SESI
CONSULTING
ENGINEERS

# 2020 PERIODIC REVIEW REPORT
# for

## December 31, 2019 – April 30, 2021
## Reporting Period

## FORMER GROSSINGERS RESORT
## LIBERTY, SULLIVAN COUNTY, NEW YORK

## NYSDEC Site # C353015

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## LIST OF ACRONYMS

| Acronym | Definition |
|---|---|
| AST | Aboveground Storage Tank |
| AWQS | Ambient Water Quality Standards |
| BCA | Brownfield Cleanup Agreement |
| BCP | Brownfield Cleanup Program |
| bgs | Below ground surface |
| CVOC | Chlorinated Volatile Organic Compound |
| 1,1-DCE | 1,1 Dichloroethene |
| DER | Division of Environmental Remediation |
| DER-10 | NYSDEC Technical Guidance for Site Investigation & Remediation |
| DUSR | Data Usability Summary Report |
| ECs | Engineering Controls |
| ECL | Environmental Conservation Law |
| EE | Environmental Easement |
| ESA | Environmental Site Assessment |
| FER | Final Engineering Report |
| HHEA | Human Health Exposure Assessment |
| ICs | Institutional Controls |
| MW | Monitoring Well |
| NYSDEC | New York State Department of Environmental Conservation |
| NYSDOH | New York State Department of Health |
| PAH | Polynuclear Aromatic Hydrocarbons |
| PCB | Polychlorinated Biphenyls |
| PCE | Tetrachloroethene |
| PHC | Petroleum Hydrocarbon |
| PID | Photoionization Detector |
| PRR | Periodic Review Report |
| RA | Remedial Action |
| RAWP | Remedial Action Work Plan |

| Acronym | Definition |
|---|---|
| RCRA | Resource Conservation and Recovery Act |
| RI | Remedial Investigation |
| RIR | Remedial Investigation Report |
| RIWP | Remedial Investigation Work Plan |
| RRSCO | Restricted Residential Soil Cleanup Objectives |
| SCG | Standards, Criteria, and Guidance |
| SCO | Soil Cleanup Objectives |
| SESI | SESI Consulting Engineers, PC |
| SMP | Site Management Plan |
| SVOCs | Semi-Volatile Organic Compounds |
| TAL | Target Analyte List |
| TOGS | Technical and Operations Guidance Series |
| TCE | Trichloroethene |
| USCO | Unrestricted Use Soil Cleanup Objectives |
| USEPA | United States Environmental Protection Agency |
| UST | Underground Storage Tank |
| VOCs | Volatile Organic Compounds |

# 1.0 INTRODUCTION

## 1.1 SUMMARY

SESI Consulting Engineers DPC (SESI) prepared this Periodic Review Report (PRR) for the period December 31, 2019 to April 30, 2021 for the Former Grossingers Resort New York State Brownfield Cleanup Program (BCP) Site No. C335015 located in Liberty, New York (hereinafter referred to as the "Site"). SESI prepared this PRR on behalf of Sullivan Resorts LLC, who entered into a Brownfield Cleanup Agreement (BCA) as Volunteers in April 2018 with the New York State Department of Environmental Conservation (NYSDEC) to remediate the Site.

Historically, Site development included a 272-room resort hotel, boiler room, laundry room, convention center, swimming pool, ice skating rink and its ancillary building, service building known as the Joy Cottage, service building known as the Harry G, and outdoor tennis courts constructed over time since 1950s. A downhill ski slope was located to the west of the main hotel buildings.

A remedial investigation (RI) was conducted in 2019 and the results of the soil sampling showed exceedances to the unrestricted use Soil Cleanup Objectives (USCOs) for benzene, ethylbenzene, 2-methylnaphthalene, poly-aromatic hydrocarbons (PAHs), mercury and lead. The results of surface soil samples showed one or more of the pesticides 4,4'-DDT, 4,4'-DDE and 4,4'-DDD, lead and PAHs were detected above the USCOs. The Site investigation for soil vapor identified elevated concentrations of Trichlorofluoromethane (Freon-11), Dichlorodifluoromethane (Freon-12), benzene, and 1,3 butadiene. The Site investigation for groundwater showed exceedances to the Class GA Groundwater Standards for benzene, ethylbenzene, isopropyl benzene, lead, barium, nickel and beryllium, Freon-11, Freon-12. The per-and polyfluoroalkyl substances (PFAS) perfluorooctanesulfonic acid (PFOS) and perfluorooctanoic acid (PFOA) were detected at concentrations exceeding the U.S. Environmental Protection Agency Health Advisory Level (HAL) of 70 parts per trillion (ppt). The impacts at the Site are the result of a leaking underground storage tank, historically applied pesticides, and other historical Site facilities.

The Site has been remediated to conditional Track 1. The remaining Engineering Control is groundwater monitoring. There are no engineering controls for soil vapors because the Site does not have any buildings however vapor intrusion investigation is on-going. Institutional and Engineering Controls (ICs and ECs) have been incorporated into the Site remedy to control exposure to the remaining contamination to ensure protection of public health and the environment. An Environmental Easement (EE) was granted to the NYSDEC and recorded by the Site owners with the Sullivan County Clerk, and it requires compliance with this Site Management Plan (SMP) and the ICs and ECs placed on the site. These ICs currently allow for residential, restricted residential use, commercial, and industrial uses, but prohibit the use of groundwater without necessary water quality treatment. The ECs require quarterly groundwater monitoring for natural attenuation. A Site Location Map is provided in **Figure 1.1 of the SMP**. All SMP figures are included in **Appendix A** of this report.

This PRR reports the required inspection and monitoring activities that were conducted during the current reporting period. The inspection and monitoring were conducted to ensure compliance with the ICs required by the EE and as stated in the SMP as approved by NYSDEC.

## 1.2 EFFECTIVENESS OF REMEDIAL PROGRAM

In order to monitor the effectiveness of the contaminant removal and the Site natural attenuation, an onsite monitoring well network including MW-201, MW-203, MW-204, MW-205, MW-206, MW-207, MW-208, MW-209, MW-210, MW-211, MW-212, MW-213, MW-214, MW-216, and MW-217 were sampled for volatile organic compounds (VOCs) and PFAS. As presented in Section 3, overall, Freon-11, Freon-12, and PFAS concentrations in groundwater detected during the April 2021 sampling event have declined have in comparison with the March 2020 sampling event.

In order to evaluate the potential for vapor intrusion, soil vapor samples were collected from vapor points SMPV-1, SMPV-2, SMPV-3, SMPV-10, SMPV-11, SMPV-12, SMPV-13, and SMPV-14 March 2020. As presented in Section 3 overall soil VOC concentrations have decreased. However, concentrations of benzene and chlorofluorocarbons (CFCs)

in SMPV-2, SMPV-11, or SMPV-13 soil vapor samples increased during the reporting period.

### 1.3 COMPLIANCE

SESI sampled the groundwater well network in March 2020, September 2020, and April 2021. Soil vapor samples were collected in March 2020 and April 2021. The 2020 second quarter sampling event was not conducted due to COVID-19 work disturbances and the 2020 fourth quarter sampling event was not conducted because of the accumulated snow, which hindered safe Site access.

### 1.4 CONCLUSIONS AND RECOMMENDATIONS

SESI has verified that the ECs and ICs developed for the site are in compliance with the SMP.

We recommend the following for the next reporting period:

- Groundwater monitoring of the onsite monitoring well network including MW-203, MW-204, MW-206, MW-207, MW-213, MW-214, MW-216, and MW-217 for VOCs and PFAS on a semi-annual basis (2 times per year).
- There were no exceedances detected in monitoring wells MW-201, MW-205, MW-210, or MW-211 during this monitoring period. Therefore, SESI recommends no further sampling of these well.
- Soil vapor monitoring of the onsite vapor monitoring networks including SMPV-1, SMPV-2, SMPV-3, SMPV-10, SMPV-12, SMPV-11, SMPV-13, and SMPV-14 on an annual basis (1 time per year).

# 2.0 SITE OVERVIEW

## 2.1 SITE LOCATION AND DESCRIPTION

The Site is located in New Liberty, Sullivan County, New York and is identified as a portion of tax parcel ID number 30-1-1.1 on the Sullivan County Tax Map. A United States Geological Survey (USGS) topographical quadrangle map, **SMP Figure 1.1** in **Appendix A**, shows the Site location. The site is an approximately is a 17.30-acre area bounded by residential dwellings and undeveloped woodlands along Route 52 to the north, Route 52 and multiple commercial dwellings to the south, residential dwellings and commercial properties along Sunset Lake to the east, and the Middle Mongauop River and commercial properties along Route 17 to the west. A boundary map is attached to the amended BCA as required by Environmental Conservation Law (ECL) Title 14 Section 27-1419 and is shown on **SMP Figure 1.2** in **Appendix A**.

## 2.2 SITE HISTORY

The Site is part of the former Grossingers Resort, developed in 1916. The resort hotel was comprised of more than three dozen buildings with a total floor area of approximately 700,000 square feet. The resort featured indoor and outdoor tennis facilities, indoor and outdoor pools, a championship golf course, a skating rink, skiing facilities, horse trails and more. Since its closure in 1986 and prior to the implementation of the Remedial Investigation/Interim Remedial Measure (RI/IRM), the hotel complex had been shuttered and many of the old resort hotel structures remained. The structures were well beyond repair and required demolition. This Site is currently vacant; all operations on the site ceased around 1986. However, the golf course is still active and is not part of the Site.

### 2.2.1 REMEDIAL INVESTIGATION (RI) CONDUCTED AT THE SITE

The Remedial Investigation Report/Interim Remedial Measure Construction Completion Report (RIR/IRM-CCR) prepared by SESI in December 2019 details the results of prior investigations and the RI performed on the Site. The RI was conducted in accordance with the Remedial Investigation\Interim Remedial Measures Work Plan (RI/IRMWP) for

the Site, which was submitted to NYSDEC on October 3, 2018 and subsequently approved by the NYSDEC on October 16, 2018.

The results of the remedial investigation soil sampling showed exceedances to the USCOs for benzene, ethylbenzene, 2-methylnaphthalene, PAHs, mercury and lead.

After the demolition and removal of the building foundations, a soil boring investigation was conducted in every building footprint to determine the environmental conditions of the uncovered areas. The soil boring investigation included performing 24 additional soil borings (SB-51 to SB-74) at the Site. Two soil samples were collected from each boring. Soil borings were also conducted around the boiler room, which contained two (2) 15,000-gallon No. 4 heating oil underground storage tanks (USTs). Light non-aqueous phase liquid (LNAPL) was observed in borings in the boiler room area. (This LNAPL was subsequently removed as part of the remedial action.) The soil boring locations are shown on **SMP Figure 2.2** in **Appendix A**. The exceedances shown on SMP Figure 2.2 in Appendix A are the exceedances left post remediation as described below in Section 2.2.6.

All soil borings were advanced to a minimum of 15 ft-bgs or to bedrock, whichever was encountered first. Two soil samples were collected from each boring. Sample collection depths from each boring location were biased based on the field screening which included photo ionization detector (PID), visual, and olfactory observations. If the field screening did not result in any impacts, the soil samples were collected at the 6-inch interval above the water table and at the deepest 6-inch interval, which is just above bedrock. All samples were analyzed for Target Compound List/Target Analyte List (TCL/TAL) +30 tentatively identified compounds.

The results of the soil boring samples showed PAHs were detected above the unrestricted use SCOs in a soil sample collected from boring SB-62 at concentrations ranging from 3.23 mg/kg to 8.15 mg/kg. The pesticide 4,4'-DDE was detected in soil boring SB-66 (3.5 to 4.0 feet) above the unrestricted use SCO at a concentration of 0.005 mg/kg. In soil boring SB-73 (11.5 to 12.0), the pesticides 4,4'-DDT (0.014 mg/kg), 4,4'-DDE (0.027 mg/kg) and 4,4'-DDD (0.008 mg/kg) were detected above the unrestricted use SCOs. All these exceedances were excavated as part of the remedial action as described below; the remaining exceedances shown on SMP Figure 2.2 in Appendix A are described in section 2.2.6 below.

Surface Soil Sampling

Surface soil samples were initially collected at ten locations during October and November 2018 after most of the buildings were demolished. The surface soil sample locations were determined after the vegetation was removed based on field screening, visual observations of stained soils and historic data. Surface soil samples were collected from the 0.0 to 2-inch interval below ground surface.

The results of the ten surface soil samples showed one or more of the pesticides 4,4'-DDT, 4,4'-DDE and 4,4'-DDD were detected above the unrestricted use SCOs in seven of the ten surface soil samples at concentrations ranging from 0.005 mg/kg to 0.061 mg/kg. Lead was detected in surface soil sample SS-3 above the unrestricted use SCOs at 67.1 mg/kg. PAHs were detected above the unrestricted use SCOs in sample SS-5 at concentrations ranging from 3.96 mg/kg to 9.92 mg/kg.

To determine the horizontal and vertical extent of these pesticides, additional surface soil samples were collected at fifteen (15) locations within the BCP Area during November and December 2018. Two samples were collected from each location at the 0 to 2-inch below grade interval and the 6 to 8-inch below grade interval after the vegetation was removed. The soil samples were collected using a stainless-steel trowel or shovel and delivered to Test America Laboratories for pesticide analysis on a 24-hour turnaround time. Care was taken when collecting the soil samples not to cross-contaminate between sample intervals and sample locations. The stainless-steel trowel or shovel was decontaminated prior to each use with a detergent wash and distilled water rinse. Any fall in from the surrounding soil was removed prior to collecting the sample. All surface soil exceedances were excavated except for the exceedances shown on **SMP Figure 2.3** in **Appendix A**. The remain soil exceedances are described in Section 2.2.6 below.

After demolition of the buildings, eight additional surface soil samples were collected beneath the former buildings during June 2019. Pesticide exceedances to the unrestricted use SCOs were detected in three (3) of the eight (8) samples.

Soil Vapor Sampling

A soil vapor investigation was determined to be necessary in preparation for the planned development on the Site, which may include buildings. To evaluate the potential for future exposures in the future building, SESI designed a soil vapor investigation in accordance with the NYS Department of Health (NYSDOH) Guidance for Evaluating Soil Vapor Intrusion (Guidance) (October 2006). The SVI plan was included in the RI/IRMWP submitted to the NYSDEC on October 3, 2018 and subsequently approved on October 16, 2018.

During the period from November 30, 2018 to December 14, 2018, ten (10) SV samples (V-1, V-2, V-3, V-10, V-11, V-12, V-13, V-14, V-15, and V-16) were collected across the Site. The sample locations and results are presented on **SMP Figure 2.4** in **Appendix A**. The soil vapor samples were collected from vapor points installed in the vadose zone to a depth of 2 or 3 ft-bg. Planned SV sample locations V4 through V9 were not installed because they are all in the former LNAPL area, which was subsequently remediated by excavation to bedrock.

A second round of soil vapor samples was collected from February 8 to 11, 2019. SV samples were collected from locations V-1, V-2, V-11, V-12, V-13 and V-14. SESI attempted to collect samples from the remaining locations; however, melting ice and snow caused the vapor points to fill up with water. The soil vapor results were compared to the NYSDOH October 2006 air guideline values, which does not include values for soil vapors.

The soil vapor results showed that benzene was detected in samples V-1 (24 ug/$m^3$), V-10 (40 ug/$m^3$) and V-14 (18 ug/$m^3$). Soil vapor point V-1 is located in the former tennis court area. Soil vapor point V-10 is located south of the former indoor pool and V-14 is located near the western boundary of the BCP area. The compound 1,3-butadiene was also detected in samples V-1 (66 ug/$m^3$), V-3 (28 ug/$m^3$), V-11 (53 ug/$m^3$), V-15 (60 ug/$m^3$) and V-16 (57 ug/$m^3$). Soil vapor point V-3 is located beneath the former convention center, V-11 is located at the southeast portion of the BCP and V-15 and V-16 are located in the former ski maintenance area. The results of the soil vapor samples collected from February 8 to February 11, 2019 showed trichlorofluoromethane in all six (6) samples at concentrations ranging from 2,300 ug/$m^3$ at V-2 to 660,000 ug/$m^3$ at V-11. Dichlorodifluoromethane was detected at concentrations ranging from 110 ug/$m^3$ at V-2 to 680,000 ug/$m^3$ at V-13. Benzene was detected in soil vapor point V-

14 at 16 ug/$m^3$. The compound 1,3-butadiene was not detected in any of the vapor points sampled in February 2019.

Groundwater Sampling

The site investigation for groundwater included the installation of five (5) monitoring wells. The results of the groundwater sample showed exceedances to the Class GA Groundwater Ambient Water Quality (AWQS) Standards for benzene, ethylbenzene, isopropyl benzene, lead, barium, nickel and beryllium. These wells were abandoned prior to the implementation of the IRM.

Initially, twelve (12) groundwater monitoring wells (MW-201 through MW-212) were installed. The wells were installed to replace the abandoned wells, investigate potential impacts to groundwater from the soil contamination and for delineation of groundwater contamination upgradient and downgradient from the former, since remediated, boiler room/LNAPL area.

The twelve (12) groundwater monitoring wells (MW-201 through MW-212) were gauged for depth to LNAPL/depth to groundwater after they were installed and developed. A sheen was detected in five monitoring wells (MW-202, MW-203, MW-204, MW-205 and MW-206) located within the boiler room/LNAPL area. Therefore, these five wells located in the former UST/LNAPL area were not sampled. In later sampling events, wells MW-203, MW-204, MW-205 and MW-206 were sampled because there was no LNAPL detected; and MW-202 was destroyed and never sampled. The remaining wells were sampled for TCL/TAL+30, 1-4 dioxane and PFAS in accordance with the RI/IRMWP. During the December 2018 sampling event, one well (MW-207) resulted in exceedances of the AWQS for Freon-12 and Freon-11. There were no other exceedances for any of the other TCL/TAL compounds or 1,4 dioxane in any of the wells. The groundwater sampling results are presented in on **SMP Figure 2.8** in **Appendix A**.

Based on the NYSDEC January 10, 2019 comments, three monitoring wells (MW-213, MW-214, MW-215) were installed at the Site on January 17, 2019. MW-215 was installed in the ski maintenance area to replace MW-1. Two monitoring wells (MW-216 and MW-217) were installed in July 2019 along the western boundary of the BCP site area for downgradient delineation of the Freon.

An additional round of groundwater samples was collected from the previous and new monitoring wells on January 29, 2019 and from February 6 to February 8, 2019. The samples were analyzed for TCL/TAL+30 and select wells, where PFAS were previously detected, were analyzed also for PFAS. The results of the groundwater samples collected on January 29 and February 6 through 8, 2019 showed Freon-12 and Freon-11 exceedances in well MW-213. No other exceedances of the Groundwater Class GA Effluent Standards were detected in any of the wells sampled. This includes MW-207 which previously had exceedances for Freon-12 and Freon-11.

As a result of the Freon exceedances in well MW-213, on July 10, 2019 two additional monitoring wells (MW-216 and MW-217) were installed to the north of well MW-213 to delineate the northern extent of the Freon plume. The results of the groundwater sampling for wells MW-216 and MW-217 showed Freon 12 and Freon 11 above 5 ug/l in monitoring well MW-216 at concentrations of 48 ug/l and 120 ug/l, respectively. Freon 11 was detected in monitoring well MW-217 at a concentration of 12 ug/L. Freon 12 was not detected in monitoring well MW-217.

The PFAS compounds PFOS and PFOA were detected in well MW-207 at concentrations of 91 and 100 ppt, respectively. PFOS and PFOA are present at a maximum combined concentration of 159 ppt in MW-206 and 191 ppt in MW-217, compared to the current U.S. Environmental Protection Agency HAL of 70 ppt.

### 2.2.2 DESCRIPTION OF INTERIM REMEDIAL MEASURES

The following IRM were conducted in accordance with the NYSDEC approved RI/IRMWP.

1. Removal of two (2) USTs that were present under the boiler room slab and the clean-up of the resulting LNAPL discharge area.
2. Basin Sediment: Removal of sediments, which contained metals exceedances, and excavation around the outlet area until confirmed clean post-excavation samples (which did not exceed the USCOs) were obtained.
3. Stockpile D: Disposal of the stockpiled material and sampling in the stockpile area to confirm removal of all contaminants that exceeded the unrestricted SCOs.

4. Ice Skating Rink: Excavation of the area around SB-14, which contained PAH and VOC exceedances, on a 25-foot radius to a depth of 1-foot. Collection of bottom and side wall samples to document the remedial action.
5. Joy Cottage: Excavation of the area around SB-38, which contained pesticide exceedances, on a 25-foot radius to a depth of 1.5-foot. Collection of bottom and side wall samples to document the remedial action.
6. Ski Maintenance Area: Excavation of the area around SB-16, which had metal exceedances, on a 25-foot radius to depth of 1.5-foot and around SB-41, which had pesticide exceedances, on a 25-foot radius to a depth of 1.5 foot. Collection of bottom and side wall samples to document remedial action.
7. From August 2018 through December 2018, SESI observed Capital Wrecking remove structures on the Site, remove two USTs, and excavate contaminated soil. Air monitoring was conducted in accordance with the CAMP.

### 2.2.3 DESCRIPTION OF REMEDIAL ACTIONS

The site was remediated in accordance with the remedy selected by the NYSDEC in the RI/IRMWP dated October 2018.

The factors considered during the selection of the remedy are those listed in 6NYCRR 375-1.8. The following are the components of the selected remedy:

1. Excavation and off-site disposal of on-site soils which exceed USCOs, as defined by 6 NYCRR Part 375-6.8.
2. Closure of the two (2) USTs by removal of all observable LNAPL in soil and weathered shale;
3. Collection and analysis of end-point samples at the bottom and sidewalls of all the excavations to evaluate the remedy by comparing results to the Track 1 USCOs.
4. Execution and recording of an Environmental Easement to restrict the use of groundwater as a source of potable or process water, without necessary water quality treatment as determined by the NYSDOH or County DOH.

5. Development and implementation of a Site Management Plan for long-term management of remaining contamination as required by the Environmental Easement, which includes plans for: (1) Institutional and Engineering Controls, (2) monitoring, (3) operation and maintenance, and (4) reporting.

6. Periodic certification of the institutional and Engineering Controls listed above.

### 2.2.4 REMOVAL OF CONTAMINATED MATERIALS FROM THE SITE

The remedial excavations removed contaminated soil and other materials to achieve the Track 1 USCOs. The soil was found to contain PAHs such as benzo(a)anthracene, benzo(b)fluoranthene, benzo(k)fluoranthene, benzo(a)pyrene, and indeno(1,2,3-cd)pyrene and the pesticides 4,4'-DDD, 4,4'-DDE and 4,4'-DDT at concentrations above their applicable Track 1 SCOs.

For soil disposal and excavation organization purposes, prior to the soil disposal activities, waste characterizations samples were collected in-situ for disposal purposes. The soil samples were collected and analyzed as requested by the disposal facility.

The remediation was considered complete when all excavation post-excavation samples resulted in constituent concentrations below the Track 1 USCOs.

### 2.2.5 ON-SITE AND OFF-SITE TREATMENT SYSTEMS

No long-term treatment systems were required to be installed as part of the site remedy.

### 2.2.6 DESCRIPTION OF RESIDUAL CONTAMINATION

Described in Section 3 of this report.

### 2.2.7 MANAGEMENT OF RESIDUAL CONTAMINATION THROUH INSTITUTIONAL AND ENGINEERING CONTROLS IN THE ENVIRONMENTAL EASEMENT

The SMP lists the ICs and ECs required by the NYSDEC to manage the residual contamination present at this Site to protect public health and the environment in the future and keep the Site safe for reuse. The remedy for the Site did not require the construction of any other Engineering Control systems.

The Site has conditionally achieved a Track 1 remedy. Until that is changed to an unconditional remedy, the Department requires that an EE be placed on the site to (1) implement, maintain and monitor the Engineering Controls; (2) prevent future exposure to remaining contamination by controlling the use of groundwater; and (3) limit the use and development of the site to residential, restricted residential, commercial and industrial uses. A SMP (December 2019) was prepared by SESI and approved by the DEC for the long-term management and monitoring of the EE requirements.

## 3.0 REMEDY PERFORMANCE, EFFECTIVENESS, PROTECTIVENESS

The goal of the SMP is to manage the residual contamination at the site through implementation of ICs until the Department determines that the conditional Track 1 designation can be changed to an unconditional Track 1. At present, SESI is conducting monitoring/inspection of the ICs and ECs on the Site in accordance with the SMP dated December 2019.

**Groundwater Monitoring**

In order to monitor the effectiveness of the contaminant removal and the Site natural attenuation, an onsite monitoring well network including MW-201, MW-203, MW-204, MW-205, MW-206, MW-207, MW-210, MW-211, MW-213, MW-214, MW-216, and MW-217 were sampled for VOCs and PFAS. Monitoring well MW-208 has been damaged and was not sampled. Monitoring wells MW-209 and MW-212 were not sampled in September 2020 due to insufficient water levels. Monitoring well MW-212 was not sampled in April 2021 due to low water levels.

The groundwater sampling and purging logs are presented in **Appendix B**. **Table 3.1** presents the groundwater analytical result summary compared to the AWQS. The laboratory data of the sampling events for this monitoring period are presented in **Appendix C**.

**Table 3.2** below and **Figure 3.1** presents a summary of VOC exceedances in groundwater. Freon-11 was detected in groundwater samples collected from monitoring wells MW-213, MW-214, MW-216, and MW-217 at concentrations ranging from 5.4 ug/L (MW-214 April 2021) to 71 ug/L (MW-213 March 2020). Freon 11 concentrations detected during the April 2021 sampling event have decreased in MW-213, MW-214, and MW-216 in comparison with the March 2020 sampling event. In addition, no Freon 11 exceedances were detected in monitoring well MW-201, MW-203, MW-204, MW-206, MW-207, MW-210, and MW-211 during this monitoring period.

Freon 12 was detected in groundwater samples collected from monitoring wells MW-213, MW-214, and MW-216 at concentrations ranging from 3.9 ug/L (MW-216 September 2020) to 74 ug/L (MW-213 March 2020). Freon 12 concentrations detected during the April 2021 sampling event have decreased in MW-213, MW-214, and MW-216 in

comparison with the March 2020 sampling event. Freon 12 was not detected in MW-217 during the March 2020, September 2020, and April 2021 sampling events. In addition, no Freon 12 exceedances were detected in monitoring wells MW-201, MW-203, MW-204, MW-206, MW-207, MW-210, MW-211, or MW-217 during this monitoring period.

## Table 3.2 Summary of Historical VOC Exceedances in Groundwater

| LOCATION | | | MW-213 | | MW-213 | | MW-213 | | MW-213 | |
|---|---|---|---|---|---|---|---|---|---|---|
| SAMPLING DATE | | | 1/29/2019 | | 3/4/2020 | | 9/2/2020 | | 4/27/2021 | |
| SAMPLE TYPE | | | Results | Q | WATER | | WATER | | WATER | |
| | NY-AWQS | Units | | | Results | Q | Results | Q | Results | Q |
| Trichlorofluoromethane (Feaon 11) | 5 | ug/l | **48** | | **71** | | **56** | | **52** | |
| Dichlorodifluoromethane (Freon 12) | 5 | ug/l | **29** | | **74** | | **40** | | **54** | |

| LOCATION | | | MW-214 | | MW-214 | | MW-214 | | MW-214 | |
|---|---|---|---|---|---|---|---|---|---|---|
| SAMPLING DATE | | | 1/29/2019 | | 3/4/2020 | | 9/3/2020 | | 4/27/2021 | |
| SAMPLE TYPE | | | Results | Q | WATER | | WATER | | WATER | |
| | NY-AWQS | Units | | | Results | Q | Results | Q | Results | Q |
| Trichlorofluoromethane (Feaon 11) | 5 | ug/l | 0.14 | U | **10** | | **5.1** | | **5.4** | |
| Dichlorodifluoromethane (Freon 12) | 5 | ug/l | 0.88 | J | **27** | | **16** | | **21** | |

| LOCATION | | | MW-216 | | MW-216 | | MW-216 | | MW-216 | |
|---|---|---|---|---|---|---|---|---|---|---|
| SAMPLING DATE | | | 7/10/2019 | | 3/6/2020 | | 9/3/2020 | | 4/28/2021 | |
| SAMPLE TYPE | | | Results | Q | WATER | | WATER | | WATER | |
| | NY-AWQS | Units | | | Results | Q | Results | Q | Results | Q |
| Trichlorofluoromethane (Feaon 11) | 5 | ug/l | **120** | | **48** | | **6.9** | | **29** | |
| Dichlorodifluoromethane (Freon 12) | 5 | ug/l | **48** | | **15** | | **3.9** | | **11** | |

| LOCATION | | | MW-217 | | MW-217 | | MW-217 | | MW-217 | |
|---|---|---|---|---|---|---|---|---|---|---|
| SAMPLING DATE | | | 7/10/2019 | | 3/6/2020 | | 9/3/2020 | | 4/28/2021 | |
| SAMPLE TYPE | | | Results | Q | WATER | | WATER | | WATER | |
| | NY-AWQS | Units | | | Results | Q | Results | Q | Results | Q |
| Trichlorofluoromethane (Feaon 11) | 5 | ug/l | **12** | | **22** | | **5.6** | | **47** | |
| Dichlorodifluoromethane (Freon 12) | 5 | ug/l | 5 | U | 5 | U | 0.31 | U | 5 | U |

Notes:

1. Results are shown in micrograms per liter (ug/L)
2. Yellow shading denotes exceedances of NYSDEC AWQS
3. Bold = Compound Detected
4. Q = Qualifier
5. U = Compound Not Detected

**Table 3.3** below and **Figure 3.1** presents a summary of PFAS exceedances in groundwater. The PFAS compound PFOS was detected in monitoring wells MW-203, MW-204, MW-206, MW-208, MW-213, MW-214, and MW-217 during this monitoring period. PFOS concentrations have declined in April 20201 in MW-203, 204, 206, 207, 213, 214, and 217 in comparison with the March 2020 sampling event. The PFAS compound PFOA was detected in monitoring wells MW-206, MW-208, MW-213, MW-214, MW-216, and MW-217 during this monitoring period.. PFOA concentrations have declined

in April 2021 in monitoring wells MW-203, MW-204, MW-207, MW-213, MW-214, and MW-17 in comparison with the March 2020 sampling event. In addition, no PFOA exceedances were detected in monitoring wells MW-203, MW-204, or MW-207 during this monitoring period.

## Table 3.3 Summary of Historical PFAS Exceedances in Groundwater

| LOCATION | | | MW-207 | | MW-207 | | MW-207 | | MW-207 | |
|---|---|---|---|---|---|---|---|---|---|---|
| SAMPLING DATE | | | 2/6/2019 | | 3/5/2020 | | 9/3/2020 | | 4/27/2021 | |
| SAMPLE TYPE | | | WATER | | WATER | | WATER | | WATER | |
| | NY-AWQS | Units | Results | Q | Results | Q | Results | Q | Results | Q |
| Perfluorooctanesulfonic Acid (PFOS) | 10 | ng/l | **34** | | **11.3** | | **22.1** | | **8.36** | |
| Perfluorooctanoic Acid (PFOA) | 10 | ng/l | **23.4** | | **6.59** | | **5.46** | | **2.2** | |

| LOCATION | | | MW-208 | | MW-208 | |
|---|---|---|---|---|---|---|
| SAMPLING DATE | | | 2/7/2019 | | 3/5/2020 | |
| SAMPLE TYPE | | | WATER | | WATER | |
| | NY-AWQS | Units | Results | Q | Results | Q |
| Perfluorooctanesulfonic Acid (PFOS) | 10 | ng/l | **17.6** | | **68.2** | |
| Perfluorooctanoic Acid (PFOA) | 10 | ng/l | **10.8** | | **38.2** | |

| LOCATION | | | MW-213 | | MW-213 | | MW-213 | | MW-213 | |
|---|---|---|---|---|---|---|---|---|---|---|
| SAMPLING DATE | | | 1/29/2019 | | 3/4/2020 | | 9/2/2020 | | 4/27/2021 | |
| SAMPLE TYPE | | | WATER | | WATER | | WATER | | WATER | |
| | NY-AWQS | Units | Results | Q | Results | Q | Results | Q | Results | Q |
| Perfluorooctanesulfonic Acid (PFOS) | 10 | ng/l | **91.2** | | **73.4** | | **60.7** | | **70** | |
| Perfluorooctanoic Acid (PFOA) | 10 | ng/l | **40.4** | | **32.8** | | **26.5** | | **27.7** | |

| LOCATION | | | MW-214 | | MW-214 | | MW-214 | | MW-214 | |
|---|---|---|---|---|---|---|---|---|---|---|
| SAMPLING DATE | | | 1/29/2019 | | 3/4/2020 | | 9/3/2020 | | 4/27/2021 | |
| SAMPLE TYPE | | | WATER | | WATER | | WATER | | WATER | |
| | NY-AWQS | Units | Results | Q | Results | Q | Results | Q | Results | Q |
| Perfluorooctanesulfonic Acid (PFOS) | 10 | ng/l | **48.5** | | **47.3** | | **46.6** | | **40.3** | |
| Perfluorooctanoic Acid (PFOA) | 10 | ng/l | **68.6** | | **29.9** | | **25.8** | | **29.5** | |

| LOCATION | | | MW-216 | | MW-216 | | MW-216 | | MW-216 | |
|---|---|---|---|---|---|---|---|---|---|---|
| SAMPLING DATE | | | 7/10/2019 | | 3/6/2020 | | 9/3/2020 | | 4/28/2021 | |
| SAMPLE TYPE | | | WATER | | WATER | | WATER | | WATER | |
| | NY-AWQS | Units | Results | Q | Results | Q | Results | Q | Results | Q |
| Perfluorooctanesulfonic Acid (PFOS) | 10 | ng/l | **29.4** | | **6.51** | | **24.8** | | **24.9** | |
| Perfluorooctanoic Acid (PFOA) | 10 | ng/l | **17.9** | | **8.18** | | **9.39** | | **10.8** | |

| LOCATION | | | MW-217 | | MW-217 | | MW-217 | | MW-217 | |
|---|---|---|---|---|---|---|---|---|---|---|
| SAMPLING DATE | | | 7/10/2019 | | 3/6/2020 | | 9/3/2020 | | 4/28/2021 | |
| SAMPLE TYPE | | | WATER | | WATER | | WATER | | WATER | |
| | NY-AWQS | Units | Results | Q | Results | Q | Results | Q | Results | Q |
| Perfluorooctanesulfonic Acid (PFOS) | 10 | ng/l | **17** | | **30** | | **42.1** | | **19.5** | |
| Perfluorooctanoic Acid (PFOA) | 10 | ng/l | **16.5** | | **15.7** | | **13.8** | | **14.6** | |

Notes:

1. Results are shown in micrograms per liter (ug/L)
2. Yellow shading denotes exceedances of NYSDEC PFAS Screening Values
3. Bold = Compound Detected
4. Q = Qualifier
5. U = Compound Not Detected

**Soil Vapor**

Soil vapor samples were collected from vapor points SMPV-1, SMPV-2, SMPV-3, SMPV-10, SMPV-11, SMPV-13, and SMPV-14 in March 2020 and April 2021. SMPVP-12 was sampled in March 2020, but could not be sampled in April 2021 due to water in the vapor line. **Table 3.4** presents the vapor analytical result. The analytical data are presented in **Appendix D**. The soil vapor locations are depicted in **Figure 3.2**.

As shown on **Table 3.5** below, detections of Freon-11 were identified in vapor points SMPV-1, SMPV-2, SMPV-3, SMPV-10, SMPV-11, SMPVP-12, SMPV-13, and SMPV-14 at concentrations ranging from 1.21 ug/m3 (SMPV-3) to 447 ug/m3 (SMPV-14). Freon-11 concentrations detected during the March 2020 and April 2021 sampling events have declined in SMPV-1, SMPV-2, SMPV-11, and SMPV-14 in comparison with the February 2019 sampling event. Freon-11 soil vapor concentrations have declined in vapor points SMPV-3, SMPV-10 in comparison with the December 2018 sampling event. Freon 11 soil vapor concentrations have increased in vapor point SMPV-13 in comparison with the November 2018 sampling event.

Freon-12 was detected in soil vapor points SMPV-1, SMPV-2, SMPV-3, SMPV-10, SMPV-11, SMPV-13, and SMPV-14 at concentrations ranging from 2.24 ug/m3 (SMPV-3) to 447 ug/m3 (SMPV-14). Freon-12 concentrations detected during the April 2021 sampling event have declined in SMPV-1, SMPV-2, SMPV-11, and SMPV-14 in comparison with the February 2019 sampling event. Freon-11 soil vapor concentrations have increased in vapor point SMPV-13 in comparison with the November 2018 sampling event.

**Table 3.5: Summary of Historical Soil Vapor Results**

| LOCATION | V-1 | | V-1 | | SMPV-1 | | SMPV-1 | |
|---|---|---|---|---|---|---|---|---|
| SAMPLING DATE | 12/14/2018 | | 2/11/2019 | | 3/6/2020 | | 4/29/2021 | |
| Units ug/m3 | Results | Q | Results | Q | Results | Q | Results | Q |
| 1,3-Butadiene | **66** | | 370 | U | 0.442 | U | 0.442 | U |
| Benzene | **24** | | 590 | U | **0.811** | | **2.37** | |
| Trichlorofluoromethane (FREON 11) | 3.5 | U | **380000** | **B** | **4.24** | | **2.56** | |
| Dichlorodifluoromethane (FREON 12) | 9.9 | U | 2600 | U | **3.21** | | **2.36** | |

| LOCATION | V-2 | | V-2 | | SMPV-2 | | SMPV-2 | |
|---|---|---|---|---|---|---|---|---|
| SAMPLING DATE | 11/30/2018 | | 2/11/2019 | | 3/6/2020 | | 4/29/2021 | |
| Units ug/m3 | Results | Q | Results | Q | Results | Q | Results | Q |
| 1,3-Butadiene | 1.4 | U | 3.5 | U | 0.442 | U | 0.442 | U |
| Benzene | 2.3 | U | 5.6 | U | 0.639 | U | **1.52** | |
| Trichlorofluoromethane (FREON 11) | **3.5** | | **2300** | B | 1.12 | U | **21.5** | |
| Dichlorodifluoromethane (FREON 12) | 9.9 | U | **110** | | **2.16** | | **2.52** | |

| LOCATION | V-3 | | SMPV-3 | | SMPV-3 | |
|---|---|---|---|---|---|---|
| SAMPLING DATE | 12/14/2018 | | 3/6/2020 | | 4/29/2021 | |
| Units ug/m3 | Results | Q | Results | Q | Results | Q |
| 1,3-Butadiene | **28** | | 0.442 | U | 0.442 | U |
| Benzene | **5.1** | **J** | 0.639 | U | **2.87** | |
| Trichlorofluoromethane (FREON 11) | **26** | | **3.2** | | **1.21** | |
| Dichlorodifluoromethane (FREON 12) | **140** | | **4.84** | | **2.34** | |

| LOCATION | V-10 | | SMPV-10 | | SMPV-10 | |
|---|---|---|---|---|---|---|
| SAMPLING DATE | 11/30/2018 | | 3/6/2020 | | 4/28/2021 | |
| Units ug/m3 | Results | Q | Results | Q | Results | Q |
| 1,3-Butadiene | 1.4 | U | 0.442 | U | 0.442 | U |
| Benzene | **40** | | **1.09** | | **1.9** | |
| Trichlorofluoromethane (FREON 11) | 3.5 | U | **111** | | **21.5** | |
| Dichlorodifluoromethane (FREON 12) | 9.9 | U | **73.2** | | **8.41** | |

| LOCATION | V-11 | | V-11 | | SMPV-11 | | SMPV-11 | |
|---|---|---|---|---|---|---|---|---|
| SAMPLING DATE | 12/13/2018 | | 2/11/2019 | | 3/6/2020 | | 4/28/2021 | |
| Units ug/m3 | Results | Q | Results | Q | Results | Q | Results | Q |
| 1,3-Butadiene | **53** | | 510 | U | 0.442 | U | 0.442 | U |
| Benzene | **11** | | 810 | U | **0.652** | | **2.87** | |
| Trichlorofluoromethane (FREON 11) | **62** | | **660000** | B | **9.72** | | **238** | |
| Dichlorodifluoromethane (FREON 12) | 9.9 | U | 3500 | U | **2.52** | | **2.24** | |

| LOCATION | V-12 | | V-12 | | SMPV-12 | |
|---|---|---|---|---|---|---|
| SAMPLING DATE | 11/30/2018 | | 2/11/2019 | | 3/6/2020 | |
| Units ug/m3 | Results | Q | Results | Q | Results | Q |
| 1,3-Butadiene | 1.4 | U | 5.7 | U | 0.442 | U |
| Benzene | 2.3 | U | 5.7 | U | 0.639 | U |
| Trichlorofluoromethane (FREON 11) | 3.5 | U | **5300** | B | **1.82** | |
| Dichlorodifluoromethane (FREON 12) | 9.9 | U | 25 | U | **2.73** | |

| LOCATION | V-13 | | SMPV-13 | | SMPV-13 | |
|---|---|---|---|---|---|---|
| SAMPLING DATE | 11/30/2018 | | 3/6/2020 | | 4/28/2021 | |
| Units ug/m3 | Results | Q | Results | Q | Results | Q |
| 1,3-Butadiene | 0.14 | U | **0.878** | | 0.442 | U |
| Benzene | 0.23 | U | 0.639 | U | **1.38** | |
| Trichlorofluoromethane (FREON 11) | **13** | | **48.7** | | **105** | |
| Dichlorodifluoromethane (FREON 12) | **69** | | **285** | | **376** | |

| LOCATION | V-14 | | V-14 | | SMPV-14 | | SMPV-14 | |
|---|---|---|---|---|---|---|---|---|
| SAMPLING DATE | 11/30/2018 | | 2/11/2019 | | 3/6/2020 | | 4/28/2021 | |
| Units ug/m3 | Results | Q | Results | Q | Results | Q | Results | Q |
| 1,3-Butadiene | 1.4 | U | 5 | U | 0.442 | U | 0.442 | U |
| Benzene | **18** | | **16** | **J** | **1.51** | | **0.834** | |
| Trichlorofluoromethane (FREON 11) | **4.5** | **J** | **4600** | **B** | **826** | | **447** | |
| Dichlorodifluoromethane (FREON 12) | **21** | **J** | **1400** | | **82.1** | | **10.6** | |

Notes:

1. Results are shown in micrograms per cubic meter (ug/m3)
2. Bold = Compound Detected
3. Q = Qualifier
4. U = Compound Not Detected
5. J = concentration estimated

# 4.0 IC/EC PLAN COMPLIANCE

## 4.1 IC/EC REQUIREMENTS AND COMPLIANCE

**Institutional and Engineering Controls**

The site remedy requires that an EE be placed on the property to (1) implement, maintain and monitor the Institutional and Engineering Controls; (2) prevent future exposure to remaining contamination by controlling the use of groundwater; and (3) limit the use and development of the site to residential, restricted residential, commercial and industrial uses. A SMP (December 2019) was prepared by SESI and approved by the DEC for the long-term management and monitoring of the EE requirements.

A series of ICs is required to prevent future exposure to remaining contamination. Adherence to these ICs on the Site is required and will be implemented under this SMP. The IC boundaries are shown on **SMP Figure 3.1**. These ICs are:

- The property may be used for residential, restricted residential, commercial, and industrial use;
- The use of groundwater underlying the property is prohibited without necessary water quality treatment as determined by the NYSDOH or the Sullivan County Department of Health to render it safe for use as drinking water or for industrial purposes, and the user must first notify and obtain written approval to do so from the Department.
- Data and information pertinent to site management must be reported at the frequency and in a manner as defined in this SMP; all ECs must be inspected at a frequency and in a manner defined in the SMP.
- Access to the site must be provided to agents, employees or other representatives of the State of New York with reasonable prior notice to the property owner to assure compliance with the restrictions identified by the Environmental Easement; and
- The potential for vapor intrusion must be evaluated for any buildings developed in the area within the IC boundaries noted on **SMP Figure 3.1**, and any potential impacts that are identified must be monitored or mitigated.

**Criteria for Completion of Remediation/Termination of Remedial Systems**

Generally, remedial processes are considered completed when monitoring indicates that the remedy has achieved the remedial action objectives identified by the decision document. The framework for determining when remedial processes are complete is provided in Section 6.4 of NYSDEC Division of Environmental Remediation (DER-10) Technical Guidance for Site Investigation and Remediation (May 3, 2010).

**Monitoring Wells Associated with Monitored Natural Attenuation**

Groundwater monitoring activities to assess natural attenuation will continue as determined by the NYSDEC, with consultation with NYSDOH, until residual concentrations of the dissolved phase Freon in groundwater are found to be consistently below ambient water quality standards, the Site Standards, Criteria and Guidelines (SCGs), or have become asymptotic at an acceptable level over an extended period. In the event that monitoring data indicates that monitoring for natural attenuation may no longer be required, a proposal to discontinue the system will be submitted by the remedial party. Monitoring will continue until permission to discontinue is granted in writing by the NYSDEC. If Freon levels in groundwater become asymptotic at a level that is not acceptable to the NYSDEC, additional source removal, treatment and/or control measures will be evaluated.

**Soil Vapor Intrusion Evaluation**

A soil vapor intrusion evaluation must be performed upon a change in use of the property that will result in occupancy of a previously unoccupied building or initial occupancy of a new building. Upon completion of the evaluation, if an action is required, any actions taken or to be taken must be reflected in an updated SMP.

## 4.2 IC/EC CERTIFICATION

The NYSDEC Institutional and Engineering Controls Certification Form has been completed and is included in **Appendix E**.

## 5.0 MONITORING PLAN COMPLIANCE

**Monitoring Completed During Current Reporting Period**

**Table 5.1: SMP Monitoring Frequency Requirements**

| Task/Report | Reporting Frequency |
|---|---|
| Inspection Report | NA |
| Groundwater monitoring and sampling | Quarterly: March, June, September and December |
| Soil Vapor Sampling | Semi-annually |
| Periodic Review Report | Annually, or as otherwise determined by the Department |

**Groundwater Monitoring**

Groundwater samples were collected from monitoring wells MW-201, MW-203, MW-204, MW-205, MW-206, MW-207, MW-210, MW-211, MW-213, MW-214, MW-216, and MW-217 in accordance with the SMP. Groundwater samples were analyzed for VOCs and PFAS as described in Section 3.

**Soil Vapor Monitoring**

Soil vapor samples were collected from vapor points SMPV-1, SMPV-2, SMPV-3, SMPV-10, SMPV-12, SMPV-11, SMPV-13, and SMPV-14 in March 2020 and April 2021 in accordance with the SMP.

**Comparison with Remedial Objectives**

**Groundwater**

Based upon results of groundwater sampling, Freon-11 was detected in groundwater samples collected from monitoring wells MW-213, MW-214, MW-216, and MW-217 at concentrations ranging from 5.4 ug/L (MW-214 April 2021) to 71 ug/L (MW-213 March 2020). Freon-11 concentrations detected during the April 2021 sampling event have declined in MW-213, MW-214, and MW-216 in comparison with the March 2020 sampling event. Freon-11 concentration in MW-217 have increased slightly over the March 2020 to April 2021 sampling events. No Freon 11 exceedances were detected in monitoring

well MW-201, MW-203, MW-204, MW-206, MW-207, MW-210, and MW-211 during this monitoring period.

Freon-12 was detected in groundwater samples collected from monitoring wells MW-213, MW-214, and MW-216 at concentrations ranging from 3.9 ug/L (MW-216 September 2020) to 74 ug/L (MW-213 March 2020). Freon-12 concentrations detected during the April 2021 sampling event have declined in MW-213, MW-214, and MW-216 in comparison with the March 2020 sampling event. Freon-12 was not detected in MW-217 during the March 2020, September 2020, and April 2021 sampling events. No Freon 12 exceedances were detected in monitoring wells MW-201, MW-203, MW-204, MW-206, MW-207, MW-210, MW-211, or MW-217 during this monitoring period.

**Soil Vapor**

The April 2021 soil vapor sampling event identified detections of Freon-11 in vapor points SMPV-1, SMPV-2, SMPV-3, SMPV-10, SMPV-11, SMPV-13, and SMPV-14 at concentrations ranging from 1.21 ug/m3 (SMPV-3) to 447 ug/m3 (SMPV-14). Freon-11 concentrations detected during the April 2021 sampling event have declined in SMPV-1, SMPV-2, SMPV-11, and SMPV-14 in comparison with the February 2019 sampling event. Freon-11 soil vapor concentrations have declined in vapor points SMPV-3, SMPV-10 in comparison with the December 2018 sampling event. Freon 11 soil vapor concentrations have increased in vapor point SMPV-13 in comparison with the November 2018 sampling event.

Freon-12 was detected in soil vapor points SMPV-1, SMPV-2, SMPV-3, SMPV-10, SMPV-11, SMPV-13, and SMPV-14 at concentrations ranging from 2.24 ug/m3 (SMPV-3) to 447 ug/m3 (SMPV-14). Freon-12 concentrations detected during the April 2021 sampling event have declined in SMPV-1, SMPV-2, SMPV-11, and SMPV-14 in comparison with the February 2019 sampling event. Freon-11 soil vapor concentrations have increased in vapor point SMPV-13 in comparison with the November 2018 sampling event.

## Monitoring Deficiencies

All aspects of the monitoring plan were in accordance with NYDEC applicable regulations.

## Conclusions and Recommendations

All aspects of the remedial program appear to be meeting the site remedy design goal.

We recommend the following for the next reporting period:

- Groundwater monitoring of the onsite monitoring well network including MW-203, MW-204, MW-206, MW-207, MW-213, MW-214, MW-216, and MW-217 for VOCs and PFAS on a semi-annual basis (2 times per year).
- There were no exceedances detected in monitoring wells MW-201, MW-205, MW-210, or MW-211 during this monitoring period. Therefore, SESI recommends no further sampling of these well.
- Soil vapor monitoring of the onsite vapor monitoring networks including SMPV-1, SMPV-2, SMPV-3, SMPV-10, SMPV-12, SMPV-11, SMPV-13, and SMPV-14 on an annual basis (1 time per year).

## 6.0 OPERATION AND MAINTENANCE PLAN COMPLIANCE

The site remedy does not rely on any mechanical systems, such as sub-slab depressurization systems or air sparge/ soil vapor extraction systems, to protect public health and the environment. Therefore, the operation and maintenance of such components is not applicable.

## 7.0 CONCLUSIONS AND RECOMMENDATIONS

**Compliance with the SMP**

All aspects of the SMP, including IC/EC and monitoring, have met the requirements. The O&M is not required at this time for the site.

There are no new exposure pathways resulting in an unacceptable risk.

**Performance and Effectiveness of the Remedy**

The sampling of the monitoring well network is determining the effectiveness of the Site's ability to naturally degrade the contaminants of concern in groundwater.

**Future PRR Submittals**

The next PRR will be submitted in May 2022.

### Recommendations

We recommend the following for the next reporting period:

- Groundwater monitoring of the onsite monitoring well network including MW-203, MW-204, MW-206, MW-207, MW-213, MW-214, MW-216, and MW-217 for VOCs and PFAS on a semi-annual basis (2 times per year).
- There were no exceedances detected in monitoring wells MW-201, MW-205, MW-210, or MW-211 during this monitoring period. Therefore, SESI recommends no further sampling of these well.
- Soil vapor monitoring of the onsite vapor monitoring networks including SMPV-1, SMPV-2, SMPV-3, SMPV-10, SMPV-12, SMPV-11, SMPV-13, and SMPV-14 on an annual basis (1 time per year).

**TABLE 3.1**
**SUMMARY OF GROUNDWATER ANALYTICAL RESULTS**
**FORMER GROSSINERS RESORT, LIBERTY NEW YORK**

| LOCATION | | | | MW-209 | | MW-210 | | MW-210 | | MW-210 | | MW-211 | | MW-211 | | MW-211 | | MW-213 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SAMPLING DATE | | | | 4/28/2021 | | 3/6/2020 | | 9/3/2020 | | 4/29/2021 | | 3/6/2020 | | 9/3/2020 | | 4/28/2021 | | 3/4/2020 | |
| LAB SAMPLE ID | | | | L2121852-03 | | L2010346-06 | | 460-217659-3 | | L2122071-01 | | L2010346-04 | | 460-217659-4 | | L2121852-04 | | L2009793-01 | |
| SAMPLE TYPE | | | | WATER | | WATER | | WATER | | WATER | | WATER | | WATER | | WATER | | WATER | |
| | CasNum | NY-AWQS | Units | Results | Qual | Results | Qual | Results | Qual | Results | Qual | Results | Qual | Results | Qual | Results | Qual | Results | Qual |
| **Volatile Organics by GC/MS** | | | | | | | | | | | | | | | | | | | |
| Ethylbenzene | 100-41-4 | 5 | ug/l | 2.5 | U | 2.5 | U | 0.3 | U | 2.5 | U | 2.5 | U | 0.3 | U | 2.5 | U | 2.5 | U |
| Styrene | 100-42-5 | 5 | ug/l | 2.5 | U | 2.5 | U | 0.42 | U | 2.5 | U | 2.5 | U | 0.42 | U | 2.5 | U | 2.5 | U |
| cis-1,3-Dichloropropene | 10061-01-5 | 0.4 | ug/l | 0.5 | U | 0.5 | U | 0.22 | U | 0.5 | U | 0.5 | U | 0.22 | U | 0.5 | U | 0.5 | U |
| trans-1,3-Dichloropropene | 10061-02-6 | 0.4 | ug/l | 0.5 | U | 0.5 | U | 0.49 | U | 0.5 | U | 0.5 | U | 0.49 | U | 0.5 | U | 0.5 | U |
| n-Propylbenzene | 103-65-1 | 5 | ug/l | 2.5 | U | 2.5 | U | - | | 2.5 | U | 2.5 | U | - | | 2.5 | U | 2.5 | U |
| n-Butylbenzene | 104-51-8 | 5 | ug/l | 2.5 | U | 2.5 | U | - | | 2.5 | U | 2.5 | U | - | | 2.5 | U | 2.5 | U |
| p-Diethylbenzene | 105-05-5 | | ug/l | 2 | U | 2 | U | - | | 2 | U | 2 | U | - | | 2 | U | 2 | U |
| p-Chlorotoluene | 106-43-4 | 5 | ug/l | 2.5 | U | 2.5 | U | - | | 2.5 | U | 2.5 | U | - | | 2.5 | U | 2.5 | U |
| 1,4-Dichlorobenzene | 106-46-7 | 3 | ug/l | 2.5 | U | 2.5 | U | 0.33 | U | 2.5 | U | 2.5 | U | 0.33 | U | 2.5 | U | 2.5 | U |
| 1,2-Dibromoethane | 106-93-4 | 0.0006 | ug/l | 2 | U | 2 | U | 0.5 | U | 2 | U | 2 | U | 0.5 | U | 2 | U | 2 | U |
| 1,2-Dichloroethane | 107-06-2 | 0.6 | ug/l | 0.5 | U | 0.5 | U | 0.43 | U * | 0.5 | U | 0.5 | U | 0.43 | U * | 0.5 | U | 0.5 | U |
| Acrylonitrile | 107-13-1 | 5 | ug/l | 5 | U | 5 | U | - | | 5 | U | 5 | U | - | | 5 | U | 5 | U |
| Vinyl acetate | 108-05-4 | | ug/l | 5 | U | 5 | U | - | | 5 | U | 5 | U | - | | 5 | U | 5 | U |
| 4-Methyl-2-pentanone | 108-10-1 | | ug/l | 5 | U | 5 | U | 1.3 | U | 5 | U | 5 | U | 1.3 | U | 5 | U | 5 | U |
| 1,3,5-Trimethylbenzene | 108-67-8 | 5 | ug/l | 2.5 | U | 2.5 | U | - | | 2.5 | U | 2.5 | U | - | | 2.5 | U | 2.5 | U |
| Bromobenzene | 108-86-1 | 5 | ug/l | 2.5 | U | 2.5 | U | - | | 2.5 | U | 2.5 | U | - | | 2.5 | U | 2.5 | U |
| Toluene | 108-88-3 | 5 | ug/l | 2.5 | U | 2.5 | U | 0.38 | U | 2.5 | U | 2.5 | U | 0.38 | U | 2.5 | U | 2.5 | U |
| Chlorobenzene | 108-90-7 | 5 | ug/l | 2.5 | U | 2.5 | U | 0.38 | U | 2.5 | U | 2.5 | U | 0.38 | U | 2.5 | U | 2.5 | U |
| trans-1,4-Dichloro-2-butene | 110-57-6 | 5 | ug/l | 2.5 | U | 2.5 | U | - | | 2.5 | U | 2.5 | U | - | | 2.5 | U | 2.5 | U |
| 1,2,4-Trichlorobenzene | 120-82-1 | 5 | ug/l | 2.5 | U | 2.5 | U | 0.37 | U | 2.5 | U | 2.5 | U | 0.37 | U | 2.5 | U | 2.5 | U |
| 1,4-Dioxane | 123-91-1 | | ug/l | 250 | U | 250 | U | 28 | U | 250 | U | 250 | U | 28 | U | 250 | U | 250 | U |
| Dibromochloromethane | 124-48-1 | 50 | ug/l | 0.5 | U | 0.5 | U | 0.28 | U | 0.5 | U | 0.5 | U | 0.28 | U | 0.5 | U | 0.5 | U |
| Tetrachloroethene | 127-18-4 | 5 | ug/l | 0.5 | U | 0.5 | U | 0.25 | U | 0.5 | U | 0.5 | U | 0.25 | U | 0.5 | U | 0.5 | U |
| Xylenes, Total | 1330-20-7 | | ug/l | 2.5 | U | 2.5 | U | - | | 2.5 | U | 2.5 | U | - | | 2.5 | U | 2.5 | U |
| sec-Butylbenzene | 135-98-8 | 5 | ug/l | 2.5 | U | 2.5 | U | - | | 2.5 | U | 2.5 | U | - | | 2.5 | U | 2.5 | U |
| 1,3-Dichloropropane | 142-28-9 | 5 | ug/l | 2.5 | U | 2.5 | U | - | | 2.5 | U | 2.5 | U | - | | 2.5 | U | 2.5 | U |
| cis-1,2-Dichloroethene | 156-59-2 | 5 | ug/l | 2.5 | U | 2.5 | U | 0.22 | U | 2.5 | U | 2.5 | U | 0.22 | U | 2.5 | U | 2.5 | U |
| trans-1,2-Dichloroethene | 156-60-5 | 5 | ug/l | 2.5 | U | 2.5 | U | 0.24 | U | 2.5 | U | 2.5 | U | 0.24 | U | 2.5 | U | 2.5 | U |
| Methyl tert butyl ether | 1634-04-4 | 10 | ug/l | 2.5 | U | 2.5 | U | 0.47 | U | 2.5 | U | 2.5 | U | 0.47 | U | 2.5 | U | 2.5 | U |
| p/m-Xylene | 179601-23-1 | 5 | ug/l | 2.5 | U | 2.5 | U | 0.3 | U | 2.5 | U | 2.5 | U | 0.3 | U | 2.5 | U | 2.5 | U |
| 1,2-Dichloroethene, Total | 540-59-0 | | ug/l | 2.5 | U | 2.5 | U | - | | 2.5 | U | 2.5 | U | - | | 2.5 | U | 2.5 | U |
| 1,3-Dichlorobenzene | 541-73-1 | 3 | ug/l | 2.5 | U | 2.5 | U | 0.34 | U | 2.5 | U | 2.5 | U | 0.34 | U | 2.5 | U | 2.5 | U |
| 1,3-Dichloropropene, Total | 542-75-6 | | ug/l | 0.5 | U | 0.5 | U | | | 0.5 | U | 0.5 | U | - | | 0.5 | U | 0.5 | U |
| Carbon tetrachloride | 56-23-5 | 5 | ug/l | 0.5 | U | 0.5 | U | 0.21 | U | 0.5 | U | 0.5 | U | 0.21 | U | 0.5 | U | 0.5 | U |
| 1,1-Dichloropropene | 563-58-6 | 5 | ug/l | 2.5 | U | 2.5 | U | - | | 2.5 | U | 2.5 | U | | | 2.5 | U | 2.5 | U |
| 2-Hexanone | 591-78-6 | 50 | ug/l | 5 | U | 5 | U | 1.1 | U | 5 | U | 5 | U | 1.1 | U | 5 | U | 5 | U |
| 2,2-Dichloropropane | 594-20-7 | 5 | ug/l | 2.5 | U | 2.5 | U | - | | 2.5 | U | 2.5 | U | - | | 2.5 | U | 2.5 | U |
| Ethyl ether | 60-29-7 | | ug/l | 2.5 | U | 2.5 | U | - | | 2.5 | U | 2.5 | U | - | | 2.5 | U | 2.5 | U |
| p-Ethyltoluene | 622-96-8 | | ug/l | 2 | U | 2 | U | - | | 2 | U | 2 | U | - | | 2 | U | 2 | U |
| 1,1,1,2-Tetrachloroethane | 630-20-6 | 5 | ug/l | 2.5 | U | 2.5 | U | - | | 2.5 | U | 2.5 | U | - | | 2.5 | U | 2.5 | U |
| Acetone | 67-64-1 | 50 | ug/l | 5 | U | 5 | U | 4.4 | U | 5 | U | 5 | U | 4.4 | U | 5 | U | 5 | U |
| Chloroform | 67-66-3 | 7 | ug/l | 2.5 | U | 2.5 | U | 0.33 | U | 2.5 | U | 2.5 | U | 0.33 | U | 2.5 | U | 2.5 | U |
| Benzene | 71-43-2 | 1 | ug/l | 0.5 | U | 0.5 | U | 0.2 | U | 0.5 | U | 0.5 | U | 0.2 | U | 0.5 | U | 0.5 | U |

**TABLE 3.1**
**SUMMARY OF GROUNDWATER ANALYTICAL RESULTS**
**FORMER GROSSINERS RESORT, LIBERTY NEW YORK**

| LOCATION | | | | MW-209 | | MW-210 | | MW-210 | | MW-210 | | MW-211 | | MW-211 | | MW-211 | | MW-213 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SAMPLING DATE | | | | 4/28/2021 | | 3/6/2020 | | 9/3/2020 | | 4/29/2021 | | 3/6/2020 | | 9/3/2020 | | 4/28/2021 | | 3/4/2020 | |
| LAB SAMPLE ID | | | | L2121852-03 | | L2010346-06 | | 460-217659-3 | | L2122071-01 | | L2010346-04 | | 460-217659-4 | | L2121852-04 | | L2009793-01 | |
| SAMPLE TYPE | | | | WATER | | WATER | | WATER | | WATER | | WATER | | WATER | | WATER | | WATER | |
| | CasNum | NY-AWQS | Units | Results | Qual | Results | Qual | Results | Qual | Results | Qual | Results | Qual | Results | Qual | Results | Qual | Results | Qual |
| 1,1,1-Trichloroethane | 71-55-6 | 5 | ug/l | 2.5 | U | 2.5 | U | 0.24 | U | 2.5 | U | 2.5 | U | 0.24 | U | 2.5 | U | 2.5 | U |
| Bromomethane | 74-83-9 | 5 | ug/l | 2.5 | U | 2.5 | U | 0.55 | U | 2.5 | U | 2.5 | U | 0.55 | U | 2.5 | U | 2.5 | U |
| Chloromethane | 74-87-3 | | ug/l | 2.5 | U | 2.5 | U | 0.4 | U | 2.5 | U | 2.5 | U | 0.4 | U | 2.5 | U | 2.5 | U |
| Dibromomethane | 74-95-3 | 5 | ug/l | 5 | U | 5 | U | - | | 5 | U | 5 | U | - | | 5 | U | 5 | U |
| Bromochloromethane | 74-97-5 | 5 | ug/l | 2.5 | U | 2.5 | U | 0.41 | U | 2.5 | U | 2.5 | U | 0.41 | U | 2.5 | U | 2.5 | U |
| Chloroethane | 75-00-3 | 5 | ug/l | 2.5 | U | 2.5 | U | 0.32 | U | 2.5 | U | 2.5 | U | 0.32 | U | 2.5 | U | 2.5 | U |
| Vinyl chloride | 75-01-4 | 2 | ug/l | 1 | U | 1 | U | 0.17 | U | 1 | U | 1 | U | 0.17 | U | 1 | U | 1 | U |
| Methylene chloride | 75-09-2 | 5 | ug/l | 2.5 | U | 2.5 | U | 0.32 | U | 2.5 | U | 2.5 | U | 0.32 | U | 2.5 | U | 2.5 | U |
| Carbon disulfide | 75-15-0 | 60 | ug/l | 5 | U | 5 | U | 0.82 | U | 5 | U | 5 | U | 0.82 | U | 5 | U | 5 | U |
| Bromoform | 75-25-2 | 50 | ug/l | 2 | U | 2 | U | 0.54 | U | 2 | U | 2 | U | 0.54 | U | 2 | U | 2 | U |
| Bromodichloromethane | 75-27-4 | 50 | ug/l | 0.5 | U | 0.5 | U | 0.34 | U | 0.5 | U | 0.5 | U | 0.34 | U | 0.5 | U | 0.5 | U |
| 1,1-Dichloroethane | 75-34-3 | 5 | ug/l | 2.5 | U | 2.5 | U | 0.26 | U | 2.5 | U | 2.5 | U | 0.26 | U | 2.5 | U | 2.5 | U |
| 1,1-Dichloroethene | 75-35-4 | 5 | ug/l | 0.5 | U | 0.5 | U | 0.26 | U | 0.5 | U | 0.5 | U | 0.26 | U | 0.5 | U | 0.5 | U |
| Trichlorofluoromethane | 75-69-4 | 5 | ug/l | 2.5 | U | 2.5 | U | 0.32 | U | 2.5 | U | 2.5 | U | 0.32 | U | 2.5 | U | **71** | |
| Dichlorodifluoromethane | 75-71-8 | 5 | ug/l | 5 | U | 5 | U | 0.31 | U | 5 | U | 5 | U | 0.31 | U | 5 | U | **74** | |
| 1,2-Dichloropropane | 78-87-5 | 1 | ug/l | 1 | U | 1 | U | 0.35 | U | 1 | U | 1 | U | 0.35 | U | 1 | U | 1 | U |
| 2-Butanone | 78-93-3 | 50 | ug/l | 5 | U | 5 | U | 1.9 | U | 5 | U | 5 | U | 1.9 | U | 5 | U | 5 | U |
| 1,1,2-Trichloroethane | 79-00-5 | 1 | ug/l | 1.5 | U | 1.5 | U | 0.43 | U | 1.5 | U | 1.5 | U | 0.43 | U | 1.5 | U | 1.5 | U |
| Trichloroethene | 79-01-6 | 5 | ug/l | 0.5 | U | 0.5 | U | 0.31 | U | 0.5 | U | 0.5 | U | 0.31 | U | 0.5 | U | 0.5 | U |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | 5 | ug/l | 0.5 | U | 0.5 | U | 0.37 | U | 0.5 | U | 0.5 | U | 0.37 | U | 0.5 | U | 0.5 | U |
| 1,2,3-Trichlorobenzene | 87-61-6 | 5 | ug/l | 2.5 | U | 2.5 | U | 0.36 | U | 2.5 | U | 2.5 | U | 0.36 | U | 2.5 | U | 2.5 | U |
| Hexachlorobutadiene | 87-68-3 | 0.5 | ug/l | 2.5 | U | 2.5 | U | - | | 2.5 | U | 2.5 | U | - | | 2.5 | U | 2.5 | U |
| Naphthalene | 91-20-3 | 10 | ug/l | 2.5 | U | 2.5 | U | - | | 2.5 | U | 2.5 | U | - | | 2.5 | U | 2.5 | U |
| o-Xylene | 95-47-6 | 5 | ug/l | 2.5 | U | 2.5 | U | 0.36 | U | 2.5 | U | 2.5 | U | 0.36 | U | 2.5 | U | 2.5 | U |
| o-Chlorotoluene | 95-49-8 | 5 | ug/l | 2.5 | U | 2.5 | U | - | | 2.5 | U | 2.5 | U | | | 2.5 | U | 2.5 | U |
| 1,2-Dichlorobenzene | 95-50-1 | 3 | ug/l | 2.5 | U | 2.5 | U | 0.43 | U | 2.5 | U | 2.5 | U | 0.43 | U | 2.5 | U | 2.5 | U |
| 1,2,4-Trimethylbenzene | 95-63-6 | 5 | ug/l | 2.5 | U | 2.5 | U | - | | 2.5 | U | 2.5 | U | - | | 2.5 | U | 2.5 | U |
| 1,2,4,5-Tetramethylbenzene | 95-93-2 | 5 | ug/l | 2 | U | 2 | U | - | | 2 | U | 2 | U | - | | 2 | U | 2 | U |
| 1,2-Dibromo-3-chloropropane | 96-12-8 | 0.04 | ug/l | 2.5 | U | 2.5 | U | 0.38 | U | 2.5 | U | 2.5 | U | 0.38 | U | 2.5 | U | 2.5 | U |
| 1,2,3-Trichloropropane | 96-18-4 | 0.04 | ug/l | 2.5 | U | 2.5 | U | - | | 2.5 | U | 2.5 | U | - | | 2.5 | U | 2.5 | U |
| tert-Butylbenzene | 98-06-6 | 5 | ug/l | 2.5 | U | 2.5 | U | - | | 2.5 | U | 2.5 | U | - | | 2.5 | U | 2.5 | U |
| Isopropylbenzene | 98-82-8 | 5 | ug/l | 2.5 | U | 2.5 | U | 0.34 | U | 2.5 | U | 2.5 | U | 0.34 | U | 2.5 | U | 2.5 | U |
| p-Isopropyltoluene | 99-87-6 | 5 | ug/l | 2.5 | U | 2.5 | U | - | | 2.5 | U | 2.5 | U | - | | 2.5 | U | 2.5 | U |

**TABLE 3.1**
**SUMMARY OF GROUNDWATER ANALYTICAL RESULTS**
**FORMER GROSSINERS RESORT, LIBERTY NEW YORK**

| LOCATION | | | | MW-213 | | MW-214 | | MW-214 | | MW-214 | | MW-216 | | MW-216 | | MW-216 | | MW-217 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SAMPLING DATE | | | | 4/27/2021 | | 3/4/2020 | | 9/3/2020 | | 4/27/2021 | | 3/6/2020 | | 9/3/2020 | | 4/28/2021 | | 3/6/2020 | |
| LAB SAMPLE ID | | | | L2121570-02 | | L2009793-02 | | 460-217659-5 | | L2121570-01 | | L2010346-01 | | 460-217659-6 | | L2121852-05 | | L2010346-02 | |
| SAMPLE TYPE | | | | WATER | | WATER | | WATER | | WATER | | WATER | | WATER | | WATER | | WATER | |
| | CasNum | NY-AWQS | Units | Results | Qual | Results | Qual | Results | Qual | Results | Qual | Results | Qual | Results | Qual | Results | Qual | Results | Qual |
| **Volatile Organics by GC/MS** | | | | | | | | | | | | | | | | | | | |
| Ethylbenzene | 100-41-4 | 5 | ug/l | 2.5 | U | 2.5 | U | 0.3 | U | 2.5 | U | 2.5 | U | 0.3 | U | 2.5 | U | 2.5 | U |
| Styrene | 100-42-5 | 5 | ug/l | 2.5 | U | 2.5 | U | 0.42 | U | 2.5 | U | 2.5 | U | 0.42 | U | 2.5 | U | 2.5 | U |
| cis-1,3-Dichloropropene | 10061-01-5 | 0.4 | ug/l | 0.5 | U | 0.5 | U | 0.22 | U | 0.5 | U | 0.5 | U | 0.22 | U | 0.5 | U | 0.5 | U |
| trans-1,3-Dichloropropene | 10061-02-6 | 0.4 | ug/l | 0.5 | U | 0.5 | U | 0.49 | U | 0.5 | U | 0.5 | U | 0.49 | U | 0.5 | U | 0.5 | U |
| n-Propylbenzene | 103-65-1 | 5 | ug/l | 2.5 | U | 2.5 | U | - | | 2.5 | U | 2.5 | U | - | | 2.5 | U | 2.5 | U |
| n-Butylbenzene | 104-51-8 | 5 | ug/l | 2.5 | U | 2.5 | U | - | | 2.5 | U | 2.5 | U | - | | 2.5 | U | 2.5 | U |
| p-Diethylbenzene | 105-05-5 | | ug/l | 2 | U | 2 | U | - | | 2 | U | 2 | U | - | | 2 | U | 2 | U |
| p-Chlorotoluene | 106-43-4 | 5 | ug/l | 2.5 | U | 2.5 | U | - | | 2.5 | U | 2.5 | U | - | | 2.5 | U | 2.5 | U |
| 1,4-Dichlorobenzene | 106-46-7 | 3 | ug/l | 2.5 | U | 2.5 | U | 0.33 | U | 2.5 | U | 2.5 | U | 0.33 | U | 2.5 | U | 2.5 | U |
| 1,2-Dibromoethane | 106-93-4 | 0.0006 | ug/l | 2 | U | 2 | U | 0.5 | U | 2 | U | 2 | U | 0.5 | U | 2 | U | 2 | U |
| 1,2-Dichloroethane | 107-06-2 | 0.6 | ug/l | 0.5 | U | 0.5 | U | 0.43 | U * | 0.5 | U | 0.5 | U | 0.43 | U * | 0.5 | U | 0.5 | U |
| Acrylonitrile | 107-13-1 | 5 | ug/l | 5 | U | 5 | U | - | | 5 | U | 5 | U | - | | 5 | U | 5 | U |
| Vinyl acetate | 108-05-4 | | ug/l | 5 | U | 5 | U | - | | 5 | U | 5 | U | - | | 5 | U | 5 | U |
| 4-Methyl-2-pentanone | 108-10-1 | | ug/l | 5 | U | 5 | U | 1.3 | U | 5 | U | 5 | U | 1.3 | U | 5 | U | 5 | U |
| 1,3,5-Trimethylbenzene | 108-67-8 | 5 | ug/l | 2.5 | U | 2.5 | U | - | | 2.5 | U | 2.5 | U | - | | 2.5 | U | 2.5 | U |
| Bromobenzene | 108-86-1 | 5 | ug/l | 2.5 | U | 2.5 | U | - | | 2.5 | U | 2.5 | U | - | | 2.5 | U | 2.5 | U |
| Toluene | 108-88-3 | 5 | ug/l | 2.5 | U | 2.5 | U | 0.38 | U | 2.5 | U | 2.5 | U | 0.38 | U | 2.5 | U | 2.5 | U |
| Chlorobenzene | 108-90-7 | 5 | ug/l | 2.5 | U | 2.5 | U | 0.38 | U | 2.5 | U | 2.5 | U | 0.38 | U | 2.5 | U | 2.5 | U |
| trans-1,4-Dichloro-2-butene | 110-57-6 | 5 | ug/l | 2.5 | U | 2.5 | U | - | | 2.5 | U | 2.5 | U | | | 2.5 | U | 2.5 | U |
| 1,2,4-Trichlorobenzene | 120-82-1 | 5 | ug/l | 2.5 | U | 2.5 | U | 0.37 | U | 2.5 | U | 2.5 | U | 0.37 | U | 2.5 | U | 2.5 | U |
| 1,4-Dioxane | 123-91-1 | | ug/l | 250 | U | 250 | U | 28 | U | 250 | U | 250 | U | 28 | U | 250 | U | 250 | U |
| Dibromochloromethane | 124-48-1 | 50 | ug/l | 0.5 | U | 0.5 | U | 0.28 | U | 0.5 | U | 0.5 | U | 0.28 | U | 0.5 | U | 0.5 | U |
| Tetrachloroethene | 127-18-4 | 5 | ug/l | 0.5 | U | 0.5 | U | 0.25 | U | 0.5 | U | 0.5 | U | 0.25 | U | 0.5 | U | 0.5 | U |
| Xylenes, Total | 1330-20-7 | | ug/l | 2.5 | U | 2.5 | U | - | | 2.5 | U | 2.5 | U | - | | 2.5 | U | 2.5 | U |
| sec-Butylbenzene | 135-98-8 | 5 | ug/l | 2.5 | U | 2.5 | U | - | | 2.5 | U | 2.5 | U | - | | 2.5 | U | 2.5 | U |
| 1,3-Dichloropropane | 142-28-9 | 5 | ug/l | 2.5 | U | 2.5 | U | - | | 2.5 | U | 2.5 | U | - | | 2.5 | U | 2.5 | U |
| cis-1,2-Dichloroethene | 156-59-2 | 5 | ug/l | 2.5 | U | 2.5 | U | 0.22 | U | 2.5 | U | 2.5 | U | 0.22 | U | 2.5 | U | 2.5 | U |
| trans-1,2-Dichloroethene | 156-60-5 | 5 | ug/l | 2.5 | U | 2.5 | U | 0.24 | U | 2.5 | U | 2.5 | U | 0.24 | U | 2.5 | U | 2.5 | U |
| Methyl tert butyl ether | 1634-04-4 | 10 | ug/l | 2.5 | U | 2.5 | U | 0.47 | U | 2.5 | U | 2.5 | U | 0.47 | U | 2.5 | U | 2.5 | U |
| p/m-Xylene | 179601-23-1 | 5 | ug/l | 2.5 | U | 2.5 | U | 0.3 | U | 2.5 | U | 2.5 | U | 0.3 | U | 2.5 | U | 2.5 | U |
| 1,2-Dichloroethene, Total | 540-59-0 | | ug/l | 2.5 | U | 2.5 | U | - | | 2.5 | U | 2.5 | U | - | | 2.5 | U | 2.5 | U |
| 1,3-Dichlorobenzene | 541-73-1 | 3 | ug/l | 2.5 | U | 2.5 | U | 0.34 | U | 2.5 | U | 2.5 | U | 0.34 | U | 2.5 | U | 2.5 | U |
| 1,3-Dichloropropene, Total | 542-75-6 | | ug/l | 0.5 | U | 0.5 | U | - | | 0.5 | U | 0.5 | U | - | | 0.5 | U | 0.5 | U |
| Carbon tetrachloride | 56-23-5 | 5 | ug/l | 0.5 | U | 0.5 | U | 0.21 | U | 0.5 | U | 0.5 | U | 0.21 | U | 0.5 | U | 0.5 | U |
| 1,1-Dichloropropene | 563-58-6 | 5 | ug/l | 2.5 | U | 2.5 | U | - | | 2.5 | U | 2.5 | U | | | 2.5 | U | 2.5 | U |
| 2-Hexanone | 591-78-6 | 50 | ug/l | 5 | U | 5 | U | 1.1 | U | 5 | U | 5 | U | 1.1 | U | 5 | U | 5 | U |
| 2,2-Dichloropropane | 594-20-7 | 5 | ug/l | 2.5 | U | 2.5 | U | - | | 2.5 | U | 2.5 | U | - | | 2.5 | U | 2.5 | U |
| Ethyl ether | 60-29-7 | | ug/l | 2.5 | U | 2.5 | U | - | | 2.5 | U | 2.5 | U | - | | 2.5 | U | 2.5 | U |
| p-Ethyltoluene | 622-96-8 | | ug/l | 2 | U | 2 | U | - | | 2 | U | 2 | U | - | | 2 | U | 2 | U |
| 1,1,1,2-Tetrachloroethane | 630-20-6 | 5 | ug/l | 2.5 | U | 2.5 | U | - | | 2.5 | U | 2.5 | U | - | | 2.5 | U | 2.5 | U |
| Acetone | 67-64-1 | 50 | ug/l | 5 | U | 5 | U | 4.4 | U | 5 | U | 5 | U | 4.4 | U | 5 | U | 5 | U |
| Chloroform | 67-66-3 | 7 | ug/l | 2.5 | U | 2.5 | U | 0.33 | U | 2.5 | U | 2.5 | U | 0.33 | U | 2.5 | U | 2.5 | U |
| Benzene | 71-43-2 | 1 | ug/l | 0.5 | U | 0.5 | U | 0.2 | U | 0.5 | U | 0.5 | U | 0.2 | U | 0.5 | U | 0.5 | U |

**TABLE 3.1**
**SUMMARY OF GROUNDWATER ANALYTICAL RESULTS**
**FORMER GROSSINERS RESORT, LIBERTY NEW YORK**

| LOCATION | | | | MW-213 | | MW-214 | | MW-214 | | MW-214 | | MW-216 | | MW-216 | | MW-216 | | MW-217 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SAMPLING DATE | | | | 4/27/2021 | | 3/4/2020 | | 9/3/2020 | | 4/27/2021 | | 3/6/2020 | | 9/3/2020 | | 4/28/2021 | | 3/6/2020 | |
| LAB SAMPLE ID | | | | L2121570-02 | | L2009793-02 | | 460-217659-5 | | L2121570-01 | | L2010346-01 | | 460-217659-6 | | L2121852-05 | | L2010346-02 | |
| SAMPLE TYPE | | | | WATER | | WATER | | WATER | | WATER | | WATER | | WATER | | WATER | | WATER | |
| | CasNum | NY-AWQS | Units | Results | Qual | Results | Qual | Results | Qual | Results | Qual | Results | Qual | Results | Qual | Results | Qual | Results | Qual |
| 1,1,1-Trichloroethane | 71-55-6 | 5 | ug/l | 2.5 | U | 2.5 | U | 0.24 | U | 2.5 | U | 2.5 | U | 0.24 | U | 2.5 | U | 2.5 | U |
| Bromomethane | 74-83-9 | 5 | ug/l | 2.5 | U | 2.5 | U | 0.55 | U | 2.5 | U | 2.5 | U | 0.55 | U | 2.5 | U | 2.5 | U |
| Chloromethane | 74-87-3 | | ug/l | 2.5 | U | 2.5 | U | 0.4 | U | 2.5 | U | 2.5 | U | 0.4 | U | 2.5 | U | 2.5 | U |
| Dibromomethane | 74-95-3 | 5 | ug/l | 5 | U | 5 | U | - | | 5 | U | 5 | U | - | | 5 | U | 5 | U |
| Bromochloromethane | 74-97-5 | 5 | ug/l | 2.5 | U | 2.5 | U | 0.41 | U | 2.5 | U | 2.5 | U | 0.41 | U | 2.5 | U | 2.5 | U |
| Chloroethane | 75-00-3 | 5 | ug/l | 2.5 | U | 2.5 | U | 0.32 | U | 2.5 | U | 2.5 | U | 0.32 | U | 2.5 | U | 2.5 | U |
| Vinyl chloride | 75-01-4 | 2 | ug/l | 1 | U | 1 | U | 0.17 | U | 1 | U | 1 | U | 0.17 | U | 1 | U | 1 | U |
| Methylene chloride | 75-09-2 | 5 | ug/l | 2.5 | U | 2.5 | U | 0.32 | U | 2.5 | U | 2.5 | U | 0.32 | U | 2.5 | U | 2.5 | U |
| Carbon disulfide | 75-15-0 | 60 | ug/l | 5 | U | 5 | U | 0.82 | U | 5 | U | 5 | U | 0.82 | U | 5 | U | 5 | U |
| Bromoform | 75-25-2 | 50 | ug/l | 2 | U | 2 | U | 0.54 | U | 2 | U | 2 | U | 0.54 | U | 2 | U | 2 | U |
| Bromodichloromethane | 75-27-4 | 50 | ug/l | 0.5 | U | 0.5 | U | 0.34 | U | 0.5 | U | 0.5 | U | 0.34 | U | 0.5 | U | 0.5 | U |
| 1,1-Dichloroethane | 75-34-3 | 5 | ug/l | 2.5 | U | 2.5 | U | 0.26 | U | 2.5 | U | 2.5 | U | 0.26 | U | 2.5 | U | 2.5 | U |
| 1,1-Dichloroethene | 75-35-4 | 5 | ug/l | 0.5 | U | 0.5 | U | 0.26 | U | 0.5 | U | 0.5 | U | 0.26 | U | 0.5 | U | 0.5 | U |
| Trichlorofluoromethane | 75-69-4 | 5 | ug/l | **52** | | **10** | | **5.1** | | **5.4** | | **48** | | **6.9** | | **29** | | **22** | |
| Dichlorodifluoromethane | 75-71-8 | 5 | ug/l | **54** | | **27** | | **16** | | **21** | | **15** | | **3.9** | | **11** | | 5 | U |
| 1,2-Dichloropropane | 78-87-5 | 1 | ug/l | 1 | U | 1 | U | 0.35 | U | 1 | U | 1 | U | 0.35 | U | 1 | U | 1 | U |
| 2-Butanone | 78-93-3 | 50 | ug/l | 5 | U | 5 | U | 1.9 | U | 5 | U | 5 | U | 1.9 | U | 5 | U | 5 | U |
| 1,1,2-Trichloroethane | 79-00-5 | 1 | ug/l | 1.5 | U | 1.5 | U | 0.43 | U | 1.5 | U | 1.5 | U | 0.43 | U | 1.5 | U | 1.5 | U |
| Trichloroethene | 79-01-6 | 5 | ug/l | 0.5 | U | 0.5 | U | 0.31 | U | 0.5 | U | 0.5 | U | 0.31 | U | 0.5 | U | 0.5 | U |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | 5 | ug/l | 0.5 | U | 0.5 | U | 0.37 | U | 0.5 | U | 0.5 | U | 0.37 | U | 0.5 | U | 0.5 | U |
| 1,2,3-Trichlorobenzene | 87-61-6 | 5 | ug/l | 2.5 | U | 2.5 | U | 0.36 | U | 2.5 | U | 2.5 | U | 0.36 | U | 2.5 | U | 2.5 | U |
| Hexachlorobutadiene | 87-68-3 | 0.5 | ug/l | 2.5 | U | 2.5 | U | - | | 2.5 | U | 2.5 | U | - | | 2.5 | U | 2.5 | U |
| Naphthalene | 91-20-3 | 10 | ug/l | 2.5 | U | 2.5 | U | - | | 2.5 | U | 2.5 | U | - | | 2.5 | U | 2.5 | U |
| o-Xylene | 95-47-6 | 5 | ug/l | 2.5 | U | 2.5 | U | 0.36 | U | 2.5 | U | 2.5 | U | 0.36 | U | 2.5 | U | 2.5 | U |
| o-Chlorotoluene | 95-49-8 | 5 | ug/l | 2.5 | U | 2.5 | U | - | | 2.5 | U | 2.5 | U | | | 2.5 | U | 2.5 | U |
| 1,2-Dichlorobenzene | 95-50-1 | 3 | ug/l | 2.5 | U | 2.5 | U | 0.43 | U | 2.5 | U | 2.5 | U | 0.43 | U | 2.5 | U | 2.5 | U |
| 1,2,4-Trimethylbenzene | 95-63-6 | 5 | ug/l | 2.5 | U | 2.5 | U | - | | 2.5 | U | 2.5 | U | - | | 2.5 | U | 2.5 | U |
| 1,2,4,5-Tetramethylbenzene | 95-93-2 | 5 | ug/l | 2 | U | 2 | U | - | | 2 | U | 2 | U | - | | 2 | U | 2 | U |
| 1,2-Dibromo-3-chloropropane | 96-12-8 | 0.04 | ug/l | 2.5 | U | 2.5 | U | 0.38 | U | 2.5 | U | 2.5 | U | 0.38 | U | 2.5 | U | 2.5 | U |
| 1,2,3-Trichloropropane | 96-18-4 | 0.04 | ug/l | 2.5 | U | 2.5 | U | - | | 2.5 | U | 2.5 | U | - | | 2.5 | U | 2.5 | U |
| tert-Butylbenzene | 98-06-6 | 5 | ug/l | 2.5 | U | 2.5 | U | - | | 2.5 | U | 2.5 | U | - | | 2.5 | U | 2.5 | U |
| Isopropylbenzene | 98-82-8 | 5 | ug/l | 2.5 | U | 2.5 | U | 0.34 | U | 2.5 | U | 2.5 | U | 0.34 | U | 2.5 | U | 2.5 | U |
| p-Isopropyltoluene | 99-87-6 | 5 | ug/l | 2.5 | U | 2.5 | U | - | | 2.5 | U | 2.5 | U | - | | 2.5 | U | 2.5 | U |

**TABLE 3.1**
**SUMMARY OF GROUNDWATER ANALYTICAL RESULTS**
**FORMER GROSSINERS RESORT, LIBERTY NEW YORK**

| LOCATION | | | | MW-217 | | MW-217 | |
|---|---|---|---|---|---|---|---|
| SAMPLING DATE | | | | 9/3/2020 | | 4/28/2021 | |
| LAB SAMPLE ID | | | | 460-217659-7 | | L2121852-06 | |
| SAMPLE TYPE | | | | WATER | | WATER | |
| | CasNum | NY-AWQS | Units | Results | Qual | Results | Qual |
| **Volatile Organics by GC/MS** | | | | | | | |
| Ethylbenzene | 100-41-4 | 5 | ug/l | 0.3 | U | 2.5 | U |
| Styrene | 100-42-5 | 5 | ug/l | 0.42 | U | 2.5 | U |
| cis-1,3-Dichloropropene | 10061-01-5 | 0.4 | ug/l | 0.22 | U | 0.5 | U |
| trans-1,3-Dichloropropene | 10061-02-6 | 0.4 | ug/l | 0.49 | U | 0.5 | U |
| n-Propylbenzene | 103-65-1 | 5 | ug/l | - | | 2.5 | U |
| n-Butylbenzene | 104-51-8 | 5 | ug/l | - | | 2.5 | U |
| p-Diethylbenzene | 105-05-5 | | ug/l | - | | 2 | U |
| p-Chlorotoluene | 106-43-4 | 5 | ug/l | - | | 2.5 | U |
| 1,4-Dichlorobenzene | 106-46-7 | 3 | ug/l | 0.33 | U | 2.5 | U |
| 1,2-Dibromoethane | 106-93-4 | 0.0006 | ug/l | 0.5 | U | 2 | U |
| 1,2-Dichloroethane | 107-06-2 | 0.6 | ug/l | 0.43 | U * | 0.5 | U |
| Acrylonitrile | 107-13-1 | 5 | ug/l | - | | 5 | U |
| Vinyl acetate | 108-05-4 | | ug/l | - | | 5 | U |
| 4-Methyl-2-pentanone | 108-10-1 | | ug/l | 1.3 | U | 5 | U |
| 1,3,5-Trimethylbenzene | 108-67-8 | 5 | ug/l | - | | 2.5 | U |
| Bromobenzene | 108-86-1 | 5 | ug/l | - | | 2.5 | U |
| Toluene | 108-88-3 | 5 | ug/l | 0.38 | U | 2.5 | U |
| Chlorobenzene | 108-90-7 | 5 | ug/l | 0.38 | U | 2.5 | U |
| trans-1,4-Dichloro-2-butene | 110-57-6 | 5 | ug/l | - | | 2.5 | U |
| 1,2,4-Trichlorobenzene | 120-82-1 | 5 | ug/l | 0.37 | U | 2.5 | U |
| 1,4-Dioxane | 123-91-1 | | ug/l | 28 | U | 250 | U |
| Dibromochloromethane | 124-48-1 | 50 | ug/l | 0.28 | U | 0.5 | U |
| Tetrachloroethene | 127-18-4 | 5 | ug/l | 0.25 | U | 0.5 | U |
| Xylenes, Total | 1330-20-7 | | ug/l | - | | 2.5 | U |
| sec-Butylbenzene | 135-98-8 | 5 | ug/l | - | | 2.5 | U |
| 1,3-Dichloropropane | 142-28-9 | 5 | ug/l | - | | 2.5 | U |
| cis-1,2-Dichloroethene | 156-59-2 | 5 | ug/l | 0.22 | U | 2.5 | U |
| trans-1,2-Dichloroethene | 156-60-5 | 5 | ug/l | 0.24 | U | 2.5 | U |
| Methyl tert butyl ether | 1634-04-4 | 10 | ug/l | 0.47 | U | 2.5 | U |
| p/m-Xylene | 179601-23-1 | 5 | ug/l | 0.3 | U | 2.5 | U |
| 1,2-Dichloroethene, Total | 540-59-0 | | ug/l | - | | 2.5 | U |
| 1,3-Dichlorobenzene | 541-73-1 | 3 | ug/l | 0.34 | U | 2.5 | U |
| 1,3-Dichloropropene, Total | 542-75-6 | | ug/l | - | | 0.5 | U |
| Carbon tetrachloride | 56-23-5 | 5 | ug/l | 0.21 | U | 0.5 | U |
| 1,1-Dichloropropene | 563-58-6 | 5 | ug/l | - | | 2.5 | U |
| 2-Hexanone | 591-78-6 | 50 | ug/l | 1.1 | U | 5 | U |
| 2,2-Dichloropropane | 594-20-7 | 5 | ug/l | - | | 2.5 | U |
| Ethyl ether | 60-29-7 | | ug/l | - | | 2.5 | U |
| p-Ethyltoluene | 622-96-8 | | ug/l | - | | 2 | U |
| 1,1,1,2-Tetrachloroethane | 630-20-6 | 5 | ug/l | - | | 2.5 | U |
| Acetone | 67-64-1 | 50 | ug/l | 4.4 | U | 5 | U |
| Chloroform | 67-66-3 | 7 | ug/l | 0.33 | U | 2.5 | U |
| Benzene | 71-43-2 | 1 | ug/l | 0.2 | U | 0.5 | U |

**TABLE 3.1**
**SUMMARY OF GROUNDWATER ANALYTICAL RESULTS**
**FORMER GROSSINERS RESORT, LIBERTY NEW YORK**

| LOCATION | | | | MW-217 | | MW-217 | |
|---|---|---|---|---|---|---|---|
| SAMPLING DATE | | | | 9/3/2020 | | 4/28/2021 | |
| LAB SAMPLE ID | | | | 460-217659-7 | | L2121852-06 | |
| SAMPLE TYPE | | | | WATER | | WATER | |
| | CasNum | NY-AWQS | Units | Results | Qual | Results | Qual |
| 1,1,1-Trichloroethane | 71-55-6 | 5 | ug/l | 0.24 | U | 2.5 | U |
| Bromomethane | 74-83-9 | 5 | ug/l | 0.55 | U | 2.5 | U |
| Chloromethane | 74-87-3 | | ug/l | 0.4 | U | 2.5 | U |
| Dibromomethane | 74-95-3 | 5 | ug/l | | | 5 | U |
| Bromochloromethane | 74-97-5 | 5 | ug/l | 0.41 | U | 2.5 | U |
| Chloroethane | 75-00-3 | 5 | ug/l | 0.32 | U | 2.5 | U |
| Vinyl chloride | 75-01-4 | 2 | ug/l | 0.17 | U | 1 | U |
| Methylene chloride | 75-09-2 | 5 | ug/l | 0.32 | U | 2.5 | U |
| Carbon disulfide | 75-15-0 | 60 | ug/l | 0.82 | U | 5 | U |
| Bromoform | 75-25-2 | 50 | ug/l | 0.54 | U | 2 | U |
| Bromodichloromethane | 75-27-4 | 50 | ug/l | 0.34 | U | 0.5 | U |
| 1,1-Dichloroethane | 75-34-3 | 5 | ug/l | 0.26 | U | 2.5 | U |
| 1,1-Dichloroethene | 75-35-4 | 5 | ug/l | 0.26 | U | 0.5 | U |
| Trichlorofluoromethane | 75-69-4 | 5 | ug/l | **5.6** | | **47** | |
| Dichlorodifluoromethane | 75-71-8 | 5 | ug/l | 0.31 | U | 5 | U |
| 1,2-Dichloropropane | 78-87-5 | 1 | ug/l | 0.35 | U | 1 | U |
| 2-Butanone | 78-93-3 | 50 | ug/l | 1.9 | U | 5 | U |
| 1,1,2-Trichloroethane | 79-00-5 | 1 | ug/l | 0.43 | U | 1.5 | U |
| Trichloroethene | 79-01-6 | 5 | ug/l | 0.31 | U | 0.5 | U |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | 5 | ug/l | 0.37 | U | 0.5 | U |
| 1,2,3-Trichlorobenzene | 87-61-6 | 5 | ug/l | 0.36 | U | 2.5 | U |
| Hexachlorobutadiene | 87-68-3 | 0.5 | ug/l | - | | 2.5 | U |
| Naphthalene | 91-20-3 | 10 | ug/l | - | | 2.5 | U |
| o-Xylene | 95-47-6 | 5 | ug/l | 0.36 | U | 2.5 | U |
| o-Chlorotoluene | 95-49-8 | 5 | ug/l | - | | 2.5 | U |
| 1,2-Dichlorobenzene | 95-50-1 | 3 | ug/l | 0.43 | U | 2.5 | U |
| 1,2,4-Trimethylbenzene | 95-63-6 | 5 | ug/l | - | | 2.5 | U |
| 1,2,4,5-Tetramethylbenzene | 95-93-2 | 5 | ug/l | - | | 2 | U |
| 1,2-Dibromo-3-chloropropane | 96-12-8 | 0.04 | ug/l | 0.38 | U | 2.5 | U |
| 1,2,3-Trichloropropane | 96-18-4 | 0.04 | ug/l | - | | 2.5 | U |
| tert-Butylbenzene | 98-06-6 | 5 | ug/l | - | | 2.5 | U |
| Isopropylbenzene | 98-82-8 | 5 | ug/l | 0.34 | U | 2.5 | U |
| p-Isopropyltoluene | 99-87-6 | 5 | ug/l | - | | 2.5 | U |

**TABLE 3.1**
**SUMMARY OF GROUNDWATER ANALYTICAL RESULTS**
**FORMER GROSSINERS RESORT, LIBERTY NEW YORK**

| LOCATION | | | | MW-201 | | MW-201 | | MW-201 | | MW-203 | | MW-203 | | MW-203 | | MW-204 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SAMPLING DATE | | | | 3/6/2020 | | 9/3/2020 | | 4/28/2021 | | 3/5/2020 | | 9/2/2020 | | 4/28/2021 | | 3/5/2020 | |
| LAB SAMPLE ID | | | | L2010346-05 | | 460-217659-1 | | L2121852-01 | | L2010093-01 | | 460-217547-1 | | L2121852-02 | | L2010093-02 | |
| SAMPLE TYPE | | | | WATER | | WATER | | WATER | | WATER | | WATER | | WATER | | WATER | |
| | CasNum | NY-AWQS | Units | Results | Qual | Results | Qual | Results | Qual | Results | Qual | Results | Qual | Results | Qual | Results | Qual |
| Perfluorinated Alkyl Acids by Isotope Dilution | | | | | | | | | | | | | | | | | |
| Perfluorooctanesulfonic Acid (PFOS) | 1763-23-1 | 10 | ng/l | 1.98 | U | **0.57** | **J** | 2.04 | U | **27.9** | | **25** | | **14.5** | | **5.05** | |
| Perfluoroundecanoic Acid (PFUnA) | 2058-94-8 | 100 | ng/l | 1.98 | U | 1.04 | U | 2.04 | U | **0.288** | **J** | 1.1 | U | 1.82 | U | 2.04 | U |
| N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA) | 2355-31-9 | 100 | ng/l | 1.98 | U | 2.92 | U | 2.04 | U | 2.14 | U | 3.1 | U | 1.82 | U | 2.04 | U |
| Perfluoropentanoic Acid (PFPeA) | 2706-90-3 | 100 | ng/l | **0.454** | **J** | 0.46 | U | **0.514** | **J** | **1.62** | **J** | **1.71** | **J** | **0.564** | **J** | **0.812** | **J** |
| 1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS) | 27619-97-2 | 100 | ng/l | 1.98 | U | 11 | **J** | 2.04 | U | 2.14 | U | **11.1** | **J** | **2.13** | | 2.04 | U |
| N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA) | 2991-50-6 | 100 | ng/l | 1.98 | U | 1.79 | U | 2.04 | U | **2.34** | | **5.65** | **J** | **3.14** | | 2.04 | U |
| Perfluorohexanoic Acid (PFHxA) | 307-24-4 | 100 | ng/l | **0.565** | **J** | 0.55 | U | **0.518** | **J** | **2.13** | **J** | **2.03** | | **0.778** | **J** | **0.837** | **J** |
| Perfluorododecanoic Acid (PFDoA) | 307-55-1 | 100 | ng/l | 1.98 | U | 0.52 | U | 2.04 | U | **1.32** | **J** | 0.55 | U | 1.82 | U | **0.588** | **J** |
| Perfluorooctanoic Acid (PFOA) | 335-67-1 | 10 | ng/l | **0.553** | **J** | 0.8 | U | **0.486** | **J** | **6** | | **5.15** | | **3.26** | | **2.22** | |
| Perfluorodecanoic Acid (PFDA) | 335-76-2 | 100 | ng/l | 1.98 | U | 0.29 | U | 2.04 | U | **0.464** | **J** | **0.35** | **J** | 1.82 | U | 2.04 | U |
| Perfluorodecanesulfonic Acid (PFDS) | 335-77-3 | 100 | ng/l | 1.98 | U | 0.3 | U | 2.04 | U | 2.14 | U | 0.32 | U | 1.82 | U | 2.04 | U |
| Perfluorohexanesulfonic Acid (PFHxS) | 355-46-4 | 100 | ng/l | 1.98 | U | **0.33** | **J B** | 2.04 | U | **0.914** | **J** | **1.47** | **J B** | **0.789** | **J** | 2.04 | U |
| Perfluorobutanoic Acid (PFBA) | 375-22-4 | 100 | ng/l | 1.98 | U | **0.51** | **J B** | 2.04 | U | **2.79** | | **2.13** | **B** | **0.869** | **J** | **0.971** | **J** |
| Perfluorobutanesulfonic Acid (PFBS) | 375-73-5 | 100 | ng/l | 1.98 | U | 0.19 | U | 2.04 | U | **1.23** | **J** | 0.2 | U | 1.82 | U | **0.249** | **J** |
| Perfluoroheptanoic Acid (PFHpA) | 375-85-9 | 100 | ng/l | 1.98 | U | 0.24 | U | 2.04 | U | **1.77** | **J** | **1.57** | **J** | **0.629** | **J** | **0.563** | **J** |
| Perfluoroheptanesulfonic Acid (PFHpS) | 375-92-8 | 100 | ng/l | 1.98 | U | 0.18 | U | 2.04 | U | 2.14 | U | 0.19 | U | 1.82 | U | 2.04 | U |
| Perfluorononanoic Acid (PFNA) | 375-95-1 | 100 | ng/l | 1.98 | U | 0.25 | U | 2.04 | U | **0.802** | **J** | **0.76** | **J** | 0.32 | **J** | 2.04 | U |
| Perfluorotetradecanoic Acid (PFTA) | 376-06-7 | 100 | ng/l | 1.98 | U | 0.27 | U | 2.04 | U | **3.92** | | 0.29 | U | 1.82 | U | **1.66** | **J** |
| 1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS) | 39108-34-4 | 100 | ng/l | 1.98 | U | 1.88 | U | 2.04 | U | 2.14 | U | 2 | U | 1.82 | U | 2.04 | U |
| Perfluorotridecanoic Acid (PFTrDA) | 72629-94-8 | 100 | ng/l | 1.98 | U | 1.22 | U | 2.04 | U | **0.768** | **J** | 1.3 | U | 1.82 | U | **0.384** | **J** |
| Perfluorooctanesulfonamide (FOSA) | 754-91-6 | 100 | ng/l | 1.98 | U | 0.33 | U | 2.04 | U | **0.978** | **J** | **2.31** | **B** | **0.989** | **JF** | 2.04 | U |
| PFOA/PFOS, Total | | 500 | ng/l | **0.553** | **J** | **12.41** | | **0.486** | **J** | **33.9** | | 59.23 | | **17.8** | | **7.27** | |

**TABLE 3.1**
**SUMMARY OF GROUNDWATER ANALYTICAL RESULTS**
**FORMER GROSSINERS RESORT, LIBERTY NEW YORK**

| LOCATION | | | | MW-204 | | MW-204 | | MW-205 | | MW-205 | | MW-205 | | MW-206 | | MW-206 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SAMPLING DATE | | | | 9/2/2020 | | 4/27/2021 | | 3/5/2020 | | 9/2/2020 | | 4/27/2021 | | 3/5/2020 | | 9/2/2020 | |
| LAB SAMPLE ID | | | | 460-217547-4 | | L2121570-05 | | L2010093-03 | | 460-217547-3 | | L2121570-06 | | L2010093-04 | | 460-217547-4 | |
| SAMPLE TYPE | | | | WATER | | WATER | | WATER | | WATER | | WATER | | WATER | | WATER | |
| | CasNum | NY-AWQS | Units | Results | Qual | Results | Qual | Results | Qual | Results | Qual | Results | Qual | Results | Qual | Results | Qual |
| Perfluorinated Alkyl Acids by Isotope Dilution | | | | | | | | | | | | | | | | | |
| Perfluorooctanesulfonic Acid (PFOS) | 1763-23-1 | 10 | ng/l | **12.1** | | **4.41** | | **2.13** | | **0.93** | **J** | **0.583** | **J** | **47.9** | | **38.7** | |
| Perfluoroundecanoic Acid (PFUnA) | 2058-94-8 | 100 | ng/l | 1.08 | U | 1.93 | U | 1.9 | U | 1.09 | U | 1.87 | U | 1.91 | U | 0.97 | U |
| N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA) | 2355-31-9 | 100 | ng/l | 3.03 | U | 1.93 | U | 1.9 | U | 3.08 | U | 1.87 | U | 1.91 | U | 2.73 | U |
| Perfluoropentanoic Acid (PFPeA) | 2706-90-3 | 100 | ng/l | **1.26** | **J** | **0.701** | **J** | **0.646** | **J** | 0.49 | U | 1.87 | U | **4.08** | | **1.83** | |
| 1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS) | 27619-97-2 | 100 | ng/l | **2.02** | **J** | 1.93 | U | 1.9 | U | 1.99 | U | 1.87 | U | 1.91 | U | **2.24** | **J** |
| N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA) | 2991-50-6 | 100 | ng/l | 1.86 | U | 1.93 | U | 1.9 | U | 1.89 | U | 1.87 | U | 1.91 | U | 1.67 | U |
| Perfluorohexanoic Acid (PFHxA) | 307-24-4 | 100 | ng/l | **1.14** | **J** | **0.744** | **J** | **0.597** | **J** | 0.58 | U | **0.478** | **J** | **5.43** | | **2.28** | |
| Perfluorododecanoic Acid (PFDoA) | 307-55-1 | 100 | ng/l | 0.54 | U | 1.93 | U | 1.9 | U | 0.55 | U | 1.87 | U | 1.91 | U | 0.48 | U |
| Perfluorooctanoic Acid (PFOA) | 335-67-1 | 10 | ng/l | **3.94** | | **1.53** | **J** | **2.19** | | 0.84 | U | **0.62** | **J** | **25.5** | | **12.1** | |
| Perfluorodecanoic Acid (PFDA) | 335-76-2 | 100 | ng/l | 0.3 | U | 1.93 | U | 1.9 | U | 0.31 | U | 1.87 | U | **0.561** | **J** | **0.45** | **J** |
| Perfluorodecanesulfonic Acid (PFDS) | 335-77-3 | 100 | ng/l | 0.31 | U | 1.93 | U | 1.9 | U | 0.32 | U | 1.87 | U | 1.91 | U | 0.28 | U |
| Perfluorohexanesulfonic Acid (PFHxS) | 355-46-4 | 100 | ng/l | **1.08** | **J B** | 1.93 | U | 1.9 | U | **0.44** | **J B** | 1.87 | U | **2.91** | | **1.93** | **B** |
| Perfluorobutanoic Acid (PFBA) | 375-22-4 | 100 | ng/l | **3.11** | **B** | **0.724** | **J** | **0.597** | **J** | **0.59** | **J B** | 1.87 | U | **9.62** | | **5.79** | |
| Perfluorobutanesulfonic Acid (PFBS) | 375-73-5 | 100 | ng/l | **0.64** | **J** | 1.93 | U | 1.9 | U | **0.2** | **J** | 1.87 | U | **2.22** | | **1.06** | **J** |
| Perfluoroheptanoic Acid (PFHpA) | 375-85-9 | 100 | ng/l | **1.02** | **J** | **0.389** | **J** | **0.414** | **J** | 0.25 | U | 1.87 | U | **5.37** | | **2.47** | |
| Perfluoroheptanesulfonic Acid (PFHpS) | 375-92-8 | 100 | ng/l | 0.19 | U | 1.93 | U | 1.9 | U | 0.19 | U | 1.87 | U | **0.809** | **J** | **0.43** | **J** |
| Perfluorononanoic Acid (PFNA) | 375-95-1 | 100 | ng/l | **0.46** | **J** | 1.93 | U | **0.3** | **J** | 0.27 | U | 1.87 | U | **1.29** | **J** | **0.75** | **J** |
| Perfluorotetradecanoic Acid (PFTA) | 376-06-7 | 100 | ng/l | 0.28 | U | 1.93 | U | **1.13** | **J** | 0.29 | U | 1.87 | U | **0.802** | **J** | 0.26 | **U** |
| 1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS) | 39108-34-4 | 100 | ng/l | 1.96 | U | 1.93 | U | 1.9 | U | 1.99 | U | 1.87 | U | 1.91 | U | 1.76 | U |
| Perfluorotridecanoic Acid (PFTrDA) | 72629-94-8 | 100 | ng/l | 1.27 | U | 1.93 | U | 1.9 | U | 1.29 | U | 1.87 | U | 1.91 | U | 1.15 | U |
| Perfluorooctanesulfonamide (FOSA) | 754-91-6 | 100 | ng/l | **0.57** | **J B** | 1.93 | U | 1.9 | U | 0.35 | U | 1.87 | U | 1.91 | U | **0.66** | **J** |
| PFOA/PFOS, Total | | 500 | ng/l | 27.34 | | **5.94** | **J** | **4.32** | | 2.16 | | **1.2** | **J** | **73.4** | | **70.69** | |

**TABLE 3.1**
**SUMMARY OF GROUNDWATER ANALYTICAL RESULTS**
**FORMER GROSSINERS RESORT, LIBERTY NEW YORK**

| LOCATION | | | | MW-206 | | MW-207 | | MW-207 | | MW-207 | | MW-208 | | MW-209 | | MW-209 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SAMPLING DATE | | | | 4/27/2021 | | 3/5/2020 | | 9/3/2020 | | 4/27/2021 | | 3/5/2020 | | 3/6/2020 | | 4/28/2021 | |
| LAB SAMPLE ID | | | | L2121570-04 | | L2010093-06 | | 460-217659-2 | | L2121570-03 | | L2010093-05 | | L2010346-03 | | L2121852-03 | |
| SAMPLE TYPE | | | | WATER | | WATER | | WATER | | WATER | | WATER | | WATER | | WATER | |
| | CasNum | NY-AWQS | Units | Results | Qual | Results | Qual | Results | Qual | Results | Qual | Results | Qual | Results | Qual | Results | Qual |
| Perfluorinated Alkyl Acids by Isotope Dilution | | | | | | | | | | | | | | | | | |
| Perfluorooctanesulfonic Acid (PFOS) | 1763-23-1 | 10 | ng/l | **30.9** | | **11.3** | | **22.1** | | **8.36** | | **68.2** | | **1.18** | **J** | **2.44** | |
| Perfluoroundecanoic Acid (PFUnA) | 2058-94-8 | 100 | ng/l | 1.94 | U | 2.09 | U | 1.03 | U | 2.14 | U | **0.792** | **J** | 2.3 | U | 2.04 | U |
| N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA) | 2355-31-9 | 100 | ng/l | 1.94 | U | 2.09 | U | 2.91 | U | 2.14 | U | **8.18** | | 2.3 | U | 2.04 | U |
| Perfluoropentanoic Acid (PFPeA) | 2706-90-3 | 100 | ng/l | **4.2** | | **1.62** | **J** | **0.79** | **J** | **0.476** | **J** | **6.12** | | **2.77** | | **2.11** | |
| 1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS) | 27619-97-2 | 100 | ng/l | 1.94 | U | 2.09 | U | 1.87 | U | 2.14 | U | **1.87** | **J** | 2.3 | U | **8.87** | |
| N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA) | 2991-50-6 | 100 | ng/l | 1.94 | U | 2.09 | U | 1.78 | U | 2.14 | U | **9.71** | | **1.26** | **J** | 2.04 | U |
| Perfluorohexanoic Acid (PFHxA) | 307-24-4 | 100 | ng/l | **5.8** | | **1.61** | **J** | **0.91** | **J** | **0.66** | **J** | **8.38** | | **2.74** | | **1.84** | **J** |
| Perfluorododecanoic Acid (PFDoA) | 307-55-1 | 100 | ng/l | 1.94 | U | 2.09 | U | 0.52 | U | 2.14 | U | **0.518** | **J** | 2.3 | U | 2.04 | U |
| Perfluorooctanoic Acid (PFOA) | 335-67-1 | 10 | ng/l | **26** | | **6.59** | | **5.46** | | **2.2** | | **38.2** | | **5.16** | | **4.08** | |
| Perfluorodecanoic Acid (PFDA) | 335-76-2 | 100 | ng/l | **0.307** | **J** | 2.09 | U | **0.39** | **J** | 2.14 | U | **3.69** | | 2.3 | U | 2.04 | U |
| Perfluorodecanesulfonic Acid (PFDS) | 335-77-3 | 100 | ng/l | 1.94 | U | 2.09 | U | 0.3 | U | 2.14 | U | 1.96 | U | 2.3 | U | 2.04 | U |
| Perfluorohexanesulfonic Acid (PFHxS) | 355-46-4 | 100 | ng/l | **4.42** | | **1.15** | **J** | **1.92** | **B** | **0.472** | **J** | **6.24** | | 2.3 | U | **0.506** | **JF** |
| Perfluorobutanoic Acid (PFBA) | 375-22-4 | 100 | ng/l | **13.1** | | **1.94** | **J** | **1.93** | **B** | **0.497** | **J** | **10.3** | | **6.63** | | **3.22** | |
| Perfluorobutanesulfonic Acid (PFBS) | 375-73-5 | 100 | ng/l | **2.68** | | **0.749** | **J** | **0.76** | **J** | **0.304** | **J** | **2.4** | | **1.36** | **J** | **0.669** | **J** |
| Perfluoroheptanoic Acid (PFHpA) | 375-85-9 | 100 | ng/l | **6.84** | | **1.35** | **J** | **0.94** | **J** | **0.506** | **J** | **6.38** | | **3.04** | | **1.63** | **J** |
| Perfluoroheptanesulfonic Acid (PFHpS) | 375-92-8 | 100 | ng/l | 1.94 | U | 2.09 | U | **0.37** | J | 2.14 | U | **1.01** | **J** | 2.3 | U | 2.04 | U |
| Perfluorononanoic Acid (PFNA) | 375-95-1 | 100 | ng/l | **1.01** | **J** | **0.644** | **J** | **0.61** | **J** | **0.467** | **J** | **2.58** | | **1.39** | **J** | **1.4** | **J** |
| Perfluorotetradecanoic Acid (PFTA) | 376-06-7 | 100 | ng/l | 1.94 | U | **0.561** | **J** | 0.27 | U | 2.14 | U | **0.69** | **J** | **0.618** | **J** | 2.04 | U |
| 1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS) | 39108-34-4 | 100 | ng/l | 1.94 | U | 2.09 | U | 1.87 | U | 2.14 | U | 1.96 | U | 2.3 | U | 2.04 | U |
| Perfluorotridecanoic Acid (PFTrDA) | 72629-94-8 | 100 | ng/l | 1.94 | U | 2.09 | U | 1.22 | U | 2.14 | U | 1.96 | U | 2.3 | U | 2.04 | U |
| Perfluorooctanesulfonamide (FOSA) | 754-91-6 | 100 | ng/l | 1.94 | U | 2.09 | U | 0.33 | U | 2.14 | U | **16.2** | | 2.3 | U | 2.04 | U |
| PFOA/PFOS, Total | | 500 | ng/l | **56.9** | | **17.9** | | **36.18** | | **10.6** | | **106** | | **6.34** | **J** | **6.52** | |

**TABLE 3.1**
**SUMMARY OF GROUNDWATER ANALYTICAL RESULTS**
**FORMER GROSSINERS RESORT, LIBERTY NEW YORK**

| LOCATION | | | | MW-210 | | MW-210 | | MW-210 | | MW-211 | | MW-211 | | MW-211 | | MW-213 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SAMPLING DATE | | | | 3/6/2020 | | 9/3/2020 | | 4/29/2021 | | 3/6/2020 | | 9/3/2020 | | 4/28/2021 | | 3/4/2020 | |
| LAB SAMPLE ID | | | | L2010346-06 | | 460-217659-3 | | L2122071-01 | | L2010346-04 | | 460-217659-4 | | L2121852-04 | | L2009793-01 | |
| SAMPLE TYPE | | | | WATER | | WATER | | WATER | | WATER | | WATER | | WATER | | WATER | |
| | CasNum | NY-AWQS | Units | Results | Qual | Results | Qual | Results | Qual | Results | Qual | Results | Qual | Results | Qual | Results | Qual |
| Perfluorinated Alkyl Acids by Isotope Dilution | | | | | | | | | | | | | | | | | |
| Perfluorooctanesulfonic Acid (PFOS) | 1763-23-1 | 10 | ng/l | **6.43** | | **3.56** | **cn** | **7.25** | | 2.27 | U | **1.75** | **J** | **1.58** | **J** | 73.4 | |
| Perfluoroundecanoic Acid (PFUnA) | 2058-94-8 | 100 | ng/l | 2.3 | U | 1.11 | U | 1.75 | U | 2.27 | U | 1.1 | U | 2.04 | U | 1.92 | U |
| N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA) | 2355-31-9 | 100 | ng/l | 2.3 | U | 3.11 | U | 1.75 | U | 2.27 | U | 3.09 | U | 2.04 | U | 1.92 | U |
| Perfluoropentanoic Acid (PFPeA) | 2706-90-3 | 100 | ng/l | **0.885** | **J** | **0.6** | **J** | **1.48** | **J** | **0.609** | **J** | 0.49 | U | **0.551** | **J** | **9** | |
| 1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS) | 27619-97-2 | 100 | ng/l | 2.3 | U | 2.01 | U | 1.75 | U | 2.27 | U | **5.28** | **J** | **1.84** | **J** | 1.92 | U |
| N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA) | 2991-50-6 | 100 | ng/l | 2.3 | U | 1.91 | U | 1.75 | U | 2.27 | U | 1.89 | U | 2.04 | U | **1.19** | **J** |
| Perfluorohexanoic Acid (PFHxA) | 307-24-4 | 100 | ng/l | **1.21** | **J** | 0.58 | U | **1.8** | | **0.432** | **J** | 0.58 | U | **0.555** | **J** | **11** | |
| Perfluorododecanoic Acid (PFDoA) | 307-55-1 | 100 | ng/l | 2.3 | U | 0.55 | U | 1.75 | U | 2.27 | U | 0.55 | U | 2.04 | U | 1.92 | U |
| Perfluorooctanoic Acid (PFOA) | 335-67-1 | 10 | ng/l | **2.91** | | **2.32** | | **4.74** | | **0.941** | **J** | **0.87** | **J** | **0.939** | **J** | 32.8 | |
| Perfluorodecanoic Acid (PFDA) | 335-76-2 | 100 | ng/l | 2.3 | U | 0.31 | U | 1.75 | U | 2.27 | U | 0.31 | U | 2.04 | U | **1.88** | **J** |
| Perfluorodecanesulfonic Acid (PFDS) | 335-77-3 | 100 | ng/l | 2.3 | U | 0.32 | U | 1.75 | U | 2.27 | U | 0.32 | U | 2.04 | U | 1.92 | U |
| Perfluorohexanesulfonic Acid (PFHxS) | 355-46-4 | 100 | ng/l | **1.1** | **J** | **1.02** | **J B** | **1.62** | **J** | 2.27 | U | **0.56** | **J B** | 2.04 | U | **5.37** | |
| Perfluorobutanoic Acid (PFBA) | 375-22-4 | 100 | ng/l | **1.59** | **J** | **1.54** | **J B** | **14** | | 2.27 | U | **0.72** | **J B** | **0.482** | **J** | **12.8** | |
| Perfluorobutanesulfonic Acid (PFBS) | 375-73-5 | 100 | ng/l | **0.922** | **J** | **1.1** | **J** | **1.17** | **J** | 2.27 | U | 0.2 | U | 2.04 | U | **2.97** | |
| Perfluoroheptanoic Acid (PFHpA) | 375-85-9 | 100 | ng/l | **0.857** | **J** | **0.73** | **J** | **1.12** | **J** | 2.27 | U | 0.25 | U | 2.04 | U | **8.1** | |
| Perfluoroheptanesulfonic Acid (PFHpS) | 375-92-8 | 100 | ng/l | 2.3 | U | 0.19 | U | 1.75 | U | 2.27 | U | 0.19 | U | 2.04 | U | **1.06** | **J** |
| Perfluorononanoic Acid (PFNA) | 375-95-1 | 100 | ng/l | 2.3 | U | 0.27 | U | 1.75 | U | 2.27 | U | 0.27 | U | 2.04 | U | **3.45** | |
| Perfluorotetradecanoic Acid (PFTA) | 376-06-7 | 100 | ng/l | 2.3 | U | 0.29 | U | 1.75 | U | 2.27 | U | **0.41** | **J** | 2.04 | U | 1.92 | U |
| 1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS) | 39108-34-4 | 100 | ng/l | 2.3 | U | 2.01 | U | 1.75 | U | 2.27 | U | 1.99 | U | 2.04 | U | 1.92 | U |
| Perfluorotridecanoic Acid (PFTrDA) | 72629-94-8 | 100 | ng/l | 2.3 | U | 1.31 | U | 1.75 | U | 2.27 | U | 1.3 | U | 2.04 | U | 1.92 | U |
| Perfluorooctanesulfonamide (FOSA) | 754-91-6 | 100 | ng/l | 2.3 | U | **0.36** | **J** | 1.75 | U | 2.27 | U | **0.35** | **J** | 2.04 | U | **1.42** | **J** |
| PFOA/PFOS, Total | | 500 | ng/l | **9.34** | | **11.23** | | **12** | | **0.941** | **J** | **9.94** | | **2.52** | **J** | **106** | |

**TABLE 3.1**
**SUMMARY OF GROUNDWATER ANALYTICAL RESULTS**
**FORMER GROSSINERS RESORT, LIBERTY NEW YORK**

| LOCATION | | | | MW-213 | | MW-213 | | MW-214 | | MW-214 | | MW-214 | | MW-216 | | MW-216 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SAMPLING DATE | | | | 9/2/2020 | | 4/27/2021 | | 3/4/2020 | | 9/3/2020 | | 4/27/2021 | | 3/6/2020 | | 9/3/2020 | |
| LAB SAMPLE ID | | | | 460-217547-5 | | L2121570-02 | | L2009793-02 | | 460-217659-5 | | L2121570-01 | | L2010346-01 | | 460-217659-6 | |
| SAMPLE TYPE | | | | WATER | | WATER | | WATER | | WATER | | WATER | | WATER | | WATER | |
| | CasNum | NY-AWQS | Units | Results | Qual | Results | Qual | Results | Qual | Results | Qual | Results | Qual | Results | Qual | Results | Qual |
| Perfluorinated Alkyl Acids by Isotope Dilution | | | | | | | | | | | | | | | | | |
| Perfluorooctanesulfonic Acid (PFOS) | 1763-23-1 | 10 | ng/l | **60.7** | | **70** | | **47.3** | | **46.6** | | **40.3** | | **6.51** | | **24.8** | |
| Perfluoroundecanoic Acid (PFUnA) | 2058-94-8 | 100 | ng/l | 1.04 | U | 1.97 | U | **0.26** | **J** | 1.14 | U | 2.01 | U | 1.93 | U | 1.01 | U |
| N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA) | 2355-31-9 | 100 | ng/l | 2.92 | U | 1.97 | U | 1.94 | U | 3.21 | U | 2.01 | U | 1.93 | U | 2.84 | U |
| Perfluoropentanoic Acid (PFPeA) | 2706-90-3 | 100 | ng/l | **7.81** | | **8.53** | | **5.47** | | **4.5** | | **6.97** | **F** | **2.06** | | **2.52** | |
| 1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS) | 27619-97-2 | 100 | ng/l | **2.14** | **J** | 1.97 | U | 1.94 | U | 2.07 | U | 2.01 | U | 1.93 | U | 1.83 | U |
| N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA) | 2991-50-6 | 100 | ng/l | 1.79 | U | 1.97 | U | 1.94 | U | 1.97 | U | 2.01 | U | 1.93 | U | 1.74 | U |
| Perfluorohexanoic Acid (PFHxA) | 307-24-4 | 100 | ng/l | **8.64** | | **9.6** | | **8.26** | | **6.65** | | **9.42** | | **2.95** | | **2.62** | |
| Perfluorododecanoic Acid (PFDoA) | 307-55-1 | 100 | ng/l | 0.52 | U | 1.97 | U | 1.94 | U | 0.57 | U | 2.01 | U | 1.93 | U | 0.5 | U |
| Perfluorooctanoic Acid (PFOA) | 335-67-1 | 10 | ng/l | **26.5** | | **27.7** | | **29.9** | | **25.8** | | **29.5** | | **8.18** | | **9.39** | |
| Perfluorodecanoic Acid (PFDA) | 335-76-2 | 100 | ng/l | **1.61** | **J** | **1.4** | **J** | **0.849** | **J** | **1.42** | **J** | **0.631** | **JF** | 1.93 | U | **0.34** | **J** |
| Perfluorodecanesulfonic Acid (PFDS) | 335-77-3 | 100 | ng/l | 0.3 | U | 1.97 | U | 1.94 | U | 0.33 | U | 2.01 | U | 1.93 | U | 0.29 | U |
| Perfluorohexanesulfonic Acid (PFHxS) | 355-46-4 | 100 | ng/l | **4.94** | **B** | **6.29** | | **8.26** | | **5.44** | **B** | **6.66** | | **1.8** | **J** | **2.96** | **B** |
| Perfluorobutanoic Acid (PFBA) | 375-22-4 | 100 | ng/l | **12.4** | **B** | **12.8** | | **10.9** | | **9.76** | **B** | **10.1** | | **4.28** | | **4.37** | **B** |
| Perfluorobutanesulfonic Acid (PFBS) | 375-73-5 | 100 | ng/l | **2.27** | | **2.92** | | **3.88** | | **3.32** | | **3.02** | | **1.35** | **J** | **1.19** | **J** |
| Perfluoroheptanoic Acid (PFHpA) | 375-85-9 | 100 | ng/l | **6.13** | | **6.7** | | **6.07** | | **5.08** | | **6.64** | | **2.12** | | **1.88** | |
| Perfluoroheptanesulfonic Acid (PFHpS) | 375-92-8 | 100 | ng/l | **0.79** | **J** | **1.22** | **J** | **1.64** | **J** | **0.75** | **J** | **1.35** | **J** | 1.93 | U | 0.17 | U |
| Perfluorononanoic Acid (PFNA) | 375-95-1 | 100 | ng/l | **2.51** | | **2.67** | | **1.08** | **J** | **1.41** | **J** | **1.29** | **J** | **0.402** | **J** | **0.73** | **J** |
| Perfluorotetradecanoic Acid (PFTA) | 376-06-7 | 100 | ng/l | 0.27 | U | 1.97 | U | 1.94 | U | 0.3 | U | 2.01 | U | **0.259** | **J** | 0.27 | U |
| 1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS) | 39108-34-4 | 100 | ng/l | 1.88 | U | 1.97 | U | 1.94 | U | 2.07 | U | 2.01 | U | 1.93 | U | 1.83 | U |
| Perfluorotridecanoic Acid (PFTrDA) | 72629-94-8 | 100 | ng/l | 1.22 | U | 1.97 | U | 1.94 | U | 1.35 | U | 2.01 | U | 1.93 | U | 1.19 | U |
| Perfluorooctanesulfonamide (FOSA) | 754-91-6 | 100 | ng/l | **1.76** | **J B** | **1.27** | JF | 1.94 | U | **2.04** | **J** | **0.8** | **JF** | 1.93 | U | **1.06** | **J** |
| PFOA/PFOS, Total | | 500 | ng/l | 138.2 | | **97.7** | | **77.2** | | **112.77** | | **69.8** | | **14.7** | | **51.86** | |

**TABLE 3.1**
**SUMMARY OF GROUNDWATER ANALYTICAL RESULTS**
**FORMER GROSSINERS RESORT, LIBERTY NEW YORK**

| LOCATION | | | | MW-216 | | MW-217 | | MW-217 | | MW-217 | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| SAMPLING DATE | | | | 4/28/2021 | | 3/6/2020 | | 9/3/2020 | | 4/28/2021 | |
| LAB SAMPLE ID | | | | L2121852-05 | | L2010346-02 | | 460-217659-7 | | L2121852-06 | |
| SAMPLE TYPE | | | | WATER | | WATER | | WATER | | WATER | |
| | CasNum | NY-AWQS | Units | Results | Qual | Results | Qual | Results | Qual | Results | Qual |
| Perfluorinated Alkyl Acids by Isotope Dilution | | | | | | | | | | | |
| Perfluorooctanesulfonic Acid (PFOS) | 1763-23-1 | 10 | ng/l | **24.9** | | **30** | | **42.1** | | **19.5** | |
| Perfluoroundecanoic Acid (PFUnA) | 2058-94-8 | 100 | ng/l | 1.8 | U | 1.94 | U | 1.03 | U | 1.77 | U |
| N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA) | 2355-31-9 | 100 | ng/l | 1.8 | U | 1.94 | U | 2.91 | U | 1.77 | U |
| Perfluoropentanoic Acid (PFPeA) | 2706-90-3 | 100 | ng/l | **2.4** | | **2.11** | | **1.57** | **J** | **2.18** | |
| 1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS) | 27619-97-2 | 100 | ng/l | **2.29** | | 1.94 | U | **4.04** | **J** | **1.36** | **J** |
| N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA) | 2991-50-6 | 100 | ng/l | **0.744** | **J** | 1.94 | U | 1.79 | U | 1.77 | U |
| Perfluorohexanoic Acid (PFHxA) | 307-24-4 | 100 | ng/l | **3.06** | | **3.4** | | **2.59** | | **3.86** | |
| Perfluorododecanoic Acid (PFDoA) | 307-55-1 | 100 | ng/l | 1.8 | U | 1.94 | U | 0.52 | U | 1.77 | U |
| Perfluorooctanoic Acid (PFOA) | 335-67-1 | 10 | ng/l | **10.8** | | **15.7** | | **13.8** | | **14.6** | |
| Perfluorodecanoic Acid (PFDA) | 335-76-2 | 100 | ng/l | **0.375** | **JF** | **0.473** | **J** | **0.71** | **J** | 1.77 | U |
| Perfluorodecanesulfonic Acid (PFDS) | 335-77-3 | 100 | ng/l | 1.8 | U | 1.94 | U | 0.3 | U | 1.77 | U |
| Perfluorohexanesulfonic Acid (PFHxS) | 355-46-4 | 100 | ng/l | **3.56** | | **7.38** | | **4.48** | **B** | **5.7** | |
| Perfluorobutanoic Acid (PFBA) | 375-22-4 | 100 | ng/l | **5.08** | | **4.31** | | **3.68** | **B** | **3.66** | |
| Perfluorobutanesulfonic Acid (PFBS) | 375-73-5 | 100 | ng/l | **1.3** | **J** | **2.93** | | **2.13** | | **2.75** | |
| Perfluoroheptanoic Acid (PFHpA) | 375-85-9 | 100 | ng/l | **2.39** | | **2.66** | | **2.07** | | **2.74** | |
| Perfluoroheptanesulfonic Acid (PFHpS) | 375-92-8 | 100 | ng/l | 1.8 | U | **0.752** | **J** | **0.61** | **J** | 1.77 | U |
| Perfluorononanoic Acid (PFNA) | 375-95-1 | 100 | ng/l | **0.859** | **J** | **1.08** | **J** | **1.51** | **J** | **0.496** | **J** |
| Perfluorotetradecanoic Acid (PFTA) | 376-06-7 | 100 | ng/l | 1.8 | U | 1.94 | U | 0.27 | U | 1.77 | U |
| 1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS) | 39108-34-4 | 100 | ng/l | 1.8 | U | 1.94 | U | 1.88 | U | 1.77 | U |
| Perfluorotridecanoic Acid (PFTrDA) | 72629-94-8 | 100 | ng/l | 1.8 | U | 1.94 | U | 1.22 | U | 1.77 | U |
| Perfluorooctanesulfonamide (FOSA) | 754-91-6 | 100 | ng/l | **0.664** | **J** | 1.94 | U | **1.21** | **J** | 1.77 | U |
| PFOA/PFOS, Total | | 500 | ng/l | **35.7** | | **45.7** | | **80.5** | | **34.1** | |

Qualifier Key
NJ - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.
F - The ratio of quantifier ion response to qualifier ion response falls outside of the laboratory criteria. Results are considered to be an estimated maximum concentration.
C - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.
Q - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)
I - The lower value for the two columns has been reported due to obvious interference.
G - The concentration may be biased high due to matrix interferences (i.e, co-elution) with non-target compound(s). The result should be considered estimated.
A - Spectra identified as "Aldol Condensates" are byproducts of the extraction/concentration procedures when acetone is introduced in the process.
E - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.
H - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.
RE - Analytical results are from sample re-extraction.
R - Analytical results are from sample re-analysis.
D - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.
P - The RPD between the results for the two columns exceeds the method-specified criteria.
U - Not detected at the reported detection limit for the sample.
M - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.
S - Analytical results are from modified screening analysis.
B - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).
* : LCS or LCSD is outside acceptance limits.
NY-AWQS: New York TOGS 111 Ambient Water Quality Standards criteria reflects all addendum to criteria through June 2004.
Compound Exceeds the NY-AWQS

**TABLE 3.4**
**SUMMARY OF SOIL VAPOR ANALYTICAL RESULTS**
**FORMER GROSSINERS RESORT, LIBERTY NEW YORK**

| LOCATION | | | SMPV-1 | | SMPV-1 | | SMPV-2 | | SMPV-2 | | SMPV-3 | | SMPV-3 | | SMPV-10 | | SMPV-10 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SAMPLING DATE | | | 3/6/2020 | | 4/29/2021 | | 3/6/2020 | | 4/29/2021 | | 3/6/2020 | | 4/29/2021 | | 3/6/2020 | | 4/28/2021 | |
| LAB SAMPLE ID | | | L2010375-03 | | L2122115-01 | | L2010375-05 | | L2122115-02 | | L2010375-04 | | L2122115-03 | | L2010375-07 | | L2122189-02 | |
| SAMPLE TYPE | | | SOIL_VAPOR | | SOIL_VAPOR | | SOIL_VAPOR | | SOIL_VAPOR | | SOIL_VAPOR | | SOIL_VAPOR | | SOIL_VAPOR | | SOIL_VAPOR | |
| SAMPLE DEPTH (ft.) | | | | | | | | | | | | | | | | | | |
| | CasNum | Units | Results | Qual | Results | Qual | Results | Qual | Results | Qual | Results | Qual | Results | Qual | Results | Qual | Results | Qual |
| Volatile Organics in Air | | | | | | | | | | | | | | | | | | |
| Ethylbenzene | 100-41-4 | ug/m3 | **1.8** | | **3.44** | | 0.869 | U | **6.34** | | 0.869 | U | **2.99** | | **2.9** | | **1.39** | |
| Styrene | 100-42-5 | ug/m3 | 0.852 | U | 0.852 | U | 0.852 | U | 0.852 | U | 0.852 | U | 0.852 | U | 0.852 | U | 0.869 | |
| Benzyl chloride | 100-44-7 | ug/m3 | 1.04 | U | 1.04 | U | 1.04 | U | 1.04 | U | 1.04 | U | 1.04 | U | 1.04 | U | 1.04 | U |
| cis-1,3-Dichloropropene | 10061-01-5 | ug/m3 | 0.908 | U | 0.908 | U | 0.908 | U | 0.908 | U | 0.908 | U | 0.908 | U | 0.908 | U | 0.908 | U |
| trans-1,3-Dichloropropene | 10061-02-6 | ug/m3 | 0.908 | U | 0.908 | U | 0.908 | U | 0.908 | U | 0.908 | U | 0.908 | U | 0.908 | U | 0.908 | U |
| 1,4-Dichlorobenzene | 106-46-7 | ug/m3 | 1.2 | U | 1.2 | U | 1.2 | U | 1.2 | U | 1.2 | U | 1.2 | U | 1.2 | U | 1.2 | U |
| 1,2-Dibromoethane | 106-93-4 | ug/m3 | 1.54 | U | 1.54 | U | 1.54 | U | 1.54 | U | 1.54 | U | 1.54 | U | 1.54 | U | 1.54 | U |
| 1,3-Butadiene | 106-99-0 | ug/m3 | 0.442 | U | 0.442 | U | 0.442 | U | 0.442 | U | 0.442 | U | 0.442 | U | 0.442 | U | 0.442 | U |
| 3-Chloropropene | 107-05-1 | ug/m3 | 0.626 | U | 0.626 | U | 0.626 | U | 0.626 | U | 0.626 | U | 0.626 | U | 0.626 | U | 0.626 | U |
| 1,2-Dichloroethane | 107-06-2 | ug/m3 | 0.809 | U | 0.809 | U | 0.809 | U | 0.809 | U | 0.809 | U | 0.809 | U | 0.809 | U | 0.809 | U |
| 4-Methyl-2-pentanone | 108-10-1 | ug/m3 | 2.05 | U | **12** | | 2.05 | U | **14.5** | | 2.05 | U | **11.1** | | 2.05 | U | **2.83** | |
| 1,3,5-Trimethylbenzene | 108-67-8 | ug/m3 | 0.983 | U | **2.05** | | 0.983 | U | **2.69** | | 0.983 | U | **3.44** | | **1.67** | | 0.983 | U |
| Toluene | 108-88-3 | ug/m3 | **5.35** | | **7.65** | | 0.754 | U | **17.3** | | 0.754 | U | **6.26** | | **8.37** | | **29.8** | |
| Chlorobenzene | 108-90-7 | ug/m3 | 0.921 | U | 0.921 | U | 0.921 | U | 0.921 | U | 0.921 | U | 0.921 | U | 0.921 | U | 0.921 | U |
| Tetrahydrofuran | 109-99-9 | ug/m3 | 1.47 | U | 1.47 | U | 1.47 | U | 1.47 | U | 1.47 | U | 1.47 | U | 1.47 | U | 1.47 | U |
| n-Hexane | 110-54-3 | ug/m3 | **1.65** | | 0.705 | U | 0.705 | U | **0.758** | | 0.705 | U | 0.705 | U | **1.2** | | **7.96** | |
| Cyclohexane | 110-82-7 | ug/m3 | **0.926** | | 0.688 | U | 0.688 | U | **0.792** | | 0.688 | U | 0.688 | U | 0.688 | U | 0.688 | U |
| 1,2,4-Trichlorobenzene | 120-82-1 | ug/m3 | 1.48 | U | 1.48 | U | 1.48 | U | 1.48 | U | 1.48 | U | 1.48 | U | 1.48 | U | 1.48 | U |
| 1,4-Dioxane | 123-91-1 | ug/m3 | 0.721 | U | 0.721 | U | 0.721 | U | 0.721 | U | 0.721 | U | 0.721 | U | 0.721 | U | 0.721 | U |
| Dibromochloromethane | 124-48-1 | ug/m3 | 1.7 | U | **1.7** | U | 1.7 | U | 1.7 | U | 1.7 | U | 1.7 | U | 1.7 | U | 1.7 | U |
| Tetrachloroethene | 127-18-4 | ug/m3 | **9.36** | | 1.36 | U | 1.36 | U | 1.36 | U | 1.36 | U | 1.36 | U | **14.2** | | 1.36 | U |
| Ethyl Acetate | 141-78-6 | ug/m3 | 1.8 | U | 1.8 | U | 1.8 | U | 1.8 | U | 1.8 | U | 1.8 | U | 1.8 | U | **94.8** | |
| Heptane | 142-82-5 | ug/m3 | **1.38** | | **1.07** | | 0.82 | U | **2.39** | | 0.82 | U | **1.11** | | **1.36** | | **1.79** | |
| cis-1,2-Dichloroethene | 156-59-2 | ug/m3 | 0.793 | U | 0.793 | U | 0.793 | U | 0.793 | U | 0.793 | U | 0.793 | U | 0.793 | U | 0.793 | U |
| trans-1,2-Dichloroethene | 156-60-5 | ug/m3 | 0.793 | U | 0.793 | U | 0.793 | U | 0.793 | U | 0.793 | U | 0.793 | U | 0.793 | U | 0.793 | U |
| Methyl tert butyl ether | 1634-04-4 | ug/m3 | 0.721 | U | 0.721 | U | 0.721 | U | 0.721 | U | 0.721 | U | 0.721 | U | 0.721 | U | 0.721 | U |
| p/m-Xylene | 179601-23-1 | ug/m3 | **7.21** | | **13** | | 1.74 | U | **23.7** | | 1.74 | U | **14.3** | | **11.4** | | **6.47** | |
| 2,2,4-Trimethylpentane | 540-84-1 | ug/m3 | 0.934 | U | **1.65** | | 0.934 | U | **2.56** | | 0.934 | U | **1.55** | | 0.934 | U | 0.934 | U |
| 1,3-Dichlorobenzene | 541-73-1 | ug/m3 | 1.2 | U | 1.2 | U | 1.2 | U | 1.2 | U | 1.2 | U | **1.69** | | 1.2 | U | **1.32** | |
| Carbon tetrachloride | 56-23-5 | ug/m3 | 1.26 | U | 1.26 | U | 1.26 | U | 1.26 | U | 1.26 | U | 1.26 | U | 1.26 | U | 1.26 | U |
| 2-Hexanone | 591-78-6 | ug/m3 | 0.82 | U | 0.82 | U | 0.82 | U | 0.82 | U | 0.82 | U | 0.82 | U | 0.82 | U | 0.82 | U |
| Vinyl bromide | 593-60-2 | ug/m3 | 0.874 | U | 0.874 | U | 0.874 | U | 0.874 | U | 0.874 | U | 0.874 | U | 0.874 | U | 0.874 | U |
| 4-Ethyltoluene | 622-96-8 | ug/m3 | **0.998** | | **1.32** | | 0.983 | U | **2.02** | | 0.983 | U | **2.07** | | **1.51** | | 0.983 | U |
| Ethanol | 64-17-5 | ug/m3 | 9.42 | U | **77.6** | | 9.42 | U | **119** | | 9.42 | U | **71.6** | | 9.42 | U | **38.8** | |
| Isopropanol | 67-63-0 | ug/m3 | **3.07** | | **1.74** | | 1.23 | U | **1.6** | | 1.23 | U | **1.23** | | 1.23 | U | **32.4** | |
| Acetone | 67-64-1 | ug/m3 | **9.29** | | **35.2** | | **4.25** | | **28** | | **4.85** | | **33.5** | | **10.7** | | **91** | |
| Chloroform | 67-66-3 | ug/m3 | 0.977 | U | 0.977 | U | 0.977 | U | 0.977 | U | 0.977 | U | 0.977 | U | 0.977 | U | 0.977 | U |
| Benzene | 71-43-2 | ug/m3 | **0.811** | | **2.37** | | 0.639 | U | **1.52** | | 0.639 | U | **2.87** | | **1.09** | | **1.9** | |
| 1,1,1-Trichloroethane | 71-55-6 | ug/m3 | 1.09 | U | 1.09 | U | 1.09 | U | 1.09 | U | 1.09 | U | 1.09 | U | 1.09 | U | 1.09 | U |
| Bromomethane | 74-83-9 | ug/m3 | 0.777 | U | 0.777 | U | 0.777 | U | 0.777 | U | 0.777 | U | 0.777 | U | 0.777 | U | 0.777 | U |
| Chloromethane | 74-87-3 | ug/m3 | 0.413 | U | 0.413 | U | **0.997** | | 0.413 | U | **1.11** | | **1.29** | | **0.537** | | **0.541** | |
| Chloroethane | 75-00-3 | ug/m3 | 0.528 | U | 0.528 | U | 0.528 | U | 0.528 | U | 0.528 | U | 0.528 | U | 0.528 | U | 0.528 | U |

**TABLE 3.4**
**SUMMARY OF SOIL VAPOR ANALYTICAL RESULTS**
**FORMER GROSSINERS RESORT, LIBERTY NEW YORK**

| LOCATION | | | SMPV-1 | | SMPV-1 | | SMPV-2 | | SMPV-2 | | SMPV-3 | | SMPV-3 | | SMPV-10 | | SMPV-10 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SAMPLING DATE | | | 3/6/2020 | | 4/29/2021 | | 3/6/2020 | | 4/29/2021 | | 3/6/2020 | | 4/29/2021 | | 3/6/2020 | | 4/28/2021 | |
| LAB SAMPLE ID | | | L2010375-03 | | L2122115-01 | | L2010375-05 | | L2122115-02 | | L2010375-04 | | L2122115-03 | | L2010375-07 | | L2122189-02 | |
| SAMPLE TYPE | | | SOIL_VAPOR | | SOIL_VAPOR | | SOIL_VAPOR | | SOIL_VAPOR | | SOIL_VAPOR | | SOIL_VAPOR | | SOIL_VAPOR | | SOIL_VAPOR | |
| SAMPLE DEPTH (ft.) | | | | | | | | | | | | | | | | | | |
| | CasNum | Units | Results | Qual | Results | Qual | Results | Qual | Results | Qual | Results | Qual | Results | Qual | Results | Qual | Results | Qual |
| Vinyl chloride | 75-01-4 | ug/m3 | 0.511 | U | 0.511 | U | 0.511 | U | 0.511 | U | 0.511 | U | 0.511 | U | 0.511 | U | 0.511 | U |
| Methylene chloride | 75-09-2 | ug/m3 | 1.74 | U | 1.74 | U | 1.74 | U | 1.74 | U | 1.74 | U | 1.74 | U | 1.74 | U | 1.74 | U |
| Carbon disulfide | 75-15-0 | ug/m3 | **2.73** | | 0.623 | U | 0.623 | U | 0.623 | U | 0.623 | U | 0.623 | U | 0.623 | U | 0.623 | U |
| Bromoform | 75-25-2 | ug/m3 | 2.07 | U | 2.07 | U | 2.07 | U | 2.07 | U | 2.07 | U | 2.07 | U | 2.07 | U | 2.07 | U |
| Bromodichloromethane | 75-27-4 | ug/m3 | 1.34 | U | 1.34 | U | 1.34 | U | 1.34 | U | 1.34 | U | 1.34 | U | 1.34 | U | 1.34 | U |
| 1,1-Dichloroethane | 75-34-3 | ug/m3 | 0.809 | U | 0.809 | U | 0.809 | U | 0.809 | U | 0.809 | U | 0.809 | U | 0.809 | U | 0.809 | U |
| 1,1-Dichloroethene | 75-35-4 | ug/m3 | 0.793 | U | 0.793 | U | 0.793 | U | 0.793 | U | 0.793 | U | 0.793 | U | 0.793 | U | 0.793 | U |
| Tertiary butyl Alcohol | 75-65-0 | ug/m3 | 1.52 | U | **4.49** | | 1.52 | U | **2.15** | | 1.52 | U | **4.52** | | 1.52 | U | **18.9** | |
| Trichlorofluoromethane | 75-69-4 | ug/m3 | **4.24** | | **2.56** | | 1.12 | U | **21.5** | | **3.2** | | **1.21** | | **111** | | **21.5** | |
| Dichlorodifluoromethane | 75-71-8 | ug/m3 | **3.21** | | **2.36** | | **2.16** | | **2.52** | | **4.84** | | **2.34** | | **73.2** | | **8.41** | |
| Freon-113 | 76-13-1 | ug/m3 | 1.53 | U | 1.53 | U | 1.53 | U | 1.53 | U | 1.53 | U | 1.53 | U | 1.53 | U | 1.53 | U |
| Freon-114 | 76-14-2 | ug/m3 | 1.4 | U | 1.4 | U | 1.4 | U | 1.4 | U | 1.4 | U | 1.4 | U | 1.4 | U | 1.4 | U |
| 1,2-Dichloropropane | 78-87-5 | ug/m3 | 0.924 | U | 0.924 | U | 0.924 | U | 0.924 | U | 0.924 | U | 0.924 | U | 0.924 | U | 0.924 | U |
| 2-Butanone | 78-93-3 | ug/m3 | **2.98** | | **2.07** | | 1.47 | U | **1.63** | | 1.47 | U | **2.4** | | **1.83** | | **4.75** | |
| 1,1,2-Trichloroethane | 79-00-5 | ug/m3 | 1.09 | U | 1.09 | U | 1.09 | U | 1.09 | U | 1.09 | U | 1.09 | U | 1.09 | U | 1.09 | U |
| Trichloroethene | 79-01-6 | ug/m3 | 1.07 | U | 1.07 | U | 1.07 | U | 1.07 | U | 1.07 | U | 1.07 | U | 1.07 | U | 1.07 | U |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | ug/m3 | 1.37 | U | 1.37 | U | 1.37 | U | 1.37 | U | 1.37 | U | 1.37 | U | 1.37 | U | 1.37 | U |
| Hexachlorobutadiene | 87-68-3 | ug/m3 | 2.13 | U | 2.13 | U | 2.13 | U | 2.13 | U | 2.13 | U | 2.13 | U | 2.13 | U | 2.13 | U |
| o-Xylene | 95-47-6 | ug/m3 | **2.64** | | **5.47** | | 0.869 | U | **8.9** | | 0.869 | U | **5.78** | | **4.34** | | **3.34** | |
| 1,2-Dichlorobenzene | 95-50-1 | ug/m3 | 1.2 | U | 1.2 | U | 1.2 | U | 1.2 | U | 1.2 | U | 1.2 | U | 1.2 | U | 1.2 | U |
| 1,2,4-Trimethylbenzene | 95-63-6 | ug/m3 | **3.95** | | **6.59** | | 0.983 | U | **8.65** | | 0.983 | U | **9.14** | | **6.34** | | 0.983 | U |

**TABLE 3.4**
**SUMMARY OF SOIL VAPOR ANALYTICAL RESULTS**
**FORMER GROSSINERS RESORT, LIBERTY NEW YORK**

| LOCATION | | | SMPV-11 | | SMPV-11 | | SMPV-12 | | SMPV-13 | | SMPV-13 | | SMPV-14 | | SMPV-14 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SAMPLING DATE | | | 3/6/2020 | | 4/28/2021 | | 3/6/2020 | | 3/6/2020 | | 4/28/2021 | | 3/6/2020 | | 4/28/2021 | |
| LAB SAMPLE ID | | | L2010375-08 | | L2122189-03 | | L2010375-06 | | L2010375-02 | | L2122189-04 | | L2010375-01 | | L2122189-01 | |
| SAMPLE TYPE | | | SOIL_VAPOR | | SOIL_VAPOR | | SOIL_VAPOR | | SOIL_VAPOR | | SOIL_VAPOR | | SOIL_VAPOR | | SOIL_VAPOR | |
| SAMPLE DEPTH (ft.) | | | | | | | | | | | | | | | | |
| | CasNum | Units | Results | Qual | Results | Qual | Results | Qual | Results | Qual | Results | Qual | Results | Qual | Results | Qual |
| Volatile Organics in Air | | | | | | | | | | | | | | | | |
| Ethylbenzene | 100-41-4 | ug/m3 | 0.869 | U | **1.6** | | 0.869 | U | 0.869 | U | 0.869 | U | **2.68** | | 0.869 | U |
| Styrene | 100-42-5 | ug/m3 | 0.852 | U | 0.852 | U | 0.852 | U | 0.852 | U | 0.852 | U | 0.852 | U | 0.852 | U |
| Benzyl chloride | 100-44-7 | ug/m3 | 1.04 | U | 1.04 | U | 1.04 | U | 1.04 | U | 1.04 | U | 1.04 | U | 1.04 | U |
| cis-1,3-Dichloropropene | 10061-01-5 | ug/m3 | 0.908 | U | 0.908 | U | 0.908 | U | 0.908 | U | 0.908 | U | 0.908 | U | 0.908 | U |
| trans-1,3-Dichloropropene | 10061-02-6 | ug/m3 | 0.908 | U | 0.908 | U | 0.908 | U | 0.908 | U | 0.908 | U | 0.908 | U | 0.908 | U |
| 1,4-Dichlorobenzene | 106-46-7 | ug/m3 | 1.2 | U | 1.2 | U | 1.2 | U | 1.2 | U | 1.2 | U | 1.2 | U | 1.2 | U |
| 1,2-Dibromoethane | 106-93-4 | ug/m3 | 1.54 | U | 1.54 | U | 1.54 | U | 1.54 | U | 1.54 | U | 1.54 | U | 1.54 | U |
| 1,3-Butadiene | 106-99-0 | ug/m3 | 0.442 | U | 0.442 | U | 0.442 | U | 0.878 | | 0.442 | U | 0.442 | U | 0.442 | U |
| 3-Chloropropene | 107-05-1 | ug/m3 | 0.626 | U | 0.626 | U | 0.626 | U | 0.626 | U | 0.626 | U | 0.626 | U | 0.626 | U |
| 1,2-Dichloroethane | 107-06-2 | ug/m3 | 0.809 | U | 0.809 | U | 0.809 | U | 0.809 | U | 0.809 | U | 0.809 | U | 0.809 | U |
| 4-Methyl-2-pentanone | 108-10-1 | ug/m3 | 2.05 | U | 2.05 | U | 2.05 | U | 2.05 | U | 2.05 | U | 2.05 | U | 2.05 | U |
| 1,3,5-Trimethylbenzene | 108-67-8 | ug/m3 | 0.983 | U | 0.983 | U | 0.983 | U | 0.983 | U | 0.983 | U | **1.23** | | 0.983 | U |
| Toluene | 108-88-3 | ug/m3 | 0.754 | U | **13.8** | | 0.754 | U | 0.837 | | **2.69** | | **7.91** | | **1.09** | |
| Chlorobenzene | 108-90-7 | ug/m3 | 0.921 | U | 0.921 | U | 0.921 | U | 0.921 | U | 0.921 | U | 0.921 | U | 0.921 | U |
| Tetrahydrofuran | 109-99-9 | ug/m3 | 1.47 | U | 1.47 | U | 1.47 | U | 1.47 | U | 1.47 | U | 1.47 | U | 1.47 | U |
| n-Hexane | 110-54-3 | ug/m3 | **1.09** | | **2.22** | | 0.705 | U | 0.705 | | 0.705 | U | **1.71** | | 0.705 | U |
| Cyclohexane | 110-82-7 | ug/m3 | **0.998** | | **1.92** | | 0.688 | U | 0.688 | U | 0.688 | U | 0.688 | U | 0.688 | U |
| 1,2,4-Trichlorobenzene | 120-82-1 | ug/m3 | 1.48 | U | 1.48 | U | 1.48 | U | 1.48 | U | 1.48 | U | 1.48 | U | 1.48 | U |
| 1,4-Dioxane | 123-91-1 | ug/m3 | 0.721 | U | 0.721 | U | 0.721 | U | 0.721 | U | 0.721 | U | 0.721 | U | 0.721 | U |
| Dibromochloromethane | 124-48-1 | ug/m3 | 1.7 | U | 1.7 | U | 1.7 | U | 1.7 | U | 1.7 | U | 1.7 | U | 1.7 | U |
| Tetrachloroethene | 127-18-4 | ug/m3 | 1.36 | U | 1.36 | U | 1.36 | U | 1.36 | U | **1.45** | | **12** | | 1.36 | U |
| Ethyl Acetate | 141-78-6 | ug/m3 | 1.8 | U | **26.4** | | 1.8 | U | 1.8 | U | **9.3** | | 1.8 | U | **5.19** | |
| Heptane | 142-82-5 | ug/m3 | 0.82 | U | **1.47** | | 0.82 | U | 0.82 | U | 0.82 | U | **1.76** | | 0.82 | U |
| cis-1,2-Dichloroethene | 156-59-2 | ug/m3 | 0.793 | U | 0.793 | U | 0.793 | U | 0.793 | U | 0.793 | U | 0.793 | U | 0.793 | U |
| trans-1,2-Dichloroethene | 156-60-5 | ug/m3 | 0.793 | U | 0.793 | U | 0.793 | U | 0.793 | U | 0.793 | U | 0.793 | U | 0.793 | U |
| Methyl tert butyl ether | 1634-04-4 | ug/m3 | 0.721 | U | 0.721 | U | 0.721 | U | 0.721 | U | 0.721 | U | 0.721 | U | 0.721 | U |
| p/m-Xylene | 179601-23-1 | ug/m3 | 1.74 | U | **6.99** | | 1.74 | U | 1.74 | U | **2.07** | | **9.64** | | 1.74 | U |
| 2,2,4-Trimethylpentane | 540-84-1 | ug/m3 | 0.934 | U | **3.46** | | 0.934 | U | 0.934 | U | 0.934 | U | 0.934 | U | 0.934 | U |
| 1,3-Dichlorobenzene | 541-73-1 | ug/m3 | 1.2 | U | 1.2 | U | 1.2 | U | 1.2 | U | **2.09** | | 1.2 | U | **1.93** | |
| Carbon tetrachloride | 56-23-5 | ug/m3 | 1.26 | U | 1.26 | U | 1.26 | U | 1.26 | U | 1.26 | U | 1.26 | U | 1.26 | U |
| 2-Hexanone | 591-78-6 | ug/m3 | 0.82 | U | 0.82 | U | 0.82 | U | 0.82 | U | 0.82 | U | 0.82 | U | 0.82 | U |
| Vinyl bromide | 593-60-2 | ug/m3 | 0.874 | U | 0.874 | U | 0.874 | U | 0.874 | U | 0.874 | U | 0.874 | U | 0.874 | U |
| 4-Ethyltoluene | 622-96-8 | ug/m3 | 0.983 | U | 0.983 | U | 0.983 | U | 0.983 | U | 0.983 | U | **1.09** | | 0.983 | U |
| Ethanol | 64-17-5 | ug/m3 | 9.42 | U | **23.2** | | 9.42 | U | 9.42 | U | **10.2** | | **11.2** | | 9.42 | U |
| Isopropanol | 67-63-0 | ug/m3 | 1.23 | U | **9** | | 1.23 | U | 1.99 | | **4.4** | | **3.22** | | **2.88** | |
| Acetone | 67-64-1 | ug/m3 | **4.58** | | **27.3** | | 3.87 | | 5.7 | | 25.2 | | **13.7** | | **21.1** | |
| Chloroform | 67-66-3 | ug/m3 | 0.977 | U | 0.977 | U | 0.977 | U | 0.977 | U | 0.977 | U | 0.977 | U | 0.977 | U |
| Benzene | 71-43-2 | ug/m3 | **0.652** | | **2.87** | | 0.639 | U | 0.639 | U | **1.38** | | **1.51** | | **0.834** | |
| 1,1,1-Trichloroethane | 71-55-6 | ug/m3 | 1.09 | U | 1.09 | U | 1.09 | U | 1.09 | U | 1.09 | U | 1.09 | U | 1.09 | U |
| Bromomethane | 74-83-9 | ug/m3 | 0.777 | U | 0.777 | U | 0.777 | U | 0.777 | U | 0.777 | U | 0.777 | U | 0.777 | U |
| Chloromethane | 74-87-3 | ug/m3 | **1.08** | | 0.413 | U | 1.07 | | 1.08 | | 0.413 | U | 0.413 | U | 0.413 | U |
| Chloroethane | 75-00-3 | ug/m3 | 0.528 | U | 0.528 | U | 0.528 | U | 0.528 | U | 0.528 | U | 0.528 | U | 0.528 | U |

**TABLE 3.4**
**SUMMARY OF SOIL VAPOR ANALYTICAL RESULTS**
**FORMER GROSSINERS RESORT, LIBERTY NEW YORK**

| LOCATION | | | SMPV-11 | | SMPV-11 | | SMPV-12 | | SMPV-13 | | SMPV-13 | | SMPV-14 | | SMPV-14 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SAMPLING DATE | | | 3/6/2020 | | 4/28/2021 | | 3/6/2020 | | 3/6/2020 | | 4/28/2021 | | 3/6/2020 | | 4/28/2021 | |
| LAB SAMPLE ID | | | L2010375-08 | | L2122189-03 | | L2010375-06 | | L2010375-02 | | L2122189-04 | | L2010375-01 | | L2122189-01 | |
| SAMPLE TYPE | | | SOIL_VAPOR | | SOIL_VAPOR | | SOIL_VAPOR | | SOIL_VAPOR | | SOIL_VAPOR | | SOIL_VAPOR | | SOIL_VAPOR | |
| SAMPLE DEPTH (ft.) | | | | | | | | | | | | | | | | |
| | CasNum | Units | Results | Qual | Results | Qual | Results | Qual | Results | Qual | Results | Qual | Results | Qual | Results | Qual |
| Vinyl chloride | 75-01-4 | ug/m3 | 0.511 | U | 0.511 | U | 0.511 | U | 0.511 | U | 0.511 | U | 0.511 | U | 0.511 | U |
| Methylene chloride | 75-09-2 | ug/m3 | 1.74 | U | 1.74 | U | 1.74 | U | 3.68 | | 1.74 | U | 1.74 | U | 1.74 | U |
| Carbon disulfide | 75-15-0 | ug/m3 | 0.623 | U | 0.623 | U | 0.623 | U | 0.797 | | 0.623 | U | **0.772** | | 0.623 | U |
| Bromoform | 75-25-2 | ug/m3 | 2.07 | U | 2.07 | U | 2.07 | U | 2.07 | U | 2.07 | U | 2.07 | U | 2.07 | U |
| Bromodichloromethane | 75-27-4 | ug/m3 | 1.34 | U | 1.34 | U | 1.34 | U | 1.34 | U | 1.34 | U | 1.34 | U | 1.34 | U |
| 1,1-Dichloroethane | 75-34-3 | ug/m3 | 0.809 | U | 0.809 | U | 0.809 | U | 0.809 | U | 0.809 | U | 0.809 | U | 0.809 | U |
| 1,1-Dichloroethene | 75-35-4 | ug/m3 | 0.793 | U | 0.793 | U | 0.793 | U | 0.793 | U | 0.793 | U | 0.793 | U | 0.793 | U |
| Tertiary butyl Alcohol | 75-65-0 | ug/m3 | 1.52 | U | **3.52** | | 1.52 | U | 1.52 | U | **4.27** | | 1.52 | U | **3.06** | |
| Trichlorofluoromethane | 75-69-4 | ug/m3 | **9.72** | | **238** | | 1.82 | | 48.7 | | **105** | | **826** | | **447** | |
| Dichlorodifluoromethane | 75-71-8 | ug/m3 | **2.52** | | **2.24** | | 2.73 | | 285 | | **376** | | **82.1** | | **10.6** | |
| Freon-113 | 76-13-1 | ug/m3 | 1.53 | U | 1.53 | U | 1.53 | U | 1.53 | U | 1.53 | U | 1.53 | U | 1.53 | U |
| Freon-114 | 76-14-2 | ug/m3 | 1.4 | U | 1.4 | U | 1.4 | U | 1.4 | U | 1.4 | U | 1.4 | U | 1.4 | U |
| 1,2-Dichloropropane | 78-87-5 | ug/m3 | 0.924 | U | 0.924 | U | 0.924 | U | 0.924 | U | 0.924 | U | 0.924 | U | 0.924 | U |
| 2-Butanone | 78-93-3 | ug/m3 | 1.47 | U | 1.47 | U | 1.47 | U | 1.47 | U | **1.63** | | **4.19** | | 1.47 | U |
| 1,1,2-Trichloroethane | 79-00-5 | ug/m3 | 1.09 | U | 1.09 | U | 1.09 | U | 1.09 | U | 1.09 | U | 1.09 | U | 1.09 | U |
| Trichloroethene | 79-01-6 | ug/m3 | 1.07 | U | 1.07 | U | 1.07 | U | 1.07 | U | 1.07 | U | 1.07 | U | 1.07 | U |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | ug/m3 | 1.37 | U | 1.37 | U | 1.37 | U | 1.37 | U | 1.37 | U | 1.37 | U | 1.37 | U |
| Hexachlorobutadiene | 87-68-3 | ug/m3 | 2.13 | U | 2.13 | U | 2.13 | U | 2.13 | U | 2.13 | U | 2.13 | U | 2.13 | U |
| o-Xylene | 95-47-6 | ug/m3 | 0.869 | U | **3.5** | | 0.869 | U | 0.869 | U | **1.3** | | **3.63** | | 0.869 | U |
| 1,2-Dichlorobenzene | 95-50-1 | ug/m3 | 1.2 | U | 1.2 | U | 1.2 | U | 1.2 | U | 1.2 | U | 1.2 | U | 1.2 | U |
| 1,2,4-Trimethylbenzene | 95-63-6 | ug/m3 | 0.983 | U | **1.71** | | 0.983 | U | 0.983 | U | 0.983 | U | **4.64** | | 0.983 | U |

Qualifier Key
NJ - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.
F - The ratio of quantifier ion response to qualifier ion response falls outside of the laboratory criteria. Results are considered to be an estimated maximum concentration.
C - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.
Q - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)
I - The lower value for the two columns has been reported due to obvious interference.
G - The concentration may be biased high due to matrix interferences (i.e, co-elution) with non-target compound(s). The result should be considered estimated.
A - Spectra identified as "Aldol Condensates" are byproducts of the extraction/concentration procedures when acetone is introduced in the process.
E - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.
H - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.
RE - Analytical results are from sample re-extraction.
R - Analytical results are from sample re-analysis.
D - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.
P - The RPD between the results for the two columns exceeds the method-specified criteria.
U - Not detected at the reported detection limit for the sample.
M - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.
S - Analytical results are from modified screening analysis.
B - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).
* : LCS or LCSD is outside acceptance limits.

# FIGURES

| | NY-AWQS | Units |
|---|---|---|
| Trichlorofluoromethane (FREON 11) | 5 | ug/l |
| Dichlorodifluoromethane (FREON 12) | 5 | ug/l |
| Perfluorooctanesulfonic Acid (PFOS) | 10 | ng/l |
| Perfluorooctanoic Acid (PFOA) | 10 | ng/l |

| LOCATION | MW-217 | | MW-217 | | MW-217 | | MW-217 | |
|---|---|---|---|---|---|---|---|---|
| SAMPLING DATE | 7/10/2019 | | 3/6/2020 | | 9/3/2020 | | 4/28/2021 | |
| | Results | Q | Results | Q | Results | Q | Results | Q |
| Trichlorofluoromethane (FREON 11) | 12 | | 22 | | 5.6 | | 47 | |
| Dichlorodifluoromethane (FREON 12) | 5 | U | 5 | U | 0.31 | U | 5 | U |
| Perfluorooctanesulfonic Acid (PFOS) | 17 | | 30 | | 42.1 | | 19.5 | |
| Perfluorooctanoic Acid (PFOA) | 16.5 | | 15.7 | | 13.8 | | 14.6 | |

| LOCATION | MW-216 | | MW-216 | | MW-216 | | MW-216 | |
|---|---|---|---|---|---|---|---|---|
| SAMPLING DATE | 7/10/2019 | | 3/6/2020 | | 9/3/2020 | | 4/28/2021 | |
| | Results | Q | Results | Q | Results | Q | Results | Q |
| Trichlorofluoromethane | 120 | | 48 | | 6.9 | | 29 | |
| Dichlorodifluoromethane | 48 | | 15 | | 3.9 | | 11 | |
| Perfluorooctanesulfonic Acid (PFOS) | 29.4 | | 6.51 | | 6.51 | | 24.8 | |
| Perfluorooctanoic Acid (PFOA) | 17.9 | | 8.18 | | 8.18 | | 9.39 | |

| LOCATION | MW-203 | | MW-203 | | MW-203 | | MW-203 | |
|---|---|---|---|---|---|---|---|---|
| SAMPLING DATE | 2/7/2019 | | 3/5/2020 | | 9/2/2020 | | 4/28/2021 | |
| | Results | Q | Results | Q | Results | Q | Results | Q |
| Perfluorooctanesulfonic Acid (PFOS) | 37 | | 27.9 | | 25 | | 14.5 | |
| Perfluorooctanoic Acid (PFOA) | 22.3 | | 6 | | 5.15 | | 3.26 | |

| LOCATION | MW-204 | | MW-204 | | MW-204 | |
|---|---|---|---|---|---|---|
| SAMPLING DATE | 3/5/2020 | | 9/2/2020 | | 4/27/2021 | |
| | Results | Q | Results | Q | Results | Q |
| Perfluorooctanesulfonic Acid (PFOS) | 5.05 | | 12.1 | | 4.41 | |
| Perfluorooctanoic Acid (PFOA) | 2.22 | | 3.94 | | 1.53 | J |

| LOCATION | MW-213 | | MW-213 | | MW-213 | | MW-213 | |
|---|---|---|---|---|---|---|---|---|
| SAMPLING DATE | 1/29/2019 | | 3/4/2020 | | 9/2/2020 | | 4/27/2021 | |
| | Results | Q | Results | Q | Results | Q | Results | Q |
| Trichlorofluoromethane (FREON 11) | 48 | | 71 | | 56 | | 52 | |
| Dichlorodifluoromethane (FREON 12) | 29 | | 74 | | 40 | | 54 | |
| Perfluorooctanesulfonic Acid (PFOS) | 91.2 | | 73.4 | | 60.7 | | 70 | |
| Perfluorooctanoic Acid (PFOA) | 40.4 | | 32.8 | | 26.5 | | 27.7 | |

| LOCATION | MW-206 | | MW-206 | | MW-206 | | MW-206 | |
|---|---|---|---|---|---|---|---|---|
| SAMPLING DATE | 2/6/2019 | | 3/5/2020 | | 9/2/2020 | | 4/27/2021 | |
| | Results | Q | Results | Q | Results | Q | Results | Q |
| Perfluorooctanesulfonic Acid (PFOS) | 51.9 | | 47.9 | | 38.7 | | 30.9 | |
| Perfluorooctanoic Acid (PFOA) | 107 | | 25.5 | | 12.1 | | 26 | |

| LOCATION | MW-207 | | MW-207 | | MW-207 | | MW-207 | |
|---|---|---|---|---|---|---|---|---|
| SAMPLING DATE | 2/6/2019 | | 3/5/2020 | | 9/3/2020 | | 4/27/2021 | |
| | Results | Q | Results | Q | Results | Q | Results | Q |
| Perfluorooctanesulfonic Acid (PFOS) | 34 | | 11.3 | | 22.1 | | 8.36 | |
| Perfluorooctanoic Acid (PFOA) | 23.4 | | 6.59 | | 5.46 | | 2.2 | |

| LOCATION | MW-208 | | MW-208 | |
|---|---|---|---|---|
| SAMPLING DATE | 2/7/2019 | | 3/5/2020 | |
| | Results | Q | Results | Q |
| Perfluorooctanesulfonic Acid (PFOS) | 17.6 | | 68.2 | |
| Perfluorooctanoic Acid (PFOA) | 10.8 | | 38.2 | |

| LOCATION | MW-214 | | MW-214 | | MW-214 | | MW-214 | |
|---|---|---|---|---|---|---|---|---|
| SAMPLING DATE | 1/29/2019 | | 3/4/2020 | | 9/3/2020 | | 4/27/2021 | |
| | Results | Q | Results | Q | Results | Q | Results | Q |
| Trichlorofluoromethane (FREON 11) | 0.14 | U | 10 | | 5.1 | | 5.4 | |
| Dichlorodifluoromethane (FREON 12) | 0.88 | J | 27 | | 16 | | 21 | |
| Perfluorooctanesulfonic Acid (PFOS) | 48.5 | | 47.3 | | 46.6 | | 40.3 | |
| Perfluorooctanoic Acid (PFOA) | 68.6 | | 29.9 | | 25.8 | | 29.5 | |

PROPERTY LINE

MACADAM SURFACE DRIVEWAY

Monitoring Well #210

Monitoring Well #201

Monitoring Well #203

Monitoring Well #204

Monitoring Well #205

Monitoring Well #211

Monitoring Well #206

Monitoring Well #208

Monitoring Well #207

Monitoring Well #209

Monitoring Well #217

Monitoring Well #216

Monitoring Well #213

Monitoring Well #214

Monitoring Well #212

FORMER TENNIS COURT

FORMER BUILDING LOCATION

UNPAVED DRIVEWAY

FORMER POOL LOCATION

FORMER SKI MAINTENANCE BUILDING

5/8" rebar (found)

SPRUCE

KATERINA CHEREPANOV CRONK
f/k/a KATERINA CRONK
INSTRUMENT NO. 2017-2245
SBL: 29-2-17

REFERENCE
1. SURVEY AND SAMPLES INFORMATION PROVIDED BY PACKER ASSOCIATES, INC., DATED DECEMBER 10, 2018.
2. WELL NOT LISTED ON TABLE DO NOT CONTAIN EXCEEDANCES TO GW CLASS GA EFFLUENT.
3. "GW CLASS GA EFFLUENT" STANDARD IS NYSDEC WATER QUALITY STANDARD APPLIED TO THIS SITE.

LEGEND

MW-201 – MONITORING WELL LOCATION AND DESIGNATION

30.9 – EXCEEDS STANDARDS

Scale: 1"= 60'

0 30 60 120 180 240

NYS Education Law
Unauthorized alterations or additions to this plan are a violation of section 7209 (2) of the New York State Education Law. Copies of this map not having the seal of the engineer shall not be valid.

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N:\ACAD\9313\SMP 2019-12-10\2021-06-21 SAMPLE RESULTS\9313 FIG-3.1 – GROUNDWATER SAMPLE RESULTS PLAN XTND 07/09/21 03:03:28PM, Jerry, LAYOUT1FIG-3.1

| no. | date | description | by |
|---|---|---|---|
| | | | |

dwg by: yy
chk by: FD
scale: 1" = 60'
date: 07/08/2021

SESI CONSULTING ENGINEERS D.P.C.
SOILS / FOUNDATIONS
SITE DESIGN
ENVIRONMENTAL
12A MAPLE AVE. PINE BROOK, NJ. 07058 PH: 973-808-9050

ROUTE 17 & ROUTE 52 EAST
LIBERTY, NEW YORK 12754
NYSDEC BCP SITE NO. C353015

drawing title:
MONITORING WELL LOCATIONS AND CONCENTRATIONS

job no. 9313
drawing no.
FIG-3.1

| LOCATION | V-2 | | V-2 | | SMPV-2 | | SMPV-2 | |
|---|---|---|---|---|---|---|---|---|
| SAMPLING DATE | 11/30/2018 | | 2/11/2019 | | 3/6/2020 | | 4/29/2021 | |
| Units ug/m3 | Results | Q | Results | Q | Results | Q | Results | Q |
| 1,3-Butadiene | 1.4 | U | 3.5 | U | 0.442 | U | 0.442 | U |
| Benzene | 2.3 | U | 5.6 | U | 0.639 | U | **1.52** | |
| Trichlorofluoromethane | **3.5** | | **2300** | B | 1.12 | U | **21.5** | |
| Dichlorodifluoromethane | 9.9 | U | **110** | | **2.16** | | **2.52** | |

| LOCATION | V-1 | | V-1 | | SMPV-1 | | SMPV-1 | |
|---|---|---|---|---|---|---|---|---|
| SAMPLING DATE | 12/14/2018 | | 2/11/2019 | | 3/6/2020 | | 4/29/2021 | |
| Units ug/m3 | Results | Q | Results | Q | Results | Q | Results | Q |
| 1,3-Butadiene | **66** | | 370 | U | 0.442 | U | 0.442 | U |
| Benzene | **24** | | 590 | U | **0.811** | | **2.37** | |
| Trichlorofluoromethane | 3.5 | U | **380000** | B | **4.24** | | **2.56** | |
| Dichlorodifluoromethane | 9.9 | U | 2600 | U | **3.21** | | **2.36** | |

| LOCATION | V-3 | | SMPV-3 | | SMPV-3 | |
|---|---|---|---|---|---|---|
| SAMPLING DATE | 12/14/2018 | | 3/6/2020 | | 4/29/2021 | |
| Units ug/m3 | Results | Q | Results | Q | Results | Q |
| 1,3-Butadiene | **28** | | 0.442 | U | 0.442 | U |
| Benzene | **5.1** | J | 0.639 | U | **2.87** | |
| Trichlorofluoromethane (FREON 11) | **26** | | **3.2** | | **1.21** | |
| Dichlorodifluoromethane (FREON 12) | **140** | | **4.84** | | **2.34** | |

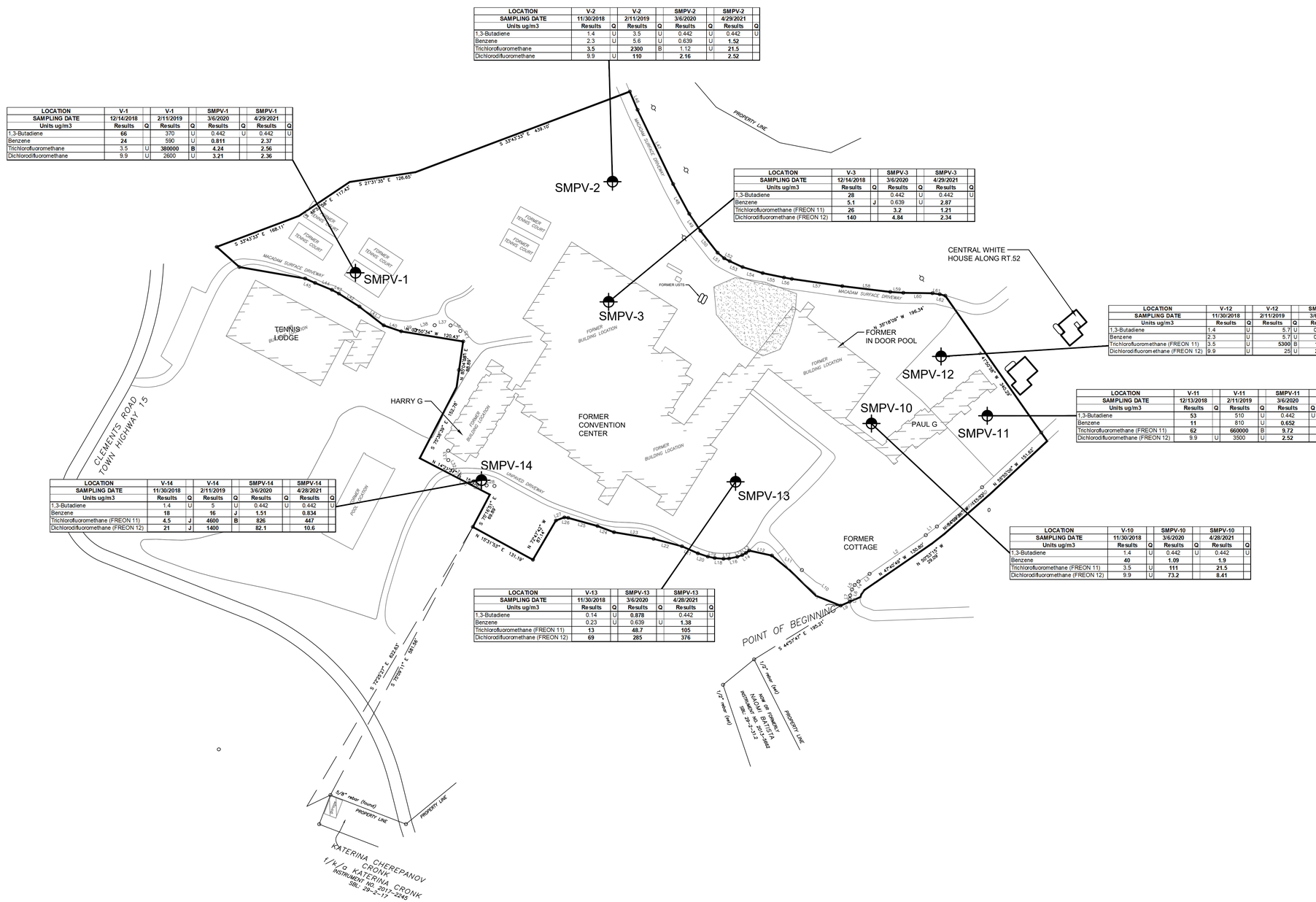
| LOCATION | V-12 | | V-12 | | SMPV-12 | |
|---|---|---|---|---|---|---|
| SAMPLING DATE | 11/30/2018 | | 2/11/2019 | | 3/6/2020 | |
| Units ug/m3 | Results | Q | Results | Q | Results | Q |
| 1,3-Butadiene | 1.4 | U | 5.7 | U | 0.442 | U |
| Benzene | 2.3 | U | 5.7 | U | 0.639 | U |
| Trichlorofluoromethane (FREON 11) | 3.5 | U | **5300** | B | **1.82** | |
| Dichlorodifluoromethane (FREON 12) | 9.9 | U | 25 | U | **2.73** | |

| LOCATION | V-11 | | V-11 | | SMPV-11 | | SMPV-11 | |
|---|---|---|---|---|---|---|---|---|
| SAMPLING DATE | 12/13/2018 | | 2/11/2019 | | 3/6/2020 | | 4/28/2021 | |
| Units ug/m3 | Results | Q | Results | Q | Results | Q | Results | Q |
| 1,3-Butadiene | **53** | | 510 | U | 0.442 | U | 0.442 | U |
| Benzene | **11** | | 810 | U | **0.652** | | **2.87** | |
| Trichlorofluoromethane (FREON 11) | **62** | | **660000** | B | **9.72** | | **238** | |
| Dichlorodifluoromethane (FREON 12) | 9.9 | U | 3500 | U | **2.52** | | **2.24** | |

| LOCATION | V-14 | | V-14 | | SMPV-14 | | SMPV-14 | |
|---|---|---|---|---|---|---|---|---|
| SAMPLING DATE | 11/30/2018 | | 2/11/2019 | | 3/6/2020 | | 4/28/2021 | |
| Units ug/m3 | Results | Q | Results | Q | Results | Q | Results | Q |
| 1,3-Butadiene | 1.4 | U | 5 | U | 0.442 | U | 0.442 | U |
| Benzene | **18** | | **16** | J | **1.51** | | **0.834** | |
| Trichlorofluoromethane (FREON 11) | **4.5** | J | **4600** | B | **826** | | **447** | |
| Dichlorodifluoromethane (FREON 12) | **21** | J | **1400** | | **82.1** | | **10.6** | |

| LOCATION | V-10 | | SMPV-10 | | SMPV-10 | |
|---|---|---|---|---|---|---|
| SAMPLING DATE | 11/30/2018 | | 3/6/2020 | | 4/28/2021 | |
| Units ug/m3 | Results | Q | Results | Q | Results | Q |
| 1,3-Butadiene | 1.4 | U | 0.442 | U | 0.442 | U |
| Benzene | **40** | | **1.09** | | **1.9** | |
| Trichlorofluoromethane (FREON 11) | 3.5 | U | **111** | | **21.5** | |
| Dichlorodifluoromethane (FREON 12) | 9.9 | U | **73.2** | | **8.41** | |

| LOCATION | V-13 | | SMPV-13 | | SMPV-13 | |
|---|---|---|---|---|---|---|
| SAMPLING DATE | 11/30/2018 | | 3/6/2020 | | 4/28/2021 | |
| Units ug/m3 | Results | Q | Results | Q | Results | Q |
| 1,3-Butadiene | 0.14 | U | **0.878** | | 0.442 | U |
| Benzene | 0.23 | U | 0.639 | U | **1.38** | |
| Trichlorofluoromethane (FREON 11) | **13** | | **48.7** | | **105** | |
| Dichlorodifluoromethane (FREON 12) | **69** | | **285** | | **376** | |




LEGEND:

SMPV-12 - LOCATION AND AND SOIL VAPOR POINT NUMBER

\- BROWNFIELDS CLEAN-UP PROGRAM (BCP) TOTAL AREA = 17.30+0.87 ACRES SITE BOUNDARY

Scale: 1"= 100'

0 50 100 200 300 400

REFERENCE
SITE INFORMATION TAKEN FROM "PRELIMINARY MAP". DATED FEBRUARY 1993.
LAST UPDATED ON DECEMBER 2009.

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N:\ACAD\9313\SMP 2019-12-10\2021-06-21 SAMPLE RESULTS\9313 FIG-3.2 - SOIL VAPOR RESULTS PLAN V1.DWG 07/09/21 03:03:57PM Jenny LAYOUT:FIG-3.2

UNKNOWN

| rev | date | description | by |
|---|---|---|---|
| | | | |

dwg by: yy
chk by: FD
scale: 1" = 100'
date: 07/08/2021

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ROUTE 17 & ROUTE 52 EAST
LIBERTY, NEW YORK 12754

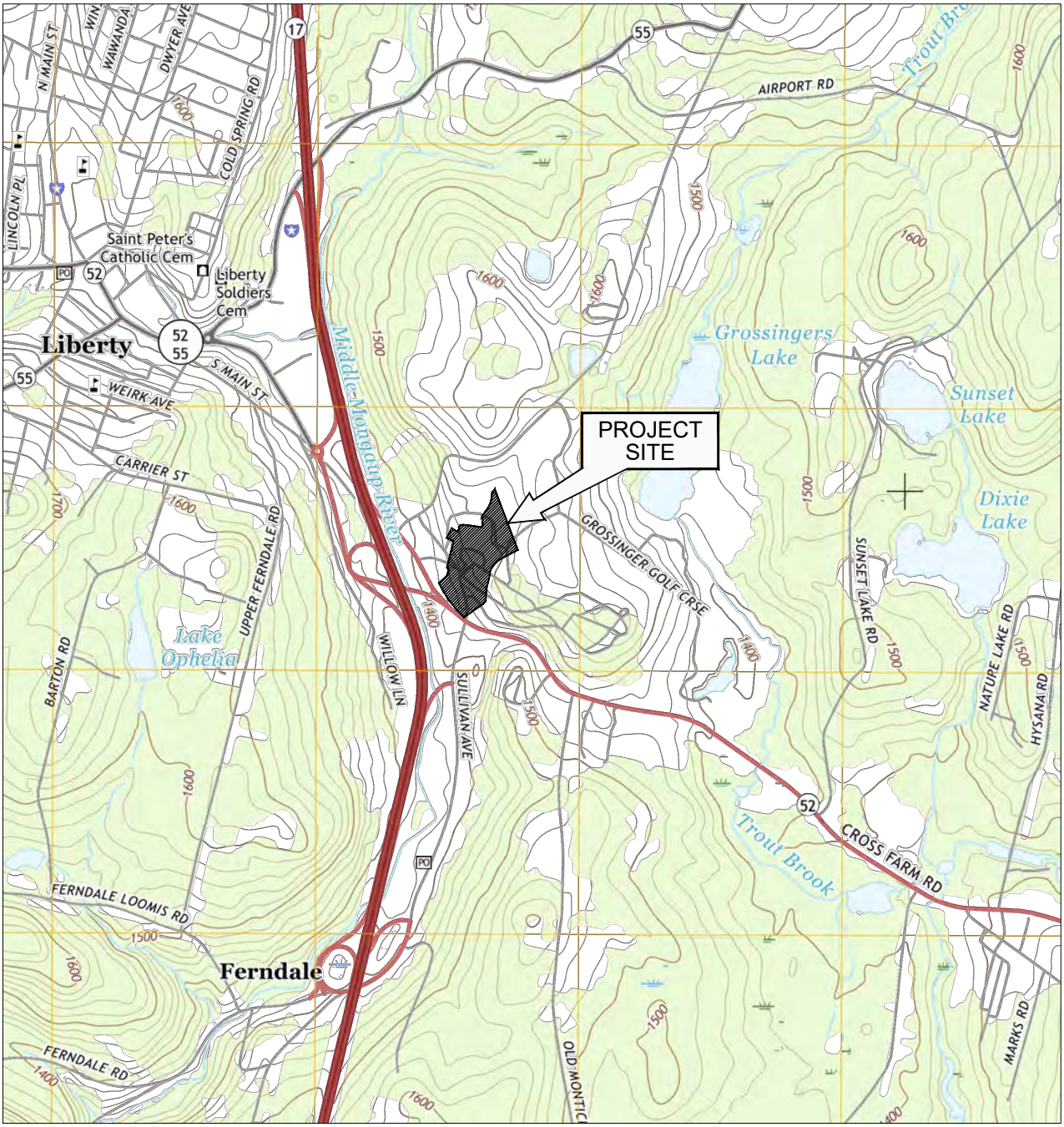
drawing title:
SOIL VAPOR POINT SAMPLE RESULTS PLAN

job no. 9313
drawing no.

FIG-3.2

# Appendix A:

## Site Management Plan (SMP) Figures




Produced by the United States Geological Survey
North American Datum of 1983 (NAD83)
World Geodetic System of 1984 (WGS84). Projection and 1 000-meter grid: Universal Transverse Mercator, Zone 18T
10 000-foot ticks: New York Coordinate System of 1983 (east zone)

This map is not a legal document. Boundaries may be generalized for this map scale. Private lands within government reservations may not be shown. Obtain permission before entering private lands.

Imagery.....NAIP, July 2013
Roads..... U.S. Census Bureau, 2015 - 2016
Names.....GNIS, 2016
Hydrography.....National Hydrography Dataset, 2013
Contours.....National Elevation Dataset, 1999
Boundaries.....Multiple sources; see metadata file 1972 - 2016

Wetlands.....FWS National Wetlands Inventory 1977 - 2014

UTM GRID AND 2016 MAGNETIC NORTH DECLINATION AT CENTER OF SHEET

U.S. National Grid
100,000-m Square ID
WM
Grid Zone Designation
18T

SCALE 1:24 000

KILOMETERS 1 0.5 0 1 2
METERS 1000 500 0 1000 2000
MILES 1 0.5 0 1
FEET 1000 0 1000 2000 3000 4000 5000 6000 7000 8000 9000 10000

CONTOUR INTERVAL 20 FEET
NORTH AMERICAN VERTICAL DATUM OF 1988

This map was produced to conform with the National Geospatial Program US Topo Product Standard, 2011.
A metadata file associated with this product is draft version 0.6.19

QUADRANGLE LOCATION

ADJOINING QUADRANGLES

| | | |
|---|---|---|
| 1 | 2 | 3 |
| 4 | | 5 |
| 6 | 7 | 8 |

1 Livingston Manor
2 Willowemoc
3 Claryville
4 Liberty West
5 Grahamsville
6 White Lake
7 Monticello
8 Woodridge

FIG - 1.1

ROUTE 17 & ROUTE 52 EAST
LIBERTY, NEW YORK 12754
NYSDEC BCP SITE NO. C353015

SITE PLAN

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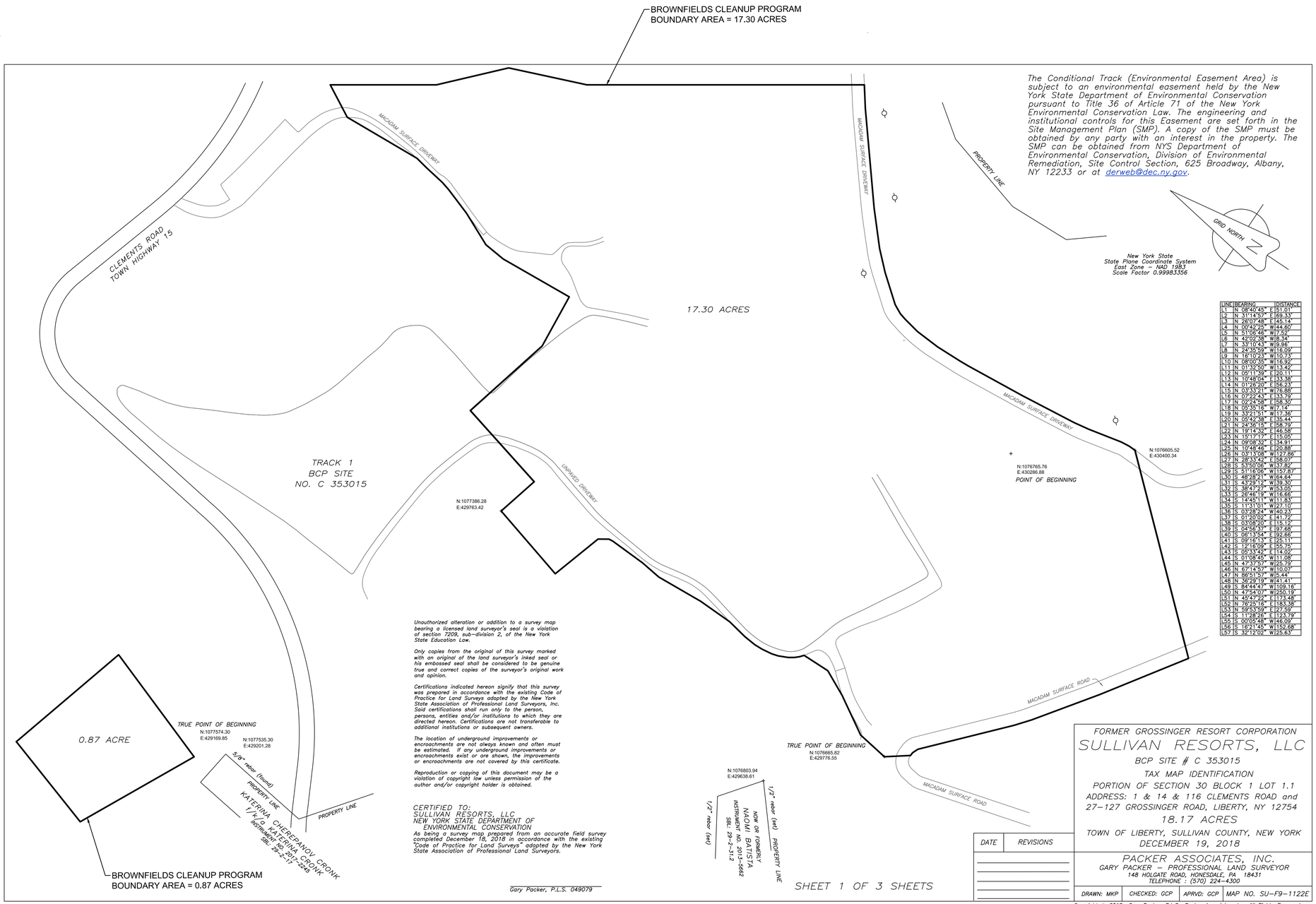
DRAWN BY: yy
CHECKED BY: FD
SCALE: N.T.S.
DATE: 12/11/19
JOB NO.: 9313

N:\ACAD\9313\SMP 2019-12-10\9313 SITE PLAN FIG-1.1.DWG 12/11/19 02:56:24PM, jenny, LAYOUT:FIG-1.1




*The Conditional Track (Environmental Easement Area) is subject to an environmental easement held by the New York State Department of Environmental Conservation pursuant to Title 36 of Article 71 of the New York Environmental Conservation Law. The engineering and institutional controls for this Easement are set forth in the Site Management Plan (SMP). A copy of the SMP must be obtained by any party with an interest in the property. The SMP can be obtained from NYS Department of Environmental Conservation, Division of Environmental Remediation, Site Control Section, 625 Broadway, Albany, NY 12233 or at derweb@dec.ny.gov.*

| LINE | BEARING | DISTANCE |
|---|---|---|
| L1 | N 08°40'45" E | 51.01' |
| L2 | N 31°14'57" E | 69.33' |
| L3 | N 26°07'48" E | 45.14' |
| L4 | N 00°42'25" W | 44.60' |
| L5 | N 51°09'46" W | 7.52' |
| L6 | N 42°03'58" W | 8.34' |
| L7 | N 33°10'43" W | 9.96' |
| L8 | N 24°15'59" W | 16.09' |
| L9 | N 18°10'23" W | 10.73' |
| L10 | N 09°00'45" W | 16.92' |
| L11 | N 01°32'50" W | 13.42' |
| L12 | N 05°11'39" E | 20.11' |
| L13 | N 10°48'04" E | 33.38' |
| L14 | N 01°26'20" E | 56.23' |
| L15 | N 01°33'21" W | 76.88' |
| L16 | N 07°22'43" E | 33.79' |
| L17 | N 09°23'58" E | 58.30' |
| L18 | N 05°35'16" W | 7.14' |
| L19 | N 33°21'51" W | 17.36' |
| L20 | N 05°42'38" E | 35.44' |
| L21 | N 24°36'15" E | 58.79' |
| L22 | N 19°13'50" E | 46.58' |
| L23 | N 15°17'17" E | 115.05' |
| L24 | N 09°08'32" E | 34.91' |
| L25 | N 10°48'46" E | 20.88' |
| L26 | N 03°13'08" W | 127.86' |
| L27 | N 28°13'42" E | 58.07' |
| L28 | S 57°50'06" W | 37.82' |
| L29 | S 31°10'06" W | 152.87' |
| L30 | S 48°28'21" W | 64.64' |
| L31 | S 43°29'12" W | 39.30' |
| L32 | S 36°41'27" W | 53.05' |
| L33 | S 26°46'19" W | 16.66' |
| L34 | S 14°45'11" W | 11.83' |
| L35 | S 11°31'01" W | 27.10' |
| L36 | S 01°28'24" W | 40.23' |
| L37 | S 01°20'02" E | 41.72' |
| L38 | S 01°08'20" E | 15.12' |
| L39 | S 04°56'37" E | 97.68' |
| L40 | S 06°13'54" E | 92.66' |
| L41 | S 09°16'13" E | 25.11' |
| L42 | S 12°10'09" E | 55.75' |
| L43 | S 05°33'42" E | 14.02' |
| L44 | S 01°08'45" W | 11.08' |
| L45 | N 47°37'57" W | 25.79' |
| L46 | N 67°14'57" W | 10.27' |
| L47 | N 86°51'57" W | 15.44' |
| L48 | N 56°29'19" W | 41.41' |
| L49 | S 84°44'47" W | 109.16' |
| L50 | N 47°54'07" W | 250.19' |
| L51 | N 45°47'22" E | 173.48' |
| L52 | N 76°29'16" E | 183.38' |
| L53 | N 59°53'59" E | 127.59' |
| L54 | S 11°28'26" E | 123.79' |
| L55 | S 00°05'48" W | 46.09' |
| L56 | S 16°21'45" W | 152.68' |
| L57 | S 30°12'02" W | 25.63' |

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*As being a survey map prepared from an accurate field survey completed December 18, 2018 in accordance with the existing "Code of Practice for Land Surveys" adopted by the New York State Association of Professional Land Surveyors.*

*Gary Packer, P.L.S. 049079*

*SHEET 1 OF 3 SHEETS*

| DATE | REVISIONS |
|---|---|
| | |

*FORMER GROSSINGER RESORT CORPORATION*

# SULLIVAN RESORTS, LLC

*BCP SITE # C 353015*

*TAX MAP IDENTIFICATION*
*PORTION OF SECTION 30 BLOCK 1 LOT 1.1*
*ADDRESS: 1 & 14 & 116 CLEMENTS ROAD and 27–127 GROSSINGER ROAD, LIBERTY, NY 12754*
*18.17 ACRES*
*TOWN OF LIBERTY, SULLIVAN COUNTY, NEW YORK*
*DECEMBER 19, 2018*

*PACKER ASSOCIATES, INC.*
*GARY PACKER – PROFESSIONAL LAND SURVEYOR*
*148 HOLGATE ROAD, HONESDALE, PA 18431*
*TELEPHONE : (570) 224–4300*

*DRAWN: MKP* | *CHECKED: GCP* | *APRVD: GCP* | *MAP NO. SU–F9–1122E*

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Scale: 1"= 80'
0 40 80 160 240 320

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N:\ACAD\9313\FIG 1.2.DWG 08/20/19 10:10:29AM jerry LAYOUT:FIG-1.2

| rev | date | description | by |
|---|---|---|---|
| | | | |

dwg by: yy
chk by: FD
scale: 1" = 80'
date: 8/20/19

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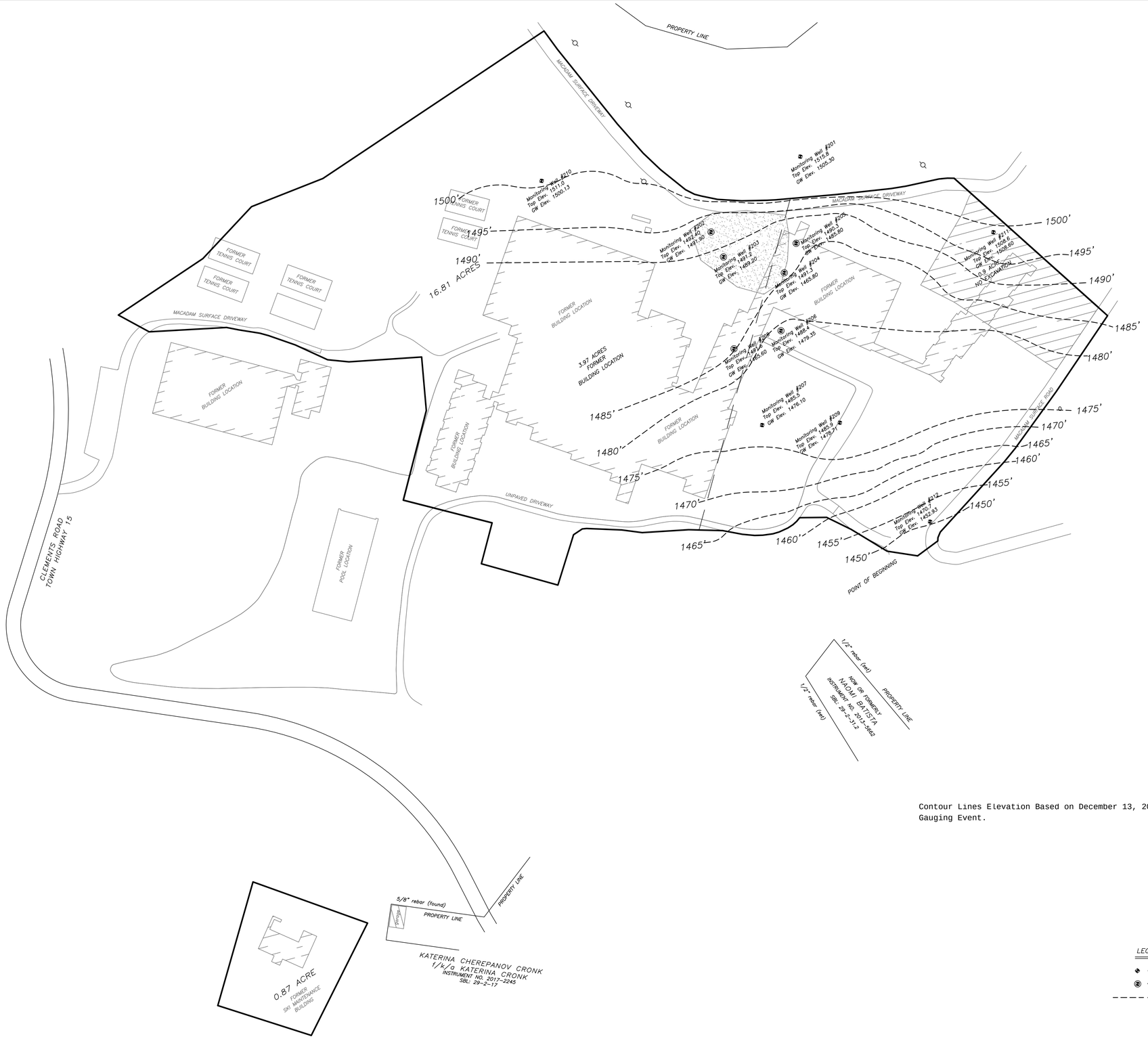
LIBERTY, NEW YORK 12754
NYSDEC BCP SITE NO. C353015

drawing title: SITE PLAN

job no. 9313
drawing no.

FIG-1.2

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dwg by: yy
chk by: FD
scale: 1" = 80'
date: 12/21/18

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NYSDEC BCP SITE NO. C353015

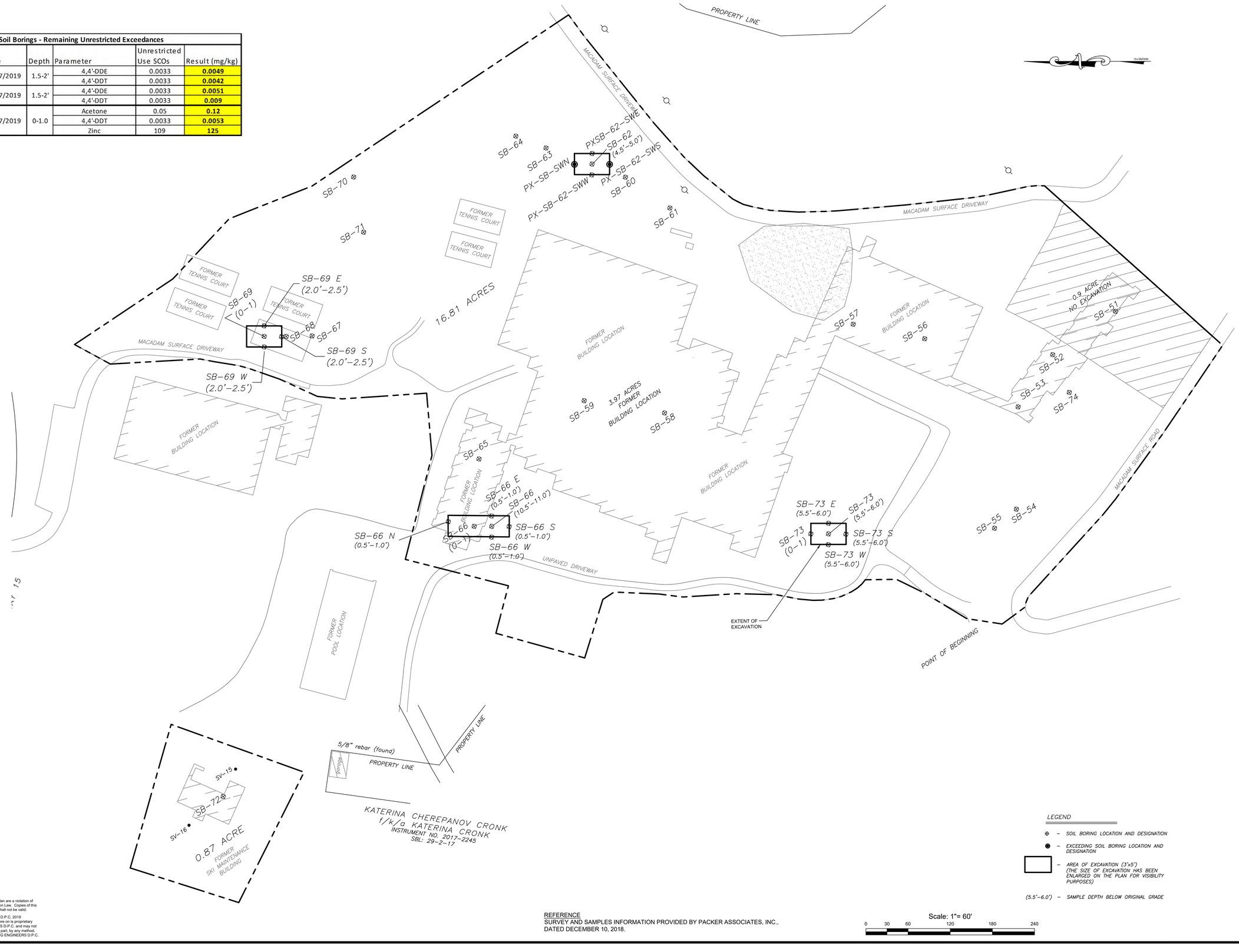
drawing title:
GROUNDWATER CONTOUR MAP

job no. 9313
drawing no.
FIG- 2.1

FUAD DAHAN, P.E.
PROFESSIONAL ENGINEER
N.Y. LIC. NO. 090531

N:\CAD\9313\SWPPP\9313 FIG-2.1.DWG 12/21/18 03:03:09PM jenny LAYOUT:FIG-4.1

| Soil Borings - Remaining Unrestricted Exceedances | | | | | |
|---|---|---|---|---|---|
| Sample Number | Date | Depth | Parameter | Unrestricted Use SCOs | Result (mg/kg) |
| SB-62-SWN | 1/17/2019 | 1.5-2' | 4,4'-DDE | 0.0033 | **0.0049** |
| | | | 4,4'-DDT | 0.0033 | **0.0042** |
| SB-62-SWS | 1/17/2019 | 1.5-2' | 4,4'-DDE | 0.0033 | **0.0051** |
| | | | 4,4'-DDT | 0.0033 | **0.009** |
| SB-73 (0-1) | 1/17/2019 | 0-1.0 | Acetone | 0.05 | **0.12** |
| | | | 4,4'-DDT | 0.0033 | **0.0053** |
| | | | Zinc | 109 | **125** |

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N:\ACAD\9313\VER 48.x 2019\9313 FIG-2.2.dwg 09/20/19 09:05:21AM jerry LAYOUT:FIG-2.2


| rev | date | description | by |
|---|---|---|---|
| | | | |

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chk by: FD
scale: 1" = 60'
date: 08/20/19


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NYSDEC BCP SITE NO. C353015

drawing title: SOIL BORING INVESTIGATION RESULTS

job no. 9313
drawing no. FIG 2.2

| Surface Soil Pesticide Excavation Areas - Remaining Unrestricted Exceedances | | | | | |
|---|---|---|---|---|---|
| Sample Number | Date | Depth | Parameter | Unrestricted Use SCOs | Result (mg/kg) |
| SS-27 | | 0-2" | 4,4'-DDT | 0.0033 | **0.010** |
| SS-28 | | 0-2" | 4,4'-DDT | 0.0033 | **0.027** |
| | | | 4,4'-DDE | 0.0033 | **0.007** |
| | | | 4,4'-DDD | 0.0033 | **0.005** |
| | | | Dieldrin | 0.005 | **0.029** |
| SS-33 | | 0-2" | 4,4'-DDT | 0.0033 | **0.013** |
| | | | 4,4'-DDE | 0.0033 | **0.004** |

LEGEND

- ● – SURFACE SOIL SAMPLE LOCATION
- ▭ – EXCAVATION AREA (DEPTH VARIES)
- 1479.1 × – ELEVATION OF TOP/BOTTOM OF EXCAVATION
- (0"–2") – SAMPLE DEPTH BELOW ORIGINAL GRADE

Scale: 1"= 80'

0 40 80 160 240 320

REFERENCE
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N:\ACAD\2013\FEB JULY 2019\9313 FIG-2.3.DWG 09/20/19 09:05:52AM jerry LAYOUT:FIG-2.3

| rev | date | description | by |
|---|---|---|---|
| | | | |

dwg by: yy
chk by: FD
scale: 1" = 80'
date: 08/20/19

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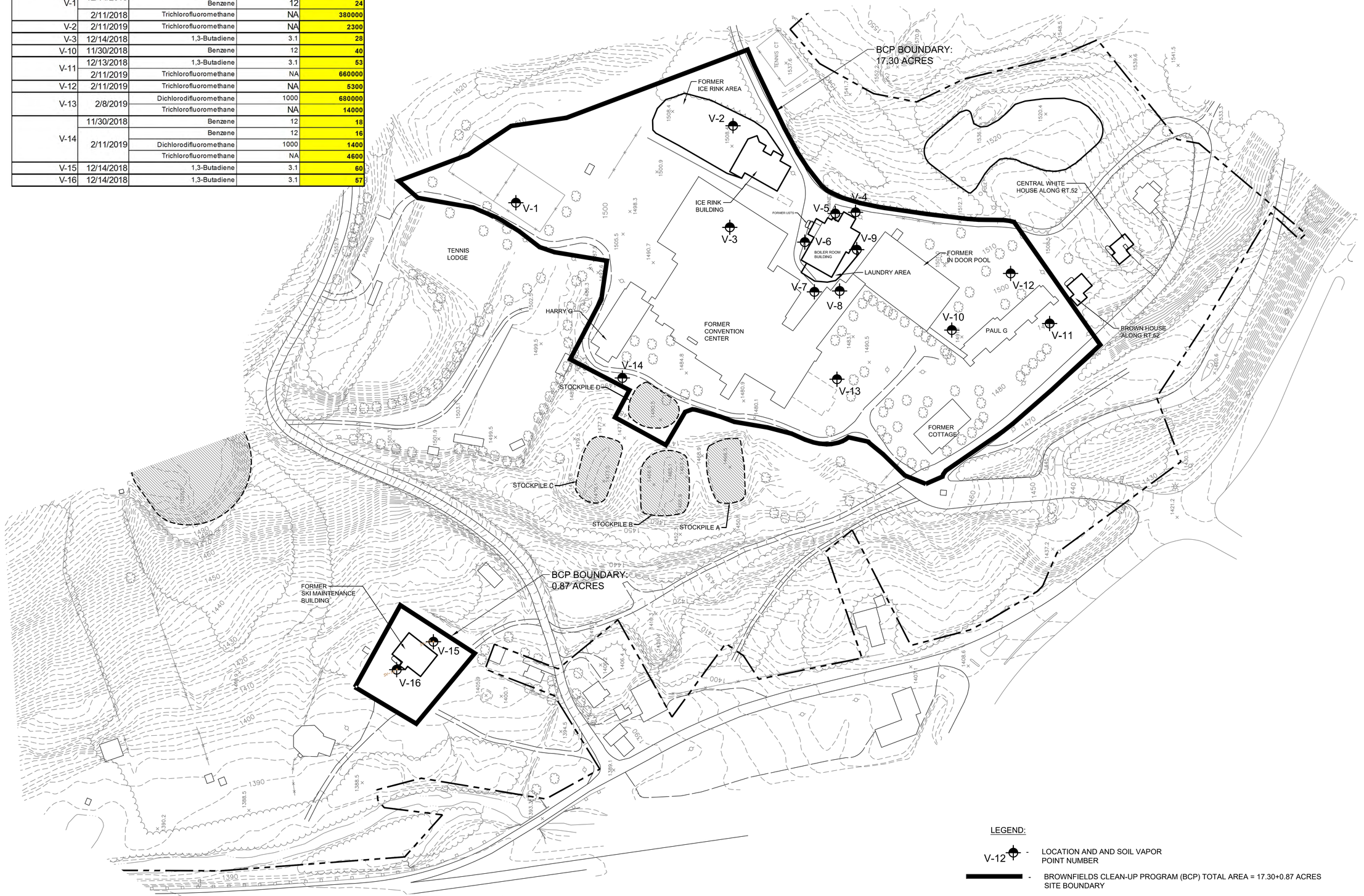
LIBERTY, NEW YORK 12754
NYSDEC BCP SITE NO. C353015

drawing title:
PESTICIDES SURFACE INVESTIGATION RESULTS

job no. 9313
drawing no.

FIG 2.3

| Soil Vapor Data | | | | |
|---|---|---|---|---|
| Sample Number | Date | Parameter | EPA Technical Guidance (ug/m3) | Result (ug/m3) |
| V-1 | 12/14/2018 | 1,3-Butadiene | 3.1 | **66** |
| | | Benzene | 12 | **24** |
| | 2/11/2018 | Trichlorofluoromethane | NA | **380000** |
| V-2 | 2/11/2019 | Trichlorofluoromethane | NA | **2300** |
| V-3 | 12/14/2018 | 1,3-Butadiene | 3.1 | **28** |
| V-10 | 11/30/2018 | Benzene | 12 | **40** |
| V-11 | 12/13/2018 | 1,3-Butadiene | 3.1 | **53** |
| | 2/11/2019 | Trichlorofluoromethane | NA | **660000** |
| V-12 | 2/11/2019 | Trichlorofluoromethane | NA | **5300** |
| V-13 | 2/8/2019 | Dichlorodifluoromethane | 1000 | **680000** |
| | | Trichlorofluoromethane | NA | **14000** |
| V-14 | 11/30/2018 | Benzene | 12 | **18** |
| | 2/11/2019 | Benzene | 12 | **16** |
| | | Dichlorodifluoromethane | 1000 | **1400** |
| | | Trichlorofluoromethane | NA | **4600** |
| V-15 | 12/14/2018 | 1,3-Butadiene | 3.1 | **60** |
| V-16 | 12/14/2018 | 1,3-Butadiene | 3.1 | **57** |




Scale: 1"= 100'

0 50 100 200 300 400

LEGEND:

V-12 - LOCATION AND AND SOIL VAPOR POINT NUMBER

\- BROWNFIELDS CLEAN-UP PROGRAM (BCP) TOTAL AREA = 17.30+0.87 ACRES SITE BOUNDARY

REFERENCE
SITE INFORMATION TAKEN FROM "PRELIMINARY MAP". DATED FEBRUARY 1993.
LAST UPDATED ON DECEMBER 2009.

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N:\ACAD\9313\VER .dcx 2019\9313 FIG 3.10.DWG 09/20/19 09:44:29AM, jerry, LAYOUT FIG-3.10

| by | description | date | rev |
|---|---|---|---|
| | | | |

dwg by: yy
chk by: FD
scale: 1" = 100'
date: 08/20/19

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ENVIRONMENTAL
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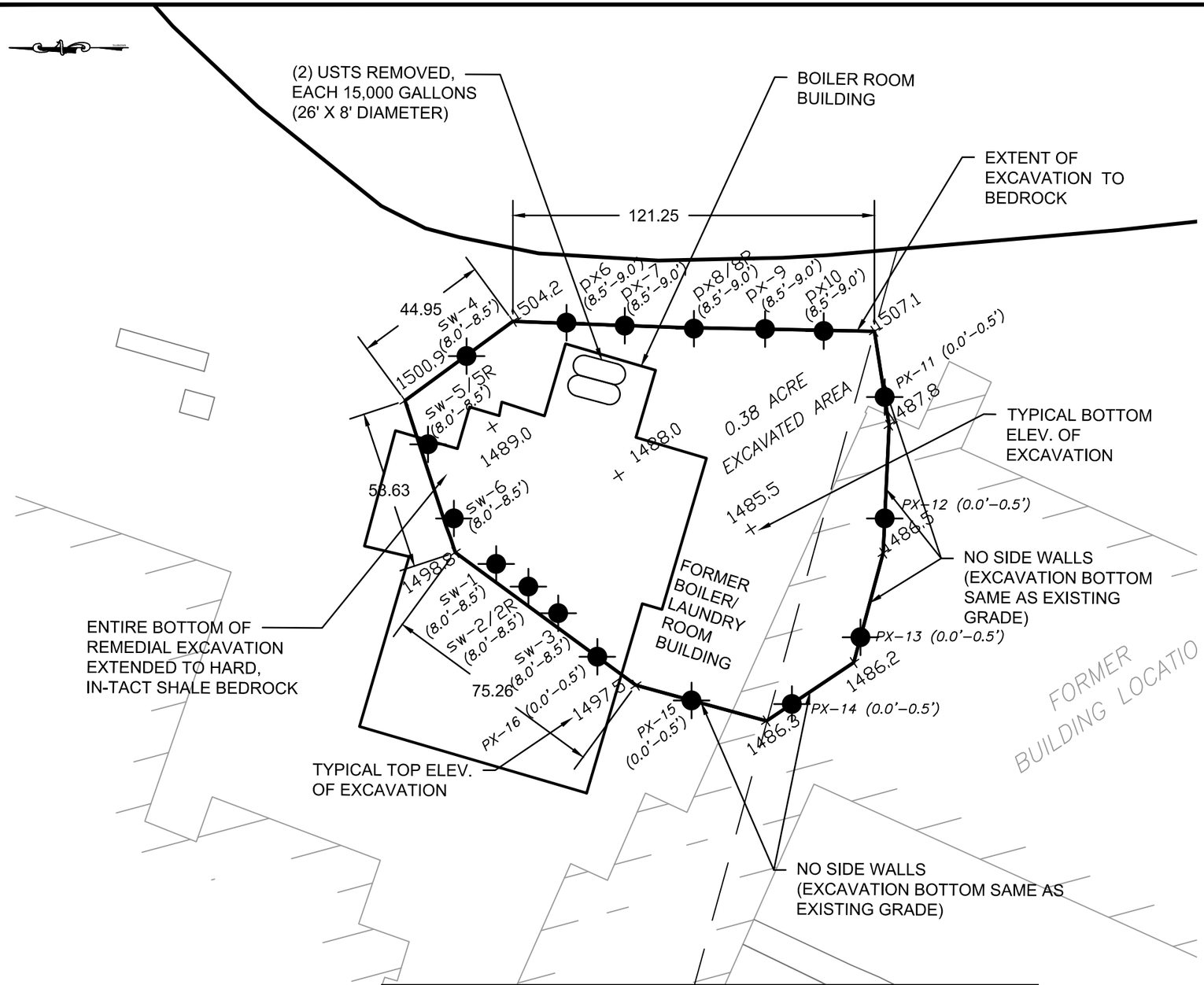
ROUTE 17 & ROUTE 52 EAST
LIBERTY, NEW YORK 12754

drawing title:
SOIL VAPOR POINT LOCATION PLAN

job no. 9313
drawing no.
FIG- 2.4




| UST LNAPL AREA - REMAINING UNRESTRICTED EXCEEDANCES | | | | | |
|---|---|---|---|---|---|
| Sample Number | Date | Depth | Parameter | Unrestricted Use SCOs | Result (mg/kg) |
| SW-5 | 12/7/2018 | 8-8.5' | Xylenes | 0.26 | **0.52** |
| SW-2R | 6/27/2019 | 8-8.5 | 4,4'-DDT | 0.0033 | **0.0135** |

*LEGEND*

- *POST EXCAVATION SAMPLE NUMBER & LOCATION*
- 1485.5 – *ELEVATION OF BOTTOM/TOP OF EXCAVATION*
- *(8.5'–9.0')* – *SAMPLE DEPTH BELOW ORIGINAL GRADE*

REFERENCE
SURVEY AND SAMPLES INFORMATION PROVIDED BY PACKER ASSOCIATES, INC., DATED DECEMBER 10, 2018.

SCALE: 1"=40'
0 40 80

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N:\ACAD\9313\FER JULY 2019\9313 FIG-3.1.DWG 08/23/19 09:18:36AM, jenny, LAYOUT:FIG-3.1

dwg by: yy
chk by: FD
scale: 1" = 40'
date: 8/20/19

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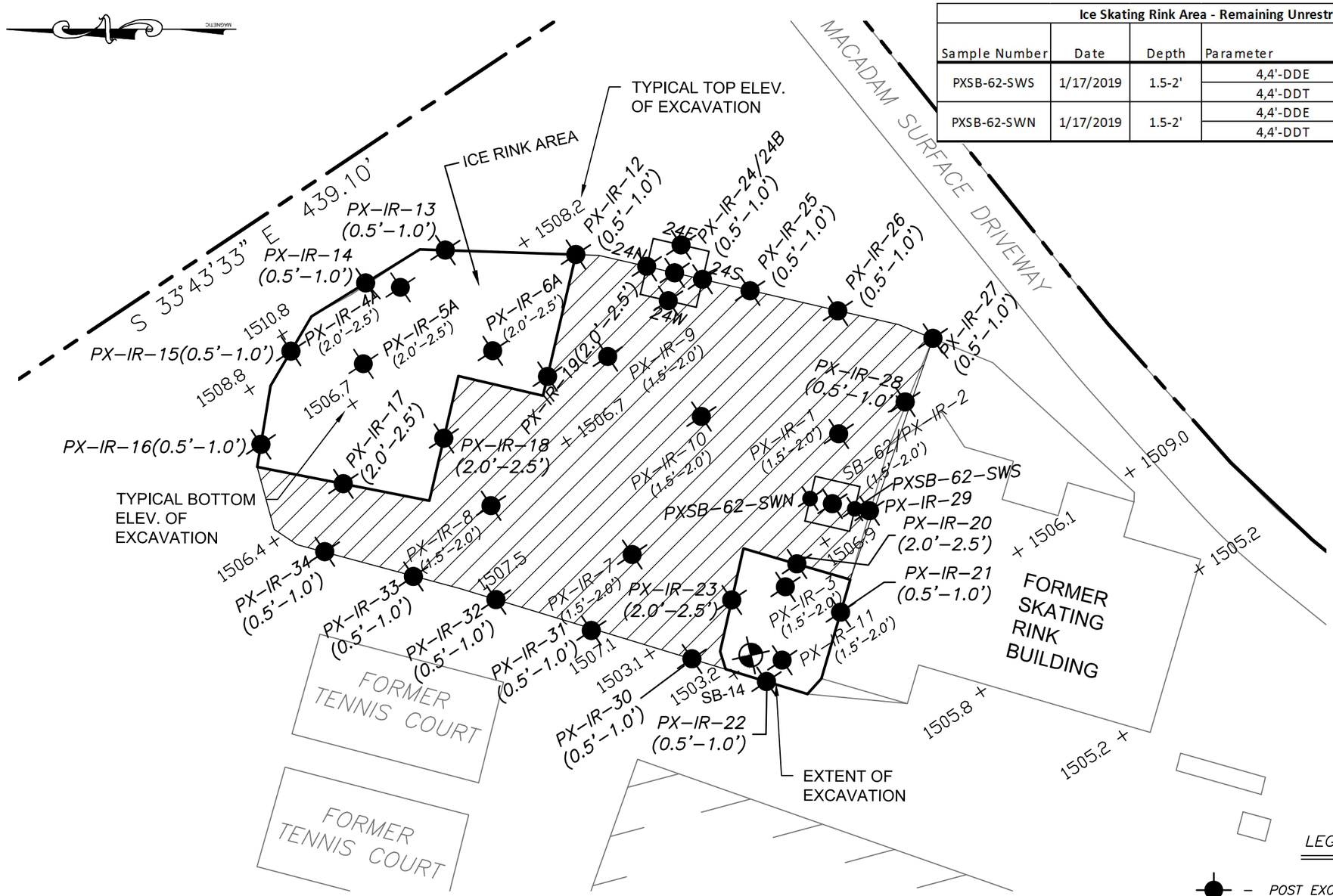
project:
ROUTE 17 & ROUTE 52 EAST
LIBERTY, NEW YORK 12754
NYSDEC BCP SITE NO. C353015

drawing title:
UST REMOVAL / LNAPL EXCAVATION AREA

job no: 9313
drawing no:

FIG 2.5

| Ice Skating Rink Area - Remaining Unrestricted Exceedances | | | | | |
|---|---|---|---|---|---|
| Sample Number | Date | Depth | Parameter | Unrestricted Use SCOs | Result (mg/kg) |
| PXSB-62-SWS | 1/17/2019 | 1.5-2' | 4,4'-DDE | 0.0033 | **0.005** |
| | | | 4,4'-DDT | 0.0033 | **0.009** |
| PXSB-62-SWN | 1/17/2019 | 1.5-2' | 4,4'-DDE | 0.0033 | **0.005** |
| | | | 4,4'-DDT | 0.0033 | **0.004** |




LEGEND

- POST EXCAVATION SAMPLE NUMBER & LOCATION
- SB-14 – PHASE II LOCATION AND SOIL BORING NUMBER/MONITORING WELL NUMBER
- (1.5'–2.0') – SAMPLE DEPTH BELOW ORIGINAL GRADE
- 1505.2 × – ELEVATION OF TOP/BOTTOM OF EXCAVATION
- AREA OF CONCRETE AND STAINED SOIL REMOVAL 1.5 FEET DEPTH

SCALE: 1"=40'

0 40 80

REFERENCE
SURVEY AND SAMPLES INFORMATION PROVIDED BY PACKER ASSOCIATES, INC., DATED DECEMBER 10, 2018.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N:\ACAD\9313\FER JULY 2019\9313 FIG-3.3.DWG 08/20/19 10:02:47AM, jenny, LAYOUT:FIG-3.3

dwg by: yy
chk by: FD
scale: 1" = 40'
date: 8/20/19


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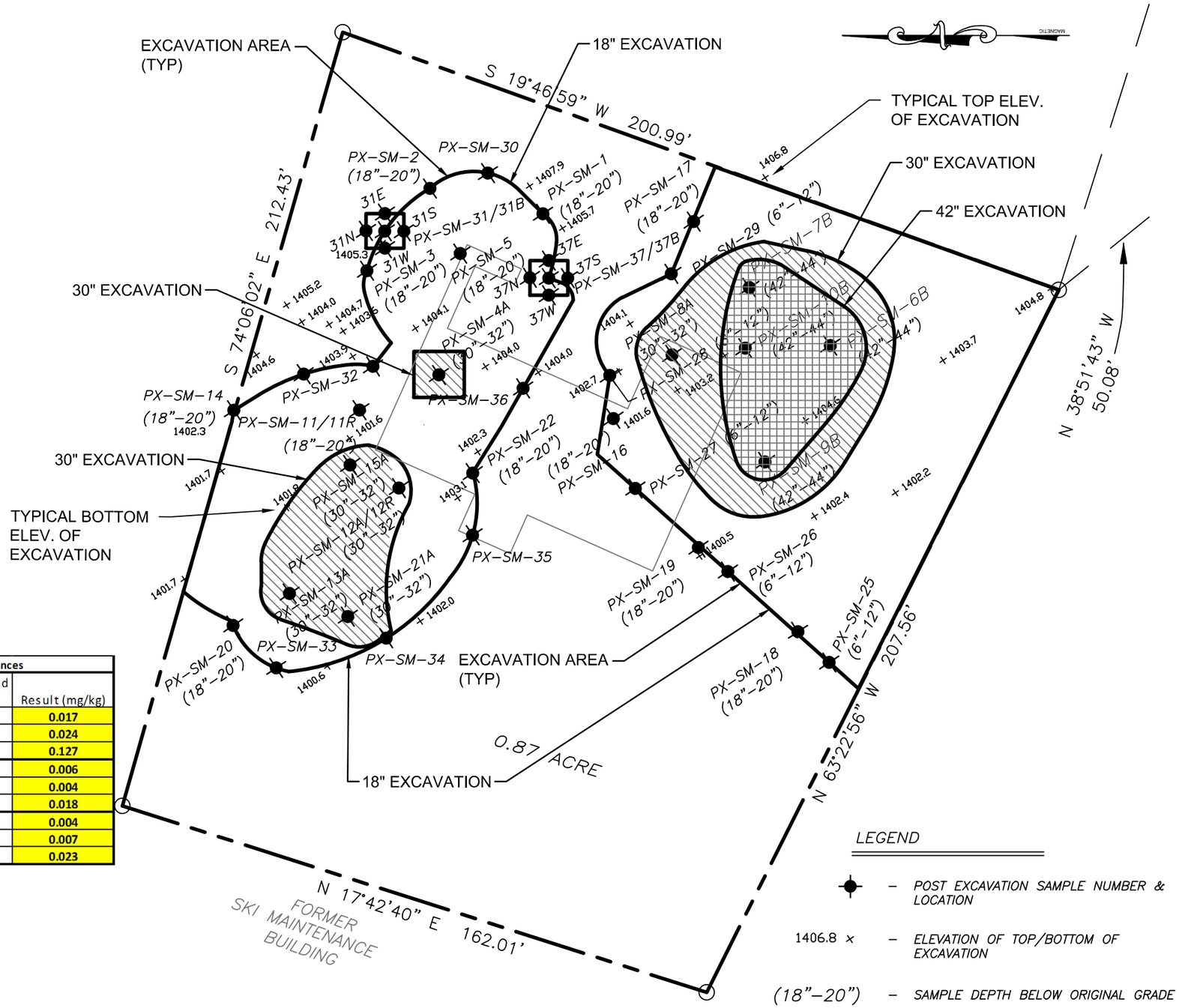
project: ROUTE 17 & ROUTE 52 EAST
LIBERTY, NEW YORK 12754
NYSDEC BCP SITE NO. C353015

drawing title: ICE RINK AREA EXCAVATION PLAN

job no: 9313
drawing no: FIG-2.6




| Ski Maintenance Area - Remaining Unrestricted Exceedances | | | | | |
|---|---|---|---|---|---|
| Sample Number | Date | Depth | Parameter | Unrestricted Use SCOs | Result (mg/kg) |
| PX-SM-37W | 7/16/2019 | 6-12" | 4,4'-DDD | 0.0033 | **0.017** |
| | | | 4,4'-DDE | 0.0033 | **0.024** |
| | | | 4,4'-DDT | 0.0033 | **0.127** |
| PX-SM-37S | 7/16/2019 | 6-12" | 4,4'-DDD | 0.0033 | **0.006** |
| | | | 4,4'-DDE | 0.0033 | **0.004** |
| | | | 4,4'-DDT | 0.0033 | **0.018** |
| PX-SM-37N | 7/16/2019 | 6-12" | 4,4'-DDD | 0.0033 | **0.004** |
| | | | 4,4'-DDE | 0.0033 | **0.007** |
| | | | 4,4'-DDT | 0.0033 | **0.023** |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dwg by: yy
chk by: FD
scale: 1" = 30'
date: 7/31/19

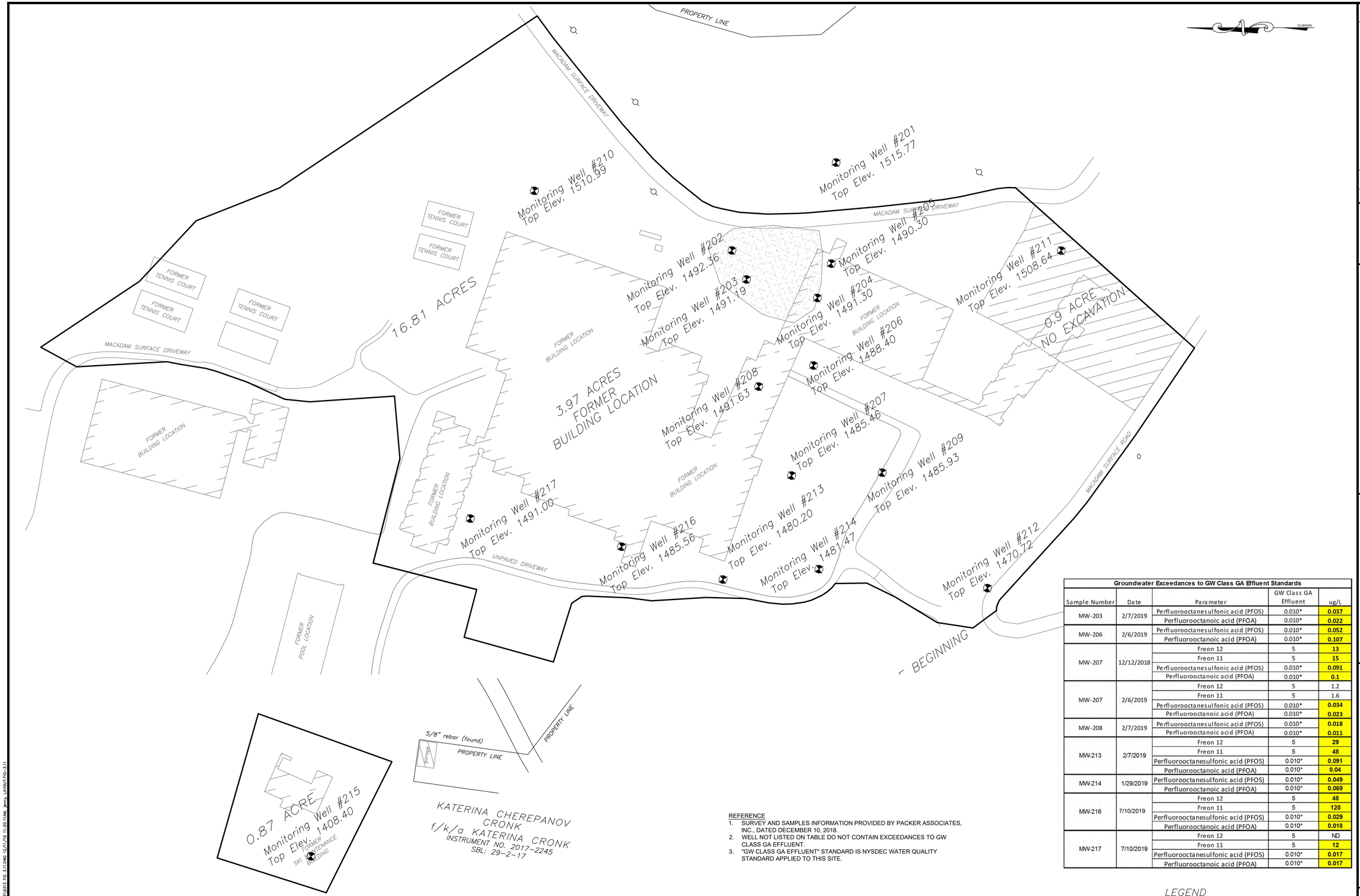
project:
ROUTE 17 & ROUTE 52 EAST
LIBERTY, NEW YORK 12754
NYSDEC BCP SITE NO. C353015

drawing title:
EXCAVATION PLAN
SKI MAINTENANCE AREA

job no: 9313
drawing no:

FIG 2.7

N:\ACAD\9313\FER JULY 2019\9313 FIG-3.2.DWG 08/20/19 10:02:29AM, jenny, LAYOUT:FIG-3.2




**Groundwater Exceedances to GW Class GA Effluent Standards**

| Sample Number | Date | Parameter | GW Class GA Effluent | ug/L |
|---|---|---|---|---|
| MW-203 | 2/7/2019 | Perfluorooctanesulfonic acid (PFOS) | 0.010* | **0.037** |
| | | Perfluorooctanoic acid (PFOA) | 0.010* | **0.022** |
| MW-206 | 2/6/2019 | Perfluorooctanesulfonic acid (PFOS) | 0.010* | **0.052** |
| | | Perfluorooctanoic acid (PFOA) | 0.010* | **0.107** |
| MW-207 | 12/12/2018 | Freon 12 | 5 | **13** |
| | | Freon 11 | 5 | **15** |
| | | Perfluorooctanesulfonic acid (PFOS) | 0.010* | **0.091** |
| | | Perfluorooctanoic acid (PFOA) | 0.010* | **0.1** |
| MW-207 | 2/6/2019 | Freon 12 | 5 | 1.2 |
| | | Freon 11 | 5 | 1.6 |
| | | Perfluorooctanesulfonic acid (PFOS) | 0.010* | **0.034** |
| | | Perfluorooctanoic acid (PFOA) | 0.010* | **0.023** |
| MW-208 | 2/7/2019 | Perfluorooctanesulfonic acid (PFOS) | 0.010* | **0.018** |
| | | Perfluorooctanoic acid (PFOA) | 0.010* | **0.011** |
| MW-213 | 2/7/2019 | Freon 12 | 5 | **29** |
| | | Freon 11 | 5 | **48** |
| | | Perfluorooctanesulfonic acid (PFOS) | 0.010* | **0.091** |
| | | Perfluorooctanoic acid (PFOA) | 0.010* | **0.04** |
| MW-214 | 1/29/2019 | Perfluorooctanesulfonic acid (PFOS) | 0.010* | **0.049** |
| | | Perfluorooctanoic acid (PFOA) | 0.010* | **0.069** |
| MW-216 | 7/10/2019 | Freon 12 | 5 | **48** |
| | | Freon 11 | 5 | **120** |
| | | Perfluorooctanesulfonic acid (PFOS) | 0.010* | **0.029** |
| | | Perfluorooctanoic acid (PFOA) | 0.010* | **0.018** |
| MW-217 | 7/10/2019 | Freon 12 | 5 | ND |
| | | Freon 11 | 5 | **12** |
| | | Perfluorooctanesulfonic acid (PFOS) | 0.010* | **0.017** |
| | | Perfluorooctanoic acid (PFOA) | 0.010* | **0.017** |

REFERENCE
1. SURVEY AND SAMPLES INFORMATION PROVIDED BY PACKER ASSOCIATES, INC., DATED DECEMBER 10, 2018.
2. WELL NOT LISTED ON TABLE DO NOT CONTAIN EXCEEDANCES TO GW CLASS GA EFFLUENT.
3. "GW CLASS GA EFFLUENT" STANDARD IS NYSDEC WATER QUALITY STANDARD APPLIED TO THIS SITE.

NOTES:
- ALL WELLS SAMPLED FOR TCL/TAL +30, PFAS, AND 1,4 DIOXANE
- NO EXCEEDANCES WERE DETECTED FOR ANY OF THE COMPOUNDS.

LEGEND

MW–201 – MONITORING WELL LOCATION AND DESIGNATION

Scale: 1"= 60'
0 30 60 120 180 240

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N:\ACAD\2313\TER 2019-12-05\2313 FIG 3.1\TER 12/17/19 11:26:11AM Jonny LAYOUT:FIG-2.8

| rev | date | description | by |
|---|---|---|---|

dwg by: yy
chk by: FD
scale: 1" = 60'
date: 12/05/19

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ROUTE 17 & ROUTE 52 EAST
LIBERTY, NEW YORK 12754
NYSDEC BCP SITE NO. C353015

drawing title: MONITORING WELL LOCATION PLAN

job no. 9313
drawing no. FIG-2.8

PROPERTY LINE

EASTERN BOUNDARY OF BCP
(TOTAL AREA = 17.30 ACRES)
AND PROPOSED EXTENT OF
ENVIRONMENTAL EASEMENT AREA

MACADAM SURFACE DRIVEWAY

Monitoring Well #210
Top Elev. 1511.0

Monitoring Well #201
Top Elev. 1515.8

Monitoring Well #202
Top Elev. 1492.40

Monitoring Well #203
Top Elev. 1491.2

Monitoring Well #204
Top Elev. 1491.3

Monitoring Well #205
Top Elev. 1490.3

Monitoring Well #206
Top Elev. 1488.4

Monitoring Well #207
Top Elev. 1485.5

Monitoring Well #208
Top Elev. 1491.6

Monitoring Well #209
Top Elev. 1485.9

Monitoring Well #211
Top Elev. 1508.6

Monitoring Well #212
Top Elev. 1470.7

Monitoring Well #213

Monitoring Well #214

Monitoring Well #216

Monitoring Well #217

Monitoring Well #215

FORMER TENNIS COURT

FORMER BUILDING LOCATION

FORMER POOL LOCATION

MACADAM SURFACE ROAD

UNPAVED DRIVEWAY

5/8" rebar (found)

PROPERTY LINE

garage

KATERINA CHEREPANOV CRONK
f/k/a KATERINA CRONK
INSTRUMENT NO. 2017-2245
SBL: 29-2-17

SKI MAINTENANCE BUILDING

WESTERN BOUNDARY OF BCP
(TOTAL AREA = 0.87 ACRES)
NOT PART OF ENVIRONMENTAL
EASEMENT AREA

Scale: 1"= 80'

0 40 80 160 240 320

**Groundwater Exceedances to GW Class GA Effluent Standards**

| Sample Number | Date | Parameter | GW Class GA Effluent | ug/L |
|---|---|---|---|---|
| MW-203 | 2/7/2019 | Perfluorooctanesulfonic acid (PFOS) | 0.010* | **0.037** |
| | | Perfluorooctanoic acid (PFOA) | 0.010* | **0.022** |
| MW-206 | 2/6/2019 | Perfluorooctanesulfonic acid (PFOS) | 0.010* | **0.052** |
| | | Perfluorooctanoic acid (PFOA) | 0.010* | **0.107** |
| MW-207 | 12/12/2018 | Freon 21 | 5 | **13** |
| | | Freon 11 | 5 | **15** |
| | | Perfluorooctanesulfonic acid (PFOS) | 0.010* | **0.091** |
| | | Perfluorooctanoic acid (PFOA) | 0.010* | **0.1** |
| MW-207 | 2/6/2019 | Freon 21 | 5 | 1.2 |
| | | Freon 11 | 5 | 1.6 |
| | | Perfluorooctanesulfonic acid (PFOS) | 0.010* | **0.034** |
| | | Perfluorooctanoic acid (PFOA) | 0.010* | **0.023** |
| MW-208 | 2/7/2019 | Perfluorooctanesulfonic acid (PFOS) | 0.010* | **0.018** |
| | | Perfluorooctanoic acid (PFOA) | 0.010* | **0.011** |
| MW-213 | 2/7/2019 | Freon 21 | 5 | **29** |
| | | Freon 11 | 5 | **48** |
| | | Perfluorooctanesulfonic acid (PFOS) | 0.010* | **0.091** |
| | | Perfluorooctanoic acid (PFOA) | 0.010* | **0.04** |
| MW-214 | 1/29/2019 | Perfluorooctanesulfonic acid (PFOS) | 0.010* | **0.049** |
| | | Perfluorooctanoic acid (PFOA) | 0.010* | **0.069** |
| MW-216 | 2/7/2019 | Freon 21 | 5 | **48** |
| | | Freon 11 | 5 | **120** |
| | | Perfluorooctanesulfonic acid (PFOS) | 0.010* | **0.029** |
| | | Perfluorooctanoic acid (PFOA) | 0.010* | **0.018** |
| MW-217 | 7/10/2019 | Freon 21 | 5 | ND |
| | | Freon 11 | 5 | **12** |
| | | Perfluorooctanesulfonic acid (PFOS) | 0.010* | **0.017** |
| | | Perfluorooctanoic acid (PFOA) | 0.010* | **0.017** |

LEGEND

MW-201 – MONITORING WELL LOCATION AND DESIGNATION

– WELLS WITH PFAS DETECTS

– WELLS WITH FREON EXCEEDANCES

– BCP BOUNDARY AND EXTENT OF ENVIRONMENTAL EASEMENT

– BCP BOUNDARY

NOTES:
- ALL WELLS SAMPLED FOR TCL/TAL +30, PFAS, AND 1,4 DIOXANE
- NO EXCEEDANCES WERE DETECTED FOR ANY OF THE COMPOUNDS.

REFERENCE
SURVEY AND SAMPLES INFORMATION PROVIDED BY RACKER ASSOCIATES, INC., DATED DECEMBER 10, 2018.

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N:\ACAD\9313\VER .doc\ 2019\9313 FIG 4.2.dwg 08/23/19 12:02:48PM jerry LAYOUT:FIG-4.2

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| rev | date | description | by |
|---|---|---|---|

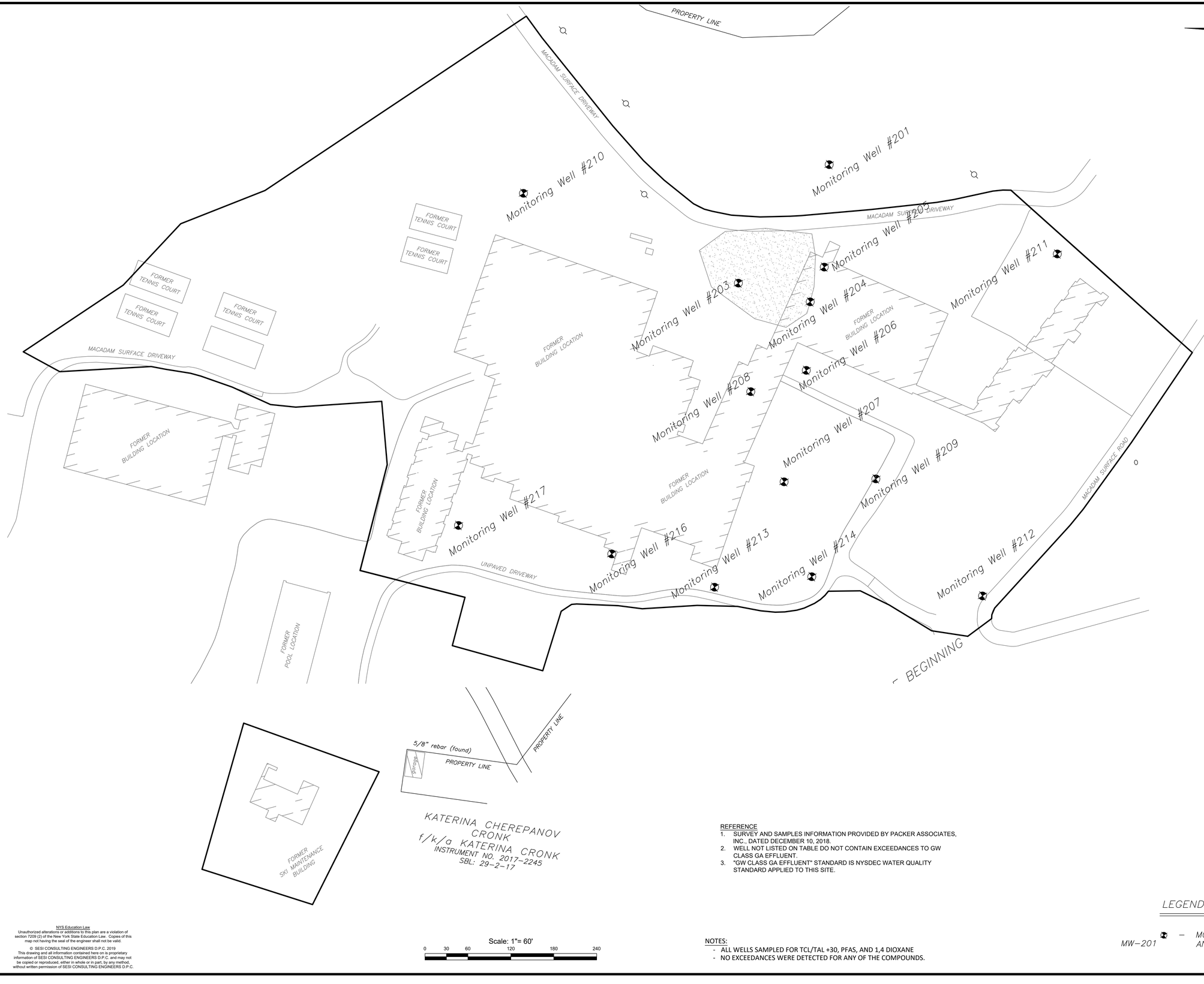
dwg by: yy
chk by: FD
scale: 1" = 80'
date: 08/20/19

FUAD DAHAN, P.E.
PROFESSIONAL ENGINEER
N.Y. LIC. NO. 090531

ROUTE 17 & ROUTE 52 EAST
LIBERTY, NEW YORK 12754
NYSDEC BCP SITE NO. C353015

drawing title:
PROPOSED
ENVIRONMENTAL EASEMENT AREA

job no. 9313
drawing no.
FIG- 3.1




REFERENCE
1. SURVEY AND SAMPLES INFORMATION PROVIDED BY PACKER ASSOCIATES, INC., DATED DECEMBER 10, 2018.
2. WELL NOT LISTED ON TABLE DO NOT CONTAIN EXCEEDANCES TO GW CLASS GA EFFLUENT.
3. "GW CLASS GA EFFLUENT" STANDARD IS NYSDEC WATER QUALITY STANDARD APPLIED TO THIS SITE.

NOTES:
- ALL WELLS SAMPLED FOR TCL/TAL +30, PFAS, AND 1,4 DIOXANE
- NO EXCEEDANCES WERE DETECTED FOR ANY OF THE COMPOUNDS.

LEGEND

MW-201 – MONITORING WELL LOCATION AND DESIGNATION

Scale: 1"= 60'

0 30 60 120 180 240

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N:\ACAD\9313\Cad\ 2019-12-10\9313 FIG-4.1.DWG 12/17/19 08:15:43PM Jenny LAYOUT:FIG-4.1

| rev | date | description | by |
|---|---|---|---|

dwg by: yy
chk by: FD
scale: 1" = 60'
date: 12/10/19

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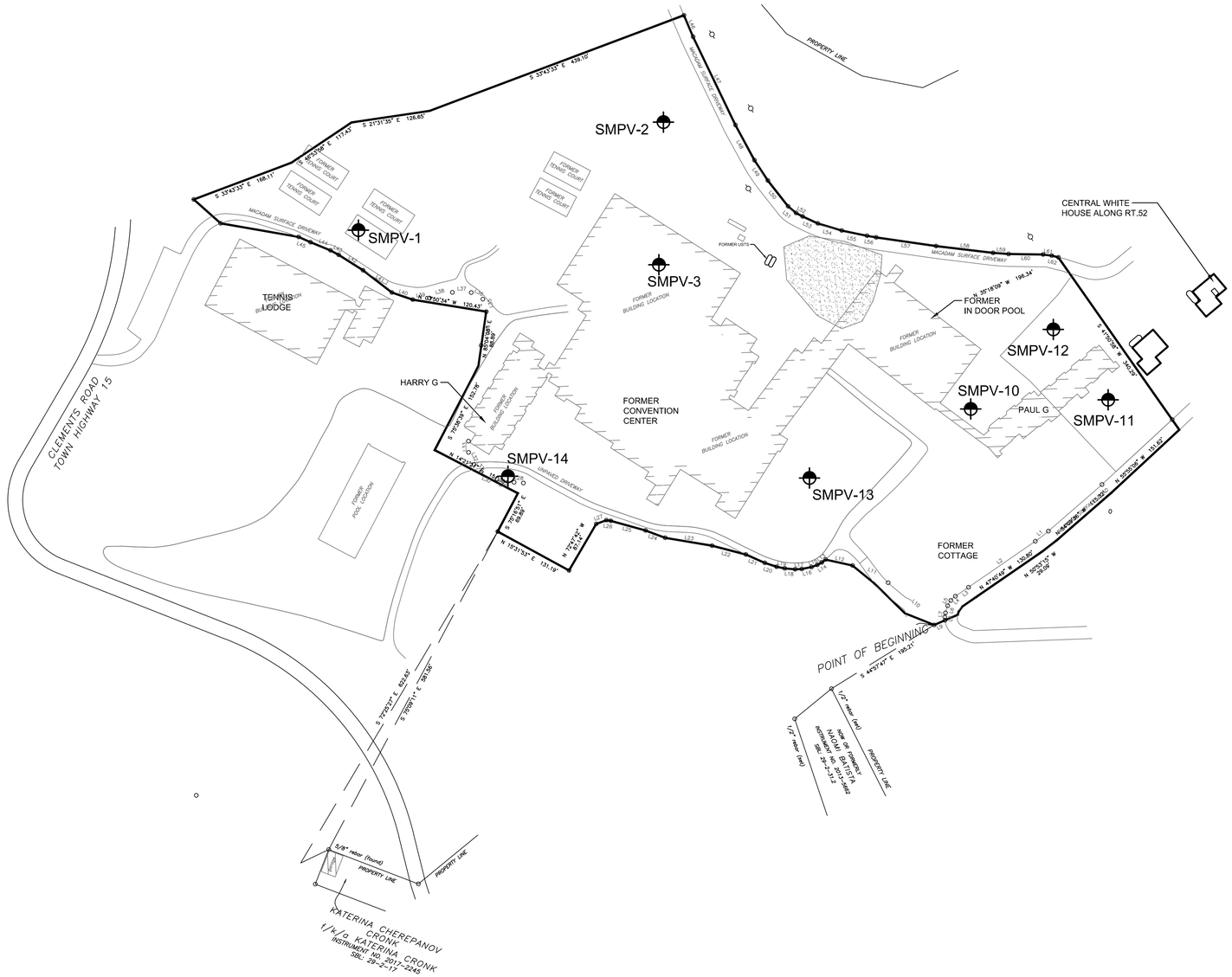
ROUTE 17 & ROUTE 52 EAST
LIBERTY, NEW YORK 12754
NYSDEC BCP SITE NO. C353015

drawing title: MONITORING WELL LOCATION PLAN

job no. 9313
drawing no. FIG-4.1




LEGEND:

SMPV-12 - LOCATION AND AND SOIL VAPOR POINT NUMBER

\- BROWNFIELDS CLEAN-UP PROGRAM (BCP) TOTAL AREA = 17.30+0.87 ACRES SITE BOUNDARY

Scale: 1"= 100'

0 50 100 200 300 400

REFERENCE
SITE INFORMATION TAKEN FROM "PRELIMINARY MAP". DATED FEBRUARY 1993. LAST UPDATED ON DECEMBER 2009.

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N:\VOA\9313\SMP 2019-12-13\9313 FIG-4.2.DWG 12/1/19 02:29:07PM, Jenny, LAYOUT:FIG-4.2

| rev | date | description | by |
|---|---|---|---|
| | | | |

dwg by: yy
chk by: FD
scale: 1" = 100'
date: 12/10/19

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ROUTE 17 & ROUTE 52 EAST
LIBERTY, NEW YORK 12754

drawing title:
PROPOSED
SOIL VAPOR POINT LOCATION PLAN

job no. 9313
drawing no.

FIG-4.2

# Appendix B:

## Monitoring Well Sampling Logs

## LOW-FLOW GROUNDWATER SAMPLING LOG

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Location: | Liberty, NY | | | Job Number: | 9313 | WELL I.D. : MW-201 | | | |
| Personnel: | JCS | | | Date: | 3/6/2020 | SESI CONSULTING ENGINEERS | | | |
| | | | | PID: | 0 | | | | |
| Stickup? Y<br>Distance ground to PVC | Distance From Rim to PVC | Total Depth of Well Rim/PVC | Depth to Product Rim/PVC | Depth to Water (PVC) | Standing Water Column (feet) | Middle of Saturated Zone (feet) | Depth to Sample Tube (feet) | TOV @ Well Head (ppmv) | Pump Peristaltic or Bladder |
| 6.5" | | 19 | NE | 9.78 | 9.22 | | 13 | | Peristaltic |
| Turbidity at collection (NTU): | | 12.1 | (Less than 5 NTU is desirable) | | Duplicate Collected? N | | | Filtered Sample N | |
| Stabilization Parameters | | +/- 0.5 deg C. | +/- 0.1 Unit | +/- 10 umhos/cm or within 3% if >300umho | 1 ppm | +/- 10 mV | No Limit | <.3 feet drawdown desirable | No Limit |

| Volume Purged (gallons) | Time (actual Time) 5 minute Intervals | TEMP. (Deg. C) | pH | Specific Conductivity uS/cm | Dissolved Oxygen (mg/L) | ORP mV millivolts | Turbidity NTUs | DTW (feet) | Odors Y/N |
|---|---|---|---|---|---|---|---|---|---|
| | 1310 | 5.07 | 7.25 | 0.065 | 5.6 | 207 | 15.8 | 9.85 | N |
| | 1315 | 4.13 | 7.15 | 0.052 | 4.93 | 290 | 17.2 | 9.85 | N |
| | 1320 | 4.14 | 6.97 | 0.051 | 4.31 | 306 | 15.6 | 9.86 | N |
| | 1325 | 4.11 | 6.87 | 0.05 | 4.26 | 317 | 14.2 | 9.85 | N |
| | 1330 | 4.12 | 6.86 | 0.049 | 4.33 | 325 | 13 | 9.85 | N |
| 1.5 | 1335 | 4.1 | 6.82 | 0.049 | 4.29 | 327 | 12.1 | 9.85 | N |
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**Well Condition Summary**

| | | | | | |
|---|---|---|---|---|---|
| Cover: N | Bolts: N | | Concrete Pad OK: N | Gripper: Y | |

**Sample Collection Information**

| | | | | |
|---|---|---|---|---|
| Sample Time: | 1345 | Appearance: Clear | Filtered Sample Turbidity: | OTHER: |

Desired purge flow rate <100mL/min (slow drip) & turbidity <10 if possible. If turbidity > 10 collect filtered and unfiltered samples. Notify PM of high turbidity and collection of filtered samples prior to lab submittal. Minimum 20 minute purge to establish stabilization.

Notes/ Calculations:

Volume? Linear Ft of well casing; 1"=0.041 gal. 2"= 0.163 gal. 4"=0.653 gal.

**ABSORBENT SOCK**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Sock Length (ft) = | | Capacity (Qt.) = | | Present: | Y / N | Product Measured (Inches) : | |
| Sock Installation Date: | | | Sock Changed : | | Y / N | | |
| Sock Depth (Depth to sock mid point): | | | | | | | |

## LOW-FLOW GROUNDWATER SAMPLING LOG

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Location: | Liberty, NY | | | Job Number: | 9313 | WELL I.D. : MW-203 | | | |
| Personnel: | JCS | | | Date: | 3/6/2020 | SESI CONSULTING ENGINEERS | | | |
| | | | | PID: | 0 | | | | |
| Stickup? Y<br>Distance ground to PVC | Distance From Rim to PVC | Total Depth of Well Rim/PVC | Depth to Product Rim/PVC | Depth to Water (PVC) | Standing Water Column (feet) | Middle of Saturated Zone (feet) | Depth to Sample Tube (feet) | TOV @ Well Head (ppmv) | Pump Peristaltic or Bladder |
| 2.6' | | 25 | NE | 3.8 | 21.2 | | 13 | | Peristaltic |
| Turbidity at collection (NTU): | | 1.8 | (Less than 5 NTU is desirable) | | Duplicate Collected? N | | | Filtered Sample N | |
| Stabilization Parameters | | +/- 0.5 deg C. | +/- 0.1 Unit | +/- 10 umhos/cm or within 3% if >300umho | 1 ppm | +/- 10 mV | No Limit | <.3 feet drawdown desirable | No Limit |

| Volume Purged (gallons) | Time (actual Time) 5 minute Intervals | TEMP. (Deg. C) | pH | Specific Conductivity uS/cm | Dissolved Oxygen (mg/L) | ORP mV millivolts | Turbidity NTUs | DTW (feet) | Odors Y/N |
|---|---|---|---|---|---|---|---|---|---|
| | 825 | 3.42 | 6.72 | 0.109 | 8.06 | 135 | 31.5 | 4.4 | N |
| | 830 | 2.85 | 6.51 | 0.122 | 0.51 | 49 | 6.2 | 4.54 | N |
| | 835 | 2.59 | 6.38 | 0.123 | 0.28 | 52 | 3.1 | 4.55 | N |
| | 840 | 2.58 | 6.27 | 0.125 | 0 | 62 | 3.3 | 4.55 | N |
| | 845 | 2.58 | 6.24 | 0.125 | 0 | 77 | 3 | 4.55 | N |
| | 850 | 2.45 | 6.22 | 0.126 | 0 | 80 | 2 | 4.55 | N |
| 2 | 855 | 2.5 | 6.21 | 0.124 | 0 | 82 | 1.8 | 4.55 | N |
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| Well Condition Summary | | | | | |
|---|---|---|---|---|---|
| Cover: N | Bolts: N | | Concrete Pad OK: N | Gripper: Y | |

| Sample Collection Information | | | | |
|---|---|---|---|---|
| Sample Time: | 900 | Appearance: Clear | Filtered Sample Turbidity: | OTHER: |

Desired purge flow rate <100mL/min (slow drip) & turbidity <10 if possible. If turbidity > 10 collect filtered and unfiltered samples. Notify PM of high turbidity and collection of filtered samples prior to lab submittal. Minimum 20 minute purge to establish stabilization.

Notes/ Calculations:

Volume? Linear Ft of well casing; 1"=0.041 gal. 2"= 0.163 gal. 4"=0.653 gal.

| ABSORBENT SOCK | | | | | | |
|---|---|---|---|---|---|---|
| Sock Length (ft) = | | Capacity (Qt.) = | | Present: | Y / N | Product Measured (Inches) : |
| Sock Installation Date: | | | Sock Changed : | | Y / N | |
| Sock Depth (Depth to sock mid point): | | | | | | |

## LOW-FLOW GROUNDWATER SAMPLING LOG

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Location: | Liberty, NY | | | Job Number: | 9313 | WELL I.D. : MW-204 | | | |
| Personnel: | JCS | | | Date: | 3/5/2020 | | | | |
| | | | | PID: | 0 | | | | |

| Stickup? Y / Distance ground to PVC | Distance From Rim to PVC | Total Depth of Well Rim/PVC | Depth to Product Rim/PVC | Depth to Water (PVC) | Standing Water Column (feet) | Middle of Saturated Zone (feet) | Depth to Sample Tube (feet) | TOV @ Well Head (ppmv) | Pump Peristaltic or Bladder |
|---|---|---|---|---|---|---|---|---|---|
| 5.1' | | 14 | NE | 6.25 | 21.2 | | 9 | | Peristaltic |

| | | | | | | |
|---|---|---|---|---|---|---|
| Turbidity at collection (NTU): | 21 | (Less than 5 NTU is desirable) | | Duplicate Collected? N | | Filtered Sample N |
| **Stabilization Parameters** | **+/- 0.5 deg C.** | **+/- 0.1 Unit** | **+/- 10 umhos/cm or within 3% if >300umho** | **1 ppm** | **+/- 10 mV** | **No Limit** | **<.3 feet drawdown desirable** | **No Limit** |

| Volume Purged (gallons) | Time (actual Time) 5 minute Intervals | TEMP. (Deg. C) | pH | Specific Conductivity uS/cm | Dissolved Oxygen (mg/L) | ORP mV millivolts | Turbidity NTUs | DTW (feet) | Odors Y/N |
|---|---|---|---|---|---|---|---|---|---|
| | 1055 | 2.82 | 6.52 | 0.098 | 8.6 | 212 | 76.1 | 6.35 | N |
| | 1100 | 2.2 | 6.46 | 0.096 | 3.52 | 219 | 92.1 | 6.35 | N |
| | 1105 | 2.17 | 6.4 | 0.096 | 3.32 | 221 | 65 | 6.35 | N |
| | 1110 | 2.26 | 6.37 | 0.097 | 3.07 | 222 | 45.9 | 6.35 | N |
| | 1115 | 2.16 | 6.35 | 0.097 | 3.08 | 222 | 30.2 | 6.35 | N |
| 1.5 | 1120 | 2.15 | 6.33 | 0.096 | 3.06 | 223 | 21 | 6.35 | N |
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**Well Condition Summary**

| | | | | | |
|---|---|---|---|---|---|
| Cover: N | Bolts: N | | Concrete Pad OK: N | Gripper: Y | |

**Sample Collection Information**

| | | | | |
|---|---|---|---|---|
| Sample Time: | 1130 | Appearance: Clear | Filtered Sample Turbidity: | OTHER: |

Desired purge flow rate <100mL/min (slow drip) & turbidity <10 if possible. If turbidity > 10 collect filtered and unfiltered samples. Notify PM of high turbidity and collection of filtered samples prior to lab submittal. Minimum 20 minute purge to establish stabilization.

Notes/ Calculations:

Volume? Linear Ft of well casing; 1"=0.041 gal. 2"= 0.163 gal. 4"=0.653 gal.

**ABSORBENT SOCK**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Sock Length (ft) = | | Capacity (Qt.) = | | Present: | Y / N | Product Measured (Inches) : | |
| Sock Installation Date: | | | Sock Changed : | | Y / N | | |
| Sock Depth (Depth to sock mid point): | | | | | | | |

## LOW-FLOW GROUNDWATER SAMPLING LOG

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Location: | Liberty, NY | | | Job Number: | 9313 | WELL I.D. : MW-205 | | | |
| Personnel: | JCS | | | Date: | 3/5/2020 | | | | |
| | | | | PID: | 0 | | | | |

| Stickup? Y / Distance ground to PVC | Distance From Rim to PVC | Total Depth of Well Rim/PVC | Depth to Product Rim/PVC | Depth to Water (PVC) | Standing Water Column (feet) | Middle of Saturated Zone (feet) | Depth to Sample Tube (feet) | TOV @ Well Head (ppmv) | Pump Peristaltic or Bladder |
|---|---|---|---|---|---|---|---|---|---|
| 3.2' | | 17' | NE | 4.2' | 12.8 | | 7' | | Peristaltic |

| | | | | | | |
|---|---|---|---|---|---|---|
| Turbidity at collection (NTU): | 87.7 | (Less than 5 NTU is desirable) | | Duplicate Collected? N | | Filtered Sample N |
| **Stabilization Parameters** | **+/- 0.5 deg C.** | **+/- 0.1 Unit** | **+/- 10 umhos/cm or within 3% if >300umho** | **1 ppm** | **+/- 10 mV** | **No Limit** | **<.3 feet drawdown desirable** | **No Limit** |

| Volume Purged (gallons) | Time (actual Time) 5 minute Intervals | TEMP. (Deg. C) | pH | Specific Conductivity uS/cm | Dissolved Oxygen (mg/L) | ORP mV millivolts | Turbidity NTUs | DTW (feet) | Odors Y/N |
|---|---|---|---|---|---|---|---|---|---|
| | 945 | 3.96 | 6.76 | 0.079 | 7.85 | 165 | 190 | 4.23 | N |
| | 950 | 3.37 | 7.05 | 0.074 | 8.39 | 169 | 200 | 4.25 | N |
| | 955 | 3 | 7.07 | 0.072 | 8.95 | 174 | 232 | 4.25 | N |
| | 1000 | 2.94 | 7.03 | 0.07 | 8.45 | 184 | 350 | 4.25 | N |
| | 1005 | 3.03 | 6.97 | 0.069 | 8.21 | 195 | 299 | 4.25 | N |
| | 1010 | 2.94 | 6.72 | 0.067 | 7.85 | 201 | 205 | 4.25 | N |
| | 1015 | 3.02 | 6.55 | 0.065 | 7.68 | 208 | 165 | 4.25 | N |
| | 1020 | 3.01 | 6.41 | 0.066 | 7.64 | 212 | 138 | 4.25 | N |
| | 1025 | 2.98 | 6.38 | 0.065 | 8.01 | 216 | 103 | 4.25 | N |
| 3 | 1030 | 3.09 | 6.33 | 0.065 | 7.87 | 220 | 87.7 | 4.25 | N |
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**Well Condition Summary**

| | | | | | |
|---|---|---|---|---|---|
| Cover: N | Bolts: N | | Concrete Pad OK: N | Gripper: Y | |

**Sample Collection Information**

| | | | | |
|---|---|---|---|---|
| Sample Time: | 1035 | Appearance: Clear | Filtered Sample Turbidity: | OTHER: |

Desired purge flow rate <100mL/min (slow drip) & turbidity <10 if possible. If turbidity > 10 collect filtered and unfiltered samples. Notify PM of high turbidity and collection of filtered samples prior to lab submittal. Minimum 20 minute purge to establish stabilization.

Notes/ Calculations:

Volume? Linear Ft of well casing; 1"=0.041 gal. 2"= 0.163 gal. 4"=0.653 gal.

**ABSORBENT SOCK**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Sock Length (ft) = | | Capacity (Qt.) = | | Present: | Y / N | Product Measured (Inches) : | |
| Sock Installation Date: | | | Sock Changed : | | Y / N | | |
| Sock Depth (Depth to sock mid point): | | | | | | | |

## LOW-FLOW GROUNDWATER SAMPLING LOG

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Location: | Liberty, NY | | | Job Number: | 9313 | WELL I.D. : MW-206 | | | |
| Personnel: | JCS | | | Date: | 3/5/2020 | SESI CONSULTING ENGINEERS | | | |
| | | | | PID: | 0 | | | | |
| Stickup? Y<br>Distance ground to PVC | Distance From Rim to PVC | Total Depth of Well Rim/PVC | Depth to Product Rim/PVC | Depth to Water (PVC) | Standing Water Column (feet) | Middle of Saturated Zone (feet) | Depth to Sample Tube (feet) | TOV @ Well Head (ppmv) | Pump Peristaltic or Bladder |
| 3.9' | | 19.5' | | 8.72' | 10.78 | | 13' | | Peristaltic |
| Turbidity at collection (NTU): | | 52.1 | (Less than 5 NTU is desirable) | | Duplicate Collected? N | | | Filtered Sample N | |
| Stabilization Parameters | | +/- 0.5 deg C. | +/- 0.1 Unit | +/- 10 umhos/cm or within 3% if >300umho | 1 ppm | +/- 10 mV | No Limit | <.3 feet drawdown desirable | No Limit |

| Volume Purged (gallons) | Time (actual Time) 5 minute Intervals | TEMP. (Deg. C) | pH | Specific Conductivity uS/cm | Dissolved Oxygen (mg/L) | ORP mV millivolts | Turbidity NTUs | DTW (feet) | Odors Y/N |
|---|---|---|---|---|---|---|---|---|---|
| | 1142 | 5.52 | 6.45 | 0.282 | 4 | 220 | 257 | 8.86 | N |
| | 1147 | 4.86 | 6.46 | 0.252 | 1.74 | 219 | 127 | 8.86 | N |
| | 1152 | 4.78 | 6.4 | 0.248 | 1.11 | 220 | 89.3 | 8.86 | N |
| | 1157 | 4.92 | 6.42 | 0.247 | 1.01 | 219 | 98.7 | 8.86 | N |
| | 1202 | 5.25 | 6.48 | 0.233 | 1 | 217 | 96.2 | 8.86 | N |
| | 1207 | 5.4 | 6.51 | 0.234 | 0.94 | 215 | 59.4 | 8.86 | N |
| 1.5 | 1212 | 5.52 | 6.53 | 0.232 | 0.89 | 213 | 52.1 | 8.86 | N |
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| Well Condition Summary | | | | | |
|---|---|---|---|---|---|
| Cover: N | Bolts: N | | Concrete Pad OK: N | Gripper: Y | |
| **Sample Collection Information** | | | | | |
| Sample Time: 1220 | Appearance: Clear | | Filtered Sample Turbidity: | OTHER: | |

Desired purge flow rate <100mL/min (slow drip) & turbidity <10 if possible. If turbidity > 10 collect filtered and unfiltered samples. Notify PM of high turbidity and collection of filtered samples prior to lab submittal. Minimum 20 minute purge to establish stabilization.

Notes/ Calculations:

Volume? Linear Ft of well casing; 1"=0.041 gal. 2"= 0.163 gal. 4"=0.653 gal.

| ABSORBENT SOCK | | | | | | |
|---|---|---|---|---|---|---|
| Sock Length (ft) = | | Capacity (Qt.) = | | Present: | Y / N | Product Measured (Inches) : |
| Sock Installation Date: | | | Sock Changed : | | Y / N | |
| Sock Depth (Depth to sock mid point): | | | | | | |

## LOW-FLOW GROUNDWATER SAMPLING LOG

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Location: | Liberty, NY | | | Job Number: | 9313 | WELL I.D. : MW-208 | | | |
| Personnel: | JCS | | | Date: | 3/5/2020 | | | | |
| | | | | PID: | 0.1 | | | | |

| Stickup? Y / Distance ground to PVC | Distance From Rim to PVC | Total Depth of Well Rim/PVC | Depth to Product Rim/PVC | Depth to Water (PVC) | Standing Water Column (feet) | Middle of Saturated Zone (feet) | Depth to Sample Tube (feet) | TOV @ Well Head (ppmv) | Pump Peristaltic or Bladder |
|---|---|---|---|---|---|---|---|---|---|
| 4.8' | | 19.5' | NE | 11.2' | 8.3' | | 15' | | Peristaltic |

| | | | | | | |
|---|---|---|---|---|---|---|
| Turbidity at collection (NTU): | 0.5 | (Less than 5 NTU is desirable) | Duplicate Collected? Yes | | Filtered Sample N | |
| **Stabilization Parameters** | **+/- 0.5 deg C.** | **+/- 0.1 Unit** | **+/- 10 umhos/cm or within 3% if >300umho** | **1 ppm** | **+/- 10 mV** | **No Limit** | **<.3 feet drawdown desirable** | **No Limit** |

| Volume Purged (gallons) | Time (actual Time) 5 minute Intervals | TEMP. (Deg. C) | pH | Specific Conductivity uS/cm | Dissolved Oxygen (mg/L) | ORP mV millivolts | Turbidity NTUs | DTW (feet) | Odors Y/N |
|---|---|---|---|---|---|---|---|---|---|
| | 1235 | 5.34 | 8.04 | 0.42 | 4.81 | 191 | 24.5 | 11.36 | N |
| | 1240 | 4.34 | 8.78 | 0.419 | 4.23 | 180 | 8.4 | 11.36 | N |
| | 1245 | 4.01 | 8.84 | 0.425 | 4.19 | 173 | 3.3 | 11.36 | N |
| | 1250 | 3.94 | 8.85 | 0.425 | 3.86 | 156 | 2.5 | 11.36 | N |
| | 1255 | 4.15 | 8.62 | 0.42 | 3.67 | -12 | 3.7 | 11.36 | N |
| | 1300 | 4.33 | 8.53 | 0.419 | 3.4 | -32 | 1.5 | 11.36 | N |
| | 1305 | 4.33 | 8.54 | 0.421 | 3.27 | -35 | 1.2 | 11.36 | N |
| | 1310 | 4.31 | 8.48 | 0.419 | 3.06 | -40 | 1 | 11.36 | N |
| 2 | 1315 | 4.32 | 8.46 | 0.42 | 2.99 | -43 | 0.5 | 11.36 | N |
| | | | | | | | | | N |
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**Well Condition Summary**

| | | | | | |
|---|---|---|---|---|---|
| Cover: N | Bolts: N | | Concrete Pad OK: N | Gripper: Y | |

**Sample Collection Information**

| | | | | |
|---|---|---|---|---|
| Sample Time: | 1320 | Appearance: Clear | Filtered Sample Turbidity: | OTHER: |

Desired purge flow rate <100mL/min (slow drip) & turbidity <10 if possible. If turbidity > 10 collect filtered and unfiltered samples. Notify PM of high turbidity and collection of filtered samples prior to lab submittal. Minimum 20 minute purge to establish stabilization.

Notes/ Calculations:

Volume? Linear Ft of well casing; 1"=0.041 gal. 2"= 0.163 gal. 4"=0.653 gal.

**ABSORBENT SOCK**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Sock Length (ft) = | | Capacity (Qt.) = | | Present: | Y / N | Product Measured (Inches) : | |
| Sock Installation Date: | | | Sock Changed : | | Y / N | | |
| Sock Depth (Depth to sock mid point): | | | | | | | |

## LOW-FLOW GROUNDWATER SAMPLING LOG

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Location: | Liberty, NY | | | Job Number: | 9313 | WELL I.D. : MW-207 | | | |
| Personnel: | JCS | | | Date: | 3/5/2020 | SESI CONSULTING ENGINEERS | | | |
| | | | | PID: | 0.1 | | | | |
| Stickup? Y<br>Distance ground to PVC | Distance From Rim to PVC | Total Depth of Well Rim/PVC | Depth to Product Rim/PVC | Depth to Water (PVC) | Standing Water Column (feet) | Middle of Saturated Zone (feet) | Depth to Sample Tube (feet) | TOV @ Well Head (ppmv) | Pump Peristaltic or Bladder |
| 4.4' | 0.5' | 15.7 | NE | 8.14' | 7.56 | | 12' | | Peristaltic |
| Turbidity at collection (NTU): | | 87.7 | (Less than 5 NTU is desirable) | | Duplicate Collected? N | | | Filtered Sample N | |
| Stabilization Parameters | | +/- 0.5 deg C. | +/- 0.1 Unit | +/- 10 umhos/cm or within 3% if >300umho | 1 ppm | +/- 10 mV | No Limit | <.3 feet drawdown desirable | No Limit |
| | | | | | | | | | |
| Volume Purged (gallons) | Time (actual Time) 5 minute Intervals | TEMP. (Deg. C) | pH | Specific Conductivity uS/cm | Dissolved Oxygen (mg/L) | ORP mV millivolts | Turbidity NTUs | DTW (feet) | Odors Y/N |
| | 1400 | 11.25 | 8.03 | 0.107 | 3.99 | 138 | 22.7 | 8.22 | N |
| | 1405 | 10.07 | 6.87 | 0.163 | 1.93 | 181 | 6.7 | 8.22 | N |
| | 1410 | 9.5 | 6.37 | 0.165 | 1.78 | 193 | 4.2 | 8.22 | N |
| | 1415 | 8.83 | 6.19 | 0.176 | 1.61 | 204 | 20 | 8.22 | N |
| | 1420 | 8.44 | 6.13 | 0.178 | 1.54 | 209 | 19 | 8.22 | N |
| | 1425 | 8.29 | 6.21 | 0.197 | 1.36 | 210 | 1000 | 8.22 | N |
| | 1430 | 7.33 | 6.3 | 0.147 | 5.66 | 207 | 1000 | 8.22 | N |
| | 1435 | 7.34 | 6.39 | 0.124 | 4.91 | 207 | 1000 | 8.22 | N |
| | 1440 | 7.67 | 6.38 | 0.117 | 2.78 | 210 | 1000 | 8.22 | N |
| | 1445 | 7.65 | 6.37 | 0.112 | 2.9 | 209 | 1000 | 8.22 | N |
| | 1450 | 7.56 | 6.36 | 0.108 | 3.04 | 207 | 1000 | 8.22 | N |
| | 1455 | 7.42 | 6.35 | 0.104 | 3.09 | 201 | 1000 | 8.22 | N |
| 4 | 1500 | 7.33 | 6.33 | 0.102 | 3.15 | 203 | 1000 | 8.22 | N |
| | | | | | | | | | |
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| | | | | | | | | | |
| Well Condition Summary | | | | | | | | | |
| Cover: N | | Bolts: N | | Concrete Pad OK: N | | Gripper: Y | | | |
| Sample Collection Information | | | | | | | | | |
| Sample Time: | 1530 | Appearance: Brown/turbid | | Filtered Sample Turbidity: | | | OTHER: | | |

Desired purge flow rate <100mL/min (slow drip) & turbidity <10 if possible. If turbidity > 10 collect filtered and unfiltered samples. Notify PM of high turbidity and collection of filtered samples prior to lab submittal. Minimum 20 minute purge to establish stabilization.

Notes/ Calculations:

Volume? Linear Ft of well casing; 1"=0.041 gal. 2"= 0.163 gal. 4"=0.653 gal.

| ABSORBENT SOCK | | | | | | | |
|---|---|---|---|---|---|---|---|
| Sock Length (ft) = | | Capacity (Qt.) = | | Present: | Y / N | Product Measured (Inches) : | |
| Sock Installation Date: | | | Sock Changed : | | Y / N | | |
| Sock Depth (Depth to sock mid point): | | | | | | | |

**VOLUME AVERAGING PURGING GROUNDWATER SAMPLING LOG**

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **Location:** | | | | **Job Number:** | | **WELL I.D. :** | | | |
| **Personnel:** | | | | **Date:** | | SESI CONSULTING ENGINEERS | | | |
| | | | | **PID:** | | | | | |
| **Stickup? Y/N** **Distance ground to Stickup Rim/PVC** | **Distance From Rim to PVC** | **Total Depth of Well Rim/PVC** | **Depth to Product Rim/PVC** | **Depth to Water (Rim/PVC)** | **Standing Water Column (feet)** | **Middle of Saturated Zone (feet)** | **Depth to Sample Tube (feet)** | **TOV @ Well Head (ppmv)** | **Pump Peristaltic or Bladder** |
| | | | | | | | | | |
| **Turbidity at collection (NTU):** | | | **(Less than 5 NTU is desirable)** | | **Duplicate Collected? Y/N** | | | **Filtered Sample Y/N** | |
| **Stabilization Parameters** | | **+/- 0.5 deg C.** | **+/- 0.1 Unit** | **+/- 10 umhos/cm or within 3% if >300umho** | **1 ppm** | **+/- 10 mV** | **No Limit** | **<.3 feet drawdown desirable** | **No Limit** |
| | | | | | | | | | |
| **Volume Purged (gallons)** | **Time (actual Time) 5 minute Intervals** | **TEMP. (Deg. C)** | **pH** | **Specific Conductivity uS/cm** | **Dissolved Oxygen (mg/L)** | **ORP mV millivolts** | **Turbidity NTUs** | **DTW (feet)** | **Odors Y/N** |
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| **Well Condition Summary** | | | | | | | | | |
| **Cover: Y / N** | | **Bolts: Y / N** | | **Concrete Pad OK: Y / N** | | **Gripper: Y / N** | | | |
| **Sample Collection Information** | | | | | | | | | |
| **Sample Time:** | | **Appearance:** | | **Filtered Sample Turbidity:** | | | **OTHER:** | | |

Desired purge flow rate <100mL/min (slow drip) & turbidity <10 if possible. If turbidity > 10 collect filtered and unfiltered samples. Notify PM of high turbidity and collection of filtered samples prior to lab submittal. Minimum 20 minute purge to establish stabilization.

Notes/ Calculations:

Volume? Linear Ft of well casing; 1"=0.041 gal. 2"= 0.163 gal. 4"=0.653 gal.

| **ABSORBENT SOCK** | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Sock Length (ft) =** | | **Capacity (Qt.) =** | | **Present:** | **Y / N** | **Product Measured (Inches) :** | |
| **Sock Installation Date:** | | | **Sock Changed :** | | **Y / N** | | |
| **Sock Depth (Depth to sock mid point):** | | | | | | | |

Volume Average Groundwater Purging Log
Grossingers
Liberty, NY

| Volume Average Purging Groundwater Sampling Log | |
|---|---|
| Pre Purge | |
| Well Name | MW-209 |
| Well Diameter (Inches) | 2 |
| Depth to Water (ft) | 7.1 |
| Depth to Bottom (ft) | 17.2 |
| Water Column | 10.1 |
| Well Volume (gal) | 1.64 |
| Well Headspace (PID) | 3.8 ppm |
| Pump On Time | 10:30 |
| Pump Off Time | 1:30 |
| Purge Time | 180 min |
| Total Volume Purged (gal) | 5 |
| Post Purge | |
| Depth to Water | 12.23 |
| Water Quality | Turbid |
| Post Sample | |
| Depth to Water | 8.5 |
| Water Quality | Turbid |

## LOW-FLOW GROUNDWATER SAMPLING LOG

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Location: | Liberty, NY | | | Job Number: | 9313 | WELL I.D. : MW-210 | | | |
| Personnel: | JCS | | | Date: | 3/6/2020 | SESI CONSULTING ENGINEERS | | | |
| | | | | PID: | 0.1 | | | | |
| Stickup? Y<br>Distance ground to PVC | Distance From Rim to PVC | Total Depth of Well Rim/PVC | Depth to Product Rim/PVC | Depth to Water (PVC) | Standing Water Column (feet) | Middle of Saturated Zone (feet) | Depth to Sample Tube (feet) | TOV @ Well Head (ppmv) | Pump Peristaltic or Bladder |
| 4.5' | 0.5' | 18' | NE | 10.14 | 7.86 | | 14' | | Peristaltic |
| Turbidity at collection (NTU): | | 170 | (Less than 5 NTU is desirable) | | Duplicate Collected? N | | | Filtered Sample N | |
| Stabilization Parameters | | +/- 0.5 deg C. | +/- 0.1 Unit | +/- 10 umhos/cm or within 3% if >300umho | 1 ppm | +/- 10 mV | No Limit | <.3 feet drawdown desirable | No Limit |

| Volume Purged (gallons) | Time (actual Time) 5 minute Intervals | TEMP. (Deg. C) | pH | Specific Conductivity uS/cm | Dissolved Oxygen (mg/L) | ORP mV millivolts | Turbidity NTUs | DTW (feet) | Odors Y/N |
|---|---|---|---|---|---|---|---|---|---|
| | 1435 | 4.62 | 7.2 | 0.123 | 19.73 | 208 | 46.5 | 10.25 | N |
| | 1440 | 4.22 | 6.62 | 0.106 | 10.39 | 221 | 300 | 10.25 | N |
| | 1445 | 4.4 | 6.26 | 0.088 | 10.42 | 231 | 259 | 10.25 | N |
| | 1450 | 4.35 | 6.15 | 0.081 | 9.65 | 238 | 217 | 10.25 | N |
| | 1455 | 4.34 | 6.08 | 0.081 | 10.33 | 247 | 176 | 10.25 | N |
| | 1500 | 4.4 | 6.06 | 0.082 | 10.47 | 250 | 172 | 10.25 | N |
| 2 | 1505 | 4.46 | 6.01 | 0.079 | 10.48 | 253 | 170 | 10.25 | N |
| | | | | | | | | | |
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| Well Condition Summary | | | | | |
|---|---|---|---|---|---|
| Cover: Y | Bolts: Y | | Concrete Pad OK: Y | Gripper: Y | |

| Sample Collection Information | | | | |
|---|---|---|---|---|
| Sample Time: | 1510 | Appearance: Brown/turbid | Filtered Sample Turbidity: | OTHER: |

Desired purge flow rate <100mL/min (slow drip) & turbidity <10 if possible. If turbidity > 10 collect filtered and unfiltered samples. Notify PM of high turbidity and collection of filtered samples prior to lab submittal. Minimum 20 minute purge to establish stabilization.

Notes/ Calculations:

Volume? Linear Ft of well casing; 1"=0.041 gal. 2"= 0.163 gal. 4"=0.653 gal.

| ABSORBENT SOCK | | | | | | |
|---|---|---|---|---|---|---|
| Sock Length (ft) = | | Capacity (Qt.) = | | Present: | Y / N | Product Measured (Inches) : |
| Sock Installation Date: | | | Sock Changed : | | Y / N | |
| Sock Depth (Depth to sock mid point): | | | | | | |

**VOLUME AVERAGING PURGING GROUNDWATER SAMPLING LOG**

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **Location:** | | | | **Job Number:** | | **WELL I.D. :** | | | |
| **Personnel:** | | | | **Date:** | | SESI CONSULTING ENGINEERS | | | |
| | | | | **PID:** | | | | | |
| **Stickup? Y/N** **Distance ground to Stickup Rim/PVC** | **Distance From Rim to PVC** | **Total Depth of Well Rim/PVC** | **Depth to Product Rim/PVC** | **Depth to Water (Rim/PVC)** | **Standing Water Column (feet)** | **Middle of Saturated Zone (feet)** | **Depth to Sample Tube (feet)** | **TOV @ Well Head (ppmv)** | **Pump Peristaltic or Bladder** |
| | | | | | | | | | |
| **Turbidity at collection (NTU):** | | | **(Less than 5 NTU is desirable)** | | **Duplicate Collected? Y/N** | | | **Filtered Sample Y/N** | |
| **Stabilization Parameters** | | **+/- 0.5 deg C.** | **+/- 0.1 Unit** | **+/- 10 umhos/cm or within 3% if >300umho** | **1 ppm** | **+/- 10 mV** | **No Limit** | **<.3 feet drawdown desirable** | **No Limit** |
| | | | | | | | | | |
| **Volume Purged (gallons)** | **Time (actual Time) 5 minute Intervals** | **TEMP. (Deg. C)** | **pH** | **Specific Conductivity uS/cm** | **Dissolved Oxygen (mg/L)** | **ORP mV millivolts** | **Turbidity NTUs** | **DTW (feet)** | **Odors Y/N** |
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| **Well Condition Summary** | | | | | | | | | |
| **Cover: Y / N** | | **Bolts: Y / N** | | **Concrete Pad OK: Y / N** | | **Gripper: Y / N** | | | |
| **Sample Collection Information** | | | | | | | | | |
| **Sample Time:** | | **Appearance:** | | **Filtered Sample Turbidity:** | | | **OTHER:** | | |

Desired purge flow rate <100mL/min (slow drip) & turbidity <10 if possible. If turbidity > 10 collect filtered and unfiltered samples. Notify PM of high turbidity and collection of filtered samples prior to lab submittal. Minimum 20 minute purge to establish stabilization.

Notes/ Calculations:

Volume? Linear Ft of well casing; 1"=0.041 gal. 2"= 0.163 gal. 4"=0.653 gal.

| **ABSORBENT SOCK** | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Sock Length (ft) =** | | **Capacity (Qt.) =** | | **Present:** | **Y / N** | **Product Measured (Inches) :** | |
| **Sock Installation Date:** | | | **Sock Changed :** | | **Y / N** | | |
| **Sock Depth (Depth to sock mid point):** | | | | | | | |

Volume Average Groundwater Purging Log
Gorssingers
Liberty, NY

| Volume Average Purging Groundwater Sampling Log | |
|---|---|
| Pre Purge | |
| Well Name | MW-211 |
| Well Diameter (Inches) | 2 |
| Depth to Water (ft) | 9.6 |
| Depth to Bottom (ft) | 17.86 |
| Water Column | 8.26 |
| Well Volume (gal) | 1.34 |
| Well Headspace (PID) | 0.2 ppm |
| Pump On Time | 10:00 |
| Pump Off Time | 10:50 |
| Purge Time | 50 min |
| Total Volume Purged (gal) | 4 |
| Post Purge | |
| Depth to Water | 11.2 |
| Water Quality | Turbid |
| Post Sample | |
| Depth to Water | 11.2 |
| Water Quality | Turbid |

## LOW-FLOW GROUNDWATER SAMPLING LOG

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Location: | Liberty, NY | | | Job Number: | 9313 | WELL I.D. : MW-213 | | | |
| Personnel: | JCS | | | Date: | 3/4/2020 | | | | |
| | | | | PID: | 0.1 | | | | |

| Stickup? Y / Distance ground to PVC | Distance From Rim to PVC | Total Depth of Well Rim/PVC | Depth to Product Rim/PVC | Depth to Water (PVC) | Standing Water Column (feet) | Middle of Saturated Zone (feet) | Depth to Sample Tube (feet) | TOV @ Well Head (ppmv) | Pump Peristaltic or Bladder |
|---|---|---|---|---|---|---|---|---|---|
| 3.5' | 0.3' | 20.5 | NE | 14.85 | 5.65 | | 17' | | Peristaltic |

| | | | | | | |
|---|---|---|---|---|---|---|
| Turbidity at collection (NTU): | 2.1 | (Less than 5 NTU is desirable) | | Duplicate Collected? N | | Filtered Sample N |

| Stabilization Parameters | +/- 0.5 deg C. | +/- 0.1 Unit | +/- 10 umhos/cm or within 3% if >300umho | 1 ppm | +/- 10 mV | No Limit | <.3 feet drawdown desirable | No Limit |
|---|---|---|---|---|---|---|---|---|

| Volume Purged (gallons) | Time (actual Time) 5 minute Intervals | TEMP. (Deg. C) | pH | Specific Conductivity uS/cm | Dissolved Oxygen (mg/L) | ORP mV millivolts | Turbidity NTUs | DTW (feet) | Odors Y/N |
|---|---|---|---|---|---|---|---|---|---|
| | 1355 | 9.95 | 6.01 | 0.414 | 0.93 | 282 | 4.9 | 14.92 | N |
| | 1400 | 10.91 | 6.03 | 0.403 | 0 | 257 | 110 | 14.92 | N |
| | 1405 | 9.32 | 6.03 | 0.423 | 0 | 216 | 27.4 | 14.92 | N |
| | 1410 | 9.42 | 6.03 | 0.417 | 0 | 217 | 9.1 | 14.92 | N |
| | 1415 | 8.89 | 6.02 | 0.424 | 0 | 220 | 7.1 | 14.92 | N |
| | 1420 | 8.67 | 6.02 | 0.425 | 0 | 225 | 3.4 | 14.92 | N |
| 2 | 1425 | 8.63 | 6.01 | 0.425 | 0 | 226 | 2.1 | 14.92 | N |
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**Well Condition Summary**

| Cover: Y | Bolts: Y | | Concrete Pad OK: Y | Gripper: Y | |
|---|---|---|---|---|---|

**Sample Collection Information**

| Sample Time: | 1430 | Appearance: Clear | Filtered Sample Turbidity: | OTHER: |
|---|---|---|---|---|

Desired purge flow rate <100mL/min (slow drip) & turbidity <10 if possible. If turbidity > 10 collect filtered and unfiltered samples. Notify PM of high turbidity and collection of filtered samples prior to lab submittal. Minimum 20 minute purge to establish stabilization.

Notes/ Calculations:

Volume? Linear Ft of well casing; 1"=0.041 gal. 2"= 0.163 gal. 4"=0.653 gal.

**ABSORBENT SOCK**

| Sock Length (ft) = | | Capacity (Qt.) = | | Present: | Y / N | Product Measured (Inches) : | |
|---|---|---|---|---|---|---|---|
| Sock Installation Date: | | | Sock Changed : | | Y / N | | |
| Sock Depth (Depth to sock mid point): | | | | | | | |

## LOW-FLOW GROUNDWATER SAMPLING LOG

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Location: | Liberty, NY | | | Job Number: | 9313 | WELL I.D. : MW-216 | | | |
| Personnel: | JCS | | | Date: | 3/6/2020 | | | | |
| | | | | PID: | 0.2 | | | | |
| Stickup? Y<br>Distance ground to PVC | Distance From Rim to PVC | Total Depth of Well Rim/PVC | Depth to Product Rim/PVC | Depth to Water (PVC) | Standing Water Column (feet) | Middle of Saturated Zone (feet) | Depth to Sample Tube (feet) | TOV @ Well Head (ppmv) | Pump Peristaltic or Bladder |
| 3.5' | 0.5' | 21' | NE | 8.39' | 12.61' | | 15' | | Peristaltic |
| Turbidity at collection (NTU): | | 98.2 | (Less than 5 NTU is desirable) | | Duplicate Collected? N | | | Filtered Sample N | |
| Stabilization Parameters | | +/- 0.5 deg C. | +/- 0.1 Unit | +/- 10 umhos/cm or within 3% if >300umho | 1 ppm | +/- 10 mV | No Limit | <.3 feet drawdown desirable | No Limit |

| Volume Purged (gallons) | Time (actual Time) 5 minute Intervals | TEMP. (Deg. C) | pH | Specific Conductivity uS/cm | Dissolved Oxygen (mg/L) | ORP mV millivolts | Turbidity NTUs | DTW (feet) | Odors Y/N |
|---|---|---|---|---|---|---|---|---|---|
| | 845 | 6.13 | 5.66 | 0.206 | 6.73 | 306 | 470 | 8.6 | N |
| | 850 | 5.5 | 6.19 | 0.207 | 6.42 | 294 | 268 | 8.65 | N |
| | 855 | 5.32 | 6.21 | 0.207 | 6.44 | 289 | 224 | 8.65 | N |
| | 900 | 6.65 | 6.2 | 0.206 | 6.31 | 280 | 207 | 8.65 | N |
| | 905 | 5.5 | 6.21 | 0.206 | 6.35 | 277 | 175 | 8.68 | N |
| | 910 | 5.42 | 6.18 | 0.208 | 6.2 | 274 | 122 | 8.7 | N |
| 2 | 915 | 5.44 | 6.17 | 0.21 | 6.11 | 276 | 98.2 | 8.7 | N |
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**Well Condition Summary**

| | | | | | |
|---|---|---|---|---|---|
| Cover: Y | Bolts: Y | | Concrete Pad OK: Y | Gripper: Y | |

**Sample Collection Information**

| | | | | |
|---|---|---|---|---|
| Sample Time: | 925 | Appearance: Clear | Filtered Sample Turbidity: | OTHER: |

Desired purge flow rate <100mL/min (slow drip) & turbidity <10 if possible. If turbidity > 10 collect filtered and unfiltered samples. Notify PM of high turbidity and collection of filtered samples prior to lab submittal. Minimum 20 minute purge to establish stabilization.

Notes/ Calculations:

Volume? Linear Ft of well casing; 1"=0.041 gal. 2"= 0.163 gal. 4"=0.653 gal.

**ABSORBENT SOCK**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Sock Length (ft) = | | Capacity (Qt.) = | | Present: | Y / N | Product Measured (Inches) : | |
| Sock Installation Date: | | | Sock Changed : | | Y / N | | |
| Sock Depth (Depth to sock mid point): | | | | | | | |

## LOW-FLOW GROUNDWATER SAMPLING LOG

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Location: | Liberty, NY | | | Job Number: | 9313 | WELL I.D. : MW-214 | | | |
| Personnel: | JCS | | | Date: | 3/4/2020 | | | | |
| | | | | PID: | 0.1 | | | | |

| Stickup? Y / Distance ground to PVC | Distance From Rim to PVC | Total Depth of Well Rim/PVC | Depth to Product Rim/PVC | Depth to Water (PVC) | Standing Water Column (feet) | Middle of Saturated Zone (feet) | Depth to Sample Tube (feet) | TOV @ Well Head (ppmv) | Pump Peristaltic or Bladder |
|---|---|---|---|---|---|---|---|---|---|
| 3.5' | 0.5' | 24.7 | NE | 16.67 | 8.03 | | 20' | | Peristaltic |

| | | | | | | |
|---|---|---|---|---|---|---|
| Turbidity at collection (NTU): | 1.5 | (Less than 5 NTU is desirable) | Duplicate Collected? N | | Filtered Sample N | |
| **Stabilization Parameters** | **+/- 0.5 deg C.** | **+/- 0.1 Unit** | **+/- 10 umhos/cm or within 3% if >300umho** | **1 ppm** | **+/- 10 mV** | **No Limit** | **<.3 feet drawdown desirable** | **No Limit** |

| Volume Purged (gallons) | Time (actual Time) 5 minute Intervals | TEMP. (Deg. C) | pH | Specific Conductivity uS/cm | Dissolved Oxygen (mg/L) | ORP mV millivolts | Turbidity NTUs | DTW (feet) | Odors Y/N |
|---|---|---|---|---|---|---|---|---|---|
| | 953 | 9.54 | 5.68 | 0.52 | 2.54 | 268 | 0 | 17.03 | N |
| | 958 | 9.07 | 5.78 | 0.528 | 2.6 | 253 | 0 | 17.03 | N |
| | 1003 | 8.19 | 5.8 | 0.553 | 3.63 | 248 | 21.5 | 17.03 | N |
| | 1008 | 8.12 | 5.84 | 0.553 | 3.09 | 245 | 6 | 17.03 | N |
| | 1013 | 8.2 | 5.87 | 0.55 | 2.52 | 245 | 3.3 | 17.03 | N |
| | 1018 | 8.29 | 5.87 | 0.547 | 2.46 | 253 | 2.5 | 17.03 | N |
| 2 | 1023 | 8.3 | 5.8 | 0.546 | 2.4 | 247 | 1.5 | 17.03 | N |
| | | | | | | | | | |
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**Well Condition Summary**

| | | | | | |
|---|---|---|---|---|---|
| Cover: Y | Bolts: Y | | Concrete Pad OK: Y | Gripper: Y | |

**Sample Collection Information**

| | | | | |
|---|---|---|---|---|
| Sample Time: | 1030 | Appearance: Clear | Filtered Sample Turbidity: | OTHER: |

Desired purge flow rate <100mL/min (slow drip) & turbidity <10 if possible. If turbidity > 10 collect filtered and unfiltered samples. Notify PM of high turbidity and collection of filtered samples prior to lab submittal. Minimum 20 minute purge to establish stabilization.

Notes/ Calculations:

Volume? Linear Ft of well casing; 1"=0.041 gal. 2"= 0.163 gal. 4"=0.653 gal.

**ABSORBENT SOCK**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Sock Length (ft) = | | Capacity (Qt.) = | | Present: | Y / N | Product Measured (Inches) : | |
| Sock Installation Date: | | | Sock Changed : | | Y / N | | |
| Sock Depth (Depth to sock mid point): | | | | | | | |

## LOW-FLOW GROUNDWATER SAMPLING LOG

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Location: | Liberty, NY | | | Job Number: | 9313 | WELL I.D. : MW-217 | | | |
| Personnel: | JCS | | | Date: | 3/6/2020 | SESI CONSULTING ENGINEERS | | | |
| | | | | PID: | 0.2 | | | | |
| Stickup? Y<br>Distance ground to PVC | Distance From Rim to PVC | Total Depth of Well Rim/PVC | Depth to Product Rim/PVC | Depth to Water (PVC) | Standing Water Column (feet) | Middle of Saturated Zone (feet) | Depth to Sample Tube (feet) | TOV @ Well Head (ppmv) | Pump Peristaltic or Bladder |
| 3.5' | 0.5' | 22.5' | NE | 10.77' | 11.73' | | 16' | | Peristaltic |
| Turbidity at collection (NTU): | | 36.7 | (Less than 5 NTU is desirable) | | Duplicate Collected? N | | | Filtered Sample N | |
| Stabilization Parameters | | +/- 0.5 deg C. | +/- 0.1 Unit | +/- 10 umhos/cm or within 3% if >300umho | 1 ppm | +/- 10 mV | No Limit | <.3 feet drawdown desirable | No Limit |

| Volume Purged (gallons) | Time (actual Time) 5 minute Intervals | TEMP. (Deg. C) | pH | Specific Conductivity uS/cm | Dissolved Oxygen (mg/L) | ORP mV millivolts | Turbidity NTUs | DTW (feet) | Odors Y/N |
|---|---|---|---|---|---|---|---|---|---|
| | 1020 | 5.99 | 6.86 | 0.575 | 18.19 | 216 | 174 | 10.82 | N |
| | 1025 | 5.27 | 7.07 | 0.576 | 12.01 | 177 | 108 | 10.9 | N |
| | 1030 | 5.64 | 7.16 | 0.573 | 11.22 | 154 | 88.2 | 10.95 | N |
| | 1035 | 5.69 | 7.15 | 0.564 | 9.52 | 152 | 67.9 | 10.95 | N |
| | 1040 | 5.71 | 7.14 | 0.557 | 9.91 | 153 | 52.8 | 10.95 | N |
| | 1045 | 5.71 | 7.12 | 0.557 | 10.02 | 155 | 47.3 | 10.95 | N |
| 2 | 1050 | 5.78 | 7.1 | 0.55 | 10.19 | 159 | 36.7 | 10.95 | N |
| | | | | | | | | | |
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**Well Condition Summary**

| | | | | | |
|---|---|---|---|---|---|
| Cover: Y | Bolts: Y | | Concrete Pad OK: Y | Gripper: Y | |

**Sample Collection Information**

| | | | | |
|---|---|---|---|---|
| Sample Time: | 1100 | Appearance: Clear | Filtered Sample Turbidity: | OTHER: |

Desired purge flow rate <100mL/min (slow drip) & turbidity <10 if possible. If turbidity > 10 collect filtered and unfiltered samples. Notify PM of high turbidity and collection of filtered samples prior to lab submittal. Minimum 20 minute purge to establish stabilization.

Notes/ Calculations:

Volume? Linear Ft of well casing; 1"=0.041 gal. 2"= 0.163 gal. 4"=0.653 gal.

**ABSORBENT SOCK**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Sock Length (ft) = | | Capacity (Qt.) = | | Present: | Y / N | Product Measured (Inches) : | |
| Sock Installation Date: | | | Sock Changed : | | Y / N | | |
| Sock Depth (Depth to sock mid point): | | | | | | | |

## LOW-FLOW GROUNDWATER SAMPLING LOG

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Location: | Liberty, NY | | | Job Number: | 9313 | WELL I.D. : MW-201 | | | |
| Personnel: | JCS | | | Date: | 9/3/2020 | SESI CONSULTING ENGINEERS | | | |
| | | | | PID: | 0 | | | | |
| Stickup? Y<br>Distance ground to Stickup Rim/PVC | Distance From Rim to PVC | Total Depth of Well Rim/PVC | Depth to Product Rim/PVC | Depth to Water (Rim/PVC) | Standing Water Column (feet) | Middle of Saturated Zone (feet) | Depth to Sample Tube (feet) | Well Diameter (Inches) | Pump Peristaltic or Bladder |
| 6.5" | | 19 | NE | 13.72 | 5.28 | 16.36 | 16 | 2 | Peristaltic |
| Turbidity at collection (NTU): | | 7.6 | (Less than 5 NTU is desirable) | | Duplicate Collected? N | | | Filtered Sample N | |
| Stabilization Parameters | | +/- 0.5 deg C. | +/- 0.1 Unit | +/- 10 umhos/cm or within 3% if >300umho | 1 ppm | +/- 10 mV | No Limit | <.3 feet drawdown desirable | No Limit |

| Volume Purged (gallons) | Time (actual Time) 5 minute Intervals | TEMP. (Deg. C) | pH | Specific Conductivity uS/cm | Dissolved Oxygen (mg/L) | ORP mV millivolts | Turbidity NTUs | DTW (feet) | Odors Y/N |
|---|---|---|---|---|---|---|---|---|---|
| | 8.5 | 22.61 | 7.04 | 0.037 | 13.47 | 151 | 201 | 13.85 | N |
| | 840 | 21.45 | 5.96 | 0.037 | 5.65 | 232 | 98 | 13.98 | N |
| | 845 | 20.28 | 5.85 | 0.037 | 3.87 | 253 | 47.5 | 14.02 | N |
| | 850 | 19.35 | 5.77 | 0.037 | 3.08 | 269 | 9.5 | 14.02 | N |
| | 855 | 18.65 | 5.72 | 0.037 | 2.87 | 277 | 8.7 | 14.02 | N |
| | 900 | 18.18 | 5.65 | 0.041 | 2.8 | 280 | 8.2 | 14.02 | N |
| | 905 | 18.05 | 5.64 | 0.041 | 2.74 | 282 | 7.6 | 14.02 | N |
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**Well Condition Summary**

| | | | | | |
|---|---|---|---|---|---|
| Cover: Y | Bolts: Y | | Concrete Pad OK: Y | Gripper: Y | |

**Sample Collection Information**

| | | | | |
|---|---|---|---|---|
| Sample Time: | 910 | Appearance: Clear | Filtered Sample Turbidity: | OTHER: |

Desired purge flow rate <100mL/min (slow drip) & turbidity <10 if possible. If turbidity > 10 collect filtered and unfiltered samples. Notify PM of high turbidity and collection of filtered samples prior to lab submittal. Minimum 20 minute purge to establish stabilization.

Notes/ Calculations:

Volume? Linear Ft of well casing; 1"=0.041 gal. 2"= 0.163 gal. 4"=0.653 gal.

**ABSORBENT SOCK**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Sock Length (ft) = | | Capacity (Qt.) = | | Present: | Y / N | Product Measured (Inches) : | |
| Sock Installation Date: | | | Sock Changed : | | Y / N | | |
| Sock Depth (Depth to sock mid point): | | | | | | | |

## LOW-FLOW GROUNDWATER SAMPLING LOG

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|---|---|---|---|---|---|---|---|---|---|
| Location: | Liberty, NY | | | Job Number: | 9313 | WELL I.D. : MW-203 | | | |
| Personnel: | JCS | | | Date: | 9/2/2020 | SESI CONSULTING ENGINEERS | | | |
| | | | | PID: | 0 | | | | |
| Stickup? Y<br>Distance ground to Stickup Rim/PVC | Distance From Rim to PVC | Total Depth of Well Rim/PVC | Depth to Product Rim/PVC | Depth to Water (Rim/PVC) | Standing Water Column (feet) | Middle of Saturated Zone (feet) | Depth to Sample Tube (feet) | Well Diameter (Inches) | Pump Peristaltic or Bladder |
| 2.6' | | 25 | NE | 4.77 | 20.23 | 14.8 | 14 | 2 | Peristaltic |
| Turbidity at collection (NTU): | | 14.1 | (Less than 5 NTU is desirable) | | Duplicate Collected? N | | | Filtered Sample N | |
| Stabilization Parameters | | +/- 0.5 deg C. | +/- 0.1 Unit | +/- 10 umhos/cm or within 3% if >300umho | 1 ppm | +/- 10 mV | No Limit | <.3 feet drawdown desirable | No Limit |

| Volume Purged (gallons) | Time (actual Time) 5 minute Intervals | TEMP. (Deg. C) | pH | Specific Conductivity uS/cm | Dissolved Oxygen (mg/L) | ORP mV millivolts | Turbidity NTUs | DTW (feet) | Odors Y/N |
|---|---|---|---|---|---|---|---|---|---|
| | 1230 | 19.81 | 6.57 | 0.315 | 5.61 | -34 | 27.7 | 4.85 | N |
| | 1235 | 18.26 | 5.92 | 0.156 | 4.18 | 41 | 24.1 | 4.85 | N |
| | 1240 | 18.02 | 5.89 | 0.124 | 3.59 | 238 | 19.5 | 4.85 | N |
| | 1245 | 17.95 | 5.84 | 0.111 | 3.22 | 260 | 17.2 | 4.85 | N |
| | 1250 | 17.76 | 5.86 | 0.106 | 3.17 | 263 | 15 | 4.85 | N |
| 2 | 1255 | 17.85 | 5.88 | 0.101 | 3.11 | 265 | 14.1 | 4.85 | N |
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**Well Condition Summary**

| | | | | | |
|---|---|---|---|---|---|
| Cover: Y | Bolts: Y | | Concrete Pad OK: Y | Gripper: Y | |

**Sample Collection Information**

| | | | | |
|---|---|---|---|---|
| Sample Time: | 1300 | Appearance: Clear | Filtered Sample Turbidity: | OTHER: |

Desired purge flow rate <100mL/min (slow drip) & turbidity <10 if possible. If turbidity > 10 collect filtered and unfiltered samples. Notify PM of high turbidity and collection of filtered samples prior to lab submittal. Minimum 20 minute purge to establish stabilization.

Notes/ Calculations:

Volume? Linear Ft of well casing; 1"=0.041 gal. 2"= 0.163 gal. 4"=0.653 gal.

**ABSORBENT SOCK**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Sock Length (ft) = | | Capacity (Qt.) = | | Present: | Y / N | Product Measured (Inches) : | |
| Sock Installation Date: | | | Sock Changed : | | Y / N | | |
| Sock Depth (Depth to sock mid point): | | | | | | | |

## LOW-FLOW GROUNDWATER SAMPLING LOG

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Location: | Liberty, NY | | | Job Number: | 9313 | WELL I.D. : MW-204 | | | |
| Personnel: | JCS | | | Date: | 9/2/2020 | SESI CONSULTING ENGINEERS | | | |
| | | | | PID: | 0 | | | | |
| Stickup? Y<br>Distance ground to Stickup Rim/PVC | Distance From Rim to PVC | Total Depth of Well Rim/PVC | Depth to Product Rim/PVC | Depth to Water (Rim/PVC) | Standing Water Column (feet) | Middle of Saturated Zone (feet) | Depth to Sample Tube (feet) | Well Diameter (Inches) | Pump Peristaltic or Bladder |
| 5.1' | | 14 | NE | 6.71 | 7.29 | 10.35 | 10 | 2 | Peristaltic |
| Turbidity at collection (NTU): | | 1.7 | (Less than 5 NTU is desirable) | | Duplicate Collected? N | | | Filtered Sample N | |
| Stabilization Parameters | | +/- 0.5 deg C. | +/- 0.1 Unit | +/- 10 umhos/cm or within 3% if >300umho | 1 ppm | +/- 10 mV | No Limit | <.3 feet drawdown desirable | No Limit |

| Volume Purged (gallons) | Time (actual Time) 5 minute Intervals | TEMP. (Deg. C) | pH | Specific Conductivity uS/cm | Dissolved Oxygen (mg/L) | ORP mV millivolts | Turbidity NTUs | DTW (feet) | Odors Y/N |
|---|---|---|---|---|---|---|---|---|---|
| | 1045 | 19.61 | 7.2 | 0.204 | 2.26 | 187 | 4.9 | 6.79 | N |
| | 1050 | 20.1 | 7.28 | 0.195 | 0 | 191 | 3.4 | 6.79 | N |
| | 1055 | 20.28 | 7.23 | 0.193 | 0 | 198 | 2 | 6.79 | N |
| | 1100 | 20.26 | 7.19 | 0.193 | 0 | 200 | 2.2 | 6.79 | N |
| | 1105 | 20.23 | 7.18 | 0.195 | 0 | 201 | 1.7 | 6.79 | N |
| | 1110 | 20.14 | 7.14 | 0.192 | 0 | 205 | 1.5 | 6.79 | N |
| 2 | 1115 | 20.04 | 7.12 | 0.19 | 0 | 207 | 1.7 | 6.79 | N |
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**Well Condition Summary**

| | | | | | |
|---|---|---|---|---|---|
| Cover: Y | Bolts: Y | | Concrete Pad OK: Y | Gripper: Y | |

**Sample Collection Information**

| | | | | |
|---|---|---|---|---|
| Sample Time: | 1120 | Appearance: Clear | Filtered Sample Turbidity: | OTHER: |

Desired purge flow rate <100mL/min (slow drip) & turbidity <10 if possible. If turbidity > 10 collect filtered and unfiltered samples. Notify PM of high turbidity and collection of filtered samples prior to lab submittal. Minimum 20 minute purge to establish stabilization.

Notes/ Calculations:

Volume? Linear Ft of well casing; 1"=0.041 gal. 2"= 0.163 gal. 4"=0.653 gal.

**ABSORBENT SOCK**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Sock Length (ft) = | | Capacity (Qt.) = | | Present: | Y / N | Product Measured (Inches) : | |
| Sock Installation Date: | | | Sock Changed : | | Y / N | | |
| Sock Depth (Depth to sock mid point): | | | | | | | |

## LOW-FLOW GROUNDWATER SAMPLING LOG

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Location: | Liberty, NY | | | Job Number: | 9313 | WELL I.D. : MW-205 | | | |
| Personnel: | JCS | | | Date: | 9/2/2020 | | | | |
| | | | | PID: | 0 | | | | |

| Stickup? Y / Distance ground to Stickup Rim/PVC | Distance From Rim to PVC | Total Depth of Well Rim/PVC | Depth to Product Rim/PVC | Depth to Water (Rim/PVC) | Standing Water Column (feet) | Middle of Saturated Zone (feet) | Depth to Sample Tube (feet) | Well Diameter (Inches) | Pump Peristaltic or Bladder |
|---|---|---|---|---|---|---|---|---|---|
| 3.2' | | 17' | NE | 5.12 | 11.88 | 11.06 | 10 | 2 | Peristaltic |

| Turbidity at collection (NTU): | 14.1 | (Less than 5 NTU is desirable) | Duplicate Collected? N | Filtered Sample N |
|---|---|---|---|---|

| Stabilization Parameters | +/- 0.5 deg C. | +/- 0.1 Unit | +/- 10 umhos/cm or within 3% if >300umho | 1 ppm | +/- 10 mV | No Limit | <.3 feet drawdown desirable | No Limit |
|---|---|---|---|---|---|---|---|---|

| Volume Purged (gallons) | Time (actual Time) 5 minute Intervals | TEMP. (Deg. C) | pH | Specific Conductivity uS/cm | Dissolved Oxygen (mg/L) | ORP mV millivolts | Turbidity NTUs | DTW (feet) | Odors Y/N |
|---|---|---|---|---|---|---|---|---|---|
| | 1210 | 21.05 | 7.06 | 0.225 | 3.54 | 6 | 2 | 5.24 | N |
| | 1215 | 20.89 | 6.78 | 0.209 | 0.29 | -25 | 6.8 | 5.24 | N |
| | 1220 | 20.56 | 6.66 | 0.198 | 0 | -42 | 5.9 | 5.24 | N |
| | 1225 | 20.32 | 6.58 | 0.19 | 0 | -50 | 2.6 | 5.24 | N |
| | 1230 | 20.14 | 6.56 | 0.185 | 0 | -52 | 3.3 | 5.24 | N |
| 2 | 1235 | 19.93 | 6.54 | 0.183 | 0 | -55 | 4.8 | 5.24 | N |
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**Well Condition Summary**

| Cover: Y | Bolts: Y | | Concrete Pad OK: Y | Gripper: Y | |
|---|---|---|---|---|---|

**Sample Collection Information**

| Sample Time: | 1240 | Appearance: Clear | Filtered Sample Turbidity: | OTHER: |
|---|---|---|---|---|

Desired purge flow rate <100mL/min (slow drip) & turbidity <10 if possible. If turbidity > 10 collect filtered and unfiltered samples. Notify PM of high turbidity and collection of filtered samples prior to lab submittal. Minimum 20 minute purge to establish stabilization.

Notes/ Calculations:

Volume? Linear Ft of well casing; 1"=0.041 gal. 2"= 0.163 gal. 4"=0.653 gal.

**ABSORBENT SOCK**

| Sock Length (ft) = | | Capacity (Qt.) = | | Present: | Y / N | Product Measured (Inches) : | |
|---|---|---|---|---|---|---|---|
| Sock Installation Date: | | | Sock Changed : | | Y / N | | |
| Sock Depth (Depth to sock mid point): | | | | | | | |

## LOW-FLOW GROUNDWATER SAMPLING LOG

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Location: | Liberty, NY | | | Job Number: | 9313 | WELL I.D. : MW-206 | | | |
| Personnel: | JCS | | | Date: | 9/2/2020 | SESI CONSULTING ENGINEERS | | | |
| | | | | PID: | 0 | | | | |
| Stickup? Y<br>Distance ground to Stickup Rim/PVC | Distance From Rim to PVC | Total Depth of Well Rim/PVC | Depth to Product Rim/PVC | Depth to Water (Rim/PVC) | Standing Water Column (feet) | Middle of Saturated Zone (feet) | Depth to Sample Tube (feet) | Well Diameter (Inches) | Pump Peristaltic or Bladder |
| 3.9' | | 19.5' | | 9.85 | 9.65 | 14.6 | 14 | 2 | Peristaltic |
| Turbidity at collection (NTU): | | 9.2 | (Less than 5 NTU is desirable) | | Duplicate Collected? N | | | Filtered Sample N | |
| Stabilization Parameters | | +/- 0.5 deg C. | +/- 0.1 Unit | +/- 10 umhos/cm or within 3% if >300umho | 1 ppm | +/- 10 mV | No Limit | <.3 feet drawdown desirable | No Limit |

| Volume Purged (gallons) | Time (actual Time) 5 minute Intervals | TEMP. (Deg. C) | pH | Specific Conductivity uS/cm | Dissolved Oxygen (mg/L) | ORP mV millivolts | Turbidity NTUs | DTW (feet) | Odors Y/N |
|---|---|---|---|---|---|---|---|---|---|
| | 1010 | 19.44 | 8.23 | 0.386 | 3.71 | 72 | 193 | 9.95 | N |
| | 1015 | 18.24 | 6.67 | 0.398 | 0 | 127 | 10.9 | 9.95 | N |
| | 1020 | 18.17 | 6.63 | 0.391 | 0 | 128 | 25.9 | 9.95 | N |
| | 1025 | 18.08 | 6.61 | 0.388 | 0 | 135 | 43 | 9.95 | N |
| | 1030 | 17.67 | 6.65 | 0.39 | 0 | 141 | 10.2 | 9.95 | N |
| 2 | 1035 | 17.8 | 6.6 | 0.391 | 0 | 144 | 9.2 | 9.95 | N |
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**Well Condition Summary**

| | | | | | |
|---|---|---|---|---|---|
| Cover: Y | Bolts: Y | | Concrete Pad OK: Y | Gripper: Y | |

**Sample Collection Information**

| | | | | |
|---|---|---|---|---|
| Sample Time: | 1040 | Appearance: Clear | Filtered Sample Turbidity: | OTHER: |

Desired purge flow rate <100mL/min (slow drip) & turbidity <10 if possible. If turbidity > 10 collect filtered and unfiltered samples. Notify PM of high turbidity and collection of filtered samples prior to lab submittal. Minimum 20 minute purge to establish stabilization.

Notes/ Calculations:

Volume? Linear Ft of well casing; 1"=0.041 gal. 2"= 0.163 gal. 4"=0.653 gal.

**ABSORBENT SOCK**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Sock Length (ft) = | | Capacity (Qt.) = | | Present: | Y / N | Product Measured (Inches) : | |
| Sock Installation Date: | | | Sock Changed : | | Y / N | | |
| Sock Depth (Depth to sock mid point): | | | | | | | |

## LOW-FLOW GROUNDWATER SAMPLING LOG

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Location: | Liberty, NY | | | Job Number: | 9313 | WELL I.D. : MW-210 | | | |
| Personnel: | JCS | | | Date: | 9/3/2020 | SESI CONSULTING ENGINEERS | | | |
| | | | | PID: | 0 | | | | |
| Stickup? Y<br>Distance ground to Stickup Rim/PVC | Distance From Rim to PVC | Total Depth of Well Rim/PVC | Depth to Product Rim/PVC | Depth to Water (Rim/PVC) | Standing Water Column (feet) | Middle of Saturated Zone (feet) | Depth to Sample Tube (feet) | Well Diameter (Inches) | Pump Peristaltic or Bladder |
| 4.5' | 0.5' | 18' | NE | 10.77 | 7.23 | 14.3 | 14' | 2 | Peristaltic |
| Turbidity at collection (NTU): | | 1.8 | (Less than 5 NTU is desirable) | | Duplicate Collected? N | | | Filtered Sample N | |
| Stabilization Parameters | | +/- 0.5 deg C. | +/- 0.1 Unit | +/- 10 umhos/cm or within 3% if >300umho | 1 ppm | +/- 10 mV | No Limit | <.3 feet drawdown desirable | No Limit |

| Volume Purged (gallons) | Time (actual Time) 5 minute Intervals | TEMP. (Deg. C) | pH | Specific Conductivity uS/cm | Dissolved Oxygen (mg/L) | ORP mV millivolts | Turbidity NTUs | DTW (feet) | Odors Y/N |
|---|---|---|---|---|---|---|---|---|---|
| | 950 | 18.85 | 6.75 | 0.345 | 11.2 | 235 | 8.8 | 10.85 | N |
| | 955 | 18.95 | 6.83 | 0.323 | 5.44 | 218 | 4.8 | 10.95 | N |
| | 1000 | 19.6 | 6.81 | 0.354 | 3.23 | 216 | 3.1 | 11.02 | N |
| | 1005 | 19.01 | 6.8 | 0.308 | 2.17 | 216 | 2.7 | 11.05 | N |
| | 1010 | 19.05 | 6.86 | 0.282 | 2.01 | 218 | 2.3 | 11.05 | N |
| | 1015 | 19.12 | 6.74 | 0.271 | 1.92 | 214 | 2.3 | 11.05 | N |
| | 1020 | 19.19 | 6.72 | 0.26 | 1.87 | 214 | 2 | 11.05 | N |
| | 1025 | 19.33 | 6.74 | 0.263 | 1.8 | 218 | 1.8 | 11.05 | N |
| 2.5 | 1030 | 19.4 | 6.75 | 0.265 | 1.77 | 220 | 1.8 | 11.05 | N |
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**Well Condition Summary**

| | | | | | |
|---|---|---|---|---|---|
| Cover: Y | Bolts: Y | | Concrete Pad OK: Y | Gripper: Y | |

**Sample Collection Information**

| | | | | |
|---|---|---|---|---|
| Sample Time: | 1035 | Appearance: Clear | Filtered Sample Turbidity: | OTHER: |

Desired purge flow rate <100mL/min (slow drip) & turbidity <10 if possible. If turbidity > 10 collect filtered and unfiltered samples. Notify PM of high turbidity and collection of filtered samples prior to lab submittal. Minimum 20 minute purge to establish stabilization.

Notes/ Calculations:

Volume? Linear Ft of well casing; 1"=0.041 gal. 2"= 0.163 gal. 4"=0.653 gal.

**ABSORBENT SOCK**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Sock Length (ft) = | | Capacity (Qt.) = | | Present: | Y / N | Product Measured (Inches) : | |
| Sock Installation Date: | | | Sock Changed : | | Y / N | | |
| Sock Depth (Depth to sock mid point): | | | | | | | |

## LOW-FLOW GROUNDWATER SAMPLING LOG

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Location: | Liberty, NY | | | Job Number: | 9313 | WELL I.D. : MW-207 | | | |
| Personnel: | JCS | | | Date: | 9/3/2020 | | | | |
| | | | | PID: | 0 | | | | |

| Stickup? Y / Distance ground to Stickup Rim/PVC | Distance From Rim to PVC | Total Depth of Well Rim/PVC | Depth to Product Rim/PVC | Depth to Water (Rim/PVC) | Standing Water Column (feet) | Middle of Saturated Zone (feet) | Depth to Sample Tube (feet) | Well Diameter (Inches) | Pump Peristaltic or Bladder |
|---|---|---|---|---|---|---|---|---|---|
| 4.4' | 0.5' | 15.7 | NE | 8.55 | 7.15 | 12.1 | 12' | 2 | Peristaltic |

| Turbidity at collection (NTU): | 232 | (Less than 5 NTU is desirable) | Duplicate Collected? N | Filtered Sample N |
|---|---|---|---|---|

| Stabilization Parameters | +/- 0.5 deg C. | +/- 0.1 Unit | +/- 10 umhos/cm or within 3% if >300umho | 1 ppm | +/- 10 mV | No Limit | <.3 feet drawdown desirable | No Limit |
|---|---|---|---|---|---|---|---|---|

| Volume Purged (gallons) | Time (actual Time) 5 minute Intervals | TEMP. (Deg. C) | pH | Specific Conductivity uS/cm | Dissolved Oxygen (mg/L) | ORP mV millivolts | Turbidity NTUs | DTW (feet) | Odors Y/N |
|---|---|---|---|---|---|---|---|---|---|
| | 1040 | 25.09 | 6.91 | 0.977 | 3.49 | 204 | 76.5 | 8.64 | N |
| | 1045 | 22.56 | 6.79 | 0.945 | 1.17 | 200 | 88.9 | 8.64 | N |
| | 1050 | 22.01 | 6.68 | 0.926 | 0.25 | 198 | 201 | 8.64 | N |
| | 1055 | 21.84 | 6.63 | 0.915 | 0 | 190 | 215 | 8.64 | N |
| | 1100 | 21.53 | 6.6 | 0.906 | 0 | 188 | 226 | 8.64 | N |
| 2 | 1105 | 21.2 | 6.58 | 0.893 | 0 | 184 | 232 | 8.64 | N |
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**Well Condition Summary**

| Cover: Y | Bolts: Y | | Concrete Pad OK: Y | Gripper: Y | |
|---|---|---|---|---|---|

**Sample Collection Information**

| Sample Time: | 1110 | Appearance: Clear | Filtered Sample Turbidity: | OTHER: |
|---|---|---|---|---|

Desired purge flow rate <100mL/min (slow drip) & turbidity <10 if possible. If turbidity > 10 collect filtered and unfiltered samples. Notify PM of high turbidity and collection of filtered samples prior to lab submittal. Minimum 20 minute purge to establish stabilization.

Notes/ Calculations:

Volume? Linear Ft of well casing; 1"=0.041 gal. 2"= 0.163 gal. 4"=0.653 gal.

**ABSORBENT SOCK**

| Sock Length (ft) = | | Capacity (Qt.) = | | Present: | Y / N | Product Measured (Inches) : | |
|---|---|---|---|---|---|---|---|
| Sock Installation Date: | | | Sock Changed : | | Y / N | | |
| Sock Depth (Depth to sock mid point): | | | | | | | |

**VOLUME AVERAGING PURGING GROUNDWATER SAMPLING LOG**

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **Location:** | | | | **Job Number:** | | **WELL I.D. :** | | | |
| **Personnel:** | | | | **Date:** | | SESI CONSULTING ENGINEERS | | | |
| | | | | **PID:** | | | | | |
| **Stickup? Y/N** **Distance ground to Stickup Rim/PVC** | **Distance From Rim to PVC** | **Total Depth of Well Rim/PVC** | **Depth to Product Rim/PVC** | **Depth to Water (Rim/PVC)** | **Standing Water Column (feet)** | **Middle of Saturated Zone (feet)** | **Depth to Sample Tube (feet)** | **TOV @ Well Head (ppmv)** | **Pump Peristaltic or Bladder** |
| | | | | | | | | | |
| **Turbidity at collection (NTU):** | | | **(Less than 5 NTU is desirable)** | | **Duplicate Collected? Y/N** | | | **Filtered Sample Y/N** | |
| **Stabilization Parameters** | | **+/- 0.5 deg C.** | **+/- 0.1 Unit** | **+/- 10 umhos/cm or within 3% if >300umho** | **1 ppm** | **+/- 10 mV** | **No Limit** | **<.3 feet drawdown desirable** | **No Limit** |
| | | | | | | | | | |
| **Volume Purged (gallons)** | **Time (actual Time) 5 minute Intervals** | **TEMP. (Deg. C)** | **pH** | **Specific Conductivity uS/cm** | **Dissolved Oxygen (mg/L)** | **ORP mV millivolts** | **Turbidity NTUs** | **DTW (feet)** | **Odors Y/N** |
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| **Well Condition Summary** | | | | | | | | | |
| **Cover: Y / N** | | **Bolts: Y / N** | | **Concrete Pad OK: Y / N** | | **Gripper: Y / N** | | | |
| **Sample Collection Information** | | | | | | | | | |
| **Sample Time:** | | **Appearance:** | | **Filtered Sample Turbidity:** | | | **OTHER:** | | |

Desired purge flow rate <100mL/min (slow drip) & turbidity <10 if possible. If turbidity > 10 collect filtered and unfiltered samples. Notify PM of high turbidity and collection of filtered samples prior to lab submittal. Minimum 20 minute purge to establish stabilization.

Notes/ Calculations:

Volume? Linear Ft of well casing; 1"=0.041 gal. 2"= 0.163 gal. 4"=0.653 gal.

| **ABSORBENT SOCK** | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Sock Length (ft) =** | | **Capacity (Qt.) =** | | **Present:** | **Y / N** | **Product Measured (Inches) :** | |
| **Sock Installation Date:** | | | **Sock Changed :** | | **Y / N** | | |
| **Sock Depth (Depth to sock mid point):** | | | | | | | |

Volume Average Groundwater Purging Log
Gorssingers
Liberty, NY

| Volume Average Purging Groundwater Sampling Log | |
|---|---|
| Pre Purge | |
| Well Name | MW-211 |
| Well Diameter (Inches) | 2 |
| Depth to Water (ft) | 11.1 |
| Depth to Bottom (ft) | 17.86 |
| Water Column | 6.76 |
| Well Volume (gal) | 1.1 |
| Well Headspace (PID) | 0 ppm |
| Pump On Time | 1:00 |
| Pump Off Time | 1:55 |
| Purge Time | 55 min |
| Total Volume Purged (gal) | 3.5 |
| Post Purge | |
| Depth to Water | 11.88 |
| Water Quality | Turbid |
| Post Sample | |
| Depth to Water | 11.88 |
| Water Quality | Turbid |

## LOW-FLOW GROUNDWATER SAMPLING LOG

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Location: | Liberty, NY | | | Job Number: | 9313 | WELL I.D. : MW-213 | | | |
| Personnel: | JCS | | | Date: | 9/2/2020 | SESI CONSULTING ENGINEERS | | | |
| | | | | PID: | 0 | | | | |
| Stickup? Y<br>Distance ground to Stickup Rim/PVC | Distance From Rim to PVC | Total Depth of Well Rim/PVC | Depth to Product Rim/PVC | Depth to Water (Rim/PVC) | Standing Water Column (feet) | Middle of Saturated Zone (feet) | Depth to Sample Tube (feet) | Well Diameter (Inches) | Pump Peristaltic or Bladder |
| 3.5' | 0.3' | 20.5 | NE | 15.1 | 5.4 | 17.8 | 17' | 2 | Peristaltic |
| Turbidity at collection (NTU): | | 0.9 | (Less than 5 NTU is desirable) | | Duplicate Collected? N | | | Filtered Sample N | |
| Stabilization Parameters | | +/- 0.5 deg C. | +/- 0.1 Unit | +/- 10 umhos/cm or within 3% if >300umho | 1 ppm | +/- 10 mV | No Limit | <.3 feet drawdown desirable | No Limit |

| Volume Purged (gallons) | Time (actual Time) 5 minute Intervals | TEMP. (Deg. C) | pH | Specific Conductivity uS/cm | Dissolved Oxygen (mg/L) | ORP mV millivolts | Turbidity NTUs | DTW (feet) | Odors Y/N |
|---|---|---|---|---|---|---|---|---|---|
| | 910 | 21.06 | 8.27 | 0.621 | 6.51 | 92 | 1.5 | 15.36 | N |
| | 915 | 20.01 | 6.57 | 0.621 | 0 | 152 | 1.5 | 15.38 | N |
| | 920 | 19.14 | 6.42 | 0.627 | 0 | 181 | 1.3 | 15.4 | N |
| | 925 | 18.9 | 6.41 | 0.63 | 0 | 185 | 1.4 | 15.4 | N |
| | 930 | 18.07 | 6.39 | 0.636 | 0 | 189 | 1.2 | 15.4 | N |
| 2 | 935 | 17.8 | 6.37 | 0.637 | 0 | 192 | 0.9 | 15.4 | N |
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**Well Condition Summary**

| | | | | | |
|---|---|---|---|---|---|
| Cover: Y | Bolts: Y | | Concrete Pad OK: Y | Gripper: Y | |

**Sample Collection Information**

| | | | | |
|---|---|---|---|---|
| Sample Time: | 940 | Appearance: Clear | Filtered Sample Turbidity: | OTHER: |

Desired purge flow rate <100mL/min (slow drip) & turbidity <10 if possible. If turbidity > 10 collect filtered and unfiltered samples. Notify PM of high turbidity and collection of filtered samples prior to lab submittal. Minimum 20 minute purge to establish stabilization.

Notes/ Calculations:

Volume? Linear Ft of well casing; 1"=0.041 gal. 2"= 0.163 gal. 4"=0.653 gal.

**ABSORBENT SOCK**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Sock Length (ft) = | | Capacity (Qt.) = | | Present: | Y / N | Product Measured (Inches) : | |
| Sock Installation Date: | | | Sock Changed : | | Y / N | | |
| Sock Depth (Depth to sock mid point): | | | | | | | |

## LOW-FLOW GROUNDWATER SAMPLING LOG

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Location: | Liberty, NY | | | Job Number: | 9313 | WELL I.D. : MW-214 | | | |
| Personnel: | JCS | | | Date: | 9/3/2020 | | | | |
| | | | | PID: | 0 | | | | |

| Stickup? Y<br>Distance ground to Stickup Rim/PVC | Distance From Rim to PVC | Total Depth of Well Rim/PVC | Depth to Product Rim/PVC | Depth to Water (Rim/PVC) | Standing Water Column (feet) | Middle of Saturated Zone (feet) | Depth to Sample Tube (feet) | Well Diameter (Inches) | Pump Peristaltic or Bladder |
|---|---|---|---|---|---|---|---|---|---|
| 3.5' | 0.5' | 24.7 | NE | 16.75 | 7.95 | 20.7 | 20' | 2 | Peristaltic |

| Turbidity at collection (NTU): | 1 | (Less than 5 NTU is desirable) | Duplicate Collected? N | Filtered Sample N |
|---|---|---|---|---|

| Stabilization Parameters | +/- 0.5 deg C. | +/- 0.1 Unit | +/- 10 umhos/cm or within 3% if >300umho | 1 ppm | +/- 10 mV | No Limit | <.3 feet drawdown desirable | No Limit |
|---|---|---|---|---|---|---|---|---|

| Volume Purged (gallons) | Time (actual Time) 5 minute Intervals | TEMP. (Deg. C) | pH | Specific Conductivity uS/cm | Dissolved Oxygen (mg/L) | ORP mV millivolts | Turbidity NTUs | DTW (feet) | Odors Y/N |
|---|---|---|---|---|---|---|---|---|---|
| | 850 | 21.22 | 6.88 | 0.784 | 0 | 133 | 5.8 | 16.85 | N |
| | 855 | 20.77 | 6.45 | 0.799 | 0 | 135 | 5.1 | 16.85 | N |
| | 900 | 20.28 | 6.32 | 0.818 | 0 | 136 | 4.5 | 16.85 | N |
| | 905 | 19.97 | 6.31 | 0.834 | 0 | 138 | 4.4 | 16.85 | N |
| | 910 | 19.63 | 6.3 | 0.84 | 0 | 140 | 3.6 | 16.85 | N |
| | 915 | 19.88 | 6.32 | 0.836 | 0 | 142 | 2.8 | 16.85 | N |
| 2.5 | 920 | 20 | 6.35 | 0.833 | 0 | 145 | 1 | 16.85 | N |
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**Well Condition Summary**

| Cover: Y | Bolts: Y | | Concrete Pad OK: Y | Gripper: Y | |
|---|---|---|---|---|---|

**Sample Collection Information**

| Sample Time: | 930 | Appearance: | Filtered Sample Turbidity: | OTHER: |
|---|---|---|---|---|

Desired purge flow rate <100mL/min (slow drip) & turbidity <10 if possible. If turbidity > 10 collect filtered and unfiltered samples. Notify PM of high turbidity and collection of filtered samples prior to lab submittal. Minimum 20 minute purge to establish stabilization.

Notes/ Calculations:

Volume? Linear Ft of well casing; 1"=0.041 gal. 2"= 0.163 gal. 4"=0.653 gal.

**ABSORBENT SOCK**

| Sock Length (ft) = | | Capacity (Qt.) = | | Present: | Y / N | Product Measured (Inches) : | |
|---|---|---|---|---|---|---|---|
| Sock Installation Date: | | | Sock Changed : | | Y / N | | |
| Sock Depth (Depth to sock mid point): | | | | | | | |

## LOW-FLOW GROUNDWATER SAMPLING LOG

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Location: | Liberty, NY | | | Job Number: | 9313 | WELL I.D. : MW-216 | | | |
| Personnel: | JCS | | | Date: | 9/3/2020 | SESI CONSULTING ENGINEERS | | | |
| | | | | PID: | 0 | | | | |
| Stickup? Y<br>Distance ground to Stickup Rim/PVC | Distance From Rim to PVC | Total Depth of Well Rim/PVC | Depth to Product Rim/PVC | Depth to Water (Rim/PVC) | Standing Water Column (feet) | Middle of Saturated Zone (feet) | Depth to Sample Tube (feet) | Well Diameter (Inches) | Pump Peristaltic or Bladder |
| 3.5' | 0.5' | 21' | NE | 7.65 | 13.35 | 14.3 | 15' | 2 | Peristaltic |
| Turbidity at collection (NTU): | | 1 | (Less than 5 NTU is desirable) | | Duplicate Collected? N | | | Filtered Sample N | |
| Stabilization Parameters | | +/- 0.5 deg C. | +/- 0.1 Unit | +/- 10 umhos/cm or within 3% if >300umho | 1 ppm | +/- 10 mV | No Limit | <.3 feet drawdown desirable | No Limit |

| Volume Purged (gallons) | Time (actual Time) 5 minute Intervals | TEMP. (Deg. C) | pH | Specific Conductivity uS/cm | Dissolved Oxygen (mg/L) | ORP mV millivolts | Turbidity NTUs | DTW (feet) | Odors Y/N |
|---|---|---|---|---|---|---|---|---|---|
| | 1300 | 23.11 | 7.34 | 0.348 | 8.9 | 157 | 31.1 | 7.88 | N |
| | 1305 | 21.5 | 7.13 | 0.385 | 0 | 175 | 5.6 | 7.88 | N |
| | 1310 | 20.52 | 7.02 | 0.405 | 0 | 180 | 4.4 | 7.88 | N |
| | 1315 | 19.84 | 6.95 | 0.411 | 0 | 185 | 2.4 | 7.88 | N |
| | 1320 | 19.57 | 6.93 | 0.414 | 0 | 187 | 2.5 | 7.88 | N |
| 2 | 1325 | 19.35 | 6.9 | 0.42 | 0 | 190 | 1.9 | 7.88 | N |
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**Well Condition Summary**

| | | | | | |
|---|---|---|---|---|---|
| Cover: Y | Bolts: Y | | Concrete Pad OK: Y | Gripper: Y | |

**Sample Collection Information**

| | | | | |
|---|---|---|---|---|
| Sample Time: | 1330 | Appearance: Clear | Filtered Sample Turbidity: | OTHER: |

Desired purge flow rate <100mL/min (slow drip) & turbidity <10 if possible. If turbidity > 10 collect filtered and unfiltered samples. Notify PM of high turbidity and collection of filtered samples prior to lab submittal. Minimum 20 minute purge to establish stabilization.

Notes/ Calculations:

Volume? Linear Ft of well casing; 1"=0.041 gal. 2"= 0.163 gal. 4"=0.653 gal.

**ABSORBENT SOCK**

| | | | | | |
|---|---|---|---|---|---|
| Sock Length (ft) = | | Capacity (Qt.) = | | Present: Y / N | Product Measured (Inches) : |
| Sock Installation Date: | | | Sock Changed : Y / N | | |
| Sock Depth (Depth to sock mid point): | | | | | |

## LOW-FLOW GROUNDWATER SAMPLING LOG

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Location: | Liberty, NY | | | Job Number: | 9313 | WELL I.D. : MW-217 | | | |
| Personnel: | JCS | | | Date: | 9/3/2020 | | | | |
| | | | | PID: | 0 | | | | |

| Stickup? Y<br>Distance ground to Stickup Rim/PVC | Distance From Rim to PVC | Total Depth of Well Rim/PVC | Depth to Product Rim/PVC | Depth to Water (Rim/PVC) | Standing Water Column (feet) | Middle of Saturated Zone (feet) | Depth to Sample Tube (feet) | Well Diameter (Inches) | Pump Peristaltic or Bladder |
|---|---|---|---|---|---|---|---|---|---|
| 3.5' | 0.5' | 22.5' | NE | 10.26 | 12.24 | 16.38 | 16' | 2 | Peristaltic |

| Turbidity at collection (NTU): | 3 | (Less than 5 NTU is desirable) | Duplicate Collected? N | Filtered Sample N |
|---|---|---|---|---|

| Stabilization Parameters | +/- 0.5 deg C. | +/- 0.1 Unit | +/- 10 umhos/cm or within 3% if >300umho | 1 ppm | +/- 10 mV | No Limit | <.3 feet drawdown desirable | No Limit |
|---|---|---|---|---|---|---|---|---|

| Volume Purged (gallons) | Time (actual Time) 5 minute Intervals | TEMP. (Deg. C) | pH | Specific Conductivity uS/cm | Dissolved Oxygen (mg/L) | ORP mV millivolts | Turbidity NTUs | DTW (feet) | Odors Y/N |
|---|---|---|---|---|---|---|---|---|---|
| | 1130 | 21.74 | 7.35 | 1.06 | 11.7 | 151 | 5.7 | 10.35 | N |
| | 1135 | 19.84 | 7.4 | 1.09 | 12 | 132 | 3.3 | 10.51 | N |
| | 1140 | 19.42 | 7.39 | 1.1 | 9 | 131 | 2.4 | 10.64 | N |
| | 1145 | 19.73 | 7.38 | 1.08 | 6.72 | 134 | 337 | 10.64 | N |
| | 1150 | 19.6 | 7.36 | 1.05 | 6.13 | 149 | 106 | 10.64 | N |
| | 1155 | 19.13 | 7.25 | 0.936 | 3.12 | 159 | 113 | 10.64 | N |
| | 1200 | 18.88 | 7.2 | 0.845 | 2.66 | 162 | 94.7 | 10.64 | N |
| | 1205 | 18.7 | 7.22 | 0.802 | 2.51 | 163 | 32.9 | 10.66 | N |
| | 1210 | 19.02 | 7.25 | 0.81 | 2.41 | 165 | 2.8 | 10.66 | N |
| 3 | 1215 | 19.1 | 7.25 | 0.812 | 2.39 | 166 | 3 | 10.66 | N |
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**Well Condition Summary**

| Cover: Y | Bolts: Y | | Concrete Pad OK: Y | Gripper: Y | |
|---|---|---|---|---|---|

**Sample Collection Information**

| Sample Time: | 1235 | Appearance: Clear | Filtered Sample Turbidity: | OTHER: |
|---|---|---|---|---|

Desired purge flow rate <100mL/min (slow drip) & turbidity <10 if possible. If turbidity > 10 collect filtered and unfiltered samples. Notify PM of high turbidity and collection of filtered samples prior to lab submittal. Minimum 20 minute purge to establish stabilization.

Notes/ Calculations:

Volume? Linear Ft of well casing; 1"=0.041 gal. 2"= 0.163 gal. 4"=0.653 gal.

**ABSORBENT SOCK**

| Sock Length (ft) = | | Capacity (Qt.) = | | Present: | Y / N | Product Measured (Inches) : | |
|---|---|---|---|---|---|---|---|
| Sock Installation Date: | | | Sock Changed : | | Y / N | | |
| Sock Depth (Depth to sock mid point): | | | | | | | |

## LOW-FLOW GROUNDWATER SAMPLING LOG

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Location: | Liberty, NY | | | Job Number: | 9313 | WELL I.D. : MW-201 | | | |
| Personnel: | JCS | | | Date: | 4/28/2021 | | | | |
| | | | | PID: | 0 | | | | |

| Stickup? Y / Distance ground to Stickup Rim/PVC | Distance From Rim to PVC | Total Depth of Well Rim/PVC | Depth to Product Rim/PVC | Depth to Water (Rim/PVC) | Standing Water Column (feet) | Middle of Saturated Zone (feet) | Depth to Sample Tube (feet) | Well Diameter (Inches) | Pump Peristaltic or Bladder |
|---|---|---|---|---|---|---|---|---|---|
| 6.5" | | 19 | NE | 11.02 | 7.98 | 15.01 | 15 | 2 | Peristaltic |

| Turbidity at collection (NTU): | 0.7 | (Less than 5 NTU is desirable) | Duplicate Collected? N | Filtered Sample N |
|---|---|---|---|---|

| Stabilization Parameters | +/- 0.5 deg C. | +/- 0.1 Unit | +/- 10 umhos/cm or within 3% if >300umho | 1 ppm | +/- 10 mV | No Limit | <.3 feet drawdown desirable | No Limit |
|---|---|---|---|---|---|---|---|---|

| Volume Purged (gallons) | Time (actual Time) 5 minute Intervals | TEMP. (Deg. C) | pH | Specific Conductivity uS/cm | Dissolved Oxygen (mg/L) | ORP mV millivolts | Turbidity NTUs | DTW (feet) | Odors Y/N |
|---|---|---|---|---|---|---|---|---|---|
| | 1145 | 15.62 | 5.72 | 0.038 | 10.66 | 230 | 227 | 11.25 | N |
| | 1150 | 13.71 | 5.09 | 0.037 | 3.95 | 278 | 196 | 11.25 | N |
| | 1155 | 11.51 | 5.01 | 0.038 | 4.22 | 291 | 2.7 | 11.25 | N |
| | 1200 | 11.2 | 4.97 | 0.039 | 4.31 | 296 | 0.6 | 11.25 | N |
| 2 | 1205 | 11.17 | 4.94 | 0.039 | 4.37 | 298 | 0.7 | 11.25 | N |
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**Well Condition Summary**

| Cover: Y | Bolts: Y | | Concrete Pad OK: Y | Gripper: Y | |
|---|---|---|---|---|---|

**Sample Collection Information**

| Sample Time: | 1210 | Appearance: Clear | Filtered Sample Turbidity: | OTHER: |
|---|---|---|---|---|

Desired purge flow rate <100mL/min (slow drip) & turbidity <10 if possible. If turbidity > 10 collect filtered and unfiltered samples. Notify PM of high turbidity and collection of filtered samples prior to lab submittal. Minimum 20 minute purge to establish stabilization.

Notes/ Calculations:

Volume? Linear Ft of well casing; 1"=0.041 gal. 2"= 0.163 gal. 4"=0.653 gal.

**ABSORBENT SOCK**

| Sock Length (ft) = | | Capacity (Qt.) = | | Present: | Y / N | Product Measured (Inches) : | |
|---|---|---|---|---|---|---|---|
| Sock Installation Date: | | | Sock Changed : | | Y / N | | |
| Sock Depth (Depth to sock mid point): | | | | | | | |

## LOW-FLOW GROUNDWATER SAMPLING LOG

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Location: | Liberty, NY | | | Job Number: | 9313 | WELL I.D. : MW-203 | | | |
| Personnel: | MEM | | | Date: | 4/28/2021 | SESI CONSULTING ENGINEERS | | | |
| | | | | PID: | 0.1 | | | | |
| Stickup? Y<br>Distance ground to Stickup Rim/PVC | Distance From Rim to PVC | Total Depth of Well Rim/PVC | Depth to Product Rim/PVC | Depth to Water (Rim/PVC) | Standing Water Column (feet) | Middle of Saturated Zone (feet) | Depth to Sample Tube (feet) | Well Diameter (Inches) | Pump Peristaltic or Bladder |
| 2.6' | | 14 | NE | 4.05 | 21.25 | 14.68 | 15 | 2 | Peristaltic |
| Turbidity at collection (NTU): | | 1.4 | (Less than 5 NTU is desirable) | | Duplicate Collected? N | | | Filtered Sample N | |
| Stabilization Parameters | | +/- 0.5 deg C. | +/- 0.1 Unit | +/- 10 umhos/cm or within 3% if >300umho | 1 ppm | +/- 10 mV | No Limit | <.3 feet drawdown desirable | No Limit |

| Volume Purged (gallons) | Time (actual Time) 5 minute Intervals | TEMP. (Deg. C) | pH | Specific Conductivity uS/cm | Dissolved Oxygen (mg/L) | ORP mV millivolts | Turbidity NTUs | DTW (feet) | Odors Y/N |
|---|---|---|---|---|---|---|---|---|---|
| | 850 | 11.08 | 6.9 | 0.245 | 0 | -72 | 15.3 | 4.5 | N |
| | 855 | 11.12 | 6.9 | 0.23 | 0 | -70 | 11.9 | 6.2 | N |
| | 900 | 11.1 | 6.9 | 0.226 | 0 | -68 | 9.3 | 6.3 | N |
| | 905 | 11.24 | 6.9 | 0.215 | 1.07 | -63 | 2.6 | 6.3 | N |
| | 910 | 10.99 | 6.84 | 0.21 | 2.7 | -36 | 1.4 | 6.3 | N |
| | 915 | 11.01 | 6.83 | 0.209 | 2.68 | -33 | 1.2 | 6.3 | N |
| 3.5 | 920 | 11.05 | 6.83 | 0.21 | 2.67 | -34 | 1.4 | 6.3 | N |
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**Well Condition Summary**

| | | | | | |
|---|---|---|---|---|---|
| Cover: Y | Bolts: Y | | Concrete Pad OK: Y | Gripper: Y | |

**Sample Collection Information**

| | | | | |
|---|---|---|---|---|
| Sample Time: | 920 | Appearance: Clear | Filtered Sample Turbidity: | OTHER: |

Desired purge flow rate <100mL/min (slow drip) & turbidity <10 if possible. If turbidity > 10 collect filtered and unfiltered samples. Notify PM of high turbidity and collection of filtered samples prior to lab submittal. Minimum 20 minute purge to establish stabilization.

Notes/ Calculations:

Volume? Linear Ft of well casing; 1"=0.041 gal. 2"= 0.163 gal. 4"=0.653 gal.

**ABSORBENT SOCK**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Sock Length (ft) = | | Capacity (Qt.) = | | Present: | Y / N | Product Measured (Inches) : | |
| Sock Installation Date: | | | Sock Changed : | | Y / N | | |
| Sock Depth (Depth to sock mid point): | | | | | | | |

## LOW-FLOW GROUNDWATER SAMPLING LOG

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Location: | Liberty, NY | | | Job Number: | 9313 | WELL I.D. : MW-204 | | | |
| Personnel: | JCS | | | Date: | 4/27/2021 | | | | |
| | | | | PID: | 0 | | | | |

| Stickup? Y / Distance ground to Stickup Rim/PVC | Distance From Rim to PVC | Total Depth of Well Rim/PVC | Depth to Product Rim/PVC | Depth to Water (Rim/PVC) | Standing Water Column (feet) | Middle of Saturated Zone (feet) | Depth to Sample Tube (feet) | Well Diameter (Inches) | Pump Peristaltic or Bladder |
|---|---|---|---|---|---|---|---|---|---|
| 5.1' | | 14 | NE | 6.73 | 7.29 | 10.35 | 10 | 2 | Peristaltic |

| Turbidity at collection (NTU): | 4.2 | (Less than 5 NTU is desirable) | Duplicate Collected? N | | Filtered Sample N | |
|---|---|---|---|---|---|---|

| Stabilization Parameters | +/- 0.5 deg C. | +/- 0.1 Unit | +/- 10 umhos/cm or within 3% if >300umho | 1 ppm | +/- 10 mV | No Limit | <.3 feet drawdown desirable | No Limit |
|---|---|---|---|---|---|---|---|---|

| Volume Purged (gallons) | Time (actual Time) 5 minute Intervals | TEMP. (Deg. C) | pH | Specific Conductivity uS/cm | Dissolved Oxygen (mg/L) | ORP mV millivolts | Turbidity NTUs | DTW (feet) | Odors Y/N |
|---|---|---|---|---|---|---|---|---|---|
| | 1305 | 15.17 | 7.52 | 0.172 | 0.96 | 139 | 41.8 | 6.79 | N |
| | 1310 | 15.25 | 7.09 | 0.173 | 0.54 | 144 | 31.5 | 6.79 | N |
| | 1315 | 14.51 | 6.94 | 0.174 | 0.3 | 147 | 12.9 | 6.79 | N |
| | 1320 | 13.35 | 6.9 | 0.176 | 0.24 | 149 | 5.2 | 6.79 | N |
| | 1325 | 13.1 | 6.84 | 0.176 | 0.22 | 148 | 5 | 6.79 | N |
| 2 | 1330 | 13.22 | 6.84 | 0.176 | 0.2 | 145 | 4.2 | 6.79 | N |
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**Well Condition Summary**

| Cover: Y | Bolts: Y | | Concrete Pad OK: Y | Gripper: Y | |
|---|---|---|---|---|---|

**Sample Collection Information**

| Sample Time: | 1335 | Appearance: Clear | Filtered Sample Turbidity: | OTHER: |
|---|---|---|---|---|

Desired purge flow rate <100mL/min (slow drip) & turbidity <10 if possible. If turbidity > 10 collect filtered and unfiltered samples. Notify PM of high turbidity and collection of filtered samples prior to lab submittal. Minimum 20 minute purge to establish stabilization.

Notes/ Calculations:

Volume? Linear Ft of well casing; 1"=0.041 gal. 2"= 0.163 gal. 4"=0.653 gal.

**ABSORBENT SOCK**

| Sock Length (ft) = | | Capacity (Qt.) = | | Present: | Y / N | Product Measured (Inches) : | |
|---|---|---|---|---|---|---|---|
| Sock Installation Date: | | | Sock Changed : | | Y / N | | |
| Sock Depth (Depth to sock mid point): | | | | | | | |

## LOW-FLOW GROUNDWATER SAMPLING LOG

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Location: | Liberty, NY | | | Job Number: | 9313 | WELL I.D. : MW-205 | | | |
| Personnel: | JCS | | | Date: | 4/27/2021 | | | | |
| | | | | PID: | 0 | | | | |

| Stickup? Y / Distance ground to Stickup Rim/PVC | Distance From Rim to PVC | Total Depth of Well Rim/PVC | Depth to Product Rim/PVC | Depth to Water (Rim/PVC) | Standing Water Column (feet) | Middle of Saturated Zone (feet) | Depth to Sample Tube (feet) | Well Diameter (Inches) | Pump Peristaltic or Bladder |
|---|---|---|---|---|---|---|---|---|---|
| 3.2' | | 17' | NE | 4.17 | 12.83 | 10.58 | 10 | 2 | Peristaltic |

| Turbidity at collection (NTU): | 3.9 | (Less than 5 NTU is desirable) | Duplicate Collected? N | Filtered Sample N |
|---|---|---|---|---|

| Stabilization Parameters | +/- 0.5 deg C. | +/- 0.1 Unit | +/- 10 umhos/cm or within 3% if >300umho | 1 ppm | +/- 10 mV | No Limit | <.3 feet drawdown desirable | No Limit |
|---|---|---|---|---|---|---|---|---|

| Volume Purged (gallons) | Time (actual Time) 5 minute Intervals | TEMP. (Deg. C) | pH | Specific Conductivity uS/cm | Dissolved Oxygen (mg/L) | ORP mV millivolts | Turbidity NTUs | DTW (feet) | Odors Y/N |
|---|---|---|---|---|---|---|---|---|---|
| | 1315 | 17.87 | 6.44 | 0.043 | 7.78 | 136 | 234 | 4.36 | N |
| | 1320 | 13.79 | 5.91 | 0.05 | 4.11 | 170 | 52.6 | 4.36 | N |
| | 1325 | 12.7 | 5.46 | 0.055 | 3.78 | 202 | 3.8 | 4.36 | N |
| | 1330 | 12.71 | 5.44 | 0.055 | 3.74 | 203 | 3.7 | 4.36 | N |
| 2 | 1335 | 12.69 | 5.44 | 0.055 | 3.7 | 204 | 3.9 | 4.36 | N |
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**Well Condition Summary**

| Cover: Y | Bolts: Y | | Concrete Pad OK: Y | Gripper: Y | |
|---|---|---|---|---|---|

**Sample Collection Information**

| Sample Time: | 1340 | Appearance: Clear | Filtered Sample Turbidity: | OTHER: |
|---|---|---|---|---|

Desired purge flow rate <100mL/min (slow drip) & turbidity <10 if possible. If turbidity > 10 collect filtered and unfiltered samples. Notify PM of high turbidity and collection of filtered samples prior to lab submittal. Minimum 20 minute purge to establish stabilization.

Notes/ Calculations:

Volume? Linear Ft of well casing; 1"=0.041 gal. 2"= 0.163 gal. 4"=0.653 gal.

**ABSORBENT SOCK**

| Sock Length (ft) = | | Capacity (Qt.) = | | Present: | Y / N | Product Measured (Inches) : | |
|---|---|---|---|---|---|---|---|
| Sock Installation Date: | | | Sock Changed : | | Y / N | | |
| Sock Depth (Depth to sock mid point): | | | | | | | |

## LOW-FLOW GROUNDWATER SAMPLING LOG

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Location: | Liberty, NY | | | Job Number: | 9313 | WELL I.D. : MW-206 | | | |
| Personnel: | JCS | | | Date: | 4/27/2021 | | | | |
| | | | | PID: | 0 | | | | |

| Stickup? Y / Distance ground to Stickup Rim/PVC | Distance From Rim to PVC | Total Depth of Well Rim/PVC | Depth to Product Rim/PVC | Depth to Water (Rim/PVC) | Standing Water Column (feet) | Middle of Saturated Zone (feet) | Depth to Sample Tube (feet) | Well Diameter (Inches) | Pump Peristaltic or Bladder |
|---|---|---|---|---|---|---|---|---|---|
| 3.9' | | 19.5' | | 8.98 | 10.52 | 14.2 | 14 | 2 | Peristaltic |

| Turbidity at collection (NTU): | 138 | (Less than 5 NTU is desirable) | Duplicate Collected? N | Filtered Sample N |
|---|---|---|---|---|

| Stabilization Parameters | +/- 0.5 deg C. | +/- 0.1 Unit | +/- 10 umhos/cm or within 3% if >300umho | 1 ppm | +/- 10 mV | No Limit | <.3 feet drawdown desirable | No Limit |
|---|---|---|---|---|---|---|---|---|

| Volume Purged (gallons) | Time (actual Time) 5 minute Intervals | TEMP. (Deg. C) | pH | Specific Conductivity uS/cm | Dissolved Oxygen (mg/L) | ORP mV millivolts | Turbidity NTUs | DTW (feet) | Odors Y/N |
|---|---|---|---|---|---|---|---|---|---|
| | 1110 | 14.47 | 6.77 | 0.406 | 4.23 | 133 | 30 | 9.24 | N |
| | 1115 | 11.09 | 6.51 | 0.382 | 4.66 | 163 | 7.3 | 9.46 | N |
| | 1120 | 10.25 | 6.36 | 0.412 | 4.17 | 181 | 7.6 | 9.46 | N |
| | 1125 | 10.06 | 6.35 | 0.424 | 4.03 | 183 | 150 | 9.46 | N |
| | 1130 | 9.75 | 6.35 | 0.428 | 3.97 | 185 | 174 | 9.46 | N |
| | 1135 | 10.02 | 6.4 | 0.43 | 3.87 | 184 | 140 | 9.46 | N |
| 2.5 | 1140 | 10.04 | 6.41 | 0.432 | 3.84 | 182 | 138 | 9.46 | N |
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**Well Condition Summary**

| Cover: Y | Bolts: Y | | Concrete Pad OK: Y | Gripper: Y | |
|---|---|---|---|---|---|

**Sample Collection Information**

| Sample Time: | 1145 | Appearance: Clear | Filtered Sample Turbidity: | OTHER: |
|---|---|---|---|---|

Desired purge flow rate <100mL/min (slow drip) & turbidity <10 if possible. If turbidity > 10 collect filtered and unfiltered samples. Notify PM of high turbidity and collection of filtered samples prior to lab submittal. Minimum 20 minute purge to establish stabilization.

Notes/ Calculations:

Volume? Linear Ft of well casing; 1"=0.041 gal. 2"= 0.163 gal. 4"=0.653 gal.

**ABSORBENT SOCK**

| Sock Length (ft) = | | Capacity (Qt.) = | | Present: | Y / N | Product Measured (Inches) : | |
|---|---|---|---|---|---|---|---|
| Sock Installation Date: | | | Sock Changed : | | Y / N | | |
| Sock Depth (Depth to sock mid point): | | | | | | | |

**VOLUME AVERAGING PURGING GROUNDWATER SAMPLING LOG**

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **Location:** | | | | **Job Number:** | | **WELL I.D. :** | | | |
| **Personnel:** | | | | **Date:** | | SESI CONSULTING ENGINEERS | | | |
| | | | | **PID:** | | | | | |
| **Stickup? Y/N** **Distance ground to Stickup Rim/PVC** | **Distance From Rim to PVC** | **Total Depth of Well Rim/PVC** | **Depth to Product Rim/PVC** | **Depth to Water (Rim/PVC)** | **Standing Water Column (feet)** | **Middle of Saturated Zone (feet)** | **Depth to Sample Tube (feet)** | **TOV @ Well Head (ppmv)** | **Pump Peristaltic or Bladder** |
| | | | | | | | | | |
| **Turbidity at collection (NTU):** | | | **(Less than 5 NTU is desirable)** | | **Duplicate Collected? Y/N** | | | **Filtered Sample Y/N** | |
| **Stabilization Parameters** | | **+/- 0.5 deg C.** | **+/- 0.1 Unit** | **+/- 10 umhos/cm or within 3% if >300umho** | **1 ppm** | **+/- 10 mV** | **No Limit** | **<.3 feet drawdown desirable** | **No Limit** |
| | | | | | | | | | |
| **Volume Purged (gallons)** | **Time (actual Time) 5 minute Intervals** | **TEMP. (Deg. C)** | **pH** | **Specific Conductivity uS/cm** | **Dissolved Oxygen (mg/L)** | **ORP mV millivolts** | **Turbidity NTUs** | **DTW (feet)** | **Odors Y/N** |
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| **Well Condition Summary** | | | | | | | | | |
| **Cover: Y / N** | | **Bolts: Y / N** | | **Concrete Pad OK: Y / N** | | **Gripper: Y / N** | | | |
| **Sample Collection Information** | | | | | | | | | |
| **Sample Time:** | | **Appearance:** | | **Filtered Sample Turbidity:** | | | **OTHER:** | | |

Desired purge flow rate <100mL/min (slow drip) & turbidity <10 if possible. If turbidity > 10 collect filtered and unfiltered samples. Notify PM of high turbidity and collection of filtered samples prior to lab submittal. Minimum 20 minute purge to establish stabilization.

Notes/ Calculations:

Volume? Linear Ft of well casing; 1"=0.041 gal. 2"= 0.163 gal. 4"=0.653 gal.

| **ABSORBENT SOCK** | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Sock Length (ft) =** | | **Capacity (Qt.) =** | | **Present:** | **Y / N** | **Product Measured (Inches) :** | |
| **Sock Installation Date:** | | | **Sock Changed :** | | **Y / N** | | |
| **Sock Depth (Depth to sock mid point):** | | | | | | | |

Volume Average Groundwater Purging Log
Gorssingers
Liberty, NY

| Volume Average Purging Groundwater Sampling Log | |
|---|---|
| Pre Purge | |
| Well Name | MW-209 |
| Well Diameter (Inches) | 2 |
| Depth to Water (ft) | 7.57 |
| Depth to Bottom (ft) | 18 |
| Water Column | 10.43 |
| Well Volume (gal) | 1.7 |
| Well Headspace (PID) | 0 ppm |
| Pump On Time | 8:40 |
| Pump Off Time | 9:40 |
| Purge Time | 60 min |
| Total Volume Purged (gal) | 5 |
| Post Purge | |
| Depth to Water | 16.53 |
| Water Quality | Turbid |
| Post Sample | |
| Depth to Water | 10.23 |
| Water Quality | Turbid |

## LOW-FLOW GROUNDWATER SAMPLING LOG

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Location: | Liberty, NY | | | Job Number: | 9313 | WELL I.D. : MW-207 | | | |
| Personnel: | JCS | | | Date: | 4/27/2021 | SESI CONSULTING ENGINEERS | | | |
| | | | | PID: | 0 | | | | |
| Stickup? Y<br>Distance ground to Stickup Rim/PVC | Distance From Rim to PVC | Total Depth of Well Rim/PVC | Depth to Product Rim/PVC | Depth to Water (Rim/PVC) | Standing Water Column (feet) | Middle of Saturated Zone (feet) | Depth to Sample Tube (feet) | Well Diameter (Inches) | Pump Peristaltic or Bladder |
| 4.4' | 0.5' | 15.7 | NE | 8.87 | 6.83 | 12.2 | 12' | 2 | Peristaltic |
| Turbidity at collection (NTU): | | 93.8 | (Less than 5 NTU is desirable) | | Duplicate Collected? N | | | Filtered Sample N | |
| Stabilization Parameters | | +/- 0.5 deg C. | +/- 0.1 Unit | +/- 10 umhos/cm or within 3% if >300umho | 1 ppm | +/- 10 mV | No Limit | <.3 feet drawdown desirable | No Limit |

| Volume Purged (gallons) | Time (actual Time) 5 minute Intervals | TEMP. (Deg. C) | pH | Specific Conductivity uS/cm | Dissolved Oxygen (mg/L) | ORP mV millivolts | Turbidity NTUs | DTW (feet) | Odors Y/N |
|---|---|---|---|---|---|---|---|---|---|
| | 1105 | 12.02 | 6.96 | 0.159 | 0 | 92 | 294 | 9.25 | N |
| | 1110 | 11.31 | 6.56 | 0.212 | 0 | 114 | 193 | 9.65 | N |
| | 1115 | 12.39 | 6.5 | 0.185 | 0 | 123 | 181 | 9.88 | N |
| | 1120 | 12.02 | 6.49 | 0.174 | 0 | 125 | 169 | 9.88 | N |
| | 1125 | 12.82 | 6.5 | 0.173 | 0 | 126 | 150 | 9.88 | N |
| | 1130 | 12.58 | 6.51 | 0.172 | 0 | 128 | 114 | 9.88 | N |
| 2.5 | 1135 | 12.34 | 6.5 | 0.172 | 0 | 130 | 93.8 | 9.88 | N |
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**Well Condition Summary**

| | | | | | |
|---|---|---|---|---|---|
| Cover: Y | Bolts: Y | | Concrete Pad OK: Y | Gripper: Y | |

**Sample Collection Information**

| | | | | |
|---|---|---|---|---|
| Sample Time: | 1140 | Appearance: Clear | Filtered Sample Turbidity: | OTHER: |

Desired purge flow rate <100mL/min (slow drip) & turbidity <10 if possible. If turbidity > 10 collect filtered and unfiltered samples. Notify PM of high turbidity and collection of filtered samples prior to lab submittal. Minimum 20 minute purge to establish stabilization.

Notes/ Calculations:

Volume? Linear Ft of well casing; 1"=0.041 gal. 2"= 0.163 gal. 4"=0.653 gal.

**ABSORBENT SOCK**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Sock Length (ft) = | | Capacity (Qt.) = | | Present: | Y / N | Product Measured (Inches) : | |
| Sock Installation Date: | | | Sock Changed : | | Y / N | | |
| Sock Depth (Depth to sock mid point): | | | | | | | |

## LOW-FLOW GROUNDWATER SAMPLING LOG

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Location: | Liberty, NY | | | Job Number: | 9313 | WELL I.D. : MW-210 | | | |
| Personnel: | MEM | | | Date: | 4/29/2021 | SESI CONSULTING ENGINEERS | | | |
| | | | | PID: | 0.1 | | | | |
| Stickup? Y<br>Distance ground to Stickup Rim/PVC | Distance From Rim to PVC | Total Depth of Well Rim/PVC | Depth to Product Rim/PVC | Depth to Water (Rim/PVC) | Standing Water Column (feet) | Middle of Saturated Zone (feet) | Depth to Sample Tube (feet) | Well Diameter (Inches) | Pump Peristaltic or Bladder |
| 4.5 | | 18.3 | NE | 11.25 | 7.05 | 14.78 | 16 | 2 | Peristaltic |
| Turbidity at collection (NTU): | | | (Less than 5 NTU is desirable) | | Duplicate Collected? N | | | Filtered Sample N | |
| Stabilization Parameters | | +/- 0.5 deg C. | +/- 0.1 Unit | +/- 10 umhos/cm or within 3% if >300umho | 1 ppm | +/- 10 mV | No Limit | <.3 feet drawdown desirable | No Limit |

| Volume Purged (gallons) | Time (actual Time) 5 minute Intervals | TEMP. (Deg. C) | pH | Specific Conductivity uS/cm | Dissolved Oxygen (mg/L) | ORP mV millivolts | Turbidity NTUs | DTW (feet) | Odors Y/N |
|---|---|---|---|---|---|---|---|---|---|
| | 945 | 11.3 | 5.7 | 0.099 | 4.93 | 218 | 825 | 11.25 | N |
| | 950 | 11.12 | 5.7 | 0.092 | 4.95 | 220 | 502 | 11.75 | N |
| | 955 | 11.05 | 5.71 | 0.087 | 4.91 | 226 | 327 | 11.8 | N |
| | 1000 | 10.97 | 5.69 | 0.085 | 4.88 | 233 | 285 | 11.8 | N |
| | 1005 | 10.85 | 5.6 | 0.081 | 4.87 | 234 | 240 | 11.8 | N |
| | 1010 | 10.82 | 5.59 | 0.075 | 4.87 | 239 | 212 | 11.8 | N |
| | 1015 | 10.88 | 5.55 | 0.066 | 4,87 | 242 | 155 | 11.8 | N |
| | 1020 | 10.75 | 5.52 | 0.051 | 4.82 | 248 | 112 | 11.8 | N |
| | 1025 | 10.56 | 5.49 | 0.05 | 4.79 | 255 | 95.9 | 11.8 | N |
| | 1030 | 10.5 | 5.45 | 0.048 | 4.78 | 259 | 55.6 | 11.8 | N |
| | 1035 | 10.42 | 5.41 | 0.042 | 4.78 | 262 | 12.1 | 11.8 | N |
| | 1040 | 10.12 | 5.35 | 0.041 | 4.76 | 266 | 10.9 | 11.8 | N |
| | 1045 | 10.02 | 5.33 | 0.039 | 4.77 | 271 | 8.6 | 11.8 | N |
| | 1050 | 9.89 | 5.28 | 0.037 | 4.75 | 285 | 5.1 | 11.8 | N |
| | 1055 | 9.83 | 5.27 | 0.035 | 4.73 | 288 | 3.9 | 11.8 | N |
| 5 | 1100 | 9.73 | 5.25 | 0.033 | 4.72 | 294 | 3.3 | 11.8 | N |
| | | | | | | | | | |
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**Well Condition Summary**

| | | | | | |
|---|---|---|---|---|---|
| Cover: Y | Bolts: Y | | Concrete Pad OK: Y | Gripper: Y | |

**Sample Collection Information**

| | | | | |
|---|---|---|---|---|
| Sample Time: | 1100 | Appearance: Clear | Filtered Sample Turbidity: | OTHER: |

Desired purge flow rate <100mL/min (slow drip) & turbidity <10 if possible. If turbidity > 10 collect filtered and unfiltered samples. Notify PM of high turbidity and collection of filtered samples prior to lab submittal. Minimum 20 minute purge to establish stabilization.

Notes/ Calculations:

Volume? Linear Ft of well casing; 1"=0.041 gal. 2"= 0.163 gal. 4"=0.653 gal.

**ABSORBENT SOCK**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Sock Length (ft) = | | Capacity (Qt.) = | | Present: | Y / N | Product Measured (Inches) : | |
| Sock Installation Date: | | | Sock Changed : | | Y / N | | |
| Sock Depth (Depth to sock mid point): | | | | | | | |

## LOW-FLOW GROUNDWATER SAMPLING LOG

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Location: | Liberty, NY | | | Job Number: | 9313 | WELL I.D. : MW-211 | | | |
| Personnel: | JCS | | | Date: | 4/28/2021 | | | | |
| | | | | PID: | 0 | | | | |

| Stickup? Y<br>Distance ground to Stickup Rim/PVC | Distance From Rim to PVC | Total Depth of Well Rim/PVC | Depth to Product Rim/PVC | Depth to Water (Rim/PVC) | Standing Water Column (feet) | Middle of Saturated Zone (feet) | Depth to Sample Tube (feet) | Well Diameter (Inches) | Pump Peristaltic or Bladder |
|---|---|---|---|---|---|---|---|---|---|
| 4.4' | 0.5' | 17.86 | NE | 9.21 | 8.65 | 13.5 | 15 | 2 | Peristaltic |

| Turbidity at collection (NTU): | 325 | (Less than 5 NTU is desirable) | Duplicate Collected? N | Filtered Sample N |
|---|---|---|---|---|

| Stabilization Parameters | +/- 0.5 deg C. | +/- 0.1 Unit | +/- 10 umhos/cm or within 3% if >300umho | 1 ppm | +/- 10 mV | No Limit | <.3 feet drawdown desirable | No Limit |
|---|---|---|---|---|---|---|---|---|

| Volume Purged (gallons) | Time (actual Time) 5 minute Intervals | TEMP. (Deg. C) | pH | Specific Conductivity uS/cm | Dissolved Oxygen (mg/L) | ORP mV millivolts | Turbidity NTUs | DTW (feet) | Odors Y/N |
|---|---|---|---|---|---|---|---|---|---|
| | 1015 | 10.74 | 5.92 | 0.117 | 5.59 | 238 | 227 | 9.89 | N |
| | 1020 | 10.65 | 5.74 | 0.141 | 2.52 | 243 | 442 | 10.25 | N |
| | 1025 | 10.8 | 5.65 | 0.141 | 2.92 | 249 | 500 | 11.1 | N |
| | 1030 | 10.7 | 5.61 | 0.142 | 3.19 | 255 | 636 | 11.9 | N |
| | 1035 | 11.04 | 5.68 | 0.141 | 3.1 | 254 | 325 | 12.03 | N |
| 2 | 1040 | 11.08 | 5.65 | 0.141 | 3.08 | 252 | 317 | 12.05 | N |
| | | | | | | | | | |
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**Well Condition Summary**

| Cover: Y | Bolts: Y | | Concrete Pad OK: Y | Gripper: Y | |
|---|---|---|---|---|---|

**Sample Collection Information**

| Sample Time: | 1045 | Appearance: Clear | Filtered Sample Turbidity: | OTHER: |
|---|---|---|---|---|

Desired purge flow rate <100mL/min (slow drip) & turbidity <10 if possible. If turbidity > 10 collect filtered and unfiltered samples. Notify PM of high turbidity and collection of filtered samples prior to lab submittal. Minimum 20 minute purge to establish stabilization.

Notes/ Calculations:

Volume? Linear Ft of well casing; 1"=0.041 gal. 2"= 0.163 gal. 4"=0.653 gal.

**ABSORBENT SOCK**

| Sock Length (ft) = | | Capacity (Qt.) = | | Present: | Y / N | Product Measured (Inches) : | |
|---|---|---|---|---|---|---|---|
| Sock Installation Date: | | | Sock Changed : | | Y / N | | |
| Sock Depth (Depth to sock mid point): | | | | | | | |

## LOW-FLOW GROUNDWATER SAMPLING LOG

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Location: | Liberty, NY | | | Job Number: | 9313 | WELL I.D. : MW-213 | | | |
| Personnel: | JCS | | | Date: | 4/27/2021 | | | | |
| | | | | PID: | 0 | | | | |

| Stickup? Y<br>Distance ground to Stickup Rim/PVC | Distance From Rim to PVC | Total Depth of Well Rim/PVC | Depth to Product Rim/PVC | Depth to Water (Rim/PVC) | Standing Water Column (feet) | Middle of Saturated Zone (feet) | Depth to Sample Tube (feet) | Well Diameter (Inches) | Pump Peristaltic or Bladder |
|---|---|---|---|---|---|---|---|---|---|
| 3.5' | 0.3' | 20.5 | NE | 15.85 | 4.65 | 18.17 | 18 | 2 | Peristaltic |

| Turbidity at collection (NTU): | 0.7 | (Less than 5 NTU is desirable) | Duplicate Collected? N | Filtered Sample N |
|---|---|---|---|---|

| Stabilization Parameters | +/- 0.5 deg C. | +/- 0.1 Unit | +/- 10 umhos/cm or within 3% if >300umho | 1 ppm | +/- 10 mV | No Limit | <.3 feet drawdown desirable | No Limit |
|---|---|---|---|---|---|---|---|---|

| Volume Purged (gallons) | Time (actual Time) 5 minute Intervals | TEMP. (Deg. C) | pH | Specific Conductivity uS/cm | Dissolved Oxygen (mg/L) | ORP mV millivolts | Turbidity NTUs | DTW (feet) | Odors Y/N |
|---|---|---|---|---|---|---|---|---|---|
| | 940 | 10.02 | 8.07 | 0.848 | 0 | 56 | 4.7 | 15.96 | N |
| | 945 | 9.42 | 6.6 | 0.82 | 0.2 | 102 | 3.7 | 15.96 | N |
| | 950 | 9.03 | 6.36 | 0.795 | 0 | 115 | 1 | 15.96 | N |
| | 955 | 9.13 | 6.33 | 0.784 | 0 | 123 | 1.3 | 15.96 | N |
| | 1000 | 9.02 | 6.32 | 0.782 | 0 | 127 | 1.1 | 15.96 | N |
| | 1005 | 8.93 | 6.31 | 0.779 | 0 | 132 | 0.6 | 15.96 | N |
| 2.5 | 1010 | 9.11 | 6.29 | 0.776 | 0 | 135 | 0.7 | 15.96 | N |
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**Well Condition Summary**

| Cover: Y | Bolts: Y | | Concrete Pad OK: Y | Gripper: Y | |
|---|---|---|---|---|---|

**Sample Collection Information**

| Sample Time: | 1015 | Appearance: Clear | Filtered Sample Turbidity: | OTHER: |
|---|---|---|---|---|

Desired purge flow rate <100mL/min (slow drip) & turbidity <10 if possible. If turbidity > 10 collect filtered and unfiltered samples. Notify PM of high turbidity and collection of filtered samples prior to lab submittal. Minimum 20 minute purge to establish stabilization.

Notes/ Calculations:

Volume? Linear Ft of well casing; 1"=0.041 gal. 2"= 0.163 gal. 4"=0.653 gal.

**ABSORBENT SOCK**

| Sock Length (ft) = | | Capacity (Qt.) = | | Present: | Y / N | Product Measured (Inches) : | |
|---|---|---|---|---|---|---|---|
| Sock Installation Date: | | | Sock Changed : | | Y / N | | |
| Sock Depth (Depth to sock mid point): | | | | | | | |

## LOW-FLOW GROUNDWATER SAMPLING LOG

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Location: | Liberty, NY | | | Job Number: | 9313 | WELL I.D. : MW-214 | | | |
| Personnel: | JCS | | | Date: | 4/27/2021 | | | | |
| | | | | PID: | 0 | | | | |

| Stickup? Y / Distance ground to Stickup Rim/PVC | Distance From Rim to PVC | Total Depth of Well Rim/PVC | Depth to Product Rim/PVC | Depth to Water (Rim/PVC) | Standing Water Column (feet) | Middle of Saturated Zone (feet) | Depth to Sample Tube (feet) | Well Diameter (Inches) | Pump Peristaltic or Bladder |
|---|---|---|---|---|---|---|---|---|---|
| 3.5' | 0.5' | 24.7 | NE | 16.89 | 7.81 | 20.7 | 20' | 2 | Peristaltic |

| Turbidity at collection (NTU): | 9.8 | (Less than 5 NTU is desirable) | Duplicate Collected? N | Filtered Sample N |
|---|---|---|---|---|

| Stabilization Parameters | +/- 0.5 deg C. | +/- 0.1 Unit | +/- 10 umhos/cm or within 3% if >300umho | 1 ppm | +/- 10 mV | No Limit | <.3 feet drawdown desirable | No Limit |
|---|---|---|---|---|---|---|---|---|

| Volume Purged (gallons) | Time (actual Time) 5 minute Intervals | TEMP. (Deg. C) | pH | Specific Conductivity uS/cm | Dissolved Oxygen (mg/L) | ORP mV millivolts | Turbidity NTUs | DTW (feet) | Odors Y/N |
|---|---|---|---|---|---|---|---|---|---|
| | 925 | 12.37 | 9.07 | 0.782 | 0 | -32 | 2.4 | 17.02 | N |
| | 930 | 11.73 | 7.41 | 0.77 | 0 | 19 | 2.8 | 17.05 | N |
| | 935 | 10.92 | 6.55 | 0.763 | 0 | 97 | 3.3 | 17.05 | N |
| | 940 | 10.94 | 6.51 | 0.763 | 0 | 103 | 7.8 | 17.05 | N |
| | 945 | 11.03 | 6.49 | 0.759 | 0 | 105 | 9.5 | 17.05 | N |
| 2 | 950 | 12.82 | 6.46 | 0.756 | 0 | 109 | 9.8 | 17.05 | N |
| | | | | | | | | | |
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**Well Condition Summary**

| Cover: Y | Bolts: Y | | Concrete Pad OK: Y | Gripper: Y | |
|---|---|---|---|---|---|

**Sample Collection Information**

| Sample Time: | 955 | Appearance: Clear | Filtered Sample Turbidity: | OTHER: |
|---|---|---|---|---|

Desired purge flow rate <100mL/min (slow drip) & turbidity <10 if possible. If turbidity > 10 collect filtered and unfiltered samples. Notify PM of high turbidity and collection of filtered samples prior to lab submittal. Minimum 20 minute purge to establish stabilization.

Notes/ Calculations:

Volume? Linear Ft of well casing; 1"=0.041 gal. 2"= 0.163 gal. 4"=0.653 gal.

**ABSORBENT SOCK**

| Sock Length (ft) = | | Capacity (Qt.) = | | Present: | Y / N | Product Measured (Inches) : | |
|---|---|---|---|---|---|---|---|
| Sock Installation Date: | | | Sock Changed : | | Y / N | | |
| Sock Depth (Depth to sock mid point): | | | | | | | |

## LOW-FLOW GROUNDWATER SAMPLING LOG

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Location: | Liberty, NY | | | Job Number: | 9313 | WELL I.D. : MW-216 | | | |
| Personnel: | MEM | | | Date: | 4/28/2021 | SESI CONSULTING ENGINEERS | | | |
| | | | | PID: | 0.1 | | | | |
| Stickup? Y<br>Distance ground to Stickup Rim/PVC | Distance From Rim to PVC | Total Depth of Well Rim/PVC | Depth to Product Rim/PVC | Depth to Water (Rim/PVC) | Standing Water Column (feet) | Middle of Saturated Zone (feet) | Depth to Sample Tube (feet) | Well Diameter (Inches) | Pump Peristaltic or Bladder |
| 3.5 | | 20.55 | NE | 8.35 | 12.2 | 14.45 | 14 | 2 | Peristaltic |
| Turbidity at collection (NTU): | | 8.9 | (Less than 5 NTU is desirable) | | Duplicate Collected? N | | | Filtered Sample N | |
| Stabilization Parameters | | +/- 0.5 deg C. | +/- 0.1 Unit | +/- 10 umhos/cm or within 3% if >300umho | 1 ppm | +/- 10 mV | No Limit | <.3 feet drawdown desirable | No Limit |

| Volume Purged (gallons) | Time (actual Time) 5 minute Intervals | TEMP. (Deg. C) | pH | Specific Conductivity uS/cm | Dissolved Oxygen (mg/L) | ORP mV millivolts | Turbidity NTUs | DTW (feet) | Odors Y/N |
|---|---|---|---|---|---|---|---|---|---|
| | 1010 | 10.82 | 6.32 | 0.294 | 2.97 | 169 | 280 | 8.65 | N |
| | 1015 | 10.6 | 6.19 | 0.344 | 0 | 206 | 148 | 8.65 | N |
| | 1020 | 11 | 6.24 | 0.413 | 0 | 199 | 115 | 8.65 | N |
| | 1025 | 11.12 | 6.32 | 0.426 | 0 | 195 | 96.5 | 8.65 | N |
| | 1030 | 10.97 | 6.33 | 0.436 | 0 | 201 | 80 | 8.65 | N |
| | 1035 | 10.99 | 6.34 | 0.445 | 0 | 202 | 72.2 | 8.65 | N |
| | 1040 | 11.05 | 6.36 | 0.455 | 0 | 202 | 58.7 | 8.65 | N |
| | 1045 | 11.09 | 6.8 | 0.46 | 0 | 201 | 52.6 | 8.65 | N |
| | 1050 | 11.1 | 6.38 | 0.466 | 0 | 201 | 45.2 | 8.65 | N |
| | 1055 | 11.12 | 6.39 | 0.482 | 0 | 200 | 40.5 | 8.65 | N |
| | 1100 | 11.12 | 6.42 | 0.493 | 0 | 200 | 37.1 | 8.65 | N |
| | 1105 | 11.12 | 6.42 | 0.496 | 0 | 200 | 26.2 | 8.65 | N |
| | 1110 | 11.12 | 6.42 | 0.497 | 0 | 200 | 9.7 | 8.65 | N |
| | 1115 | 11.12 | 6.42 | 0.497 | 0 | 200 | 9.3 | 8.65 | N |
| 5 | 1120 | 11.12 | 6.42 | 0.497 | 0 | 200 | 8.9 | 8.65 | N |
| | | | | | | | | | |
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**Well Condition Summary**

| | | | | | |
|---|---|---|---|---|---|
| Cover: Y | Bolts: Y | | Concrete Pad OK: Y | Gripper: Y | |

**Sample Collection Information**

| | | | | |
|---|---|---|---|---|
| Sample Time: | 1220 | Appearance: Clear | Filtered Sample Turbidity: | OTHER: |

Desired purge flow rate <100mL/min (slow drip) & turbidity <10 if possible. If turbidity > 10 collect filtered and unfiltered samples. Notify PM of high turbidity and collection of filtered samples prior to lab submittal. Minimum 20 minute purge to establish stabilization.

Notes/ Calculations:

Volume? Linear Ft of well casing; 1"=0.041 gal. 2"= 0.163 gal. 4"=0.653 gal.

**ABSORBENT SOCK**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Sock Length (ft) = | | Capacity (Qt.) = | | Present: | Y / N | Product Measured (Inches) : | |
| Sock Installation Date: | | | Sock Changed : | | Y / N | | |
| Sock Depth (Depth to sock mid point): | | | | | | | |

## LOW-FLOW GROUNDWATER SAMPLING LOG

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Location: | Liberty, NY | | | Job Number: | 9313 | WELL I.D. : MW-217 | | | |
| Personnel: | MEM | | | Date: | 4/28/2021 | SESI CONSULTING ENGINEERS | | | |
| | | | | PID: | 0.1 | | | | |
| Stickup? Y<br>Distance ground to Stickup Rim/PVC | Distance From Rim to PVC | Total Depth of Well Rim/PVC | Depth to Product Rim/PVC | Depth to Water (Rim/PVC) | Standing Water Column (feet) | Middle of Saturated Zone (feet) | Depth to Sample Tube (feet) | Well Diameter (Inches) | Pump Peristaltic or Bladder |
| 3.5 | | 19.9 | NE | 11 | 8.9 | 15.45 | 15 | 2 | Peristaltic |
| Turbidity at collection (NTU): | | 6.1 | (Less than 5 NTU is desirable) | | Duplicate Collected? N | | | Filtered Sample N | |
| Stabilization Parameters | | +/- 0.5 deg C. | +/- 0.1 Unit | +/- 10 umhos/cm or within 3% if >300umho | 1 ppm | +/- 10 mV | No Limit | <.3 feet drawdown desirable | No Limit |

| Volume Purged (gallons) | Time (actual Time) 5 minute Intervals | TEMP. (Deg. C) | pH | Specific Conductivity uS/cm | Dissolved Oxygen (mg/L) | ORP mV millivolts | Turbidity NTUs | DTW (feet) | Odors Y/N |
|---|---|---|---|---|---|---|---|---|---|
| | 1150 | 10.69 | 6.84 | 0.554 | 5.29 | 193 | 245 | 11.15 | N |
| | 1155 | 10.66 | 6.64 | 0.493 | 4.77 | 201 | 172 | 11.15 | N |
| | 1200 | 10.58 | 6.44 | 0.462 | 3.17 | 210 | 111 | 11.15 | N |
| | 1205 | 10.65 | 6.31 | 0.427 | 2.73 | 219 | 65.1 | 11.15 | N |
| | 1210 | 10.81 | 6.25 | 0.414 | 2.64 | 223 | 49.2 | 11.15 | N |
| | 1215 | 11 | 6.22 | 0.402 | 2.53 | 227 | 27.9 | 11.15 | N |
| | 1220 | 11.04 | 6.17 | 0.396 | 2.4 | 231 | 16.2 | 11.15 | N |
| | 1225 | 11.21 | 6.17 | 0.392 | 2.44 | 232 | 10.2 | 11.15 | N |
| | 1230 | 11.29 | 6.17 | 0.39 | 2.41 | 232 | 6.7 | 11.15 | N |
| | 1235 | 11.31 | 6.17 | 0.389 | 2.4 | 232 | 6.3 | 11.15 | N |
| 4 | 1240 | 11.31 | 6.17 | 0.389 | 2.4 | 232 | 6.1 | 11.15 | N |
| | | | | | | | | | |
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**Well Condition Summary**

| | | | | | |
|---|---|---|---|---|---|
| Cover: Y | Bolts: Y | | Concrete Pad OK: Y | Gripper: Y | |

**Sample Collection Information**

| | | | | |
|---|---|---|---|---|
| Sample Time: | 1240 | Appearance: Clear | Filtered Sample Turbidity: | OTHER: |

Desired purge flow rate <100mL/min (slow drip) & turbidity <10 if possible. If turbidity > 10 collect filtered and unfiltered samples. Notify PM of high turbidity and collection of filtered samples prior to lab submittal. Minimum 20 minute purge to establish stabilization.

Notes/ Calculations:

Volume? Linear Ft of well casing; 1"=0.041 gal. 2"= 0.163 gal. 4"=0.653 gal.

**ABSORBENT SOCK**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Sock Length (ft) = | | Capacity (Qt.) = | | Present: | Y / N | Product Measured (Inches) : | |
| Sock Installation Date: | | | Sock Changed : | | Y / N | | |
| Sock Depth (Depth to sock mid point): | | | | | | | |

# Appendix C:

## Groundwater Laboratory Data

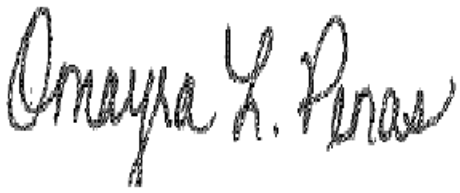
# ANALYTICAL REPORT

Job Number: 460-217547-1

Job Description: Grossingers

For:
SESI Consulting Engineers
12 A Maple Avenue
Building B
Pine Brook, NJ 07058

Attention: Fuad Dahan



Approved for release.
Omayra Penas
Senior Project Manager
9/15/2020 10:01 AM

Omayra Penas, Senior Project Manager
777 New Durham Road, Edison, NJ, 08817
(732)593-2538
Omayra.Penas@Eurofinset.com
09/15/2020

The test results in this report meet all NELAP requirements unless specified within the case narrative. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory. All questions regarding this report should be directed to the TestAmerica Edison Project Manager.

TestAmerica Edison Certifications and Approvals: Connecticut: CTDOH #PH-0200, New Jersey: NJDEP (NELAP) #12028, New York: NYDOH (NELAP) #11452, NYDOH (ELAP) #11452, Pennsylvania: PADEP (NELAP) 68-00522 and Rhode Island: RIDOH LAO00132

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins TestAmerica Project Manager.

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# CASE NARRATIVE

## Client: SESI Consulting Engineers

## Project: Grossingers

## Report Number: 460-217547-1

This case narrative is in the form of an exception report, where only the anomalies related to this report, method specific performance and/or QA/QC issues are discussed. If there are no issues to report, this narrative will include a statement that documents that there are no relevant data issues.

It should be noted that samples with elevated Reporting Limits (RLs) as a result of a dilution may not be able to satisfy customer reporting limits in some cases. Such increases in the RLs are unavoidable but acceptable consequence of sample dilution that enables quantification of target analytes or interferences which exceed the calibration range of the instrument.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

**RECEIPT**

The samples were received on 09/03/2020; the samples arrived in good condition, properly preserved and on ice. The temperature of the coolers at receipt was 3.4 C.

Note: All samples which require thermal preservation are considered acceptable if the arrival temperature is within 2C of the required temperature or method specified range. For samples with a specified temperature of 4C, samples with a temperature ranging from just above freezing temperature of water to 6C shall be acceptable. Samples that are hand delivered immediately following collection may not meet these criteria, however they will be deemed acceptable according to NELAC standards, if there is evidence that the chilling process has begun, such as arrival on ice, etc.

**VOLATILE ORGANIC COMPOUNDS (GC-MS)**

Samples MW-203 (460-217547-1), MW-204 (460-217547-2), MW-205 (460-217547-3), MW-206 (460-217547-4), MW-213 (460-217547-5), DUP (460-217547-6), FB (460-217547-7) and TB (460-217547-8) were analyzed for Volatile organic compounds (GC-MS) in accordance with EPA SW-846 Methods 8260C. The samples were analyzed on 09/09/2020 and 09/10/2020.

The laboratory control sample (LCS) and / or laboratory control sample duplicate (LCSD) for analytical batch 460-722597 recovered outside control limits for the following analyte: Bromomethane. This analyte was biased high in the LCS/LCSD and was not detected in the associated samples; therefore, the data have been reported.

The continuing calibration verification (CCV) analyzed in batch 460-722597 was outside the method criteria for the following analyte(s): 1,2,3-Trichlorobenzene (biased low); Bromomethane and Methyl acetate (biased high). A CCV standard at or below the reporting limit (RL) was analyzed with the affected samples and found to be acceptable. As indicated in the reference method, sample analysis may proceed; however, any detection for the affected analyte(s) is considered estimated.

Several analytes failed the recovery criteria high for the MS of sample 460-217576-4 in batch 460-722834.

Refer to the QC report for details.

No other difficulties were encountered during the volatiles analysis.

All other quality control parameters were within the acceptance limits.

**PER- AND POLYFLUOROALKYL SUBSTANCES (PFAS)**

Samples MW-203 (460-217547-1), MW-204 (460-217547-2), MW-205 (460-217547-3), MW-206 (460-217547-4), MW-213 (460-217547-5), DUP (460-217547-6) and FB (460-217547-7) were analyzed for Per- and Polyfluoroalkyl Substances (PFAS) in accordance with PFC. The samples were prepared on 09/09/2020 and 09/10/2020 and analyzed on 09/10/2020 and 09/11/2020.

Isotope Dilution Analyte (IDA) recovery is above the method recommended limit for M2-6:2 FTS and M2-8:2 FTS for the following sample: MW-203 (460-217547-1). Quantitation by isotope dilution generally precludes any adverse effect on data quality due to elevated IDA recoveries.

Isotope Dilution Analyte (IDA) recovery is above the method recommended limit for M2-6:2 FTS for the following sample: MW-213 (460-217547-5). Quantitation by isotope dilution generally precludes any adverse effect on data quality due to elevated IDA recoveries.

Perfluorobutanoic acid (PFBA), Perfluorohexanesulfonic acid (PFHxS) and Perfluorooctanesulfonamide (FOSA) were detected in method

blank MB 320-410910/1-A at levels that were above the method detection limit but below the reporting limit. The values should be considered estimates, and have been flagged. If the associated sample reported a result above the MDL and/or RL, the result has been flagged. Perfluorohexanesulfonic acid (PFHxS) was detected in method blank MB 320-411226/1-A at a level that was above the method detection limit but below the reporting limit. The value should be considered an estimate, and has been flagged. If the associated sample reported a result above the MDL and/or RL, the result has been flagged.

Refer to the QC report for details.

No other difficulties were encountered during the PFAS analysis.

All other quality control parameters were within the acceptance limits.

# Sample Summary

Client: SESI Consulting Engineers
Job ID: 460-217547-1
Project/Site: Grossingers

| Lab Sample ID | Client Sample ID | Matrix | Collected | Received | Asset ID |
|---|---|---|---|---|---|
| 460-217547-1 | MW-203 | Water | 09/02/20 13:00 | 09/03/20 16:45 | |
| 460-217547-2 | MW-204 | Water | 09/02/20 11:30 | 09/03/20 16:45 | |
| 460-217547-3 | MW-205 | Water | 09/02/20 12:40 | 09/03/20 16:45 | |
| 460-217547-4 | MW-206 | Water | 09/02/20 10:40 | 09/03/20 16:45 | |
| 460-217547-5 | MW-213 | Water | 09/02/20 09:40 | 09/03/20 16:45 | |
| 460-217547-6 | DUP | Water | 09/02/20 00:00 | 09/03/20 16:45 | |
| 460-217547-7 | FB | Water | 09/02/20 14:30 | 09/03/20 16:45 | |
| 460-217547-8 | TB | Water | 09/02/20 14:30 | 09/03/20 16:45 | |

# Detection Summary

Client: SESI Consulting Engineers
Project/Site: Grossingers

Job ID: 460-217547-1

## Client Sample ID: MW-203 — Lab Sample ID: 460-217547-1

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| 2-Butanone (MEK) | 2.2 | J | 5.0 | 1.9 | ug/L | 1 | | 8260C | Total/NA |
| Acetone | 5.3 | | 5.0 | 4.4 | ug/L | 1 | | 8260C | Total/NA |
| Cyclohexane | 0.57 | J | 1.0 | 0.32 | ug/L | 1 | | 8260C | Total/NA |
| Ethylbenzene | 0.55 | J | 1.0 | 0.30 | ug/L | 1 | | 8260C | Total/NA |
| Isopropylbenzene | 0.68 | J | 1.0 | 0.34 | ug/L | 1 | | 8260C | Total/NA |
| Methylcyclohexane | 0.48 | J | 1.0 | 0.26 | ug/L | 1 | | 8260C | Total/NA |
| Perfluorobutanoic acid (PFBA) | 2.13 | B | 2.00 | 0.35 | ng/L | 1 | | 537 (modified) | Total/NA |
| Perfluoropentanoic acid (PFPeA) | 1.71 | J | 2.00 | 0.49 | ng/L | 1 | | 537 (modified) | Total/NA |
| Perfluorohexanoic acid (PFHxA) | 2.03 | | 2.00 | 0.58 | ng/L | 1 | | 537 (modified) | Total/NA |
| Perfluoroheptanoic acid (PFHpA) | 1.57 | J | 2.00 | 0.25 | ng/L | 1 | | 537 (modified) | Total/NA |
| Perfluorooctanoic acid (PFOA) | 5.15 | | 2.00 | 0.85 | ng/L | 1 | | 537 (modified) | Total/NA |
| Perfluorononanoic acid (PFNA) | 0.76 | J | 2.00 | 0.27 | ng/L | 1 | | 537 (modified) | Total/NA |
| Perfluorodecanoic acid (PFDA) | 0.35 | J | 2.00 | 0.31 | ng/L | 1 | | 537 (modified) | Total/NA |
| Perfluorohexanesulfonic acid (PFHxS) | 1.47 | J B | 2.00 | 0.17 | ng/L | 1 | | 537 (modified) | Total/NA |
| Perfluorooctanesulfonic acid (PFOS) | 25.0 | | 2.00 | 0.54 | ng/L | 1 | | 537 (modified) | Total/NA |
| Perfluorooctanesulfonamide (FOSA) | 2.31 | B | 2.00 | 0.35 | ng/L | 1 | | 537 (modified) | Total/NA |
| N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA) | 5.65 | J | 20.0 | 1.90 | ng/L | 1 | | 537 (modified) | Total/NA |
| 6:2 FTS | 11.1 | J | 20.0 | 2.00 | ng/L | 1 | | 537 (modified) | Total/NA |

## Client Sample ID: MW-204 — Lab Sample ID: 460-217547-2

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Perfluorobutanoic acid (PFBA) | 3.11 | B | 1.96 | 0.34 | ng/L | 1 | | 537 (modified) | Total/NA |
| Perfluoropentanoic acid (PFPeA) | 1.26 | J | 1.96 | 0.48 | ng/L | 1 | | 537 (modified) | Total/NA |
| Perfluorohexanoic acid (PFHxA) | 1.14 | J | 1.96 | 0.57 | ng/L | 1 | | 537 (modified) | Total/NA |
| Perfluoroheptanoic acid (PFHpA) | 1.02 | J | 1.96 | 0.24 | ng/L | 1 | | 537 (modified) | Total/NA |
| Perfluorooctanoic acid (PFOA) | 3.94 | | 1.96 | 0.83 | ng/L | 1 | | 537 (modified) | Total/NA |
| Perfluorononanoic acid (PFNA) | 0.46 | J | 1.96 | 0.26 | ng/L | 1 | | 537 (modified) | Total/NA |
| Perfluorobutanesulfonic acid (PFBS) | 0.64 | J | 1.96 | 0.20 | ng/L | 1 | | 537 (modified) | Total/NA |
| Perfluorohexanesulfonic acid (PFHxS) | 1.08 | J B | 1.96 | 0.17 | ng/L | 1 | | 537 (modified) | Total/NA |
| Perfluorooctanesulfonic acid (PFOS) | 12.1 | | 1.96 | 0.53 | ng/L | 1 | | 537 (modified) | Total/NA |
| Perfluorooctanesulfonamide (FOSA) | 0.57 | J B | 1.96 | 0.34 | ng/L | 1 | | 537 (modified) | Total/NA |
| 6:2 FTS | 2.02 | J | 19.6 | 1.96 | ng/L | 1 | | 537 (modified) | Total/NA |

## Client Sample ID: MW-205 — Lab Sample ID: 460-217547-3

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Perfluorobutanoic acid (PFBA) | 0.59 | J B | 1.99 | 0.35 | ng/L | 1 | | 537 (modified) | Total/NA |
| Perfluorobutanesulfonic acid (PFBS) | 0.20 | J | 1.99 | 0.20 | ng/L | 1 | | 537 (modified) | Total/NA |
| Perfluorohexanesulfonic acid (PFHxS) | 0.44 | J B | 1.99 | 0.17 | ng/L | 1 | | 537 (modified) | Total/NA |
| Perfluorooctanesulfonic acid (PFOS) | 0.93 | J | 1.99 | 0.54 | ng/L | 1 | | 537 (modified) | Total/NA |

## Client Sample ID: MW-206 — Lab Sample ID: 460-217547-4

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Dichlorodifluoromethane | 0.60 | J | 1.0 | 0.31 | ug/L | 1 | | 8260C | Total/NA |
| Perfluorobutanoic acid (PFBA) | 5.79 | | 1.76 | 0.31 | ng/L | 1 | | 537 (modified) | Total/NA |
| Perfluoropentanoic acid (PFPeA) | 1.83 | | 1.76 | 0.43 | ng/L | 1 | | 537 (modified) | Total/NA |
| Perfluorohexanoic acid (PFHxA) | 2.28 | | 1.76 | 0.51 | ng/L | 1 | | 537 (modified) | Total/NA |
| Perfluoroheptanoic acid (PFHpA) | 2.47 | | 1.76 | 0.22 | ng/L | 1 | | 537 (modified) | Total/NA |
| Perfluorooctanoic acid (PFOA) | 12.1 | | 1.76 | 0.75 | ng/L | 1 | | 537 (modified) | Total/NA |
| Perfluorononanoic acid (PFNA) | 0.75 | J | 1.76 | 0.24 | ng/L | 1 | | 537 (modified) | Total/NA |

This Detection Summary does not include radiochemical test results.

## Client Sample ID: MW-206 (Continued) — Lab Sample ID: 460-217547-4

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Perfluorodecanoic acid (PFDA) | 0.45 | J | 1.76 | 0.27 | ng/L | 1 | | 537 (modified) | Total/NA |
| Perfluorobutanesulfonic acid (PFBS) | 1.06 | J | 1.76 | 0.18 | ng/L | 1 | | 537 (modified) | Total/NA |
| Perfluorohexanesulfonic acid (PFHxS) | 1.93 | B | 1.76 | 0.15 | ng/L | 1 | | 537 (modified) | Total/NA |
| Perfluoroheptanesulfonic Acid (PFHpS) | 0.43 | J | 1.76 | 0.17 | ng/L | 1 | | 537 (modified) | Total/NA |
| Perfluorooctanesulfonic acid (PFOS) | 38.7 | | 1.76 | 0.48 | ng/L | 1 | | 537 (modified) | Total/NA |
| Perfluorooctanesulfonamide (FOSA) | 0.66 | J | 1.76 | 0.31 | ng/L | 1 | | 537 (modified) | Total/NA |
| 6:2 FTS | 2.24 | J | 17.6 | 1.76 | ng/L | 1 | | 537 (modified) | Total/NA |

## Client Sample ID: MW-213 — Lab Sample ID: 460-217547-5

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Dichlorodifluoromethane | 40 | | 1.0 | 0.31 | ug/L | 1 | | 8260C | Total/NA |
| Methylene Chloride | 0.44 | J | 1.0 | 0.32 | ug/L | 1 | | 8260C | Total/NA |
| Trichlorofluoromethane | 56 | | 1.0 | 0.32 | ug/L | 1 | | 8260C | Total/NA |
| Perfluorobutanoic acid (PFBA) | 12.4 | B | 1.88 | 0.33 | ng/L | 1 | | 537 (modified) | Total/NA |
| Perfluoropentanoic acid (PFPeA) | 7.81 | | 1.88 | 0.46 | ng/L | 1 | | 537 (modified) | Total/NA |
| Perfluorohexanoic acid (PFHxA) | 8.64 | | 1.88 | 0.55 | ng/L | 1 | | 537 (modified) | Total/NA |
| Perfluoroheptanoic acid (PFHpA) | 6.13 | | 1.88 | 0.24 | ng/L | 1 | | 537 (modified) | Total/NA |
| Perfluorooctanoic acid (PFOA) | 26.5 | | 1.88 | 0.80 | ng/L | 1 | | 537 (modified) | Total/NA |
| Perfluorononanoic acid (PFNA) | 2.51 | | 1.88 | 0.25 | ng/L | 1 | | 537 (modified) | Total/NA |
| Perfluorodecanoic acid (PFDA) | 1.61 | J | 1.88 | 0.29 | ng/L | 1 | | 537 (modified) | Total/NA |
| Perfluorobutanesulfonic acid (PFBS) | 2.27 | | 1.88 | 0.19 | ng/L | 1 | | 537 (modified) | Total/NA |
| Perfluorohexanesulfonic acid (PFHxS) | 4.94 | B | 1.88 | 0.16 | ng/L | 1 | | 537 (modified) | Total/NA |
| Perfluoroheptanesulfonic Acid (PFHpS) | 0.79 | J | 1.88 | 0.18 | ng/L | 1 | | 537 (modified) | Total/NA |
| Perfluorooctanesulfonic acid (PFOS) | 60.7 | | 1.88 | 0.51 | ng/L | 1 | | 537 (modified) | Total/NA |
| Perfluorooctanesulfonamide (FOSA) | 1.76 | J B | 1.88 | 0.33 | ng/L | 1 | | 537 (modified) | Total/NA |
| 6:2 FTS | 2.14 | J | 18.8 | 1.88 | ng/L | 1 | | 537 (modified) | Total/NA |

## Client Sample ID: DUP — Lab Sample ID: 460-217547-6

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Perfluorobutanoic acid (PFBA) | 0.70 | J B | 1.99 | 0.35 | ng/L | 1 | | 537 (modified) | Total/NA |
| Perfluorohexanesulfonic acid (PFHxS) | 0.37 | J B | 1.99 | 0.17 | ng/L | 1 | | 537 (modified) | Total/NA |
| Perfluorooctanesulfonic acid (PFOS) | 0.79 | J | 1.99 | 0.54 | ng/L | 1 | | 537 (modified) | Total/NA |

## Client Sample ID: FB — Lab Sample ID: 460-217547-7

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Methylene Chloride | 0.83 | J | 1.0 | 0.32 | ug/L | 1 | | 8260C | Total/NA |
| Perfluorobutanoic acid (PFBA) | 0.35 | J B | 1.96 | 0.34 | ng/L | 1 | | 537 (modified) | Total/NA |
| Perfluorohexanesulfonic acid (PFHxS) | 0.27 | J B | 1.96 | 0.17 | ng/L | 1 | | 537 (modified) | Total/NA |

## Client Sample ID: TB — Lab Sample ID: 460-217547-8

No Detections.

This Detection Summary does not include radiochemical test results.

# Method Summary

Client: SESI Consulting Engineers
Project/Site: Grossingers

Job ID: 460-217547-1

| Method | Method Description | Protocol | Laboratory |
|---|---|---|---|
| 8260C | Volatile Organic Compounds by GC/MS | SW846 | TAL EDI |
| 537 (modified) | Fluorinated Alkyl Substances | EPA | TAL SAC |
| 3535 | Solid-Phase Extraction (SPE) | SW846 | TAL SAC |
| 5030C | Purge and Trap | SW846 | TAL EDI |

**Protocol References:**

EPA = US Environmental Protection Agency

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

**Laboratory References:**

TAL EDI = Eurofins TestAmerica, Edison, 777 New Durham Road, Edison, NJ 08817, TEL (732)549-3900

TAL SAC = Eurofins TestAmerica, Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

## Client Sample ID: MW-203

**Date Collected: 09/02/20 13:00**
**Date Received: 09/03/20 16:45**

## Lab Sample ID: 460-217547-1

**Matrix: Water**

### Method: 8260C - Volatile Organic Compounds by GC/MS

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1-Trichloroethane | 0.24 | U | 1.0 | 0.24 | ug/L | | | 09/10/20 00:42 | 1 |
| 1,1,2,2-Tetrachloroethane | 0.37 | U | 1.0 | 0.37 | ug/L | | | 09/10/20 00:42 | 1 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 0.31 | U | 1.0 | 0.31 | ug/L | | | 09/10/20 00:42 | 1 |
| 1,1,2-Trichloroethane | 0.43 | U | 1.0 | 0.43 | ug/L | | | 09/10/20 00:42 | 1 |
| 1,1-Dichloroethane | 0.26 | U | 1.0 | 0.26 | ug/L | | | 09/10/20 00:42 | 1 |
| 1,1-Dichloroethene | 0.26 | U | 1.0 | 0.26 | ug/L | | | 09/10/20 00:42 | 1 |
| 1,2,3-Trichlorobenzene | 0.36 | U | 1.0 | 0.36 | ug/L | | | 09/10/20 00:42 | 1 |
| 1,2,4-Trichlorobenzene | 0.37 | U | 1.0 | 0.37 | ug/L | | | 09/10/20 00:42 | 1 |
| 1,2-Dichloropropane | 0.35 | U | 1.0 | 0.35 | ug/L | | | 09/10/20 00:42 | 1 |
| 1,3-Dichlorobenzene | 0.34 | U | 1.0 | 0.34 | ug/L | | | 09/10/20 00:42 | 1 |
| 1,4-Dichlorobenzene | 0.33 | U | 1.0 | 0.33 | ug/L | | | 09/10/20 00:42 | 1 |
| 1,4-Dioxane | 28 | U | 50 | 28 | ug/L | | | 09/10/20 00:42 | 1 |
| **2-Butanone (MEK)** | **2.2** | **J** | 5.0 | 1.9 | ug/L | | | 09/10/20 00:42 | 1 |
| 2-Hexanone | 1.1 | U | 5.0 | 1.1 | ug/L | | | 09/10/20 00:42 | 1 |
| 4-Methyl-2-pentanone (MIBK) | 1.3 | U | 5.0 | 1.3 | ug/L | | | 09/10/20 00:42 | 1 |
| **Acetone** | **5.3** | | 5.0 | 4.4 | ug/L | | | 09/10/20 00:42 | 1 |
| Benzene | 0.20 | U | 1.0 | 0.20 | ug/L | | | 09/10/20 00:42 | 1 |
| Bromoform | 0.54 | U | 1.0 | 0.54 | ug/L | | | 09/10/20 00:42 | 1 |
| Bromomethane | 0.55 | U | 1.0 | 0.55 | ug/L | | | 09/10/20 00:42 | 1 |
| Carbon disulfide | 0.82 | U | 1.0 | 0.82 | ug/L | | | 09/10/20 00:42 | 1 |
| Carbon tetrachloride | 0.21 | U | 1.0 | 0.21 | ug/L | | | 09/10/20 00:42 | 1 |
| Chlorobenzene | 0.38 | U | 1.0 | 0.38 | ug/L | | | 09/10/20 00:42 | 1 |
| Chlorobromomethane | 0.41 | U | 1.0 | 0.41 | ug/L | | | 09/10/20 00:42 | 1 |
| Chlorodibromomethane | 0.28 | U | 1.0 | 0.28 | ug/L | | | 09/10/20 00:42 | 1 |
| Chloroethane | 0.32 | U | 1.0 | 0.32 | ug/L | | | 09/10/20 00:42 | 1 |
| Chloroform | 0.33 | U | 1.0 | 0.33 | ug/L | | | 09/10/20 00:42 | 1 |
| Chloromethane | 0.40 | U | 1.0 | 0.40 | ug/L | | | 09/10/20 00:42 | 1 |
| cis-1,2-Dichloroethene | 0.22 | U | 1.0 | 0.22 | ug/L | | | 09/10/20 00:42 | 1 |
| cis-1,3-Dichloropropene | 0.22 | U | 1.0 | 0.22 | ug/L | | | 09/10/20 00:42 | 1 |
| **Cyclohexane** | **0.57** | **J** | 1.0 | 0.32 | ug/L | | | 09/10/20 00:42 | 1 |
| Dichlorobromomethane | 0.34 | U | 1.0 | 0.34 | ug/L | | | 09/10/20 00:42 | 1 |
| Dichlorodifluoromethane | 0.31 | U | 1.0 | 0.31 | ug/L | | | 09/10/20 00:42 | 1 |
| **Ethylbenzene** | **0.55** | **J** | 1.0 | 0.30 | ug/L | | | 09/10/20 00:42 | 1 |
| Ethylene Dibromide | 0.50 | U | 1.0 | 0.50 | ug/L | | | 09/10/20 00:42 | 1 |
| **Isopropylbenzene** | **0.68** | **J** | 1.0 | 0.34 | ug/L | | | 09/10/20 00:42 | 1 |
| Methyl acetate | 0.79 | U | 5.0 | 0.79 | ug/L | | | 09/10/20 00:42 | 1 |
| Methyl tert-butyl ether | 0.47 | U | 1.0 | 0.47 | ug/L | | | 09/10/20 00:42 | 1 |
| **Methylcyclohexane** | **0.48** | **J** | 1.0 | 0.26 | ug/L | | | 09/10/20 00:42 | 1 |
| Methylene Chloride | 0.32 | U | 1.0 | 0.32 | ug/L | | | 09/10/20 00:42 | 1 |
| m-Xylene & p-Xylene | 0.30 | U | 1.0 | 0.30 | ug/L | | | 09/10/20 00:42 | 1 |
| o-Xylene | 0.36 | U | 1.0 | 0.36 | ug/L | | | 09/10/20 00:42 | 1 |
| Styrene | 0.42 | U | 1.0 | 0.42 | ug/L | | | 09/10/20 00:42 | 1 |
| Tetrachloroethene | 0.25 | U | 1.0 | 0.25 | ug/L | | | 09/10/20 00:42 | 1 |
| Toluene | 0.38 | U | 1.0 | 0.38 | ug/L | | | 09/10/20 00:42 | 1 |
| trans-1,2-Dichloroethene | 0.24 | U | 1.0 | 0.24 | ug/L | | | 09/10/20 00:42 | 1 |
| trans-1,3-Dichloropropene | 0.49 | U | 1.0 | 0.49 | ug/L | | | 09/10/20 00:42 | 1 |
| Trichloroethene | 0.31 | U | 1.0 | 0.31 | ug/L | | | 09/10/20 00:42 | 1 |
| Trichlorofluoromethane | 0.32 | U | 1.0 | 0.32 | ug/L | | | 09/10/20 00:42 | 1 |
| Vinyl chloride | 0.17 | U | 1.0 | 0.17 | ug/L | | | 09/10/20 00:42 | 1 |

## Client Sample ID: MW-203

**Date Collected: 09/02/20 13:00**
**Date Received: 09/03/20 16:45**

## Lab Sample ID: 460-217547-1

**Matrix: Water**

### Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,2-Dichloroethane | 0.43 | U | 1.0 | 0.43 | ug/L | | | 09/10/20 00:42 | 1 |
| 1,2-Dichlorobenzene | 0.43 | U | 1.0 | 0.43 | ug/L | | | 09/10/20 00:42 | 1 |
| 1,2-Dibromo-3-Chloropropane | 0.38 | U | 1.0 | 0.38 | ug/L | | | 09/10/20 00:42 | 1 |

| *Tentatively Identified Compound* | *Est. Result* | *Qualifier* | *Unit* | *D* | *RT* | *CAS No.* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|---|---|---|
| *Tentatively Identified Compound* | *None* | | *ug/L* | | | | | *09/10/20 00:42* | *1* |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1,2-Dichloroethane-d4 (Surr)* | *91* | | *75 - 123* | | *09/10/20 00:42* | *1* |
| *4-Bromofluorobenzene* | *104* | | *76 - 120* | | *09/10/20 00:42* | *1* |
| *Dibromofluoromethane (Surr)* | *99* | | *77 - 124* | | *09/10/20 00:42* | *1* |
| *Toluene-d8 (Surr)* | *96* | | *80 - 120* | | *09/10/20 00:42* | *1* |

### Method: 537 (modified) - Fluorinated Alkyl Substances

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Perfluorobutanoic acid (PFBA)** | **2.13** | **B** | 2.00 | 0.35 | ng/L | | 09/09/20 18:52 | 09/11/20 12:41 | 1 |
| **Perfluoropentanoic acid (PFPeA)** | **1.71** | **J** | 2.00 | 0.49 | ng/L | | 09/09/20 18:52 | 09/11/20 12:41 | 1 |
| **Perfluorohexanoic acid (PFHxA)** | **2.03** | | 2.00 | 0.58 | ng/L | | 09/09/20 18:52 | 09/11/20 12:41 | 1 |
| **Perfluoroheptanoic acid (PFHpA)** | **1.57** | **J** | 2.00 | 0.25 | ng/L | | 09/09/20 18:52 | 09/11/20 12:41 | 1 |
| **Perfluorooctanoic acid (PFOA)** | **5.15** | | 2.00 | 0.85 | ng/L | | 09/09/20 18:52 | 09/11/20 12:41 | 1 |
| **Perfluorononanoic acid (PFNA)** | **0.76** | **J** | 2.00 | 0.27 | ng/L | | 09/09/20 18:52 | 09/11/20 12:41 | 1 |
| **Perfluorodecanoic acid (PFDA)** | **0.35** | **J** | 2.00 | 0.31 | ng/L | | 09/09/20 18:52 | 09/11/20 12:41 | 1 |
| Perfluoroundecanoic acid (PFUnA) | 1.10 | U | 2.00 | 1.10 | ng/L | | 09/09/20 18:52 | 09/11/20 12:41 | 1 |
| Perfluorododecanoic acid (PFDoA) | 0.55 | U | 2.00 | 0.55 | ng/L | | 09/09/20 18:52 | 09/11/20 12:41 | 1 |
| Perfluorotridecanoic acid (PFTriA) | 1.30 | U | 2.00 | 1.30 | ng/L | | 09/09/20 18:52 | 09/11/20 12:41 | 1 |
| Perfluorotetradecanoic acid (PFTeA) | 0.29 | U | 2.00 | 0.29 | ng/L | | 09/09/20 18:52 | 09/11/20 12:41 | 1 |
| Perfluorobutanesulfonic acid (PFBS) | 0.20 | U | 2.00 | 0.20 | ng/L | | 09/09/20 18:52 | 09/11/20 12:41 | 1 |
| **Perfluorohexanesulfonic acid (PFHxS)** | **1.47** | **J B** | 2.00 | 0.17 | ng/L | | 09/09/20 18:52 | 09/11/20 12:41 | 1 |
| Perfluoroheptanesulfonic Acid (PFHpS) | 0.19 | U | 2.00 | 0.19 | ng/L | | 09/09/20 18:52 | 09/11/20 12:41 | 1 |
| **Perfluorooctanesulfonic acid (PFOS)** | **25.0** | | 2.00 | 0.54 | ng/L | | 09/09/20 18:52 | 09/11/20 12:41 | 1 |
| Perfluorodecanesulfonic acid (PFDS) | 0.32 | U | 2.00 | 0.32 | ng/L | | 09/09/20 18:52 | 09/11/20 12:41 | 1 |
| **Perfluorooctanesulfonamide (FOSA)** | **2.31** | **B** | 2.00 | 0.35 | ng/L | | 09/09/20 18:52 | 09/11/20 12:41 | 1 |
| N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA) | 3.10 | U | 20.0 | 3.10 | ng/L | | 09/09/20 18:52 | 09/11/20 12:41 | 1 |
| **N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)** | **5.65** | **J** | 20.0 | 1.90 | ng/L | | 09/09/20 18:52 | 09/11/20 12:41 | 1 |
| **6:2 FTS** | **11.1** | **J** | 20.0 | 2.00 | ng/L | | 09/09/20 18:52 | 09/11/20 12:41 | 1 |
| 8:2 FTS | 2.00 | U | 20.0 | 2.00 | ng/L | | 09/09/20 18:52 | 09/11/20 12:41 | 1 |

| *Isotope Dilution* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *13C4 PFBA* | *36* | | *25 - 150* | *09/09/20 18:52* | *09/11/20 12:41* | *1* |
| *13C5 PFPeA* | *57* | | *25 - 150* | *09/09/20 18:52* | *09/11/20 12:41* | *1* |
| *13C2 PFHxA* | *67* | | *25 - 150* | *09/09/20 18:52* | *09/11/20 12:41* | *1* |
| *13C4 PFHpA* | *77* | | *25 - 150* | *09/09/20 18:52* | *09/11/20 12:41* | *1* |
| *13C4 PFOA* | *82* | | *25 - 150* | *09/09/20 18:52* | *09/11/20 12:41* | *1* |
| *13C5 PFNA* | *86* | | *25 - 150* | *09/09/20 18:52* | *09/11/20 12:41* | *1* |
| *13C2 PFDA* | *81* | | *25 - 150* | *09/09/20 18:52* | *09/11/20 12:41* | *1* |
| *13C2 PFUnA* | *75* | | *25 - 150* | *09/09/20 18:52* | *09/11/20 12:41* | *1* |

## Client Sample ID: MW-203

**Date Collected: 09/02/20 13:00**
**Date Received: 09/03/20 16:45**

## Lab Sample ID: 460-217547-1

**Matrix: Water**

### Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

| *Isotope Dilution* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *13C2 PFDoA* | *74* | | *25 - 150* | *09/09/20 18:52* | *09/11/20 12:41* | *1* |
| *13C2 PFTeDA* | *69* | | *25 - 150* | *09/09/20 18:52* | *09/11/20 12:41* | *1* |
| *13C3 PFBS* | *93* | | *25 - 150* | *09/09/20 18:52* | *09/11/20 12:41* | *1* |
| *18O2 PFHxS* | *100* | | *25 - 150* | *09/09/20 18:52* | *09/11/20 12:41* | *1* |
| *13C4 PFOS* | *97* | | *25 - 150* | *09/09/20 18:52* | *09/11/20 12:41* | *1* |
| *13C8 FOSA* | *75* | | *25 - 150* | *09/09/20 18:52* | *09/11/20 12:41* | *1* |
| *d3-NMeFOSAA* | *73* | | *25 - 150* | *09/09/20 18:52* | *09/11/20 12:41* | *1* |
| *d5-NEtFOSAA* | *76* | | *25 - 150* | *09/09/20 18:52* | *09/11/20 12:41* | *1* |
| *M2-6:2 FTS* | *213* | **5* | *25 - 150* | *09/09/20 18:52* | *09/11/20 12:41* | *1* |
| *M2-8:2 FTS* | *166* | **5* | *25 - 150* | *09/09/20 18:52* | *09/11/20 12:41* | *1* |

## Client Sample ID: MW-204

**Date Collected: 09/02/20 11:30**
**Date Received: 09/03/20 16:45**

## Lab Sample ID: 460-217547-2

**Matrix: Water**

### Method: 8260C - Volatile Organic Compounds by GC/MS

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1-Trichloroethane | 0.24 | U | 1.0 | 0.24 | ug/L | | | 09/09/20 06:21 | 1 |
| 1,1,2,2-Tetrachloroethane | 0.37 | U | 1.0 | 0.37 | ug/L | | | 09/09/20 06:21 | 1 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 0.31 | U | 1.0 | 0.31 | ug/L | | | 09/09/20 06:21 | 1 |
| 1,1,2-Trichloroethane | 0.43 | U | 1.0 | 0.43 | ug/L | | | 09/09/20 06:21 | 1 |
| 1,1-Dichloroethane | 0.26 | U | 1.0 | 0.26 | ug/L | | | 09/09/20 06:21 | 1 |
| 1,1-Dichloroethene | 0.26 | U | 1.0 | 0.26 | ug/L | | | 09/09/20 06:21 | 1 |
| 1,2,3-Trichlorobenzene | 0.36 | U | 1.0 | 0.36 | ug/L | | | 09/09/20 06:21 | 1 |
| 1,2,4-Trichlorobenzene | 0.37 | U | 1.0 | 0.37 | ug/L | | | 09/09/20 06:21 | 1 |
| 1,2-Dichloropropane | 0.35 | U | 1.0 | 0.35 | ug/L | | | 09/09/20 06:21 | 1 |
| 1,3-Dichlorobenzene | 0.34 | U | 1.0 | 0.34 | ug/L | | | 09/09/20 06:21 | 1 |
| 1,4-Dichlorobenzene | 0.33 | U | 1.0 | 0.33 | ug/L | | | 09/09/20 06:21 | 1 |
| 1,4-Dioxane | 28 | U | 50 | 28 | ug/L | | | 09/09/20 06:21 | 1 |
| 2-Butanone (MEK) | 1.9 | U | 5.0 | 1.9 | ug/L | | | 09/09/20 06:21 | 1 |
| 2-Hexanone | 1.1 | U | 5.0 | 1.1 | ug/L | | | 09/09/20 06:21 | 1 |
| 4-Methyl-2-pentanone (MIBK) | 1.3 | U | 5.0 | 1.3 | ug/L | | | 09/09/20 06:21 | 1 |
| Acetone | 4.4 | U | 5.0 | 4.4 | ug/L | | | 09/09/20 06:21 | 1 |
| Benzene | 0.20 | U | 1.0 | 0.20 | ug/L | | | 09/09/20 06:21 | 1 |
| Bromoform | 0.54 | U | 1.0 | 0.54 | ug/L | | | 09/09/20 06:21 | 1 |
| Bromomethane | 0.55 | U * | 1.0 | 0.55 | ug/L | | | 09/09/20 06:21 | 1 |
| Carbon disulfide | 0.82 | U | 1.0 | 0.82 | ug/L | | | 09/09/20 06:21 | 1 |
| Carbon tetrachloride | 0.21 | U | 1.0 | 0.21 | ug/L | | | 09/09/20 06:21 | 1 |
| Chlorobenzene | 0.38 | U | 1.0 | 0.38 | ug/L | | | 09/09/20 06:21 | 1 |
| Chlorobromomethane | 0.41 | U | 1.0 | 0.41 | ug/L | | | 09/09/20 06:21 | 1 |
| Chlorodibromomethane | 0.28 | U | 1.0 | 0.28 | ug/L | | | 09/09/20 06:21 | 1 |
| Chloroethane | 0.32 | U | 1.0 | 0.32 | ug/L | | | 09/09/20 06:21 | 1 |
| Chloroform | 0.33 | U | 1.0 | 0.33 | ug/L | | | 09/09/20 06:21 | 1 |
| Chloromethane | 0.40 | U | 1.0 | 0.40 | ug/L | | | 09/09/20 06:21 | 1 |
| cis-1,2-Dichloroethene | 0.22 | U | 1.0 | 0.22 | ug/L | | | 09/09/20 06:21 | 1 |
| cis-1,3-Dichloropropene | 0.22 | U | 1.0 | 0.22 | ug/L | | | 09/09/20 06:21 | 1 |
| Cyclohexane | 0.32 | U | 1.0 | 0.32 | ug/L | | | 09/09/20 06:21 | 1 |
| Dichlorobromomethane | 0.34 | U | 1.0 | 0.34 | ug/L | | | 09/09/20 06:21 | 1 |
| Dichlorodifluoromethane | 0.31 | U | 1.0 | 0.31 | ug/L | | | 09/09/20 06:21 | 1 |
| Ethylbenzene | 0.30 | U | 1.0 | 0.30 | ug/L | | | 09/09/20 06:21 | 1 |

## Client Sample ID: MW-204

**Date Collected: 09/02/20 11:30**
**Date Received: 09/03/20 16:45**

## Lab Sample ID: 460-217547-2

**Matrix: Water**

### Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Ethylene Dibromide | 0.50 | U | 1.0 | 0.50 | ug/L | | | 09/09/20 06:21 | 1 |
| Isopropylbenzene | 0.34 | U | 1.0 | 0.34 | ug/L | | | 09/09/20 06:21 | 1 |
| Methyl acetate | 0.79 | U | 5.0 | 0.79 | ug/L | | | 09/09/20 06:21 | 1 |
| Methyl tert-butyl ether | 0.47 | U | 1.0 | 0.47 | ug/L | | | 09/09/20 06:21 | 1 |
| Methylcyclohexane | 0.26 | U | 1.0 | 0.26 | ug/L | | | 09/09/20 06:21 | 1 |
| Methylene Chloride | 0.32 | U | 1.0 | 0.32 | ug/L | | | 09/09/20 06:21 | 1 |
| m-Xylene & p-Xylene | 0.30 | U | 1.0 | 0.30 | ug/L | | | 09/09/20 06:21 | 1 |
| o-Xylene | 0.36 | U | 1.0 | 0.36 | ug/L | | | 09/09/20 06:21 | 1 |
| Styrene | 0.42 | U | 1.0 | 0.42 | ug/L | | | 09/09/20 06:21 | 1 |
| Tetrachloroethene | 0.25 | U | 1.0 | 0.25 | ug/L | | | 09/09/20 06:21 | 1 |
| Toluene | 0.38 | U | 1.0 | 0.38 | ug/L | | | 09/09/20 06:21 | 1 |
| trans-1,2-Dichloroethene | 0.24 | U | 1.0 | 0.24 | ug/L | | | 09/09/20 06:21 | 1 |
| trans-1,3-Dichloropropene | 0.49 | U | 1.0 | 0.49 | ug/L | | | 09/09/20 06:21 | 1 |
| Trichloroethene | 0.31 | U | 1.0 | 0.31 | ug/L | | | 09/09/20 06:21 | 1 |
| Trichlorofluoromethane | 0.32 | U | 1.0 | 0.32 | ug/L | | | 09/09/20 06:21 | 1 |
| Vinyl chloride | 0.17 | U | 1.0 | 0.17 | ug/L | | | 09/09/20 06:21 | 1 |
| 1,2-Dichloroethane | 0.43 | U | 1.0 | 0.43 | ug/L | | | 09/09/20 06:21 | 1 |
| 1,2-Dichlorobenzene | 0.43 | U | 1.0 | 0.43 | ug/L | | | 09/09/20 06:21 | 1 |
| 1,2-Dibromo-3-Chloropropane | 0.38 | U | 1.0 | 0.38 | ug/L | | | 09/09/20 06:21 | 1 |

| *Tentatively Identified Compound* | *Est. Result* | *Qualifier* | *Unit* | *D* | *RT* | *CAS No.* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|---|---|---|
| *Tentatively Identified Compound* | *None* | | *ug/L* | | | | | *09/09/20 06:21* | *1* |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1,2-Dichloroethane-d4 (Surr)* | *99* | | *75 - 123* | | *09/09/20 06:21* | *1* |
| *4-Bromofluorobenzene* | *110* | | *76 - 120* | | *09/09/20 06:21* | *1* |
| *Dibromofluoromethane (Surr)* | *106* | | *77 - 124* | | *09/09/20 06:21* | *1* |
| *Toluene-d8 (Surr)* | *107* | | *80 - 120* | | *09/09/20 06:21* | *1* |

### Method: 537 (modified) - Fluorinated Alkyl Substances

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Perfluorobutanoic acid (PFBA)** | **3.11** | **B** | 1.96 | 0.34 | ng/L | | 09/09/20 18:52 | 09/11/20 12:50 | 1 |
| **Perfluoropentanoic acid (PFPeA)** | **1.26** | **J** | 1.96 | 0.48 | ng/L | | 09/09/20 18:52 | 09/11/20 12:50 | 1 |
| **Perfluorohexanoic acid (PFHxA)** | **1.14** | **J** | 1.96 | 0.57 | ng/L | | 09/09/20 18:52 | 09/11/20 12:50 | 1 |
| **Perfluoroheptanoic acid (PFHpA)** | **1.02** | **J** | 1.96 | 0.24 | ng/L | | 09/09/20 18:52 | 09/11/20 12:50 | 1 |
| **Perfluorooctanoic acid (PFOA)** | **3.94** | | 1.96 | 0.83 | ng/L | | 09/09/20 18:52 | 09/11/20 12:50 | 1 |
| **Perfluorononanoic acid (PFNA)** | **0.46** | **J** | 1.96 | 0.26 | ng/L | | 09/09/20 18:52 | 09/11/20 12:50 | 1 |
| Perfluorodecanoic acid (PFDA) | 0.30 | U | 1.96 | 0.30 | ng/L | | 09/09/20 18:52 | 09/11/20 12:50 | 1 |
| Perfluoroundecanoic acid (PFUnA) | 1.08 | U | 1.96 | 1.08 | ng/L | | 09/09/20 18:52 | 09/11/20 12:50 | 1 |
| Perfluorododecanoic acid (PFDoA) | 0.54 | U | 1.96 | 0.54 | ng/L | | 09/09/20 18:52 | 09/11/20 12:50 | 1 |
| Perfluorotridecanoic acid (PFTriA) | 1.27 | U | 1.96 | 1.27 | ng/L | | 09/09/20 18:52 | 09/11/20 12:50 | 1 |
| Perfluorotetradecanoic acid (PFTeA) | 0.28 | U | 1.96 | 0.28 | ng/L | | 09/09/20 18:52 | 09/11/20 12:50 | 1 |
| **Perfluorobutanesulfonic acid (PFBS)** | **0.64** | **J** | 1.96 | 0.20 | ng/L | | 09/09/20 18:52 | 09/11/20 12:50 | 1 |
| **Perfluorohexanesulfonic acid (PFHxS)** | **1.08** | **J B** | 1.96 | 0.17 | ng/L | | 09/09/20 18:52 | 09/11/20 12:50 | 1 |
| Perfluoroheptanesulfonic Acid (PFHpS) | 0.19 | U | 1.96 | 0.19 | ng/L | | 09/09/20 18:52 | 09/11/20 12:50 | 1 |
| **Perfluorooctanesulfonic acid (PFOS)** | **12.1** | | 1.96 | 0.53 | ng/L | | 09/09/20 18:52 | 09/11/20 12:50 | 1 |
| Perfluorodecanesulfonic acid (PFDS) | 0.31 | U | 1.96 | 0.31 | ng/L | | 09/09/20 18:52 | 09/11/20 12:50 | 1 |

## Client Sample ID: MW-204

**Date Collected: 09/02/20 11:30**
**Date Received: 09/03/20 16:45**

## Lab Sample ID: 460-217547-2

**Matrix: Water**

### Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Perfluorooctanesulfonamide (FOSA)** | **0.57** | **J B** | 1.96 | 0.34 | ng/L | | 09/09/20 18:52 | 09/11/20 12:50 | 1 |
| N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA) | 3.03 | U | 19.6 | 3.03 | ng/L | | 09/09/20 18:52 | 09/11/20 12:50 | 1 |
| N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA) | 1.86 | U | 19.6 | 1.86 | ng/L | | 09/09/20 18:52 | 09/11/20 12:50 | 1 |
| **6:2 FTS** | **2.02** | **J** | 19.6 | 1.96 | ng/L | | 09/09/20 18:52 | 09/11/20 12:50 | 1 |
| 8:2 FTS | 1.96 | U | 19.6 | 1.96 | ng/L | | 09/09/20 18:52 | 09/11/20 12:50 | 1 |

| *Isotope Dilution* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *13C4 PFBA* | *39* | | *25 - 150* | *09/09/20 18:52* | *09/11/20 12:50* | *1* |
| *13C5 PFPeA* | *54* | | *25 - 150* | *09/09/20 18:52* | *09/11/20 12:50* | *1* |
| *13C2 PFHxA* | *63* | | *25 - 150* | *09/09/20 18:52* | *09/11/20 12:50* | *1* |
| *13C4 PFHpA* | *66* | | *25 - 150* | *09/09/20 18:52* | *09/11/20 12:50* | *1* |
| *13C4 PFOA* | *66* | | *25 - 150* | *09/09/20 18:52* | *09/11/20 12:50* | *1* |
| *13C5 PFNA* | *70* | | *25 - 150* | *09/09/20 18:52* | *09/11/20 12:50* | *1* |
| *13C2 PFDA* | *70* | | *25 - 150* | *09/09/20 18:52* | *09/11/20 12:50* | *1* |
| *13C2 PFUnA* | *69* | | *25 - 150* | *09/09/20 18:52* | *09/11/20 12:50* | *1* |
| *13C2 PFDoA* | *70* | | *25 - 150* | *09/09/20 18:52* | *09/11/20 12:50* | *1* |
| *13C2 PFTeDA* | *58* | | *25 - 150* | *09/09/20 18:52* | *09/11/20 12:50* | *1* |
| *13C3 PFBS* | *91* | | *25 - 150* | *09/09/20 18:52* | *09/11/20 12:50* | *1* |
| *18O2 PFHxS* | *90* | | *25 - 150* | *09/09/20 18:52* | *09/11/20 12:50* | *1* |
| *13C4 PFOS* | *87* | | *25 - 150* | *09/09/20 18:52* | *09/11/20 12:50* | *1* |
| *13C8 FOSA* | *66* | | *25 - 150* | *09/09/20 18:52* | *09/11/20 12:50* | *1* |
| *d3-NMeFOSAA* | *56* | | *25 - 150* | *09/09/20 18:52* | *09/11/20 12:50* | *1* |
| *d5-NEtFOSAA* | *67* | | *25 - 150* | *09/09/20 18:52* | *09/11/20 12:50* | *1* |
| *M2-6:2 FTS* | *143* | | *25 - 150* | *09/09/20 18:52* | *09/11/20 12:50* | *1* |
| *M2-8:2 FTS* | *113* | | *25 - 150* | *09/09/20 18:52* | *09/11/20 12:50* | *1* |

## Client Sample ID: MW-205

**Date Collected: 09/02/20 12:40**
**Date Received: 09/03/20 16:45**

## Lab Sample ID: 460-217547-3

**Matrix: Water**

### Method: 8260C - Volatile Organic Compounds by GC/MS

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1-Trichloroethane | 0.24 | U | 1.0 | 0.24 | ug/L | | | 09/09/20 06:44 | 1 |
| 1,1,2,2-Tetrachloroethane | 0.37 | U | 1.0 | 0.37 | ug/L | | | 09/09/20 06:44 | 1 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 0.31 | U | 1.0 | 0.31 | ug/L | | | 09/09/20 06:44 | 1 |
| 1,1,2-Trichloroethane | 0.43 | U | 1.0 | 0.43 | ug/L | | | 09/09/20 06:44 | 1 |
| 1,1-Dichloroethane | 0.26 | U | 1.0 | 0.26 | ug/L | | | 09/09/20 06:44 | 1 |
| 1,1-Dichloroethene | 0.26 | U | 1.0 | 0.26 | ug/L | | | 09/09/20 06:44 | 1 |
| 1,2,3-Trichlorobenzene | 0.36 | U | 1.0 | 0.36 | ug/L | | | 09/09/20 06:44 | 1 |
| 1,2,4-Trichlorobenzene | 0.37 | U | 1.0 | 0.37 | ug/L | | | 09/09/20 06:44 | 1 |
| 1,2-Dichloropropane | 0.35 | U | 1.0 | 0.35 | ug/L | | | 09/09/20 06:44 | 1 |
| 1,3-Dichlorobenzene | 0.34 | U | 1.0 | 0.34 | ug/L | | | 09/09/20 06:44 | 1 |
| 1,4-Dichlorobenzene | 0.33 | U | 1.0 | 0.33 | ug/L | | | 09/09/20 06:44 | 1 |
| 1,4-Dioxane | 28 | U | 50 | 28 | ug/L | | | 09/09/20 06:44 | 1 |
| 2-Butanone (MEK) | 1.9 | U | 5.0 | 1.9 | ug/L | | | 09/09/20 06:44 | 1 |
| 2-Hexanone | 1.1 | U | 5.0 | 1.1 | ug/L | | | 09/09/20 06:44 | 1 |
| 4-Methyl-2-pentanone (MIBK) | 1.3 | U | 5.0 | 1.3 | ug/L | | | 09/09/20 06:44 | 1 |
| Acetone | 4.4 | U | 5.0 | 4.4 | ug/L | | | 09/09/20 06:44 | 1 |

## Client Sample ID: MW-205

**Date Collected: 09/02/20 12:40**
**Date Received: 09/03/20 16:45**

## Lab Sample ID: 460-217547-3

**Matrix: Water**

### Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Benzene | 0.20 | U | 1.0 | 0.20 | ug/L | | | 09/09/20 06:44 | 1 |
| Bromoform | 0.54 | U | 1.0 | 0.54 | ug/L | | | 09/09/20 06:44 | 1 |
| Bromomethane | 0.55 | U * | 1.0 | 0.55 | ug/L | | | 09/09/20 06:44 | 1 |
| Carbon disulfide | 0.82 | U | 1.0 | 0.82 | ug/L | | | 09/09/20 06:44 | 1 |
| Carbon tetrachloride | 0.21 | U | 1.0 | 0.21 | ug/L | | | 09/09/20 06:44 | 1 |
| Chlorobenzene | 0.38 | U | 1.0 | 0.38 | ug/L | | | 09/09/20 06:44 | 1 |
| Chlorobromomethane | 0.41 | U | 1.0 | 0.41 | ug/L | | | 09/09/20 06:44 | 1 |
| Chlorodibromomethane | 0.28 | U | 1.0 | 0.28 | ug/L | | | 09/09/20 06:44 | 1 |
| Chloroethane | 0.32 | U | 1.0 | 0.32 | ug/L | | | 09/09/20 06:44 | 1 |
| Chloroform | 0.33 | U | 1.0 | 0.33 | ug/L | | | 09/09/20 06:44 | 1 |
| Chloromethane | 0.40 | U | 1.0 | 0.40 | ug/L | | | 09/09/20 06:44 | 1 |
| cis-1,2-Dichloroethene | 0.22 | U | 1.0 | 0.22 | ug/L | | | 09/09/20 06:44 | 1 |
| cis-1,3-Dichloropropene | 0.22 | U | 1.0 | 0.22 | ug/L | | | 09/09/20 06:44 | 1 |
| Cyclohexane | 0.32 | U | 1.0 | 0.32 | ug/L | | | 09/09/20 06:44 | 1 |
| Dichlorobromomethane | 0.34 | U | 1.0 | 0.34 | ug/L | | | 09/09/20 06:44 | 1 |
| Dichlorodifluoromethane | 0.31 | U | 1.0 | 0.31 | ug/L | | | 09/09/20 06:44 | 1 |
| Ethylbenzene | 0.30 | U | 1.0 | 0.30 | ug/L | | | 09/09/20 06:44 | 1 |
| Ethylene Dibromide | 0.50 | U | 1.0 | 0.50 | ug/L | | | 09/09/20 06:44 | 1 |
| Isopropylbenzene | 0.34 | U | 1.0 | 0.34 | ug/L | | | 09/09/20 06:44 | 1 |
| Methyl acetate | 0.79 | U | 5.0 | 0.79 | ug/L | | | 09/09/20 06:44 | 1 |
| Methyl tert-butyl ether | 0.47 | U | 1.0 | 0.47 | ug/L | | | 09/09/20 06:44 | 1 |
| Methylcyclohexane | 0.26 | U | 1.0 | 0.26 | ug/L | | | 09/09/20 06:44 | 1 |
| Methylene Chloride | 0.32 | U | 1.0 | 0.32 | ug/L | | | 09/09/20 06:44 | 1 |
| m-Xylene & p-Xylene | 0.30 | U | 1.0 | 0.30 | ug/L | | | 09/09/20 06:44 | 1 |
| o-Xylene | 0.36 | U | 1.0 | 0.36 | ug/L | | | 09/09/20 06:44 | 1 |
| Styrene | 0.42 | U | 1.0 | 0.42 | ug/L | | | 09/09/20 06:44 | 1 |
| Tetrachloroethene | 0.25 | U | 1.0 | 0.25 | ug/L | | | 09/09/20 06:44 | 1 |
| Toluene | 0.38 | U | 1.0 | 0.38 | ug/L | | | 09/09/20 06:44 | 1 |
| trans-1,2-Dichloroethene | 0.24 | U | 1.0 | 0.24 | ug/L | | | 09/09/20 06:44 | 1 |
| trans-1,3-Dichloropropene | 0.49 | U | 1.0 | 0.49 | ug/L | | | 09/09/20 06:44 | 1 |
| Trichloroethene | 0.31 | U | 1.0 | 0.31 | ug/L | | | 09/09/20 06:44 | 1 |
| Trichlorofluoromethane | 0.32 | U | 1.0 | 0.32 | ug/L | | | 09/09/20 06:44 | 1 |
| Vinyl chloride | 0.17 | U | 1.0 | 0.17 | ug/L | | | 09/09/20 06:44 | 1 |
| 1,2-Dichloroethane | 0.43 | U | 1.0 | 0.43 | ug/L | | | 09/09/20 06:44 | 1 |
| 1,2-Dichlorobenzene | 0.43 | U | 1.0 | 0.43 | ug/L | | | 09/09/20 06:44 | 1 |
| 1,2-Dibromo-3-Chloropropane | 0.38 | U | 1.0 | 0.38 | ug/L | | | 09/09/20 06:44 | 1 |

| *Tentatively Identified Compound* | *Est. Result* | *Qualifier* | *Unit* | *D* | *RT* | *CAS No.* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|---|---|---|
| *Tentatively Identified Compound* | *None* | | *ug/L* | | | | | *09/09/20 06:44* | *1* |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1,2-Dichloroethane-d4 (Surr)* | *91* | | *75 - 123* | | *09/09/20 06:44* | *1* |
| *4-Bromofluorobenzene* | *99* | | *76 - 120* | | *09/09/20 06:44* | *1* |
| *Dibromofluoromethane (Surr)* | *99* | | *77 - 124* | | *09/09/20 06:44* | *1* |
| *Toluene-d8 (Surr)* | *98* | | *80 - 120* | | *09/09/20 06:44* | *1* |

### Method: 537 (modified) - Fluorinated Alkyl Substances

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Perfluorobutanoic acid (PFBA)** | **0.59** | **J B** | 1.99 | 0.35 | ng/L | | 09/09/20 18:52 | 09/11/20 13:00 | 1 |
| Perfluoropentanoic acid (PFPeA) | 0.49 | U | 1.99 | 0.49 | ng/L | | 09/09/20 18:52 | 09/11/20 13:00 | 1 |

## Client Sample ID: MW-205

**Date Collected: 09/02/20 12:40**
**Date Received: 09/03/20 16:45**

## Lab Sample ID: 460-217547-3

**Matrix: Water**

### Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Perfluorohexanoic acid (PFHxA) | 0.58 | U | 1.99 | 0.58 | ng/L | | 09/09/20 18:52 | 09/11/20 13:00 | 1 |
| Perfluoroheptanoic acid (PFHpA) | 0.25 | U | 1.99 | 0.25 | ng/L | | 09/09/20 18:52 | 09/11/20 13:00 | 1 |
| Perfluorooctanoic acid (PFOA) | 0.84 | U | 1.99 | 0.84 | ng/L | | 09/09/20 18:52 | 09/11/20 13:00 | 1 |
| Perfluorononanoic acid (PFNA) | 0.27 | U | 1.99 | 0.27 | ng/L | | 09/09/20 18:52 | 09/11/20 13:00 | 1 |
| Perfluorodecanoic acid (PFDA) | 0.31 | U | 1.99 | 0.31 | ng/L | | 09/09/20 18:52 | 09/11/20 13:00 | 1 |
| Perfluoroundecanoic acid (PFUnA) | 1.09 | U | 1.99 | 1.09 | ng/L | | 09/09/20 18:52 | 09/11/20 13:00 | 1 |
| Perfluorododecanoic acid (PFDoA) | 0.55 | U | 1.99 | 0.55 | ng/L | | 09/09/20 18:52 | 09/11/20 13:00 | 1 |
| Perfluorotridecanoic acid (PFTriA) | 1.29 | U | 1.99 | 1.29 | ng/L | | 09/09/20 18:52 | 09/11/20 13:00 | 1 |
| Perfluorotetradecanoic acid (PFTeA) | 0.29 | U | 1.99 | 0.29 | ng/L | | 09/09/20 18:52 | 09/11/20 13:00 | 1 |
| **Perfluorobutanesulfonic acid (PFBS)** | **0.20** | **J** | 1.99 | 0.20 | ng/L | | 09/09/20 18:52 | 09/11/20 13:00 | 1 |
| **Perfluorohexanesulfonic acid (PFHxS)** | **0.44** | **J B** | 1.99 | 0.17 | ng/L | | 09/09/20 18:52 | 09/11/20 13:00 | 1 |
| Perfluoroheptanesulfonic Acid (PFHpS) | 0.19 | U | 1.99 | 0.19 | ng/L | | 09/09/20 18:52 | 09/11/20 13:00 | 1 |
| **Perfluorooctanesulfonic acid (PFOS)** | **0.93** | **J** | 1.99 | 0.54 | ng/L | | 09/09/20 18:52 | 09/11/20 13:00 | 1 |
| Perfluorodecanesulfonic acid (PFDS) | 0.32 | U | 1.99 | 0.32 | ng/L | | 09/09/20 18:52 | 09/11/20 13:00 | 1 |
| Perfluorooctanesulfonamide (FOSA) | 0.35 | U | 1.99 | 0.35 | ng/L | | 09/09/20 18:52 | 09/11/20 13:00 | 1 |
| N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA) | 3.08 | U | 19.9 | 3.08 | ng/L | | 09/09/20 18:52 | 09/11/20 13:00 | 1 |
| N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA) | 1.89 | U | 19.9 | 1.89 | ng/L | | 09/09/20 18:52 | 09/11/20 13:00 | 1 |
| 6:2 FTS | 1.99 | U | 19.9 | 1.99 | ng/L | | 09/09/20 18:52 | 09/11/20 13:00 | 1 |
| 8:2 FTS | 1.99 | U | 19.9 | 1.99 | ng/L | | 09/09/20 18:52 | 09/11/20 13:00 | 1 |

| *Isotope Dilution* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *13C4 PFBA* | *58* | | *25 - 150* | *09/09/20 18:52* | *09/11/20 13:00* | *1* |
| *13C5 PFPeA* | *77* | | *25 - 150* | *09/09/20 18:52* | *09/11/20 13:00* | *1* |
| *13C2 PFHxA* | *86* | | *25 - 150* | *09/09/20 18:52* | *09/11/20 13:00* | *1* |
| *13C4 PFHpA* | *88* | | *25 - 150* | *09/09/20 18:52* | *09/11/20 13:00* | *1* |
| *13C4 PFOA* | *92* | | *25 - 150* | *09/09/20 18:52* | *09/11/20 13:00* | *1* |
| *13C5 PFNA* | *91* | | *25 - 150* | *09/09/20 18:52* | *09/11/20 13:00* | *1* |
| *13C2 PFDA* | *84* | | *25 - 150* | *09/09/20 18:52* | *09/11/20 13:00* | *1* |
| *13C2 PFUnA* | *91* | | *25 - 150* | *09/09/20 18:52* | *09/11/20 13:00* | *1* |
| *13C2 PFDoA* | *71* | | *25 - 150* | *09/09/20 18:52* | *09/11/20 13:00* | *1* |
| *13C2 PFTeDA* | *84* | | *25 - 150* | *09/09/20 18:52* | *09/11/20 13:00* | *1* |
| *13C3 PFBS* | *92* | | *25 - 150* | *09/09/20 18:52* | *09/11/20 13:00* | *1* |
| *18O2 PFHxS* | *95* | | *25 - 150* | *09/09/20 18:52* | *09/11/20 13:00* | *1* |
| *13C4 PFOS* | *94* | | *25 - 150* | *09/09/20 18:52* | *09/11/20 13:00* | *1* |
| *13C8 FOSA* | *77* | | *25 - 150* | *09/09/20 18:52* | *09/11/20 13:00* | *1* |
| *d3-NMeFOSAA* | *68* | | *25 - 150* | *09/09/20 18:52* | *09/11/20 13:00* | *1* |
| *d5-NEtFOSAA* | *74* | | *25 - 150* | *09/09/20 18:52* | *09/11/20 13:00* | *1* |
| *M2-6:2 FTS* | *101* | | *25 - 150* | *09/09/20 18:52* | *09/11/20 13:00* | *1* |
| *M2-8:2 FTS* | *101* | | *25 - 150* | *09/09/20 18:52* | *09/11/20 13:00* | *1* |

## Client Sample ID: MW-206

**Date Collected: 09/02/20 10:40**
**Date Received: 09/03/20 16:45**

## Lab Sample ID: 460-217547-4

**Matrix: Water**

### Method: 8260C - Volatile Organic Compounds by GC/MS

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1-Trichloroethane | 0.24 | U | 1.0 | 0.24 | ug/L | | | 09/10/20 01:06 | 1 |
| 1,1,2,2-Tetrachloroethane | 0.37 | U | 1.0 | 0.37 | ug/L | | | 09/10/20 01:06 | 1 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 0.31 | U | 1.0 | 0.31 | ug/L | | | 09/10/20 01:06 | 1 |
| 1,1,2-Trichloroethane | 0.43 | U | 1.0 | 0.43 | ug/L | | | 09/10/20 01:06 | 1 |
| 1,1-Dichloroethane | 0.26 | U | 1.0 | 0.26 | ug/L | | | 09/10/20 01:06 | 1 |
| 1,1-Dichloroethene | 0.26 | U | 1.0 | 0.26 | ug/L | | | 09/10/20 01:06 | 1 |
| 1,2,3-Trichlorobenzene | 0.36 | U | 1.0 | 0.36 | ug/L | | | 09/10/20 01:06 | 1 |
| 1,2,4-Trichlorobenzene | 0.37 | U | 1.0 | 0.37 | ug/L | | | 09/10/20 01:06 | 1 |
| 1,2-Dichloropropane | 0.35 | U | 1.0 | 0.35 | ug/L | | | 09/10/20 01:06 | 1 |
| 1,3-Dichlorobenzene | 0.34 | U | 1.0 | 0.34 | ug/L | | | 09/10/20 01:06 | 1 |
| 1,4-Dichlorobenzene | 0.33 | U | 1.0 | 0.33 | ug/L | | | 09/10/20 01:06 | 1 |
| 1,4-Dioxane | 28 | U | 50 | 28 | ug/L | | | 09/10/20 01:06 | 1 |
| 2-Butanone (MEK) | 1.9 | U | 5.0 | 1.9 | ug/L | | | 09/10/20 01:06 | 1 |
| 2-Hexanone | 1.1 | U | 5.0 | 1.1 | ug/L | | | 09/10/20 01:06 | 1 |
| 4-Methyl-2-pentanone (MIBK) | 1.3 | U | 5.0 | 1.3 | ug/L | | | 09/10/20 01:06 | 1 |
| Acetone | 4.4 | U | 5.0 | 4.4 | ug/L | | | 09/10/20 01:06 | 1 |
| Benzene | 0.20 | U | 1.0 | 0.20 | ug/L | | | 09/10/20 01:06 | 1 |
| Bromoform | 0.54 | U | 1.0 | 0.54 | ug/L | | | 09/10/20 01:06 | 1 |
| Bromomethane | 0.55 | U | 1.0 | 0.55 | ug/L | | | 09/10/20 01:06 | 1 |
| Carbon disulfide | 0.82 | U | 1.0 | 0.82 | ug/L | | | 09/10/20 01:06 | 1 |
| Carbon tetrachloride | 0.21 | U | 1.0 | 0.21 | ug/L | | | 09/10/20 01:06 | 1 |
| Chlorobenzene | 0.38 | U | 1.0 | 0.38 | ug/L | | | 09/10/20 01:06 | 1 |
| Chlorobromomethane | 0.41 | U | 1.0 | 0.41 | ug/L | | | 09/10/20 01:06 | 1 |
| Chlorodibromomethane | 0.28 | U | 1.0 | 0.28 | ug/L | | | 09/10/20 01:06 | 1 |
| Chloroethane | 0.32 | U | 1.0 | 0.32 | ug/L | | | 09/10/20 01:06 | 1 |
| Chloroform | 0.33 | U | 1.0 | 0.33 | ug/L | | | 09/10/20 01:06 | 1 |
| Chloromethane | 0.40 | U | 1.0 | 0.40 | ug/L | | | 09/10/20 01:06 | 1 |
| cis-1,2-Dichloroethene | 0.22 | U | 1.0 | 0.22 | ug/L | | | 09/10/20 01:06 | 1 |
| cis-1,3-Dichloropropene | 0.22 | U | 1.0 | 0.22 | ug/L | | | 09/10/20 01:06 | 1 |
| Cyclohexane | 0.32 | U | 1.0 | 0.32 | ug/L | | | 09/10/20 01:06 | 1 |
| Dichlorobromomethane | 0.34 | U | 1.0 | 0.34 | ug/L | | | 09/10/20 01:06 | 1 |
| **Dichlorodifluoromethane** | **0.60** | **J** | 1.0 | 0.31 | ug/L | | | 09/10/20 01:06 | 1 |
| Ethylbenzene | 0.30 | U | 1.0 | 0.30 | ug/L | | | 09/10/20 01:06 | 1 |
| Ethylene Dibromide | 0.50 | U | 1.0 | 0.50 | ug/L | | | 09/10/20 01:06 | 1 |
| Isopropylbenzene | 0.34 | U | 1.0 | 0.34 | ug/L | | | 09/10/20 01:06 | 1 |
| Methyl acetate | 0.79 | U | 5.0 | 0.79 | ug/L | | | 09/10/20 01:06 | 1 |
| Methyl tert-butyl ether | 0.47 | U | 1.0 | 0.47 | ug/L | | | 09/10/20 01:06 | 1 |
| Methylcyclohexane | 0.26 | U | 1.0 | 0.26 | ug/L | | | 09/10/20 01:06 | 1 |
| Methylene Chloride | 0.32 | U | 1.0 | 0.32 | ug/L | | | 09/10/20 01:06 | 1 |
| m-Xylene & p-Xylene | 0.30 | U | 1.0 | 0.30 | ug/L | | | 09/10/20 01:06 | 1 |
| o-Xylene | 0.36 | U | 1.0 | 0.36 | ug/L | | | 09/10/20 01:06 | 1 |
| Styrene | 0.42 | U | 1.0 | 0.42 | ug/L | | | 09/10/20 01:06 | 1 |
| Tetrachloroethene | 0.25 | U | 1.0 | 0.25 | ug/L | | | 09/10/20 01:06 | 1 |
| Toluene | 0.38 | U | 1.0 | 0.38 | ug/L | | | 09/10/20 01:06 | 1 |
| trans-1,2-Dichloroethene | 0.24 | U | 1.0 | 0.24 | ug/L | | | 09/10/20 01:06 | 1 |
| trans-1,3-Dichloropropene | 0.49 | U | 1.0 | 0.49 | ug/L | | | 09/10/20 01:06 | 1 |
| Trichloroethene | 0.31 | U | 1.0 | 0.31 | ug/L | | | 09/10/20 01:06 | 1 |
| Trichlorofluoromethane | 0.32 | U | 1.0 | 0.32 | ug/L | | | 09/10/20 01:06 | 1 |
| Vinyl chloride | 0.17 | U | 1.0 | 0.17 | ug/L | | | 09/10/20 01:06 | 1 |

## Client Sample ID: MW-206

**Date Collected: 09/02/20 10:40**
**Date Received: 09/03/20 16:45**

## Lab Sample ID: 460-217547-4

**Matrix: Water**

### Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,2-Dichloroethane | 0.43 | U | 1.0 | 0.43 | ug/L | | | 09/10/20 01:06 | 1 |
| 1,2-Dichlorobenzene | 0.43 | U | 1.0 | 0.43 | ug/L | | | 09/10/20 01:06 | 1 |
| 1,2-Dibromo-3-Chloropropane | 0.38 | U | 1.0 | 0.38 | ug/L | | | 09/10/20 01:06 | 1 |

| *Tentatively Identified Compound* | *Est. Result* | *Qualifier* | *Unit* | *D* | *RT* | *CAS No.* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|---|---|---|
| *Tentatively Identified Compound* | *None* | | *ug/L* | | | | | *09/10/20 01:06* | *1* |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1,2-Dichloroethane-d4 (Surr)* | *93* | | *75 - 123* | | *09/10/20 01:06* | *1* |
| *4-Bromofluorobenzene* | *104* | | *76 - 120* | | *09/10/20 01:06* | *1* |
| *Dibromofluoromethane (Surr)* | *99* | | *77 - 124* | | *09/10/20 01:06* | *1* |
| *Toluene-d8 (Surr)* | *96* | | *80 - 120* | | *09/10/20 01:06* | *1* |

### Method: 537 (modified) - Fluorinated Alkyl Substances

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Perfluorobutanoic acid (PFBA)** | **5.79** | | 1.76 | 0.31 | ng/L | | 09/10/20 18:32 | 09/11/20 15:25 | 1 |
| **Perfluoropentanoic acid (PFPeA)** | **1.83** | | 1.76 | 0.43 | ng/L | | 09/10/20 18:32 | 09/11/20 15:25 | 1 |
| **Perfluorohexanoic acid (PFHxA)** | **2.28** | | 1.76 | 0.51 | ng/L | | 09/10/20 18:32 | 09/11/20 15:25 | 1 |
| **Perfluoroheptanoic acid (PFHpA)** | **2.47** | | 1.76 | 0.22 | ng/L | | 09/10/20 18:32 | 09/11/20 15:25 | 1 |
| **Perfluorooctanoic acid (PFOA)** | **12.1** | | 1.76 | 0.75 | ng/L | | 09/10/20 18:32 | 09/11/20 15:25 | 1 |
| **Perfluorononanoic acid (PFNA)** | **0.75** | **J** | 1.76 | 0.24 | ng/L | | 09/10/20 18:32 | 09/11/20 15:25 | 1 |
| **Perfluorodecanoic acid (PFDA)** | **0.45** | **J** | 1.76 | 0.27 | ng/L | | 09/10/20 18:32 | 09/11/20 15:25 | 1 |
| Perfluoroundecanoic acid (PFUnA) | 0.97 | U | 1.76 | 0.97 | ng/L | | 09/10/20 18:32 | 09/11/20 15:25 | 1 |
| Perfluorododecanoic acid (PFDoA) | 0.48 | U | 1.76 | 0.48 | ng/L | | 09/10/20 18:32 | 09/11/20 15:25 | 1 |
| Perfluorotridecanoic acid (PFTriA) | 1.15 | U | 1.76 | 1.15 | ng/L | | 09/10/20 18:32 | 09/11/20 15:25 | 1 |
| Perfluorotetradecanoic acid (PFTeA) | 0.26 | U | 1.76 | 0.26 | ng/L | | 09/10/20 18:32 | 09/11/20 15:25 | 1 |
| **Perfluorobutanesulfonic acid (PFBS)** | **1.06** | **J** | 1.76 | 0.18 | ng/L | | 09/10/20 18:32 | 09/11/20 15:25 | 1 |
| **Perfluorohexanesulfonic acid (PFHxS)** | **1.93** | **B** | 1.76 | 0.15 | ng/L | | 09/10/20 18:32 | 09/11/20 15:25 | 1 |
| **Perfluoroheptanesulfonic Acid (PFHpS)** | **0.43** | **J** | 1.76 | 0.17 | ng/L | | 09/10/20 18:32 | 09/11/20 15:25 | 1 |
| **Perfluorooctanesulfonic acid (PFOS)** | **38.7** | | 1.76 | 0.48 | ng/L | | 09/10/20 18:32 | 09/11/20 15:25 | 1 |
| Perfluorodecanesulfonic acid (PFDS) | 0.28 | U | 1.76 | 0.28 | ng/L | | 09/10/20 18:32 | 09/11/20 15:25 | 1 |
| **Perfluorooctanesulfonamide (FOSA)** | **0.66** | **J** | 1.76 | 0.31 | ng/L | | 09/10/20 18:32 | 09/11/20 15:25 | 1 |
| N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA) | 2.73 | U | 17.6 | 2.73 | ng/L | | 09/10/20 18:32 | 09/11/20 15:25 | 1 |
| N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA) | 1.67 | U | 17.6 | 1.67 | ng/L | | 09/10/20 18:32 | 09/11/20 15:25 | 1 |
| **6:2 FTS** | **2.24** | **J** | 17.6 | 1.76 | ng/L | | 09/10/20 18:32 | 09/11/20 15:25 | 1 |
| 8:2 FTS | 1.76 | U | 17.6 | 1.76 | ng/L | | 09/10/20 18:32 | 09/11/20 15:25 | 1 |

| *Isotope Dilution* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *13C4 PFBA* | *57* | | *25 - 150* | *09/10/20 18:32* | *09/11/20 15:25* | *1* |
| *13C5 PFPeA* | *70* | | *25 - 150* | *09/10/20 18:32* | *09/11/20 15:25* | *1* |
| *13C2 PFHxA* | *78* | | *25 - 150* | *09/10/20 18:32* | *09/11/20 15:25* | *1* |
| *13C4 PFHpA* | *80* | | *25 - 150* | *09/10/20 18:32* | *09/11/20 15:25* | *1* |
| *13C4 PFOA* | *81* | | *25 - 150* | *09/10/20 18:32* | *09/11/20 15:25* | *1* |
| *13C5 PFNA* | *87* | | *25 - 150* | *09/10/20 18:32* | *09/11/20 15:25* | *1* |
| *13C2 PFDA* | *80* | | *25 - 150* | *09/10/20 18:32* | *09/11/20 15:25* | *1* |
| *13C2 PFUnA* | *75* | | *25 - 150* | *09/10/20 18:32* | *09/11/20 15:25* | *1* |

## Client Sample ID: MW-206
**Lab Sample ID: 460-217547-4**

**Date Collected: 09/02/20 10:40**
**Matrix: Water**
**Date Received: 09/03/20 16:45**

### Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

| *Isotope Dilution* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *13C2 PFDoA* | *70* | | *25 - 150* | *09/10/20 18:32* | *09/11/20 15:25* | *1* |
| *13C2 PFTeDA* | *64* | | *25 - 150* | *09/10/20 18:32* | *09/11/20 15:25* | *1* |
| *13C3 PFBS* | *81* | | *25 - 150* | *09/10/20 18:32* | *09/11/20 15:25* | *1* |
| *18O2 PFHxS* | *86* | | *25 - 150* | *09/10/20 18:32* | *09/11/20 15:25* | *1* |
| *13C4 PFOS* | *82* | | *25 - 150* | *09/10/20 18:32* | *09/11/20 15:25* | *1* |
| *13C8 FOSA* | *74* | | *25 - 150* | *09/10/20 18:32* | *09/11/20 15:25* | *1* |
| *d3-NMeFOSAA* | *67* | | *25 - 150* | *09/10/20 18:32* | *09/11/20 15:25* | *1* |
| *d5-NEtFOSAA* | *71* | | *25 - 150* | *09/10/20 18:32* | *09/11/20 15:25* | *1* |
| *M2-6:2 FTS* | *107* | | *25 - 150* | *09/10/20 18:32* | *09/11/20 15:25* | *1* |
| *M2-8:2 FTS* | *93* | | *25 - 150* | *09/10/20 18:32* | *09/11/20 15:25* | *1* |

## Client Sample ID: MW-213
**Lab Sample ID: 460-217547-5**

**Date Collected: 09/02/20 09:40**
**Matrix: Water**
**Date Received: 09/03/20 16:45**

### Method: 8260C - Volatile Organic Compounds by GC/MS

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1-Trichloroethane | 0.24 | U | 1.0 | 0.24 | ug/L | | | 09/09/20 11:42 | 1 |
| 1,1,2,2-Tetrachloroethane | 0.37 | U | 1.0 | 0.37 | ug/L | | | 09/09/20 11:42 | 1 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 0.31 | U | 1.0 | 0.31 | ug/L | | | 09/09/20 11:42 | 1 |
| 1,1,2-Trichloroethane | 0.43 | U | 1.0 | 0.43 | ug/L | | | 09/09/20 11:42 | 1 |
| 1,1-Dichloroethane | 0.26 | U | 1.0 | 0.26 | ug/L | | | 09/09/20 11:42 | 1 |
| 1,1-Dichloroethene | 0.26 | U | 1.0 | 0.26 | ug/L | | | 09/09/20 11:42 | 1 |
| 1,2,3-Trichlorobenzene | 0.36 | U | 1.0 | 0.36 | ug/L | | | 09/09/20 11:42 | 1 |
| 1,2,4-Trichlorobenzene | 0.37 | U | 1.0 | 0.37 | ug/L | | | 09/09/20 11:42 | 1 |
| 1,2-Dichloropropane | 0.35 | U | 1.0 | 0.35 | ug/L | | | 09/09/20 11:42 | 1 |
| 1,3-Dichlorobenzene | 0.34 | U | 1.0 | 0.34 | ug/L | | | 09/09/20 11:42 | 1 |
| 1,4-Dichlorobenzene | 0.33 | U | 1.0 | 0.33 | ug/L | | | 09/09/20 11:42 | 1 |
| 1,4-Dioxane | 28 | U | 50 | 28 | ug/L | | | 09/09/20 11:42 | 1 |
| 2-Butanone (MEK) | 1.9 | U | 5.0 | 1.9 | ug/L | | | 09/09/20 11:42 | 1 |
| 2-Hexanone | 1.1 | U | 5.0 | 1.1 | ug/L | | | 09/09/20 11:42 | 1 |
| 4-Methyl-2-pentanone (MIBK) | 1.3 | U | 5.0 | 1.3 | ug/L | | | 09/09/20 11:42 | 1 |
| Acetone | 4.4 | U | 5.0 | 4.4 | ug/L | | | 09/09/20 11:42 | 1 |
| Benzene | 0.20 | U | 1.0 | 0.20 | ug/L | | | 09/09/20 11:42 | 1 |
| Bromoform | 0.54 | U | 1.0 | 0.54 | ug/L | | | 09/09/20 11:42 | 1 |
| Bromomethane | 0.55 | U | 1.0 | 0.55 | ug/L | | | 09/09/20 11:42 | 1 |
| Carbon disulfide | 0.82 | U | 1.0 | 0.82 | ug/L | | | 09/09/20 11:42 | 1 |
| Carbon tetrachloride | 0.21 | U | 1.0 | 0.21 | ug/L | | | 09/09/20 11:42 | 1 |
| Chlorobenzene | 0.38 | U | 1.0 | 0.38 | ug/L | | | 09/09/20 11:42 | 1 |
| Chlorobromomethane | 0.41 | U | 1.0 | 0.41 | ug/L | | | 09/09/20 11:42 | 1 |
| Chlorodibromomethane | 0.28 | U | 1.0 | 0.28 | ug/L | | | 09/09/20 11:42 | 1 |
| Chloroethane | 0.32 | U | 1.0 | 0.32 | ug/L | | | 09/09/20 11:42 | 1 |
| Chloroform | 0.33 | U | 1.0 | 0.33 | ug/L | | | 09/09/20 11:42 | 1 |
| Chloromethane | 0.40 | U | 1.0 | 0.40 | ug/L | | | 09/09/20 11:42 | 1 |
| cis-1,2-Dichloroethene | 0.22 | U | 1.0 | 0.22 | ug/L | | | 09/09/20 11:42 | 1 |
| cis-1,3-Dichloropropene | 0.22 | U | 1.0 | 0.22 | ug/L | | | 09/09/20 11:42 | 1 |
| Cyclohexane | 0.32 | U | 1.0 | 0.32 | ug/L | | | 09/09/20 11:42 | 1 |
| Dichlorobromomethane | 0.34 | U | 1.0 | 0.34 | ug/L | | | 09/09/20 11:42 | 1 |
| **Dichlorodifluoromethane** | **40** | | 1.0 | 0.31 | ug/L | | | 09/09/20 11:42 | 1 |
| Ethylbenzene | 0.30 | U | 1.0 | 0.30 | ug/L | | | 09/09/20 11:42 | 1 |

## Client Sample ID: MW-213

**Date Collected: 09/02/20 09:40**
**Date Received: 09/03/20 16:45**

## Lab Sample ID: 460-217547-5

**Matrix: Water**

### Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Ethylene Dibromide | 0.50 | U | 1.0 | 0.50 | ug/L | | | 09/09/20 11:42 | 1 |
| Isopropylbenzene | 0.34 | U | 1.0 | 0.34 | ug/L | | | 09/09/20 11:42 | 1 |
| Methyl acetate | 0.79 | U | 5.0 | 0.79 | ug/L | | | 09/09/20 11:42 | 1 |
| Methyl tert-butyl ether | 0.47 | U | 1.0 | 0.47 | ug/L | | | 09/09/20 11:42 | 1 |
| Methylcyclohexane | 0.26 | U | 1.0 | 0.26 | ug/L | | | 09/09/20 11:42 | 1 |
| **Methylene Chloride** | **0.44** | **J** | 1.0 | 0.32 | ug/L | | | 09/09/20 11:42 | 1 |
| m-Xylene & p-Xylene | 0.30 | U | 1.0 | 0.30 | ug/L | | | 09/09/20 11:42 | 1 |
| o-Xylene | 0.36 | U | 1.0 | 0.36 | ug/L | | | 09/09/20 11:42 | 1 |
| Styrene | 0.42 | U | 1.0 | 0.42 | ug/L | | | 09/09/20 11:42 | 1 |
| Tetrachloroethene | 0.25 | U | 1.0 | 0.25 | ug/L | | | 09/09/20 11:42 | 1 |
| Toluene | 0.38 | U | 1.0 | 0.38 | ug/L | | | 09/09/20 11:42 | 1 |
| trans-1,2-Dichloroethene | 0.24 | U | 1.0 | 0.24 | ug/L | | | 09/09/20 11:42 | 1 |
| trans-1,3-Dichloropropene | 0.49 | U | 1.0 | 0.49 | ug/L | | | 09/09/20 11:42 | 1 |
| Trichloroethene | 0.31 | U | 1.0 | 0.31 | ug/L | | | 09/09/20 11:42 | 1 |
| **Trichlorofluoromethane** | **56** | | 1.0 | 0.32 | ug/L | | | 09/09/20 11:42 | 1 |
| Vinyl chloride | 0.17 | U | 1.0 | 0.17 | ug/L | | | 09/09/20 11:42 | 1 |
| 1,2-Dichloroethane | 0.43 | U | 1.0 | 0.43 | ug/L | | | 09/09/20 11:42 | 1 |
| 1,2-Dichlorobenzene | 0.43 | U | 1.0 | 0.43 | ug/L | | | 09/09/20 11:42 | 1 |
| 1,2-Dibromo-3-Chloropropane | 0.38 | U | 1.0 | 0.38 | ug/L | | | 09/09/20 11:42 | 1 |

| *Tentatively Identified Compound* | *Est. Result* | *Qualifier* | *Unit* | *D* | *RT* | *CAS No.* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|---|---|---|
| *Fluorodichloromethane* | *27* | *J N* | *ug/L* | | *1.19* | *75-43-4* | | *09/09/20 11:42* | *1* |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1,2-Dichloroethane-d4 (Surr)* | *93* | | *75 - 123* | | *09/09/20 11:42* | *1* |
| *4-Bromofluorobenzene* | *104* | | *76 - 120* | | *09/09/20 11:42* | *1* |
| *Dibromofluoromethane (Surr)* | *99* | | *77 - 124* | | *09/09/20 11:42* | *1* |
| *Toluene-d8 (Surr)* | *96* | | *80 - 120* | | *09/09/20 11:42* | *1* |

### Method: 537 (modified) - Fluorinated Alkyl Substances

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Perfluorobutanoic acid (PFBA)** | **12.4** | **B** | 1.88 | 0.33 | ng/L | | 09/09/20 18:52 | 09/11/20 13:09 | 1 |
| **Perfluoropentanoic acid (PFPeA)** | **7.81** | | 1.88 | 0.46 | ng/L | | 09/09/20 18:52 | 09/11/20 13:09 | 1 |
| **Perfluorohexanoic acid (PFHxA)** | **8.64** | | 1.88 | 0.55 | ng/L | | 09/09/20 18:52 | 09/11/20 13:09 | 1 |
| **Perfluoroheptanoic acid (PFHpA)** | **6.13** | | 1.88 | 0.24 | ng/L | | 09/09/20 18:52 | 09/11/20 13:09 | 1 |
| **Perfluorooctanoic acid (PFOA)** | **26.5** | | 1.88 | 0.80 | ng/L | | 09/09/20 18:52 | 09/11/20 13:09 | 1 |
| **Perfluorononanoic acid (PFNA)** | **2.51** | | 1.88 | 0.25 | ng/L | | 09/09/20 18:52 | 09/11/20 13:09 | 1 |
| **Perfluorodecanoic acid (PFDA)** | **1.61** | **J** | 1.88 | 0.29 | ng/L | | 09/09/20 18:52 | 09/11/20 13:09 | 1 |
| Perfluoroundecanoic acid (PFUnA) | 1.04 | U | 1.88 | 1.04 | ng/L | | 09/09/20 18:52 | 09/11/20 13:09 | 1 |
| Perfluorododecanoic acid (PFDoA) | 0.52 | U | 1.88 | 0.52 | ng/L | | 09/09/20 18:52 | 09/11/20 13:09 | 1 |
| Perfluorotridecanoic acid (PFTriA) | 1.22 | U | 1.88 | 1.22 | ng/L | | 09/09/20 18:52 | 09/11/20 13:09 | 1 |
| Perfluorotetradecanoic acid (PFTeA) | 0.27 | U | 1.88 | 0.27 | ng/L | | 09/09/20 18:52 | 09/11/20 13:09 | 1 |
| **Perfluorobutanesulfonic acid (PFBS)** | **2.27** | | 1.88 | 0.19 | ng/L | | 09/09/20 18:52 | 09/11/20 13:09 | 1 |
| **Perfluorohexanesulfonic acid (PFHxS)** | **4.94** | **B** | 1.88 | 0.16 | ng/L | | 09/09/20 18:52 | 09/11/20 13:09 | 1 |
| **Perfluoroheptanesulfonic Acid (PFHpS)** | **0.79** | **J** | 1.88 | 0.18 | ng/L | | 09/09/20 18:52 | 09/11/20 13:09 | 1 |
| **Perfluorooctanesulfonic acid (PFOS)** | **60.7** | | 1.88 | 0.51 | ng/L | | 09/09/20 18:52 | 09/11/20 13:09 | 1 |
| Perfluorodecanesulfonic acid (PFDS) | 0.30 | U | 1.88 | 0.30 | ng/L | | 09/09/20 18:52 | 09/11/20 13:09 | 1 |

## Client Sample ID: MW-213

**Date Collected: 09/02/20 09:40**
**Date Received: 09/03/20 16:45**

## Lab Sample ID: 460-217547-5

**Matrix: Water**

### Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Perfluorooctanesulfonamide (FOSA)** | **1.76** | **J B** | 1.88 | 0.33 | ng/L | | 09/09/20 18:52 | 09/11/20 13:09 | 1 |
| N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA) | 2.92 | U | 18.8 | 2.92 | ng/L | | 09/09/20 18:52 | 09/11/20 13:09 | 1 |
| N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA) | 1.79 | U | 18.8 | 1.79 | ng/L | | 09/09/20 18:52 | 09/11/20 13:09 | 1 |
| **6:2 FTS** | **2.14** | **J** | 18.8 | 1.88 | ng/L | | 09/09/20 18:52 | 09/11/20 13:09 | 1 |
| 8:2 FTS | 1.88 | U | 18.8 | 1.88 | ng/L | | 09/09/20 18:52 | 09/11/20 13:09 | 1 |

| *Isotope Dilution* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *13C4 PFBA* | *49* | | *25 - 150* | *09/09/20 18:52* | *09/11/20 13:09* | *1* |
| *13C5 PFPeA* | *68* | | *25 - 150* | *09/09/20 18:52* | *09/11/20 13:09* | *1* |
| *13C2 PFHxA* | *81* | | *25 - 150* | *09/09/20 18:52* | *09/11/20 13:09* | *1* |
| *13C4 PFHpA* | *91* | | *25 - 150* | *09/09/20 18:52* | *09/11/20 13:09* | *1* |
| *13C4 PFOA* | *91* | | *25 - 150* | *09/09/20 18:52* | *09/11/20 13:09* | *1* |
| *13C5 PFNA* | *94* | | *25 - 150* | *09/09/20 18:52* | *09/11/20 13:09* | *1* |
| *13C2 PFDA* | *100* | | *25 - 150* | *09/09/20 18:52* | *09/11/20 13:09* | *1* |
| *13C2 PFUnA* | *89* | | *25 - 150* | *09/09/20 18:52* | *09/11/20 13:09* | *1* |
| *13C2 PFDoA* | *72* | | *25 - 150* | *09/09/20 18:52* | *09/11/20 13:09* | *1* |
| *13C2 PFTeDA* | *74* | | *25 - 150* | *09/09/20 18:52* | *09/11/20 13:09* | *1* |
| *13C3 PFBS* | *88* | | *25 - 150* | *09/09/20 18:52* | *09/11/20 13:09* | *1* |
| *18O2 PFHxS* | *92* | | *25 - 150* | *09/09/20 18:52* | *09/11/20 13:09* | *1* |
| *13C4 PFOS* | *88* | | *25 - 150* | *09/09/20 18:52* | *09/11/20 13:09* | *1* |
| *13C8 FOSA* | *72* | | *25 - 150* | *09/09/20 18:52* | *09/11/20 13:09* | *1* |
| *d3-NMeFOSAA* | *61* | | *25 - 150* | *09/09/20 18:52* | *09/11/20 13:09* | *1* |
| *d5-NEtFOSAA* | *71* | | *25 - 150* | *09/09/20 18:52* | *09/11/20 13:09* | *1* |
| *M2-6:2 FTS* | *157* | **5* | *25 - 150* | *09/09/20 18:52* | *09/11/20 13:09* | *1* |
| *M2-8:2 FTS* | *113* | | *25 - 150* | *09/09/20 18:52* | *09/11/20 13:09* | *1* |

## Client Sample ID: DUP

**Date Collected: 09/02/20 00:00**
**Date Received: 09/03/20 16:45**

## Lab Sample ID: 460-217547-6

**Matrix: Water**

### Method: 8260C - Volatile Organic Compounds by GC/MS

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1-Trichloroethane | 0.24 | U | 1.0 | 0.24 | ug/L | | | 09/10/20 00:18 | 1 |
| 1,1,2,2-Tetrachloroethane | 0.37 | U | 1.0 | 0.37 | ug/L | | | 09/10/20 00:18 | 1 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 0.31 | U | 1.0 | 0.31 | ug/L | | | 09/10/20 00:18 | 1 |
| 1,1,2-Trichloroethane | 0.43 | U | 1.0 | 0.43 | ug/L | | | 09/10/20 00:18 | 1 |
| 1,1-Dichloroethane | 0.26 | U | 1.0 | 0.26 | ug/L | | | 09/10/20 00:18 | 1 |
| 1,1-Dichloroethene | 0.26 | U | 1.0 | 0.26 | ug/L | | | 09/10/20 00:18 | 1 |
| 1,2,3-Trichlorobenzene | 0.36 | U | 1.0 | 0.36 | ug/L | | | 09/10/20 00:18 | 1 |
| 1,2,4-Trichlorobenzene | 0.37 | U | 1.0 | 0.37 | ug/L | | | 09/10/20 00:18 | 1 |
| 1,2-Dichloropropane | 0.35 | U | 1.0 | 0.35 | ug/L | | | 09/10/20 00:18 | 1 |
| 1,3-Dichlorobenzene | 0.34 | U | 1.0 | 0.34 | ug/L | | | 09/10/20 00:18 | 1 |
| 1,4-Dichlorobenzene | 0.33 | U | 1.0 | 0.33 | ug/L | | | 09/10/20 00:18 | 1 |
| 1,4-Dioxane | 28 | U | 50 | 28 | ug/L | | | 09/10/20 00:18 | 1 |
| 2-Butanone (MEK) | 1.9 | U | 5.0 | 1.9 | ug/L | | | 09/10/20 00:18 | 1 |
| 2-Hexanone | 1.1 | U | 5.0 | 1.1 | ug/L | | | 09/10/20 00:18 | 1 |
| 4-Methyl-2-pentanone (MIBK) | 1.3 | U | 5.0 | 1.3 | ug/L | | | 09/10/20 00:18 | 1 |
| Acetone | 4.4 | U | 5.0 | 4.4 | ug/L | | | 09/10/20 00:18 | 1 |

## Client Sample ID: DUP

**Date Collected: 09/02/20 00:00**
**Date Received: 09/03/20 16:45**

## Lab Sample ID: 460-217547-6

**Matrix: Water**

### Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Benzene | 0.20 | U | 1.0 | 0.20 | ug/L | | | 09/10/20 00:18 | 1 |
| Bromoform | 0.54 | U | 1.0 | 0.54 | ug/L | | | 09/10/20 00:18 | 1 |
| Bromomethane | 0.55 | U | 1.0 | 0.55 | ug/L | | | 09/10/20 00:18 | 1 |
| Carbon disulfide | 0.82 | U | 1.0 | 0.82 | ug/L | | | 09/10/20 00:18 | 1 |
| Carbon tetrachloride | 0.21 | U | 1.0 | 0.21 | ug/L | | | 09/10/20 00:18 | 1 |
| Chlorobenzene | 0.38 | U | 1.0 | 0.38 | ug/L | | | 09/10/20 00:18 | 1 |
| Chlorobromomethane | 0.41 | U | 1.0 | 0.41 | ug/L | | | 09/10/20 00:18 | 1 |
| Chlorodibromomethane | 0.28 | U | 1.0 | 0.28 | ug/L | | | 09/10/20 00:18 | 1 |
| Chloroethane | 0.32 | U | 1.0 | 0.32 | ug/L | | | 09/10/20 00:18 | 1 |
| Chloroform | 0.33 | U | 1.0 | 0.33 | ug/L | | | 09/10/20 00:18 | 1 |
| Chloromethane | 0.40 | U | 1.0 | 0.40 | ug/L | | | 09/10/20 00:18 | 1 |
| cis-1,2-Dichloroethene | 0.22 | U | 1.0 | 0.22 | ug/L | | | 09/10/20 00:18 | 1 |
| cis-1,3-Dichloropropene | 0.22 | U | 1.0 | 0.22 | ug/L | | | 09/10/20 00:18 | 1 |
| Cyclohexane | 0.32 | U | 1.0 | 0.32 | ug/L | | | 09/10/20 00:18 | 1 |
| Dichlorobromomethane | 0.34 | U | 1.0 | 0.34 | ug/L | | | 09/10/20 00:18 | 1 |
| Dichlorodifluoromethane | 0.31 | U | 1.0 | 0.31 | ug/L | | | 09/10/20 00:18 | 1 |
| Ethylbenzene | 0.30 | U | 1.0 | 0.30 | ug/L | | | 09/10/20 00:18 | 1 |
| Ethylene Dibromide | 0.50 | U | 1.0 | 0.50 | ug/L | | | 09/10/20 00:18 | 1 |
| Isopropylbenzene | 0.34 | U | 1.0 | 0.34 | ug/L | | | 09/10/20 00:18 | 1 |
| Methyl acetate | 0.79 | U | 5.0 | 0.79 | ug/L | | | 09/10/20 00:18 | 1 |
| Methyl tert-butyl ether | 0.47 | U | 1.0 | 0.47 | ug/L | | | 09/10/20 00:18 | 1 |
| Methylcyclohexane | 0.26 | U | 1.0 | 0.26 | ug/L | | | 09/10/20 00:18 | 1 |
| Methylene Chloride | 0.32 | U | 1.0 | 0.32 | ug/L | | | 09/10/20 00:18 | 1 |
| m-Xylene & p-Xylene | 0.30 | U | 1.0 | 0.30 | ug/L | | | 09/10/20 00:18 | 1 |
| o-Xylene | 0.36 | U | 1.0 | 0.36 | ug/L | | | 09/10/20 00:18 | 1 |
| Styrene | 0.42 | U | 1.0 | 0.42 | ug/L | | | 09/10/20 00:18 | 1 |
| Tetrachloroethene | 0.25 | U | 1.0 | 0.25 | ug/L | | | 09/10/20 00:18 | 1 |
| Toluene | 0.38 | U | 1.0 | 0.38 | ug/L | | | 09/10/20 00:18 | 1 |
| trans-1,2-Dichloroethene | 0.24 | U | 1.0 | 0.24 | ug/L | | | 09/10/20 00:18 | 1 |
| trans-1,3-Dichloropropene | 0.49 | U | 1.0 | 0.49 | ug/L | | | 09/10/20 00:18 | 1 |
| Trichloroethene | 0.31 | U | 1.0 | 0.31 | ug/L | | | 09/10/20 00:18 | 1 |
| Trichlorofluoromethane | 0.32 | U | 1.0 | 0.32 | ug/L | | | 09/10/20 00:18 | 1 |
| Vinyl chloride | 0.17 | U | 1.0 | 0.17 | ug/L | | | 09/10/20 00:18 | 1 |
| 1,2-Dichloroethane | 0.43 | U | 1.0 | 0.43 | ug/L | | | 09/10/20 00:18 | 1 |
| 1,2-Dichlorobenzene | 0.43 | U | 1.0 | 0.43 | ug/L | | | 09/10/20 00:18 | 1 |
| 1,2-Dibromo-3-Chloropropane | 0.38 | U | 1.0 | 0.38 | ug/L | | | 09/10/20 00:18 | 1 |

| *Tentatively Identified Compound* | *Est. Result* | *Qualifier* | *Unit* | *D* | *RT* | *CAS No.* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|---|---|---|
| *Tentatively Identified Compound* | *None* | | *ug/L* | | | | | *09/10/20 00:18* | *1* |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1,2-Dichloroethane-d4 (Surr)* | *96* | | *75 - 123* | | *09/10/20 00:18* | *1* |
| *4-Bromofluorobenzene* | *104* | | *76 - 120* | | *09/10/20 00:18* | *1* |
| *Dibromofluoromethane (Surr)* | *102* | | *77 - 124* | | *09/10/20 00:18* | *1* |
| *Toluene-d8 (Surr)* | *94* | | *80 - 120* | | *09/10/20 00:18* | *1* |

### Method: 537 (modified) - Fluorinated Alkyl Substances

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Perfluorobutanoic acid (PFBA)** | **0.70** | **J B** | 1.99 | 0.35 | ng/L | | 09/09/20 18:52 | 09/11/20 13:18 | 1 |
| Perfluoropentanoic acid (PFPeA) | 0.49 | U | 1.99 | 0.49 | ng/L | | 09/09/20 18:52 | 09/11/20 13:18 | 1 |

## Client Sample ID: DUP

**Lab Sample ID: 460-217547-6**

**Date Collected: 09/02/20 00:00**

**Matrix: Water**

**Date Received: 09/03/20 16:45**

### Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Perfluorohexanoic acid (PFHxA) | 0.58 | U | 1.99 | 0.58 | ng/L | | 09/09/20 18:52 | 09/11/20 13:18 | 1 |
| Perfluoroheptanoic acid (PFHpA) | 0.25 | U | 1.99 | 0.25 | ng/L | | 09/09/20 18:52 | 09/11/20 13:18 | 1 |
| Perfluorooctanoic acid (PFOA) | 0.85 | U | 1.99 | 0.85 | ng/L | | 09/09/20 18:52 | 09/11/20 13:18 | 1 |
| Perfluorononanoic acid (PFNA) | 0.27 | U | 1.99 | 0.27 | ng/L | | 09/09/20 18:52 | 09/11/20 13:18 | 1 |
| Perfluorodecanoic acid (PFDA) | 0.31 | U | 1.99 | 0.31 | ng/L | | 09/09/20 18:52 | 09/11/20 13:18 | 1 |
| Perfluoroundecanoic acid (PFUnA) | 1.10 | U | 1.99 | 1.10 | ng/L | | 09/09/20 18:52 | 09/11/20 13:18 | 1 |
| Perfluorododecanoic acid (PFDoA) | 0.55 | U | 1.99 | 0.55 | ng/L | | 09/09/20 18:52 | 09/11/20 13:18 | 1 |
| Perfluorotridecanoic acid (PFTriA) | 1.30 | U | 1.99 | 1.30 | ng/L | | 09/09/20 18:52 | 09/11/20 13:18 | 1 |
| Perfluorotetradecanoic acid (PFTeA) | 0.29 | U | 1.99 | 0.29 | ng/L | | 09/09/20 18:52 | 09/11/20 13:18 | 1 |
| Perfluorobutanesulfonic acid (PFBS) | 0.20 | U | 1.99 | 0.20 | ng/L | | 09/09/20 18:52 | 09/11/20 13:18 | 1 |
| **Perfluorohexanesulfonic acid (PFHxS)** | **0.37** | **J B** | 1.99 | 0.17 | ng/L | | 09/09/20 18:52 | 09/11/20 13:18 | 1 |
| Perfluoroheptanesulfonic Acid (PFHpS) | 0.19 | U | 1.99 | 0.19 | ng/L | | 09/09/20 18:52 | 09/11/20 13:18 | 1 |
| **Perfluorooctanesulfonic acid (PFOS)** | **0.79** | **J** | 1.99 | 0.54 | ng/L | | 09/09/20 18:52 | 09/11/20 13:18 | 1 |
| Perfluorodecanesulfonic acid (PFDS) | 0.32 | U | 1.99 | 0.32 | ng/L | | 09/09/20 18:52 | 09/11/20 13:18 | 1 |
| Perfluorooctanesulfonamide (FOSA) | 0.35 | U | 1.99 | 0.35 | ng/L | | 09/09/20 18:52 | 09/11/20 13:18 | 1 |
| N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA) | 3.09 | U | 19.9 | 3.09 | ng/L | | 09/09/20 18:52 | 09/11/20 13:18 | 1 |
| N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA) | 1.89 | U | 19.9 | 1.89 | ng/L | | 09/09/20 18:52 | 09/11/20 13:18 | 1 |
| 6:2 FTS | 1.99 | U | 19.9 | 1.99 | ng/L | | 09/09/20 18:52 | 09/11/20 13:18 | 1 |
| 8:2 FTS | 1.99 | U | 19.9 | 1.99 | ng/L | | 09/09/20 18:52 | 09/11/20 13:18 | 1 |

| *Isotope Dilution* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *13C4 PFBA* | *60* | | *25 - 150* | *09/09/20 18:52* | *09/11/20 13:18* | *1* |
| *13C5 PFPeA* | *79* | | *25 - 150* | *09/09/20 18:52* | *09/11/20 13:18* | *1* |
| *13C2 PFHxA* | *92* | | *25 - 150* | *09/09/20 18:52* | *09/11/20 13:18* | *1* |
| *13C4 PFHpA* | *85* | | *25 - 150* | *09/09/20 18:52* | *09/11/20 13:18* | *1* |
| *13C4 PFOA* | *90* | | *25 - 150* | *09/09/20 18:52* | *09/11/20 13:18* | *1* |
| *13C5 PFNA* | *93* | | *25 - 150* | *09/09/20 18:52* | *09/11/20 13:18* | *1* |
| *13C2 PFDA* | *99* | | *25 - 150* | *09/09/20 18:52* | *09/11/20 13:18* | *1* |
| *13C2 PFUnA* | *93* | | *25 - 150* | *09/09/20 18:52* | *09/11/20 13:18* | *1* |
| *13C2 PFDoA* | *81* | | *25 - 150* | *09/09/20 18:52* | *09/11/20 13:18* | *1* |
| *13C2 PFTeDA* | *97* | | *25 - 150* | *09/09/20 18:52* | *09/11/20 13:18* | *1* |
| *13C3 PFBS* | *90* | | *25 - 150* | *09/09/20 18:52* | *09/11/20 13:18* | *1* |
| *18O2 PFHxS* | *95* | | *25 - 150* | *09/09/20 18:52* | *09/11/20 13:18* | *1* |
| *13C4 PFOS* | *95* | | *25 - 150* | *09/09/20 18:52* | *09/11/20 13:18* | *1* |
| *13C8 FOSA* | *79* | | *25 - 150* | *09/09/20 18:52* | *09/11/20 13:18* | *1* |
| *d3-NMeFOSAA* | *68* | | *25 - 150* | *09/09/20 18:52* | *09/11/20 13:18* | *1* |
| *d5-NEtFOSAA* | *74* | | *25 - 150* | *09/09/20 18:52* | *09/11/20 13:18* | *1* |
| *M2-6:2 FTS* | *108* | | *25 - 150* | *09/09/20 18:52* | *09/11/20 13:18* | *1* |
| *M2-8:2 FTS* | *95* | | *25 - 150* | *09/09/20 18:52* | *09/11/20 13:18* | *1* |

## Client Sample ID: FB

**Lab Sample ID: 460-217547-7**

**Date Collected: 09/02/20 14:30**

**Matrix: Water**

**Date Received: 09/03/20 16:45**

### Method: 8260C - Volatile Organic Compounds by GC/MS

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1-Trichloroethane | 0.24 | U | 1.0 | 0.24 | ug/L | | | 09/09/20 02:49 | 1 |

## Client Sample ID: FB

**Date Collected: 09/02/20 14:30**
**Date Received: 09/03/20 16:45**

## Lab Sample ID: 460-217547-7

**Matrix: Water**

### Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,2,2-Tetrachloroethane | 0.37 | U | 1.0 | 0.37 | ug/L | | | 09/09/20 02:49 | 1 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 0.31 | U | 1.0 | 0.31 | ug/L | | | 09/09/20 02:49 | 1 |
| 1,1,2-Trichloroethane | 0.43 | U | 1.0 | 0.43 | ug/L | | | 09/09/20 02:49 | 1 |
| 1,1-Dichloroethane | 0.26 | U | 1.0 | 0.26 | ug/L | | | 09/09/20 02:49 | 1 |
| 1,1-Dichloroethene | 0.26 | U | 1.0 | 0.26 | ug/L | | | 09/09/20 02:49 | 1 |
| 1,2,3-Trichlorobenzene | 0.36 | U | 1.0 | 0.36 | ug/L | | | 09/09/20 02:49 | 1 |
| 1,2,4-Trichlorobenzene | 0.37 | U | 1.0 | 0.37 | ug/L | | | 09/09/20 02:49 | 1 |
| 1,2-Dichloropropane | 0.35 | U | 1.0 | 0.35 | ug/L | | | 09/09/20 02:49 | 1 |
| 1,3-Dichlorobenzene | 0.34 | U | 1.0 | 0.34 | ug/L | | | 09/09/20 02:49 | 1 |
| 1,4-Dichlorobenzene | 0.33 | U | 1.0 | 0.33 | ug/L | | | 09/09/20 02:49 | 1 |
| 1,4-Dioxane | 28 | U | 50 | 28 | ug/L | | | 09/09/20 02:49 | 1 |
| 2-Butanone (MEK) | 1.9 | U | 5.0 | 1.9 | ug/L | | | 09/09/20 02:49 | 1 |
| 2-Hexanone | 1.1 | U | 5.0 | 1.1 | ug/L | | | 09/09/20 02:49 | 1 |
| 4-Methyl-2-pentanone (MIBK) | 1.3 | U | 5.0 | 1.3 | ug/L | | | 09/09/20 02:49 | 1 |
| Acetone | 4.4 | U | 5.0 | 4.4 | ug/L | | | 09/09/20 02:49 | 1 |
| Benzene | 0.20 | U | 1.0 | 0.20 | ug/L | | | 09/09/20 02:49 | 1 |
| Bromoform | 0.54 | U | 1.0 | 0.54 | ug/L | | | 09/09/20 02:49 | 1 |
| Bromomethane | 0.55 | U * | 1.0 | 0.55 | ug/L | | | 09/09/20 02:49 | 1 |
| Carbon disulfide | 0.82 | U | 1.0 | 0.82 | ug/L | | | 09/09/20 02:49 | 1 |
| Carbon tetrachloride | 0.21 | U | 1.0 | 0.21 | ug/L | | | 09/09/20 02:49 | 1 |
| Chlorobenzene | 0.38 | U | 1.0 | 0.38 | ug/L | | | 09/09/20 02:49 | 1 |
| Chlorobromomethane | 0.41 | U | 1.0 | 0.41 | ug/L | | | 09/09/20 02:49 | 1 |
| Chlorodibromomethane | 0.28 | U | 1.0 | 0.28 | ug/L | | | 09/09/20 02:49 | 1 |
| Chloroethane | 0.32 | U | 1.0 | 0.32 | ug/L | | | 09/09/20 02:49 | 1 |
| Chloroform | 0.33 | U | 1.0 | 0.33 | ug/L | | | 09/09/20 02:49 | 1 |
| Chloromethane | 0.40 | U | 1.0 | 0.40 | ug/L | | | 09/09/20 02:49 | 1 |
| cis-1,2-Dichloroethene | 0.22 | U | 1.0 | 0.22 | ug/L | | | 09/09/20 02:49 | 1 |
| cis-1,3-Dichloropropene | 0.22 | U | 1.0 | 0.22 | ug/L | | | 09/09/20 02:49 | 1 |
| Cyclohexane | 0.32 | U | 1.0 | 0.32 | ug/L | | | 09/09/20 02:49 | 1 |
| Dichlorobromomethane | 0.34 | U | 1.0 | 0.34 | ug/L | | | 09/09/20 02:49 | 1 |
| Dichlorodifluoromethane | 0.31 | U | 1.0 | 0.31 | ug/L | | | 09/09/20 02:49 | 1 |
| Ethylbenzene | 0.30 | U | 1.0 | 0.30 | ug/L | | | 09/09/20 02:49 | 1 |
| Ethylene Dibromide | 0.50 | U | 1.0 | 0.50 | ug/L | | | 09/09/20 02:49 | 1 |
| Isopropylbenzene | 0.34 | U | 1.0 | 0.34 | ug/L | | | 09/09/20 02:49 | 1 |
| Methyl acetate | 0.79 | U | 5.0 | 0.79 | ug/L | | | 09/09/20 02:49 | 1 |
| Methyl tert-butyl ether | 0.47 | U | 1.0 | 0.47 | ug/L | | | 09/09/20 02:49 | 1 |
| Methylcyclohexane | 0.26 | U | 1.0 | 0.26 | ug/L | | | 09/09/20 02:49 | 1 |
| **Methylene Chloride** | **0.83** | **J** | 1.0 | 0.32 | ug/L | | | 09/09/20 02:49 | 1 |
| m-Xylene & p-Xylene | 0.30 | U | 1.0 | 0.30 | ug/L | | | 09/09/20 02:49 | 1 |
| o-Xylene | 0.36 | U | 1.0 | 0.36 | ug/L | | | 09/09/20 02:49 | 1 |
| Styrene | 0.42 | U | 1.0 | 0.42 | ug/L | | | 09/09/20 02:49 | 1 |
| Tetrachloroethene | 0.25 | U | 1.0 | 0.25 | ug/L | | | 09/09/20 02:49 | 1 |
| Toluene | 0.38 | U | 1.0 | 0.38 | ug/L | | | 09/09/20 02:49 | 1 |
| trans-1,2-Dichloroethene | 0.24 | U | 1.0 | 0.24 | ug/L | | | 09/09/20 02:49 | 1 |
| trans-1,3-Dichloropropene | 0.49 | U | 1.0 | 0.49 | ug/L | | | 09/09/20 02:49 | 1 |
| Trichloroethene | 0.31 | U | 1.0 | 0.31 | ug/L | | | 09/09/20 02:49 | 1 |
| Trichlorofluoromethane | 0.32 | U | 1.0 | 0.32 | ug/L | | | 09/09/20 02:49 | 1 |
| Vinyl chloride | 0.17 | U | 1.0 | 0.17 | ug/L | | | 09/09/20 02:49 | 1 |
| 1,2-Dichloroethane | 0.43 | U | 1.0 | 0.43 | ug/L | | | 09/09/20 02:49 | 1 |

## Client Sample ID: FB

**Date Collected: 09/02/20 14:30**
**Date Received: 09/03/20 16:45**

## Lab Sample ID: 460-217547-7

**Matrix: Water**

### Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,2-Dichlorobenzene | 0.43 | U | 1.0 | 0.43 | ug/L | | | 09/09/20 02:49 | 1 |
| 1,2-Dibromo-3-Chloropropane | 0.38 | U | 1.0 | 0.38 | ug/L | | | 09/09/20 02:49 | 1 |

| *Tentatively Identified Compound* | *Est. Result* | *Qualifier* | *Unit* | *D* | *RT* | *CAS No.* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|---|---|---|
| *Tentatively Identified Compound* | *None* | | *ug/L* | | | | | *09/09/20 02:49* | *1* |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1,2-Dichloroethane-d4 (Surr)* | *87* | | *75 - 123* | | *09/09/20 02:49* | *1* |
| *4-Bromofluorobenzene* | *96* | | *76 - 120* | | *09/09/20 02:49* | *1* |
| *Dibromofluoromethane (Surr)* | *96* | | *77 - 124* | | *09/09/20 02:49* | *1* |
| *Toluene-d8 (Surr)* | *99* | | *80 - 120* | | *09/09/20 02:49* | *1* |

### Method: 537 (modified) - Fluorinated Alkyl Substances

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Perfluorobutanoic acid (PFBA)** | **0.35** | **J B** | 1.96 | 0.34 | ng/L | | 09/09/20 18:52 | 09/10/20 15:38 | 1 |
| Perfluoropentanoic acid (PFPeA) | 0.48 | U | 1.96 | 0.48 | ng/L | | 09/09/20 18:52 | 09/10/20 15:38 | 1 |
| Perfluorohexanoic acid (PFHxA) | 0.57 | U | 1.96 | 0.57 | ng/L | | 09/09/20 18:52 | 09/10/20 15:38 | 1 |
| Perfluoroheptanoic acid (PFHpA) | 0.25 | U | 1.96 | 0.25 | ng/L | | 09/09/20 18:52 | 09/10/20 15:38 | 1 |
| Perfluorooctanoic acid (PFOA) | 0.83 | U | 1.96 | 0.83 | ng/L | | 09/09/20 18:52 | 09/10/20 15:38 | 1 |
| Perfluorononanoic acid (PFNA) | 0.27 | U | 1.96 | 0.27 | ng/L | | 09/09/20 18:52 | 09/10/20 15:38 | 1 |
| Perfluorodecanoic acid (PFDA) | 0.30 | U | 1.96 | 0.30 | ng/L | | 09/09/20 18:52 | 09/10/20 15:38 | 1 |
| Perfluoroundecanoic acid (PFUnA) | 1.08 | U | 1.96 | 1.08 | ng/L | | 09/09/20 18:52 | 09/10/20 15:38 | 1 |
| Perfluorododecanoic acid (PFDoA) | 0.54 | U | 1.96 | 0.54 | ng/L | | 09/09/20 18:52 | 09/10/20 15:38 | 1 |
| Perfluorotridecanoic acid (PFTriA) | 1.28 | U | 1.96 | 1.28 | ng/L | | 09/09/20 18:52 | 09/10/20 15:38 | 1 |
| Perfluorotetradecanoic acid (PFTeA) | 0.28 | U | 1.96 | 0.28 | ng/L | | 09/09/20 18:52 | 09/10/20 15:38 | 1 |
| Perfluorobutanesulfonic acid (PFBS) | 0.20 | U | 1.96 | 0.20 | ng/L | | 09/09/20 18:52 | 09/10/20 15:38 | 1 |
| **Perfluorohexanesulfonic acid (PFHxS)** | **0.27** | **J B** | 1.96 | 0.17 | ng/L | | 09/09/20 18:52 | 09/10/20 15:38 | 1 |
| Perfluoroheptanesulfonic Acid (PFHpS) | 0.19 | U | 1.96 | 0.19 | ng/L | | 09/09/20 18:52 | 09/10/20 15:38 | 1 |
| Perfluorooctanesulfonic acid (PFOS) | 0.53 | U | 1.96 | 0.53 | ng/L | | 09/09/20 18:52 | 09/10/20 15:38 | 1 |
| Perfluorodecanesulfonic acid (PFDS) | 0.31 | U | 1.96 | 0.31 | ng/L | | 09/09/20 18:52 | 09/10/20 15:38 | 1 |
| Perfluorooctanesulfonamide (FOSA) | 0.34 | U | 1.96 | 0.34 | ng/L | | 09/09/20 18:52 | 09/10/20 15:38 | 1 |
| N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA) | 3.05 | U | 19.6 | 3.05 | ng/L | | 09/09/20 18:52 | 09/10/20 15:38 | 1 |
| N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA) | 1.87 | U | 19.6 | 1.87 | ng/L | | 09/09/20 18:52 | 09/10/20 15:38 | 1 |
| 6:2 FTS | 1.96 | U | 19.6 | 1.96 | ng/L | | 09/09/20 18:52 | 09/10/20 15:38 | 1 |
| 8:2 FTS | 1.96 | U | 19.6 | 1.96 | ng/L | | 09/09/20 18:52 | 09/10/20 15:38 | 1 |

| *Isotope Dilution* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *13C4 PFBA* | *84* | | *25 - 150* | *09/09/20 18:52* | *09/10/20 15:38* | *1* |
| *13C5 PFPeA* | *90* | | *25 - 150* | *09/09/20 18:52* | *09/10/20 15:38* | *1* |
| *13C2 PFHxA* | *102* | | *25 - 150* | *09/09/20 18:52* | *09/10/20 15:38* | *1* |
| *13C4 PFHpA* | *101* | | *25 - 150* | *09/09/20 18:52* | *09/10/20 15:38* | *1* |
| *13C4 PFOA* | *100* | | *25 - 150* | *09/09/20 18:52* | *09/10/20 15:38* | *1* |
| *13C5 PFNA* | *102* | | *25 - 150* | *09/09/20 18:52* | *09/10/20 15:38* | *1* |
| *13C2 PFDA* | *106* | | *25 - 150* | *09/09/20 18:52* | *09/10/20 15:38* | *1* |
| *13C2 PFUnA* | *114* | | *25 - 150* | *09/09/20 18:52* | *09/10/20 15:38* | *1* |
| *13C2 PFDoA* | *96* | | *25 - 150* | *09/09/20 18:52* | *09/10/20 15:38* | *1* |
| *13C2 PFTeDA* | *93* | | *25 - 150* | *09/09/20 18:52* | *09/10/20 15:38* | *1* |
| *13C3 PFBS* | *97* | | *25 - 150* | *09/09/20 18:52* | *09/10/20 15:38* | *1* |

## Client Sample ID: FB

**Lab Sample ID: 460-217547-7**

**Date Collected: 09/02/20 14:30**

**Matrix: Water**

**Date Received: 09/03/20 16:45**

### Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

| *Isotope Dilution* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *18O2 PFHxS* | *101* | | *25 - 150* | *09/09/20 18:52* | *09/10/20 15:38* | *1* |
| *13C4 PFOS* | *101* | | *25 - 150* | *09/09/20 18:52* | *09/10/20 15:38* | *1* |
| *13C8 FOSA* | *88* | | *25 - 150* | *09/09/20 18:52* | *09/10/20 15:38* | *1* |
| *d3-NMeFOSAA* | *87* | | *25 - 150* | *09/09/20 18:52* | *09/10/20 15:38* | *1* |
| *d5-NEtFOSAA* | *89* | | *25 - 150* | *09/09/20 18:52* | *09/10/20 15:38* | *1* |
| *M2-6:2 FTS* | *112* | | *25 - 150* | *09/09/20 18:52* | *09/10/20 15:38* | *1* |
| *M2-8:2 FTS* | *118* | | *25 - 150* | *09/09/20 18:52* | *09/10/20 15:38* | *1* |

## Client Sample ID: TB

**Lab Sample ID: 460-217547-8**

**Date Collected: 09/02/20 14:30**

**Matrix: Water**

**Date Received: 09/03/20 16:45**

### Method: 8260C - Volatile Organic Compounds by GC/MS

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1-Trichloroethane | 0.24 | U | 1.0 | 0.24 | ug/L | | | 09/09/20 01:38 | 1 |
| 1,1,2,2-Tetrachloroethane | 0.37 | U | 1.0 | 0.37 | ug/L | | | 09/09/20 01:38 | 1 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 0.31 | U | 1.0 | 0.31 | ug/L | | | 09/09/20 01:38 | 1 |
| 1,1,2-Trichloroethane | 0.43 | U | 1.0 | 0.43 | ug/L | | | 09/09/20 01:38 | 1 |
| 1,1-Dichloroethane | 0.26 | U | 1.0 | 0.26 | ug/L | | | 09/09/20 01:38 | 1 |
| 1,1-Dichloroethene | 0.26 | U | 1.0 | 0.26 | ug/L | | | 09/09/20 01:38 | 1 |
| 1,2,3-Trichlorobenzene | 0.36 | U | 1.0 | 0.36 | ug/L | | | 09/09/20 01:38 | 1 |
| 1,2,4-Trichlorobenzene | 0.37 | U | 1.0 | 0.37 | ug/L | | | 09/09/20 01:38 | 1 |
| 1,2-Dichloropropane | 0.35 | U | 1.0 | 0.35 | ug/L | | | 09/09/20 01:38 | 1 |
| 1,3-Dichlorobenzene | 0.34 | U | 1.0 | 0.34 | ug/L | | | 09/09/20 01:38 | 1 |
| 1,4-Dichlorobenzene | 0.33 | U | 1.0 | 0.33 | ug/L | | | 09/09/20 01:38 | 1 |
| 1,4-Dioxane | 28 | U | 50 | 28 | ug/L | | | 09/09/20 01:38 | 1 |
| 2-Butanone (MEK) | 1.9 | U | 5.0 | 1.9 | ug/L | | | 09/09/20 01:38 | 1 |
| 2-Hexanone | 1.1 | U | 5.0 | 1.1 | ug/L | | | 09/09/20 01:38 | 1 |
| 4-Methyl-2-pentanone (MIBK) | 1.3 | U | 5.0 | 1.3 | ug/L | | | 09/09/20 01:38 | 1 |
| Acetone | 4.4 | U | 5.0 | 4.4 | ug/L | | | 09/09/20 01:38 | 1 |
| Benzene | 0.20 | U | 1.0 | 0.20 | ug/L | | | 09/09/20 01:38 | 1 |
| Bromoform | 0.54 | U | 1.0 | 0.54 | ug/L | | | 09/09/20 01:38 | 1 |
| Bromomethane | 0.55 | U * | 1.0 | 0.55 | ug/L | | | 09/09/20 01:38 | 1 |
| Carbon disulfide | 0.82 | U | 1.0 | 0.82 | ug/L | | | 09/09/20 01:38 | 1 |
| Carbon tetrachloride | 0.21 | U | 1.0 | 0.21 | ug/L | | | 09/09/20 01:38 | 1 |
| Chlorobenzene | 0.38 | U | 1.0 | 0.38 | ug/L | | | 09/09/20 01:38 | 1 |
| Chlorobromomethane | 0.41 | U | 1.0 | 0.41 | ug/L | | | 09/09/20 01:38 | 1 |
| Chlorodibromomethane | 0.28 | U | 1.0 | 0.28 | ug/L | | | 09/09/20 01:38 | 1 |
| Chloroethane | 0.32 | U | 1.0 | 0.32 | ug/L | | | 09/09/20 01:38 | 1 |
| Chloroform | 0.33 | U | 1.0 | 0.33 | ug/L | | | 09/09/20 01:38 | 1 |
| Chloromethane | 0.40 | U | 1.0 | 0.40 | ug/L | | | 09/09/20 01:38 | 1 |
| cis-1,2-Dichloroethene | 0.22 | U | 1.0 | 0.22 | ug/L | | | 09/09/20 01:38 | 1 |
| cis-1,3-Dichloropropene | 0.22 | U | 1.0 | 0.22 | ug/L | | | 09/09/20 01:38 | 1 |
| Cyclohexane | 0.32 | U | 1.0 | 0.32 | ug/L | | | 09/09/20 01:38 | 1 |
| Dichlorobromomethane | 0.34 | U | 1.0 | 0.34 | ug/L | | | 09/09/20 01:38 | 1 |
| Dichlorodifluoromethane | 0.31 | U | 1.0 | 0.31 | ug/L | | | 09/09/20 01:38 | 1 |
| Ethylbenzene | 0.30 | U | 1.0 | 0.30 | ug/L | | | 09/09/20 01:38 | 1 |
| Ethylene Dibromide | 0.50 | U | 1.0 | 0.50 | ug/L | | | 09/09/20 01:38 | 1 |
| Isopropylbenzene | 0.34 | U | 1.0 | 0.34 | ug/L | | | 09/09/20 01:38 | 1 |
| Methyl acetate | 0.79 | U | 5.0 | 0.79 | ug/L | | | 09/09/20 01:38 | 1 |

## Client Sample ID: TB

**Date Collected: 09/02/20 14:30**
**Date Received: 09/03/20 16:45**

## Lab Sample ID: 460-217547-8

**Matrix: Water**

### Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Methyl tert-butyl ether | 0.47 | U | 1.0 | 0.47 | ug/L | | | 09/09/20 01:38 | 1 |
| Methylcyclohexane | 0.26 | U | 1.0 | 0.26 | ug/L | | | 09/09/20 01:38 | 1 |
| Methylene Chloride | 0.32 | U | 1.0 | 0.32 | ug/L | | | 09/09/20 01:38 | 1 |
| m-Xylene & p-Xylene | 0.30 | U | 1.0 | 0.30 | ug/L | | | 09/09/20 01:38 | 1 |
| o-Xylene | 0.36 | U | 1.0 | 0.36 | ug/L | | | 09/09/20 01:38 | 1 |
| Styrene | 0.42 | U | 1.0 | 0.42 | ug/L | | | 09/09/20 01:38 | 1 |
| Tetrachloroethene | 0.25 | U | 1.0 | 0.25 | ug/L | | | 09/09/20 01:38 | 1 |
| Toluene | 0.38 | U | 1.0 | 0.38 | ug/L | | | 09/09/20 01:38 | 1 |
| trans-1,2-Dichloroethene | 0.24 | U | 1.0 | 0.24 | ug/L | | | 09/09/20 01:38 | 1 |
| trans-1,3-Dichloropropene | 0.49 | U | 1.0 | 0.49 | ug/L | | | 09/09/20 01:38 | 1 |
| Trichloroethene | 0.31 | U | 1.0 | 0.31 | ug/L | | | 09/09/20 01:38 | 1 |
| Trichlorofluoromethane | 0.32 | U | 1.0 | 0.32 | ug/L | | | 09/09/20 01:38 | 1 |
| Vinyl chloride | 0.17 | U | 1.0 | 0.17 | ug/L | | | 09/09/20 01:38 | 1 |
| 1,2-Dichloroethane | 0.43 | U | 1.0 | 0.43 | ug/L | | | 09/09/20 01:38 | 1 |
| 1,2-Dichlorobenzene | 0.43 | U | 1.0 | 0.43 | ug/L | | | 09/09/20 01:38 | 1 |
| 1,2-Dibromo-3-Chloropropane | 0.38 | U | 1.0 | 0.38 | ug/L | | | 09/09/20 01:38 | 1 |

| *Tentatively Identified Compound* | *Est. Result* | *Qualifier* | *Unit* | *D* | *RT* | *CAS No.* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|---|---|---|
| *Tentatively Identified Compound* | *None* | | *ug/L* | | | | | *09/09/20 01:38* | *1* |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1,2-Dichloroethane-d4 (Surr)* | *91* | | *75 - 123* | | *09/09/20 01:38* | *1* |
| *4-Bromofluorobenzene* | *99* | | *76 - 120* | | *09/09/20 01:38* | *1* |
| *Dibromofluoromethane (Surr)* | *98* | | *77 - 124* | | *09/09/20 01:38* | *1* |
| *Toluene-d8 (Surr)* | *99* | | *80 - 120* | | *09/09/20 01:38* | *1* |

# Surrogate Summary

Client: SESI Consulting Engineers
Project/Site: Grossingers

Job ID: 460-217547-1

## Method: 8260C - Volatile Organic Compounds by GC/MS

**Matrix: Water**

**Prep Type: Total/NA**

| | | Percent Surrogate Recovery (Acceptance Limits) | | | |
|---|---|---|---|---|---|
| | | DCA | BFB | DBFM | TOL |
| Lab Sample ID | Client Sample ID | (75-123) | (76-120) | (77-124) | (80-120) |
| 460-217547-1 | MW-203 | 91 | 104 | 99 | 96 |
| 460-217547-2 | MW-204 | 99 | 110 | 106 | 107 |
| 460-217547-3 | MW-205 | 91 | 99 | 99 | 98 |
| 460-217547-4 | MW-206 | 93 | 104 | 99 | 96 |
| 460-217547-5 | MW-213 | 93 | 104 | 99 | 96 |
| 460-217547-6 | DUP | 96 | 104 | 102 | 94 |
| 460-217547-7 | FB | 87 | 96 | 96 | 99 |
| 460-217547-8 | TB | 91 | 99 | 98 | 99 |
| 460-217576-A-4 MS | Matrix Spike | 103 | 117 | 107 | 102 |
| 460-217576-A-4 MSD | Matrix Spike Duplicate | 98 | 108 | 100 | 95 |
| LCS 460-722597/4 | Lab Control Sample | 91 | 100 | 94 | 95 |
| LCS 460-722709/4 | Lab Control Sample | 97 | 104 | 98 | 94 |
| LCS 460-722834/5 | Lab Control Sample | 91 | 103 | 95 | 94 |
| LCSD 460-722597/5 | Lab Control Sample Dup | 88 | 98 | 94 | 96 |
| LCSD 460-722709/5 | Lab Control Sample Dup | 96 | 105 | 97 | 96 |
| MB 460-722597/10 | Method Blank | 103 | 108 | 107 | 102 |
| MB 460-722709/8 | Method Blank | 94 | 101 | 99 | 97 |
| MB 460-722834/9 | Method Blank | 93 | 105 | 103 | 99 |

**Surrogate Legend**

DCA = 1,2-Dichloroethane-d4 (Surr)
BFB = 4-Bromofluorobenzene
DBFM = Dibromofluoromethane (Surr)
TOL = Toluene-d8 (Surr)

# Isotope Dilution Summary

Client: SESI Consulting Engineers
Project/Site: Grossingers

Job ID: 460-217547-1

## Method: 537 (modified) - Fluorinated Alkyl Substances

**Matrix: Water**

**Prep Type: Total/NA**

| | | Percent Isotope Dilution Recovery (Acceptance Limits) | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Lab Sample ID | Client Sample ID | PFBA (25-150) | PFPeA (25-150) | PFHxA (25-150) | C4PFHA (25-150) | PFOA (25-150) | PFNA (25-150) | PFDA (25-150) | PFUnA (25-150) |
| 460-217547-1 | MW-203 | 36 | 57 | 67 | 77 | 82 | 86 | 81 | 75 |
| 460-217547-2 | MW-204 | 39 | 54 | 63 | 66 | 66 | 70 | 70 | 69 |
| 460-217547-3 | MW-205 | 58 | 77 | 86 | 88 | 92 | 91 | 84 | 91 |
| 460-217547-4 | MW-206 | 57 | 70 | 78 | 80 | 81 | 87 | 80 | 75 |
| 460-217547-5 | MW-213 | 49 | 68 | 81 | 91 | 91 | 94 | 100 | 89 |
| 460-217547-6 | DUP | 60 | 79 | 92 | 85 | 90 | 93 | 99 | 93 |
| 460-217547-7 | FB | 84 | 90 | 102 | 101 | 100 | 102 | 106 | 114 |
| LCS 320-410910/2-A | Lab Control Sample | 55 | 56 | 64 | 66 | 58 | 64 | 66 | 69 |
| LCS 320-411226/2-A | Lab Control Sample | 90 | 94 | 90 | 96 | 93 | 100 | 99 | 100 |
| LCSD 320-410910/3-A | Lab Control Sample Dup | 63 | 65 | 70 | 76 | 70 | 70 | 75 | 71 |
| LCSD 320-411226/3-A | Lab Control Sample Dup | 86 | 89 | 90 | 91 | 89 | 94 | 95 | 96 |
| MB 320-410910/1-A | Method Blank | 84 | 86 | 95 | 92 | 93 | 95 | 101 | 99 |
| MB 320-411226/1-A | Method Blank | 73 | 90 | 89 | 92 | 92 | 97 | 100 | 98 |

| | | Percent Isotope Dilution Recovery (Acceptance Limits) | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Lab Sample ID | Client Sample ID | PFDoA (25-150) | PFTDA (25-150) | C3PFBS (25-150) | PFHxS (25-150) | PFOS (25-150) | PFOSA (25-150) | d3NMFOS (25-150) | d5NEFOS (25-150) |
| 460-217547-1 | MW-203 | 74 | 69 | 93 | 100 | 97 | 75 | 73 | 76 |
| 460-217547-2 | MW-204 | 70 | 58 | 91 | 90 | 87 | 66 | 56 | 67 |
| 460-217547-3 | MW-205 | 71 | 84 | 92 | 95 | 94 | 77 | 68 | 74 |
| 460-217547-4 | MW-206 | 70 | 64 | 81 | 86 | 82 | 74 | 67 | 71 |
| 460-217547-5 | MW-213 | 72 | 74 | 88 | 92 | 88 | 72 | 61 | 71 |
| 460-217547-6 | DUP | 81 | 97 | 90 | 95 | 95 | 79 | 68 | 74 |
| 460-217547-7 | FB | 96 | 93 | 97 | 101 | 101 | 88 | 87 | 89 |
| LCS 320-410910/2-A | Lab Control Sample | 65 | 57 | 72 | 76 | 72 | 58 | 58 | 62 |
| LCS 320-411226/2-A | Lab Control Sample | 95 | 92 | 96 | 98 | 99 | 88 | 76 | 84 |
| LCSD 320-410910/3-A | Lab Control Sample Dup | 73 | 88 | 83 | 84 | 81 | 69 | 66 | 73 |
| LCSD 320-411226/3-A | Lab Control Sample Dup | 88 | 89 | 94 | 94 | 97 | 81 | 79 | 79 |
| MB 320-410910/1-A | Method Blank | 94 | 93 | 103 | 106 | 104 | 90 | 86 | 89 |
| MB 320-411226/1-A | Method Blank | 97 | 92 | 94 | 100 | 101 | 89 | 78 | 84 |

| | | Percent Isotope Dilution Recovery (Acceptance Limits) | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Lab Sample ID | Client Sample ID | M262FTS (25-150) | M282FTS (25-150) | | | | | | |
| 460-217547-1 | MW-203 | 213 *5 | 166 *5 | | | | | | |
| 460-217547-2 | MW-204 | 143 | 113 | | | | | | |
| 460-217547-3 | MW-205 | 101 | 101 | | | | | | |
| 460-217547-4 | MW-206 | 107 | 93 | | | | | | |
| 460-217547-5 | MW-213 | 157 *5 | 113 | | | | | | |
| 460-217547-6 | DUP | 108 | 95 | | | | | | |
| 460-217547-7 | FB | 112 | 118 | | | | | | |
| LCS 320-410910/2-A | Lab Control Sample | 68 | 76 | | | | | | |
| LCS 320-411226/2-A | Lab Control Sample | 101 | 96 | | | | | | |
| LCSD 320-410910/3-A | Lab Control Sample Dup | 78 | 79 | | | | | | |
| LCSD 320-411226/3-A | Lab Control Sample Dup | 95 | 92 | | | | | | |
| MB 320-410910/1-A | Method Blank | 103 | 115 | | | | | | |
| MB 320-411226/1-A | Method Blank | 94 | 102 | | | | | | |

**Surrogate Legend**

PFBA = 13C4 PFBA

PFPeA = 13C5 PFPeA

# Isotope Dilution Summary

Client: SESI Consulting Engineers
Job ID: 460-217547-1
Project/Site: Grossingers

PFHxA = 13C2 PFHxA
C4PFHA = 13C4 PFHpA
PFOA = 13C4 PFOA
PFNA = 13C5 PFNA
PFDA = 13C2 PFDA
PFUnA = 13C2 PFUnA
PFDoA = 13C2 PFDoA
PFTDA = 13C2 PFTeDA
C3PFBS = 13C3 PFBS
PFHxS = 18O2 PFHxS
PFOS = 13C4 PFOS
PFOSA = 13C8 FOSA
d3NMFOS = d3-NMeFOSAA
d5NEFOS = d5-NEtFOSAA
M262FTS = M2-6:2 FTS
M282FTS = M2-8:2 FTS

## Method: 8260C - Volatile Organic Compounds by GC/MS

**Lab Sample ID: MB 460-722597/10**
**Matrix: Water**
**Analysis Batch: 722597**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1-Trichloroethane | 0.24 | U | 1.0 | 0.24 | ug/L | | | 09/08/20 22:33 | 1 |
| 1,1,2,2-Tetrachloroethane | 0.37 | U | 1.0 | 0.37 | ug/L | | | 09/08/20 22:33 | 1 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 0.31 | U | 1.0 | 0.31 | ug/L | | | 09/08/20 22:33 | 1 |
| 1,1,2-Trichloroethane | 0.43 | U | 1.0 | 0.43 | ug/L | | | 09/08/20 22:33 | 1 |
| 1,1-Dichloroethane | 0.26 | U | 1.0 | 0.26 | ug/L | | | 09/08/20 22:33 | 1 |
| 1,1-Dichloroethene | 0.26 | U | 1.0 | 0.26 | ug/L | | | 09/08/20 22:33 | 1 |
| 1,2,3-Trichlorobenzene | 0.36 | U | 1.0 | 0.36 | ug/L | | | 09/08/20 22:33 | 1 |
| 1,2,4-Trichlorobenzene | 0.37 | U | 1.0 | 0.37 | ug/L | | | 09/08/20 22:33 | 1 |
| 1,2-Dichloropropane | 0.35 | U | 1.0 | 0.35 | ug/L | | | 09/08/20 22:33 | 1 |
| 1,3-Dichlorobenzene | 0.34 | U | 1.0 | 0.34 | ug/L | | | 09/08/20 22:33 | 1 |
| 1,4-Dichlorobenzene | 0.33 | U | 1.0 | 0.33 | ug/L | | | 09/08/20 22:33 | 1 |
| 1,4-Dioxane | 28 | U | 50 | 28 | ug/L | | | 09/08/20 22:33 | 1 |
| 2-Butanone (MEK) | 1.9 | U | 5.0 | 1.9 | ug/L | | | 09/08/20 22:33 | 1 |
| 2-Hexanone | 1.1 | U | 5.0 | 1.1 | ug/L | | | 09/08/20 22:33 | 1 |
| 4-Methyl-2-pentanone (MIBK) | 1.3 | U | 5.0 | 1.3 | ug/L | | | 09/08/20 22:33 | 1 |
| Acetone | 4.4 | U | 5.0 | 4.4 | ug/L | | | 09/08/20 22:33 | 1 |
| Benzene | 0.20 | U | 1.0 | 0.20 | ug/L | | | 09/08/20 22:33 | 1 |
| Bromoform | 0.54 | U | 1.0 | 0.54 | ug/L | | | 09/08/20 22:33 | 1 |
| Bromomethane | 0.55 | U | 1.0 | 0.55 | ug/L | | | 09/08/20 22:33 | 1 |
| Carbon disulfide | 0.82 | U | 1.0 | 0.82 | ug/L | | | 09/08/20 22:33 | 1 |
| Carbon tetrachloride | 0.21 | U | 1.0 | 0.21 | ug/L | | | 09/08/20 22:33 | 1 |
| Chlorobenzene | 0.38 | U | 1.0 | 0.38 | ug/L | | | 09/08/20 22:33 | 1 |
| Chlorobromomethane | 0.41 | U | 1.0 | 0.41 | ug/L | | | 09/08/20 22:33 | 1 |
| Chlorodibromomethane | 0.28 | U | 1.0 | 0.28 | ug/L | | | 09/08/20 22:33 | 1 |
| Chloroethane | 0.32 | U | 1.0 | 0.32 | ug/L | | | 09/08/20 22:33 | 1 |
| Chloroform | 0.33 | U | 1.0 | 0.33 | ug/L | | | 09/08/20 22:33 | 1 |
| Chloromethane | 0.40 | U | 1.0 | 0.40 | ug/L | | | 09/08/20 22:33 | 1 |
| cis-1,2-Dichloroethene | 0.22 | U | 1.0 | 0.22 | ug/L | | | 09/08/20 22:33 | 1 |
| cis-1,3-Dichloropropene | 0.22 | U | 1.0 | 0.22 | ug/L | | | 09/08/20 22:33 | 1 |
| Cyclohexane | 0.32 | U | 1.0 | 0.32 | ug/L | | | 09/08/20 22:33 | 1 |
| Dichlorobromomethane | 0.34 | U | 1.0 | 0.34 | ug/L | | | 09/08/20 22:33 | 1 |
| Dichlorodifluoromethane | 0.31 | U | 1.0 | 0.31 | ug/L | | | 09/08/20 22:33 | 1 |
| Ethylbenzene | 0.30 | U | 1.0 | 0.30 | ug/L | | | 09/08/20 22:33 | 1 |
| Ethylene Dibromide | 0.50 | U | 1.0 | 0.50 | ug/L | | | 09/08/20 22:33 | 1 |
| Isopropylbenzene | 0.34 | U | 1.0 | 0.34 | ug/L | | | 09/08/20 22:33 | 1 |
| Methyl acetate | 0.79 | U | 5.0 | 0.79 | ug/L | | | 09/08/20 22:33 | 1 |
| Methyl tert-butyl ether | 0.47 | U | 1.0 | 0.47 | ug/L | | | 09/08/20 22:33 | 1 |
| Methylcyclohexane | 0.26 | U | 1.0 | 0.26 | ug/L | | | 09/08/20 22:33 | 1 |
| Methylene Chloride | 0.32 | U | 1.0 | 0.32 | ug/L | | | 09/08/20 22:33 | 1 |
| m-Xylene & p-Xylene | 0.30 | U | 1.0 | 0.30 | ug/L | | | 09/08/20 22:33 | 1 |
| o-Xylene | 0.36 | U | 1.0 | 0.36 | ug/L | | | 09/08/20 22:33 | 1 |
| Styrene | 0.42 | U | 1.0 | 0.42 | ug/L | | | 09/08/20 22:33 | 1 |
| Tetrachloroethene | 0.25 | U | 1.0 | 0.25 | ug/L | | | 09/08/20 22:33 | 1 |
| Toluene | 0.38 | U | 1.0 | 0.38 | ug/L | | | 09/08/20 22:33 | 1 |
| trans-1,2-Dichloroethene | 0.24 | U | 1.0 | 0.24 | ug/L | | | 09/08/20 22:33 | 1 |
| trans-1,3-Dichloropropene | 0.49 | U | 1.0 | 0.49 | ug/L | | | 09/08/20 22:33 | 1 |
| Trichloroethene | 0.31 | U | 1.0 | 0.31 | ug/L | | | 09/08/20 22:33 | 1 |
| Trichlorofluoromethane | 0.32 | U | 1.0 | 0.32 | ug/L | | | 09/08/20 22:33 | 1 |

## Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

**Lab Sample ID: MB 460-722597/10**
**Matrix: Water**
**Analysis Batch: 722597**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Vinyl chloride | 0.17 | U | 1.0 | 0.17 | ug/L | | | 09/08/20 22:33 | 1 |
| 1,2-Dichloroethane | 0.43 | U | 1.0 | 0.43 | ug/L | | | 09/08/20 22:33 | 1 |
| 1,2-Dichlorobenzene | 0.43 | U | 1.0 | 0.43 | ug/L | | | 09/08/20 22:33 | 1 |
| 1,2-Dibromo-3-Chloropropane | 0.38 | U | 1.0 | 0.38 | ug/L | | | 09/08/20 22:33 | 1 |

| *Tentatively Identified Compound* | *MB Est. Result* | *MB Qualifier* | *Unit* | *D* | *RT* | *CAS No.* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|---|---|---|
| *Tentatively Identified Compound* | *None* | | *ug/L* | | | | | *09/08/20 22:33* | *1* |

| *Surrogate* | *MB %Recovery* | *MB Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1,2-Dichloroethane-d4 (Surr)* | *103* | | *75 - 123* | | *09/08/20 22:33* | *1* |
| *4-Bromofluorobenzene* | *108* | | *76 - 120* | | *09/08/20 22:33* | *1* |
| *Dibromofluoromethane (Surr)* | *107* | | *77 - 124* | | *09/08/20 22:33* | *1* |
| *Toluene-d8 (Surr)* | *102* | | *80 - 120* | | *09/08/20 22:33* | *1* |

**Lab Sample ID: LCS 460-722597/4**
**Matrix: Water**
**Analysis Batch: 722597**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| 1,1,1-Trichloroethane | 20.0 | 20.7 | | ug/L | | 104 | 68 - 128 |
| 1,1,2,2-Tetrachloroethane | 20.0 | 18.9 | | ug/L | | 94 | 63 - 139 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 20.0 | 21.1 | | ug/L | | 105 | 59 - 142 |
| 1,1,2-Trichloroethane | 20.0 | 18.7 | | ug/L | | 93 | 74 - 125 |
| 1,1-Dichloroethane | 20.0 | 20.2 | | ug/L | | 101 | 73 - 130 |
| 1,1-Dichloroethene | 20.0 | 20.7 | | ug/L | | 104 | 68 - 133 |
| 1,2,3-Trichlorobenzene | 20.0 | 17.3 | | ug/L | | 86 | 53 - 144 |
| 1,2,4-Trichlorobenzene | 20.0 | 19.3 | | ug/L | | 97 | 64 - 132 |
| 1,2-Dichloropropane | 20.0 | 19.5 | | ug/L | | 97 | 76 - 126 |
| 1,3-Dichlorobenzene | 20.0 | 21.0 | | ug/L | | 105 | 80 - 121 |
| 1,4-Dichlorobenzene | 20.0 | 20.7 | | ug/L | | 103 | 80 - 118 |
| 1,4-Dioxane | 400 | 434 | | ug/L | | 109 | 70 - 142 |
| 2-Butanone (MEK) | 100 | 119 | | ug/L | | 119 | 69 - 128 |
| 2-Hexanone | 100 | 125 | | ug/L | | 125 | 74 - 127 |
| 4-Methyl-2-pentanone (MIBK) | 100 | 123 | | ug/L | | 123 | 78 - 125 |
| Acetone | 100 | 98.2 | | ug/L | | 98 | 61 - 134 |
| Benzene | 20.0 | 19.9 | | ug/L | | 99 | 78 - 126 |
| Bromoform | 20.0 | 18.1 | | ug/L | | 90 | 38 - 144 |
| Bromomethane | 20.0 | 32.6 | * | ug/L | | 163 | 10 - 150 |
| Carbon disulfide | 20.0 | 19.5 | | ug/L | | 97 | 64 - 138 |
| Carbon tetrachloride | 20.0 | 22.5 | | ug/L | | 112 | 56 - 131 |
| Chlorobenzene | 20.0 | 20.3 | | ug/L | | 102 | 80 - 119 |
| Chlorobromomethane | 20.0 | 20.3 | | ug/L | | 101 | 73 - 126 |
| Chlorodibromomethane | 20.0 | 18.9 | | ug/L | | 94 | 58 - 130 |
| Chloroethane | 20.0 | 20.2 | | ug/L | | 101 | 29 - 150 |
| Chloroform | 20.0 | 19.8 | | ug/L | | 99 | 78 - 125 |
| Chloromethane | 20.0 | 18.7 | | ug/L | | 93 | 38 - 150 |
| cis-1,2-Dichloroethene | 20.0 | 19.9 | | ug/L | | 100 | 78 - 121 |

## Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

**Lab Sample ID: LCS 460-722597/4**
**Matrix: Water**
**Analysis Batch: 722597**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| cis-1,3-Dichloropropene | 20.0 | 18.9 | | ug/L | | 94 | 74 - 125 |
| Cyclohexane | 20.0 | 20.3 | | ug/L | | 102 | 67 - 133 |
| Dichlorobromomethane | 20.0 | 19.9 | | ug/L | | 99 | 72 - 121 |
| Dichlorodifluoromethane | 20.0 | 19.9 | | ug/L | | 99 | 31 - 150 |
| Ethylbenzene | 20.0 | 20.7 | | ug/L | | 103 | 78 - 120 |
| Ethylene Dibromide | 20.0 | 18.9 | | ug/L | | 95 | 69 - 126 |
| Isopropylbenzene | 20.0 | 20.7 | | ug/L | | 104 | 79 - 125 |
| Methyl acetate | 40.0 | 48.2 | | ug/L | | 121 | 70 - 127 |
| Methyl tert-butyl ether | 20.0 | 19.2 | | ug/L | | 96 | 65 - 131 |
| Methylcyclohexane | 20.0 | 21.4 | | ug/L | | 107 | 60 - 139 |
| Methylene Chloride | 20.0 | 20.1 | | ug/L | | 100 | 74 - 127 |
| m-Xylene & p-Xylene | 20.0 | 21.3 | | ug/L | | 107 | 78 - 123 |
| o-Xylene | 20.0 | 20.4 | | ug/L | | 102 | 78 - 122 |
| Styrene | 20.0 | 20.7 | | ug/L | | 104 | 75 - 127 |
| Tetrachloroethene | 20.0 | 21.0 | | ug/L | | 105 | 70 - 127 |
| Toluene | 20.0 | 20.2 | | ug/L | | 101 | 78 - 119 |
| trans-1,2-Dichloroethene | 20.0 | 20.7 | | ug/L | | 103 | 74 - 126 |
| trans-1,3-Dichloropropene | 20.0 | 19.4 | | ug/L | | 97 | 66 - 127 |
| Trichloroethene | 20.0 | 20.5 | | ug/L | | 102 | 71 - 121 |
| Trichlorofluoromethane | 20.0 | 20.7 | | ug/L | | 103 | 61 - 140 |
| Vinyl chloride | 20.0 | 19.4 | | ug/L | | 97 | 61 - 144 |
| 1,2-Dichloroethane | 20.0 | 18.2 | | ug/L | | 91 | 75 - 121 |
| 1,2-Dichlorobenzene | 20.0 | 20.7 | | ug/L | | 104 | 79 - 122 |
| 1,2-Dibromo-3-Chloropropane | 20.0 | 18.5 | | ug/L | | 93 | 41 - 143 |

| *Surrogate* | *LCS %Recovery* | *LCS Qualifier* | *Limits* |
|---|---|---|---|
| *1,2-Dichloroethane-d4 (Surr)* | *91* | | *75 - 123* |
| *4-Bromofluorobenzene* | *100* | | *76 - 120* |
| *Dibromofluoromethane (Surr)* | *94* | | *77 - 124* |
| *Toluene-d8 (Surr)* | *95* | | *80 - 120* |

**Lab Sample ID: LCSD 460-722597/5**
**Matrix: Water**
**Analysis Batch: 722597**

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

| Analyte | Spike Added | LCSD Result | LCSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1-Trichloroethane | 20.0 | 20.8 | | ug/L | | 104 | 68 - 128 | 0 | 30 |
| 1,1,2,2-Tetrachloroethane | 20.0 | 18.2 | | ug/L | | 91 | 63 - 139 | 3 | 30 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 20.0 | 21.7 | | ug/L | | 109 | 59 - 142 | 3 | 30 |
| 1,1,2-Trichloroethane | 20.0 | 18.2 | | ug/L | | 91 | 74 - 125 | 3 | 30 |
| 1,1-Dichloroethane | 20.0 | 19.7 | | ug/L | | 98 | 73 - 130 | 3 | 30 |
| 1,1-Dichloroethene | 20.0 | 21.1 | | ug/L | | 106 | 68 - 133 | 2 | 30 |
| 1,2,3-Trichlorobenzene | 20.0 | 17.7 | | ug/L | | 88 | 53 - 144 | 2 | 30 |
| 1,2,4-Trichlorobenzene | 20.0 | 18.8 | | ug/L | | 94 | 64 - 132 | 2 | 30 |
| 1,2-Dichloropropane | 20.0 | 19.6 | | ug/L | | 98 | 76 - 126 | 1 | 30 |
| 1,3-Dichlorobenzene | 20.0 | 21.2 | | ug/L | | 106 | 80 - 121 | 1 | 30 |
| 1,4-Dichlorobenzene | 20.0 | 20.9 | | ug/L | | 105 | 80 - 118 | 1 | 30 |
| 1,4-Dioxane | 400 | 483 | | ug/L | | 121 | 70 - 142 | 11 | 30 |

## Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

**Lab Sample ID: LCSD 460-722597/5**
**Matrix: Water**
**Analysis Batch: 722597**

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

| Analyte | | | Spike Added | LCSD Result | LCSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 2-Butanone (MEK) | | | 100 | 126 | | ug/L | | 126 | 69 - 128 | 6 | 30 |
| 2-Hexanone | | | 100 | 125 | | ug/L | | 125 | 74 - 127 | 1 | 30 |
| 4-Methyl-2-pentanone (MIBK) | | | 100 | 124 | | ug/L | | 124 | 78 - 125 | 1 | 30 |
| Acetone | | | 100 | 107 | | ug/L | | 107 | 61 - 134 | 9 | 30 |
| Benzene | | | 20.0 | 19.8 | | ug/L | | 99 | 78 - 126 | 0 | 30 |
| Bromoform | | | 20.0 | 17.5 | | ug/L | | 88 | 38 - 144 | 3 | 30 |
| Bromomethane | | | 20.0 | 34.5 | * | ug/L | | 173 | 10 - 150 | 6 | 30 |
| Carbon disulfide | | | 20.0 | 19.9 | | ug/L | | 99 | 64 - 138 | 2 | 30 |
| Carbon tetrachloride | | | 20.0 | 22.8 | | ug/L | | 114 | 56 - 131 | 1 | 30 |
| Chlorobenzene | | | 20.0 | 20.5 | | ug/L | | 102 | 80 - 119 | 1 | 30 |
| Chlorobromomethane | | | 20.0 | 19.7 | | ug/L | | 99 | 73 - 126 | 3 | 30 |
| Chlorodibromomethane | | | 20.0 | 18.0 | | ug/L | | 90 | 58 - 130 | 5 | 30 |
| Chloroethane | | | 20.0 | 19.9 | | ug/L | | 99 | 29 - 150 | 2 | 30 |
| Chloroform | | | 20.0 | 19.6 | | ug/L | | 98 | 78 - 125 | 1 | 30 |
| Chloromethane | | | 20.0 | 18.7 | | ug/L | | 94 | 38 - 150 | 0 | 30 |
| cis-1,2-Dichloroethene | | | 20.0 | 19.9 | | ug/L | | 99 | 78 - 121 | 0 | 30 |
| cis-1,3-Dichloropropene | | | 20.0 | 18.9 | | ug/L | | 95 | 74 - 125 | 0 | 30 |
| Cyclohexane | | | 20.0 | 20.4 | | ug/L | | 102 | 67 - 133 | 0 | 30 |
| Dichlorobromomethane | | | 20.0 | 19.5 | | ug/L | | 97 | 72 - 121 | 2 | 30 |
| Dichlorodifluoromethane | | | 20.0 | 19.8 | | ug/L | | 99 | 31 - 150 | 0 | 30 |
| Ethylbenzene | | | 20.0 | 20.9 | | ug/L | | 104 | 78 - 120 | 1 | 30 |
| Ethylene Dibromide | | | 20.0 | 18.5 | | ug/L | | 93 | 69 - 126 | 2 | 30 |
| Isopropylbenzene | | | 20.0 | 21.0 | | ug/L | | 105 | 79 - 125 | 1 | 30 |
| Methyl acetate | | | 40.0 | 48.0 | | ug/L | | 120 | 70 - 127 | 0 | 30 |
| Methyl tert-butyl ether | | | 20.0 | 18.1 | | ug/L | | 91 | 65 - 131 | 6 | 30 |
| Methylcyclohexane | | | 20.0 | 21.6 | | ug/L | | 108 | 60 - 139 | 1 | 30 |
| Methylene Chloride | | | 20.0 | 20.3 | | ug/L | | 101 | 74 - 127 | 1 | 30 |
| m-Xylene & p-Xylene | | | 20.0 | 21.7 | | ug/L | | 108 | 78 - 123 | 2 | 30 |
| o-Xylene | | | 20.0 | 20.5 | | ug/L | | 103 | 78 - 122 | 1 | 30 |
| Styrene | | | 20.0 | 21.1 | | ug/L | | 106 | 75 - 127 | 2 | 30 |
| Tetrachloroethene | | | 20.0 | 21.1 | | ug/L | | 105 | 70 - 127 | 1 | 30 |
| Toluene | | | 20.0 | 20.4 | | ug/L | | 102 | 78 - 119 | 1 | 30 |
| trans-1,2-Dichloroethene | | | 20.0 | 20.4 | | ug/L | | 102 | 74 - 126 | 1 | 30 |
| trans-1,3-Dichloropropene | | | 20.0 | 18.8 | | ug/L | | 94 | 66 - 127 | 3 | 30 |
| Trichloroethene | | | 20.0 | 21.1 | | ug/L | | 106 | 71 - 121 | 3 | 30 |
| Trichlorofluoromethane | | | 20.0 | 21.9 | | ug/L | | 109 | 61 - 140 | 6 | 30 |
| Vinyl chloride | | | 20.0 | 19.5 | | ug/L | | 97 | 61 - 144 | 1 | 30 |
| 1,2-Dichloroethane | | | 20.0 | 18.1 | | ug/L | | 90 | 75 - 121 | 0 | 30 |
| 1,2-Dichlorobenzene | | | 20.0 | 20.7 | | ug/L | | 104 | 79 - 122 | 0 | 30 |
| 1,2-Dibromo-3-Chloropropane | | | 20.0 | 18.5 | | ug/L | | 93 | 41 - 143 | 0 | 30 |

| *Surrogate* | *LCSD %Recovery* | *LCSD Qualifier* | *Limits* |
|---|---|---|---|
| *1,2-Dichloroethane-d4 (Surr)* | *88* | | *75 - 123* |
| *4-Bromofluorobenzene* | *98* | | *76 - 120* |
| *Dibromofluoromethane (Surr)* | *94* | | *77 - 124* |
| *Toluene-d8 (Surr)* | *96* | | *80 - 120* |

## Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

**Lab Sample ID: MB 460-722709/8**
**Matrix: Water**
**Analysis Batch: 722709**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1-Trichloroethane | 0.24 | U | 1.0 | 0.24 | ug/L | | | 09/09/20 10:31 | 1 |
| 1,1,2,2-Tetrachloroethane | 0.37 | U | 1.0 | 0.37 | ug/L | | | 09/09/20 10:31 | 1 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 0.31 | U | 1.0 | 0.31 | ug/L | | | 09/09/20 10:31 | 1 |
| 1,1,2-Trichloroethane | 0.43 | U | 1.0 | 0.43 | ug/L | | | 09/09/20 10:31 | 1 |
| 1,1-Dichloroethane | 0.26 | U | 1.0 | 0.26 | ug/L | | | 09/09/20 10:31 | 1 |
| 1,1-Dichloroethene | 0.26 | U | 1.0 | 0.26 | ug/L | | | 09/09/20 10:31 | 1 |
| 1,2,3-Trichlorobenzene | 0.36 | U | 1.0 | 0.36 | ug/L | | | 09/09/20 10:31 | 1 |
| 1,2,4-Trichlorobenzene | 0.37 | U | 1.0 | 0.37 | ug/L | | | 09/09/20 10:31 | 1 |
| 1,2-Dichloropropane | 0.35 | U | 1.0 | 0.35 | ug/L | | | 09/09/20 10:31 | 1 |
| 1,3-Dichlorobenzene | 0.34 | U | 1.0 | 0.34 | ug/L | | | 09/09/20 10:31 | 1 |
| 1,4-Dichlorobenzene | 0.33 | U | 1.0 | 0.33 | ug/L | | | 09/09/20 10:31 | 1 |
| 1,4-Dioxane | 28 | U | 50 | 28 | ug/L | | | 09/09/20 10:31 | 1 |
| 2-Butanone (MEK) | 1.9 | U | 5.0 | 1.9 | ug/L | | | 09/09/20 10:31 | 1 |
| 2-Hexanone | 1.1 | U | 5.0 | 1.1 | ug/L | | | 09/09/20 10:31 | 1 |
| 4-Methyl-2-pentanone (MIBK) | 1.3 | U | 5.0 | 1.3 | ug/L | | | 09/09/20 10:31 | 1 |
| Acetone | 4.4 | U | 5.0 | 4.4 | ug/L | | | 09/09/20 10:31 | 1 |
| Benzene | 0.20 | U | 1.0 | 0.20 | ug/L | | | 09/09/20 10:31 | 1 |
| Bromoform | 0.54 | U | 1.0 | 0.54 | ug/L | | | 09/09/20 10:31 | 1 |
| Bromomethane | 0.55 | U | 1.0 | 0.55 | ug/L | | | 09/09/20 10:31 | 1 |
| Carbon disulfide | 0.82 | U | 1.0 | 0.82 | ug/L | | | 09/09/20 10:31 | 1 |
| Carbon tetrachloride | 0.21 | U | 1.0 | 0.21 | ug/L | | | 09/09/20 10:31 | 1 |
| Chlorobenzene | 0.38 | U | 1.0 | 0.38 | ug/L | | | 09/09/20 10:31 | 1 |
| Chlorobromomethane | 0.41 | U | 1.0 | 0.41 | ug/L | | | 09/09/20 10:31 | 1 |
| Chlorodibromomethane | 0.28 | U | 1.0 | 0.28 | ug/L | | | 09/09/20 10:31 | 1 |
| Chloroethane | 0.32 | U | 1.0 | 0.32 | ug/L | | | 09/09/20 10:31 | 1 |
| Chloroform | 0.33 | U | 1.0 | 0.33 | ug/L | | | 09/09/20 10:31 | 1 |
| Chloromethane | 0.40 | U | 1.0 | 0.40 | ug/L | | | 09/09/20 10:31 | 1 |
| cis-1,2-Dichloroethene | 0.22 | U | 1.0 | 0.22 | ug/L | | | 09/09/20 10:31 | 1 |
| cis-1,3-Dichloropropene | 0.22 | U | 1.0 | 0.22 | ug/L | | | 09/09/20 10:31 | 1 |
| Cyclohexane | 0.32 | U | 1.0 | 0.32 | ug/L | | | 09/09/20 10:31 | 1 |
| Dichlorobromomethane | 0.34 | U | 1.0 | 0.34 | ug/L | | | 09/09/20 10:31 | 1 |
| Dichlorodifluoromethane | 0.31 | U | 1.0 | 0.31 | ug/L | | | 09/09/20 10:31 | 1 |
| Ethylbenzene | 0.30 | U | 1.0 | 0.30 | ug/L | | | 09/09/20 10:31 | 1 |
| Ethylene Dibromide | 0.50 | U | 1.0 | 0.50 | ug/L | | | 09/09/20 10:31 | 1 |
| Isopropylbenzene | 0.34 | U | 1.0 | 0.34 | ug/L | | | 09/09/20 10:31 | 1 |
| Methyl acetate | 0.79 | U | 5.0 | 0.79 | ug/L | | | 09/09/20 10:31 | 1 |
| Methyl tert-butyl ether | 0.47 | U | 1.0 | 0.47 | ug/L | | | 09/09/20 10:31 | 1 |
| Methylcyclohexane | 0.26 | U | 1.0 | 0.26 | ug/L | | | 09/09/20 10:31 | 1 |
| Methylene Chloride | 0.32 | U | 1.0 | 0.32 | ug/L | | | 09/09/20 10:31 | 1 |
| m-Xylene & p-Xylene | 0.30 | U | 1.0 | 0.30 | ug/L | | | 09/09/20 10:31 | 1 |
| o-Xylene | 0.36 | U | 1.0 | 0.36 | ug/L | | | 09/09/20 10:31 | 1 |
| Styrene | 0.42 | U | 1.0 | 0.42 | ug/L | | | 09/09/20 10:31 | 1 |
| Tetrachloroethene | 0.25 | U | 1.0 | 0.25 | ug/L | | | 09/09/20 10:31 | 1 |
| Toluene | 0.38 | U | 1.0 | 0.38 | ug/L | | | 09/09/20 10:31 | 1 |
| trans-1,2-Dichloroethene | 0.24 | U | 1.0 | 0.24 | ug/L | | | 09/09/20 10:31 | 1 |
| trans-1,3-Dichloropropene | 0.49 | U | 1.0 | 0.49 | ug/L | | | 09/09/20 10:31 | 1 |
| Trichloroethene | 0.31 | U | 1.0 | 0.31 | ug/L | | | 09/09/20 10:31 | 1 |
| Trichlorofluoromethane | 0.32 | U | 1.0 | 0.32 | ug/L | | | 09/09/20 10:31 | 1 |

## Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

**Lab Sample ID: MB 460-722709/8**
**Matrix: Water**
**Analysis Batch: 722709**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Vinyl chloride | 0.17 | U | 1.0 | 0.17 | ug/L | | | 09/09/20 10:31 | 1 |
| 1,2-Dichloroethane | 0.43 | U | 1.0 | 0.43 | ug/L | | | 09/09/20 10:31 | 1 |
| 1,2-Dichlorobenzene | 0.43 | U | 1.0 | 0.43 | ug/L | | | 09/09/20 10:31 | 1 |
| 1,2-Dibromo-3-Chloropropane | 0.38 | U | 1.0 | 0.38 | ug/L | | | 09/09/20 10:31 | 1 |

| *Tentatively Identified Compound* | *MB Est. Result* | *MB Qualifier* | *Unit* | *D* | *RT* | *CAS No.* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|---|---|---|
| *Tentatively Identified Compound* | *None* | | *ug/L* | | | | | *09/09/20 10:31* | *1* |

| *Surrogate* | *MB %Recovery* | *MB Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1,2-Dichloroethane-d4 (Surr)* | *94* | | *75 - 123* | | *09/09/20 10:31* | *1* |
| *4-Bromofluorobenzene* | *101* | | *76 - 120* | | *09/09/20 10:31* | *1* |
| *Dibromofluoromethane (Surr)* | *99* | | *77 - 124* | | *09/09/20 10:31* | *1* |
| *Toluene-d8 (Surr)* | *97* | | *80 - 120* | | *09/09/20 10:31* | *1* |

**Lab Sample ID: LCS 460-722709/4**
**Matrix: Water**
**Analysis Batch: 722709**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| 1,1,1-Trichloroethane | 20.0 | 20.0 | | ug/L | | 100 | 68 - 128 |
| 1,1,2,2-Tetrachloroethane | 20.0 | 19.9 | | ug/L | | 100 | 63 - 139 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 20.0 | 21.2 | | ug/L | | 106 | 59 - 142 |
| 1,1,2-Trichloroethane | 20.0 | 19.3 | | ug/L | | 96 | 74 - 125 |
| 1,1-Dichloroethane | 20.0 | 19.2 | | ug/L | | 96 | 73 - 130 |
| 1,1-Dichloroethene | 20.0 | 20.3 | | ug/L | | 102 | 68 - 133 |
| 1,2,3-Trichlorobenzene | 20.0 | 18.4 | | ug/L | | 92 | 53 - 144 |
| 1,2,4-Trichlorobenzene | 20.0 | 19.6 | | ug/L | | 98 | 64 - 132 |
| 1,2-Dichloropropane | 20.0 | 19.1 | | ug/L | | 95 | 76 - 126 |
| 1,3-Dichlorobenzene | 20.0 | 19.6 | | ug/L | | 98 | 80 - 121 |
| 1,4-Dichlorobenzene | 20.0 | 19.7 | | ug/L | | 98 | 80 - 118 |
| 1,4-Dioxane | 400 | 432 | | ug/L | | 108 | 70 - 142 |
| 2-Butanone (MEK) | 100 | 103 | | ug/L | | 103 | 69 - 128 |
| 2-Hexanone | 100 | 108 | | ug/L | | 108 | 74 - 127 |
| 4-Methyl-2-pentanone (MIBK) | 100 | 103 | | ug/L | | 103 | 78 - 125 |
| Acetone | 100 | 87.0 | | ug/L | | 87 | 61 - 134 |
| Benzene | 20.0 | 18.7 | | ug/L | | 94 | 78 - 126 |
| Bromoform | 20.0 | 18.9 | | ug/L | | 95 | 38 - 144 |
| Bromomethane | 20.0 | 18.3 | | ug/L | | 92 | 10 - 150 |
| Carbon disulfide | 20.0 | 19.2 | | ug/L | | 96 | 64 - 138 |
| Carbon tetrachloride | 20.0 | 21.8 | | ug/L | | 109 | 56 - 131 |
| Chlorobenzene | 20.0 | 19.4 | | ug/L | | 97 | 80 - 119 |
| Chlorobromomethane | 20.0 | 20.3 | | ug/L | | 102 | 73 - 126 |
| Chlorodibromomethane | 20.0 | 19.6 | | ug/L | | 98 | 58 - 130 |
| Chloroethane | 20.0 | 18.5 | | ug/L | | 93 | 29 - 150 |
| Chloroform | 20.0 | 19.7 | | ug/L | | 98 | 78 - 125 |
| Chloromethane | 20.0 | 17.9 | | ug/L | | 90 | 38 - 150 |
| cis-1,2-Dichloroethene | 20.0 | 19.8 | | ug/L | | 99 | 78 - 121 |

## Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

**Lab Sample ID: LCS 460-722709/4**
**Matrix: Water**
**Analysis Batch: 722709**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| cis-1,3-Dichloropropene | 20.0 | 19.0 | | ug/L | | 95 | 74 - 125 |
| Cyclohexane | 20.0 | 20.2 | | ug/L | | 101 | 67 - 133 |
| Dichlorobromomethane | 20.0 | 19.5 | | ug/L | | 98 | 72 - 121 |
| Dichlorodifluoromethane | 20.0 | 19.9 | | ug/L | | 100 | 31 - 150 |
| Ethylbenzene | 20.0 | 19.8 | | ug/L | | 99 | 78 - 120 |
| Ethylene Dibromide | 20.0 | 20.0 | | ug/L | | 100 | 69 - 126 |
| Isopropylbenzene | 20.0 | 20.0 | | ug/L | | 100 | 79 - 125 |
| Methyl acetate | 40.0 | 38.4 | | ug/L | | 96 | 70 - 127 |
| Methyl tert-butyl ether | 20.0 | 20.5 | | ug/L | | 102 | 65 - 131 |
| Methylcyclohexane | 20.0 | 21.4 | | ug/L | | 107 | 60 - 139 |
| Methylene Chloride | 20.0 | 20.2 | | ug/L | | 101 | 74 - 127 |
| m-Xylene & p-Xylene | 20.0 | 20.6 | | ug/L | | 103 | 78 - 123 |
| o-Xylene | 20.0 | 19.5 | | ug/L | | 97 | 78 - 122 |
| Styrene | 20.0 | 20.1 | | ug/L | | 101 | 75 - 127 |
| Tetrachloroethene | 20.0 | 20.3 | | ug/L | | 102 | 70 - 127 |
| Toluene | 20.0 | 19.6 | | ug/L | | 98 | 78 - 119 |
| trans-1,2-Dichloroethene | 20.0 | 19.5 | | ug/L | | 97 | 74 - 126 |
| trans-1,3-Dichloropropene | 20.0 | 19.5 | | ug/L | | 98 | 66 - 127 |
| Trichloroethene | 20.0 | 20.6 | | ug/L | | 103 | 71 - 121 |
| Trichlorofluoromethane | 20.0 | 21.6 | | ug/L | | 108 | 61 - 140 |
| Vinyl chloride | 20.0 | 18.6 | | ug/L | | 93 | 61 - 144 |
| 1,2-Dichloroethane | 20.0 | 18.9 | | ug/L | | 95 | 75 - 121 |
| 1,2-Dichlorobenzene | 20.0 | 20.0 | | ug/L | | 100 | 79 - 122 |
| 1,2-Dibromo-3-Chloropropane | 20.0 | 21.9 | | ug/L | | 110 | 41 - 143 |

| *Surrogate* | *LCS %Recovery* | *LCS Qualifier* | *Limits* |
|---|---|---|---|
| *1,2-Dichloroethane-d4 (Surr)* | *97* | | *75 - 123* |
| *4-Bromofluorobenzene* | *104* | | *76 - 120* |
| *Dibromofluoromethane (Surr)* | *98* | | *77 - 124* |
| *Toluene-d8 (Surr)* | *94* | | *80 - 120* |

**Lab Sample ID: LCSD 460-722709/5**
**Matrix: Water**
**Analysis Batch: 722709**

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

| Analyte | Spike Added | LCSD Result | LCSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1-Trichloroethane | 20.0 | 20.8 | | ug/L | | 104 | 68 - 128 | 4 | 30 |
| 1,1,2,2-Tetrachloroethane | 20.0 | 20.1 | | ug/L | | 100 | 63 - 139 | 1 | 30 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 20.0 | 22.1 | | ug/L | | 111 | 59 - 142 | 4 | 30 |
| 1,1,2-Trichloroethane | 20.0 | 20.2 | | ug/L | | 101 | 74 - 125 | 4 | 30 |
| 1,1-Dichloroethane | 20.0 | 19.2 | | ug/L | | 96 | 73 - 130 | 0 | 30 |
| 1,1-Dichloroethene | 20.0 | 21.0 | | ug/L | | 105 | 68 - 133 | 3 | 30 |
| 1,2,3-Trichlorobenzene | 20.0 | 19.2 | | ug/L | | 96 | 53 - 144 | 4 | 30 |
| 1,2,4-Trichlorobenzene | 20.0 | 19.6 | | ug/L | | 98 | 64 - 132 | 0 | 30 |
| 1,2-Dichloropropane | 20.0 | 19.8 | | ug/L | | 99 | 76 - 126 | 3 | 30 |
| 1,3-Dichlorobenzene | 20.0 | 20.3 | | ug/L | | 102 | 80 - 121 | 3 | 30 |
| 1,4-Dichlorobenzene | 20.0 | 20.0 | | ug/L | | 100 | 80 - 118 | 1 | 30 |
| 1,4-Dioxane | 400 | 478 | | ug/L | | 119 | 70 - 142 | 10 | 30 |

## Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

**Lab Sample ID: LCSD 460-722709/5**
**Matrix: Water**
**Analysis Batch: 722709**

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

| Analyte | | | Spike Added | LCSD Result | LCSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 2-Butanone (MEK) | | | 100 | 106 | | ug/L | | 106 | 69 - 128 | 3 | 30 |
| 2-Hexanone | | | 100 | 109 | | ug/L | | 109 | 74 - 127 | 1 | 30 |
| 4-Methyl-2-pentanone (MIBK) | | | 100 | 105 | | ug/L | | 105 | 78 - 125 | 2 | 30 |
| Acetone | | | 100 | 91.9 | | ug/L | | 92 | 61 - 134 | 5 | 30 |
| Benzene | | | 20.0 | 19.6 | | ug/L | | 98 | 78 - 126 | 5 | 30 |
| Bromoform | | | 20.0 | 20.1 | | ug/L | | 100 | 38 - 144 | 6 | 30 |
| Bromomethane | | | 20.0 | 19.4 | | ug/L | | 97 | 10 - 150 | 6 | 30 |
| Carbon disulfide | | | 20.0 | 19.5 | | ug/L | | 97 | 64 - 138 | 1 | 30 |
| Carbon tetrachloride | | | 20.0 | 22.6 | | ug/L | | 113 | 56 - 131 | 3 | 30 |
| Chlorobenzene | | | 20.0 | 20.1 | | ug/L | | 100 | 80 - 119 | 4 | 30 |
| Chlorobromomethane | | | 20.0 | 20.4 | | ug/L | | 102 | 73 - 126 | 0 | 30 |
| Chlorodibromomethane | | | 20.0 | 20.4 | | ug/L | | 102 | 58 - 130 | 4 | 30 |
| Chloroethane | | | 20.0 | 14.9 | | ug/L | | 75 | 29 - 150 | 21 | 30 |
| Chloroform | | | 20.0 | 19.7 | | ug/L | | 98 | 78 - 125 | 0 | 30 |
| Chloromethane | | | 20.0 | 17.7 | | ug/L | | 89 | 38 - 150 | 1 | 30 |
| cis-1,2-Dichloroethene | | | 20.0 | 20.0 | | ug/L | | 100 | 78 - 121 | 1 | 30 |
| cis-1,3-Dichloropropene | | | 20.0 | 19.1 | | ug/L | | 95 | 74 - 125 | 1 | 30 |
| Cyclohexane | | | 20.0 | 20.4 | | ug/L | | 102 | 67 - 133 | 1 | 30 |
| Dichlorobromomethane | | | 20.0 | 19.8 | | ug/L | | 99 | 72 - 121 | 1 | 30 |
| Dichlorodifluoromethane | | | 20.0 | 19.9 | | ug/L | | 99 | 31 - 150 | 0 | 30 |
| Ethylbenzene | | | 20.0 | 20.4 | | ug/L | | 102 | 78 - 120 | 3 | 30 |
| Ethylene Dibromide | | | 20.0 | 21.2 | | ug/L | | 106 | 69 - 126 | 6 | 30 |
| Isopropylbenzene | | | 20.0 | 20.6 | | ug/L | | 103 | 79 - 125 | 3 | 30 |
| Methyl acetate | | | 40.0 | 38.6 | | ug/L | | 96 | 70 - 127 | 1 | 30 |
| Methyl tert-butyl ether | | | 20.0 | 20.9 | | ug/L | | 105 | 65 - 131 | 2 | 30 |
| Methylcyclohexane | | | 20.0 | 21.7 | | ug/L | | 108 | 60 - 139 | 1 | 30 |
| Methylene Chloride | | | 20.0 | 20.2 | | ug/L | | 101 | 74 - 127 | 0 | 30 |
| m-Xylene & p-Xylene | | | 20.0 | 20.9 | | ug/L | | 105 | 78 - 123 | 1 | 30 |
| o-Xylene | | | 20.0 | 20.2 | | ug/L | | 101 | 78 - 122 | 4 | 30 |
| Styrene | | | 20.0 | 20.7 | | ug/L | | 104 | 75 - 127 | 3 | 30 |
| Tetrachloroethene | | | 20.0 | 21.4 | | ug/L | | 107 | 70 - 127 | 5 | 30 |
| Toluene | | | 20.0 | 20.0 | | ug/L | | 100 | 78 - 119 | 2 | 30 |
| trans-1,2-Dichloroethene | | | 20.0 | 20.9 | | ug/L | | 104 | 74 - 126 | 7 | 30 |
| trans-1,3-Dichloropropene | | | 20.0 | 20.5 | | ug/L | | 103 | 66 - 127 | 5 | 30 |
| Trichloroethene | | | 20.0 | 21.1 | | ug/L | | 105 | 71 - 121 | 3 | 30 |
| Trichlorofluoromethane | | | 20.0 | 21.7 | | ug/L | | 109 | 61 - 140 | 0 | 30 |
| Vinyl chloride | | | 20.0 | 19.2 | | ug/L | | 96 | 61 - 144 | 3 | 30 |
| 1,2-Dichloroethane | | | 20.0 | 19.3 | | ug/L | | 96 | 75 - 121 | 2 | 30 |
| 1,2-Dichlorobenzene | | | 20.0 | 20.2 | | ug/L | | 101 | 79 - 122 | 1 | 30 |
| 1,2-Dibromo-3-Chloropropane | | | 20.0 | 21.7 | | ug/L | | 108 | 41 - 143 | 1 | 30 |

| *Surrogate* | *LCSD %Recovery* | *LCSD Qualifier* | *Limits* |
|---|---|---|---|
| *1,2-Dichloroethane-d4 (Surr)* | *96* | | *75 - 123* |
| *4-Bromofluorobenzene* | *105* | | *76 - 120* |
| *Dibromofluoromethane (Surr)* | *97* | | *77 - 124* |
| *Toluene-d8 (Surr)* | *96* | | *80 - 120* |

## Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

**Lab Sample ID: MB 460-722834/9**
**Matrix: Water**
**Analysis Batch: 722834**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1-Trichloroethane | 0.24 | U | 1.0 | 0.24 | ug/L | | | 09/09/20 21:01 | 1 |
| 1,1,2,2-Tetrachloroethane | 0.37 | U | 1.0 | 0.37 | ug/L | | | 09/09/20 21:01 | 1 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 0.31 | U | 1.0 | 0.31 | ug/L | | | 09/09/20 21:01 | 1 |
| 1,1,2-Trichloroethane | 0.43 | U | 1.0 | 0.43 | ug/L | | | 09/09/20 21:01 | 1 |
| 1,1-Dichloroethane | 0.26 | U | 1.0 | 0.26 | ug/L | | | 09/09/20 21:01 | 1 |
| 1,1-Dichloroethene | 0.26 | U | 1.0 | 0.26 | ug/L | | | 09/09/20 21:01 | 1 |
| 1,2,3-Trichlorobenzene | 0.36 | U | 1.0 | 0.36 | ug/L | | | 09/09/20 21:01 | 1 |
| 1,2,4-Trichlorobenzene | 0.37 | U | 1.0 | 0.37 | ug/L | | | 09/09/20 21:01 | 1 |
| 1,2-Dichloropropane | 0.35 | U | 1.0 | 0.35 | ug/L | | | 09/09/20 21:01 | 1 |
| 1,3-Dichlorobenzene | 0.34 | U | 1.0 | 0.34 | ug/L | | | 09/09/20 21:01 | 1 |
| 1,4-Dichlorobenzene | 0.33 | U | 1.0 | 0.33 | ug/L | | | 09/09/20 21:01 | 1 |
| 1,4-Dioxane | 28 | U | 50 | 28 | ug/L | | | 09/09/20 21:01 | 1 |
| 2-Butanone (MEK) | 1.9 | U | 5.0 | 1.9 | ug/L | | | 09/09/20 21:01 | 1 |
| 2-Hexanone | 1.1 | U | 5.0 | 1.1 | ug/L | | | 09/09/20 21:01 | 1 |
| 4-Methyl-2-pentanone (MIBK) | 1.3 | U | 5.0 | 1.3 | ug/L | | | 09/09/20 21:01 | 1 |
| Acetone | 4.4 | U | 5.0 | 4.4 | ug/L | | | 09/09/20 21:01 | 1 |
| Benzene | 0.20 | U | 1.0 | 0.20 | ug/L | | | 09/09/20 21:01 | 1 |
| Bromoform | 0.54 | U | 1.0 | 0.54 | ug/L | | | 09/09/20 21:01 | 1 |
| Bromomethane | 0.55 | U | 1.0 | 0.55 | ug/L | | | 09/09/20 21:01 | 1 |
| Carbon disulfide | 0.82 | U | 1.0 | 0.82 | ug/L | | | 09/09/20 21:01 | 1 |
| Carbon tetrachloride | 0.21 | U | 1.0 | 0.21 | ug/L | | | 09/09/20 21:01 | 1 |
| Chlorobenzene | 0.38 | U | 1.0 | 0.38 | ug/L | | | 09/09/20 21:01 | 1 |
| Chlorobromomethane | 0.41 | U | 1.0 | 0.41 | ug/L | | | 09/09/20 21:01 | 1 |
| Chlorodibromomethane | 0.28 | U | 1.0 | 0.28 | ug/L | | | 09/09/20 21:01 | 1 |
| Chloroethane | 0.32 | U | 1.0 | 0.32 | ug/L | | | 09/09/20 21:01 | 1 |
| Chloroform | 0.33 | U | 1.0 | 0.33 | ug/L | | | 09/09/20 21:01 | 1 |
| Chloromethane | 0.40 | U | 1.0 | 0.40 | ug/L | | | 09/09/20 21:01 | 1 |
| cis-1,2-Dichloroethene | 0.22 | U | 1.0 | 0.22 | ug/L | | | 09/09/20 21:01 | 1 |
| cis-1,3-Dichloropropene | 0.22 | U | 1.0 | 0.22 | ug/L | | | 09/09/20 21:01 | 1 |
| Cyclohexane | 0.32 | U | 1.0 | 0.32 | ug/L | | | 09/09/20 21:01 | 1 |
| Dichlorobromomethane | 0.34 | U | 1.0 | 0.34 | ug/L | | | 09/09/20 21:01 | 1 |
| Dichlorodifluoromethane | 0.31 | U | 1.0 | 0.31 | ug/L | | | 09/09/20 21:01 | 1 |
| Ethylbenzene | 0.30 | U | 1.0 | 0.30 | ug/L | | | 09/09/20 21:01 | 1 |
| Ethylene Dibromide | 0.50 | U | 1.0 | 0.50 | ug/L | | | 09/09/20 21:01 | 1 |
| Isopropylbenzene | 0.34 | U | 1.0 | 0.34 | ug/L | | | 09/09/20 21:01 | 1 |
| Methyl acetate | 0.79 | U | 5.0 | 0.79 | ug/L | | | 09/09/20 21:01 | 1 |
| Methyl tert-butyl ether | 0.47 | U | 1.0 | 0.47 | ug/L | | | 09/09/20 21:01 | 1 |
| Methylcyclohexane | 0.26 | U | 1.0 | 0.26 | ug/L | | | 09/09/20 21:01 | 1 |
| Methylene Chloride | 0.32 | U | 1.0 | 0.32 | ug/L | | | 09/09/20 21:01 | 1 |
| m-Xylene & p-Xylene | 0.30 | U | 1.0 | 0.30 | ug/L | | | 09/09/20 21:01 | 1 |
| o-Xylene | 0.36 | U | 1.0 | 0.36 | ug/L | | | 09/09/20 21:01 | 1 |
| Styrene | 0.42 | U | 1.0 | 0.42 | ug/L | | | 09/09/20 21:01 | 1 |
| Tetrachloroethene | 0.25 | U | 1.0 | 0.25 | ug/L | | | 09/09/20 21:01 | 1 |
| Toluene | 0.38 | U | 1.0 | 0.38 | ug/L | | | 09/09/20 21:01 | 1 |
| trans-1,2-Dichloroethene | 0.24 | U | 1.0 | 0.24 | ug/L | | | 09/09/20 21:01 | 1 |
| trans-1,3-Dichloropropene | 0.49 | U | 1.0 | 0.49 | ug/L | | | 09/09/20 21:01 | 1 |
| Trichloroethene | 0.31 | U | 1.0 | 0.31 | ug/L | | | 09/09/20 21:01 | 1 |
| Trichlorofluoromethane | 0.32 | U | 1.0 | 0.32 | ug/L | | | 09/09/20 21:01 | 1 |

## Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

**Lab Sample ID: MB 460-722834/9**
**Matrix: Water**
**Analysis Batch: 722834**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Vinyl chloride | 0.17 | U | 1.0 | 0.17 | ug/L | | | 09/09/20 21:01 | 1 |
| 1,2-Dichloroethane | 0.43 | U | 1.0 | 0.43 | ug/L | | | 09/09/20 21:01 | 1 |
| 1,2-Dichlorobenzene | 0.43 | U | 1.0 | 0.43 | ug/L | | | 09/09/20 21:01 | 1 |
| 1,2-Dibromo-3-Chloropropane | 0.38 | U | 1.0 | 0.38 | ug/L | | | 09/09/20 21:01 | 1 |

| *Tentatively Identified Compound* | *MB Est. Result* | *MB Qualifier* | *Unit* | *D* | *RT* | *CAS No.* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|---|---|---|
| *Tentatively Identified Compound* | *None* | | *ug/L* | | | | | *09/09/20 21:01* | *1* |

| *Surrogate* | *MB %Recovery* | *MB Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1,2-Dichloroethane-d4 (Surr)* | *93* | | *75 - 123* | | *09/09/20 21:01* | *1* |
| *4-Bromofluorobenzene* | *105* | | *76 - 120* | | *09/09/20 21:01* | *1* |
| *Dibromofluoromethane (Surr)* | *103* | | *77 - 124* | | *09/09/20 21:01* | *1* |
| *Toluene-d8 (Surr)* | *99* | | *80 - 120* | | *09/09/20 21:01* | *1* |

**Lab Sample ID: LCS 460-722834/5**
**Matrix: Water**
**Analysis Batch: 722834**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| 1,1,1-Trichloroethane | 20.0 | 20.6 | | ug/L | | 103 | 68 - 128 |
| 1,1,2,2-Tetrachloroethane | 20.0 | 19.4 | | ug/L | | 97 | 63 - 139 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 20.0 | 21.4 | | ug/L | | 107 | 59 - 142 |
| 1,1,2-Trichloroethane | 20.0 | 18.7 | | ug/L | | 94 | 74 - 125 |
| 1,1-Dichloroethane | 20.0 | 19.5 | | ug/L | | 98 | 73 - 130 |
| 1,1-Dichloroethene | 20.0 | 20.8 | | ug/L | | 104 | 68 - 133 |
| 1,2,3-Trichlorobenzene | 20.0 | 18.5 | | ug/L | | 93 | 53 - 144 |
| 1,2,4-Trichlorobenzene | 20.0 | 19.8 | | ug/L | | 99 | 64 - 132 |
| 1,2-Dichloropropane | 20.0 | 19.2 | | ug/L | | 96 | 76 - 126 |
| 1,3-Dichlorobenzene | 20.0 | 21.0 | | ug/L | | 105 | 80 - 121 |
| 1,4-Dichlorobenzene | 20.0 | 20.6 | | ug/L | | 103 | 80 - 118 |
| 1,4-Dioxane | 400 | 445 | | ug/L | | 111 | 70 - 142 |
| 2-Butanone (MEK) | 100 | 120 | | ug/L | | 120 | 69 - 128 |
| 2-Hexanone | 100 | 120 | | ug/L | | 120 | 74 - 127 |
| 4-Methyl-2-pentanone (MIBK) | 100 | 118 | | ug/L | | 118 | 78 - 125 |
| Acetone | 100 | 100 | | ug/L | | 100 | 61 - 134 |
| Benzene | 20.0 | 19.5 | | ug/L | | 98 | 78 - 126 |
| Bromoform | 20.0 | 19.6 | | ug/L | | 98 | 38 - 144 |
| Bromomethane | 20.0 | 23.7 | | ug/L | | 119 | 10 - 150 |
| Carbon disulfide | 20.0 | 19.4 | | ug/L | | 97 | 64 - 138 |
| Carbon tetrachloride | 20.0 | 22.8 | | ug/L | | 114 | 56 - 131 |
| Chlorobenzene | 20.0 | 20.8 | | ug/L | | 104 | 80 - 119 |
| Chlorobromomethane | 20.0 | 20.1 | | ug/L | | 100 | 73 - 126 |
| Chlorodibromomethane | 20.0 | 19.2 | | ug/L | | 96 | 58 - 130 |
| Chloroethane | 20.0 | 17.2 | | ug/L | | 86 | 29 - 150 |
| Chloroform | 20.0 | 19.8 | | ug/L | | 99 | 78 - 125 |
| Chloromethane | 20.0 | 16.1 | | ug/L | | 80 | 38 - 150 |
| cis-1,2-Dichloroethene | 20.0 | 20.1 | | ug/L | | 100 | 78 - 121 |

## Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

**Lab Sample ID: LCS 460-722834/5**
**Matrix: Water**
**Analysis Batch: 722834**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| cis-1,3-Dichloropropene | 20.0 | 19.0 | | ug/L | | 95 | 74 - 125 |
| Cyclohexane | 20.0 | 19.7 | | ug/L | | 99 | 67 - 133 |
| Dichlorobromomethane | 20.0 | 19.7 | | ug/L | | 99 | 72 - 121 |
| Dichlorodifluoromethane | 20.0 | 15.3 | | ug/L | | 77 | 31 - 150 |
| Ethylbenzene | 20.0 | 20.7 | | ug/L | | 104 | 78 - 120 |
| Ethylene Dibromide | 20.0 | 20.2 | | ug/L | | 101 | 69 - 126 |
| Isopropylbenzene | 20.0 | 20.8 | | ug/L | | 104 | 79 - 125 |
| Methyl acetate | 40.0 | 42.7 | | ug/L | | 107 | 70 - 127 |
| Methyl tert-butyl ether | 20.0 | 19.5 | | ug/L | | 98 | 65 - 131 |
| Methylcyclohexane | 20.0 | 20.8 | | ug/L | | 104 | 60 - 139 |
| Methylene Chloride | 20.0 | 20.3 | | ug/L | | 102 | 74 - 127 |
| m-Xylene & p-Xylene | 20.0 | 21.4 | | ug/L | | 107 | 78 - 123 |
| o-Xylene | 20.0 | 20.5 | | ug/L | | 103 | 78 - 122 |
| Styrene | 20.0 | 21.3 | | ug/L | | 106 | 75 - 127 |
| Tetrachloroethene | 20.0 | 21.5 | | ug/L | | 108 | 70 - 127 |
| Toluene | 20.0 | 20.3 | | ug/L | | 101 | 78 - 119 |
| trans-1,2-Dichloroethene | 20.0 | 20.5 | | ug/L | | 103 | 74 - 126 |
| trans-1,3-Dichloropropene | 20.0 | 19.4 | | ug/L | | 97 | 66 - 127 |
| Trichloroethene | 20.0 | 21.5 | | ug/L | | 107 | 71 - 121 |
| Trichlorofluoromethane | 20.0 | 19.7 | | ug/L | | 99 | 61 - 140 |
| Vinyl chloride | 20.0 | 17.2 | | ug/L | | 86 | 61 - 144 |
| 1,2-Dichloroethane | 20.0 | 18.8 | | ug/L | | 94 | 75 - 121 |
| 1,2-Dichlorobenzene | 20.0 | 20.8 | | ug/L | | 104 | 79 - 122 |
| 1,2-Dibromo-3-Chloropropane | 20.0 | 19.9 | | ug/L | | 100 | 41 - 143 |

| *Surrogate* | *LCS %Recovery* | *LCS Qualifier* | *Limits* |
|---|---|---|---|
| *1,2-Dichloroethane-d4 (Surr)* | *91* | | *75 - 123* |
| *4-Bromofluorobenzene* | *103* | | *76 - 120* |
| *Dibromofluoromethane (Surr)* | *95* | | *77 - 124* |
| *Toluene-d8 (Surr)* | *94* | | *80 - 120* |

**Lab Sample ID: 460-217576-A-4 MS**
**Matrix: Water**
**Analysis Batch: 722834**

**Client Sample ID: Matrix Spike**
**Prep Type: Total/NA**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1-Trichloroethane | 0.24 | U | 20.0 | 24.0 | | ug/L | | 120 | 68 - 128 |
| 1,1,2,2-Tetrachloroethane | 0.37 | U | 20.0 | 23.8 | | ug/L | | 119 | 63 - 139 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 0.31 | U | 20.0 | 23.9 | | ug/L | | 119 | 59 - 142 |
| 1,1,2-Trichloroethane | 0.43 | U | 20.0 | 23.0 | | ug/L | | 115 | 74 - 125 |
| 1,1-Dichloroethane | 0.26 | U | 20.0 | 21.9 | | ug/L | | 109 | 73 - 130 |
| 1,1-Dichloroethene | 0.26 | U | 20.0 | 23.5 | | ug/L | | 117 | 68 - 133 |
| 1,2,3-Trichlorobenzene | 0.36 | U | 20.0 | 22.1 | | ug/L | | 110 | 53 - 144 |
| 1,2,4-Trichlorobenzene | 0.37 | U | 20.0 | 23.3 | | ug/L | | 117 | 64 - 132 |
| 1,2-Dichloropropane | 0.35 | U | 20.0 | 22.1 | | ug/L | | 110 | 76 - 126 |
| 1,3-Dichlorobenzene | 0.34 | U | 20.0 | 23.7 | | ug/L | | 119 | 80 - 121 |
| 1,4-Dichlorobenzene | 0.33 | U | 20.0 | 23.5 | | ug/L | | 117 | 80 - 118 |
| 1,4-Dioxane | 28 | U | 400 | 457 | | ug/L | | 114 | 70 - 142 |

## Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

**Lab Sample ID: 460-217576-A-4 MS**
**Matrix: Water**
**Analysis Batch: 722834**

**Client Sample ID: Matrix Spike**
**Prep Type: Total/NA**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|---|---|
| 2-Butanone (MEK) | 1.9 | U F1 | 100 | 159 | F1 | ug/L | | 159 | 69 - 128 |
| 2-Hexanone | 1.1 | U F1 | 100 | 162 | F1 | ug/L | | 162 | 74 - 127 |
| 4-Methyl-2-pentanone (MIBK) | 1.3 | U F1 | 100 | 162 | F1 | ug/L | | 162 | 78 - 125 |
| Acetone | 4.4 | U F1 | 100 | 136 | F1 | ug/L | | 136 | 61 - 134 |
| Benzene | 0.20 | U | 20.0 | 21.8 | | ug/L | | 109 | 78 - 126 |
| Bromoform | 0.54 | U | 20.0 | 25.4 | | ug/L | | 127 | 38 - 144 |
| Bromomethane | 0.55 | U | 20.0 | 26.6 | | ug/L | | 133 | 10 - 150 |
| Carbon disulfide | 0.82 | U | 20.0 | 21.9 | | ug/L | | 109 | 64 - 138 |
| Carbon tetrachloride | 0.21 | U | 20.0 | 25.9 | | ug/L | | 129 | 56 - 131 |
| Chlorobenzene | 0.38 | U | 20.0 | 23.6 | | ug/L | | 118 | 80 - 119 |
| Chlorobromomethane | 0.41 | U F1 | 20.0 | 25.7 | F1 | ug/L | | 128 | 73 - 126 |
| Chlorodibromomethane | 0.28 | U | 20.0 | 23.7 | | ug/L | | 118 | 58 - 130 |
| Chloroethane | 0.32 | U | 20.0 | 20.0 | | ug/L | | 100 | 29 - 150 |
| Chloroform | 0.33 | U | 20.0 | 23.3 | | ug/L | | 117 | 78 - 125 |
| Chloromethane | 0.40 | U | 20.0 | 17.6 | | ug/L | | 88 | 38 - 150 |
| cis-1,2-Dichloroethene | 4.5 | F1 | 20.0 | 28.8 | F1 | ug/L | | 122 | 78 - 121 |
| cis-1,3-Dichloropropene | 0.22 | U | 20.0 | 20.7 | | ug/L | | 104 | 74 - 125 |
| Cyclohexane | 0.32 | U | 20.0 | 21.2 | | ug/L | | 106 | 67 - 133 |
| Dichlorobromomethane | 0.34 | U | 20.0 | 23.8 | | ug/L | | 119 | 72 - 121 |
| Dichlorodifluoromethane | 0.31 | U | 20.0 | 17.7 | | ug/L | | 88 | 31 - 150 |
| Ethylbenzene | 0.30 | U | 20.0 | 23.6 | | ug/L | | 118 | 78 - 120 |
| Ethylene Dibromide | 0.50 | U | 20.0 | 24.5 | | ug/L | | 122 | 69 - 126 |
| Isopropylbenzene | 0.34 | U | 20.0 | 23.3 | | ug/L | | 116 | 79 - 125 |
| Methyl acetate | 0.79 | U | 40.0 | 43.5 | | ug/L | | 109 | 70 - 127 |
| Methyl tert-butyl ether | 0.47 | U | 20.0 | 25.7 | | ug/L | | 129 | 65 - 131 |
| Methylcyclohexane | 0.26 | U | 20.0 | 23.2 | | ug/L | | 116 | 60 - 139 |
| Methylene Chloride | 0.32 | U | 20.0 | 23.9 | | ug/L | | 119 | 74 - 127 |
| m-Xylene & p-Xylene | 0.30 | U | 20.0 | 24.4 | | ug/L | | 122 | 78 - 123 |
| o-Xylene | 0.36 | U | 20.0 | 23.0 | | ug/L | | 115 | 78 - 122 |
| Styrene | 0.42 | U | 20.0 | 23.9 | | ug/L | | 120 | 75 - 127 |
| Tetrachloroethene | 2.7 | | 20.0 | 27.2 | | ug/L | | 123 | 70 - 127 |
| Toluene | 0.38 | U | 20.0 | 22.9 | | ug/L | | 115 | 78 - 119 |
| trans-1,2-Dichloroethene | 0.24 | U | 20.0 | 24.0 | | ug/L | | 120 | 74 - 126 |
| trans-1,3-Dichloropropene | 0.49 | U | 20.0 | 21.3 | | ug/L | | 106 | 66 - 127 |
| Trichloroethene | 1.3 | F1 | 20.0 | 26.5 | F1 | ug/L | | 126 | 71 - 121 |
| Trichlorofluoromethane | 0.32 | U | 20.0 | 23.1 | | ug/L | | 116 | 61 - 140 |
| Vinyl chloride | 0.17 | U | 20.0 | 19.7 | | ug/L | | 99 | 61 - 144 |
| 1,2-Dichloroethane | 0.43 | U | 20.0 | 22.6 | | ug/L | | 113 | 75 - 121 |
| 1,2-Dichlorobenzene | 0.43 | U | 20.0 | 23.6 | | ug/L | | 118 | 79 - 122 |
| 1,2-Dibromo-3-Chloropropane | 0.38 | U | 20.0 | 26.7 | | ug/L | | 134 | 41 - 143 |

| *Surrogate* | *MS %Recovery* | *MS Qualifier* | *Limits* |
|---|---|---|---|
| *1,2-Dichloroethane-d4 (Surr)* | *103* | | *75 - 123* |
| *4-Bromofluorobenzene* | *117* | | *76 - 120* |
| *Dibromofluoromethane (Surr)* | *107* | | *77 - 124* |
| *Toluene-d8 (Surr)* | *102* | | *80 - 120* |

## Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

**Lab Sample ID: 460-217576-A-4 MSD**
**Matrix: Water**
**Analysis Batch: 722834**

**Client Sample ID: Matrix Spike Duplicate**
**Prep Type: Total/NA**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,1,1-Trichloroethane | 0.24 | U | 20.0 | 19.8 | | ug/L | | 99 | 68 - 128 | 19 | 30 |
| 1,1,2,2-Tetrachloroethane | 0.37 | U | 20.0 | 19.2 | | ug/L | | 96 | 63 - 139 | 21 | 30 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 0.31 | U | 20.0 | 19.5 | | ug/L | | 98 | 59 - 142 | 20 | 30 |
| 1,1,2-Trichloroethane | 0.43 | U | 20.0 | 19.0 | | ug/L | | 95 | 74 - 125 | 19 | 30 |
| 1,1-Dichloroethane | 0.26 | U | 20.0 | 17.9 | | ug/L | | 90 | 73 - 130 | 20 | 30 |
| 1,1-Dichloroethene | 0.26 | U | 20.0 | 19.4 | | ug/L | | 97 | 68 - 133 | 19 | 30 |
| 1,2,3-Trichlorobenzene | 0.36 | U | 20.0 | 19.8 | | ug/L | | 99 | 53 - 144 | 11 | 30 |
| 1,2,4-Trichlorobenzene | 0.37 | U | 20.0 | 19.3 | | ug/L | | 97 | 64 - 132 | 19 | 30 |
| 1,2-Dichloropropane | 0.35 | U | 20.0 | 17.8 | | ug/L | | 89 | 76 - 126 | 21 | 30 |
| 1,3-Dichlorobenzene | 0.34 | U | 20.0 | 19.6 | | ug/L | | 98 | 80 - 121 | 19 | 30 |
| 1,4-Dichlorobenzene | 0.33 | U | 20.0 | 19.3 | | ug/L | | 97 | 80 - 118 | 19 | 30 |
| 1,4-Dioxane | 28 | U | 400 | 405 | | ug/L | | 101 | 70 - 142 | 12 | 30 |
| 2-Butanone (MEK) | 1.9 | U F1 | 100 | 125 | | ug/L | | 125 | 69 - 128 | 24 | 30 |
| 2-Hexanone | 1.1 | U F1 | 100 | 124 | | ug/L | | 124 | 74 - 127 | 27 | 30 |
| 4-Methyl-2-pentanone (MIBK) | 1.3 | U F1 | 100 | 124 | | ug/L | | 124 | 78 - 125 | 26 | 30 |
| Acetone | 4.4 | U F1 | 100 | 108 | | ug/L | | 108 | 61 - 134 | 23 | 30 |
| Benzene | 0.20 | U | 20.0 | 17.9 | | ug/L | | 89 | 78 - 126 | 20 | 30 |
| Bromoform | 0.54 | U | 20.0 | 20.7 | | ug/L | | 103 | 38 - 144 | 20 | 30 |
| Bromomethane | 0.55 | U | 20.0 | 22.2 | | ug/L | | 111 | 10 - 150 | 18 | 30 |
| Carbon disulfide | 0.82 | U | 20.0 | 18.1 | | ug/L | | 90 | 64 - 138 | 19 | 30 |
| Carbon tetrachloride | 0.21 | U | 20.0 | 21.3 | | ug/L | | 107 | 56 - 131 | 19 | 30 |
| Chlorobenzene | 0.38 | U | 20.0 | 19.3 | | ug/L | | 96 | 80 - 119 | 20 | 30 |
| Chlorobromomethane | 0.41 | U F1 | 20.0 | 20.3 | | ug/L | | 101 | 73 - 126 | 24 | 30 |
| Chlorodibromomethane | 0.28 | U | 20.0 | 19.1 | | ug/L | | 96 | 58 - 130 | 21 | 30 |
| Chloroethane | 0.32 | U | 20.0 | 17.5 | | ug/L | | 87 | 29 - 150 | 14 | 30 |
| Chloroform | 0.33 | U | 20.0 | 19.1 | | ug/L | | 96 | 78 - 125 | 20 | 30 |
| Chloromethane | 0.40 | U | 20.0 | 15.5 | | ug/L | | 77 | 38 - 150 | 13 | 30 |
| cis-1,2-Dichloroethene | 4.5 | F1 | 20.0 | 23.1 | | ug/L | | 93 | 78 - 121 | 22 | 30 |
| cis-1,3-Dichloropropene | 0.22 | U | 20.0 | 16.8 | | ug/L | | 84 | 74 - 125 | 21 | 30 |
| Cyclohexane | 0.32 | U | 20.0 | 17.2 | | ug/L | | 86 | 67 - 133 | 21 | 30 |
| Dichlorobromomethane | 0.34 | U | 20.0 | 19.4 | | ug/L | | 97 | 72 - 121 | 21 | 30 |
| Dichlorodifluoromethane | 0.31 | U | 20.0 | 15.9 | | ug/L | | 79 | 31 - 150 | 11 | 30 |
| Ethylbenzene | 0.30 | U | 20.0 | 19.2 | | ug/L | | 96 | 78 - 120 | 21 | 30 |
| Ethylene Dibromide | 0.50 | U | 20.0 | 20.0 | | ug/L | | 100 | 69 - 126 | 20 | 30 |
| Isopropylbenzene | 0.34 | U | 20.0 | 19.4 | | ug/L | | 97 | 79 - 125 | 18 | 30 |
| Methyl acetate | 0.79 | U | 40.0 | 32.9 | | ug/L | | 82 | 70 - 127 | 28 | 30 |
| Methyl tert-butyl ether | 0.47 | U | 20.0 | 20.8 | | ug/L | | 104 | 65 - 131 | 21 | 30 |
| Methylcyclohexane | 0.26 | U | 20.0 | 19.1 | | ug/L | | 95 | 60 - 139 | 19 | 30 |
| Methylene Chloride | 0.32 | U | 20.0 | 19.4 | | ug/L | | 97 | 74 - 127 | 20 | 30 |
| m-Xylene & p-Xylene | 0.30 | U | 20.0 | 19.6 | | ug/L | | 98 | 78 - 123 | 22 | 30 |
| o-Xylene | 0.36 | U | 20.0 | 19.1 | | ug/L | | 96 | 78 - 122 | 18 | 30 |
| Styrene | 0.42 | U | 20.0 | 19.6 | | ug/L | | 98 | 75 - 127 | 20 | 30 |
| Tetrachloroethene | 2.7 | | 20.0 | 23.0 | | ug/L | | 102 | 70 - 127 | 17 | 30 |
| Toluene | 0.38 | U | 20.0 | 19.0 | | ug/L | | 95 | 78 - 119 | 19 | 30 |
| trans-1,2-Dichloroethene | 0.24 | U | 20.0 | 19.7 | | ug/L | | 99 | 74 - 126 | 20 | 30 |
| trans-1,3-Dichloropropene | 0.49 | U | 20.0 | 18.3 | | ug/L | | 91 | 66 - 127 | 15 | 30 |
| Trichloroethene | 1.3 | F1 | 20.0 | 21.6 | | ug/L | | 102 | 71 - 121 | 20 | 30 |
| Trichlorofluoromethane | 0.32 | U | 20.0 | 20.0 | | ug/L | | 100 | 61 - 140 | 15 | 30 |

## Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

**Lab Sample ID: 460-217576-A-4 MSD**
**Matrix: Water**
**Analysis Batch: 722834**

**Client Sample ID: Matrix Spike Duplicate**
**Prep Type: Total/NA**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Vinyl chloride | 0.17 | U | 20.0 | 16.7 | | ug/L | | 84 | 61 - 144 | 16 | 30 |
| 1,2-Dichloroethane | 0.43 | U | 20.0 | 18.0 | | ug/L | | 90 | 75 - 121 | 23 | 30 |
| 1,2-Dichlorobenzene | 0.43 | U | 20.0 | 19.5 | | ug/L | | 97 | 79 - 122 | 19 | 30 |
| 1,2-Dibromo-3-Chloropropane | 0.38 | U | 20.0 | 21.0 | | ug/L | | 105 | 41 - 143 | 24 | 30 |

| *Surrogate* | *MSD %Recovery* | *MSD Qualifier* | *Limits* |
|---|---|---|---|
| *1,2-Dichloroethane-d4 (Surr)* | *98* | | *75 - 123* |
| *4-Bromofluorobenzene* | *108* | | *76 - 120* |
| *Dibromofluoromethane (Surr)* | *100* | | *77 - 124* |
| *Toluene-d8 (Surr)* | *95* | | *80 - 120* |

## Method: 537 (modified) - Fluorinated Alkyl Substances

**Lab Sample ID: MB 320-410910/1-A**
**Matrix: Water**
**Analysis Batch: 411087**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 410910**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Perfluorobutanoic acid (PFBA) | 0.354 | J | 2.00 | 0.35 | ng/L | | 09/09/20 18:52 | 09/10/20 15:11 | 1 |
| Perfluoropentanoic acid (PFPeA) | 0.49 | U | 2.00 | 0.49 | ng/L | | 09/09/20 18:52 | 09/10/20 15:11 | 1 |
| Perfluorohexanoic acid (PFHxA) | 0.58 | U | 2.00 | 0.58 | ng/L | | 09/09/20 18:52 | 09/10/20 15:11 | 1 |
| Perfluoroheptanoic acid (PFHpA) | 0.25 | U | 2.00 | 0.25 | ng/L | | 09/09/20 18:52 | 09/10/20 15:11 | 1 |
| Perfluorooctanoic acid (PFOA) | 0.85 | U | 2.00 | 0.85 | ng/L | | 09/09/20 18:52 | 09/10/20 15:11 | 1 |
| Perfluorononanoic acid (PFNA) | 0.27 | U | 2.00 | 0.27 | ng/L | | 09/09/20 18:52 | 09/10/20 15:11 | 1 |
| Perfluorodecanoic acid (PFDA) | 0.31 | U | 2.00 | 0.31 | ng/L | | 09/09/20 18:52 | 09/10/20 15:11 | 1 |
| Perfluoroundecanoic acid (PFUnA) | 1.10 | U | 2.00 | 1.10 | ng/L | | 09/09/20 18:52 | 09/10/20 15:11 | 1 |
| Perfluorododecanoic acid (PFDoA) | 0.55 | U | 2.00 | 0.55 | ng/L | | 09/09/20 18:52 | 09/10/20 15:11 | 1 |
| Perfluorotridecanoic acid (PFTriA) | 1.30 | U | 2.00 | 1.30 | ng/L | | 09/09/20 18:52 | 09/10/20 15:11 | 1 |
| Perfluorotetradecanoic acid (PFTeA) | 0.29 | U | 2.00 | 0.29 | ng/L | | 09/09/20 18:52 | 09/10/20 15:11 | 1 |
| Perfluorobutanesulfonic acid (PFBS) | 0.20 | U | 2.00 | 0.20 | ng/L | | 09/09/20 18:52 | 09/10/20 15:11 | 1 |
| Perfluorohexanesulfonic acid (PFHxS) | 0.273 | J | 2.00 | 0.17 | ng/L | | 09/09/20 18:52 | 09/10/20 15:11 | 1 |
| Perfluoroheptanesulfonic Acid (PFHpS) | 0.19 | U | 2.00 | 0.19 | ng/L | | 09/09/20 18:52 | 09/10/20 15:11 | 1 |
| Perfluorooctanesulfonic acid (PFOS) | 0.54 | U | 2.00 | 0.54 | ng/L | | 09/09/20 18:52 | 09/10/20 15:11 | 1 |
| Perfluorodecanesulfonic acid (PFDS) | 0.32 | U | 2.00 | 0.32 | ng/L | | 09/09/20 18:52 | 09/10/20 15:11 | 1 |
| Perfluorooctanesulfonamide (FOSA) | 0.357 | J | 2.00 | 0.35 | ng/L | | 09/09/20 18:52 | 09/10/20 15:11 | 1 |
| N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA) | 3.10 | U | 20.0 | 3.10 | ng/L | | 09/09/20 18:52 | 09/10/20 15:11 | 1 |
| N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA) | 1.90 | U | 20.0 | 1.90 | ng/L | | 09/09/20 18:52 | 09/10/20 15:11 | 1 |
| 6:2 FTS | 2.00 | U | 20.0 | 2.00 | ng/L | | 09/09/20 18:52 | 09/10/20 15:11 | 1 |
| 8:2 FTS | 2.00 | U | 20.0 | 2.00 | ng/L | | 09/09/20 18:52 | 09/10/20 15:11 | 1 |

| *Isotope Dilution* | *MB %Recovery* | *MB Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *13C4 PFBA* | *84* | | *25 - 150* | *09/09/20 18:52* | *09/10/20 15:11* | *1* |
| *13C5 PFPeA* | *86* | | *25 - 150* | *09/09/20 18:52* | *09/10/20 15:11* | *1* |
| *13C2 PFHxA* | *95* | | *25 - 150* | *09/09/20 18:52* | *09/10/20 15:11* | *1* |
| *13C4 PFHpA* | *92* | | *25 - 150* | *09/09/20 18:52* | *09/10/20 15:11* | *1* |
| *13C4 PFOA* | *93* | | *25 - 150* | *09/09/20 18:52* | *09/10/20 15:11* | *1* |

## Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

**Lab Sample ID: MB 320-410910/1-A**
**Matrix: Water**
**Analysis Batch: 411087**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 410910**

| Isotope Dilution | MB %Recovery | MB Qualifier | Limits | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|
| 13C5 PFNA | 95 | | 25 - 150 | 09/09/20 18:52 | 09/10/20 15:11 | 1 |
| 13C2 PFDA | 101 | | 25 - 150 | 09/09/20 18:52 | 09/10/20 15:11 | 1 |
| 13C2 PFUnA | 99 | | 25 - 150 | 09/09/20 18:52 | 09/10/20 15:11 | 1 |
| 13C2 PFDoA | 94 | | 25 - 150 | 09/09/20 18:52 | 09/10/20 15:11 | 1 |
| 13C2 PFTeDA | 93 | | 25 - 150 | 09/09/20 18:52 | 09/10/20 15:11 | 1 |
| 13C3 PFBS | 103 | | 25 - 150 | 09/09/20 18:52 | 09/10/20 15:11 | 1 |
| 18O2 PFHxS | 106 | | 25 - 150 | 09/09/20 18:52 | 09/10/20 15:11 | 1 |
| 13C4 PFOS | 104 | | 25 - 150 | 09/09/20 18:52 | 09/10/20 15:11 | 1 |
| 13C8 FOSA | 90 | | 25 - 150 | 09/09/20 18:52 | 09/10/20 15:11 | 1 |
| d3-NMeFOSAA | 86 | | 25 - 150 | 09/09/20 18:52 | 09/10/20 15:11 | 1 |
| d5-NEtFOSAA | 89 | | 25 - 150 | 09/09/20 18:52 | 09/10/20 15:11 | 1 |
| M2-6:2 FTS | 103 | | 25 - 150 | 09/09/20 18:52 | 09/10/20 15:11 | 1 |
| M2-8:2 FTS | 115 | | 25 - 150 | 09/09/20 18:52 | 09/10/20 15:11 | 1 |

**Lab Sample ID: LCS 320-410910/2-A**
**Matrix: Water**
**Analysis Batch: 411087**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 410910**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Perfluorobutanoic acid (PFBA) | 40.0 | 39.79 | | ng/L | | 99 | 76 - 136 |
| Perfluoropentanoic acid (PFPeA) | 40.0 | 37.53 | | ng/L | | 94 | 71 - 131 |
| Perfluorohexanoic acid (PFHxA) | 40.0 | 36.61 | | ng/L | | 92 | 73 - 133 |
| Perfluoroheptanoic acid (PFHpA) | 40.0 | 34.02 | | ng/L | | 85 | 72 - 132 |
| Perfluorooctanoic acid (PFOA) | 40.0 | 39.17 | | ng/L | | 98 | 70 - 130 |
| Perfluorononanoic acid (PFNA) | 40.0 | 37.61 | | ng/L | | 94 | 75 - 135 |
| Perfluorodecanoic acid (PFDA) | 40.0 | 34.20 | | ng/L | | 86 | 76 - 136 |
| Perfluoroundecanoic acid (PFUnA) | 40.0 | 42.31 | | ng/L | | 106 | 68 - 128 |
| Perfluorododecanoic acid (PFDoA) | 40.0 | 31.77 | | ng/L | | 79 | 71 - 131 |
| Perfluorotridecanoic acid (PFTriA) | 40.0 | 31.90 | | ng/L | | 80 | 71 - 131 |
| Perfluorotetradecanoic acid (PFTeA) | 40.0 | 45.97 | | ng/L | | 115 | 70 - 130 |
| Perfluorobutanesulfonic acid (PFBS) | 35.4 | 32.55 | | ng/L | | 92 | 67 - 127 |
| Perfluorohexanesulfonic acid (PFHxS) | 36.4 | 32.14 | | ng/L | | 88 | 59 - 119 |
| Perfluoroheptanesulfonic Acid (PFHpS) | 38.1 | 36.25 | | ng/L | | 95 | 76 - 136 |
| Perfluorooctanesulfonic acid (PFOS) | 37.1 | 35.50 | | ng/L | | 96 | 70 - 130 |
| Perfluorodecanesulfonic acid (PFDS) | 38.6 | 34.21 | | ng/L | | 89 | 71 - 131 |
| Perfluorooctanesulfonamide (FOSA) | 40.0 | 39.32 | | ng/L | | 98 | 73 - 133 |
| N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA) | 40.0 | 40.79 | | ng/L | | 102 | 76 - 136 |
| N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA) | 40.0 | 36.89 | | ng/L | | 92 | 76 - 136 |
| 6:2 FTS | 37.9 | 35.12 | | ng/L | | 93 | 59 - 175 |
| 8:2 FTS | 38.3 | 36.14 | | ng/L | | 94 | 75 - 135 |

## Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

| Isotope Dilution | LCS %Recovery | LCS Qualifier | Limits |
|---|---|---|---|
| 13C4 PFBA | 55 | | 25 - 150 |
| 13C5 PFPeA | 56 | | 25 - 150 |
| 13C2 PFHxA | 64 | | 25 - 150 |
| 13C4 PFHpA | 66 | | 25 - 150 |
| 13C4 PFOA | 58 | | 25 - 150 |
| 13C5 PFNA | 64 | | 25 - 150 |
| 13C2 PFDA | 66 | | 25 - 150 |
| 13C2 PFUnA | 69 | | 25 - 150 |
| 13C2 PFDoA | 65 | | 25 - 150 |
| 13C2 PFTeDA | 57 | | 25 - 150 |
| 13C3 PFBS | 72 | | 25 - 150 |
| 18O2 PFHxS | 76 | | 25 - 150 |
| 13C4 PFOS | 72 | | 25 - 150 |
| 13C8 FOSA | 58 | | 25 - 150 |
| d3-NMeFOSAA | 58 | | 25 - 150 |
| d5-NEtFOSAA | 62 | | 25 - 150 |
| M2-6:2 FTS | 68 | | 25 - 150 |
| M2-8:2 FTS | 76 | | 25 - 150 |

**Lab Sample ID: LCSD 320-410910/3-A**
**Matrix: Water**
**Analysis Batch: 411087**

**Client Sample ID: Lab Control Sample Dup**
**Prep Type: Total/NA**
**Prep Batch: 410910**

| Analyte | | | Spike Added | LCSD Result | LCSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Perfluorobutanoic acid (PFBA) | | | 40.0 | 39.95 | | ng/L | | 100 | 76 - 136 | 0 | 30 |
| Perfluoropentanoic acid (PFPeA) | | | 40.0 | 39.21 | | ng/L | | 98 | 71 - 131 | 4 | 30 |
| Perfluorohexanoic acid (PFHxA) | | | 40.0 | 39.20 | | ng/L | | 98 | 73 - 133 | 7 | 30 |
| Perfluoroheptanoic acid (PFHpA) | | | 40.0 | 36.55 | | ng/L | | 91 | 72 - 132 | 7 | 30 |
| Perfluorooctanoic acid (PFOA) | | | 40.0 | 39.44 | | ng/L | | 99 | 70 - 130 | 1 | 30 |
| Perfluorononanoic acid (PFNA) | | | 40.0 | 44.28 | | ng/L | | 111 | 75 - 135 | 16 | 30 |
| Perfluorodecanoic acid (PFDA) | | | 40.0 | 32.38 | | ng/L | | 81 | 76 - 136 | 5 | 30 |
| Perfluoroundecanoic acid (PFUnA) | | | 40.0 | 42.82 | | ng/L | | 107 | 68 - 128 | 1 | 30 |
| Perfluorododecanoic acid (PFDoA) | | | 40.0 | 32.50 | | ng/L | | 81 | 71 - 131 | 2 | 30 |
| Perfluorotridecanoic acid (PFTriA) | | | 40.0 | 33.88 | | ng/L | | 85 | 71 - 131 | 6 | 30 |
| Perfluorotetradecanoic acid (PFTeA) | | | 40.0 | 42.61 | | ng/L | | 107 | 70 - 130 | 8 | 30 |
| Perfluorobutanesulfonic acid (PFBS) | | | 35.4 | 32.20 | | ng/L | | 91 | 67 - 127 | 1 | 30 |
| Perfluorohexanesulfonic acid (PFHxS) | | | 36.4 | 32.49 | | ng/L | | 89 | 59 - 119 | 1 | 30 |
| Perfluoroheptanesulfonic Acid (PFHpS) | | | 38.1 | 37.83 | | ng/L | | 99 | 76 - 136 | 4 | 30 |
| Perfluorooctanesulfonic acid (PFOS) | | | 37.1 | 35.53 | | ng/L | | 96 | 70 - 130 | 0 | 30 |
| Perfluorodecanesulfonic acid (PFDS) | | | 38.6 | 33.52 | | ng/L | | 87 | 71 - 131 | 2 | 30 |
| Perfluorooctanesulfonamide (FOSA) | | | 40.0 | 38.85 | | ng/L | | 97 | 73 - 133 | 1 | 30 |
| N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA) | | | 40.0 | 39.80 | | ng/L | | 99 | 76 - 136 | 2 | 30 |
| N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA) | | | 40.0 | 37.29 | | ng/L | | 93 | 76 - 136 | 1 | 30 |

## Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

**Lab Sample ID: LCSD 320-410910/3-A**
**Matrix: Water**
**Analysis Batch: 411087**

**Client Sample ID: Lab Control Sample Dup**
**Prep Type: Total/NA**
**Prep Batch: 410910**

| Analyte | | | Spike Added | LCSD Result | LCSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 6:2 FTS | | | 37.9 | 34.57 | | ng/L | | 91 | 59 - 175 | 2 | 30 |
| 8:2 FTS | | | 38.3 | 37.33 | | ng/L | | 97 | 75 - 135 | 3 | 30 |

| *Isotope Dilution* | *LCSD %Recovery* | *LCSD Qualifier* | *Limits* |
|---|---|---|---|
| *13C4 PFBA* | *63* | | *25 - 150* |
| *13C5 PFPeA* | *65* | | *25 - 150* |
| *13C2 PFHxA* | *70* | | *25 - 150* |
| *13C4 PFHpA* | *76* | | *25 - 150* |
| *13C4 PFOA* | *70* | | *25 - 150* |
| *13C5 PFNA* | *70* | | *25 - 150* |
| *13C2 PFDA* | *75* | | *25 - 150* |
| *13C2 PFUnA* | *71* | | *25 - 150* |
| *13C2 PFDoA* | *73* | | *25 - 150* |
| *13C2 PFTeDA* | *88* | | *25 - 150* |
| *13C3 PFBS* | *83* | | *25 - 150* |
| *18O2 PFHxS* | *84* | | *25 - 150* |
| *13C4 PFOS* | *81* | | *25 - 150* |
| *13C8 FOSA* | *69* | | *25 - 150* |
| *d3-NMeFOSAA* | *66* | | *25 - 150* |
| *d5-NEtFOSAA* | *73* | | *25 - 150* |
| *M2-6:2 FTS* | *78* | | *25 - 150* |
| *M2-8:2 FTS* | *79* | | *25 - 150* |

**Lab Sample ID: MB 320-411226/1-A**
**Matrix: Water**
**Analysis Batch: 411454**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 411226**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Perfluorobutanoic acid (PFBA) | 0.35 | U | 2.00 | 0.35 | ng/L | | 09/10/20 18:32 | 09/11/20 13:14 | 1 |
| Perfluoropentanoic acid (PFPeA) | 0.49 | U | 2.00 | 0.49 | ng/L | | 09/10/20 18:32 | 09/11/20 13:14 | 1 |
| Perfluorohexanoic acid (PFHxA) | 0.58 | U | 2.00 | 0.58 | ng/L | | 09/10/20 18:32 | 09/11/20 13:14 | 1 |
| Perfluoroheptanoic acid (PFHpA) | 0.25 | U | 2.00 | 0.25 | ng/L | | 09/10/20 18:32 | 09/11/20 13:14 | 1 |
| Perfluorooctanoic acid (PFOA) | 0.85 | U | 2.00 | 0.85 | ng/L | | 09/10/20 18:32 | 09/11/20 13:14 | 1 |
| Perfluorononanoic acid (PFNA) | 0.27 | U | 2.00 | 0.27 | ng/L | | 09/10/20 18:32 | 09/11/20 13:14 | 1 |
| Perfluorodecanoic acid (PFDA) | 0.31 | U | 2.00 | 0.31 | ng/L | | 09/10/20 18:32 | 09/11/20 13:14 | 1 |
| Perfluoroundecanoic acid (PFUnA) | 1.10 | U | 2.00 | 1.10 | ng/L | | 09/10/20 18:32 | 09/11/20 13:14 | 1 |
| Perfluorododecanoic acid (PFDoA) | 0.55 | U | 2.00 | 0.55 | ng/L | | 09/10/20 18:32 | 09/11/20 13:14 | 1 |
| Perfluorotridecanoic acid (PFTriA) | 1.30 | U | 2.00 | 1.30 | ng/L | | 09/10/20 18:32 | 09/11/20 13:14 | 1 |
| Perfluorotetradecanoic acid (PFTeA) | 0.29 | U | 2.00 | 0.29 | ng/L | | 09/10/20 18:32 | 09/11/20 13:14 | 1 |
| Perfluorobutanesulfonic acid (PFBS) | 0.20 | U | 2.00 | 0.20 | ng/L | | 09/10/20 18:32 | 09/11/20 13:14 | 1 |
| Perfluorohexanesulfonic acid (PFHxS) | 0.261 | J | 2.00 | 0.17 | ng/L | | 09/10/20 18:32 | 09/11/20 13:14 | 1 |
| Perfluoroheptanesulfonic Acid (PFHpS) | 0.19 | U | 2.00 | 0.19 | ng/L | | 09/10/20 18:32 | 09/11/20 13:14 | 1 |
| Perfluorooctanesulfonic acid (PFOS) | 0.54 | U | 2.00 | 0.54 | ng/L | | 09/10/20 18:32 | 09/11/20 13:14 | 1 |
| Perfluorodecanesulfonic acid (PFDS) | 0.32 | U | 2.00 | 0.32 | ng/L | | 09/10/20 18:32 | 09/11/20 13:14 | 1 |
| Perfluorooctanesulfonamide (FOSA) | 0.35 | U | 2.00 | 0.35 | ng/L | | 09/10/20 18:32 | 09/11/20 13:14 | 1 |
| N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA) | 3.10 | U | 20.0 | 3.10 | ng/L | | 09/10/20 18:32 | 09/11/20 13:14 | 1 |
| N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA) | 1.90 | U | 20.0 | 1.90 | ng/L | | 09/10/20 18:32 | 09/11/20 13:14 | 1 |

## Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

**Lab Sample ID: MB 320-411226/1-A**
**Matrix: Water**
**Analysis Batch: 411454**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 411226**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 6:2 FTS | 2.00 | U | 20.0 | 2.00 | ng/L | | 09/10/20 18:32 | 09/11/20 13:14 | 1 |
| 8:2 FTS | 2.00 | U | 20.0 | 2.00 | ng/L | | 09/10/20 18:32 | 09/11/20 13:14 | 1 |

| *Isotope Dilution* | *MB %Recovery* | *MB Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *13C4 PFBA* | *73* | | *25 - 150* | *09/10/20 18:32* | *09/11/20 13:14* | *1* |
| *13C5 PFPeA* | *90* | | *25 - 150* | *09/10/20 18:32* | *09/11/20 13:14* | *1* |
| *13C2 PFHxA* | *89* | | *25 - 150* | *09/10/20 18:32* | *09/11/20 13:14* | *1* |
| *13C4 PFHpA* | *92* | | *25 - 150* | *09/10/20 18:32* | *09/11/20 13:14* | *1* |
| *13C4 PFOA* | *92* | | *25 - 150* | *09/10/20 18:32* | *09/11/20 13:14* | *1* |
| *13C5 PFNA* | *97* | | *25 - 150* | *09/10/20 18:32* | *09/11/20 13:14* | *1* |
| *13C2 PFDA* | *100* | | *25 - 150* | *09/10/20 18:32* | *09/11/20 13:14* | *1* |
| *13C2 PFUnA* | *98* | | *25 - 150* | *09/10/20 18:32* | *09/11/20 13:14* | *1* |
| *13C2 PFDoA* | *97* | | *25 - 150* | *09/10/20 18:32* | *09/11/20 13:14* | *1* |
| *13C2 PFTeDA* | *92* | | *25 - 150* | *09/10/20 18:32* | *09/11/20 13:14* | *1* |
| *13C3 PFBS* | *94* | | *25 - 150* | *09/10/20 18:32* | *09/11/20 13:14* | *1* |
| *18O2 PFHxS* | *100* | | *25 - 150* | *09/10/20 18:32* | *09/11/20 13:14* | *1* |
| *13C4 PFOS* | *101* | | *25 - 150* | *09/10/20 18:32* | *09/11/20 13:14* | *1* |
| *13C8 FOSA* | *89* | | *25 - 150* | *09/10/20 18:32* | *09/11/20 13:14* | *1* |
| *d3-NMeFOSAA* | *78* | | *25 - 150* | *09/10/20 18:32* | *09/11/20 13:14* | *1* |
| *d5-NEtFOSAA* | *84* | | *25 - 150* | *09/10/20 18:32* | *09/11/20 13:14* | *1* |
| *M2-6:2 FTS* | *94* | | *25 - 150* | *09/10/20 18:32* | *09/11/20 13:14* | *1* |
| *M2-8:2 FTS* | *102* | | *25 - 150* | *09/10/20 18:32* | *09/11/20 13:14* | *1* |

**Lab Sample ID: LCS 320-411226/2-A**
**Matrix: Water**
**Analysis Batch: 411454**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 411226**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Perfluorobutanoic acid (PFBA) | 40.0 | 43.69 | | ng/L | | 109 | 76 - 136 |
| Perfluoropentanoic acid (PFPeA) | 40.0 | 39.79 | | ng/L | | 99 | 71 - 131 |
| Perfluorohexanoic acid (PFHxA) | 40.0 | 42.56 | | ng/L | | 106 | 73 - 133 |
| Perfluoroheptanoic acid (PFHpA) | 40.0 | 42.66 | | ng/L | | 107 | 72 - 132 |
| Perfluorooctanoic acid (PFOA) | 40.0 | 41.65 | | ng/L | | 104 | 70 - 130 |
| Perfluorononanoic acid (PFNA) | 40.0 | 42.80 | | ng/L | | 107 | 75 - 135 |
| Perfluorodecanoic acid (PFDA) | 40.0 | 43.22 | | ng/L | | 108 | 76 - 136 |
| Perfluoroundecanoic acid (PFUnA) | 40.0 | 42.76 | | ng/L | | 107 | 68 - 128 |
| Perfluorododecanoic acid (PFDoA) | 40.0 | 39.08 | | ng/L | | 98 | 71 - 131 |
| Perfluorotridecanoic acid (PFTriA) | 40.0 | 37.81 | | ng/L | | 95 | 71 - 131 |
| Perfluorotetradecanoic acid (PFTeA) | 40.0 | 38.52 | | ng/L | | 96 | 70 - 130 |
| Perfluorobutanesulfonic acid (PFBS) | 35.4 | 38.07 | | ng/L | | 108 | 67 - 127 |
| Perfluorohexanesulfonic acid (PFHxS) | 36.4 | 34.33 | | ng/L | | 94 | 59 - 119 |
| Perfluoroheptanesulfonic Acid (PFHpS) | 38.1 | 40.41 | | ng/L | | 106 | 76 - 136 |
| Perfluorooctanesulfonic acid (PFOS) | 37.1 | 38.35 | | ng/L | | 103 | 70 - 130 |

## Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

**Lab Sample ID: LCS 320-411226/2-A**
**Matrix: Water**
**Analysis Batch: 411454**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 411226**

| Analyte | | | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Perfluorodecanesulfonic acid (PFDS) | | | 38.6 | 38.33 | | ng/L | | 99 | 71 - 131 | | |
| Perfluorooctanesulfonamide (FOSA) | | | 40.0 | 42.22 | | ng/L | | 106 | 73 - 133 | | |
| N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA) | | | 40.0 | 45.82 | | ng/L | | 115 | 76 - 136 | | |
| N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA) | | | 40.0 | 41.81 | | ng/L | | 105 | 76 - 136 | | |
| 6:2 FTS | | | 37.9 | 37.34 | | ng/L | | 98 | 59 - 175 | | |
| 8:2 FTS | | | 38.3 | 39.15 | | ng/L | | 102 | 75 - 135 | | |

| *Isotope Dilution* | *LCS %Recovery* | *LCS Qualifier* | *Limits* |
|---|---|---|---|
| *13C4 PFBA* | *90* | | *25 - 150* |
| *13C5 PFPeA* | *94* | | *25 - 150* |
| *13C2 PFHxA* | *90* | | *25 - 150* |
| *13C4 PFHpA* | *96* | | *25 - 150* |
| *13C4 PFOA* | *93* | | *25 - 150* |
| *13C5 PFNA* | *100* | | *25 - 150* |
| *13C2 PFDA* | *99* | | *25 - 150* |
| *13C2 PFUnA* | *100* | | *25 - 150* |
| *13C2 PFDoA* | *95* | | *25 - 150* |
| *13C2 PFTeDA* | *92* | | *25 - 150* |
| *13C3 PFBS* | *96* | | *25 - 150* |
| *18O2 PFHxS* | *98* | | *25 - 150* |
| *13C4 PFOS* | *99* | | *25 - 150* |
| *13C8 FOSA* | *88* | | *25 - 150* |
| *d3-NMeFOSAA* | *76* | | *25 - 150* |
| *d5-NEtFOSAA* | *84* | | *25 - 150* |
| *M2-6:2 FTS* | *101* | | *25 - 150* |
| *M2-8:2 FTS* | *96* | | *25 - 150* |

**Lab Sample ID: LCSD 320-411226/3-A**
**Matrix: Water**
**Analysis Batch: 411454**

**Client Sample ID: Lab Control Sample Dup**
**Prep Type: Total/NA**
**Prep Batch: 411226**

| Analyte | | | Spike Added | LCSD Result | LCSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Perfluorobutanoic acid (PFBA) | | | 40.0 | 43.48 | | ng/L | | 109 | 76 - 136 | 0 | 30 |
| Perfluoropentanoic acid (PFPeA) | | | 40.0 | 39.01 | | ng/L | | 98 | 71 - 131 | 2 | 30 |
| Perfluorohexanoic acid (PFHxA) | | | 40.0 | 41.96 | | ng/L | | 105 | 73 - 133 | 1 | 30 |
| Perfluoroheptanoic acid (PFHpA) | | | 40.0 | 42.11 | | ng/L | | 105 | 72 - 132 | 1 | 30 |
| Perfluorooctanoic acid (PFOA) | | | 40.0 | 41.33 | | ng/L | | 103 | 70 - 130 | 1 | 30 |
| Perfluorononanoic acid (PFNA) | | | 40.0 | 45.26 | | ng/L | | 113 | 75 - 135 | 6 | 30 |
| Perfluorodecanoic acid (PFDA) | | | 40.0 | 41.84 | | ng/L | | 105 | 76 - 136 | 3 | 30 |
| Perfluoroundecanoic acid (PFUnA) | | | 40.0 | 45.15 | | ng/L | | 113 | 68 - 128 | 5 | 30 |
| Perfluorododecanoic acid (PFDoA) | | | 40.0 | 45.36 | | ng/L | | 113 | 71 - 131 | 15 | 30 |
| Perfluorotridecanoic acid (PFTriA) | | | 40.0 | 40.17 | | ng/L | | 100 | 71 - 131 | 6 | 30 |
| Perfluorotetradecanoic acid (PFTeA) | | | 40.0 | 39.04 | | ng/L | | 98 | 70 - 130 | 1 | 30 |

## Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

**Lab Sample ID: LCSD 320-411226/3-A**
**Matrix: Water**
**Analysis Batch: 411454**

**Client Sample ID: Lab Control Sample Dup**
**Prep Type: Total/NA**
**Prep Batch: 411226**

| Analyte | | | Spike Added | LCSD Result | LCSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Perfluorobutanesulfonic acid (PFBS) | | | 35.4 | 37.40 | | ng/L | | 106 | 67 - 127 | 2 | 30 |
| Perfluorohexanesulfonic acid (PFHxS) | | | 36.4 | 34.52 | | ng/L | | 95 | 59 - 119 | 1 | 30 |
| Perfluoroheptanesulfonic Acid (PFHpS) | | | 38.1 | 40.88 | | ng/L | | 107 | 76 - 136 | 1 | 30 |
| Perfluorooctanesulfonic acid (PFOS) | | | 37.1 | 37.79 | | ng/L | | 102 | 70 - 130 | 1 | 30 |
| Perfluorodecanesulfonic acid (PFDS) | | | 38.6 | 38.93 | | ng/L | | 101 | 71 - 131 | 2 | 30 |
| Perfluorooctanesulfonamide (FOSA) | | | 40.0 | 45.31 | | ng/L | | 113 | 73 - 133 | 7 | 30 |
| N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA) | | | 40.0 | 43.86 | | ng/L | | 110 | 76 - 136 | 4 | 30 |
| N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA) | | | 40.0 | 42.04 | | ng/L | | 105 | 76 - 136 | 1 | 30 |
| 6:2 FTS | | | 37.9 | 35.19 | | ng/L | | 93 | 59 - 175 | 6 | 30 |
| 8:2 FTS | | | 38.3 | 40.25 | | ng/L | | 105 | 75 - 135 | 3 | 30 |

| *Isotope Dilution* | *LCSD %Recovery* | *LCSD Qualifier* | *Limits* |
|---|---|---|---|
| *13C4 PFBA* | *86* | | *25 - 150* |
| *13C5 PFPeA* | *89* | | *25 - 150* |
| *13C2 PFHxA* | *90* | | *25 - 150* |
| *13C4 PFHpA* | *91* | | *25 - 150* |
| *13C4 PFOA* | *89* | | *25 - 150* |
| *13C5 PFNA* | *94* | | *25 - 150* |
| *13C2 PFDA* | *95* | | *25 - 150* |
| *13C2 PFUnA* | *96* | | *25 - 150* |
| *13C2 PFDoA* | *88* | | *25 - 150* |
| *13C2 PFTeDA* | *89* | | *25 - 150* |
| *13C3 PFBS* | *94* | | *25 - 150* |
| *18O2 PFHxS* | *94* | | *25 - 150* |
| *13C4 PFOS* | *97* | | *25 - 150* |
| *13C8 FOSA* | *81* | | *25 - 150* |
| *d3-NMeFOSAA* | *79* | | *25 - 150* |
| *d5-NEtFOSAA* | *79* | | *25 - 150* |
| *M2-6:2 FTS* | *95* | | *25 - 150* |
| *M2-8:2 FTS* | *92* | | *25 - 150* |

## Qualifiers

### GC/MS VOA

| Qualifier | Qualifier Description |
|---|---|
| * | LCS or LCSD is outside acceptance limits. |
| F1 | MS and/or MSD recovery exceeds control limits. |
| J | Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value. |
| U | Indicates the analyte was analyzed for but not detected. |

### GC/MS VOA TICs

| Qualifier | Qualifier Description |
|---|---|
| J | Indicates an Estimated Value for TICs |
| N | This flag indicates the presumptive evidence of a compound. |

### LCMS

| Qualifier | Qualifier Description |
|---|---|
| *5 | Isotope dilution analyte is outside acceptance limits. |
| B | Compound was found in the blank and sample. |
| J | Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value. |
| U | Indicates the analyte was analyzed for but not detected. |

## Glossary

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

## GC/MS VOA

### Analysis Batch: 722597

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 460-217547-2 | MW-204 | Total/NA | Water | 8260C | |
| 460-217547-3 | MW-205 | Total/NA | Water | 8260C | |
| 460-217547-7 | FB | Total/NA | Water | 8260C | |
| 460-217547-8 | TB | Total/NA | Water | 8260C | |
| MB 460-722597/10 | Method Blank | Total/NA | Water | 8260C | |
| LCS 460-722597/4 | Lab Control Sample | Total/NA | Water | 8260C | |
| LCSD 460-722597/5 | Lab Control Sample Dup | Total/NA | Water | 8260C | |

### Analysis Batch: 722709

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 460-217547-5 | MW-213 | Total/NA | Water | 8260C | |
| MB 460-722709/8 | Method Blank | Total/NA | Water | 8260C | |
| LCS 460-722709/4 | Lab Control Sample | Total/NA | Water | 8260C | |
| LCSD 460-722709/5 | Lab Control Sample Dup | Total/NA | Water | 8260C | |

### Analysis Batch: 722834

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 460-217547-1 | MW-203 | Total/NA | Water | 8260C | |
| 460-217547-4 | MW-206 | Total/NA | Water | 8260C | |
| 460-217547-6 | DUP | Total/NA | Water | 8260C | |
| MB 460-722834/9 | Method Blank | Total/NA | Water | 8260C | |
| LCS 460-722834/5 | Lab Control Sample | Total/NA | Water | 8260C | |
| 460-217576-A-4 MS | Matrix Spike | Total/NA | Water | 8260C | |
| 460-217576-A-4 MSD | Matrix Spike Duplicate | Total/NA | Water | 8260C | |

## LCMS

### Prep Batch: 410910

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 460-217547-1 | MW-203 | Total/NA | Water | 3535 | |
| 460-217547-2 | MW-204 | Total/NA | Water | 3535 | |
| 460-217547-3 | MW-205 | Total/NA | Water | 3535 | |
| 460-217547-5 | MW-213 | Total/NA | Water | 3535 | |
| 460-217547-6 | DUP | Total/NA | Water | 3535 | |
| 460-217547-7 | FB | Total/NA | Water | 3535 | |
| MB 320-410910/1-A | Method Blank | Total/NA | Water | 3535 | |
| LCS 320-410910/2-A | Lab Control Sample | Total/NA | Water | 3535 | |
| LCSD 320-410910/3-A | Lab Control Sample Dup | Total/NA | Water | 3535 | |

### Analysis Batch: 411087

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 460-217547-7 | FB | Total/NA | Water | 537 (modified) | 410910 |
| MB 320-410910/1-A | Method Blank | Total/NA | Water | 537 (modified) | 410910 |
| LCS 320-410910/2-A | Lab Control Sample | Total/NA | Water | 537 (modified) | 410910 |
| LCSD 320-410910/3-A | Lab Control Sample Dup | Total/NA | Water | 537 (modified) | 410910 |

### Prep Batch: 411226

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 460-217547-4 | MW-206 | Total/NA | Water | 3535 | |
| MB 320-411226/1-A | Method Blank | Total/NA | Water | 3535 | |
| LCS 320-411226/2-A | Lab Control Sample | Total/NA | Water | 3535 | |

## LCMS (Continued)

### Prep Batch: 411226 (Continued)

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| LCSD 320-411226/3-A | Lab Control Sample Dup | Total/NA | Water | 3535 | |

### Analysis Batch: 411377

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 460-217547-1 | MW-203 | Total/NA | Water | 537 (modified) | 410910 |
| 460-217547-2 | MW-204 | Total/NA | Water | 537 (modified) | 410910 |
| 460-217547-3 | MW-205 | Total/NA | Water | 537 (modified) | 410910 |
| 460-217547-5 | MW-213 | Total/NA | Water | 537 (modified) | 410910 |
| 460-217547-6 | DUP | Total/NA | Water | 537 (modified) | 410910 |

### Analysis Batch: 411454

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 460-217547-4 | MW-206 | Total/NA | Water | 537 (modified) | 411226 |
| MB 320-411226/1-A | Method Blank | Total/NA | Water | 537 (modified) | 411226 |
| LCS 320-411226/2-A | Lab Control Sample | Total/NA | Water | 537 (modified) | 411226 |
| LCSD 320-411226/3-A | Lab Control Sample Dup | Total/NA | Water | 537 (modified) | 411226 |

## Client Sample ID: MW-203
**Date Collected: 09/02/20 13:00**
**Date Received: 09/03/20 16:45**

## Lab Sample ID: 460-217547-1
**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 8260C | | 1 | 722834 | 09/10/20 00:42 | AMS | TAL EDI |
| Total/NA | Prep | 3535 | | | 410910 | 09/09/20 18:52 | VP | TAL SAC |
| Total/NA | Analysis | 537 (modified) | | 1 | 411377 | 09/11/20 12:41 | RS1 | TAL SAC |

## Client Sample ID: MW-204
**Date Collected: 09/02/20 11:30**
**Date Received: 09/03/20 16:45**

## Lab Sample ID: 460-217547-2
**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 8260C | | 1 | 722597 | 09/09/20 06:21 | AMS | TAL EDI |
| Total/NA | Prep | 3535 | | | 410910 | 09/09/20 18:52 | VP | TAL SAC |
| Total/NA | Analysis | 537 (modified) | | 1 | 411377 | 09/11/20 12:50 | RS1 | TAL SAC |

## Client Sample ID: MW-205
**Date Collected: 09/02/20 12:40**
**Date Received: 09/03/20 16:45**

## Lab Sample ID: 460-217547-3
**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 8260C | | 1 | 722597 | 09/09/20 06:44 | AMS | TAL EDI |
| Total/NA | Prep | 3535 | | | 410910 | 09/09/20 18:52 | VP | TAL SAC |
| Total/NA | Analysis | 537 (modified) | | 1 | 411377 | 09/11/20 13:00 | RS1 | TAL SAC |

## Client Sample ID: MW-206
**Date Collected: 09/02/20 10:40**
**Date Received: 09/03/20 16:45**

## Lab Sample ID: 460-217547-4
**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 8260C | | 1 | 722834 | 09/10/20 01:06 | AMS | TAL EDI |
| Total/NA | Prep | 3535 | | | 411226 | 09/10/20 18:32 | PV | TAL SAC |
| Total/NA | Analysis | 537 (modified) | | 1 | 411454 | 09/11/20 15:25 | IK | TAL SAC |

## Client Sample ID: MW-213
**Date Collected: 09/02/20 09:40**
**Date Received: 09/03/20 16:45**

## Lab Sample ID: 460-217547-5
**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 8260C | | 1 | 722709 | 09/09/20 11:42 | CJM | TAL EDI |
| Total/NA | Prep | 3535 | | | 410910 | 09/09/20 18:52 | VP | TAL SAC |
| Total/NA | Analysis | 537 (modified) | | 1 | 411377 | 09/11/20 13:09 | RS1 | TAL SAC |

## Client Sample ID: DUP
**Date Collected: 09/02/20 00:00**
**Date Received: 09/03/20 16:45**

## Lab Sample ID: 460-217547-6
**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 8260C | | 1 | 722834 | 09/10/20 00:18 | AMS | TAL EDI |

# Lab Chronicle

Client: SESI Consulting Engineers
Project/Site: Grossingers

Job ID: 460-217547-1

## Client Sample ID: DUP
**Date Collected: 09/02/20 00:00**
**Date Received: 09/03/20 16:45**

## Lab Sample ID: 460-217547-6
**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | 3535 | | | 410910 | 09/09/20 18:52 | VP | TAL SAC |
| Total/NA | Analysis | 537 (modified) | | 1 | 411377 | 09/11/20 13:18 | RS1 | TAL SAC |

## Client Sample ID: FB
**Date Collected: 09/02/20 14:30**
**Date Received: 09/03/20 16:45**

## Lab Sample ID: 460-217547-7
**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 8260C | | 1 | 722597 | 09/09/20 02:49 | AMS | TAL EDI |
| Total/NA | Prep | 3535 | | | 410910 | 09/09/20 18:52 | VP | TAL SAC |
| Total/NA | Analysis | 537 (modified) | | 1 | 411087 | 09/10/20 15:38 | RS1 | TAL SAC |

## Client Sample ID: TB
**Date Collected: 09/02/20 14:30**
**Date Received: 09/03/20 16:45**

## Lab Sample ID: 460-217547-8
**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 8260C | | 1 | 722597 | 09/09/20 01:38 | AMS | TAL EDI |

**Laboratory References:**

TAL EDI = Eurofins TestAmerica, Edison, 777 New Durham Road, Edison, NJ 08817, TEL (732)549-3900

TAL SAC = Eurofins TestAmerica, Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

# Accreditation/Certification Summary

Client: SESI Consulting Engineers
Job ID: 460-217547-1
Project/Site: Grossingers

## Laboratory: Eurofins TestAmerica, Edison

The accreditations/certifications listed below are applicable to this report.

| Authority | Program | Identification Number | Expiration Date |
|---|---|---|---|
| New York | NELAP | 11452 | 04-01-21 |

## Laboratory: Eurofins TestAmerica, Sacramento

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

| Authority | Program | Identification Number | Expiration Date |
|---|---|---|---|
| Alaska (UST) | State | 17-020 | 01-20-21 |
| ANAB | Dept. of Defense ELAP | L2468 | 01-20-21 |
| ANAB | Dept. of Energy | L2468.01 | 01-20-21 |
| ANAB | ISO/IEC 17025 | L2468 | 01-20-21 |
| Arizona | State | AZ0708 | 08-11-21 |
| Arkansas DEQ | State | 88-0691 | 06-17-21 |
| California | State | 2897 | 01-31-22 |
| Colorado | State | CA0004 | 08-31-21 |
| Connecticut | State | PH-0691 | 06-30-21 |
| Florida | NELAP | E87570 | 06-30-21 |
| Georgia | State | 4040 | 01-30-21 |
| Hawaii | State | <cert No.> | 01-29-21 |
| Illinois | NELAP | 200060 | 03-17-21 |
| Kansas | NELAP | E-10375 | 10-31-20 |
| Louisiana | NELAP | 01944 | 06-30-21 |
| Maine | State | CA00004 | 04-14-22 |
| Michigan | State | 9947 | 08-03-23 |
| Nevada | State | CA000442021-1 | 07-31-21 |
| New Hampshire | NELAP | 2997 | 04-18-21 |
| New Jersey | NELAP | CA005 | 06-30-21 |
| New York | NELAP | 11666 | 04-01-21 |
| Oregon | NELAP | 4040 | 01-29-21 |
| Pennsylvania | NELAP | 68-01272 | 03-31-21 |
| Texas | NELAP | T104704399-19-13 | 06-01-21 |
| US Fish & Wildlife | US Federal Programs | 58448 | 07-31-21 |
| USDA | US Federal Programs | P330-18-00239 | 07-31-21 |
| Utah | NELAP | CA000442019-01 | 02-28-21 |
| Vermont | State | VT-4040 | 04-16-21 |
| Virginia | NELAP | 460278 | 03-14-21 |
| Washington | State | C581 | 05-05-21 |
| West Virginia (DW) | State | 9930C | 12-31-20 |
| Wisconsin | State | 998204680 | 08-31-21 |
| Wyoming | State Program | 8TMS-L | 01-28-19 * |

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

# 8260C

## Volatile Organic Compounds by GC/MS

FORM II
GC/MS VOA SURROGATE RECOVERY

Lab Name: Eurofins TestAmerica, Edison  Job No.: 460-217547-1

SDG No.:

Matrix: Water  Level: Low

GC Column (1): Rtx-624  ID: 0.25(mm)

| Client Sample ID | Lab Sample ID | DBFM # | DCA # | TOL # | BFB # |
|---|---|---|---|---|---|
| MW-203 | 460-217547-1 | 99 | 91 | 96 | 104 |
| MW-204 | 460-217547-2 | 106 | 99 | 107 | 110 |
| MW-205 | 460-217547-3 | 99 | 91 | 98 | 99 |
| MW-206 | 460-217547-4 | 99 | 93 | 96 | 104 |
| MW-213 | 460-217547-5 | 99 | 93 | 96 | 104 |
| DUP | 460-217547-6 | 102 | 96 | 94 | 104 |
| FB | 460-217547-7 | 96 | 87 | 99 | 96 |
| TB | 460-217547-8 | 98 | 91 | 99 | 99 |
| | MB 460-722597/10 | 107 | 103 | 102 | 108 |
| | MB 460-722709/8 | 99 | 94 | 97 | 101 |
| | MB 460-722834/9 | 103 | 93 | 99 | 105 |
| | LCS 460-722597/4 | 94 | 91 | 95 | 100 |
| | LCS 460-722709/4 | 98 | 97 | 94 | 104 |
| | LCS 460-722834/5 | 95 | 91 | 94 | 103 |
| | LCSD 460-722597/5 | 94 | 88 | 96 | 98 |
| | LCSD 460-722709/5 | 97 | 96 | 96 | 105 |
| | 460-217576-A-4 MS | 107 | 103 | 102 | 117 |
| | 460-217576-A-4 MSD | 100 | 98 | 95 | 108 |

| | QC LIMITS |
|---|---|
| DBFM = Dibromofluoromethane (Surr) | 77-124 |
| DCA = 1,2-Dichloroethane-d4 (Surr) | 75-123 |
| TOL = Toluene-d8 (Surr) | 80-120 |
| BFB = 4-Bromofluorobenzene | 76-120 |

# Column to be used to flag recovery values

FORM II 8260C

FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: Eurofins TestAmerica, Edison Job No.: 460-217547-1

SDG No.:

Matrix: Water Level: Low Lab File ID: P79482.D

Lab ID: LCS 460-722597/4 Client ID:

| COMPOUND | SPIKE ADDED (ug/L) | LCS CONCENTRATION (ug/L) | LCS % REC | QC LIMITS REC | # |
|---|---|---|---|---|---|
| 1,1,1-Trichloroethane | 20.0 | 20.7 | 104 | 68-128 | |
| 1,1,2,2-Tetrachloroethane | 20.0 | 18.9 | 94 | 63-139 | |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 20.0 | 21.1 | 105 | 59-142 | |
| 1,1,2-Trichloroethane | 20.0 | 18.7 | 93 | 74-125 | |
| 1,1-Dichloroethane | 20.0 | 20.2 | 101 | 73-130 | |
| 1,1-Dichloroethene | 20.0 | 20.7 | 104 | 68-133 | |
| 1,2,3-Trichlorobenzene | 20.0 | 17.3 | 86 | 53-144 | |
| 1,2,4-Trichlorobenzene | 20.0 | 19.3 | 97 | 64-132 | |
| 1,2-Dichloropropane | 20.0 | 19.5 | 97 | 76-126 | |
| 1,3-Dichlorobenzene | 20.0 | 21.0 | 105 | 80-121 | |
| 1,4-Dichlorobenzene | 20.0 | 20.7 | 103 | 80-118 | |
| 1,4-Dioxane | 400 | 434 | 109 | 70-142 | |
| 2-Butanone (MEK) | 100 | 119 | 119 | 69-128 | |
| 2-Hexanone | 100 | 125 | 125 | 74-127 | |
| 4-Methyl-2-pentanone (MIBK) | 100 | 123 | 123 | 78-125 | |
| Acetone | 100 | 98.2 | 98 | 61-134 | |
| Benzene | 20.0 | 19.9 | 99 | 78-126 | |
| Bromoform | 20.0 | 18.1 | 90 | 38-144 | |
| Bromomethane | 20.0 | 32.6 | 163 | 10-150 | * |
| Carbon disulfide | 20.0 | 19.5 | 97 | 64-138 | |
| Carbon tetrachloride | 20.0 | 22.5 | 112 | 56-131 | |
| Chlorobenzene | 20.0 | 20.3 | 102 | 80-119 | |
| Chlorobromomethane | 20.0 | 20.3 | 101 | 73-126 | |
| Chlorodibromomethane | 20.0 | 18.9 | 94 | 58-130 | |
| Chloroethane | 20.0 | 20.2 | 101 | 29-150 | |
| Chloroform | 20.0 | 19.8 | 99 | 78-125 | |
| Chloromethane | 20.0 | 18.7 | 93 | 38-150 | |
| cis-1,2-Dichloroethene | 20.0 | 19.9 | 100 | 78-121 | |
| cis-1,3-Dichloropropene | 20.0 | 18.9 | 94 | 74-125 | |
| Cyclohexane | 20.0 | 20.3 | 102 | 67-133 | |
| Dichlorobromomethane | 20.0 | 19.9 | 99 | 72-121 | |
| Dichlorodifluoromethane | 20.0 | 19.9 | 99 | 31-150 | |
| Ethylbenzene | 20.0 | 20.7 | 103 | 78-120 | |
| Ethylene Dibromide | 20.0 | 18.9 | 95 | 69-126 | |
| Isopropylbenzene | 20.0 | 20.7 | 104 | 79-125 | |
| Methyl acetate | 40.0 | 48.2 | 121 | 70-127 | |
| Methyl tert-butyl ether | 20.0 | 19.2 | 96 | 65-131 | |
| Methylcyclohexane | 20.0 | 21.4 | 107 | 60-139 | |
| Methylene Chloride | 20.0 | 20.1 | 100 | 74-127 | |
| m-Xylene & p-Xylene | 20.0 | 21.3 | 107 | 78-123 | |
| o-Xylene | 20.0 | 20.4 | 102 | 78-122 | |

# Column to be used to flag recovery and RPD values

FORM III 8260C

FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: Eurofins TestAmerica, Edison Job No.: 460-217547-1

SDG No.:

Matrix: Water Level: Low Lab File ID: P79482.D

Lab ID: LCS 460-722597/4 Client ID:

| COMPOUND | SPIKE ADDED (ug/L) | LCS CONCENTRATION (ug/L) | LCS % REC | QC LIMITS REC | # |
|---|---|---|---|---|---|
| Styrene | 20.0 | 20.7 | 104 | 75-127 | |
| Tetrachloroethene | 20.0 | 21.0 | 105 | 70-127 | |
| Toluene | 20.0 | 20.2 | 101 | 78-119 | |
| trans-1,2-Dichloroethene | 20.0 | 20.7 | 103 | 74-126 | |
| trans-1,3-Dichloropropene | 20.0 | 19.4 | 97 | 66-127 | |
| Trichloroethene | 20.0 | 20.5 | 102 | 71-121 | |
| Trichlorofluoromethane | 20.0 | 20.7 | 103 | 61-140 | |
| Vinyl chloride | 20.0 | 19.4 | 97 | 61-144 | |
| 1,2-Dichloroethane | 20.0 | 18.2 | 91 | 75-121 | |
| 1,2-Dichlorobenzene | 20.0 | 20.7 | 104 | 79-122 | |
| 1,2-Dibromo-3-Chloropropane | 20.0 | 18.5 | 93 | 41-143 | |

# Column to be used to flag recovery and RPD values

FORM III 8260C

FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: Eurofins TestAmerica, Edison Job No.: 460-217547-1

SDG No.:

Matrix: Water Level: Low Lab File ID: P79507.D

Lab ID: LCS 460-722709/4 Client ID:

| COMPOUND | SPIKE ADDED (ug/L) | LCS CONCENTRATION (ug/L) | LCS % REC | QC LIMITS REC | # |
|---|---|---|---|---|---|
| 1,1,1-Trichloroethane | 20.0 | 20.0 | 100 | 68-128 | |
| 1,1,2,2-Tetrachloroethane | 20.0 | 19.9 | 100 | 63-139 | |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 20.0 | 21.2 | 106 | 59-142 | |
| 1,1,2-Trichloroethane | 20.0 | 19.3 | 96 | 74-125 | |
| 1,1-Dichloroethane | 20.0 | 19.2 | 96 | 73-130 | |
| 1,1-Dichloroethene | 20.0 | 20.3 | 102 | 68-133 | |
| 1,2,3-Trichlorobenzene | 20.0 | 18.4 | 92 | 53-144 | |
| 1,2,4-Trichlorobenzene | 20.0 | 19.6 | 98 | 64-132 | |
| 1,2-Dichloropropane | 20.0 | 19.1 | 95 | 76-126 | |
| 1,3-Dichlorobenzene | 20.0 | 19.6 | 98 | 80-121 | |
| 1,4-Dichlorobenzene | 20.0 | 19.7 | 98 | 80-118 | |
| 1,4-Dioxane | 400 | 432 | 108 | 70-142 | |
| 2-Butanone (MEK) | 100 | 103 | 103 | 69-128 | |
| 2-Hexanone | 100 | 108 | 108 | 74-127 | |
| 4-Methyl-2-pentanone (MIBK) | 100 | 103 | 103 | 78-125 | |
| Acetone | 100 | 87.0 | 87 | 61-134 | |
| Benzene | 20.0 | 18.7 | 94 | 78-126 | |
| Bromoform | 20.0 | 18.9 | 95 | 38-144 | |
| Bromomethane | 20.0 | 18.3 | 92 | 10-150 | |
| Carbon disulfide | 20.0 | 19.2 | 96 | 64-138 | |
| Carbon tetrachloride | 20.0 | 21.8 | 109 | 56-131 | |
| Chlorobenzene | 20.0 | 19.4 | 97 | 80-119 | |
| Chlorobromomethane | 20.0 | 20.3 | 102 | 73-126 | |
| Chlorodibromomethane | 20.0 | 19.6 | 98 | 58-130 | |
| Chloroethane | 20.0 | 18.5 | 93 | 29-150 | |
| Chloroform | 20.0 | 19.7 | 98 | 78-125 | |
| Chloromethane | 20.0 | 17.9 | 90 | 38-150 | |
| cis-1,2-Dichloroethene | 20.0 | 19.8 | 99 | 78-121 | |
| cis-1,3-Dichloropropene | 20.0 | 19.0 | 95 | 74-125 | |
| Cyclohexane | 20.0 | 20.2 | 101 | 67-133 | |
| Dichlorobromomethane | 20.0 | 19.5 | 98 | 72-121 | |
| Dichlorodifluoromethane | 20.0 | 19.9 | 100 | 31-150 | |
| Ethylbenzene | 20.0 | 19.8 | 99 | 78-120 | |
| Ethylene Dibromide | 20.0 | 20.0 | 100 | 69-126 | |
| Isopropylbenzene | 20.0 | 20.0 | 100 | 79-125 | |
| Methyl acetate | 40.0 | 38.4 | 96 | 70-127 | |
| Methyl tert-butyl ether | 20.0 | 20.5 | 102 | 65-131 | |
| Methylcyclohexane | 20.0 | 21.4 | 107 | 60-139 | |
| Methylene Chloride | 20.0 | 20.2 | 101 | 74-127 | |
| m-Xylene & p-Xylene | 20.0 | 20.6 | 103 | 78-123 | |
| o-Xylene | 20.0 | 19.5 | 97 | 78-122 | |

# Column to be used to flag recovery and RPD values

FORM III 8260C

FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: Eurofins TestAmerica, Edison Job No.: 460-217547-1

SDG No.:

Matrix: Water Level: Low Lab File ID: P79507.D

Lab ID: LCS 460-722709/4 Client ID:

| COMPOUND | SPIKE ADDED (ug/L) | LCS CONCENTRATION (ug/L) | LCS % REC | QC LIMITS REC | # |
|---|---|---|---|---|---|
| Styrene | 20.0 | 20.1 | 101 | 75-127 | |
| Tetrachloroethene | 20.0 | 20.3 | 102 | 70-127 | |
| Toluene | 20.0 | 19.6 | 98 | 78-119 | |
| trans-1,2-Dichloroethene | 20.0 | 19.5 | 97 | 74-126 | |
| trans-1,3-Dichloropropene | 20.0 | 19.5 | 98 | 66-127 | |
| Trichloroethene | 20.0 | 20.6 | 103 | 71-121 | |
| Trichlorofluoromethane | 20.0 | 21.6 | 108 | 61-140 | |
| Vinyl chloride | 20.0 | 18.6 | 93 | 61-144 | |
| 1,2-Dichloroethane | 20.0 | 18.9 | 95 | 75-121 | |
| 1,2-Dichlorobenzene | 20.0 | 20.0 | 100 | 79-122 | |
| 1,2-Dibromo-3-Chloropropane | 20.0 | 21.9 | 110 | 41-143 | |

# Column to be used to flag recovery and RPD values

FORM III 8260C

FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: Eurofins TestAmerica, Edison Job No.: 460-217547-1

SDG No.:

Matrix: Water Level: Low Lab File ID: P79534.D

Lab ID: LCS 460-722834/5 Client ID:

| COMPOUND | SPIKE ADDED (ug/L) | LCS CONCENTRATION (ug/L) | LCS % REC | QC LIMITS REC | # |
|---|---|---|---|---|---|
| 1,1,1-Trichloroethane | 20.0 | 20.6 | 103 | 68-128 | |
| 1,1,2,2-Tetrachloroethane | 20.0 | 19.4 | 97 | 63-139 | |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 20.0 | 21.4 | 107 | 59-142 | |
| 1,1,2-Trichloroethane | 20.0 | 18.7 | 94 | 74-125 | |
| 1,1-Dichloroethane | 20.0 | 19.5 | 98 | 73-130 | |
| 1,1-Dichloroethene | 20.0 | 20.8 | 104 | 68-133 | |
| 1,2,3-Trichlorobenzene | 20.0 | 18.5 | 93 | 53-144 | |
| 1,2,4-Trichlorobenzene | 20.0 | 19.8 | 99 | 64-132 | |
| 1,2-Dichloropropane | 20.0 | 19.2 | 96 | 76-126 | |
| 1,3-Dichlorobenzene | 20.0 | 21.0 | 105 | 80-121 | |
| 1,4-Dichlorobenzene | 20.0 | 20.6 | 103 | 80-118 | |
| 1,4-Dioxane | 400 | 445 | 111 | 70-142 | |
| 2-Butanone (MEK) | 100 | 120 | 120 | 69-128 | |
| 2-Hexanone | 100 | 120 | 120 | 74-127 | |
| 4-Methyl-2-pentanone (MIBK) | 100 | 118 | 118 | 78-125 | |
| Acetone | 100 | 100 | 100 | 61-134 | |
| Benzene | 20.0 | 19.5 | 98 | 78-126 | |
| Bromoform | 20.0 | 19.6 | 98 | 38-144 | |
| Bromomethane | 20.0 | 23.7 | 119 | 10-150 | |
| Carbon disulfide | 20.0 | 19.4 | 97 | 64-138 | |
| Carbon tetrachloride | 20.0 | 22.8 | 114 | 56-131 | |
| Chlorobenzene | 20.0 | 20.8 | 104 | 80-119 | |
| Chlorobromomethane | 20.0 | 20.1 | 100 | 73-126 | |
| Chlorodibromomethane | 20.0 | 19.2 | 96 | 58-130 | |
| Chloroethane | 20.0 | 17.2 | 86 | 29-150 | |
| Chloroform | 20.0 | 19.8 | 99 | 78-125 | |
| Chloromethane | 20.0 | 16.1 | 80 | 38-150 | |
| cis-1,2-Dichloroethene | 20.0 | 20.1 | 100 | 78-121 | |
| cis-1,3-Dichloropropene | 20.0 | 19.0 | 95 | 74-125 | |
| Cyclohexane | 20.0 | 19.7 | 99 | 67-133 | |
| Dichlorobromomethane | 20.0 | 19.7 | 99 | 72-121 | |
| Dichlorodifluoromethane | 20.0 | 15.3 | 77 | 31-150 | |
| Ethylbenzene | 20.0 | 20.7 | 104 | 78-120 | |
| Ethylene Dibromide | 20.0 | 20.2 | 101 | 69-126 | |
| Isopropylbenzene | 20.0 | 20.8 | 104 | 79-125 | |
| Methyl acetate | 40.0 | 42.7 | 107 | 70-127 | |
| Methyl tert-butyl ether | 20.0 | 19.5 | 98 | 65-131 | |
| Methylcyclohexane | 20.0 | 20.8 | 104 | 60-139 | |
| Methylene Chloride | 20.0 | 20.3 | 102 | 74-127 | |
| m-Xylene & p-Xylene | 20.0 | 21.4 | 107 | 78-123 | |
| o-Xylene | 20.0 | 20.5 | 103 | 78-122 | |

# Column to be used to flag recovery and RPD values

FORM III 8260C

FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: Eurofins TestAmerica, Edison Job No.: 460-217547-1

SDG No.:

Matrix: Water Level: Low Lab File ID: P79534.D

Lab ID: LCS 460-722834/5 Client ID:

| COMPOUND | SPIKE ADDED (ug/L) | LCS CONCENTRATION (ug/L) | LCS % REC | QC LIMITS REC | # |
|---|---|---|---|---|---|
| Styrene | 20.0 | 21.3 | 106 | 75-127 | |
| Tetrachloroethene | 20.0 | 21.5 | 108 | 70-127 | |
| Toluene | 20.0 | 20.3 | 101 | 78-119 | |
| trans-1,2-Dichloroethene | 20.0 | 20.5 | 103 | 74-126 | |
| trans-1,3-Dichloropropene | 20.0 | 19.4 | 97 | 66-127 | |
| Trichloroethene | 20.0 | 21.5 | 107 | 71-121 | |
| Trichlorofluoromethane | 20.0 | 19.7 | 99 | 61-140 | |
| Vinyl chloride | 20.0 | 17.2 | 86 | 61-144 | |
| 1,2-Dichloroethane | 20.0 | 18.8 | 94 | 75-121 | |
| 1,2-Dichlorobenzene | 20.0 | 20.8 | 104 | 79-122 | |
| 1,2-Dibromo-3-Chloropropane | 20.0 | 19.9 | 100 | 41-143 | |

# Column to be used to flag recovery and RPD values

FORM III 8260C

FORM III
GC/MS VOA LAB CONTROL SAMPLE DUPLICATE RECOVERY

Lab Name: Eurofins TestAmerica, Edison Job No.: 460-217547-1

SDG No.:

Matrix: Water Level: Low Lab File ID: P79483.D

Lab ID: LCSD 460-722597/5 Client ID:

| COMPOUND | SPIKE ADDED (ug/L) | LCSD CONCENTRATION (ug/L) | LCSD % REC | % RPD | QC LIMITS RPD | QC LIMITS REC | # |
|---|---|---|---|---|---|---|---|
| 1,1,1-Trichloroethane | 20.0 | 20.8 | 104 | 0 | 30 | 68-128 | |
| 1,1,2,2-Tetrachloroethane | 20.0 | 18.2 | 91 | 3 | 30 | 63-139 | |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 20.0 | 21.7 | 109 | 3 | 30 | 59-142 | |
| 1,1,2-Trichloroethane | 20.0 | 18.2 | 91 | 3 | 30 | 74-125 | |
| 1,1-Dichloroethane | 20.0 | 19.7 | 98 | 3 | 30 | 73-130 | |
| 1,1-Dichloroethene | 20.0 | 21.1 | 106 | 2 | 30 | 68-133 | |
| 1,2,3-Trichlorobenzene | 20.0 | 17.7 | 88 | 2 | 30 | 53-144 | |
| 1,2,4-Trichlorobenzene | 20.0 | 18.8 | 94 | 2 | 30 | 64-132 | |
| 1,2-Dichloropropane | 20.0 | 19.6 | 98 | 1 | 30 | 76-126 | |
| 1,3-Dichlorobenzene | 20.0 | 21.2 | 106 | 1 | 30 | 80-121 | |
| 1,4-Dichlorobenzene | 20.0 | 20.9 | 105 | 1 | 30 | 80-118 | |
| 1,4-Dioxane | 400 | 483 | 121 | 11 | 30 | 70-142 | |
| 2-Butanone (MEK) | 100 | 126 | 126 | 6 | 30 | 69-128 | |
| 2-Hexanone | 100 | 125 | 125 | 1 | 30 | 74-127 | |
| 4-Methyl-2-pentanone (MIBK) | 100 | 124 | 124 | 1 | 30 | 78-125 | |
| Acetone | 100 | 107 | 107 | 9 | 30 | 61-134 | |
| Benzene | 20.0 | 19.8 | 99 | 0 | 30 | 78-126 | |
| Bromoform | 20.0 | 17.5 | 88 | 3 | 30 | 38-144 | |
| Bromomethane | 20.0 | 34.5 | 173 | 6 | 30 | 10-150 | * |
| Carbon disulfide | 20.0 | 19.9 | 99 | 2 | 30 | 64-138 | |
| Carbon tetrachloride | 20.0 | 22.8 | 114 | 1 | 30 | 56-131 | |
| Chlorobenzene | 20.0 | 20.5 | 102 | 1 | 30 | 80-119 | |
| Chlorobromomethane | 20.0 | 19.7 | 99 | 3 | 30 | 73-126 | |
| Chlorodibromomethane | 20.0 | 18.0 | 90 | 5 | 30 | 58-130 | |
| Chloroethane | 20.0 | 19.9 | 99 | 2 | 30 | 29-150 | |
| Chloroform | 20.0 | 19.6 | 98 | 1 | 30 | 78-125 | |
| Chloromethane | 20.0 | 18.7 | 94 | 0 | 30 | 38-150 | |
| cis-1,2-Dichloroethene | 20.0 | 19.9 | 99 | 0 | 30 | 78-121 | |
| cis-1,3-Dichloropropene | 20.0 | 18.9 | 95 | 0 | 30 | 74-125 | |
| Cyclohexane | 20.0 | 20.4 | 102 | 0 | 30 | 67-133 | |
| Dichlorobromomethane | 20.0 | 19.5 | 97 | 2 | 30 | 72-121 | |
| Dichlorodifluoromethane | 20.0 | 19.8 | 99 | 0 | 30 | 31-150 | |
| Ethylbenzene | 20.0 | 20.9 | 104 | 1 | 30 | 78-120 | |
| Ethylene Dibromide | 20.0 | 18.5 | 93 | 2 | 30 | 69-126 | |
| Isopropylbenzene | 20.0 | 21.0 | 105 | 1 | 30 | 79-125 | |
| Methyl acetate | 40.0 | 48.0 | 120 | 0 | 30 | 70-127 | |
| Methyl tert-butyl ether | 20.0 | 18.1 | 91 | 6 | 30 | 65-131 | |
| Methylcyclohexane | 20.0 | 21.6 | 108 | 1 | 30 | 60-139 | |
| Methylene Chloride | 20.0 | 20.3 | 101 | 1 | 30 | 74-127 | |
| m-Xylene & p-Xylene | 20.0 | 21.7 | 108 | 2 | 30 | 78-123 | |
| o-Xylene | 20.0 | 20.5 | 103 | 1 | 30 | 78-122 | |

# Column to be used to flag recovery and RPD values

FORM III 8260C

FORM III
GC/MS VOA LAB CONTROL SAMPLE DUPLICATE RECOVERY

Lab Name: Eurofins TestAmerica, Edison Job No.: 460-217547-1

SDG No.:

Matrix: Water Level: Low Lab File ID: P79483.D

Lab ID: LCSD 460-722597/5 Client ID:

| COMPOUND | SPIKE ADDED (ug/L) | LCSD CONCENTRATION (ug/L) | LCSD % REC | % RPD | QC LIMITS RPD | QC LIMITS REC | # |
|---|---|---|---|---|---|---|---|
| Styrene | 20.0 | 21.1 | 106 | 2 | 30 | 75-127 | |
| Tetrachloroethene | 20.0 | 21.1 | 105 | 1 | 30 | 70-127 | |
| Toluene | 20.0 | 20.4 | 102 | 1 | 30 | 78-119 | |
| trans-1,2-Dichloroethene | 20.0 | 20.4 | 102 | 1 | 30 | 74-126 | |
| trans-1,3-Dichloropropene | 20.0 | 18.8 | 94 | 3 | 30 | 66-127 | |
| Trichloroethene | 20.0 | 21.1 | 106 | 3 | 30 | 71-121 | |
| Trichlorofluoromethane | 20.0 | 21.9 | 109 | 6 | 30 | 61-140 | |
| Vinyl chloride | 20.0 | 19.5 | 97 | 1 | 30 | 61-144 | |
| 1,2-Dichloroethane | 20.0 | 18.1 | 90 | 0 | 30 | 75-121 | |
| 1,2-Dichlorobenzene | 20.0 | 20.7 | 104 | 0 | 30 | 79-122 | |
| 1,2-Dibromo-3-Chloropropane | 20.0 | 18.5 | 93 | 0 | 30 | 41-143 | |

# Column to be used to flag recovery and RPD values

FORM III 8260C

FORM III
GC/MS VOA LAB CONTROL SAMPLE DUPLICATE RECOVERY

Lab Name: Eurofins TestAmerica, Edison Job No.: 460-217547-1

SDG No.:

Matrix: Water Level: Low Lab File ID: P79508.D

Lab ID: LCSD 460-722709/5 Client ID:

| COMPOUND | SPIKE ADDED (ug/L) | LCSD CONCENTRATION (ug/L) | LCSD % REC | % RPD | QC LIMITS RPD | QC LIMITS REC | # |
|---|---|---|---|---|---|---|---|
| 1,1,1-Trichloroethane | 20.0 | 20.8 | 104 | 4 | 30 | 68-128 | |
| 1,1,2,2-Tetrachloroethane | 20.0 | 20.1 | 100 | 1 | 30 | 63-139 | |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 20.0 | 22.1 | 111 | 4 | 30 | 59-142 | |
| 1,1,2-Trichloroethane | 20.0 | 20.2 | 101 | 4 | 30 | 74-125 | |
| 1,1-Dichloroethane | 20.0 | 19.2 | 96 | 0 | 30 | 73-130 | |
| 1,1-Dichloroethene | 20.0 | 21.0 | 105 | 3 | 30 | 68-133 | |
| 1,2,3-Trichlorobenzene | 20.0 | 19.2 | 96 | 4 | 30 | 53-144 | |
| 1,2,4-Trichlorobenzene | 20.0 | 19.6 | 98 | 0 | 30 | 64-132 | |
| 1,2-Dichloropropane | 20.0 | 19.8 | 99 | 3 | 30 | 76-126 | |
| 1,3-Dichlorobenzene | 20.0 | 20.3 | 102 | 3 | 30 | 80-121 | |
| 1,4-Dichlorobenzene | 20.0 | 20.0 | 100 | 1 | 30 | 80-118 | |
| 1,4-Dioxane | 400 | 478 | 119 | 10 | 30 | 70-142 | |
| 2-Butanone (MEK) | 100 | 106 | 106 | 3 | 30 | 69-128 | |
| 2-Hexanone | 100 | 109 | 109 | 1 | 30 | 74-127 | |
| 4-Methyl-2-pentanone (MIBK) | 100 | 105 | 105 | 2 | 30 | 78-125 | |
| Acetone | 100 | 91.9 | 92 | 5 | 30 | 61-134 | |
| Benzene | 20.0 | 19.6 | 98 | 5 | 30 | 78-126 | |
| Bromoform | 20.0 | 20.1 | 100 | 6 | 30 | 38-144 | |
| Bromomethane | 20.0 | 19.4 | 97 | 6 | 30 | 10-150 | |
| Carbon disulfide | 20.0 | 19.5 | 97 | 1 | 30 | 64-138 | |
| Carbon tetrachloride | 20.0 | 22.6 | 113 | 3 | 30 | 56-131 | |
| Chlorobenzene | 20.0 | 20.1 | 100 | 4 | 30 | 80-119 | |
| Chlorobromomethane | 20.0 | 20.4 | 102 | 0 | 30 | 73-126 | |
| Chlorodibromomethane | 20.0 | 20.4 | 102 | 4 | 30 | 58-130 | |
| Chloroethane | 20.0 | 14.9 | 75 | 21 | 30 | 29-150 | |
| Chloroform | 20.0 | 19.7 | 98 | 0 | 30 | 78-125 | |
| Chloromethane | 20.0 | 17.7 | 89 | 1 | 30 | 38-150 | |
| cis-1,2-Dichloroethene | 20.0 | 20.0 | 100 | 1 | 30 | 78-121 | |
| cis-1,3-Dichloropropene | 20.0 | 19.1 | 95 | 1 | 30 | 74-125 | |
| Cyclohexane | 20.0 | 20.4 | 102 | 1 | 30 | 67-133 | |
| Dichlorobromomethane | 20.0 | 19.8 | 99 | 1 | 30 | 72-121 | |
| Dichlorodifluoromethane | 20.0 | 19.9 | 99 | 0 | 30 | 31-150 | |
| Ethylbenzene | 20.0 | 20.4 | 102 | 3 | 30 | 78-120 | |
| Ethylene Dibromide | 20.0 | 21.2 | 106 | 6 | 30 | 69-126 | |
| Isopropylbenzene | 20.0 | 20.6 | 103 | 3 | 30 | 79-125 | |
| Methyl acetate | 40.0 | 38.6 | 96 | 1 | 30 | 70-127 | |
| Methyl tert-butyl ether | 20.0 | 20.9 | 105 | 2 | 30 | 65-131 | |
| Methylcyclohexane | 20.0 | 21.7 | 108 | 1 | 30 | 60-139 | |
| Methylene Chloride | 20.0 | 20.2 | 101 | 0 | 30 | 74-127 | |
| m-Xylene & p-Xylene | 20.0 | 20.9 | 105 | 1 | 30 | 78-123 | |
| o-Xylene | 20.0 | 20.2 | 101 | 4 | 30 | 78-122 | |

# Column to be used to flag recovery and RPD values

FORM III 8260C

FORM III
GC/MS VOA LAB CONTROL SAMPLE DUPLICATE RECOVERY

Lab Name: Eurofins TestAmerica, Edison  Job No.: 460-217547-1

SDG No.:

Matrix: Water  Level: Low  Lab File ID: P79508.D

Lab ID: LCSD 460-722709/5  Client ID:

| COMPOUND | SPIKE ADDED (ug/L) | LCSD CONCENTRATION (ug/L) | LCSD % REC | % RPD | QC LIMITS RPD | QC LIMITS REC | # |
|---|---|---|---|---|---|---|---|
| Styrene | 20.0 | 20.7 | 104 | 3 | 30 | 75-127 | |
| Tetrachloroethene | 20.0 | 21.4 | 107 | 5 | 30 | 70-127 | |
| Toluene | 20.0 | 20.0 | 100 | 2 | 30 | 78-119 | |
| trans-1,2-Dichloroethene | 20.0 | 20.9 | 104 | 7 | 30 | 74-126 | |
| trans-1,3-Dichloropropene | 20.0 | 20.5 | 103 | 5 | 30 | 66-127 | |
| Trichloroethene | 20.0 | 21.1 | 105 | 3 | 30 | 71-121 | |
| Trichlorofluoromethane | 20.0 | 21.7 | 109 | 0 | 30 | 61-140 | |
| Vinyl chloride | 20.0 | 19.2 | 96 | 3 | 30 | 61-144 | |
| 1,2-Dichloroethane | 20.0 | 19.3 | 96 | 2 | 30 | 75-121 | |
| 1,2-Dichlorobenzene | 20.0 | 20.2 | 101 | 1 | 30 | 79-122 | |
| 1,2-Dibromo-3-Chloropropane | 20.0 | 21.7 | 108 | 1 | 30 | 41-143 | |

# Column to be used to flag recovery and RPD values

FORM III 8260C

FORM III
GC/MS VOA MATRIX SPIKE RECOVERY

Lab Name: Eurofins TestAmerica, Edison Job No.: 460-217547-1

SDG No.:

Matrix: Water Level: Low Lab File ID: P79554.D

Lab ID: 460-217576-A-4 MS Client ID:

| COMPOUND | SPIKE ADDED (ug/L) | SAMPLE CONCENTRATION (ug/L) | MS CONCENTRATION (ug/L) | MS % REC | QC LIMITS REC | # |
|---|---|---|---|---|---|---|
| 1,1,1-Trichloroethane | 20.0 | 0.24 U | 24.0 | 120 | 68-128 | |
| 1,1,2,2-Tetrachloroethane | 20.0 | 0.37 U | 23.8 | 119 | 63-139 | |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 20.0 | 0.31 U | 23.9 | 119 | 59-142 | |
| 1,1,2-Trichloroethane | 20.0 | 0.43 U | 23.0 | 115 | 74-125 | |
| 1,1-Dichloroethane | 20.0 | 0.26 U | 21.9 | 109 | 73-130 | |
| 1,1-Dichloroethene | 20.0 | 0.26 U | 23.5 | 117 | 68-133 | |
| 1,2,3-Trichlorobenzene | 20.0 | 0.36 U | 22.1 | 110 | 53-144 | |
| 1,2,4-Trichlorobenzene | 20.0 | 0.37 U | 23.3 | 117 | 64-132 | |
| 1,2-Dichloropropane | 20.0 | 0.35 U | 22.1 | 110 | 76-126 | |
| 1,3-Dichlorobenzene | 20.0 | 0.34 U | 23.7 | 119 | 80-121 | |
| 1,4-Dichlorobenzene | 20.0 | 0.33 U | 23.5 | 117 | 80-118 | |
| 1,4-Dioxane | 400 | 28 U | 457 | 114 | 70-142 | |
| 2-Butanone (MEK) | 100 | 1.9 U | 159 | 159 | 69-128 | F1 |
| 2-Hexanone | 100 | 1.1 U | 162 | 162 | 74-127 | F1 |
| 4-Methyl-2-pentanone (MIBK) | 100 | 1.3 U | 162 | 162 | 78-125 | F1 |
| Acetone | 100 | 4.4 U | 136 | 136 | 61-134 | F1 |
| Benzene | 20.0 | 0.20 U | 21.8 | 109 | 78-126 | |
| Bromoform | 20.0 | 0.54 U | 25.4 | 127 | 38-144 | |
| Bromomethane | 20.0 | 0.55 U | 26.6 | 133 | 10-150 | |
| Carbon disulfide | 20.0 | 0.82 U | 21.9 | 109 | 64-138 | |
| Carbon tetrachloride | 20.0 | 0.21 U | 25.9 | 129 | 56-131 | |
| Chlorobenzene | 20.0 | 0.38 U | 23.6 | 118 | 80-119 | |
| Chlorobromomethane | 20.0 | 0.41 U | 25.7 | 128 | 73-126 | F1 |
| Chlorodibromomethane | 20.0 | 0.28 U | 23.7 | 118 | 58-130 | |
| Chloroethane | 20.0 | 0.32 U | 20.0 | 100 | 29-150 | |
| Chloroform | 20.0 | 0.33 U | 23.3 | 117 | 78-125 | |
| Chloromethane | 20.0 | 0.40 U | 17.6 | 88 | 38-150 | |
| cis-1,2-Dichloroethene | 20.0 | 4.5 | 28.8 | 122 | 78-121 | F1 |
| cis-1,3-Dichloropropene | 20.0 | 0.22 U | 20.7 | 104 | 74-125 | |
| Cyclohexane | 20.0 | 0.32 U | 21.2 | 106 | 67-133 | |
| Dichlorobromomethane | 20.0 | 0.34 U | 23.8 | 119 | 72-121 | |
| Dichlorodifluoromethane | 20.0 | 0.31 U | 17.7 | 88 | 31-150 | |
| Ethylbenzene | 20.0 | 0.30 U | 23.6 | 118 | 78-120 | |
| Ethylene Dibromide | 20.0 | 0.50 U | 24.5 | 122 | 69-126 | |
| Isopropylbenzene | 20.0 | 0.34 U | 23.3 | 116 | 79-125 | |
| Methyl acetate | 40.0 | 0.79 U | 43.5 | 109 | 70-127 | |
| Methyl tert-butyl ether | 20.0 | 0.47 U | 25.7 | 129 | 65-131 | |
| Methylcyclohexane | 20.0 | 0.26 U | 23.2 | 116 | 60-139 | |
| Methylene Chloride | 20.0 | 0.32 U | 23.9 | 119 | 74-127 | |
| m-Xylene & p-Xylene | 20.0 | 0.30 U | 24.4 | 122 | 78-123 | |
| o-Xylene | 20.0 | 0.36 U | 23.0 | 115 | 78-122 | |

# Column to be used to flag recovery and RPD values

FORM III 8260C

FORM III
GC/MS VOA MATRIX SPIKE RECOVERY

Lab Name: Eurofins TestAmerica, Edison Job No.: 460-217547-1

SDG No.:

Matrix: Water Level: Low Lab File ID: P79554.D

Lab ID: 460-217576-A-4 MS Client ID:

| COMPOUND | SPIKE ADDED (ug/L) | SAMPLE CONCENTRATION (ug/L) | MS CONCENTRATION (ug/L) | MS % REC | QC LIMITS REC | # |
|---|---|---|---|---|---|---|
| Styrene | 20.0 | 0.42 U | 23.9 | 120 | 75-127 | |
| Tetrachloroethene | 20.0 | 2.7 | 27.2 | 123 | 70-127 | |
| Toluene | 20.0 | 0.38 U | 22.9 | 115 | 78-119 | |
| trans-1,2-Dichloroethene | 20.0 | 0.24 U | 24.0 | 120 | 74-126 | |
| trans-1,3-Dichloropropene | 20.0 | 0.49 U | 21.3 | 106 | 66-127 | |
| Trichloroethene | 20.0 | 1.3 | 26.5 | 126 | 71-121 | F1 |
| Trichlorofluoromethane | 20.0 | 0.32 U | 23.1 | 116 | 61-140 | |
| Vinyl chloride | 20.0 | 0.17 U | 19.7 | 99 | 61-144 | |
| 1,2-Dichloroethane | 20.0 | 0.43 U | 22.6 | 113 | 75-121 | |
| 1,2-Dichlorobenzene | 20.0 | 0.43 U | 23.6 | 118 | 79-122 | |
| 1,2-Dibromo-3-Chloropropane | 20.0 | 0.38 U | 26.7 | 134 | 41-143 | |

# Column to be used to flag recovery and RPD values

FORM III 8260C

FORM III
GC/MS VOA MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: Eurofins TestAmerica, Edison Job No.: 460-217547-1

SDG No.:

Matrix: Water Level: Low Lab File ID: P79555.D

Lab ID: 460-217576-A-4 MSD Client ID:

| COMPOUND | SPIKE ADDED (ug/L) | MSD CONCENTRATION (ug/L) | MSD % REC | % RPD | QC LIMITS RPD | QC LIMITS REC | # |
|---|---|---|---|---|---|---|---|
| 1,1,1-Trichloroethane | 20.0 | 19.8 | 99 | 19 | 30 | 68-128 | |
| 1,1,2,2-Tetrachloroethane | 20.0 | 19.2 | 96 | 21 | 30 | 63-139 | |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 20.0 | 19.5 | 98 | 20 | 30 | 59-142 | |
| 1,1,2-Trichloroethane | 20.0 | 19.0 | 95 | 19 | 30 | 74-125 | |
| 1,1-Dichloroethane | 20.0 | 17.9 | 90 | 20 | 30 | 73-130 | |
| 1,1-Dichloroethene | 20.0 | 19.4 | 97 | 19 | 30 | 68-133 | |
| 1,2,3-Trichlorobenzene | 20.0 | 19.8 | 99 | 11 | 30 | 53-144 | |
| 1,2,4-Trichlorobenzene | 20.0 | 19.3 | 97 | 19 | 30 | 64-132 | |
| 1,2-Dichloropropane | 20.0 | 17.8 | 89 | 21 | 30 | 76-126 | |
| 1,3-Dichlorobenzene | 20.0 | 19.6 | 98 | 19 | 30 | 80-121 | |
| 1,4-Dichlorobenzene | 20.0 | 19.3 | 97 | 19 | 30 | 80-118 | |
| 1,4-Dioxane | 400 | 405 | 101 | 12 | 30 | 70-142 | |
| 2-Butanone (MEK) | 100 | 125 | 125 | 24 | 30 | 69-128 | |
| 2-Hexanone | 100 | 124 | 124 | 27 | 30 | 74-127 | |
| 4-Methyl-2-pentanone (MIBK) | 100 | 124 | 124 | 26 | 30 | 78-125 | |
| Acetone | 100 | 108 | 108 | 23 | 30 | 61-134 | |
| Benzene | 20.0 | 17.9 | 89 | 20 | 30 | 78-126 | |
| Bromoform | 20.0 | 20.7 | 103 | 20 | 30 | 38-144 | |
| Bromomethane | 20.0 | 22.2 | 111 | 18 | 30 | 10-150 | |
| Carbon disulfide | 20.0 | 18.1 | 90 | 19 | 30 | 64-138 | |
| Carbon tetrachloride | 20.0 | 21.3 | 107 | 19 | 30 | 56-131 | |
| Chlorobenzene | 20.0 | 19.3 | 96 | 20 | 30 | 80-119 | |
| Chlorobromomethane | 20.0 | 20.3 | 101 | 24 | 30 | 73-126 | |
| Chlorodibromomethane | 20.0 | 19.1 | 96 | 21 | 30 | 58-130 | |
| Chloroethane | 20.0 | 17.5 | 87 | 14 | 30 | 29-150 | |
| Chloroform | 20.0 | 19.1 | 96 | 20 | 30 | 78-125 | |
| Chloromethane | 20.0 | 15.5 | 77 | 13 | 30 | 38-150 | |
| cis-1,2-Dichloroethene | 20.0 | 23.1 | 93 | 22 | 30 | 78-121 | |
| cis-1,3-Dichloropropene | 20.0 | 16.8 | 84 | 21 | 30 | 74-125 | |
| Cyclohexane | 20.0 | 17.2 | 86 | 21 | 30 | 67-133 | |
| Dichlorobromomethane | 20.0 | 19.4 | 97 | 21 | 30 | 72-121 | |
| Dichlorodifluoromethane | 20.0 | 15.9 | 79 | 11 | 30 | 31-150 | |
| Ethylbenzene | 20.0 | 19.2 | 96 | 21 | 30 | 78-120 | |
| Ethylene Dibromide | 20.0 | 20.0 | 100 | 20 | 30 | 69-126 | |
| Isopropylbenzene | 20.0 | 19.4 | 97 | 18 | 30 | 79-125 | |
| Methyl acetate | 40.0 | 32.9 | 82 | 28 | 30 | 70-127 | |
| Methyl tert-butyl ether | 20.0 | 20.8 | 104 | 21 | 30 | 65-131 | |
| Methylcyclohexane | 20.0 | 19.1 | 95 | 19 | 30 | 60-139 | |
| Methylene Chloride | 20.0 | 19.4 | 97 | 20 | 30 | 74-127 | |
| m-Xylene & p-Xylene | 20.0 | 19.6 | 98 | 22 | 30 | 78-123 | |
| o-Xylene | 20.0 | 19.1 | 96 | 18 | 30 | 78-122 | |

# Column to be used to flag recovery and RPD values

FORM III 8260C

FORM III
GC/MS VOA MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: Eurofins TestAmerica, Edison Job No.: 460-217547-1

SDG No.:

Matrix: Water Level: Low Lab File ID: P79555.D

Lab ID: 460-217576-A-4 MSD Client ID:

| COMPOUND | SPIKE ADDED (ug/L) | MSD CONCENTRATION (ug/L) | MSD % REC | % RPD | QC LIMITS RPD | QC LIMITS REC | # |
|---|---|---|---|---|---|---|---|
| Styrene | 20.0 | 19.6 | 98 | 20 | 30 | 75-127 | |
| Tetrachloroethene | 20.0 | 23.0 | 102 | 17 | 30 | 70-127 | |
| Toluene | 20.0 | 19.0 | 95 | 19 | 30 | 78-119 | |
| trans-1,2-Dichloroethene | 20.0 | 19.7 | 99 | 20 | 30 | 74-126 | |
| trans-1,3-Dichloropropene | 20.0 | 18.3 | 91 | 15 | 30 | 66-127 | |
| Trichloroethene | 20.0 | 21.6 | 102 | 20 | 30 | 71-121 | |
| Trichlorofluoromethane | 20.0 | 20.0 | 100 | 15 | 30 | 61-140 | |
| Vinyl chloride | 20.0 | 16.7 | 84 | 16 | 30 | 61-144 | |
| 1,2-Dichloroethane | 20.0 | 18.0 | 90 | 23 | 30 | 75-121 | |
| 1,2-Dichlorobenzene | 20.0 | 19.5 | 97 | 19 | 30 | 79-122 | |
| 1,2-Dibromo-3-Chloropropane | 20.0 | 21.0 | 105 | 24 | 30 | 41-143 | |

# Column to be used to flag recovery and RPD values

FORM III 8260C

FORM IV
GC/MS VOA METHOD BLANK SUMMARY

Lab Name: Eurofins TestAmerica, Edison  Job No.: 460-217547-1

SDG No.:

Lab File ID: P79488.D  Lab Sample ID: MB 460-722597/10

Matrix: Water  Heated Purge:(Y/N) N

Instrument ID: CVOAMS13  Date Analyzed: 09/08/2020 22:33

GC Column: Rtx-624  ID: 0.25(mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

| CLIENT SAMPLE ID | LAB SAMPLE ID | LAB FILE ID | DATE ANALYZED |
|---|---|---|---|
| | LCS 460-722597/4 | P79482.D | 09/08/2020 20:12 |
| | LCSD 460-722597/5 | P79483.D | 09/08/2020 20:35 |
| TB | 460-217547-8 | P79489.D | 09/09/2020 01:38 |
| FB | 460-217547-7 | P79492.D | 09/09/2020 02:49 |
| MW-204 | 460-217547-2 | P79501.D | 09/09/2020 06:21 |
| MW-205 | 460-217547-3 | P79502.D | 09/09/2020 06:44 |

FORM IV
GC/MS VOA METHOD BLANK SUMMARY

Lab Name: Eurofins TestAmerica, Edison  Job No.: 460-217547-1

SDG No.:

Lab File ID: P79511.D  Lab Sample ID: MB 460-722709/8

Matrix: Water  Heated Purge:(Y/N) N

Instrument ID: CVOAMS13  Date Analyzed: 09/09/2020 10:31

GC Column: Rtx-624  ID: 0.25(mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

| CLIENT SAMPLE ID | LAB SAMPLE ID | LAB FILE ID | DATE ANALYZED |
|---|---|---|---|
| | LCS 460-722709/4 | P79507.D | 09/09/2020 08:57 |
| | LCSD 460-722709/5 | P79508.D | 09/09/2020 09:20 |
| MW-213 | 460-217547-5 | P79514.D | 09/09/2020 11:42 |

FORM IV
GC/MS VOA METHOD BLANK SUMMARY

Lab Name: Eurofins TestAmerica, Edison  Job No.: 460-217547-1

SDG No.:

Lab File ID: P79538.D  Lab Sample ID: MB 460-722834/9

Matrix: Water  Heated Purge:(Y/N) N

Instrument ID: CVOAMS13  Date Analyzed: 09/09/2020 21:01

GC Column: Rtx-624  ID: 0.25(mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

| CLIENT SAMPLE ID | LAB SAMPLE ID | LAB FILE ID | DATE ANALYZED |
|---|---|---|---|
| | LCS 460-722834/5 | P79534.D | 09/09/2020 19:27 |
| DUP | 460-217547-6 | P79546.D | 09/10/2020 00:18 |
| MW-203 | 460-217547-1 | P79547.D | 09/10/2020 00:42 |
| MW-206 | 460-217547-4 | P79548.D | 09/10/2020 01:06 |
| | 460-217576-A-4 MS | P79554.D | 09/10/2020 03:28 |
| | 460-217576-A-4 MSD | P79555.D | 09/10/2020 03:52 |

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Eurofins TestAmerica, Edison  Job No.: 460-217547-1

SDG No.:

Lab File ID: P79350.D  BFB Injection Date: 09/04/2020

Instrument ID: CVOAMS13  BFB Injection Time: 13:21

Analysis Batch No.: 721970

| M/E | ION ABUNDANCE CRITERIA | % RELATIVE ABUNDANCE | |
|---|---|---|---|
| 50 | 15.0 - 40.0 % of mass 95 | 18.2 | |
| 75 | 30.0 - 60.0 % of mass 95 | 48.5 | |
| 95 | Base Peak, 100% relative abundance | 100.0 | |
| 96 | 5.0 - 9.0 % of mass 95 | 7.2 | |
| 173 | Less than 2.0 % of mass 174 | 0.0 | (0.0) 1 |
| 174 | Greater than 50% of mass 95 | 82.9 | |
| 175 | 5.0 - 9.0 % of mass 174 | 6.6 | (8.0) 1 |
| 176 | 95.0 - 101.0 % of mass 174 | 79.8 | (96.3) 1 |
| 177 | 5.0 - 9.0 % of mass 176 | 5.6 | (7.0) 2 |

1-Value is % mass 174  2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

| CLIENT SAMPLE ID | LAB SAMPLE ID | LAB FILE ID | DATE ANALYZED | TIME ANALYZED |
|---|---|---|---|---|
| | STD8 460-721970/3 | P79352.D | 09/04/2020 | 14:09 |
| | STD1 460-721970/4 | P79354.D | 09/04/2020 | 14:57 |
| | STD5 460-721970/5 | P79355.D | 09/04/2020 | 15:21 |
| | STD20 460-721970/6 | P79356.D | 09/04/2020 | 15:45 |
| | STD50 460-721970/7 | P79357.D | 09/04/2020 | 16:09 |
| | STD200 460-721970/8 | P79358.D | 09/04/2020 | 16:33 |
| | STD500 460-721970/9 | P79359.D | 09/04/2020 | 16:58 |
| | ICV 460-721970/18 | P79368.D | 09/04/2020 | 20:34 |

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Eurofins TestAmerica, Edison  Job No.: 460-217547-1

SDG No.:

Lab File ID: P79479.D  BFB Injection Date: 09/08/2020

Instrument ID: CVOAMS13  BFB Injection Time: 19:03

Analysis Batch No.: 722597

| M/E | ION ABUNDANCE CRITERIA | % RELATIVE ABUNDANCE | |
|---|---|---|---|
| 50 | 15.0 - 40.0 % of mass 95 | 17.5 | |
| 75 | 30.0 - 60.0 % of mass 95 | 49.3 | |
| 95 | Base Peak, 100% relative abundance | 100.0 | |
| 96 | 5.0 - 9.0 % of mass 95 | 7.7 | |
| 173 | Less than 2.0 % of mass 174 | 0.2 | (0.2) 1 |
| 174 | Greater than 50% of mass 95 | 96.3 | |
| 175 | 5.0 - 9.0 % of mass 174 | 7.2 | (7.5) 1 |
| 176 | 95.0 - 101.0 % of mass 174 | 91.9 | (95.5) 1 |
| 177 | 5.0 - 9.0 % of mass 176 | 6.3 | (6.8) 2 |

1-Value is % mass 174  2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

| CLIENT SAMPLE ID | LAB SAMPLE ID | LAB FILE ID | DATE ANALYZED | TIME ANALYZED |
|---|---|---|---|---|
| | CCVIS 460-722597/3 | P79481.D | 09/08/2020 | 19:49 |
| | LCS 460-722597/4 | P79482.D | 09/08/2020 | 20:12 |
| | LCSD 460-722597/5 | P79483.D | 09/08/2020 | 20:35 |
| | MB 460-722597/10 | P79488.D | 09/08/2020 | 22:33 |
| TB | 460-217547-8 | P79489.D | 09/09/2020 | 1:38 |
| FB | 460-217547-7 | P79492.D | 09/09/2020 | 2:49 |
| MW-204 | 460-217547-2 | P79501.D | 09/09/2020 | 6:21 |
| MW-205 | 460-217547-3 | P79502.D | 09/09/2020 | 6:44 |

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Eurofins TestAmerica, Edison  Job No.: 460-217547-1

SDG No.:

Lab File ID: P79504.D  BFB Injection Date: 09/09/2020

Instrument ID: CVOAMS13  BFB Injection Time: 07:47

Analysis Batch No.: 722709

| M/E | ION ABUNDANCE CRITERIA | % RELATIVE ABUNDANCE | |
|---|---|---|---|
| 50 | 15.0 - 40.0 % of mass 95 | 16.3 | |
| 75 | 30.0 - 60.0 % of mass 95 | 42.6 | |
| 95 | Base Peak, 100% relative abundance | 100.0 | |
| 96 | 5.0 - 9.0 % of mass 95 | 8.2 | |
| 173 | Less than 2.0 % of mass 174 | 0.8 | (0.8) 1 |
| 174 | Greater than 50% of mass 95 | 89.5 | |
| 175 | 5.0 - 9.0 % of mass 174 | 7.2 | (8.0) 1 |
| 176 | 95.0 - 101.0 % of mass 174 | 85.9 | (96.0) 1 |
| 177 | 5.0 - 9.0 % of mass 176 | 5.8 | (6.8) 2 |

1-Value is % mass 174  2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

| CLIENT SAMPLE ID | LAB SAMPLE ID | LAB FILE ID | DATE ANALYZED | TIME ANALYZED |
|---|---|---|---|---|
| | CCVIS 460-722709/3 | P79506.D | 09/09/2020 | 8:33 |
| | LCS 460-722709/4 | P79507.D | 09/09/2020 | 8:57 |
| | LCSD 460-722709/5 | P79508.D | 09/09/2020 | 9:20 |
| | MB 460-722709/8 | P79511.D | 09/09/2020 | 10:31 |
| MW-213 | 460-217547-5 | P79514.D | 09/09/2020 | 11:42 |

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Eurofins TestAmerica, Edison  Job No.: 460-217547-1

SDG No.:

Lab File ID: P79530.D  BFB Injection Date: 09/09/2020

Instrument ID: CVOAMS13  BFB Injection Time: 17:54

Analysis Batch No.: 722834

| M/E | ION ABUNDANCE CRITERIA | % RELATIVE ABUNDANCE | |
|---|---|---|---|
| 50 | 15.0 - 40.0 % of mass 95 | 17.3 | |
| 75 | 30.0 - 60.0 % of mass 95 | 45.7 | |
| 95 | Base Peak, 100% relative abundance | 100.0 | |
| 96 | 5.0 - 9.0 % of mass 95 | 6.4 | |
| 173 | Less than 2.0 % of mass 174 | 0.6 | (0.7) 1 |
| 174 | Greater than 50% of mass 95 | 86.6 | |
| 175 | 5.0 - 9.0 % of mass 174 | 7.5 | (8.6) 1 |
| 176 | 95.0 - 101.0 % of mass 174 | 84.7 | (97.8) 1 |
| 177 | 5.0 - 9.0 % of mass 176 | 6.7 | (7.9) 2 |

1-Value is % mass 174  2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

| CLIENT SAMPLE ID | LAB SAMPLE ID | LAB FILE ID | DATE ANALYZED | TIME ANALYZED |
|---|---|---|---|---|
| | CCVIS 460-722834/4 | P79533.D | 09/09/2020 | 19:04 |
| | LCS 460-722834/5 | P79534.D | 09/09/2020 | 19:27 |
| | MB 460-722834/9 | P79538.D | 09/09/2020 | 21:01 |
| DUP | 460-217547-6 | P79546.D | 09/10/2020 | 0:18 |
| MW-203 | 460-217547-1 | P79547.D | 09/10/2020 | 0:42 |
| MW-206 | 460-217547-4 | P79548.D | 09/10/2020 | 1:06 |
| | 460-217576-A-4 MS | P79554.D | 09/10/2020 | 3:28 |
| | 460-217576-A-4 MSD | P79555.D | 09/10/2020 | 3:52 |

FORM VIII
GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: Eurofins TestAmerica, Edison  Job No.: 460-217547-1

SDG No.:

Sample No.: STD20 460-721970/6  Date Analyzed: 09/04/2020 15:45

Instrument ID: CVOAMS13  GC Column: Rtx-624  ID: 0.25(mm)

Lab File ID (Standard): P79356.D  Heated Purge: (Y/N) N

Calibration ID: 81791

| | | TBAd9 | | BUT | | FB | |
|---|---|---|---|---|---|---|---|
| | | AREA # | RT # | AREA # | RT # | AREA # | RT # |
| INITIAL CALIBRATION MID-POINT | | 111415 | 1.86 | 142853 | 2.83 | 570384 | 3.39 |
| UPPER LIMIT | | 222830 | 2.36 | 285706 | 3.33 | 1140768 | 3.89 |
| LOWER LIMIT | | 55708 | 1.36 | 71427 | 2.33 | 285192 | 2.89 |
| LAB SAMPLE ID | CLIENT SAMPLE ID | | | | | | |
| ICV 460-721970/18 | | 97671 | 1.86 | 133699 | 2.83 | 520222 | 3.39 |

TBAd9 = TBA-d9 (IS)
BUT = 2-Butanone-d5
FB = Fluorobenzene

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

# Column used to flag values outside QC limits

FORM VIII 8260C

FORM VIII
GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: Eurofins TestAmerica, Edison  Job No.: 460-217547-1

SDG No.:

Sample No.: STD20 460-721970/6  Date Analyzed: 09/04/2020 15:45

Instrument ID: CVOAMS13  GC Column: Rtx-624  ID: 0.25(mm)

Lab File ID (Standard): P79356.D  Heated Purge: (Y/N) N

Calibration ID: 81791

| | | DXE | | CBNZd5 | | DCBd4 | |
|---|---|---|---|---|---|---|---|
| | | AREA # | RT # | AREA # | RT # | AREA # | RT # |
| INITIAL CALIBRATION MID-POINT | | 14880 | 4.24 | 396072 | 6.72 | 220745 | 10.23 |
| UPPER LIMIT | | 29760 | 4.74 | 792144 | 7.22 | 441490 | 10.73 |
| LOWER LIMIT | | 7440 | 3.74 | 198036 | 6.22 | 110373 | 9.73 |
| LAB SAMPLE ID | CLIENT SAMPLE ID | | | | | | |
| ICV 460-721970/18 | | 13148 | 4.24 | 368030 | 6.72 | 205232 | 10.23 |

DXE = 1,4-Dioxane-d8
CBNZd5 = Chlorobenzene-d5
DCBd4 = 1,4-Dichlorobenzene-d4

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

# Column used to flag values outside QC limits

FORM VIII 8260C

FORM VIII
GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: Eurofins TestAmerica, Edison  Job No.: 460-217547-1

SDG No.:

Sample No.: CCVIS 460-722597/3  Date Analyzed: 09/08/2020 19:49

Instrument ID: CVOAMS13  GC Column: Rtx-624  ID: 0.25(mm)

Lab File ID (Standard): P79481.D  Heated Purge: (Y/N) N

Calibration ID: 81791

| | | TBAd9 | | BUT | | FB | |
|---|---|---|---|---|---|---|---|
| | | AREA # | RT # | AREA # | RT # | AREA # | RT # |
| 12/24 HOUR STD | | 87627 | 1.85 | 112681 | 2.83 | 577608 | 3.39 |
| UPPER LIMIT | | 175254 | 2.35 | 225362 | 3.33 | 1155216 | 3.89 |
| LOWER LIMIT | | 43814 | 1.35 | 56341 | 2.33 | 288804 | 2.89 |
| LAB SAMPLE ID | CLIENT SAMPLE ID | | | | | | |
| LCS 460-722597/4 | | 88603 | 1.85 | 110078 | 2.83 | 568410 | 3.39 |
| LCSD 460-722597/5 | | 85867 | 1.85 | 102909 | 2.83 | 565626 | 3.39 |
| MB 460-722597/10 | | 103726 | 1.85 | 130040 | 2.83 | 495972 | 3.39 |
| 460-217547-8 | TB | 101652 | 1.85 | 126732 | 2.83 | 590943 | 3.39 |
| 460-217547-7 | FB | 88671 | 1.85 | 88294 | 2.83 | 552302 | 3.39 |
| 460-217547-2 | MW-204 | 92157 | 1.85 | 106832 | 2.83 | 495163 | 3.39 |
| 460-217547-3 | MW-205 | 98990 | 1.85 | 119061 | 2.83 | 536849 | 3.39 |

TBAd9 = TBA-d9 (IS)
BUT = 2-Butanone-d5
FB = Fluorobenzene

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

# Column used to flag values outside QC limits

FORM VIII 8260C

FORM VIII
GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: Eurofins TestAmerica, Edison  Job No.: 460-217547-1

SDG No.:

Sample No.: CCVIS 460-722597/3  Date Analyzed: 09/08/2020 19:49

Instrument ID: CVOAMS13  GC Column: Rtx-624  ID: 0.25(mm)

Lab File ID (Standard): P79481.D  Heated Purge: (Y/N) N

Calibration ID: 81791

| | | DXE | | CBNZd5 | | DCBd4 | |
|---|---|---|---|---|---|---|---|
| | | AREA # | RT # | AREA # | RT # | AREA # | RT # |
| 12/24 HOUR STD | | 13500 | 4.24 | 409547 | 6.72 | 226879 | 10.23 |
| UPPER LIMIT | | 27000 | 4.74 | 819094 | 7.22 | 453758 | 10.73 |
| LOWER LIMIT | | 6750 | 3.74 | 204774 | 6.22 | 113440 | 9.73 |
| LAB SAMPLE ID | CLIENT SAMPLE ID | | | | | | |
| LCS 460-722597/4 | | 12814 | 4.24 | 412206 | 6.72 | 224246 | 10.23 |
| LCSD 460-722597/5 | | 11441 | 4.24 | 407770 | 6.72 | 218624 | 10.23 |
| MB 460-722597/10 | | 14125 | 4.25 | 360979 | 6.72 | 201418 | 10.23 |
| 460-217547-8 | TB | 15259 | 4.24 | 413624 | 6.72 | 221706 | 10.23 |
| 460-217547-7 | FB | 12188 | 4.25 | 392651 | 6.72 | 206548 | 10.23 |
| 460-217547-2 | MW-204 | 12461 | 4.25 | 351522 | 6.72 | 192202 | 10.23 |
| 460-217547-3 | MW-205 | 13109 | 4.24 | 386942 | 6.72 | 210862 | 10.23 |

DXE = 1,4-Dioxane-d8
CBNZd5 = Chlorobenzene-d5
DCBd4 = 1,4-Dichlorobenzene-d4

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

# Column used to flag values outside QC limits

FORM VIII 8260C

FORM VIII
GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: Eurofins TestAmerica, Edison  Job No.: 460-217547-1

SDG No.:

Sample No.: CCVIS 460-722709/3  Date Analyzed: 09/09/2020 08:33

Instrument ID: CVOAMS13  GC Column: Rtx-624  ID: 0.25(mm)

Lab File ID (Standard): P79506.D  Heated Purge: (Y/N) N

Calibration ID: 81791

| | | TBAd9 | | BUT | | FB | |
|---|---|---|---|---|---|---|---|
| | | AREA # | RT # | AREA # | RT # | AREA # | RT # |
| 12/24 HOUR STD | | 100786 | 1.85 | 114143 | 2.83 | 567265 | 3.39 |
| UPPER LIMIT | | 201572 | 2.35 | 228286 | 3.33 | 1134530 | 3.89 |
| LOWER LIMIT | | 50393 | 1.35 | 57072 | 2.33 | 283633 | 2.89 |
| LAB SAMPLE ID | CLIENT SAMPLE ID | | | | | | |
| LCS 460-722709/4 | | 113614 | 1.85 | 145323 | 2.83 | 553525 | 3.39 |
| LCSD 460-722709/5 | | 115607 | 1.85 | 143241 | 2.83 | 556895 | 3.39 |
| MB 460-722709/8 | | 114331 | 1.85 | 126850 | 2.83 | 537540 | 3.39 |
| 460-217547-5 | MW-213 | 101548 | 1.85 | 115323 | 2.83 | 534191 | 3.39 |

TBAd9 = TBA-d9 (IS)
BUT = 2-Butanone-d5
FB = Fluorobenzene

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

# Column used to flag values outside QC limits

FORM VIII 8260C

FORM VIII
GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: Eurofins TestAmerica, Edison  Job No.: 460-217547-1

SDG No.:

Sample No.: CCVIS 460-722709/3  Date Analyzed: 09/09/2020 08:33

Instrument ID: CVOAMS13  GC Column: Rtx-624  ID: 0.25(mm)

Lab File ID (Standard): P79506.D  Heated Purge: (Y/N) N

Calibration ID: 81791

| | | DXE | | CBNZd5 | | DCBd4 | |
|---|---|---|---|---|---|---|---|
| | | AREA # | RT # | AREA # | RT # | AREA # | RT # |
| 12/24 HOUR STD | | 14807 | 4.24 | 406183 | 6.72 | 224702 | 10.23 |
| UPPER LIMIT | | 29614 | 4.74 | 812366 | 7.22 | 449404 | 10.73 |
| LOWER LIMIT | | 7404 | 3.74 | 203092 | 6.22 | 112351 | 9.73 |
| LAB SAMPLE ID | CLIENT SAMPLE ID | | | | | | |
| LCS 460-722709/4 | | 16021 | 4.24 | 407654 | 6.72 | 229833 | 10.23 |
| LCSD 460-722709/5 | | 14367 | 4.24 | 402348 | 6.72 | 231809 | 10.23 |
| MB 460-722709/8 | | 14451 | 4.24 | 389344 | 6.72 | 216799 | 10.23 |
| 460-217547-5 | MW-213 | 13474 | 4.24 | 385835 | 6.72 | 212790 | 10.23 |

DXE = 1,4-Dioxane-d8
CBNZd5 = Chlorobenzene-d5
DCBd4 = 1,4-Dichlorobenzene-d4

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

# Column used to flag values outside QC limits

FORM VIII 8260C

FORM VIII
GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: Eurofins TestAmerica, Edison  Job No.: 460-217547-1

SDG No.:

Sample No.: CCVIS 460-722834/4  Date Analyzed: 09/09/2020 19:04

Instrument ID: CVOAMS13  GC Column: Rtx-624  ID: 0.25(mm)

Lab File ID (Standard): P79533.D  Heated Purge: (Y/N) N

Calibration ID: 81791

| | | TBAd9 | | BUT | | FB | |
|---|---|---|---|---|---|---|---|
| | | AREA # | RT # | AREA # | RT # | AREA # | RT # |
| 12/24 HOUR STD | | 87155 | 1.85 | 100164 | 2.83 | 506797 | 3.39 |
| UPPER LIMIT | | 174310 | 2.35 | 200328 | 3.33 | 1013594 | 3.89 |
| LOWER LIMIT | | 43578 | 1.35 | 50082 | 2.33 | 253399 | 2.89 |
| LAB SAMPLE ID | CLIENT SAMPLE ID | | | | | | |
| LCS 460-722834/5 | | 96105 | 1.85 | 114017 | 2.83 | 540454 | 3.39 |
| MB 460-722834/9 | | 83555 | 1.85 | 96067 | 2.83 | 488796 | 3.39 |
| 460-217547-6 | DUP | 114140 | 1.85 | 115660 | 2.83 | 499346 | 3.39 |
| 460-217547-1 | MW-203 | 104510 | 1.85 | 91098 | 2.83 | 508927 | 3.39 |
| 460-217547-4 | MW-206 | 104940 | 1.85 | 93383 | 2.83 | 504275 | 3.39 |
| 460-217576-A-4 MS | | 96087 | 1.85 | 94971 | 2.83 | 467866 | 3.39 |
| 460-217576-A-4 MSD | | 107546 | 1.85 | 106756 | 2.83 | 503910 | 3.39 |

TBAd9 = TBA-d9 (IS)
BUT = 2-Butanone-d5
FB = Fluorobenzene

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

# Column used to flag values outside QC limits

FORM VIII 8260C

FORM VIII
GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: Eurofins TestAmerica, Edison  Job No.: 460-217547-1

SDG No.:

Sample No.: CCVIS 460-722834/4  Date Analyzed: 09/09/2020 19:04

Instrument ID: CVOAMS13  GC Column: Rtx-624  ID: 0.25(mm)

Lab File ID (Standard): P79533.D  Heated Purge: (Y/N) N

Calibration ID: 81791

| | | DXE | | CBNZd5 | | DCBd4 | |
|---|---|---|---|---|---|---|---|
| | | AREA # | RT # | AREA # | RT # | AREA # | RT # |
| 12/24 HOUR STD | | 12024 | 4.24 | 373898 | 6.72 | 207926 | 10.23 |
| UPPER LIMIT | | 24048 | 4.74 | 747796 | 7.22 | 415852 | 10.73 |
| LOWER LIMIT | | 6012 | 3.74 | 186949 | 6.22 | 103963 | 9.73 |
| LAB SAMPLE ID | CLIENT SAMPLE ID | | | | | | |
| LCS 460-722834/5 | | 14129 | 4.24 | 393935 | 6.72 | 221549 | 10.23 |
| MB 460-722834/9 | | 11233 | 4.25 | 353801 | 6.72 | 197833 | 10.23 |
| 460-217547-6 | DUP | 15872 | 4.25 | 372705 | 6.72 | 206109 | 10.23 |
| 460-217547-1 | MW-203 | 13656 | 4.24 | 373703 | 6.72 | 207010 | 10.23 |
| 460-217547-4 | MW-206 | 14371 | 4.25 | 370822 | 6.72 | 206121 | 10.23 |
| 460-217576-A-4 MS | | 14294 | 4.24 | 351265 | 6.72 | 199106 | 10.23 |
| 460-217576-A-4 MSD | | 15564 | 4.24 | 377909 | 6.72 | 216814 | 10.23 |

DXE = 1,4-Dioxane-d8
CBNZd5 = Chlorobenzene-d5
DCBd4 = 1,4-Dichlorobenzene-d4

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

# Column used to flag values outside QC limits

FORM VIII 8260C

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Edison  Job No.: 460-217547-1

SDG No.:

Client Sample ID: MW-203  Lab Sample ID: 460-217547-1

Matrix: Water  Lab File ID: P79547.D

Analysis Method: 8260C  Date Collected: 09/02/2020 13:00

Sample wt/vol: 5(mL)  Date Analyzed: 09/10/2020 00:42

Soil Aliquot Vol:  Dilution Factor: 1

Soil Extract Vol.:  GC Column: Rtx-624  ID: 0.25(mm)

% Moisture:  Level: (low/med) Low

Analysis Batch No.: 722834  Units: ug/L

| CAS NO. | COMPOUND NAME | RESULT | Q | RL | MDL |
|---|---|---|---|---|---|
| 71-55-6 | 1,1,1-Trichloroethane | 0.24 | U | 1.0 | 0.24 |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 0.37 | U | 1.0 | 0.37 |
| 76-13-1 | 1,1,2-Trichloro-1,2,2-trifluoroethane | 0.31 | U | 1.0 | 0.31 |
| 79-00-5 | 1,1,2-Trichloroethane | 0.43 | U | 1.0 | 0.43 |
| 75-34-3 | 1,1-Dichloroethane | 0.26 | U | 1.0 | 0.26 |
| 75-35-4 | 1,1-Dichloroethene | 0.26 | U | 1.0 | 0.26 |
| 87-61-6 | 1,2,3-Trichlorobenzene | 0.36 | U | 1.0 | 0.36 |
| 120-82-1 | 1,2,4-Trichlorobenzene | 0.37 | U | 1.0 | 0.37 |
| 78-87-5 | 1,2-Dichloropropane | 0.35 | U | 1.0 | 0.35 |
| 541-73-1 | 1,3-Dichlorobenzene | 0.34 | U | 1.0 | 0.34 |
| 106-46-7 | 1,4-Dichlorobenzene | 0.33 | U | 1.0 | 0.33 |
| 123-91-1 | 1,4-Dioxane | 28 | U | 50 | 28 |
| 78-93-3 | 2-Butanone (MEK) | 2.2 | J | 5.0 | 1.9 |
| 591-78-6 | 2-Hexanone | 1.1 | U | 5.0 | 1.1 |
| 108-10-1 | 4-Methyl-2-pentanone (MIBK) | 1.3 | U | 5.0 | 1.3 |
| 67-64-1 | Acetone | 5.3 |  | 5.0 | 4.4 |
| 71-43-2 | Benzene | 0.20 | U | 1.0 | 0.20 |
| 75-25-2 | Bromoform | 0.54 | U | 1.0 | 0.54 |
| 74-83-9 | Bromomethane | 0.55 | U | 1.0 | 0.55 |
| 75-15-0 | Carbon disulfide | 0.82 | U | 1.0 | 0.82 |
| 56-23-5 | Carbon tetrachloride | 0.21 | U | 1.0 | 0.21 |
| 108-90-7 | Chlorobenzene | 0.38 | U | 1.0 | 0.38 |
| 74-97-5 | Chlorobromomethane | 0.41 | U | 1.0 | 0.41 |
| 124-48-1 | Chlorodibromomethane | 0.28 | U | 1.0 | 0.28 |
| 75-00-3 | Chloroethane | 0.32 | U | 1.0 | 0.32 |
| 67-66-3 | Chloroform | 0.33 | U | 1.0 | 0.33 |
| 74-87-3 | Chloromethane | 0.40 | U | 1.0 | 0.40 |
| 156-59-2 | cis-1,2-Dichloroethene | 0.22 | U | 1.0 | 0.22 |
| 10061-01-5 | cis-1,3-Dichloropropene | 0.22 | U | 1.0 | 0.22 |
| 110-82-7 | Cyclohexane | 0.57 | J | 1.0 | 0.32 |
| 75-27-4 | Dichlorobromomethane | 0.34 | U | 1.0 | 0.34 |
| 75-71-8 | Dichlorodifluoromethane | 0.31 | U | 1.0 | 0.31 |
| 100-41-4 | Ethylbenzene | 0.55 | J | 1.0 | 0.30 |
| 106-93-4 | Ethylene Dibromide | 0.50 | U | 1.0 | 0.50 |
| 98-82-8 | Isopropylbenzene | 0.68 | J | 1.0 | 0.34 |

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Edison  Job No.: 460-217547-1

SDG No.:

Client Sample ID: MW-203  Lab Sample ID: 460-217547-1

Matrix: Water  Lab File ID: P79547.D

Analysis Method: 8260C  Date Collected: 09/02/2020 13:00

Sample wt/vol: 5(mL)  Date Analyzed: 09/10/2020 00:42

Soil Aliquot Vol:  Dilution Factor: 1

Soil Extract Vol.:  GC Column: Rtx-624  ID: 0.25(mm)

% Moisture:  Level: (low/med) Low

Analysis Batch No.: 722834  Units: ug/L

| CAS NO. | COMPOUND NAME | RESULT | Q | RL | MDL |
|---|---|---|---|---|---|
| 79-20-9 | Methyl acetate | 0.79 | U | 5.0 | 0.79 |
| 1634-04-4 | Methyl tert-butyl ether | 0.47 | U | 1.0 | 0.47 |
| 108-87-2 | Methylcyclohexane | 0.48 | J | 1.0 | 0.26 |
| 75-09-2 | Methylene Chloride | 0.32 | U | 1.0 | 0.32 |
| 179601-23-1 | m-Xylene & p-Xylene | 0.30 | U | 1.0 | 0.30 |
| 95-47-6 | o-Xylene | 0.36 | U | 1.0 | 0.36 |
| 100-42-5 | Styrene | 0.42 | U | 1.0 | 0.42 |
| 127-18-4 | Tetrachloroethene | 0.25 | U | 1.0 | 0.25 |
| 108-88-3 | Toluene | 0.38 | U | 1.0 | 0.38 |
| 156-60-5 | trans-1,2-Dichloroethene | 0.24 | U | 1.0 | 0.24 |
| 10061-02-6 | trans-1,3-Dichloropropene | 0.49 | U | 1.0 | 0.49 |
| 79-01-6 | Trichloroethene | 0.31 | U | 1.0 | 0.31 |
| 75-69-4 | Trichlorofluoromethane | 0.32 | U | 1.0 | 0.32 |
| 75-01-4 | Vinyl chloride | 0.17 | U | 1.0 | 0.17 |
| 107-06-2 | 1,2-Dichloroethane | 0.43 | U | 1.0 | 0.43 |
| 95-50-1 | 1,2-Dichlorobenzene | 0.43 | U | 1.0 | 0.43 |
| 96-12-8 | 1,2-Dibromo-3-Chloropropane | 0.38 | U | 1.0 | 0.38 |

| CAS NO. | SURROGATE | %REC | Q | LIMITS |
|---|---|---|---|---|
| 17060-07-0 | 1,2-Dichloroethane-d4 (Surr) | 91 | | 75-123 |
| 460-00-4 | 4-Bromofluorobenzene | 104 | | 76-120 |
| 1868-53-7 | Dibromofluoromethane (Surr) | 99 | | 77-124 |
| 2037-26-5 | Toluene-d8 (Surr) | 96 | | 80-120 |

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: Eurofins TestAmerica, Edison  Job No.: 460-217547-1

SDG No.:

Client Sample ID: MW-203  Lab Sample ID: 460-217547-1

Matrix: Water  Lab File ID: P79547.D

Analysis Method: 8260C  Date Collected: 09/02/2020 13:00

Sample wt/vol: 5(mL)  Date Analyzed: 09/10/2020 00:42

Soil Aliquot Vol:  Dilution Factor: 1

Soil Extract Vol.:  GC Column: Rtx-624  ID: 0.25(mm)

% Moisture:  Level: (low/med) Low

Analysis Batch No.: 722834  Units: ug/L

Number TICs Found: 0  TIC Result Total: 0

| CAS NO. | COMPOUND NAME | RT | RESULT | Q | MATCH QUALITY |
|---|---|---|---|---|---|
| | Tentatively Identified Compound | | None | | |

Eurofins TestAmerica, Edison
Target Compound Quantitation Report

Data File: \\chromfs\Edison\ChromData\CVOAMS13\20200909-116494.b\P79547.D
Lims ID: 460-217547-A-1
Client ID: MW-203
Sample Type: Client
Inject. Date: 10-Sep-2020 00:42:30 ALS Bottle#: 17 Worklist Smp#: 18
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: 460-217547-A-1
Misc. Info.: 460-0116494-018
Operator ID: Instrument ID: CVOAMS13

Method: \\chromfs\Edison\ChromData\CVOAMS13\20200909-116494.b\8260W_13.m
Limit Group: VOA - 8260C Water and Solid
Last Update: 10-Sep-2020 14:25:29 Calib Date: 04-Sep-2020 16:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Edison\ChromData\CVOAMS13\20200904-116303.b\P79359.D

Column 1 : Rtx-624 ( 0.25 mm) Det: MS SCAN
Process Host: CTX1019

First Level Reviewer: yallabg Date: 10-Sep-2020 00:20:08

| Compound | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q | Response | OnCol Amt ug/l | Flags |
|---|---|---|---|---|---|---|---|---|
| 28 Acetone | 43 | 1.709 | 1.709 | 0.000 | 83 | 1578 | 5.27 | |
| * 33 TBA-d9 (IS) | 65 | 1.845 | 1.845 | 0.000 | 100 | 104510 | 1000.0 | |
| 44 Cyclohexane | 56 | 2.583 | 2.583 | 0.000 | 89 | 2762 | 0.5673 | |
| $ 51 Dibromofluoromethane (Surr) | 113 | 2.776 | 2.769 | 0.007 | 98 | 107963 | 49.3 | |
| * 53 2-Butanone-d5 | 46 | 2.834 | 2.827 | 0.007 | 99 | 91098 | 250.0 | |
| 54 2-Butanone (MEK) | 72 | 2.862 | 2.863 | 0.000 | 55 | 295 | 2.22 | a |
| $ 61 1,2-Dichloroethane-d4 (Surr) | 65 | 3.156 | 3.156 | 0.000 | 0 | 100544 | 45.7 | |
| * 66 Fluorobenzene | 96 | 3.385 | 3.385 | 0.000 | 99 | 508927 | 50.0 | |
| 68 Methylcyclohexane | 83 | 3.507 | 3.507 | 0.000 | 91 | 2154 | 0.4796 | |
| * 76 1,4-Dioxane-d8 | 96 | 4.238 | 4.238 | 0.000 | 63 | 13656 | 1000.0 | |
| $ 82 Toluene-d8 (Surr) | 98 | 4.882 | 4.882 | 0.000 | 99 | 461555 | 47.9 | |
| * 96 Chlorobenzene-d5 | 117 | 6.723 | 6.723 | 0.000 | 84 | 373703 | 50.0 | |
| 98 Ethylbenzene | 106 | 6.852 | 6.831 | 0.021 | 96 | 2303 | 0.5534 | |
| 105 Isopropylbenzene | 105 | 8.127 | 8.113 | 0.014 | 96 | 8719 | 0.6808 | |
| $ 107 4-Bromofluorobenzene | 174 | 8.485 | 8.478 | 0.007 | 97 | 157448 | 52.0 | |
| * 123 1,4-Dichlorobenzene-d4 | 152 | 10.233 | 10.226 | 0.007 | 93 | 207010 | 50.0 | |

## QC Flag Legend

Review Flags
a - User Assigned ID

## Reagents:

| | | | | |
|---|---|---|---|---|
| 8260ISNEW_00129 | Amount Added: | 1.00 | Units: uL | Run Reagent |
| 8260SURR250_00212 | Amount Added: | 1.00 | Units: uL | Run Reagent |

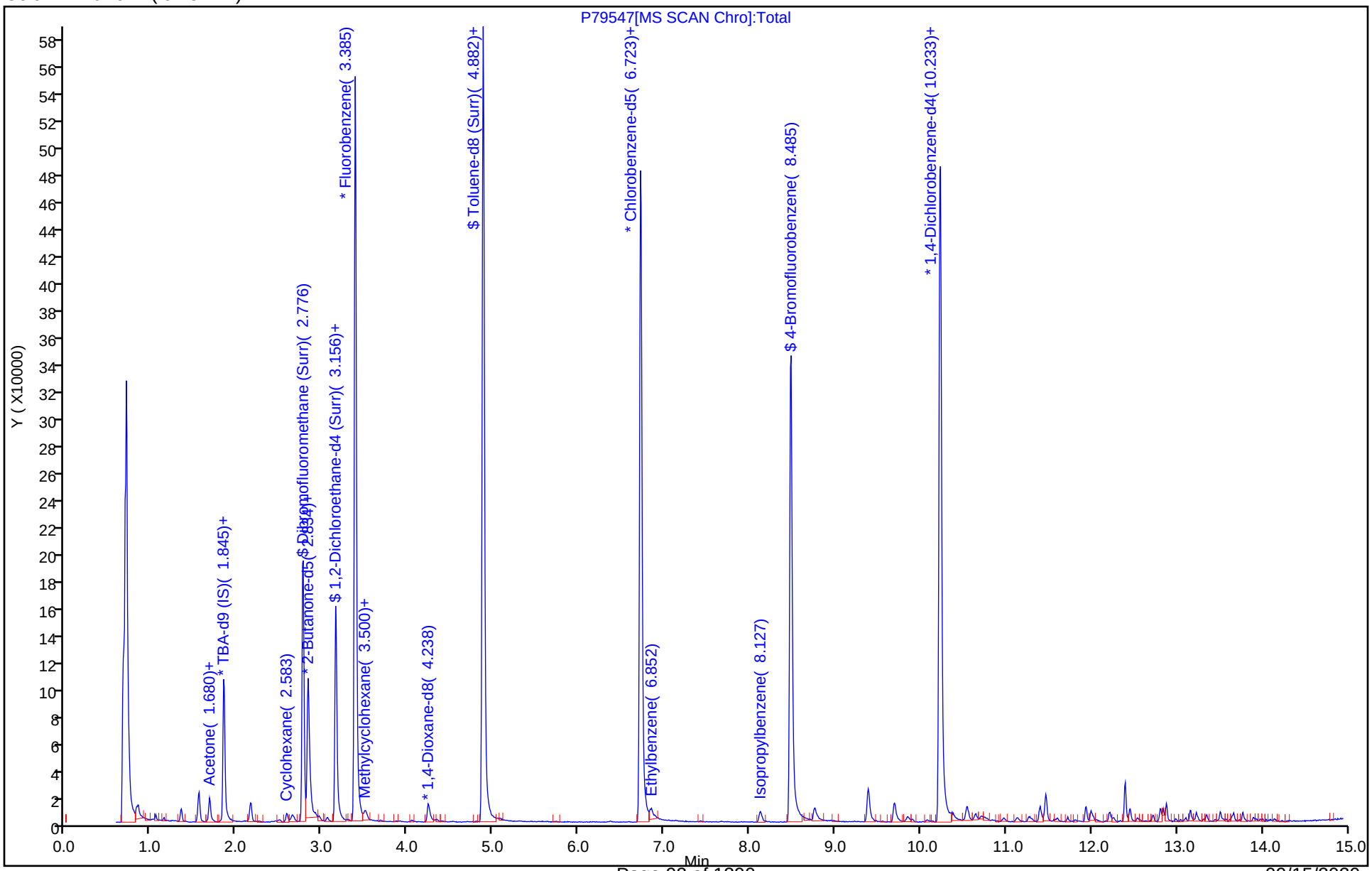
Report Date: 10-Sep-2020 14:26:20 Chrom Revision: 2.3 20-Aug-2020 13:57:12

Eurofins TestAmerica, Edison

Data File: \\chromfs\Edison\ChromData\CVOAMS13\20200909-116494.b\P79547.D

| | | | | | |
|---|---|---|---|---|---|
| Injection Date: | 10-Sep-2020 00:42:30 | Instrument ID: | CVOAMS13 | Operator ID: | |
| Lims ID: | 460-217547-A-1 | Lab Sample ID: | 460-217547-1 | Worklist Smp#: | 18 |
| Client ID: | MW-203 | | | | |
| Purge Vol: | 5.000 mL | Dil. Factor: | 1.0000 | ALS Bottle#: | 17 |
| Method: | 8260W_13 | Limit Group: | VOA - 8260C Water and Solid | | |

Column: Rtx-624 ( 0.25 mm)



Eurofins TestAmerica, Edison

| | | | |
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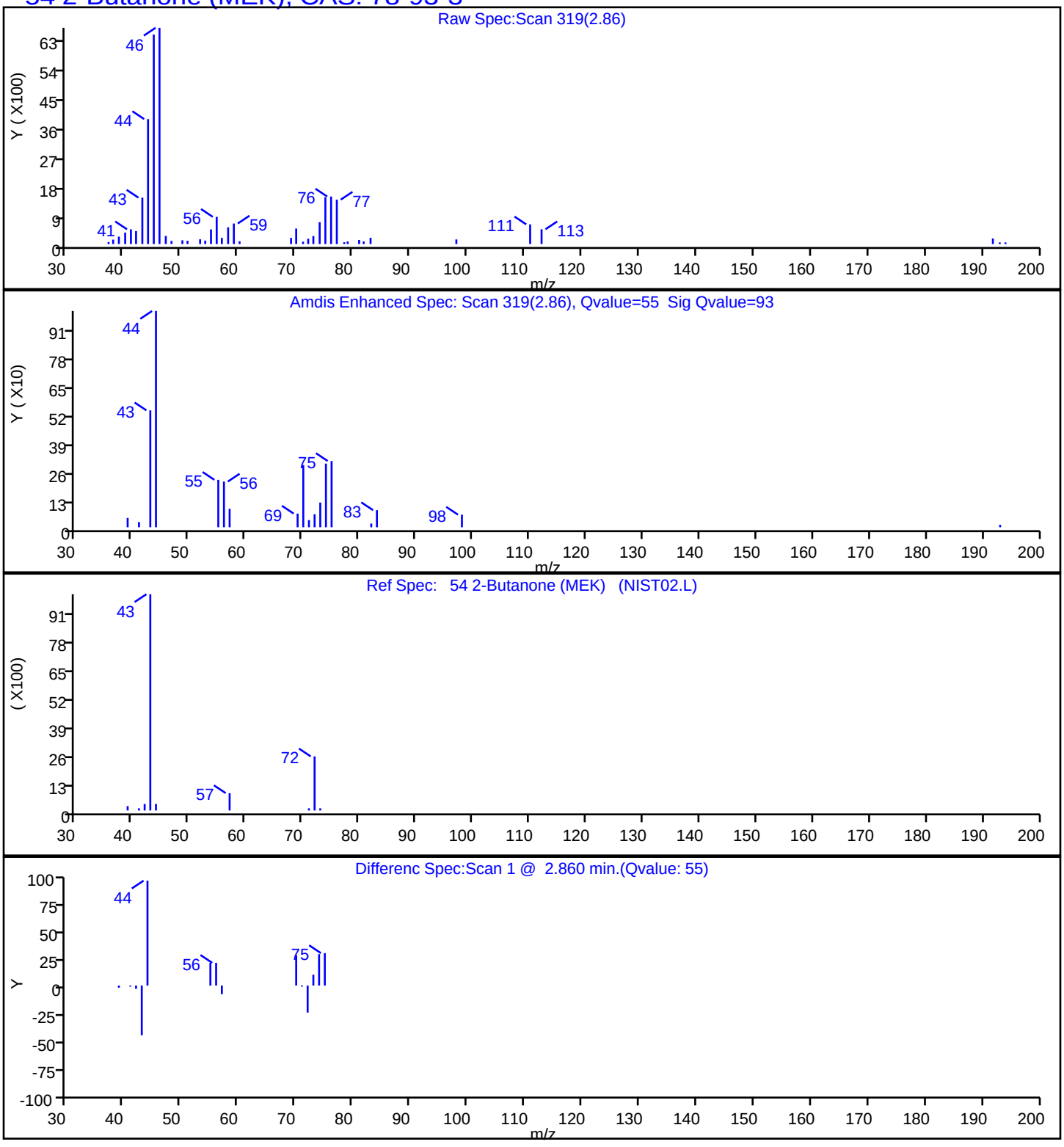
| Data File: | \\chromfs\Edison\ChromData\CVOAMS13\20200909-116494.b\P79547.D | | |
| Injection Date: | 10-Sep-2020 00:42:30 | Instrument ID: | CVOAMS13 |
| Lims ID: | 460-217547-A-1 | Lab Sample ID: | 460-217547-1 |
| Client ID: | MW-203 | | |
| Operator ID: | | ALS Bottle#: | 17 Worklist Smp#: 18 |
| Purge Vol: | 5.000 mL | Dil. Factor: | 1.0000 |
| Method: | 8260W_13 | Limit Group: | VOA - 8260C Water and Solid |
| Column: | Rtx-624 ( 0.25 mm) | Detector | MS SCAN |

## 54 2-Butanone (MEK), CAS: 78-93-3



Eurofins TestAmerica, Edison

| | | | |
|---|---|---|---|
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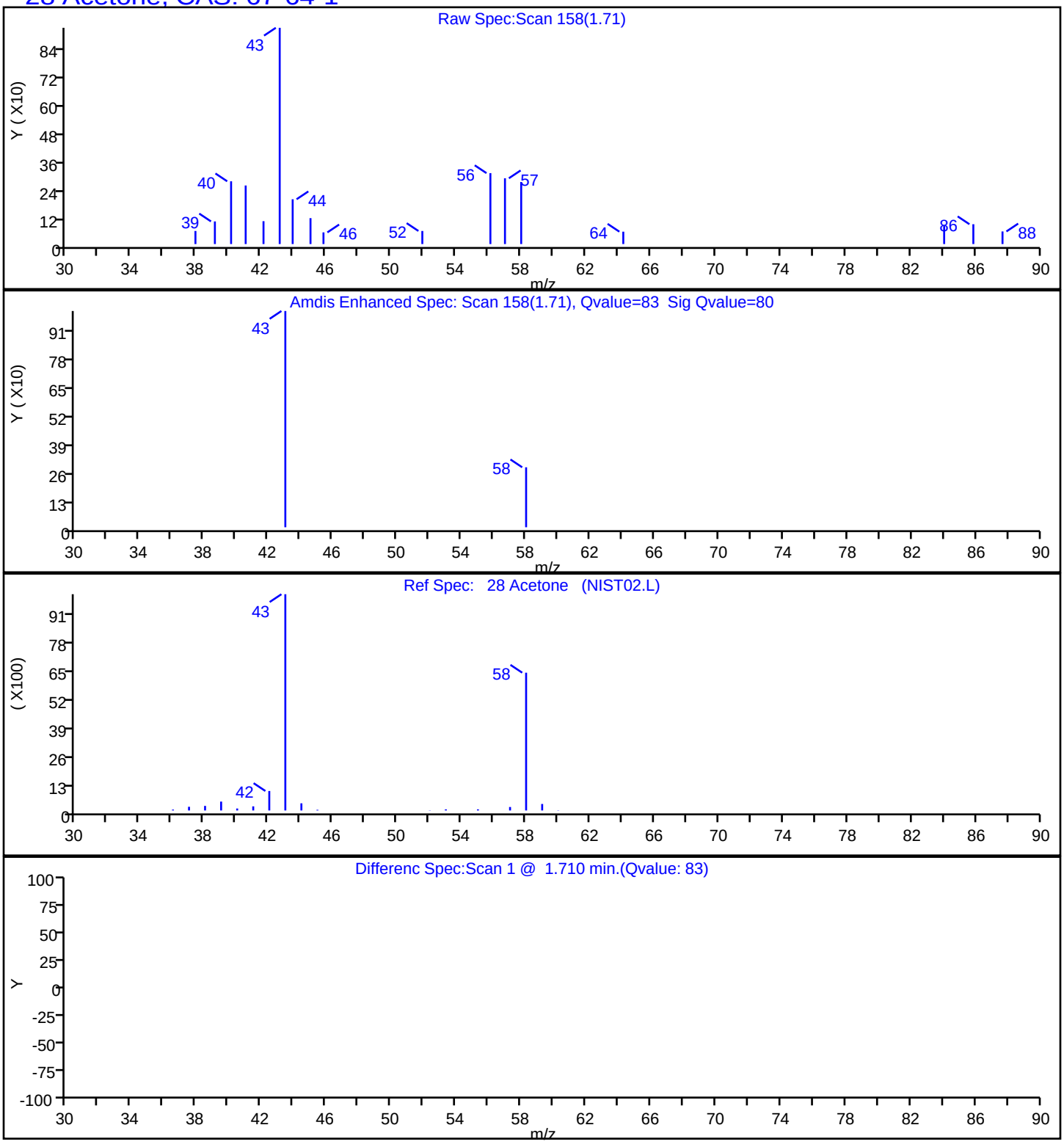
| Injection Date: | 10-Sep-2020 00:42:30 | Instrument ID: | CVOAMS13 |
| Lims ID: | 460-217547-A-1 | Lab Sample ID: | 460-217547-1 |
| Client ID: | MW-203 | | |
| Operator ID: | | ALS Bottle#: | 17 Worklist Smp#: 18 |
| Purge Vol: | 5.000 mL | Dil. Factor: | 1.0000 |
| Method: | 8260W_13 | Limit Group: | VOA - 8260C Water and Solid |
| Column: | Rtx-624 ( 0.25 mm) | Detector | MS SCAN |

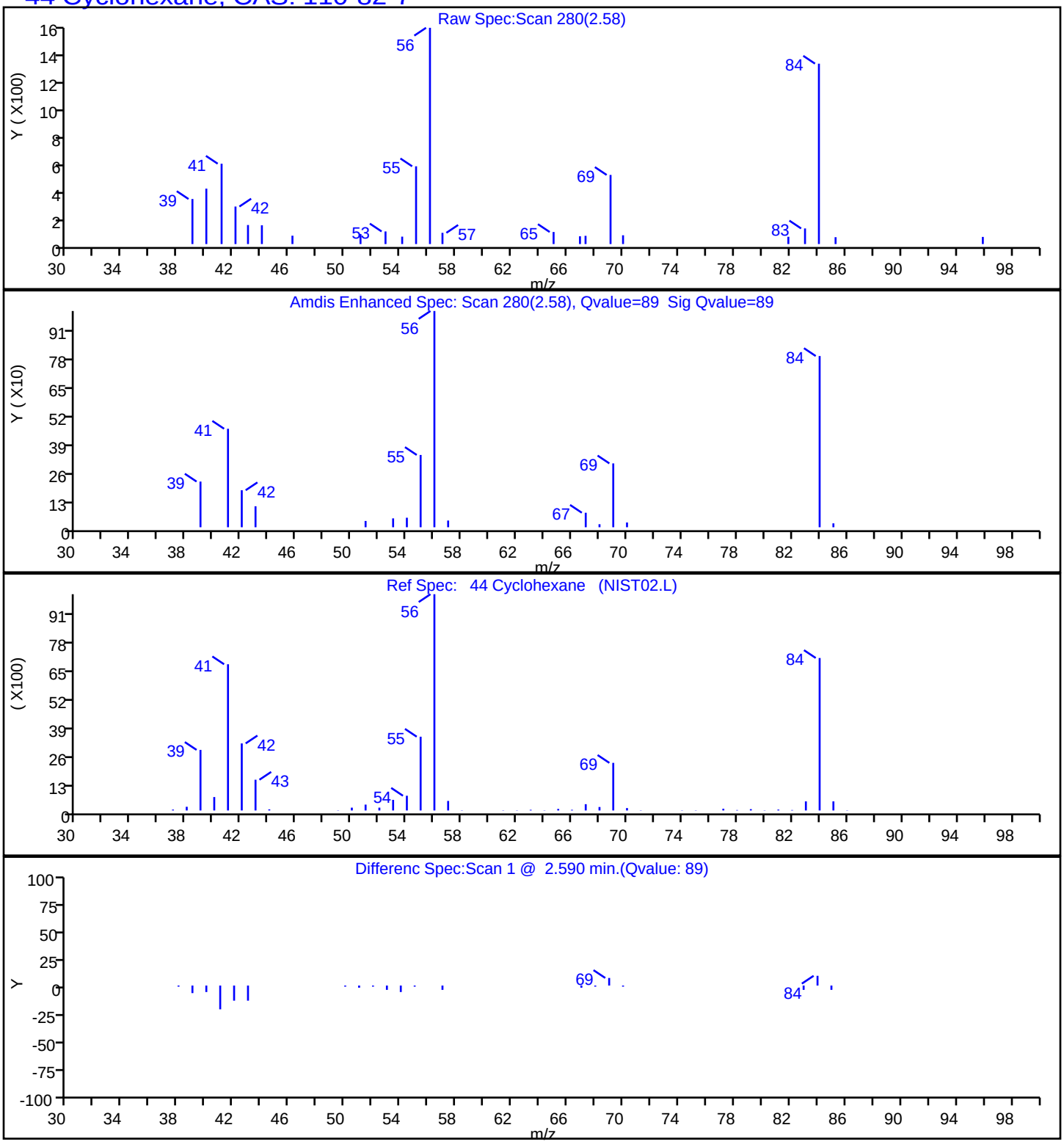
## 28 Acetone, CAS: 67-64-1



Eurofins TestAmerica, Edison

| | | | |
|---|---|---|---|
| Data File: | \\chromfs\Edison\ChromData\CVOAMS13\20200909-116494.b\P79547.D | | |
| Injection Date: | 10-Sep-2020 00:42:30 | Instrument ID: | CVOAMS13 |
| Lims ID: | 460-217547-A-1 | Lab Sample ID: | 460-217547-1 |
| Client ID: | MW-203 | | |
| Operator ID: | | ALS Bottle#: | 17 Worklist Smp#: 18 |
| Purge Vol: | 5.000 mL | Dil. Factor: | 1.0000 |
| Method: | 8260W_13 | Limit Group: | VOA - 8260C Water and Solid |
| Column: | Rtx-624 ( 0.25 mm) | Detector | MS SCAN |

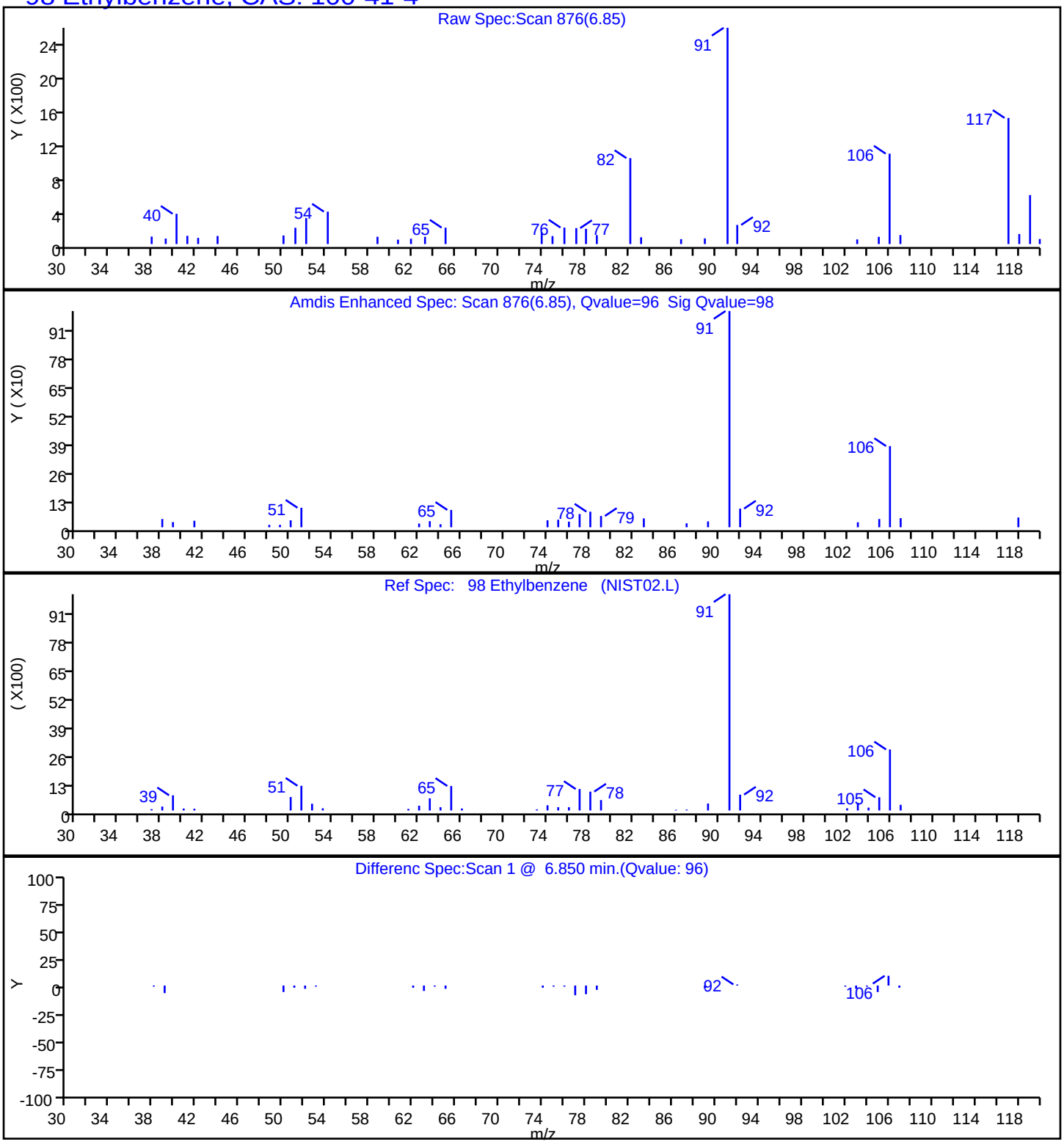
## 44 Cyclohexane, CAS: 110-82-7



Eurofins TestAmerica, Edison

| | | | | | |
|---|---|---|---|---|---|
| Data File: | \\chromfs\Edison\ChromData\CVOAMS13\20200909-116494.b\P79547.D | | | | |
| Injection Date: | 10-Sep-2020 00:42:30 | Instrument ID: | CVOAMS13 | | |
| Lims ID: | 460-217547-A-1 | Lab Sample ID: | 460-217547-1 | | |
| Client ID: | MW-203 | | | | |
| Operator ID: | | ALS Bottle#: | 17 | Worklist Smp#: | 18 |
| Purge Vol: | 5.000 mL | Dil. Factor: | 1.0000 | | |
| Method: | 8260W_13 | Limit Group: | VOA - 8260C Water and Solid | | |
| Column: | Rtx-624 ( 0.25 mm) | Detector | MS SCAN | | |

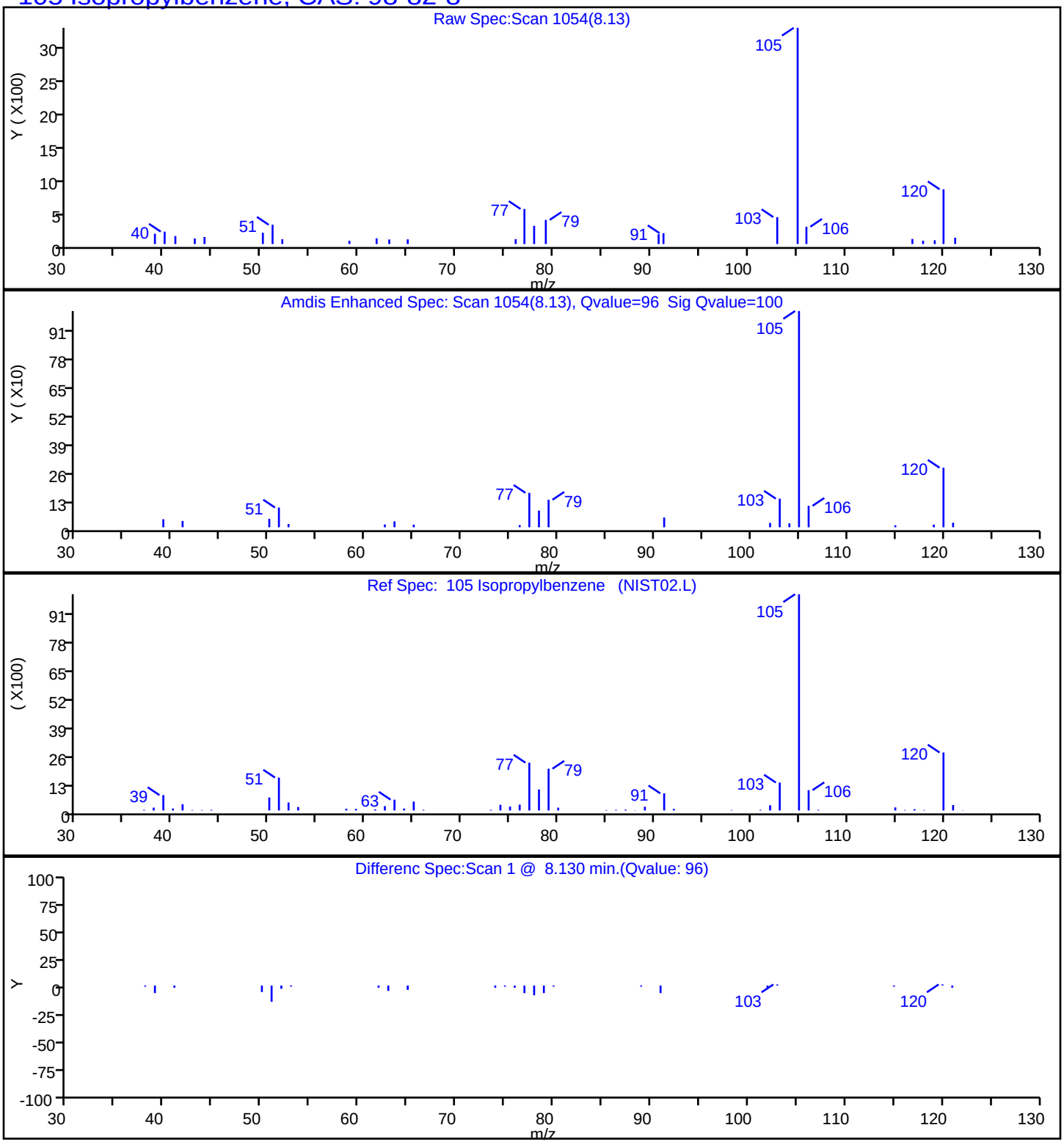
## 98 Ethylbenzene, CAS: 100-41-4



Eurofins TestAmerica, Edison

| | | | |
|---|---|---|---|
| Data File: | \\chromfs\Edison\ChromData\CVOAMS13\20200909-116494.b\P79547.D | | |
| Injection Date: | 10-Sep-2020 00:42:30 | Instrument ID: | CVOAMS13 |
| Lims ID: | 460-217547-A-1 | Lab Sample ID: | 460-217547-1 |
| Client ID: | MW-203 | | |
| Operator ID: | | ALS Bottle#: | 17 Worklist Smp#: 18 |
| Purge Vol: | 5.000 mL | Dil. Factor: | 1.0000 |
| Method: | 8260W_13 | Limit Group: | VOA - 8260C Water and Solid |
| Column: | Rtx-624 ( 0.25 mm) | Detector | MS SCAN |

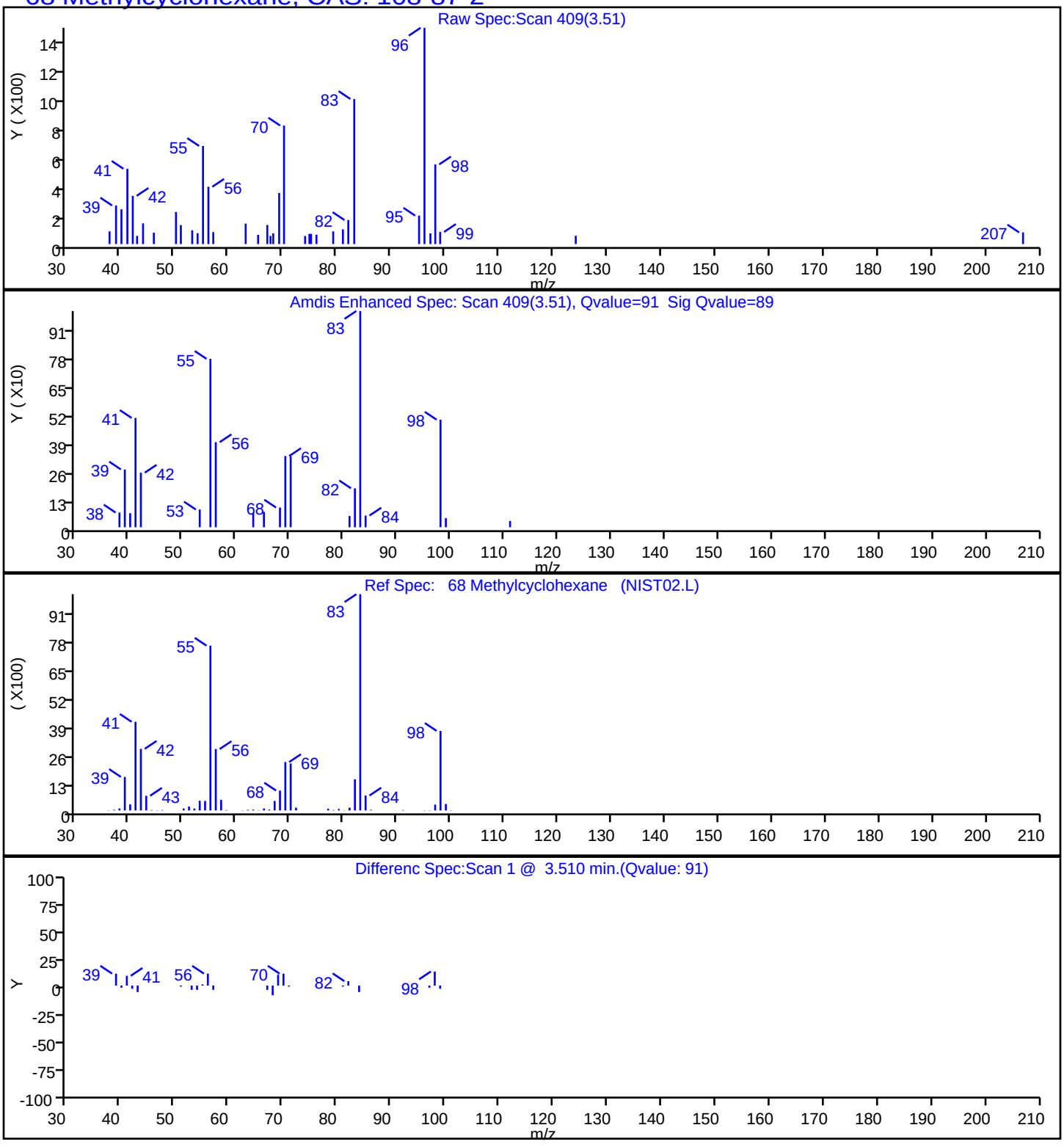
## 105 Isopropylbenzene, CAS: 98-82-8



Eurofins TestAmerica, Edison

| | | | |
|---|---|---|---|
| Data File: | \\chromfs\Edison\ChromData\CVOAMS13\20200909-116494.b\P79547.D | | |
| Injection Date: | 10-Sep-2020 00:42:30 | Instrument ID: | CVOAMS13 |
| Lims ID: | 460-217547-A-1 | Lab Sample ID: | 460-217547-1 |
| Client ID: | MW-203 | | |
| Operator ID: | | ALS Bottle#: | 17 Worklist Smp#: 18 |
| Purge Vol: | 5.000 mL | Dil. Factor: | 1.0000 |
| Method: | 8260W_13 | Limit Group: | VOA - 8260C Water and Solid |
| Column: | Rtx-624 ( 0.25 mm) | Detector | MS SCAN |

## 68 Methylcyclohexane, CAS: 108-87-2



Eurofins TestAmerica, Edison

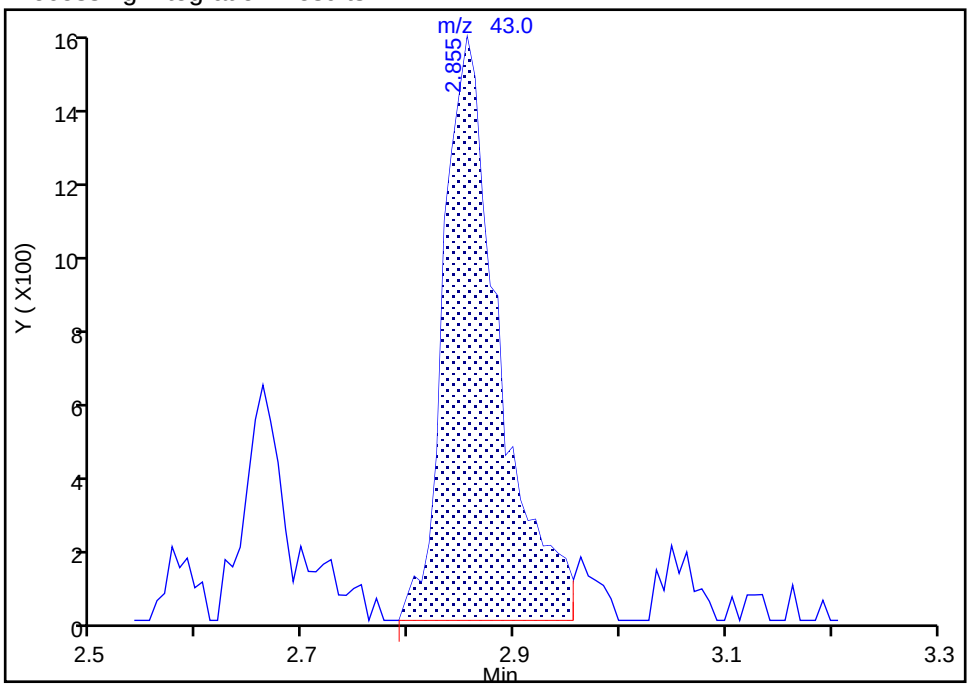
| | | | |
|---|---|---|---|
| Data File: | \\chromfs\Edison\ChromData\CVOAMS13\20200909-116494.b\P79547.D | | |
| Injection Date: | 10-Sep-2020 00:42:30 | Instrument ID: | CVOAMS13 |
| Lims ID: | 460-217547-A-1 | Lab Sample ID: | 460-217547-1 |
| Client ID: | MW-203 | | |
| Operator ID: | | ALS Bottle#: | 17 Worklist Smp#: 18 |
| Purge Vol: | 5.000 mL | Dil. Factor: | 1.0000 |
| Method: | 8260W_13 | Limit Group: | VOA - 8260C Water and Solid |
| Column: | Rtx-624 ( 0.25 mm) | Detector | MS SCAN |

## 54 2-Butanone (MEK), CAS: 78-93-3

Signal: 2

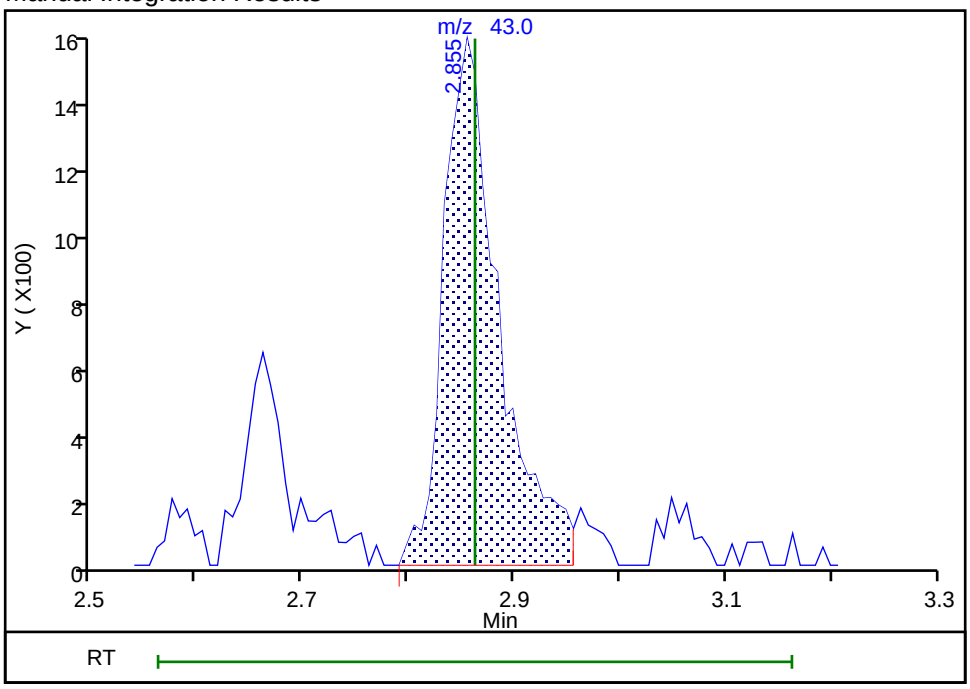
Processing Integration Results

RT: 2.86
Area: 5581
Amount: 2.216192
Amount Units: ug/l




Manual Integration Results

RT: 2.86
Area: 5581
Amount: 2.216192
Amount Units: ug/l




Reviewer: sgroa, 10-Sep-2020 08:06:30
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Edison

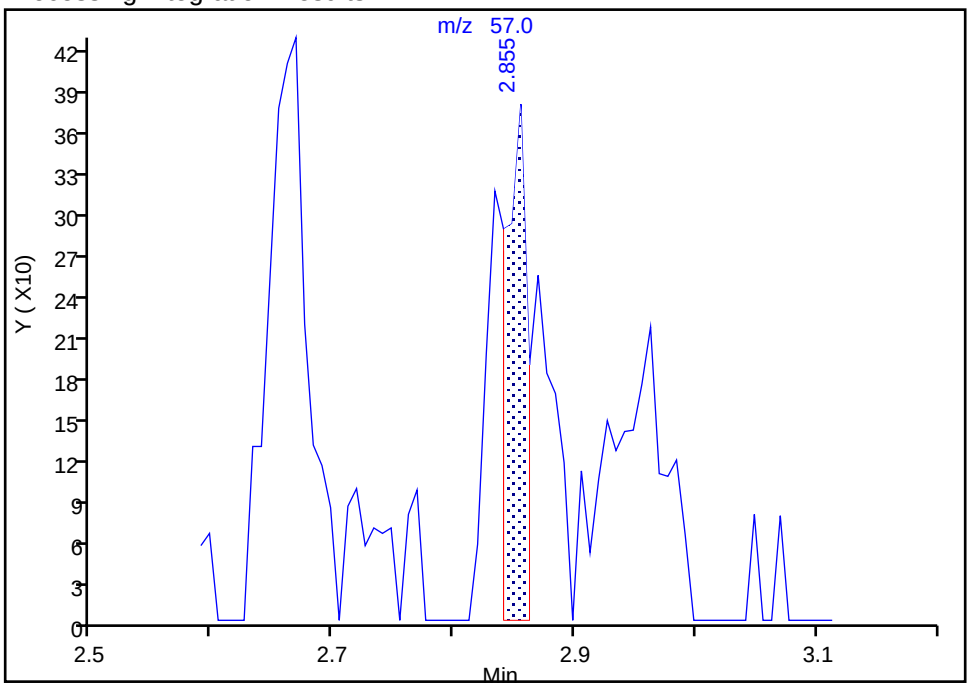
| | | | | | |
|---|---|---|---|---|---|
| Data File: | \\chromfs\Edison\ChromData\CVOAMS13\20200909-116494.b\P79547.D | | | | |
| Injection Date: | 10-Sep-2020 00:42:30 | Instrument ID: | CVOAMS13 | | |
| Lims ID: | 460-217547-A-1 | Lab Sample ID: | 460-217547-1 | | |
| Client ID: | MW-203 | | | | |
| Operator ID: | | ALS Bottle#: | 17 | Worklist Smp#: | 18 |
| Purge Vol: | 5.000 mL | Dil. Factor: | 1.0000 | | |
| Method: | 8260W_13 | Limit Group: | VOA - 8260C Water and Solid | | |
| Column: | Rtx-624 ( 0.25 mm) | Detector | MS SCAN | | |

## 54 2-Butanone (MEK), CAS: 78-93-3

Signal: 3

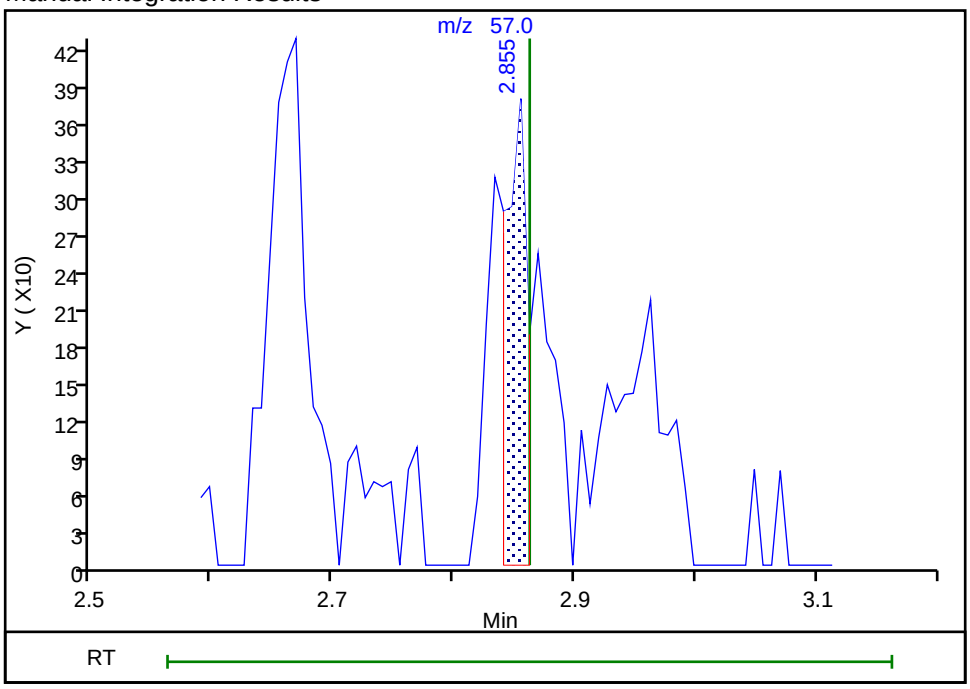
Processing Integration Results

RT: 2.86
Area: 493
Amount: 2.216192
Amount Units: ug/l




Manual Integration Results

RT: 2.86
Area: 493
Amount: 2.216192
Amount Units: ug/l




Reviewer: sgroa, 10-Sep-2020 08:06:30
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Edison

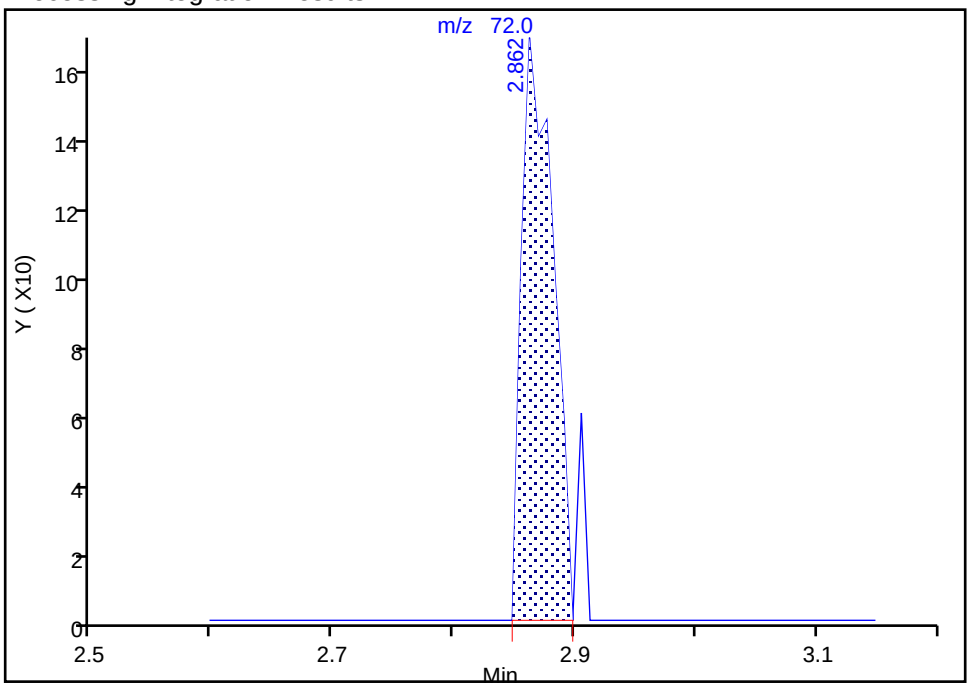
| | | | | | |
|---|---|---|---|---|---|
| Data File: | \\chromfs\Edison\ChromData\CVOAMS13\20200909-116494.b\P79547.D | | | | |
| Injection Date: | 10-Sep-2020 00:42:30 | Instrument ID: | CVOAMS13 | | |
| Lims ID: | 460-217547-A-1 | Lab Sample ID: | 460-217547-1 | | |
| Client ID: | MW-203 | | | | |
| Operator ID: | | ALS Bottle#: | 17 | Worklist Smp#: | 18 |
| Purge Vol: | 5.000 mL | Dil. Factor: | 1.0000 | | |
| Method: | 8260W_13 | Limit Group: | VOA - 8260C Water and Solid | | |
| Column: | Rtx-624 ( 0.25 mm) | Detector | MS SCAN | | |

## 54 2-Butanone (MEK), CAS: 78-93-3

Signal: 1

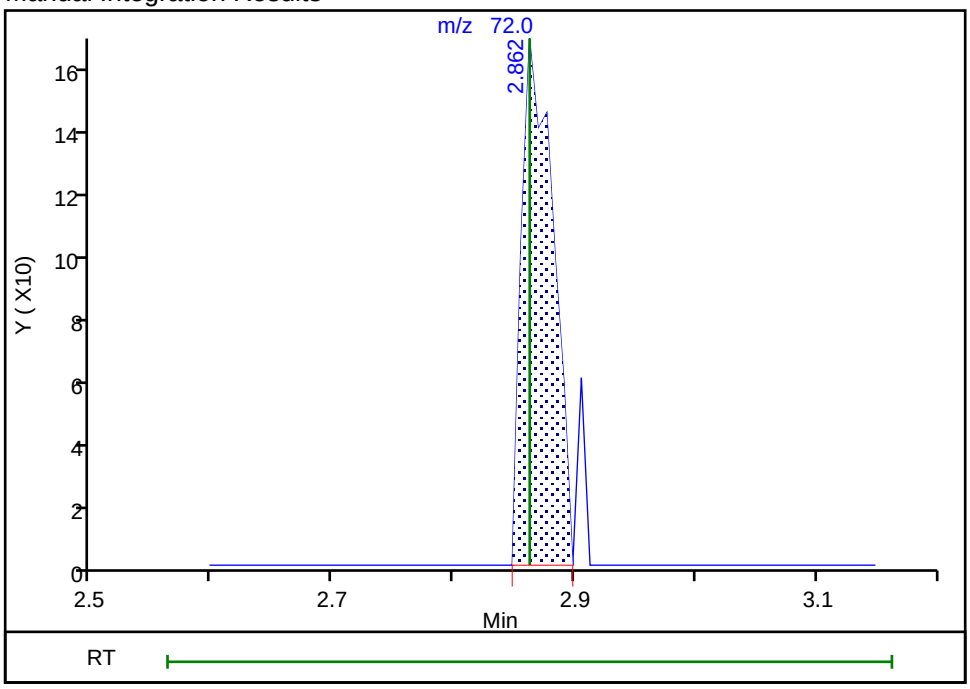
Processing Integration Results

RT: 2.86
Area: 295
Amount: 2.216192
Amount Units: ug/l




Manual Integration Results

RT: 2.86
Area: 295
Amount: 2.216192
Amount Units: ug/l




Reviewer: baronm, 10-Sep-2020 14:15:35
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

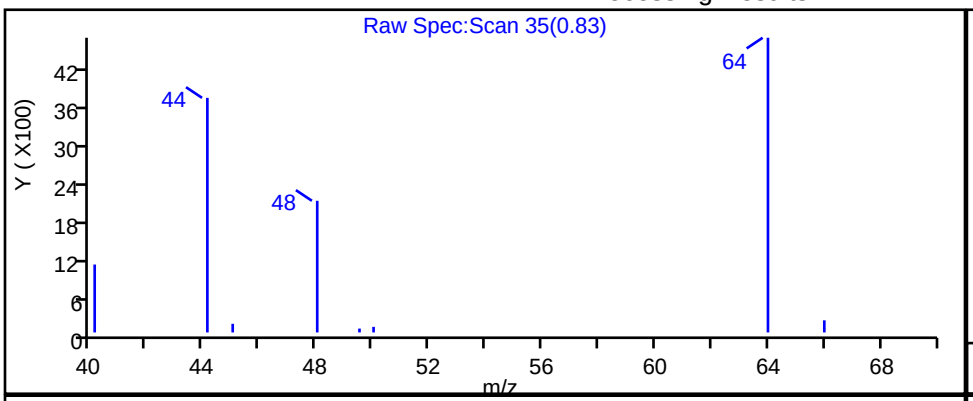
User Disabled Compound Report

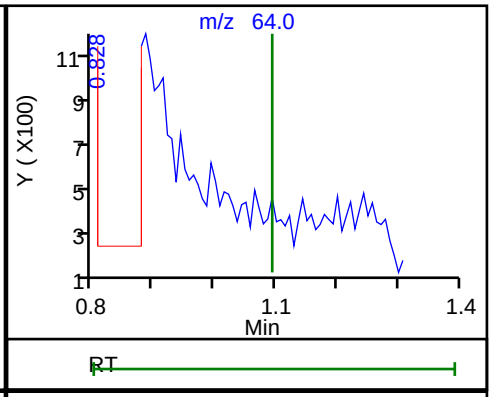
Eurofins TestAmerica, Edison

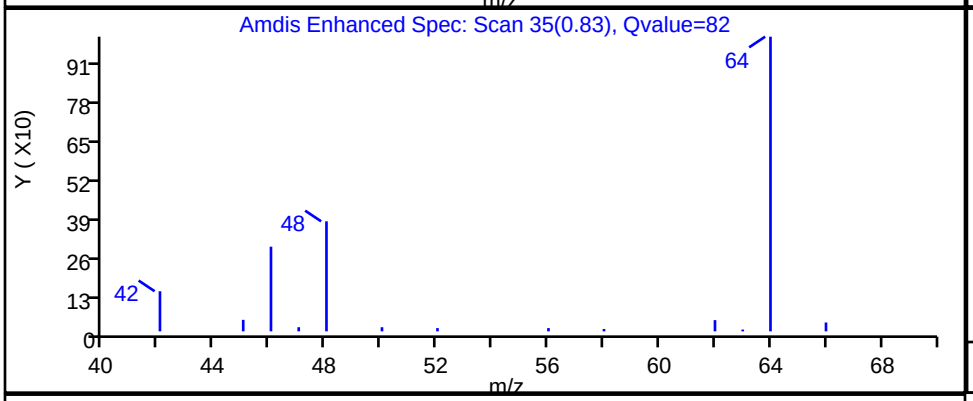
| | | | |
|---|---|---|---|
| Data File: | \\chromfs\Edison\ChromData\CVOAMS13\20200909-116494.b\P79547.D | | |
| Injection Date: | 10-Sep-2020 00:42:30 | Instrument ID: | CVOAMS13 |
| Lims ID: | 460-217547-A-1 | Lab Sample ID: | 460-217547-1 |
| Client ID: | MW-203 | | |
| Operator ID: | | ALS Bottle#: | 17 Worklist Smp#: 18 |
| Purge Vol: | 5.000 mL | Dil. Factor: | 1.0000 |
| Method: | 8260W_13 | Limit Group: | VOA - 8260C Water and Solid |
| Column: | Rtx-624 ( 0.25 mm) | Detector | MS SCAN |

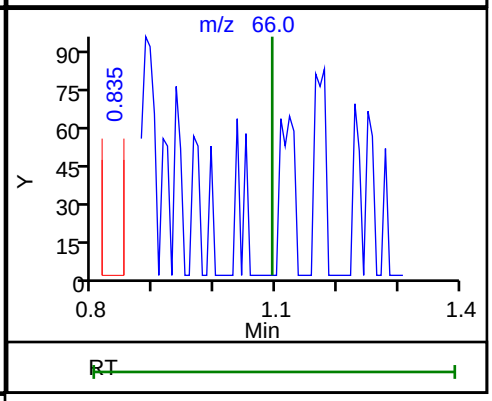
## 10 Chloroethane, CAS: 75-00-3

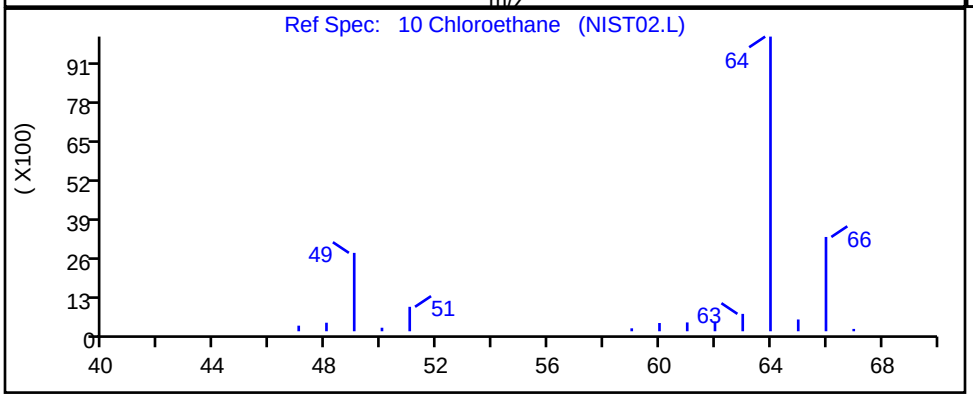
Processing Results




| RT | Mass | Response | Amount |
|---|---|---|---|
| 0.83 | 64.00 | 11690 | 6.269975 |
| 0.84 | 66.00 | 334 | |

Reviewer: sgroa, 10-Sep-2020 08:05:53

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

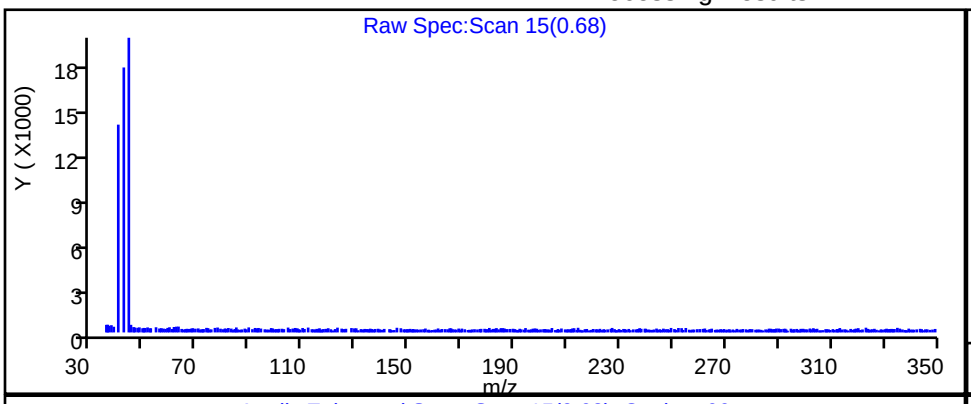
User Disabled Compound Report

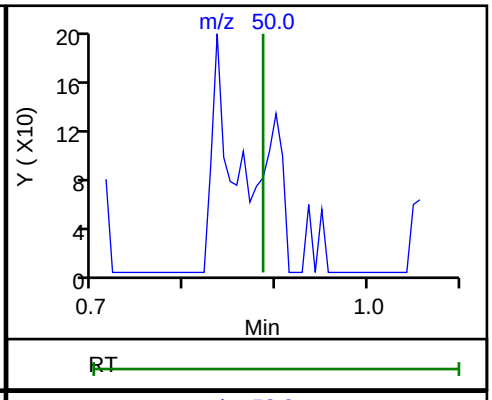
Eurofins TestAmerica, Edison

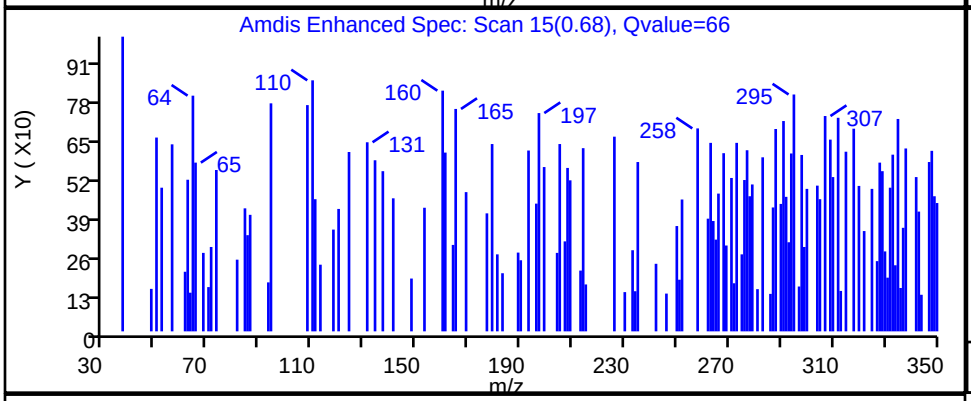
| | | | |
|---|---|---|---|
| Data File: | \\chromfs\Edison\ChromData\CVOAMS13\20200909-116494.b\P79547.D | | |
| Injection Date: | 10-Sep-2020 00:42:30 | Instrument ID: | CVOAMS13 |
| Lims ID: | 460-217547-A-1 | Lab Sample ID: | 460-217547-1 |
| Client ID: | MW-203 | | |
| Operator ID: | | ALS Bottle#: | 17 Worklist Smp#: 18 |
| Purge Vol: | 5.000 mL | Dil. Factor: | 1.0000 |
| Method: | 8260W_13 | Limit Group: | VOA - 8260C Water and Solid |
| Column: | Rtx-624 ( 0.25 mm) | Detector | MS SCAN |

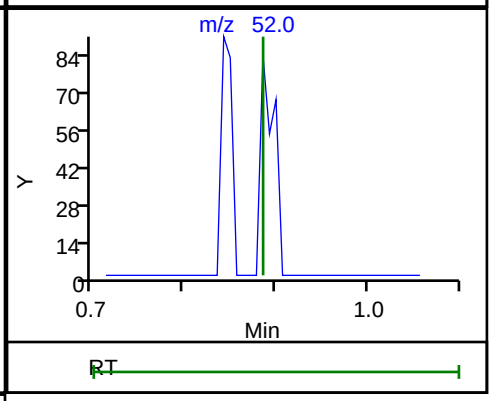
## 6 Chloromethane, CAS: 74-87-3

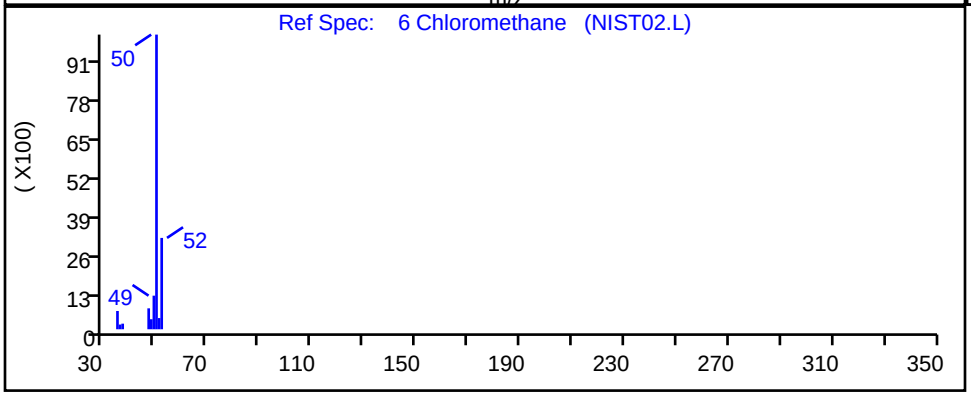
Processing Results




| RT | Mass | Response | Amount |
|---|---|---|---|
| 0.68 | 50.00 | 956 | 0.199598 |
| 0.68 | 52.00 | 566 | |

Reviewer: sgroa, 10-Sep-2020 08:05:49

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

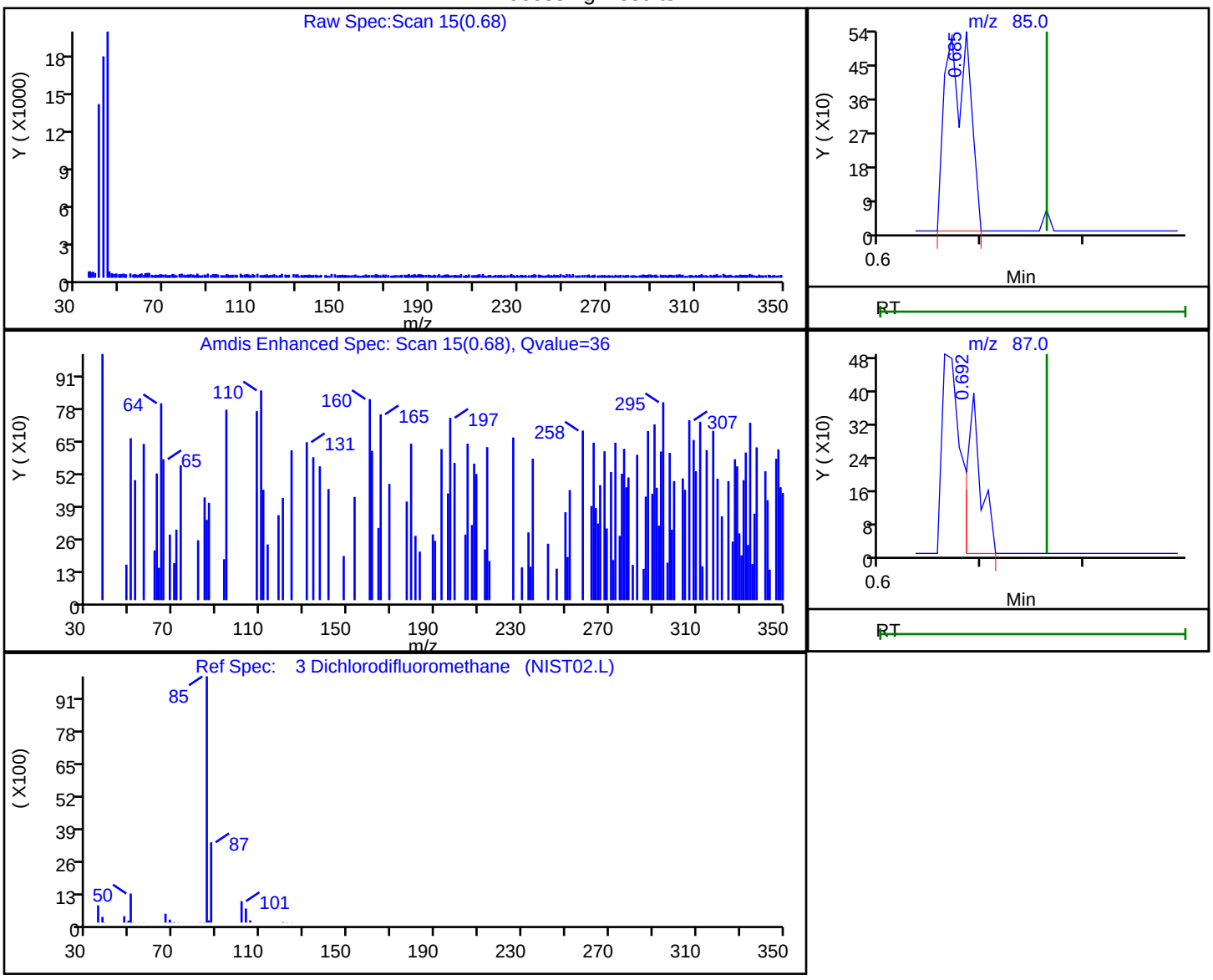
User Disabled Compound Report

Eurofins TestAmerica, Edison

| | | | |
|---|---|---|---|
| Data File: | \\chromfs\Edison\ChromData\CVOAMS13\20200909-116494.b\P79547.D | | |
| Injection Date: | 10-Sep-2020 00:42:30 | Instrument ID: | CVOAMS13 |
| Lims ID: | 460-217547-A-1 | Lab Sample ID: | 460-217547-1 |
| Client ID: | MW-203 | | |
| Operator ID: | | ALS Bottle#: | 17 Worklist Smp#: 18 |
| Purge Vol: | 5.000 mL | Dil. Factor: | 1.0000 |
| Method: | 8260W_13 | Limit Group: | VOA - 8260C Water and Solid |
| Column: | Rtx-624 ( 0.25 mm) | Detector | MS SCAN |

## 3 Dichlorodifluoromethane, CAS: 75-71-8

Processing Results




| RT | Mass | Response | Amount |
|---|---|---|---|
| 0.68 | 85.00 | 857 | 0.249802 |
| 0.69 | 87.00 | 367 | |

Reviewer: sgroa, 10-Sep-2020 08:05:47

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

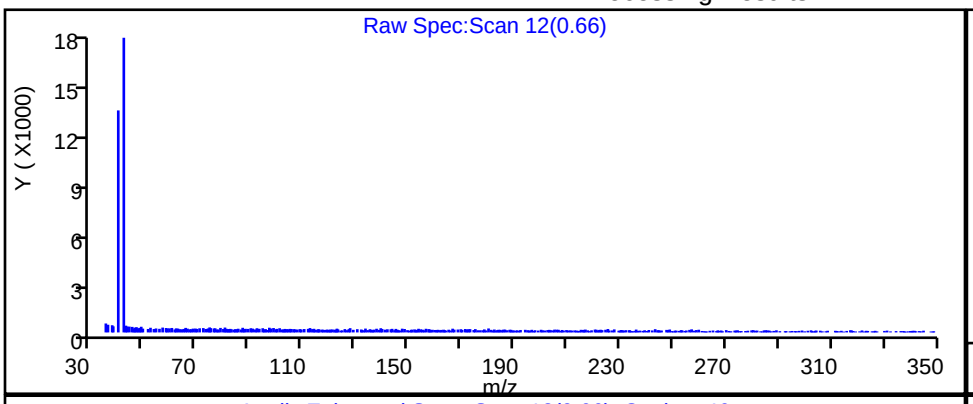
User Disabled Compound Report

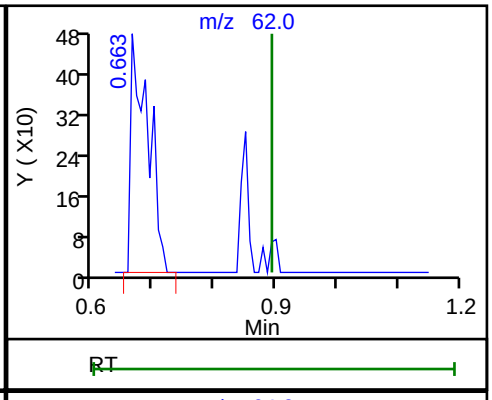
Eurofins TestAmerica, Edison

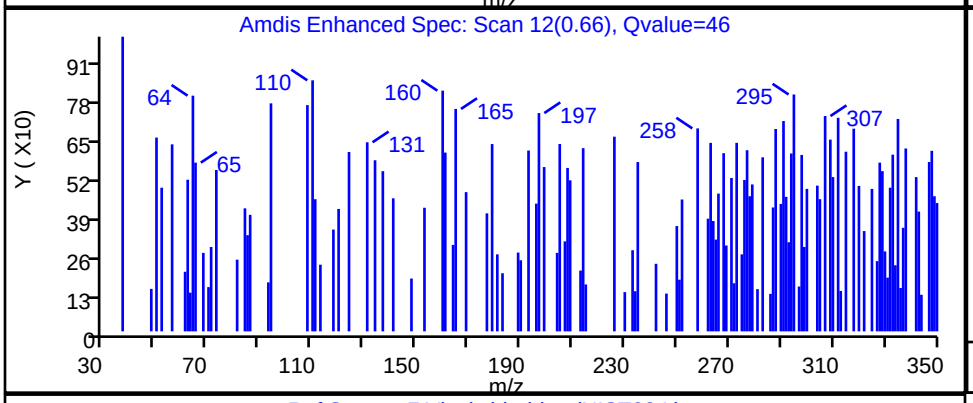
| | | | |
|---|---|---|---|
| Data File: | \\chromfs\Edison\ChromData\CVOAMS13\20200909-116494.b\P79547.D | | |
| Injection Date: | 10-Sep-2020 00:42:30 | Instrument ID: | CVOAMS13 |
| Lims ID: | 460-217547-A-1 | Lab Sample ID: | 460-217547-1 |
| Client ID: | MW-203 | | |
| Operator ID: | | ALS Bottle#: | 17 Worklist Smp#: 18 |
| Purge Vol: | 5.000 mL | Dil. Factor: | 1.0000 |
| Method: | 8260W_13 | Limit Group: | VOA - 8260C Water and Solid |
| Column: | Rtx-624 ( 0.25 mm) | Detector | MS SCAN |

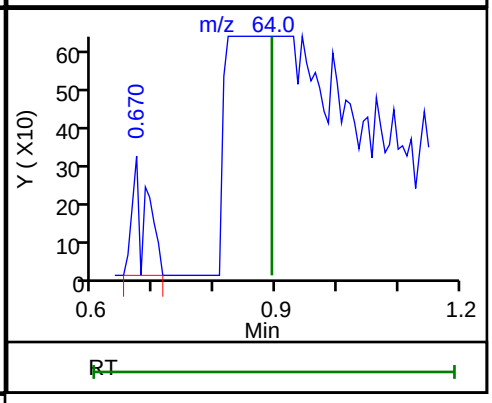
## 7 Vinyl chloride, CAS: 75-01-4

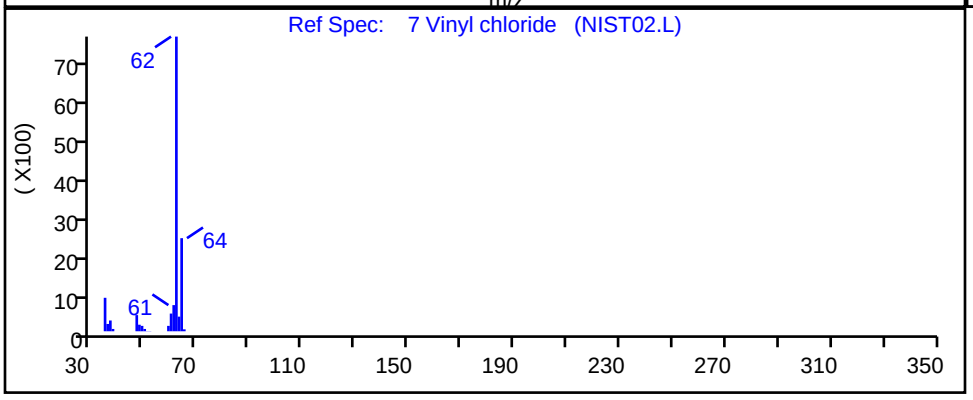
Processing Results




| RT | Mass | Response | Amount |
|---|---|---|---|
| 0.66 | 62.00 | 945 | 0.269290 |
| 0.67 | 64.00 | 524 | |

Reviewer: sgroa, 10-Sep-2020 08:05:55

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Edison  Job No.: 460-217547-1

SDG No.:

Client Sample ID: MW-204  Lab Sample ID: 460-217547-2

Matrix: Water  Lab File ID: P79501.D

Analysis Method: 8260C  Date Collected: 09/02/2020 11:30

Sample wt/vol: 5(mL)  Date Analyzed: 09/09/2020 06:21

Soil Aliquot Vol:  Dilution Factor: 1

Soil Extract Vol.:  GC Column: Rtx-624  ID: 0.25(mm)

% Moisture:  Level: (low/med) Low

Analysis Batch No.: 722597  Units: ug/L

| CAS NO. | COMPOUND NAME | RESULT | Q | RL | MDL |
|---|---|---|---|---|---|
| 71-55-6 | 1,1,1-Trichloroethane | 0.24 | U | 1.0 | 0.24 |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 0.37 | U | 1.0 | 0.37 |
| 76-13-1 | 1,1,2-Trichloro-1,2,2-trifluoroethane | 0.31 | U | 1.0 | 0.31 |
| 79-00-5 | 1,1,2-Trichloroethane | 0.43 | U | 1.0 | 0.43 |
| 75-34-3 | 1,1-Dichloroethane | 0.26 | U | 1.0 | 0.26 |
| 75-35-4 | 1,1-Dichloroethene | 0.26 | U | 1.0 | 0.26 |
| 87-61-6 | 1,2,3-Trichlorobenzene | 0.36 | U | 1.0 | 0.36 |
| 120-82-1 | 1,2,4-Trichlorobenzene | 0.37 | U | 1.0 | 0.37 |
| 78-87-5 | 1,2-Dichloropropane | 0.35 | U | 1.0 | 0.35 |
| 541-73-1 | 1,3-Dichlorobenzene | 0.34 | U | 1.0 | 0.34 |
| 106-46-7 | 1,4-Dichlorobenzene | 0.33 | U | 1.0 | 0.33 |
| 123-91-1 | 1,4-Dioxane | 28 | U | 50 | 28 |
| 78-93-3 | 2-Butanone (MEK) | 1.9 | U | 5.0 | 1.9 |
| 591-78-6 | 2-Hexanone | 1.1 | U | 5.0 | 1.1 |
| 108-10-1 | 4-Methyl-2-pentanone (MIBK) | 1.3 | U | 5.0 | 1.3 |
| 67-64-1 | Acetone | 4.4 | U | 5.0 | 4.4 |
| 71-43-2 | Benzene | 0.20 | U | 1.0 | 0.20 |
| 75-25-2 | Bromoform | 0.54 | U | 1.0 | 0.54 |
| 74-83-9 | Bromomethane | 0.55 | U * | 1.0 | 0.55 |
| 75-15-0 | Carbon disulfide | 0.82 | U | 1.0 | 0.82 |
| 56-23-5 | Carbon tetrachloride | 0.21 | U | 1.0 | 0.21 |
| 108-90-7 | Chlorobenzene | 0.38 | U | 1.0 | 0.38 |
| 74-97-5 | Chlorobromomethane | 0.41 | U | 1.0 | 0.41 |
| 124-48-1 | Chlorodibromomethane | 0.28 | U | 1.0 | 0.28 |
| 75-00-3 | Chloroethane | 0.32 | U | 1.0 | 0.32 |
| 67-66-3 | Chloroform | 0.33 | U | 1.0 | 0.33 |
| 74-87-3 | Chloromethane | 0.40 | U | 1.0 | 0.40 |
| 156-59-2 | cis-1,2-Dichloroethene | 0.22 | U | 1.0 | 0.22 |
| 10061-01-5 | cis-1,3-Dichloropropene | 0.22 | U | 1.0 | 0.22 |
| 110-82-7 | Cyclohexane | 0.32 | U | 1.0 | 0.32 |
| 75-27-4 | Dichlorobromomethane | 0.34 | U | 1.0 | 0.34 |
| 75-71-8 | Dichlorodifluoromethane | 0.31 | U | 1.0 | 0.31 |
| 100-41-4 | Ethylbenzene | 0.30 | U | 1.0 | 0.30 |
| 106-93-4 | Ethylene Dibromide | 0.50 | U | 1.0 | 0.50 |
| 98-82-8 | Isopropylbenzene | 0.34 | U | 1.0 | 0.34 |

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Edison  Job No.: 460-217547-1

SDG No.:

Client Sample ID: MW-204  Lab Sample ID: 460-217547-2

Matrix: Water  Lab File ID: P79501.D

Analysis Method: 8260C  Date Collected: 09/02/2020 11:30

Sample wt/vol: 5(mL)  Date Analyzed: 09/09/2020 06:21

Soil Aliquot Vol:  Dilution Factor: 1

Soil Extract Vol.:  GC Column: Rtx-624  ID: 0.25(mm)

% Moisture:  Level: (low/med) Low

Analysis Batch No.: 722597  Units: ug/L

| CAS NO. | COMPOUND NAME | RESULT | Q | RL | MDL |
|---|---|---|---|---|---|
| 79-20-9 | Methyl acetate | 0.79 | U | 5.0 | 0.79 |
| 1634-04-4 | Methyl tert-butyl ether | 0.47 | U | 1.0 | 0.47 |
| 108-87-2 | Methylcyclohexane | 0.26 | U | 1.0 | 0.26 |
| 75-09-2 | Methylene Chloride | 0.32 | U | 1.0 | 0.32 |
| 179601-23-1 | m-Xylene & p-Xylene | 0.30 | U | 1.0 | 0.30 |
| 95-47-6 | o-Xylene | 0.36 | U | 1.0 | 0.36 |
| 100-42-5 | Styrene | 0.42 | U | 1.0 | 0.42 |
| 127-18-4 | Tetrachloroethene | 0.25 | U | 1.0 | 0.25 |
| 108-88-3 | Toluene | 0.38 | U | 1.0 | 0.38 |
| 156-60-5 | trans-1,2-Dichloroethene | 0.24 | U | 1.0 | 0.24 |
| 10061-02-6 | trans-1,3-Dichloropropene | 0.49 | U | 1.0 | 0.49 |
| 79-01-6 | Trichloroethene | 0.31 | U | 1.0 | 0.31 |
| 75-69-4 | Trichlorofluoromethane | 0.32 | U | 1.0 | 0.32 |
| 75-01-4 | Vinyl chloride | 0.17 | U | 1.0 | 0.17 |
| 107-06-2 | 1,2-Dichloroethane | 0.43 | U | 1.0 | 0.43 |
| 95-50-1 | 1,2-Dichlorobenzene | 0.43 | U | 1.0 | 0.43 |
| 96-12-8 | 1,2-Dibromo-3-Chloropropane | 0.38 | U | 1.0 | 0.38 |

| CAS NO. | SURROGATE | %REC | Q | LIMITS |
|---|---|---|---|---|
| 17060-07-0 | 1,2-Dichloroethane-d4 (Surr) | 99 | | 75-123 |
| 460-00-4 | 4-Bromofluorobenzene | 110 | | 76-120 |
| 1868-53-7 | Dibromofluoromethane (Surr) | 106 | | 77-124 |
| 2037-26-5 | Toluene-d8 (Surr) | 107 | | 80-120 |

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: Eurofins TestAmerica, Edison  Job No.: 460-217547-1

SDG No.:

Client Sample ID: MW-204  Lab Sample ID: 460-217547-2

Matrix: Water  Lab File ID: P79501.D

Analysis Method: 8260C  Date Collected: 09/02/2020 11:30

Sample wt/vol: 5(mL)  Date Analyzed: 09/09/2020 06:21

Soil Aliquot Vol:  Dilution Factor: 1

Soil Extract Vol.:  GC Column: Rtx-624  ID: 0.25(mm)

% Moisture:  Level: (low/med) Low

Analysis Batch No.: 722597  Units: ug/L

Number TICs Found: 0  TIC Result Total: 0

| CAS NO. | COMPOUND NAME | RT | RESULT | Q | MATCH QUALITY |
|---|---|---|---|---|---|
| | Tentatively Identified Compound | | None | | |

Eurofins TestAmerica, Edison
Target Compound Quantitation Report

Data File: \\chromfs\Edison\ChromData\CVOAMS13\20200908-116444.b\P79501.D
Lims ID: 460-217547-B-2
Client ID: MW-204
Sample Type: Client
Inject. Date: 09-Sep-2020 06:21:30 ALS Bottle#: 22 Worklist Smp#: 23
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: 460-217547-B-2
Misc. Info.: 460-0116444-023
Operator ID: Instrument ID: CVOAMS13

Method: \\chromfs\Edison\ChromData\CVOAMS13\20200908-116444.b\8260W_13.m
Limit Group: VOA - 8260C Water and Solid
Last Update: 09-Sep-2020 19:45:59 Calib Date: 04-Sep-2020 16:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Edison\ChromData\CVOAMS13\20200904-116303.b\P79359.D

Column 1 : Rtx-624 ( 0.25 mm) Det: MS SCAN
Process Host: CTX1060

First Level Reviewer: xuyvo Date: 09-Sep-2020 19:50:00

| Compound | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q | Response | OnCol Amt ug/l | Flags |
|---|---|---|---|---|---|---|---|---|
| * 33 TBA-d9 (IS) | 65 | 1.845 | 1.845 | 0.000 | 100 | 92157 | 1000.0 | |
| $ 51 Dibromofluoromethane (Surr) | 113 | 2.776 | 2.769 | 0.007 | 98 | 113214 | 53.1 | |
| * 53 2-Butanone-d5 | 46 | 2.834 | 2.827 | 0.007 | 98 | 106832 | 250.0 | |
| $ 61 1,2-Dichloroethane-d4 (Surr) | 65 | 3.156 | 3.156 | 0.000 | 0 | 105801 | 49.4 | |
| * 66 Fluorobenzene | 96 | 3.385 | 3.385 | 0.000 | 99 | 495163 | 50.0 | |
| * 76 1,4-Dioxane-d8 | 96 | 4.245 | 4.238 | 0.007 | 63 | 12461 | 1000.0 | |
| $ 82 Toluene-d8 (Surr) | 98 | 4.882 | 4.883 | 0.000 | 99 | 485070 | 53.5 | |
| * 96 Chlorobenzene-d5 | 117 | 6.723 | 6.723 | 0.000 | 85 | 351522 | 50.0 | |
| $ 107 4-Bromofluorobenzene | 174 | 8.485 | 8.478 | 0.007 | 95 | 155960 | 54.8 | |
| * 123 1,4-Dichlorobenzene-d4 | 152 | 10.233 | 10.226 | 0.007 | 94 | 192202 | 50.0 | |

## Reagents:

8260ISNEW_00129 Amount Added: 1.00 Units: uL Run Reagent
8260SURR250_00212 Amount Added: 1.00 Units: uL Run Reagent

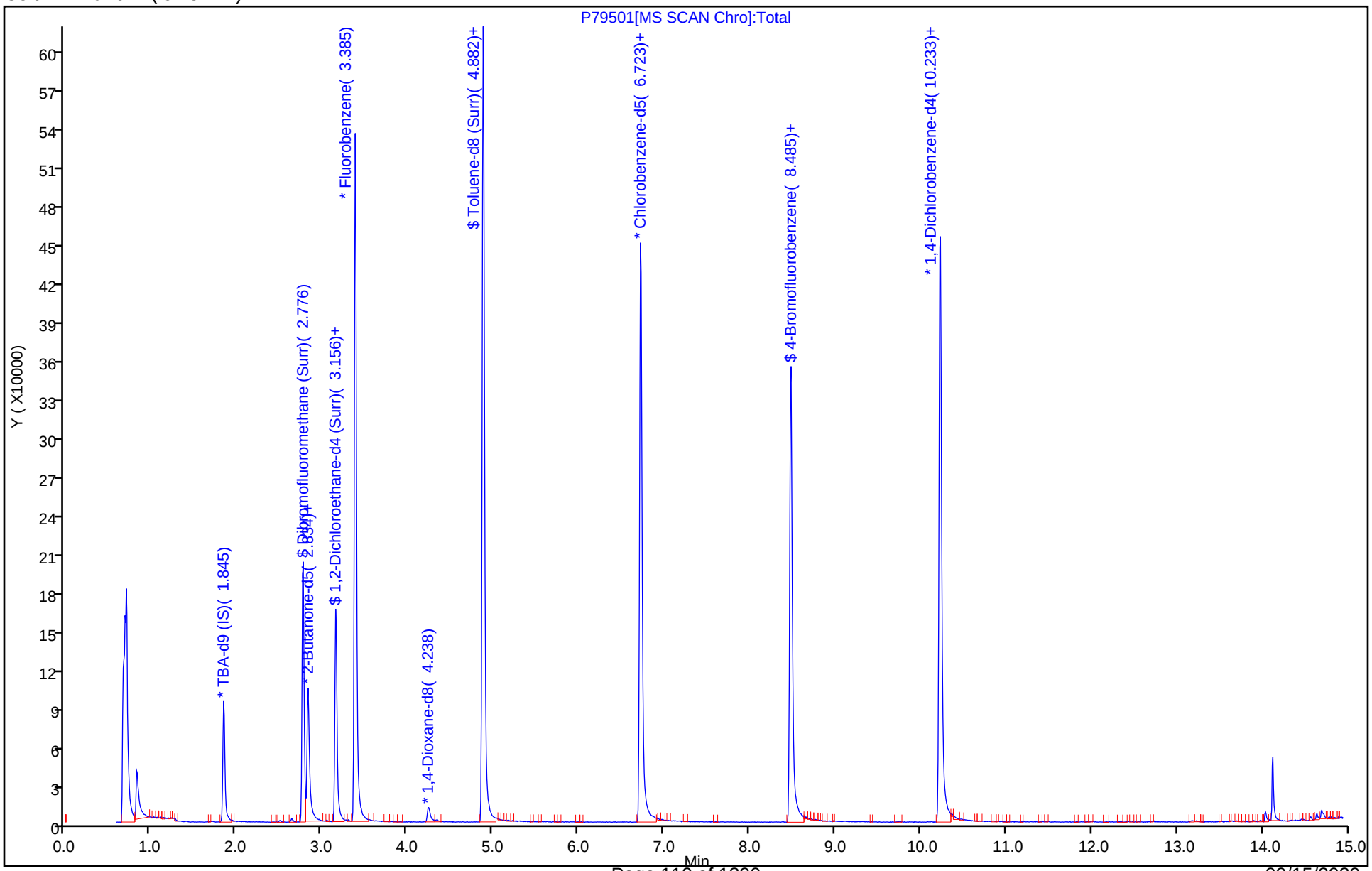
Report Date: 09-Sep-2020 19:50:01 Chrom Revision: 2.3 20-Aug-2020 13:57:12

Eurofins TestAmerica, Edison

Data File: \\chromfs\Edison\ChromData\CVOAMS13\20200908-116444.b\P79501.D

| | | | | | |
|---|---|---|---|---|---|
| Injection Date: | 09-Sep-2020 06:21:30 | Instrument ID: | CVOAMS13 | Operator ID: | |
| Lims ID: | 460-217547-B-2 | Lab Sample ID: | 460-217547-2 | Worklist Smp#: | 23 |
| Client ID: | MW-204 | | | | |
| Purge Vol: | 5.000 mL | Dil. Factor: | 1.0000 | ALS Bottle#: | 22 |
| Method: | 8260W_13 | Limit Group: | VOA - 8260C Water and Solid | | |

Column: Rtx-624 ( 0.25 mm)



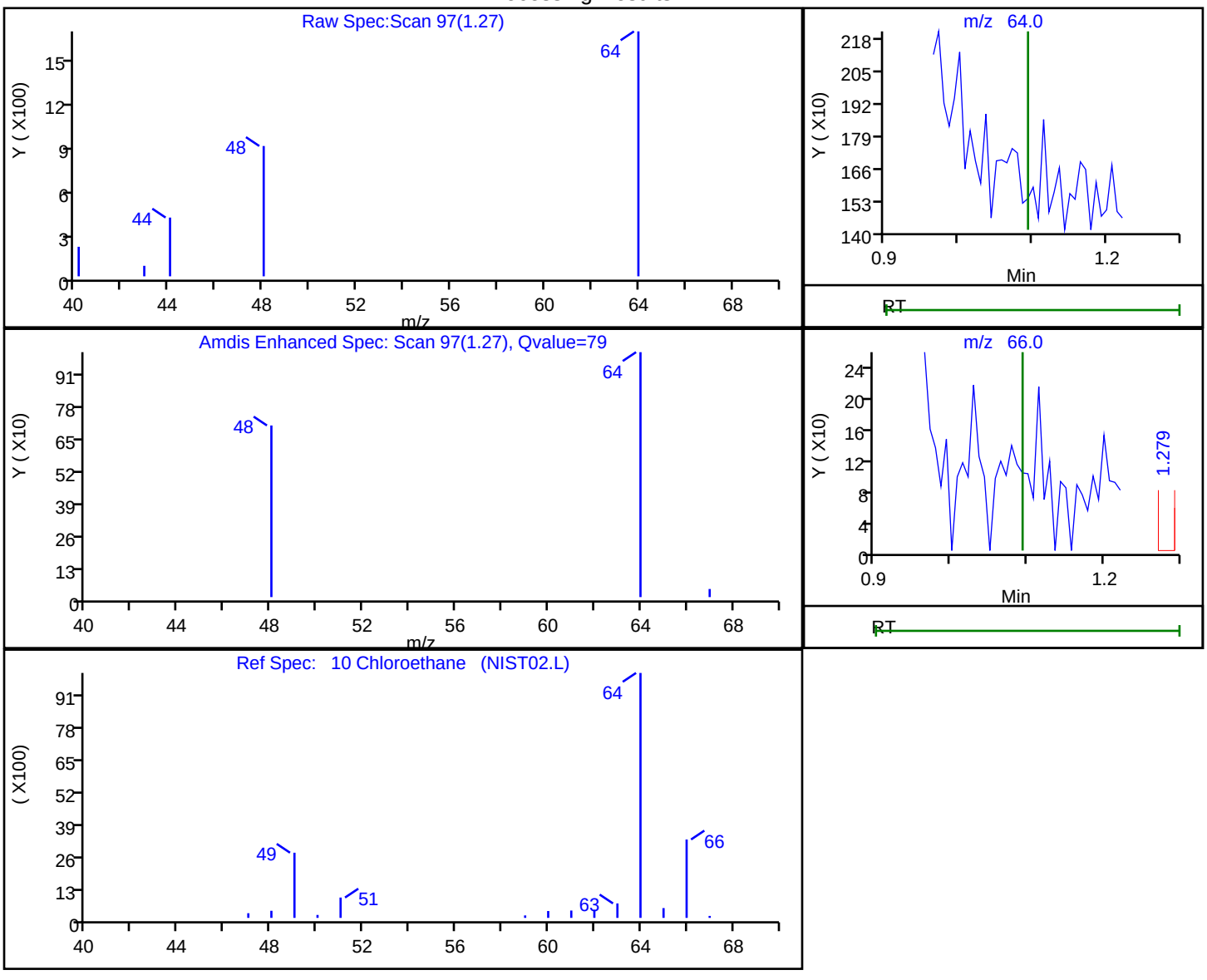
User Disabled Compound Report

Eurofins TestAmerica, Edison

| | | | | | |
|---|---|---|---|---|---|
| Data File: | \\chromfs\Edison\ChromData\CVOAMS13\20200908-116444.b\P79501.D | | | | |
| Injection Date: | 09-Sep-2020 06:21:30 | Instrument ID: | CVOAMS13 | | |
| Lims ID: | 460-217547-B-2 | Lab Sample ID: | 460-217547-2 | | |
| Client ID: | MW-204 | | | | |
| Operator ID: | | ALS Bottle#: | 22 | Worklist Smp#: | 23 |
| Purge Vol: | 5.000 mL | Dil. Factor: | 1.0000 | | |
| Method: | 8260W_13 | Limit Group: | VOA - 8260C Water and Solid | | |
| Column: | Rtx-624 ( 0.25 mm) | Detector | MS SCAN | | |

## 10 Chloroethane, CAS: 75-00-3

Processing Results




| RT | Mass | Response | Amount |
|---|---|---|---|
| 1.27 | 64.00 | 2407 | 1.326889 |
| 1.28 | 66.00 | 27 | |

Reviewer: moroneyc, 09-Sep-2020 07:04:37

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

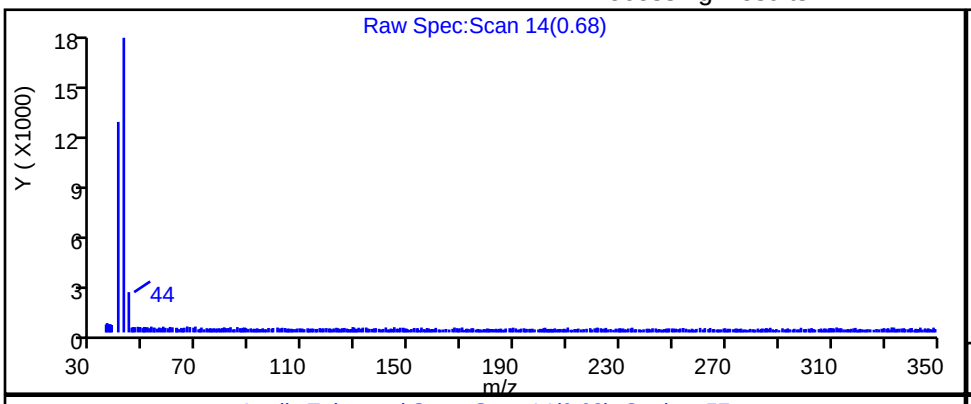
User Disabled Compound Report

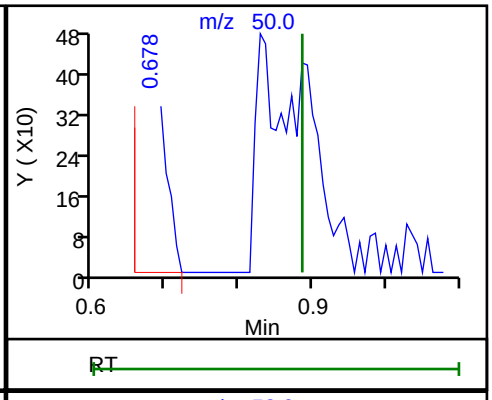
Eurofins TestAmerica, Edison

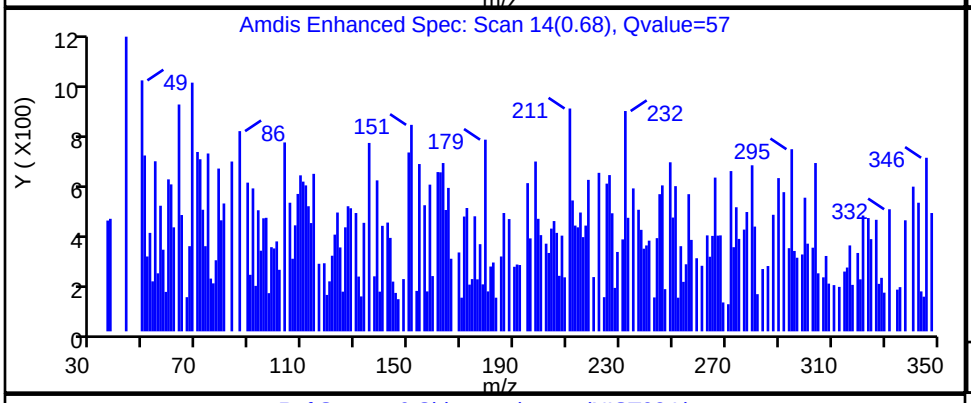
| | | | | | |
|---|---|---|---|---|---|
| Data File: | \\chromfs\Edison\ChromData\CVOAMS13\20200908-116444.b\P79501.D | | | | |
| Injection Date: | 09-Sep-2020 06:21:30 | Instrument ID: | CVOAMS13 | | |
| Lims ID: | 460-217547-B-2 | Lab Sample ID: | 460-217547-2 | | |
| Client ID: | MW-204 | | | | |
| Operator ID: | | ALS Bottle#: | 22 | Worklist Smp#: | 23 |
| Purge Vol: | 5.000 mL | Dil. Factor: | 1.0000 | | |
| Method: | 8260W_13 | Limit Group: | VOA - 8260C Water and Solid | | |
| Column: | Rtx-624 ( 0.25 mm) | Detector | MS SCAN | | |

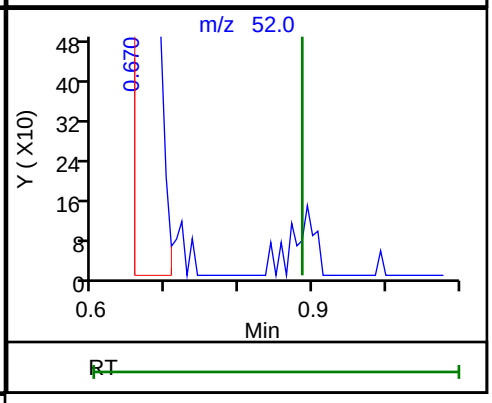
## 6 Chloromethane, CAS: 74-87-3

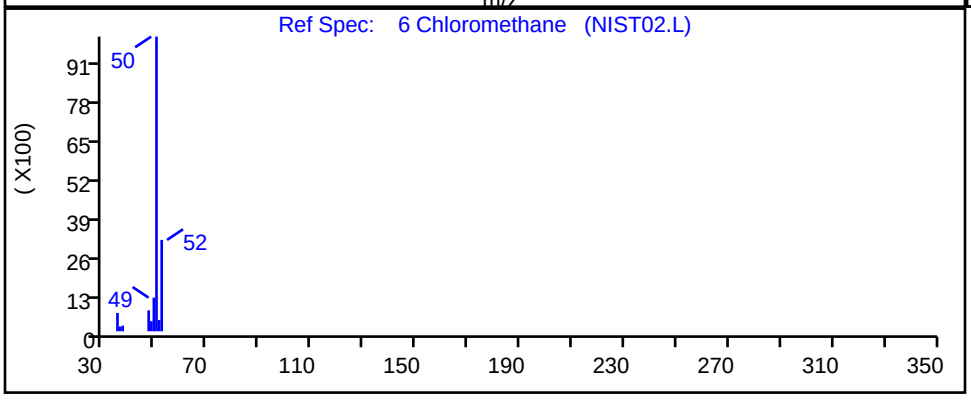
Processing Results




| RT | Mass | Response | Amount |
|---|---|---|---|
| 0.68 | 50.00 | 996 | 0.213730 |
| 0.67 | 52.00 | 1146 | |

Reviewer: moroneyc, 09-Sep-2020 07:04:36

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

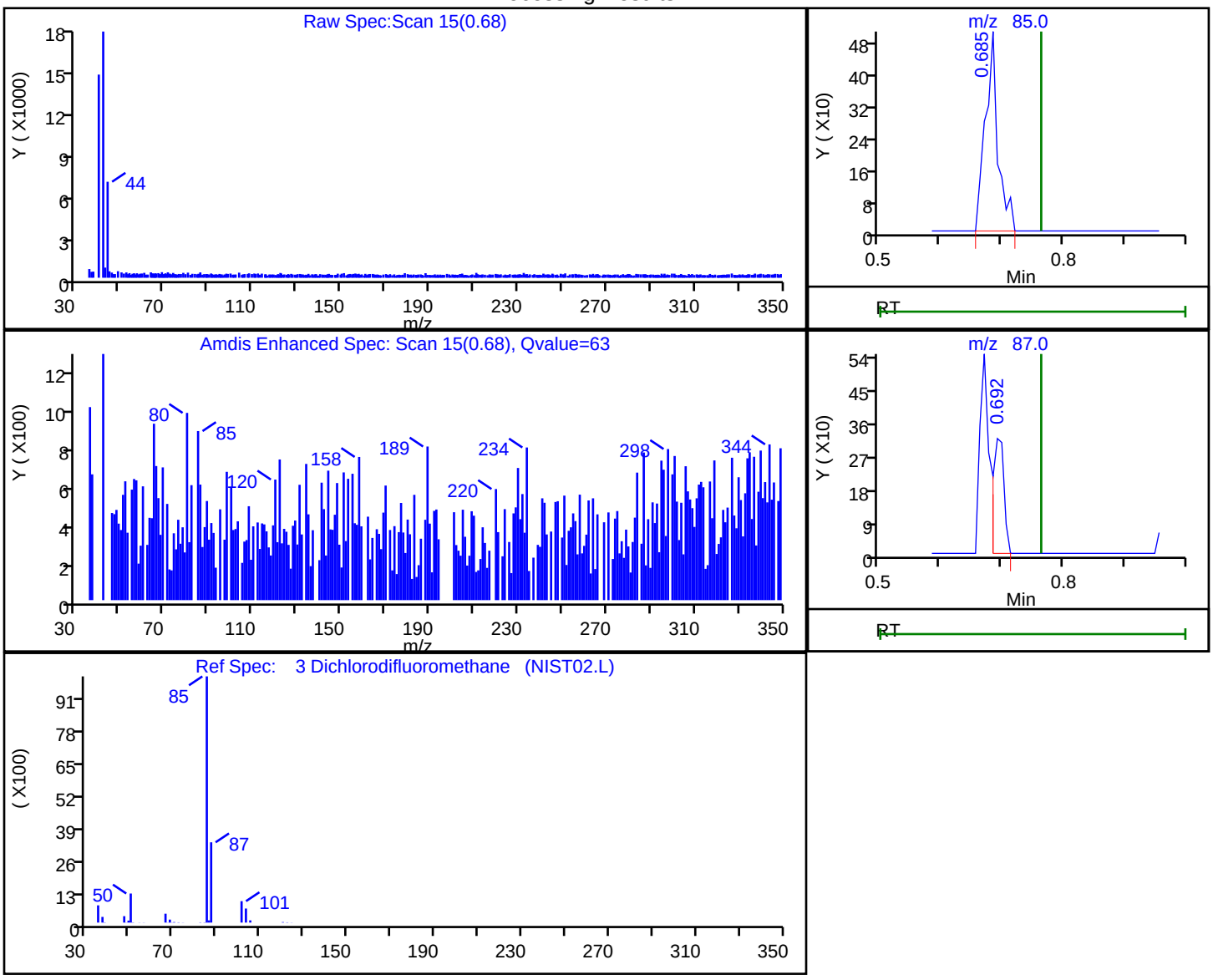
User Disabled Compound Report

Eurofins TestAmerica, Edison

| | | | |
|---|---|---|---|
| Data File: | \\chromfs\Edison\ChromData\CVOAMS13\20200908-116444.b\P79501.D | | |
| Injection Date: | 09-Sep-2020 06:21:30 | Instrument ID: | CVOAMS13 |
| Lims ID: | 460-217547-B-2 | Lab Sample ID: | 460-217547-2 |
| Client ID: | MW-204 | | |
| Operator ID: | | ALS Bottle#: | 22 Worklist Smp#: 23 |
| Purge Vol: | 5.000 mL | Dil. Factor: | 1.0000 |
| Method: | 8260W_13 | Limit Group: | VOA - 8260C Water and Solid |
| Column: | Rtx-624 ( 0.25 mm) | Detector | MS SCAN |

## 3 Dichlorodifluoromethane, CAS: 75-71-8

Processing Results




| RT | Mass | Response | Amount |
|---|---|---|---|
| 0.68 | 85.00 | 722 | 0.216302 |
| 0.69 | 87.00 | 391 | |

Reviewer: moroneyc, 09-Sep-2020 07:04:33

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

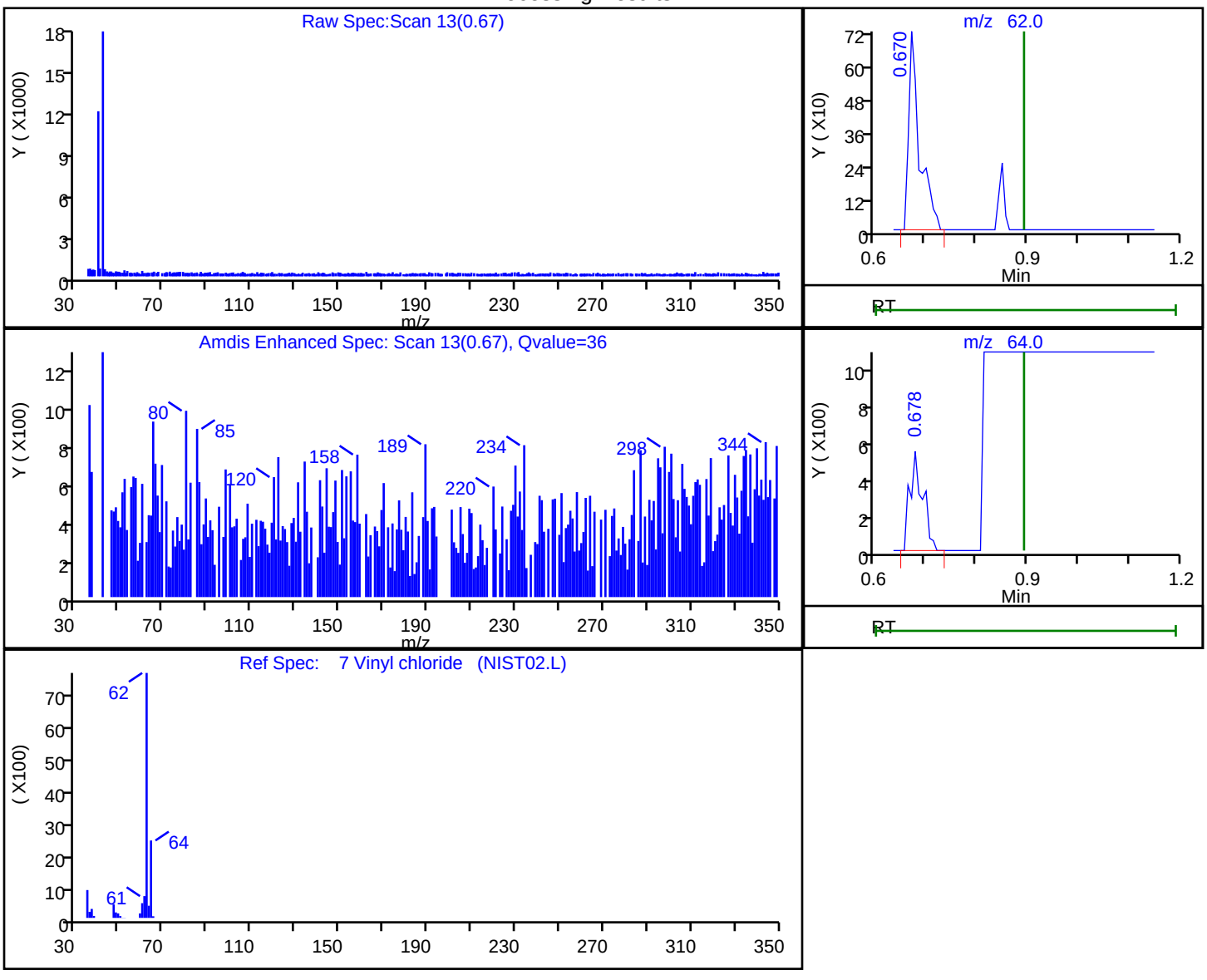
User Disabled Compound Report

Eurofins TestAmerica, Edison

| | | | | | |
|---|---|---|---|---|---|
| Data File: | \\chromfs\Edison\ChromData\CVOAMS13\20200908-116444.b\P79501.D | | | | |
| Injection Date: | 09-Sep-2020 06:21:30 | Instrument ID: | CVOAMS13 | | |
| Lims ID: | 460-217547-B-2 | Lab Sample ID: | 460-217547-2 | | |
| Client ID: | MW-204 | | | | |
| Operator ID: | | ALS Bottle#: | 22 | Worklist Smp#: | 23 |
| Purge Vol: | 5.000 mL | Dil. Factor: | 1.0000 | | |
| Method: | 8260W_13 | Limit Group: | VOA - 8260C Water and Solid | | |
| Column: | Rtx-624 ( 0.25 mm) | Detector | MS SCAN | | |

## 7 Vinyl chloride, CAS: 75-01-4

Processing Results




| RT | Mass | Response | Amount |
|---|---|---|---|
| 0.67 | 62.00 | 1079 | 0.316022 |
| 0.68 | 64.00 | 914 | |

Reviewer: moroneyc, 09-Sep-2020 07:04:36

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Edison  Job No.: 460-217547-1

SDG No.:

Client Sample ID: MW-205  Lab Sample ID: 460-217547-3

Matrix: Water  Lab File ID: P79502.D

Analysis Method: 8260C  Date Collected: 09/02/2020 12:40

Sample wt/vol: 5(mL)  Date Analyzed: 09/09/2020 06:44

Soil Aliquot Vol:  Dilution Factor: 1

Soil Extract Vol.:  GC Column: Rtx-624 ID: 0.25(mm)

% Moisture:  Level: (low/med) Low

Analysis Batch No.: 722597  Units: ug/L

| CAS NO. | COMPOUND NAME | RESULT | Q | RL | MDL |
|---|---|---|---|---|---|
| 71-55-6 | 1,1,1-Trichloroethane | 0.24 | U | 1.0 | 0.24 |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 0.37 | U | 1.0 | 0.37 |
| 76-13-1 | 1,1,2-Trichloro-1,2,2-trifluoroethane | 0.31 | U | 1.0 | 0.31 |
| 79-00-5 | 1,1,2-Trichloroethane | 0.43 | U | 1.0 | 0.43 |
| 75-34-3 | 1,1-Dichloroethane | 0.26 | U | 1.0 | 0.26 |
| 75-35-4 | 1,1-Dichloroethene | 0.26 | U | 1.0 | 0.26 |
| 87-61-6 | 1,2,3-Trichlorobenzene | 0.36 | U | 1.0 | 0.36 |
| 120-82-1 | 1,2,4-Trichlorobenzene | 0.37 | U | 1.0 | 0.37 |
| 78-87-5 | 1,2-Dichloropropane | 0.35 | U | 1.0 | 0.35 |
| 541-73-1 | 1,3-Dichlorobenzene | 0.34 | U | 1.0 | 0.34 |
| 106-46-7 | 1,4-Dichlorobenzene | 0.33 | U | 1.0 | 0.33 |
| 123-91-1 | 1,4-Dioxane | 28 | U | 50 | 28 |
| 78-93-3 | 2-Butanone (MEK) | 1.9 | U | 5.0 | 1.9 |
| 591-78-6 | 2-Hexanone | 1.1 | U | 5.0 | 1.1 |
| 108-10-1 | 4-Methyl-2-pentanone (MIBK) | 1.3 | U | 5.0 | 1.3 |
| 67-64-1 | Acetone | 4.4 | U | 5.0 | 4.4 |
| 71-43-2 | Benzene | 0.20 | U | 1.0 | 0.20 |
| 75-25-2 | Bromoform | 0.54 | U | 1.0 | 0.54 |
| 74-83-9 | Bromomethane | 0.55 | U * | 1.0 | 0.55 |
| 75-15-0 | Carbon disulfide | 0.82 | U | 1.0 | 0.82 |
| 56-23-5 | Carbon tetrachloride | 0.21 | U | 1.0 | 0.21 |
| 108-90-7 | Chlorobenzene | 0.38 | U | 1.0 | 0.38 |
| 74-97-5 | Chlorobromomethane | 0.41 | U | 1.0 | 0.41 |
| 124-48-1 | Chlorodibromomethane | 0.28 | U | 1.0 | 0.28 |
| 75-00-3 | Chloroethane | 0.32 | U | 1.0 | 0.32 |
| 67-66-3 | Chloroform | 0.33 | U | 1.0 | 0.33 |
| 74-87-3 | Chloromethane | 0.40 | U | 1.0 | 0.40 |
| 156-59-2 | cis-1,2-Dichloroethene | 0.22 | U | 1.0 | 0.22 |
| 10061-01-5 | cis-1,3-Dichloropropene | 0.22 | U | 1.0 | 0.22 |
| 110-82-7 | Cyclohexane | 0.32 | U | 1.0 | 0.32 |
| 75-27-4 | Dichlorobromomethane | 0.34 | U | 1.0 | 0.34 |
| 75-71-8 | Dichlorodifluoromethane | 0.31 | U | 1.0 | 0.31 |
| 100-41-4 | Ethylbenzene | 0.30 | U | 1.0 | 0.30 |
| 106-93-4 | Ethylene Dibromide | 0.50 | U | 1.0 | 0.50 |
| 98-82-8 | Isopropylbenzene | 0.34 | U | 1.0 | 0.34 |

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Edison  Job No.: 460-217547-1

SDG No.:

Client Sample ID: MW-205  Lab Sample ID: 460-217547-3

Matrix: Water  Lab File ID: P79502.D

Analysis Method: 8260C  Date Collected: 09/02/2020 12:40

Sample wt/vol: 5(mL)  Date Analyzed: 09/09/2020 06:44

Soil Aliquot Vol:  Dilution Factor: 1

Soil Extract Vol.:  GC Column: Rtx-624  ID: 0.25(mm)

% Moisture:  Level: (low/med) Low

Analysis Batch No.: 722597  Units: ug/L

| CAS NO. | COMPOUND NAME | RESULT | Q | RL | MDL |
|---|---|---|---|---|---|
| 79-20-9 | Methyl acetate | 0.79 | U | 5.0 | 0.79 |
| 1634-04-4 | Methyl tert-butyl ether | 0.47 | U | 1.0 | 0.47 |
| 108-87-2 | Methylcyclohexane | 0.26 | U | 1.0 | 0.26 |
| 75-09-2 | Methylene Chloride | 0.32 | U | 1.0 | 0.32 |
| 179601-23-1 | m-Xylene & p-Xylene | 0.30 | U | 1.0 | 0.30 |
| 95-47-6 | o-Xylene | 0.36 | U | 1.0 | 0.36 |
| 100-42-5 | Styrene | 0.42 | U | 1.0 | 0.42 |
| 127-18-4 | Tetrachloroethene | 0.25 | U | 1.0 | 0.25 |
| 108-88-3 | Toluene | 0.38 | U | 1.0 | 0.38 |
| 156-60-5 | trans-1,2-Dichloroethene | 0.24 | U | 1.0 | 0.24 |
| 10061-02-6 | trans-1,3-Dichloropropene | 0.49 | U | 1.0 | 0.49 |
| 79-01-6 | Trichloroethene | 0.31 | U | 1.0 | 0.31 |
| 75-69-4 | Trichlorofluoromethane | 0.32 | U | 1.0 | 0.32 |
| 75-01-4 | Vinyl chloride | 0.17 | U | 1.0 | 0.17 |
| 107-06-2 | 1,2-Dichloroethane | 0.43 | U | 1.0 | 0.43 |
| 95-50-1 | 1,2-Dichlorobenzene | 0.43 | U | 1.0 | 0.43 |
| 96-12-8 | 1,2-Dibromo-3-Chloropropane | 0.38 | U | 1.0 | 0.38 |

| CAS NO. | SURROGATE | %REC | Q | LIMITS |
|---|---|---|---|---|
| 17060-07-0 | 1,2-Dichloroethane-d4 (Surr) | 91 | | 75-123 |
| 460-00-4 | 4-Bromofluorobenzene | 99 | | 76-120 |
| 1868-53-7 | Dibromofluoromethane (Surr) | 99 | | 77-124 |
| 2037-26-5 | Toluene-d8 (Surr) | 98 | | 80-120 |

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: Eurofins TestAmerica, Edison  Job No.: 460-217547-1

SDG No.:

Client Sample ID: MW-205  Lab Sample ID: 460-217547-3

Matrix: Water  Lab File ID: P79502.D

Analysis Method: 8260C  Date Collected: 09/02/2020 12:40

Sample wt/vol: 5(mL)  Date Analyzed: 09/09/2020 06:44

Soil Aliquot Vol:  Dilution Factor: 1

Soil Extract Vol.:  GC Column: Rtx-624  ID: 0.25(mm)

% Moisture:  Level: (low/med) Low

Analysis Batch No.: 722597  Units: ug/L

Number TICs Found: 0  TIC Result Total: 0

| CAS NO. | COMPOUND NAME | RT | RESULT | Q | MATCH QUALITY |
|---|---|---|---|---|---|
| | Tentatively Identified Compound | | None | | |

Eurofins TestAmerica, Edison
Target Compound Quantitation Report

Data File: \\chromfs\Edison\ChromData\CVOAMS13\20200908-116444.b\P79502.D
Lims ID: 460-217547-A-3
Client ID: MW-205
Sample Type: Client
Inject. Date: 09-Sep-2020 06:44:30 ALS Bottle#: 23 Worklist Smp#: 24
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: 460-217547-A-3
Misc. Info.: 460-0116444-024
Operator ID: Instrument ID: CVOAMS13

Method: \\chromfs\Edison\ChromData\CVOAMS13\20200908-116444.b\8260W_13.m
Limit Group: VOA - 8260C Water and Solid
Last Update: 09-Sep-2020 19:45:59 Calib Date: 04-Sep-2020 16:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Edison\ChromData\CVOAMS13\20200904-116303.b\P79359.D

Column 1 : Rtx-624 ( 0.25 mm) Det: MS SCAN
Process Host: CTX1060

First Level Reviewer: moroneyc Date: 09-Sep-2020 07:05:09

| Compound | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q | Response | OnCol Amt ug/l | Flags |
|---|---|---|---|---|---|---|---|---|
| * 33 TBA-d9 (IS) | 65 | 1.845 | 1.845 | 0.000 | 100 | 98990 | 1000.0 | |
| $ 51 Dibromofluoromethane (Surr) | 113 | 2.777 | 2.769 | 0.007 | 98 | 113898 | 49.3 | |
| * 53 2-Butanone-d5 | 46 | 2.827 | 2.827 | 0.000 | 99 | 119061 | 250.0 | |
| $ 61 1,2-Dichloroethane-d4 (Surr) | 65 | 3.156 | 3.156 | 0.000 | 0 | 105091 | 45.3 | |
| * 66 Fluorobenzene | 96 | 3.385 | 3.385 | 0.000 | 99 | 536849 | 50.0 | |
| * 76 1,4-Dioxane-d8 | 96 | 4.238 | 4.238 | 0.000 | 63 | 13109 | 1000.0 | |
| $ 82 Toluene-d8 (Surr) | 98 | 4.882 | 4.883 | 0.000 | 99 | 488018 | 48.9 | |
| * 96 Chlorobenzene-d5 | 117 | 6.723 | 6.723 | 0.000 | 85 | 386942 | 50.0 | |
| $ 107 4-Bromofluorobenzene | 174 | 8.485 | 8.478 | 0.007 | 94 | 154992 | 49.5 | |
| * 123 1,4-Dichlorobenzene-d4 | 152 | 10.233 | 10.226 | 0.007 | 94 | 210862 | 50.0 | |

## Reagents:

8260ISNEW_00129 Amount Added: 1.00 Units: uL Run Reagent
8260SURR250_00212 Amount Added: 1.00 Units: uL Run Reagent

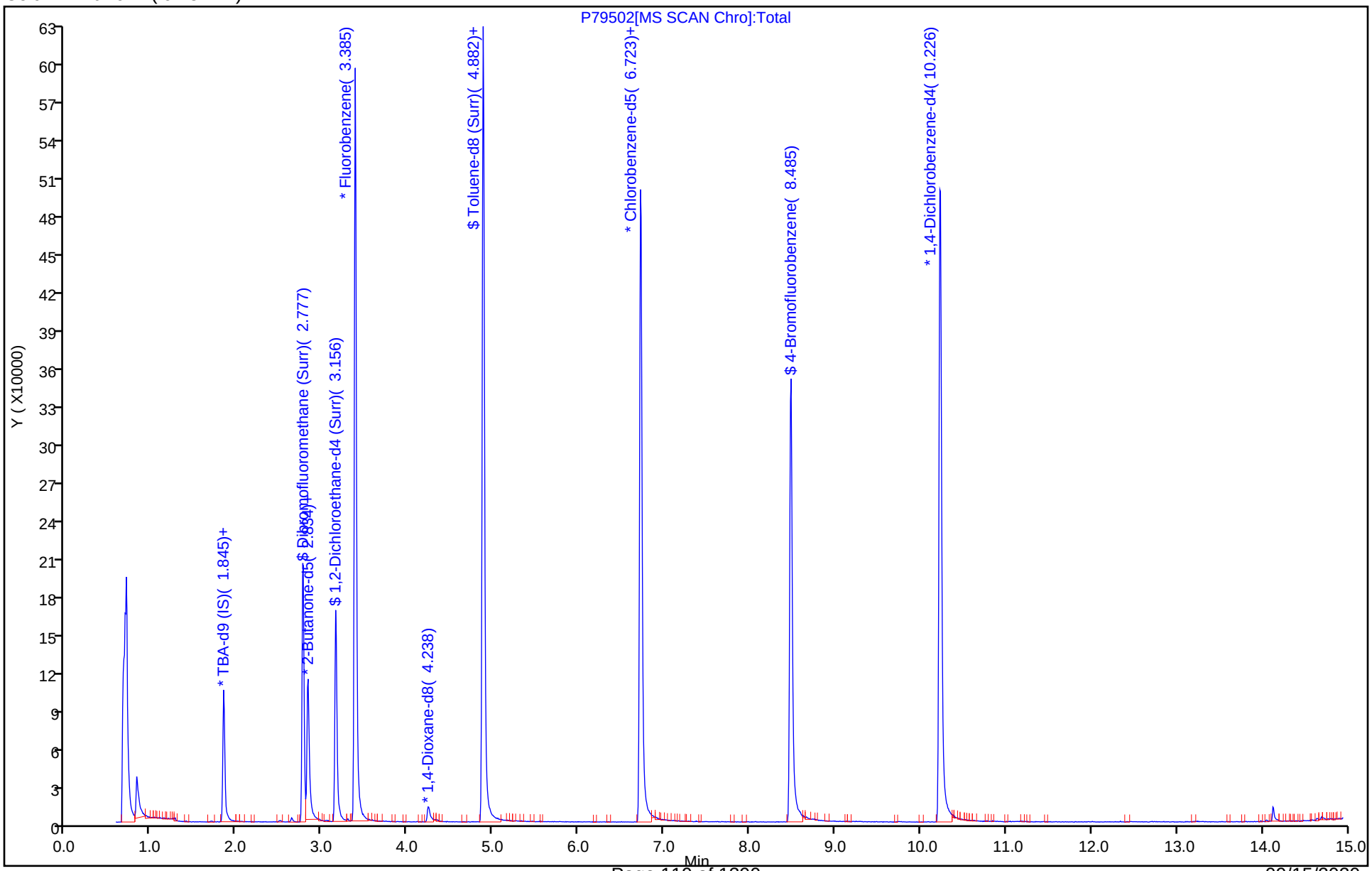
Report Date: 09-Sep-2020 19:50:13 Chrom Revision: 2.3 20-Aug-2020 13:57:12

Eurofins TestAmerica, Edison

Data File: \\chromfs\Edison\ChromData\CVOAMS13\20200908-116444.b\P79502.D

| | | | | | |
|---|---|---|---|---|---|
| Injection Date: | 09-Sep-2020 06:44:30 | Instrument ID: | CVOAMS13 | Operator ID: | |
| Lims ID: | 460-217547-A-3 | Lab Sample ID: | 460-217547-3 | Worklist Smp#: | 24 |
| Client ID: | MW-205 | | | | |
| Purge Vol: | 5.000 mL | Dil. Factor: | 1.0000 | ALS Bottle#: | 23 |
| Method: | 8260W_13 | Limit Group: | VOA - 8260C Water and Solid | | |

Column: Rtx-624 ( 0.25 mm)



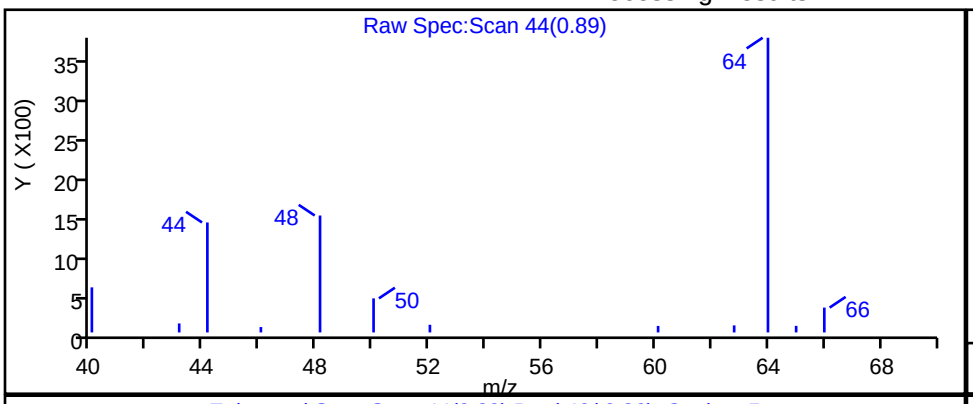
User Disabled Compound Report

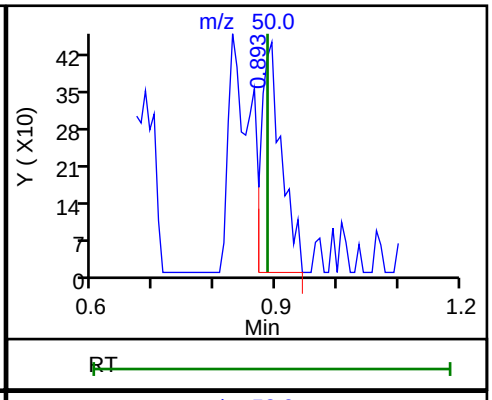
Eurofins TestAmerica, Edison

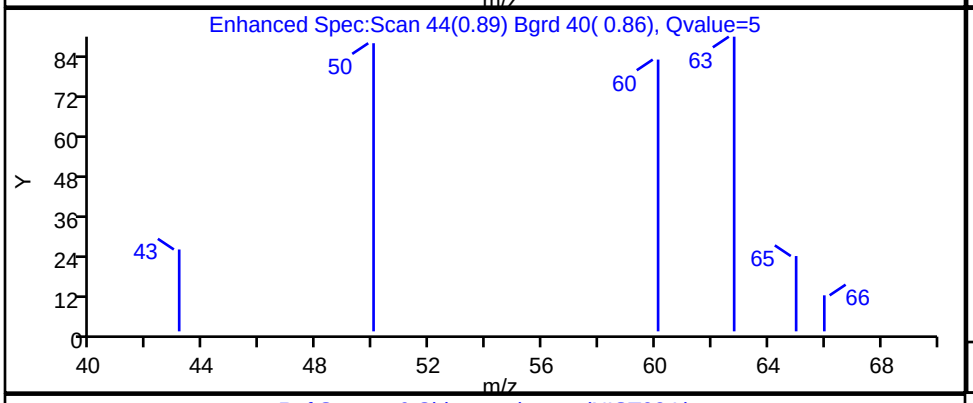
| | | | |
|---|---|---|---|
| Data File: | \\chromfs\Edison\ChromData\CVOAMS13\20200908-116444.b\P79502.D | | |
| Injection Date: | 09-Sep-2020 06:44:30 | Instrument ID: | CVOAMS13 |
| Lims ID: | 460-217547-A-3 | Lab Sample ID: | 460-217547-3 |
| Client ID: | MW-205 | | |
| Operator ID: | | ALS Bottle#: | 23 Worklist Smp#: 24 |
| Purge Vol: | 5.000 mL | Dil. Factor: | 1.0000 |
| Method: | 8260W_13 | Limit Group: | VOA - 8260C Water and Solid |
| Column: | Rtx-624 ( 0.25 mm) | Detector | MS SCAN |

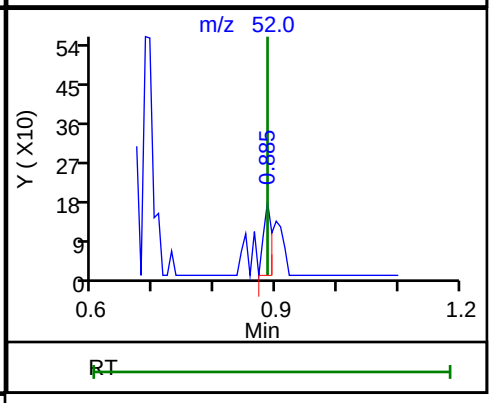
## 6 Chloromethane, CAS: 74-87-3

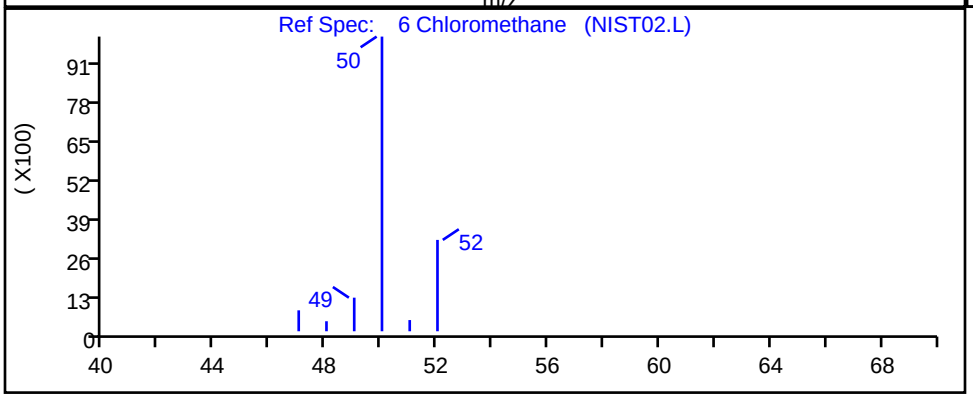
Processing Results




| RT | Mass | Response | Amount |
|---|---|---|---|
| 0.89 | 50.00 | 991 | 0.196145 |
| 0.89 | 52.00 | 154 | |

Reviewer: moroneyc, 09-Sep-2020 07:04:57

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

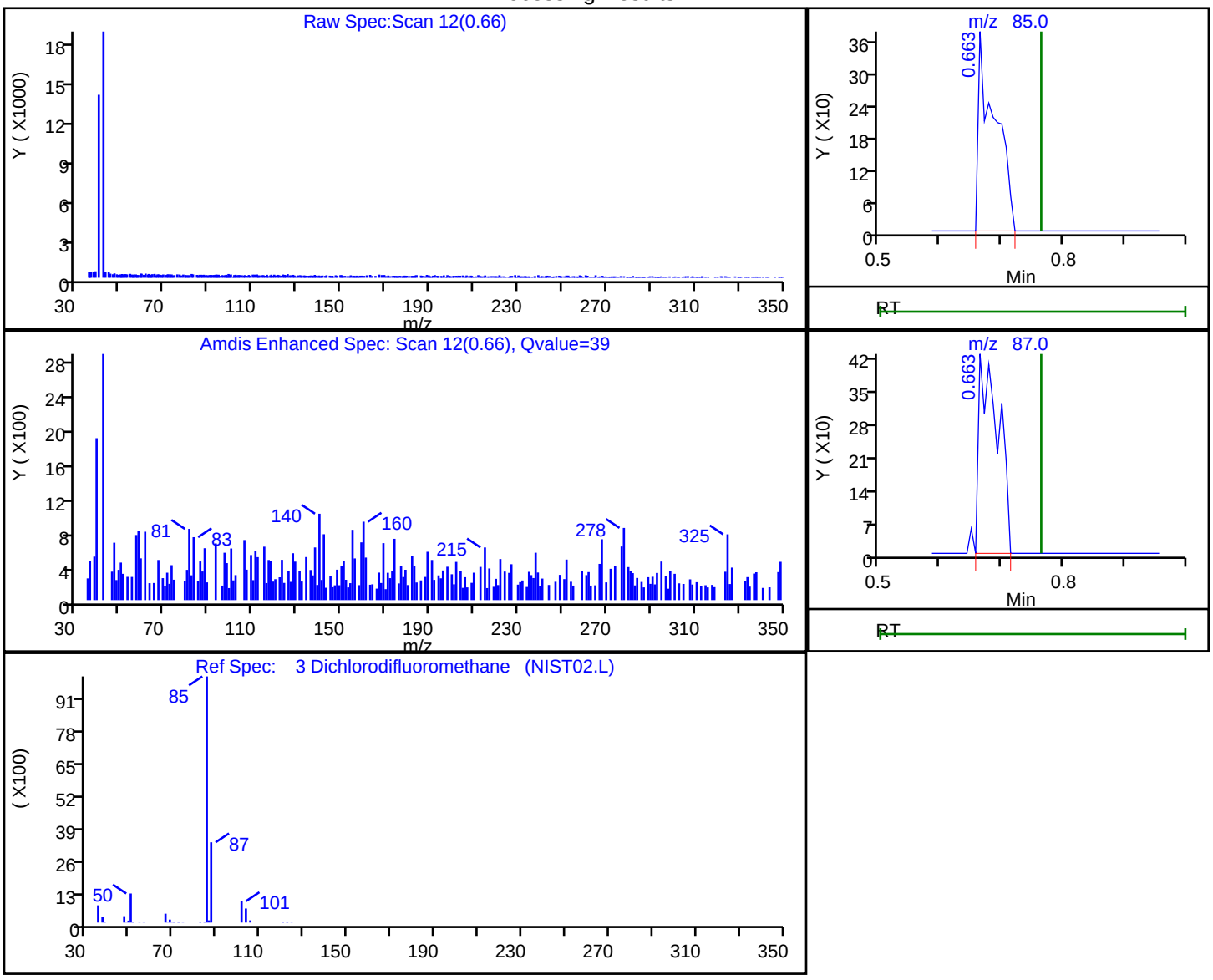
User Disabled Compound Report

Eurofins TestAmerica, Edison

| | | | |
|---|---|---|---|
| Data File: | \\chromfs\Edison\ChromData\CVOAMS13\20200908-116444.b\P79502.D | | |
| Injection Date: | 09-Sep-2020 06:44:30 | Instrument ID: | CVOAMS13 |
| Lims ID: | 460-217547-A-3 | Lab Sample ID: | 460-217547-3 |
| Client ID: | MW-205 | | |
| Operator ID: | | ALS Bottle#: | 23 Worklist Smp#: 24 |
| Purge Vol: | 5.000 mL | Dil. Factor: | 1.0000 |
| Method: | 8260W_13 | Limit Group: | VOA - 8260C Water and Solid |
| Column: | Rtx-624 ( 0.25 mm) | Detector | MS SCAN |

## 3 Dichlorodifluoromethane, CAS: 75-71-8

Processing Results




| RT | Mass | Response | Amount |
|---|---|---|---|
| 0.66 | 85.00 | 723 | 0.199782 |
| 0.66 | 87.00 | 936 | |

Reviewer: moroneyc, 09-Sep-2020 07:04:56

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

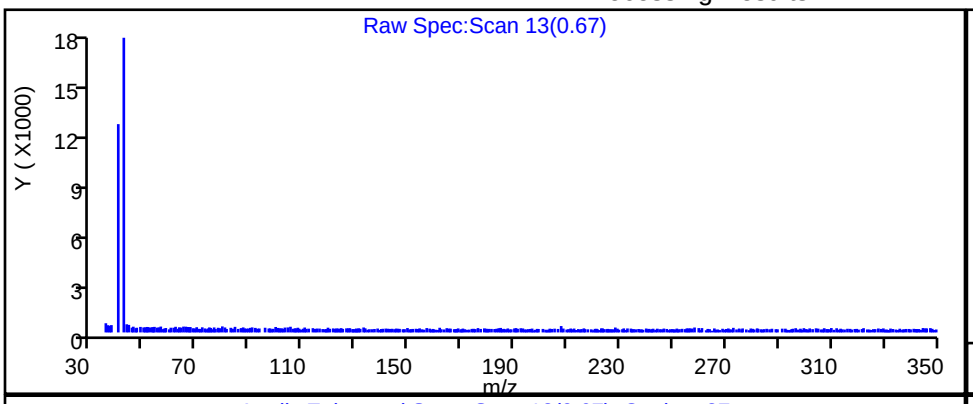
User Disabled Compound Report

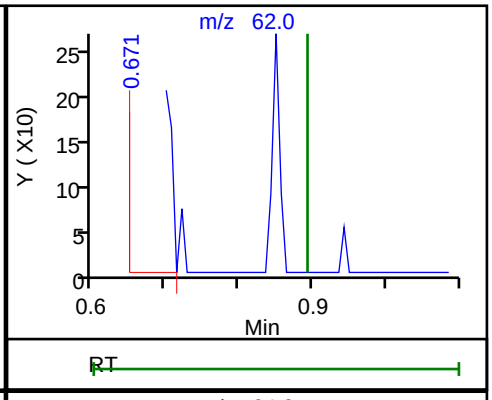
Eurofins TestAmerica, Edison

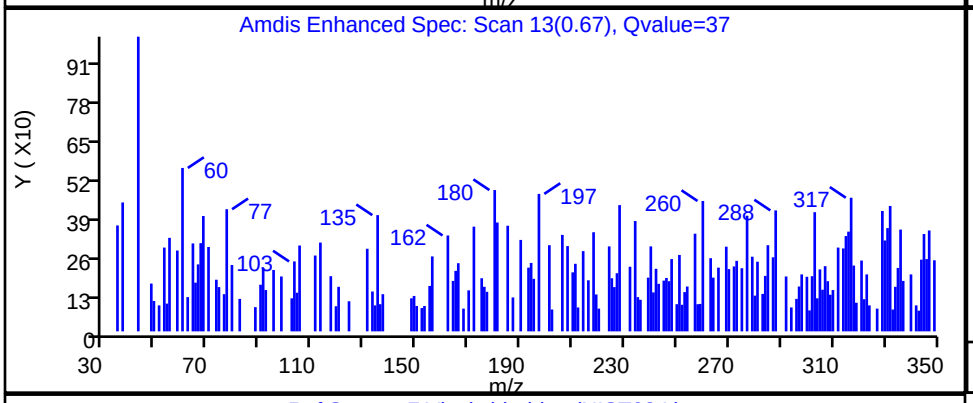
| | | | | | |
|---|---|---|---|---|---|
| Data File: | \\chromfs\Edison\ChromData\CVOAMS13\20200908-116444.b\P79502.D | | | | |
| Injection Date: | 09-Sep-2020 06:44:30 | Instrument ID: | CVOAMS13 | | |
| Lims ID: | 460-217547-A-3 | Lab Sample ID: | 460-217547-3 | | |
| Client ID: | MW-205 | | | | |
| Operator ID: | | ALS Bottle#: | 23 | Worklist Smp#: | 24 |
| Purge Vol: | 5.000 mL | Dil. Factor: | 1.0000 | | |
| Method: | 8260W_13 | Limit Group: | VOA - 8260C Water and Solid | | |
| Column: | Rtx-624 ( 0.25 mm) | Detector | MS SCAN | | |

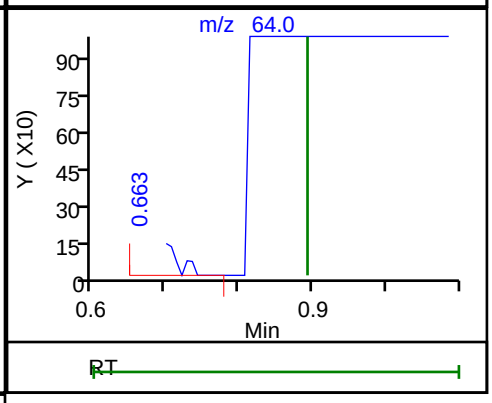
## 7 Vinyl chloride, CAS: 75-01-4

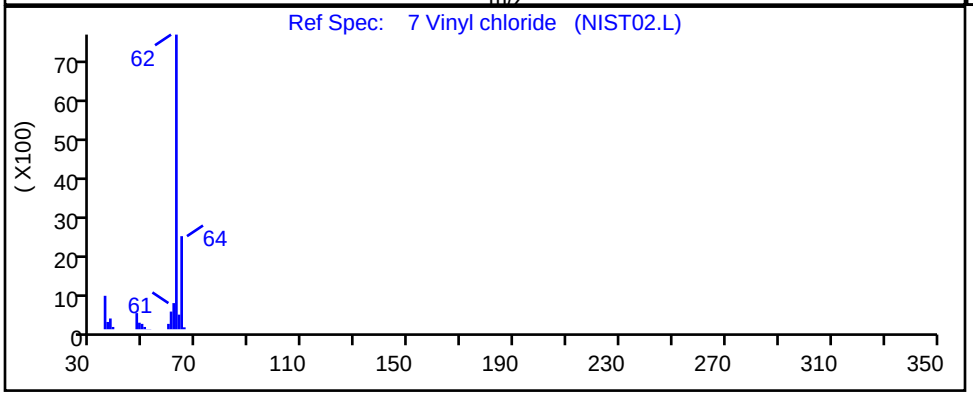
Processing Results




| RT | Mass | Response | Amount |
|---|---|---|---|
| 0.67 | 62.00 | 1145 | 0.309313 |
| 0.66 | 64.00 | 849 | |

Reviewer: moroneyc, 09-Sep-2020 07:04:58

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

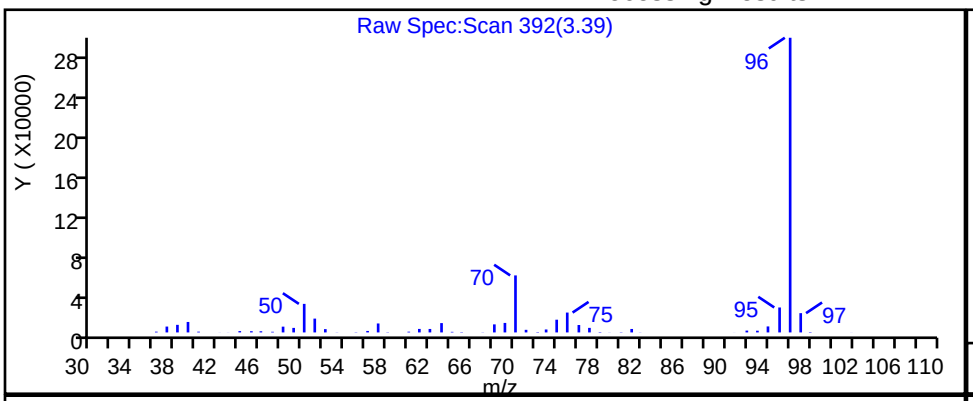
User Disabled Compound Report

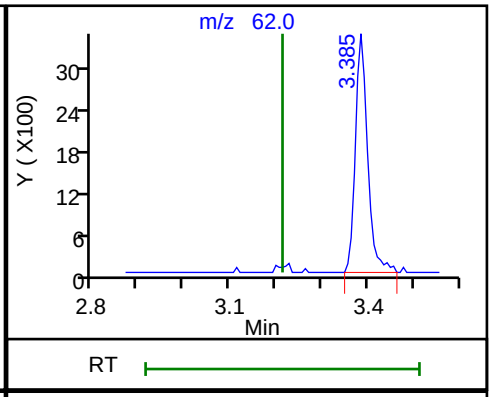
Eurofins TestAmerica, Edison

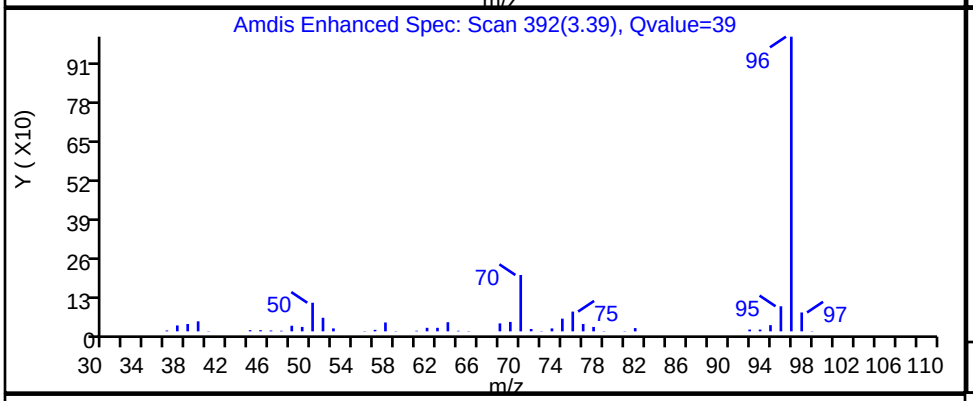
| | | | |
|---|---|---|---|
| Data File: | \\chromfs\Edison\ChromData\CVOAMS13\20200908-116444.b\P79502.D | | |
| Injection Date: | 09-Sep-2020 06:44:30 | Instrument ID: | CVOAMS13 |
| Lims ID: | 460-217547-A-3 | Lab Sample ID: | 460-217547-3 |
| Client ID: | MW-205 | | |
| Operator ID: | | ALS Bottle#: | 23 Worklist Smp#: 24 |
| Purge Vol: | 5.000 mL | Dil. Factor: | 1.0000 |
| Method: | 8260W_13 | Limit Group: | VOA - 8260C Water and Solid |
| Column: | Rtx-624 ( 0.25 mm) | Detector | MS SCAN |

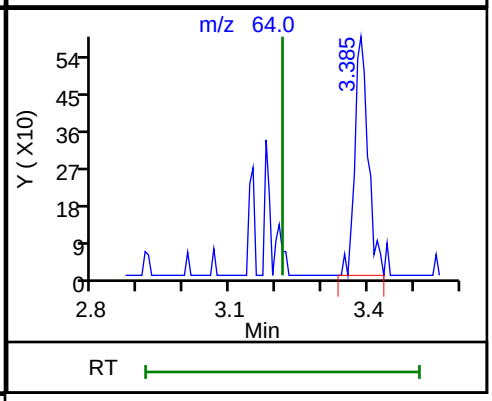
## 63 1,2-Dichloroethane, CAS: 107-06-2

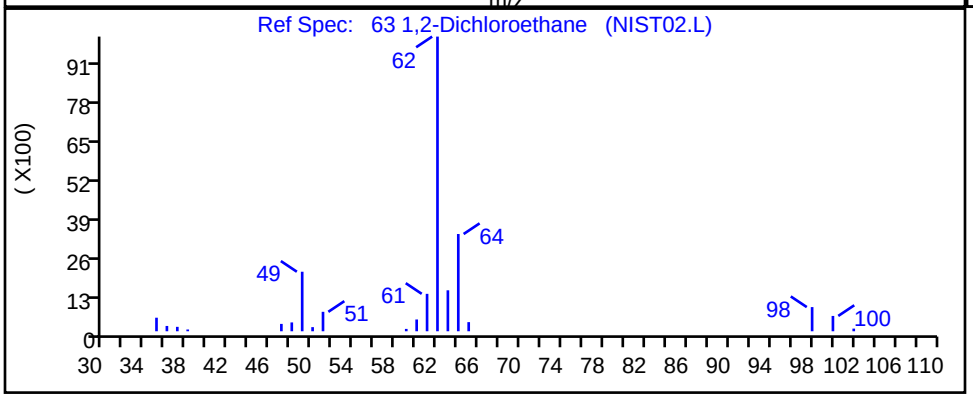
Processing Results




| RT | Mass | Response | Amount |
|---|---|---|---|
| 3.39 | 62.00 | 6422 | 2.140748 |
| 3.39 | 64.00 | 1181 | |

Reviewer: moroneyc, 09-Sep-2020 07:05:01

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Edison  Job No.: 460-217547-1

SDG No.:

Client Sample ID: MW-206  Lab Sample ID: 460-217547-4

Matrix: Water  Lab File ID: P79548.D

Analysis Method: 8260C  Date Collected: 09/02/2020 10:40

Sample wt/vol: 5(mL)  Date Analyzed: 09/10/2020 01:06

Soil Aliquot Vol:  Dilution Factor: 1

Soil Extract Vol.:  GC Column: Rtx-624  ID: 0.25(mm)

% Moisture:  Level: (low/med) Low

Analysis Batch No.: 722834  Units: ug/L

| CAS NO. | COMPOUND NAME | RESULT | Q | RL | MDL |
|---|---|---|---|---|---|
| 71-55-6 | 1,1,1-Trichloroethane | 0.24 | U | 1.0 | 0.24 |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 0.37 | U | 1.0 | 0.37 |
| 76-13-1 | 1,1,2-Trichloro-1,2,2-trifluoroethane | 0.31 | U | 1.0 | 0.31 |
| 79-00-5 | 1,1,2-Trichloroethane | 0.43 | U | 1.0 | 0.43 |
| 75-34-3 | 1,1-Dichloroethane | 0.26 | U | 1.0 | 0.26 |
| 75-35-4 | 1,1-Dichloroethene | 0.26 | U | 1.0 | 0.26 |
| 87-61-6 | 1,2,3-Trichlorobenzene | 0.36 | U | 1.0 | 0.36 |
| 120-82-1 | 1,2,4-Trichlorobenzene | 0.37 | U | 1.0 | 0.37 |
| 78-87-5 | 1,2-Dichloropropane | 0.35 | U | 1.0 | 0.35 |
| 541-73-1 | 1,3-Dichlorobenzene | 0.34 | U | 1.0 | 0.34 |
| 106-46-7 | 1,4-Dichlorobenzene | 0.33 | U | 1.0 | 0.33 |
| 123-91-1 | 1,4-Dioxane | 28 | U | 50 | 28 |
| 78-93-3 | 2-Butanone (MEK) | 1.9 | U | 5.0 | 1.9 |
| 591-78-6 | 2-Hexanone | 1.1 | U | 5.0 | 1.1 |
| 108-10-1 | 4-Methyl-2-pentanone (MIBK) | 1.3 | U | 5.0 | 1.3 |
| 67-64-1 | Acetone | 4.4 | U | 5.0 | 4.4 |
| 71-43-2 | Benzene | 0.20 | U | 1.0 | 0.20 |
| 75-25-2 | Bromoform | 0.54 | U | 1.0 | 0.54 |
| 74-83-9 | Bromomethane | 0.55 | U | 1.0 | 0.55 |
| 75-15-0 | Carbon disulfide | 0.82 | U | 1.0 | 0.82 |
| 56-23-5 | Carbon tetrachloride | 0.21 | U | 1.0 | 0.21 |
| 108-90-7 | Chlorobenzene | 0.38 | U | 1.0 | 0.38 |
| 74-97-5 | Chlorobromomethane | 0.41 | U | 1.0 | 0.41 |
| 124-48-1 | Chlorodibromomethane | 0.28 | U | 1.0 | 0.28 |
| 75-00-3 | Chloroethane | 0.32 | U | 1.0 | 0.32 |
| 67-66-3 | Chloroform | 0.33 | U | 1.0 | 0.33 |
| 74-87-3 | Chloromethane | 0.40 | U | 1.0 | 0.40 |
| 156-59-2 | cis-1,2-Dichloroethene | 0.22 | U | 1.0 | 0.22 |
| 10061-01-5 | cis-1,3-Dichloropropene | 0.22 | U | 1.0 | 0.22 |
| 110-82-7 | Cyclohexane | 0.32 | U | 1.0 | 0.32 |
| 75-27-4 | Dichlorobromomethane | 0.34 | U | 1.0 | 0.34 |
| 75-71-8 | Dichlorodifluoromethane | 0.60 | J | 1.0 | 0.31 |
| 100-41-4 | Ethylbenzene | 0.30 | U | 1.0 | 0.30 |
| 106-93-4 | Ethylene Dibromide | 0.50 | U | 1.0 | 0.50 |
| 98-82-8 | Isopropylbenzene | 0.34 | U | 1.0 | 0.34 |

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Edison  Job No.: 460-217547-1

SDG No.:

Client Sample ID: MW-206  Lab Sample ID: 460-217547-4

Matrix: Water  Lab File ID: P79548.D

Analysis Method: 8260C  Date Collected: 09/02/2020 10:40

Sample wt/vol: 5(mL)  Date Analyzed: 09/10/2020 01:06

Soil Aliquot Vol:  Dilution Factor: 1

Soil Extract Vol.:  GC Column: Rtx-624  ID: 0.25(mm)

% Moisture:  Level: (low/med) Low

Analysis Batch No.: 722834  Units: ug/L

| CAS NO. | COMPOUND NAME | RESULT | Q | RL | MDL |
|---|---|---|---|---|---|
| 79-20-9 | Methyl acetate | 0.79 | U | 5.0 | 0.79 |
| 1634-04-4 | Methyl tert-butyl ether | 0.47 | U | 1.0 | 0.47 |
| 108-87-2 | Methylcyclohexane | 0.26 | U | 1.0 | 0.26 |
| 75-09-2 | Methylene Chloride | 0.32 | U | 1.0 | 0.32 |
| 179601-23-1 | m-Xylene & p-Xylene | 0.30 | U | 1.0 | 0.30 |
| 95-47-6 | o-Xylene | 0.36 | U | 1.0 | 0.36 |
| 100-42-5 | Styrene | 0.42 | U | 1.0 | 0.42 |
| 127-18-4 | Tetrachloroethene | 0.25 | U | 1.0 | 0.25 |
| 108-88-3 | Toluene | 0.38 | U | 1.0 | 0.38 |
| 156-60-5 | trans-1,2-Dichloroethene | 0.24 | U | 1.0 | 0.24 |
| 10061-02-6 | trans-1,3-Dichloropropene | 0.49 | U | 1.0 | 0.49 |
| 79-01-6 | Trichloroethene | 0.31 | U | 1.0 | 0.31 |
| 75-69-4 | Trichlorofluoromethane | 0.32 | U | 1.0 | 0.32 |
| 75-01-4 | Vinyl chloride | 0.17 | U | 1.0 | 0.17 |
| 107-06-2 | 1,2-Dichloroethane | 0.43 | U | 1.0 | 0.43 |
| 95-50-1 | 1,2-Dichlorobenzene | 0.43 | U | 1.0 | 0.43 |
| 96-12-8 | 1,2-Dibromo-3-Chloropropane | 0.38 | U | 1.0 | 0.38 |

| CAS NO. | SURROGATE | %REC | Q | LIMITS |
|---|---|---|---|---|
| 17060-07-0 | 1,2-Dichloroethane-d4 (Surr) | 93 | | 75-123 |
| 460-00-4 | 4-Bromofluorobenzene | 104 | | 76-120 |
| 1868-53-7 | Dibromofluoromethane (Surr) | 99 | | 77-124 |
| 2037-26-5 | Toluene-d8 (Surr) | 96 | | 80-120 |

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: Eurofins TestAmerica, Edison  Job No.: 460-217547-1

SDG No.:

Client Sample ID: MW-206  Lab Sample ID: 460-217547-4

Matrix: Water  Lab File ID: P79548.D

Analysis Method: 8260C  Date Collected: 09/02/2020 10:40

Sample wt/vol: 5(mL)  Date Analyzed: 09/10/2020 01:06

Soil Aliquot Vol:  Dilution Factor: 1

Soil Extract Vol.:  GC Column: Rtx-624  ID: 0.25(mm)

% Moisture:  Level: (low/med) Low

Analysis Batch No.: 722834  Units: ug/L

Number TICs Found: 0  TIC Result Total: 0

| CAS NO. | COMPOUND NAME | RT | RESULT | Q | MATCH QUALITY |
|---|---|---|---|---|---|
| | Tentatively Identified Compound | | None | | |

Eurofins TestAmerica, Edison
Target Compound Quantitation Report

Data File: \\chromfs\Edison\ChromData\CVOAMS13\20200909-116494.b\P79548.D
Lims ID: 460-217547-A-4
Client ID: MW-206
Sample Type: Client
Inject. Date: 10-Sep-2020 01:06:30 ALS Bottle#: 18 Worklist Smp#: 19
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: 460-217547-A-4
Misc. Info.: 460-0116494-019
Operator ID: Instrument ID: CVOAMS13

Method: \\chromfs\Edison\ChromData\CVOAMS13\20200909-116494.b\8260W_13.m
Limit Group: VOA - 8260C Water and Solid
Last Update: 10-Sep-2020 14:25:29 Calib Date: 04-Sep-2020 16:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Edison\ChromData\CVOAMS13\20200904-116303.b\P79359.D

Column 1 : Rtx-624 ( 0.25 mm) Det: MS SCAN
Process Host: CTX1019

First Level Reviewer: sgroa Date: 10-Sep-2020 08:09:19

| Compound | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q | Response | OnCol Amt ug/l | Flags |
|---|---|---|---|---|---|---|---|---|
| 3 Dichlorodifluoromethane | 85 | 0.771 | 0.764 | 0.007 | 96 | 2027 | 0.5963 | |
| * 33 TBA-d9 (IS) | 65 | 1.845 | 1.845 | 0.000 | 99 | 104940 | 1000.0 | |
| $ 51 Dibromofluoromethane (Surr) | 113 | 2.776 | 2.769 | 0.007 | 98 | 107960 | 49.7 | |
| * 53 2-Butanone-d5 | 46 | 2.834 | 2.827 | 0.007 | 98 | 93383 | 250.0 | |
| $ 61 1,2-Dichloroethane-d4 (Surr) | 65 | 3.156 | 3.156 | 0.000 | 0 | 101154 | 46.4 | |
| * 66 Fluorobenzene | 96 | 3.385 | 3.385 | 0.000 | 99 | 504275 | 50.0 | |
| * 76 1,4-Dioxane-d8 | 96 | 4.245 | 4.238 | 0.007 | 63 | 14371 | 1000.0 | |
| $ 82 Toluene-d8 (Surr) | 98 | 4.882 | 4.882 | 0.000 | 99 | 459992 | 48.1 | |
| * 96 Chlorobenzene-d5 | 117 | 6.723 | 6.723 | 0.000 | 84 | 370822 | 50.0 | |
| $ 107 4-Bromofluorobenzene | 174 | 8.485 | 8.478 | 0.007 | 97 | 155800 | 51.9 | |
| * 123 1,4-Dichlorobenzene-d4 | 152 | 10.233 | 10.226 | 0.007 | 94 | 206121 | 50.0 | |

## Reagents:

8260ISNEW_00129 Amount Added: 1.00 Units: uL Run Reagent
8260SURR250_00212 Amount Added: 1.00 Units: uL Run Reagent

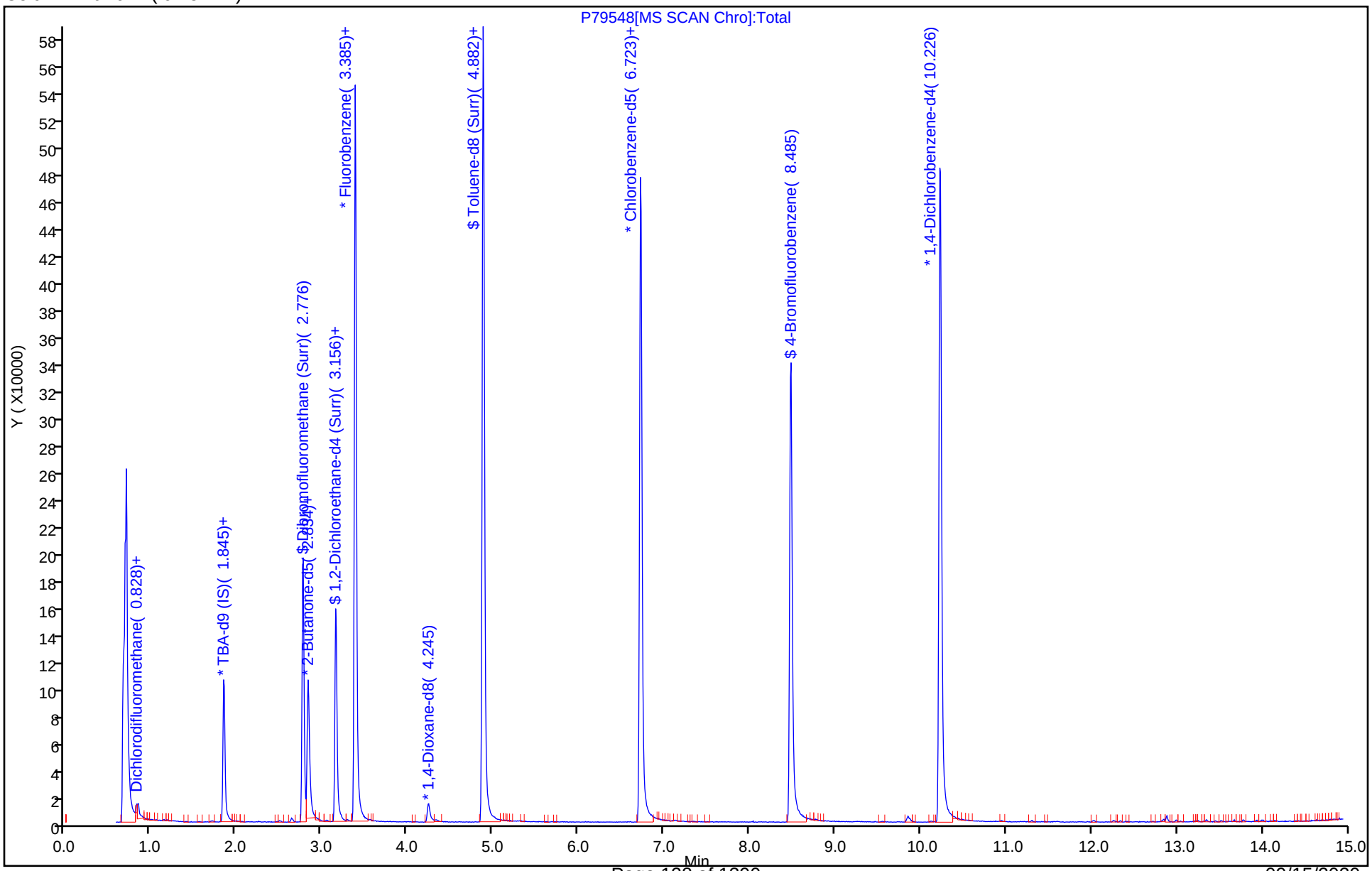
Report Date: 10-Sep-2020 14:26:22 Chrom Revision: 2.3 20-Aug-2020 13:57:12

Eurofins TestAmerica, Edison

Data File: \\chromfs\Edison\ChromData\CVOAMS13\20200909-116494.b\P79548.D

| | | | | | |
|---|---|---|---|---|---|
| Injection Date: | 10-Sep-2020 01:06:30 | Instrument ID: | CVOAMS13 | Operator ID: | |
| Lims ID: | 460-217547-A-4 | Lab Sample ID: | 460-217547-4 | Worklist Smp#: | 19 |
| Client ID: | MW-206 | | | | |
| Purge Vol: | 5.000 mL | Dil. Factor: | 1.0000 | ALS Bottle#: | 18 |
| Method: | 8260W_13 | Limit Group: | VOA - 8260C Water and Solid | | |

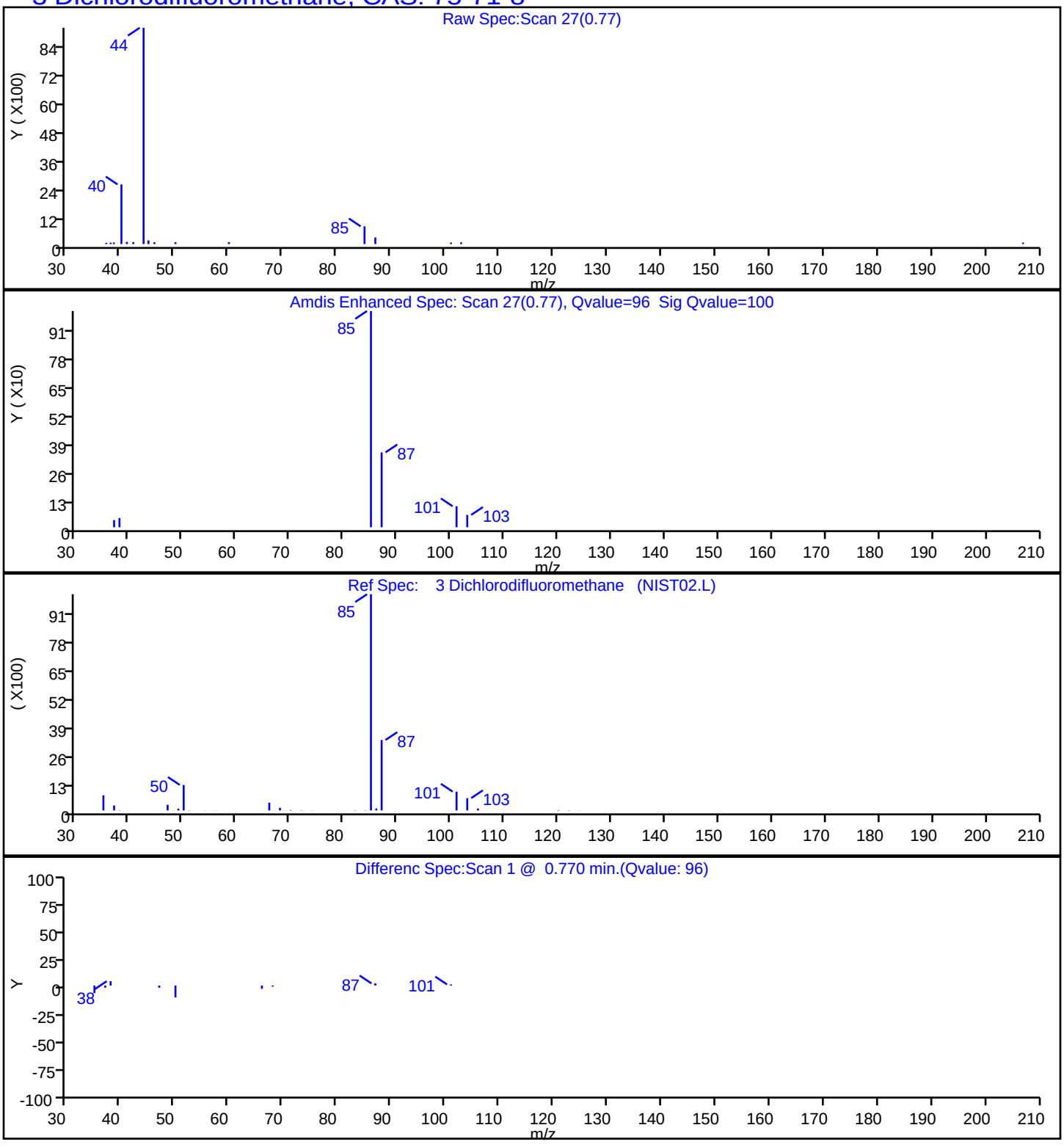
Column: Rtx-624 ( 0.25 mm)



Eurofins TestAmerica, Edison

| | | | | | |
|---|---|---|---|---|---|
| Data File: | \\chromfs\Edison\ChromData\CVOAMS13\20200909-116494.b\P79548.D | | | | |
| Injection Date: | 10-Sep-2020 01:06:30 | Instrument ID: | CVOAMS13 | | |
| Lims ID: | 460-217547-A-4 | Lab Sample ID: | 460-217547-4 | | |
| Client ID: | MW-206 | | | | |
| Operator ID: | | ALS Bottle#: | 18 | Worklist Smp#: | 19 |
| Purge Vol: | 5.000 mL | Dil. Factor: | 1.0000 | | |
| Method: | 8260W_13 | Limit Group: | VOA - 8260C Water and Solid | | |
| Column: | Rtx-624 ( 0.25 mm) | Detector | MS SCAN | | |

## 3 Dichlorodifluoromethane, CAS: 75-71-8



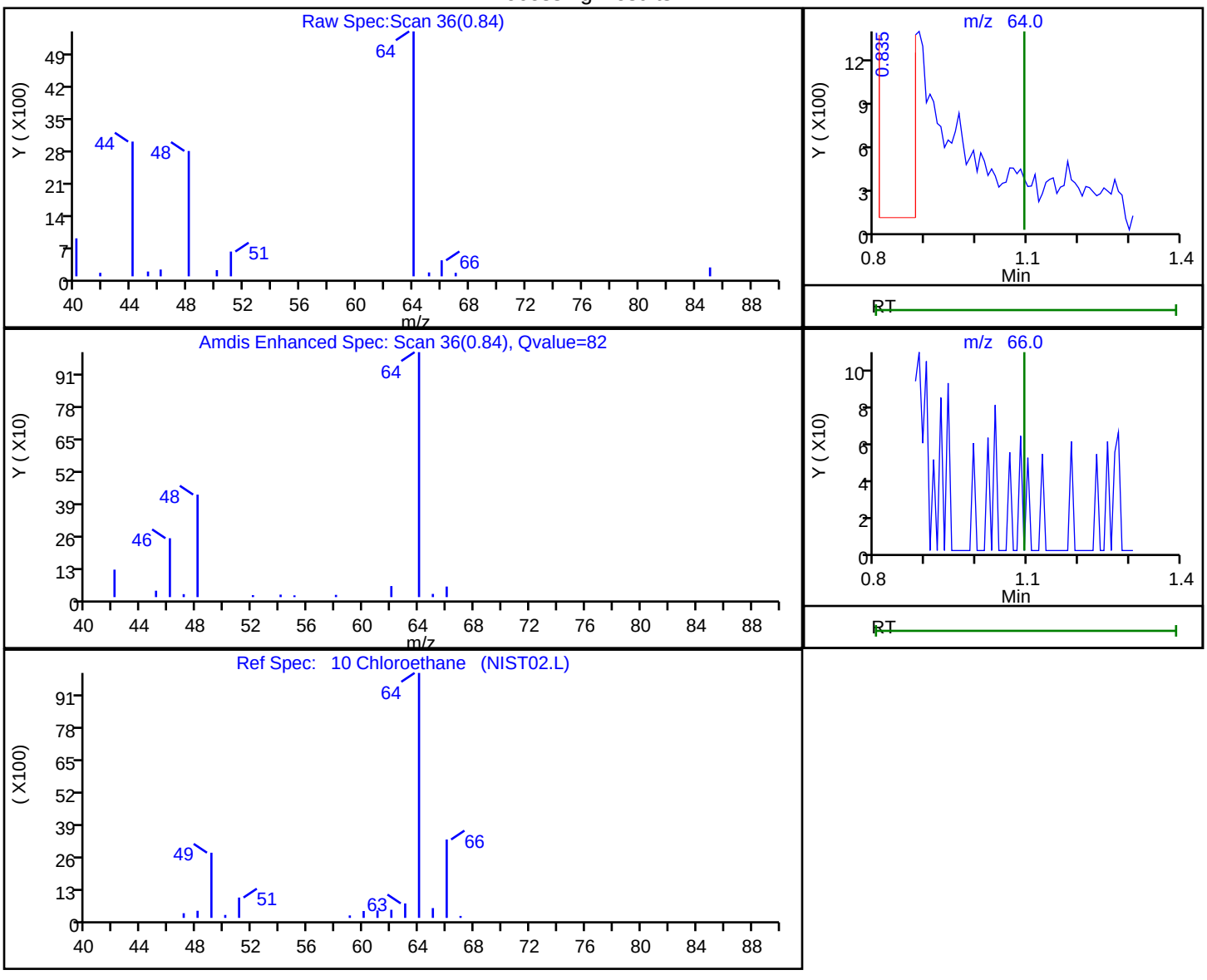
User Disabled Compound Report

Eurofins TestAmerica, Edison

| | | | |
|---|---|---|---|
| Data File: | \\chromfs\Edison\ChromData\CVOAMS13\20200909-116494.b\P79548.D | | |
| Injection Date: | 10-Sep-2020 01:06:30 | Instrument ID: | CVOAMS13 |
| Lims ID: | 460-217547-A-4 | Lab Sample ID: | 460-217547-4 |
| Client ID: | MW-206 | | |
| Operator ID: | | ALS Bottle#: | 18 Worklist Smp#: 19 |
| Purge Vol: | 5.000 mL | Dil. Factor: | 1.0000 |
| Method: | 8260W_13 | Limit Group: | VOA - 8260C Water and Solid |
| Column: | Rtx-624 ( 0.25 mm) | Detector | MS SCAN |

## 10 Chloroethane, CAS: 75-00-3

Processing Results




| RT | Mass | Response | Amount |
|---|---|---|---|
| 0.84 | 64.00 | 12596 | 6.818235 |
| 0.84 | 66.00 | 688 | |

Reviewer: sgroa, 10-Sep-2020 08:08:37

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

Eurofins TestAmerica, Edison

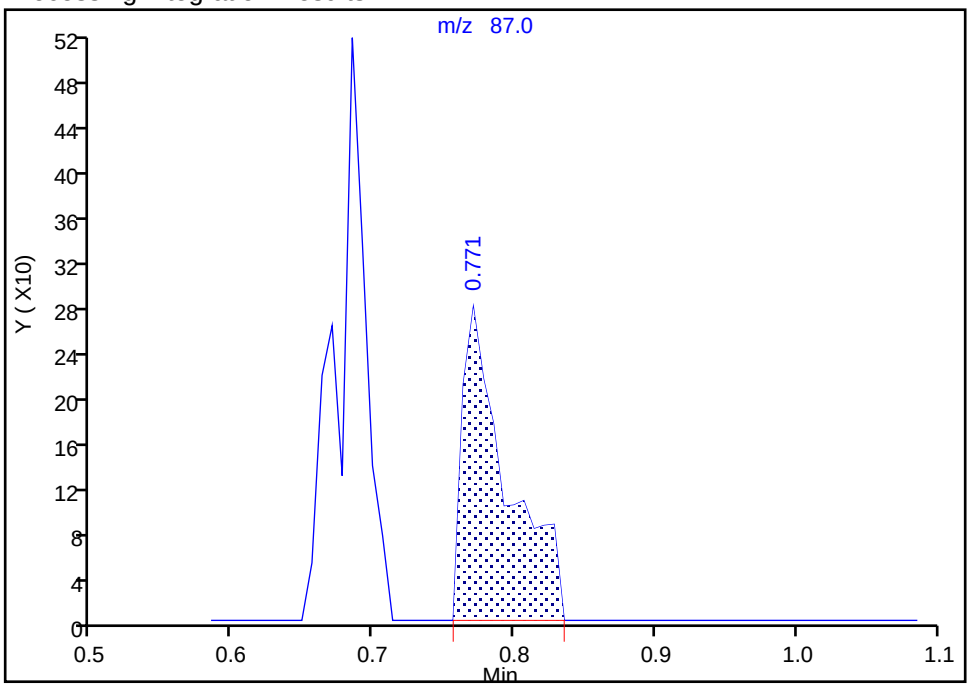
| | | | |
|---|---|---|---|
| Data File: | \\chromfs\Edison\ChromData\CVOAMS13\20200909-116494.b\P79548.D | | |
| Injection Date: | 10-Sep-2020 01:06:30 | Instrument ID: | CVOAMS13 |
| Lims ID: | 460-217547-A-4 | Lab Sample ID: | 460-217547-4 |
| Client ID: | MW-206 | | |
| Operator ID: | | ALS Bottle#: | 18 Worklist Smp#: 19 |
| Purge Vol: | 5.000 mL | Dil. Factor: | 1.0000 |
| Method: | 8260W_13 | Limit Group: | VOA - 8260C Water and Solid |
| Column: | Rtx-624 ( 0.25 mm) | Detector | MS SCAN |

## 3 Dichlorodifluoromethane, CAS: 75-71-8

Signal: 2

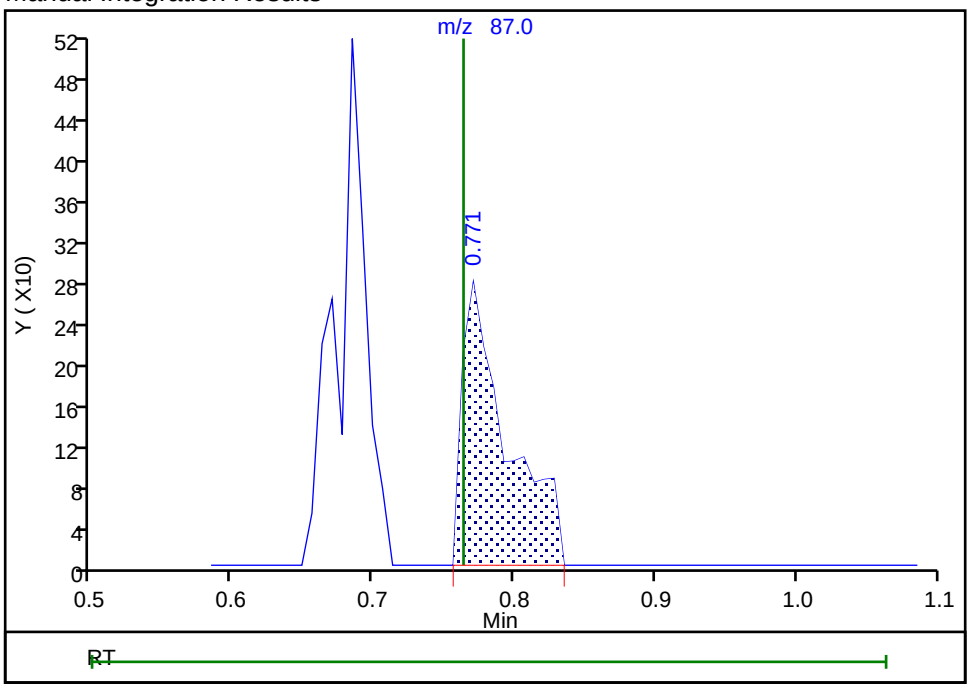
Processing Integration Results

RT: 0.77
Area: 616
Amount: 0.596290
Amount Units: ug/l




Manual Integration Results

RT: 0.77
Area: 616
Amount: 0.596290
Amount Units: ug/l




Reviewer: sgroa, 10-Sep-2020 08:08:31
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

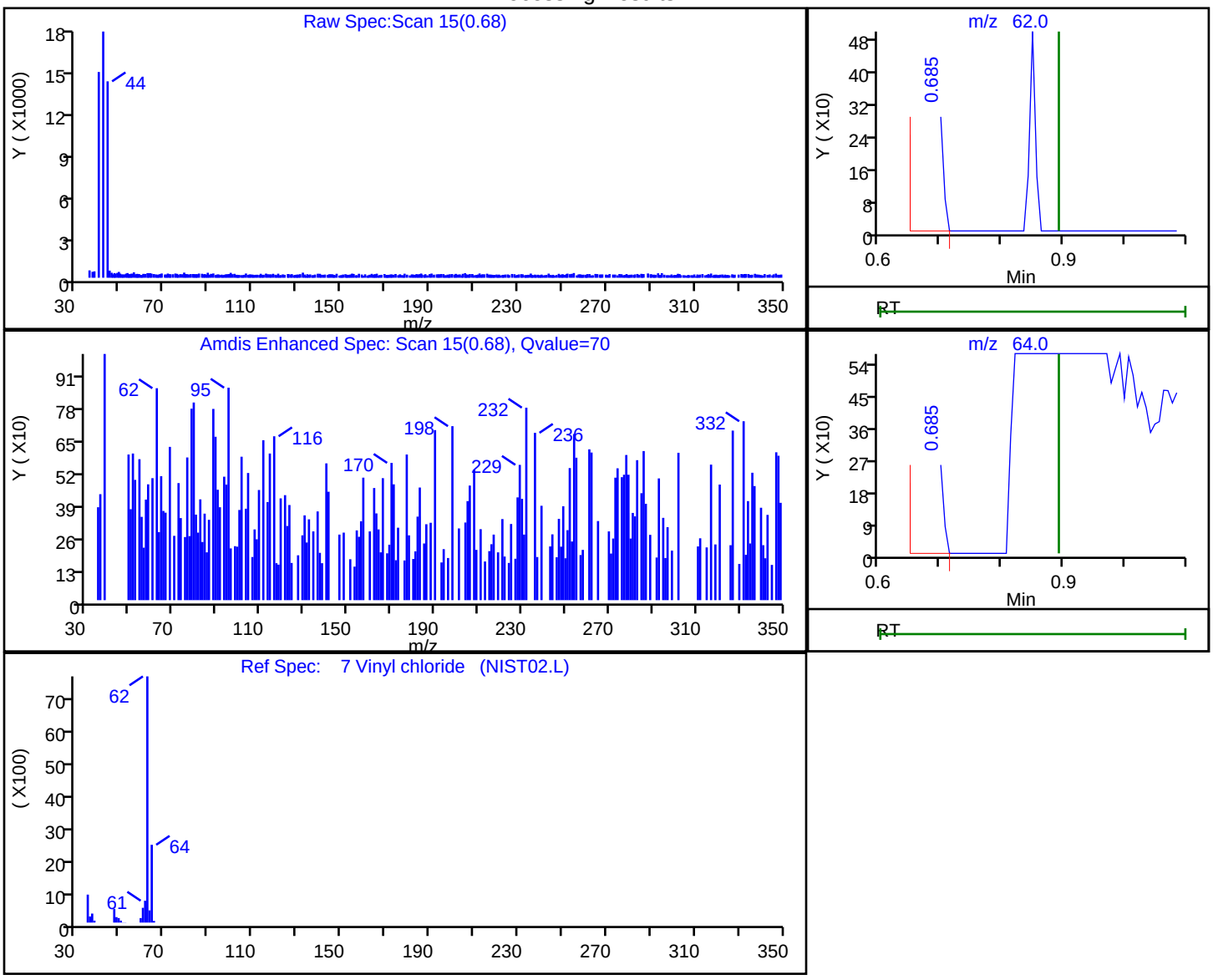
User Disabled Compound Report

Eurofins TestAmerica, Edison

| | | | |
|---|---|---|---|
| Data File: | \\chromfs\Edison\ChromData\CVOAMS13\20200909-116494.b\P79548.D | | |
| Injection Date: | 10-Sep-2020 01:06:30 | Instrument ID: | CVOAMS13 |
| Lims ID: | 460-217547-A-4 | Lab Sample ID: | 460-217547-4 |
| Client ID: | MW-206 | | |
| Operator ID: | | ALS Bottle#: | 18 Worklist Smp#: 19 |
| Purge Vol: | 5.000 mL | Dil. Factor: | 1.0000 |
| Method: | 8260W_13 | Limit Group: | VOA - 8260C Water and Solid |
| Column: | Rtx-624 ( 0.25 mm) | Detector | MS SCAN |

## 7 Vinyl chloride, CAS: 75-01-4

Processing Results




| RT | Mass | Response | Amount |
|---|---|---|---|
| 0.68 | 62.00 | 1040 | 0.299096 |
| 0.68 | 64.00 | 615 | |

Reviewer: sgroa, 10-Sep-2020 08:08:35

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Edison  Job No.: 460-217547-1

SDG No.:

Client Sample ID: MW-213  Lab Sample ID: 460-217547-5

Matrix: Water  Lab File ID: P79514.D

Analysis Method: 8260C  Date Collected: 09/02/2020 09:40

Sample wt/vol: 5(mL)  Date Analyzed: 09/09/2020 11:42

Soil Aliquot Vol:  Dilution Factor: 1

Soil Extract Vol.:  GC Column: Rtx-624 ID: 0.25(mm)

% Moisture:  Level: (low/med) Low

Analysis Batch No.: 722709  Units: ug/L

| CAS NO. | COMPOUND NAME | RESULT | Q | RL | MDL |
|---|---|---|---|---|---|
| 71-55-6 | 1,1,1-Trichloroethane | 0.24 | U | 1.0 | 0.24 |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 0.37 | U | 1.0 | 0.37 |
| 76-13-1 | 1,1,2-Trichloro-1,2,2-trifluoroethane | 0.31 | U | 1.0 | 0.31 |
| 79-00-5 | 1,1,2-Trichloroethane | 0.43 | U | 1.0 | 0.43 |
| 75-34-3 | 1,1-Dichloroethane | 0.26 | U | 1.0 | 0.26 |
| 75-35-4 | 1,1-Dichloroethene | 0.26 | U | 1.0 | 0.26 |
| 87-61-6 | 1,2,3-Trichlorobenzene | 0.36 | U | 1.0 | 0.36 |
| 120-82-1 | 1,2,4-Trichlorobenzene | 0.37 | U | 1.0 | 0.37 |
| 78-87-5 | 1,2-Dichloropropane | 0.35 | U | 1.0 | 0.35 |
| 541-73-1 | 1,3-Dichlorobenzene | 0.34 | U | 1.0 | 0.34 |
| 106-46-7 | 1,4-Dichlorobenzene | 0.33 | U | 1.0 | 0.33 |
| 123-91-1 | 1,4-Dioxane | 28 | U | 50 | 28 |
| 78-93-3 | 2-Butanone (MEK) | 1.9 | U | 5.0 | 1.9 |
| 591-78-6 | 2-Hexanone | 1.1 | U | 5.0 | 1.1 |
| 108-10-1 | 4-Methyl-2-pentanone (MIBK) | 1.3 | U | 5.0 | 1.3 |
| 67-64-1 | Acetone | 4.4 | U | 5.0 | 4.4 |
| 71-43-2 | Benzene | 0.20 | U | 1.0 | 0.20 |
| 75-25-2 | Bromoform | 0.54 | U | 1.0 | 0.54 |
| 74-83-9 | Bromomethane | 0.55 | U | 1.0 | 0.55 |
| 75-15-0 | Carbon disulfide | 0.82 | U | 1.0 | 0.82 |
| 56-23-5 | Carbon tetrachloride | 0.21 | U | 1.0 | 0.21 |
| 108-90-7 | Chlorobenzene | 0.38 | U | 1.0 | 0.38 |
| 74-97-5 | Chlorobromomethane | 0.41 | U | 1.0 | 0.41 |
| 124-48-1 | Chlorodibromomethane | 0.28 | U | 1.0 | 0.28 |
| 75-00-3 | Chloroethane | 0.32 | U | 1.0 | 0.32 |
| 67-66-3 | Chloroform | 0.33 | U | 1.0 | 0.33 |
| 74-87-3 | Chloromethane | 0.40 | U | 1.0 | 0.40 |
| 156-59-2 | cis-1,2-Dichloroethene | 0.22 | U | 1.0 | 0.22 |
| 10061-01-5 | cis-1,3-Dichloropropene | 0.22 | U | 1.0 | 0.22 |
| 110-82-7 | Cyclohexane | 0.32 | U | 1.0 | 0.32 |
| 75-27-4 | Dichlorobromomethane | 0.34 | U | 1.0 | 0.34 |
| 75-71-8 | Dichlorodifluoromethane | 40 |  | 1.0 | 0.31 |
| 100-41-4 | Ethylbenzene | 0.30 | U | 1.0 | 0.30 |
| 106-93-4 | Ethylene Dibromide | 0.50 | U | 1.0 | 0.50 |
| 98-82-8 | Isopropylbenzene | 0.34 | U | 1.0 | 0.34 |

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Edison  Job No.: 460-217547-1

SDG No.:

Client Sample ID: MW-213  Lab Sample ID: 460-217547-5

Matrix: Water  Lab File ID: P79514.D

Analysis Method: 8260C  Date Collected: 09/02/2020 09:40

Sample wt/vol: 5(mL)  Date Analyzed: 09/09/2020 11:42

Soil Aliquot Vol:  Dilution Factor: 1

Soil Extract Vol.:  GC Column: Rtx-624  ID: 0.25(mm)

% Moisture:  Level: (low/med) Low

Analysis Batch No.: 722709  Units: ug/L

| CAS NO. | COMPOUND NAME | RESULT | Q | RL | MDL |
|---|---|---|---|---|---|
| 79-20-9 | Methyl acetate | 0.79 | U | 5.0 | 0.79 |
| 1634-04-4 | Methyl tert-butyl ether | 0.47 | U | 1.0 | 0.47 |
| 108-87-2 | Methylcyclohexane | 0.26 | U | 1.0 | 0.26 |
| 75-09-2 | Methylene Chloride | 0.44 | J | 1.0 | 0.32 |
| 179601-23-1 | m-Xylene & p-Xylene | 0.30 | U | 1.0 | 0.30 |
| 95-47-6 | o-Xylene | 0.36 | U | 1.0 | 0.36 |
| 100-42-5 | Styrene | 0.42 | U | 1.0 | 0.42 |
| 127-18-4 | Tetrachloroethene | 0.25 | U | 1.0 | 0.25 |
| 108-88-3 | Toluene | 0.38 | U | 1.0 | 0.38 |
| 156-60-5 | trans-1,2-Dichloroethene | 0.24 | U | 1.0 | 0.24 |
| 10061-02-6 | trans-1,3-Dichloropropene | 0.49 | U | 1.0 | 0.49 |
| 79-01-6 | Trichloroethene | 0.31 | U | 1.0 | 0.31 |
| 75-69-4 | Trichlorofluoromethane | 56 |  | 1.0 | 0.32 |
| 75-01-4 | Vinyl chloride | 0.17 | U | 1.0 | 0.17 |
| 107-06-2 | 1,2-Dichloroethane | 0.43 | U | 1.0 | 0.43 |
| 95-50-1 | 1,2-Dichlorobenzene | 0.43 | U | 1.0 | 0.43 |
| 96-12-8 | 1,2-Dibromo-3-Chloropropane | 0.38 | U | 1.0 | 0.38 |

| CAS NO. | SURROGATE | %REC | Q | LIMITS |
|---|---|---|---|---|
| 17060-07-0 | 1,2-Dichloroethane-d4 (Surr) | 93 |  | 75-123 |
| 460-00-4 | 4-Bromofluorobenzene | 104 |  | 76-120 |
| 1868-53-7 | Dibromofluoromethane (Surr) | 99 |  | 77-124 |
| 2037-26-5 | Toluene-d8 (Surr) | 96 |  | 80-120 |

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: Eurofins TestAmerica, Edison  Job No.: 460-217547-1

SDG No.:

Client Sample ID: MW-213  Lab Sample ID: 460-217547-5

Matrix: Water  Lab File ID: P79514.D

Analysis Method: 8260C  Date Collected: 09/02/2020 09:40

Sample wt/vol: 5(mL)  Date Analyzed: 09/09/2020 11:42

Soil Aliquot Vol:  Dilution Factor: 1

Soil Extract Vol.:  GC Column: Rtx-624  ID: 0.25(mm)

% Moisture:  Level: (low/med) Low

Analysis Batch No.: 722709  Units: ug/L

Number TICs Found: 1  TIC Result Total: 27

| CAS NO. | COMPOUND NAME | RT | RESULT | Q | MATCH QUALITY |
|---|---|---|---|---|---|
| 75-43-4 | Fluorodichloromethane | 1.19 | 27 | J N | 90% |

Eurofins TestAmerica, Edison
Target Compound Quantitation Report

Data File: \\chromfs\Edison\ChromData\CVOAMS13\20200909-116470.b\P79514.D
Lims ID: 460-217547-B-5
Client ID: MW-213
Sample Type: Client
Inject. Date: 09-Sep-2020 11:42:30 ALS Bottle#: 10 Worklist Smp#: 11
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: 460-217547-B-5
Misc. Info.: 460-0116470-011
Operator ID: Instrument ID: CVOAMS13

Method: \\chromfs\Edison\ChromData\CVOAMS13\20200909-116470.b\8260W_13.m
Limit Group: VOA - 8260C Water and Solid
Last Update: 10-Sep-2020 11:14:21 Calib Date: 04-Sep-2020 16:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Edison\ChromData\CVOAMS13\20200904-116303.b\P79359.D

Column 1 : Rtx-624 ( 0.25 mm) Det: MS SCAN
Process Host: CTX1019

First Level Reviewer: moroneyc Date: 09-Sep-2020 11:08:17

| Compound | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q | Response | OnCol Amt ug/l | Flags |
|---|---|---|---|---|---|---|---|---|
| 3 Dichlorodifluoromethane | 85 | 0.764 | 0.764 | 0.000 | 99 | 142563 | 39.6 | |
| 12 Trichlorofluoromethane | 101 | 1.151 | 1.150 | 0.001 | 98 | 188687 | 56.1 | M |
| 27 Methylene Chloride | 84 | 1.695 | 1.688 | 0.007 | 91 | 1276 | 0.4403 | |
| * 33 TBA-d9 (IS) | 65 | 1.845 | 1.845 | 0.000 | 99 | 101548 | 1000.0 | |
| $ 51 Dibromofluoromethane (Surr) | 113 | 2.777 | 2.769 | 0.008 | 98 | 113942 | 49.5 | |
| * 53 2-Butanone-d5 | 46 | 2.827 | 2.827 | 0.000 | 99 | 115323 | 250.0 | |
| $ 61 1,2-Dichloroethane-d4 (Surr) | 65 | 3.156 | 3.156 | 0.000 | 0 | 107519 | 46.6 | |
| * 66 Fluorobenzene | 96 | 3.385 | 3.385 | 0.000 | 99 | 534191 | 50.0 | |
| * 76 1,4-Dioxane-d8 | 96 | 4.238 | 4.238 | 0.000 | 63 | 13474 | 1000.0 | |
| $ 82 Toluene-d8 (Surr) | 98 | 4.882 | 4.882 | 0.000 | 99 | 478415 | 48.1 | |
| * 96 Chlorobenzene-d5 | 117 | 6.723 | 6.723 | 0.000 | 85 | 385835 | 50.0 | |
| $ 107 4-Bromofluorobenzene | 174 | 8.478 | 8.478 | 0.000 | 95 | 162797 | 52.1 | |
| * 123 1,4-Dichlorobenzene-d4 | 152 | 10.226 | 10.226 | 0.000 | 93 | 212790 | 50.0 | |

## QC Flag Legend

Review Flags
M - Manually Integrated

## Reagents:

8260ISNEW_00129 Amount Added: 1.00 Units: uL Run Reagent
8260SURR250_00212 Amount Added: 1.00 Units: uL Run Reagent

Eurofins TestAmerica, Edison
Tentatively Identified Quantitation Report

| | | | | | |
|---|---|---|---|---|---|
| Data File: | \\chromfs\Edison\ChromData\CVOAMS13\20200909-116470.b\P79514.D | | | | |
| Lims ID: | 460-217547-B-5 | | | | |
| Client ID: | MW-213 | | | | |
| Sample Type: | Client | | | | |
| Inject. Date: | 09-Sep-2020 11:42:30 | ALS Bottle#: | 10 | Worklist Smp#: | 11 |
| Purge Vol: | 5.000 mL | Dil. Factor: | 1.0000 | | |
| Sample Info: | 460-217547-B-5 | | | | |
| Misc. Info.: | 460-0116470-011 | | | | |
| Operator ID: | | Instrument ID: | CVOAMS13 | | |
| Method: | \\chromfs\Edison\ChromData\CVOAMS13\20200909-116470.b\8260W_13.m | | | | |
| Limit Group: | VOA - 8260C Water and Solid | | | | |
| Last Update: | 10-Sep-2020 11:14:21 | Calib Date: | 04-Sep-2020 16:58:30 | | |
| Tic RT Window: | 0.000 -0.000 | Response: | area | | |
| Quant By: | Nearest ISTD | Quant LOD: | 10.00000 | | |
| MS Library: | \\chromfs\Edison\Database\NIST02.L | | | | |
| Min. Match: | 70 | | | | |
| Column 1 : | Rtx-624 ( 0.25 mm) | | Det: MS SCAN | | |
| Process Host: | CTX1019 | | | | |
| First Level Reviewer: moroneyc | | Date: | 09-Sep-2020 11:08:17 | | |

Tentative Identified Compound Results

| RT | Area | Amount ug/l | Quant Cpnd | Qual | Lib Entry | Molecular Formula | Mol. Weight | Flags |
|---|---|---|---|---|---|---|---|---|
| 75-43-4 | Fluorodichloromethane | | | | | | | |
| 1.186 | 564995 | 26.6 | 66 | 90 | 4401 | CHCl2F | 102 | |

Quantitation Compounds

| Compound | RT | Area | Amount ug/l |
|---|---|---|---|
| * 66 Fluorobenzene | 3.385 | 1060464 | 50.0 |

## QC Flag Legend

Processing Flags

## Reagents:

| | | | | |
|---|---|---|---|---|
| 8260ISNEW_00129 | Amount Added: | 1.00 | Units: uL | Run Reagent |
| 8260SURR250_00212 | Amount Added: | 1.00 | Units: uL | Run Reagent |

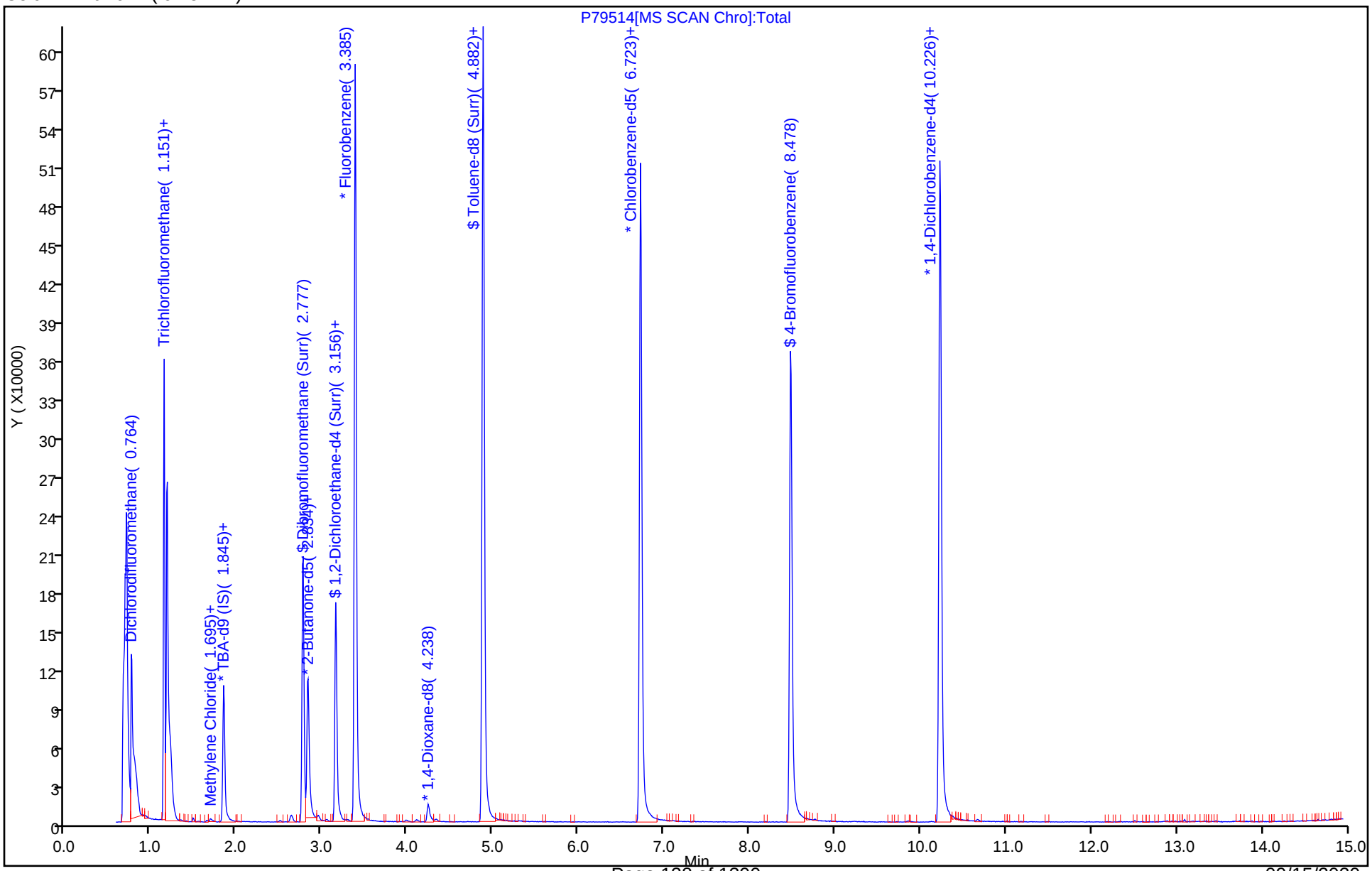
Report Date: 10-Sep-2020 11:14:53 Chrom Revision: 2.3 20-Aug-2020 13:57:12

Eurofins TestAmerica, Edison

Data File: \\chromfs\Edison\ChromData\CVOAMS13\20200909-116470.b\P79514.D

| | | | | | |
|---|---|---|---|---|---|
| Injection Date: | 09-Sep-2020 11:42:30 | Instrument ID: | CVOAMS13 | Operator ID: | |
| Lims ID: | 460-217547-B-5 | Lab Sample ID: | 460-217547-5 | Worklist Smp#: | 11 |
| Client ID: | MW-213 | | | | |
| Purge Vol: | 5.000 mL | Dil. Factor: | 1.0000 | ALS Bottle#: | 10 |
| Method: | 8260W_13 | Limit Group: | VOA - 8260C Water and Solid | | |

Column: Rtx-624 ( 0.25 mm)



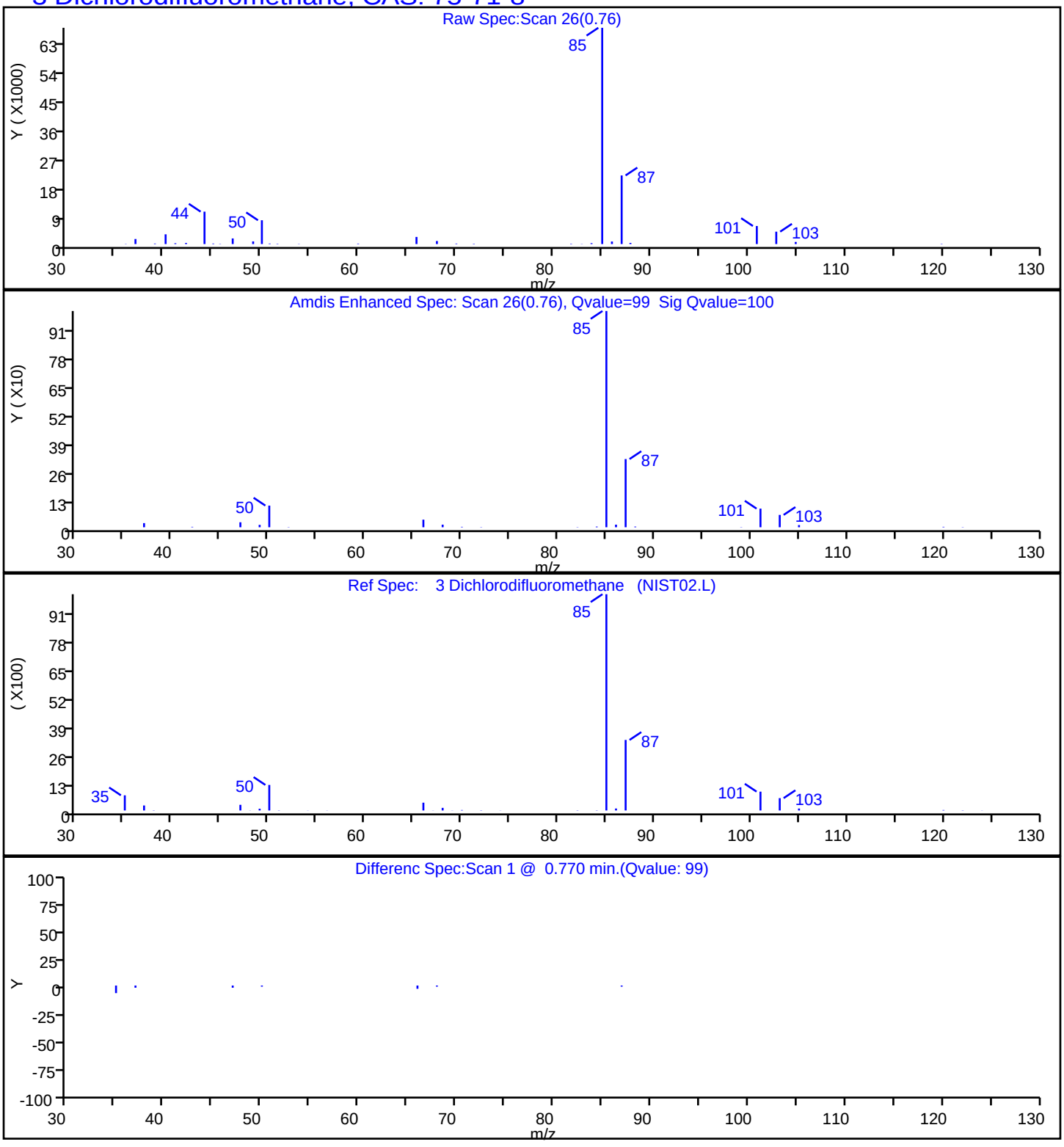
Report Date: 10-Sep-2020 11:14:53 Chrom Revision: 2.3 20-Aug-2020 13:57:12

Eurofins TestAmerica, Edison

Data File: \\chromfs\Edison\ChromData\CVOAMS13\20200909-116470.b\P79514.D

| | | | | | |
|---|---|---|---|---|---|
| Injection Date: | 09-Sep-2020 11:42:30 | Instrument ID: | CVOAMS13 | | |
| Lims ID: | 460-217547-B-5 | Lab Sample ID: | 460-217547-5 | | |
| Client ID: | MW-213 | | | | |
| Operator ID: | | ALS Bottle#: | 10 | Worklist Smp#: | 11 |
| Purge Vol: | 5.000 mL | Dil. Factor: | 1.0000 | | |
| Method: | 8260W_13 | Limit Group: | VOA - 8260C Water and Solid | | |
| Column: | Rtx-624 ( 0.25 mm) | Detector | MS SCAN | | |

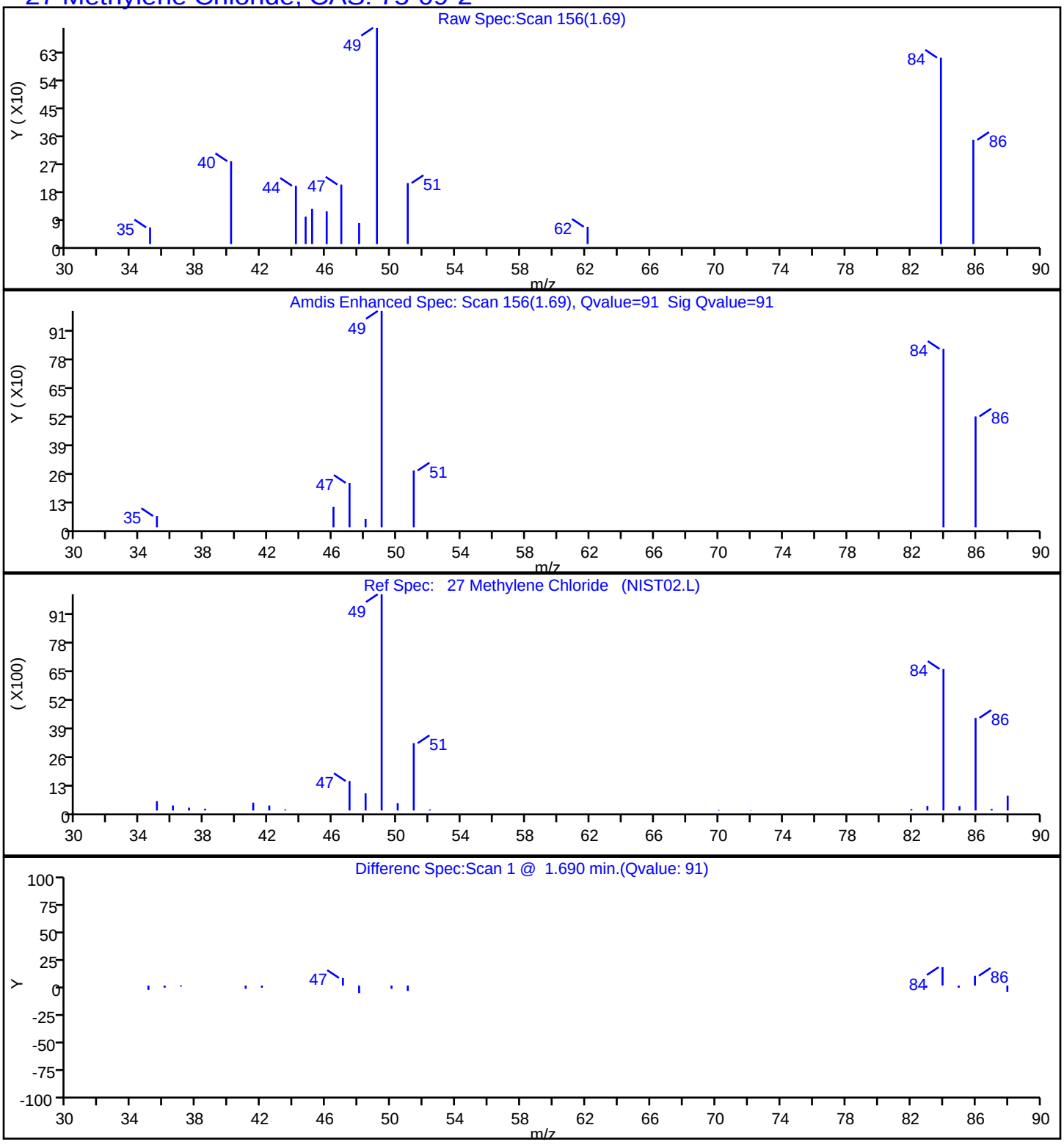
## 3 Dichlorodifluoromethane, CAS: 75-71-8



Eurofins TestAmerica, Edison

| | | | |
|---|---|---|---|
| Data File: | \\chromfs\Edison\ChromData\CVOAMS13\20200909-116470.b\P79514.D | | |
| Injection Date: | 09-Sep-2020 11:42:30 | Instrument ID: | CVOAMS13 |
| Lims ID: | 460-217547-B-5 | Lab Sample ID: | 460-217547-5 |
| Client ID: | MW-213 | | |
| Operator ID: | | ALS Bottle#: | 10 Worklist Smp#: 11 |
| Purge Vol: | 5.000 mL | Dil. Factor: | 1.0000 |
| Method: | 8260W_13 | Limit Group: | VOA - 8260C Water and Solid |
| Column: | Rtx-624 ( 0.25 mm) | Detector | MS SCAN |

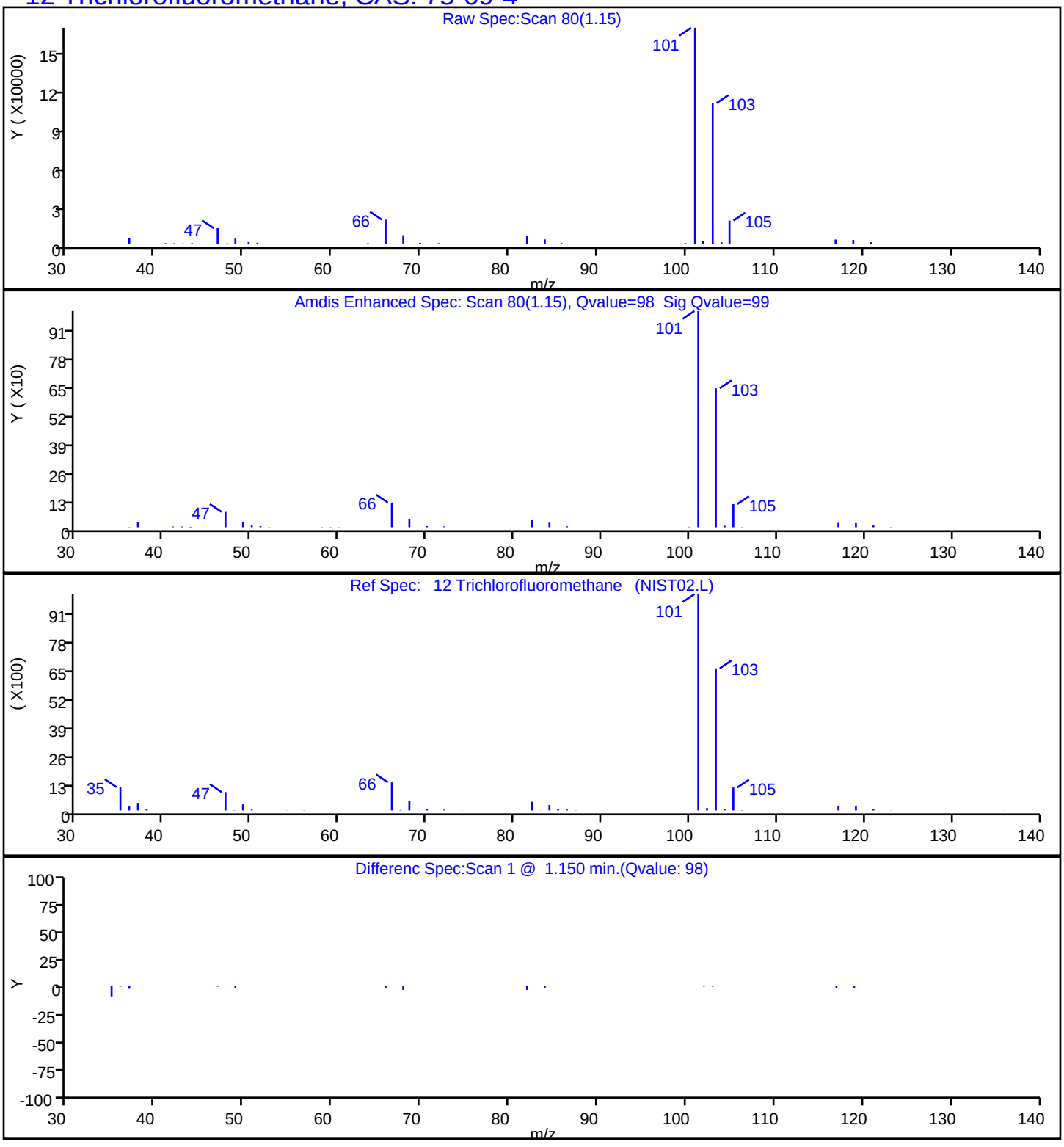
## 27 Methylene Chloride, CAS: 75-09-2



Eurofins TestAmerica, Edison

| | | | | | |
|---|---|---|---|---|---|
| Data File: | \\chromfs\Edison\ChromData\CVOAMS13\20200909-116470.b\P79514.D | | | | |
| Injection Date: | 09-Sep-2020 11:42:30 | Instrument ID: | CVOAMS13 | | |
| Lims ID: | 460-217547-B-5 | Lab Sample ID: | 460-217547-5 | | |
| Client ID: | MW-213 | | | | |
| Operator ID: | | ALS Bottle#: | 10 | Worklist Smp#: | 11 |
| Purge Vol: | 5.000 mL | Dil. Factor: | 1.0000 | | |
| Method: | 8260W_13 | Limit Group: | VOA - 8260C Water and Solid | | |
| Column: | Rtx-624 ( 0.25 mm) | Detector | MS SCAN | | |

## 12 Trichlorofluoromethane, CAS: 75-69-4



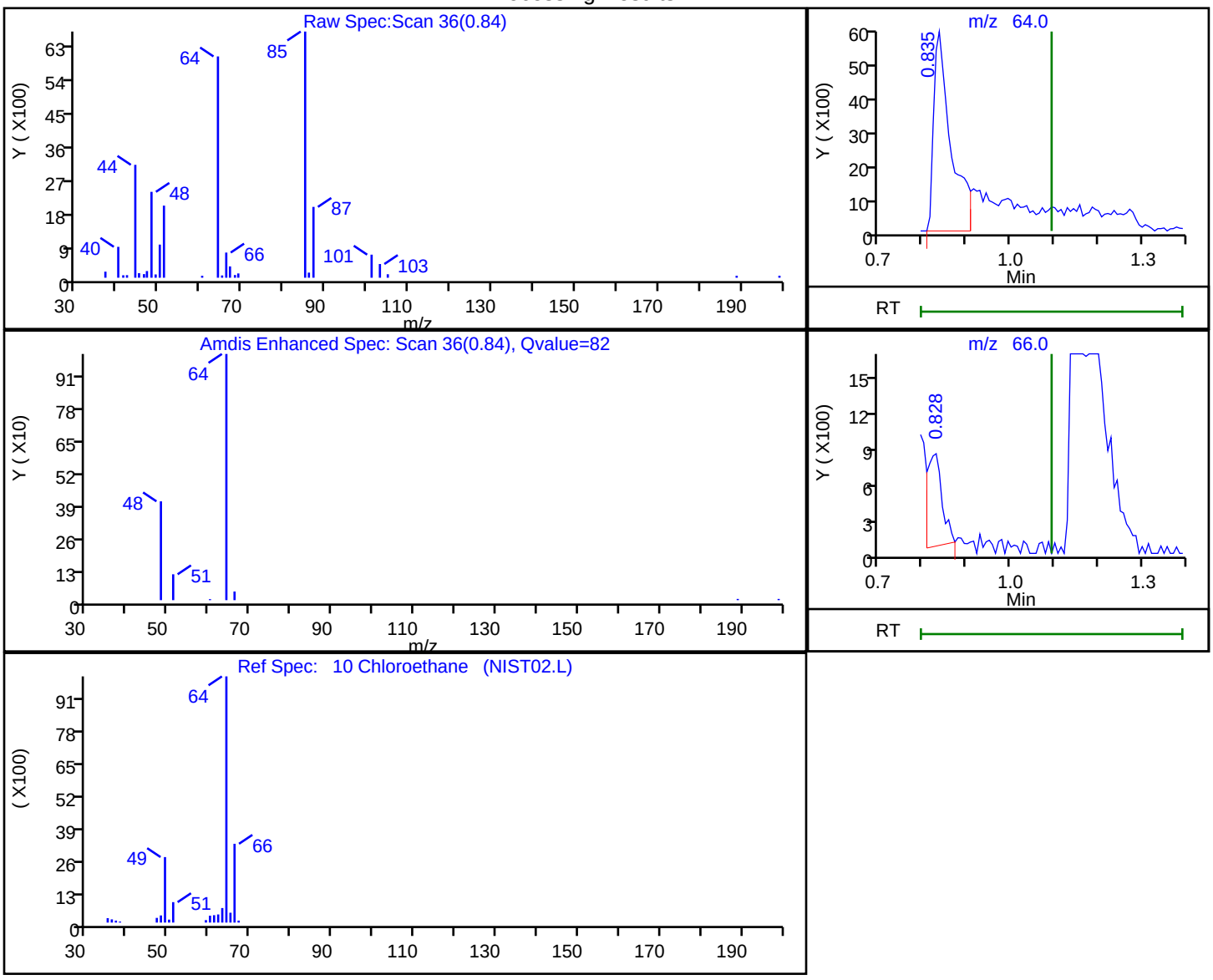
User Disabled Compound Report

Eurofins TestAmerica, Edison

| | | | |
|---|---|---|---|
| Data File: | \\chromfs\Edison\ChromData\CVOAMS13\20200909-116470.b\P79514.D | | |
| Injection Date: | 09-Sep-2020 11:42:30 | Instrument ID: | CVOAMS13 |
| Lims ID: | 460-217547-B-5 | Lab Sample ID: | 460-217547-5 |
| Client ID: | MW-213 | | |
| Operator ID: | | ALS Bottle#: | 10 Worklist Smp#: 11 |
| Purge Vol: | 5.000 mL | Dil. Factor: | 1.0000 |
| Method: | 8260W_13 | Limit Group: | VOA - 8260C Water and Solid |
| Column: | Rtx-624 ( 0.25 mm) | Detector | MS SCAN |

## 10 Chloroethane, CAS: 75-00-3

Processing Results




| RT | Mass | Response | Amount |
|---|---|---|---|
| 0.84 | 64.00 | 16343 | 8.351067 |
| 0.83 | 66.00 | 1809 | |

Reviewer: moroneyc, 09-Sep-2020 11:08:00

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Edison

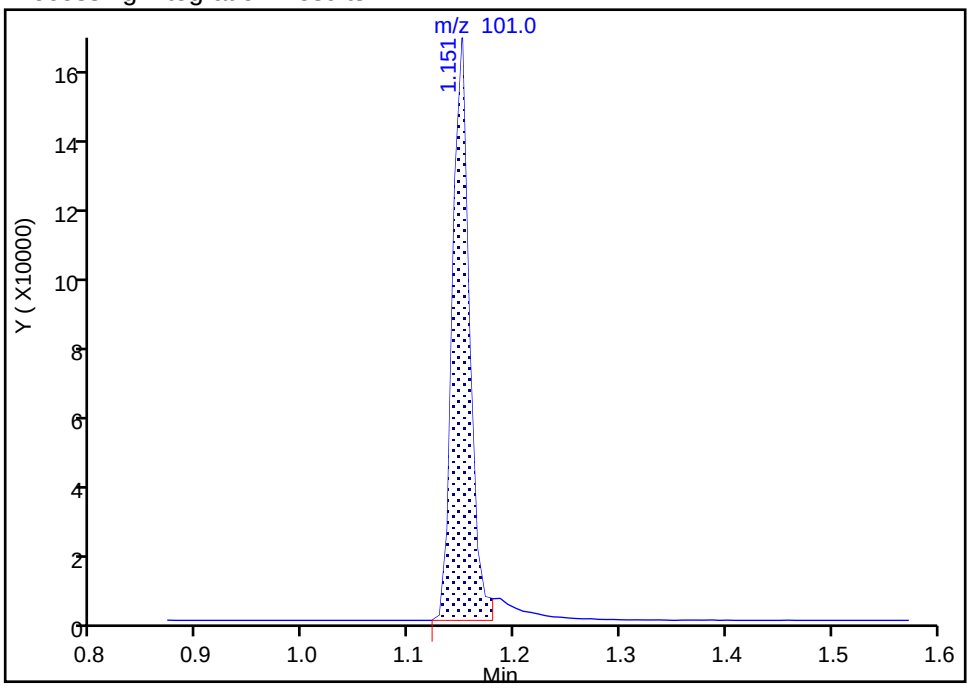
| | | | |
|---|---|---|---|
| Data File: | \\chromfs\Edison\ChromData\CVOAMS13\20200909-116470.b\P79514.D | | |
| Injection Date: | 09-Sep-2020 11:42:30 | Instrument ID: | CVOAMS13 |
| Lims ID: | 460-217547-B-5 | Lab Sample ID: | 460-217547-5 |
| Client ID: | MW-213 | | |
| Operator ID: | | ALS Bottle#: | 10 Worklist Smp#: 11 |
| Purge Vol: | 5.000 mL | Dil. Factor: | 1.0000 |
| Method: | 8260W_13 | Limit Group: | VOA - 8260C Water and Solid |
| Column: | Rtx-624 ( 0.25 mm) | Detector | MS SCAN |

## 12 Trichlorofluoromethane, CAS: 75-69-4

Signal: 1

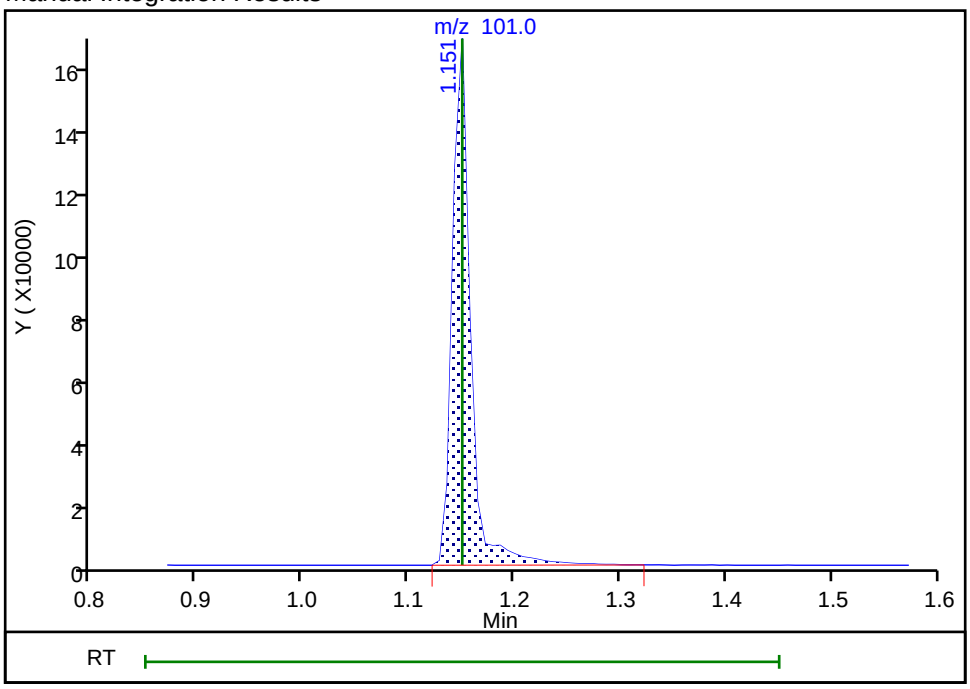
Processing Integration Results

RT: 1.15
Area: 177716
Amount: 52.864696
Amount Units: ug/l




Manual Integration Results

RT: 1.15
Area: 188687
Amount: 56.128209
Amount Units: ug/l




Reviewer: xuyvo, 09-Sep-2020 19:53:45

Audit Action: Manually Integrated Audit Reason: Incomplete Integration

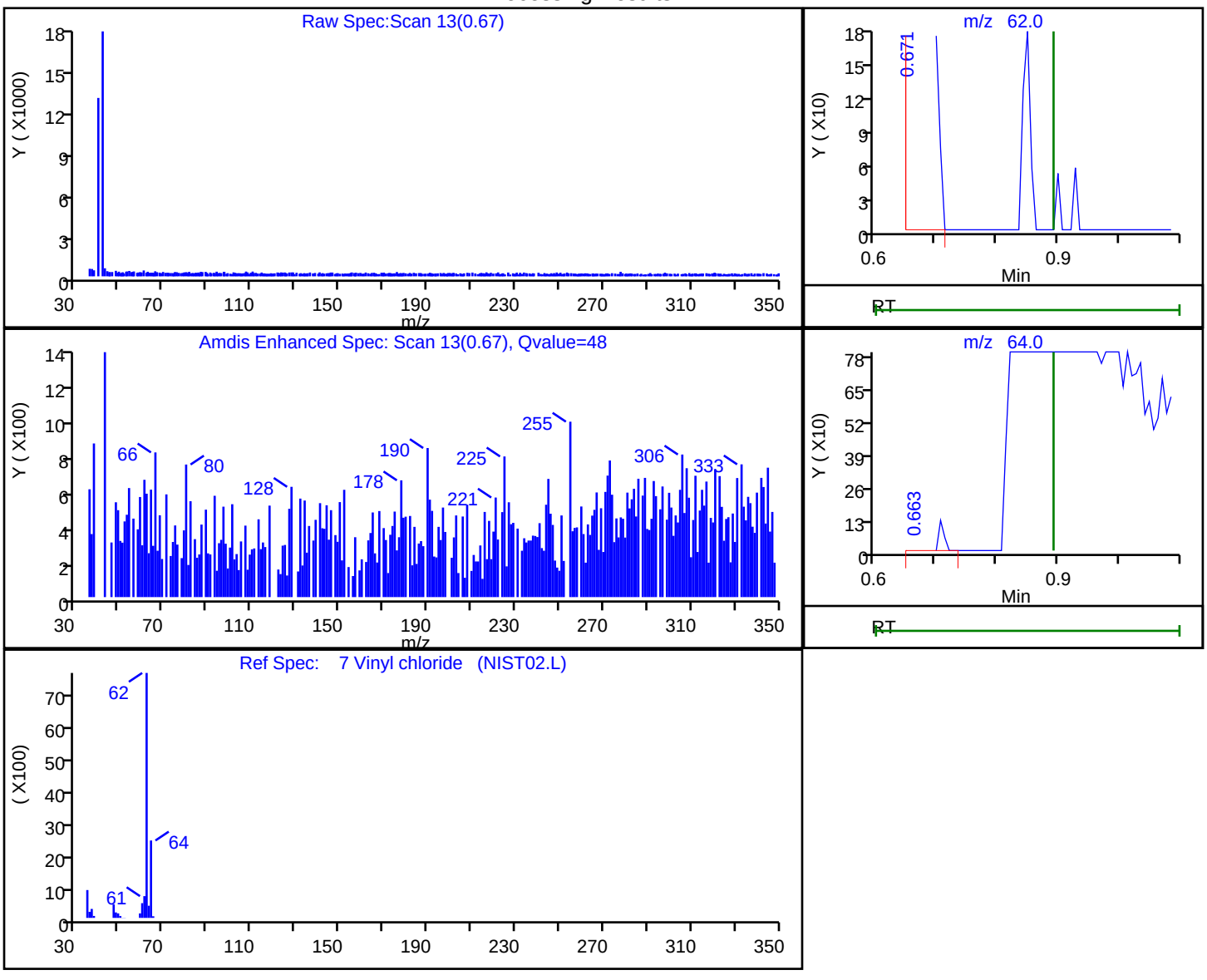
User Disabled Compound Report

Eurofins TestAmerica, Edison

| | | | |
|---|---|---|---|
| Data File: | \\chromfs\Edison\ChromData\CVOAMS13\20200909-116470.b\P79514.D | | |
| Injection Date: | 09-Sep-2020 11:42:30 | Instrument ID: | CVOAMS13 |
| Lims ID: | 460-217547-B-5 | Lab Sample ID: | 460-217547-5 |
| Client ID: | MW-213 | | |
| Operator ID: | | ALS Bottle#: | 10 Worklist Smp#: 11 |
| Purge Vol: | 5.000 mL | Dil. Factor: | 1.0000 |
| Method: | 8260W_13 | Limit Group: | VOA - 8260C Water and Solid |
| Column: | Rtx-624 ( 0.25 mm) | Detector | MS SCAN |

## 7 Vinyl chloride, CAS: 75-01-4

Processing Results




| RT | Mass | Response | Amount |
|---|---|---|---|
| 0.67 | 62.00 | 690 | 0.187325 |
| 0.66 | 64.00 | 707 | |

Reviewer: moroneyc, 09-Sep-2020 11:07:58

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

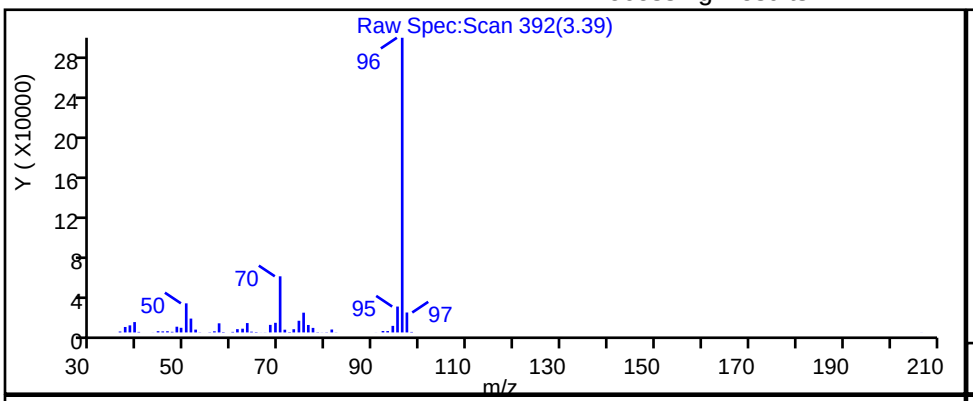
User Disabled Compound Report

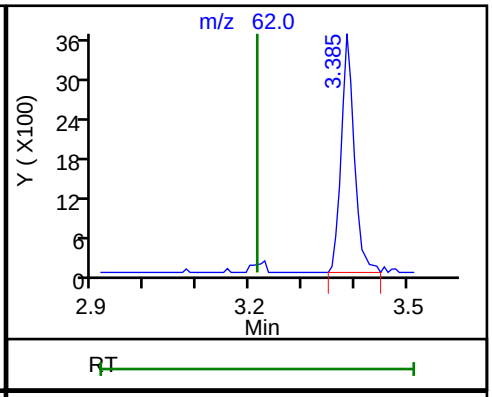
Eurofins TestAmerica, Edison

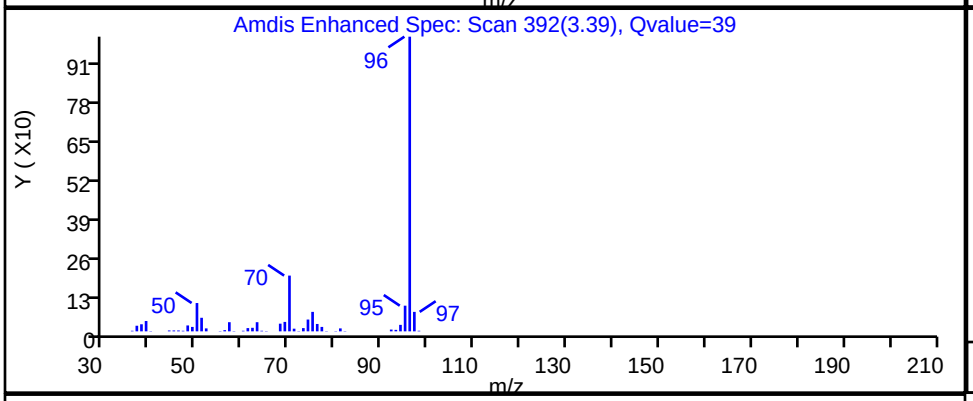
| | | | |
|---|---|---|---|
| Data File: | \\chromfs\Edison\ChromData\CVOAMS13\20200909-116470.b\P79514.D | | |
| Injection Date: | 09-Sep-2020 11:42:30 | Instrument ID: | CVOAMS13 |
| Lims ID: | 460-217547-B-5 | Lab Sample ID: | 460-217547-5 |
| Client ID: | MW-213 | | |
| Operator ID: | | ALS Bottle#: | 10 Worklist Smp#: 11 |
| Purge Vol: | 5.000 mL | Dil. Factor: | 1.0000 |
| Method: | 8260W_13 | Limit Group: | VOA - 8260C Water and Solid |
| Column: | Rtx-624 ( 0.25 mm) | Detector | MS SCAN |

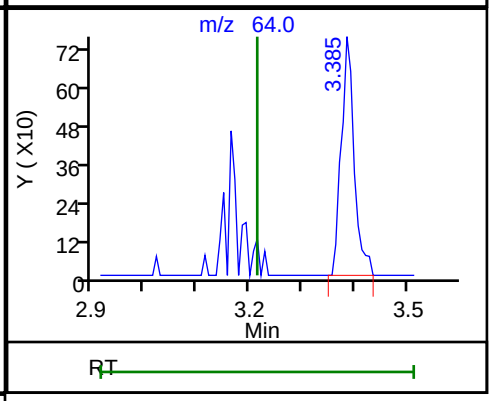
## 63 1,2-Dichloroethane, CAS: 107-06-2

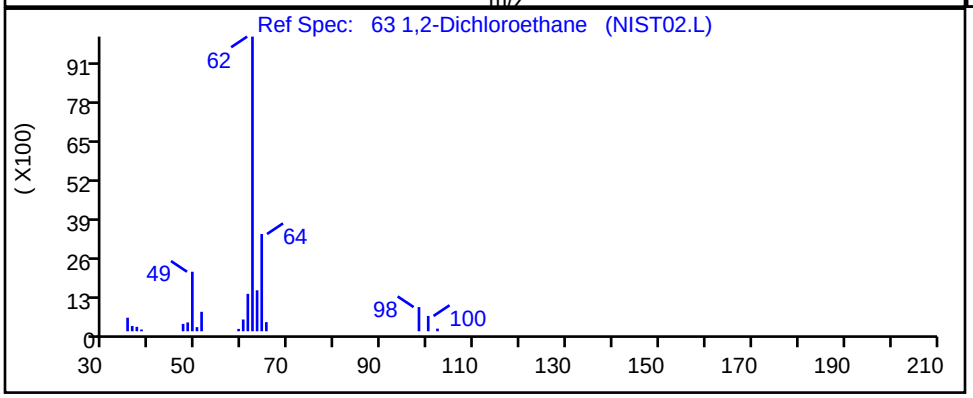
Processing Results




| RT | Mass | Response | Amount |
|---|---|---|---|
| 3.39 | 62.00 | 6377 | 2.136325 |
| 3.39 | 64.00 | 1300 | |

Reviewer: moroneyc, 09-Sep-2020 11:08:05

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

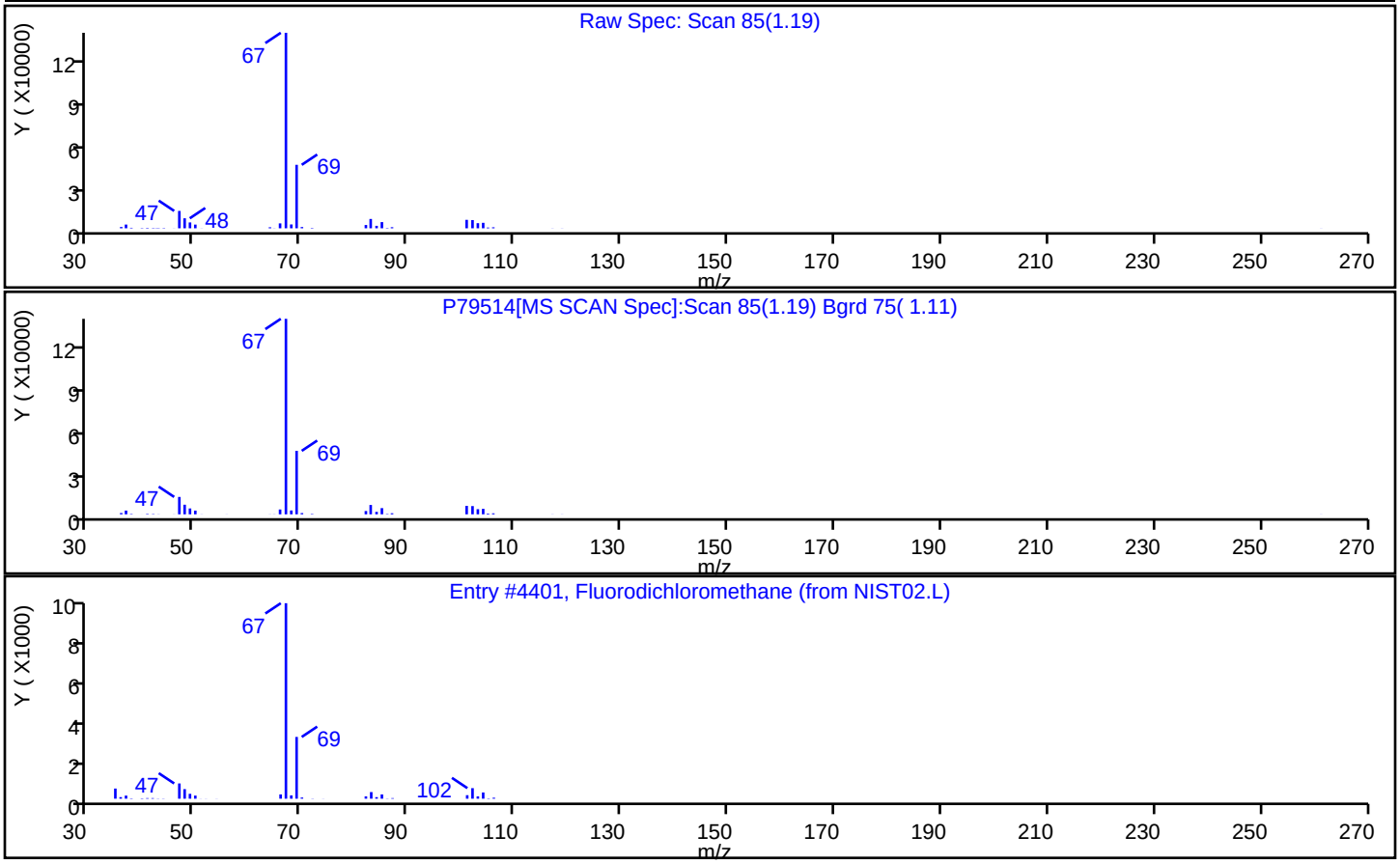
Report Date: 10-Sep-2020 11:14:53 Chrom Revision: 2.3 20-Aug-2020 13:57:12

Eurofins TestAmerica, Edison

Data File: \\chromfs\Edison\ChromData\CVOAMS13\20200909-116470.b\P79514.D

| | | | | | |
|---|---|---|---|---|---|
| Injection Date: | 09-Sep-2020 11:42:30 | Instrument ID: | CVOAMS13 | | |
| Lims ID: | 460-217547-B-5 | Lab Sample ID: | 460-217547-5 | | |
| Client ID: | MW-213 | | | | |
| Operator ID: | | ALS Bottle#: | 10 | Worklist Smp#: | 11 |
| Purge Vol: | 5.000 mL | Dil. Factor: | 1.0000 | | |
| Method: | 8260W_13 | Limit Group: | VOA - 8260C Water and Solid | | |
| Column: | | Detector | MS SCAN | | |

| Library Search Compound Match | CAS# | Library | Entry | Formula | Weight | Q |
|---|---|---|---|---|---|---|
| Fluorodichloromethane | 75-43-4 | NIST02.L | 4401 | CHCl2F | 102 | 90 |



FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Edison  Job No.: 460-217547-1

SDG No.:

Client Sample ID: DUP  Lab Sample ID: 460-217547-6

Matrix: Water  Lab File ID: P79546.D

Analysis Method: 8260C  Date Collected: 09/02/2020 00:00

Sample wt/vol: 5(mL)  Date Analyzed: 09/10/2020 00:18

Soil Aliquot Vol:  Dilution Factor: 1

Soil Extract Vol.:  GC Column: Rtx-624  ID: 0.25(mm)

% Moisture:  Level: (low/med) Low

Analysis Batch No.: 722834  Units: ug/L

| CAS NO. | COMPOUND NAME | RESULT | Q | RL | MDL |
|---|---|---|---|---|---|
| 71-55-6 | 1,1,1-Trichloroethane | 0.24 | U | 1.0 | 0.24 |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 0.37 | U | 1.0 | 0.37 |
| 76-13-1 | 1,1,2-Trichloro-1,2,2-trifluoroethane | 0.31 | U | 1.0 | 0.31 |
| 79-00-5 | 1,1,2-Trichloroethane | 0.43 | U | 1.0 | 0.43 |
| 75-34-3 | 1,1-Dichloroethane | 0.26 | U | 1.0 | 0.26 |
| 75-35-4 | 1,1-Dichloroethene | 0.26 | U | 1.0 | 0.26 |
| 87-61-6 | 1,2,3-Trichlorobenzene | 0.36 | U | 1.0 | 0.36 |
| 120-82-1 | 1,2,4-Trichlorobenzene | 0.37 | U | 1.0 | 0.37 |
| 78-87-5 | 1,2-Dichloropropane | 0.35 | U | 1.0 | 0.35 |
| 541-73-1 | 1,3-Dichlorobenzene | 0.34 | U | 1.0 | 0.34 |
| 106-46-7 | 1,4-Dichlorobenzene | 0.33 | U | 1.0 | 0.33 |
| 123-91-1 | 1,4-Dioxane | 28 | U | 50 | 28 |
| 78-93-3 | 2-Butanone (MEK) | 1.9 | U | 5.0 | 1.9 |
| 591-78-6 | 2-Hexanone | 1.1 | U | 5.0 | 1.1 |
| 108-10-1 | 4-Methyl-2-pentanone (MIBK) | 1.3 | U | 5.0 | 1.3 |
| 67-64-1 | Acetone | 4.4 | U | 5.0 | 4.4 |
| 71-43-2 | Benzene | 0.20 | U | 1.0 | 0.20 |
| 75-25-2 | Bromoform | 0.54 | U | 1.0 | 0.54 |
| 74-83-9 | Bromomethane | 0.55 | U | 1.0 | 0.55 |
| 75-15-0 | Carbon disulfide | 0.82 | U | 1.0 | 0.82 |
| 56-23-5 | Carbon tetrachloride | 0.21 | U | 1.0 | 0.21 |
| 108-90-7 | Chlorobenzene | 0.38 | U | 1.0 | 0.38 |
| 74-97-5 | Chlorobromomethane | 0.41 | U | 1.0 | 0.41 |
| 124-48-1 | Chlorodibromomethane | 0.28 | U | 1.0 | 0.28 |
| 75-00-3 | Chloroethane | 0.32 | U | 1.0 | 0.32 |
| 67-66-3 | Chloroform | 0.33 | U | 1.0 | 0.33 |
| 74-87-3 | Chloromethane | 0.40 | U | 1.0 | 0.40 |
| 156-59-2 | cis-1,2-Dichloroethene | 0.22 | U | 1.0 | 0.22 |
| 10061-01-5 | cis-1,3-Dichloropropene | 0.22 | U | 1.0 | 0.22 |
| 110-82-7 | Cyclohexane | 0.32 | U | 1.0 | 0.32 |
| 75-27-4 | Dichlorobromomethane | 0.34 | U | 1.0 | 0.34 |
| 75-71-8 | Dichlorodifluoromethane | 0.31 | U | 1.0 | 0.31 |
| 100-41-4 | Ethylbenzene | 0.30 | U | 1.0 | 0.30 |
| 106-93-4 | Ethylene Dibromide | 0.50 | U | 1.0 | 0.50 |
| 98-82-8 | Isopropylbenzene | 0.34 | U | 1.0 | 0.34 |

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Edison  Job No.: 460-217547-1

SDG No.:

Client Sample ID: DUP  Lab Sample ID: 460-217547-6

Matrix: Water  Lab File ID: P79546.D

Analysis Method: 8260C  Date Collected: 09/02/2020 00:00

Sample wt/vol: 5(mL)  Date Analyzed: 09/10/2020 00:18

Soil Aliquot Vol:  Dilution Factor: 1

Soil Extract Vol.:  GC Column: Rtx-624  ID: 0.25(mm)

% Moisture:  Level: (low/med) Low

Analysis Batch No.: 722834  Units: ug/L

| CAS NO. | COMPOUND NAME | RESULT | Q | RL | MDL |
|---|---|---|---|---|---|
| 79-20-9 | Methyl acetate | 0.79 | U | 5.0 | 0.79 |
| 1634-04-4 | Methyl tert-butyl ether | 0.47 | U | 1.0 | 0.47 |
| 108-87-2 | Methylcyclohexane | 0.26 | U | 1.0 | 0.26 |
| 75-09-2 | Methylene Chloride | 0.32 | U | 1.0 | 0.32 |
| 179601-23-1 | m-Xylene & p-Xylene | 0.30 | U | 1.0 | 0.30 |
| 95-47-6 | o-Xylene | 0.36 | U | 1.0 | 0.36 |
| 100-42-5 | Styrene | 0.42 | U | 1.0 | 0.42 |
| 127-18-4 | Tetrachloroethene | 0.25 | U | 1.0 | 0.25 |
| 108-88-3 | Toluene | 0.38 | U | 1.0 | 0.38 |
| 156-60-5 | trans-1,2-Dichloroethene | 0.24 | U | 1.0 | 0.24 |
| 10061-02-6 | trans-1,3-Dichloropropene | 0.49 | U | 1.0 | 0.49 |
| 79-01-6 | Trichloroethene | 0.31 | U | 1.0 | 0.31 |
| 75-69-4 | Trichlorofluoromethane | 0.32 | U | 1.0 | 0.32 |
| 75-01-4 | Vinyl chloride | 0.17 | U | 1.0 | 0.17 |
| 107-06-2 | 1,2-Dichloroethane | 0.43 | U | 1.0 | 0.43 |
| 95-50-1 | 1,2-Dichlorobenzene | 0.43 | U | 1.0 | 0.43 |
| 96-12-8 | 1,2-Dibromo-3-Chloropropane | 0.38 | U | 1.0 | 0.38 |

| CAS NO. | SURROGATE | %REC | Q | LIMITS |
|---|---|---|---|---|
| 17060-07-0 | 1,2-Dichloroethane-d4 (Surr) | 96 | | 75-123 |
| 460-00-4 | 4-Bromofluorobenzene | 104 | | 76-120 |
| 1868-53-7 | Dibromofluoromethane (Surr) | 102 | | 77-124 |
| 2037-26-5 | Toluene-d8 (Surr) | 94 | | 80-120 |

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: Eurofins TestAmerica, Edison  Job No.: 460-217547-1

SDG No.:

Client Sample ID: DUP  Lab Sample ID: 460-217547-6

Matrix: Water  Lab File ID: P79546.D

Analysis Method: 8260C  Date Collected: 09/02/2020 00:00

Sample wt/vol: 5(mL)  Date Analyzed: 09/10/2020 00:18

Soil Aliquot Vol:  Dilution Factor: 1

Soil Extract Vol.:  GC Column: Rtx-624  ID: 0.25(mm)

% Moisture:  Level: (low/med) Low

Analysis Batch No.: 722834  Units: ug/L

Number TICs Found: 0  TIC Result Total: 0

| CAS NO. | COMPOUND NAME | RT | RESULT | Q | MATCH QUALITY |
|---|---|---|---|---|---|
| | Tentatively Identified Compound | | None | | |

Eurofins TestAmerica, Edison
Target Compound Quantitation Report

Data File: \\chromfs\Edison\ChromData\CVOAMS13\20200909-116494.b\P79546.D
Lims ID: 460-217547-A-6
Client ID: DUP
Sample Type: Client
Inject. Date: 10-Sep-2020 00:18:30 ALS Bottle#: 16 Worklist Smp#: 17
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: 460-217547-A-6
Misc. Info.: 460-0116494-017
Operator ID: Instrument ID: CVOAMS13

Method: \\chromfs\Edison\ChromData\CVOAMS13\20200909-116494.b\8260W_13.m
Limit Group: VOA - 8260C Water and Solid
Last Update: 10-Sep-2020 14:25:29 Calib Date: 04-Sep-2020 16:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Edison\ChromData\CVOAMS13\20200904-116303.b\P79359.D

Column 1 : Rtx-624 ( 0.25 mm) Det: MS SCAN
Process Host: CTX1019

First Level Reviewer: sgroa Date: 10-Sep-2020 08:05:23

| Compound | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q | Response | OnCol Amt ug/l | Flags |
|---|---|---|---|---|---|---|---|---|
| * 33 TBA-d9 (IS) | 65 | 1.853 | 1.845 | 0.008 | 99 | 114140 | 1000.0 | |
| $ 51 Dibromofluoromethane (Surr) | 113 | 2.777 | 2.769 | 0.008 | 98 | 109185 | 50.8 | |
| * 53 2-Butanone-d5 | 46 | 2.834 | 2.827 | 0.007 | 98 | 115660 | 250.0 | |
| $ 61 1,2-Dichloroethane-d4 (Surr) | 65 | 3.156 | 3.156 | 0.000 | 0 | 103182 | 47.8 | |
| * 66 Fluorobenzene | 96 | 3.385 | 3.385 | 0.000 | 99 | 499346 | 50.0 | |
| * 76 1,4-Dioxane-d8 | 96 | 4.245 | 4.238 | 0.007 | 63 | 15872 | 1000.0 | |
| $ 82 Toluene-d8 (Surr) | 98 | 4.882 | 4.882 | 0.000 | 99 | 452600 | 47.1 | |
| * 96 Chlorobenzene-d5 | 117 | 6.723 | 6.723 | 0.000 | 84 | 372705 | 50.0 | |
| $ 107 4-Bromofluorobenzene | 174 | 8.486 | 8.478 | 0.008 | 97 | 157201 | 52.1 | |
| * 123 1,4-Dichlorobenzene-d4 | 152 | 10.233 | 10.226 | 0.007 | 94 | 206109 | 50.0 | |

## Reagents:

8260ISNEW_00129 Amount Added: 1.00 Units: uL Run Reagent
8260SURR250_00212 Amount Added: 1.00 Units: uL Run Reagent

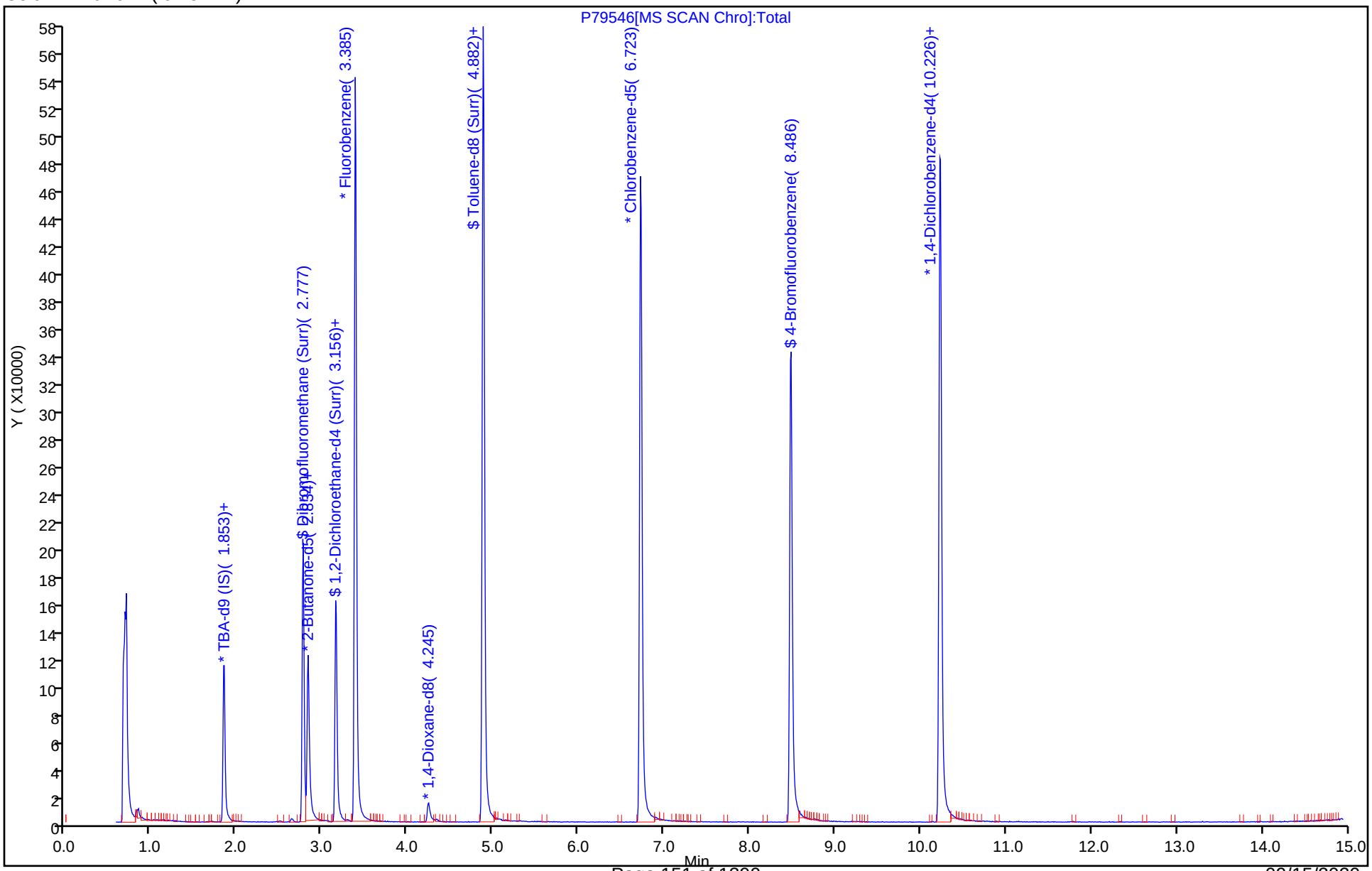
Report Date: 10-Sep-2020 14:26:19 Chrom Revision: 2.3 20-Aug-2020 13:57:12

Eurofins TestAmerica, Edison

Data File: \\chromfs\Edison\ChromData\CVOAMS13\20200909-116494.b\P79546.D

| | | | | | |
|---|---|---|---|---|---|
| Injection Date: | 10-Sep-2020 00:18:30 | Instrument ID: | CVOAMS13 | Operator ID: | |
| Lims ID: | 460-217547-A-6 | Lab Sample ID: | 460-217547-6 | Worklist Smp#: | 17 |
| Client ID: | DUP | | | | |
| Purge Vol: | 5.000 mL | Dil. Factor: | 1.0000 | ALS Bottle#: | 16 |
| Method: | 8260W_13 | Limit Group: | VOA - 8260C Water and Solid | | |

Column: Rtx-624 ( 0.25 mm)



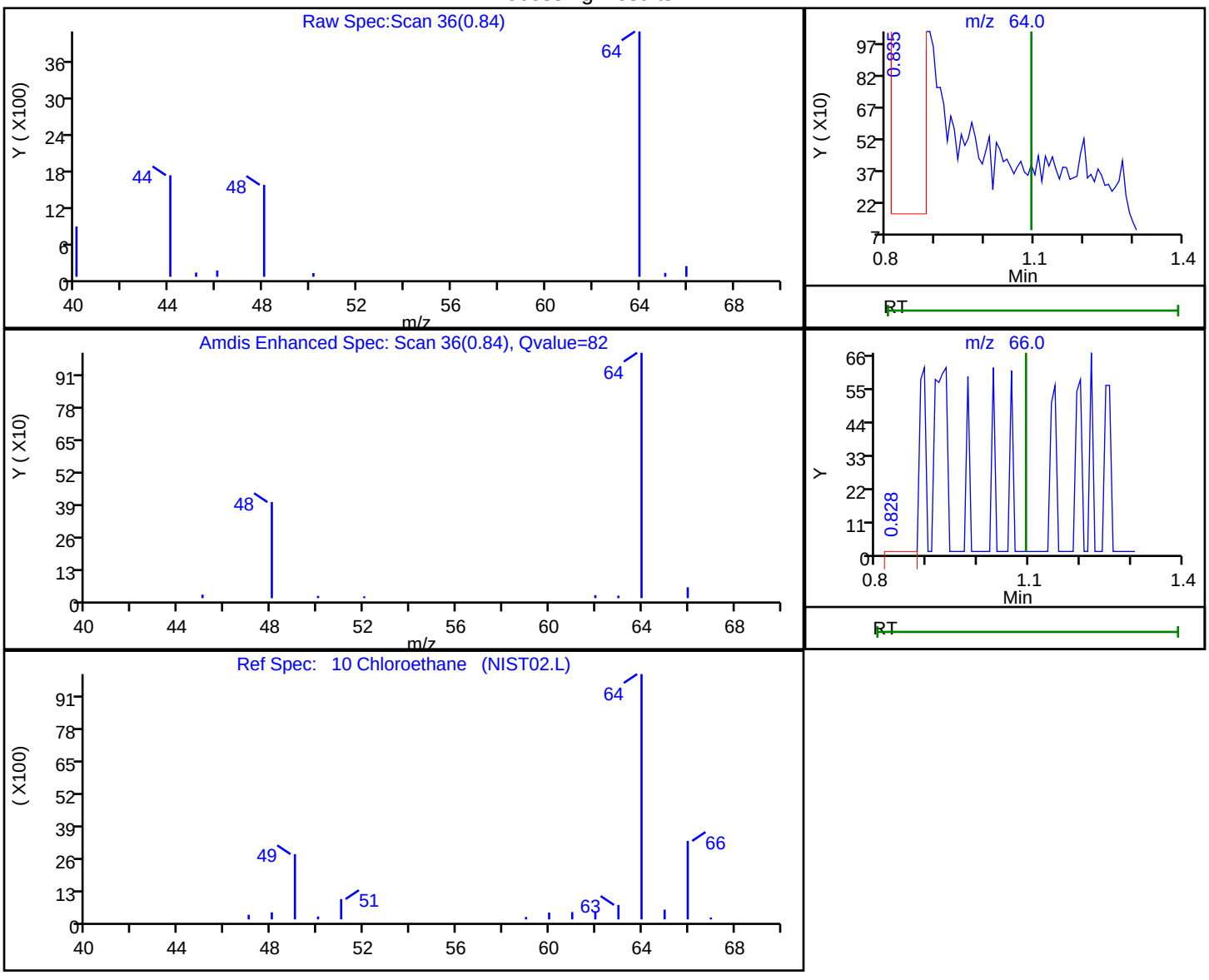
User Disabled Compound Report

Eurofins TestAmerica, Edison

| | | | |
|---|---|---|---|
| Data File: | \\chromfs\Edison\ChromData\CVOAMS13\20200909-116494.b\P79546.D | | |
| Injection Date: | 10-Sep-2020 00:18:30 | Instrument ID: | CVOAMS13 |
| Lims ID: | 460-217547-A-6 | Lab Sample ID: | 460-217547-6 |
| Client ID: | DUP | | |
| Operator ID: | | ALS Bottle#: | 16 Worklist Smp#: 17 |
| Purge Vol: | 5.000 mL | Dil. Factor: | 1.0000 |
| Method: | 8260W_13 | Limit Group: | VOA - 8260C Water and Solid |
| Column: | Rtx-624 ( 0.25 mm) | Detector | MS SCAN |

## 10 Chloroethane, CAS: 75-00-3

Processing Results




| RT | Mass | Response | Amount |
|---|---|---|---|
| 0.84 | 64.00 | 9879 | 5.400304 |
| 0.83 | 66.00 | 493 | |

Reviewer: sgroa, 10-Sep-2020 08:04:51

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

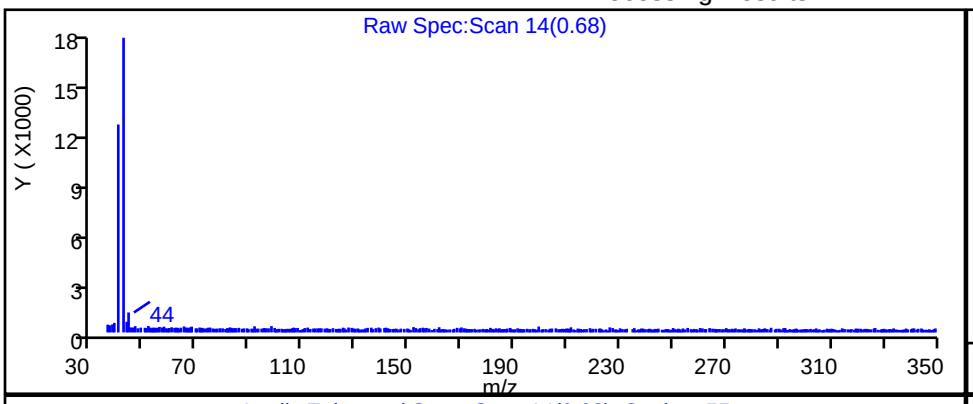
User Disabled Compound Report

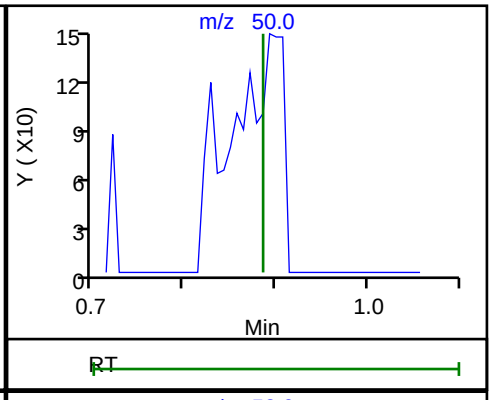
Eurofins TestAmerica, Edison

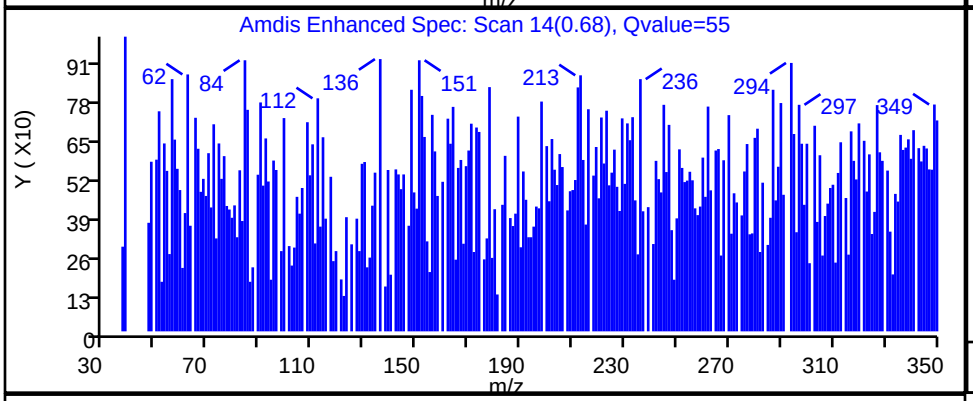
| | | | |
|---|---|---|---|
| Data File: | \\chromfs\Edison\ChromData\CVOAMS13\20200909-116494.b\P79546.D | | |
| Injection Date: | 10-Sep-2020 00:18:30 | Instrument ID: | CVOAMS13 |
| Lims ID: | 460-217547-A-6 | Lab Sample ID: | 460-217547-6 |
| Client ID: | DUP | | |
| Operator ID: | | ALS Bottle#: | 16 Worklist Smp#: 17 |
| Purge Vol: | 5.000 mL | Dil. Factor: | 1.0000 |
| Method: | 8260W_13 | Limit Group: | VOA - 8260C Water and Solid |
| Column: | Rtx-624 ( 0.25 mm) | Detector | MS SCAN |

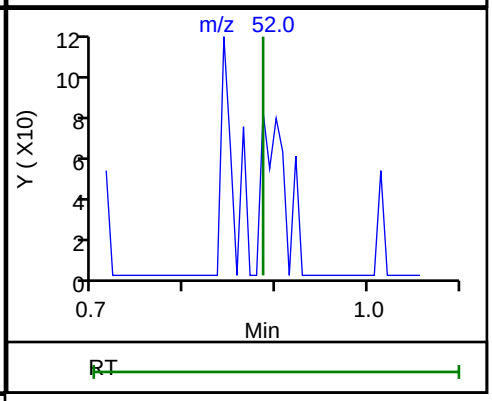
## 6 Chloromethane, CAS: 74-87-3

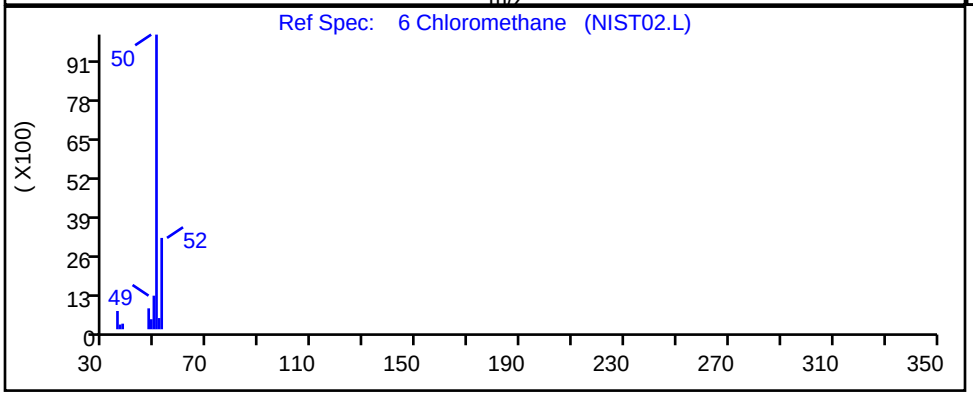
Processing Results




| RT | Mass | Response | Amount |
|---|---|---|---|
| 0.68 | 50.00 | 944 | 0.200875 |
| 0.67 | 52.00 | 596 | |

Reviewer: sgroa, 10-Sep-2020 08:04:47

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

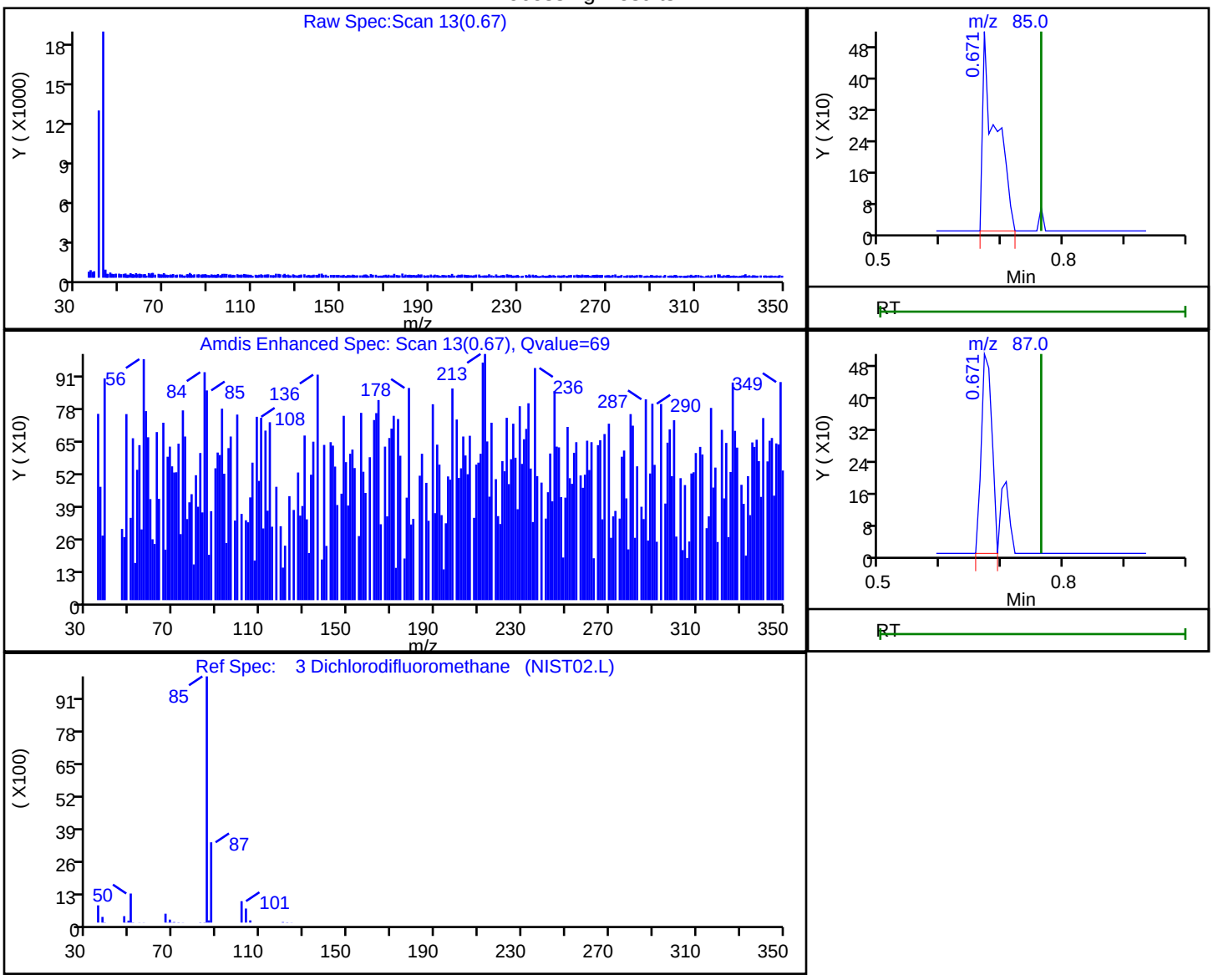
User Disabled Compound Report

Eurofins TestAmerica, Edison

| | | | |
|---|---|---|---|
| Data File: | \\chromfs\Edison\ChromData\CVOAMS13\20200909-116494.b\P79546.D | | |
| Injection Date: | 10-Sep-2020 00:18:30 | Instrument ID: | CVOAMS13 |
| Lims ID: | 460-217547-A-6 | Lab Sample ID: | 460-217547-6 |
| Client ID: | DUP | | |
| Operator ID: | | ALS Bottle#: | 16 Worklist Smp#: 17 |
| Purge Vol: | 5.000 mL | Dil. Factor: | 1.0000 |
| Method: | 8260W_13 | Limit Group: | VOA - 8260C Water and Solid |
| Column: | Rtx-624 ( 0.25 mm) | Detector | MS SCAN |

## 3 Dichlorodifluoromethane, CAS: 75-71-8

Processing Results




| RT | Mass | Response | Amount |
|---|---|---|---|
| 0.67 | 85.00 | 781 | 0.232017 |
| 0.67 | 87.00 | 611 | |

Reviewer: sgroa, 10-Sep-2020 08:04:45

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

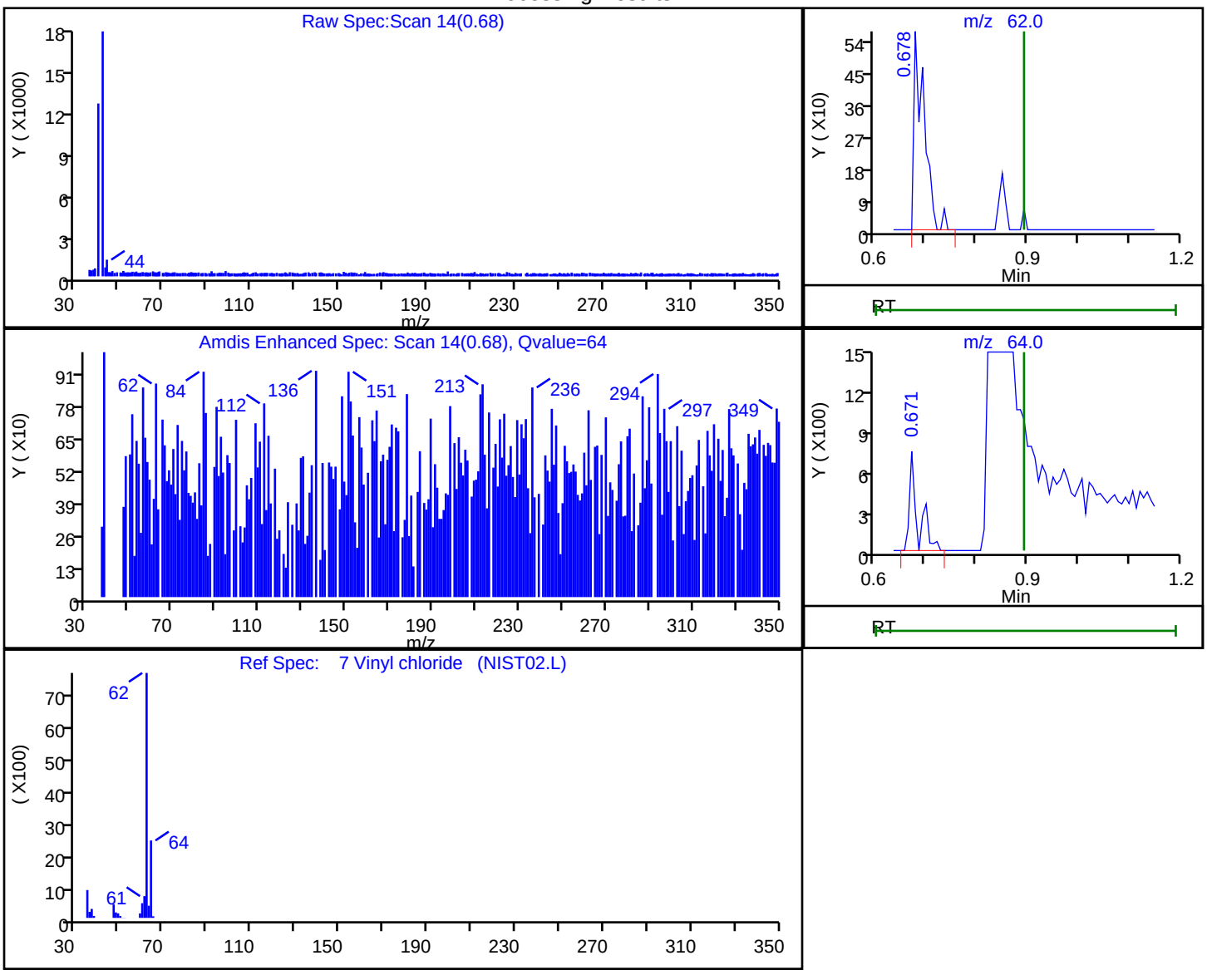
User Disabled Compound Report

Eurofins TestAmerica, Edison

| | | | |
|---|---|---|---|
| Data File: | \\chromfs\Edison\ChromData\CVOAMS13\20200909-116494.b\P79546.D | | |
| Injection Date: | 10-Sep-2020 00:18:30 | Instrument ID: | CVOAMS13 |
| Lims ID: | 460-217547-A-6 | Lab Sample ID: | 460-217547-6 |
| Client ID: | DUP | | |
| Operator ID: | | ALS Bottle#: | 16 Worklist Smp#: 17 |
| Purge Vol: | 5.000 mL | Dil. Factor: | 1.0000 |
| Method: | 8260W_13 | Limit Group: | VOA - 8260C Water and Solid |
| Column: | Rtx-624 ( 0.25 mm) | Detector | MS SCAN |

## 7 Vinyl chloride, CAS: 75-01-4

Processing Results




| RT | Mass | Response | Amount |
|---|---|---|---|
| 0.68 | 62.00 | 803 | 0.233216 |
| 0.67 | 64.00 | 835 | |

Reviewer: sgroa, 10-Sep-2020 08:04:48

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Edison Job No.: 460-217547-1

SDG No.:

Client Sample ID: FB Lab Sample ID: 460-217547-7

Matrix: Water Lab File ID: P79492.D

Analysis Method: 8260C Date Collected: 09/02/2020 14:30

Sample wt/vol: 5(mL) Date Analyzed: 09/09/2020 02:49

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: Rtx-624 ID: 0.25(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 722597 Units: ug/L

| CAS NO. | COMPOUND NAME | RESULT | Q | RL | MDL |
|---|---|---|---|---|---|
| 71-55-6 | 1,1,1-Trichloroethane | 0.24 | U | 1.0 | 0.24 |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 0.37 | U | 1.0 | 0.37 |
| 76-13-1 | 1,1,2-Trichloro-1,2,2-trifluoroethane | 0.31 | U | 1.0 | 0.31 |
| 79-00-5 | 1,1,2-Trichloroethane | 0.43 | U | 1.0 | 0.43 |
| 75-34-3 | 1,1-Dichloroethane | 0.26 | U | 1.0 | 0.26 |
| 75-35-4 | 1,1-Dichloroethene | 0.26 | U | 1.0 | 0.26 |
| 87-61-6 | 1,2,3-Trichlorobenzene | 0.36 | U | 1.0 | 0.36 |
| 120-82-1 | 1,2,4-Trichlorobenzene | 0.37 | U | 1.0 | 0.37 |
| 78-87-5 | 1,2-Dichloropropane | 0.35 | U | 1.0 | 0.35 |
| 541-73-1 | 1,3-Dichlorobenzene | 0.34 | U | 1.0 | 0.34 |
| 106-46-7 | 1,4-Dichlorobenzene | 0.33 | U | 1.0 | 0.33 |
| 123-91-1 | 1,4-Dioxane | 28 | U | 50 | 28 |
| 78-93-3 | 2-Butanone (MEK) | 1.9 | U | 5.0 | 1.9 |
| 591-78-6 | 2-Hexanone | 1.1 | U | 5.0 | 1.1 |
| 108-10-1 | 4-Methyl-2-pentanone (MIBK) | 1.3 | U | 5.0 | 1.3 |
| 67-64-1 | Acetone | 4.4 | U | 5.0 | 4.4 |
| 71-43-2 | Benzene | 0.20 | U | 1.0 | 0.20 |
| 75-25-2 | Bromoform | 0.54 | U | 1.0 | 0.54 |
| 74-83-9 | Bromomethane | 0.55 | U * | 1.0 | 0.55 |
| 75-15-0 | Carbon disulfide | 0.82 | U | 1.0 | 0.82 |
| 56-23-5 | Carbon tetrachloride | 0.21 | U | 1.0 | 0.21 |
| 108-90-7 | Chlorobenzene | 0.38 | U | 1.0 | 0.38 |
| 74-97-5 | Chlorobromomethane | 0.41 | U | 1.0 | 0.41 |
| 124-48-1 | Chlorodibromomethane | 0.28 | U | 1.0 | 0.28 |
| 75-00-3 | Chloroethane | 0.32 | U | 1.0 | 0.32 |
| 67-66-3 | Chloroform | 0.33 | U | 1.0 | 0.33 |
| 74-87-3 | Chloromethane | 0.40 | U | 1.0 | 0.40 |
| 156-59-2 | cis-1,2-Dichloroethene | 0.22 | U | 1.0 | 0.22 |
| 10061-01-5 | cis-1,3-Dichloropropene | 0.22 | U | 1.0 | 0.22 |
| 110-82-7 | Cyclohexane | 0.32 | U | 1.0 | 0.32 |
| 75-27-4 | Dichlorobromomethane | 0.34 | U | 1.0 | 0.34 |
| 75-71-8 | Dichlorodifluoromethane | 0.31 | U | 1.0 | 0.31 |
| 100-41-4 | Ethylbenzene | 0.30 | U | 1.0 | 0.30 |
| 106-93-4 | Ethylene Dibromide | 0.50 | U | 1.0 | 0.50 |
| 98-82-8 | Isopropylbenzene | 0.34 | U | 1.0 | 0.34 |

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Edison  Job No.: 460-217547-1

SDG No.:

Client Sample ID: FB  Lab Sample ID: 460-217547-7

Matrix: Water  Lab File ID: P79492.D

Analysis Method: 8260C  Date Collected: 09/02/2020 14:30

Sample wt/vol: 5(mL)  Date Analyzed: 09/09/2020 02:49

Soil Aliquot Vol:  Dilution Factor: 1

Soil Extract Vol.:  GC Column: Rtx-624  ID: 0.25(mm)

% Moisture:  Level: (low/med) Low

Analysis Batch No.: 722597  Units: ug/L

| CAS NO. | COMPOUND NAME | RESULT | Q | RL | MDL |
|---|---|---|---|---|---|
| 79-20-9 | Methyl acetate | 0.79 | U | 5.0 | 0.79 |
| 1634-04-4 | Methyl tert-butyl ether | 0.47 | U | 1.0 | 0.47 |
| 108-87-2 | Methylcyclohexane | 0.26 | U | 1.0 | 0.26 |
| 75-09-2 | Methylene Chloride | 0.83 | J | 1.0 | 0.32 |
| 179601-23-1 | m-Xylene & p-Xylene | 0.30 | U | 1.0 | 0.30 |
| 95-47-6 | o-Xylene | 0.36 | U | 1.0 | 0.36 |
| 100-42-5 | Styrene | 0.42 | U | 1.0 | 0.42 |
| 127-18-4 | Tetrachloroethene | 0.25 | U | 1.0 | 0.25 |
| 108-88-3 | Toluene | 0.38 | U | 1.0 | 0.38 |
| 156-60-5 | trans-1,2-Dichloroethene | 0.24 | U | 1.0 | 0.24 |
| 10061-02-6 | trans-1,3-Dichloropropene | 0.49 | U | 1.0 | 0.49 |
| 79-01-6 | Trichloroethene | 0.31 | U | 1.0 | 0.31 |
| 75-69-4 | Trichlorofluoromethane | 0.32 | U | 1.0 | 0.32 |
| 75-01-4 | Vinyl chloride | 0.17 | U | 1.0 | 0.17 |
| 107-06-2 | 1,2-Dichloroethane | 0.43 | U | 1.0 | 0.43 |
| 95-50-1 | 1,2-Dichlorobenzene | 0.43 | U | 1.0 | 0.43 |
| 96-12-8 | 1,2-Dibromo-3-Chloropropane | 0.38 | U | 1.0 | 0.38 |

| CAS NO. | SURROGATE | %REC | Q | LIMITS |
|---|---|---|---|---|
| 17060-07-0 | 1,2-Dichloroethane-d4 (Surr) | 87 | | 75-123 |
| 460-00-4 | 4-Bromofluorobenzene | 96 | | 76-120 |
| 1868-53-7 | Dibromofluoromethane (Surr) | 96 | | 77-124 |
| 2037-26-5 | Toluene-d8 (Surr) | 99 | | 80-120 |

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: Eurofins TestAmerica, Edison  Job No.: 460-217547-1

SDG No.:

Client Sample ID: FB  Lab Sample ID: 460-217547-7

Matrix: Water  Lab File ID: P79492.D

Analysis Method: 8260C  Date Collected: 09/02/2020 14:30

Sample wt/vol: 5(mL)  Date Analyzed: 09/09/2020 02:49

Soil Aliquot Vol:  Dilution Factor: 1

Soil Extract Vol.:  GC Column: Rtx-624  ID: 0.25(mm)

% Moisture:  Level: (low/med) Low

Analysis Batch No.: 722597  Units: ug/L

Number TICs Found: 0  TIC Result Total: 0

| CAS NO. | COMPOUND NAME | RT | RESULT | Q | MATCH QUALITY |
|---|---|---|---|---|---|
| | Tentatively Identified Compound | | None | | |

Eurofins TestAmerica, Edison
Target Compound Quantitation Report

Data File: \\chromfs\Edison\ChromData\CVOAMS13\20200908-116444.b\P79492.D
Lims ID: 460-217547-A-7
Client ID: FB
Sample Type: Client
Inject. Date: 09-Sep-2020 02:49:30 ALS Bottle#: 13 Worklist Smp#: 14
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: 460-217547-A-7
Misc. Info.: 460-0116444-014
Operator ID: Instrument ID: CVOAMS13

Method: \\chromfs\Edison\ChromData\CVOAMS13\20200908-116444.b\8260W_13.m
Limit Group: VOA - 8260C Water and Solid
Last Update: 09-Sep-2020 07:05:09 Calib Date: 04-Sep-2020 16:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Edison\ChromData\CVOAMS13\20200904-116303.b\P79359.D

Column 1 : Rtx-624 ( 0.25 mm) Det: MS SCAN
Process Host: CTX1060

First Level Reviewer: yallabg Date: 09-Sep-2020 02:30:26

| Compound | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q | Response | OnCol Amt ug/l | Flags |
|---|---|---|---|---|---|---|---|---|
| 27 Methylene Chloride | 84 | 1.695 | 1.688 | 0.007 | 92 | 2499 | 0.8341 | |
| * 33 TBA-d9 (IS) | 65 | 1.845 | 1.845 | 0.000 | 99 | 88671 | 1000.0 | |
| $ 51 Dibromofluoromethane (Surr) | 113 | 2.769 | 2.769 | 0.000 | 98 | 113612 | 47.8 | |
| * 53 2-Butanone-d5 | 46 | 2.827 | 2.827 | 0.000 | 98 | 88294 | 250.0 | |
| $ 61 1,2-Dichloroethane-d4 (Surr) | 65 | 3.156 | 3.156 | 0.000 | 0 | 104127 | 43.6 | |
| * 66 Fluorobenzene | 96 | 3.385 | 3.385 | 0.000 | 99 | 552302 | 50.0 | |
| * 76 1,4-Dioxane-d8 | 96 | 4.245 | 4.238 | 0.007 | 63 | 12188 | 1000.0 | |
| $ 82 Toluene-d8 (Surr) | 98 | 4.883 | 4.883 | 0.001 | 99 | 500167 | 49.4 | |
| * 96 Chlorobenzene-d5 | 117 | 6.723 | 6.723 | 0.000 | 85 | 392651 | 50.0 | |
| $ 107 4-Bromofluorobenzene | 174 | 8.486 | 8.478 | 0.008 | 94 | 153179 | 48.2 | |
| * 123 1,4-Dichlorobenzene-d4 | 152 | 10.233 | 10.226 | 0.007 | 94 | 206548 | 50.0 | |

## Reagents:

8260ISNEW_00129 Amount Added: 1.00 Units: uL Run Reagent
8260SURR250_00212 Amount Added: 1.00 Units: uL Run Reagent

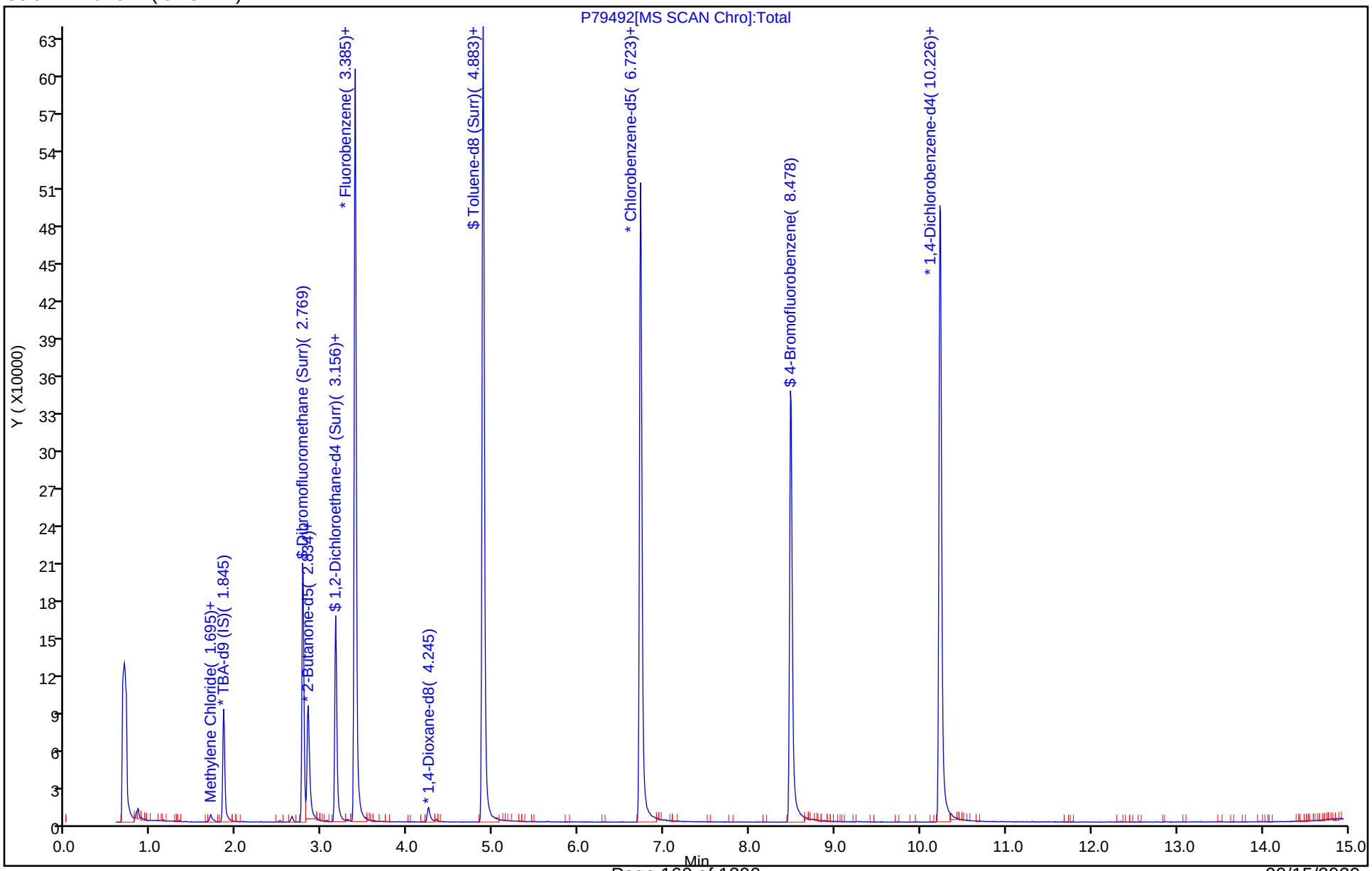
Report Date: 09-Sep-2020 07:05:27 Chrom Revision: 2.3 20-Aug-2020 13:57:12

Eurofins TestAmerica, Edison

Data File: \\chromfs\Edison\ChromData\CVOAMS13\20200908-116444.b\P79492.D

| | | | | | |
|---|---|---|---|---|---|
| Injection Date: | 09-Sep-2020 02:49:30 | Instrument ID: | CVOAMS13 | Operator ID: | |
| Lims ID: | 460-217547-A-7 | Lab Sample ID: | 460-217547-7 | Worklist Smp#: | 14 |
| Client ID: | FB | | | | |
| Purge Vol: | 5.000 mL | Dil. Factor: | 1.0000 | ALS Bottle#: | 13 |
| Method: | 8260W_13 | Limit Group: | VOA - 8260C Water and Solid | | |

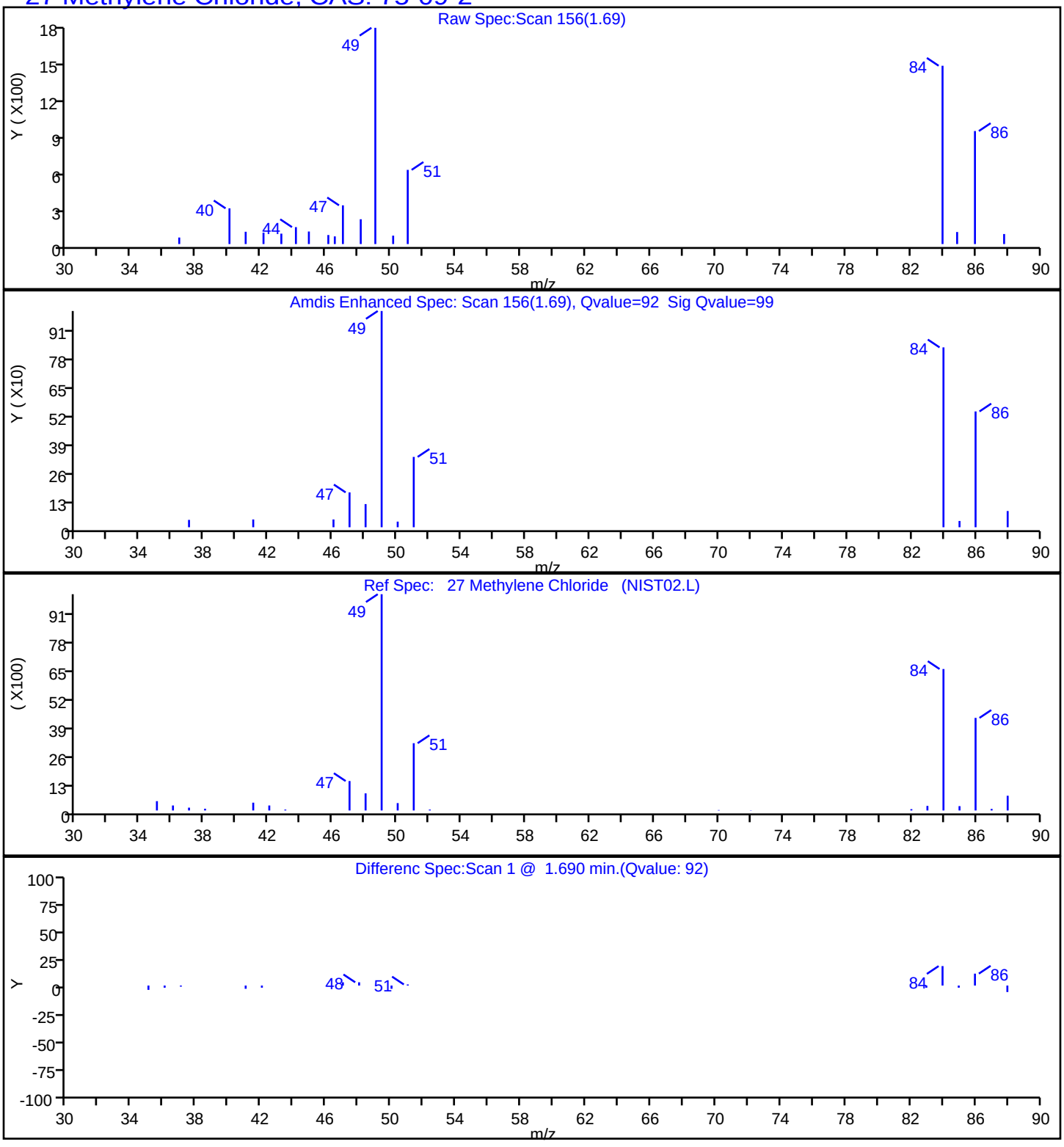
Column: Rtx-624 ( 0.25 mm)



Eurofins TestAmerica, Edison

| | | | | | |
|---|---|---|---|---|---|
| Data File: | \\chromfs\Edison\ChromData\CVOAMS13\20200908-116444.b\P79492.D | | | | |
| Injection Date: | 09-Sep-2020 02:49:30 | Instrument ID: | CVOAMS13 | | |
| Lims ID: | 460-217547-A-7 | Lab Sample ID: | 460-217547-7 | | |
| Client ID: | FB | | | | |
| Operator ID: | | ALS Bottle#: | 13 | Worklist Smp#: | 14 |
| Purge Vol: | 5.000 mL | Dil. Factor: | 1.0000 | | |
| Method: | 8260W_13 | Limit Group: | VOA - 8260C Water and Solid | | |
| Column: | Rtx-624 ( 0.25 mm) | Detector | MS SCAN | | |

## 27 Methylene Chloride, CAS: 75-09-2



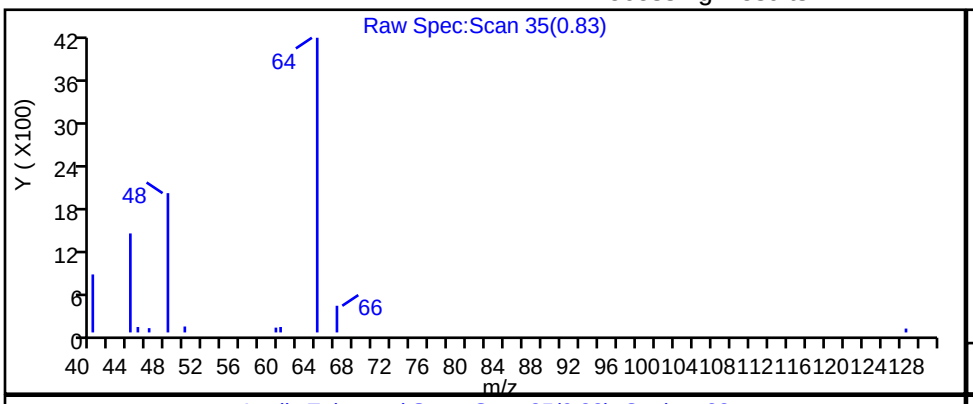
User Disabled Compound Report

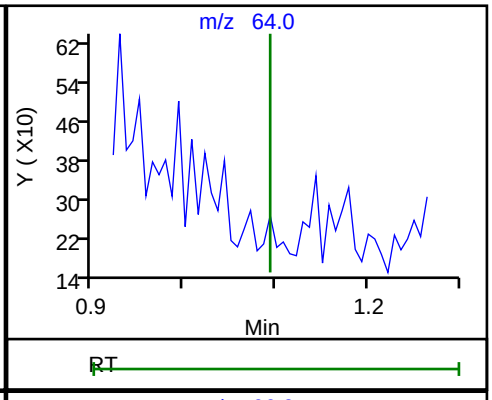
Eurofins TestAmerica, Edison

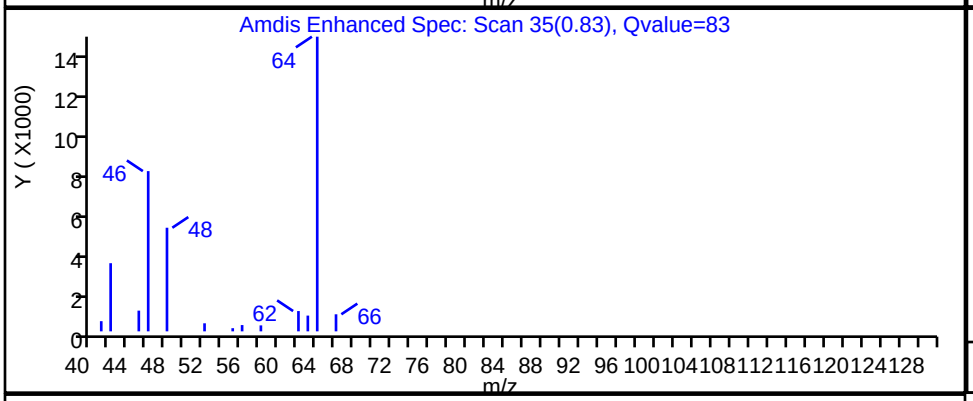
| | | | |
|---|---|---|---|
| Data File: | \\chromfs\Edison\ChromData\CVOAMS13\20200908-116444.b\P79492.D | | |
| Injection Date: | 09-Sep-2020 02:49:30 | Instrument ID: | CVOAMS13 |
| Lims ID: | 460-217547-A-7 | Lab Sample ID: | 460-217547-7 |
| Client ID: | FB | | |
| Operator ID: | | ALS Bottle#: | 13 Worklist Smp#: 14 |
| Purge Vol: | 5.000 mL | Dil. Factor: | 1.0000 |
| Method: | 8260W_13 | Limit Group: | VOA - 8260C Water and Solid |
| Column: | Rtx-624 ( 0.25 mm) | Detector | MS SCAN |

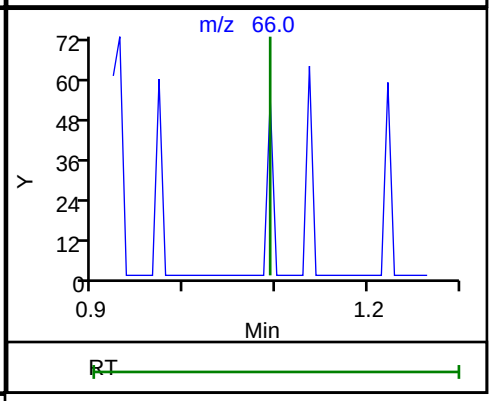
## 10 Chloroethane, CAS: 75-00-3

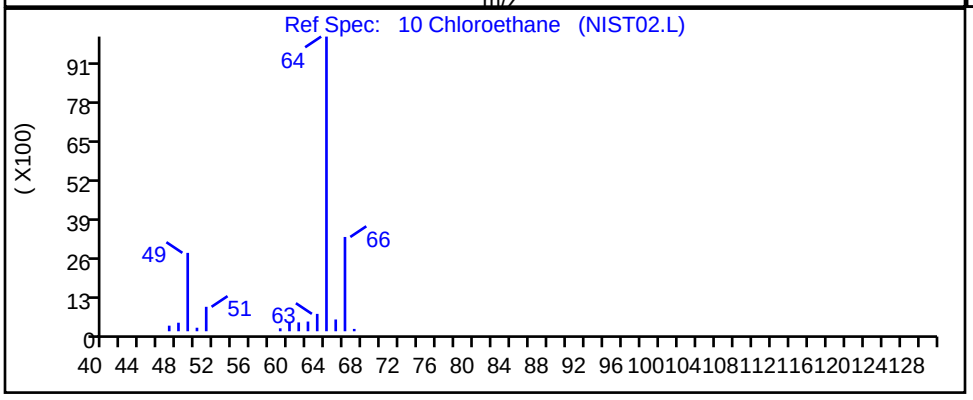
Processing Results




| RT | Mass | Response | Amount |
|---|---|---|---|
| 0.83 | 64.00 | 8282 | 4.093223 |
| 0.83 | 66.00 | 530 | |

Reviewer: moroneyc, 09-Sep-2020 07:01:15

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

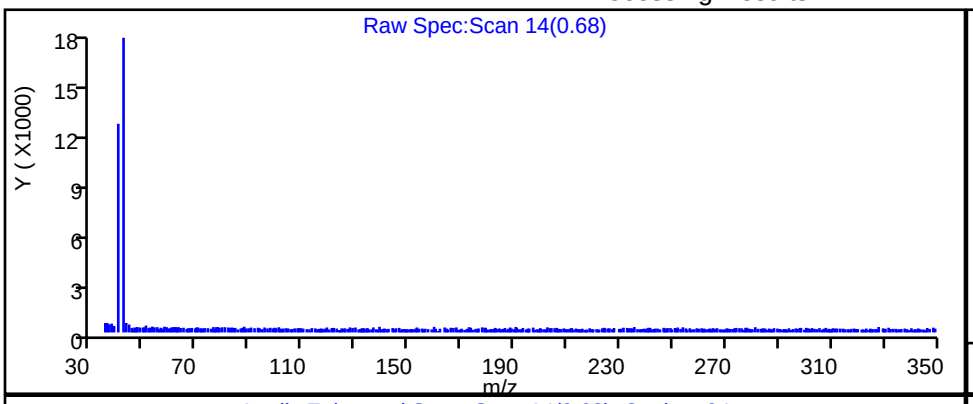
User Disabled Compound Report

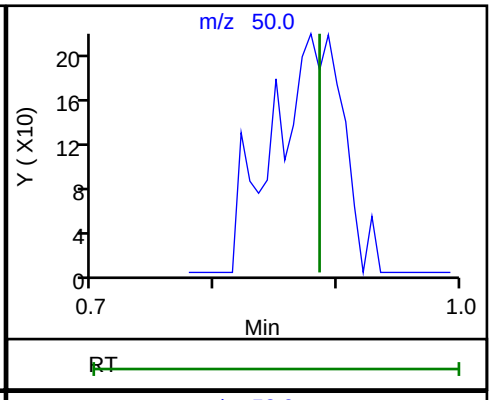
Eurofins TestAmerica, Edison

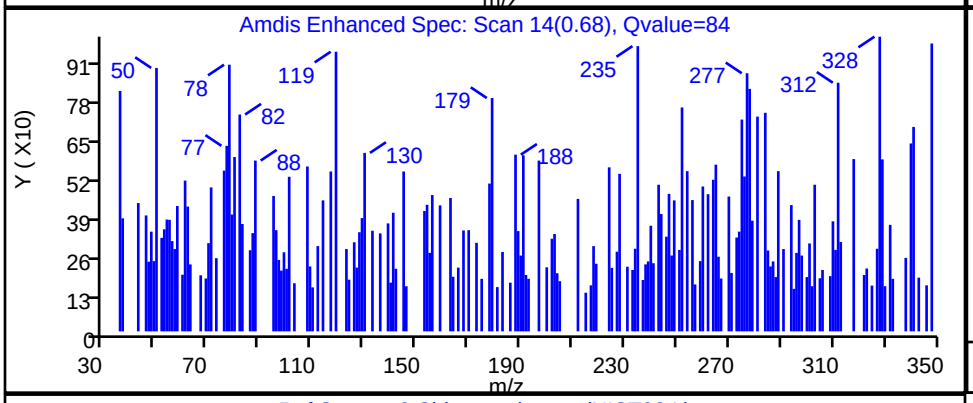
| | | | |
|---|---|---|---|
| Data File: | \\chromfs\Edison\ChromData\CVOAMS13\20200908-116444.b\P79492.D | | |
| Injection Date: | 09-Sep-2020 02:49:30 | Instrument ID: | CVOAMS13 |
| Lims ID: | 460-217547-A-7 | Lab Sample ID: | 460-217547-7 |
| Client ID: | FB | | |
| Operator ID: | | ALS Bottle#: | 13 Worklist Smp#: 14 |
| Purge Vol: | 5.000 mL | Dil. Factor: | 1.0000 |
| Method: | 8260W_13 | Limit Group: | VOA - 8260C Water and Solid |
| Column: | Rtx-624 ( 0.25 mm) | Detector | MS SCAN |

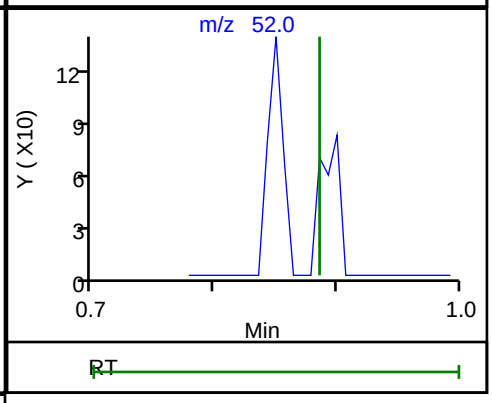
## 6 Chloromethane, CAS: 74-87-3

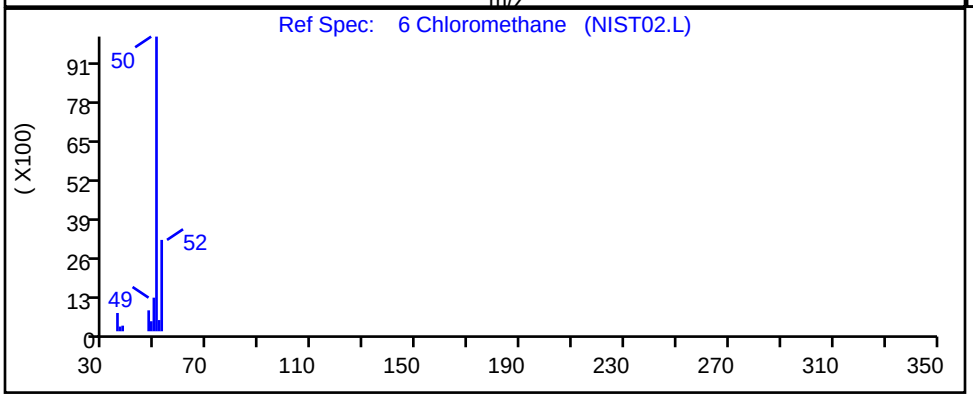
Processing Results




| RT | Mass | Response | Amount |
|---|---|---|---|
| 0.68 | 50.00 | 817 | 0.157181 |
| 0.68 | 52.00 | 678 | |

Reviewer: moroneyc, 09-Sep-2020 07:01:13

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

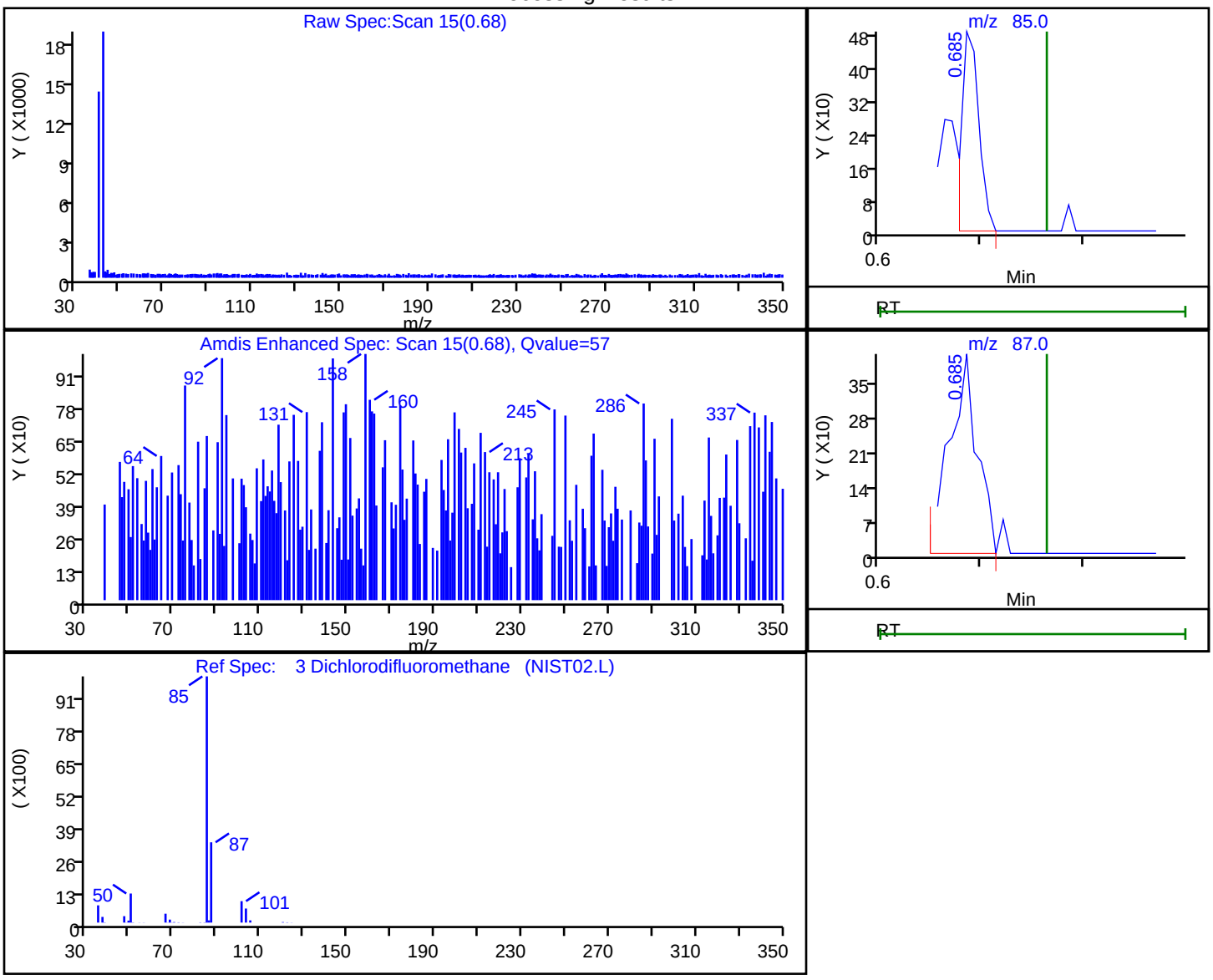
User Disabled Compound Report

Eurofins TestAmerica, Edison

| | | | |
|---|---|---|---|
| Data File: | \\chromfs\Edison\ChromData\CVOAMS13\20200908-116444.b\P79492.D | | |
| Injection Date: | 09-Sep-2020 02:49:30 | Instrument ID: | CVOAMS13 |
| Lims ID: | 460-217547-A-7 | Lab Sample ID: | 460-217547-7 |
| Client ID: | FB | | |
| Operator ID: | | ALS Bottle#: | 13 Worklist Smp#: 14 |
| Purge Vol: | 5.000 mL | Dil. Factor: | 1.0000 |
| Method: | 8260W_13 | Limit Group: | VOA - 8260C Water and Solid |
| Column: | Rtx-624 ( 0.25 mm) | Detector | MS SCAN |

## 3 Dichlorodifluoromethane, CAS: 75-71-8

Processing Results




| RT | Mass | Response | Amount |
|---|---|---|---|
| 0.68 | 85.00 | 579 | 0.155515 |
| 0.68 | 87.00 | 742 | |

Reviewer: moroneyc, 09-Sep-2020 07:01:12

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

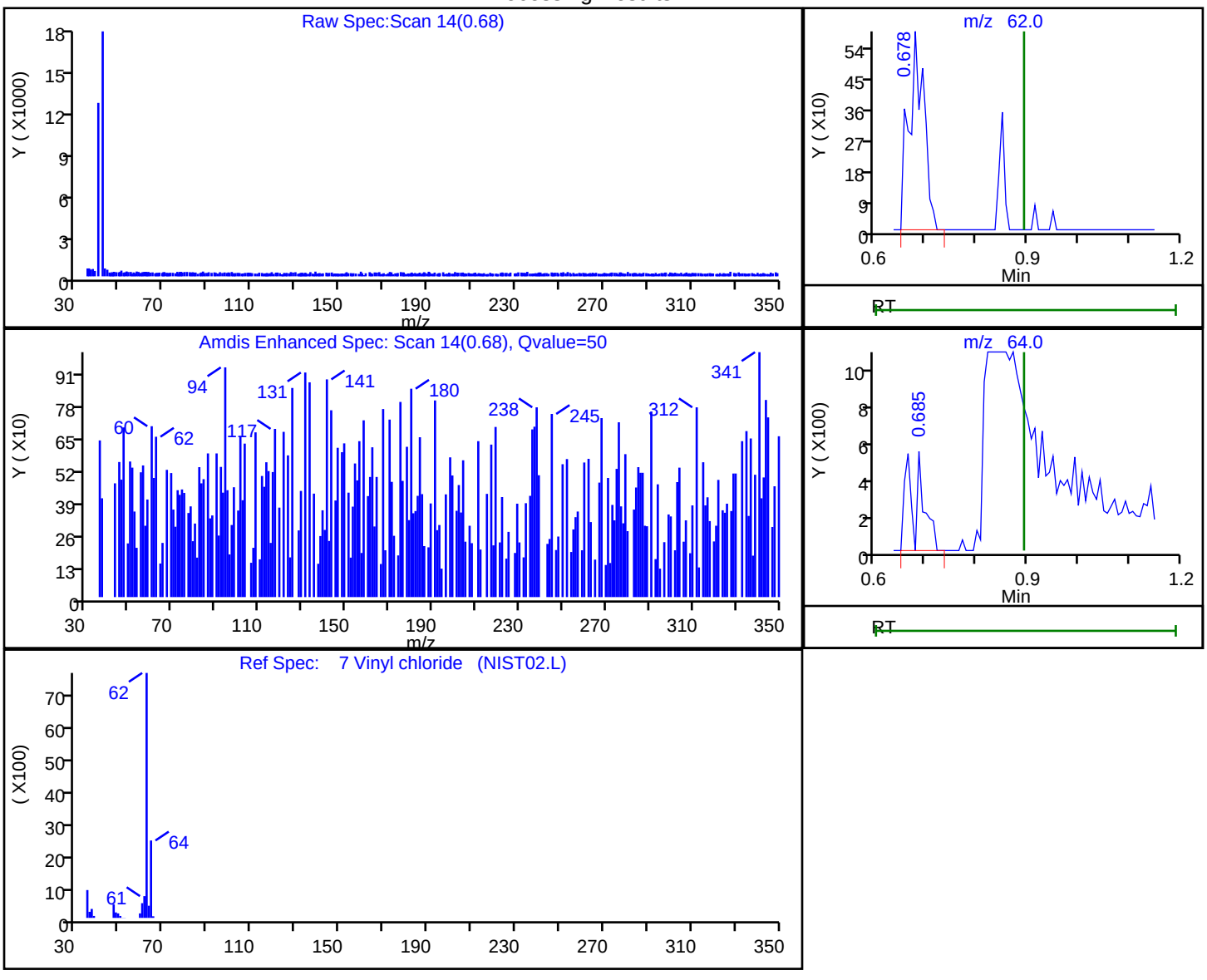
User Disabled Compound Report

Eurofins TestAmerica, Edison

| | | | |
|---|---|---|---|
| Data File: | \\chromfs\Edison\ChromData\CVOAMS13\20200908-116444.b\P79492.D | | |
| Injection Date: | 09-Sep-2020 02:49:30 | Instrument ID: | CVOAMS13 |
| Lims ID: | 460-217547-A-7 | Lab Sample ID: | 460-217547-7 |
| Client ID: | FB | | |
| Operator ID: | | ALS Bottle#: | 13 Worklist Smp#: 14 |
| Purge Vol: | 5.000 mL | Dil. Factor: | 1.0000 |
| Method: | 8260W_13 | Limit Group: | VOA - 8260C Water and Solid |
| Column: | Rtx-624 ( 0.25 mm) | Detector | MS SCAN |

## 7 Vinyl chloride, CAS: 75-01-4

Processing Results




| RT | Mass | Response | Amount |
|---|---|---|---|
| 0.68 | 62.00 | 1198 | 0.314575 |
| 0.68 | 64.00 | 1012 | |

Reviewer: moroneyc, 09-Sep-2020 07:01:14

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

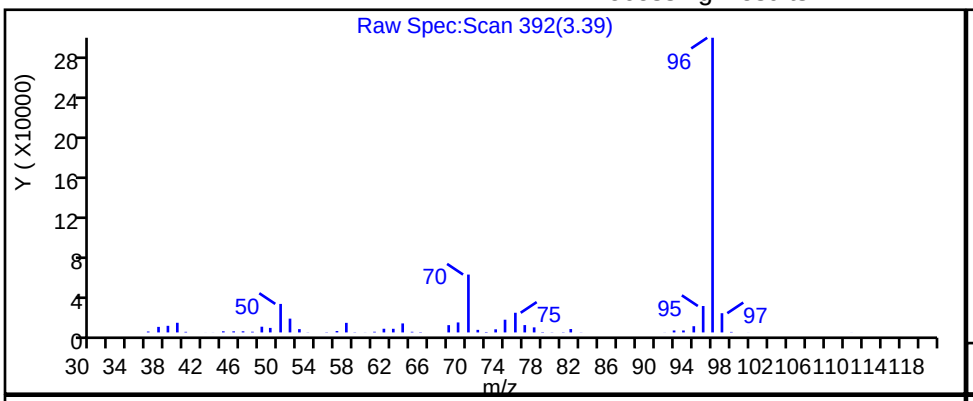
User Disabled Compound Report

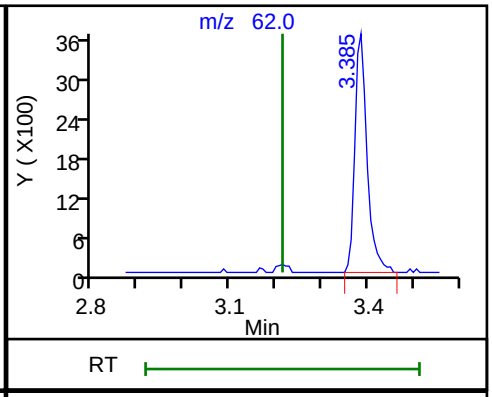
Eurofins TestAmerica, Edison

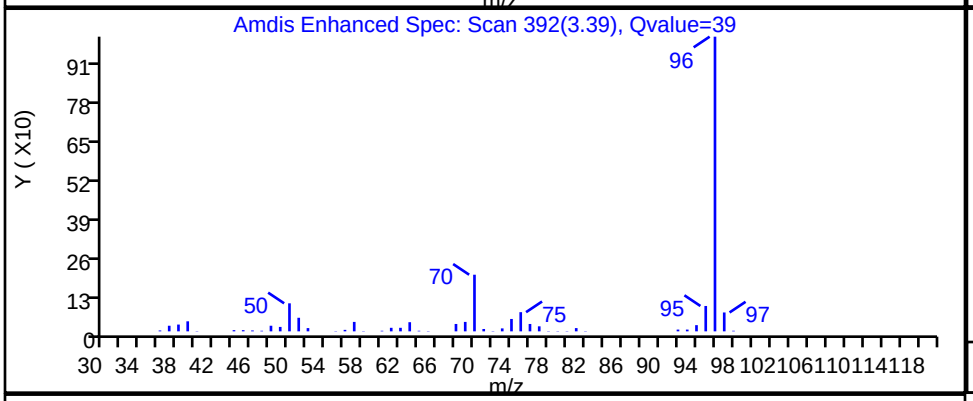
| | | | |
|---|---|---|---|
| Data File: | \\chromfs\Edison\ChromData\CVOAMS13\20200908-116444.b\P79492.D | | |
| Injection Date: | 09-Sep-2020 02:49:30 | Instrument ID: | CVOAMS13 |
| Lims ID: | 460-217547-A-7 | Lab Sample ID: | 460-217547-7 |
| Client ID: | FB | | |
| Operator ID: | | ALS Bottle#: | 13 Worklist Smp#: 14 |
| Purge Vol: | 5.000 mL | Dil. Factor: | 1.0000 |
| Method: | 8260W_13 | Limit Group: | VOA - 8260C Water and Solid |
| Column: | Rtx-624 ( 0.25 mm) | Detector | MS SCAN |

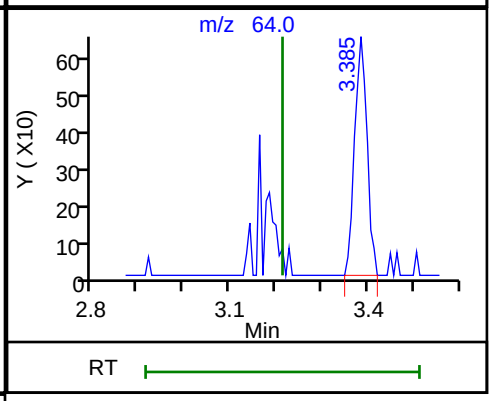
## 63 1,2-Dichloroethane, CAS: 107-06-2

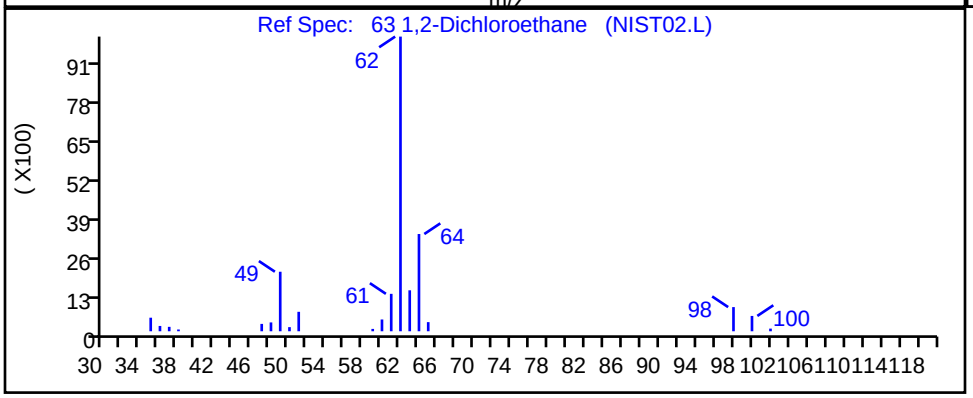
Processing Results




| RT | Mass | Response | Amount |
|---|---|---|---|
| 3.39 | 62.00 | 6861 | 2.223096 |
| 3.39 | 64.00 | 1228 | |

Reviewer: moroneyc, 09-Sep-2020 07:01:19

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Edison  Job No.: 460-217547-1

SDG No.:

Client Sample ID: TB  Lab Sample ID: 460-217547-8

Matrix: Water  Lab File ID: P79489.D

Analysis Method: 8260C  Date Collected: 09/02/2020 14:30

Sample wt/vol: 5(mL)  Date Analyzed: 09/09/2020 01:38

Soil Aliquot Vol:  Dilution Factor: 1

Soil Extract Vol.:  GC Column: Rtx-624 ID: 0.25(mm)

% Moisture:  Level: (low/med) Low

Analysis Batch No.: 722597  Units: ug/L

| CAS NO. | COMPOUND NAME | RESULT | Q | RL | MDL |
|---|---|---|---|---|---|
| 71-55-6 | 1,1,1-Trichloroethane | 0.24 | U | 1.0 | 0.24 |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 0.37 | U | 1.0 | 0.37 |
| 76-13-1 | 1,1,2-Trichloro-1,2,2-trifluoroethane | 0.31 | U | 1.0 | 0.31 |
| 79-00-5 | 1,1,2-Trichloroethane | 0.43 | U | 1.0 | 0.43 |
| 75-34-3 | 1,1-Dichloroethane | 0.26 | U | 1.0 | 0.26 |
| 75-35-4 | 1,1-Dichloroethene | 0.26 | U | 1.0 | 0.26 |
| 87-61-6 | 1,2,3-Trichlorobenzene | 0.36 | U | 1.0 | 0.36 |
| 120-82-1 | 1,2,4-Trichlorobenzene | 0.37 | U | 1.0 | 0.37 |
| 78-87-5 | 1,2-Dichloropropane | 0.35 | U | 1.0 | 0.35 |
| 541-73-1 | 1,3-Dichlorobenzene | 0.34 | U | 1.0 | 0.34 |
| 106-46-7 | 1,4-Dichlorobenzene | 0.33 | U | 1.0 | 0.33 |
| 123-91-1 | 1,4-Dioxane | 28 | U | 50 | 28 |
| 78-93-3 | 2-Butanone (MEK) | 1.9 | U | 5.0 | 1.9 |
| 591-78-6 | 2-Hexanone | 1.1 | U | 5.0 | 1.1 |
| 108-10-1 | 4-Methyl-2-pentanone (MIBK) | 1.3 | U | 5.0 | 1.3 |
| 67-64-1 | Acetone | 4.4 | U | 5.0 | 4.4 |
| 71-43-2 | Benzene | 0.20 | U | 1.0 | 0.20 |
| 75-25-2 | Bromoform | 0.54 | U | 1.0 | 0.54 |
| 74-83-9 | Bromomethane | 0.55 | U * | 1.0 | 0.55 |
| 75-15-0 | Carbon disulfide | 0.82 | U | 1.0 | 0.82 |
| 56-23-5 | Carbon tetrachloride | 0.21 | U | 1.0 | 0.21 |
| 108-90-7 | Chlorobenzene | 0.38 | U | 1.0 | 0.38 |
| 74-97-5 | Chlorobromomethane | 0.41 | U | 1.0 | 0.41 |
| 124-48-1 | Chlorodibromomethane | 0.28 | U | 1.0 | 0.28 |
| 75-00-3 | Chloroethane | 0.32 | U | 1.0 | 0.32 |
| 67-66-3 | Chloroform | 0.33 | U | 1.0 | 0.33 |
| 74-87-3 | Chloromethane | 0.40 | U | 1.0 | 0.40 |
| 156-59-2 | cis-1,2-Dichloroethene | 0.22 | U | 1.0 | 0.22 |
| 10061-01-5 | cis-1,3-Dichloropropene | 0.22 | U | 1.0 | 0.22 |
| 110-82-7 | Cyclohexane | 0.32 | U | 1.0 | 0.32 |
| 75-27-4 | Dichlorobromomethane | 0.34 | U | 1.0 | 0.34 |
| 75-71-8 | Dichlorodifluoromethane | 0.31 | U | 1.0 | 0.31 |
| 100-41-4 | Ethylbenzene | 0.30 | U | 1.0 | 0.30 |
| 106-93-4 | Ethylene Dibromide | 0.50 | U | 1.0 | 0.50 |
| 98-82-8 | Isopropylbenzene | 0.34 | U | 1.0 | 0.34 |

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Edison  Job No.: 460-217547-1

SDG No.:

Client Sample ID: TB  Lab Sample ID: 460-217547-8

Matrix: Water  Lab File ID: P79489.D

Analysis Method: 8260C  Date Collected: 09/02/2020 14:30

Sample wt/vol: 5(mL)  Date Analyzed: 09/09/2020 01:38

Soil Aliquot Vol:  Dilution Factor: 1

Soil Extract Vol.:  GC Column: Rtx-624 ID: 0.25(mm)

% Moisture:  Level: (low/med) Low

Analysis Batch No.: 722597  Units: ug/L

| CAS NO. | COMPOUND NAME | RESULT | Q | RL | MDL |
|---|---|---|---|---|---|
| 79-20-9 | Methyl acetate | 0.79 | U | 5.0 | 0.79 |
| 1634-04-4 | Methyl tert-butyl ether | 0.47 | U | 1.0 | 0.47 |
| 108-87-2 | Methylcyclohexane | 0.26 | U | 1.0 | 0.26 |
| 75-09-2 | Methylene Chloride | 0.32 | U | 1.0 | 0.32 |
| 179601-23-1 | m-Xylene & p-Xylene | 0.30 | U | 1.0 | 0.30 |
| 95-47-6 | o-Xylene | 0.36 | U | 1.0 | 0.36 |
| 100-42-5 | Styrene | 0.42 | U | 1.0 | 0.42 |
| 127-18-4 | Tetrachloroethene | 0.25 | U | 1.0 | 0.25 |
| 108-88-3 | Toluene | 0.38 | U | 1.0 | 0.38 |
| 156-60-5 | trans-1,2-Dichloroethene | 0.24 | U | 1.0 | 0.24 |
| 10061-02-6 | trans-1,3-Dichloropropene | 0.49 | U | 1.0 | 0.49 |
| 79-01-6 | Trichloroethene | 0.31 | U | 1.0 | 0.31 |
| 75-69-4 | Trichlorofluoromethane | 0.32 | U | 1.0 | 0.32 |
| 75-01-4 | Vinyl chloride | 0.17 | U | 1.0 | 0.17 |
| 107-06-2 | 1,2-Dichloroethane | 0.43 | U | 1.0 | 0.43 |
| 95-50-1 | 1,2-Dichlorobenzene | 0.43 | U | 1.0 | 0.43 |
| 96-12-8 | 1,2-Dibromo-3-Chloropropane | 0.38 | U | 1.0 | 0.38 |

| CAS NO. | SURROGATE | %REC | Q | LIMITS |
|---|---|---|---|---|
| 17060-07-0 | 1,2-Dichloroethane-d4 (Surr) | 91 | | 75-123 |
| 460-00-4 | 4-Bromofluorobenzene | 99 | | 76-120 |
| 1868-53-7 | Dibromofluoromethane (Surr) | 98 | | 77-124 |
| 2037-26-5 | Toluene-d8 (Surr) | 99 | | 80-120 |

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: Eurofins TestAmerica, Edison  Job No.: 460-217547-1

SDG No.:

Client Sample ID: TB  Lab Sample ID: 460-217547-8

Matrix: Water  Lab File ID: P79489.D

Analysis Method: 8260C  Date Collected: 09/02/2020 14:30

Sample wt/vol: 5(mL)  Date Analyzed: 09/09/2020 01:38

Soil Aliquot Vol:  Dilution Factor: 1

Soil Extract Vol.:  GC Column: Rtx-624 ID: 0.25(mm)

% Moisture:  Level: (low/med) Low

Analysis Batch No.: 722597  Units: ug/L

Number TICs Found: 0  TIC Result Total: 0

| CAS NO. | COMPOUND NAME | RT | RESULT | Q | MATCH QUALITY |
|---|---|---|---|---|---|
| | Tentatively Identified Compound | | None | | |

Eurofins TestAmerica, Edison
Target Compound Quantitation Report

Data File: \\chromfs\Edison\ChromData\CVOAMS13\20200908-116444.b\P79489.D
Lims ID: 460-217547-A-8
Client ID: TB
Sample Type: Client
Inject. Date: 09-Sep-2020 01:38:30 ALS Bottle#: 10 Worklist Smp#: 11
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: 460-217547-A-8
Misc. Info.: 460-0116444-011
Operator ID: Instrument ID: CVOAMS13

Method: \\chromfs\Edison\ChromData\CVOAMS13\20200908-116444.b\8260W_13.m
Limit Group: VOA - 8260C Water and Solid
Last Update: 09-Sep-2020 19:45:59 Calib Date: 04-Sep-2020 16:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Edison\ChromData\CVOAMS13\20200904-116303.b\P79359.D

Column 1 : Rtx-624 ( 0.25 mm) Det: MS SCAN
Process Host: CTX1060

First Level Reviewer: yallabg Date: 09-Sep-2020 01:14:25

| Compound | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q | Response | OnCol Amt ug/l | Flags |
|---|---|---|---|---|---|---|---|---|
| * 33 TBA-d9 (IS) | 65 | 1.845 | 1.845 | 0.000 | 99 | 101652 | 1000.0 | |
| $ 51 Dibromofluoromethane (Surr) | 113 | 2.776 | 2.769 | 0.007 | 98 | 124453 | 48.9 | |
| * 53 2-Butanone-d5 | 46 | 2.827 | 2.827 | -0.001 | 100 | 126732 | 250.0 | |
| $ 61 1,2-Dichloroethane-d4 (Surr) | 65 | 3.156 | 3.156 | 0.000 | 0 | 115948 | 45.4 | |
| * 66 Fluorobenzene | 96 | 3.385 | 3.385 | 0.000 | 99 | 590943 | 50.0 | |
| * 76 1,4-Dioxane-d8 | 96 | 4.238 | 4.238 | 0.000 | 63 | 15259 | 1000.0 | M |
| 78 1,4-Dioxane | 88 | 4.288 | 4.266 | 0.022 | 47 | 456 | 25.9 | |
| $ 82 Toluene-d8 (Surr) | 98 | 4.882 | 4.883 | 0.000 | 99 | 529167 | 49.6 | |
| * 96 Chlorobenzene-d5 | 117 | 6.723 | 6.723 | 0.000 | 86 | 413624 | 50.0 | |
| $ 107 4-Bromofluorobenzene | 174 | 8.485 | 8.478 | 0.007 | 95 | 165743 | 49.5 | |
| * 123 1,4-Dichlorobenzene-d4 | 152 | 10.226 | 10.226 | 0.000 | 94 | 221706 | 50.0 | |

## QC Flag Legend

Review Flags
M - Manually Integrated

## Reagents:

8260ISNEW_00129 Amount Added: 1.00 Units: uL Run Reagent
8260SURR250_00212 Amount Added: 1.00 Units: uL Run Reagent

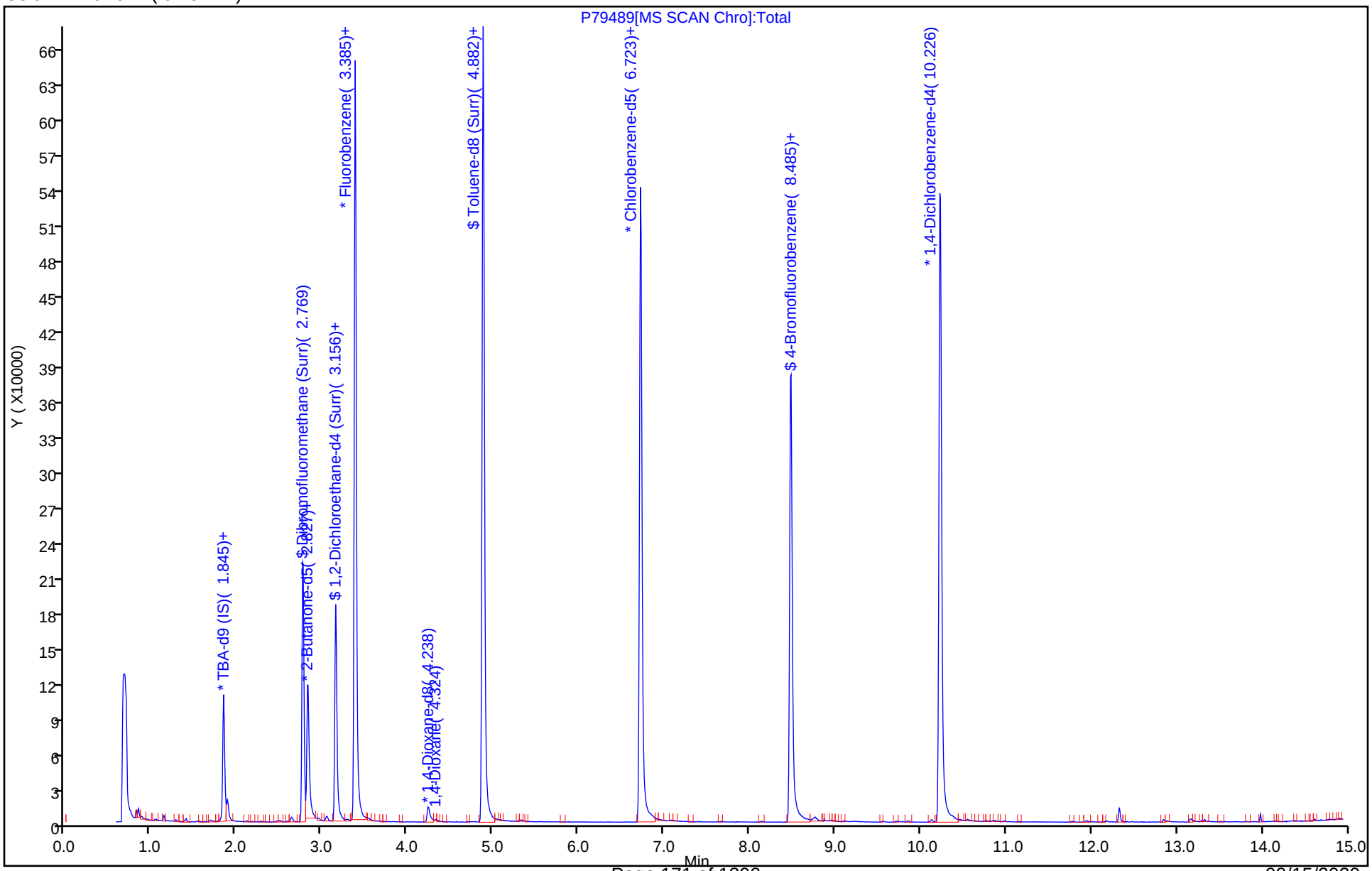
Report Date: 09-Sep-2020 19:45:59 Chrom Revision: 2.3 20-Aug-2020 13:57:12

Eurofins TestAmerica, Edison

Data File: \\chromfs\Edison\ChromData\CVOAMS13\20200908-116444.b\P79489.D

| | | | | | |
|---|---|---|---|---|---|
| Injection Date: | 09-Sep-2020 01:38:30 | Instrument ID: | CVOAMS13 | Operator ID: | |
| Lims ID: | 460-217547-A-8 | Lab Sample ID: | 460-217547-8 | Worklist Smp#: | 11 |
| Client ID: | TB | | | | |
| Purge Vol: | 5.000 mL | Dil. Factor: | 1.0000 | ALS Bottle#: | 10 |
| Method: | 8260W_13 | Limit Group: | VOA - 8260C Water and Solid | | |

Column: Rtx-624 ( 0.25 mm)



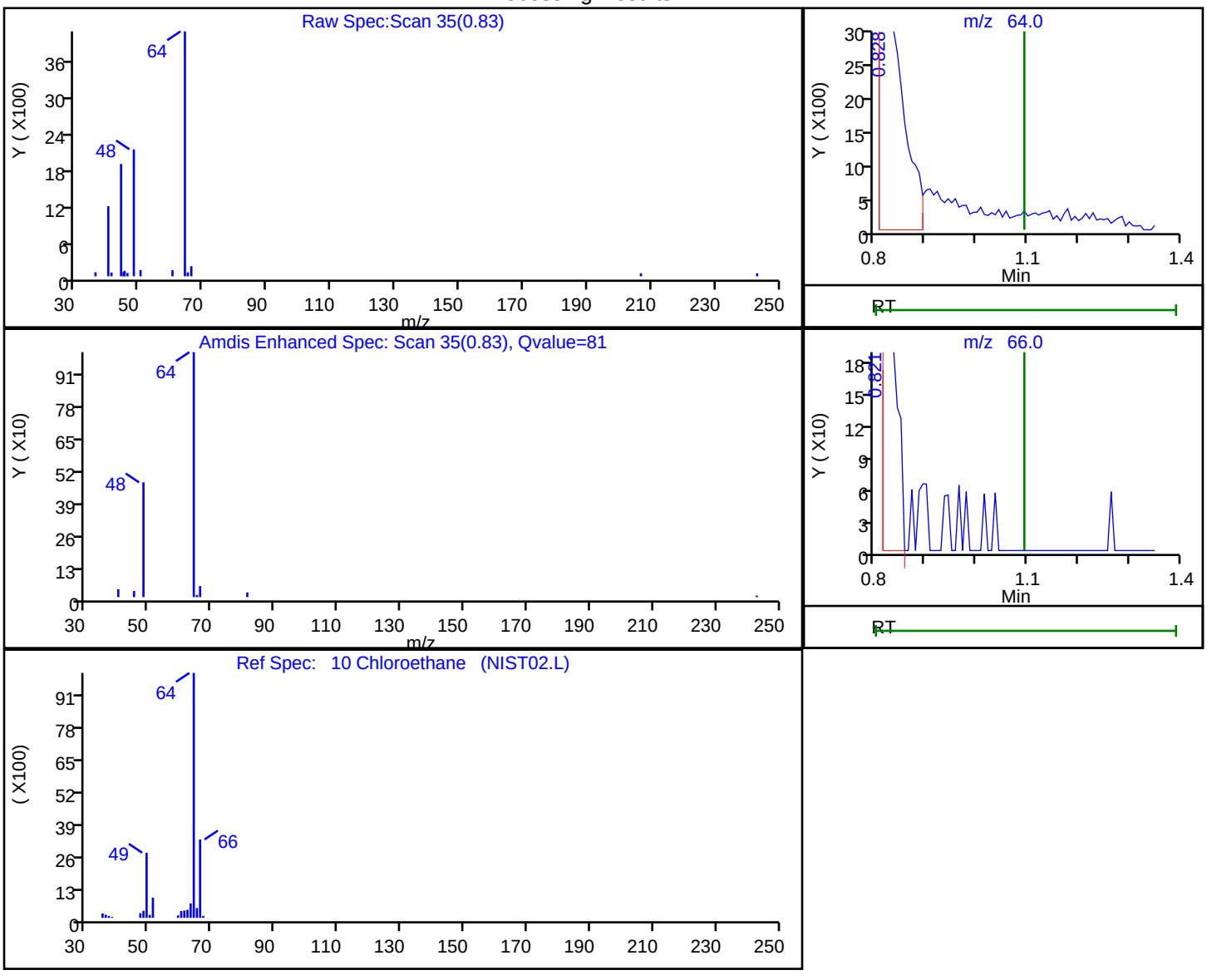
User Disabled Compound Report

Eurofins TestAmerica, Edison

| | | | |
|---|---|---|---|
| Data File: | \\chromfs\Edison\ChromData\CVOAMS13\20200908-116444.b\P79489.D | | |
| Injection Date: | 09-Sep-2020 01:38:30 | Instrument ID: | CVOAMS13 |
| Lims ID: | 460-217547-A-8 | Lab Sample ID: | 460-217547-8 |
| Client ID: | TB | | |
| Operator ID: | | ALS Bottle#: | 10 Worklist Smp#: 11 |
| Purge Vol: | 5.000 mL | Dil. Factor: | 1.0000 |
| Method: | 8260W_13 | Limit Group: | VOA - 8260C Water and Solid |
| Column: | Rtx-624 ( 0.25 mm) | Detector | MS SCAN |

## 10 Chloroethane, CAS: 75-00-3

Processing Results




| RT | Mass | Response | Amount |
|---|---|---|---|
| 0.83 | 64.00 | 9303 | 4.297186 |
| 0.82 | 66.00 | 368 | |

Reviewer: moroneyc, 09-Sep-2020 07:00:26

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

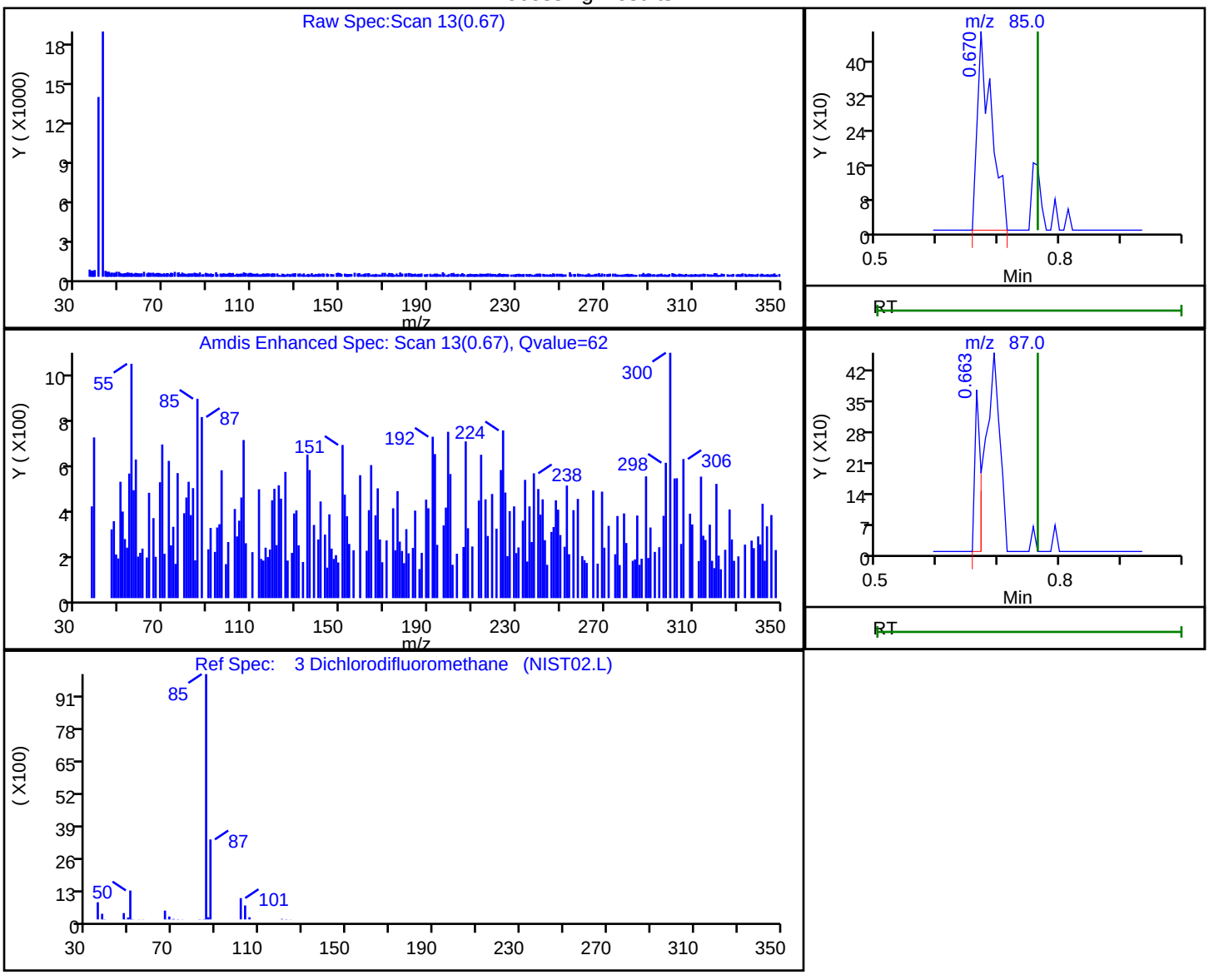
User Disabled Compound Report

Eurofins TestAmerica, Edison

| | | | |
|---|---|---|---|
| Data File: | \\chromfs\Edison\ChromData\CVOAMS13\20200908-116444.b\P79489.D | | |
| Injection Date: | 09-Sep-2020 01:38:30 | Instrument ID: | CVOAMS13 |
| Lims ID: | 460-217547-A-8 | Lab Sample ID: | 460-217547-8 |
| Client ID: | TB | | |
| Operator ID: | | ALS Bottle#: | 10 Worklist Smp#: 11 |
| Purge Vol: | 5.000 mL | Dil. Factor: | 1.0000 |
| Method: | 8260W_13 | Limit Group: | VOA - 8260C Water and Solid |
| Column: | Rtx-624 ( 0.25 mm) | Detector | MS SCAN |

## 3 Dichlorodifluoromethane, CAS: 75-71-8

Processing Results




| RT | Mass | Response | Amount |
|---|---|---|---|
| 0.67 | 85.00 | 762 | 0.191285 |
| 0.66 | 87.00 | 236 | |

Reviewer: moroneyc, 09-Sep-2020 07:00:23

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

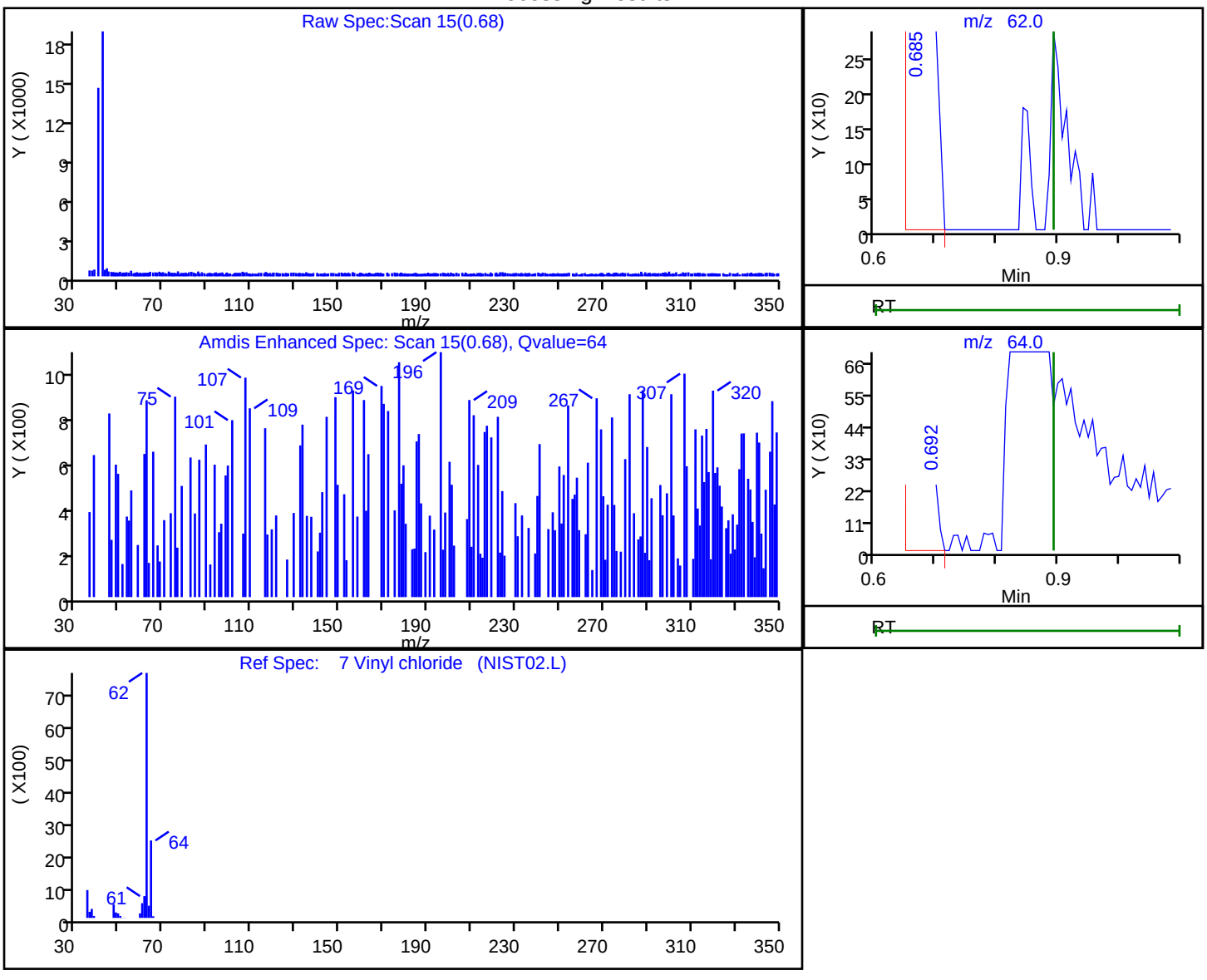
User Disabled Compound Report

Eurofins TestAmerica, Edison

| | | | |
|---|---|---|---|
| Data File: | \\chromfs\Edison\ChromData\CVOAMS13\20200908-116444.b\P79489.D | | |
| Injection Date: | 09-Sep-2020 01:38:30 | Instrument ID: | CVOAMS13 |
| Lims ID: | 460-217547-A-8 | Lab Sample ID: | 460-217547-8 |
| Client ID: | TB | | |
| Operator ID: | | ALS Bottle#: | 10 Worklist Smp#: 11 |
| Purge Vol: | 5.000 mL | Dil. Factor: | 1.0000 |
| Method: | 8260W_13 | Limit Group: | VOA - 8260C Water and Solid |
| Column: | Rtx-624 ( 0.25 mm) | Detector | MS SCAN |

## 7 Vinyl chloride, CAS: 75-01-4

Processing Results




| RT | Mass | Response | Amount |
|---|---|---|---|
| 0.68 | 62.00 | 710 | 0.174244 |
| 0.69 | 64.00 | 706 | |

Reviewer: moroneyc, 09-Sep-2020 07:00:24

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Edison

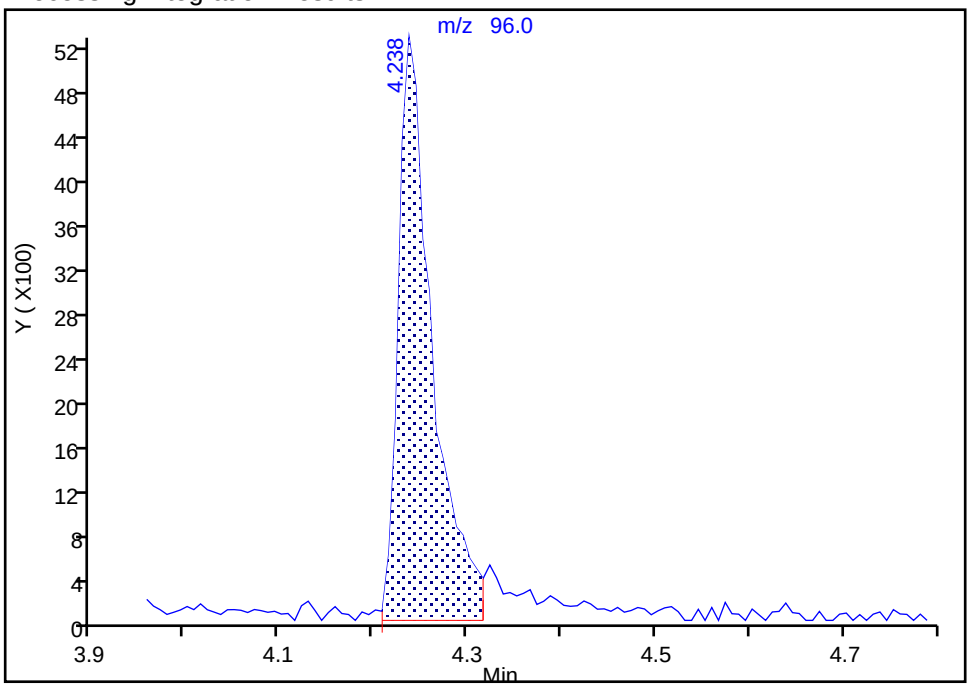
| | | | |
|---|---|---|---|
| Data File: | \\chromfs\Edison\ChromData\CVOAMS13\20200908-116444.b\P79489.D | | |
| Injection Date: | 09-Sep-2020 01:38:30 | Instrument ID: | CVOAMS13 |
| Lims ID: | 460-217547-A-8 | Lab Sample ID: | 460-217547-8 |
| Client ID: | TB | | |
| Operator ID: | | ALS Bottle#: | 10 Worklist Smp#: 11 |
| Purge Vol: | 5.000 mL | Dil. Factor: | 1.0000 |
| Method: | 8260W_13 | Limit Group: | VOA - 8260C Water and Solid |
| Column: | Rtx-624 ( 0.25 mm) | Detector | MS SCAN |

## * 76 1,4-Dioxane-d8, CAS: 17647-74-4

Signal: 1

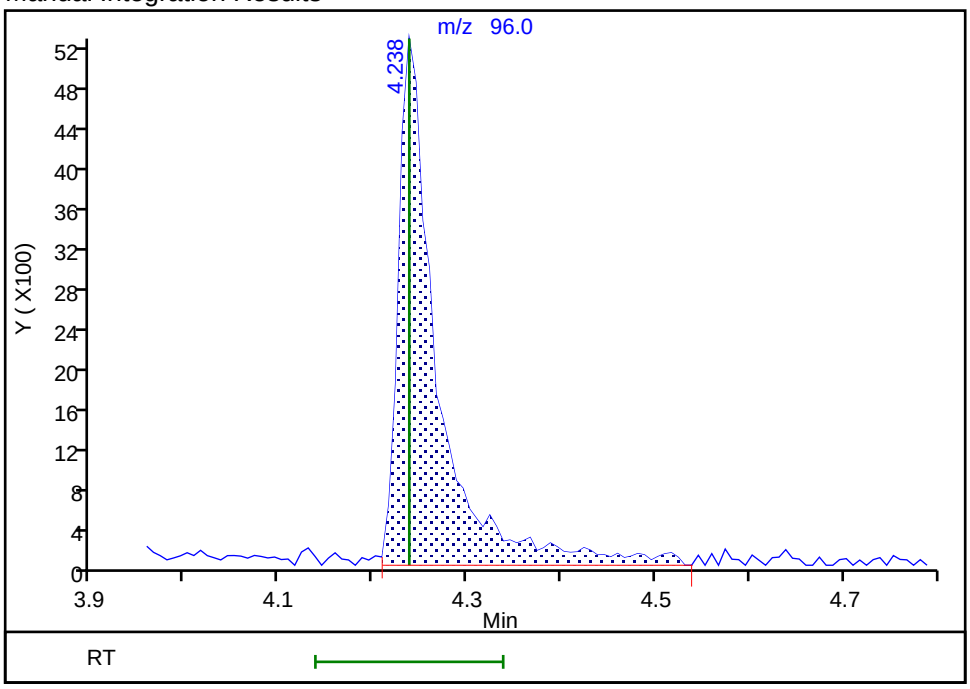
Processing Integration Results

RT: 4.24
Area: 13199
Amount: 1000.0000
Amount Units: ug/l




Manual Integration Results

RT: 4.24
Area: 15259
Amount: 1000.0000
Amount Units: ug/l




Reviewer: xuyvo, 09-Sep-2020 19:45:44

Audit Action: Manually Integrated Audit Reason: Incomplete Integration

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins TestAmerica, Edison Job No.: 460-217547-1 Analy Batch No.: 721970

SDG No.:

Instrument ID: CVOAMS13 GC Column: Rtx-624 ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 09/04/2020 14:09 Calibration End Date: 09/04/2020 16:58 Calibration ID: 81791

Calibration Files:

| LEVEL: | LAB SAMPLE ID: | LAB FILE ID: |
|---|---|---|
| Level 1 | STD8 460-721970/3 | P79352.D |
| Level 2 | STD1 460-721970/4 | P79354.D |
| Level 3 | STD5 460-721970/5 | P79355.D |
| Level 4 | STD20 460-721970/6 | P79356.D |
| Level 5 | STD50 460-721970/7 | P79357.D |
| Level 6 | STD200 460-721970/8 | P79358.D |
| Level 7 | STD500 460-721970/9 | P79359.D |

| ANALYTE | RRF | | | | | CURVE TYPE | COEFFICIENT | | | # | MIN RRF | %RSD | # | MAX %RSD | R^2 OR COD | # | MIN R^2 OR COD |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | LVL 1 LVL 6 | LVL 2 LVL 7 | LVL 3 | LVL 4 | LVL 5 | | B | M1 | M2 | | | | | | | | |
| Monochloropentafluoroethane | +++++ 0.0233 | 0.0241 0.0248 | 0.0197 | 0.0207 | 0.0197 | Ave | | 0.0221 | | | | 10.4 | | 20.0 | | | |
| Chlorotrifluoroethene | +++++ 0.0895 | 0.0735 0.0964 | 0.0654 | 0.0738 | 0.0723 | Ave | | 0.0785 | | | | 15.1 | | 20.0 | | | |
| Dichlorodifluoromethane | +++++ 0.3537 | 0.3490 0.3452 | 0.3112 | 0.3333 | 0.3299 | Ave | | 0.3371 | | | 0.1000 | 4.6 | | 20.0 | | | |
| 1,1-Difluoroethane | +++++ 0.1453 | 0.2164 0.1478 | 0.1510 | 0.1516 | 0.1465 | Ave | | 0.1598 | | | | 17.4 | | 20.0 | | | |
| Chlorodifluoromethane | +++++ 0.0441 | 0.0527 0.0462 | 0.0440 | 0.0449 | 0.0453 | Ave | | 0.0462 | | | | 7.1 | | 20.0 | | | |
| Butadiene | 0.2961 0.3247 | 0.3328 0.3267 | 0.2778 | 0.3167 | 0.3177 | Ave | | 0.3132 | | | | 6.2 | | 20.0 | | | |
| Chloromethane | +++++ 0.4683 | 0.5186 0.4637 | 0.4635 | 0.4407 | 0.4685 | Ave | | 0.4706 | | | 0.1000 | 5.5 | | 20.0 | | | |
| Vinyl chloride | +++++ 0.3426 | 0.3926 0.3393 | 0.3183 | 0.3318 | 0.3440 | Ave | | 0.3448 | | | 0.1000 | 7.3 | | 20.0 | | | |
| Bromomethane | +++++ 2.9805 | 2.2164 2.9461 | 2.2933 | 2.5085 | 2.4052 | Ave | | 2.5583 | | | 0.1000 | 12.9 | | 20.0 | | | |
| Chloroethane | +++++ 0.1835 | 0.1605 0.1558 | 0.2111 | 0.1999 | 0.1883 | Ave | | 0.1832 | | | 0.1000 | 11.8 | | 20.0 | | | |
| Pentane | +++++ 4.5767 | 3.9693 4.1472 | 4.3381 | 4.7655 | 4.0283 | Ave | | 4.3042 | | | | 7.4 | | 20.0 | | | |
| Trichlorofluoromethane | +++++ 0.3322 | 0.3218 0.3258 | 0.2777 | 0.3072 | 0.3232 | Ave | | 0.3147 | | | 0.1000 | 6.3 | | 20.0 | | | |
| Dichlorofluoromethane | +++++ 0.4150 | 0.4701 0.3877 | 0.4205 | 0.4160 | 0.4290 | Ave | | 0.4231 | | | | 6.4 | | 20.0 | | | |
| 2-Methyl-1,3-butadiene | +++++ 0.3762 | 0.3440 0.3840 | 0.3351 | 0.3720 | 0.3614 | Ave | | 0.3621 | | | | 5.3 | | 20.0 | | | |

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins TestAmerica, Edison Job No.: 460-217547-1 Analy Batch No.: 721970

SDG No.:

Instrument ID: CVOAMS13 GC Column: Rtx-624 ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 09/04/2020 14:09 Calibration End Date: 09/04/2020 16:58 Calibration ID: 81791

| ANALYTE | RRF | | | | | CURVE TYPE | COEFFICIENT | | | # | MIN RRF | %RSD | # | MAX %RSD | R^2 OR COD | # | MIN R^2 OR COD |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | LVL 1<br>LVL 6 | LVL 2<br>LVL 7 | LVL 3 | LVL 4 | LVL 5 | | B | M1 | M2 | | | | | | | | |
| Ethyl ether | +++++<br>0.1713 | 0.1662<br>0.1707 | 0.1701 | 0.1653 | 0.1697 | Ave | | 0.1689 | | | | 1.5 | | 20.0 | | | |
| 1,2-Dichloro-1,1,2-trifluoroethane | +++++<br>0.3267 | 0.3506<br>0.3318 | 0.3139 | 0.3300 | 0.3175 | Ave | | 0.3284 | | | | 3.9 | | 20.0 | | | |
| 1,1-Dichloroethene | +++++<br>0.2312 | 0.2356<br>0.2290 | 0.2122 | 0.2234 | 0.2188 | Ave | | 0.2250 | | | 0.1000 | 3.8 | | 20.0 | | | |
| Ethanol | +++++<br>0.0776 | 0.1106<br>0.0782 | 0.0748 | 0.0778 | 0.0788 | Ave | | 0.0830 | | | | 16.4 | | 20.0 | | | |
| Carbon disulfide | +++++<br>0.8838 | 0.9751<br>0.8712 | 0.8478 | 0.8570 | 0.8467 | Ave | | 0.8803 | | | 0.1000 | 5.5 | | 20.0 | | | |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | +++++<br>0.2326 | 0.2157<br>0.2273 | 0.2109 | 0.2235 | 0.2110 | Ave | | 0.2202 | | | 0.1000 | 4.1 | | 20.0 | | | |
| 1,1,1-Trifluoro-2,2-dichloroethane | +++++<br>0.3453 | 0.3466<br>0.3549 | 0.3193 | 0.3421 | 0.3365 | Ave | | 0.3408 | | | | 3.6 | | 20.0 | | | |
| Iodomethane | +++++<br>0.3680 | 0.1671<br>0.3632 | 0.1874 | 0.2283 | 0.2857 | QuaF | | 0.3560 | 0.0000155 | | | | | | 0.9990 | | 0.9900 |
| Cyclopentene | +++++<br>0.6252 | 0.6663<br>0.6325 | 0.5728 | 0.6323 | 0.6115 | Ave | | 0.6234 | | | | 4.9 | | 20.0 | | | |
| Acrolein | +++++<br>2.2178 | 1.9825<br>2.2476 | 1.4025 | 1.8826 | 1.9239 | Ave | | 1.9428 | | | | 15.7 | | 20.0 | | | |
| Allyl chloride | +++++<br>0.1497 | 0.1516<br>0.1500 | 0.1378 | 0.1323 | 0.1414 | Ave | | 0.1438 | | | | 5.5 | | 20.0 | | | |
| Isopropyl alcohol | +++++<br>0.7678 | 1.0806<br>0.7365 | 0.7977 | 0.7235 | 0.7367 | Ave | | 0.8071 | | | | 16.9 | | 20.0 | | | |
| Methylene Chloride | +++++<br>0.2650 | 0.2937<br>0.2617 | 0.2745 | 0.2660 | 0.2665 | Ave | | 0.2712 | | | 0.1000 | 4.3 | | 20.0 | | | |
| Acetone | +++++<br>0.7423 | 1.0606<br>0.5961 | 0.7615 | 0.7450 | 0.7025 | QuaF | | 0.8222 | -0.000090 | | 0.0500 | | | | 1.0000 | | 0.9900 |
| trans-1,2-Dichloroethene | +++++<br>0.2585 | 0.2681<br>0.2561 | 0.2530 | 0.2544 | 0.2544 | Ave | | 0.2574 | | | 0.1000 | 2.2 | | 20.0 | | | |
| Methyl acetate | +++++<br>9.1553 | 9.5638<br>9.0263 | 10.339 | 9.4395 | 10.939 | Ave | | 9.7439 | | | 0.1000 | 7.6 | | 20.0 | | | |
| Hexane | +++++<br>0.0687 | 0.0544<br>0.0674 | 0.0528 | 0.0677 | 0.0615 | Ave | | 0.0621 | | | | 11.4 | | 20.0 | | | |
| Methyl tert-butyl ether | +++++<br>0.5321 | 0.5288<br>0.5232 | 0.5271 | 0.5150 | 0.5322 | Ave | | 0.5264 | | | 0.1000 | 1.2 | | 20.0 | | | |
| 2-Methyl-2-propanol | +++++<br>1.1038 | 1.7792<br>1.1184 | 1.2246 | 1.1502 | 1.0799 | QuaF | | 1.0933 | 0.0000050 | | | | | | 1.0000 | | 0.9900 |
| Acetonitrile | +++++<br>1.9185 | 2.0208<br>2.0033 | 2.1215 | 1.9176 | 2.0155 | Ave | | 1.9995 | | | | 3.8 | | 20.0 | | | |

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins TestAmerica, Edison Job No.: 460-217547-1 Analy Batch No.: 721970

SDG No.:

Instrument ID: CVOAMS13 GC Column: Rtx-624 ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 09/04/2020 14:09 Calibration End Date: 09/04/2020 16:58 Calibration ID: 81791

| ANALYTE | RRF | | | | | CURVE TYPE | COEFFICIENT | | | # | MIN RRF | %RSD | # | MAX %RSD | R^2 OR COD | # | MIN R^2 OR COD |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | LVL 1<br>LVL 6 | LVL 2<br>LVL 7 | LVL 3 | LVL 4 | LVL 5 | | B | M1 | M2 | | | | | | | | |
| Isopropyl ether | +++++<br>0.8434 | 0.7753<br>0.8498 | 0.8082 | 0.8209 | 0.8457 | Ave | | 0.8239 | | | | 3.5 | | 20.0 | | | |
| 2-Chloro-1,3-butadiene | +++++<br>0.2432 | 0.2251<br>0.2460 | 0.2269 | 0.2362 | 0.2377 | Ave | | 0.2359 | | | | 3.6 | | 20.0 | | | |
| 1,1-Dichloroethane | +++++<br>0.4770 | 0.5064<br>0.4730 | 0.4749 | 0.4642 | 0.4710 | Ave | | 0.4778 | | | 0.2000 | 3.1 | | 20.0 | | | |
| Acrylonitrile | 0.0576<br>0.0625 | 0.0629<br>0.0643 | 0.0635 | 0.0610 | 0.0616 | Ave | | 0.0619 | | | | 3.6 | | 20.0 | | | |
| Tert-butyl ethyl ether | +++++<br>0.7027 | 0.6546<br>0.7067 | 0.6532 | 0.6639 | 0.6936 | Ave | | 0.6791 | | | | 3.6 | | 20.0 | | | |
| Vinyl acetate | +++++<br>0.3834 | 0.3635<br>0.3798 | 0.3821 | 0.3314 | 0.3652 | Ave | | 0.3676 | | | | 5.4 | | 20.0 | | | |
| cis-1,2-Dichloroethene | +++++<br>0.2849 | 0.3206<br>0.2832 | 0.2849 | 0.2653 | 0.2696 | Ave | | 0.2848 | | | 0.1000 | 6.8 | | 20.0 | | | |
| 2,2-Dichloropropane | +++++<br>0.3254 | 0.3390<br>0.3200 | 0.3158 | 0.3168 | 0.3238 | Ave | | 0.3235 | | | | 2.6 | | 20.0 | | | |
| Cyclohexane | +++++<br>0.5035 | 0.4728<br>0.4870 | 0.4528 | 0.4914 | 0.4626 | Ave | | 0.4784 | | | 0.1000 | 4.0 | | 20.0 | | | |
| Chlorobromomethane | +++++<br>0.1268 | 0.1274<br>0.1264 | 0.1246 | 0.1193 | 0.1223 | Ave | | 0.1245 | | | | 2.5 | | 20.0 | | | |
| Chloroform | +++++<br>0.4294 | 0.4576<br>0.4217 | 0.4186 | 0.4179 | 0.4247 | Ave | | 0.4283 | | | 0.2000 | 3.5 | | 20.0 | | | |
| Carbon tetrachloride | +++++<br>0.2699 | 0.2562<br>0.2829 | 0.2267 | 0.2342 | 0.2451 | Ave | | 0.2525 | | | 0.1000 | 8.5 | | 20.0 | | | |
| Ethyl acetate | +++++<br>0.3419 | 0.2726<br>0.3237 | 0.3101 | 0.3592 | 0.3364 | Ave | | 0.3240 | | | | 9.3 | | 20.0 | | | |
| Methyl acrylate | +++++<br>0.1447 | 0.1171<br>0.1482 | 0.1249 | 0.1342 | 0.1405 | Ave | | 0.1349 | | | | 8.9 | | 20.0 | | | |
| Tetrahydrofuran | +++++<br>1.1391 | 1.1225<br>1.0709 | 1.1531 | 1.1732 | 1.1232 | Ave | | 1.1303 | | | | 3.1 | | 20.0 | | | |
| 1,1,1-Trichloroethane | +++++<br>0.3546 | 0.3548<br>0.3468 | 0.3239 | 0.3378 | 0.3474 | Ave | | 0.3442 | | | 0.1000 | 3.4 | | 20.0 | | | |
| 1,1-Dichloropropene | +++++<br>0.3678 | 0.5770<br>0.3565 | 0.3887 | 0.3664 | 0.3575 | QuaF | | 0.3731 | -0.000033 | | | | | | 1.0000 | | 0.9900 |
| 2-Butanone (MEK) | +++++<br>0.3793 | 0.3571<br>0.3460 | 0.3713 | 0.3792 | 0.3588 | Ave | | 0.3653 | | | 0.0500 | 3.7 | | 20.0 | | | |
| 2,2,4-Trimethylpentane | +++++<br>0.8222 | 0.7002<br>0.8174 | 0.7145 | 0.7737 | 0.7019 | Ave | | 0.7550 | | | | 7.5 | | 20.0 | | | |
| n-Heptane | +++++<br>0.1985 | 0.1832<br>0.1918 | 0.1723 | 0.1907 | 0.1756 | Ave | | 0.1853 | | | | 5.5 | | 20.0 | | | |

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins TestAmerica, Edison Job No.: 460-217547-1 Analy Batch No.: 721970

SDG No.:

Instrument ID: CVOAMS13 GC Column: Rtx-624 ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 09/04/2020 14:09 Calibration End Date: 09/04/2020 16:58 Calibration ID: 81791

| ANALYTE | RRF | | | | | CURVE TYPE | COEFFICIENT | | | # | MIN RRF | %RSD | # | MAX %RSD | R^2 OR COD | # | MIN R^2 OR COD |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | LVL 1 LVL 6 | LVL 2 LVL 7 | LVL 3 | LVL 4 | LVL 5 | | B | M1 | M2 | | | | | | | | |
| Benzene | +++++ 1.5616 | 1.6632 1.4994 | 1.5103 | 1.5678 | 1.5633 | Ave | | 1.5609 | | | 0.5000 | 3.7 | | 20.0 | | | |
| Propionitrile | +++++ 2.2508 | 1.9570 2.2497 | 2.0074 | 2.0662 | 2.2001 | Ave | | 2.1219 | | | | 6.1 | | 20.0 | | | |
| Methacrylonitrile | +++++ 0.0700 | 0.0608 0.0704 | 0.0698 | 0.0696 | 0.0713 | Ave | | 0.0687 | | | | 5.7 | | 20.0 | | | |
| Tert-amyl methyl ether | +++++ 0.5943 | 0.5097 0.6045 | 0.5508 | 0.5482 | 0.5832 | Ave | | 0.5651 | | | | 6.3 | | 20.0 | | | |
| 1,2-Dichloroethane | +++++ 0.2709 | 0.3143 0.2663 | 0.2900 | 0.2610 | 0.2739 | Ave | | 0.2794 | | | 0.1000 | 7.1 | | 20.0 | | | |
| Isobutyl alcohol | +++++ 0.5697 | 0.5064 0.6093 | 0.4942 | 0.5202 | 0.5084 | Ave | | 0.5347 | | | | 8.4 | | 20.0 | | | |
| Isopropyl acetate | +++++ 0.3195 | 0.3179 0.3201 | 0.3223 | 0.2894 | 0.3347 | Ave | | 0.3173 | | | | 4.7 | | 20.0 | | | |
| Methylcyclohexane | +++++ 0.4797 | 0.4096 0.4744 | 0.3979 | 0.4541 | 0.4320 | Ave | | 0.4413 | | | 0.1000 | 7.7 | | 20.0 | | | |
| Trichloroethene | +++++ 0.2809 | 0.2686 0.2797 | 0.2538 | 0.2658 | 0.2706 | Ave | | 0.2699 | | | 0.2000 | 3.7 | | 20.0 | | | |
| Dibromomethane | +++++ 0.1227 | 0.1071 0.1252 | 0.1258 | 0.1191 | 0.1223 | Ave | | 0.1204 | | | | 5.8 | | 20.0 | | | |
| n-Butanol | +++++ 0.3555 | 0.1161 0.3867 | 0.2493 | 0.2719 | 0.3031 | QuaF | | 0.3280 | 0.0000047 | | | | | | 1.0000 | | 0.9900 |
| 1,2-Dichloropropane | +++++ 0.2789 | 0.2590 0.2754 | 0.2654 | 0.2660 | 0.2770 | Ave | | 0.2703 | | | 0.1000 | 2.9 | | 20.0 | | | |
| Dichlorobromomethane | +++++ 0.3093 | 0.2768 0.3148 | 0.2853 | 0.2883 | 0.3044 | Ave | | 0.2965 | | | 0.2000 | 5.1 | | 20.0 | | | |
| Ethyl acrylate | +++++ 0.2096 | 0.1003 0.2139 | 0.1466 | 0.1800 | 0.1969 | Qua2 | -0.088 | 0.1839 | 0.0000716 | | | | | | 0.9960 | | 0.9900 |
| Methyl methacrylate | +++++ 0.0448 | 0.0319 0.0454 | 0.0362 | 0.0402 | 0.0431 | Ave | | 0.0402 | | | | 13.2 | | 20.0 | | | |
| 1,4-Dioxane | +++++ 1.1186 | 1.1175 1.1773 | 1.1513 | 1.1719 | 1.1830 | Ave | | 1.1533 | | | | 2.5 | | 20.0 | | | |
| n-Propyl acetate | +++++ 0.2254 | 0.1669 0.2272 | 0.1801 | 0.2025 | 0.2177 | Ave | | 0.2033 | | | | 12.3 | | 20.0 | | | |
| 2-Chloroethyl vinyl ether | +++++ 0.0614 | +++++ 0.0825 | 0.0289 | 0.0340 | 0.0489 | Ave | | 0.0511 | | | | 42.4 | * | 20.0 | | | |
| cis-1,3-Dichloropropene | +++++ 0.5581 | 0.4610 0.5630 | 0.4458 | 0.4953 | 0.5451 | Ave | | 0.5114 | | | 0.2000 | 10.0 | | 20.0 | | | |
| Toluene | +++++ 1.5924 | 1.6604 1.5537 | 1.5508 | 1.5716 | 1.5873 | Ave | | 1.5860 | | | 0.4000 | 2.5 | | 20.0 | | | |

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins TestAmerica, Edison Job No.: 460-217547-1 Analy Batch No.: 721970

SDG No.:

Instrument ID: CVOAMS13 GC Column: Rtx-624 ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 09/04/2020 14:09 Calibration End Date: 09/04/2020 16:58 Calibration ID: 81791

| ANALYTE | RRF | | | | | CURVE TYPE | COEFFICIENT | | | # | MIN RRF | %RSD | # | MAX %RSD | R^2 OR COD | # | MIN R^2 OR COD |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | LVL 1 LVL 6 | LVL 2 LVL 7 | LVL 3 | LVL 4 | LVL 5 | | B | M1 | M2 | | | | | | | | |
| Epichlorohydrin | +++++ 0.1124 | 0.0385 0.1498 | 0.0415 | 0.0612 | 0.0841 | QuaF | | 0.0854 | 0.0000064 | | | | | | 1.0000 | | 0.9900 |
| 2-Nitropropane | +++++ 0.0283 | 0.0276 0.0324 | 0.0233 | 0.0227 | 0.0266 | Ave | | 0.0268 | | | | 13.3 | | 20.0 | | | |
| Tetrachloroethene | +++++ 0.3815 | 0.3981 0.3767 | 0.3542 | 0.3589 | 0.3722 | Ave | | 0.3736 | | | 0.2000 | 4.3 | | 20.0 | | | |
| 4-Methyl-2-pentanone (MIBK) | +++++ 2.7730 | 2.1966 2.5332 | 2.5768 | 2.7654 | 2.6722 | Ave | | 2.5862 | | | 0.0500 | 8.3 | | 20.0 | | | |
| trans-1,3-Dichloropropene | +++++ 0.4543 | 0.3079 0.4706 | 0.3618 | 0.4055 | 0.4386 | Ave | | 0.4064 | | | 0.1000 | 15.2 | | 20.0 | | | |
| 1,1,2-Trichloroethane | +++++ 0.2236 | 0.2081 0.2234 | 0.2065 | 0.2139 | 0.2222 | Ave | | 0.2163 | | | 0.1000 | 3.6 | | 20.0 | | | |
| Ethyl methacrylate | +++++ 0.2373 | 0.1650 0.2373 | 0.1979 | 0.2111 | 0.2254 | Ave | | 0.2123 | | | | 13.1 | | 20.0 | | | |
| Chlorodibromomethane | +++++ 0.2937 | 0.2775 0.2985 | 0.2546 | 0.2694 | 0.2807 | Ave | | 0.2791 | | | 0.1000 | 5.8 | | 20.0 | | | |
| 1,3-Dichloropropane | +++++ 0.4561 | 0.4124 0.4589 | 0.4473 | 0.4552 | 0.4710 | Ave | | 0.4502 | | | | 4.4 | | 20.0 | | | |
| Ethylene Dibromide | +++++ 0.2513 | 0.2025 0.2527 | 0.1985 | 0.2395 | 0.2499 | Ave | | 0.2324 | | | 0.1000 | 10.8 | | 20.0 | | | |
| n-Butyl acetate | +++++ 0.3542 | 0.1767 0.3472 | 0.2576 | 0.2956 | 0.3239 | Qua2 | -0.137 | 0.3088 | 0.0000996 | | | | | | 0.9970 | | 0.9900 |
| 2-Hexanone | +++++ 1.9489 | 1.2726 1.7814 | 1.6291 | 1.9212 | 1.8601 | Ave | | 1.7356 | | | 0.0500 | 14.6 | | 20.0 | | | |
| Chlorobenzene | +++++ 0.9978 | 1.0150 0.9806 | 0.9979 | 0.9757 | 0.9939 | Ave | | 0.9935 | | | 0.5000 | 1.4 | | 20.0 | | | |
| Ethylbenzene | +++++ 0.5591 | 0.5643 0.5614 | 0.5490 | 0.5493 | 0.5579 | Ave | | 0.5568 | | | 0.1000 | 1.1 | | 20.0 | | | |
| 1,1,1,2-Tetrachloroethane | +++++ 0.3250 | 0.2708 0.3300 | 0.2909 | 0.3023 | 0.3263 | Ave | | 0.3075 | | | | 7.7 | | 20.0 | | | |
| m-Xylene & p-Xylene | +++++ 0.6950 | 0.5297 0.6778 | 0.6500 | 0.6823 | 0.6836 | Ave | | 0.6531 | | | 0.1000 | 9.5 | | 20.0 | | | |
| o-Xylene | +++++ 0.6672 | 0.6813 0.6448 | 0.6465 | 0.6538 | 0.6710 | Ave | | 0.6608 | | | 0.3000 | 2.2 | | 20.0 | | | |
| Bromoform | +++++ 0.1672 | 0.1443 0.1733 | 0.1508 | 0.1476 | 0.1629 | Ave | | 0.1577 | | | 0.1000 | 7.5 | | 20.0 | | | |
| Styrene | +++++ 1.1070 | 0.9763 1.0769 | 0.9835 | 1.0858 | 1.1141 | Ave | | 1.0573 | | | 0.3000 | 5.8 | | 20.0 | | | |
| n-Butyl acrylate | +++++ 0.2012 | 0.1110 0.2016 | 0.1527 | 0.1767 | 0.1849 | Qua2 | -0.071 | 0.1794 | 0.0000542 | | | | | | 0.9980 | | 0.9900 |

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins TestAmerica, Edison Job No.: 460-217547-1 Analy Batch No.: 721970

SDG No.:

Instrument ID: CVOAMS13 GC Column: Rtx-624 ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 09/04/2020 14:09 Calibration End Date: 09/04/2020 16:58 Calibration ID: 81791

| ANALYTE | RRF | | | | | CURVE TYPE | COEFFICIENT | | | # | MIN RRF | %RSD | # | MAX %RSD | R^2 OR COD | # | MIN R^2 OR COD |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | LVL 1 LVL 6 | LVL 2 LVL 7 | LVL 3 | LVL 4 | LVL 5 | | B | M1 | M2 | | | | | | | | |
| Isopropylbenzene | +++++ 1.7223 | 1.7494 1.6527 | 1.6817 | 1.7415 | 1.7342 | Ave | | 1.7136 | | | 0.1000 | 2.2 | | 20.0 | | | |
| Amyl acetate (mixed isomers) | +++++ 0.8344 | 0.4519 0.8550 | 0.5717 | 0.7364 | 0.7858 | Qua2 | -0.298 | 0.7314 | 0.0002933 | | | | | | 0.9940 | | 0.9900 |
| Bromobenzene | +++++ 0.7645 | 0.6666 0.7718 | 0.7462 | 0.7324 | 0.7526 | Ave | | 0.7390 | | | | 5.2 | | 20.0 | | | |
| N-Propylbenzene | +++++ 3.8798 | 3.4711 3.7467 | 3.5497 | 3.7816 | 3.7568 | Ave | | 3.6976 | | | | 4.2 | | 20.0 | | | |
| 1,1,2,2-Tetrachloroethane | +++++ 0.5309 | 0.4552 0.5400 | 0.5038 | 0.5097 | 0.5358 | Ave | | 0.5126 | | | 0.3000 | 6.2 | | 20.0 | | | |
| 2-Chlorotoluene | +++++ 2.5648 | 2.8019 2.5518 | 2.3668 | 2.5067 | 2.4977 | Ave | | 2.5483 | | | | 5.6 | | 20.0 | | | |
| 4-Ethyltoluene | +++++ 3.2097 | 2.9099 3.2458 | 2.8937 | 3.0909 | 3.0838 | Ave | | 3.0723 | | | | 4.8 | | 20.0 | | | |
| 1,2,3-Trichloropropane | +++++ 0.1453 | 0.1000 0.1444 | 0.1403 | 0.1405 | 0.1431 | Ave | | 0.1356 | | | | 12.9 | | 20.0 | | | |
| 1,3,5-Trimethylbenzene | +++++ 2.6873 | 2.3909 2.6398 | 2.5051 | 2.5758 | 2.5836 | Ave | | 2.5637 | | | | 4.1 | | 20.0 | | | |
| trans-1,4-Dichloro-2-butene | +++++ 0.1202 | +++++ 0.1358 | 0.0558 | 0.0820 | 0.0957 | Ave | | 0.0979 | | | | 32.1 | * | 20.0 | | | |
| 4-Chlorotoluene | +++++ 2.3584 | 1.9675 2.3246 | 2.2205 | 2.2751 | 2.2885 | Ave | | 2.2391 | | | | 6.3 | | 20.0 | | | |
| tert-Butylbenzene | +++++ 2.2832 | 2.2491 2.2296 | 2.0966 | 2.2323 | 2.2134 | Ave | | 2.2174 | | | | 2.9 | | 20.0 | | | |
| 1,2,4-Trimethylbenzene | +++++ 2.7600 | 2.5171 2.7243 | 2.5269 | 2.6715 | 2.6679 | Ave | | 2.6446 | | | | 3.8 | | 20.0 | | | |
| Butyl Methacrylate | +++++ 0.8383 | 0.4786 0.8868 | 0.6084 | 0.7051 | 0.7606 | Qua2 | -0.250 | 0.7167 | 0.0003825 | | | | | | 0.9970 | | 0.9900 |
| sec-Butylbenzene | +++++ 3.4524 | 3.3664 3.3520 | 3.2503 | 3.4140 | 3.3646 | Ave | | 3.3666 | | | | 2.0 | | 20.0 | | | |
| 1,3-Dichlorobenzene | +++++ 1.5317 | 1.3657 1.5290 | 1.3842 | 1.4642 | 1.4843 | Ave | | 1.4599 | | | 0.6000 | 4.9 | | 20.0 | | | |
| 4-Isopropyltoluene | +++++ 2.9656 | 2.7530 2.9206 | 2.6193 | 2.9023 | 2.8793 | Ave | | 2.8400 | | | | 4.6 | | 20.0 | | | |
| 1,4-Dichlorobenzene | +++++ 1.5251 | 1.6168 1.5147 | 1.5341 | 1.5102 | 1.5204 | Ave | | 1.5369 | | | 0.5000 | 2.6 | | 20.0 | | | |
| 1,2,3-Trimethylbenzene | +++++ 2.7143 | 2.6022 2.7348 | 2.6213 | 2.6951 | 2.7110 | Ave | | 2.6798 | | | | 2.0 | | 20.0 | | | |
| Indan | +++++ 2.6223 | 2.6471 2.6250 | 2.5024 | 2.5992 | 2.6059 | Ave | | 2.6003 | | | | 2.0 | | 20.0 | | | |

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins TestAmerica, Edison Job No.: 460-217547-1 Analy Batch No.: 721970

SDG No.:

Instrument ID: CVOAMS13 GC Column: Rtx-624 ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 09/04/2020 14:09 Calibration End Date: 09/04/2020 16:58 Calibration ID: 81791

| ANALYTE | RRF | | | | | CURVE TYPE | COEFFICIENT | | | # | MIN RRF | %RSD | # | MAX %RSD | R^2 OR COD | # | MIN R^2 OR COD |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | LVL 1<br>LVL 6 | LVL 2<br>LVL 7 | LVL 3 | LVL 4 | LVL 5 | | B | M1 | M2 | | | | | | | | |
| Benzyl chloride | +++++<br>0.1971 | 0.0815<br>0.2122 | 0.1168 | 0.1481 | 0.1814 | Qua2 | -0.081 | 0.1571 | 0.0001256 | | | | | | 0.9910 | | 0.9900 |
| p-Diethylbenzene | +++++<br>1.5089 | 1.3728<br>1.5167 | 1.3147 | 1.4281 | 1.4454 | Ave | | 1.4311 | | | | 5.5 | | 20.0 | | | |
| n-Butylbenzene | +++++<br>2.7109 | 2.4320<br>2.6241 | 2.4731 | 2.6543 | 2.6419 | Ave | | 2.5894 | | | | 4.3 | | 20.0 | | | |
| 1,2-Dichlorobenzene | +++++<br>1.3971 | 1.2563<br>1.3917 | 1.2874 | 1.3162 | 1.3682 | Ave | | 1.3361 | | | 0.4000 | 4.4 | | 20.0 | | | |
| 1,2,4,5-Tetramethylbenzene | +++++<br>2.6714 | 2.1245<br>2.6503 | 2.3092 | 2.5583 | 2.6410 | Ave | | 2.4925 | | | | 9.0 | | 20.0 | | | |
| 1,2-Dibromo-3-Chloropropane | +++++<br>0.0907 | 0.0657<br>0.0941 | 0.0765 | 0.0882 | 0.0966 | Ave | | 0.0853 | | | 0.0500 | 13.9 | | 20.0 | | | |
| 1,3,5-Trichlorobenzene | +++++<br>1.0932 | 0.9022<br>1.1128 | 1.0524 | 1.0822 | 1.1150 | Ave | | 1.0597 | | | | 7.6 | | 20.0 | | | |
| 1,2,4-Trichlorobenzene | +++++<br>0.9111 | 0.8164<br>0.9316 | 0.8558 | 0.8904 | 0.9314 | Ave | | 0.8895 | | | 0.2000 | 5.1 | | 20.0 | | | |
| Hexachlorobutadiene | +++++<br>0.3946 | 0.4328<br>0.3900 | 0.3705 | 0.3908 | 0.3781 | Ave | | 0.3928 | | | | 5.5 | | 20.0 | | | |
| Naphthalene | +++++<br>1.5495 | 2.0068<br>1.5794 | 1.5061 | 1.5683 | 1.6344 | Ave | | 1.6408 | | | | 11.2 | | 20.0 | | | |
| 1,2,3-Trichlorobenzene | +++++<br>0.7246 | 0.7467<br>0.7389 | 0.6922 | 0.7258 | 0.7392 | Ave | | 0.7279 | | | | 2.7 | | 20.0 | | | |
| Dibromofluoromethane (Surr) | 0.2171<br>0.2158 | 0.2175<br>0.2146 | 0.2183 | 0.2114 | 0.2126 | Ave | | 0.2153 | | | | 1.2 | | 20.0 | | | |
| 1,2-Dichloroethane-d4 (Surr) | 0.2120<br>0.2048 | 0.2163<br>0.2157 | 0.2182 | 0.2160 | 0.2300 | Ave | | 0.2161 | | | | 3.5 | | 20.0 | | | |
| Toluene-d8 (Surr) | 1.3119<br>1.2898 | 1.2924<br>1.2643 | 1.2984 | 1.2888 | 1.2810 | Ave | | 1.2895 | | | | 1.1 | | 20.0 | | | |
| 4-Bromofluorobenzene | 0.3925<br>0.3990 | 0.4167<br>0.3907 | 0.4134 | 0.4075 | 0.4136 | Ave | | 0.4048 | | | | 2.6 | | 20.0 | | | |

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins TestAmerica, Edison Job No.: 460-217547-1 Analy Batch No.: 721970

SDG No.:

Instrument ID: CVOAMS13 GC Column: Rtx-624 ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 09/04/2020 14:09 Calibration End Date: 09/04/2020 16:58 Calibration ID: 81791

Calibration Files:

| LEVEL: | LAB SAMPLE ID: | LAB FILE ID: |
|---|---|---|
| Level 1 | STD8 460-721970/3 | P79352.D |
| Level 2 | STD1 460-721970/4 | P79354.D |
| Level 3 | STD5 460-721970/5 | P79355.D |
| Level 4 | STD20 460-721970/6 | P79356.D |
| Level 5 | STD50 460-721970/7 | P79357.D |
| Level 6 | STD200 460-721970/8 | P79358.D |
| Level 7 | STD500 460-721970/9 | P79359.D |

| ANALYTE | IS REF | CURVE TYPE | RESPONSE | | | | | CONCENTRATION (UG/L) | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | LVL 1 LVL 6 | LVL 2 LVL 7 | LVL 3 | LVL 4 | LVL 5 | LVL 1 LVL 6 | LVL 2 LVL 7 | LVL 3 | LVL 4 | LVL 5 |
| Monochloropentafluoroethane | FB | Ave | +++++ 55399 | 260 153563 | 1081 | 4726 | 11186 | +++++ 200 | 1.00 500 | 5.00 | 20.0 | 50.0 |
| Chlorotrifluoroethene | FB | Ave | +++++ 213205 | 792 597178 | 3587 | 16846 | 41027 | +++++ 200 | 1.00 500 | 5.00 | 20.0 | 50.0 |
| Dichlorodifluoromethane | FB | Ave | +++++ 842683 | 3758 2138983 | 17078 | 76055 | 187202 | +++++ 200 | 1.00 500 | 5.00 | 20.0 | 50.0 |
| 1,1-Difluoroethane | FB | Ave | +++++ 346160 | 2330 915944 | 8287 | 34592 | 83104 | +++++ 200 | 1.00 500 | 5.00 | 20.0 | 50.0 |
| Chlorodifluoromethane | FB | Ave | +++++ 104936 | 567 286055 | 2413 | 10240 | 25723 | +++++ 200 | 1.00 500 | 5.00 | 20.0 | 50.0 |
| Butadiene | FB | Ave | 817 773489 | 3584 2024494 | 15246 | 72263 | 180254 | 0.250 200 | 1.00 500 | 5.00 | 20.0 | 50.0 |
| Chloromethane | FB | Ave | +++++ 1115644 | 5585 2873454 | 25436 | 100553 | 265854 | +++++ 200 | 1.00 500 | 5.00 | 20.0 | 50.0 |
| Vinyl chloride | FB | Ave | +++++ 816164 | 4228 2102724 | 17466 | 75711 | 195179 | +++++ 200 | 1.00 500 | 5.00 | 20.0 | 50.0 |
| Bromomethane | BUT | Ave | +++++ 381620 | 1317 1058616 | 6734 | 28668 | 74861 | +++++ 200 | 1.00 500 | 5.00 | 20.0 | 50.0 |
| Chloroethane | FB | Ave | +++++ 437022 | 1728 965466 | 11587 | 45616 | 106827 | +++++ 200 | 1.00 500 | 5.00 | 20.0 | 50.0 |
| Pentane | TBAd 9 | Ave | +++++ 213875 | 933 510382 | 4966 | 21238 | 47651 | +++++ 400 | 2.00 1000 | 10.0 | 40.0 | 100 |
| Trichlorofluoromethane | FB | Ave | +++++ 791377 | 3466 2018986 | 15241 | 70080 | 183391 | +++++ 200 | 1.00 500 | 5.00 | 20.0 | 50.0 |
| Dichlorofluoromethane | FB | Ave | +++++ 988703 | 5062 2402602 | 23079 | 94922 | 243460 | +++++ 200 | 1.00 500 | 5.00 | 20.0 | 50.0 |
| 2-Methyl-1,3-butadiene | FB | Ave | +++++ 896070 | 3704 2379512 | 18393 | 84871 | 205064 | +++++ 200 | 1.00 500 | 5.00 | 20.0 | 50.0 |
| Ethyl ether | FB | Ave | +++++ 408174 | 1790 1057648 | 9337 | 37723 | 96289 | +++++ 200 | 1.00 500 | 5.00 | 20.0 | 50.0 |

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins TestAmerica, Edison Job No.: 460-217547-1 Analy Batch No.: 721970

SDG No.:

Instrument ID: CVOAMS13 GC Column: Rtx-624 ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 09/04/2020 14:09 Calibration End Date: 09/04/2020 16:58 Calibration ID: 81791

| ANALYTE | IS REF | CURVE TYPE | RESPONSE | | | | | CONCENTRATION (UG/L) | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | LVL 1<br>LVL 6 | LVL 2<br>LVL 7 | LVL 3 | LVL 4 | LVL 5 | LVL 1<br>LVL 6 | LVL 2<br>LVL 7 | LVL 3 | LVL 4 | LVL 5 |
| 1,2-Dichloro-1,1,2-trifluoroethane | FB | Ave | +++++<br>778229 | 3776<br>2055897 | 17228 | 75300 | 180162 | +++++<br>200 | 1.00<br>500 | 5.00 | 20.0 | 50.0 |
| 1,1-Dichloroethene | FB | Ave | +++++<br>550740 | 2537<br>1418804 | 11646 | 50980 | 124171 | +++++<br>200 | 1.00<br>500 | 5.00 | 20.0 | 50.0 |
| Ethanol | TBAd9 | Ave | +++++<br>72547 | 520<br>192362 | 1713 | 6934 | 18644 | +++++<br>8000 | 40.0<br>20000 | 200 | 800 | 2000 |
| Carbon disulfide | FB | Ave | +++++<br>2105421 | 10501<br>5398702 | 46527 | 195533 | 480480 | +++++<br>200 | 1.00<br>500 | 5.00 | 20.0 | 50.0 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | FB | Ave | +++++<br>554137 | 2323<br>1408561 | 11574 | 50985 | 119706 | +++++<br>200 | 1.00<br>500 | 5.00 | 20.0 | 50.0 |
| 1,1,1-Trifluoro-2,2-dichloroethane | FB | Ave | +++++<br>822579 | 3732<br>2199434 | 17523 | 78053 | 190942 | +++++<br>200 | 1.00<br>500 | 5.00 | 20.0 | 50.0 |
| Iodomethane | FB | QuaF | +++++<br>876527 | 1799<br>2250918 | 10285 | 52089 | 162100 | +++++<br>200 | 1.00<br>500 | 5.00 | 20.0 | 50.0 |
| Cyclopentene | FB | Ave | +++++<br>1489341 | 7175<br>3919618 | 31435 | 144269 | 346990 | +++++<br>200 | 1.00<br>500 | 5.00 | 20.0 | 50.0 |
| Acrolein | TBAd9 | Ave | +++++<br>51820 | 932<br>110641 | 3211 | 8390 | 22758 | +++++<br>200 | 4.00<br>400 | 20.0 | 40.0 | 100 |
| Allyl chloride | FB | Ave | +++++<br>356679 | 1633<br>929413 | 7562 | 30186 | 80220 | +++++<br>200 | 1.00<br>500 | 5.00 | 20.0 | 50.0 |
| Isopropyl alcohol | TBAd9 | Ave | +++++<br>179401 | 1270<br>453215 | 4566 | 16121 | 43572 | +++++<br>2000 | 10.0<br>5000 | 50.0 | 200 | 500 |
| Methylene Chloride | FB | Ave | +++++<br>631304 | 3163<br>1621460 | 15063 | 60699 | 151225 | +++++<br>200 | 1.00<br>500 | 5.00 | 20.0 | 50.0 |
| Acetone | BUT | QuaF | +++++<br>475188 | 3151<br>1071045 | 11181 | 42570 | 109326 | +++++<br>1000 | 5.00<br>2500 | 25.0 | 100 | 250 |
| trans-1,2-Dichloroethene | FB | Ave | +++++<br>615832 | 2887<br>1586745 | 13885 | 58053 | 144381 | +++++<br>200 | 1.00<br>500 | 5.00 | 20.0 | 50.0 |
| Methyl acetate | TBAd9 | Ave | +++++<br>427833 | 2248<br>1110827 | 11836 | 42068 | 129401 | +++++<br>400 | 2.00<br>1000 | 10.0 | 40.0 | 100 |
| Hexane | FB | Ave | +++++<br>163677 | 586<br>417628 | 2899 | 15447 | 34872 | +++++<br>200 | 1.00<br>500 | 5.00 | 20.0 | 50.0 |
| Methyl tert-butyl ether | FB | Ave | +++++<br>1267437 | 5695<br>3242233 | 28926 | 117508 | 302014 | +++++<br>200 | 1.00<br>500 | 5.00 | 20.0 | 50.0 |
| 2-Methyl-2-propanol | TBAd9 | QuaF | +++++<br>257906 | 2091<br>688184 | 7009 | 25630 | 63871 | +++++<br>2000 | 10.0<br>5000 | 50.0 | 200 | 500 |
| Acetonitrile | TBAd9 | Ave | +++++<br>448269 | 2375<br>1232698 | 12143 | 42730 | 119206 | +++++<br>2000 | 10.0<br>5000 | 50.0 | 200 | 500 |
| Isopropyl ether | FB | Ave | +++++<br>2009218 | 8349<br>5266152 | 44353 | 187280 | 479907 | +++++<br>200 | 1.00<br>500 | 5.00 | 20.0 | 50.0 |
| 2-Chloro-1,3-butadiene | FB | Ave | +++++<br>579320 | 2424<br>1524691 | 12452 | 53898 | 134890 | +++++<br>200 | 1.00<br>500 | 5.00 | 20.0 | 50.0 |

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins TestAmerica, Edison Job No.: 460-217547-1 Analy Batch No.: 721970

SDG No.:

Instrument ID: CVOAMS13 GC Column: Rtx-624 ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 09/04/2020 14:09 Calibration End Date: 09/04/2020 16:58 Calibration ID: 81791

| ANALYTE | IS REF | CURVE TYPE | RESPONSE | | | | | CONCENTRATION (UG/L) | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | LVL 1<br>LVL 6 | LVL 2<br>LVL 7 | LVL 3 | LVL 4 | LVL 5 | LVL 1<br>LVL 6 | LVL 2<br>LVL 7 | LVL 3 | LVL 4 | LVL 5 |
| 1,1-Dichloroethane | FB | Ave | +++++<br>1136397 | 5453<br>2930827 | 26065 | 105914 | 267263 | +++++<br>200 | 1.00<br>500 | 5.00 | 20.0 | 50.0 |
| Acrylonitrile | FB | Ave | 1272<br>1488785 | 6770<br>3986357 | 34857 | 139063 | 349337 | 2.00<br>2000 | 10.0<br>5000 | 50.0 | 200 | 500 |
| Tert-butyl ethyl ether | FB | Ave | +++++<br>1673940 | 7049<br>4379554 | 35847 | 151474 | 393578 | +++++<br>200 | 1.00<br>500 | 5.00 | 20.0 | 50.0 |
| Vinyl acetate | FB | Ave | +++++<br>1826519 | 7828<br>4707045 | 41944 | 151225 | 414482 | +++++<br>400 | 2.00<br>1000 | 10.0 | 40.0 | 100 |
| cis-1,2-Dichloroethene | FB | Ave | +++++<br>678589 | 3453<br>1754817 | 15638 | 60535 | 152965 | +++++<br>200 | 1.00<br>500 | 5.00 | 20.0 | 50.0 |
| 2,2-Dichloropropane | FB | Ave | +++++<br>775196 | 3651<br>1983171 | 17330 | 72273 | 183711 | +++++<br>200 | 1.00<br>500 | 5.00 | 20.0 | 50.0 |
| Cyclohexane | FB | Ave | +++++<br>1199483 | 5092<br>3017859 | 24852 | 112116 | 262475 | +++++<br>200 | 1.00<br>500 | 5.00 | 20.0 | 50.0 |
| Chlorobromomethane | FB | Ave | +++++<br>302079 | 1372<br>783070 | 6839 | 27217 | 69379 | +++++<br>200 | 1.00<br>500 | 5.00 | 20.0 | 50.0 |
| Chloroform | FB | Ave | +++++<br>1022953 | 4928<br>2613155 | 22972 | 95335 | 241017 | +++++<br>200 | 1.00<br>500 | 5.00 | 20.0 | 50.0 |
| Carbon tetrachloride | FB | Ave | +++++<br>642971 | 2759<br>1753099 | 12442 | 53428 | 139102 | +++++<br>200 | 1.00<br>500 | 5.00 | 20.0 | 50.0 |
| Ethyl acetate | BUT | Ave | +++++<br>87559 | 324<br>232661 | 1821 | 8210 | 20943 | +++++<br>400 | 2.00<br>1000 | 10.0 | 40.0 | 100 |
| Methyl acrylate | FB | Ave | +++++<br>344589 | 1261<br>918247 | 6855 | 30616 | 79700 | +++++<br>200 | 1.00<br>500 | 5.00 | 20.0 | 50.0 |
| Tetrahydrofuran | BUT | Ave | +++++<br>291683 | 1334<br>769588 | 6772 | 26816 | 69916 | +++++<br>400 | 2.00<br>1000 | 10.0 | 40.0 | 100 |
| 1,1,1-Trichloroethane | FB | Ave | +++++<br>844830 | 3821<br>2148975 | 17778 | 77080 | 197131 | +++++<br>200 | 1.00<br>500 | 5.00 | 20.0 | 50.0 |
| 1,1-Dichloropropene | FB | QuaF | +++++<br>876224 | 6214<br>2209037 | 21330 | 83603 | 202888 | +++++<br>200 | 1.00<br>500 | 5.00 | 20.0 | 50.0 |
| 2-Butanone (MEK) | BUT | Ave | +++++<br>242797 | 1061<br>621699 | 5452 | 21668 | 55843 | +++++<br>1000 | 5.00<br>2500 | 25.0 | 100 | 250 |
| 2,2,4-Trimethylpentane | FB | Ave | +++++<br>1958645 | 7540<br>5065144 | 39210 | 176521 | 398266 | +++++<br>200 | 1.00<br>500 | 5.00 | 20.0 | 50.0 |
| n-Heptane | FB | Ave | +++++<br>472746 | 1973<br>1188377 | 9455 | 43511 | 99655 | +++++<br>200 | 1.00<br>500 | 5.00 | 20.0 | 50.0 |
| Benzene | CBNZ d5 | Ave | +++++<br>2668664 | 12509<br>6741611 | 58103 | 248383 | 623917 | +++++<br>200 | 1.00<br>500 | 5.00 | 20.0 | 50.0 |
| Propionitrile | TBAd 9 | Ave | +++++<br>525916 | 2300<br>1384313 | 11490 | 46041 | 130125 | +++++<br>2000 | 10.0<br>5000 | 50.0 | 200 | 500 |
| Methacrylonitrile | FB | Ave | +++++<br>1667489 | 6544<br>4364305 | 38315 | 158756 | 404787 | +++++<br>2000 | 10.0<br>5000 | 50.0 | 200 | 500 |

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins TestAmerica, Edison Job No.: 460-217547-1 Analy Batch No.: 721970

SDG No.:

Instrument ID: CVOAMS13 GC Column: Rtx-624 ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 09/04/2020 14:09 Calibration End Date: 09/04/2020 16:58 Calibration ID: 81791

| ANALYTE | IS REF | CURVE TYPE | RESPONSE | | | | | CONCENTRATION (UG/L) | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | LVL 1<br>LVL 6 | LVL 2<br>LVL 7 | LVL 3 | LVL 4 | LVL 5 | LVL 1<br>LVL 6 | LVL 2<br>LVL 7 | LVL 3 | LVL 4 | LVL 5 |
| Tert-amyl methyl ether | FB | Ave | +++++<br>1415698 | 5489<br>3745941 | 30230 | 125065 | 330913 | +++++<br>200 | 1.00<br>500 | 5.00 | 20.0 | 50.0 |
| 1,2-Dichloroethane | FB | Ave | +++++<br>645223 | 3385<br>1650015 | 15916 | 59557 | 155414 | +++++<br>200 | 1.00<br>500 | 5.00 | 20.0 | 50.0 |
| Isobutyl alcohol | TBAd9 | Ave | +++++<br>332754 | 1488<br>937256 | 7071 | 28978 | 75173 | +++++<br>5000 | 25.0<br>12500 | 125 | 500 | 1250 |
| Isopropyl acetate | FB | Ave | +++++<br>761069 | 3423<br>1983357 | 17689 | 66033 | 189901 | +++++<br>200 | 1.00<br>500 | 5.00 | 20.0 | 50.0 |
| Methylcyclohexane | FB | Ave | +++++<br>1142664 | 4411<br>2940010 | 21835 | 103611 | 245162 | +++++<br>200 | 1.00<br>500 | 5.00 | 20.0 | 50.0 |
| Trichloroethene | FB | Ave | +++++<br>669215 | 2893<br>1733049 | 13926 | 60650 | 153554 | +++++<br>200 | 1.00<br>500 | 5.00 | 20.0 | 50.0 |
| Dibromomethane | FB | Ave | +++++<br>292356 | 1153<br>776124 | 6905 | 27162 | 69397 | +++++<br>200 | 1.00<br>500 | 5.00 | 20.0 | 50.0 |
| n-Butanol | TBAd9 | QuaF | +++++<br>207653 | 341<br>594810 | 3568 | 15148 | 44814 | +++++<br>5000 | 25.0<br>12500 | 125 | 500 | 1250 |
| 1,2-Dichloropropane | FB | Ave | +++++<br>664337 | 2789<br>1706920 | 14565 | 60700 | 157156 | +++++<br>200 | 1.00<br>500 | 5.00 | 20.0 | 50.0 |
| Dichlorobromomethane | FB | Ave | +++++<br>736764 | 2981<br>1950550 | 15658 | 65786 | 172749 | +++++<br>200 | 1.00<br>500 | 5.00 | 20.0 | 50.0 |
| Ethyl acrylate | FB | Qua2 | +++++<br>499304 | 1080<br>1325732 | 8046 | 41058 | 111737 | +++++<br>200 | 1.00<br>500 | 5.00 | 20.0 | 50.0 |
| Methyl methacrylate | FB | Ave | +++++<br>213231 | 686<br>562331 | 3972 | 18324 | 48928 | +++++<br>400 | 2.00<br>1000 | 10.0 | 40.0 | 100 |
| 1,4-Dioxane | DXE | Ave | +++++<br>72363 | 890<br>196250 | 1785 | 6975 | 18706 | +++++<br>4000 | 50.0<br>10000 | 100 | 400 | 1000 |
| n-Propyl acetate | FB | Ave | +++++<br>536909 | 1797<br>1407703 | 9882 | 46190 | 123542 | +++++<br>200 | 1.00<br>500 | 5.00 | 20.0 | 50.0 |
| 2-Chloroethyl vinyl ether | FB | Ave | +++++<br>146693 | +++++<br>512328 | 1592 | 7768 | 27833 | +++++<br>200 | +++++<br>501 | 5.01 | 20.0 | 50.1 |
| cis-1,3-Dichloropropene | CBNZ d5 | Ave | +++++<br>953812 | 3467<br>2531452 | 17150 | 78477 | 217536 | +++++<br>200 | 1.00<br>500 | 5.00 | 20.0 | 50.0 |
| Toluene | CBNZ d5 | Ave | +++++<br>2721314 | 12488<br>6985837 | 59660 | 248986 | 633484 | +++++<br>200 | 1.00<br>500 | 5.00 | 20.0 | 50.0 |
| Epichlorohydrin | BUT | QuaF | +++++<br>287832 | 457<br>1076562 | 2440 | 13992 | 52334 | +++++<br>4000 | 20.0<br>10000 | 100 | 400 | 1000 |
| 2-Nitropropane | FB | Ave | +++++<br>134976 | 595<br>401764 | 2558 | 10374 | 30161 | +++++<br>400 | 2.00<br>1000 | 10.0 | 40.0 | 100 |
| Tetrachloroethene | CBNZ d5 | Ave | +++++<br>651928 | 2994<br>1693883 | 13625 | 56857 | 148555 | +++++<br>200 | 1.00<br>500 | 5.00 | 20.0 | 50.0 |
| 4-Methyl-2-pentanone (MIBK) | BUT | Ave | +++++<br>1775270 | 6526<br>4551250 | 37833 | 158019 | 415853 | +++++<br>1000 | 5.00<br>2500 | 25.0 | 100 | 250 |

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins TestAmerica, Edison Job No.: 460-217547-1 Analy Batch No.: 721970

SDG No.:

Instrument ID: CVOAMS13 GC Column: Rtx-624 ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 09/04/2020 14:09 Calibration End Date: 09/04/2020 16:58 Calibration ID: 81791

| ANALYTE | IS REF | CURVE TYPE | RESPONSE | | | | | CONCENTRATION (UG/L) | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | LVL 1<br>LVL 6 | LVL 2<br>LVL 7 | LVL 3 | LVL 4 | LVL 5 | LVL 1<br>LVL 6 | LVL 2<br>LVL 7 | LVL 3 | LVL 4 | LVL 5 |
| trans-1,3-Dichloropropene | CBNZ d5 | Ave | +++++<br>776364 | 2316<br>2115743 | 13917 | 64238 | 175032 | +++++<br>200 | 1.00<br>500 | 5.00 | 20.0 | 50.0 |
| 1,1,2-Trichloroethane | CBNZ d5 | Ave | +++++<br>382089 | 1565<br>1004352 | 7946 | 33891 | 88686 | +++++<br>200 | 1.00<br>500 | 5.00 | 20.0 | 50.0 |
| Ethyl methacrylate | FB | Ave | +++++<br>565187 | 1777<br>1470388 | 10862 | 48156 | 127890 | +++++<br>200 | 1.00<br>500 | 5.00 | 20.0 | 50.0 |
| Chlorodibromomethane | CBNZ d5 | Ave | +++++<br>501890 | 2087<br>1342232 | 9794 | 42676 | 112017 | +++++<br>200 | 1.00<br>500 | 5.00 | 20.0 | 50.0 |
| 1,3-Dichloropropane | CBNZ d5 | Ave | +++++<br>779411 | 3102<br>2063481 | 17208 | 72110 | 187991 | +++++<br>200 | 1.00<br>500 | 5.00 | 20.0 | 50.0 |
| Ethylene Dibromide | CBNZ d5 | Ave | +++++<br>429394 | 1523<br>1136144 | 7636 | 37940 | 99746 | +++++<br>200 | 1.00<br>500 | 5.00 | 20.0 | 50.0 |
| n-Butyl acetate | CBNZ d5 | Qua2 | +++++<br>605244 | 1329<br>1561177 | 9910 | 46824 | 129286 | +++++<br>200 | 1.00<br>500 | 5.00 | 20.0 | 50.0 |
| 2-Hexanone | BUT | Ave | +++++<br>1247693 | 3781<br>3200586 | 23919 | 109780 | 289479 | +++++<br>1000 | 5.00<br>2500 | 25.0 | 100 | 250 |
| Chlorobenzene | CBNZ d5 | Ave | +++++<br>1705190 | 7634<br>4409049 | 38391 | 154586 | 396659 | +++++<br>200 | 1.00<br>500 | 5.00 | 20.0 | 50.0 |
| Ethylbenzene | CBNZ d5 | Ave | +++++<br>955498 | 4244<br>2523965 | 21119 | 87032 | 222648 | +++++<br>200 | 1.00<br>500 | 5.00 | 20.0 | 50.0 |
| 1,1,1,2-Tetrachloroethane | CBNZ d5 | Ave | +++++<br>555386 | 2037<br>1483682 | 11192 | 47888 | 130225 | +++++<br>200 | 1.00<br>500 | 5.00 | 20.0 | 50.0 |
| m-Xylene & p-Xylene | CBNZ d5 | Ave | +++++<br>1187799 | 3984<br>3047634 | 25007 | 108099 | 272822 | +++++<br>200 | 1.00<br>500 | 5.00 | 20.0 | 50.0 |
| o-Xylene | CBNZ d5 | Ave | +++++<br>1140173 | 5124<br>2899229 | 24870 | 103586 | 267785 | +++++<br>200 | 1.00<br>500 | 5.00 | 20.0 | 50.0 |
| Bromoform | CBNZ d5 | Ave | +++++<br>285754 | 1085<br>779054 | 5800 | 23389 | 65010 | +++++<br>200 | 1.00<br>500 | 5.00 | 20.0 | 50.0 |
| Styrene | CBNZ d5 | Ave | +++++<br>1891908 | 7343<br>4841761 | 37835 | 172023 | 444655 | +++++<br>200 | 1.00<br>500 | 5.00 | 20.0 | 50.0 |
| n-Butyl acrylate | CBNZ d5 | Qua2 | +++++<br>343856 | 835<br>906398 | 5873 | 27988 | 73809 | +++++<br>200 | 1.00<br>500 | 5.00 | 20.0 | 50.0 |
| Isopropylbenzene | CBNZ d5 | Ave | +++++<br>2943384 | 13158<br>7430702 | 64696 | 275910 | 692109 | +++++<br>200 | 1.00<br>500 | 5.00 | 20.0 | 50.0 |
| Amyl acetate (mixed isomers) | DCBd 4 | Qua2 | +++++<br>774550 | 1912<br>2050851 | 12401 | 65023 | 176787 | +++++<br>200 | 1.00<br>500 | 5.00 | 20.0 | 50.0 |
| Bromobenzene | DCBd 4 | Ave | +++++<br>709661 | 2820<br>1851197 | 16184 | 64671 | 169325 | +++++<br>200 | 1.00<br>500 | 5.00 | 20.0 | 50.0 |
| N-Propylbenzene | DCBd 4 | Ave | +++++<br>3601702 | 14685<br>8986684 | 76993 | 333905 | 845216 | +++++<br>200 | 1.00<br>500 | 5.00 | 20.0 | 50.0 |
| 1,1,2,2-Tetrachloroethane | DCBd 4 | Ave | +++++<br>492837 | 1926<br>1295322 | 10928 | 45006 | 120554 | +++++<br>200 | 1.00<br>500 | 5.00 | 20.0 | 50.0 |

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins TestAmerica, Edison Job No.: 460-217547-1 Analy Batch No.: 721970

SDG No.:

Instrument ID: CVOAMS13 GC Column: Rtx-624 ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 09/04/2020 14:09 Calibration End Date: 09/04/2020 16:58 Calibration ID: 81791

| ANALYTE | IS REF | CURVE TYPE | RESPONSE | | | | | CONCENTRATION (UG/L) | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | LVL 1<br>LVL 6 | LVL 2<br>LVL 7 | LVL 3 | LVL 4 | LVL 5 | LVL 1<br>LVL 6 | LVL 2<br>LVL 7 | LVL 3 | LVL 4 | LVL 5 |
| 2-Chlorotoluene | DCBd 4 | Ave | +++++<br>2380971 | 11854<br>6120662 | 51336 | 221339 | 561931 | +++++<br>200 | 1.00<br>500 | 5.00 | 20.0 | 50.0 |
| 4-Ethyltoluene | DCBd 4 | Ave | +++++<br>2979644 | 12311<br>7785180 | 62764 | 272920 | 693783 | +++++<br>200 | 1.00<br>500 | 5.00 | 20.0 | 50.0 |
| 1,2,3-Trichloropropane | DCBd 4 | Ave | +++++<br>134903 | 423<br>346260 | 3042 | 12409 | 32185 | +++++<br>200 | 1.00<br>500 | 5.00 | 20.0 | 50.0 |
| 1,3,5-Trimethylbenzene | DCBd 4 | Ave | +++++<br>2494661 | 10115<br>6331744 | 54335 | 227437 | 581260 | +++++<br>200 | 1.00<br>500 | 5.00 | 20.0 | 50.0 |
| trans-1,4-Dichloro-2-butene | DCBd 4 | Ave | +++++<br>111606 | +++++<br>325652 | 1211 | 7238 | 21533 | +++++<br>200 | +++++<br>500 | 5.00 | 20.0 | 50.0 |
| 4-Chlorotoluene | DCBd 4 | Ave | +++++<br>2189374 | 8324<br>5575558 | 48163 | 200889 | 514860 | +++++<br>200 | 1.00<br>500 | 5.00 | 20.0 | 50.0 |
| tert-Butylbenzene | DCBd 4 | Ave | +++++<br>2119520 | 9515<br>5347740 | 45475 | 197112 | 497969 | +++++<br>200 | 1.00<br>500 | 5.00 | 20.0 | 50.0 |
| 1,2,4-Trimethylbenzene | DCBd 4 | Ave | +++++<br>2562120 | 10649<br>6534418 | 54807 | 235892 | 600215 | +++++<br>200 | 1.00<br>500 | 5.00 | 20.0 | 50.0 |
| Butyl Methacrylate | DCBd 4 | Qua2 | +++++<br>778176 | 2025<br>2127034 | 13195 | 62255 | 171118 | +++++<br>200 | 1.00<br>500 | 5.00 | 20.0 | 50.0 |
| sec-Butylbenzene | DCBd 4 | Ave | +++++<br>3204917 | 14242<br>8040037 | 70498 | 301449 | 756973 | +++++<br>200 | 1.00<br>500 | 5.00 | 20.0 | 50.0 |
| 1,3-Dichlorobenzene | DCBd 4 | Ave | +++++<br>1421890 | 5778<br>3667475 | 30024 | 129288 | 333939 | +++++<br>200 | 1.00<br>500 | 5.00 | 20.0 | 50.0 |
| 4-Isopropyltoluene | DCBd 4 | Ave | +++++<br>2753070 | 11647<br>7005086 | 56813 | 256268 | 647792 | +++++<br>200 | 1.00<br>500 | 5.00 | 20.0 | 50.0 |
| 1,4-Dichlorobenzene | DCBd 4 | Ave | +++++<br>1415792 | 6840<br>3633198 | 33274 | 133344 | 342051 | +++++<br>200 | 1.00<br>500 | 5.00 | 20.0 | 50.0 |
| 1,2,3-Trimethylbenzene | DCBd 4 | Ave | +++++<br>2519702 | 11009<br>6559615 | 56856 | 237975 | 609921 | +++++<br>200 | 1.00<br>500 | 5.00 | 20.0 | 50.0 |
| Indan | DCBd 4 | Ave | +++++<br>2434293 | 11199<br>6296307 | 54276 | 229507 | 586285 | +++++<br>200 | 1.00<br>500 | 5.00 | 20.0 | 50.0 |
| Benzyl chloride | DCBd 4 | Qua2 | +++++<br>182937 | 345<br>508966 | 2533 | 13077 | 40821 | +++++<br>200 | 1.00<br>500 | 5.00 | 20.0 | 50.0 |
| p-Diethylbenzene | DCBd 4 | Ave | +++++<br>1400739 | 5808<br>3637762 | 28516 | 126096 | 325177 | +++++<br>200 | 1.00<br>500 | 5.00 | 20.0 | 50.0 |
| n-Butylbenzene | DCBd 4 | Ave | +++++<br>2516592 | 10289<br>6293963 | 53640 | 234371 | 594378 | +++++<br>200 | 1.00<br>500 | 5.00 | 20.0 | 50.0 |
| 1,2-Dichlorobenzene | DCBd 4 | Ave | +++++<br>1296949 | 5315<br>3338000 | 27923 | 116216 | 307828 | +++++<br>200 | 1.00<br>500 | 5.00 | 20.0 | 50.0 |
| 1,2,4,5-Tetramethylbenzene | DCBd 4 | Ave | +++++<br>2479879 | 8988<br>6356940 | 50087 | 225892 | 594174 | +++++<br>200 | 1.00<br>500 | 5.00 | 20.0 | 50.0 |
| 1,2-Dibromo-3-Chloropropane | DCBd 4 | Ave | +++++<br>84236 | 278<br>225792 | 1659 | 7792 | 21742 | +++++<br>200 | 1.00<br>500 | 5.00 | 20.0 | 50.0 |

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins TestAmerica, Edison Job No.: 460-217547-1 Analy Batch No.: 721970

SDG No.:

Instrument ID: CVOAMS13 GC Column: Rtx-624 ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 09/04/2020 14:09 Calibration End Date: 09/04/2020 16:58 Calibration ID: 81791

| ANALYTE | IS REF | CURVE TYPE | RESPONSE | | | | | CONCENTRATION (UG/L) | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | LVL 1<br>LVL 6 | LVL 2<br>LVL 7 | LVL 3 | LVL 4 | LVL 5 | LVL 1<br>LVL 6 | LVL 2<br>LVL 7 | LVL 3 | LVL 4 | LVL 5 |
| 1,3,5-Trichlorobenzene | DCBd 4 | Ave | +++++<br>1014884 | 3817<br>2669157 | 22827 | 95559 | 250860 | +++++<br>200 | 1.00<br>500 | 5.00 | 20.0 | 50.0 |
| 1,2,4-Trichlorobenzene | DCBd 4 | Ave | +++++<br>845782 | 3454<br>2234541 | 18563 | 78620 | 209542 | +++++<br>200 | 1.00<br>500 | 5.00 | 20.0 | 50.0 |
| Hexachlorobutadiene | DCBd 4 | Ave | +++++<br>366310 | 1831<br>935397 | 8036 | 34508 | 85054 | +++++<br>200 | 1.00<br>500 | 5.00 | 20.0 | 50.0 |
| Naphthalene | DCBd 4 | Ave | +++++<br>1438478 | 8490<br>3788295 | 32667 | 138476 | 367710 | +++++<br>200 | 1.00<br>500 | 5.00 | 20.0 | 50.0 |
| 1,2,3-Trichlorobenzene | DCBd 4 | Ave | +++++<br>672673 | 3159<br>1772317 | 15014 | 64083 | 166305 | +++++<br>200 | 1.00<br>500 | 5.00 | 20.0 | 50.0 |
| Dibromofluoromethane (Surr) | FB | Ave | 119790<br>128526 | 117139<br>132990 | 119812 | 120577 | 120630 | 50.0<br>50.0 | 50.0<br>50.0 | 50.0 | 50.0 | 50.0 |
| 1,2-Dichloroethane-d4 (Surr) | FB | Ave | 116973<br>121939 | 116479<br>133687 | 119732 | 123183 | 130501 | 50.0<br>50.0 | 50.0<br>50.0 | 50.0 | 50.0 | 50.0 |
| Toluene-d8 (Surr) | CBNZ d5 | Ave | 501267<br>551075 | 486030<br>568428 | 499494 | 510468 | 511255 | 50.0<br>50.0 | 50.0<br>50.0 | 50.0 | 50.0 | 50.0 |
| 4-Bromofluorobenzene | CBNZ d5 | Ave | 149964<br>170465 | 156709<br>175673 | 159019 | 161410 | 165058 | 50.0<br>50.0 | 50.0<br>50.0 | 50.0 | 50.0 | 50.0 |

Curve Type Legend:

| |
|---|
| Ave = Average ISTD |
| Qua2 = Quadratic 1/conc^2 ISTD |
| QuaF = Quadratic ISTD forced zero |

Eurofins TestAmerica, Edison
Target Compound Quantitation Report

Data File: \\chromfs\Edison\ChromData\CVOAMS13\20200904-116303.b\P79352.D
Lims ID: STD8
Client ID:
Sample Type: IC Calib Level: 8
Inject. Date: 04-Sep-2020 14:09:30 ALS Bottle#: 2 Worklist Smp#: 3
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: STD8
Misc. Info.: 460-0116303-003
Operator ID: Instrument ID: CVOAMS13
Sublist: chrom-8260W_13*sub62

Method: \\chromfs\Edison\ChromData\CVOAMS13\20200904-116303.b\8260W_13.m
Limit Group: VOA - 8260C Water and Solid
Last Update: 10-Sep-2020 10:37:50 Calib Date: 04-Sep-2020 16:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Edison\ChromData\CVOAMS13\20200904-116303.b\P79359.D

Column 1 : Rtx-624 ( 0.25 mm) Det: MS SCAN
Process Host: CTX1019

First Level Reviewer: starzecm Date: 04-Sep-2020 13:40:44

| Compound | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q | Response | Cal Amt ug/l | OnCol Amt ug/l | Flags |
|---|---|---|---|---|---|---|---|---|---|
| 8 Butadiene | 54 | 0.885 | 0.892 | -0.007 | 90 | 817 | 0.2500 | 0.2364 | |
| * 33 TBA-d9 (IS) | 65 | 1.860 | 1.860 | 0.000 | 100 | 116556 | 1000.0 | 1000.0 | |
| 39 Acrylonitrile | 53 | 2.160 | 2.153 | 0.007 | 99 | 1272 | 2.00 | 1.86 | |
| $ 51 Dibromofluoromethane (Surr) | 113 | 2.776 | 2.776 | 0.000 | 98 | 119790 | 50.0 | 50.4 | |
| * 53 2-Butanone-d5 | 46 | 2.834 | 2.834 | 0.000 | 99 | 138595 | 250.0 | 250.0 | |
| $ 61 1,2-Dichloroethane-d4 (Surr) | 65 | 3.156 | 3.156 | 0.000 | 0 | 116973 | 50.0 | 49.0 | |
| * 66 Fluorobenzene | 96 | 3.385 | 3.385 | 0.000 | 99 | 551813 | 50.0 | 50.0 | |
| * 76 1,4-Dioxane-d8 | 96 | 4.245 | 4.238 | 0.007 | 63 | 13879 | 1000.0 | 1000.0 | |
| $ 82 Toluene-d8 (Surr) | 98 | 4.882 | 4.882 | 0.000 | 99 | 501267 | 50.0 | 50.9 | |
| * 96 Chlorobenzene-d5 | 117 | 6.723 | 6.723 | 0.000 | 86 | 382078 | 50.0 | 50.0 | |
| $ 107 4-Bromofluorobenzene | 174 | 8.485 | 8.478 | 0.007 | 93 | 149964 | 50.0 | 48.5 | |
| * 123 1,4-Dichlorobenzene-d4 | 152 | 10.233 | 10.226 | 0.007 | 95 | 203372 | 50.0 | 50.0 | |

## Reagents:

| | | | | |
|---|---|---|---|---|
| 8260MIX1COMB_00125 | Amount Added: | 0.00 | Units: uL | |
| ACROLEIN W_00112 | Amount Added: | 0.00 | Units: uL | |
| GASES Li_00384 | Amount Added: | 2.50 | Units: uL | |
| GAS Hi_00370 | Amount Added: | 0.00 | Units: uL | |
| 8FreonHi_00023 | Amount Added: | 0.00 | Units: uL | |
| ACRY/EPIH MIX_00077 | Amount Added: | 20.00 | Units: uL | |
| MIX 2 Hi_00102 | Amount Added: | 0.00 | Units: uL | |
| Ethanol mix_00043 | Amount Added: | 0.00 | Units: uL | |
| 14DIOXINTER_00118 | Amount Added: | 0.00 | Units: uL | |
| 524freon_00027 | Amount Added: | 0.00 | Units: uL | |
| MIX I Hi_00129 | Amount Added: | 0.00 | Units: uL | |
| 8260ISNEW_00129 | Amount Added: | 1.00 | Units: uL | Run Reagent |
| 8260SURR250_00212 | Amount Added: | 1.00 | Units: uL | Run Reagent |

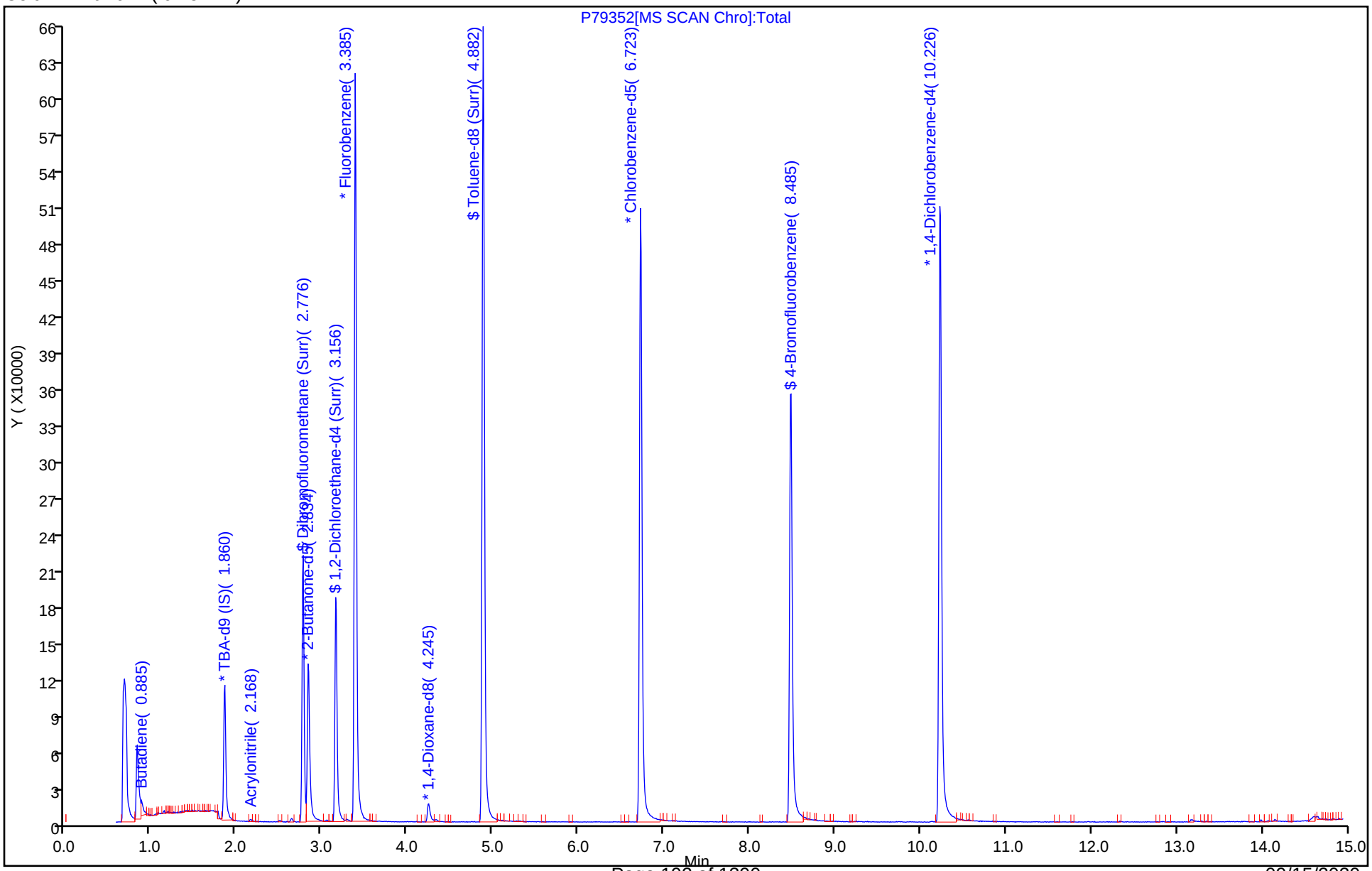
Report Date: 10-Sep-2020 10:37:52 Chrom Revision: 2.3 20-Aug-2020 13:57:12

Eurofins TestAmerica, Edison

Data File: \\chromfs\Edison\ChromData\CVOAMS13\20200904-116303.b\P79352.D

| | | | | | |
|---|---|---|---|---|---|
| Injection Date: | 04-Sep-2020 14:09:30 | Instrument ID: | CVOAMS13 | Operator ID: | |
| Lims ID: | STD8 | | | Worklist Smp#: | 3 |
| Client ID: | | | | | |
| Purge Vol: | 5.000 mL | Dil. Factor: | 1.0000 | ALS Bottle#: | 2 |
| Method: | 8260W_13 | Limit Group: | VOA - 8260C Water and Solid | | |

Column: Rtx-624 ( 0.25 mm)



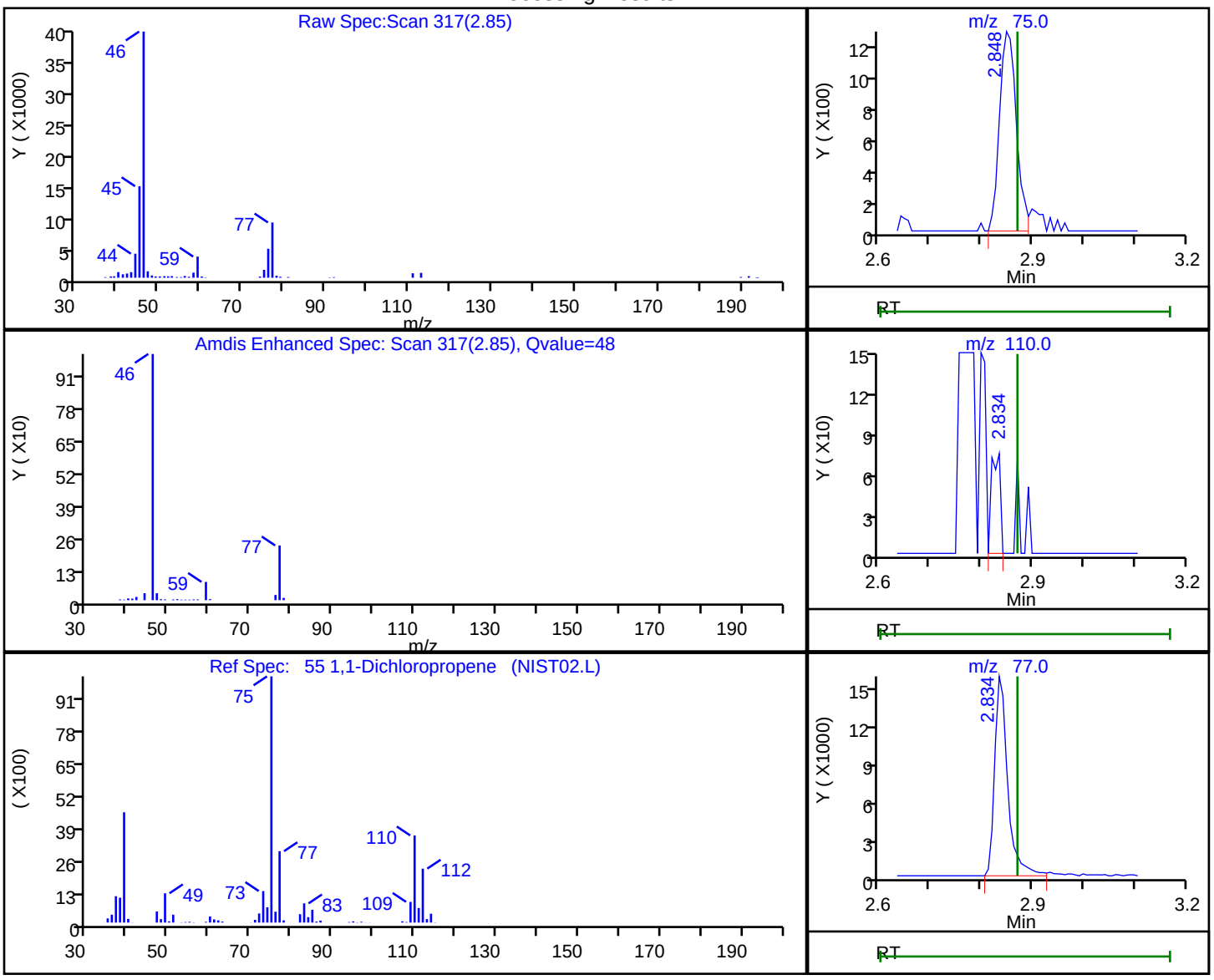
User Disabled Compound Report

Eurofins TestAmerica, Edison

Data File: \\chromfs\Edison\ChromData\CVOAMS13\20200904-116303.b\P79352.D
Injection Date: 04-Sep-2020 14:09:30 Instrument ID: CVOAMS13
Lims ID: STD8
Client ID:
Operator ID: ALS Bottle#: 2 Worklist Smp#: 3
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: 8260W_13 Limit Group: VOA - 8260C Water and Solid
Column: Rtx-624 ( 0.25 mm) Detector MS SCAN

## 55 1,1-Dichloropropene, CAS: 563-58-6

Processing Results




| RT | Mass | Response | Amount |
|---|---|---|---|
| 2.85 | 75.00 | 2901 | 0.704631 |
| 2.83 | 110.00 | 90 | |
| 2.83 | 77.00 | 28656 | |

Reviewer: boykink, 05-Sep-2020 00:03:07
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

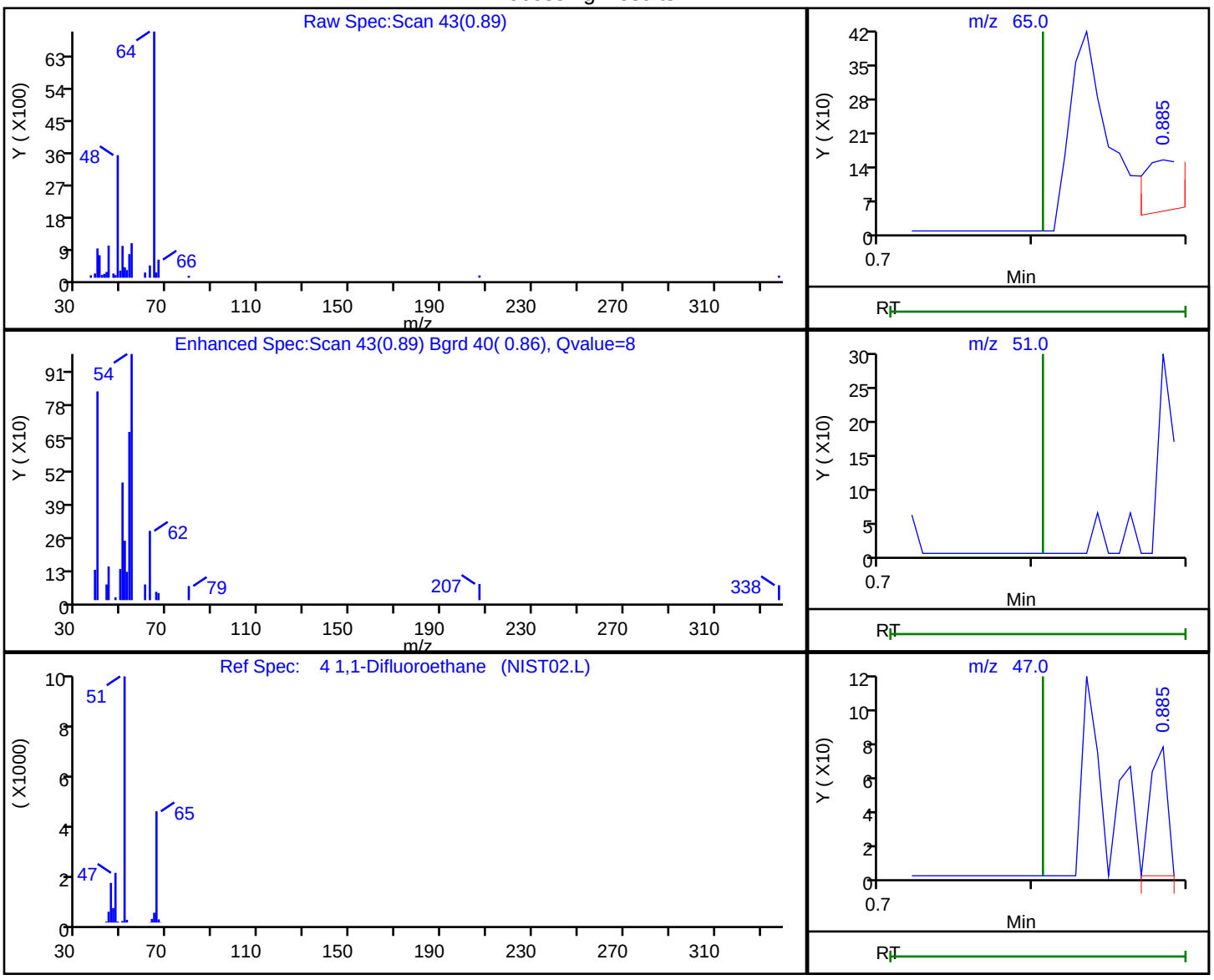
User Disabled Compound Report

Eurofins TestAmerica, Edison

Data File: \\chromfs\Edison\ChromData\CVOAMS13\20200904-116303.b\P79352.D
Injection Date: 04-Sep-2020 14:09:30 Instrument ID: CVOAMS13
Lims ID: STD8
Client ID:
Operator ID: ALS Bottle#: 2 Worklist Smp#: 3
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: 8260W_13 Limit Group: VOA - 8260C Water and Solid
Column: Rtx-624 ( 0.25 mm) Detector MS SCAN

## 4 1,1-Difluoroethane, CAS: 75-37-6

Processing Results




| RT | Mass | Response | Amount |
|---|---|---|---|
| 0.89 | 65.00 | 179 | 0.104445 |
| 0.89 | 51.00 | 239 | |
| 0.89 | 47.00 | 57 | |

Reviewer: boykink, 05-Sep-2020 00:02:35
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

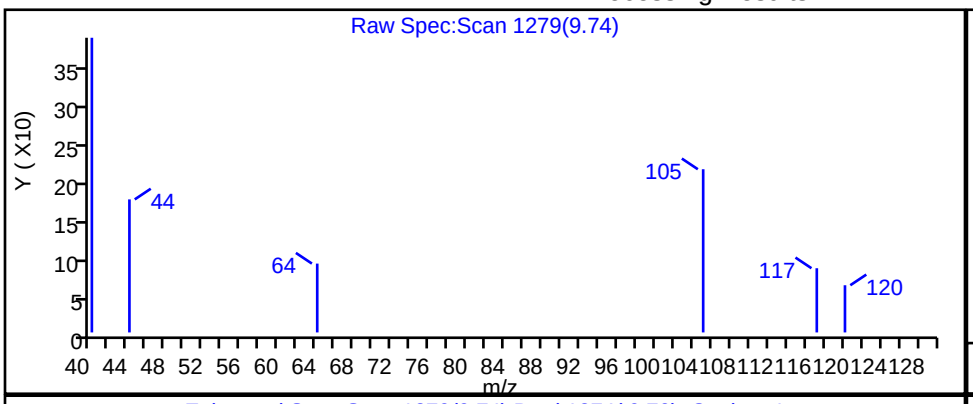
User Disabled Compound Report

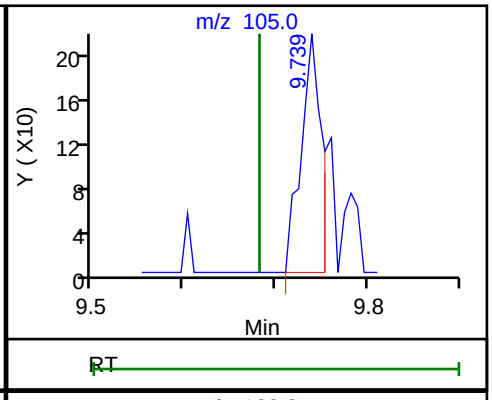
Eurofins TestAmerica, Edison

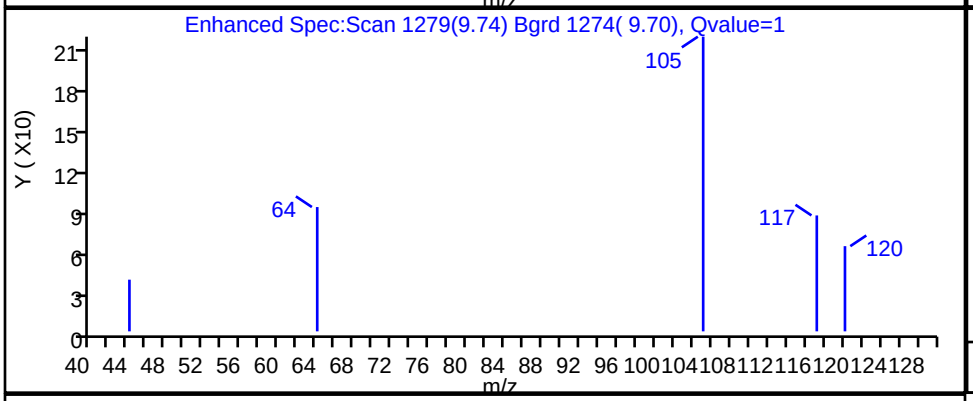
Data File: \\chromfs\Edison\ChromData\CVOAMS13\20200904-116303.b\P79352.D
Injection Date: 04-Sep-2020 14:09:30 Instrument ID: CVOAMS13
Lims ID: STD8
Client ID:
Operator ID: ALS Bottle#: 2 Worklist Smp#: 3
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: 8260W_13 Limit Group: VOA - 8260C Water and Solid
Column: Rtx-624 ( 0.25 mm) Detector MS SCAN

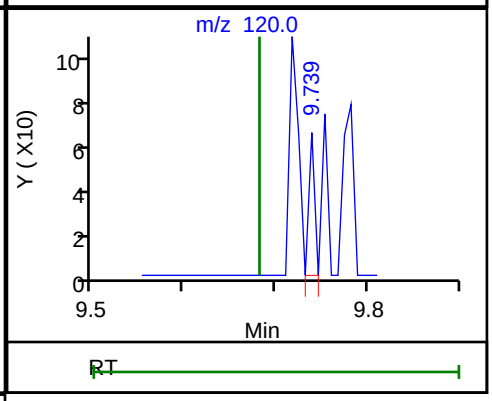
## 118 1,2,4-Trimethylbenzene, CAS: 95-63-6

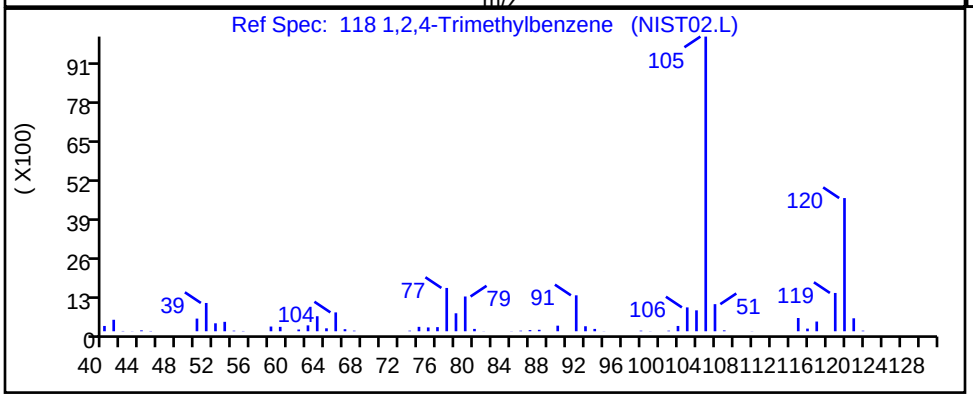
Processing Results




| RT | Mass | Response | Amount |
|---|---|---|---|
| 9.74 | 105.00 | 323 | 0.030435 |
| 9.74 | 120.00 | 26 | |

Reviewer: boykink, 05-Sep-2020 00:03:43
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

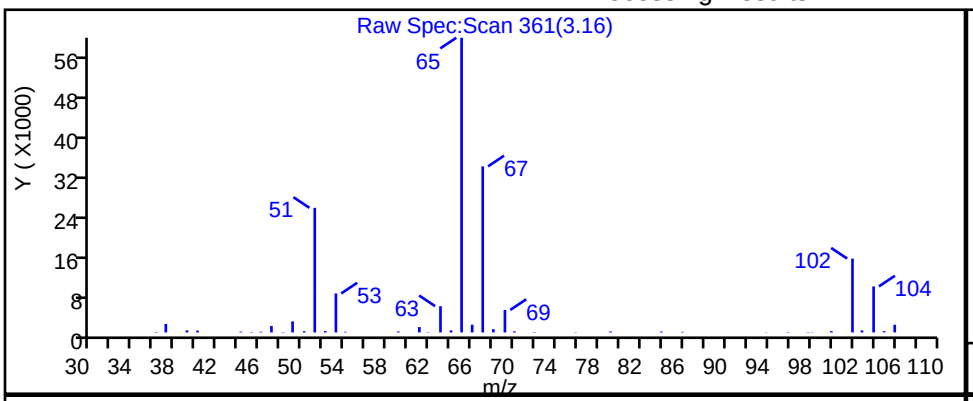
User Disabled Compound Report

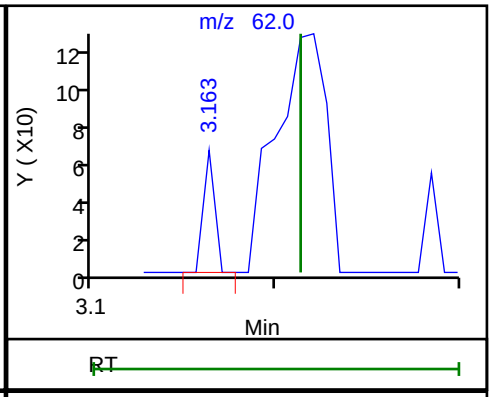
Eurofins TestAmerica, Edison

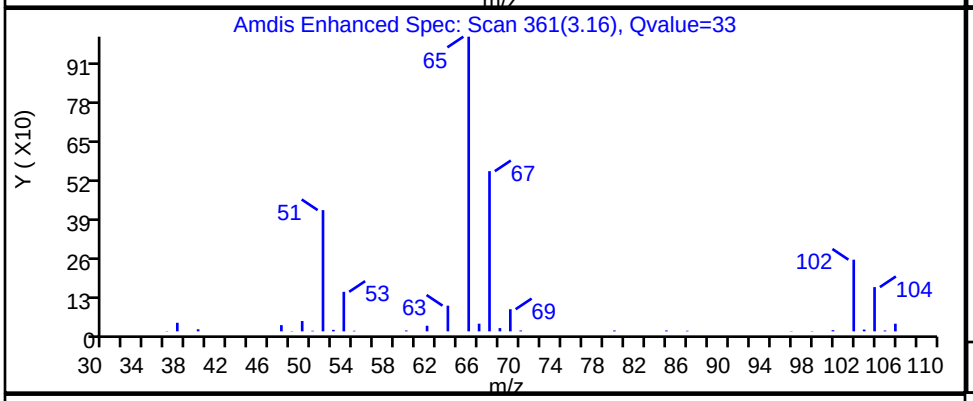
Data File: \\chromfs\Edison\ChromData\CVOAMS13\20200904-116303.b\P79352.D
Injection Date: 04-Sep-2020 14:09:30 Instrument ID: CVOAMS13
Lims ID: STD8
Client ID:
Operator ID: ALS Bottle#: 2 Worklist Smp#: 3
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: 8260W_13 Limit Group: VOA - 8260C Water and Solid
Column: Rtx-624 ( 0.25 mm) Detector MS SCAN

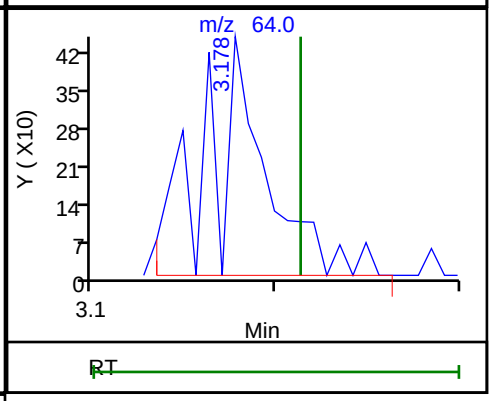
## 63 1,2-Dichloroethane, CAS: 107-06-2

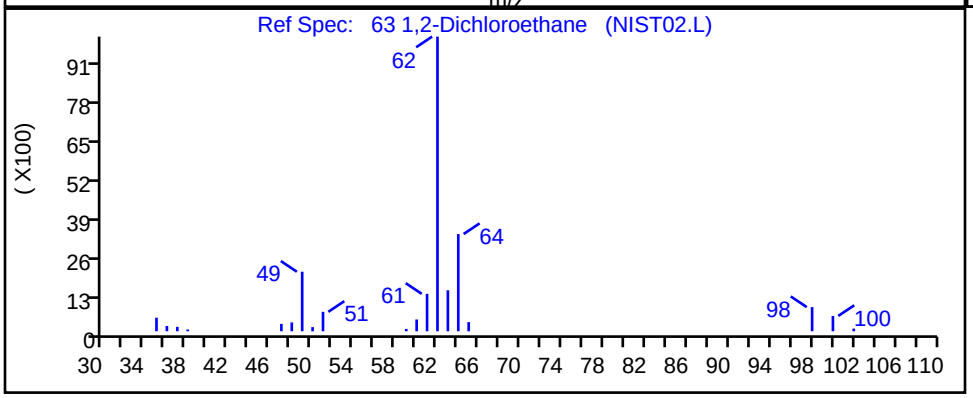
Processing Results




| RT | Mass | Response | Amount |
|---|---|---|---|
| 3.16 | 62.00 | 28 | 0.008825 |
| 3.18 | 64.00 | 1036 | |

Reviewer: boykink, 05-Sep-2020 00:03:16
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

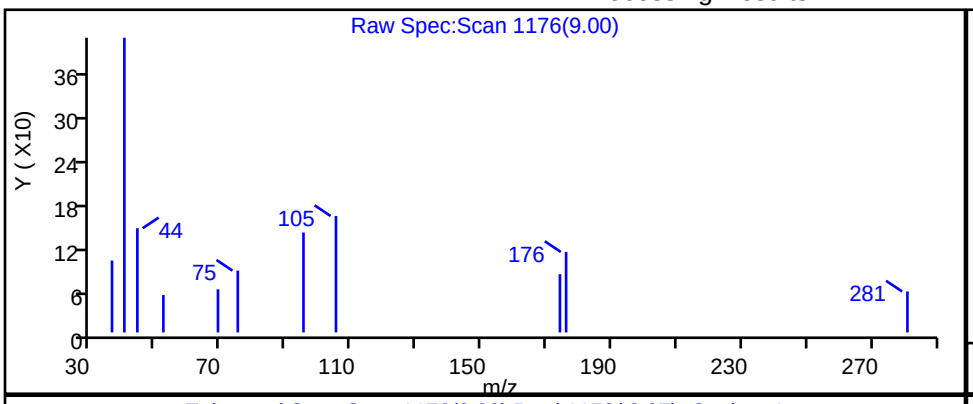
User Disabled Compound Report

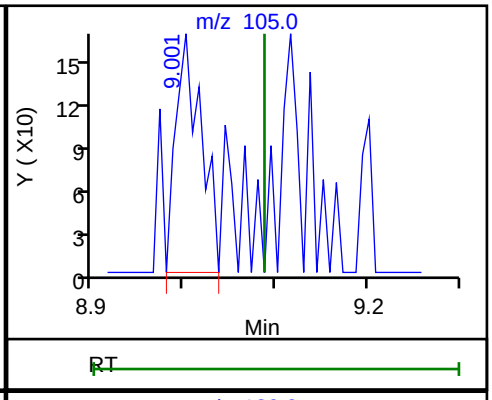
Eurofins TestAmerica, Edison

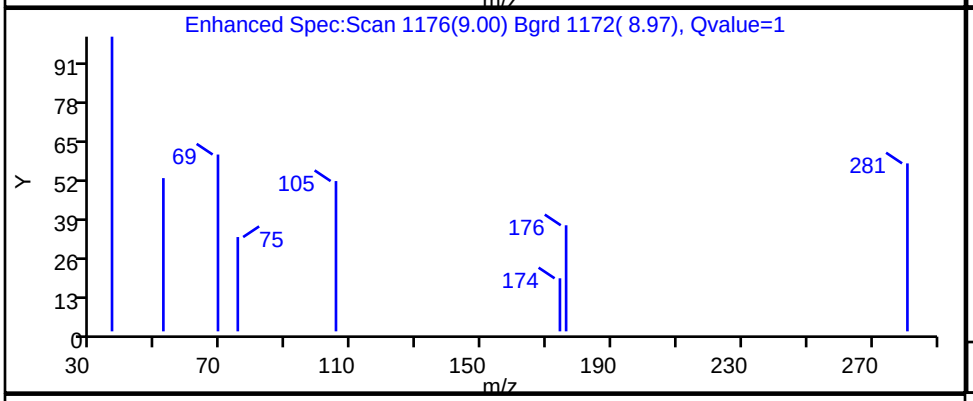
Data File: \\chromfs\Edison\ChromData\CVOAMS13\20200904-116303.b\P79352.D
Injection Date: 04-Sep-2020 14:09:30 Instrument ID: CVOAMS13
Lims ID: STD8
Client ID:
Operator ID: ALS Bottle#: 2 Worklist Smp#: 3
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: 8260W_13 Limit Group: VOA - 8260C Water and Solid
Column: Rtx-624 ( 0.25 mm) Detector MS SCAN

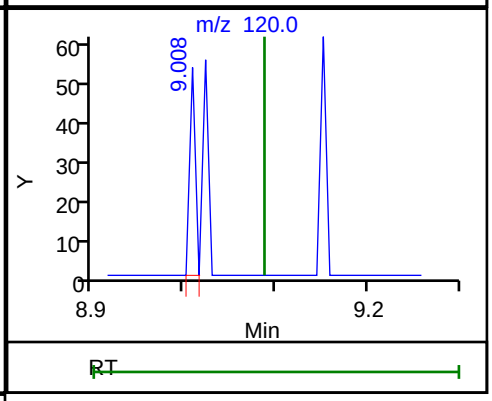
## 114 1,3,5-Trimethylbenzene, CAS: 108-67-8

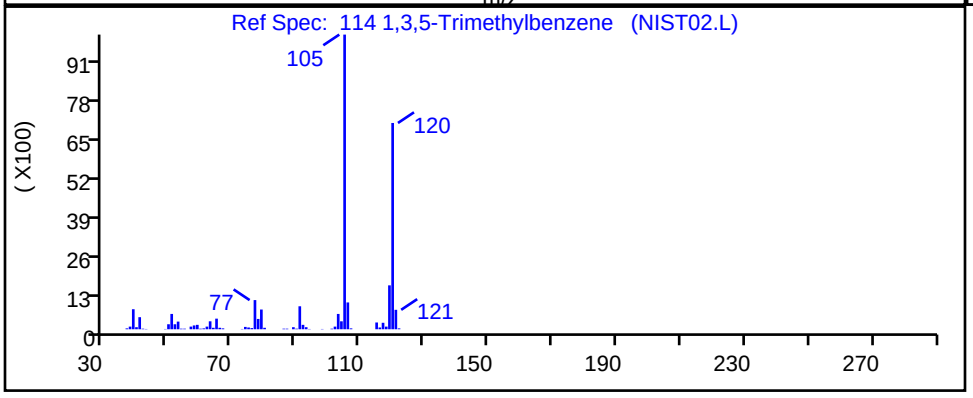
Processing Results




| RT | Mass | Response | Amount |
|---|---|---|---|
| 9.00 | 105.00 | 312 | 0.030379 |
| 9.01 | 120.00 | 23 | |

Reviewer: boykink, 05-Sep-2020 00:03:41
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

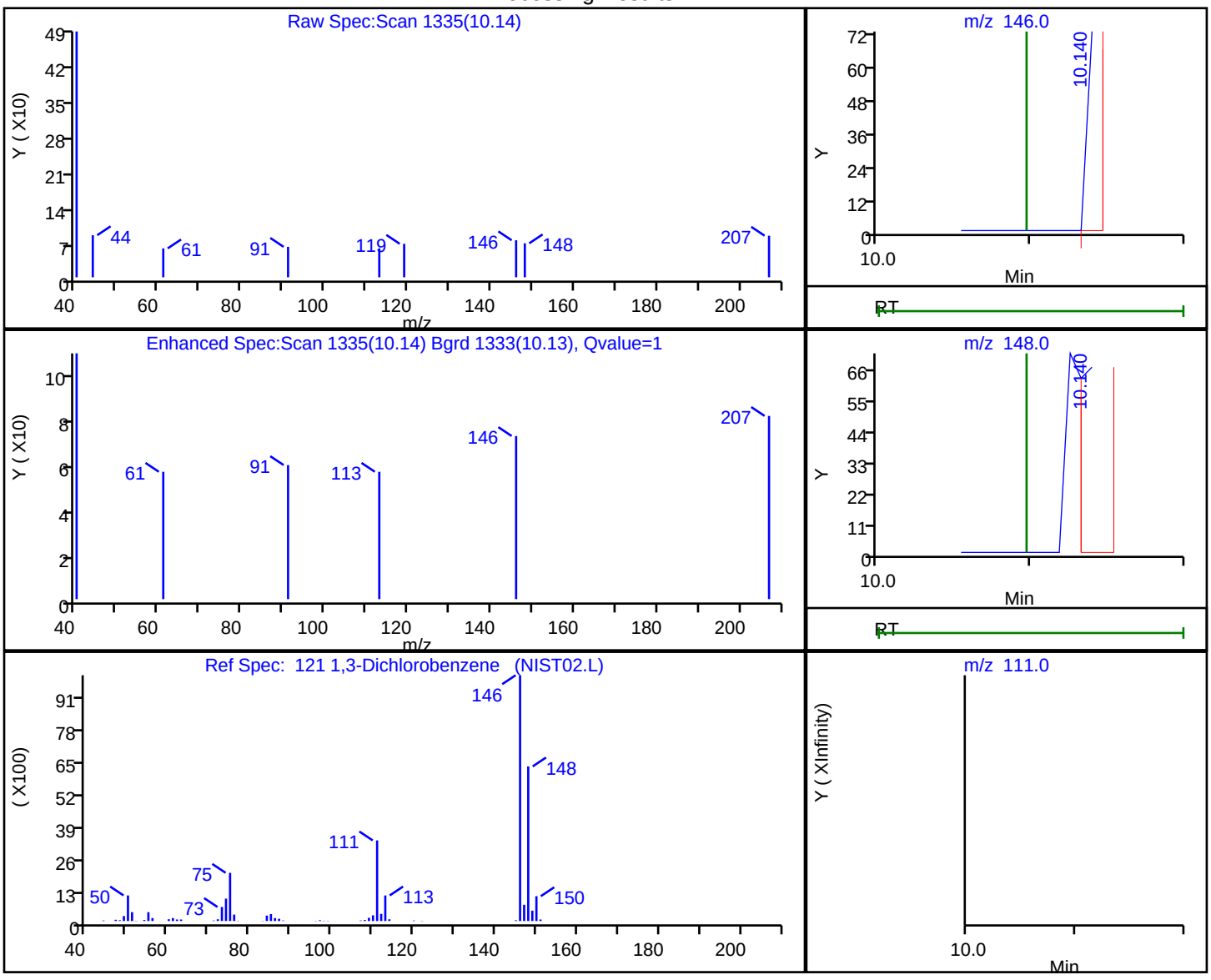
User Disabled Compound Report

Eurofins TestAmerica, Edison

Data File: \\chromfs\Edison\ChromData\CVOAMS13\20200904-116303.b\P79352.D
Injection Date: 04-Sep-2020 14:09:30 Instrument ID: CVOAMS13
Lims ID: STD8
Client ID:
Operator ID: ALS Bottle#: 2 Worklist Smp#: 3
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: 8260W_13 Limit Group: VOA - 8260C Water and Solid
Column: Rtx-624 ( 0.25 mm) Detector MS SCAN

## 121 1,3-Dichlorobenzene, CAS: 541-73-1

Processing Results




| RT | Mass | Response | Amount |
|---|---|---|---|
| 10.14 | 146.00 | 31 | 0.005347 |
| 10.14 | 148.00 | 82 | |
| 10.15 | 111.00 | 38 | |

Reviewer: boykink, 05-Sep-2020 00:03:44
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

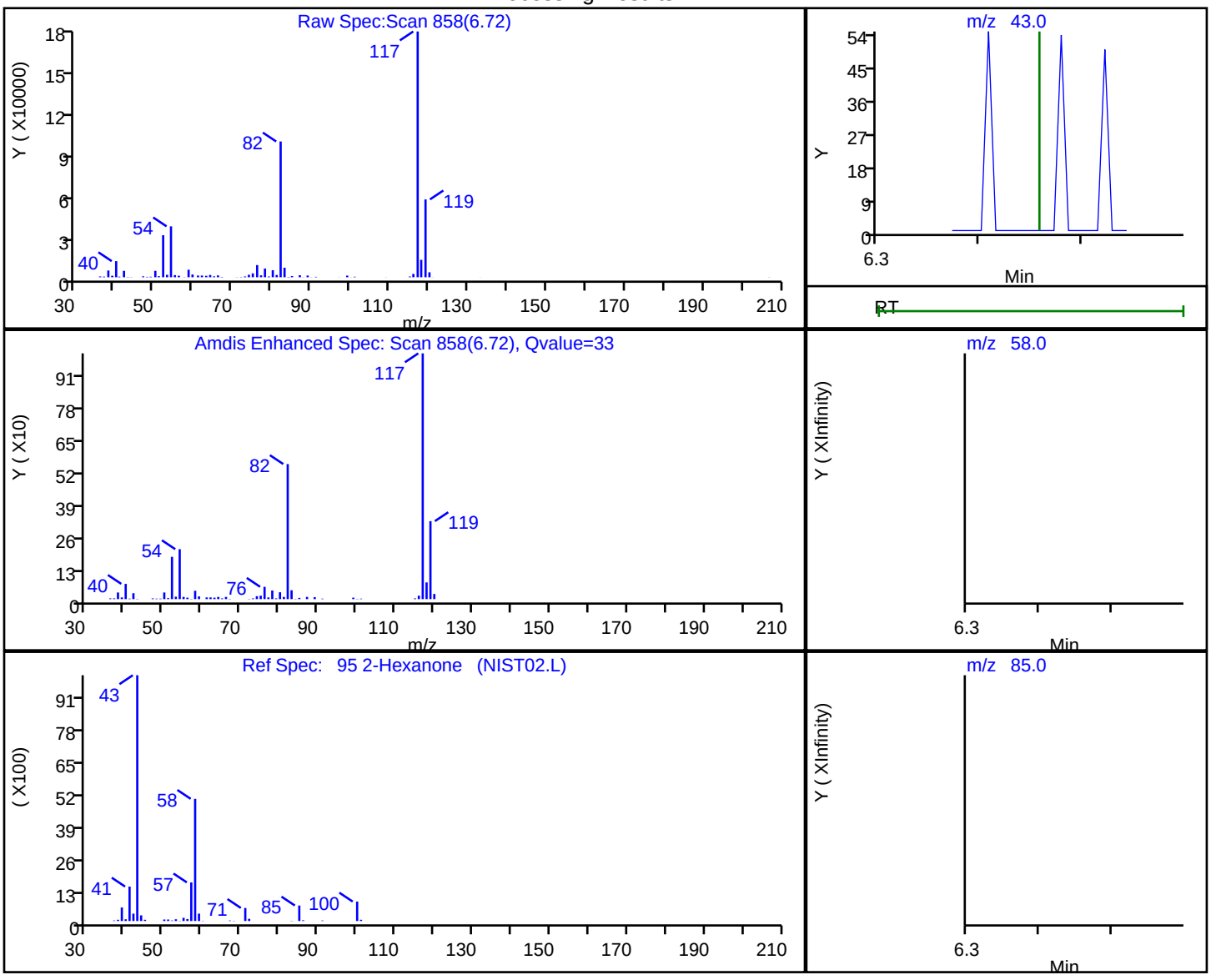
User Disabled Compound Report

Eurofins TestAmerica, Edison

Data File: \\chromfs\Edison\ChromData\CVOAMS13\20200904-116303.b\P79352.D
Injection Date: 04-Sep-2020 14:09:30 Instrument ID: CVOAMS13
Lims ID: STD8
Client ID:
Operator ID: ALS Bottle#: 2 Worklist Smp#: 3
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: 8260W_13 Limit Group: VOA - 8260C Water and Solid
Column: Rtx-624 ( 0.25 mm) Detector MS SCAN

## 95 2-Hexanone, CAS: 591-78-6

Processing Results




| RT | Mass | Response | Amount |
|---|---|---|---|
| 6.72 | 43.00 | 230 | 864.8696 |
| 6.73 | 58.00 | 13278 | |
| 6.72 | 85.00 | 1952 | |
| 6.73 | 100.00 | 205 | |

Reviewer: boykink, 05-Sep-2020 00:03:37
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

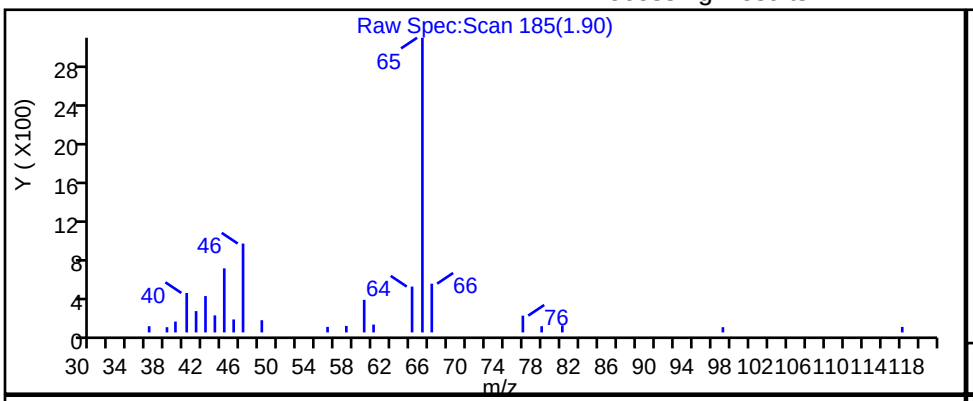
User Disabled Compound Report

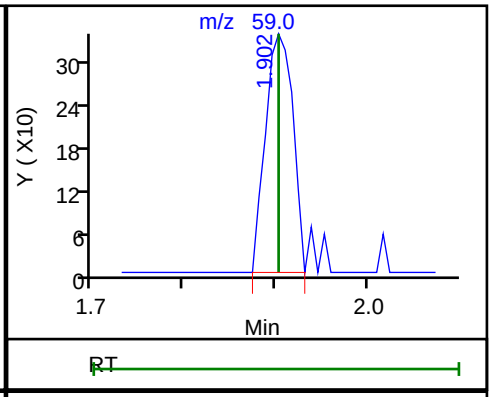
Eurofins TestAmerica, Edison

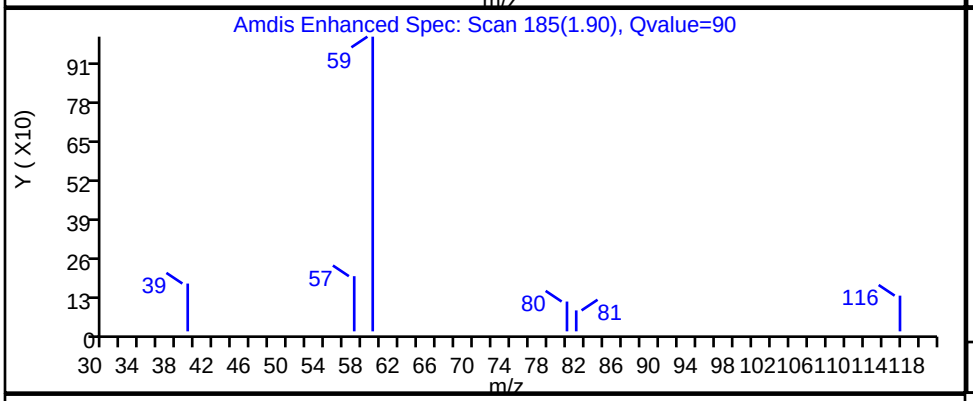
Data File: \\chromfs\Edison\ChromData\CVOAMS13\20200904-116303.b\P79352.D
Injection Date: 04-Sep-2020 14:09:30 Instrument ID: CVOAMS13
Lims ID: STD8
Client ID:
Operator ID: ALS Bottle#: 2 Worklist Smp#: 3
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: 8260W_13 Limit Group: VOA - 8260C Water and Solid
Column: Rtx-624 ( 0.25 mm) Detector MS SCAN

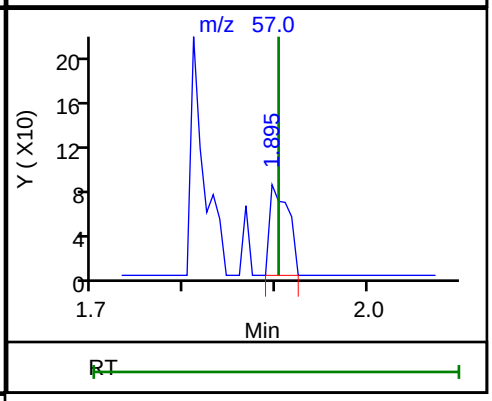
## 34 2-Methyl-2-propanol, CAS: 75-65-0

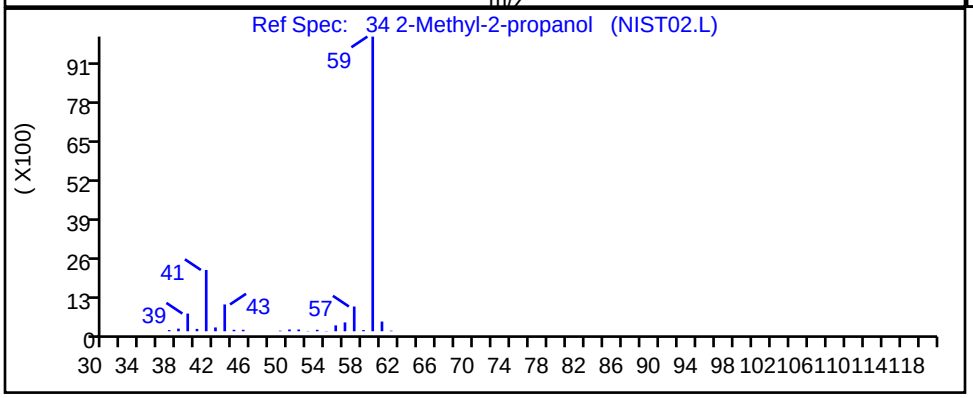
Processing Results




| RT | Mass | Response | Amount |
|---|---|---|---|
| 1.90 | 59.00 | 699 | 5.484978 |
| 1.90 | 57.00 | 115 | |

Reviewer: boykink, 05-Sep-2020 00:03:00
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

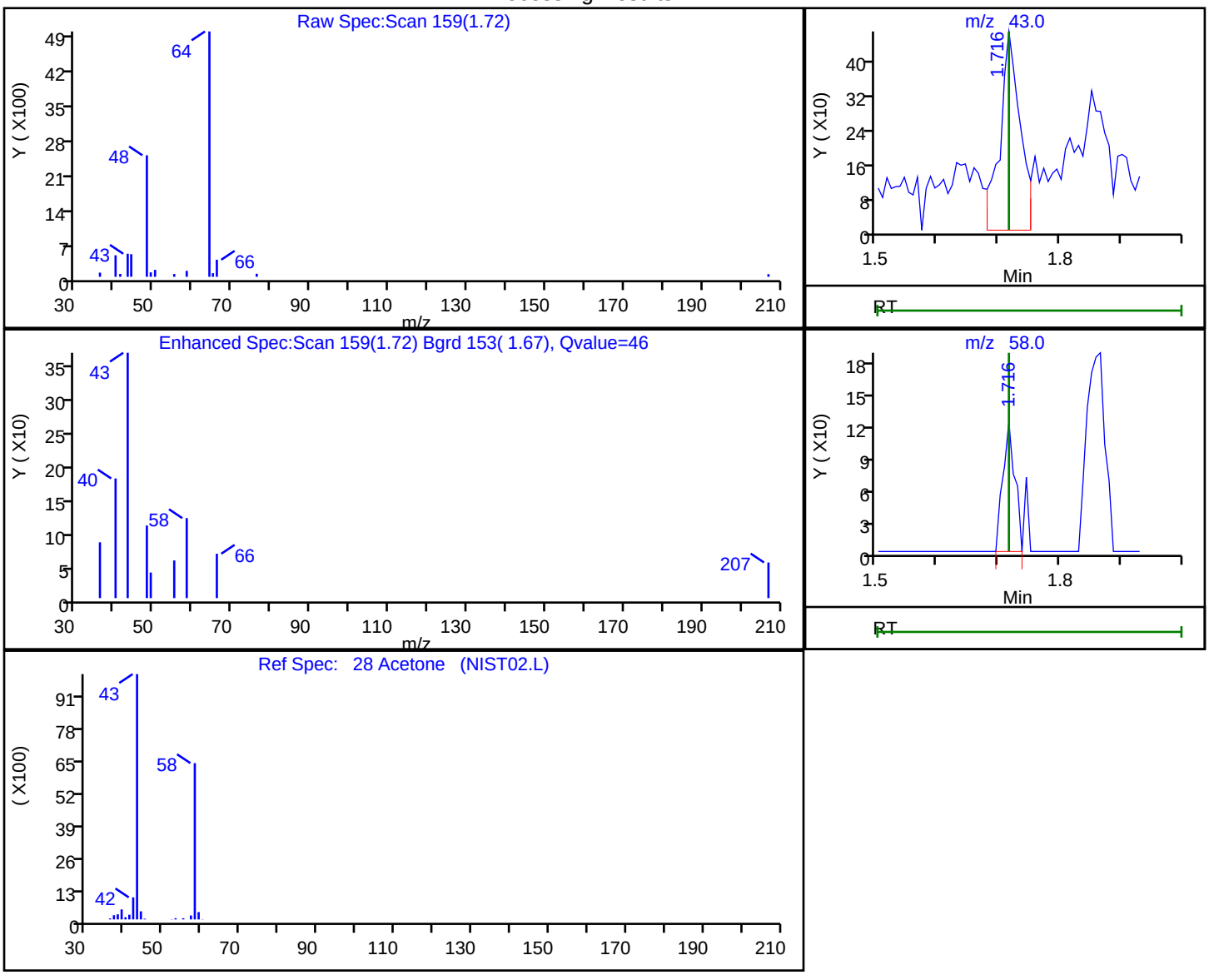
User Disabled Compound Report

Eurofins TestAmerica, Edison

Data File: \\chromfs\Edison\ChromData\CVOAMS13\20200904-116303.b\P79352.D
Injection Date: 04-Sep-2020 14:09:30 Instrument ID: CVOAMS13
Lims ID: STD8
Client ID:
Operator ID: ALS Bottle#: 2 Worklist Smp#: 3
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: 8260W_13 Limit Group: VOA - 8260C Water and Solid
Column: Rtx-624 ( 0.25 mm) Detector MS SCAN

## 28 Acetone, CAS: 67-64-1

Processing Results




| RT | Mass | Response | Amount |
|---|---|---|---|
| 1.72 | 43.00 | 1076 | 856.7366 |
| 1.72 | 58.00 | 163 | |

Reviewer: boykink, 05-Sep-2020 00:02:59
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

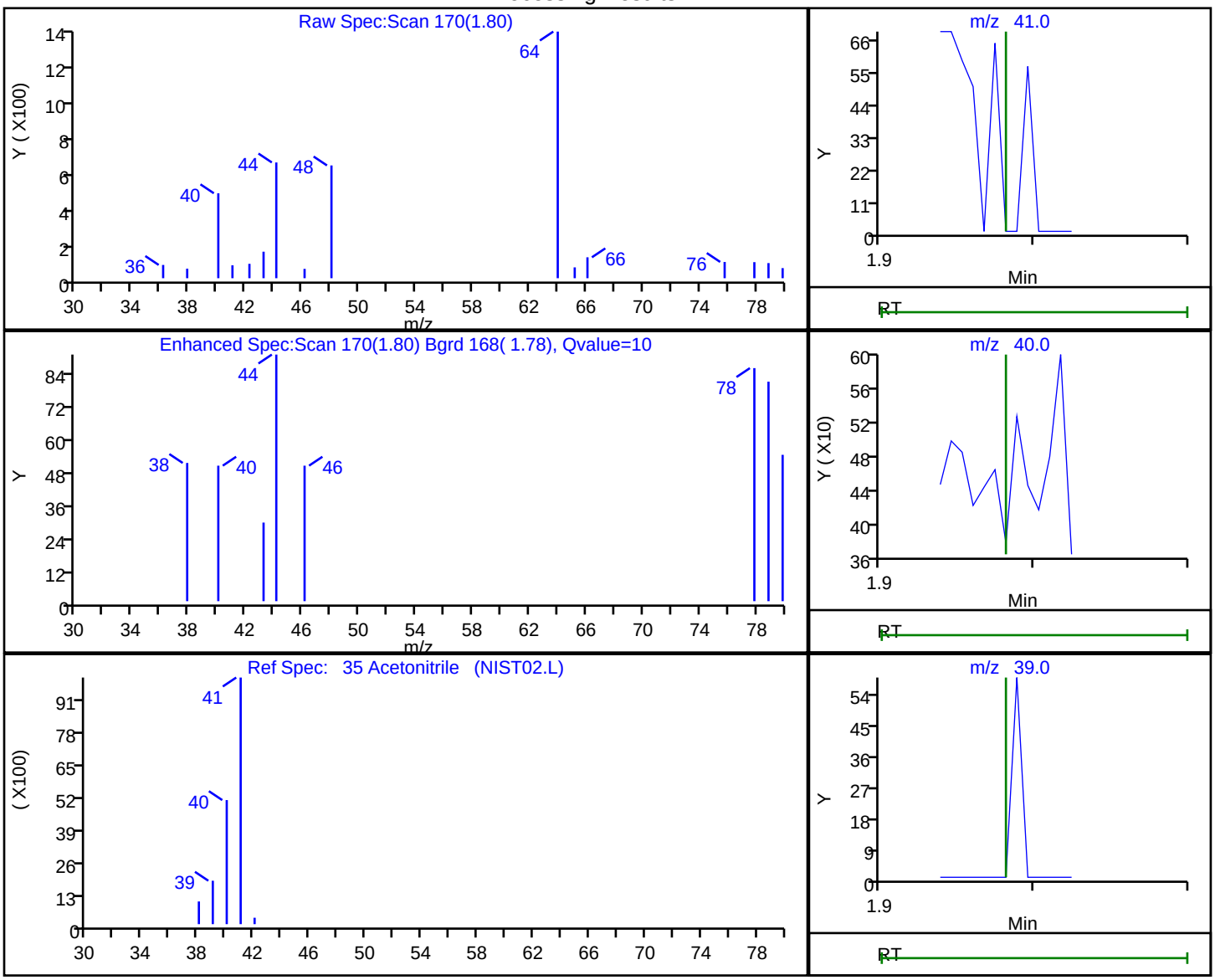
User Disabled Compound Report

Eurofins TestAmerica, Edison

Data File: \\chromfs\Edison\ChromData\CVOAMS13\20200904-116303.b\P79352.D
Injection Date: 04-Sep-2020 14:09:30 Instrument ID: CVOAMS13
Lims ID: STD8
Client ID:
Operator ID: ALS Bottle#: 2 Worklist Smp#: 3
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: 8260W_13 Limit Group: VOA - 8260C Water and Solid
Column: Rtx-624 ( 0.25 mm) Detector MS SCAN

## 35 Acetonitrile, CAS: 75-05-8

Processing Results




| RT | Mass | Response | Amount |
|---|---|---|---|
| 1.80 | 41.00 | 81 | 0.369146 |
| 1.80 | 40.00 | 179 | |
| 1.79 | 39.00 | 36 | |
| 1.79 | 38.00 | 52 | |

Reviewer: boykink, 05-Sep-2020 00:03:03
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

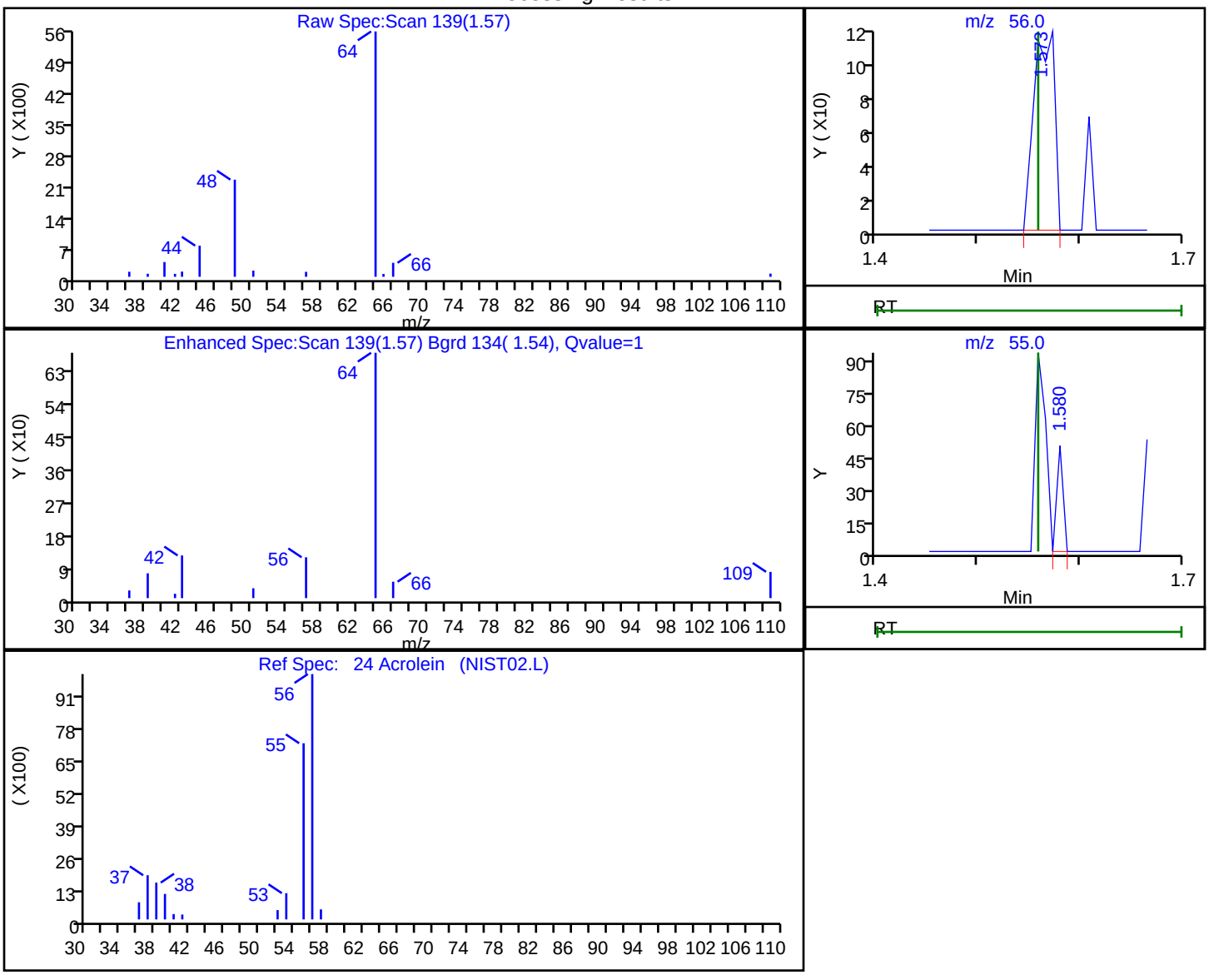
User Disabled Compound Report

Eurofins TestAmerica, Edison

Data File: \\chromfs\Edison\ChromData\CVOAMS13\20200904-116303.b\P79352.D
Injection Date: 04-Sep-2020 14:09:30 Instrument ID: CVOAMS13
Lims ID: STD8
Client ID:
Operator ID: ALS Bottle#: 2 Worklist Smp#: 3
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: 8260W_13 Limit Group: VOA - 8260C Water and Solid
Column: Rtx-624 ( 0.25 mm) Detector MS SCAN

## 24 Acrolein, CAS: 107-02-8

Processing Results




| RT | Mass | Response | Amount |
|---|---|---|---|
| 1.57 | 56.00 | 157 | 0.664059 |
| 1.58 | 55.00 | 21 | |

Reviewer: boykink, 05-Sep-2020 00:02:58
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

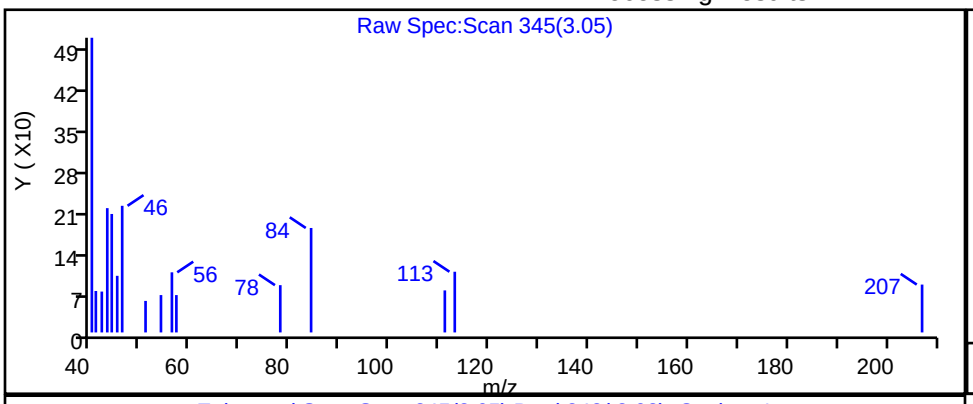
User Disabled Compound Report

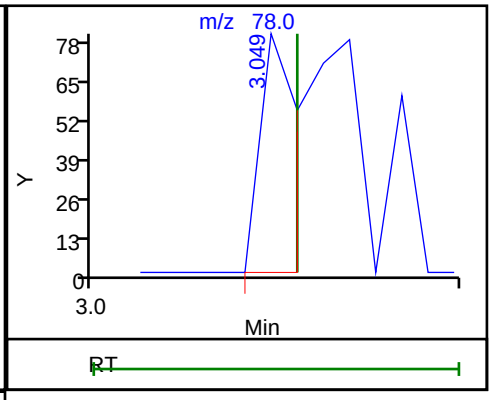
Eurofins TestAmerica, Edison

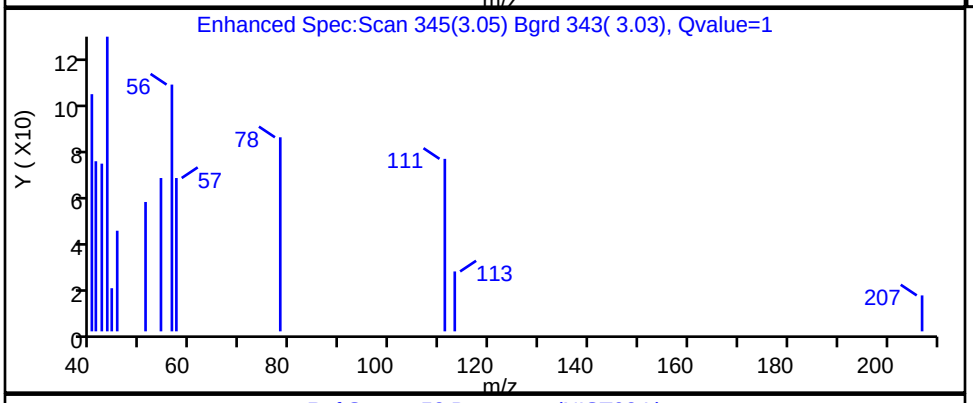
Data File: \\chromfs\Edison\ChromData\CVOAMS13\20200904-116303.b\P79352.D
Injection Date: 04-Sep-2020 14:09:30 Instrument ID: CVOAMS13
Lims ID: STD8
Client ID:
Operator ID: ALS Bottle#: 2 Worklist Smp#: 3
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: 8260W_13 Limit Group: VOA - 8260C Water and Solid
Column: Rtx-624 ( 0.25 mm) Detector MS SCAN

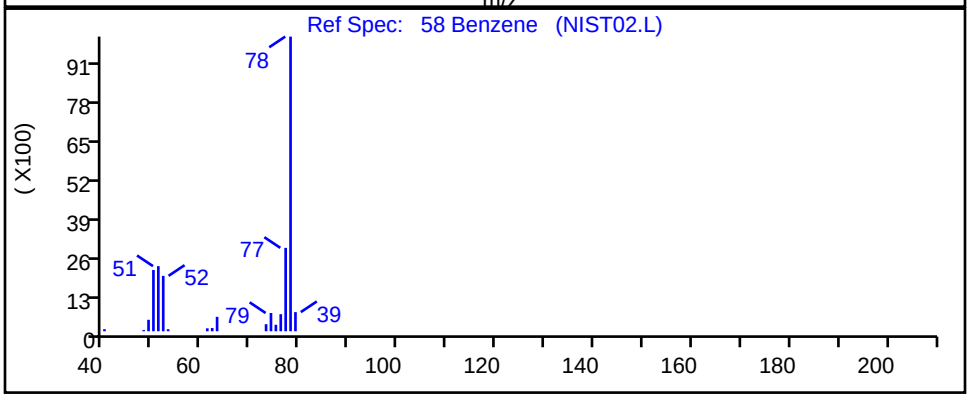
## 58 Benzene, CAS: 71-43-2

Processing Results




| RT | Mass | Response | Amount |
|---|---|---|---|
| 3.05 | 78.00 | 58 | 0.004886 |

Reviewer: boykink, 05-Sep-2020 00:03:13
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

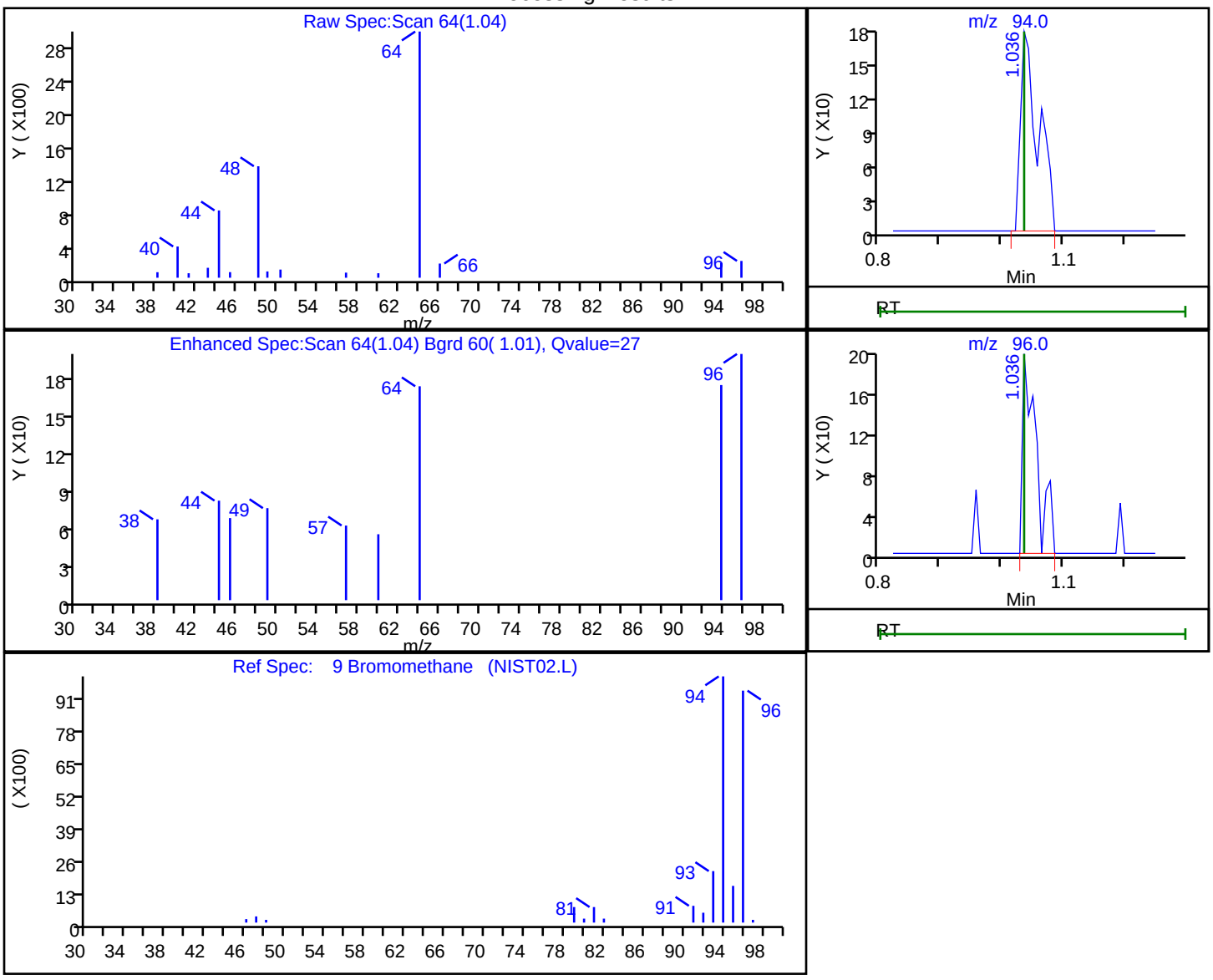
User Disabled Compound Report

Eurofins TestAmerica, Edison

Data File: \\chromfs\Edison\ChromData\CVOAMS13\20200904-116303.b\P79352.D
Injection Date: 04-Sep-2020 14:09:30 Instrument ID: CVOAMS13
Lims ID: STD8
Client ID:
Operator ID: ALS Bottle#: 2 Worklist Smp#: 3
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: 8260W_13 Limit Group: VOA - 8260C Water and Solid
Column: Rtx-624 ( 0.25 mm) Detector MS SCAN

## 9 Bromomethane, CAS: 74-83-9

Processing Results




| RT | Mass | Response | Amount |
|---|---|---|---|
| 1.04 | 94.00 | 345 | 174.0470 |
| 1.04 | 96.00 | 316 | |

Reviewer: boykink, 05-Sep-2020 00:02:51
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

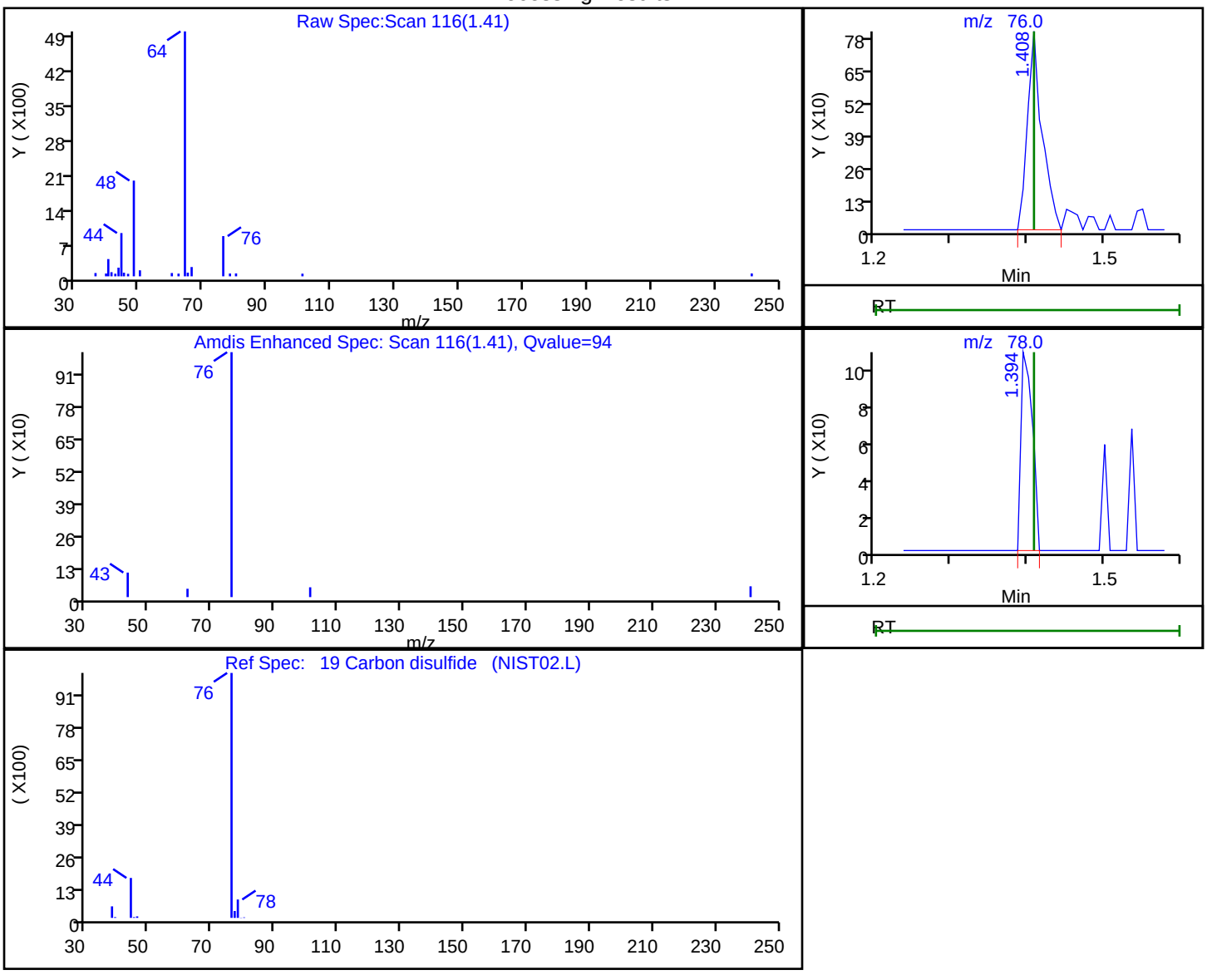
User Disabled Compound Report

Eurofins TestAmerica, Edison

Data File: \\chromfs\Edison\ChromData\CVOAMS13\20200904-116303.b\P79352.D
Injection Date: 04-Sep-2020 14:09:30 Instrument ID: CVOAMS13
Lims ID: STD8
Client ID:
Operator ID: ALS Bottle#: 2 Worklist Smp#: 3
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: 8260W_13 Limit Group: VOA - 8260C Water and Solid
Column: Rtx-624 ( 0.25 mm) Detector MS SCAN

## 19 Carbon disulfide, CAS: 75-15-0

Processing Results




| RT | Mass | Response | Amount |
|---|---|---|---|
| 1.41 | 76.00 | 1078 | 0.108275 |
| 1.39 | 78.00 | 105 | |

Reviewer: boykink, 05-Sep-2020 00:02:56
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

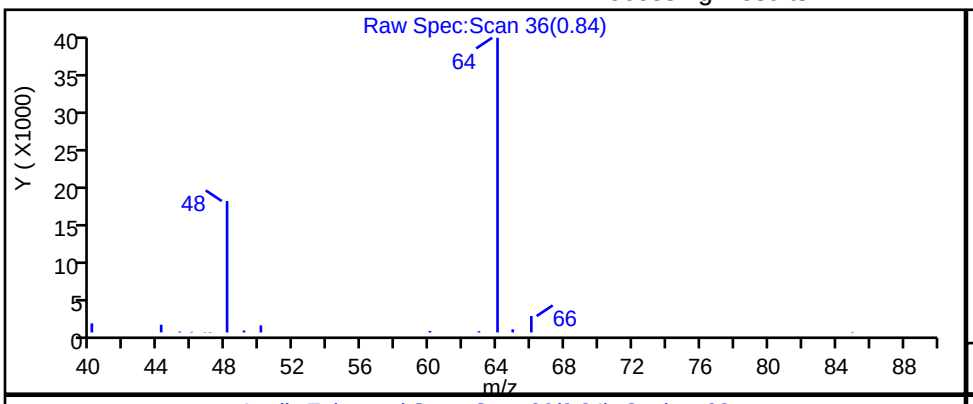
User Disabled Compound Report

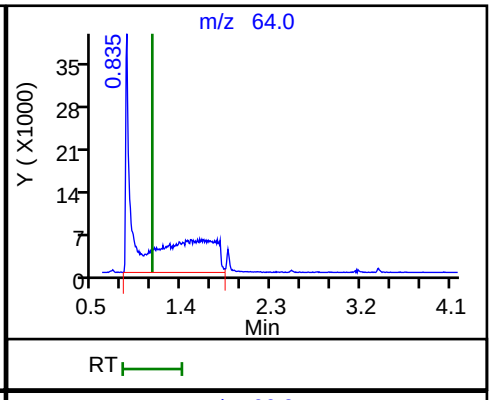
Eurofins TestAmerica, Edison

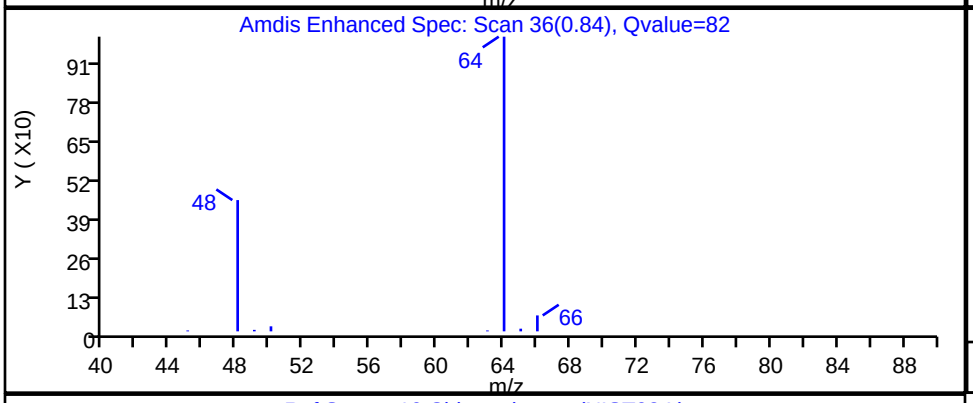
Data File: \\chromfs\Edison\ChromData\CVOAMS13\20200904-116303.b\P79352.D
Injection Date: 04-Sep-2020 14:09:30 Instrument ID: CVOAMS13
Lims ID: STD8
Client ID:
Operator ID: ALS Bottle#: 2 Worklist Smp#: 3
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: 8260W_13 Limit Group: VOA - 8260C Water and Solid
Column: Rtx-624 ( 0.25 mm) Detector MS SCAN

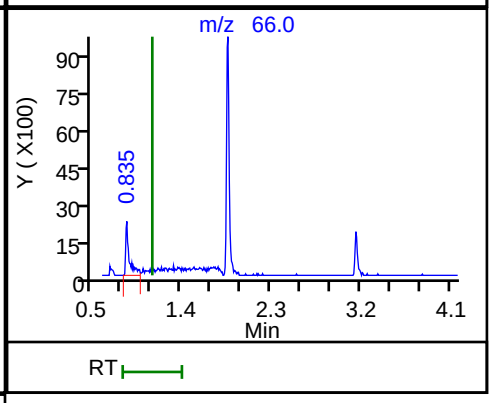
## 10 Chloroethane, CAS: 75-00-3

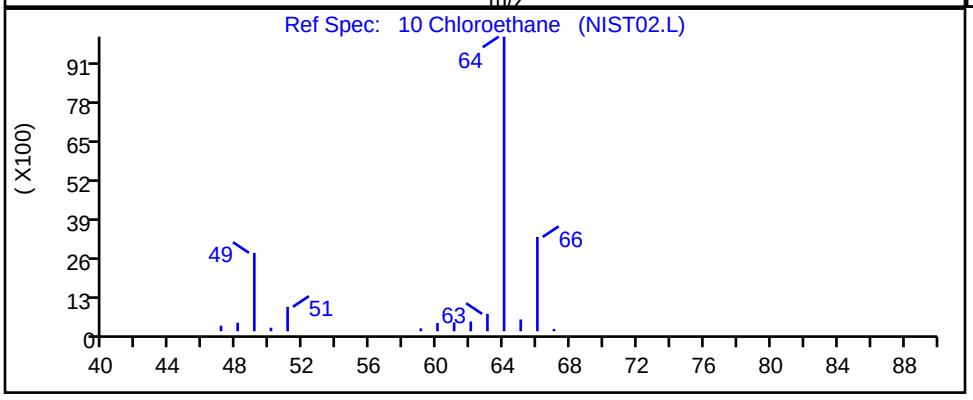
Processing Results




| RT | Mass | Response | Amount |
|---|---|---|---|
| 0.84 | 64.00 | 327961 | 1.330294 |
| 0.84 | 66.00 | 5483 | |

Reviewer: boykink, 05-Sep-2020 00:02:52
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

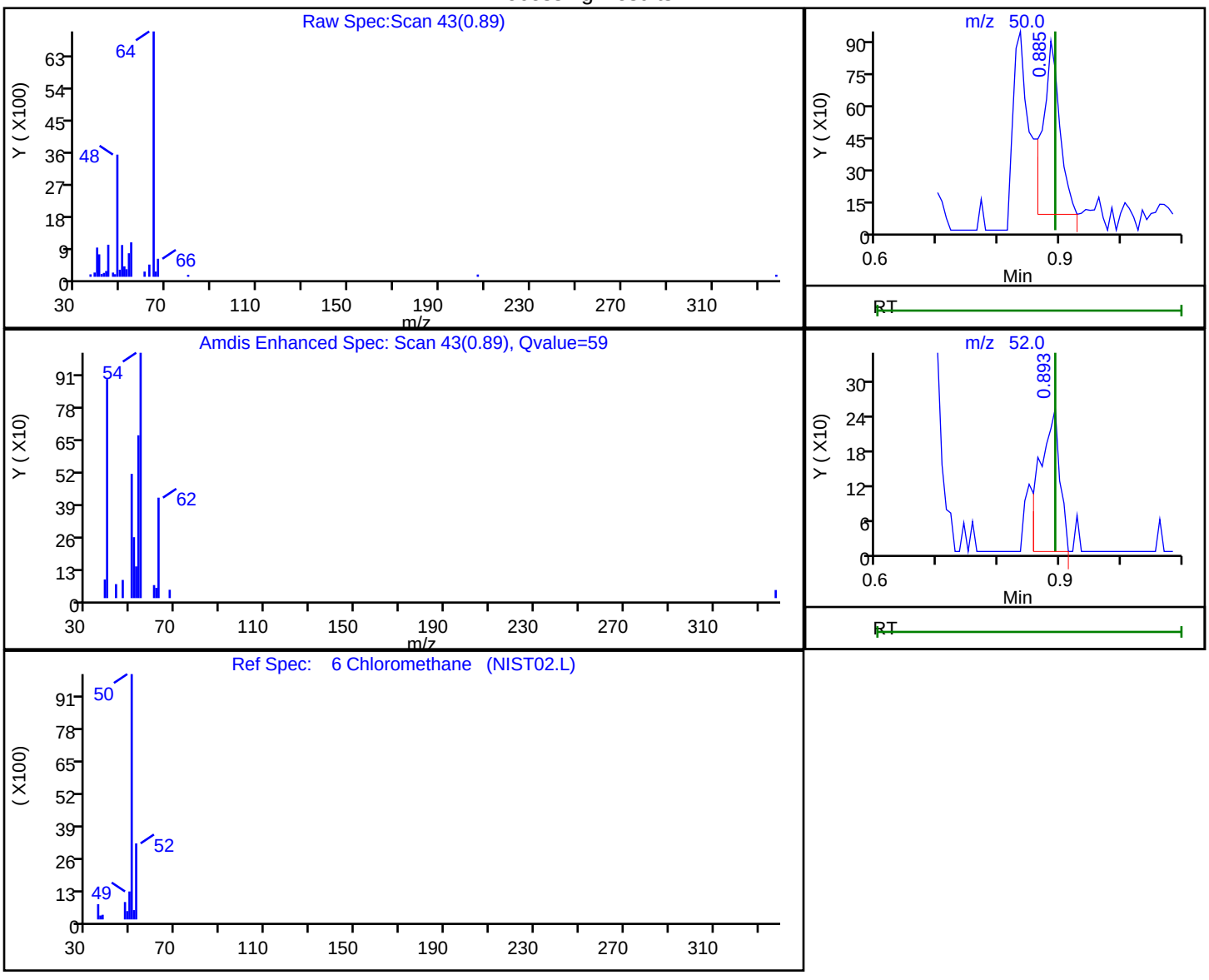
User Disabled Compound Report

Eurofins TestAmerica, Edison

Data File: \\chromfs\Edison\ChromData\CVOAMS13\20200904-116303.b\P79352.D
Injection Date: 04-Sep-2020 14:09:30 Instrument ID: CVOAMS13
Lims ID: STD8
Client ID:
Operator ID: ALS Bottle#: 2 Worklist Smp#: 3
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: 8260W_13 Limit Group: VOA - 8260C Water and Solid
Column: Rtx-624 ( 0.25 mm) Detector MS SCAN

## 6 Chloromethane, CAS: 74-87-3

Processing Results




| RT | Mass | Response | Amount |
|---|---|---|---|
| 0.89 | 50.00 | 1564 | 0.285365 |
| 0.89 | 52.00 | 546 | |

Reviewer: boykink, 05-Sep-2020 00:02:48
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

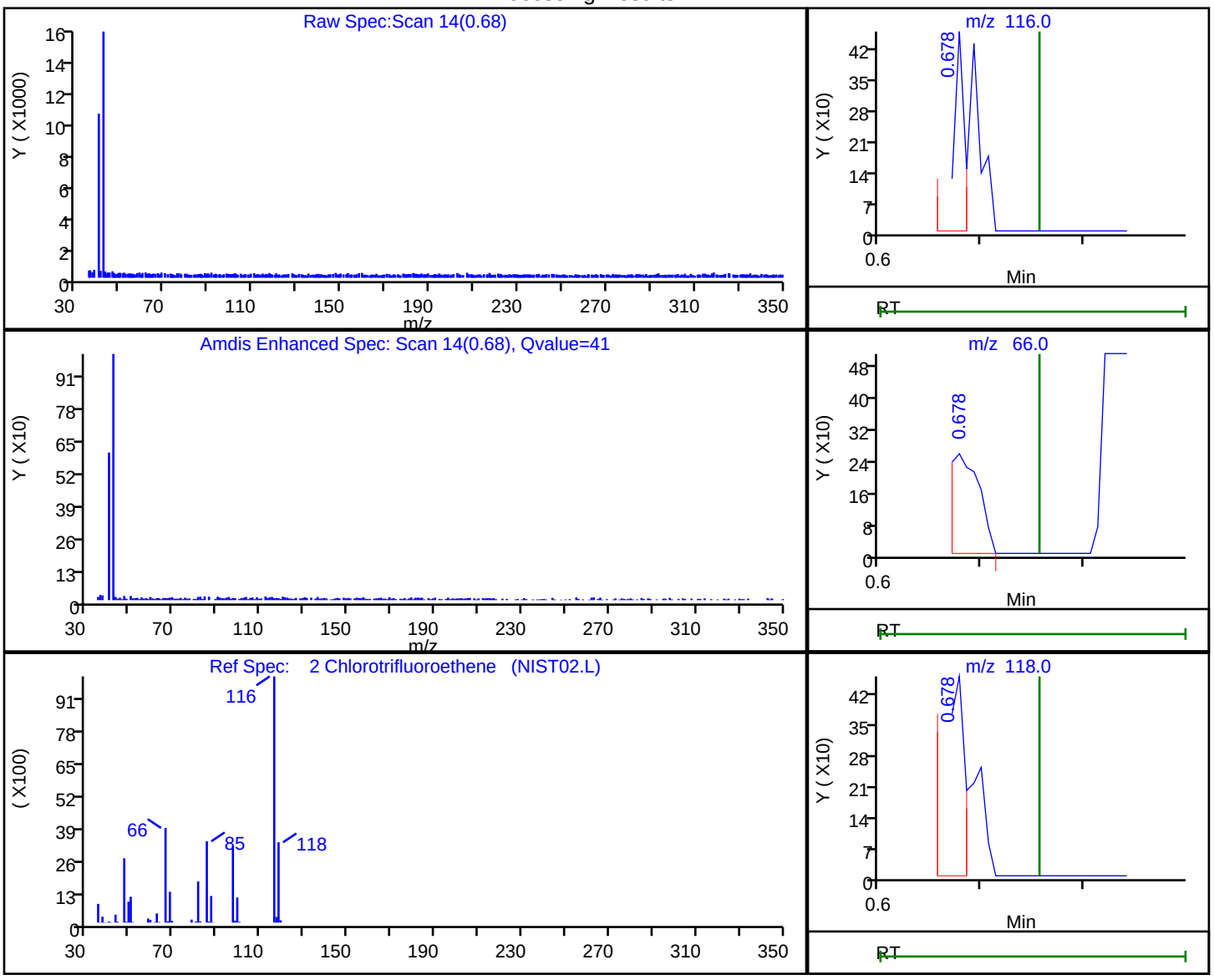
User Disabled Compound Report

Eurofins TestAmerica, Edison

Data File: \\chromfs\Edison\ChromData\CVOAMS13\20200904-116303.b\P79352.D
Injection Date: 04-Sep-2020 14:09:30 Instrument ID: CVOAMS13
Lims ID: STD8
Client ID:
Operator ID: ALS Bottle#: 2 Worklist Smp#: 3
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: 8260W_13 Limit Group: VOA - 8260C Water and Solid
Column: Rtx-624 ( 0.25 mm) Detector MS SCAN

## 2 Chlorotrifluoroethene, CAS: 79-38-9

Processing Results




| RT | Mass | Response | Amount |
|---|---|---|---|
| 0.68 | 116.00 | 426 | 0.492486 |
| 0.68 | 66.00 | 493 | |
| 0.68 | 118.00 | 551 | |

Reviewer: boykink, 05-Sep-2020 00:02:30
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

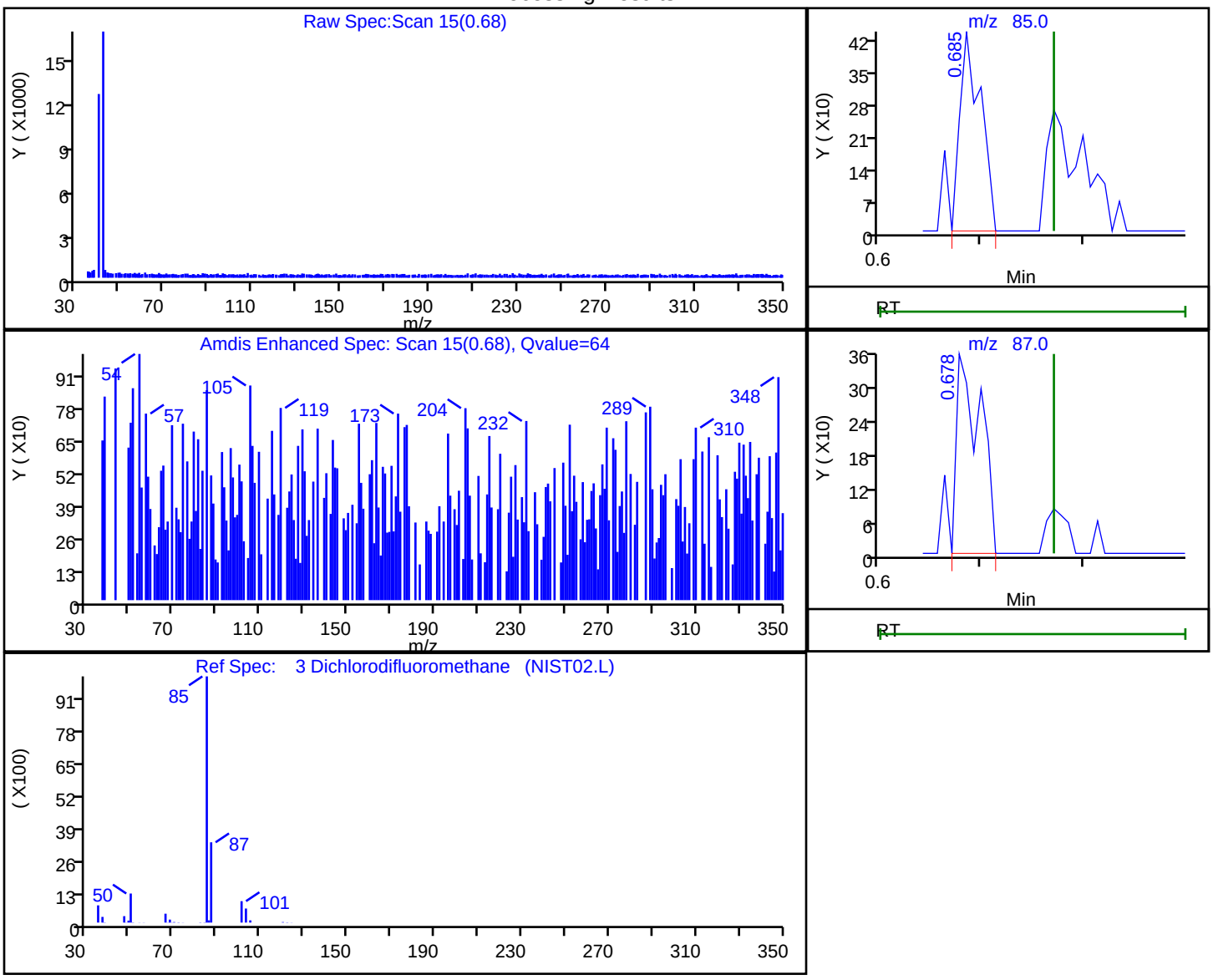
User Disabled Compound Report

Eurofins TestAmerica, Edison

Data File: \\chromfs\Edison\ChromData\CVOAMS13\20200904-116303.b\P79352.D
Injection Date: 04-Sep-2020 14:09:30 Instrument ID: CVOAMS13
Lims ID: STD8
Client ID:
Operator ID: ALS Bottle#: 2 Worklist Smp#: 3
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: 8260W_13 Limit Group: VOA - 8260C Water and Solid
Column: Rtx-624 ( 0.25 mm) Detector MS SCAN

## 3 Dichlorodifluoromethane, CAS: 75-71-8

Processing Results




| RT | Mass | Response | Amount |
|---|---|---|---|
| 0.68 | 85.00 | 609 | 0.172788 |
| 0.68 | 87.00 | 575 | |

Reviewer: boykink, 05-Sep-2020 00:02:31
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

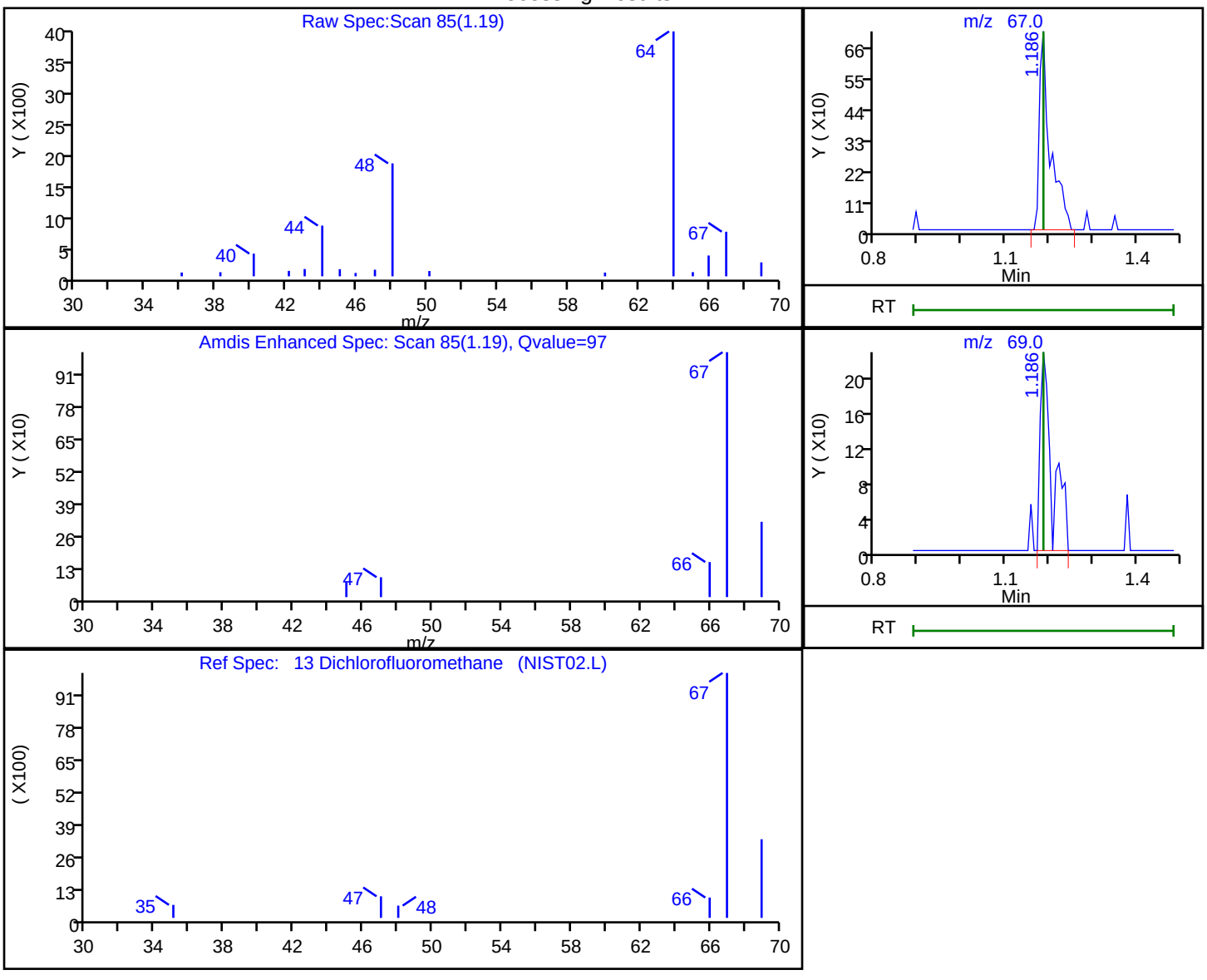
User Disabled Compound Report

Eurofins TestAmerica, Edison

Data File: \\chromfs\Edison\ChromData\CVOAMS13\20200904-116303.b\P79352.D
Injection Date: 04-Sep-2020 14:09:30 Instrument ID: CVOAMS13
Lims ID: STD8
Client ID:
Operator ID: ALS Bottle#: 2 Worklist Smp#: 3
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: 8260W_13 Limit Group: VOA - 8260C Water and Solid
Column: Rtx-624 ( 0.25 mm) Detector MS SCAN

## 13 Dichlorofluoromethane, CAS: 75-43-4

Processing Results




| RT | Mass | Response | Amount |
|---|---|---|---|
| 1.19 | 67.00 | 1245 | 0.263820 |
| 1.19 | 69.00 | 434 | |

Reviewer: boykink, 05-Sep-2020 00:02:54
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

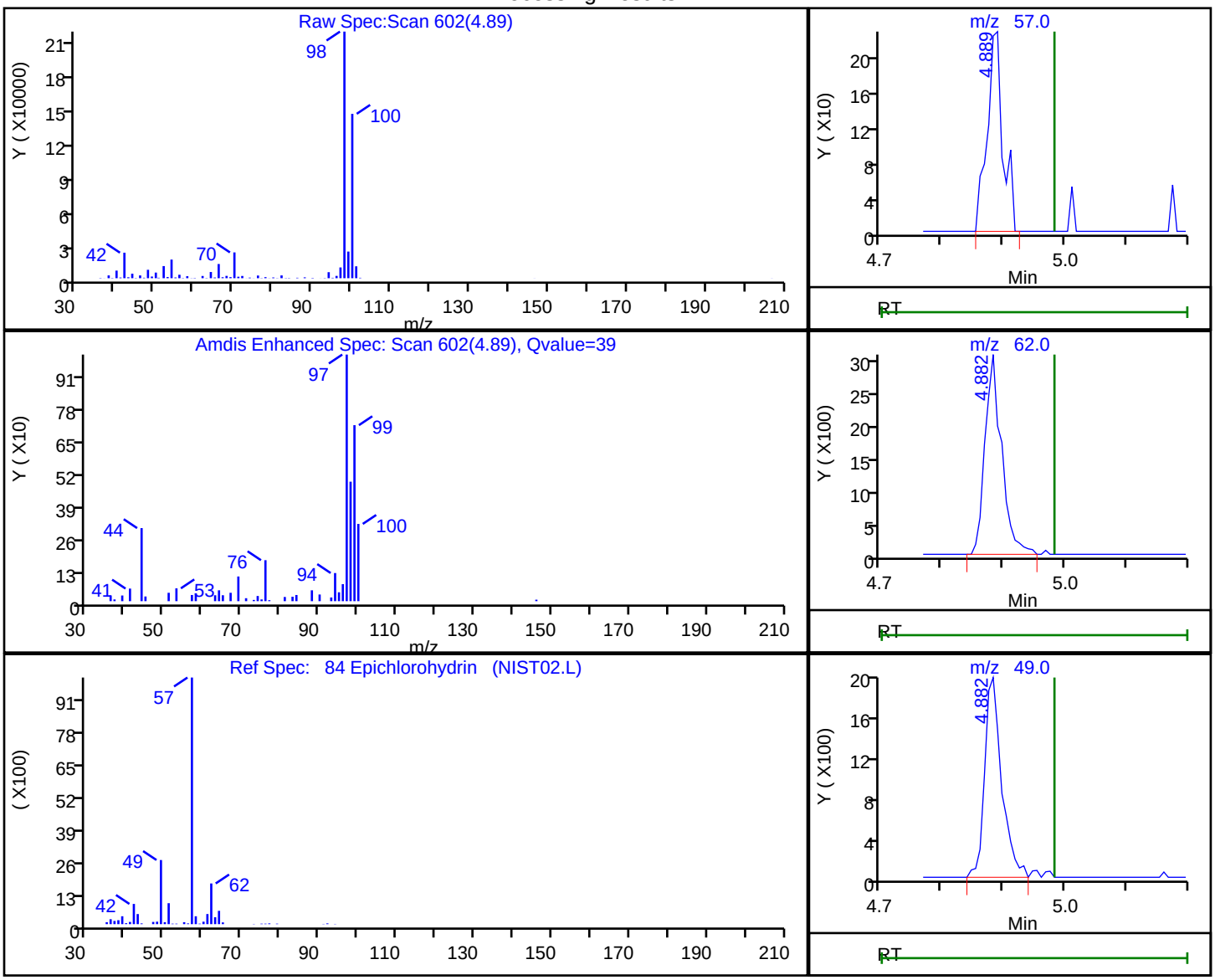
User Disabled Compound Report

Eurofins TestAmerica, Edison

Data File: \\chromfs\Edison\ChromData\CVOAMS13\20200904-116303.b\P79352.D
Injection Date: 04-Sep-2020 14:09:30 Instrument ID: CVOAMS13
Lims ID: STD8
Client ID:
Operator ID: ALS Bottle#: 2 Worklist Smp#: 3
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: 8260W_13 Limit Group: VOA - 8260C Water and Solid
Column: Rtx-624 ( 0.25 mm) Detector MS SCAN

## 84 Epichlorohydrin, CAS: 106-89-8

Processing Results




| RT | Mass | Response | Amount |
|---|---|---|---|
| 4.89 | 57.00 | 406 | 8.568717 |
| 4.88 | 62.00 | 5790 | |
| 4.88 | 49.00 | 3821 | |

Reviewer: baronm, 05-Sep-2020 12:14:52
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

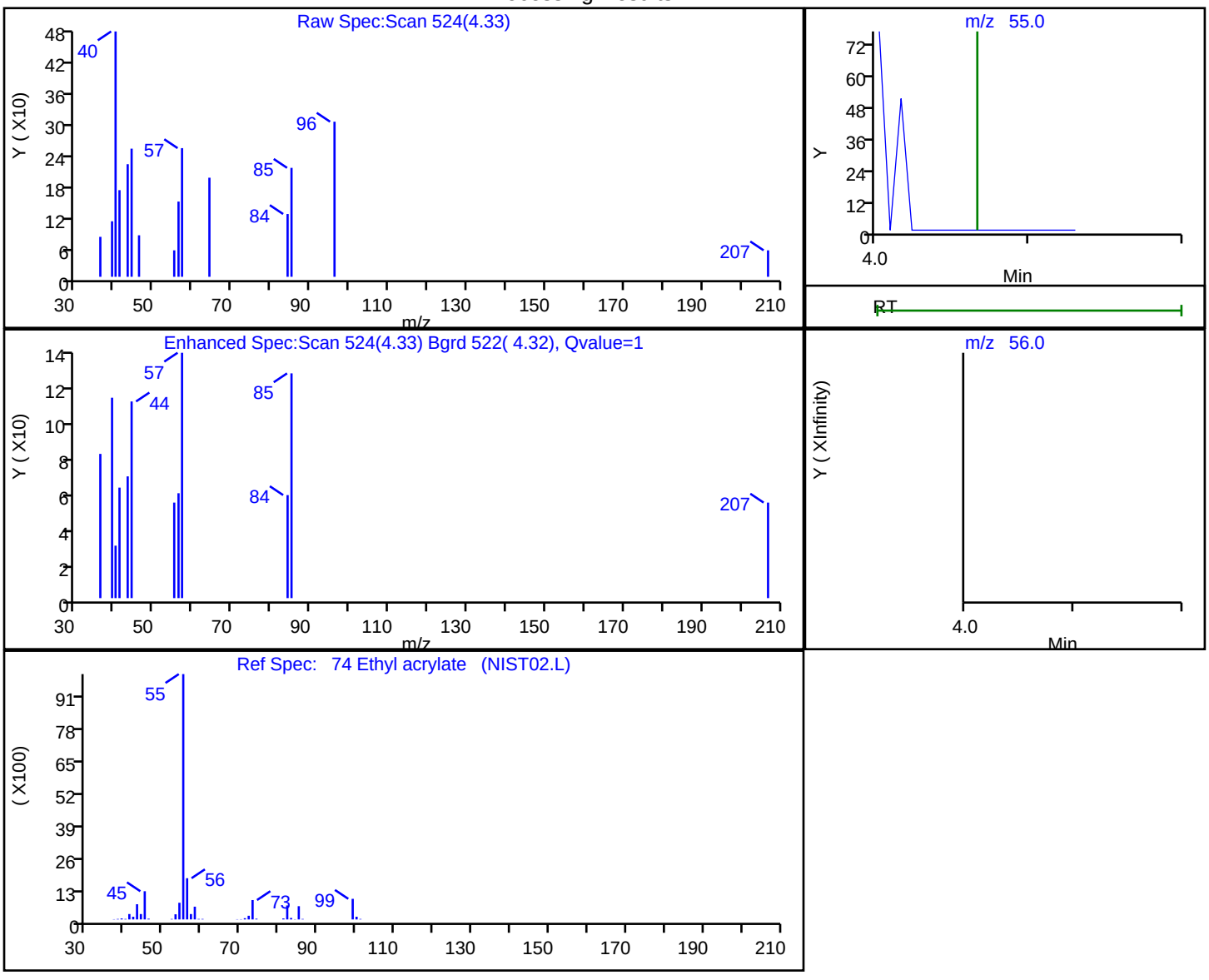
User Disabled Compound Report

Eurofins TestAmerica, Edison

Data File: \\chromfs\Edison\ChromData\CVOAMS13\20200904-116303.b\P79352.D
Injection Date: 04-Sep-2020 14:09:30 Instrument ID: CVOAMS13
Lims ID: STD8
Client ID:
Operator ID: ALS Bottle#: 2 Worklist Smp#: 3
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: 8260W_13 Limit Group: VOA - 8260C Water and Solid
Column: Rtx-624 ( 0.25 mm) Detector MS SCAN

## 74 Ethyl acrylate, CAS: 140-88-5

Processing Results




| RT | Mass | Response | Amount |
|---|---|---|---|
| 4.33 | 55.00 | 44 | 0.567643 |
| 4.33 | 56.00 | 252 | |

Reviewer: boykink, 05-Sep-2020 00:03:34
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

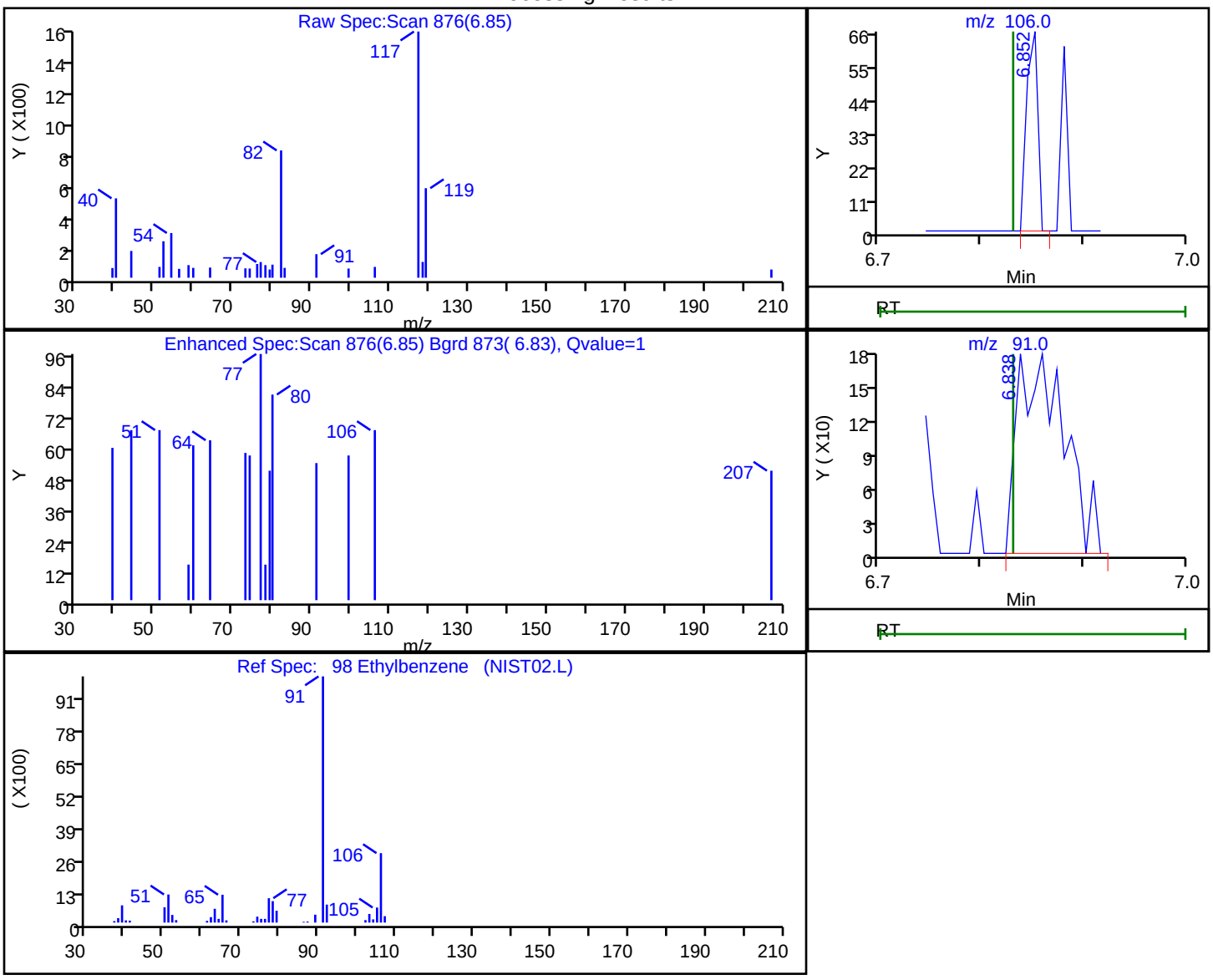
User Disabled Compound Report

Eurofins TestAmerica, Edison

Data File: \\chromfs\Edison\ChromData\CVOAMS13\20200904-116303.b\P79352.D
Injection Date: 04-Sep-2020 14:09:30 Instrument ID: CVOAMS13
Lims ID: STD8
Client ID:
Operator ID: ALS Bottle#: 2 Worklist Smp#: 3
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: 8260W_13 Limit Group: VOA - 8260C Water and Solid
Column: Rtx-624 ( 0.25 mm) Detector MS SCAN

## 98 Ethylbenzene, CAS: 100-41-4

Processing Results




| RT | Mass | Response | Amount |
|---|---|---|---|
| 6.85 | 106.00 | 51 | 0.011946 |
| 6.84 | 91.00 | 571 | |

Reviewer: boykink, 05-Sep-2020 00:03:38
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

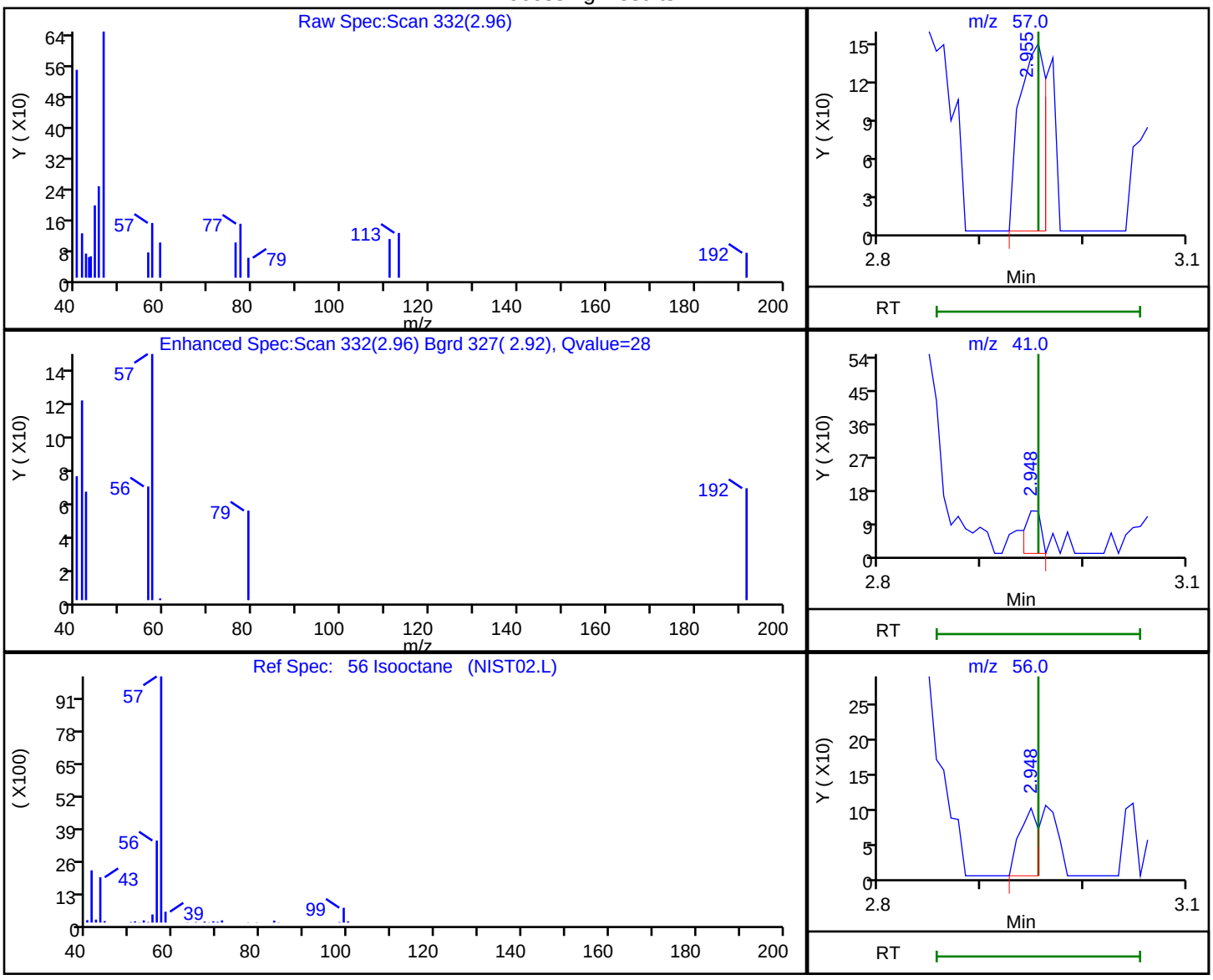
User Disabled Compound Report

Eurofins TestAmerica, Edison

Data File: \\chromfs\Edison\ChromData\CVOAMS13\20200904-116303.b\P79352.D
Injection Date: 04-Sep-2020 14:09:30 Instrument ID: CVOAMS13
Lims ID: STD8
Client ID:
Operator ID: ALS Bottle#: 2 Worklist Smp#: 3
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: 8260W_13 Limit Group: VOA - 8260C Water and Solid
Column: Rtx-624 ( 0.25 mm) Detector MS SCAN

## 56 Isooctane, CAS: 540-84-1

Processing Results




| RT | Mass | Response | Amount |
|---|---|---|---|
| 2.96 | 57.00 | 257 | 0.031274 |
| 2.95 | 41.00 | 127 | |
| 2.95 | 56.00 | 123 | |

Reviewer: boykink, 05-Sep-2020 00:03:07
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

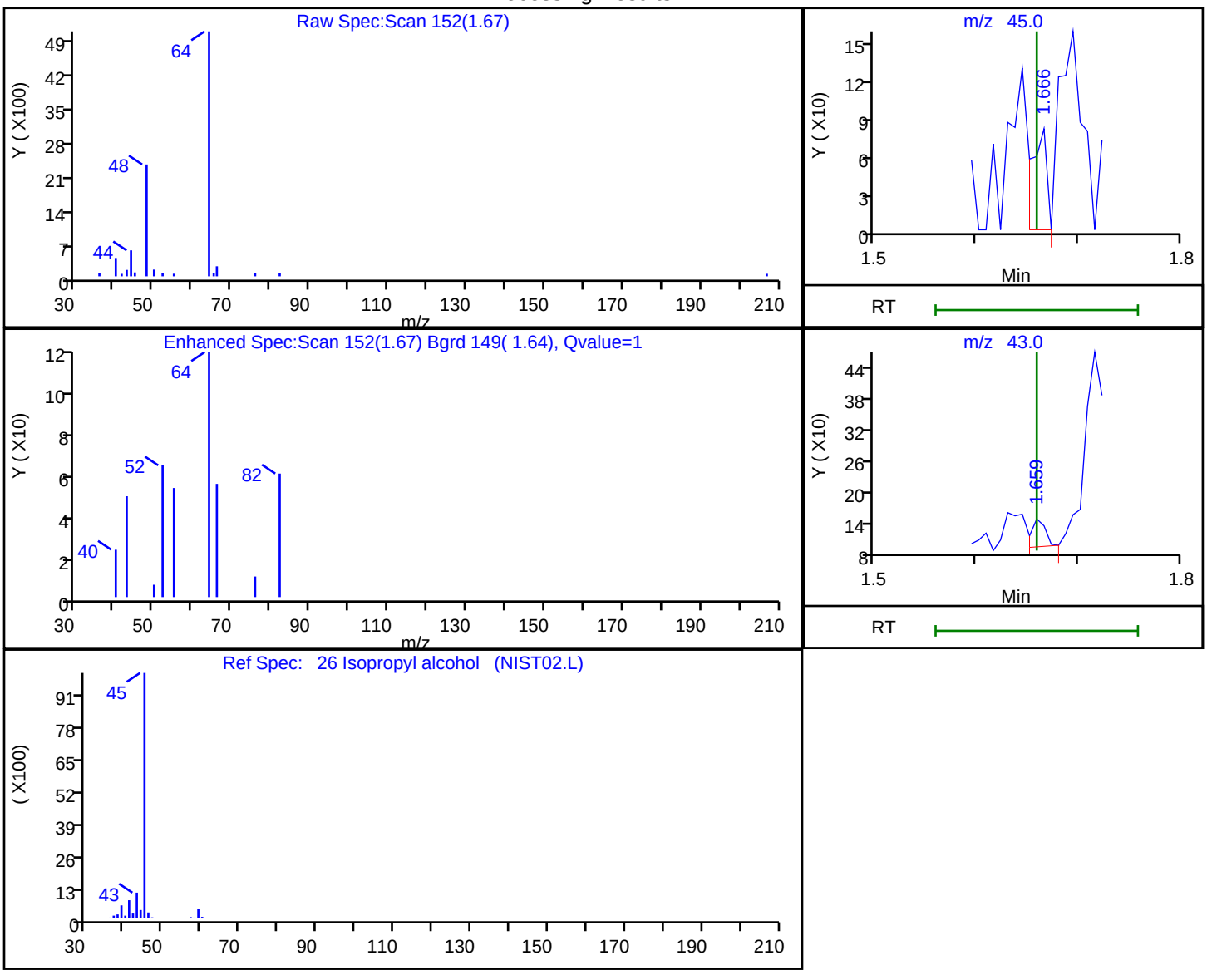
User Disabled Compound Report

Eurofins TestAmerica, Edison

Data File: \\chromfs\Edison\ChromData\CVOAMS13\20200904-116303.b\P79352.D
Injection Date: 04-Sep-2020 14:09:30 Instrument ID: CVOAMS13
Lims ID: STD8
Client ID:
Operator ID: ALS Bottle#: 2 Worklist Smp#: 3
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: 8260W_13 Limit Group: VOA - 8260C Water and Solid
Column: Rtx-624 ( 0.25 mm) Detector MS SCAN

## 26 Isopropyl alcohol, CAS: 67-63-0

Processing Results




| RT | Mass | Response | Amount |
|---|---|---|---|
| 1.67 | 45.00 | 83 | 0.911971 |
| 1.66 | 43.00 | 50 | |

Reviewer: boykink, 05-Sep-2020 00:02:58
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

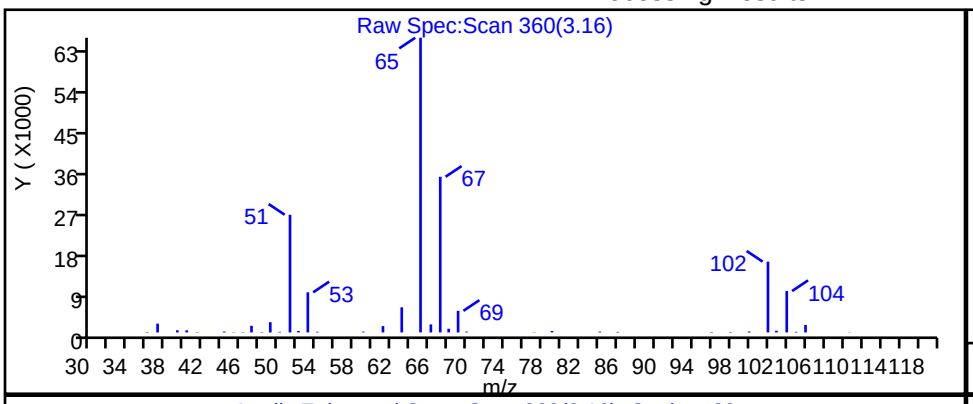
User Disabled Compound Report

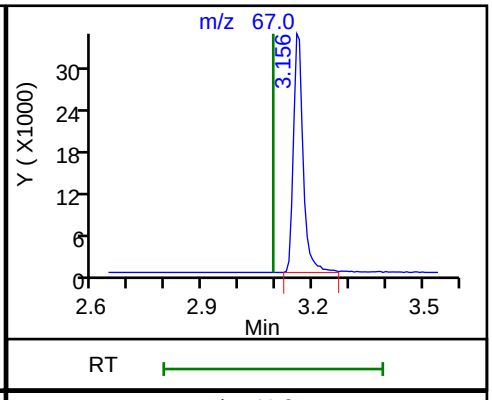
Eurofins TestAmerica, Edison

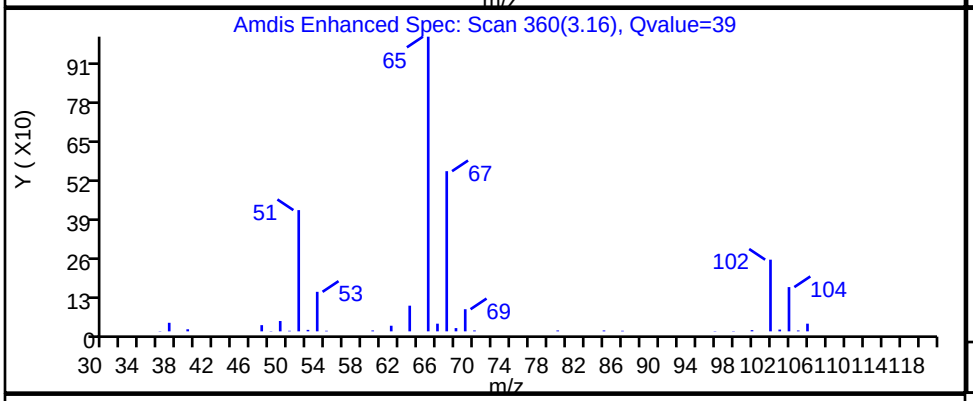
Data File: \\chromfs\Edison\ChromData\CVOAMS13\20200904-116303.b\P79352.D
Injection Date: 04-Sep-2020 14:09:30 Instrument ID: CVOAMS13
Lims ID: STD8
Client ID:
Operator ID: ALS Bottle#: 2 Worklist Smp#: 3
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: 8260W_13 Limit Group: VOA - 8260C Water and Solid
Column: Rtx-624 ( 0.25 mm) Detector MS SCAN

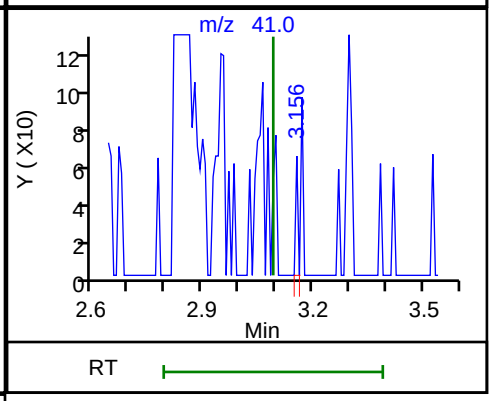
## 60 Methacrylonitrile, CAS: 126-98-7

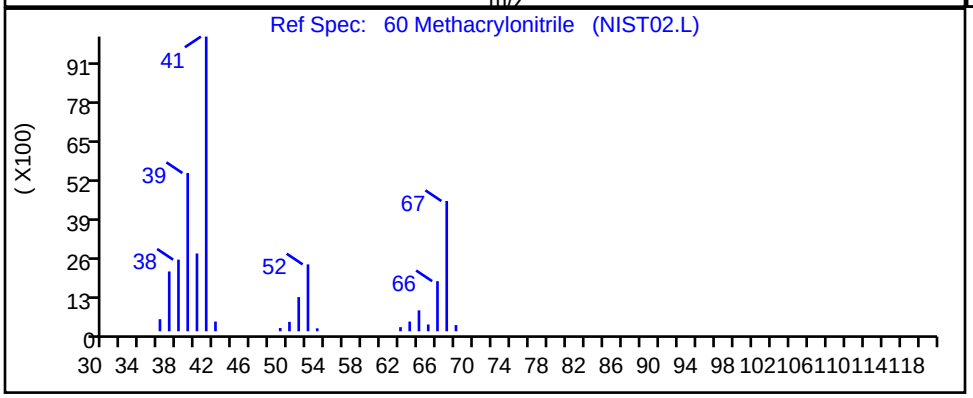
Processing Results




| RT | Mass | Response | Amount |
|---|---|---|---|
| 3.16 | 67.00 | 63861 | 85.791685 |
| 3.16 | 41.00 | 27 | |

Reviewer: boykink, 05-Sep-2020 00:03:15
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

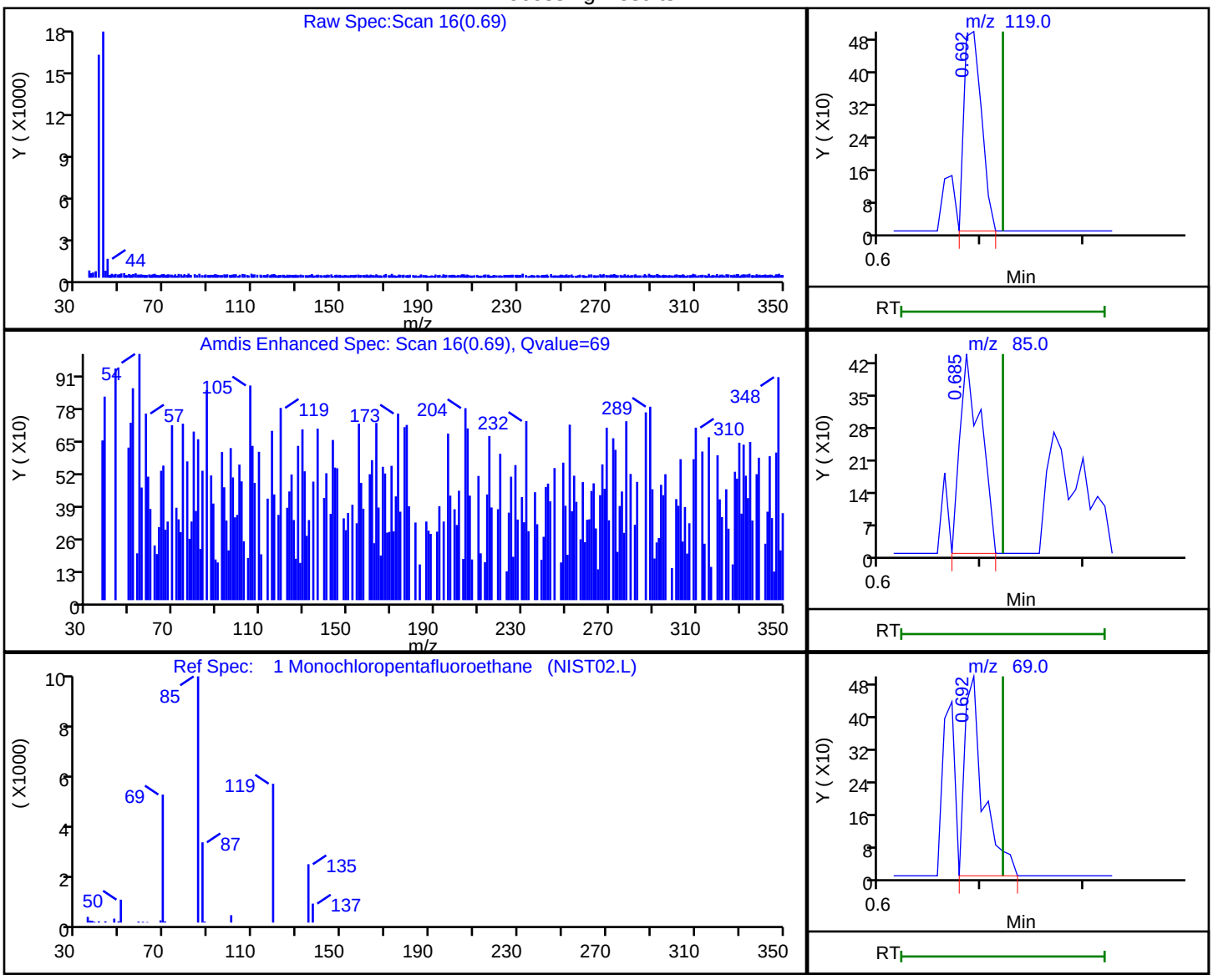
User Disabled Compound Report

Eurofins TestAmerica, Edison

Data File: \\chromfs\Edison\ChromData\CVOAMS13\20200904-116303.b\P79352.D
Injection Date: 04-Sep-2020 14:09:30 Instrument ID: CVOAMS13
Lims ID: STD8
Client ID:
Operator ID: ALS Bottle#: 2 Worklist Smp#: 3
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: 8260W_13 Limit Group: VOA - 8260C Water and Solid
Column: Rtx-624 ( 0.25 mm) Detector MS SCAN

## 1 Monochloropentafluoroethane, CAS: 76-15-3

Processing Results




| RT | Mass | Response | Amount |
|---|---|---|---|
| 0.69 | 119.00 | 593 | 2.523969 |
| 0.68 | 85.00 | 609 | |
| 0.69 | 69.00 | 630 | |
| 0.69 | 135.00 | 629 | |

Reviewer: boykink, 05-Sep-2020 00:02:29
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

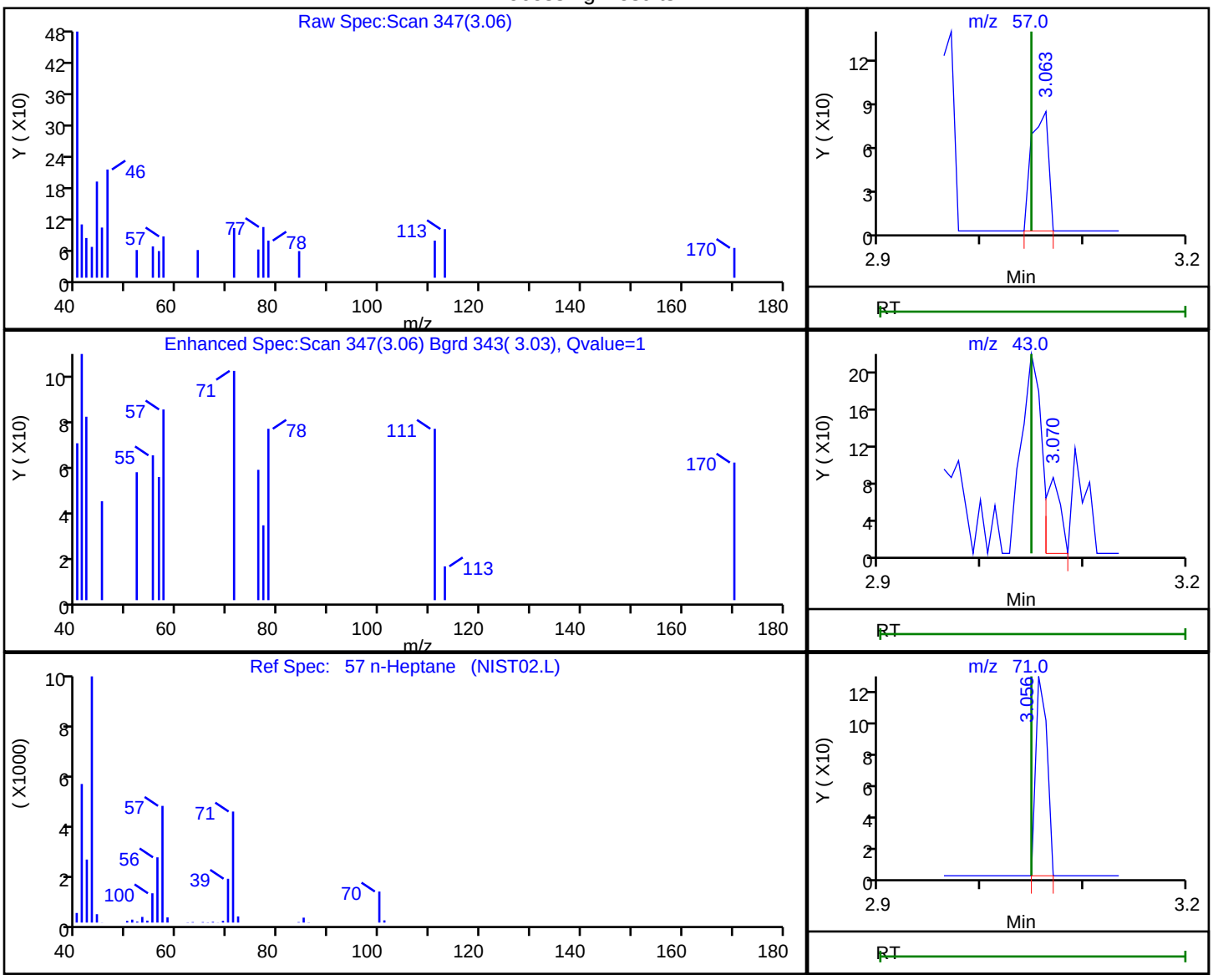
User Disabled Compound Report

Eurofins TestAmerica, Edison

Data File: \\chromfs\Edison\ChromData\CVOAMS13\20200904-116303.b\P79352.D
Injection Date: 04-Sep-2020 14:09:30 Instrument ID: CVOAMS13
Lims ID: STD8
Client ID:
Operator ID: ALS Bottle#: 2 Worklist Smp#: 3
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: 8260W_13 Limit Group: VOA - 8260C Water and Solid
Column: Rtx-624 ( 0.25 mm) Detector MS SCAN

## 57 n-Heptane, CAS: 142-82-5

Processing Results




| RT | Mass | Response | Amount |
|---|---|---|---|
| 3.06 | 57.00 | 91 | 0.044787 |
| 3.07 | 43.00 | 82 | |
| 3.06 | 71.00 | 93 | |

Reviewer: boykink, 05-Sep-2020 00:03:08
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

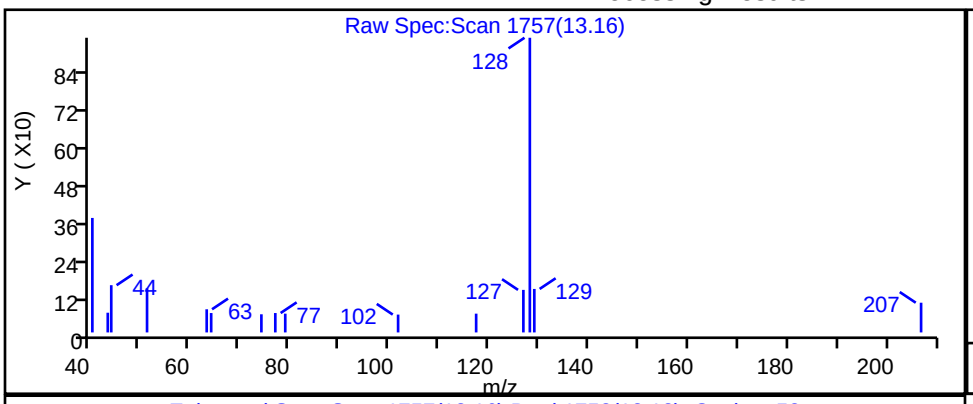
User Disabled Compound Report

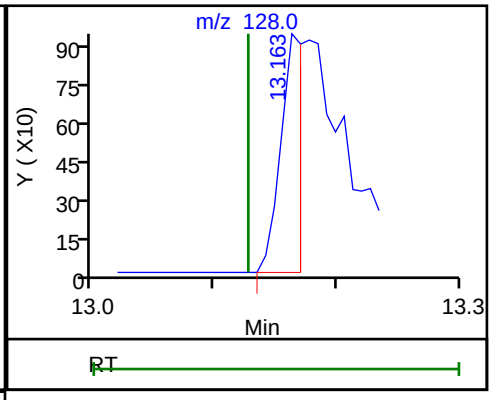
Eurofins TestAmerica, Edison

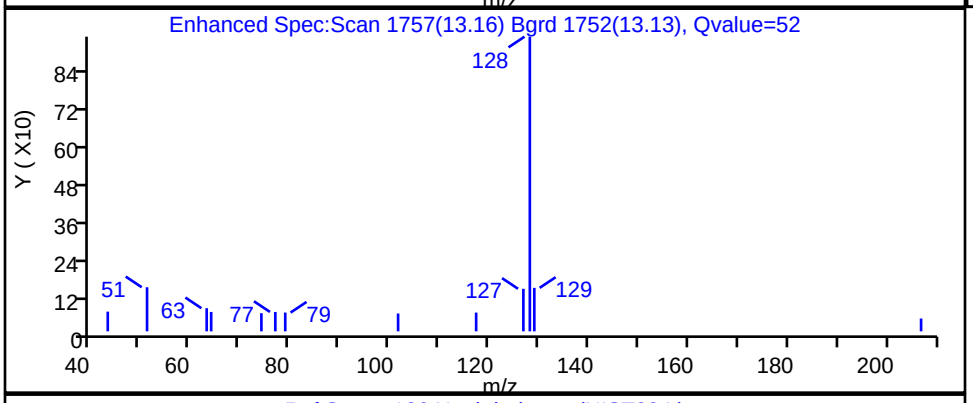
Data File: \\chromfs\Edison\ChromData\CVOAMS13\20200904-116303.b\P79352.D
Injection Date: 04-Sep-2020 14:09:30 Instrument ID: CVOAMS13
Lims ID: STD8
Client ID:
Operator ID: ALS Bottle#: 2 Worklist Smp#: 3
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: 8260W_13 Limit Group: VOA - 8260C Water and Solid
Column: Rtx-624 ( 0.25 mm) Detector MS SCAN

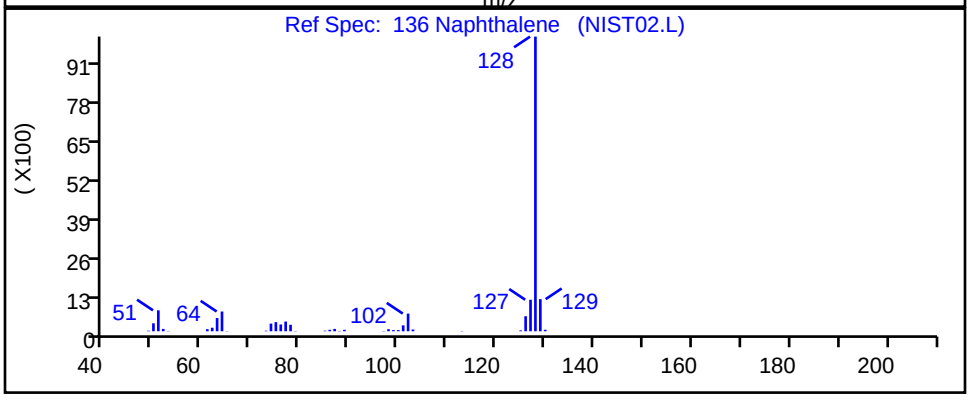
## 136 Naphthalene, CAS: 91-20-3

Processing Results




| RT | Mass | Response | Amount |
|---|---|---|---|
| 13.16 | 128.00 | 1193 | 0.143501 |

Reviewer: boykink, 05-Sep-2020 00:03:49
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

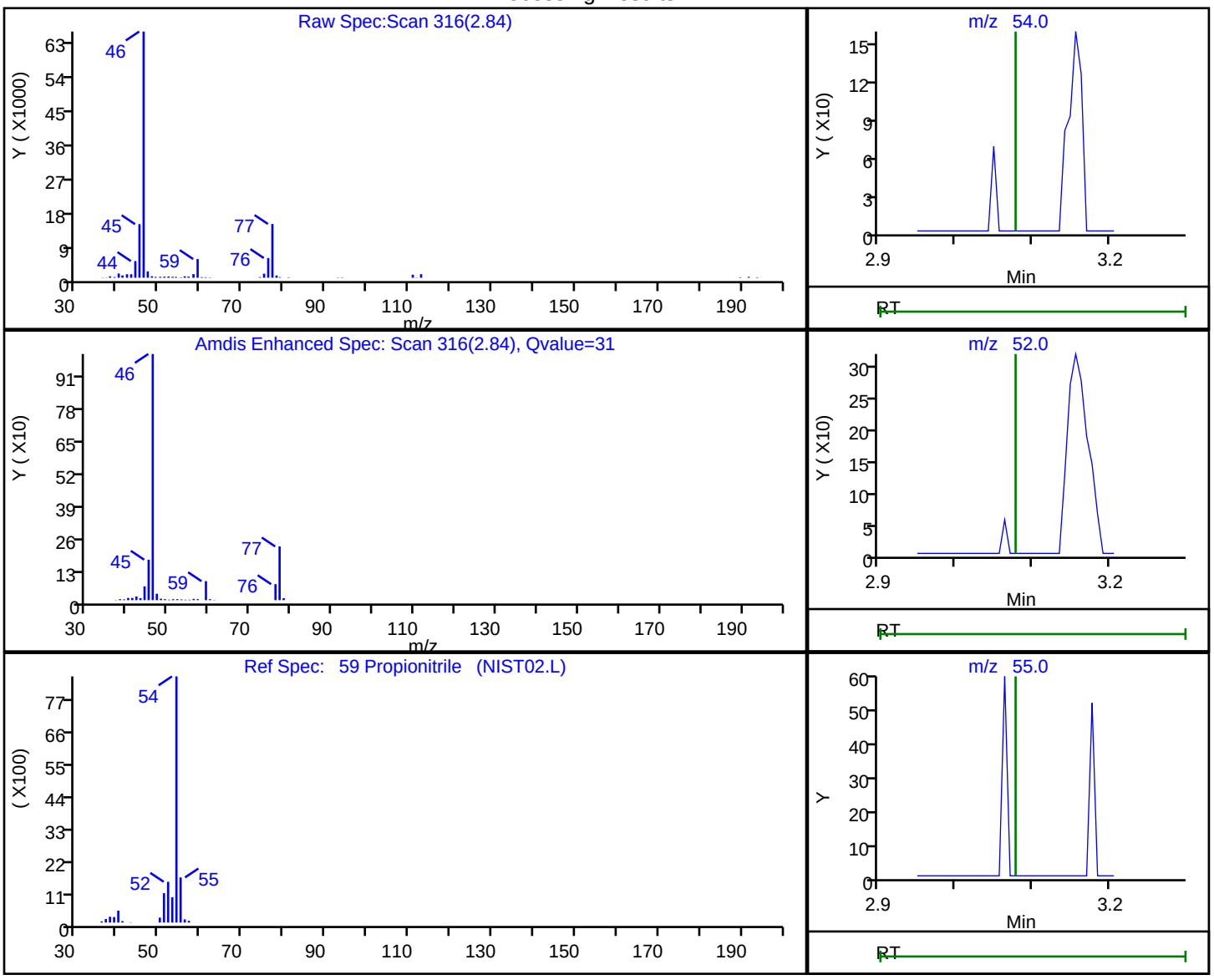
User Disabled Compound Report

Eurofins TestAmerica, Edison

Data File: \\chromfs\Edison\ChromData\CVOAMS13\20200904-116303.b\P79352.D
Injection Date: 04-Sep-2020 14:09:30 Instrument ID: CVOAMS13
Lims ID: STD8
Client ID:
Operator ID: ALS Bottle#: 2 Worklist Smp#: 3
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: 8260W_13 Limit Group: VOA - 8260C Water and Solid
Column: Rtx-624 ( 0.25 mm) Detector MS SCAN

## 59 Propionitrile, CAS: 107-12-0

Processing Results




| RT | Mass | Response | Amount |
|---|---|---|---|
| 2.84 | 54.00 | 309 | 1.183645 |
| 2.83 | 52.00 | 616 | |
| 2.83 | 55.00 | 269 | |

Reviewer: boykink, 05-Sep-2020 00:03:14
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

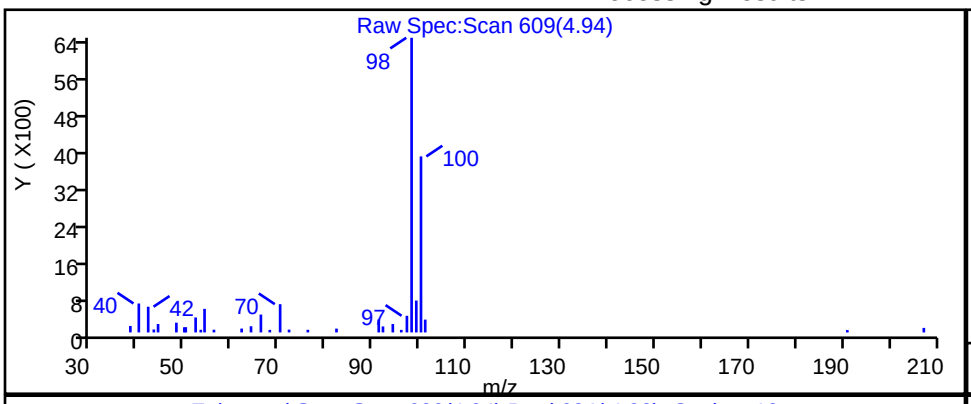
User Disabled Compound Report

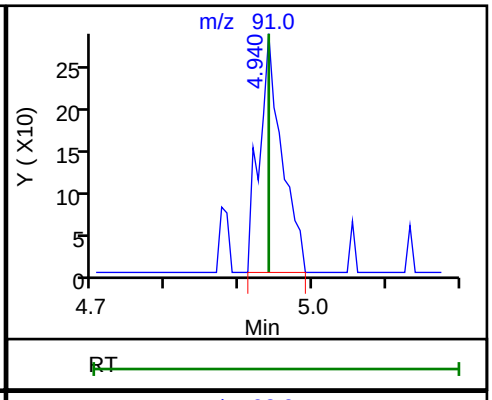
Eurofins TestAmerica, Edison

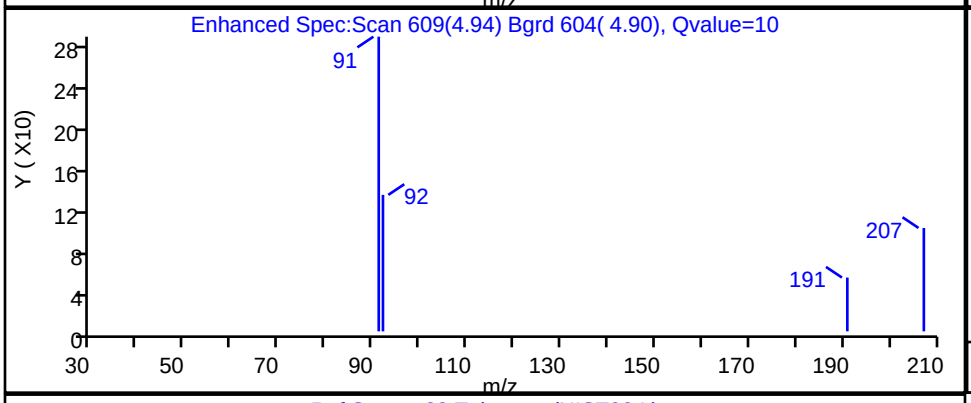
Data File: \\chromfs\Edison\ChromData\CVOAMS13\20200904-116303.b\P79352.D
Injection Date: 04-Sep-2020 14:09:30 Instrument ID: CVOAMS13
Lims ID: STD8
Client ID:
Operator ID: ALS Bottle#: 2 Worklist Smp#: 3
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: 8260W_13 Limit Group: VOA - 8260C Water and Solid
Column: Rtx-624 ( 0.25 mm) Detector MS SCAN

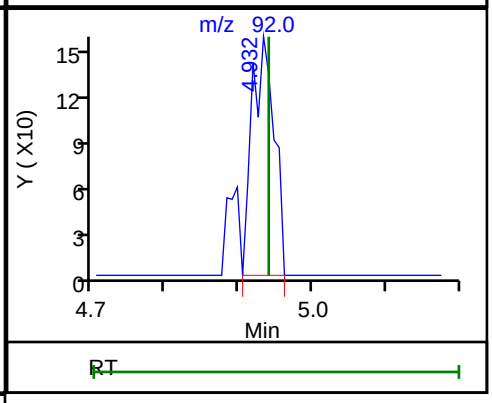
## 83 Toluene, CAS: 108-88-3

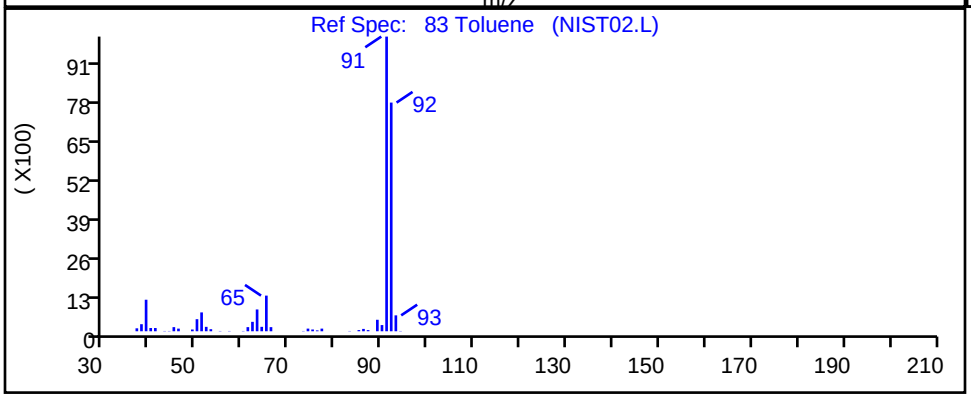
Processing Results




| RT | Mass | Response | Amount |
|---|---|---|---|
| 4.94 | 91.00 | 611 | 0.049766 |
| 4.93 | 92.00 | 330 | |

Reviewer: boykink, 05-Sep-2020 00:03:35
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

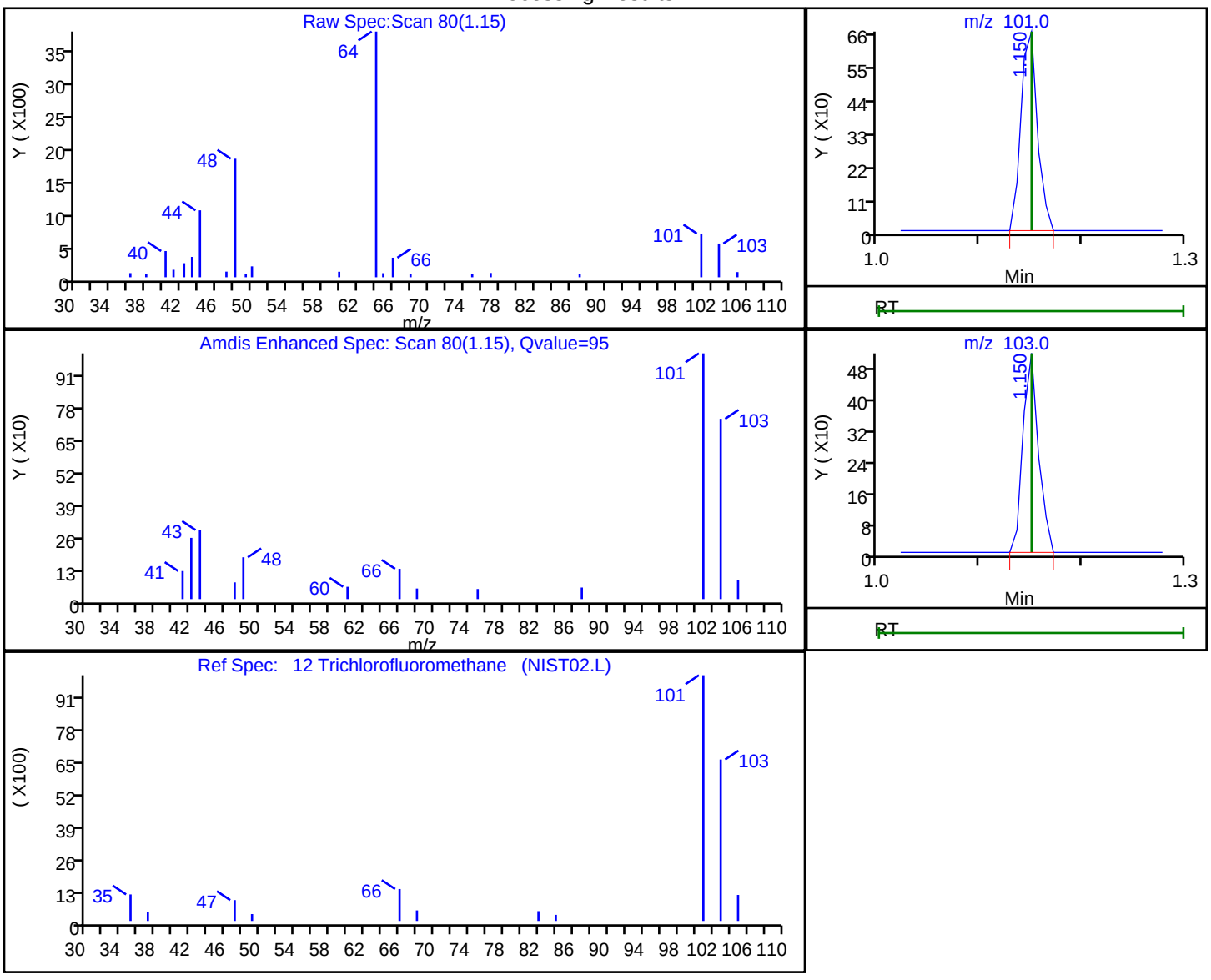
User Disabled Compound Report

Eurofins TestAmerica, Edison

Data File: \\chromfs\Edison\ChromData\CVOAMS13\20200904-116303.b\P79352.D
Injection Date: 04-Sep-2020 14:09:30 Instrument ID: CVOAMS13
Lims ID: STD8
Client ID:
Operator ID: ALS Bottle#: 2 Worklist Smp#: 3
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: 8260W_13 Limit Group: VOA - 8260C Water and Solid
Column: Rtx-624 ( 0.25 mm) Detector MS SCAN

## 12 Trichlorofluoromethane, CAS: 75-69-4

Processing Results




| RT | Mass | Response | Amount |
|---|---|---|---|
| 1.15 | 101.00 | 752 | 0.224057 |
| 1.15 | 103.00 | 546 | |

Reviewer: boykink, 05-Sep-2020 00:02:54
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

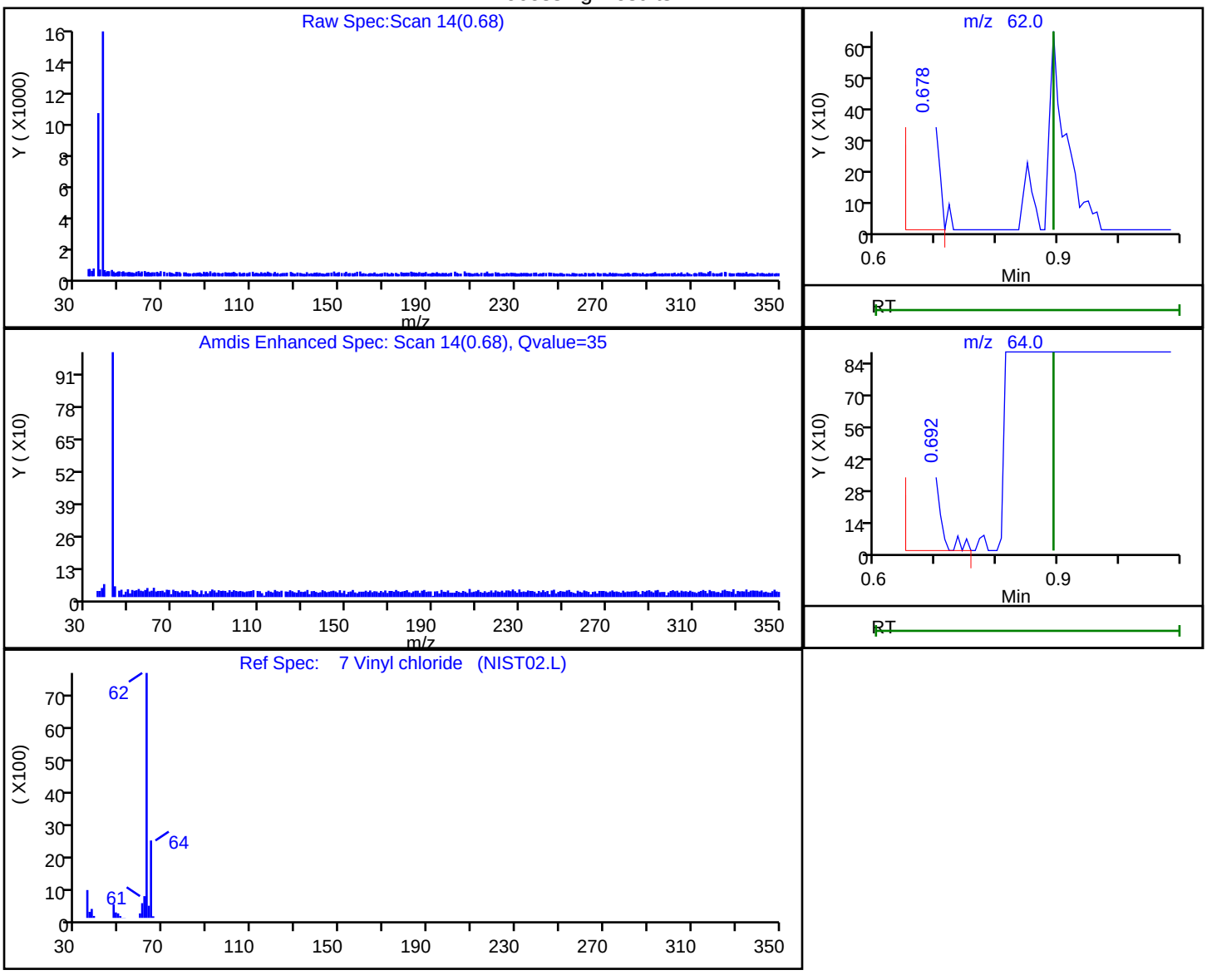
User Disabled Compound Report

Eurofins TestAmerica, Edison

Data File: \\chromfs\Edison\ChromData\CVOAMS13\20200904-116303.b\P79352.D
Injection Date: 04-Sep-2020 14:09:30 Instrument ID: CVOAMS13
Lims ID: STD8
Client ID:
Operator ID: ALS Bottle#: 2 Worklist Smp#: 3
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: 8260W_13 Limit Group: VOA - 8260C Water and Solid
Column: Rtx-624 ( 0.25 mm) Detector MS SCAN

## 7 Vinyl chloride, CAS: 75-01-4

Processing Results




| RT | Mass | Response | Amount |
|---|---|---|---|
| 0.68 | 62.00 | 855 | 0.226508 |
| 0.69 | 64.00 | 891 | |

Reviewer: boykink, 05-Sep-2020 00:02:50
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

Eurofins TestAmerica, Edison
Target Compound Quantitation Report

Data File: \\chromfs\Edison\ChromData\CVOAMS13\20200904-116303.b\P79354.D
Lims ID: STD1
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 04-Sep-2020 14:57:30 ALS Bottle#: 4 Worklist Smp#: 4
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: STD1
Misc. Info.: 460-0116303-004
Operator ID: Instrument ID: CVOAMS13
Sublist: chrom-8260W_13*sub62

Method: \\chromfs\Edison\ChromData\CVOAMS13\20200904-116303.b\8260W_13.m
Limit Group: VOA - 8260C Water and Solid
Last Update: 10-Sep-2020 10:37:57 Calib Date: 04-Sep-2020 16:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Edison\ChromData\CVOAMS13\20200904-116303.b\P79359.D

Column 1 : Rtx-624 ( 0.25 mm) Det: MS SCAN
Process Host: CTX1019

First Level Reviewer: baronm Date: 10-Sep-2020 10:29:52

| Compound | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q | Response | Cal Amt ug/l | OnCol Amt ug/l | Flags |
|---|---|---|---|---|---|---|---|---|---|
| 1 Monochloropentafluoroethane | 119 | 0.735 | 0.721 | 0.014 | 34 | 260 | 1.00 | 1.09 | Ma |
| 2 Chlorotrifluoroethene | 116 | 0.757 | 0.756 | 0.000 | 37 | 792 | 1.00 | 0.9370 | a |
| 3 Dichlorodifluoromethane | 85 | 0.771 | 0.771 | 0.000 | 95 | 3758 | 1.00 | 1.04 | a |
| 4 1,1-Difluoroethane | 65 | 0.807 | 0.807 | 0.000 | 86 | 2330 | 1.00 | 1.35 | |
| 5 Chlorodifluoromethane | 67 | 0.814 | 0.814 | 0.000 | 95 | 567 | 1.00 | 1.14 | |
| 6 Chloromethane | 50 | 0.893 | 0.892 | 0.001 | 78 | 5585 | 1.00 | 1.10 | |
| 8 Butadiene | 54 | 0.893 | 0.892 | 0.001 | 84 | 3584 | 1.00 | 1.06 | |
| 7 Vinyl chloride | 62 | 0.893 | 0.892 | 0.001 | 55 | 4228 | 1.00 | 1.14 | a |
| 9 Bromomethane | 94 | 1.043 | 1.036 | 0.007 | 91 | 1317 | 1.00 | 0.8664 | |
| 10 Chloroethane | 64 | 1.100 | 1.093 | 0.007 | 68 | 1728 | 1.00 | 0.8760 | Ma |
| 11 Pentane | 72 | 1.150 | 1.150 | 0.000 | 98 | 933 | 2.00 | 1.84 | |
| 12 Trichlorofluoromethane | 101 | 1.150 | 1.150 | 0.000 | 58 | 3466 | 1.00 | 1.02 | |
| 13 Dichlorofluoromethane | 67 | 1.186 | 1.186 | 0.000 | 96 | 5062 | 1.00 | 1.11 | |
| 14 2-Methyl-1,3-butadiene | 67 | 1.294 | 1.286 | 0.008 | 96 | 3704 | 1.00 | 0.9499 | |
| 15 Ethyl ether | 59 | 1.294 | 1.294 | 0.000 | 94 | 1790 | 1.00 | 0.9841 | |
| 17 1,1-Dichloroethene | 96 | 1.394 | 1.387 | 0.007 | 98 | 2537 | 1.00 | 1.05 | |
| 18 1,2-Dichloro-1,1,2-trifluoroetha | 67 | 1.387 | 1.387 | 0.000 | 83 | 3776 | 1.00 | 1.07 | |
| 16 Ethanol | 46 | 1.394 | 1.408 | -0.014 | 24 | 520 | 40.0 | 53.3 | a |
| 19 Carbon disulfide | 76 | 1.408 | 1.408 | 0.000 | 100 | 10501 | 1.00 | 1.11 | |
| 20 1,1,2-Trichloro-1,2,2-trifluoroe | 101 | 1.416 | 1.408 | 0.008 | 69 | 2323 | 1.00 | 0.9798 | |
| 21 1,1,1-Trifluoro-2,2-dichloroetha | 83 | 1.416 | 1.415 | 0.001 | 88 | 3732 | 1.00 | 1.02 | |
| 22 Iodomethane | 142 | 1.466 | 1.466 | 0.000 | 96 | 1799 | 1.00 | 0.4693 | M |
| 23 Cyclopentene | 67 | 1.537 | 1.537 | 0.000 | 95 | 7175 | 1.00 | 1.07 | |
| 24 Acrolein | 56 | 1.559 | 1.559 | 0.000 | 92 | 932 | 4.00 | 4.08 | |
| 25 3-Chloro-1-propene | 76 | 1.630 | 1.630 | 0.000 | 94 | 1633 | 1.00 | 1.05 | |
| 26 Isopropyl alcohol | 45 | 1.659 | 1.659 | 0.000 | 97 | 1270 | 10.0 | 13.4 | |
| 27 Methylene Chloride | 84 | 1.695 | 1.695 | 0.000 | 92 | 3163 | 1.00 | 1.08 | |
| 28 Acetone | 43 | 1.716 | 1.716 | 0.000 | 88 | 3151 | 5.00 | 6.45 | |
| 29 trans-1,2-Dichloroethene | 96 | 1.774 | 1.774 | 0.000 | 93 | 2887 | 1.00 | 1.04 | |
| 30 Methyl acetate | 43 | 1.788 | 1.781 | 0.007 | 95 | 2248 | 2.00 | 1.96 | |

| Compound | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q | Response | Cal Amt ug/l | OnCol Amt ug/l | Flags |
|---|---|---|---|---|---|---|---|---|---|
| 31 Hexane | 86 | 1.817 | 1.817 | 0.000 | 80 | 586 | 1.00 | 0.8765 | |
| 32 Methyl tert-butyl ether | 73 | 1.838 | 1.838 | 0.000 | 89 | 5695 | 1.00 | 1.00 | |
| * 33 TBA-d9 (IS) | 65 | 1.860 | 1.860 | 0.000 | 100 | 117526 | 1000.0 | 1000.0 | |
| 34 2-Methyl-2-propanol | 59 | 1.903 | 1.902 | 0.001 | 95 | 2091 | 10.0 | 16.3 | |
| 35 Acetonitrile | 41 | 1.981 | 1.981 | 0.000 | 90 | 2375 | 10.0 | 10.1 | a |
| 36 Isopropyl ether | 45 | 2.060 | 2.053 | 0.007 | 97 | 8349 | 1.00 | 0.9410 | |
| 37 2-Chloro-1,3-butadiene | 88 | 2.110 | 2.110 | 0.000 | 91 | 2424 | 1.00 | 0.9543 | |
| 38 1,1-Dichloroethane | 63 | 2.125 | 2.117 | 0.008 | 100 | 5453 | 1.00 | 1.06 | |
| 39 Acrylonitrile | 53 | 2.160 | 2.153 | 0.007 | 94 | 6770 | 10.0 | 10.2 | |
| 40 Tert-butyl ethyl ether | 59 | 2.275 | 2.275 | 0.000 | 89 | 7049 | 1.00 | 0.9638 | |
| 41 Vinyl acetate | 43 | 2.297 | 2.282 | 0.015 | 100 | 7828 | 2.00 | 1.98 | |
| 42 cis-1,2-Dichloroethene | 96 | 2.468 | 2.461 | 0.007 | 95 | 3453 | 1.00 | 1.13 | |
| 43 2,2-Dichloropropane | 77 | 2.526 | 2.526 | 0.000 | 96 | 3651 | 1.00 | 1.05 | |
| 44 Cyclohexane | 56 | 2.590 | 2.583 | 0.007 | 91 | 5092 | 1.00 | 0.9885 | |
| 45 Chlorobromomethane | 128 | 2.597 | 2.590 | 0.007 | 92 | 1372 | 1.00 | 1.02 | |
| 46 Chloroform | 83 | 2.655 | 2.647 | 0.008 | 97 | 4928 | 1.00 | 1.07 | |
| 47 Carbon tetrachloride | 117 | 2.734 | 2.733 | 0.001 | 91 | 2759 | 1.00 | 1.01 | |
| 48 Ethyl acetate | 70 | 2.762 | 2.748 | 0.014 | 94 | 324 | 2.00 | 1.68 | |
| 49 Methyl acrylate | 55 | 2.755 | 2.748 | 0.007 | 76 | 1261 | 1.00 | 0.8679 | |
| 50 Tetrahydrofuran | 42 | 2.762 | 2.755 | 0.007 | 77 | 1334 | 2.00 | 1.99 | |
| 52 1,1,1-Trichloroethane | 97 | 2.784 | 2.776 | 0.008 | 41 | 3821 | 1.00 | 1.03 | |
| $ 51 Dibromofluoromethane (Surr) | 113 | 2.776 | 2.776 | 0.000 | 98 | 117139 | 50.0 | 50.5 | |
| * 53 2-Butanone-d5 | 46 | 2.834 | 2.834 | 0.000 | 100 | 148550 | 250.0 | 250.0 | |
| 55 1,1-Dichloropropene | 75 | 2.870 | 2.869 | 0.001 | 92 | 6214 | 1.00 | 1.55 | a |
| 54 2-Butanone (MEK) | 72 | 2.884 | 2.869 | 0.015 | 83 | 1061 | 5.00 | 4.89 | |
| 56 Isooctane | 57 | 2.956 | 2.955 | 0.001 | 99 | 7540 | 1.00 | 0.9274 | |
| 57 n-Heptane | 57 | 3.056 | 3.049 | 0.007 | 51 | 1973 | 1.00 | 0.9885 | |
| 58 Benzene | 78 | 3.056 | 3.056 | 0.000 | 95 | 12509 | 1.00 | 1.07 | |
| 59 Propionitrile | 54 | 3.092 | 3.077 | 0.015 | 34 | 2300 | 10.0 | 9.22 | a |
| 60 Methacrylonitrile | 67 | 3.099 | 3.092 | 0.007 | 91 | 6544 | 10.0 | 8.85 | |
| $ 61 1,2-Dichloroethane-d4 (Surr) | 65 | 3.156 | 3.156 | 0.000 | 0 | 116479 | 50.0 | 50.0 | |
| 62 Tert-amyl methyl ether | 73 | 3.170 | 3.163 | 0.007 | 38 | 5489 | 1.00 | 0.9020 | |
| 63 1,2-Dichloroethane | 62 | 3.221 | 3.213 | 0.008 | 92 | 3385 | 1.00 | 1.13 | |
| 64 Isobutyl alcohol | 43 | 3.299 | 3.292 | 0.007 | 94 | 1488 | 25.0 | 23.7 | a |
| 65 t-Amyl alcohol | 59 | 3.371 | 3.357 | 0.014 | 84 | 1000 | 10.0 | 9.81 | |
| * 66 Fluorobenzene | 96 | 3.385 | 3.385 | 0.000 | 99 | 538450 | 50.0 | 50.0 | |
| 67 Isopropyl acetate | 43 | 3.471 | 3.457 | 0.014 | 89 | 3423 | 1.00 | 1.00 | |
| 68 Methylcyclohexane | 83 | 3.514 | 3.507 | 0.007 | 95 | 4411 | 1.00 | 0.9282 | |
| 69 Trichloroethene | 130 | 3.543 | 3.536 | 0.007 | 96 | 2893 | 1.00 | 1.00 | |
| 70 2-ethoxy-2-methyl butane | 59 | 3.772 | 3.772 | 0.000 | 94 | 5420 | 1.00 | 0.9035 | |
| 71 Dibromomethane | 93 | 3.908 | 3.894 | 0.014 | 91 | 1153 | 1.00 | 0.8895 | |
| 72 n-Butanol | 56 | 3.958 | 3.915 | 0.043 | 31 | 341 | 25.0 | 8.84 | a |
| 73 1,2-Dichloropropane | 63 | 3.987 | 3.980 | 0.007 | 86 | 2789 | 1.00 | 0.9582 | |
| 75 Dichlorobromomethane | 83 | 4.073 | 4.066 | 0.007 | 97 | 2981 | 1.00 | 0.9336 | |
| 74 Ethyl acrylate | 55 | 4.116 | 4.066 | 0.050 | 32 | 1080 | 1.00 | 1.02 | a |
| * 76 1,4-Dioxane-d8 | 96 | 4.245 | 4.238 | 0.007 | 63 | 15928 | 1000.0 | 1000.0 | |
| 77 Methyl methacrylate | 100 | 4.274 | 4.259 | 0.015 | 94 | 686 | 2.00 | 1.58 | |
| 78 1,4-Dioxane | 88 | 4.274 | 4.273 | 0.001 | 51 | 890 | 50.0 | 48.5 | |
| 79 n-Propyl acetate | 43 | 4.445 | 4.417 | 0.028 | 96 | 1797 | 1.00 | 0.8209 | M |
| 81 cis-1,3-Dichloropropene | 75 | 4.718 | 4.696 | 0.022 | 91 | 3467 | 1.00 | 0.9014 | |
| $ 82 Toluene-d8 (Surr) | 98 | 4.882 | 4.882 | 0.000 | 100 | 486030 | 50.0 | 50.1 | |
| 83 Toluene | 91 | 4.940 | 4.940 | 0.000 | 93 | 12488 | 1.00 | 1.05 | |

| Compound | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q | Response | Cal Amt ug/l | OnCol Amt ug/l | Flags |
|---|---|---|---|---|---|---|---|---|---|
| 84 Epichlorohydrin | 57 | 5.026 | 4.983 | 0.043 | 6 | 457 | 20.0 | 9.00 | a |
| 85 2-Nitropropane | 41 | 5.212 | 5.197 | 0.015 | 72 | 595 | 2.00 | 2.06 | a |
| 86 Tetrachloroethene | 166 | 5.370 | 5.362 | 0.008 | 94 | 2994 | 1.00 | 1.07 | |
| 87 4-Methyl-2-pentanone (MIBK) | 43 | 5.420 | 5.405 | 0.015 | 95 | 6526 | 5.00 | 4.25 | |
| 88 trans-1,3-Dichloropropene | 75 | 5.491 | 5.441 | 0.050 | 89 | 2316 | 1.00 | 0.7576 | |
| 89 1,1,2-Trichloroethane | 83 | 5.627 | 5.606 | 0.021 | 90 | 1565 | 1.00 | 0.9620 | |
| 90 Ethyl methacrylate | 69 | 5.728 | 5.699 | 0.029 | 32 | 1777 | 1.00 | 0.7772 | a |
| 91 Chlorodibromomethane | 129 | 5.821 | 5.799 | 0.022 | 90 | 2087 | 1.00 | 0.99 | |
| 92 1,3-Dichloropropane | 76 | 5.935 | 5.914 | 0.021 | 90 | 3102 | 1.00 | 0.9162 | |
| 93 Ethylene Dibromide | 107 | 6.086 | 6.050 | 0.036 | 85 | 1523 | 1.00 | 0.8714 | |
| 94 n-Butyl acetate | 43 | 6.430 | 6.401 | 0.029 | 93 | 1329 | 1.00 | 1.02 | |
| 95 2-Hexanone | 43 | 6.487 | 6.458 | 0.029 | 96 | 3781 | 5.00 | 3.67 | |
| * 96 Chlorobenzene-d5 | 117 | 6.723 | 6.723 | 0.000 | 86 | 376063 | 50.0 | 50.0 | |
| 97 Chlorobenzene | 112 | 6.745 | 6.745 | 0.000 | 90 | 7634 | 1.00 | 1.02 | |
| 98 Ethylbenzene | 106 | 6.838 | 6.831 | 0.007 | 98 | 4244 | 1.00 | 1.01 | |
| 99 1,1,1,2-Tetrachloroethane | 131 | 6.859 | 6.859 | 0.000 | 87 | 2037 | 1.00 | 0.8806 | |
| 100 m-Xylene & p-Xylene | 106 | 7.074 | 7.046 | 0.028 | 0 | 3984 | 1.00 | 0.8111 | |
| 101 o-Xylene | 106 | 7.640 | 7.626 | 0.014 | 96 | 5124 | 1.00 | 1.03 | |
| 102 Bromoform | 173 | 7.719 | 7.690 | 0.029 | 84 | 1085 | 1.00 | 0.9149 | |
| 103 Styrene | 104 | 7.762 | 7.719 | 0.043 | 94 | 7343 | 1.00 | 0.9234 | a |
| 104 n-Butyl acrylate | 73 | 8.099 | 8.056 | 0.043 | 31 | 835 | 1.00 | 1.01 | M |
| 105 Isopropylbenzene | 105 | 8.120 | 8.113 | 0.007 | 96 | 13158 | 1.00 | 1.02 | |
| 106 Amyl acetate (mixed isomers) | 43 | 8.514 | 8.471 | 0.043 | 64 | 1912 | 1.00 | 1.03 | a |
| $ 107 4-Bromofluorobenzene | 174 | 8.485 | 8.478 | 0.007 | 93 | 156709 | 50.0 | 51.5 | |
| 108 Bromobenzene | 156 | 8.593 | 8.586 | 0.007 | 98 | 2820 | 1.00 | 0.9020 | |
| 109 N-Propylbenzene | 91 | 8.758 | 8.743 | 0.015 | 99 | 14685 | 1.00 | 0.9387 | |
| 110 1,1,2,2-Tetrachloroethane | 83 | 8.915 | 8.894 | 0.021 | 46 | 1926 | 1.00 | 0.8881 | |
| 111 2-Chlorotoluene | 91 | 8.930 | 8.908 | 0.022 | 97 | 11854 | 1.00 | 1.10 | |
| 112 4-Ethyltoluene | 105 | 8.951 | 8.929 | 0.022 | 97 | 12311 | 1.00 | 0.9472 | |
| 113 1,2,3-Trichloropropane | 110 | 9.058 | 9.023 | 0.035 | 84 | 423 | 1.00 | 0.7374 | |
| 114 1,3,5-Trimethylbenzene | 105 | 9.101 | 9.087 | 0.014 | 95 | 10115 | 1.00 | 0.9326 | |
| 116 4-Chlorotoluene | 91 | 9.216 | 9.173 | 0.043 | 97 | 8324 | 1.00 | 0.8787 | |
| 117 tert-Butylbenzene | 119 | 9.553 | 9.545 | 0.008 | 95 | 9515 | 1.00 | 1.01 | |
| 118 1,2,4-Trimethylbenzene | 105 | 9.703 | 9.682 | 0.021 | 96 | 10649 | 1.00 | 0.9518 | |
| 119 Butyl Methacrylate | 87 | 9.717 | 9.696 | 0.021 | 91 | 2025 | 1.00 | 1.02 | |
| 120 sec-Butylbenzene | 105 | 9.846 | 9.839 | 0.007 | 99 | 14242 | 1.00 | 1.00 | |
| 121 1,3-Dichlorobenzene | 146 | 10.119 | 10.097 | 0.022 | 70 | 5778 | 1.00 | 0.9355 | |
| 122 4-Isopropyltoluene | 119 | 10.126 | 10.118 | 0.008 | 98 | 11647 | 1.00 | 0.9694 | |
| * 123 1,4-Dichlorobenzene-d4 | 152 | 10.226 | 10.226 | 0.000 | 95 | 211533 | 50.0 | 50.0 | |
| 124 1,4-Dichlorobenzene | 146 | 10.248 | 10.247 | 0.001 | 91 | 6840 | 1.00 | 1.05 | |
| 125 1,2,3-Trimethylbenzene | 105 | 10.369 | 10.355 | 0.014 | 98 | 11009 | 1.00 | 0.9710 | |
| 126 2,3-Dihydroindene | 117 | 10.548 | 10.527 | 0.021 | 93 | 11199 | 1.00 | 1.02 | |
| 127 Benzyl chloride | 126 | 10.756 | 10.713 | 0.043 | 65 | 345 | 1.00 | 1.03 | |
| 128 p-Diethylbenzene | 119 | 10.742 | 10.727 | 0.015 | 94 | 5808 | 1.00 | 0.9593 | |
| 129 n-Butylbenzene | 91 | 10.828 | 10.813 | 0.015 | 96 | 10289 | 1.00 | 0.9392 | |
| 130 1,2-Dichlorobenzene | 146 | 10.950 | 10.921 | 0.029 | 94 | 5315 | 1.00 | 0.9402 | |
| 131 1,2,4,5-Tetramethylbenzene | 119 | 11.938 | 11.924 | 0.014 | 96 | 8988 | 1.00 | 0.8524 | |
| 132 1,2-Dibromo-3-Chloropropane | 157 | 12.096 | 12.074 | 0.022 | 1 | 278 | 1.00 | 0.7701 | |
| 133 1,3,5-Trichlorobenzene | 180 | 12.153 | 12.124 | 0.029 | 96 | 3817 | 1.00 | 0.8514 | |
| 134 1,2,4-Trichlorobenzene | 180 | 12.862 | 12.819 | 0.043 | 60 | 3454 | 1.00 | 0.9179 | |
| 135 Hexachlorobutadiene | 225 | 12.841 | 12.840 | 0.001 | 95 | 1831 | 1.00 | 1.10 | |
| 136 Naphthalene | 128 | 13.149 | 13.127 | 0.022 | 99 | 8490 | 1.00 | 1.22 | |

| Compound | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q | Response | Cal Amt ug/l | OnCol Amt ug/l | Flags |
|---|---|---|---|---|---|---|---|---|---|
| 137 1,2,3-Trichlorobenzene | 180 | 13.313 | 13.299 | 0.014 | 94 | 3159 | 1.00 | 1.03 | |
| S 138 1,2-Dichloroethene, Total | 100 | | | | 0 | | 2.00 | 2.17 | |
| S 139 1,3-Dichloropropene, Total | 100 | | | | 0 | | 2.00 | 1.66 | |
| S 140 Xylenes, Total | 100 | | | | 0 | | 2.00 | 1.84 | |
| S 142 Total BTEX | 1 | | | | 0 | | 5.00 | 4.97 | |

## QC Flag Legend

Review Flags

M - Manually Integrated

a - User Assigned ID

## Reagents:

| | | | | |
|---|---|---|---|---|
| 8260MIX1COMB_00125 | Amount Added: | 10.00 | Units: uL | |
| ACROLEIN W_00112 | Amount Added: | 4.00 | Units: uL | |
| GASES Li_00384 | Amount Added: | 10.00 | Units: uL | |
| 14DIOXINTER_00118 | Amount Added: | 30.00 | Units: uL | |
| 524freon_00027 | Amount Added: | 10.00 | Units: uL | |
| 8260ISNEW_00129 | Amount Added: | 1.00 | Units: uL | Run Reagent |
| 8260SURR250_00212 | Amount Added: | 1.00 | Units: uL | Run Reagent |

Report Date: 10-Sep-2020 10:38:00 Chrom Revision: 2.3 20-Aug-2020 13:57:12

Eurofins TestAmerica, Edison

Data File: \\chromfs\Edison\ChromData\CVOAMS13\20200904-116303.b\P79354.D

Injection Date: 04-Sep-2020 14:57:30 Instrument ID: CVOAMS13 Operator ID:

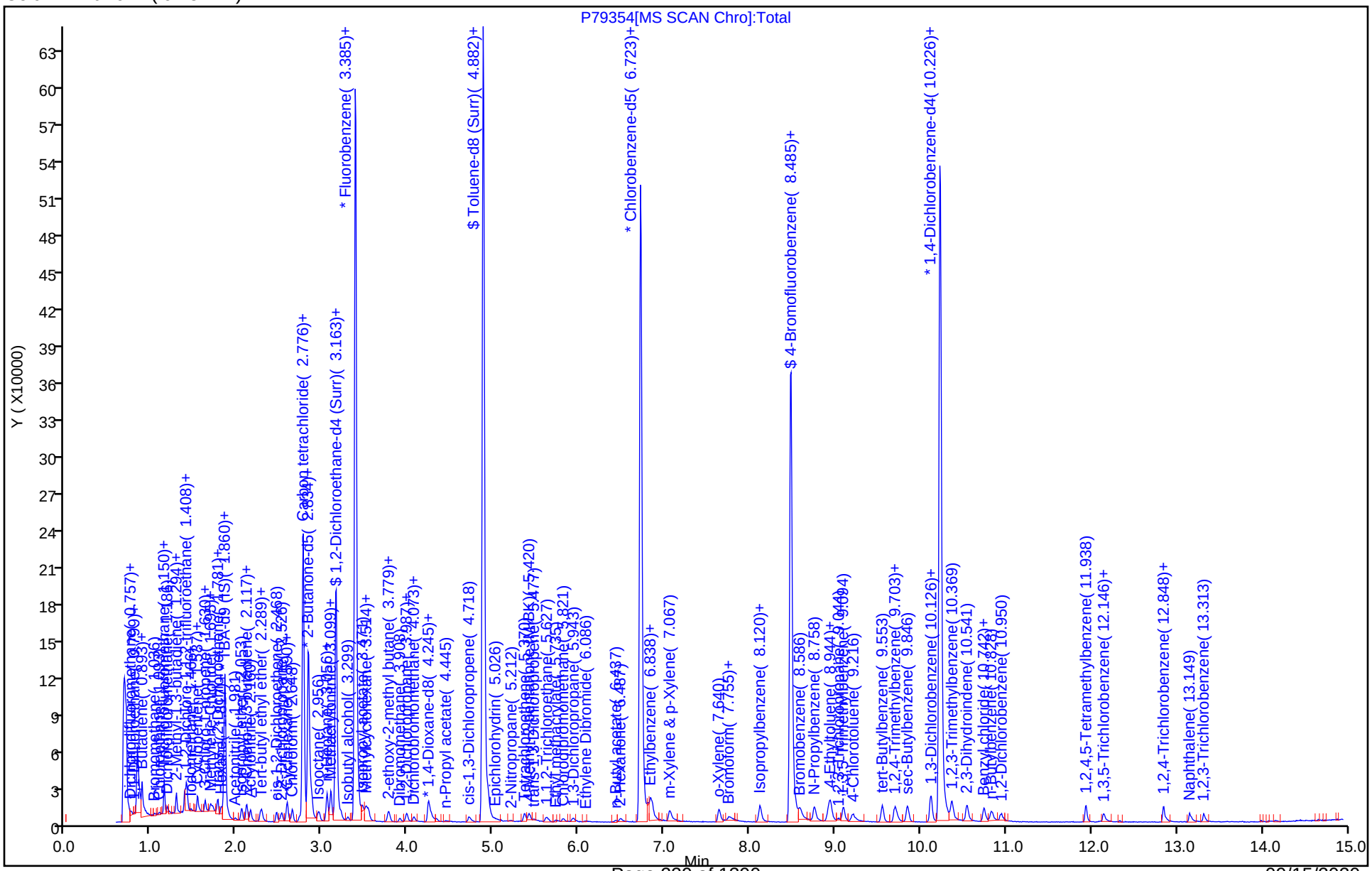
Lims ID: STD1 Worklist Smp#: 4

Client ID:

Purge Vol: 5.000 mL Dil. Factor: 1.0000 ALS Bottle#: 4

Method: 8260W_13 Limit Group: VOA - 8260C Water and Solid

Column: Rtx-624 ( 0.25 mm)



Eurofins TestAmerica, Edison

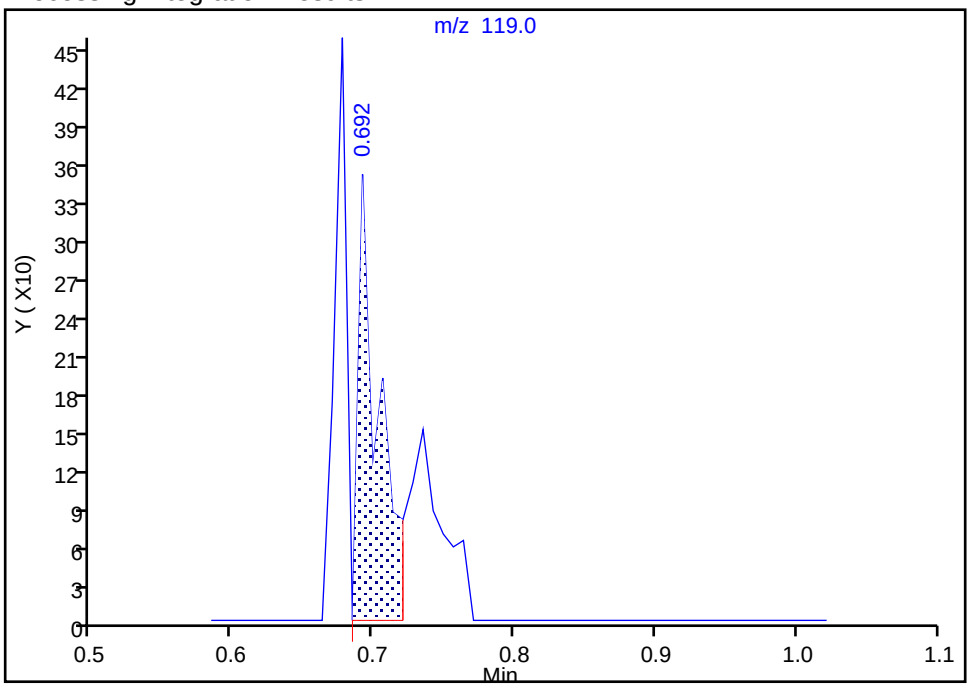
Data File: \\chromfs\Edison\ChromData\CVOAMS13\20200904-116303.b\P79354.D
Injection Date: 04-Sep-2020 14:57:30 Instrument ID: CVOAMS13
Lims ID: STD1
Client ID:
Operator ID: ALS Bottle#: 4 Worklist Smp#: 4
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: 8260W_13 Limit Group: VOA - 8260C Water and Solid
Column: Rtx-624 ( 0.25 mm) Detector MS SCAN

## 1 Monochloropentafluoroethane, CAS: 76-15-3

Signal: 1

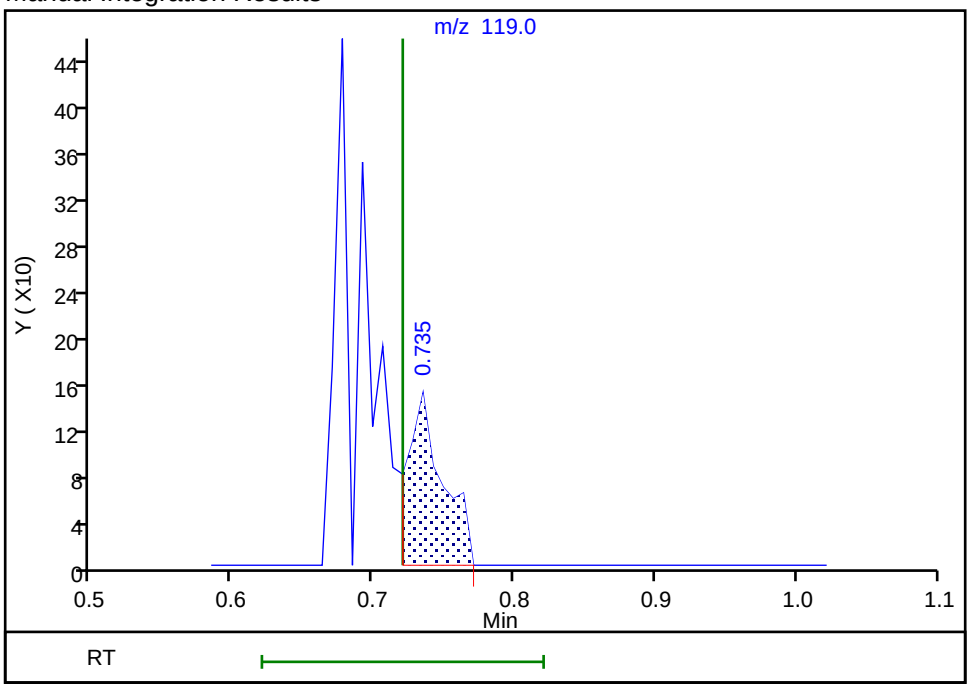
Processing Integration Results

RT: 0.69
Area: 350
Amount: 1.495826
Amount Units: ug/l




Manual Integration Results

RT: 0.74
Area: 260
Amount: 1.094902
Amount Units: ug/l




Reviewer: baronm, 05-Sep-2020 11:56:24
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Eurofins TestAmerica, Edison

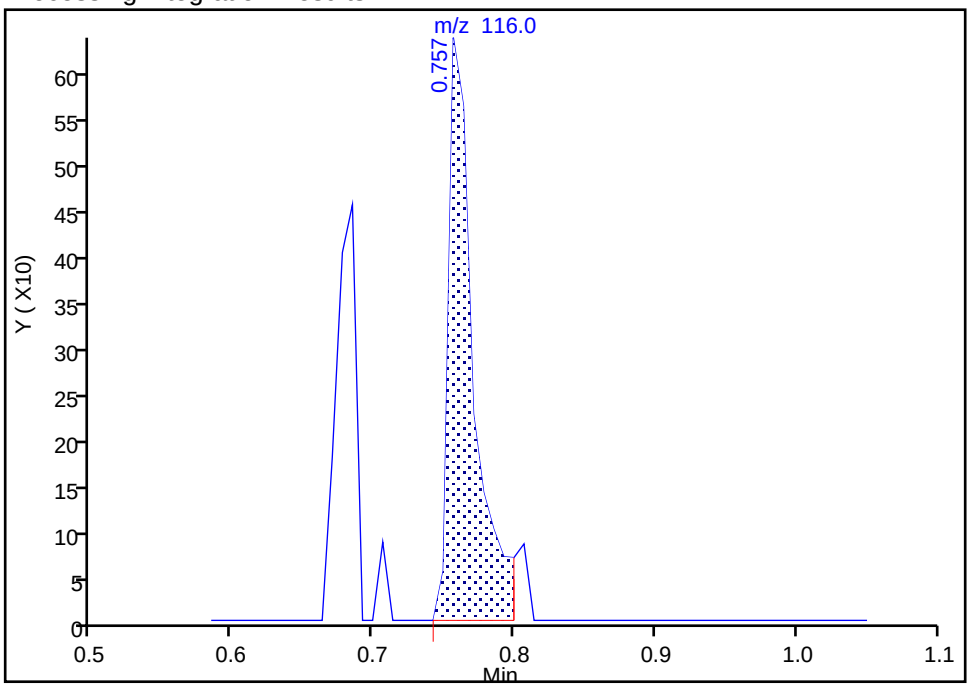
Data File: \\chromfs\Edison\ChromData\CVOAMS13\20200904-116303.b\P79354.D
Injection Date: 04-Sep-2020 14:57:30 Instrument ID: CVOAMS13
Lims ID: STD1
Client ID:
Operator ID: ALS Bottle#: 4 Worklist Smp#: 4
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: 8260W_13 Limit Group: VOA - 8260C Water and Solid
Column: Rtx-624 ( 0.25 mm) Detector MS SCAN

## 2 Chlorotrifluoroethene, CAS: 79-38-9

Signal: 1

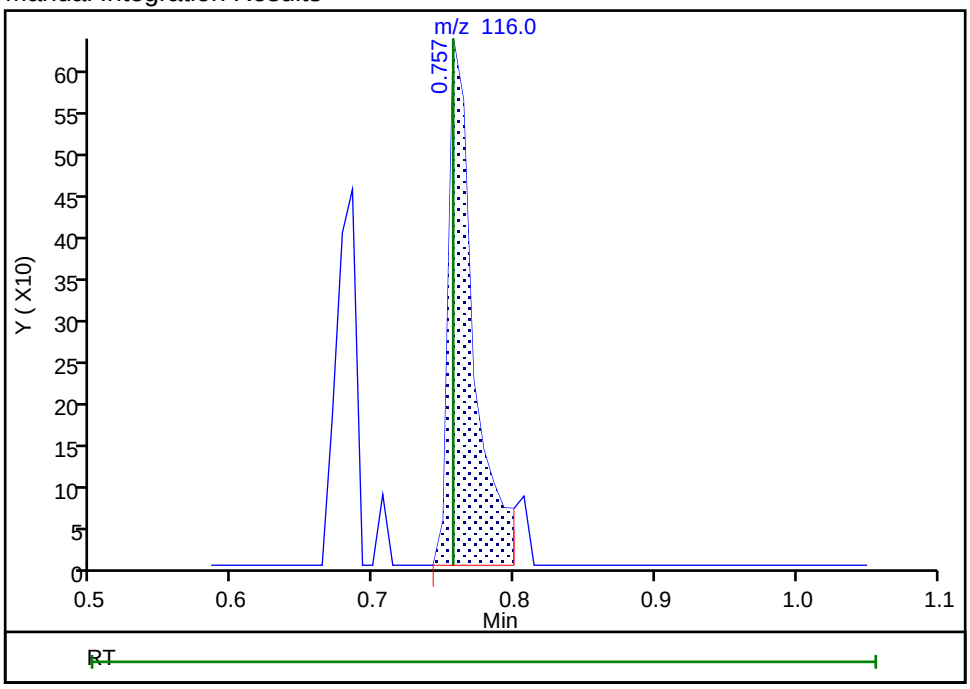
Processing Integration Results

RT: 0.76
Area: 792
Amount: 0
Amount Units: ug/l




Manual Integration Results

RT: 0.76
Area: 792
Amount: 0.937050
Amount Units: ug/l




Reviewer: starzecm, 04-Sep-2020 14:47:15
Audit Action: Assigned Compound ID Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Edison

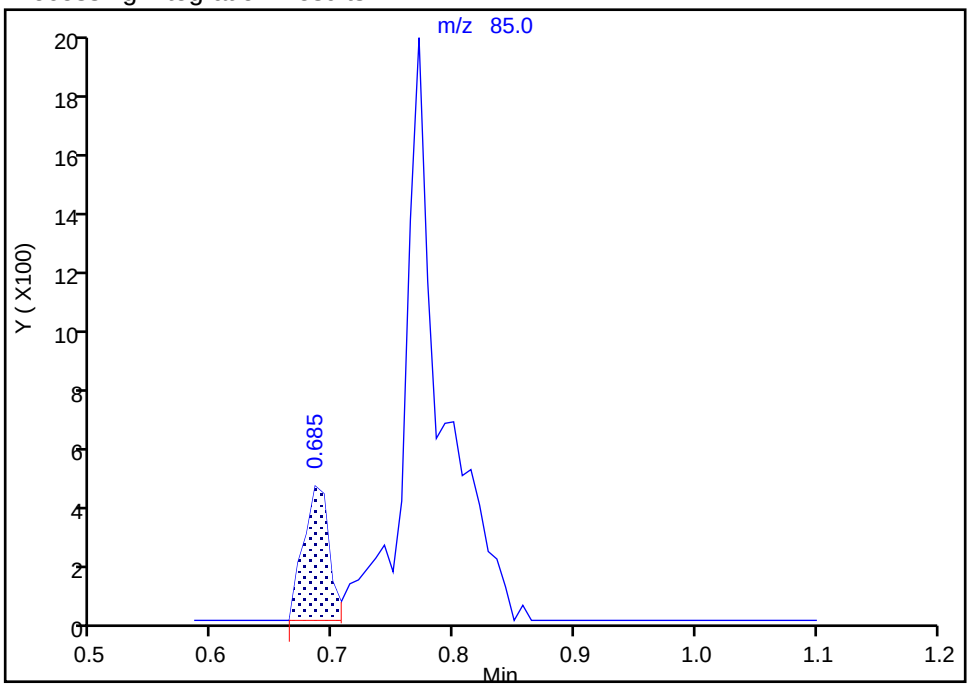
Data File: \\chromfs\Edison\ChromData\CVOAMS13\20200904-116303.b\P79354.D
Injection Date: 04-Sep-2020 14:57:30 Instrument ID: CVOAMS13
Lims ID: STD1
Client ID:
Operator ID: ALS Bottle#: 4 Worklist Smp#: 4
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: 8260W_13 Limit Group: VOA - 8260C Water and Solid
Column: Rtx-624 ( 0.25 mm) Detector MS SCAN

## 3 Dichlorodifluoromethane, CAS: 75-71-8

Signal: 1

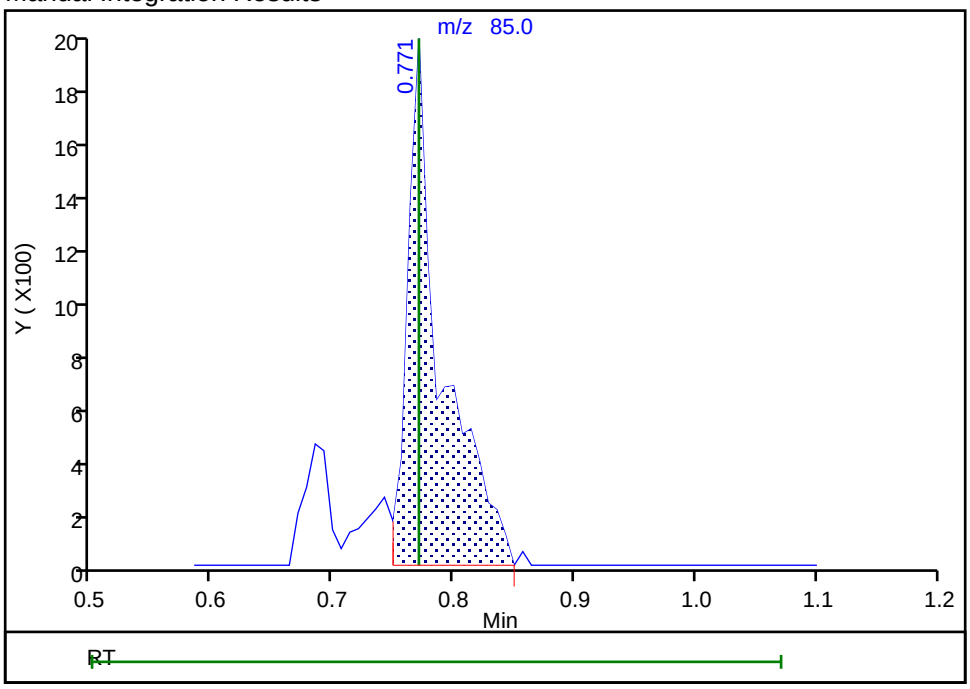
Processing Integration Results

RT: 0.68
Area: 658
Amount: 0.308765
Amount Units: ug/l




Manual Integration Results

RT: 0.77
Area: 3758
Amount: 1.035338
Amount Units: ug/l




Reviewer: starzecm, 04-Sep-2020 14:19:05
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Edison

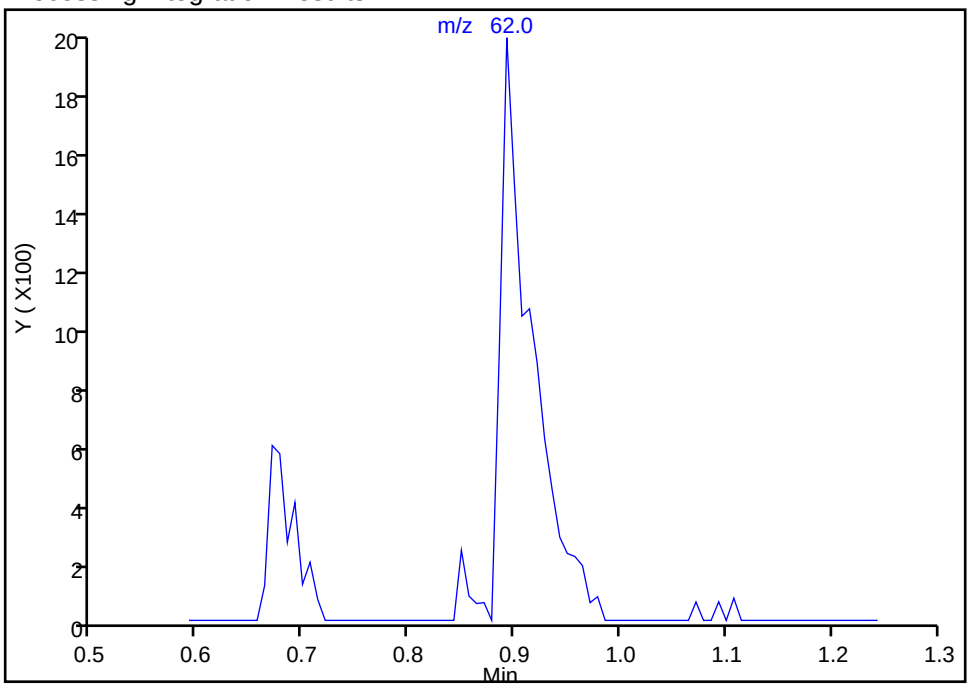
Data File: \\chromfs\Edison\ChromData\CVOAMS13\20200904-116303.b\P79354.D
Injection Date: 04-Sep-2020 14:57:30 Instrument ID: CVOAMS13
Lims ID: STD1
Client ID:
Operator ID: ALS Bottle#: 4 Worklist Smp#: 4
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: 8260W_13 Limit Group: VOA - 8260C Water and Solid
Column: Rtx-624 ( 0.25 mm) Detector MS SCAN

## 7 Vinyl chloride, CAS: 75-01-4

Signal: 1

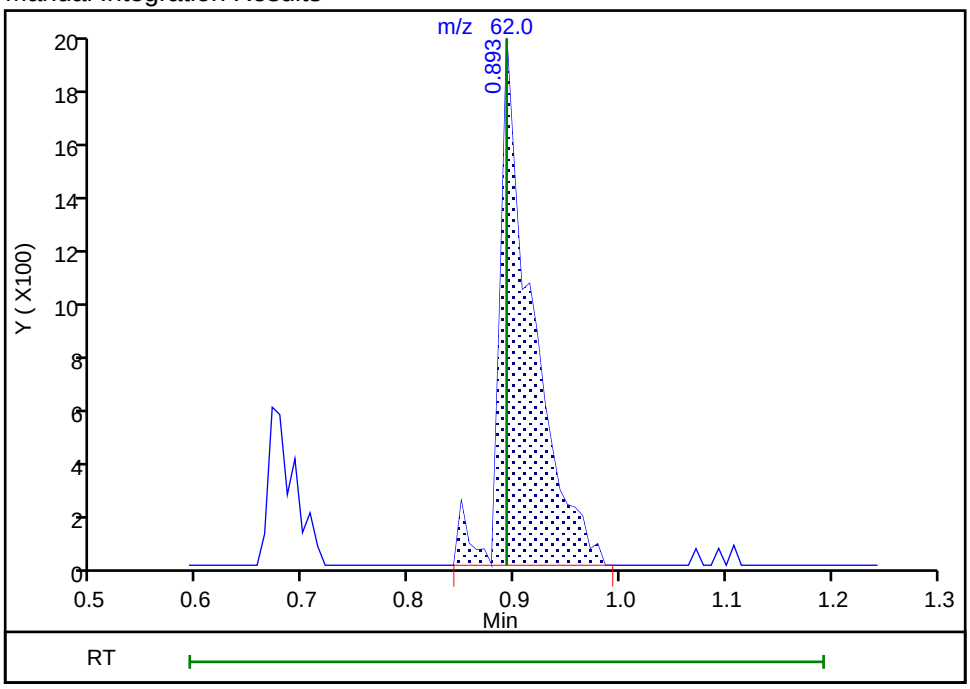
Not Detected
Expected RT: 0.89

Processing Integration Results




Manual Integration Results

RT: 0.89
Area: 4228
Amount: 1.138764
Amount Units: ug/l




Reviewer: starzecm, 04-Sep-2020 14:16:32
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Edison

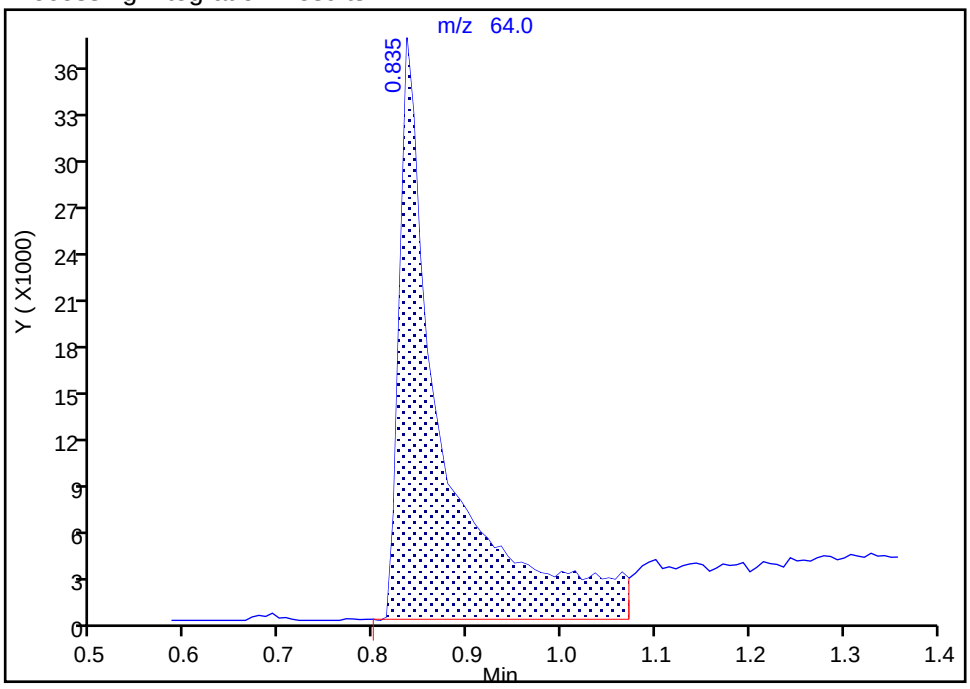
Data File: \\chromfs\Edison\ChromData\CVOAMS13\20200904-116303.b\P79354.D
Injection Date: 04-Sep-2020 14:57:30 Instrument ID: CVOAMS13
Lims ID: STD1
Client ID:
Operator ID: ALS Bottle#: 4 Worklist Smp#: 4
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: 8260W_13 Limit Group: VOA - 8260C Water and Solid
Column: Rtx-624 ( 0.25 mm) Detector MS SCAN

## 10 Chloroethane, CAS: 75-00-3

Signal: 1

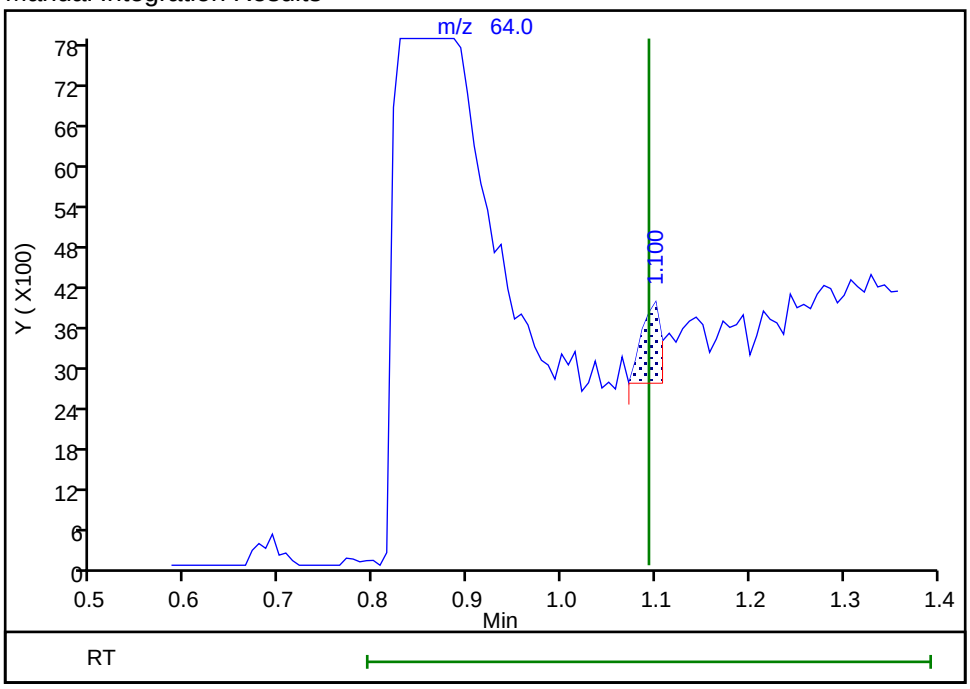
Processing Integration Results

RT: 0.84
Area: 120203
Amount: 0.236987
Amount Units: ug/l




Manual Integration Results

RT: 1.10
Area: 1728
Amount: 0.876002
Amount Units: ug/l




Reviewer: starzecm, 04-Sep-2020 14:47:01
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Edison

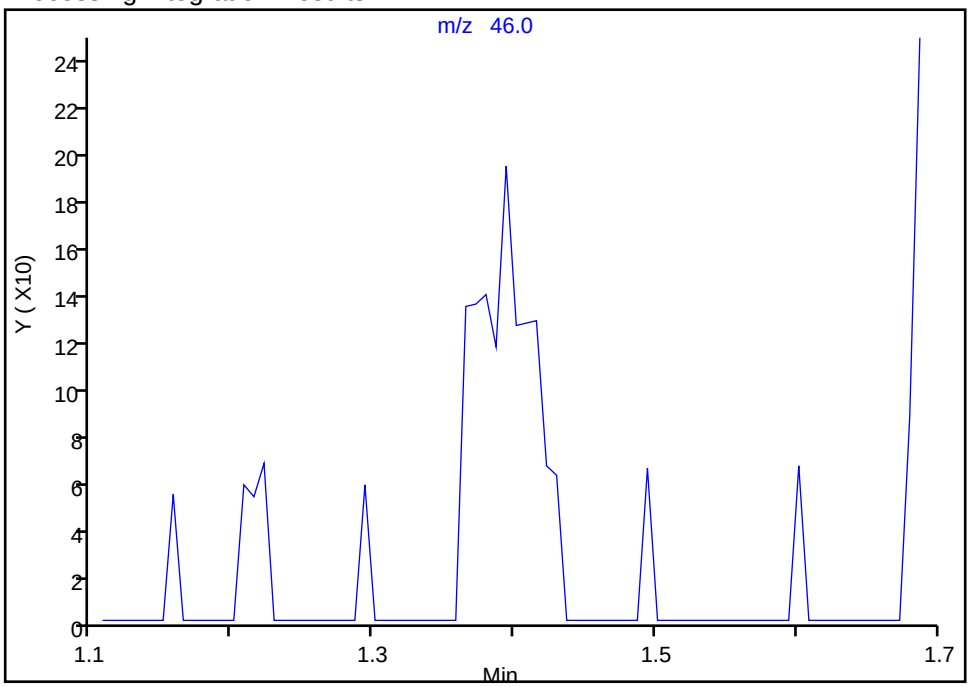
Data File: \\chromfs\Edison\ChromData\CVOAMS13\20200904-116303.b\P79354.D
Injection Date: 04-Sep-2020 14:57:30 Instrument ID: CVOAMS13
Lims ID: STD1
Client ID:
Operator ID: ALS Bottle#: 4 Worklist Smp#: 4
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: 8260W_13 Limit Group: VOA - 8260C Water and Solid
Column: Rtx-624 ( 0.25 mm) Detector MS SCAN

## 16 Ethanol, CAS: 64-17-5

Signal: 1

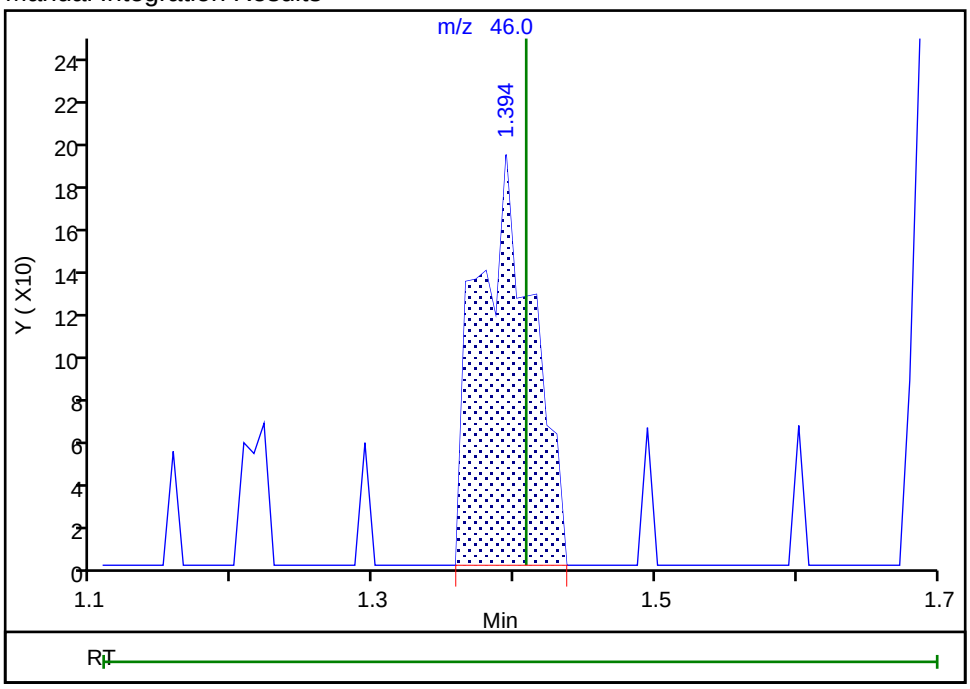
Not Detected
Expected RT: 1.41

Processing Integration Results




Manual Integration Results

RT: 1.39
Area: 520
Amount: 53.328039
Amount Units: ug/l




Reviewer: starzecm, 04-Sep-2020 14:20:28
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Eurofins TestAmerica, Edison

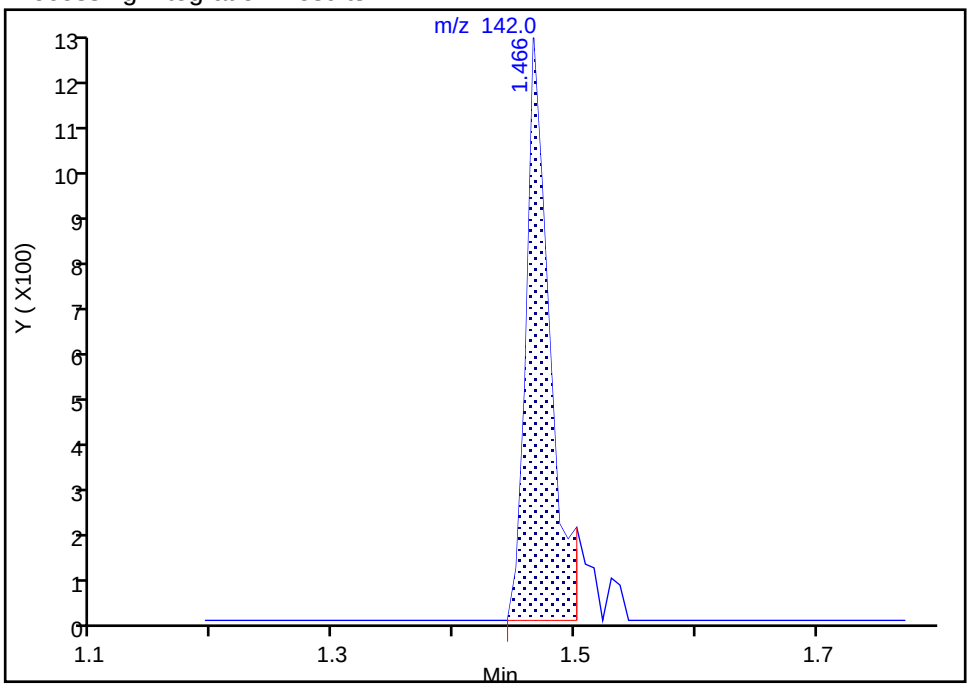
Data File: \\chromfs\Edison\ChromData\CVOAMS13\20200904-116303.b\P79354.D
Injection Date: 04-Sep-2020 14:57:30 Instrument ID: CVOAMS13
Lims ID: STD1
Client ID:
Operator ID: ALS Bottle#: 4 Worklist Smp#: 4
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: 8260W_13 Limit Group: VOA - 8260C Water and Solid
Column: Rtx-624 ( 0.25 mm) Detector MS SCAN

## 22 Iodomethane, CAS: 74-88-4

Signal: 1

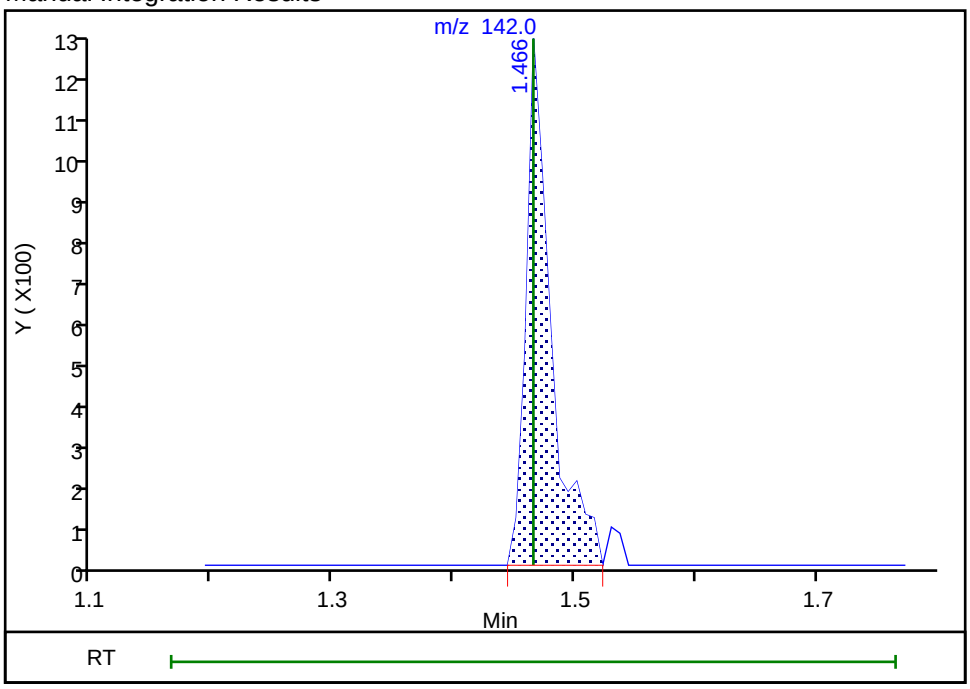
Processing Integration Results

RT: 1.47
Area: 1698
Amount: 0.442951
Amount Units: ug/l




Manual Integration Results

RT: 1.47
Area: 1799
Amount: 0.469297
Amount Units: ug/l




Reviewer: baronm, 05-Sep-2020 12:24:23
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Eurofins TestAmerica, Edison

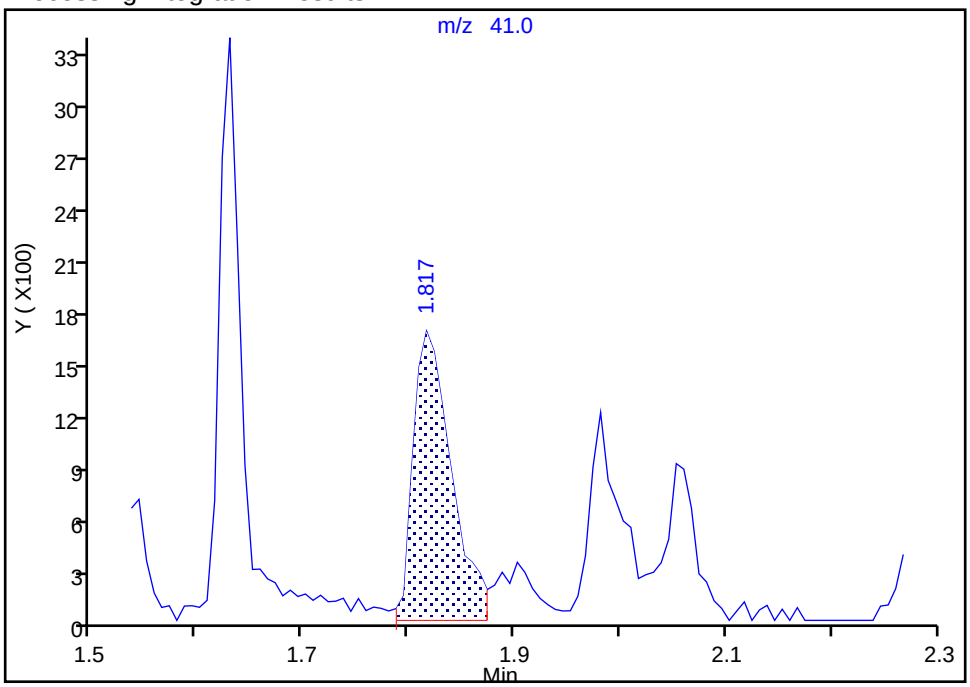
Data File: \\chromfs\Edison\ChromData\CVOAMS13\20200904-116303.b\P79354.D
Injection Date: 04-Sep-2020 14:57:30 Instrument ID: CVOAMS13
Lims ID: STD1
Client ID:
Operator ID: ALS Bottle#: 4 Worklist Smp#: 4
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: 8260W_13 Limit Group: VOA - 8260C Water and Solid
Column: Rtx-624 ( 0.25 mm) Detector MS SCAN

## 35 Acetonitrile, CAS: 75-05-8

Signal: 1

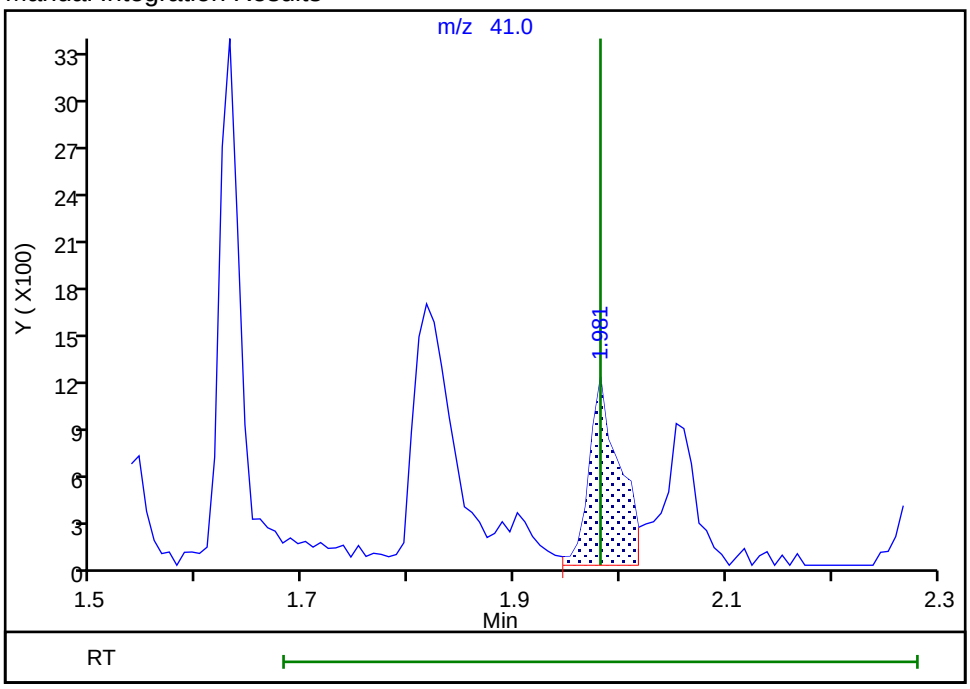
Processing Integration Results

RT: 1.82
Area: 4175
Amount: 9.993630
Amount Units: ug/l




Manual Integration Results

RT: 1.98
Area: 2375
Amount: 10.106438
Amount Units: ug/l




Reviewer: starzecm, 04-Sep-2020 14:47:41
Audit Action: Assigned Compound ID Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Edison

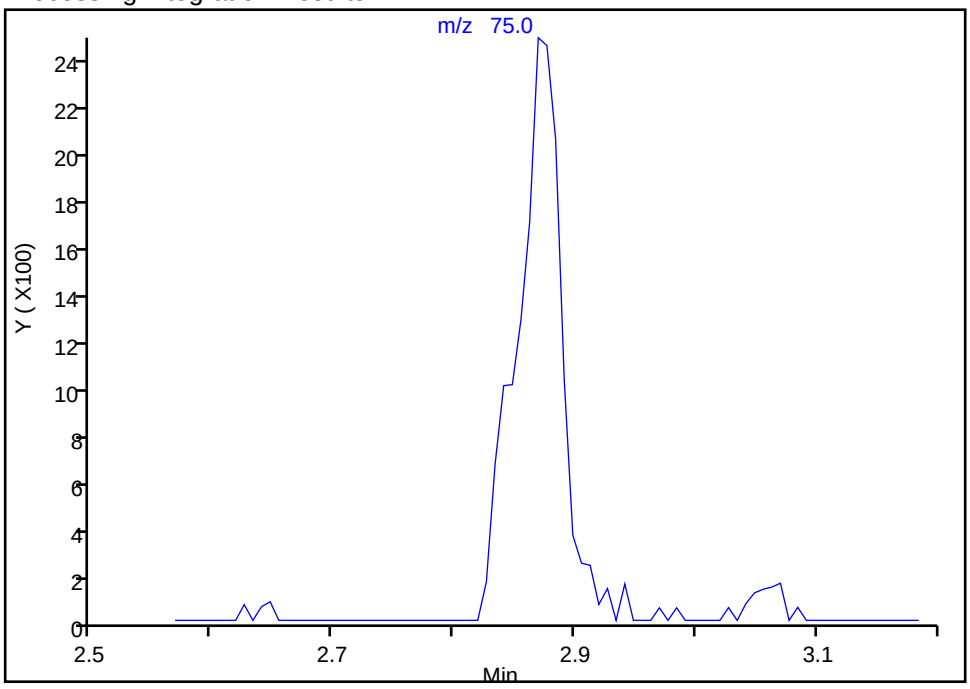
Data File: \\chromfs\Edison\ChromData\CVOAMS13\20200904-116303.b\P79354.D
Injection Date: 04-Sep-2020 14:57:30 Instrument ID: CVOAMS13
Lims ID: STD1
Client ID:
Operator ID: ALS Bottle#: 4 Worklist Smp#: 4
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: 8260W_13 Limit Group: VOA - 8260C Water and Solid
Column: Rtx-624 ( 0.25 mm) Detector MS SCAN

## 55 1,1-Dichloropropene, CAS: 563-58-6

Signal: 1

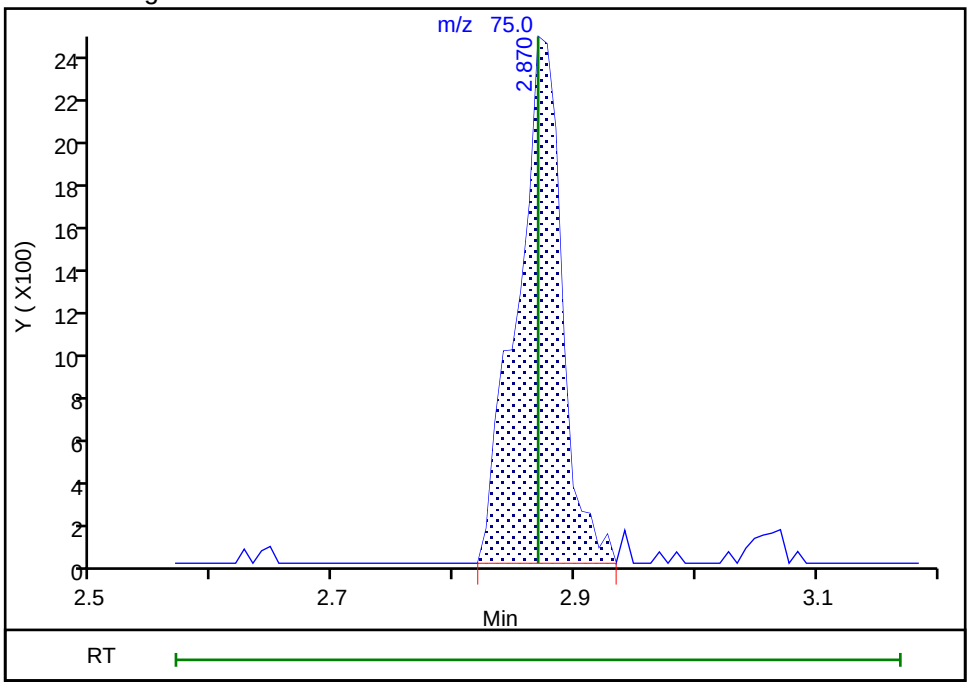
Not Detected
Expected RT: 2.87

Processing Integration Results




Manual Integration Results

RT: 2.87
Area: 6214
Amount: 1.546934
Amount Units: ug/l




Reviewer: starzecm, 04-Sep-2020 14:18:06
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Edison

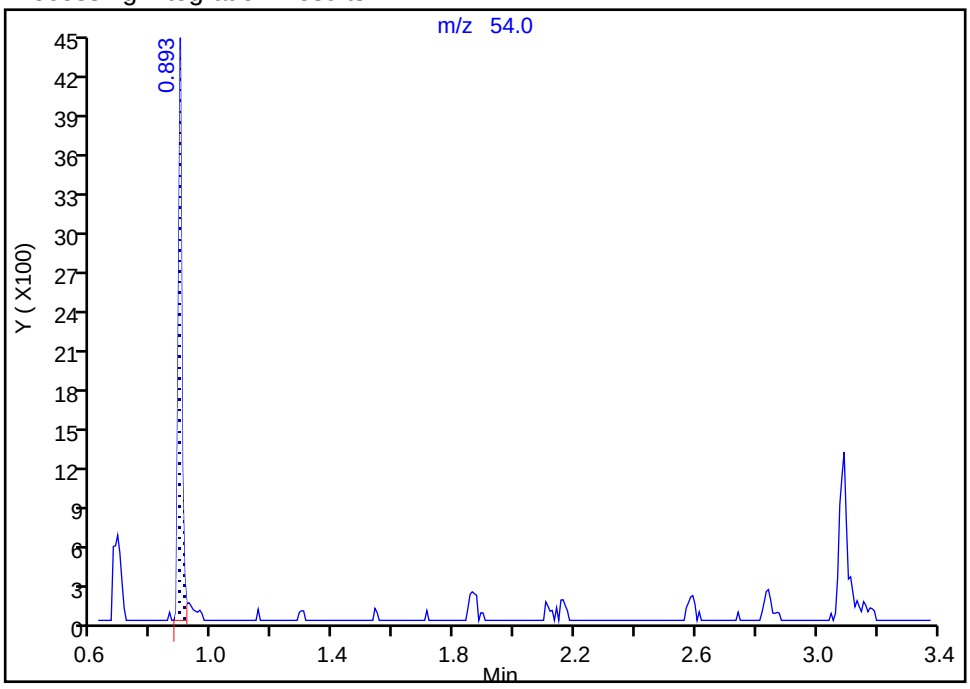
Data File: \\chromfs\Edison\ChromData\CVOAMS13\20200904-116303.b\P79354.D
Injection Date: 04-Sep-2020 14:57:30 Instrument ID: CVOAMS13
Lims ID: STD1
Client ID:
Operator ID: ALS Bottle#: 4 Worklist Smp#: 4
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: 8260W_13 Limit Group: VOA - 8260C Water and Solid
Column: Rtx-624 ( 0.25 mm) Detector MS SCAN

## 59 Propionitrile, CAS: 107-12-0

Signal: 1

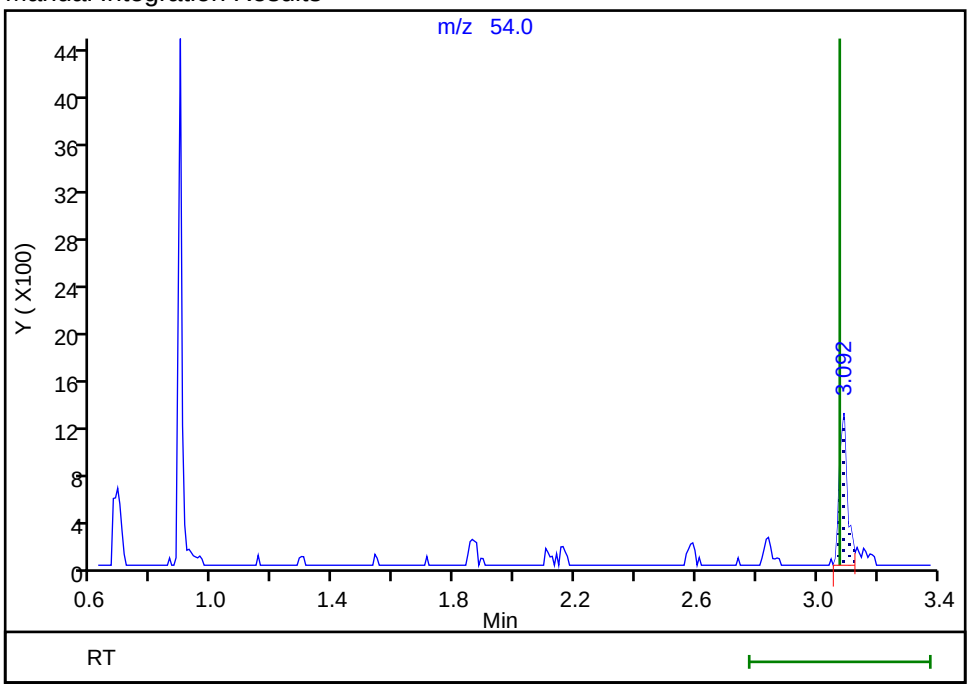
Processing Integration Results

RT: 0.89
Area: 3584
Amount: 13.553221
Amount Units: ug/l




Manual Integration Results

RT: 3.09
Area: 2300
Amount: 9.223009
Amount Units: ug/l




Reviewer: boykink, 05-Sep-2020 00:07:09
Audit Action: Located Compound Audit Reason:

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Edison

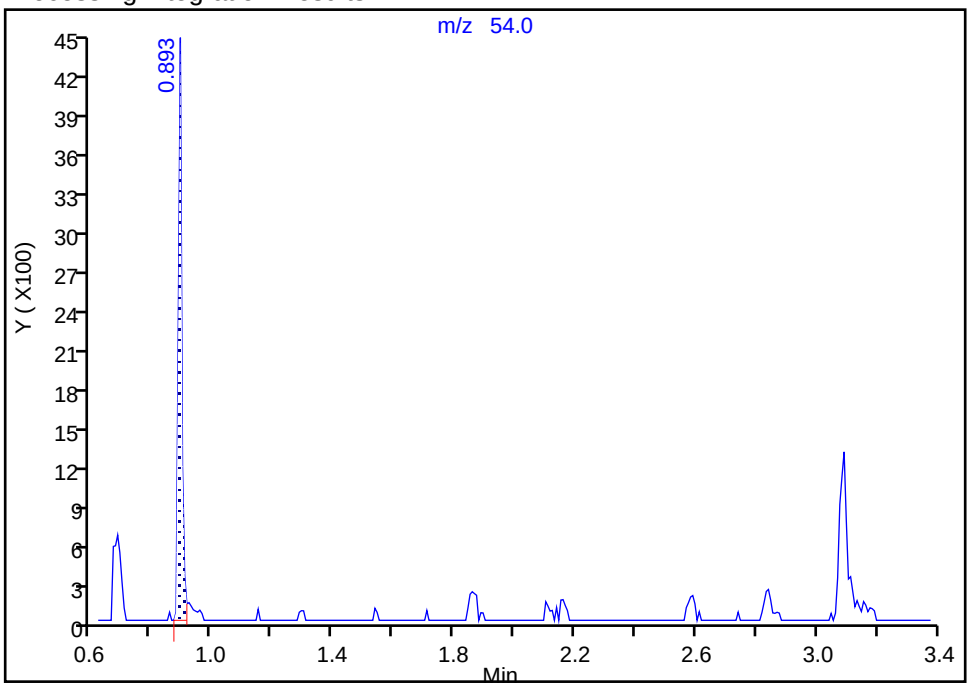
Data File: \\chromfs\Edison\ChromData\CVOAMS13\20200904-116303.b\P79354.D
Injection Date: 04-Sep-2020 14:57:30 Instrument ID: CVOAMS13
Lims ID: STD1
Client ID:
Operator ID: ALS Bottle#: 4 Worklist Smp#: 4
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: 8260W_13 Limit Group: VOA - 8260C Water and Solid
Column: Rtx-624 ( 0.25 mm) Detector MS SCAN

## 59 Propionitrile, CAS: 107-12-0

Signal: 1

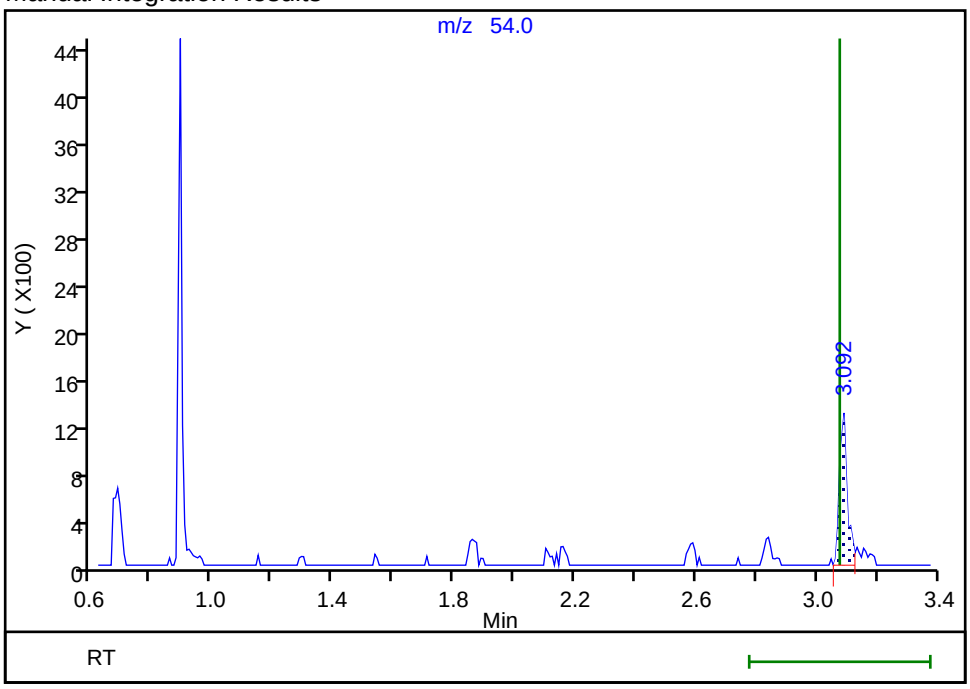
Processing Integration Results

RT: 0.89
Area: 3584
Amount: 13.553221
Amount Units: ug/l




Manual Integration Results

RT: 3.09
Area: 2300
Amount: 9.223009
Amount Units: ug/l




Reviewer: baronm, 05-Sep-2020 11:57:01
Audit Action: Assigned Compound ID Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Edison

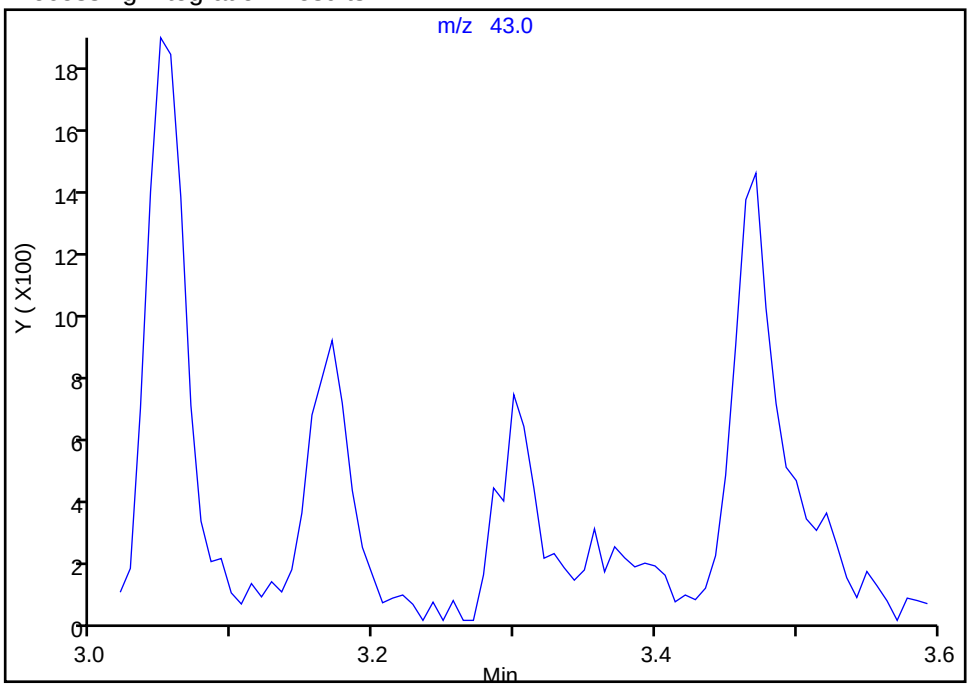
Data File: \\chromfs\Edison\ChromData\CVOAMS13\20200904-116303.b\P79354.D
Injection Date: 04-Sep-2020 14:57:30 Instrument ID: CVOAMS13
Lims ID: STD1
Client ID:
Operator ID: ALS Bottle#: 4 Worklist Smp#: 4
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: 8260W_13 Limit Group: VOA - 8260C Water and Solid
Column: Rtx-624 ( 0.25 mm) Detector MS SCAN

## 64 Isobutyl alcohol, CAS: 78-83-1

Signal: 1

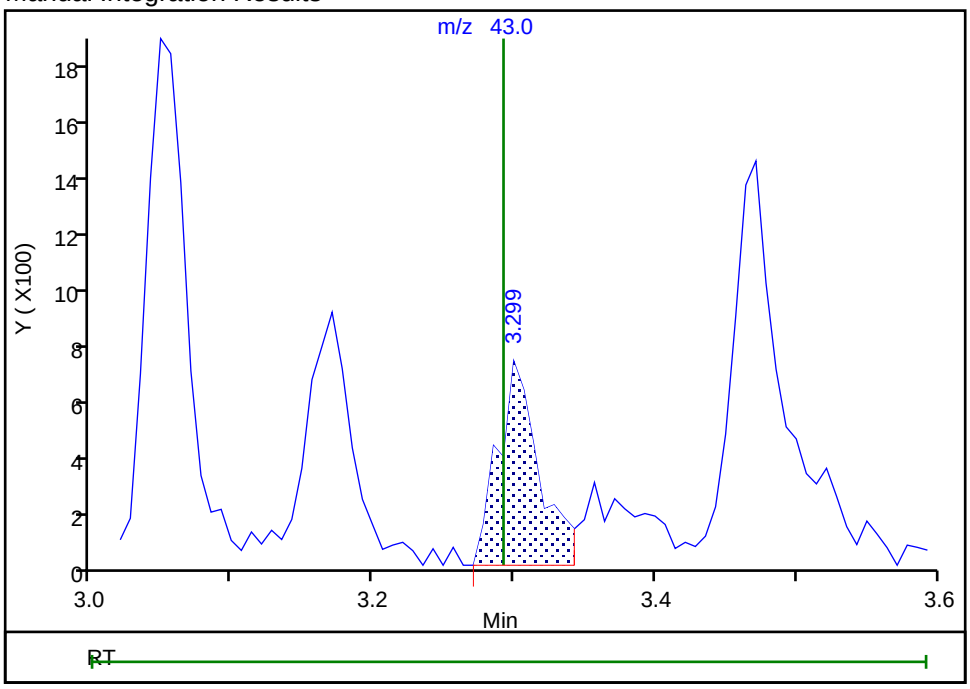
Not Detected
Expected RT: 3.29

Processing Integration Results




Manual Integration Results

RT: 3.30
Area: 1488
Amount: 23.679494
Amount Units: ug/l




Reviewer: starzecm, 04-Sep-2020 14:18:11
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Edison

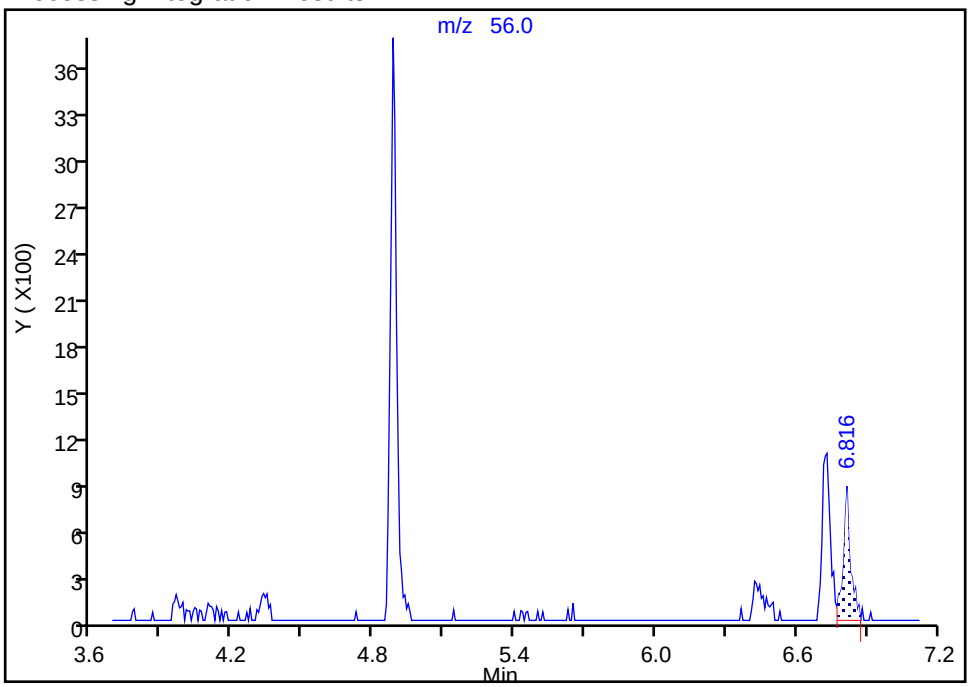
Data File: \\chromfs\Edison\ChromData\CVOAMS13\20200904-116303.b\P79354.D
Injection Date: 04-Sep-2020 14:57:30 Instrument ID: CVOAMS13
Lims ID: STD1
Client ID:
Operator ID: ALS Bottle#: 4 Worklist Smp#: 4
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: 8260W_13 Limit Group: VOA - 8260C Water and Solid
Column: Rtx-624 ( 0.25 mm) Detector MS SCAN

## 72 n-Butanol, CAS: 71-36-3

Signal: 1

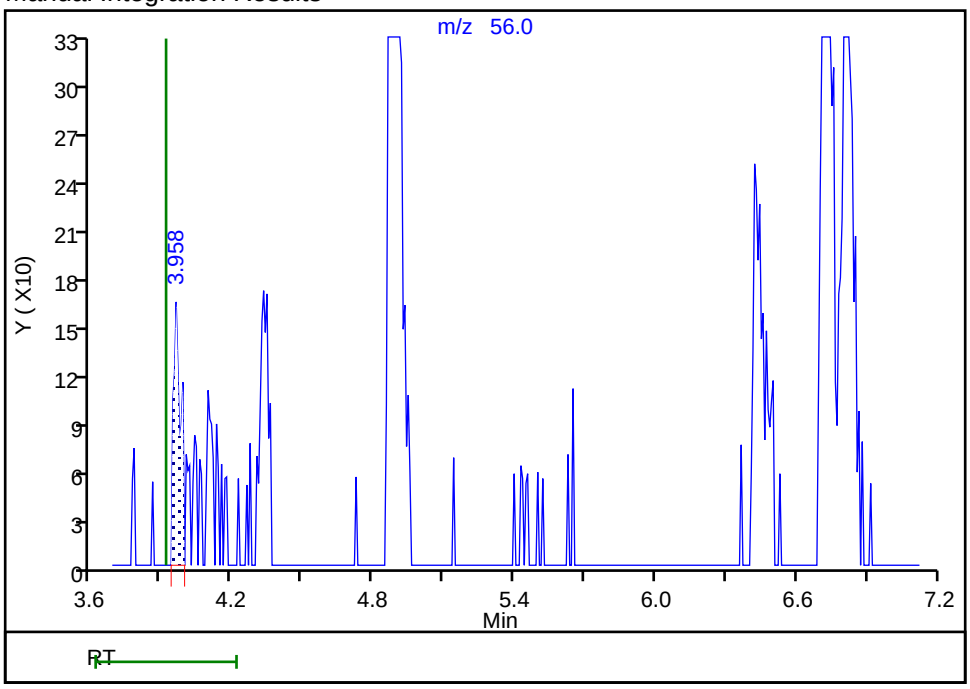
Processing Integration Results

RT: 6.82
Area: 1786
Amount: 46.291533
Amount Units: ug/l




Manual Integration Results

RT: 3.96
Area: 341
Amount: 8.843967
Amount Units: ug/l




Reviewer: boykink, 05-Sep-2020 00:07:32
Audit Action: Located Compound Audit Reason:

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Edison

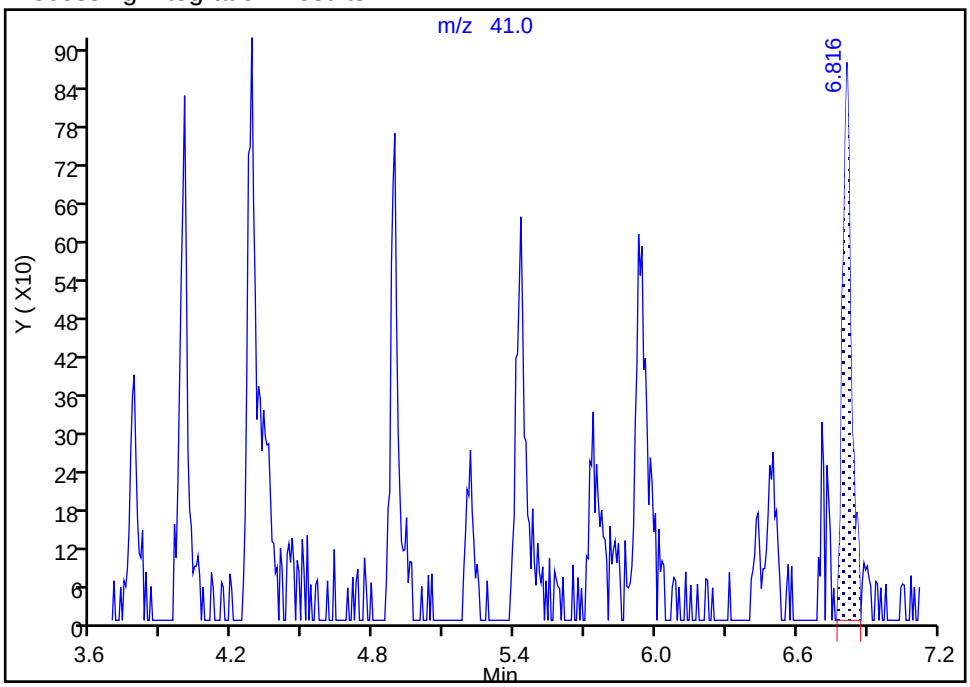
Data File: \\chromfs\Edison\ChromData\CVOAMS13\20200904-116303.b\P79354.D
Injection Date: 04-Sep-2020 14:57:30 Instrument ID: CVOAMS13
Lims ID: STD1
Client ID:
Operator ID: ALS Bottle#: 4 Worklist Smp#: 4
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: 8260W_13 Limit Group: VOA - 8260C Water and Solid
Column: Rtx-624 ( 0.25 mm) Detector MS SCAN

## 72 n-Butanol, CAS: 71-36-3

Signal: 2

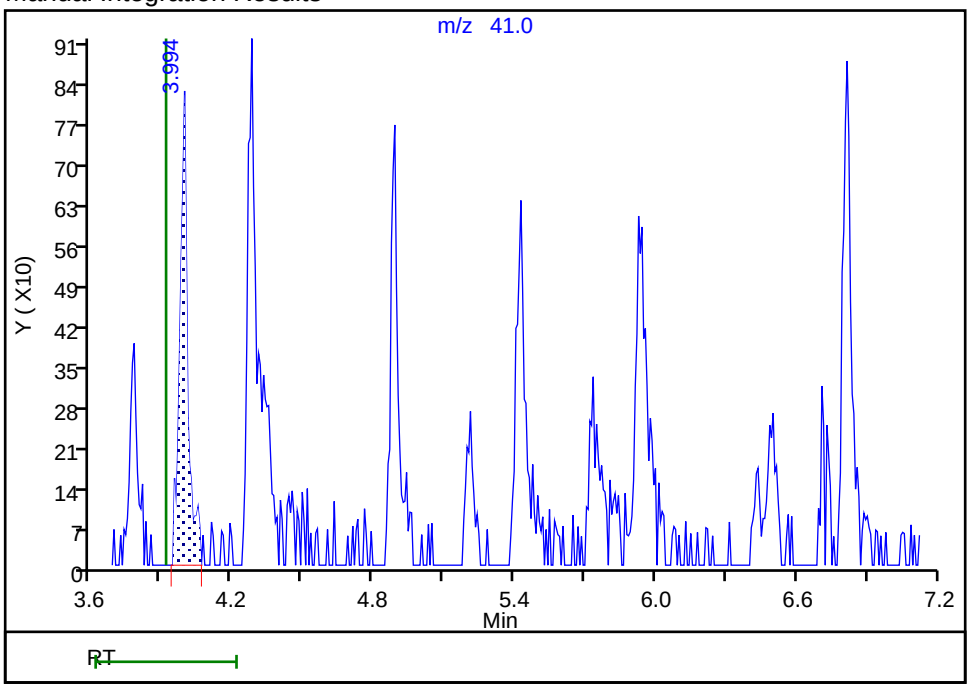
Processing Integration Results

RT: 6.82
Area: 2219
Amount: 46.291533
Amount Units: ug/l




Manual Integration Results

RT: 3.99
Area: 1900
Amount: 8.843967
Amount Units: ug/l




Reviewer: baronm, 05-Sep-2020 12:22:12
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Edison

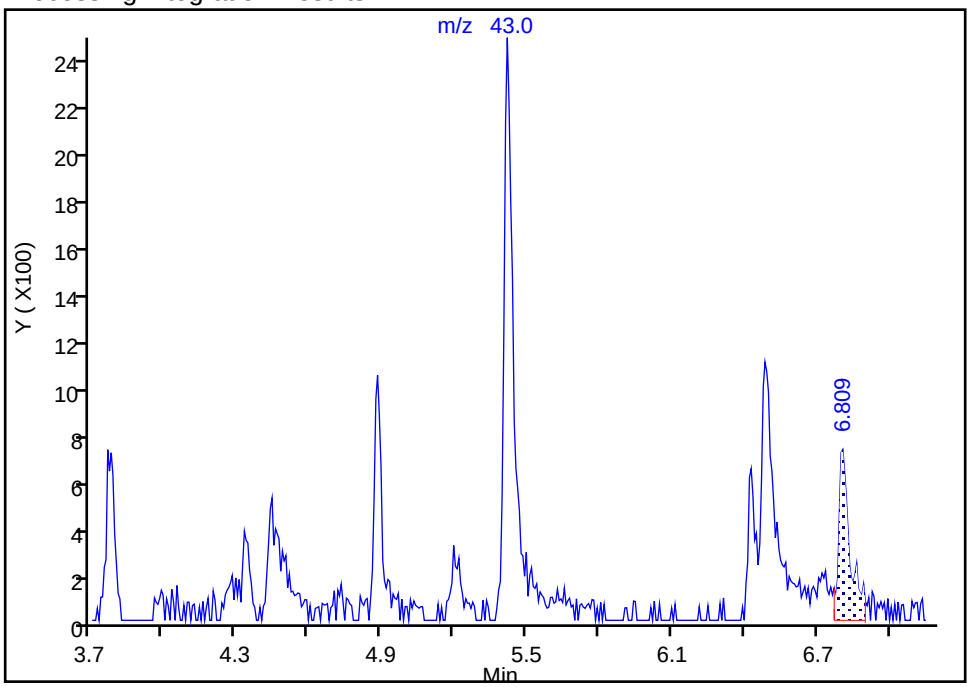
Data File: \\chromfs\Edison\ChromData\CVOAMS13\20200904-116303.b\P79354.D
Injection Date: 04-Sep-2020 14:57:30 Instrument ID: CVOAMS13
Lims ID: STD1
Client ID:
Operator ID: ALS Bottle#: 4 Worklist Smp#: 4
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: 8260W_13 Limit Group: VOA - 8260C Water and Solid
Column: Rtx-624 ( 0.25 mm) Detector MS SCAN

## 72 n-Butanol, CAS: 71-36-3

Signal: 3

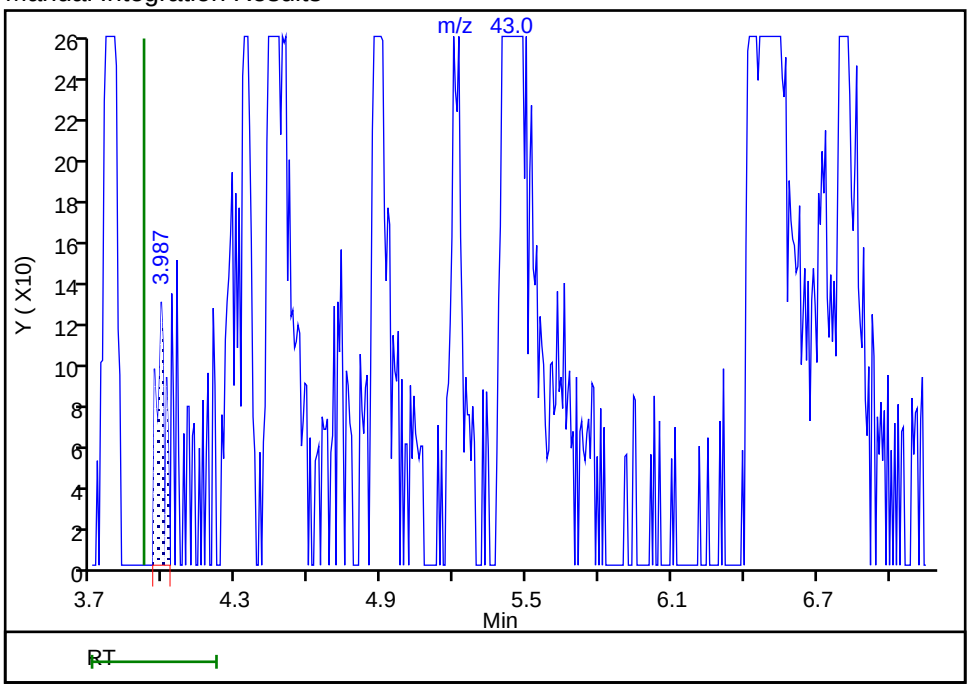
Processing Integration Results

RT: 6.81
Area: 2317
Amount: 46.291533
Amount Units: ug/l




Manual Integration Results

RT: 3.99
Area: 305
Amount: 8.843967
Amount Units: ug/l




Reviewer: baronm, 05-Sep-2020 12:22:12
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Edison

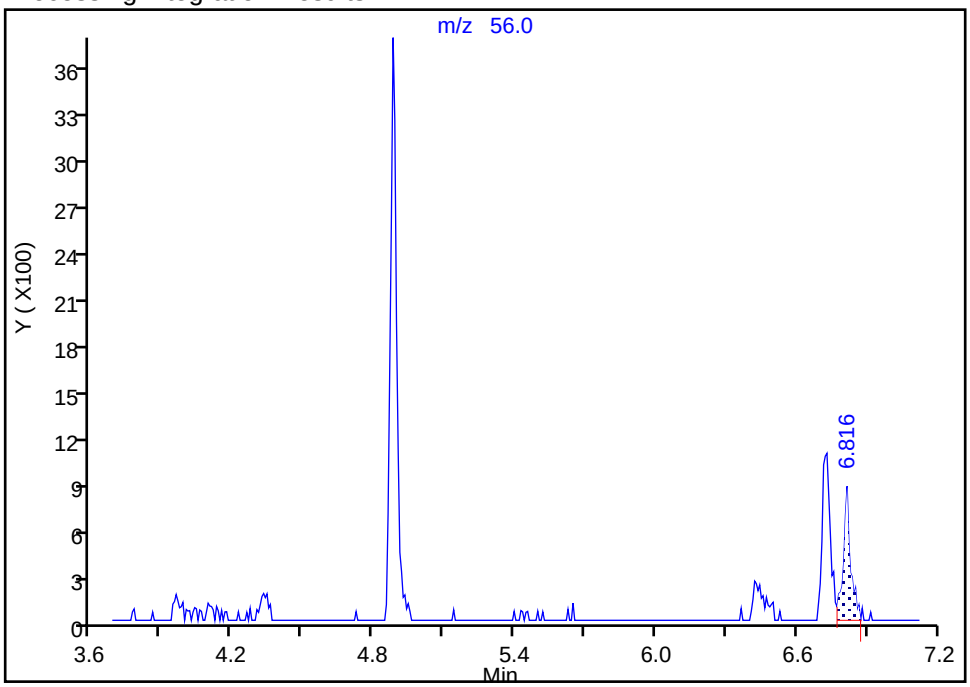
Data File: \\chromfs\Edison\ChromData\CVOAMS13\20200904-116303.b\P79354.D
Injection Date: 04-Sep-2020 14:57:30 Instrument ID: CVOAMS13
Lims ID: STD1
Client ID:
Operator ID: ALS Bottle#: 4 Worklist Smp#: 4
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: 8260W_13 Limit Group: VOA - 8260C Water and Solid
Column: Rtx-624 ( 0.25 mm) Detector MS SCAN

## 72 n-Butanol, CAS: 71-36-3

Signal: 1

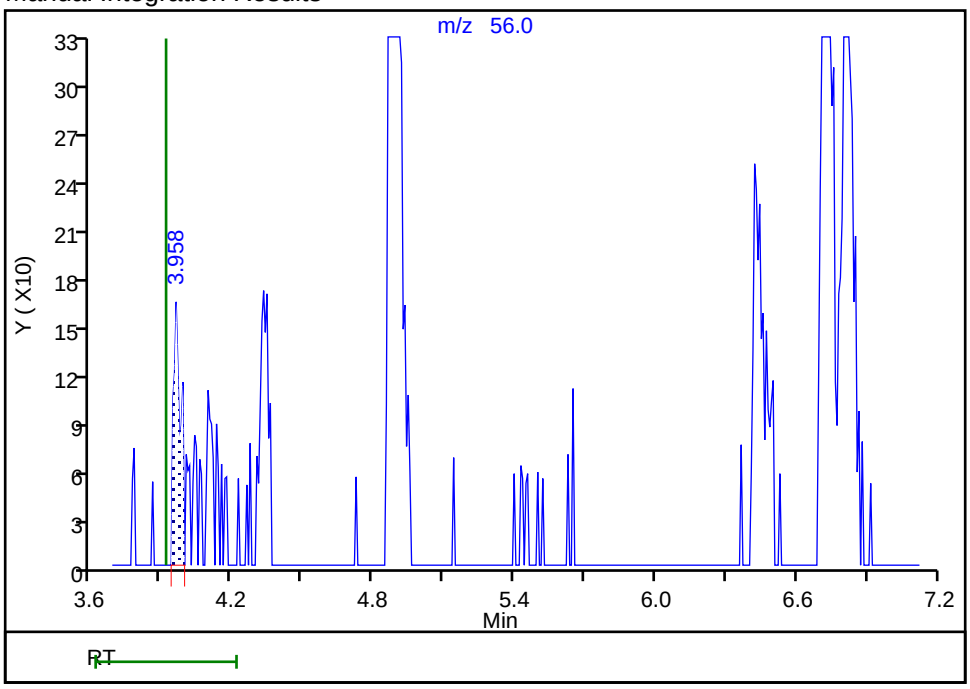
Processing Integration Results

RT: 6.82
Area: 1786
Amount: 46.291533
Amount Units: ug/l




Manual Integration Results

RT: 3.96
Area: 341
Amount: 8.843967
Amount Units: ug/l




Reviewer: baronm, 10-Sep-2020 10:29:24
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Edison

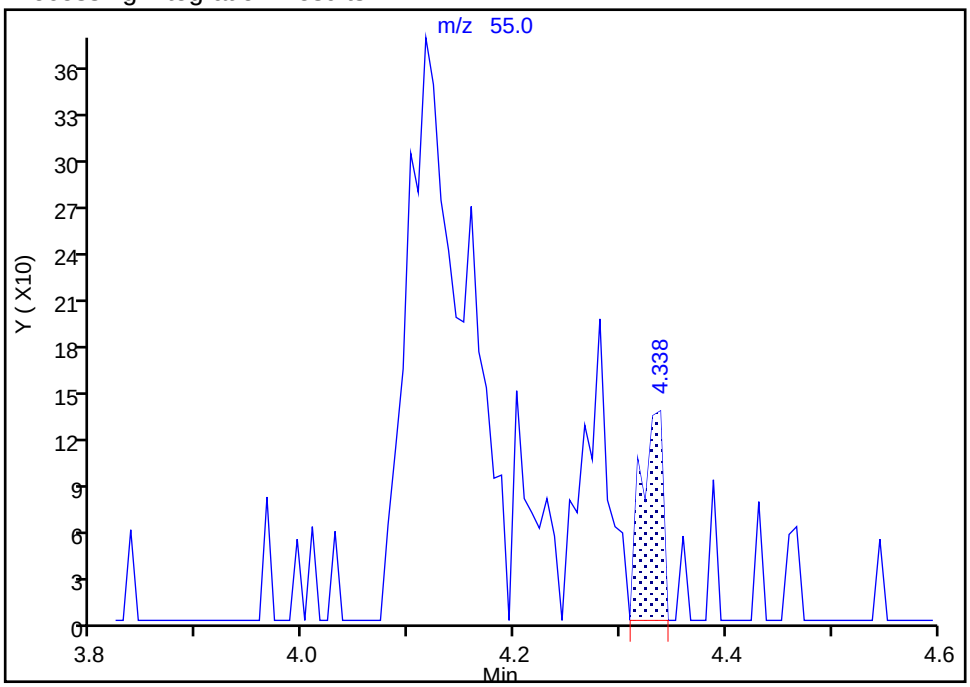
Data File: \\chromfs\Edison\ChromData\CVOAMS13\20200904-116303.b\P79354.D
Injection Date: 04-Sep-2020 14:57:30 Instrument ID: CVOAMS13
Lims ID: STD1
Client ID:
Operator ID: ALS Bottle#: 4 Worklist Smp#: 4
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: 8260W_13 Limit Group: VOA - 8260C Water and Solid
Column: Rtx-624 ( 0.25 mm) Detector MS SCAN

## 74 Ethyl acrylate, CAS: 140-88-5

Signal: 1

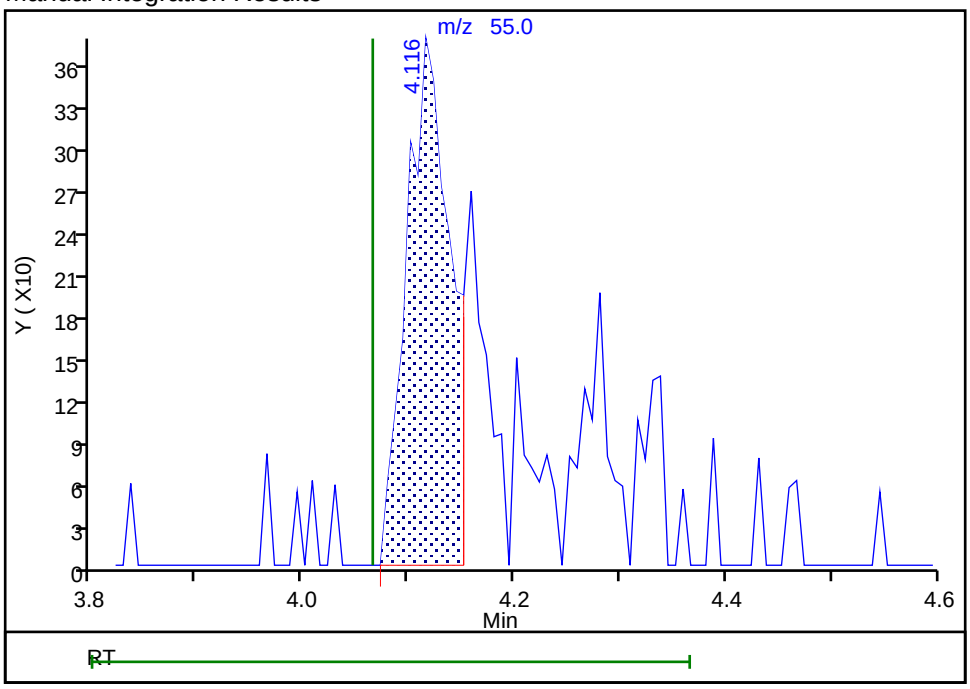
Processing Integration Results

RT: 4.34
Area: 190
Amount: 0.652791
Amount Units: ug/l




Manual Integration Results

RT: 4.12
Area: 1080
Amount: 1.020712
Amount Units: ug/l




Reviewer: boykink, 05-Sep-2020 00:07:44
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Edison

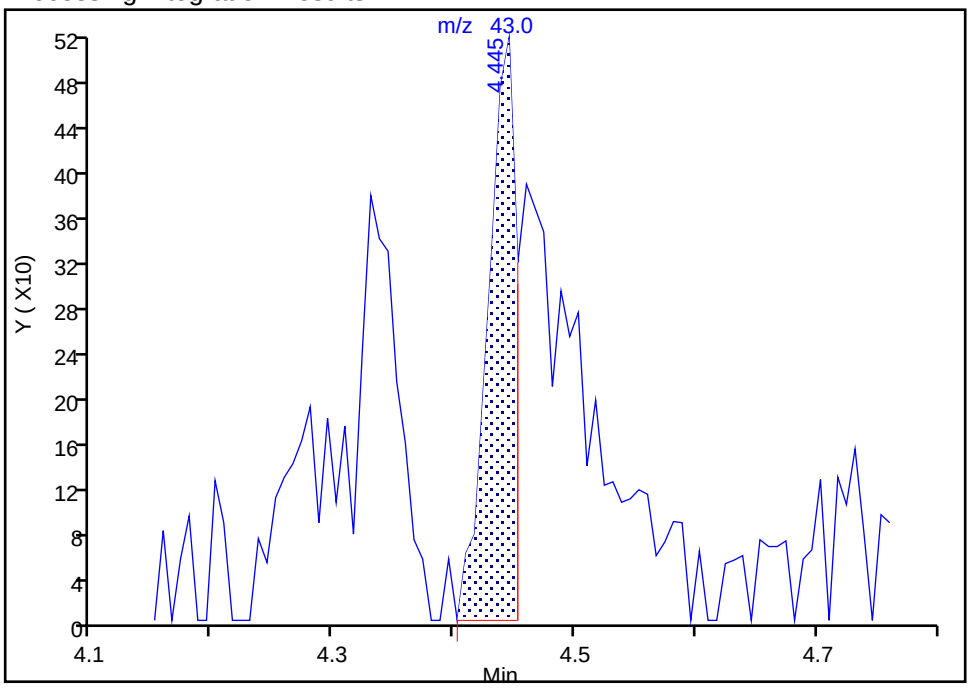
Data File: \\chromfs\Edison\ChromData\CVOAMS13\20200904-116303.b\P79354.D
Injection Date: 04-Sep-2020 14:57:30 Instrument ID: CVOAMS13
Lims ID: STD1
Client ID:
Operator ID: ALS Bottle#: 4 Worklist Smp#: 4
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: 8260W_13 Limit Group: VOA - 8260C Water and Solid
Column: Rtx-624 ( 0.25 mm) Detector MS SCAN

## 79 n-Propyl acetate, CAS: 109-60-4

Signal: 1

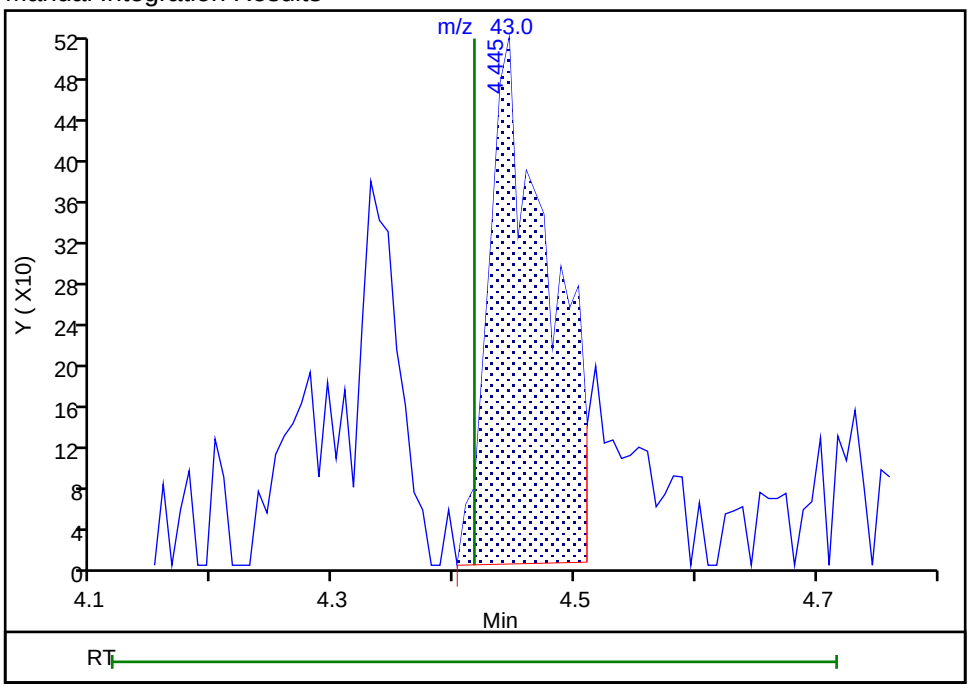
Processing Integration Results

RT: 4.45
Area: 843
Amount: 0.351508
Amount Units: ug/l




Manual Integration Results

RT: 4.45
Area: 1797
Amount: 0.820897
Amount Units: ug/l




Reviewer: baronm, 05-Sep-2020 11:57:36
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Edison

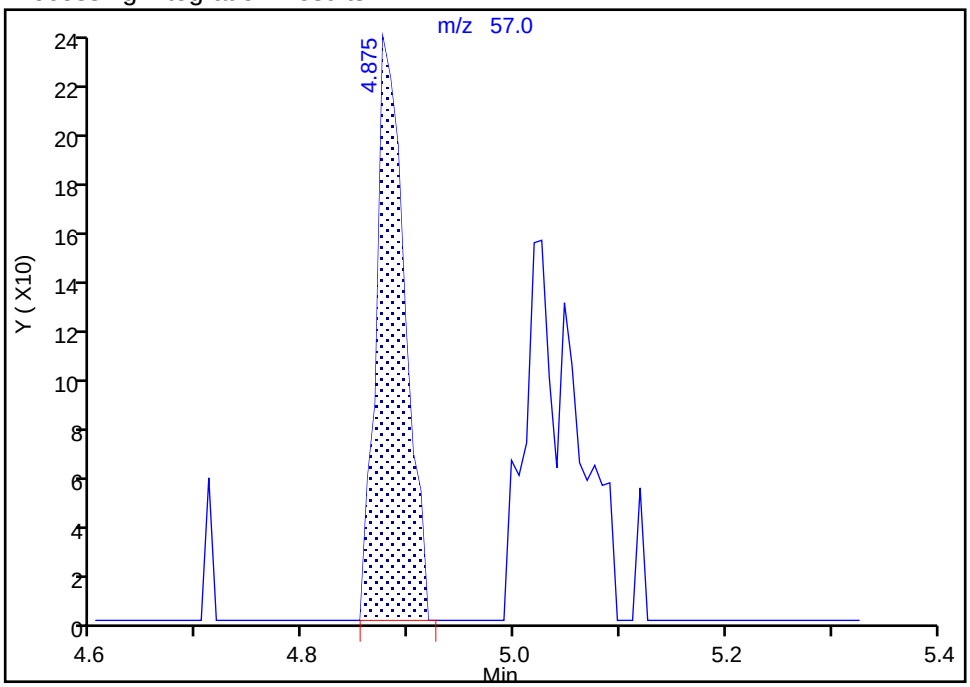
Data File: \\chromfs\Edison\ChromData\CVOAMS13\20200904-116303.b\P79354.D
Injection Date: 04-Sep-2020 14:57:30 Instrument ID: CVOAMS13
Lims ID: STD1
Client ID:
Operator ID: ALS Bottle#: 4 Worklist Smp#: 4
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: 8260W_13 Limit Group: VOA - 8260C Water and Solid
Column: Rtx-624 ( 0.25 mm) Detector MS SCAN

## 84 Epichlorohydrin, CAS: 106-89-8

Signal: 1

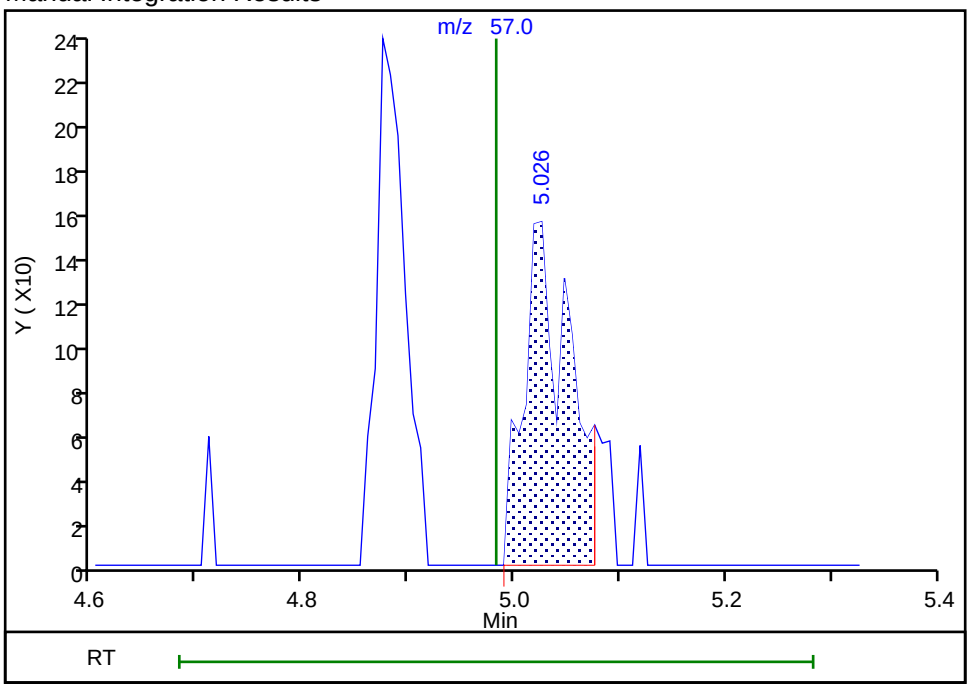
Processing Integration Results

RT: 4.88
Area: 440
Amount: 8.663925
Amount Units: ug/l




Manual Integration Results

RT: 5.03
Area: 457
Amount: 8.998456
Amount Units: ug/l




Reviewer: baronm, 05-Sep-2020 12:14:16
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Edison

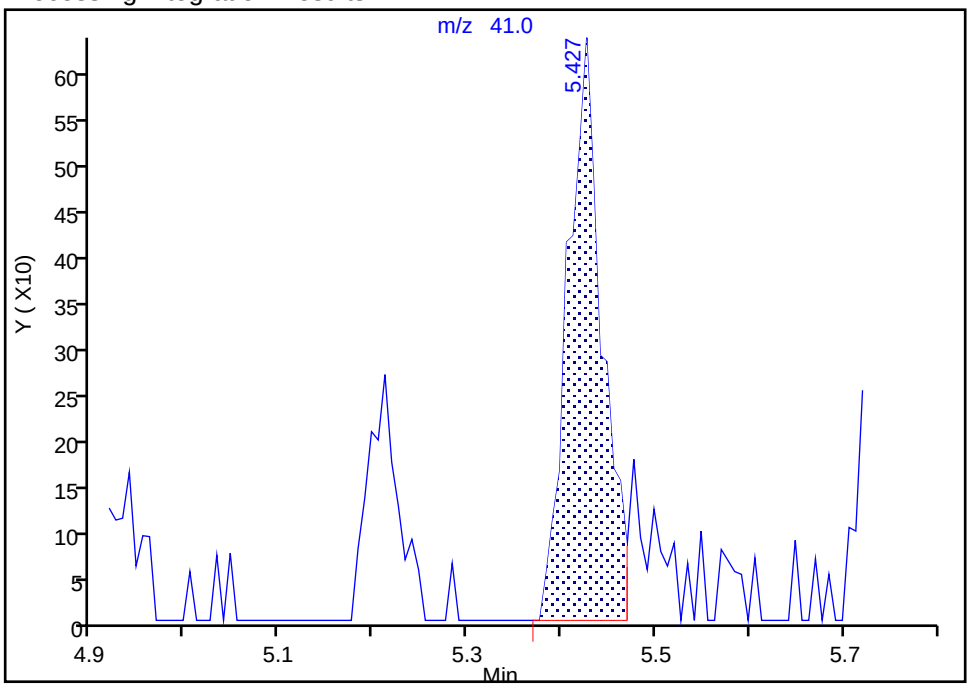
Data File: \\chromfs\Edison\ChromData\CVOAMS13\20200904-116303.b\P79354.D
Injection Date: 04-Sep-2020 14:57:30 Instrument ID: CVOAMS13
Lims ID: STD1
Client ID:
Operator ID: ALS Bottle#: 4 Worklist Smp#: 4
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: 8260W_13 Limit Group: VOA - 8260C Water and Solid
Column: Rtx-624 ( 0.25 mm) Detector MS SCAN

## 85 2-Nitropropane, CAS: 79-46-9

Signal: 1

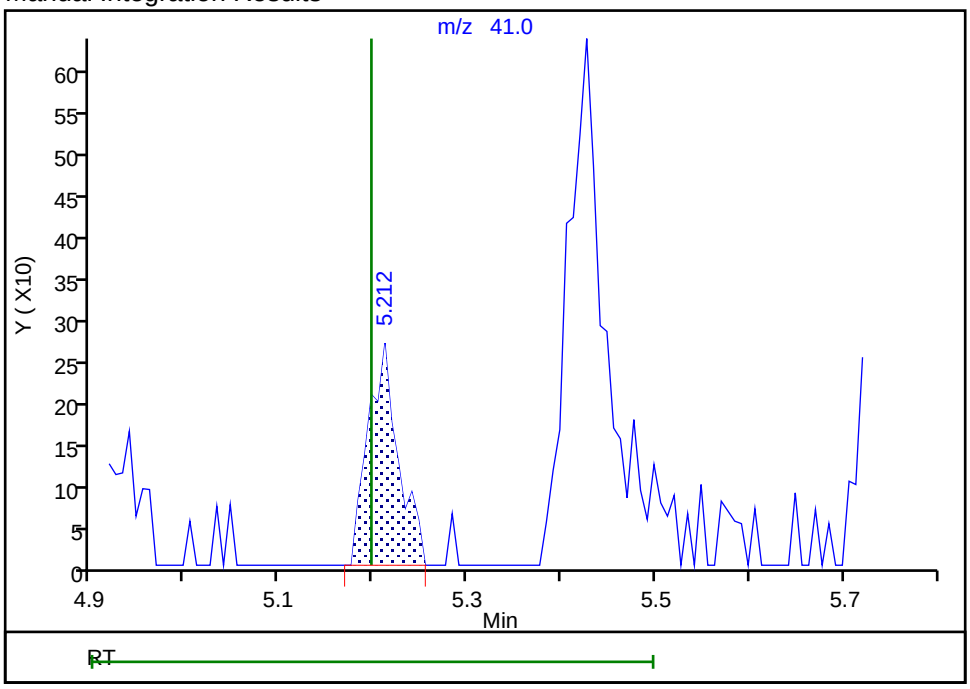
Processing Integration Results

RT: 5.43
Area: 1614
Amount: 5.851678
Amount Units: ug/l




Manual Integration Results

RT: 5.21
Area: 595
Amount: 2.059193
Amount Units: ug/l




Reviewer: baronm, 05-Sep-2020 12:14:25
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Eurofins TestAmerica, Edison

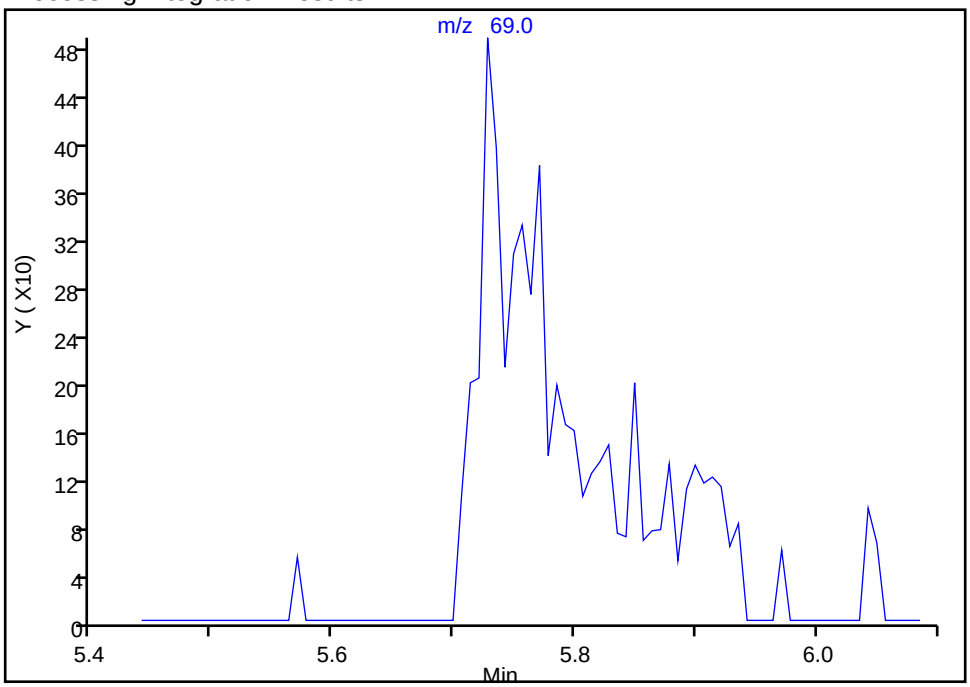
Data File: \\chromfs\Edison\ChromData\CVOAMS13\20200904-116303.b\P79354.D
Injection Date: 04-Sep-2020 14:57:30 Instrument ID: CVOAMS13
Lims ID: STD1
Client ID:
Operator ID: ALS Bottle#: 4 Worklist Smp#: 4
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: 8260W_13 Limit Group: VOA - 8260C Water and Solid
Column: Rtx-624 ( 0.25 mm) Detector MS SCAN

## 90 Ethyl methacrylate, CAS: 97-63-2

Signal: 1

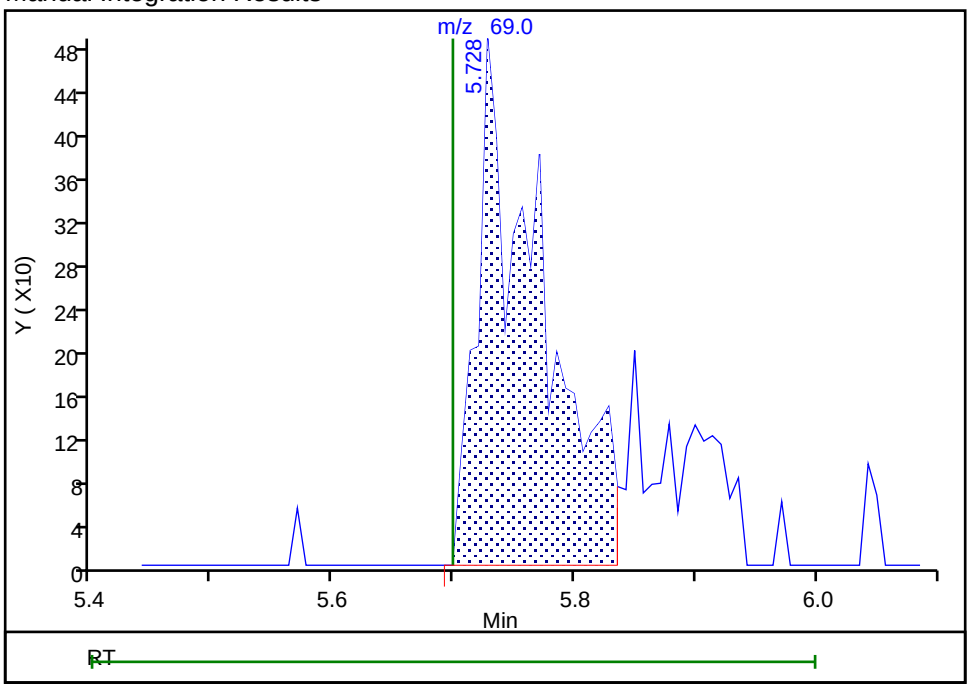
Not Detected
Expected RT: 5.70

Processing Integration Results




Manual Integration Results

RT: 5.73
Area: 1777
Amount: 0.777182
Amount Units: ug/l




Reviewer: starzecm, 04-Sep-2020 14:48:01
Audit Action: Assigned Compound ID Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Edison

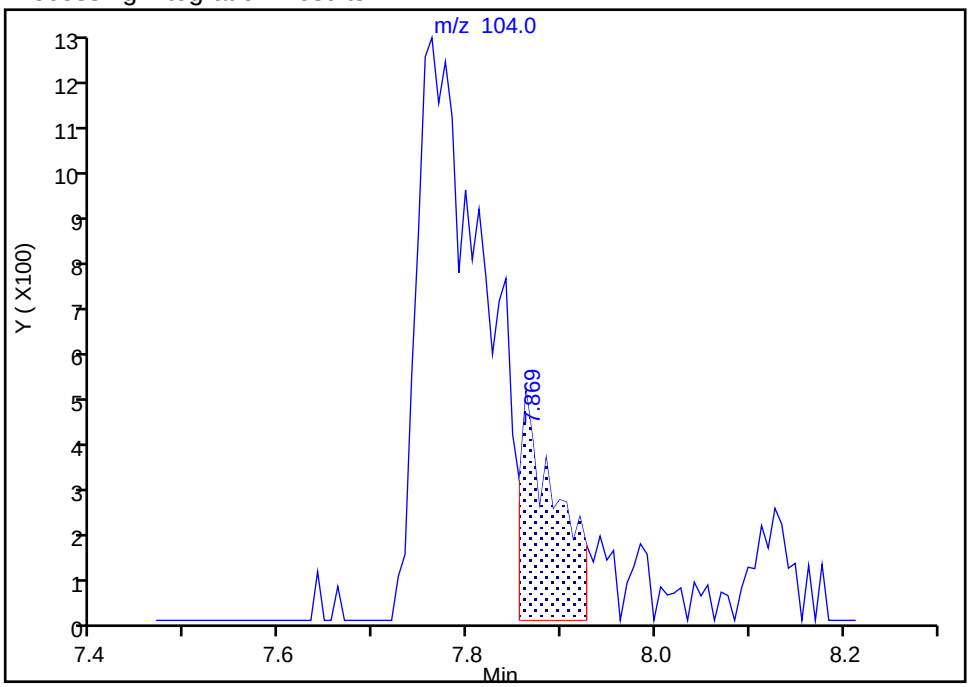
Data File: \\chromfs\Edison\ChromData\CVOAMS13\20200904-116303.b\P79354.D
Injection Date: 04-Sep-2020 14:57:30 Instrument ID: CVOAMS13
Lims ID: STD1
Client ID:
Operator ID: ALS Bottle#: 4 Worklist Smp#: 4
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: 8260W_13 Limit Group: VOA - 8260C Water and Solid
Column: Rtx-624 ( 0.25 mm) Detector MS SCAN

## 103 Styrene, CAS: 100-42-5

Signal: 1

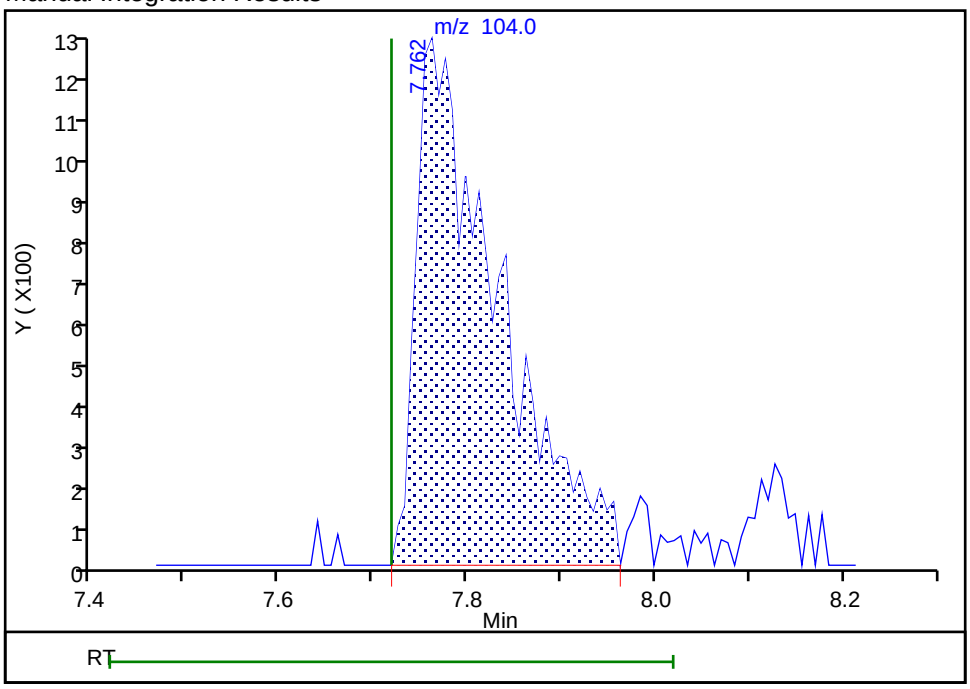
Processing Integration Results

RT: 7.87
Area: 1283
Amount: 0.193461
Amount Units: ug/l




Manual Integration Results

RT: 7.76
Area: 7343
Amount: 0.923415
Amount Units: ug/l




Reviewer: boykink, 05-Sep-2020 00:09:32
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Eurofins TestAmerica, Edison

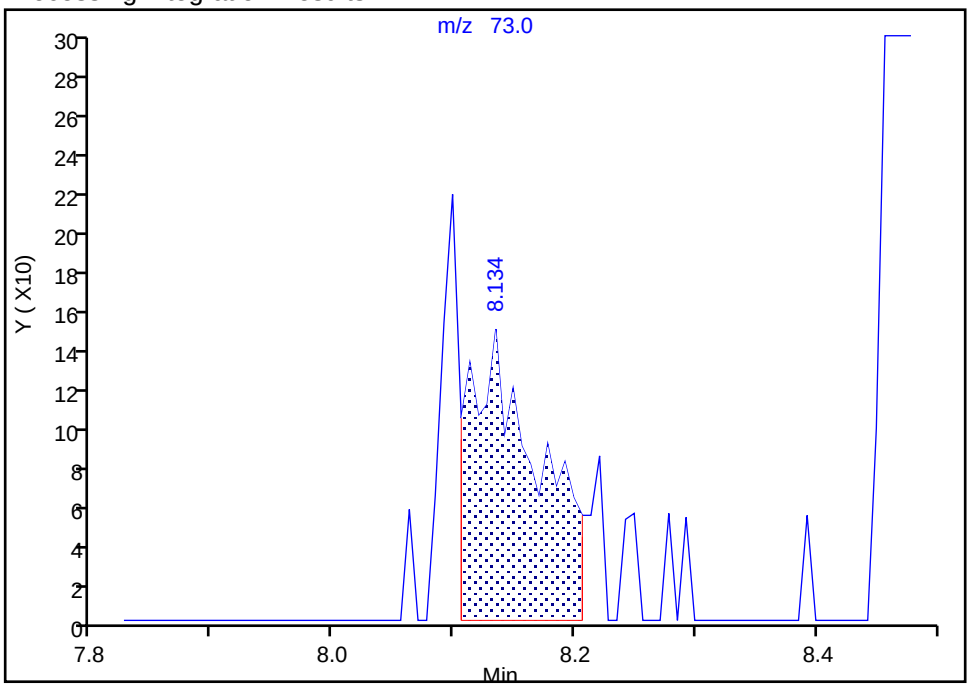
Data File: \\chromfs\Edison\ChromData\CVOAMS13\20200904-116303.b\P79354.D
Injection Date: 04-Sep-2020 14:57:30 Instrument ID: CVOAMS13
Lims ID: STD1
Client ID:
Operator ID: ALS Bottle#: 4 Worklist Smp#: 4
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: 8260W_13 Limit Group: VOA - 8260C Water and Solid
Column: Rtx-624 ( 0.25 mm) Detector MS SCAN

## 104 n-Butyl acrylate, CAS: 141-32-2

Signal: 1

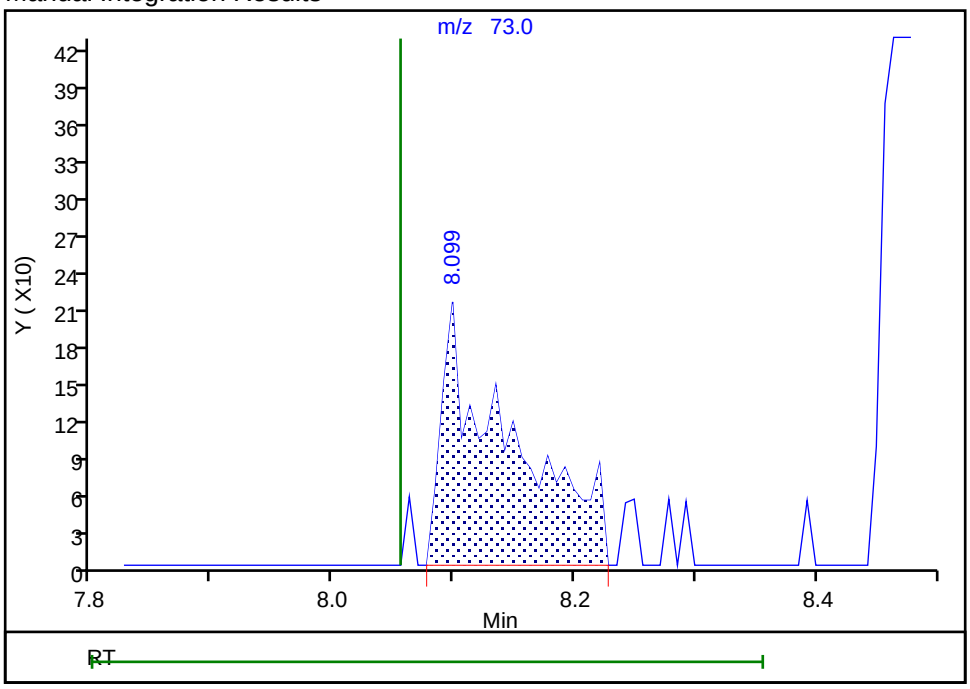
Processing Integration Results

RT: 8.13
Area: 593
Amount: 0.397969
Amount Units: ug/l




Manual Integration Results

RT: 8.10
Area: 835
Amount: 1.013673
Amount Units: ug/l




Reviewer: baronm, 05-Sep-2020 12:22:57
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Edison

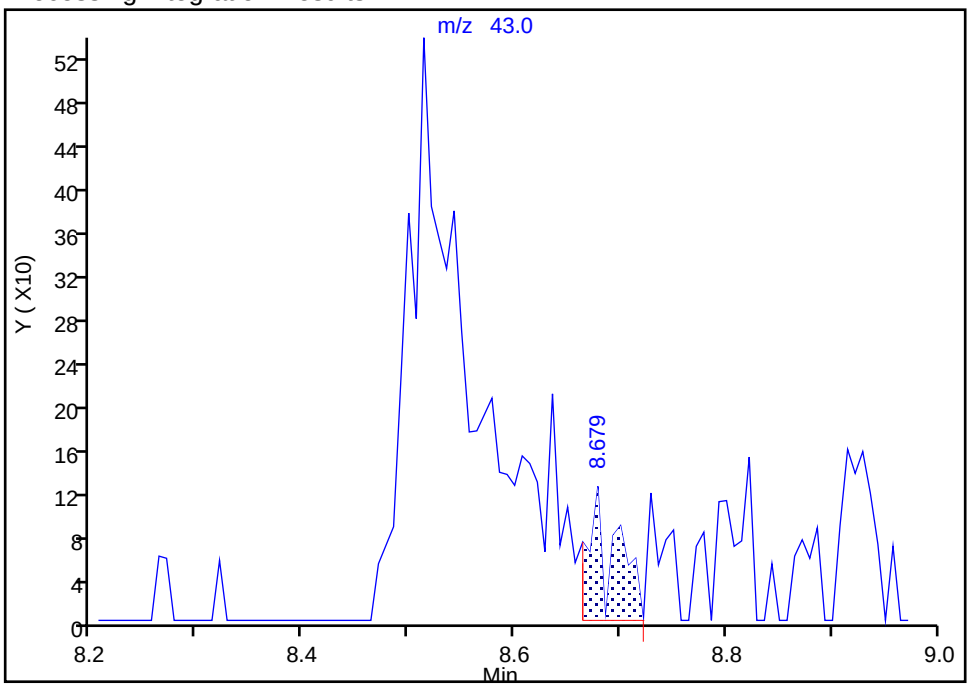
Data File: \\chromfs\Edison\ChromData\CVOAMS13\20200904-116303.b\P79354.D
Injection Date: 04-Sep-2020 14:57:30 Instrument ID: CVOAMS13
Lims ID: STD1
Client ID:
Operator ID: ALS Bottle#: 4 Worklist Smp#: 4
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: 8260W_13 Limit Group: VOA - 8260C Water and Solid
Column: Rtx-624 ( 0.25 mm) Detector MS SCAN

## 106 Amyl acetate (mixed isomers), CAS: 628-63-7

Signal: 1

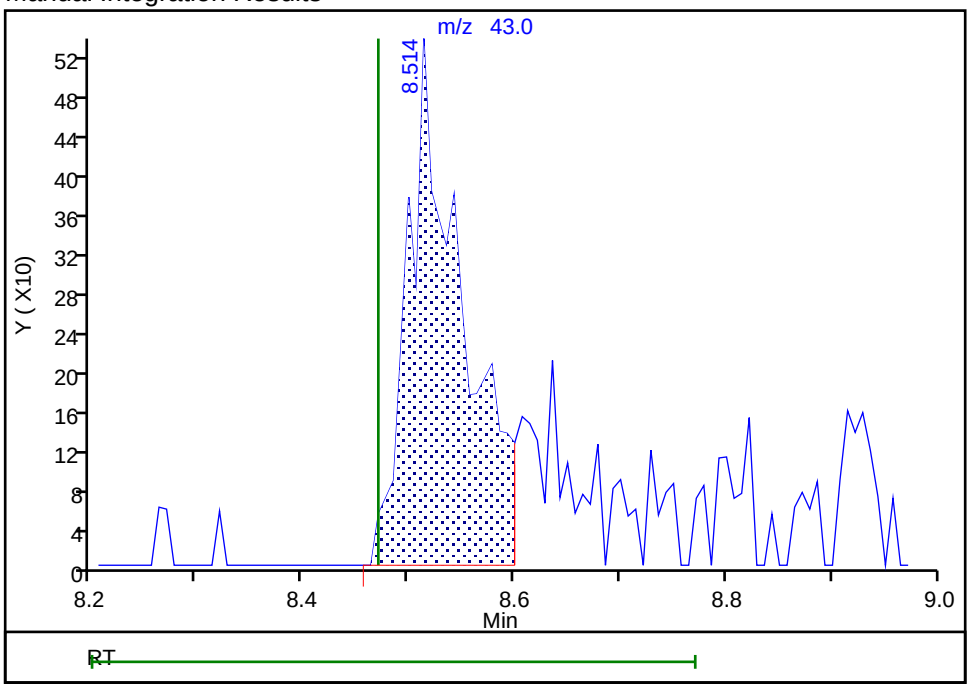
Processing Integration Results

RT: 8.68
Area: 227
Amount: 0.434639
Amount Units: ug/l




Manual Integration Results

RT: 8.51
Area: 1912
Amount: 1.025273
Amount Units: ug/l




Reviewer: boykink, 05-Sep-2020 00:09:42
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

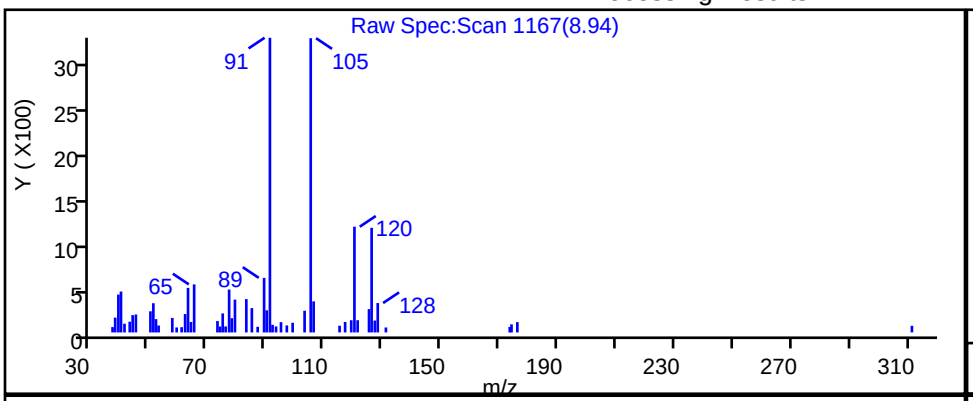
User Disabled Compound Report

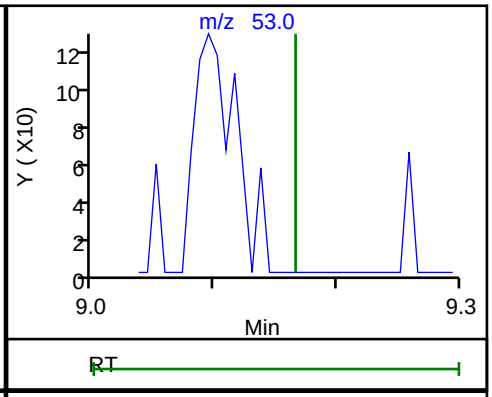
Eurofins TestAmerica, Edison

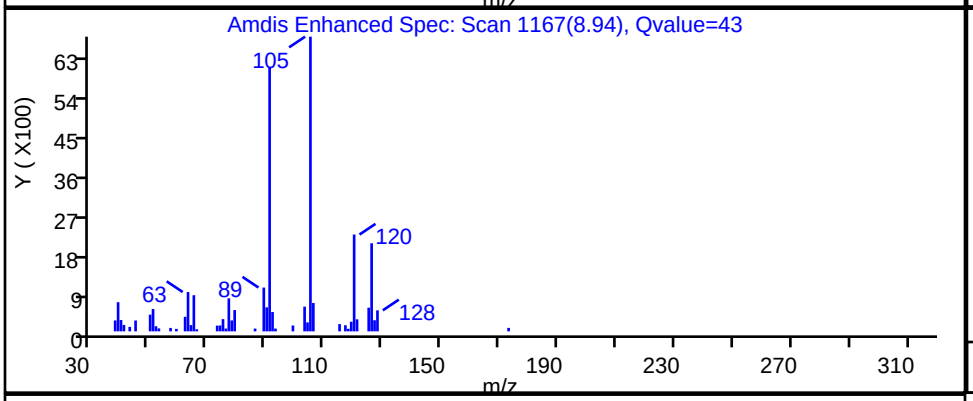
Data File: \\chromfs\Edison\ChromData\CVOAMS13\20200904-116303.b\P79354.D
Injection Date: 04-Sep-2020 14:57:30 Instrument ID: CVOAMS13
Lims ID: STD1
Client ID:
Operator ID: ALS Bottle#: 4 Worklist Smp#: 4
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: 8260W_13 Limit Group: VOA - 8260C Water and Solid
Column: Rtx-624 ( 0.25 mm) Detector MS SCAN

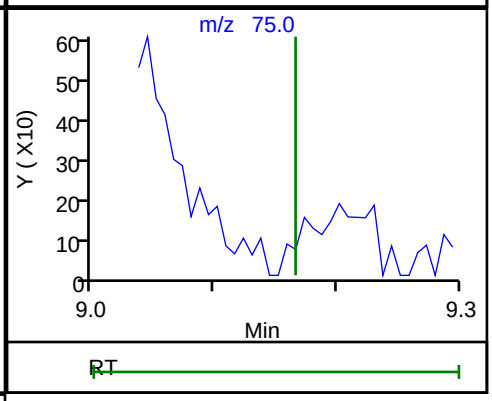
## 115 trans-1,4-Dichloro-2-butene, CAS: 110-57-6

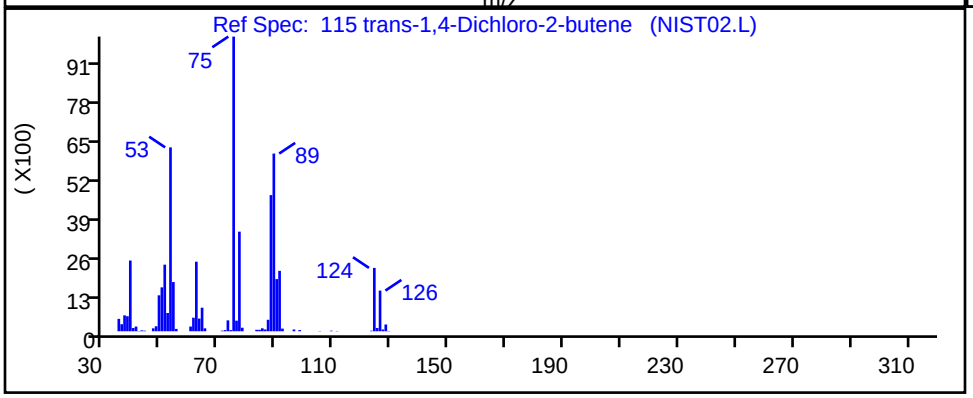
Processing Results




| RT | Mass | Response | Amount |
|---|---|---|---|
| 8.94 | 53.00 | 82 | 0.244940 |
| 8.92 | 75.00 | 759 | |

Reviewer: baronm, 05-Sep-2020 12:07:10
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

Eurofins TestAmerica, Edison
Target Compound Quantitation Report

Data File: \\chromfs\Edison\ChromData\CVOAMS13\20200904-116303.b\P79355.D
Lims ID: STD5
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 04-Sep-2020 15:21:30 ALS Bottle#: 5 Worklist Smp#: 5
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: STD5
Misc. Info.: 460-0116303-005
Operator ID: Instrument ID: CVOAMS13
Sublist: chrom-8260W_13*sub62

Method: \\chromfs\Edison\ChromData\CVOAMS13\20200904-116303.b\8260W_13.m
Limit Group: VOA - 8260C Water and Solid
Last Update: 10-Sep-2020 10:38:13 Calib Date: 04-Sep-2020 16:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Edison\ChromData\CVOAMS13\20200904-116303.b\P79359.D

Column 1 : Rtx-624 ( 0.25 mm) Det: MS SCAN
Process Host: CTX1019

First Level Reviewer: starzecm Date: 04-Sep-2020 14:46:14

| Compound | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q | Response | Cal Amt ug/l | OnCol Amt ug/l | Flags |
|---|---|---|---|---|---|---|---|---|---|
| 1 Monochloropentafluoroethane | 119 | 0.728 | 0.721 | 0.007 | 68 | 1081 | 5.00 | 4.47 | |
| 2 Chlorotrifluoroethene | 116 | 0.756 | 0.756 | 0.000 | 85 | 3587 | 5.00 | 4.16 | a |
| 3 Dichlorodifluoromethane | 85 | 0.771 | 0.771 | 0.000 | 99 | 17078 | 5.00 | 4.62 | |
| 4 1,1-Difluoroethane | 65 | 0.807 | 0.807 | 0.000 | 89 | 8287 | 5.00 | 4.73 | |
| 5 Chlorodifluoromethane | 67 | 0.821 | 0.814 | 0.007 | 95 | 2413 | 5.00 | 4.76 | a |
| 6 Chloromethane | 50 | 0.893 | 0.892 | 0.001 | 68 | 25436 | 5.00 | 4.92 | |
| 8 Butadiene | 54 | 0.893 | 0.892 | 0.001 | 91 | 15246 | 5.00 | 4.43 | |
| 7 Vinyl chloride | 62 | 0.893 | 0.892 | 0.001 | 56 | 17466 | 5.00 | 4.62 | a |
| 9 Bromomethane | 94 | 1.036 | 1.036 | 0.000 | 99 | 6734 | 5.00 | 4.48 | |
| 10 Chloroethane | 64 | 1.093 | 1.093 | 0.000 | 98 | 11587 | 5.00 | 5.76 | Ma |
| 11 Pentane | 72 | 1.150 | 1.150 | 0.000 | 97 | 4966 | 10.0 | 10.1 | |
| 12 Trichlorofluoromethane | 101 | 1.150 | 1.150 | 0.000 | 56 | 15241 | 5.00 | 4.41 | |
| 13 Dichlorofluoromethane | 67 | 1.186 | 1.186 | 0.000 | 98 | 23079 | 5.00 | 4.97 | |
| 14 2-Methyl-1,3-butadiene | 67 | 1.294 | 1.286 | 0.008 | 96 | 18393 | 5.00 | 4.63 | |
| 15 Ethyl ether | 59 | 1.294 | 1.294 | 0.000 | 98 | 9337 | 5.00 | 5.04 | |
| 18 1,2-Dichloro-1,1,2-trifluoroetha | 67 | 1.387 | 1.387 | 0.000 | 93 | 17228 | 5.00 | 4.78 | |
| 17 1,1-Dichloroethene | 96 | 1.394 | 1.387 | 0.007 | 98 | 11646 | 5.00 | 4.71 | |
| 16 Ethanol | 46 | 1.380 | 1.408 | -0.028 | 32 | 1713 | 200.0 | 180.4 | a |
| 19 Carbon disulfide | 76 | 1.408 | 1.408 | 0.000 | 99 | 46527 | 5.00 | 4.82 | |
| 20 1,1,2-Trichloro-1,2,2-trifluoroe | 101 | 1.415 | 1.408 | 0.007 | 89 | 11574 | 5.00 | 4.79 | |
| 21 1,1,1-Trifluoro-2,2-dichloroetha | 83 | 1.415 | 1.415 | 0.000 | 95 | 17523 | 5.00 | 4.68 | a |
| 22 Iodomethane | 142 | 1.466 | 1.466 | 0.000 | 97 | 10285 | 5.00 | 2.63 | |
| 23 Cyclopentene | 67 | 1.537 | 1.537 | 0.000 | 96 | 31435 | 5.00 | 4.59 | |
| 24 Acrolein | 56 | 1.559 | 1.559 | 0.000 | 93 | 3211 | 20.0 | 14.4 | |
| 25 3-Chloro-1-propene | 76 | 1.630 | 1.630 | 0.000 | 94 | 7562 | 5.00 | 4.79 | |
| 26 Isopropyl alcohol | 45 | 1.659 | 1.659 | 0.000 | 96 | 4566 | 50.0 | 49.4 | |
| 27 Methylene Chloride | 84 | 1.695 | 1.695 | 0.000 | 92 | 15063 | 5.00 | 5.06 | |
| 28 Acetone | 43 | 1.716 | 1.716 | 0.000 | 88 | 11181 | 25.0 | 23.2 | |
| 29 trans-1,2-Dichloroethene | 96 | 1.774 | 1.774 | 0.000 | 93 | 13885 | 5.00 | 4.91 | |
| 30 Methyl acetate | 43 | 1.788 | 1.781 | 0.007 | 98 | 11836 | 10.0 | 10.6 | |

| Compound | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q | Response | Cal Amt ug/l | OnCol Amt ug/l | Flags |
|---|---|---|---|---|---|---|---|---|---|
| 31 Hexane | 86 | 1.817 | 1.817 | 0.000 | 91 | 2899 | 5.00 | 4.25 | |
| 32 Methyl tert-butyl ether | 73 | 1.838 | 1.838 | 0.000 | 84 | 28926 | 5.00 | 5.01 | |
| * 33 TBA-d9 (IS) | 65 | 1.860 | 1.860 | 0.000 | 100 | 114474 | 1000.0 | 1000.0 | |
| 34 2-Methyl-2-propanol | 59 | 1.903 | 1.902 | 0.001 | 100 | 7009 | 50.0 | 56.0 | |
| 35 Acetonitrile | 41 | 1.981 | 1.981 | 0.000 | 99 | 12143 | 50.0 | 53.1 | a |
| 36 Isopropyl ether | 45 | 2.053 | 2.053 | 0.000 | 97 | 44353 | 5.00 | 4.90 | |
| 37 2-Chloro-1,3-butadiene | 88 | 2.110 | 2.110 | 0.000 | 88 | 12452 | 5.00 | 4.81 | |
| 38 1,1-Dichloroethane | 63 | 2.117 | 2.117 | 0.000 | 100 | 26065 | 5.00 | 4.97 | |
| 39 Acrylonitrile | 53 | 2.153 | 2.153 | 0.000 | 94 | 34857 | 50.0 | 51.3 | |
| 40 Tert-butyl ethyl ether | 59 | 2.275 | 2.275 | 0.000 | 89 | 35847 | 5.00 | 4.81 | |
| 41 Vinyl acetate | 43 | 2.289 | 2.282 | 0.007 | 100 | 41944 | 10.0 | 10.4 | |
| 42 cis-1,2-Dichloroethene | 96 | 2.461 | 2.461 | 0.000 | 96 | 15638 | 5.00 | 5.00 | |
| 43 2,2-Dichloropropane | 77 | 2.526 | 2.526 | 0.000 | 97 | 17330 | 5.00 | 4.88 | |
| 44 Cyclohexane | 56 | 2.590 | 2.583 | 0.007 | 91 | 24852 | 5.00 | 4.73 | |
| 45 Chlorobromomethane | 128 | 2.590 | 2.590 | 0.000 | 90 | 6839 | 5.00 | 5.01 | |
| 46 Chloroform | 83 | 2.648 | 2.647 | 0.001 | 98 | 22972 | 5.00 | 4.89 | |
| 47 Carbon tetrachloride | 117 | 2.733 | 2.733 | 0.000 | 97 | 12442 | 5.00 | 4.49 | |
| 48 Ethyl acetate | 70 | 2.748 | 2.748 | 0.000 | 99 | 1821 | 10.0 | 9.57 | |
| 49 Methyl acrylate | 55 | 2.755 | 2.748 | 0.007 | 76 | 6855 | 5.00 | 4.63 | |
| 50 Tetrahydrofuran | 42 | 2.762 | 2.755 | 0.007 | 95 | 6772 | 10.0 | 10.2 | |
| $ 51 Dibromofluoromethane (Surr) | 113 | 2.776 | 2.776 | 0.000 | 98 | 119812 | 50.0 | 50.7 | |
| 52 1,1,1-Trichloroethane | 97 | 2.784 | 2.776 | 0.008 | 98 | 17778 | 5.00 | 4.71 | |
| * 53 2-Butanone-d5 | 46 | 2.834 | 2.834 | 0.000 | 100 | 146821 | 250.0 | 250.0 | |
| 55 1,1-Dichloropropene | 75 | 2.870 | 2.869 | 0.001 | 96 | 21330 | 5.00 | 5.21 | a |
| 54 2-Butanone (MEK) | 72 | 2.870 | 2.869 | 0.001 | 90 | 5452 | 25.0 | 25.4 | |
| 56 Isooctane | 57 | 2.956 | 2.955 | 0.001 | 99 | 39210 | 5.00 | 4.73 | |
| 57 n-Heptane | 57 | 3.049 | 3.049 | 0.000 | 94 | 9455 | 5.00 | 4.65 | |
| 58 Benzene | 78 | 3.056 | 3.056 | 0.000 | 96 | 58103 | 5.00 | 4.84 | |
| 59 Propionitrile | 54 | 3.077 | 3.077 | 0.000 | 93 | 11490 | 50.0 | 47.3 | |
| 60 Methacrylonitrile | 67 | 3.099 | 3.092 | 0.007 | 92 | 38315 | 50.0 | 50.8 | |
| $ 61 1,2-Dichloroethane-d4 (Surr) | 65 | 3.156 | 3.156 | 0.000 | 0 | 119732 | 50.0 | 50.5 | |
| 62 Tert-amyl methyl ether | 73 | 3.170 | 3.163 | 0.007 | 98 | 30230 | 5.00 | 4.87 | |
| 63 1,2-Dichloroethane | 62 | 3.213 | 3.213 | 0.000 | 96 | 15916 | 5.00 | 5.19 | |
| 64 Isobutyl alcohol | 43 | 3.292 | 3.292 | 0.000 | 94 | 7071 | 125.0 | 115.5 | |
| 65 t-Amyl alcohol | 59 | 3.357 | 3.357 | 0.000 | 87 | 4530 | 50.0 | 45.6 | a |
| * 66 Fluorobenzene | 96 | 3.385 | 3.385 | 0.000 | 99 | 548804 | 50.0 | 50.0 | |
| 67 Isopropyl acetate | 43 | 3.464 | 3.457 | 0.007 | 98 | 17689 | 5.00 | 5.08 | |
| 68 Methylcyclohexane | 83 | 3.507 | 3.507 | 0.000 | 96 | 21835 | 5.00 | 4.51 | |
| 69 Trichloroethene | 130 | 3.536 | 3.536 | 0.000 | 98 | 13926 | 5.00 | 4.70 | |
| 70 2-ethoxy-2-methyl butane | 59 | 3.772 | 3.772 | 0.000 | 93 | 28737 | 5.00 | 4.70 | |
| 71 Dibromomethane | 93 | 3.901 | 3.894 | 0.007 | 96 | 6905 | 5.00 | 5.23 | |
| 72 n-Butanol | 56 | 3.930 | 3.915 | 0.015 | 69 | 3568 | 125.0 | 94.9 | a |
| 73 1,2-Dichloropropane | 63 | 3.987 | 3.980 | 0.007 | 92 | 14565 | 5.00 | 4.91 | |
| 75 Dichlorobromomethane | 83 | 4.066 | 4.066 | 0.000 | 98 | 15658 | 5.00 | 4.81 | |
| 74 Ethyl acrylate | 55 | 4.080 | 4.066 | 0.014 | 98 | 8046 | 5.00 | 4.45 | M |
| * 76 1,4-Dioxane-d8 | 96 | 4.245 | 4.238 | 0.007 | 66 | 15504 | 1000.0 | 1000.0 | |
| 77 Methyl methacrylate | 100 | 4.274 | 4.259 | 0.015 | 92 | 3972 | 10.0 | 8.99 | |
| 78 1,4-Dioxane | 88 | 4.274 | 4.273 | 0.001 | 35 | 1785 | 100.0 | 99.8 | |
| 79 n-Propyl acetate | 43 | 4.424 | 4.417 | 0.007 | 98 | 9882 | 5.00 | 4.43 | |
| 80 2-Chloroethyl vinyl ether | 63 | 4.696 | 4.675 | 0.021 | 33 | 1592 | 5.01 | 2.84 | |
| 81 cis-1,3-Dichloropropene | 75 | 4.703 | 4.696 | 0.007 | 93 | 17150 | 5.00 | 4.36 | |
| $ 82 Toluene-d8 (Surr) | 98 | 4.882 | 4.882 | 0.000 | 99 | 499494 | 50.0 | 50.3 | |

| Compound | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q | Response | Cal Amt ug/l | OnCol Amt ug/l | Flags |
|---|---|---|---|---|---|---|---|---|---|
| 83 Toluene | 91 | 4.940 | 4.940 | 0.000 | 93 | 59660 | 5.00 | 4.89 | |
| 84 Epichlorohydrin | 57 | 4.997 | 4.983 | 0.014 | 91 | 2440 | 100.0 | 48.5 | |
| 85 2-Nitropropane | 41 | 5.190 | 5.197 | -0.007 | 97 | 2558 | 10.0 | 8.69 | a |
| 86 Tetrachloroethene | 166 | 5.362 | 5.362 | 0.000 | 97 | 13625 | 5.00 | 4.74 | |
| 87 4-Methyl-2-pentanone (MIBK) | 43 | 5.412 | 5.405 | 0.007 | 97 | 37833 | 25.0 | 24.9 | |
| 88 trans-1,3-Dichloropropene | 75 | 5.448 | 5.441 | 0.007 | 93 | 13917 | 5.00 | 4.45 | |
| 89 1,1,2-Trichloroethane | 83 | 5.613 | 5.606 | 0.007 | 95 | 7946 | 5.00 | 4.77 | |
| 90 Ethyl methacrylate | 69 | 5.713 | 5.699 | 0.014 | 90 | 10862 | 5.00 | 4.66 | |
| 91 Chlorodibromomethane | 129 | 5.806 | 5.799 | 0.007 | 98 | 9794 | 5.00 | 4.56 | |
| 92 1,3-Dichloropropane | 76 | 5.928 | 5.914 | 0.014 | 93 | 17208 | 5.00 | 4.97 | |
| 93 Ethylene Dibromide | 107 | 6.057 | 6.050 | 0.007 | 99 | 7636 | 5.00 | 4.27 | |
| 94 n-Butyl acetate | 43 | 6.408 | 6.401 | 0.007 | 98 | 9910 | 5.00 | 4.61 | |
| 95 2-Hexanone | 43 | 6.465 | 6.458 | 0.007 | 94 | 23919 | 25.0 | 23.5 | |
| * 96 Chlorobenzene-d5 | 117 | 6.723 | 6.723 | 0.000 | 86 | 384707 | 50.0 | 50.0 | |
| 97 Chlorobenzene | 112 | 6.745 | 6.745 | 0.000 | 94 | 38391 | 5.00 | 5.02 | |
| 98 Ethylbenzene | 106 | 6.838 | 6.831 | 0.007 | 98 | 21119 | 5.00 | 4.93 | |
| 99 1,1,1,2-Tetrachloroethane | 131 | 6.859 | 6.859 | 0.000 | 94 | 11192 | 5.00 | 4.73 | |
| 100 m-Xylene & p-Xylene | 106 | 7.053 | 7.046 | 0.007 | 0 | 25007 | 5.00 | 4.98 | |
| 101 o-Xylene | 106 | 7.633 | 7.626 | 0.007 | 94 | 24870 | 5.00 | 4.89 | |
| 102 Bromoform | 173 | 7.705 | 7.690 | 0.015 | 95 | 5800 | 5.00 | 4.78 | |
| 103 Styrene | 104 | 7.726 | 7.719 | 0.007 | 95 | 37835 | 5.00 | 4.65 | |
| 104 n-Butyl acrylate | 73 | 8.070 | 8.056 | 0.014 | 98 | 5873 | 5.00 | 4.64 | |
| 105 Isopropylbenzene | 105 | 8.113 | 8.113 | 0.000 | 95 | 64696 | 5.00 | 4.91 | |
| 106 Amyl acetate (mixed isomers) | 43 | 8.478 | 8.471 | 0.007 | 39 | 12401 | 5.00 | 4.31 | |
| $ 107 4-Bromofluorobenzene | 174 | 8.485 | 8.478 | 0.007 | 92 | 159019 | 50.0 | 51.1 | |
| 108 Bromobenzene | 156 | 8.593 | 8.586 | 0.007 | 99 | 16184 | 5.00 | 5.05 | |
| 109 N-Propylbenzene | 91 | 8.743 | 8.743 | 0.000 | 99 | 76993 | 5.00 | 4.80 | |
| 110 1,1,2,2-Tetrachloroethane | 83 | 8.894 | 8.894 | 0.000 | 97 | 10928 | 5.00 | 4.91 | |
| 111 2-Chlorotoluene | 91 | 8.915 | 8.908 | 0.007 | 97 | 51336 | 5.00 | 4.64 | |
| 112 4-Ethyltoluene | 105 | 8.937 | 8.929 | 0.008 | 98 | 62764 | 5.00 | 4.71 | |
| 113 1,2,3-Trichloropropane | 110 | 9.023 | 9.023 | 0.000 | 97 | 3042 | 5.00 | 5.17 | |
| 114 1,3,5-Trimethylbenzene | 105 | 9.087 | 9.087 | 0.000 | 94 | 54335 | 5.00 | 4.89 | |
| 115 trans-1,4-Dichloro-2-butene | 53 | 9.209 | 9.166 | 0.043 | 39 | 1211 | 5.00 | 2.85 | a |
| 116 4-Chlorotoluene | 91 | 9.187 | 9.173 | 0.014 | 97 | 48163 | 5.00 | 4.96 | |
| 117 tert-Butylbenzene | 119 | 9.553 | 9.545 | 0.008 | 95 | 45475 | 5.00 | 4.73 | |
| 118 1,2,4-Trimethylbenzene | 105 | 9.689 | 9.682 | 0.007 | 98 | 54807 | 5.00 | 4.78 | |
| 119 Butyl Methacrylate | 87 | 9.703 | 9.696 | 0.007 | 94 | 13195 | 5.00 | 4.58 | |
| 120 sec-Butylbenzene | 105 | 9.839 | 9.839 | 0.000 | 99 | 70498 | 5.00 | 4.83 | |
| 121 1,3-Dichlorobenzene | 146 | 10.104 | 10.097 | 0.007 | 97 | 30024 | 5.00 | 4.74 | |
| 122 4-Isopropyltoluene | 119 | 10.119 | 10.118 | 0.001 | 98 | 56813 | 5.00 | 4.61 | |
| * 123 1,4-Dichlorobenzene-d4 | 152 | 10.226 | 10.226 | 0.000 | 95 | 216898 | 50.0 | 50.0 | |
| 124 1,4-Dichlorobenzene | 146 | 10.255 | 10.247 | 0.008 | 96 | 33274 | 5.00 | 4.99 | |
| 125 1,2,3-Trimethylbenzene | 105 | 10.362 | 10.355 | 0.007 | 98 | 56856 | 5.00 | 4.89 | |
| 126 2,3-Dihydroindene | 117 | 10.534 | 10.527 | 0.007 | 93 | 54276 | 5.00 | 4.81 | |
| 127 Benzyl chloride | 126 | 10.735 | 10.713 | 0.022 | 76 | 2533 | 5.00 | 4.22 | |
| 128 p-Diethylbenzene | 119 | 10.735 | 10.727 | 0.008 | 90 | 28516 | 5.00 | 4.59 | |
| 129 n-Butylbenzene | 91 | 10.821 | 10.813 | 0.008 | 99 | 53640 | 5.00 | 4.78 | |
| 130 1,2-Dichlorobenzene | 146 | 10.928 | 10.921 | 0.007 | 96 | 27923 | 5.00 | 4.82 | |
| 131 1,2,4,5-Tetramethylbenzene | 119 | 11.931 | 11.924 | 0.007 | 97 | 50087 | 5.00 | 4.63 | |
| 132 1,2-Dibromo-3-Chloropropane | 157 | 12.081 | 12.074 | 0.007 | 92 | 1659 | 5.00 | 4.48 | |
| 133 1,3,5-Trichlorobenzene | 180 | 12.131 | 12.124 | 0.007 | 97 | 22827 | 5.00 | 4.97 | |
| 134 1,2,4-Trichlorobenzene | 180 | 12.826 | 12.819 | 0.007 | 94 | 18563 | 5.00 | 4.81 | |

| Compound | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q | Response | Cal Amt ug/l | OnCol Amt ug/l | Flags |
|---|---|---|---|---|---|---|---|---|---|
| 135 Hexachlorobutadiene | 225 | 12.841 | 12.840 | 0.000 | 97 | 8036 | 5.00 | 4.72 | a |
| 136 Naphthalene | 128 | 13.134 | 13.127 | 0.007 | 99 | 32667 | 5.00 | 4.59 | |
| 137 1,2,3-Trichlorobenzene | 180 | 13.306 | 13.299 | 0.007 | 94 | 15014 | 5.00 | 4.75 | |
| S 138 1,2-Dichloroethene, Total | 100 | | | | 0 | | 10.0 | 9.92 | |
| S 139 1,3-Dichloropropene, Total | 100 | | | | 0 | | 10.0 | 8.81 | |
| S 140 Xylenes, Total | 100 | | | | 0 | | 10.0 | 9.87 | |
| S 142 Total BTEX | 1 | | | | 0 | | 25.0 | 24.5 | |

## QC Flag Legend

Review Flags

M - Manually Integrated

a - User Assigned ID

## Reagents:

| | | | | |
|---|---|---|---|---|
| 8260MIX1COMB_00125 | Amount Added: 10.00 | Units: uL | | |
| ACROLEIN W_00112 | Amount Added: 4.00 | Units: uL | | |
| GASES Li_00384 | Amount Added: 10.00 | Units: uL | | |
| 524freon_00027 | Amount Added: 10.00 | Units: uL | | |
| 8260ISNEW_00129 | Amount Added: 1.00 | Units: uL | Run Reagent | |
| 8260SURR250_00212 | Amount Added: 1.00 | Units: uL | Run Reagent | |

Report Date: 10-Sep-2020 10:38:16 Chrom Revision: 2.3 20-Aug-2020 13:57:12

Eurofins TestAmerica, Edison

Data File: \\chromfs\Edison\ChromData\CVOAMS13\20200904-116303.b\P79355.D

Injection Date: 04-Sep-2020 15:21:30 Instrument ID: CVOAMS13 Operator ID:

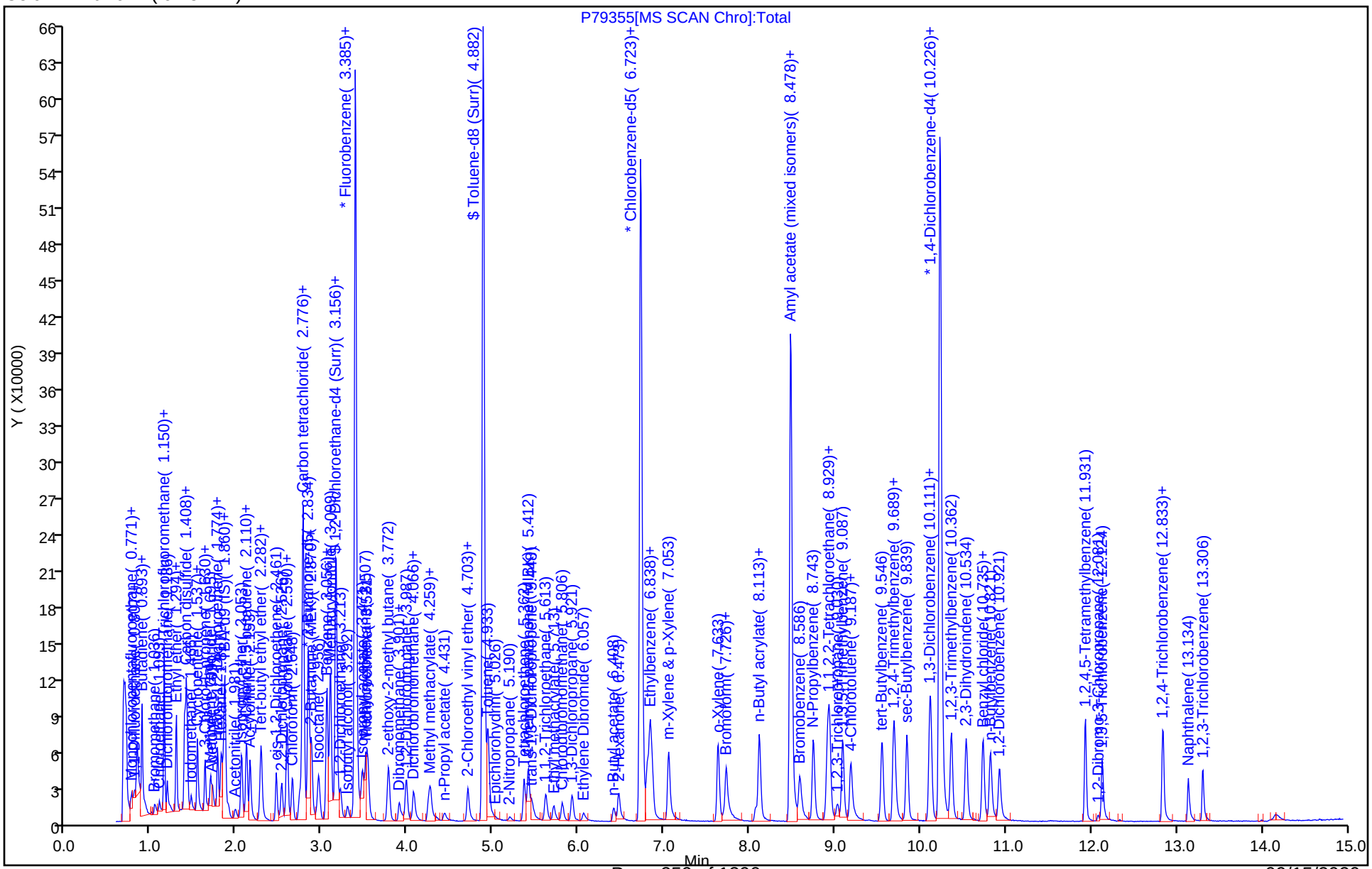
Lims ID: STD5 Worklist Smp#: 5

Client ID:

Purge Vol: 5.000 mL Dil. Factor: 1.0000 ALS Bottle#: 5

Method: 8260W_13 Limit Group: VOA - 8260C Water and Solid

Column: Rtx-624 ( 0.25 mm)



Eurofins TestAmerica, Edison

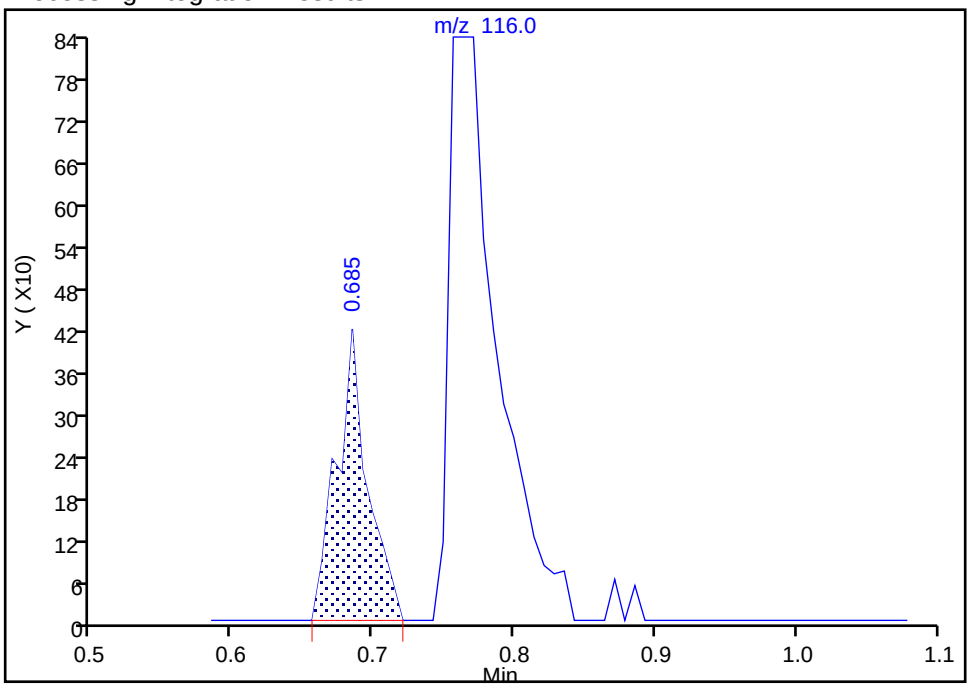
Data File: \\chromfs\Edison\ChromData\CVOAMS13\20200904-116303.b\P79355.D
Injection Date: 04-Sep-2020 15:21:30 Instrument ID: CVOAMS13
Lims ID: STD5
Client ID:
Operator ID: ALS Bottle#: 5 Worklist Smp#: 5
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: 8260W_13 Limit Group: VOA - 8260C Water and Solid
Column: Rtx-624 ( 0.25 mm) Detector MS SCAN

## 2 Chlorotrifluoroethene, CAS: 79-38-9

Signal: 1

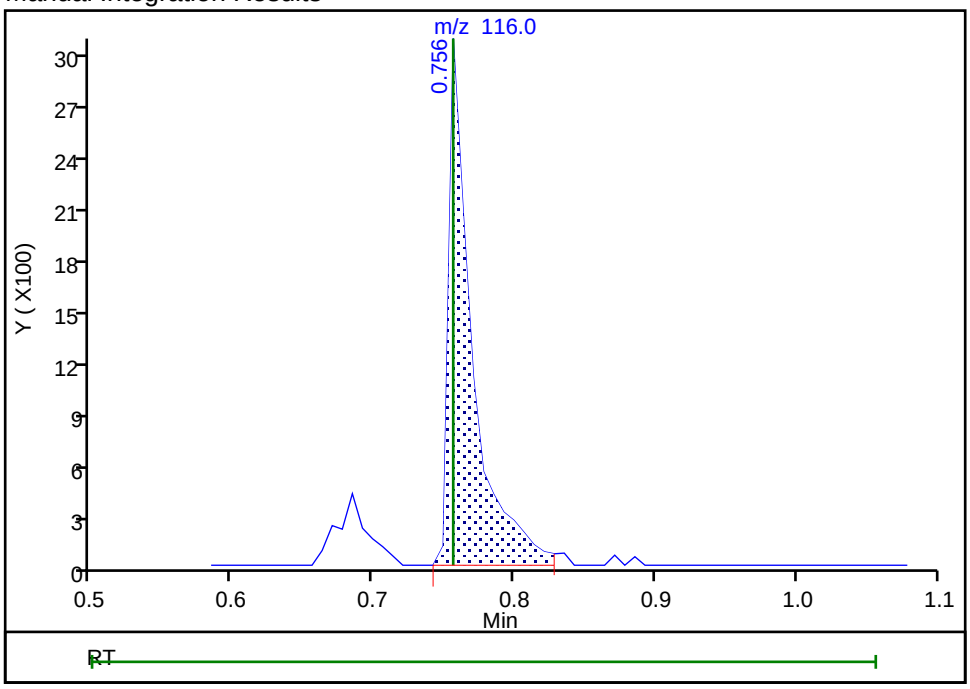
Processing Integration Results

RT: 0.68
Area: 638
Amount: 5.024448
Amount Units: ug/l




Manual Integration Results

RT: 0.76
Area: 3587
Amount: 4.163868
Amount Units: ug/l




Reviewer: starzecm, 04-Sep-2020 14:40:39
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Edison

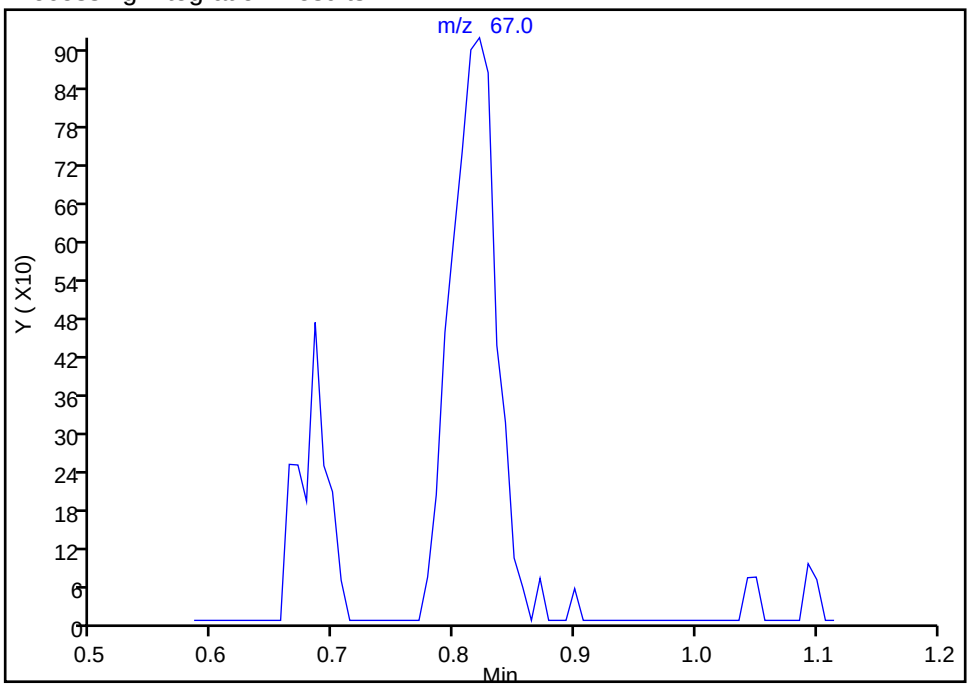
Data File: \\chromfs\Edison\ChromData\CVOAMS13\20200904-116303.b\P79355.D
Injection Date: 04-Sep-2020 15:21:30 Instrument ID: CVOAMS13
Lims ID: STD5
Client ID:
Operator ID: ALS Bottle#: 5 Worklist Smp#: 5
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: 8260W_13 Limit Group: VOA - 8260C Water and Solid
Column: Rtx-624 ( 0.25 mm) Detector MS SCAN

## 5 Chlorodifluoromethane, CAS: 75-45-6

Signal: 1

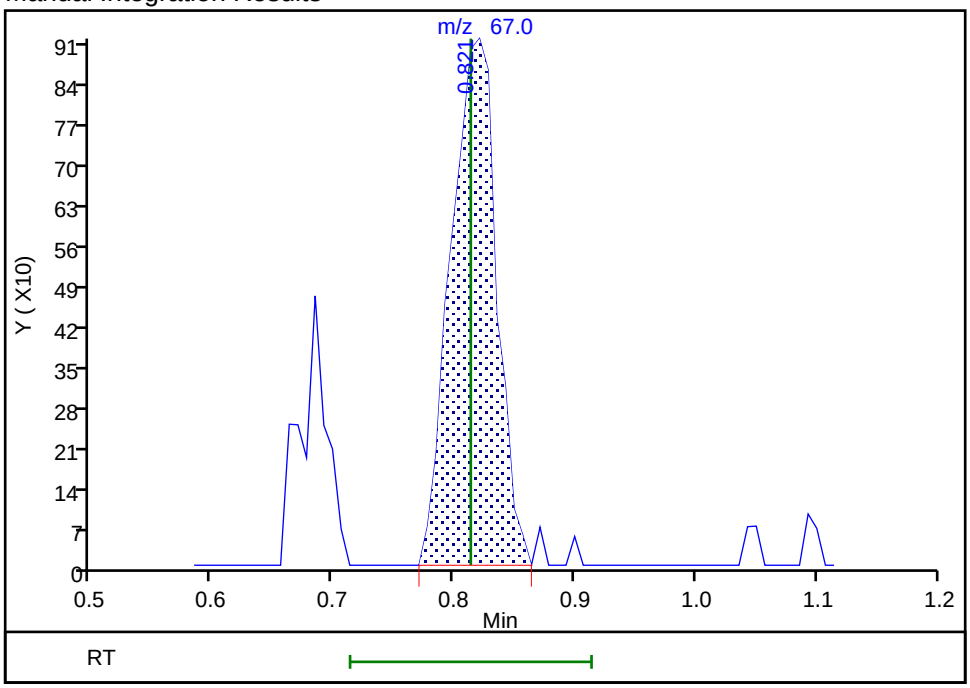
Not Detected
Expected RT: 0.81

Processing Integration Results




Manual Integration Results

RT: 0.82
Area: 2413
Amount: 4.761146
Amount Units: ug/l




Reviewer: starzecm, 04-Sep-2020 14:40:51
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Edison

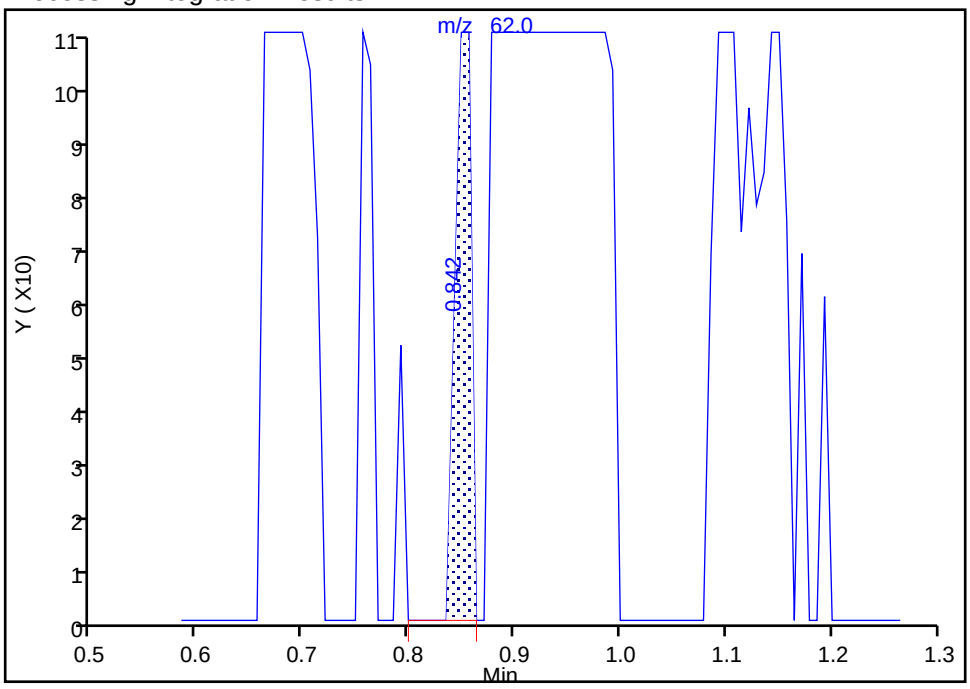
Data File: \\chromfs\Edison\ChromData\CVOAMS13\20200904-116303.b\P79355.D
Injection Date: 04-Sep-2020 15:21:30 Instrument ID: CVOAMS13
Lims ID: STD5
Client ID:
Operator ID: ALS Bottle#: 5 Worklist Smp#: 5
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: 8260W_13 Limit Group: VOA - 8260C Water and Solid
Column: Rtx-624 ( 0.25 mm) Detector MS SCAN

## 7 Vinyl chloride, CAS: 75-01-4

Signal: 1

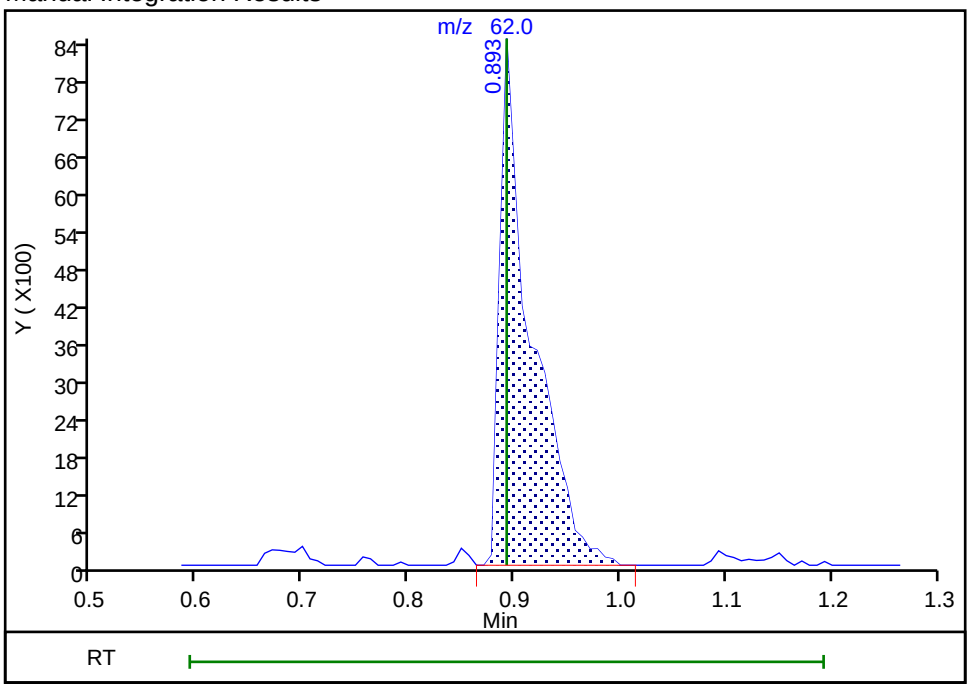
Processing Integration Results

RT: 0.84
Area: 208
Amount: 0.071241
Amount Units: ug/l




Manual Integration Results

RT: 0.89
Area: 17466
Amount: 4.615518
Amount Units: ug/l




Reviewer: starzecm, 04-Sep-2020 14:40:59
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Eurofins TestAmerica, Edison

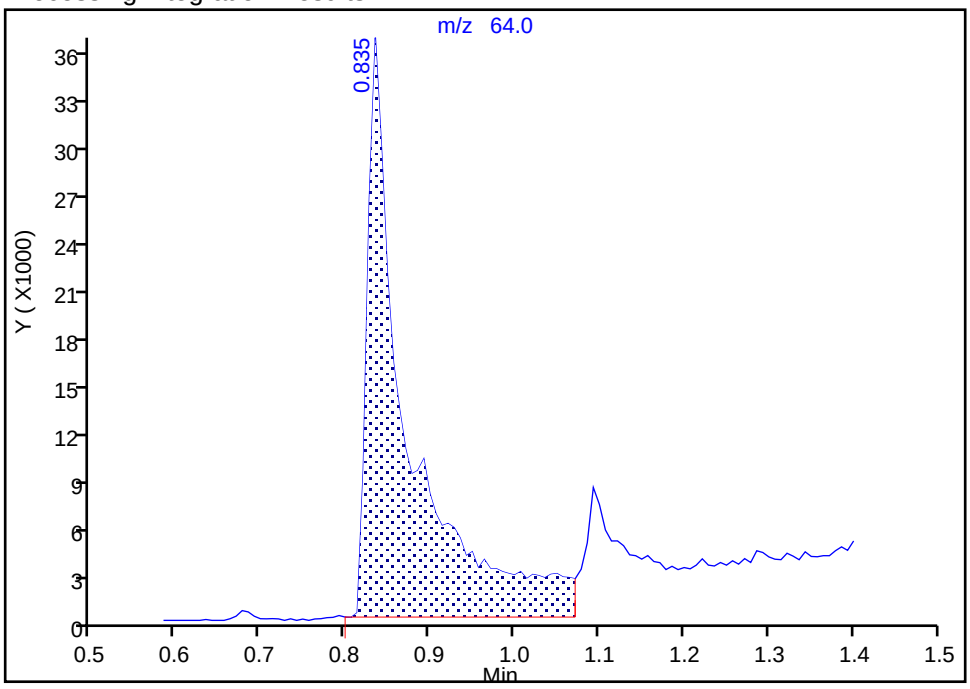
Data File: \\chromfs\Edison\ChromData\CVOAMS13\20200904-116303.b\P79355.D
Injection Date: 04-Sep-2020 15:21:30 Instrument ID: CVOAMS13
Lims ID: STD5
Client ID:
Operator ID: ALS Bottle#: 5 Worklist Smp#: 5
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: 8260W_13 Limit Group: VOA - 8260C Water and Solid
Column: Rtx-624 ( 0.25 mm) Detector MS SCAN

## 10 Chloroethane, CAS: 75-00-3

Signal: 1

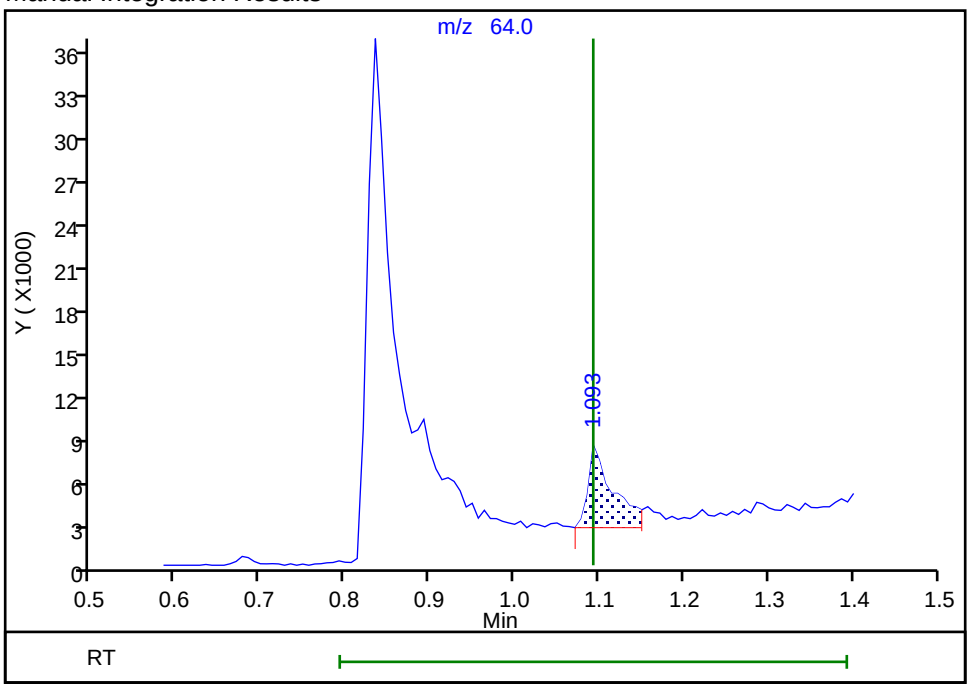
Processing Integration Results

RT: 0.84
Area: 119362
Amount: 0.228626
Amount Units: ug/l




Manual Integration Results

RT: 1.09
Area: 11587
Amount: 5.763158
Amount Units: ug/l




Reviewer: starzecm, 04-Sep-2020 14:41:45
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Edison

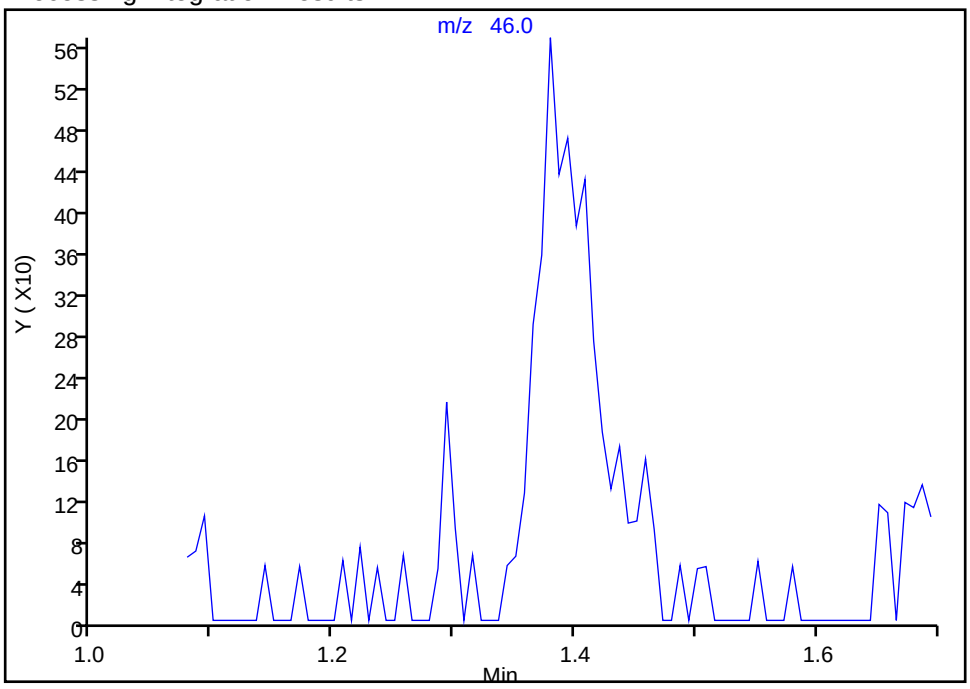
Data File: \\chromfs\Edison\ChromData\CVOAMS13\20200904-116303.b\P79355.D
Injection Date: 04-Sep-2020 15:21:30 Instrument ID: CVOAMS13
Lims ID: STD5
Client ID:
Operator ID: ALS Bottle#: 5 Worklist Smp#: 5
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: 8260W_13 Limit Group: VOA - 8260C Water and Solid
Column: Rtx-624 ( 0.25 mm) Detector MS SCAN

## 16 Ethanol, CAS: 64-17-5

Signal: 1

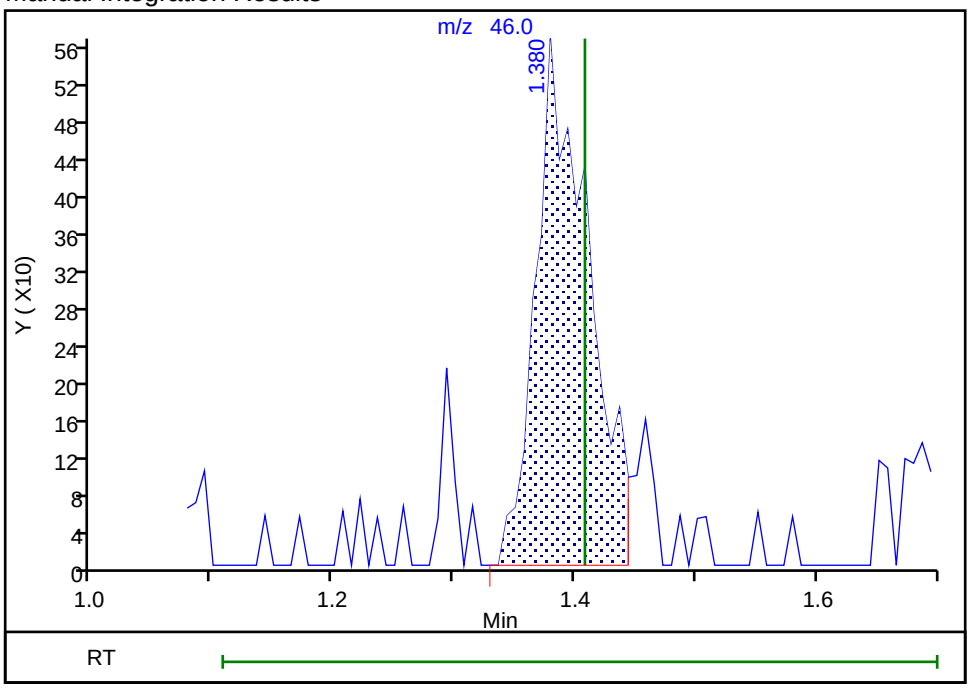
Not Detected
Expected RT: 1.41

Processing Integration Results




Manual Integration Results

RT: 1.38
Area: 1713
Amount: 180.3585
Amount Units: ug/l




Reviewer: starzecm, 04-Sep-2020 14:42:48
Audit Action: Assigned Compound ID Audit Reason: Incomplete Integration

Eurofins TestAmerica, Edison

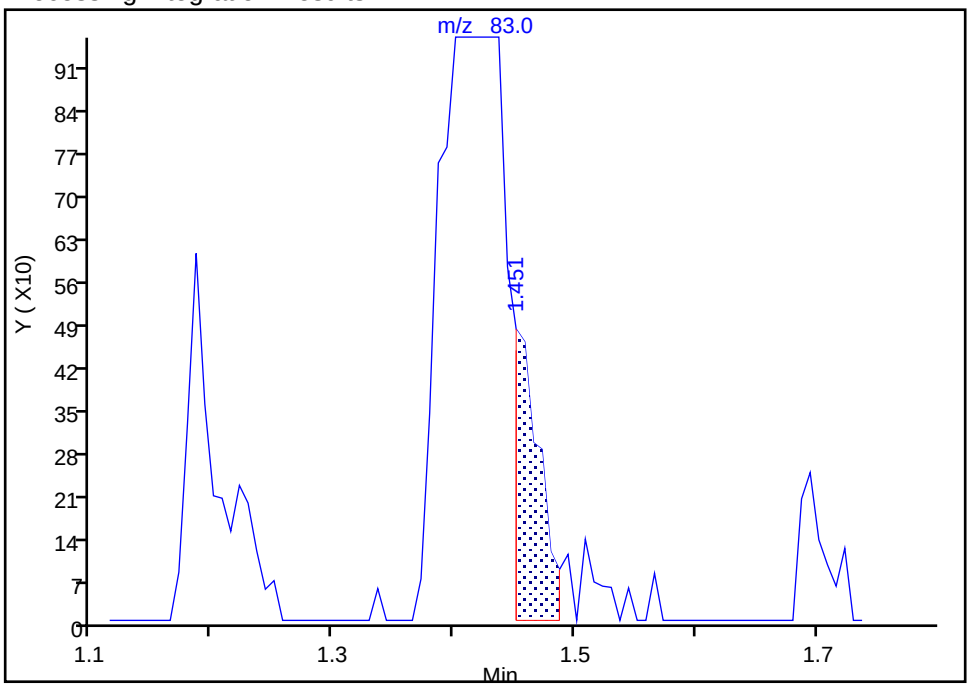
Data File: \\chromfs\Edison\ChromData\CVOAMS13\20200904-116303.b\P79355.D
Injection Date: 04-Sep-2020 15:21:30 Instrument ID: CVOAMS13
Lims ID: STD5
Client ID:
Operator ID: ALS Bottle#: 5 Worklist Smp#: 5
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: 8260W_13 Limit Group: VOA - 8260C Water and Solid
Column: Rtx-624 ( 0.25 mm) Detector MS SCAN

## 21 1,1,1-Trifluoro-2,2-dichloroetha, CAS: 306-83-2

Signal: 1

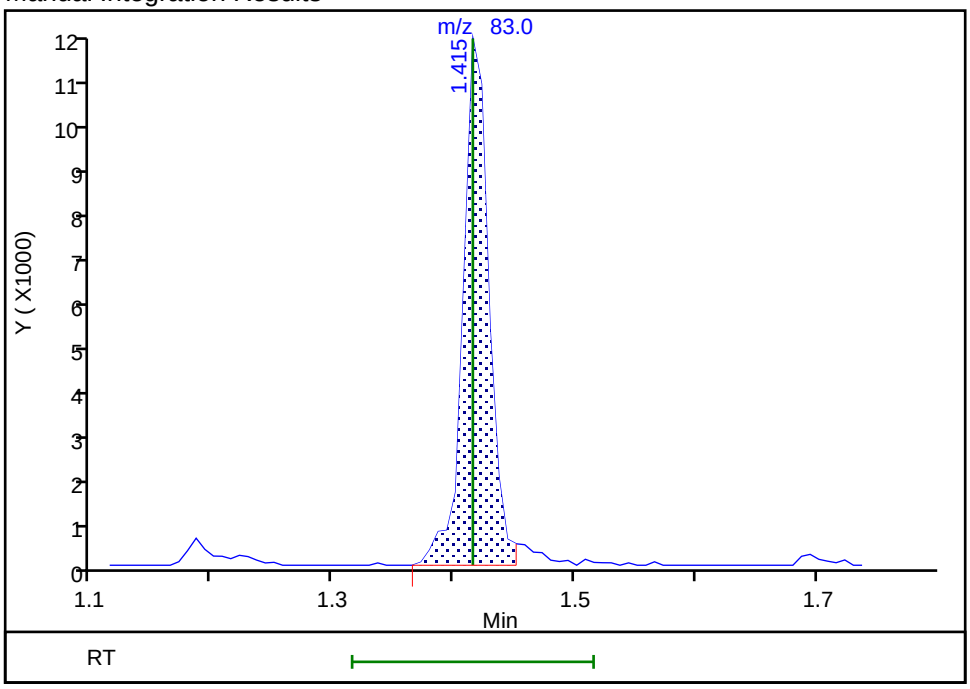
Processing Integration Results

RT: 1.45
Area: 731
Amount: 0.287735
Amount Units: ug/l




Manual Integration Results

RT: 1.42
Area: 17523
Amount: 4.684757
Amount Units: ug/l




Reviewer: starzecm, 04-Sep-2020 14:42:28
Audit Action: Assigned Compound ID Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Edison

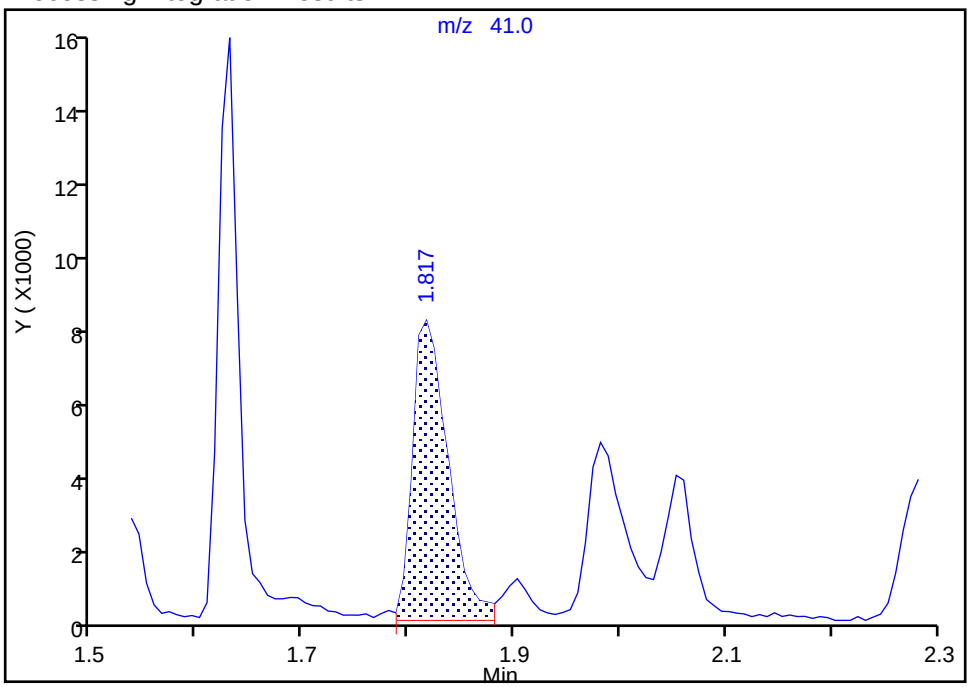
Data File: \\chromfs\Edison\ChromData\CVOAMS13\20200904-116303.b\P79355.D
Injection Date: 04-Sep-2020 15:21:30 Instrument ID: CVOAMS13
Lims ID: STD5
Client ID:
Operator ID: ALS Bottle#: 5 Worklist Smp#: 5
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: 8260W_13 Limit Group: VOA - 8260C Water and Solid
Column: Rtx-624 ( 0.25 mm) Detector MS SCAN

## 35 Acetonitrile, CAS: 75-05-8

Signal: 1

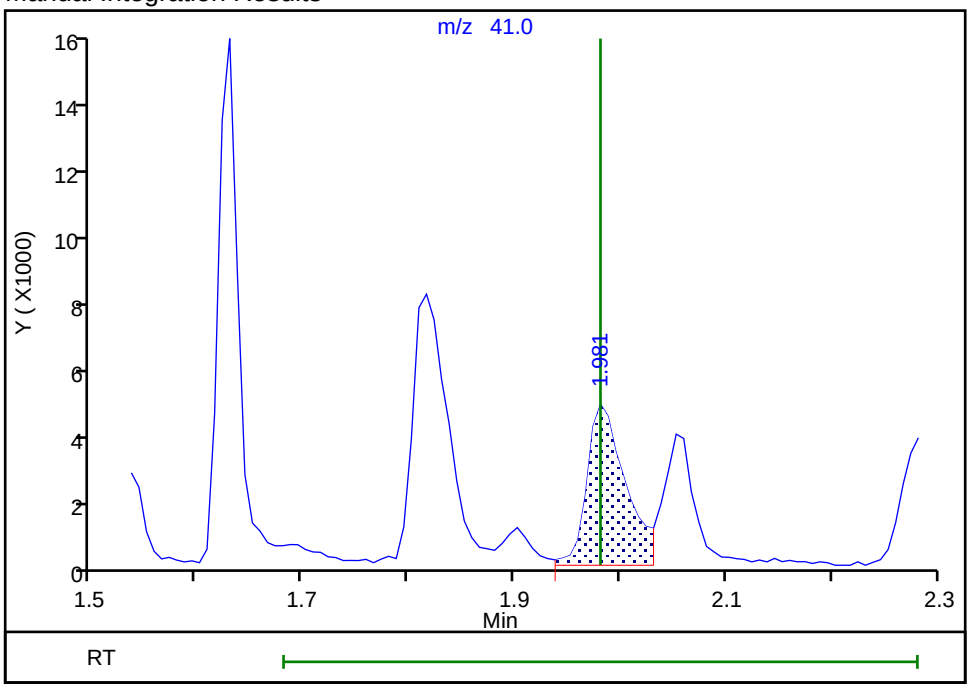
Processing Integration Results

RT: 1.82
Area: 18719
Amount: 46.439067
Amount Units: ug/l




Manual Integration Results

RT: 1.98
Area: 12143
Amount: 53.050268
Amount Units: ug/l




Reviewer: starzecm, 04-Sep-2020 14:43:46
Audit Action: Assigned Compound ID Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Edison

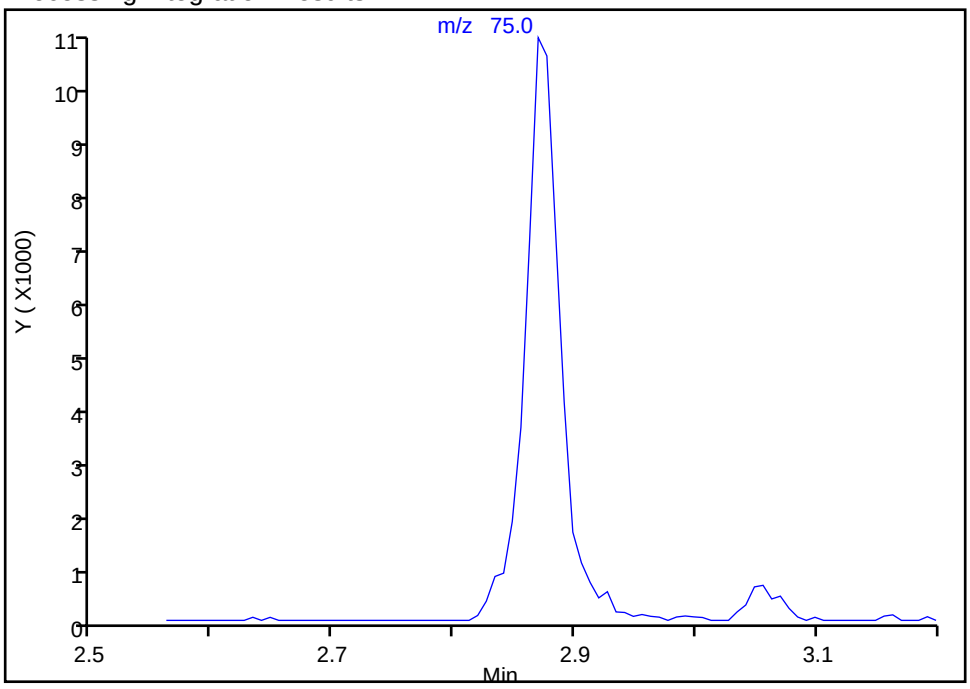
Data File: \\chromfs\Edison\ChromData\CVOAMS13\20200904-116303.b\P79355.D
Injection Date: 04-Sep-2020 15:21:30 Instrument ID: CVOAMS13
Lims ID: STD5
Client ID:
Operator ID: ALS Bottle#: 5 Worklist Smp#: 5
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: 8260W_13 Limit Group: VOA - 8260C Water and Solid
Column: Rtx-624 ( 0.25 mm) Detector MS SCAN

## 55 1,1-Dichloropropene, CAS: 563-58-6

Signal: 1

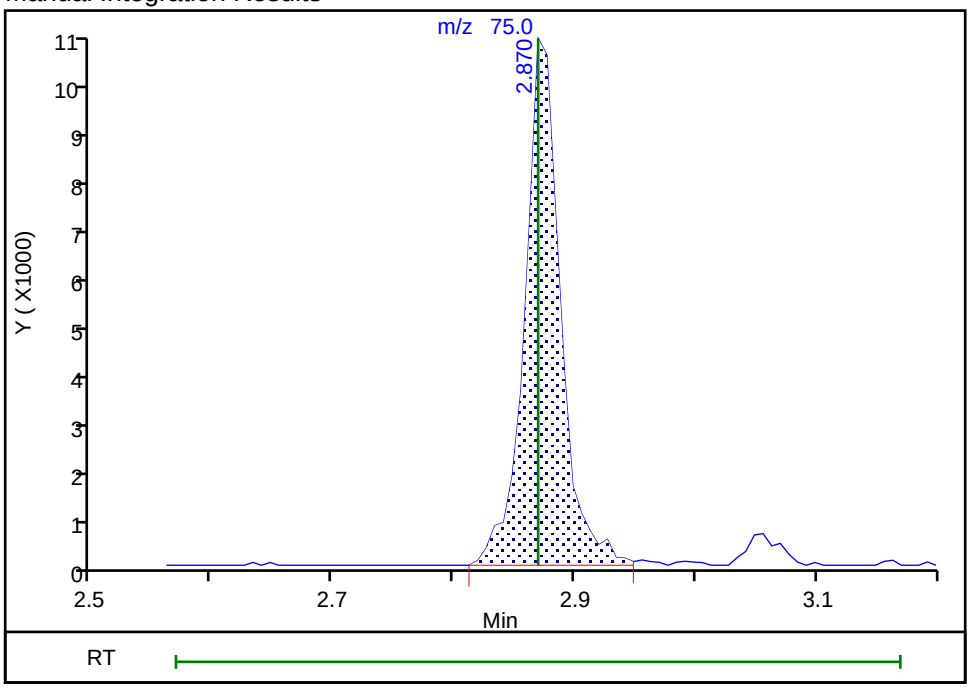
Not Detected
Expected RT: 2.87

Processing Integration Results




Manual Integration Results

RT: 2.87
Area: 21330
Amount: 5.211473
Amount Units: ug/l




Reviewer: starzecm, 04-Sep-2020 14:44:09
Audit Action: Assigned Compound ID Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Edison

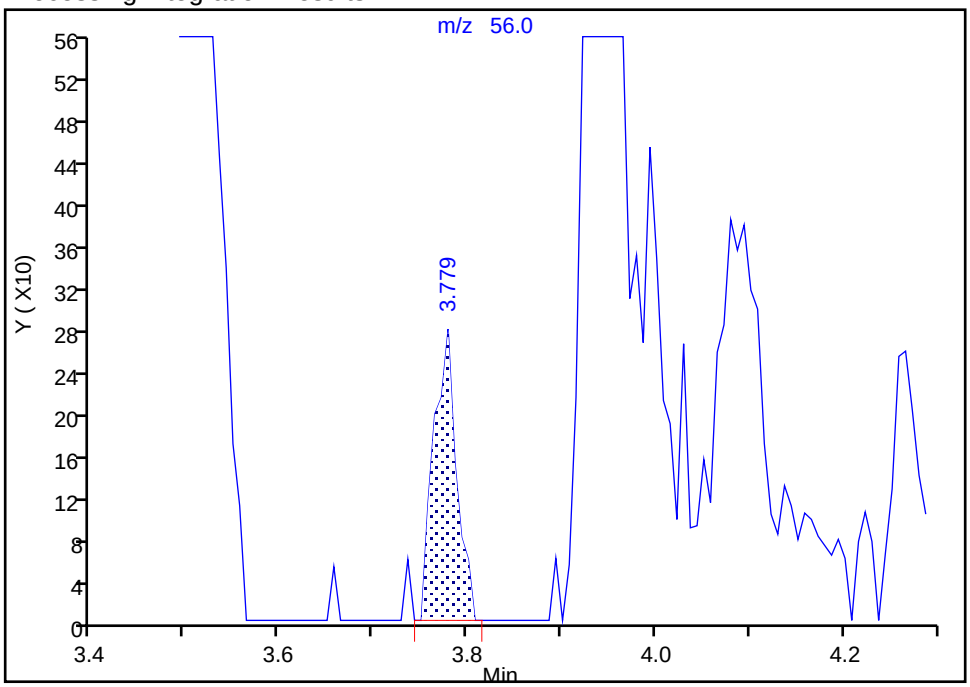
Data File: \\chromfs\Edison\ChromData\CVOAMS13\20200904-116303.b\P79355.D
Injection Date: 04-Sep-2020 15:21:30 Instrument ID: CVOAMS13
Lims ID: STD5
Client ID:
Operator ID: ALS Bottle#: 5 Worklist Smp#: 5
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: 8260W_13 Limit Group: VOA - 8260C Water and Solid
Column: Rtx-624 ( 0.25 mm) Detector MS SCAN

## 72 n-Butanol, CAS: 71-36-3

Signal: 1

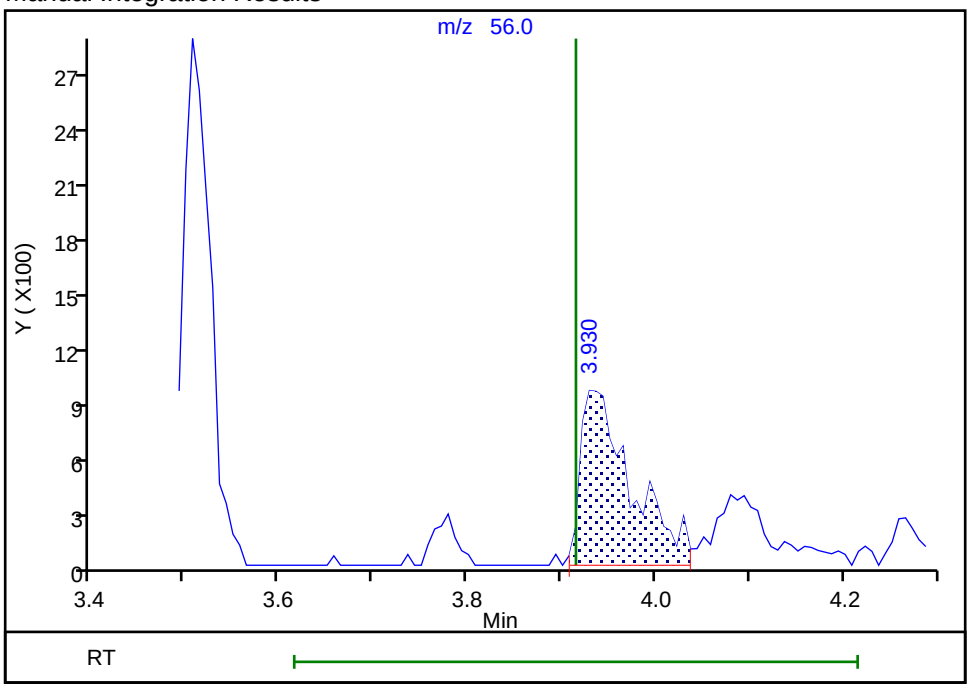
Processing Integration Results

RT: 3.78
Area: 466
Amount: 12.477019
Amount Units: ug/l




Manual Integration Results

RT: 3.93
Area: 3568
Amount: 94.887462
Amount Units: ug/l




Reviewer: boykink, 05-Sep-2020 00:30:44
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Eurofins TestAmerica, Edison

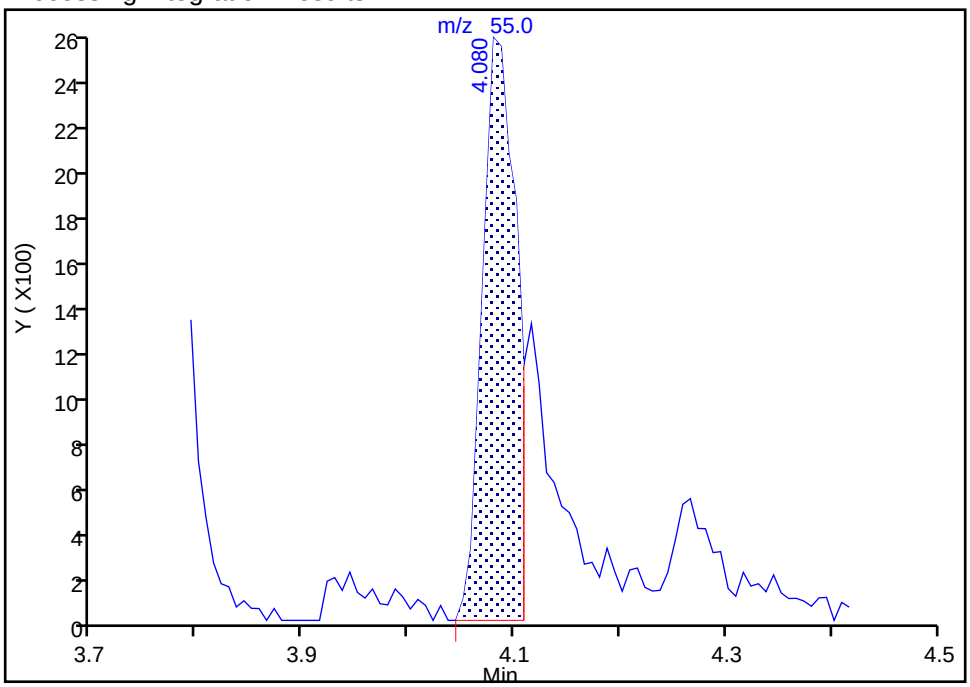
Data File: \\chromfs\Edison\ChromData\CVOAMS13\20200904-116303.b\P79355.D
Injection Date: 04-Sep-2020 15:21:30 Instrument ID: CVOAMS13
Lims ID: STD5
Client ID:
Operator ID: ALS Bottle#: 5 Worklist Smp#: 5
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: 8260W_13 Limit Group: VOA - 8260C Water and Solid
Column: Rtx-624 ( 0.25 mm) Detector MS SCAN

## 74 Ethyl acrylate, CAS: 140-88-5

Signal: 1

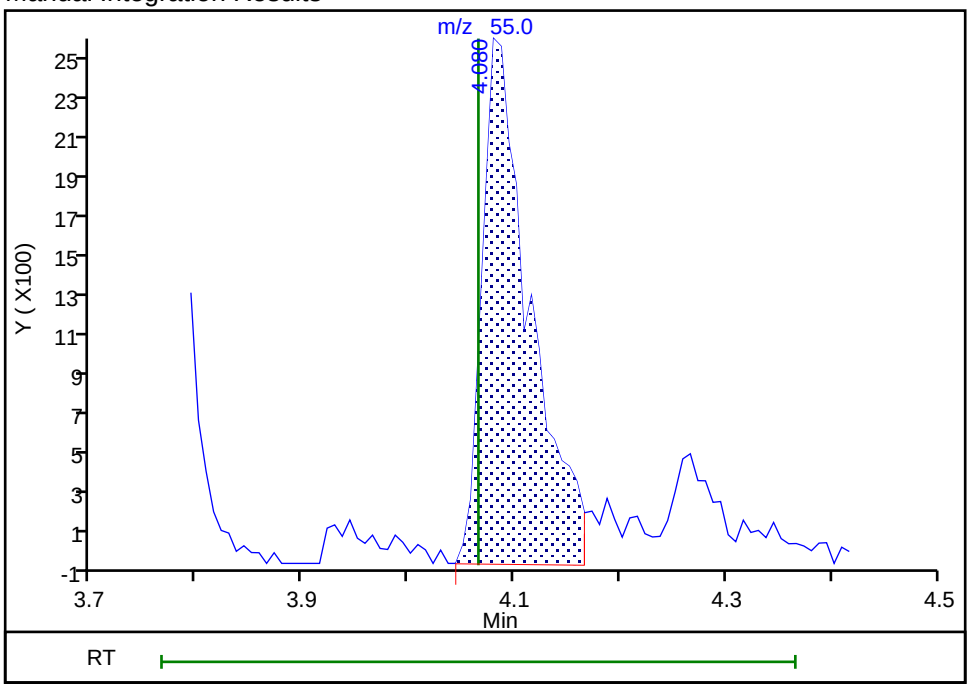
Processing Integration Results

RT: 4.08
Area: 5756
Amount: 2.563893
Amount Units: ug/l




Manual Integration Results

RT: 4.08
Area: 8046
Amount: 4.453863
Amount Units: ug/l




Reviewer: baronm, 05-Sep-2020 11:59:50
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Edison

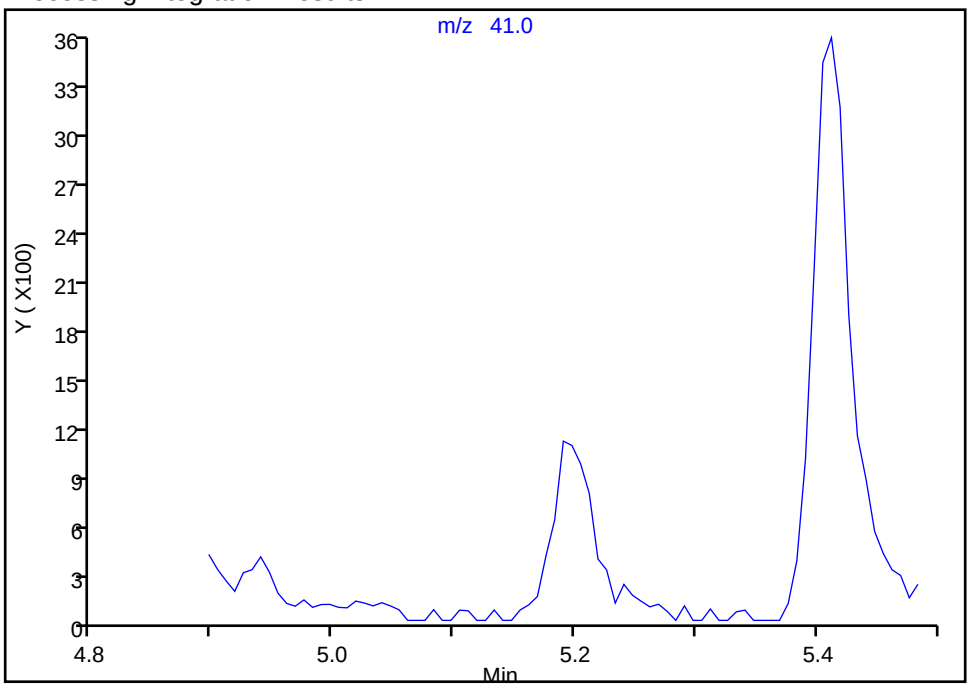
Data File: \\chromfs\Edison\ChromData\CVOAMS13\20200904-116303.b\P79355.D
Injection Date: 04-Sep-2020 15:21:30 Instrument ID: CVOAMS13
Lims ID: STD5
Client ID:
Operator ID: ALS Bottle#: 5 Worklist Smp#: 5
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: 8260W_13 Limit Group: VOA - 8260C Water and Solid
Column: Rtx-624 ( 0.25 mm) Detector MS SCAN

## 85 2-Nitropropane, CAS: 79-46-9

Signal: 1

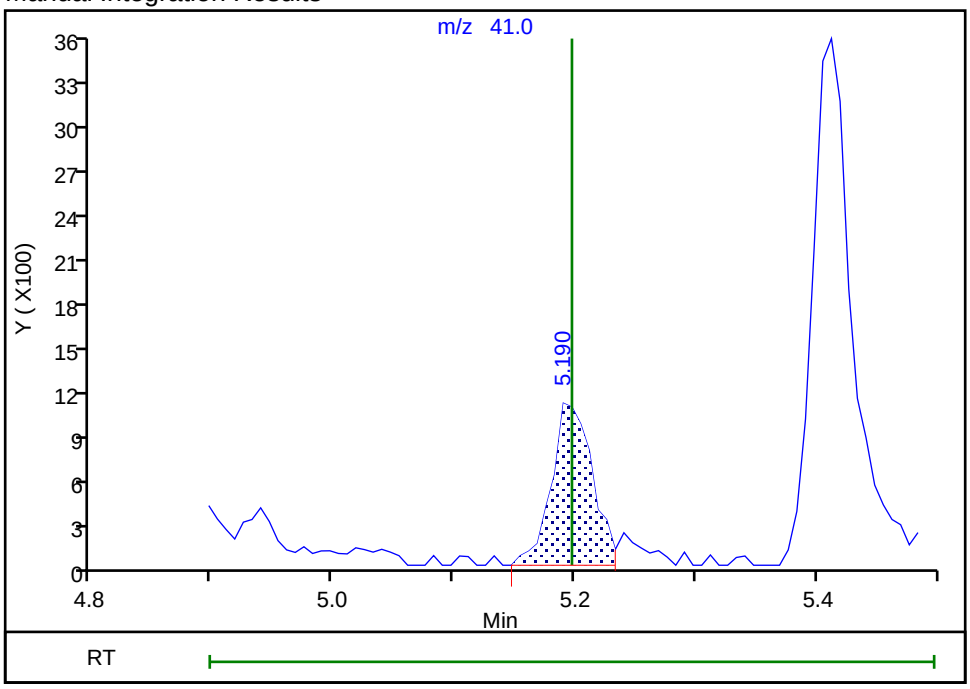
Not Detected
Expected RT: 5.20

Processing Integration Results




Manual Integration Results

RT: 5.19
Area: 2558
Amount: 8.685777
Amount Units: ug/l




Reviewer: baronm, 05-Sep-2020 12:13:04
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Edison

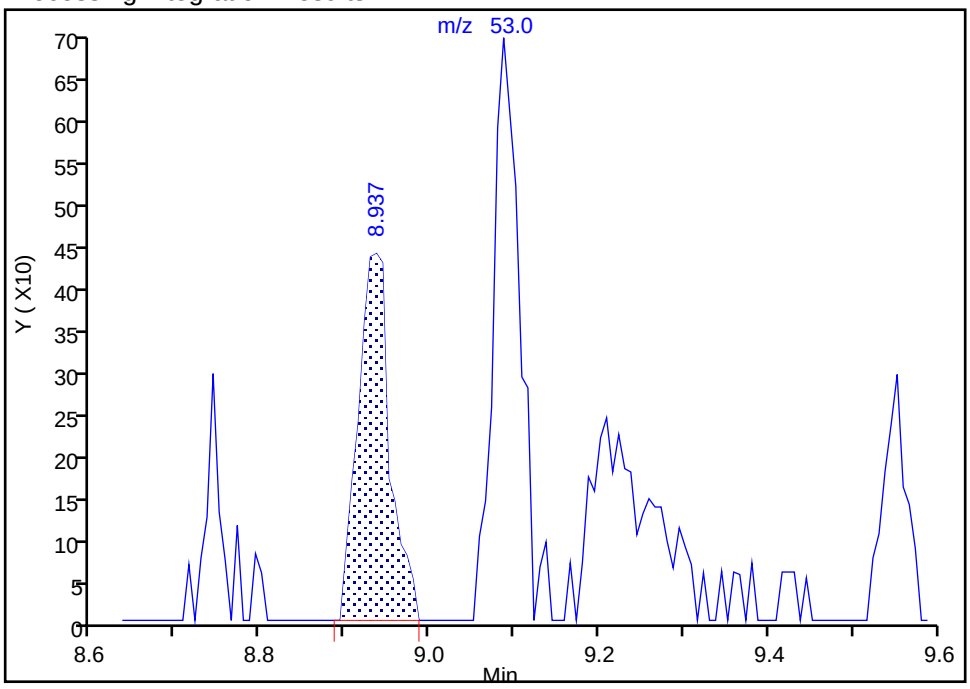
Data File: \\chromfs\Edison\ChromData\CVOAMS13\20200904-116303.b\P79355.D
Injection Date: 04-Sep-2020 15:21:30 Instrument ID: CVOAMS13
Lims ID: STD5
Client ID:
Operator ID: ALS Bottle#: 5 Worklist Smp#: 5
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: 8260W_13 Limit Group: VOA - 8260C Water and Solid
Column: Rtx-624 ( 0.25 mm) Detector MS SCAN

## 115 trans-1,4-Dichloro-2-butene, CAS: 110-57-6

Signal: 1

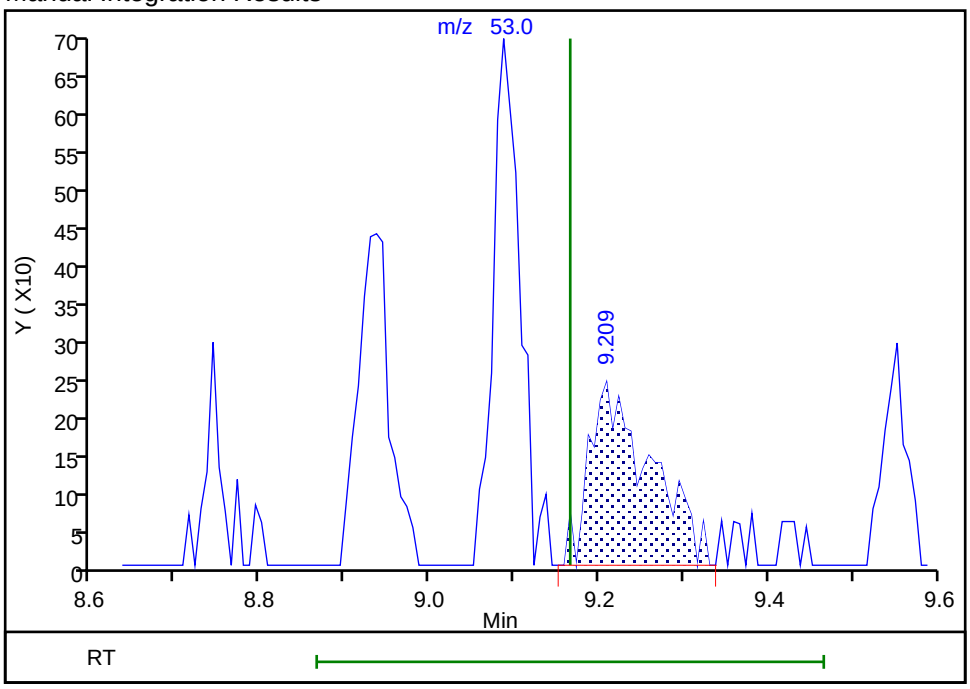
Processing Integration Results

RT: 8.94
Area: 1154
Amount: 3.377841
Amount Units: ug/l




Manual Integration Results

RT: 9.21
Area: 1211
Amount: 2.851459
Amount Units: ug/l




Reviewer: baronm, 05-Sep-2020 12:06:05
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Edison

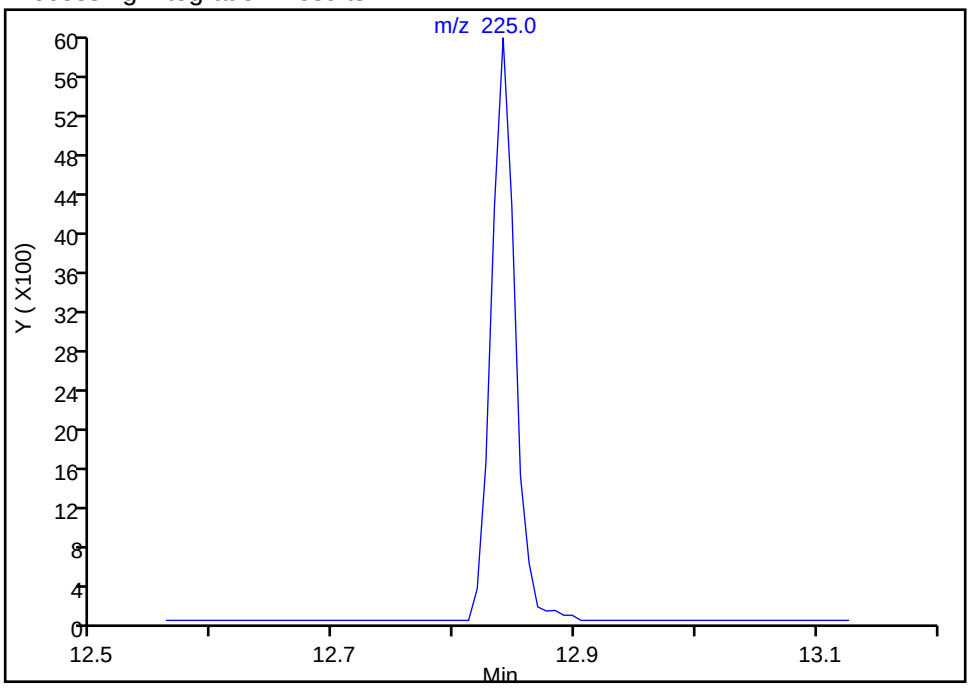
Data File: \\chromfs\Edison\ChromData\CVOAMS13\20200904-116303.b\P79355.D
Injection Date: 04-Sep-2020 15:21:30 Instrument ID: CVOAMS13
Lims ID: STD5
Client ID:
Operator ID: ALS Bottle#: 5 Worklist Smp#: 5
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: 8260W_13 Limit Group: VOA - 8260C Water and Solid
Column: Rtx-624 ( 0.25 mm) Detector MS SCAN

## 135 Hexachlorobutadiene, CAS: 87-68-3

Signal: 1

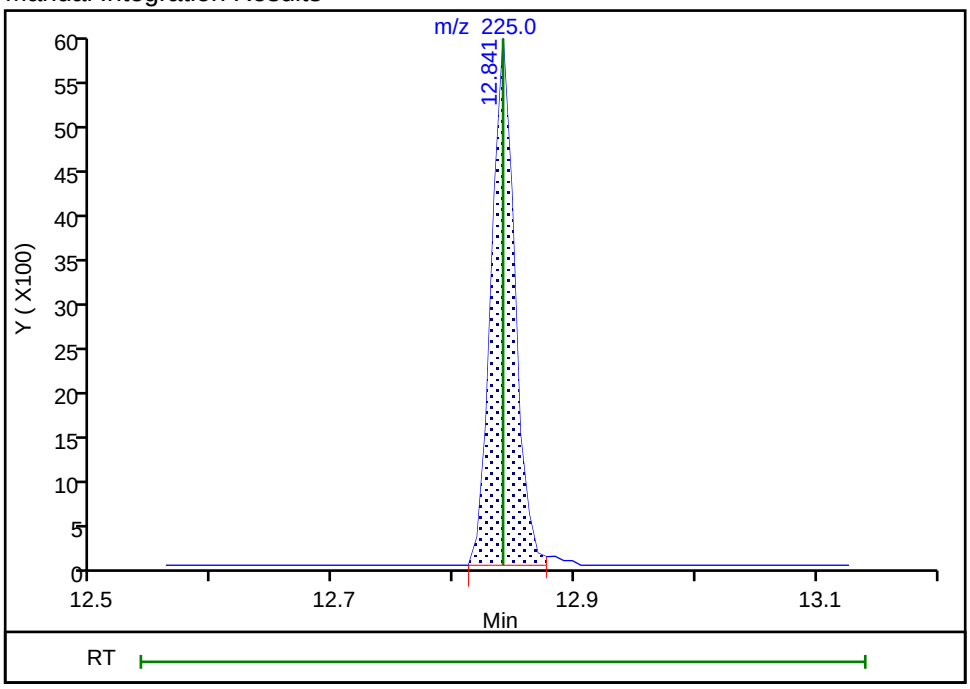
Not Detected
Expected RT: 12.84

Processing Integration Results




Manual Integration Results

RT: 12.84
Area: 8036
Amount: 4.716233
Amount Units: ug/l




Reviewer: starzecm, 04-Sep-2020 14:45:50
Audit Action: Assigned Compound ID Audit Reason: Incomplete Integration

Eurofins TestAmerica, Edison
Target Compound Quantitation Report

Data File: \\chromfs\Edison\ChromData\CVOAMS13\20200904-116303.b\P79356.D
Lims ID: STD20
Client ID:
Sample Type: ICIS Calib Level: 4
Inject. Date: 04-Sep-2020 15:45:30 ALS Bottle#: 6 Worklist Smp#: 6
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: STD20
Misc. Info.: 460-0116303-006
Operator ID: Instrument ID: CVOAMS13
Sublist: chrom-8260W_13*sub62

Method: \\chromfs\Edison\ChromData\CVOAMS13\20200904-116303.b\8260W_13.m
Limit Group: VOA - 8260C Water and Solid
Last Update: 10-Sep-2020 10:38:31 Calib Date: 04-Sep-2020 16:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Edison\ChromData\CVOAMS13\20200904-116303.b\P79359.D

Column 1 : Rtx-624 ( 0.25 mm) Det: MS SCAN
Process Host: CTX1019

First Level Reviewer: baronm Date: 06-Sep-2020 07:12:48

| Compound | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q | Response | Cal Amt ug/l | OnCol Amt ug/l | Flags |
|---|---|---|---|---|---|---|---|---|---|
| 1 Monochloropentafluoroethane | 119 | 0.721 | 0.721 | 0.000 | 68 | 4726 | 20.0 | 18.8 | M |
| 2 Chlorotrifluoroethene | 116 | 0.756 | 0.756 | 0.000 | 87 | 16846 | 20.0 | 18.8 | |
| 3 Dichlorodifluoromethane | 85 | 0.771 | 0.771 | 0.000 | 99 | 76055 | 20.0 | 19.8 | |
| 4 1,1-Difluoroethane | 65 | 0.807 | 0.807 | 0.000 | 89 | 34592 | 20.0 | 19.0 | |
| 5 Chlorodifluoromethane | 67 | 0.814 | 0.814 | 0.000 | 95 | 10240 | 20.0 | 19.4 | a |
| 6 Chloromethane | 50 | 0.892 | 0.892 | 0.000 | 80 | 100553 | 20.0 | 18.7 | |
| 8 Butadiene | 54 | 0.892 | 0.892 | 0.000 | 96 | 72263 | 20.0 | 20.2 | |
| 7 Vinyl chloride | 62 | 0.892 | 0.892 | 0.000 | 96 | 75711 | 20.0 | 19.3 | |
| 9 Bromomethane | 94 | 1.036 | 1.036 | 0.000 | 97 | 28668 | 20.0 | 19.6 | |
| 10 Chloroethane | 64 | 1.093 | 1.093 | 0.000 | 99 | 45616 | 20.0 | 21.8 | M |
| 11 Pentane | 72 | 1.150 | 1.150 | 0.000 | 96 | 21238 | 40.0 | 44.3 | |
| 12 Trichlorofluoromethane | 101 | 1.150 | 1.150 | 0.000 | 57 | 70080 | 20.0 | 19.5 | |
| 13 Dichlorofluoromethane | 67 | 1.186 | 1.186 | 0.000 | 98 | 94922 | 20.0 | 19.7 | |
| 14 2-Methyl-1,3-butadiene | 67 | 1.286 | 1.286 | 0.000 | 97 | 84871 | 20.0 | 20.5 | |
| 15 Ethyl ether | 59 | 1.294 | 1.294 | 0.000 | 95 | 37723 | 20.0 | 19.6 | |
| 17 1,1-Dichloroethene | 96 | 1.387 | 1.387 | 0.000 | 97 | 50980 | 20.0 | 19.9 | |
| 18 1,2-Dichloro-1,1,2-trifluoroetha | 67 | 1.387 | 1.387 | 0.000 | 78 | 75300 | 20.0 | 20.1 | |
| 16 Ethanol | 46 | 1.408 | 1.408 | 0.000 | 27 | 6934 | 800.0 | 750.1 | a |
| 19 Carbon disulfide | 76 | 1.408 | 1.408 | 0.000 | 99 | 195533 | 20.0 | 19.5 | |
| 20 1,1,2-Trichloro-1,2,2-trifluoroe | 101 | 1.408 | 1.408 | 0.000 | 89 | 50985 | 20.0 | 20.3 | |
| 21 1,1,1-Trifluoro-2,2-dichloroetha | 83 | 1.415 | 1.415 | 0.000 | 92 | 78053 | 20.0 | 20.1 | |
| 22 Iodomethane | 142 | 1.466 | 1.466 | 0.000 | 97 | 52089 | 20.0 | 12.8 | |
| 23 Cyclopentene | 67 | 1.537 | 1.537 | 0.000 | 96 | 144269 | 20.0 | 20.3 | |
| 24 Acrolein | 56 | 1.559 | 1.559 | 0.000 | 95 | 8390 | 40.0 | 38.8 | |
| 25 3-Chloro-1-propene | 76 | 1.630 | 1.630 | 0.000 | 94 | 30186 | 20.0 | 18.4 | |
| 26 Isopropyl alcohol | 45 | 1.659 | 1.659 | 0.000 | 96 | 16121 | 200.0 | 179.3 | |
| 27 Methylene Chloride | 84 | 1.695 | 1.695 | 0.000 | 91 | 60699 | 20.0 | 19.6 | |
| 28 Acetone | 43 | 1.716 | 1.716 | 0.000 | 88 | 42570 | 100.0 | 91.5 | |
| 29 trans-1,2-Dichloroethene | 96 | 1.774 | 1.774 | 0.000 | 94 | 58053 | 20.0 | 19.8 | |
| 30 Methyl acetate | 43 | 1.781 | 1.781 | 0.000 | 98 | 42068 | 40.0 | 38.8 | |

| Compound | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q | Response | Cal Amt ug/l | OnCol Amt ug/l | Flags |
|---|---|---|---|---|---|---|---|---|---|
| 31 Hexane | 86 | 1.817 | 1.817 | 0.000 | 89 | 15447 | 20.0 | 21.8 | |
| 32 Methyl tert-butyl ether | 73 | 1.838 | 1.838 | 0.000 | 88 | 117508 | 20.0 | 19.6 | |
| * 33 TBA-d9 (IS) | 65 | 1.860 | 1.860 | 0.000 | 100 | 111415 | 1000.0 | 1000.0 | |
| 34 2-Methyl-2-propanol | 59 | 1.902 | 1.902 | 0.000 | 100 | 25630 | 200.0 | 210.2 | |
| 35 Acetonitrile | 41 | 1.981 | 1.981 | 0.000 | 100 | 42730 | 200.0 | 191.8 | |
| 36 Isopropyl ether | 45 | 2.053 | 2.053 | 0.000 | 98 | 187280 | 20.0 | 19.9 | |
| 37 2-Chloro-1,3-butadiene | 88 | 2.110 | 2.110 | 0.000 | 90 | 53898 | 20.0 | 20.0 | |
| 38 1,1-Dichloroethane | 63 | 2.117 | 2.117 | 0.000 | 100 | 105914 | 20.0 | 19.4 | |
| 39 Acrylonitrile | 53 | 2.153 | 2.153 | 0.000 | 95 | 139063 | 200.0 | 196.9 | |
| 40 Tert-butyl ethyl ether | 59 | 2.275 | 2.275 | 0.000 | 89 | 151474 | 20.0 | 19.6 | |
| 41 Vinyl acetate | 43 | 2.282 | 2.282 | 0.000 | 100 | 151225 | 40.0 | 36.1 | |
| 42 cis-1,2-Dichloroethene | 96 | 2.461 | 2.461 | 0.000 | 97 | 60535 | 20.0 | 18.6 | |
| 43 2,2-Dichloropropane | 77 | 2.526 | 2.526 | 0.000 | 98 | 72273 | 20.0 | 19.6 | |
| 44 Cyclohexane | 56 | 2.583 | 2.583 | 0.000 | 91 | 112116 | 20.0 | 20.5 | |
| 45 Chlorobromomethane | 128 | 2.590 | 2.590 | 0.000 | 93 | 27217 | 20.0 | 19.2 | |
| 46 Chloroform | 83 | 2.647 | 2.647 | 0.000 | 99 | 95335 | 20.0 | 19.5 | |
| 47 Carbon tetrachloride | 117 | 2.733 | 2.733 | 0.000 | 98 | 53428 | 20.0 | 18.5 | |
| 48 Ethyl acetate | 70 | 2.748 | 2.748 | 0.000 | 98 | 8210 | 40.0 | 44.3 | |
| 49 Methyl acrylate | 55 | 2.748 | 2.748 | 0.000 | 77 | 30616 | 20.0 | 19.9 | |
| 50 Tetrahydrofuran | 42 | 2.755 | 2.755 | 0.000 | 95 | 26816 | 40.0 | 41.5 | |
| 52 1,1,1-Trichloroethane | 97 | 2.776 | 2.776 | 0.000 | 98 | 77080 | 20.0 | 19.6 | |
| $ 51 Dibromofluoromethane (Surr) | 113 | 2.776 | 2.776 | 0.000 | 98 | 120577 | 50.0 | 49.1 | |
| * 53 2-Butanone-d5 | 46 | 2.834 | 2.834 | 0.000 | 100 | 142853 | 250.0 | 250.0 | |
| 55 1,1-Dichloropropene | 75 | 2.869 | 2.869 | 0.000 | 98 | 83603 | 20.0 | 19.7 | |
| 54 2-Butanone (MEK) | 72 | 2.869 | 2.869 | 0.000 | 98 | 21668 | 100.0 | 103.8 | |
| 56 Isooctane | 57 | 2.955 | 2.955 | 0.000 | 99 | 176521 | 20.0 | 20.5 | |
| 57 n-Heptane | 57 | 3.049 | 3.049 | 0.000 | 92 | 43511 | 20.0 | 20.6 | |
| 58 Benzene | 78 | 3.056 | 3.056 | 0.000 | 96 | 248383 | 20.0 | 20.1 | |
| 59 Propionitrile | 54 | 3.077 | 3.077 | 0.000 | 94 | 46041 | 200.0 | 194.8 | |
| 60 Methacrylonitrile | 67 | 3.092 | 3.092 | 0.000 | 91 | 158756 | 200.0 | 202.7 | |
| $ 61 1,2-Dichloroethane-d4 (Surr) | 65 | 3.156 | 3.156 | 0.000 | 0 | 123183 | 50.0 | 50.0 | |
| 62 Tert-amyl methyl ether | 73 | 3.163 | 3.163 | 0.000 | 99 | 125065 | 20.0 | 19.4 | |
| 63 1,2-Dichloroethane | 62 | 3.213 | 3.213 | 0.000 | 96 | 59557 | 20.0 | 18.7 | |
| 64 Isobutyl alcohol | 43 | 3.292 | 3.292 | 0.000 | 96 | 28978 | 500.0 | 486.4 | |
| 65 t-Amyl alcohol | 59 | 3.357 | 3.357 | 0.000 | 95 | 18265 | 200.0 | 188.9 | |
| * 66 Fluorobenzene | 96 | 3.385 | 3.385 | 0.000 | 99 | 570384 | 50.0 | 50.0 | |
| 67 Isopropyl acetate | 43 | 3.457 | 3.457 | 0.000 | 98 | 66033 | 20.0 | 18.2 | |
| 68 Methylcyclohexane | 83 | 3.507 | 3.507 | 0.000 | 96 | 103611 | 20.0 | 20.6 | |
| 69 Trichloroethene | 130 | 3.536 | 3.536 | 0.000 | 97 | 60650 | 20.0 | 19.7 | |
| 70 2-ethoxy-2-methyl butane | 59 | 3.772 | 3.772 | 0.000 | 93 | 121796 | 20.0 | 19.2 | |
| 71 Dibromomethane | 93 | 3.894 | 3.894 | 0.000 | 96 | 27162 | 20.0 | 19.8 | |
| 72 n-Butanol | 56 | 3.915 | 3.915 | 0.000 | 91 | 15148 | 500.0 | 412.0 | |
| 73 1,2-Dichloropropane | 63 | 3.980 | 3.980 | 0.000 | 92 | 60700 | 20.0 | 19.7 | |
| 75 Dichlorobromomethane | 83 | 4.066 | 4.066 | 0.000 | 100 | 65786 | 20.0 | 19.5 | |
| 74 Ethyl acrylate | 55 | 4.066 | 4.066 | 0.000 | 98 | 41058 | 20.0 | 19.9 | |
| * 76 1,4-Dioxane-d8 | 96 | 4.238 | 4.238 | 0.000 | 93 | 14880 | 1000.0 | 1000.0 | |
| 77 Methyl methacrylate | 100 | 4.259 | 4.259 | 0.000 | 92 | 18324 | 40.0 | 39.9 | |
| 78 1,4-Dioxane | 88 | 4.273 | 4.273 | 0.000 | 40 | 6975 | 400.0 | 406.5 | |
| 79 n-Propyl acetate | 43 | 4.417 | 4.417 | 0.000 | 99 | 46190 | 20.0 | 19.9 | |
| 80 2-Chloroethyl vinyl ether | 63 | 4.675 | 4.675 | 0.000 | 96 | 7768 | 20.0 | 13.3 | |
| 81 cis-1,3-Dichloropropene | 75 | 4.696 | 4.696 | 0.000 | 92 | 78477 | 20.0 | 19.4 | |
| $ 82 Toluene-d8 (Surr) | 98 | 4.882 | 4.882 | 0.000 | 99 | 510468 | 50.0 | 50.0 | |

| Compound | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q | Response | Cal Amt ug/l | OnCol Amt ug/l | Flags |
|---|---|---|---|---|---|---|---|---|---|
| 83 Toluene | 91 | 4.940 | 4.940 | 0.000 | 93 | 248986 | 20.0 | 19.8 | |
| 84 Epichlorohydrin | 57 | 4.983 | 4.983 | 0.000 | 99 | 13992 | 400.0 | 280.7 | a |
| 85 2-Nitropropane | 41 | 5.197 | 5.197 | 0.000 | 97 | 10374 | 40.0 | 33.9 | a |
| 86 Tetrachloroethene | 166 | 5.362 | 5.362 | 0.000 | 97 | 56857 | 20.0 | 19.2 | |
| 87 4-Methyl-2-pentanone (MIBK) | 43 | 5.405 | 5.405 | 0.000 | 97 | 158019 | 100.0 | 106.9 | |
| 88 trans-1,3-Dichloropropene | 75 | 5.441 | 5.441 | 0.000 | 94 | 64238 | 20.0 | 20.0 | |
| 89 1,1,2-Trichloroethane | 83 | 5.606 | 5.606 | 0.000 | 96 | 33891 | 20.0 | 19.8 | |
| 90 Ethyl methacrylate | 69 | 5.699 | 5.699 | 0.000 | 90 | 48156 | 20.0 | 19.9 | |
| 91 Chlorodibromomethane | 129 | 5.799 | 5.799 | 0.000 | 98 | 42676 | 20.0 | 19.3 | |
| 92 1,3-Dichloropropane | 76 | 5.914 | 5.914 | 0.000 | 95 | 72110 | 20.0 | 20.2 | |
| 93 Ethylene Dibromide | 107 | 6.050 | 6.050 | 0.000 | 98 | 37940 | 20.0 | 20.6 | |
| 94 n-Butyl acetate | 43 | 6.401 | 6.401 | 0.000 | 99 | 46824 | 20.0 | 19.5 | |
| 95 2-Hexanone | 43 | 6.458 | 6.458 | 0.000 | 95 | 109780 | 100.0 | 110.7 | |
| * 96 Chlorobenzene-d5 | 117 | 6.723 | 6.723 | 0.000 | 86 | 396072 | 50.0 | 50.0 | |
| 97 Chlorobenzene | 112 | 6.745 | 6.745 | 0.000 | 94 | 154586 | 20.0 | 19.6 | |
| 98 Ethylbenzene | 106 | 6.831 | 6.831 | 0.000 | 98 | 87032 | 20.0 | 19.7 | |
| 99 1,1,1,2-Tetrachloroethane | 131 | 6.859 | 6.859 | 0.000 | 96 | 47888 | 20.0 | 19.7 | |
| 100 m-Xylene & p-Xylene | 106 | 7.046 | 7.046 | 0.000 | 0 | 108099 | 20.0 | 20.9 | |
| 101 o-Xylene | 106 | 7.626 | 7.626 | 0.000 | 94 | 103586 | 20.0 | 19.8 | |
| 102 Bromoform | 173 | 7.690 | 7.690 | 0.000 | 95 | 23389 | 20.0 | 18.7 | |
| 103 Styrene | 104 | 7.719 | 7.719 | 0.000 | 97 | 172023 | 20.0 | 20.5 | |
| 104 n-Butyl acrylate | 73 | 8.056 | 8.056 | 0.000 | 98 | 27988 | 20.0 | 20.0 | |
| 105 Isopropylbenzene | 105 | 8.113 | 8.113 | 0.000 | 95 | 275910 | 20.0 | 20.3 | |
| 106 Amyl acetate (mixed isomers) | 43 | 8.471 | 8.471 | 0.000 | 88 | 65023 | 20.0 | 20.4 | |
| $ 107 4-Bromofluorobenzene | 174 | 8.478 | 8.478 | 0.000 | 92 | 161410 | 50.0 | 50.3 | |
| 108 Bromobenzene | 156 | 8.586 | 8.586 | 0.000 | 98 | 64671 | 20.0 | 19.8 | |
| 109 N-Propylbenzene | 91 | 8.743 | 8.743 | 0.000 | 99 | 333905 | 20.0 | 20.5 | |
| 110 1,1,2,2-Tetrachloroethane | 83 | 8.894 | 8.894 | 0.000 | 97 | 45006 | 20.0 | 19.9 | |
| 111 2-Chlorotoluene | 91 | 8.908 | 8.908 | 0.000 | 97 | 221339 | 20.0 | 19.7 | |
| 112 4-Ethyltoluene | 105 | 8.929 | 8.929 | 0.000 | 98 | 272920 | 20.0 | 20.1 | |
| 113 1,2,3-Trichloropropane | 110 | 9.023 | 9.023 | 0.000 | 98 | 12409 | 20.0 | 20.7 | |
| 114 1,3,5-Trimethylbenzene | 105 | 9.087 | 9.087 | 0.000 | 93 | 227437 | 20.0 | 20.1 | |
| 115 trans-1,4-Dichloro-2-butene | 53 | 9.166 | 9.166 | 0.000 | 80 | 7238 | 20.0 | 16.7 | |
| 116 4-Chlorotoluene | 91 | 9.173 | 9.173 | 0.000 | 98 | 200889 | 20.0 | 20.3 | |
| 117 tert-Butylbenzene | 119 | 9.545 | 9.545 | 0.000 | 95 | 197112 | 20.0 | 20.1 | |
| 118 1,2,4-Trimethylbenzene | 105 | 9.682 | 9.682 | 0.000 | 97 | 235892 | 20.0 | 20.2 | |
| 119 Butyl Methacrylate | 87 | 9.696 | 9.696 | 0.000 | 93 | 62255 | 20.0 | 19.8 | |
| 120 sec-Butylbenzene | 105 | 9.839 | 9.839 | 0.000 | 99 | 301449 | 20.0 | 20.3 | |
| 121 1,3-Dichlorobenzene | 146 | 10.097 | 10.097 | 0.000 | 96 | 129288 | 20.0 | 20.1 | |
| 122 4-Isopropyltoluene | 119 | 10.118 | 10.118 | 0.000 | 98 | 256268 | 20.0 | 20.4 | |
| * 123 1,4-Dichlorobenzene-d4 | 152 | 10.226 | 10.226 | 0.000 | 95 | 220745 | 50.0 | 50.0 | |
| 124 1,4-Dichlorobenzene | 146 | 10.247 | 10.247 | 0.000 | 96 | 133344 | 20.0 | 19.7 | |
| 125 1,2,3-Trimethylbenzene | 105 | 10.355 | 10.355 | 0.000 | 98 | 237975 | 20.0 | 20.1 | |
| 126 2,3-Dihydroindene | 117 | 10.527 | 10.527 | 0.000 | 94 | 229507 | 20.0 | 20.0 | |
| 127 Benzyl chloride | 126 | 10.713 | 10.713 | 0.000 | 97 | 13077 | 20.0 | 19.1 | |
| 128 p-Diethylbenzene | 119 | 10.727 | 10.727 | 0.000 | 93 | 126096 | 20.0 | 20.0 | |
| 129 n-Butylbenzene | 91 | 10.813 | 10.813 | 0.000 | 99 | 234371 | 20.0 | 20.5 | |
| 130 1,2-Dichlorobenzene | 146 | 10.921 | 10.921 | 0.000 | 97 | 116216 | 20.0 | 19.7 | |
| 131 1,2,4,5-Tetramethylbenzene | 119 | 11.924 | 11.924 | 0.000 | 98 | 225892 | 20.0 | 20.5 | |
| 132 1,2-Dibromo-3-Chloropropane | 157 | 12.074 | 12.074 | 0.000 | 93 | 7792 | 20.0 | 20.7 | |
| 133 1,3,5-Trichlorobenzene | 180 | 12.124 | 12.124 | 0.000 | 98 | 95559 | 20.0 | 20.4 | |
| 134 1,2,4-Trichlorobenzene | 180 | 12.819 | 12.819 | 0.000 | 94 | 78620 | 20.0 | 20.0 | |

| Compound | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q | Response | Cal Amt ug/l | OnCol Amt ug/l | Flags |
|---|---|---|---|---|---|---|---|---|---|
| 135 Hexachlorobutadiene | 225 | 12.840 | 12.840 | 0.000 | 97 | 34508 | 20.0 | 19.9 | |
| 136 Naphthalene | 128 | 13.127 | 13.127 | 0.000 | 100 | 138476 | 20.0 | 19.1 | |
| 137 1,2,3-Trichlorobenzene | 180 | 13.299 | 13.299 | 0.000 | 95 | 64083 | 20.0 | 19.9 | |
| S 138 1,2-Dichloroethene, Total | 100 | | | | 0 | | 40.0 | 38.4 | |
| S 139 1,3-Dichloropropene, Total | 100 | | | | 0 | | 40.0 | 39.3 | |
| S 140 Xylenes, Total | 100 | | | | 0 | | 40.0 | 40.7 | |
| S 142 Total BTEX | 1 | | | | 0 | | 100.0 | 100.3 | |

## QC Flag Legend

Review Flags

M - Manually Integrated

a - User Assigned ID

## Reagents:

| | | | | |
|---|---|---|---|---|
| 8260MIX1COMB_00125 | Amount Added: | 20.00 | Units: uL | |
| ACROLEIN W_00112 | Amount Added: | 4.00 | Units: uL | |
| GASES Li_00384 | Amount Added: | 20.00 | Units: uL | |
| 524freon_00027 | Amount Added: | 20.00 | Units: uL | |
| 8260ISNEW_00129 | Amount Added: | 1.00 | Units: uL | Run Reagent |
| 8260SURR250_00212 | Amount Added: | 1.00 | Units: uL | Run Reagent |

Report Date: 10-Sep-2020 10:38:35 Chrom Revision: 2.3 20-Aug-2020 13:57:12

Eurofins TestAmerica, Edison

Data File: \\chromfs\Edison\ChromData\CVOAMS13\20200904-116303.b\P79356.D

Injection Date: 04-Sep-2020 15:45:30 Instrument ID: CVOAMS13 Operator ID:

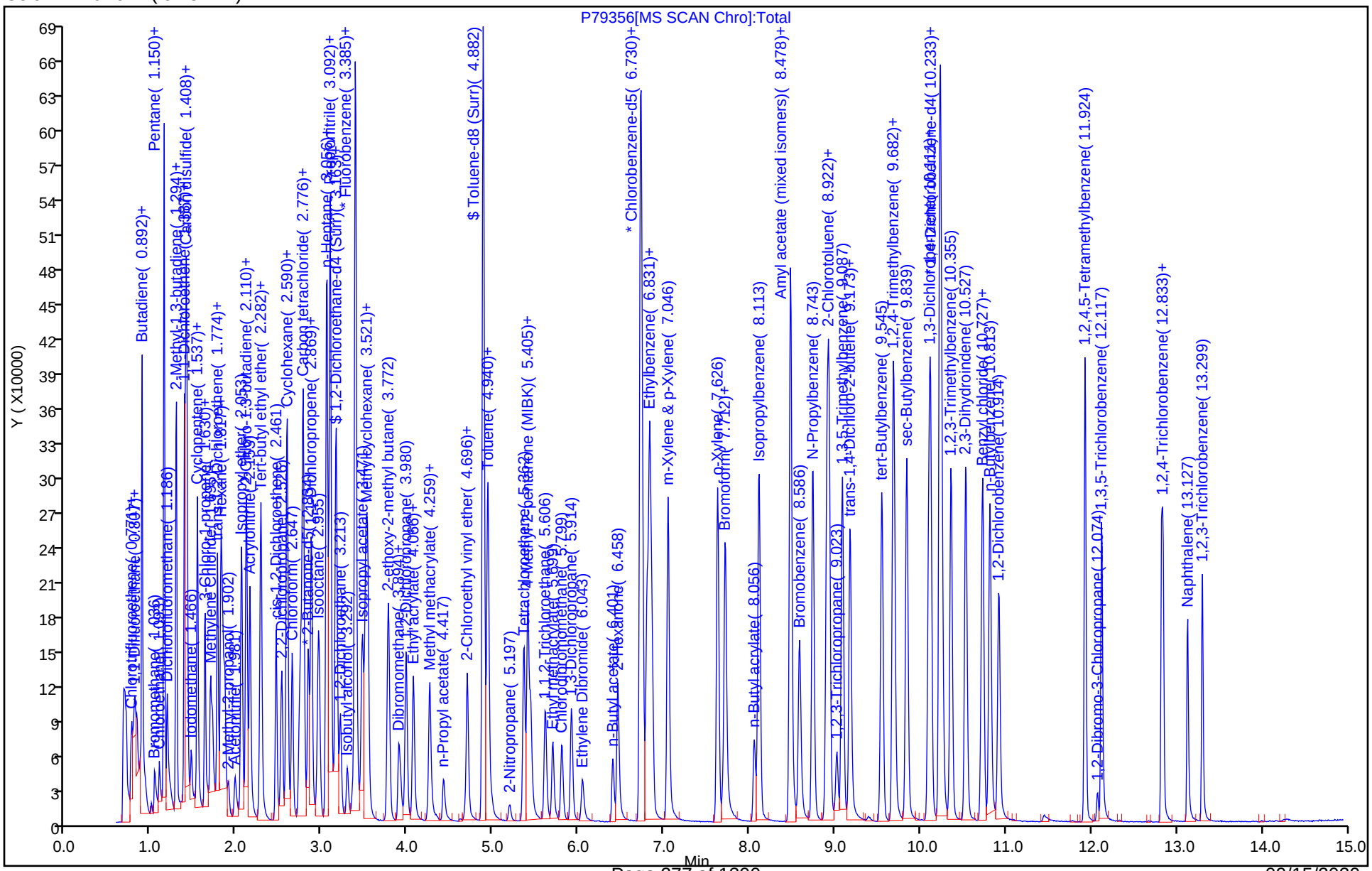
Lims ID: STD20 Worklist Smp#: 6

Client ID:

Purge Vol: 5.000 mL Dil. Factor: 1.0000 ALS Bottle#: 6

Method: 8260W_13 Limit Group: VOA - 8260C Water and Solid

Column: Rtx-624 ( 0.25 mm)



Eurofins TestAmerica, Edison

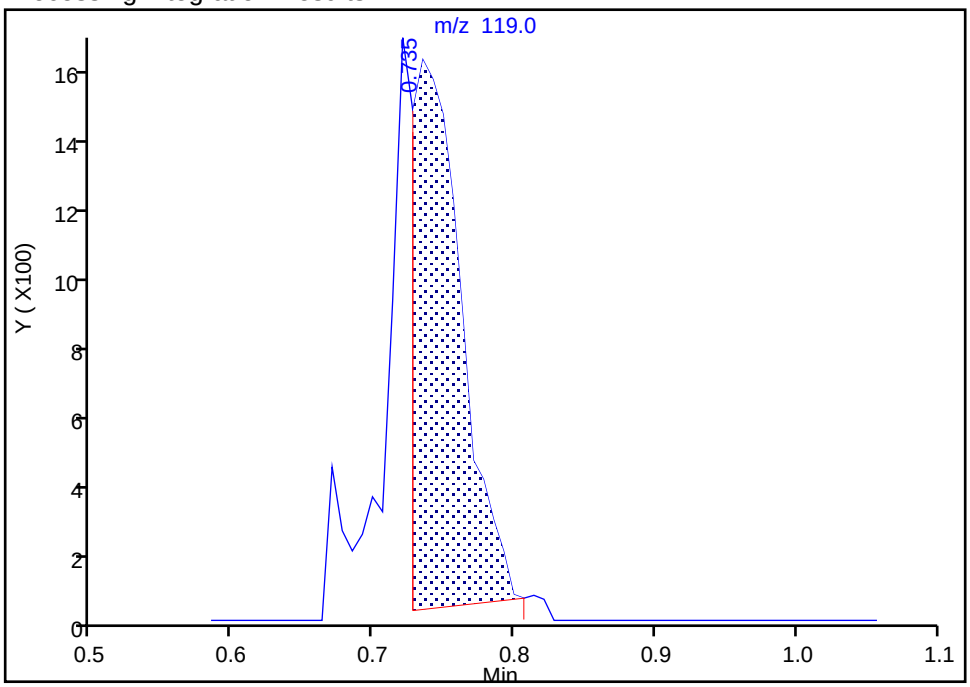
Data File: \\chromfs\Edison\ChromData\CVOAMS13\20200904-116303.b\P79356.D
Injection Date: 04-Sep-2020 15:45:30 Instrument ID: CVOAMS13
Lims ID: STD20
Client ID:
Operator ID: ALS Bottle#: 6 Worklist Smp#: 6
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: 8260W_13 Limit Group: VOA - 8260C Water and Solid
Column: Rtx-624 ( 0.25 mm) Detector MS SCAN

## 1 Monochloropentafluoroethane, CAS: 76-15-3

Signal: 1

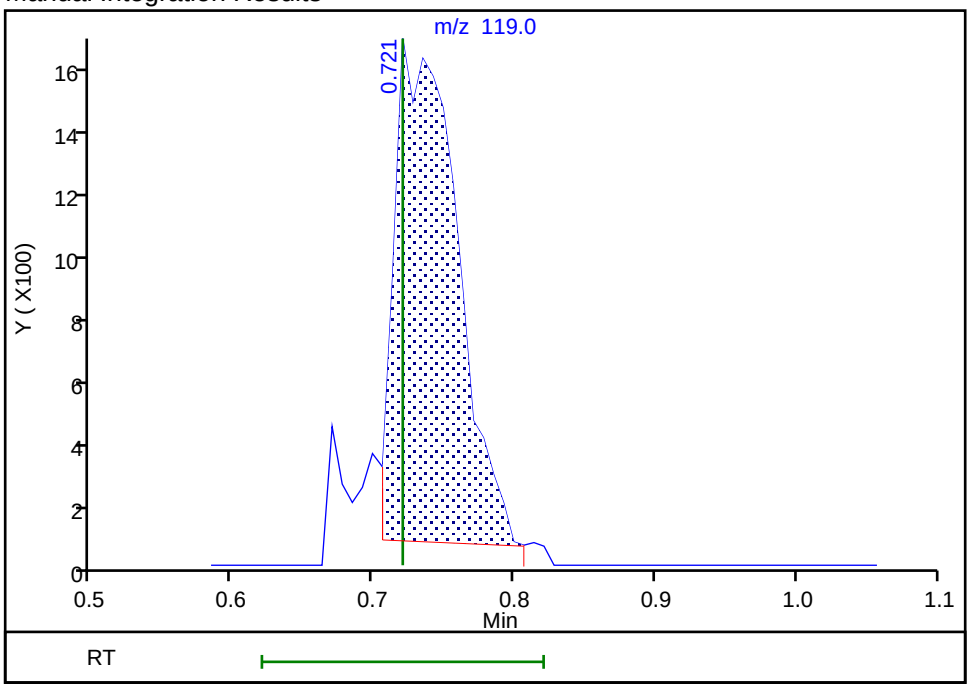
Processing Integration Results

RT: 0.73
Area: 3739
Amount: 15.366439
Amount Units: ug/l




Manual Integration Results

RT: 0.72
Area: 4726
Amount: 18.787706
Amount Units: ug/l




Reviewer: baronm, 05-Sep-2020 12:03:51
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Eurofins TestAmerica, Edison

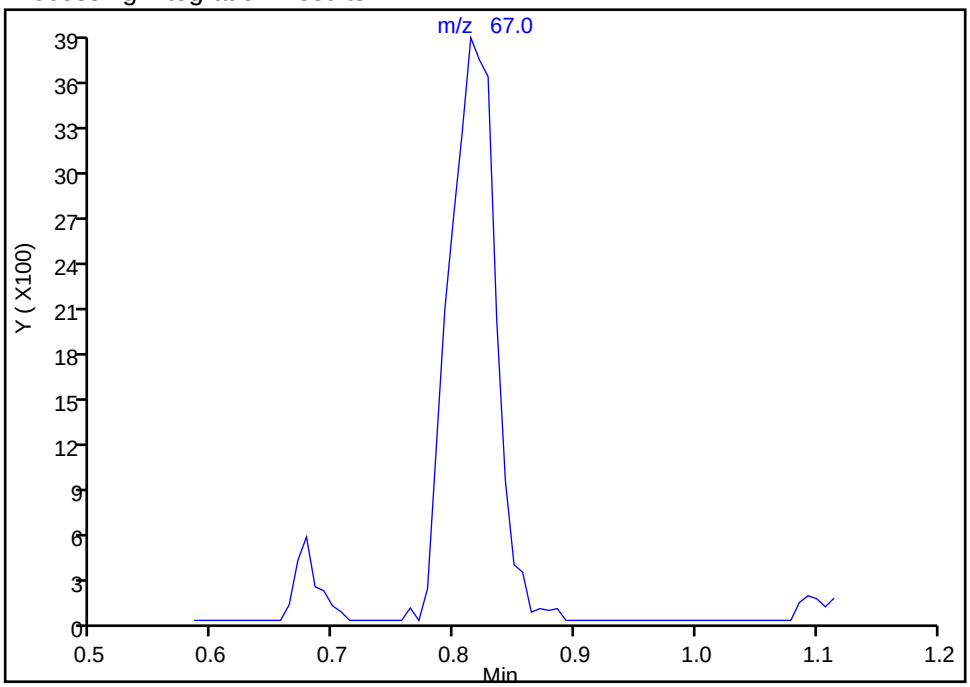
Data File: \\chromfs\Edison\ChromData\CVOAMS13\20200904-116303.b\P79356.D
Injection Date: 04-Sep-2020 15:45:30 Instrument ID: CVOAMS13
Lims ID: STD20
Client ID:
Operator ID: ALS Bottle#: 6 Worklist Smp#: 6
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: 8260W_13 Limit Group: VOA - 8260C Water and Solid
Column: Rtx-624 ( 0.25 mm) Detector MS SCAN

## 5 Chlorodifluoromethane, CAS: 75-45-6

Signal: 1

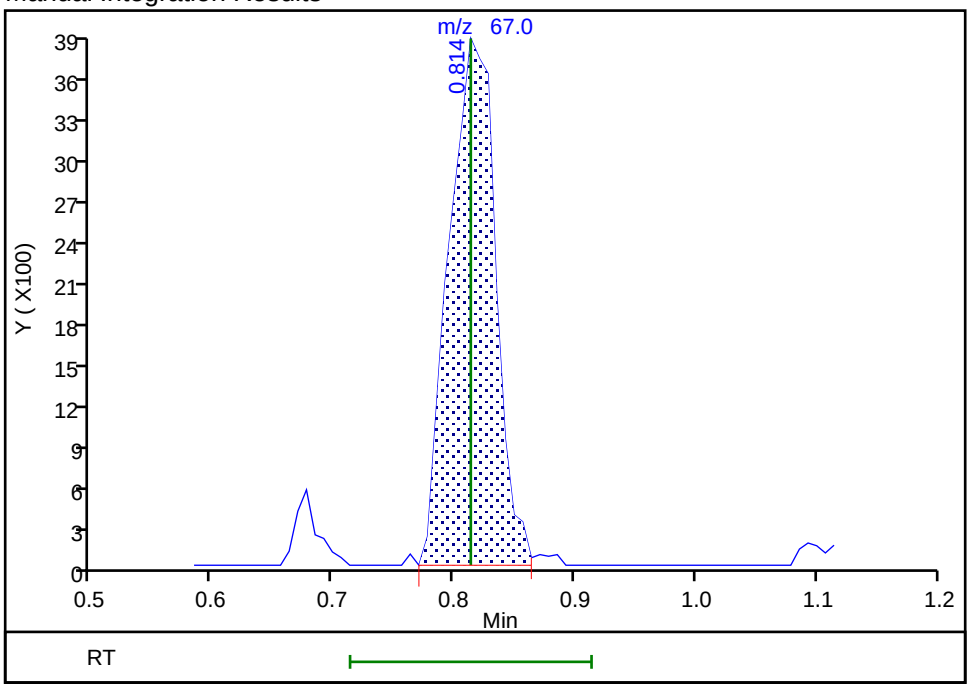
Not Detected
Expected RT: 0.81

Processing Integration Results




Manual Integration Results

RT: 0.81
Area: 10240
Amount: 19.440349
Amount Units: ug/l




Reviewer: starzecm, 04-Sep-2020 15:04:07
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Edison

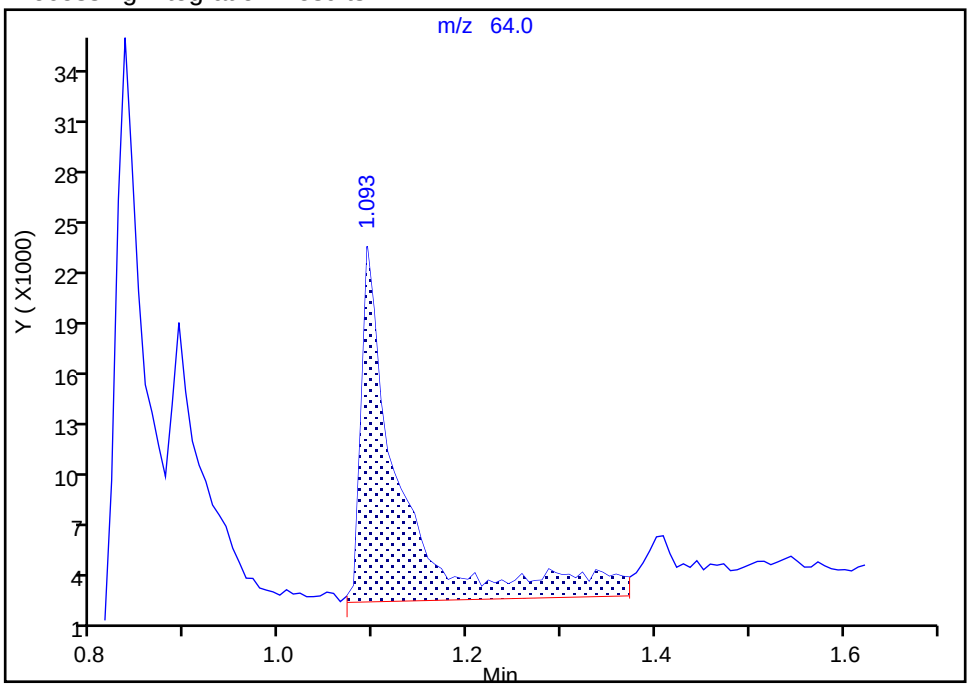
Data File: \\chromfs\Edison\ChromData\CVOAMS13\20200904-116303.b\P79356.D
Injection Date: 04-Sep-2020 15:45:30 Instrument ID: CVOAMS13
Lims ID: STD20
Client ID:
Operator ID: ALS Bottle#: 6 Worklist Smp#: 6
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: 8260W_13 Limit Group: VOA - 8260C Water and Solid
Column: Rtx-624 ( 0.25 mm) Detector MS SCAN

## 10 Chloroethane, CAS: 75-00-3

Signal: 1

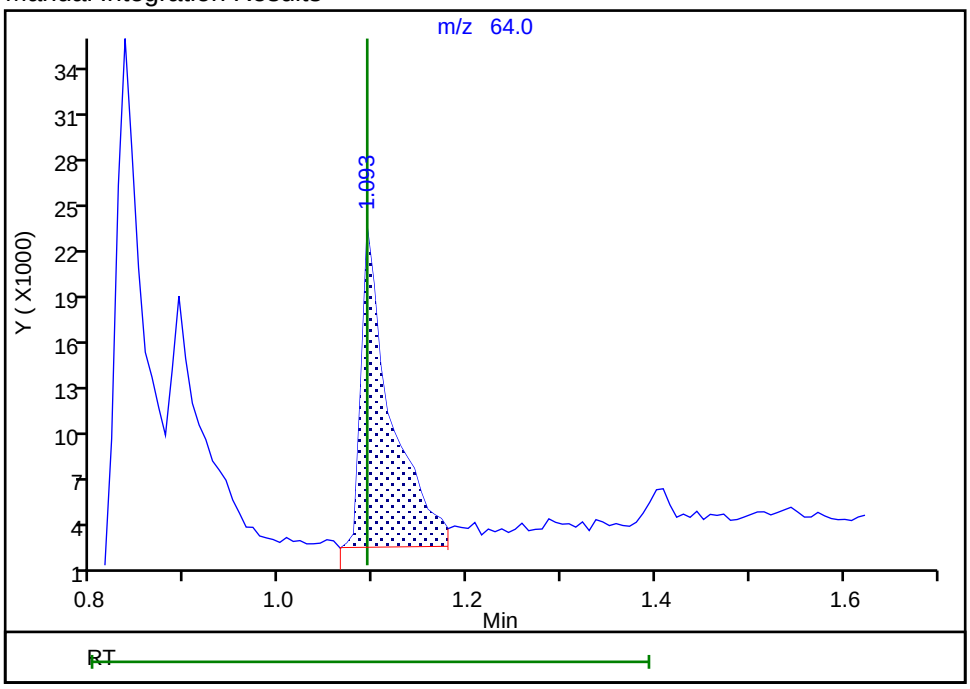
Processing Integration Results

RT: 1.09
Area: 60101
Amount: 26.802940
Amount Units: ug/l




Manual Integration Results

RT: 1.09
Area: 45616
Amount: 21.830145
Amount Units: ug/l




Reviewer: baronm, 05-Sep-2020 12:04:09
Audit Action: Manually Integrated Audit Reason: Baseline

Eurofins TestAmerica, Edison

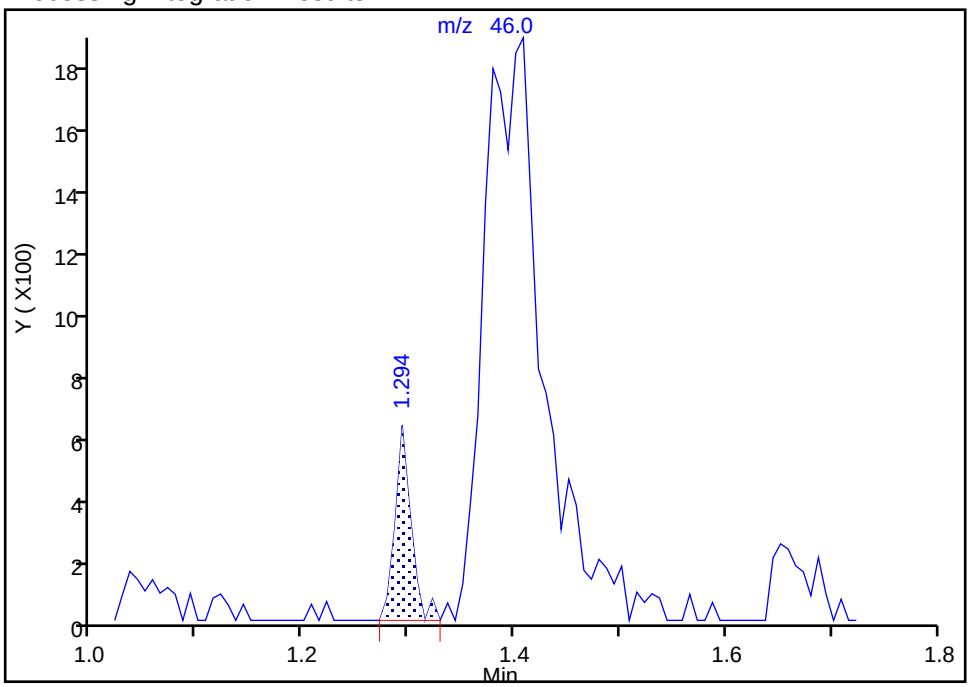
Data File: \\chromfs\Edison\ChromData\CVOAMS13\20200904-116303.b\P79356.D
Injection Date: 04-Sep-2020 15:45:30 Instrument ID: CVOAMS13
Lims ID: STD20
Client ID:
Operator ID: ALS Bottle#: 6 Worklist Smp#: 6
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: 8260W_13 Limit Group: VOA - 8260C Water and Solid
Column: Rtx-624 ( 0.25 mm) Detector MS SCAN

## 16 Ethanol, CAS: 64-17-5

Signal: 1

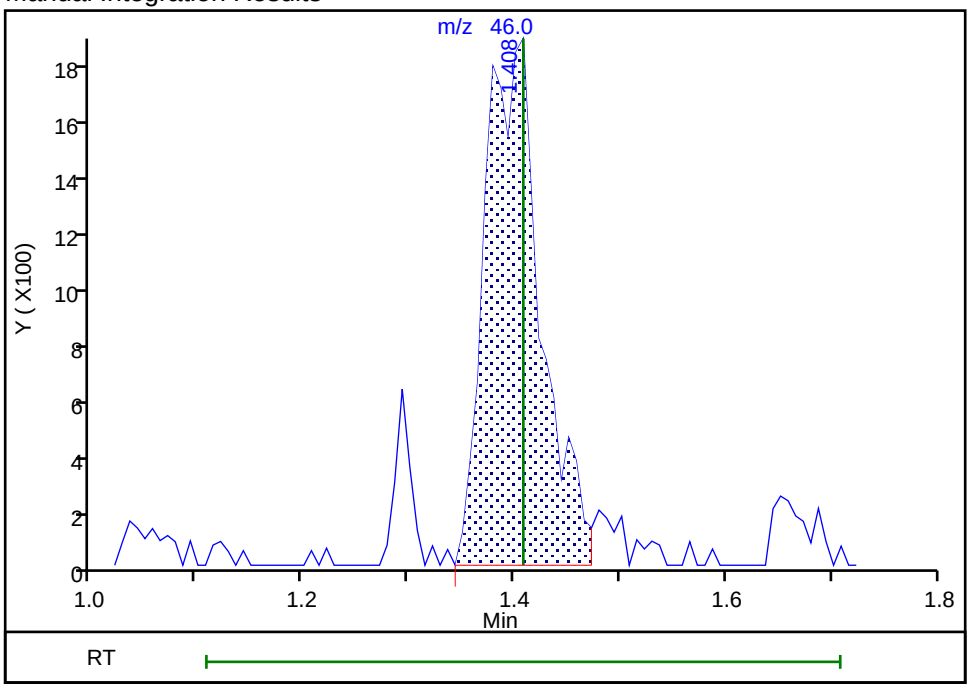
Processing Integration Results

RT: 1.29
Area: 663
Amount: 112.3043
Amount Units: ug/l




Manual Integration Results

RT: 1.41
Area: 6934
Amount: 750.1125
Amount Units: ug/l




Reviewer: starzecm, 04-Sep-2020 15:04:45
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Edison

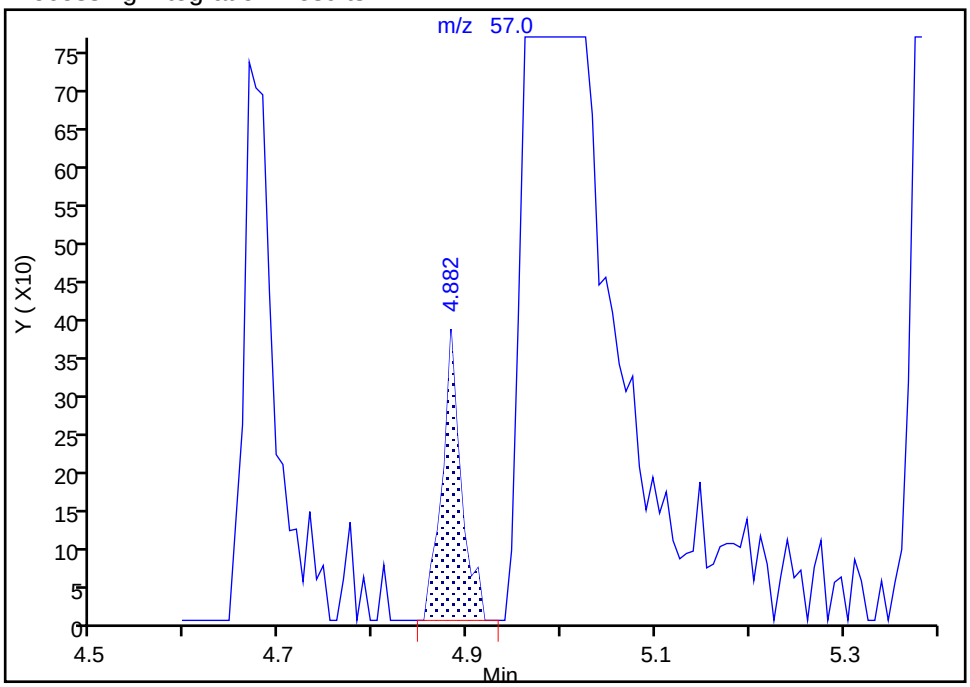
Data File: \\chromfs\Edison\ChromData\CVOAMS13\20200904-116303.b\P79356.D
Injection Date: 04-Sep-2020 15:45:30 Instrument ID: CVOAMS13
Lims ID: STD20
Client ID:
Operator ID: ALS Bottle#: 6 Worklist Smp#: 6
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: 8260W_13 Limit Group: VOA - 8260C Water and Solid
Column: Rtx-624 ( 0.25 mm) Detector MS SCAN

## 84 Epichlorohydrin, CAS: 106-89-8

Signal: 1

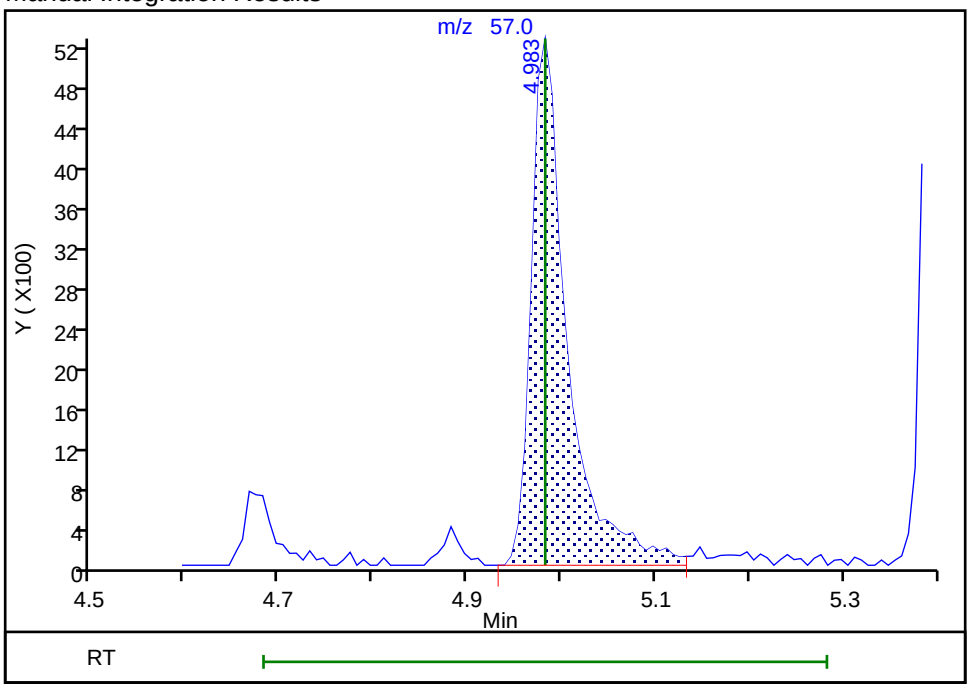
Processing Integration Results

RT: 4.88
Area: 539
Amount: 15.183941
Amount Units: ug/l




Manual Integration Results

RT: 4.98
Area: 13992
Amount: 280.7404
Amount Units: ug/l




Reviewer: starzecm, 04-Sep-2020 15:06:32
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Edison

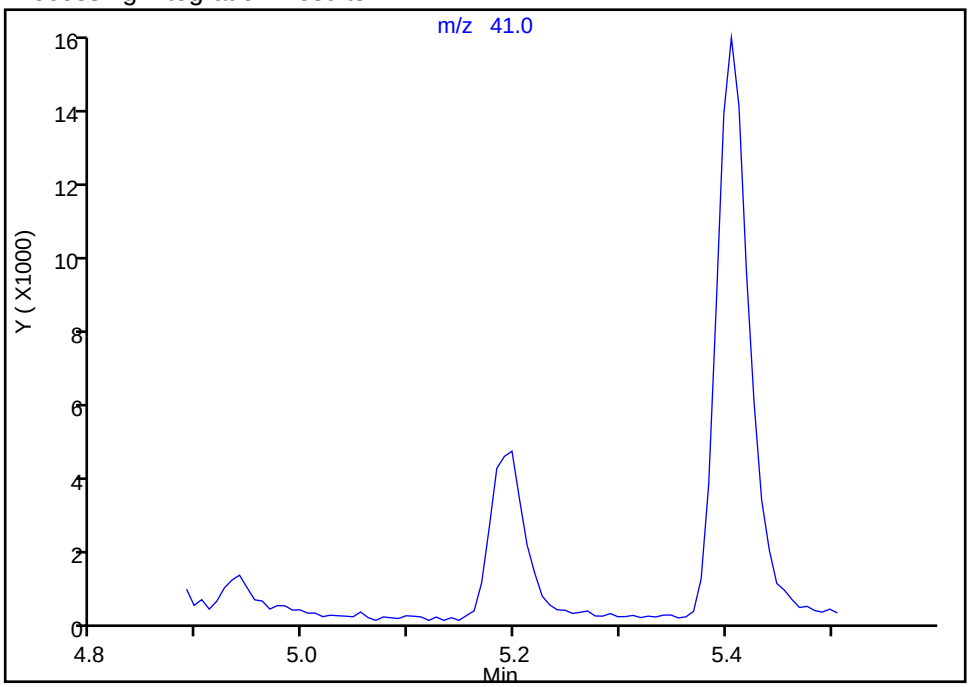
Data File: \\chromfs\Edison\ChromData\CVOAMS13\20200904-116303.b\P79356.D
Injection Date: 04-Sep-2020 15:45:30 Instrument ID: CVOAMS13
Lims ID: STD20
Client ID:
Operator ID: ALS Bottle#: 6 Worklist Smp#: 6
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: 8260W_13 Limit Group: VOA - 8260C Water and Solid
Column: Rtx-624 ( 0.25 mm) Detector MS SCAN

## 85 2-Nitropropane, CAS: 79-46-9

Signal: 1

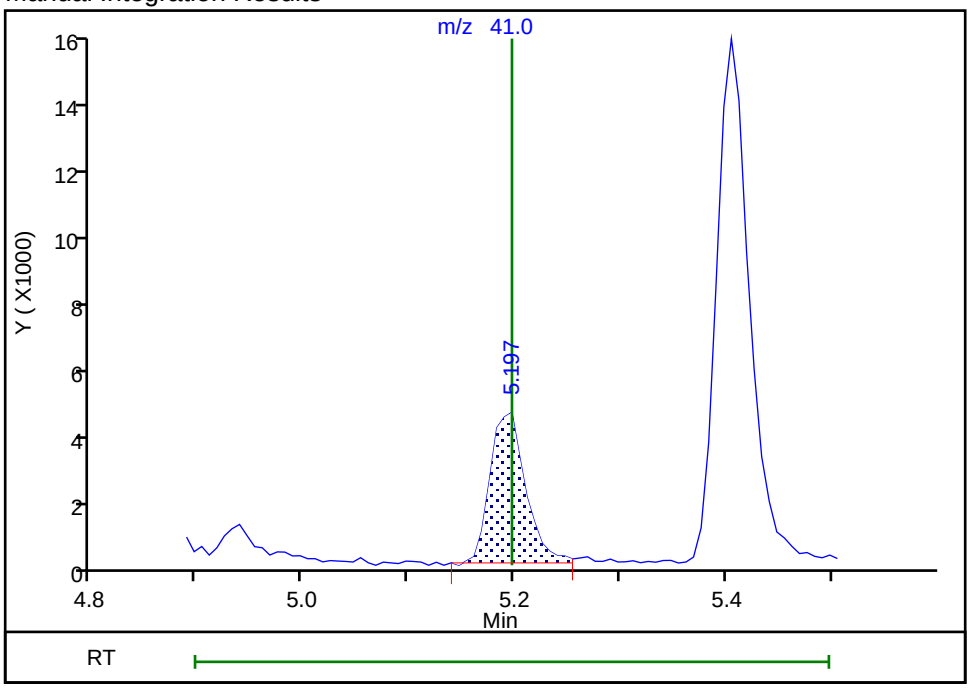
Not Detected
Expected RT: 5.20

Processing Integration Results




Manual Integration Results

RT: 5.20
Area: 10374
Amount: 33.892556
Amount Units: ug/l




Reviewer: baronm, 05-Sep-2020 12:12:32
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Eurofins TestAmerica, Edison
Target Compound Quantitation Report

Data File: \\chromfs\Edison\ChromData\CVOAMS13\20200904-116303.b\P79357.D
Lims ID: STD50
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 04-Sep-2020 16:09:30 ALS Bottle#: 7 Worklist Smp#: 7
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: STD50
Misc. Info.: 460-0116303-007
Operator ID: Instrument ID: CVOAMS13
Sublist: chrom-8260W_13*sub62

Method: \\chromfs\Edison\ChromData\CVOAMS13\20200904-116303.b\8260W_13.m
Limit Group: VOA - 8260C Water and Solid
Last Update: 10-Sep-2020 10:38:49 Calib Date: 04-Sep-2020 16:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Edison\ChromData\CVOAMS13\20200904-116303.b\P79359.D

Column 1 : Rtx-624 ( 0.25 mm) Det: MS SCAN
Process Host: CTX1019

First Level Reviewer: starzecm Date: 04-Sep-2020 15:37:43

| Compound | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q | Response | Cal Amt ug/l | OnCol Amt ug/l | Flags |
|---|---|---|---|---|---|---|---|---|---|
| 1 Monochloropentafluoroethane | 119 | 0.728 | 0.721 | 0.007 | 70 | 11186 | 50.0 | 44.7 | |
| 2 Chlorotrifluoroethene | 116 | 0.757 | 0.756 | 0.001 | 88 | 41027 | 50.0 | 46.1 | |
| 3 Dichlorodifluoromethane | 85 | 0.771 | 0.771 | 0.000 | 99 | 187202 | 50.0 | 48.9 | |
| 4 1,1-Difluoroethane | 65 | 0.807 | 0.807 | 0.000 | 93 | 83104 | 50.0 | 45.8 | |
| 5 Chlorodifluoromethane | 67 | 0.821 | 0.814 | 0.007 | 97 | 25723 | 50.0 | 49.1 | a |
| 6 Chloromethane | 50 | 0.893 | 0.892 | 0.001 | 98 | 265854 | 50.0 | 49.8 | |
| 8 Butadiene | 54 | 0.893 | 0.892 | 0.001 | 92 | 180254 | 50.0 | 50.7 | |
| 7 Vinyl chloride | 62 | 0.893 | 0.892 | 0.001 | 56 | 195179 | 50.0 | 49.9 | |
| 9 Bromomethane | 94 | 1.036 | 1.036 | 0.000 | 99 | 74861 | 50.0 | 47.0 | |
| 10 Chloroethane | 64 | 1.093 | 1.093 | 0.000 | 99 | 106827 | 50.0 | 51.4 | |
| 11 Pentane | 72 | 1.150 | 1.150 | 0.000 | 96 | 47651 | 100.0 | 93.6 | |
| 12 Trichlorofluoromethane | 101 | 1.150 | 1.150 | 0.000 | 61 | 183391 | 50.0 | 51.4 | |
| 13 Dichlorofluoromethane | 67 | 1.186 | 1.186 | 0.000 | 99 | 243460 | 50.0 | 50.7 | |
| 14 2-Methyl-1,3-butadiene | 67 | 1.287 | 1.286 | 0.001 | 96 | 205064 | 50.0 | 49.9 | |
| 15 Ethyl ether | 59 | 1.294 | 1.294 | 0.000 | 92 | 96289 | 50.0 | 50.2 | |
| 18 1,2-Dichloro-1,1,2-trifluoroetha | 67 | 1.387 | 1.387 | 0.000 | 75 | 180162 | 50.0 | 48.3 | |
| 17 1,1-Dichloroethene | 96 | 1.387 | 1.387 | 0.000 | 97 | 124171 | 50.0 | 48.6 | |
| 16 Ethanol | 46 | 1.408 | 1.408 | 0.000 | 76 | 18644 | 2000.0 | 1899.7 | a |
| 19 Carbon disulfide | 76 | 1.408 | 1.408 | 0.000 | 99 | 480480 | 50.0 | 48.1 | |
| 20 1,1,2-Trichloro-1,2,2-trifluoroe | 101 | 1.416 | 1.408 | 0.008 | 92 | 119706 | 50.0 | 47.9 | |
| 21 1,1,1-Trifluoro-2,2-dichloroetha | 83 | 1.416 | 1.415 | 0.001 | 92 | 190942 | 50.0 | 49.4 | |
| 22 Iodomethane | 142 | 1.466 | 1.466 | 0.000 | 95 | 162100 | 50.0 | 40.1 | |
| 23 Cyclopentene | 67 | 1.537 | 1.537 | 0.000 | 96 | 346990 | 50.0 | 49.0 | |
| 24 Acrolein | 56 | 1.559 | 1.559 | 0.000 | 96 | 22758 | 100.0 | 99.0 | |
| 25 3-Chloro-1-propene | 76 | 1.630 | 1.630 | 0.000 | 94 | 80220 | 50.0 | 49.2 | |
| 26 Isopropyl alcohol | 45 | 1.659 | 1.659 | 0.000 | 97 | 43572 | 500.0 | 456.4 | |
| 27 Methylene Chloride | 84 | 1.695 | 1.695 | 0.000 | 92 | 151225 | 50.0 | 49.1 | |
| 28 Acetone | 43 | 1.716 | 1.716 | 0.000 | 87 | 109326 | 250.0 | 218.9 | |
| 29 trans-1,2-Dichloroethene | 96 | 1.774 | 1.774 | 0.000 | 93 | 144381 | 50.0 | 49.4 | |
| 30 Methyl acetate | 43 | 1.781 | 1.781 | 0.000 | 99 | 129401 | 100.0 | 112.3 | |

| Compound | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q | Response | Cal Amt ug/l | OnCol Amt ug/l | Flags |
|---|---|---|---|---|---|---|---|---|---|
| 31 Hexane | 86 | 1.817 | 1.817 | 0.000 | 89 | 34872 | 50.0 | 49.5 | |
| 32 Methyl tert-butyl ether | 73 | 1.838 | 1.838 | 0.000 | 88 | 302014 | 50.0 | 50.6 | |
| * 33 TBA-d9 (IS) | 65 | 1.860 | 1.860 | 0.000 | 99 | 118290 | 1000.0 | 1000.0 | |
| 34 2-Methyl-2-propanol | 59 | 1.903 | 1.902 | 0.001 | 100 | 63871 | 500.0 | 492.7 | |
| 35 Acetonitrile | 41 | 1.981 | 1.981 | 0.000 | 100 | 119206 | 500.0 | 504.0 | |
| 36 Isopropyl ether | 45 | 2.053 | 2.053 | 0.000 | 98 | 479907 | 50.0 | 51.3 | |
| 37 2-Chloro-1,3-butadiene | 88 | 2.110 | 2.110 | 0.000 | 90 | 134890 | 50.0 | 50.4 | |
| 38 1,1-Dichloroethane | 63 | 2.117 | 2.117 | 0.000 | 100 | 267263 | 50.0 | 49.3 | |
| 39 Acrylonitrile | 53 | 2.153 | 2.153 | 0.000 | 94 | 349337 | 500.0 | 497.2 | |
| 40 Tert-butyl ethyl ether | 59 | 2.282 | 2.275 | 0.007 | 89 | 393578 | 50.0 | 51.1 | |
| 41 Vinyl acetate | 43 | 2.282 | 2.282 | 0.000 | 100 | 414482 | 100.0 | 99.4 | |
| 42 cis-1,2-Dichloroethene | 96 | 2.461 | 2.461 | 0.000 | 98 | 152965 | 50.0 | 47.3 | |
| 43 2,2-Dichloropropane | 77 | 2.526 | 2.526 | 0.000 | 99 | 183711 | 50.0 | 50.0 | |
| 44 Cyclohexane | 56 | 2.583 | 2.583 | 0.000 | 92 | 262475 | 50.0 | 48.3 | |
| 45 Chlorobromomethane | 128 | 2.590 | 2.590 | 0.000 | 90 | 69379 | 50.0 | 49.1 | |
| 46 Chloroform | 83 | 2.648 | 2.647 | 0.001 | 99 | 241017 | 50.0 | 49.6 | |
| 47 Carbon tetrachloride | 117 | 2.734 | 2.733 | 0.001 | 98 | 139102 | 50.0 | 48.5 | |
| 48 Ethyl acetate | 70 | 2.748 | 2.748 | 0.000 | 98 | 20943 | 100.0 | 103.8 | |
| 49 Methyl acrylate | 55 | 2.748 | 2.748 | 0.000 | 58 | 79700 | 50.0 | 52.1 | |
| 50 Tetrahydrofuran | 42 | 2.755 | 2.755 | 0.000 | 95 | 69916 | 100.0 | 99.4 | |
| $ 51 Dibromofluoromethane (Surr) | 113 | 2.776 | 2.776 | 0.000 | 97 | 120630 | 50.0 | 49.4 | |
| 52 1,1,1-Trichloroethane | 97 | 2.784 | 2.776 | 0.008 | 98 | 197131 | 50.0 | 50.5 | |
| * 53 2-Butanone-d5 | 46 | 2.834 | 2.834 | 0.000 | 99 | 155624 | 250.0 | 250.0 | |
| 55 1,1-Dichloropropene | 75 | 2.870 | 2.869 | 0.001 | 98 | 202888 | 50.0 | 48.1 | |
| 54 2-Butanone (MEK) | 72 | 2.870 | 2.869 | 0.001 | 100 | 55843 | 250.0 | 245.6 | |
| 56 Isooctane | 57 | 2.956 | 2.955 | 0.001 | 99 | 398266 | 50.0 | 46.5 | |
| 57 n-Heptane | 57 | 3.049 | 3.049 | 0.000 | 92 | 99655 | 50.0 | 47.4 | |
| 58 Benzene | 78 | 3.056 | 3.056 | 0.000 | 96 | 623917 | 50.0 | 50.1 | |
| 59 Propionitrile | 54 | 3.077 | 3.077 | 0.000 | 97 | 130125 | 500.0 | 518.4 | |
| 60 Methacrylonitrile | 67 | 3.092 | 3.092 | 0.000 | 91 | 404787 | 500.0 | 519.5 | |
| $ 61 1,2-Dichloroethane-d4 (Surr) | 65 | 3.156 | 3.156 | 0.000 | 0 | 130501 | 50.0 | 53.2 | |
| 62 Tert-amyl methyl ether | 73 | 3.163 | 3.163 | 0.000 | 99 | 330913 | 50.0 | 51.6 | |
| 63 1,2-Dichloroethane | 62 | 3.213 | 3.213 | 0.000 | 96 | 155414 | 50.0 | 49.0 | |
| 64 Isobutyl alcohol | 43 | 3.292 | 3.292 | 0.000 | 95 | 75173 | 1250.0 | 1188.5 | |
| 65 t-Amyl alcohol | 59 | 3.357 | 3.357 | 0.000 | 96 | 49048 | 500.0 | 477.8 | |
| * 66 Fluorobenzene | 96 | 3.385 | 3.385 | 0.000 | 99 | 567446 | 50.0 | 50.0 | |
| 67 Isopropyl acetate | 43 | 3.457 | 3.457 | 0.000 | 99 | 189901 | 50.0 | 52.7 | |
| 68 Methylcyclohexane | 83 | 3.514 | 3.507 | 0.007 | 96 | 245162 | 50.0 | 49.0 | |
| 69 Trichloroethene | 130 | 3.536 | 3.536 | 0.000 | 98 | 153554 | 50.0 | 50.1 | |
| 70 2-ethoxy-2-methyl butane | 59 | 3.772 | 3.772 | 0.000 | 93 | 318350 | 50.0 | 50.4 | |
| 71 Dibromomethane | 93 | 3.894 | 3.894 | 0.000 | 96 | 69397 | 50.0 | 50.8 | |
| 72 n-Butanol | 56 | 3.915 | 3.915 | 0.000 | 88 | 44814 | 1250.0 | 1136.4 | |
| 73 1,2-Dichloropropane | 63 | 3.980 | 3.980 | 0.000 | 93 | 157156 | 50.0 | 51.2 | |
| 75 Dichlorobromomethane | 83 | 4.066 | 4.066 | 0.000 | 99 | 172749 | 50.0 | 51.3 | |
| 74 Ethyl acrylate | 55 | 4.066 | 4.066 | 0.000 | 68 | 111737 | 50.0 | 52.9 | |
| * 76 1,4-Dioxane-d8 | 96 | 4.238 | 4.238 | 0.000 | 73 | 15812 | 1000.0 | 1000.0 | |
| 77 Methyl methacrylate | 100 | 4.259 | 4.259 | 0.000 | 92 | 48928 | 100.0 | 107.1 | |
| 78 1,4-Dioxane | 88 | 4.266 | 4.273 | -0.007 | 96 | 18706 | 1000.0 | 1025.8 | |
| 79 n-Propyl acetate | 43 | 4.417 | 4.417 | 0.000 | 100 | 123542 | 50.0 | 53.6 | |
| 80 2-Chloroethyl vinyl ether | 63 | 4.668 | 4.675 | -0.007 | 96 | 27833 | 50.1 | 47.9 | |
| 81 cis-1,3-Dichloropropene | 75 | 4.696 | 4.696 | 0.000 | 92 | 217536 | 50.0 | 53.3 | |
| $ 82 Toluene-d8 (Surr) | 98 | 4.882 | 4.882 | 0.000 | 99 | 511255 | 50.0 | 49.7 | |

| Compound | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q | Response | Cal Amt ug/l | OnCol Amt ug/l | Flags |
|---|---|---|---|---|---|---|---|---|---|
| 83 Toluene | 91 | 4.933 | 4.940 | -0.007 | 93 | 633484 | 50.0 | 50.0 | |
| 84 Epichlorohydrin | 57 | 4.968 | 4.983 | -0.015 | 100 | 52334 | 1000.0 | 920.4 | a |
| 85 2-Nitropropane | 41 | 5.190 | 5.197 | -0.007 | 98 | 30161 | 100.0 | 99.0 | a |
| 86 Tetrachloroethene | 166 | 5.355 | 5.362 | -0.007 | 98 | 148555 | 50.0 | 49.8 | |
| 87 4-Methyl-2-pentanone (MIBK) | 43 | 5.405 | 5.405 | 0.000 | 95 | 415853 | 250.0 | 258.3 | |
| 88 trans-1,3-Dichloropropene | 75 | 5.434 | 5.441 | -0.007 | 94 | 175032 | 50.0 | 54.0 | |
| 89 1,1,2-Trichloroethane | 83 | 5.606 | 5.606 | 0.000 | 96 | 88686 | 50.0 | 51.4 | |
| 90 Ethyl methacrylate | 69 | 5.692 | 5.699 | -0.007 | 90 | 127890 | 50.0 | 53.1 | |
| 91 Chlorodibromomethane | 129 | 5.799 | 5.799 | 0.000 | 98 | 112017 | 50.0 | 50.3 | |
| 92 1,3-Dichloropropane | 76 | 5.914 | 5.914 | 0.000 | 94 | 187991 | 50.0 | 52.3 | |
| 93 Ethylene Dibromide | 107 | 6.043 | 6.050 | -0.007 | 99 | 99746 | 50.0 | 53.8 | |
| 94 n-Butyl acetate | 43 | 6.394 | 6.401 | -0.007 | 99 | 129286 | 50.0 | 52.0 | |
| 95 2-Hexanone | 43 | 6.451 | 6.458 | -0.007 | 95 | 289479 | 250.0 | 267.9 | |
| * 96 Chlorobenzene-d5 | 117 | 6.723 | 6.723 | 0.000 | 86 | 399105 | 50.0 | 50.0 | |
| 97 Chlorobenzene | 112 | 6.745 | 6.745 | 0.000 | 95 | 396659 | 50.0 | 50.0 | |
| 98 Ethylbenzene | 106 | 6.831 | 6.831 | 0.000 | 98 | 222648 | 50.0 | 50.1 | |
| 99 1,1,1,2-Tetrachloroethane | 131 | 6.859 | 6.859 | 0.000 | 95 | 130225 | 50.0 | 53.0 | |
| 100 m-Xylene & p-Xylene | 106 | 7.046 | 7.046 | 0.000 | 0 | 272822 | 50.0 | 52.3 | |
| 101 o-Xylene | 106 | 7.626 | 7.626 | 0.000 | 95 | 267785 | 50.0 | 50.8 | |
| 102 Bromoform | 173 | 7.690 | 7.690 | 0.000 | 96 | 65010 | 50.0 | 51.7 | |
| 103 Styrene | 104 | 7.712 | 7.719 | -0.007 | 96 | 444655 | 50.0 | 52.7 | |
| 104 n-Butyl acrylate | 73 | 8.048 | 8.056 | -0.008 | 97 | 73809 | 50.0 | 51.1 | |
| 105 Isopropylbenzene | 105 | 8.106 | 8.113 | -0.007 | 95 | 692109 | 50.0 | 50.6 | |
| 106 Amyl acetate (mixed isomers) | 43 | 8.464 | 8.471 | -0.007 | 90 | 176787 | 50.0 | 53.0 | |
| $ 107 4-Bromofluorobenzene | 174 | 8.478 | 8.478 | 0.000 | 92 | 165058 | 50.0 | 51.1 | |
| 108 Bromobenzene | 156 | 8.586 | 8.586 | 0.000 | 98 | 169325 | 50.0 | 50.9 | |
| 109 N-Propylbenzene | 91 | 8.736 | 8.743 | -0.007 | 99 | 845216 | 50.0 | 50.8 | |
| 110 1,1,2,2-Tetrachloroethane | 83 | 8.894 | 8.894 | 0.000 | 98 | 120554 | 50.0 | 52.3 | |
| 111 2-Chlorotoluene | 91 | 8.908 | 8.908 | 0.000 | 97 | 561931 | 50.0 | 49.0 | |
| 112 4-Ethyltoluene | 105 | 8.930 | 8.929 | 0.001 | 98 | 693783 | 50.0 | 50.2 | |
| 113 1,2,3-Trichloropropane | 110 | 9.023 | 9.023 | 0.000 | 99 | 32185 | 50.0 | 52.8 | |
| 114 1,3,5-Trimethylbenzene | 105 | 9.087 | 9.087 | 0.000 | 94 | 581260 | 50.0 | 50.4 | |
| 115 trans-1,4-Dichloro-2-butene | 53 | 9.152 | 9.166 | -0.014 | 39 | 21533 | 50.0 | 48.9 | |
| 116 4-Chlorotoluene | 91 | 9.173 | 9.173 | 0.000 | 98 | 514860 | 50.0 | 51.1 | |
| 117 tert-Butylbenzene | 119 | 9.546 | 9.545 | 0.001 | 95 | 497969 | 50.0 | 49.9 | |
| 118 1,2,4-Trimethylbenzene | 105 | 9.682 | 9.682 | 0.000 | 97 | 600215 | 50.0 | 50.4 | |
| 119 Butyl Methacrylate | 87 | 9.696 | 9.696 | 0.000 | 92 | 171118 | 50.0 | 52.0 | |
| 120 sec-Butylbenzene | 105 | 9.839 | 9.839 | 0.000 | 99 | 756973 | 50.0 | 50.0 | |
| 121 1,3-Dichlorobenzene | 146 | 10.090 | 10.097 | -0.007 | 98 | 333939 | 50.0 | 50.8 | |
| 122 4-Isopropyltoluene | 119 | 10.119 | 10.118 | 0.001 | 98 | 647792 | 50.0 | 50.7 | |
| * 123 1,4-Dichlorobenzene-d4 | 152 | 10.226 | 10.226 | 0.000 | 94 | 224980 | 50.0 | 50.0 | |
| 124 1,4-Dichlorobenzene | 146 | 10.248 | 10.247 | 0.001 | 96 | 342051 | 50.0 | 49.5 | |
| 125 1,2,3-Trimethylbenzene | 105 | 10.355 | 10.355 | 0.000 | 98 | 609921 | 50.0 | 50.6 | |
| 126 2,3-Dihydroindene | 117 | 10.527 | 10.527 | 0.000 | 95 | 586285 | 50.0 | 50.1 | |
| 127 Benzyl chloride | 126 | 10.706 | 10.713 | -0.007 | 98 | 40821 | 50.0 | 55.8 | |
| 128 p-Diethylbenzene | 119 | 10.727 | 10.727 | 0.000 | 94 | 325177 | 50.0 | 50.5 | |
| 129 n-Butylbenzene | 91 | 10.813 | 10.813 | 0.000 | 98 | 594378 | 50.0 | 51.0 | |
| 130 1,2-Dichlorobenzene | 146 | 10.914 | 10.921 | -0.007 | 97 | 307828 | 50.0 | 51.2 | |
| 131 1,2,4,5-Tetramethylbenzene | 119 | 11.924 | 11.924 | 0.000 | 98 | 594174 | 50.0 | 53.0 | |
| 132 1,2-Dibromo-3-Chloropropane | 157 | 12.067 | 12.074 | -0.007 | 95 | 21742 | 50.0 | 56.6 | |
| 133 1,3,5-Trichlorobenzene | 180 | 12.117 | 12.124 | -0.007 | 98 | 250860 | 50.0 | 52.6 | |
| 134 1,2,4-Trichlorobenzene | 180 | 12.819 | 12.819 | 0.000 | 94 | 209542 | 50.0 | 52.4 | |

| Compound | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q | Response | Cal Amt ug/l | OnCol Amt ug/l | Flags |
|---|---|---|---|---|---|---|---|---|---|
| 135 Hexachlorobutadiene | 225 | 12.841 | 12.840 | 0.001 | 97 | 85054 | 50.0 | 48.1 | |
| 136 Naphthalene | 128 | 13.120 | 13.127 | -0.007 | 100 | 367710 | 50.0 | 49.8 | |
| 137 1,2,3-Trichlorobenzene | 180 | 13.299 | 13.299 | 0.000 | 95 | 166305 | 50.0 | 50.8 | |
| S 138 1,2-Dichloroethene, Total | 100 | | | | 0 | | 100.0 | 96.8 | |
| S 139 1,3-Dichloropropene, Total | 100 | | | | 0 | | 100.0 | 107.2 | |
| S 140 Xylenes, Total | 100 | | | | 0 | | 100.0 | 103.1 | |
| S 142 Total BTEX | 1 | | | | 0 | | 250.0 | 253.3 | |

## QC Flag Legend

Review Flags

a - User Assigned ID

## Reagents:

| | | | | |
|---|---|---|---|---|
| 8260MIX1COMB_00125 | Amount Added: 50.00 | Units: uL | | |
| ACROLEIN W_00112 | Amount Added: 10.00 | Units: uL | | |
| GASES Li_00384 | Amount Added: 50.00 | Units: uL | | |
| 524freon_00027 | Amount Added: 50.00 | Units: uL | | |
| 8260ISNEW_00129 | Amount Added: 1.00 | Units: uL | Run Reagent | |
| 8260SURR250_00212 | Amount Added: 1.00 | Units: uL | Run Reagent | |

Report Date: 10-Sep-2020 10:38:54 Chrom Revision: 2.3 20-Aug-2020 13:57:12

Eurofins TestAmerica, Edison

Data File: \\chromfs\Edison\ChromData\CVOAMS13\20200904-116303.b\P79357.D

Injection Date: 04-Sep-2020 16:09:30 Instrument ID: CVOAMS13 Operator ID:

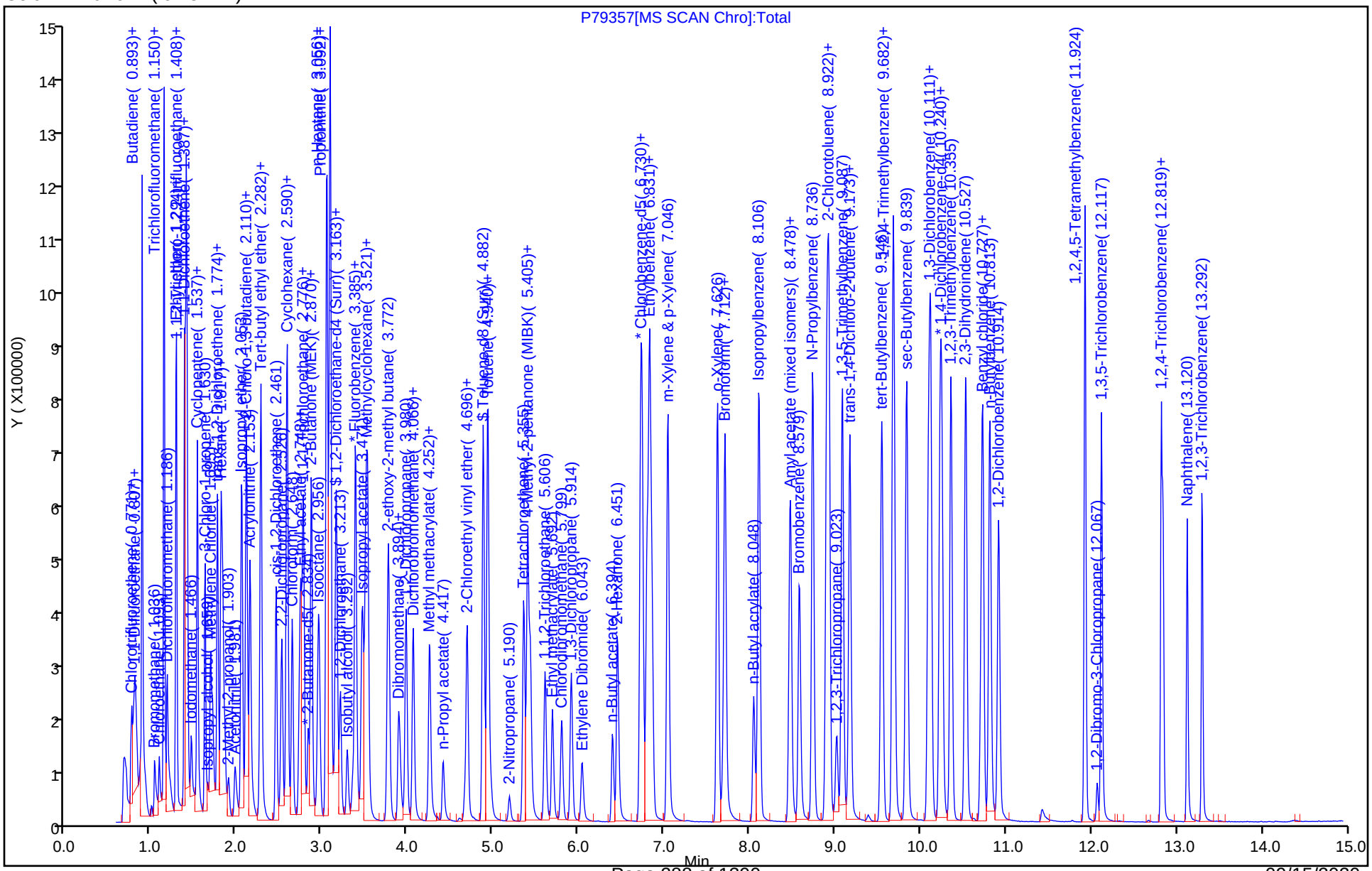
Lims ID: STD50 Worklist Smp#: 7

Client ID:

Purge Vol: 5.000 mL Dil. Factor: 1.0000 ALS Bottle#: 7

Method: 8260W_13 Limit Group: VOA - 8260C Water and Solid

Column: Rtx-624 ( 0.25 mm)



Eurofins TestAmerica, Edison

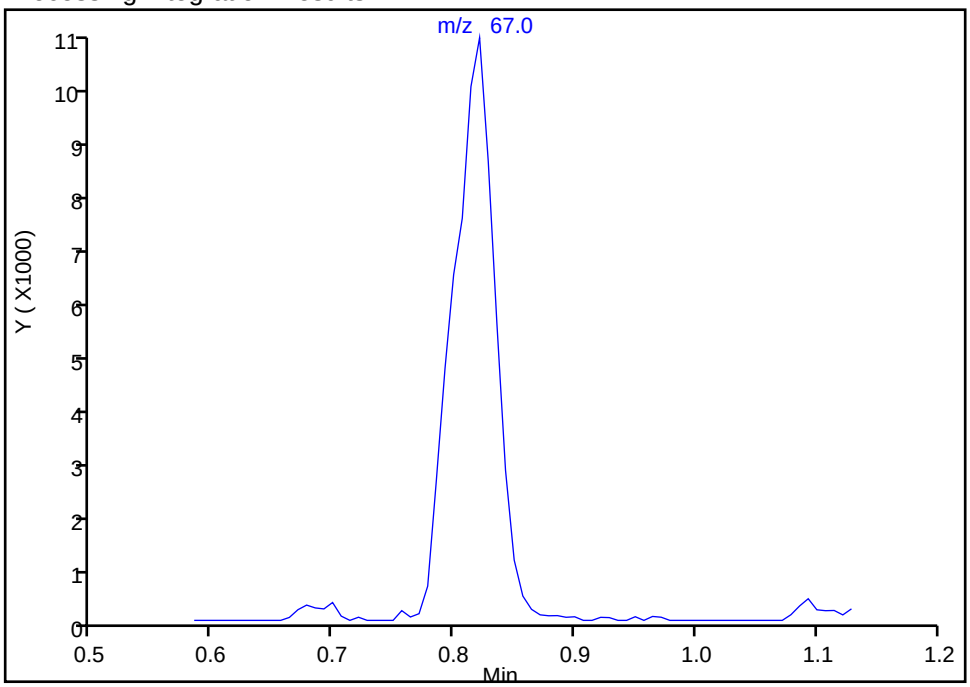
Data File: \\chromfs\Edison\ChromData\CVOAMS13\20200904-116303.b\P79357.D
Injection Date: 04-Sep-2020 16:09:30 Instrument ID: CVOAMS13
Lims ID: STD50
Client ID:
Operator ID: ALS Bottle#: 7 Worklist Smp#: 7
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: 8260W_13 Limit Group: VOA - 8260C Water and Solid
Column: Rtx-624 ( 0.25 mm) Detector MS SCAN

## 5 Chlorodifluoromethane, CAS: 75-45-6

Signal: 1

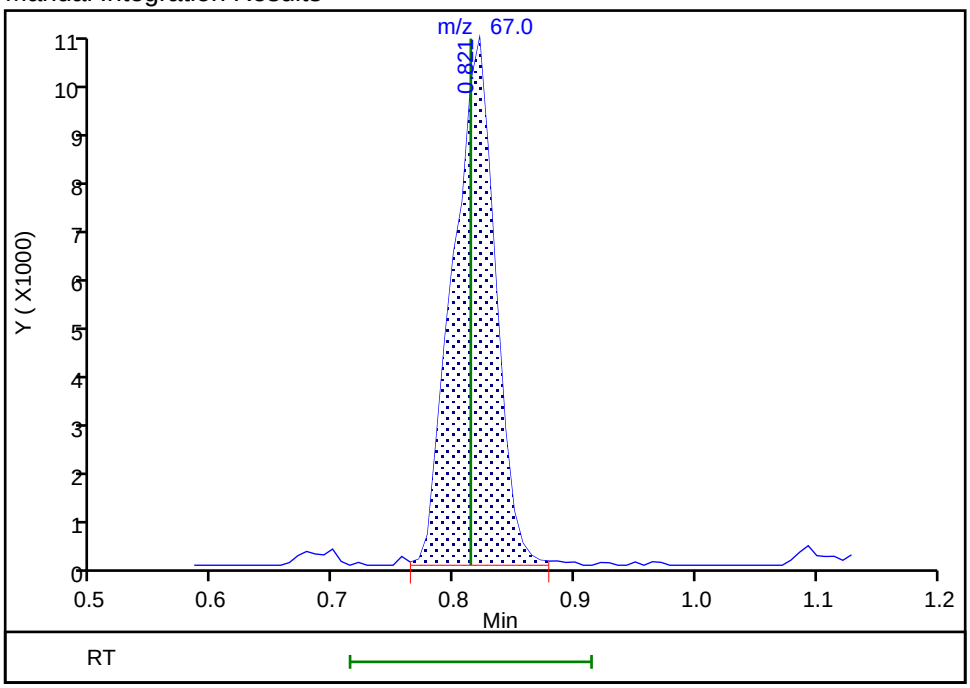
Not Detected
Expected RT: 0.81

Processing Integration Results




Manual Integration Results

RT: 0.82
Area: 25723
Amount: 49.087229
Amount Units: ug/l




Reviewer: starzecm, 04-Sep-2020 15:37:03
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Eurofins TestAmerica, Edison

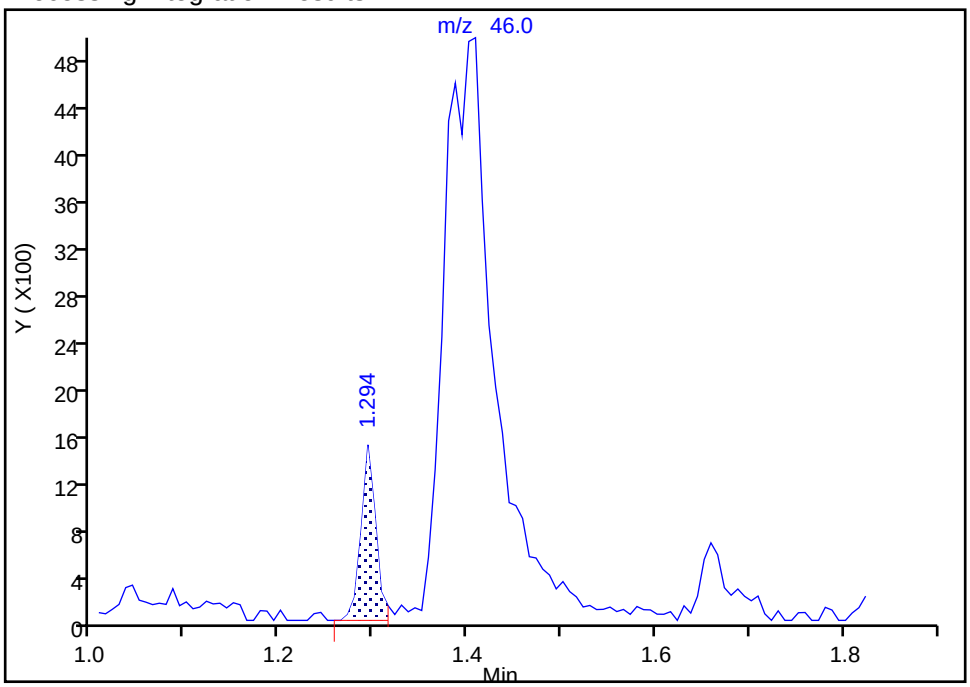
Data File: \\chromfs\Edison\ChromData\CVOAMS13\20200904-116303.b\P79357.D
Injection Date: 04-Sep-2020 16:09:30 Instrument ID: CVOAMS13
Lims ID: STD50
Client ID:
Operator ID: ALS Bottle#: 7 Worklist Smp#: 7
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: 8260W_13 Limit Group: VOA - 8260C Water and Solid
Column: Rtx-624 ( 0.25 mm) Detector MS SCAN

## 16 Ethanol, CAS: 64-17-5

Signal: 1

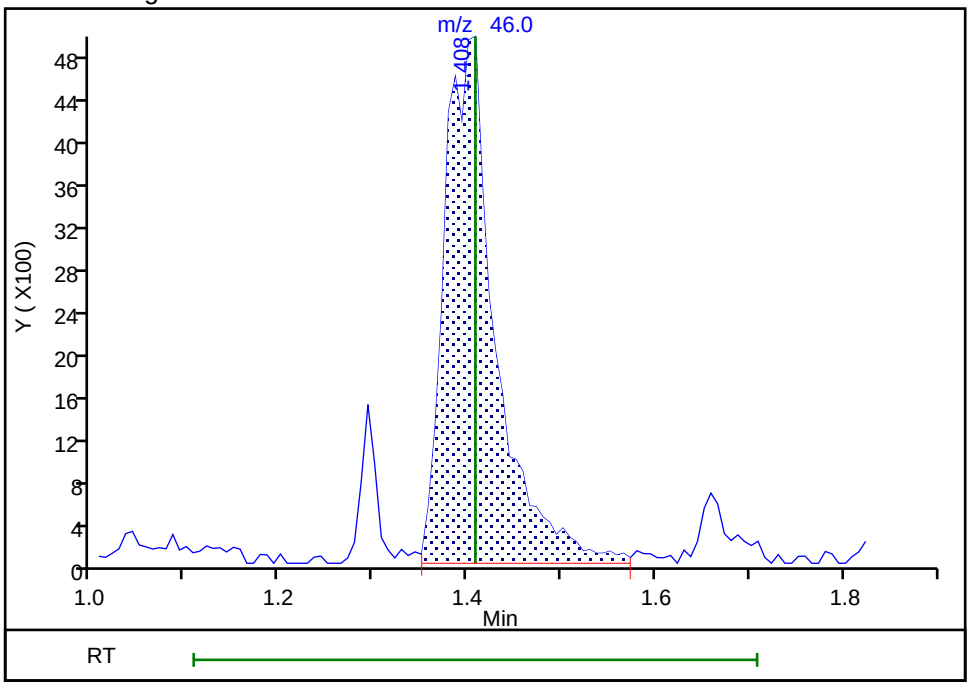
Processing Integration Results

RT: 1.29
Area: 1638
Amount: 264.0425
Amount Units: ug/l




Manual Integration Results

RT: 1.41
Area: 18644
Amount: 1899.6662
Amount Units: ug/l




Reviewer: boykink, 05-Sep-2020 00:12:09
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Edison

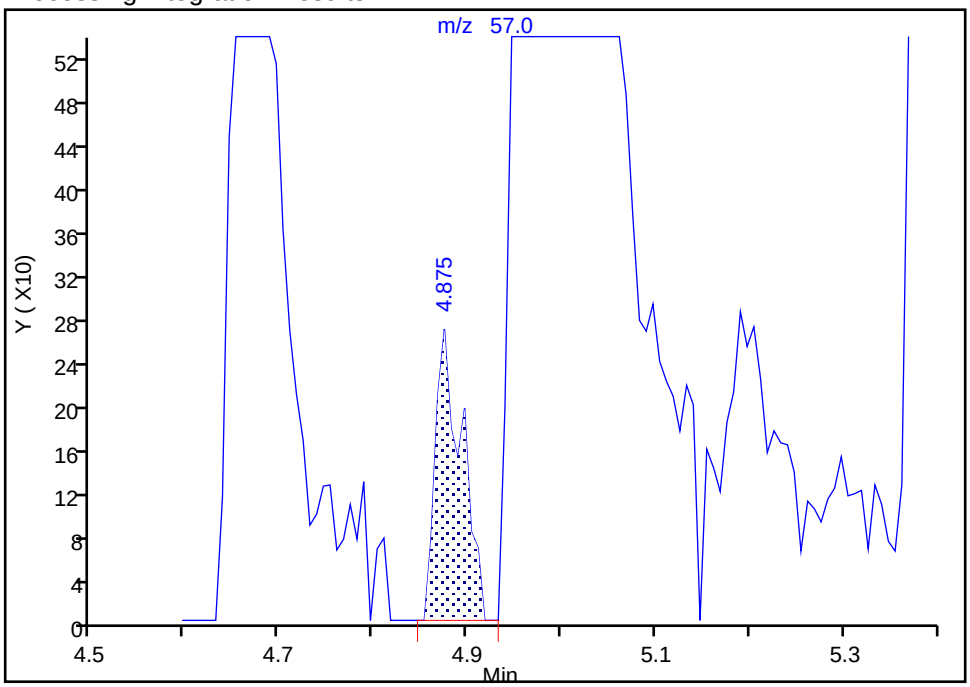
Data File: \\chromfs\Edison\ChromData\CVOAMS13\20200904-116303.b\P79357.D
Injection Date: 04-Sep-2020 16:09:30 Instrument ID: CVOAMS13
Lims ID: STD50
Client ID:
Operator ID: ALS Bottle#: 7 Worklist Smp#: 7
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: 8260W_13 Limit Group: VOA - 8260C Water and Solid
Column: Rtx-624 ( 0.25 mm) Detector MS SCAN

## 84 Epichlorohydrin, CAS: 106-89-8

Signal: 1

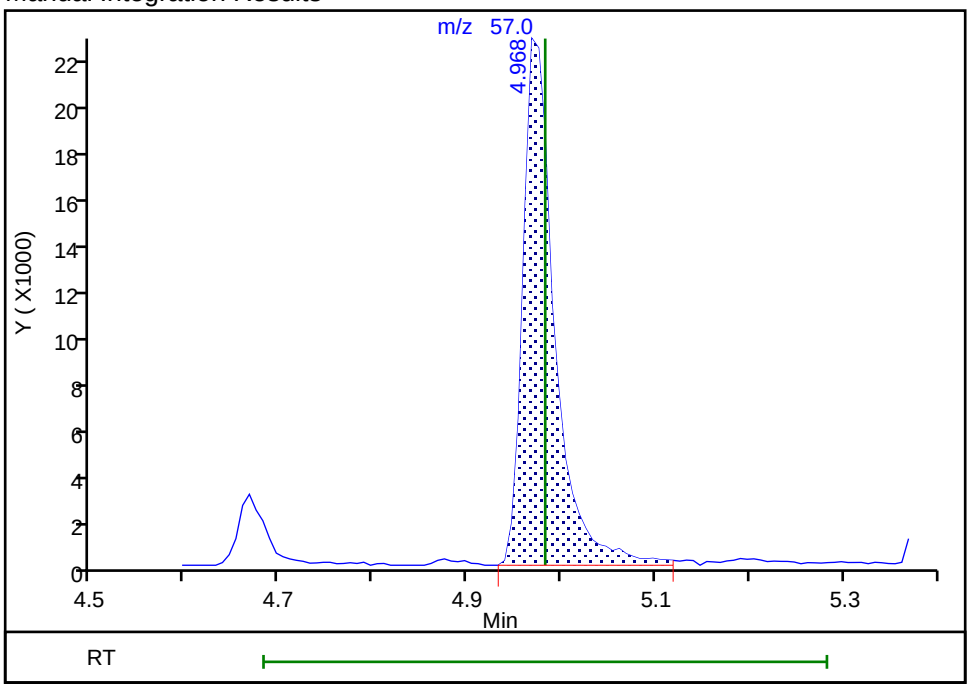
Processing Integration Results

RT: 4.88
Area: 526
Amount: 13.690616
Amount Units: ug/l




Manual Integration Results

RT: 4.97
Area: 52334
Amount: 920.3729
Amount Units: ug/l




Reviewer: starzecm, 04-Sep-2020 15:37:20
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Edison

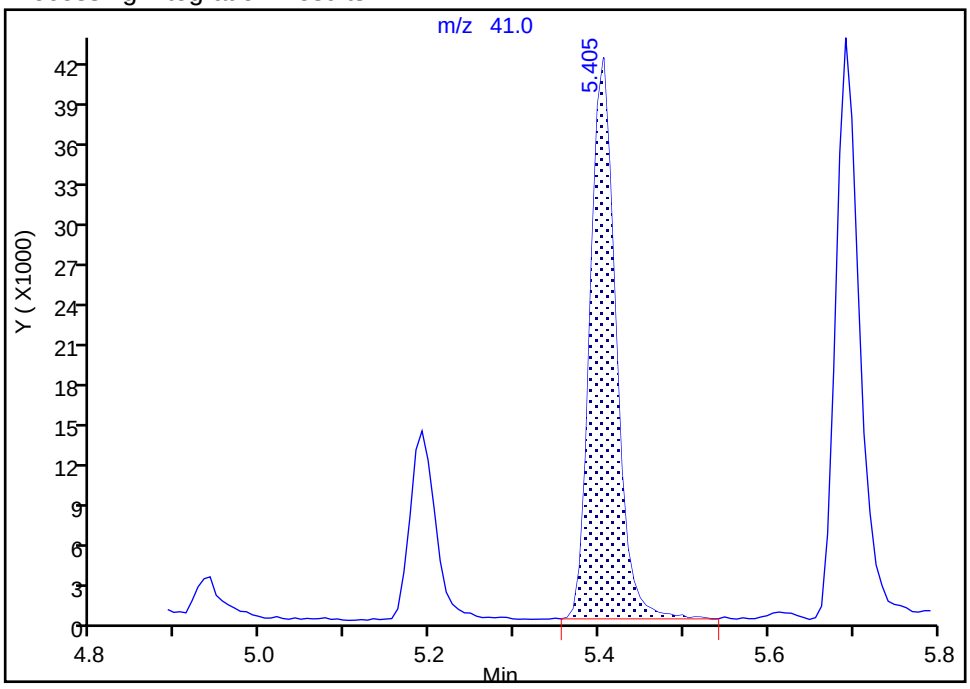
Data File: \\chromfs\Edison\ChromData\CVOAMS13\20200904-116303.b\P79357.D
Injection Date: 04-Sep-2020 16:09:30 Instrument ID: CVOAMS13
Lims ID: STD50
Client ID:
Operator ID: ALS Bottle#: 7 Worklist Smp#: 7
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: 8260W_13 Limit Group: VOA - 8260C Water and Solid
Column: Rtx-624 ( 0.25 mm) Detector MS SCAN

## 85 2-Nitropropane, CAS: 79-46-9

Signal: 1

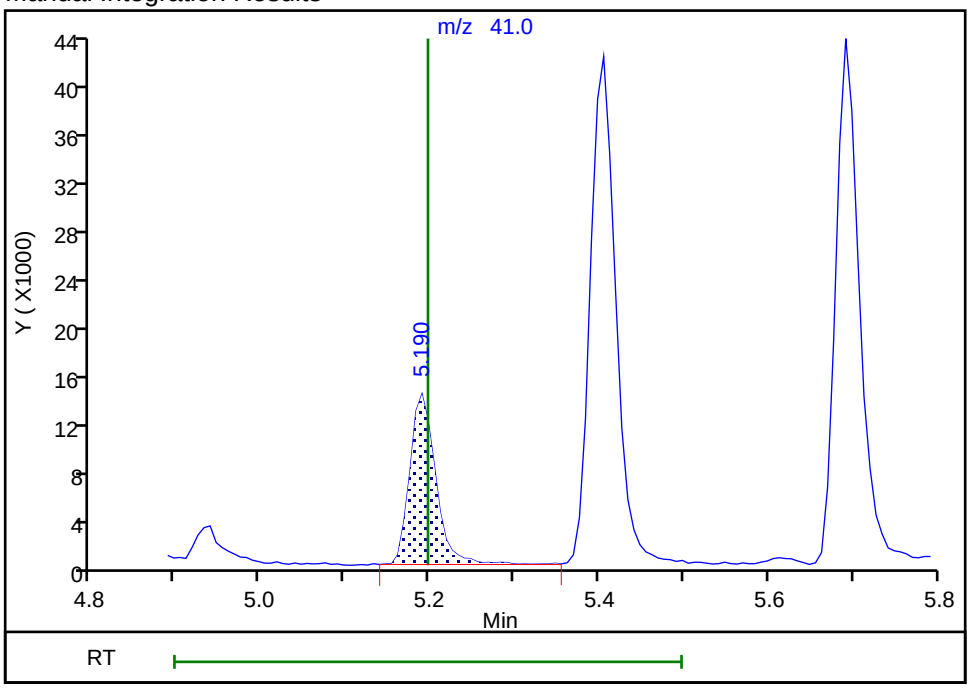
Processing Integration Results

RT: 5.41
Area: 88418
Amount: 96.765381
Amount Units: ug/l




Manual Integration Results

RT: 5.19
Area: 30161
Amount: 99.048205
Amount Units: ug/l




Reviewer: baronm, 05-Sep-2020 12:08:29
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Eurofins TestAmerica, Edison
Target Compound Quantitation Report

Data File: \\chromfs\Edison\ChromData\CVOAMS13\20200904-116303.b\P79358.D
Lims ID: STD200
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 04-Sep-2020 16:33:30 ALS Bottle#: 8 Worklist Smp#: 8
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: STD200
Misc. Info.: 460-0116303-008
Operator ID: Instrument ID: CVOAMS13
Sublist: chrom-8260W_13*sub62

Method: \\chromfs\Edison\ChromData\CVOAMS13\20200904-116303.b\8260W_13.m
Limit Group: VOA - 8260C Water and Solid
Last Update: 10-Sep-2020 10:39:08 Calib Date: 04-Sep-2020 16:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Edison\ChromData\CVOAMS13\20200904-116303.b\P79359.D

Column 1 : Rtx-624 ( 0.25 mm) Det: MS SCAN
Process Host: CTX1019

First Level Reviewer: boykink Date: 05-Sep-2020 00:16:26

| Compound | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q | Response | Cal Amt ug/l | OnCol Amt ug/l | Flags |
|---|---|---|---|---|---|---|---|---|---|
| 1 Monochloropentafluoroethane | 119 | 0.728 | 0.721 | 0.007 | 68 | 55399 | 200.0 | 210.9 | a |
| 2 Chlorotrifluoroethene | 116 | 0.756 | 0.756 | 0.000 | 87 | 213205 | 200.0 | 228.1 | |
| 3 Dichlorodifluoromethane | 85 | 0.771 | 0.771 | 0.000 | 99 | 842683 | 200.0 | 209.9 | |
| 4 1,1-Difluoroethane | 65 | 0.807 | 0.807 | 0.000 | 93 | 346160 | 200.0 | 181.9 | |
| 5 Chlorodifluoromethane | 67 | 0.821 | 0.814 | 0.007 | 97 | 104936 | 200.0 | 190.8 | a |
| 6 Chloromethane | 50 | 0.892 | 0.892 | 0.000 | 97 | 1115644 | 200.0 | 199.1 | |
| 8 Butadiene | 54 | 0.892 | 0.892 | 0.000 | 94 | 773489 | 200.0 | 207.3 | |
| 7 Vinyl chloride | 62 | 0.892 | 0.892 | 0.000 | 86 | 816164 | 200.0 | 198.8 | |
| 9 Bromomethane | 94 | 1.036 | 1.036 | 0.000 | 99 | 381620 | 200.0 | 233.0 | |
| 10 Chloroethane | 64 | 1.093 | 1.093 | 0.000 | 99 | 437022 | 200.0 | 200.3 | |
| 11 Pentane | 72 | 1.150 | 1.150 | 0.000 | 96 | 213875 | 400.0 | 425.3 | |
| 12 Trichlorofluoromethane | 101 | 1.150 | 1.150 | 0.000 | 98 | 791377 | 200.0 | 211.2 | |
| 13 Dichlorofluoromethane | 67 | 1.186 | 1.186 | 0.000 | 99 | 988703 | 200.0 | 196.2 | |
| 14 2-Methyl-1,3-butadiene | 67 | 1.286 | 1.286 | 0.000 | 96 | 896070 | 200.0 | 207.8 | |
| 15 Ethyl ether | 59 | 1.294 | 1.294 | 0.000 | 95 | 408174 | 200.0 | 202.9 | |
| 17 1,1-Dichloroethene | 96 | 1.394 | 1.387 | 0.007 | 97 | 550740 | 200.0 | 205.5 | |
| 18 1,2-Dichloro-1,1,2-trifluoroetha | 67 | 1.387 | 1.387 | 0.000 | 83 | 778229 | 200.0 | 198.9 | |
| 16 Ethanol | 46 | 1.408 | 1.408 | 0.000 | 80 | 72547 | 8000.0 | 7484.5 | a |
| 19 Carbon disulfide | 76 | 1.408 | 1.408 | 0.000 | 99 | 2105421 | 200.0 | 200.8 | |
| 20 1,1,2-Trichloro-1,2,2-trifluoroe | 101 | 1.408 | 1.408 | 0.000 | 56 | 554137 | 200.0 | 211.3 | |
| 21 1,1,1-Trifluoro-2,2-dichloroetha | 83 | 1.415 | 1.415 | 0.000 | 92 | 822579 | 200.0 | 202.7 | |
| 22 Iodomethane | 142 | 1.466 | 1.466 | 0.000 | 96 | 876527 | 200.0 | 204.9 | |
| 23 Cyclopentene | 67 | 1.537 | 1.537 | 0.000 | 96 | 1489341 | 200.0 | 200.6 | |
| 24 Acrolein | 56 | 1.566 | 1.559 | 0.007 | 93 | 51820 | 200.0 | 228.3 | |
| 25 3-Chloro-1-propene | 76 | 1.630 | 1.630 | 0.000 | 94 | 356679 | 200.0 | 208.2 | |
| 26 Isopropyl alcohol | 45 | 1.659 | 1.659 | 0.000 | 98 | 179401 | 2000.0 | 1902.5 | |
| 27 Methylene Chloride | 84 | 1.695 | 1.695 | 0.000 | 91 | 631304 | 200.0 | 195.4 | |
| 28 Acetone | 43 | 1.716 | 1.716 | 0.000 | 88 | 475188 | 1000.0 | 1016.0 | |
| 29 trans-1,2-Dichloroethene | 96 | 1.774 | 1.774 | 0.000 | 93 | 615832 | 200.0 | 200.9 | |
| 30 Methyl acetate | 43 | 1.781 | 1.781 | 0.000 | 99 | 427833 | 400.0 | 375.8 | |

| Compound | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q | Response | Cal Amt ug/l | OnCol Amt ug/l | Flags |
|---|---|---|---|---|---|---|---|---|---|
| 31 Hexane | 86 | 1.817 | 1.817 | -0.001 | 90 | 163677 | 200.0 | 221.3 | |
| 32 Methyl tert-butyl ether | 73 | 1.831 | 1.838 | -0.007 | 87 | 1267437 | 200.0 | 202.1 | |
| * 33 TBA-d9 (IS) | 65 | 1.859 | 1.860 | -0.001 | 99 | 116827 | 1000.0 | 1000.0 | |
| 34 2-Methyl-2-propanol | 59 | 1.902 | 1.902 | 0.000 | 100 | 257906 | 2000.0 | 2000.8 | |
| 35 Acetonitrile | 41 | 1.981 | 1.981 | 0.000 | 99 | 448269 | 2000.0 | 1919.0 | |
| 36 Isopropyl ether | 45 | 2.053 | 2.053 | 0.000 | 97 | 2009218 | 200.0 | 204.7 | |
| 37 2-Chloro-1,3-butadiene | 88 | 2.103 | 2.110 | -0.007 | 90 | 579320 | 200.0 | 206.2 | |
| 38 1,1-Dichloroethane | 63 | 2.117 | 2.117 | 0.000 | 100 | 1136397 | 200.0 | 199.7 | |
| 39 Acrylonitrile | 53 | 2.160 | 2.153 | 0.007 | 94 | 1488785 | 2000.0 | 2019.1 | |
| 40 Tert-butyl ethyl ether | 59 | 2.275 | 2.275 | 0.000 | 89 | 1673940 | 200.0 | 206.9 | |
| 41 Vinyl acetate | 43 | 2.282 | 2.282 | 0.000 | 100 | 1826519 | 400.0 | 417.2 | |
| 42 cis-1,2-Dichloroethene | 96 | 2.461 | 2.461 | 0.000 | 98 | 678589 | 200.0 | 200.1 | |
| 43 2,2-Dichloropropane | 77 | 2.526 | 2.526 | 0.000 | 98 | 775196 | 200.0 | 201.2 | |
| 44 Cyclohexane | 56 | 2.583 | 2.583 | 0.000 | 92 | 1199483 | 200.0 | 210.5 | |
| 45 Chlorobromomethane | 128 | 2.590 | 2.590 | 0.000 | 91 | 302079 | 200.0 | 203.8 | |
| 46 Chloroform | 83 | 2.647 | 2.647 | 0.000 | 99 | 1022953 | 200.0 | 200.5 | |
| 47 Carbon tetrachloride | 117 | 2.733 | 2.733 | 0.000 | 98 | 642971 | 200.0 | 213.8 | |
| 48 Ethyl acetate | 70 | 2.748 | 2.748 | 0.000 | 99 | 87559 | 400.0 | 422.1 | |
| 49 Methyl acrylate | 55 | 2.748 | 2.748 | 0.000 | 85 | 344589 | 200.0 | 214.4 | |
| 50 Tetrahydrofuran | 42 | 2.755 | 2.755 | 0.000 | 96 | 291683 | 400.0 | 403.1 | |
| 52 1,1,1-Trichloroethane | 97 | 2.784 | 2.776 | 0.008 | 99 | 844830 | 200.0 | 206.0 | |
| $ 51 Dibromofluoromethane (Surr) | 113 | 2.776 | 2.776 | 0.000 | 97 | 128526 | 50.0 | 50.1 | |
| * 53 2-Butanone-d5 | 46 | 2.834 | 2.834 | 0.000 | 98 | 160047 | 250.0 | 250.0 | |
| 55 1,1-Dichloropropene | 75 | 2.869 | 2.869 | 0.000 | 97 | 876224 | 200.0 | 200.8 | |
| 54 2-Butanone (MEK) | 72 | 2.869 | 2.869 | 0.000 | 100 | 242797 | 1000.0 | 1038.2 | |
| 56 Isooctane | 57 | 2.955 | 2.955 | 0.000 | 99 | 1958645 | 200.0 | 217.8 | |
| 57 n-Heptane | 57 | 3.049 | 3.049 | 0.000 | 93 | 472746 | 200.0 | 214.1 | |
| 58 Benzene | 78 | 3.056 | 3.056 | 0.000 | 96 | 2668664 | 200.0 | 200.1 | |
| 59 Propionitrile | 54 | 3.084 | 3.077 | 0.007 | 96 | 525916 | 2000.0 | 2121.5 | |
| 60 Methacrylonitrile | 67 | 3.092 | 3.092 | 0.000 | 92 | 1667489 | 2000.0 | 2039.2 | |
| $ 61 1,2-Dichloroethane-d4 (Surr) | 65 | 3.156 | 3.156 | 0.000 | 0 | 121939 | 50.0 | 47.4 | |
| 62 Tert-amyl methyl ether | 73 | 3.163 | 3.163 | 0.000 | 99 | 1415698 | 200.0 | 210.3 | |
| 63 1,2-Dichloroethane | 62 | 3.213 | 3.213 | 0.000 | 96 | 645223 | 200.0 | 193.9 | |
| 64 Isobutyl alcohol | 43 | 3.292 | 3.292 | 0.000 | 95 | 332754 | 5000.0 | 5327.0 | |
| 65 t-Amyl alcohol | 59 | 3.357 | 3.357 | 0.000 | 98 | 218748 | 2000.0 | 2157.7 | |
| * 66 Fluorobenzene | 96 | 3.385 | 3.385 | 0.000 | 99 | 595538 | 50.0 | 50.0 | |
| 67 Isopropyl acetate | 43 | 3.457 | 3.457 | 0.000 | 99 | 761069 | 200.0 | 201.4 | |
| 68 Methylcyclohexane | 83 | 3.514 | 3.507 | 0.007 | 97 | 1142664 | 200.0 | 217.4 | |
| 69 Trichloroethene | 130 | 3.536 | 3.536 | 0.000 | 98 | 669215 | 200.0 | 208.2 | |
| 70 2-ethoxy-2-methyl butane | 59 | 3.772 | 3.772 | 0.000 | 93 | 1434376 | 200.0 | 216.2 | |
| 71 Dibromomethane | 93 | 3.887 | 3.894 | -0.007 | 97 | 292356 | 200.0 | 203.9 | |
| 72 n-Butanol | 56 | 3.908 | 3.915 | -0.007 | 88 | 207653 | 5000.0 | 5052.2 | |
| 73 1,2-Dichloropropane | 63 | 3.980 | 3.980 | 0.000 | 92 | 664337 | 200.0 | 206.4 | |
| 75 Dichlorobromomethane | 83 | 4.066 | 4.066 | 0.000 | 99 | 736764 | 200.0 | 208.6 | |
| 74 Ethyl acrylate | 55 | 4.059 | 4.066 | -0.007 | 98 | 499304 | 200.0 | 211.1 | |
| * 76 1,4-Dioxane-d8 | 96 | 4.238 | 4.238 | 0.000 | 73 | 16172 | 1000.0 | 1000.0 | |
| 77 Methyl methacrylate | 100 | 4.252 | 4.259 | -0.007 | 93 | 213231 | 400.0 | 444.9 | |
| 78 1,4-Dioxane | 88 | 4.259 | 4.273 | -0.014 | 96 | 72363 | 4000.0 | 3879.9 | |
| 79 n-Propyl acetate | 43 | 4.410 | 4.417 | -0.007 | 99 | 536909 | 200.0 | 221.8 | |
| 80 2-Chloroethyl vinyl ether | 63 | 4.667 | 4.675 | -0.008 | 97 | 146693 | 200.5 | 240.8 | |
| 81 cis-1,3-Dichloropropene | 75 | 4.696 | 4.696 | 0.000 | 92 | 953812 | 200.0 | 218.3 | |
| $ 82 Toluene-d8 (Surr) | 98 | 4.882 | 4.882 | 0.000 | 99 | 551075 | 50.0 | 50.0 | |

| Compound | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q | Response | Cal Amt ug/l | OnCol Amt ug/l | Flags |
|---|---|---|---|---|---|---|---|---|---|
| 83 Toluene | 91 | 4.940 | 4.940 | 0.000 | 93 | 2721314 | 200.0 | 200.8 | |
| 84 Epichlorohydrin | 57 | 4.968 | 4.983 | -0.015 | 99 | 287832 | 4000.0 | 4035.2 | a |
| 85 2-Nitropropane | 41 | 5.190 | 5.197 | -0.007 | 96 | 134976 | 400.0 | 422.3 | a |
| 86 Tetrachloroethene | 166 | 5.355 | 5.362 | -0.007 | 98 | 651928 | 200.0 | 204.2 | |
| 87 4-Methyl-2-pentanone (MIBK) | 43 | 5.405 | 5.405 | 0.000 | 95 | 1775270 | 1000.0 | 1072.2 | |
| 88 trans-1,3-Dichloropropene | 75 | 5.434 | 5.441 | -0.007 | 95 | 776364 | 200.0 | 223.6 | |
| 89 1,1,2-Trichloroethane | 83 | 5.606 | 5.606 | 0.000 | 96 | 382089 | 200.0 | 206.7 | |
| 90 Ethyl methacrylate | 69 | 5.692 | 5.699 | -0.007 | 90 | 565187 | 200.0 | 223.5 | |
| 91 Chlorodibromomethane | 129 | 5.799 | 5.799 | 0.000 | 98 | 501890 | 200.0 | 210.5 | |
| 92 1,3-Dichloropropane | 76 | 5.914 | 5.914 | 0.000 | 95 | 779411 | 200.0 | 202.6 | |
| 93 Ethylene Dibromide | 107 | 6.036 | 6.050 | -0.014 | 98 | 429394 | 200.0 | 216.2 | |
| 94 n-Butyl acetate | 43 | 6.394 | 6.401 | -0.007 | 99 | 605244 | 200.0 | 214.9 | |
| 95 2-Hexanone | 43 | 6.451 | 6.458 | -0.007 | 95 | 1247693 | 1000.0 | 1122.9 | |
| * 96 Chlorobenzene-d5 | 117 | 6.723 | 6.723 | 0.000 | 87 | 427242 | 50.0 | 50.0 | |
| 97 Chlorobenzene | 112 | 6.745 | 6.745 | 0.000 | 95 | 1705190 | 200.0 | 200.9 | |
| 98 Ethylbenzene | 106 | 6.831 | 6.831 | 0.000 | 98 | 955498 | 200.0 | 200.8 | |
| 99 1,1,1,2-Tetrachloroethane | 131 | 6.859 | 6.859 | 0.000 | 96 | 555386 | 200.0 | 211.3 | |
| 100 m-Xylene & p-Xylene | 106 | 7.046 | 7.046 | 0.000 | 0 | 1187799 | 200.0 | 212.8 | |
| 101 o-Xylene | 106 | 7.626 | 7.626 | 0.000 | 95 | 1140173 | 200.0 | 201.9 | |
| 102 Bromoform | 173 | 7.690 | 7.690 | 0.000 | 96 | 285754 | 200.0 | 212.1 | |
| 103 Styrene | 104 | 7.712 | 7.719 | -0.007 | 97 | 1891908 | 200.0 | 209.4 | |
| 104 n-Butyl acrylate | 73 | 8.048 | 8.056 | -0.008 | 97 | 343856 | 200.0 | 211.2 | |
| 105 Isopropylbenzene | 105 | 8.113 | 8.113 | 0.000 | 95 | 2943384 | 200.0 | 201.0 | |
| 106 Amyl acetate (mixed isomers) | 43 | 8.464 | 8.471 | -0.007 | 90 | 774550 | 200.0 | 210.7 | |
| $ 107 4-Bromofluorobenzene | 174 | 8.478 | 8.478 | 0.000 | 92 | 170465 | 50.0 | 49.3 | |
| 108 Bromobenzene | 156 | 8.586 | 8.586 | 0.000 | 98 | 709661 | 200.0 | 206.9 | |
| 109 N-Propylbenzene | 91 | 8.743 | 8.743 | 0.000 | 99 | 3601702 | 200.0 | 209.9 | |
| 110 1,1,2,2-Tetrachloroethane | 83 | 8.894 | 8.894 | 0.000 | 97 | 492837 | 200.0 | 207.1 | |
| 111 2-Chlorotoluene | 91 | 8.908 | 8.908 | 0.000 | 97 | 2380971 | 200.0 | 201.3 | |
| 112 4-Ethyltoluene | 105 | 8.929 | 8.929 | 0.000 | 98 | 2979644 | 200.0 | 208.9 | |
| 113 1,2,3-Trichloropropane | 110 | 9.023 | 9.023 | 0.000 | 99 | 134903 | 200.0 | 214.4 | |
| 114 1,3,5-Trimethylbenzene | 105 | 9.087 | 9.087 | 0.000 | 94 | 2494661 | 200.0 | 209.6 | |
| 115 trans-1,4-Dichloro-2-butene | 53 | 9.151 | 9.166 | -0.015 | 90 | 111606 | 200.0 | 245.6 | |
| 116 4-Chlorotoluene | 91 | 9.173 | 9.173 | 0.000 | 98 | 2189374 | 200.0 | 210.7 | |
| 117 tert-Butylbenzene | 119 | 9.553 | 9.545 | 0.008 | 95 | 2119520 | 200.0 | 205.9 | |
| 118 1,2,4-Trimethylbenzene | 105 | 9.682 | 9.682 | 0.000 | 97 | 2562120 | 200.0 | 208.7 | |
| 119 Butyl Methacrylate | 87 | 9.696 | 9.696 | 0.000 | 93 | 778176 | 200.0 | 210.6 | |
| 120 sec-Butylbenzene | 105 | 9.839 | 9.839 | 0.000 | 99 | 3204917 | 200.0 | 205.1 | |
| 121 1,3-Dichlorobenzene | 146 | 10.097 | 10.097 | 0.000 | 97 | 1421890 | 200.0 | 209.8 | |
| 122 4-Isopropyltoluene | 119 | 10.126 | 10.118 | 0.008 | 98 | 2753070 | 200.0 | 208.8 | |
| * 123 1,4-Dichlorobenzene-d4 | 152 | 10.233 | 10.226 | 0.007 | 94 | 232080 | 50.0 | 50.0 | |
| 124 1,4-Dichlorobenzene | 146 | 10.255 | 10.247 | 0.008 | 96 | 1415792 | 200.0 | 198.5 | |
| 125 1,2,3-Trimethylbenzene | 105 | 10.362 | 10.355 | 0.007 | 98 | 2519702 | 200.0 | 202.6 | |
| 126 2,3-Dihydroindene | 117 | 10.534 | 10.527 | 0.007 | 95 | 2434293 | 200.0 | 201.7 | |
| 127 Benzyl chloride | 126 | 10.706 | 10.713 | -0.007 | 99 | 182937 | 200.0 | 214.6 | |
| 128 p-Diethylbenzene | 119 | 10.734 | 10.727 | 0.007 | 94 | 1400739 | 200.0 | 210.9 | |
| 129 n-Butylbenzene | 91 | 10.813 | 10.813 | 0.000 | 99 | 2516592 | 200.0 | 209.4 | |
| 130 1,2-Dichlorobenzene | 146 | 10.914 | 10.921 | -0.007 | 97 | 1296949 | 200.0 | 209.1 | |
| 131 1,2,4,5-Tetramethylbenzene | 119 | 11.931 | 11.924 | 0.007 | 98 | 2479879 | 200.0 | 214.4 | |
| 132 1,2-Dibromo-3-Chloropropane | 157 | 12.067 | 12.074 | -0.007 | 95 | 84236 | 200.0 | 212.7 | |
| 133 1,3,5-Trichlorobenzene | 180 | 12.117 | 12.124 | -0.007 | 97 | 1014884 | 200.0 | 206.3 | |
| 134 1,2,4-Trichlorobenzene | 180 | 12.819 | 12.819 | 0.000 | 94 | 845782 | 200.0 | 204.9 | |

| Compound | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q | Response | Cal Amt ug/l | OnCol Amt ug/l | Flags |
|---|---|---|---|---|---|---|---|---|---|
| 135 Hexachlorobutadiene | 225 | 12.840 | 12.840 | 0.000 | 97 | 366310 | 200.0 | 200.9 | |
| 136 Naphthalene | 128 | 13.120 | 13.127 | -0.007 | 100 | 1438478 | 200.0 | 188.9 | |
| 137 1,2,3-Trichlorobenzene | 180 | 13.292 | 13.299 | -0.007 | 96 | 672673 | 200.0 | 199.1 | |
| S 138 1,2-Dichloroethene, Total | 100 | | | | 0 | | 400.0 | 400.9 | |
| S 139 1,3-Dichloropropene, Total | 100 | | | | 0 | | 400.0 | 441.8 | |
| S 140 Xylenes, Total | 100 | | | | 0 | | 400.0 | 414.8 | |
| S 142 Total BTEX | 1 | | | | 0 | | 1000.0 | 1016.5 | |

## QC Flag Legend

Review Flags

a - User Assigned ID

## Reagents:

| | | | | |
|---|---|---|---|---|
| ACROLEIN W_00112 | Amount Added: | 20.00 | Units: uL | |
| GAS Hi_00370 | Amount Added: | 20.00 | Units: uL | |
| 8FreonHi_00023 | Amount Added: | 20.00 | Units: uL | |
| MIX 2 Hi_00102 | Amount Added: | 20.00 | Units: uL | |
| Ethanol mix_00043 | Amount Added: | 20.00 | Units: uL | |
| MIX I Hi_00129 | Amount Added: | 20.00 | Units: uL | |
| 8260ISNEW_00129 | Amount Added: | 1.00 | Units: uL | Run Reagent |
| 8260SURR250_00212 | Amount Added: | 1.00 | Units: uL | Run Reagent |

Report Date: 10-Sep-2020 10:39:10 Chrom Revision: 2.3 20-Aug-2020 13:57:12

Eurofins TestAmerica, Edison

Data File: \\chromfs\Edison\ChromData\CVOAMS13\20200904-116303.b\P79358.D

Injection Date: 04-Sep-2020 16:33:30 Instrument ID: CVOAMS13 Operator ID:

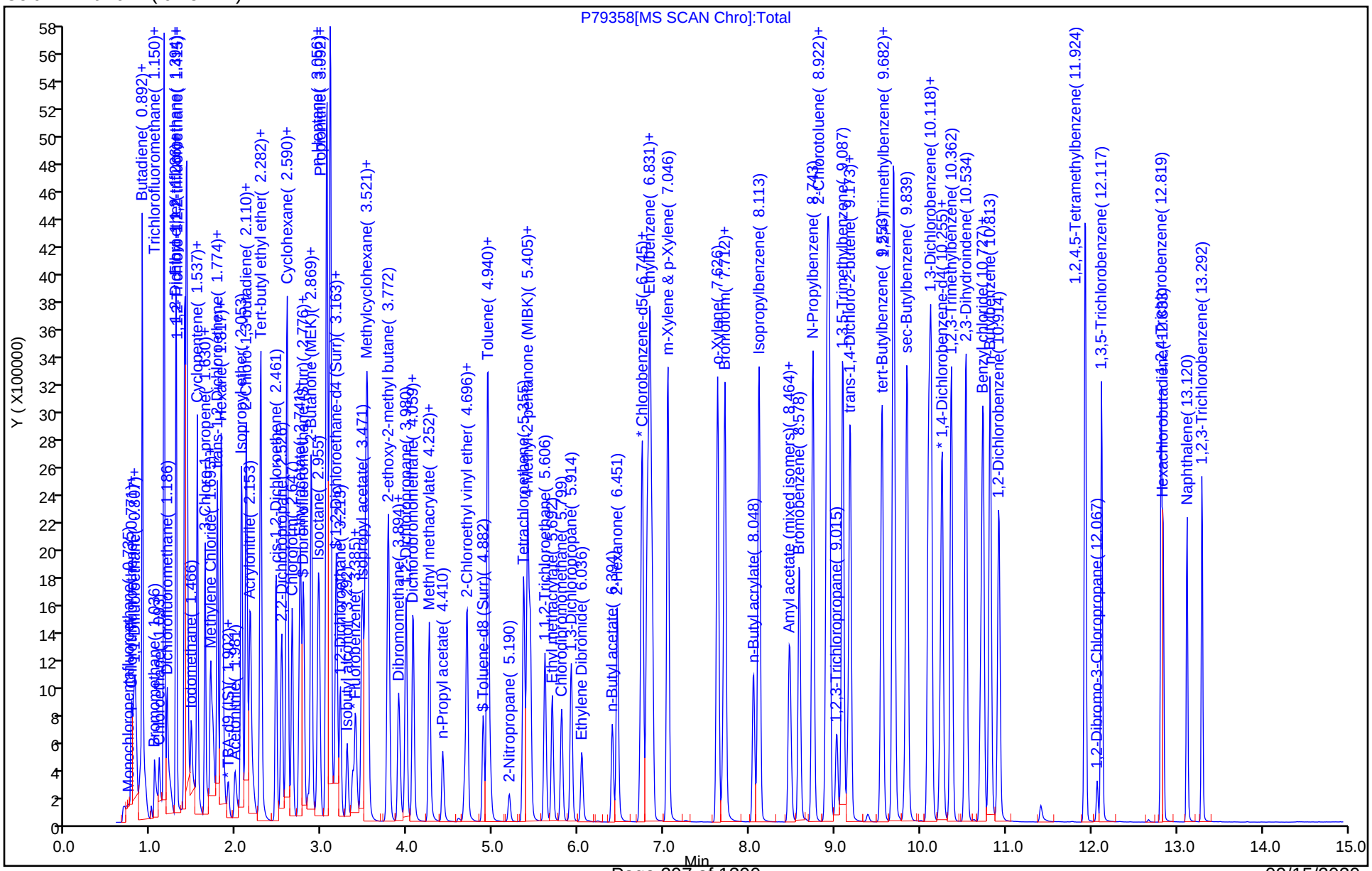
Lims ID: STD200 Worklist Smp#: 8

Client ID:

Purge Vol: 5.000 mL Dil. Factor: 1.0000 ALS Bottle#: 8

Method: 8260W_13 Limit Group: VOA - 8260C Water and Solid

Column: Rtx-624 ( 0.25 mm)



Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Edison

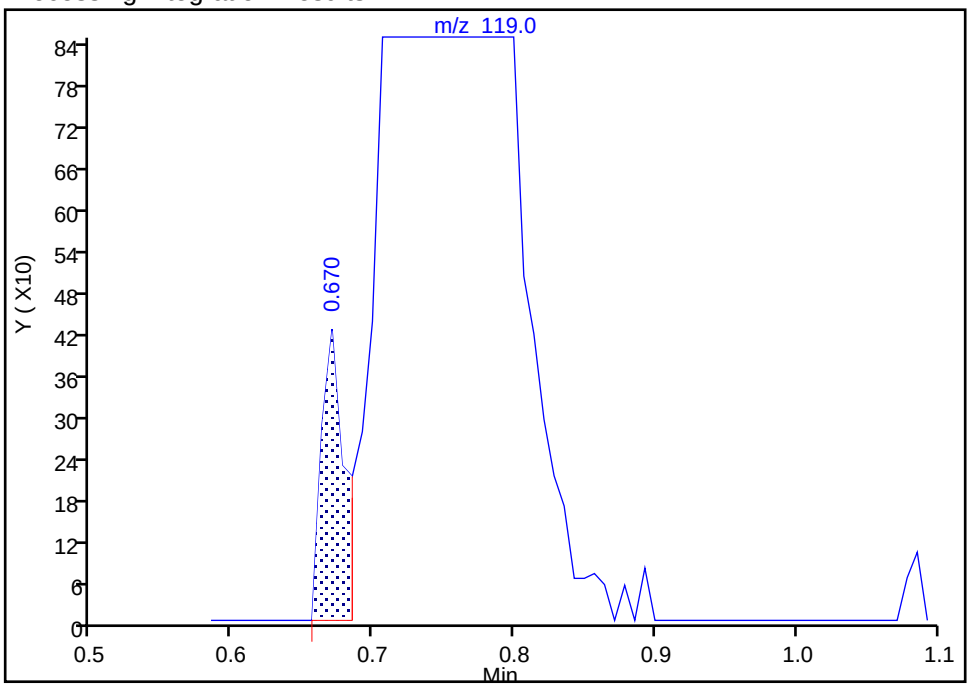
Data File: \\chromfs\Edison\ChromData\CVOAMS13\20200904-116303.b\P79358.D
Injection Date: 04-Sep-2020 16:33:30 Instrument ID: CVOAMS13
Lims ID: STD200
Client ID:
Operator ID: ALS Bottle#: 8 Worklist Smp#: 8
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: 8260W_13 Limit Group: VOA - 8260C Water and Solid
Column: Rtx-624 ( 0.25 mm) Detector MS SCAN

## 1 Monochloropentafluoroethane, CAS: 76-15-3

Signal: 1

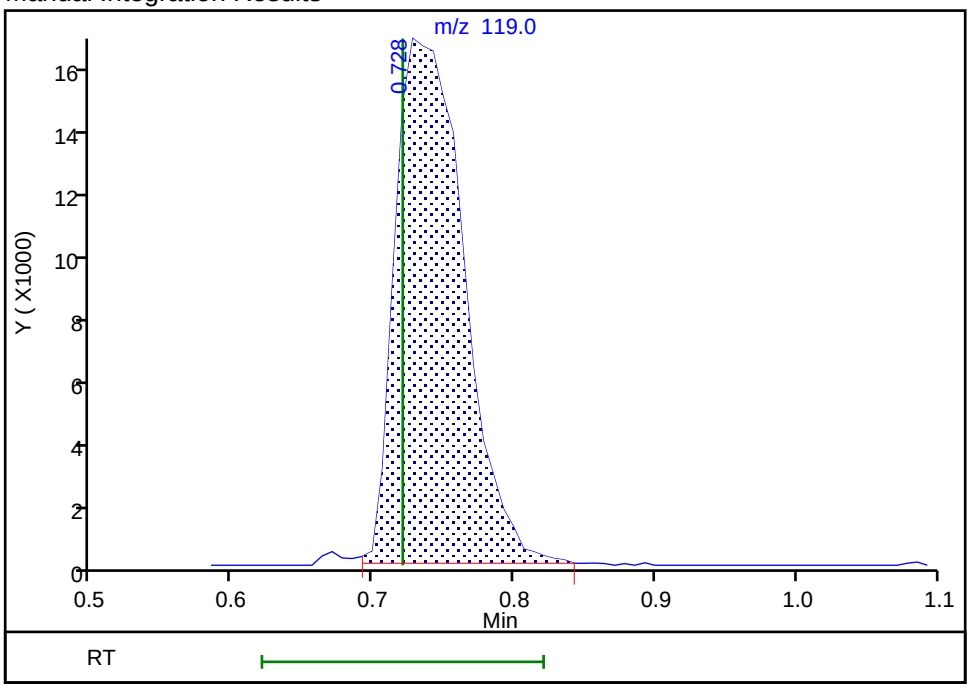
Processing Integration Results

RT: 0.67
Area: 490
Amount: 1.932448
Amount Units: ug/l




Manual Integration Results

RT: 0.73
Area: 55399
Amount: 210.9307
Amount Units: ug/l




Reviewer: boykink, 05-Sep-2020 00:13:07
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Edison

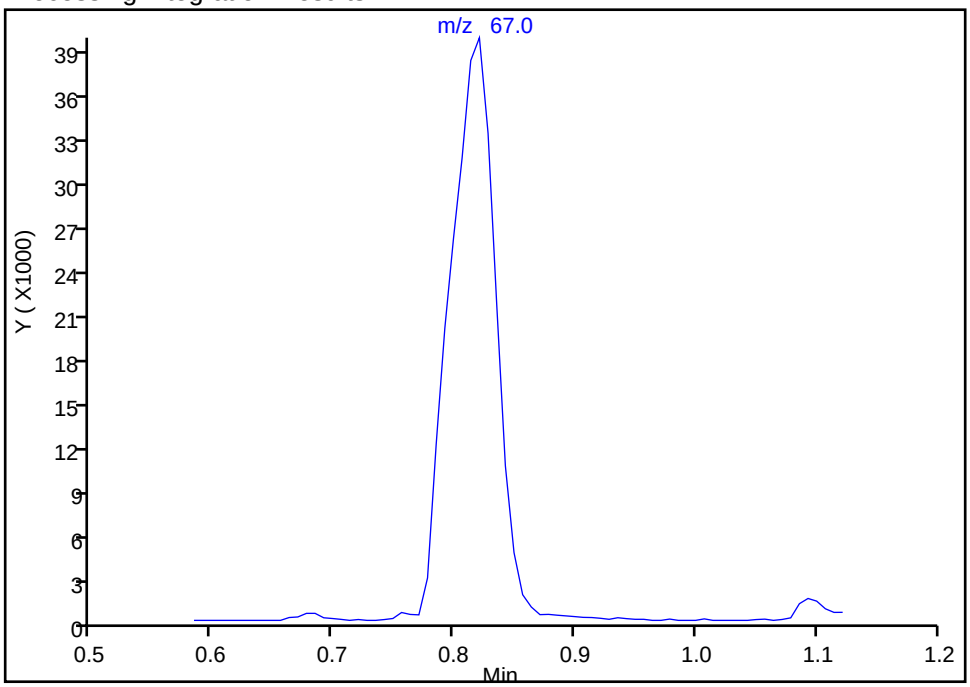
Data File: \\chromfs\Edison\ChromData\CVOAMS13\20200904-116303.b\P79358.D
Injection Date: 04-Sep-2020 16:33:30 Instrument ID: CVOAMS13
Lims ID: STD200
Client ID:
Operator ID: ALS Bottle#: 8 Worklist Smp#: 8
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: 8260W_13 Limit Group: VOA - 8260C Water and Solid
Column: Rtx-624 ( 0.25 mm) Detector MS SCAN

## 5 Chlorodifluoromethane, CAS: 75-45-6

Signal: 1

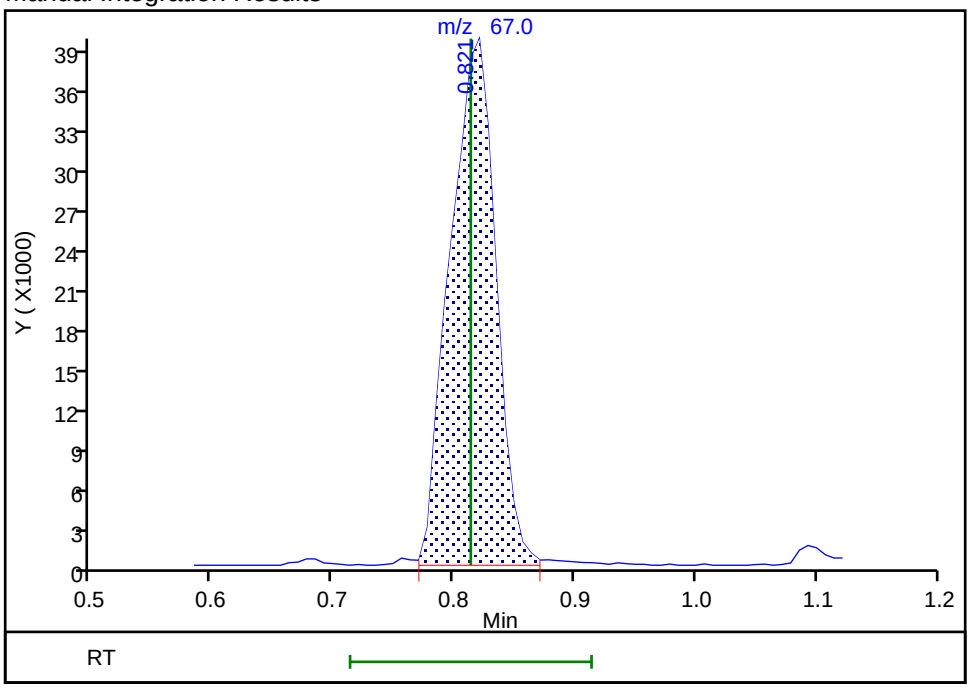
Not Detected
Expected RT: 0.81

Processing Integration Results




Manual Integration Results

RT: 0.82
Area: 104936
Amount: 190.8036
Amount Units: ug/l




Reviewer: boykink, 05-Sep-2020 00:13:13
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Edison

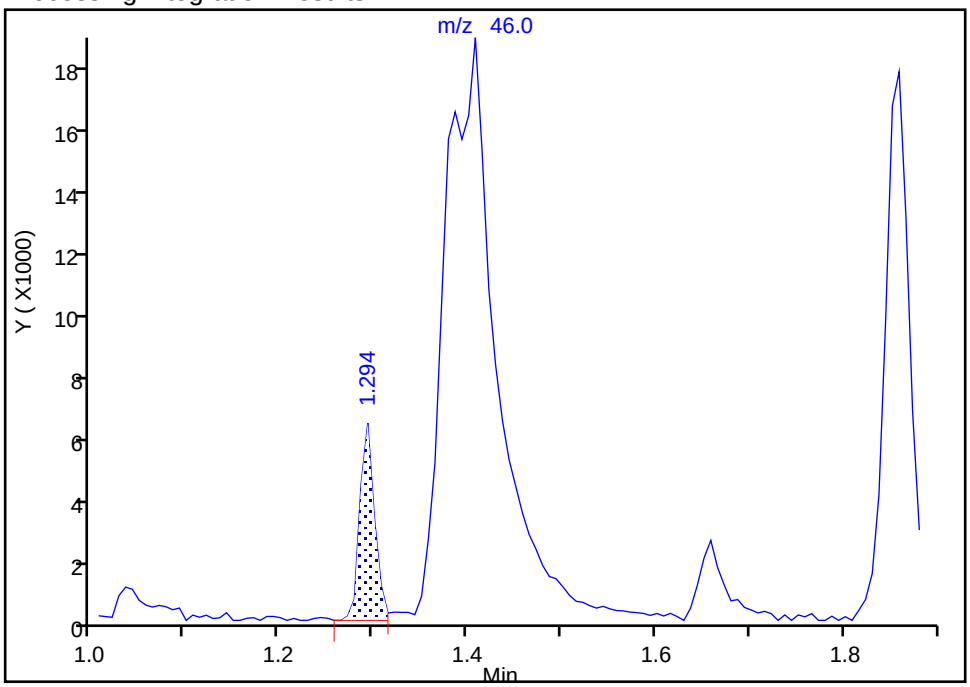
Data File: \\chromfs\Edison\ChromData\CVOAMS13\20200904-116303.b\P79358.D
Injection Date: 04-Sep-2020 16:33:30 Instrument ID: CVOAMS13
Lims ID: STD200
Client ID:
Operator ID: ALS Bottle#: 8 Worklist Smp#: 8
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: 8260W_13 Limit Group: VOA - 8260C Water and Solid
Column: Rtx-624 ( 0.25 mm) Detector MS SCAN

## 16 Ethanol, CAS: 64-17-5

Signal: 1

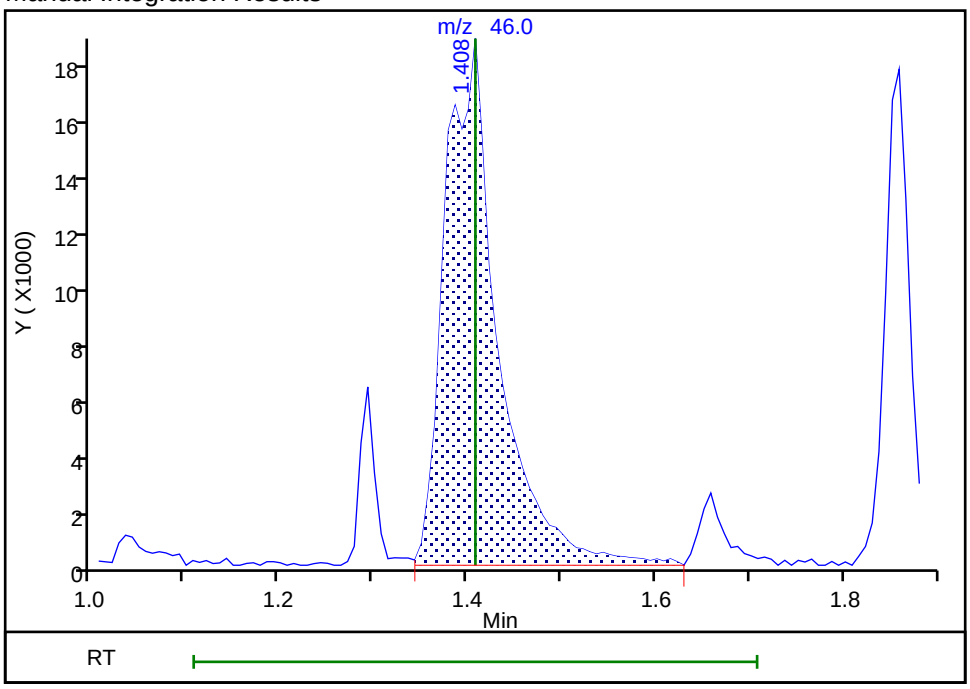
Processing Integration Results

RT: 1.29
Area: 6843
Amount: 934.0051
Amount Units: ug/l




Manual Integration Results

RT: 1.41
Area: 72547
Amount: 7484.4943
Amount Units: ug/l




Reviewer: boykink, 05-Sep-2020 00:13:21
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Edison

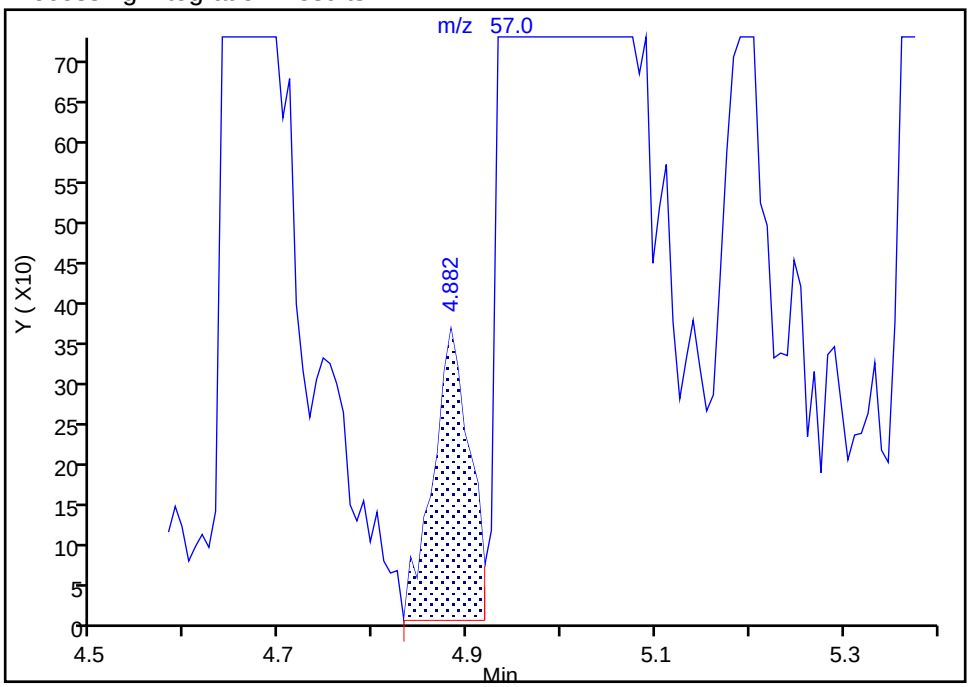
Data File: \\chromfs\Edison\ChromData\CVOAMS13\20200904-116303.b\P79358.D
Injection Date: 04-Sep-2020 16:33:30 Instrument ID: CVOAMS13
Lims ID: STD200
Client ID:
Operator ID: ALS Bottle#: 8 Worklist Smp#: 8
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: 8260W_13 Limit Group: VOA - 8260C Water and Solid
Column: Rtx-624 ( 0.25 mm) Detector MS SCAN

## 84 Epichlorohydrin, CAS: 106-89-8

Signal: 1

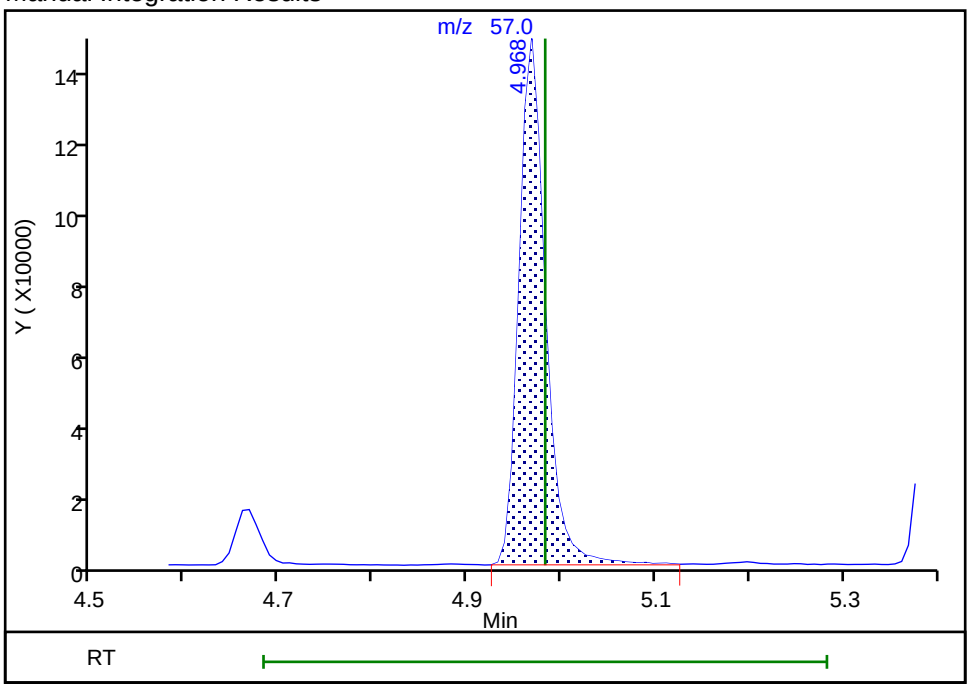
Processing Integration Results

RT: 4.88
Area: 983
Amount: 26.899773
Amount Units: ug/l




Manual Integration Results

RT: 4.97
Area: 287832
Amount: 4035.1740
Amount Units: ug/l




Reviewer: boykink, 05-Sep-2020 00:16:02
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Edison

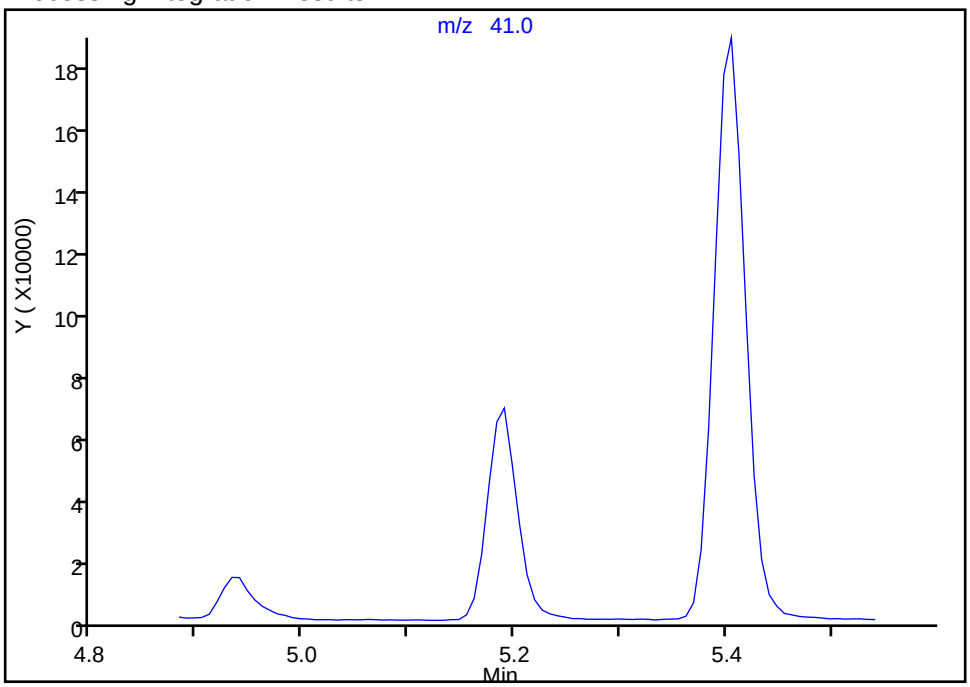
Data File: \\chromfs\Edison\ChromData\CVOAMS13\20200904-116303.b\P79358.D
Injection Date: 04-Sep-2020 16:33:30 Instrument ID: CVOAMS13
Lims ID: STD200
Client ID:
Operator ID: ALS Bottle#: 8 Worklist Smp#: 8
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: 8260W_13 Limit Group: VOA - 8260C Water and Solid
Column: Rtx-624 ( 0.25 mm) Detector MS SCAN

## 85 2-Nitropropane, CAS: 79-46-9

Signal: 1

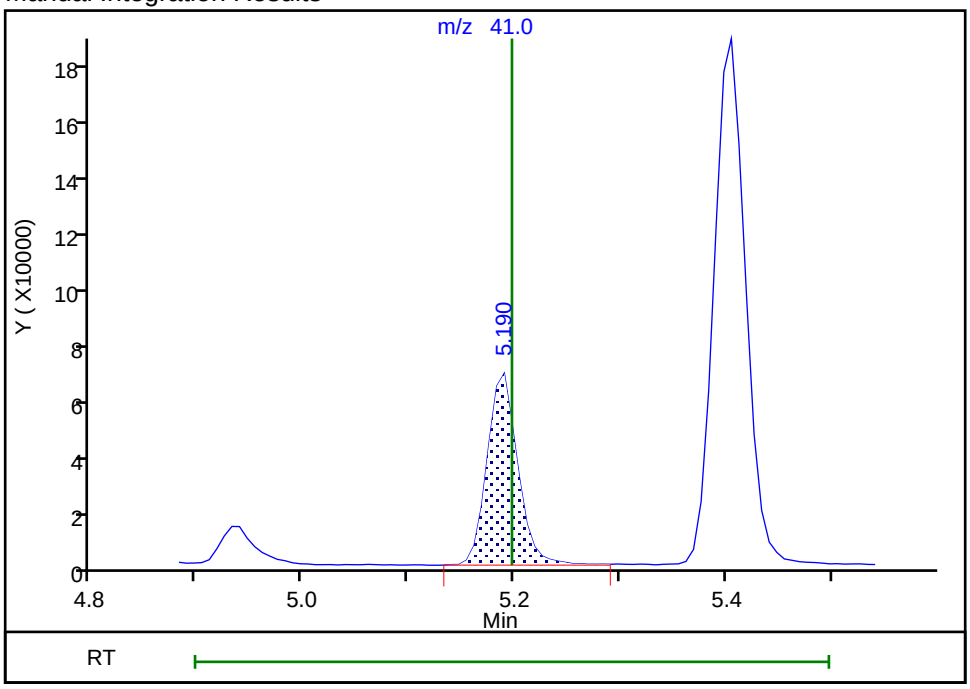
Not Detected
Expected RT: 5.20

Processing Integration Results




Manual Integration Results

RT: 5.19
Area: 134976
Amount: 422.3500
Amount Units: ug/l




Reviewer: baronm, 05-Sep-2020 12:10:03
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Eurofins TestAmerica, Edison
Target Compound Quantitation Report

Data File: \\chromfs\Edison\ChromData\CVOAMS13\20200904-116303.b\P79359.D
Lims ID: STD500
Client ID:
Sample Type: IC Calib Level: 7
Inject. Date: 04-Sep-2020 16:58:30 ALS Bottle#: 9 Worklist Smp#: 9
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: STD500
Misc. Info.: 460-0116303-009
Operator ID: Instrument ID: CVOAMS13
Sublist: chrom-8260W_13*sub62

Method: \\chromfs\Edison\ChromData\CVOAMS13\20200904-116303.b\8260W_13.m
Limit Group: VOA - 8260C Water and Solid
Last Update: 10-Sep-2020 10:39:27 Calib Date: 04-Sep-2020 16:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Edison\ChromData\CVOAMS13\20200904-116303.b\P79359.D

Column 1 : Rtx-624 ( 0.25 mm) Det: MS SCAN
Process Host: CTX1019

First Level Reviewer: baronm Date: 05-Sep-2020 12:41:51

| Compound | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q | Response | Cal Amt ug/l | OnCol Amt ug/l | Flags |
|---|---|---|---|---|---|---|---|---|---|
| 1 Monochloropentafluoroethane | 119 | 0.735 | 0.721 | 0.014 | 96 | 153563 | 500.0 | 561.9 | a |
| 2 Chlorotrifluoroethene | 116 | 0.757 | 0.756 | 0.001 | 88 | 597178 | 500.0 | 613.9 | |
| 3 Dichlorodifluoromethane | 85 | 0.771 | 0.771 | 0.000 | 99 | 2138983 | 500.0 | 512.0 | |
| 4 1,1-Difluoroethane | 65 | 0.807 | 0.807 | 0.000 | 95 | 915944 | 500.0 | 462.6 | |
| 5 Chlorodifluoromethane | 67 | 0.821 | 0.814 | 0.007 | 97 | 286055 | 500.0 | 499.9 | a |
| 6 Chloromethane | 50 | 0.893 | 0.892 | 0.001 | 99 | 2873454 | 500.0 | 492.7 | |
| 8 Butadiene | 54 | 0.900 | 0.892 | 0.008 | 95 | 2024494 | 500.0 | 521.5 | |
| 7 Vinyl chloride | 62 | 0.893 | 0.892 | 0.001 | 98 | 2102724 | 500.0 | 492.1 | |
| 9 Bromomethane | 94 | 1.036 | 1.036 | 0.000 | 99 | 1058616 | 500.0 | 575.8 | |
| 10 Chloroethane | 64 | 1.093 | 1.093 | 0.000 | 99 | 965466 | 500.0 | 425.3 | |
| 11 Pentane | 72 | 1.143 | 1.150 | -0.007 | 95 | 510382 | 1000.0 | 963.5 | |
| 12 Trichlorofluoromethane | 101 | 1.158 | 1.150 | 0.008 | 97 | 2018986 | 500.0 | 517.7 | |
| 13 Dichlorofluoromethane | 67 | 1.179 | 1.186 | -0.007 | 98 | 2402602 | 500.0 | 458.2 | |
| 14 2-Methyl-1,3-butadiene | 67 | 1.287 | 1.286 | 0.001 | 97 | 2379512 | 500.0 | 530.2 | |
| 15 Ethyl ether | 59 | 1.294 | 1.294 | 0.000 | 94 | 1057648 | 500.0 | 505.3 | |
| 18 1,2-Dichloro-1,1,2-trifluoroetha | 67 | 1.394 | 1.387 | 0.007 | 89 | 2055897 | 500.0 | 505.1 | |
| 17 1,1-Dichloroethene | 96 | 1.394 | 1.387 | 0.007 | 97 | 1418804 | 500.0 | 508.7 | |
| 16 Ethanol | 46 | 1.408 | 1.408 | 0.000 | 35 | 192362 | 20000 | 18839 | a |
| 19 Carbon disulfide | 76 | 1.416 | 1.408 | 0.008 | 100 | 5398702 | 500.0 | 494.8 | |
| 20 1,1,2-Trichloro-1,2,2-trifluoroe | 101 | 1.408 | 1.408 | 0.000 | 91 | 1408561 | 500.0 | 516.2 | |
| 21 1,1,1-Trifluoro-2,2-dichloroetha | 83 | 1.423 | 1.415 | 0.008 | 94 | 2199434 | 500.0 | 520.8 | a |
| 22 Iodomethane | 142 | 1.466 | 1.466 | 0.000 | 96 | 2250918 | 500.0 | 499.3 | |
| 23 Cyclopentene | 67 | 1.537 | 1.537 | 0.000 | 97 | 3919618 | 500.0 | 507.3 | |
| 24 Acrolein | 56 | 1.566 | 1.559 | 0.007 | 92 | 110641 | 400.0 | 462.7 | |
| 25 3-Chloro-1-propene | 76 | 1.638 | 1.630 | 0.008 | 94 | 929413 | 500.0 | 521.5 | |
| 26 Isopropyl alcohol | 45 | 1.666 | 1.659 | 0.007 | 98 | 453215 | 5000.0 | 4562.6 | |
| 27 Methylene Chloride | 84 | 1.695 | 1.695 | 0.000 | 91 | 1621460 | 500.0 | 482.3 | |
| 28 Acetone | 43 | 1.724 | 1.716 | 0.008 | 87 | 1071045 | 2500.0 | 2496.3 | |
| 29 trans-1,2-Dichloroethene | 96 | 1.774 | 1.774 | 0.000 | 93 | 1586745 | 500.0 | 497.3 | |
| 30 Methyl acetate | 43 | 1.788 | 1.781 | 0.007 | 97 | 1110827 | 1000.0 | 926.3 | |

| Compound | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q | Response | Cal Amt ug/l | OnCol Amt ug/l | Flags |
|---|---|---|---|---|---|---|---|---|---|
| 31 Hexane | 86 | 1.817 | 1.817 | 0.000 | 89 | 417628 | 500.0 | 542.8 | |
| 32 Methyl tert-butyl ether | 73 | 1.838 | 1.838 | 0.000 | 89 | 3242233 | 500.0 | 497.0 | |
| * 33 TBA-d9 (IS) | 65 | 1.860 | 1.860 | 0.000 | 99 | 123066 | 1000.0 | 1000.0 | |
| 34 2-Methyl-2-propanol | 59 | 1.903 | 1.902 | 0.001 | 100 | 688184 | 5000.0 | 4999.9 | |
| 35 Acetonitrile | 41 | 1.981 | 1.981 | 0.000 | 99 | 1232698 | 5000.0 | 5009.4 | |
| 36 Isopropyl ether | 45 | 2.060 | 2.053 | 0.007 | 97 | 5266152 | 500.0 | 515.7 | |
| 37 2-Chloro-1,3-butadiene | 88 | 2.110 | 2.110 | 0.000 | 92 | 1524691 | 500.0 | 521.6 | |
| 38 1,1-Dichloroethane | 63 | 2.125 | 2.117 | 0.008 | 100 | 2930827 | 500.0 | 495.0 | |
| 39 Acrylonitrile | 53 | 2.161 | 2.153 | 0.008 | 94 | 3986357 | 5000.0 | 5195.6 | |
| 40 Tert-butyl ethyl ether | 59 | 2.282 | 2.275 | 0.007 | 89 | 4379554 | 500.0 | 520.3 | |
| 41 Vinyl acetate | 43 | 2.282 | 2.282 | 0.000 | 100 | 4707045 | 1000.0 | 1033.3 | |
| 42 cis-1,2-Dichloroethene | 96 | 2.461 | 2.461 | 0.000 | 98 | 1754817 | 500.0 | 497.2 | |
| 43 2,2-Dichloropropane | 77 | 2.526 | 2.526 | 0.000 | 98 | 1983171 | 500.0 | 494.7 | |
| 44 Cyclohexane | 56 | 2.590 | 2.583 | 0.007 | 92 | 3017859 | 500.0 | 509.0 | |
| 45 Chlorobromomethane | 128 | 2.597 | 2.590 | 0.007 | 92 | 783070 | 500.0 | 507.7 | |
| 46 Chloroform | 83 | 2.655 | 2.647 | 0.008 | 99 | 2613155 | 500.0 | 492.3 | |
| 47 Carbon tetrachloride | 117 | 2.734 | 2.733 | 0.001 | 99 | 1753099 | 500.0 | 560.2 | |
| 48 Ethyl acetate | 70 | 2.748 | 2.748 | 0.000 | 99 | 232661 | 1000.0 | 999.2 | |
| 49 Methyl acrylate | 55 | 2.748 | 2.748 | 0.000 | 61 | 918247 | 500.0 | 549.2 | |
| 50 Tetrahydrofuran | 42 | 2.755 | 2.755 | 0.000 | 98 | 769588 | 1000.0 | 947.4 | |
| $ 51 Dibromofluoromethane (Surr) | 113 | 2.777 | 2.776 | 0.001 | 94 | 132990 | 50.0 | 49.8 | |
| 52 1,1,1-Trichloroethane | 97 | 2.784 | 2.776 | 0.008 | 99 | 2148975 | 500.0 | 503.7 | |
| * 53 2-Butanone-d5 | 46 | 2.834 | 2.834 | 0.000 | 96 | 179665 | 250.0 | 250.0 | a |
| 55 1,1-Dichloropropene | 75 | 2.877 | 2.869 | 0.008 | 97 | 2209037 | 500.0 | 499.9 | |
| 54 2-Butanone (MEK) | 72 | 2.870 | 2.869 | 0.001 | 100 | 621699 | 2500.0 | 2368.2 | |
| 56 Isooctane | 57 | 2.963 | 2.955 | 0.008 | 99 | 5065144 | 500.0 | 541.3 | |
| 57 n-Heptane | 57 | 3.056 | 3.049 | 0.007 | 94 | 1188377 | 500.0 | 517.3 | |
| 58 Benzene | 78 | 3.056 | 3.056 | 0.000 | 96 | 6741611 | 500.0 | 480.3 | |
| 59 Propionitrile | 54 | 3.099 | 3.077 | 0.022 | 88 | 1384313 | 5000.0 | 5301.2 | |
| 60 Methacrylonitrile | 67 | 3.106 | 3.092 | 0.014 | 92 | 4364305 | 5000.0 | 5129.1 | |
| $ 61 1,2-Dichloroethane-d4 (Surr) | 65 | 3.163 | 3.156 | 0.007 | 0 | 133687 | 50.0 | 49.9 | |
| 62 Tert-amyl methyl ether | 73 | 3.171 | 3.163 | 0.008 | 99 | 3745941 | 500.0 | 534.8 | |
| 63 1,2-Dichloroethane | 62 | 3.214 | 3.213 | 0.001 | 96 | 1650015 | 500.0 | 476.5 | |
| 64 Isobutyl alcohol | 43 | 3.299 | 3.292 | 0.007 | 96 | 937256 | 12500 | 14244 | |
| 65 t-Amyl alcohol | 59 | 3.364 | 3.357 | 0.007 | 99 | 602472 | 5000.0 | 5641.5 | |
| * 66 Fluorobenzene | 96 | 3.393 | 3.385 | 0.008 | 99 | 619689 | 50.0 | 50.0 | |
| 67 Isopropyl acetate | 43 | 3.464 | 3.457 | 0.007 | 99 | 1983357 | 500.0 | 504.3 | |
| 68 Methylcyclohexane | 83 | 3.514 | 3.507 | 0.007 | 96 | 2940010 | 500.0 | 537.6 | |
| 69 Trichloroethene | 130 | 3.536 | 3.536 | 0.000 | 98 | 1733049 | 500.0 | 518.1 | |
| 70 2-ethoxy-2-methyl butane | 59 | 3.779 | 3.772 | 0.007 | 93 | 3831768 | 500.0 | 555.0 | |
| 71 Dibromomethane | 93 | 3.894 | 3.894 | 0.000 | 96 | 776124 | 500.0 | 520.3 | |
| 72 n-Butanol | 56 | 3.915 | 3.915 | 0.000 | 88 | 594810 | 12500 | 12494 | |
| 73 1,2-Dichloropropane | 63 | 3.987 | 3.980 | 0.007 | 92 | 1706920 | 500.0 | 509.6 | |
| 75 Dichlorobromomethane | 83 | 4.066 | 4.066 | 0.000 | 99 | 1950550 | 500.0 | 530.8 | |
| 74 Ethyl acrylate | 55 | 4.059 | 4.066 | -0.007 | 98 | 1325732 | 500.0 | 489.0 | |
| * 76 1,4-Dioxane-d8 | 96 | 4.238 | 4.238 | 0.000 | 83 | 16670 | 1000.0 | 1000.0 | |
| 77 Methyl methacrylate | 100 | 4.259 | 4.259 | 0.000 | 93 | 562331 | 1000.0 | 1127.6 | |
| 78 1,4-Dioxane | 88 | 4.266 | 4.273 | -0.007 | 96 | 196250 | 10000 | 10208 | |
| 79 n-Propyl acetate | 43 | 4.410 | 4.417 | -0.007 | 99 | 1407703 | 500.0 | 558.8 | |
| 80 2-Chloroethyl vinyl ether | 63 | 4.668 | 4.675 | -0.007 | 97 | 512328 | 501.2 | 808.2 | |
| 81 cis-1,3-Dichloropropene | 75 | 4.696 | 4.696 | 0.000 | 92 | 2531452 | 500.0 | 550.5 | |
| $ 82 Toluene-d8 (Surr) | 98 | 4.890 | 4.882 | 0.008 | 99 | 568428 | 50.0 | 49.0 | |

| Compound | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q | Response | Cal Amt ug/l | OnCol Amt ug/l | Flags |
|---|---|---|---|---|---|---|---|---|---|
| 83 Toluene | 91 | 4.940 | 4.940 | 0.000 | 94 | 6985837 | 500.0 | 489.8 | |
| 84 Epichlorohydrin | 57 | 4.968 | 4.983 | -0.015 | 98 | 1076562 | 10000 | 9996.9 | a |
| 85 2-Nitropropane | 41 | 5.191 | 5.197 | -0.007 | 96 | 401764 | 1000.0 | 1208.2 | a |
| 86 Tetrachloroethene | 166 | 5.362 | 5.362 | 0.000 | 98 | 1693883 | 500.0 | 504.2 | |
| 87 4-Methyl-2-pentanone (MIBK) | 43 | 5.413 | 5.405 | 0.008 | 96 | 4551250 | 2500.0 | 2448.8 | |
| 88 trans-1,3-Dichloropropene | 75 | 5.441 | 5.441 | 0.000 | 95 | 2115743 | 500.0 | 578.9 | |
| 89 1,1,2-Trichloroethane | 83 | 5.606 | 5.606 | 0.000 | 97 | 1004352 | 500.0 | 516.4 | |
| 90 Ethyl methacrylate | 69 | 5.692 | 5.699 | -0.007 | 90 | 1470388 | 500.0 | 558.8 | |
| 91 Chlorodibromomethane | 129 | 5.807 | 5.799 | 0.008 | 98 | 1342232 | 500.0 | 534.9 | |
| 92 1,3-Dichloropropane | 76 | 5.921 | 5.914 | 0.007 | 94 | 2063481 | 500.0 | 509.8 | |
| 93 Ethylene Dibromide | 107 | 6.043 | 6.050 | -0.007 | 98 | 1136144 | 500.0 | 543.7 | |
| 94 n-Butyl acetate | 43 | 6.401 | 6.401 | 0.000 | 99 | 1561177 | 500.0 | 486.3 | |
| 95 2-Hexanone | 43 | 6.458 | 6.458 | 0.000 | 95 | 3200586 | 2500.0 | 2566.0 | |
| * 96 Chlorobenzene-d5 | 117 | 6.731 | 6.723 | 0.008 | 87 | 449616 | 50.0 | 50.0 | |
| 97 Chlorobenzene | 112 | 6.752 | 6.745 | 0.007 | 95 | 4409049 | 500.0 | 493.5 | |
| 98 Ethylbenzene | 106 | 6.845 | 6.831 | 0.014 | 98 | 2523965 | 500.0 | 504.1 | |
| 99 1,1,1,2-Tetrachloroethane | 131 | 6.867 | 6.859 | 0.008 | 97 | 1483682 | 500.0 | 536.5 | |
| 100 m-Xylene & p-Xylene | 106 | 7.053 | 7.046 | 0.007 | 0 | 3047634 | 500.0 | 518.9 | |
| 101 o-Xylene | 106 | 7.633 | 7.626 | 0.007 | 95 | 2899229 | 500.0 | 487.9 | |
| 102 Bromoform | 173 | 7.698 | 7.690 | 0.008 | 96 | 779054 | 500.0 | 549.5 | |
| 103 Styrene | 104 | 7.719 | 7.719 | 0.000 | 96 | 4841761 | 500.0 | 509.3 | |
| 104 n-Butyl acrylate | 73 | 8.049 | 8.056 | -0.007 | 98 | 906398 | 500.0 | 489.7 | |
| 105 Isopropylbenzene | 105 | 8.120 | 8.113 | 0.007 | 96 | 7430702 | 500.0 | 482.2 | |
| 106 Amyl acetate (mixed isomers) | 43 | 8.471 | 8.471 | 0.000 | 90 | 2050851 | 500.0 | 489.0 | |
| $ 107 4-Bromofluorobenzene | 174 | 8.486 | 8.478 | 0.008 | 91 | 175673 | 50.0 | 48.3 | |
| 108 Bromobenzene | 156 | 8.586 | 8.586 | 0.000 | 98 | 1851197 | 500.0 | 522.2 | |
| 109 N-Propylbenzene | 91 | 8.751 | 8.743 | 0.008 | 99 | 8986684 | 500.0 | 506.6 | |
| 110 1,1,2,2-Tetrachloroethane | 83 | 8.901 | 8.894 | 0.007 | 99 | 1295322 | 500.0 | 526.8 | |
| 111 2-Chlorotoluene | 91 | 8.915 | 8.908 | 0.007 | 97 | 6120662 | 500.0 | 500.7 | |
| 112 4-Ethyltoluene | 105 | 8.944 | 8.929 | 0.015 | 98 | 7785180 | 500.0 | 528.2 | |
| 113 1,2,3-Trichloropropane | 110 | 9.030 | 9.023 | 0.007 | 99 | 346260 | 500.0 | 532.4 | |
| 114 1,3,5-Trimethylbenzene | 105 | 9.102 | 9.087 | 0.015 | 94 | 6331744 | 500.0 | 514.8 | |
| 115 trans-1,4-Dichloro-2-butene | 53 | 9.152 | 9.166 | -0.014 | 90 | 325652 | 500.0 | 693.4 | |
| 116 4-Chlorotoluene | 91 | 9.187 | 9.173 | 0.014 | 97 | 5575558 | 500.0 | 519.1 | |
| 117 tert-Butylbenzene | 119 | 9.560 | 9.545 | 0.015 | 95 | 5347740 | 500.0 | 502.8 | |
| 118 1,2,4-Trimethylbenzene | 105 | 9.689 | 9.682 | 0.007 | 97 | 6534418 | 500.0 | 515.1 | |
| 119 Butyl Methacrylate | 87 | 9.703 | 9.696 | 0.007 | 92 | 2127034 | 500.0 | 490.6 | |
| 120 sec-Butylbenzene | 105 | 9.854 | 9.839 | 0.015 | 99 | 8040037 | 500.0 | 497.8 | |
| 121 1,3-Dichlorobenzene | 146 | 10.104 | 10.097 | 0.007 | 98 | 3667475 | 500.0 | 523.7 | |
| 122 4-Isopropyltoluene | 119 | 10.133 | 10.118 | 0.015 | 98 | 7005086 | 500.0 | 514.2 | |
| * 123 1,4-Dichlorobenzene-d4 | 152 | 10.240 | 10.226 | 0.014 | 95 | 239855 | 50.0 | 50.0 | |
| 124 1,4-Dichlorobenzene | 146 | 10.262 | 10.247 | 0.015 | 96 | 3633198 | 500.0 | 492.8 | |
| 125 1,2,3-Trimethylbenzene | 105 | 10.369 | 10.355 | 0.014 | 98 | 6559615 | 500.0 | 510.3 | |
| 126 2,3-Dihydroindene | 117 | 10.541 | 10.527 | 0.014 | 95 | 6296307 | 500.0 | 504.8 | |
| 127 Benzyl chloride | 126 | 10.706 | 10.713 | -0.007 | 99 | 508966 | 500.0 | 486.6 | |
| 128 p-Diethylbenzene | 119 | 10.742 | 10.727 | 0.015 | 94 | 3637762 | 500.0 | 529.9 | |
| 129 n-Butylbenzene | 91 | 10.828 | 10.813 | 0.015 | 99 | 6293963 | 500.0 | 506.7 | |
| 130 1,2-Dichlorobenzene | 146 | 10.928 | 10.921 | 0.007 | 97 | 3338000 | 500.0 | 520.8 | |
| 131 1,2,4,5-Tetramethylbenzene | 119 | 11.931 | 11.924 | 0.007 | 98 | 6356940 | 500.0 | 531.7 | |
| 132 1,2-Dibromo-3-Chloropropane | 157 | 12.067 | 12.074 | -0.007 | 95 | 225792 | 500.0 | 551.6 | |
| 133 1,3,5-Trichlorobenzene | 180 | 12.124 | 12.124 | 0.000 | 98 | 2669157 | 500.0 | 525.1 | |
| 134 1,2,4-Trichlorobenzene | 180 | 12.819 | 12.819 | 0.000 | 94 | 2234541 | 500.0 | 523.7 | |

| Compound | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q | Response | Cal Amt ug/l | OnCol Amt ug/l | Flags |
|---|---|---|---|---|---|---|---|---|---|
| 135 Hexachlorobutadiene | 225 | 12.841 | 12.840 | 0.001 | 97 | 935397 | 500.0 | 496.4 | |
| 136 Naphthalene | 128 | 13.120 | 13.127 | -0.007 | 99 | 3788295 | 500.0 | 481.3 | |
| 137 1,2,3-Trichlorobenzene | 180 | 13.299 | 13.299 | 0.000 | 96 | 1772317 | 500.0 | 507.6 | |
| S 138 1,2-Dichloroethene, Total | 100 | | | | 0 | | 1000.0 | 994.6 | |
| S 139 1,3-Dichloropropene, Total | 100 | | | | 0 | | 1000.0 | 1129.4 | |
| S 140 Xylenes, Total | 100 | | | | 0 | | 1000.0 | 1006.9 | |
| S 142 Total BTEX | 1 | | | | 0 | | 2500.0 | 2481.1 | |

## QC Flag Legend

Review Flags

a - User Assigned ID

## Reagents:

| | | | | |
|---|---|---|---|---|
| Ethanol mix_00043 | Amount Added: | 50.00 | Units: uL | |
| MIX 2 Hi_00102 | Amount Added: | 50.00 | Units: uL | |
| 8FreonHi_00023 | Amount Added: | 50.00 | Units: uL | |
| GAS Hi_00370 | Amount Added: | 50.00 | Units: uL | |
| ACROLEIN W_00112 | Amount Added: | 40.00 | Units: uL | |
| MIX I Hi_00129 | Amount Added: | 50.00 | Units: uL | |
| 8260ISNEW_00129 | Amount Added: | 1.00 | Units: uL | Run Reagent |
| 8260SURR250_00212 | Amount Added: | 1.00 | Units: uL | Run Reagent |

Report Date: 10-Sep-2020 10:39:32 Chrom Revision: 2.3 20-Aug-2020 13:57:12

Eurofins TestAmerica, Edison

Data File: \\chromfs\Edison\ChromData\CVOAMS13\20200904-116303.b\P79359.D

Injection Date: 04-Sep-2020 16:58:30 Instrument ID: CVOAMS13 Operator ID:

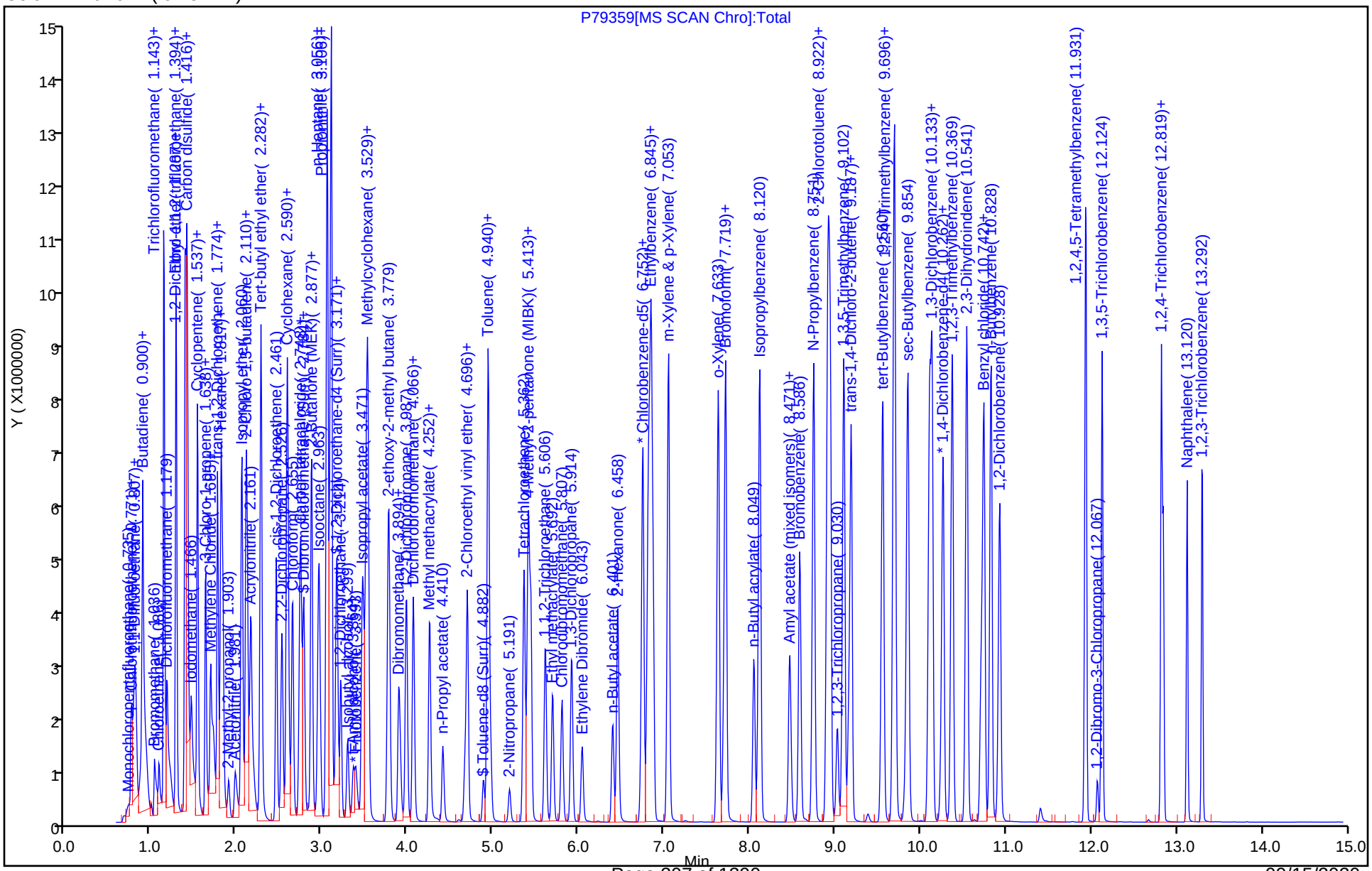
Lims ID: STD500 Worklist Smp#: 9

Client ID:

Purge Vol: 5.000 mL Dil. Factor: 1.0000 ALS Bottle#: 9

Method: 8260W_13 Limit Group: VOA - 8260C Water and Solid

Column: Rtx-624 ( 0.25 mm)



Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Edison

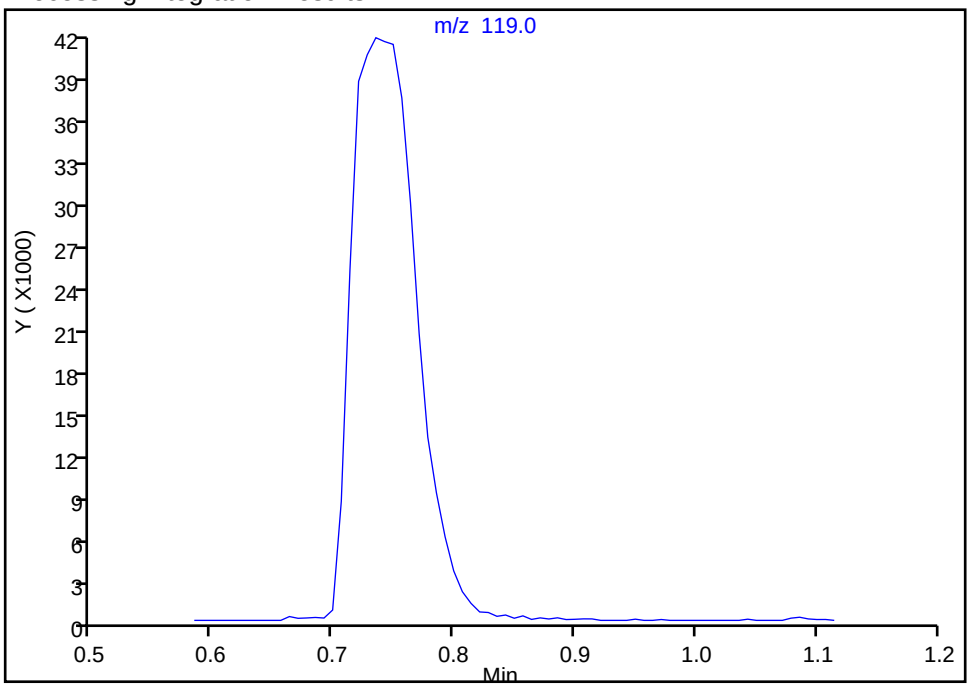
Data File: \\chromfs\Edison\ChromData\CVOAMS13\20200904-116303.b\P79359.D
Injection Date: 04-Sep-2020 16:58:30 Instrument ID: CVOAMS13
Lims ID: STD500
Client ID:
Operator ID: ALS Bottle#: 9 Worklist Smp#: 9
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: 8260W_13 Limit Group: VOA - 8260C Water and Solid
Column: Rtx-624 ( 0.25 mm) Detector MS SCAN

## 1 Monochloropentafluoroethane, CAS: 76-15-3

Signal: 1

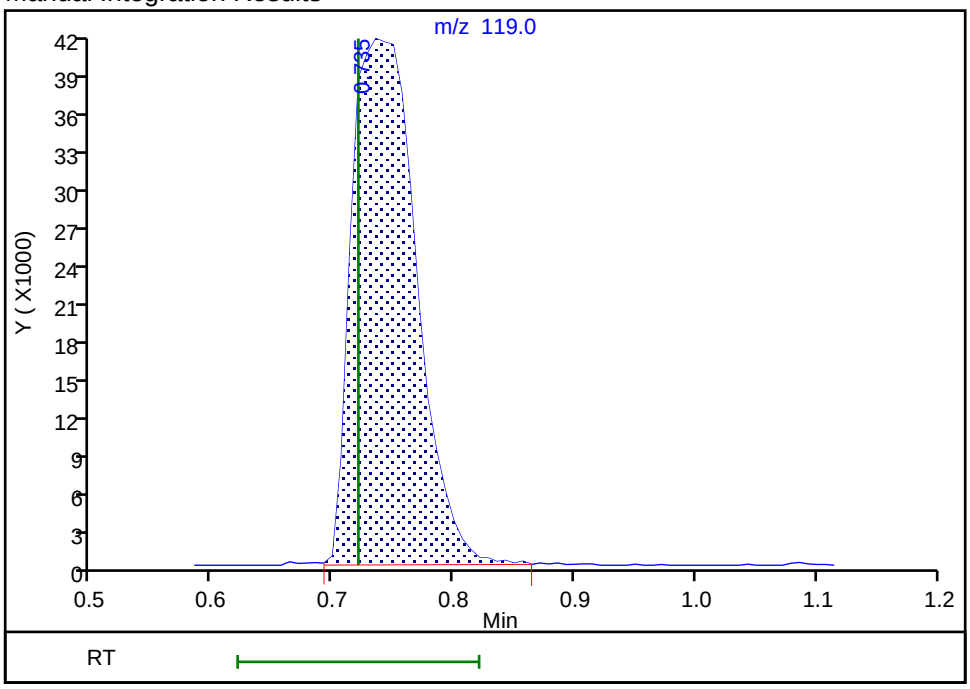
Not Detected
Expected RT: 0.72

Processing Integration Results




Manual Integration Results

RT: 0.74
Area: 153563
Amount: 561.9015
Amount Units: ug/l




Reviewer: boykink, 05-Sep-2020 00:16:53
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Edison

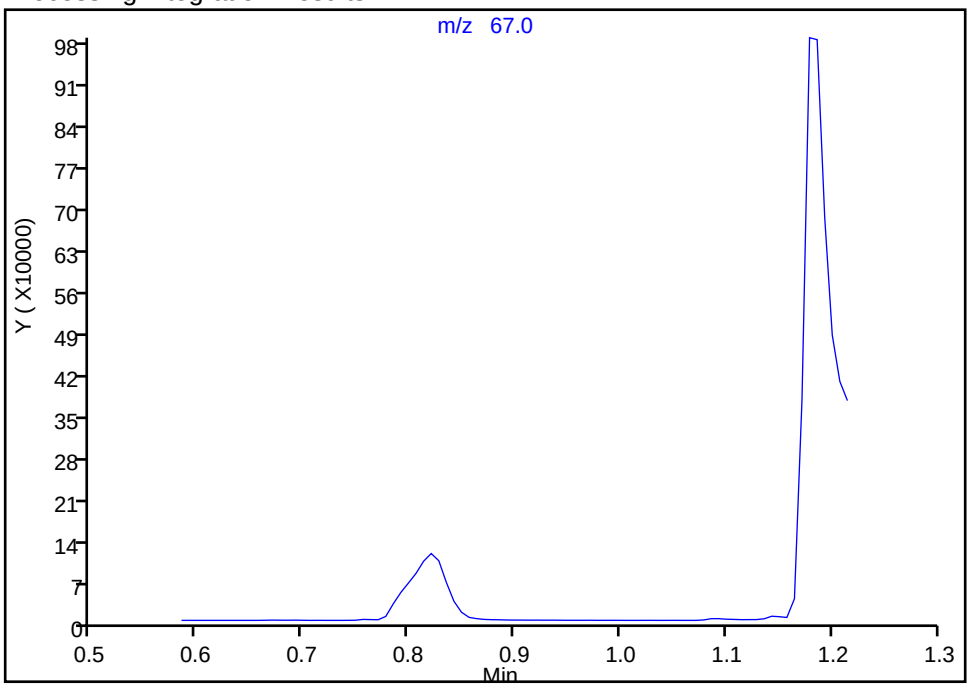
Data File: \\chromfs\Edison\ChromData\CVOAMS13\20200904-116303.b\P79359.D
Injection Date: 04-Sep-2020 16:58:30 Instrument ID: CVOAMS13
Lims ID: STD500
Client ID:
Operator ID: ALS Bottle#: 9 Worklist Smp#: 9
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: 8260W_13 Limit Group: VOA - 8260C Water and Solid
Column: Rtx-624 ( 0.25 mm) Detector MS SCAN

## 5 Chlorodifluoromethane, CAS: 75-45-6

Signal: 1

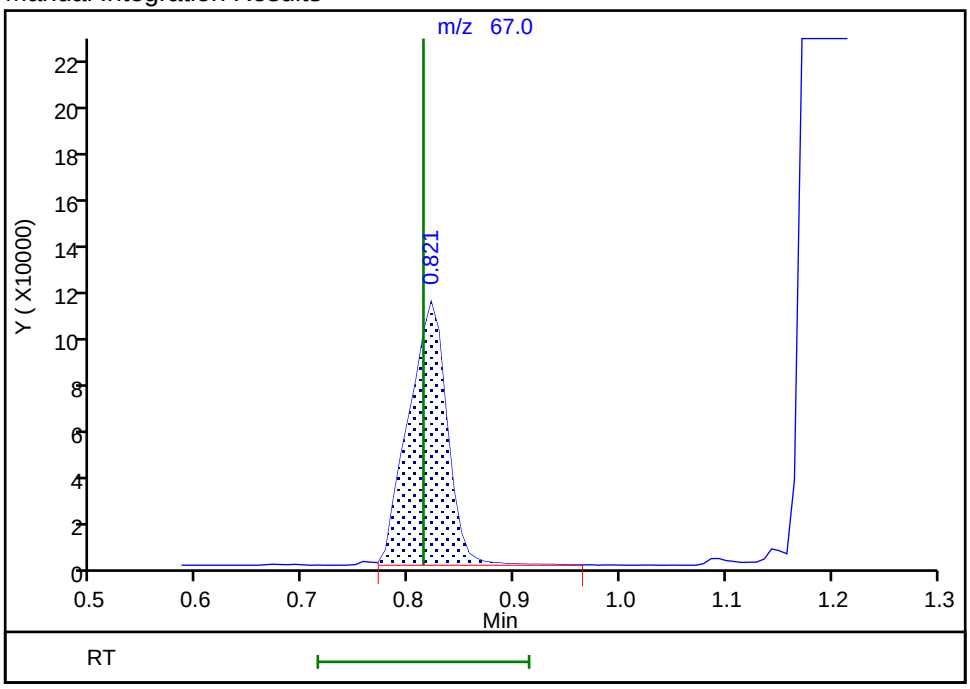
Not Detected
Expected RT: 0.81

Processing Integration Results




Manual Integration Results

RT: 0.82
Area: 286055
Amount: 499.8586
Amount Units: ug/l




Reviewer: boykink, 05-Sep-2020 00:17:00
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Edison

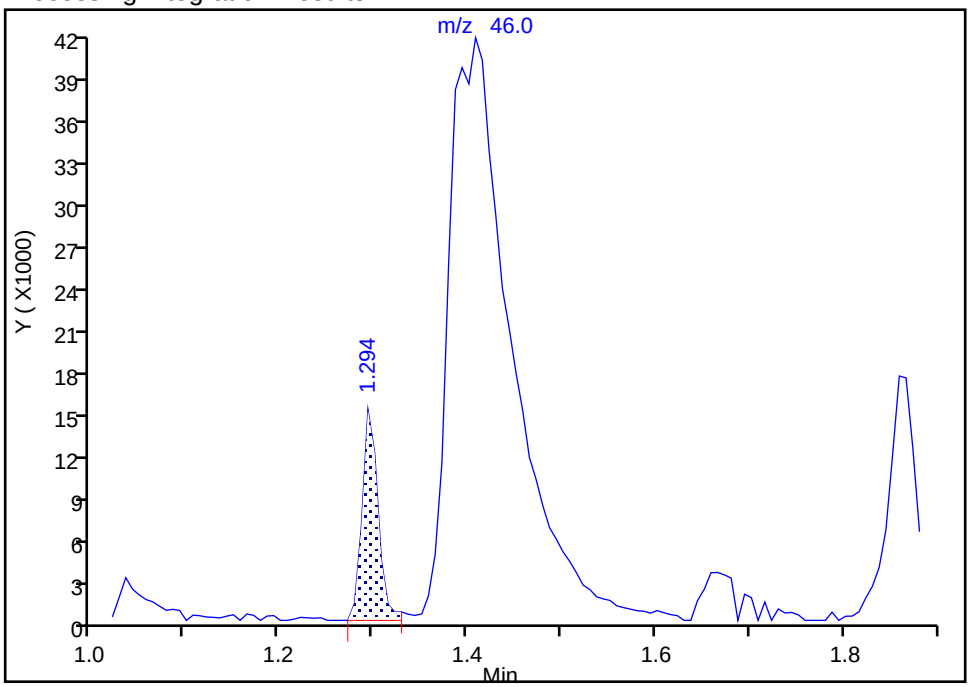
Data File: \\chromfs\Edison\ChromData\CVOAMS13\20200904-116303.b\P79359.D
Injection Date: 04-Sep-2020 16:58:30 Instrument ID: CVOAMS13
Lims ID: STD500
Client ID:
Operator ID: ALS Bottle#: 9 Worklist Smp#: 9
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: 8260W_13 Limit Group: VOA - 8260C Water and Solid
Column: Rtx-624 ( 0.25 mm) Detector MS SCAN

## 16 Ethanol, CAS: 64-17-5

Signal: 1

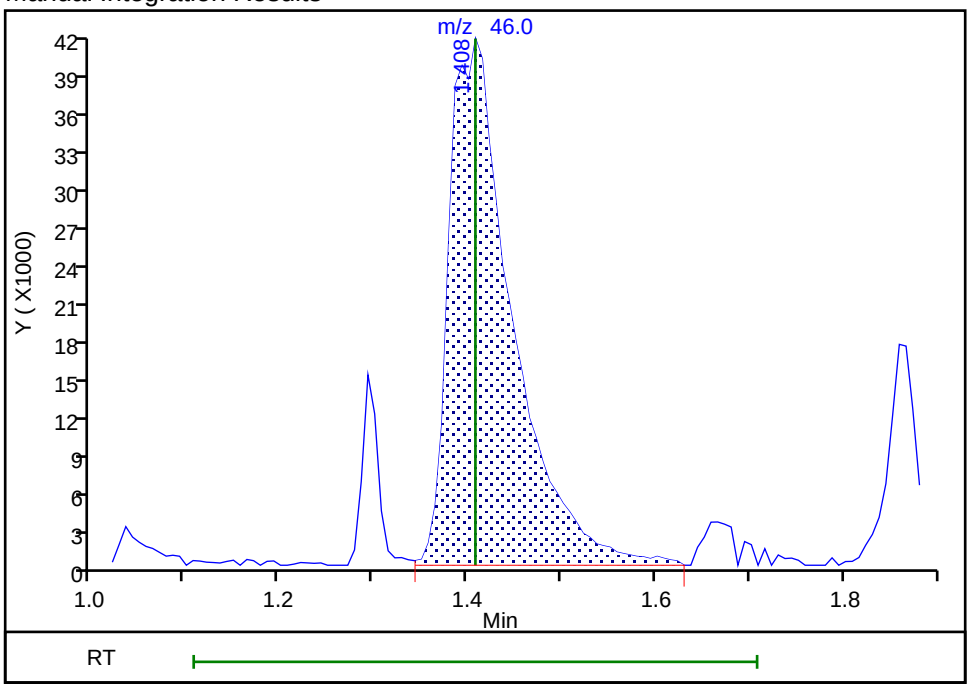
Processing Integration Results

RT: 1.29
Area: 17630
Amount: 1969.0141
Amount Units: ug/l




Manual Integration Results

RT: 1.41
Area: 192362
Amount: 18839
Amount Units: ug/l




Reviewer: boykink, 05-Sep-2020 00:17:16
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Edison

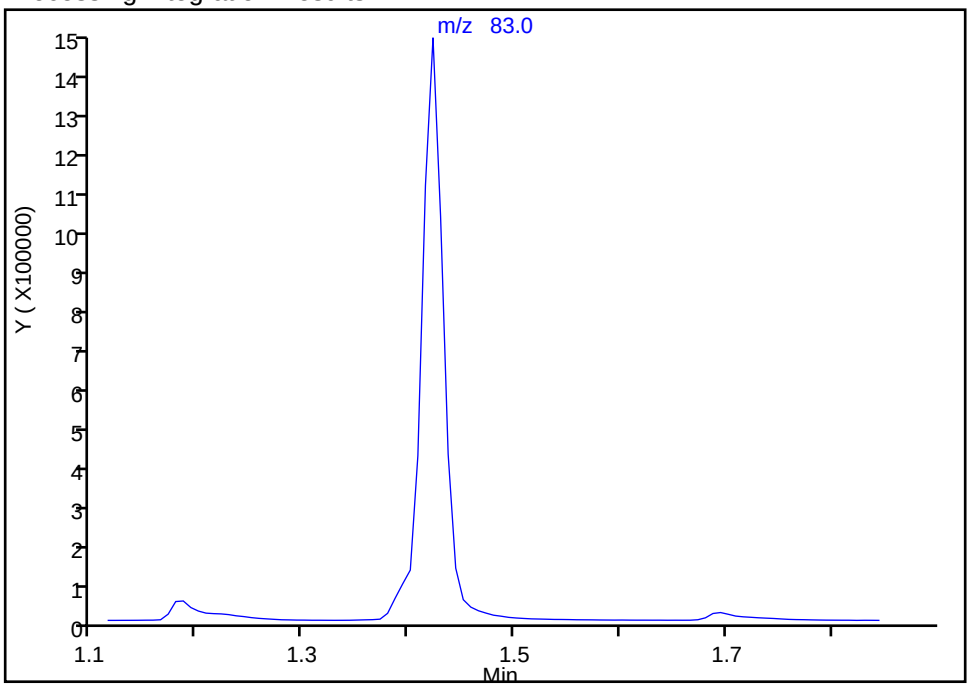
Data File: \\chromfs\Edison\ChromData\CVOAMS13\20200904-116303.b\P79359.D
Injection Date: 04-Sep-2020 16:58:30 Instrument ID: CVOAMS13
Lims ID: STD500
Client ID:
Operator ID: ALS Bottle#: 9 Worklist Smp#: 9
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: 8260W_13 Limit Group: VOA - 8260C Water and Solid
Column: Rtx-624 ( 0.25 mm) Detector MS SCAN

## 21 1,1,1-Trifluoro-2,2-dichloroetha, CAS: 306-83-2

Signal: 1

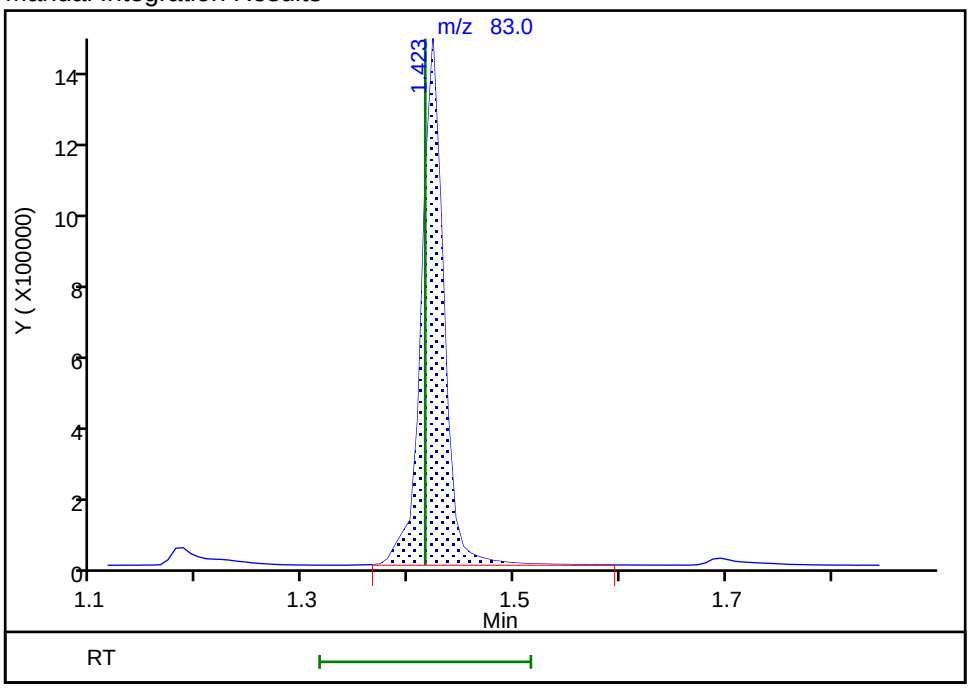
Not Detected
Expected RT: 1.42

Processing Integration Results




Manual Integration Results

RT: 1.42
Area: 2199434
Amount: 520.7545
Amount Units: ug/l




Reviewer: boykink, 05-Sep-2020 00:17:23
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Edison

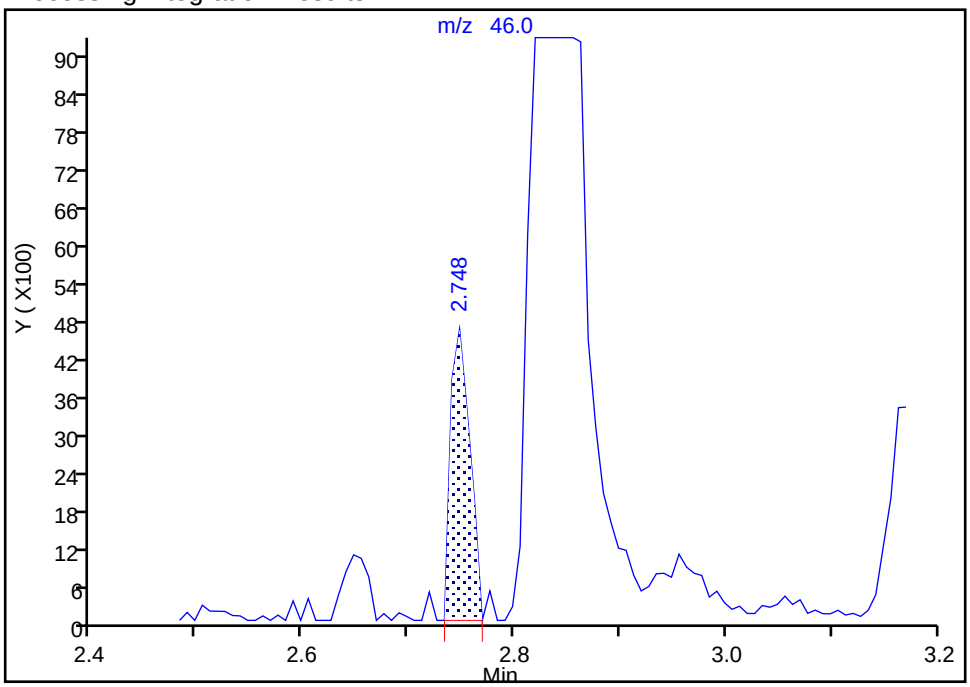
Data File: \\chromfs\Edison\ChromData\CVOAMS13\20200904-116303.b\P79359.D
Injection Date: 04-Sep-2020 16:58:30 Instrument ID: CVOAMS13
Lims ID: STD500
Client ID:
Operator ID: ALS Bottle#: 9 Worklist Smp#: 9
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: 8260W_13 Limit Group: VOA - 8260C Water and Solid
Column: Rtx-624 ( 0.25 mm) Detector MS SCAN

## * 53 2-Butanone-d5, CAS: 24313-50-6

Signal: 1

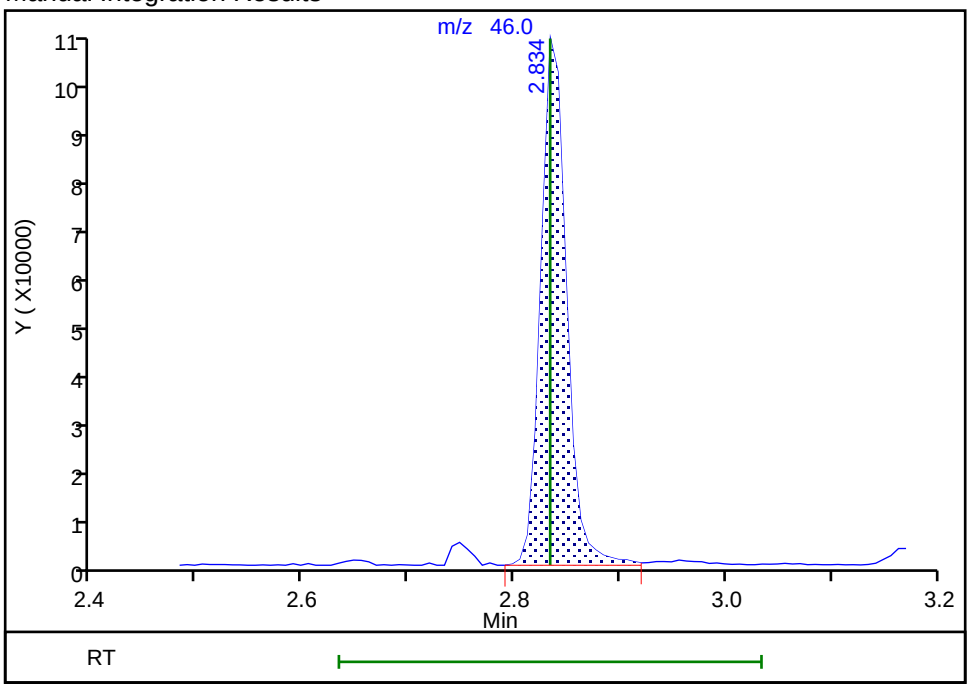
Processing Integration Results

RT: 2.75
Area: 5828
Amount: 250.0000
Amount Units: ug/l




Manual Integration Results

RT: 2.83
Area: 179665
Amount: 250.0000
Amount Units: ug/l




Reviewer: boykink, 05-Sep-2020 00:25:27
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Edison

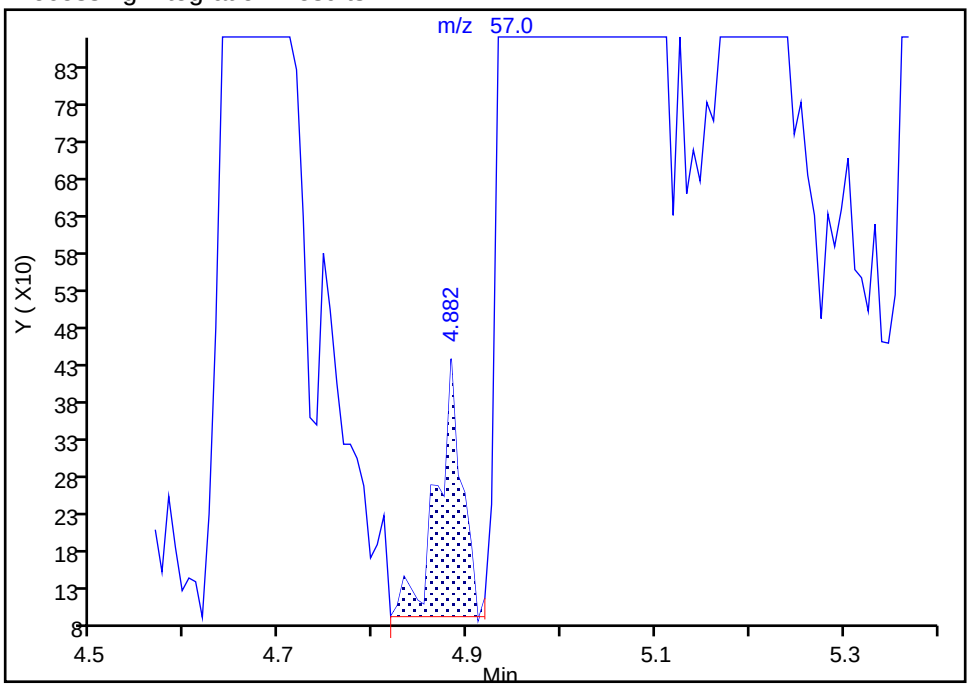
Data File: \\chromfs\Edison\ChromData\CVOAMS13\20200904-116303.b\P79359.D
Injection Date: 04-Sep-2020 16:58:30 Instrument ID: CVOAMS13
Lims ID: STD500
Client ID:
Operator ID: ALS Bottle#: 9 Worklist Smp#: 9
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: 8260W_13 Limit Group: VOA - 8260C Water and Solid
Column: Rtx-624 ( 0.25 mm) Detector MS SCAN

## 84 Epichlorohydrin, CAS: 106-89-8

Signal: 1

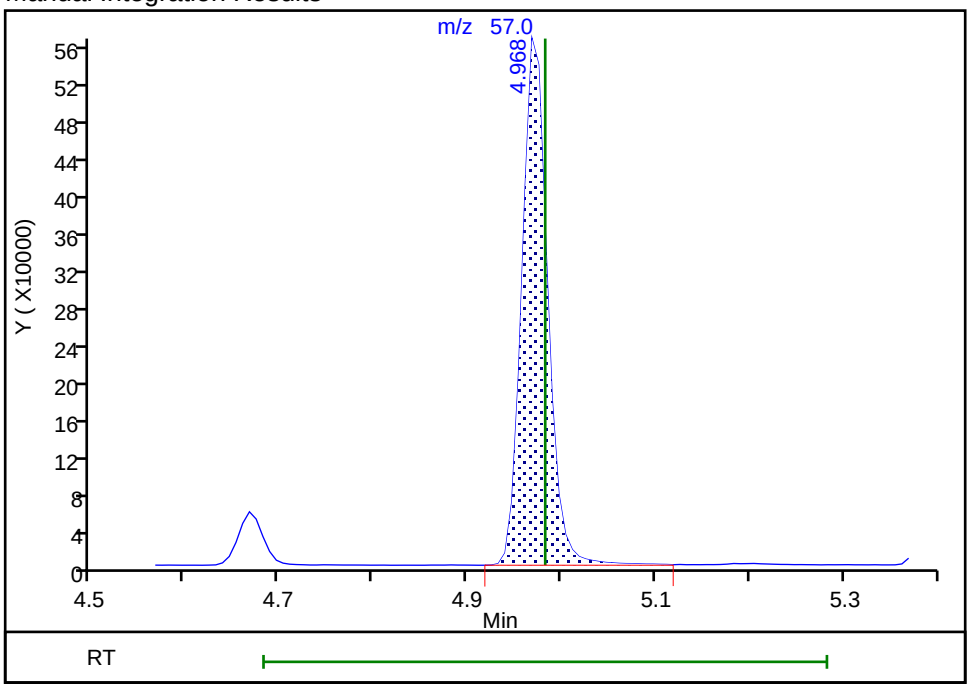
Processing Integration Results

RT: 4.88
Area: 635
Amount: 12.810448
Amount Units: ug/l




Manual Integration Results

RT: 4.97
Area: 1076562
Amount: 9996.8603
Amount Units: ug/l




Reviewer: boykink, 05-Sep-2020 00:29:34
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Edison

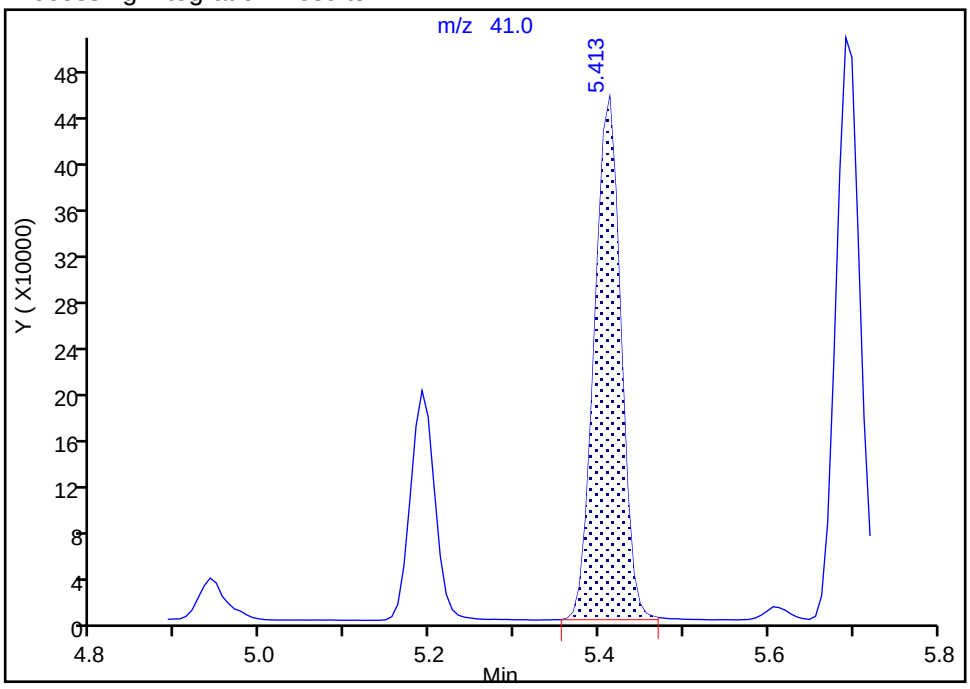
Data File: \\chromfs\Edison\ChromData\CVOAMS13\20200904-116303.b\P79359.D
Injection Date: 04-Sep-2020 16:58:30 Instrument ID: CVOAMS13
Lims ID: STD500
Client ID:
Operator ID: ALS Bottle#: 9 Worklist Smp#: 9
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: 8260W_13 Limit Group: VOA - 8260C Water and Solid
Column: Rtx-624 ( 0.25 mm) Detector MS SCAN

## 85 2-Nitropropane, CAS: 79-46-9

Signal: 1

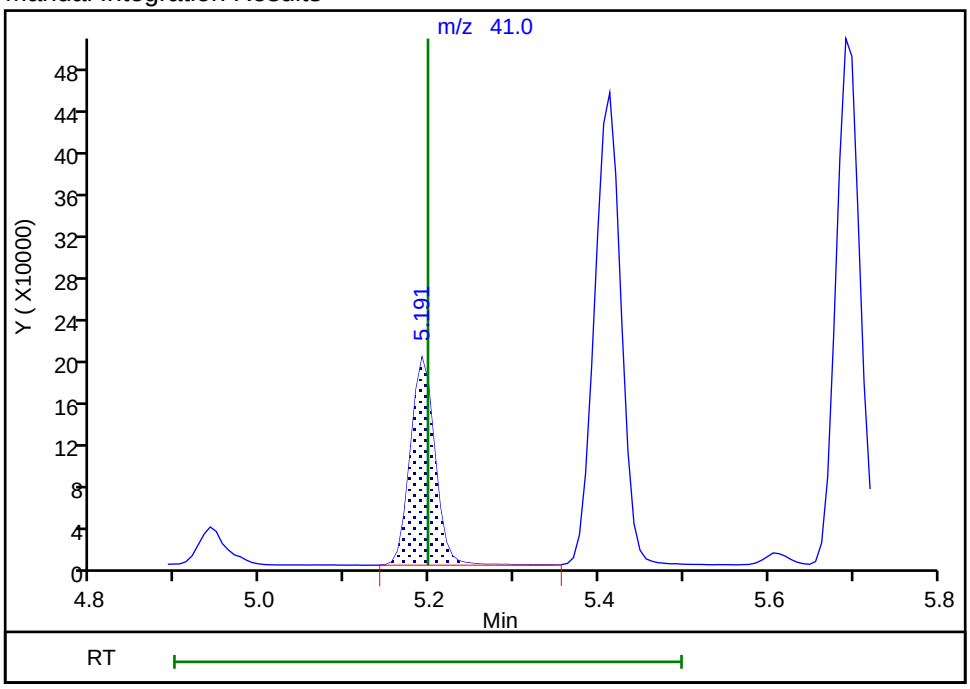
Processing Integration Results

RT: 5.41
Area: 982283
Amount: 1417.7766
Amount Units: ug/l




Manual Integration Results

RT: 5.19
Area: 401764
Amount: 1208.1550
Amount Units: ug/l




Reviewer: baronm, 05-Sep-2020 12:11:28
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Edison Job No.: 460-217547-1

SDG No.:

Lab Sample ID: ICV 460-721970/18 Calibration Date: 09/04/2020 20:34

Instrument ID: CVOAMS13 Calib Start Date: 09/04/2020 14:09

GC Column: Rtx-624 ID: 0.25(mm) Calib End Date: 09/04/2020 16:58

Lab File ID: P79368.D Conc. Units: ug/L Heated Purge: (Y/N) N

| ANALYTE | CURVE TYPE | AVE RRF | RRF | MIN RRF | CALC AMOUNT | SPIKE AMOUNT | %D | MAX %D |
|---|---|---|---|---|---|---|---|---|
| Monochloropentafluoroethane | Ave | 0.0221 | 0.0097 | | 8.83 | 20.0 | -55.9* | 30.0 |
| Chlorotrifluoroethene | Ave | 0.0785 | 0.0566 | | 14.4 | 20.0 | -27.9 | 30.0 |
| Dichlorodifluoromethane | Ave | 0.3371 | 0.3929 | 0.1000 | 23.3 | 20.0 | 16.6 | 30.0 |
| 1,1-Difluoroethane | Ave | 0.1598 | 0.1308 | | 16.4 | 20.0 | -18.1 | 30.0 |
| Chlorodifluoromethane | Ave | 0.0462 | 0.0422 | | 18.3 | 20.0 | -8.5 | 30.0 |
| Butadiene | Ave | 0.3132 | 0.3432 | | 21.9 | 20.0 | 9.6 | 30.0 |
| Chloromethane | Ave | 0.4706 | 0.5395 | 0.1000 | 22.9 | 20.0 | 14.6 | 30.0 |
| Vinyl chloride | Ave | 0.3448 | 0.4126 | 0.1000 | 23.9 | 20.0 | 19.7 | 30.0 |
| Bromomethane | Ave | 2.558 | 3.790 | 0.1000 | 29.6 | 20.0 | 48.2* | 30.0 |
| Chloroethane | Ave | 0.1832 | 0.2318 | 0.1000 | 25.3 | 20.0 | 26.6 | 30.0 |
| Pentane | Ave | 4.304 | 5.923 | | 55.0 | 40.0 | 37.6* | 30.0 |
| Trichlorofluoromethane | Ave | 0.3147 | 0.3837 | 0.1000 | 24.4 | 20.0 | 21.9 | 30.0 |
| Dichlorofluoromethane | Ave | 0.4231 | 0.4988 | | 23.6 | 20.0 | 17.9 | 30.0 |
| 2-Methyl-1,3-butadiene | Ave | 0.3621 | 0.4343 | | 24.0 | 20.0 | 19.9 | 30.0 |
| Ethyl ether | Ave | 0.1689 | 0.2009 | | 23.8 | 20.0 | 18.9 | 30.0 |
| 1,1-Dichloroethene | Ave | 0.2250 | 0.2719 | 0.1000 | 24.2 | 20.0 | 20.8 | 30.0 |
| 1,2-Dichloro-1,1,2-trifluoro ethane | Ave | 0.3284 | 0.3424 | | 20.8 | 20.0 | 4.2 | 30.0 |
| 1,1,2-Trichloro-1,2,2-triflu oroethane | Ave | 0.2202 | 0.2586 | 0.1000 | 23.5 | 20.0 | 17.5 | 30.0 |
| Carbon disulfide | Ave | 0.8803 | 0.9881 | 0.1000 | 22.4 | 20.0 | 12.2 | 30.0 |
| Ethanol | Ave | 0.0830 | 0.0931 | | 897 | 800 | 12.2 | 30.0 |
| 1,1,1-Trifluoro-2,2-dichloro ethane | Ave | 0.3408 | 0.3623 | | 21.3 | 20.0 | 6.3 | 30.0 |
| Iodomethane | QuaF | | 0.2300 | | 12.9 | 20.0 | -35.4* | 30.0 |
| Cyclopentene | Ave | 0.6234 | 0.7513 | | 24.1 | 20.0 | 20.5 | 30.0 |
| Acrolein | Ave | 1.943 | 1.150 | | 23.7 | 40.1 | -40.8* | 30.0 |
| Allyl chloride | Ave | 0.1438 | 0.1592 | | 22.1 | 20.0 | 10.7 | 30.0 |
| Isopropyl alcohol | Ave | 0.8071 | 0.8232 | | 204 | 200 | 2.0 | 30.0 |
| Methylene Chloride | Ave | 0.2712 | 0.3066 | 0.1000 | 22.6 | 20.0 | 13.0 | 30.0 |
| Acetone | QuaF | | 0.8158 | 0.0500 | 100 | 100 | 0.3 | 30.0 |
| trans-1,2-Dichloroethene | Ave | 0.2574 | 0.2970 | 0.1000 | 23.1 | 20.0 | 15.4 | 30.0 |
| Methyl acetate | Ave | 9.744 | 11.24 | 0.1000 | 46.1 | 40.0 | 15.4 | 30.0 |
| Hexane | Ave | 0.0621 | 0.0749 | | 24.1 | 20.0 | 20.7 | 30.0 |
| Methyl tert-butyl ether | Ave | 0.5264 | 0.5856 | 0.1000 | 22.2 | 20.0 | 11.2 | 30.0 |
| 2-Methyl-2-propanol | QuaF | | 1.293 | | 236 | 200 | 18.1 | 30.0 |
| Acetonitrile | Ave | 2.000 | 2.163 | | 216 | 200 | 8.2 | 30.0 |
| Isopropyl ether | Ave | 0.8239 | 0.9643 | | 23.4 | 20.0 | 17.0 | 30.0 |
| 2-Chloro-1,3-butadiene | Ave | 0.2359 | 0.2624 | | 22.3 | 20.0 | 11.3 | 30.0 |
| 1,1-Dichloroethane | Ave | 0.4778 | 0.5281 | 0.2000 | 22.1 | 20.0 | 10.5 | 30.0 |
| Acrylonitrile | Ave | 0.0619 | 0.0699 | | 226 | 200 | 12.8 | 30.0 |
| Tert-butyl ethyl ether | Ave | 0.6791 | 0.7647 | | 22.5 | 20.0 | 12.6 | 30.0 |

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Edison Job No.: 460-217547-1

SDG No.:

Lab Sample ID: ICV 460-721970/18 Calibration Date: 09/04/2020 20:34

Instrument ID: CVOAMS13 Calib Start Date: 09/04/2020 14:09

GC Column: Rtx-624 ID: 0.25(mm) Calib End Date: 09/04/2020 16:58

Lab File ID: P79368.D Conc. Units: ug/L Heated Purge: (Y/N) N

| ANALYTE | CURVE TYPE | AVE RRF | RRF | MIN RRF | CALC AMOUNT | SPIKE AMOUNT | %D | MAX %D |
|---|---|---|---|---|---|---|---|---|
| Vinyl acetate | Ave | 0.3676 | 0.3236 | | 35.2 | 40.0 | -12.0 | 30.0 |
| cis-1,2-Dichloroethene | Ave | 0.2848 | 0.3187 | 0.1000 | 22.4 | 20.0 | 11.9 | 30.0 |
| 2,2-Dichloropropane | Ave | 0.3235 | 0.3192 | | 19.7 | 20.0 | -1.3 | 30.0 |
| Cyclohexane | Ave | 0.4784 | 0.5577 | 0.1000 | 23.3 | 20.0 | 16.6 | 30.0 |
| Chlorobromomethane | Ave | 0.1245 | 0.1322 | | 21.2 | 20.0 | 6.2 | 30.0 |
| Chloroform | Ave | 0.4283 | 0.4680 | 0.2000 | 21.9 | 20.0 | 9.3 | 30.0 |
| Carbon tetrachloride | Ave | 0.2525 | 0.2786 | 0.1000 | 22.1 | 20.0 | 10.3 | 30.0 |
| Ethyl acetate | Ave | 0.3240 | 0.3877 | | 47.9 | 40.0 | 19.7 | 30.0 |
| Methyl acrylate | Ave | 0.1349 | 0.1495 | | 22.2 | 20.0 | 10.8 | 30.0 |
| Tetrahydrofuran | Ave | 1.130 | 1.262 | | 44.7 | 40.0 | 11.6 | 30.0 |
| 1,1,1-Trichloroethane | Ave | 0.3442 | 0.3840 | 0.1000 | 22.3 | 20.0 | 11.6 | 30.0 |
| 1,1-Dichloropropene | QuaF | | 0.4000 | | 21.5 | 20.0 | 7.4 | 30.0 |
| 2-Butanone (MEK) | Ave | 0.3653 | 0.4231 | 0.0500 | 116 | 100 | 15.8 | 30.0 |
| 2,2,4-Trimethylpentane | Ave | 0.7550 | 0.8355 | | 22.1 | 20.0 | 10.7 | 30.0 |
| n-Heptane | Ave | 0.1853 | 0.1933 | | 20.9 | 20.0 | 4.3 | 30.0 |
| Benzene | Ave | 1.561 | 1.763 | 0.5000 | 22.6 | 20.0 | 12.9 | 30.0 |
| Propionitrile | Ave | 2.122 | 2.469 | | 233 | 200 | 16.3 | 30.0 |
| Methacrylonitrile | Ave | 0.0687 | 0.0775 | | 226 | 200 | 12.9 | 30.0 |
| Tert-amyl methyl ether | Ave | 0.5651 | 0.6443 | | 22.8 | 20.0 | 14.0 | 30.0 |
| 1,2-Dichloroethane | Ave | 0.2794 | 0.3005 | 0.1000 | 21.5 | 20.0 | 7.5 | 30.0 |
| Isobutyl alcohol | Ave | 0.5347 | 0.5433 | | 508 | 500 | 1.6 | 30.0 |
| Isopropyl acetate | Ave | 0.3173 | 0.3187 | | 20.1 | 20.0 | 0.5 | 30.0 |
| Methylcyclohexane | Ave | 0.4413 | 0.5026 | 0.1000 | 22.8 | 20.0 | 13.9 | 30.0 |
| Trichloroethene | Ave | 0.2699 | 0.3063 | 0.2000 | 22.7 | 20.0 | 13.5 | 30.0 |
| Dibromomethane | Ave | 0.1204 | 0.1317 | | 21.9 | 20.0 | 9.4 | 30.0 |
| n-Butanol | QuaF | | 0.2955 | | 448 | 500 | -10.5 | 30.0 |
| 1,2-Dichloropropane | Ave | 0.2703 | 0.3030 | 0.1000 | 22.4 | 20.0 | 12.1 | 30.0 |
| Dichlorobromomethane | Ave | 0.2965 | 0.3312 | 0.2000 | 22.3 | 20.0 | 11.7 | 30.0 |
| Ethyl acrylate | Qua2 | | 0.2032 | | 22.4 | 20.0 | 11.9 | 30.0 |
| Methyl methacrylate | Ave | 0.0402 | 0.0465 | | 46.2 | 40.0 | 15.6 | 30.0 |
| 1,4-Dioxane | Ave | 1.153 | 1.264 | | 438 | 400 | 9.6 | 30.0 |
| n-Propyl acetate | Ave | 0.2033 | 0.2201 | | 21.7 | 20.0 | 8.3 | 30.0 |
| 2-Chloroethyl vinyl ether | Ave | 0.0511 | 0.0407 | | 15.9 | 20.0 | -20.3 | 30.0 |
| cis-1,3-Dichloropropene | Ave | 0.5114 | 0.5562 | 0.2000 | 21.8 | 20.0 | 8.8 | 30.0 |
| Toluene | Ave | 1.586 | 1.759 | 0.4000 | 22.2 | 20.0 | 10.9 | 30.0 |
| Epichlorohydrin | QuaF | | 0.0485 | | 11.4 | 20.0 | -43.2* | 30.0 |
| 2-Nitropropane | Ave | 0.0268 | 0.0259 | | 38.6 | 40.0 | -3.5 | 30.0 |
| Tetrachloroethene | Ave | 0.3736 | 0.4062 | 0.2000 | 21.7 | 20.0 | 8.7 | 30.0 |
| 4-Methyl-2-pentanone (MIBK) | Ave | 2.586 | 3.009 | 0.0500 | 116 | 100 | 16.3 | 30.0 |
| trans-1,3-Dichloropropene | Ave | 0.4064 | 0.4205 | 0.1000 | 20.7 | 20.0 | 3.5 | 30.0 |
| 1,1,2-Trichloroethane | Ave | 0.2163 | 0.2398 | 0.1000 | 22.2 | 20.0 | 10.9 | 30.0 |

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Edison Job No.: 460-217547-1

SDG No.:

Lab Sample ID: ICV 460-721970/18 Calibration Date: 09/04/2020 20:34

Instrument ID: CVOAMS13 Calib Start Date: 09/04/2020 14:09

GC Column: Rtx-624 ID: 0.25(mm) Calib End Date: 09/04/2020 16:58

Lab File ID: P79368.D Conc. Units: ug/L Heated Purge: (Y/N) N

| ANALYTE | CURVE TYPE | AVE RRF | RRF | MIN RRF | CALC AMOUNT | SPIKE AMOUNT | %D | MAX %D |
|---|---|---|---|---|---|---|---|---|
| Ethyl methacrylate | Ave | 0.2123 | 0.2356 | | 22.2 | 20.0 | 11.0 | 30.0 |
| Chlorodibromomethane | Ave | 0.2791 | 0.3028 | 0.1000 | 21.7 | 20.0 | 8.5 | 30.0 |
| 1,3-Dichloropropane | Ave | 0.4502 | 0.5002 | | 22.2 | 20.0 | 11.1 | 30.0 |
| Ethylene Dibromide | Ave | 0.2324 | 0.2641 | 0.1000 | 22.7 | 20.0 | 13.7 | 30.0 |
| n-Butyl acetate | Qua2 | | 0.3323 | | 21.8 | 20.0 | 9.1 | 30.0 |
| 2-Hexanone | Ave | 1.736 | 2.066 | 0.0500 | 119 | 100 | 19.0 | 30.0 |
| Chlorobenzene | Ave | 0.9935 | 1.098 | 0.5000 | 22.1 | 20.0 | 10.5 | 30.0 |
| Ethylbenzene | Ave | 0.5568 | 0.6154 | 0.1000 | 22.1 | 20.0 | 10.5 | 30.0 |
| 1,1,1,2-Tetrachloroethane | Ave | 0.3075 | 0.3412 | | 22.2 | 20.0 | 11.0 | 30.0 |
| m-Xylene & p-Xylene | Ave | 0.6531 | 0.7498 | 0.1000 | 23.0 | 20.0 | 14.8 | 30.0 |
| o-Xylene | Ave | 0.6608 | 0.7377 | 0.3000 | 22.3 | 20.0 | 11.6 | 30.0 |
| Bromoform | Ave | 0.1577 | 0.1690 | 0.1000 | 21.4 | 20.0 | 7.2 | 30.0 |
| Styrene | Ave | 1.057 | 1.212 | 0.3000 | 22.9 | 20.0 | 14.7 | 30.0 |
| n-Butyl acrylate | Qua2 | | 0.1920 | | 21.7 | 20.0 | 8.3 | 30.0 |
| Isopropylbenzene | Ave | 1.714 | 1.942 | 0.1000 | 22.7 | 20.0 | 13.3 | 30.0 |
| Amyl acetate (mixed isomers) | Qua2 | | 0.7905 | | 21.8 | 20.0 | 9.2 | 30.0 |
| Bromobenzene | Ave | 0.7390 | 0.8320 | | 22.5 | 20.0 | 12.6 | 30.0 |
| N-Propylbenzene | Ave | 3.698 | 4.166 | | 22.5 | 20.0 | 12.7 | 30.0 |
| 1,1,2,2-Tetrachloroethane | Ave | 0.5126 | 0.5414 | 0.3000 | 21.1 | 20.0 | 5.6 | 30.0 |
| 2-Chlorotoluene | Ave | 2.548 | 2.813 | | 22.1 | 20.0 | 10.4 | 30.0 |
| 4-Ethyltoluene | Ave | 3.072 | 3.485 | | 22.7 | 20.0 | 13.4 | 30.0 |
| 1,2,3-Trichloropropane | Ave | 0.1356 | 0.1510 | | 22.3 | 20.0 | 11.3 | 30.0 |
| 1,3,5-Trimethylbenzene | Ave | 2.564 | 2.870 | | 22.4 | 20.0 | 11.9 | 30.0 |
| trans-1,4-Dichloro-2-butene | Ave | 0.0979 | 0.0972 | | 19.9 | 20.0 | -0.7 | 30.0 |
| 4-Chlorotoluene | Ave | 2.239 | 2.513 | | 22.5 | 20.0 | 12.3 | 30.0 |
| tert-Butylbenzene | Ave | 2.217 | 2.487 | | 22.4 | 20.0 | 12.2 | 30.0 |
| 1,2,4-Trimethylbenzene | Ave | 2.645 | 2.944 | | 22.3 | 20.0 | 11.3 | 30.0 |
| Butyl Methacrylate | Qua2 | | 0.7940 | | 22.2 | 20.0 | 11.2 | 30.0 |
| sec-Butylbenzene | Ave | 3.367 | 3.753 | | 22.3 | 20.0 | 11.5 | 30.0 |
| 1,3-Dichlorobenzene | Ave | 1.460 | 1.599 | 0.6000 | 21.9 | 20.0 | 9.6 | 30.0 |
| 4-Isopropyltoluene | Ave | 2.840 | 3.182 | | 22.4 | 20.0 | 12.1 | 30.0 |
| 1,4-Dichlorobenzene | Ave | 1.537 | 1.672 | 0.5000 | 21.8 | 20.0 | 8.8 | 30.0 |
| 1,2,3-Trimethylbenzene | Ave | 2.680 | 3.043 | | 22.7 | 20.0 | 13.6 | 30.0 |
| Indan | Ave | 2.600 | 2.962 | | 22.8 | 20.0 | 13.9 | 30.0 |
| Benzyl chloride | Qua2 | | 0.1436 | | 18.5 | 20.0 | -7.4 | 30.0 |
| p-Diethylbenzene | Ave | 1.431 | 1.659 | | 23.2 | 20.0 | 15.9 | 30.0 |
| n-Butylbenzene | Ave | 2.589 | 2.847 | | 22.0 | 20.0 | 10.0 | 30.0 |
| 1,2-Dichlorobenzene | Ave | 1.336 | 1.464 | 0.4000 | 21.9 | 20.0 | 9.5 | 30.0 |
| 1,2,4,5-Tetramethylbenzene | Ave | 2.492 | 2.877 | | 23.1 | 20.0 | 15.4 | 30.0 |
| 1,2-Dibromo-3-Chloropropane | Ave | 0.0853 | 0.0895 | 0.0500 | 21.0 | 20.0 | 4.8 | 30.0 |
| 1,3,5-Trichlorobenzene | Ave | 1.060 | 1.194 | | 22.5 | 20.0 | 12.7 | 30.0 |

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Edison  Job No.: 460-217547-1

SDG No.:

Lab Sample ID: ICV 460-721970/18  Calibration Date: 09/04/2020 20:34

Instrument ID: CVOAMS13  Calib Start Date: 09/04/2020 14:09

GC Column: Rtx-624  ID: 0.25(mm)  Calib End Date: 09/04/2020 16:58

Lab File ID: P79368.D  Conc. Units: ug/L  Heated Purge: (Y/N) N

| ANALYTE | CURVE TYPE | AVE RRF | RRF | MIN RRF | CALC AMOUNT | SPIKE AMOUNT | %D | MAX %D |
|---|---|---|---|---|---|---|---|---|
| 1,2,4-Trichlorobenzene | Ave | 0.8895 | 0.9706 | 0.2000 | 21.8 | 20.0 | 9.1 | 30.0 |
| Hexachlorobutadiene | Ave | 0.3928 | 0.4115 | | 21.0 | 20.0 | 4.8 | 30.0 |
| Naphthalene | Ave | 1.641 | 1.606 | | 19.6 | 20.0 | -2.1 | 30.0 |
| 1,2,3-Trichlorobenzene | Ave | 0.7279 | 0.7668 | | 21.1 | 20.0 | 5.3 | 30.0 |
| Dibromofluoromethane (Surr) | Ave | 0.2153 | 0.2277 | | 52.9 | 50.0 | 5.7 | 30.0 |
| 1,2-Dichloroethane-d4 (Surr) | Ave | 0.2161 | 0.2355 | | 54.5 | 50.0 | 9.0 | 30.0 |
| Toluene-d8 (Surr) | Ave | 1.290 | 1.397 | | 54.2 | 50.0 | 8.3 | 30.0 |
| 4-Bromofluorobenzene | Ave | 0.4048 | 0.4425 | | 54.7 | 50.0 | 9.3 | 30.0 |

Eurofins TestAmerica, Edison
Target Compound Quantitation Report

Data File: \\chromfs\Edison\ChromData\CVOAMS13\20200904-116303.b\P79368.D
Lims ID: ICV
Client ID:
Sample Type: ICV
Inject. Date: 04-Sep-2020 20:34:30 ALS Bottle#: 18 Worklist Smp#: 18
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: ICV
Misc. Info.: 460-0116303-018
Operator ID: Instrument ID: CVOAMS13
Sublist:

Method: \\chromfs\Edison\ChromData\CVOAMS13\20200904-116303.b\8260W_13.m
Limit Group: VOA - 8260C Water and Solid
Last Update: 10-Sep-2020 10:32:29 Calib Date: 04-Sep-2020 16:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Edison\ChromData\CVOAMS13\20200904-116303.b\P79359.D

Column 1 : Rtx-624 ( 0.25 mm) Det: MS SCAN
Process Host: CTX1019

First Level Reviewer: baronm Date: 10-Sep-2020 10:37:21

| Compound | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q | Response | Cal Amt ug/l | OnCol Amt ug/l | Flags |
|---|---|---|---|---|---|---|---|---|---|
| 1 Monochloropentafluoroethane | 119 | 0.742 | 0.721 | 0.021 | 68 | 2025 | 20.0 | 8.83 | M |
| 2 Chlorotrifluoroethene | 116 | 0.756 | 0.756 | 0.000 | 88 | 11768 | 20.0 | 14.4 | |
| 3 Dichlorodifluoromethane | 85 | 0.771 | 0.771 | 0.000 | 99 | 81758 | 20.0 | 23.3 | |
| 4 1,1-Difluoroethane | 65 | 0.807 | 0.807 | 0.000 | 89 | 27217 | 20.0 | 16.4 | |
| 5 Chlorodifluoromethane | 67 | 0.828 | 0.814 | 0.014 | 96 | 8790 | 20.0 | 18.3 | a |
| 6 Chloromethane | 50 | 0.893 | 0.892 | 0.001 | 97 | 112258 | 20.0 | 22.9 | |
| 8 Butadiene | 54 | 0.893 | 0.892 | 0.001 | 97 | 71406 | 20.0 | 21.9 | |
| 7 Vinyl chloride | 62 | 0.893 | 0.892 | 0.001 | 97 | 85863 | 20.0 | 23.9 | |
| 9 Bromomethane | 94 | 1.036 | 1.036 | 0.000 | 99 | 40540 | 20.0 | 29.6 | |
| 10 Chloroethane | 64 | 1.093 | 1.093 | 0.000 | 99 | 48243 | 20.0 | 25.3 | M |
| 11 Pentane | 72 | 1.150 | 1.150 | 0.000 | 97 | 23140 | 40.0 | 55.0 | |
| 12 Trichlorofluoromethane | 101 | 1.150 | 1.150 | 0.000 | 55 | 79843 | 20.0 | 24.4 | |
| 13 Dichlorofluoromethane | 67 | 1.186 | 1.186 | 0.000 | 99 | 103796 | 20.0 | 23.6 | |
| 14 2-Methyl-1,3-butadiene | 67 | 1.287 | 1.286 | 0.001 | 96 | 90380 | 20.0 | 24.0 | |
| 15 Ethyl ether | 59 | 1.294 | 1.294 | 0.000 | 95 | 41795 | 20.0 | 23.8 | |
| 18 1,2-Dichloro-1,1,2-trifluoroetha | 67 | 1.387 | 1.387 | 0.000 | 70 | 71240 | 20.0 | 20.8 | |
| 17 1,1-Dichloroethene | 96 | 1.387 | 1.387 | 0.000 | 97 | 56570 | 20.0 | 24.2 | |
| 16 Ethanol | 46 | 1.408 | 1.408 | 0.000 | 27 | 7271 | 800.0 | 897.3 | a |
| 19 Carbon disulfide | 76 | 1.408 | 1.408 | 0.000 | 99 | 205612 | 20.0 | 22.4 | |
| 20 1,1,2-Trichloro-1,2,2-trifluoroe | 101 | 1.408 | 1.408 | 0.000 | 93 | 53810 | 20.0 | 23.5 | |
| 21 1,1,1-Trifluoro-2,2-dichloroetha | 83 | 1.415 | 1.415 | 0.000 | 96 | 75396 | 20.0 | 21.3 | |
| 22 Iodomethane | 142 | 1.466 | 1.466 | 0.000 | 96 | 47852 | 20.0 | 12.9 | |
| 23 Cyclopentene | 67 | 1.537 | 1.537 | 0.000 | 96 | 156335 | 20.0 | 24.1 | |
| 24 Acrolein | 56 | 1.559 | 1.559 | 0.000 | 93 | 4500 | 40.1 | 23.7 | |
| 25 3-Chloro-1-propene | 76 | 1.630 | 1.630 | 0.000 | 94 | 33122 | 20.0 | 22.1 | |
| 26 Isopropyl alcohol | 45 | 1.659 | 1.659 | 0.000 | 97 | 16080 | 200.0 | 204.0 | |
| 27 Methylene Chloride | 84 | 1.695 | 1.695 | 0.000 | 92 | 63803 | 20.0 | 22.6 | |
| 28 Acetone | 43 | 1.709 | 1.716 | -0.007 | 87 | 43630 | 100.0 | 100.3 | |
| 29 trans-1,2-Dichloroethene | 96 | 1.774 | 1.774 | 0.000 | 93 | 61805 | 20.0 | 23.1 | |
| 30 Methyl acetate | 43 | 1.781 | 1.781 | 0.000 | 98 | 43917 | 40.0 | 46.1 | |

| Compound | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q | Response | Cal Amt ug/l | OnCol Amt ug/l | Flags |
|---|---|---|---|---|---|---|---|---|---|
| 31 Hexane | 86 | 1.817 | 1.817 | 0.000 | 90 | 15587 | 20.0 | 24.1 | |
| 32 Methyl tert-butyl ether | 73 | 1.831 | 1.838 | -0.007 | 88 | 121848 | 20.0 | 22.2 | |
| * 33 TBA-d9 (IS) | 65 | 1.860 | 1.860 | 0.000 | 100 | 97671 | 1000.0 | 1000.0 | |
| 34 2-Methyl-2-propanol | 59 | 1.903 | 1.902 | 0.001 | 100 | 25252 | 200.0 | 236.2 | |
| 35 Acetonitrile | 41 | 1.981 | 1.981 | 0.000 | 99 | 42255 | 200.0 | 216.4 | |
| 36 Isopropyl ether | 45 | 2.053 | 2.053 | 0.000 | 98 | 200655 | 20.0 | 23.4 | |
| 37 2-Chloro-1,3-butadiene | 88 | 2.110 | 2.110 | 0.000 | 89 | 54607 | 20.0 | 22.3 | |
| 38 1,1-Dichloroethane | 63 | 2.117 | 2.117 | 0.000 | 100 | 109900 | 20.0 | 22.1 | |
| 39 Acrylonitrile | 53 | 2.153 | 2.153 | 0.000 | 95 | 145372 | 200.0 | 225.7 | |
| 40 Tert-butyl ethyl ether | 59 | 2.275 | 2.275 | 0.000 | 89 | 159126 | 20.0 | 22.5 | |
| 41 Vinyl acetate | 43 | 2.282 | 2.282 | 0.000 | 100 | 134675 | 40.0 | 35.2 | |
| 42 cis-1,2-Dichloroethene | 96 | 2.461 | 2.461 | 0.000 | 96 | 66317 | 20.0 | 22.4 | |
| 43 2,2-Dichloropropane | 77 | 2.526 | 2.526 | 0.000 | 98 | 66429 | 20.0 | 19.7 | |
| 44 Cyclohexane | 56 | 2.583 | 2.583 | 0.000 | 91 | 116054 | 20.0 | 23.3 | |
| 45 Chlorobromomethane | 128 | 2.590 | 2.590 | 0.000 | 95 | 27499 | 20.0 | 21.2 | |
| 46 Chloroform | 83 | 2.647 | 2.647 | 0.000 | 98 | 97387 | 20.0 | 21.9 | |
| 47 Carbon tetrachloride | 117 | 2.733 | 2.733 | 0.000 | 99 | 57978 | 20.0 | 22.1 | |
| 48 Ethyl acetate | 70 | 2.748 | 2.748 | 0.000 | 99 | 8293 | 40.0 | 47.9 | |
| 49 Methyl acrylate | 55 | 2.748 | 2.748 | 0.000 | 87 | 31099 | 20.0 | 22.2 | |
| 50 Tetrahydrofuran | 42 | 2.755 | 2.755 | 0.000 | 96 | 26995 | 40.0 | 44.7 | |
| $ 51 Dibromofluoromethane (Surr) | 113 | 2.776 | 2.776 | 0.000 | 98 | 118453 | 50.0 | 52.9 | |
| 52 1,1,1-Trichloroethane | 97 | 2.784 | 2.776 | 0.008 | 97 | 79909 | 20.0 | 22.3 | |
| * 53 2-Butanone-d5 | 46 | 2.834 | 2.834 | 0.000 | 100 | 133699 | 250.0 | 250.0 | |
| 55 1,1-Dichloropropene | 75 | 2.870 | 2.869 | 0.001 | 98 | 83245 | 20.0 | 21.5 | |
| 54 2-Butanone (MEK) | 72 | 2.870 | 2.869 | 0.001 | 98 | 22626 | 100.0 | 115.8 | |
| 56 Isooctane | 57 | 2.956 | 2.955 | 0.001 | 99 | 173853 | 20.0 | 22.1 | |
| 57 n-Heptane | 57 | 3.049 | 3.049 | 0.000 | 95 | 40223 | 20.0 | 20.9 | |
| 58 Benzene | 78 | 3.056 | 3.056 | 0.000 | 96 | 259468 | 20.0 | 22.6 | |
| 59 Propionitrile | 54 | 3.077 | 3.077 | 0.000 | 92 | 48225 | 200.0 | 232.7 | |
| 60 Methacrylonitrile | 67 | 3.092 | 3.092 | 0.000 | 91 | 161245 | 200.0 | 225.7 | |
| $ 61 1,2-Dichloroethane-d4 (Surr) | 65 | 3.156 | 3.156 | 0.000 | 0 | 122509 | 50.0 | 54.5 | |
| 62 Tert-amyl methyl ether | 73 | 3.163 | 3.163 | 0.000 | 99 | 134062 | 20.0 | 22.8 | |
| 63 1,2-Dichloroethane | 62 | 3.213 | 3.213 | 0.000 | 96 | 62523 | 20.0 | 21.5 | |
| 64 Isobutyl alcohol | 43 | 3.292 | 3.292 | 0.000 | 96 | 26531 | 500.0 | 508.0 | |
| 65 t-Amyl alcohol | 59 | 3.357 | 3.357 | 0.000 | 92 | 17589 | 200.0 | 207.5 | |
| * 66 Fluorobenzene | 96 | 3.385 | 3.385 | 0.000 | 99 | 520222 | 50.0 | 50.0 | |
| 67 Isopropyl acetate | 43 | 3.457 | 3.457 | 0.000 | 99 | 66324 | 20.0 | 20.1 | |
| 68 Methylcyclohexane | 83 | 3.514 | 3.507 | 0.007 | 96 | 104591 | 20.0 | 22.8 | |
| 69 Trichloroethene | 130 | 3.536 | 3.536 | 0.000 | 98 | 63738 | 20.0 | 22.7 | |
| 70 2-ethoxy-2-methyl butane | 59 | 3.772 | 3.772 | 0.000 | 93 | 130315 | 20.0 | 22.5 | |
| 71 Dibromomethane | 93 | 3.894 | 3.894 | 0.000 | 96 | 27403 | 20.0 | 21.9 | |
| 72 n-Butanol | 56 | 3.915 | 3.915 | 0.000 | 89 | 14430 | 500.0 | 447.5 | |
| 73 1,2-Dichloropropane | 63 | 3.980 | 3.980 | 0.000 | 92 | 63048 | 20.0 | 22.4 | |
| 75 Dichlorobromomethane | 83 | 4.066 | 4.066 | 0.000 | 99 | 68909 | 20.0 | 22.3 | |
| 74 Ethyl acrylate | 55 | 4.066 | 4.066 | 0.000 | 97 | 42288 | 20.0 | 22.4 | |
| * 76 1,4-Dioxane-d8 | 96 | 4.238 | 4.238 | 0.000 | 88 | 13148 | 1000.0 | 1000.0 | |
| 77 Methyl methacrylate | 100 | 4.259 | 4.259 | 0.000 | 91 | 19358 | 40.0 | 46.2 | |
| 78 1,4-Dioxane | 88 | 4.266 | 4.273 | -0.007 | 35 | 6649 | 400.0 | 438.5 | |
| 79 n-Propyl acetate | 43 | 4.417 | 4.417 | 0.000 | 100 | 45801 | 20.0 | 21.7 | |
| 80 2-Chloroethyl vinyl ether | 63 | 4.667 | 4.675 | -0.008 | 97 | 8479 | 20.0 | 15.9 | |
| 81 cis-1,3-Dichloropropene | 75 | 4.696 | 4.696 | 0.000 | 92 | 81874 | 20.0 | 21.8 | |
| $ 82 Toluene-d8 (Surr) | 98 | 4.882 | 4.882 | 0.000 | 99 | 514202 | 50.0 | 54.2 | |

| Compound | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q | Response | Cal Amt ug/l | OnCol Amt ug/l | Flags |
|---|---|---|---|---|---|---|---|---|---|
| 83 Toluene | 91 | 4.940 | 4.940 | 0.000 | 93 | 258968 | 20.0 | 22.2 | |
| 84 Epichlorohydrin | 57 | 4.990 | 4.983 | 0.007 | 1 | 519 | 20.0 | 11.4 | a |
| 85 2-Nitropropane | 41 | 5.190 | 5.197 | -0.007 | 97 | 10773 | 40.0 | 38.6 | a |
| 86 Tetrachloroethene | 166 | 5.362 | 5.362 | 0.000 | 98 | 59791 | 20.0 | 21.7 | |
| 87 4-Methyl-2-pentanone (MIBK) | 43 | 5.405 | 5.405 | 0.000 | 97 | 160902 | 100.0 | 116.3 | |
| 88 trans-1,3-Dichloropropene | 75 | 5.441 | 5.441 | 0.000 | 94 | 61904 | 20.0 | 20.7 | |
| 89 1,1,2-Trichloroethane | 83 | 5.606 | 5.606 | 0.000 | 96 | 35299 | 20.0 | 22.2 | |
| 90 Ethyl methacrylate | 69 | 5.699 | 5.699 | 0.000 | 90 | 49030 | 20.0 | 22.2 | |
| 91 Chlorodibromomethane | 129 | 5.799 | 5.799 | 0.000 | 98 | 44574 | 20.0 | 21.7 | |
| 92 1,3-Dichloropropane | 76 | 5.914 | 5.914 | 0.000 | 95 | 73642 | 20.0 | 22.2 | |
| 93 Ethylene Dibromide | 107 | 6.043 | 6.050 | -0.007 | 98 | 38884 | 20.0 | 22.7 | |
| 94 n-Butyl acetate | 43 | 6.401 | 6.401 | 0.000 | 99 | 48921 | 20.0 | 21.8 | |
| 95 2-Hexanone | 43 | 6.458 | 6.458 | 0.000 | 96 | 110481 | 100.0 | 119.0 | |
| * 96 Chlorobenzene-d5 | 117 | 6.723 | 6.723 | 0.000 | 87 | 368030 | 50.0 | 50.0 | |
| 97 Chlorobenzene | 112 | 6.745 | 6.745 | 0.000 | 95 | 161644 | 20.0 | 22.1 | |
| 98 Ethylbenzene | 106 | 6.831 | 6.831 | 0.000 | 98 | 90587 | 20.0 | 22.1 | |
| 99 1,1,1,2-Tetrachloroethane | 131 | 6.859 | 6.859 | 0.000 | 94 | 50235 | 20.0 | 22.2 | |
| 100 m-Xylene & p-Xylene | 106 | 7.046 | 7.046 | 0.000 | 0 | 110382 | 20.0 | 23.0 | |
| 101 o-Xylene | 106 | 7.626 | 7.626 | 0.000 | 94 | 108595 | 20.0 | 22.3 | |
| 102 Bromoform | 173 | 7.697 | 7.690 | 0.007 | 95 | 24879 | 20.0 | 21.4 | |
| 103 Styrene | 104 | 7.712 | 7.719 | -0.007 | 96 | 178474 | 20.0 | 22.9 | |
| 104 n-Butyl acrylate | 73 | 8.056 | 8.056 | 0.000 | 98 | 28260 | 20.0 | 21.7 | |
| 105 Isopropylbenzene | 105 | 8.113 | 8.113 | 0.000 | 96 | 285869 | 20.0 | 22.7 | |
| 106 Amyl acetate (mixed isomers) | 43 | 8.471 | 8.471 | 0.000 | 89 | 64894 | 20.0 | 21.8 | |
| $ 107 4-Bromofluorobenzene | 174 | 8.478 | 8.478 | 0.000 | 92 | 162869 | 50.0 | 54.7 | |
| 108 Bromobenzene | 156 | 8.586 | 8.586 | 0.000 | 97 | 68300 | 20.0 | 22.5 | |
| 109 N-Propylbenzene | 91 | 8.743 | 8.743 | 0.000 | 99 | 341964 | 20.0 | 22.5 | |
| 110 1,1,2,2-Tetrachloroethane | 83 | 8.894 | 8.894 | 0.000 | 99 | 44441 | 20.0 | 21.1 | |
| 111 2-Chlorotoluene | 91 | 8.908 | 8.908 | 0.000 | 96 | 230889 | 20.0 | 22.1 | |
| 112 4-Ethyltoluene | 105 | 8.929 | 8.929 | 0.000 | 98 | 286112 | 20.0 | 22.7 | |
| 113 1,2,3-Trichloropropane | 110 | 9.023 | 9.023 | 0.000 | 98 | 12392 | 20.0 | 22.3 | |
| 114 1,3,5-Trimethylbenzene | 105 | 9.087 | 9.087 | 0.000 | 94 | 235599 | 20.0 | 22.4 | |
| 115 trans-1,4-Dichloro-2-butene | 53 | 9.166 | 9.166 | 0.000 | 64 | 7977 | 20.0 | 19.9 | |
| 116 4-Chlorotoluene | 91 | 9.173 | 9.173 | 0.000 | 98 | 206334 | 20.0 | 22.5 | |
| 117 tert-Butylbenzene | 119 | 9.546 | 9.545 | 0.001 | 96 | 204188 | 20.0 | 22.4 | |
| 118 1,2,4-Trimethylbenzene | 105 | 9.682 | 9.682 | 0.000 | 97 | 241642 | 20.0 | 22.3 | |
| 119 Butyl Methacrylate | 87 | 9.696 | 9.696 | 0.000 | 92 | 65181 | 20.0 | 22.2 | |
| 120 sec-Butylbenzene | 105 | 9.839 | 9.839 | 0.000 | 99 | 308098 | 20.0 | 22.3 | |
| 121 1,3-Dichlorobenzene | 146 | 10.097 | 10.097 | 0.000 | 97 | 131304 | 20.0 | 21.9 | |
| 122 4-Isopropyltoluene | 119 | 10.119 | 10.118 | 0.001 | 98 | 261251 | 20.0 | 22.4 | |
| * 123 1,4-Dichlorobenzene-d4 | 152 | 10.226 | 10.226 | 0.000 | 94 | 205232 | 50.0 | 50.0 | |
| 124 1,4-Dichlorobenzene | 146 | 10.247 | 10.247 | 0.000 | 96 | 137233 | 20.0 | 21.8 | |
| 125 1,2,3-Trimethylbenzene | 105 | 10.355 | 10.355 | 0.000 | 98 | 249810 | 20.0 | 22.7 | |
| 126 2,3-Dihydroindene | 117 | 10.527 | 10.527 | 0.000 | 94 | 243174 | 20.0 | 22.8 | |
| 127 Benzyl chloride | 126 | 10.713 | 10.713 | 0.000 | 96 | 11791 | 20.0 | 18.5 | |
| 128 p-Diethylbenzene | 119 | 10.727 | 10.727 | 0.000 | 93 | 136183 | 20.0 | 23.2 | |
| 129 n-Butylbenzene | 91 | 10.813 | 10.813 | 0.000 | 98 | 233725 | 20.0 | 22.0 | |
| 130 1,2-Dichlorobenzene | 146 | 10.914 | 10.921 | -0.007 | 97 | 120160 | 20.0 | 21.9 | |
| 131 1,2,4,5-Tetramethylbenzene | 119 | 11.924 | 11.924 | 0.000 | 98 | 236206 | 20.0 | 23.1 | |
| 132 1,2-Dibromo-3-Chloropropane | 157 | 12.074 | 12.074 | 0.000 | 92 | 7344 | 20.0 | 21.0 | |
| 133 1,3,5-Trichlorobenzene | 180 | 12.117 | 12.124 | -0.007 | 97 | 98006 | 20.0 | 22.5 | |
| 134 1,2,4-Trichlorobenzene | 180 | 12.819 | 12.819 | 0.000 | 93 | 79678 | 20.0 | 21.8 | |

| Compound | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q | Response | Cal Amt ug/l | OnCol Amt ug/l | Flags |
|---|---|---|---|---|---|---|---|---|---|
| 135 Hexachlorobutadiene | 225 | 12.841 | 12.840 | 0.000 | 96 | 33784 | 20.0 | 21.0 | |
| 136 Naphthalene | 128 | 13.127 | 13.127 | 0.000 | 99 | 131832 | 20.0 | 19.6 | |
| 137 1,2,3-Trichlorobenzene | 180 | 13.299 | 13.299 | 0.000 | 95 | 62945 | 20.0 | 21.1 | |
| S 138 1,2-Dichloroethene, Total | 100 | | | | 0 | | 40.0 | 45.5 | |
| S 139 1,3-Dichloropropene, Total | 100 | | | | 0 | | 40.0 | 42.4 | |
| S 140 Xylenes, Total | 100 | | | | 0 | | 40.0 | 45.3 | |
| S 142 Total BTEX | 1 | | | | 0 | | 100.0 | 112.2 | |

## QC Flag Legend

Review Flags

M - Manually Integrated

a - User Assigned ID

## Reagents:

| | | | | |
|---|---|---|---|---|
| GAS C SP_00372 | Amount Added: | 20.00 | Units: uL | |
| 8260 SP_00129 | Amount Added: | 20.00 | Units: uL | |
| ACROLEIN SP_00116 | Amount Added: | 4.00 | Units: uL | |
| 8FreonsSS_00023 | Amount Added: | 20.00 | Units: uL | |
| 8260ISNEW_00129 | Amount Added: | 1.00 | Units: uL | Run Reagent |
| 8260SURR250_00212 | Amount Added: | 1.00 | Units: uL | Run Reagent |

Report Date: 10-Sep-2020 10:37:26 Chrom Revision: 2.3 20-Aug-2020 13:57:12

Eurofins TestAmerica, Edison

Data File: \\chromfs\Edison\ChromData\CVOAMS13\20200904-116303.b\P79368.D

Injection Date: 04-Sep-2020 20:34:30 Instrument ID: CVOAMS13 Operator ID:

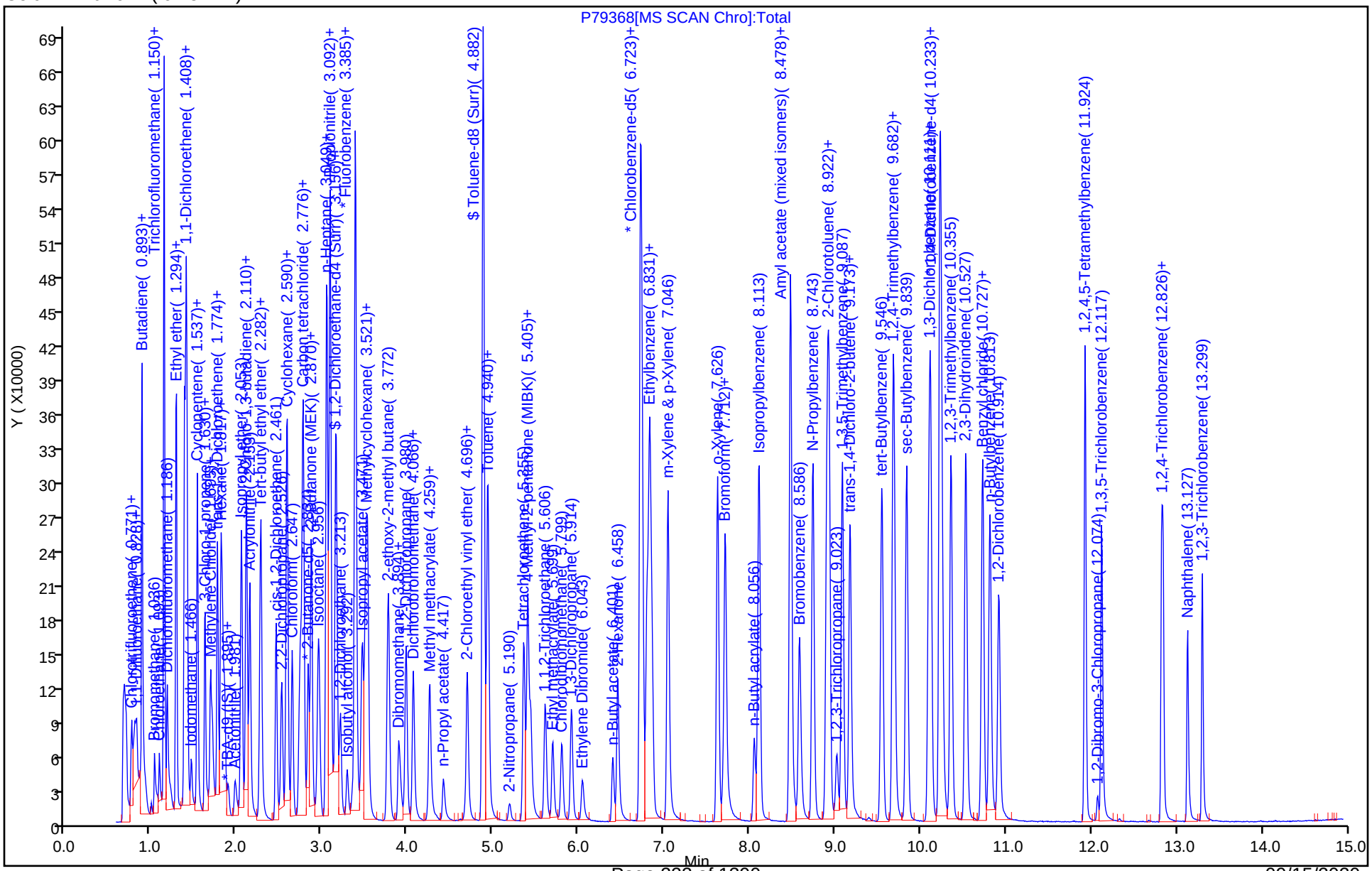
Lims ID: ICV Worklist Smp#: 18

Client ID:

Purge Vol: 5.000 mL Dil. Factor: 1.0000 ALS Bottle#: 18

Method: 8260W_13 Limit Group: VOA - 8260C Water and Solid

Column: Rtx-624 ( 0.25 mm)



Eurofins TestAmerica, Edison

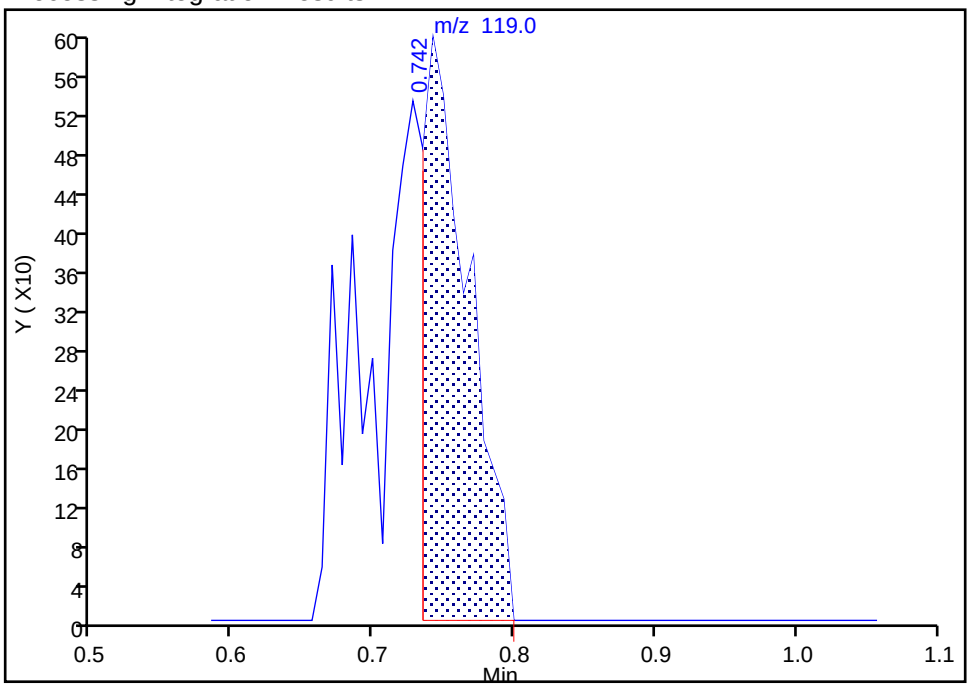
Data File: \\chromfs\Edison\ChromData\CVOAMS13\20200904-116303.b\P79368.D
Injection Date: 04-Sep-2020 20:34:30 Instrument ID: CVOAMS13
Lims ID: ICV
Client ID:
Operator ID: ALS Bottle#: 18 Worklist Smp#: 18
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: 8260W_13 Limit Group: VOA - 8260C Water and Solid
Column: Rtx-624 ( 0.25 mm) Detector MS SCAN

## 1 Monochloropentafluoroethane, CAS: 76-15-3

Signal: 1

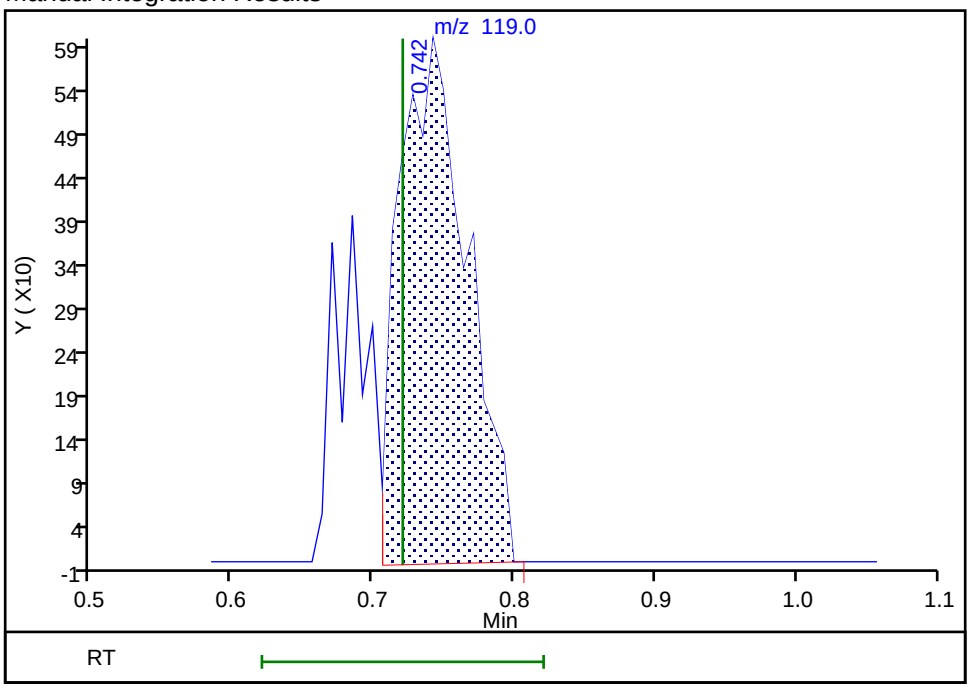
Processing Integration Results

RT: 0.74
Area: 1383
Amount: 6.028105
Amount Units: ug/l




Manual Integration Results

RT: 0.74
Area: 2025
Amount: 8.826402
Amount Units: ug/l




Reviewer: baronm, 06-Sep-2020 07:25:03
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Eurofins TestAmerica, Edison

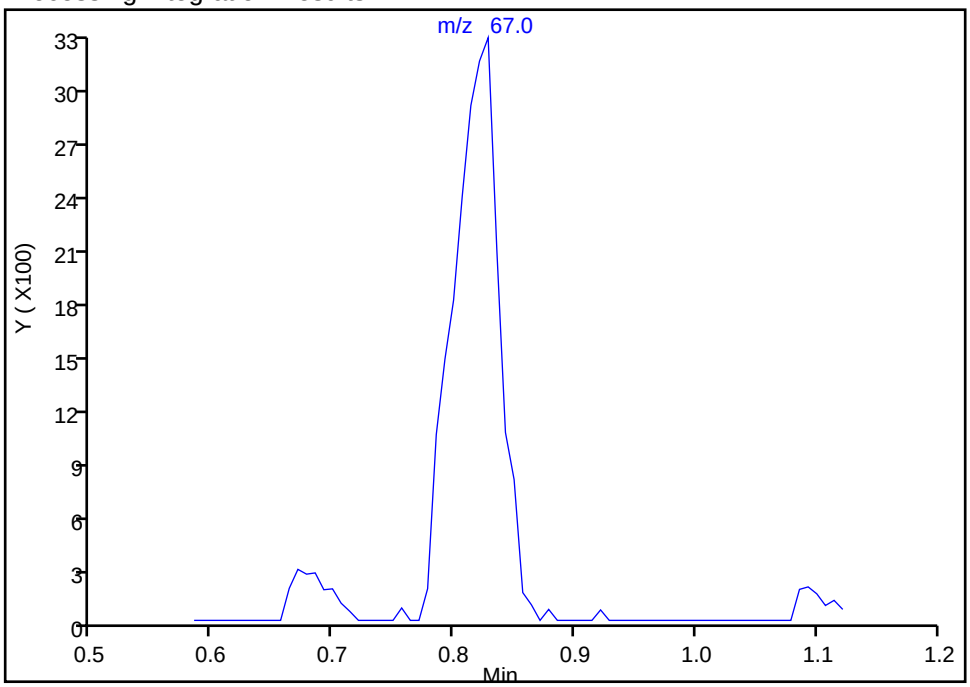
Data File: \\chromfs\Edison\ChromData\CVOAMS13\20200904-116303.b\P79368.D
Injection Date: 04-Sep-2020 20:34:30 Instrument ID: CVOAMS13
Lims ID: ICV
Client ID:
Operator ID: ALS Bottle#: 18 Worklist Smp#: 18
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: 8260W_13 Limit Group: VOA - 8260C Water and Solid
Column: Rtx-624 ( 0.25 mm) Detector MS SCAN

## 5 Chlorodifluoromethane, CAS: 75-45-6

Signal: 1

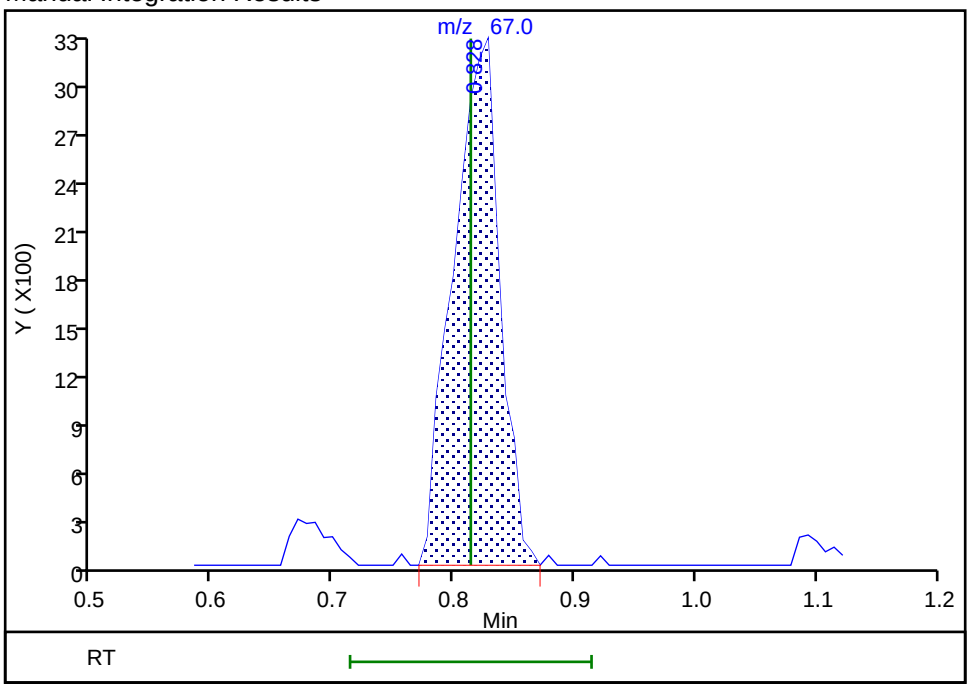
Not Detected
Expected RT: 0.81

Processing Integration Results




Manual Integration Results

RT: 0.83
Area: 8790
Amount: 18.296651
Amount Units: ug/l




Reviewer: baronm, 06-Sep-2020 07:25:13
Audit Action: Assigned Compound ID Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Edison

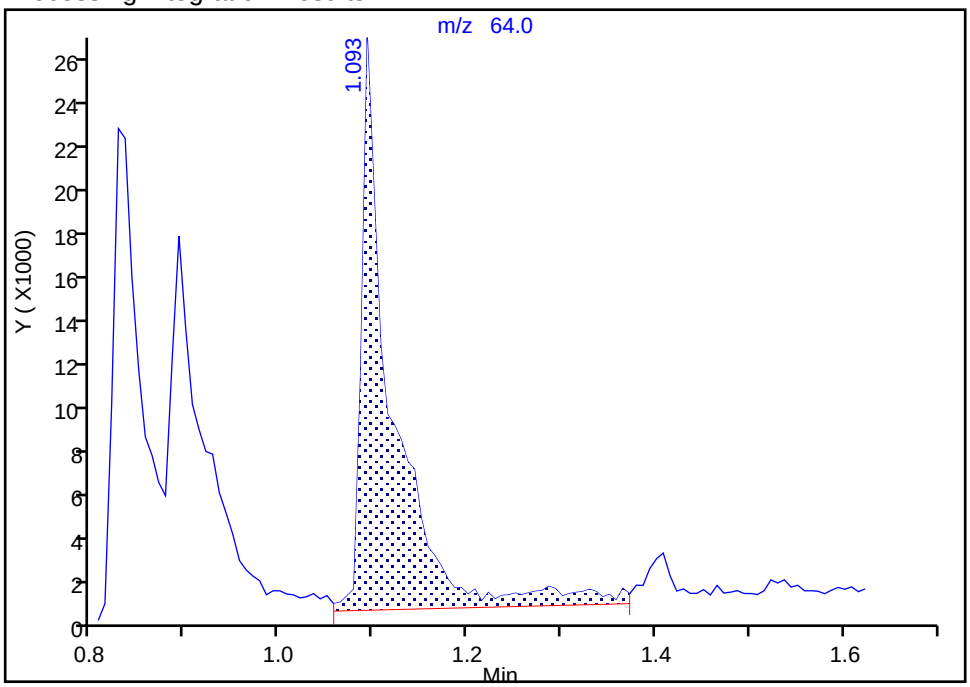
Data File: \\chromfs\Edison\ChromData\CVOAMS13\20200904-116303.b\P79368.D
Injection Date: 04-Sep-2020 20:34:30 Instrument ID: CVOAMS13
Lims ID: ICV
Client ID:
Operator ID: ALS Bottle#: 18 Worklist Smp#: 18
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: 8260W_13 Limit Group: VOA - 8260C Water and Solid
Column: Rtx-624 ( 0.25 mm) Detector MS SCAN

## 10 Chloroethane, CAS: 75-00-3

Signal: 1

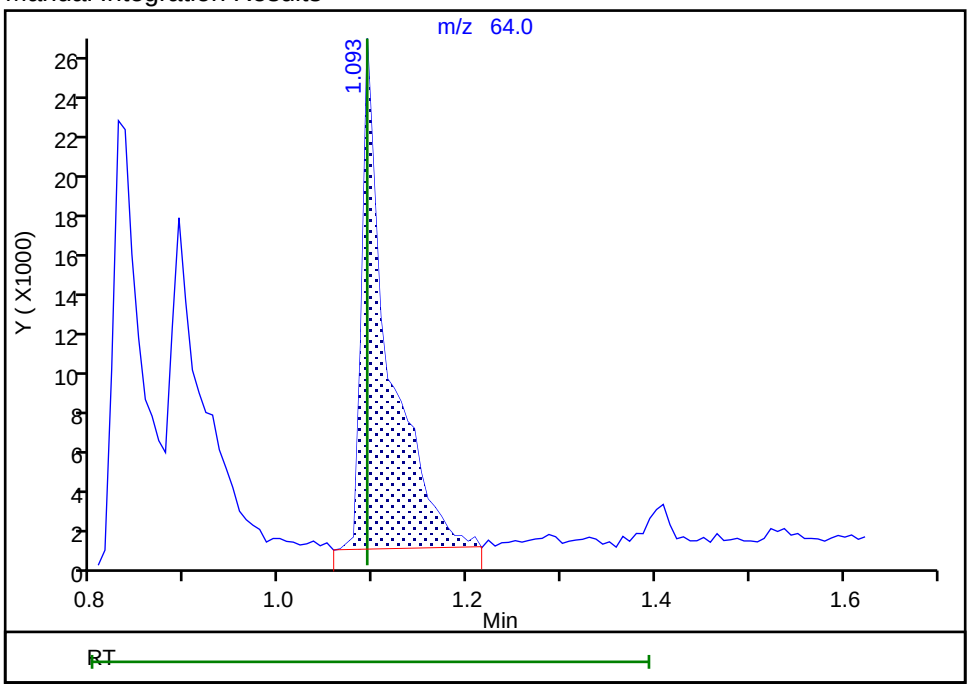
Processing Integration Results

RT: 1.09
Area: 56666
Amount: 29.733128
Amount Units: ug/l




Manual Integration Results

RT: 1.09
Area: 48243
Amount: 25.313509
Amount Units: ug/l




Reviewer: baronm, 06-Sep-2020 07:25:37
Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Edison

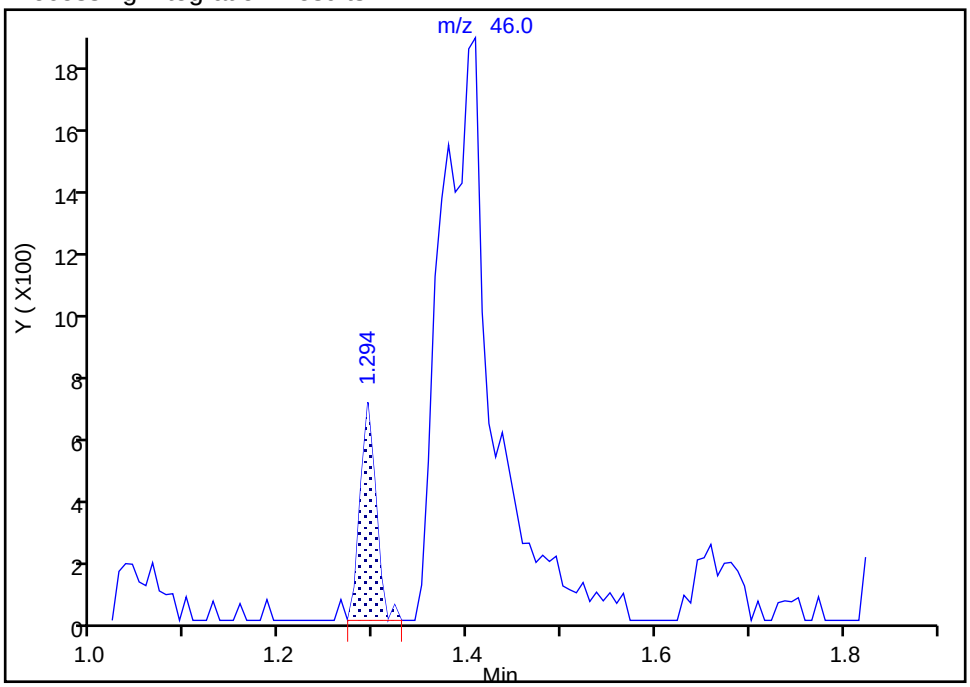
Data File: \\chromfs\Edison\ChromData\CVOAMS13\20200904-116303.b\P79368.D
Injection Date: 04-Sep-2020 20:34:30 Instrument ID: CVOAMS13
Lims ID: ICV
Client ID:
Operator ID: ALS Bottle#: 18 Worklist Smp#: 18
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: 8260W_13 Limit Group: VOA - 8260C Water and Solid
Column: Rtx-624 ( 0.25 mm) Detector MS SCAN

## 16 Ethanol, CAS: 64-17-5

Signal: 1

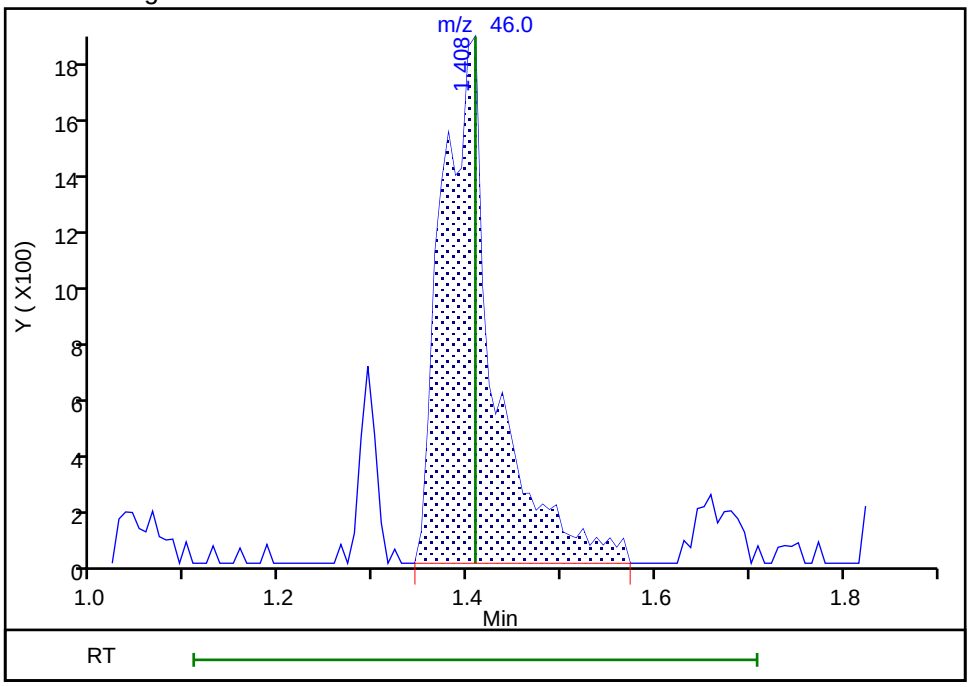
Processing Integration Results

RT: 1.29
Area: 822
Amount: 101.4361
Amount Units: ug/l




Manual Integration Results

RT: 1.41
Area: 7271
Amount: 897.2526
Amount Units: ug/l




Reviewer: baronm, 06-Sep-2020 07:25:52
Audit Action: Assigned Compound ID Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Edison

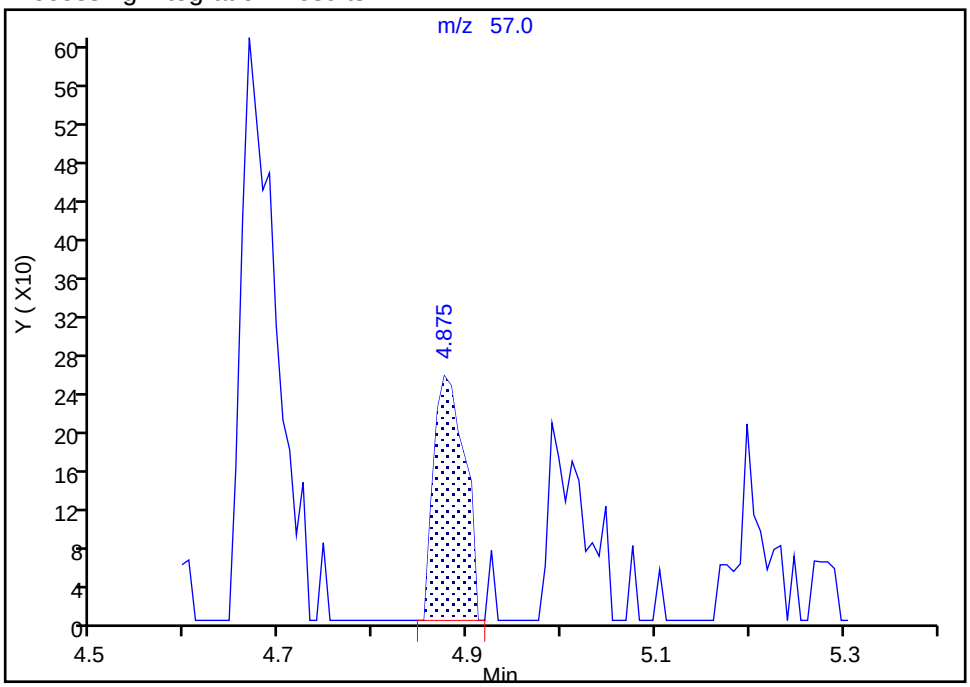
Data File: \\chromfs\Edison\ChromData\CVOAMS13\20200904-116303.b\P79368.D
Injection Date: 04-Sep-2020 20:34:30 Instrument ID: CVOAMS13
Lims ID: ICV
Client ID:
Operator ID: ALS Bottle#: 18 Worklist Smp#: 18
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: 8260W_13 Limit Group: VOA - 8260C Water and Solid
Column: Rtx-624 ( 0.25 mm) Detector MS SCAN

## 84 Epichlorohydrin, CAS: 106-89-8

Signal: 1

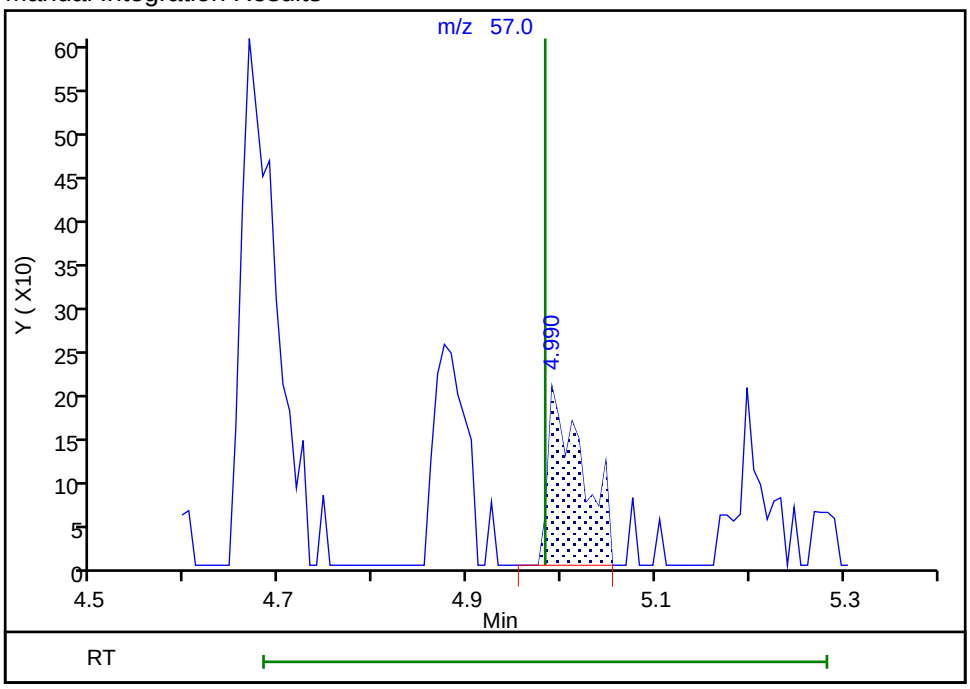
Processing Integration Results

RT: 4.88
Area: 583
Amount: 12.750933
Amount Units: ug/l




Manual Integration Results

RT: 4.99
Area: 519
Amount: 11.352370
Amount Units: ug/l




Reviewer: baronm, 06-Sep-2020 07:26:44
Audit Action: Assigned Compound ID Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Edison

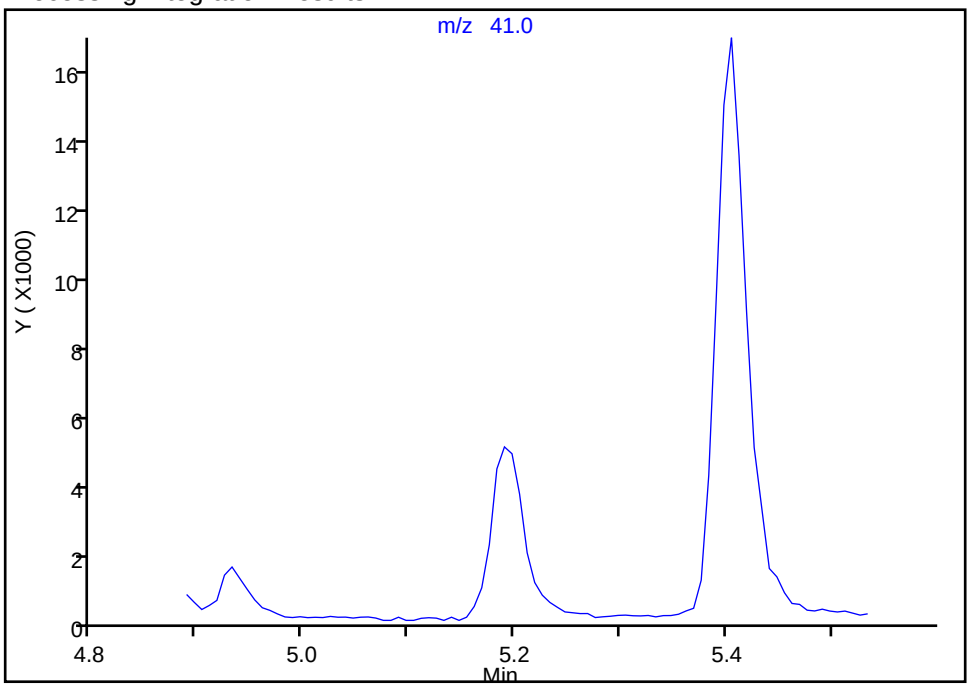
Data File: \\chromfs\Edison\ChromData\CVOAMS13\20200904-116303.b\P79368.D
Injection Date: 04-Sep-2020 20:34:30 Instrument ID: CVOAMS13
Lims ID: ICV
Client ID:
Operator ID: ALS Bottle#: 18 Worklist Smp#: 18
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: 8260W_13 Limit Group: VOA - 8260C Water and Solid
Column: Rtx-624 ( 0.25 mm) Detector MS SCAN

## 85 2-Nitropropane, CAS: 79-46-9

Signal: 1

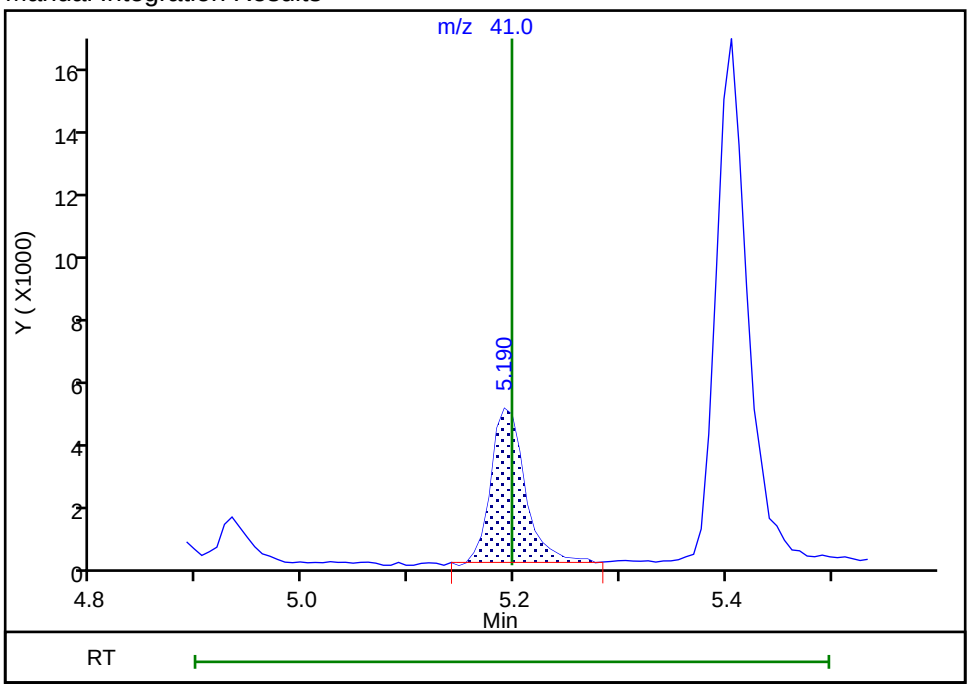
Not Detected
Expected RT: 5.20

Processing Integration Results




Manual Integration Results

RT: 5.19
Area: 10773
Amount: 38.589874
Amount Units: ug/l




Reviewer: baronm, 06-Sep-2020 07:26:52
Audit Action: Assigned Compound ID Audit Reason: Baseline

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Edison Job No.: 460-217547-1

SDG No.:

Lab Sample ID: CCVIS 460-722597/3 Calibration Date: 09/08/2020 19:49

Instrument ID: CVOAMS13 Calib Start Date: 09/04/2020 14:09

GC Column: Rtx-624 ID: 0.25(mm) Calib End Date: 09/04/2020 16:58

Lab File ID: P79481.D Conc. Units: ug/L Heated Purge: (Y/N) N

| ANALYTE | CURVE TYPE | AVE RRF | RRF | MIN RRF | CALC AMOUNT | SPIKE AMOUNT | %D | MAX %D |
|---|---|---|---|---|---|---|---|---|
| Dichlorodifluoromethane | Ave | 0.3371 | 0.3537 | 0.1000 | 21.0 | 20.0 | 4.9 | 20.0 |
| Butadiene | Ave | 0.3132 | 0.3087 | | 19.7 | 20.0 | -1.4 | 20.0 |
| Chloromethane | Ave | 0.4706 | 0.4510 | 0.1000 | 19.2 | 20.0 | -4.2 | 20.0 |
| Vinyl chloride | Ave | 0.3448 | 0.3437 | 0.1000 | 19.9 | 20.0 | -0.3 | 20.0 |
| Bromomethane | Ave | 2.558 | 3.962 | 0.1000 | 31.0 | 20.0 | 54.9* | 50.0 |
| Chloroethane | Ave | 0.1832 | 0.1929 | 0.1000 | 21.1 | 20.0 | 5.3 | 50.0 |
| Pentane | Ave | 4.304 | 6.175 | | 57.4 | 40.0 | 43.5* | 20.0 |
| Trichlorofluoromethane | Ave | 0.3147 | 0.3365 | 0.1000 | 21.4 | 20.0 | 7.0 | 20.0 |
| Dichlorofluoromethane | Ave | 0.4231 | 0.4276 | | 20.2 | 20.0 | 1.1 | 20.0 |
| 2-Methyl-1,3-butadiene | Ave | 0.3621 | 0.3855 | | 21.3 | 20.0 | 6.5 | 20.0 |
| Ethyl ether | Ave | 0.1689 | 0.1512 | | 17.9 | 20.0 | -10.5 | 20.0 |
| 1,1-Dichloroethene | Ave | 0.2250 | 0.2363 | 0.1000 | 21.0 | 20.0 | 5.0 | 20.0 |
| Carbon disulfide | Ave | 0.8803 | 0.8658 | 0.1000 | 19.7 | 20.0 | -1.6 | 50.0 |
| Ethanol | Ave | 0.0830 | 0.0800 | | 772 | 800 | -3.5 | 50.0 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | Ave | 0.2202 | 0.2423 | 0.1000 | 22.0 | 20.0 | 10.1 | 20.0 |
| Iodomethane | QuaF | | 0.1309 | | 7.35 | 20.0 | -63.2* | 20.0 |
| Cyclopentene | Ave | 0.6234 | 0.6754 | | 21.7 | 20.0 | 8.3 | 20.0 |
| Acrolein | Ave | 1.943 | 2.113 | | 43.5 | 40.0 | 8.7 | 50.0 |
| Allyl chloride | Ave | 0.1438 | 0.1473 | | 20.5 | 20.0 | 2.4 | 20.0 |
| Isopropyl alcohol | Ave | 0.8071 | 0.6846 | | 170 | 200 | -15.2 | 50.0 |
| Methylene Chloride | Ave | 0.2712 | 0.2749 | 0.1000 | 20.3 | 20.0 | 1.4 | 20.0 |
| Acetone | QuaF | | 0.8277 | 0.0500 | 102 | 100 | 1.8 | 50.0 |
| trans-1,2-Dichloroethene | Ave | 0.2574 | 0.2668 | 0.1000 | 20.7 | 20.0 | 3.6 | 20.0 |
| Methyl acetate | Ave | 9.744 | 11.85 | 0.1000 | 48.6 | 40.0 | 21.6* | 20.0 |
| Hexane | Ave | 0.0621 | 0.0710 | | 22.9 | 20.0 | 14.3 | 20.0 |
| Methyl tert-butyl ether | Ave | 0.5264 | 0.4908 | 0.1000 | 18.6 | 20.0 | -6.8 | 20.0 |
| 2-Methyl-2-propanol | QuaF | | 1.089 | | 199 | 200 | -0.5 | 50.0 |
| Acetonitrile | Ave | 2.000 | 1.961 | | 196 | 200 | -1.9 | 20.0 |
| Isopropyl ether | Ave | 0.8239 | 0.7919 | | 19.2 | 20.0 | -3.9 | 20.0 |
| 2-Chloro-1,3-butadiene | Ave | 0.2359 | 0.2519 | | 21.4 | 20.0 | 6.8 | 20.0 |
| 1,1-Dichloroethane | Ave | 0.4778 | 0.4787 | 0.2000 | 20.0 | 20.0 | 0.2 | 20.0 |
| Acrylonitrile | Ave | 0.0619 | 0.0558 | | 180 | 200 | -9.8 | 20.0 |
| Tert-butyl ethyl ether | Ave | 0.6791 | 0.6236 | | 18.4 | 20.0 | -8.2 | 20.0 |
| Vinyl acetate | Ave | 0.3676 | 0.3074 | | 33.5 | 40.0 | -16.4 | 20.0 |
| cis-1,2-Dichloroethene | Ave | 0.2848 | 0.2885 | 0.1000 | 20.3 | 20.0 | 1.3 | 20.0 |
| 2,2-Dichloropropane | Ave | 0.3235 | 0.3106 | | 19.2 | 20.0 | -4.0 | 20.0 |
| Cyclohexane | Ave | 0.4784 | 0.4973 | 0.1000 | 20.8 | 20.0 | 4.0 | 50.0 |
| Chlorobromomethane | Ave | 0.1245 | 0.1252 | | 20.1 | 20.0 | 0.6 | 20.0 |
| Chloroform | Ave | 0.4283 | 0.4344 | 0.2000 | 20.3 | 20.0 | 1.4 | 20.0 |
| Carbon tetrachloride | Ave | 0.2525 | 0.2843 | 0.1000 | 22.5 | 20.0 | 12.6 | 20.0 |

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Edison Job No.: 460-217547-1

SDG No.:

Lab Sample ID: CCVIS 460-722597/3 Calibration Date: 09/08/2020 19:49

Instrument ID: CVOAMS13 Calib Start Date: 09/04/2020 14:09

GC Column: Rtx-624 ID: 0.25(mm) Calib End Date: 09/04/2020 16:58

Lab File ID: P79481.D Conc. Units: ug/L Heated Purge: (Y/N) N

| ANALYTE | CURVE TYPE | AVE RRF | RRF | MIN RRF | CALC AMOUNT | SPIKE AMOUNT | %D | MAX %D |
|---|---|---|---|---|---|---|---|---|
| Ethyl acetate | Ave | 0.3240 | 0.4139 | | 51.1 | 40.0 | 27.7* | 20.0 |
| Methyl acrylate | Ave | 0.1349 | 0.1082 | | 16.0 | 20.0 | -19.8 | 20.0 |
| Tetrahydrofuran | Ave | 1.130 | 1.230 | | 43.5 | 40.0 | 8.8 | 20.0 |
| 1,1,1-Trichloroethane | Ave | 0.3442 | 0.3612 | 0.1000 | 21.0 | 20.0 | 4.9 | 20.0 |
| 2-Butanone (MEK) | Ave | 0.3653 | 0.4291 | 0.0500 | 117 | 100 | 17.5 | 50.0 |
| 1,1-Dichloropropene | QuaF | | 0.3787 | | 20.3 | 20.0 | 1.7 | 20.0 |
| 2,2,4-Trimethylpentane | Ave | 0.7550 | 0.8129 | | 21.5 | 20.0 | 7.7 | 20.0 |
| Benzene | Ave | 1.561 | 1.594 | 0.5000 | 20.4 | 20.0 | 2.1 | 20.0 |
| n-Heptane | Ave | 0.1853 | 0.1999 | | 21.6 | 20.0 | 7.8 | 20.0 |
| Propionitrile | Ave | 2.122 | 2.223 | | 210 | 200 | 4.8 | 20.0 |
| Methacrylonitrile | Ave | 0.0687 | 0.0598 | | 174 | 200 | -12.9 | 20.0 |
| Tert-amyl methyl ether | Ave | 0.5651 | 0.5121 | | 18.1 | 20.0 | -9.4 | 20.0 |
| 1,2-Dichloroethane | Ave | 0.2794 | 0.2546 | 0.1000 | 18.2 | 20.0 | -8.9 | 20.0 |
| Isobutyl alcohol | Ave | 0.5347 | 0.4763 | | 445 | 500 | -10.9 | 50.0 |
| Isopropyl acetate | Ave | 0.3173 | 0.2379 | | 15.0 | 20.0 | -25.0* | 20.0 |
| Methylcyclohexane | Ave | 0.4413 | 0.4759 | 0.1000 | 21.6 | 20.0 | 7.8 | 50.0 |
| Trichloroethene | Ave | 0.2699 | 0.2787 | 0.2000 | 20.7 | 20.0 | 3.3 | 20.0 |
| Dibromomethane | Ave | 0.1204 | 0.1103 | | 18.3 | 20.0 | -8.4 | 20.0 |
| n-Butanol | QuaF | | 0.2395 | | 382 | 500 | -23.5 | 50.0 |
| 1,2-Dichloropropane | Ave | 0.2703 | 0.2611 | 0.1000 | 19.3 | 20.0 | -3.4 | 20.0 |
| Dichlorobromomethane | Ave | 0.2965 | 0.2859 | 0.2000 | 19.3 | 20.0 | -3.6 | 20.0 |
| Ethyl acrylate | Qua2 | | 0.1466 | | 16.3 | 20.0 | -18.4 | 20.0 |
| Methyl methacrylate | Ave | 0.0402 | 0.0368 | | 36.6 | 40.0 | -8.6 | 20.0 |
| 1,4-Dioxane | Ave | 1.153 | 1.038 | | 360 | 400 | -10.0 | 50.0 |
| n-Propyl acetate | Ave | 0.2033 | 0.1647 | | 16.2 | 20.0 | -19.0 | 20.0 |
| 2-Chloroethyl vinyl ether | Ave | 0.0511 | 0.0299 | | 11.7 | 20.0 | -41.6* | 20.0 |
| cis-1,3-Dichloropropene | Ave | 0.5114 | 0.4931 | 0.2000 | 19.3 | 20.0 | -3.6 | 50.0 |
| Toluene | Ave | 1.586 | 1.636 | 0.4000 | 20.6 | 20.0 | 3.2 | 20.0 |
| Epichlorohydrin | QuaF | | 0.0685 | | 313 | 400 | -21.6* | 20.0 |
| 2-Nitropropane | Ave | 0.0268 | 0.0214 | | 31.9 | 40.0 | -20.2* | 20.0 |
| Tetrachloroethene | Ave | 0.3736 | 0.3986 | 0.2000 | 21.3 | 20.0 | 6.7 | 20.0 |
| 4-Methyl-2-pentanone (MIBK) | Ave | 2.586 | 3.000 | 0.0500 | 116 | 100 | 16.0 | 50.0 |
| trans-1,3-Dichloropropene | Ave | 0.4064 | 0.3892 | 0.1000 | 19.2 | 20.0 | -4.2 | 50.0 |
| 1,1,2-Trichloroethane | Ave | 0.2163 | 0.1999 | 0.1000 | 18.5 | 20.0 | -7.6 | 20.0 |
| Ethyl methacrylate | Ave | 0.2123 | 0.1912 | | 18.0 | 20.0 | -10.0 | 20.0 |
| Chlorodibromomethane | Ave | 0.2791 | 0.2629 | 0.1000 | 18.8 | 20.0 | -5.8 | 50.0 |
| 1,3-Dichloropropane | Ave | 0.4502 | 0.4274 | | 19.0 | 20.0 | -5.1 | 20.0 |
| Ethylene Dibromide | Ave | 0.2324 | 0.2232 | 0.1000 | 19.2 | 20.0 | -4.0 | 20.0 |
| n-Butyl acetate | Qua2 | | 0.2494 | | 16.5 | 20.0 | -17.5 | 20.0 |
| 2-Hexanone | Ave | 1.736 | 2.027 | 0.0500 | 117 | 100 | 16.8 | 50.0 |
| Chlorobenzene | Ave | 0.9935 | 1.018 | 0.5000 | 20.5 | 20.0 | 2.4 | 20.0 |

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Edison Job No.: 460-217547-1

SDG No.:

Lab Sample ID: CCVIS 460-722597/3 Calibration Date: 09/08/2020 19:49

Instrument ID: CVOAMS13 Calib Start Date: 09/04/2020 14:09

GC Column: Rtx-624 ID: 0.25(mm) Calib End Date: 09/04/2020 16:58

Lab File ID: P79481.D Conc. Units: ug/L Heated Purge: (Y/N) N

| ANALYTE | CURVE TYPE | AVE RRF | RRF | MIN RRF | CALC AMOUNT | SPIKE AMOUNT | %D | MAX %D |
|---|---|---|---|---|---|---|---|---|
| Ethylbenzene | Ave | 0.5568 | 0.5869 | 0.1000 | 21.1 | 20.0 | 5.4 | 20.0 |
| 1,1,1,2-Tetrachloroethane | Ave | 0.3075 | 0.3159 | | 20.5 | 20.0 | 2.7 | 20.0 |
| m-Xylene & p-Xylene | Ave | 0.6531 | 0.7112 | 0.1000 | 21.8 | 20.0 | 8.9 | 20.0 |
| o-Xylene | Ave | 0.6608 | 0.6904 | 0.3000 | 20.9 | 20.0 | 4.5 | 20.0 |
| Bromoform | Ave | 0.1577 | 0.1434 | 0.1000 | 18.2 | 20.0 | -9.1 | 20.0 |
| Styrene | Ave | 1.057 | 1.126 | 0.3000 | 21.3 | 20.0 | 6.5 | 20.0 |
| n-Butyl acrylate | Qua2 | | 0.1533 | | 17.4 | 20.0 | -13.1 | 20.0 |
| Isopropylbenzene | Ave | 1.714 | 1.817 | 0.1000 | 21.2 | 20.0 | 6.0 | 20.0 |
| Amyl acetate (mixed isomers) | Qua2 | | 0.6002 | | 16.7 | 20.0 | -16.5 | 20.0 |
| Bromobenzene | Ave | 0.7390 | 0.7762 | | 21.0 | 20.0 | 5.0 | 20.0 |
| N-Propylbenzene | Ave | 3.698 | 3.921 | | 21.2 | 20.0 | 6.0 | 20.0 |
| 1,1,2,2-Tetrachloroethane | Ave | 0.5126 | 0.4730 | 0.3000 | 18.5 | 20.0 | -7.7 | 20.0 |
| 2-Chlorotoluene | Ave | 2.548 | 2.590 | | 20.3 | 20.0 | 1.6 | 20.0 |
| 4-Ethyltoluene | Ave | 3.072 | 3.231 | | 21.0 | 20.0 | 5.2 | 20.0 |
| 1,2,3-Trichloropropane | Ave | 0.1356 | 0.1329 | | 19.6 | 20.0 | -2.0 | 20.0 |
| 1,3,5-Trimethylbenzene | Ave | 2.564 | 2.693 | | 21.0 | 20.0 | 5.0 | 20.0 |
| trans-1,4-Dichloro-2-butene | Ave | 0.0979 | 0.0970 | | 19.8 | 20.0 | -0.9 | 20.0 |
| 4-Chlorotoluene | Ave | 2.239 | 2.316 | | 20.7 | 20.0 | 3.4 | 20.0 |
| tert-Butylbenzene | Ave | 2.217 | 2.339 | | 21.1 | 20.0 | 5.5 | 20.0 |
| 1,2,4-Trimethylbenzene | Ave | 2.645 | 2.717 | | 20.5 | 20.0 | 2.7 | 20.0 |
| Butyl Methacrylate | Qua2 | | 0.6576 | | 18.5 | 20.0 | -7.4 | 20.0 |
| sec-Butylbenzene | Ave | 3.367 | 3.544 | | 21.1 | 20.0 | 5.3 | 20.0 |
| 1,3-Dichlorobenzene | Ave | 1.460 | 1.522 | 0.6000 | 20.9 | 20.0 | 4.3 | 20.0 |
| 4-Isopropyltoluene | Ave | 2.840 | 3.004 | | 21.2 | 20.0 | 5.8 | 20.0 |
| 1,4-Dichlorobenzene | Ave | 1.537 | 1.539 | 0.5000 | 20.0 | 20.0 | 0.1 | 20.0 |
| 1,2,3-Trimethylbenzene | Ave | 2.680 | 2.713 | | 20.2 | 20.0 | 1.2 | 20.0 |
| Indan | Ave | 2.600 | 2.557 | | 19.7 | 20.0 | -1.7 | 20.0 |
| Benzyl chloride | Qua2 | | 0.1442 | | 18.6 | 20.0 | -7.0 | 50.0 |
| p-Diethylbenzene | Ave | 1.431 | 1.491 | | 20.8 | 20.0 | 4.2 | 20.0 |
| n-Butylbenzene | Ave | 2.589 | 2.697 | | 20.8 | 20.0 | 4.2 | 20.0 |
| 1,2-Dichlorobenzene | Ave | 1.336 | 1.348 | 0.4000 | 20.2 | 20.0 | 0.9 | 20.0 |
| 1,2,4,5-Tetramethylbenzene | Ave | 2.492 | 2.489 | | 20.0 | 20.0 | -0.2 | 20.0 |
| 1,2-Dibromo-3-Chloropropane | Ave | 0.0853 | 0.0722 | 0.0500 | 16.9 | 20.0 | -15.3 | 50.0 |
| 1,3,5-Trichlorobenzene | Ave | 1.060 | 1.081 | | 20.4 | 20.0 | 2.0 | 20.0 |
| 1,2,4-Trichlorobenzene | Ave | 0.8895 | 0.7903 | 0.2000 | 17.8 | 20.0 | -11.1 | 20.0 |
| Hexachlorobutadiene | Ave | 0.3928 | 0.3674 | | 18.7 | 20.0 | -6.5 | 20.0 |
| Naphthalene | Ave | 1.641 | 1.200 | | 14.6 | 20.0 | -26.9 | 50.0 |
| 1,2,3-Trichlorobenzene | Ave | 0.7279 | 0.5368 | | 14.7 | 20.0 | -26.3* | 20.0 |
| Dibromofluoromethane (Surr) | Ave | 0.2153 | 0.2022 | | 47.0 | 50.0 | -6.1 | 20.0 |
| 1,2-Dichloroethane-d4 (Surr) | Ave | 0.2161 | 0.1957 | | 45.3 | 50.0 | -9.5 | 20.0 |
| Toluene-d8 (Surr) | Ave | 1.290 | 1.244 | | 48.2 | 50.0 | -3.5 | 20.0 |

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Edison  Job No.: 460-217547-1

SDG No.:

Lab Sample ID: CCVIS 460-722597/3  Calibration Date: 09/08/2020 19:49

Instrument ID: CVOAMS13  Calib Start Date: 09/04/2020 14:09

GC Column: Rtx-624  ID: 0.25(mm)  Calib End Date: 09/04/2020 16:58

Lab File ID: P79481.D  Conc. Units: ug/L  Heated Purge: (Y/N) N

| ANALYTE | CURVE TYPE | AVE RRF | RRF | MIN RRF | CALC AMOUNT | SPIKE AMOUNT | %D | MAX %D |
|---|---|---|---|---|---|---|---|---|
| 4-Bromofluorobenzene | Ave | 0.4048 | 0.3999 | | 49.4 | 50.0 | -1.2 | 20.0 |

Eurofins TestAmerica, Edison
Target Compound Quantitation Report

Data File: \\chromfs\Edison\ChromData\CVOAMS13\20200908-116444.b\P79481.D
Lims ID: CCVIS
Client ID:
Sample Type: CCVIS
Inject. Date: 08-Sep-2020 19:49:30 ALS Bottle#: 2 Worklist Smp#: 3
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: CCVIS
Misc. Info.: 460-0116444-003
Operator ID: Instrument ID: CVOAMS13
Sublist: chrom-8260W_13*sub61

Method: \\chromfs\Edison\ChromData\CVOAMS13\20200908-116444.b\8260W_13.m
Limit Group: VOA - 8260C Water and Solid
Last Update: 09-Sep-2020 14:24:18 Calib Date: 04-Sep-2020 16:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Edison\ChromData\CVOAMS13\20200904-116303.b\P79359.D

Column 1 : Rtx-624 ( 0.25 mm) Det: MS SCAN
Process Host: CTX1060

First Level Reviewer: yallabg Date: 08-Sep-2020 20:32:13

| Compound | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q | Response | Cal Amt ug/l | OnCol Amt ug/l | Flags |
|---|---|---|---|---|---|---|---|---|---|
| 3 Dichlorodifluoromethane | 85 | 0.764 | 0.764 | 0.000 | 99 | 81728 | 20.0 | 21.0 | |
| 6 Chloromethane | 50 | 0.886 | 0.886 | 0.000 | 82 | 104199 | 20.0 | 19.2 | |
| 8 Butadiene | 54 | 0.886 | 0.886 | 0.000 | 96 | 71331 | 20.0 | 19.7 | |
| 7 Vinyl chloride | 62 | 0.893 | 0.893 | 0.000 | 98 | 79407 | 20.0 | 19.9 | |
| 9 Bromomethane | 94 | 1.036 | 1.036 | 0.000 | 99 | 35712 | 20.0 | 31.0 | |
| 10 Chloroethane | 64 | 1.093 | 1.093 | 0.000 | 99 | 44573 | 20.0 | 21.1 | |
| 11 Pentane | 72 | 1.143 | 1.143 | 0.000 | 96 | 21643 | 40.0 | 57.4 | |
| 12 Trichlorofluoromethane | 101 | 1.143 | 1.143 | 0.000 | 60 | 77756 | 20.0 | 21.4 | |
| 13 Dichlorofluoromethane | 67 | 1.179 | 1.179 | 0.000 | 98 | 98794 | 20.0 | 20.2 | |
| 14 2-Methyl-1,3-butadiene | 67 | 1.287 | 1.287 | 0.000 | 97 | 89078 | 20.0 | 21.3 | |
| 15 Ethyl ether | 59 | 1.294 | 1.294 | 0.000 | 92 | 34923 | 20.0 | 17.9 | |
| 17 1,1-Dichloroethene | 96 | 1.387 | 1.387 | 0.000 | 97 | 54606 | 20.0 | 21.0 | |
| 16 Ethanol | 46 | 1.401 | 1.401 | 0.000 | 26 | 5610 | 800.0 | 771.6 | a |
| 19 Carbon disulfide | 76 | 1.401 | 1.401 | 0.000 | 99 | 200029 | 20.0 | 19.7 | |
| 20 1,1,2-Trichloro-1,2,2-trifluoroe | 101 | 1.408 | 1.408 | 0.000 | 93 | 55982 | 20.0 | 22.0 | |
| 22 Iodomethane | 142 | 1.466 | 1.466 | 0.000 | 97 | 30242 | 20.0 | 7.35 | |
| 23 Cyclopentene | 67 | 1.537 | 1.537 | 0.000 | 96 | 156046 | 20.0 | 21.7 | |
| 24 Acrolein | 56 | 1.559 | 1.559 | 0.000 | 89 | 7405 | 40.0 | 43.5 | |
| 25 3-Chloro-1-propene | 76 | 1.623 | 1.623 | 0.000 | 94 | 34032 | 20.0 | 20.5 | |
| 26 Isopropyl alcohol | 45 | 1.645 | 1.645 | 0.000 | 97 | 11998 | 200.0 | 169.6 | |
| 27 Methylene Chloride | 84 | 1.688 | 1.688 | 0.000 | 93 | 63514 | 20.0 | 20.3 | |
| 28 Acetone | 43 | 1.709 | 1.709 | 0.000 | 88 | 37306 | 100.0 | 101.8 | |
| 29 trans-1,2-Dichloroethene | 96 | 1.767 | 1.767 | 0.000 | 93 | 61644 | 20.0 | 20.7 | |
| 30 Methyl acetate | 43 | 1.781 | 1.781 | 0.000 | 99 | 41533 | 40.0 | 48.6 | |
| 31 Hexane | 86 | 1.817 | 1.817 | 0.000 | 91 | 16395 | 20.0 | 22.9 | |
| 32 Methyl tert-butyl ether | 73 | 1.831 | 1.831 | 0.000 | 94 | 113390 | 20.0 | 18.6 | |
| * 33 TBA-d9 (IS) | 65 | 1.845 | 1.845 | 0.000 | 100 | 87627 | 1000.0 | 1000.0 | |
| 34 2-Methyl-2-propanol | 59 | 1.888 | 1.888 | 0.000 | 99 | 19088 | 200.0 | 199.1 | |
| 35 Acetonitrile | 41 | 1.974 | 1.974 | 0.000 | 98 | 34375 | 200.0 | 196.2 | |
| 36 Isopropyl ether | 45 | 2.046 | 2.046 | 0.000 | 98 | 182962 | 20.0 | 19.2 | |

| Compound | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q | Response | Cal Amt ug/l | OnCol Amt ug/l | Flags |
|---|---|---|---|---|---|---|---|---|---|
| 37 2-Chloro-1,3-butadiene | 88 | 2.103 | 2.103 | 0.000 | 89 | 58206 | 20.0 | 21.4 | |
| 38 1,1-Dichloroethane | 63 | 2.118 | 2.118 | 0.000 | 100 | 110610 | 20.0 | 20.0 | |
| 39 Acrylonitrile | 53 | 2.146 | 2.146 | 0.000 | 95 | 129004 | 200.0 | 180.4 | |
| 40 Tert-butyl ethyl ether | 59 | 2.268 | 2.268 | 0.000 | 89 | 144079 | 20.0 | 18.4 | |
| 41 Vinyl acetate | 43 | 2.282 | 2.282 | 0.000 | 100 | 142046 | 40.0 | 33.5 | |
| 42 cis-1,2-Dichloroethene | 96 | 2.461 | 2.461 | 0.000 | 99 | 66649 | 20.0 | 20.3 | |
| 43 2,2-Dichloropropane | 77 | 2.526 | 2.526 | 0.000 | 97 | 71768 | 20.0 | 19.2 | |
| 44 Cyclohexane | 56 | 2.583 | 2.583 | 0.000 | 92 | 114907 | 20.0 | 20.8 | |
| 45 Chlorobromomethane | 128 | 2.590 | 2.590 | 0.000 | 89 | 28927 | 20.0 | 20.1 | |
| 46 Chloroform | 83 | 2.648 | 2.648 | 0.000 | 99 | 100357 | 20.0 | 20.3 | |
| 47 Carbon tetrachloride | 117 | 2.734 | 2.734 | 0.000 | 97 | 65695 | 20.0 | 22.5 | |
| 48 Ethyl acetate | 70 | 2.741 | 2.741 | 0.000 | 98 | 7462 | 40.0 | 51.1 | |
| 49 Methyl acrylate | 55 | 2.748 | 2.748 | 0.000 | 77 | 25005 | 20.0 | 16.0 | |
| 50 Tetrahydrofuran | 42 | 2.748 | 2.748 | 0.000 | 97 | 22168 | 40.0 | 43.5 | |
| $ 51 Dibromofluoromethane (Surr) | 113 | 2.769 | 2.769 | 0.000 | 98 | 116799 | 50.0 | 47.0 | |
| 52 1,1,1-Trichloroethane | 97 | 2.777 | 2.777 | 0.000 | 97 | 83458 | 20.0 | 21.0 | |
| * 53 2-Butanone-d5 | 46 | 2.827 | 2.827 | 0.000 | 99 | 112681 | 250.0 | 250.0 | |
| 54 2-Butanone (MEK) | 72 | 2.863 | 2.863 | 0.000 | 99 | 19342 | 100.0 | 117.5 | |
| 55 1,1-Dichloropropene | 75 | 2.870 | 2.870 | 0.000 | 97 | 87501 | 20.0 | 20.3 | |
| 56 Isooctane | 57 | 2.956 | 2.956 | 0.000 | 99 | 187804 | 20.0 | 21.5 | |
| 57 n-Heptane | 57 | 3.049 | 3.049 | 0.000 | 92 | 46178 | 20.0 | 21.6 | |
| 58 Benzene | 78 | 3.049 | 3.049 | 0.000 | 97 | 261149 | 20.0 | 20.4 | |
| 59 Propionitrile | 54 | 3.070 | 3.070 | 0.000 | 99 | 38964 | 200.0 | 209.6 | |
| 60 Methacrylonitrile | 67 | 3.085 | 3.085 | 0.000 | 90 | 138188 | 200.0 | 174.2 | |
| $ 61 1,2-Dichloroethane-d4 (Surr) | 65 | 3.156 | 3.156 | 0.000 | 0 | 113023 | 50.0 | 45.3 | |
| 62 Tert-amyl methyl ether | 73 | 3.156 | 3.156 | 0.000 | 97 | 118319 | 20.0 | 18.1 | |
| 63 1,2-Dichloroethane | 62 | 3.214 | 3.214 | 0.000 | 96 | 58835 | 20.0 | 18.2 | |
| 64 Isobutyl alcohol | 43 | 3.278 | 3.278 | 0.000 | 95 | 20868 | 500.0 | 445.4 | |
| 65 t-Amyl alcohol | 59 | 3.350 | 3.350 | 0.000 | 91 | 14613 | 200.0 | 192.2 | |
| * 66 Fluorobenzene | 96 | 3.385 | 3.385 | 0.000 | 99 | 577608 | 50.0 | 50.0 | |
| 67 Isopropyl acetate | 43 | 3.457 | 3.457 | 0.000 | 99 | 54959 | 20.0 | 15.0 | |
| 68 Methylcyclohexane | 83 | 3.507 | 3.507 | 0.000 | 96 | 109951 | 20.0 | 21.6 | |
| 69 Trichloroethene | 130 | 3.536 | 3.536 | 0.000 | 97 | 64402 | 20.0 | 20.7 | |
| 70 2-ethoxy-2-methyl butane | 59 | 3.765 | 3.765 | 0.000 | 94 | 117256 | 20.0 | 18.2 | |
| 71 Dibromomethane | 93 | 3.894 | 3.894 | 0.000 | 95 | 25477 | 20.0 | 18.3 | |
| 72 n-Butanol | 56 | 3.915 | 3.915 | 0.000 | 87 | 10495 | 500.0 | 382.3 | |
| 73 1,2-Dichloropropane | 63 | 3.980 | 3.980 | 0.000 | 93 | 60328 | 20.0 | 19.3 | |
| 75 Dichlorobromomethane | 83 | 4.059 | 4.059 | 0.000 | 99 | 66048 | 20.0 | 19.3 | |
| 74 Ethyl acrylate | 55 | 4.066 | 4.066 | 0.000 | 98 | 33875 | 20.0 | 16.3 | |
| * 76 1,4-Dioxane-d8 | 96 | 4.238 | 4.238 | 0.000 | 85 | 13500 | 1000.0 | 1000.0 | |
| 77 Methyl methacrylate | 100 | 4.252 | 4.252 | 0.000 | 91 | 16995 | 40.0 | 36.6 | |
| 78 1,4-Dioxane | 88 | 4.266 | 4.266 | 0.000 | 48 | 5603 | 400.0 | 359.9 | |
| 79 n-Propyl acetate | 43 | 4.417 | 4.417 | 0.000 | 98 | 38049 | 20.0 | 16.2 | M |
| 80 2-Chloroethyl vinyl ether | 63 | 4.675 | 4.675 | 0.000 | 95 | 6917 | 20.0 | 11.7 | |
| 81 cis-1,3-Dichloropropene | 75 | 4.696 | 4.696 | 0.000 | 92 | 80775 | 20.0 | 19.3 | |
| $ 82 Toluene-d8 (Surr) | 98 | 4.883 | 4.883 | 0.000 | 99 | 509598 | 50.0 | 48.2 | |
| 83 Toluene | 91 | 4.940 | 4.940 | 0.000 | 93 | 268075 | 20.0 | 20.6 | |
| 84 Epichlorohydrin | 57 | 4.983 | 4.983 | 0.000 | 93 | 12352 | 400.0 | 313.4 | |
| 85 2-Nitropropane | 41 | 5.191 | 5.191 | 0.000 | 97 | 9897 | 40.0 | 31.9 | |
| 86 Tetrachloroethene | 166 | 5.355 | 5.355 | 0.000 | 98 | 65292 | 20.0 | 21.3 | |
| 87 4-Methyl-2-pentanone (MIBK) | 43 | 5.405 | 5.405 | 0.000 | 95 | 135219 | 100.0 | 116.0 | |
| 88 trans-1,3-Dichloropropene | 75 | 5.441 | 5.441 | 0.000 | 95 | 63759 | 20.0 | 19.2 | |

| Compound | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q | Response | Cal Amt ug/l | OnCol Amt ug/l | Flags |
|---|---|---|---|---|---|---|---|---|---|
| 89 1,1,2-Trichloroethane | 83 | 5.606 | 5.606 | 0.000 | 96 | 32740 | 20.0 | 18.5 | |
| 90 Ethyl methacrylate | 69 | 5.692 | 5.692 | 0.000 | 89 | 44169 | 20.0 | 18.0 | |
| 91 Chlorodibromomethane | 129 | 5.799 | 5.799 | 0.000 | 98 | 43075 | 20.0 | 18.8 | |
| 92 1,3-Dichloropropane | 76 | 5.914 | 5.914 | 0.000 | 94 | 70009 | 20.0 | 19.0 | |
| 93 Ethylene Dibromide | 107 | 6.043 | 6.043 | 0.000 | 99 | 36558 | 20.0 | 19.2 | |
| 94 n-Butyl acetate | 43 | 6.401 | 6.401 | 0.000 | 98 | 40853 | 20.0 | 16.5 | |
| 95 2-Hexanone | 43 | 6.458 | 6.458 | 0.000 | 95 | 91382 | 100.0 | 116.8 | |
| * 96 Chlorobenzene-d5 | 117 | 6.723 | 6.723 | 0.000 | 86 | 409547 | 50.0 | 50.0 | |
| 97 Chlorobenzene | 112 | 6.745 | 6.745 | 0.000 | 95 | 166711 | 20.0 | 20.5 | |
| 98 Ethylbenzene | 106 | 6.831 | 6.831 | 0.000 | 98 | 96146 | 20.0 | 21.1 | |
| 99 1,1,1,2-Tetrachloroethane | 131 | 6.852 | 6.852 | 0.000 | 95 | 51745 | 20.0 | 20.5 | |
| 100 m-Xylene & p-Xylene | 106 | 7.046 | 7.046 | 0.000 | 0 | 116513 | 20.0 | 21.8 | |
| 101 o-Xylene | 106 | 7.626 | 7.626 | 0.000 | 95 | 113107 | 20.0 | 20.9 | |
| 102 Bromoform | 173 | 7.690 | 7.690 | 0.000 | 96 | 23490 | 20.0 | 18.2 | |
| 103 Styrene | 104 | 7.719 | 7.719 | 0.000 | 97 | 184523 | 20.0 | 21.3 | |
| 104 n-Butyl acrylate | 73 | 8.049 | 8.049 | 0.000 | 97 | 25106 | 20.0 | 17.4 | |
| 105 Isopropylbenzene | 105 | 8.113 | 8.113 | 0.000 | 95 | 297612 | 20.0 | 21.2 | |
| 106 Amyl acetate (mixed isomers) | 43 | 8.471 | 8.471 | 0.000 | 90 | 54473 | 20.0 | 16.7 | |
| $ 107 4-Bromofluorobenzene | 174 | 8.478 | 8.478 | 0.000 | 93 | 163788 | 50.0 | 49.4 | |
| 108 Bromobenzene | 156 | 8.586 | 8.586 | 0.000 | 96 | 70438 | 20.0 | 21.0 | |
| 109 N-Propylbenzene | 91 | 8.743 | 8.743 | 0.000 | 100 | 355831 | 20.0 | 21.2 | |
| 110 1,1,2,2-Tetrachloroethane | 83 | 8.894 | 8.894 | 0.000 | 98 | 42929 | 20.0 | 18.5 | |
| 111 2-Chlorotoluene | 91 | 8.908 | 8.908 | 0.000 | 97 | 235061 | 20.0 | 20.3 | |
| 112 4-Ethyltoluene | 105 | 8.930 | 8.930 | 0.000 | 98 | 293183 | 20.0 | 21.0 | |
| 113 1,2,3-Trichloropropane | 110 | 9.023 | 9.023 | 0.000 | 98 | 12062 | 20.0 | 19.6 | |
| 114 1,3,5-Trimethylbenzene | 105 | 9.087 | 9.087 | 0.000 | 94 | 244354 | 20.0 | 21.0 | |
| 115 trans-1,4-Dichloro-2-butene | 53 | 9.166 | 9.166 | 0.000 | 39 | 8807 | 20.0 | 19.8 | a |
| 116 4-Chlorotoluene | 91 | 9.173 | 9.173 | 0.000 | 97 | 210163 | 20.0 | 20.7 | |
| 117 tert-Butylbenzene | 119 | 9.546 | 9.546 | 0.000 | 95 | 212267 | 20.0 | 21.1 | |
| 118 1,2,4-Trimethylbenzene | 105 | 9.682 | 9.682 | 0.000 | 97 | 246578 | 20.0 | 20.5 | |
| 119 Butyl Methacrylate | 87 | 9.696 | 9.696 | 0.000 | 91 | 59675 | 20.0 | 18.5 | |
| 120 sec-Butylbenzene | 105 | 9.839 | 9.839 | 0.000 | 99 | 321607 | 20.0 | 21.1 | |
| 121 1,3-Dichlorobenzene | 146 | 10.097 | 10.097 | 0.000 | 97 | 138148 | 20.0 | 20.9 | |
| 122 4-Isopropyltoluene | 119 | 10.119 | 10.119 | 0.000 | 98 | 272661 | 20.0 | 21.2 | |
| * 123 1,4-Dichlorobenzene-d4 | 152 | 10.226 | 10.226 | 0.000 | 94 | 226879 | 50.0 | 50.0 | |
| 124 1,4-Dichlorobenzene | 146 | 10.248 | 10.248 | 0.000 | 97 | 139665 | 20.0 | 20.0 | |
| 125 1,2,3-Trimethylbenzene | 105 | 10.355 | 10.355 | 0.000 | 98 | 246177 | 20.0 | 20.2 | |
| 126 2,3-Dihydroindene | 117 | 10.527 | 10.527 | 0.000 | 95 | 232049 | 20.0 | 19.7 | |
| 127 Benzyl chloride | 126 | 10.713 | 10.713 | 0.000 | 97 | 13084 | 20.0 | 18.6 | |
| 128 p-Diethylbenzene | 119 | 10.728 | 10.728 | 0.000 | 94 | 135344 | 20.0 | 20.8 | |
| 129 n-Butylbenzene | 91 | 10.814 | 10.814 | 0.000 | 98 | 244781 | 20.0 | 20.8 | |
| 130 1,2-Dichlorobenzene | 146 | 10.914 | 10.914 | 0.000 | 97 | 122362 | 20.0 | 20.2 | |
| 131 1,2,4,5-Tetramethylbenzene | 119 | 11.924 | 11.924 | 0.000 | 98 | 225836 | 20.0 | 20.0 | |
| 132 1,2-Dibromo-3-Chloropropane | 157 | 12.074 | 12.074 | 0.000 | 94 | 6555 | 20.0 | 16.9 | |
| 133 1,3,5-Trichlorobenzene | 180 | 12.117 | 12.117 | 0.000 | 97 | 98092 | 20.0 | 20.4 | |
| 134 1,2,4-Trichlorobenzene | 180 | 12.819 | 12.819 | 0.000 | 94 | 71720 | 20.0 | 17.8 | |
| 135 Hexachlorobutadiene | 225 | 12.841 | 12.841 | 0.000 | 97 | 33341 | 20.0 | 18.7 | |
| 136 Naphthalene | 128 | 13.127 | 13.127 | 0.000 | 100 | 108885 | 20.0 | 14.6 | |
| 137 1,2,3-Trichlorobenzene | 180 | 13.299 | 13.299 | 0.000 | 95 | 48716 | 20.0 | 14.7 | |
| S 138 1,2-Dichloroethene, Total | 100 | | | | 0 | | 40.0 | 41.0 | |
| S 139 1,3-Dichloropropene, Total | 100 | | | | 0 | | 40.0 | 38.4 | |
| S 140 Xylenes, Total | 100 | | | | 0 | | 40.0 | 42.7 | |

| Compound | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q | Response | Cal Amt ug/l | OnCol Amt ug/l | Flags |
|---|---|---|---|---|---|---|---|---|---|
| S 142 Total BTEX | 1 | | | | 0 | | 100.0 | 104.8 | |

## QC Flag Legend

Review Flags

M - Manually Integrated

a - User Assigned ID

## Reagents:

| | | | | |
|---|---|---|---|---|
| ACROLEIN W_00112 | Amount Added: | 4.00 | Units: uL | |
| 8260MIX1COMB_00125 | Amount Added: | 20.00 | Units: uL | |
| GASES Li_00384 | Amount Added: | 20.00 | Units: uL | |
| 8260ISNEW_00129 | Amount Added: | 1.00 | Units: uL | Run Reagent |
| 8260SURR250_00212 | Amount Added: | 1.00 | Units: uL | Run Reagent |

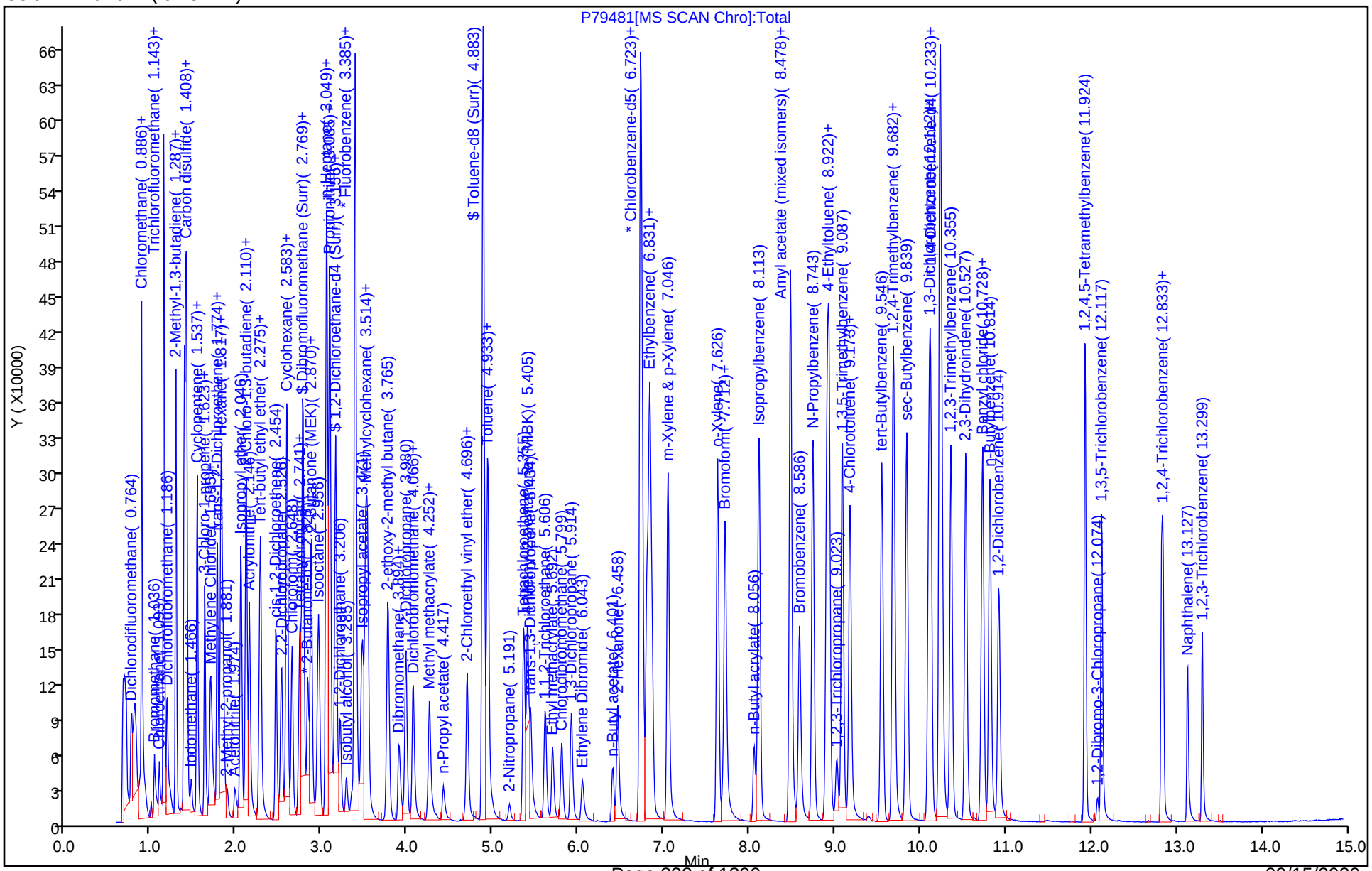
Report Date: 09-Sep-2020 14:24:21 Chrom Revision: 2.3 20-Aug-2020 13:57:12

Eurofins TestAmerica, Edison

Data File: \\chromfs\Edison\ChromData\CVOAMS13\20200908-116444.b\P79481.D

| | | | | | |
|---|---|---|---|---|---|
| Injection Date: | 08-Sep-2020 19:49:30 | Instrument ID: | CVOAMS13 | Operator ID: | |
| Lims ID: | CCVIS | | | Worklist Smp#: | 3 |
| Client ID: | | | | | |
| Purge Vol: | 5.000 mL | Dil. Factor: | 1.0000 | ALS Bottle#: | 2 |
| Method: | 8260W_13 | Limit Group: | VOA - 8260C Water and Solid | | |

Column: Rtx-624 ( 0.25 mm)



Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Edison

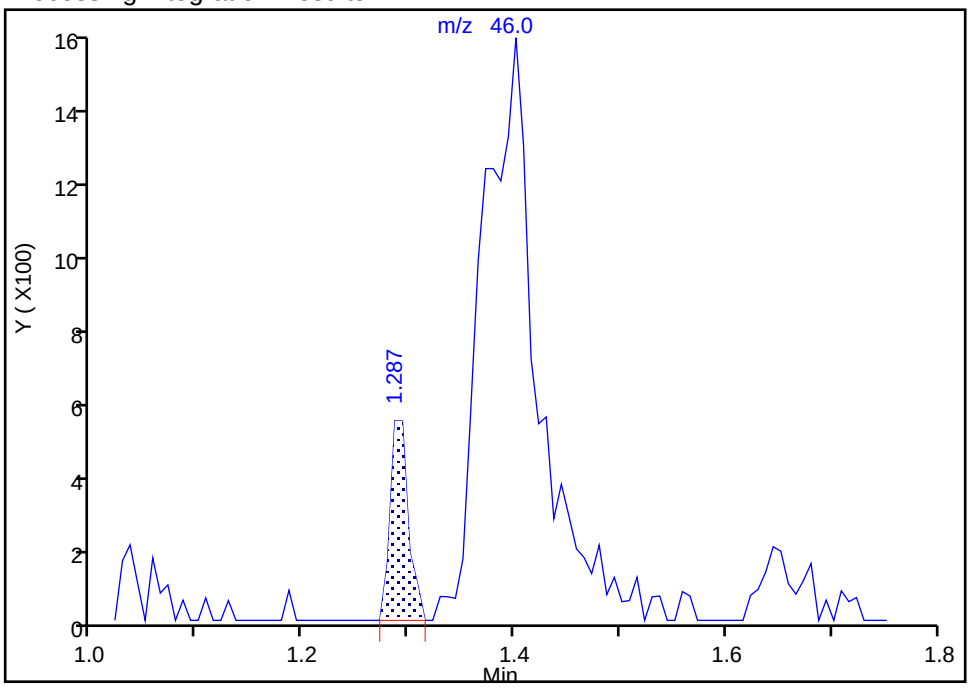
Data File: \\chromfs\Edison\ChromData\CVOAMS13\20200908-116444.b\P79481.D
Injection Date: 08-Sep-2020 19:49:30 Instrument ID: CVOAMS13
Lims ID: CCVIS
Client ID:
Operator ID: ALS Bottle#: 2 Worklist Smp#: 3
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: 8260W_13 Limit Group: VOA - 8260C Water and Solid
Column: Rtx-624 ( 0.25 mm) Detector MS SCAN

## 16 Ethanol, CAS: 64-17-5

Signal: 1

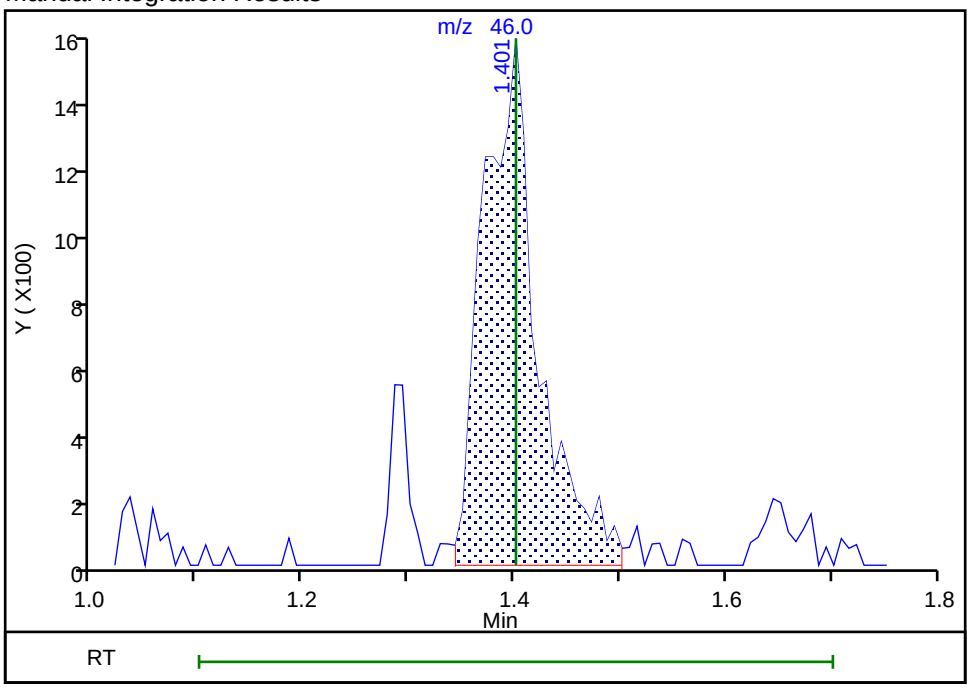
Processing Integration Results

RT: 1.29
Area: 644
Amount: 88.579689
Amount Units: ug/l




Manual Integration Results

RT: 1.40
Area: 5610
Amount: 771.6336
Amount Units: ug/l




Reviewer: sgroa, 08-Sep-2020 19:11:14
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Eurofins TestAmerica, Edison

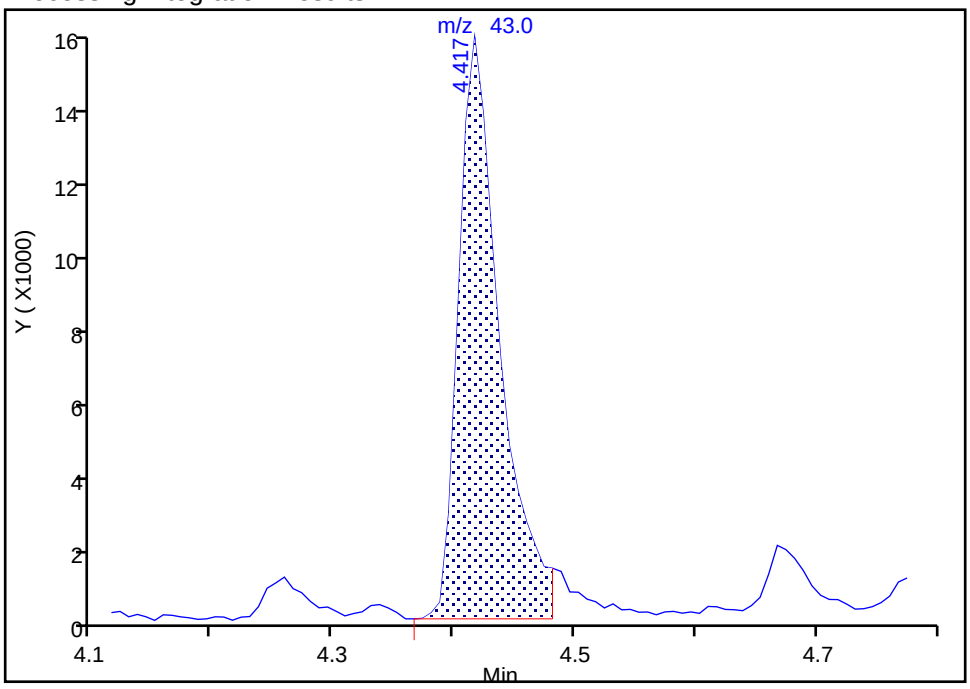
Data File: \\chromfs\Edison\ChromData\CVOAMS13\20200908-116444.b\P79481.D
Injection Date: 08-Sep-2020 19:49:30 Instrument ID: CVOAMS13
Lims ID: CCVIS
Client ID:
Operator ID: ALS Bottle#: 2 Worklist Smp#: 3
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: 8260W_13 Limit Group: VOA - 8260C Water and Solid
Column: Rtx-624 ( 0.25 mm) Detector MS SCAN

## 79 n-Propyl acetate, CAS: 109-60-4

Signal: 1

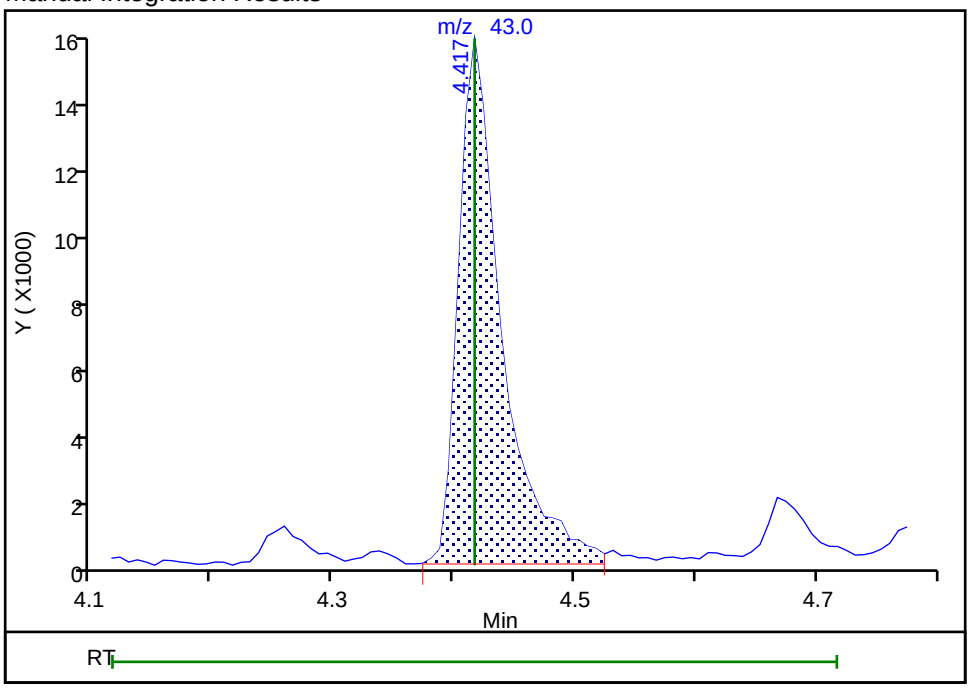
Processing Integration Results

RT: 4.42
Area: 36328
Amount: 15.470138
Amount Units: ug/l




Manual Integration Results

RT: 4.42
Area: 38049
Amount: 16.203019
Amount Units: ug/l




Reviewer: xuyvo, 09-Sep-2020 14:23:55
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Edison

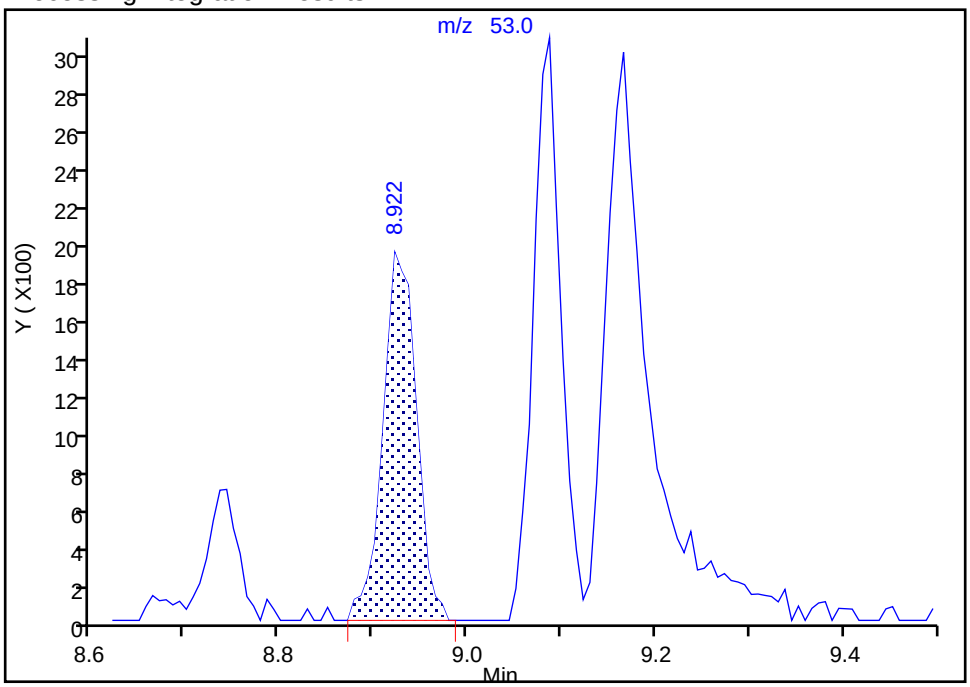
Data File: \\chromfs\Edison\ChromData\CVOAMS13\20200908-116444.b\P79481.D
Injection Date: 08-Sep-2020 19:49:30 Instrument ID: CVOAMS13
Lims ID: CCVIS
Client ID:
Operator ID: ALS Bottle#: 2 Worklist Smp#: 3
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: 8260W_13 Limit Group: VOA - 8260C Water and Solid
Column: Rtx-624 ( 0.25 mm) Detector MS SCAN

## 115 trans-1,4-Dichloro-2-butene, CAS: 110-57-6

Signal: 1

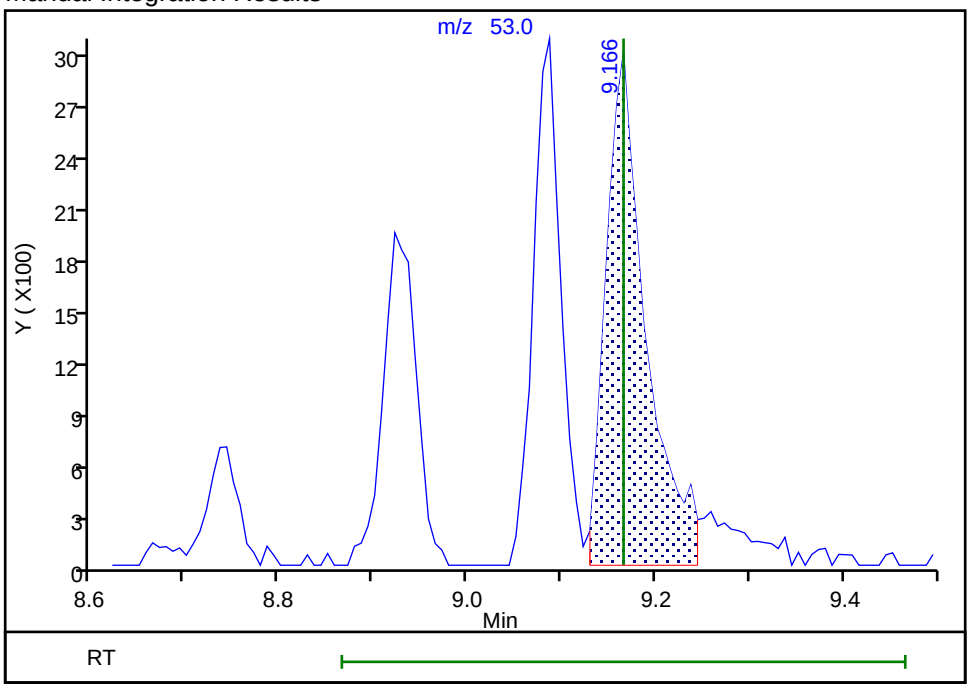
Processing Integration Results

RT: 8.92
Area: 4774
Amount: 10.746492
Amount Units: ug/l




Manual Integration Results

RT: 9.17
Area: 8807
Amount: 19.824959
Amount Units: ug/l




Reviewer: sgroa, 08-Sep-2020 19:14:46
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Edison Job No.: 460-217547-1

SDG No.:

Lab Sample ID: CCVIS 460-722709/3 Calibration Date: 09/09/2020 08:33

Instrument ID: CVOAMS13 Calib Start Date: 09/04/2020 14:09

GC Column: Rtx-624 ID: 0.25(mm) Calib End Date: 09/04/2020 16:58

Lab File ID: P79506.D Conc. Units: ug/L Heated Purge: (Y/N) N

| ANALYTE | CURVE TYPE | AVE RRF | RRF | MIN RRF | CALC AMOUNT | SPIKE AMOUNT | %D | MAX %D |
|---|---|---|---|---|---|---|---|---|
| Dichlorodifluoromethane | Ave | 0.3371 | 0.3620 | 0.1000 | 21.5 | 20.0 | 7.4 | 20.0 |
| Butadiene | Ave | 0.3132 | 0.2952 | | 18.8 | 20.0 | -5.8 | 20.0 |
| Chloromethane | Ave | 0.4706 | 0.4340 | 0.1000 | 18.4 | 20.0 | -7.8 | 20.0 |
| Vinyl chloride | Ave | 0.3448 | 0.3287 | 0.1000 | 19.1 | 20.0 | -4.7 | 20.0 |
| Bromomethane | Ave | 2.558 | 3.260 | 0.1000 | 25.5 | 20.0 | 27.4 | 50.0 |
| Chloroethane | Ave | 0.1832 | 0.1791 | 0.1000 | 19.6 | 20.0 | -2.2 | 50.0 |
| Pentane | Ave | 4.304 | 5.370 | | 49.9 | 40.0 | 24.8* | 20.0 |
| Trichlorofluoromethane | Ave | 0.3147 | 0.3548 | 0.1000 | 22.6 | 20.0 | 12.8 | 20.0 |
| Dichlorofluoromethane | Ave | 0.4231 | 0.4116 | | 19.5 | 20.0 | -2.7 | 20.0 |
| 2-Methyl-1,3-butadiene | Ave | 0.3621 | 0.3720 | | 20.5 | 20.0 | 2.7 | 20.0 |
| Ethyl ether | Ave | 0.1689 | 0.1500 | | 17.8 | 20.0 | -11.2 | 20.0 |
| 1,1-Dichloroethene | Ave | 0.2250 | 0.2331 | 0.1000 | 20.7 | 20.0 | 3.6 | 20.0 |
| Carbon disulfide | Ave | 0.8803 | 0.8519 | 0.1000 | 19.4 | 20.0 | -3.2 | 50.0 |
| Ethanol | Ave | 0.0830 | 0.0754 | | 727 | 800 | -9.1 | 50.0 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | Ave | 0.2202 | 0.2420 | 0.1000 | 22.0 | 20.0 | 9.9 | 20.0 |
| Iodomethane | QuaF | | 0.1608 | | 9.03 | 20.0 | -54.8* | 20.0 |
| Cyclopentene | Ave | 0.6234 | 0.6755 | | 21.7 | 20.0 | 8.3 | 20.0 |
| Acrolein | Ave | 1.943 | 1.549 | | 31.9 | 40.0 | -20.3 | 50.0 |
| Allyl chloride | Ave | 0.1438 | 0.1412 | | 19.6 | 20.0 | -1.8 | 20.0 |
| Isopropyl alcohol | Ave | 0.8071 | 0.6961 | | 172 | 200 | -13.8 | 50.0 |
| Methylene Chloride | Ave | 0.2712 | 0.2679 | 0.1000 | 19.8 | 20.0 | -1.2 | 20.0 |
| Acetone | QuaF | | 0.8383 | 0.0500 | 103 | 100 | 3.1 | 50.0 |
| trans-1,2-Dichloroethene | Ave | 0.2574 | 0.2634 | 0.1000 | 20.5 | 20.0 | 2.3 | 20.0 |
| Methyl acetate | Ave | 9.744 | 10.27 | 0.1000 | 42.2 | 40.0 | 5.4 | 20.0 |
| Hexane | Ave | 0.0621 | 0.0744 | | 24.0 | 20.0 | 19.9 | 20.0 |
| Methyl tert-butyl ether | Ave | 0.5264 | 0.5083 | 0.1000 | 19.3 | 20.0 | -3.4 | 20.0 |
| 2-Methyl-2-propanol | QuaF | | 1.080 | | 197 | 200 | -1.3 | 50.0 |
| Acetonitrile | Ave | 2.000 | 1.609 | | 161 | 200 | -19.5 | 20.0 |
| Isopropyl ether | Ave | 0.8239 | 0.7782 | | 18.9 | 20.0 | -5.5 | 20.0 |
| 2-Chloro-1,3-butadiene | Ave | 0.2359 | 0.2478 | | 21.0 | 20.0 | 5.1 | 20.0 |
| 1,1-Dichloroethane | Ave | 0.4778 | 0.4633 | 0.2000 | 19.4 | 20.0 | -3.0 | 20.0 |
| Acrylonitrile | Ave | 0.0619 | 0.0578 | | 187 | 200 | -6.6 | 20.0 |
| Tert-butyl ethyl ether | Ave | 0.6791 | 0.6334 | | 18.7 | 20.0 | -6.7 | 20.0 |
| Vinyl acetate | Ave | 0.3676 | 0.3054 | | 33.2 | 40.0 | -16.9 | 20.0 |
| cis-1,2-Dichloroethene | Ave | 0.2848 | 0.2812 | 0.1000 | 19.8 | 20.0 | -1.2 | 20.0 |
| 2,2-Dichloropropane | Ave | 0.3235 | 0.3080 | | 19.0 | 20.0 | -4.8 | 20.0 |
| Cyclohexane | Ave | 0.4784 | 0.4932 | 0.1000 | 20.6 | 20.0 | 3.1 | 50.0 |
| Chlorobromomethane | Ave | 0.1245 | 0.1240 | | 19.9 | 20.0 | -0.4 | 20.0 |
| Chloroform | Ave | 0.4283 | 0.4165 | 0.2000 | 19.4 | 20.0 | -2.8 | 20.0 |
| Carbon tetrachloride | Ave | 0.2525 | 0.2835 | 0.1000 | 22.5 | 20.0 | 12.3 | 20.0 |

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Edison Job No.: 460-217547-1

SDG No.:

Lab Sample ID: CCVIS 460-722709/3 Calibration Date: 09/09/2020 08:33

Instrument ID: CVOAMS13 Calib Start Date: 09/04/2020 14:09

GC Column: Rtx-624 ID: 0.25(mm) Calib End Date: 09/04/2020 16:58

Lab File ID: P79506.D Conc. Units: ug/L Heated Purge: (Y/N) N

| ANALYTE | CURVE TYPE | AVE RRF | RRF | MIN RRF | CALC AMOUNT | SPIKE AMOUNT | %D | MAX %D |
|---|---|---|---|---|---|---|---|---|
| Ethyl acetate | Ave | 0.3240 | 0.4026 | | 49.7 | 40.0 | 24.3* | 20.0 |
| Methyl acrylate | Ave | 0.1349 | 0.1150 | | 17.1 | 20.0 | -14.7 | 20.0 |
| Tetrahydrofuran | Ave | 1.130 | 1.274 | | 45.1 | 40.0 | 12.7 | 20.0 |
| 1,1,1-Trichloroethane | Ave | 0.3442 | 0.3529 | 0.1000 | 20.5 | 20.0 | 2.5 | 20.0 |
| 2-Butanone (MEK) | Ave | 0.3653 | 0.4374 | 0.0500 | 120 | 100 | 19.7 | 50.0 |
| 1,1-Dichloropropene | QuaF | | 0.3786 | | 20.3 | 20.0 | 1.7 | 20.0 |
| 2,2,4-Trimethylpentane | Ave | 0.7550 | 0.8178 | | 21.7 | 20.0 | 8.3 | 20.0 |
| n-Heptane | Ave | 0.1853 | 0.2021 | | 21.8 | 20.0 | 9.1 | 20.0 |
| Benzene | Ave | 1.561 | 1.536 | 0.5000 | 19.7 | 20.0 | -1.6 | 20.0 |
| Propionitrile | Ave | 2.122 | 2.080 | | 196 | 200 | -2.0 | 20.0 |
| Methacrylonitrile | Ave | 0.0687 | 0.0644 | | 188 | 200 | -6.2 | 20.0 |
| Tert-amyl methyl ether | Ave | 0.5651 | 0.5484 | | 19.4 | 20.0 | -3.0 | 20.0 |
| 1,2-Dichloroethane | Ave | 0.2794 | 0.2558 | 0.1000 | 18.3 | 20.0 | -8.4 | 20.0 |
| Isobutyl alcohol | Ave | 0.5347 | 0.4720 | | 441 | 500 | -11.7 | 50.0 |
| Isopropyl acetate | Ave | 0.3173 | 0.2560 | | 16.1 | 20.0 | -19.3 | 20.0 |
| Methylcyclohexane | Ave | 0.4413 | 0.4827 | 0.1000 | 21.9 | 20.0 | 9.4 | 50.0 |
| Trichloroethene | Ave | 0.2699 | 0.2798 | 0.2000 | 20.7 | 20.0 | 3.6 | 20.0 |
| Dibromomethane | Ave | 0.1204 | 0.1140 | | 18.9 | 20.0 | -5.3 | 20.0 |
| n-Butanol | QuaF | | 0.2513 | | 381 | 500 | -23.8 | 50.0 |
| 1,2-Dichloropropane | Ave | 0.2703 | 0.2581 | 0.1000 | 19.1 | 20.0 | -4.5 | 20.0 |
| Dichlorobromomethane | Ave | 0.2965 | 0.2831 | 0.2000 | 19.1 | 20.0 | -4.5 | 20.0 |
| Ethyl acrylate | Qua2 | | 0.1599 | | 17.7 | 20.0 | -11.3 | 20.0 |
| Methyl methacrylate | Ave | 0.0402 | 0.0405 | | 40.3 | 40.0 | 0.8 | 20.0 |
| 1,4-Dioxane | Ave | 1.153 | 1.085 | | 376 | 400 | -6.0 | 50.0 |
| n-Propyl acetate | Ave | 0.2033 | 0.1744 | | 17.2 | 20.0 | -14.2 | 20.0 |
| 2-Chloroethyl vinyl ether | Ave | 0.0511 | 0.0269 | | 10.5 | 20.0 | -47.5* | 20.0 |
| cis-1,3-Dichloropropene | Ave | 0.5114 | 0.4745 | 0.2000 | 18.6 | 20.0 | -7.2 | 50.0 |
| Toluene | Ave | 1.586 | 1.610 | 0.4000 | 20.3 | 20.0 | 1.5 | 20.0 |
| Epichlorohydrin | QuaF | | 0.0770 | | 351 | 400 | -12.2 | 20.0 |
| 2-Nitropropane | Ave | 0.0268 | 0.0226 | | 33.8 | 40.0 | -15.6 | 20.0 |
| Tetrachloroethene | Ave | 0.3736 | 0.4032 | 0.2000 | 21.6 | 20.0 | 7.9 | 20.0 |
| 4-Methyl-2-pentanone (MIBK) | Ave | 2.586 | 3.156 | 0.0500 | 122 | 100 | 22.0 | 50.0 |
| trans-1,3-Dichloropropene | Ave | 0.4064 | 0.3938 | 0.1000 | 19.4 | 20.0 | -3.1 | 50.0 |
| 1,1,2-Trichloroethane | Ave | 0.2163 | 0.2031 | 0.1000 | 18.8 | 20.0 | -6.1 | 20.0 |
| Ethyl methacrylate | Ave | 0.2123 | 0.2003 | | 18.9 | 20.0 | -5.7 | 20.0 |
| Chlorodibromomethane | Ave | 0.2791 | 0.2634 | 0.1000 | 18.9 | 20.0 | -5.6 | 50.0 |
| 1,3-Dichloropropane | Ave | 0.4502 | 0.4290 | | 19.1 | 20.0 | -4.7 | 20.0 |
| Ethylene Dibromide | Ave | 0.2324 | 0.2248 | 0.1000 | 19.4 | 20.0 | -3.2 | 20.0 |
| n-Butyl acetate | Qua2 | | 0.2551 | | 16.9 | 20.0 | -15.7 | 20.0 |
| 2-Hexanone | Ave | 1.736 | 2.142 | 0.0500 | 123 | 100 | 23.4 | 50.0 |
| Chlorobenzene | Ave | 0.9935 | 1.003 | 0.5000 | 20.2 | 20.0 | 1.0 | 20.0 |

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Edison Job No.: 460-217547-1

SDG No.:

Lab Sample ID: CCVIS 460-722709/3 Calibration Date: 09/09/2020 08:33

Instrument ID: CVOAMS13 Calib Start Date: 09/04/2020 14:09

GC Column: Rtx-624 ID: 0.25(mm) Calib End Date: 09/04/2020 16:58

Lab File ID: P79506.D Conc. Units: ug/L Heated Purge: (Y/N) N

| ANALYTE | CURVE TYPE | AVE RRF | RRF | MIN RRF | CALC AMOUNT | SPIKE AMOUNT | %D | MAX %D |
|---|---|---|---|---|---|---|---|---|
| Ethylbenzene | Ave | 0.5568 | 0.5790 | 0.1000 | 20.8 | 20.0 | 4.0 | 20.0 |
| 1,1,1,2-Tetrachloroethane | Ave | 0.3075 | 0.3121 | | 20.3 | 20.0 | 1.5 | 20.0 |
| m-Xylene & p-Xylene | Ave | 0.6531 | 0.7044 | 0.1000 | 21.6 | 20.0 | 7.9 | 20.0 |
| o-Xylene | Ave | 0.6608 | 0.6688 | 0.3000 | 20.2 | 20.0 | 1.2 | 20.0 |
| Bromoform | Ave | 0.1577 | 0.1485 | 0.1000 | 18.8 | 20.0 | -5.8 | 20.0 |
| Styrene | Ave | 1.057 | 1.080 | 0.3000 | 20.4 | 20.0 | 2.1 | 20.0 |
| n-Butyl acrylate | Qua2 | | 0.1590 | | 18.0 | 20.0 | -9.9 | 20.0 |
| Isopropylbenzene | Ave | 1.714 | 1.781 | 0.1000 | 20.8 | 20.0 | 3.9 | 20.0 |
| Amyl acetate (mixed isomers) | Qua2 | | 0.6248 | | 17.4 | 20.0 | -13.1 | 20.0 |
| Bromobenzene | Ave | 0.7390 | 0.7622 | | 20.6 | 20.0 | 3.1 | 20.0 |
| N-Propylbenzene | Ave | 3.698 | 3.791 | | 20.5 | 20.0 | 2.5 | 20.0 |
| 1,1,2,2-Tetrachloroethane | Ave | 0.5126 | 0.4836 | 0.3000 | 18.9 | 20.0 | -5.7 | 20.0 |
| 2-Chlorotoluene | Ave | 2.548 | 2.465 | | 19.3 | 20.0 | -3.3 | 20.0 |
| 4-Ethyltoluene | Ave | 3.072 | 3.158 | | 20.6 | 20.0 | 2.8 | 20.0 |
| 1,2,3-Trichloropropane | Ave | 0.1356 | 0.1324 | | 19.5 | 20.0 | -2.3 | 20.0 |
| 1,3,5-Trimethylbenzene | Ave | 2.564 | 2.613 | | 20.4 | 20.0 | 1.9 | 20.0 |
| trans-1,4-Dichloro-2-butene | Ave | 0.0979 | 0.1015 | | 20.7 | 20.0 | 3.7 | 20.0 |
| 4-Chlorotoluene | Ave | 2.239 | 2.233 | | 19.9 | 20.0 | -0.3 | 20.0 |
| tert-Butylbenzene | Ave | 2.217 | 2.297 | | 20.7 | 20.0 | 3.6 | 20.0 |
| 1,2,4-Trimethylbenzene | Ave | 2.645 | 2.677 | | 20.2 | 20.0 | 1.2 | 20.0 |
| Butyl Methacrylate | Qua2 | | 0.6558 | | 18.5 | 20.0 | -7.7 | 20.0 |
| sec-Butylbenzene | Ave | 3.367 | 3.461 | | 20.6 | 20.0 | 2.8 | 20.0 |
| 1,3-Dichlorobenzene | Ave | 1.460 | 1.502 | 0.6000 | 20.6 | 20.0 | 2.9 | 20.0 |
| 4-Isopropyltoluene | Ave | 2.840 | 2.957 | | 20.8 | 20.0 | 4.1 | 20.0 |
| 1,4-Dichlorobenzene | Ave | 1.537 | 1.552 | 0.5000 | 20.2 | 20.0 | 1.0 | 20.0 |
| 1,2,3-Trimethylbenzene | Ave | 2.680 | 2.642 | | 19.7 | 20.0 | -1.4 | 20.0 |
| Indan | Ave | 2.600 | 2.575 | | 19.8 | 20.0 | -1.0 | 20.0 |
| Benzyl chloride | Qua2 | | 0.1519 | | 19.6 | 20.0 | -2.2 | 50.0 |
| p-Diethylbenzene | Ave | 1.431 | 1.450 | | 20.3 | 20.0 | 1.3 | 20.0 |
| n-Butylbenzene | Ave | 2.589 | 2.679 | | 20.7 | 20.0 | 3.5 | 20.0 |
| 1,2-Dichlorobenzene | Ave | 1.336 | 1.347 | 0.4000 | 20.2 | 20.0 | 0.8 | 20.0 |
| 1,2,4,5-Tetramethylbenzene | Ave | 2.492 | 2.498 | | 20.0 | 20.0 | 0.2 | 20.0 |
| 1,2-Dibromo-3-Chloropropane | Ave | 0.0853 | 0.0765 | 0.0500 | 17.9 | 20.0 | -10.3 | 50.0 |
| 1,3,5-Trichlorobenzene | Ave | 1.060 | 1.097 | | 20.7 | 20.0 | 3.5 | 20.0 |
| 1,2,4-Trichlorobenzene | Ave | 0.8895 | 0.8311 | 0.2000 | 18.7 | 20.0 | -6.6 | 20.0 |
| Hexachlorobutadiene | Ave | 0.3928 | 0.3770 | | 19.2 | 20.0 | -4.0 | 20.0 |
| Naphthalene | Ave | 1.641 | 1.315 | | 16.0 | 20.0 | -19.9 | 50.0 |
| 1,2,3-Trichlorobenzene | Ave | 0.7279 | 0.5904 | | 16.2 | 20.0 | -18.9 | 20.0 |
| Dibromofluoromethane (Surr) | Ave | 0.2153 | 0.2007 | | 46.6 | 50.0 | -6.8 | 20.0 |
| 1,2-Dichloroethane-d4 (Surr) | Ave | 0.2161 | 0.1976 | | 45.7 | 50.0 | -8.6 | 20.0 |
| Toluene-d8 (Surr) | Ave | 1.290 | 1.236 | | 47.9 | 50.0 | -4.1 | 20.0 |

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Edison  Job No.: 460-217547-1

SDG No.:

Lab Sample ID: CCVIS 460-722709/3  Calibration Date: 09/09/2020 08:33

Instrument ID: CVOAMS13  Calib Start Date: 09/04/2020 14:09

GC Column: Rtx-624  ID: 0.25(mm)  Calib End Date: 09/04/2020 16:58

Lab File ID: P79506.D  Conc. Units: ug/L  Heated Purge: (Y/N) N

| ANALYTE | CURVE TYPE | AVE RRF | RRF | MIN RRF | CALC AMOUNT | SPIKE AMOUNT | %D | MAX %D |
|---|---|---|---|---|---|---|---|---|
| 4-Bromofluorobenzene | Ave | 0.4048 | 0.4120 | | 50.9 | 50.0 | 1.8 | 20.0 |

Eurofins TestAmerica, Edison
Target Compound Quantitation Report

Data File: \\chromfs\Edison\ChromData\CVOAMS13\20200909-116470.b\P79506.D
Lims ID: CCVIS
Client ID:
Sample Type: CCVIS
Inject. Date: 09-Sep-2020 08:33:30 ALS Bottle#: 2 Worklist Smp#: 3
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: CCVIS
Misc. Info.: 460-0116470-003
Operator ID: Instrument ID: CVOAMS13
Sublist: chrom-8260W_13*sub61

Method: \\chromfs\Edison\ChromData\CVOAMS13\20200909-116470.b\8260W_13.m
Limit Group: VOA - 8260C Water and Solid
Last Update: 10-Sep-2020 11:14:21 Calib Date: 04-Sep-2020 16:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Edison\ChromData\CVOAMS13\20200904-116303.b\P79359.D

Column 1 : Rtx-624 ( 0.25 mm) Det: MS SCAN
Process Host: CTX1019

First Level Reviewer: moroneyc Date: 09-Sep-2020 08:07:34

| Compound | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q | Response | Cal Amt ug/l | OnCol Amt ug/l | Flags |
|---|---|---|---|---|---|---|---|---|---|
| 3 Dichlorodifluoromethane | 85 | 0.764 | 0.764 | 0.000 | 99 | 82139 | 20.0 | 21.5 | |
| 6 Chloromethane | 50 | 0.885 | 0.885 | 0.000 | 93 | 98479 | 20.0 | 18.4 | |
| 8 Butadiene | 54 | 0.885 | 0.885 | 0.000 | 96 | 66983 | 20.0 | 18.8 | |
| 7 Vinyl chloride | 62 | 0.893 | 0.893 | 0.000 | 97 | 74590 | 20.0 | 19.1 | |
| 9 Bromomethane | 94 | 1.036 | 1.036 | 0.000 | 99 | 29771 | 20.0 | 25.5 | |
| 10 Chloroethane | 64 | 1.093 | 1.093 | 0.000 | 99 | 40640 | 20.0 | 19.6 | |
| 11 Pentane | 72 | 1.143 | 1.143 | 0.000 | 96 | 21648 | 40.0 | 49.9 | |
| 12 Trichlorofluoromethane | 101 | 1.150 | 1.150 | 0.000 | 61 | 80505 | 20.0 | 22.6 | |
| 13 Dichlorofluoromethane | 67 | 1.179 | 1.179 | 0.000 | 99 | 93396 | 20.0 | 19.5 | |
| 14 2-Methyl-1,3-butadiene | 67 | 1.287 | 1.287 | 0.000 | 96 | 84407 | 20.0 | 20.5 | |
| 15 Ethyl ether | 59 | 1.294 | 1.294 | 0.000 | 96 | 34044 | 20.0 | 17.8 | |
| 17 1,1-Dichloroethene | 96 | 1.387 | 1.387 | 0.000 | 97 | 52896 | 20.0 | 20.7 | |
| 16 Ethanol | 46 | 1.401 | 1.401 | 0.000 | 24 | 6083 | 800.0 | 727.5 | |
| 19 Carbon disulfide | 76 | 1.401 | 1.401 | 0.000 | 99 | 193293 | 20.0 | 19.4 | |
| 20 1,1,2-Trichloro-1,2,2-trifluoroe | 101 | 1.408 | 1.408 | 0.000 | 88 | 54913 | 20.0 | 22.0 | |
| 22 Iodomethane | 142 | 1.466 | 1.466 | 0.000 | 97 | 36483 | 20.0 | 9.03 | |
| 23 Cyclopentene | 67 | 1.537 | 1.537 | 0.000 | 96 | 153264 | 20.0 | 21.7 | |
| 24 Acrolein | 56 | 1.559 | 1.559 | 0.000 | 90 | 6243 | 40.0 | 31.9 | |
| 25 3-Chloro-1-propene | 76 | 1.623 | 1.623 | 0.000 | 94 | 32049 | 20.0 | 19.6 | |
| 26 Isopropyl alcohol | 45 | 1.652 | 1.652 | 0.000 | 97 | 14032 | 200.0 | 172.5 | |
| 27 Methylene Chloride | 84 | 1.688 | 1.688 | 0.000 | 91 | 60786 | 20.0 | 19.8 | |
| 28 Acetone | 43 | 1.709 | 1.709 | 0.000 | 87 | 38273 | 100.0 | 103.1 | |
| 29 trans-1,2-Dichloroethene | 96 | 1.774 | 1.774 | 0.000 | 94 | 59777 | 20.0 | 20.5 | |
| 30 Methyl acetate | 43 | 1.781 | 1.781 | 0.000 | 99 | 41414 | 40.0 | 42.2 | |
| 31 Hexane | 86 | 1.817 | 1.817 | 0.000 | 91 | 16893 | 20.0 | 24.0 | |
| 32 Methyl tert-butyl ether | 73 | 1.831 | 1.831 | 0.000 | 96 | 115327 | 20.0 | 19.3 | |
| * 33 TBA-d9 (IS) | 65 | 1.845 | 1.845 | 0.000 | 100 | 100786 | 1000.0 | 1000.0 | |
| 34 2-Methyl-2-propanol | 59 | 1.888 | 1.888 | 0.000 | 99 | 21764 | 200.0 | 197.3 | |
| 35 Acetonitrile | 41 | 1.974 | 1.974 | 0.000 | 100 | 32428 | 200.0 | 160.9 | |
| 36 Isopropyl ether | 45 | 2.046 | 2.046 | 0.000 | 97 | 176581 | 20.0 | 18.9 | |

| Compound | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q | Response | Cal Amt ug/l | OnCol Amt ug/l | Flags |
|---|---|---|---|---|---|---|---|---|---|
| 37 2-Chloro-1,3-butadiene | 88 | 2.103 | 2.103 | 0.000 | 89 | 56235 | 20.0 | 21.0 | |
| 38 1,1-Dichloroethane | 63 | 2.117 | 2.117 | 0.000 | 100 | 105130 | 20.0 | 19.4 | |
| 39 Acrylonitrile | 53 | 2.146 | 2.146 | 0.000 | 92 | 131189 | 200.0 | 186.8 | |
| 40 Tert-butyl ethyl ether | 59 | 2.268 | 2.268 | 0.000 | 89 | 143713 | 20.0 | 18.7 | |
| 41 Vinyl acetate | 43 | 2.282 | 2.282 | 0.000 | 99 | 138585 | 40.0 | 33.2 | |
| 42 cis-1,2-Dichloroethene | 96 | 2.461 | 2.461 | 0.000 | 99 | 63808 | 20.0 | 19.8 | |
| 43 2,2-Dichloropropane | 77 | 2.526 | 2.526 | 0.000 | 98 | 69879 | 20.0 | 19.0 | |
| 44 Cyclohexane | 56 | 2.583 | 2.583 | 0.000 | 91 | 111911 | 20.0 | 20.6 | |
| 45 Chlorobromomethane | 128 | 2.590 | 2.590 | 0.000 | 88 | 28133 | 20.0 | 19.9 | |
| 46 Chloroform | 83 | 2.648 | 2.648 | 0.000 | 99 | 94499 | 20.0 | 19.4 | |
| 47 Carbon tetrachloride | 117 | 2.733 | 2.733 | 0.000 | 98 | 64332 | 20.0 | 22.5 | |
| 48 Ethyl acetate | 70 | 2.741 | 2.741 | 0.000 | 99 | 7353 | 40.0 | 49.7 | |
| 49 Methyl acrylate | 55 | 2.748 | 2.748 | 0.000 | 80 | 26102 | 20.0 | 17.1 | |
| 50 Tetrahydrofuran | 42 | 2.755 | 2.755 | 0.000 | 95 | 23267 | 40.0 | 45.1 | |
| 52 1,1,1-Trichloroethane | 97 | 2.776 | 2.776 | 0.000 | 98 | 80083 | 20.0 | 20.5 | |
| $ 51 Dibromofluoromethane (Surr) | 113 | 2.769 | 2.769 | 0.000 | 98 | 113863 | 50.0 | 46.6 | |
| * 53 2-Butanone-d5 | 46 | 2.827 | 2.827 | 0.000 | 99 | 114143 | 250.0 | 250.0 | |
| 55 1,1-Dichloropropene | 75 | 2.870 | 2.870 | 0.000 | 96 | 85896 | 20.0 | 20.3 | |
| 54 2-Butanone (MEK) | 72 | 2.862 | 2.862 | 0.000 | 99 | 19969 | 100.0 | 119.7 | |
| 56 Isooctane | 57 | 2.956 | 2.956 | 0.000 | 99 | 185575 | 20.0 | 21.7 | |
| 57 n-Heptane | 57 | 3.049 | 3.049 | 0.000 | 96 | 45862 | 20.0 | 21.8 | |
| 58 Benzene | 78 | 3.056 | 3.056 | 0.000 | 95 | 249640 | 20.0 | 19.7 | |
| 59 Propionitrile | 54 | 3.070 | 3.070 | 0.000 | 96 | 41929 | 200.0 | 196.1 | |
| 60 Methacrylonitrile | 67 | 3.092 | 3.092 | 0.000 | 91 | 146048 | 200.0 | 187.5 | |
| $ 61 1,2-Dichloroethane-d4 (Surr) | 65 | 3.156 | 3.156 | 0.000 | 0 | 112065 | 50.0 | 45.7 | |
| 62 Tert-amyl methyl ether | 73 | 3.156 | 3.156 | 0.000 | 99 | 124443 | 20.0 | 19.4 | |
| 63 1,2-Dichloroethane | 62 | 3.213 | 3.213 | 0.000 | 97 | 58048 | 20.0 | 18.3 | |
| 64 Isobutyl alcohol | 43 | 3.285 | 3.285 | 0.000 | 95 | 23783 | 500.0 | 441.3 | |
| 65 t-Amyl alcohol | 59 | 3.349 | 3.349 | 0.000 | 93 | 16755 | 200.0 | 191.6 | |
| * 66 Fluorobenzene | 96 | 3.385 | 3.385 | 0.000 | 99 | 567265 | 50.0 | 50.0 | |
| 67 Isopropyl acetate | 43 | 3.457 | 3.457 | 0.000 | 99 | 58093 | 20.0 | 16.1 | |
| 68 Methylcyclohexane | 83 | 3.507 | 3.507 | 0.000 | 96 | 109523 | 20.0 | 21.9 | |
| 69 Trichloroethene | 130 | 3.536 | 3.536 | 0.000 | 96 | 63478 | 20.0 | 20.7 | |
| 70 2-ethoxy-2-methyl butane | 59 | 3.772 | 3.772 | 0.000 | 95 | 117552 | 20.0 | 18.6 | |
| 71 Dibromomethane | 93 | 3.894 | 3.894 | 0.000 | 95 | 25871 | 20.0 | 18.9 | |
| 72 n-Butanol | 56 | 3.908 | 3.908 | 0.000 | 90 | 12665 | 500.0 | 381.0 | |
| 73 1,2-Dichloropropane | 63 | 3.980 | 3.980 | 0.000 | 92 | 58568 | 20.0 | 19.1 | |
| 75 Dichlorobromomethane | 83 | 4.066 | 4.066 | 0.000 | 99 | 64234 | 20.0 | 19.1 | |
| 74 Ethyl acrylate | 55 | 4.066 | 4.066 | 0.000 | 98 | 36287 | 20.0 | 17.7 | |
| * 76 1,4-Dioxane-d8 | 96 | 4.238 | 4.238 | 0.000 | 86 | 14807 | 1000.0 | 1000.0 | |
| 77 Methyl methacrylate | 100 | 4.259 | 4.259 | 0.000 | 91 | 18400 | 40.0 | 40.3 | |
| 78 1,4-Dioxane | 88 | 4.266 | 4.266 | 0.000 | 36 | 6424 | 400.0 | 376.2 | |
| 79 n-Propyl acetate | 43 | 4.417 | 4.417 | 0.000 | 98 | 39567 | 20.0 | 17.2 | |
| 80 2-Chloroethyl vinyl ether | 63 | 4.675 | 4.675 | 0.000 | 95 | 6108 | 20.0 | 10.5 | |
| 81 cis-1,3-Dichloropropene | 75 | 4.696 | 4.696 | 0.000 | 92 | 77087 | 20.0 | 18.6 | |
| $ 82 Toluene-d8 (Surr) | 98 | 4.882 | 4.882 | 0.000 | 99 | 502090 | 50.0 | 47.9 | |
| 83 Toluene | 91 | 4.940 | 4.940 | 0.000 | 93 | 261504 | 20.0 | 20.3 | |
| 84 Epichlorohydrin | 57 | 4.983 | 4.983 | 0.000 | 97 | 14055 | 400.0 | 351.1 | |
| 85 2-Nitropropane | 41 | 5.190 | 5.190 | 0.000 | 97 | 10278 | 40.0 | 33.8 | |
| 86 Tetrachloroethene | 166 | 5.355 | 5.355 | 0.000 | 98 | 65514 | 20.0 | 21.6 | |
| 87 4-Methyl-2-pentanone (MIBK) | 43 | 5.398 | 5.398 | 0.000 | 96 | 144093 | 100.0 | 122.0 | |
| 88 trans-1,3-Dichloropropene | 75 | 5.441 | 5.441 | 0.000 | 99 | 63985 | 20.0 | 19.4 | |

| Compound | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q | Response | Cal Amt ug/l | OnCol Amt ug/l | Flags |
|---|---|---|---|---|---|---|---|---|---|
| 89 1,1,2-Trichloroethane | 83 | 5.606 | 5.606 | 0.000 | 96 | 33000 | 20.0 | 18.8 | |
| 90 Ethyl methacrylate | 69 | 5.692 | 5.692 | 0.000 | 90 | 45440 | 20.0 | 18.9 | |
| 91 Chlorodibromomethane | 129 | 5.806 | 5.806 | 0.000 | 98 | 42788 | 20.0 | 18.9 | |
| 92 1,3-Dichloropropane | 76 | 5.914 | 5.914 | 0.000 | 93 | 69698 | 20.0 | 19.1 | |
| 93 Ethylene Dibromide | 107 | 6.043 | 6.043 | 0.000 | 100 | 36531 | 20.0 | 19.4 | |
| 94 n-Butyl acetate | 43 | 6.401 | 6.401 | 0.000 | 98 | 41440 | 20.0 | 16.9 | |
| 95 2-Hexanone | 43 | 6.458 | 6.458 | 0.000 | 93 | 97808 | 100.0 | 123.4 | |
| * 96 Chlorobenzene-d5 | 117 | 6.723 | 6.723 | 0.000 | 86 | 406183 | 50.0 | 50.0 | |
| 97 Chlorobenzene | 112 | 6.745 | 6.745 | 0.000 | 96 | 162967 | 20.0 | 20.2 | |
| 98 Ethylbenzene | 106 | 6.831 | 6.831 | 0.000 | 98 | 94065 | 20.0 | 20.8 | |
| 99 1,1,1,2-Tetrachloroethane | 131 | 6.859 | 6.859 | 0.000 | 96 | 50713 | 20.0 | 20.3 | |
| 100 m-Xylene & p-Xylene | 106 | 7.046 | 7.046 | 0.000 | 0 | 114449 | 20.0 | 21.6 | |
| 101 o-Xylene | 106 | 7.626 | 7.626 | 0.000 | 95 | 108669 | 20.0 | 20.2 | |
| 102 Bromoform | 173 | 7.690 | 7.690 | 0.000 | 96 | 24123 | 20.0 | 18.8 | |
| 103 Styrene | 104 | 7.712 | 7.712 | 0.000 | 96 | 175451 | 20.0 | 20.4 | |
| 104 n-Butyl acrylate | 73 | 8.056 | 8.056 | 0.000 | 99 | 25839 | 20.0 | 18.0 | |
| 105 Isopropylbenzene | 105 | 8.113 | 8.113 | 0.000 | 95 | 289348 | 20.0 | 20.8 | |
| 106 Amyl acetate (mixed isomers) | 43 | 8.464 | 8.464 | 0.000 | 91 | 56159 | 20.0 | 17.4 | |
| $ 107 4-Bromofluorobenzene | 174 | 8.478 | 8.478 | 0.000 | 94 | 167335 | 50.0 | 50.9 | |
| 108 Bromobenzene | 156 | 8.586 | 8.586 | 0.000 | 95 | 68505 | 20.0 | 20.6 | |
| 109 N-Propylbenzene | 91 | 8.736 | 8.736 | 0.000 | 99 | 340723 | 20.0 | 20.5 | |
| 110 1,1,2,2-Tetrachloroethane | 83 | 8.894 | 8.894 | 0.000 | 98 | 43462 | 20.0 | 18.9 | |
| 111 2-Chlorotoluene | 91 | 8.908 | 8.908 | 0.000 | 97 | 221568 | 20.0 | 19.3 | |
| 112 4-Ethyltoluene | 105 | 8.929 | 8.929 | 0.000 | 98 | 283854 | 20.0 | 20.6 | |
| 113 1,2,3-Trichloropropane | 110 | 9.023 | 9.023 | 0.000 | 98 | 11902 | 20.0 | 19.5 | |
| 114 1,3,5-Trimethylbenzene | 105 | 9.087 | 9.087 | 0.000 | 94 | 234819 | 20.0 | 20.4 | |
| 115 trans-1,4-Dichloro-2-butene | 53 | 9.159 | 9.159 | 0.000 | 86 | 9122 | 20.0 | 20.7 | |
| 116 4-Chlorotoluene | 91 | 9.173 | 9.173 | 0.000 | 97 | 200748 | 20.0 | 19.9 | |
| 117 tert-Butylbenzene | 119 | 9.546 | 9.546 | 0.000 | 96 | 206433 | 20.0 | 20.7 | |
| 118 1,2,4-Trimethylbenzene | 105 | 9.682 | 9.682 | 0.000 | 97 | 240623 | 20.0 | 20.2 | |
| 119 Butyl Methacrylate | 87 | 9.696 | 9.696 | 0.000 | 91 | 58946 | 20.0 | 18.5 | |
| 120 sec-Butylbenzene | 105 | 9.839 | 9.839 | 0.000 | 99 | 311099 | 20.0 | 20.6 | |
| 121 1,3-Dichlorobenzene | 146 | 10.097 | 10.097 | 0.000 | 98 | 134977 | 20.0 | 20.6 | |
| 122 4-Isopropyltoluene | 119 | 10.119 | 10.119 | 0.000 | 98 | 265791 | 20.0 | 20.8 | |
| * 123 1,4-Dichlorobenzene-d4 | 152 | 10.226 | 10.226 | 0.000 | 93 | 224702 | 50.0 | 50.0 | |
| 124 1,4-Dichlorobenzene | 146 | 10.247 | 10.247 | 0.000 | 96 | 139502 | 20.0 | 20.2 | |
| 125 1,2,3-Trimethylbenzene | 105 | 10.355 | 10.355 | 0.000 | 98 | 237501 | 20.0 | 19.7 | |
| 126 2,3-Dihydroindene | 117 | 10.527 | 10.527 | 0.000 | 94 | 231458 | 20.0 | 19.8 | |
| 127 Benzyl chloride | 126 | 10.706 | 10.706 | 0.000 | 97 | 13656 | 20.0 | 19.6 | |
| 128 p-Diethylbenzene | 119 | 10.727 | 10.727 | 0.000 | 94 | 130357 | 20.0 | 20.3 | |
| 129 n-Butylbenzene | 91 | 10.813 | 10.813 | 0.000 | 98 | 240770 | 20.0 | 20.7 | |
| 130 1,2-Dichlorobenzene | 146 | 10.921 | 10.921 | 0.000 | 98 | 121047 | 20.0 | 20.2 | |
| 131 1,2,4,5-Tetramethylbenzene | 119 | 11.924 | 11.924 | 0.000 | 97 | 224530 | 20.0 | 20.0 | |
| 132 1,2-Dibromo-3-Chloropropane | 157 | 12.074 | 12.074 | 0.000 | 92 | 6878 | 20.0 | 17.9 | |
| 133 1,3,5-Trichlorobenzene | 180 | 12.117 | 12.117 | 0.000 | 97 | 98570 | 20.0 | 20.7 | |
| 134 1,2,4-Trichlorobenzene | 180 | 12.819 | 12.819 | 0.000 | 94 | 74697 | 20.0 | 18.7 | |
| 135 Hexachlorobutadiene | 225 | 12.841 | 12.841 | 0.000 | 97 | 33889 | 20.0 | 19.2 | |
| 136 Naphthalene | 128 | 13.127 | 13.127 | 0.000 | 99 | 118177 | 20.0 | 16.0 | |
| 137 1,2,3-Trichlorobenzene | 180 | 13.299 | 13.299 | 0.000 | 96 | 53065 | 20.0 | 16.2 | |
| S 138 1,2-Dichloroethene, Total | 100 | | | | 0 | | 40.0 | 40.2 | |
| S 139 1,3-Dichloropropene, Total | 100 | | | | 0 | | 40.0 | 37.9 | |
| S 140 Xylenes, Total | 100 | | | | 0 | | 40.0 | 41.8 | |

| Compound | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q | Response | Cal Amt ug/l | OnCol Amt ug/l | Flags |
|---|---|---|---|---|---|---|---|---|---|
| S 142 Total BTEX | 1 | | | | 0 | | 100.0 | 102.6 | |

## Reagents:

| | | | | |
|---|---|---|---|---|
| ACROLEIN W_00112 | Amount Added: | 4.00 | Units: uL | |
| 8260MIX1COMB_00125 | Amount Added: | 20.00 | Units: uL | |
| GASES Li_00385 | Amount Added: | 20.00 | Units: uL | |
| 8260ISNEW_00129 | Amount Added: | 1.00 | Units: uL | Run Reagent |
| 8260SURR250_00212 | Amount Added: | 1.00 | Units: uL | Run Reagent |

Report Date: 10-Sep-2020 11:14:24 Chrom Revision: 2.3 20-Aug-2020 13:57:12

Eurofins TestAmerica, Edison

Data File: \\chromfs\Edison\ChromData\CVOAMS13\20200909-116470.b\P79506.D

Injection Date: 09-Sep-2020 08:33:30 Instrument ID: CVOAMS13 Operator ID:

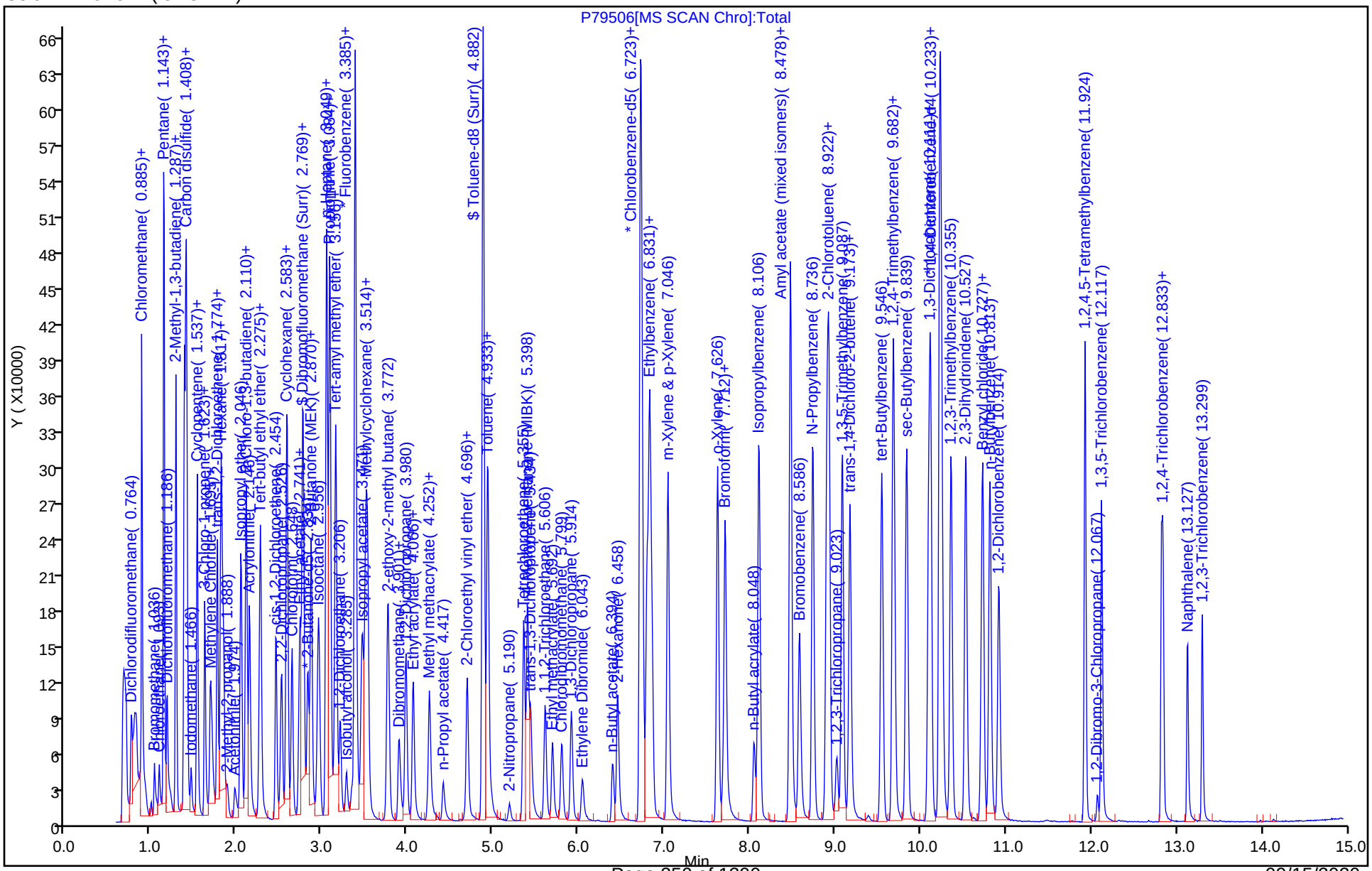
Lims ID: CCVIS Worklist Smp#: 3

Client ID:

Purge Vol: 5.000 mL Dil. Factor: 1.0000 ALS Bottle#: 2

Method: 8260W_13 Limit Group: VOA - 8260C Water and Solid

Column: Rtx-624 ( 0.25 mm)



FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Edison Job No.: 460-217547-1

SDG No.:

Lab Sample ID: CCVIS 460-722834/4 Calibration Date: 09/09/2020 19:04

Instrument ID: CVOAMS13 Calib Start Date: 09/04/2020 14:09

GC Column: Rtx-624 ID: 0.25(mm) Calib End Date: 09/04/2020 16:58

Lab File ID: P79533.D Conc. Units: ug/L Heated Purge: (Y/N) N

| ANALYTE | CURVE TYPE | AVE RRF | RRF | MIN RRF | CALC AMOUNT | SPIKE AMOUNT | %D | MAX %D |
|---|---|---|---|---|---|---|---|---|
| Dichlorodifluoromethane | Ave | 0.3371 | 0.2753 | 0.1000 | 16.3 | 20.0 | -18.3 | 20.0 |
| Butadiene | Ave | 0.3132 | 0.2685 | | 17.1 | 20.0 | -14.3 | 20.0 |
| Chloromethane | Ave | 0.4706 | 0.4013 | 0.1000 | 17.1 | 20.0 | -14.7 | 20.0 |
| Vinyl chloride | Ave | 0.3448 | 0.3099 | 0.1000 | 18.0 | 20.0 | -10.1 | 20.0 |
| Bromomethane | Ave | 2.558 | 3.678 | 0.1000 | 28.7 | 20.0 | 43.7 | 50.0 |
| Chloroethane | Ave | 0.1832 | 0.1759 | 0.1000 | 19.2 | 20.0 | -4.0 | 50.0 |
| Pentane | Ave | 4.304 | 5.203 | | 48.4 | 40.0 | 20.9* | 20.0 |
| Trichlorofluoromethane | Ave | 0.3147 | 0.3210 | 0.1000 | 20.4 | 20.0 | 2.0 | 20.0 |
| Dichlorofluoromethane | Ave | 0.4231 | 0.4019 | | 19.0 | 20.0 | -5.0 | 20.0 |
| 2-Methyl-1,3-butadiene | Ave | 0.3621 | 0.3579 | | 19.8 | 20.0 | -1.2 | 20.0 |
| Ethyl ether | Ave | 0.1689 | 0.1553 | | 18.4 | 20.0 | -8.0 | 20.0 |
| 1,1-Dichloroethene | Ave | 0.2250 | 0.2340 | 0.1000 | 20.8 | 20.0 | 4.0 | 20.0 |
| Carbon disulfide | Ave | 0.8803 | 0.8379 | 0.1000 | 19.0 | 20.0 | -4.8 | 50.0 |
| Ethanol | Ave | 0.0830 | 0.0973 | | 938 | 800 | 17.2 | 50.0 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | Ave | 0.2202 | 0.2318 | 0.1000 | 21.1 | 20.0 | 5.3 | 20.0 |
| Iodomethane | QuaF | | 0.2057 | | 11.6 | 20.0 | -42.2* | 20.0 |
| Cyclopentene | Ave | 0.6234 | 0.6507 | | 20.9 | 20.0 | 4.4 | 20.0 |
| Acrolein | Ave | 1.943 | 1.482 | | 30.5 | 40.0 | -23.7 | 50.0 |
| Allyl chloride | Ave | 0.1438 | 0.1447 | | 20.1 | 20.0 | 0.6 | 20.0 |
| Isopropyl alcohol | Ave | 0.8071 | 0.7834 | | 194 | 200 | -2.9 | 50.0 |
| Methylene Chloride | Ave | 0.2712 | 0.2825 | 0.1000 | 20.8 | 20.0 | 4.1 | 20.0 |
| Acetone | QuaF | | 0.9353 | 0.0500 | 115 | 100 | 15.2 | 50.0 |
| trans-1,2-Dichloroethene | Ave | 0.2574 | 0.2731 | 0.1000 | 21.2 | 20.0 | 6.1 | 20.0 |
| Methyl acetate | Ave | 9.744 | 11.13 | 0.1000 | 45.7 | 40.0 | 14.2 | 20.0 |
| Hexane | Ave | 0.0621 | 0.0692 | | 22.3 | 20.0 | 11.5 | 20.0 |
| Methyl tert-butyl ether | Ave | 0.5264 | 0.5397 | 0.1000 | 20.5 | 20.0 | 2.5 | 20.0 |
| 2-Methyl-2-propanol | QuaF | | 1.251 | | 229 | 200 | 14.3 | 50.0 |
| Acetonitrile | Ave | 2.000 | 1.783 | | 178 | 200 | -10.8 | 20.0 |
| Isopropyl ether | Ave | 0.8239 | 0.7703 | | 18.7 | 20.0 | -6.5 | 20.0 |
| 2-Chloro-1,3-butadiene | Ave | 0.2359 | 0.2434 | | 20.6 | 20.0 | 3.2 | 20.0 |
| 1,1-Dichloroethane | Ave | 0.4778 | 0.4742 | 0.2000 | 19.9 | 20.0 | -0.7 | 20.0 |
| Acrylonitrile | Ave | 0.0619 | 0.0603 | | 195 | 200 | -2.6 | 20.0 |
| Tert-butyl ethyl ether | Ave | 0.6791 | 0.6511 | | 19.2 | 20.0 | -4.1 | 20.0 |
| Vinyl acetate | Ave | 0.3676 | 0.3089 | | 33.6 | 40.0 | -16.0 | 20.0 |
| cis-1,2-Dichloroethene | Ave | 0.2848 | 0.2915 | 0.1000 | 20.5 | 20.0 | 2.4 | 20.0 |
| 2,2-Dichloropropane | Ave | 0.3235 | 0.3157 | | 19.5 | 20.0 | -2.4 | 20.0 |
| Cyclohexane | Ave | 0.4784 | 0.4665 | 0.1000 | 19.5 | 20.0 | -2.5 | 50.0 |
| Chlorobromomethane | Ave | 0.1245 | 0.1316 | | 21.1 | 20.0 | 5.7 | 20.0 |
| Chloroform | Ave | 0.4283 | 0.4303 | 0.2000 | 20.1 | 20.0 | 0.5 | 20.0 |
| Carbon tetrachloride | Ave | 0.2525 | 0.2850 | 0.1000 | 22.6 | 20.0 | 12.9 | 20.0 |

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Edison Job No.: 460-217547-1

SDG No.:

Lab Sample ID: CCVIS 460-722834/4 Calibration Date: 09/09/2020 19:04

Instrument ID: CVOAMS13 Calib Start Date: 09/04/2020 14:09

GC Column: Rtx-624 ID: 0.25(mm) Calib End Date: 09/04/2020 16:58

Lab File ID: P79533.D Conc. Units: ug/L Heated Purge: (Y/N) N

| ANALYTE | CURVE TYPE | AVE RRF | RRF | MIN RRF | CALC AMOUNT | SPIKE AMOUNT | %D | MAX %D |
|---|---|---|---|---|---|---|---|---|
| Ethyl acetate | Ave | 0.3240 | 0.4478 | | 55.3 | 40.0 | 38.2* | 20.0 |
| Methyl acrylate | Ave | 0.1349 | 0.1206 | | 17.9 | 20.0 | -10.6 | 20.0 |
| Tetrahydrofuran | Ave | 1.130 | 1.358 | | 48.0 | 40.0 | 20.1* | 20.0 |
| 1,1,1-Trichloroethane | Ave | 0.3442 | 0.3535 | 0.1000 | 20.5 | 20.0 | 2.7 | 20.0 |
| 2-Butanone (MEK) | Ave | 0.3653 | 0.4841 | 0.0500 | 133 | 100 | 32.5 | 50.0 |
| 1,1-Dichloropropene | QuaF | | 0.3835 | | 20.6 | 20.0 | 3.0 | 20.0 |
| 2,2,4-Trimethylpentane | Ave | 0.7550 | 0.7794 | | 20.6 | 20.0 | 3.2 | 20.0 |
| Benzene | Ave | 1.561 | 1.524 | 0.5000 | 19.5 | 20.0 | -2.4 | 20.0 |
| n-Heptane | Ave | 0.1853 | 0.1921 | | 20.7 | 20.0 | 3.6 | 20.0 |
| Propionitrile | Ave | 2.122 | 2.288 | | 216 | 200 | 7.9 | 20.0 |
| Methacrylonitrile | Ave | 0.0687 | 0.0663 | | 193 | 200 | -3.4 | 20.0 |
| Tert-amyl methyl ether | Ave | 0.5651 | 0.5395 | | 19.1 | 20.0 | -4.5 | 20.0 |
| 1,2-Dichloroethane | Ave | 0.2794 | 0.2703 | 0.1000 | 19.3 | 20.0 | -3.3 | 20.0 |
| Isobutyl alcohol | Ave | 0.5347 | 0.5034 | | 471 | 500 | -5.9 | 50.0 |
| Isopropyl acetate | Ave | 0.3173 | 0.2643 | | 16.7 | 20.0 | -16.7 | 20.0 |
| Methylcyclohexane | Ave | 0.4413 | 0.4392 | 0.1000 | 19.9 | 20.0 | -0.5 | 50.0 |
| Trichloroethene | Ave | 0.2699 | 0.2893 | 0.2000 | 21.4 | 20.0 | 7.2 | 20.0 |
| Dibromomethane | Ave | 0.1204 | 0.1218 | | 20.2 | 20.0 | 1.2 | 20.0 |
| n-Butanol | QuaF | | 0.3020 | | 457 | 500 | -8.5 | 50.0 |
| 1,2-Dichloropropane | Ave | 0.2703 | 0.2572 | 0.1000 | 19.0 | 20.0 | -4.8 | 20.0 |
| Dichlorobromomethane | Ave | 0.2965 | 0.3014 | 0.2000 | 20.3 | 20.0 | 1.7 | 20.0 |
| Ethyl acrylate | Qua2 | | 0.1650 | | 18.3 | 20.0 | -8.6 | 20.0 |
| Methyl methacrylate | Ave | 0.0402 | 0.0430 | | 42.7 | 40.0 | 6.9 | 20.0 |
| 1,4-Dioxane | Ave | 1.153 | 1.411 | | 489 | 400 | 22.4 | 50.0 |
| n-Propyl acetate | Ave | 0.2033 | 0.1768 | | 17.4 | 20.0 | -13.0 | 20.0 |
| 2-Chloroethyl vinyl ether | Ave | 0.0511 | 0.0337 | | 13.2 | 20.0 | -34.2* | 20.0 |
| cis-1,3-Dichloropropene | Ave | 0.5114 | 0.4916 | 0.2000 | 19.2 | 20.0 | -3.9 | 50.0 |
| Toluene | Ave | 1.586 | 1.611 | 0.4000 | 20.3 | 20.0 | 1.6 | 20.0 |
| Epichlorohydrin | QuaF | | 0.0920 | | 418 | 400 | 4.4 | 20.0 |
| 2-Nitropropane | Ave | 0.0268 | 0.0240 | | 35.8 | 40.0 | -10.4 | 20.0 |
| Tetrachloroethene | Ave | 0.3736 | 0.3902 | 0.2000 | 20.9 | 20.0 | 4.5 | 20.0 |
| 4-Methyl-2-pentanone (MIBK) | Ave | 2.586 | 3.265 | 0.0500 | 126 | 100 | 26.3 | 50.0 |
| trans-1,3-Dichloropropene | Ave | 0.4064 | 0.3860 | 0.1000 | 19.0 | 20.0 | -5.0 | 50.0 |
| 1,1,2-Trichloroethane | Ave | 0.2163 | 0.2091 | 0.1000 | 19.3 | 20.0 | -3.3 | 20.0 |
| Ethyl methacrylate | Ave | 0.2123 | 0.2130 | | 20.1 | 20.0 | 0.3 | 20.0 |
| Chlorodibromomethane | Ave | 0.2791 | 0.2731 | 0.1000 | 19.6 | 20.0 | -2.1 | 50.0 |
| 1,3-Dichloropropane | Ave | 0.4502 | 0.4297 | | 19.1 | 20.0 | -4.6 | 20.0 |
| Ethylene Dibromide | Ave | 0.2324 | 0.2334 | 0.1000 | 20.1 | 20.0 | 0.4 | 20.0 |
| n-Butyl acetate | Qua2 | | 0.2497 | | 16.5 | 20.0 | -17.4 | 20.0 |
| 2-Hexanone | Ave | 1.736 | 2.271 | 0.0500 | 131 | 100 | 30.8 | 50.0 |
| Chlorobenzene | Ave | 0.9935 | 1.026 | 0.5000 | 20.6 | 20.0 | 3.2 | 20.0 |

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Edison Job No.: 460-217547-1

SDG No.:

Lab Sample ID: CCVIS 460-722834/4 Calibration Date: 09/09/2020 19:04

Instrument ID: CVOAMS13 Calib Start Date: 09/04/2020 14:09

GC Column: Rtx-624 ID: 0.25(mm) Calib End Date: 09/04/2020 16:58

Lab File ID: P79533.D Conc. Units: ug/L Heated Purge: (Y/N) N

| ANALYTE | CURVE TYPE | AVE RRF | RRF | MIN RRF | CALC AMOUNT | SPIKE AMOUNT | %D | MAX %D |
|---|---|---|---|---|---|---|---|---|
| Ethylbenzene | Ave | 0.5568 | 0.5844 | 0.1000 | 21.0 | 20.0 | 4.9 | 20.0 |
| 1,1,1,2-Tetrachloroethane | Ave | 0.3075 | 0.3082 | | 20.0 | 20.0 | 0.2 | 20.0 |
| m-Xylene & p-Xylene | Ave | 0.6531 | 0.6990 | 0.1000 | 21.4 | 20.0 | 7.0 | 20.0 |
| o-Xylene | Ave | 0.6608 | 0.6669 | 0.3000 | 20.2 | 20.0 | 0.9 | 20.0 |
| Bromoform | Ave | 0.1577 | 0.1545 | 0.1000 | 19.6 | 20.0 | -2.0 | 20.0 |
| Styrene | Ave | 1.057 | 1.110 | 0.3000 | 21.0 | 20.0 | 5.0 | 20.0 |
| n-Butyl acrylate | Qua2 | | 0.1609 | | 18.2 | 20.0 | -8.9 | 20.0 |
| Isopropylbenzene | Ave | 1.714 | 1.790 | 0.1000 | 20.9 | 20.0 | 4.4 | 20.0 |
| Amyl acetate (mixed isomers) | Qua2 | | 0.6416 | | 17.8 | 20.0 | -10.9 | 20.0 |
| Bromobenzene | Ave | 0.7390 | 0.7878 | | 21.3 | 20.0 | 6.6 | 20.0 |
| N-Propylbenzene | Ave | 3.698 | 3.793 | | 20.5 | 20.0 | 2.6 | 20.0 |
| 1,1,2,2-Tetrachloroethane | Ave | 0.5126 | 0.4958 | 0.3000 | 19.3 | 20.0 | -3.3 | 20.0 |
| 2-Chlorotoluene | Ave | 2.548 | 2.509 | | 19.7 | 20.0 | -1.5 | 20.0 |
| 4-Ethyltoluene | Ave | 3.072 | 3.177 | | 20.7 | 20.0 | 3.4 | 20.0 |
| 1,2,3-Trichloropropane | Ave | 0.1356 | 0.1389 | | 20.5 | 20.0 | 2.4 | 20.0 |
| 1,3,5-Trimethylbenzene | Ave | 2.564 | 2.637 | | 20.6 | 20.0 | 2.8 | 20.0 |
| trans-1,4-Dichloro-2-butene | Ave | 0.0979 | 0.1040 | | 21.2 | 20.0 | 6.2 | 20.0 |
| 4-Chlorotoluene | Ave | 2.239 | 2.285 | | 20.4 | 20.0 | 2.0 | 20.0 |
| tert-Butylbenzene | Ave | 2.217 | 2.292 | | 20.7 | 20.0 | 3.4 | 20.0 |
| 1,2,4-Trimethylbenzene | Ave | 2.645 | 2.674 | | 20.2 | 20.0 | 1.1 | 20.0 |
| Butyl Methacrylate | Qua2 | | 0.6789 | | 19.1 | 20.0 | -4.5 | 20.0 |
| sec-Butylbenzene | Ave | 3.367 | 3.434 | | 20.4 | 20.0 | 2.0 | 20.0 |
| 1,3-Dichlorobenzene | Ave | 1.460 | 1.549 | 0.6000 | 21.2 | 20.0 | 6.1 | 20.0 |
| 4-Isopropyltoluene | Ave | 2.840 | 2.939 | | 20.7 | 20.0 | 3.5 | 20.0 |
| 1,4-Dichlorobenzene | Ave | 1.537 | 1.608 | 0.5000 | 20.9 | 20.0 | 4.6 | 20.0 |
| 1,2,3-Trimethylbenzene | Ave | 2.680 | 2.726 | | 20.3 | 20.0 | 1.7 | 20.0 |
| Indan | Ave | 2.600 | 2.628 | | 20.2 | 20.0 | 1.1 | 20.0 |
| Benzyl chloride | Qua2 | | 0.1551 | | 19.9 | 20.0 | -0.3 | 50.0 |
| p-Diethylbenzene | Ave | 1.431 | 1.455 | | 20.3 | 20.0 | 1.7 | 20.0 |
| n-Butylbenzene | Ave | 2.589 | 2.609 | | 20.2 | 20.0 | 0.8 | 20.0 |
| 1,2-Dichlorobenzene | Ave | 1.336 | 1.376 | 0.4000 | 20.6 | 20.0 | 3.0 | 20.0 |
| 1,2,4,5-Tetramethylbenzene | Ave | 2.492 | 2.531 | | 20.3 | 20.0 | 1.6 | 20.0 |
| 1,2-Dibromo-3-Chloropropane | Ave | 0.0853 | 0.0851 | 0.0500 | 20.0 | 20.0 | -0.2 | 50.0 |
| 1,3,5-Trichlorobenzene | Ave | 1.060 | 1.122 | | 21.2 | 20.0 | 5.9 | 20.0 |
| 1,2,4-Trichlorobenzene | Ave | 0.8895 | 0.8811 | 0.2000 | 19.8 | 20.0 | -0.9 | 20.0 |
| Hexachlorobutadiene | Ave | 0.3928 | 0.3883 | | 19.8 | 20.0 | -1.1 | 20.0 |
| Naphthalene | Ave | 1.641 | 1.456 | | 17.7 | 20.0 | -11.3 | 50.0 |
| 1,2,3-Trichlorobenzene | Ave | 0.7279 | 0.6595 | | 18.1 | 20.0 | -9.4 | 20.0 |
| Dibromofluoromethane (Surr) | Ave | 0.2153 | 0.2197 | | 51.0 | 50.0 | 2.0 | 20.0 |
| 1,2-Dichloroethane-d4 (Surr) | Ave | 0.2161 | 0.2064 | | 47.7 | 50.0 | -4.5 | 20.0 |
| Toluene-d8 (Surr) | Ave | 1.290 | 1.273 | | 49.3 | 50.0 | -1.3 | 20.0 |

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Edison  Job No.: 460-217547-1

SDG No.:

Lab Sample ID: CCVIS 460-722834/4  Calibration Date: 09/09/2020 19:04

Instrument ID: CVOAMS13  Calib Start Date: 09/04/2020 14:09

GC Column: Rtx-624  ID: 0.25(mm)  Calib End Date: 09/04/2020 16:58

Lab File ID: P79533.D  Conc. Units: ug/L  Heated Purge: (Y/N) N

| ANALYTE | CURVE TYPE | AVE RRF | RRF | MIN RRF | CALC AMOUNT | SPIKE AMOUNT | %D | MAX %D |
|---|---|---|---|---|---|---|---|---|
| 4-Bromofluorobenzene | Ave | 0.4048 | 0.4390 | | 54.2 | 50.0 | 8.5 | 20.0 |

Eurofins TestAmerica, Edison
Target Compound Quantitation Report

Data File: \\chromfs\Edison\ChromData\CVOAMS13\20200909-116494.b\P79533.D
Lims ID: CCVIS
Client ID:
Sample Type: CCVIS
Inject. Date: 09-Sep-2020 19:04:30 ALS Bottle#: 3 Worklist Smp#: 4
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: CCVIS
Misc. Info.: 460-0116494-004
Operator ID: Instrument ID: CVOAMS13
Sublist: chrom-8260W_13*sub61

Method: \\chromfs\Edison\ChromData\CVOAMS13\20200909-116494.b\8260W_13.m
Limit Group: VOA - 8260C Water and Solid
Last Update: 10-Sep-2020 14:25:29 Calib Date: 04-Sep-2020 16:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Edison\ChromData\CVOAMS13\20200904-116303.b\P79359.D

Column 1 : Rtx-624 ( 0.25 mm) Det: MS SCAN
Process Host: CTX1019

First Level Reviewer: sgroa Date: 09-Sep-2020 18:23:15

| Compound | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q | Response | Cal Amt ug/l | OnCol Amt ug/l | Flags |
|---|---|---|---|---|---|---|---|---|---|
| 3 Dichlorodifluoromethane | 85 | 0.764 | 0.764 | 0.000 | 99 | 55806 | 20.0 | 16.3 | |
| 6 Chloromethane | 50 | 0.886 | 0.886 | 0.000 | 92 | 81360 | 20.0 | 17.1 | |
| 8 Butadiene | 54 | 0.886 | 0.886 | 0.000 | 95 | 54440 | 20.0 | 17.1 | |
| 7 Vinyl chloride | 62 | 0.893 | 0.893 | 0.000 | 96 | 62823 | 20.0 | 18.0 | |
| 9 Bromomethane | 94 | 1.036 | 1.036 | 0.000 | 99 | 29469 | 20.0 | 28.7 | |
| 10 Chloroethane | 64 | 1.093 | 1.093 | 0.000 | 98 | 35664 | 20.0 | 19.2 | |
| 11 Pentane | 72 | 1.143 | 1.143 | 0.000 | 95 | 18138 | 40.0 | 48.4 | |
| 12 Trichlorofluoromethane | 101 | 1.151 | 1.151 | 0.000 | 61 | 65079 | 20.0 | 20.4 | |
| 13 Dichlorofluoromethane | 67 | 1.186 | 1.186 | 0.000 | 98 | 81480 | 20.0 | 19.0 | |
| 14 2-Methyl-1,3-butadiene | 67 | 1.287 | 1.287 | 0.000 | 96 | 72555 | 20.0 | 19.8 | |
| 15 Ethyl ether | 59 | 1.294 | 1.294 | 0.000 | 96 | 31488 | 20.0 | 18.4 | |
| 17 1,1-Dichloroethene | 96 | 1.387 | 1.387 | 0.000 | 97 | 47438 | 20.0 | 20.8 | |
| 16 Ethanol | 46 | 1.401 | 1.401 | 0.000 | 23 | 6782 | 800.0 | 937.9 | a |
| 19 Carbon disulfide | 76 | 1.401 | 1.401 | 0.000 | 99 | 169861 | 20.0 | 19.0 | |
| 20 1,1,2-Trichloro-1,2,2-trifluoroe | 101 | 1.408 | 1.408 | 0.000 | 89 | 46989 | 20.0 | 21.1 | |
| 22 Iodomethane | 142 | 1.466 | 1.466 | 0.000 | 95 | 41705 | 20.0 | 11.6 | |
| 23 Cyclopentene | 67 | 1.537 | 1.537 | 0.000 | 96 | 131907 | 20.0 | 20.9 | |
| 24 Acrolein | 56 | 1.559 | 1.559 | 0.000 | 94 | 5166 | 40.0 | 30.5 | |
| 25 3-Chloro-1-propene | 76 | 1.623 | 1.623 | 0.000 | 94 | 29339 | 20.0 | 20.1 | |
| 26 Isopropyl alcohol | 45 | 1.645 | 1.645 | 0.000 | 97 | 13655 | 200.0 | 194.1 | |
| 27 Methylene Chloride | 84 | 1.688 | 1.688 | 0.000 | 91 | 57262 | 20.0 | 20.8 | |
| 28 Acetone | 43 | 1.709 | 1.709 | 0.000 | 88 | 37475 | 100.0 | 115.2 | |
| 29 trans-1,2-Dichloroethene | 96 | 1.774 | 1.774 | 0.000 | 93 | 55366 | 20.0 | 21.2 | |
| 30 Methyl acetate | 43 | 1.781 | 1.781 | 0.000 | 99 | 38784 | 40.0 | 45.7 | |
| 31 Hexane | 86 | 1.817 | 1.817 | 0.000 | 91 | 14030 | 20.0 | 22.3 | |
| 32 Methyl tert-butyl ether | 73 | 1.831 | 1.831 | 0.000 | 96 | 109412 | 20.0 | 20.5 | |
| * 33 TBA-d9 (IS) | 65 | 1.845 | 1.845 | 0.000 | 99 | 87155 | 1000.0 | 1000.0 | |
| 34 2-Methyl-2-propanol | 59 | 1.888 | 1.888 | 0.000 | 99 | 21804 | 200.0 | 228.6 | |
| 35 Acetonitrile | 41 | 1.981 | 1.981 | 0.000 | 98 | 31083 | 200.0 | 178.4 | |
| 36 Isopropyl ether | 45 | 2.046 | 2.046 | 0.000 | 98 | 156157 | 20.0 | 18.7 | |

| Compound | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q | Response | Cal Amt ug/l | OnCol Amt ug/l | Flags |
|---|---|---|---|---|---|---|---|---|---|
| 37 2-Chloro-1,3-butadiene | 88 | 2.103 | 2.103 | 0.000 | 89 | 49348 | 20.0 | 20.6 | |
| 38 1,1-Dichloroethane | 63 | 2.118 | 2.118 | 0.000 | 100 | 96132 | 20.0 | 19.9 | |
| 39 Acrylonitrile | 53 | 2.146 | 2.146 | 0.000 | 93 | 122199 | 200.0 | 194.7 | |
| 40 Tert-butyl ethyl ether | 59 | 2.268 | 2.268 | 0.000 | 89 | 131994 | 20.0 | 19.2 | |
| 41 Vinyl acetate | 43 | 2.282 | 2.282 | 0.000 | 100 | 125228 | 40.0 | 33.6 | |
| 42 cis-1,2-Dichloroethene | 96 | 2.461 | 2.461 | 0.000 | 99 | 59102 | 20.0 | 20.5 | |
| 43 2,2-Dichloropropane | 77 | 2.526 | 2.526 | 0.000 | 97 | 63999 | 20.0 | 19.5 | |
| 44 Cyclohexane | 56 | 2.583 | 2.583 | 0.000 | 90 | 94576 | 20.0 | 19.5 | |
| 45 Chlorobromomethane | 128 | 2.590 | 2.590 | 0.000 | 88 | 26675 | 20.0 | 21.1 | |
| 46 Chloroform | 83 | 2.648 | 2.648 | 0.000 | 99 | 87240 | 20.0 | 20.1 | |
| 47 Carbon tetrachloride | 117 | 2.734 | 2.734 | 0.000 | 97 | 57778 | 20.0 | 22.6 | |
| 48 Ethyl acetate | 70 | 2.741 | 2.741 | 0.000 | 98 | 7176 | 40.0 | 55.3 | |
| 49 Methyl acrylate | 55 | 2.748 | 2.748 | 0.000 | 80 | 24445 | 20.0 | 17.9 | |
| 50 Tetrahydrofuran | 42 | 2.755 | 2.755 | 0.000 | 96 | 21756 | 40.0 | 48.0 | |
| $ 51 Dibromofluoromethane (Surr) | 113 | 2.769 | 2.769 | 0.000 | 98 | 111332 | 50.0 | 51.0 | |
| 52 1,1,1-Trichloroethane | 97 | 2.777 | 2.777 | 0.000 | 98 | 71660 | 20.0 | 20.5 | |
| * 53 2-Butanone-d5 | 46 | 2.827 | 2.827 | 0.000 | 99 | 100164 | 250.0 | 250.0 | |
| 54 2-Butanone (MEK) | 72 | 2.863 | 2.863 | 0.000 | 99 | 19394 | 100.0 | 132.5 | |
| 55 1,1-Dichloropropene | 75 | 2.870 | 2.870 | 0.000 | 96 | 77737 | 20.0 | 20.6 | |
| 56 Isooctane | 57 | 2.956 | 2.956 | 0.000 | 99 | 157992 | 20.0 | 20.6 | |
| 57 n-Heptane | 57 | 3.049 | 3.049 | 0.000 | 94 | 38940 | 20.0 | 20.7 | |
| 58 Benzene | 78 | 3.049 | 3.049 | 0.000 | 95 | 227875 | 20.0 | 19.5 | |
| 59 Propionitrile | 54 | 3.070 | 3.070 | 0.000 | 97 | 39890 | 200.0 | 215.7 | |
| 60 Methacrylonitrile | 67 | 3.092 | 3.092 | 0.000 | 90 | 134451 | 200.0 | 193.2 | |
| $ 61 1,2-Dichloroethane-d4 (Surr) | 65 | 3.156 | 3.156 | 0.000 | 0 | 104578 | 50.0 | 47.7 | |
| 62 Tert-amyl methyl ether | 73 | 3.163 | 3.163 | 0.000 | 98 | 109371 | 20.0 | 19.1 | |
| 63 1,2-Dichloroethane | 62 | 3.213 | 3.213 | 0.000 | 97 | 54787 | 20.0 | 19.3 | |
| 64 Isobutyl alcohol | 43 | 3.285 | 3.285 | 0.000 | 95 | 21937 | 500.0 | 470.7 | |
| 65 t-Amyl alcohol | 59 | 3.350 | 3.350 | 0.000 | 92 | 15923 | 200.0 | 210.5 | |
| * 66 Fluorobenzene | 96 | 3.385 | 3.385 | 0.000 | 99 | 506797 | 50.0 | 50.0 | |
| 67 Isopropyl acetate | 43 | 3.457 | 3.457 | 0.000 | 99 | 53584 | 20.0 | 16.7 | |
| 68 Methylcyclohexane | 83 | 3.507 | 3.507 | 0.000 | 95 | 89039 | 20.0 | 19.9 | |
| 69 Trichloroethene | 130 | 3.536 | 3.536 | 0.000 | 97 | 58647 | 20.0 | 21.4 | |
| 70 2-ethoxy-2-methyl butane | 59 | 3.765 | 3.765 | 0.000 | 94 | 106624 | 20.0 | 18.9 | |
| 71 Dibromomethane | 93 | 3.894 | 3.894 | 0.000 | 94 | 24698 | 20.0 | 20.2 | |
| 72 n-Butanol | 56 | 3.915 | 3.915 | 0.000 | 87 | 13162 | 500.0 | 457.4 | |
| 73 1,2-Dichloropropane | 63 | 3.980 | 3.980 | 0.000 | 93 | 52139 | 20.0 | 19.0 | |
| 75 Dichlorobromomethane | 83 | 4.066 | 4.066 | 0.000 | 99 | 61097 | 20.0 | 20.3 | |
| 74 Ethyl acrylate | 55 | 4.066 | 4.066 | 0.000 | 55 | 33447 | 20.0 | 18.3 | |
| * 76 1,4-Dioxane-d8 | 96 | 4.238 | 4.238 | 0.000 | 86 | 12024 | 1000.0 | 1000.0 | |
| 77 Methyl methacrylate | 100 | 4.252 | 4.252 | 0.000 | 91 | 17436 | 40.0 | 42.7 | |
| 78 1,4-Dioxane | 88 | 4.259 | 4.259 | 0.000 | 34 | 6787 | 400.0 | 489.4 | |
| 79 n-Propyl acetate | 43 | 4.417 | 4.417 | 0.000 | 99 | 35837 | 20.0 | 17.4 | |
| 80 2-Chloroethyl vinyl ether | 63 | 4.675 | 4.675 | 0.000 | 96 | 6843 | 20.0 | 13.2 | |
| 81 cis-1,3-Dichloropropene | 75 | 4.696 | 4.696 | 0.000 | 91 | 73524 | 20.0 | 19.2 | |
| $ 82 Toluene-d8 (Surr) | 98 | 4.882 | 4.882 | 0.000 | 99 | 475794 | 50.0 | 49.3 | |
| 83 Toluene | 91 | 4.933 | 4.933 | 0.000 | 93 | 240912 | 20.0 | 20.3 | |
| 84 Epichlorohydrin | 57 | 4.983 | 4.983 | 0.000 | 93 | 14746 | 400.0 | 417.7 | a |
| 85 2-Nitropropane | 41 | 5.190 | 5.190 | 0.000 | 97 | 9742 | 40.0 | 35.8 | |
| 86 Tetrachloroethene | 166 | 5.362 | 5.362 | 0.000 | 97 | 58365 | 20.0 | 20.9 | |
| 87 4-Methyl-2-pentanone (MIBK) | 43 | 5.398 | 5.398 | 0.000 | 94 | 130829 | 100.0 | 126.3 | |
| 88 trans-1,3-Dichloropropene | 75 | 5.441 | 5.441 | 0.000 | 99 | 57731 | 20.0 | 19.0 | |

| Compound | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q | Response | Cal Amt ug/l | OnCol Amt ug/l | Flags |
|---|---|---|---|---|---|---|---|---|---|
| 89 1,1,2-Trichloroethane | 83 | 5.606 | 5.606 | 0.000 | 96 | 31267 | 20.0 | 19.3 | |
| 90 Ethyl methacrylate | 69 | 5.692 | 5.692 | 0.000 | 89 | 43186 | 20.0 | 20.1 | |
| 91 Chlorodibromomethane | 129 | 5.807 | 5.807 | 0.000 | 99 | 40844 | 20.0 | 19.6 | |
| 92 1,3-Dichloropropane | 76 | 5.914 | 5.914 | 0.000 | 93 | 64259 | 20.0 | 19.1 | |
| 93 Ethylene Dibromide | 107 | 6.043 | 6.043 | 0.000 | 98 | 34908 | 20.0 | 20.1 | |
| 94 n-Butyl acetate | 43 | 6.401 | 6.401 | 0.000 | 97 | 37350 | 20.0 | 16.5 | |
| 95 2-Hexanone | 43 | 6.458 | 6.458 | 0.000 | 93 | 90977 | 100.0 | 130.8 | |
| * 96 Chlorobenzene-d5 | 117 | 6.723 | 6.723 | 0.000 | 85 | 373898 | 50.0 | 50.0 | |
| 97 Chlorobenzene | 112 | 6.745 | 6.745 | 0.000 | 95 | 153404 | 20.0 | 20.6 | |
| 98 Ethylbenzene | 106 | 6.831 | 6.831 | 0.000 | 98 | 87397 | 20.0 | 21.0 | |
| 99 1,1,1,2-Tetrachloroethane | 131 | 6.852 | 6.852 | 0.000 | 97 | 46090 | 20.0 | 20.0 | |
| 100 m-Xylene & p-Xylene | 106 | 7.046 | 7.046 | 0.000 | 0 | 104538 | 20.0 | 21.4 | |
| 101 o-Xylene | 106 | 7.626 | 7.626 | 0.000 | 95 | 99740 | 20.0 | 20.2 | |
| 102 Bromoform | 173 | 7.698 | 7.698 | 0.000 | 96 | 23105 | 20.0 | 19.6 | |
| 103 Styrene | 104 | 7.712 | 7.712 | 0.000 | 96 | 166028 | 20.0 | 21.0 | |
| 104 n-Butyl acrylate | 73 | 8.056 | 8.056 | 0.000 | 98 | 24060 | 20.0 | 18.2 | |
| 105 Isopropylbenzene | 105 | 8.113 | 8.113 | 0.000 | 95 | 267653 | 20.0 | 20.9 | |
| 106 Amyl acetate (mixed isomers) | 43 | 8.464 | 8.464 | 0.000 | 91 | 53363 | 20.0 | 17.8 | |
| $ 107 4-Bromofluorobenzene | 174 | 8.478 | 8.478 | 0.000 | 95 | 164146 | 50.0 | 54.2 | |
| 108 Bromobenzene | 156 | 8.586 | 8.586 | 0.000 | 96 | 65525 | 20.0 | 21.3 | |
| 109 N-Propylbenzene | 91 | 8.743 | 8.743 | 0.000 | 99 | 315502 | 20.0 | 20.5 | |
| 110 1,1,2,2-Tetrachloroethane | 83 | 8.894 | 8.894 | 0.000 | 97 | 41235 | 20.0 | 19.3 | |
| 111 2-Chlorotoluene | 91 | 8.908 | 8.908 | 0.000 | 97 | 208688 | 20.0 | 19.7 | |
| 112 4-Ethyltoluene | 105 | 8.930 | 8.930 | 0.000 | 98 | 264241 | 20.0 | 20.7 | |
| 113 1,2,3-Trichloropropane | 110 | 9.023 | 9.023 | 0.000 | 98 | 11550 | 20.0 | 20.5 | |
| 114 1,3,5-Trimethylbenzene | 105 | 9.087 | 9.087 | 0.000 | 94 | 219296 | 20.0 | 20.6 | |
| 115 trans-1,4-Dichloro-2-butene | 53 | 9.159 | 9.159 | 0.000 | 40 | 8646 | 20.0 | 21.2 | a |
| 116 4-Chlorotoluene | 91 | 9.173 | 9.173 | 0.000 | 97 | 190037 | 20.0 | 20.4 | |
| 117 tert-Butylbenzene | 119 | 9.546 | 9.546 | 0.000 | 95 | 190651 | 20.0 | 20.7 | |
| 118 1,2,4-Trimethylbenzene | 105 | 9.682 | 9.682 | 0.000 | 97 | 222418 | 20.0 | 20.2 | |
| 119 Butyl Methacrylate | 87 | 9.696 | 9.696 | 0.000 | 91 | 56464 | 20.0 | 19.1 | |
| 120 sec-Butylbenzene | 105 | 9.839 | 9.839 | 0.000 | 99 | 285645 | 20.0 | 20.4 | |
| 121 1,3-Dichlorobenzene | 146 | 10.097 | 10.097 | 0.000 | 98 | 128829 | 20.0 | 21.2 | |
| 122 4-Isopropyltoluene | 119 | 10.119 | 10.119 | 0.000 | 98 | 244467 | 20.0 | 20.7 | |
| * 123 1,4-Dichlorobenzene-d4 | 152 | 10.226 | 10.226 | 0.000 | 93 | 207926 | 50.0 | 50.0 | |
| 124 1,4-Dichlorobenzene | 146 | 10.248 | 10.248 | 0.000 | 97 | 133698 | 20.0 | 20.9 | |
| 125 1,2,3-Trimethylbenzene | 105 | 10.355 | 10.355 | 0.000 | 98 | 226754 | 20.0 | 20.3 | |
| 126 2,3-Dihydroindene | 117 | 10.527 | 10.527 | 0.000 | 95 | 218551 | 20.0 | 20.2 | |
| 127 Benzyl chloride | 126 | 10.713 | 10.713 | 0.000 | 97 | 12900 | 20.0 | 19.9 | |
| 128 p-Diethylbenzene | 119 | 10.728 | 10.728 | 0.000 | 94 | 120990 | 20.0 | 20.3 | |
| 129 n-Butylbenzene | 91 | 10.813 | 10.813 | 0.000 | 98 | 217016 | 20.0 | 20.2 | |
| 130 1,2-Dichlorobenzene | 146 | 10.914 | 10.914 | 0.000 | 98 | 114439 | 20.0 | 20.6 | |
| 131 1,2,4,5-Tetramethylbenzene | 119 | 11.924 | 11.924 | 0.000 | 97 | 210522 | 20.0 | 20.3 | |
| 132 1,2-Dibromo-3-Chloropropane | 157 | 12.074 | 12.074 | 0.000 | 91 | 7079 | 20.0 | 20.0 | |
| 133 1,3,5-Trichlorobenzene | 180 | 12.117 | 12.117 | 0.000 | 98 | 93351 | 20.0 | 21.2 | |
| 134 1,2,4-Trichlorobenzene | 180 | 12.819 | 12.819 | 0.000 | 94 | 73278 | 20.0 | 19.8 | |
| 135 Hexachlorobutadiene | 225 | 12.841 | 12.841 | 0.000 | 97 | 32295 | 20.0 | 19.8 | |
| 136 Naphthalene | 128 | 13.127 | 13.127 | 0.000 | 100 | 121098 | 20.0 | 17.7 | |
| 137 1,2,3-Trichlorobenzene | 180 | 13.299 | 13.299 | 0.000 | 95 | 54848 | 20.0 | 18.1 | |
| S 138 1,2-Dichloroethene, Total | 100 | | | | 0 | | 40.0 | 41.7 | |
| S 139 1,3-Dichloropropene, Total | 100 | | | | 0 | | 40.0 | 38.2 | |
| S 140 Xylenes, Total | 100 | | | | 0 | | 40.0 | 41.6 | |

| Compound | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q | Response | Cal Amt ug/l | OnCol Amt ug/l | Flags |
|---|---|---|---|---|---|---|---|---|---|
| S 142 Total BTEX | 1 | | | | 0 | | 100.0 | 102.4 | |

## QC Flag Legend

Review Flags

a - User Assigned ID

## Reagents:

| | | | | |
|---|---|---|---|---|
| ACROLEIN W_00112 | Amount Added: | 4.00 | Units: uL | |
| 8260MIX1COMB_00125 | Amount Added: | 20.00 | Units: uL | |
| GASES Li_00385 | Amount Added: | 20.00 | Units: uL | |
| 8260ISNEW_00129 | Amount Added: | 1.00 | Units: uL | Run Reagent |
| 8260SURR250_00212 | Amount Added: | 1.00 | Units: uL | Run Reagent |

Report Date: 10-Sep-2020 14:25:33 Chrom Revision: 2.3 20-Aug-2020 13:57:12

Eurofins TestAmerica, Edison

Data File: \\chromfs\Edison\ChromData\CVOAMS13\20200909-116494.b\P79533.D

Injection Date: 09-Sep-2020 19:04:30 Instrument ID: CVOAMS13 Operator ID:

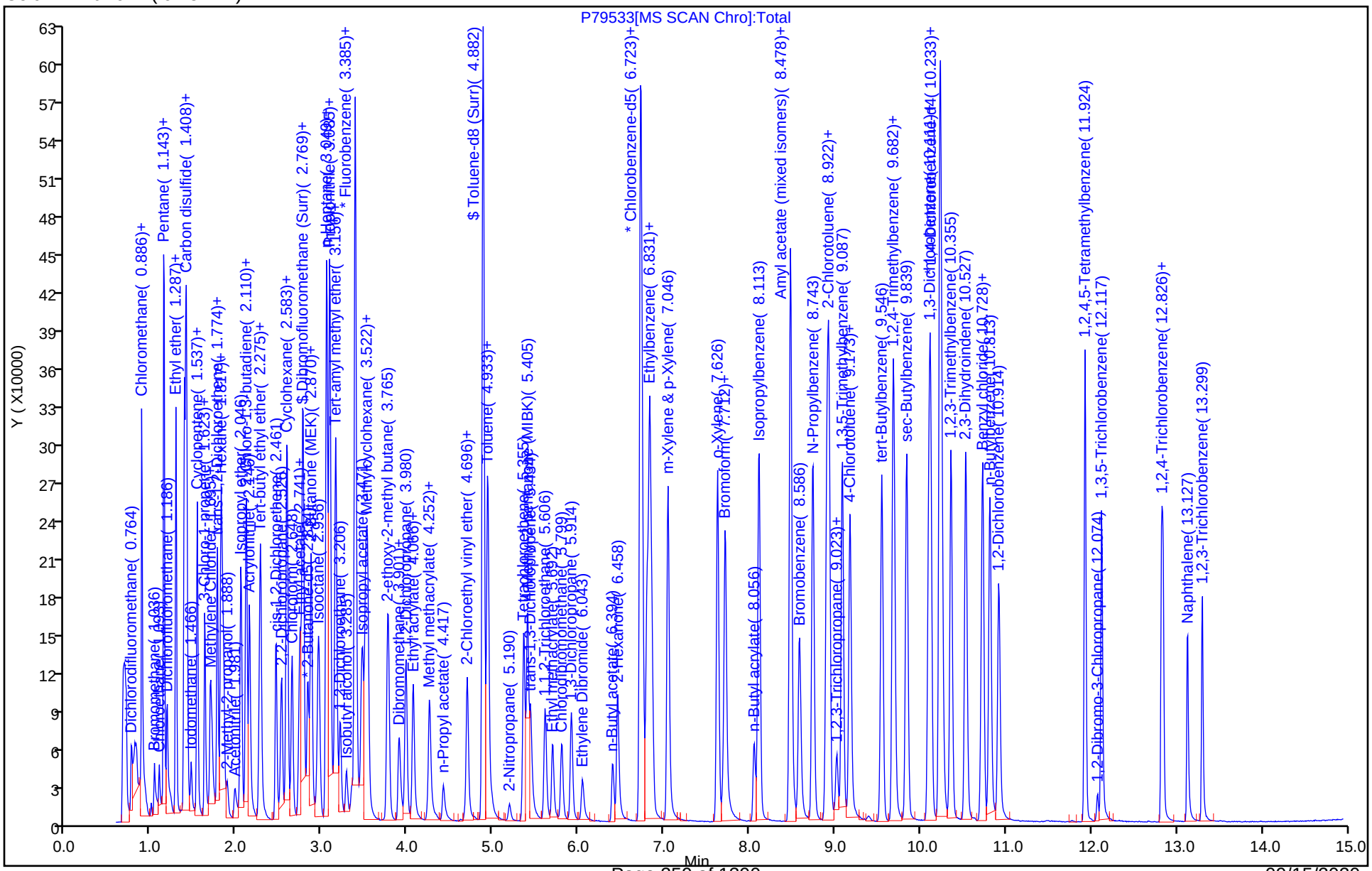
Lims ID: CCVIS Worklist Smp#: 4

Client ID:

Purge Vol: 5.000 mL Dil. Factor: 1.0000 ALS Bottle#: 3

Method: 8260W_13 Limit Group: VOA - 8260C Water and Solid

Column: Rtx-624 ( 0.25 mm)



Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Edison

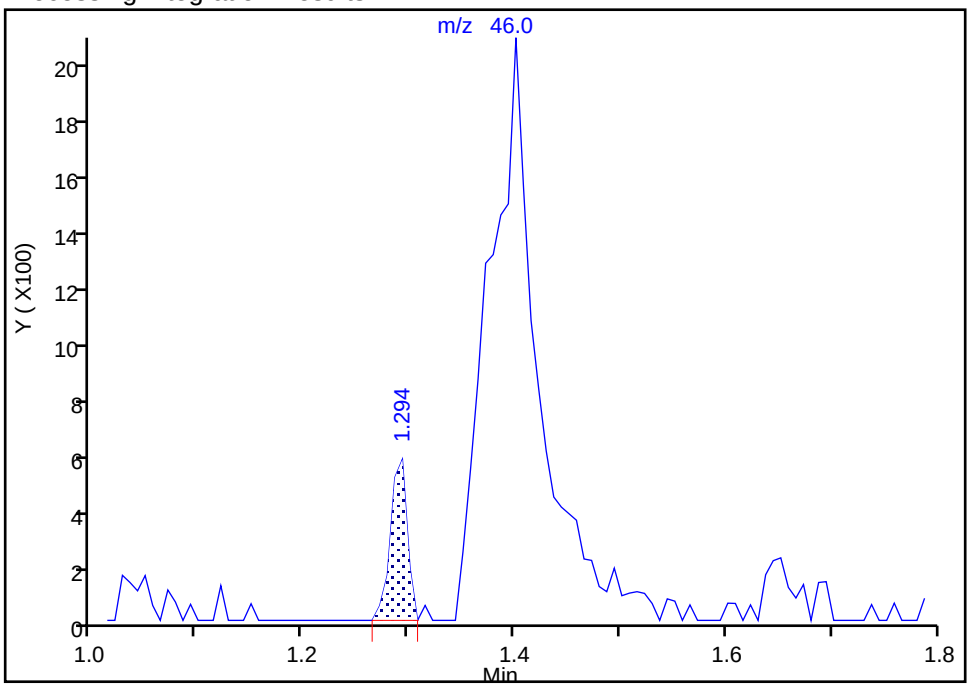
Data File: \\chromfs\Edison\ChromData\CVOAMS13\20200909-116494.b\P79533.D
Injection Date: 09-Sep-2020 19:04:30 Instrument ID: CVOAMS13
Lims ID: CCVIS
Client ID:
Operator ID: ALS Bottle#: 3 Worklist Smp#: 4
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: 8260W_13 Limit Group: VOA - 8260C Water and Solid
Column: Rtx-624 ( 0.25 mm) Detector MS SCAN

## 16 Ethanol, CAS: 64-17-5

Signal: 1

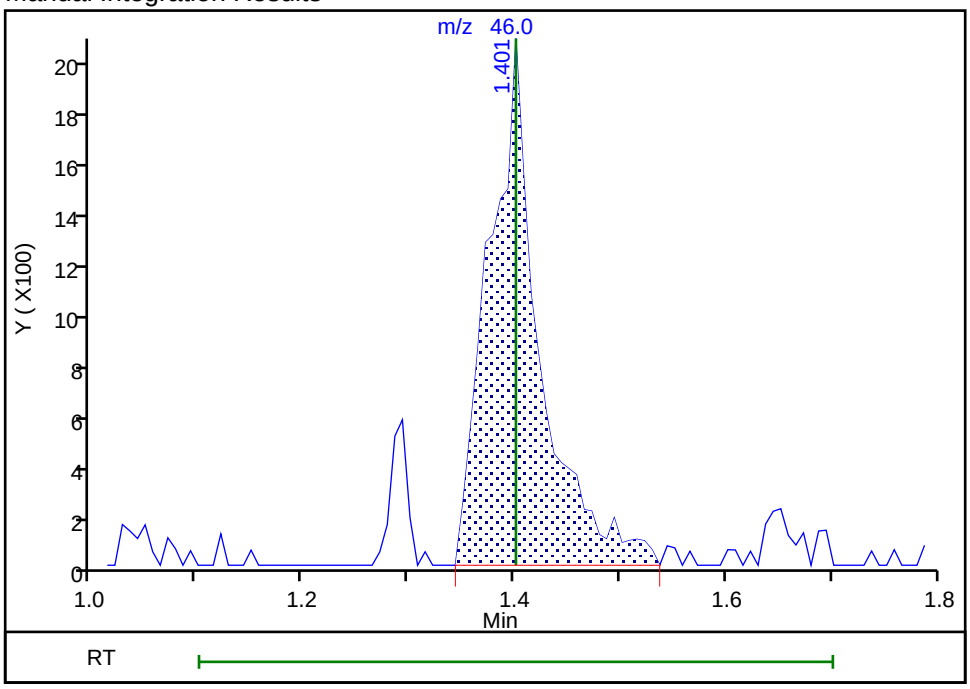
Processing Integration Results

RT: 1.29
Area: 624
Amount: 86.293585
Amount Units: ug/l




Manual Integration Results

RT: 1.40
Area: 6782
Amount: 937.8896
Amount Units: ug/l




Reviewer: sgroa, 09-Sep-2020 18:22:25
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Edison

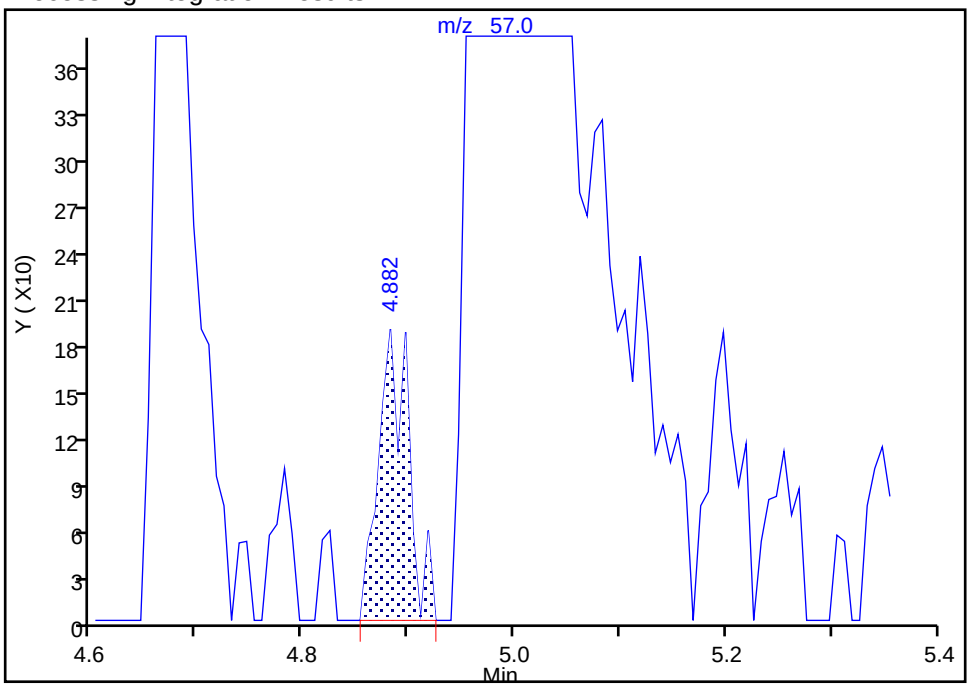
Data File: \\chromfs\Edison\ChromData\CVOAMS13\20200909-116494.b\P79533.D
Injection Date: 09-Sep-2020 19:04:30 Instrument ID: CVOAMS13
Lims ID: CCVIS
Client ID:
Operator ID: ALS Bottle#: 3 Worklist Smp#: 4
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: 8260W_13 Limit Group: VOA - 8260C Water and Solid
Column: Rtx-624 ( 0.25 mm) Detector MS SCAN

## 84 Epichlorohydrin, CAS: 106-89-8

Signal: 1

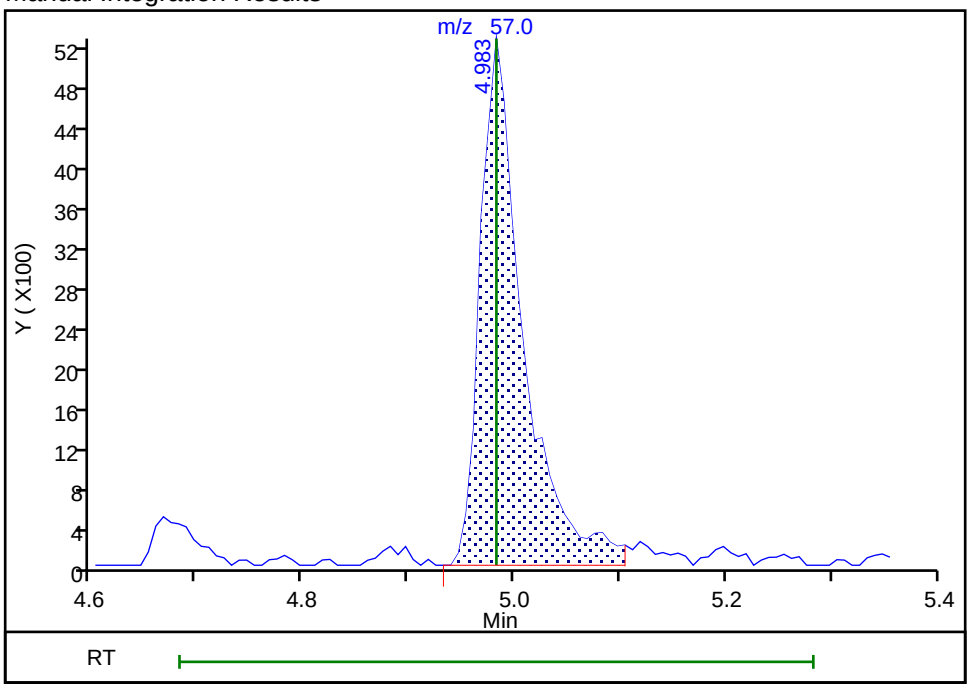
Processing Integration Results

RT: 4.88
Area: 367
Amount: 10.715751
Amount Units: ug/l




Manual Integration Results

RT: 4.98
Area: 14746
Amount: 417.7364
Amount Units: ug/l




Reviewer: xuyvo, 10-Sep-2020 11:00:17
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Edison

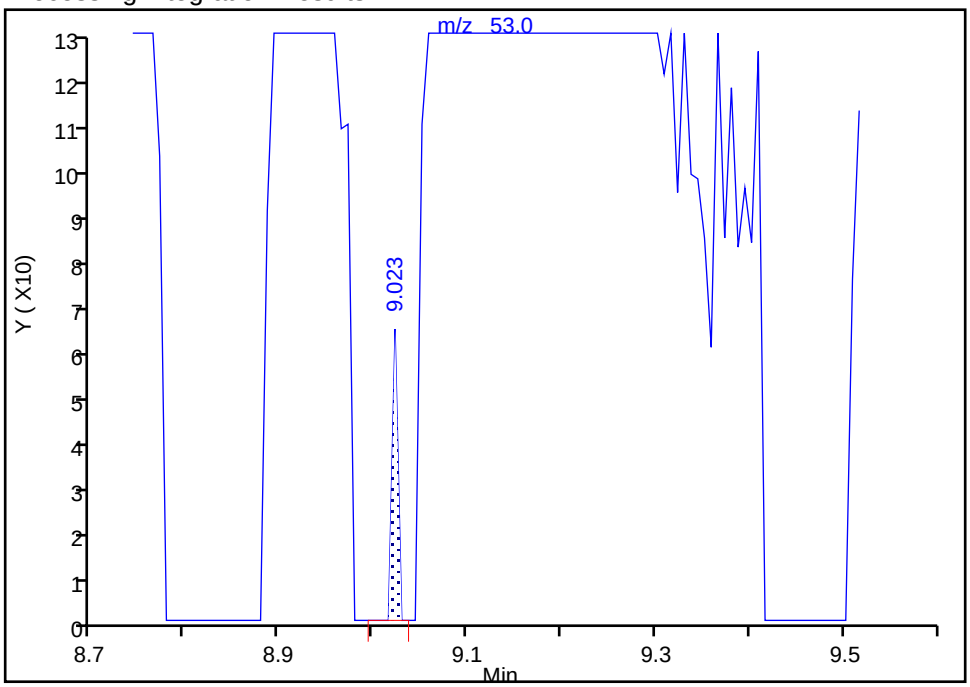
Data File: \\chromfs\Edison\ChromData\CVOAMS13\20200909-116494.b\P79533.D
Injection Date: 09-Sep-2020 19:04:30 Instrument ID: CVOAMS13
Lims ID: CCVIS
Client ID:
Operator ID: ALS Bottle#: 3 Worklist Smp#: 4
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: 8260W_13 Limit Group: VOA - 8260C Water and Solid
Column: Rtx-624 ( 0.25 mm) Detector MS SCAN

## 115 trans-1,4-Dichloro-2-butene, CAS: 110-57-6

Signal: 1

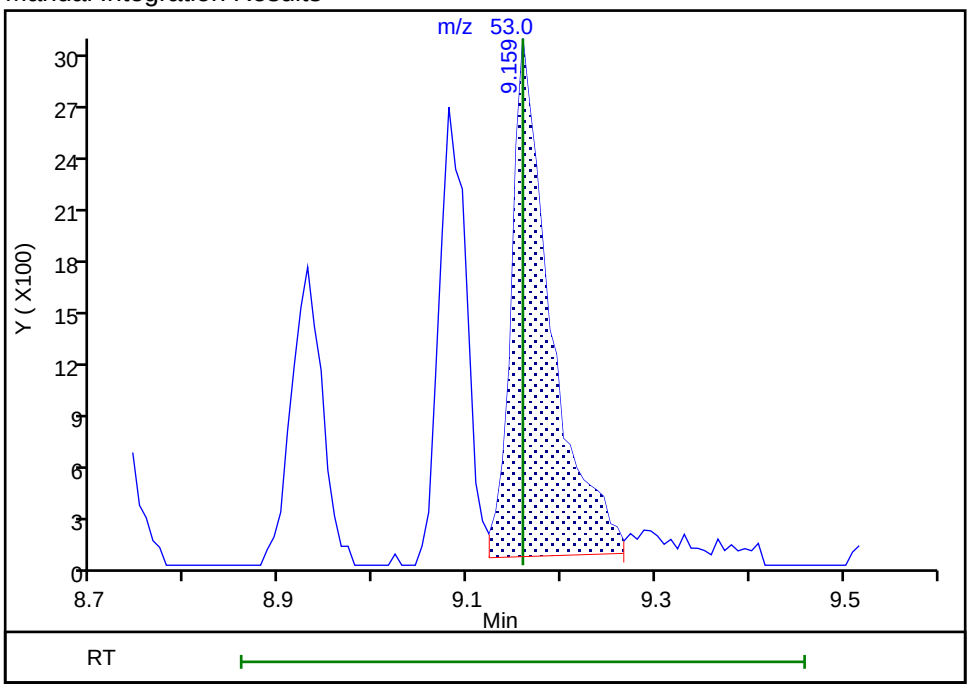
Processing Integration Results

RT: 9.02
Area: 28
Amount: 0.068775
Amount Units: ug/l




Manual Integration Results

RT: 9.16
Area: 8646
Amount: 21.236602
Amount Units: ug/l




Reviewer: xuyvo, 10-Sep-2020 11:00:01
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Eurofins TestAmerica, Edison
Target Compound Quantitation Report

| | | | | | |
|---|---|---|---|---|---|
| Data File: | \\chromfs\Edison\ChromData\CVOAMS13\20200904-116303.b\P79350.D | | | | |
| Lims ID: | BFB | | | | |
| Client ID: | | | | | |
| Sample Type: | BFB | | | | |
| Inject. Date: | 04-Sep-2020 13:21:30 | ALS Bottle#: | 99 | Worklist Smp#: | 1 |
| Injection Vol: | 5.0 mL | Dil. Factor: | 1.0000 | | |
| Sample Info: | BFB | | | | |
| Misc. Info.: | 460-0116303-001 | | | | |
| Operator ID: | | Instrument ID: | CVOAMS13 | | |
| Method: | \\chromfs\Edison\ChromData\CVOAMS13\20200904-116303.b\8260W_13.m | | | | |
| Limit Group: | VOA - 8260C Water and Solid | | | | |
| Last Update: | 05-Sep-2020 12:39:16 | Calib Date: | 04-Sep-2020 16:58:30 | | |
| Integrator: | RTE | ID Type: | Deconvolution ID | | |
| Quant Method: | Internal Standard | Quant By: | Initial Calibration | | |
| Last ICal File: | \\chromfs\Edison\ChromData\CVOAMS13\20200904-116303.b\P79359.D | | | | |
| Column 1 : | Rtx-624 ( 0.25 mm) | | Det: MS SCAN | | |
| Process Host: | CTX1014 | | | | |
| First Level Reviewer: starzecm | | Date: | 04-Sep-2020 12:34:18 | | |

| Compound | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q | Response | Cal Amt ug/l | OnCol Amt ug/l | Flags |
|---|---|---|---|---|---|---|---|---|---|
| $ 143 BFB | 95 | 2.007 | 2.007 | 0.000 | 89 | 27033 | NR | NR | |

## QC Flag Legend

Processing Flags
NR - Missing Quant Standard

## Reagents:

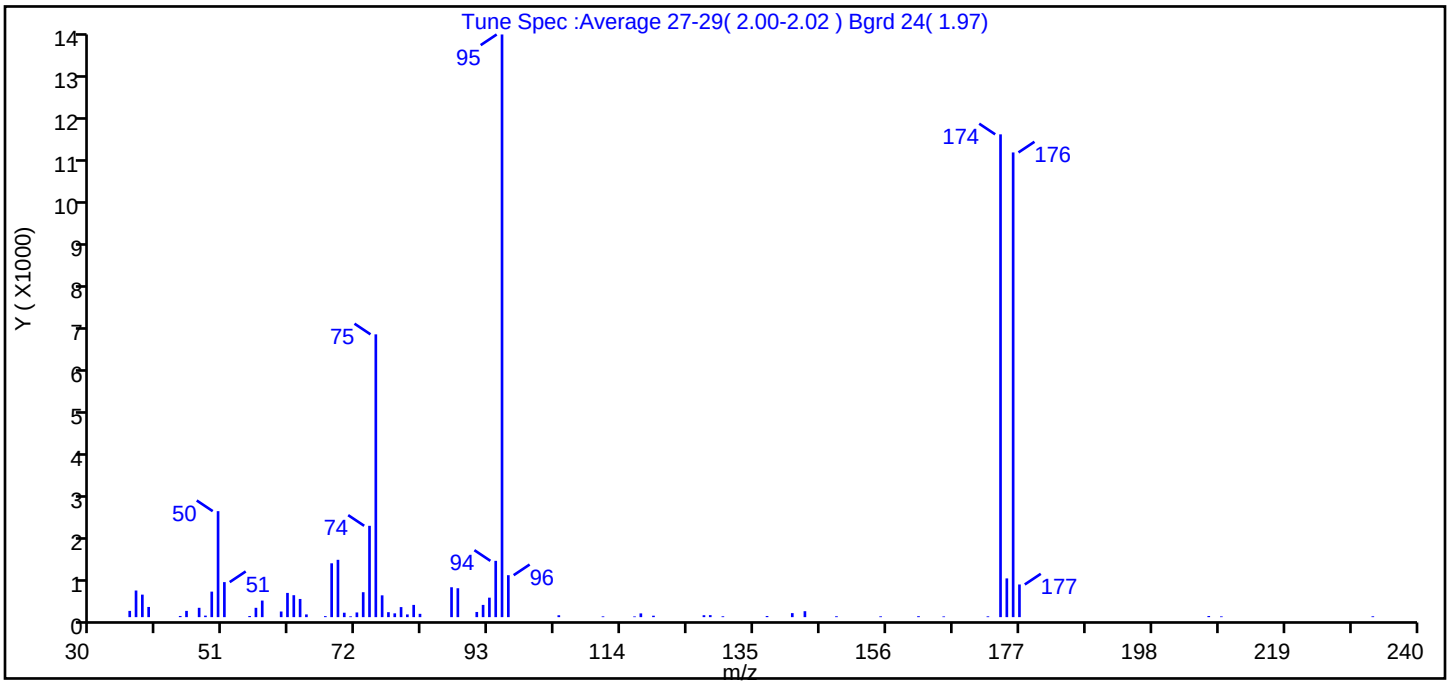
BFB_00026 Amount Added: 1.00 Units: uL

MS Tune Report

Eurofins TestAmerica, Edison

Data File: \\chromfs\Edison\ChromData\CVOAMS13\20200904-116303.b\P79350.D
Injection Date: 04-Sep-2020 13:21:30 Instrument ID: CVOAMS13
Lims ID: BFB
Client ID:
Operator ID: ALS Bottle#: 99 Worklist Smp#: 1
Injection Vol: 5.0 mL Dil. Factor: 1.0000
Method: 8260W_13 Limit Group: VOA - 8260C Water and Solid
Tune Method: BFB Method 8260

$ 143 BFB




| m/z | Ion Abundance Criteria | % Relative Abundance |
|---|---|---|
| 95 | Base peak, 100% relative abundance | 100.0 |
| 50 | 15 to 40% of m/z 95 | 18.2 |
| 75 | 30 to 60% of m/z 95 | 48.5 |
| 96 | 5 to 9% of m/z 95 | 7.2 |
| 173 | Less than 2% of m/z 174 | 0.0 (0.0) |
| 174 | 50 to 120% of m/z 95 | 82.9 |
| 175 | 5 to 9% of m/z 174 | 6.6 (8.0) |
| 176 | Greater than 95% but less than 101% of m/z 174 | 79.8 (96.3) |
| 177 | 5 to 9% of m/z 176 | 5.6 (7.0) |

Data File: \\chromfs\Edison\ChromData\CVOAMS13\20200904-116303.b\P79350.D\8260W_13.rslt\spectra.d
Injection Date: 04-Sep-2020 13:21:30
Spectrum: Tune Spec :Average 27-29( 2.00-2.02 ) Bgrd 24( 1.97)
Base Peak: 95.00
Minimum % Base Peak: 0
Number of Points: 66

| m/z | Y | m/z | Y | m/z | Y | m/z | Y |
|---|---|---|---|---|---|---|---|
| 36.00 | 140 | 63.00 | 407 | 82.00 | 74 | 137.00 | 25 |
| 37.00 | 596 | 64.00 | 61 | 87.00 | 669 | 141.00 | 90 |
| 38.00 | 504 | 67.00 | 23 | 88.00 | 647 | 143.00 | 133 |
| 39.00 | 228 | 68.00 | 1205 | 91.00 | 116 | 148.00 | 20 |
| 44.00 | 26 | 69.00 | 1283 | 92.00 | 274 | 155.00 | 18 |
| 45.00 | 140 | 70.00 | 99 | 93.00 | 436 | 161.00 | 21 |
| 47.00 | 209 | 71.00 | 18 | 94.00 | 1260 | 165.00 | 16 |
| 48.00 | 34 | 72.00 | 105 | 95.00 | 13040 | 172.00 | 18 |
| 49.00 | 571 | 73.00 | 558 | 96.00 | 939 | 174.00 | 10805 |
| 50.00 | 2372 | 74.00 | 2044 | 104.00 | 42 | 175.00 | 867 |
| 51.00 | 784 | 75.00 | 6329 | 111.00 | 17 | 176.00 | 10400 |
| 55.00 | 25 | 76.00 | 488 | 116.00 | 16 | 177.00 | 731 |
| 56.00 | 209 | 77.00 | 111 | 117.00 | 84 | 207.00 | 25 |
| 57.00 | 371 | 78.00 | 85 | 119.00 | 32 | 209.00 | 17 |
| 60.00 | 126 | 79.00 | 225 | 127.00 | 43 | 233.00 | 19 |
| 61.00 | 542 | 80.00 | 61 | 128.00 | 45 | | |
| 62.00 | 491 | 81.00 | 274 | 130.00 | 19 | | |

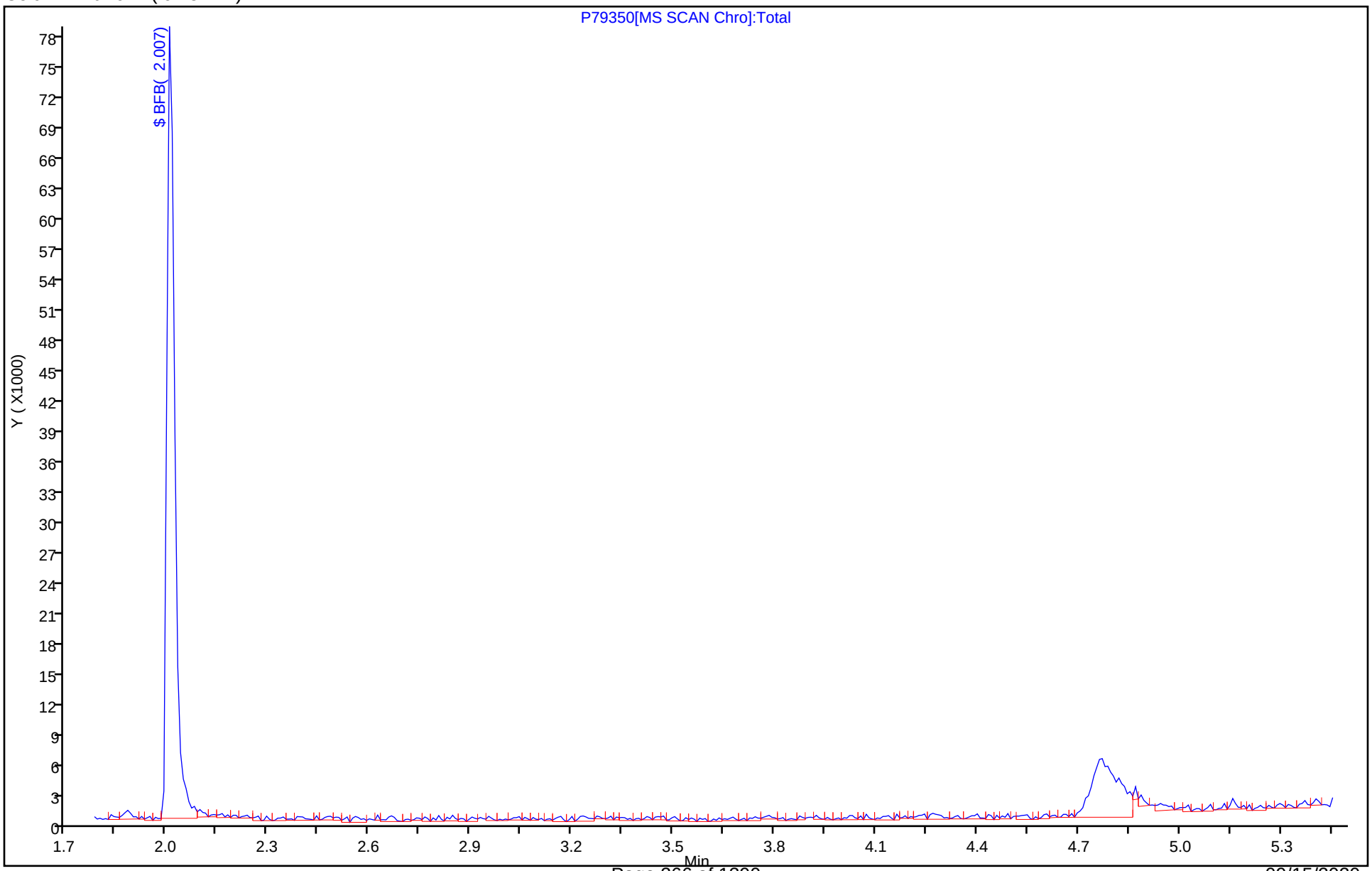
Report Date: 05-Sep-2020 12:39:16 Chrom Revision: 2.3 20-Aug-2020 13:57:12

Eurofins TestAmerica, Edison

Data File: \\chromfs\Edison\ChromData\CVOAMS13\20200904-116303.b\P79350.D

| | | | | | |
|---|---|---|---|---|---|
| Injection Date: | 04-Sep-2020 13:21:30 | Instrument ID: | CVOAMS13 | Operator ID: | |
| Lims ID: | BFB | | | Worklist Smp#: | 1 |
| Client ID: | | | | | |
| Injection Vol: | 5.0 mL | Dil. Factor: | 1.0000 | ALS Bottle#: | 99 |
| Method: | 8260W_13 | Limit Group: | VOA - 8260C Water and Solid | | |

Column: Rtx-624 ( 0.25 mm)



Eurofins TestAmerica, Edison
Target Compound Quantitation Report

| | | | | | |
|---|---|---|---|---|---|
| Data File: | \\chromfs\Edison\ChromData\CVOAMS13\20200908-116444.b\P79479.D | | | | |
| Lims ID: | BFB | | | | |
| Client ID: | | | | | |
| Sample Type: | BFB | | | | |
| Inject. Date: | 08-Sep-2020 19:03:30 | ALS Bottle#: | 99 | Worklist Smp#: | 1 |
| Injection Vol: | 5.0 mL | Dil. Factor: | 1.0000 | | |
| Sample Info: | BFB | | | | |
| Misc. Info.: | 460-0116444-001 | | | | |
| Operator ID: | | Instrument ID: | CVOAMS13 | | |
| Method: | \\chromfs\Edison\ChromData\CVOAMS13\20200908-116444.b\8260W_13.m | | | | |
| Limit Group: | VOA - 8260C Water and Solid | | | | |
| Last Update: | 08-Sep-2020 20:17:20 | Calib Date: | 04-Sep-2020 16:58:30 | | |
| Integrator: | RTE | ID Type: | Deconvolution ID | | |
| Quant Method: | Internal Standard | Quant By: | Initial Calibration | | |
| Last ICal File: | \\chromfs\Edison\ChromData\CVOAMS13\20200904-116303.b\P79359.D | | | | |
| Column 1 : | Rtx-624 ( 0.25 mm) | | Det: MS SCAN | | |
| Process Host: | CTX1016 | | | | |

| Compound | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q | Response | Cal Amt ug/l | OnCol Amt ug/l | Flags |
|---|---|---|---|---|---|---|---|---|---|
| $ 143 BFB | 95 | 2.015 | 2.015 | 0.000 | 96 | 33954 | NR | NR | |

## QC Flag Legend

Processing Flags
NR - Missing Quant Standard

## Reagents:

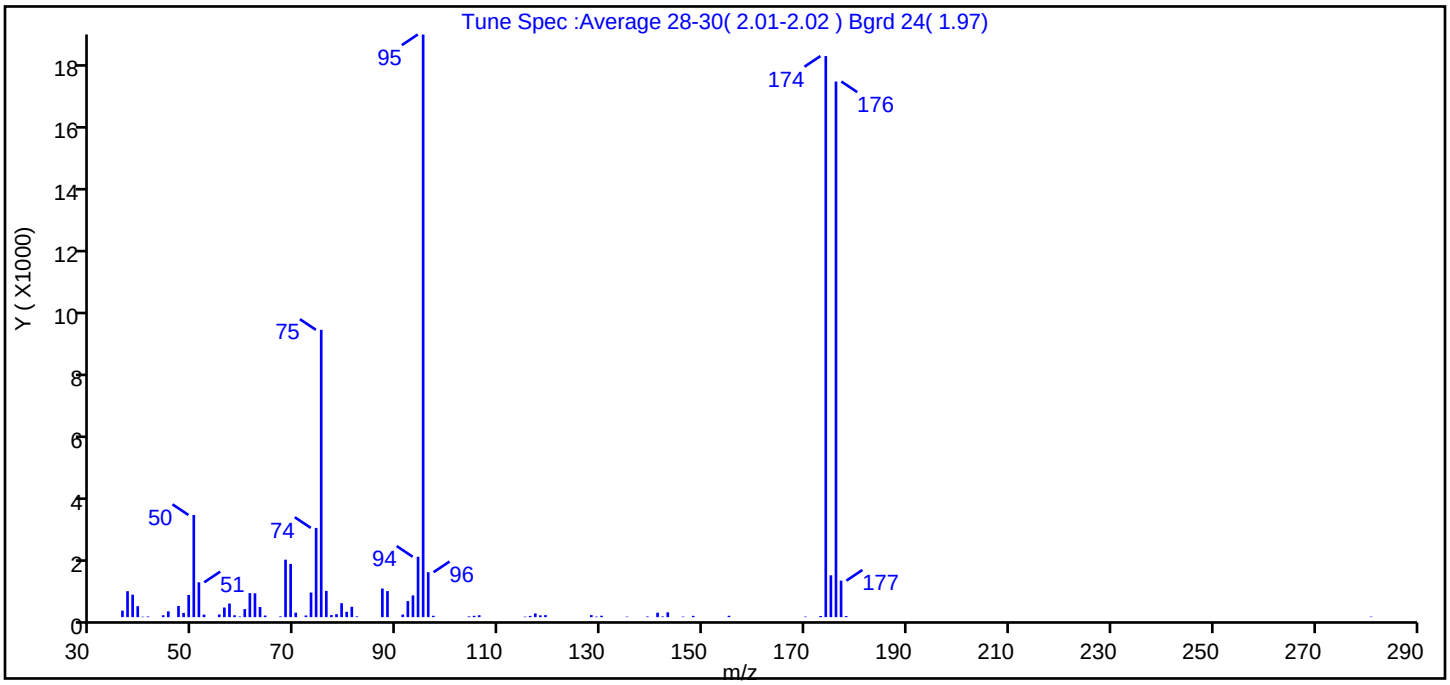
BFB_00026 Amount Added: 1.00 Units: uL

MS Tune Report

Eurofins TestAmerica, Edison

Data File: \\chromfs\Edison\ChromData\CVOAMS13\20200908-116444.b\P79479.D
Injection Date: 08-Sep-2020 19:03:30 Instrument ID: CVOAMS13
Lims ID: BFB
Client ID:
Operator ID: ALS Bottle#: 99 Worklist Smp#: 1
Injection Vol: 5.0 mL Dil. Factor: 1.0000
Method: 8260W_13 Limit Group: VOA - 8260C Water and Solid
Tune Method: BFB Method 8260

$ 143 BFB




| m/z | Ion Abundance Criteria | % Relative Abundance |
|---|---|---|
| 95 | Base peak, 100% relative abundance | 100.0 |
| 50 | 15 to 40% of m/z 95 | 17.5 |
| 75 | 30 to 60% of m/z 95 | 49.3 |
| 96 | 5 to 9% of m/z 95 | 7.7 |
| 173 | Less than 2% of m/z 174 | 0.2 (0.2) |
| 174 | 50 to 120% of m/z 95 | 96.3 |
| 175 | 5 to 9% of m/z 174 | 7.2 (7.5) |
| 176 | Greater than 95% but less than 101% of m/z 174 | 91.9 (95.5) |
| 177 | 5 to 9% of m/z 176 | 6.3 (6.8) |

Data File: \\chromfs\Edison\ChromData\CVOAMS13\20200908-116444.b\P79479.D\8260W_13.rslt\spectra.d
Injection Date: 08-Sep-2020 19:03:30
Spectrum: Tune Spec :Average 28-30( 2.01-2.02 ) Bgrd 24( 1.97)
Base Peak: 95.00
Minimum % Base Peak: 0
Number of Points: 75

| m/z | Y | m/z | Y | m/z | Y | m/z | Y |
|---|---|---|---|---|---|---|---|
| 36.00 | 203 | 60.00 | 251 | 82.00 | 24 | 129.00 | 17 |
| 37.00 | 808 | 61.00 | 749 | 87.00 | 891 | 130.00 | 44 |
| 38.00 | 700 | 62.00 | 742 | 88.00 | 812 | 135.00 | 16 |
| 39.00 | 342 | 63.00 | 316 | 91.00 | 80 | 139.00 | 21 |
| 40.00 | 14 | 64.00 | 50 | 92.00 | 500 | 141.00 | 138 |
| 41.00 | 21 | 67.00 | 22 | 93.00 | 677 | 142.00 | 21 |
| 44.00 | 58 | 68.00 | 1789 | 94.00 | 1880 | 143.00 | 150 |
| 45.00 | 180 | 69.00 | 1658 | 95.00 | 18144 | 146.00 | 17 |
| 47.00 | 349 | 70.00 | 139 | 96.00 | 1400 | 148.00 | 40 |
| 48.00 | 131 | 72.00 | 52 | 97.00 | 43 | 155.00 | 43 |
| 49.00 | 691 | 73.00 | 766 | 104.00 | 23 | 170.00 | 17 |
| 50.00 | 3181 | 74.00 | 2779 | 105.00 | 42 | 173.00 | 36 |
| 51.00 | 1085 | 75.00 | 8947 | 106.00 | 60 | 174.00 | 17472 |
| 52.00 | 79 | 76.00 | 817 | 115.00 | 16 | 175.00 | 1303 |
| 55.00 | 82 | 77.00 | 64 | 116.00 | 39 | 176.00 | 16680 |
| 56.00 | 300 | 78.00 | 93 | 117.00 | 116 | 177.00 | 1137 |
| 57.00 | 424 | 79.00 | 436 | 118.00 | 55 | 178.00 | 34 |
| 58.00 | 59 | 80.00 | 167 | 119.00 | 64 | 281.00 | 16 |
| 59.00 | 19 | 81.00 | 322 | 128.00 | 64 | | |

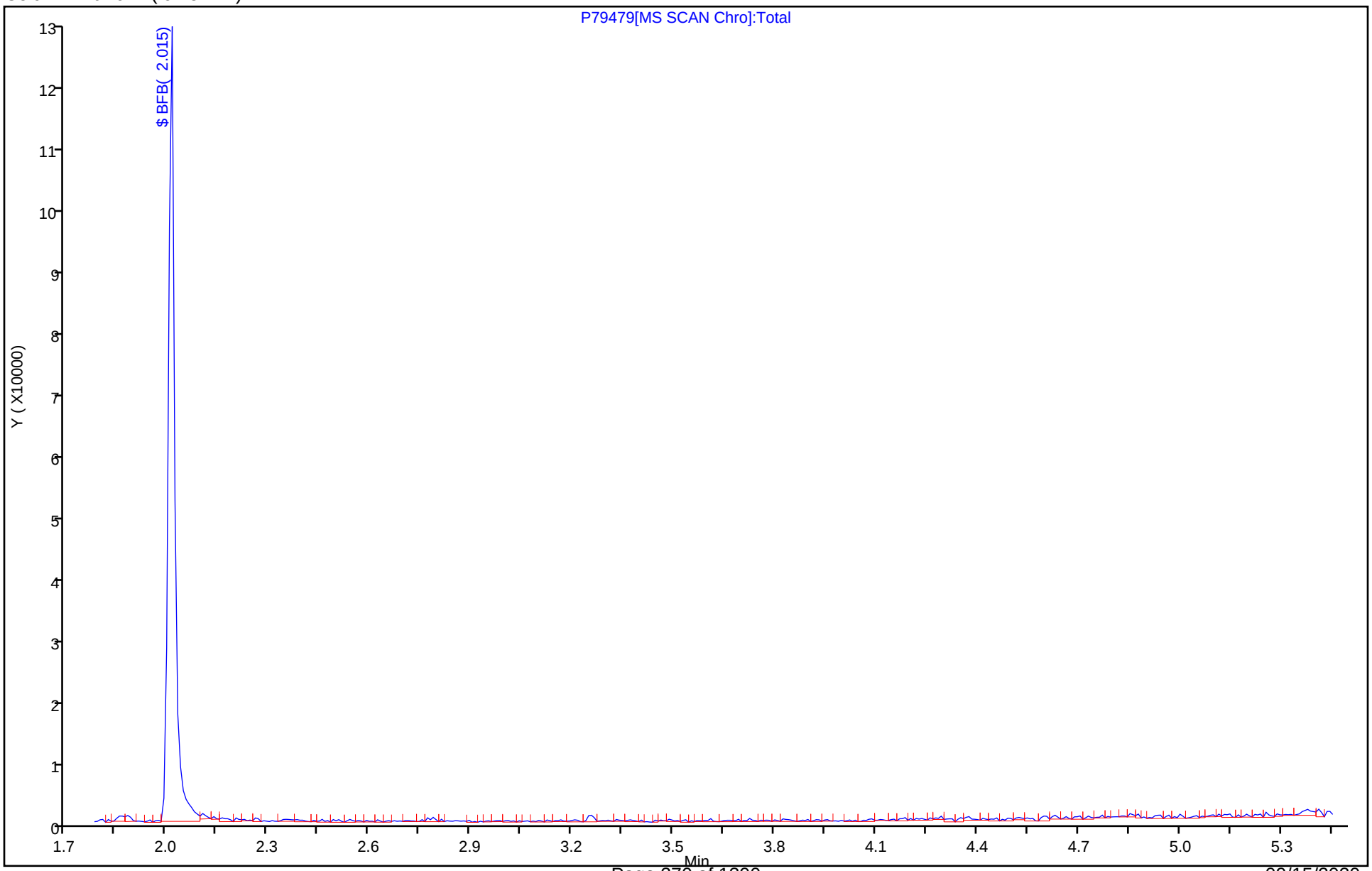
Report Date: 08-Sep-2020 20:17:20 Chrom Revision: 2.3 20-Aug-2020 13:57:12

Eurofins TestAmerica, Edison

Data File: \\chromfs\Edison\ChromData\CVOAMS13\20200908-116444.b\P79479.D

| | | | | | |
|---|---|---|---|---|---|
| Injection Date: | 08-Sep-2020 19:03:30 | Instrument ID: | CVOAMS13 | Operator ID: | |
| Lims ID: | BFB | | | Worklist Smp#: | 1 |
| Client ID: | | | | | |
| Injection Vol: | 5.0 mL | Dil. Factor: | 1.0000 | ALS Bottle#: | 99 |
| Method: | 8260W_13 | Limit Group: | VOA - 8260C Water and Solid | | |

Column: Rtx-624 ( 0.25 mm)



Eurofins TestAmerica, Edison
Target Compound Quantitation Report

Data File: \\chromfs\Edison\ChromData\CVOAMS13\20200909-116470.b\P79504.D
Lims ID: BFB
Client ID:
Sample Type: BFB
Inject. Date: 09-Sep-2020 07:47:30 ALS Bottle#: 99 Worklist Smp#: 1
Injection Vol: 5.0 mL Dil. Factor: 1.0000
Sample Info: BFB
Misc. Info.: 460-0116470-001
Operator ID: Instrument ID: CVOAMS13

Method: \\chromfs\Edison\ChromData\CVOAMS13\20200909-116470.b\8260W_13.m
Limit Group: VOA - 8260C Water and Solid
Last Update: 09-Sep-2020 07:56:24 Calib Date: 04-Sep-2020 16:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Edison\ChromData\CVOAMS13\20200904-116303.b\P79359.D

Column 1 : Rtx-624 ( 0.25 mm) Det: MS SCAN
Process Host: CTX1060

First Level Reviewer: moroneyc Date: 09-Sep-2020 06:57:29

| Compound | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q | Response | Cal Amt ug/l | OnCol Amt ug/l | Flags |
|---|---|---|---|---|---|---|---|---|---|
| $ 143 BFB | 95 | 2.007 | 2.007 | 0.000 | 92 | 20995 | NR | NR | a |

## QC Flag Legend

Processing Flags
NR - Missing Quant Standard
Review Flags
a - User Assigned ID

## Reagents:

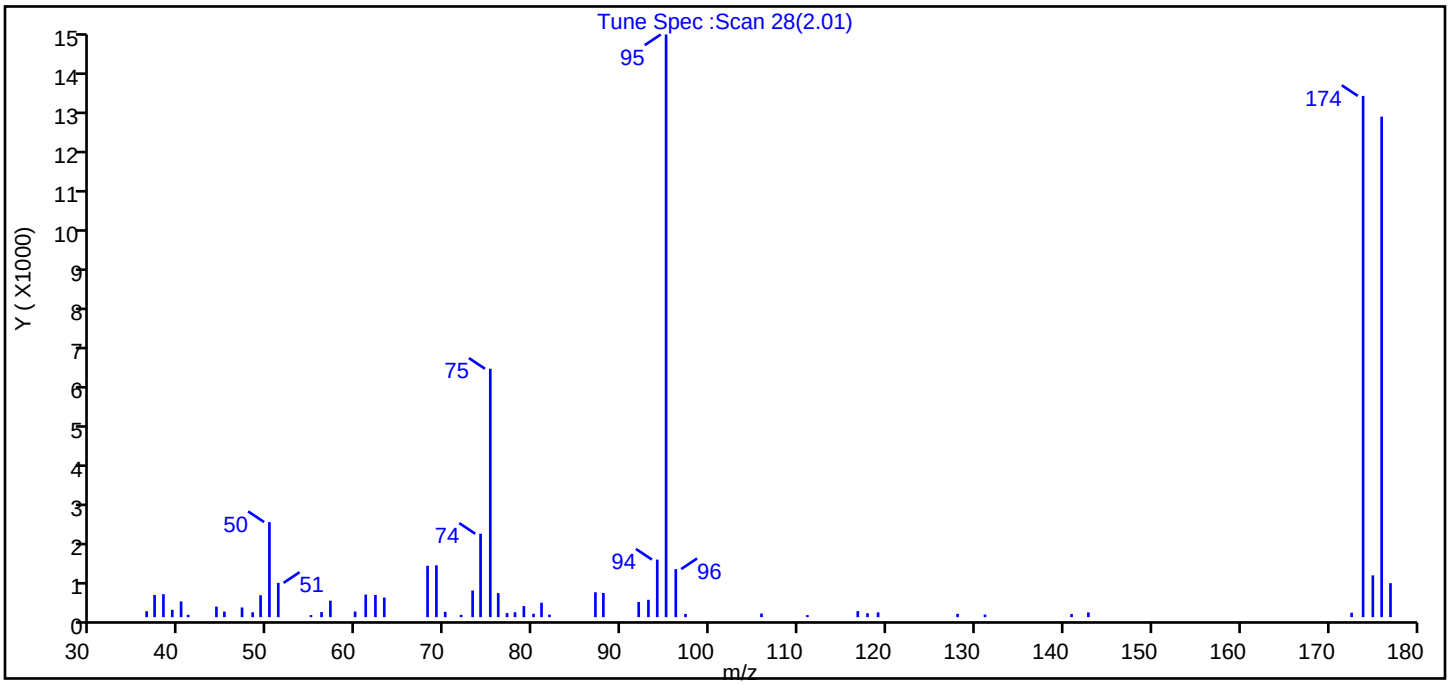
BFB_00026 Amount Added: 1.00 Units: uL

MS Tune Report

Eurofins TestAmerica, Edison

Data File: \\chromfs\Edison\ChromData\CVOAMS13\20200909-116470.b\P79504.D
Injection Date: 09-Sep-2020 07:47:30 Instrument ID: CVOAMS13
Lims ID: BFB
Client ID:
Operator ID: ALS Bottle#: 99 Worklist Smp#: 1
Injection Vol: 5.0 mL Dil. Factor: 1.0000
Method: 8260W_13 Limit Group: VOA - 8260C Water and Solid
Tune Method: BFB Method 8260

$ 143 BFB




| m/z | Ion Abundance Criteria | % Relative Abundance |
|---|---|---|
| 95 | Base peak, 100% relative abundance | 100.0 |
| 50 | 15 to 40% of m/z 95 | 16.3 |
| 75 | 30 to 60% of m/z 95 | 42.6 |
| 96 | 5 to 9% of m/z 95 | 8.2 |
| 173 | Less than 2% of m/z 174 | 0.8 (0.8) |
| 174 | 50 to 120% of m/z 95 | 89.5 |
| 175 | 5 to 9% of m/z 174 | 7.2 (8.0) |
| 176 | Greater than 95% but less than 101% of m/z 174 | 85.9 (96.0) |
| 177 | 5 to 9% of m/z 176 | 5.8 (6.8) |

Data File: \\chromfs\Edison\ChromData\CVOAMS13\20200909-116470.b\P79504.D\8260W_13.rslt\spectra.d
Injection Date: 09-Sep-2020 07:47:30
Spectrum: Tune Spec :Scan 28(2.01)
Base Peak: 95.00
Minimum % Base Peak: 0
Number of Points: 56

| m/z | Y | m/z | Y | m/z | Y | m/z | Y |
|---|---|---|---|---|---|---|---|
| 36.00 | 146 | 56.00 | 124 | 77.00 | 99 | 106.00 | 88 |
| 37.00 | 541 | 57.00 | 402 | 78.00 | 120 | 111.00 | 50 |
| 38.00 | 560 | 60.00 | 137 | 79.00 | 270 | 117.00 | 147 |
| 39.00 | 179 | 61.00 | 552 | 80.00 | 82 | 118.00 | 96 |
| 40.00 | 383 | 62.00 | 541 | 81.00 | 352 | 119.00 | 117 |
| 41.00 | 57 | 63.00 | 478 | 82.00 | 62 | 128.00 | 81 |
| 44.00 | 258 | 68.00 | 1254 | 87.00 | 608 | 131.00 | 63 |
| 45.00 | 136 | 69.00 | 1265 | 88.00 | 590 | 141.00 | 76 |
| 47.00 | 236 | 70.00 | 130 | 92.00 | 369 | 143.00 | 116 |
| 48.00 | 118 | 72.00 | 57 | 93.00 | 423 | 173.00 | 107 |
| 49.00 | 535 | 73.00 | 650 | 94.00 | 1405 | 174.00 | 12725 |
| 50.00 | 2321 | 74.00 | 2036 | 95.00 | 14225 | 175.00 | 1020 |
| 51.00 | 837 | 75.00 | 6064 | 96.00 | 1173 | 176.00 | 12219 |
| 55.00 | 50 | 76.00 | 587 | 97.00 | 79 | 177.00 | 830 |

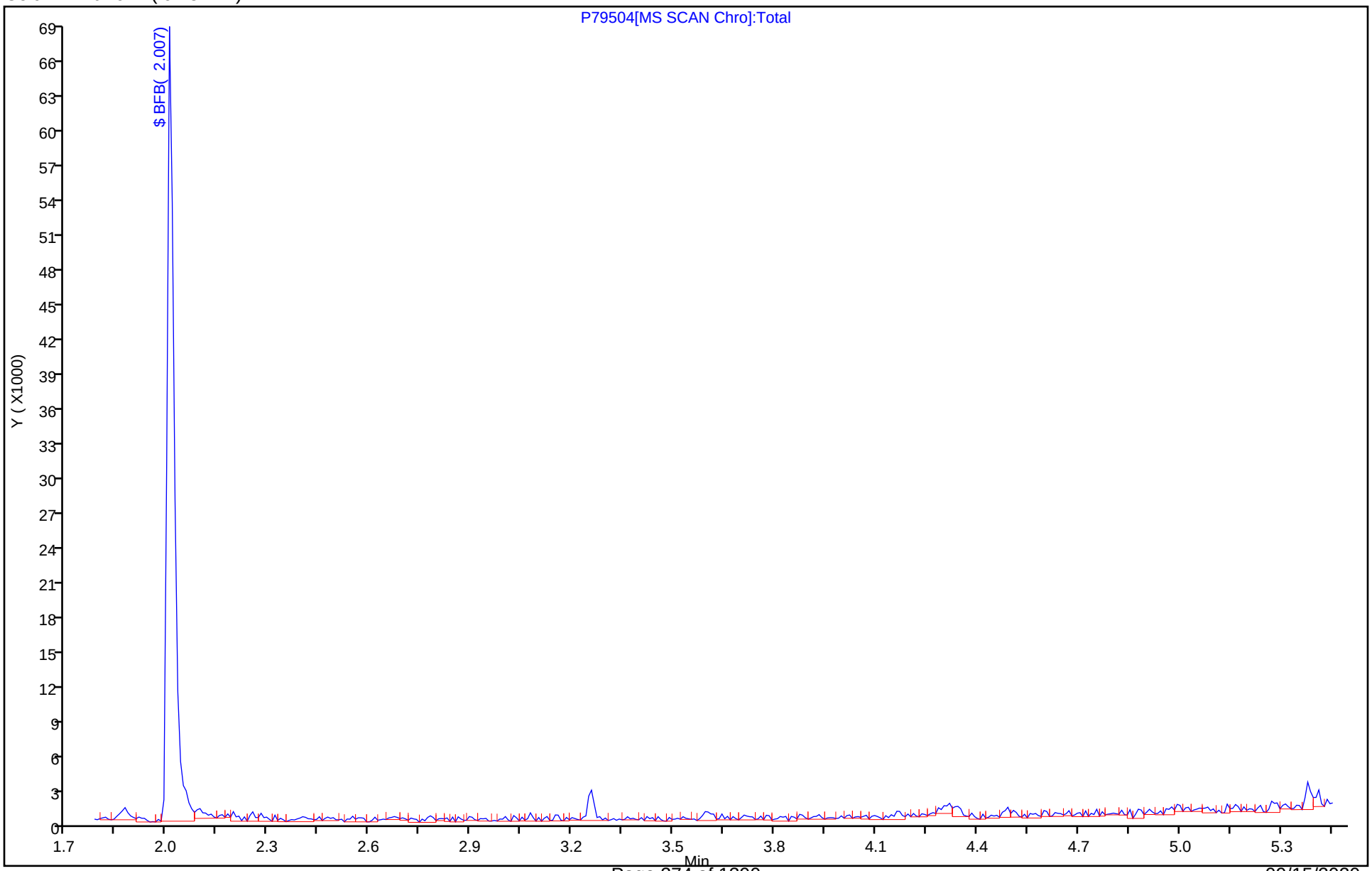
Report Date: 09-Sep-2020 07:56:25 Chrom Revision: 2.3 20-Aug-2020 13:57:12

Eurofins TestAmerica, Edison

Data File: \\chromfs\Edison\ChromData\CVOAMS13\20200909-116470.b\P79504.D

| | | | | | |
|---|---|---|---|---|---|
| Injection Date: | 09-Sep-2020 07:47:30 | Instrument ID: | CVOAMS13 | Operator ID: | |
| Lims ID: | BFB | | | Worklist Smp#: | 1 |
| Client ID: | | | | | |
| Injection Vol: | 5.0 mL | Dil. Factor: | 1.0000 | ALS Bottle#: | 99 |
| Method: | 8260W_13 | Limit Group: | VOA - 8260C Water and Solid | | |

Column: Rtx-624 ( 0.25 mm)



Eurofins TestAmerica, Edison
Target Compound Quantitation Report

| | | | | | |
|---|---|---|---|---|---|
| Data File: | \\chromfs\Edison\ChromData\CVOAMS13\20200909-116494.b\P79530.D | | | | |
| Lims ID: | BFB | | | | |
| Client ID: | | | | | |
| Sample Type: | BFB | | | | |
| Inject. Date: | 09-Sep-2020 17:54:30 | ALS Bottle#: | 99 | Worklist Smp#: | 1 |
| Injection Vol: | 5.0 mL | Dil. Factor: | 1.0000 | | |
| Sample Info: | BFB | | | | |
| Misc. Info.: | 460-0116494-001 | | | | |
| Operator ID: | | Instrument ID: | CVOAMS13 | | |
| Method: | \\chromfs\Edison\ChromData\CVOAMS13\20200909-116494.b\8260W_13.m | | | | |
| Limit Group: | VOA - 8260C Water and Solid | | | | |
| Last Update: | 09-Sep-2020 19:44:47 | Calib Date: | 04-Sep-2020 16:58:30 | | |
| Integrator: | RTE | ID Type: | Deconvolution ID | | |
| Quant Method: | Internal Standard | Quant By: | Initial Calibration | | |
| Last ICal File: | \\chromfs\Edison\ChromData\CVOAMS13\20200904-116303.b\P79359.D | | | | |
| Column 1 : | Rtx-624 ( 0.25 mm) | | Det: MS SCAN | | |
| Process Host: | CTX1016 | | | | |
| First Level Reviewer: sgroa | | Date: | 09-Sep-2020 17:03:02 | | |

| Compound | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q | Response | Cal Amt ug/l | OnCol Amt ug/l | Flags |
|---|---|---|---|---|---|---|---|---|---|
| $ 143 BFB | 95 | 2.015 | 2.015 | 0.000 | 86 | 34505 | NR | NR | |

## QC Flag Legend

Processing Flags

NR - Missing Quant Standard

## Reagents:

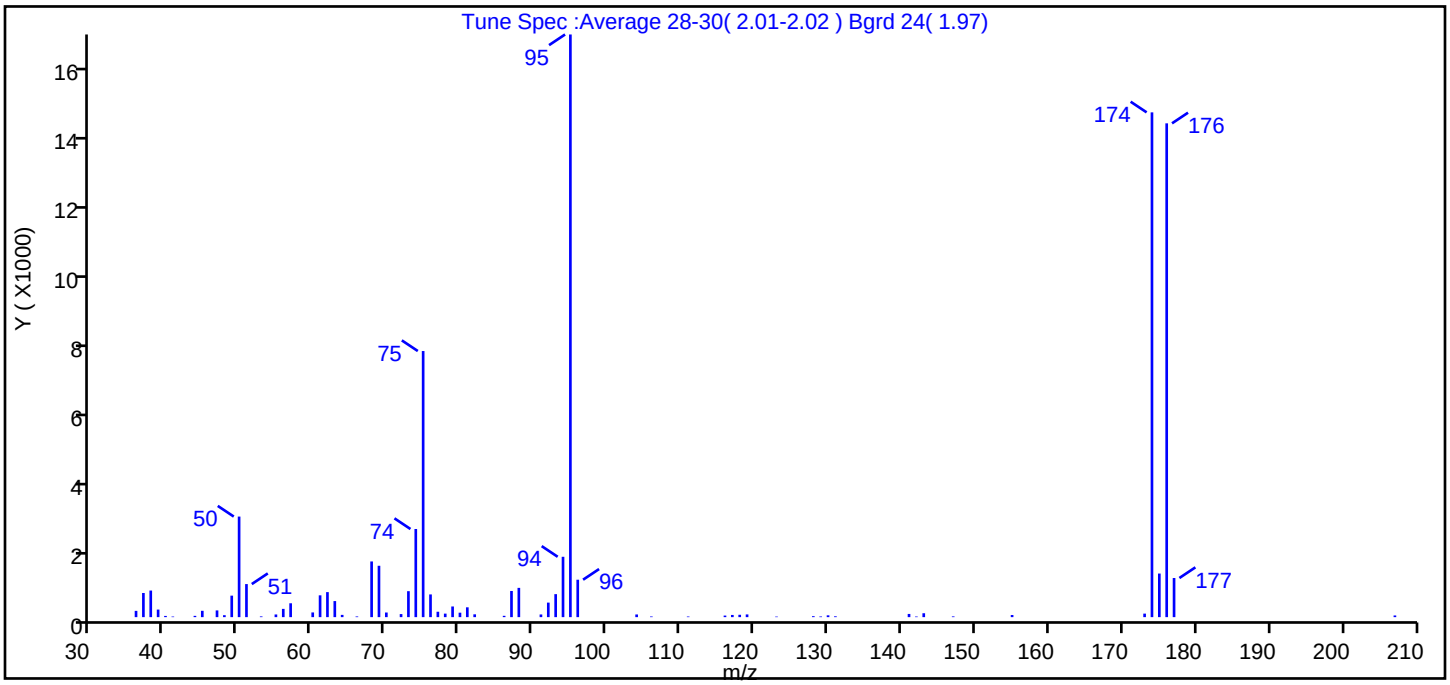
BFB_00026 Amount Added: 1.00 Units: uL

MS Tune Report

Eurofins TestAmerica, Edison

Data File: \\chromfs\Edison\ChromData\CVOAMS13\20200909-116494.b\P79530.D
Injection Date: 09-Sep-2020 17:54:30 Instrument ID: CVOAMS13
Lims ID: BFB
Client ID:
Operator ID: ALS Bottle#: 99 Worklist Smp#: 1
Injection Vol: 5.0 mL Dil. Factor: 1.0000
Method: 8260W_13 Limit Group: VOA - 8260C Water and Solid
Tune Method: BFB Method 8260

$ 143 BFB




| m/z | Ion Abundance Criteria | % Relative Abundance |
|---|---|---|
| 95 | Base peak, 100% relative abundance | 100.0 |
| 50 | 15 to 40% of m/z 95 | 17.3 |
| 75 | 30 to 60% of m/z 95 | 45.7 |
| 96 | 5 to 9% of m/z 95 | 6.4 |
| 173 | Less than 2% of m/z 174 | 0.6 (0.7) |
| 174 | 50 to 120% of m/z 95 | 86.6 |
| 175 | 5 to 9% of m/z 174 | 7.5 (8.6) |
| 176 | Greater than 95% but less than 101% of m/z 174 | 84.7 (97.8) |
| 177 | 5 to 9% of m/z 176 | 6.7 (7.9) |

Data File: \\chromfs\Edison\ChromData\CVOAMS13\20200909-116494.b\P79530.D\8260W_13.rslt\spectra.d
Injection Date: 09-Sep-2020 17:54:30
Spectrum: Tune Spec :Average 28-30( 2.01-2.02 ) Bgrd 24( 1.97)
Base Peak: 95.00
Minimum % Base Peak: 0
Number of Points: 69

| m/z | Y | m/z | Y | m/z | Y | m/z | Y |
|---|---|---|---|---|---|---|---|
| 36.00 | 180 | 61.00 | 626 | 82.00 | 81 | 128.00 | 27 |
| 37.00 | 693 | 62.00 | 718 | 86.00 | 38 | 129.00 | 19 |
| 38.00 | 763 | 63.00 | 461 | 87.00 | 751 | 130.00 | 52 |
| 39.00 | 217 | 64.00 | 65 | 88.00 | 840 | 131.00 | 24 |
| 40.00 | 35 | 66.00 | 20 | 91.00 | 77 | 141.00 | 92 |
| 41.00 | 17 | 68.00 | 1598 | 92.00 | 417 | 142.00 | 18 |
| 44.00 | 37 | 69.00 | 1474 | 93.00 | 660 | 143.00 | 112 |
| 45.00 | 182 | 70.00 | 133 | 94.00 | 1732 | 147.00 | 21 |
| 47.00 | 193 | 72.00 | 88 | 95.00 | 16720 | 155.00 | 61 |
| 48.00 | 56 | 73.00 | 745 | 96.00 | 1074 | 173.00 | 101 |
| 49.00 | 617 | 74.00 | 2529 | 104.00 | 77 | 174.00 | 14485 |
| 50.00 | 2886 | 75.00 | 7636 | 106.00 | 19 | 175.00 | 1251 |
| 51.00 | 949 | 76.00 | 652 | 111.00 | 18 | 176.00 | 14170 |
| 53.00 | 21 | 77.00 | 155 | 116.00 | 45 | 177.00 | 1123 |
| 55.00 | 77 | 78.00 | 101 | 117.00 | 63 | 207.00 | 48 |
| 56.00 | 237 | 79.00 | 306 | 118.00 | 68 | | |
| 57.00 | 398 | 80.00 | 128 | 119.00 | 78 | | |
| 60.00 | 135 | 81.00 | 282 | 123.00 | 16 | | |

Report Date: 09-Sep-2020 19:44:48 Chrom Revision: 2.3 20-Aug-2020 13:57:12

Eurofins TestAmerica, Edison

Data File: \\chromfs\Edison\ChromData\CVOAMS13\20200909-116494.b\P79530.D

| | | | | | |
|---|---|---|---|---|---|
| Injection Date: | 09-Sep-2020 17:54:30 | Instrument ID: | CVOAMS13 | Operator ID: | |
| Lims ID: | BFB | | | Worklist Smp#: | 1 |
| Client ID: | | | | | |
| Injection Vol: | 5.0 mL | Dil. Factor: | 1.0000 | ALS Bottle#: | 99 |
| Method: | 8260W_13 | Limit Group: | VOA - 8260C Water and Solid | | |

Column: Rtx-624 ( 0.25 mm)

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Edison  Job No.: 460-217547-1

SDG No.:

Client Sample ID:  Lab Sample ID: MB 460-722597/10

Matrix: Water  Lab File ID: P79488.D

Analysis Method: 8260C  Date Collected:

Sample wt/vol: 5(mL)  Date Analyzed: 09/08/2020 22:33

Soil Aliquot Vol:  Dilution Factor: 1

Soil Extract Vol.:  GC Column: Rtx-624 ID: 0.25(mm)

% Moisture:  Level: (low/med) Low

Analysis Batch No.: 722597  Units: ug/L

| CAS NO. | COMPOUND NAME | RESULT | Q | RL | MDL |
|---|---|---|---|---|---|
| 71-55-6 | 1,1,1-Trichloroethane | 0.24 | U | 1.0 | 0.24 |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 0.37 | U | 1.0 | 0.37 |
| 76-13-1 | 1,1,2-Trichloro-1,2,2-trifluoroethane | 0.31 | U | 1.0 | 0.31 |
| 79-00-5 | 1,1,2-Trichloroethane | 0.43 | U | 1.0 | 0.43 |
| 75-34-3 | 1,1-Dichloroethane | 0.26 | U | 1.0 | 0.26 |
| 75-35-4 | 1,1-Dichloroethene | 0.26 | U | 1.0 | 0.26 |
| 87-61-6 | 1,2,3-Trichlorobenzene | 0.36 | U | 1.0 | 0.36 |
| 120-82-1 | 1,2,4-Trichlorobenzene | 0.37 | U | 1.0 | 0.37 |
| 78-87-5 | 1,2-Dichloropropane | 0.35 | U | 1.0 | 0.35 |
| 541-73-1 | 1,3-Dichlorobenzene | 0.34 | U | 1.0 | 0.34 |
| 106-46-7 | 1,4-Dichlorobenzene | 0.33 | U | 1.0 | 0.33 |
| 123-91-1 | 1,4-Dioxane | 28 | U | 50 | 28 |
| 78-93-3 | 2-Butanone (MEK) | 1.9 | U | 5.0 | 1.9 |
| 591-78-6 | 2-Hexanone | 1.1 | U | 5.0 | 1.1 |
| 108-10-1 | 4-Methyl-2-pentanone (MIBK) | 1.3 | U | 5.0 | 1.3 |
| 67-64-1 | Acetone | 4.4 | U | 5.0 | 4.4 |
| 71-43-2 | Benzene | 0.20 | U | 1.0 | 0.20 |
| 75-25-2 | Bromoform | 0.54 | U | 1.0 | 0.54 |
| 74-83-9 | Bromomethane | 0.55 | U | 1.0 | 0.55 |
| 75-15-0 | Carbon disulfide | 0.82 | U | 1.0 | 0.82 |
| 56-23-5 | Carbon tetrachloride | 0.21 | U | 1.0 | 0.21 |
| 108-90-7 | Chlorobenzene | 0.38 | U | 1.0 | 0.38 |
| 74-97-5 | Chlorobromomethane | 0.41 | U | 1.0 | 0.41 |
| 124-48-1 | Chlorodibromomethane | 0.28 | U | 1.0 | 0.28 |
| 75-00-3 | Chloroethane | 0.32 | U | 1.0 | 0.32 |
| 67-66-3 | Chloroform | 0.33 | U | 1.0 | 0.33 |
| 74-87-3 | Chloromethane | 0.40 | U | 1.0 | 0.40 |
| 156-59-2 | cis-1,2-Dichloroethene | 0.22 | U | 1.0 | 0.22 |
| 10061-01-5 | cis-1,3-Dichloropropene | 0.22 | U | 1.0 | 0.22 |
| 110-82-7 | Cyclohexane | 0.32 | U | 1.0 | 0.32 |
| 75-27-4 | Dichlorobromomethane | 0.34 | U | 1.0 | 0.34 |
| 75-71-8 | Dichlorodifluoromethane | 0.31 | U | 1.0 | 0.31 |
| 100-41-4 | Ethylbenzene | 0.30 | U | 1.0 | 0.30 |
| 106-93-4 | Ethylene Dibromide | 0.50 | U | 1.0 | 0.50 |
| 98-82-8 | Isopropylbenzene | 0.34 | U | 1.0 | 0.34 |

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Edison  Job No.: 460-217547-1

SDG No.:

Client Sample ID:  Lab Sample ID: MB 460-722597/10

Matrix: Water  Lab File ID: P79488.D

Analysis Method: 8260C  Date Collected:

Sample wt/vol: 5(mL)  Date Analyzed: 09/08/2020 22:33

Soil Aliquot Vol:  Dilution Factor: 1

Soil Extract Vol.:  GC Column: Rtx-624 ID: 0.25(mm)

% Moisture:  Level: (low/med) Low

Analysis Batch No.: 722597  Units: ug/L

| CAS NO. | COMPOUND NAME | RESULT | Q | RL | MDL |
|---|---|---|---|---|---|
| 79-20-9 | Methyl acetate | 0.79 | U | 5.0 | 0.79 |
| 1634-04-4 | Methyl tert-butyl ether | 0.47 | U | 1.0 | 0.47 |
| 108-87-2 | Methylcyclohexane | 0.26 | U | 1.0 | 0.26 |
| 75-09-2 | Methylene Chloride | 0.32 | U | 1.0 | 0.32 |
| 179601-23-1 | m-Xylene & p-Xylene | 0.30 | U | 1.0 | 0.30 |
| 95-47-6 | o-Xylene | 0.36 | U | 1.0 | 0.36 |
| 100-42-5 | Styrene | 0.42 | U | 1.0 | 0.42 |
| 127-18-4 | Tetrachloroethene | 0.25 | U | 1.0 | 0.25 |
| 108-88-3 | Toluene | 0.38 | U | 1.0 | 0.38 |
| 156-60-5 | trans-1,2-Dichloroethene | 0.24 | U | 1.0 | 0.24 |
| 10061-02-6 | trans-1,3-Dichloropropene | 0.49 | U | 1.0 | 0.49 |
| 79-01-6 | Trichloroethene | 0.31 | U | 1.0 | 0.31 |
| 75-69-4 | Trichlorofluoromethane | 0.32 | U | 1.0 | 0.32 |
| 75-01-4 | Vinyl chloride | 0.17 | U | 1.0 | 0.17 |
| 107-06-2 | 1,2-Dichloroethane | 0.43 | U | 1.0 | 0.43 |
| 95-50-1 | 1,2-Dichlorobenzene | 0.43 | U | 1.0 | 0.43 |
| 96-12-8 | 1,2-Dibromo-3-Chloropropane | 0.38 | U | 1.0 | 0.38 |

| CAS NO. | SURROGATE | %REC | Q | LIMITS |
|---|---|---|---|---|
| 17060-07-0 | 1,2-Dichloroethane-d4 (Surr) | 103 | | 75-123 |
| 460-00-4 | 4-Bromofluorobenzene | 108 | | 76-120 |
| 1868-53-7 | Dibromofluoromethane (Surr) | 107 | | 77-124 |
| 2037-26-5 | Toluene-d8 (Surr) | 102 | | 80-120 |

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: Eurofins TestAmerica, Edison  Job No.: 460-217547-1

SDG No.:

Client Sample ID:  Lab Sample ID: MB 460-722597/10

Matrix: Water  Lab File ID: P79488.D

Analysis Method: 8260C  Date Collected:

Sample wt/vol: 5(mL)  Date Analyzed: 09/08/2020 22:33

Soil Aliquot Vol:  Dilution Factor: 1

Soil Extract Vol.:  GC Column: Rtx-624 ID: 0.25(mm)

% Moisture:  Level: (low/med) Low

Analysis Batch No.: 722597  Units: ug/L

Number TICs Found: 0  TIC Result Total: 0

| CAS NO. | COMPOUND NAME | RT | RESULT | Q | MATCH QUALITY |
|---|---|---|---|---|---|
| | Tentatively Identified Compound | | None | | |

Eurofins TestAmerica, Edison
Target Compound Quantitation Report

Data File: \\chromfs\Edison\ChromData\CVOAMS13\20200908-116444.b\P79488.D
Lims ID: MB
Client ID:
Sample Type: MB
Inject. Date: 08-Sep-2020 22:33:30 ALS Bottle#: 9 Worklist Smp#: 10
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: MB
Misc. Info.: 460-0116444-010
Operator ID: Instrument ID: CVOAMS13

Method: \\chromfs\Edison\ChromData\CVOAMS13\20200908-116444.b\8260W_13.m
Limit Group: VOA - 8260C Water and Solid
Last Update: 09-Sep-2020 07:05:09 Calib Date: 04-Sep-2020 16:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Edison\ChromData\CVOAMS13\20200904-116303.b\P79359.D

Column 1 : Rtx-624 ( 0.25 mm) Det: MS SCAN
Process Host: CTX1060

First Level Reviewer: moroneyc Date: 09-Sep-2020 07:00:13

| Compound | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q | Response | Cal Amt ug/l | OnCol Amt ug/l | Flags |
|---|---|---|---|---|---|---|---|---|---|
| * 33 TBA-d9 (IS) | 65 | 1.845 | 1.845 | 0.000 | 100 | 103726 | 1000.0 | 1000.0 | |
| $ 51 Dibromofluoromethane (Surr) | 113 | 2.776 | 2.769 | 0.007 | 98 | 114705 | 50.0 | 53.7 | |
| * 53 2-Butanone-d5 | 46 | 2.834 | 2.827 | 0.007 | 99 | 130040 | 250.0 | 250.0 | |
| $ 61 1,2-Dichloroethane-d4 (Surr) | 65 | 3.156 | 3.156 | 0.000 | 0 | 110776 | 50.0 | 51.7 | |
| * 66 Fluorobenzene | 96 | 3.385 | 3.385 | 0.000 | 99 | 495972 | 50.0 | 50.0 | |
| * 76 1,4-Dioxane-d8 | 96 | 4.245 | 4.238 | 0.007 | 62 | 14125 | 1000.0 | 1000.0 | |
| $ 82 Toluene-d8 (Surr) | 98 | 4.882 | 4.883 | 0.000 | 99 | 475272 | 50.0 | 51.1 | |
| * 96 Chlorobenzene-d5 | 117 | 6.723 | 6.723 | 0.000 | 85 | 360979 | 50.0 | 50.0 | |
| $ 107 4-Bromofluorobenzene | 174 | 8.485 | 8.478 | 0.007 | 93 | 158525 | 50.0 | 54.2 | |
| * 123 1,4-Dichlorobenzene-d4 | 152 | 10.233 | 10.226 | 0.007 | 94 | 201418 | 50.0 | 50.0 | |

## Reagents:

8260ISNEW_00129 Amount Added: 1.00 Units: uL Run Reagent
8260SURR250_00212 Amount Added: 1.00 Units: uL Run Reagent

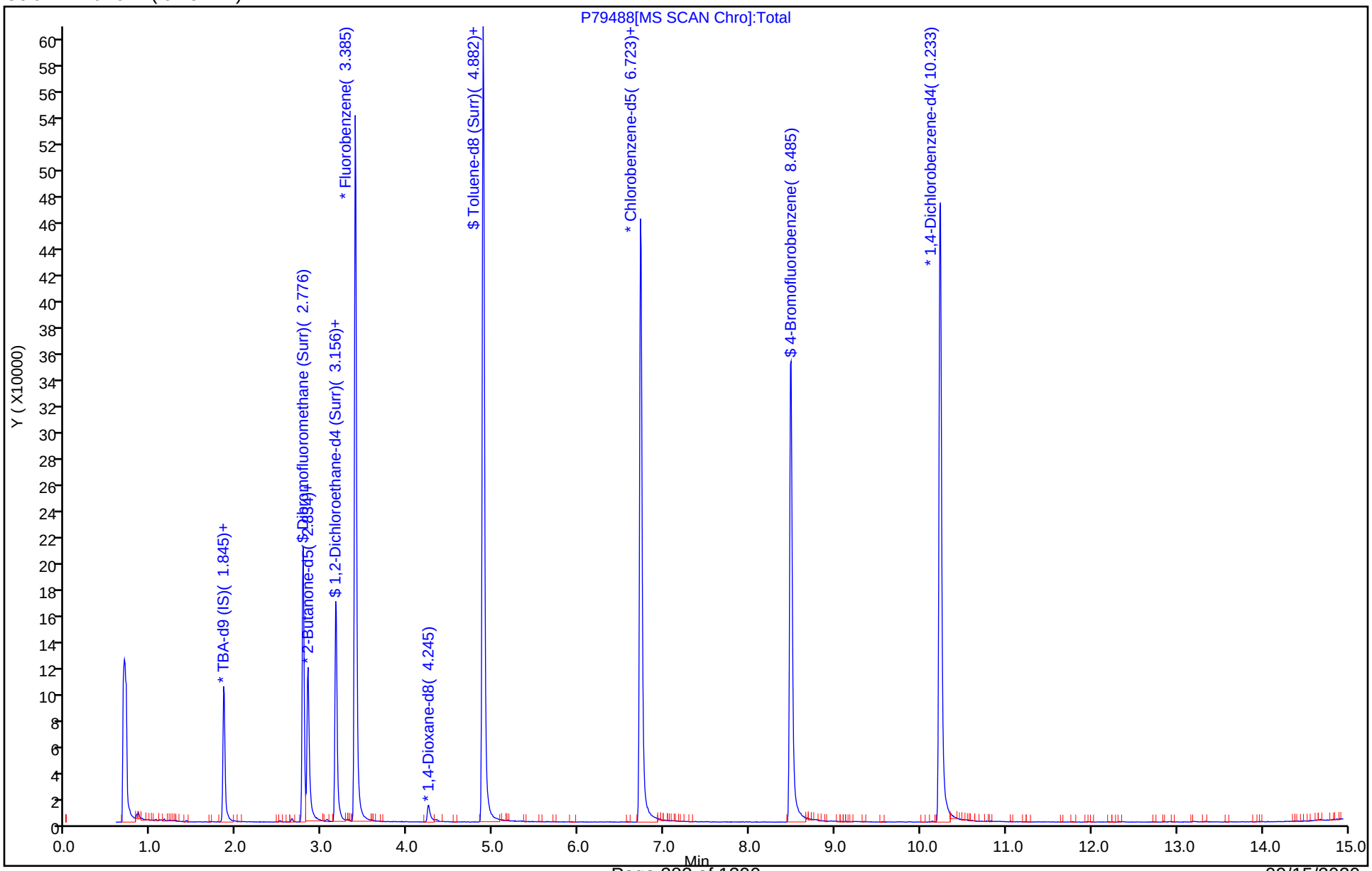
Report Date: 09-Sep-2020 07:05:24 Chrom Revision: 2.3 20-Aug-2020 13:57:12

Eurofins TestAmerica, Edison

Data File: \\chromfs\Edison\ChromData\CVOAMS13\20200908-116444.b\P79488.D

| | | | | | |
|---|---|---|---|---|---|
| Injection Date: | 08-Sep-2020 22:33:30 | Instrument ID: | CVOAMS13 | Operator ID: | |
| Lims ID: | MB | | | Worklist Smp#: | 10 |
| Client ID: | | | | | |
| Purge Vol: | 5.000 mL | Dil. Factor: | 1.0000 | ALS Bottle#: | 9 |
| Method: | 8260W_13 | Limit Group: | VOA - 8260C Water and Solid | | |

Column: Rtx-624 ( 0.25 mm)



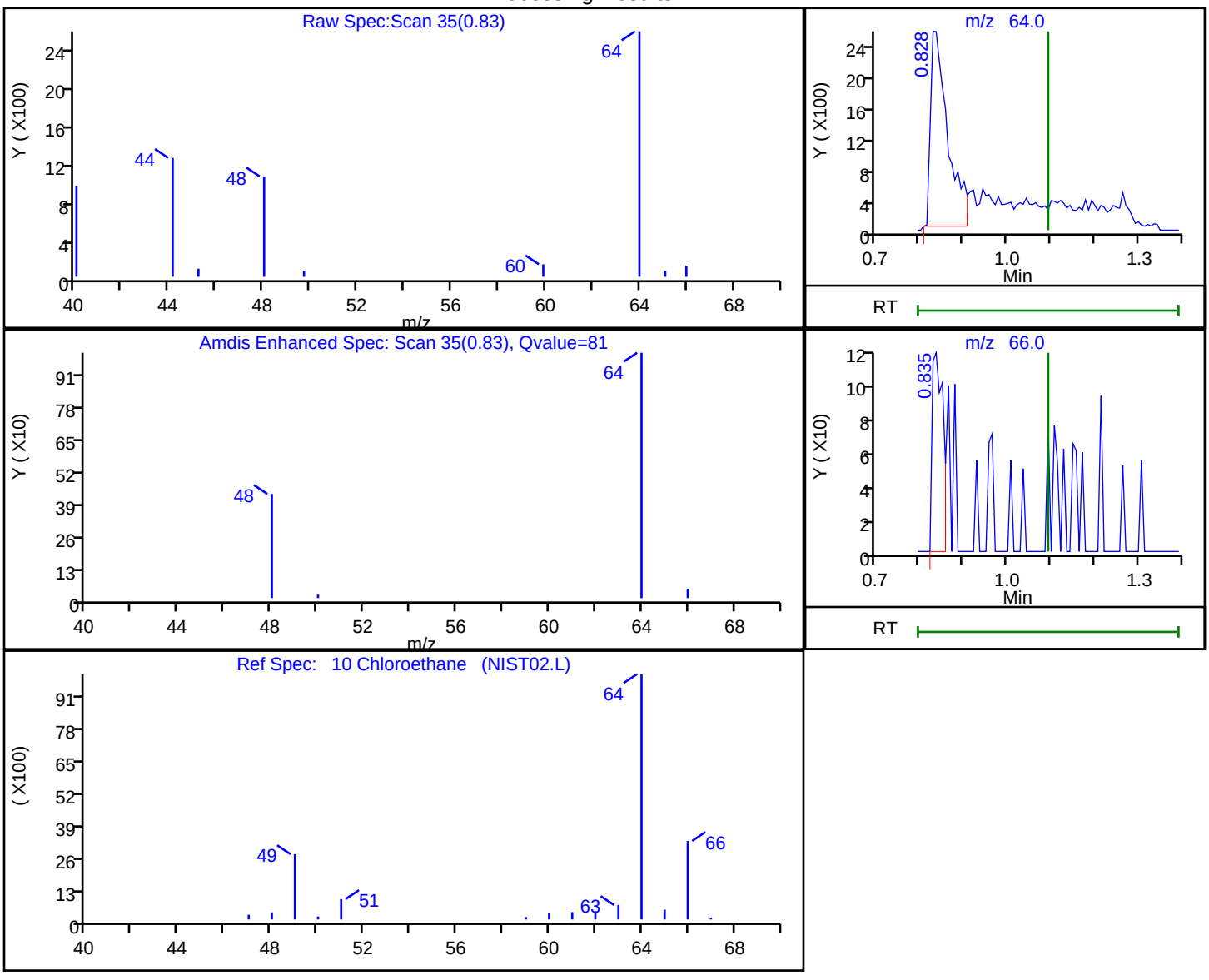
User Disabled Compound Report

Eurofins TestAmerica, Edison

Data File: \\chromfs\Edison\ChromData\CVOAMS13\20200908-116444.b\P79488.D
Injection Date: 08-Sep-2020 22:33:30 Instrument ID: CVOAMS13
Lims ID: MB
Client ID:
Operator ID: ALS Bottle#: 9 Worklist Smp#: 10
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: 8260W_13 Limit Group: VOA - 8260C Water and Solid
Column: Rtx-624 ( 0.25 mm) Detector MS SCAN

## 10 Chloroethane, CAS: 75-00-3

Processing Results




| RT | Mass | Response | Amount |
|---|---|---|---|
| 0.83 | 64.00 | 6945 | 3.822274 |
| 0.84 | 66.00 | 209 | |

Reviewer: moroneyc, 09-Sep-2020 06:59:57
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

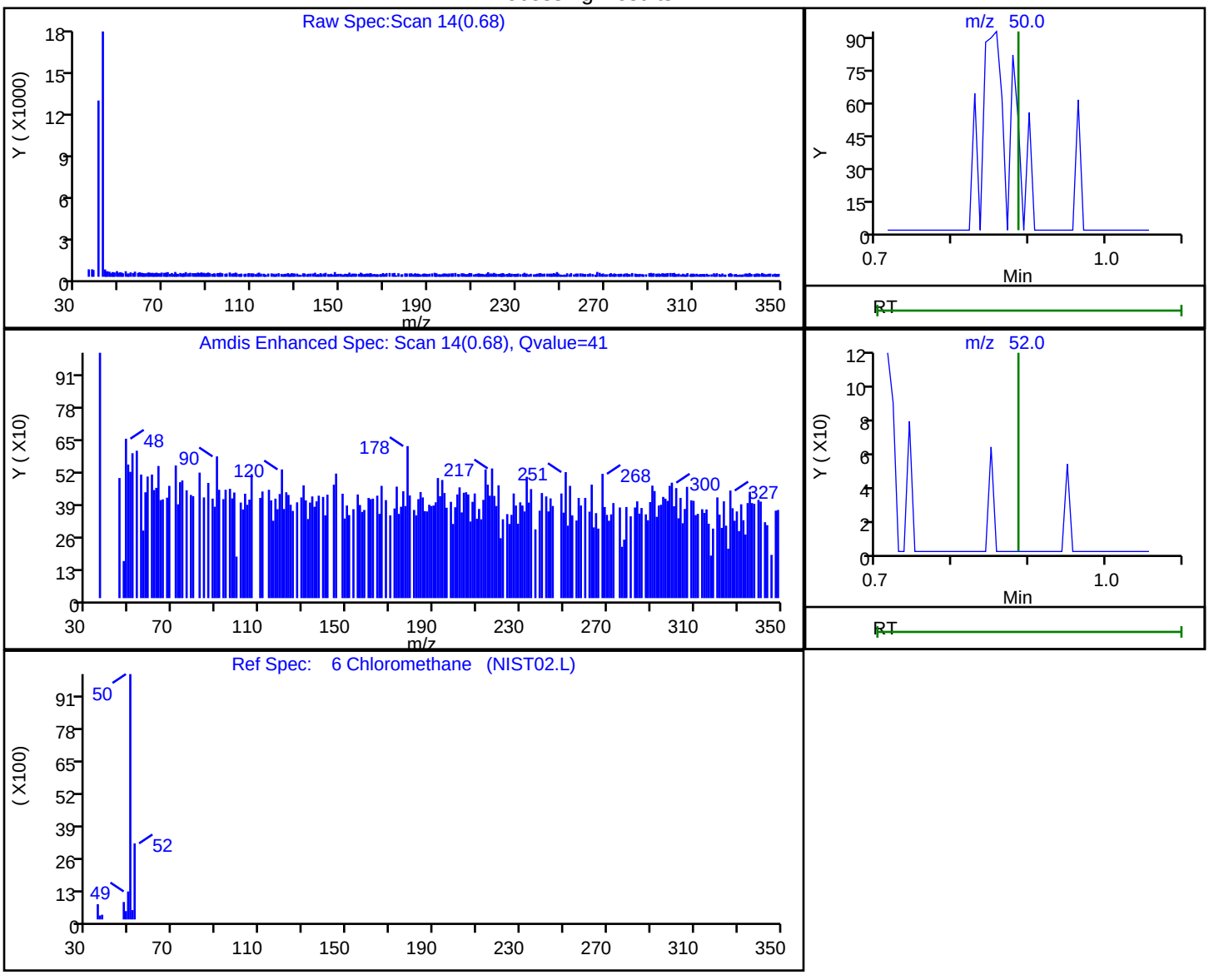
User Disabled Compound Report

Eurofins TestAmerica, Edison

Data File: \\chromfs\Edison\ChromData\CVOAMS13\20200908-116444.b\P79488.D
Injection Date: 08-Sep-2020 22:33:30 Instrument ID: CVOAMS13
Lims ID: MB
Client ID:
Operator ID: ALS Bottle#: 9 Worklist Smp#: 10
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: 8260W_13 Limit Group: VOA - 8260C Water and Solid
Column: Rtx-624 ( 0.25 mm) Detector MS SCAN

## 6 Chloromethane, CAS: 74-87-3

Processing Results




| RT | Mass | Response | Amount |
|---|---|---|---|
| 0.68 | 50.00 | 1059 | 0.226879 |
| 0.68 | 52.00 | 535 | |

Reviewer: moroneyc, 09-Sep-2020 06:59:55
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

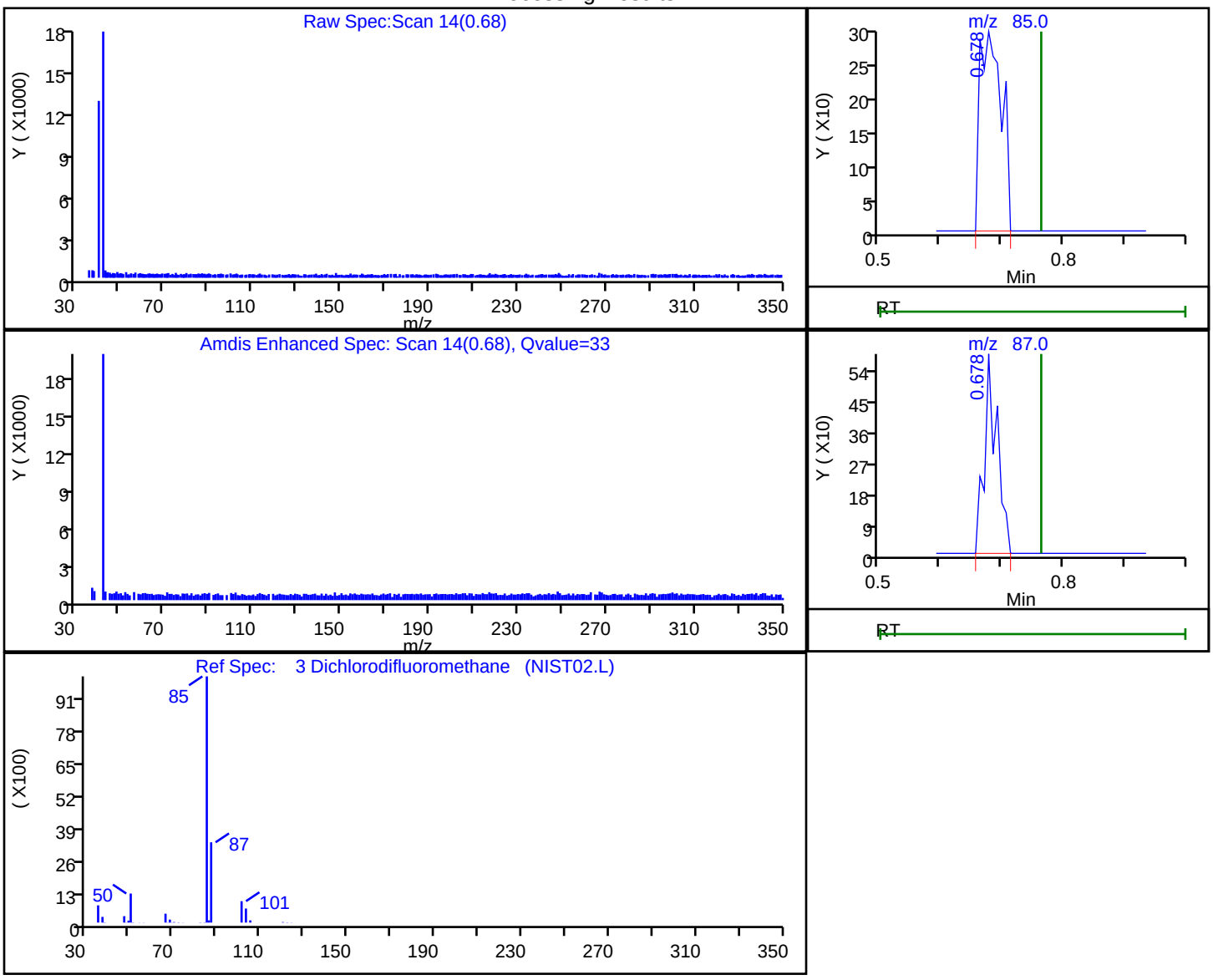
User Disabled Compound Report

Eurofins TestAmerica, Edison

Data File: \\chromfs\Edison\ChromData\CVOAMS13\20200908-116444.b\P79488.D
Injection Date: 08-Sep-2020 22:33:30 Instrument ID: CVOAMS13
Lims ID: MB
Client ID:
Operator ID: ALS Bottle#: 9 Worklist Smp#: 10
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: 8260W_13 Limit Group: VOA - 8260C Water and Solid
Column: Rtx-624 ( 0.25 mm) Detector MS SCAN

## 3 Dichlorodifluoromethane, CAS: 75-71-8

Processing Results




| RT | Mass | Response | Amount |
|---|---|---|---|
| 0.68 | 85.00 | 735 | 0.219837 |
| 0.68 | 87.00 | 852 | |

Reviewer: moroneyc, 09-Sep-2020 06:59:53
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Edison  Job No.: 460-217547-1

SDG No.:

Client Sample ID:  Lab Sample ID: MB 460-722709/8

Matrix: Water  Lab File ID: P79511.D

Analysis Method: 8260C  Date Collected:

Sample wt/vol: 5(mL)  Date Analyzed: 09/09/2020 10:31

Soil Aliquot Vol:  Dilution Factor: 1

Soil Extract Vol.:  GC Column: Rtx-624 ID: 0.25(mm)

% Moisture:  Level: (low/med) Low

Analysis Batch No.: 722709  Units: ug/L

| CAS NO. | COMPOUND NAME | RESULT | Q | RL | MDL |
|---|---|---|---|---|---|
| 71-55-6 | 1,1,1-Trichloroethane | 0.24 | U | 1.0 | 0.24 |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 0.37 | U | 1.0 | 0.37 |
| 76-13-1 | 1,1,2-Trichloro-1,2,2-trifluoroethane | 0.31 | U | 1.0 | 0.31 |
| 79-00-5 | 1,1,2-Trichloroethane | 0.43 | U | 1.0 | 0.43 |
| 75-34-3 | 1,1-Dichloroethane | 0.26 | U | 1.0 | 0.26 |
| 75-35-4 | 1,1-Dichloroethene | 0.26 | U | 1.0 | 0.26 |
| 87-61-6 | 1,2,3-Trichlorobenzene | 0.36 | U | 1.0 | 0.36 |
| 120-82-1 | 1,2,4-Trichlorobenzene | 0.37 | U | 1.0 | 0.37 |
| 78-87-5 | 1,2-Dichloropropane | 0.35 | U | 1.0 | 0.35 |
| 541-73-1 | 1,3-Dichlorobenzene | 0.34 | U | 1.0 | 0.34 |
| 106-46-7 | 1,4-Dichlorobenzene | 0.33 | U | 1.0 | 0.33 |
| 123-91-1 | 1,4-Dioxane | 28 | U | 50 | 28 |
| 78-93-3 | 2-Butanone (MEK) | 1.9 | U | 5.0 | 1.9 |
| 591-78-6 | 2-Hexanone | 1.1 | U | 5.0 | 1.1 |
| 108-10-1 | 4-Methyl-2-pentanone (MIBK) | 1.3 | U | 5.0 | 1.3 |
| 67-64-1 | Acetone | 4.4 | U | 5.0 | 4.4 |
| 71-43-2 | Benzene | 0.20 | U | 1.0 | 0.20 |
| 75-25-2 | Bromoform | 0.54 | U | 1.0 | 0.54 |
| 74-83-9 | Bromomethane | 0.55 | U | 1.0 | 0.55 |
| 75-15-0 | Carbon disulfide | 0.82 | U | 1.0 | 0.82 |
| 56-23-5 | Carbon tetrachloride | 0.21 | U | 1.0 | 0.21 |
| 108-90-7 | Chlorobenzene | 0.38 | U | 1.0 | 0.38 |
| 74-97-5 | Chlorobromomethane | 0.41 | U | 1.0 | 0.41 |
| 124-48-1 | Chlorodibromomethane | 0.28 | U | 1.0 | 0.28 |
| 75-00-3 | Chloroethane | 0.32 | U | 1.0 | 0.32 |
| 67-66-3 | Chloroform | 0.33 | U | 1.0 | 0.33 |
| 74-87-3 | Chloromethane | 0.40 | U | 1.0 | 0.40 |
| 156-59-2 | cis-1,2-Dichloroethene | 0.22 | U | 1.0 | 0.22 |
| 10061-01-5 | cis-1,3-Dichloropropene | 0.22 | U | 1.0 | 0.22 |
| 110-82-7 | Cyclohexane | 0.32 | U | 1.0 | 0.32 |
| 75-27-4 | Dichlorobromomethane | 0.34 | U | 1.0 | 0.34 |
| 75-71-8 | Dichlorodifluoromethane | 0.31 | U | 1.0 | 0.31 |
| 100-41-4 | Ethylbenzene | 0.30 | U | 1.0 | 0.30 |
| 106-93-4 | Ethylene Dibromide | 0.50 | U | 1.0 | 0.50 |
| 98-82-8 | Isopropylbenzene | 0.34 | U | 1.0 | 0.34 |

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Edison  Job No.: 460-217547-1

SDG No.:

Client Sample ID:  Lab Sample ID: MB 460-722709/8

Matrix: Water  Lab File ID: P79511.D

Analysis Method: 8260C  Date Collected:

Sample wt/vol: 5(mL)  Date Analyzed: 09/09/2020 10:31

Soil Aliquot Vol:  Dilution Factor: 1

Soil Extract Vol.:  GC Column: Rtx-624 ID: 0.25(mm)

% Moisture:  Level: (low/med) Low

Analysis Batch No.: 722709  Units: ug/L

| CAS NO. | COMPOUND NAME | RESULT | Q | RL | MDL |
|---|---|---|---|---|---|
| 79-20-9 | Methyl acetate | 0.79 | U | 5.0 | 0.79 |
| 1634-04-4 | Methyl tert-butyl ether | 0.47 | U | 1.0 | 0.47 |
| 108-87-2 | Methylcyclohexane | 0.26 | U | 1.0 | 0.26 |
| 75-09-2 | Methylene Chloride | 0.32 | U | 1.0 | 0.32 |
| 179601-23-1 | m-Xylene & p-Xylene | 0.30 | U | 1.0 | 0.30 |
| 95-47-6 | o-Xylene | 0.36 | U | 1.0 | 0.36 |
| 100-42-5 | Styrene | 0.42 | U | 1.0 | 0.42 |
| 127-18-4 | Tetrachloroethene | 0.25 | U | 1.0 | 0.25 |
| 108-88-3 | Toluene | 0.38 | U | 1.0 | 0.38 |
| 156-60-5 | trans-1,2-Dichloroethene | 0.24 | U | 1.0 | 0.24 |
| 10061-02-6 | trans-1,3-Dichloropropene | 0.49 | U | 1.0 | 0.49 |
| 79-01-6 | Trichloroethene | 0.31 | U | 1.0 | 0.31 |
| 75-69-4 | Trichlorofluoromethane | 0.32 | U | 1.0 | 0.32 |
| 75-01-4 | Vinyl chloride | 0.17 | U | 1.0 | 0.17 |
| 107-06-2 | 1,2-Dichloroethane | 0.43 | U | 1.0 | 0.43 |
| 95-50-1 | 1,2-Dichlorobenzene | 0.43 | U | 1.0 | 0.43 |
| 96-12-8 | 1,2-Dibromo-3-Chloropropane | 0.38 | U | 1.0 | 0.38 |

| CAS NO. | SURROGATE | %REC | Q | LIMITS |
|---|---|---|---|---|
| 17060-07-0 | 1,2-Dichloroethane-d4 (Surr) | 94 | | 75-123 |
| 460-00-4 | 4-Bromofluorobenzene | 101 | | 76-120 |
| 1868-53-7 | Dibromofluoromethane (Surr) | 99 | | 77-124 |
| 2037-26-5 | Toluene-d8 (Surr) | 97 | | 80-120 |

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: Eurofins TestAmerica, Edison  Job No.: 460-217547-1

SDG No.:

Client Sample ID:  Lab Sample ID: MB 460-722709/8

Matrix: Water  Lab File ID: P79511.D

Analysis Method: 8260C  Date Collected:

Sample wt/vol: 5(mL)  Date Analyzed: 09/09/2020 10:31

Soil Aliquot Vol:  Dilution Factor: 1

Soil Extract Vol.:  GC Column: Rtx-624 ID: 0.25(mm)

% Moisture:  Level: (low/med) Low

Analysis Batch No.: 722709  Units: ug/L

Number TICs Found: 0  TIC Result Total: 0

| CAS NO. | COMPOUND NAME | RT | RESULT | Q | MATCH QUALITY |
|---|---|---|---|---|---|
| | Tentatively Identified Compound | | None | | |

Eurofins TestAmerica, Edison
Target Compound Quantitation Report

Data File: \\chromfs\Edison\ChromData\CVOAMS13\20200909-116470.b\P79511.D
Lims ID: MB
Client ID:
Sample Type: MB
Inject. Date: 09-Sep-2020 10:31:30 ALS Bottle#: 7 Worklist Smp#: 8
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: MB
Misc. Info.: 460-0116470-008
Operator ID: Instrument ID: CVOAMS13

Method: \\chromfs\Edison\ChromData\CVOAMS13\20200909-116470.b\8260W_13.m
Limit Group: VOA - 8260C Water and Solid
Last Update: 10-Sep-2020 12:10:49 Calib Date: 04-Sep-2020 16:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Edison\ChromData\CVOAMS13\20200904-116303.b\P79359.D

Column 1 : Rtx-624 ( 0.25 mm) Det: MS SCAN
Process Host: CTX1019

First Level Reviewer: moroneyc Date: 09-Sep-2020 10:01:21

| Compound | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q | Response | Cal Amt ug/l | OnCol Amt ug/l | Flags |
|---|---|---|---|---|---|---|---|---|---|
| * 33 TBA-d9 (IS) | 65 | 1.845 | 1.845 | 0.000 | 100 | 114331 | 1000.0 | 1000.0 | |
| $ 51 Dibromofluoromethane (Surr) | 113 | 2.776 | 2.769 | 0.007 | 98 | 114416 | 50.0 | 49.4 | |
| * 53 2-Butanone-d5 | 46 | 2.827 | 2.827 | 0.000 | 100 | 126850 | 250.0 | 250.0 | |
| $ 61 1,2-Dichloroethane-d4 (Surr) | 65 | 3.156 | 3.156 | 0.000 | 0 | 109224 | 50.0 | 47.0 | |
| * 66 Fluorobenzene | 96 | 3.385 | 3.385 | 0.000 | 99 | 537540 | 50.0 | 50.0 | |
| * 76 1,4-Dioxane-d8 | 96 | 4.238 | 4.238 | 0.000 | 63 | 14451 | 1000.0 | 1000.0 | |
| $ 82 Toluene-d8 (Surr) | 98 | 4.882 | 4.882 | 0.000 | 99 | 484835 | 50.0 | 48.3 | |
| * 96 Chlorobenzene-d5 | 117 | 6.723 | 6.723 | 0.000 | 85 | 389344 | 50.0 | 50.0 | |
| $ 107 4-Bromofluorobenzene | 174 | 8.485 | 8.478 | 0.007 | 94 | 158483 | 50.0 | 50.3 | |
| * 123 1,4-Dichlorobenzene-d4 | 152 | 10.233 | 10.226 | 0.007 | 94 | 216799 | 50.0 | 50.0 | |

## Reagents:

8260ISNEW_00129 Amount Added: 1.00 Units: uL Run Reagent
8260SURR250_00212 Amount Added: 1.00 Units: uL Run Reagent

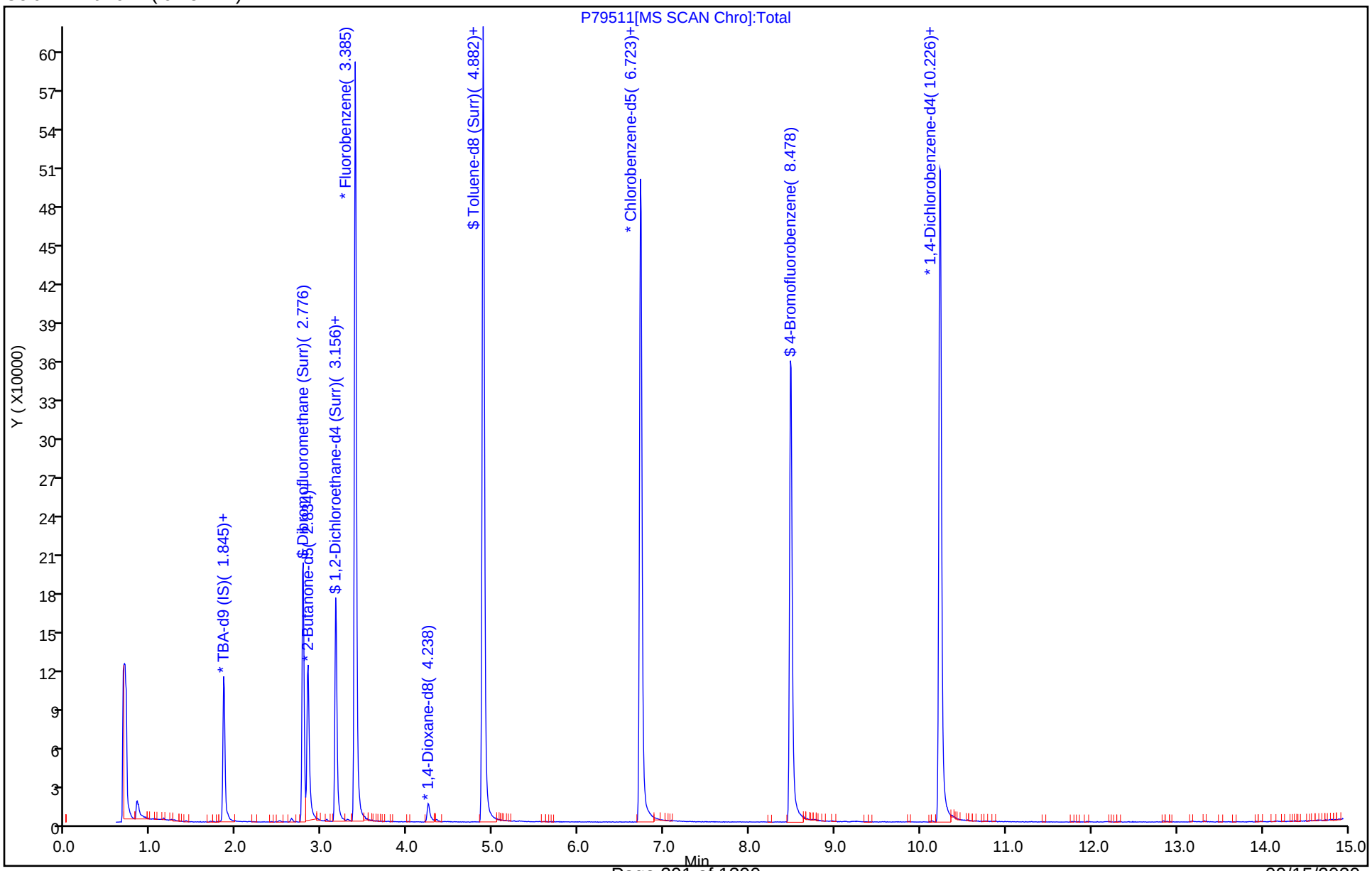
Report Date: 10-Sep-2020 12:10:50 Chrom Revision: 2.3 20-Aug-2020 13:57:12

Eurofins TestAmerica, Edison

Data File: \\chromfs\Edison\ChromData\CVOAMS13\20200909-116470.b\P79511.D

| | | | | | |
|---|---|---|---|---|---|
| Injection Date: | 09-Sep-2020 10:31:30 | Instrument ID: | CVOAMS13 | Operator ID: | |
| Lims ID: | MB | | | Worklist Smp#: | 8 |
| Client ID: | | | | | |
| Purge Vol: | 5.000 mL | Dil. Factor: | 1.0000 | ALS Bottle#: | 7 |
| Method: | 8260W_13 | Limit Group: | VOA - 8260C Water and Solid | | |

Column: Rtx-624 ( 0.25 mm)



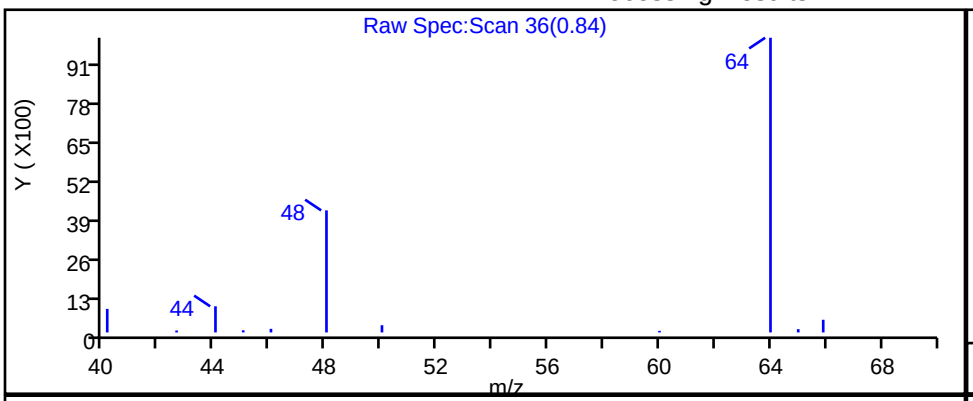
User Disabled Compound Report

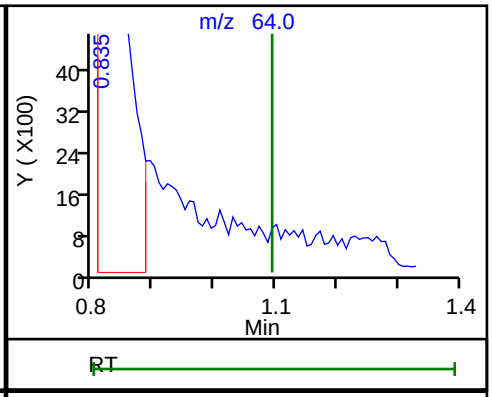
Eurofins TestAmerica, Edison

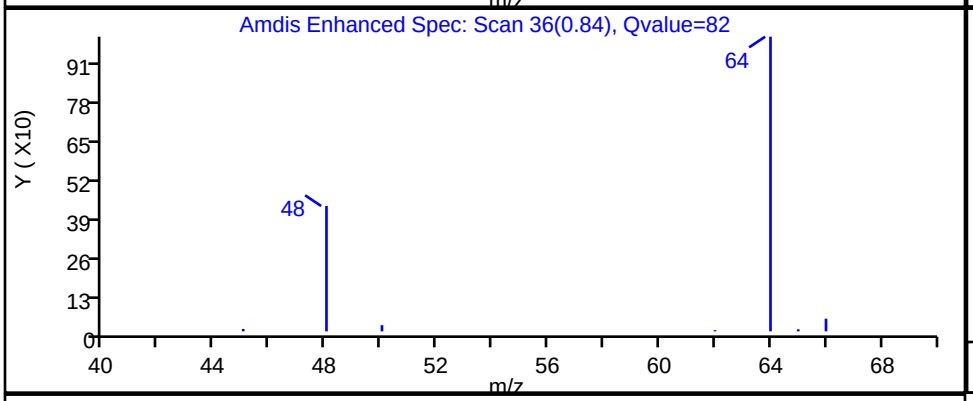
Data File: \\chromfs\Edison\ChromData\CVOAMS13\20200909-116470.b\P79511.D
Injection Date: 09-Sep-2020 10:31:30 Instrument ID: CVOAMS13
Lims ID: MB
Client ID:
Operator ID: ALS Bottle#: 7 Worklist Smp#: 8
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: 8260W_13 Limit Group: VOA - 8260C Water and Solid
Column: Rtx-624 ( 0.25 mm) Detector MS SCAN

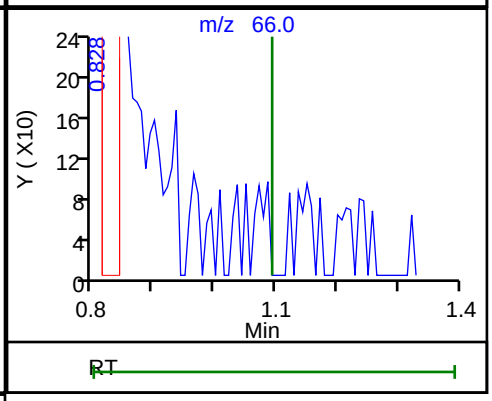
## 10 Chloroethane, CAS: 75-00-3

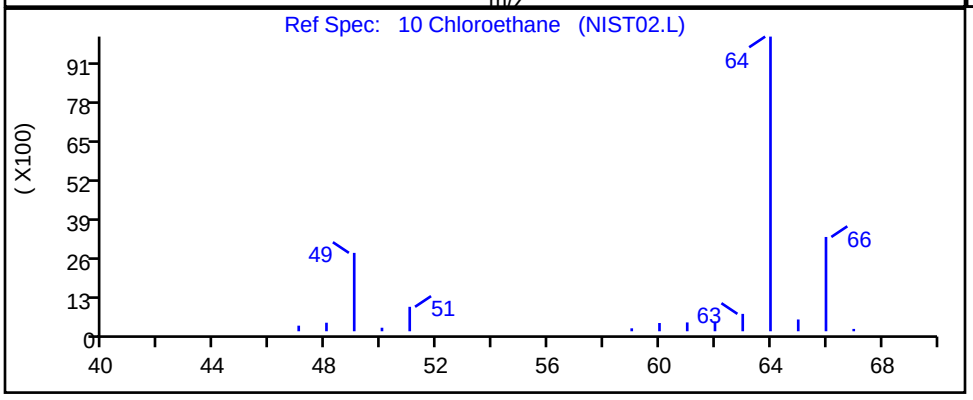
Processing Results




| RT | Mass | Response | Amount |
|---|---|---|---|
| 0.84 | 64.00 | 23408 | 11.886672 |
| 0.83 | 66.00 | 675 | |

Reviewer: moroneyc, 09-Sep-2020 10:01:04
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

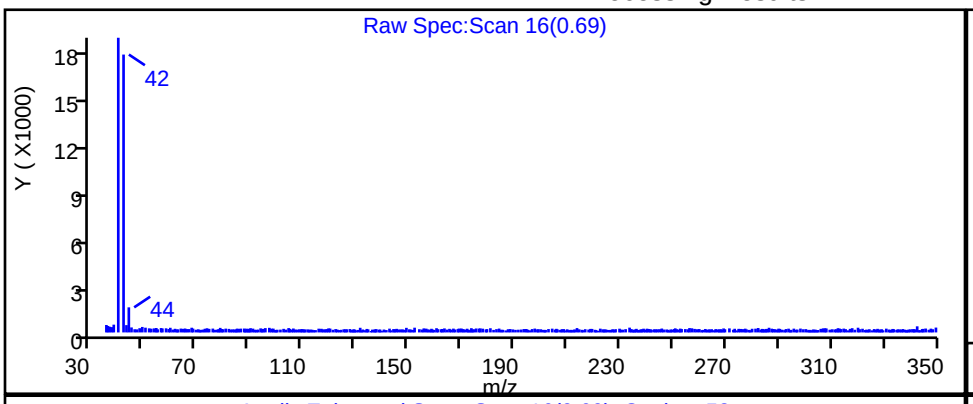
User Disabled Compound Report

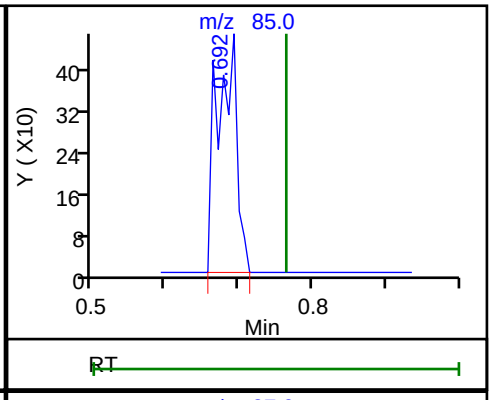
Eurofins TestAmerica, Edison

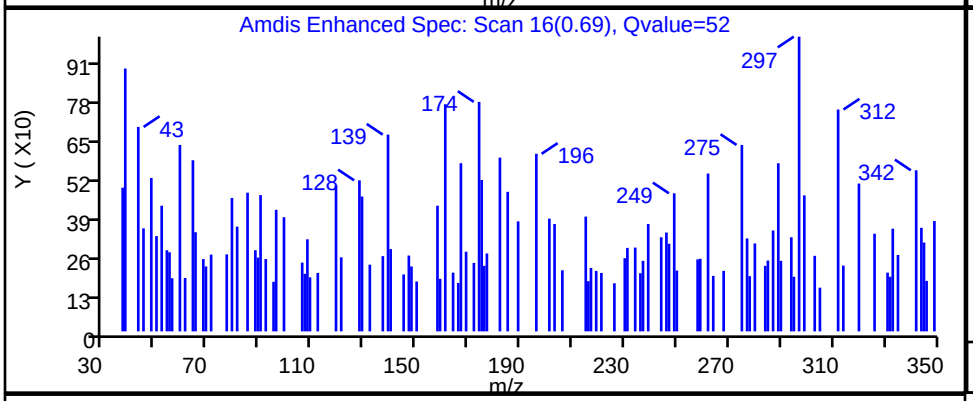
| | | | | | |
|---|---|---|---|---|---|
| Data File: | \\chromfs\Edison\ChromData\CVOAMS13\20200909-116470.b\P79511.D | | | | |
| Injection Date: | 09-Sep-2020 10:31:30 | Instrument ID: | CVOAMS13 | | |
| Lims ID: | MB | | | | |
| Client ID: | | | | | |
| Operator ID: | | ALS Bottle#: | 7 | Worklist Smp#: | 8 |
| Purge Vol: | 5.000 mL | Dil. Factor: | 1.0000 | | |
| Method: | 8260W_13 | Limit Group: | VOA - 8260C Water and Solid | | |
| Column: | Rtx-624 ( 0.25 mm) | Detector | MS SCAN | | |

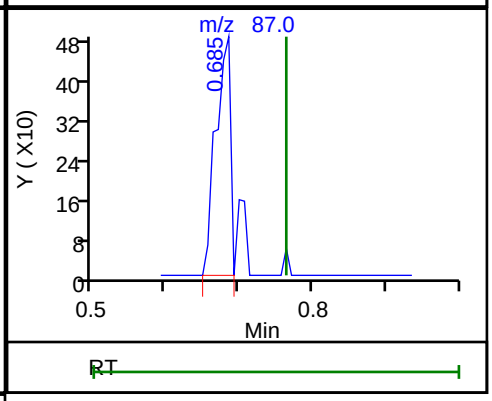
## 3 Dichlorodifluoromethane, CAS: 75-71-8

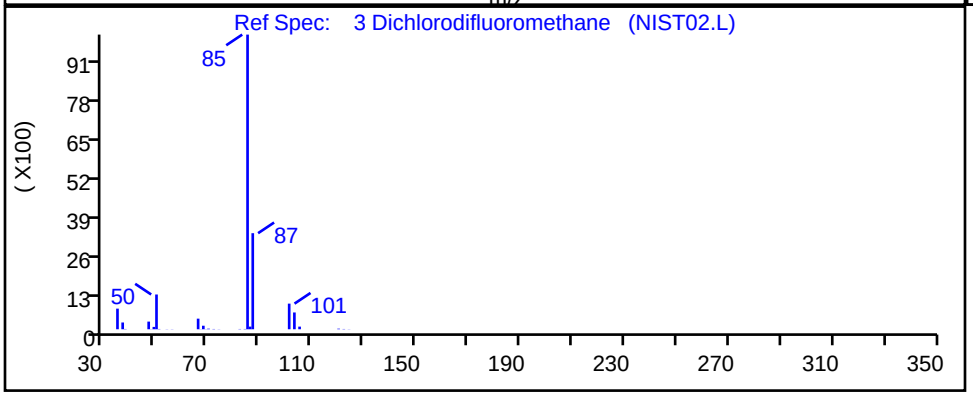
Processing Results




| RT | Mass | Response | Amount |
|---|---|---|---|
| 0.69 | 85.00 | 856 | 0.236229 |
| 0.68 | 87.00 | 677 | |

Reviewer: moroneyc, 09-Sep-2020 10:01:01

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

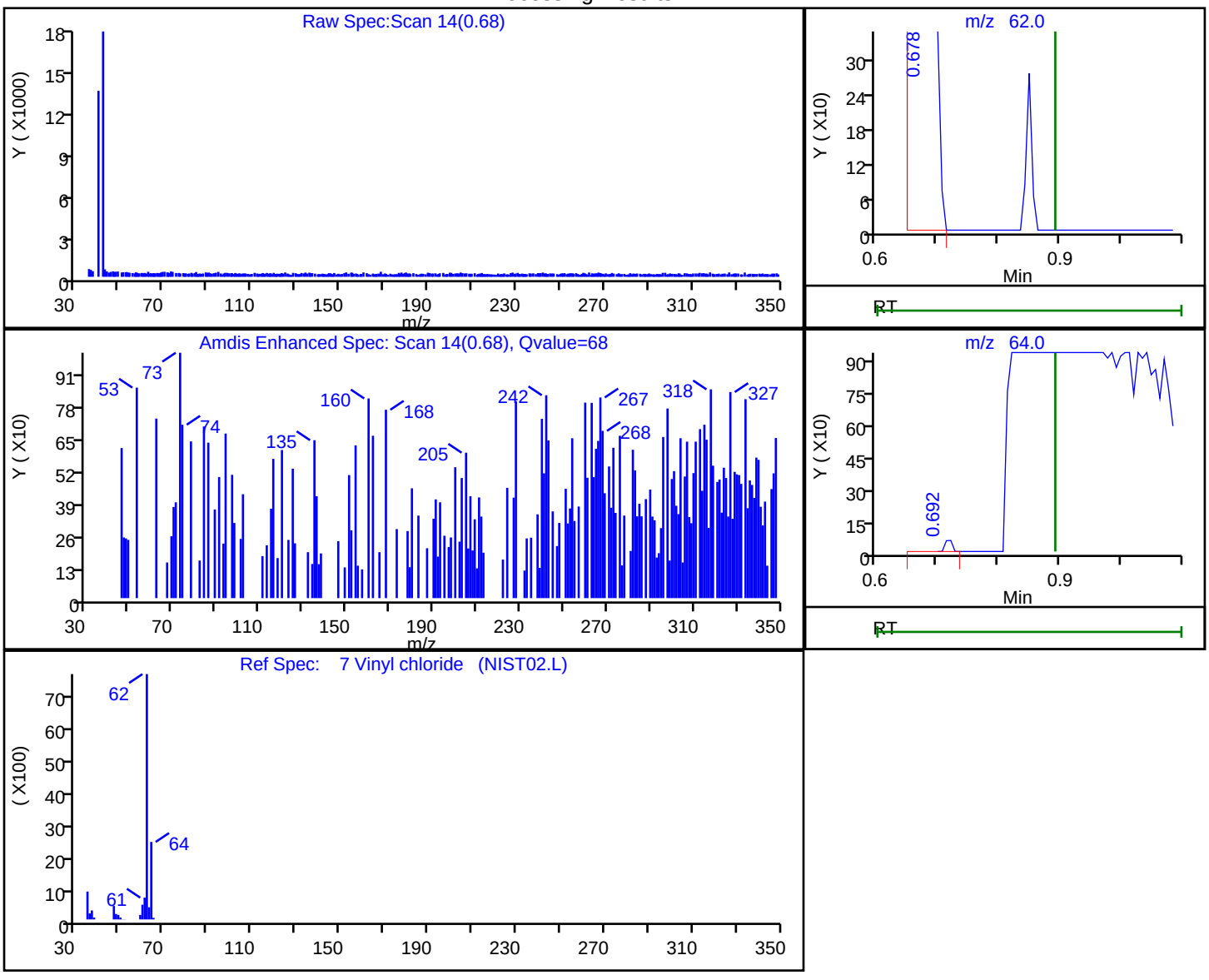
User Disabled Compound Report

Eurofins TestAmerica, Edison

Data File: \\chromfs\Edison\ChromData\CVOAMS13\20200909-116470.b\P79511.D
Injection Date: 09-Sep-2020 10:31:30 Instrument ID: CVOAMS13
Lims ID: MB
Client ID:
Operator ID: ALS Bottle#: 7 Worklist Smp#: 8
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: 8260W_13 Limit Group: VOA - 8260C Water and Solid
Column: Rtx-624 ( 0.25 mm) Detector MS SCAN

## 7 Vinyl chloride, CAS: 75-01-4

Processing Results




| RT | Mass | Response | Amount |
|---|---|---|---|
| 0.68 | 62.00 | 770 | 0.207742 |
| 0.69 | 64.00 | 918 | |

Reviewer: moroneyc, 09-Sep-2020 10:01:03
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Edison  Job No.: 460-217547-1

SDG No.:

Client Sample ID:  Lab Sample ID: MB 460-722834/9

Matrix: Water  Lab File ID: P79538.D

Analysis Method: 8260C  Date Collected:

Sample wt/vol: 5(mL)  Date Analyzed: 09/09/2020 21:01

Soil Aliquot Vol:  Dilution Factor: 1

Soil Extract Vol.:  GC Column: Rtx-624 ID: 0.25(mm)

% Moisture:  Level: (low/med) Low

Analysis Batch No.: 722834  Units: ug/L

| CAS NO. | COMPOUND NAME | RESULT | Q | RL | MDL |
|---|---|---|---|---|---|
| 71-55-6 | 1,1,1-Trichloroethane | 0.24 | U | 1.0 | 0.24 |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 0.37 | U | 1.0 | 0.37 |
| 76-13-1 | 1,1,2-Trichloro-1,2,2-trifluoroethane | 0.31 | U | 1.0 | 0.31 |
| 79-00-5 | 1,1,2-Trichloroethane | 0.43 | U | 1.0 | 0.43 |
| 75-34-3 | 1,1-Dichloroethane | 0.26 | U | 1.0 | 0.26 |
| 75-35-4 | 1,1-Dichloroethene | 0.26 | U | 1.0 | 0.26 |
| 87-61-6 | 1,2,3-Trichlorobenzene | 0.36 | U | 1.0 | 0.36 |
| 120-82-1 | 1,2,4-Trichlorobenzene | 0.37 | U | 1.0 | 0.37 |
| 78-87-5 | 1,2-Dichloropropane | 0.35 | U | 1.0 | 0.35 |
| 541-73-1 | 1,3-Dichlorobenzene | 0.34 | U | 1.0 | 0.34 |
| 106-46-7 | 1,4-Dichlorobenzene | 0.33 | U | 1.0 | 0.33 |
| 123-91-1 | 1,4-Dioxane | 28 | U | 50 | 28 |
| 78-93-3 | 2-Butanone (MEK) | 1.9 | U | 5.0 | 1.9 |
| 591-78-6 | 2-Hexanone | 1.1 | U | 5.0 | 1.1 |
| 108-10-1 | 4-Methyl-2-pentanone (MIBK) | 1.3 | U | 5.0 | 1.3 |
| 67-64-1 | Acetone | 4.4 | U | 5.0 | 4.4 |
| 71-43-2 | Benzene | 0.20 | U | 1.0 | 0.20 |
| 75-25-2 | Bromoform | 0.54 | U | 1.0 | 0.54 |
| 74-83-9 | Bromomethane | 0.55 | U | 1.0 | 0.55 |
| 75-15-0 | Carbon disulfide | 0.82 | U | 1.0 | 0.82 |
| 56-23-5 | Carbon tetrachloride | 0.21 | U | 1.0 | 0.21 |
| 108-90-7 | Chlorobenzene | 0.38 | U | 1.0 | 0.38 |
| 74-97-5 | Chlorobromomethane | 0.41 | U | 1.0 | 0.41 |
| 124-48-1 | Chlorodibromomethane | 0.28 | U | 1.0 | 0.28 |
| 75-00-3 | Chloroethane | 0.32 | U | 1.0 | 0.32 |
| 67-66-3 | Chloroform | 0.33 | U | 1.0 | 0.33 |
| 74-87-3 | Chloromethane | 0.40 | U | 1.0 | 0.40 |
| 156-59-2 | cis-1,2-Dichloroethene | 0.22 | U | 1.0 | 0.22 |
| 10061-01-5 | cis-1,3-Dichloropropene | 0.22 | U | 1.0 | 0.22 |
| 110-82-7 | Cyclohexane | 0.32 | U | 1.0 | 0.32 |
| 75-27-4 | Dichlorobromomethane | 0.34 | U | 1.0 | 0.34 |
| 75-71-8 | Dichlorodifluoromethane | 0.31 | U | 1.0 | 0.31 |
| 100-41-4 | Ethylbenzene | 0.30 | U | 1.0 | 0.30 |
| 106-93-4 | Ethylene Dibromide | 0.50 | U | 1.0 | 0.50 |
| 98-82-8 | Isopropylbenzene | 0.34 | U | 1.0 | 0.34 |

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Edison  Job No.: 460-217547-1

SDG No.:

Client Sample ID:  Lab Sample ID: MB 460-722834/9

Matrix: Water  Lab File ID: P79538.D

Analysis Method: 8260C  Date Collected:

Sample wt/vol: 5(mL)  Date Analyzed: 09/09/2020 21:01

Soil Aliquot Vol:  Dilution Factor: 1

Soil Extract Vol.:  GC Column: Rtx-624 ID: 0.25(mm)

% Moisture:  Level: (low/med) Low

Analysis Batch No.: 722834  Units: ug/L

| CAS NO. | COMPOUND NAME | RESULT | Q | RL | MDL |
|---|---|---|---|---|---|
| 79-20-9 | Methyl acetate | 0.79 | U | 5.0 | 0.79 |
| 1634-04-4 | Methyl tert-butyl ether | 0.47 | U | 1.0 | 0.47 |
| 108-87-2 | Methylcyclohexane | 0.26 | U | 1.0 | 0.26 |
| 75-09-2 | Methylene Chloride | 0.32 | U | 1.0 | 0.32 |
| 179601-23-1 | m-Xylene & p-Xylene | 0.30 | U | 1.0 | 0.30 |
| 95-47-6 | o-Xylene | 0.36 | U | 1.0 | 0.36 |
| 100-42-5 | Styrene | 0.42 | U | 1.0 | 0.42 |
| 127-18-4 | Tetrachloroethene | 0.25 | U | 1.0 | 0.25 |
| 108-88-3 | Toluene | 0.38 | U | 1.0 | 0.38 |
| 156-60-5 | trans-1,2-Dichloroethene | 0.24 | U | 1.0 | 0.24 |
| 10061-02-6 | trans-1,3-Dichloropropene | 0.49 | U | 1.0 | 0.49 |
| 79-01-6 | Trichloroethene | 0.31 | U | 1.0 | 0.31 |
| 75-69-4 | Trichlorofluoromethane | 0.32 | U | 1.0 | 0.32 |
| 75-01-4 | Vinyl chloride | 0.17 | U | 1.0 | 0.17 |
| 107-06-2 | 1,2-Dichloroethane | 0.43 | U | 1.0 | 0.43 |
| 95-50-1 | 1,2-Dichlorobenzene | 0.43 | U | 1.0 | 0.43 |
| 96-12-8 | 1,2-Dibromo-3-Chloropropane | 0.38 | U | 1.0 | 0.38 |

| CAS NO. | SURROGATE | %REC | Q | LIMITS |
|---|---|---|---|---|
| 17060-07-0 | 1,2-Dichloroethane-d4 (Surr) | 93 | | 75-123 |
| 460-00-4 | 4-Bromofluorobenzene | 105 | | 76-120 |
| 1868-53-7 | Dibromofluoromethane (Surr) | 103 | | 77-124 |
| 2037-26-5 | Toluene-d8 (Surr) | 99 | | 80-120 |

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: Eurofins TestAmerica, Edison  Job No.: 460-217547-1

SDG No.:

Client Sample ID:  Lab Sample ID: MB 460-722834/9

Matrix: Water  Lab File ID: P79538.D

Analysis Method: 8260C  Date Collected:

Sample wt/vol: 5(mL)  Date Analyzed: 09/09/2020 21:01

Soil Aliquot Vol:  Dilution Factor: 1

Soil Extract Vol.:  GC Column: Rtx-624 ID: 0.25(mm)

% Moisture:  Level: (low/med) Low

Analysis Batch No.: 722834  Units: ug/L

Number TICs Found: 0  TIC Result Total: 0

| CAS NO. | COMPOUND NAME | RT | RESULT | Q | MATCH QUALITY |
|---|---|---|---|---|---|
| | Tentatively Identified Compound | | None | | |

Eurofins TestAmerica, Edison
Target Compound Quantitation Report

Data File: \\chromfs\Edison\ChromData\CVOAMS13\20200909-116494.b\P79538.D
Lims ID: MB
Client ID:
Sample Type: MB
Inject. Date: 09-Sep-2020 21:01:30 ALS Bottle#: 8 Worklist Smp#: 9
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: MB
Misc. Info.: 460-0116494-009
Operator ID: Instrument ID: CVOAMS13

Method: \\chromfs\Edison\ChromData\CVOAMS13\20200909-116494.b\8260W_13.m
Limit Group: VOA - 8260C Water and Solid
Last Update: 10-Sep-2020 14:25:29 Calib Date: 04-Sep-2020 16:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Edison\ChromData\CVOAMS13\20200904-116303.b\P79359.D

Column 1 : Rtx-624 ( 0.25 mm) Det: MS SCAN
Process Host: CTX1019

First Level Reviewer: sgroa Date: 09-Sep-2020 20:20:42

| Compound | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q | Response | Cal Amt ug/l | OnCol Amt ug/l | Flags |
|---|---|---|---|---|---|---|---|---|---|
| * 33 TBA-d9 (IS) | 65 | 1.845 | 1.845 | 0.000 | 100 | 83555 | 1000.0 | 1000.0 | |
| $ 51 Dibromofluoromethane (Surr) | 113 | 2.776 | 2.769 | 0.007 | 98 | 108174 | 50.0 | 51.4 | |
| * 53 2-Butanone-d5 | 46 | 2.827 | 2.827 | 0.000 | 99 | 96067 | 250.0 | 250.0 | |
| $ 61 1,2-Dichloroethane-d4 (Surr) | 65 | 3.156 | 3.156 | 0.000 | 0 | 97790 | 50.0 | 46.3 | |
| * 66 Fluorobenzene | 96 | 3.385 | 3.385 | 0.000 | 99 | 488796 | 50.0 | 50.0 | |
| * 76 1,4-Dioxane-d8 | 96 | 4.245 | 4.238 | 0.007 | 63 | 11233 | 1000.0 | 1000.0 | |
| $ 82 Toluene-d8 (Surr) | 98 | 4.882 | 4.882 | 0.000 | 99 | 453592 | 50.0 | 49.7 | |
| * 96 Chlorobenzene-d5 | 117 | 6.723 | 6.723 | 0.000 | 85 | 353801 | 50.0 | 50.0 | |
| $ 107 4-Bromofluorobenzene | 174 | 8.485 | 8.478 | 0.007 | 95 | 150716 | 50.0 | 52.6 | |
| * 123 1,4-Dichlorobenzene-d4 | 152 | 10.233 | 10.226 | 0.007 | 94 | 197833 | 50.0 | 50.0 | |

## Reagents:

8260ISNEW_00129 Amount Added: 1.00 Units: uL Run Reagent
8260SURR250_00212 Amount Added: 1.00 Units: uL Run Reagent

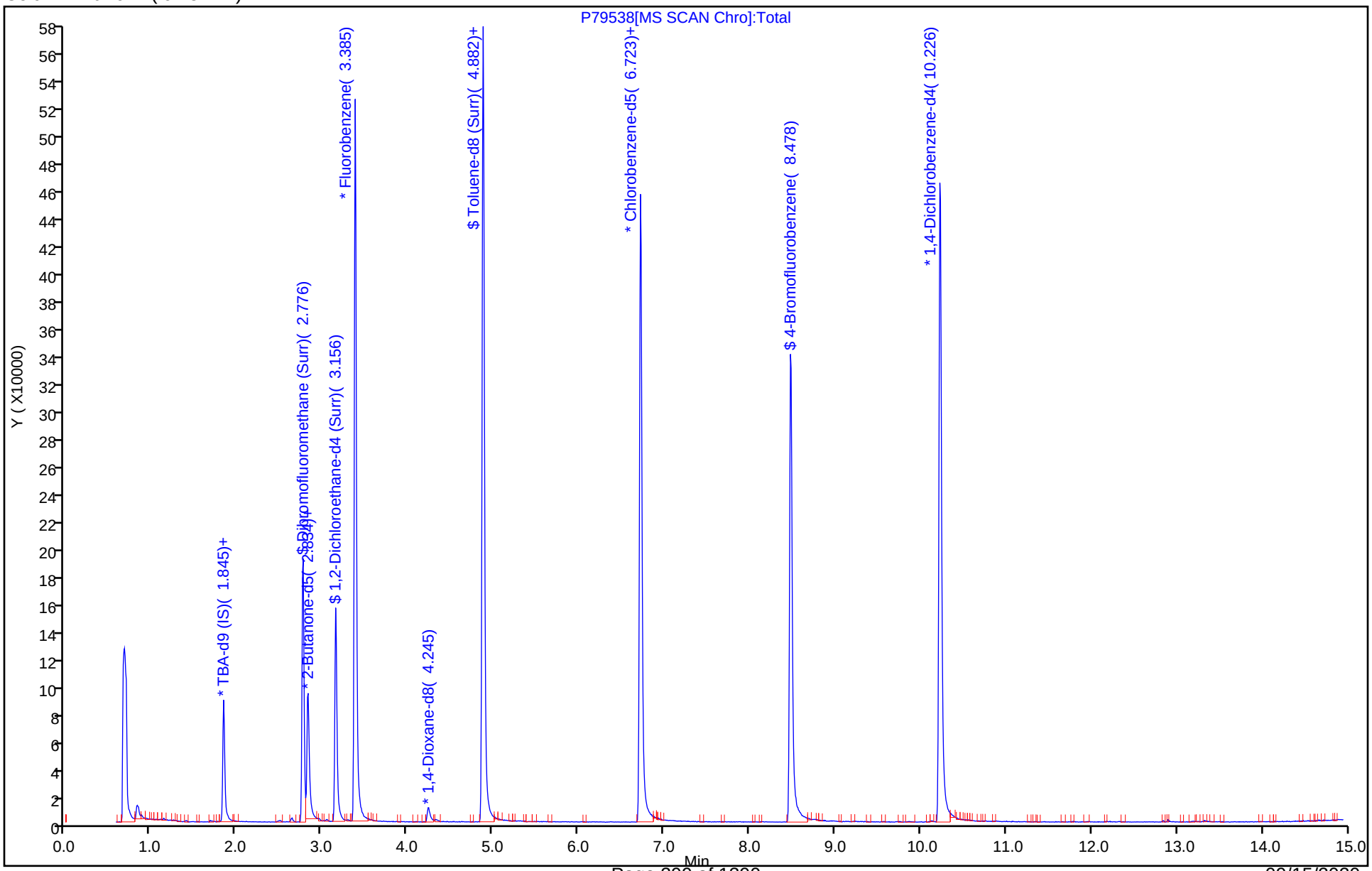
Report Date: 10-Sep-2020 14:26:08 Chrom Revision: 2.3 20-Aug-2020 13:57:12

Eurofins TestAmerica, Edison

Data File: \\chromfs\Edison\ChromData\CVOAMS13\20200909-116494.b\P79538.D

| | | | | | |
|---|---|---|---|---|---|
| Injection Date: | 09-Sep-2020 21:01:30 | Instrument ID: | CVOAMS13 | Operator ID: | |
| Lims ID: | MB | | | Worklist Smp#: | 9 |
| Client ID: | | | | | |
| Purge Vol: | 5.000 mL | Dil. Factor: | 1.0000 | ALS Bottle#: | 8 |
| Method: | 8260W_13 | Limit Group: | VOA - 8260C Water and Solid | | |

Column: Rtx-624 ( 0.25 mm)



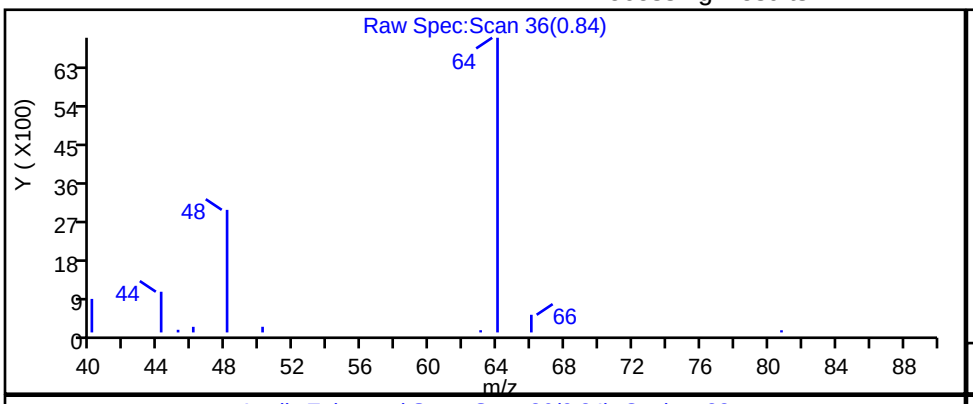
User Disabled Compound Report

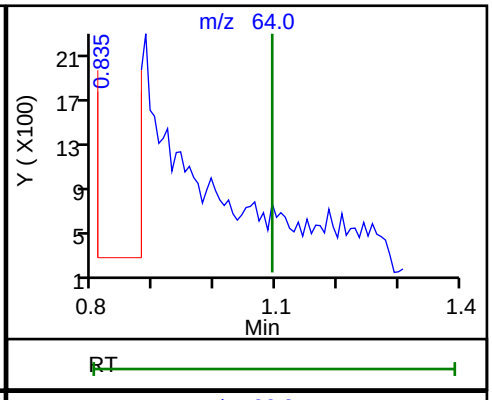
Eurofins TestAmerica, Edison

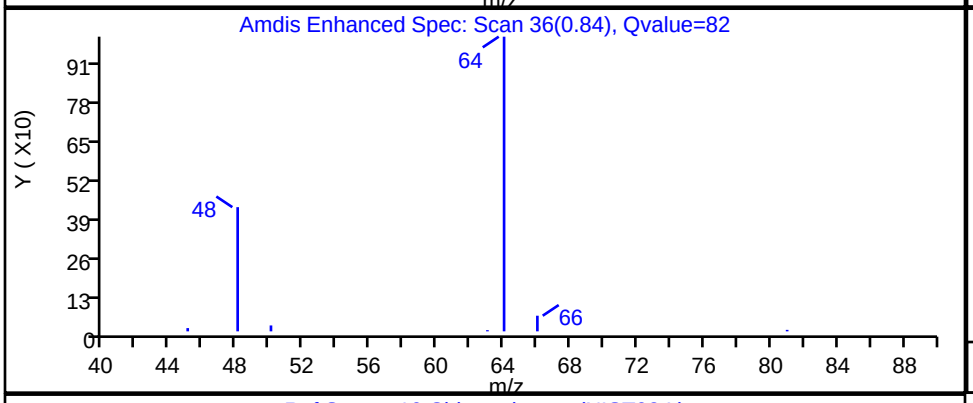
Data File: \\chromfs\Edison\ChromData\CVOAMS13\20200909-116494.b\P79538.D
Injection Date: 09-Sep-2020 21:01:30 Instrument ID: CVOAMS13
Lims ID: MB
Client ID:
Operator ID: ALS Bottle#: 8 Worklist Smp#: 9
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: 8260W_13 Limit Group: VOA - 8260C Water and Solid
Column: Rtx-624 ( 0.25 mm) Detector MS SCAN

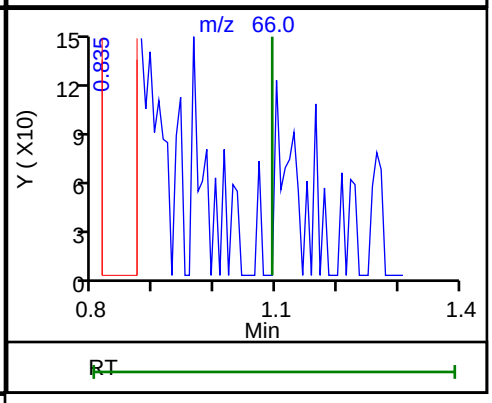
## 10 Chloroethane, CAS: 75-00-3

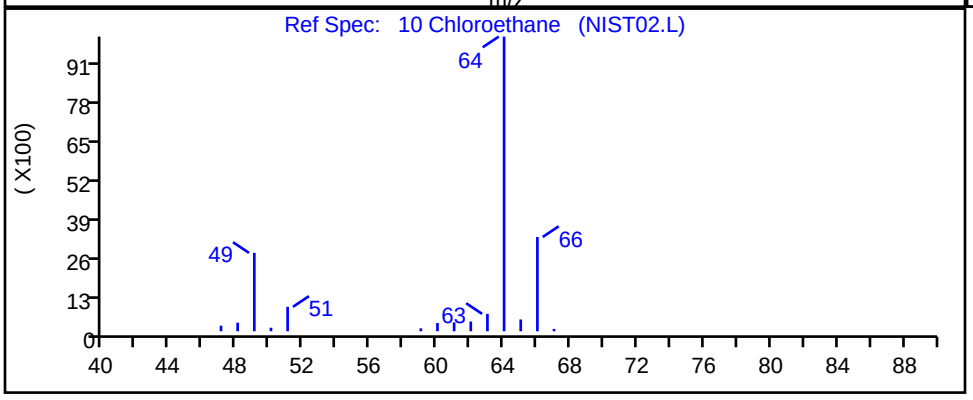
Processing Results




| RT | Mass | Response | Amount |
|---|---|---|---|
| 0.84 | 64.00 | 15980 | 8.923925 |
| 0.84 | 66.00 | 799 | |

Reviewer: sgroa, 09-Sep-2020 20:19:59
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

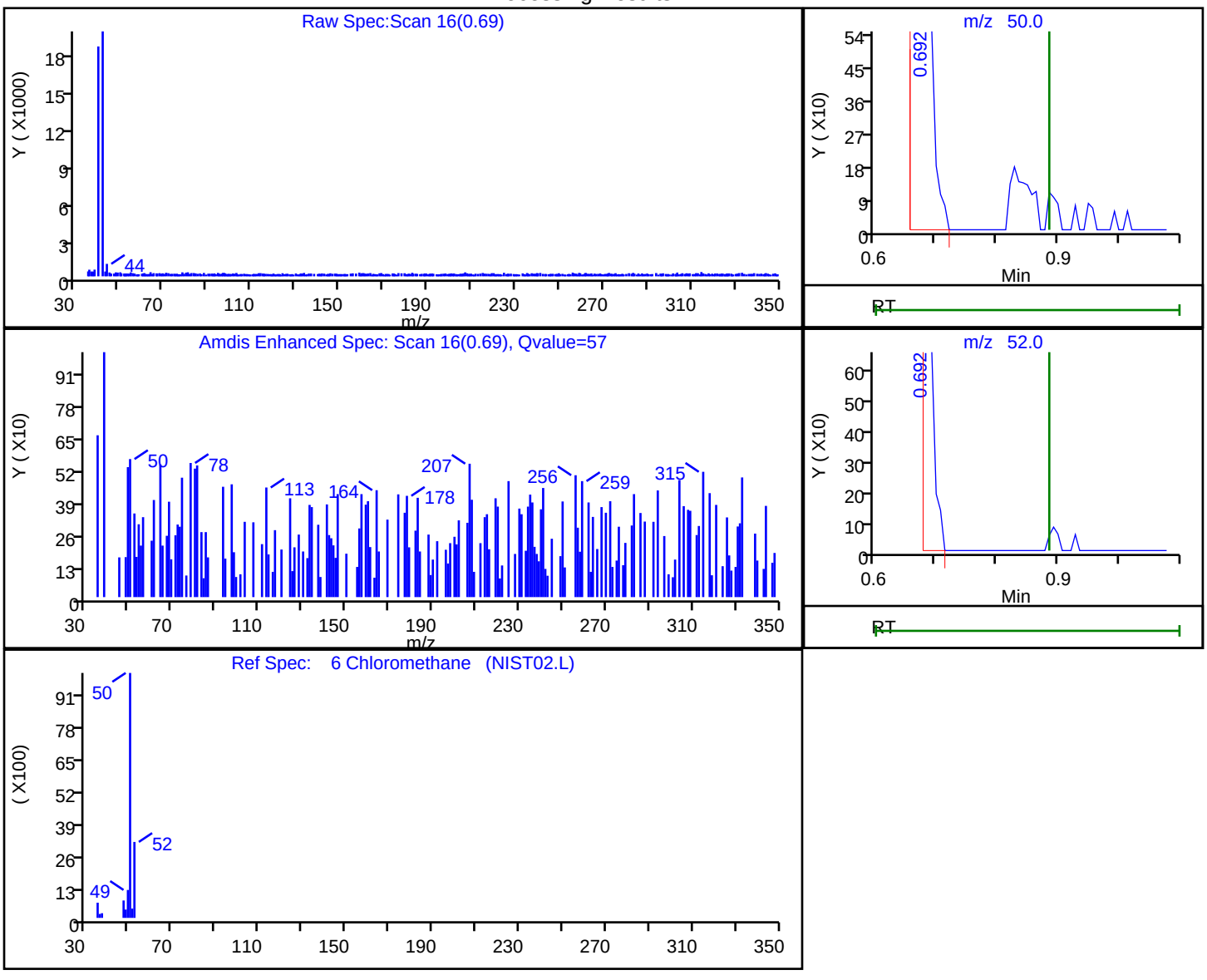
User Disabled Compound Report

Eurofins TestAmerica, Edison

Data File: \\chromfs\Edison\ChromData\CVOAMS13\20200909-116494.b\P79538.D
Injection Date: 09-Sep-2020 21:01:30 Instrument ID: CVOAMS13
Lims ID: MB
Client ID:
Operator ID: ALS Bottle#: 8 Worklist Smp#: 9
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: 8260W_13 Limit Group: VOA - 8260C Water and Solid
Column: Rtx-624 ( 0.25 mm) Detector MS SCAN

## 6 Chloromethane, CAS: 74-87-3

Processing Results




| RT | Mass | Response | Amount |
|---|---|---|---|
| 0.69 | 50.00 | 964 | 0.209558 |
| 0.69 | 52.00 | 638 | |

Reviewer: sgroa, 09-Sep-2020 20:19:55
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

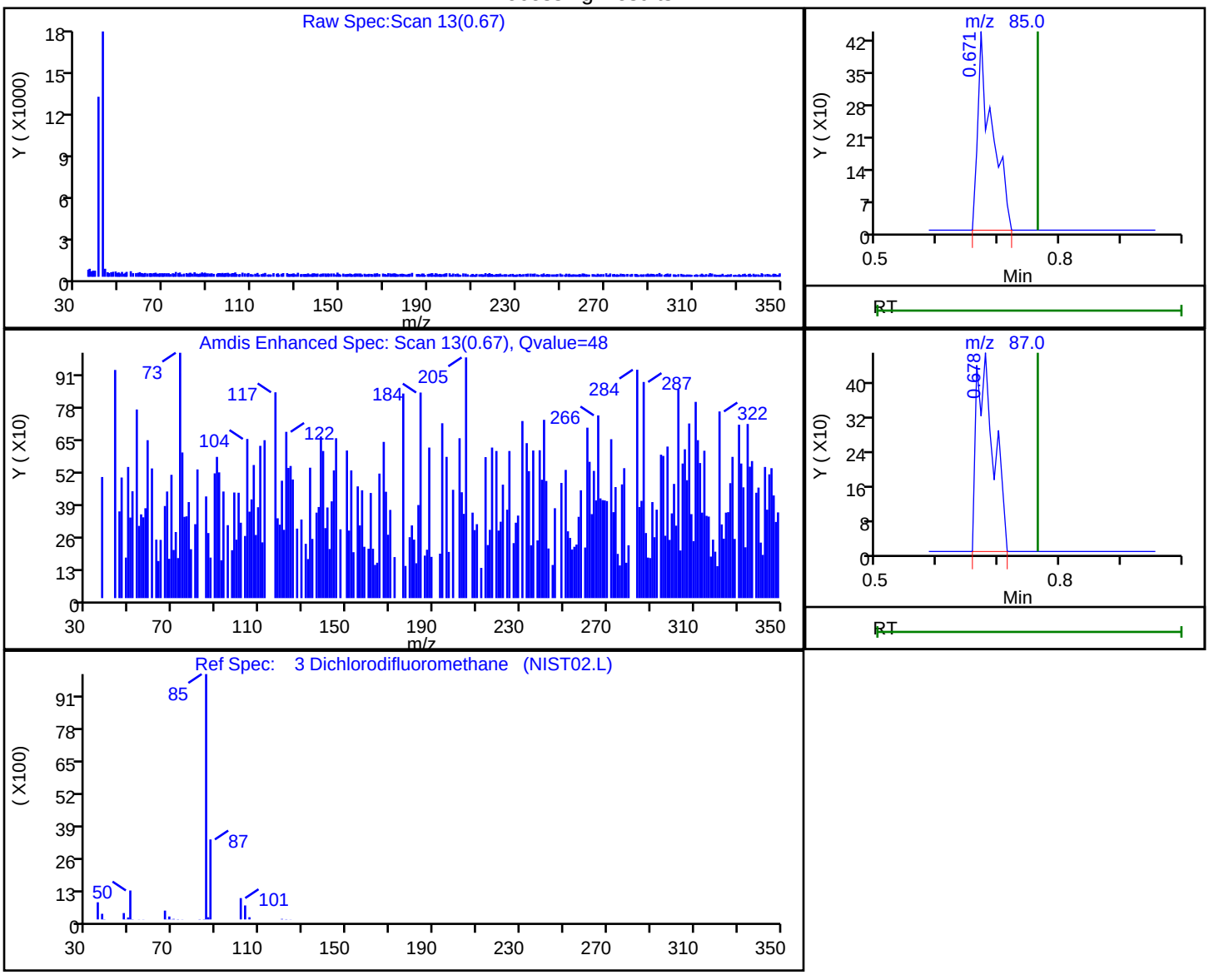
User Disabled Compound Report

Eurofins TestAmerica, Edison

Data File: \\chromfs\Edison\ChromData\CVOAMS13\20200909-116494.b\P79538.D
Injection Date: 09-Sep-2020 21:01:30 Instrument ID: CVOAMS13
Lims ID: MB
Client ID:
Operator ID: ALS Bottle#: 8 Worklist Smp#: 9
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: 8260W_13 Limit Group: VOA - 8260C Water and Solid
Column: Rtx-624 ( 0.25 mm) Detector MS SCAN

## 3 Dichlorodifluoromethane, CAS: 75-71-8

Processing Results




| RT | Mass | Response | Amount |
|---|---|---|---|
| 0.67 | 85.00 | 714 | 0.216691 |
| 0.68 | 87.00 | 892 | |

Reviewer: xuyvo, 10-Sep-2020 10:51:47
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

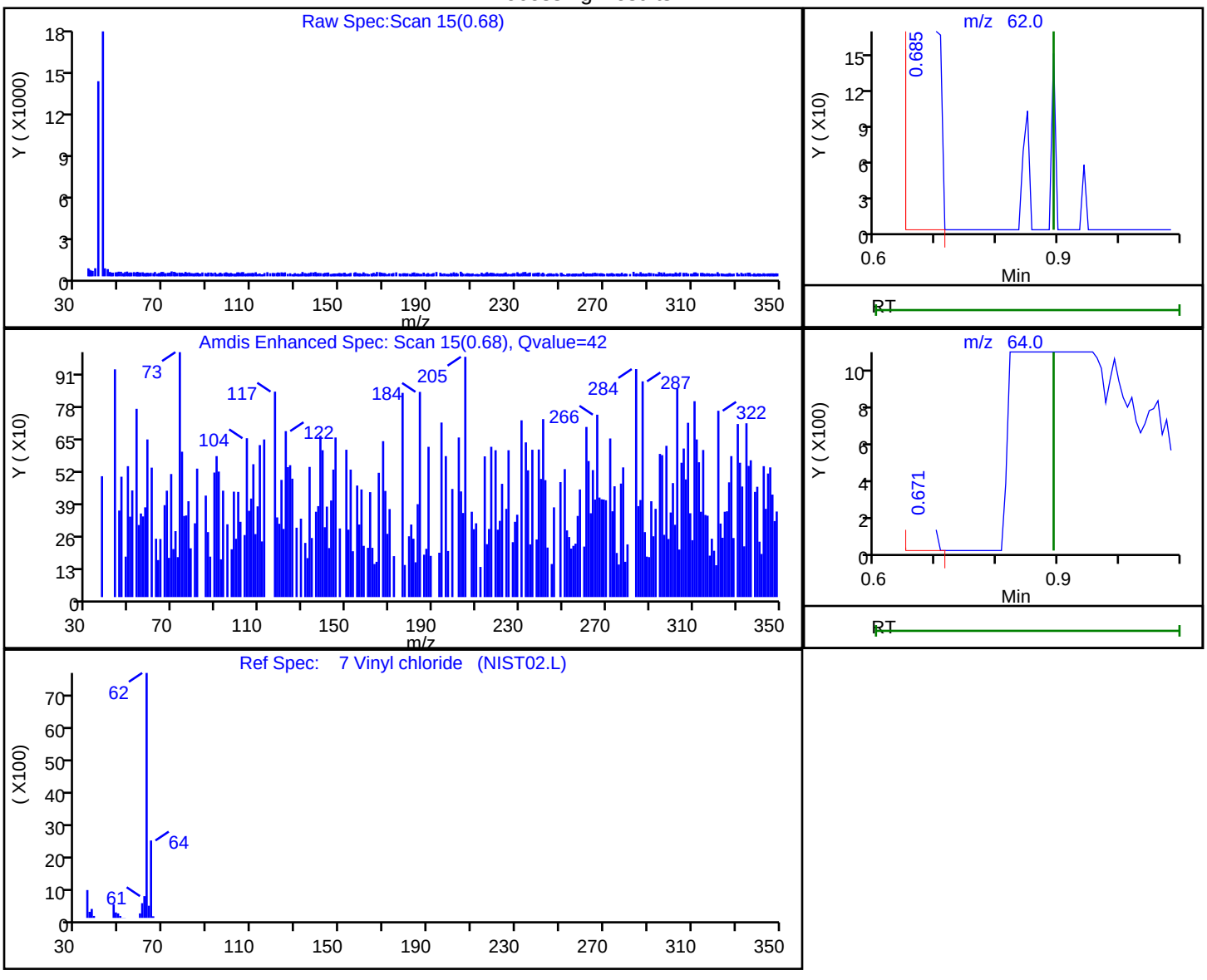
User Disabled Compound Report

Eurofins TestAmerica, Edison

Data File: \\chromfs\Edison\ChromData\CVOAMS13\20200909-116494.b\P79538.D
Injection Date: 09-Sep-2020 21:01:30 Instrument ID: CVOAMS13
Lims ID: MB
Client ID:
Operator ID: ALS Bottle#: 8 Worklist Smp#: 9
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: 8260W_13 Limit Group: VOA - 8260C Water and Solid
Column: Rtx-624 ( 0.25 mm) Detector MS SCAN

## 7 Vinyl chloride, CAS: 75-01-4

Processing Results




| RT | Mass | Response | Amount |
|---|---|---|---|
| 0.68 | 62.00 | 700 | 0.207690 |
| 0.67 | 64.00 | 781 | |

Reviewer: sgroa, 09-Sep-2020 20:19:57
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

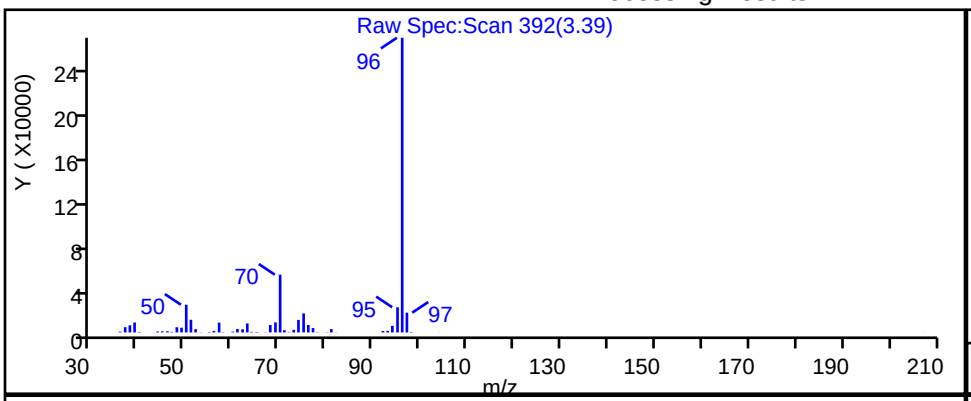
User Disabled Compound Report

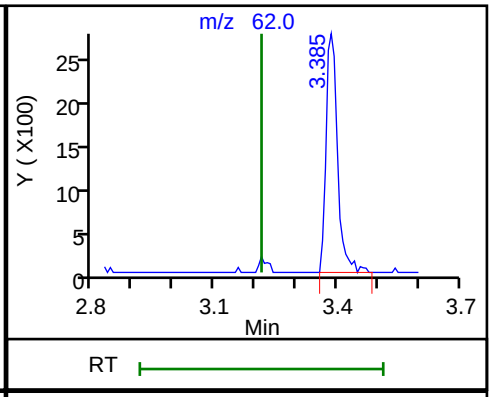
Eurofins TestAmerica, Edison

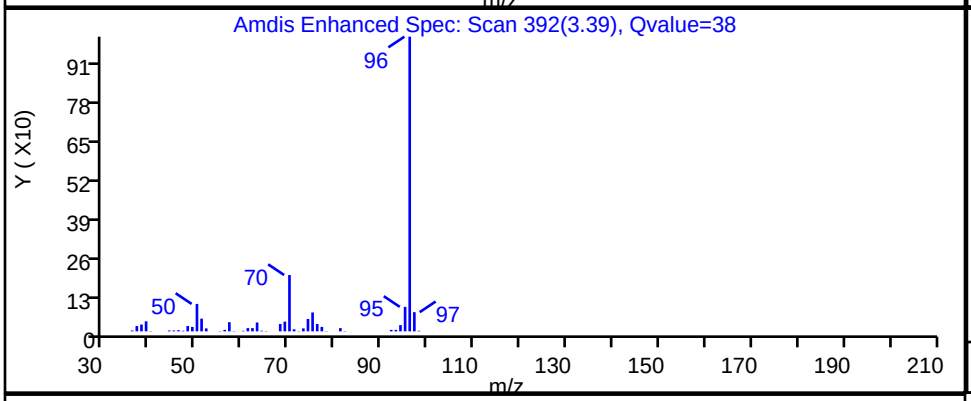
Data File: \\chromfs\Edison\ChromData\CVOAMS13\20200909-116494.b\P79538.D
Injection Date: 09-Sep-2020 21:01:30 Instrument ID: CVOAMS13
Lims ID: MB
Client ID:
Operator ID: ALS Bottle#: 8 Worklist Smp#: 9
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: 8260W_13 Limit Group: VOA - 8260C Water and Solid
Column: Rtx-624 ( 0.25 mm) Detector MS SCAN

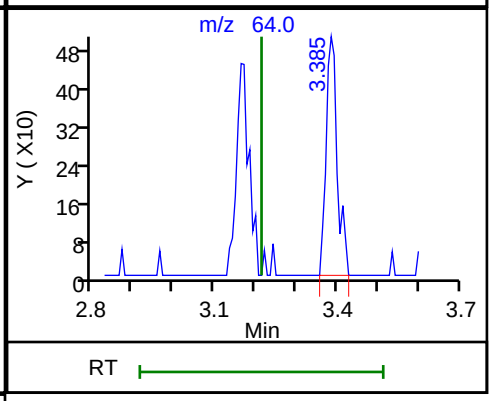
## 63 1,2-Dichloroethane, CAS: 107-06-2

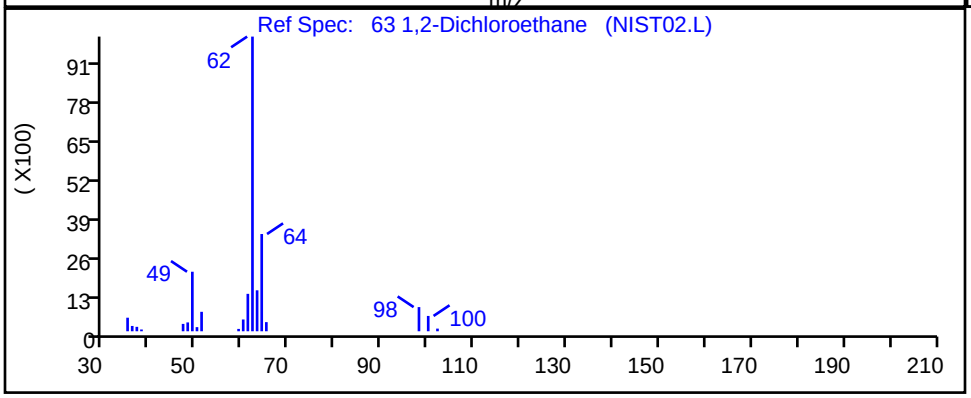
Processing Results




| RT | Mass | Response | Amount |
|---|---|---|---|
| 3.39 | 62.00 | 5499 | 2.013277 |
| 3.39 | 64.00 | 970 | |

Reviewer: sgroa, 09-Sep-2020 20:20:09
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Edison  Job No.: 460-217547-1

SDG No.:

Client Sample ID:  Lab Sample ID: LCS 460-722597/4

Matrix: Water  Lab File ID: P79482.D

Analysis Method: 8260C  Date Collected:

Sample wt/vol: 5(mL)  Date Analyzed: 09/08/2020 20:12

Soil Aliquot Vol:  Dilution Factor: 1

Soil Extract Vol.:  GC Column: Rtx-624 ID: 0.25(mm)

% Moisture:  Level: (low/med) Low

Analysis Batch No.: 722597  Units: ug/L

| CAS NO. | COMPOUND NAME | RESULT | Q | RL | MDL |
|---|---|---|---|---|---|
| 71-55-6 | 1,1,1-Trichloroethane | 20.7 | | 1.0 | 0.24 |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 18.9 | | 1.0 | 0.37 |
| 76-13-1 | 1,1,2-Trichloro-1,2,2-trifluoroethane | 21.1 | | 1.0 | 0.31 |
| 79-00-5 | 1,1,2-Trichloroethane | 18.7 | | 1.0 | 0.43 |
| 75-34-3 | 1,1-Dichloroethane | 20.2 | | 1.0 | 0.26 |
| 75-35-4 | 1,1-Dichloroethene | 20.7 | | 1.0 | 0.26 |
| 87-61-6 | 1,2,3-Trichlorobenzene | 17.3 | | 1.0 | 0.36 |
| 120-82-1 | 1,2,4-Trichlorobenzene | 19.3 | | 1.0 | 0.37 |
| 78-87-5 | 1,2-Dichloropropane | 19.5 | | 1.0 | 0.35 |
| 541-73-1 | 1,3-Dichlorobenzene | 21.0 | | 1.0 | 0.34 |
| 106-46-7 | 1,4-Dichlorobenzene | 20.7 | | 1.0 | 0.33 |
| 123-91-1 | 1,4-Dioxane | 434 | | 50 | 28 |
| 78-93-3 | 2-Butanone (MEK) | 119 | | 5.0 | 1.9 |
| 591-78-6 | 2-Hexanone | 125 | | 5.0 | 1.1 |
| 108-10-1 | 4-Methyl-2-pentanone (MIBK) | 123 | | 5.0 | 1.3 |
| 67-64-1 | Acetone | 98.2 | | 5.0 | 4.4 |
| 71-43-2 | Benzene | 19.9 | | 1.0 | 0.20 |
| 75-25-2 | Bromoform | 18.1 | | 1.0 | 0.54 |
| 74-83-9 | Bromomethane | 32.6 | | 1.0 | 0.55 |
| 75-15-0 | Carbon disulfide | 19.5 | | 1.0 | 0.82 |
| 56-23-5 | Carbon tetrachloride | 22.5 | | 1.0 | 0.21 |
| 108-90-7 | Chlorobenzene | 20.3 | | 1.0 | 0.38 |
| 74-97-5 | Chlorobromomethane | 20.3 | | 1.0 | 0.41 |
| 124-48-1 | Chlorodibromomethane | 18.9 | | 1.0 | 0.28 |
| 75-00-3 | Chloroethane | 20.2 | | 1.0 | 0.32 |
| 67-66-3 | Chloroform | 19.8 | | 1.0 | 0.33 |
| 74-87-3 | Chloromethane | 18.7 | | 1.0 | 0.40 |
| 156-59-2 | cis-1,2-Dichloroethene | 19.9 | | 1.0 | 0.22 |
| 10061-01-5 | cis-1,3-Dichloropropene | 18.9 | | 1.0 | 0.22 |
| 110-82-7 | Cyclohexane | 20.3 | | 1.0 | 0.32 |
| 75-27-4 | Dichlorobromomethane | 19.9 | | 1.0 | 0.34 |
| 75-71-8 | Dichlorodifluoromethane | 19.9 | | 1.0 | 0.31 |
| 100-41-4 | Ethylbenzene | 20.7 | | 1.0 | 0.30 |
| 106-93-4 | Ethylene Dibromide | 18.9 | | 1.0 | 0.50 |
| 98-82-8 | Isopropylbenzene | 20.7 | | 1.0 | 0.34 |

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Edison  Job No.: 460-217547-1

SDG No.:

Client Sample ID:  Lab Sample ID: LCS 460-722597/4

Matrix: Water  Lab File ID: P79482.D

Analysis Method: 8260C  Date Collected:

Sample wt/vol: 5(mL)  Date Analyzed: 09/08/2020 20:12

Soil Aliquot Vol:  Dilution Factor: 1

Soil Extract Vol.:  GC Column: Rtx-624 ID: 0.25(mm)

% Moisture:  Level: (low/med) Low

Analysis Batch No.: 722597  Units: ug/L

| CAS NO. | COMPOUND NAME | RESULT | Q | RL | MDL |
|---|---|---|---|---|---|
| 79-20-9 | Methyl acetate | 48.2 | | 5.0 | 0.79 |
| 1634-04-4 | Methyl tert-butyl ether | 19.2 | | 1.0 | 0.47 |
| 108-87-2 | Methylcyclohexane | 21.4 | | 1.0 | 0.26 |
| 75-09-2 | Methylene Chloride | 20.1 | | 1.0 | 0.32 |
| 179601-23-1 | m-Xylene & p-Xylene | 21.3 | | 1.0 | 0.30 |
| 95-47-6 | o-Xylene | 20.4 | | 1.0 | 0.36 |
| 100-42-5 | Styrene | 20.7 | | 1.0 | 0.42 |
| 127-18-4 | Tetrachloroethene | 21.0 | | 1.0 | 0.25 |
| 108-88-3 | Toluene | 20.2 | | 1.0 | 0.38 |
| 156-60-5 | trans-1,2-Dichloroethene | 20.7 | | 1.0 | 0.24 |
| 10061-02-6 | trans-1,3-Dichloropropene | 19.4 | | 1.0 | 0.49 |
| 79-01-6 | Trichloroethene | 20.5 | | 1.0 | 0.31 |
| 75-69-4 | Trichlorofluoromethane | 20.7 | | 1.0 | 0.32 |
| 75-01-4 | Vinyl chloride | 19.4 | | 1.0 | 0.17 |
| 107-06-2 | 1,2-Dichloroethane | 18.2 | | 1.0 | 0.43 |
| 95-50-1 | 1,2-Dichlorobenzene | 20.7 | | 1.0 | 0.43 |
| 96-12-8 | 1,2-Dibromo-3-Chloropropane | 18.5 | | 1.0 | 0.38 |

| CAS NO. | SURROGATE | %REC | Q | LIMITS |
|---|---|---|---|---|
| 17060-07-0 | 1,2-Dichloroethane-d4 (Surr) | 91 | | 75-123 |
| 460-00-4 | 4-Bromofluorobenzene | 100 | | 76-120 |
| 1868-53-7 | Dibromofluoromethane (Surr) | 94 | | 77-124 |
| 2037-26-5 | Toluene-d8 (Surr) | 95 | | 80-120 |

Eurofins TestAmerica, Edison
Target Compound Quantitation Report

Data File: \\chromfs\Edison\ChromData\CVOAMS13\20200908-116444.b\P79482.D
Lims ID: LCS
Client ID:
Sample Type: LCS
Inject. Date: 08-Sep-2020 20:12:30 ALS Bottle#: 3 Worklist Smp#: 4
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: LCS
Misc. Info.: 460-0116444-004
Operator ID: Instrument ID: CVOAMS13

Method: \\chromfs\Edison\ChromData\CVOAMS13\20200908-116444.b\8260W_13.m
Limit Group: VOA - 8260C Water and Solid
Last Update: 09-Sep-2020 14:26:26 Calib Date: 04-Sep-2020 16:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Edison\ChromData\CVOAMS13\20200904-116303.b\P79359.D

Column 1 : Rtx-624 ( 0.25 mm) Det: MS SCAN
Process Host: CTX1060

First Level Reviewer: xuyvo Date: 09-Sep-2020 14:26:26

| Compound | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q | Response | Cal Amt ug/l | OnCol Amt ug/l | Flags |
|---|---|---|---|---|---|---|---|---|---|
| 3 Dichlorodifluoromethane | 85 | 0.771 | 0.764 | 0.007 | 99 | 76192 | 20.0 | 19.9 | |
| 6 Chloromethane | 50 | 0.885 | 0.886 | -0.001 | 91 | 99846 | 20.0 | 18.7 | |
| 8 Butadiene | 54 | 0.885 | 0.886 | -0.001 | 96 | 66975 | 20.0 | 18.8 | |
| 7 Vinyl chloride | 62 | 0.893 | 0.893 | 0.000 | 97 | 75921 | 20.0 | 19.4 | |
| 9 Bromomethane | 94 | 1.036 | 1.036 | 0.000 | 99 | 36675 | 20.0 | 32.6 | |
| 10 Chloroethane | 64 | 1.093 | 1.093 | 0.000 | 99 | 42131 | 20.0 | 20.2 | |
| 11 Pentane | 72 | 1.143 | 1.143 | 0.000 | 96 | 20881 | 40.0 | 54.8 | |
| 12 Trichlorofluoromethane | 101 | 1.143 | 1.143 | 0.000 | 61 | 73937 | 20.0 | 20.7 | |
| 13 Dichlorofluoromethane | 67 | 1.186 | 1.179 | 0.007 | 98 | 94910 | 20.0 | 19.7 | |
| 14 2-Methyl-1,3-butadiene | 67 | 1.287 | 1.287 | 0.000 | 97 | 84925 | 20.0 | 20.6 | |
| 15 Ethyl ether | 59 | 1.294 | 1.294 | 0.000 | 95 | 33198 | 20.0 | 17.3 | |
| 17 1,1-Dichloroethene | 96 | 1.387 | 1.387 | 0.000 | 98 | 52975 | 20.0 | 20.7 | |
| 16 Ethanol | 46 | 1.401 | 1.401 | 0.000 | 23 | 6508 | 800.0 | 885.3 | |
| 19 Carbon disulfide | 76 | 1.401 | 1.401 | 0.000 | 99 | 194913 | 20.0 | 19.5 | |
| 20 1,1,2-Trichloro-1,2,2-trifluoroe | 101 | 1.408 | 1.408 | 0.000 | 94 | 52721 | 20.0 | 21.1 | |
| 22 Iodomethane | 142 | 1.466 | 1.466 | 0.000 | 96 | 40229 | 20.0 | 9.94 | |
| 23 Cyclopentene | 67 | 1.537 | 1.537 | 0.000 | 96 | 148437 | 20.0 | 20.9 | |
| 24 Acrolein | 56 | 1.552 | 1.559 | -0.007 | 90 | 7672 | 40.0 | 44.6 | |
| 25 3-Chloro-1-propene | 76 | 1.623 | 1.623 | 0.000 | 94 | 32461 | 20.0 | 19.9 | |
| 26 Isopropyl alcohol | 45 | 1.652 | 1.645 | 0.007 | 96 | 13905 | 200.0 | 194.4 | |
| 27 Methylene Chloride | 84 | 1.695 | 1.688 | 0.007 | 92 | 61888 | 20.0 | 20.1 | |
| 28 Acetone | 43 | 1.709 | 1.709 | 0.000 | 88 | 35161 | 100.0 | 98.2 | |
| 29 trans-1,2-Dichloroethene | 96 | 1.774 | 1.767 | 0.007 | 93 | 60475 | 20.0 | 20.7 | |
| 30 Methyl acetate | 43 | 1.781 | 1.781 | 0.000 | 99 | 41631 | 40.0 | 48.2 | |
| 31 Hexane | 86 | 1.810 | 1.817 | -0.007 | 91 | 16240 | 20.0 | 23.0 | |
| 32 Methyl tert-butyl ether | 73 | 1.831 | 1.831 | 0.000 | 95 | 114915 | 20.0 | 19.2 | |
| * 33 TBA-d9 (IS) | 65 | 1.845 | 1.845 | 0.000 | 100 | 88603 | 1000.0 | 1000.0 | |
| 34 2-Methyl-2-propanol | 59 | 1.888 | 1.888 | 0.000 | 100 | 21841 | 200.0 | 225.2 | |
| 35 Acetonitrile | 41 | 1.981 | 1.974 | 0.007 | 100 | 33497 | 200.0 | 189.1 | |
| 36 Isopropyl ether | 45 | 2.046 | 2.046 | 0.000 | 98 | 180832 | 20.0 | 19.3 | |
| 37 2-Chloro-1,3-butadiene | 88 | 2.103 | 2.103 | 0.000 | 90 | 55031 | 20.0 | 20.5 | |

| Compound | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q | Response | Cal Amt ug/l | OnCol Amt ug/l | Flags |
|---|---|---|---|---|---|---|---|---|---|
| 38 1,1-Dichloroethane | 63 | 2.118 | 2.118 | 0.000 | 99 | 109476 | 20.0 | 20.2 | |
| 39 Acrylonitrile | 53 | 2.146 | 2.146 | 0.000 | 95 | 126982 | 200.0 | 180.4 | |
| 40 Tert-butyl ethyl ether | 59 | 2.268 | 2.268 | 0.000 | 89 | 144797 | 20.0 | 18.8 | |
| 41 Vinyl acetate | 43 | 2.282 | 2.282 | 0.000 | 100 | 144045 | 40.0 | 34.5 | |
| 42 cis-1,2-Dichloroethene | 96 | 2.454 | 2.461 | -0.007 | 98 | 64513 | 20.0 | 19.9 | |
| 43 2,2-Dichloropropane | 77 | 2.526 | 2.526 | 0.000 | 98 | 70223 | 20.0 | 19.1 | |
| 44 Cyclohexane | 56 | 2.583 | 2.583 | 0.000 | 90 | 110427 | 20.0 | 20.3 | |
| 45 Chlorobromomethane | 128 | 2.590 | 2.590 | 0.000 | 72 | 28652 | 20.0 | 20.3 | |
| 46 Chloroform | 83 | 2.648 | 2.648 | 0.000 | 99 | 96181 | 20.0 | 19.8 | |
| 47 Carbon tetrachloride | 117 | 2.734 | 2.734 | 0.000 | 98 | 64546 | 20.0 | 22.5 | |
| 48 Ethyl acetate | 70 | 2.741 | 2.741 | 0.000 | 98 | 7280 | 40.0 | 51.0 | |
| 49 Methyl acrylate | 55 | 2.748 | 2.748 | 0.000 | 85 | 25386 | 20.0 | 16.6 | |
| 50 Tetrahydrofuran | 42 | 2.755 | 2.748 | 0.007 | 95 | 21899 | 40.0 | 44.0 | |
| $ 51 Dibromofluoromethane (Surr) | 113 | 2.769 | 2.769 | 0.000 | 98 | 114892 | 50.0 | 46.9 | |
| 52 1,1,1-Trichloroethane | 97 | 2.777 | 2.777 | -0.001 | 98 | 81151 | 20.0 | 20.7 | |
| * 53 2-Butanone-d5 | 46 | 2.827 | 2.827 | 0.000 | 99 | 110078 | 250.0 | 250.0 | |
| 54 2-Butanone (MEK) | 72 | 2.862 | 2.863 | -0.001 | 100 | 19155 | 100.0 | 119.1 | |
| 55 1,1-Dichloropropene | 75 | 2.870 | 2.870 | 0.000 | 97 | 86158 | 20.0 | 20.4 | |
| 56 Isooctane | 57 | 2.956 | 2.956 | 0.000 | 99 | 182106 | 20.0 | 21.2 | |
| 57 n-Heptane | 57 | 3.049 | 3.049 | 0.000 | 93 | 45739 | 20.0 | 21.7 | |
| 58 Benzene | 78 | 3.049 | 3.049 | 0.000 | 95 | 255682 | 20.0 | 19.9 | |
| 59 Propionitrile | 54 | 3.070 | 3.070 | 0.000 | 96 | 41235 | 200.0 | 219.3 | |
| 60 Methacrylonitrile | 67 | 3.092 | 3.085 | 0.007 | 90 | 140342 | 200.0 | 179.8 | |
| $ 61 1,2-Dichloroethane-d4 (Surr) | 65 | 3.156 | 3.156 | 0.000 | 0 | 111651 | 50.0 | 45.4 | |
| 62 Tert-amyl methyl ether | 73 | 3.156 | 3.156 | 0.000 | 98 | 120370 | 20.0 | 18.7 | |
| 63 1,2-Dichloroethane | 62 | 3.206 | 3.214 | -0.008 | 97 | 57649 | 20.0 | 18.2 | |
| 64 Isobutyl alcohol | 43 | 3.285 | 3.278 | 0.007 | 96 | 23356 | 500.0 | 493.0 | |
| 65 t-Amyl alcohol | 59 | 3.342 | 3.350 | -0.008 | 92 | 15430 | 200.0 | 200.7 | |
| * 66 Fluorobenzene | 96 | 3.385 | 3.385 | 0.000 | 99 | 568410 | 50.0 | 50.0 | |
| 67 Isopropyl acetate | 43 | 3.457 | 3.457 | 0.000 | 99 | 56091 | 20.0 | 15.6 | |
| 68 Methylcyclohexane | 83 | 3.507 | 3.507 | 0.000 | 96 | 107246 | 20.0 | 21.4 | |
| 69 Trichloroethene | 130 | 3.536 | 3.536 | 0.000 | 97 | 62825 | 20.0 | 20.5 | |
| 70 2-ethoxy-2-methyl butane | 59 | 3.765 | 3.765 | 0.000 | 93 | 120054 | 20.0 | 19.0 | |
| 71 Dibromomethane | 93 | 3.894 | 3.894 | 0.000 | 95 | 25608 | 20.0 | 18.7 | |
| 72 n-Butanol | 56 | 3.908 | 3.915 | -0.007 | 91 | 12390 | 500.0 | 446.3 | |
| 73 1,2-Dichloropropane | 63 | 3.980 | 3.980 | 0.000 | 92 | 59902 | 20.0 | 19.5 | |
| 75 Dichlorobromomethane | 83 | 4.066 | 4.059 | 0.007 | 99 | 67065 | 20.0 | 19.9 | |
| 74 Ethyl acrylate | 55 | 4.066 | 4.066 | 0.000 | 53 | 35479 | 20.0 | 17.3 | |
| * 76 1,4-Dioxane-d8 | 96 | 4.238 | 4.238 | 0.000 | 85 | 12814 | 1000.0 | 1000.0 | |
| 77 Methyl methacrylate | 100 | 4.252 | 4.252 | 0.000 | 90 | 17854 | 40.0 | 39.0 | |
| 78 1,4-Dioxane | 88 | 4.259 | 4.266 | -0.007 | 34 | 6417 | 400.0 | 434.2 | |
| 79 n-Propyl acetate | 43 | 4.417 | 4.417 | 0.000 | 98 | 38769 | 20.0 | 16.8 | |
| 80 2-Chloroethyl vinyl ether | 63 | 4.675 | 4.675 | 0.000 | 97 | 6817 | 20.0 | 11.7 | |
| 81 cis-1,3-Dichloropropene | 75 | 4.696 | 4.696 | 0.000 | 91 | 79622 | 20.0 | 18.9 | |
| $ 82 Toluene-d8 (Surr) | 98 | 4.882 | 4.883 | 0.000 | 99 | 504962 | 50.0 | 47.5 | |
| 83 Toluene | 91 | 4.933 | 4.940 | -0.007 | 93 | 264688 | 20.0 | 20.2 | |
| 84 Epichlorohydrin | 57 | 4.983 | 4.983 | 0.000 | 97 | 12053 | 400.0 | 313.1 | |
| 85 2-Nitropropane | 41 | 5.190 | 5.191 | -0.001 | 99 | 9817 | 40.0 | 32.2 | |
| 86 Tetrachloroethene | 166 | 5.362 | 5.355 | 0.007 | 97 | 64625 | 20.0 | 21.0 | |
| 87 4-Methyl-2-pentanone (MIBK) | 43 | 5.398 | 5.405 | -0.007 | 95 | 139675 | 100.0 | 122.7 | |
| 88 trans-1,3-Dichloropropene | 75 | 5.434 | 5.441 | -0.007 | 99 | 65020 | 20.0 | 19.4 | |
| 89 1,1,2-Trichloroethane | 83 | 5.606 | 5.606 | 0.000 | 97 | 33255 | 20.0 | 18.7 | |

| Compound | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q | Response | Cal Amt ug/l | OnCol Amt ug/l | Flags |
|---|---|---|---|---|---|---|---|---|---|
| 90 Ethyl methacrylate | 69 | 5.692 | 5.692 | 0.000 | 89 | 44094 | 20.0 | 18.3 | |
| 91 Chlorodibromomethane | 129 | 5.799 | 5.799 | 0.000 | 98 | 43474 | 20.0 | 18.9 | |
| 92 1,3-Dichloropropane | 76 | 5.914 | 5.914 | 0.000 | 93 | 68539 | 20.0 | 18.5 | |
| 93 Ethylene Dibromide | 107 | 6.043 | 6.043 | 0.000 | 97 | 36222 | 20.0 | 18.9 | |
| 94 n-Butyl acetate | 43 | 6.401 | 6.401 | 0.000 | 99 | 39196 | 20.0 | 15.8 | |
| 95 2-Hexanone | 43 | 6.458 | 6.458 | 0.000 | 95 | 95255 | 100.0 | 124.6 | |
| * 96 Chlorobenzene-d5 | 117 | 6.723 | 6.723 | 0.000 | 86 | 412206 | 50.0 | 50.0 | |
| 97 Chlorobenzene | 112 | 6.745 | 6.745 | 0.000 | 95 | 166586 | 20.0 | 20.3 | |
| 98 Ethylbenzene | 106 | 6.831 | 6.831 | 0.000 | 98 | 95021 | 20.0 | 20.7 | |
| 99 1,1,1,2-Tetrachloroethane | 131 | 6.859 | 6.852 | 0.007 | 96 | 51019 | 20.0 | 20.1 | |
| 100 m-Xylene & p-Xylene | 106 | 7.046 | 7.046 | 0.000 | 0 | 114932 | 20.0 | 21.3 | |
| 101 o-Xylene | 106 | 7.626 | 7.626 | 0.000 | 95 | 111087 | 20.0 | 20.4 | |
| 102 Bromoform | 173 | 7.690 | 7.690 | 0.000 | 96 | 23504 | 20.0 | 18.1 | |
| 103 Styrene | 104 | 7.712 | 7.719 | -0.007 | 97 | 180708 | 20.0 | 20.7 | |
| 104 n-Butyl acrylate | 73 | 8.056 | 8.049 | 0.007 | 97 | 24912 | 20.0 | 17.1 | |
| 105 Isopropylbenzene | 105 | 8.113 | 8.113 | 0.000 | 95 | 292995 | 20.0 | 20.7 | |
| 106 Amyl acetate (mixed isomers) | 43 | 8.471 | 8.471 | 0.000 | 91 | 56974 | 20.0 | 17.7 | |
| $ 107 4-Bromofluorobenzene | 174 | 8.478 | 8.478 | 0.000 | 93 | 166530 | 50.0 | 49.9 | |
| 108 Bromobenzene | 156 | 8.586 | 8.586 | 0.000 | 96 | 68314 | 20.0 | 20.6 | |
| 109 N-Propylbenzene | 91 | 8.743 | 8.743 | 0.000 | 99 | 351444 | 20.0 | 21.2 | |
| 110 1,1,2,2-Tetrachloroethane | 83 | 8.894 | 8.894 | 0.000 | 98 | 43345 | 20.0 | 18.9 | |
| 111 2-Chlorotoluene | 91 | 8.908 | 8.908 | 0.000 | 97 | 232459 | 20.0 | 20.3 | |
| 112 4-Ethyltoluene | 105 | 8.930 | 8.930 | 0.000 | 98 | 289265 | 20.0 | 21.0 | |
| 113 1,2,3-Trichloropropane | 110 | 9.023 | 9.023 | 0.000 | 98 | 11770 | 20.0 | 19.4 | |
| 114 1,3,5-Trimethylbenzene | 105 | 9.087 | 9.087 | 0.000 | 94 | 238277 | 20.0 | 20.7 | |
| 115 trans-1,4-Dichloro-2-butene | 53 | 9.159 | 9.166 | -0.007 | 39 | 8995 | 20.0 | 20.5 | a |
| 116 4-Chlorotoluene | 91 | 9.173 | 9.173 | 0.000 | 97 | 211935 | 20.0 | 21.1 | |
| 117 tert-Butylbenzene | 119 | 9.546 | 9.546 | 0.000 | 95 | 207907 | 20.0 | 20.9 | |
| 118 1,2,4-Trimethylbenzene | 105 | 9.682 | 9.682 | 0.000 | 97 | 242940 | 20.0 | 20.5 | |
| 119 Butyl Methacrylate | 87 | 9.696 | 9.696 | 0.000 | 91 | 59747 | 20.0 | 18.7 | |
| 120 sec-Butylbenzene | 105 | 9.839 | 9.839 | 0.000 | 99 | 319347 | 20.0 | 21.2 | |
| 121 1,3-Dichlorobenzene | 146 | 10.097 | 10.097 | 0.000 | 97 | 137799 | 20.0 | 21.0 | |
| 122 4-Isopropyltoluene | 119 | 10.119 | 10.119 | 0.000 | 98 | 267958 | 20.0 | 21.0 | |
| * 123 1,4-Dichlorobenzene-d4 | 152 | 10.226 | 10.226 | 0.000 | 94 | 224246 | 50.0 | 50.0 | |
| 124 1,4-Dichlorobenzene | 146 | 10.248 | 10.248 | 0.000 | 96 | 142439 | 20.0 | 20.7 | |
| 125 1,2,3-Trimethylbenzene | 105 | 10.355 | 10.355 | 0.000 | 98 | 243114 | 20.0 | 20.2 | |
| 126 2,3-Dihydroindene | 117 | 10.527 | 10.527 | 0.000 | 95 | 233243 | 20.0 | 20.0 | |
| 127 Benzyl chloride | 126 | 10.713 | 10.713 | 0.000 | 97 | 14256 | 20.0 | 20.4 | |
| 128 p-Diethylbenzene | 119 | 10.727 | 10.728 | -0.001 | 94 | 132567 | 20.0 | 20.7 | |
| 129 n-Butylbenzene | 91 | 10.813 | 10.814 | -0.001 | 98 | 240763 | 20.0 | 20.7 | |
| 130 1,2-Dichlorobenzene | 146 | 10.914 | 10.914 | 0.000 | 97 | 124106 | 20.0 | 20.7 | |
| 131 1,2,4,5-Tetramethylbenzene | 119 | 11.924 | 11.924 | 0.000 | 98 | 228394 | 20.0 | 20.4 | |
| 132 1,2-Dibromo-3-Chloropropane | 157 | 12.074 | 12.074 | 0.000 | 93 | 7081 | 20.0 | 18.5 | |
| 133 1,3,5-Trichlorobenzene | 180 | 12.117 | 12.117 | 0.000 | 98 | 98753 | 20.0 | 20.8 | |
| 134 1,2,4-Trichlorobenzene | 180 | 12.819 | 12.819 | 0.000 | 94 | 77034 | 20.0 | 19.3 | |
| 135 Hexachlorobutadiene | 225 | 12.841 | 12.841 | 0.000 | 97 | 34320 | 20.0 | 19.5 | |
| 136 Naphthalene | 128 | 13.127 | 13.127 | 0.000 | 100 | 123495 | 20.0 | 16.8 | |
| 137 1,2,3-Trichlorobenzene | 180 | 13.299 | 13.299 | 0.000 | 95 | 56433 | 20.0 | 17.3 | |
| S 138 1,2-Dichloroethene, Total | 100 | | | | 0 | | 40.0 | 40.6 | |
| S 139 1,3-Dichloropropene, Total | 100 | | | | 0 | | 40.0 | 38.3 | |
| S 140 Xylenes, Total | 100 | | | | 0 | | 40.0 | 41.7 | |
| S 142 Total BTEX | 1 | | | | 0 | | 100.0 | 102.6 | |

## QC Flag Legend

Review Flags

a - User Assigned ID

## Reagents:

| | | | | |
|---|---|---|---|---|
| ACROLEIN W_00112 | Amount Added: | 4.00 | Units: uL | |
| 8260MIX1COMB_00125 | Amount Added: | 20.00 | Units: uL | |
| GASES Li_00384 | Amount Added: | 20.00 | Units: uL | |
| 8260ISNEW_00129 | Amount Added: | 1.00 | Units: uL | Run Reagent |
| 8260SURR250_00212 | Amount Added: | 1.00 | Units: uL | Run Reagent |

Report Date: 09-Sep-2020 14:26:29 Chrom Revision: 2.3 20-Aug-2020 13:57:12

Eurofins TestAmerica, Edison

Data File: \\chromfs\Edison\ChromData\CVOAMS13\20200908-116444.b\P79482.D

Injection Date: 08-Sep-2020 20:12:30 Instrument ID: CVOAMS13 Operator ID:

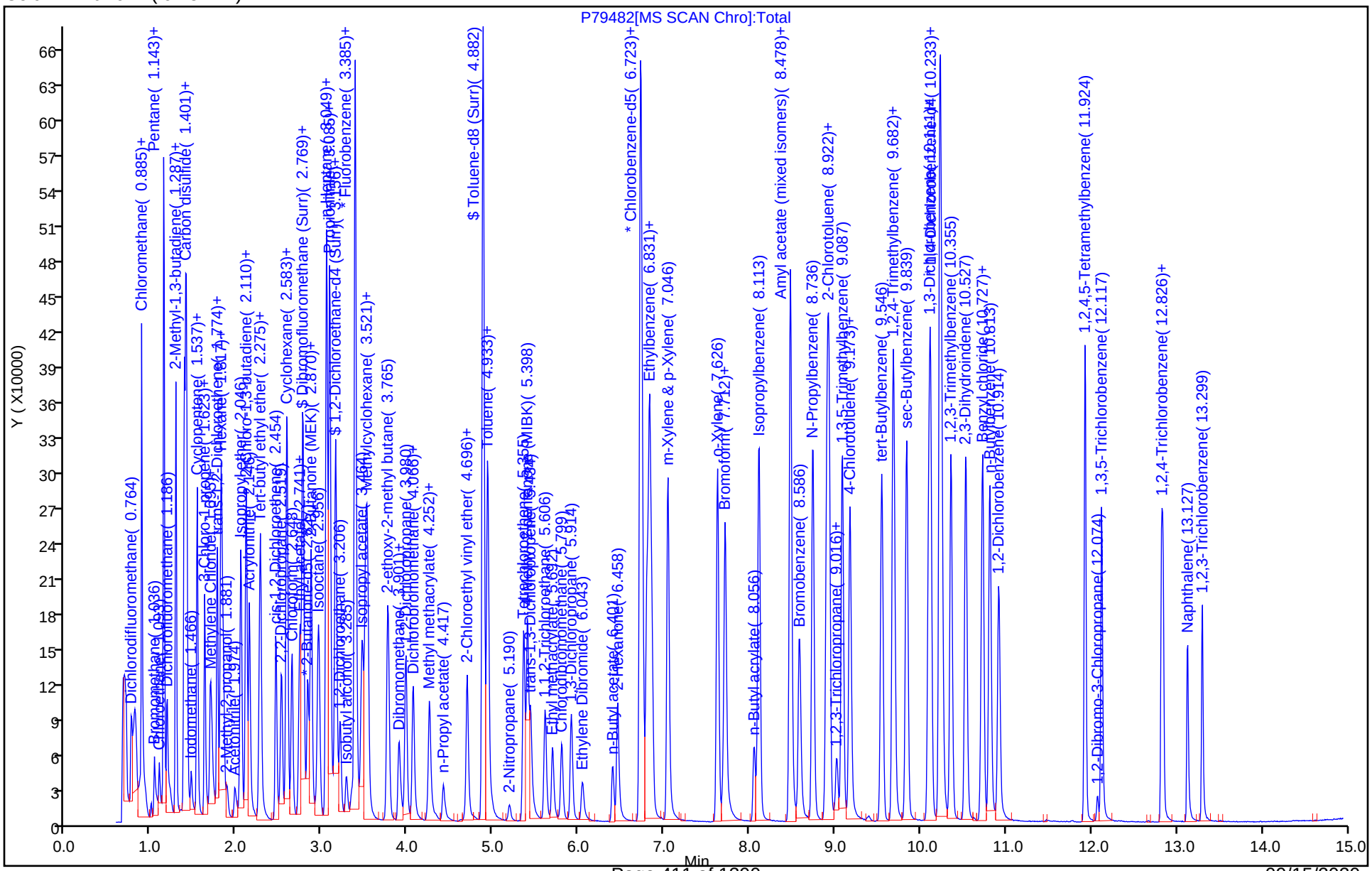
Lims ID: LCS Worklist Smp#: 4

Client ID:

Purge Vol: 5.000 mL Dil. Factor: 1.0000 ALS Bottle#: 3

Method: 8260W_13 Limit Group: VOA - 8260C Water and Solid

Column: Rtx-624 ( 0.25 mm)



FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Edison  Job No.: 460-217547-1

SDG No.:

Client Sample ID:  Lab Sample ID: LCS 460-722709/4

Matrix: Water  Lab File ID: P79507.D

Analysis Method: 8260C  Date Collected:

Sample wt/vol: 5(mL)  Date Analyzed: 09/09/2020 08:57

Soil Aliquot Vol:  Dilution Factor: 1

Soil Extract Vol.:  GC Column: Rtx-624 ID: 0.25(mm)

% Moisture:  Level: (low/med) Low

Analysis Batch No.: 722709  Units: ug/L

| CAS NO. | COMPOUND NAME | RESULT | Q | RL | MDL |
|---|---|---|---|---|---|
| 71-55-6 | 1,1,1-Trichloroethane | 20.0 | | 1.0 | 0.24 |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 19.9 | | 1.0 | 0.37 |
| 76-13-1 | 1,1,2-Trichloro-1,2,2-trifluoroethane | 21.2 | | 1.0 | 0.31 |
| 79-00-5 | 1,1,2-Trichloroethane | 19.3 | | 1.0 | 0.43 |
| 75-34-3 | 1,1-Dichloroethane | 19.2 | | 1.0 | 0.26 |
| 75-35-4 | 1,1-Dichloroethene | 20.3 | | 1.0 | 0.26 |
| 87-61-6 | 1,2,3-Trichlorobenzene | 18.4 | | 1.0 | 0.36 |
| 120-82-1 | 1,2,4-Trichlorobenzene | 19.6 | | 1.0 | 0.37 |
| 78-87-5 | 1,2-Dichloropropane | 19.1 | | 1.0 | 0.35 |
| 541-73-1 | 1,3-Dichlorobenzene | 19.6 | | 1.0 | 0.34 |
| 106-46-7 | 1,4-Dichlorobenzene | 19.7 | | 1.0 | 0.33 |
| 123-91-1 | 1,4-Dioxane | 432 | | 50 | 28 |
| 78-93-3 | 2-Butanone (MEK) | 103 | | 5.0 | 1.9 |
| 591-78-6 | 2-Hexanone | 108 | | 5.0 | 1.1 |
| 108-10-1 | 4-Methyl-2-pentanone (MIBK) | 103 | | 5.0 | 1.3 |
| 67-64-1 | Acetone | 87.0 | | 5.0 | 4.4 |
| 71-43-2 | Benzene | 18.7 | | 1.0 | 0.20 |
| 75-25-2 | Bromoform | 18.9 | | 1.0 | 0.54 |
| 74-83-9 | Bromomethane | 18.3 | | 1.0 | 0.55 |
| 75-15-0 | Carbon disulfide | 19.2 | | 1.0 | 0.82 |
| 56-23-5 | Carbon tetrachloride | 21.8 | | 1.0 | 0.21 |
| 108-90-7 | Chlorobenzene | 19.4 | | 1.0 | 0.38 |
| 74-97-5 | Chlorobromomethane | 20.3 | | 1.0 | 0.41 |
| 124-48-1 | Chlorodibromomethane | 19.6 | | 1.0 | 0.28 |
| 75-00-3 | Chloroethane | 18.5 | | 1.0 | 0.32 |
| 67-66-3 | Chloroform | 19.7 | | 1.0 | 0.33 |
| 74-87-3 | Chloromethane | 17.9 | | 1.0 | 0.40 |
| 156-59-2 | cis-1,2-Dichloroethene | 19.8 | | 1.0 | 0.22 |
| 10061-01-5 | cis-1,3-Dichloropropene | 19.0 | | 1.0 | 0.22 |
| 110-82-7 | Cyclohexane | 20.2 | | 1.0 | 0.32 |
| 75-27-4 | Dichlorobromomethane | 19.5 | | 1.0 | 0.34 |
| 75-71-8 | Dichlorodifluoromethane | 19.9 | | 1.0 | 0.31 |
| 100-41-4 | Ethylbenzene | 19.8 | | 1.0 | 0.30 |
| 106-93-4 | Ethylene Dibromide | 20.0 | | 1.0 | 0.50 |
| 98-82-8 | Isopropylbenzene | 20.0 | | 1.0 | 0.34 |

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Edison  Job No.: 460-217547-1

SDG No.:

Client Sample ID:  Lab Sample ID: LCS 460-722709/4

Matrix: Water  Lab File ID: P79507.D

Analysis Method: 8260C  Date Collected:

Sample wt/vol: 5(mL)  Date Analyzed: 09/09/2020 08:57

Soil Aliquot Vol:  Dilution Factor: 1

Soil Extract Vol.:  GC Column: Rtx-624 ID: 0.25(mm)

% Moisture:  Level: (low/med) Low

Analysis Batch No.: 722709  Units: ug/L

| CAS NO. | COMPOUND NAME | RESULT | Q | RL | MDL |
|---|---|---|---|---|---|
| 79-20-9 | Methyl acetate | 38.4 | | 5.0 | 0.79 |
| 1634-04-4 | Methyl tert-butyl ether | 20.5 | | 1.0 | 0.47 |
| 108-87-2 | Methylcyclohexane | 21.4 | | 1.0 | 0.26 |
| 75-09-2 | Methylene Chloride | 20.2 | | 1.0 | 0.32 |
| 179601-23-1 | m-Xylene & p-Xylene | 20.6 | | 1.0 | 0.30 |
| 95-47-6 | o-Xylene | 19.5 | | 1.0 | 0.36 |
| 100-42-5 | Styrene | 20.1 | | 1.0 | 0.42 |
| 127-18-4 | Tetrachloroethene | 20.3 | | 1.0 | 0.25 |
| 108-88-3 | Toluene | 19.6 | | 1.0 | 0.38 |
| 156-60-5 | trans-1,2-Dichloroethene | 19.5 | | 1.0 | 0.24 |
| 10061-02-6 | trans-1,3-Dichloropropene | 19.5 | | 1.0 | 0.49 |
| 79-01-6 | Trichloroethene | 20.6 | | 1.0 | 0.31 |
| 75-69-4 | Trichlorofluoromethane | 21.6 | | 1.0 | 0.32 |
| 75-01-4 | Vinyl chloride | 18.6 | | 1.0 | 0.17 |
| 107-06-2 | 1,2-Dichloroethane | 18.9 | | 1.0 | 0.43 |
| 95-50-1 | 1,2-Dichlorobenzene | 20.0 | | 1.0 | 0.43 |
| 96-12-8 | 1,2-Dibromo-3-Chloropropane | 21.9 | | 1.0 | 0.38 |

| CAS NO. | SURROGATE | %REC | Q | LIMITS |
|---|---|---|---|---|
| 17060-07-0 | 1,2-Dichloroethane-d4 (Surr) | 97 | | 75-123 |
| 460-00-4 | 4-Bromofluorobenzene | 104 | | 76-120 |
| 1868-53-7 | Dibromofluoromethane (Surr) | 98 | | 77-124 |
| 2037-26-5 | Toluene-d8 (Surr) | 94 | | 80-120 |

Eurofins TestAmerica, Edison
Target Compound Quantitation Report

Data File: \\chromfs\Edison\ChromData\CVOAMS13\20200909-116470.b\P79507.D
Lims ID: LCS
Client ID:
Sample Type: LCS
Inject. Date: 09-Sep-2020 08:57:30 ALS Bottle#: 3 Worklist Smp#: 4
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: LCS
Misc. Info.: 460-0116470-004
Operator ID: Instrument ID: CVOAMS13

Method: \\chromfs\Edison\ChromData\CVOAMS13\20200909-116470.b\8260W_13.m
Limit Group: VOA - 8260C Water and Solid
Last Update: 10-Sep-2020 11:14:21 Calib Date: 04-Sep-2020 16:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Edison\ChromData\CVOAMS13\20200904-116303.b\P79359.D

Column 1 : Rtx-624 ( 0.25 mm) Det: MS SCAN
Process Host: CTX1019

First Level Reviewer: moroneyc Date: 09-Sep-2020 08:56:46

| Compound | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q | Response | Cal Amt ug/l | OnCol Amt ug/l | Flags |
|---|---|---|---|---|---|---|---|---|---|
| 3 Dichlorodifluoromethane | 85 | 0.771 | 0.764 | 0.007 | 99 | 74284 | 20.0 | 19.9 | |
| 6 Chloromethane | 50 | 0.893 | 0.885 | 0.008 | 94 | 93505 | 20.0 | 17.9 | |
| 8 Butadiene | 54 | 0.893 | 0.885 | 0.008 | 92 | 61535 | 20.0 | 17.7 | |
| 7 Vinyl chloride | 62 | 0.893 | 0.893 | 0.000 | 62 | 70943 | 20.0 | 18.6 | |
| 9 Bromomethane | 94 | 1.036 | 1.036 | 0.000 | 99 | 27269 | 20.0 | 18.3 | |
| 10 Chloroethane | 64 | 1.093 | 1.093 | 0.000 | 99 | 37529 | 20.0 | 18.5 | |
| 11 Pentane | 72 | 1.150 | 1.143 | 0.007 | 95 | 20486 | 40.0 | 41.9 | |
| 12 Trichlorofluoromethane | 101 | 1.150 | 1.150 | 0.000 | 61 | 75346 | 20.0 | 21.6 | |
| 13 Dichlorofluoromethane | 67 | 1.186 | 1.179 | 0.007 | 98 | 87453 | 20.0 | 18.7 | |
| 14 2-Methyl-1,3-butadiene | 67 | 1.287 | 1.287 | -0.001 | 96 | 81197 | 20.0 | 20.3 | |
| 15 Ethyl ether | 59 | 1.294 | 1.294 | 0.000 | 94 | 34640 | 20.0 | 18.5 | |
| 17 1,1-Dichloroethene | 96 | 1.387 | 1.387 | 0.000 | 97 | 50622 | 20.0 | 20.3 | |
| 16 Ethanol | 46 | 1.401 | 1.401 | 0.000 | 28 | 7376 | 800.0 | 782.5 | |
| 19 Carbon disulfide | 76 | 1.408 | 1.401 | 0.007 | 99 | 186838 | 20.0 | 19.2 | |
| 20 1,1,2-Trichloro-1,2,2-trifluoroe | 101 | 1.408 | 1.408 | 0.000 | 88 | 51739 | 20.0 | 21.2 | |
| 22 Iodomethane | 142 | 1.466 | 1.466 | 0.000 | 96 | 39776 | 20.0 | 10.1 | |
| 23 Cyclopentene | 67 | 1.537 | 1.537 | 0.000 | 96 | 146819 | 20.0 | 21.3 | |
| 24 Acrolein | 56 | 1.559 | 1.559 | 0.000 | 94 | 9368 | 40.0 | 42.4 | |
| 25 3-Chloro-1-propene | 76 | 1.630 | 1.623 | 0.007 | 94 | 31378 | 20.0 | 19.7 | |
| 26 Isopropyl alcohol | 45 | 1.652 | 1.652 | 0.000 | 97 | 16166 | 200.0 | 176.3 | |
| 27 Methylene Chloride | 84 | 1.695 | 1.688 | 0.007 | 91 | 60515 | 20.0 | 20.2 | |
| 28 Acetone | 43 | 1.709 | 1.709 | 0.000 | 88 | 41207 | 100.0 | 87.0 | |
| 29 trans-1,2-Dichloroethene | 96 | 1.774 | 1.774 | 0.000 | 94 | 55565 | 20.0 | 19.5 | |
| 30 Methyl acetate | 43 | 1.781 | 1.781 | 0.000 | 98 | 42461 | 40.0 | 38.4 | |
| 31 Hexane | 86 | 1.817 | 1.817 | 0.000 | 91 | 16130 | 20.0 | 23.5 | |
| 32 Methyl tert-butyl ether | 73 | 1.831 | 1.831 | 0.000 | 95 | 119414 | 20.0 | 20.5 | |
| * 33 TBA-d9 (IS) | 65 | 1.845 | 1.845 | 0.000 | 100 | 113614 | 1000.0 | 1000.0 | |
| 34 2-Methyl-2-propanol | 59 | 1.895 | 1.888 | 0.007 | 99 | 25977 | 200.0 | 208.9 | |
| 35 Acetonitrile | 41 | 1.981 | 1.974 | 0.007 | 99 | 38428 | 200.0 | 169.2 | |
| 36 Isopropyl ether | 45 | 2.053 | 2.046 | 0.007 | 97 | 175406 | 20.0 | 19.2 | |
| 37 2-Chloro-1,3-butadiene | 88 | 2.110 | 2.103 | 0.007 | 89 | 52929 | 20.0 | 20.3 | |

| Compound | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q | Response | Cal Amt ug/l | OnCol Amt ug/l | Flags |
|---|---|---|---|---|---|---|---|---|---|
| 38 1,1-Dichloroethane | 63 | 2.117 | 2.117 | 0.000 | 99 | 101372 | 20.0 | 19.2 | |
| 39 Acrylonitrile | 53 | 2.153 | 2.146 | 0.007 | 94 | 135271 | 200.0 | 197.4 | |
| 40 Tert-butyl ethyl ether | 59 | 2.275 | 2.268 | 0.007 | 89 | 144680 | 20.0 | 19.2 | |
| 41 Vinyl acetate | 43 | 2.282 | 2.282 | 0.000 | 100 | 156404 | 40.0 | 38.4 | |
| 42 cis-1,2-Dichloroethene | 96 | 2.461 | 2.461 | 0.000 | 99 | 62377 | 20.0 | 19.8 | |
| 43 2,2-Dichloropropane | 77 | 2.526 | 2.526 | 0.000 | 98 | 67978 | 20.0 | 19.0 | |
| 44 Cyclohexane | 56 | 2.590 | 2.583 | 0.007 | 90 | 106824 | 20.0 | 20.2 | |
| 45 Chlorobromomethane | 128 | 2.590 | 2.590 | 0.000 | 84 | 28012 | 20.0 | 20.3 | |
| 46 Chloroform | 83 | 2.647 | 2.648 | -0.001 | 99 | 93214 | 20.0 | 19.7 | |
| 47 Carbon tetrachloride | 117 | 2.733 | 2.733 | 0.000 | 97 | 61066 | 20.0 | 21.8 | |
| 48 Ethyl acetate | 70 | 2.748 | 2.741 | 0.007 | 99 | 7879 | 40.0 | 41.8 | |
| 49 Methyl acrylate | 55 | 2.748 | 2.748 | 0.000 | 94 | 28845 | 20.0 | 19.3 | |
| 50 Tetrahydrofuran | 42 | 2.755 | 2.755 | 0.000 | 96 | 25120 | 40.0 | 38.2 | |
| $ 51 Dibromofluoromethane (Surr) | 113 | 2.776 | 2.769 | 0.007 | 98 | 116509 | 50.0 | 48.9 | |
| 52 1,1,1-Trichloroethane | 97 | 2.784 | 2.776 | 0.008 | 98 | 76345 | 20.0 | 20.0 | |
| * 53 2-Butanone-d5 | 46 | 2.827 | 2.827 | 0.000 | 99 | 145323 | 250.0 | 250.0 | |
| 54 2-Butanone (MEK) | 72 | 2.862 | 2.862 | 0.000 | 99 | 21929 | 100.0 | 103.3 | |
| 55 1,1-Dichloropropene | 75 | 2.877 | 2.870 | 0.007 | 97 | 82369 | 20.0 | 20.0 | |
| 56 Isooctane | 57 | 2.955 | 2.956 | -0.001 | 99 | 176640 | 20.0 | 21.1 | |
| 57 n-Heptane | 57 | 3.049 | 3.049 | 0.000 | 95 | 42861 | 20.0 | 20.9 | |
| 58 Benzene | 78 | 3.056 | 3.056 | 0.000 | 96 | 238498 | 20.0 | 18.7 | |
| 59 Propionitrile | 54 | 3.070 | 3.070 | 0.000 | 95 | 47906 | 200.0 | 198.7 | |
| 60 Methacrylonitrile | 67 | 3.092 | 3.092 | 0.000 | 90 | 154852 | 200.0 | 203.7 | |
| 62 Tert-amyl methyl ether | 73 | 3.163 | 3.156 | 0.007 | 98 | 124452 | 20.0 | 19.9 | |
| $ 61 1,2-Dichloroethane-d4 (Surr) | 65 | 3.156 | 3.156 | 0.000 | 0 | 116461 | 50.0 | 48.7 | |
| 63 1,2-Dichloroethane | 62 | 3.213 | 3.213 | 0.000 | 96 | 58476 | 20.0 | 18.9 | |
| 64 Isobutyl alcohol | 43 | 3.285 | 3.285 | 0.000 | 97 | 27479 | 500.0 | 452.3 | |
| 65 t-Amyl alcohol | 59 | 3.349 | 3.349 | 0.000 | 90 | 20195 | 200.0 | 204.8 | |
| * 66 Fluorobenzene | 96 | 3.385 | 3.385 | 0.000 | 99 | 553525 | 50.0 | 50.0 | |
| 67 Isopropyl acetate | 43 | 3.457 | 3.457 | 0.000 | 99 | 69686 | 20.0 | 19.8 | |
| 68 Methylcyclohexane | 83 | 3.514 | 3.507 | 0.007 | 96 | 104538 | 20.0 | 21.4 | |
| 69 Trichloroethene | 130 | 3.536 | 3.536 | 0.000 | 97 | 61404 | 20.0 | 20.6 | |
| 70 2-ethoxy-2-methyl butane | 59 | 3.772 | 3.772 | 0.000 | 93 | 117738 | 20.0 | 19.1 | |
| 71 Dibromomethane | 93 | 3.894 | 3.894 | 0.000 | 97 | 26325 | 20.0 | 19.8 | |
| 72 n-Butanol | 56 | 3.915 | 3.908 | 0.007 | 86 | 14804 | 500.0 | 395.0 | |
| 73 1,2-Dichloropropane | 63 | 3.980 | 3.980 | 0.000 | 92 | 57121 | 20.0 | 19.1 | |
| 75 Dichlorobromomethane | 83 | 4.066 | 4.066 | 0.000 | 99 | 64062 | 20.0 | 19.5 | |
| 74 Ethyl acrylate | 55 | 4.066 | 4.066 | 0.000 | 60 | 38922 | 20.0 | 19.4 | |
| * 76 1,4-Dioxane-d8 | 96 | 4.238 | 4.238 | 0.000 | 87 | 16021 | 1000.0 | 1000.0 | |
| 77 Methyl methacrylate | 100 | 4.252 | 4.259 | -0.007 | 89 | 19101 | 40.0 | 42.9 | |
| 78 1,4-Dioxane | 88 | 4.266 | 4.266 | 0.000 | 37 | 7986 | 400.0 | 432.2 | |
| 79 n-Propyl acetate | 43 | 4.417 | 4.417 | 0.000 | 98 | 42741 | 20.0 | 19.0 | |
| 80 2-Chloroethyl vinyl ether | 63 | 4.675 | 4.675 | 0.000 | 96 | 11613 | 20.0 | 20.5 | |
| 81 cis-1,3-Dichloropropene | 75 | 4.696 | 4.696 | 0.000 | 92 | 79063 | 20.0 | 19.0 | |
| $ 82 Toluene-d8 (Surr) | 98 | 4.882 | 4.882 | 0.000 | 100 | 495916 | 50.0 | 47.2 | |
| 83 Toluene | 91 | 4.940 | 4.940 | 0.000 | 93 | 253360 | 20.0 | 19.6 | |
| 84 Epichlorohydrin | 57 | 4.975 | 4.983 | -0.008 | 98 | 22685 | 400.0 | 442.1 | a |
| 85 2-Nitropropane | 41 | 5.190 | 5.190 | 0.000 | 97 | 12138 | 40.0 | 40.9 | |
| 86 Tetrachloroethene | 166 | 5.362 | 5.355 | 0.007 | 98 | 61899 | 20.0 | 20.3 | |
| 87 4-Methyl-2-pentanone (MIBK) | 43 | 5.405 | 5.398 | 0.007 | 96 | 154708 | 100.0 | 102.9 | |
| 88 trans-1,3-Dichloropropene | 75 | 5.441 | 5.441 | 0.000 | 99 | 64753 | 20.0 | 19.5 | |
| 89 1,1,2-Trichloroethane | 83 | 5.613 | 5.606 | 0.007 | 96 | 34008 | 20.0 | 19.3 | |

| Compound | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q | Response | Cal Amt ug/l | OnCol Amt ug/l | Flags |
|---|---|---|---|---|---|---|---|---|---|
| 90 Ethyl methacrylate | 69 | 5.699 | 5.692 | 0.007 | 89 | 48209 | 20.0 | 20.5 | |
| 91 Chlorodibromomethane | 129 | 5.799 | 5.806 | -0.007 | 98 | 44550 | 20.0 | 19.6 | |
| 92 1,3-Dichloropropane | 76 | 5.914 | 5.914 | 0.000 | 94 | 71382 | 20.0 | 19.4 | |
| 93 Ethylene Dibromide | 107 | 6.050 | 6.043 | 0.007 | 100 | 37845 | 20.0 | 20.0 | |
| 94 n-Butyl acetate | 43 | 6.401 | 6.401 | 0.000 | 99 | 43919 | 20.0 | 17.8 | |
| 95 2-Hexanone | 43 | 6.458 | 6.458 | 0.000 | 95 | 108874 | 100.0 | 107.9 | |
| * 96 Chlorobenzene-d5 | 117 | 6.723 | 6.723 | 0.000 | 85 | 407654 | 50.0 | 50.0 | |
| 97 Chlorobenzene | 112 | 6.745 | 6.745 | 0.000 | 96 | 156909 | 20.0 | 19.4 | |
| 98 Ethylbenzene | 106 | 6.831 | 6.831 | 0.000 | 98 | 89895 | 20.0 | 19.8 | |
| 99 1,1,1,2-Tetrachloroethane | 131 | 6.859 | 6.859 | 0.000 | 96 | 49950 | 20.0 | 19.9 | |
| 100 m-Xylene & p-Xylene | 106 | 7.046 | 7.046 | 0.000 | 0 | 109907 | 20.0 | 20.6 | |
| 101 o-Xylene | 106 | 7.626 | 7.626 | 0.000 | 94 | 104975 | 20.0 | 19.5 | |
| 102 Bromoform | 173 | 7.690 | 7.690 | 0.000 | 96 | 24305 | 20.0 | 18.9 | |
| 103 Styrene | 104 | 7.712 | 7.712 | 0.000 | 97 | 173459 | 20.0 | 20.1 | |
| 104 n-Butyl acrylate | 73 | 8.048 | 8.056 | -0.008 | 97 | 27301 | 20.0 | 18.9 | |
| 105 Isopropylbenzene | 105 | 8.113 | 8.113 | 0.000 | 95 | 279193 | 20.0 | 20.0 | |
| 106 Amyl acetate (mixed isomers) | 43 | 8.464 | 8.464 | 0.000 | 91 | 60507 | 20.0 | 18.3 | |
| $ 107 4-Bromofluorobenzene | 174 | 8.478 | 8.478 | 0.000 | 94 | 171219 | 50.0 | 51.9 | |
| 108 Bromobenzene | 156 | 8.586 | 8.586 | 0.000 | 96 | 68237 | 20.0 | 20.1 | |
| 109 N-Propylbenzene | 91 | 8.743 | 8.736 | 0.007 | 99 | 328521 | 20.0 | 19.3 | |
| 110 1,1,2,2-Tetrachloroethane | 83 | 8.894 | 8.894 | 0.000 | 96 | 46940 | 20.0 | 19.9 | |
| 111 2-Chlorotoluene | 91 | 8.908 | 8.908 | 0.000 | 97 | 216786 | 20.0 | 18.5 | |
| 112 4-Ethyltoluene | 105 | 8.929 | 8.929 | 0.000 | 98 | 275360 | 20.0 | 19.5 | |
| 113 1,2,3-Trichloropropane | 110 | 9.023 | 9.023 | 0.000 | 97 | 12783 | 20.0 | 20.5 | |
| 114 1,3,5-Trimethylbenzene | 105 | 9.087 | 9.087 | 0.000 | 94 | 226439 | 20.0 | 19.2 | |
| 115 trans-1,4-Dichloro-2-butene | 53 | 9.159 | 9.159 | 0.000 | 42 | 9651 | 20.0 | 21.4 | |
| 116 4-Chlorotoluene | 91 | 9.173 | 9.173 | 0.000 | 97 | 199250 | 20.0 | 19.4 | |
| 117 tert-Butylbenzene | 119 | 9.545 | 9.546 | -0.001 | 96 | 198440 | 20.0 | 19.5 | |
| 118 1,2,4-Trimethylbenzene | 105 | 9.682 | 9.682 | 0.000 | 97 | 233161 | 20.0 | 19.2 | |
| 119 Butyl Methacrylate | 87 | 9.696 | 9.696 | 0.000 | 91 | 61544 | 20.0 | 18.8 | |
| 120 sec-Butylbenzene | 105 | 9.839 | 9.839 | 0.000 | 99 | 301797 | 20.0 | 19.5 | |
| 121 1,3-Dichlorobenzene | 146 | 10.097 | 10.097 | 0.000 | 98 | 131826 | 20.0 | 19.6 | |
| 122 4-Isopropyltoluene | 119 | 10.119 | 10.119 | 0.000 | 98 | 257490 | 20.0 | 19.7 | |
| * 123 1,4-Dichlorobenzene-d4 | 152 | 10.226 | 10.226 | 0.000 | 93 | 229833 | 50.0 | 50.0 | |
| 124 1,4-Dichlorobenzene | 146 | 10.247 | 10.247 | 0.000 | 96 | 138992 | 20.0 | 19.7 | |
| 125 1,2,3-Trimethylbenzene | 105 | 10.355 | 10.355 | 0.000 | 98 | 235843 | 20.0 | 19.1 | |
| 126 2,3-Dihydroindene | 117 | 10.527 | 10.527 | 0.000 | 95 | 230848 | 20.0 | 19.3 | |
| 127 Benzyl chloride | 126 | 10.713 | 10.706 | 0.007 | 98 | 15782 | 20.0 | 22.0 | |
| 128 p-Diethylbenzene | 119 | 10.727 | 10.727 | 0.000 | 94 | 129926 | 20.0 | 19.8 | |
| 129 n-Butylbenzene | 91 | 10.813 | 10.813 | 0.000 | 98 | 232663 | 20.0 | 19.5 | |
| 130 1,2-Dichlorobenzene | 146 | 10.914 | 10.921 | -0.007 | 98 | 122694 | 20.0 | 20.0 | |
| 131 1,2,4,5-Tetramethylbenzene | 119 | 11.924 | 11.924 | 0.000 | 98 | 217945 | 20.0 | 19.0 | |
| 132 1,2-Dibromo-3-Chloropropane | 157 | 12.074 | 12.074 | 0.000 | 91 | 8603 | 20.0 | 21.9 | |
| 133 1,3,5-Trichlorobenzene | 180 | 12.117 | 12.117 | 0.000 | 97 | 98603 | 20.0 | 20.2 | |
| 134 1,2,4-Trichlorobenzene | 180 | 12.819 | 12.819 | 0.000 | 94 | 80227 | 20.0 | 19.6 | |
| 135 Hexachlorobutadiene | 225 | 12.840 | 12.841 | 0.000 | 97 | 32936 | 20.0 | 18.2 | |
| 136 Naphthalene | 128 | 13.120 | 13.127 | -0.007 | 100 | 145075 | 20.0 | 19.2 | |
| 137 1,2,3-Trichlorobenzene | 180 | 13.299 | 13.299 | 0.000 | 95 | 61455 | 20.0 | 18.4 | |
| S 138 1,2-Dichloroethene, Total | 100 | | | | 0 | | 40.0 | 39.3 | |
| S 139 1,3-Dichloropropene, Total | 100 | | | | 0 | | 40.0 | 38.5 | |
| S 140 Xylenes, Total | 100 | | | | 0 | | 40.0 | 40.1 | |
| S 142 Total BTEX | 1 | | | | 0 | | 100.0 | 98.3 | |

## QC Flag Legend

Review Flags

a - User Assigned ID

## Reagents:

| | | | | |
|---|---|---|---|---|
| ACROLEIN W_00112 | Amount Added: | 4.00 | Units: uL | |
| 8260MIX1COMB_00125 | Amount Added: | 20.00 | Units: uL | |
| GASES Li_00385 | Amount Added: | 20.00 | Units: uL | |
| 8260ISNEW_00129 | Amount Added: | 1.00 | Units: uL | Run Reagent |
| 8260SURR250_00212 | Amount Added: | 1.00 | Units: uL | Run Reagent |

Report Date: 10-Sep-2020 11:14:34 Chrom Revision: 2.3 20-Aug-2020 13:57:12

Eurofins TestAmerica, Edison

Data File: \\chromfs\Edison\ChromData\CVOAMS13\20200909-116470.b\P79507.D

Injection Date: 09-Sep-2020 08:57:30 Instrument ID: CVOAMS13 Operator ID:

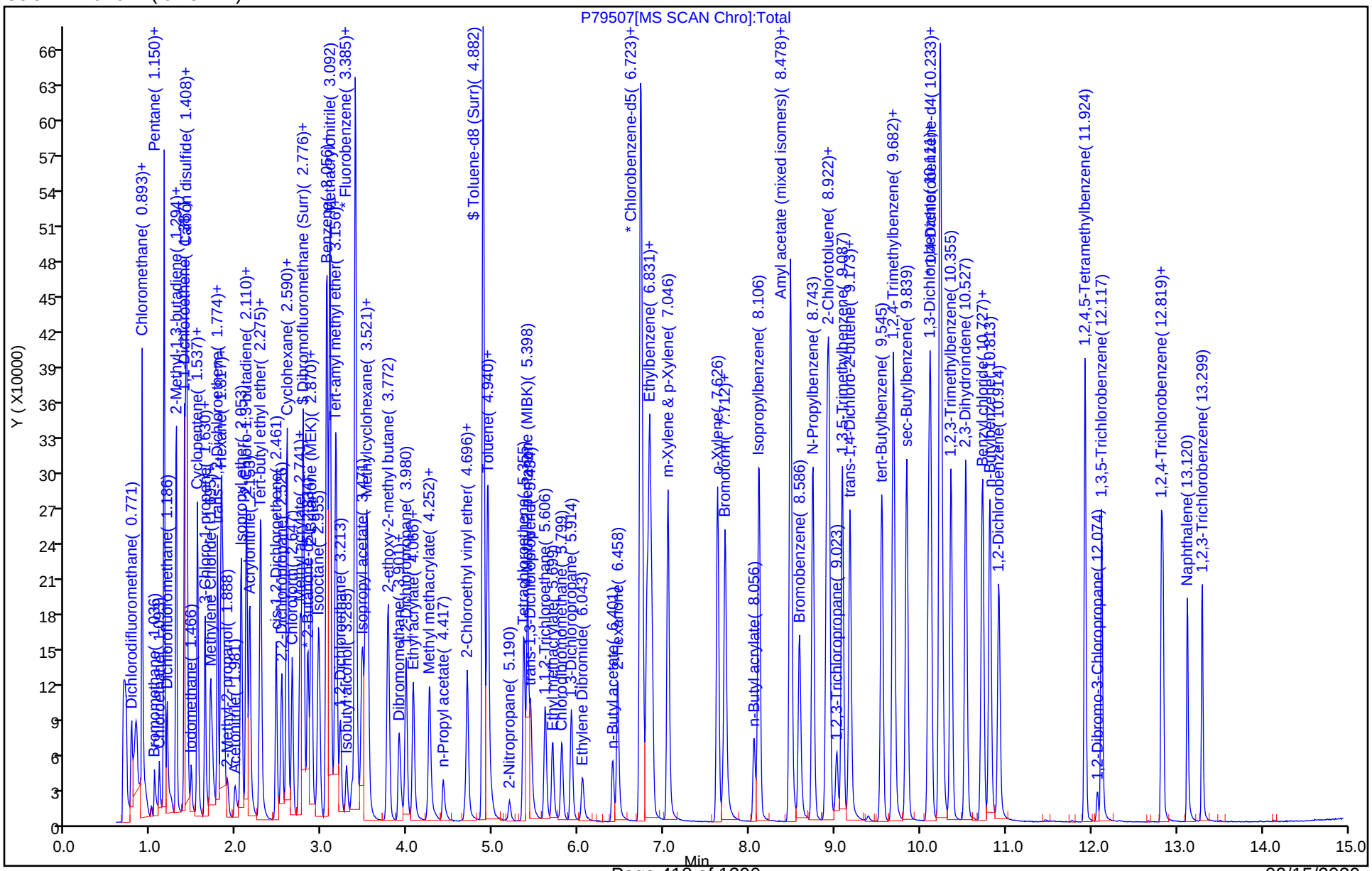
Lims ID: LCS Worklist Smp#: 4

Client ID:

Purge Vol: 5.000 mL Dil. Factor: 1.0000 ALS Bottle#: 3

Method: 8260W_13 Limit Group: VOA - 8260C Water and Solid

Column: Rtx-624 ( 0.25 mm)



FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Edison  Job No.: 460-217547-1

SDG No.:

Client Sample ID:  Lab Sample ID: LCS 460-722834/5

Matrix: Water  Lab File ID: P79534.D

Analysis Method: 8260C  Date Collected:

Sample wt/vol: 5(mL)  Date Analyzed: 09/09/2020 19:27

Soil Aliquot Vol:  Dilution Factor: 1

Soil Extract Vol.:  GC Column: Rtx-624 ID: 0.25(mm)

% Moisture:  Level: (low/med) Low

Analysis Batch No.: 722834  Units: ug/L

| CAS NO. | COMPOUND NAME | RESULT | Q | RL | MDL |
|---|---|---|---|---|---|
| 71-55-6 | 1,1,1-Trichloroethane | 20.6 | | 1.0 | 0.24 |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 19.4 | | 1.0 | 0.37 |
| 76-13-1 | 1,1,2-Trichloro-1,2,2-trifluoroethane | 21.4 | | 1.0 | 0.31 |
| 79-00-5 | 1,1,2-Trichloroethane | 18.7 | | 1.0 | 0.43 |
| 75-34-3 | 1,1-Dichloroethane | 19.5 | | 1.0 | 0.26 |
| 75-35-4 | 1,1-Dichloroethene | 20.8 | | 1.0 | 0.26 |
| 87-61-6 | 1,2,3-Trichlorobenzene | 18.5 | | 1.0 | 0.36 |
| 120-82-1 | 1,2,4-Trichlorobenzene | 19.8 | | 1.0 | 0.37 |
| 78-87-5 | 1,2-Dichloropropane | 19.2 | | 1.0 | 0.35 |
| 541-73-1 | 1,3-Dichlorobenzene | 21.0 | | 1.0 | 0.34 |
| 106-46-7 | 1,4-Dichlorobenzene | 20.6 | | 1.0 | 0.33 |
| 123-91-1 | 1,4-Dioxane | 445 | | 50 | 28 |
| 78-93-3 | 2-Butanone (MEK) | 120 | | 5.0 | 1.9 |
| 591-78-6 | 2-Hexanone | 120 | | 5.0 | 1.1 |
| 108-10-1 | 4-Methyl-2-pentanone (MIBK) | 118 | | 5.0 | 1.3 |
| 67-64-1 | Acetone | 100 | | 5.0 | 4.4 |
| 71-43-2 | Benzene | 19.5 | | 1.0 | 0.20 |
| 75-25-2 | Bromoform | 19.6 | | 1.0 | 0.54 |
| 74-83-9 | Bromomethane | 23.7 | | 1.0 | 0.55 |
| 75-15-0 | Carbon disulfide | 19.4 | | 1.0 | 0.82 |
| 56-23-5 | Carbon tetrachloride | 22.8 | | 1.0 | 0.21 |
| 108-90-7 | Chlorobenzene | 20.8 | | 1.0 | 0.38 |
| 74-97-5 | Chlorobromomethane | 20.1 | | 1.0 | 0.41 |
| 124-48-1 | Chlorodibromomethane | 19.2 | | 1.0 | 0.28 |
| 75-00-3 | Chloroethane | 17.2 | | 1.0 | 0.32 |
| 67-66-3 | Chloroform | 19.8 | | 1.0 | 0.33 |
| 74-87-3 | Chloromethane | 16.1 | | 1.0 | 0.40 |
| 156-59-2 | cis-1,2-Dichloroethene | 20.1 | | 1.0 | 0.22 |
| 10061-01-5 | cis-1,3-Dichloropropene | 19.0 | | 1.0 | 0.22 |
| 110-82-7 | Cyclohexane | 19.7 | | 1.0 | 0.32 |
| 75-27-4 | Dichlorobromomethane | 19.7 | | 1.0 | 0.34 |
| 75-71-8 | Dichlorodifluoromethane | 15.3 | | 1.0 | 0.31 |
| 100-41-4 | Ethylbenzene | 20.7 | | 1.0 | 0.30 |
| 106-93-4 | Ethylene Dibromide | 20.2 | | 1.0 | 0.50 |
| 98-82-8 | Isopropylbenzene | 20.8 | | 1.0 | 0.34 |

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Edison  Job No.: 460-217547-1

SDG No.:

Client Sample ID:  Lab Sample ID: LCS 460-722834/5

Matrix: Water  Lab File ID: P79534.D

Analysis Method: 8260C  Date Collected:

Sample wt/vol: 5(mL)  Date Analyzed: 09/09/2020 19:27

Soil Aliquot Vol:  Dilution Factor: 1

Soil Extract Vol.:  GC Column: Rtx-624 ID: 0.25(mm)

% Moisture:  Level: (low/med) Low

Analysis Batch No.: 722834  Units: ug/L

| CAS NO. | COMPOUND NAME | RESULT | Q | RL | MDL |
|---|---|---|---|---|---|
| 79-20-9 | Methyl acetate | 42.7 | | 5.0 | 0.79 |
| 1634-04-4 | Methyl tert-butyl ether | 19.5 | | 1.0 | 0.47 |
| 108-87-2 | Methylcyclohexane | 20.8 | | 1.0 | 0.26 |
| 75-09-2 | Methylene Chloride | 20.3 | | 1.0 | 0.32 |
| 179601-23-1 | m-Xylene & p-Xylene | 21.4 | | 1.0 | 0.30 |
| 95-47-6 | o-Xylene | 20.5 | | 1.0 | 0.36 |
| 100-42-5 | Styrene | 21.3 | | 1.0 | 0.42 |
| 127-18-4 | Tetrachloroethene | 21.5 | | 1.0 | 0.25 |
| 108-88-3 | Toluene | 20.3 | | 1.0 | 0.38 |
| 156-60-5 | trans-1,2-Dichloroethene | 20.5 | | 1.0 | 0.24 |
| 10061-02-6 | trans-1,3-Dichloropropene | 19.4 | | 1.0 | 0.49 |
| 79-01-6 | Trichloroethene | 21.5 | | 1.0 | 0.31 |
| 75-69-4 | Trichlorofluoromethane | 19.7 | | 1.0 | 0.32 |
| 75-01-4 | Vinyl chloride | 17.2 | | 1.0 | 0.17 |
| 107-06-2 | 1,2-Dichloroethane | 18.8 | | 1.0 | 0.43 |
| 95-50-1 | 1,2-Dichlorobenzene | 20.8 | | 1.0 | 0.43 |
| 96-12-8 | 1,2-Dibromo-3-Chloropropane | 19.9 | | 1.0 | 0.38 |

| CAS NO. | SURROGATE | %REC | Q | LIMITS |
|---|---|---|---|---|
| 17060-07-0 | 1,2-Dichloroethane-d4 (Surr) | 91 | | 75-123 |
| 460-00-4 | 4-Bromofluorobenzene | 103 | | 76-120 |
| 1868-53-7 | Dibromofluoromethane (Surr) | 95 | | 77-124 |
| 2037-26-5 | Toluene-d8 (Surr) | 94 | | 80-120 |

Eurofins TestAmerica, Edison
Target Compound Quantitation Report

Data File: \\chromfs\Edison\ChromData\CVOAMS13\20200909-116494.b\P79534.D
Lims ID: LCS
Client ID:
Sample Type: LCS
Inject. Date: 09-Sep-2020 19:27:30 ALS Bottle#: 4 Worklist Smp#: 5
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: LCS
Misc. Info.: 460-0116494-005
Operator ID: Instrument ID: CVOAMS13

Method: \\chromfs\Edison\ChromData\CVOAMS13\20200909-116494.b\8260W_13.m
Limit Group: VOA - 8260C Water and Solid
Last Update: 10-Sep-2020 14:25:29 Calib Date: 04-Sep-2020 16:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Edison\ChromData\CVOAMS13\20200904-116303.b\P79359.D

Column 1 : Rtx-624 ( 0.25 mm) Det: MS SCAN
Process Host: CTX1019

First Level Reviewer: sgroa Date: 09-Sep-2020 19:44:16

| Compound | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q | Response | Cal Amt ug/l | OnCol Amt ug/l | Flags |
|---|---|---|---|---|---|---|---|---|---|
| 3 Dichlorodifluoromethane | 85 | 0.764 | 0.764 | 0.000 | 99 | 55876 | 20.0 | 15.3 | |
| 6 Chloromethane | 50 | 0.885 | 0.886 | -0.001 | 99 | 81785 | 20.0 | 16.1 | |
| 8 Butadiene | 54 | 0.885 | 0.886 | -0.001 | 94 | 53067 | 20.0 | 15.7 | |
| 7 Vinyl chloride | 62 | 0.893 | 0.893 | 0.000 | 96 | 63984 | 20.0 | 17.2 | |
| 9 Bromomethane | 94 | 1.036 | 1.036 | 0.000 | 97 | 27661 | 20.0 | 23.7 | |
| 10 Chloroethane | 64 | 1.093 | 1.093 | 0.000 | 99 | 34101 | 20.0 | 17.2 | |
| 11 Pentane | 72 | 1.151 | 1.143 | 0.007 | 96 | 18548 | 40.0 | 44.8 | |
| 12 Trichlorofluoromethane | 101 | 1.151 | 1.151 | -0.001 | 60 | 67127 | 20.0 | 19.7 | |
| 13 Dichlorofluoromethane | 67 | 1.179 | 1.186 | -0.007 | 98 | 80193 | 20.0 | 17.5 | |
| 14 2-Methyl-1,3-butadiene | 67 | 1.287 | 1.287 | 0.000 | 96 | 77084 | 20.0 | 19.7 | |
| 15 Ethyl ether | 59 | 1.294 | 1.294 | 0.000 | 97 | 32727 | 20.0 | 17.9 | |
| 17 1,1-Dichloroethene | 96 | 1.387 | 1.387 | 0.000 | 97 | 50473 | 20.0 | 20.8 | |
| 16 Ethanol | 46 | 1.401 | 1.401 | 0.000 | 23 | 6492 | 800.0 | 814.2 | a |
| 19 Carbon disulfide | 76 | 1.401 | 1.401 | 0.000 | 99 | 184733 | 20.0 | 19.4 | |
| 20 1,1,2-Trichloro-1,2,2-trifluoroe | 101 | 1.408 | 1.408 | 0.000 | 95 | 50885 | 20.0 | 21.4 | |
| 22 Iodomethane | 142 | 1.466 | 1.466 | 0.000 | 96 | 46679 | 20.0 | 12.1 | |
| 23 Cyclopentene | 67 | 1.537 | 1.537 | 0.000 | 95 | 142462 | 20.0 | 21.1 | |
| 24 Acrolein | 56 | 1.552 | 1.559 | -0.007 | 92 | 7023 | 40.0 | 37.6 | |
| 25 3-Chloro-1-propene | 76 | 1.623 | 1.623 | 0.000 | 95 | 31049 | 20.0 | 20.0 | |
| 26 Isopropyl alcohol | 45 | 1.652 | 1.645 | 0.007 | 97 | 15581 | 200.0 | 200.9 | |
| 27 Methylene Chloride | 84 | 1.688 | 1.688 | 0.000 | 90 | 59593 | 20.0 | 20.3 | |
| 28 Acetone | 43 | 1.709 | 1.709 | 0.000 | 88 | 37255 | 100.0 | 100.5 | |
| 29 trans-1,2-Dichloroethene | 96 | 1.774 | 1.774 | 0.000 | 92 | 57090 | 20.0 | 20.5 | |
| 30 Methyl acetate | 43 | 1.781 | 1.781 | 0.000 | 99 | 39957 | 40.0 | 42.7 | |
| 31 Hexane | 86 | 1.817 | 1.817 | 0.000 | 92 | 14665 | 20.0 | 21.9 | |
| 32 Methyl tert-butyl ether | 73 | 1.831 | 1.831 | 0.000 | 94 | 111071 | 20.0 | 19.5 | |
| * 33 TBA-d9 (IS) | 65 | 1.845 | 1.845 | 0.000 | 100 | 96105 | 1000.0 | 1000.0 | |
| 34 2-Methyl-2-propanol | 59 | 1.888 | 1.888 | 0.000 | 100 | 22372 | 200.0 | 212.7 | |
| 35 Acetonitrile | 41 | 1.974 | 1.981 | -0.007 | 98 | 31861 | 200.0 | 165.8 | |
| 36 Isopropyl ether | 45 | 2.046 | 2.046 | 0.000 | 97 | 166087 | 20.0 | 18.7 | |
| 37 2-Chloro-1,3-butadiene | 88 | 2.103 | 2.103 | 0.000 | 89 | 53122 | 20.0 | 20.8 | |

| Compound | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q | Response | Cal Amt ug/l | OnCol Amt ug/l | Flags |
|---|---|---|---|---|---|---|---|---|---|
| 38 1,1-Dichloroethane | 63 | 2.118 | 2.118 | 0.000 | 99 | 100792 | 20.0 | 19.5 | |
| 39 Acrylonitrile | 53 | 2.146 | 2.146 | 0.000 | 91 | 124675 | 200.0 | 186.3 | |
| 40 Tert-butyl ethyl ether | 59 | 2.268 | 2.268 | 0.000 | 89 | 136649 | 20.0 | 18.6 | |
| 41 Vinyl acetate | 43 | 2.282 | 2.282 | 0.000 | 100 | 136360 | 40.0 | 34.3 | |
| 42 cis-1,2-Dichloroethene | 96 | 2.461 | 2.461 | 0.000 | 99 | 61799 | 20.0 | 20.1 | |
| 43 2,2-Dichloropropane | 77 | 2.526 | 2.526 | 0.000 | 98 | 69162 | 20.0 | 19.8 | |
| 44 Cyclohexane | 56 | 2.583 | 2.583 | 0.000 | 90 | 101877 | 20.0 | 19.7 | |
| 45 Chlorobromomethane | 128 | 2.590 | 2.590 | 0.000 | 89 | 26989 | 20.0 | 20.1 | |
| 46 Chloroform | 83 | 2.648 | 2.648 | 0.000 | 99 | 91566 | 20.0 | 19.8 | |
| 47 Carbon tetrachloride | 117 | 2.734 | 2.734 | 0.000 | 98 | 62107 | 20.0 | 22.8 | |
| 48 Ethyl acetate | 70 | 2.741 | 2.741 | 0.000 | 99 | 7290 | 40.0 | 49.3 | |
| 49 Methyl acrylate | 55 | 2.748 | 2.748 | 0.000 | 95 | 25327 | 20.0 | 17.4 | |
| 50 Tetrahydrofuran | 42 | 2.748 | 2.755 | -0.007 | 96 | 22400 | 40.0 | 43.5 | |
| $ 51 Dibromofluoromethane (Surr) | 113 | 2.769 | 2.769 | 0.000 | 98 | 109979 | 50.0 | 47.3 | |
| 52 1,1,1-Trichloroethane | 97 | 2.777 | 2.777 | 0.000 | 98 | 76477 | 20.0 | 20.6 | |
| * 53 2-Butanone-d5 | 46 | 2.827 | 2.827 | 0.000 | 99 | 114017 | 250.0 | 250.0 | |
| 54 2-Butanone (MEK) | 72 | 2.862 | 2.863 | 0.000 | 100 | 20046 | 100.0 | 120.3 | |
| 55 1,1-Dichloropropene | 75 | 2.870 | 2.870 | 0.000 | 97 | 81238 | 20.0 | 20.2 | |
| 56 Isooctane | 57 | 2.956 | 2.956 | 0.000 | 99 | 162895 | 20.0 | 20.0 | |
| 57 n-Heptane | 57 | 3.049 | 3.049 | 0.000 | 94 | 40524 | 20.0 | 20.2 | |
| 58 Benzene | 78 | 3.049 | 3.049 | 0.000 | 95 | 240270 | 20.0 | 19.5 | |
| 59 Propionitrile | 54 | 3.070 | 3.070 | 0.000 | 95 | 40635 | 200.0 | 199.3 | |
| 60 Methacrylonitrile | 67 | 3.092 | 3.092 | 0.000 | 90 | 139767 | 200.0 | 188.3 | |
| $ 61 1,2-Dichloroethane-d4 (Surr) | 65 | 3.156 | 3.156 | 0.000 | 0 | 106661 | 50.0 | 45.7 | |
| 62 Tert-amyl methyl ether | 73 | 3.163 | 3.163 | 0.000 | 98 | 116845 | 20.0 | 19.1 | |
| 63 1,2-Dichloroethane | 62 | 3.213 | 3.213 | 0.000 | 97 | 56823 | 20.0 | 18.8 | |
| 64 Isobutyl alcohol | 43 | 3.285 | 3.285 | 0.000 | 95 | 23525 | 500.0 | 457.8 | |
| 65 t-Amyl alcohol | 59 | 3.350 | 3.350 | 0.000 | 91 | 17032 | 200.0 | 204.2 | |
| * 66 Fluorobenzene | 96 | 3.385 | 3.385 | 0.000 | 99 | 540454 | 50.0 | 50.0 | |
| 67 Isopropyl acetate | 43 | 3.457 | 3.457 | 0.000 | 99 | 57005 | 20.0 | 16.6 | |
| 68 Methylcyclohexane | 83 | 3.507 | 3.507 | 0.000 | 95 | 99049 | 20.0 | 20.8 | |
| 69 Trichloroethene | 130 | 3.529 | 3.536 | -0.007 | 96 | 62657 | 20.0 | 21.5 | |
| 70 2-ethoxy-2-methyl butane | 59 | 3.765 | 3.765 | 0.000 | 94 | 112639 | 20.0 | 18.7 | |
| 71 Dibromomethane | 93 | 3.894 | 3.894 | 0.000 | 94 | 25719 | 20.0 | 19.8 | |
| 72 n-Butanol | 56 | 3.915 | 3.915 | 0.000 | 87 | 13313 | 500.0 | 419.8 | |
| 73 1,2-Dichloropropane | 63 | 3.980 | 3.980 | 0.000 | 92 | 56147 | 20.0 | 19.2 | |
| 75 Dichlorobromomethane | 83 | 4.066 | 4.066 | 0.000 | 99 | 63257 | 20.0 | 19.7 | |
| 74 Ethyl acrylate | 55 | 4.066 | 4.066 | 0.000 | 98 | 34232 | 20.0 | 17.6 | |
| * 76 1,4-Dioxane-d8 | 96 | 4.238 | 4.238 | 0.000 | 87 | 14129 | 1000.0 | 1000.0 | |
| 77 Methyl methacrylate | 100 | 4.252 | 4.252 | 0.000 | 88 | 18667 | 40.0 | 42.9 | |
| 78 1,4-Dioxane | 88 | 4.259 | 4.259 | 0.000 | 36 | 7253 | 400.0 | 445.1 | |
| 79 n-Propyl acetate | 43 | 4.417 | 4.417 | 0.000 | 98 | 37442 | 20.0 | 17.0 | |
| 80 2-Chloroethyl vinyl ether | 63 | 4.668 | 4.675 | -0.007 | 96 | 8510 | 20.0 | 15.4 | |
| 81 cis-1,3-Dichloropropene | 75 | 4.696 | 4.696 | 0.000 | 92 | 76444 | 20.0 | 19.0 | |
| $ 82 Toluene-d8 (Surr) | 98 | 4.882 | 4.882 | 0.000 | 99 | 475653 | 50.0 | 46.8 | |
| 83 Toluene | 91 | 4.933 | 4.933 | 0.000 | 93 | 253423 | 20.0 | 20.3 | |
| 84 Epichlorohydrin | 57 | 4.976 | 4.983 | -0.007 | 98 | 16473 | 400.0 | 410.2 | a |
| 85 2-Nitropropane | 41 | 5.190 | 5.190 | 0.000 | 98 | 10356 | 40.0 | 35.7 | |
| 86 Tetrachloroethene | 166 | 5.362 | 5.362 | 0.000 | 97 | 63392 | 20.0 | 21.5 | |
| 87 4-Methyl-2-pentanone (MIBK) | 43 | 5.398 | 5.398 | 0.000 | 95 | 139685 | 100.0 | 118.4 | |
| 88 trans-1,3-Dichloropropene | 75 | 5.441 | 5.441 | 0.000 | 99 | 62199 | 20.0 | 19.4 | |
| 89 1,1,2-Trichloroethane | 83 | 5.606 | 5.606 | 0.000 | 96 | 31898 | 20.0 | 18.7 | |

| Compound | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q | Response | Cal Amt ug/l | OnCol Amt ug/l | Flags |
|---|---|---|---|---|---|---|---|---|---|
| 90 Ethyl methacrylate | 69 | 5.699 | 5.692 | 0.007 | 90 | 43054 | 20.0 | 18.8 | |
| 91 Chlorodibromomethane | 129 | 5.799 | 5.807 | -0.007 | 98 | 42122 | 20.0 | 19.2 | |
| 92 1,3-Dichloropropane | 76 | 5.914 | 5.914 | 0.000 | 93 | 68980 | 20.0 | 19.4 | |
| 93 Ethylene Dibromide | 107 | 6.043 | 6.043 | 0.000 | 99 | 37032 | 20.0 | 20.2 | |
| 94 n-Butyl acetate | 43 | 6.401 | 6.401 | 0.000 | 99 | 39022 | 20.0 | 16.4 | |
| 95 2-Hexanone | 43 | 6.458 | 6.458 | 0.000 | 95 | 94973 | 100.0 | 120.0 | |
| * 96 Chlorobenzene-d5 | 117 | 6.723 | 6.723 | 0.000 | 85 | 393935 | 50.0 | 50.0 | |
| 97 Chlorobenzene | 112 | 6.745 | 6.745 | 0.000 | 97 | 162647 | 20.0 | 20.8 | |
| 98 Ethylbenzene | 106 | 6.831 | 6.831 | 0.000 | 98 | 90995 | 20.0 | 20.7 | |
| 99 1,1,1,2-Tetrachloroethane | 131 | 6.859 | 6.852 | 0.007 | 96 | 49286 | 20.0 | 20.3 | |
| 100 m-Xylene & p-Xylene | 106 | 7.046 | 7.046 | 0.000 | 0 | 110288 | 20.0 | 21.4 | |
| 101 o-Xylene | 106 | 7.626 | 7.626 | 0.000 | 95 | 106896 | 20.0 | 20.5 | |
| 102 Bromoform | 173 | 7.690 | 7.698 | -0.008 | 96 | 24390 | 20.0 | 19.6 | |
| 103 Styrene | 104 | 7.712 | 7.712 | 0.000 | 97 | 177090 | 20.0 | 21.3 | |
| 104 n-Butyl acrylate | 73 | 8.049 | 8.056 | -0.007 | 98 | 25513 | 20.0 | 18.3 | |
| 105 Isopropylbenzene | 105 | 8.113 | 8.113 | 0.000 | 95 | 281234 | 20.0 | 20.8 | |
| 106 Amyl acetate (mixed isomers) | 43 | 8.464 | 8.464 | 0.000 | 91 | 56430 | 20.0 | 17.7 | |
| $ 107 4-Bromofluorobenzene | 174 | 8.478 | 8.478 | 0.000 | 94 | 163722 | 50.0 | 51.3 | |
| 108 Bromobenzene | 156 | 8.586 | 8.586 | 0.000 | 95 | 70227 | 20.0 | 21.4 | |
| 109 N-Propylbenzene | 91 | 8.736 | 8.743 | -0.007 | 100 | 333868 | 20.0 | 20.4 | |
| 110 1,1,2,2-Tetrachloroethane | 83 | 8.894 | 8.894 | 0.000 | 96 | 43953 | 20.0 | 19.4 | |
| 111 2-Chlorotoluene | 91 | 8.908 | 8.908 | 0.000 | 97 | 221591 | 20.0 | 19.6 | |
| 112 4-Ethyltoluene | 105 | 8.930 | 8.930 | 0.000 | 98 | 277638 | 20.0 | 20.4 | |
| 113 1,2,3-Trichloropropane | 110 | 9.023 | 9.023 | 0.000 | 98 | 11901 | 20.0 | 19.8 | |
| 114 1,3,5-Trimethylbenzene | 105 | 9.087 | 9.087 | 0.000 | 94 | 233394 | 20.0 | 20.5 | |
| 115 trans-1,4-Dichloro-2-butene | 53 | 9.159 | 9.159 | 0.000 | 39 | 9778 | 20.0 | 22.5 | a |
| 116 4-Chlorotoluene | 91 | 9.173 | 9.173 | 0.000 | 97 | 202581 | 20.0 | 20.4 | |
| 117 tert-Butylbenzene | 119 | 9.546 | 9.546 | 0.000 | 95 | 199597 | 20.0 | 20.3 | |
| 118 1,2,4-Trimethylbenzene | 105 | 9.682 | 9.682 | 0.000 | 97 | 234879 | 20.0 | 20.0 | |
| 119 Butyl Methacrylate | 87 | 9.696 | 9.696 | 0.000 | 91 | 60257 | 20.0 | 19.1 | |
| 120 sec-Butylbenzene | 105 | 9.839 | 9.839 | 0.000 | 99 | 303715 | 20.0 | 20.4 | |
| 121 1,3-Dichlorobenzene | 146 | 10.097 | 10.097 | 0.000 | 98 | 135794 | 20.0 | 21.0 | |
| 122 4-Isopropyltoluene | 119 | 10.119 | 10.119 | 0.000 | 99 | 259961 | 20.0 | 20.7 | |
| * 123 1,4-Dichlorobenzene-d4 | 152 | 10.226 | 10.226 | 0.000 | 94 | 221549 | 50.0 | 50.0 | |
| 124 1,4-Dichlorobenzene | 146 | 10.248 | 10.248 | 0.000 | 96 | 139969 | 20.0 | 20.6 | |
| 125 1,2,3-Trimethylbenzene | 105 | 10.355 | 10.355 | 0.000 | 98 | 241247 | 20.0 | 20.3 | |
| 126 2,3-Dihydroindene | 117 | 10.527 | 10.527 | 0.000 | 94 | 232077 | 20.0 | 20.1 | |
| 127 Benzyl chloride | 126 | 10.713 | 10.713 | 0.000 | 97 | 13837 | 20.0 | 20.1 | |
| 128 p-Diethylbenzene | 119 | 10.727 | 10.728 | -0.001 | 95 | 130648 | 20.0 | 20.6 | |
| 129 n-Butylbenzene | 91 | 10.813 | 10.813 | 0.000 | 98 | 231484 | 20.0 | 20.2 | |
| 130 1,2-Dichlorobenzene | 146 | 10.914 | 10.914 | 0.000 | 98 | 123061 | 20.0 | 20.8 | |
| 131 1,2,4,5-Tetramethylbenzene | 119 | 11.924 | 11.924 | 0.000 | 98 | 222936 | 20.0 | 20.2 | |
| 132 1,2-Dibromo-3-Chloropropane | 157 | 12.074 | 12.074 | 0.000 | 91 | 7530 | 20.0 | 19.9 | |
| 133 1,3,5-Trichlorobenzene | 180 | 12.117 | 12.117 | 0.000 | 97 | 99840 | 20.0 | 21.3 | |
| 134 1,2,4-Trichlorobenzene | 180 | 12.819 | 12.819 | 0.000 | 93 | 77981 | 20.0 | 19.8 | |
| 135 Hexachlorobutadiene | 225 | 12.841 | 12.841 | 0.000 | 97 | 34596 | 20.0 | 19.9 | |
| 136 Naphthalene | 128 | 13.127 | 13.127 | 0.000 | 100 | 131034 | 20.0 | 18.0 | |
| 137 1,2,3-Trichlorobenzene | 180 | 13.299 | 13.299 | 0.000 | 95 | 59792 | 20.0 | 18.5 | |
| S 138 1,2-Dichloroethene, Total | 100 | | | | 0 | | 40.0 | 40.6 | |
| S 139 1,3-Dichloropropene, Total | 100 | | | | 0 | | 40.0 | 38.4 | |
| S 140 Xylenes, Total | 100 | | | | 0 | | 40.0 | 42.0 | |
| S 142 Total BTEX | 1 | | | | 0 | | 100.0 | 102.5 | |

## QC Flag Legend

Review Flags

a - User Assigned ID

## Reagents:

| | | | | |
|---|---|---|---|---|
| ACROLEIN W_00112 | Amount Added: | 4.00 | Units: uL | |
| 8260MIX1COMB_00125 | Amount Added: | 20.00 | Units: uL | |
| GASES Li_00385 | Amount Added: | 20.00 | Units: uL | |
| 8260ISNEW_00129 | Amount Added: | 1.00 | Units: uL | Run Reagent |
| 8260SURR250_00212 | Amount Added: | 1.00 | Units: uL | Run Reagent |

Report Date: 10-Sep-2020 14:25:46 Chrom Revision: 2.3 20-Aug-2020 13:57:12

Eurofins TestAmerica, Edison

Data File: \\chromfs\Edison\ChromData\CVOAMS13\20200909-116494.b\P79534.D

Injection Date: 09-Sep-2020 19:27:30 Instrument ID: CVOAMS13 Operator ID:

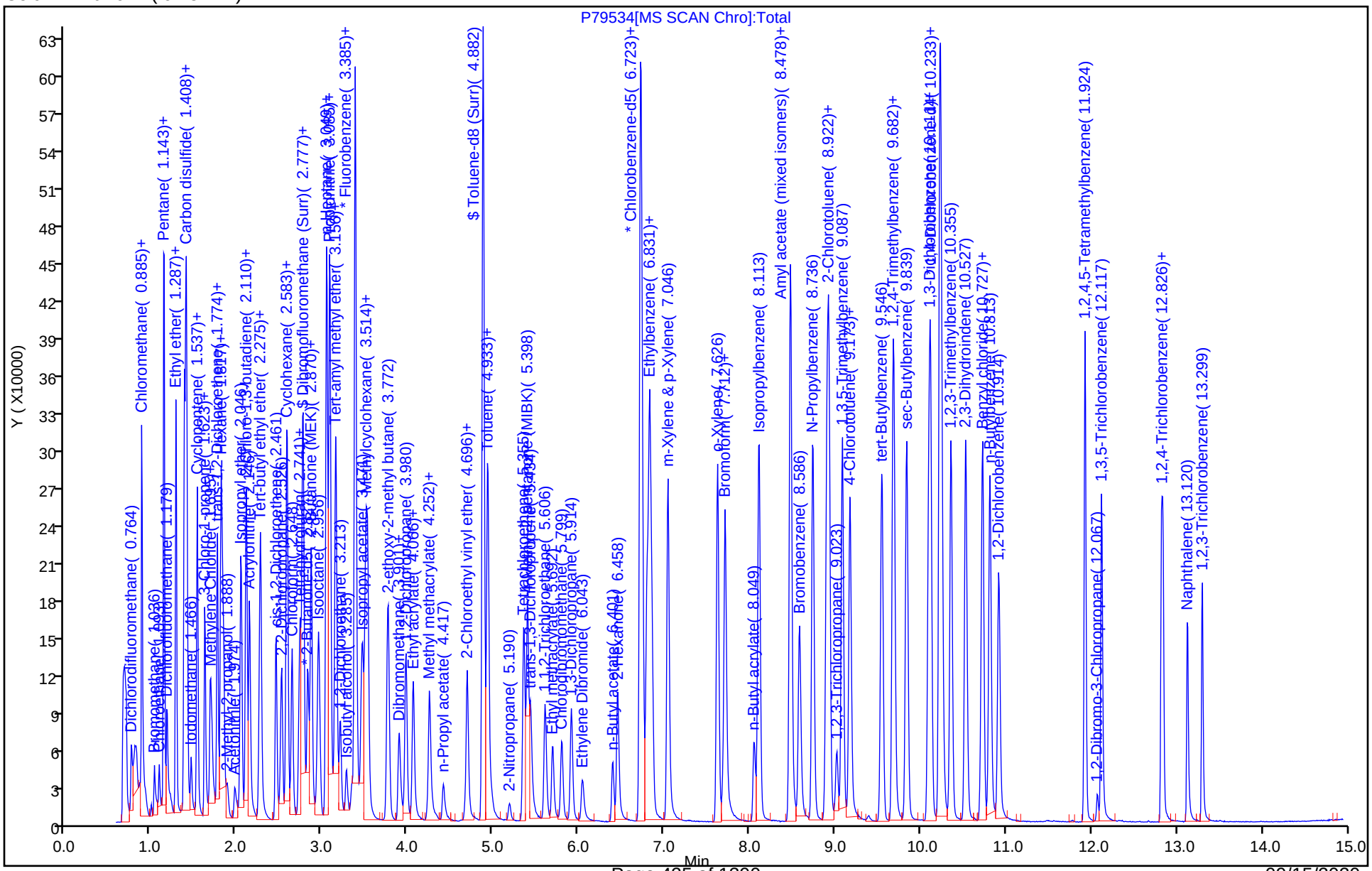
Lims ID: LCS Worklist Smp#: 5

Client ID:

Purge Vol: 5.000 mL Dil. Factor: 1.0000 ALS Bottle#: 4

Method: 8260W_13 Limit Group: VOA - 8260C Water and Solid

Column: Rtx-624 ( 0.25 mm)



FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Edison  Job No.: 460-217547-1

SDG No.:

Client Sample ID:  Lab Sample ID: LCSD 460-722597/5

Matrix: Water  Lab File ID: P79483.D

Analysis Method: 8260C  Date Collected:

Sample wt/vol: 5(mL)  Date Analyzed: 09/08/2020 20:35

Soil Aliquot Vol:  Dilution Factor: 1

Soil Extract Vol.:  GC Column: Rtx-624 ID: 0.25(mm)

% Moisture:  Level: (low/med) Low

Analysis Batch No.: 722597  Units: ug/L

| CAS NO. | COMPOUND NAME | RESULT | Q | RL | MDL |
|---|---|---|---|---|---|
| 71-55-6 | 1,1,1-Trichloroethane | 20.8 | | 1.0 | 0.24 |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 18.2 | | 1.0 | 0.37 |
| 76-13-1 | 1,1,2-Trichloro-1,2,2-trifluoroethane | 21.7 | | 1.0 | 0.31 |
| 79-00-5 | 1,1,2-Trichloroethane | 18.2 | | 1.0 | 0.43 |
| 75-34-3 | 1,1-Dichloroethane | 19.7 | | 1.0 | 0.26 |
| 75-35-4 | 1,1-Dichloroethene | 21.1 | | 1.0 | 0.26 |
| 87-61-6 | 1,2,3-Trichlorobenzene | 17.7 | | 1.0 | 0.36 |
| 120-82-1 | 1,2,4-Trichlorobenzene | 18.8 | | 1.0 | 0.37 |
| 78-87-5 | 1,2-Dichloropropane | 19.6 | | 1.0 | 0.35 |
| 541-73-1 | 1,3-Dichlorobenzene | 21.2 | | 1.0 | 0.34 |
| 106-46-7 | 1,4-Dichlorobenzene | 20.9 | | 1.0 | 0.33 |
| 123-91-1 | 1,4-Dioxane | 483 | | 50 | 28 |
| 78-93-3 | 2-Butanone (MEK) | 126 | | 5.0 | 1.9 |
| 591-78-6 | 2-Hexanone | 125 | | 5.0 | 1.1 |
| 108-10-1 | 4-Methyl-2-pentanone (MIBK) | 124 | | 5.0 | 1.3 |
| 67-64-1 | Acetone | 107 | | 5.0 | 4.4 |
| 71-43-2 | Benzene | 19.8 | | 1.0 | 0.20 |
| 75-25-2 | Bromoform | 17.5 | | 1.0 | 0.54 |
| 74-83-9 | Bromomethane | 34.5 | | 1.0 | 0.55 |
| 75-15-0 | Carbon disulfide | 19.9 | | 1.0 | 0.82 |
| 56-23-5 | Carbon tetrachloride | 22.8 | | 1.0 | 0.21 |
| 108-90-7 | Chlorobenzene | 20.5 | | 1.0 | 0.38 |
| 74-97-5 | Chlorobromomethane | 19.7 | | 1.0 | 0.41 |
| 124-48-1 | Chlorodibromomethane | 18.0 | | 1.0 | 0.28 |
| 75-00-3 | Chloroethane | 19.9 | | 1.0 | 0.32 |
| 67-66-3 | Chloroform | 19.6 | | 1.0 | 0.33 |
| 74-87-3 | Chloromethane | 18.7 | | 1.0 | 0.40 |
| 156-59-2 | cis-1,2-Dichloroethene | 19.9 | | 1.0 | 0.22 |
| 10061-01-5 | cis-1,3-Dichloropropene | 18.9 | | 1.0 | 0.22 |
| 110-82-7 | Cyclohexane | 20.4 | | 1.0 | 0.32 |
| 75-27-4 | Dichlorobromomethane | 19.5 | | 1.0 | 0.34 |
| 75-71-8 | Dichlorodifluoromethane | 19.8 | | 1.0 | 0.31 |
| 100-41-4 | Ethylbenzene | 20.9 | | 1.0 | 0.30 |
| 106-93-4 | Ethylene Dibromide | 18.5 | | 1.0 | 0.50 |
| 98-82-8 | Isopropylbenzene | 21.0 | | 1.0 | 0.34 |

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Edison  Job No.: 460-217547-1

SDG No.:

Client Sample ID:  Lab Sample ID: LCSD 460-722597/5

Matrix: Water  Lab File ID: P79483.D

Analysis Method: 8260C  Date Collected:

Sample wt/vol: 5(mL)  Date Analyzed: 09/08/2020 20:35

Soil Aliquot Vol:  Dilution Factor: 1

Soil Extract Vol.:  GC Column: Rtx-624  ID: 0.25(mm)

% Moisture:  Level: (low/med) Low

Analysis Batch No.: 722597  Units: ug/L

| CAS NO. | COMPOUND NAME | RESULT | Q | RL | MDL |
|---|---|---|---|---|---|
| 79-20-9 | Methyl acetate | 48.0 | | 5.0 | 0.79 |
| 1634-04-4 | Methyl tert-butyl ether | 18.1 | | 1.0 | 0.47 |
| 108-87-2 | Methylcyclohexane | 21.6 | | 1.0 | 0.26 |
| 75-09-2 | Methylene Chloride | 20.3 | | 1.0 | 0.32 |
| 179601-23-1 | m-Xylene & p-Xylene | 21.7 | | 1.0 | 0.30 |
| 95-47-6 | o-Xylene | 20.5 | | 1.0 | 0.36 |
| 100-42-5 | Styrene | 21.1 | | 1.0 | 0.42 |
| 127-18-4 | Tetrachloroethene | 21.1 | | 1.0 | 0.25 |
| 108-88-3 | Toluene | 20.4 | | 1.0 | 0.38 |
| 156-60-5 | trans-1,2-Dichloroethene | 20.4 | | 1.0 | 0.24 |
| 10061-02-6 | trans-1,3-Dichloropropene | 18.8 | | 1.0 | 0.49 |
| 79-01-6 | Trichloroethene | 21.1 | | 1.0 | 0.31 |
| 75-69-4 | Trichlorofluoromethane | 21.9 | | 1.0 | 0.32 |
| 75-01-4 | Vinyl chloride | 19.5 | | 1.0 | 0.17 |
| 107-06-2 | 1,2-Dichloroethane | 18.1 | | 1.0 | 0.43 |
| 95-50-1 | 1,2-Dichlorobenzene | 20.7 | | 1.0 | 0.43 |
| 96-12-8 | 1,2-Dibromo-3-Chloropropane | 18.5 | | 1.0 | 0.38 |

| CAS NO. | SURROGATE | %REC | Q | LIMITS |
|---|---|---|---|---|
| 17060-07-0 | 1,2-Dichloroethane-d4 (Surr) | 88 | | 75-123 |
| 460-00-4 | 4-Bromofluorobenzene | 98 | | 76-120 |
| 1868-53-7 | Dibromofluoromethane (Surr) | 94 | | 77-124 |
| 2037-26-5 | Toluene-d8 (Surr) | 96 | | 80-120 |

Eurofins TestAmerica, Edison
Target Compound Quantitation Report

Data File: \\chromfs\Edison\ChromData\CVOAMS13\20200908-116444.b\P79483.D
Lims ID: LCSD
Client ID:
Sample Type: LCSD
Inject. Date: 08-Sep-2020 20:35:30 ALS Bottle#: 4 Worklist Smp#: 5
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: LCSD
Misc. Info.: 460-0116444-005
Operator ID: Instrument ID: CVOAMS13

Method: \\chromfs\Edison\ChromData\CVOAMS13\20200908-116444.b\8260W_13.m
Limit Group: VOA - 8260C Water and Solid
Last Update: 09-Sep-2020 14:26:26 Calib Date: 04-Sep-2020 16:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Edison\ChromData\CVOAMS13\20200904-116303.b\P79359.D

Column 1 : Rtx-624 ( 0.25 mm) Det: MS SCAN
Process Host: CTX1060

First Level Reviewer: xuyvo Date: 09-Sep-2020 14:27:08

| Compound | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q | Response | Cal Amt ug/l | OnCol Amt ug/l | Flags |
|---|---|---|---|---|---|---|---|---|---|
| 3 Dichlorodifluoromethane | 85 | 0.771 | 0.764 | 0.007 | 99 | 75596 | 20.0 | 19.8 | |
| 6 Chloromethane | 50 | 0.885 | 0.886 | -0.001 | 93 | 99604 | 20.0 | 18.7 | |
| 8 Butadiene | 54 | 0.885 | 0.886 | -0.001 | 95 | 65744 | 20.0 | 18.6 | |
| 7 Vinyl chloride | 62 | 0.893 | 0.893 | 0.000 | 98 | 76011 | 20.0 | 19.5 | |
| 9 Bromomethane | 94 | 1.036 | 1.036 | 0.000 | 99 | 36350 | 20.0 | 34.5 | |
| 10 Chloroethane | 64 | 1.093 | 1.093 | 0.000 | 99 | 41163 | 20.0 | 19.9 | |
| 11 Pentane | 72 | 1.143 | 1.143 | 0.000 | 96 | 20590 | 40.0 | 55.7 | |
| 12 Trichlorofluoromethane | 101 | 1.143 | 1.143 | 0.000 | 62 | 77794 | 20.0 | 21.9 | |
| 13 Dichlorofluoromethane | 67 | 1.186 | 1.179 | 0.007 | 99 | 94803 | 20.0 | 19.8 | |
| 14 2-Methyl-1,3-butadiene | 67 | 1.287 | 1.287 | 0.000 | 96 | 83739 | 20.0 | 20.4 | |
| 15 Ethyl ether | 59 | 1.287 | 1.294 | -0.007 | 96 | 32493 | 20.0 | 17.0 | |
| 17 1,1-Dichloroethene | 96 | 1.387 | 1.387 | 0.000 | 97 | 53780 | 20.0 | 21.1 | |
| 16 Ethanol | 46 | 1.401 | 1.401 | 0.000 | 25 | 6654 | 800.0 | 934.0 | |
| 19 Carbon disulfide | 76 | 1.401 | 1.401 | 0.000 | 99 | 197787 | 20.0 | 19.9 | |
| 20 1,1,2-Trichloro-1,2,2-trifluoroe | 101 | 1.408 | 1.408 | 0.000 | 98 | 54091 | 20.0 | 21.7 | |
| 22 Iodomethane | 142 | 1.466 | 1.466 | 0.000 | 97 | 45596 | 20.0 | 11.3 | |
| 23 Cyclopentene | 67 | 1.537 | 1.537 | 0.000 | 95 | 153676 | 20.0 | 21.8 | |
| 24 Acrolein | 56 | 1.552 | 1.559 | -0.007 | 93 | 8269 | 40.0 | 49.6 | |
| 25 3-Chloro-1-propene | 76 | 1.623 | 1.623 | 0.000 | 94 | 33496 | 20.0 | 20.6 | |
| 26 Isopropyl alcohol | 45 | 1.645 | 1.645 | 0.000 | 97 | 12986 | 200.0 | 187.4 | |
| 27 Methylene Chloride | 84 | 1.695 | 1.688 | 0.007 | 93 | 62215 | 20.0 | 20.3 | |
| 28 Acetone | 43 | 1.709 | 1.709 | 0.000 | 88 | 35838 | 100.0 | 107.1 | |
| 29 trans-1,2-Dichloroethene | 96 | 1.766 | 1.767 | -0.001 | 94 | 59447 | 20.0 | 20.4 | |
| 30 Methyl acetate | 43 | 1.781 | 1.781 | 0.000 | 98 | 40161 | 40.0 | 48.0 | |
| 31 Hexane | 86 | 1.817 | 1.817 | 0.000 | 91 | 16105 | 20.0 | 22.9 | |
| 32 Methyl tert-butyl ether | 73 | 1.824 | 1.831 | -0.007 | 96 | 108001 | 20.0 | 18.1 | |
| * 33 TBA-d9 (IS) | 65 | 1.845 | 1.845 | 0.000 | 99 | 85867 | 1000.0 | 1000.0 | |
| 34 2-Methyl-2-propanol | 59 | 1.888 | 1.888 | 0.000 | 98 | 20556 | 200.0 | 218.7 | |
| 35 Acetonitrile | 41 | 1.981 | 1.974 | 0.007 | 99 | 32142 | 200.0 | 187.2 | |
| 36 Isopropyl ether | 45 | 2.046 | 2.046 | 0.000 | 98 | 177964 | 20.0 | 19.1 | |
| 37 2-Chloro-1,3-butadiene | 88 | 2.103 | 2.103 | 0.000 | 91 | 54113 | 20.0 | 20.3 | |

| Compound | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q | Response | Cal Amt ug/l | OnCol Amt ug/l | Flags |
|---|---|---|---|---|---|---|---|---|---|
| 38 1,1-Dichloroethane | 63 | 2.117 | 2.118 | -0.001 | 100 | 106223 | 20.0 | 19.7 | |
| 39 Acrylonitrile | 53 | 2.146 | 2.146 | 0.000 | 94 | 123610 | 200.0 | 176.5 | |
| 40 Tert-butyl ethyl ether | 59 | 2.268 | 2.268 | 0.000 | 89 | 142028 | 20.0 | 18.5 | |
| 41 Vinyl acetate | 43 | 2.282 | 2.282 | 0.000 | 100 | 133631 | 40.0 | 32.1 | |
| 42 cis-1,2-Dichloroethene | 96 | 2.454 | 2.461 | -0.007 | 98 | 63961 | 20.0 | 19.9 | |
| 43 2,2-Dichloropropane | 77 | 2.519 | 2.526 | -0.007 | 98 | 70856 | 20.0 | 19.4 | |
| 44 Cyclohexane | 56 | 2.583 | 2.583 | 0.000 | 90 | 110367 | 20.0 | 20.4 | |
| 45 Chlorobromomethane | 128 | 2.590 | 2.590 | 0.000 | 70 | 27802 | 20.0 | 19.7 | |
| 46 Chloroform | 83 | 2.648 | 2.648 | 0.000 | 99 | 95042 | 20.0 | 19.6 | |
| 47 Carbon tetrachloride | 117 | 2.733 | 2.734 | -0.001 | 98 | 65006 | 20.0 | 22.8 | |
| 48 Ethyl acetate | 70 | 2.748 | 2.741 | 0.007 | 98 | 6975 | 40.0 | 52.3 | |
| 49 Methyl acrylate | 55 | 2.748 | 2.748 | 0.000 | 98 | 25882 | 20.0 | 17.0 | |
| 50 Tetrahydrofuran | 42 | 2.748 | 2.748 | 0.000 | 96 | 21713 | 40.0 | 46.7 | |
| $ 51 Dibromofluoromethane (Surr) | 113 | 2.769 | 2.769 | 0.000 | 98 | 114528 | 50.0 | 47.0 | |
| 52 1,1,1-Trichloroethane | 97 | 2.776 | 2.777 | -0.001 | 97 | 80895 | 20.0 | 20.8 | |
| * 53 2-Butanone-d5 | 46 | 2.827 | 2.827 | 0.000 | 98 | 102909 | 250.0 | 250.0 | |
| 54 2-Butanone (MEK) | 72 | 2.870 | 2.863 | 0.007 | 100 | 19001 | 100.0 | 126.4 | |
| 55 1,1-Dichloropropene | 75 | 2.870 | 2.870 | 0.000 | 98 | 86683 | 20.0 | 20.6 | |
| 56 Isooctane | 57 | 2.956 | 2.956 | 0.000 | 99 | 181506 | 20.0 | 21.3 | |
| 57 n-Heptane | 57 | 3.049 | 3.049 | 0.000 | 89 | 45580 | 20.0 | 21.7 | |
| 58 Benzene | 78 | 3.049 | 3.049 | 0.000 | 95 | 252555 | 20.0 | 19.8 | |
| 59 Propionitrile | 54 | 3.070 | 3.070 | 0.000 | 97 | 38573 | 200.0 | 211.7 | |
| 60 Methacrylonitrile | 67 | 3.084 | 3.085 | -0.001 | 90 | 135694 | 200.0 | 174.7 | |
| $ 61 1,2-Dichloroethane-d4 (Surr) | 65 | 3.156 | 3.156 | 0.000 | 0 | 107776 | 50.0 | 44.1 | |
| 62 Tert-amyl methyl ether | 73 | 3.156 | 3.156 | 0.000 | 98 | 116013 | 20.0 | 18.1 | |
| 63 1,2-Dichloroethane | 62 | 3.206 | 3.214 | -0.008 | 97 | 57170 | 20.0 | 18.1 | |
| 64 Isobutyl alcohol | 43 | 3.278 | 3.278 | 0.000 | 95 | 22644 | 500.0 | 493.2 | |
| 65 t-Amyl alcohol | 59 | 3.342 | 3.350 | -0.008 | 91 | 13915 | 200.0 | 186.7 | |
| * 66 Fluorobenzene | 96 | 3.385 | 3.385 | 0.000 | 99 | 565626 | 50.0 | 50.0 | |
| 67 Isopropyl acetate | 43 | 3.457 | 3.457 | 0.000 | 99 | 56019 | 20.0 | 15.6 | |
| 68 Methylcyclohexane | 83 | 3.507 | 3.507 | 0.000 | 96 | 107995 | 20.0 | 21.6 | |
| 69 Trichloroethene | 130 | 3.529 | 3.536 | -0.007 | 97 | 64541 | 20.0 | 21.1 | |
| 70 2-ethoxy-2-methyl butane | 59 | 3.765 | 3.765 | 0.000 | 94 | 117829 | 20.0 | 18.7 | |
| 71 Dibromomethane | 93 | 3.894 | 3.894 | 0.000 | 96 | 25124 | 20.0 | 18.5 | |
| 72 n-Butanol | 56 | 3.915 | 3.915 | 0.000 | 86 | 12348 | 500.0 | 459.0 | |
| 73 1,2-Dichloropropane | 63 | 3.980 | 3.980 | 0.000 | 94 | 59926 | 20.0 | 19.6 | |
| 75 Dichlorobromomethane | 83 | 4.066 | 4.059 | 0.007 | 100 | 65259 | 20.0 | 19.5 | |
| 74 Ethyl acrylate | 55 | 4.066 | 4.066 | 0.000 | 98 | 34180 | 20.0 | 16.8 | |
| * 76 1,4-Dioxane-d8 | 96 | 4.238 | 4.238 | 0.000 | 82 | 11441 | 1000.0 | 1000.0 | |
| 77 Methyl methacrylate | 100 | 4.252 | 4.252 | 0.000 | 90 | 16077 | 40.0 | 35.3 | |
| 78 1,4-Dioxane | 88 | 4.266 | 4.266 | 0.000 | 37 | 6367 | 400.0 | 482.5 | |
| 79 n-Propyl acetate | 43 | 4.417 | 4.417 | 0.000 | 98 | 37224 | 20.0 | 16.2 | |
| 80 2-Chloroethyl vinyl ether | 63 | 4.675 | 4.675 | 0.000 | 96 | 6253 | 20.0 | 10.8 | |
| 81 cis-1,3-Dichloropropene | 75 | 4.696 | 4.696 | 0.000 | 91 | 78886 | 20.0 | 18.9 | |
| $ 82 Toluene-d8 (Surr) | 98 | 4.882 | 4.883 | 0.000 | 99 | 503453 | 50.0 | 47.9 | |
| 83 Toluene | 91 | 4.933 | 4.940 | -0.007 | 93 | 263746 | 20.0 | 20.4 | |
| 84 Epichlorohydrin | 57 | 4.990 | 4.983 | 0.007 | 93 | 10926 | 400.0 | 303.8 | |
| 85 2-Nitropropane | 41 | 5.190 | 5.191 | -0.001 | 99 | 8972 | 40.0 | 29.6 | |
| 86 Tetrachloroethene | 166 | 5.355 | 5.355 | 0.000 | 98 | 64254 | 20.0 | 21.1 | |
| 87 4-Methyl-2-pentanone (MIBK) | 43 | 5.405 | 5.405 | 0.000 | 95 | 132313 | 100.0 | 124.3 | |
| 88 trans-1,3-Dichloropropene | 75 | 5.441 | 5.441 | 0.000 | 95 | 62384 | 20.0 | 18.8 | |
| 89 1,1,2-Trichloroethane | 83 | 5.606 | 5.606 | 0.000 | 96 | 32037 | 20.0 | 18.2 | |

| Compound | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q | Response | Cal Amt ug/l | OnCol Amt ug/l | Flags |
|---|---|---|---|---|---|---|---|---|---|
| 90 Ethyl methacrylate | 69 | 5.692 | 5.692 | 0.000 | 90 | 42517 | 20.0 | 17.7 | |
| 91 Chlorodibromomethane | 129 | 5.799 | 5.799 | 0.000 | 99 | 41020 | 20.0 | 18.0 | |
| 92 1,3-Dichloropropane | 76 | 5.914 | 5.914 | 0.000 | 94 | 67387 | 20.0 | 18.4 | |
| 93 Ethylene Dibromide | 107 | 6.043 | 6.043 | 0.000 | 97 | 35127 | 20.0 | 18.5 | |
| 94 n-Butyl acetate | 43 | 6.401 | 6.401 | 0.000 | 99 | 38126 | 20.0 | 15.5 | |
| 95 2-Hexanone | 43 | 6.458 | 6.458 | 0.000 | 95 | 89566 | 100.0 | 125.4 | |
| * 96 Chlorobenzene-d5 | 117 | 6.723 | 6.723 | 0.000 | 86 | 407770 | 50.0 | 50.0 | |
| 97 Chlorobenzene | 112 | 6.745 | 6.745 | 0.000 | 95 | 165788 | 20.0 | 20.5 | |
| 98 Ethylbenzene | 106 | 6.831 | 6.831 | 0.000 | 98 | 94813 | 20.0 | 20.9 | |
| 99 1,1,1,2-Tetrachloroethane | 131 | 6.859 | 6.852 | 0.007 | 96 | 50404 | 20.0 | 20.1 | |
| 100 m-Xylene & p-Xylene | 106 | 7.046 | 7.046 | 0.000 | 0 | 115510 | 20.0 | 21.7 | |
| 101 o-Xylene | 106 | 7.626 | 7.626 | 0.000 | 95 | 110477 | 20.0 | 20.5 | |
| 102 Bromoform | 173 | 7.697 | 7.690 | 0.007 | 94 | 22507 | 20.0 | 17.5 | |
| 103 Styrene | 104 | 7.712 | 7.719 | -0.007 | 97 | 182084 | 20.0 | 21.1 | |
| 104 n-Butyl acrylate | 73 | 8.056 | 8.049 | 0.007 | 98 | 24385 | 20.0 | 17.0 | |
| 105 Isopropylbenzene | 105 | 8.113 | 8.113 | 0.000 | 95 | 293493 | 20.0 | 21.0 | |
| 106 Amyl acetate (mixed isomers) | 43 | 8.471 | 8.471 | 0.000 | 90 | 52971 | 20.0 | 16.9 | |
| $ 107 4-Bromofluorobenzene | 174 | 8.478 | 8.478 | 0.000 | 93 | 162056 | 50.0 | 49.1 | |
| 108 Bromobenzene | 156 | 8.586 | 8.586 | 0.000 | 96 | 68596 | 20.0 | 21.2 | |
| 109 N-Propylbenzene | 91 | 8.736 | 8.743 | -0.007 | 99 | 351612 | 20.0 | 21.7 | |
| 110 1,1,2,2-Tetrachloroethane | 83 | 8.894 | 8.894 | 0.000 | 96 | 40871 | 20.0 | 18.2 | |
| 111 2-Chlorotoluene | 91 | 8.908 | 8.908 | 0.000 | 97 | 231947 | 20.0 | 20.8 | |
| 112 4-Ethyltoluene | 105 | 8.929 | 8.930 | -0.001 | 98 | 290152 | 20.0 | 21.6 | |
| 113 1,2,3-Trichloropropane | 110 | 9.023 | 9.023 | 0.000 | 98 | 11336 | 20.0 | 19.1 | |
| 114 1,3,5-Trimethylbenzene | 105 | 9.087 | 9.087 | 0.000 | 94 | 240002 | 20.0 | 21.4 | |
| 115 trans-1,4-Dichloro-2-butene | 53 | 9.159 | 9.166 | -0.007 | 43 | 8444 | 20.0 | 19.7 | |
| 116 4-Chlorotoluene | 91 | 9.173 | 9.173 | 0.000 | 98 | 203927 | 20.0 | 20.8 | |
| 117 tert-Butylbenzene | 119 | 9.546 | 9.546 | 0.000 | 95 | 207933 | 20.0 | 21.4 | |
| 118 1,2,4-Trimethylbenzene | 105 | 9.674 | 9.682 | -0.008 | 97 | 242975 | 20.0 | 21.0 | |
| 119 Butyl Methacrylate | 87 | 9.696 | 9.696 | 0.000 | 92 | 58732 | 20.0 | 18.9 | |
| 120 sec-Butylbenzene | 105 | 9.839 | 9.839 | 0.000 | 99 | 315833 | 20.0 | 21.5 | |
| 121 1,3-Dichlorobenzene | 146 | 10.097 | 10.097 | 0.000 | 98 | 135579 | 20.0 | 21.2 | |
| 122 4-Isopropyltoluene | 119 | 10.119 | 10.119 | 0.000 | 98 | 267057 | 20.0 | 21.5 | |
| * 123 1,4-Dichlorobenzene-d4 | 152 | 10.226 | 10.226 | 0.000 | 94 | 218624 | 50.0 | 50.0 | |
| 124 1,4-Dichlorobenzene | 146 | 10.247 | 10.248 | -0.001 | 96 | 140779 | 20.0 | 20.9 | |
| 125 1,2,3-Trimethylbenzene | 105 | 10.355 | 10.355 | 0.000 | 98 | 240356 | 20.0 | 20.5 | |
| 126 2,3-Dihydroindene | 117 | 10.527 | 10.527 | 0.000 | 95 | 230639 | 20.0 | 20.3 | |
| 127 Benzyl chloride | 126 | 10.713 | 10.713 | 0.000 | 97 | 12705 | 20.0 | 18.7 | |
| 128 p-Diethylbenzene | 119 | 10.727 | 10.728 | -0.001 | 94 | 132424 | 20.0 | 21.2 | |
| 129 n-Butylbenzene | 91 | 10.813 | 10.814 | -0.001 | 98 | 243378 | 20.0 | 21.5 | |
| 130 1,2-Dichlorobenzene | 146 | 10.914 | 10.914 | 0.000 | 98 | 121044 | 20.0 | 20.7 | |
| 131 1,2,4,5-Tetramethylbenzene | 119 | 11.924 | 11.924 | 0.000 | 98 | 226758 | 20.0 | 20.8 | |
| 132 1,2-Dibromo-3-Chloropropane | 157 | 12.074 | 12.074 | 0.000 | 94 | 6914 | 20.0 | 18.5 | |
| 133 1,3,5-Trichlorobenzene | 180 | 12.117 | 12.117 | 0.000 | 97 | 97470 | 20.0 | 21.0 | |
| 134 1,2,4-Trichlorobenzene | 180 | 12.819 | 12.819 | 0.000 | 94 | 73269 | 20.0 | 18.8 | |
| 135 Hexachlorobutadiene | 225 | 12.841 | 12.841 | -0.001 | 97 | 34290 | 20.0 | 20.0 | |
| 136 Naphthalene | 128 | 13.127 | 13.127 | 0.000 | 99 | 118709 | 20.0 | 16.5 | |
| 137 1,2,3-Trichlorobenzene | 180 | 13.299 | 13.299 | 0.000 | 95 | 56220 | 20.0 | 17.7 | |
| S 138 1,2-Dichloroethene, Total | 100 | | | | 0 | | 40.0 | 40.3 | |
| S 139 1,3-Dichloropropene, Total | 100 | | | | 0 | | 40.0 | 37.7 | |
| S 140 Xylenes, Total | 100 | | | | 0 | | 40.0 | 42.2 | |
| S 142 Total BTEX | 1 | | | | 0 | | 100.0 | 103.3 | |

## Reagents:

| | | | | |
|---|---|---|---|---|
| ACROLEIN W_00112 | Amount Added: | 4.00 | Units: uL | |
| 8260MIX1COMB_00125 | Amount Added: | 20.00 | Units: uL | |
| GASES Li_00384 | Amount Added: | 20.00 | Units: uL | |
| 8260ISNEW_00129 | Amount Added: | 1.00 | Units: uL | Run Reagent |
| 8260SURR250_00212 | Amount Added: | 1.00 | Units: uL | Run Reagent |

Report Date: 09-Sep-2020 14:27:12 Chrom Revision: 2.3 20-Aug-2020 13:57:12

Eurofins TestAmerica, Edison

Data File: \\chromfs\Edison\ChromData\CVOAMS13\20200908-116444.b\P79483.D

Injection Date: 08-Sep-2020 20:35:30 Instrument ID: CVOAMS13 Operator ID:

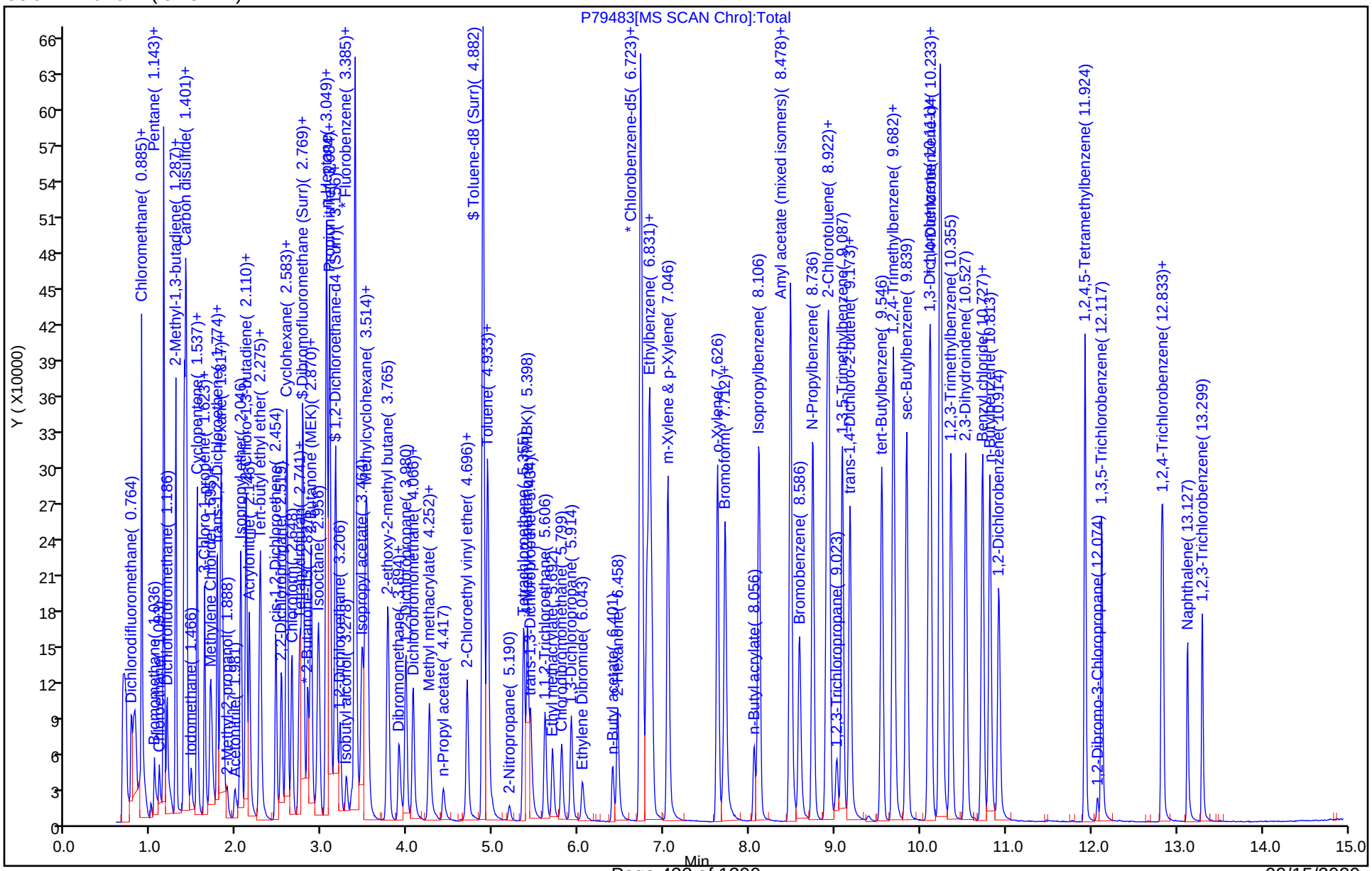
Lims ID: LCSD Worklist Smp#: 5

Client ID:

Purge Vol: 5.000 mL Dil. Factor: 1.0000 ALS Bottle#: 4

Method: 8260W_13 Limit Group: VOA - 8260C Water and Solid

Column: Rtx-624 ( 0.25 mm)



FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Edison  Job No.: 460-217547-1

SDG No.:

Client Sample ID:  Lab Sample ID: LCSD 460-722709/5

Matrix: Water  Lab File ID: P79508.D

Analysis Method: 8260C  Date Collected:

Sample wt/vol: 5(mL)  Date Analyzed: 09/09/2020 09:20

Soil Aliquot Vol:  Dilution Factor: 1

Soil Extract Vol.:  GC Column: Rtx-624 ID: 0.25(mm)

% Moisture:  Level: (low/med) Low

Analysis Batch No.: 722709  Units: ug/L

| CAS NO. | COMPOUND NAME | RESULT | Q | RL | MDL |
|---|---|---|---|---|---|
| 71-55-6 | 1,1,1-Trichloroethane | 20.8 | | 1.0 | 0.24 |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 20.1 | | 1.0 | 0.37 |
| 76-13-1 | 1,1,2-Trichloro-1,2,2-trifluoroethane | 22.1 | | 1.0 | 0.31 |
| 79-00-5 | 1,1,2-Trichloroethane | 20.2 | | 1.0 | 0.43 |
| 75-34-3 | 1,1-Dichloroethane | 19.2 | | 1.0 | 0.26 |
| 75-35-4 | 1,1-Dichloroethene | 21.0 | | 1.0 | 0.26 |
| 87-61-6 | 1,2,3-Trichlorobenzene | 19.2 | | 1.0 | 0.36 |
| 120-82-1 | 1,2,4-Trichlorobenzene | 19.6 | | 1.0 | 0.37 |
| 78-87-5 | 1,2-Dichloropropane | 19.8 | | 1.0 | 0.35 |
| 541-73-1 | 1,3-Dichlorobenzene | 20.3 | | 1.0 | 0.34 |
| 106-46-7 | 1,4-Dichlorobenzene | 20.0 | | 1.0 | 0.33 |
| 123-91-1 | 1,4-Dioxane | 478 | | 50 | 28 |
| 78-93-3 | 2-Butanone (MEK) | 106 | | 5.0 | 1.9 |
| 591-78-6 | 2-Hexanone | 109 | | 5.0 | 1.1 |
| 108-10-1 | 4-Methyl-2-pentanone (MIBK) | 105 | | 5.0 | 1.3 |
| 67-64-1 | Acetone | 91.9 | | 5.0 | 4.4 |
| 71-43-2 | Benzene | 19.6 | | 1.0 | 0.20 |
| 75-25-2 | Bromoform | 20.1 | | 1.0 | 0.54 |
| 74-83-9 | Bromomethane | 19.4 | | 1.0 | 0.55 |
| 75-15-0 | Carbon disulfide | 19.5 | | 1.0 | 0.82 |
| 56-23-5 | Carbon tetrachloride | 22.6 | | 1.0 | 0.21 |
| 108-90-7 | Chlorobenzene | 20.1 | | 1.0 | 0.38 |
| 74-97-5 | Chlorobromomethane | 20.4 | | 1.0 | 0.41 |
| 124-48-1 | Chlorodibromomethane | 20.4 | | 1.0 | 0.28 |
| 75-00-3 | Chloroethane | 14.9 | | 1.0 | 0.32 |
| 67-66-3 | Chloroform | 19.7 | | 1.0 | 0.33 |
| 74-87-3 | Chloromethane | 17.7 | | 1.0 | 0.40 |
| 156-59-2 | cis-1,2-Dichloroethene | 20.0 | | 1.0 | 0.22 |
| 10061-01-5 | cis-1,3-Dichloropropene | 19.1 | | 1.0 | 0.22 |
| 110-82-7 | Cyclohexane | 20.4 | | 1.0 | 0.32 |
| 75-27-4 | Dichlorobromomethane | 19.8 | | 1.0 | 0.34 |
| 75-71-8 | Dichlorodifluoromethane | 19.9 | | 1.0 | 0.31 |
| 100-41-4 | Ethylbenzene | 20.4 | | 1.0 | 0.30 |
| 106-93-4 | Ethylene Dibromide | 21.2 | | 1.0 | 0.50 |
| 98-82-8 | Isopropylbenzene | 20.6 | | 1.0 | 0.34 |

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Edison  Job No.: 460-217547-1

SDG No.:

Client Sample ID:  Lab Sample ID: LCSD 460-722709/5

Matrix: Water  Lab File ID: P79508.D

Analysis Method: 8260C  Date Collected:

Sample wt/vol: 5(mL)  Date Analyzed: 09/09/2020 09:20

Soil Aliquot Vol:  Dilution Factor: 1

Soil Extract Vol.:  GC Column: Rtx-624 ID: 0.25(mm)

% Moisture:  Level: (low/med) Low

Analysis Batch No.: 722709  Units: ug/L

| CAS NO. | COMPOUND NAME | RESULT | Q | RL | MDL |
|---|---|---|---|---|---|
| 79-20-9 | Methyl acetate | 38.6 | | 5.0 | 0.79 |
| 1634-04-4 | Methyl tert-butyl ether | 20.9 | | 1.0 | 0.47 |
| 108-87-2 | Methylcyclohexane | 21.7 | | 1.0 | 0.26 |
| 75-09-2 | Methylene Chloride | 20.2 | | 1.0 | 0.32 |
| 179601-23-1 | m-Xylene & p-Xylene | 20.9 | | 1.0 | 0.30 |
| 95-47-6 | o-Xylene | 20.2 | | 1.0 | 0.36 |
| 100-42-5 | Styrene | 20.7 | | 1.0 | 0.42 |
| 127-18-4 | Tetrachloroethene | 21.4 | | 1.0 | 0.25 |
| 108-88-3 | Toluene | 20.0 | | 1.0 | 0.38 |
| 156-60-5 | trans-1,2-Dichloroethene | 20.9 | | 1.0 | 0.24 |
| 10061-02-6 | trans-1,3-Dichloropropene | 20.5 | | 1.0 | 0.49 |
| 79-01-6 | Trichloroethene | 21.1 | | 1.0 | 0.31 |
| 75-69-4 | Trichlorofluoromethane | 21.7 | | 1.0 | 0.32 |
| 75-01-4 | Vinyl chloride | 19.2 | | 1.0 | 0.17 |
| 107-06-2 | 1,2-Dichloroethane | 19.3 | | 1.0 | 0.43 |
| 95-50-1 | 1,2-Dichlorobenzene | 20.2 | | 1.0 | 0.43 |
| 96-12-8 | 1,2-Dibromo-3-Chloropropane | 21.7 | | 1.0 | 0.38 |

| CAS NO. | SURROGATE | %REC | Q | LIMITS |
|---|---|---|---|---|
| 17060-07-0 | 1,2-Dichloroethane-d4 (Surr) | 96 | | 75-123 |
| 460-00-4 | 4-Bromofluorobenzene | 105 | | 76-120 |
| 1868-53-7 | Dibromofluoromethane (Surr) | 97 | | 77-124 |
| 2037-26-5 | Toluene-d8 (Surr) | 96 | | 80-120 |

Eurofins TestAmerica, Edison
Target Compound Quantitation Report

Data File: \\chromfs\Edison\ChromData\CVOAMS13\20200909-116470.b\P79508.D
Lims ID: LCSD
Client ID:
Sample Type: LCSD
Inject. Date: 09-Sep-2020 09:20:30 ALS Bottle#: 4 Worklist Smp#: 5
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: LCSD
Misc. Info.: 460-0116470-005
Operator ID: Instrument ID: CVOAMS13

Method: \\chromfs\Edison\ChromData\CVOAMS13\20200909-116470.b\8260W_13.m
Limit Group: VOA - 8260C Water and Solid
Last Update: 10-Sep-2020 11:14:21 Calib Date: 04-Sep-2020 16:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Edison\ChromData\CVOAMS13\20200904-116303.b\P79359.D

Column 1 : Rtx-624 ( 0.25 mm) Det: MS SCAN
Process Host: CTX1019

First Level Reviewer: moroneyc Date: 09-Sep-2020 08:57:39

| Compound | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q | Response | Cal Amt ug/l | OnCol Amt ug/l | Flags |
|---|---|---|---|---|---|---|---|---|---|
| 3 Dichlorodifluoromethane | 85 | 0.771 | 0.764 | 0.007 | 99 | 74572 | 20.0 | 19.9 | |
| 6 Chloromethane | 50 | 0.893 | 0.885 | 0.008 | 63 | 92921 | 20.0 | 17.7 | |
| 8 Butadiene | 54 | 0.893 | 0.885 | 0.008 | 92 | 66484 | 20.0 | 19.1 | |
| 7 Vinyl chloride | 62 | 0.893 | 0.893 | 0.000 | 59 | 73606 | 20.0 | 19.2 | |
| 9 Bromomethane | 94 | 1.036 | 1.036 | 0.000 | 98 | 28432 | 20.0 | 19.4 | |
| 10 Chloroethane | 64 | 1.093 | 1.093 | 0.000 | 99 | 30494 | 20.0 | 14.9 | |
| 11 Pentane | 72 | 1.150 | 1.143 | 0.007 | 95 | 20496 | 40.0 | 41.2 | |
| 12 Trichlorofluoromethane | 101 | 1.150 | 1.150 | 0.000 | 61 | 76159 | 20.0 | 21.7 | |
| 13 Dichlorofluoromethane | 67 | 1.186 | 1.179 | 0.007 | 98 | 87544 | 20.0 | 18.6 | |
| 14 2-Methyl-1,3-butadiene | 67 | 1.287 | 1.287 | 0.000 | 97 | 86338 | 20.0 | 21.4 | |
| 15 Ethyl ether | 59 | 1.294 | 1.294 | 0.000 | 95 | 35621 | 20.0 | 18.9 | |
| 17 1,1-Dichloroethene | 96 | 1.387 | 1.387 | 0.000 | 97 | 52560 | 20.0 | 21.0 | |
| 16 Ethanol | 46 | 1.408 | 1.401 | 0.007 | 28 | 7659 | 800.0 | 798.5 | a |
| 19 Carbon disulfide | 76 | 1.408 | 1.401 | 0.007 | 99 | 190764 | 20.0 | 19.5 | |
| 20 1,1,2-Trichloro-1,2,2-trifluoroe | 101 | 1.408 | 1.408 | 0.000 | 95 | 54276 | 20.0 | 22.1 | |
| 22 Iodomethane | 142 | 1.466 | 1.466 | 0.000 | 97 | 43594 | 20.0 | 11.0 | |
| 23 Cyclopentene | 67 | 1.537 | 1.537 | 0.000 | 96 | 149629 | 20.0 | 21.5 | |
| 24 Acrolein | 56 | 1.559 | 1.559 | 0.000 | 91 | 9248 | 40.0 | 41.2 | |
| 25 3-Chloro-1-propene | 76 | 1.630 | 1.623 | 0.007 | 94 | 32660 | 20.0 | 20.4 | |
| 26 Isopropyl alcohol | 45 | 1.652 | 1.652 | 0.000 | 97 | 17348 | 200.0 | 185.9 | |
| 27 Methylene Chloride | 84 | 1.695 | 1.688 | 0.007 | 92 | 60912 | 20.0 | 20.2 | |
| 28 Acetone | 43 | 1.709 | 1.709 | 0.000 | 87 | 42874 | 100.0 | 91.9 | |
| 29 trans-1,2-Dichloroethene | 96 | 1.774 | 1.774 | 0.000 | 93 | 59896 | 20.0 | 20.9 | |
| 30 Methyl acetate | 43 | 1.781 | 1.781 | 0.000 | 98 | 43457 | 40.0 | 38.6 | |
| 31 Hexane | 86 | 1.817 | 1.817 | 0.000 | 91 | 16748 | 20.0 | 24.2 | |
| 32 Methyl tert-butyl ether | 73 | 1.831 | 1.831 | 0.000 | 94 | 122699 | 20.0 | 20.9 | |
| * 33 TBA-d9 (IS) | 65 | 1.845 | 1.845 | 0.000 | 100 | 115607 | 1000.0 | 1000.0 | |
| 34 2-Methyl-2-propanol | 59 | 1.895 | 1.888 | 0.007 | 99 | 26174 | 200.0 | 206.9 | |
| 35 Acetonitrile | 41 | 1.981 | 1.974 | 0.007 | 100 | 38127 | 200.0 | 164.9 | |
| 36 Isopropyl ether | 45 | 2.053 | 2.046 | 0.007 | 97 | 178013 | 20.0 | 19.4 | |
| 37 2-Chloro-1,3-butadiene | 88 | 2.110 | 2.103 | 0.007 | 88 | 54603 | 20.0 | 20.8 | |

| Compound | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q | Response | Cal Amt ug/l | OnCol Amt ug/l | Flags |
|---|---|---|---|---|---|---|---|---|---|
| 38 1,1-Dichloroethane | 63 | 2.118 | 2.117 | 0.001 | 100 | 101998 | 20.0 | 19.2 | |
| 39 Acrylonitrile | 53 | 2.153 | 2.146 | 0.007 | 94 | 137686 | 200.0 | 199.7 | |
| 40 Tert-butyl ethyl ether | 59 | 2.275 | 2.268 | 0.007 | 90 | 147069 | 20.0 | 19.4 | |
| 41 Vinyl acetate | 43 | 2.282 | 2.282 | 0.000 | 100 | 152523 | 40.0 | 37.3 | |
| 42 cis-1,2-Dichloroethene | 96 | 2.461 | 2.461 | 0.000 | 99 | 63473 | 20.0 | 20.0 | |
| 43 2,2-Dichloropropane | 77 | 2.526 | 2.526 | 0.000 | 98 | 70898 | 20.0 | 19.7 | |
| 44 Cyclohexane | 56 | 2.590 | 2.583 | 0.007 | 90 | 108430 | 20.0 | 20.4 | |
| 45 Chlorobromomethane | 128 | 2.590 | 2.590 | 0.000 | 71 | 28221 | 20.0 | 20.4 | |
| 46 Chloroform | 83 | 2.648 | 2.648 | 0.000 | 99 | 93781 | 20.0 | 19.7 | |
| 47 Carbon tetrachloride | 117 | 2.734 | 2.733 | 0.001 | 98 | 63623 | 20.0 | 22.6 | |
| 48 Ethyl acetate | 70 | 2.748 | 2.741 | 0.007 | 99 | 8045 | 40.0 | 43.3 | |
| 49 Methyl acrylate | 55 | 2.748 | 2.748 | 0.000 | 81 | 29223 | 20.0 | 19.4 | |
| 50 Tetrahydrofuran | 42 | 2.755 | 2.755 | 0.000 | 95 | 26048 | 40.0 | 40.2 | |
| $ 51 Dibromofluoromethane (Surr) | 113 | 2.777 | 2.769 | 0.007 | 98 | 116415 | 50.0 | 48.5 | |
| 52 1,1,1-Trichloroethane | 97 | 2.784 | 2.776 | 0.008 | 98 | 79824 | 20.0 | 20.8 | |
| * 53 2-Butanone-d5 | 46 | 2.827 | 2.827 | 0.000 | 100 | 143241 | 250.0 | 250.0 | |
| 54 2-Butanone (MEK) | 72 | 2.870 | 2.862 | 0.008 | 100 | 22177 | 100.0 | 106.0 | |
| 55 1,1-Dichloropropene | 75 | 2.877 | 2.870 | 0.007 | 96 | 83288 | 20.0 | 20.1 | |
| 56 Isooctane | 57 | 2.956 | 2.956 | 0.000 | 99 | 178523 | 20.0 | 21.2 | |
| 57 n-Heptane | 57 | 3.049 | 3.049 | 0.000 | 91 | 44441 | 20.0 | 21.5 | |
| 58 Benzene | 78 | 3.056 | 3.056 | 0.000 | 96 | 246655 | 20.0 | 19.6 | |
| 59 Propionitrile | 54 | 3.070 | 3.070 | 0.000 | 92 | 46567 | 200.0 | 189.8 | |
| 60 Methacrylonitrile | 67 | 3.092 | 3.092 | 0.000 | 90 | 157425 | 200.0 | 205.9 | |
| 62 Tert-amyl methyl ether | 73 | 3.163 | 3.156 | 0.007 | 99 | 127075 | 20.0 | 20.2 | |
| $ 61 1,2-Dichloroethane-d4 (Surr) | 65 | 3.156 | 3.156 | 0.000 | 0 | 115777 | 50.0 | 48.1 | |
| 63 1,2-Dichloroethane | 62 | 3.213 | 3.213 | 0.000 | 97 | 59908 | 20.0 | 19.3 | |
| 64 Isobutyl alcohol | 43 | 3.285 | 3.285 | 0.000 | 96 | 27455 | 500.0 | 444.2 | |
| 65 t-Amyl alcohol | 59 | 3.350 | 3.349 | 0.001 | 90 | 20072 | 200.0 | 200.1 | |
| * 66 Fluorobenzene | 96 | 3.385 | 3.385 | 0.000 | 99 | 556895 | 50.0 | 50.0 | |
| 67 Isopropyl acetate | 43 | 3.457 | 3.457 | 0.000 | 99 | 63912 | 20.0 | 18.1 | |
| 68 Methylcyclohexane | 83 | 3.514 | 3.507 | 0.007 | 96 | 106544 | 20.0 | 21.7 | |
| 69 Trichloroethene | 130 | 3.536 | 3.536 | 0.000 | 96 | 63381 | 20.0 | 21.1 | |
| 70 2-ethoxy-2-methyl butane | 59 | 3.772 | 3.772 | 0.000 | 95 | 119665 | 20.0 | 19.3 | |
| 71 Dibromomethane | 93 | 3.894 | 3.894 | 0.000 | 94 | 27087 | 20.0 | 20.2 | |
| 72 n-Butanol | 56 | 3.908 | 3.908 | 0.000 | 87 | 16386 | 500.0 | 429.4 | |
| 73 1,2-Dichloropropane | 63 | 3.980 | 3.980 | 0.000 | 93 | 59469 | 20.0 | 19.8 | |
| 75 Dichlorobromomethane | 83 | 4.066 | 4.066 | 0.000 | 99 | 65368 | 20.0 | 19.8 | |
| 74 Ethyl acrylate | 55 | 4.066 | 4.066 | 0.000 | 61 | 41584 | 20.0 | 20.6 | |
| * 76 1,4-Dioxane-d8 | 96 | 4.238 | 4.238 | 0.000 | 89 | 14367 | 1000.0 | 1000.0 | |
| 77 Methyl methacrylate | 100 | 4.259 | 4.259 | 0.000 | 90 | 20497 | 40.0 | 45.7 | |
| 78 1,4-Dioxane | 88 | 4.266 | 4.266 | 0.000 | 36 | 7915 | 400.0 | 477.7 | |
| 79 n-Propyl acetate | 43 | 4.417 | 4.417 | 0.000 | 98 | 41370 | 20.0 | 18.3 | |
| 80 2-Chloroethyl vinyl ether | 63 | 4.675 | 4.675 | 0.000 | 96 | 11773 | 20.0 | 20.7 | |
| 81 cis-1,3-Dichloropropene | 75 | 4.696 | 4.696 | 0.000 | 92 | 78568 | 20.0 | 19.1 | |
| $ 82 Toluene-d8 (Surr) | 98 | 4.882 | 4.882 | 0.000 | 99 | 498328 | 50.0 | 48.0 | |
| 83 Toluene | 91 | 4.940 | 4.940 | 0.000 | 93 | 255236 | 20.0 | 20.0 | |
| 84 Epichlorohydrin | 57 | 4.976 | 4.983 | -0.007 | 99 | 21890 | 400.0 | 433.1 | |
| 85 2-Nitropropane | 41 | 5.190 | 5.190 | 0.000 | 96 | 11184 | 40.0 | 37.4 | |
| 86 Tetrachloroethene | 166 | 5.362 | 5.355 | 0.007 | 98 | 64410 | 20.0 | 21.4 | |
| 87 4-Methyl-2-pentanone (MIBK) | 43 | 5.405 | 5.398 | 0.007 | 96 | 155089 | 100.0 | 104.7 | |
| 88 trans-1,3-Dichloropropene | 75 | 5.441 | 5.441 | 0.000 | 94 | 67187 | 20.0 | 20.5 | |
| 89 1,1,2-Trichloroethane | 83 | 5.606 | 5.606 | 0.000 | 96 | 35094 | 20.0 | 20.2 | |

| Compound | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q | Response | Cal Amt ug/l | OnCol Amt ug/l | Flags |
|---|---|---|---|---|---|---|---|---|---|
| 90 Ethyl methacrylate | 69 | 5.692 | 5.692 | 0.000 | 89 | 49130 | 20.0 | 20.8 | |
| 91 Chlorodibromomethane | 129 | 5.806 | 5.806 | 0.000 | 98 | 45765 | 20.0 | 20.4 | |
| 92 1,3-Dichloropropane | 76 | 5.914 | 5.914 | 0.000 | 94 | 72113 | 20.0 | 19.9 | |
| 93 Ethylene Dibromide | 107 | 6.043 | 6.043 | 0.000 | 100 | 39619 | 20.0 | 21.2 | |
| 94 n-Butyl acetate | 43 | 6.401 | 6.401 | 0.000 | 99 | 44254 | 20.0 | 18.1 | |
| 95 2-Hexanone | 43 | 6.458 | 6.458 | 0.000 | 95 | 108240 | 100.0 | 108.8 | |
| * 96 Chlorobenzene-d5 | 117 | 6.723 | 6.723 | 0.000 | 86 | 402348 | 50.0 | 50.0 | |
| 97 Chlorobenzene | 112 | 6.745 | 6.745 | 0.000 | 95 | 160608 | 20.0 | 20.1 | |
| 98 Ethylbenzene | 106 | 6.831 | 6.831 | 0.000 | 98 | 91368 | 20.0 | 20.4 | |
| 99 1,1,1,2-Tetrachloroethane | 131 | 6.859 | 6.859 | 0.000 | 95 | 50745 | 20.0 | 20.5 | |
| 100 m-Xylene & p-Xylene | 106 | 7.046 | 7.046 | 0.000 | 0 | 110056 | 20.0 | 20.9 | |
| 101 o-Xylene | 106 | 7.626 | 7.626 | 0.000 | 95 | 107308 | 20.0 | 20.2 | |
| 102 Bromoform | 173 | 7.690 | 7.690 | 0.000 | 95 | 25468 | 20.0 | 20.1 | |
| 103 Styrene | 104 | 7.712 | 7.712 | 0.000 | 97 | 176323 | 20.0 | 20.7 | |
| 104 n-Butyl acrylate | 73 | 8.056 | 8.056 | 0.000 | 98 | 27446 | 20.0 | 19.3 | |
| 105 Isopropylbenzene | 105 | 8.106 | 8.113 | -0.007 | 95 | 283527 | 20.0 | 20.6 | |
| 106 Amyl acetate (mixed isomers) | 43 | 8.464 | 8.464 | 0.000 | 90 | 59885 | 20.0 | 17.9 | |
| $ 107 4-Bromofluorobenzene | 174 | 8.478 | 8.478 | 0.000 | 94 | 170589 | 50.0 | 52.4 | |
| 108 Bromobenzene | 156 | 8.586 | 8.586 | 0.000 | 96 | 68596 | 20.0 | 20.0 | |
| 109 N-Propylbenzene | 91 | 8.743 | 8.736 | 0.007 | 100 | 337943 | 20.0 | 19.7 | |
| 110 1,1,2,2-Tetrachloroethane | 83 | 8.894 | 8.894 | 0.000 | 97 | 47741 | 20.0 | 20.1 | |
| 111 2-Chlorotoluene | 91 | 8.908 | 8.908 | 0.000 | 97 | 221638 | 20.0 | 18.8 | |
| 112 4-Ethyltoluene | 105 | 8.930 | 8.929 | 0.001 | 99 | 280379 | 20.0 | 19.7 | |
| 113 1,2,3-Trichloropropane | 110 | 9.023 | 9.023 | 0.000 | 97 | 13500 | 20.0 | 21.5 | |
| 114 1,3,5-Trimethylbenzene | 105 | 9.087 | 9.087 | 0.000 | 94 | 233441 | 20.0 | 19.6 | |
| 115 trans-1,4-Dichloro-2-butene | 53 | 9.159 | 9.159 | 0.000 | 86 | 10577 | 20.0 | 23.3 | |
| 116 4-Chlorotoluene | 91 | 9.173 | 9.173 | 0.000 | 97 | 202292 | 20.0 | 19.5 | |
| 117 tert-Butylbenzene | 119 | 9.546 | 9.546 | 0.000 | 96 | 202717 | 20.0 | 19.7 | |
| 118 1,2,4-Trimethylbenzene | 105 | 9.682 | 9.682 | 0.000 | 97 | 238604 | 20.0 | 19.5 | |
| 119 Butyl Methacrylate | 87 | 9.696 | 9.696 | 0.000 | 91 | 62064 | 20.0 | 18.8 | |
| 120 sec-Butylbenzene | 105 | 9.839 | 9.839 | 0.000 | 99 | 309281 | 20.0 | 19.8 | |
| 121 1,3-Dichlorobenzene | 146 | 10.097 | 10.097 | 0.000 | 97 | 137572 | 20.0 | 20.3 | |
| 122 4-Isopropyltoluene | 119 | 10.119 | 10.119 | 0.000 | 98 | 263373 | 20.0 | 20.0 | |
| * 123 1,4-Dichlorobenzene-d4 | 152 | 10.226 | 10.226 | 0.000 | 94 | 231809 | 50.0 | 50.0 | |
| 124 1,4-Dichlorobenzene | 146 | 10.248 | 10.247 | 0.001 | 96 | 142272 | 20.0 | 20.0 | |
| 125 1,2,3-Trimethylbenzene | 105 | 10.355 | 10.355 | 0.000 | 98 | 241789 | 20.0 | 19.5 | |
| 126 2,3-Dihydroindene | 117 | 10.527 | 10.527 | 0.000 | 94 | 237331 | 20.0 | 19.7 | |
| 127 Benzyl chloride | 126 | 10.713 | 10.706 | 0.007 | 98 | 15436 | 20.0 | 21.3 | |
| 128 p-Diethylbenzene | 119 | 10.727 | 10.727 | 0.000 | 94 | 129980 | 20.0 | 19.6 | |
| 129 n-Butylbenzene | 91 | 10.813 | 10.813 | 0.000 | 98 | 234804 | 20.0 | 19.6 | |
| 130 1,2-Dichlorobenzene | 146 | 10.914 | 10.921 | -0.007 | 98 | 125084 | 20.0 | 20.2 | |
| 131 1,2,4,5-Tetramethylbenzene | 119 | 11.924 | 11.924 | 0.000 | 98 | 226389 | 20.0 | 19.6 | |
| 132 1,2-Dibromo-3-Chloropropane | 157 | 12.074 | 12.074 | 0.000 | 92 | 8571 | 20.0 | 21.7 | |
| 133 1,3,5-Trichlorobenzene | 180 | 12.117 | 12.117 | 0.000 | 97 | 100944 | 20.0 | 20.5 | |
| 134 1,2,4-Trichlorobenzene | 180 | 12.819 | 12.819 | 0.000 | 94 | 80693 | 20.0 | 19.6 | |
| 135 Hexachlorobutadiene | 225 | 12.841 | 12.841 | 0.001 | 97 | 34875 | 20.0 | 19.2 | |
| 136 Naphthalene | 128 | 13.120 | 13.127 | -0.007 | 100 | 148997 | 20.0 | 19.6 | |
| 137 1,2,3-Trichlorobenzene | 180 | 13.299 | 13.299 | 0.000 | 95 | 64755 | 20.0 | 19.2 | |
| S 138 1,2-Dichloroethene, Total | 100 | | | | 0 | | 40.0 | 40.9 | |
| S 139 1,3-Dichloropropene, Total | 100 | | | | 0 | | 40.0 | 39.6 | |
| S 140 Xylenes, Total | 100 | | | | 0 | | 40.0 | 41.1 | |
| S 142 Total BTEX | 1 | | | | 0 | | 100.0 | 101.2 | |

## QC Flag Legend

Review Flags

a - User Assigned ID

## Reagents:

| | | | | |
|---|---|---|---|---|
| ACROLEIN W_00112 | Amount Added: | 4.00 | Units: uL | |
| 8260MIX1COMB_00125 | Amount Added: | 20.00 | Units: uL | |
| GASES Li_00385 | Amount Added: | 20.00 | Units: uL | |
| 8260ISNEW_00129 | Amount Added: | 1.00 | Units: uL | Run Reagent |
| 8260SURR250_00212 | Amount Added: | 1.00 | Units: uL | Run Reagent |

Report Date: 10-Sep-2020 11:14:44 Chrom Revision: 2.3 20-Aug-2020 13:57:12

Eurofins TestAmerica, Edison

Data File: \\chromfs\Edison\ChromData\CVOAMS13\20200909-116470.b\P79508.D

Injection Date: 09-Sep-2020 09:20:30 Instrument ID: CVOAMS13 Operator ID:

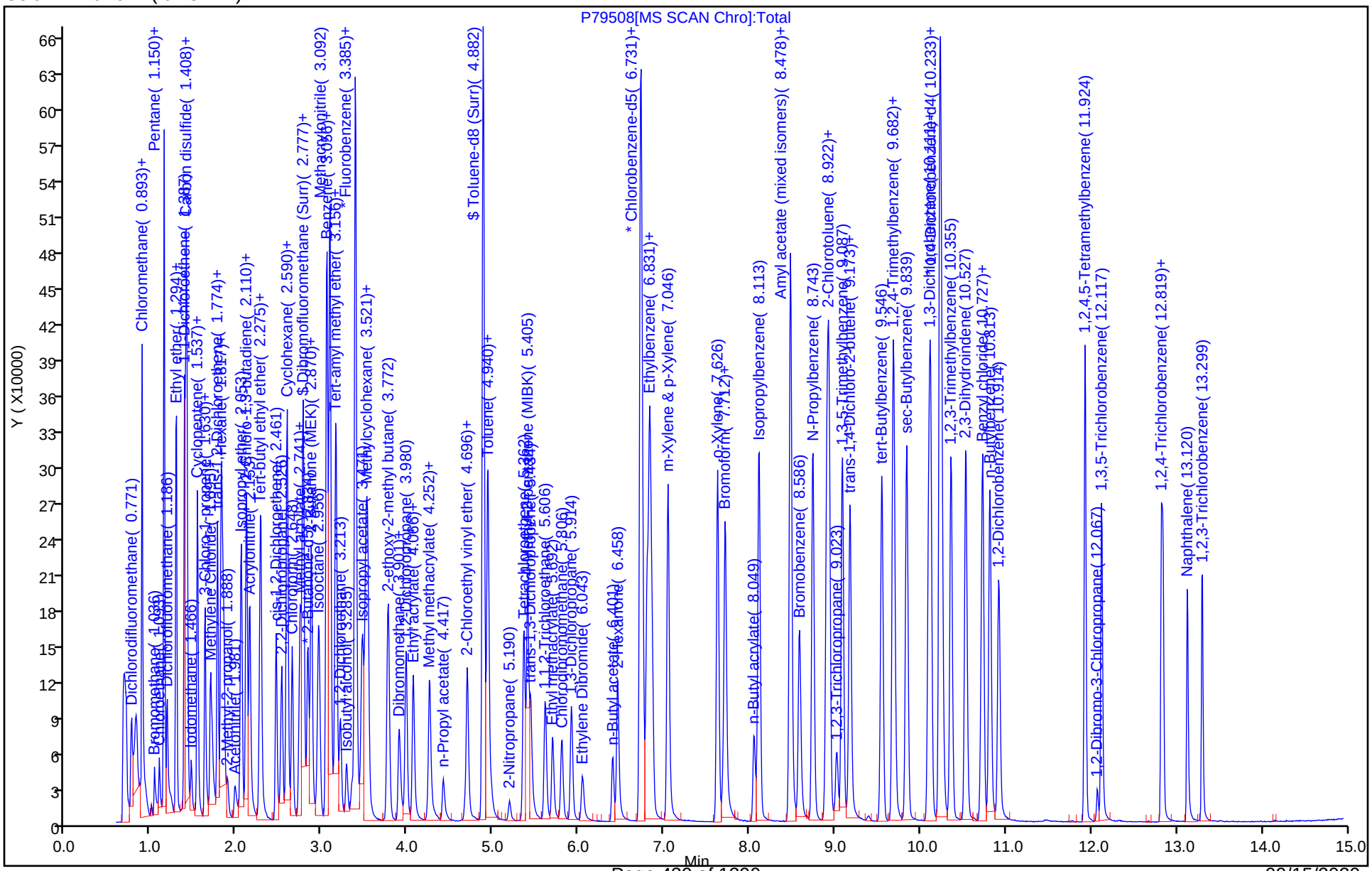
Lims ID: LCSD Worklist Smp#: 5

Client ID:

Purge Vol: 5.000 mL Dil. Factor: 1.0000 ALS Bottle#: 4

Method: 8260W_13 Limit Group: VOA - 8260C Water and Solid

Column: Rtx-624 ( 0.25 mm)



FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Edison  Job No.: 460-217547-1

SDG No.:

Client Sample ID:  Lab Sample ID: 460-217576-A-4 MS

Matrix: Water  Lab File ID: P79554.D

Analysis Method: 8260C  Date Collected:

Sample wt/vol: 5(mL)  Date Analyzed: 09/10/2020 03:28

Soil Aliquot Vol:  Dilution Factor: 1

Soil Extract Vol.:  GC Column: Rtx-624 ID: 0.25(mm)

% Moisture:  Level: (low/med) Low

Analysis Batch No.: 722834  Units: ug/L

| CAS NO. | COMPOUND NAME | RESULT | Q | RL | MDL |
|---|---|---|---|---|---|
| 71-55-6 | 1,1,1-Trichloroethane | 24.0 | | 1.0 | 0.24 |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 23.8 | | 1.0 | 0.37 |
| 76-13-1 | 1,1,2-Trichloro-1,2,2-trifluoroethane | 23.9 | | 1.0 | 0.31 |
| 79-00-5 | 1,1,2-Trichloroethane | 23.0 | | 1.0 | 0.43 |
| 75-34-3 | 1,1-Dichloroethane | 21.9 | | 1.0 | 0.26 |
| 75-35-4 | 1,1-Dichloroethene | 23.5 | | 1.0 | 0.26 |
| 87-61-6 | 1,2,3-Trichlorobenzene | 22.1 | | 1.0 | 0.36 |
| 120-82-1 | 1,2,4-Trichlorobenzene | 23.3 | | 1.0 | 0.37 |
| 78-87-5 | 1,2-Dichloropropane | 22.1 | | 1.0 | 0.35 |
| 541-73-1 | 1,3-Dichlorobenzene | 23.7 | | 1.0 | 0.34 |
| 106-46-7 | 1,4-Dichlorobenzene | 23.5 | | 1.0 | 0.33 |
| 123-91-1 | 1,4-Dioxane | 457 | | 50 | 28 |
| 78-93-3 | 2-Butanone (MEK) | 159 | | 5.0 | 1.9 |
| 591-78-6 | 2-Hexanone | 162 | | 5.0 | 1.1 |
| 108-10-1 | 4-Methyl-2-pentanone (MIBK) | 162 | | 5.0 | 1.3 |
| 67-64-1 | Acetone | 136 | | 5.0 | 4.4 |
| 71-43-2 | Benzene | 21.8 | | 1.0 | 0.20 |
| 75-25-2 | Bromoform | 25.4 | | 1.0 | 0.54 |
| 74-83-9 | Bromomethane | 26.6 | | 1.0 | 0.55 |
| 75-15-0 | Carbon disulfide | 21.9 | | 1.0 | 0.82 |
| 56-23-5 | Carbon tetrachloride | 25.9 | | 1.0 | 0.21 |
| 108-90-7 | Chlorobenzene | 23.6 | | 1.0 | 0.38 |
| 74-97-5 | Chlorobromomethane | 25.7 | | 1.0 | 0.41 |
| 124-48-1 | Chlorodibromomethane | 23.7 | | 1.0 | 0.28 |
| 75-00-3 | Chloroethane | 20.0 | | 1.0 | 0.32 |
| 67-66-3 | Chloroform | 23.3 | | 1.0 | 0.33 |
| 74-87-3 | Chloromethane | 17.6 | | 1.0 | 0.40 |
| 156-59-2 | cis-1,2-Dichloroethene | 28.8 | | 1.0 | 0.22 |
| 10061-01-5 | cis-1,3-Dichloropropene | 20.7 | | 1.0 | 0.22 |
| 110-82-7 | Cyclohexane | 21.2 | | 1.0 | 0.32 |
| 75-27-4 | Dichlorobromomethane | 23.8 | | 1.0 | 0.34 |
| 75-71-8 | Dichlorodifluoromethane | 17.7 | | 1.0 | 0.31 |
| 100-41-4 | Ethylbenzene | 23.6 | | 1.0 | 0.30 |
| 106-93-4 | Ethylene Dibromide | 24.5 | | 1.0 | 0.50 |
| 98-82-8 | Isopropylbenzene | 23.3 | | 1.0 | 0.34 |

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Edison  Job No.: 460-217547-1

SDG No.:

Client Sample ID:  Lab Sample ID: 460-217576-A-4 MS

Matrix: Water  Lab File ID: P79554.D

Analysis Method: 8260C  Date Collected:

Sample wt/vol: 5(mL)  Date Analyzed: 09/10/2020 03:28

Soil Aliquot Vol:  Dilution Factor: 1

Soil Extract Vol.:  GC Column: Rtx-624 ID: 0.25(mm)

% Moisture:  Level: (low/med) Low

Analysis Batch No.: 722834  Units: ug/L

| CAS NO. | COMPOUND NAME | RESULT | Q | RL | MDL |
|---|---|---|---|---|---|
| 79-20-9 | Methyl acetate | 43.5 | | 5.0 | 0.79 |
| 1634-04-4 | Methyl tert-butyl ether | 25.7 | | 1.0 | 0.47 |
| 108-87-2 | Methylcyclohexane | 23.2 | | 1.0 | 0.26 |
| 75-09-2 | Methylene Chloride | 23.9 | | 1.0 | 0.32 |
| 179601-23-1 | m-Xylene & p-Xylene | 24.4 | | 1.0 | 0.30 |
| 95-47-6 | o-Xylene | 23.0 | | 1.0 | 0.36 |
| 100-42-5 | Styrene | 23.9 | | 1.0 | 0.42 |
| 127-18-4 | Tetrachloroethene | 27.2 | | 1.0 | 0.25 |
| 108-88-3 | Toluene | 22.9 | | 1.0 | 0.38 |
| 156-60-5 | trans-1,2-Dichloroethene | 24.0 | | 1.0 | 0.24 |
| 10061-02-6 | trans-1,3-Dichloropropene | 21.3 | | 1.0 | 0.49 |
| 79-01-6 | Trichloroethene | 26.5 | | 1.0 | 0.31 |
| 75-69-4 | Trichlorofluoromethane | 23.1 | | 1.0 | 0.32 |
| 75-01-4 | Vinyl chloride | 19.7 | | 1.0 | 0.17 |
| 107-06-2 | 1,2-Dichloroethane | 22.6 | | 1.0 | 0.43 |
| 95-50-1 | 1,2-Dichlorobenzene | 23.6 | | 1.0 | 0.43 |
| 96-12-8 | 1,2-Dibromo-3-Chloropropane | 26.7 | | 1.0 | 0.38 |

| CAS NO. | SURROGATE | %REC | Q | LIMITS |
|---|---|---|---|---|
| 17060-07-0 | 1,2-Dichloroethane-d4 (Surr) | 103 | | 75-123 |
| 460-00-4 | 4-Bromofluorobenzene | 117 | | 76-120 |
| 1868-53-7 | Dibromofluoromethane (Surr) | 107 | | 77-124 |
| 2037-26-5 | Toluene-d8 (Surr) | 102 | | 80-120 |

Eurofins TestAmerica, Edison
Target Compound Quantitation Report

Data File: \\chromfs\Edison\ChromData\CVOAMS13\20200909-116494.b\P79554.D
Lims ID: 460-217576-A-4 MS
Client ID: DDC-07-PD
Sample Type: MS
Inject. Date: 10-Sep-2020 03:28:30 ALS Bottle#: 24 Worklist Smp#: 25
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: 460-217576-A-4 MS
Misc. Info.: 460-0116494-025
Operator ID: Instrument ID: CVOAMS13

Method: \\chromfs\Edison\ChromData\CVOAMS13\20200909-116494.b\8260W_13.m
Limit Group: VOA - 8260C Water and Solid
Last Update: 10-Sep-2020 14:25:29 Calib Date: 04-Sep-2020 16:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Edison\ChromData\CVOAMS13\20200904-116303.b\P79359.D

Column 1 : Rtx-624 ( 0.25 mm) Det: MS SCAN
Process Host: CTX1019

First Level Reviewer: baronm Date: 10-Sep-2020 14:23:41

| Compound | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q | Response | Cal Amt ug/l | OnCol Amt ug/l | Flags |
|---|---|---|---|---|---|---|---|---|---|
| 2 Chlorotrifluoroethene | 116 | 0.756 | 0.756 | 0.000 | 83 | 3925 | | 5.34 | |
| 3 Dichlorodifluoromethane | 85 | 0.771 | 0.764 | 0.007 | 99 | 55800 | 20.0 | 17.7 | |
| 4 1,1-Difluoroethane | 65 | 0.814 | 0.807 | 0.007 | 88 | 16753 | | 11.2 | |
| 5 Chlorodifluoromethane | 67 | 0.821 | 0.814 | 0.007 | 95 | 6786 | | 15.7 | a |
| 6 Chloromethane | 50 | 0.893 | 0.886 | 0.007 | 99 | 77627 | 20.0 | 17.6 | |
| 8 Butadiene | 54 | 0.893 | 0.886 | 0.007 | 92 | 53477 | 20.0 | 18.2 | |
| 7 Vinyl chloride | 62 | 0.893 | 0.893 | 0.000 | 75 | 63637 | 20.0 | 19.7 | |
| 9 Bromomethane | 94 | 1.036 | 1.036 | 0.000 | 98 | 25854 | 20.0 | 26.6 | |
| 10 Chloroethane | 64 | 1.093 | 1.093 | 0.000 | 98 | 34277 | 20.0 | 20.0 | |
| 11 Pentane | 72 | 1.150 | 1.143 | 0.007 | 95 | 16957 | 40.0 | 41.0 | |
| 12 Trichlorofluoromethane | 101 | 1.150 | 1.151 | -0.001 | 66 | 68106 | 20.0 | 23.1 | |
| 13 Dichlorofluoromethane | 67 | 1.186 | 1.186 | 0.000 | 98 | 80863 | 20.0 | 20.4 | |
| 14 2-Methyl-1,3-butadiene | 67 | 1.287 | 1.287 | 0.000 | 96 | 72435 | 20.0 | 21.4 | |
| 15 Ethyl ether | 59 | 1.294 | 1.294 | 0.000 | 94 | 33407 | 20.0 | 21.1 | |
| 18 1,2-Dichloro-1,1,2-trifluoroetha | 67 | 1.387 | 1.387 | 0.000 | 74 | 64894 | | 21.1 | |
| 17 1,1-Dichloroethene | 96 | 1.387 | 1.387 | 0.000 | 96 | 49436 | 20.0 | 23.5 | |
| 16 Ethanol | 46 | 1.401 | 1.401 | 0.000 | 25 | 7280 | 800.0 | 913.2 | |
| 19 Carbon disulfide | 76 | 1.408 | 1.401 | 0.007 | 99 | 180071 | 20.0 | 21.9 | |
| 20 1,1,2-Trichloro-1,2,2-trifluoroe | 101 | 1.408 | 1.408 | 0.000 | 86 | 49226 | 20.0 | 23.9 | |
| 21 1,1,1-Trifluoro-2,2-dichloroetha | 83 | 1.415 | 1.415 | 0.000 | 96 | 69365 | | 21.8 | a |
| 22 Iodomethane | 142 | 1.466 | 1.466 | 0.000 | 96 | 29565 | 20.0 | 8.87 | |
| 23 Cyclopentene | 67 | 1.537 | 1.537 | 0.000 | 96 | 132540 | 20.0 | 22.7 | |
| 24 Acrolein | 56 | 1.559 | 1.559 | 0.000 | 95 | 8117 | 40.0 | 43.5 | |
| 25 3-Chloro-1-propene | 76 | 1.630 | 1.623 | 0.007 | 94 | 29143 | 20.0 | 21.7 | |
| 26 Isopropyl alcohol | 45 | 1.652 | 1.645 | 0.007 | 97 | 19644 | 200.0 | 253.3 | |
| 27 Methylene Chloride | 84 | 1.695 | 1.688 | 0.007 | 90 | 60540 | 20.0 | 23.9 | |
| 28 Acetone | 43 | 1.709 | 1.709 | 0.000 | 88 | 41733 | 100.0 | 135.6 | |
| 29 trans-1,2-Dichloroethene | 96 | 1.774 | 1.774 | 0.000 | 92 | 57870 | 20.0 | 24.0 | |
| 30 Methyl acetate | 43 | 1.781 | 1.781 | 0.000 | 99 | 40721 | 40.0 | 43.5 | |
| 31 Hexane | 86 | 1.817 | 1.817 | 0.000 | 90 | 14757 | 20.0 | 25.4 | |
| 32 Methyl tert-butyl ether | 73 | 1.831 | 1.831 | 0.000 | 90 | 126753 | 20.0 | 25.7 | |

| Compound | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q | Response | Cal Amt ug/l | OnCol Amt ug/l | Flags |
|---|---|---|---|---|---|---|---|---|---|
| * 33 TBA-d9 (IS) | 65 | 1.852 | 1.845 | 0.007 | 99 | 96087 | 1000.0 | 1000.0 | |
| 34 2-Methyl-2-propanol | 59 | 1.888 | 1.888 | 0.000 | 99 | 25883 | 200.0 | 246.1 | |
| 35 Acetonitrile | 41 | 1.981 | 1.981 | 0.000 | 98 | 33694 | 200.0 | 175.4 | |
| 36 Isopropyl ether | 45 | 2.053 | 2.046 | 0.007 | 97 | 170588 | 20.0 | 22.1 | |
| 37 2-Chloro-1,3-butadiene | 88 | 2.103 | 2.103 | 0.000 | 90 | 52265 | 20.0 | 23.7 | |
| 38 1,1-Dichloroethane | 63 | 2.117 | 2.118 | -0.001 | 100 | 97716 | 20.0 | 21.9 | |
| 39 Acrylonitrile | 53 | 2.153 | 2.146 | 0.007 | 93 | 135985 | 200.0 | 234.7 | |
| 40 Tert-butyl ethyl ether | 59 | 2.275 | 2.268 | 0.007 | 90 | 146197 | 20.0 | 23.0 | |
| 41 Vinyl acetate | 43 | 2.282 | 2.282 | 0.000 | 100 | 119214 | 40.0 | 34.7 | |
| 42 cis-1,2-Dichloroethene | 96 | 2.461 | 2.461 | 0.000 | 99 | 76656 | 20.0 | 28.8 | |
| 43 2,2-Dichloropropane | 77 | 2.526 | 2.526 | 0.000 | 98 | 54308 | 20.0 | 17.9 | |
| 44 Cyclohexane | 56 | 2.583 | 2.583 | 0.000 | 88 | 95024 | 20.0 | 21.2 | |
| 45 Chlorobromomethane | 128 | 2.590 | 2.590 | 0.000 | 82 | 29913 | 20.0 | 25.7 | |
| 46 Chloroform | 83 | 2.648 | 2.648 | 0.000 | 100 | 93454 | 20.0 | 23.3 | |
| 47 Carbon tetrachloride | 117 | 2.733 | 2.734 | -0.001 | 98 | 61150 | 20.0 | 25.9 | |
| 48 Ethyl acetate | 70 | 2.741 | 2.741 | 0.000 | 97 | 7639 | 40.0 | 62.1 | |
| 49 Methyl acrylate | 55 | 2.748 | 2.748 | 0.000 | 90 | 27414 | 20.0 | 21.7 | |
| 50 Tetrahydrofuran | 42 | 2.755 | 2.755 | 0.000 | 97 | 26494 | 40.0 | 61.7 | |
| $ 51 Dibromofluoromethane (Surr) | 113 | 2.769 | 2.769 | 0.000 | 98 | 107927 | 50.0 | 53.6 | |
| 52 1,1,1-Trichloroethane | 97 | 2.776 | 2.777 | -0.001 | 98 | 77392 | 20.0 | 24.0 | |
| * 53 2-Butanone-d5 | 46 | 2.834 | 2.827 | 0.007 | 98 | 94971 | 250.0 | 250.0 | |
| 54 2-Butanone (MEK) | 72 | 2.870 | 2.863 | 0.008 | 99 | 22111 | 100.0 | 159.3 | |
| 55 1,1-Dichloropropene | 75 | 2.870 | 2.870 | 0.000 | 96 | 81267 | 20.0 | 23.3 | |
| 56 Isooctane | 57 | 2.956 | 2.956 | 0.000 | 99 | 151393 | 20.0 | 21.4 | |
| 57 n-Heptane | 57 | 3.049 | 3.049 | 0.000 | 93 | 35804 | 20.0 | 20.6 | |
| 58 Benzene | 78 | 3.056 | 3.049 | 0.007 | 95 | 239247 | 20.0 | 21.8 | |
| 59 Propionitrile | 54 | 3.070 | 3.070 | 0.000 | 92 | 45993 | 200.0 | 225.6 | |
| 60 Methacrylonitrile | 67 | 3.092 | 3.092 | 0.000 | 90 | 159549 | 200.0 | 248.4 | |
| $ 61 1,2-Dichloroethane-d4 (Surr) | 65 | 3.156 | 3.156 | 0.000 | 0 | 104220 | 50.0 | 51.5 | |
| 62 Tert-amyl methyl ether | 73 | 3.163 | 3.163 | 0.000 | 99 | 129324 | 20.0 | 24.5 | |
| 63 1,2-Dichloroethane | 62 | 3.213 | 3.213 | 0.000 | 97 | 59213 | 20.0 | 22.6 | |
| 64 Isobutyl alcohol | 43 | 3.285 | 3.285 | 0.000 | 96 | 26972 | 500.0 | 525.0 | |
| 65 t-Amyl alcohol | 59 | 3.350 | 3.350 | 0.000 | 94 | 19978 | 200.0 | 239.6 | |
| * 66 Fluorobenzene | 96 | 3.385 | 3.385 | 0.000 | 99 | 467866 | 50.0 | 50.0 | |
| 67 Isopropyl acetate | 43 | 3.457 | 3.457 | 0.000 | 98 | 61801 | 20.0 | 20.8 | |
| 68 Methylcyclohexane | 83 | 3.514 | 3.507 | 0.007 | 95 | 95671 | 20.0 | 23.2 | |
| 69 Trichloroethene | 130 | 3.536 | 3.536 | 0.000 | 97 | 66970 | 20.0 | 26.5 | |
| 70 2-ethoxy-2-methyl butane | 59 | 3.772 | 3.765 | 0.007 | 95 | 114990 | 20.0 | 22.1 | |
| 71 Dibromomethane | 93 | 3.894 | 3.894 | 0.000 | 93 | 27263 | 20.0 | 24.2 | |
| 72 n-Butanol | 56 | 3.908 | 3.915 | -0.007 | 90 | 15369 | 500.0 | 484.2 | |
| 73 1,2-Dichloropropane | 63 | 3.980 | 3.980 | 0.000 | 92 | 55811 | 20.0 | 22.1 | |
| 75 Dichlorobromomethane | 83 | 4.066 | 4.066 | 0.000 | 99 | 66109 | 20.0 | 23.8 | |
| 74 Ethyl acrylate | 55 | 4.066 | 4.066 | 0.000 | 59 | 41048 | 20.0 | 24.1 | |
| * 76 1,4-Dioxane-d8 | 96 | 4.238 | 4.238 | 0.000 | 90 | 14294 | 1000.0 | 1000.0 | |
| 77 Methyl methacrylate | 100 | 4.259 | 4.252 | 0.007 | 88 | 20378 | 40.0 | 54.1 | |
| 78 1,4-Dioxane | 88 | 4.259 | 4.259 | 0.000 | 34 | 7541 | 400.0 | 457.4 | |
| 79 n-Propyl acetate | 43 | 4.417 | 4.417 | 0.000 | 98 | 38972 | 20.0 | 20.5 | |
| 81 cis-1,3-Dichloropropene | 75 | 4.696 | 4.696 | 0.000 | 91 | 74482 | 20.0 | 20.7 | |
| $ 82 Toluene-d8 (Surr) | 98 | 4.882 | 4.882 | 0.000 | 99 | 463110 | 50.0 | 51.1 | |
| 83 Toluene | 91 | 4.940 | 4.933 | 0.007 | 93 | 255316 | 20.0 | 22.9 | |
| 84 Epichlorohydrin | 57 | 4.990 | 4.983 | 0.007 | 93 | 8575 | 400.0 | 259.2 | |
| 85 2-Nitropropane | 41 | 5.190 | 5.190 | 0.000 | 98 | 11412 | 40.0 | 45.5 | |

| Compound | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q | Response | Cal Amt ug/l | OnCol Amt ug/l | Flags |
|---|---|---|---|---|---|---|---|---|---|
| 86 Tetrachloroethene | 166 | 5.362 | 5.362 | 0.000 | 96 | 71425 | 20.0 | 27.2 | |
| 87 4-Methyl-2-pentanone (MIBK) | 43 | 5.405 | 5.398 | 0.007 | 94 | 159049 | 100.0 | 161.9 | |
| 88 trans-1,3-Dichloropropene | 75 | 5.441 | 5.441 | 0.000 | 93 | 60763 | 20.0 | 21.3 | |
| 89 1,1,2-Trichloroethane | 83 | 5.613 | 5.606 | 0.007 | 96 | 34932 | 20.0 | 23.0 | |
| 90 Ethyl methacrylate | 69 | 5.692 | 5.692 | 0.000 | 88 | 50294 | 20.0 | 25.3 | |
| 91 Chlorodibromomethane | 129 | 5.799 | 5.807 | -0.007 | 98 | 46433 | 20.0 | 23.7 | |
| 92 1,3-Dichloropropane | 76 | 5.914 | 5.914 | 0.000 | 93 | 71565 | 20.0 | 22.6 | |
| 93 Ethylene Dibromide | 107 | 6.043 | 6.043 | 0.000 | 99 | 39986 | 20.0 | 24.5 | |
| 94 n-Butyl acetate | 43 | 6.401 | 6.401 | 0.000 | 98 | 39915 | 20.0 | 18.7 | |
| 95 2-Hexanone | 43 | 6.458 | 6.458 | 0.000 | 94 | 107080 | 100.0 | 162.4 | |
| * 96 Chlorobenzene-d5 | 117 | 6.723 | 6.723 | 0.000 | 85 | 351265 | 50.0 | 50.0 | |
| 97 Chlorobenzene | 112 | 6.745 | 6.745 | 0.000 | 96 | 164538 | 20.0 | 23.6 | |
| 98 Ethylbenzene | 106 | 6.831 | 6.831 | 0.000 | 98 | 92425 | 20.0 | 23.6 | |
| 99 1,1,1,2-Tetrachloroethane | 131 | 6.859 | 6.852 | 0.007 | 96 | 51796 | 20.0 | 24.0 | |
| 100 m-Xylene & p-Xylene | 106 | 7.046 | 7.046 | 0.000 | 0 | 112031 | 20.0 | 24.4 | |
| 101 o-Xylene | 106 | 7.626 | 7.626 | 0.000 | 95 | 106549 | 20.0 | 23.0 | |
| 102 Bromoform | 173 | 7.697 | 7.698 | -0.001 | 96 | 28138 | 20.0 | 25.4 | |
| 103 Styrene | 104 | 7.719 | 7.712 | 0.007 | 97 | 177664 | 20.0 | 23.9 | |
| 104 n-Butyl acrylate | 73 | 8.056 | 8.056 | 0.000 | 98 | 28922 | 20.0 | 23.2 | |
| 105 Isopropylbenzene | 105 | 8.113 | 8.113 | 0.000 | 95 | 279988 | 20.0 | 23.3 | |
| 106 Amyl acetate (mixed isomers) | 43 | 8.464 | 8.464 | 0.000 | 91 | 56959 | 20.0 | 19.8 | |
| $ 107 4-Bromofluorobenzene | 174 | 8.478 | 8.478 | 0.000 | 96 | 166009 | 50.0 | 58.4 | |
| 108 Bromobenzene | 156 | 8.586 | 8.586 | 0.000 | 94 | 72932 | 20.0 | 24.8 | |
| 109 N-Propylbenzene | 91 | 8.743 | 8.743 | 0.000 | 100 | 328710 | 20.0 | 22.3 | |
| 110 1,1,2,2-Tetrachloroethane | 83 | 8.894 | 8.894 | 0.000 | 96 | 48486 | 20.0 | 23.8 | |
| 111 2-Chlorotoluene | 91 | 8.908 | 8.908 | 0.000 | 97 | 217809 | 20.0 | 21.5 | |
| 112 4-Ethyltoluene | 105 | 8.930 | 8.930 | 0.000 | 98 | 275190 | 20.0 | 22.5 | |
| 113 1,2,3-Trichloropropane | 110 | 9.023 | 9.023 | 0.000 | 97 | 13810 | 20.0 | 25.6 | |
| 114 1,3,5-Trimethylbenzene | 105 | 9.087 | 9.087 | 0.000 | 94 | 229133 | 20.0 | 22.4 | |
| 115 trans-1,4-Dichloro-2-butene | 53 | 9.159 | 9.159 | 0.000 | 39 | 10375 | 20.0 | 26.6 | a |
| 116 4-Chlorotoluene | 91 | 9.173 | 9.173 | 0.000 | 97 | 199133 | 20.0 | 22.3 | |
| 117 tert-Butylbenzene | 119 | 9.546 | 9.546 | 0.000 | 96 | 202270 | 20.0 | 22.9 | |
| 118 1,2,4-Trimethylbenzene | 105 | 9.682 | 9.682 | 0.000 | 97 | 236286 | 20.0 | 22.4 | |
| 119 Butyl Methacrylate | 87 | 9.696 | 9.696 | 0.000 | 91 | 62469 | 20.0 | 22.0 | |
| 120 sec-Butylbenzene | 105 | 9.839 | 9.839 | 0.000 | 99 | 301813 | 20.0 | 22.5 | |
| 121 1,3-Dichlorobenzene | 146 | 10.097 | 10.097 | 0.000 | 98 | 137824 | 20.0 | 23.7 | |
| 122 4-Isopropyltoluene | 119 | 10.119 | 10.119 | 0.000 | 98 | 259196 | 20.0 | 22.9 | |
| * 123 1,4-Dichlorobenzene-d4 | 152 | 10.226 | 10.226 | 0.000 | 93 | 199106 | 50.0 | 50.0 | |
| 124 1,4-Dichlorobenzene | 146 | 10.248 | 10.248 | 0.000 | 97 | 143634 | 20.0 | 23.5 | |
| 125 1,2,3-Trimethylbenzene | 105 | 10.355 | 10.355 | 0.000 | 98 | 239285 | 20.0 | 22.4 | |
| 126 2,3-Dihydroindene | 117 | 10.527 | 10.527 | 0.000 | 94 | 237285 | 20.0 | 22.9 | |
| 127 Benzyl chloride | 126 | 10.713 | 10.713 | 0.000 | 97 | 12397 | 20.0 | 20.0 | |
| 128 p-Diethylbenzene | 119 | 10.727 | 10.728 | -0.001 | 94 | 127204 | 20.0 | 22.3 | |
| 129 n-Butylbenzene | 91 | 10.813 | 10.813 | 0.000 | 98 | 219643 | 20.0 | 21.3 | |
| 130 1,2-Dichlorobenzene | 146 | 10.914 | 10.914 | 0.000 | 98 | 125698 | 20.0 | 23.6 | |
| 131 1,2,4,5-Tetramethylbenzene | 119 | 11.924 | 11.924 | 0.000 | 98 | 223975 | 20.0 | 22.6 | |
| 132 1,2-Dibromo-3-Chloropropane | 157 | 12.074 | 12.074 | 0.000 | 89 | 9073 | 20.0 | 26.7 | |
| 133 1,3,5-Trichlorobenzene | 180 | 12.117 | 12.117 | 0.000 | 97 | 99639 | 20.0 | 23.6 | |
| 134 1,2,4-Trichlorobenzene | 180 | 12.819 | 12.819 | 0.000 | 94 | 82647 | 20.0 | 23.3 | |
| 135 Hexachlorobutadiene | 225 | 12.841 | 12.841 | 0.000 | 97 | 32550 | 20.0 | 20.8 | |
| 136 Naphthalene | 128 | 13.127 | 13.127 | 0.000 | 100 | 139740 | 20.0 | 21.4 | |
| 137 1,2,3-Trichlorobenzene | 180 | 13.299 | 13.299 | 0.000 | 96 | 63999 | 20.0 | 22.1 | |

| Compound | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q | Response | Cal Amt ug/l | OnCol Amt ug/l | Flags |
|---|---|---|---|---|---|---|---|---|---|
| S 138 1,2-Dichloroethene, Total | 100 | | | | 0 | | 40.0 | 52.8 | |
| S 139 1,3-Dichloropropene, Total | 100 | | | | 0 | | 40.0 | 42.0 | |
| S 140 Xylenes, Total | 100 | | | | 0 | | 40.0 | 47.4 | |
| S 142 Total BTEX | 1 | | | | 0 | | 100.0 | 115.7 | |

## QC Flag Legend

Review Flags

a - User Assigned ID

## Reagents:

| | | | | |
|---|---|---|---|---|
| ACROLEIN W_00112 | Amount Added: | 4.00 | Units: uL | |
| 8260MIX1COMB_00125 | Amount Added: | 20.00 | Units: uL | |
| GASES Li_00385 | Amount Added: | 20.00 | Units: uL | |
| 8260ISNEW_00129 | Amount Added: | 1.00 | Units: uL | Run Reagent |
| 8260SURR250_00212 | Amount Added: | 1.00 | Units: uL | Run Reagent |

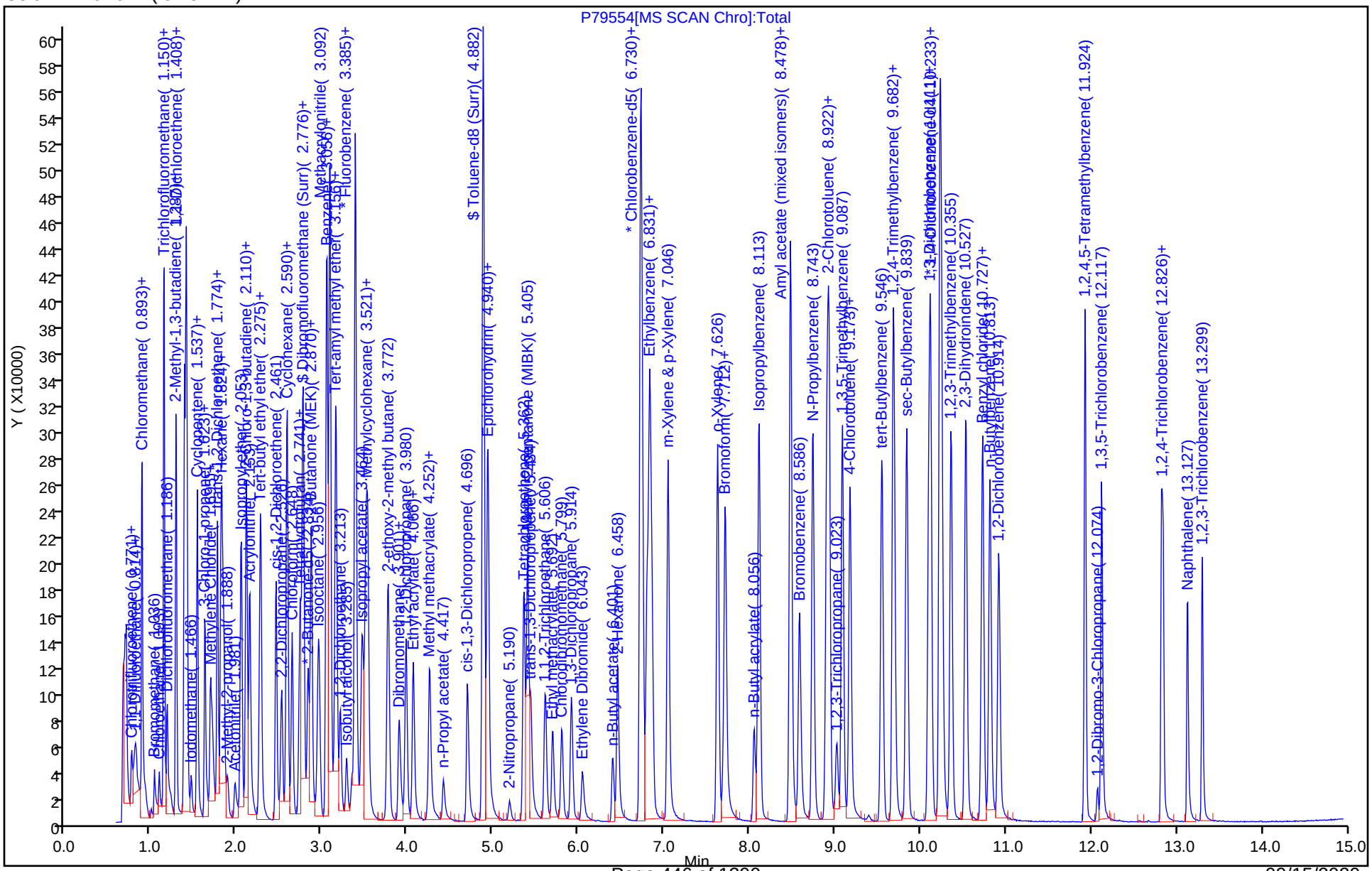
Report Date: 10-Sep-2020 14:26:32 Chrom Revision: 2.3 20-Aug-2020 13:57:12

Eurofins TestAmerica, Edison

Data File: \\chromfs\Edison\ChromData\CVOAMS13\20200909-116494.b\P79554.D

| | | | | | |
|---|---|---|---|---|---|
| Injection Date: | 10-Sep-2020 03:28:30 | Instrument ID: | CVOAMS13 | Operator ID: | |
| Lims ID: | 460-217576-A-4 MS | | | Worklist Smp#: | 25 |
| Client ID: | DDC-07-PD | | | | |
| Purge Vol: | 5.000 mL | Dil. Factor: | 1.0000 | ALS Bottle#: | 24 |
| Method: | 8260W_13 | Limit Group: | VOA - 8260C Water and Solid | | |

Column: Rtx-624 ( 0.25 mm)



FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Edison  Job No.: 460-217547-1

SDG No.:

Client Sample ID:  Lab Sample ID: 460-217576-A-4 MSD

Matrix: Water  Lab File ID: P79555.D

Analysis Method: 8260C  Date Collected:

Sample wt/vol: 5(mL)  Date Analyzed: 09/10/2020 03:52

Soil Aliquot Vol:  Dilution Factor: 1

Soil Extract Vol.:  GC Column: Rtx-624 ID: 0.25(mm)

% Moisture:  Level: (low/med) Low

Analysis Batch No.: 722834  Units: ug/L

| CAS NO. | COMPOUND NAME | RESULT | Q | RL | MDL |
|---|---|---|---|---|---|
| 71-55-6 | 1,1,1-Trichloroethane | 19.8 | | 1.0 | 0.24 |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 19.2 | | 1.0 | 0.37 |
| 76-13-1 | 1,1,2-Trichloro-1,2,2-trifluoroethane | 19.5 | | 1.0 | 0.31 |
| 79-00-5 | 1,1,2-Trichloroethane | 19.0 | | 1.0 | 0.43 |
| 75-34-3 | 1,1-Dichloroethane | 17.9 | | 1.0 | 0.26 |
| 75-35-4 | 1,1-Dichloroethene | 19.4 | | 1.0 | 0.26 |
| 87-61-6 | 1,2,3-Trichlorobenzene | 19.8 | | 1.0 | 0.36 |
| 120-82-1 | 1,2,4-Trichlorobenzene | 19.3 | | 1.0 | 0.37 |
| 78-87-5 | 1,2-Dichloropropane | 17.8 | | 1.0 | 0.35 |
| 541-73-1 | 1,3-Dichlorobenzene | 19.6 | | 1.0 | 0.34 |
| 106-46-7 | 1,4-Dichlorobenzene | 19.3 | | 1.0 | 0.33 |
| 123-91-1 | 1,4-Dioxane | 405 | | 50 | 28 |
| 78-93-3 | 2-Butanone (MEK) | 125 | | 5.0 | 1.9 |
| 591-78-6 | 2-Hexanone | 124 | | 5.0 | 1.1 |
| 108-10-1 | 4-Methyl-2-pentanone (MIBK) | 124 | | 5.0 | 1.3 |
| 67-64-1 | Acetone | 108 | | 5.0 | 4.4 |
| 71-43-2 | Benzene | 17.9 | | 1.0 | 0.20 |
| 75-25-2 | Bromoform | 20.7 | | 1.0 | 0.54 |
| 74-83-9 | Bromomethane | 22.2 | | 1.0 | 0.55 |
| 75-15-0 | Carbon disulfide | 18.1 | | 1.0 | 0.82 |
| 56-23-5 | Carbon tetrachloride | 21.3 | | 1.0 | 0.21 |
| 108-90-7 | Chlorobenzene | 19.3 | | 1.0 | 0.38 |
| 74-97-5 | Chlorobromomethane | 20.3 | | 1.0 | 0.41 |
| 124-48-1 | Chlorodibromomethane | 19.1 | | 1.0 | 0.28 |
| 75-00-3 | Chloroethane | 17.5 | | 1.0 | 0.32 |
| 67-66-3 | Chloroform | 19.1 | | 1.0 | 0.33 |
| 74-87-3 | Chloromethane | 15.5 | | 1.0 | 0.40 |
| 156-59-2 | cis-1,2-Dichloroethene | 23.1 | | 1.0 | 0.22 |
| 10061-01-5 | cis-1,3-Dichloropropene | 16.8 | | 1.0 | 0.22 |
| 110-82-7 | Cyclohexane | 17.2 | | 1.0 | 0.32 |
| 75-27-4 | Dichlorobromomethane | 19.4 | | 1.0 | 0.34 |
| 75-71-8 | Dichlorodifluoromethane | 15.9 | | 1.0 | 0.31 |
| 100-41-4 | Ethylbenzene | 19.2 | | 1.0 | 0.30 |
| 106-93-4 | Ethylene Dibromide | 20.0 | | 1.0 | 0.50 |
| 98-82-8 | Isopropylbenzene | 19.4 | | 1.0 | 0.34 |

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Edison  Job No.: 460-217547-1

SDG No.:

Client Sample ID:  Lab Sample ID: 460-217576-A-4 MSD

Matrix: Water  Lab File ID: P79555.D

Analysis Method: 8260C  Date Collected:

Sample wt/vol: 5(mL)  Date Analyzed: 09/10/2020 03:52

Soil Aliquot Vol:  Dilution Factor: 1

Soil Extract Vol.:  GC Column: Rtx-624 ID: 0.25(mm)

% Moisture:  Level: (low/med) Low

Analysis Batch No.: 722834  Units: ug/L

| CAS NO. | COMPOUND NAME | RESULT | Q | RL | MDL |
|---|---|---|---|---|---|
| 79-20-9 | Methyl acetate | 32.9 | | 5.0 | 0.79 |
| 1634-04-4 | Methyl tert-butyl ether | 20.8 | | 1.0 | 0.47 |
| 108-87-2 | Methylcyclohexane | 19.1 | | 1.0 | 0.26 |
| 75-09-2 | Methylene Chloride | 19.4 | | 1.0 | 0.32 |
| 179601-23-1 | m-Xylene & p-Xylene | 19.6 | | 1.0 | 0.30 |
| 95-47-6 | o-Xylene | 19.1 | | 1.0 | 0.36 |
| 100-42-5 | Styrene | 19.6 | | 1.0 | 0.42 |
| 127-18-4 | Tetrachloroethene | 23.0 | | 1.0 | 0.25 |
| 108-88-3 | Toluene | 19.0 | | 1.0 | 0.38 |
| 156-60-5 | trans-1,2-Dichloroethene | 19.7 | | 1.0 | 0.24 |
| 10061-02-6 | trans-1,3-Dichloropropene | 18.3 | | 1.0 | 0.49 |
| 79-01-6 | Trichloroethene | 21.6 | | 1.0 | 0.31 |
| 75-69-4 | Trichlorofluoromethane | 20.0 | | 1.0 | 0.32 |
| 75-01-4 | Vinyl chloride | 16.7 | | 1.0 | 0.17 |
| 107-06-2 | 1,2-Dichloroethane | 18.0 | | 1.0 | 0.43 |
| 95-50-1 | 1,2-Dichlorobenzene | 19.5 | | 1.0 | 0.43 |
| 96-12-8 | 1,2-Dibromo-3-Chloropropane | 21.0 | | 1.0 | 0.38 |

| CAS NO. | SURROGATE | %REC | Q | LIMITS |
|---|---|---|---|---|
| 17060-07-0 | 1,2-Dichloroethane-d4 (Surr) | 98 | | 75-123 |
| 460-00-4 | 4-Bromofluorobenzene | 108 | | 76-120 |
| 1868-53-7 | Dibromofluoromethane (Surr) | 100 | | 77-124 |
| 2037-26-5 | Toluene-d8 (Surr) | 95 | | 80-120 |

Eurofins TestAmerica, Edison
Target Compound Quantitation Report

Data File: \\chromfs\Edison\ChromData\CVOAMS13\20200909-116494.b\P79555.D
Lims ID: 460-217576-A-4 MSD
Client ID: DDC-07-PD
Sample Type: MSD
Inject. Date: 10-Sep-2020 03:52:30 ALS Bottle#: 25 Worklist Smp#: 26
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: 460-217576-A-4 MSD
Misc. Info.: 460-0116494-026
Operator ID: Instrument ID: CVOAMS13

Method: \\chromfs\Edison\ChromData\CVOAMS13\20200909-116494.b\8260W_13.m
Limit Group: VOA - 8260C Water and Solid
Last Update: 10-Sep-2020 15:03:38 Calib Date: 04-Sep-2020 16:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Edison\ChromData\CVOAMS13\20200904-116303.b\P79359.D

Column 1 : Rtx-624 ( 0.25 mm) Det: MS SCAN
Process Host: CTX1019

First Level Reviewer: sgroa Date: 10-Sep-2020 08:18:56

| Compound | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q | Response | Cal Amt ug/l | OnCol Amt ug/l | Flags |
|---|---|---|---|---|---|---|---|---|---|
| 2 Chlorotrifluoroethene | 116 | 0.756 | 0.756 | 0.000 | 84 | 4040 | | 5.11 | |
| 3 Dichlorodifluoromethane | 85 | 0.771 | 0.764 | 0.007 | 99 | 53864 | 20.0 | 15.9 | |
| 4 1,1-Difluoroethane | 65 | 0.814 | 0.807 | 0.007 | 88 | 16442 | | 10.2 | |
| 5 Chlorodifluoromethane | 67 | 0.828 | 0.814 | 0.014 | 95 | 6325 | | 13.6 | a |
| 6 Chloromethane | 50 | 0.893 | 0.886 | 0.007 | 69 | 73444 | 20.0 | 15.5 | |
| 8 Butadiene | 54 | 0.893 | 0.886 | 0.007 | 91 | 50833 | 20.0 | 16.1 | |
| 7 Vinyl chloride | 62 | 0.893 | 0.893 | 0.000 | 96 | 58139 | 20.0 | 16.7 | |
| 9 Bromomethane | 94 | 1.036 | 1.036 | 0.000 | 97 | 24306 | 20.0 | 22.2 | |
| 10 Chloroethane | 64 | 1.093 | 1.093 | 0.000 | 99 | 32229 | 20.0 | 17.5 | M |
| 11 Pentane | 72 | 1.150 | 1.143 | 0.007 | 96 | 14940 | 40.0 | 32.3 | |
| 12 Trichlorofluoromethane | 101 | 1.150 | 1.151 | -0.001 | 67 | 63379 | 20.0 | 20.0 | |
| 13 Dichlorofluoromethane | 67 | 1.186 | 1.186 | 0.000 | 98 | 74118 | 20.0 | 17.4 | |
| 14 2-Methyl-1,3-butadiene | 67 | 1.287 | 1.287 | 0.000 | 96 | 63048 | 20.0 | 17.3 | |
| 15 Ethyl ether | 59 | 1.294 | 1.294 | 0.000 | 94 | 29998 | 20.0 | 17.6 | |
| 18 1,2-Dichloro-1,1,2-trifluoroetha | 67 | 1.387 | 1.387 | 0.000 | 78 | 62306 | | 18.8 | |
| 17 1,1-Dichloroethene | 96 | 1.387 | 1.387 | 0.000 | 96 | 43975 | 20.0 | 19.4 | |
| 16 Ethanol | 46 | 1.401 | 1.401 | 0.000 | 24 | 7141 | 800.0 | 800.3 | a |
| 19 Carbon disulfide | 76 | 1.408 | 1.401 | 0.007 | 99 | 160424 | 20.0 | 18.1 | |
| 20 1,1,2-Trichloro-1,2,2-trifluoroe | 101 | 1.408 | 1.408 | 0.000 | 93 | 43344 | 20.0 | 19.5 | |
| 21 1,1,1-Trifluoro-2,2-dichloroetha | 83 | 1.415 | 1.415 | 0.000 | 94 | 67796 | | 19.7 | a |
| 22 Iodomethane | 142 | 1.466 | 1.466 | 0.000 | 97 | 32854 | 20.0 | 9.15 | |
| 23 Cyclopentene | 67 | 1.537 | 1.537 | 0.000 | 95 | 118367 | 20.0 | 18.8 | |
| 24 Acrolein | 56 | 1.559 | 1.559 | 0.000 | 93 | 5628 | 40.0 | 26.9 | |
| 25 3-Chloro-1-propene | 76 | 1.630 | 1.623 | 0.007 | 93 | 26506 | 20.0 | 18.3 | |
| 26 Isopropyl alcohol | 45 | 1.652 | 1.645 | 0.007 | 99 | 18568 | 200.0 | 213.9 | |
| 27 Methylene Chloride | 84 | 1.695 | 1.688 | 0.007 | 89 | 53110 | 20.0 | 19.4 | |
| 28 Acetone | 43 | 1.709 | 1.709 | 0.000 | 88 | 37501 | 100.0 | 108.1 | |
| 29 trans-1,2-Dichloroethene | 96 | 1.774 | 1.774 | 0.000 | 93 | 51115 | 20.0 | 19.7 | |
| 30 Methyl acetate | 43 | 1.781 | 1.781 | 0.000 | 97 | 34489 | 40.0 | 32.9 | |
| 31 Hexane | 86 | 1.817 | 1.817 | 0.000 | 88 | 12435 | 20.0 | 19.9 | |
| 32 Methyl tert-butyl ether | 73 | 1.831 | 1.831 | 0.000 | 98 | 110408 | 20.0 | 20.8 | |

| Compound | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q | Response | Cal Amt ug/l | OnCol Amt ug/l | Flags |
|---|---|---|---|---|---|---|---|---|---|
| * 33 TBA-d9 (IS) | 65 | 1.852 | 1.845 | 0.007 | 100 | 107546 | 1000.0 | 1000.0 | |
| 34 2-Methyl-2-propanol | 59 | 1.895 | 1.888 | 0.007 | 99 | 24431 | 200.0 | 207.6 | |
| 35 Acetonitrile | 41 | 1.981 | 1.981 | 0.000 | 100 | 32550 | 200.0 | 151.4 | |
| 36 Isopropyl ether | 45 | 2.053 | 2.046 | 0.007 | 97 | 148866 | 20.0 | 17.9 | |
| 37 2-Chloro-1,3-butadiene | 88 | 2.110 | 2.103 | 0.007 | 88 | 45716 | 20.0 | 19.2 | |
| 38 1,1-Dichloroethane | 63 | 2.117 | 2.118 | -0.001 | 99 | 86204 | 20.0 | 17.9 | |
| 39 Acrylonitrile | 53 | 2.153 | 2.146 | 0.007 | 95 | 117332 | 200.0 | 188.1 | |
| 40 Tert-butyl ethyl ether | 59 | 2.275 | 2.268 | 0.007 | 89 | 128518 | 20.0 | 18.8 | |
| 41 Vinyl acetate | 43 | 2.282 | 2.282 | 0.000 | 100 | 109507 | 40.0 | 29.6 | |
| 42 cis-1,2-Dichloroethene | 96 | 2.461 | 2.461 | 0.000 | 99 | 66150 | 20.0 | 23.1 | |
| 43 2,2-Dichloropropane | 77 | 2.526 | 2.526 | 0.000 | 97 | 47811 | 20.0 | 14.7 | |
| 44 Cyclohexane | 56 | 2.583 | 2.583 | 0.000 | 89 | 82950 | 20.0 | 17.2 | |
| 45 Chlorobromomethane | 128 | 2.590 | 2.590 | 0.000 | 82 | 25400 | 20.0 | 20.3 | |
| 46 Chloroform | 83 | 2.648 | 2.648 | 0.000 | 99 | 82530 | 20.0 | 19.1 | |
| 47 Carbon tetrachloride | 117 | 2.733 | 2.734 | -0.001 | 98 | 54208 | 20.0 | 21.3 | |
| 48 Ethyl acetate | 70 | 2.741 | 2.741 | 0.000 | 99 | 6653 | 40.0 | 48.1 | |
| 49 Methyl acrylate | 55 | 2.748 | 2.748 | 0.000 | 98 | 26607 | 20.0 | 19.6 | |
| 50 Tetrahydrofuran | 42 | 2.755 | 2.755 | 0.000 | 95 | 22702 | 40.0 | 47.0 | |
| $ 51 Dibromofluoromethane (Surr) | 113 | 2.769 | 2.769 | 0.000 | 98 | 108987 | 50.0 | 50.2 | |
| 52 1,1,1-Trichloroethane | 97 | 2.784 | 2.777 | 0.007 | 98 | 68764 | 20.0 | 19.8 | |
| * 53 2-Butanone-d5 | 46 | 2.834 | 2.827 | 0.007 | 99 | 106756 | 250.0 | 250.0 | |
| 54 2-Butanone (MEK) | 72 | 2.870 | 2.863 | 0.008 | 100 | 19520 | 100.0 | 125.1 | |
| 55 1,1-Dichloropropene | 75 | 2.870 | 2.870 | 0.000 | 96 | 72294 | 20.0 | 19.3 | |
| 56 Isooctane | 57 | 2.956 | 2.956 | 0.000 | 99 | 132860 | 20.0 | 17.5 | |
| 57 n-Heptane | 57 | 3.049 | 3.049 | 0.000 | 92 | 32497 | 20.0 | 17.4 | |
| 58 Benzene | 78 | 3.056 | 3.049 | 0.007 | 97 | 210783 | 20.0 | 17.9 | |
| 59 Propionitrile | 54 | 3.070 | 3.070 | 0.000 | 96 | 39034 | 200.0 | 171.1 | |
| 60 Methacrylonitrile | 67 | 3.092 | 3.092 | 0.000 | 89 | 139120 | 200.0 | 201.1 | |
| $ 61 1,2-Dichloroethane-d4 (Surr) | 65 | 3.156 | 3.156 | 0.000 | 0 | 106483 | 50.0 | 48.9 | |
| 62 Tert-amyl methyl ether | 73 | 3.163 | 3.163 | 0.000 | 98 | 113133 | 20.0 | 19.9 | |
| 63 1,2-Dichloroethane | 62 | 3.213 | 3.213 | 0.000 | 96 | 50595 | 20.0 | 18.0 | |
| 64 Isobutyl alcohol | 43 | 3.285 | 3.285 | 0.000 | 97 | 24151 | 500.0 | 420.0 | |
| 65 t-Amyl alcohol | 59 | 3.349 | 3.350 | -0.001 | 90 | 19161 | 200.0 | 205.3 | |
| * 66 Fluorobenzene | 96 | 3.385 | 3.385 | 0.000 | 99 | 503910 | 50.0 | 50.0 | |
| 67 Isopropyl acetate | 43 | 3.457 | 3.457 | 0.000 | 100 | 52690 | 20.0 | 16.5 | |
| 68 Methylcyclohexane | 83 | 3.514 | 3.507 | 0.007 | 95 | 84784 | 20.0 | 19.1 | |
| 69 Trichloroethene | 130 | 3.536 | 3.536 | 0.000 | 96 | 58772 | 20.0 | 21.6 | |
| 70 2-ethoxy-2-methyl butane | 59 | 3.772 | 3.765 | 0.007 | 96 | 102444 | 20.0 | 18.2 | |
| 71 Dibromomethane | 93 | 3.894 | 3.894 | 0.000 | 94 | 24478 | 20.0 | 20.2 | |
| 72 n-Butanol | 56 | 3.915 | 3.915 | 0.000 | 90 | 15002 | 500.0 | 422.7 | |
| 73 1,2-Dichloropropane | 63 | 3.980 | 3.980 | 0.000 | 92 | 48504 | 20.0 | 17.8 | |
| 75 Dichlorobromomethane | 83 | 4.066 | 4.066 | 0.000 | 99 | 57882 | 20.0 | 19.4 | |
| 74 Ethyl acrylate | 55 | 4.066 | 4.066 | 0.000 | 58 | 33783 | 20.0 | 18.6 | |
| * 76 1,4-Dioxane-d8 | 96 | 4.238 | 4.238 | 0.000 | 94 | 15564 | 1000.0 | 1000.0 | |
| 77 Methyl methacrylate | 100 | 4.259 | 4.252 | 0.007 | 87 | 18090 | 40.0 | 44.6 | |
| 78 1,4-Dioxane | 88 | 4.266 | 4.259 | 0.007 | 39 | 7270 | 400.0 | 405.0 | |
| 79 n-Propyl acetate | 43 | 4.417 | 4.417 | 0.000 | 97 | 32990 | 20.0 | 16.1 | |
| 81 cis-1,3-Dichloropropene | 75 | 4.696 | 4.696 | 0.000 | 92 | 65094 | 20.0 | 16.8 | |
| $ 82 Toluene-d8 (Surr) | 98 | 4.882 | 4.882 | 0.000 | 99 | 463721 | 50.0 | 47.6 | |
| 83 Toluene | 91 | 4.940 | 4.933 | 0.007 | 93 | 227582 | 20.0 | 19.0 | |
| 84 Epichlorohydrin | 57 | 4.990 | 4.983 | 0.007 | 97 | 7407 | 400.0 | 200.1 | |
| 85 2-Nitropropane | 41 | 5.190 | 5.190 | 0.000 | 98 | 9589 | 40.0 | 35.5 | |

| Compound | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q | Response | Cal Amt ug/l | OnCol Amt ug/l | Flags |
|---|---|---|---|---|---|---|---|---|---|
| 86 Tetrachloroethene | 166 | 5.362 | 5.362 | 0.000 | 96 | 64986 | 20.0 | 23.0 | |
| 87 4-Methyl-2-pentanone (MIBK) | 43 | 5.405 | 5.398 | 0.007 | 95 | 137322 | 100.0 | 124.3 | |
| 88 trans-1,3-Dichloropropene | 75 | 5.441 | 5.441 | 0.000 | 98 | 56084 | 20.0 | 18.3 | |
| 89 1,1,2-Trichloroethane | 83 | 5.606 | 5.606 | 0.000 | 96 | 31070 | 20.0 | 19.0 | |
| 90 Ethyl methacrylate | 69 | 5.699 | 5.692 | 0.007 | 88 | 43662 | 20.0 | 20.4 | |
| 91 Chlorodibromomethane | 129 | 5.806 | 5.807 | 0.000 | 97 | 40335 | 20.0 | 19.1 | |
| 92 1,3-Dichloropropane | 76 | 5.914 | 5.914 | 0.000 | 93 | 63687 | 20.0 | 18.7 | |
| 93 Ethylene Dibromide | 107 | 6.043 | 6.043 | 0.000 | 99 | 35148 | 20.0 | 20.0 | |
| 94 n-Butyl acetate | 43 | 6.401 | 6.401 | 0.000 | 98 | 37449 | 20.0 | 16.4 | |
| 95 2-Hexanone | 43 | 6.458 | 6.458 | 0.000 | 94 | 91944 | 100.0 | 124.1 | |
| * 96 Chlorobenzene-d5 | 117 | 6.723 | 6.723 | 0.000 | 84 | 377909 | 50.0 | 50.0 | |
| 97 Chlorobenzene | 112 | 6.745 | 6.745 | 0.000 | 98 | 144648 | 20.0 | 19.3 | |
| 98 Ethylbenzene | 106 | 6.831 | 6.831 | 0.000 | 98 | 80626 | 20.0 | 19.2 | |
| 99 1,1,1,2-Tetrachloroethane | 131 | 6.859 | 6.852 | 0.007 | 95 | 46545 | 20.0 | 20.0 | |
| 100 m-Xylene & p-Xylene | 106 | 7.046 | 7.046 | 0.000 | 0 | 96791 | 20.0 | 19.6 | |
| 101 o-Xylene | 106 | 7.626 | 7.626 | 0.000 | 95 | 95537 | 20.0 | 19.1 | |
| 102 Bromoform | 173 | 7.690 | 7.698 | -0.008 | 96 | 24663 | 20.0 | 20.7 | |
| 103 Styrene | 104 | 7.719 | 7.712 | 0.007 | 98 | 157013 | 20.0 | 19.6 | |
| 104 n-Butyl acrylate | 73 | 8.056 | 8.056 | 0.000 | 97 | 23960 | 20.0 | 18.0 | |
| 105 Isopropylbenzene | 105 | 8.113 | 8.113 | 0.000 | 95 | 250815 | 20.0 | 19.4 | |
| 106 Amyl acetate (mixed isomers) | 43 | 8.471 | 8.464 | 0.007 | 91 | 48164 | 20.0 | 15.5 | |
| $ 107 4-Bromofluorobenzene | 174 | 8.485 | 8.478 | 0.007 | 96 | 165057 | 50.0 | 54.0 | |
| 108 Bromobenzene | 156 | 8.586 | 8.586 | 0.000 | 93 | 64255 | 20.0 | 20.1 | |
| 109 N-Propylbenzene | 91 | 8.743 | 8.743 | 0.000 | 100 | 289803 | 20.0 | 18.1 | |
| 110 1,1,2,2-Tetrachloroethane | 83 | 8.894 | 8.894 | 0.000 | 97 | 42660 | 20.0 | 19.2 | |
| 111 2-Chlorotoluene | 91 | 8.908 | 8.908 | 0.000 | 97 | 192234 | 20.0 | 17.4 | |
| 112 4-Ethyltoluene | 105 | 8.929 | 8.930 | -0.001 | 98 | 244249 | 20.0 | 18.3 | |
| 113 1,2,3-Trichloropropane | 110 | 9.023 | 9.023 | 0.000 | 98 | 12509 | 20.0 | 21.3 | |
| 114 1,3,5-Trimethylbenzene | 105 | 9.087 | 9.087 | 0.000 | 94 | 207118 | 20.0 | 18.6 | |
| 115 trans-1,4-Dichloro-2-butene | 53 | 9.166 | 9.159 | 0.007 | 39 | 8956 | 20.0 | 21.1 | a |
| 116 4-Chlorotoluene | 91 | 9.173 | 9.173 | 0.000 | 97 | 176802 | 20.0 | 18.2 | |
| 117 tert-Butylbenzene | 119 | 9.546 | 9.546 | 0.000 | 96 | 180763 | 20.0 | 18.8 | |
| 118 1,2,4-Trimethylbenzene | 105 | 9.682 | 9.682 | 0.000 | 97 | 208402 | 20.0 | 18.2 | |
| 119 Butyl Methacrylate | 87 | 9.696 | 9.696 | 0.000 | 91 | 55822 | 20.0 | 18.1 | |
| 120 sec-Butylbenzene | 105 | 9.839 | 9.839 | 0.000 | 99 | 263066 | 20.0 | 18.0 | |
| 121 1,3-Dichlorobenzene | 146 | 10.097 | 10.097 | 0.000 | 98 | 124097 | 20.0 | 19.6 | |
| 122 4-Isopropyltoluene | 119 | 10.119 | 10.119 | 0.000 | 98 | 227565 | 20.0 | 18.5 | |
| * 123 1,4-Dichlorobenzene-d4 | 152 | 10.226 | 10.226 | 0.000 | 94 | 216814 | 50.0 | 50.0 | |
| 124 1,4-Dichlorobenzene | 146 | 10.247 | 10.248 | -0.001 | 97 | 128766 | 20.0 | 19.3 | |
| 125 1,2,3-Trimethylbenzene | 105 | 10.355 | 10.355 | 0.000 | 97 | 213778 | 20.0 | 18.4 | |
| 126 2,3-Dihydroindene | 117 | 10.527 | 10.527 | 0.000 | 94 | 212728 | 20.0 | 18.9 | |
| 127 Benzyl chloride | 126 | 10.713 | 10.713 | 0.000 | 97 | 11358 | 20.0 | 17.0 | |
| 128 p-Diethylbenzene | 119 | 10.727 | 10.728 | -0.001 | 95 | 113266 | 20.0 | 18.3 | |
| 129 n-Butylbenzene | 91 | 10.813 | 10.813 | 0.000 | 98 | 198607 | 20.0 | 17.7 | |
| 130 1,2-Dichlorobenzene | 146 | 10.921 | 10.914 | 0.007 | 98 | 112762 | 20.0 | 19.5 | |
| 131 1,2,4,5-Tetramethylbenzene | 119 | 11.924 | 11.924 | 0.000 | 98 | 199061 | 20.0 | 18.4 | |
| 132 1,2-Dibromo-3-Chloropropane | 157 | 12.074 | 12.074 | 0.000 | 92 | 7776 | 20.0 | 21.0 | |
| 133 1,3,5-Trichlorobenzene | 180 | 12.117 | 12.117 | 0.000 | 97 | 88136 | 20.0 | 19.2 | |
| 134 1,2,4-Trichlorobenzene | 180 | 12.819 | 12.819 | 0.000 | 94 | 74499 | 20.0 | 19.3 | |
| 135 Hexachlorobutadiene | 225 | 12.841 | 12.841 | -0.001 | 97 | 30516 | 20.0 | 17.9 | |
| 136 Naphthalene | 128 | 13.120 | 13.127 | -0.007 | 100 | 134292 | 20.0 | 18.9 | |
| 137 1,2,3-Trichlorobenzene | 180 | 13.299 | 13.299 | 0.000 | 96 | 62520 | 20.0 | 19.8 | |

| Compound | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q | Response | Cal Amt ug/l | OnCol Amt ug/l | Flags |
|---|---|---|---|---|---|---|---|---|---|
| S 138 1,2-Dichloroethene, Total | 100 | | | | 0 | | 40.0 | 42.8 | |
| S 139 1,3-Dichloropropene, Total | 100 | | | | 0 | | 40.0 | 35.1 | |
| S 140 Xylenes, Total | 100 | | | | 0 | | 40.0 | 38.7 | |
| S 142 Total BTEX | 1 | | | | 0 | | 100.0 | 94.7 | |

## QC Flag Legend

Review Flags

M - Manually Integrated

a - User Assigned ID

## Reagents:

| | | | | |
|---|---|---|---|---|
| ACROLEIN W_00112 | Amount Added: | 4.00 | Units: uL | |
| 8260MIX1COMB_00125 | Amount Added: | 20.00 | Units: uL | |
| GASES Li_00385 | Amount Added: | 20.00 | Units: uL | |
| 8260ISNEW_00129 | Amount Added: | 1.00 | Units: uL | Run Reagent |
| 8260SURR250_00212 | Amount Added: | 1.00 | Units: uL | Run Reagent |

Report Date: 10-Sep-2020 15:03:41 Chrom Revision: 2.3 20-Aug-2020 13:57:12

Eurofins TestAmerica, Edison

Data File: \\chromfs\Edison\ChromData\CVOAMS13\20200909-116494.b\P79555.D

Injection Date: 10-Sep-2020 03:52:30 Instrument ID: CVOAMS13 Operator ID:

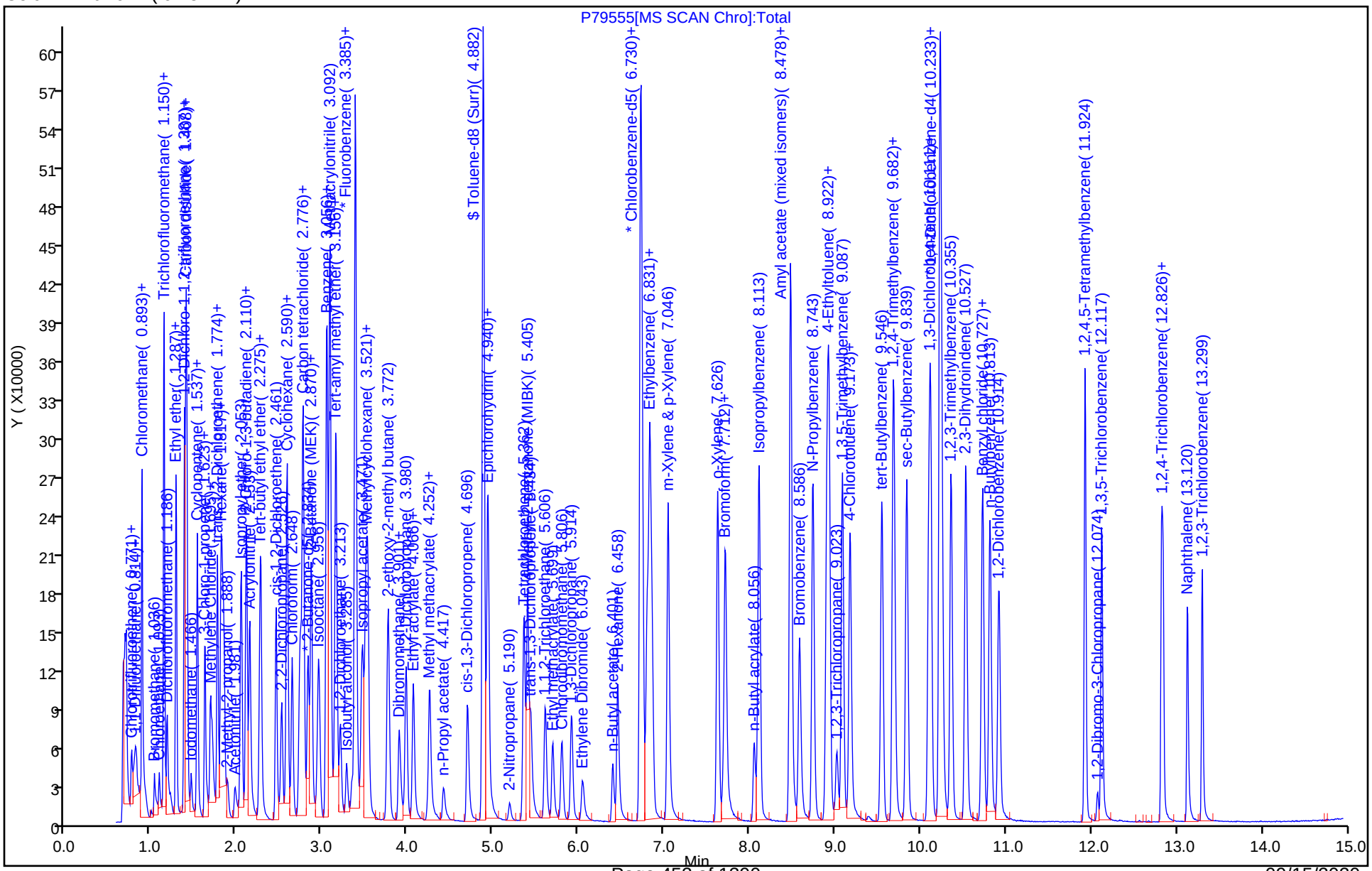
Lims ID: 460-217576-A-4 MSD Worklist Smp#: 26

Client ID: DDC-07-PD

Purge Vol: 5.000 mL Dil. Factor: 1.0000 ALS Bottle#: 25

Method: 8260W_13 Limit Group: VOA - 8260C Water and Solid

Column: Rtx-624 ( 0.25 mm)



Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Edison

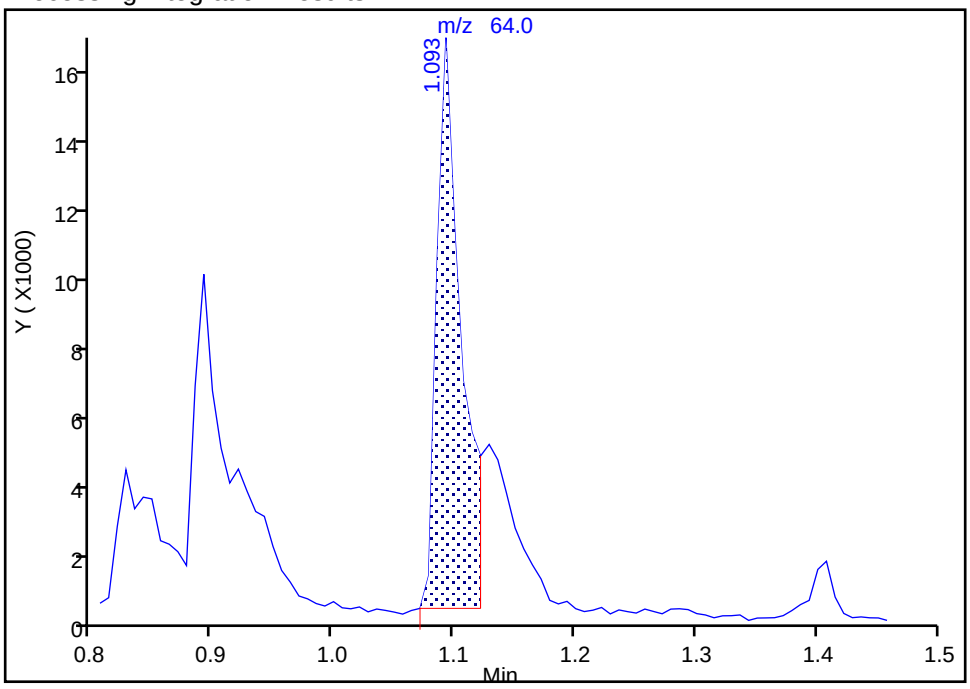
| | | | |
|---|---|---|---|
| Data File: | \\chromfs\Edison\ChromData\CVOAMS13\20200909-116494.b\P79555.D | | |
| Injection Date: | 10-Sep-2020 03:52:30 | Instrument ID: | CVOAMS13 |
| Lims ID: | 460-217576-A-4 MSD | | |
| Client ID: | DDC-07-PD | | |
| Operator ID: | | ALS Bottle#: | 25 Worklist Smp#: 26 |
| Purge Vol: | 5.000 mL | Dil. Factor: | 1.0000 |
| Method: | 8260W_13 | Limit Group: | VOA - 8260C Water and Solid |
| Column: | Rtx-624 ( 0.25 mm) | Detector | MS SCAN |

## 10 Chloroethane, CAS: 75-00-3

Signal: 1

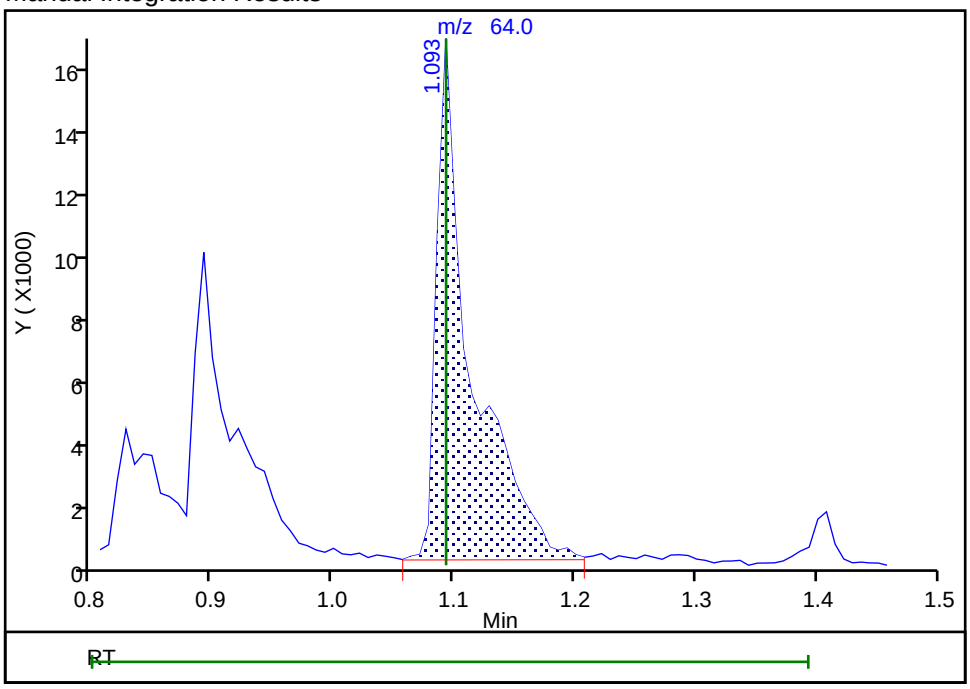
Processing Integration Results

RT: 1.09
Area: 22807
Amount: 12.354408
Amount Units: ug/l




Manual Integration Results

RT: 1.09
Area: 32229
Amount: 17.458246
Amount Units: ug/l




Reviewer: baronm, 10-Sep-2020 15:03:24
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

GC/MS VOA ANALYSIS RUN LOG

Lab Name: Eurofins TestAmerica, Edison Job No.: 460-217547-1

SDG No.:

Instrument ID: CVOAMS13 Start Date: 09/04/2020 13:21

Analysis Batch Number: 721970 End Date: 09/04/2020 20:34

| LAB SAMPLE ID | CLIENT SAMPLE ID | DATE ANALYZED | DILUTION FACTOR | LAB FILE ID | COLUMN ID |
|---|---|---|---|---|---|
| BFB 460-721970/1 | | 09/04/2020 13:21 | 1 | P79350.D | Rtx-624 0.25(mm) |
| STD8 460-721970/3 IC | | 09/04/2020 14:09 | 1 | P79352.D | Rtx-624 0.25(mm) |
| STD1 460-721970/4 IC | | 09/04/2020 14:57 | 1 | P79354.D | Rtx-624 0.25(mm) |
| STD5 460-721970/5 IC | | 09/04/2020 15:21 | 1 | P79355.D | Rtx-624 0.25(mm) |
| STD20 460-721970/6 ICIS | | 09/04/2020 15:45 | 1 | P79356.D | Rtx-624 0.25(mm) |
| STD50 460-721970/7 IC | | 09/04/2020 16:09 | 1 | P79357.D | Rtx-624 0.25(mm) |
| STD200 460-721970/8 IC | | 09/04/2020 16:33 | 1 | P79358.D | Rtx-624 0.25(mm) |
| STD500 460-721970/9 IC | | 09/04/2020 16:58 | 1 | P79359.D | Rtx-624 0.25(mm) |
| ICV 460-721970/18 | | 09/04/2020 20:34 | 1 | P79368.D | Rtx-624 0.25(mm) |

GC/MS VOA ANALYSIS RUN LOG

Lab Name: Eurofins TestAmerica, Edison Job No.: 460-217547-1

SDG No.:

Instrument ID: CVOAMS13 Start Date: 09/08/2020 19:03

Analysis Batch Number: 722597 End Date: 09/09/2020 06:44

| LAB SAMPLE ID | CLIENT SAMPLE ID | DATE ANALYZED | DILUTION FACTOR | LAB FILE ID | COLUMN ID |
|---|---|---|---|---|---|
| BFB 460-722597/1 | | 09/08/2020 19:03 | 1 | P79479.D | Rtx-624 0.25(mm) |
| CCVIS 460-722597/3 | | 09/08/2020 19:49 | 1 | P79481.D | Rtx-624 0.25(mm) |
| LCS 460-722597/4 | | 09/08/2020 20:12 | 1 | P79482.D | Rtx-624 0.25(mm) |
| LCSD 460-722597/5 | | 09/08/2020 20:35 | 1 | P79483.D | Rtx-624 0.25(mm) |
| MB 460-722597/10 | | 09/08/2020 22:33 | 1 | P79488.D | Rtx-624 0.25(mm) |
| 460-217547-8 | TB | 09/09/2020 01:38 | 1 | P79489.D | Rtx-624 0.25(mm) |
| ZZZZZ | | 09/09/2020 02:02 | 1 | | Rtx-624 0.25(mm) |
| ZZZZZ | | 09/09/2020 02:25 | 1 | | Rtx-624 0.25(mm) |
| 460-217547-7 | FB | 09/09/2020 02:49 | 1 | P79492.D | Rtx-624 0.25(mm) |
| ZZZZZ | | 09/09/2020 03:12 | 1 | | Rtx-624 0.25(mm) |
| ZZZZZ | | 09/09/2020 03:36 | 1 | | Rtx-624 0.25(mm) |
| ZZZZZ | | 09/09/2020 03:59 | 1 | | Rtx-624 0.25(mm) |
| ZZZZZ | | 09/09/2020 04:23 | 1 | | Rtx-624 0.25(mm) |
| ZZZZZ | | 09/09/2020 04:47 | 1 | | Rtx-624 0.25(mm) |
| ZZZZZ | | 09/09/2020 05:10 | 1 | | Rtx-624 0.25(mm) |
| ZZZZZ | | 09/09/2020 05:34 | 1 | | Rtx-624 0.25(mm) |
| 460-217547-2 | MW-204 | 09/09/2020 06:21 | 1 | P79501.D | Rtx-624 0.25(mm) |
| 460-217547-3 | MW-205 | 09/09/2020 06:44 | 1 | P79502.D | Rtx-624 0.25(mm) |

GC/MS VOA ANALYSIS RUN LOG

Lab Name: Eurofins TestAmerica, Edison Job No.: 460-217547-1

SDG No.:

Instrument ID: CVOAMS13 Start Date: 09/09/2020 07:47

Analysis Batch Number: 722709 End Date: 09/09/2020 11:42

| LAB SAMPLE ID | CLIENT SAMPLE ID | DATE ANALYZED | DILUTION FACTOR | LAB FILE ID | COLUMN ID |
|---|---|---|---|---|---|
| BFB 460-722709/1 | | 09/09/2020 07:47 | 1 | P79504.D | Rtx-624 0.25(mm) |
| CCVIS 460-722709/3 | | 09/09/2020 08:33 | 1 | P79506.D | Rtx-624 0.25(mm) |
| LCS 460-722709/4 | | 09/09/2020 08:57 | 1 | P79507.D | Rtx-624 0.25(mm) |
| LCSD 460-722709/5 | | 09/09/2020 09:20 | 1 | P79508.D | Rtx-624 0.25(mm) |
| MB 460-722709/8 | | 09/09/2020 10:31 | 1 | P79511.D | Rtx-624 0.25(mm) |
| 460-217547-5 | MW-213 | 09/09/2020 11:42 | 1 | P79514.D | Rtx-624 0.25(mm) |

GC/MS VOA ANALYSIS RUN LOG

Lab Name: Eurofins TestAmerica, Edison Job No.: 460-217547-1

SDG No.:

Instrument ID: CVOAMS13 Start Date: 09/09/2020 17:54

Analysis Batch Number: 722834 End Date: 09/10/2020 03:52

| LAB SAMPLE ID | CLIENT SAMPLE ID | DATE ANALYZED | DILUTION FACTOR | LAB FILE ID | COLUMN ID |
|---|---|---|---|---|---|
| BFB 460-722834/1 | | 09/09/2020 17:54 | 1 | P79530.D | Rtx-624 0.25(mm) |
| CCVIS 460-722834/4 | | 09/09/2020 19:04 | 1 | P79533.D | Rtx-624 0.25(mm) |
| LCS 460-722834/5 | | 09/09/2020 19:27 | 1 | P79534.D | Rtx-624 0.25(mm) |
| ZZZZZ | | 09/09/2020 19:51 | 1 | | Rtx-624 0.25(mm) |
| MB 460-722834/9 | | 09/09/2020 21:01 | 1 | P79538.D | Rtx-624 0.25(mm) |
| ZZZZZ | | 09/09/2020 21:32 | 1 | | Rtx-624 0.25(mm) |
| ZZZZZ | | 09/09/2020 21:55 | 1 | | Rtx-624 0.25(mm) |
| ZZZZZ | | 09/09/2020 22:19 | 1 | | Rtx-624 0.25(mm) |
| ZZZZZ | | 09/09/2020 22:43 | 1 | | Rtx-624 0.25(mm) |
| ZZZZZ | | 09/09/2020 23:07 | 1 | | Rtx-624 0.25(mm) |
| ZZZZZ | | 09/09/2020 23:30 | 1 | | Rtx-624 0.25(mm) |
| ZZZZZ | | 09/09/2020 23:54 | 1 | | Rtx-624 0.25(mm) |
| 460-217547-6 | DUP | 09/10/2020 00:18 | 1 | P79546.D | Rtx-624 0.25(mm) |
| 460-217547-1 | MW-203 | 09/10/2020 00:42 | 1 | P79547.D | Rtx-624 0.25(mm) |
| 460-217547-4 | MW-206 | 09/10/2020 01:06 | 1 | P79548.D | Rtx-624 0.25(mm) |
| 460-217576-A-4 MS | | 09/10/2020 03:28 | 1 | P79554.D | Rtx-624 0.25(mm) |
| 460-217576-A-4 MSD | | 09/10/2020 03:52 | 1 | P79555.D | Rtx-624 0.25(mm) |

# GC/MS VOA BATCH WORKSHEET

Lab Name: Eurofins TestAmerica, Edison  Job No.: 460-217547-1

SDG No.:

Batch Number: 721970  Batch Start Date: 09/04/20 13:21  Batch Analyst: Starzec, Margaret

Batch Method: 8260C  Batch End Date:

| Lab Sample ID | Client Sample ID | Method Chain | Basis | InitialAmount | FinalAmount | 14DIOXINTER 00118 | 524freon 00027 | 8260 SP 00129 | 8260ISNEW 00129 |
|---|---|---|---|---|---|---|---|---|---|
| BFB 460-721970/1 | | 8260C | | 5 mL | 5 mL | | | | |
| STD8 460-721970/3 IC | | 8260C | | 5 mL | 5 mL | | | | 1 uL |
| STD1 460-721970/4 IC | | 8260C | | 5 mL | 5 mL | 30 uL | 10 uL | | 1 uL |
| STD5 460-721970/5 IC | | 8260C | | 5 mL | 5 mL | | 10 uL | | 1 uL |
| STD20 460-721970/6 ICIS | | 8260C | | 5 mL | 5 mL | | 20 uL | | 1 uL |
| STD50 460-721970/7 IC | | 8260C | | 5 mL | 5 mL | | 50 uL | | 1 uL |
| STD200 460-721970/8 IC | | 8260C | | 5 mL | 5 mL | | | | 1 uL |
| STD500 460-721970/9 IC | | 8260C | | 5 mL | 5 mL | | | | 1 uL |
| ICV 460-721970/18 | | 8260C | | 5 mL | 5 mL | | | 20 uL | 1 uL |

| Lab Sample ID | Client Sample ID | Method Chain | Basis | 8260MIX1COMB 00125 | 8260SURR250 00212 | 8FreonHi 00023 | 8FreonsSS 00023 | ACROLEIN SP 00116 | ACROLEIN W 00112 |
|---|---|---|---|---|---|---|---|---|---|
| BFB 460-721970/1 | | 8260C | | | | | | | |
| STD8 460-721970/3 IC | | 8260C | | | 1 uL | | | | |
| STD1 460-721970/4 IC | | 8260C | | 10 uL | 1 uL | | | | 4 uL |
| STD5 460-721970/5 IC | | 8260C | | 10 uL | 1 uL | | | | 4 uL |
| STD20 460-721970/6 ICIS | | 8260C | | 20 uL | 1 uL | | | | 4 uL |
| STD50 460-721970/7 IC | | 8260C | | 50 uL | 1 uL | | | | 10 uL |
| STD200 460-721970/8 IC | | 8260C | | | 1 uL | 20 uL | | | 20 uL |
| STD500 460-721970/9 IC | | 8260C | | | 1 uL | 50 uL | | | 40 uL |
| ICV 460-721970/18 | | 8260C | | | 1 uL | | 20 uL | 4 uL | |

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

# GC/MS VOA BATCH WORKSHEET

Lab Name: Eurofins TestAmerica, Edison  Job No.: 460-217547-1

SDG No.:

Batch Number: 721970  Batch Start Date: 09/04/20 13:21  Batch Analyst: Starzec, Margaret

Batch Method: 8260C  Batch End Date:

| Lab Sample ID | Client Sample ID | Method Chain | Basis | ACRY/EPIH MIX 00077 | BFB 00026 | Ethanol mix 00043 | GAS C SP 00372 | GAS Hi 00370 | GASES Li 00384 |
|---|---|---|---|---|---|---|---|---|---|
| BFB 460-721970/1 | | 8260C | | | 1 uL | | | | |
| STD8 460-721970/3 IC | | 8260C | | 20 uL | | | | | 2.5 uL |
| STD1 460-721970/4 IC | | 8260C | | | | | | | 10 uL |
| STD5 460-721970/5 IC | | 8260C | | | | | | | 10 uL |
| STD20 460-721970/6 ICIS | | 8260C | | | | | | | 20 uL |
| STD50 460-721970/7 IC | | 8260C | | | | | | | 50 uL |
| STD200 460-721970/8 IC | | 8260C | | | | 20 uL | | 20 uL | |
| STD500 460-721970/9 IC | | 8260C | | | | 50 uL | | 50 uL | |
| ICV 460-721970/18 | | 8260C | | | | | 20 uL | | |

| Lab Sample ID | Client Sample ID | Method Chain | Basis | MIX 2 Hi 00102 | MIX I Hi 00129 | | | | |
|---|---|---|---|---|---|---|---|---|---|
| BFB 460-721970/1 | | 8260C | | | | | | | |
| STD8 460-721970/3 IC | | 8260C | | | | | | | |
| STD1 460-721970/4 IC | | 8260C | | | | | | | |
| STD5 460-721970/5 IC | | 8260C | | | | | | | |
| STD20 460-721970/6 ICIS | | 8260C | | | | | | | |
| STD50 460-721970/7 IC | | 8260C | | | | | | | |
| STD200 460-721970/8 IC | | 8260C | | 20 uL | 20 uL | | | | |
| STD500 460-721970/9 IC | | 8260C | | 50 uL | 50 uL | | | | |
| ICV 460-721970/18 | | 8260C | | | | | | | |

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

# GC/MS VOA BATCH WORKSHEET

Lab Name: Eurofins TestAmerica, Edison  Job No.: 460-217547-1

SDG No.:

Batch Number: 721970  Batch Start Date: 09/04/20 13:21  Batch Analyst: Starzec, Margaret

Batch Method: 8260C  Batch End Date:

| Batch Notes | |
|---|---|
| | |

| Basis | Basis Description |
|---|---|
| | |

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

# GC/MS VOA BATCH WORKSHEET

Lab Name: Eurofins TestAmerica, Edison  Job No.: 460-217547-1

SDG No.:

Batch Number: 722597  Batch Start Date: 09/08/20 19:03  Batch Analyst: Sgro, Angela M

Batch Method: 8260C  Batch End Date:

| Lab Sample ID | Client Sample ID | Method Chain | Basis | InitialAmount | FinalAmount | Initial pH | 8260ISNEW 00129 | 8260MIX1COMB 00125 | 8260SURR250 00212 |
|---|---|---|---|---|---|---|---|---|---|
| BFB 460-722597/1 | | 8260C | | 5 mL | 5 mL | | | | |
| CCVIS 460-722597/3 | | 8260C | | 5 mL | 5 mL | | 1 uL | 20 uL | 1 uL |
| LCS 460-722597/4 | | 8260C | | 5 mL | 5 mL | | 1 uL | 20 uL | 1 uL |
| LCSD 460-722597/5 | | 8260C | | 5 mL | 5 mL | | 1 uL | 20 uL | 1 uL |
| MB 460-722597/10 | | 8260C | | 5 mL | 5 mL | | 1 uL | | 1 uL |
| 460-217547-A-8 | TB | 8260C | T | 5 mL | 5 mL | <2 SU | 1 uL | | 1 uL |
| 460-217547-A-7 | FB | 8260C | T | 5 mL | 5 mL | <2 SU | 1 uL | | 1 uL |
| 460-217547-B-2 | MW-204 | 8260C | T | 5 mL | 5 mL | <2 SU | 1 uL | | 1 uL |
| 460-217547-A-3 | MW-205 | 8260C | T | 5 mL | 5 mL | <2 SU | 1 uL | | 1 uL |

| Lab Sample ID | Client Sample ID | Method Chain | Basis | ACROLEIN W 00112 | BFB 00026 | GASES Li 00384 | | | |
|---|---|---|---|---|---|---|---|---|---|
| BFB 460-722597/1 | | 8260C | | | 1 uL | | | | |
| CCVIS 460-722597/3 | | 8260C | | 4 uL | | 20 uL | | | |
| LCS 460-722597/4 | | 8260C | | 4 uL | | 20 uL | | | |
| LCSD 460-722597/5 | | 8260C | | 4 uL | | 20 uL | | | |
| MB 460-722597/10 | | 8260C | | | | | | | |
| 460-217547-A-8 | TB | 8260C | T | | | | | | |
| 460-217547-A-7 | FB | 8260C | T | | | | | | |
| 460-217547-B-2 | MW-204 | 8260C | T | | | | | | |
| 460-217547-A-3 | MW-205 | 8260C | T | | | | | | |

| Batch Notes | |
|---|---|
| | |

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GC/MS VOA BATCH WORKSHEET

Lab Name: Eurofins TestAmerica, Edison  Job No.: 460-217547-1

SDG No.:

Batch Number: 722597  Batch Start Date: 09/08/20 19:03  Batch Analyst: Sgro, Angela M

Batch Method: 8260C  Batch End Date:

| Basis | Basis Description |
|---|---|
| T | Total/NA |

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

# GC/MS VOA BATCH WORKSHEET

Lab Name: Eurofins TestAmerica, Edison  Job No.: 460-217547-1

SDG No.:

Batch Number: 722709  Batch Start Date: 09/09/20 07:47  Batch Analyst: Moroney, Christopher J

Batch Method: 8260C  Batch End Date:

| Lab Sample ID | Client Sample ID | Method Chain | Basis | InitialAmount | FinalAmount | Initial pH | 8260ISNEW 00129 | 8260MIX1COMB 00125 | 8260SURR250 00212 |
|---|---|---|---|---|---|---|---|---|---|
| BFB 460-722709/1 | | 8260C | | 5 mL | 5 mL | | | | |
| CCVIS 460-722709/3 | | 8260C | | 5 mL | 5 mL | | 1 uL | 20 uL | 1 uL |
| LCS 460-722709/4 | | 8260C | | 5 mL | 5 mL | | 1 uL | 20 uL | 1 uL |
| LCSD 460-722709/5 | | 8260C | | 5 mL | 5 mL | | 1 uL | 20 uL | 1 uL |
| MB 460-722709/8 | | 8260C | | 5 mL | 5 mL | | 1 uL | | 1 uL |
| 460-217547-B-5 | MW-213 | 8260C | T | 5 mL | 5 mL | <2 SU | 1 uL | | 1 uL |

| Lab Sample ID | Client Sample ID | Method Chain | Basis | ACROLEIN W 00112 | BFB 00026 | GASES Li 00385 | | | |
|---|---|---|---|---|---|---|---|---|---|
| BFB 460-722709/1 | | 8260C | | | 1 uL | | | | |
| CCVIS 460-722709/3 | | 8260C | | 4 uL | | 20 uL | | | |
| LCS 460-722709/4 | | 8260C | | 4 uL | | 20 uL | | | |
| LCSD 460-722709/5 | | 8260C | | 4 uL | | 20 uL | | | |
| MB 460-722709/8 | | 8260C | | | | | | | |
| 460-217547-B-5 | MW-213 | 8260C | T | | | | | | |

| Batch Notes | |
|---|---|
| | |

| Basis | Basis Description |
|---|---|
| T | Total/NA |

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

# GC/MS VOA BATCH WORKSHEET

Lab Name: Eurofins TestAmerica, Edison  Job No.: 460-217547-1

SDG No.:

Batch Number: 722834  Batch Start Date: 09/09/20 17:54  Batch Analyst: Sgro, Angela M

Batch Method: 8260C  Batch End Date:

| Lab Sample ID | Client Sample ID | Method Chain | Basis | InitialAmount | FinalAmount | Initial pH | 8260ISNEW 00129 | 8260MIX1COMB 00125 | 8260SURR250 00212 |
|---|---|---|---|---|---|---|---|---|---|
| BFB 460-722834/1 | | 8260C | | 5 mL | 5 mL | | | | |
| CCVIS 460-722834/4 | | 8260C | | 5 mL | 5 mL | | 1 uL | 20 uL | 1 uL |
| LCS 460-722834/5 | | 8260C | | 5 mL | 5 mL | | 1 uL | 20 uL | 1 uL |
| MB 460-722834/9 | | 8260C | | 5 mL | 5 mL | | 1 uL | | 1 uL |
| 460-217547-A-6 | DUP | 8260C | T | 5 mL | 5 mL | <2 SU | 1 uL | | 1 uL |
| 460-217547-A-1 | MW-203 | 8260C | T | 5 mL | 5 mL | <2 SU | 1 uL | | 1 uL |
| 460-217547-A-4 | MW-206 | 8260C | T | 5 mL | 5 mL | <2 SU | 1 uL | | 1 uL |
| 460-217576-A-4 MS | DDC-07-PD | 8260C | T | 5 mL | 5 mL | <2 SU | 1 uL | 20 uL | 1 uL |
| 460-217576-A-4 MSD | DDC-07-PD | 8260C | T | 5 mL | 5 mL | <2 SU | 1 uL | 20 uL | 1 uL |

| Lab Sample ID | Client Sample ID | Method Chain | Basis | ACROLEIN W 00112 | BFB 00026 | GASES Li 00385 | | | |
|---|---|---|---|---|---|---|---|---|---|
| BFB 460-722834/1 | | 8260C | | | 1 uL | | | | |
| CCVIS 460-722834/4 | | 8260C | | 4 uL | | 20 uL | | | |
| LCS 460-722834/5 | | 8260C | | 4 uL | | 20 uL | | | |
| MB 460-722834/9 | | 8260C | | | | | | | |
| 460-217547-A-6 | DUP | 8260C | T | | | | | | |
| 460-217547-A-1 | MW-203 | 8260C | T | | | | | | |
| 460-217547-A-4 | MW-206 | 8260C | T | | | | | | |
| 460-217576-A-4 MS | DDC-07-PD | 8260C | T | 4 uL | | 20 uL | | | |
| 460-217576-A-4 MSD | DDC-07-PD | 8260C | T | 4 uL | | 20 uL | | | |

| Batch Notes | |
|---|---|
| | |

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

# GC/MS VOA BATCH WORKSHEET

Lab Name: Eurofins TestAmerica, Edison  Job No.: 460-217547-1

SDG No.:

Batch Number: 722834  Batch Start Date: 09/09/20 17:54  Batch Analyst: Sgro, Angela M

Batch Method: 8260C  Batch End Date:

| Basis | Basis Description |
|---|---|
| T | Total/NA |

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

# Method PFC IDA

## Fluorinated Hydrocarbons by Method PFAS IDA

FORM II
LCMS SURROGATE RECOVERY

Lab Name: Eurofins TestAmerica, Sacramento  Job No.: 460-217547-1

SDG No.:

Matrix: Water  Level: Low

GC Column (1): Gemini C18  ID: 3  (mm)

| Client Sample ID | Lab Sample ID | PFBA # | PFPeA # | C3PFBS # | PFHxA # | C4PFHA # | PFHxS # | M262FTS # | PFOA # |
|---|---|---|---|---|---|---|---|---|---|
| MW-203 | 460-217547-1 | 36 | 57 | 93 | 67 | 77 | 100 | 213 *5 | 82 |
| MW-204 | 460-217547-2 | 39 | 54 | 91 | 63 | 66 | 90 | 143 | 66 |
| MW-205 | 460-217547-3 | 58 | 77 | 92 | 86 | 88 | 95 | 101 | 92 |
| MW-213 | 460-217547-5 | 49 | 68 | 88 | 81 | 91 | 92 | 157 *5 | 91 |
| DUP | 460-217547-6 | 60 | 79 | 90 | 92 | 85 | 95 | 108 | 90 |
| FB | 460-217547-7 | 84 | 90 | 97 | 102 | 101 | 101 | 112 | 100 |
| | MB 320-410910/1-A | 84 | 86 | 103 | 95 | 92 | 106 | 103 | 93 |
| | LCS 320-410910/2-A | 55 | 56 | 72 | 64 | 66 | 76 | 68 | 58 |
| | LCSD 320-410910/3-A | 63 | 65 | 83 | 70 | 76 | 84 | 78 | 70 |

| | QC LIMITS |
|---|---|
| PFBA = 13C4 PFBA | 25-150 |
| PFPeA = 13C5 PFPeA | 25-150 |
| C3PFBS = 13C3 PFBS | 25-150 |
| PFHxA = 13C2 PFHxA | 25-150 |
| PFHxS = 18O2 PFHxS | 25-150 |
| C4PFHA = 13C4 PFHpA | 25-150 |
| M262FTS = M2-6:2 FTS | 25-150 |
| PFOA = 13C4 PFOA | 25-150 |

# Column to be used to flag recovery values

FORM II 537 (modified)

FORM II
LCMS SURROGATE RECOVERY

Lab Name: Eurofins TestAmerica, Sacramento  Job No.: 460-217547-1

SDG No.:

Matrix: Water  Level: Low

GC Column (1): Gemini C18  ID: 3  (mm)

| Client Sample ID | Lab Sample ID | PFOS # | PFNA # | PFOSA # | M282FTS # | PFDA # | d3NMFOS # | d5NEFOS # | PFUnA # |
|---|---|---|---|---|---|---|---|---|---|
| MW-203 | 460-217547-1 | 97 | 86 | 75 | 166 *5 | 81 | 73 | 76 | 75 |
| MW-204 | 460-217547-2 | 87 | 70 | 66 | 113 | 70 | 56 | 67 | 69 |
| MW-205 | 460-217547-3 | 94 | 91 | 77 | 101 | 84 | 68 | 74 | 91 |
| MW-213 | 460-217547-5 | 88 | 94 | 72 | 113 | 100 | 61 | 71 | 89 |
| DUP | 460-217547-6 | 95 | 93 | 79 | 95 | 99 | 68 | 74 | 93 |
| FB | 460-217547-7 | 101 | 102 | 88 | 118 | 106 | 87 | 89 | 114 |
| | MB 320-410910/1-A | 104 | 95 | 90 | 115 | 101 | 86 | 89 | 99 |
| | LCS 320-410910/2-A | 72 | 64 | 58 | 76 | 66 | 58 | 62 | 69 |
| | LCSD 320-410910/3-A | 81 | 70 | 69 | 79 | 75 | 66 | 73 | 71 |

| | QC LIMITS |
|---|---|
| PFOS = 13C4 PFOS | 25-150 |
| PFNA = 13C5 PFNA | 25-150 |
| PFOSA = 13C8 FOSA | 25-150 |
| M282FTS = M2-8:2 FTS | 25-150 |
| PFDA = 13C2 PFDA | 25-150 |
| d3NMFOS = d3-NMeFOSAA | 25-150 |
| d5NEFOS = d5-NEtFOSAA | 25-150 |
| PFUnA = 13C2 PFUnA | 25-150 |

# Column to be used to flag recovery values

FORM II 537 (modified)

FORM II
LCMS SURROGATE RECOVERY

Lab Name: Eurofins TestAmerica, Sacramento  Job No.: 460-217547-1

SDG No.:

Matrix: Water  Level: Low

GC Column (1): Gemini C18  ID: 3  (mm)

| Client Sample ID | Lab Sample ID | PFDoA # | PFTDA # |
|---|---|---|---|
| MW-203 | 460-217547-1 | 74 | 69 |
| MW-204 | 460-217547-2 | 70 | 58 |
| MW-205 | 460-217547-3 | 71 | 84 |
| MW-213 | 460-217547-5 | 72 | 74 |
| DUP | 460-217547-6 | 81 | 97 |
| FB | 460-217547-7 | 96 | 93 |
| | MB 320-410910/1-A | 94 | 93 |
| | LCS 320-410910/2-A | 65 | 57 |
| | LCSD 320-410910/3-A | 73 | 88 |

| | QC LIMITS |
|---|---|
| PFDoA = 13C2 PFDoA | 25-150 |
| PFTDA = 13C2 PFTeDA | 25-150 |

# Column to be used to flag recovery values

FORM II 537 (modified)

FORM II
LCMS SURROGATE RECOVERY

Lab Name: Eurofins TestAmerica, Sacramento  Job No.: 460-217547-1

SDG No.:

Matrix: Water  Level: Low

GC Column (1): Acquity  ID: 2.1 (mm)

| Client Sample ID | Lab Sample ID | PFBA # | PFPeA # | C3PFBS # | PFHxA # | C4PFHA # | PFHxS # | M262FTS # | PFOA # |
|---|---|---|---|---|---|---|---|---|---|
| MW-206 | 460-217547-4 | 57 | 70 | 81 | 78 | 80 | 86 | 107 | 81 |
| | MB 320-411226/1-A | 73 | 90 | 94 | 89 | 92 | 100 | 94 | 92 |
| | LCS 320-411226/2-A | 90 | 94 | 96 | 90 | 96 | 98 | 101 | 93 |
| | LCSD 320-411226/3-A | 86 | 89 | 94 | 90 | 91 | 94 | 95 | 89 |

| | QC LIMITS |
|---|---|
| PFBA = 13C4 PFBA | 25-150 |
| PFPeA = 13C5 PFPeA | 25-150 |
| C3PFBS = 13C3 PFBS | 25-150 |
| PFHxA = 13C2 PFHxA | 25-150 |
| PFHxS = 18O2 PFHxS | 25-150 |
| C4PFHA = 13C4 PFHpA | 25-150 |
| M262FTS = M2-6:2 FTS | 25-150 |
| PFOA = 13C4 PFOA | 25-150 |

# Column to be used to flag recovery values

FORM II 537 (modified)

FORM II
LCMS SURROGATE RECOVERY

Lab Name: Eurofins TestAmerica, Sacramento  Job No.: 460-217547-1

SDG No.:

Matrix: Water  Level: Low

GC Column (1): Acquity  ID: 2.1 (mm)

| Client Sample ID | Lab Sample ID | PFOS # | PFNA # | PFOSA # | M282FTS # | PFDA # | d3NMFOS # | PFUnA # | d5NEFOS # |
|---|---|---|---|---|---|---|---|---|---|
| MW-206 | 460-217547-4 | 82 | 87 | 74 | 93 | 80 | 67 | 75 | 71 |
| | MB 320-411226/1-A | 101 | 97 | 89 | 102 | 100 | 78 | 98 | 84 |
| | LCS 320-411226/2-A | 99 | 100 | 88 | 96 | 99 | 76 | 100 | 84 |
| | LCSD 320-411226/3-A | 97 | 94 | 81 | 92 | 95 | 79 | 96 | 79 |

| | QC LIMITS |
|---|---|
| PFOS = 13C4 PFOS | 25-150 |
| PFNA = 13C5 PFNA | 25-150 |
| PFOSA = 13C8 FOSA | 25-150 |
| M282FTS = M2-8:2 FTS | 25-150 |
| PFDA = 13C2 PFDA | 25-150 |
| d3NMFOS = d3-NMeFOSAA | 25-150 |
| PFUnA = 13C2 PFUnA | 25-150 |
| d5NEFOS = d5-NEtFOSAA | 25-150 |

# Column to be used to flag recovery values

FORM II 537 (modified)

FORM II
LCMS SURROGATE RECOVERY

Lab Name: Eurofins TestAmerica, Sacramento  Job No.: 460-217547-1

SDG No.:

Matrix: Water  Level: Low

GC Column (1): Acquity  ID: 2.1 (mm)

| Client Sample ID | Lab Sample ID | PFDoA # | PFTDA # |
|---|---|---|---|
| MW-206 | 460-217547-4 | 70 | 64 |
| | MB 320-411226/1-A | 97 | 92 |
| | LCS 320-411226/2-A | 95 | 92 |
| | LCSD 320-411226/3-A | 88 | 89 |

| | QC LIMITS |
|---|---|
| PFDoA = 13C2 PFDoA | 25-150 |
| PFTDA = 13C2 PFTeDA | 25-150 |

# Column to be used to flag recovery values

FORM II 537 (modified)

FORM III
LCMS LAB CONTROL SAMPLE RECOVERY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 460-217547-1

SDG No.:

Matrix: Water Level: Low Lab File ID: 2020.09.10_A18_PFC_A_075.d

Lab ID: LCS 320-410910/2-A Client ID:

| COMPOUND | SPIKE ADDED (ng/L) | LCS CONCENTRATION (ng/L) | LCS % REC | QC LIMITS REC | # |
|---|---|---|---|---|---|
| Perfluorobutanoic acid (PFBA) | 40.0 | 39.79 | 99 | 76-136 | |
| Perfluoropentanoic acid (PFPeA) | 40.0 | 37.53 | 94 | 71-131 | |
| Perfluorohexanoic acid (PFHxA) | 40.0 | 36.61 | 92 | 73-133 | |
| Perfluoroheptanoic acid (PFHpA) | 40.0 | 34.02 | 85 | 72-132 | |
| Perfluorooctanoic acid (PFOA) | 40.0 | 39.17 | 98 | 70-130 | |
| Perfluorononanoic acid (PFNA) | 40.0 | 37.61 | 94 | 75-135 | |
| Perfluorodecanoic acid (PFDA) | 40.0 | 34.20 | 86 | 76-136 | |
| Perfluoroundecanoic acid (PFUnA) | 40.0 | 42.31 | 106 | 68-128 | |
| Perfluorododecanoic acid (PFDoA) | 40.0 | 31.77 | 79 | 71-131 | |
| Perfluorotridecanoic acid (PFTriA) | 40.0 | 31.90 | 80 | 71-131 | |
| Perfluorotetradecanoic acid (PFTeA) | 40.0 | 45.97 | 115 | 70-130 | |
| Perfluorobutanesulfonic acid (PFBS) | 35.4 | 32.55 | 92 | 67-127 | |
| Perfluorohexanesulfonic acid (PFHxS) | 36.4 | 32.14 | 88 | 59-119 | |
| Perfluoroheptanesulfonic Acid (PFHpS) | 38.1 | 36.25 | 95 | 76-136 | |
| Perfluorooctanesulfonic acid (PFOS) | 37.1 | 35.50 | 96 | 70-130 | |
| Perfluorodecanesulfonic acid (PFDS) | 38.6 | 34.21 | 89 | 71-131 | |
| Perfluorooctanesulfonamide (FOSA) | 40.0 | 39.32 | 98 | 73-133 | |
| N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA) | 40.0 | 40.79 | 102 | 76-136 | |
| N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA) | 40.0 | 36.89 | 92 | 76-136 | |
| 6:2 FTS | 37.9 | 35.12 | 93 | 59-175 | |
| 8:2 FTS | 38.3 | 36.14 | 94 | 75-135 | |
| 13C4 PFBA | 100 | 54.88 | 55 | 25-150 | |
| 13C5 PFPeA | 100 | 56.03 | 56 | 25-150 | |
| 13C2 PFHxA | 100 | 63.98 | 64 | 25-150 | |
| 13C4 PFHpA | 100 | 66.20 | 66 | 25-150 | |
| 13C4 PFOA | 100 | 58.14 | 58 | 25-150 | |
| 13C5 PFNA | 100 | 64.17 | 64 | 25-150 | |
| 13C2 PFDA | 100 | 65.62 | 66 | 25-150 | |
| 13C2 PFUnA | 100 | 69.05 | 69 | 25-150 | |
| 13C2 PFDoA | 100 | 64.77 | 65 | 25-150 | |
| 13C2 PFTeDA | 100 | 57.49 | 57 | 25-150 | |

# Column to be used to flag recovery and RPD values

FORM III 537 (modified)

FORM III
LCMS LAB CONTROL SAMPLE RECOVERY

Lab Name: Eurofins TestAmerica, Sacramento  Job No.: 460-217547-1

SDG No.:

Matrix: Water  Level: Low  Lab File ID: 2020.09.10_A18_PFC_A_075.d

Lab ID: LCS 320-410910/2-A  Client ID:

| COMPOUND | SPIKE ADDED (ng/L) | LCS CONCENTRATION (ng/L) | LCS % REC | QC LIMITS REC | # |
|---|---|---|---|---|---|
| 13C3 PFBS | 93.0 | 66.66 | 72 | 25-150 | |
| 18O2 PFHxS | 94.6 | 71.61 | 76 | 25-150 | |
| 13C4 PFOS | 95.6 | 68.55 | 72 | 25-150 | |
| 13C8 FOSA | 100 | 58.33 | 58 | 25-150 | |
| d3-NMeFOSAA | 100 | 57.83 | 58 | 25-150 | |
| d5-NEtFOSAA | 100 | 61.77 | 62 | 25-150 | |
| M2-6:2 FTS | 95.0 | 64.46 | 68 | 25-150 | |
| M2-8:2 FTS | 95.8 | 72.48 | 76 | 25-150 | |

# Column to be used to flag recovery and RPD values

FORM III 537 (modified)

FORM III
LCMS LAB CONTROL SAMPLE RECOVERY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 460-217547-1

SDG No.:

Matrix: Water Level: Low Lab File ID: 2020.09.11_A9_PFC_AA_026.d

Lab ID: LCS 320-411226/2-A Client ID:

| COMPOUND | SPIKE ADDED (ng/L) | LCS CONCENTRATION (ng/L) | LCS % REC | QC LIMITS REC | # |
|---|---|---|---|---|---|
| Perfluorobutanoic acid (PFBA) | 40.0 | 43.69 | 109 | 76-136 | |
| Perfluoropentanoic acid (PFPeA) | 40.0 | 39.79 | 99 | 71-131 | |
| Perfluorohexanoic acid (PFHxA) | 40.0 | 42.56 | 106 | 73-133 | |
| Perfluoroheptanoic acid (PFHpA) | 40.0 | 42.66 | 107 | 72-132 | |
| Perfluorooctanoic acid (PFOA) | 40.0 | 41.65 | 104 | 70-130 | |
| Perfluorononanoic acid (PFNA) | 40.0 | 42.80 | 107 | 75-135 | |
| Perfluorodecanoic acid (PFDA) | 40.0 | 43.22 | 108 | 76-136 | |
| Perfluoroundecanoic acid (PFUnA) | 40.0 | 42.76 | 107 | 68-128 | |
| Perfluorododecanoic acid (PFDoA) | 40.0 | 39.08 | 98 | 71-131 | |
| Perfluorotridecanoic acid (PFTriA) | 40.0 | 37.81 | 95 | 71-131 | |
| Perfluorotetradecanoic acid (PFTeA) | 40.0 | 38.52 | 96 | 70-130 | |
| Perfluorobutanesulfonic acid (PFBS) | 35.4 | 38.07 | 108 | 67-127 | |
| Perfluorohexanesulfonic acid (PFHxS) | 36.4 | 34.33 | 94 | 59-119 | |
| Perfluoroheptanesulfonic Acid (PFHpS) | 38.1 | 40.41 | 106 | 76-136 | |
| Perfluorooctanesulfonic acid (PFOS) | 37.1 | 38.35 | 103 | 70-130 | |
| Perfluorodecanesulfonic acid (PFDS) | 38.6 | 38.33 | 99 | 71-131 | |
| Perfluorooctanesulfonamide (FOSA) | 40.0 | 42.22 | 106 | 73-133 | |
| N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA) | 40.0 | 45.82 | 115 | 76-136 | |
| N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA) | 40.0 | 41.81 | 105 | 76-136 | |
| 6:2 FTS | 37.9 | 37.34 | 98 | 59-175 | |
| 8:2 FTS | 38.3 | 39.15 | 102 | 75-135 | |
| 13C4 PFBA | 100 | 89.92 | 90 | 25-150 | |
| 13C5 PFPeA | 100 | 93.59 | 94 | 25-150 | |
| 13C2 PFHxA | 100 | 89.61 | 90 | 25-150 | |
| 13C4 PFHpA | 100 | 95.68 | 96 | 25-150 | |
| 13C4 PFOA | 100 | 93.22 | 93 | 25-150 | |
| 13C5 PFNA | 100 | 99.94 | 100 | 25-150 | |
| 13C2 PFDA | 100 | 99.18 | 99 | 25-150 | |
| 13C2 PFUnA | 100 | 100.3 | 100 | 25-150 | |
| 13C2 PFDoA | 100 | 95.33 | 95 | 25-150 | |
| 13C2 PFTeDA | 100 | 92.20 | 92 | 25-150 | |

# Column to be used to flag recovery and RPD values

FORM III 537 (modified)

FORM III
LCMS LAB CONTROL SAMPLE RECOVERY

Lab Name: Eurofins TestAmerica, Sacramento  Job No.: 460-217547-1

SDG No.:

Matrix: Water  Level: Low  Lab File ID: 2020.09.11_A9_PFC_AA_026.d

Lab ID: LCS 320-411226/2-A  Client ID:

| COMPOUND | SPIKE ADDED (ng/L) | LCS CONCENTRATION (ng/L) | LCS % REC | QC LIMITS REC | # |
|---|---|---|---|---|---|
| 13C3 PFBS | 93.0 | 89.57 | 96 | 25-150 | |
| 18O2 PFHxS | 94.6 | 92.48 | 98 | 25-150 | |
| 13C4 PFOS | 95.6 | 94.94 | 99 | 25-150 | |
| 13C8 FOSA | 100 | 88.13 | 88 | 25-150 | |
| d3-NMeFOSAA | 100 | 76.16 | 76 | 25-150 | |
| d5-NEtFOSAA | 100 | 83.54 | 84 | 25-150 | |
| M2-6:2 FTS | 95.0 | 95.61 | 101 | 25-150 | |
| M2-8:2 FTS | 95.8 | 91.77 | 96 | 25-150 | |

# Column to be used to flag recovery and RPD values

FORM III 537 (modified)

FORM III
LCMS LAB CONTROL SAMPLE DUPLICATE RECOVERY

Lab Name: Eurofins TestAmerica, Sacramento  Job No.: 460-217547-1

SDG No.:

Matrix: Water  Level: Low  Lab File ID: 2020.09.10_A18_PFC_A_076.d

Lab ID: LCSD 320-410910/3-A  Client ID:

| COMPOUND | SPIKE ADDED (ng/L) | LCSD CONCENTRATION (ng/L) | LCSD % REC | % RPD | QC LIMITS RPD | QC LIMITS REC | # |
|---|---|---|---|---|---|---|---|
| Perfluorobutanoic acid (PFBA) | 40.0 | 39.95 | 100 | 0 | 30 | 76-136 | |
| Perfluoropentanoic acid (PFPeA) | 40.0 | 39.21 | 98 | 4 | 30 | 71-131 | |
| Perfluorohexanoic acid (PFHxA) | 40.0 | 39.20 | 98 | 7 | 30 | 73-133 | |
| Perfluoroheptanoic acid (PFHpA) | 40.0 | 36.55 | 91 | 7 | 30 | 72-132 | |
| Perfluorooctanoic acid (PFOA) | 40.0 | 39.44 | 99 | 1 | 30 | 70-130 | |
| Perfluorononanoic acid (PFNA) | 40.0 | 44.28 | 111 | 16 | 30 | 75-135 | |
| Perfluorodecanoic acid (PFDA) | 40.0 | 32.38 | 81 | 5 | 30 | 76-136 | |
| Perfluoroundecanoic acid (PFUnA) | 40.0 | 42.82 | 107 | 1 | 30 | 68-128 | |
| Perfluorododecanoic acid (PFDoA) | 40.0 | 32.50 | 81 | 2 | 30 | 71-131 | |
| Perfluorotridecanoic acid (PFTriA) | 40.0 | 33.88 | 85 | 6 | 30 | 71-131 | |
| Perfluorotetradecanoic acid (PFTeA) | 40.0 | 42.61 | 107 | 8 | 30 | 70-130 | |
| Perfluorobutanesulfonic acid (PFBS) | 35.4 | 32.20 | 91 | 1 | 30 | 67-127 | |
| Perfluorohexanesulfonic acid (PFHxS) | 36.4 | 32.49 | 89 | 1 | 30 | 59-119 | |
| Perfluoroheptanesulfonic Acid (PFHpS) | 38.1 | 37.83 | 99 | 4 | 30 | 76-136 | |
| Perfluorooctanesulfonic acid (PFOS) | 37.1 | 35.53 | 96 | 0 | 30 | 70-130 | |
| Perfluorodecanesulfonic acid (PFDS) | 38.6 | 33.52 | 87 | 2 | 30 | 71-131 | |
| Perfluorooctanesulfonamide (FOSA) | 40.0 | 38.85 | 97 | 1 | 30 | 73-133 | |
| N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA) | 40.0 | 39.80 | 99 | 2 | 30 | 76-136 | |
| N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA) | 40.0 | 37.29 | 93 | 1 | 30 | 76-136 | |
| 6:2 FTS | 37.9 | 34.57 | 91 | 2 | 30 | 59-175 | |
| 8:2 FTS | 38.3 | 37.33 | 97 | 3 | 30 | 75-135 | |
| 13C4 PFBA | 100 | 63.30 | 63 | | | 25-150 | |
| 13C5 PFPeA | 100 | 64.85 | 65 | | | 25-150 | |
| 13C2 PFHxA | 100 | 69.92 | 70 | | | 25-150 | |
| 13C4 PFHpA | 100 | 76.44 | 76 | | | 25-150 | |
| 13C4 PFOA | 100 | 70.35 | 70 | | | 25-150 | |
| 13C5 PFNA | 100 | 69.97 | 70 | | | 25-150 | |
| 13C2 PFDA | 100 | 75.35 | 75 | | | 25-150 | |
| 13C2 PFUnA | 100 | 71.26 | 71 | | | 25-150 | |
| 13C2 PFDoA | 100 | 72.73 | 73 | | | 25-150 | |
| 13C2 PFTeDA | 100 | 87.81 | 88 | | | 25-150 | |

# Column to be used to flag recovery and RPD values

FORM III 537 (modified)

FORM III
LCMS LAB CONTROL SAMPLE DUPLICATE RECOVERY

Lab Name: Eurofins TestAmerica, Sacramento  Job No.: 460-217547-1

SDG No.:

Matrix: Water  Level: Low  Lab File ID: 2020.09.10_A18_PFC_A_076.d

Lab ID: LCSD 320-410910/3-A  Client ID:

| COMPOUND | SPIKE ADDED (ng/L) | LCSD CONCENTRATION (ng/L) | LCSD % REC | % RPD | QC LIMITS RPD | QC LIMITS REC | # |
|---|---|---|---|---|---|---|---|
| 13C3 PFBS | 93.0 | 77.08 | 83 | | | 25-150 | |
| 18O2 PFHxS | 94.6 | 79.73 | 84 | | | 25-150 | |
| 13C4 PFOS | 95.6 | 77.46 | 81 | | | 25-150 | |
| 13C8 FOSA | 100 | 68.60 | 69 | | | 25-150 | |
| d3-NMeFOSAA | 100 | 66.49 | 66 | | | 25-150 | |
| d5-NEtFOSAA | 100 | 72.74 | 73 | | | 25-150 | |
| M2-6:2 FTS | 95.0 | 74.37 | 78 | | | 25-150 | |
| M2-8:2 FTS | 95.8 | 75.94 | 79 | | | 25-150 | |

# Column to be used to flag recovery and RPD values

FORM III 537 (modified)

FORM III
LCMS LAB CONTROL SAMPLE DUPLICATE RECOVERY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 460-217547-1

SDG No.:

Matrix: Water Level: Low Lab File ID: 2020.09.11_A9_PFC_AA_027.d

Lab ID: LCSD 320-411226/3-A Client ID:

| COMPOUND | SPIKE ADDED (ng/L) | LCSD CONCENTRATION (ng/L) | LCSD % REC | % RPD | QC LIMITS RPD | QC LIMITS REC | # |
|---|---|---|---|---|---|---|---|
| Perfluorobutanoic acid (PFBA) | 40.0 | 43.48 | 109 | 0 | 30 | 76-136 | |
| Perfluoropentanoic acid (PFPeA) | 40.0 | 39.01 | 98 | 2 | 30 | 71-131 | |
| Perfluorohexanoic acid (PFHxA) | 40.0 | 41.96 | 105 | 1 | 30 | 73-133 | |
| Perfluoroheptanoic acid (PFHpA) | 40.0 | 42.11 | 105 | 1 | 30 | 72-132 | |
| Perfluorooctanoic acid (PFOA) | 40.0 | 41.33 | 103 | 1 | 30 | 70-130 | |
| Perfluorononanoic acid (PFNA) | 40.0 | 45.26 | 113 | 6 | 30 | 75-135 | |
| Perfluorodecanoic acid (PFDA) | 40.0 | 41.84 | 105 | 3 | 30 | 76-136 | |
| Perfluoroundecanoic acid (PFUnA) | 40.0 | 45.15 | 113 | 5 | 30 | 68-128 | |
| Perfluorododecanoic acid (PFDoA) | 40.0 | 45.36 | 113 | 15 | 30 | 71-131 | |
| Perfluorotridecanoic acid (PFTriA) | 40.0 | 40.17 | 100 | 6 | 30 | 71-131 | |
| Perfluorotetradecanoic acid (PFTeA) | 40.0 | 39.04 | 98 | 1 | 30 | 70-130 | |
| Perfluorobutanesulfonic acid (PFBS) | 35.4 | 37.40 | 106 | 2 | 30 | 67-127 | |
| Perfluorohexanesulfonic acid (PFHxS) | 36.4 | 34.52 | 95 | 1 | 30 | 59-119 | |
| Perfluoroheptanesulfonic Acid (PFHpS) | 38.1 | 40.88 | 107 | 1 | 30 | 76-136 | |
| Perfluorooctanesulfonic acid (PFOS) | 37.1 | 37.79 | 102 | 1 | 30 | 70-130 | |
| Perfluorodecanesulfonic acid (PFDS) | 38.6 | 38.93 | 101 | 2 | 30 | 71-131 | |
| Perfluorooctanesulfonamide (FOSA) | 40.0 | 45.31 | 113 | 7 | 30 | 73-133 | |
| N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA) | 40.0 | 43.86 | 110 | 4 | 30 | 76-136 | |
| N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA) | 40.0 | 42.04 | 105 | 1 | 30 | 76-136 | |
| 6:2 FTS | 37.9 | 35.19 | 93 | 6 | 30 | 59-175 | |
| 8:2 FTS | 38.3 | 40.25 | 105 | 3 | 30 | 75-135 | |
| 13C4 PFBA | 100 | 86.21 | 86 | | | 25-150 | |
| 13C5 PFPeA | 100 | 89.37 | 89 | | | 25-150 | |
| 13C2 PFHxA | 100 | 89.66 | 90 | | | 25-150 | |
| 13C4 PFHpA | 100 | 91.28 | 91 | | | 25-150 | |
| 13C4 PFOA | 100 | 88.67 | 89 | | | 25-150 | |
| 13C5 PFNA | 100 | 93.99 | 94 | | | 25-150 | |
| 13C2 PFDA | 100 | 94.51 | 95 | | | 25-150 | |
| 13C2 PFUnA | 100 | 96.43 | 96 | | | 25-150 | |
| 13C2 PFDoA | 100 | 87.92 | 88 | | | 25-150 | |
| 13C2 PFTeDA | 100 | 89.09 | 89 | | | 25-150 | |

# Column to be used to flag recovery and RPD values

FORM III 537 (modified)

FORM III
LCMS LAB CONTROL SAMPLE DUPLICATE RECOVERY

Lab Name: Eurofins TestAmerica, Sacramento  Job No.: 460-217547-1

SDG No.:

Matrix: Water  Level: Low  Lab File ID: 2020.09.11_A9_PFC_AA_027.d

Lab ID: LCSD 320-411226/3-A  Client ID:

| COMPOUND | SPIKE ADDED (ng/L) | LCSD CONCENTRATION (ng/L) | LCSD % REC | % RPD | QC LIMITS RPD | QC LIMITS REC | # |
|---|---|---|---|---|---|---|---|
| 13C3 PFBS | 93.0 | 87.09 | 94 | | | 25-150 | |
| 18O2 PFHxS | 94.6 | 89.31 | 94 | | | 25-150 | |
| 13C4 PFOS | 95.6 | 92.89 | 97 | | | 25-150 | |
| 13C8 FOSA | 100 | 81.27 | 81 | | | 25-150 | |
| d3-NMeFOSAA | 100 | 78.66 | 79 | | | 25-150 | |
| d5-NEtFOSAA | 100 | 79.34 | 79 | | | 25-150 | |
| M2-6:2 FTS | 95.0 | 90.28 | 95 | | | 25-150 | |
| M2-8:2 FTS | 95.8 | 88.12 | 92 | | | 25-150 | |

# Column to be used to flag recovery and RPD values

FORM III 537 (modified)

FORM IV
LCMS METHOD BLANK SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento  Job No.: 460-217547-1

SDG No.:

Lab File ID: 2020.09.10_A18_PFC_A_074.d  Lab Sample ID: MB 320-410910/1-A

Matrix: Water  Date Extracted: 09/09/2020 18:52

Instrument ID: A18  Date Analyzed: 09/10/2020 15:11

Level:(Low/Med) Low

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

| CLIENT SAMPLE ID | LAB SAMPLE ID | LAB FILE ID | DATE ANALYZED |
|---|---|---|---|
| | LCS 320-410910/2-A | 2020.09.10_A18_PFC_A_075.d | 09/10/2020 15:20 |
| | LCSD 320-410910/3-A | 2020.09.10_A18_PFC_A_076.d | 09/10/2020 15:29 |
| FB | 460-217547-7 | 2020.09.10_A18_PFC_A_077.d | 09/10/2020 15:38 |
| MW-203 | 460-217547-1 | 2020.09.11_A18_PFC_A_016.d | 09/11/2020 12:41 |
| MW-204 | 460-217547-2 | 2020.09.11_A18_PFC_A_017.d | 09/11/2020 12:50 |
| MW-205 | 460-217547-3 | 2020.09.11_A18_PFC_A_018.d | 09/11/2020 13:00 |
| MW-213 | 460-217547-5 | 2020.09.11_A18_PFC_A_019.d | 09/11/2020 13:09 |
| DUP | 460-217547-6 | 2020.09.11_A18_PFC_A_020.d | 09/11/2020 13:18 |

FORM IV
LCMS METHOD BLANK SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento  Job No.: 460-217547-1

SDG No.:

Lab File ID: 2020.09.11_A9_PFC_AA_025.d  Lab Sample ID: MB 320-411226/1-A

Matrix: Water  Date Extracted: 09/10/2020 18:32

Instrument ID: A9  Date Analyzed: 09/11/2020 13:14

Level:(Low/Med) Low

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

| CLIENT SAMPLE ID | LAB SAMPLE ID | LAB FILE ID | DATE ANALYZED |
|---|---|---|---|
| | LCS 320-411226/2-A | 2020.09.11_A9_PFC_AA_026.d | 09/11/2020 13:24 |
| | LCSD 320-411226/3-A | 2020.09.11_A9_PFC_AA_027.d | 09/11/2020 13:33 |
| MW-206 | 460-217547-4 | 2020.09.11_A9_PFC_AA_039.d | 09/11/2020 15:25 |

FORM VIII
LCMS INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento  Job No.: 460-217547-1

SDG No.:

Sample No.: IC 320-406555/5  Date Analyzed: 08/25/2020 17:10

Instrument ID: A18  GC Column: Gemini C18 3x50  ID: 3(mm)

Lab File ID (Standard): 2020.08.25_A18_ICAL  Heated Purge: (Y/N) N

Calibration ID: 51647

| | | 13PFOA | | | | | |
|---|---|---|---|---|---|---|---|
| | | AREA # | RT # | # | RT # | # | RT # |
| INITIAL CALIBRATION MID-POINT | | 10564097 | 4.16 | | | | |
| UPPER LIMIT | | 15846146 | 4.36 | | | | |
| LOWER LIMIT | | 5282049 | 3.96 | | | | |
| LAB SAMPLE ID | CLIENT SAMPLE ID | | | | | | |
| ICB 320-406555/9 | | 10921372 | 4.14 | | | | |
| ICV 320-406555/10 | | 10812430 | 4.14 | | | | |
| CCV 320-410948/3 CCVIS | | 10561280 | 4.10 | | | | |
| CCV 320-411371/3 CCVIS | | 12703244 | 4.10 | | | | |

13PFOA = 13C2 PFOA

Area Limit = 50%-150% of internal standard area
RT Limit = ± 0.2 minutes of internal standard RT

# Column used to flag values outside QC limits

FORM VIII 537 (MODIFIED)

FORM VIII
LCMS INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento  Job No.: 460-217547-1

SDG No.:

Sample No.: CCV 320-410948/3  Date Analyzed: 09/10/2020 12:54

Instrument ID: A18  GC Column: Gemini C18 3x50  ID: 3(mm)

Lab File ID (Standard): 2020.09.10_A18_PFC_  Heated Purge: (Y/N) N

Calibration ID: 51647

| | | 13PFOA | | | | | |
|---|---|---|---|---|---|---|---|
| | | AREA # | RT # | # | RT # | # | RT # |
| 12/24 HOUR STD | | 10561280 | 4.10 | | | | |
| UPPER LIMIT | | 15841920 | 4.30 | | | | |
| LOWER LIMIT | | 5280640 | 3.90 | | | | |
| LAB SAMPLE ID | CLIENT SAMPLE ID | | | | | | |
| CCB 320-410948/1 | | 12124580 | 4.11 | | | | |
| CCVL 320-410948/2 | | 11318081 | 4.10 | | | | |
| CCV 320-411087/1 | | 10146011 | 4.08 | | | | |
| MB 320-410910/1-A | | 11427575 | 4.07 | | | | |
| LCS 320-410910/2-A | | 12085104 | 4.07 | | | | |
| LCSD 320-410910/3-A | | 11853441 | 4.07 | | | | |
| 460-217547-7 | FB | 11939642 | 4.08 | | | | |
| CCV 320-411087/13 | | 10911451 | 4.08 | | | | |

13PFOA = 13C2 PFOA

Area Limit = 50%-150% of internal standard area
RT Limit = ± 0.2 minutes of internal standard RT

# Column used to flag values outside QC limits

FORM VIII 537 (MODIFIED)

FORM VIII
LCMS INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 460-217547-1

SDG No.:

Sample No.: CCV 320-411371/3 Date Analyzed: 09/11/2020 11:10

Instrument ID: A18 GC Column: Gemini C18 3x50 ID: 3(mm)

Lab File ID (Standard): 2020.09.11_A18_PFC_ Heated Purge: (Y/N) N

Calibration ID: 51647

| | | 13PFOA | | | | | |
|---|---|---|---|---|---|---|---|
| | | AREA # | RT # | # | RT # | # | RT # |
| 12/24 HOUR STD | | 12703244 | 4.10 | | | | |
| UPPER LIMIT | | 19054866 | 4.30 | | | | |
| LOWER LIMIT | | 6351622 | 3.90 | | | | |
| LAB SAMPLE ID | CLIENT SAMPLE ID | | | | | | |
| CCB 320-411371/1 | | 13554288 | 4.10 | | | | |
| CCVL 320-411371/2 | | 11242049 | 4.09 | | | | |
| CCV 320-411377/1 | | 11619087 | 4.09 | | | | |
| 460-217547-1 | MW-203 | 11958048 | 4.09 | | | | |
| 460-217547-2 | MW-204 | 12198246 | 4.08 | | | | |
| 460-217547-3 | MW-205 | 12038587 | 4.08 | | | | |
| 460-217547-5 | MW-213 | 11995113 | 4.10 | | | | |
| 460-217547-6 | DUP | 12435808 | 4.08 | | | | |
| CCV 320-411377/10 | | 11668243 | 4.09 | | | | |

13PFOA = 13C2 PFOA

Area Limit = 50%-150% of internal standard area
RT Limit = ± 0.2 minutes of internal standard RT

# Column used to flag values outside QC limits

FORM VIII 537 (MODIFIED)

FORM VIII
LCMS INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento  Job No.: 460-217547-1

SDG No.:

Sample No.: IC 320-410935/5  Date Analyzed: 09/10/2020 10:46

Instrument ID: A9  GC Column: Acquity  ID: 2.1(mm)

Lab File ID (Standard): 2020.09.10_A9 _PFC_  Heated Purge: (Y/N) N

Calibration ID: 51814

| | | 13PFOA | | | | | |
|---|---|---|---|---|---|---|---|
| | | AREA # | RT # | # | RT # | # | RT # |
| INITIAL CALIBRATION MID-POINT | | 6156052 | 3.37 | | | | |
| UPPER LIMIT | | 9234078 | 3.57 | | | | |
| LOWER LIMIT | | 3078026 | 3.17 | | | | |
| LAB SAMPLE ID | CLIENT SAMPLE ID | | | | | | |
| ICB 320-410935/14 | | 6274513 | 3.36 | | | | |
| ICV 320-410935/15 | | 6105955 | 3.35 | | | | |
| CCV 320-411300/3 CCVIS | | 6083088 | 3.37 | | | | |

13PFOA = 13C2 PFOA

Area Limit = 50%-150% of internal standard area
RT Limit = ± 0.2 minutes of internal standard RT

# Column used to flag values outside QC limits

FORM VIII 537 (MODIFIED)

FORM VIII
LCMS INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento  Job No.: 460-217547-1

SDG No.:

Sample No.: CCV 320-411300/3  Date Analyzed: 09/11/2020 09:49

Instrument ID: A9  GC Column: Acquity  ID: 2.1(mm)

Lab File ID (Standard): 2020.09.11_A9_PFC_A  Heated Purge: (Y/N) N

Calibration ID: 51814

| | | 13PFOA | | | | | |
|---|---|---|---|---|---|---|---|
| | | AREA # | RT # | # | RT # | # | RT # |
| 12/24 HOUR STD | | 6083088 | 3.37 | | | | |
| UPPER LIMIT | | 9124632 | 3.57 | | | | |
| LOWER LIMIT | | 3041544 | 3.17 | | | | |
| LAB SAMPLE ID | CLIENT SAMPLE ID | | | | | | |
| CCB 320-411300/1 | | 6327562 | 3.38 | | | | |
| CCVL 320-411300/2 | | 5724089 | 3.37 | | | | |
| CCV 320-411454/1 | | 6002612 | 3.35 | | | | |
| MB 320-411226/1-A | | 6092365 | 3.35 | | | | |
| LCS 320-411226/2-A | | 6014667 | 3.34 | | | | |
| LCSD 320-411226/3-A | | 6230408 | 3.35 | | | | |
| CCV 320-411454/13 | | 6006964 | 3.35 | | | | |
| 460-217547-4 | MW-206 | 6232796 | 3.34 | | | | |
| CCV 320-411454/18 | | 5894884 | 3.35 | | | | |

13PFOA = 13C2 PFOA

Area Limit = 50%-150% of internal standard area
RT Limit = ± 0.2 minutes of internal standard RT

# Column used to flag values outside QC limits

FORM VIII 537 (MODIFIED)

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento  Job No.: 460-217547-1

SDG No.:

Client Sample ID: MW-203  Lab Sample ID: 460-217547-1

Matrix: Water  Lab File ID: 2020.09.11_A18_PFC_A_016.d

Analysis Method: 537 (modified)  Date Collected: 09/02/2020 13:00

Extraction Method: 3535  Date Extracted: 09/09/2020 18:52

Sample wt/vol: 249.7(mL)  Date Analyzed: 09/11/2020 12:41

Con. Extract Vol.: 10.00(mL)  Dilution Factor: 1

Injection Volume: 20(uL)  GC Column: Gemini C18 3x50 ID: 3(mm)

% Moisture:  GPC Cleanup:(Y/N) N

Analysis Batch No.: 411377  Units: ng/L

| CAS NO. | COMPOUND NAME | RESULT | Q | RL | MDL |
|---|---|---|---|---|---|
| 375-22-4 | Perfluorobutanoic acid (PFBA) | 2.13 | B | 2.00 | 0.35 |
| 2706-90-3 | Perfluoropentanoic acid (PFPeA) | 1.71 | J | 2.00 | 0.49 |
| 307-24-4 | Perfluorohexanoic acid (PFHxA) | 2.03 | | 2.00 | 0.58 |
| 375-85-9 | Perfluoroheptanoic acid (PFHpA) | 1.57 | J | 2.00 | 0.25 |
| 335-67-1 | Perfluorooctanoic acid (PFOA) | 5.15 | | 2.00 | 0.85 |
| 375-95-1 | Perfluorononanoic acid (PFNA) | 0.76 | J | 2.00 | 0.27 |
| 335-76-2 | Perfluorodecanoic acid (PFDA) | 0.35 | J | 2.00 | 0.31 |
| 2058-94-8 | Perfluoroundecanoic acid (PFUnA) | 1.10 | U | 2.00 | 1.10 |
| 307-55-1 | Perfluorododecanoic acid (PFDoA) | 0.55 | U | 2.00 | 0.55 |
| 72629-94-8 | Perfluorotridecanoic acid (PFTriA) | 1.30 | U | 2.00 | 1.30 |
| 376-06-7 | Perfluorotetradecanoic acid (PFTeA) | 0.29 | U | 2.00 | 0.29 |
| 375-73-5 | Perfluorobutanesulfonic acid (PFBS) | 0.20 | U | 2.00 | 0.20 |
| 355-46-4 | Perfluorohexanesulfonic acid (PFHxS) | 1.47 | J B | 2.00 | 0.17 |
| 375-92-8 | Perfluoroheptanesulfonic Acid (PFHpS) | 0.19 | U | 2.00 | 0.19 |
| 1763-23-1 | Perfluorooctanesulfonic acid (PFOS) | 25.0 | | 2.00 | 0.54 |
| 335-77-3 | Perfluorodecanesulfonic acid (PFDS) | 0.32 | U | 2.00 | 0.32 |
| 754-91-6 | Perfluorooctanesulfonamide (FOSA) | 2.31 | B | 2.00 | 0.35 |
| 2355-31-9 | N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA) | 3.10 | U | 20.0 | 3.10 |
| 2991-50-6 | N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA) | 5.65 | J | 20.0 | 1.90 |
| 27619-97-2 | 6:2 FTS | 11.1 | J | 20.0 | 2.00 |
| 39108-34-4 | 8:2 FTS | 2.00 | U | 20.0 | 2.00 |

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento  Job No.: 460-217547-1

SDG No.:

Client Sample ID: MW-203  Lab Sample ID: 460-217547-1

Matrix: Water  Lab File ID: 2020.09.11_A18_PFC_A_016.d

Analysis Method: 537 (modified)  Date Collected: 09/02/2020 13:00

Extraction Method: 3535  Date Extracted: 09/09/2020 18:52

Sample wt/vol: 249.7(mL)  Date Analyzed: 09/11/2020 12:41

Con. Extract Vol.: 10.00(mL)  Dilution Factor: 1

Injection Volume: 20(uL)  GC Column: Gemini C18 3x50 ID: 3(mm)

% Moisture:  GPC Cleanup:(Y/N) N

Analysis Batch No.: 411377  Units: ng/L

| CAS NO. | ISOTOPE DILUTION | %REC | Q | LIMITS |
|---|---|---|---|---|
| STL00992 | 13C4 PFBA | 36 | | 25-150 |
| STL01893 | 13C5 PFPeA | 57 | | 25-150 |
| STL00993 | 13C2 PFHxA | 67 | | 25-150 |
| STL01892 | 13C4 PFHpA | 77 | | 25-150 |
| STL00990 | 13C4 PFOA | 82 | | 25-150 |
| STL00995 | 13C5 PFNA | 86 | | 25-150 |
| STL00996 | 13C2 PFDA | 81 | | 25-150 |
| STL00997 | 13C2 PFUnA | 75 | | 25-150 |
| STL00998 | 13C2 PFDoA | 74 | | 25-150 |
| STL02116 | 13C2 PFTeDA | 69 | | 25-150 |
| STL02337 | 13C3 PFBS | 93 | | 25-150 |
| STL00994 | 18O2 PFHxS | 100 | | 25-150 |
| STL00991 | 13C4 PFOS | 97 | | 25-150 |
| STL01056 | 13C8 FOSA | 75 | | 25-150 |
| STL02118 | d3-NMeFOSAA | 73 | | 25-150 |
| STL02117 | d5-NEtFOSAA | 76 | | 25-150 |
| STL02279 | M2-6:2 FTS | 213 | *5 | 25-150 |
| STL02280 | M2-8:2 FTS | 166 | *5 | 25-150 |

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\A18\20200911-103101.b\2020.09.11_A18_PFC_A_016.d
Lims ID: 460-217547-E-1-A
Client ID: MW-203
Sample Type: Client
Inject. Date: 11-Sep-2020 12:41:50 ALS Bottle#: 7 Worklist Smp#: 2
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Sample Info: 460-217547-e-1-a DUE 9/22 (#410910) (WATER)
Misc. Info.: Plate: 1 Rack: 1
Operator ID: TAISACA18-PC\A-18 Instrument ID: A18

Method: \\chromfs\Sacramento\ChromData\A18\20200911-103101.b\PFAS_A18V2.m
Limit Group: LC PFC ICAL
Last Update: 14-Sep-2020 09:53:39 Calib Date: 25-Aug-2020 17:37:57
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\A18\20200825-102078.b\2020.08.25_A18_ICAL_A_017.d

Column 1 : Gemini C18 3um 3mm x 50 mm ( 3.00 mm) Det: EXP1
Process Host: CTX1038

First Level Reviewer: sanjumnair Date: 14-Sep-2020 09:53:39
Ratio Calibration: CCV Sample: \\chromfs\Sacramento\ChromData\A18\20200911-103101.b\2020.09.11_A18_PFC_A_015.d

| Signal | RT | EXP RT | DLT RT | REL RT | Response | Amount ng/ml | Ratio(Limits) | %Rec | S/N | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| D 1 13C4 PFBA | | | | | | | | | | |
| 217.00 > 172.00 | 2.566 | 2.566 | 0.0 | 0.627 | 6912177 | 0.9115 | | 36.5 | 4139 | |
| 2 Perfluorobutanoic acid | | | | | | | | | | M |
| 212.90 > 169.00 | 2.574 | 2.566 | 0.008 | 1.003 | 127765 | 0.0532 | | | 0.9 | M |
| D 4 13C5 PFPeA | | | | | | | | | | |
| 267.90 > 223.00 | 2.920 | 2.909 | 0.011 | 0.713 | 8476553 | 1.44 | | 57.5 | 1092 | |
| 5 Perfluoropentanoic acid | | | | | | | | | | M |
| 262.90 > 219.00 | 2.909 | 2.920 | -0.011 | 0.996 | 144610 | 0.0428 | | | 0.2 | M |
| D 9 13C3 PFBS | | | | | | | | | | |
| 301.90 > 80.00 | 2.950 | 2.951 | -0.001 | 0.721 | 10009195 | 2.16 | | 92.9 | 193 | |
| D 11 13C2 PFHxA | | | | | | | | | | |
| 315.00 > 270.00 | 3.290 | 3.290 | 0.0 | 0.804 | 9895082 | 1.68 | | 67.2 | 3696 | |
| 10 Perfluorohexanoic acid | | | | | | | | | | M |
| 313.00 > 269.00 | 3.290 | 3.290 | 0.0 | 1.000 | 193041 | 0.0506 | Target=13.16 | | 0.7 | M |
| 313.00 > 119.00 | 3.290 | 3.290 | 0.0 | 1.000 | 14896 | | 12.96(6.58-19.74) | | 2.1 | M |
| D 17 18O2 PFHxS | | | | | | | | | | |
| 403.00 > 84.00 | 3.702 | 3.702 | 0.0 | 0.905 | 5808645 | 2.37 | | 100 | 5318 | |
| D 18 13C4 PFHpA | | | | | | | | | | |
| 367.00 > 322.00 | 3.693 | 3.702 | -0.009 | 0.902 | 9668893 | 1.92 | | 76.9 | 6351 | |
| 16 Perfluoroheptanoic acid | | | | | | | | | | M |
| 363.00 > 319.00 | 3.702 | 3.702 | 0.0 | 1.003 | 153818 | 0.0392 | Target=3.69 | | 1.6 | M |
| 363.00 > 169.00 | 3.693 | 3.702 | -0.009 | 1.000 | 39157 | | 3.93(1.85-5.54) | | 11.9 | M |
| 15 Perfluorohexanesulfonic acid | | | | | | | | | | M |
| 399.00 > 80.00 | 3.702 | 3.702 | 0.0 | 1.000 | 106366 | 0.0367 | Target=3.35 | | 1.5 | M |
| 399.00 > 99.00 | 3.702 | 3.702 | 0.0 | 1.000 | 28686 | | 3.71(1.67-5.02) | | 4.1 | M |
| D 20 M2-6:2 FTS | | | | | | | | | | |
| 429.00 > 81.00 | 4.076 | 4.068 | 0.008 | 0.996 | 4735691 | 5.06 | | 213 | 366 | |

| Signal | RT | EXP RT | DLT RT | REL RT | Response | Amount ng/ml | Ratio(Limits) | %Rec | S/N | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| 21 6:2 FTS | | | | | | | | | | |
| 427.00 > 407.00 | 4.076 | 4.068 | 0.008 | 1.000 | 1270636 | 0.2772 | | | 999 | |
| D 25 13C4 PFOA | | | | | | | | | | |
| 417.00 > 372.00 | 4.092 | 4.092 | 0.0 | 1.000 | 9800350 | 2.05 | | 81.9 | 6376 | |
| 22 Perfluorooctanoic acid | | | | | | | | | | M |
| 413.00 > 369.00 | 4.092 | 4.092 | 0.0 | 1.000 | 514484 | 0.1286 | Target=2.91 | | 8.8 | M |
| 413.00 > 169.00 | 4.092 | 4.092 | 0.0 | 1.000 | 208282 | | 2.47(1.45-4.36) | | 83.1 | M |
| * 23 13C2 PFOA | | | | | | | | | | |
| 415.00 > 370.00 | 4.092 | 4.092 | 0.0 | | 11958048 | 2.50 | | | 4949 | |
| D 27 13C4 PFOS | | | | | | | | | | |
| 503.00 > 80.00 | 4.454 | 4.454 | 0.0 | 1.088 | 3842826 | 2.32 | | 97.0 | 353 | |
| 29 Perfluorooctanesulfonic acid | | | | | | | | | | M |
| 499.00 > 80.00 | 4.454 | 4.454 | 0.0 | 1.000 | 1039823 | 0.6248 | Target=4.72 | | 60.9 | M |
| 499.00 > 99.00 | 4.454 | 4.454 | 0.0 | 1.000 | 181621 | | 5.73(2.36-7.07) | | 62.2 | M |
| D 30 13C5 PFNA | | | | | | | | | | |
| 468.00 > 423.00 | 4.470 | 4.470 | 0.0 | 1.092 | 8296949 | 2.15 | | 86.1 | 6278 | |
| 31 Perfluorononanoic acid | | | | | | | | | | M |
| 463.00 > 419.00 | 4.478 | 4.478 | 0.0 | 1.002 | 60310 | 0.0189 | Target=8.08 | | 3.0 | M |
| 463.00 > 169.00 | 4.478 | 4.478 | 0.0 | 1.002 | 6319 | | 9.54(4.04-12.12) | | 6.9 | M |
| D 33 13C8 FOSA | | | | | | | | | | |
| 506.00 > 78.00 | 4.794 | 4.786 | 0.008 | 1.172 | 5042875 | 1.89 | | 75.4 | 6088 | |
| 34 Perfluorooctanesulfonamide | | | | | | | | | | |
| 498.00 > 78.00 | 4.803 | 4.786 | 0.017 | 1.002 | 108393 | 0.0577 | | | 16.3 | |
| D 39 13C2 PFDA | | | | | | | | | | |
| 515.00 > 470.00 | 4.828 | 4.828 | 0.0 | 1.180 | 7616915 | 2.03 | | 81.4 | 5755 | |
| D 38 M2-8:2 FTS | | | | | | | | | | |
| 529.00 > 81.00 | 4.837 | 4.828 | 0.009 | 1.182 | 5377799 | 3.98 | | 166 | 845 | |
| 37 Perfluorodecanoic acid | | | | | | | | | | M |
| 513.00 > 469.00 | 4.828 | 4.828 | 0.0 | 1.000 | 25781 | 0.008779 | Target=10.81 | | 2.0 | M |
| 513.00 > 169.00 | 4.820 | 4.828 | -0.008 | 0.998 | 3259 | | 7.91(5.40-16.21) | | 2.8 | |
| 36 8:2 FTS | | | | | | | | | | |
| 527.00 > 507.00 | 4.828 | 4.828 | 0.0 | 0.998 | 8752 | 0.002196 | | | 53.7 | |
| D 40 d3-NMeFOSAA | | | | | | | | | | |
| 573.00 > 419.00 | 5.000 | 5.000 | 0.0 | 1.222 | 4563361 | 1.82 | | 72.6 | 3963 | |
| 41 NMeFOSAA | | | | | | | | | | M |
| 570.00 > 419.00 | 5.011 | 5.000 | 0.011 | 1.002 | 18578 | 0.0137 | | | 16.1 | M |
| D 43 13C2 PFUnA | | | | | | | | | | |
| 565.00 > 520.00 | 5.157 | 5.157 | 0.0 | 1.260 | 6928134 | 1.87 | | 74.7 | 8634 | |
| D 44 d5-NEtFOSAA | | | | | | | | | | |
| 589.00 > 419.00 | 5.166 | 5.157 | 0.009 | 1.262 | 5048702 | 1.90 | | 76.0 | 3155 | |
| 46 NEtFOSA | | | | | | | | | | |
| 584.00 > 419.00 | 5.166 | 5.166 | 0.0 | 1.000 | 192577 | 0.1411 | | | 256 | |
| D 56 13C2 PFDoA | | | | | | | | | | |
| 615.00 > 570.00 | 5.448 | 5.448 | 0.0 | 1.331 | 6773574 | 1.85 | | 74.0 | 7492 | |
| 57 Perfluorododecanoic acid | | | | | | | | | | |
| 613.00 > 569.00 | 5.448 | 5.448 | 0.0 | 1.000 | 10120 | 0.003653 | Target=8.64 | | 2.8 | |
| 613.00 > 169.00 | 5.448 | 5.448 | 0.0 | 1.000 | 1455 | | 6.96(4.32-12.96) | | 5.0 | |

| Signal | RT | EXP RT | DLT RT | REL RT | Response | Amount ng/ml | Ratio(Limits) | %Rec | S/N | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| D 61 13C2 PFTeDA | | | | | | | | | | |
| 715.00 > 670.00 | 5.960 | 5.959 | 0.001 | 1.456 | 5198001 | 1.72 | | 68.9 | 6298 | |

## QC Flag Legend

Processing Flags

Review Flags

M - Manually Integrated

Report Date: 14-Sep-2020 09:53:39 Chrom Revision: 2.3 11-Sep-2020 20:57:08

Eurofins TestAmerica, Sacramento

Data File: \\chromfs\Sacramento\ChromData\A18\20200911-103101.b\2020.09.11_A18_PFC_A_016.d

Injection Date: 11-Sep-2020 12:41:50 Instrument ID: A18

Lims ID: 460-217547-E-1-A Lab Sample ID: 320-217547-1

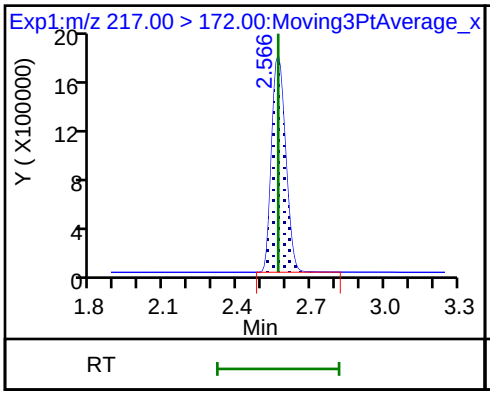
Client ID: MW-203

Operator ID: TAISACA18-PC\A-18 ALS Bottle#: 7 Worklist Smp#: 2

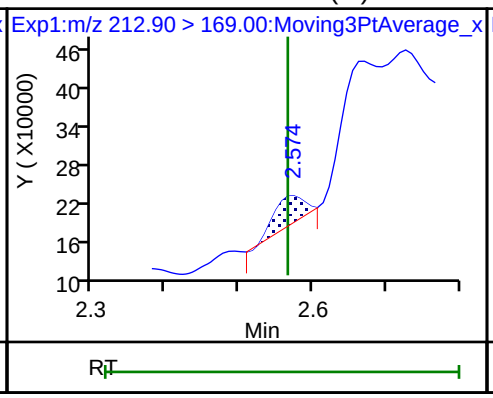
Injection Vol: 20.0 ul Dil. Factor: 1.0000

Method: PFAS_A18V2 Limit Group: LC PFC ICAL

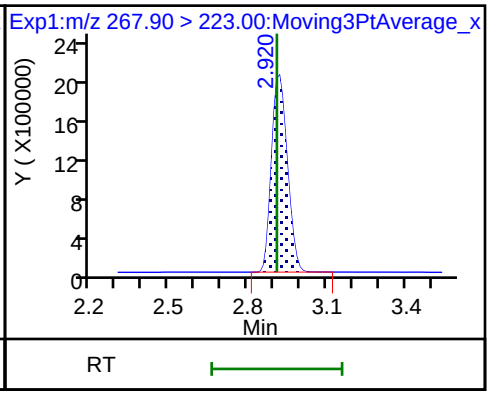
D 1 13C4 PFBA



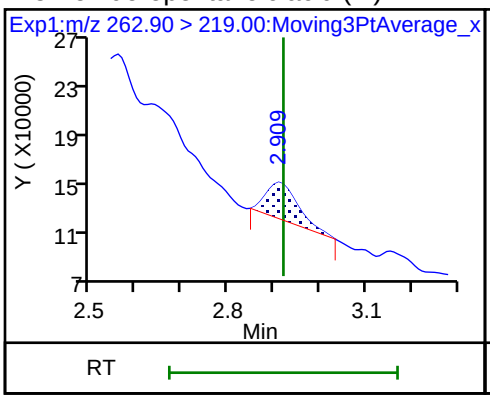

2 Perfluorobutanoic acid (M)



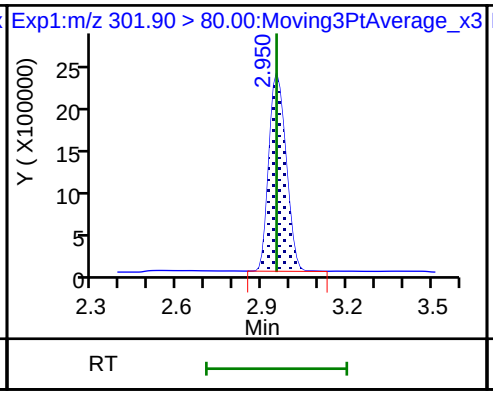

D 4 13C5 PFPeA



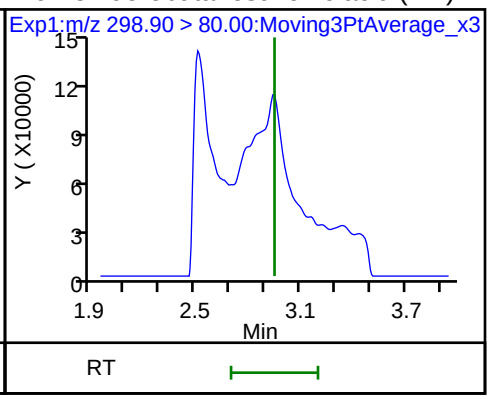

5 Perfluoropentanoic acid (M)



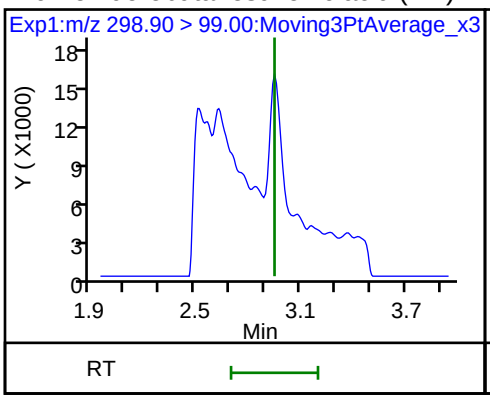

D 9 13C3 PFBS



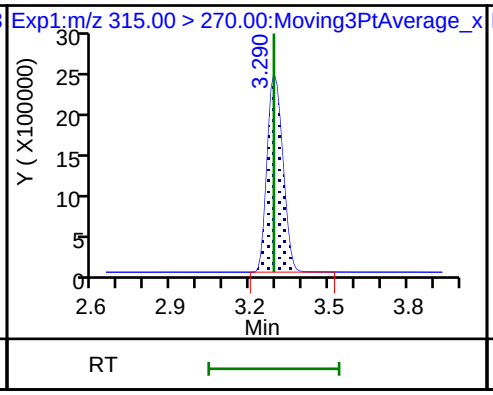

6 Perfluorobutanesulfonic acid (ND)



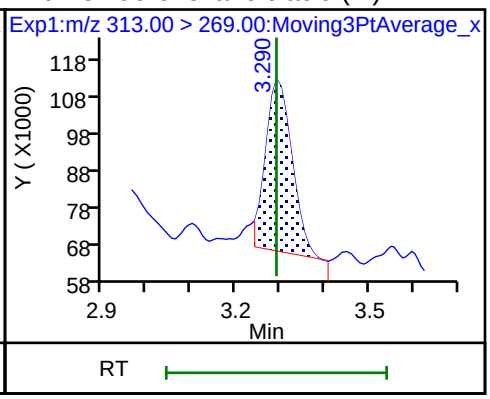

6 Perfluorobutanesulfonic acid (ND)



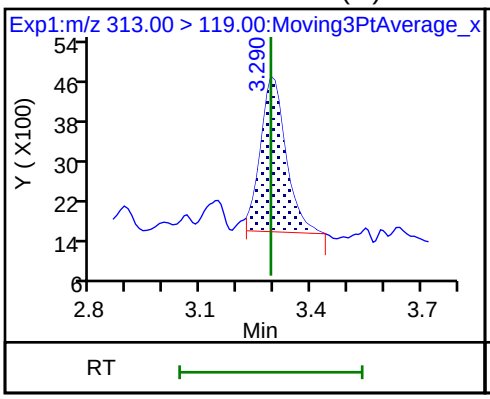

D 11 13C2 PFHxA



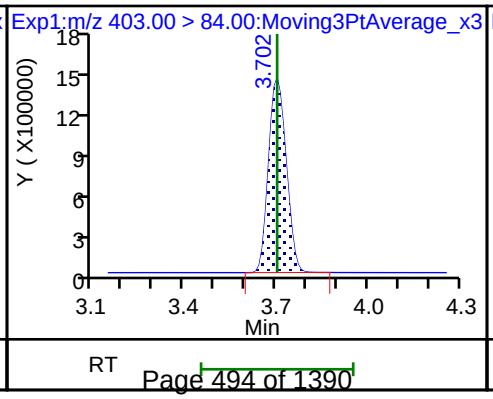

10 Perfluorohexanoic acid (M)



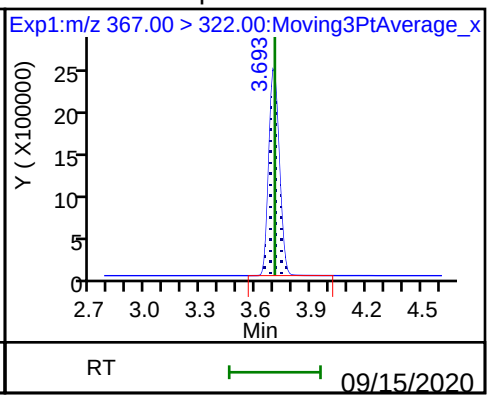

10 Perfluorohexanoic acid (M)



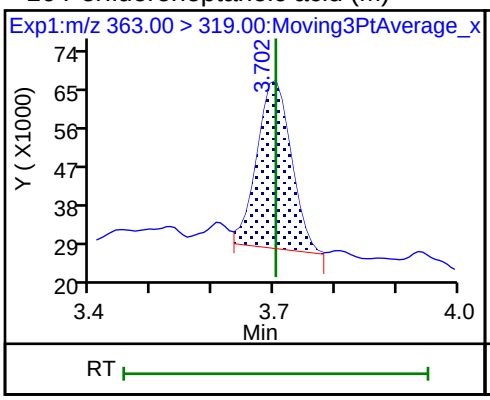

D 17 18O2 PFHxS



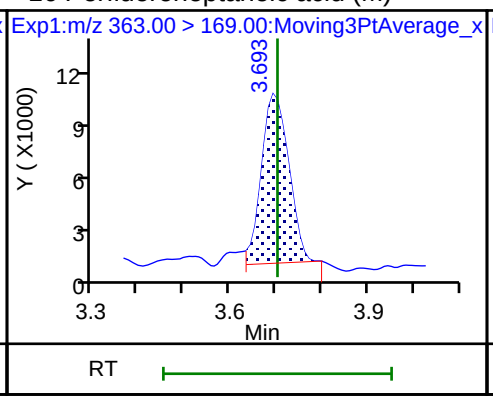

D 18 13C4 PFHpA



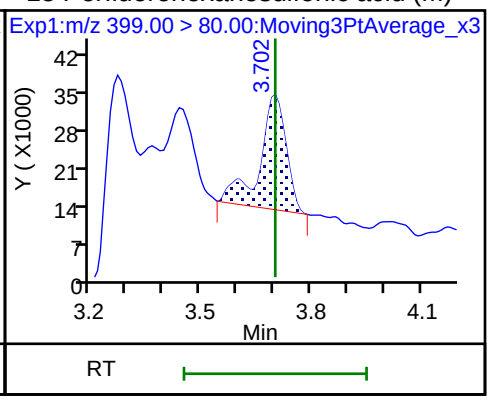
16 Perfluoroheptanoic acid (M)



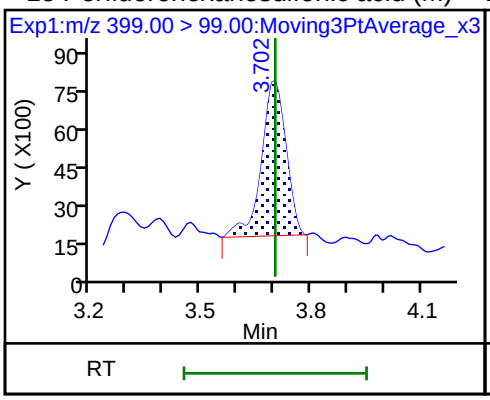

16 Perfluoroheptanoic acid (M)



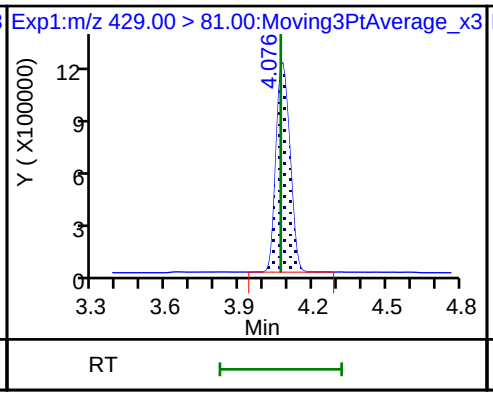

15 Perfluorohexanesulfonic acid (M)



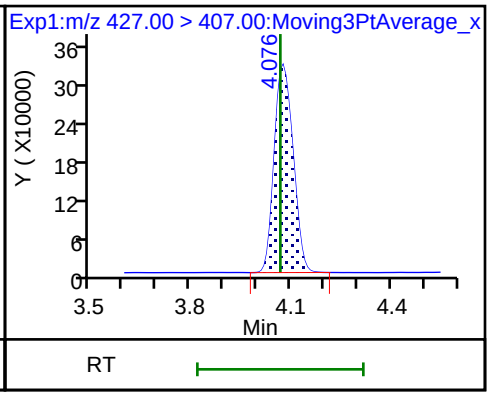

15 Perfluorohexanesulfonic acid (M)



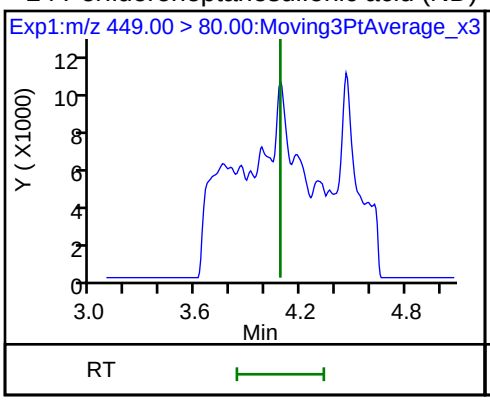

D 20 M2-6:2 FTS



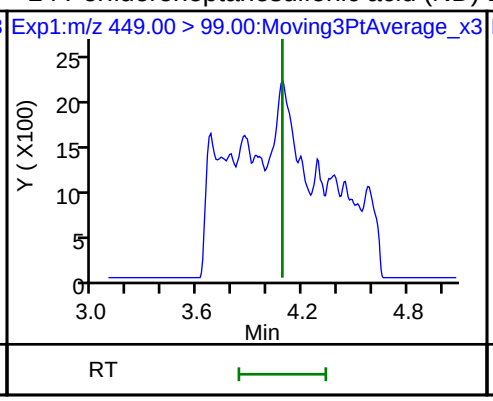

21 6:2 FTS



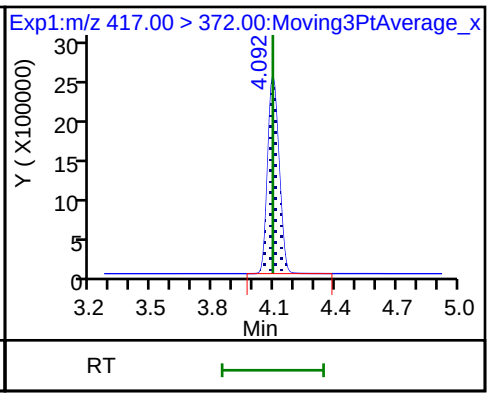

24 Perfluoroheptanesulfonic acid (ND)



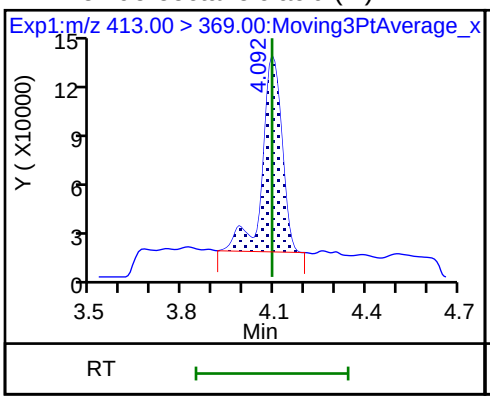

24 Perfluoroheptanesulfonic acid (ND)



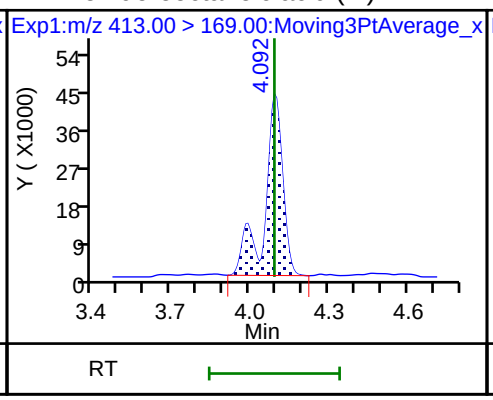

D 25 13C4 PFOA



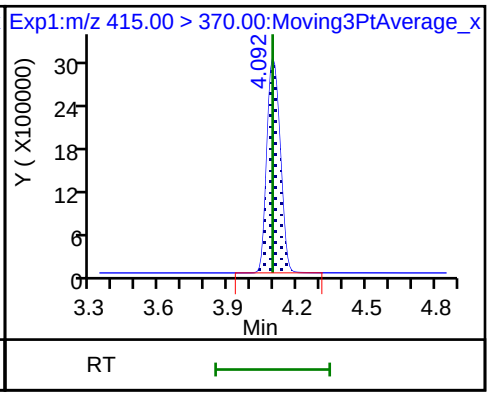

22 Perfluorooctanoic acid (M)



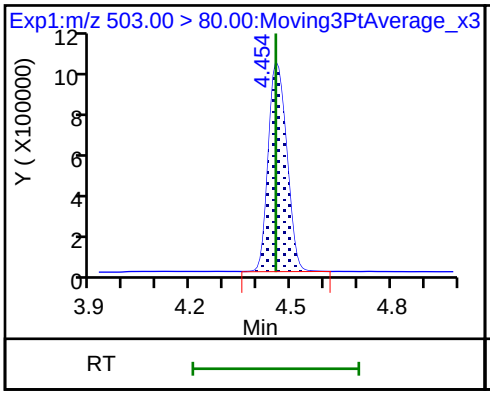

22 Perfluorooctanoic acid (M)



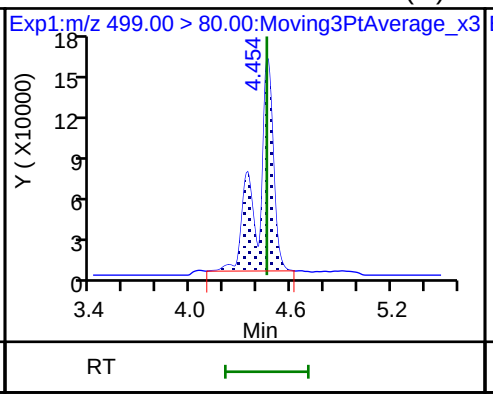

* 23 13C2 PFOA



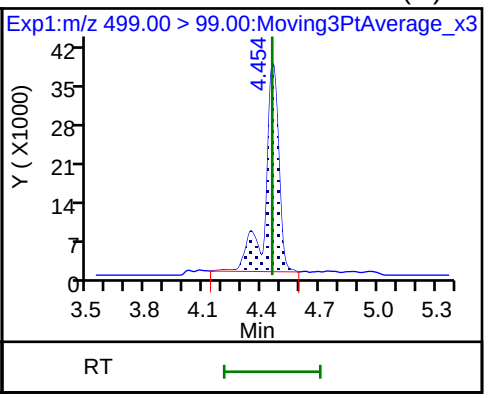
D 27 13C4 PFOS



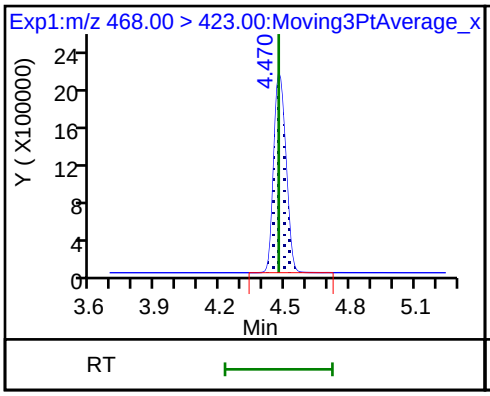

29 Perfluorooctanesulfonic acid (M)



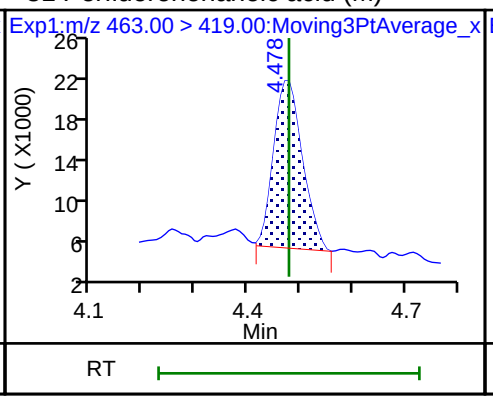

29 Perfluorooctanesulfonic acid (M)



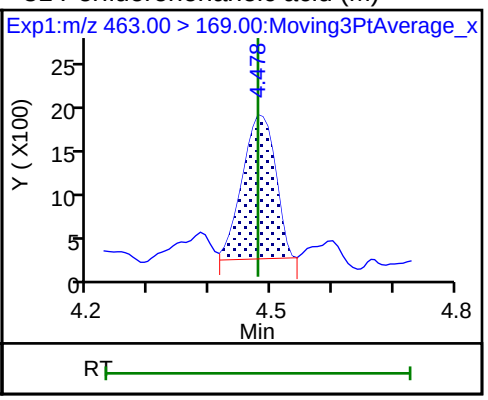

D 30 13C5 PFNA



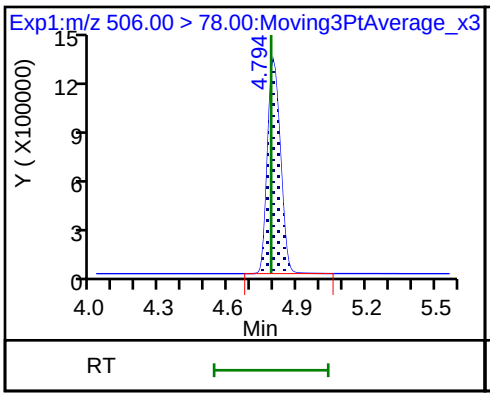

31 Perfluorononanoic acid (M)



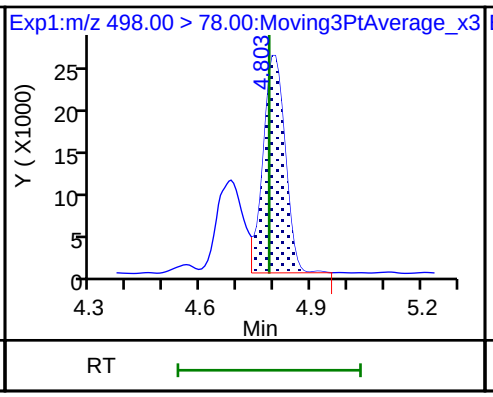

31 Perfluorononanoic acid (M)



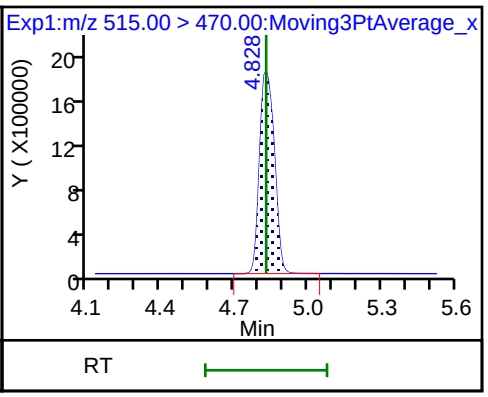

D 33 13C8 FOSA



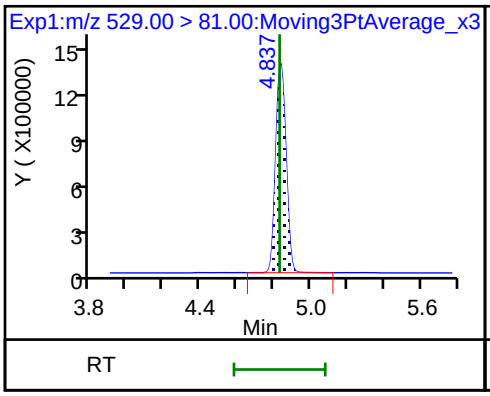

34 Perfluorooctanesulfonamide



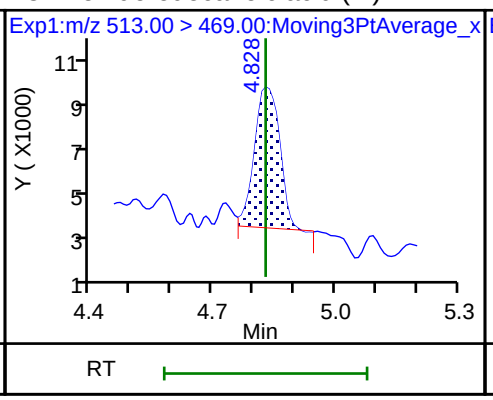

D 39 13C2 PFDA



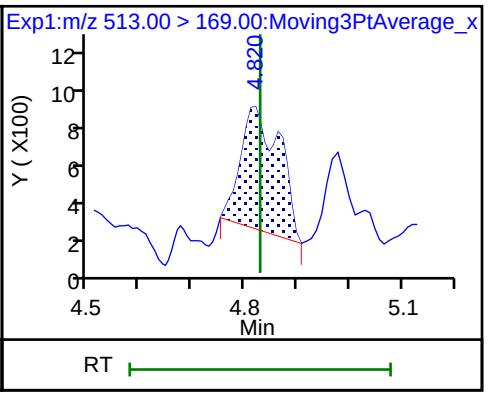

D 38 M2-8:2 FTS



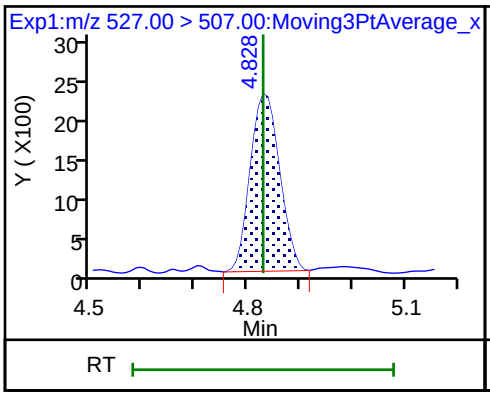

37 Perfluorodecanoic acid (M)



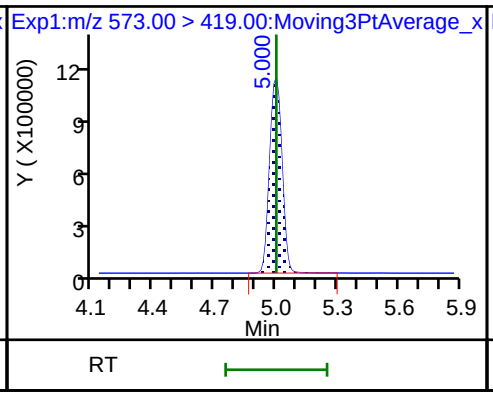

37 Perfluorodecanoic acid



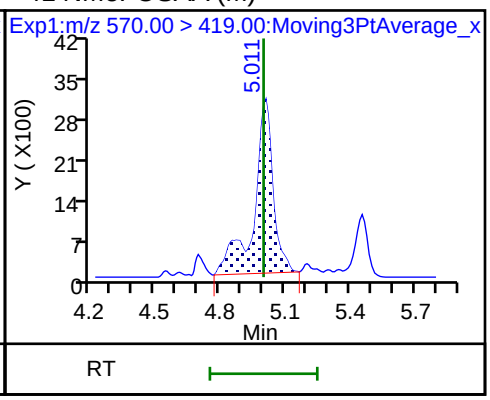
36 8:2 FTS



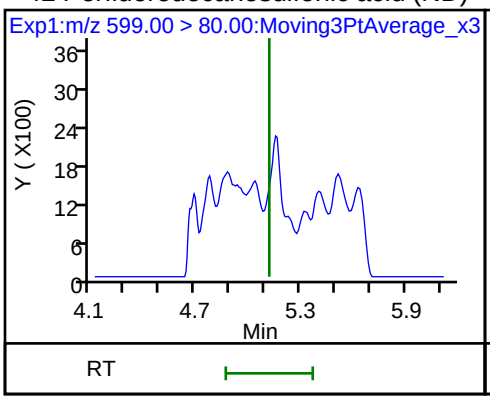

D 40 d3-NMeFOSAA



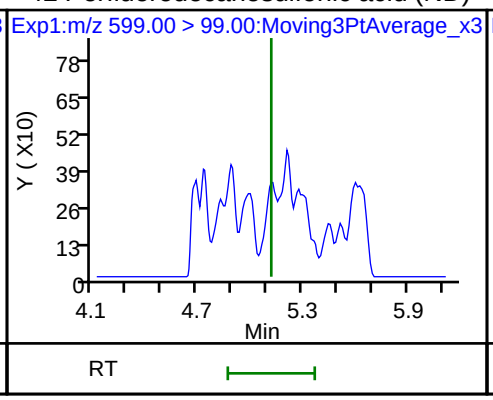

41 NMeFOSAA (M)



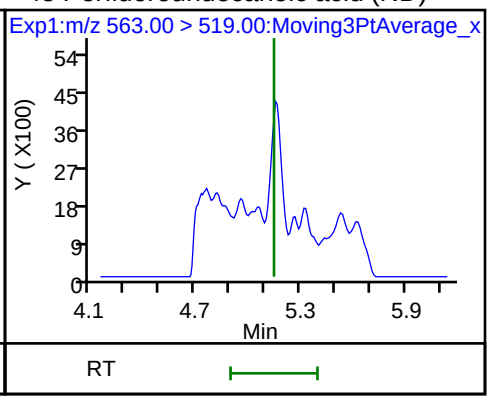

42 Perfluorodecanesulfonic acid (ND)



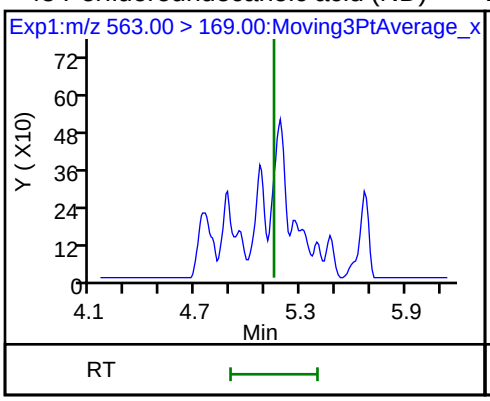

42 Perfluorodecanesulfonic acid (ND)



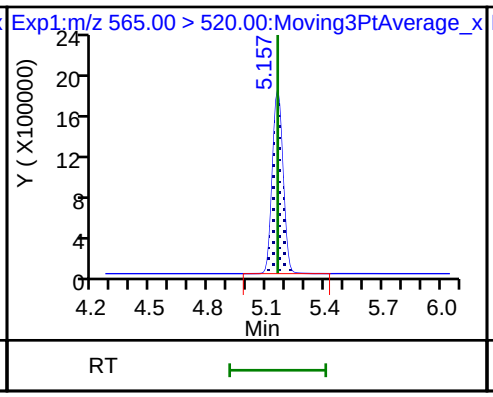

45 Perfluoroundecanoic acid (ND)



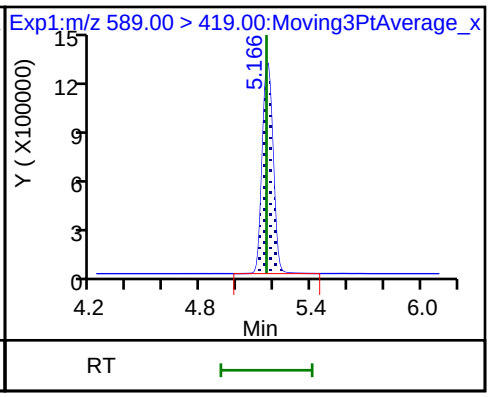

45 Perfluoroundecanoic acid (ND)



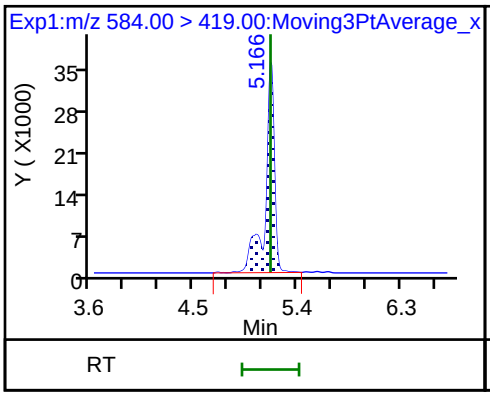

D 43 13C2 PFUnA



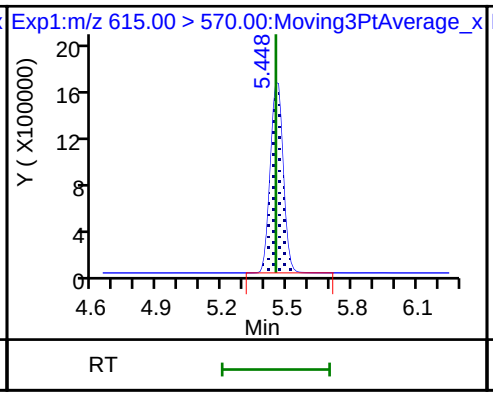

D 44 d5-NEtFOSAA



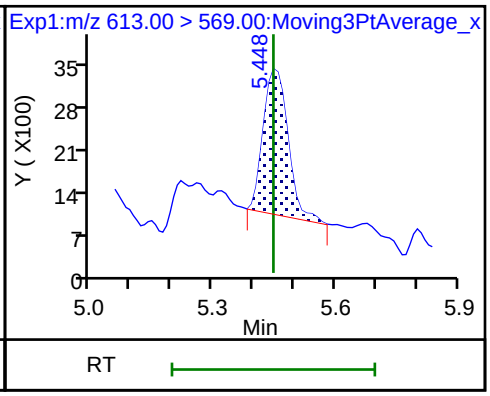

46 NEtFOSA



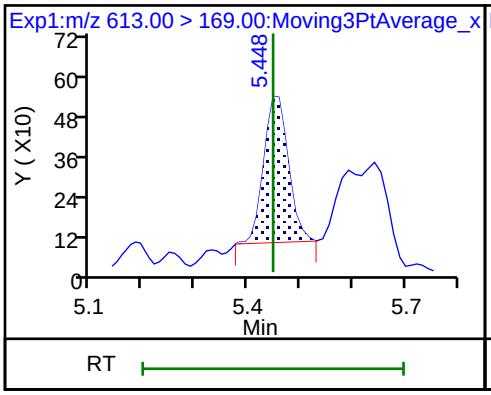

D 56 13C2 PFDoA



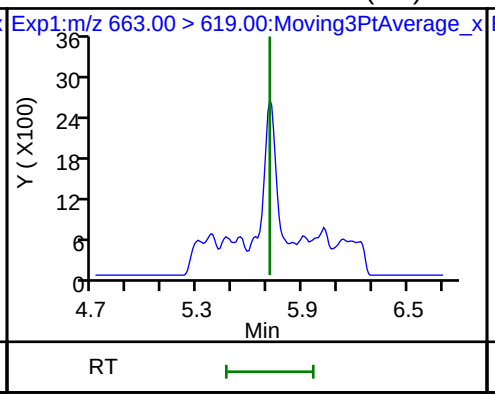

57 Perfluorododecanoic acid



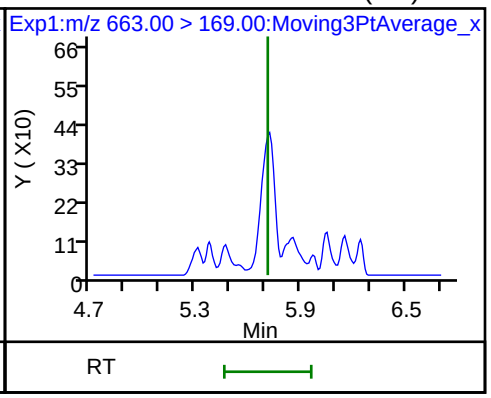
57 Perfluorododecanoic acid



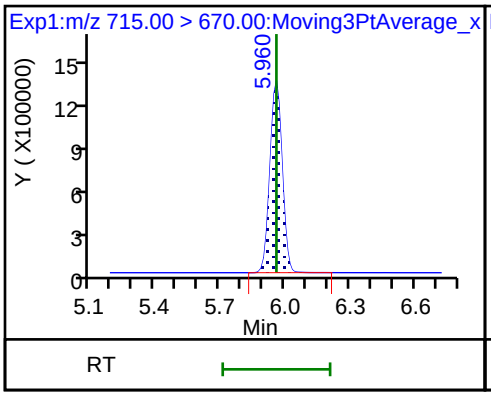

60 Perfluorotridecanoic acid (ND)



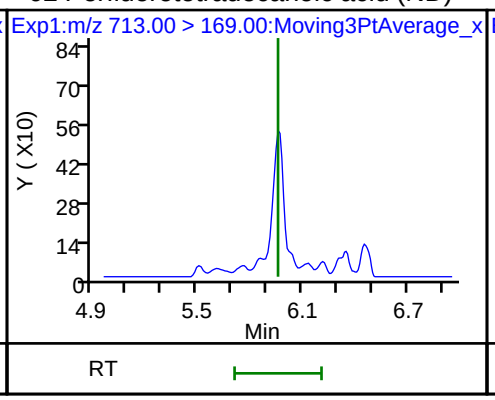

60 Perfluorotridecanoic acid (ND)



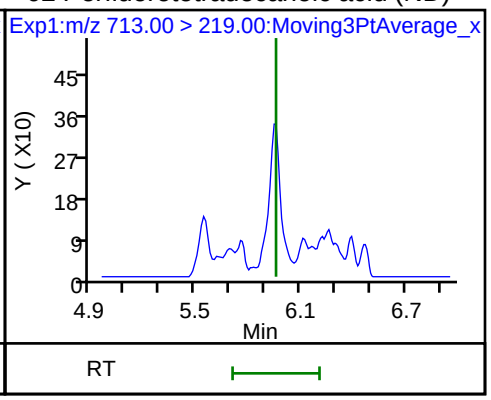

D 61 13C2 PFTeDA




62 Perfluorotetradecanoic acid (ND)




62 Perfluorotetradecanoic acid (ND)



Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

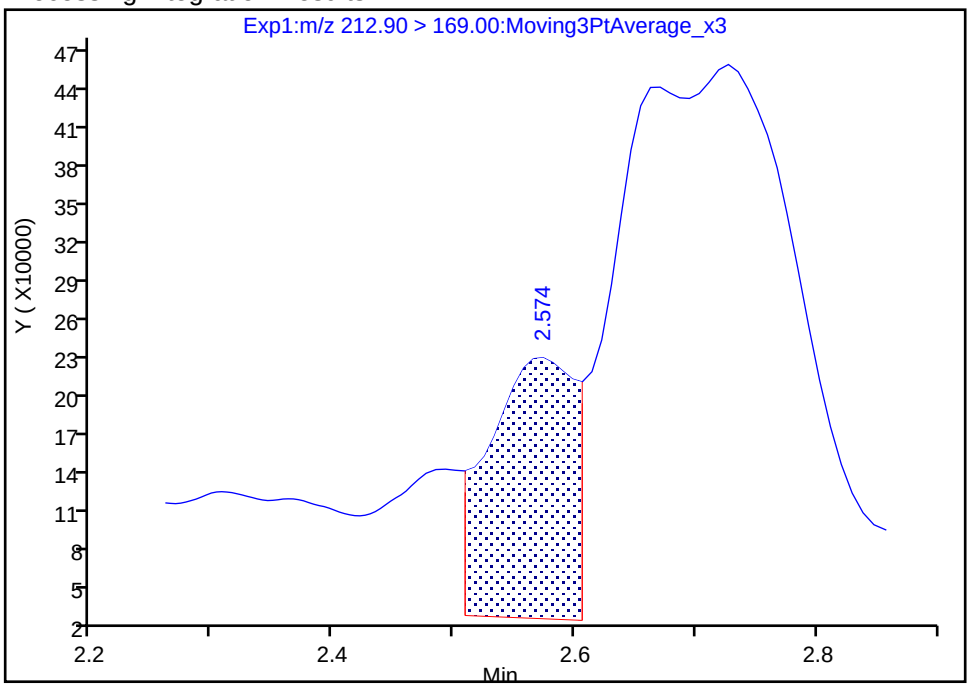
| | | | | | |
|---|---|---|---|---|---|
| Data File: | \\chromfs\Sacramento\ChromData\A18\20200911-103101.b\2020.09.11_A18_PFC_A_016.d | | | | |
| Injection Date: | 11-Sep-2020 12:41:50 | Instrument ID: | A18 | | |
| Lims ID: | 460-217547-E-1-A | Lab Sample ID: | 320-217547-1 | | |
| Client ID: | MW-203 | | | | |
| Operator ID: | TAISACA18-PC\A-18 | ALS Bottle#: | 7 | Worklist Smp#: | 2 |
| Injection Vol: | 20.0 ul | Dil. Factor: | 1.0000 | | |
| Method: | PFAS_A18V2 | Limit Group: | LC PFC ICAL | | |
| Column: | Gemini C18 3um 3mm x 50 mm ( 3.00mm) | Detector | EXP1 | | |

## 2 Perfluorobutanoic acid, CAS: 375-22-4

Signal: 1

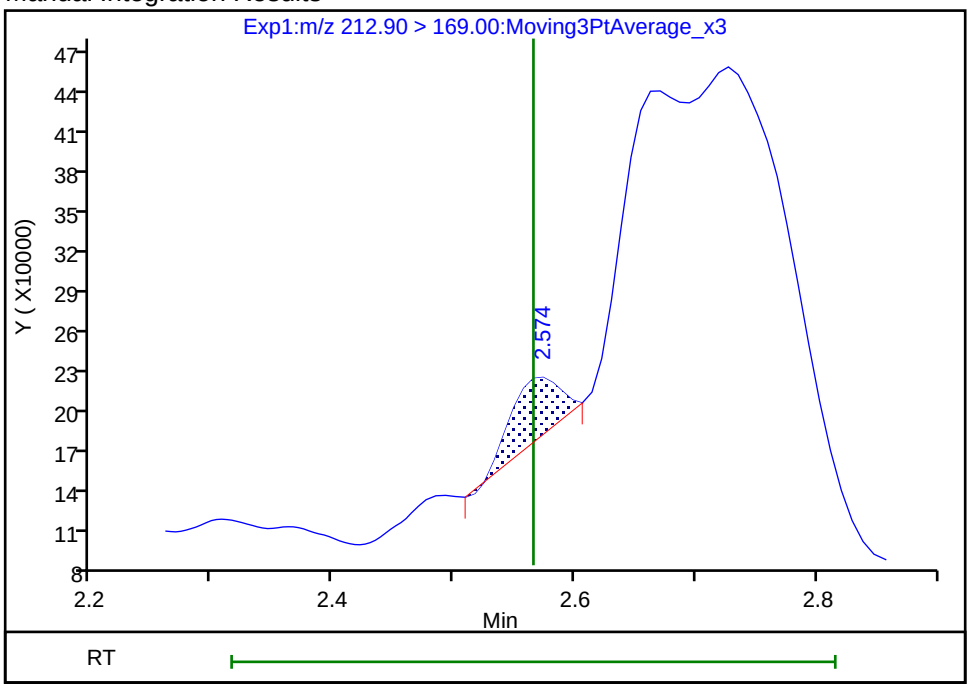
Processing Integration Results

RT: 2.57
Area: 997819
Amount: 0.415818
Amount Units: ng/ml




Manual Integration Results

RT: 2.57
Area: 127765
Amount: 0.053243
Amount Units: ng/ml




Reviewer: sanjumnair, 14-Sep-2020 09:49:34
Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

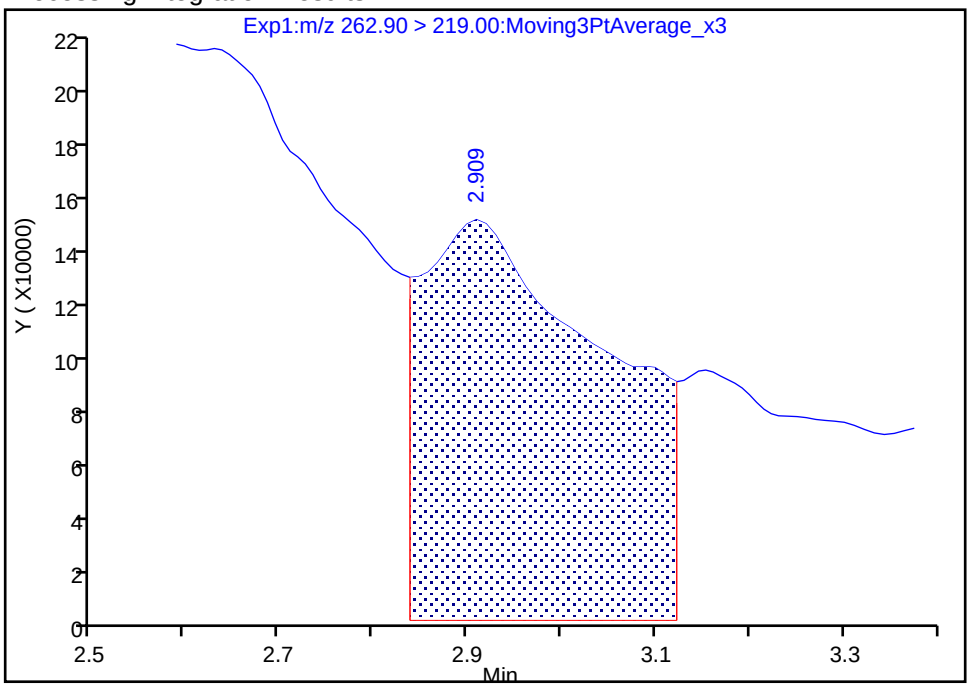
| | | | | | |
|---|---|---|---|---|---|
| Data File: | \\chromfs\Sacramento\ChromData\A18\20200911-103101.b\2020.09.11_A18_PFC_A_016.d | | | | |
| Injection Date: | 11-Sep-2020 12:41:50 | Instrument ID: | A18 | | |
| Lims ID: | 460-217547-E-1-A | Lab Sample ID: | 320-217547-1 | | |
| Client ID: | MW-203 | | | | |
| Operator ID: | TAISACA18-PC\A-18 | ALS Bottle#: | 7 | Worklist Smp#: | 2 |
| Injection Vol: | 20.0 ul | Dil. Factor: | 1.0000 | | |
| Method: | PFAS_A18V2 | Limit Group: | LC PFC ICAL | | |
| Column: | Gemini C18 3um 3mm x 50 mm ( 3.00mm) | Detector | EXP1 | | |

## 5 Perfluoropentanoic acid, CAS: 2706-90-3

Signal: 1

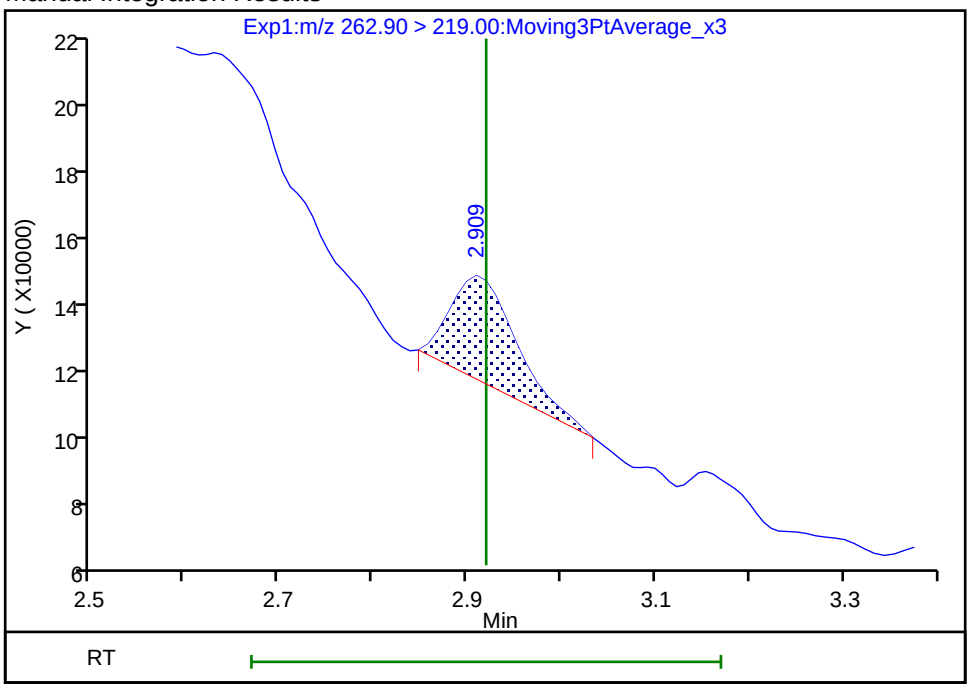
Processing Integration Results

RT: 2.91
Area: 2001157
Amount: 0.592012
Amount Units: ng/ml




Manual Integration Results

RT: 2.91
Area: 144610
Amount: 0.042781
Amount Units: ng/ml




Reviewer: sanjumnair, 14-Sep-2020 09:49:45

Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

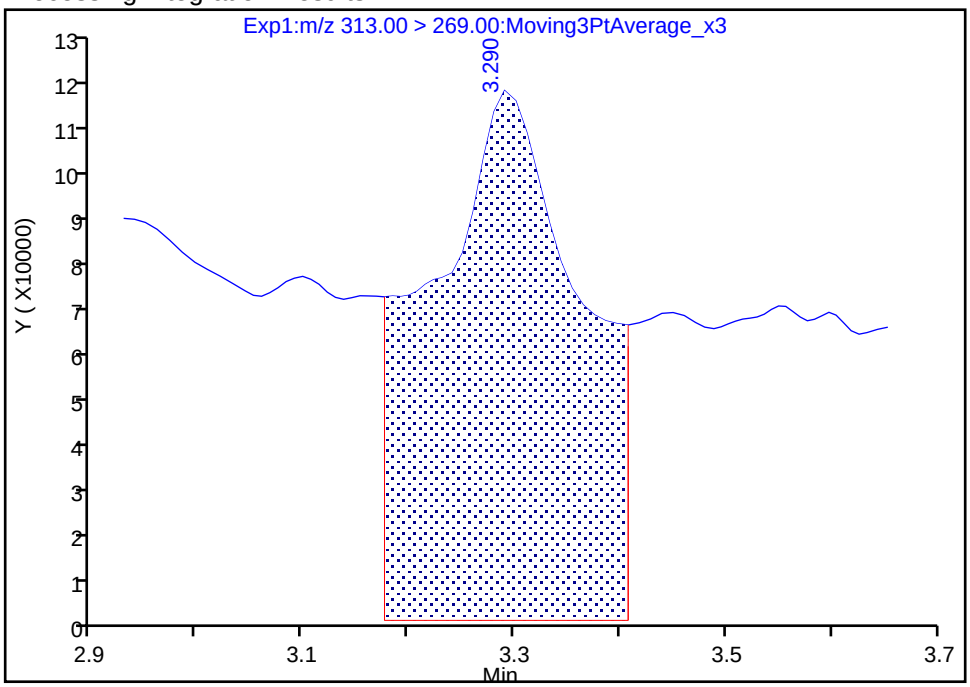
| | | | | | |
|---|---|---|---|---|---|
| Data File: | \\chromfs\Sacramento\ChromData\A18\20200911-103101.b\2020.09.11_A18_PFC_A_016.d | | | | |
| Injection Date: | 11-Sep-2020 12:41:50 | Instrument ID: | A18 | | |
| Lims ID: | 460-217547-E-1-A | Lab Sample ID: | 320-217547-1 | | |
| Client ID: | MW-203 | | | | |
| Operator ID: | TAISACA18-PC\A-18 | ALS Bottle#: | 7 | Worklist Smp#: | 2 |
| Injection Vol: | 20.0 ul | Dil. Factor: | 1.0000 | | |
| Method: | PFAS_A18V2 | Limit Group: | LC PFC ICAL | | |
| Column: | Gemini C18 3um 3mm x 50 mm ( 3.00mm) | Detector | EXP1 | | |

## 10 Perfluorohexanoic acid, CAS: 307-24-4

Signal: 1

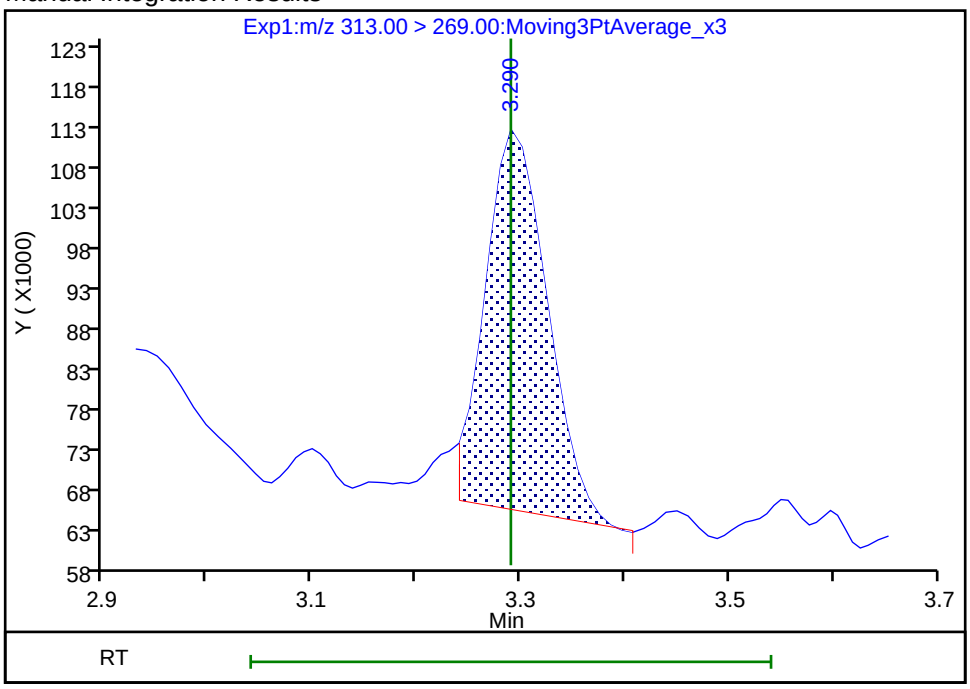
Processing Integration Results

RT: 3.29
Area: 1110591
Amount: 0.291123
Amount Units: ng/ml




Manual Integration Results

RT: 3.29
Area: 193041
Amount: 0.050602
Amount Units: ng/ml




Reviewer: sanjumnair, 14-Sep-2020 09:50:49

Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

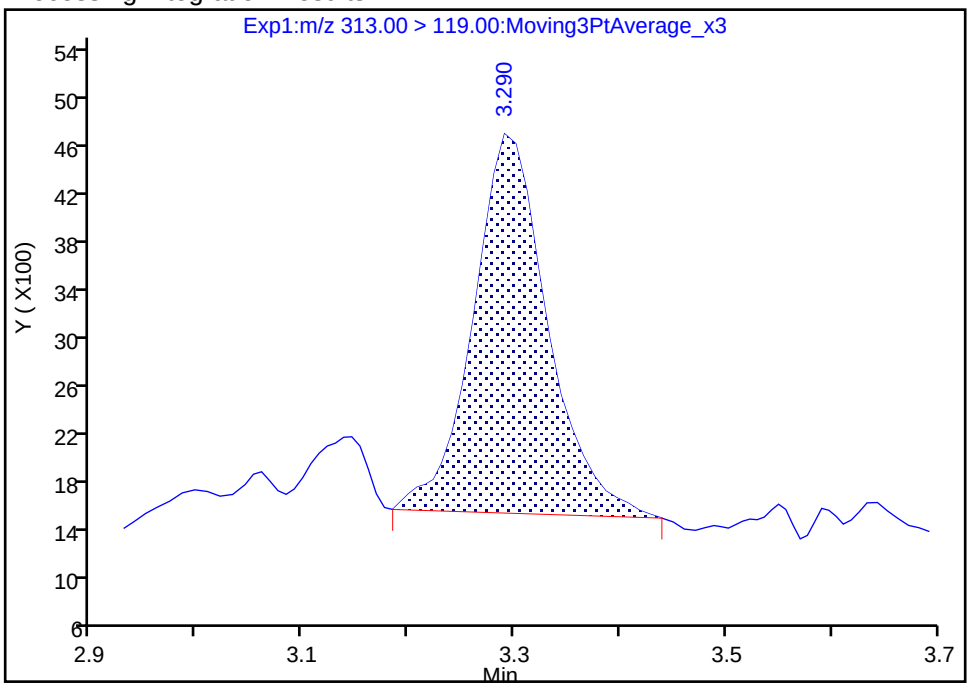
| | | | | | |
|---|---|---|---|---|---|
| Data File: | \\chromfs\Sacramento\ChromData\A18\20200911-103101.b\2020.09.11_A18_PFC_A_016.d | | | | |
| Injection Date: | 11-Sep-2020 12:41:50 | Instrument ID: | A18 | | |
| Lims ID: | 460-217547-E-1-A | Lab Sample ID: | 320-217547-1 | | |
| Client ID: | MW-203 | | | | |
| Operator ID: | TAISACA18-PC\A-18 | ALS Bottle#: | 7 | Worklist Smp#: | 2 |
| Injection Vol: | 20.0 ul | Dil. Factor: | 1.0000 | | |
| Method: | PFAS_A18V2 | Limit Group: | LC PFC ICAL | | |
| Column: | Gemini C18 3um 3mm x 50 mm ( 3.00mm) | Detector | EXP1 | | |

## 10 Perfluorohexanoic acid, CAS: 307-24-4

Signal: 2

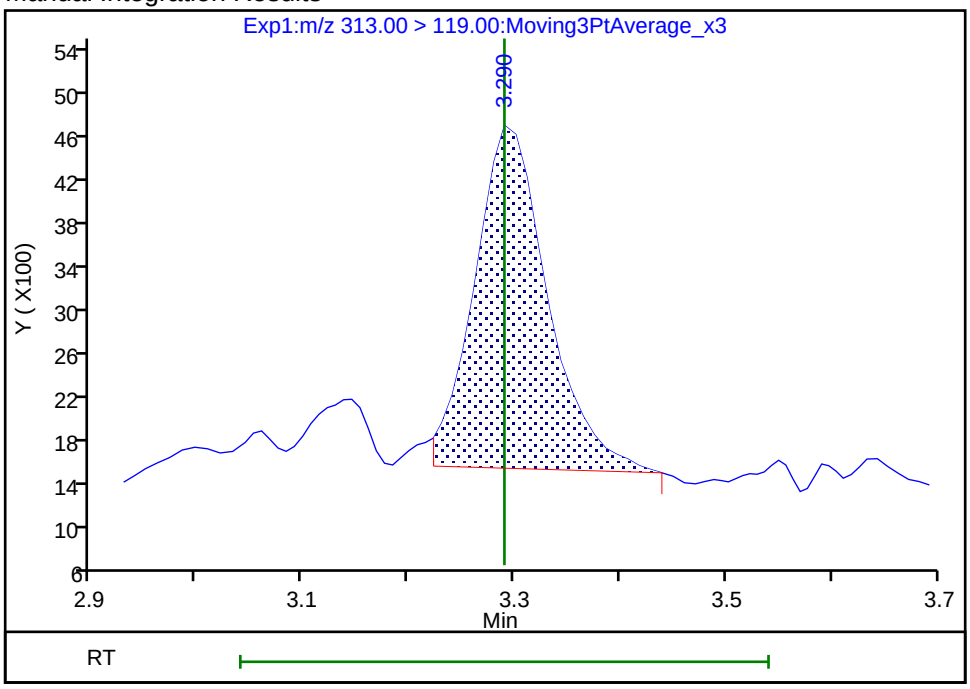
Processing Integration Results

RT: 3.29
Area: 15242
Amount: 0.291123
Amount Units: ng/ml




Manual Integration Results

RT: 3.29
Area: 14896
Amount: 0.050602
Amount Units: ng/ml




Reviewer: sanjumnair, 14-Sep-2020 09:50:55
Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

| | | | | | |
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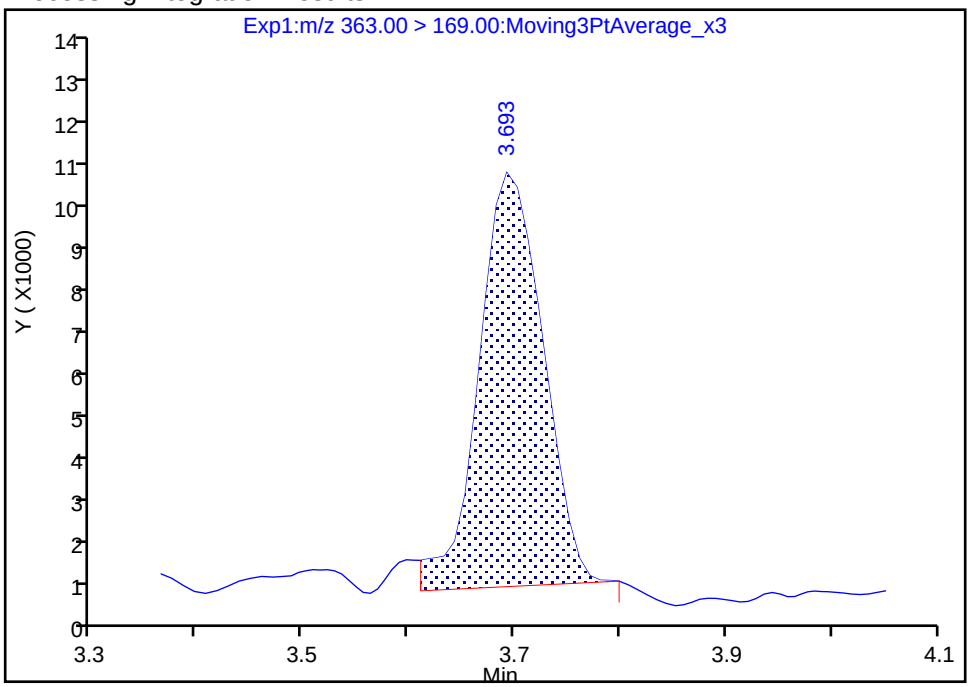
| Data File: | \\chromfs\Sacramento\ChromData\A18\20200911-103101.b\2020.09.11_A18_PFC_A_016.d | | | | |
| Injection Date: | 11-Sep-2020 12:41:50 | Instrument ID: | A18 | | |
| Lims ID: | 460-217547-E-1-A | Lab Sample ID: | 320-217547-1 | | |
| Client ID: | MW-203 | | | | |
| Operator ID: | TAISACA18-PC\A-18 | ALS Bottle#: | 7 | Worklist Smp#: | 2 |
| Injection Vol: | 20.0 ul | Dil. Factor: | 1.0000 | | |
| Method: | PFAS_A18V2 | Limit Group: | LC PFC ICAL | | |
| Column: | Gemini C18 3um 3mm x 50 mm ( 3.00mm) | Detector | EXP1 | | |

## 16 Perfluoroheptanoic acid, CAS: 375-85-9

Signal: 2

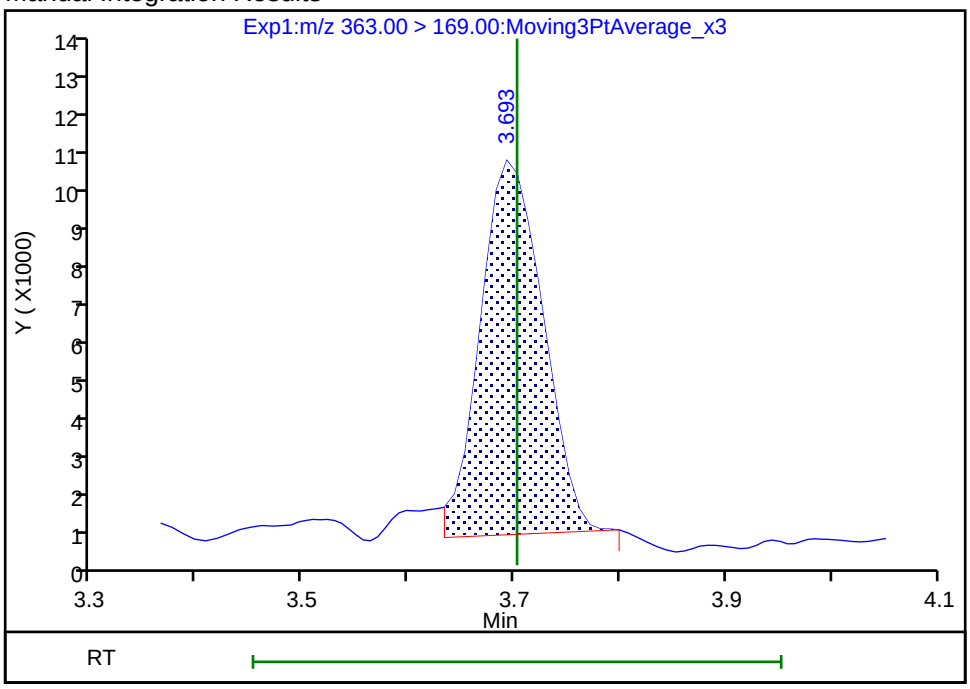
Processing Integration Results

RT: 3.69
Area: 40163
Amount: 0.058307
Amount Units: ng/ml




Manual Integration Results

RT: 3.69
Area: 39157
Amount: 0.039232
Amount Units: ng/ml




Reviewer: sanjumnair, 14-Sep-2020 09:51:01

Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

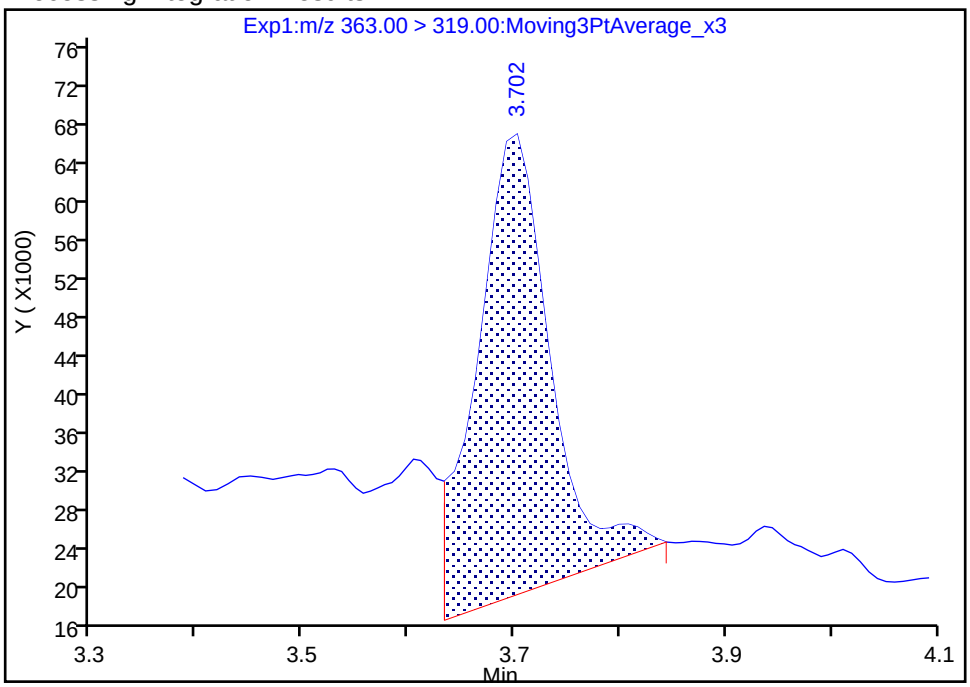
| | | | | | |
|---|---|---|---|---|---|
| Data File: | \\chromfs\Sacramento\ChromData\A18\20200911-103101.b\2020.09.11_A18_PFC_A_016.d | | | | |
| Injection Date: | 11-Sep-2020 12:41:50 | Instrument ID: | A18 | | |
| Lims ID: | 460-217547-E-1-A | Lab Sample ID: | 320-217547-1 | | |
| Client ID: | MW-203 | | | | |
| Operator ID: | TAISACA18-PC\A-18 | ALS Bottle#: | 7 | Worklist Smp#: | 2 |
| Injection Vol: | 20.0 ul | Dil. Factor: | 1.0000 | | |
| Method: | PFAS_A18V2 | Limit Group: | LC PFC ICAL | | |
| Column: | Gemini C18 3um 3mm x 50 mm ( 3.00mm) | Detector | EXP1 | | |

## 16 Perfluoroheptanoic acid, CAS: 375-85-9

Signal: 1

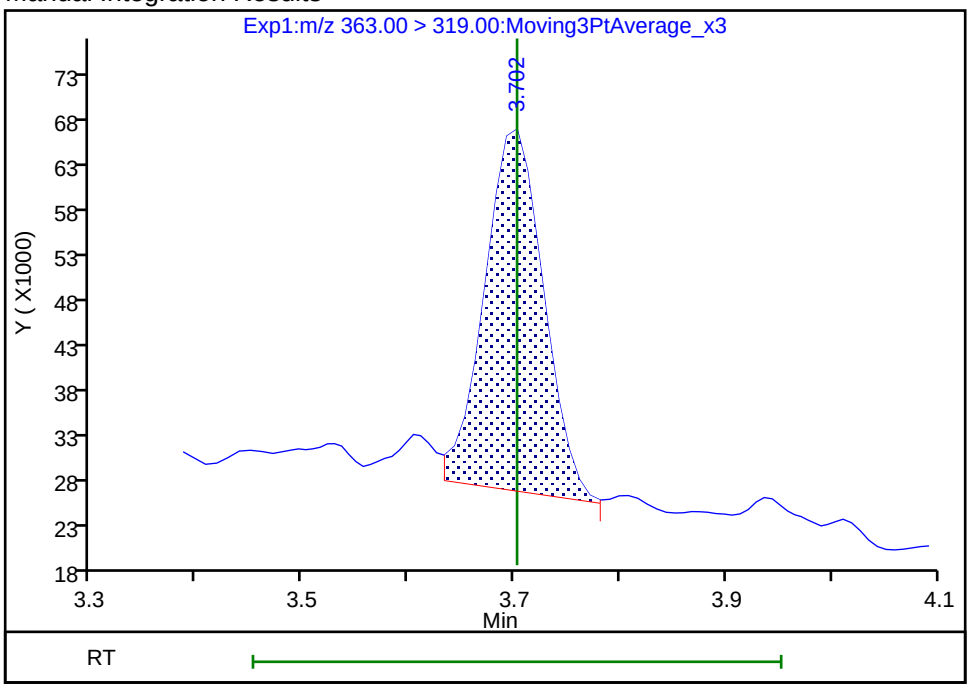
Processing Integration Results

RT: 3.70
Area: 228606
Amount: 0.058307
Amount Units: ng/ml




Manual Integration Results

RT: 3.70
Area: 153818
Amount: 0.039232
Amount Units: ng/ml




Reviewer: sanjumnair, 14-Sep-2020 09:51:10
Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

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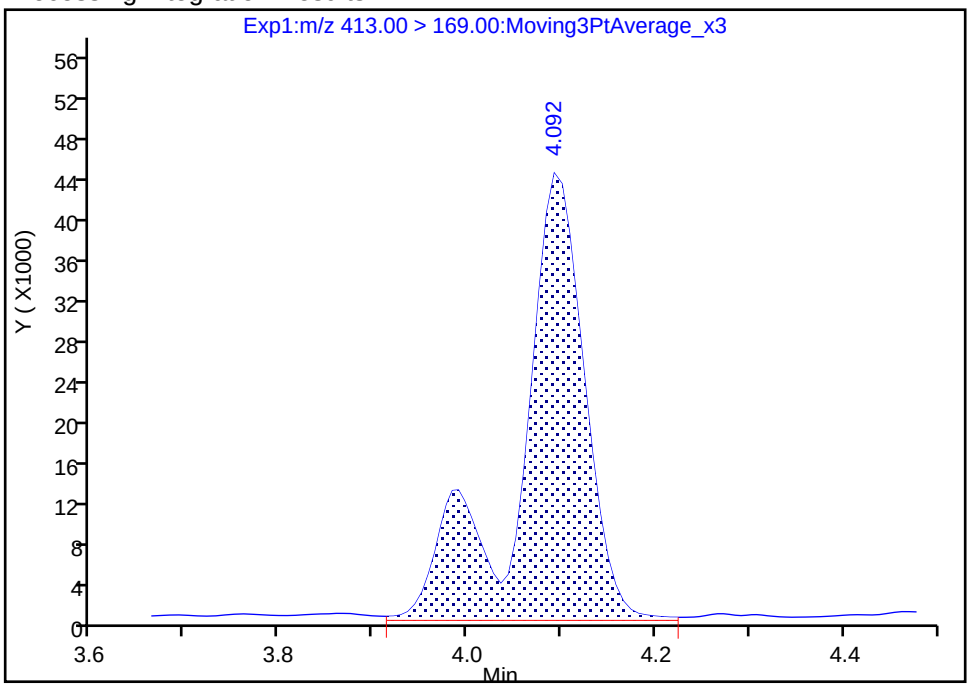
| Injection Date: | 11-Sep-2020 12:41:50 | Instrument ID: | A18 | | |
| Lims ID: | 460-217547-E-1-A | Lab Sample ID: | 320-217547-1 | | |
| Client ID: | MW-203 | | | | |
| Operator ID: | TAISACA18-PC\A-18 | ALS Bottle#: | 7 | Worklist Smp#: | 2 |
| Injection Vol: | 20.0 ul | Dil. Factor: | 1.0000 | | |
| Method: | PFAS_A18V2 | Limit Group: | LC PFC ICAL | | |
| Column: | Gemini C18 3um 3mm x 50 mm ( 3.00mm) | Detector | EXP1 | | |

## 22 Perfluorooctanoic acid, CAS: 335-67-1

Signal: 2

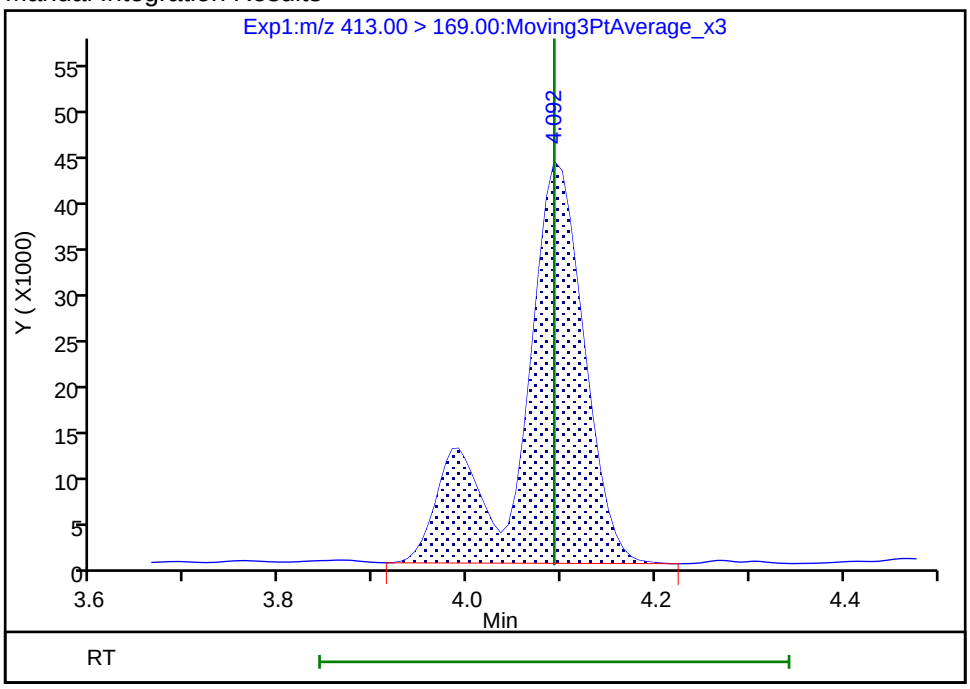
Processing Integration Results

RT: 4.09
Area: 214798
Amount: 0.279236
Amount Units: ng/ml




Manual Integration Results

RT: 4.09
Area: 208282
Amount: 0.128618
Amount Units: ng/ml




Reviewer: sanjumnair, 14-Sep-2020 09:52:08

Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

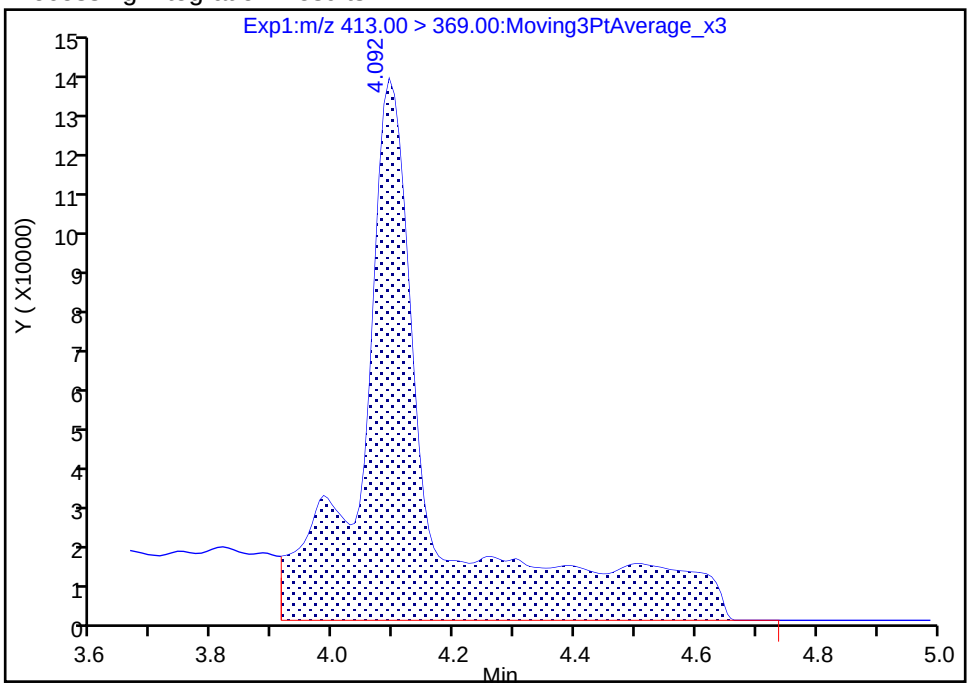
| | | | | | |
|---|---|---|---|---|---|
| Data File: | \\chromfs\Sacramento\ChromData\A18\20200911-103101.b\2020.09.11_A18_PFC_A_016.d | | | | |
| Injection Date: | 11-Sep-2020 12:41:50 | Instrument ID: | A18 | | |
| Lims ID: | 460-217547-E-1-A | Lab Sample ID: | 320-217547-1 | | |
| Client ID: | MW-203 | | | | |
| Operator ID: | TAISACA18-PC\A-18 | ALS Bottle#: | 7 | Worklist Smp#: | 2 |
| Injection Vol: | 20.0 ul | Dil. Factor: | 1.0000 | | |
| Method: | PFAS_A18V2 | Limit Group: | LC PFC ICAL | | |
| Column: | Gemini C18 3um 3mm x 50 mm ( 3.00mm) | Detector | EXP1 | | |

## 22 Perfluorooctanoic acid, CAS: 335-67-1

Signal: 1

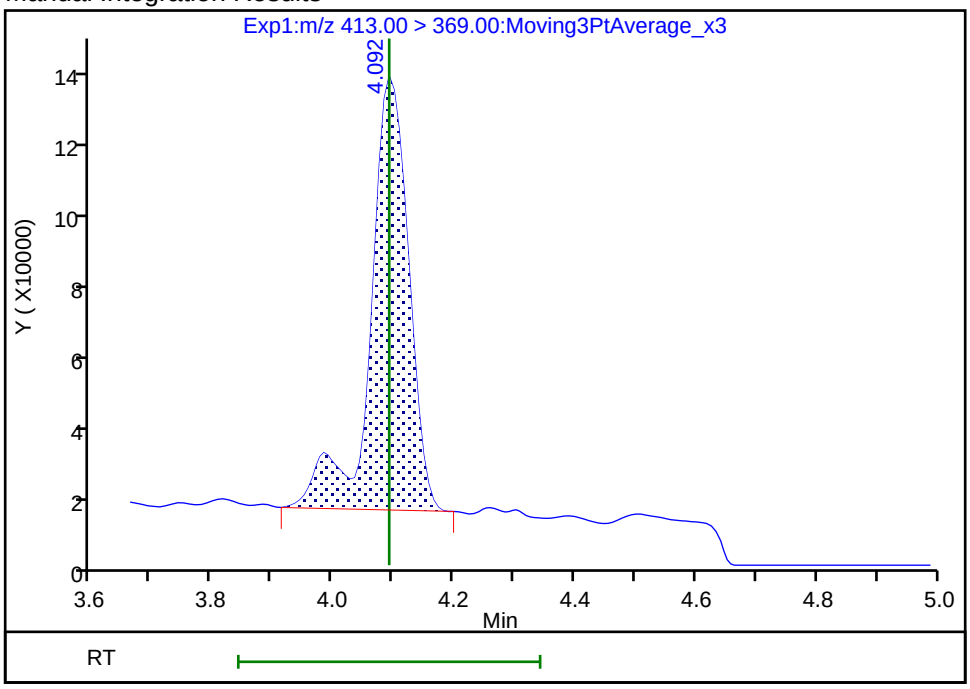
Processing Integration Results

RT: 4.09
Area: 1116971
Amount: 0.279236
Amount Units: ng/ml




Manual Integration Results

RT: 4.09
Area: 514484
Amount: 0.128618
Amount Units: ng/ml




Reviewer: sanjumnair, 14-Sep-2020 09:52:16
Audit Action: Manually Integrated Audit Reason: Baseline

Eurofins TestAmerica, Sacramento

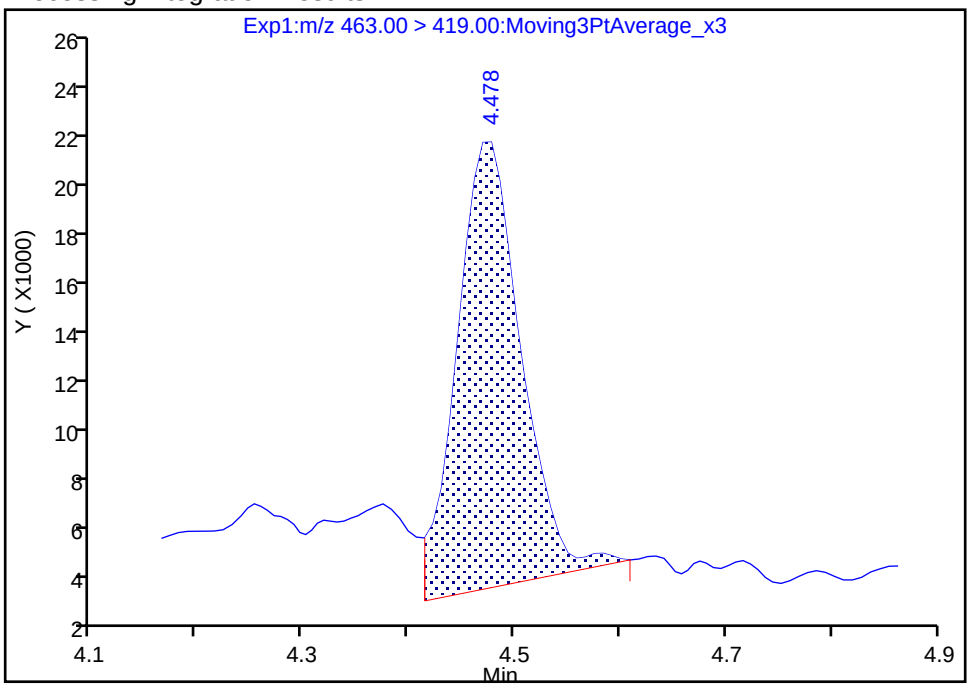
| | | | | | |
|---|---|---|---|---|---|
| Data File: | \\chromfs\Sacramento\ChromData\A18\20200911-103101.b\2020.09.11_A18_PFC_A_016.d | | | | |
| Injection Date: | 11-Sep-2020 12:41:50 | Instrument ID: | A18 | | |
| Lims ID: | 460-217547-E-1-A | Lab Sample ID: | 320-217547-1 | | |
| Client ID: | MW-203 | | | | |
| Operator ID: | TAISACA18-PC\A-18 | ALS Bottle#: | 7 | Worklist Smp#: | 2 |
| Injection Vol: | 20.0 ul | Dil. Factor: | 1.0000 | | |
| Method: | PFAS_A18V2 | Limit Group: | LC PFC ICAL | | |
| Column: | Gemini C18 3um 3mm x 50 mm ( 3.00mm) | Detector | EXP1 | | |

## 31 Perfluorononanoic acid, CAS: 375-95-1

Signal: 1

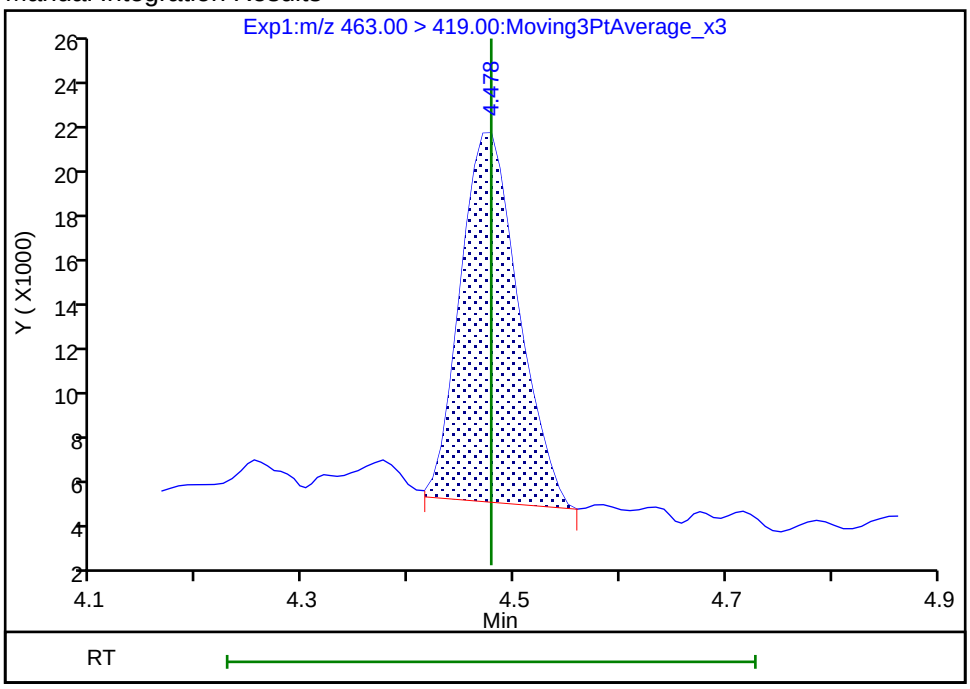
Processing Integration Results

RT: 4.48
Area: 72797
Amount: 0.022873
Amount Units: ng/ml




Manual Integration Results

RT: 4.48
Area: 60310
Amount: 0.018949
Amount Units: ng/ml




Reviewer: sanjumnair, 14-Sep-2020 09:52:58
Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

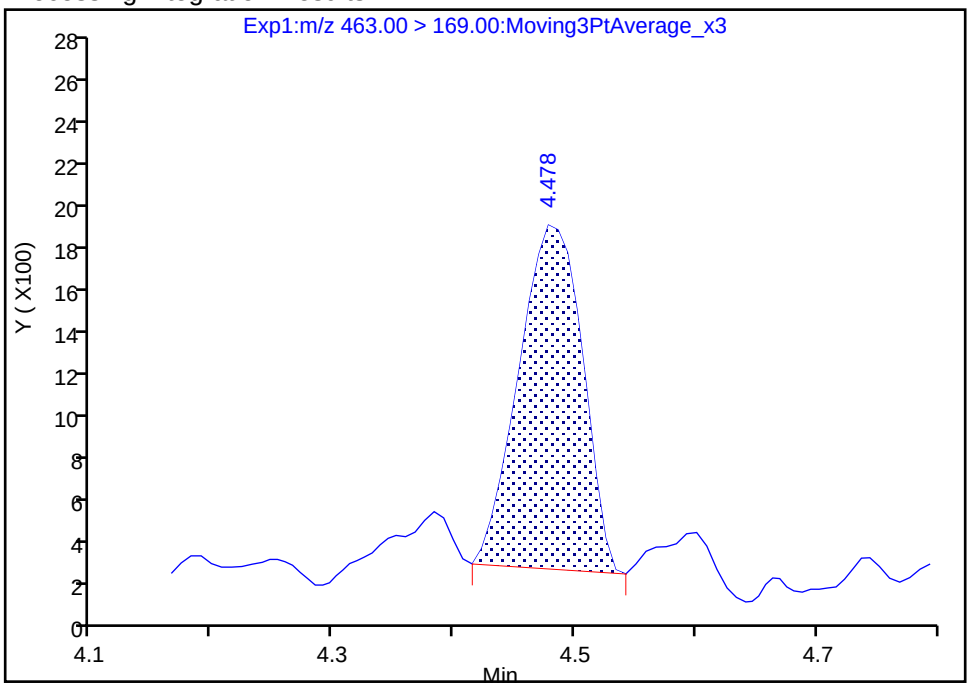
| | | | | | |
|---|---|---|---|---|---|
| Data File: | \\chromfs\Sacramento\ChromData\A18\20200911-103101.b\2020.09.11_A18_PFC_A_016.d | | | | |
| Injection Date: | 11-Sep-2020 12:41:50 | Instrument ID: | A18 | | |
| Lims ID: | 460-217547-E-1-A | Lab Sample ID: | 320-217547-1 | | |
| Client ID: | MW-203 | | | | |
| Operator ID: | TAISACA18-PC\A-18 | ALS Bottle#: | 7 | Worklist Smp#: | 2 |
| Injection Vol: | 20.0 ul | Dil. Factor: | 1.0000 | | |
| Method: | PFAS_A18V2 | Limit Group: | LC PFC ICAL | | |
| Column: | Gemini C18 3um 3mm x 50 mm ( 3.00mm) | Detector | EXP1 | | |

## 31 Perfluorononanoic acid, CAS: 375-95-1

Signal: 2

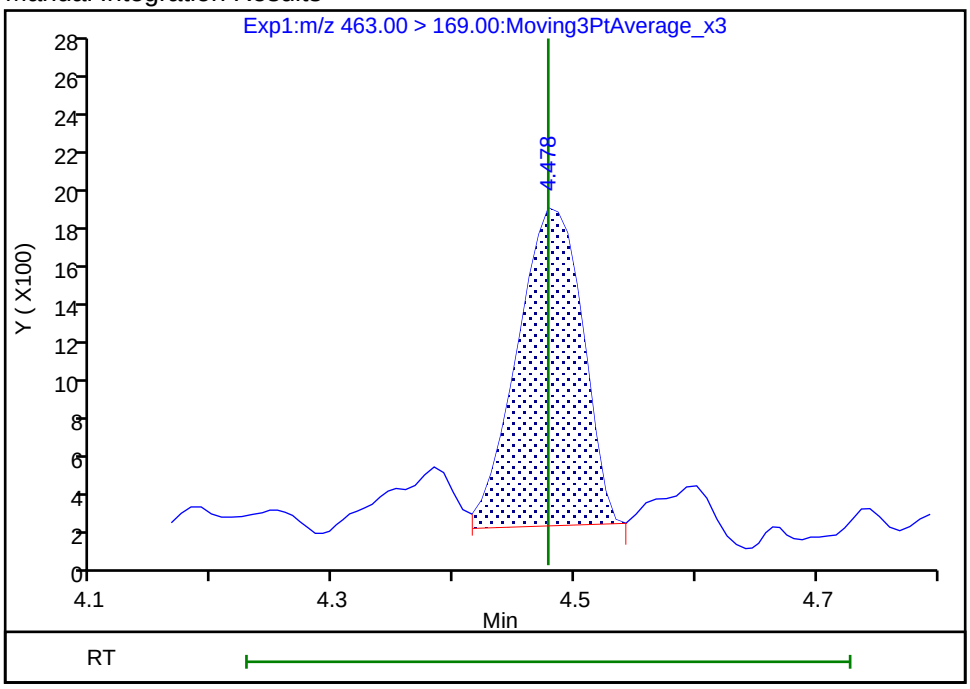
Processing Integration Results

RT: 4.48
Area: 6033
Amount: 0.022873
Amount Units: ng/ml




Manual Integration Results

RT: 4.48
Area: 6319
Amount: 0.018949
Amount Units: ng/ml




Reviewer: sanjumnair, 14-Sep-2020 09:53:00
Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

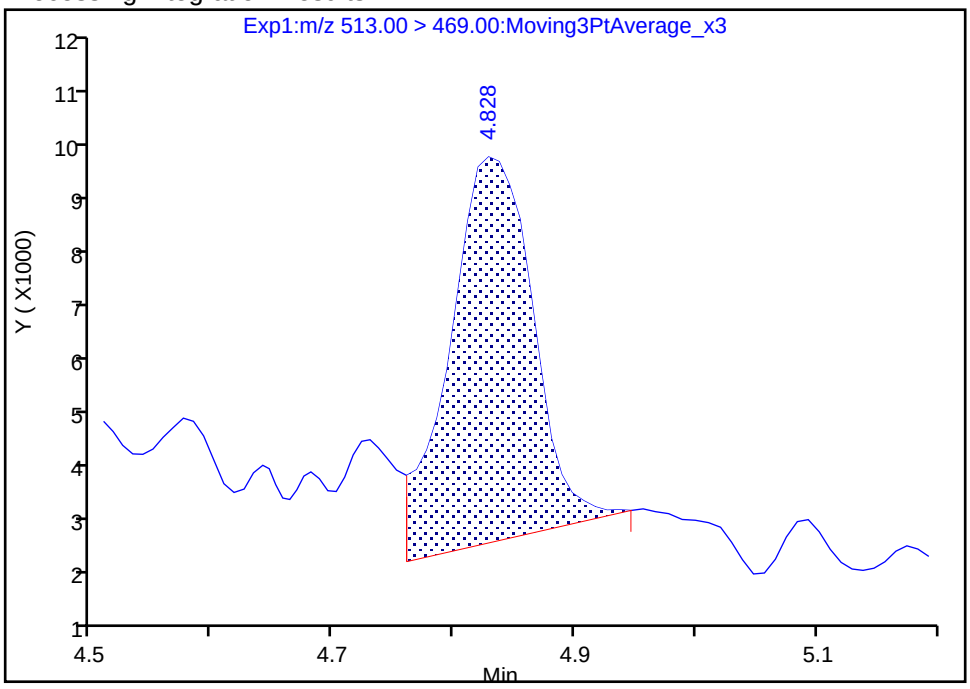
| | | | | | |
|---|---|---|---|---|---|
| Data File: | \\chromfs\Sacramento\ChromData\A18\20200911-103101.b\2020.09.11_A18_PFC_A_016.d | | | | |
| Injection Date: | 11-Sep-2020 12:41:50 | Instrument ID: | A18 | | |
| Lims ID: | 460-217547-E-1-A | Lab Sample ID: | 320-217547-1 | | |
| Client ID: | MW-203 | | | | |
| Operator ID: | TAISACA18-PC\A-18 | ALS Bottle#: | 7 | Worklist Smp#: | 2 |
| Injection Vol: | 20.0 ul | Dil. Factor: | 1.0000 | | |
| Method: | PFAS_A18V2 | Limit Group: | LC PFC ICAL | | |
| Column: | Gemini C18 3um 3mm x 50 mm ( 3.00mm) | Detector | EXP1 | | |

## 37 Perfluorodecanoic acid, CAS: 335-76-2

Signal: 1

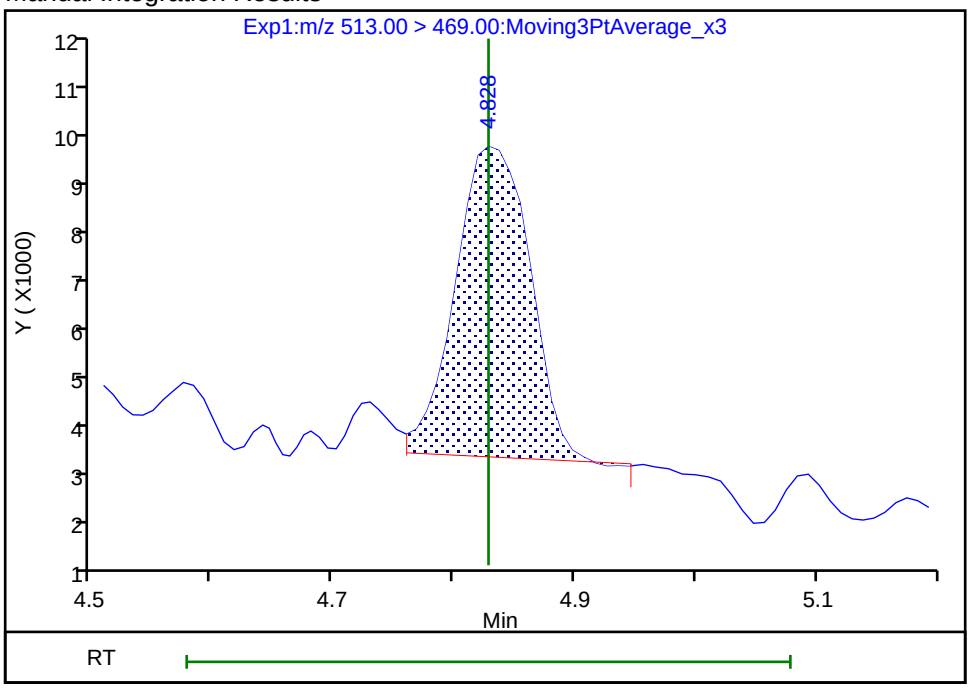
Processing Integration Results

RT: 4.83
Area: 32434
Amount: 0.011044
Amount Units: ng/ml




Manual Integration Results

RT: 4.83
Area: 25781
Amount: 0.008779
Amount Units: ng/ml




Reviewer: sanjumnair, 14-Sep-2020 09:53:17

Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

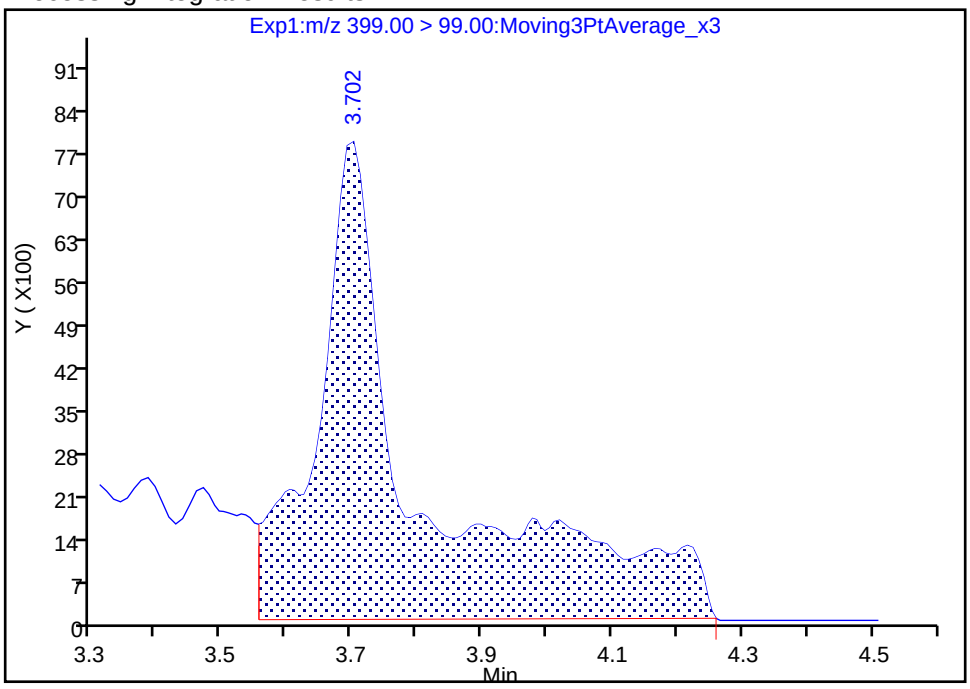
| | | | | | |
|---|---|---|---|---|---|
| Data File: | \\chromfs\Sacramento\ChromData\A18\20200911-103101.b\2020.09.11_A18_PFC_A_016.d | | | | |
| Injection Date: | 11-Sep-2020 12:41:50 | Instrument ID: | A18 | | |
| Lims ID: | 460-217547-E-1-A | Lab Sample ID: | 320-217547-1 | | |
| Client ID: | MW-203 | | | | |
| Operator ID: | TAISACA18-PC\A-18 | ALS Bottle#: | 7 | Worklist Smp#: | 2 |
| Injection Vol: | 20.0 ul | Dil. Factor: | 1.0000 | | |
| Method: | PFAS_A18V2 | Limit Group: | LC PFC ICAL | | |
| Column: | Gemini C18 3um 3mm x 50 mm ( 3.00mm) | Detector | EXP1 | | |

## 15 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 2

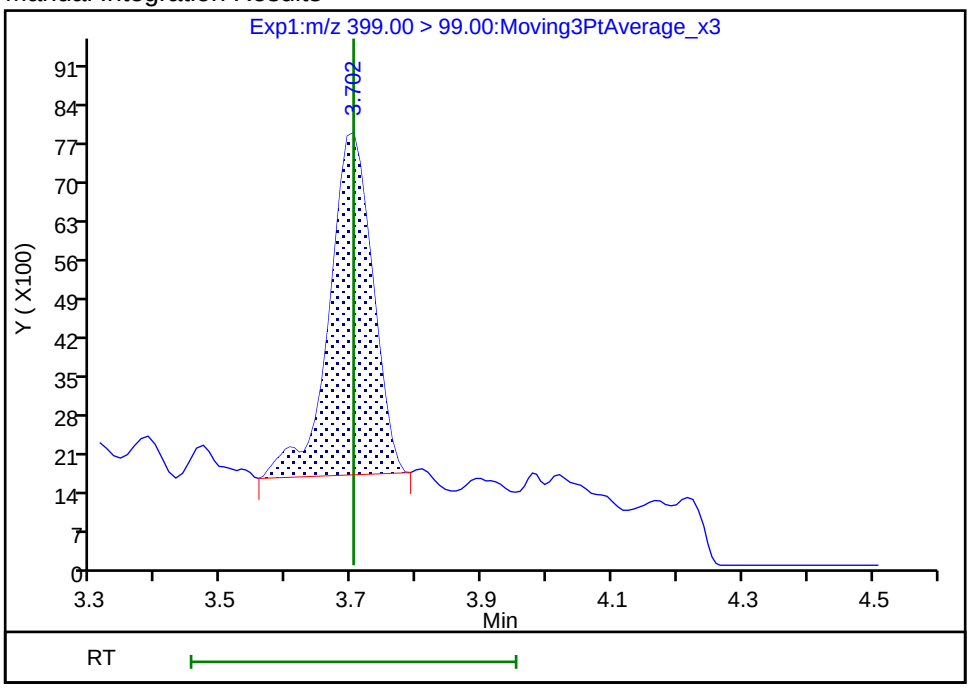
Processing Integration Results

RT: 3.70
Area: 87438
Amount: 0.189259
Amount Units: ng/ml




Manual Integration Results

RT: 3.70
Area: 28686
Amount: 0.036656
Amount Units: ng/ml




Reviewer: sanjumnair, 14-Sep-2020 09:51:18

Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

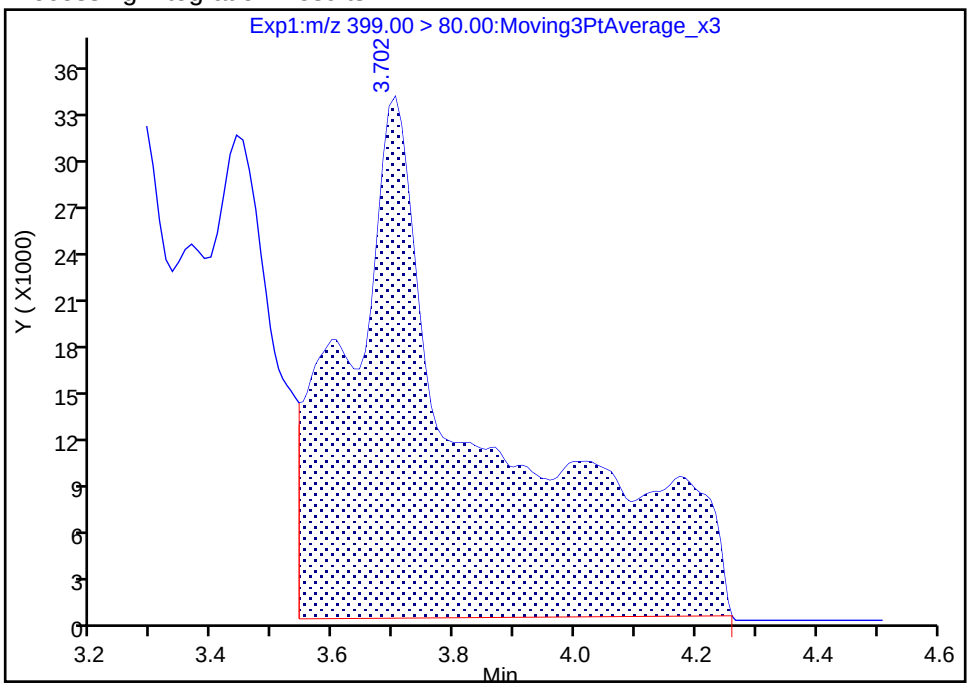
| | | | | | |
|---|---|---|---|---|---|
| Data File: | \\chromfs\Sacramento\ChromData\A18\20200911-103101.b\2020.09.11_A18_PFC_A_016.d | | | | |
| Injection Date: | 11-Sep-2020 12:41:50 | Instrument ID: | A18 | | |
| Lims ID: | 460-217547-E-1-A | Lab Sample ID: | 320-217547-1 | | |
| Client ID: | MW-203 | | | | |
| Operator ID: | TAISACA18-PC\A-18 | ALS Bottle#: | 7 | Worklist Smp#: | 2 |
| Injection Vol: | 20.0 ul | Dil. Factor: | 1.0000 | | |
| Method: | PFAS_A18V2 | Limit Group: | LC PFC ICAL | | |
| Column: | Gemini C18 3um 3mm x 50 mm ( 3.00 mm) | Detector | EXP1 | | |

## 15 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 1

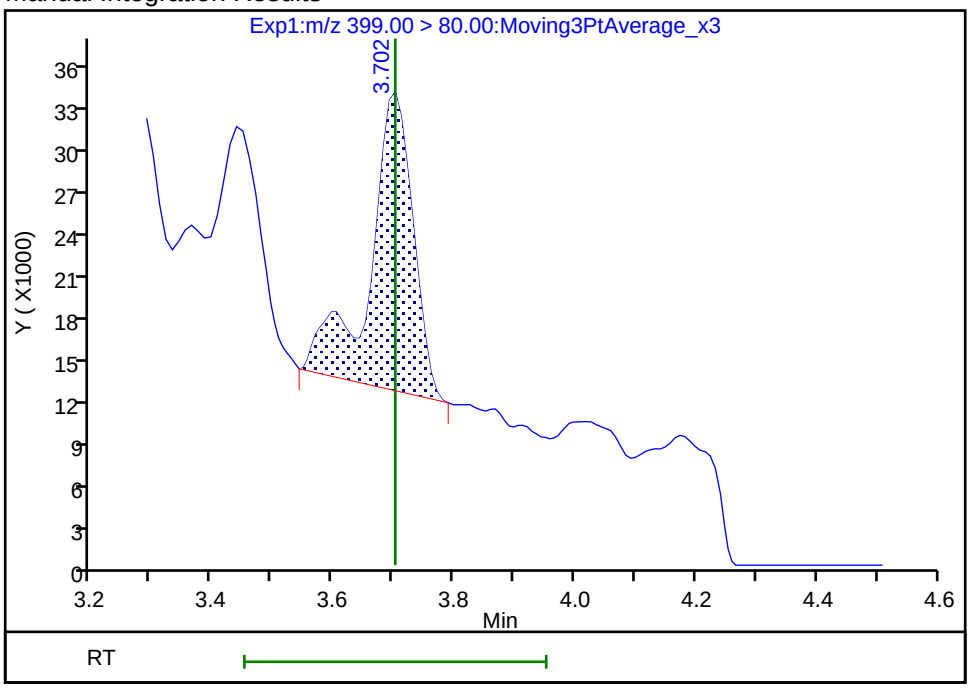
Processing Integration Results

RT: 3.70
Area: 549180
Amount: 0.189259
Amount Units: ng/ml




Manual Integration Results

RT: 3.70
Area: 106366
Amount: 0.036656
Amount Units: ng/ml




Reviewer: sanjumnair, 14-Sep-2020 09:51:56
Audit Action: Manually Integrated Audit Reason: Baseline

Eurofins TestAmerica, Sacramento

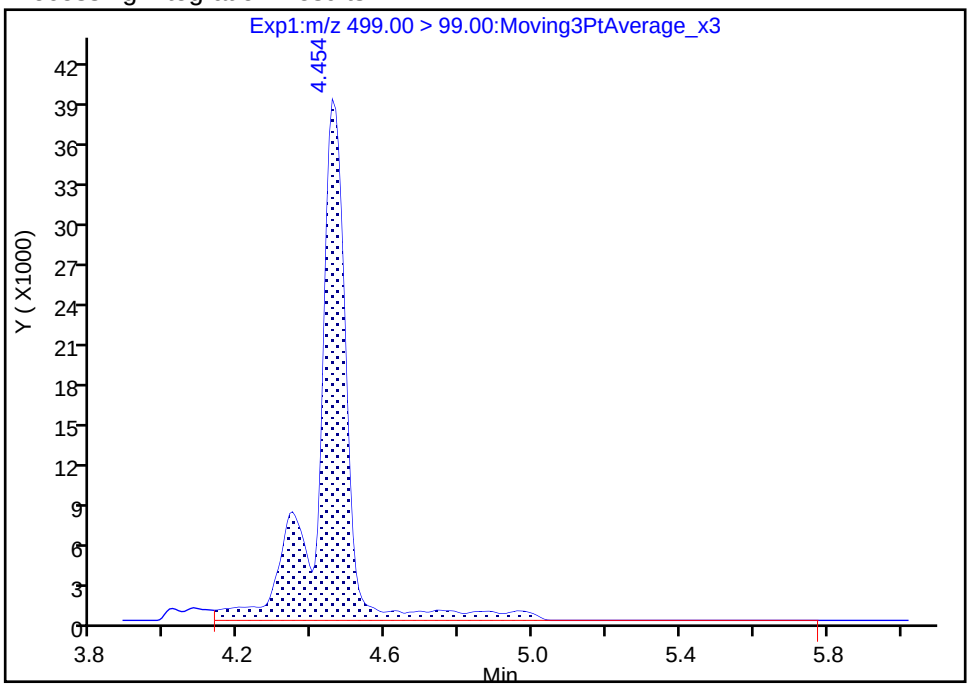
| | | | | | |
|---|---|---|---|---|---|
| Data File: | \\chromfs\Sacramento\ChromData\A18\20200911-103101.b\2020.09.11_A18_PFC_A_016.d | | | | |
| Injection Date: | 11-Sep-2020 12:41:50 | Instrument ID: | A18 | | |
| Lims ID: | 460-217547-E-1-A | Lab Sample ID: | 320-217547-1 | | |
| Client ID: | MW-203 | | | | |
| Operator ID: | TAISACA18-PC\A-18 | ALS Bottle#: | 7 | Worklist Smp#: | 2 |
| Injection Vol: | 20.0 ul | Dil. Factor: | 1.0000 | | |
| Method: | PFAS_A18V2 | Limit Group: | LC PFC ICAL | | |
| Column: | Gemini C18 3um 3mm x 50 mm ( 3.00mm) | Detector | EXP1 | | |

## 29 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 2

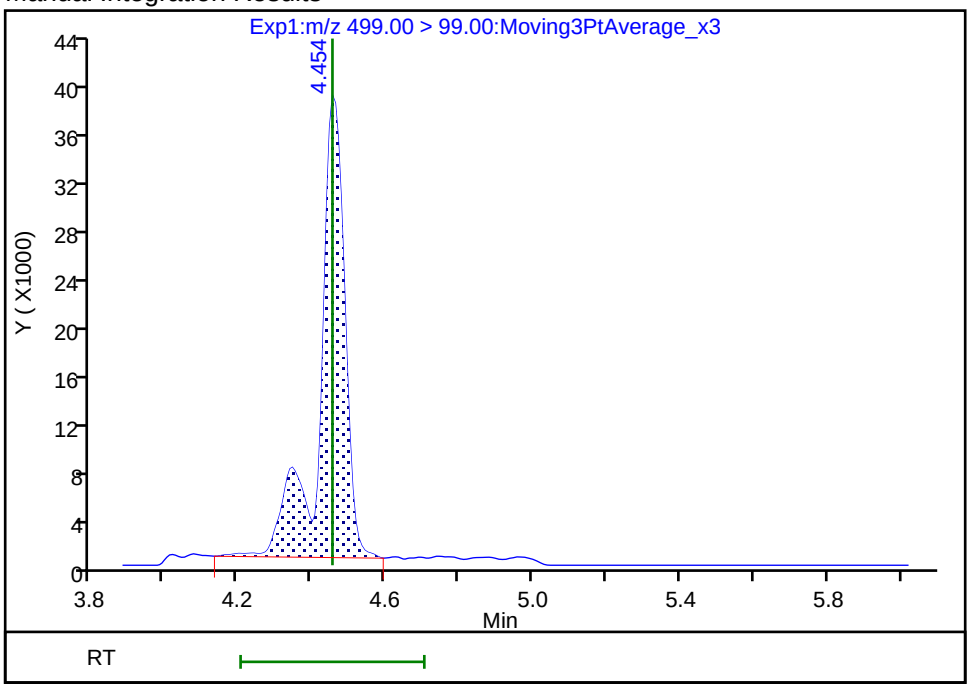
Processing Integration Results

RT: 4.45
Area: 215304
Amount: 0.694402
Amount Units: ng/ml




Manual Integration Results

RT: 4.45
Area: 181621
Amount: 0.624815
Amount Units: ng/ml




Reviewer: sanjumnair, 14-Sep-2020 09:52:24
Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

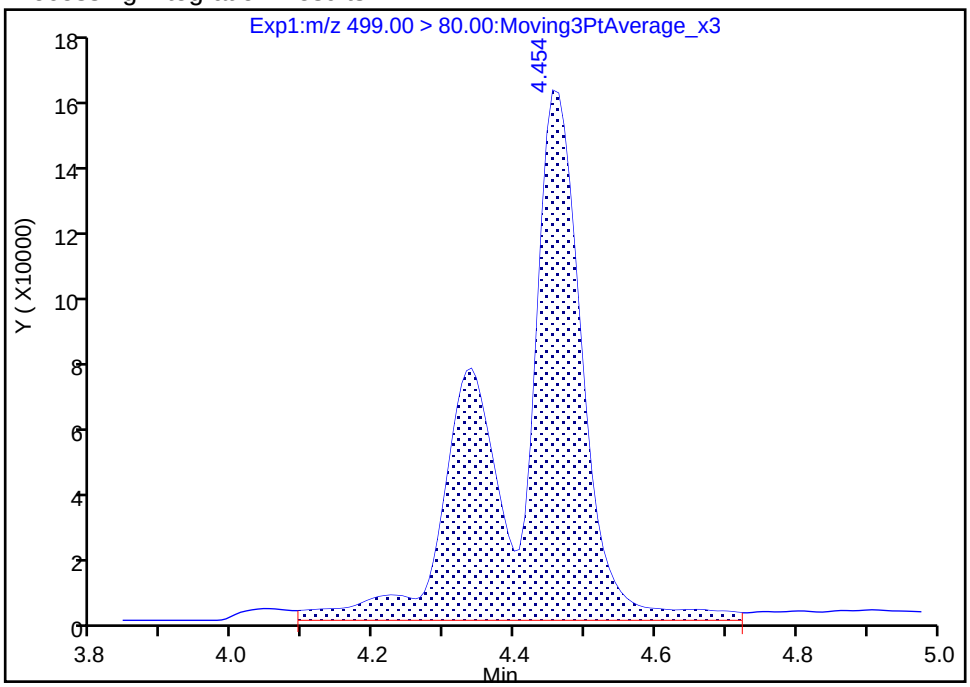
| | | | | | |
|---|---|---|---|---|---|
| Data File: | \\chromfs\Sacramento\ChromData\A18\20200911-103101.b\2020.09.11_A18_PFC_A_016.d | | | | |
| Injection Date: | 11-Sep-2020 12:41:50 | Instrument ID: | A18 | | |
| Lims ID: | 460-217547-E-1-A | Lab Sample ID: | 320-217547-1 | | |
| Client ID: | MW-203 | | | | |
| Operator ID: | TAISACA18-PC\A-18 | ALS Bottle#: | 7 | Worklist Smp#: | 2 |
| Injection Vol: | 20.0 ul | Dil. Factor: | 1.0000 | | |
| Method: | PFAS_A18V2 | Limit Group: | LC PFC ICAL | | |
| Column: | Gemini C18 3um 3mm x 50 mm ( 3.00mm) | Detector | EXP1 | | |

## 29 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 1

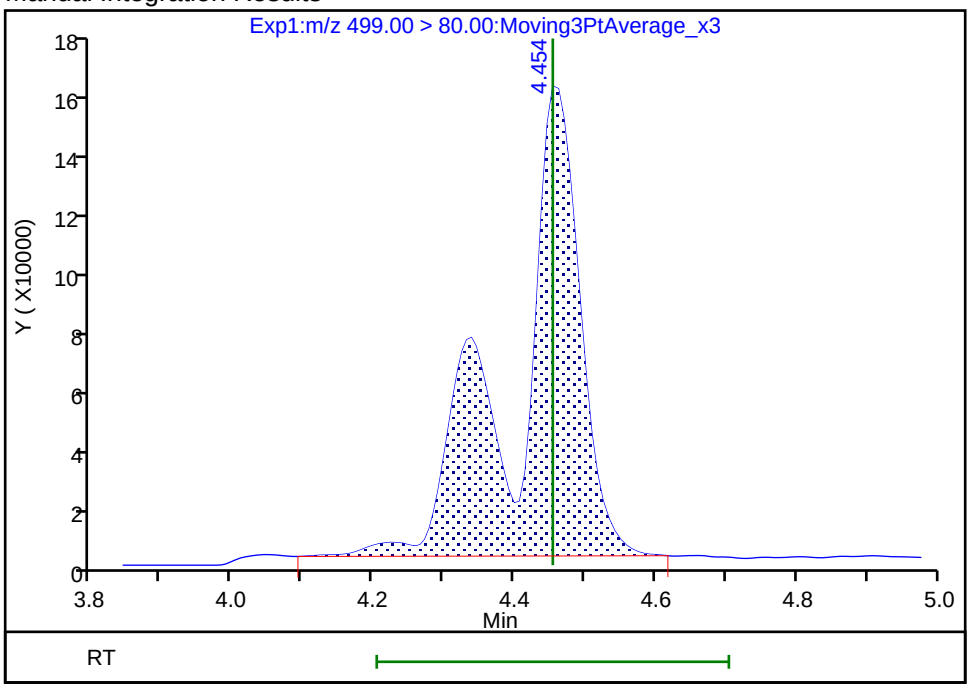
Processing Integration Results

RT: 4.45
Area: 1155632
Amount: 0.694402
Amount Units: ng/ml




Manual Integration Results

RT: 4.45
Area: 1039823
Amount: 0.624815
Amount Units: ng/ml




Reviewer: sanjumnair, 14-Sep-2020 09:52:30
Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

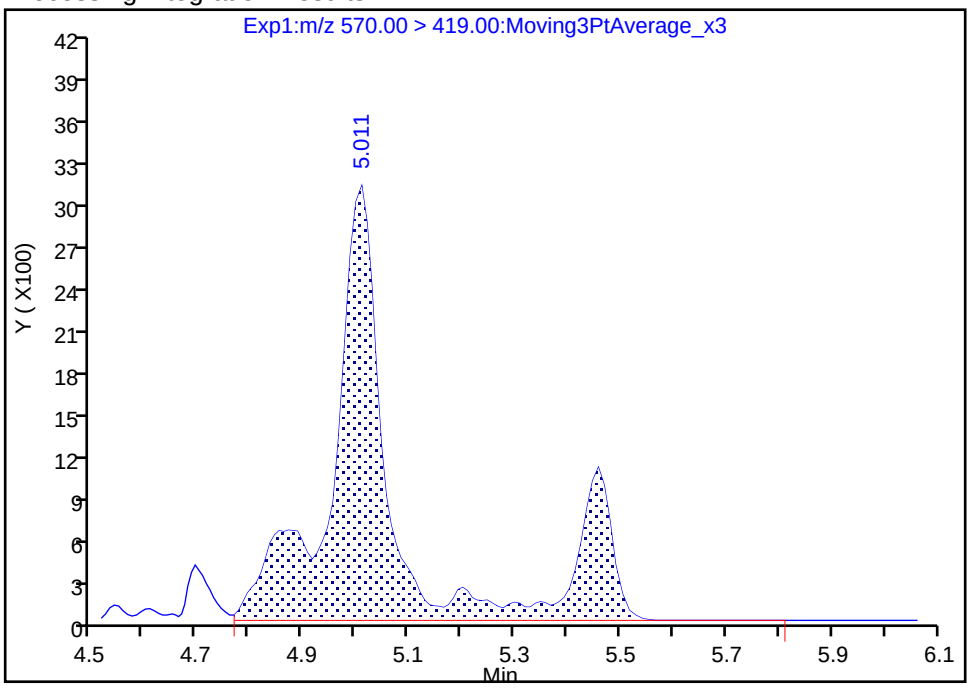
| | | | | | |
|---|---|---|---|---|---|
| Data File: | \\chromfs\Sacramento\ChromData\A18\20200911-103101.b\2020.09.11_A18_PFC_A_016.d | | | | |
| Injection Date: | 11-Sep-2020 12:41:50 | Instrument ID: | A18 | | |
| Lims ID: | 460-217547-E-1-A | Lab Sample ID: | 320-217547-1 | | |
| Client ID: | MW-203 | | | | |
| Operator ID: | TAISACA18-PC\A-18 | ALS Bottle#: | 7 | Worklist Smp#: | 2 |
| Injection Vol: | 20.0 ul | Dil. Factor: | 1.0000 | | |
| Method: | PFAS_A18V2 | Limit Group: | LC PFC ICAL | | |
| Column: | Gemini C18 3um 3mm x 50 mm ( 3.00mm) | Detector | EXP1 | | |

## 41 NMeFOSAA, CAS: 2355-31-9

Signal: 1

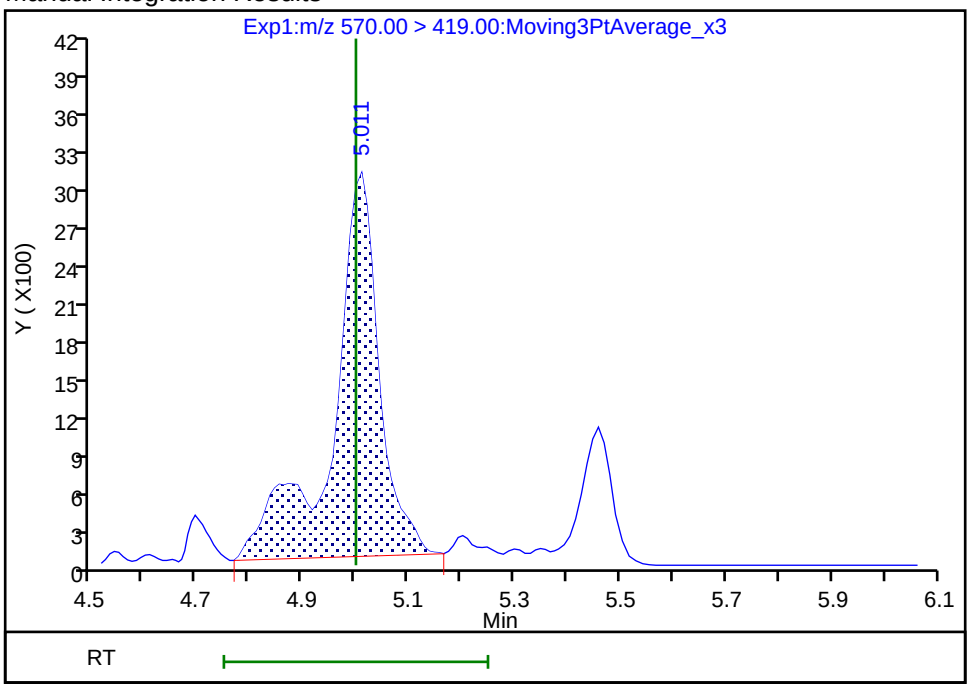
Processing Integration Results

RT: 5.01
Area: 26225
Amount: 0.019372
Amount Units: ng/ml




Manual Integration Results

RT: 5.01
Area: 18578
Amount: 0.013723
Amount Units: ng/ml




Reviewer: sanjumnair, 14-Sep-2020 09:53:30

Audit Action: Manually Integrated Audit Reason: Baseline

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento  Job No.: 460-217547-1

SDG No.:

Client Sample ID: MW-204  Lab Sample ID: 460-217547-2

Matrix: Water  Lab File ID: 2020.09.11_A18_PFC_A_017.d

Analysis Method: 537 (modified)  Date Collected: 09/02/2020 11:30

Extraction Method: 3535  Date Extracted: 09/09/2020 18:52

Sample wt/vol: 255.7(mL)  Date Analyzed: 09/11/2020 12:50

Con. Extract Vol.: 10.00(mL)  Dilution Factor: 1

Injection Volume: 20(uL)  GC Column: Gemini C18 3x50 ID: 3(mm)

% Moisture:  GPC Cleanup:(Y/N) N

Analysis Batch No.: 411377  Units: ng/L

| CAS NO. | COMPOUND NAME | RESULT | Q | RL | MDL |
|---|---|---|---|---|---|
| 375-22-4 | Perfluorobutanoic acid (PFBA) | 3.11 | B | 1.96 | 0.34 |
| 2706-90-3 | Perfluoropentanoic acid (PFPeA) | 1.26 | J | 1.96 | 0.48 |
| 307-24-4 | Perfluorohexanoic acid (PFHxA) | 1.14 | J | 1.96 | 0.57 |
| 375-85-9 | Perfluoroheptanoic acid (PFHpA) | 1.02 | J | 1.96 | 0.24 |
| 335-67-1 | Perfluorooctanoic acid (PFOA) | 3.94 | | 1.96 | 0.83 |
| 375-95-1 | Perfluorononanoic acid (PFNA) | 0.46 | J | 1.96 | 0.26 |
| 335-76-2 | Perfluorodecanoic acid (PFDA) | 0.30 | U | 1.96 | 0.30 |
| 2058-94-8 | Perfluoroundecanoic acid (PFUnA) | 1.08 | U | 1.96 | 1.08 |
| 307-55-1 | Perfluorododecanoic acid (PFDoA) | 0.54 | U | 1.96 | 0.54 |
| 72629-94-8 | Perfluorotridecanoic acid (PFTriA) | 1.27 | U | 1.96 | 1.27 |
| 376-06-7 | Perfluorotetradecanoic acid (PFTeA) | 0.28 | U | 1.96 | 0.28 |
| 375-73-5 | Perfluorobutanesulfonic acid (PFBS) | 0.64 | J | 1.96 | 0.20 |
| 355-46-4 | Perfluorohexanesulfonic acid (PFHxS) | 1.08 | J B | 1.96 | 0.17 |
| 375-92-8 | Perfluoroheptanesulfonic Acid (PFHpS) | 0.19 | U | 1.96 | 0.19 |
| 1763-23-1 | Perfluorooctanesulfonic acid (PFOS) | 12.1 | | 1.96 | 0.53 |
| 335-77-3 | Perfluorodecanesulfonic acid (PFDS) | 0.31 | U | 1.96 | 0.31 |
| 754-91-6 | Perfluorooctanesulfonamide (FOSA) | 0.57 | J B | 1.96 | 0.34 |
| 2355-31-9 | N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA) | 3.03 | U | 19.6 | 3.03 |
| 2991-50-6 | N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA) | 1.86 | U | 19.6 | 1.86 |
| 27619-97-2 | 6:2 FTS | 2.02 | J | 19.6 | 1.96 |
| 39108-34-4 | 8:2 FTS | 1.96 | U | 19.6 | 1.96 |

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento  Job No.: 460-217547-1

SDG No.:

Client Sample ID: MW-204  Lab Sample ID: 460-217547-2

Matrix: Water  Lab File ID: 2020.09.11_A18_PFC_A_017.d

Analysis Method: 537 (modified)  Date Collected: 09/02/2020 11:30

Extraction Method: 3535  Date Extracted: 09/09/2020 18:52

Sample wt/vol: 255.7(mL)  Date Analyzed: 09/11/2020 12:50

Con. Extract Vol.: 10.00(mL)  Dilution Factor: 1

Injection Volume: 20(uL)  GC Column: Gemini C18 3x50 ID: 3(mm)

% Moisture:  GPC Cleanup:(Y/N) N

Analysis Batch No.: 411377  Units: ng/L

| CAS NO. | ISOTOPE DILUTION | %REC | Q | LIMITS |
|---|---|---|---|---|
| STL00992 | 13C4 PFBA | 39 | | 25-150 |
| STL01893 | 13C5 PFPeA | 54 | | 25-150 |
| STL00993 | 13C2 PFHxA | 63 | | 25-150 |
| STL01892 | 13C4 PFHpA | 66 | | 25-150 |
| STL00990 | 13C4 PFOA | 66 | | 25-150 |
| STL00995 | 13C5 PFNA | 70 | | 25-150 |
| STL00996 | 13C2 PFDA | 70 | | 25-150 |
| STL00997 | 13C2 PFUnA | 69 | | 25-150 |
| STL00998 | 13C2 PFDoA | 70 | | 25-150 |
| STL02116 | 13C2 PFTeDA | 58 | | 25-150 |
| STL02337 | 13C3 PFBS | 91 | | 25-150 |
| STL00994 | 18O2 PFHxS | 90 | | 25-150 |
| STL00991 | 13C4 PFOS | 87 | | 25-150 |
| STL01056 | 13C8 FOSA | 66 | | 25-150 |
| STL02118 | d3-NMeFOSAA | 56 | | 25-150 |
| STL02117 | d5-NEtFOSAA | 67 | | 25-150 |
| STL02279 | M2-6:2 FTS | 143 | | 25-150 |
| STL02280 | M2-8:2 FTS | 113 | | 25-150 |

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\A18\20200911-103101.b\2020.09.11_A18_PFC_A_017.d
Lims ID: 460-217547-E-2-A
Client ID: MW-204
Sample Type: Client
Inject. Date: 11-Sep-2020 12:50:59 ALS Bottle#: 8 Worklist Smp#: 3
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Sample Info: 460-217547-e-2-a
Misc. Info.: Plate: 1 Rack: 1
Operator ID: TAISACA18-PC\A-18 Instrument ID: A18

Method: \\chromfs\Sacramento\ChromData\A18\20200911-103101.b\PFAS_A18V2.m
Limit Group: LC PFC ICAL
Last Update: 14-Sep-2020 09:57:30 Calib Date: 25-Aug-2020 17:37:57
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\A18\20200825-102078.b\2020.08.25_A18_ICAL_A_017.d

Column 1 : Gemini C18 3um 3mm x 50 mm ( 3.00 mm) Det: EXP1
Process Host: CTX1038

First Level Reviewer: sanjumnair Date: 14-Sep-2020 09:57:30
Ratio Calibration: CCV Sample: \\chromfs\Sacramento\ChromData\A18\20200911-103101.b\2020.09.11_A18_PFC_A_015.d

| Signal | RT | EXP RT | DLT RT | REL RT | Response | Amount ng/ml | Ratio(Limits) | %Rec | S/N | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| D 1 13C4 PFBA | | | | | | | | | | |
| 217.00 > 172.00 | 2.557 | 2.566 | -0.009 | 0.626 | 7622919 | 0.9855 | | 39.4 | 4581 | |
| 2 Perfluorobutanoic acid | | | | | | | | | | M |
| 212.90 > 169.00 | 2.557 | 2.566 | -0.009 | 1.000 | 210714 | 0.0796 | | | 2.4 | M |
| D 4 13C5 PFPeA | | | | | | | | | | |
| 267.90 > 223.00 | 2.909 | 2.909 | 0.0 | 0.713 | 8159501 | 1.36 | | 54.2 | 1717 | |
| 5 Perfluoropentanoic acid | | | | | | | | | | M |
| 262.90 > 219.00 | 2.909 | 2.920 | -0.011 | 1.000 | 105104 | 0.0323 | | | 0.4 | M |
| D 9 13C3 PFBS | | | | | | | | | | |
| 301.90 > 80.00 | 2.940 | 2.951 | -0.011 | 0.720 | 9945943 | 2.11 | | 90.5 | 520 | |
| 6 Perfluorobutanesulfonic acid | | | | | | | | | | M |
| 298.90 > 80.00 | 2.940 | 2.951 | -0.011 | 1.000 | 71084 | 0.0165 | Target=2.37 | | 1.1 | M |
| 298.90 > 99.00 | 2.940 | 2.951 | -0.011 | 1.000 | 21403 | | 3.32(1.19-3.56) | | 1.3 | |
| D 11 13C2 PFHxA | | | | | | | | | | |
| 315.00 > 270.00 | 3.288 | 3.290 | -0.002 | 0.805 | 9433784 | 1.57 | | 62.8 | 4456 | |
| 10 Perfluorohexanoic acid | | | | | | | | | | M |
| 313.00 > 269.00 | 3.278 | 3.290 | -0.012 | 0.997 | 106270 | 0.0292 | Target=13.16 | | 0.7 | M |
| 313.00 > 119.00 | 3.278 | 3.290 | -0.012 | 0.997 | 8852 | | 12.01(6.58-19.74) | | 2.2 | M |
| D 17 18O2 PFHxS | | | | | | | | | | |
| 403.00 > 84.00 | 3.691 | 3.702 | -0.011 | 0.904 | 5303385 | 2.12 | | 89.8 | 6383 | |
| D 18 13C4 PFHpA | | | | | | | | | | |
| 367.00 > 322.00 | 3.691 | 3.702 | -0.011 | 0.904 | 8405070 | 1.64 | | 65.6 | 3961 | |
| 16 Perfluoroheptanoic acid | | | | | | | | | | M |
| 363.00 > 319.00 | 3.681 | 3.702 | -0.021 | 0.997 | 88935 | 0.0261 | Target=3.69 | | 1.5 | M |
| 363.00 > 169.00 | 3.691 | 3.702 | -0.011 | 1.000 | 28595 | | 3.11(1.85-5.54) | | 12.9 | M |
| 15 Perfluorohexanesulfonic acid | | | | | | | | | | M |
| 399.00 > 80.00 | 3.691 | 3.702 | -0.011 | 1.000 | 73455 | 0.0277 | Target=3.35 | | 2.6 | M |
| 399.00 > 99.00 | 3.691 | 3.702 | -0.011 | 1.000 | 17568 | | 4.18(1.67-5.02) | | 3.7 | M |

| Signal | RT | EXP RT | DLT RT | REL RT | Response | Amount ng/ml | Ratio(Limits) | %Rec | S/N | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| D 20 M2-6:2 FTS | | | | | | | | | | |
| 429.00 > 81.00 | 4.066 | 4.068 | -0.002 | 0.996 | 3234647 | 3.39 | | 143 | 440 | |
| 21 6:2 FTS | | | | | | | | | | |
| 427.00 > 407.00 | 4.066 | 4.068 | -0.002 | 1.000 | 161783 | 0.0517 | | | 172 | |
| D 25 13C4 PFOA | | | | | | | | | | |
| 417.00 > 372.00 | 4.082 | 4.092 | -0.010 | 1.000 | 8073169 | 1.65 | | 66.1 | 4935 | |
| 22 Perfluorooctanoic acid | | | | | | | | | | M |
| 413.00 > 369.00 | 4.082 | 4.092 | -0.010 | 1.000 | 332174 | 0.1008 | Target=2.91 | | 8.0 | M |
| 413.00 > 169.00 | 4.082 | 4.092 | -0.010 | 1.000 | 129831 | | 2.56(1.45-4.36) | | 62.0 | M |
| * 23 13C2 PFOA | | | | | | | | | | |
| 415.00 > 370.00 | 4.082 | 4.092 | -0.010 | | 12198246 | 2.50 | | | 5477 | |
| D 27 13C4 PFOS | | | | | | | | | | |
| 503.00 > 80.00 | 4.446 | 4.454 | -0.008 | 1.089 | 3513557 | 2.08 | | 86.9 | 543 | |
| 29 Perfluorooctanesulfonic acid | | | | | | | | | | M |
| 499.00 > 80.00 | 4.446 | 4.454 | -0.008 | 1.000 | 470556 | 0.3092 | Target=4.72 | | 43.6 | M |
| 499.00 > 99.00 | 4.446 | 4.454 | -0.008 | 1.000 | 83967 | | 5.60(2.36-7.07) | | 37.6 | M |
| D 30 13C5 PFNA | | | | | | | | | | |
| 468.00 > 423.00 | 4.462 | 4.470 | -0.008 | 1.093 | 6928553 | 1.76 | | 70.4 | 4601 | |
| 31 Perfluorononanoic acid | | | | | | | | | | M |
| 463.00 > 419.00 | 4.462 | 4.478 | -0.016 | 1.000 | 31461 | 0.0118 | Target=8.08 | | 1.8 | M |
| 463.00 > 169.00 | 4.454 | 4.478 | -0.024 | 0.998 | 4334 | | 7.26(4.04-12.12) | | 6.5 | M |
| D 33 13C8 FOSA | | | | | | | | | | |
| 506.00 > 78.00 | 4.786 | 4.786 | 0.0 | 1.172 | 4497619 | 1.65 | | 66.0 | 6018 | |
| 34 Perfluorooctanesulfonamide | | | | | | | | | | |
| 498.00 > 78.00 | 4.786 | 4.786 | 0.0 | 1.000 | 24351 | 0.0145 | | | 10.9 | |
| D 39 13C2 PFDA | | | | | | | | | | |
| 515.00 > 470.00 | 4.820 | 4.828 | -0.008 | 1.181 | 6658663 | 1.74 | | 69.7 | 6260 | |
| D 38 M2-8:2 FTS | | | | | | | | | | |
| 529.00 > 81.00 | 4.820 | 4.828 | -0.008 | 1.181 | 3725335 | 2.70 | | 113 | 932 | |
| 37 Perfluorodecanoic acid | | | | | | | | | | |
| 513.00 > 469.00 | 4.820 | 4.828 | -0.008 | 1.000 | 15509 | 0.006041 | Target=10.81 | | 1.8 | |
| 513.00 > 169.00 | 4.828 | 4.828 | 0.0 | 1.002 | 1264 | | 12.27(5.40-16.21) | | 2.1 | |
| 36 8:2 FTS | | | | | | | | | | |
| 527.00 > 507.00 | 4.846 | 4.828 | 0.018 | 1.005 | 1620 | 0.000587 | | | 12.6 | |
| D 40 d3-NMeFOSAA | | | | | | | | | | |
| 573.00 > 419.00 | 4.977 | 5.000 | -0.023 | 1.219 | 3619255 | 1.41 | | 56.5 | 2392 | |
| 41 NMeFOSAA | | | | | | | | | | M |
| 570.00 > 419.00 | 4.977 | 5.000 | -0.023 | 1.000 | 7312 | 0.006810 | | | 6.5 | M |
| D 43 13C2 PFUnA | | | | | | | | | | |
| 565.00 > 520.00 | 5.138 | 5.157 | -0.019 | 1.259 | 6558345 | 1.73 | | 69.3 | 7471 | |
| D 44 d5-NEtFOSAA | | | | | | | | | | |
| 589.00 > 419.00 | 5.147 | 5.157 | -0.010 | 1.261 | 4551165 | 1.68 | | 67.2 | 2933 | |
| 46 NEtFOSA | | | | | | | | | | M |
| 584.00 > 419.00 | 5.157 | 5.166 | -0.010 | 1.002 | 11565 | 0.009400 | | | 31.2 | M |
| D 56 13C2 PFDoA | | | | | | | | | | |
| 615.00 > 570.00 | 5.437 | 5.448 | -0.011 | 1.332 | 6515498 | 1.75 | | 69.8 | 7642 | |

| Signal | RT | EXP RT | DLT RT | REL RT | Response | Amount ng/ml | Ratio(Limits) | %Rec | S/N | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| D 61 13C2 PFTeDA | | | | | | | | | | |
| 715.00 > 670.00 | 5.948 | 5.959 | -0.011 | 1.457 | 4470320 | 1.45 | | 58.1 | 5122 | |

## QC Flag Legend

Processing Flags

Review Flags

M - Manually Integrated

Report Date: 14-Sep-2020 09:57:30 Chrom Revision: 2.3 11-Sep-2020 20:57:08

Eurofins TestAmerica, Sacramento

Data File: \\chromfs\Sacramento\ChromData\A18\20200911-103101.b\2020.09.11_A18_PFC_A_017.d

Injection Date: 11-Sep-2020 12:50:59 Instrument ID: A18

Lims ID: 460-217547-E-2-A Lab Sample ID: 320-217547-2

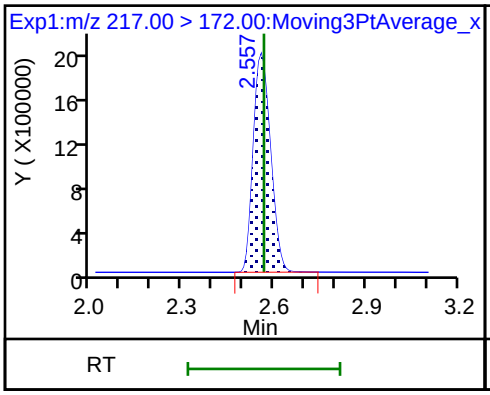
Client ID: MW-204

Operator ID: TAISACA18-PC\A-18 ALS Bottle#: 8 Worklist Smp#: 3

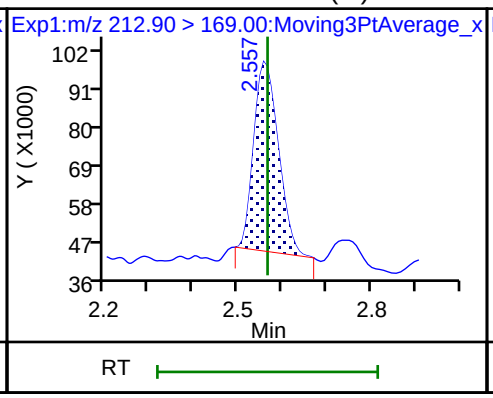
Injection Vol: 20.0 ul Dil. Factor: 1.0000

Method: PFAS_A18V2 Limit Group: LC PFC ICAL

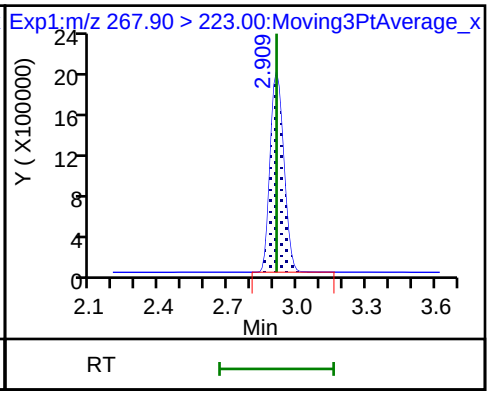
D 1 13C4 PFBA



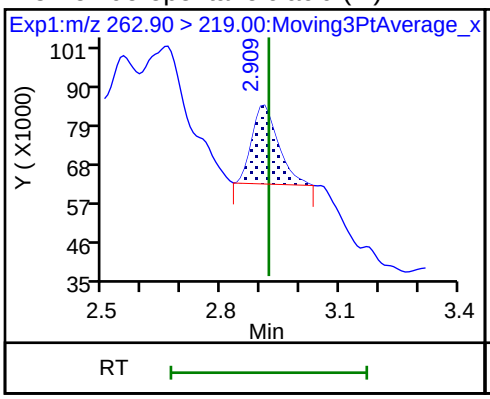

2 Perfluorobutanoic acid (M)



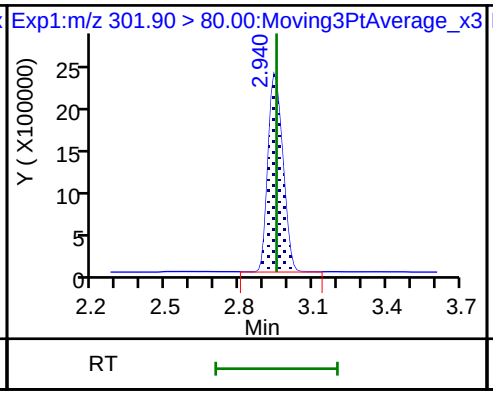

D 4 13C5 PFPeA



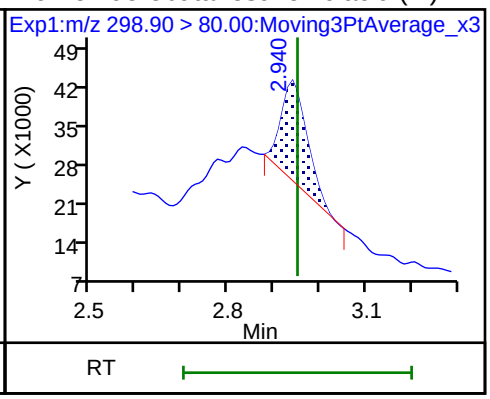

5 Perfluoropentanoic acid (M)



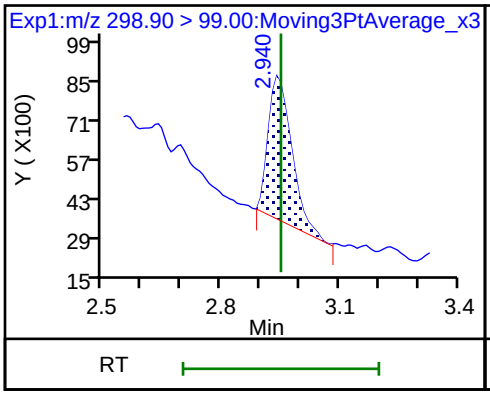

D 9 13C3 PFBS



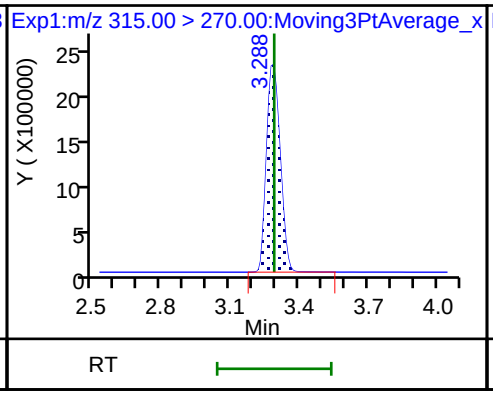

6 Perfluorobutanesulfonic acid (M)



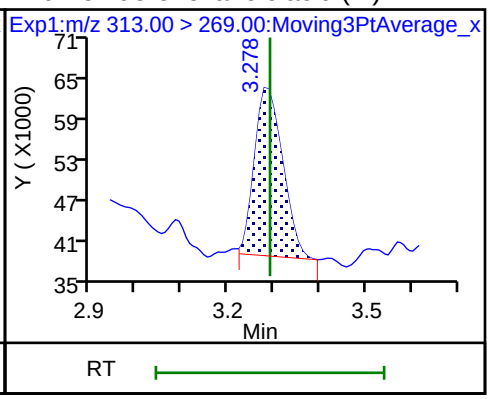

6 Perfluorobutanesulfonic acid



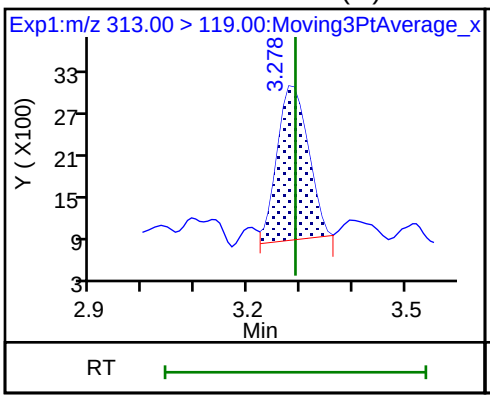

D 11 13C2 PFHxA



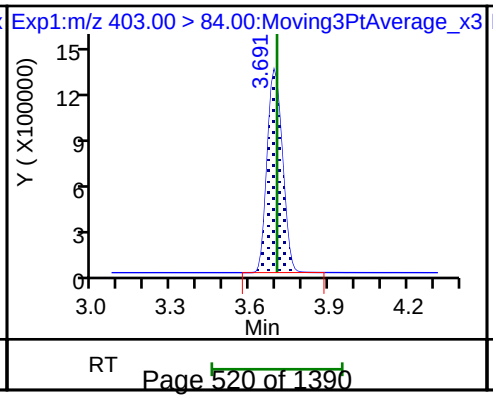

10 Perfluorohexanoic acid (M)



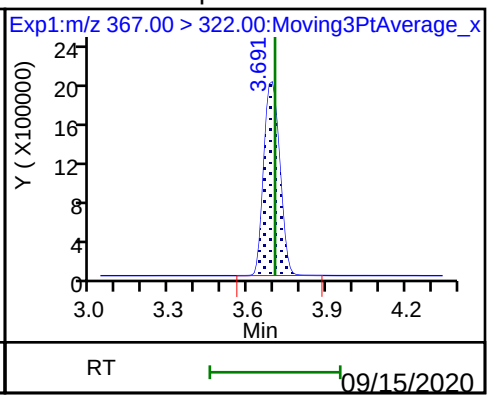

10 Perfluorohexanoic acid (M)



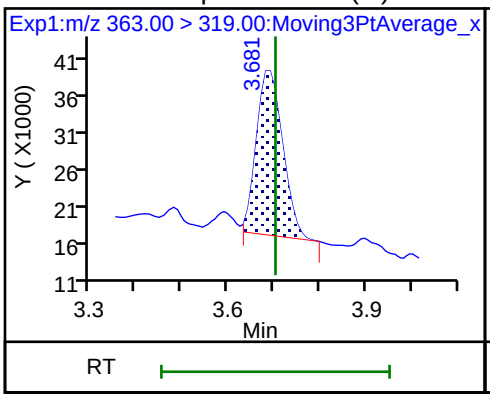

D 17 18O2 PFHxS



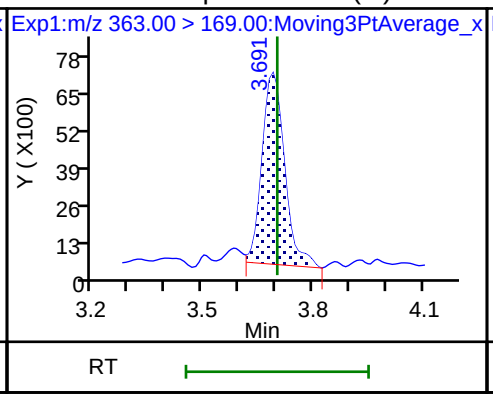

D 18 13C4 PFHpA



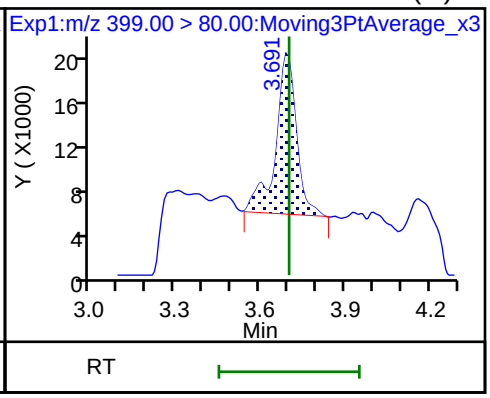
16 Perfluoroheptanoic acid (M)



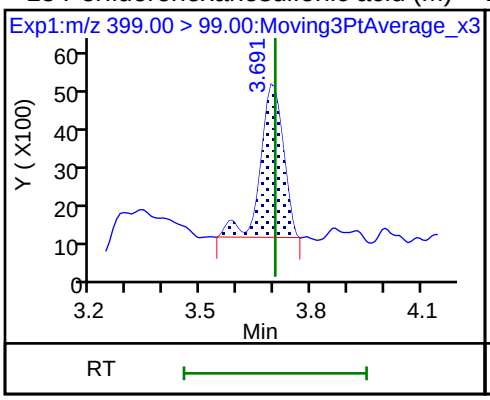

16 Perfluoroheptanoic acid (M)



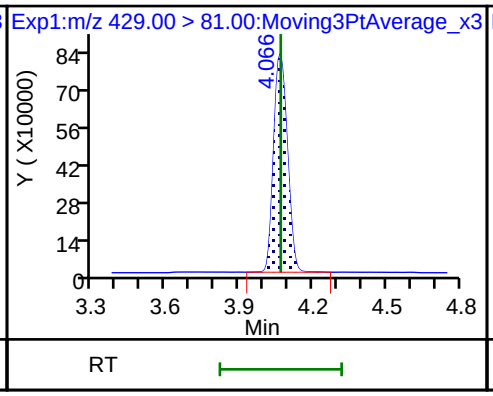

15 Perfluorohexanesulfonic acid (M)



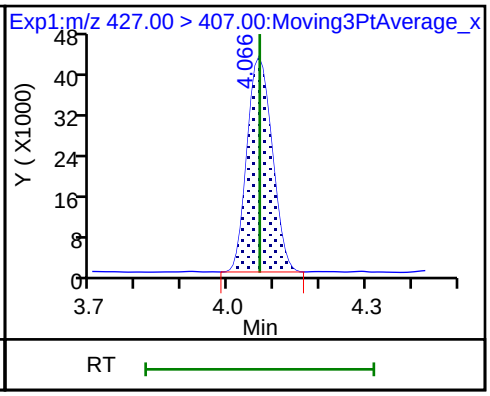

15 Perfluorohexanesulfonic acid (M)



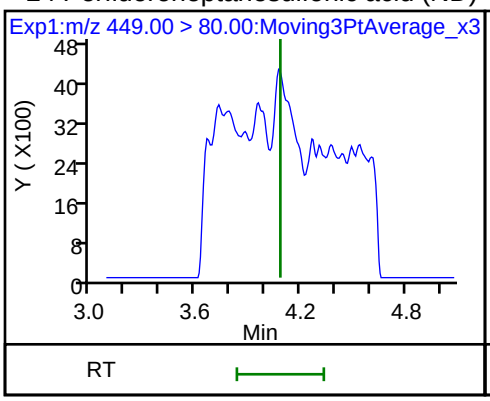

D 20 M2-6:2 FTS



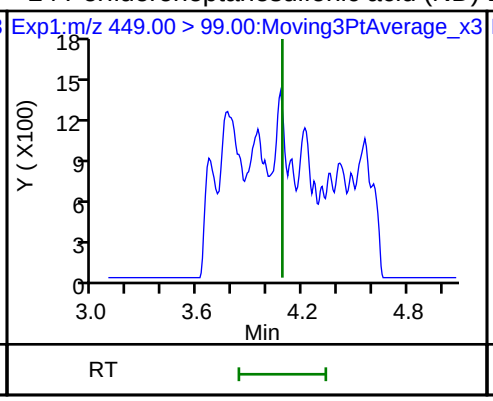

21 6:2 FTS

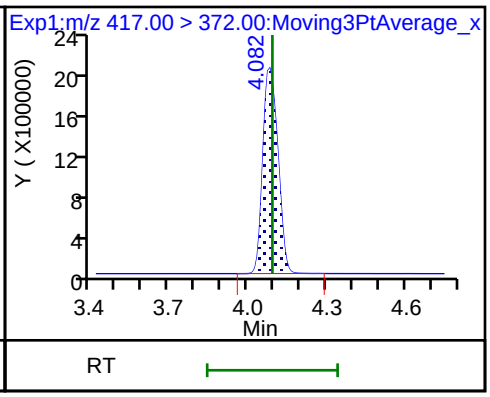



24 Perfluoroheptanesulfonic acid (ND)

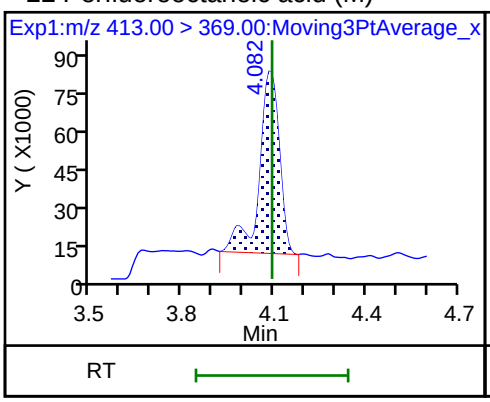



24 Perfluoroheptanesulfonic acid (ND) D 25 13C4 PFOA

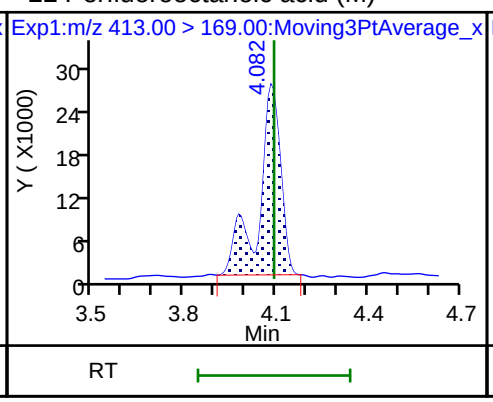


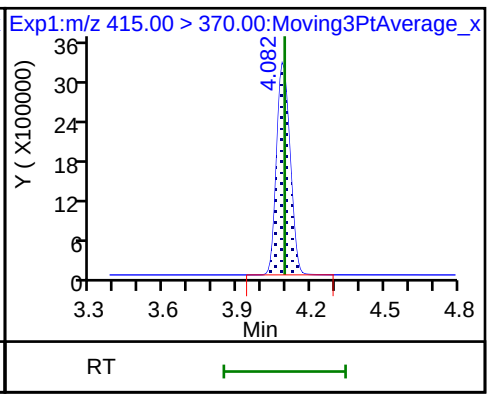

22 Perfluorooctanoic acid (M)



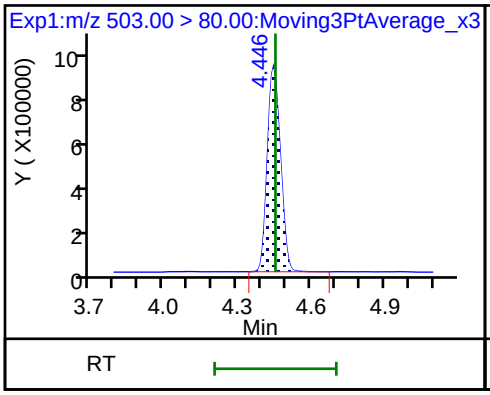

22 Perfluorooctanoic acid (M)



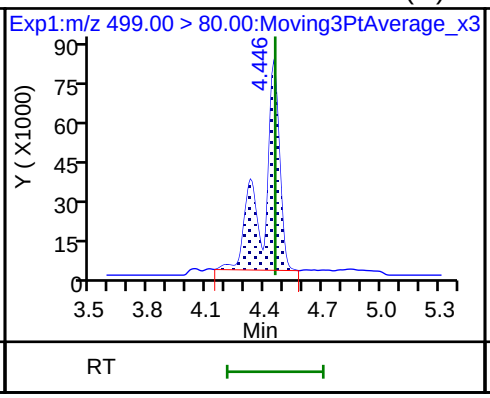

* 23 13C2 PFOA



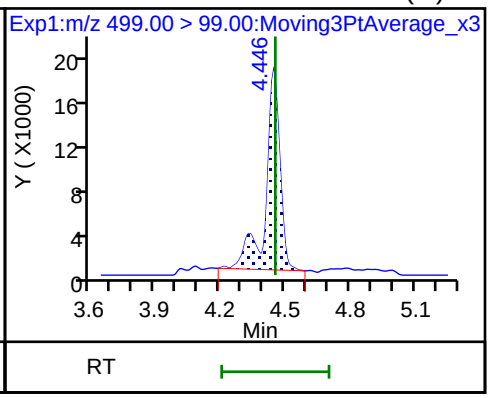
D 27 13C4 PFOS



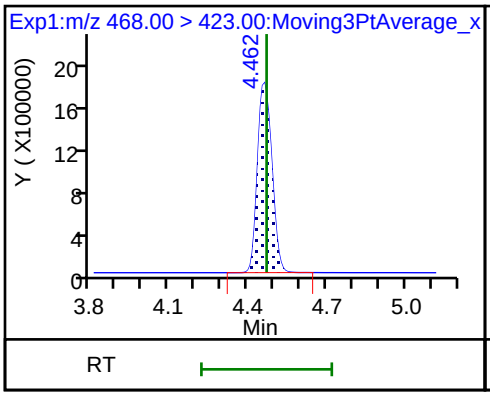

29 Perfluorooctanesulfonic acid (M)



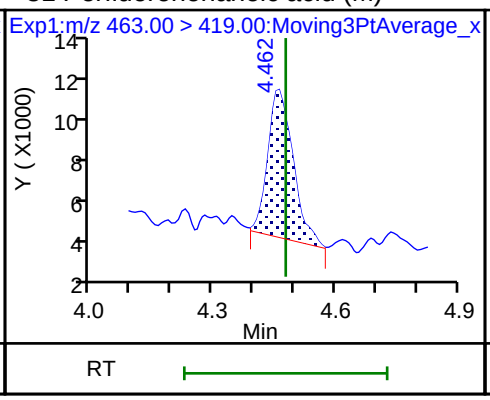

29 Perfluorooctanesulfonic acid (M)



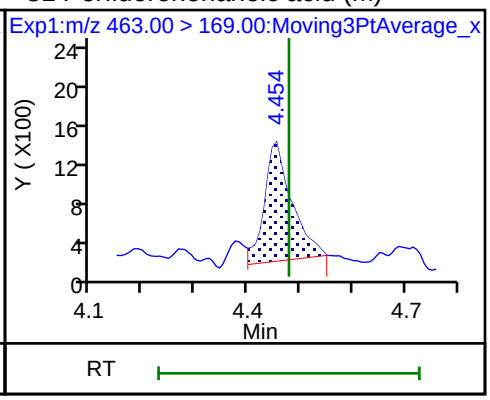

D 30 13C5 PFNA



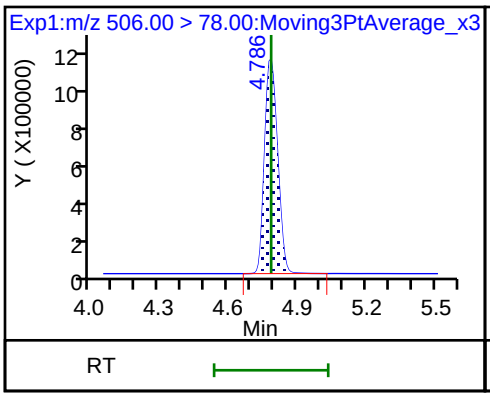

31 Perfluorononanoic acid (M)



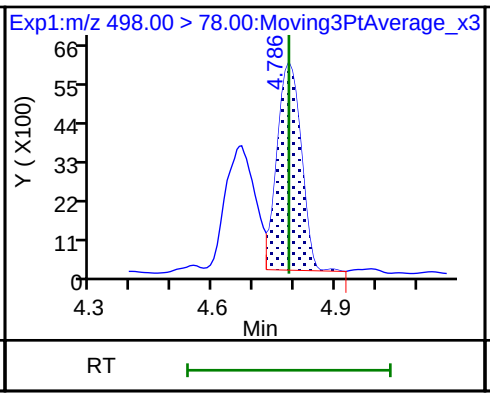

31 Perfluorononanoic acid (M)



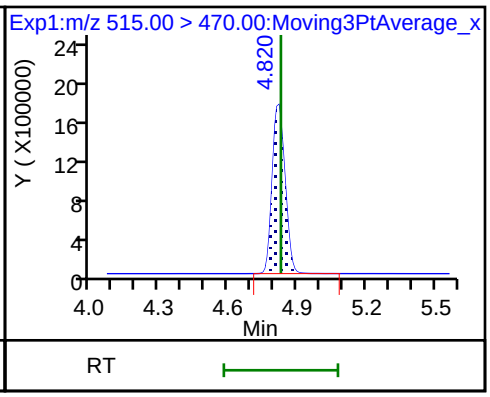

D 33 13C8 FOSA



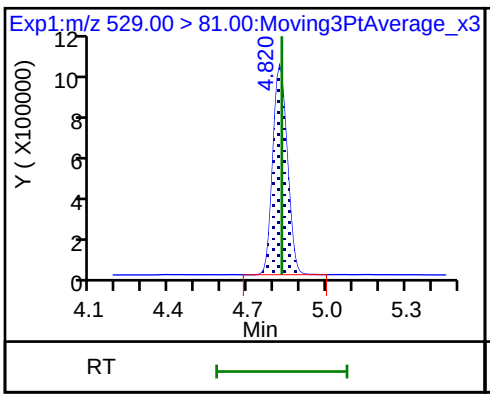

34 Perfluorooctanesulfonamide



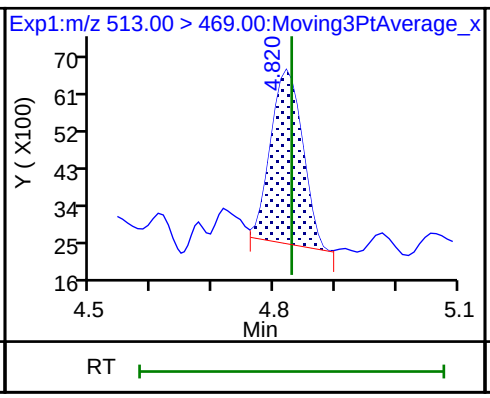

D 39 13C2 PFDA



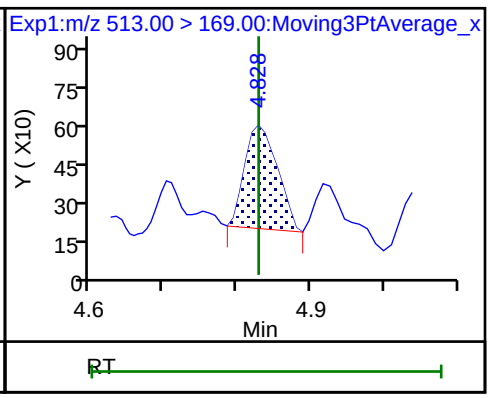

D 38 M2-8:2 FTS



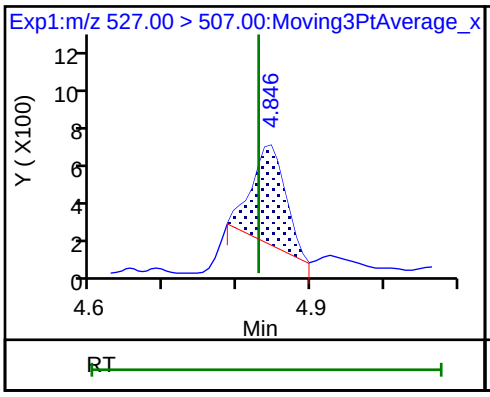

37 Perfluorodecanoic acid



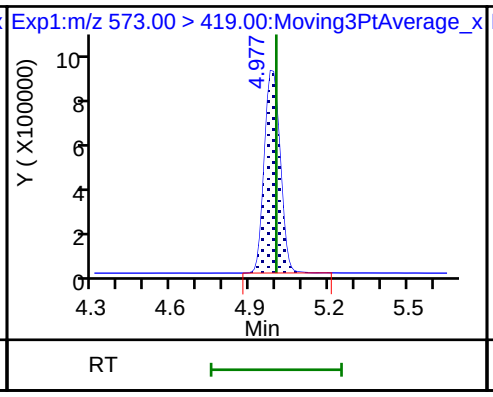

37 Perfluorodecanoic acid



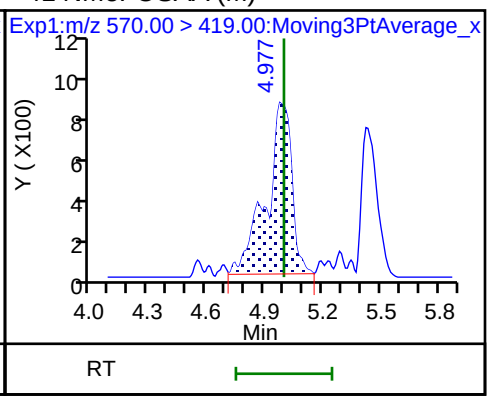
36 8:2 FTS



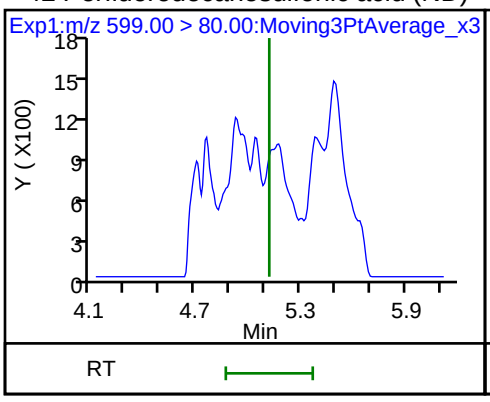

D 40 d3-NMeFOSAA



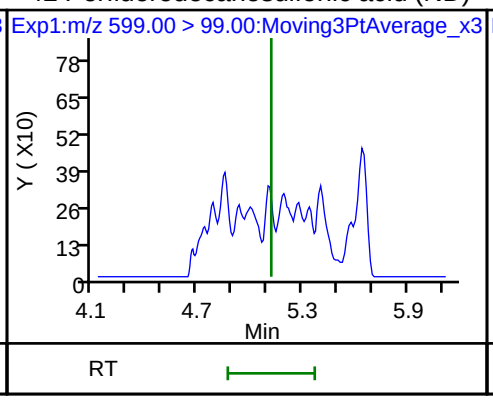

41 NMeFOSAA (M)



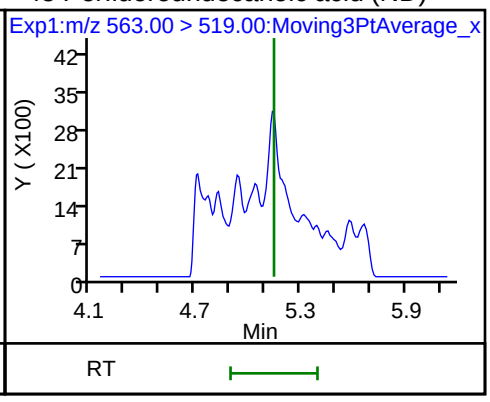

42 Perfluorodecanesulfonic acid (ND)




42 Perfluorodecanesulfonic acid (ND)




45 Perfluoroundecanoic acid (ND)

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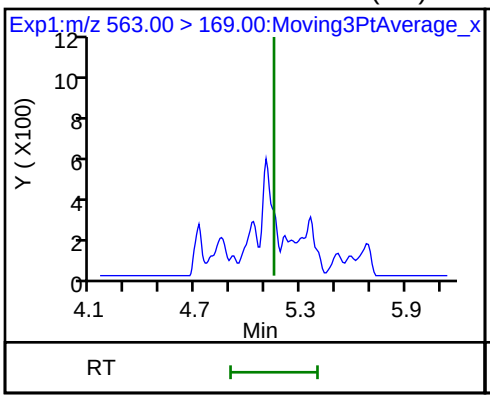
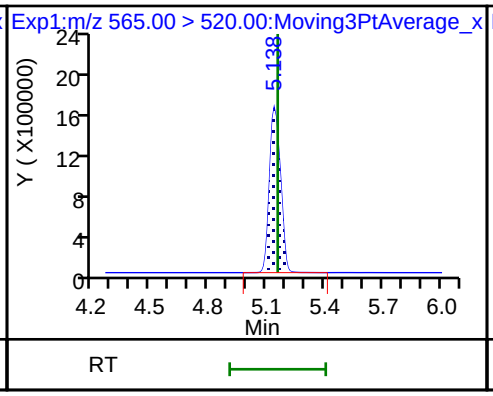
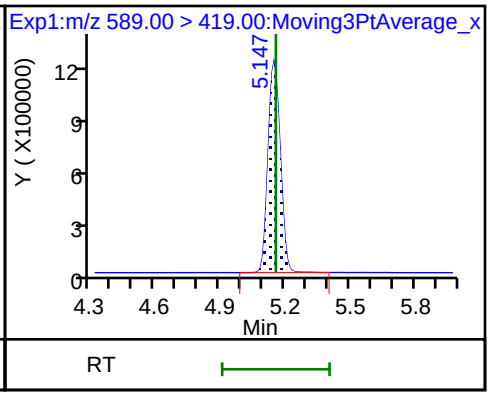


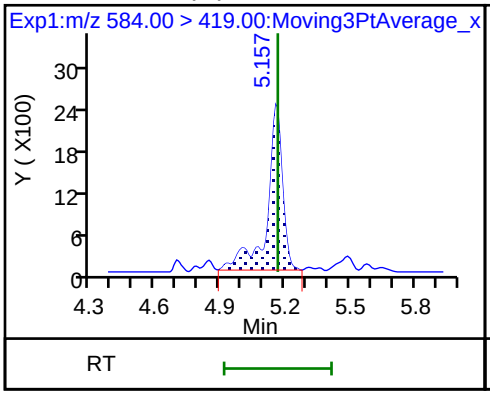

D 43 13C2 PFUnA



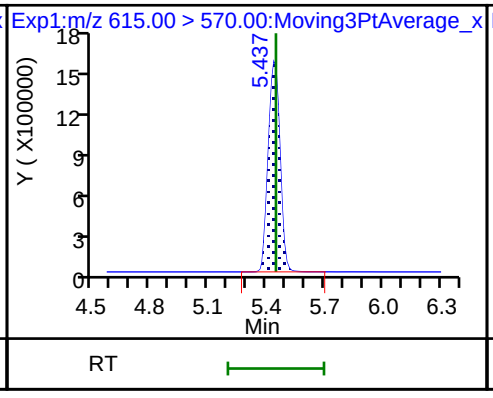

D 44 d5-NEtFOSAA



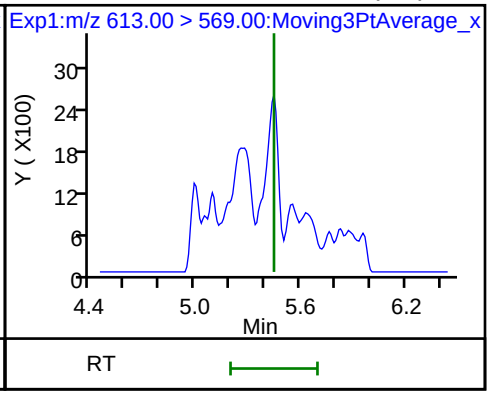

46 NEtFOSA (M)



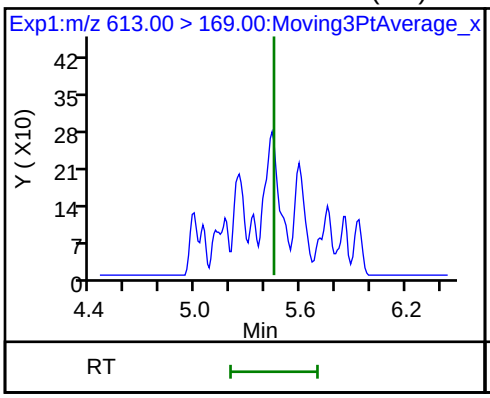

D 56 13C2 PFDoA



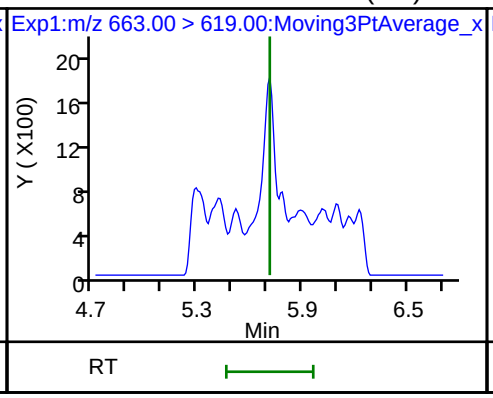

57 Perfluorododecanoic acid (ND)



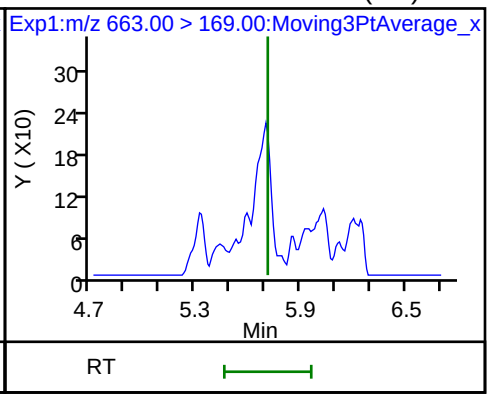
57 Perfluorododecanoic acid (ND)



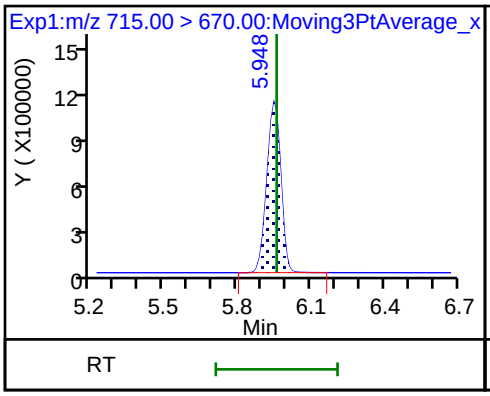

60 Perfluorotridecanoic acid (ND)



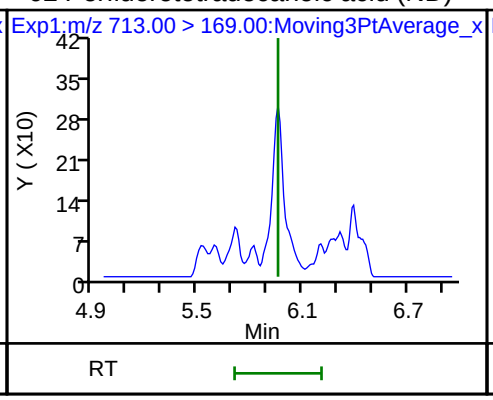

60 Perfluorotridecanoic acid (ND)



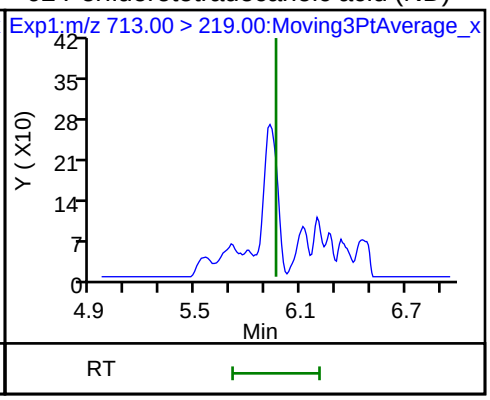

D 61 13C2 PFTeDA




62 Perfluorotetradecanoic acid (ND)




62 Perfluorotetradecanoic acid (ND)



Eurofins TestAmerica, Sacramento

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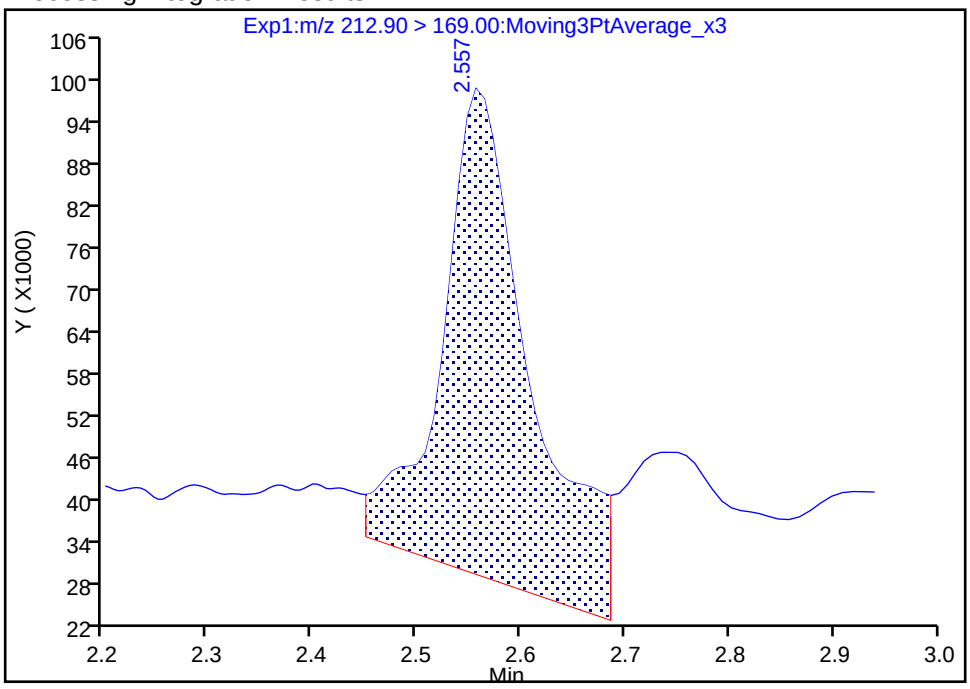
|---|---|---|---|---|---|
| Data File: | \\chromfs\Sacramento\ChromData\A18\20200911-103101.b\2020.09.11_A18_PFC_A_017.d | | | | |
| Injection Date: | 11-Sep-2020 12:50:59 | Instrument ID: | A18 | | |
| Lims ID: | 460-217547-E-2-A | Lab Sample ID: | 320-217547-2 | | |
| Client ID: | MW-204 | | | | |
| Operator ID: | TAISACA18-PC\A-18 | ALS Bottle#: | 8 | Worklist Smp#: | 3 |
| Injection Vol: | 20.0 ul | Dil. Factor: | 1.0000 | | |
| Method: | PFAS_A18V2 | Limit Group: | LC PFC ICAL | | |
| Column: | Gemini C18 3um 3mm x 50 mm ( 3.00mm) | Detector | EXP1 | | |

## 2 Perfluorobutanoic acid, CAS: 375-22-4

Signal: 1

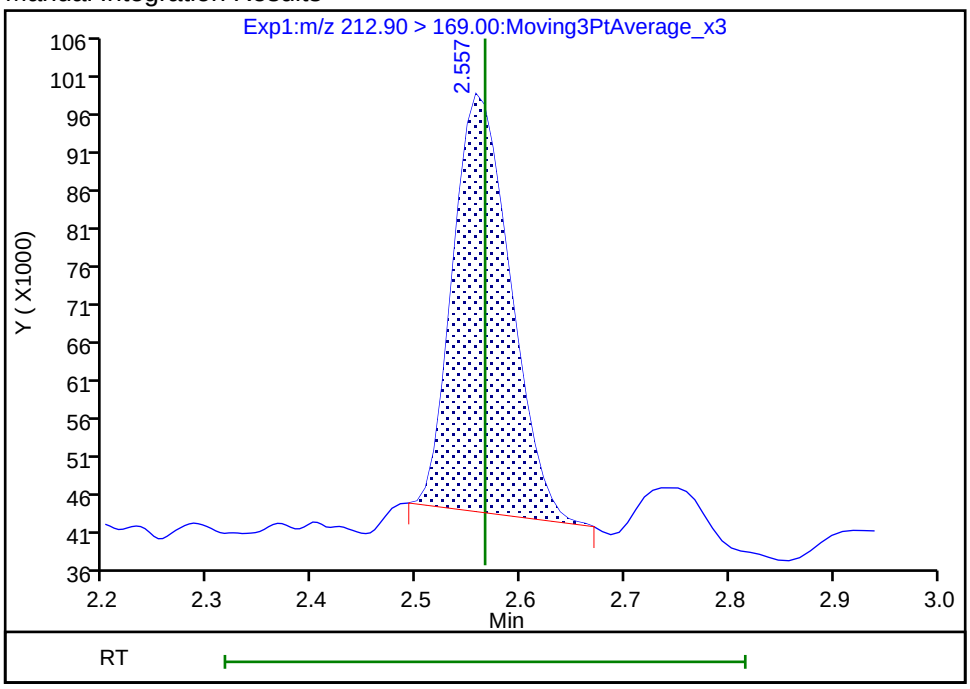
Processing Integration Results

RT: 2.56
Area: 411320
Amount: 0.155427
Amount Units: ng/ml




Manual Integration Results

RT: 2.56
Area: 210714
Amount: 0.079623
Amount Units: ng/ml




Reviewer: sanjumnair, 14-Sep-2020 09:54:56
Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

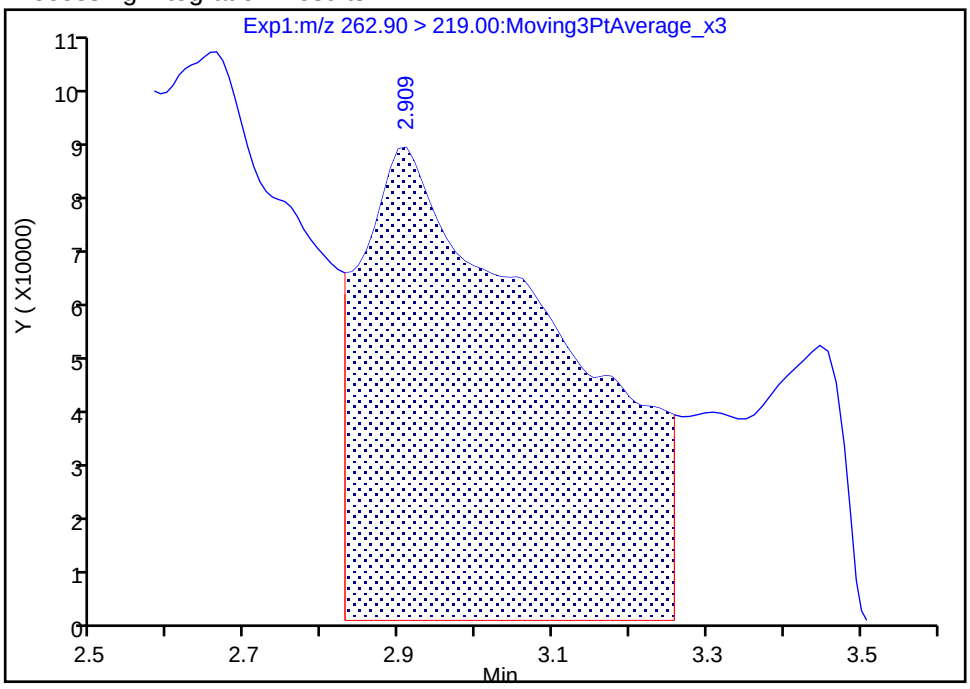
| | | | | | |
|---|---|---|---|---|---|
| Data File: | \\chromfs\Sacramento\ChromData\A18\20200911-103101.b\2020.09.11_A18_PFC_A_017.d | | | | |
| Injection Date: | 11-Sep-2020 12:50:59 | Instrument ID: | A18 | | |
| Lims ID: | 460-217547-E-2-A | Lab Sample ID: | 320-217547-2 | | |
| Client ID: | MW-204 | | | | |
| Operator ID: | TAISACA18-PC\A-18 | ALS Bottle#: | 8 | Worklist Smp#: | 3 |
| Injection Vol: | 20.0 ul | Dil. Factor: | 1.0000 | | |
| Method: | PFAS_A18V2 | Limit Group: | LC PFC ICAL | | |
| Column: | Gemini C18 3um 3mm x 50 mm ( 3.00mm) | Detector | EXP1 | | |

## 5 Perfluoropentanoic acid, CAS: 2706-90-3

Signal: 1

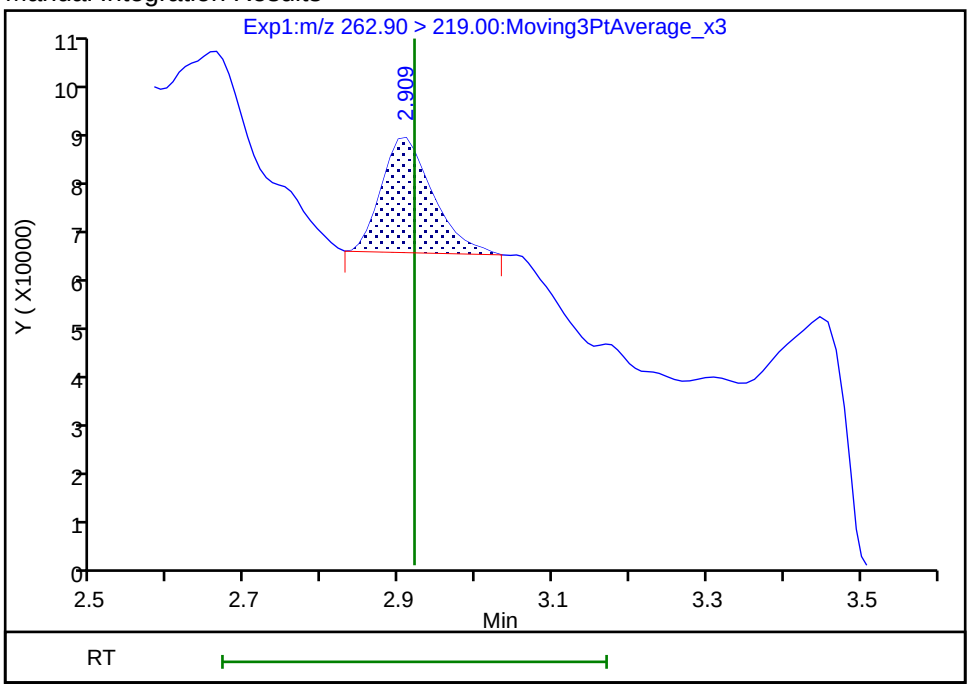
Processing Integration Results

RT: 2.91
Area: 1497461
Amount: 0.460215
Amount Units: ng/ml




Manual Integration Results

RT: 2.91
Area: 105104
Amount: 0.032302
Amount Units: ng/ml




Reviewer: sanjumnair, 14-Sep-2020 09:55:03
Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

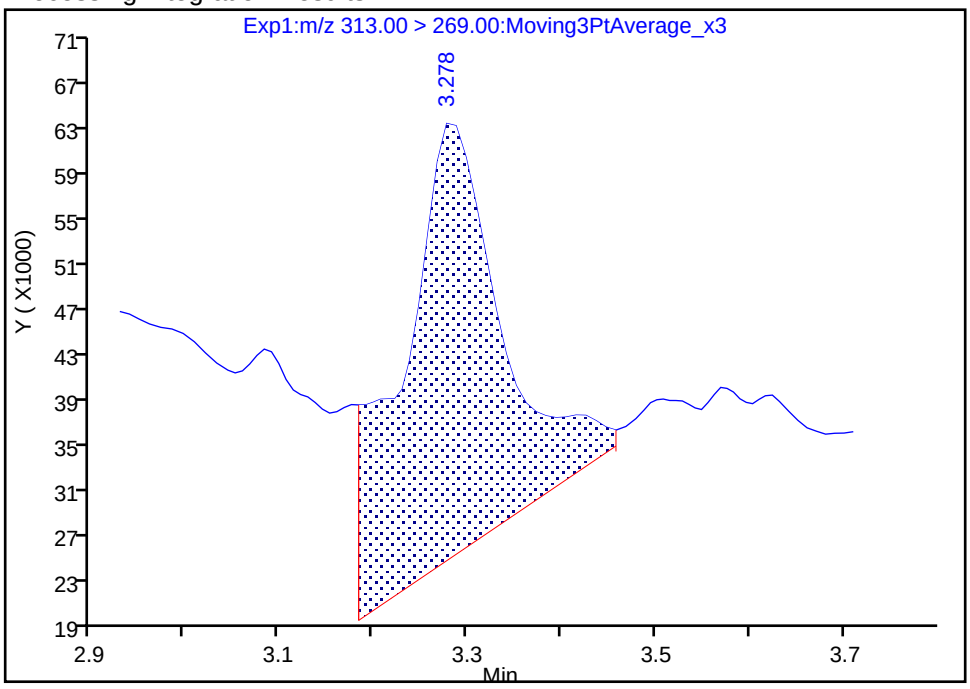
| | | | | | |
|---|---|---|---|---|---|
| Data File: | \\chromfs\Sacramento\ChromData\A18\20200911-103101.b\2020.09.11_A18_PFC_A_017.d | | | | |
| Injection Date: | 11-Sep-2020 12:50:59 | Instrument ID: | A18 | | |
| Lims ID: | 460-217547-E-2-A | Lab Sample ID: | 320-217547-2 | | |
| Client ID: | MW-204 | | | | |
| Operator ID: | TAISACA18-PC\A-18 | ALS Bottle#: | 8 | Worklist Smp#: | 3 |
| Injection Vol: | 20.0 ul | Dil. Factor: | 1.0000 | | |
| Method: | PFAS_A18V2 | Limit Group: | LC PFC ICAL | | |
| Column: | Gemini C18 3um 3mm x 50 mm ( 3.00mm) | Detector | EXP1 | | |

## 10 Perfluorohexanoic acid, CAS: 307-24-4

Signal: 1

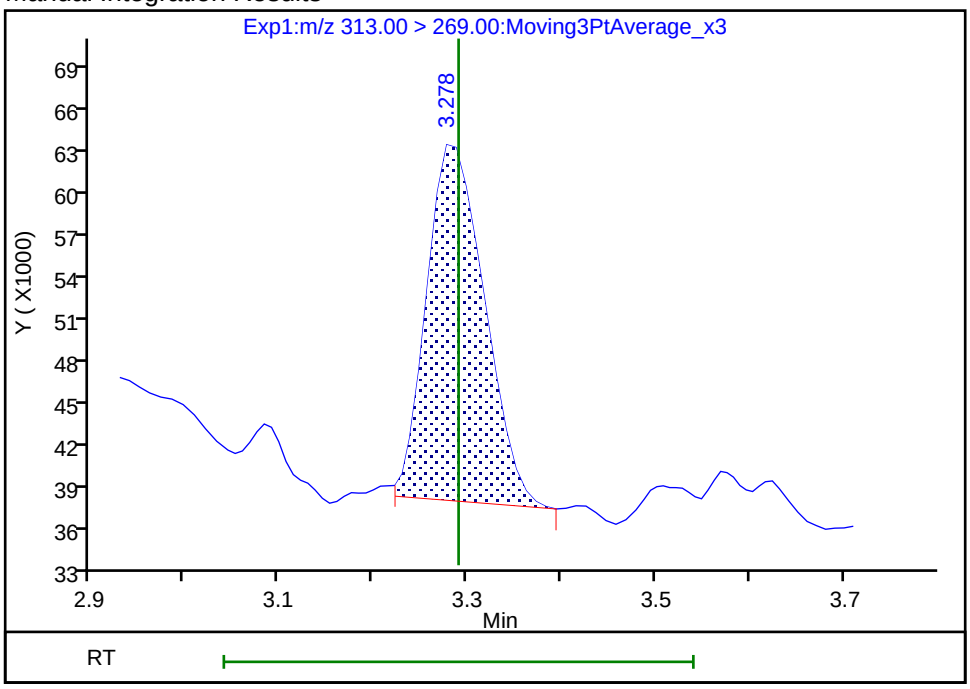
Processing Integration Results

RT: 3.28
Area: 277239
Amount: 0.076227
Amount Units: ng/ml




Manual Integration Results

RT: 3.28
Area: 106270
Amount: 0.029219
Amount Units: ng/ml




Reviewer: sanjumnair, 14-Sep-2020 09:55:29

Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

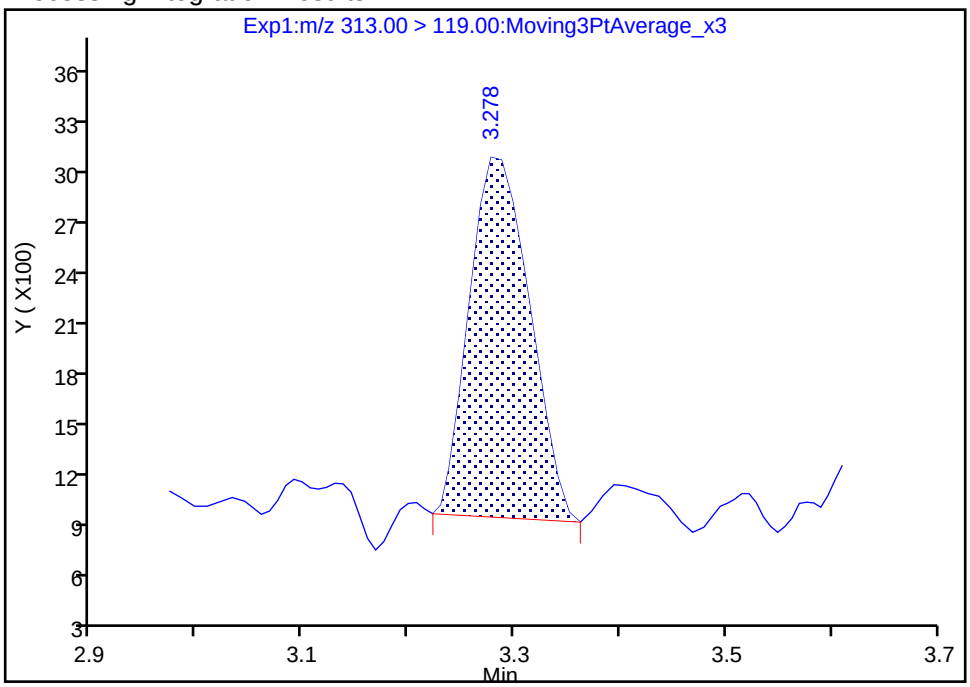
| | | | | | |
|---|---|---|---|---|---|
| Data File: | \\chromfs\Sacramento\ChromData\A18\20200911-103101.b\2020.09.11_A18_PFC_A_017.d | | | | |
| Injection Date: | 11-Sep-2020 12:50:59 | Instrument ID: | A18 | | |
| Lims ID: | 460-217547-E-2-A | Lab Sample ID: | 320-217547-2 | | |
| Client ID: | MW-204 | | | | |
| Operator ID: | TAISACA18-PC\A-18 | ALS Bottle#: | 8 | Worklist Smp#: | 3 |
| Injection Vol: | 20.0 ul | Dil. Factor: | 1.0000 | | |
| Method: | PFAS_A18V2 | Limit Group: | LC PFC ICAL | | |
| Column: | Gemini C18 3um 3mm x 50 mm ( 3.00mm) | Detector | EXP1 | | |

## 10 Perfluorohexanoic acid, CAS: 307-24-4

Signal: 2

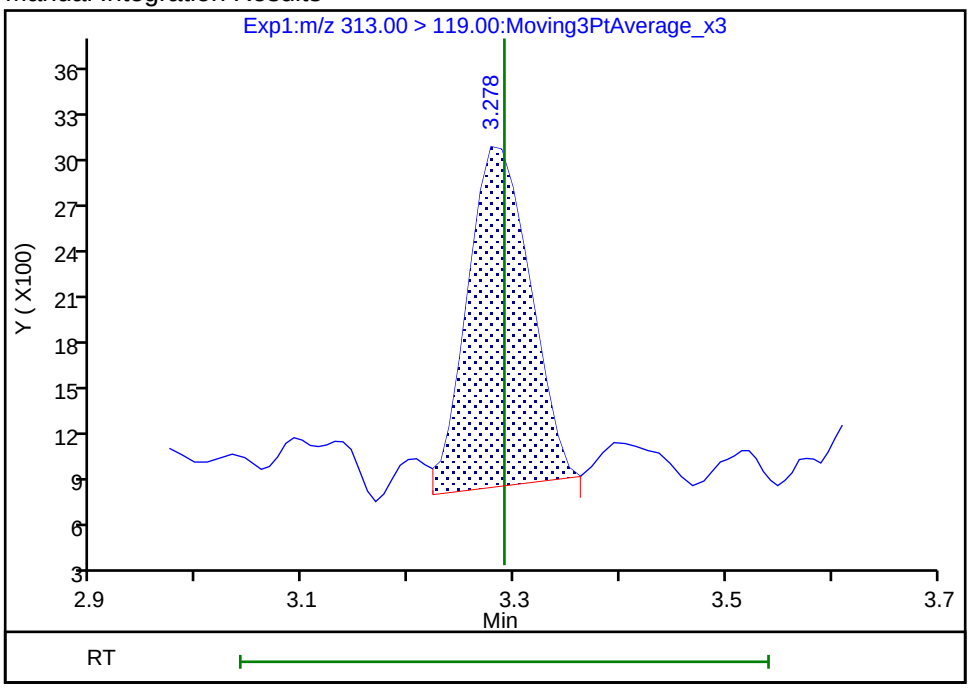
Processing Integration Results

RT: 3.28
Area: 8169
Amount: 0.076227
Amount Units: ng/ml




Manual Integration Results

RT: 3.28
Area: 8852
Amount: 0.029219
Amount Units: ng/ml




Reviewer: sanjumnair, 14-Sep-2020 09:55:33
Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

| | | | | | |
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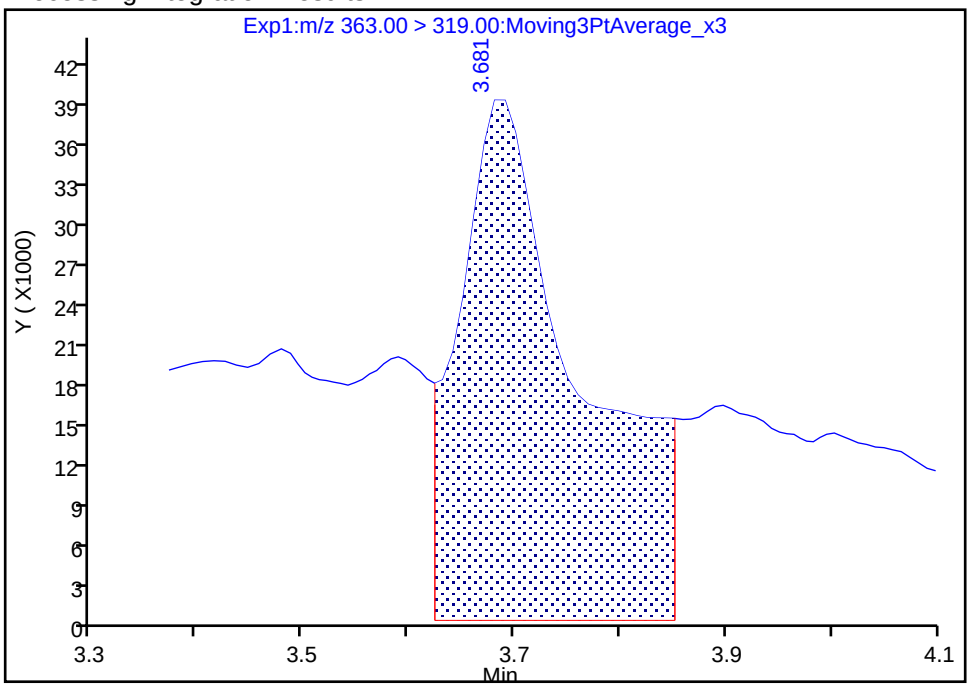
| Injection Date: | 11-Sep-2020 12:50:59 | Instrument ID: | A18 | | |
| Lims ID: | 460-217547-E-2-A | Lab Sample ID: | 320-217547-2 | | |
| Client ID: | MW-204 | | | | |
| Operator ID: | TAISACA18-PC\A-18 | ALS Bottle#: | 8 | Worklist Smp#: | 3 |
| Injection Vol: | 20.0 ul | Dil. Factor: | 1.0000 | | |
| Method: | PFAS_A18V2 | Limit Group: | LC PFC ICAL | | |
| Column: | Gemini C18 3um 3mm x 50 mm ( 3.00mm) | Detector | EXP1 | | |

## 16 Perfluoroheptanoic acid, CAS: 375-85-9

Signal: 1

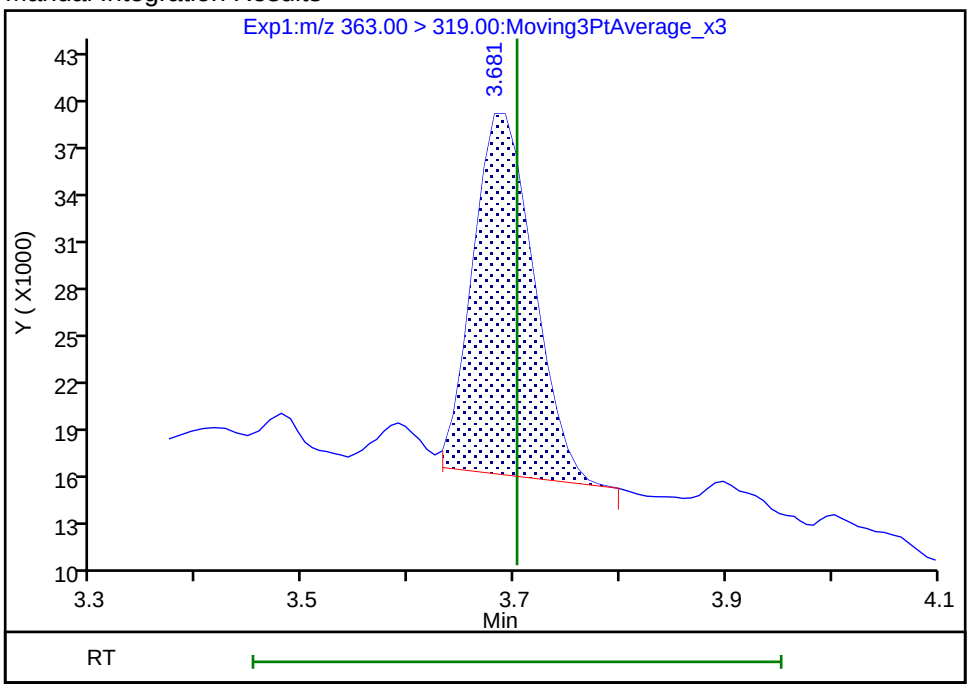
Processing Integration Results

RT: 3.68
Area: 307563
Amount: 0.090240
Amount Units: ng/ml




Manual Integration Results

RT: 3.68
Area: 88935
Amount: 0.026094
Amount Units: ng/ml




Reviewer: sanjumnair, 14-Sep-2020 09:55:55

Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

| | | | | | |
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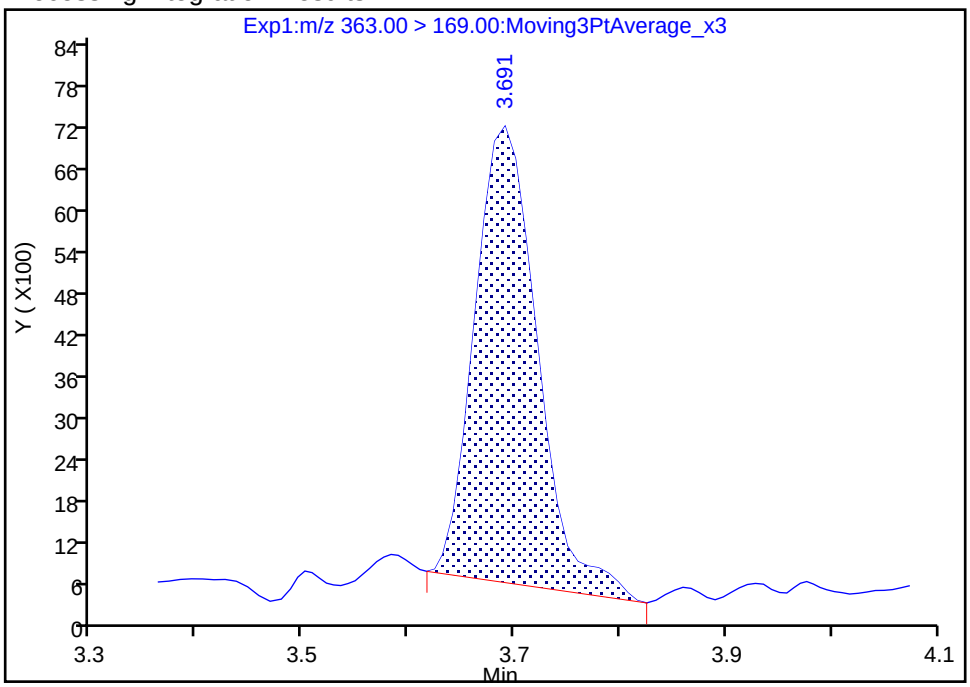
| Data File: | \\chromfs\Sacramento\ChromData\A18\20200911-103101.b\2020.09.11_A18_PFC_A_017.d | | | | |
| Injection Date: | 11-Sep-2020 12:50:59 | Instrument ID: | A18 | | |
| Lims ID: | 460-217547-E-2-A | Lab Sample ID: | 320-217547-2 | | |
| Client ID: | MW-204 | | | | |
| Operator ID: | TAISACA18-PC\A-18 | ALS Bottle#: | 8 | Worklist Smp#: | 3 |
| Injection Vol: | 20.0 ul | Dil. Factor: | 1.0000 | | |
| Method: | PFAS_A18V2 | Limit Group: | LC PFC ICAL | | |
| Column: | Gemini C18 3um 3mm x 50 mm ( 3.00mm) | Detector | EXP1 | | |

## 16 Perfluoroheptanoic acid, CAS: 375-85-9

Signal: 2

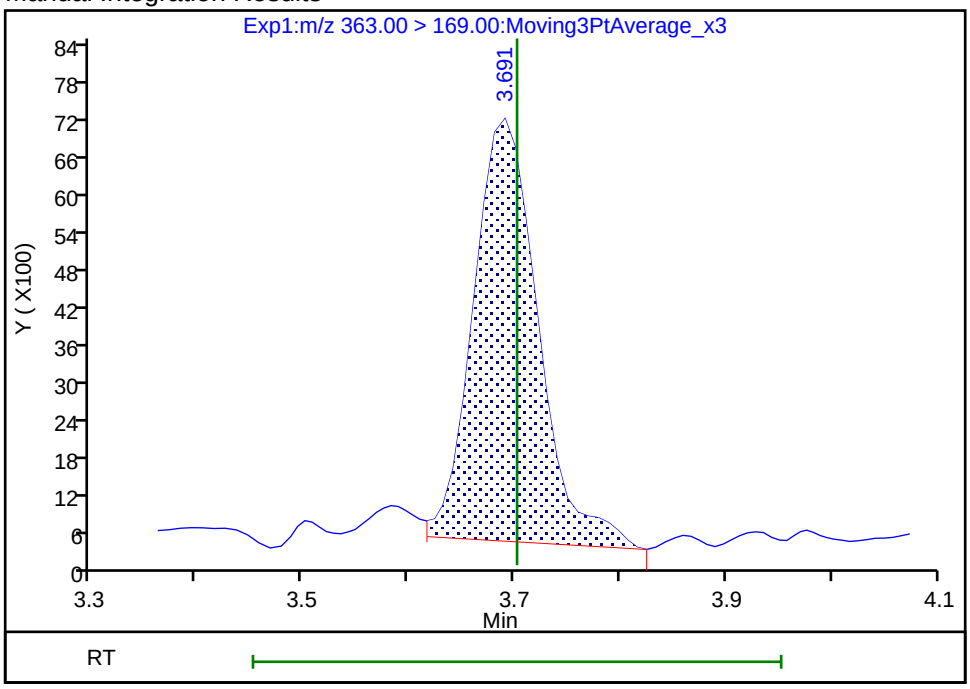
Processing Integration Results

RT: 3.69
Area: 27044
Amount: 0.090240
Amount Units: ng/ml




Manual Integration Results

RT: 3.69
Area: 28595
Amount: 0.026094
Amount Units: ng/ml




Reviewer: sanjumnair, 14-Sep-2020 09:55:58
Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

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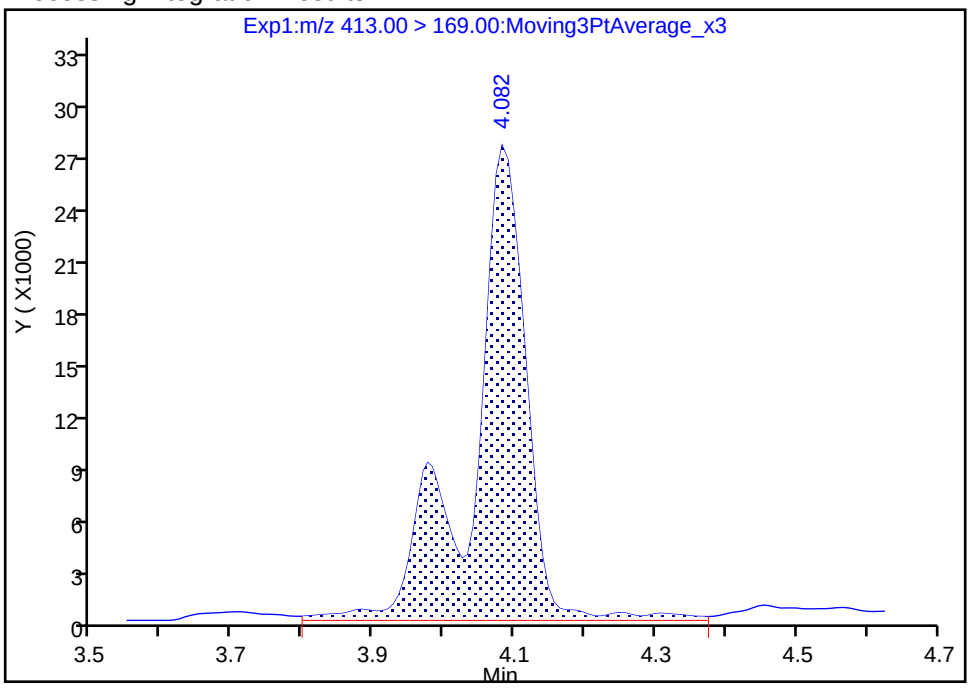
| Injection Date: | 11-Sep-2020 12:50:59 | Instrument ID: | A18 | | |
| Lims ID: | 460-217547-E-2-A | Lab Sample ID: | 320-217547-2 | | |
| Client ID: | MW-204 | | | | |
| Operator ID: | TAISACA18-PC\A-18 | ALS Bottle#: | 8 | Worklist Smp#: | 3 |
| Injection Vol: | 20.0 ul | Dil. Factor: | 1.0000 | | |
| Method: | PFAS_A18V2 | Limit Group: | LC PFC ICAL | | |
| Column: | Gemini C18 3um 3mm x 50 mm ( 3.00mm) | Detector | EXP1 | | |

## 22 Perfluorooctanoic acid, CAS: 335-67-1

Signal: 2

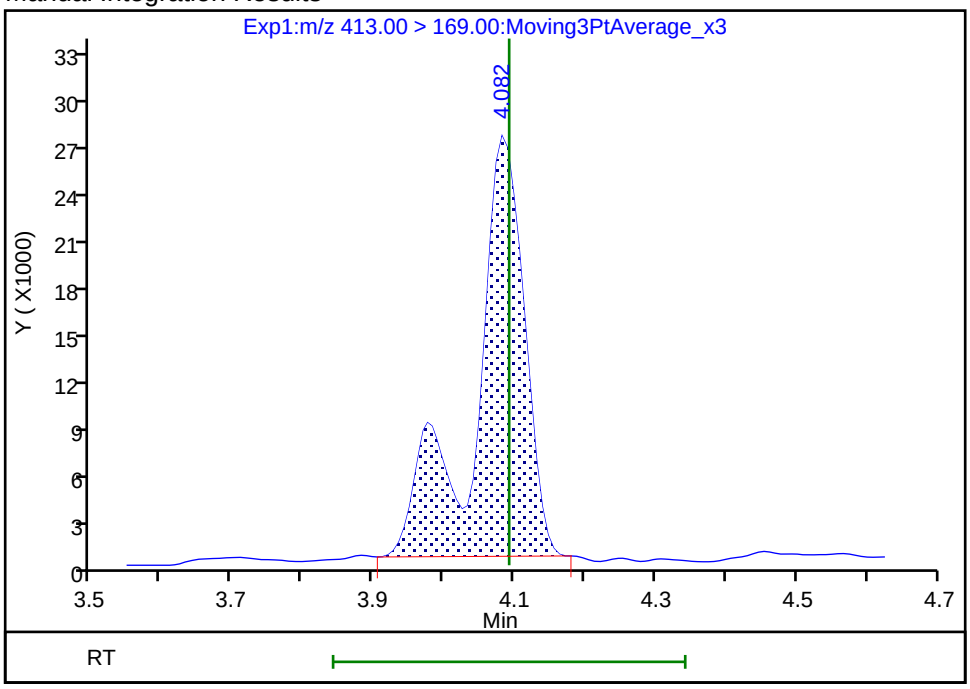
Processing Integration Results

RT: 4.08
Area: 145579
Amount: 0.190971
Amount Units: ng/ml




Manual Integration Results

RT: 4.08
Area: 129831
Amount: 0.100808
Amount Units: ng/ml




Reviewer: sanjumnair, 14-Sep-2020 09:56:23

Audit Action: Manually Integrated Audit Reason: Baseline

Eurofins TestAmerica, Sacramento

| | | | | | |
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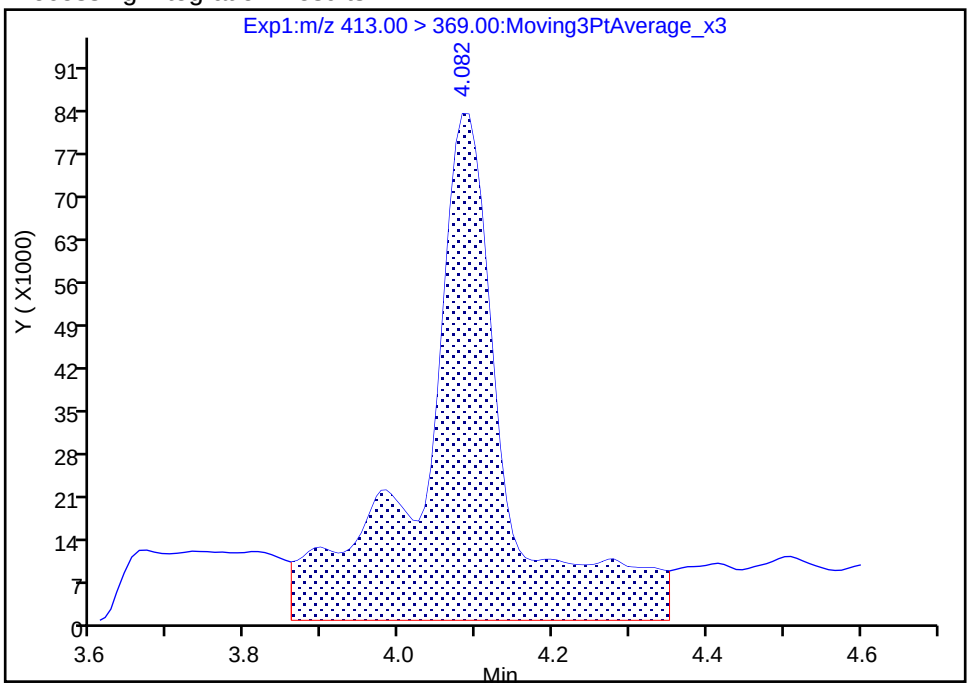
| Data File: | \\chromfs\Sacramento\ChromData\A18\20200911-103101.b\2020.09.11_A18_PFC_A_017.d | | | | |
| Injection Date: | 11-Sep-2020 12:50:59 | Instrument ID: | A18 | | |
| Lims ID: | 460-217547-E-2-A | Lab Sample ID: | 320-217547-2 | | |
| Client ID: | MW-204 | | | | |
| Operator ID: | TAISACA18-PC\A-18 | ALS Bottle#: | 8 | Worklist Smp#: | 3 |
| Injection Vol: | 20.0 ul | Dil. Factor: | 1.0000 | | |
| Method: | PFAS_A18V2 | Limit Group: | LC PFC ICAL | | |
| Column: | Gemini C18 3um 3mm x 50 mm ( 3.00mm) | Detector | EXP1 | | |

## 22 Perfluorooctanoic acid, CAS: 335-67-1

Signal: 1

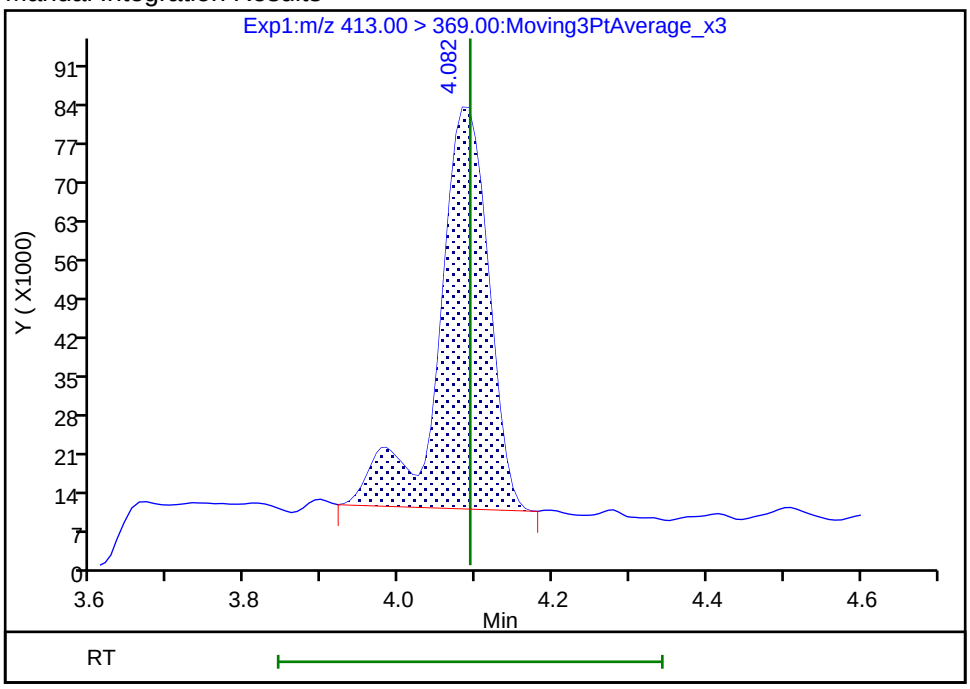
Processing Integration Results

RT: 4.08
Area: 629275
Amount: 0.190971
Amount Units: ng/ml




Manual Integration Results

RT: 4.08
Area: 332174
Amount: 0.100808
Amount Units: ng/ml




Reviewer: sanjumnair, 14-Sep-2020 09:56:28
Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

| | | | | | |
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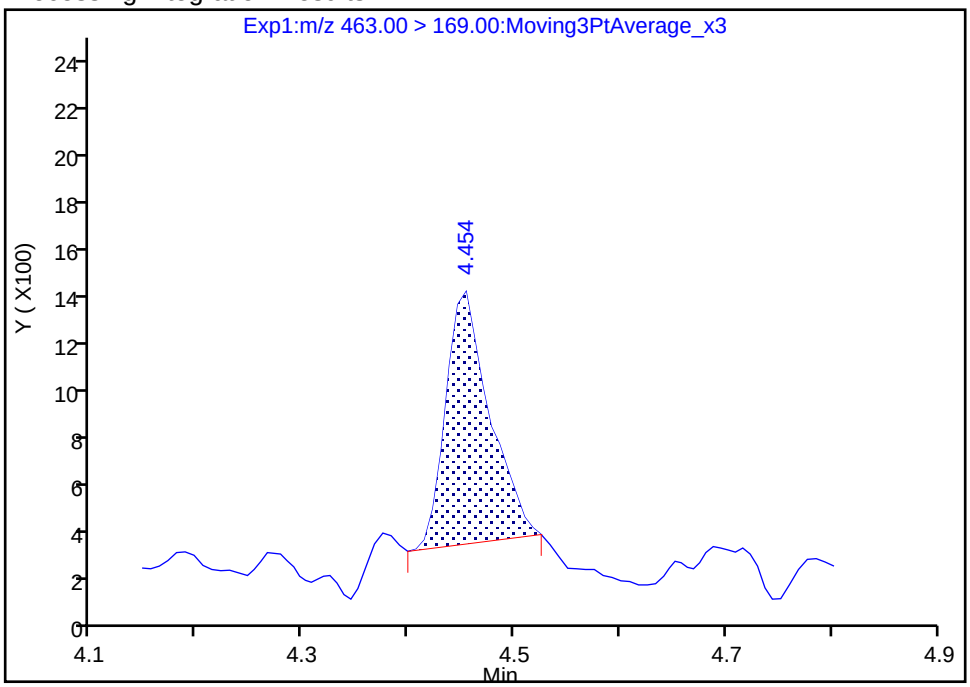
| Injection Date: | 11-Sep-2020 12:50:59 | Instrument ID: | A18 | | |
| Lims ID: | 460-217547-E-2-A | Lab Sample ID: | 320-217547-2 | | |
| Client ID: | MW-204 | | | | |
| Operator ID: | TAISACA18-PC\A-18 | ALS Bottle#: | 8 | Worklist Smp#: | 3 |
| Injection Vol: | 20.0 ul | Dil. Factor: | 1.0000 | | |
| Method: | PFAS_A18V2 | Limit Group: | LC PFC ICAL | | |
| Column: | Gemini C18 3um 3mm x 50 mm ( 3.00mm) | Detector | EXP1 | | |

## 31 Perfluorononanoic acid, CAS: 375-95-1

Signal: 2

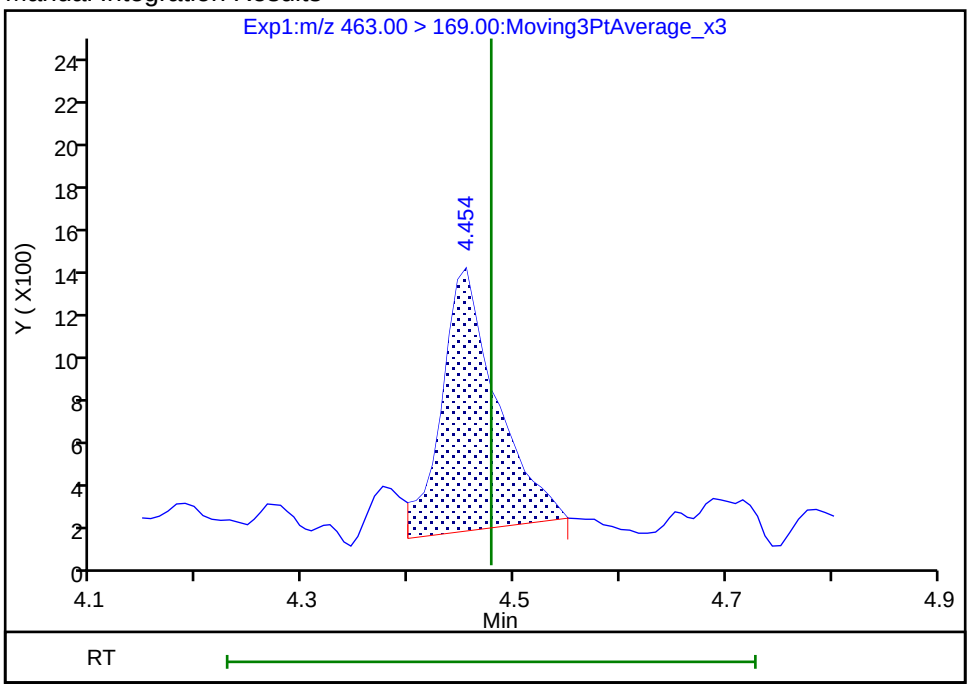
Processing Integration Results

RT: 4.45
Area: 3008
Amount: 0.015755
Amount Units: ng/ml




Manual Integration Results

RT: 4.45
Area: 4334
Amount: 0.011837
Amount Units: ng/ml




Reviewer: sanjumnair, 14-Sep-2020 09:56:53

Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

| | | | | | |
|---|---|---|---|---|---|
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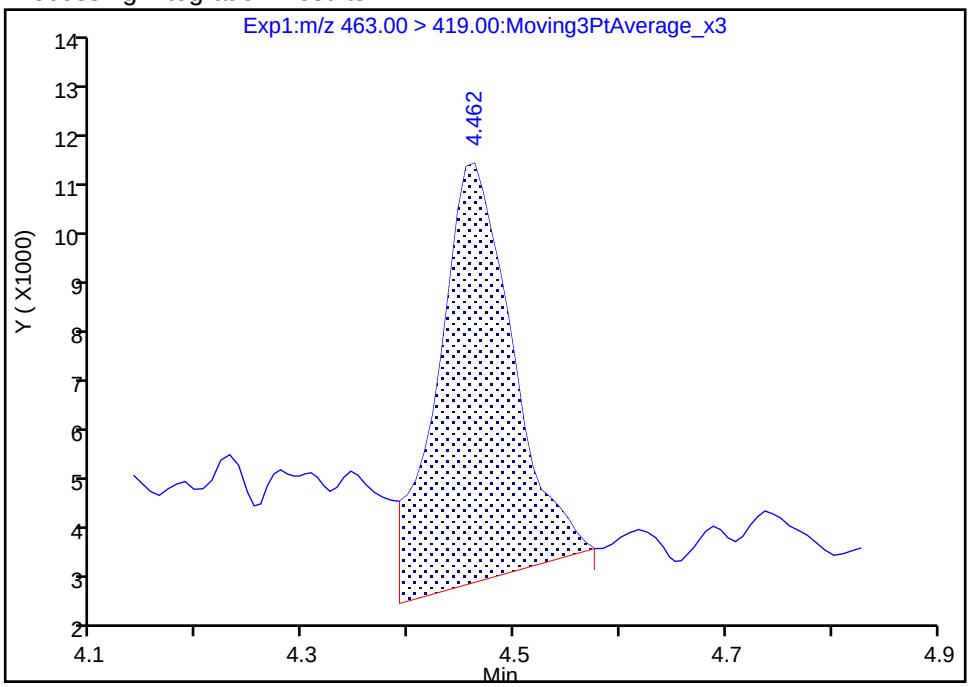
| Injection Date: | 11-Sep-2020 12:50:59 | Instrument ID: | A18 | | |
| Lims ID: | 460-217547-E-2-A | Lab Sample ID: | 320-217547-2 | | |
| Client ID: | MW-204 | | | | |
| Operator ID: | TAISACA18-PC\A-18 | ALS Bottle#: | 8 | Worklist Smp#: | 3 |
| Injection Vol: | 20.0 ul | Dil. Factor: | 1.0000 | | |
| Method: | PFAS_A18V2 | Limit Group: | LC PFC ICAL | | |
| Column: | Gemini C18 3um 3mm x 50 mm ( 3.00mm) | Detector | EXP1 | | |

## 31 Perfluorononanoic acid, CAS: 375-95-1

Signal: 1

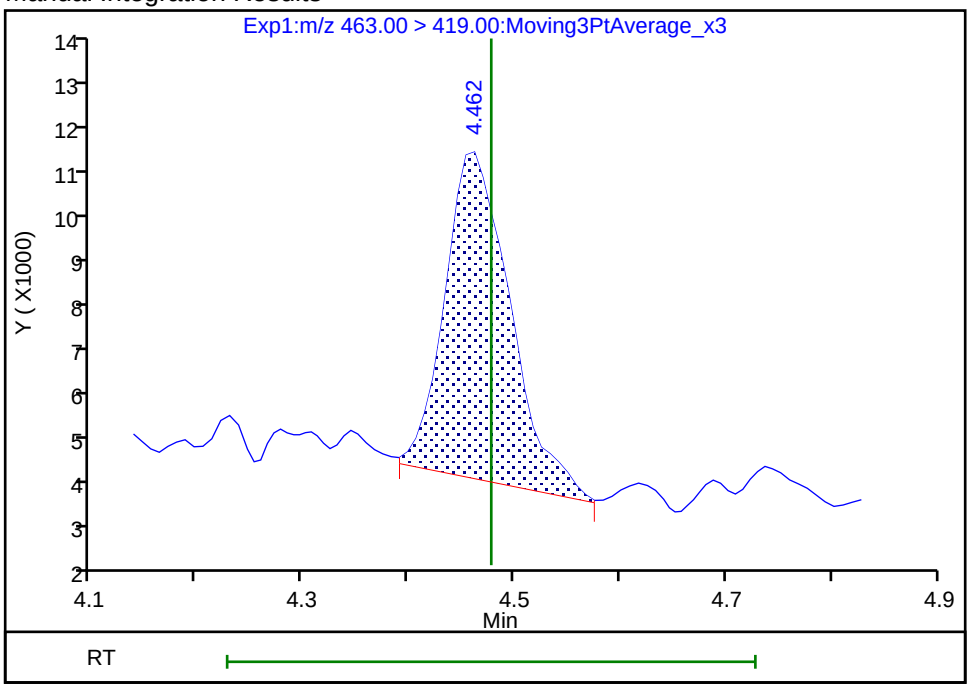
Processing Integration Results

RT: 4.46
Area: 41873
Amount: 0.015755
Amount Units: ng/ml




Manual Integration Results

RT: 4.46
Area: 31461
Amount: 0.011837
Amount Units: ng/ml




Reviewer: sanjumnair, 14-Sep-2020 09:56:59
Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

| | | | | | |
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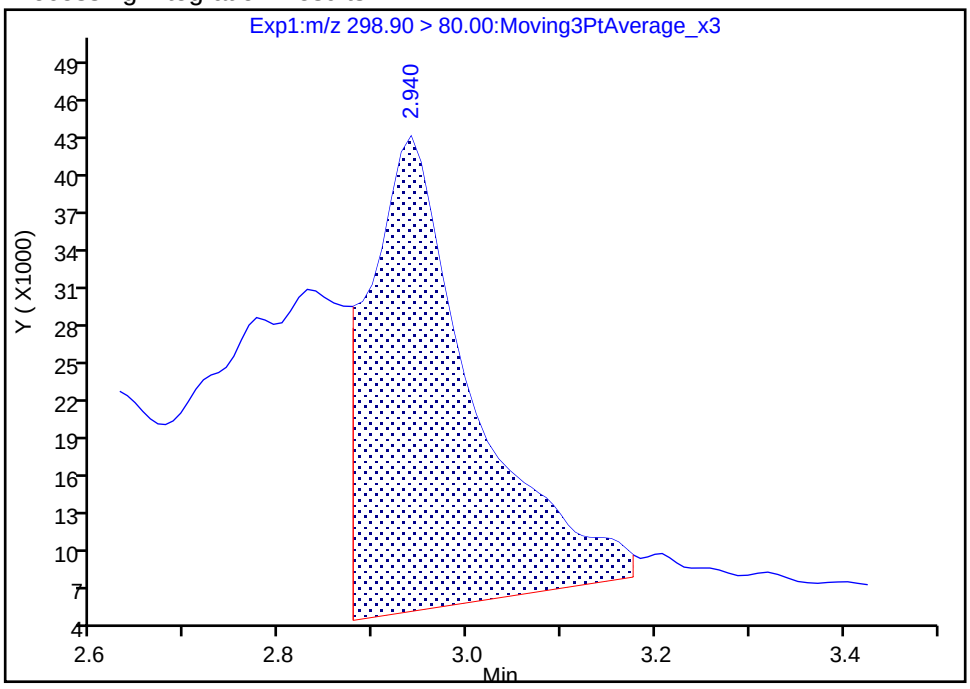
| Data File: | \\chromfs\Sacramento\ChromData\A18\20200911-103101.b\2020.09.11_A18_PFC_A_017.d | | | | |
| Injection Date: | 11-Sep-2020 12:50:59 | Instrument ID: | A18 | | |
| Lims ID: | 460-217547-E-2-A | Lab Sample ID: | 320-217547-2 | | |
| Client ID: | MW-204 | | | | |
| Operator ID: | TAISACA18-PC\A-18 | ALS Bottle#: | 8 | Worklist Smp#: | 3 |
| Injection Vol: | 20.0 ul | Dil. Factor: | 1.0000 | | |
| Method: | PFAS_A18V2 | Limit Group: | LC PFC ICAL | | |
| Column: | Gemini C18 3um 3mm x 50 mm ( 3.00mm) | Detector | EXP1 | | |

## 6 Perfluorobutanesulfonic acid, CAS: 375-73-5

Signal: 1

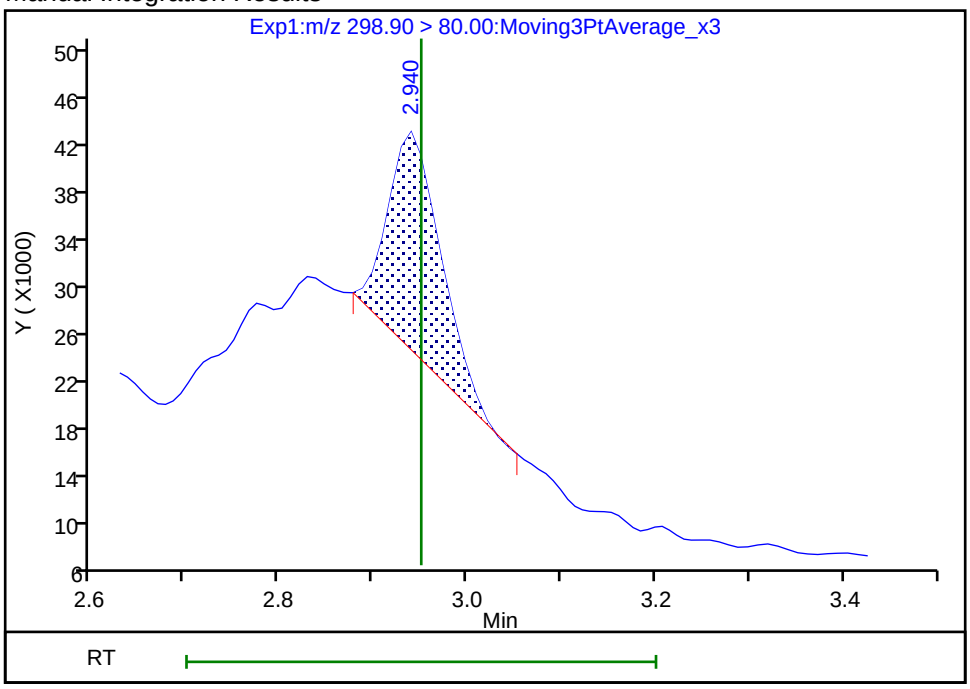
Processing Integration Results

RT: 2.94
Area: 287711
Amount: 0.066604
Amount Units: ng/ml




Manual Integration Results

RT: 2.94
Area: 71084
Amount: 0.016456
Amount Units: ng/ml




Reviewer: sanjumnair, 14-Sep-2020 09:55:10

Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

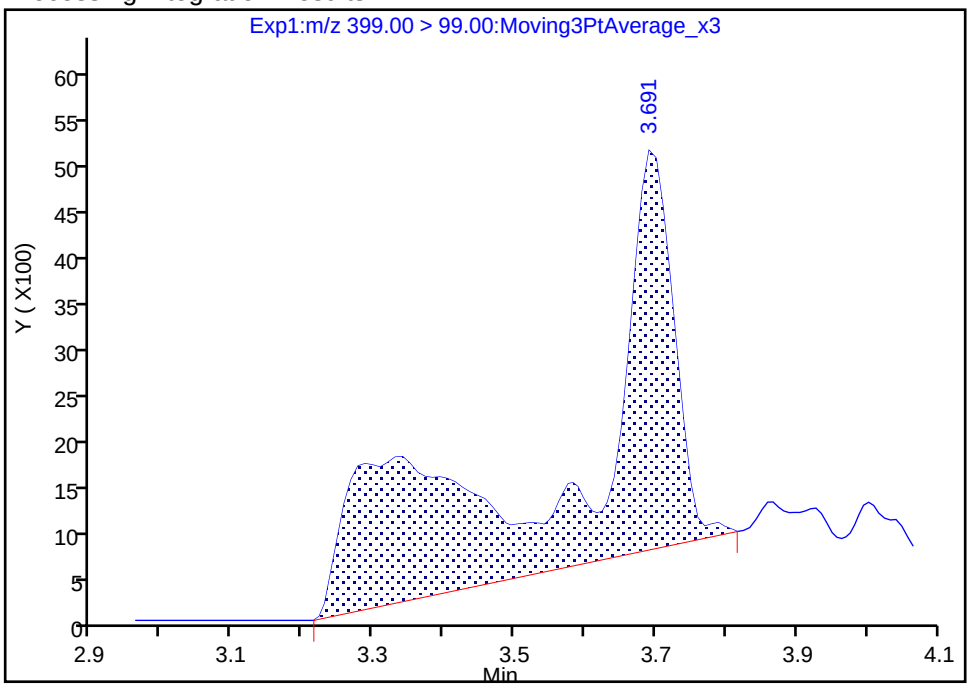
| | | | | | |
|---|---|---|---|---|---|
| Data File: | \\chromfs\Sacramento\ChromData\A18\20200911-103101.b\2020.09.11_A18_PFC_A_017.d | | | | |
| Injection Date: | 11-Sep-2020 12:50:59 | Instrument ID: | A18 | | |
| Lims ID: | 460-217547-E-2-A | Lab Sample ID: | 320-217547-2 | | |
| Client ID: | MW-204 | | | | |
| Operator ID: | TAISACA18-PC\A-18 | ALS Bottle#: | 8 | Worklist Smp#: | 3 |
| Injection Vol: | 20.0 ul | Dil. Factor: | 1.0000 | | |
| Method: | PFAS_A18V2 | Limit Group: | LC PFC ICAL | | |
| Column: | Gemini C18 3um 3mm x 50 mm ( 3.00mm) | Detector | EXP1 | | |

## 15 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 2

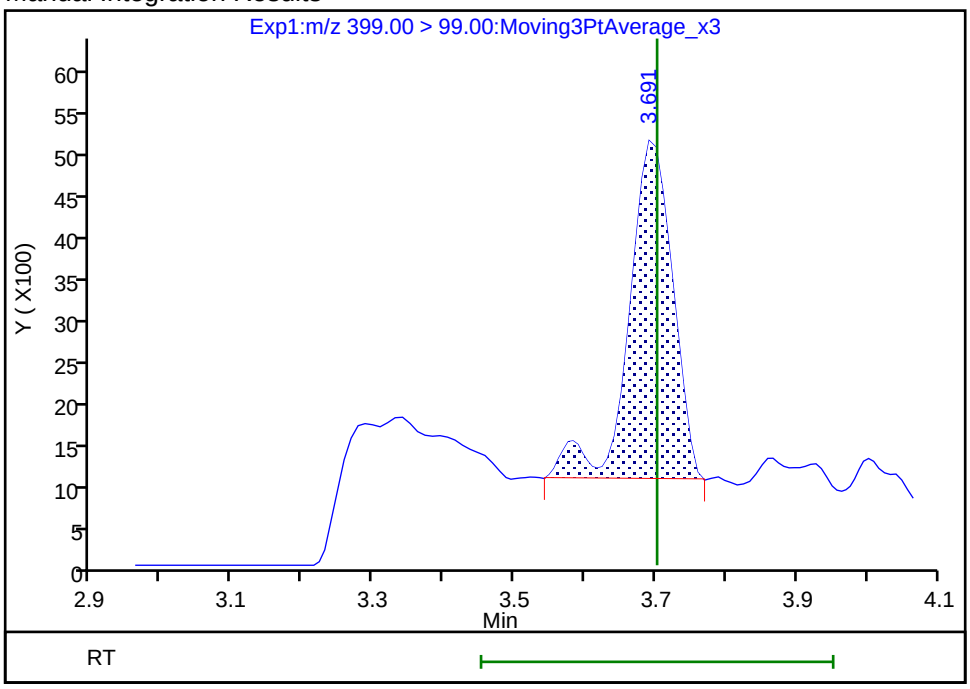
Processing Integration Results

RT: 3.69
Area: 43151
Amount: 0.094669
Amount Units: ng/ml




Manual Integration Results

RT: 3.69
Area: 17568
Amount: 0.027726
Amount Units: ng/ml




Reviewer: sanjumnair, 14-Sep-2020 09:56:06

Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

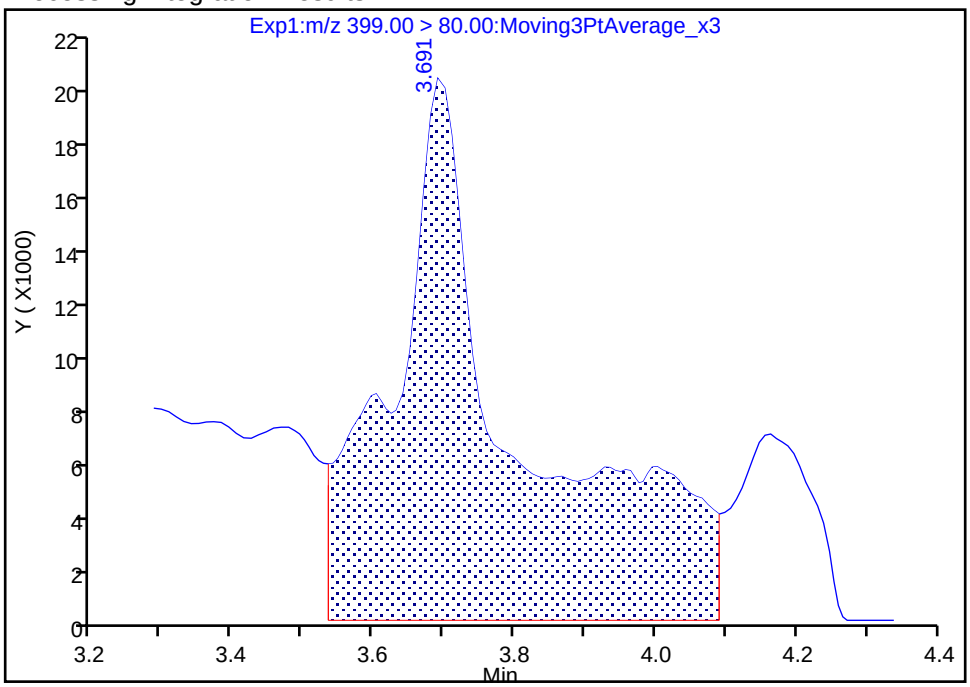
| | | | | | |
|---|---|---|---|---|---|
| Data File: | \\chromfs\Sacramento\ChromData\A18\20200911-103101.b\2020.09.11_A18_PFC_A_017.d | | | | |
| Injection Date: | 11-Sep-2020 12:50:59 | Instrument ID: | A18 | | |
| Lims ID: | 460-217547-E-2-A | Lab Sample ID: | 320-217547-2 | | |
| Client ID: | MW-204 | | | | |
| Operator ID: | TAISACA18-PC\A-18 | ALS Bottle#: | 8 | Worklist Smp#: | 3 |
| Injection Vol: | 20.0 ul | Dil. Factor: | 1.0000 | | |
| Method: | PFAS_A18V2 | Limit Group: | LC PFC ICAL | | |
| Column: | Gemini C18 3um 3mm x 50 mm ( 3.00mm) | Detector | EXP1 | | |

## 15 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 1

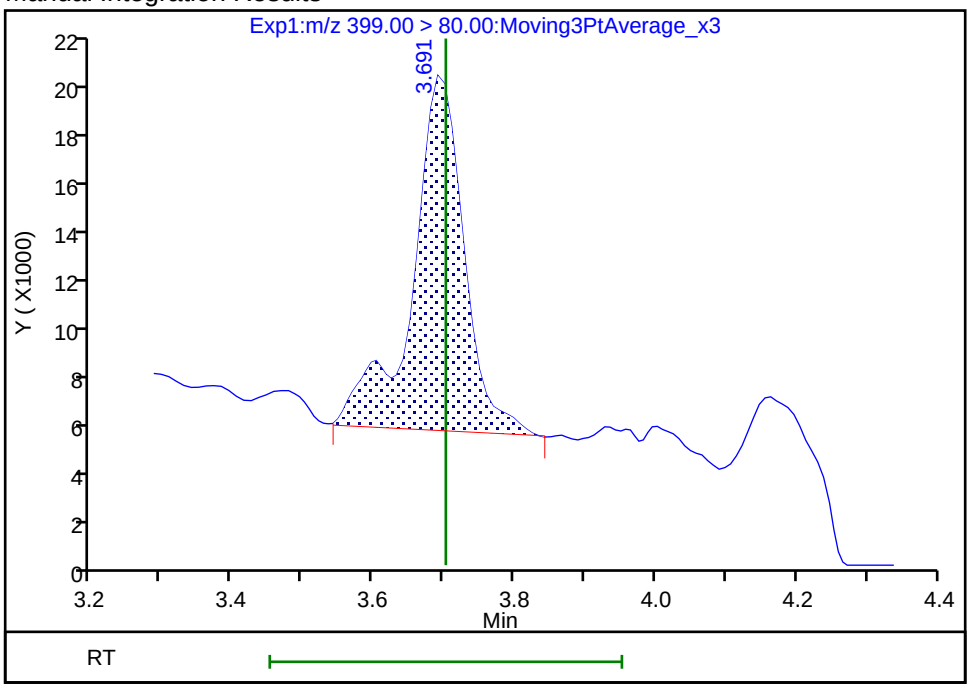
Processing Integration Results

RT: 3.69
Area: 250811
Amount: 0.094669
Amount Units: ng/ml




Manual Integration Results

RT: 3.69
Area: 73455
Amount: 0.027726
Amount Units: ng/ml




Reviewer: sanjumnair, 14-Sep-2020 09:56:12
Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

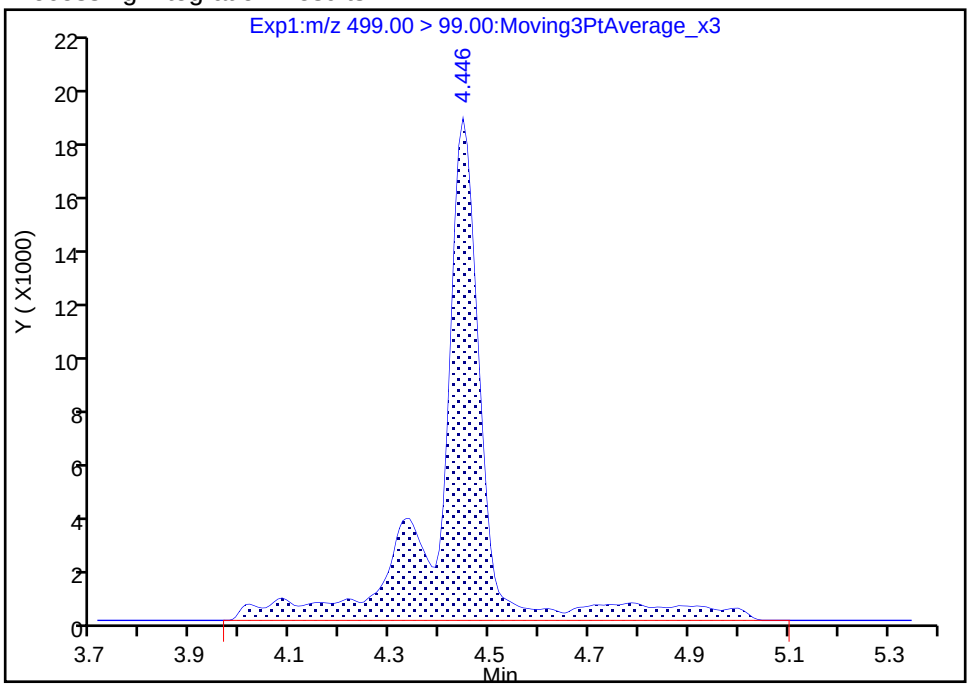
| | | | | | |
|---|---|---|---|---|---|
| Data File: | \\chromfs\Sacramento\ChromData\A18\20200911-103101.b\2020.09.11_A18_PFC_A_017.d | | | | |
| Injection Date: | 11-Sep-2020 12:50:59 | Instrument ID: | A18 | | |
| Lims ID: | 460-217547-E-2-A | Lab Sample ID: | 320-217547-2 | | |
| Client ID: | MW-204 | | | | |
| Operator ID: | TAISACA18-PC\A-18 | ALS Bottle#: | 8 | Worklist Smp#: | 3 |
| Injection Vol: | 20.0 ul | Dil. Factor: | 1.0000 | | |
| Method: | PFAS_A18V2 | Limit Group: | LC PFC ICAL | | |
| Column: | Gemini C18 3um 3mm x 50 mm ( 3.00mm) | Detector | EXP1 | | |

## 29 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 2

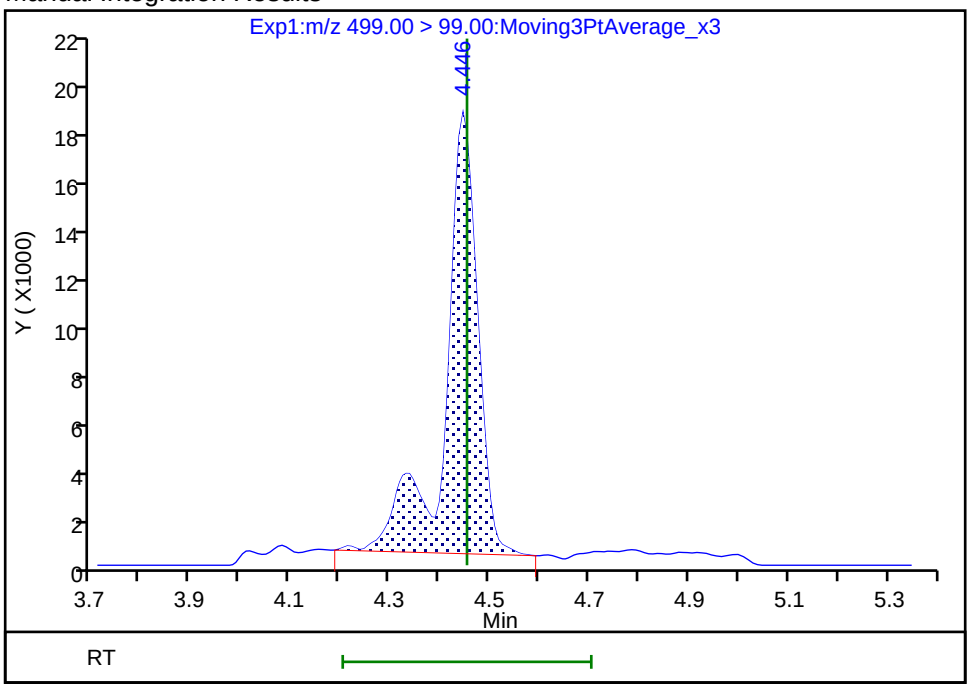
Processing Integration Results

RT: 4.45
Area: 115952
Amount: 0.328495
Amount Units: ng/ml




Manual Integration Results

RT: 4.45
Area: 83967
Amount: 0.309248
Amount Units: ng/ml




Reviewer: sanjumnair, 14-Sep-2020 09:56:35

Audit Action: Manually Integrated Audit Reason: Baseline

Eurofins TestAmerica, Sacramento

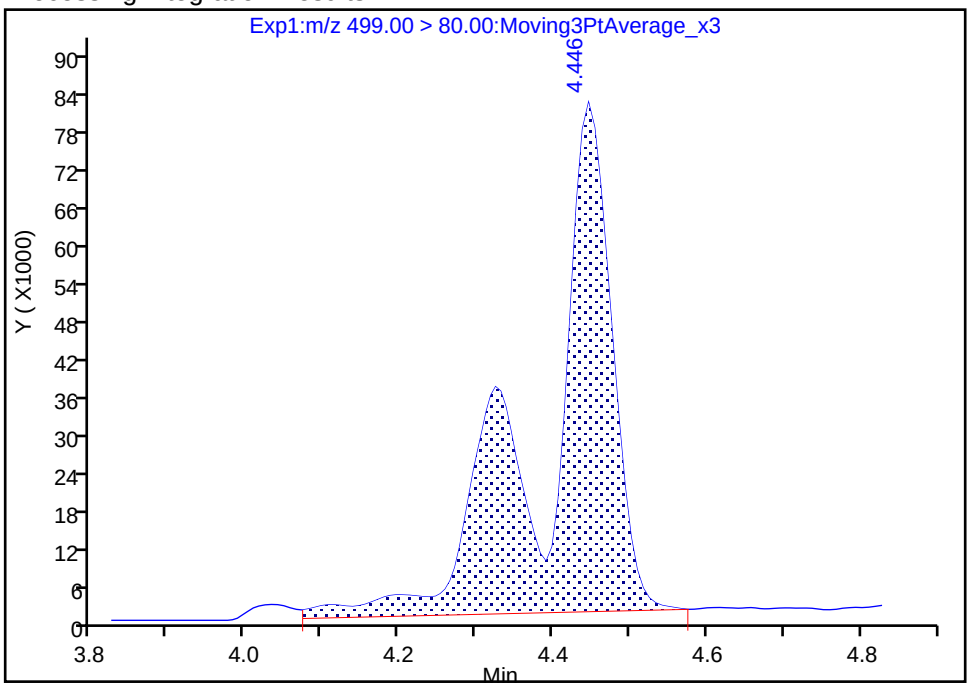
| | | | | | |
|---|---|---|---|---|---|
| Data File: | \\chromfs\Sacramento\ChromData\A18\20200911-103101.b\2020.09.11_A18_PFC_A_017.d | | | | |
| Injection Date: | 11-Sep-2020 12:50:59 | Instrument ID: | A18 | | |
| Lims ID: | 460-217547-E-2-A | Lab Sample ID: | 320-217547-2 | | |
| Client ID: | MW-204 | | | | |
| Operator ID: | TAISACA18-PC\A-18 | ALS Bottle#: | 8 | Worklist Smp#: | 3 |
| Injection Vol: | 20.0 ul | Dil. Factor: | 1.0000 | | |
| Method: | PFAS_A18V2 | Limit Group: | LC PFC ICAL | | |
| Column: | Gemini C18 3um 3mm x 50 mm ( 3.00mm) | Detector | EXP1 | | |

## 29 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 1

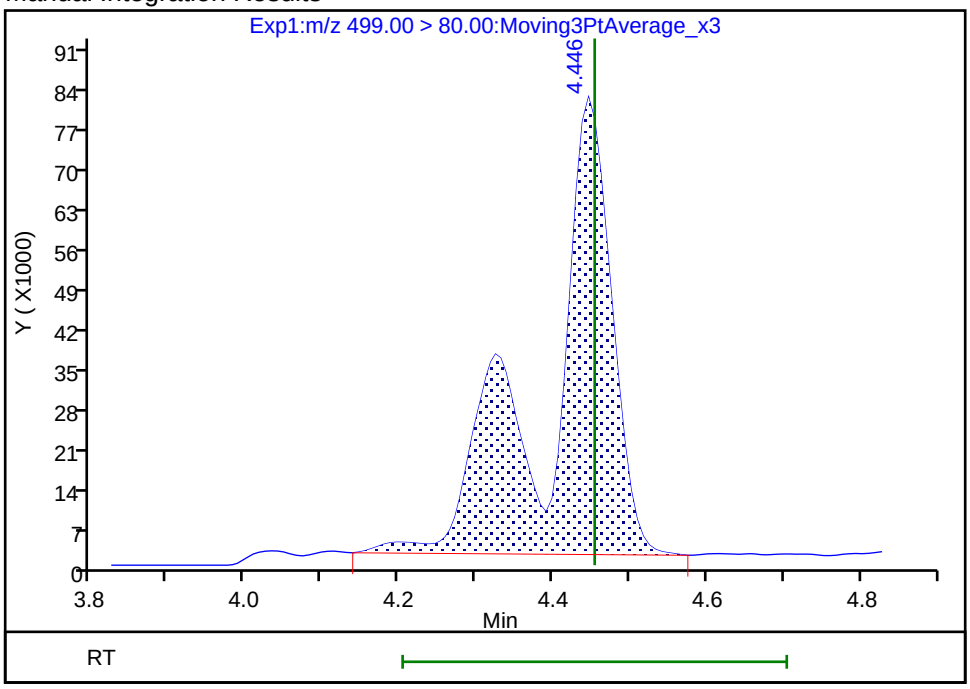
Processing Integration Results

RT: 4.45
Area: 499843
Amount: 0.328495
Amount Units: ng/ml




Manual Integration Results

RT: 4.45
Area: 470556
Amount: 0.309248
Amount Units: ng/ml




Reviewer: sanjumnair, 14-Sep-2020 09:56:42
Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

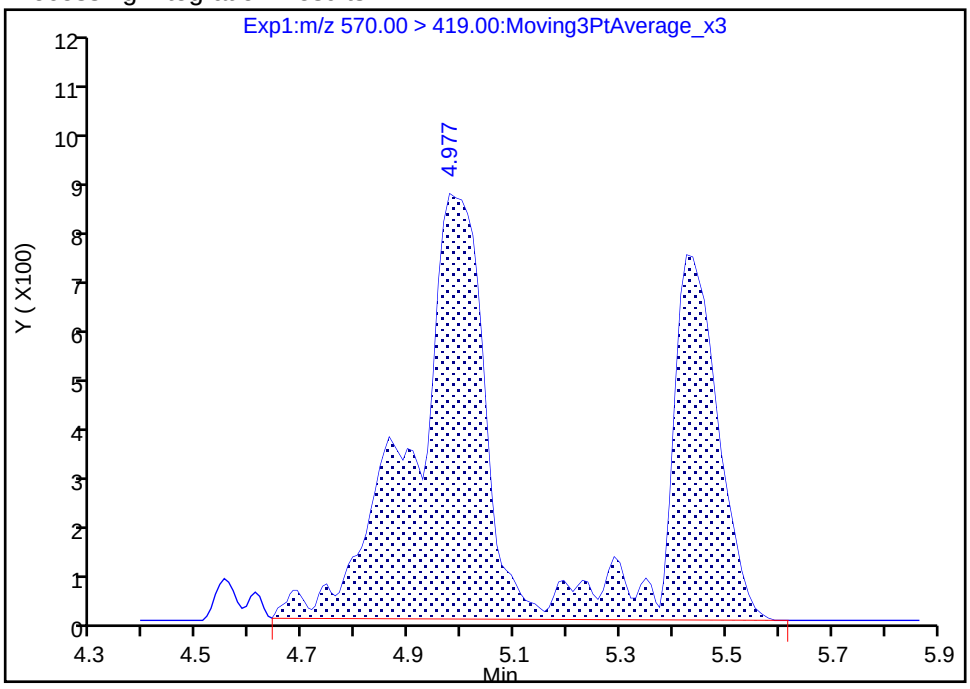
| | | | | | |
|---|---|---|---|---|---|
| Data File: | \\chromfs\Sacramento\ChromData\A18\20200911-103101.b\2020.09.11_A18_PFC_A_017.d | | | | |
| Injection Date: | 11-Sep-2020 12:50:59 | Instrument ID: | A18 | | |
| Lims ID: | 460-217547-E-2-A | Lab Sample ID: | 320-217547-2 | | |
| Client ID: | MW-204 | | | | |
| Operator ID: | TAISACA18-PC\A-18 | ALS Bottle#: | 8 | Worklist Smp#: | 3 |
| Injection Vol: | 20.0 ul | Dil. Factor: | 1.0000 | | |
| Method: | PFAS_A18V2 | Limit Group: | LC PFC ICAL | | |
| Column: | Gemini C18 3um 3mm x 50 mm ( 3.00mm) | Detector | EXP1 | | |

## 41 NMeFOSAA, CAS: 2355-31-9

Signal: 1

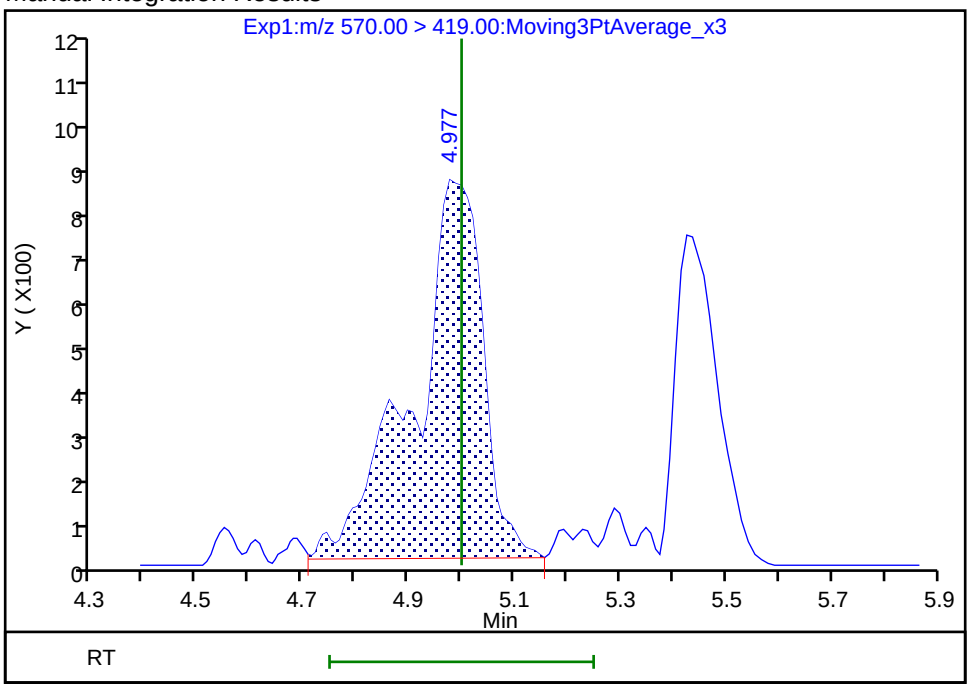
Processing Integration Results

RT: 4.98
Area: 12467
Amount: 0.011611
Amount Units: ng/ml




Manual Integration Results

RT: 4.98
Area: 7312
Amount: 0.006810
Amount Units: ng/ml




Reviewer: sanjumnair, 14-Sep-2020 09:57:13

Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

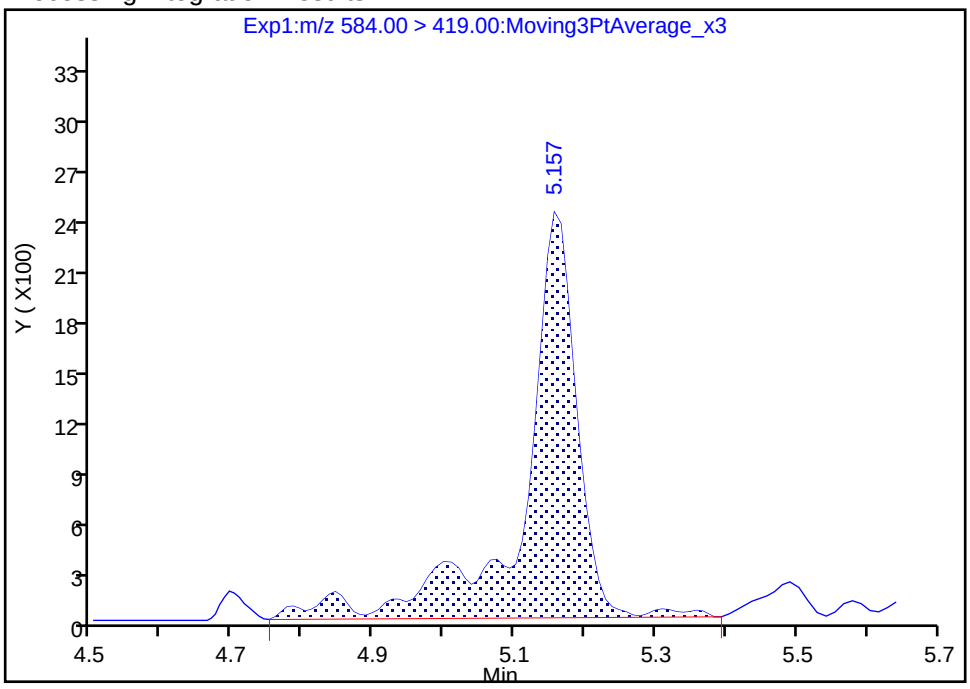
| | | | | | |
|---|---|---|---|---|---|
| Data File: | \\chromfs\Sacramento\ChromData\A18\20200911-103101.b\2020.09.11_A18_PFC_A_017.d | | | | |
| Injection Date: | 11-Sep-2020 12:50:59 | Instrument ID: | A18 | | |
| Lims ID: | 460-217547-E-2-A | Lab Sample ID: | 320-217547-2 | | |
| Client ID: | MW-204 | | | | |
| Operator ID: | TAISACA18-PC\A-18 | ALS Bottle#: | 8 | Worklist Smp#: | 3 |
| Injection Vol: | 20.0 ul | Dil. Factor: | 1.0000 | | |
| Method: | PFAS_A18V2 | Limit Group: | LC PFC ICAL | | |
| Column: | Gemini C18 3um 3mm x 50 mm ( 3.00mm) | Detector | EXP1 | | |

## 46 NEtFOSA, CAS: 2991-50-6

Signal: 1

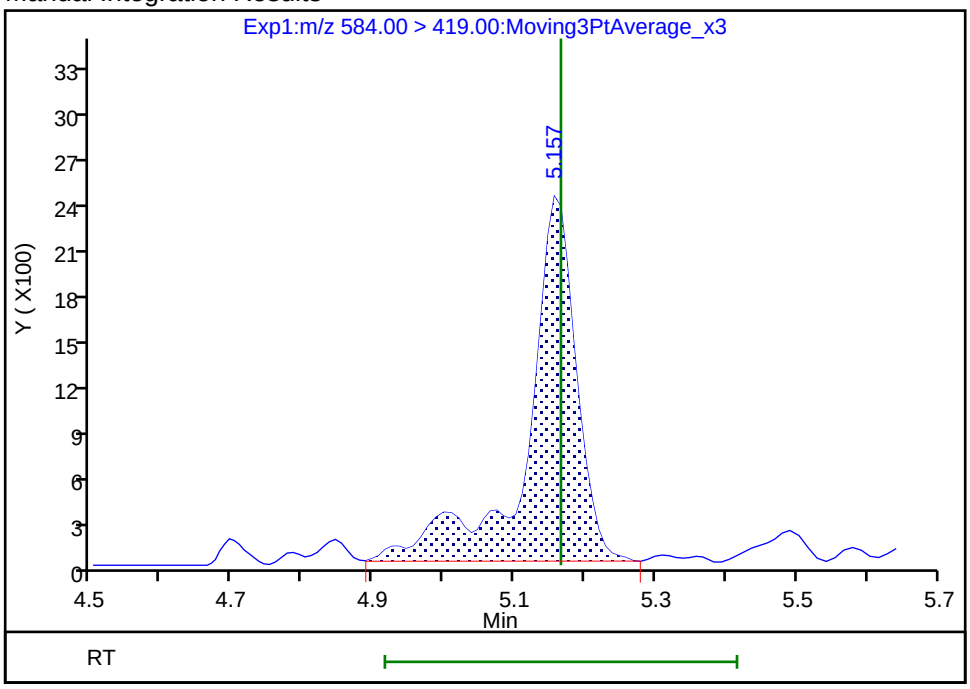
Processing Integration Results

RT: 5.16
Area: 12670
Amount: 0.010298
Amount Units: ng/ml




Manual Integration Results

RT: 5.16
Area: 11565
Amount: 0.009400
Amount Units: ng/ml




Reviewer: sanjumnair, 14-Sep-2020 09:57:25

Audit Action: Manually Integrated Audit Reason: Baseline

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento  Job No.: 460-217547-1

SDG No.:

Client Sample ID: MW-205  Lab Sample ID: 460-217547-3

Matrix: Water  Lab File ID: 2020.09.11_A18_PFC_A_018.d

Analysis Method: 537 (modified)  Date Collected: 09/02/2020 12:40

Extraction Method: 3535  Date Extracted: 09/09/2020 18:52

Sample wt/vol: 251.6(mL)  Date Analyzed: 09/11/2020 13:00

Con. Extract Vol.: 10.00(mL)  Dilution Factor: 1

Injection Volume: 20(uL)  GC Column: Gemini C18 3x50 ID: 3(mm)

% Moisture:  GPC Cleanup:(Y/N) N

Analysis Batch No.: 411377  Units: ng/L

| CAS NO. | COMPOUND NAME | RESULT | Q | RL | MDL |
|---|---|---|---|---|---|
| 375-22-4 | Perfluorobutanoic acid (PFBA) | 0.59 | J B | 1.99 | 0.35 |
| 2706-90-3 | Perfluoropentanoic acid (PFPeA) | 0.49 | U | 1.99 | 0.49 |
| 307-24-4 | Perfluorohexanoic acid (PFHxA) | 0.58 | U | 1.99 | 0.58 |
| 375-85-9 | Perfluoroheptanoic acid (PFHpA) | 0.25 | U | 1.99 | 0.25 |
| 335-67-1 | Perfluorooctanoic acid (PFOA) | 0.84 | U | 1.99 | 0.84 |
| 375-95-1 | Perfluorononanoic acid (PFNA) | 0.27 | U | 1.99 | 0.27 |
| 335-76-2 | Perfluorodecanoic acid (PFDA) | 0.31 | U | 1.99 | 0.31 |
| 2058-94-8 | Perfluoroundecanoic acid (PFUnA) | 1.09 | U | 1.99 | 1.09 |
| 307-55-1 | Perfluorododecanoic acid (PFDoA) | 0.55 | U | 1.99 | 0.55 |
| 72629-94-8 | Perfluorotridecanoic acid (PFTriA) | 1.29 | U | 1.99 | 1.29 |
| 376-06-7 | Perfluorotetradecanoic acid (PFTeA) | 0.29 | U | 1.99 | 0.29 |
| 375-73-5 | Perfluorobutanesulfonic acid (PFBS) | 0.20 | J | 1.99 | 0.20 |
| 355-46-4 | Perfluorohexanesulfonic acid (PFHxS) | 0.44 | J B | 1.99 | 0.17 |
| 375-92-8 | Perfluoroheptanesulfonic Acid (PFHpS) | 0.19 | U | 1.99 | 0.19 |
| 1763-23-1 | Perfluorooctanesulfonic acid (PFOS) | 0.93 | J | 1.99 | 0.54 |
| 335-77-3 | Perfluorodecanesulfonic acid (PFDS) | 0.32 | U | 1.99 | 0.32 |
| 754-91-6 | Perfluorooctanesulfonamide (FOSA) | 0.35 | U | 1.99 | 0.35 |
| 2355-31-9 | N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA) | 3.08 | U | 19.9 | 3.08 |
| 2991-50-6 | N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA) | 1.89 | U | 19.9 | 1.89 |
| 27619-97-2 | 6:2 FTS | 1.99 | U | 19.9 | 1.99 |
| 39108-34-4 | 8:2 FTS | 1.99 | U | 19.9 | 1.99 |

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento  Job No.: 460-217547-1

SDG No.:

Client Sample ID: MW-205  Lab Sample ID: 460-217547-3

Matrix: Water  Lab File ID: 2020.09.11_A18_PFC_A_018.d

Analysis Method: 537 (modified)  Date Collected: 09/02/2020 12:40

Extraction Method: 3535  Date Extracted: 09/09/2020 18:52

Sample wt/vol: 251.6(mL)  Date Analyzed: 09/11/2020 13:00

Con. Extract Vol.: 10.00(mL)  Dilution Factor: 1

Injection Volume: 20(uL)  GC Column: Gemini C18 3x50 ID: 3(mm)

% Moisture:  GPC Cleanup:(Y/N) N

Analysis Batch No.: 411377  Units: ng/L

| CAS NO. | ISOTOPE DILUTION | %REC | Q | LIMITS |
|---|---|---|---|---|
| STL00992 | 13C4 PFBA | 58 | | 25-150 |
| STL01893 | 13C5 PFPeA | 77 | | 25-150 |
| STL00993 | 13C2 PFHxA | 86 | | 25-150 |
| STL01892 | 13C4 PFHpA | 88 | | 25-150 |
| STL00990 | 13C4 PFOA | 92 | | 25-150 |
| STL00995 | 13C5 PFNA | 91 | | 25-150 |
| STL00996 | 13C2 PFDA | 84 | | 25-150 |
| STL00997 | 13C2 PFUnA | 91 | | 25-150 |
| STL00998 | 13C2 PFDoA | 71 | | 25-150 |
| STL02116 | 13C2 PFTeDA | 84 | | 25-150 |
| STL02337 | 13C3 PFBS | 92 | | 25-150 |
| STL00994 | 18O2 PFHxS | 95 | | 25-150 |
| STL00991 | 13C4 PFOS | 94 | | 25-150 |
| STL01056 | 13C8 FOSA | 77 | | 25-150 |
| STL02118 | d3-NMeFOSAA | 68 | | 25-150 |
| STL02117 | d5-NEtFOSAA | 74 | | 25-150 |
| STL02279 | M2-6:2 FTS | 101 | | 25-150 |
| STL02280 | M2-8:2 FTS | 101 | | 25-150 |

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\A18\20200911-103101.b\2020.09.11_A18_PFC_A_018.d
Lims ID: 460-217547-E-3-A
Client ID: MW-205
Sample Type: Client
Inject. Date: 11-Sep-2020 13:00:08 ALS Bottle#: 9 Worklist Smp#: 4
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Sample Info: 460-217547-e-3-a
Misc. Info.: Plate: 1 Rack: 1
Operator ID: TAISACA18-PC\A-18 Instrument ID: A18

Method: \\chromfs\Sacramento\ChromData\A18\20200911-103101.b\PFAS_A18V2.m
Limit Group: LC PFC ICAL
Last Update: 14-Sep-2020 10:03:10 Calib Date: 25-Aug-2020 17:37:57
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\A18\20200825-102078.b\2020.08.25_A18_ICAL_A_017.d

Column 1 : Gemini C18 3um 3mm x 50 mm ( 3.00 mm) Det: EXP1
Process Host: CTX1038

First Level Reviewer: sanjumnair Date: 14-Sep-2020 10:03:10
Ratio Calibration: CCV Sample: \\chromfs\Sacramento\ChromData\A18\20200911-103101.b\2020.09.11_A18_PFC_A_015.d

| Signal | RT | EXP RT | DLT RT | REL RT | Response | Amount ng/ml | Ratio(Limits) | %Rec | S/N | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| D 1 13C4 PFBA | | | | | | | | | | |
| 217.00 > 172.00 | 2.558 | 2.566 | -0.008 | 0.627 | 11026219 | 1.44 | | 57.8 | 5899 | |
| 2 Perfluorobutanoic acid | | | | | | | | | | M |
| 212.90 > 169.00 | 2.558 | 2.566 | -0.008 | 1.000 | 57214 | 0.0149 | | | 1.3 | M |
| D 4 13C5 PFPeA | | | | | | | | | | |
| 267.90 > 223.00 | 2.910 | 2.909 | 0.001 | 0.713 | 11416359 | 1.92 | | 76.9 | 4076 | |
| 5 Perfluoropentanoic acid | | | | | | | | | | M |
| 262.90 > 219.00 | 2.910 | 2.920 | -0.010 | 1.000 | 47487 | 0.0104 | | | 0.7 | M |
| D 9 13C3 PFBS | | | | | | | | | | |
| 301.90 > 80.00 | 2.940 | 2.951 | -0.011 | 0.720 | 9931639 | 2.13 | | 91.6 | 2742 | |
| 6 Perfluorobutanesulfonic acid | | | | | | | | | | |
| 298.90 > 80.00 | 2.940 | 2.951 | -0.011 | 1.000 | 21574 | 0.005002 | Target=2.37 | | 2.0 | |
| 298.90 > 99.00 | 2.940 | 2.951 | -0.011 | 1.000 | 10378 | | 2.08(1.19-3.56) | | 1.6 | |
| D 11 13C2 PFHxA | | | | | | | | | | |
| 315.00 > 270.00 | 3.281 | 3.290 | -0.009 | 0.804 | 12714577 | 2.15 | | 85.8 | 5655 | |
| 10 Perfluorohexanoic acid | | | | | | | | | | |
| 313.00 > 269.00 | 3.281 | 3.290 | -0.009 | 1.000 | 24791 | 0.005057 | Target=13.16 | | 0.6 | |
| 313.00 > 119.00 | 3.271 | 3.290 | -0.019 | 0.997 | 1724 | | 14.38(6.58-19.74) | | 0.9 | |
| D 17 18O2 PFHxS | | | | | | | | | | |
| 403.00 > 84.00 | 3.690 | 3.702 | -0.012 | 0.904 | 5511899 | 2.24 | | 94.6 | 7862 | |
| D 18 13C4 PFHpA | | | | | | | | | | |
| 367.00 > 322.00 | 3.690 | 3.702 | -0.012 | 0.904 | 11173228 | 2.21 | | 88.3 | 5884 | |
| 16 Perfluoroheptanoic acid | | | | | | | | | | |
| 363.00 > 319.00 | 3.690 | 3.702 | -0.012 | 1.000 | 22013 | 0.004859 | Target=3.69 | | 0.8 | |
| 363.00 > 169.00 | 3.690 | 3.702 | -0.012 | 1.000 | 4226 | | 5.21(1.85-5.54) | | 2.2 | |
| 15 Perfluorohexanesulfonic acid | | | | | | | | | | M |
| 399.00 > 80.00 | 3.690 | 3.702 | -0.012 | 1.000 | 30559 | 0.0111 | Target=3.35 | | 7.7 | M |
| 399.00 > 99.00 | 3.690 | 3.702 | -0.012 | 1.000 | 8257 | | 3.70(1.67-5.02) | | 3.3 | M |

| Signal | RT | EXP RT | DLT RT | REL RT | Response | Amount ng/ml | Ratio(Limits) | %Rec | S/N | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| D 20 M2-6:2 FTS | | | | | | | | | | |
| 429.00 > 81.00 | 4.066 | 4.068 | -0.002 | 0.996 | 2258125 | 2.39 | | 101 | 1085 | |
| 21 6:2 FTS | | | | | | | | | | |
| 427.00 > 407.00 | 4.066 | 4.068 | -0.002 | 1.000 | 6602 | 0.003021 | | | 11.1 | |
| D 25 13C4 PFOA | | | | | | | | | | |
| 417.00 > 372.00 | 4.082 | 4.092 | -0.010 | 1.000 | 11084658 | 2.30 | | 92.0 | 6037 | |
| 22 Perfluorooctanoic acid | | | | | | | | | | M |
| 413.00 > 369.00 | 4.082 | 4.092 | -0.010 | 1.000 | 62126 | 0.0137 | Target=2.91 | | 4.9 | M |
| 413.00 > 169.00 | 4.082 | 4.092 | -0.010 | 1.000 | 27878 | | 2.23(1.45-4.36) | | 18.5 | M |
| * 23 13C2 PFOA | | | | | | | | | | |
| 415.00 > 370.00 | 4.082 | 4.092 | -0.010 | | 12038587 | 2.50 | | | 6653 | |
| D 27 13C4 PFOS | | | | | | | | | | |
| 503.00 > 80.00 | 4.446 | 4.454 | -0.008 | 1.089 | 3742244 | 2.24 | | 93.8 | 1758 | |
| 29 Perfluorooctanesulfonic acid | | | | | | | | | | M |
| 499.00 > 80.00 | 4.446 | 4.454 | -0.008 | 1.000 | 37835 | 0.0233 | Target=4.72 | | 7.0 | M |
| 499.00 > 99.00 | 4.454 | 4.454 | 0.0 | 1.002 | 5618 | | 6.73(2.36-7.07) | | 2.2 | M |
| D 30 13C5 PFNA | | | | | | | | | | |
| 468.00 > 423.00 | 4.462 | 4.470 | -0.008 | 1.093 | 8794415 | 2.27 | | 90.6 | 5993 | |
| D 33 13C8 FOSA | | | | | | | | | | |
| 506.00 > 78.00 | 4.786 | 4.786 | 0.0 | 1.172 | 5199100 | 1.93 | | 77.3 | 3726 | |
| 34 Perfluorooctanesulfonamide | | | | | | | | | | |
| 498.00 > 78.00 | 4.786 | 4.786 | 0.0 | 1.000 | 15512 | 0.008016 | | | 93.4 | |
| D 39 13C2 PFDA | | | | | | | | | | |
| 515.00 > 470.00 | 4.811 | 4.828 | -0.017 | 1.179 | 7903196 | 2.10 | | 83.9 | 10297 | |
| D 38 M2-8:2 FTS | | | | | | | | | | |
| 529.00 > 81.00 | 4.820 | 4.828 | -0.008 | 1.181 | 3291550 | 2.42 | | 101 | 1679 | |
| 36 8:2 FTS | | | | | | | | | | |
| 527.00 > 507.00 | 4.811 | 4.828 | -0.017 | 0.998 | 1979 | 0.000811 | | | 29.8 | |
| D 40 d3-NMeFOSAA | | | | | | | | | | |
| 573.00 > 419.00 | 4.989 | 5.000 | -0.011 | 1.222 | 4312705 | 1.70 | | 68.2 | 3144 | |
| 41 NMeFOSAA | | | | | | | | | | |
| 570.00 > 419.00 | 4.989 | 5.000 | -0.011 | 1.000 | 8218 | 0.006423 | | | 9.9 | |
| D 43 13C2 PFUnA | | | | | | | | | | |
| 565.00 > 520.00 | 5.139 | 5.157 | -0.018 | 1.259 | 8475159 | 2.27 | | 90.7 | 8738 | |
| D 44 d5-NEtFOSAA | | | | | | | | | | |
| 589.00 > 419.00 | 5.148 | 5.157 | -0.009 | 1.261 | 4917935 | 1.84 | | 73.5 | 3660 | |
| 46 NEtFOSA | | | | | | | | | | |
| 584.00 > 419.00 | 5.157 | 5.166 | -0.009 | 1.002 | 8449 | 0.006355 | | | 35.7 | |
| D 56 13C2 PFDoA | | | | | | | | | | |
| 615.00 > 570.00 | 5.437 | 5.448 | -0.011 | 1.332 | 6584327 | 1.79 | | 71.5 | 6638 | |
| D 61 13C2 PFTeDA | | | | | | | | | | |
| 715.00 > 670.00 | 5.948 | 5.959 | -0.011 | 1.457 | 6403714 | 2.11 | | 84.3 | 6145 | |
| 62 Perfluorotetradecanoic acid | | | | | | | | | | |
| 713.00 > 169.00 | 5.948 | 5.959 | -0.011 | 1.000 | 1198 | 0.005542 | Target=1.11 | | 8.0 | |
| 713.00 > 219.00 | 5.936 | 5.959 | -0.023 | 0.998 | 1911 | | 0.63(0.56-1.67) | | 11.8 | |

## QC Flag Legend

Processing Flags

Review Flags

M - Manually Integrated

Report Date: 14-Sep-2020 10:03:10 Chrom Revision: 2.3 11-Sep-2020 20:57:08

Eurofins TestAmerica, Sacramento

Data File: \\chromfs\Sacramento\ChromData\A18\20200911-103101.b\2020.09.11_A18_PFC_A_018.d

Injection Date: 11-Sep-2020 13:00:08 Instrument ID: A18

Lims ID: 460-217547-E-3-A Lab Sample ID: 320-217547-3

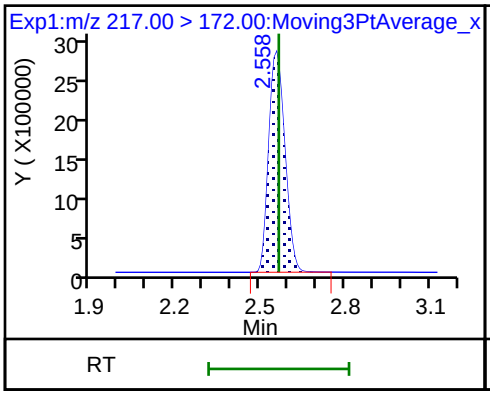
Client ID: MW-205

Operator ID: TAISACA18-PC\A-18 ALS Bottle#: 9 Worklist Smp#: 4

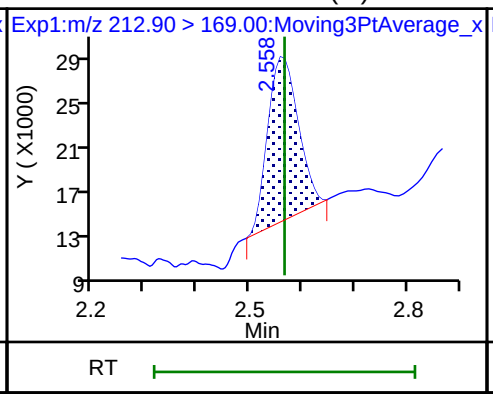
Injection Vol: 20.0 ul Dil. Factor: 1.0000

Method: PFAS_A18V2 Limit Group: LC PFC ICAL

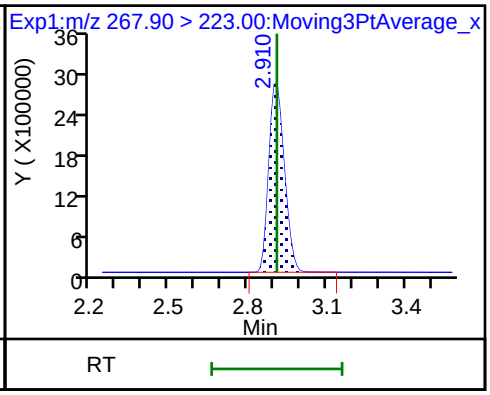
D 1 13C4 PFBA



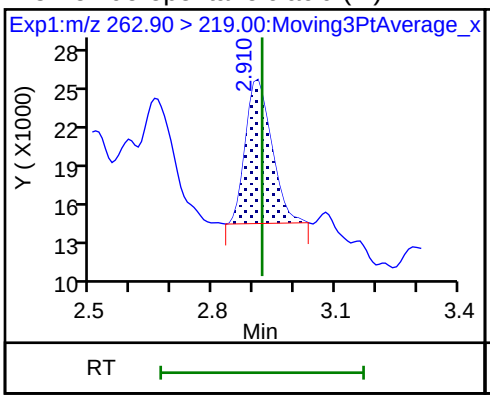

2 Perfluorobutanoic acid (M)



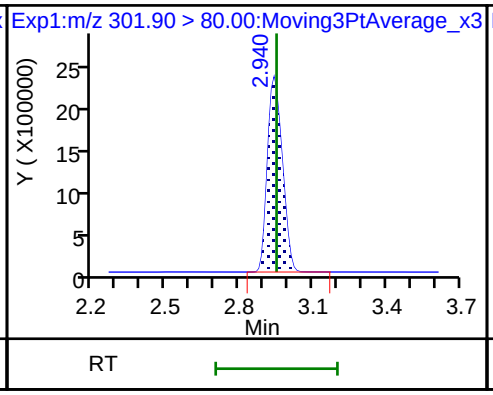

D 4 13C5 PFPeA



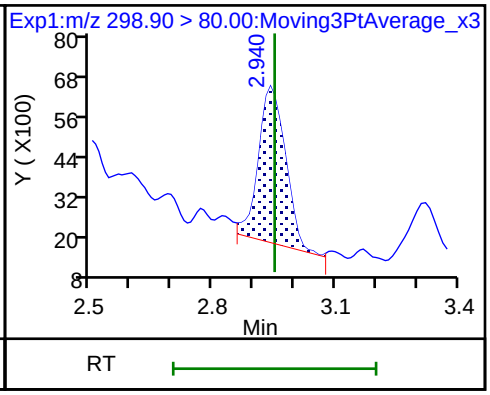

5 Perfluoropentanoic acid (M)



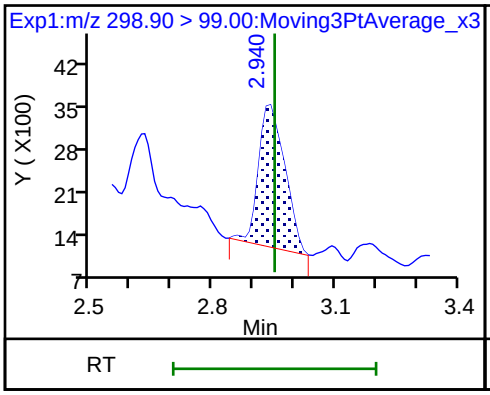

D 9 13C3 PFBS



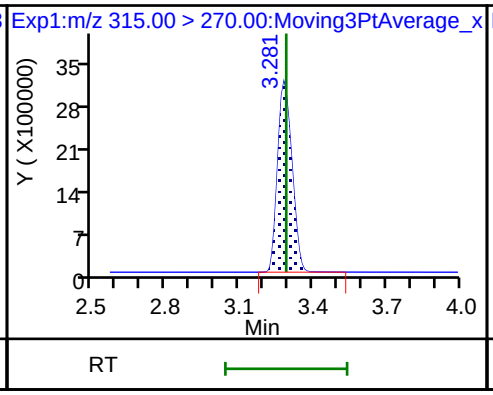

6 Perfluorobutanesulfonic acid



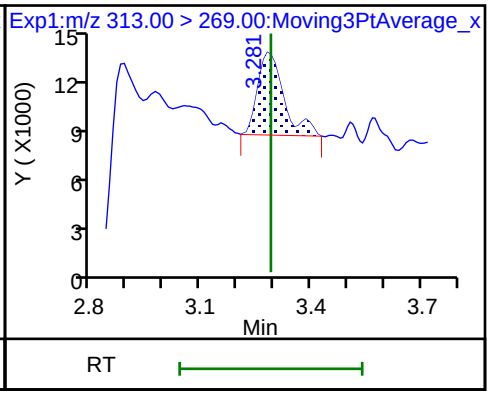

6 Perfluorobutanesulfonic acid



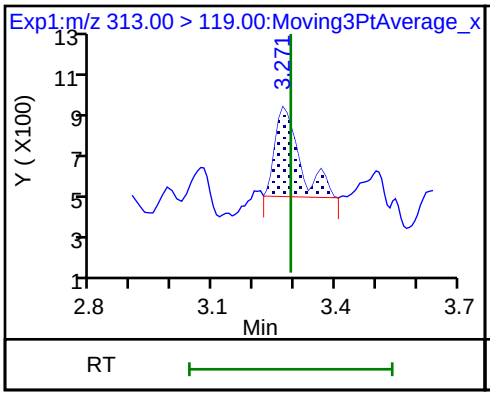

D 11 13C2 PFHxA



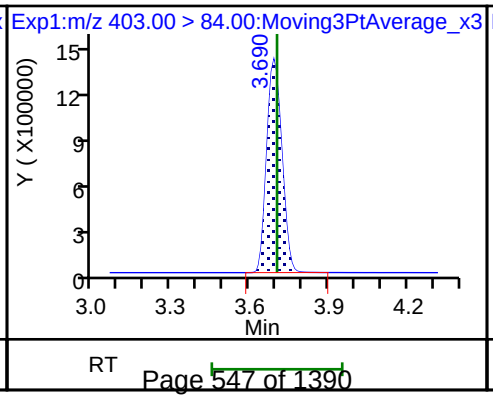

10 Perfluorohexanoic acid



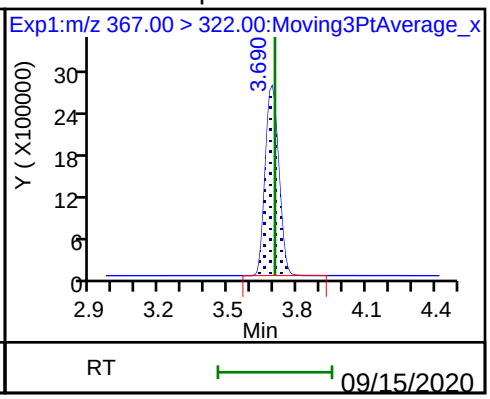

10 Perfluorohexanoic acid



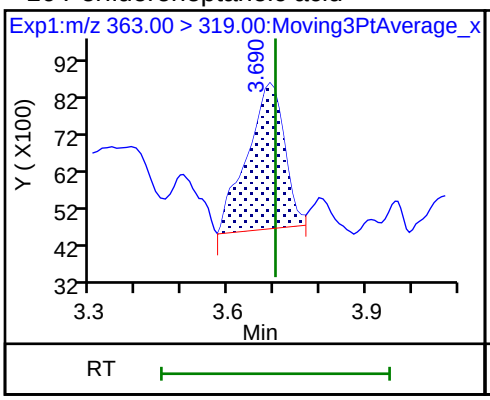

D 17 18O2 PFHxS



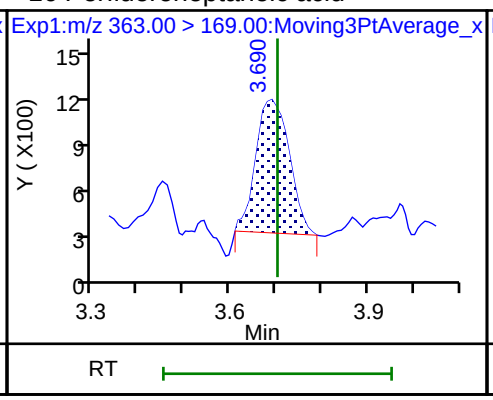

D 18 13C4 PFHpA



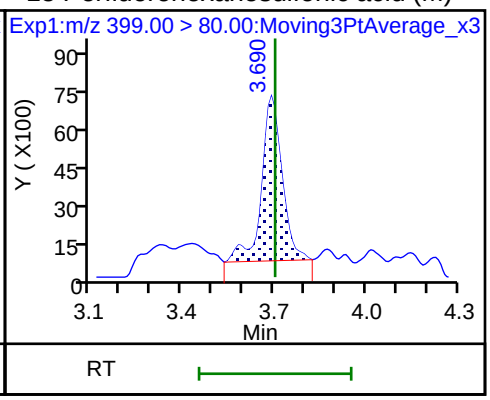
16 Perfluoroheptanoic acid



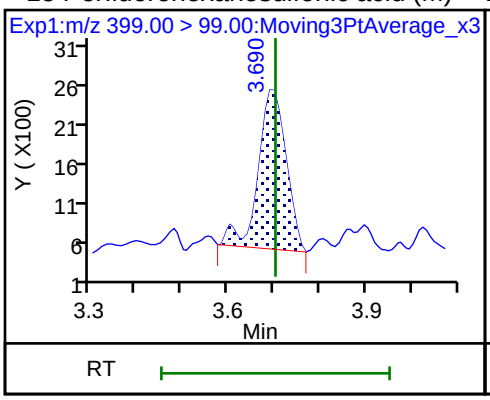

16 Perfluoroheptanoic acid



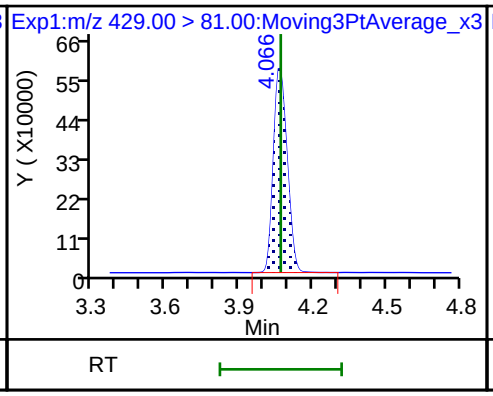

15 Perfluorohexanesulfonic acid (M)



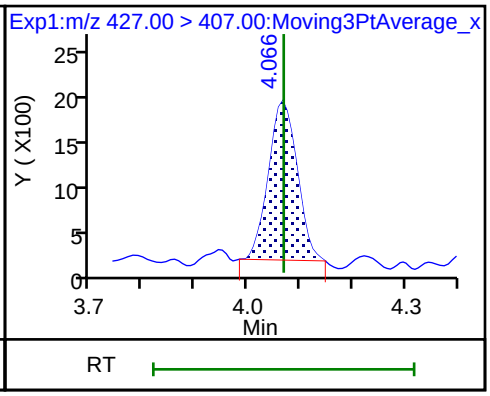

15 Perfluorohexanesulfonic acid (M)



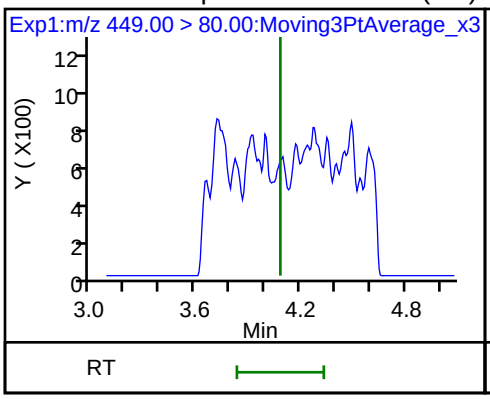

D 20 M2-6:2 FTS



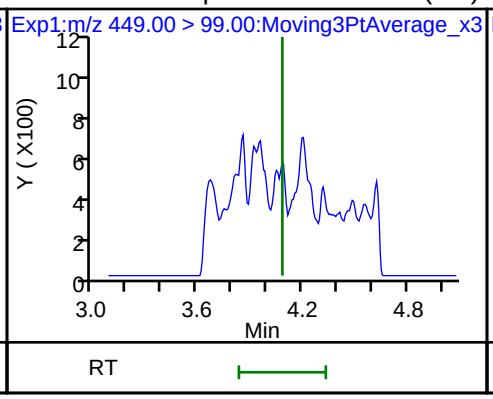

21 6:2 FTS

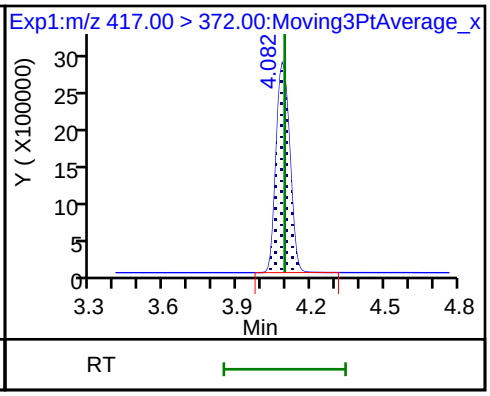



24 Perfluoroheptanesulfonic acid (ND)

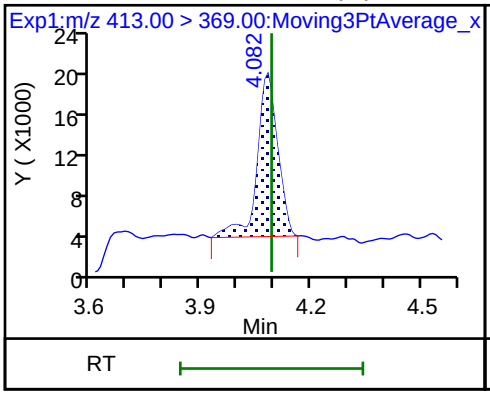



24 Perfluoroheptanesulfonic acid (ND) D 25 13C4 PFOA

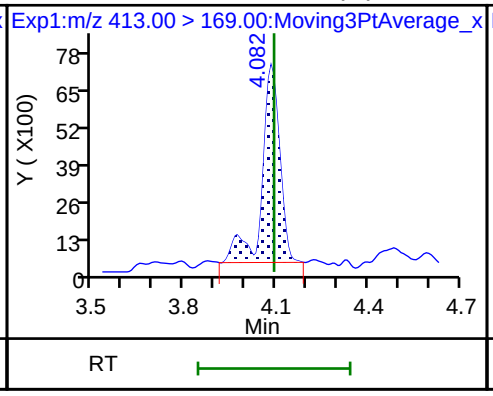


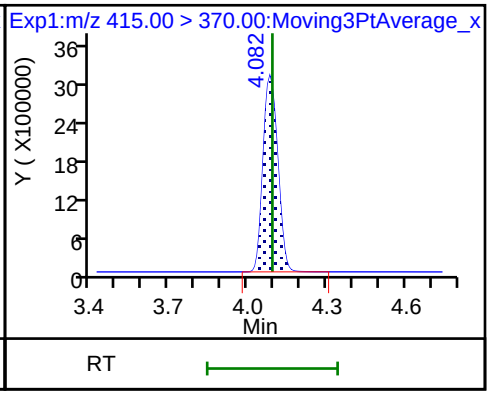

22 Perfluorooctanoic acid (M)



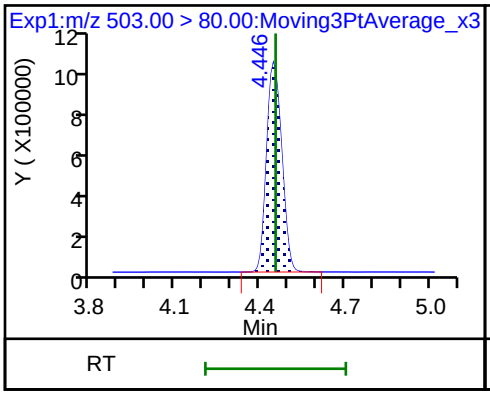

22 Perfluorooctanoic acid (M)



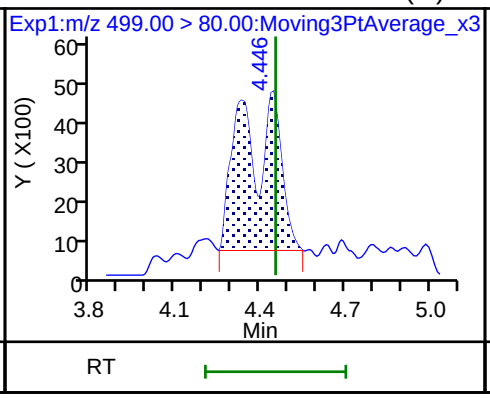

* 23 13C2 PFOA



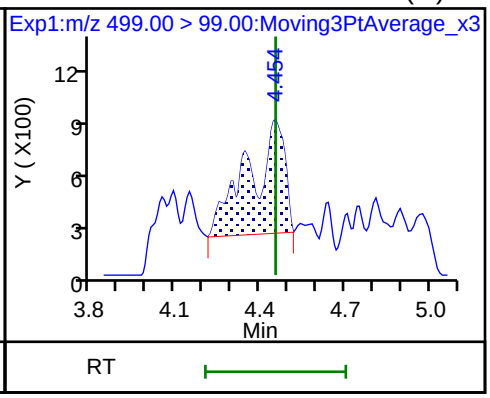
D 27 13C4 PFOS



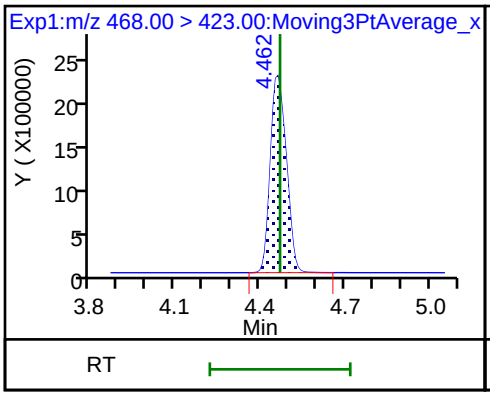

29 Perfluorooctanesulfonic acid (M)



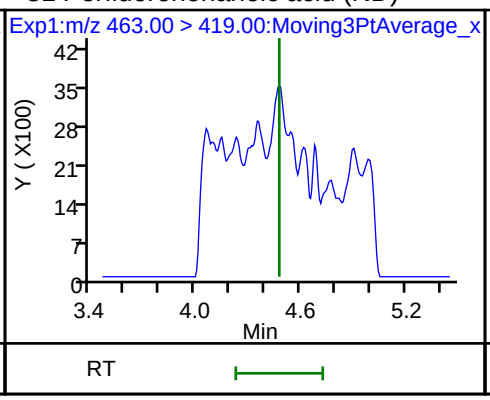

29 Perfluorooctanesulfonic acid (M)



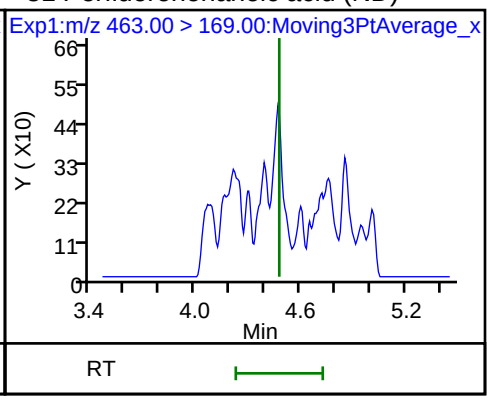

D 30 13C5 PFNA



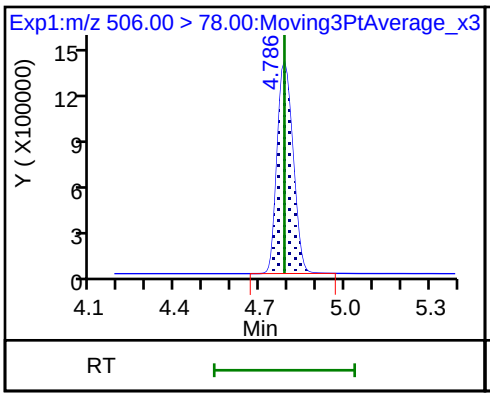

31 Perfluorononanoic acid (ND)



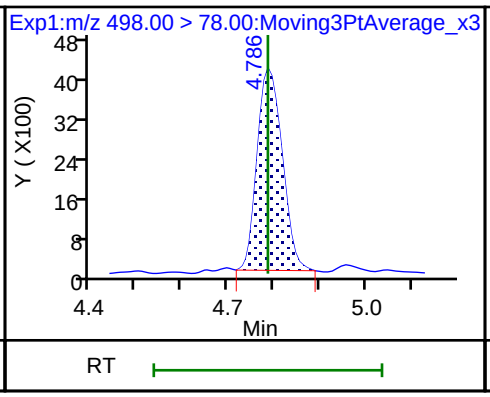

31 Perfluorononanoic acid (ND)



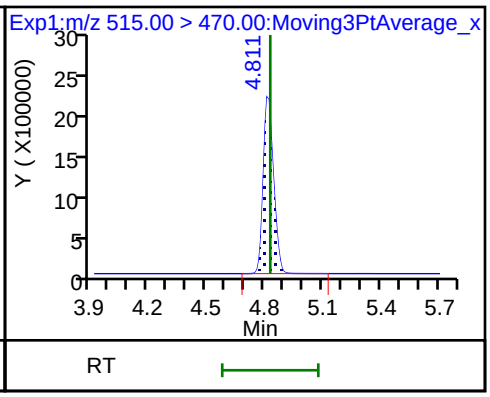

D 33 13C8 FOSA



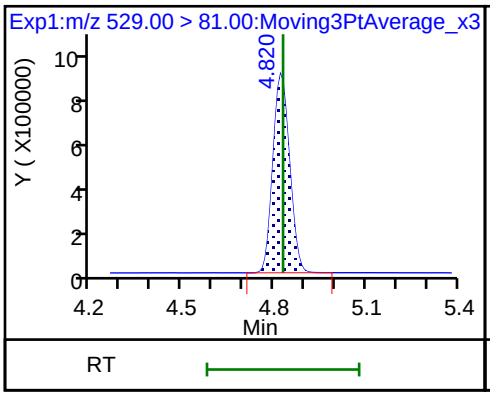

34 Perfluorooctanesulfonamide



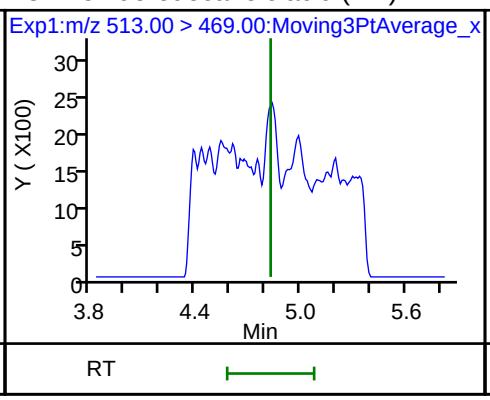

D 39 13C2 PFDA



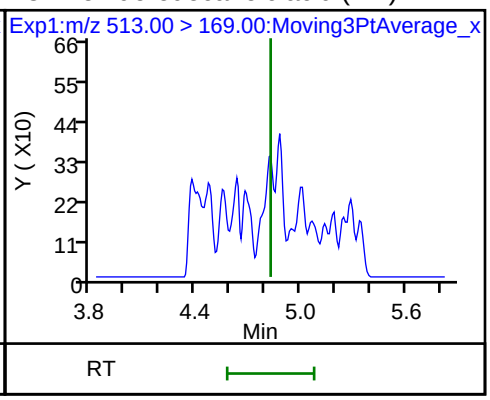

D 38 M2-8:2 FTS



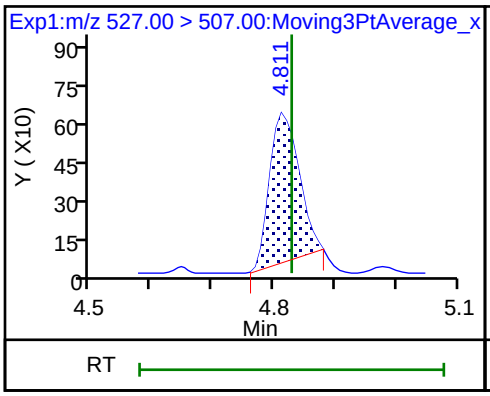

37 Perfluorodecanoic acid (ND)



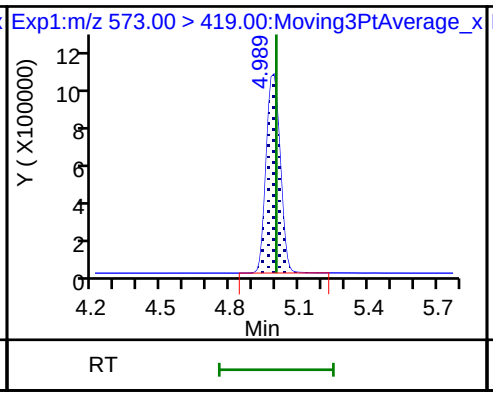

37 Perfluorodecanoic acid (ND)



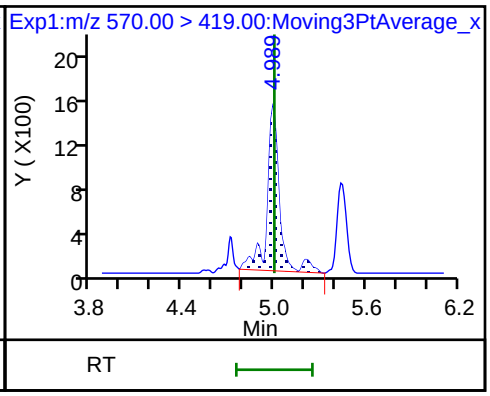
36 8:2 FTS



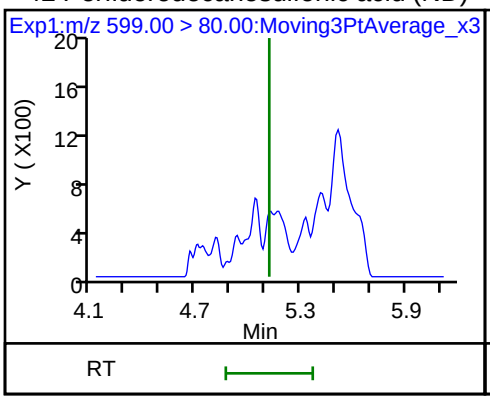

D 40 d3-NMeFOSAA



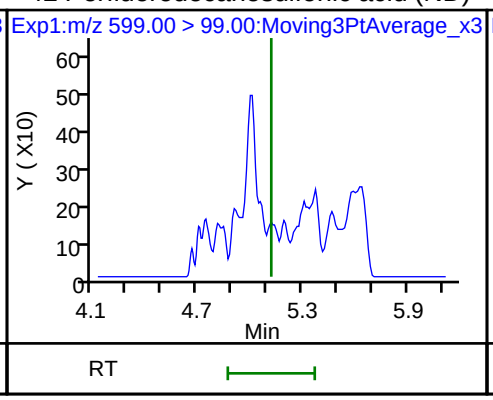

41 NMeFOSAA



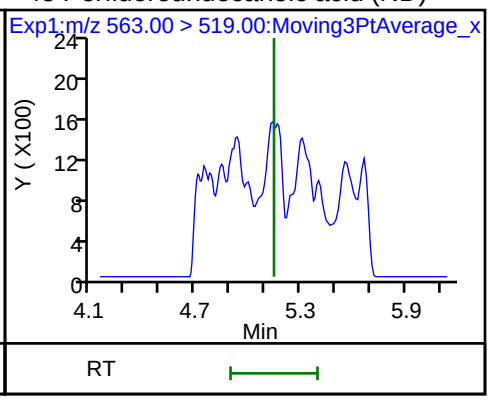

42 Perfluorodecanesulfonic acid (ND)



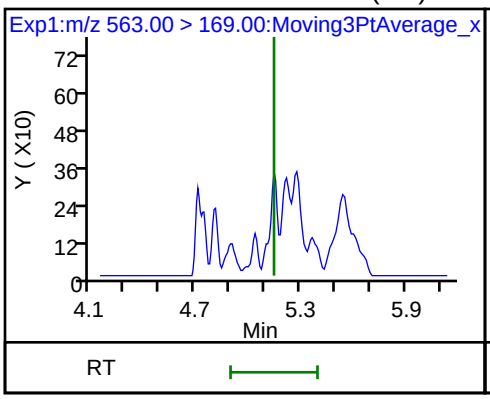

42 Perfluorodecanesulfonic acid (ND)



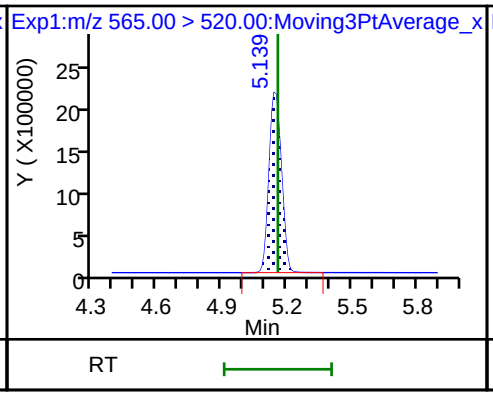

45 Perfluoroundecanoic acid (ND)



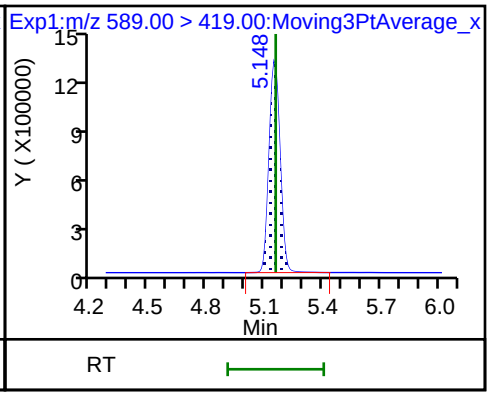

45 Perfluoroundecanoic acid (ND)



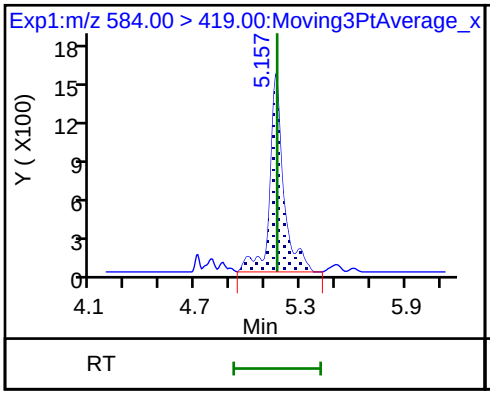

D 43 13C2 PFUnA



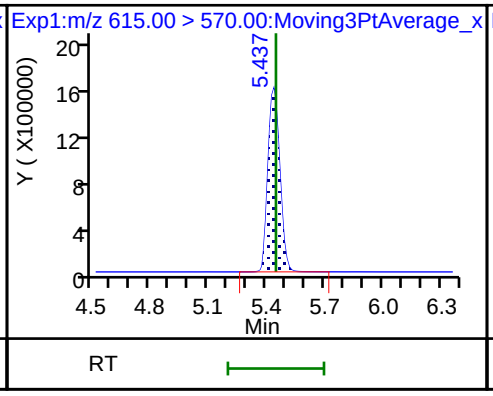

D 44 d5-NEtFOSAA



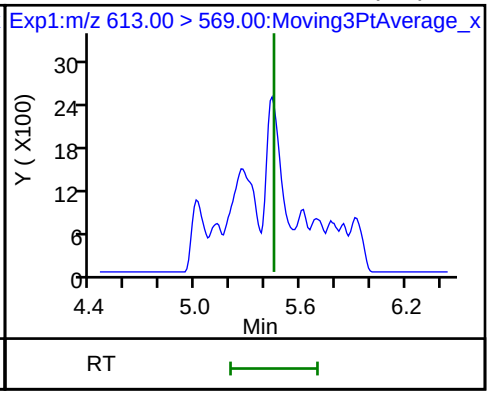

46 NEtFOSA



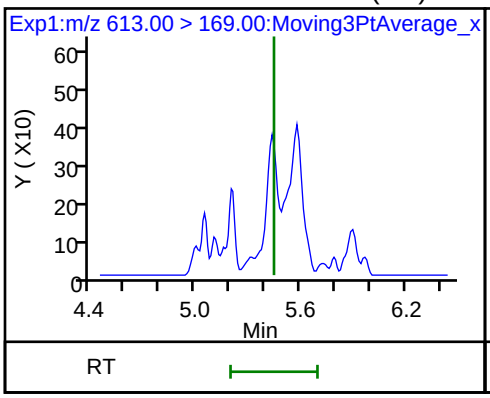

D 56 13C2 PFDoA



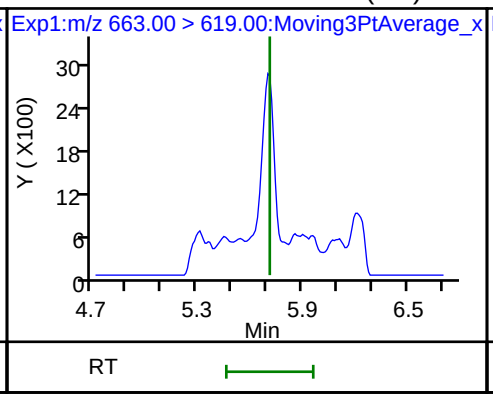

57 Perfluorododecanoic acid (ND)



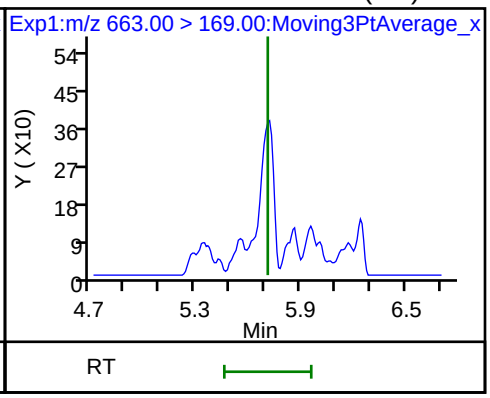
57 Perfluorododecanoic acid (ND)



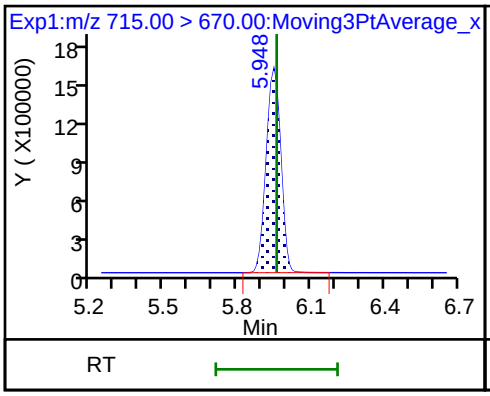

60 Perfluorotridecanoic acid (ND)



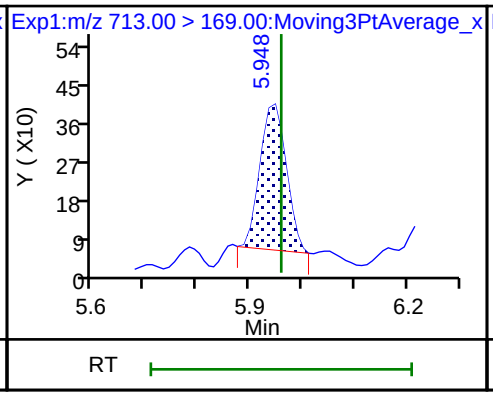

60 Perfluorotridecanoic acid (ND)



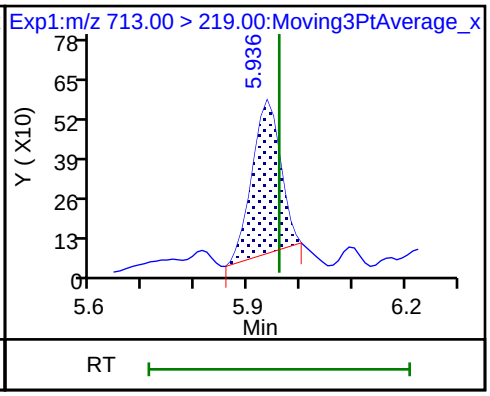

D 61 13C2 PFTeDA




62 Perfluorotetradecanoic acid




62 Perfluorotetradecanoic acid



Eurofins TestAmerica, Sacramento

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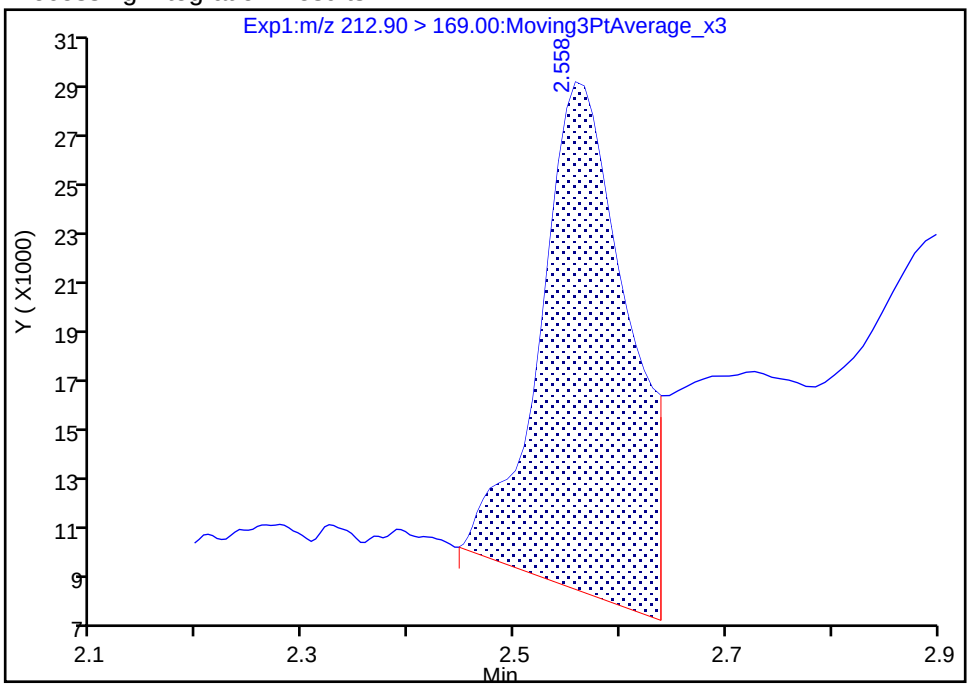
| Lims ID: | 460-217547-E-3-A | Lab Sample ID: | 320-217547-3 | | |
| Client ID: | MW-205 | | | | |
| Operator ID: | TAISACA18-PC\A-18 | ALS Bottle#: | 9 | Worklist Smp#: | 4 |
| Injection Vol: | 20.0 ul | Dil. Factor: | 1.0000 | | |
| Method: | PFAS_A18V2 | Limit Group: | LC PFC ICAL | | |
| Column: | Gemini C18 3um 3mm x 50 mm ( 3.00mm) | Detector | EXP1 | | |

## 2 Perfluorobutanoic acid, CAS: 375-22-4

Signal: 1

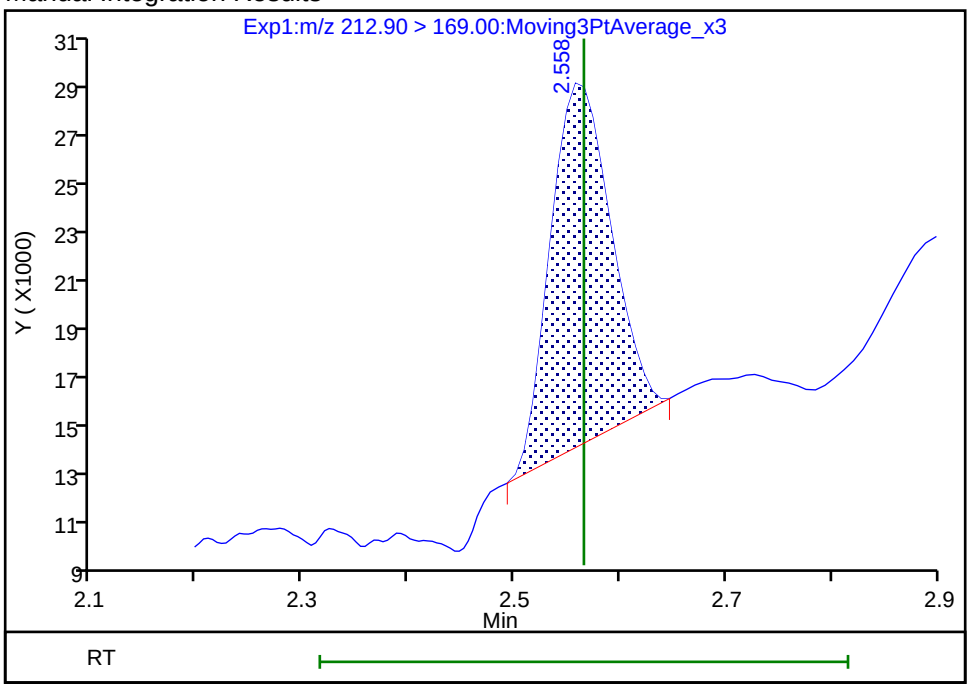
Processing Integration Results

RT: 2.56
Area: 115311
Amount: 0.030124
Amount Units: ng/ml




Manual Integration Results

RT: 2.56
Area: 57214
Amount: 0.014947
Amount Units: ng/ml




Reviewer: sanjumnair, 14-Sep-2020 10:01:54
Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

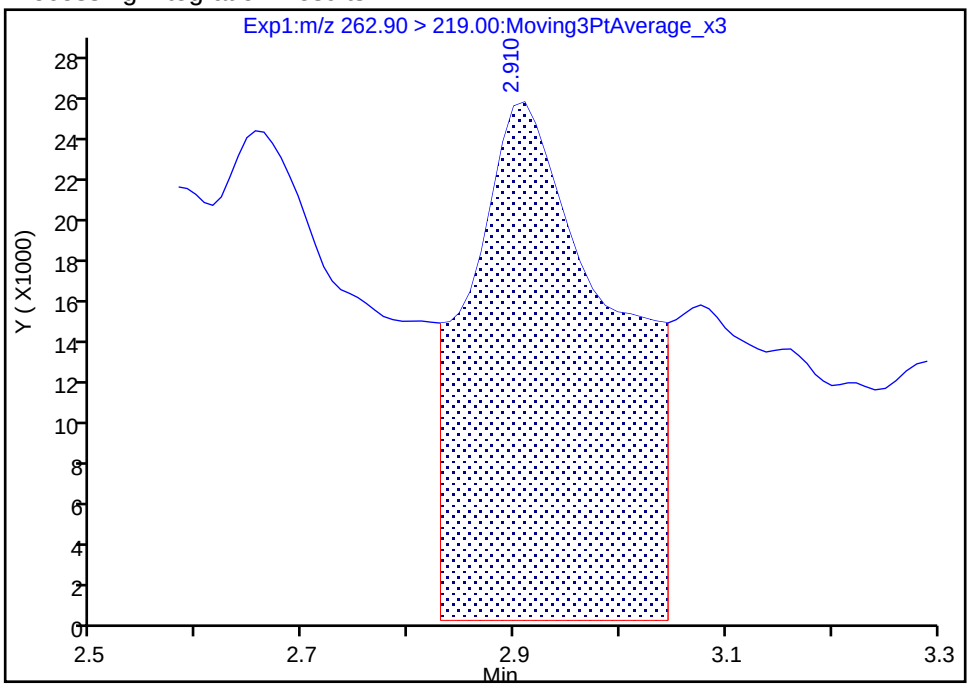
| | | | | | |
|---|---|---|---|---|---|
| Data File: | \\chromfs\Sacramento\ChromData\A18\20200911-103101.b\2020.09.11_A18_PFC_A_018.d | | | | |
| Injection Date: | 11-Sep-2020 13:00:08 | Instrument ID: | A18 | | |
| Lims ID: | 460-217547-E-3-A | Lab Sample ID: | 320-217547-3 | | |
| Client ID: | MW-205 | | | | |
| Operator ID: | TAISACA18-PC\A-18 | ALS Bottle#: | 9 | Worklist Smp#: | 4 |
| Injection Vol: | 20.0 ul | Dil. Factor: | 1.0000 | | |
| Method: | PFAS_A18V2 | Limit Group: | LC PFC ICAL | | |
| Column: | Gemini C18 3um 3mm x 50 mm ( 3.00mm) | Detector | EXP1 | | |

## 5 Perfluoropentanoic acid, CAS: 2706-90-3

Signal: 1

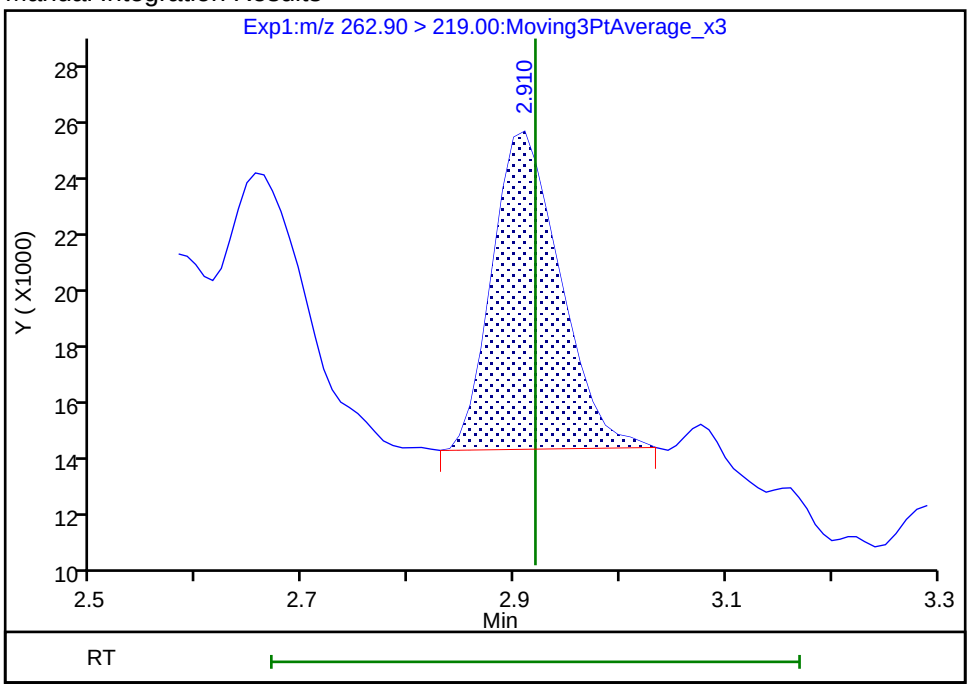
Processing Integration Results

RT: 2.91
Area: 233010
Amount: 0.051182
Amount Units: ng/ml




Manual Integration Results

RT: 2.91
Area: 47487
Amount: 0.010431
Amount Units: ng/ml




Reviewer: sanjumnair, 14-Sep-2020 10:02:00

Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

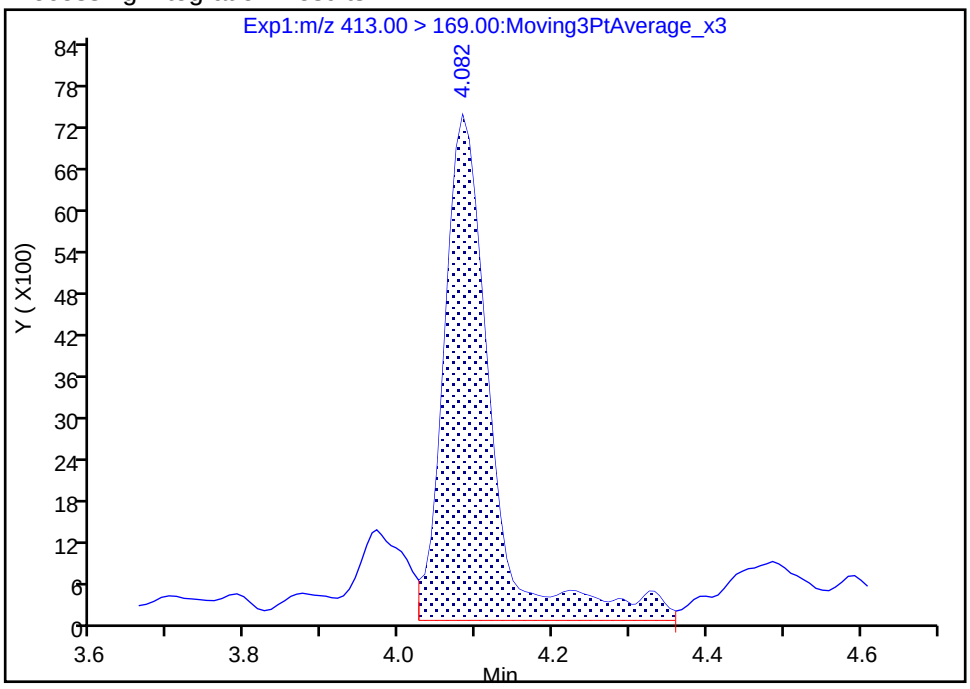
| | | | | | |
|---|---|---|---|---|---|
| Data File: | \\chromfs\Sacramento\ChromData\A18\20200911-103101.b\2020.09.11_A18_PFC_A_018.d | | | | |
| Injection Date: | 11-Sep-2020 13:00:08 | Instrument ID: | A18 | | |
| Lims ID: | 460-217547-E-3-A | Lab Sample ID: | 320-217547-3 | | |
| Client ID: | MW-205 | | | | |
| Operator ID: | TAISACA18-PC\A-18 | ALS Bottle#: | 9 | Worklist Smp#: | 4 |
| Injection Vol: | 20.0 ul | Dil. Factor: | 1.0000 | | |
| Method: | PFAS_A18V2 | Limit Group: | LC PFC ICAL | | |
| Column: | Gemini C18 3um 3mm x 50 mm ( 3.00mm) | Detector | EXP1 | | |

## 22 Perfluorooctanoic acid, CAS: 335-67-1

Signal: 2

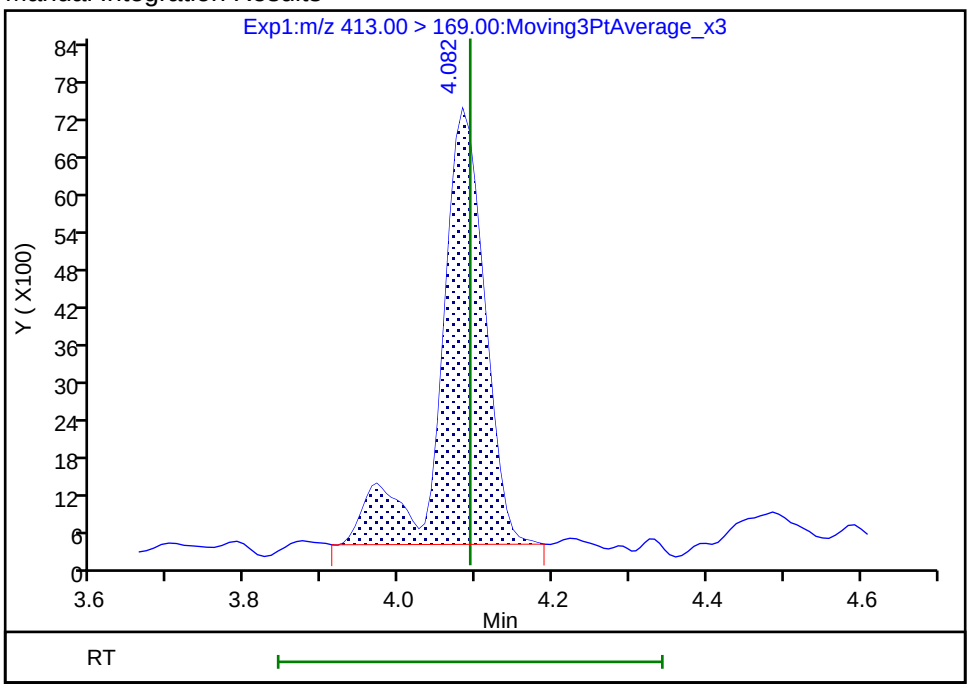
Processing Integration Results

RT: 4.08
Area: 31024
Amount: 0.040997
Amount Units: ng/ml




Manual Integration Results

RT: 4.08
Area: 27878
Amount: 0.013732
Amount Units: ng/ml




Reviewer: sanjumnair, 14-Sep-2020 10:02:28

Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

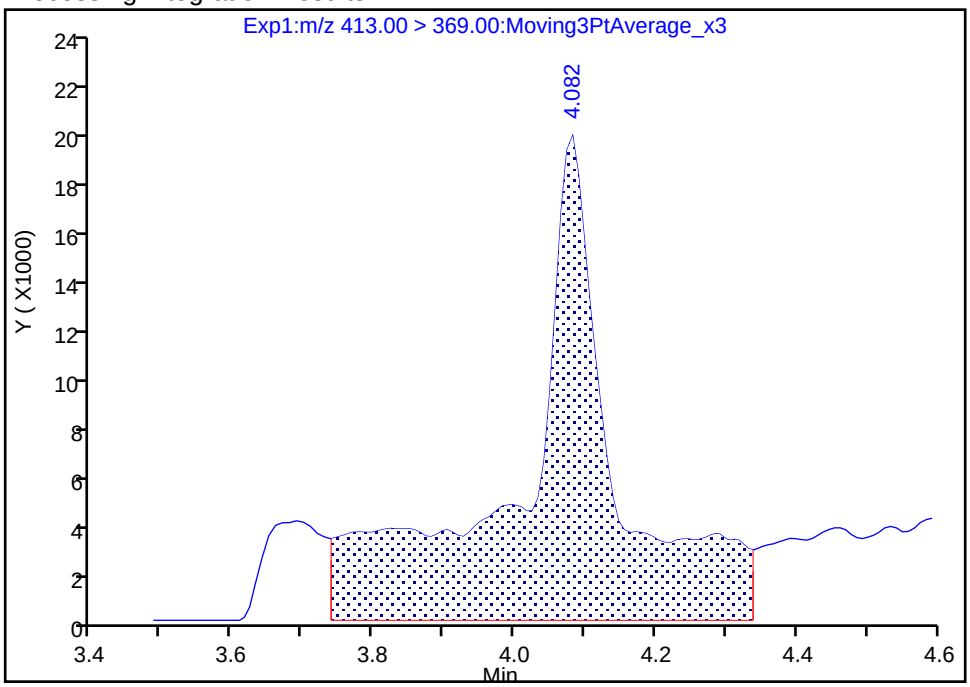
| | | | | | |
|---|---|---|---|---|---|
| Data File: | \\chromfs\Sacramento\ChromData\A18\20200911-103101.b\2020.09.11_A18_PFC_A_018.d | | | | |
| Injection Date: | 11-Sep-2020 13:00:08 | Instrument ID: | A18 | | |
| Lims ID: | 460-217547-E-3-A | Lab Sample ID: | 320-217547-3 | | |
| Client ID: | MW-205 | | | | |
| Operator ID: | TAISACA18-PC\A-18 | ALS Bottle#: | 9 | Worklist Smp#: | 4 |
| Injection Vol: | 20.0 ul | Dil. Factor: | 1.0000 | | |
| Method: | PFAS_A18V2 | Limit Group: | LC PFC ICAL | | |
| Column: | Gemini C18 3um 3mm x 50 mm ( 3.00mm) | Detector | EXP1 | | |

## 22 Perfluorooctanoic acid, CAS: 335-67-1

Signal: 1

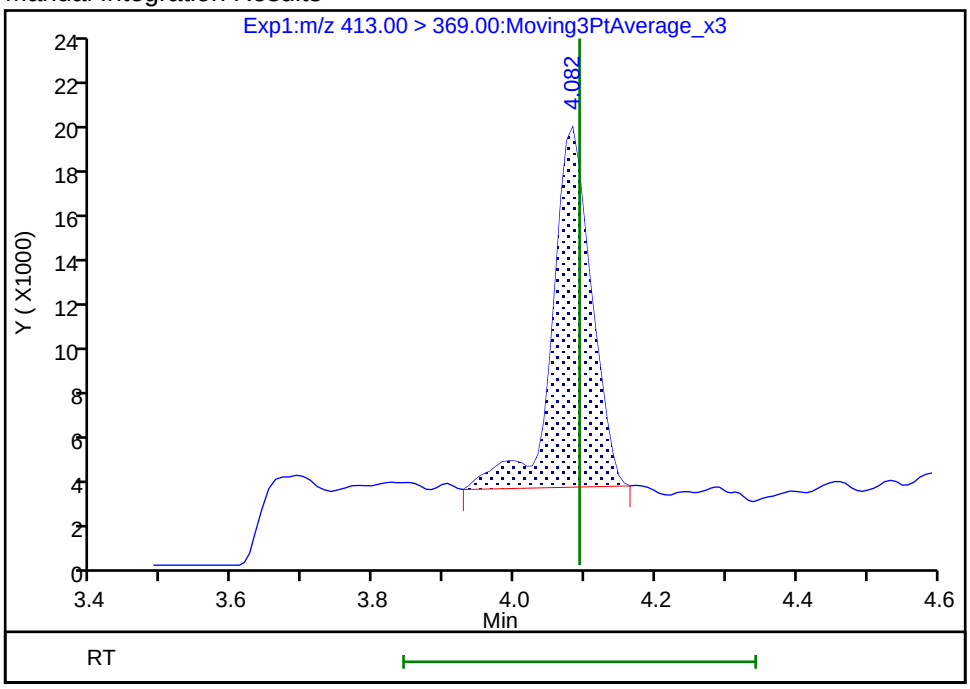
Processing Integration Results

RT: 4.08
Area: 185482
Amount: 0.040997
Amount Units: ng/ml




Manual Integration Results

RT: 4.08
Area: 62126
Amount: 0.013732
Amount Units: ng/ml




Reviewer: sanjumnair, 14-Sep-2020 10:02:33
Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

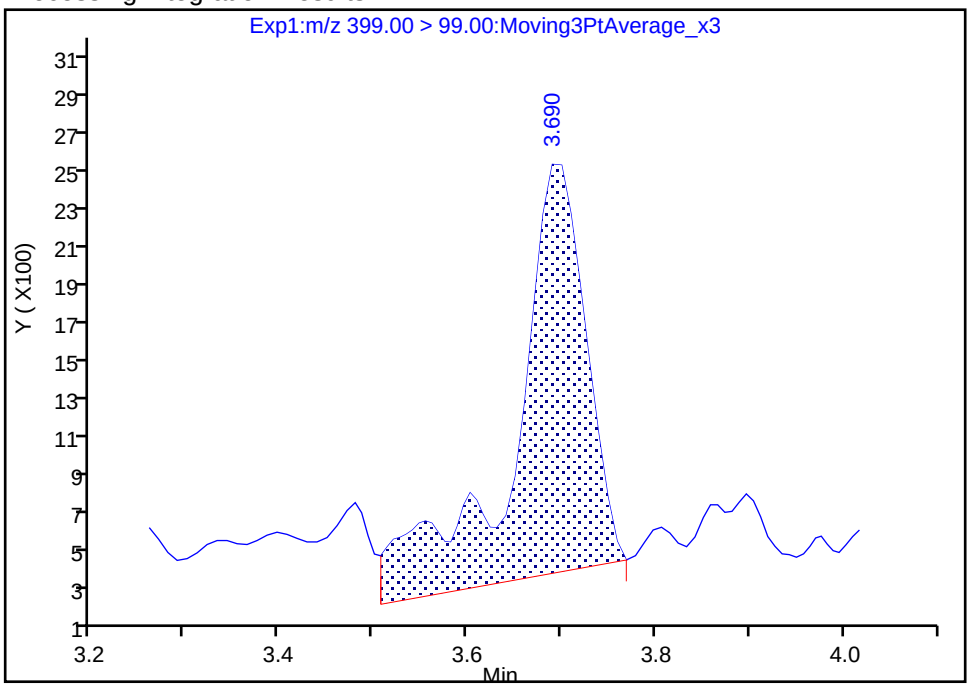
| | | | | | |
|---|---|---|---|---|---|
| Data File: | \\chromfs\Sacramento\ChromData\A18\20200911-103101.b\2020.09.11_A18_PFC_A_018.d | | | | |
| Injection Date: | 11-Sep-2020 13:00:08 | Instrument ID: | A18 | | |
| Lims ID: | 460-217547-E-3-A | Lab Sample ID: | 320-217547-3 | | |
| Client ID: | MW-205 | | | | |
| Operator ID: | TAISACA18-PC\A-18 | ALS Bottle#: | 9 | Worklist Smp#: | 4 |
| Injection Vol: | 20.0 ul | Dil. Factor: | 1.0000 | | |
| Method: | PFAS_A18V2 | Limit Group: | LC PFC ICAL | | |
| Column: | Gemini C18 3um 3mm x 50 mm ( 3.00mm) | Detector | EXP1 | | |

## 15 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 2

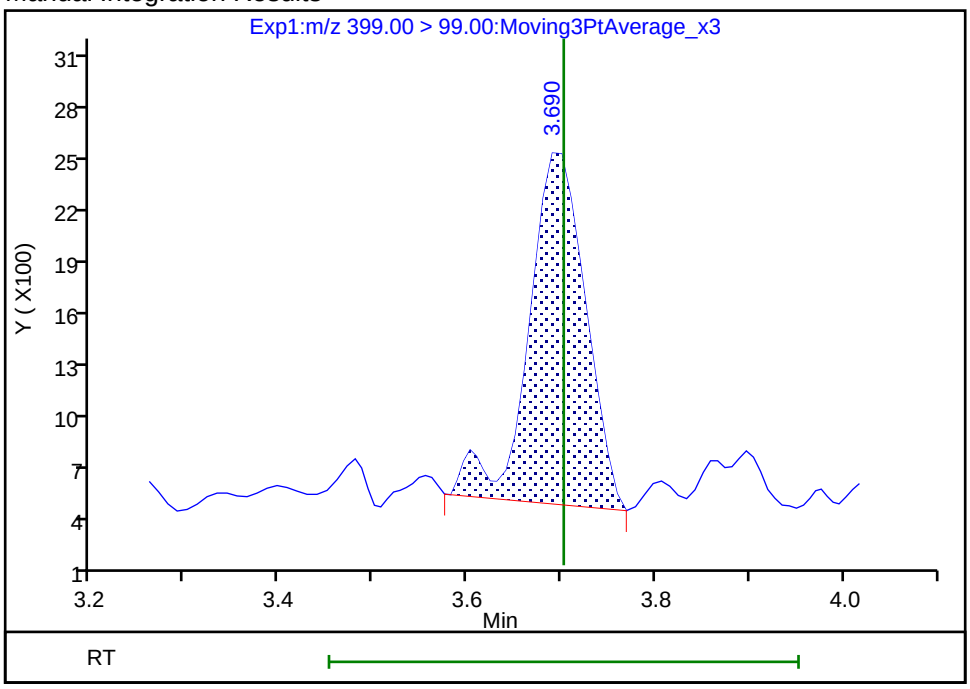
Processing Integration Results

RT: 3.69
Area: 11080
Amount: 0.017774
Amount Units: ng/ml




Manual Integration Results

RT: 3.69
Area: 8257
Amount: 0.011098
Amount Units: ng/ml




Reviewer: sanjumnair, 14-Sep-2020 10:02:15

Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

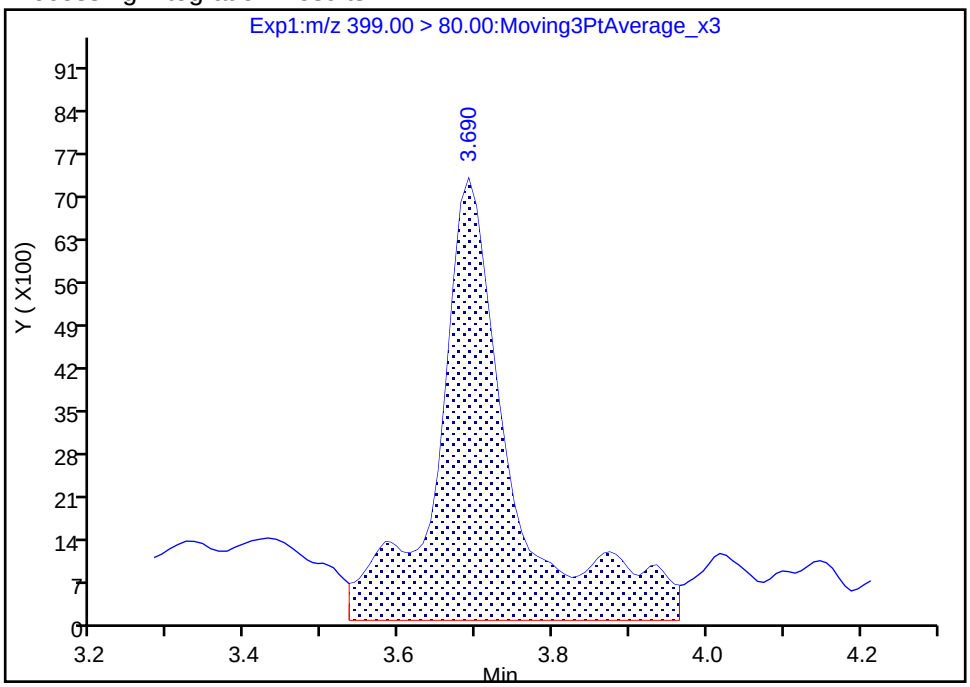
| | | | | | |
|---|---|---|---|---|---|
| Data File: | \\chromfs\Sacramento\ChromData\A18\20200911-103101.b\2020.09.11_A18_PFC_A_018.d | | | | |
| Injection Date: | 11-Sep-2020 13:00:08 | Instrument ID: | A18 | | |
| Lims ID: | 460-217547-E-3-A | Lab Sample ID: | 320-217547-3 | | |
| Client ID: | MW-205 | | | | |
| Operator ID: | TAISACA18-PC\A-18 | ALS Bottle#: | 9 | Worklist Smp#: | 4 |
| Injection Vol: | 20.0 ul | Dil. Factor: | 1.0000 | | |
| Method: | PFAS_A18V2 | Limit Group: | LC PFC ICAL | | |
| Column: | Gemini C18 3um 3mm x 50 mm ( 3.00mm) | Detector | EXP1 | | |

## 15 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 1

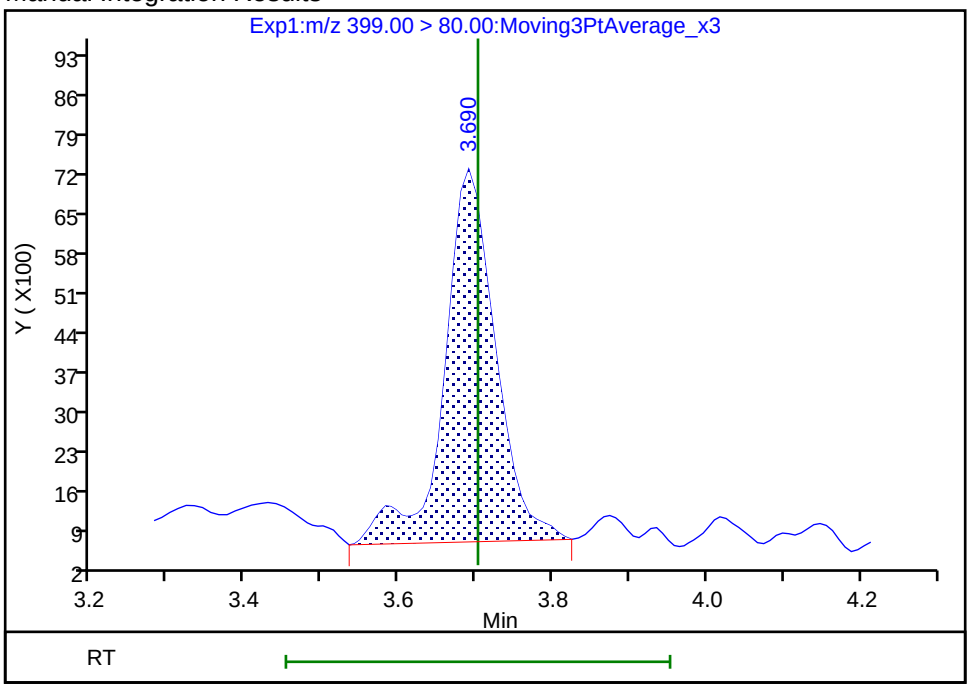
Processing Integration Results

RT: 3.69
Area: 48941
Amount: 0.017774
Amount Units: ng/ml




Manual Integration Results

RT: 3.69
Area: 30559
Amount: 0.011098
Amount Units: ng/ml




Reviewer: sanjumnair, 14-Sep-2020 10:02:20
Audit Action: Manually Integrated Audit Reason: Baseline

Eurofins TestAmerica, Sacramento

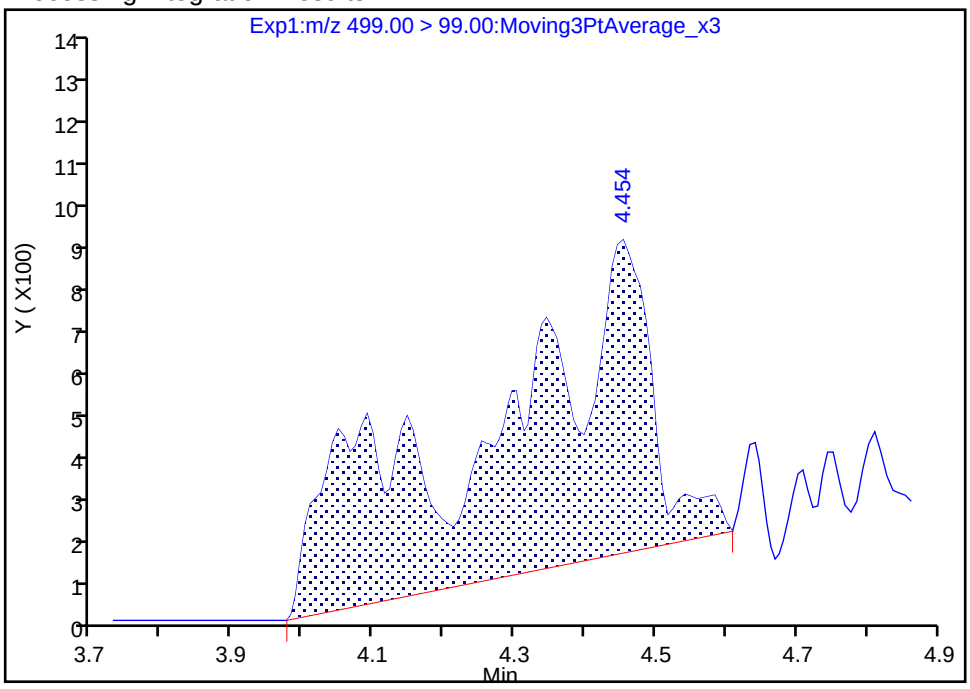
| | | | | | |
|---|---|---|---|---|---|
| Data File: | \\chromfs\Sacramento\ChromData\A18\20200911-103101.b\2020.09.11_A18_PFC_A_018.d | | | | |
| Injection Date: | 11-Sep-2020 13:00:08 | Instrument ID: | A18 | | |
| Lims ID: | 460-217547-E-3-A | Lab Sample ID: | 320-217547-3 | | |
| Client ID: | MW-205 | | | | |
| Operator ID: | TAISACA18-PC\A-18 | ALS Bottle#: | 9 | Worklist Smp#: | 4 |
| Injection Vol: | 20.0 ul | Dil. Factor: | 1.0000 | | |
| Method: | PFAS_A18V2 | Limit Group: | LC PFC ICAL | | |
| Column: | Gemini C18 3um 3mm x 50 mm ( 3.00mm) | Detector | EXP1 | | |

## 29 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 2

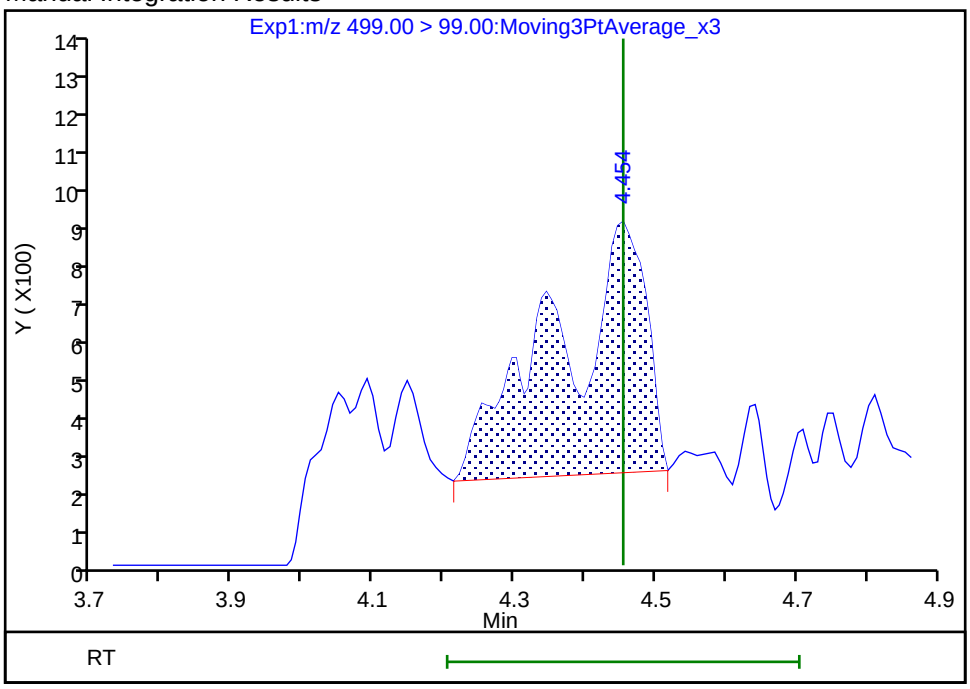
Processing Integration Results

RT: 4.45
Area: 11937
Amount: 0.026946
Amount Units: ng/ml




Manual Integration Results

RT: 4.45
Area: 5618
Amount: 0.023346
Amount Units: ng/ml




Reviewer: sanjumnair, 14-Sep-2020 10:02:41
Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

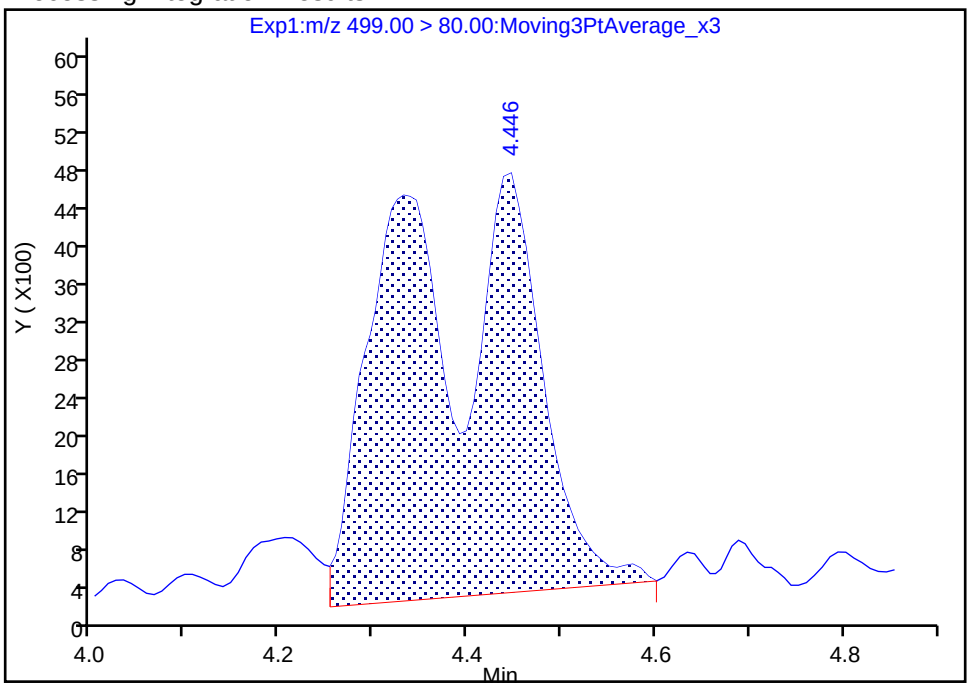
| | | | | | |
|---|---|---|---|---|---|
| Data File: | \\chromfs\Sacramento\ChromData\A18\20200911-103101.b\2020.09.11_A18_PFC_A_018.d | | | | |
| Injection Date: | 11-Sep-2020 13:00:08 | Instrument ID: | A18 | | |
| Lims ID: | 460-217547-E-3-A | Lab Sample ID: | 320-217547-3 | | |
| Client ID: | MW-205 | | | | |
| Operator ID: | TAISACA18-PC\A-18 | ALS Bottle#: | 9 | Worklist Smp#: | 4 |
| Injection Vol: | 20.0 ul | Dil. Factor: | 1.0000 | | |
| Method: | PFAS_A18V2 | Limit Group: | LC PFC ICAL | | |
| Column: | Gemini C18 3um 3mm x 50 mm ( 3.00mm) | Detector | EXP1 | | |

## 29 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 1

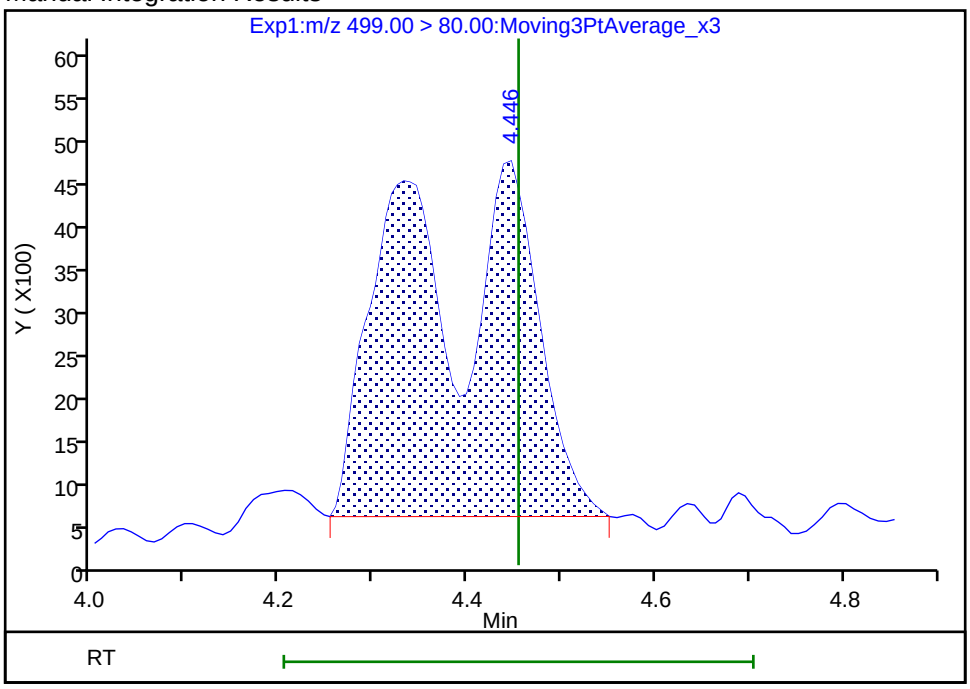
Processing Integration Results

RT: 4.45
Area: 43670
Amount: 0.026946
Amount Units: ng/ml




Manual Integration Results

RT: 4.45
Area: 37835
Amount: 0.023346
Amount Units: ng/ml




Reviewer: sanjumnair, 14-Sep-2020 10:02:57
Audit Action: Manually Integrated Audit Reason: Baseline

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento  Job No.: 460-217547-1

SDG No.:

Client Sample ID: MW-206  Lab Sample ID: 460-217547-4

Matrix: Water  Lab File ID: 2020.09.11_A9_PFC_AA_039.d

Analysis Method: 537 (modified)  Date Collected: 09/02/2020 10:40

Extraction Method: 3535  Date Extracted: 09/10/2020 18:32

Sample wt/vol: 283.7(mL)  Date Analyzed: 09/11/2020 15:25

Con. Extract Vol.: 10.00(mL)  Dilution Factor: 1

Injection Volume: 20(uL)  GC Column: Acquity  ID: 2.1(mm)

% Moisture:  GPC Cleanup:(Y/N) N

Analysis Batch No.: 411454  Units: ng/L

| CAS NO. | COMPOUND NAME | RESULT | Q | RL | MDL |
|---|---|---|---|---|---|
| 375-22-4 | Perfluorobutanoic acid (PFBA) | 5.79 | | 1.76 | 0.31 |
| 2706-90-3 | Perfluoropentanoic acid (PFPeA) | 1.83 | | 1.76 | 0.43 |
| 307-24-4 | Perfluorohexanoic acid (PFHxA) | 2.28 | | 1.76 | 0.51 |
| 375-85-9 | Perfluoroheptanoic acid (PFHpA) | 2.47 | | 1.76 | 0.22 |
| 335-67-1 | Perfluorooctanoic acid (PFOA) | 12.1 | | 1.76 | 0.75 |
| 375-95-1 | Perfluorononanoic acid (PFNA) | 0.75 | J | 1.76 | 0.24 |
| 335-76-2 | Perfluorodecanoic acid (PFDA) | 0.45 | J | 1.76 | 0.27 |
| 2058-94-8 | Perfluoroundecanoic acid (PFUnA) | 0.97 | U | 1.76 | 0.97 |
| 307-55-1 | Perfluorododecanoic acid (PFDoA) | 0.48 | U | 1.76 | 0.48 |
| 72629-94-8 | Perfluorotridecanoic acid (PFTriA) | 1.15 | U | 1.76 | 1.15 |
| 376-06-7 | Perfluorotetradecanoic acid (PFTeA) | 0.26 | U | 1.76 | 0.26 |
| 375-73-5 | Perfluorobutanesulfonic acid (PFBS) | 1.06 | J | 1.76 | 0.18 |
| 355-46-4 | Perfluorohexanesulfonic acid (PFHxS) | 1.93 | B | 1.76 | 0.15 |
| 375-92-8 | Perfluoroheptanesulfonic Acid (PFHpS) | 0.43 | J | 1.76 | 0.17 |
| 1763-23-1 | Perfluorooctanesulfonic acid (PFOS) | 38.7 | | 1.76 | 0.48 |
| 335-77-3 | Perfluorodecanesulfonic acid (PFDS) | 0.28 | U | 1.76 | 0.28 |
| 754-91-6 | Perfluorooctanesulfonamide (FOSA) | 0.66 | J | 1.76 | 0.31 |
| 2355-31-9 | N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA) | 2.73 | U | 17.6 | 2.73 |
| 2991-50-6 | N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA) | 1.67 | U | 17.6 | 1.67 |
| 27619-97-2 | 6:2 FTS | 2.24 | J | 17.6 | 1.76 |
| 39108-34-4 | 8:2 FTS | 1.76 | U | 17.6 | 1.76 |

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento  Job No.: 460-217547-1

SDG No.:

Client Sample ID: MW-206  Lab Sample ID: 460-217547-4

Matrix: Water  Lab File ID: 2020.09.11_A9_PFC_AA_039.d

Analysis Method: 537 (modified)  Date Collected: 09/02/2020 10:40

Extraction Method: 3535  Date Extracted: 09/10/2020 18:32

Sample wt/vol: 283.7(mL)  Date Analyzed: 09/11/2020 15:25

Con. Extract Vol.: 10.00(mL)  Dilution Factor: 1

Injection Volume: 20(uL)  GC Column: Acquity  ID: 2.1(mm)

% Moisture:  GPC Cleanup:(Y/N) N

Analysis Batch No.: 411454  Units: ng/L

| CAS NO. | ISOTOPE DILUTION | %REC | Q | LIMITS |
|---|---|---|---|---|
| STL00992 | 13C4 PFBA | 57 | | 25-150 |
| STL01893 | 13C5 PFPeA | 70 | | 25-150 |
| STL00993 | 13C2 PFHxA | 78 | | 25-150 |
| STL01892 | 13C4 PFHpA | 80 | | 25-150 |
| STL00990 | 13C4 PFOA | 81 | | 25-150 |
| STL00995 | 13C5 PFNA | 87 | | 25-150 |
| STL00996 | 13C2 PFDA | 80 | | 25-150 |
| STL00997 | 13C2 PFUnA | 75 | | 25-150 |
| STL00998 | 13C2 PFDoA | 70 | | 25-150 |
| STL02116 | 13C2 PFTeDA | 64 | | 25-150 |
| STL02337 | 13C3 PFBS | 81 | | 25-150 |
| STL00994 | 18O2 PFHxS | 86 | | 25-150 |
| STL00991 | 13C4 PFOS | 82 | | 25-150 |
| STL01056 | 13C8 FOSA | 74 | | 25-150 |
| STL02118 | d3-NMeFOSAA | 67 | | 25-150 |
| STL02117 | d5-NEtFOSAA | 71 | | 25-150 |
| STL02279 | M2-6:2 FTS | 107 | | 25-150 |
| STL02280 | M2-8:2 FTS | 93 | | 25-150 |

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\A9\20200911-103120.b\2020.09.11_A9_PFC_AA_039.d
Lims ID: 460-217547-D-4-A
Client ID: MW-206
Sample Type: Client
Inject. Date: 11-Sep-2020 15:25:56 ALS Bottle#: 25 Worklist Smp#: 16
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Sample Info: 460-217547-d-4-a
Misc. Info.: Plate: 1 Rack: 3
Operator ID: SACINSTRLCMS02 Instrument ID: A9

Method: \\chromfs\Sacramento\ChromData\A9\20200911-103120.b\PFAS_A9.m
Limit Group: LC PFC ICAL
Last Update: 11-Sep-2020 18:26:57 Calib Date: 10-Sep-2020 12:29:20
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\A9\20200910-102999.b\2020.09.10_A9 _PFC_ICAL_AA_022.d

Column 1 : Det: EXP1
Process Host: CTX1003

First Level Reviewer: zibaa Date: 11-Sep-2020 17:37:15
Ratio Calibration: CCV Sample: \\chromfs\Sacramento\ChromData\A9\20200911-103120.b\2020.09.11_A9_PFC_AA_036.d

| Signal | RT | EXP RT | DLT RT | REL RT | Response | Amount ng/ml | Ratio(Limits) | %Rec | S/N | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| D 1 13C4 PFBA | | | | | | | | | | |
| 217.00 > 172.00 | 1.889 | 1.893 | -0.004 | 0.566 | 4831912 | 1.44 | | 57.4 | 1893 | |
| 2 Perfluorobutanoic acid | | | | | | | | | | M |
| 212.90 > 169.00 | 1.889 | 1.893 | -0.004 | 1.000 | 277429 | 0.1643 | | | 6.5 | M |
| D 4 13C5 PFPeA | | | | | | | | | | |
| 267.90 > 223.00 | 2.191 | 2.198 | -0.007 | 0.656 | 4973896 | 1.75 | | 70.1 | 1710 | |
| 3 Perfluoropentanoic acid | | | | | | | | | | M |
| 262.90 > 219.00 | 2.191 | 2.198 | -0.007 | 1.000 | 104899 | 0.0518 | | | 1.1 | M |
| D 6 13C3 PFBS | | | | | | | | | | |
| 301.90 > 80.00 | 2.216 | 2.224 | -0.008 | 0.664 | 10535199 | 1.88 | | 80.8 | 989 | |
| 5 Perfluorobutanesulfonic acid | | | | | | | | | | M |
| 298.90 > 80.00 | 2.216 | 2.224 | -0.008 | 1.000 | 135321 | 0.0299 | Target=3.04 | | 3.4 | M |
| 298.90 > 99.00 | 2.225 | 2.224 | 0.001 | 1.004 | 33583 | | 4.03(1.52-4.56) | | 2.0 | M |
| D 10 13C2 PFHxA | | | | | | | | | | |
| 315.00 > 270.00 | 2.548 | 2.547 | 0.001 | 0.763 | 5122301 | 1.94 | | 77.7 | 2370 | |
| 11 Perfluorohexanoic acid | | | | | | | | | | M |
| 313.00 > 269.00 | 2.548 | 2.547 | 0.001 | 1.000 | 110711 | 0.0648 | Target=10.29 | | 3.4 | M |
| 313.00 > 119.00 | 2.548 | 2.547 | 0.001 | 1.000 | 12762 | | 8.68(5.15-15.44) | | 5.4 | |
| D 15 13C4 PFHpA | | | | | | | | | | |
| 367.00 > 322.00 | 2.935 | 2.940 | -0.005 | 0.879 | 5164214 | 2.01 | | 80.4 | 3416 | |
| D 17 18O2 PFHxS | | | | | | | | | | |
| 403.00 > 84.00 | 2.941 | 2.940 | 0.001 | 0.881 | 5452499 | 2.03 | | 86.0 | 5424 | |
| 18 Perfluoroheptanoic acid | | | | | | | | | | M |
| 363.00 > 319.00 | 2.935 | 2.940 | -0.005 | 1.000 | 160568 | 0.0701 | Target=3.69 | | 7.2 | M |
| 363.00 > 169.00 | 2.935 | 2.940 | -0.005 | 1.000 | 44056 | | 3.64(1.85-5.54) | | 29.2 | M |
| 16 Perfluorohexanesulfonic acid | | | | | | | | | | M |
| 399.00 > 80.00 | 2.941 | 2.946 | -0.005 | 1.000 | 148787 | 0.0547 | Target=3.51 | | 18.4 | M |
| 399.00 > 99.00 | 2.941 | 2.946 | -0.005 | 1.000 | 41641 | | 3.57(1.76-5.27) | | 15.4 | M |

| Signal | RT | EXP RT | DLT RT | REL RT | Response | Amount ng/ml | Ratio(Limits) | %Rec | S/N | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| D 20 M2-6:2 FTS | | | | | | | | | | |
| 429.00 > 81.00 | 3.318 | 3.324 | -0.006 | 0.994 | 1215092 | 2.53 | | 107 | 645 | |
| 22 1H,1H,2H,2H-perfluorooctanesulfo | | | | | | | | | | M |
| 427.00 > 407.00 | 3.318 | 3.324 | -0.006 | 1.000 | 50064 | 0.0635 | | | 40.1 | M |
| 23 Perfluoroheptanesulfonic acid | | | | | | | | | | M |
| 449.00 > 80.00 | 3.332 | 3.338 | -0.006 | 0.897 | 25792 | 0.0121 | Target=3.71 | | 4.9 | M |
| 449.00 > 99.00 | 3.339 | 3.338 | 0.001 | 0.899 | 7517 | | 3.43(1.85-5.56) | | 9.4 | |
| D 26 13C4 PFOA | | | | | | | | | | |
| 417.00 > 372.00 | 3.339 | 3.345 | -0.006 | 1.000 | 4851223 | 2.02 | | 80.6 | 4748 | |
| 24 Perfluorooctanoic acid | | | | | | | | | | M |
| 413.00 > 369.00 | 3.339 | 3.345 | -0.006 | 1.000 | 716648 | 0.3424 | Target=2.51 | | 39.0 | M |
| 413.00 > 169.00 | 3.339 | 3.345 | -0.006 | 1.000 | 320090 | | 2.24(1.26-3.77) | | 179 | M |
| * 25 13C2 PFOA | | | | | | | | | | |
| 415.00 > 370.00 | 3.339 | 3.345 | -0.006 | | 6232796 | 2.50 | | | 5524 | |
| D 31 13C4 PFOS | | | | | | | | | | |
| 503.00 > 80.00 | 3.714 | 3.720 | -0.006 | 1.112 | 5507063 | 1.97 | | 82.3 | 1346 | |
| 28 Perfluorooctanesulfonic acid | | | | | | | | | | M |
| 499.00 > 80.00 | 3.714 | 3.720 | -0.006 | 1.000 | 2632819 | 1.10 | Target=4.39 | | 247 | |
| 499.00 > 99.00 | 3.714 | 3.720 | -0.006 | 1.000 | 556138 | | 4.73(2.19-6.58) | | 672 | M |
| D 29 13C5 PFNA | | | | | | | | | | |
| 468.00 > 423.00 | 3.730 | 3.735 | -0.005 | 1.117 | 4520717 | 2.16 | | 86.6 | 4607 | |
| 30 Perfluorononanoic acid | | | | | | | | | | M |
| 463.00 > 419.00 | 3.730 | 3.735 | -0.005 | 1.000 | 38257 | 0.0213 | Target=4.20 | | 9.1 | |
| 463.00 > 169.00 | 3.722 | 3.735 | -0.013 | 0.998 | 6580 | | 5.81(2.10-6.30) | | 7.9 | M |
| D 36 13C8 FOSA | | | | | | | | | | |
| 506.00 > 78.00 | 4.069 | 4.074 | -0.005 | 1.219 | 2429277 | 1.85 | | 73.8 | 2915 | |
| 34 Perfluorooctanesulfonamide | | | | | | | | | | |
| 498.00 > 78.00 | 4.078 | 4.074 | 0.004 | 1.002 | 50890 | 0.0188 | | | 7.6 | |
| D 33 13C2 PFDA | | | | | | | | | | |
| 515.00 > 470.00 | 4.086 | 4.092 | -0.006 | 1.224 | 5317300 | 2.01 | | 80.2 | 4518 | |
| 38 Perfluorodecanoic acid | | | | | | | | | | |
| 513.00 > 469.00 | 4.095 | 4.092 | 0.003 | 1.002 | 26963 | 0.0127 | Target=14.22 | | 7.4 | |
| 513.00 > 169.00 | 4.095 | 4.092 | 0.003 | 1.002 | 1873 | | 14.40(7.11-21.34) | | 7.9 | |
| 39 1H,1H,2H,2H-perfluorodecanesulfo | | | | | | | | | | |
| 527.00 > 507.00 | 4.095 | 4.092 | 0.003 | 1.000 | 1168 | 0.001655 | | | 12.3 | |
| D 37 M2-8:2 FTS | | | | | | | | | | |
| 529.00 > 81.00 | 4.095 | 4.092 | 0.003 | 1.227 | 1311645 | 2.23 | | 93.2 | 808 | |
| D 41 d3-NMeFOSAA | | | | | | | | | | |
| 573.00 > 419.00 | 4.257 | 4.253 | 0.004 | 1.275 | 2192600 | 1.66 | | 66.6 | 3473 | |
| D 46 13C2 PFUnA | | | | | | | | | | |
| 565.00 > 520.00 | 4.413 | 4.409 | 0.004 | 1.322 | 3827908 | 1.87 | | 74.9 | 5388 | |
| D 45 d5-NEtFOSAA | | | | | | | | | | |
| 589.00 > 419.00 | 4.413 | 4.418 | -0.005 | 1.322 | 1569398 | 1.78 | | 71.1 | 2558 | |
| 44 N-ethylperfluorooctanesulfonamid | | | | | | | | | | M |
| 584.00 > 419.00 | 4.422 | 4.426 | -0.004 | 1.002 | 4690 | 0.009210 | | | 15.6 | M |
| D 56 13C2 PFDoA | | | | | | | | | | |
| 615.00 > 570.00 | 4.698 | 4.704 | -0.006 | 1.407 | 3500442 | 1.74 | | 69.8 | 4666 | |

| Signal | RT | EXP RT | DLT RT | REL RT | Response | Amount ng/ml | Ratio(Limits) | %Rec | S/N | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| D 62 13C2 PFTeDA | | | | | | | | | | |
| 715.00 > 670.00 | 5.207 | 5.211 | -0.004 | 1.559 | 2240474 | 1.60 | | 64.0 | 4132 | |

## QC Flag Legend

Processing Flags

Review Flags

M - Manually Integrated

Report Date: 11-Sep-2020 18:27:10 Chrom Revision: 2.3 11-Sep-2020 14:12:18

Eurofins TestAmerica, Sacramento

Data File: \\chromfs\Sacramento\ChromData\A9\20200911-103120.b\2020.09.11_A9_PFC_AA_039.d

Injection Date: 11-Sep-2020 15:25:56 Instrument ID: A9

Lims ID: 460-217547-D-4-A Lab Sample ID: 320-217547-4

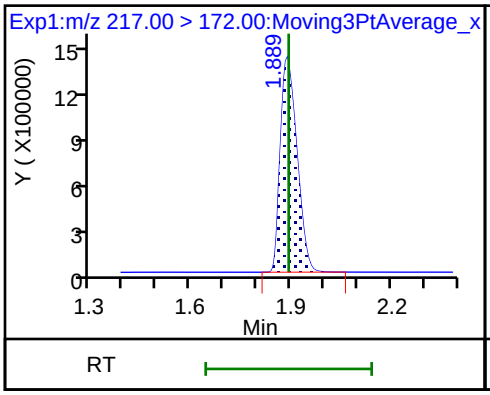
Client ID: MW-206

Operator ID: SACINSTRLCMS02 ALS Bottle#: 25 Worklist Smp#: 16

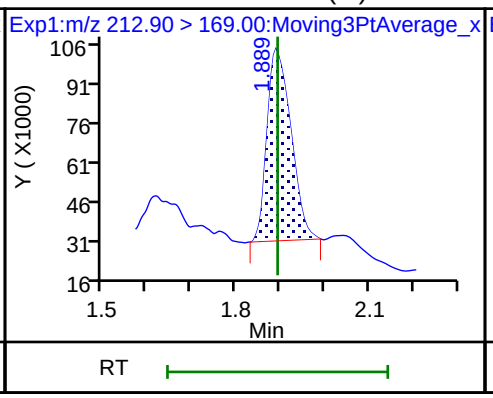
Injection Vol: 20.0 ul Dil. Factor: 1.0000

Method: PFAS_A9 Limit Group: LC PFC ICAL

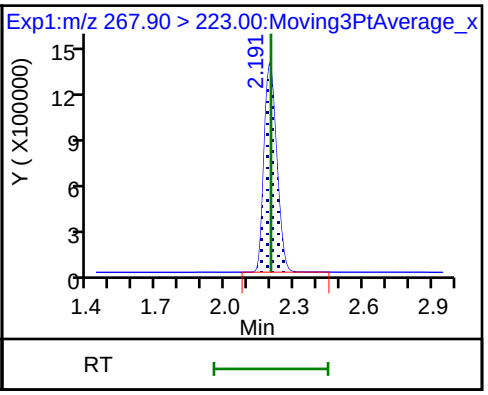
D 1 13C4 PFBA



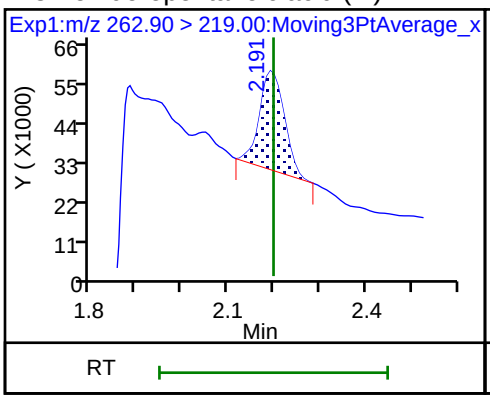

2 Perfluorobutanoic acid (M)



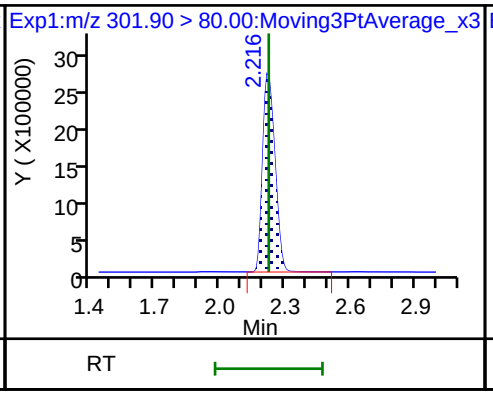

D 4 13C5 PFPeA



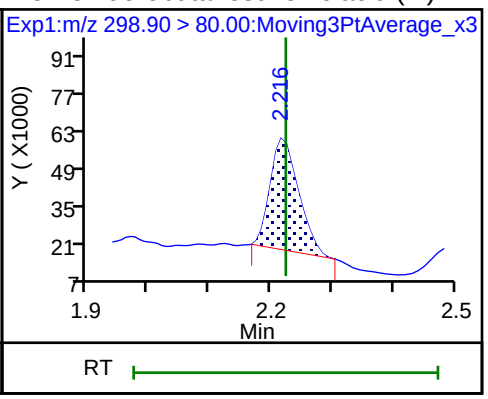

3 Perfluoropentanoic acid (M)



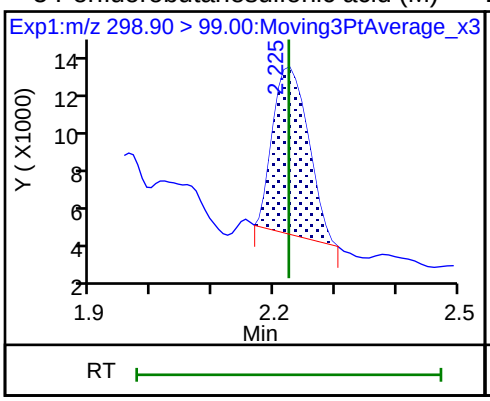

D 6 13C3 PFBS



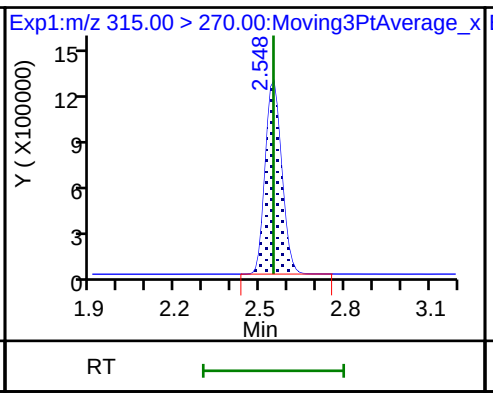

5 Perfluorobutanesulfonic acid (M)



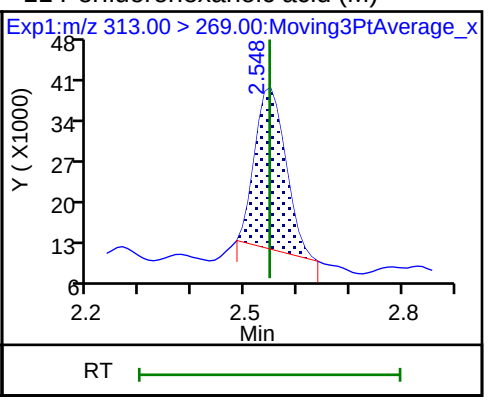

5 Perfluorobutanesulfonic acid (M)



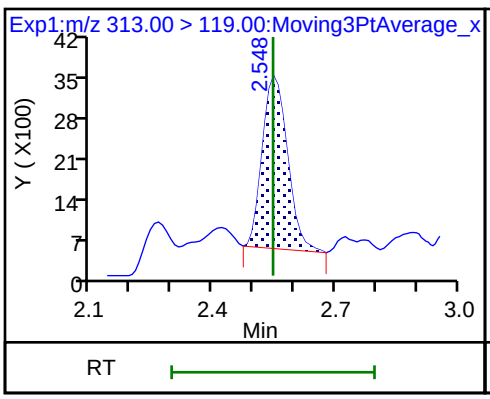

D 10 13C2 PFHxA



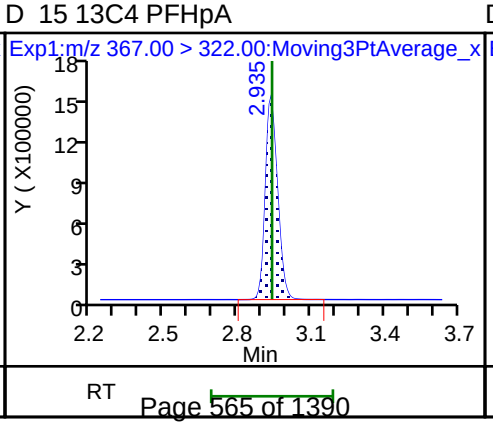

11 Perfluorohexanoic acid (M)



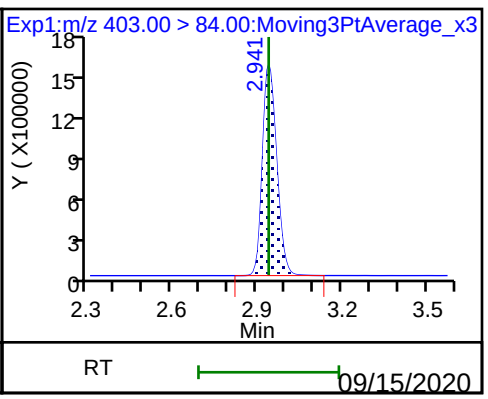

11 Perfluorohexanoic acid



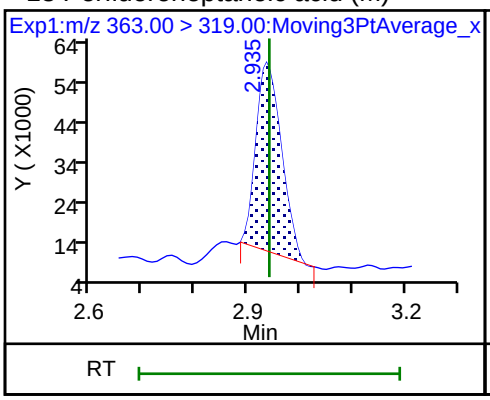

D 15 13C4 PFHpA



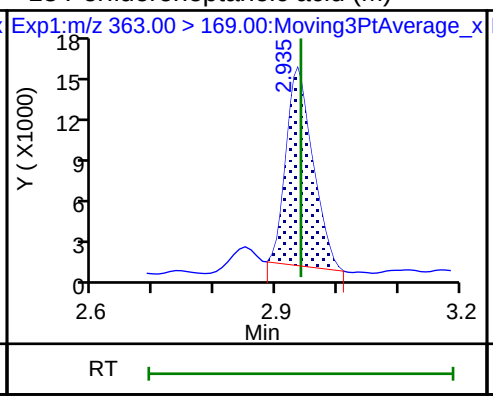

D 17 18O2 PFHxS



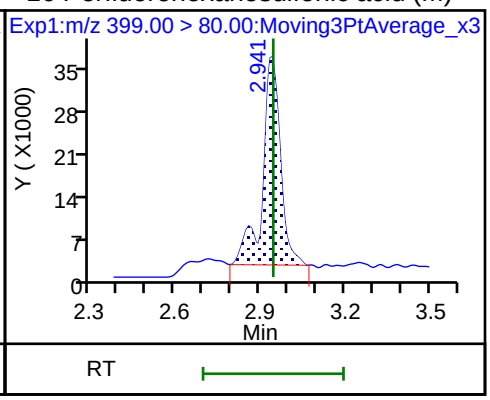
18 Perfluoroheptanoic acid (M)



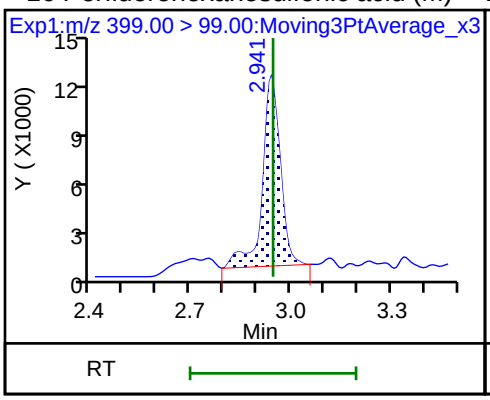

18 Perfluoroheptanoic acid (M)



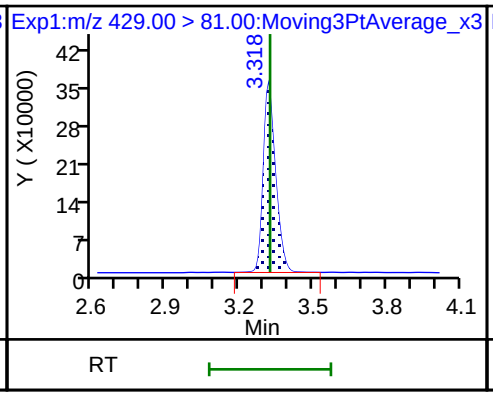

16 Perfluorohexanesulfonic acid (M)



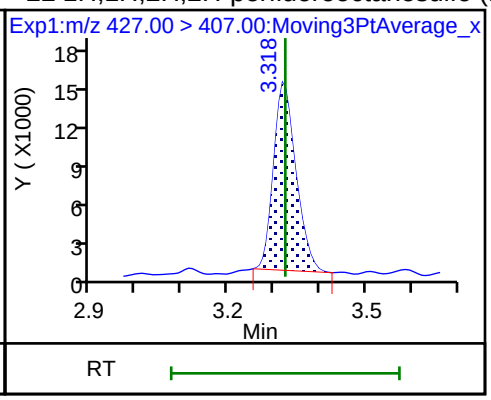

16 Perfluorohexanesulfonic acid (M)



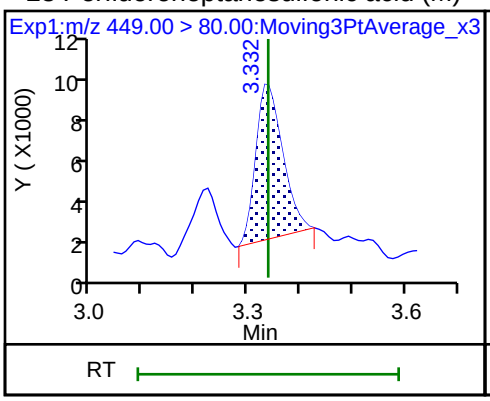

D 20 M2-6:2 FTS



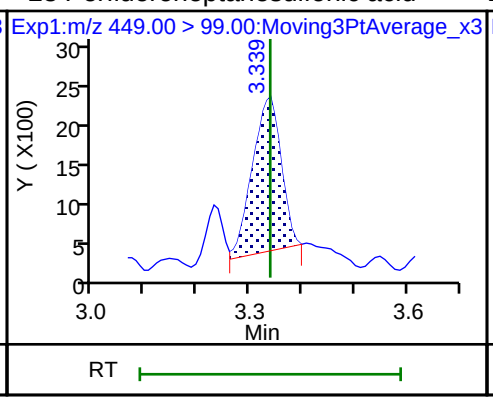

22 1H,1H,2H,2H-perfluorooctanesulfo (M)



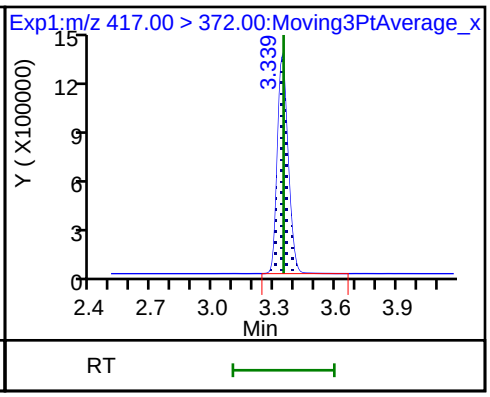

23 Perfluoroheptanesulfonic acid (M)



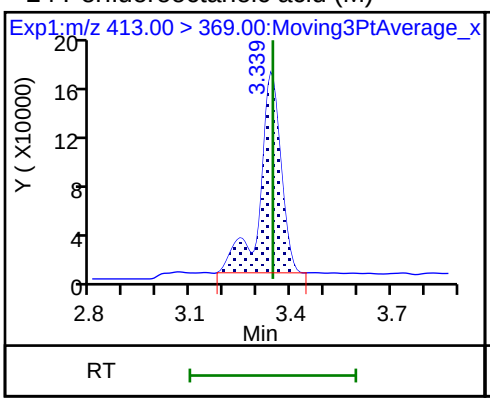

23 Perfluoroheptanesulfonic acid



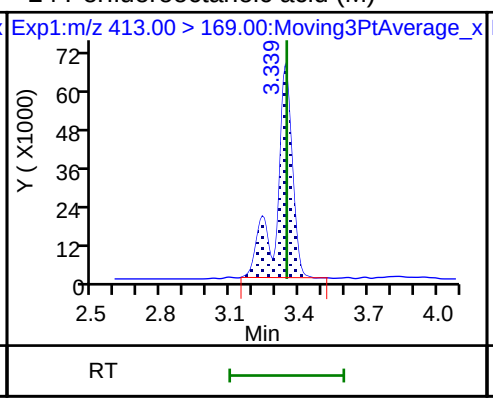

D 26 13C4 PFOA



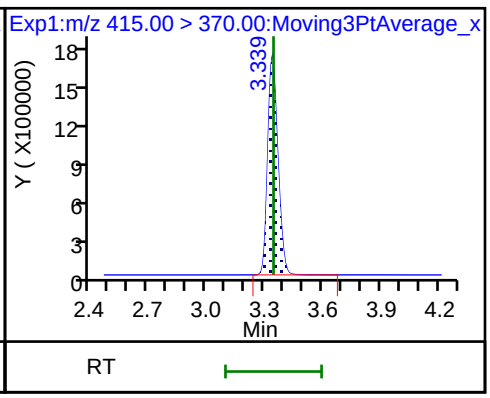

24 Perfluorooctanoic acid (M)



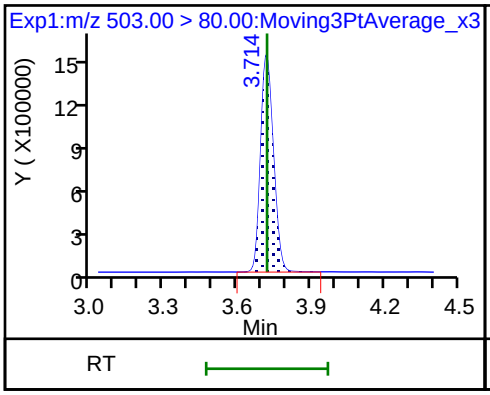

24 Perfluorooctanoic acid (M)



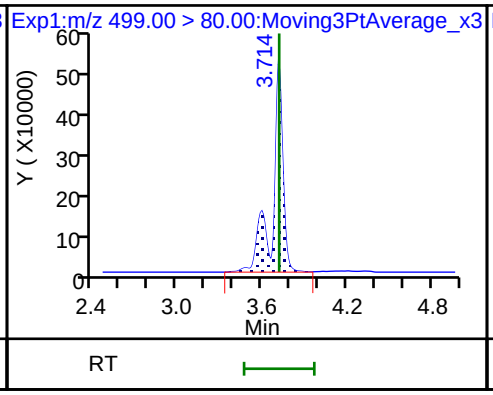

* 25 13C2 PFOA



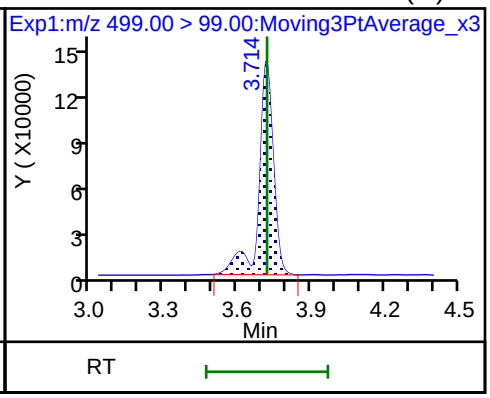
D 31 13C4 PFOS



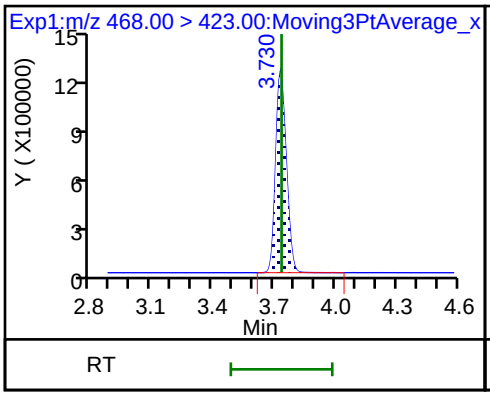

28 Perfluorooctanesulfonic acid



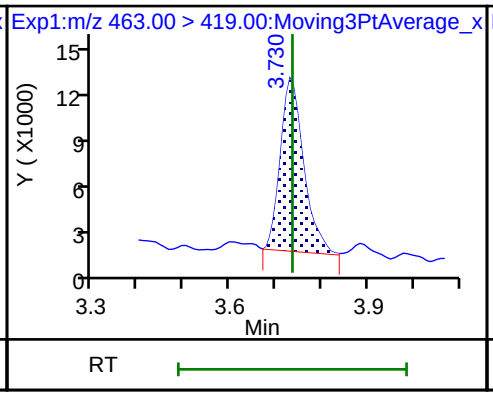

28 Perfluorooctanesulfonic acid (M)



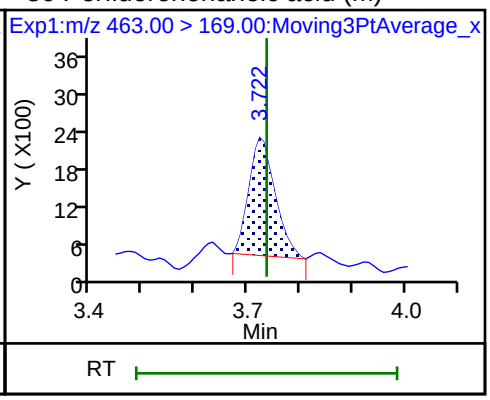

D 29 13C5 PFNA



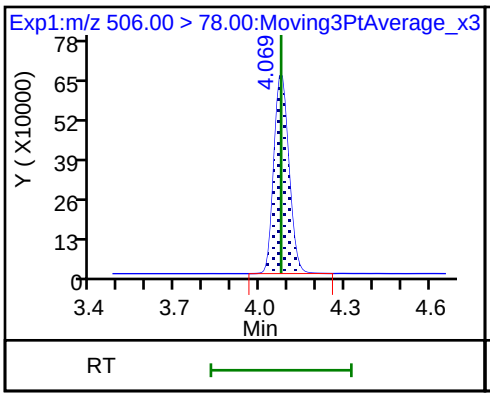

30 Perfluorononanoic acid



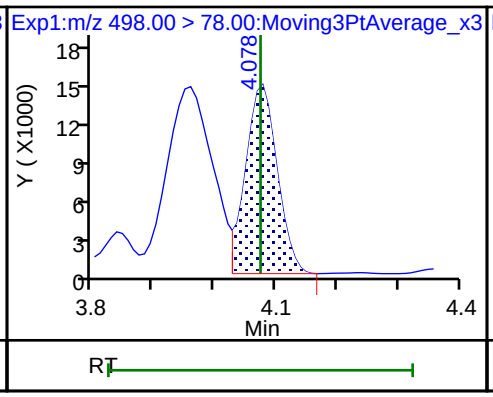

30 Perfluorononanoic acid (M)



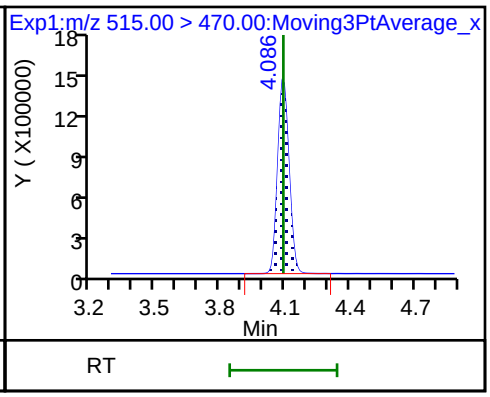

D 36 13C8 FOSA



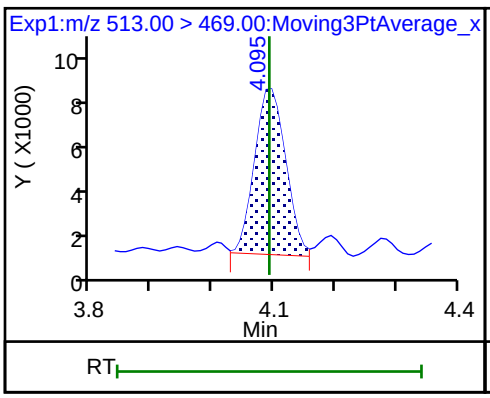

34 Perfluorooctanesulfonamide



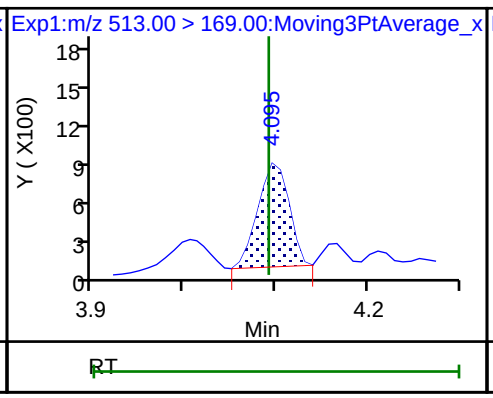

D 33 13C2 PFDA



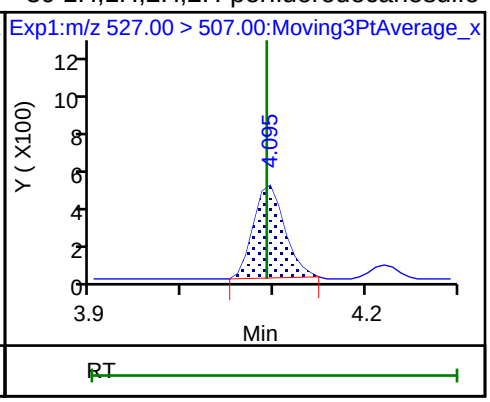

38 Perfluorodecanoic acid



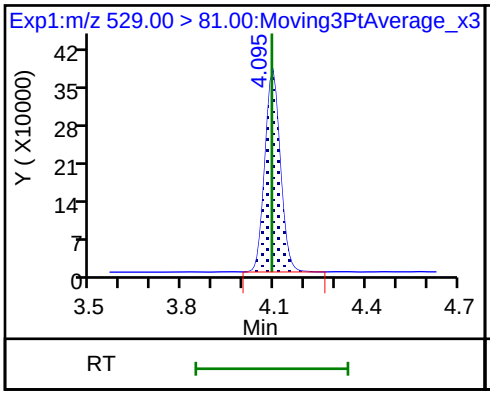

38 Perfluorodecanoic acid



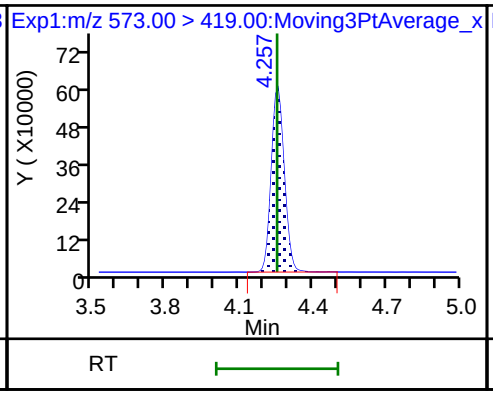

39 1H,1H,2H,2H-perfluorodecanesulfo



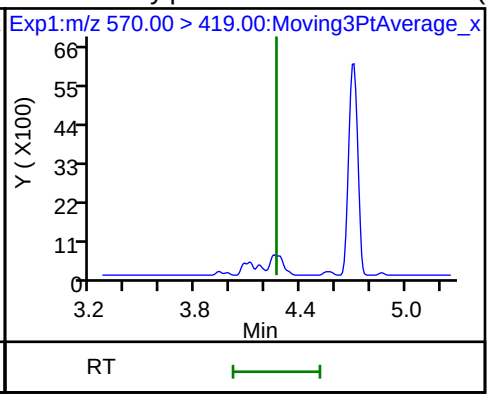
D 37 M2-8:2 FTS



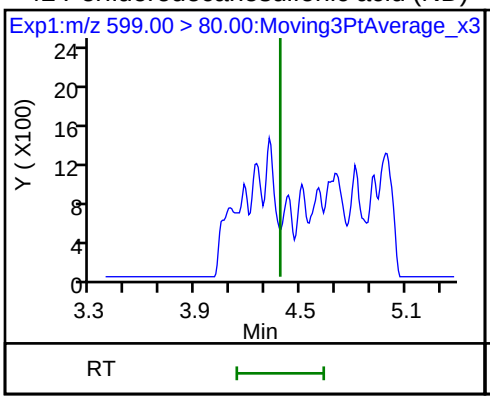

D 41 d3-NMeFOSAA



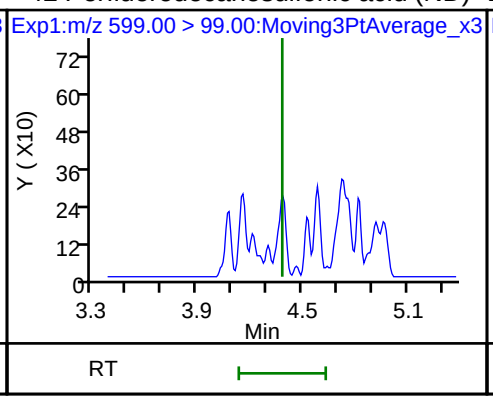

40 N-methylperfluorooctanesulfonami (ND)



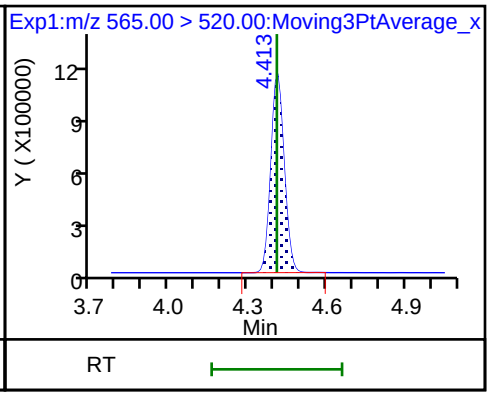

42 Perfluorodecanesulfonic acid (ND)



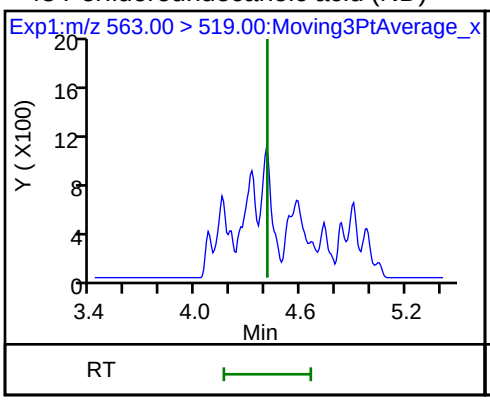

42 Perfluorodecanesulfonic acid (ND)



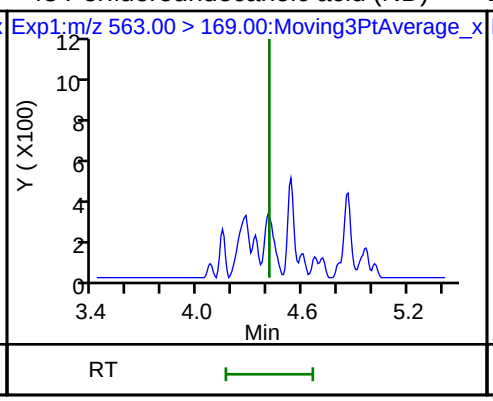

D 46 13C2 PFUnA



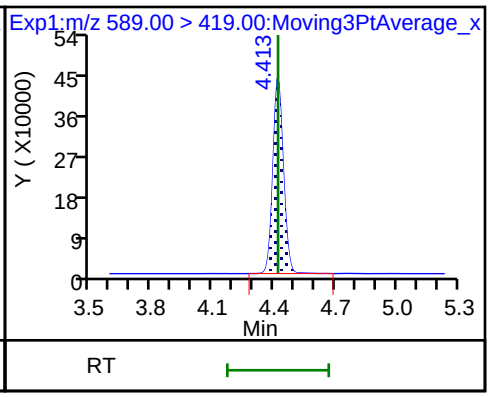

43 Perfluoroundecanoic acid (ND)



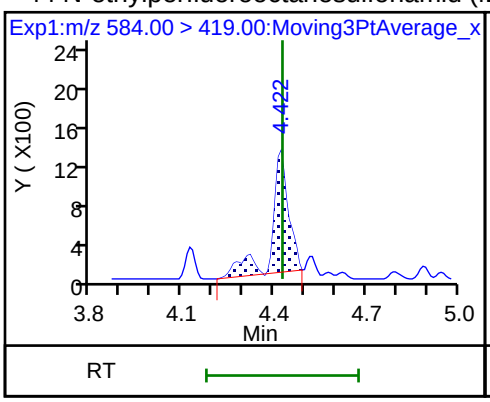

43 Perfluoroundecanoic acid (ND)



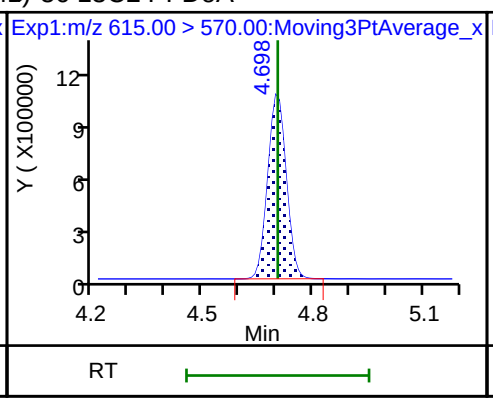

D 45 d5-NEtFOSAA



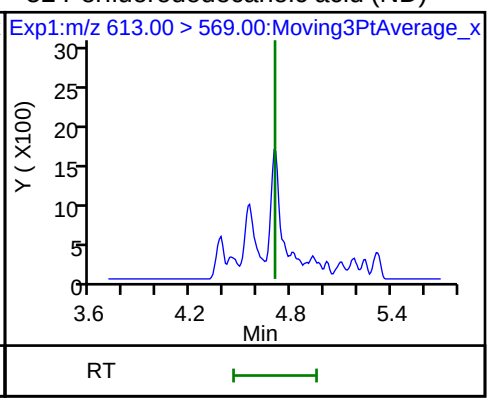

44 N-ethylperfluorooctanesulfonamid (ND)



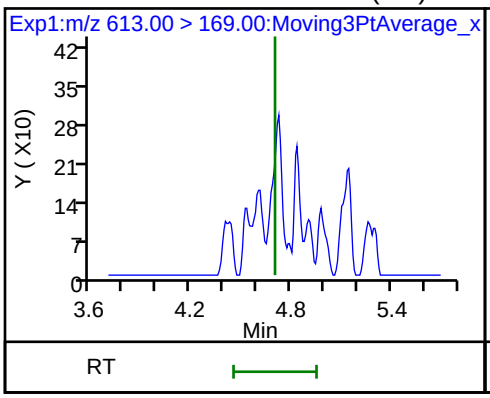

D 56 13C2 PFDoA



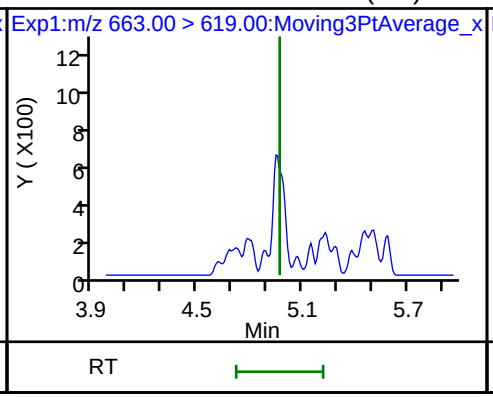

52 Perfluorododecanoic acid (ND)



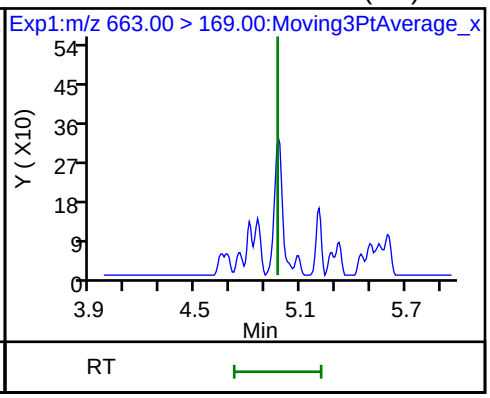
52 Perfluorododecanoic acid (ND)



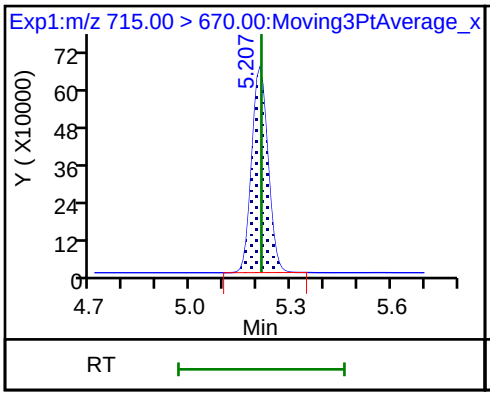

60 Perfluorotridecanoic acid (ND)



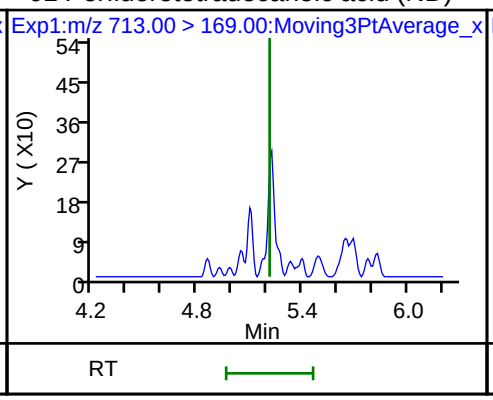

60 Perfluorotridecanoic acid (ND)



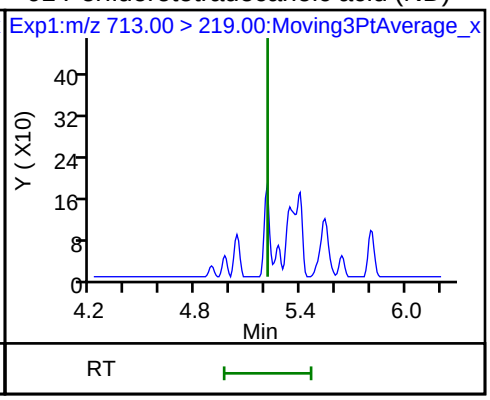

D 62 13C2 PFTeDA




61 Perfluorotetradecanoic acid (ND)




61 Perfluorotetradecanoic acid (ND)



Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

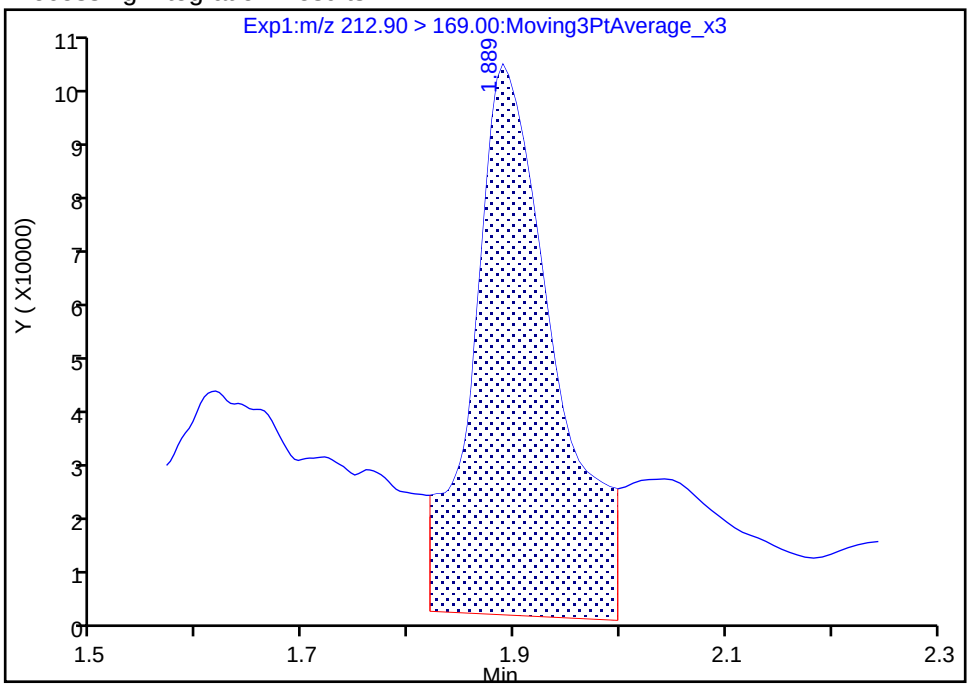
| | | | | | |
|---|---|---|---|---|---|
| Data File: | \\chromfs\Sacramento\ChromData\A9\20200911-103120.b\2020.09.11_A9_PFC_AA_039.d | | | | |
| Injection Date: | 11-Sep-2020 15:25:56 | Instrument ID: | A9 | | |
| Lims ID: | 460-217547-D-4-A | Lab Sample ID: | 320-217547-4 | | |
| Client ID: | MW-206 | | | | |
| Operator ID: | SACINSTRLCMS02 | ALS Bottle#: | 25 | Worklist Smp#: | 16 |
| Injection Vol: | 20.0 ul | Dil. Factor: | 1.0000 | | |
| Method: | PFAS_A9 | Limit Group: | LC PFC ICAL | | |
| Column: | | Detector | EXP1 | | |

## 2 Perfluorobutanoic acid, CAS: 375-22-4

Signal: 1

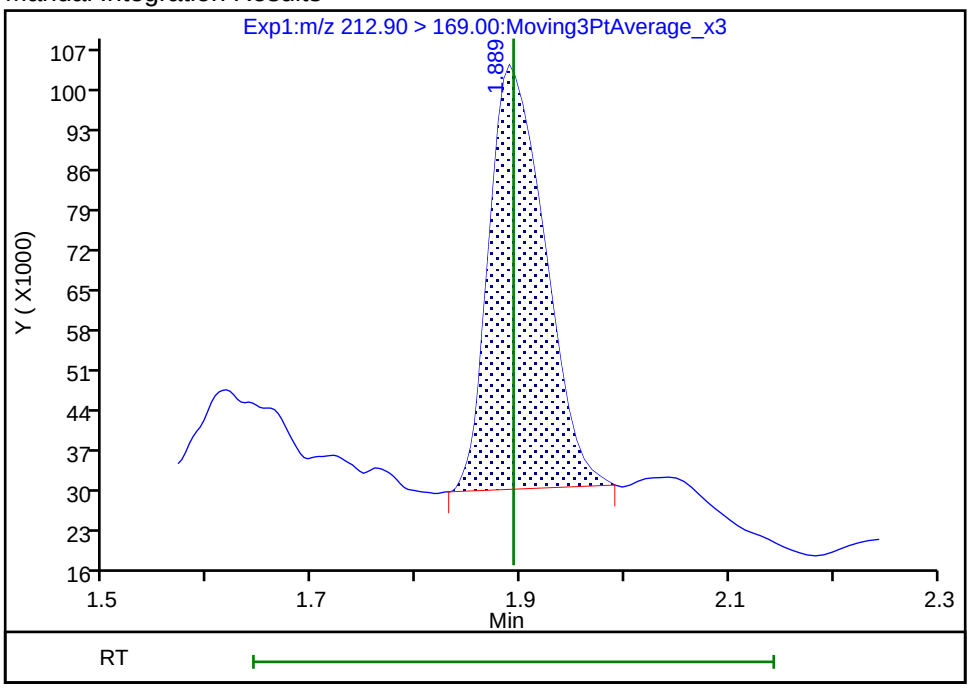
Processing Integration Results

RT: 1.89
Area: 510579
Amount: 0.302451
Amount Units: ng/ml




Manual Integration Results

RT: 1.89
Area: 277429
Amount: 0.164340
Amount Units: ng/ml




Reviewer: zibaa, 11-Sep-2020 17:17:56

Audit Action: Manually Integrated Audit Reason: Baseline

Eurofins TestAmerica, Sacramento

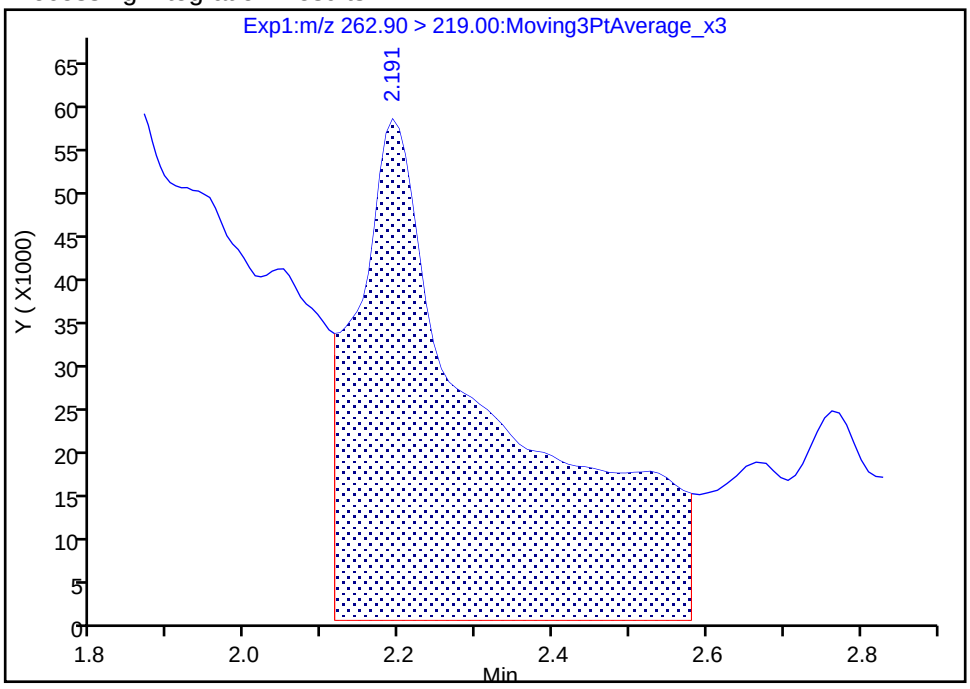
| | | | | | |
|---|---|---|---|---|---|
| Data File: | \\chromfs\Sacramento\ChromData\A9\20200911-103120.b\2020.09.11_A9_PFC_AA_039.d | | | | |
| Injection Date: | 11-Sep-2020 15:25:56 | Instrument ID: | A9 | | |
| Lims ID: | 460-217547-D-4-A | Lab Sample ID: | 320-217547-4 | | |
| Client ID: | MW-206 | | | | |
| Operator ID: | SACINSTRLCMS02 | ALS Bottle#: | 25 | Worklist Smp#: | 16 |
| Injection Vol: | 20.0 ul | Dil. Factor: | 1.0000 | | |
| Method: | PFAS_A9 | Limit Group: | LC PFC ICAL | | |
| Column: | | Detector | EXP1 | | |

## 3 Perfluoropentanoic acid, CAS: 2706-90-3

Signal: 1

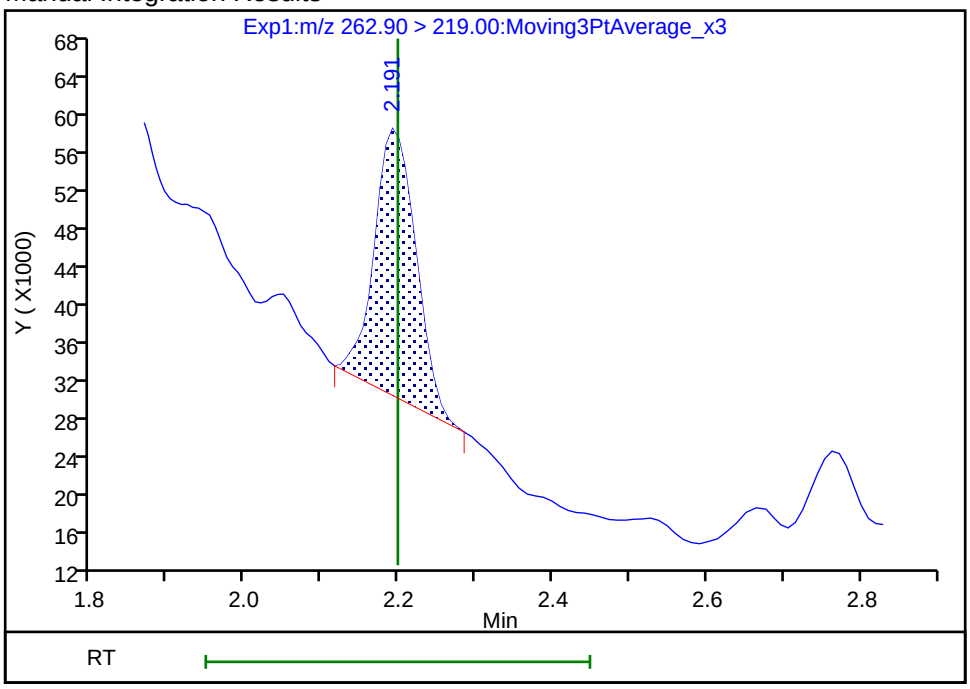
Processing Integration Results

RT: 2.19
Area: 742816
Amount: 0.366892
Amount Units: ng/ml




Manual Integration Results

RT: 2.19
Area: 104899
Amount: 0.051812
Amount Units: ng/ml




Reviewer: zibaa, 11-Sep-2020 17:18:42
Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

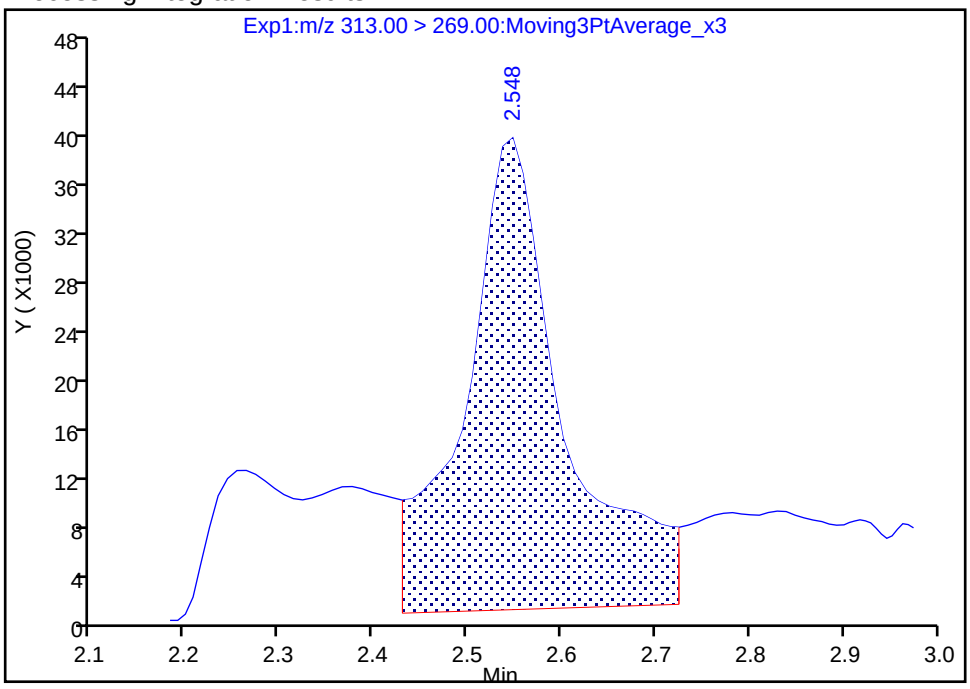
| | | | | | |
|---|---|---|---|---|---|
| Data File: | \\chromfs\Sacramento\ChromData\A9\20200911-103120.b\2020.09.11_A9_PFC_AA_039.d | | | | |
| Injection Date: | 11-Sep-2020 15:25:56 | Instrument ID: | A9 | | |
| Lims ID: | 460-217547-D-4-A | Lab Sample ID: | 320-217547-4 | | |
| Client ID: | MW-206 | | | | |
| Operator ID: | SACINSTRLCMS02 | ALS Bottle#: | 25 | Worklist Smp#: | 16 |
| Injection Vol: | 20.0 ul | Dil. Factor: | 1.0000 | | |
| Method: | PFAS_A9 | Limit Group: | LC PFC ICAL | | |
| Column: | | Detector | EXP1 | | |

## 11 Perfluorohexanoic acid, CAS: 307-24-4

Signal: 1

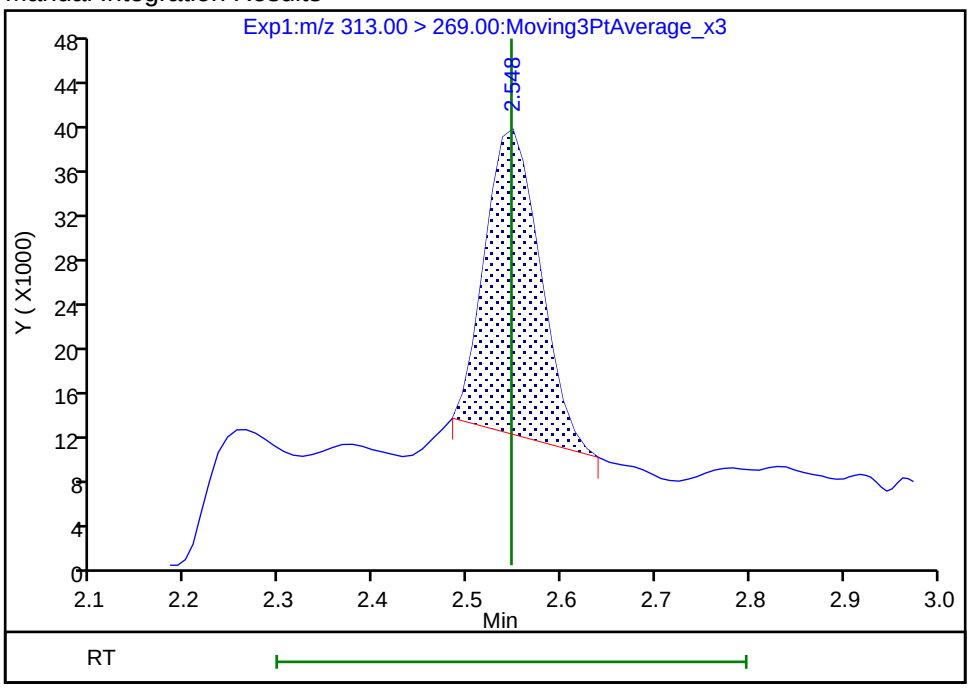
Processing Integration Results

RT: 2.55
Area: 279445
Amount: 0.163471
Amount Units: ng/ml




Manual Integration Results

RT: 2.55
Area: 110711
Amount: 0.064764
Amount Units: ng/ml




Reviewer: zibaa, 11-Sep-2020 17:19:13

Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

| | | | | | |
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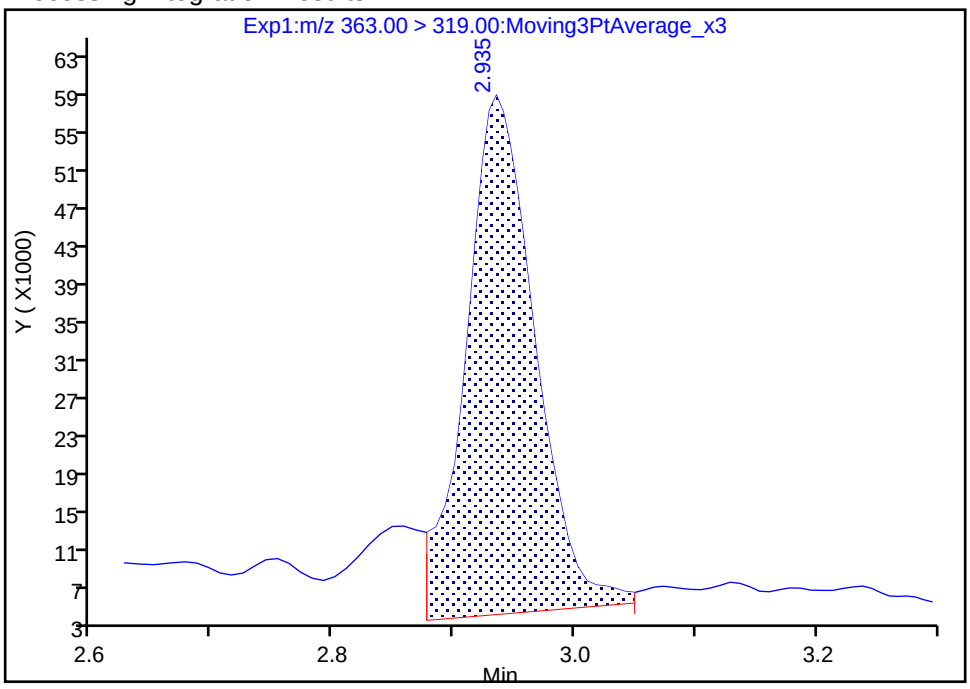
| Data File: | \\chromfs\Sacramento\ChromData\A9\20200911-103120.b\2020.09.11_A9_PFC_AA_039.d | | | | |
| Injection Date: | 11-Sep-2020 15:25:56 | Instrument ID: | A9 | | |
| Lims ID: | 460-217547-D-4-A | Lab Sample ID: | 320-217547-4 | | |
| Client ID: | MW-206 | | | | |
| Operator ID: | SACINSTRLCMS02 | ALS Bottle#: | 25 | Worklist Smp#: | 16 |
| Injection Vol: | 20.0 ul | Dil. Factor: | 1.0000 | | |
| Method: | PFAS_A9 | Limit Group: | LC PFC ICAL | | |
| Column: | | Detector | EXP1 | | |

## 18 Perfluoroheptanoic acid, CAS: 375-85-9

Signal: 1

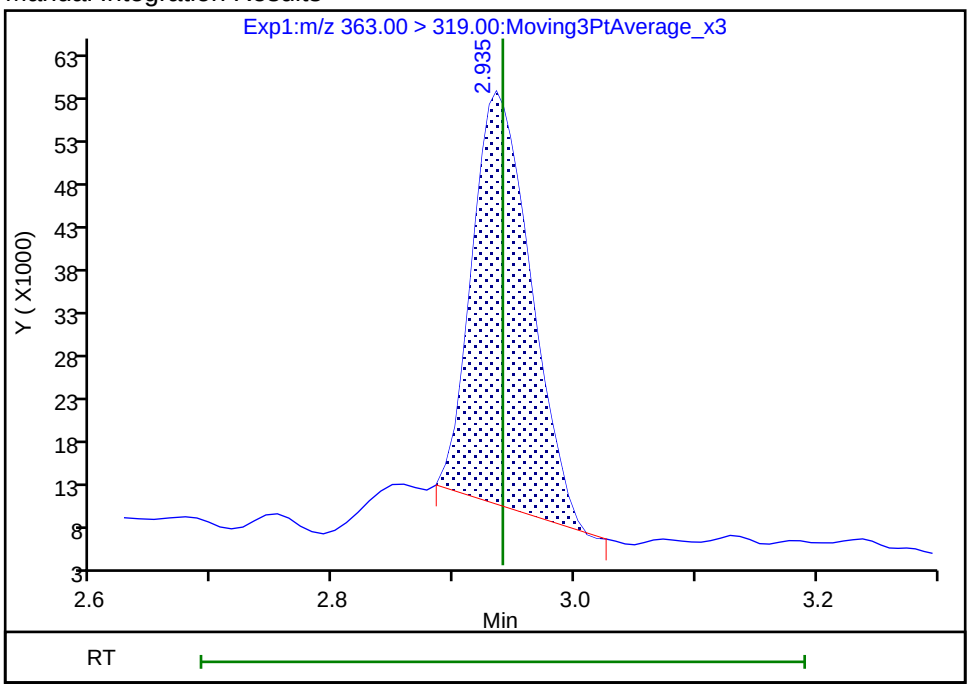
Processing Integration Results

RT: 2.93
Area: 217190
Amount: 0.094798
Amount Units: ng/ml




Manual Integration Results

RT: 2.93
Area: 160568
Amount: 0.070084
Amount Units: ng/ml




Reviewer: zibaa, 11-Sep-2020 17:20:10

Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

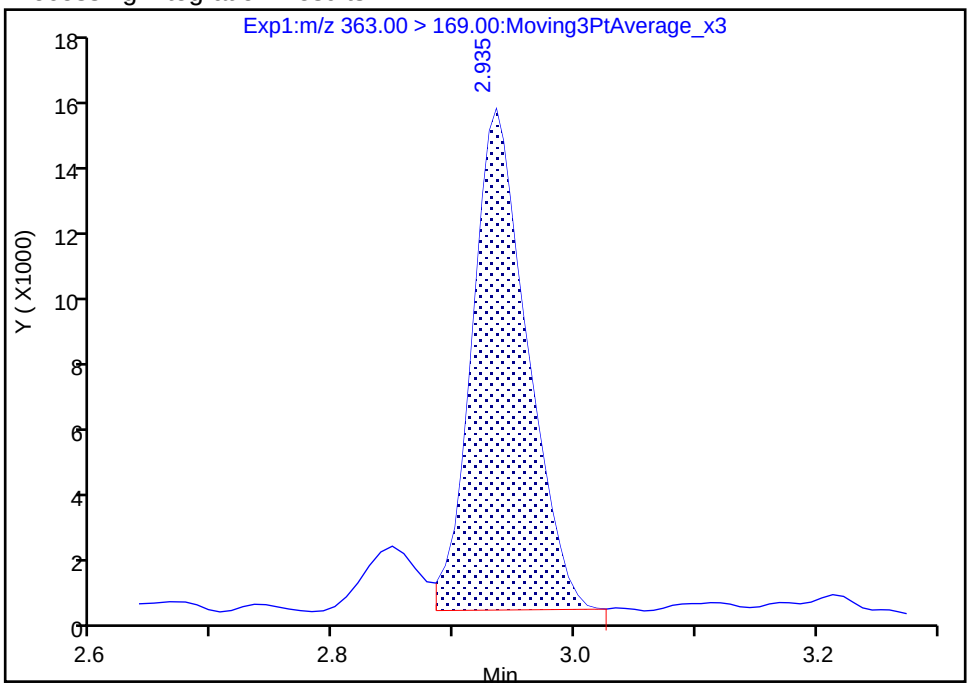
| | | | | | |
|---|---|---|---|---|---|
| Data File: | \\chromfs\Sacramento\ChromData\A9\20200911-103120.b\2020.09.11_A9_PFC_AA_039.d | | | | |
| Injection Date: | 11-Sep-2020 15:25:56 | Instrument ID: | A9 | | |
| Lims ID: | 460-217547-D-4-A | Lab Sample ID: | 320-217547-4 | | |
| Client ID: | MW-206 | | | | |
| Operator ID: | SACINSTRLCMS02 | ALS Bottle#: | 25 | Worklist Smp#: | 16 |
| Injection Vol: | 20.0 ul | Dil. Factor: | 1.0000 | | |
| Method: | PFAS_A9 | Limit Group: | LC PFC ICAL | | |
| Column: | | Detector | EXP1 | | |

## 18 Perfluoroheptanoic acid, CAS: 375-85-9

Signal: 2

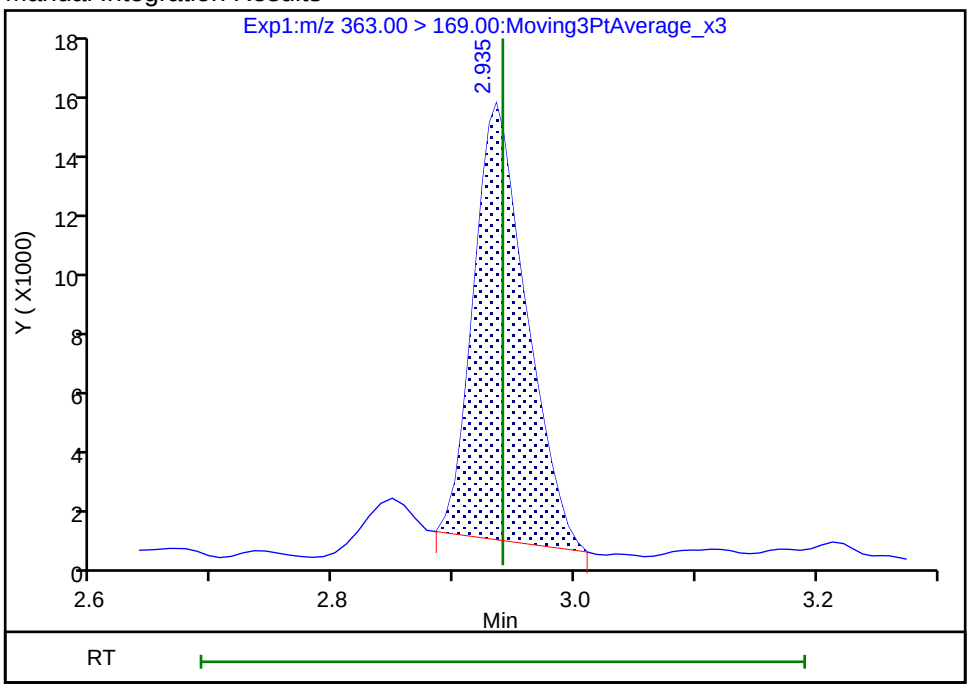
Processing Integration Results

RT: 2.93
Area: 47599
Amount: 0.094798
Amount Units: ng/ml




Manual Integration Results

RT: 2.93
Area: 44056
Amount: 0.070084
Amount Units: ng/ml




Reviewer: zibaa, 11-Sep-2020 17:20:15
Audit Action: Manually Integrated Audit Reason: Baseline

Eurofins TestAmerica, Sacramento

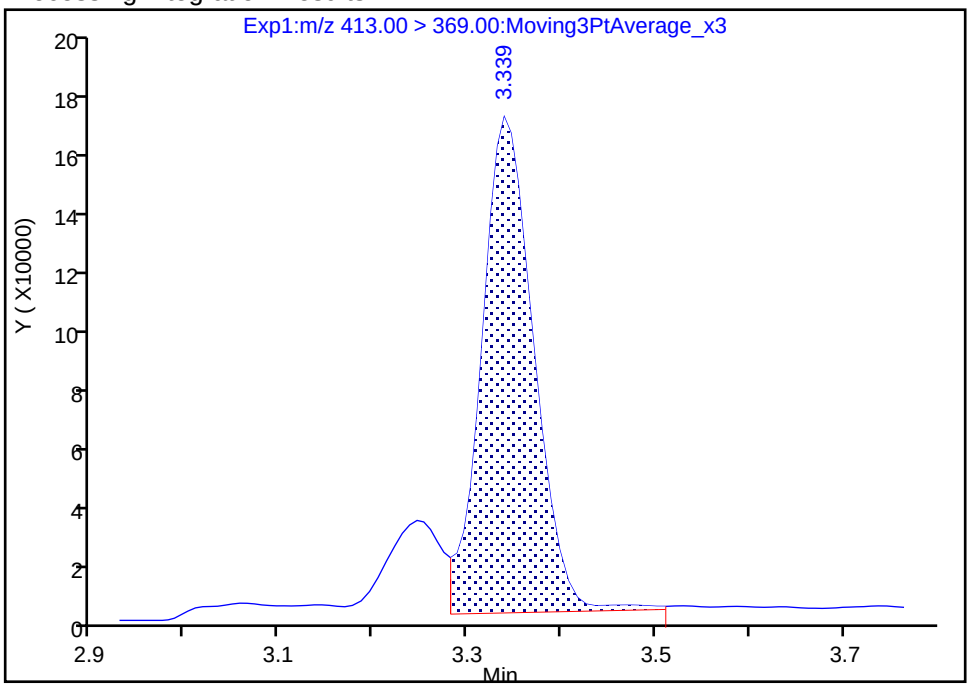
| | | | | | |
|---|---|---|---|---|---|
| Data File: | \\chromfs\Sacramento\ChromData\A9\20200911-103120.b\2020.09.11_A9_PFC_AA_039.d | | | | |
| Injection Date: | 11-Sep-2020 15:25:56 | Instrument ID: | A9 | | |
| Lims ID: | 460-217547-D-4-A | Lab Sample ID: | 320-217547-4 | | |
| Client ID: | MW-206 | | | | |
| Operator ID: | SACINSTRLCMS02 | ALS Bottle#: | 25 | Worklist Smp#: | 16 |
| Injection Vol: | 20.0 ul | Dil. Factor: | 1.0000 | | |
| Method: | PFAS_A9 | Limit Group: | LC PFC ICAL | | |
| Column: | | Detector | EXP1 | | |

## 24 Perfluorooctanoic acid, CAS: 335-67-1

Signal: 1

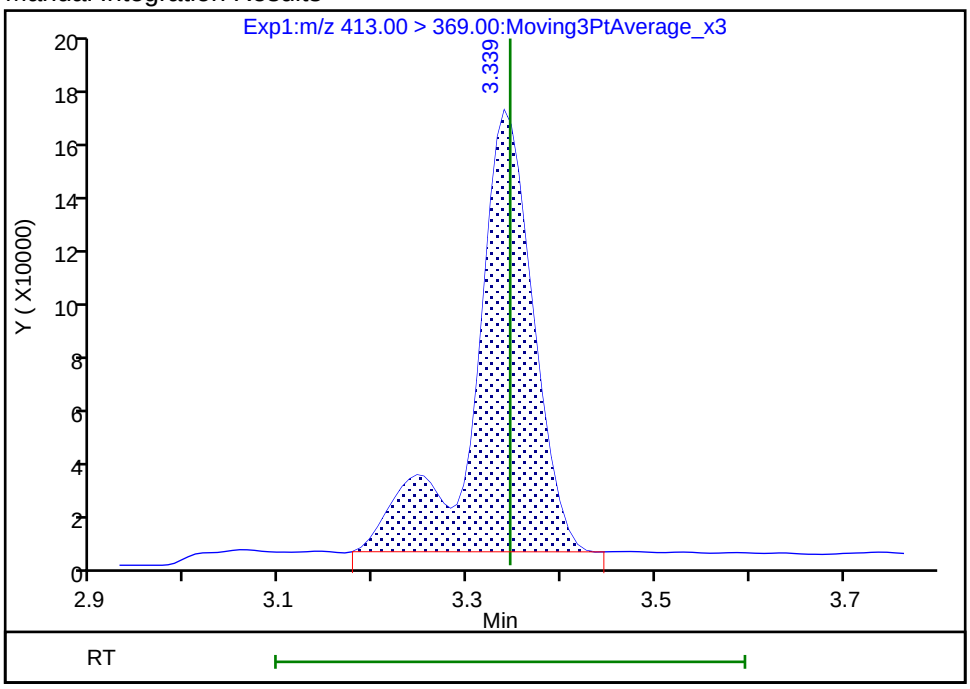
Processing Integration Results

RT: 3.34
Area: 638657
Amount: 0.305167
Amount Units: ng/ml




Manual Integration Results

RT: 3.34
Area: 716648
Amount: 0.342434
Amount Units: ng/ml




Reviewer: zibaa, 11-Sep-2020 17:21:09
Audit Action: Manually Integrated Audit Reason: Isomers

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

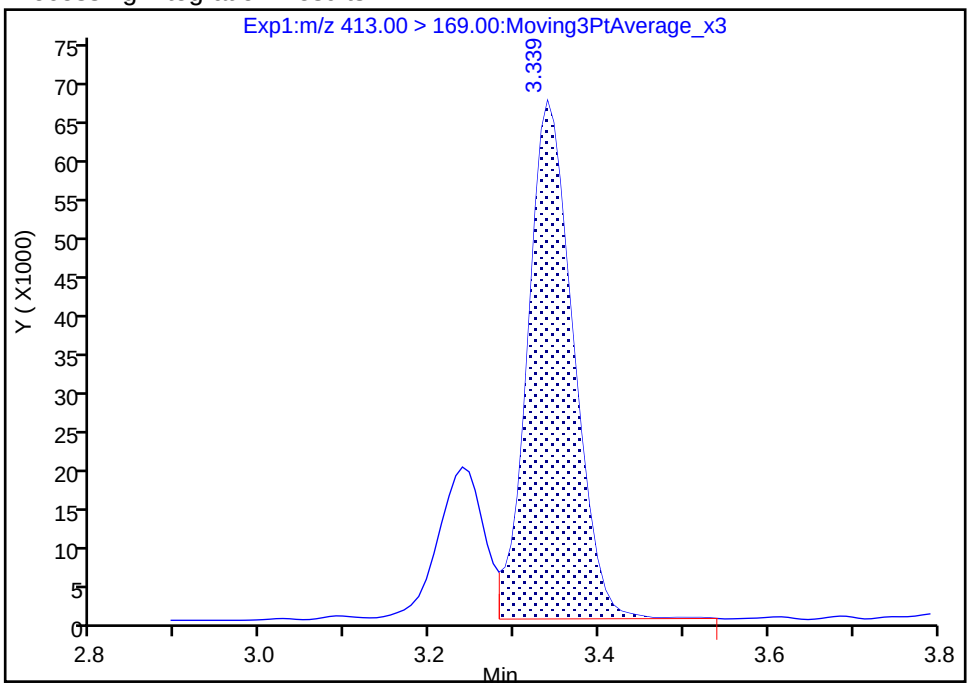
| | | | | | |
|---|---|---|---|---|---|
| Data File: | \\chromfs\Sacramento\ChromData\A9\20200911-103120.b\2020.09.11_A9_PFC_AA_039.d | | | | |
| Injection Date: | 11-Sep-2020 15:25:56 | Instrument ID: | A9 | | |
| Lims ID: | 460-217547-D-4-A | Lab Sample ID: | 320-217547-4 | | |
| Client ID: | MW-206 | | | | |
| Operator ID: | SACINSTRLCMS02 | ALS Bottle#: | 25 | Worklist Smp#: | 16 |
| Injection Vol: | 20.0 ul | Dil. Factor: | 1.0000 | | |
| Method: | PFAS_A9 | Limit Group: | LC PFC ICAL | | |
| Column: | | Detector | EXP1 | | |

## 24 Perfluorooctanoic acid, CAS: 335-67-1

Signal: 2

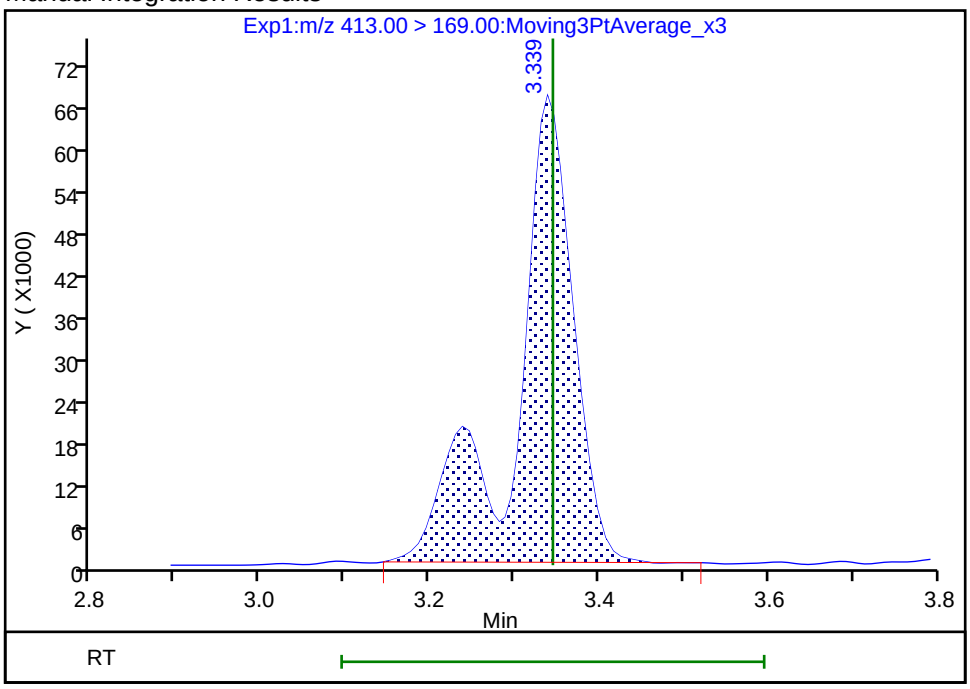
Processing Integration Results

RT: 3.34
Area: 251005
Amount: 0.305167
Amount Units: ng/ml




Manual Integration Results

RT: 3.34
Area: 320090
Amount: 0.342434
Amount Units: ng/ml




Reviewer: zibaa, 11-Sep-2020 17:21:13

Audit Action: Manually Integrated Audit Reason: Isomers

Eurofins TestAmerica, Sacramento

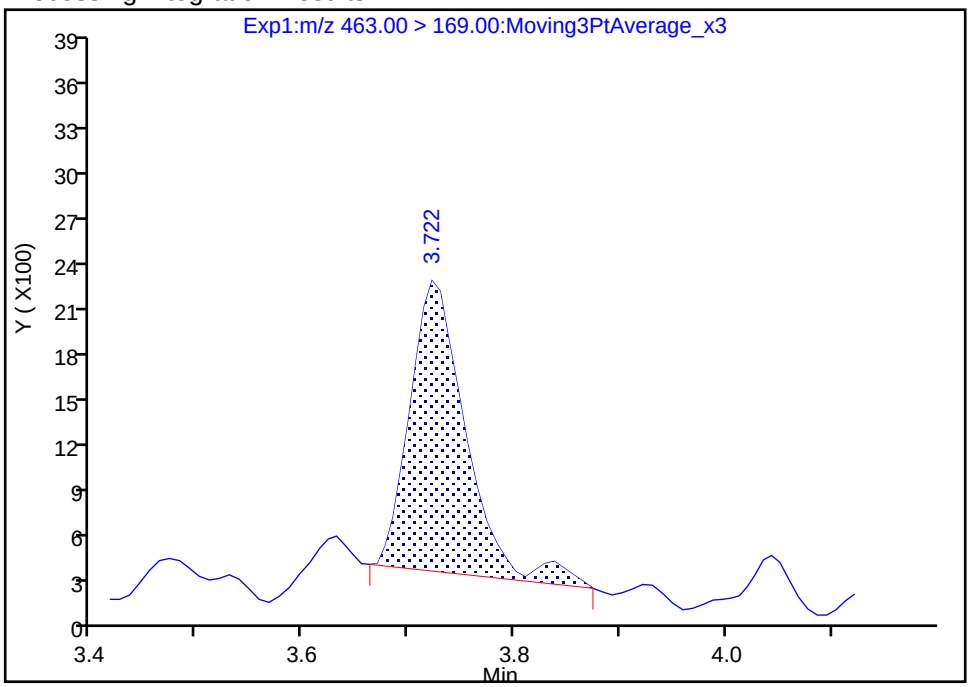
| | | | | | |
|---|---|---|---|---|---|
| Data File: | \\chromfs\Sacramento\ChromData\A9\20200911-103120.b\2020.09.11_A9_PFC_AA_039.d | | | | |
| Injection Date: | 11-Sep-2020 15:25:56 | Instrument ID: | A9 | | |
| Lims ID: | 460-217547-D-4-A | Lab Sample ID: | 320-217547-4 | | |
| Client ID: | MW-206 | | | | |
| Operator ID: | SACINSTRLCMS02 | ALS Bottle#: | 25 | Worklist Smp#: | 16 |
| Injection Vol: | 20.0 ul | Dil. Factor: | 1.0000 | | |
| Method: | PFAS_A9 | Limit Group: | LC PFC ICAL | | |
| Column: | | Detector | EXP1 | | |

## 30 Perfluorononanoic acid, CAS: 375-95-1

Signal: 2

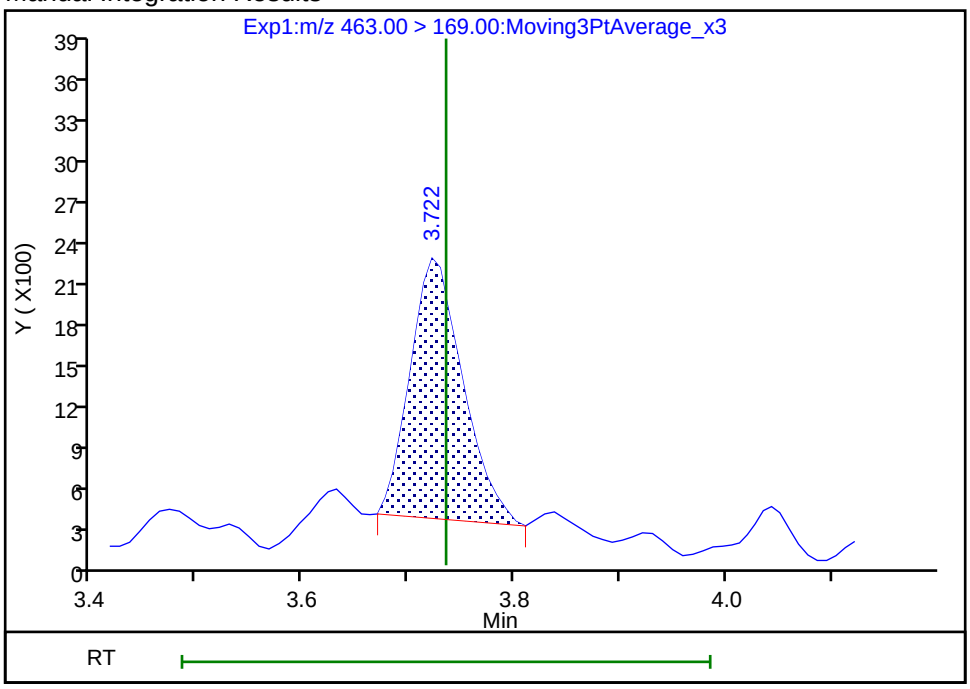
Processing Integration Results

RT: 3.72
Area: 7067
Amount: 0.021250
Amount Units: ng/ml




Manual Integration Results

RT: 3.72
Area: 6580
Amount: 0.021250
Amount Units: ng/ml




Reviewer: zibaa, 11-Sep-2020 17:21:47
Audit Action: Manually Integrated Audit Reason: Baseline

Eurofins TestAmerica, Sacramento

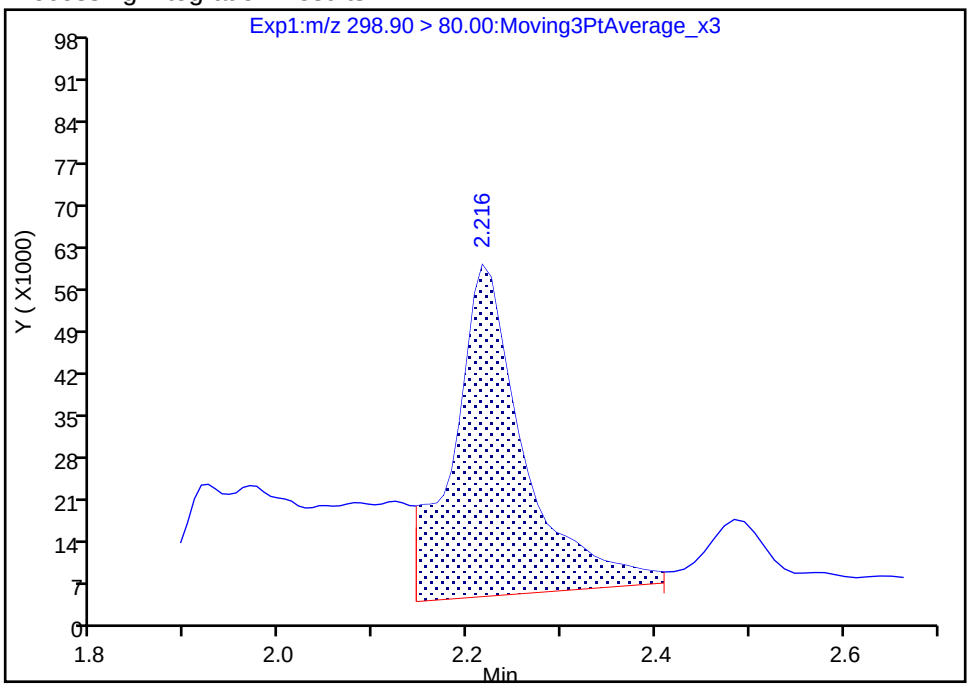
| | | | | | |
|---|---|---|---|---|---|
| Data File: | \\chromfs\Sacramento\ChromData\A9\20200911-103120.b\2020.09.11_A9_PFC_AA_039.d | | | | |
| Injection Date: | 11-Sep-2020 15:25:56 | Instrument ID: | A9 | | |
| Lims ID: | 460-217547-D-4-A | Lab Sample ID: | 320-217547-4 | | |
| Client ID: | MW-206 | | | | |
| Operator ID: | SACINSTRLCMS02 | ALS Bottle#: | 25 | Worklist Smp#: | 16 |
| Injection Vol: | 20.0 ul | Dil. Factor: | 1.0000 | | |
| Method: | PFAS_A9 | Limit Group: | LC PFC ICAL | | |
| Column: | | Detector | EXP1 | | |

## 5 Perfluorobutanesulfonic acid, CAS: 375-73-5

Signal: 1

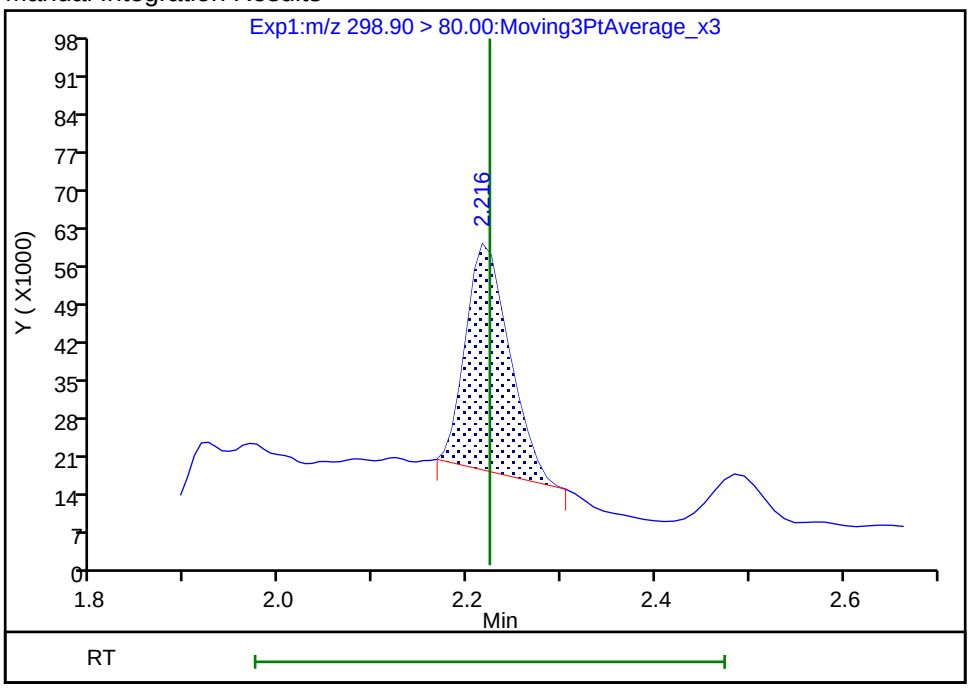
Processing Integration Results

RT: 2.22
Area: 288390
Amount: 0.063794
Amount Units: ng/ml




Manual Integration Results

RT: 2.22
Area: 135321
Amount: 0.029934
Amount Units: ng/ml




Reviewer: zibaa, 11-Sep-2020 17:18:57
Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

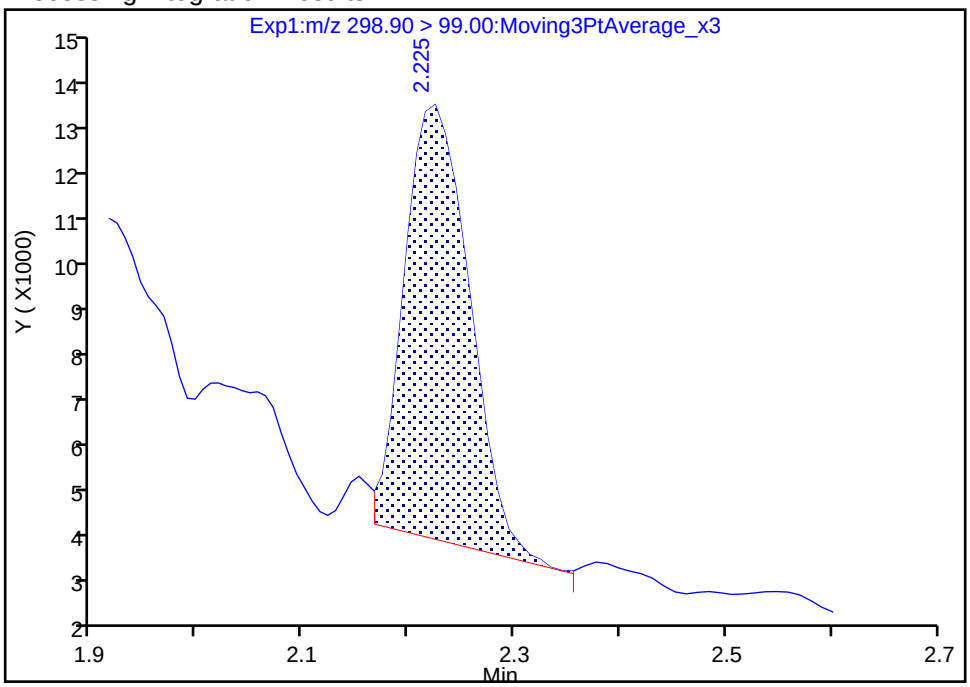
| | | | | | |
|---|---|---|---|---|---|
| Data File: | \\chromfs\Sacramento\ChromData\A9\20200911-103120.b\2020.09.11_A9_PFC_AA_039.d | | | | |
| Injection Date: | 11-Sep-2020 15:25:56 | Instrument ID: | A9 | | |
| Lims ID: | 460-217547-D-4-A | Lab Sample ID: | 320-217547-4 | | |
| Client ID: | MW-206 | | | | |
| Operator ID: | SACINSTRLCMS02 | ALS Bottle#: | 25 | Worklist Smp#: | 16 |
| Injection Vol: | 20.0 ul | Dil. Factor: | 1.0000 | | |
| Method: | PFAS_A9 | Limit Group: | LC PFC ICAL | | |
| Column: | | Detector | EXP1 | | |

## 5 Perfluorobutanesulfonic acid, CAS: 375-73-5

Signal: 2

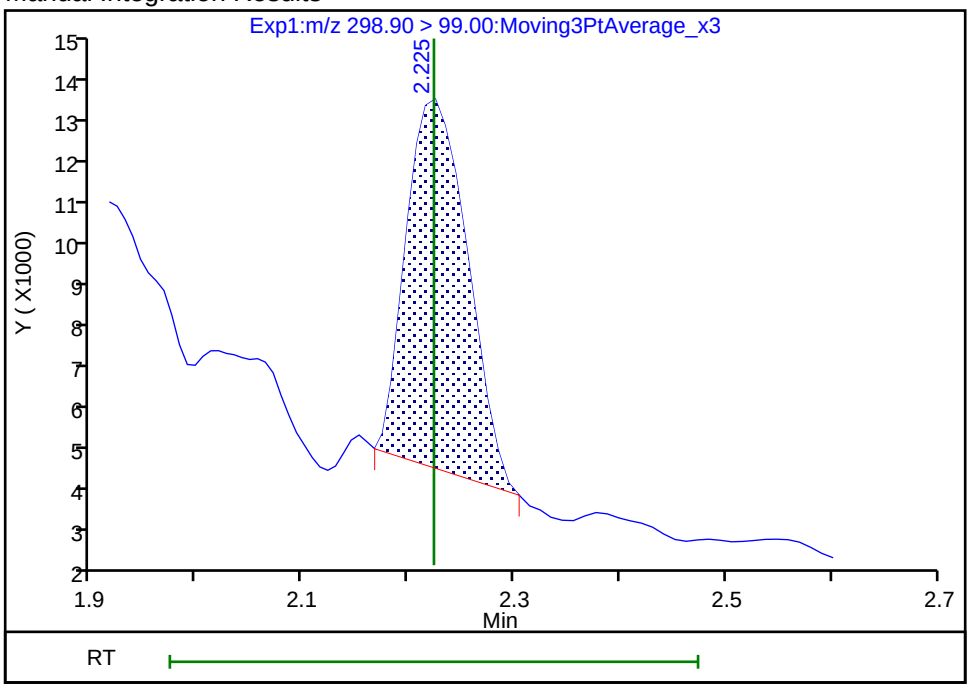
Processing Integration Results

RT: 2.22
Area: 38073
Amount: 0.063794
Amount Units: ng/ml




Manual Integration Results

RT: 2.22
Area: 33583
Amount: 0.029934
Amount Units: ng/ml




Reviewer: kurilyaki, 11-Sep-2020 18:26:30
Audit Action: Manually Integrated Audit Reason: Baseline

Eurofins TestAmerica, Sacramento

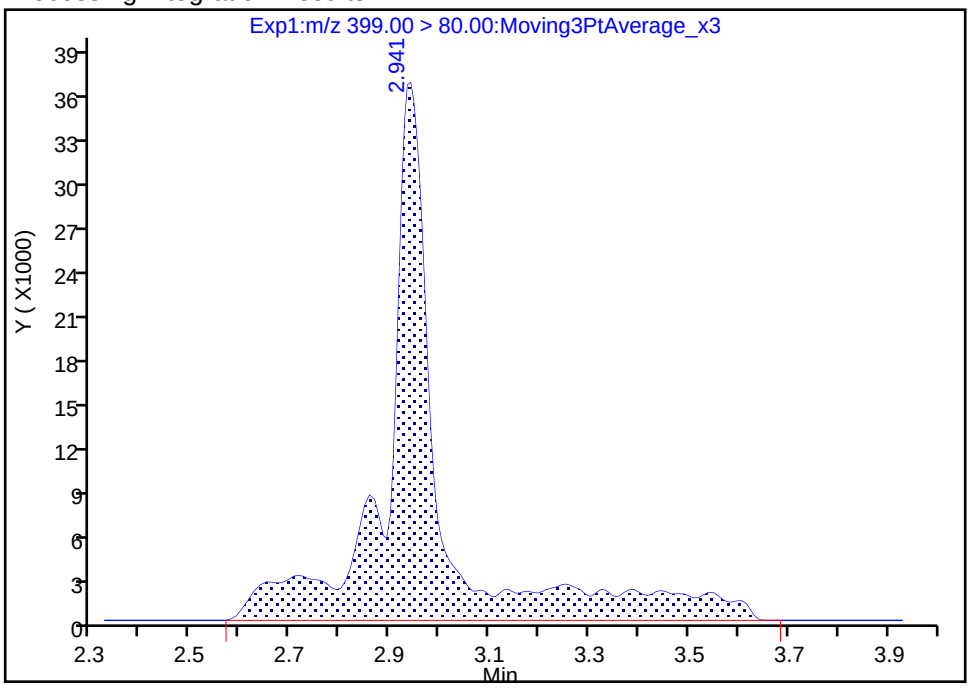
| | | | | | |
|---|---|---|---|---|---|
| Data File: | \\chromfs\Sacramento\ChromData\A9\20200911-103120.b\2020.09.11_A9_PFC_AA_039.d | | | | |
| Injection Date: | 11-Sep-2020 15:25:56 | Instrument ID: | A9 | | |
| Lims ID: | 460-217547-D-4-A | Lab Sample ID: | 320-217547-4 | | |
| Client ID: | MW-206 | | | | |
| Operator ID: | SACINSTRLCMS02 | ALS Bottle#: | 25 | Worklist Smp#: | 16 |
| Injection Vol: | 20.0 ul | Dil. Factor: | 1.0000 | | |
| Method: | PFAS_A9 | Limit Group: | LC PFC ICAL | | |
| Column: | | Detector | EXP1 | | |

## 16 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 1

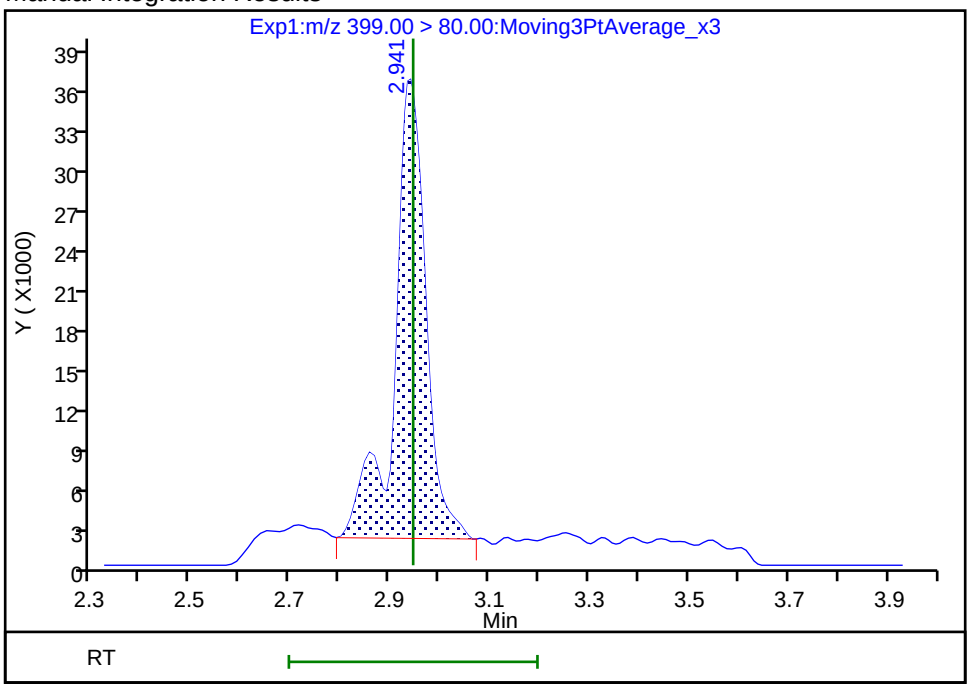
Processing Integration Results

RT: 2.94
Area: 270164
Amount: 0.099346
Amount Units: ng/ml




Manual Integration Results

RT: 2.94
Area: 148787
Amount: 0.054713
Amount Units: ng/ml




Reviewer: zibaa, 11-Sep-2020 17:19:33
Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

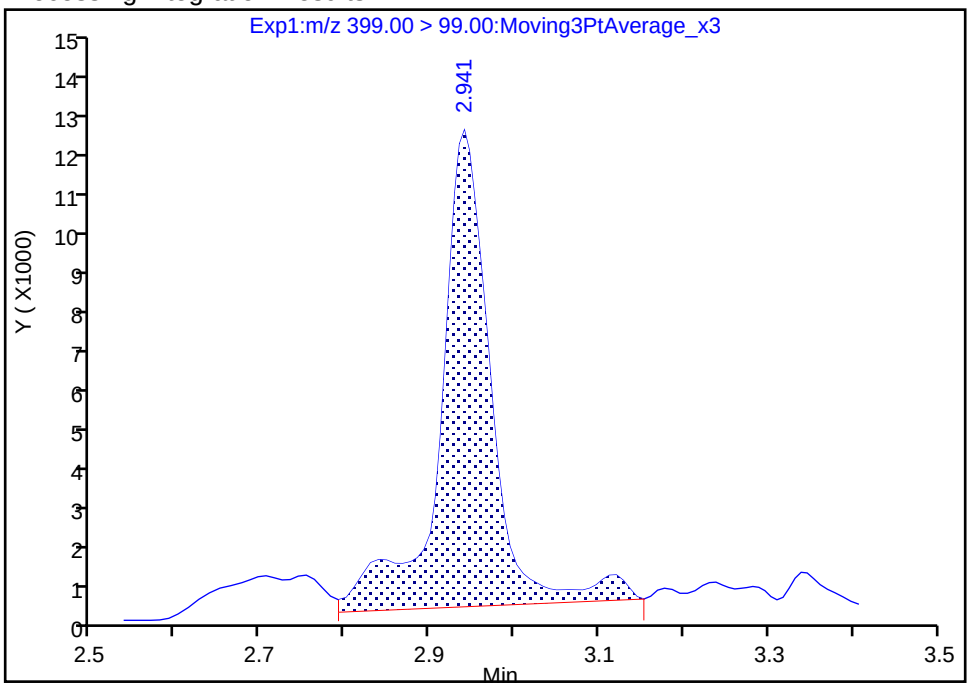
| | | | | | |
|---|---|---|---|---|---|
| Data File: | \\chromfs\Sacramento\ChromData\A9\20200911-103120.b\2020.09.11_A9_PFC_AA_039.d | | | | |
| Injection Date: | 11-Sep-2020 15:25:56 | Instrument ID: | A9 | | |
| Lims ID: | 460-217547-D-4-A | Lab Sample ID: | 320-217547-4 | | |
| Client ID: | MW-206 | | | | |
| Operator ID: | SACINSTRLCMS02 | ALS Bottle#: | 25 | Worklist Smp#: | 16 |
| Injection Vol: | 20.0 ul | Dil. Factor: | 1.0000 | | |
| Method: | PFAS_A9 | Limit Group: | LC PFC ICAL | | |
| Column: | | Detector | EXP1 | | |

## 16 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 2

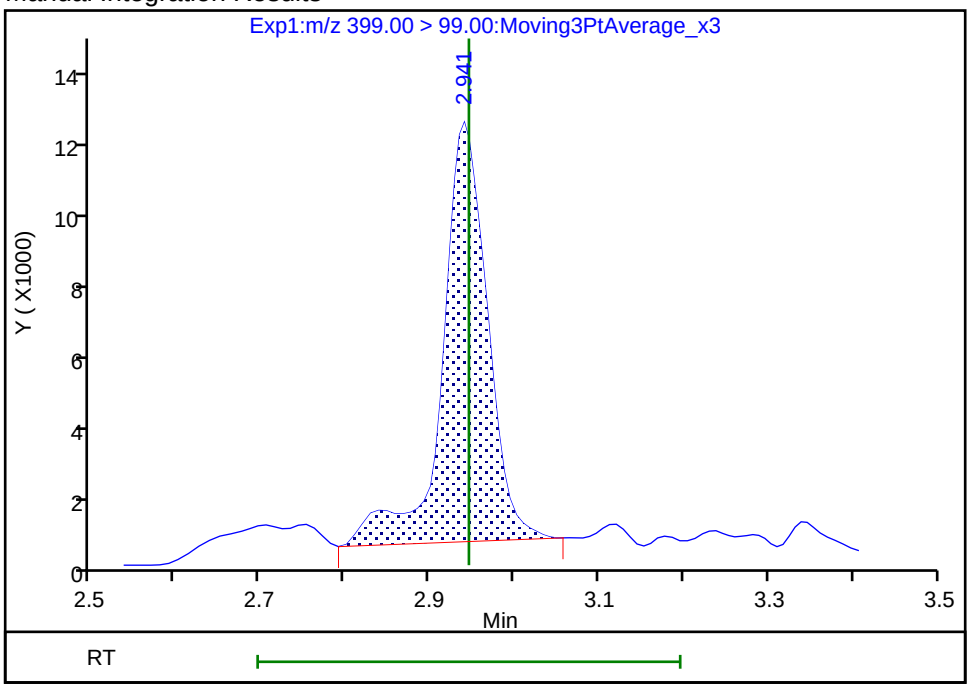
Processing Integration Results

RT: 2.94
Area: 48444
Amount: 0.099346
Amount Units: ng/ml




Manual Integration Results

RT: 2.94
Area: 41641
Amount: 0.054713
Amount Units: ng/ml




Reviewer: zibaa, 11-Sep-2020 17:19:51
Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

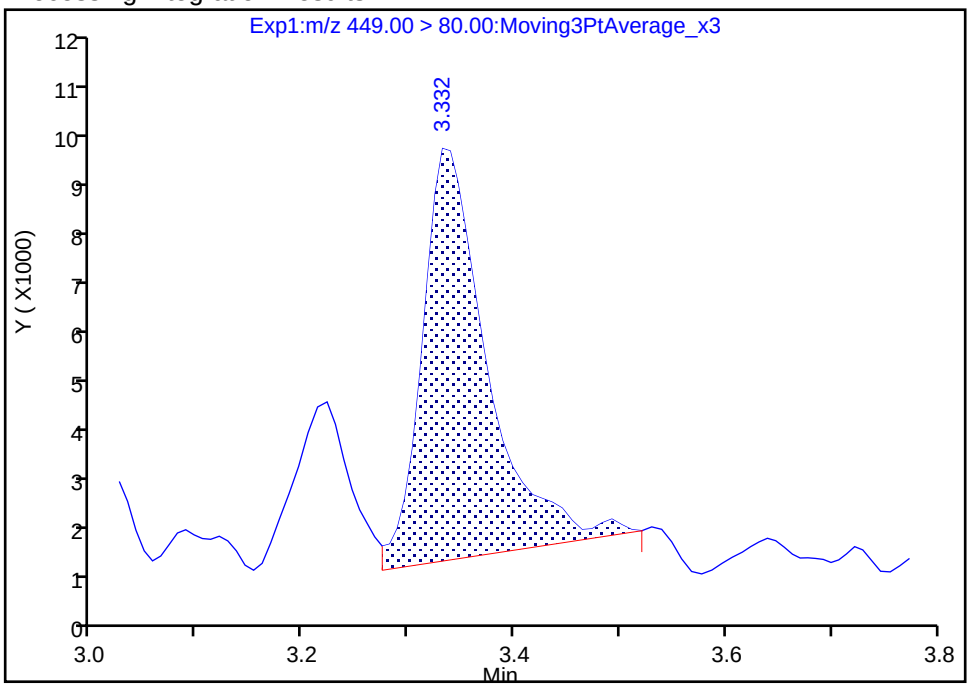
| | | | | | |
|---|---|---|---|---|---|
| Data File: | \\chromfs\Sacramento\ChromData\A9\20200911-103120.b\2020.09.11_A9_PFC_AA_039.d | | | | |
| Injection Date: | 11-Sep-2020 15:25:56 | Instrument ID: | A9 | | |
| Lims ID: | 460-217547-D-4-A | Lab Sample ID: | 320-217547-4 | | |
| Client ID: | MW-206 | | | | |
| Operator ID: | SACINSTRLCMS02 | ALS Bottle#: | 25 | Worklist Smp#: | 16 |
| Injection Vol: | 20.0 ul | Dil. Factor: | 1.0000 | | |
| Method: | PFAS_A9 | Limit Group: | LC PFC ICAL | | |
| Column: | | Detector | EXP1 | | |

## 23 Perfluoroheptanesulfonic acid, CAS: 375-92-8

Signal: 1

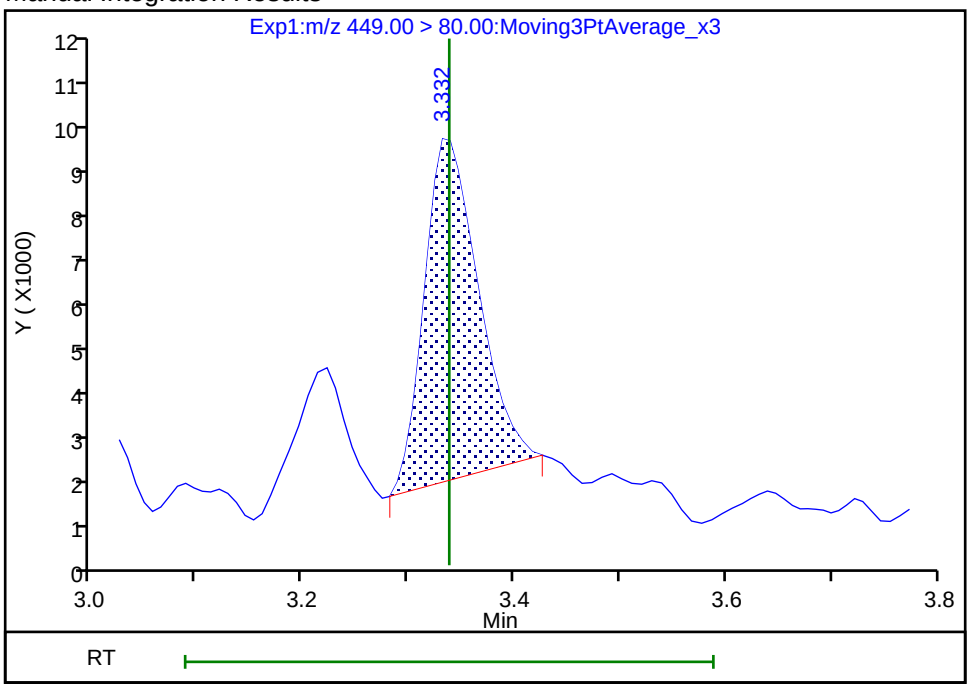
Processing Integration Results

RT: 3.33
Area: 33996
Amount: 0.015960
Amount Units: ng/ml




Manual Integration Results

RT: 3.33
Area: 25792
Amount: 0.012108
Amount Units: ng/ml




Reviewer: zibaa, 11-Sep-2020 17:20:50

Audit Action: Manually Integrated Audit Reason: Baseline

Eurofins TestAmerica, Sacramento

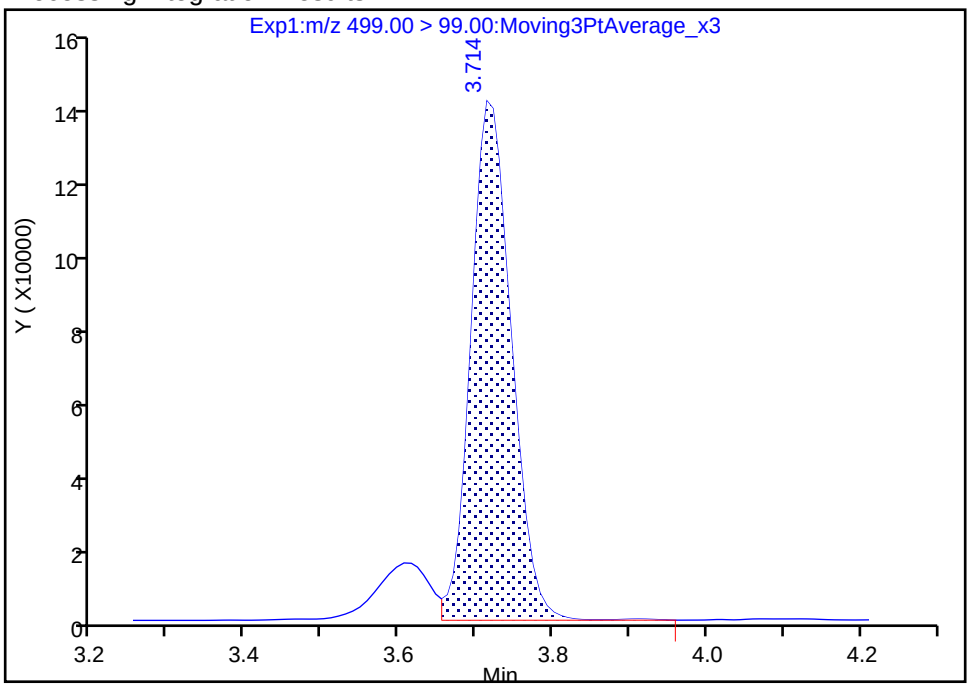
| | | | | | |
|---|---|---|---|---|---|
| Data File: | \\chromfs\Sacramento\ChromData\A9\20200911-103120.b\2020.09.11_A9_PFC_AA_039.d | | | | |
| Injection Date: | 11-Sep-2020 15:25:56 | Instrument ID: | A9 | | |
| Lims ID: | 460-217547-D-4-A | Lab Sample ID: | 320-217547-4 | | |
| Client ID: | MW-206 | | | | |
| Operator ID: | SACINSTRLCMS02 | ALS Bottle#: | 25 | Worklist Smp#: | 16 |
| Injection Vol: | 20.0 ul | Dil. Factor: | 1.0000 | | |
| Method: | PFAS_A9 | Limit Group: | LC PFC ICAL | | |
| Column: | | Detector | EXP1 | | |

## 28 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 2

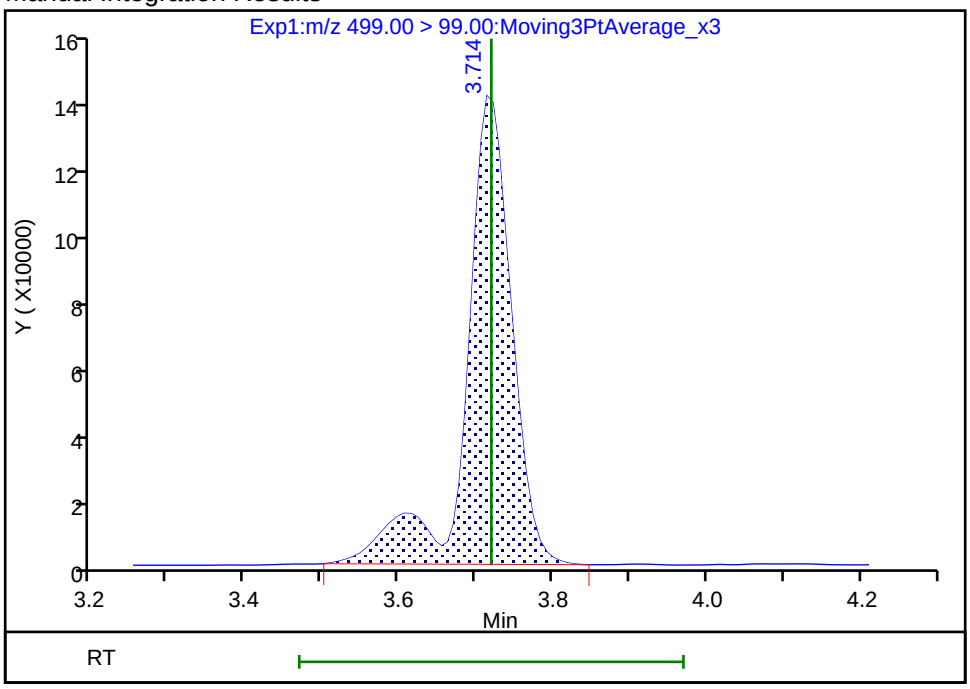
Processing Integration Results

RT: 3.71
Area: 492195
Amount: 1.099005
Amount Units: ng/ml




Manual Integration Results

RT: 3.71
Area: 556138
Amount: 1.099005
Amount Units: ng/ml




Reviewer: zibaa, 11-Sep-2020 17:21:25
Audit Action: Manually Integrated Audit Reason: Isomers

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

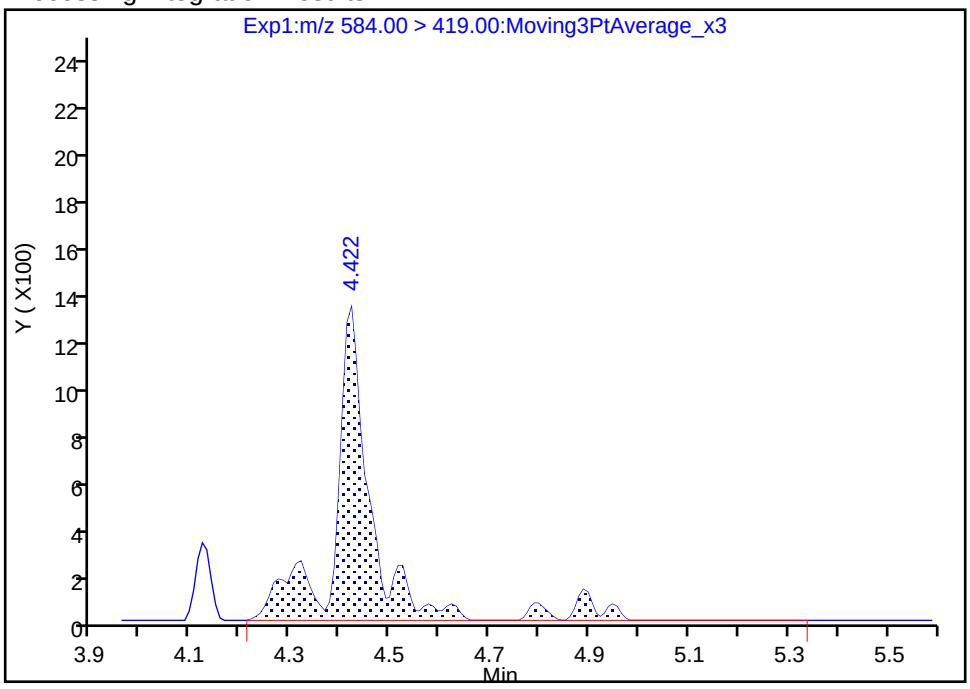
| | | | | | |
|---|---|---|---|---|---|
| Data File: | \\chromfs\Sacramento\ChromData\A9\20200911-103120.b\2020.09.11_A9_PFC_AA_039.d | | | | |
| Injection Date: | 11-Sep-2020 15:25:56 | Instrument ID: | A9 | | |
| Lims ID: | 460-217547-D-4-A | Lab Sample ID: | 320-217547-4 | | |
| Client ID: | MW-206 | | | | |
| Operator ID: | SACINSTRLCMS02 | ALS Bottle#: | 25 | Worklist Smp#: | 16 |
| Injection Vol: | 20.0 ul | Dil. Factor: | 1.0000 | | |
| Method: | PFAS_A9 | Limit Group: | LC PFC ICAL | | |
| Column: | | Detector | EXP1 | | |

## 44 N-ethylperfluorooctanesulfonamid, CAS: 2991-50-6

Signal: 1

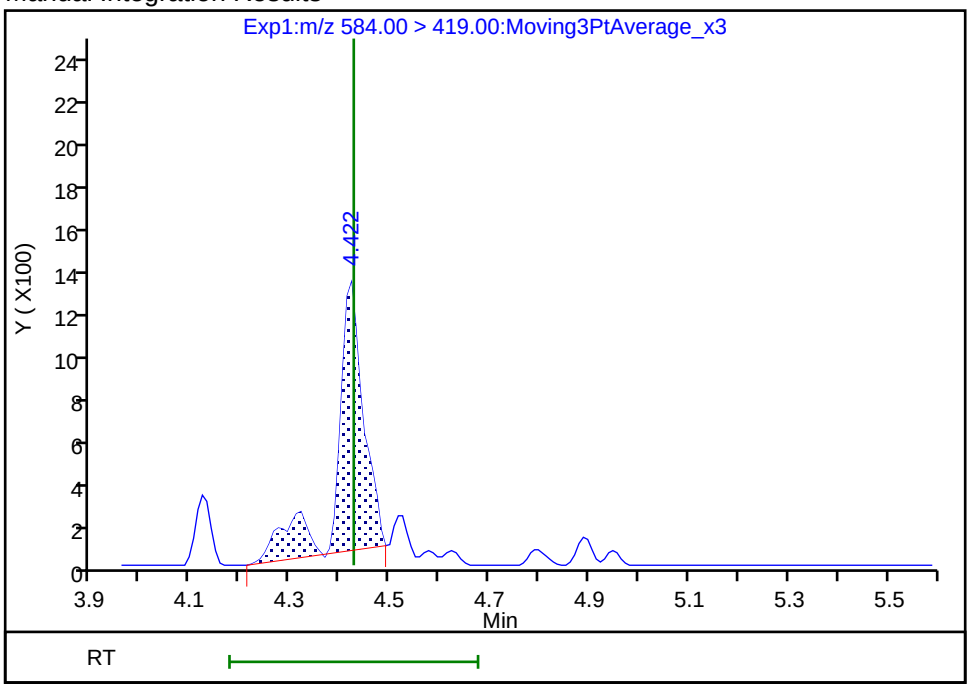
Processing Integration Results

RT: 4.42
Area: 6870
Amount: 0.013491
Amount Units: ng/ml




Manual Integration Results

RT: 4.42
Area: 4690
Amount: 0.009210
Amount Units: ng/ml




Reviewer: zibaa, 11-Sep-2020 17:22:35

Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

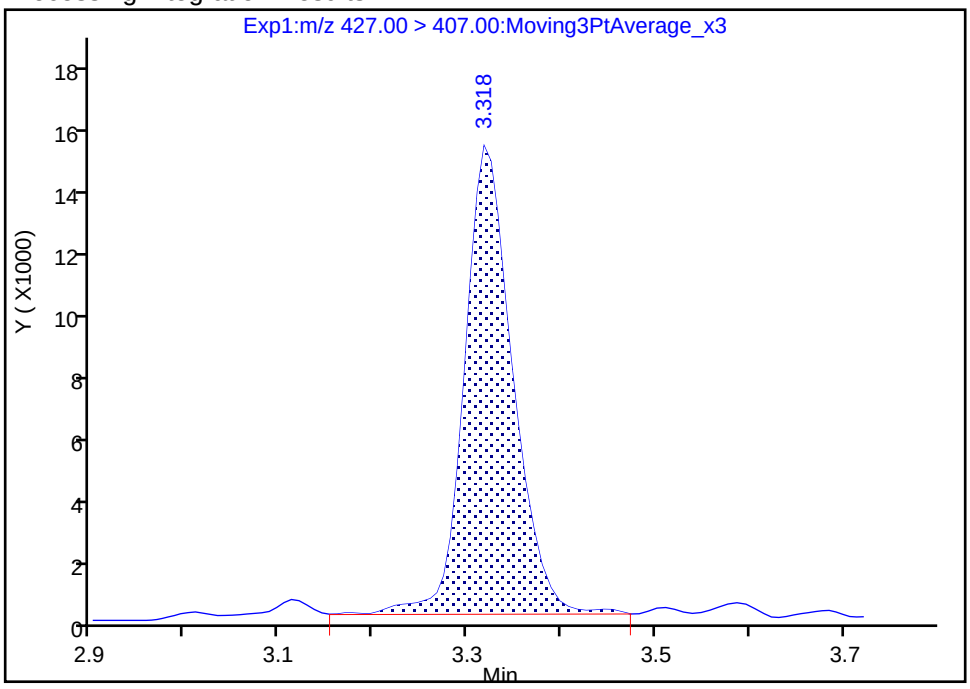
| | | | | | |
|---|---|---|---|---|---|
| Data File: | \\chromfs\Sacramento\ChromData\A9\20200911-103120.b\2020.09.11_A9_PFC_AA_039.d | | | | |
| Injection Date: | 11-Sep-2020 15:25:56 | Instrument ID: | A9 | | |
| Lims ID: | 460-217547-D-4-A | Lab Sample ID: | 320-217547-4 | | |
| Client ID: | MW-206 | | | | |
| Operator ID: | SACINSTRLCMS02 | ALS Bottle#: | 25 | Worklist Smp#: | 16 |
| Injection Vol: | 20.0 ul | Dil. Factor: | 1.0000 | | |
| Method: | PFAS_A9 | Limit Group: | LC PFC ICAL | | |
| Column: | | Detector | EXP1 | | |

## 22 1H,1H,2H,2H-perfluorooctanesulfo, CAS: 27619-97-2

Signal: 1

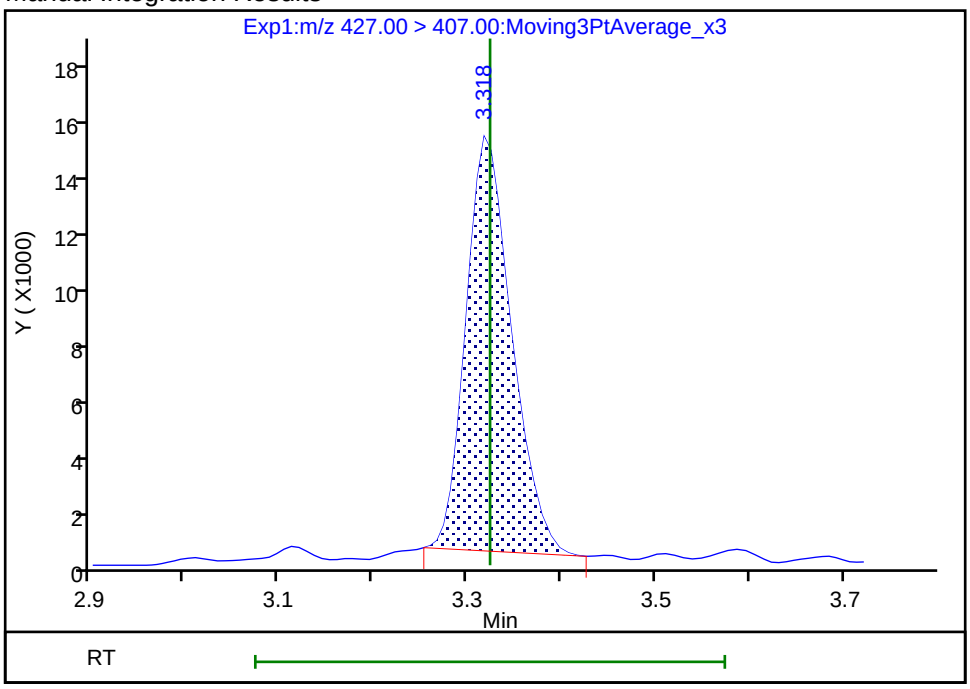
Processing Integration Results

RT: 3.32
Area: 54177
Amount: 0.068687
Amount Units: ng/ml




Manual Integration Results

RT: 3.32
Area: 50064
Amount: 0.063472
Amount Units: ng/ml




Reviewer: zibaa, 11-Sep-2020 17:20:30

Audit Action: Manually Integrated Audit Reason: Baseline

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento  Job No.: 460-217547-1

SDG No.:

Client Sample ID: MW-213  Lab Sample ID: 460-217547-5

Matrix: Water  Lab File ID: 2020.09.11_A18_PFC_A_019.d

Analysis Method: 537 (modified)  Date Collected: 09/02/2020 09:40

Extraction Method: 3535  Date Extracted: 09/09/2020 18:52

Sample wt/vol: 265.7(mL)  Date Analyzed: 09/11/2020 13:09

Con. Extract Vol.: 10.00(mL)  Dilution Factor: 1

Injection Volume: 20(uL)  GC Column: Gemini C18 3x50 ID: 3(mm)

% Moisture:  GPC Cleanup:(Y/N) N

Analysis Batch No.: 411377  Units: ng/L

| CAS NO. | COMPOUND NAME | RESULT | Q | RL | MDL |
|---|---|---|---|---|---|
| 375-22-4 | Perfluorobutanoic acid (PFBA) | 12.4 | B | 1.88 | 0.33 |
| 2706-90-3 | Perfluoropentanoic acid (PFPeA) | 7.81 | | 1.88 | 0.46 |
| 307-24-4 | Perfluorohexanoic acid (PFHxA) | 8.64 | | 1.88 | 0.55 |
| 375-85-9 | Perfluoroheptanoic acid (PFHpA) | 6.13 | | 1.88 | 0.24 |
| 335-67-1 | Perfluorooctanoic acid (PFOA) | 26.5 | | 1.88 | 0.80 |
| 375-95-1 | Perfluorononanoic acid (PFNA) | 2.51 | | 1.88 | 0.25 |
| 335-76-2 | Perfluorodecanoic acid (PFDA) | 1.61 | J | 1.88 | 0.29 |
| 2058-94-8 | Perfluoroundecanoic acid (PFUnA) | 1.04 | U | 1.88 | 1.04 |
| 307-55-1 | Perfluorododecanoic acid (PFDoA) | 0.52 | U | 1.88 | 0.52 |
| 72629-94-8 | Perfluorotridecanoic acid (PFTriA) | 1.22 | U | 1.88 | 1.22 |
| 376-06-7 | Perfluorotetradecanoic acid (PFTeA) | 0.27 | U | 1.88 | 0.27 |
| 375-73-5 | Perfluorobutanesulfonic acid (PFBS) | 2.27 | | 1.88 | 0.19 |
| 355-46-4 | Perfluorohexanesulfonic acid (PFHxS) | 4.94 | B | 1.88 | 0.16 |
| 375-92-8 | Perfluoroheptanesulfonic Acid (PFHpS) | 0.79 | J | 1.88 | 0.18 |
| 1763-23-1 | Perfluorooctanesulfonic acid (PFOS) | 60.7 | | 1.88 | 0.51 |
| 335-77-3 | Perfluorodecanesulfonic acid (PFDS) | 0.30 | U | 1.88 | 0.30 |
| 754-91-6 | Perfluorooctanesulfonamide (FOSA) | 1.76 | J B | 1.88 | 0.33 |
| 2355-31-9 | N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA) | 2.92 | U | 18.8 | 2.92 |
| 2991-50-6 | N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA) | 1.79 | U | 18.8 | 1.79 |
| 27619-97-2 | 6:2 FTS | 2.14 | J | 18.8 | 1.88 |
| 39108-34-4 | 8:2 FTS | 1.88 | U | 18.8 | 1.88 |

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento  Job No.: 460-217547-1

SDG No.:

Client Sample ID: MW-213  Lab Sample ID: 460-217547-5

Matrix: Water  Lab File ID: 2020.09.11_A18_PFC_A_019.d

Analysis Method: 537 (modified)  Date Collected: 09/02/2020 09:40

Extraction Method: 3535  Date Extracted: 09/09/2020 18:52

Sample wt/vol: 265.7(mL)  Date Analyzed: 09/11/2020 13:09

Con. Extract Vol.: 10.00(mL)  Dilution Factor: 1

Injection Volume: 20(uL)  GC Column: Gemini C18 3x50 ID: 3(mm)

% Moisture:  GPC Cleanup:(Y/N) N

Analysis Batch No.: 411377  Units: ng/L

| CAS NO. | ISOTOPE DILUTION | %REC | Q | LIMITS |
|---|---|---|---|---|
| STL00992 | 13C4 PFBA | 49 | | 25-150 |
| STL01893 | 13C5 PFPeA | 68 | | 25-150 |
| STL00993 | 13C2 PFHxA | 81 | | 25-150 |
| STL01892 | 13C4 PFHpA | 91 | | 25-150 |
| STL00990 | 13C4 PFOA | 91 | | 25-150 |
| STL00995 | 13C5 PFNA | 94 | | 25-150 |
| STL00996 | 13C2 PFDA | 100 | | 25-150 |
| STL00997 | 13C2 PFUnA | 89 | | 25-150 |
| STL00998 | 13C2 PFDoA | 72 | | 25-150 |
| STL02116 | 13C2 PFTeDA | 74 | | 25-150 |
| STL02337 | 13C3 PFBS | 88 | | 25-150 |
| STL00994 | 18O2 PFHxS | 92 | | 25-150 |
| STL00991 | 13C4 PFOS | 88 | | 25-150 |
| STL01056 | 13C8 FOSA | 72 | | 25-150 |
| STL02118 | d3-NMeFOSAA | 61 | | 25-150 |
| STL02117 | d5-NEtFOSAA | 71 | | 25-150 |
| STL02279 | M2-6:2 FTS | 157 | *5 | 25-150 |
| STL02280 | M2-8:2 FTS | 113 | | 25-150 |

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\A18\20200911-103101.b\2020.09.11_A18_PFC_A_019.d
Lims ID: 460-217547-E-5-A
Client ID: MW-213
Sample Type: Client
Inject. Date: 11-Sep-2020 13:09:17 ALS Bottle#: 10 Worklist Smp#: 5
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Sample Info: 460-217547-e-5-a
Misc. Info.: Plate: 1 Rack: 1
Operator ID: TAISACA18-PC\A-18 Instrument ID: A18

Method: \\chromfs\Sacramento\ChromData\A18\20200911-103101.b\PFAS_A18V2.m
Limit Group: LC PFC ICAL
Last Update: 14-Sep-2020 10:06:26 Calib Date: 25-Aug-2020 17:37:57
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\A18\20200825-102078.b\2020.08.25_A18_ICAL_A_017.d

Column 1 : Gemini C18 3um 3mm x 50 mm ( 3.00 mm) Det: EXP1
Process Host: CTX1038

First Level Reviewer: sanjumnair Date: 14-Sep-2020 10:06:26
Ratio Calibration: CCV Sample: \\chromfs\Sacramento\ChromData\A18\20200911-103101.b\2020.09.11_A18_PFC_A_015.d

| Signal | RT | EXP RT | DLT RT | REL RT | Response | Amount ng/ml | Ratio(Limits) | %Rec | S/N | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| D 1 13C4 PFBA | | | | | | | | | | |
| 217.00 > 172.00 | 2.565 | 2.566 | -0.001 | 0.626 | 9299589 | 1.22 | | 48.9 | 4934 | |
| 2 Perfluorobutanoic acid | | | | | | | | | | M |
| 212.90 > 169.00 | 2.565 | 2.566 | -0.001 | 1.000 | 1067902 | 0.3308 | | | 13.2 | M |
| D 4 13C5 PFPeA | | | | | | | | | | |
| 267.90 > 223.00 | 2.919 | 2.909 | 0.010 | 0.712 | 10058627 | 1.70 | | 68.0 | 1855 | |
| 5 Perfluoropentanoic acid | | | | | | | | | | M |
| 262.90 > 219.00 | 2.919 | 2.920 | -0.001 | 1.000 | 832729 | 0.2076 | | | 3.2 | M |
| D 9 13C3 PFBS | | | | | | | | | | |
| 301.90 > 80.00 | 2.950 | 2.951 | -0.001 | 0.720 | 9555598 | 2.06 | | 88.5 | 363 | |
| 6 Perfluorobutanesulfonic acid | | | | | | | | | | M |
| 298.90 > 80.00 | 2.950 | 2.951 | -0.001 | 1.000 | 250763 | 0.0604 | Target=2.37 | | 2.4 | M |
| 298.90 > 99.00 | 2.950 | 2.951 | -0.001 | 1.000 | 100991 | | 2.48(1.19-3.56) | | 4.1 | M |
| D 11 13C2 PFHxA | | | | | | | | | | |
| 315.00 > 270.00 | 3.288 | 3.290 | -0.002 | 0.802 | 11981717 | 2.03 | | 81.2 | 4434 | |
| 10 Perfluorohexanoic acid | | | | | | | | | | M |
| 313.00 > 269.00 | 3.288 | 3.290 | -0.002 | 1.000 | 1060602 | 0.2296 | Target=13.16 | | 8.9 | M |
| 313.00 > 119.00 | 3.288 | 3.290 | -0.002 | 1.000 | 83645 | | 12.68(6.58-19.74) | | 18.1 | |
| D 17 18O2 PFHxS | | | | | | | | | | |
| 403.00 > 84.00 | 3.701 | 3.702 | -0.001 | 0.903 | 5350588 | 2.18 | | 92.1 | 7284 | |
| D 18 13C4 PFHpA | | | | | | | | | | |
| 367.00 > 322.00 | 3.701 | 3.702 | -0.001 | 0.903 | 11521527 | 2.29 | | 91.4 | 5401 | |
| 16 Perfluoroheptanoic acid | | | | | | | | | | M |
| 363.00 > 319.00 | 3.701 | 3.702 | -0.001 | 1.000 | 761389 | 0.1630 | Target=3.69 | | 13.8 | M |
| 363.00 > 169.00 | 3.701 | 3.702 | -0.001 | 1.000 | 215814 | | 3.53(1.85-5.54) | | 43.8 | |
| 15 Perfluorohexanesulfonic acid | | | | | | | | | | M |
| 399.00 > 80.00 | 3.701 | 3.702 | -0.001 | 1.000 | 350602 | 0.1312 | Target=3.35 | | 17.3 | M |
| 399.00 > 99.00 | 3.701 | 3.702 | -0.001 | 1.000 | 93275 | | 3.76(1.67-5.02) | | 16.3 | M |

| Signal | RT | EXP RT | DLT RT | REL RT | Response | Amount ng/ml | Ratio(Limits) | %Rec | S/N | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| D 20 M2-6:2 FTS | | | | | | | | | | |
| 429.00 > 81.00 | 4.074 | 4.068 | 0.006 | 0.994 | 3514116 | 3.74 | | 157 | 715 | |
| 21 6:2 FTS | | | | | | | | | | |
| 427.00 > 407.00 | 4.074 | 4.068 | 0.006 | 1.000 | 193798 | 0.0570 | | | 230 | |
| 24 Perfluoroheptanesulfonic acid | | | | | | | | | | M |
| 449.00 > 80.00 | 4.082 | 4.084 | -0.002 | 0.916 | 34272 | 0.0211 | Target=4.35 | | 4.6 | M |
| 449.00 > 99.00 | 4.082 | 4.084 | -0.002 | 0.916 | 9737 | | 3.52(2.18-6.53) | | 3.4 | M |
| D 25 13C4 PFOA | | | | | | | | | | |
| 417.00 > 372.00 | 4.099 | 4.092 | 0.007 | 1.000 | 10952290 | 2.28 | | 91.2 | 7002 | |
| 22 Perfluorooctanoic acid | | | | | | | | | | M |
| 413.00 > 369.00 | 4.099 | 4.092 | 0.007 | 1.000 | 3148349 | 0.7043 | Target=2.91 | | 114 | M |
| 413.00 > 169.00 | 4.099 | 4.092 | 0.007 | 1.000 | 1265974 | | 2.49(1.45-4.36) | | 454 | M |
| * 23 13C2 PFOA | | | | | | | | | | |
| 415.00 > 370.00 | 4.099 | 4.092 | 0.007 | | 11995113 | 2.50 | | | 6807 | |
| D 27 13C4 PFOS | | | | | | | | | | |
| 503.00 > 80.00 | 4.454 | 4.454 | 0.0 | 1.087 | 3481249 | 2.09 | | 87.6 | 786 | |
| 29 Perfluorooctanesulfonic acid | | | | | | | | | | M |
| 499.00 > 80.00 | 4.454 | 4.454 | 0.0 | 1.000 | 2431074 | 1.61 | Target=4.72 | | 365 | M |
| 499.00 > 99.00 | 4.454 | 4.454 | 0.0 | 1.000 | 448988 | | 5.41(2.36-7.07) | | 189 | M |
| D 30 13C5 PFNA | | | | | | | | | | |
| 468.00 > 423.00 | 4.470 | 4.470 | 0.0 | 1.091 | 9121675 | 2.36 | | 94.3 | 6378 | |
| 31 Perfluorononanoic acid | | | | | | | | | | |
| 463.00 > 419.00 | 4.478 | 4.478 | 0.0 | 1.002 | 233283 | 0.0667 | Target=8.08 | | 19.0 | |
| 463.00 > 169.00 | 4.478 | 4.478 | 0.0 | 1.002 | 28834 | | 8.09(4.04-12.12) | | 30.5 | |
| D 33 13C8 FOSA | | | | | | | | | | |
| 506.00 > 78.00 | 4.794 | 4.786 | 0.008 | 1.170 | 4804130 | 1.79 | | 71.6 | 4910 | |
| 34 Perfluorooctanesulfonamide | | | | | | | | | | |
| 498.00 > 78.00 | 4.794 | 4.786 | 0.008 | 1.000 | 83843 | 0.0469 | | | 10.5 | |
| D 39 13C2 PFDA | | | | | | | | | | |
| 515.00 > 470.00 | 4.829 | 4.828 | 0.001 | 1.178 | 9372588 | 2.50 | | 99.8 | 9516 | |
| D 38 M2-8:2 FTS | | | | | | | | | | |
| 529.00 > 81.00 | 4.829 | 4.828 | 0.001 | 1.178 | 3677623 | 2.72 | | 113 | 1325 | |
| 37 Perfluorodecanoic acid | | | | | | | | | | M |
| 513.00 > 469.00 | 4.829 | 4.828 | 0.001 | 1.000 | 154449 | 0.0427 | Target=10.81 | | 23.1 | M |
| 513.00 > 169.00 | 4.820 | 4.828 | -0.008 | 0.998 | 15563 | | 9.92(5.40-16.21) | | 22.0 | |
| 36 8:2 FTS | | | | | | | | | | |
| 527.00 > 507.00 | 4.837 | 4.828 | 0.009 | 1.002 | 4904 | 0.001799 | | | 40.6 | |
| D 40 d3-NMeFOSAA | | | | | | | | | | |
| 573.00 > 419.00 | 4.989 | 5.000 | -0.011 | 1.217 | 3820963 | 1.52 | | 60.6 | 2689 | |
| 41 NMeFOSAA | | | | | | | | | | |
| 570.00 > 419.00 | 5.000 | 5.000 | 0.0 | 1.002 | 26177 | 0.0231 | | | 15.1 | |
| D 43 13C2 PFUnA | | | | | | | | | | |
| 565.00 > 520.00 | 5.148 | 5.157 | -0.009 | 1.256 | 8298350 | 2.23 | | 89.2 | 9028 | |
| D 44 d5-NEtFOSAA | | | | | | | | | | |
| 589.00 > 419.00 | 5.157 | 5.157 | 0.0 | 1.258 | 4711431 | 1.77 | | 70.7 | 3027 | |
| 46 NEtFOSA | | | | | | | | | | |
| 584.00 > 419.00 | 5.157 | 5.166 | -0.009 | 1.000 | 56968 | 0.0447 | | | 99.0 | |

| Signal | RT | EXP RT | DLT RT | REL RT | Response | Amount ng/ml | Ratio(Limits) | %Rec | S/N | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| D 56 13C2 PFDoA | | | | | | | | | | |
| 615.00 > 570.00 | 5.437 | 5.448 | -0.011 | 1.327 | 6586677 | 1.79 | | 71.8 | 6098 | |
| D 61 13C2 PFTeDA | | | | | | | | | | |
| 715.00 > 670.00 | 5.948 | 5.959 | -0.011 | 1.451 | 5586478 | 1.84 | | 73.8 | 6847 | |

## QC Flag Legend

Processing Flags

Review Flags

M - Manually Integrated

Report Date: 14-Sep-2020 10:06:26 Chrom Revision: 2.3 11-Sep-2020 20:57:08

Eurofins TestAmerica, Sacramento

Data File: \\chromfs\Sacramento\ChromData\A18\20200911-103101.b\2020.09.11_A18_PFC_A_019.d

Injection Date: 11-Sep-2020 13:09:17 Instrument ID: A18

Lims ID: 460-217547-E-5-A Lab Sample ID: 320-217547-5

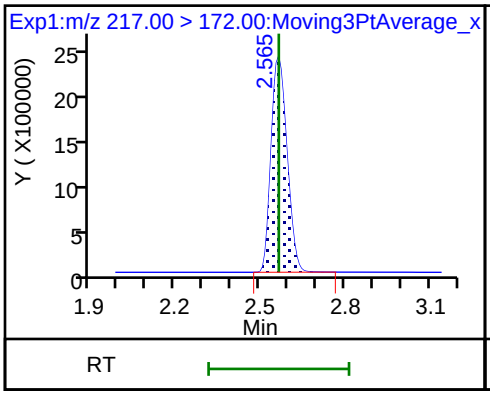
Client ID: MW-213

Operator ID: TAISACA18-PC\A-18 ALS Bottle#: 10 Worklist Smp#: 5

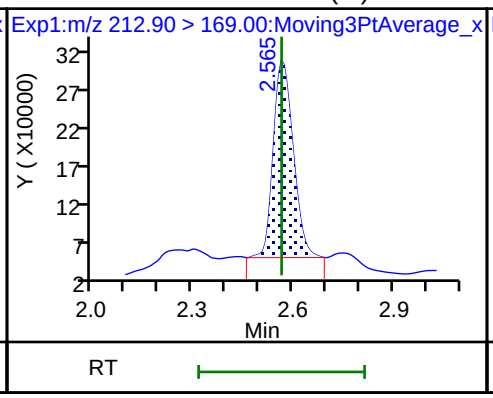
Injection Vol: 20.0 ul Dil. Factor: 1.0000

Method: PFAS_A18V2 Limit Group: LC PFC ICAL

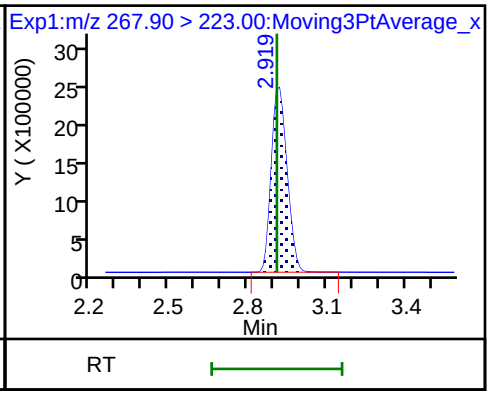
D 1 13C4 PFBA



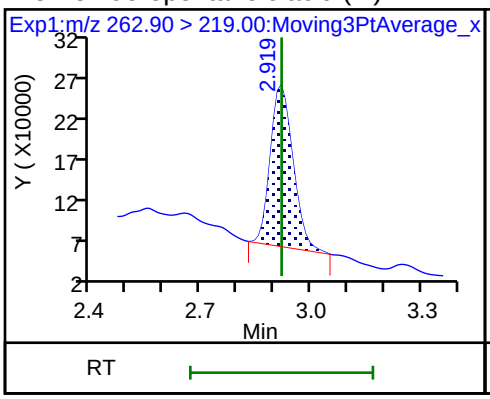

2 Perfluorobutanoic acid (M)



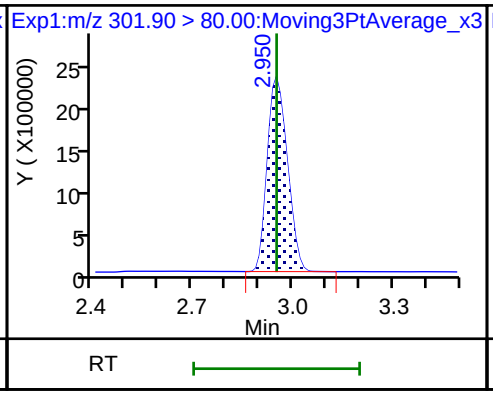

D 4 13C5 PFPeA



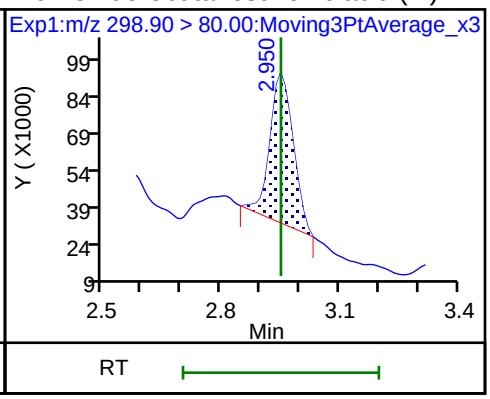

5 Perfluoropentanoic acid (M)



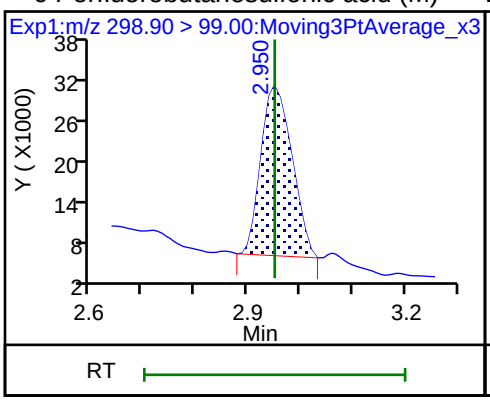

D 9 13C3 PFBS



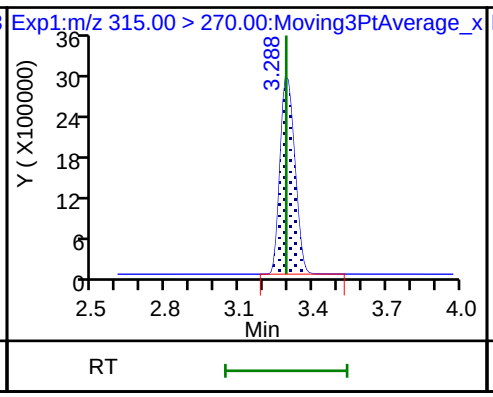

6 Perfluorobutanesulfonic acid (M)



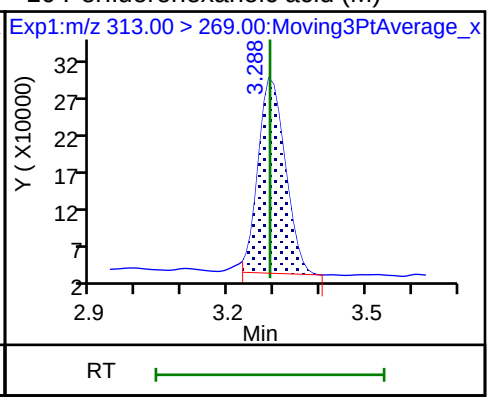

6 Perfluorobutanesulfonic acid (M)



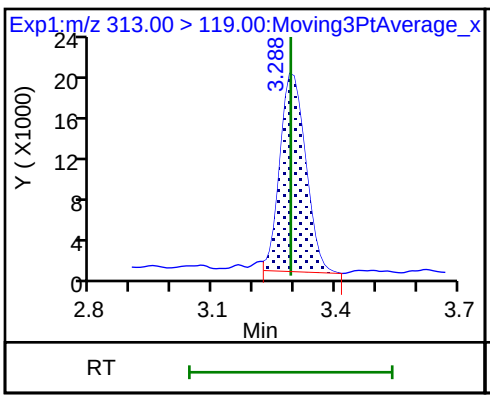

D 11 13C2 PFHxA



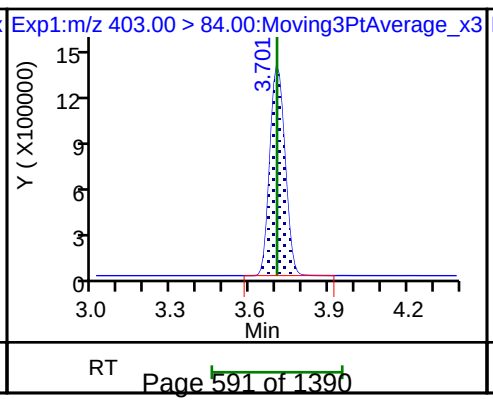

10 Perfluorohexanoic acid (M)



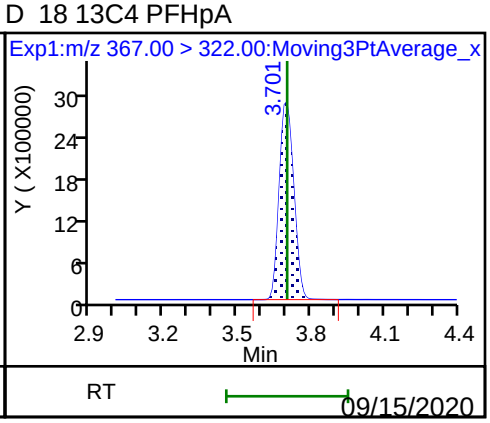

10 Perfluorohexanoic acid



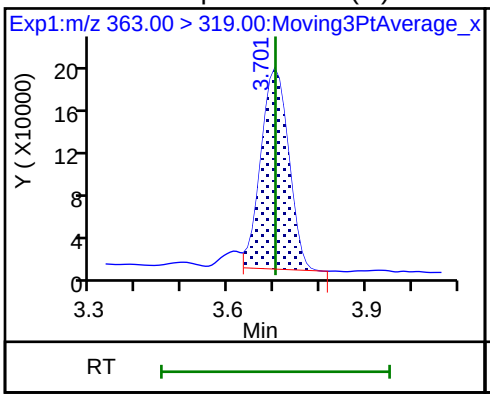

D 17 18O2 PFHxS



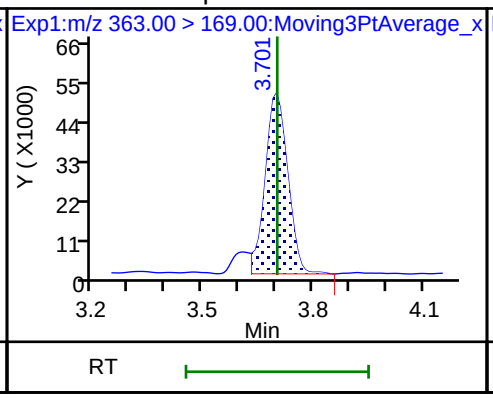

D 18 13C4 PFHpA



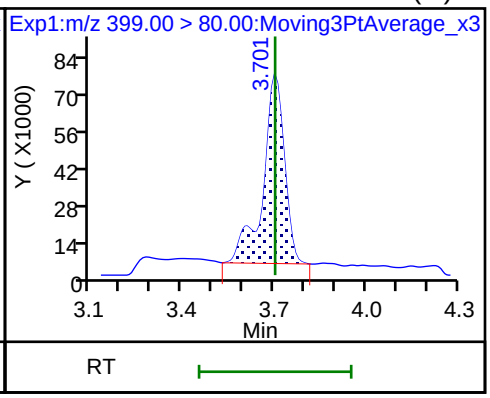
16 Perfluoroheptanoic acid (M)



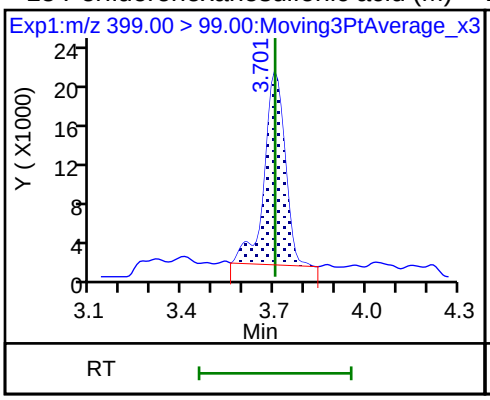

16 Perfluoroheptanoic acid



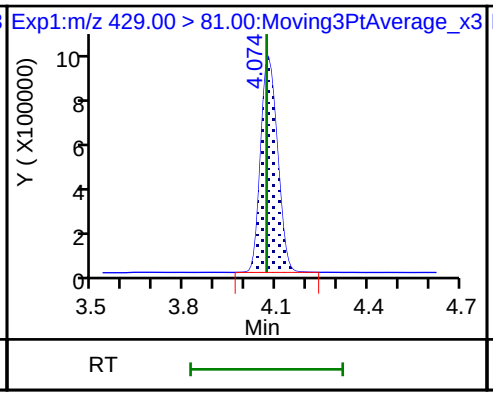

15 Perfluorohexanesulfonic acid (M)



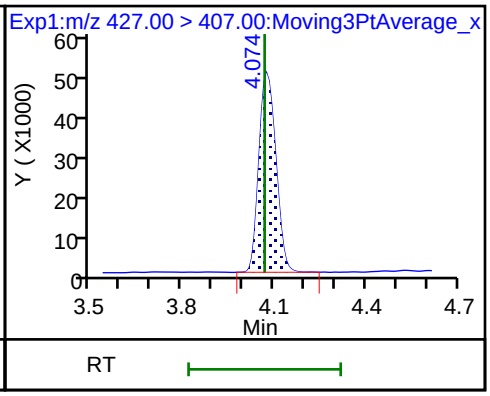

15 Perfluorohexanesulfonic acid (M)



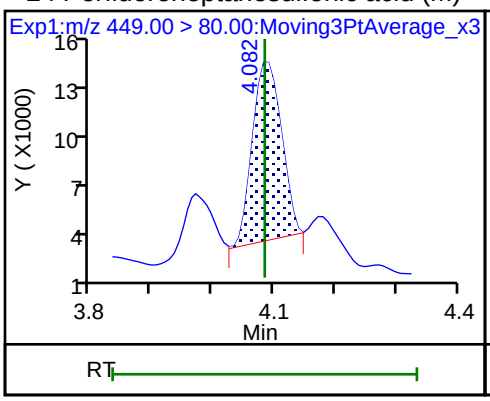

D 20 M2-6:2 FTS



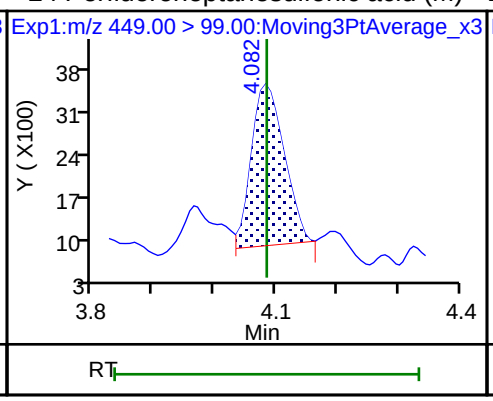

21 6:2 FTS



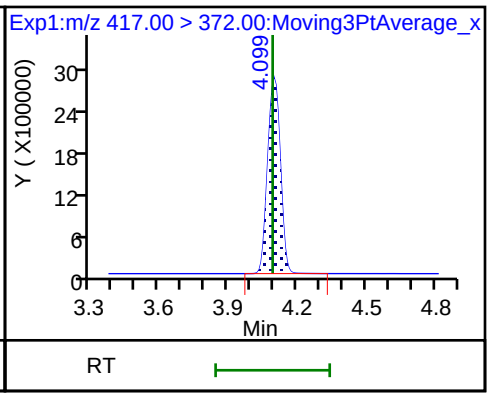

24 Perfluoroheptanesulfonic acid (M)



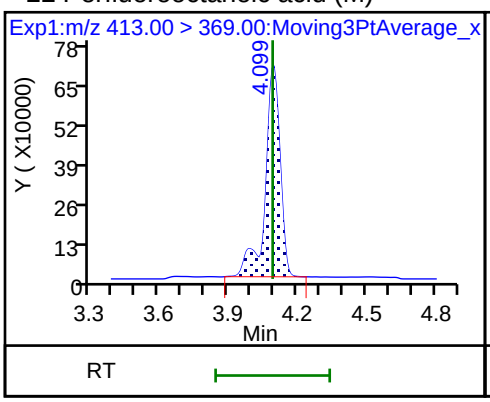

24 Perfluoroheptanesulfonic acid (M)



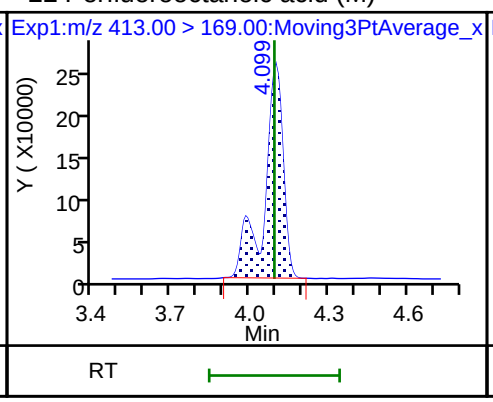

D 25 13C4 PFOA



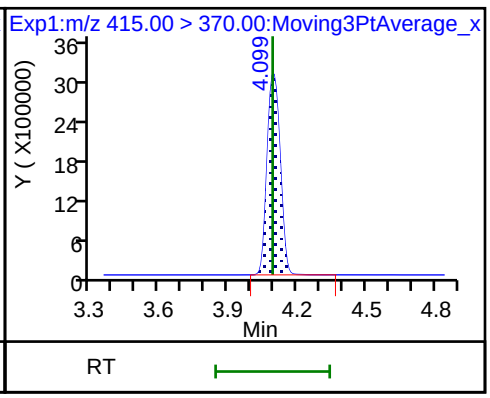

22 Perfluorooctanoic acid (M)



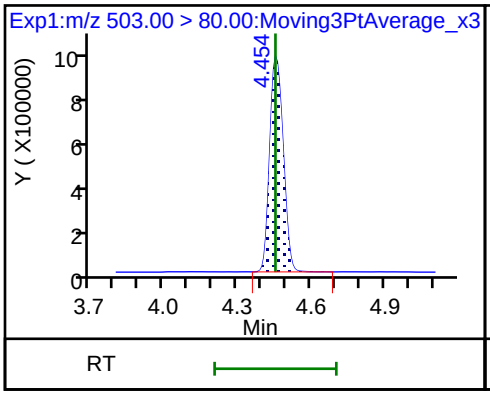

22 Perfluorooctanoic acid (M)



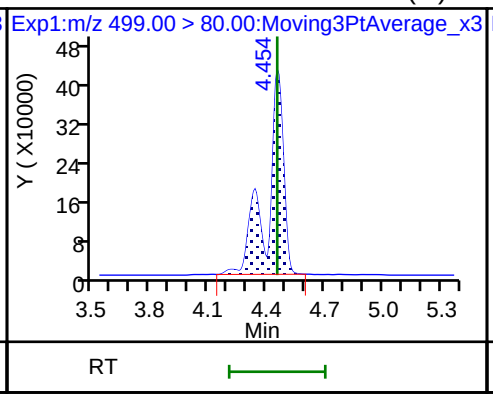

* 23 13C2 PFOA



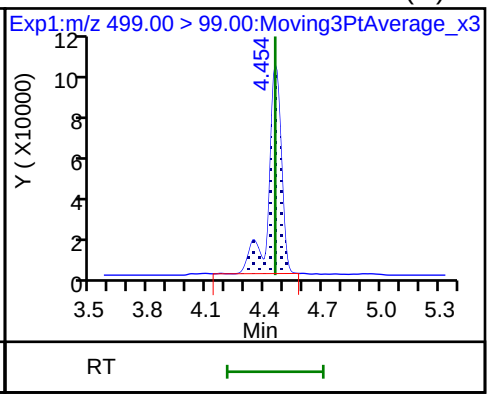
D 27 13C4 PFOS



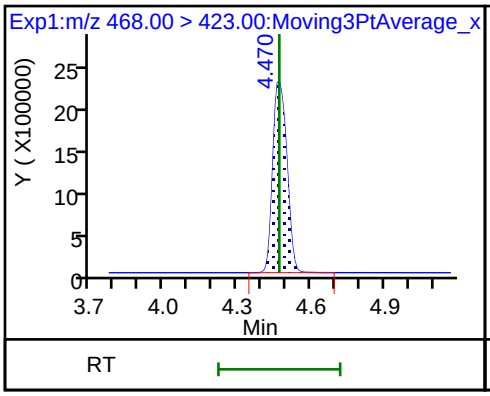

29 Perfluorooctanesulfonic acid (M)



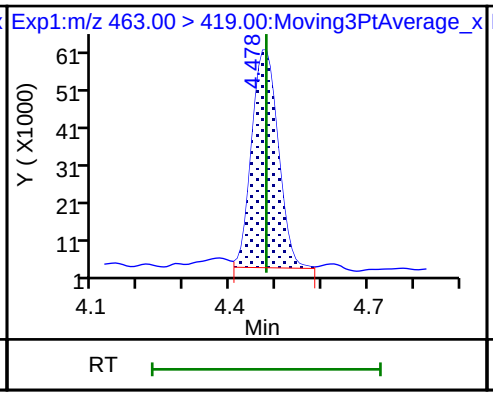

29 Perfluorooctanesulfonic acid (M)



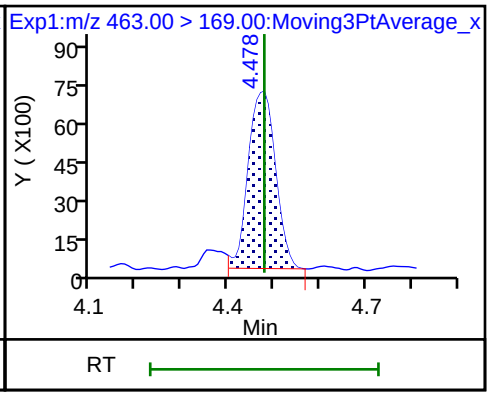

D 30 13C5 PFNA



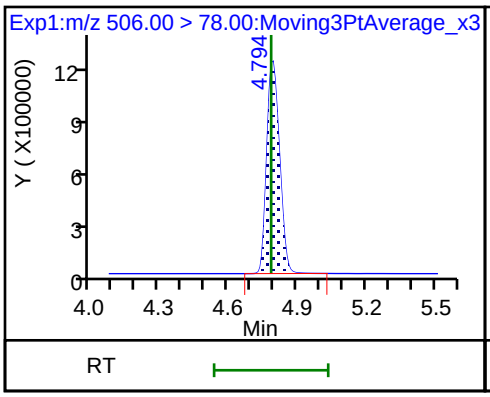

31 Perfluorononanoic acid



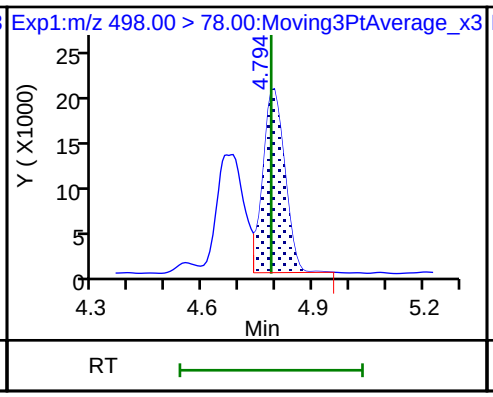

31 Perfluorononanoic acid



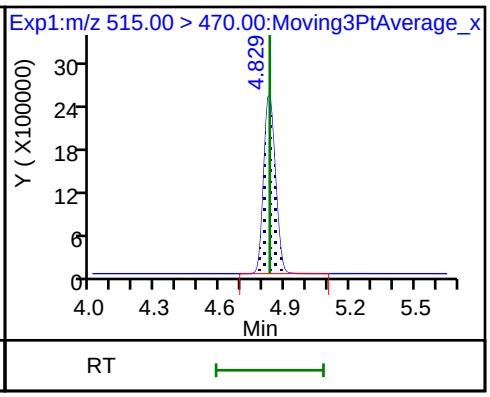

D 33 13C8 FOSA



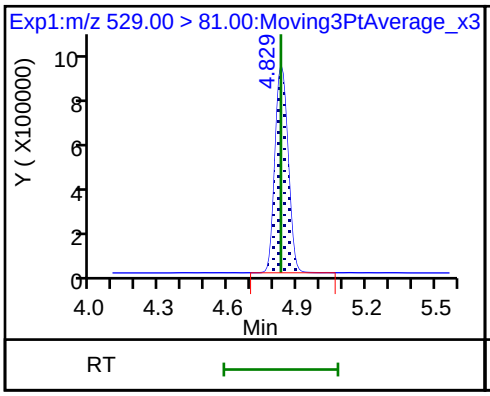

34 Perfluorooctanesulfonamide



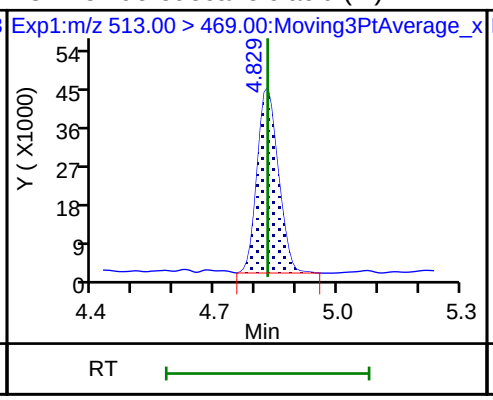

D 39 13C2 PFDA



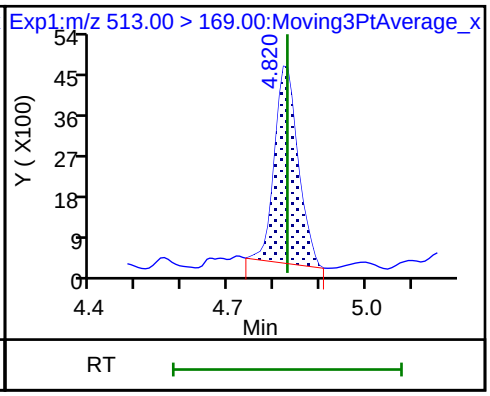

D 38 M2-8:2 FTS



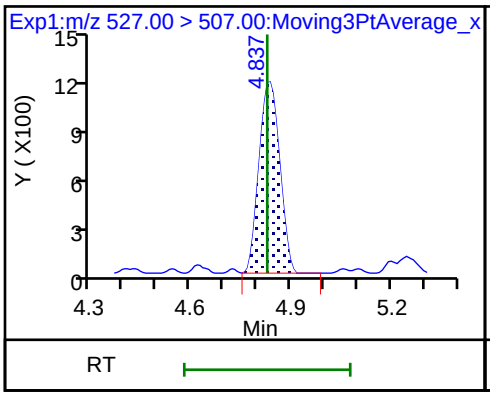

37 Perfluorodecanoic acid (M)



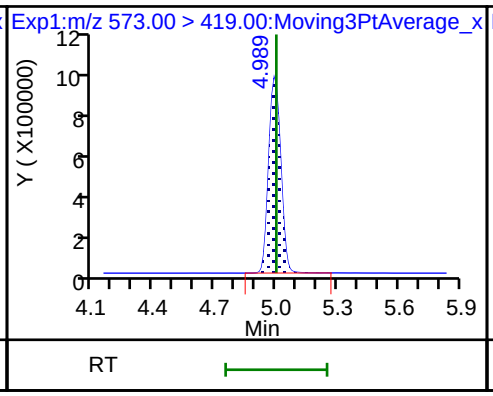

37 Perfluorodecanoic acid



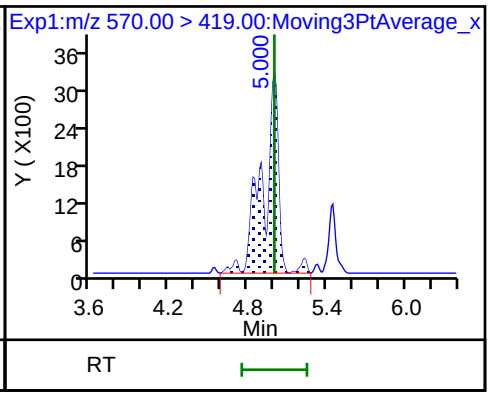
36 8:2 FTS



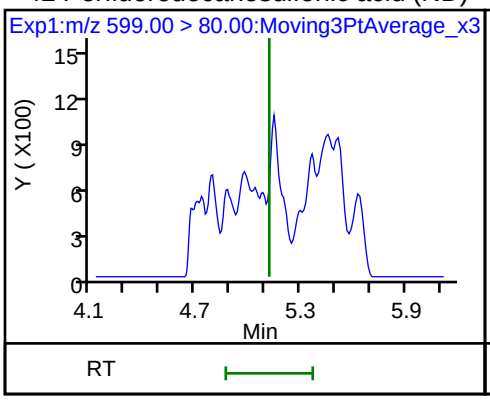

D 40 d3-NMeFOSAA



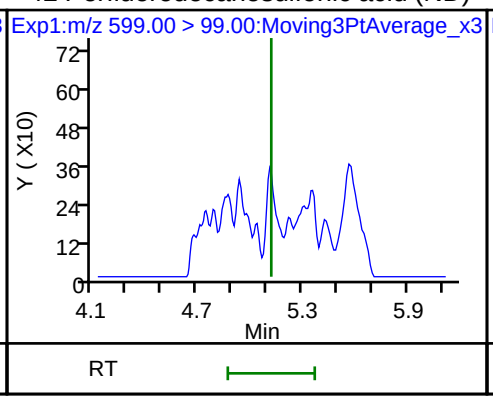

41 NMeFOSAA



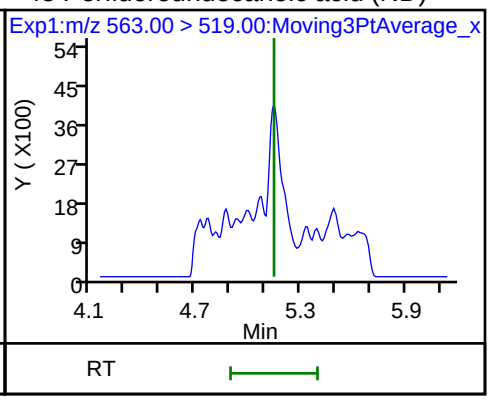

42 Perfluorodecanesulfonic acid (ND)



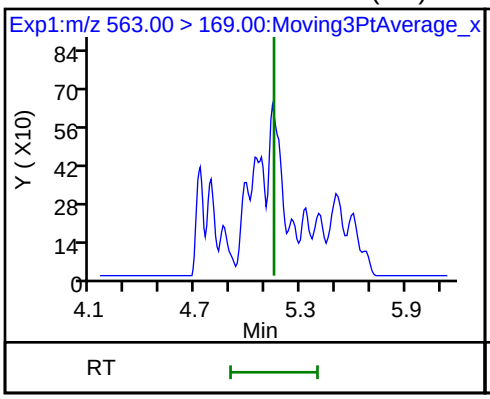

42 Perfluorodecanesulfonic acid (ND)



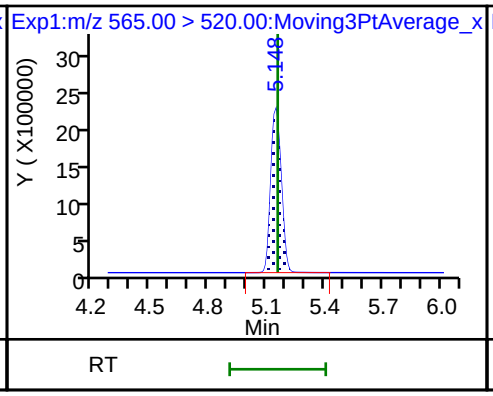

45 Perfluoroundecanoic acid (ND)



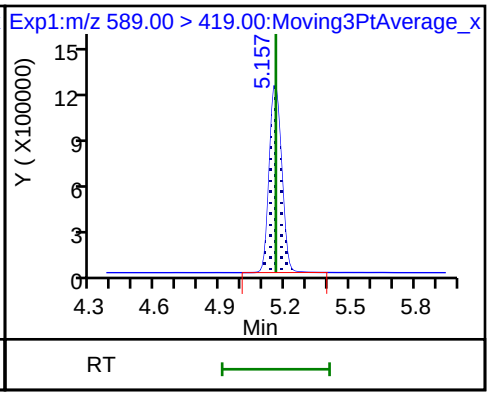

45 Perfluoroundecanoic acid (ND)



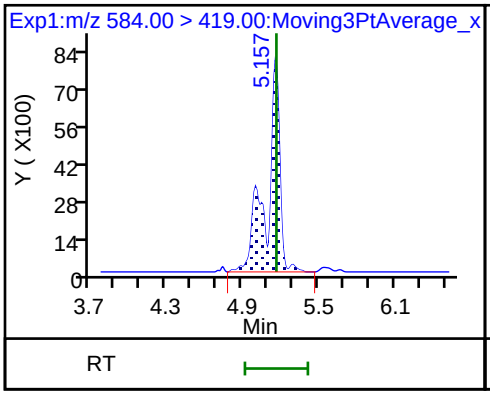

D 43 13C2 PFUnA



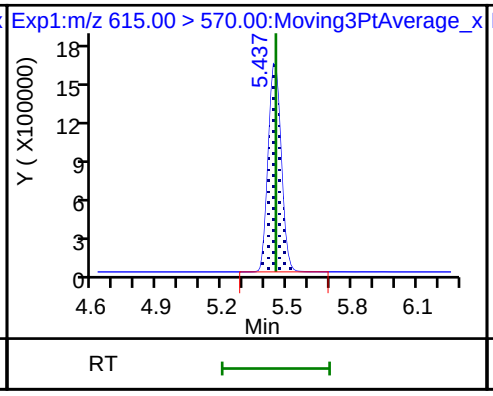

D 44 d5-NEtFOSAA



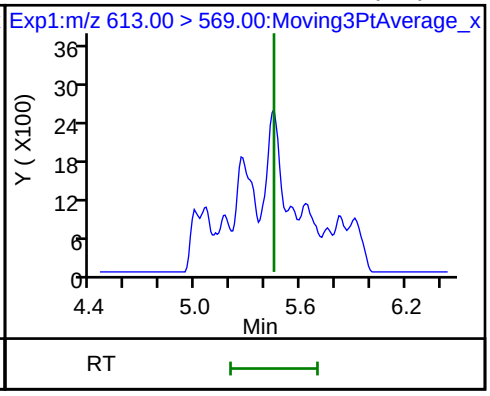

46 NEtFOSA



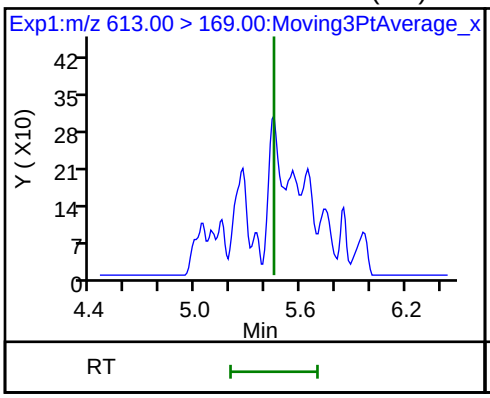

D 56 13C2 PFDoA



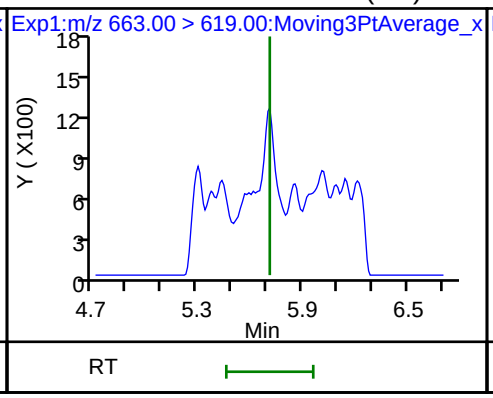

57 Perfluorododecanoic acid (ND)



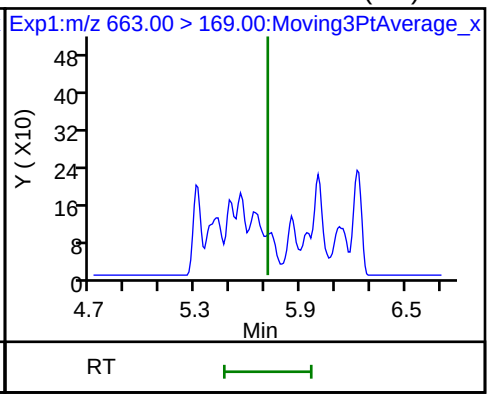
57 Perfluorododecanoic acid (ND)



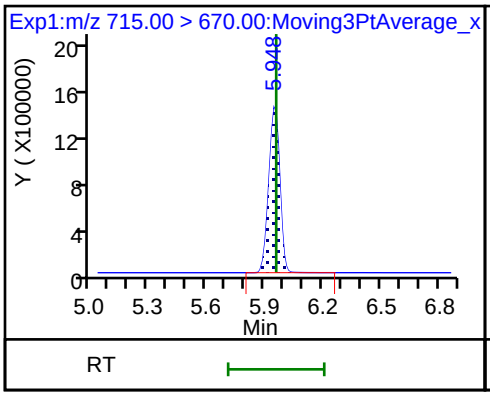

60 Perfluorotridecanoic acid (ND)



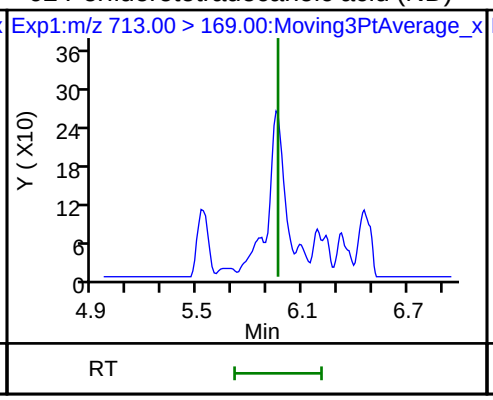

60 Perfluorotridecanoic acid (ND)



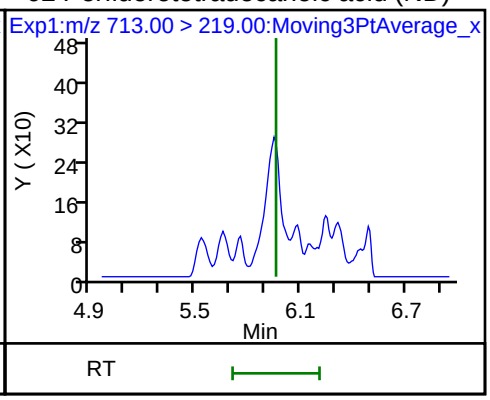

D 61 13C2 PFTeDA




62 Perfluorotetradecanoic acid (ND)




62 Perfluorotetradecanoic acid (ND)



Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

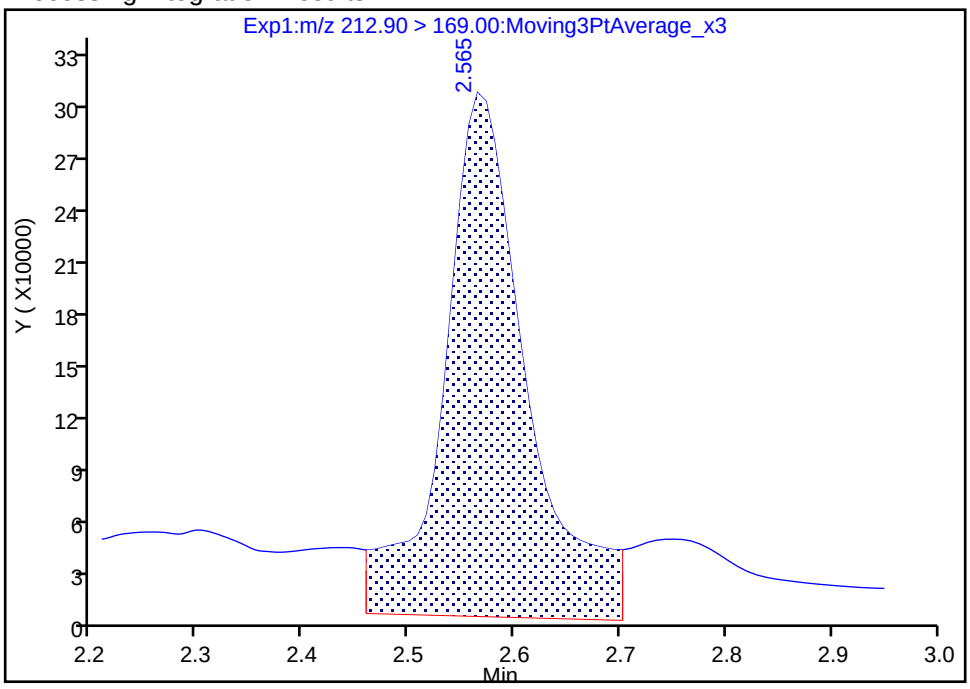
| | | | | | |
|---|---|---|---|---|---|
| Data File: | \\chromfs\Sacramento\ChromData\A18\20200911-103101.b\2020.09.11_A18_PFC_A_019.d | | | | |
| Injection Date: | 11-Sep-2020 13:09:17 | Instrument ID: | A18 | | |
| Lims ID: | 460-217547-E-5-A | Lab Sample ID: | 320-217547-5 | | |
| Client ID: | MW-213 | | | | |
| Operator ID: | TAISACA18-PC\A-18 | ALS Bottle#: | 10 | Worklist Smp#: | 5 |
| Injection Vol: | 20.0 ul | Dil. Factor: | 1.0000 | | |
| Method: | PFAS_A18V2 | Limit Group: | LC PFC ICAL | | |
| Column: | Gemini C18 3um 3mm x 50 mm ( 3.00mm) | Detector | EXP1 | | |

## 2 Perfluorobutanoic acid, CAS: 375-22-4

Signal: 1

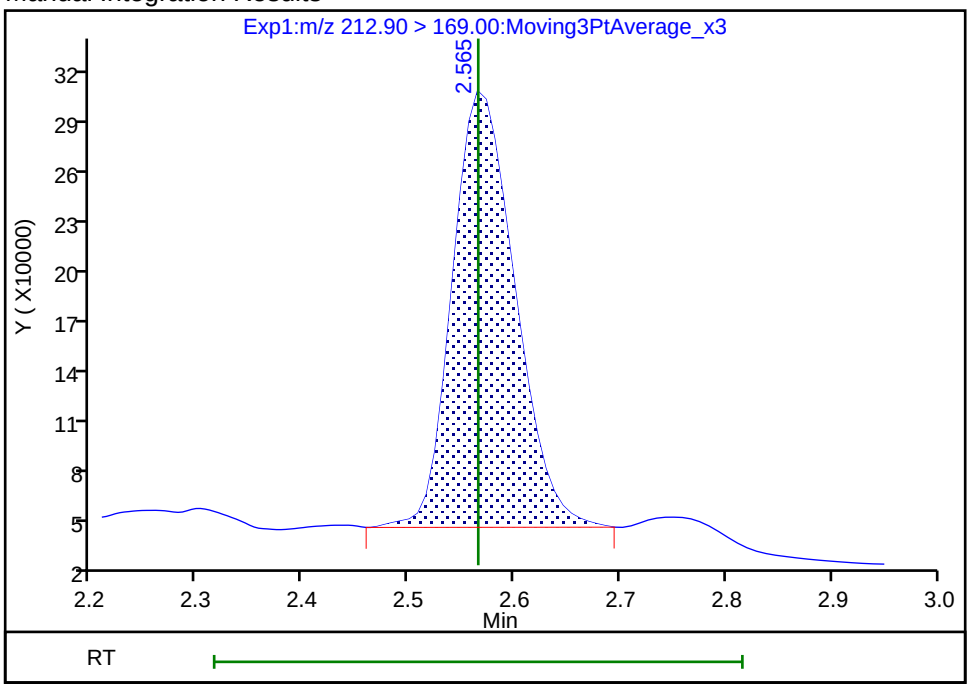
Processing Integration Results

RT: 2.56
Area: 1621274
Amount: 0.502180
Amount Units: ng/ml




Manual Integration Results

RT: 2.56
Area: 1067902
Amount: 0.330776
Amount Units: ng/ml




Reviewer: sanjumnair, 14-Sep-2020 10:04:08
Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

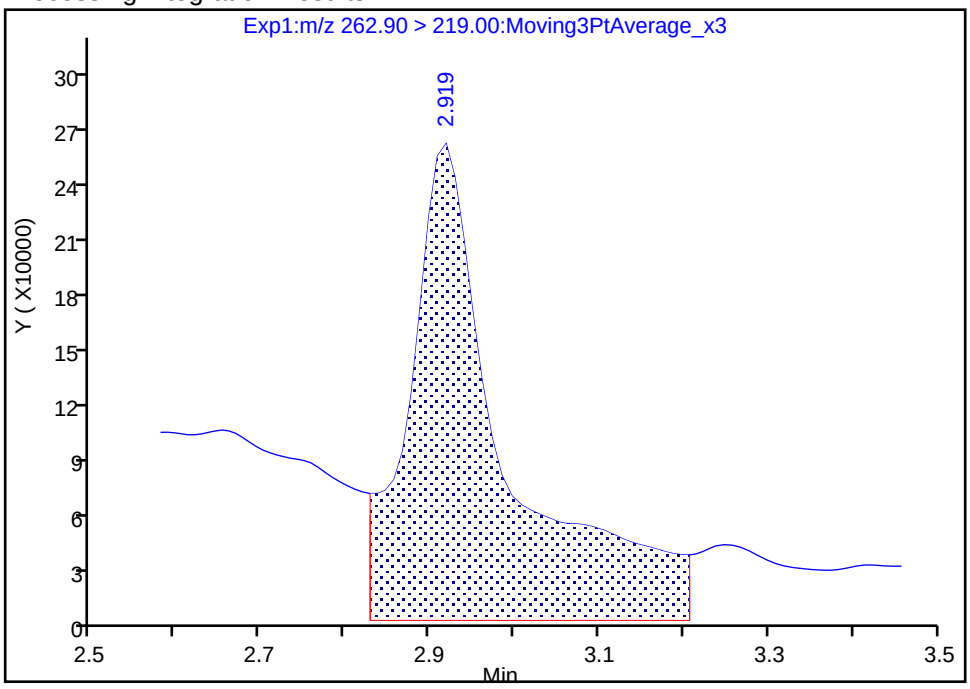
| | | | | | |
|---|---|---|---|---|---|
| Data File: | \\chromfs\Sacramento\ChromData\A18\20200911-103101.b\2020.09.11_A18_PFC_A_019.d | | | | |
| Injection Date: | 11-Sep-2020 13:09:17 | Instrument ID: | A18 | | |
| Lims ID: | 460-217547-E-5-A | Lab Sample ID: | 320-217547-5 | | |
| Client ID: | MW-213 | | | | |
| Operator ID: | TAISACA18-PC\A-18 | ALS Bottle#: | 10 | Worklist Smp#: | 5 |
| Injection Vol: | 20.0 ul | Dil. Factor: | 1.0000 | | |
| Method: | PFAS_A18V2 | Limit Group: | LC PFC ICAL | | |
| Column: | Gemini C18 3um 3mm x 50 mm ( 3.00mm) | Detector | EXP1 | | |

## 5 Perfluoropentanoic acid, CAS: 2706-90-3

Signal: 1

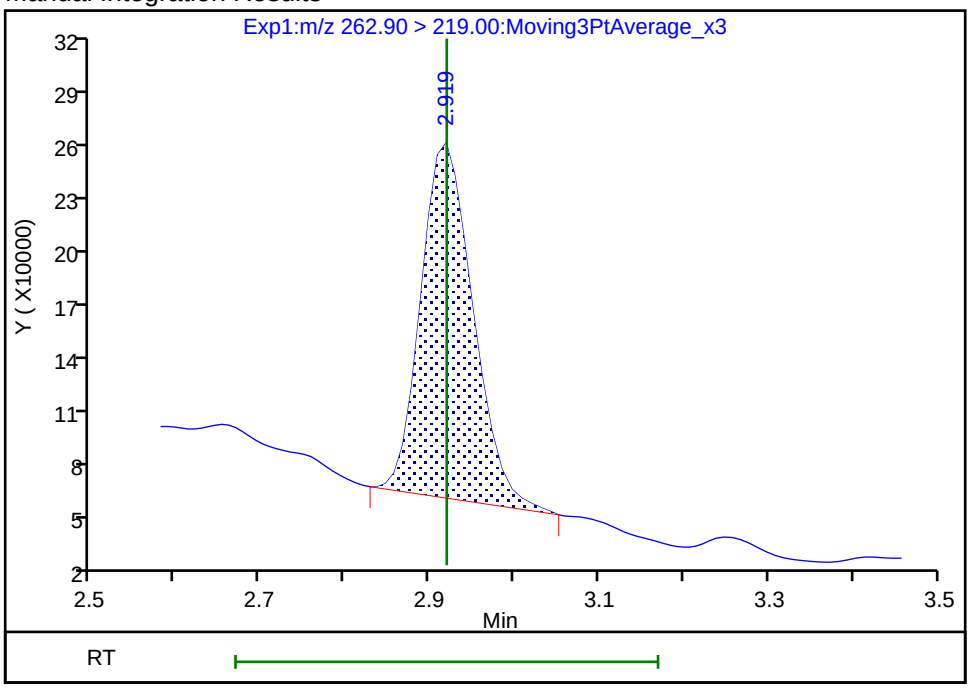
Processing Integration Results

RT: 2.92
Area: 2054104
Amount: 0.512097
Amount Units: ng/ml




Manual Integration Results

RT: 2.92
Area: 832729
Amount: 0.207603
Amount Units: ng/ml




Reviewer: sanjumnair, 14-Sep-2020 10:04:14

Audit Action: Manually Integrated Audit Reason: Baseline

Eurofins TestAmerica, Sacramento

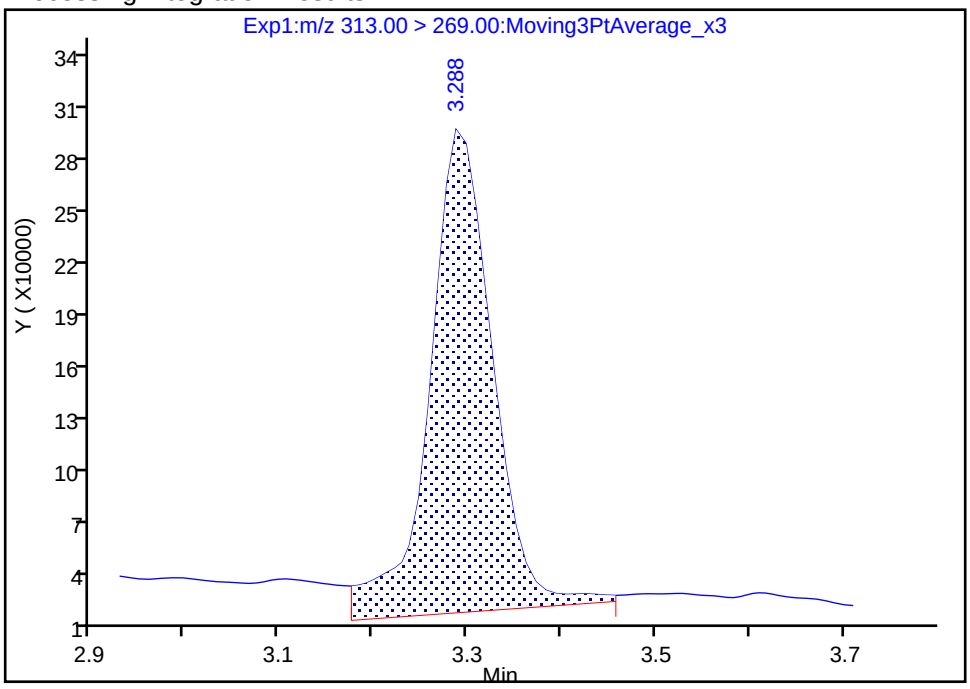
| | | | | | |
|---|---|---|---|---|---|
| Data File: | \\chromfs\Sacramento\ChromData\A18\20200911-103101.b\2020.09.11_A18_PFC_A_019.d | | | | |
| Injection Date: | 11-Sep-2020 13:09:17 | Instrument ID: | A18 | | |
| Lims ID: | 460-217547-E-5-A | Lab Sample ID: | 320-217547-5 | | |
| Client ID: | MW-213 | | | | |
| Operator ID: | TAISACA18-PC\A-18 | ALS Bottle#: | 10 | Worklist Smp#: | 5 |
| Injection Vol: | 20.0 ul | Dil. Factor: | 1.0000 | | |
| Method: | PFAS_A18V2 | Limit Group: | LC PFC ICAL | | |
| Column: | Gemini C18 3um 3mm x 50 mm ( 3.00mm) | Detector | EXP1 | | |

## 10 Perfluorohexanoic acid, CAS: 307-24-4

Signal: 1

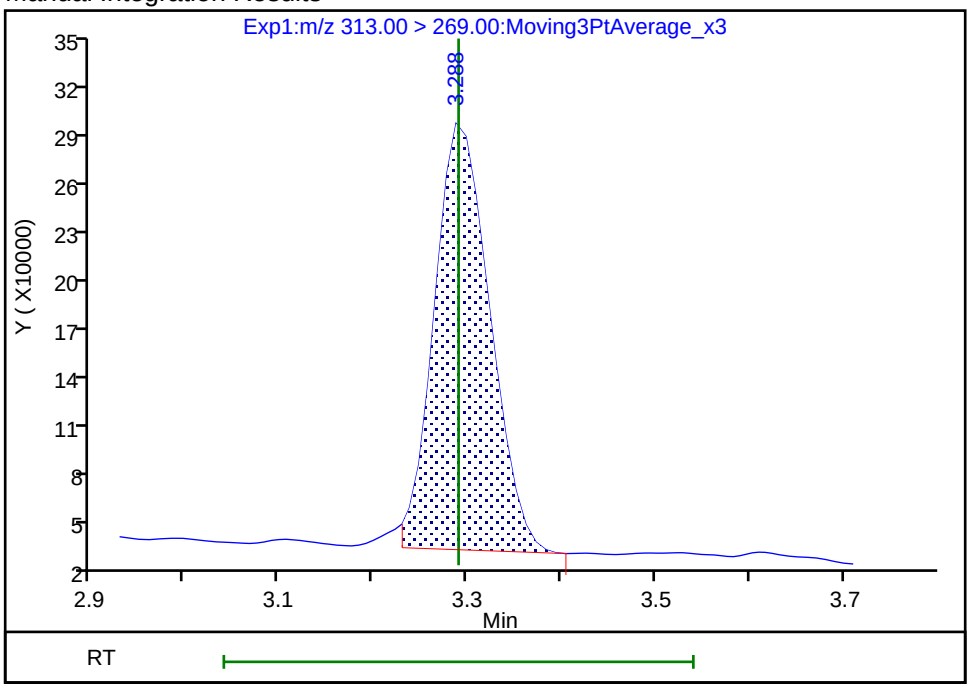
Processing Integration Results

RT: 3.29
Area: 1267645
Amount: 0.274423
Amount Units: ng/ml




Manual Integration Results

RT: 3.29
Area: 1060602
Amount: 0.229601
Amount Units: ng/ml




Reviewer: sanjumnair, 14-Sep-2020 10:04:43
Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

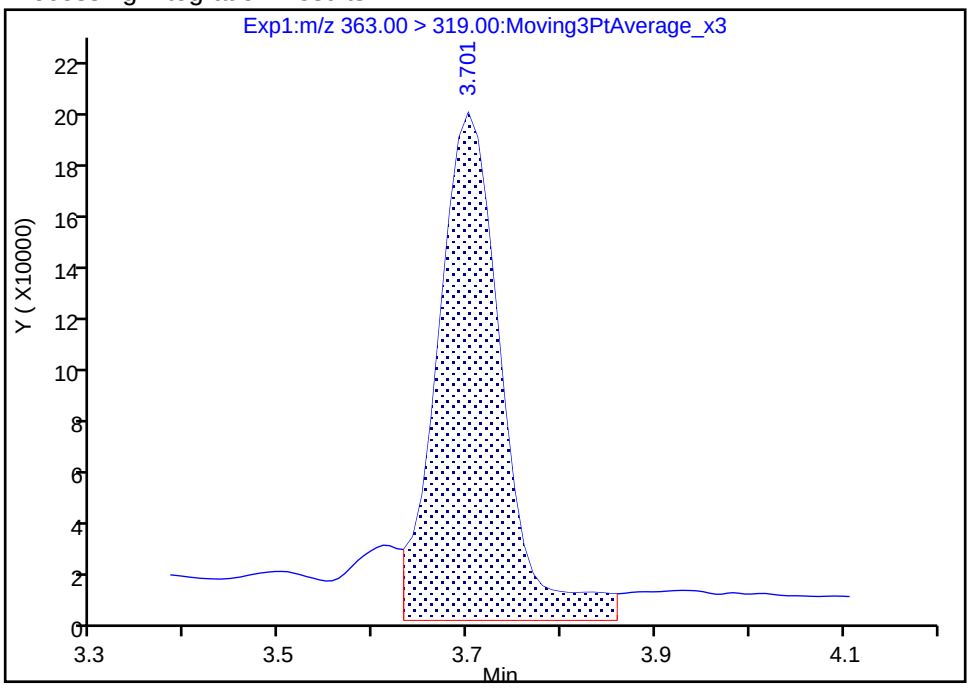
| | | | | | |
|---|---|---|---|---|---|
| Data File: | \\chromfs\Sacramento\ChromData\A18\20200911-103101.b\2020.09.11_A18_PFC_A_019.d | | | | |
| Injection Date: | 11-Sep-2020 13:09:17 | Instrument ID: | A18 | | |
| Lims ID: | 460-217547-E-5-A | Lab Sample ID: | 320-217547-5 | | |
| Client ID: | MW-213 | | | | |
| Operator ID: | TAISACA18-PC\A-18 | ALS Bottle#: | 10 | Worklist Smp#: | 5 |
| Injection Vol: | 20.0 ul | Dil. Factor: | 1.0000 | | |
| Method: | PFAS_A18V2 | Limit Group: | LC PFC ICAL | | |
| Column: | Gemini C18 3um 3mm x 50 mm ( 3.00mm) | Detector | EXP1 | | |

## 16 Perfluoroheptanoic acid, CAS: 375-85-9

Signal: 1

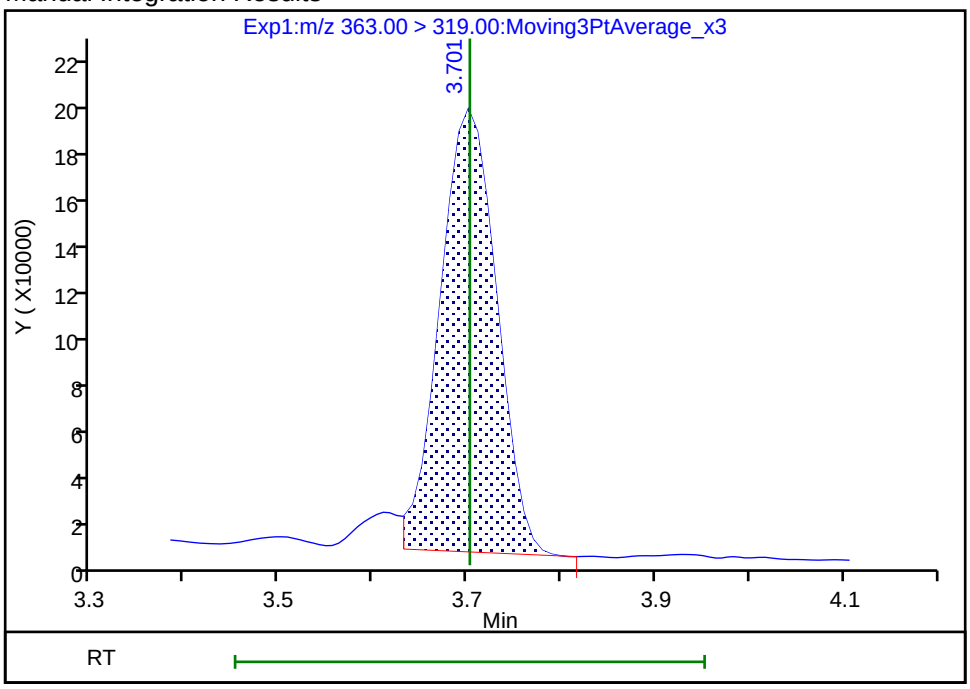
Processing Integration Results

RT: 3.70
Area: 922570
Amount: 0.197468
Amount Units: ng/ml




Manual Integration Results

RT: 3.70
Area: 761389
Amount: 0.162969
Amount Units: ng/ml




Reviewer: sanjumnair, 14-Sep-2020 10:04:56

Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

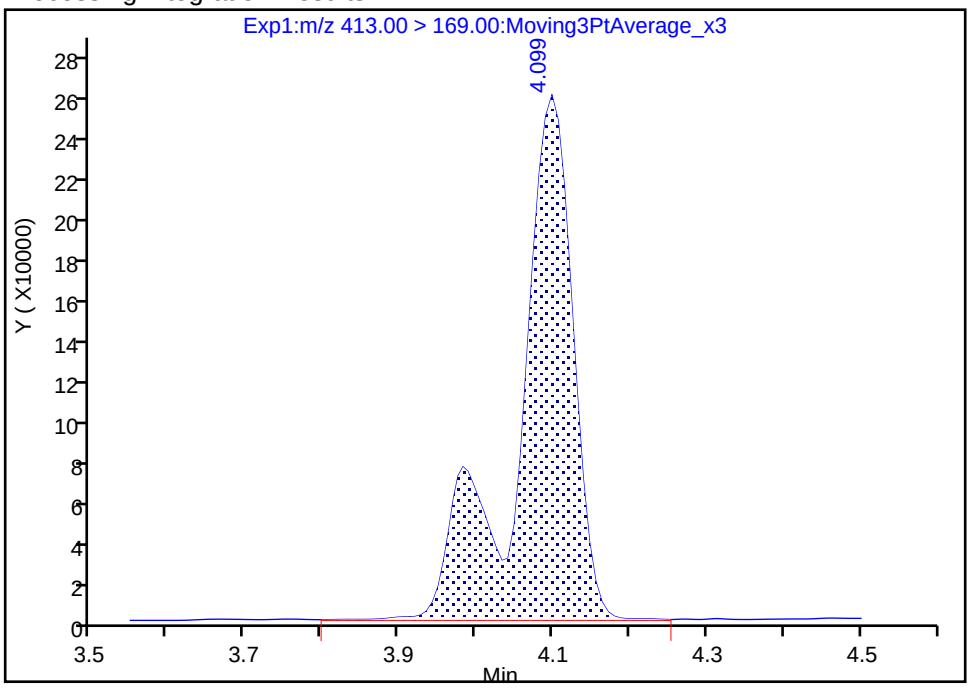
| | | | | | |
|---|---|---|---|---|---|
| Data File: | \\chromfs\Sacramento\ChromData\A18\20200911-103101.b\2020.09.11_A18_PFC_A_019.d | | | | |
| Injection Date: | 11-Sep-2020 13:09:17 | Instrument ID: | A18 | | |
| Lims ID: | 460-217547-E-5-A | Lab Sample ID: | 320-217547-5 | | |
| Client ID: | MW-213 | | | | |
| Operator ID: | TAISACA18-PC\A-18 | ALS Bottle#: | 10 | Worklist Smp#: | 5 |
| Injection Vol: | 20.0 ul | Dil. Factor: | 1.0000 | | |
| Method: | PFAS_A18V2 | Limit Group: | LC PFC ICAL | | |
| Column: | Gemini C18 3um 3mm x 50 mm ( 3.00mm) | Detector | EXP1 | | |

## 22 Perfluorooctanoic acid, CAS: 335-67-1

Signal: 2

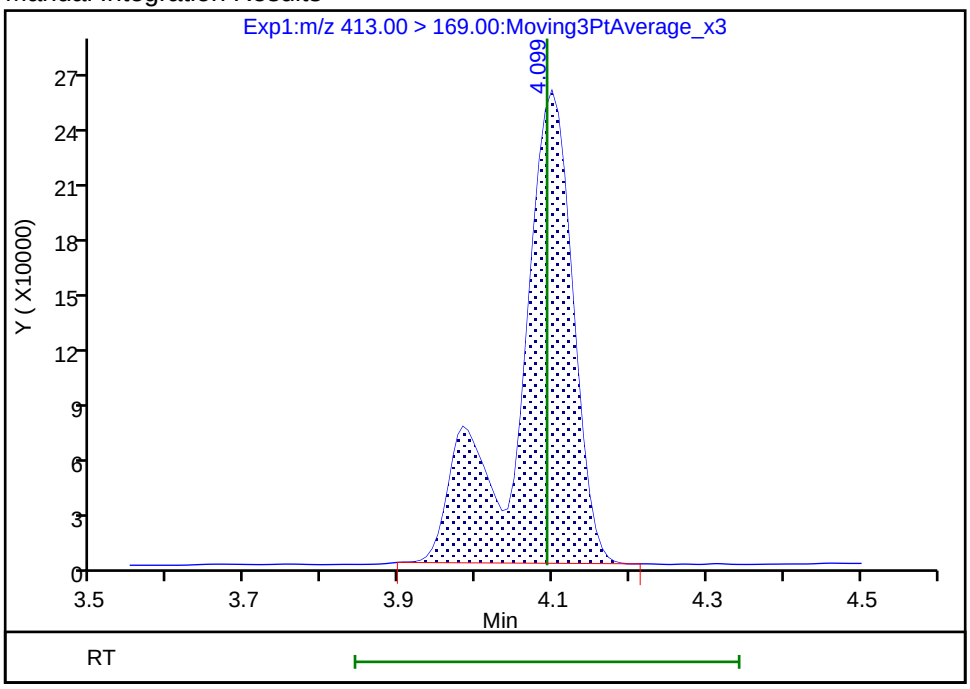
Processing Integration Results

RT: 4.10
Area: 1292734
Amount: 0.754345
Amount Units: ng/ml




Manual Integration Results

RT: 4.10
Area: 1265974
Amount: 0.704287
Amount Units: ng/ml




Reviewer: sanjumnair, 14-Sep-2020 10:05:37

Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

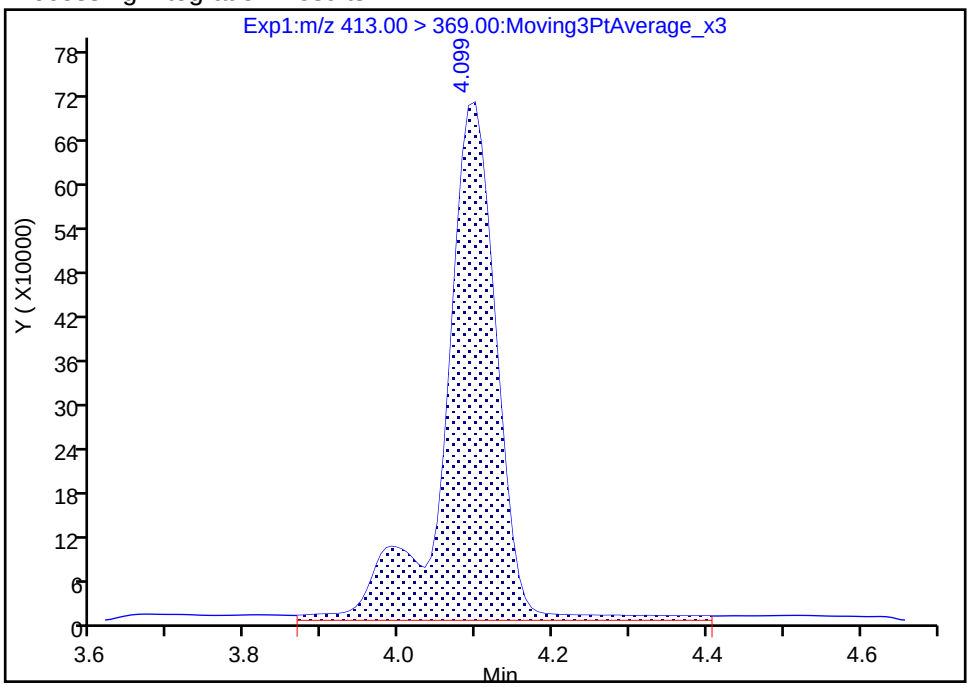
| | | | | | |
|---|---|---|---|---|---|
| Data File: | \\chromfs\Sacramento\ChromData\A18\20200911-103101.b\2020.09.11_A18_PFC_A_019.d | | | | |
| Injection Date: | 11-Sep-2020 13:09:17 | Instrument ID: | A18 | | |
| Lims ID: | 460-217547-E-5-A | Lab Sample ID: | 320-217547-5 | | |
| Client ID: | MW-213 | | | | |
| Operator ID: | TAISACA18-PC\A-18 | ALS Bottle#: | 10 | Worklist Smp#: | 5 |
| Injection Vol: | 20.0 ul | Dil. Factor: | 1.0000 | | |
| Method: | PFAS_A18V2 | Limit Group: | LC PFC ICAL | | |
| Column: | Gemini C18 3um 3mm x 50 mm ( 3.00mm) | Detector | EXP1 | | |

## 22 Perfluorooctanoic acid, CAS: 335-67-1

Signal: 1

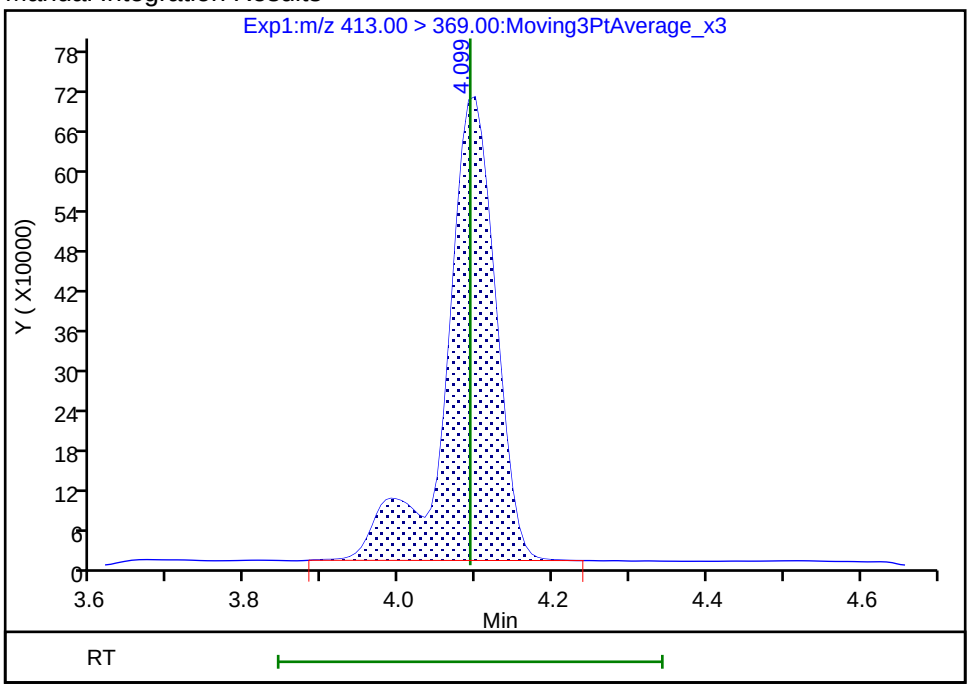
Processing Integration Results

RT: 4.10
Area: 3372122
Amount: 0.754345
Amount Units: ng/ml




Manual Integration Results

RT: 4.10
Area: 3148349
Amount: 0.704287
Amount Units: ng/ml




Reviewer: sanjumnair, 14-Sep-2020 10:05:43
Audit Action: Manually Integrated Audit Reason: Baseline

Eurofins TestAmerica, Sacramento

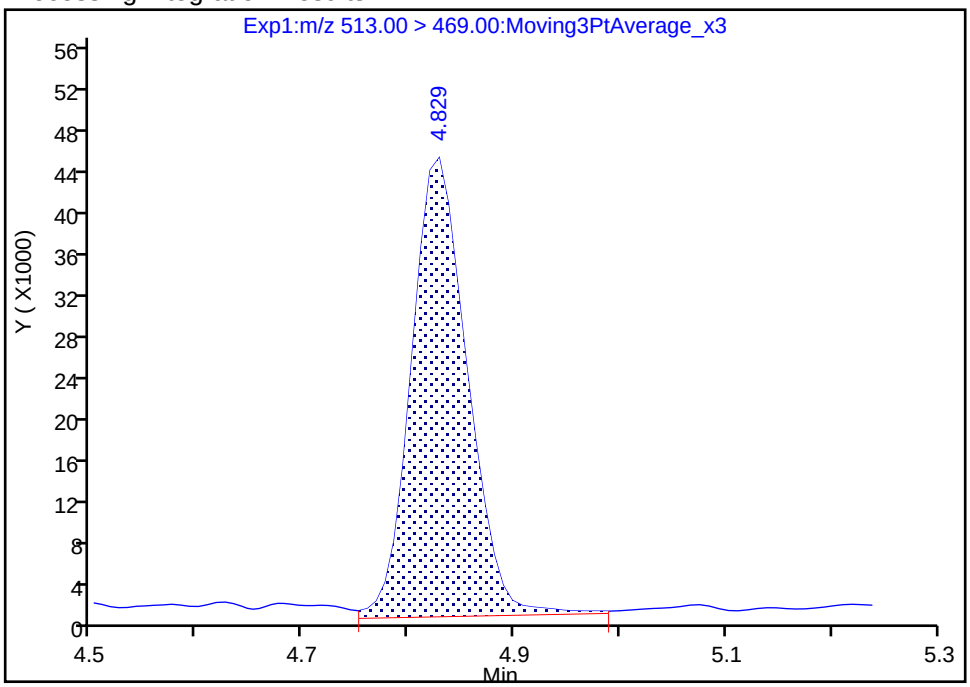
| | | | | | |
|---|---|---|---|---|---|
| Data File: | \\chromfs\Sacramento\ChromData\A18\20200911-103101.b\2020.09.11_A18_PFC_A_019.d | | | | |
| Injection Date: | 11-Sep-2020 13:09:17 | Instrument ID: | A18 | | |
| Lims ID: | 460-217547-E-5-A | Lab Sample ID: | 320-217547-5 | | |
| Client ID: | MW-213 | | | | |
| Operator ID: | TAISACA18-PC\A-18 | ALS Bottle#: | 10 | Worklist Smp#: | 5 |
| Injection Vol: | 20.0 ul | Dil. Factor: | 1.0000 | | |
| Method: | PFAS_A18V2 | Limit Group: | LC PFC ICAL | | |
| Column: | Gemini C18 3um 3mm x 50 mm ( 3.00mm) | Detector | EXP1 | | |

## 37 Perfluorodecanoic acid, CAS: 335-76-2

Signal: 1

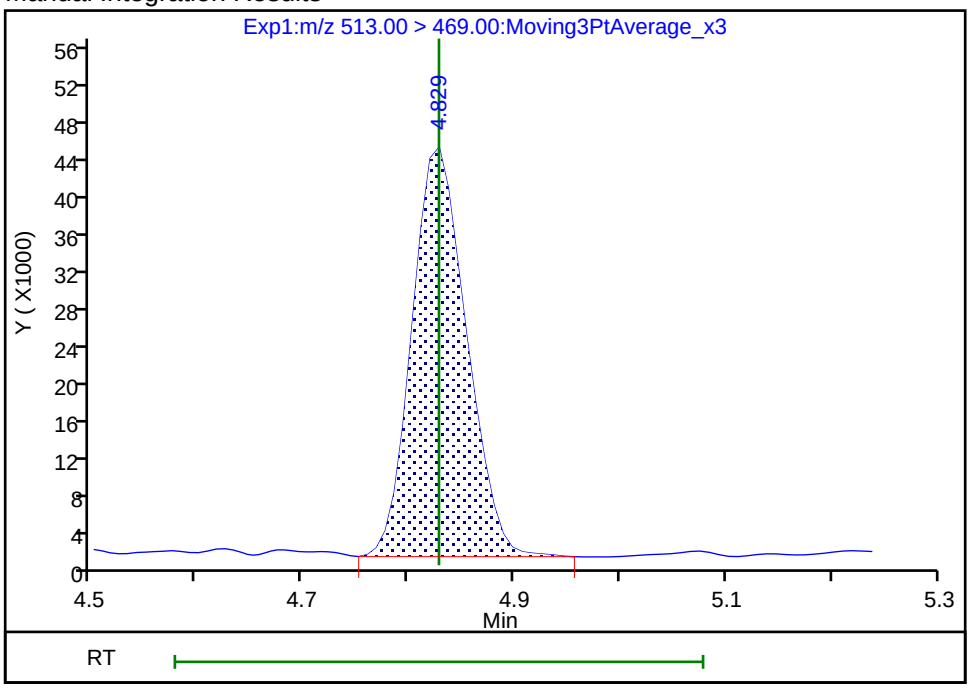
Processing Integration Results

RT: 4.83
Area: 161237
Amount: 0.044618
Amount Units: ng/ml




Manual Integration Results

RT: 4.83
Area: 154449
Amount: 0.042739
Amount Units: ng/ml




Reviewer: sanjumnair, 14-Sep-2020 10:06:10
Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

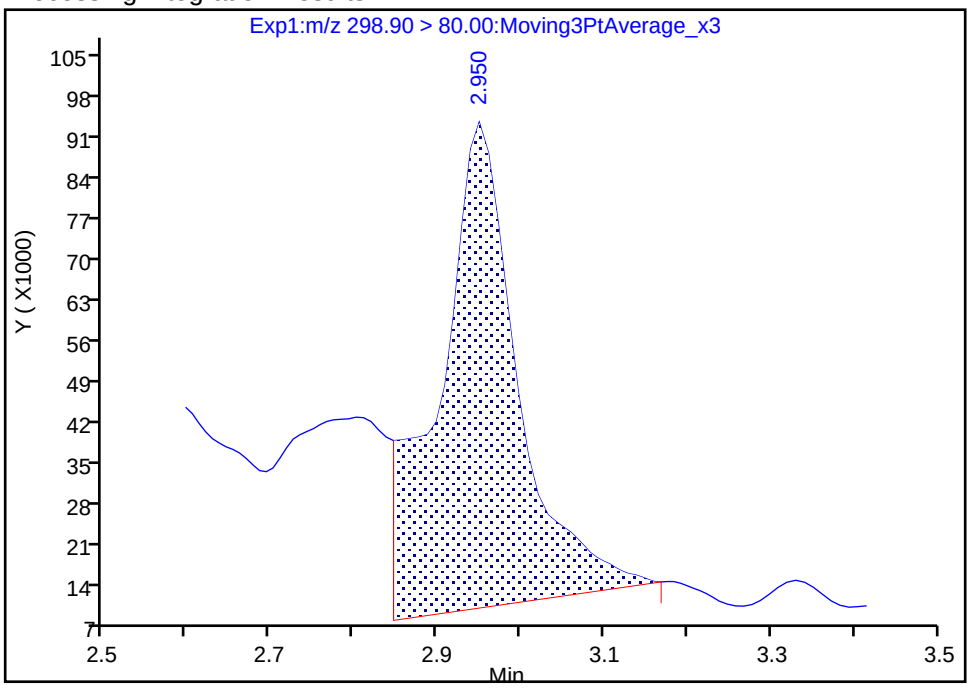
| | | | | | |
|---|---|---|---|---|---|
| Data File: | \\chromfs\Sacramento\ChromData\A18\20200911-103101.b\2020.09.11_A18_PFC_A_019.d | | | | |
| Injection Date: | 11-Sep-2020 13:09:17 | Instrument ID: | A18 | | |
| Lims ID: | 460-217547-E-5-A | Lab Sample ID: | 320-217547-5 | | |
| Client ID: | MW-213 | | | | |
| Operator ID: | TAISACA18-PC\A-18 | ALS Bottle#: | 10 | Worklist Smp#: | 5 |
| Injection Vol: | 20.0 ul | Dil. Factor: | 1.0000 | | |
| Method: | PFAS_A18V2 | Limit Group: | LC PFC ICAL | | |
| Column: | Gemini C18 3um 3mm x 50 mm ( 3.00mm) | Detector | EXP1 | | |

## 6 Perfluorobutanesulfonic acid, CAS: 375-73-5

Signal: 1

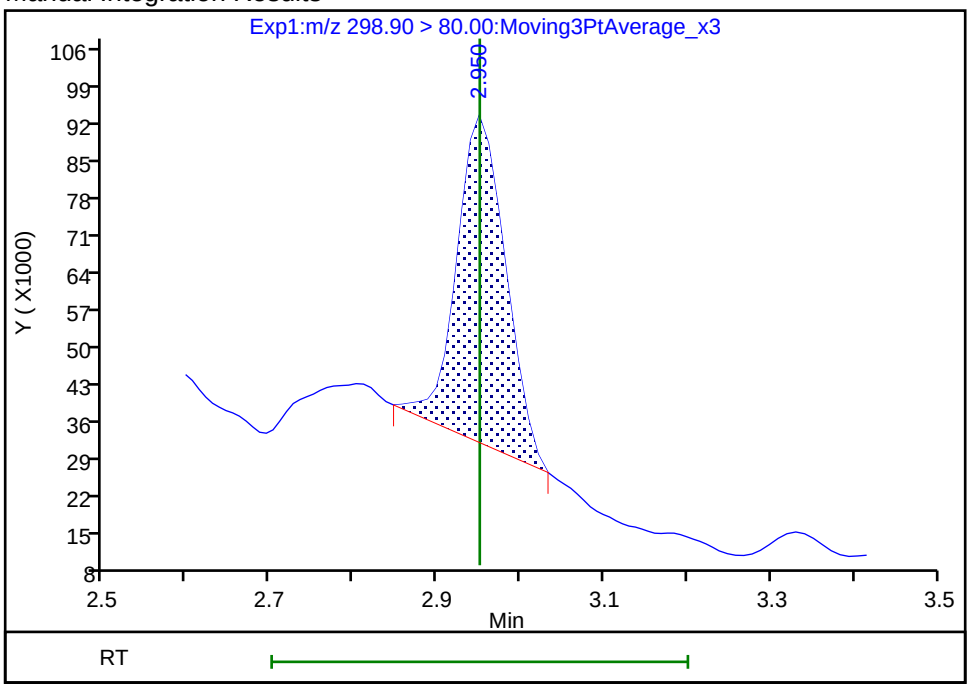
Processing Integration Results

RT: 2.95
Area: 547620
Amount: 0.131951
Amount Units: ng/ml




Manual Integration Results

RT: 2.95
Area: 250763
Amount: 0.060422
Amount Units: ng/ml




Reviewer: sanjumnair, 14-Sep-2020 10:04:24

Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

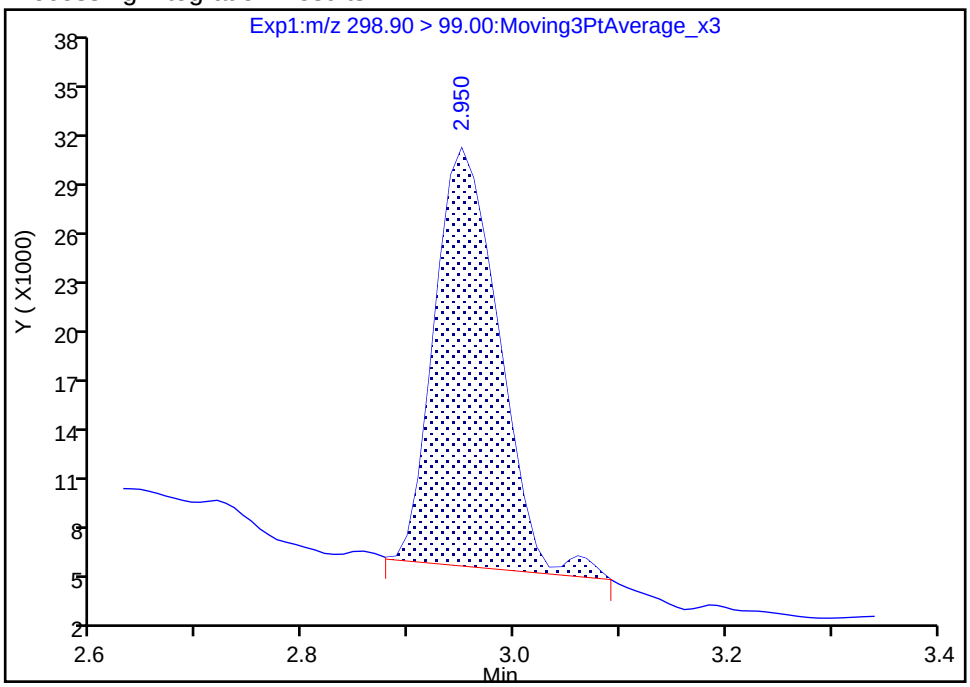
| | | | | | |
|---|---|---|---|---|---|
| Data File: | \\chromfs\Sacramento\ChromData\A18\20200911-103101.b\2020.09.11_A18_PFC_A_019.d | | | | |
| Injection Date: | 11-Sep-2020 13:09:17 | Instrument ID: | A18 | | |
| Lims ID: | 460-217547-E-5-A | Lab Sample ID: | 320-217547-5 | | |
| Client ID: | MW-213 | | | | |
| Operator ID: | TAISACA18-PC\A-18 | ALS Bottle#: | 10 | Worklist Smp#: | 5 |
| Injection Vol: | 20.0 ul | Dil. Factor: | 1.0000 | | |
| Method: | PFAS_A18V2 | Limit Group: | LC PFC ICAL | | |
| Column: | Gemini C18 3um 3mm x 50 mm ( 3.00mm) | Detector | EXP1 | | |

## 6 Perfluorobutanesulfonic acid, CAS: 375-73-5

Signal: 2

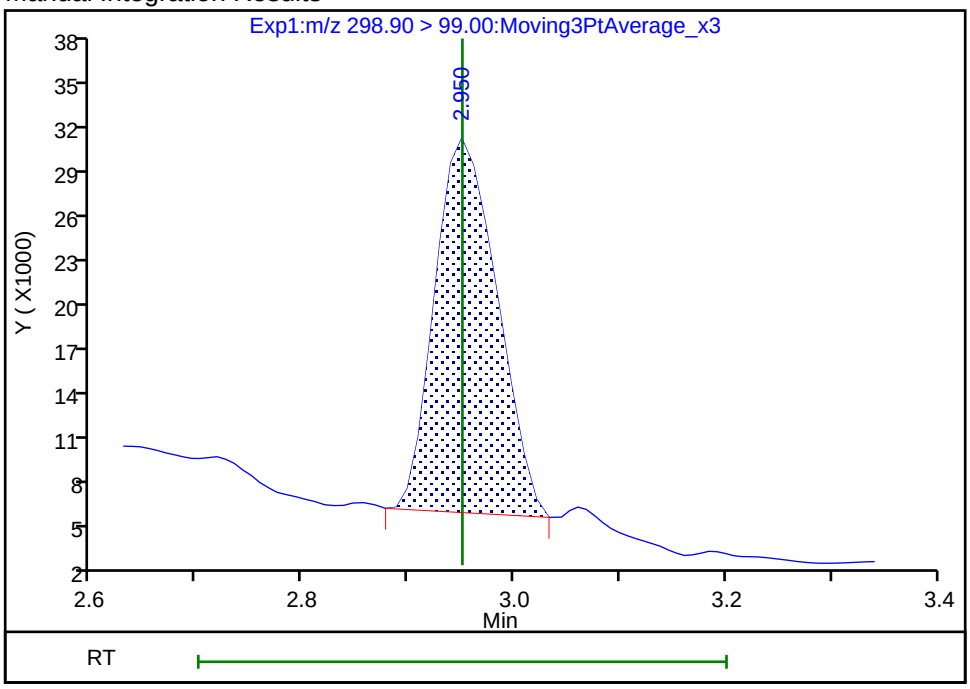
Processing Integration Results

RT: 2.95
Area: 105715
Amount: 0.131951
Amount Units: ng/ml




Manual Integration Results

RT: 2.95
Area: 100991
Amount: 0.060422
Amount Units: ng/ml




Reviewer: sanjumnair, 14-Sep-2020 10:04:30
Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

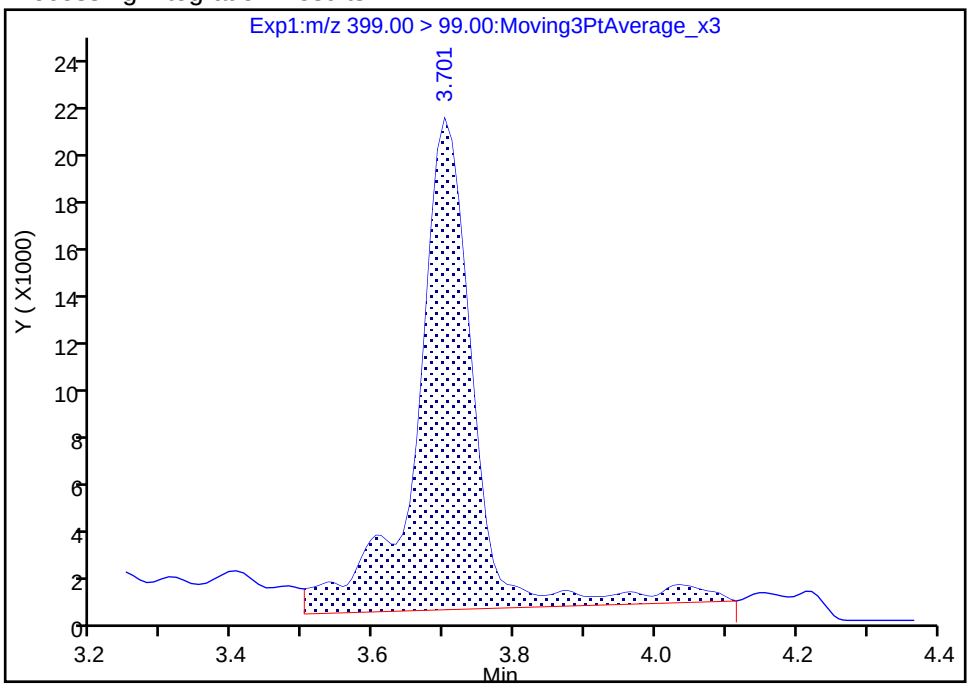
| | | | | | |
|---|---|---|---|---|---|
| Data File: | \\chromfs\Sacramento\ChromData\A18\20200911-103101.b\2020.09.11_A18_PFC_A_019.d | | | | |
| Injection Date: | 11-Sep-2020 13:09:17 | Instrument ID: | A18 | | |
| Lims ID: | 460-217547-E-5-A | Lab Sample ID: | 320-217547-5 | | |
| Client ID: | MW-213 | | | | |
| Operator ID: | TAISACA18-PC\A-18 | ALS Bottle#: | 10 | Worklist Smp#: | 5 |
| Injection Vol: | 20.0 ul | Dil. Factor: | 1.0000 | | |
| Method: | PFAS_A18V2 | Limit Group: | LC PFC ICAL | | |
| Column: | Gemini C18 3um 3mm x 50 mm ( 3.00mm) | Detector | EXP1 | | |

## 15 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 2

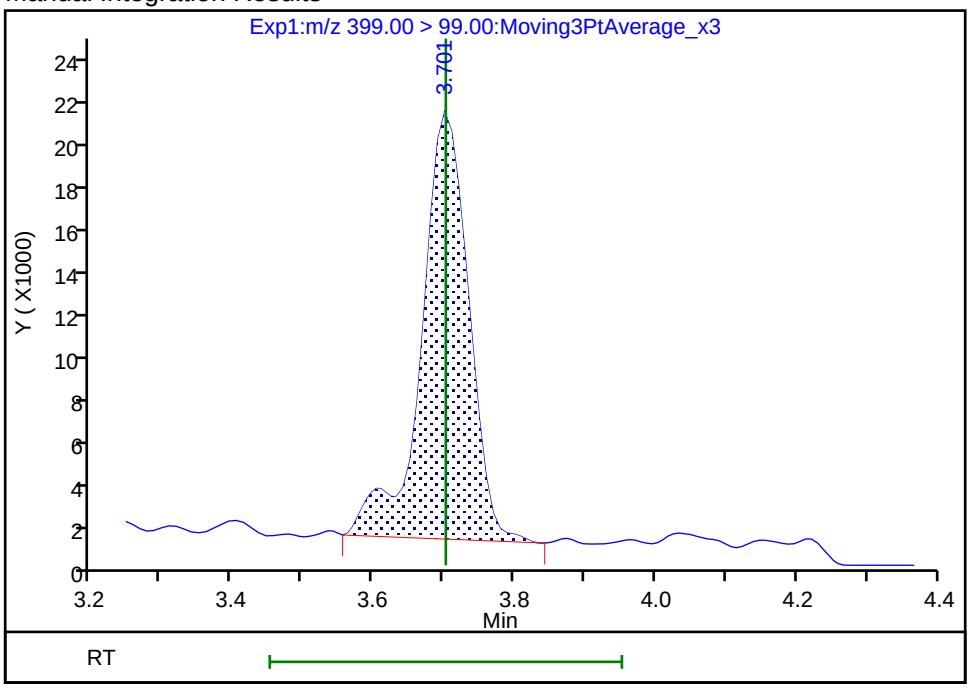
Processing Integration Results

RT: 3.70
Area: 117968
Amount: 0.159358
Amount Units: ng/ml




Manual Integration Results

RT: 3.70
Area: 93275
Amount: 0.131168
Amount Units: ng/ml




Reviewer: sanjumnair, 14-Sep-2020 10:05:04

Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

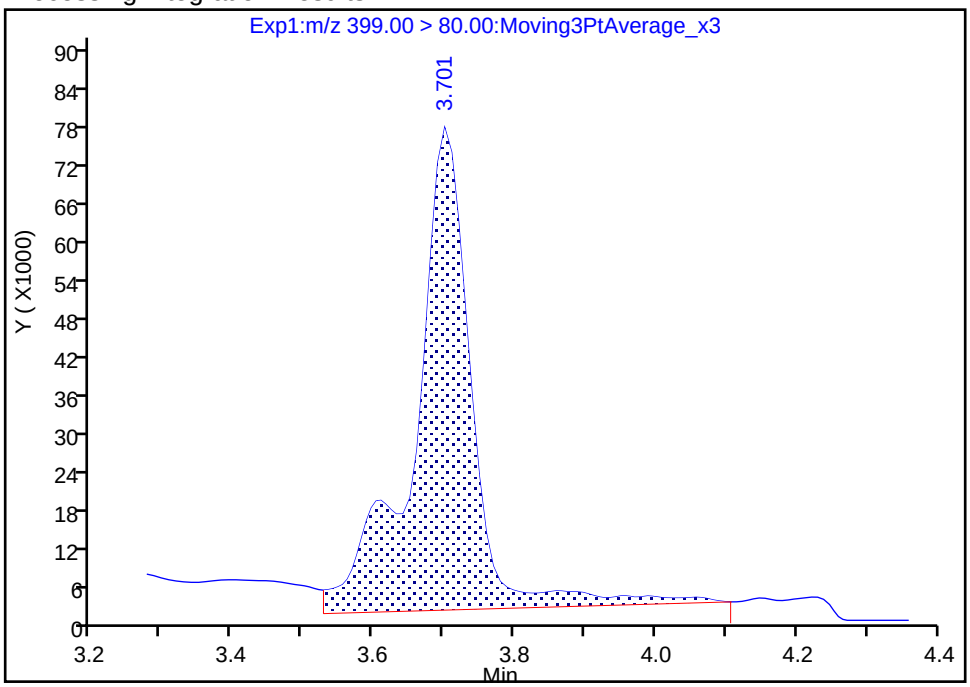
| | | | | | |
|---|---|---|---|---|---|
| Data File: | \\chromfs\Sacramento\ChromData\A18\20200911-103101.b\2020.09.11_A18_PFC_A_019.d | | | | |
| Injection Date: | 11-Sep-2020 13:09:17 | Instrument ID: | A18 | | |
| Lims ID: | 460-217547-E-5-A | Lab Sample ID: | 320-217547-5 | | |
| Client ID: | MW-213 | | | | |
| Operator ID: | TAISACA18-PC\A-18 | ALS Bottle#: | 10 | Worklist Smp#: | 5 |
| Injection Vol: | 20.0 ul | Dil. Factor: | 1.0000 | | |
| Method: | PFAS_A18V2 | Limit Group: | LC PFC ICAL | | |
| Column: | Gemini C18 3um 3mm x 50 mm ( 3.00mm) | Detector | EXP1 | | |

## 15 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 1

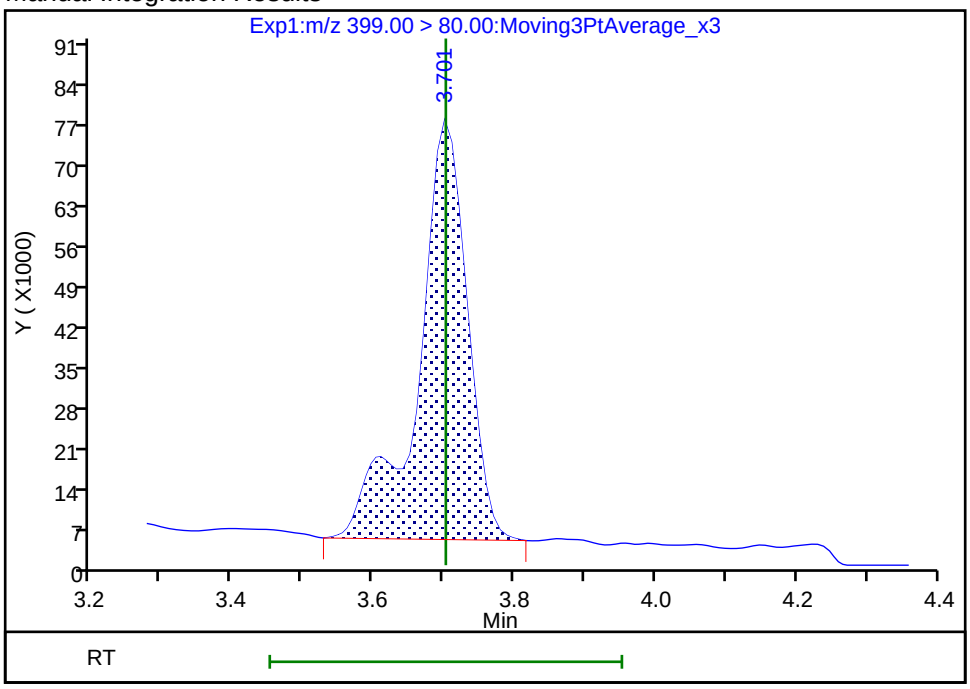
Processing Integration Results

RT: 3.70
Area: 425951
Amount: 0.159358
Amount Units: ng/ml




Manual Integration Results

RT: 3.70
Area: 350602
Amount: 0.131168
Amount Units: ng/ml




Reviewer: sanjumnair, 14-Sep-2020 10:05:10
Audit Action: Manually Integrated Audit Reason: Baseline

Eurofins TestAmerica, Sacramento

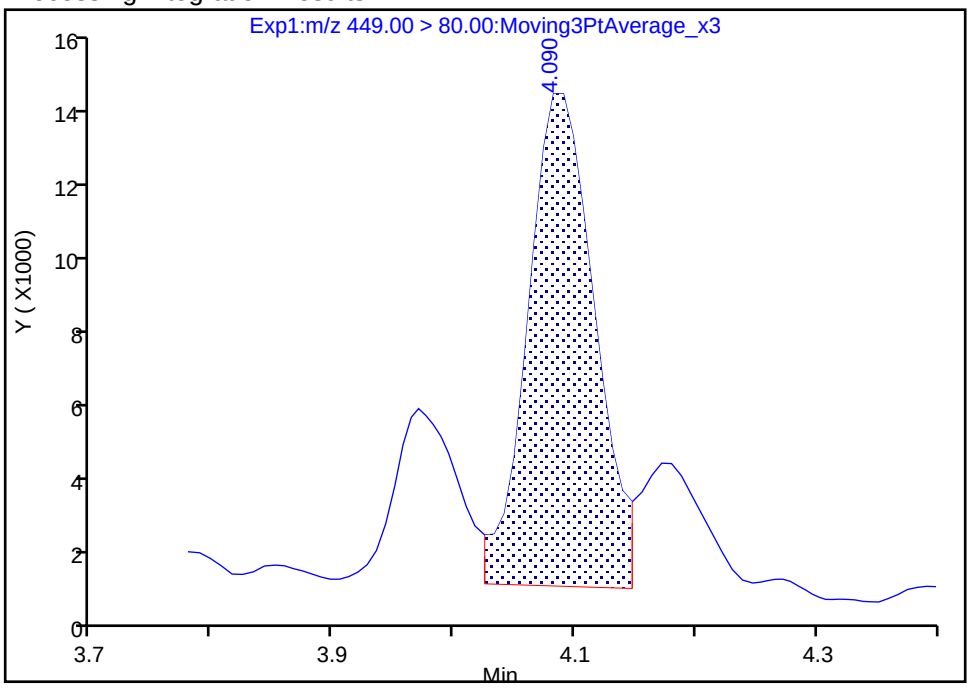
| | | | | | |
|---|---|---|---|---|---|
| Data File: | \\chromfs\Sacramento\ChromData\A18\20200911-103101.b\2020.09.11_A18_PFC_A_019.d | | | | |
| Injection Date: | 11-Sep-2020 13:09:17 | Instrument ID: | A18 | | |
| Lims ID: | 460-217547-E-5-A | Lab Sample ID: | 320-217547-5 | | |
| Client ID: | MW-213 | | | | |
| Operator ID: | TAISACA18-PC\A-18 | ALS Bottle#: | 10 | Worklist Smp#: | 5 |
| Injection Vol: | 20.0 ul | Dil. Factor: | 1.0000 | | |
| Method: | PFAS_A18V2 | Limit Group: | LC PFC ICAL | | |
| Column: | Gemini C18 3um 3mm x 50 mm ( 3.00mm) | Detector | EXP1 | | |

## 24 Perfluoroheptanesulfonic acid, CAS: 375-92-8

Signal: 1

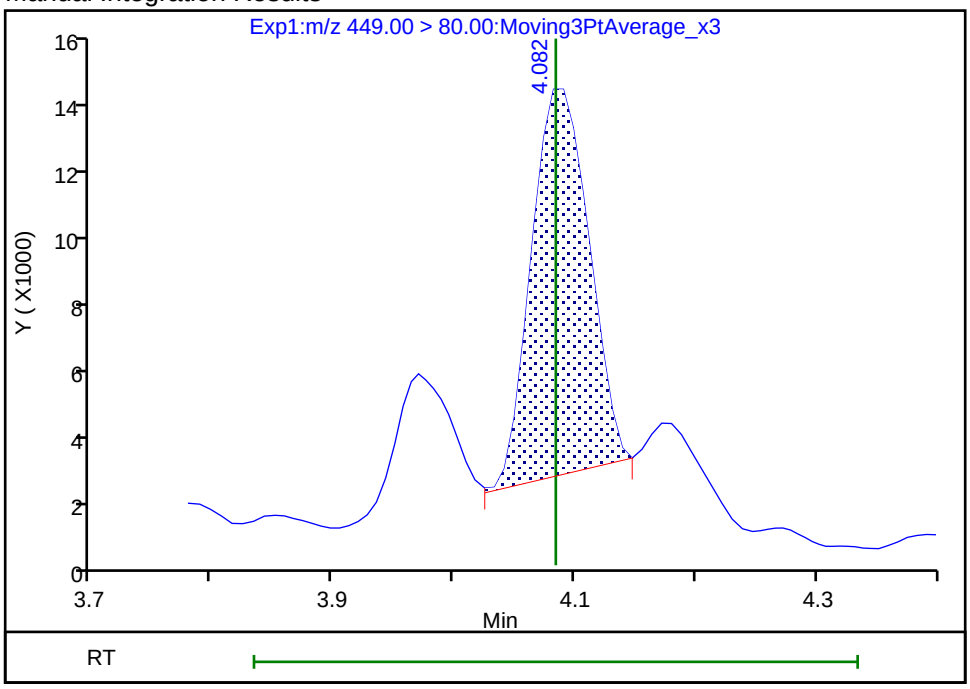
Processing Integration Results

RT: 4.09
Area: 45839
Amount: 0.028158
Amount Units: ng/ml




Manual Integration Results

RT: 4.08
Area: 34272
Amount: 0.021053
Amount Units: ng/ml




Reviewer: sanjumnair, 14-Sep-2020 10:05:27
Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

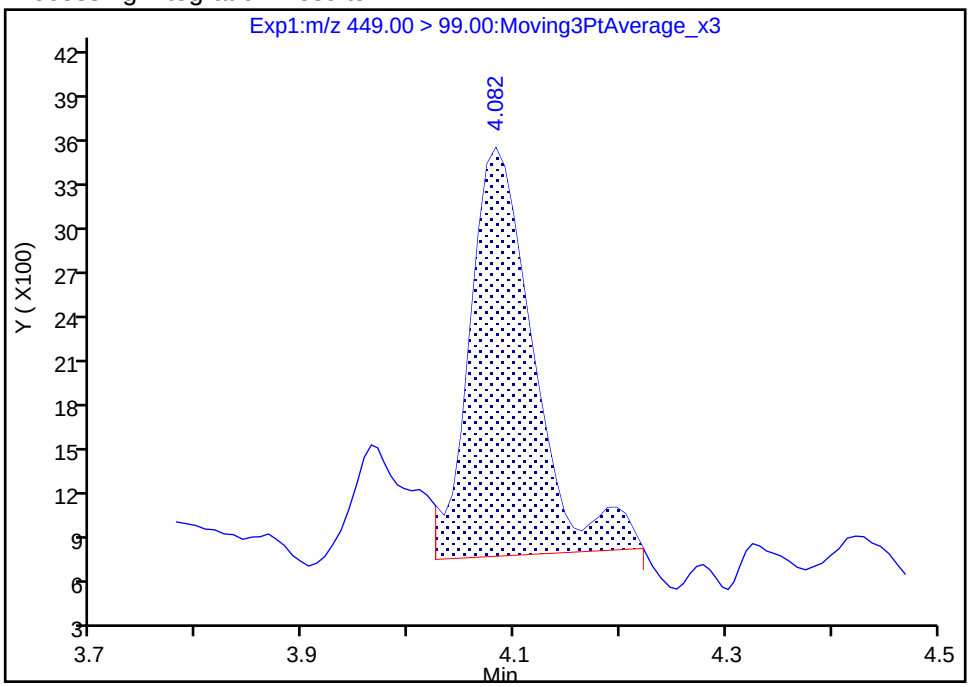
| | | | | | |
|---|---|---|---|---|---|
| Data File: | \\chromfs\Sacramento\ChromData\A18\20200911-103101.b\2020.09.11_A18_PFC_A_019.d | | | | |
| Injection Date: | 11-Sep-2020 13:09:17 | Instrument ID: | A18 | | |
| Lims ID: | 460-217547-E-5-A | Lab Sample ID: | 320-217547-5 | | |
| Client ID: | MW-213 | | | | |
| Operator ID: | TAISACA18-PC\A-18 | ALS Bottle#: | 10 | Worklist Smp#: | 5 |
| Injection Vol: | 20.0 ul | Dil. Factor: | 1.0000 | | |
| Method: | PFAS_A18V2 | Limit Group: | LC PFC ICAL | | |
| Column: | Gemini C18 3um 3mm x 50 mm ( 3.00mm) | Detector | EXP1 | | |

## 24 Perfluoroheptanesulfonic acid, CAS: 375-92-8

Signal: 2

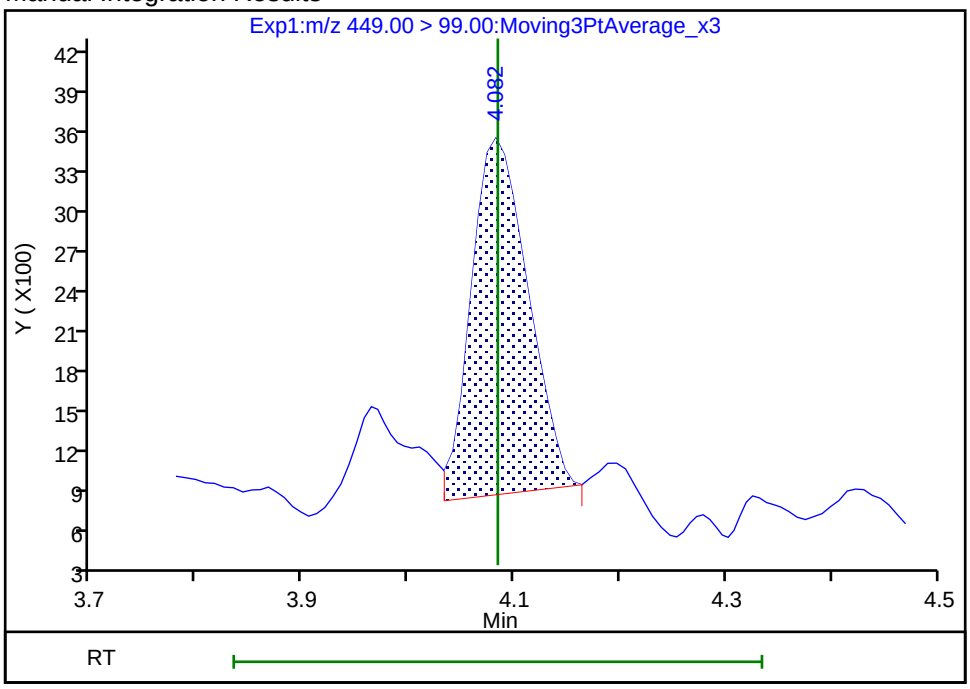
Processing Integration Results

RT: 4.08
Area: 11379
Amount: 0.028158
Amount Units: ng/ml




Manual Integration Results

RT: 4.08
Area: 9737
Amount: 0.021053
Amount Units: ng/ml




Reviewer: sanjumnair, 14-Sep-2020 10:05:30
Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

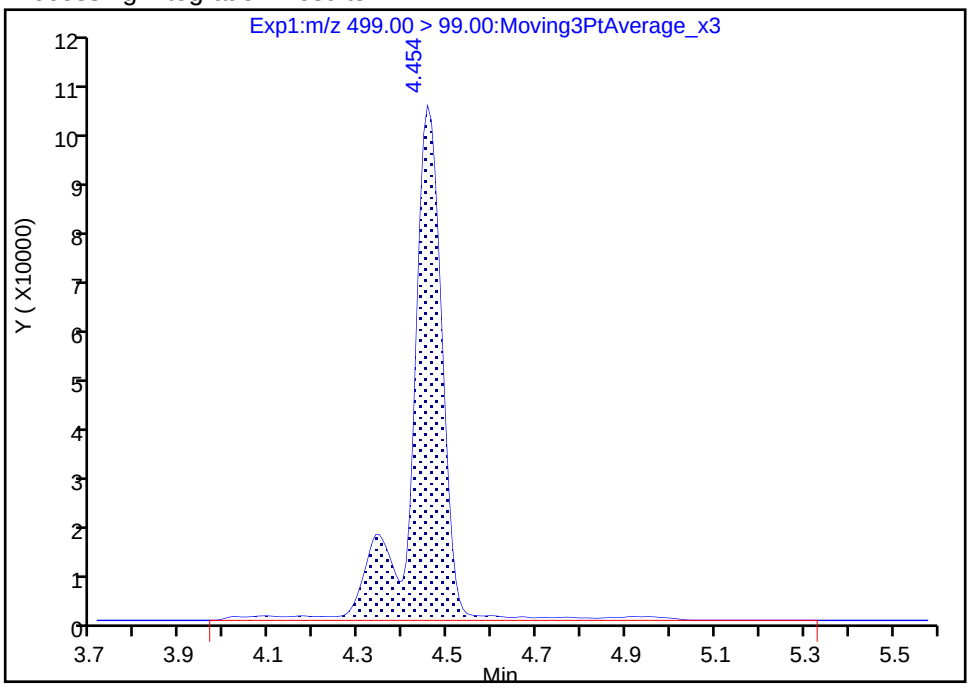
| | | | | | |
|---|---|---|---|---|---|
| Data File: | \\chromfs\Sacramento\ChromData\A18\20200911-103101.b\2020.09.11_A18_PFC_A_019.d | | | | |
| Injection Date: | 11-Sep-2020 13:09:17 | Instrument ID: | A18 | | |
| Lims ID: | 460-217547-E-5-A | Lab Sample ID: | 320-217547-5 | | |
| Client ID: | MW-213 | | | | |
| Operator ID: | TAISACA18-PC\A-18 | ALS Bottle#: | 10 | Worklist Smp#: | 5 |
| Injection Vol: | 20.0 ul | Dil. Factor: | 1.0000 | | |
| Method: | PFAS_A18V2 | Limit Group: | LC PFC ICAL | | |
| Column: | Gemini C18 3um 3mm x 50 mm ( 3.00mm) | Detector | EXP1 | | |

## 29 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 2

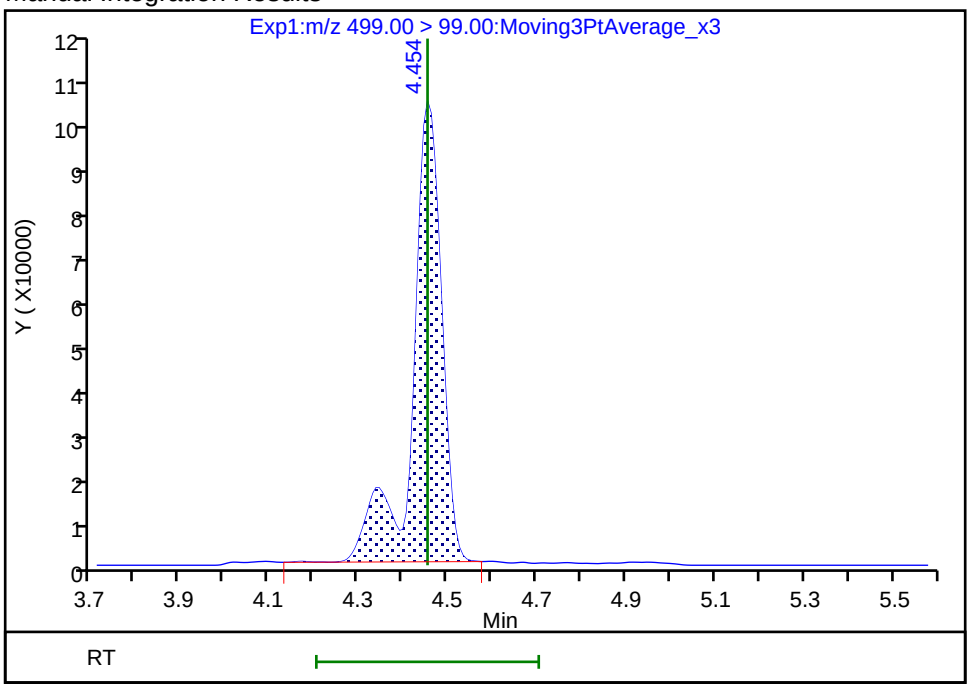
Processing Integration Results

RT: 4.45
Area: 487318
Amount: 1.638739
Amount Units: ng/ml




Manual Integration Results

RT: 4.45
Area: 448988
Amount: 1.612521
Amount Units: ng/ml




Reviewer: sanjumnair, 14-Sep-2020 10:05:52

Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

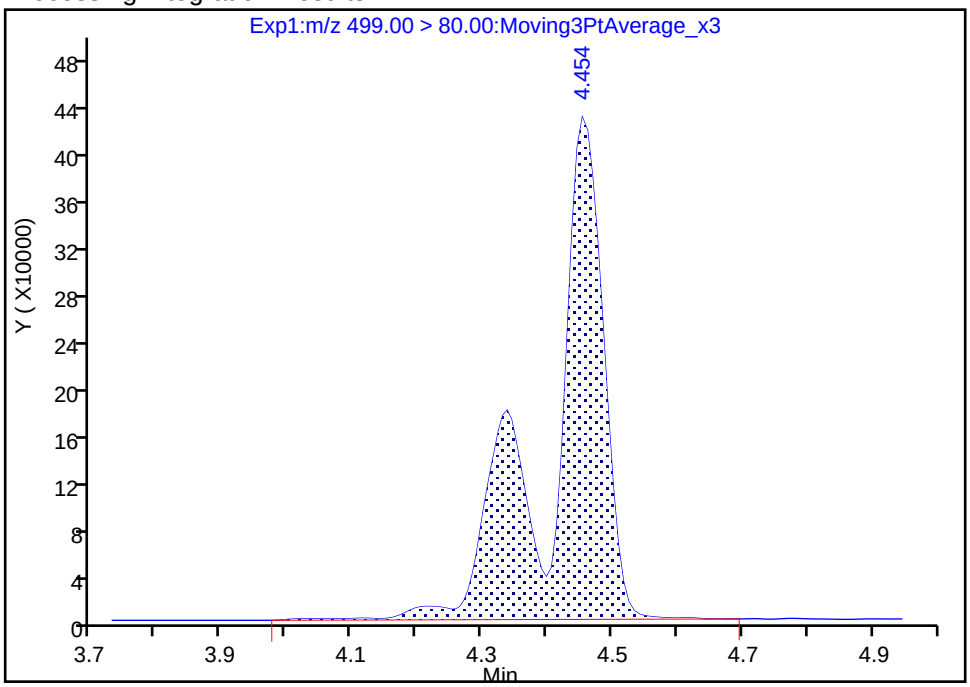
| | | | | | |
|---|---|---|---|---|---|
| Data File: | \\chromfs\Sacramento\ChromData\A18\20200911-103101.b\2020.09.11_A18_PFC_A_019.d | | | | |
| Injection Date: | 11-Sep-2020 13:09:17 | Instrument ID: | A18 | | |
| Lims ID: | 460-217547-E-5-A | Lab Sample ID: | 320-217547-5 | | |
| Client ID: | MW-213 | | | | |
| Operator ID: | TAISACA18-PC\A-18 | ALS Bottle#: | 10 | Worklist Smp#: | 5 |
| Injection Vol: | 20.0 ul | Dil. Factor: | 1.0000 | | |
| Method: | PFAS_A18V2 | Limit Group: | LC PFC ICAL | | |
| Column: | Gemini C18 3um 3mm x 50 mm ( 3.00mm) | Detector | EXP1 | | |

## 29 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 1

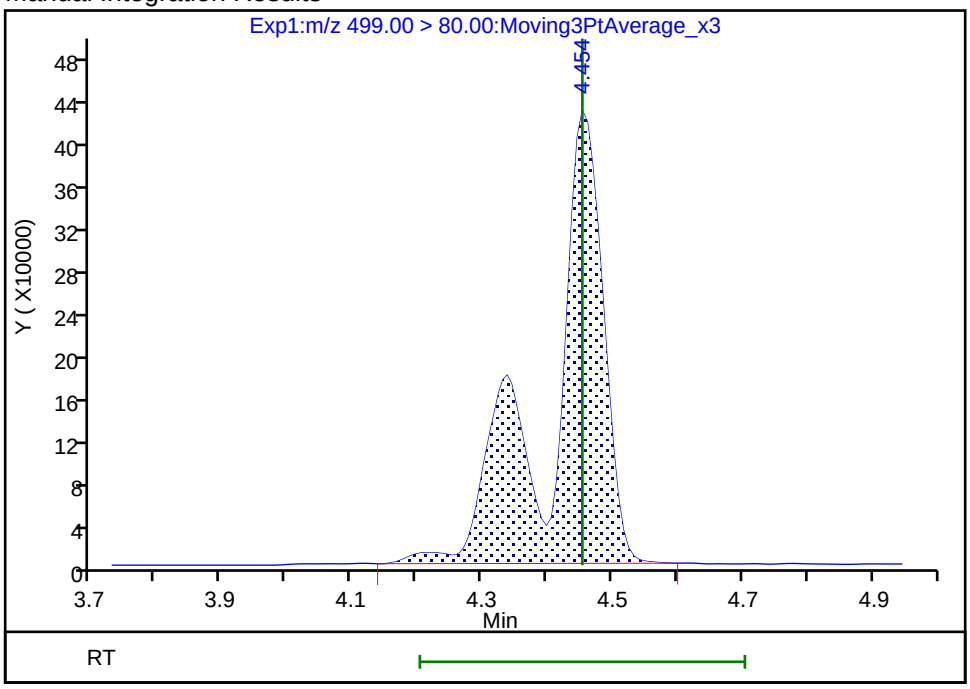
Processing Integration Results

RT: 4.45
Area: 2470600
Amount: 1.638739
Amount Units: ng/ml




Manual Integration Results

RT: 4.45
Area: 2431074
Amount: 1.612521
Amount Units: ng/ml




Reviewer: sanjumnair, 14-Sep-2020 10:05:58
Audit Action: Manually Integrated Audit Reason: Baseline

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento  Job No.: 460-217547-1

SDG No.:

Client Sample ID: DUP  Lab Sample ID: 460-217547-6

Matrix: Water  Lab File ID: 2020.09.11_A18_PFC_A_020.d

Analysis Method: 537 (modified)  Date Collected: 09/02/2020 00:00

Extraction Method: 3535  Date Extracted: 09/09/2020 18:52

Sample wt/vol: 250.8(mL)  Date Analyzed: 09/11/2020 13:18

Con. Extract Vol.: 10.00(mL)  Dilution Factor: 1

Injection Volume: 20(uL)  GC Column: Gemini C18 3x50 ID: 3(mm)

% Moisture:  GPC Cleanup:(Y/N) N

Analysis Batch No.: 411377  Units: ng/L

| CAS NO. | COMPOUND NAME | RESULT | Q | RL | MDL |
|---|---|---|---|---|---|
| 375-22-4 | Perfluorobutanoic acid (PFBA) | 0.70 | J B | 1.99 | 0.35 |
| 2706-90-3 | Perfluoropentanoic acid (PFPeA) | 0.49 | U | 1.99 | 0.49 |
| 307-24-4 | Perfluorohexanoic acid (PFHxA) | 0.58 | U | 1.99 | 0.58 |
| 375-85-9 | Perfluoroheptanoic acid (PFHpA) | 0.25 | U | 1.99 | 0.25 |
| 335-67-1 | Perfluorooctanoic acid (PFOA) | 0.85 | U | 1.99 | 0.85 |
| 375-95-1 | Perfluorononanoic acid (PFNA) | 0.27 | U | 1.99 | 0.27 |
| 335-76-2 | Perfluorodecanoic acid (PFDA) | 0.31 | U | 1.99 | 0.31 |
| 2058-94-8 | Perfluoroundecanoic acid (PFUnA) | 1.10 | U | 1.99 | 1.10 |
| 307-55-1 | Perfluorododecanoic acid (PFDoA) | 0.55 | U | 1.99 | 0.55 |
| 72629-94-8 | Perfluorotridecanoic acid (PFTriA) | 1.30 | U | 1.99 | 1.30 |
| 376-06-7 | Perfluorotetradecanoic acid (PFTeA) | 0.29 | U | 1.99 | 0.29 |
| 375-73-5 | Perfluorobutanesulfonic acid (PFBS) | 0.20 | U | 1.99 | 0.20 |
| 355-46-4 | Perfluorohexanesulfonic acid (PFHxS) | 0.37 | J B | 1.99 | 0.17 |
| 375-92-8 | Perfluoroheptanesulfonic Acid (PFHpS) | 0.19 | U | 1.99 | 0.19 |
| 1763-23-1 | Perfluorooctanesulfonic acid (PFOS) | 0.79 | J | 1.99 | 0.54 |
| 335-77-3 | Perfluorodecanesulfonic acid (PFDS) | 0.32 | U | 1.99 | 0.32 |
| 754-91-6 | Perfluorooctanesulfonamide (FOSA) | 0.35 | U | 1.99 | 0.35 |
| 2355-31-9 | N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA) | 3.09 | U | 19.9 | 3.09 |
| 2991-50-6 | N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA) | 1.89 | U | 19.9 | 1.89 |
| 27619-97-2 | 6:2 FTS | 1.99 | U | 19.9 | 1.99 |
| 39108-34-4 | 8:2 FTS | 1.99 | U | 19.9 | 1.99 |

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento  Job No.: 460-217547-1

SDG No.:

Client Sample ID: DUP  Lab Sample ID: 460-217547-6

Matrix: Water  Lab File ID: 2020.09.11_A18_PFC_A_020.d

Analysis Method: 537 (modified)  Date Collected: 09/02/2020 00:00

Extraction Method: 3535  Date Extracted: 09/09/2020 18:52

Sample wt/vol: 250.8(mL)  Date Analyzed: 09/11/2020 13:18

Con. Extract Vol.: 10.00(mL)  Dilution Factor: 1

Injection Volume: 20(uL)  GC Column: Gemini C18 3x50 ID: 3(mm)

% Moisture:  GPC Cleanup:(Y/N) N

Analysis Batch No.: 411377  Units: ng/L

| CAS NO. | ISOTOPE DILUTION | %REC | Q | LIMITS |
|---|---|---|---|---|
| STL00992 | 13C4 PFBA | 60 | | 25-150 |
| STL01893 | 13C5 PFPeA | 79 | | 25-150 |
| STL00993 | 13C2 PFHxA | 92 | | 25-150 |
| STL01892 | 13C4 PFHpA | 85 | | 25-150 |
| STL00990 | 13C4 PFOA | 90 | | 25-150 |
| STL00995 | 13C5 PFNA | 93 | | 25-150 |
| STL00996 | 13C2 PFDA | 99 | | 25-150 |
| STL00997 | 13C2 PFUnA | 93 | | 25-150 |
| STL00998 | 13C2 PFDoA | 81 | | 25-150 |
| STL02116 | 13C2 PFTeDA | 97 | | 25-150 |
| STL02337 | 13C3 PFBS | 90 | | 25-150 |
| STL00994 | 18O2 PFHxS | 95 | | 25-150 |
| STL00991 | 13C4 PFOS | 95 | | 25-150 |
| STL01056 | 13C8 FOSA | 79 | | 25-150 |
| STL02118 | d3-NMeFOSAA | 68 | | 25-150 |
| STL02117 | d5-NEtFOSAA | 74 | | 25-150 |
| STL02279 | M2-6:2 FTS | 108 | | 25-150 |
| STL02280 | M2-8:2 FTS | 95 | | 25-150 |

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\A18\20200911-103101.b\2020.09.11_A18_PFC_A_020.d
Lims ID: 460-217547-E-6-A
Client ID: DUP
Sample Type: Client
Inject. Date: 11-Sep-2020 13:18:27 ALS Bottle#: 11 Worklist Smp#: 6
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Sample Info: 460-217547-e-6-a
Misc. Info.: Plate: 1 Rack: 1
Operator ID: TAISACA18-PC\A-18 Instrument ID: A18

Method: \\chromfs\Sacramento\ChromData\A18\20200911-103101.b\PFAS_A18V2.m
Limit Group: LC PFC ICAL
Last Update: 14-Sep-2020 10:09:52 Calib Date: 25-Aug-2020 17:37:57
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\A18\20200825-102078.b\2020.08.25_A18_ICAL_A_017.d

Column 1 : Gemini C18 3um 3mm x 50 mm ( 3.00 mm) Det: EXP1
Process Host: CTX1038

First Level Reviewer: sanjumnair Date: 14-Sep-2020 10:09:52
Ratio Calibration: CCV Sample: \\chromfs\Sacramento\ChromData\A18\20200911-103101.b\2020.09.11_A18_PFC_A_015.d

| Signal | RT | EXP RT | DLT RT | REL RT | Response | Amount ng/ml | Ratio(Limits) | %Rec | S/N | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| D 1 13C4 PFBA | | | | | | | | | | |
| 217.00 > 172.00 | 2.557 | 2.566 | -0.009 | 0.626 | 11799712 | 1.50 | | 59.9 | 6436 | |
| 2 Perfluorobutanoic acid | | | | | | | | | | M |
| 212.90 > 169.00 | 2.557 | 2.566 | -0.009 | 1.000 | 72055 | 0.0176 | | | 1.6 | M |
| D 4 13C5 PFPeA | | | | | | | | | | |
| 267.90 > 223.00 | 2.909 | 2.909 | 0.0 | 0.713 | 12176859 | 1.99 | | 79.4 | 4509 | |
| 5 Perfluoropentanoic acid | | | | | | | | | | M |
| 262.90 > 219.00 | 2.909 | 2.920 | -0.011 | 1.000 | 48064 | 0.009898 | | | 0.9 | M |
| D 9 13C3 PFBS | | | | | | | | | | |
| 301.90 > 80.00 | 2.940 | 2.951 | -0.011 | 0.720 | 10118999 | 2.10 | | 90.4 | 2627 | |
| 6 Perfluorobutanesulfonic acid | | | | | | | | | | M |
| 298.90 > 80.00 | 2.940 | 2.951 | -0.011 | 1.000 | 18902 | 0.004301 | Target=2.37 | | 2.1 | M |
| 298.90 > 99.00 | 2.940 | 2.951 | -0.011 | 1.000 | 11540 | | 1.64(1.19-3.56) | | 1.5 | |
| D 11 13C2 PFHxA | | | | | | | | | | |
| 315.00 > 270.00 | 3.278 | 3.290 | -0.012 | 0.803 | 14142886 | 2.31 | | 92.4 | 4762 | |
| D 17 18O2 PFHxS | | | | | | | | | | |
| 403.00 > 84.00 | 3.691 | 3.702 | -0.011 | 0.904 | 5742253 | 2.26 | | 95.4 | 11440 | |
| D 18 13C4 PFHpA | | | | | | | | | | |
| 367.00 > 322.00 | 3.691 | 3.702 | -0.011 | 0.904 | 11072258 | 2.12 | | 84.7 | 6104 | |
| 16 Perfluoroheptanoic acid | | | | | | | | | | |
| 363.00 > 319.00 | 3.691 | 3.702 | -0.011 | 1.000 | 22737 | 0.005064 | Target=3.69 | | 0.9 | |
| 363.00 > 169.00 | 3.701 | 3.702 | -0.001 | 1.003 | 5281 | | 4.31(1.85-5.54) | | 2.9 | |
| 15 Perfluorohexanesulfonic acid | | | | | | | | | | M |
| 399.00 > 80.00 | 3.691 | 3.702 | -0.011 | 1.000 | 26650 | 0.009290 | Target=3.35 | | 8.6 | M |
| 399.00 > 99.00 | 3.701 | 3.702 | -0.001 | 1.003 | 11100 | | 2.40(1.67-5.02) | | 3.3 | M |
| D 20 M2-6:2 FTS | | | | | | | | | | |
| 429.00 > 81.00 | 4.067 | 4.068 | -0.002 | 0.996 | 2494981 | 2.56 | | 108 | 1162 | |

| Signal | RT | EXP RT | DLT RT | REL RT | Response | Amount ng/ml | Ratio(Limits) | %Rec | S/N | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| 21 6:2 FTS | | | | | | | | | | |
| 427.00 > 407.00 | 4.058 | 4.068 | -0.010 | 0.998 | 14012 | 0.005802 | | | 18.5 | |
| D 25 13C4 PFOA | | | | | | | | | | |
| 417.00 > 372.00 | 4.091 | 4.092 | -0.001 | 1.002 | 11239004 | 2.26 | | 90.3 | 6260 | |
| 22 Perfluorooctanoic acid | | | | | | | | | | M |
| 413.00 > 369.00 | 4.083 | 4.092 | -0.009 | 0.998 | 66976 | 0.0146 | Target=2.91 | | 4.7 | M |
| 413.00 > 169.00 | 4.083 | 4.092 | -0.009 | 0.998 | 27799 | | 2.41(1.45-4.36) | | 13.7 | M |
| * 23 13C2 PFOA | | | | | | | | | | |
| 415.00 > 370.00 | 4.083 | 4.092 | -0.009 | | 12435808 | 2.50 | | | 5581 | |
| D 27 13C4 PFOS | | | | | | | | | | |
| 503.00 > 80.00 | 4.447 | 4.454 | -0.007 | 1.089 | 3911924 | 2.27 | | 95.0 | 1649 | |
| 29 Perfluorooctanesulfonic acid | | | | | | | | | | M |
| 499.00 > 80.00 | 4.326 | 4.454 | -0.128 | 0.973 | 33418 | 0.0197 | Target=4.72 | | 6.4 | M |
| 499.00 > 99.00 | 4.447 | 4.454 | -0.007 | 1.000 | 5271 | | 6.34(2.36-7.07) | | 2.1 | M |
| D 30 13C5 PFNA | | | | | | | | | | |
| 468.00 > 423.00 | 4.463 | 4.470 | -0.007 | 1.093 | 9359165 | 2.33 | | 93.3 | 5975 | |
| D 33 13C8 FOSA | | | | | | | | | | |
| 506.00 > 78.00 | 4.786 | 4.786 | 0.0 | 1.172 | 5470734 | 1.97 | | 78.7 | 7082 | |
| 34 Perfluorooctanesulfonamide | | | | | | | | | | |
| 498.00 > 78.00 | 4.786 | 4.786 | 0.0 | 1.000 | 14337 | 0.007041 | | | 61.0 | |
| D 39 13C2 PFDA | | | | | | | | | | |
| 515.00 > 470.00 | 4.820 | 4.828 | -0.008 | 1.181 | 9659247 | 2.48 | | 99.2 | 8286 | |
| D 38 M2-8:2 FTS | | | | | | | | | | |
| 529.00 > 81.00 | 4.820 | 4.828 | -0.008 | 1.181 | 3188441 | 2.27 | | 94.8 | 1565 | |
| D 40 d3-NMeFOSAA | | | | | | | | | | |
| 573.00 > 419.00 | 4.978 | 5.000 | -0.022 | 1.219 | 4419541 | 1.69 | | 67.6 | 3251 | |
| D 43 13C2 PFUnA | | | | | | | | | | |
| 565.00 > 520.00 | 5.138 | 5.157 | -0.019 | 1.259 | 8991854 | 2.33 | | 93.2 | 15940 | |
| D 44 d5-NEtFOSAA | | | | | | | | | | |
| 589.00 > 419.00 | 5.147 | 5.157 | -0.010 | 1.261 | 5109379 | 1.85 | | 73.9 | 2636 | |
| 46 NEtFOSA | | | | | | | | | | |
| 584.00 > 419.00 | 5.147 | 5.166 | -0.019 | 1.000 | 4282 | 0.003100 | | | 11.2 | |
| D 56 13C2 PFDoA | | | | | | | | | | |
| 615.00 > 570.00 | 5.437 | 5.448 | -0.011 | 1.332 | 7669032 | 2.02 | | 80.6 | 6665 | |
| D 61 13C2 PFTeDA | | | | | | | | | | |
| 715.00 > 670.00 | 5.936 | 5.959 | -0.023 | 1.454 | 7624481 | 2.43 | | 97.1 | 6696 | |

## QC Flag Legend

Processing Flags

Review Flags

M - Manually Integrated

Report Date: 14-Sep-2020 10:09:52 Chrom Revision: 2.3 11-Sep-2020 20:57:08

Eurofins TestAmerica, Sacramento

Data File: \\chromfs\Sacramento\ChromData\A18\20200911-103101.b\2020.09.11_A18_PFC_A_020.d

Injection Date: 11-Sep-2020 13:18:27 Instrument ID: A18

Lims ID: 460-217547-E-6-A Lab Sample ID: 320-217547-6

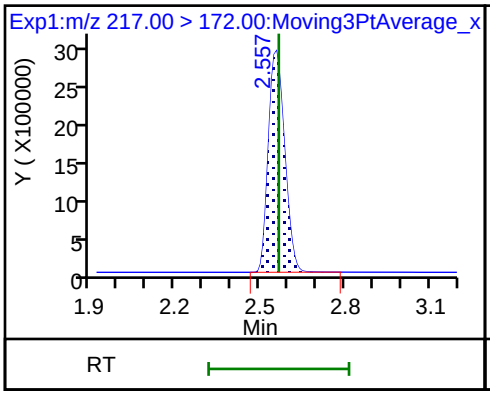
Client ID: DUP

Operator ID: TAISACA18-PC\A-18 ALS Bottle#: 11 Worklist Smp#: 6

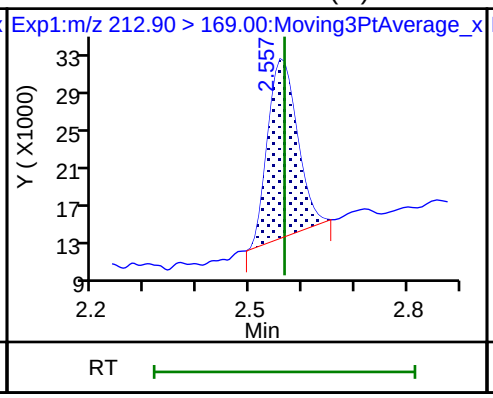
Injection Vol: 20.0 ul Dil. Factor: 1.0000

Method: PFAS_A18V2 Limit Group: LC PFC ICAL

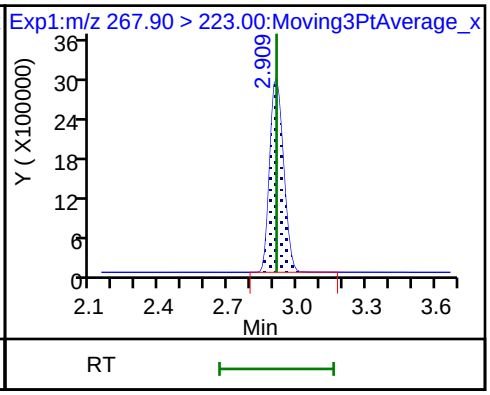
D 1 13C4 PFBA



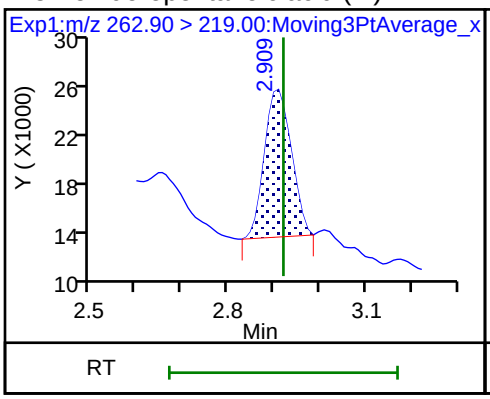

2 Perfluorobutanoic acid (M)



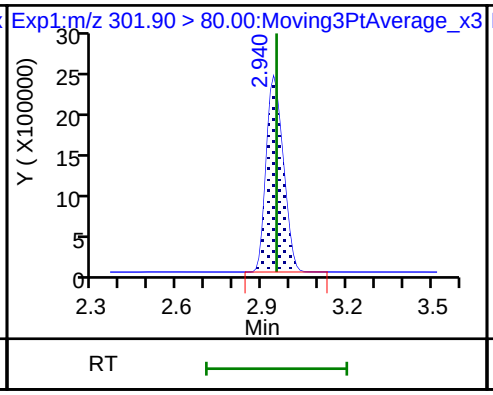

D 4 13C5 PFPeA



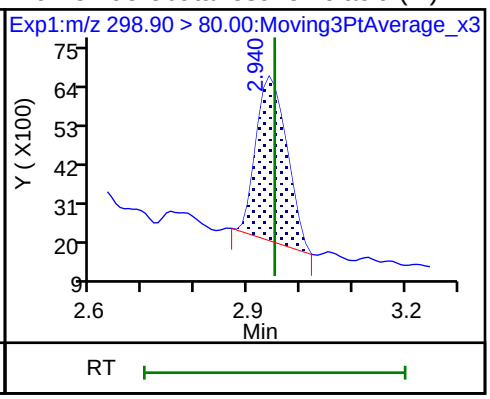

5 Perfluoropentanoic acid (M)



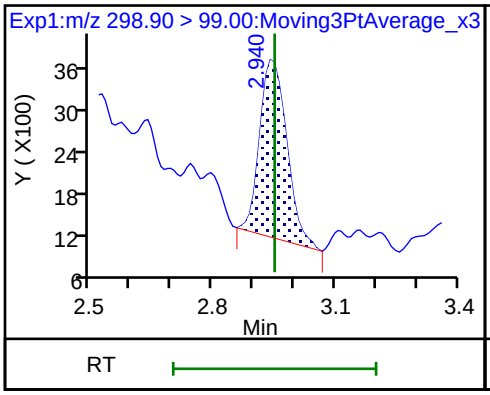

D 9 13C3 PFBS



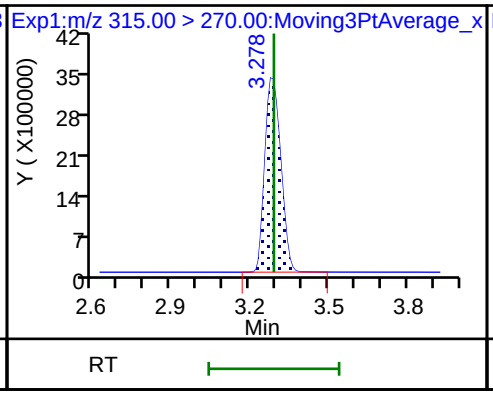

6 Perfluorobutanesulfonic acid (M)



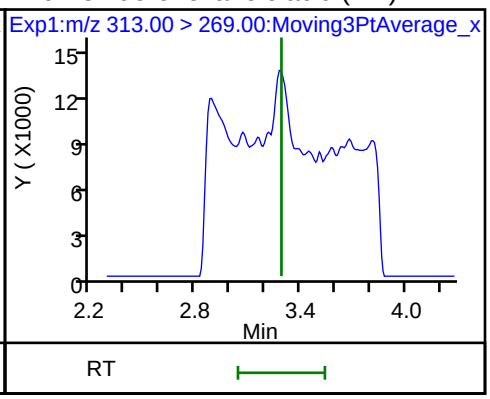

6 Perfluorobutanesulfonic acid



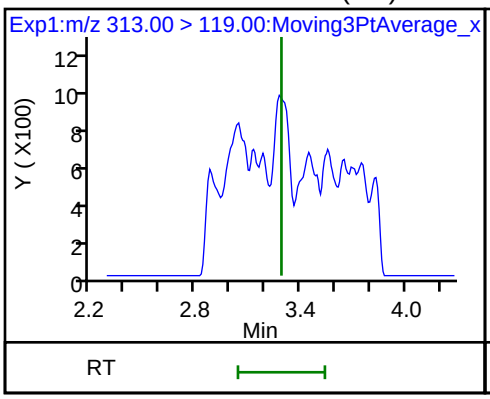

D 11 13C2 PFHxA



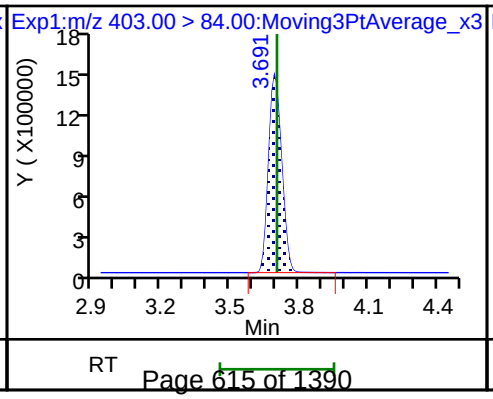

10 Perfluorohexanoic acid (ND)



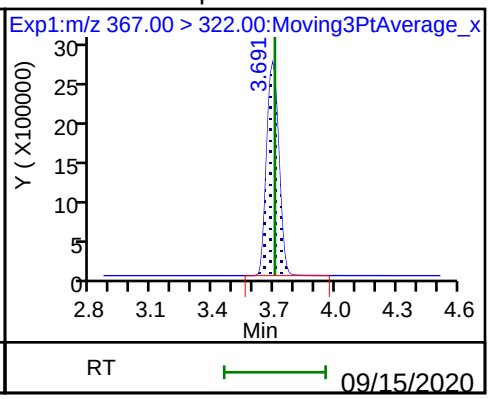

10 Perfluorohexanoic acid (ND)



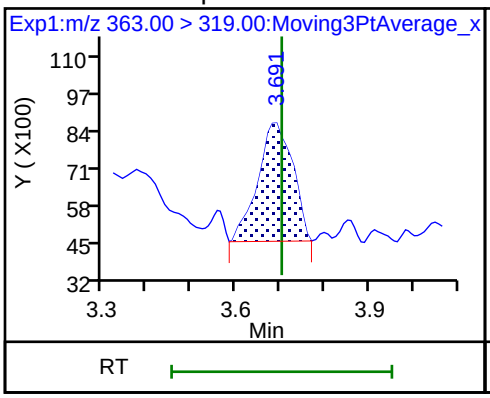

D 17 18O2 PFHxS



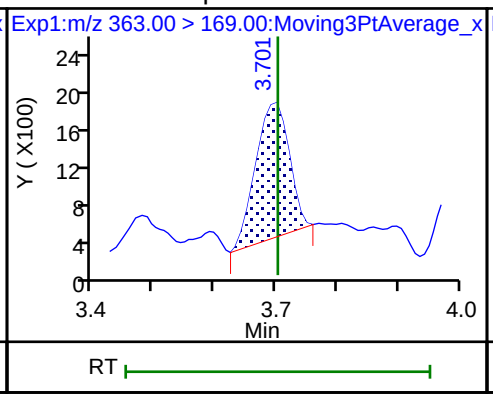

D 18 13C4 PFHpA



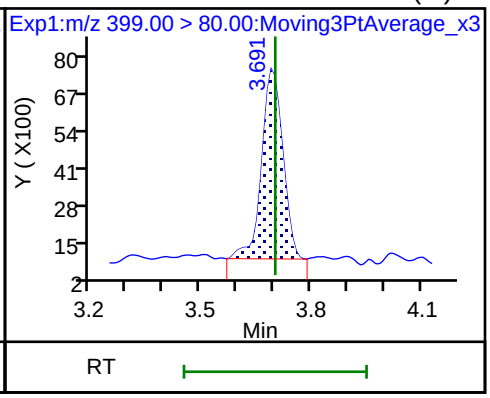
16 Perfluoroheptanoic acid



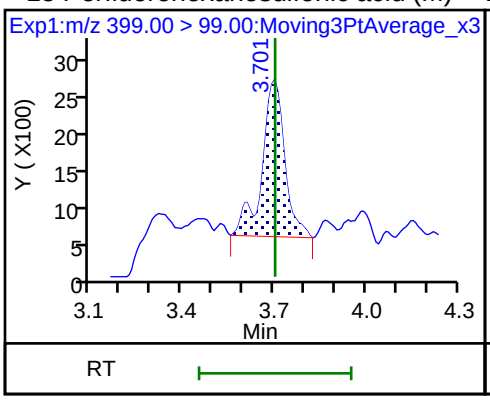

16 Perfluoroheptanoic acid



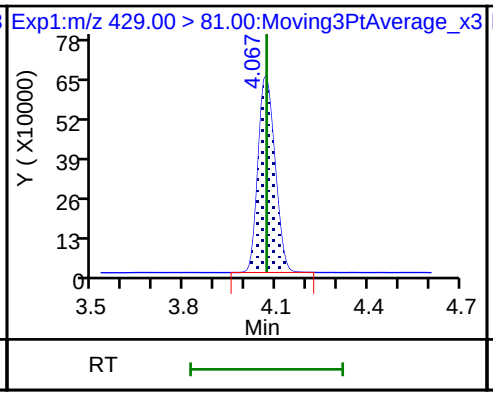

15 Perfluorohexanesulfonic acid (M)



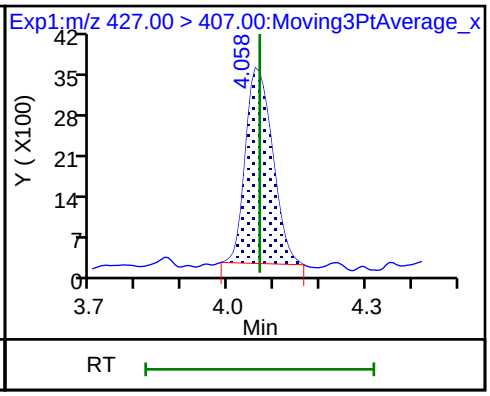

15 Perfluorohexanesulfonic acid (M)



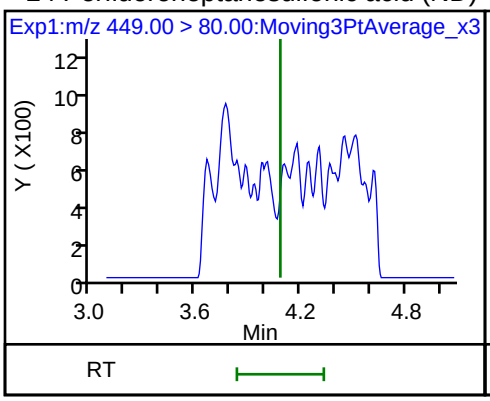

D 20 M2-6:2 FTS



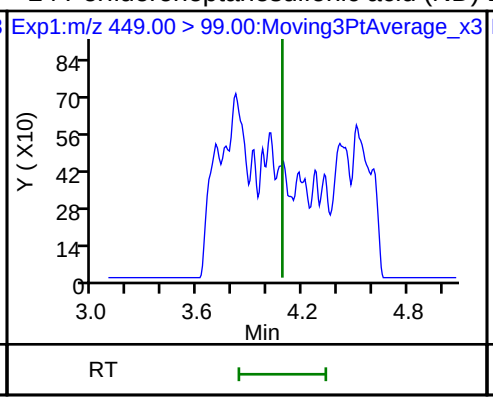

21 6:2 FTS

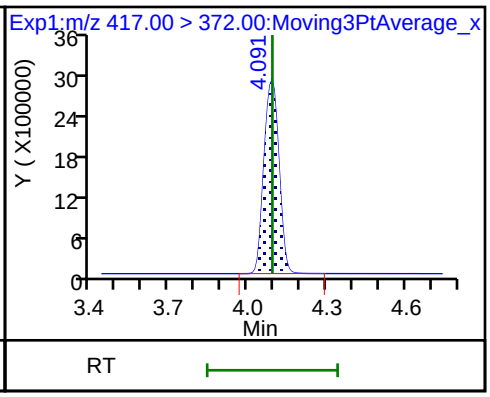



24 Perfluoroheptanesulfonic acid (ND)

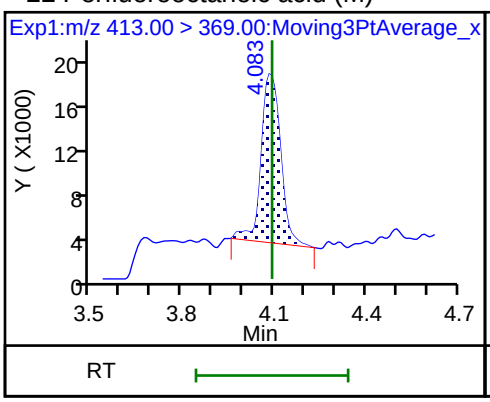



24 Perfluoroheptanesulfonic acid (ND) D 25 13C4 PFOA

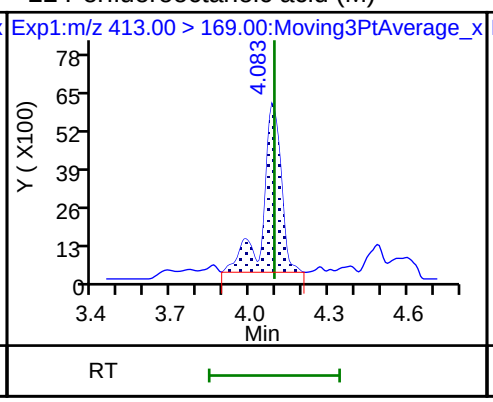


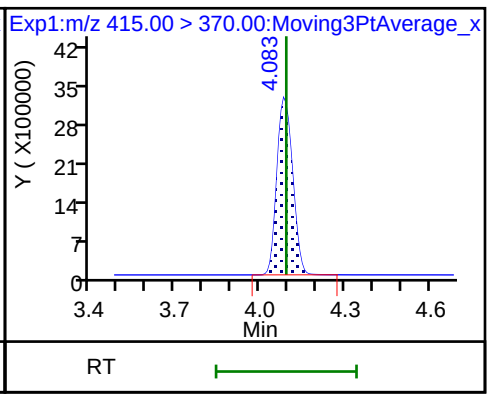

22 Perfluorooctanoic acid (M)



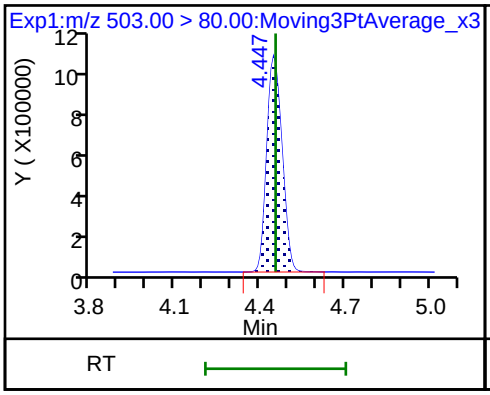

22 Perfluorooctanoic acid (M)



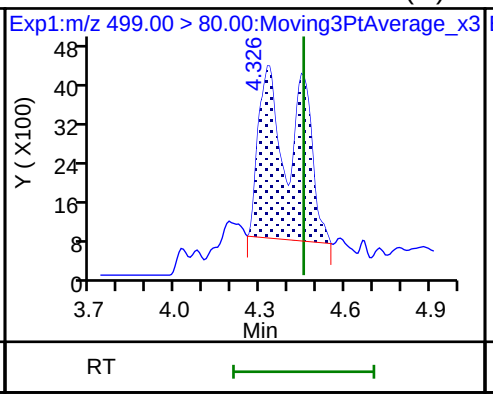

* 23 13C2 PFOA



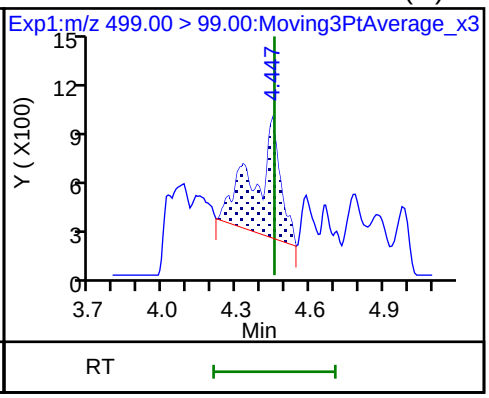
D 27 13C4 PFOS



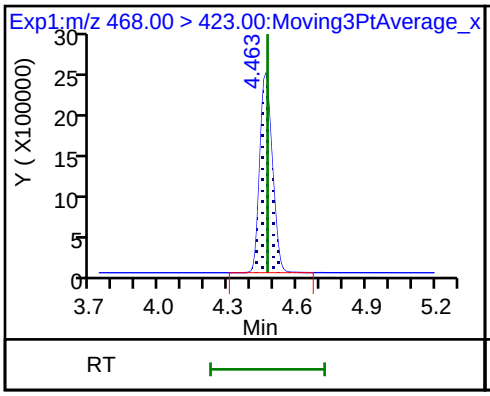

29 Perfluorooctanesulfonic acid (M)



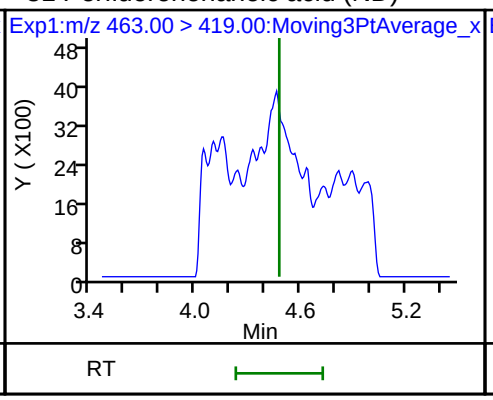

29 Perfluorooctanesulfonic acid (M)



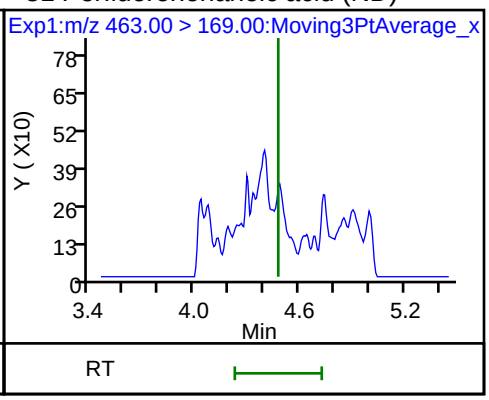

D 30 13C5 PFNA



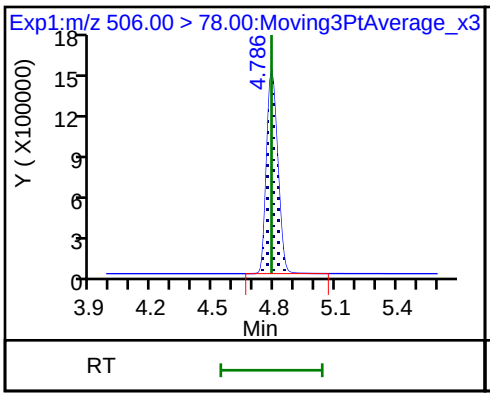

31 Perfluorononanoic acid (ND)



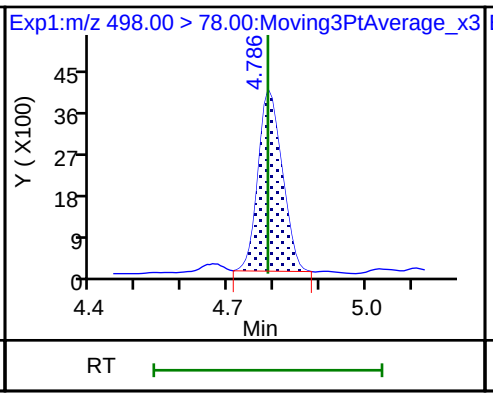

31 Perfluorononanoic acid (ND)



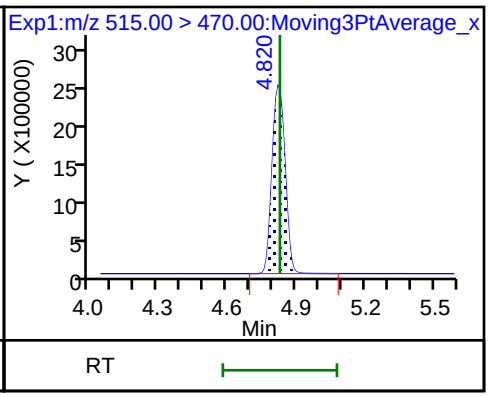

D 33 13C8 FOSA



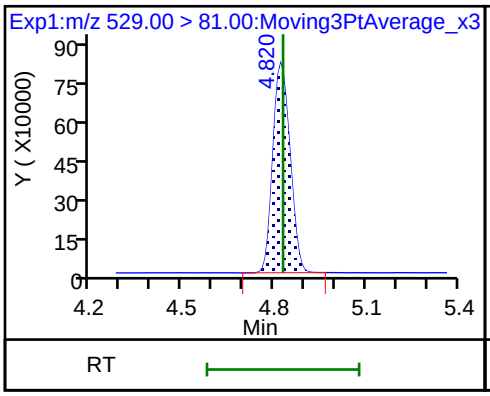

34 Perfluorooctanesulfonamide



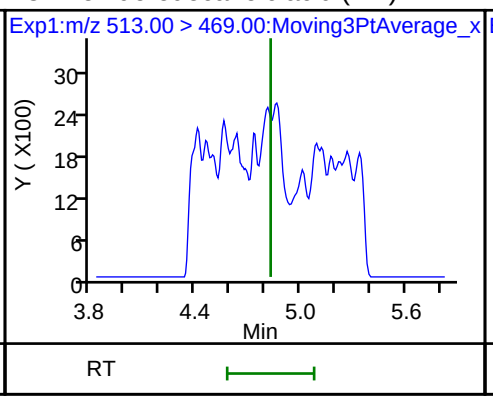

D 39 13C2 PFDA



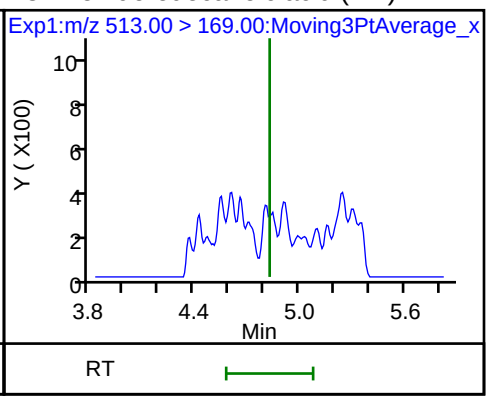

D 38 M2-8:2 FTS



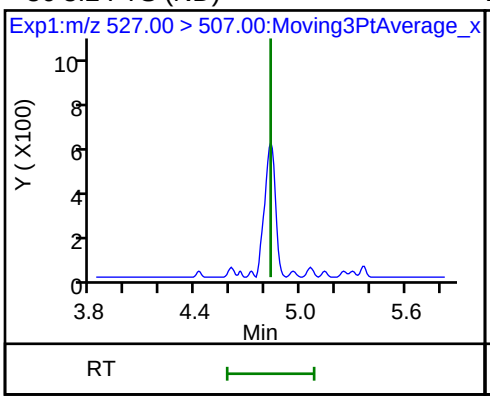

37 Perfluorodecanoic acid (ND)



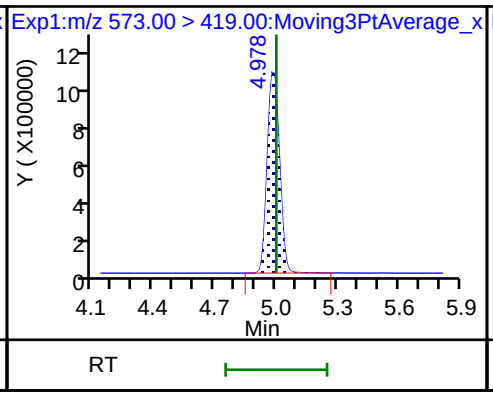

37 Perfluorodecanoic acid (ND)



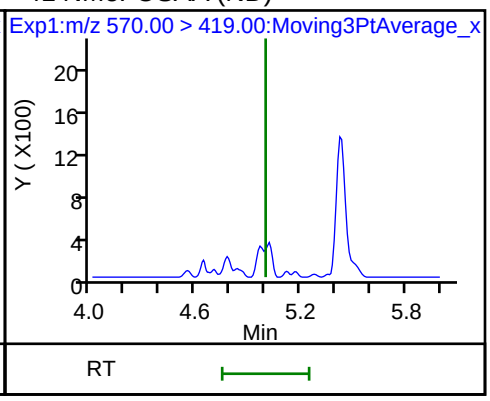
36 8:2 FTS (ND)



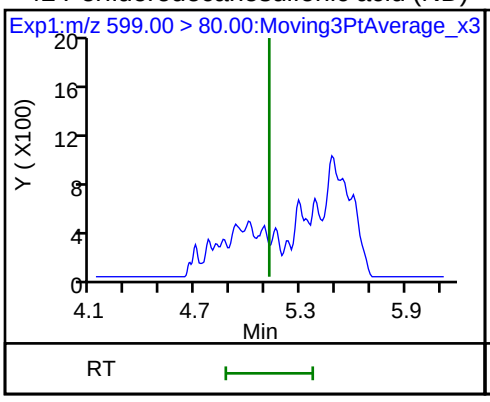

D 40 d3-NMeFOSAA



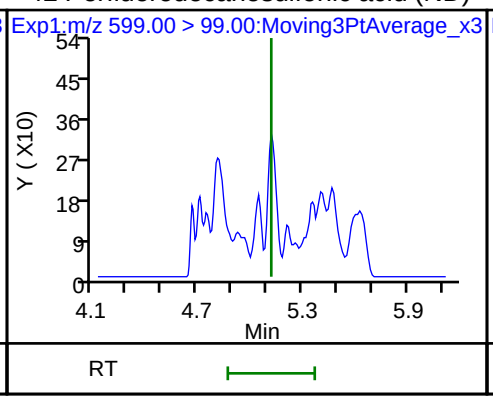

41 NMeFOSAA (ND)



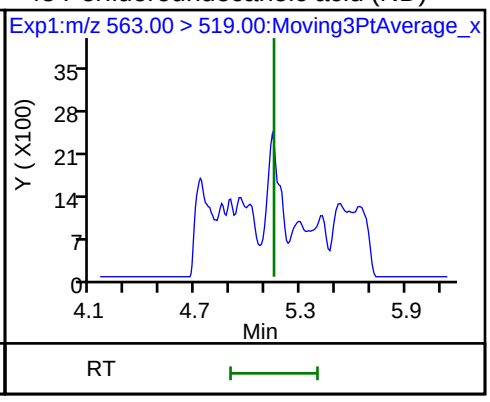

42 Perfluorodecanesulfonic acid (ND)



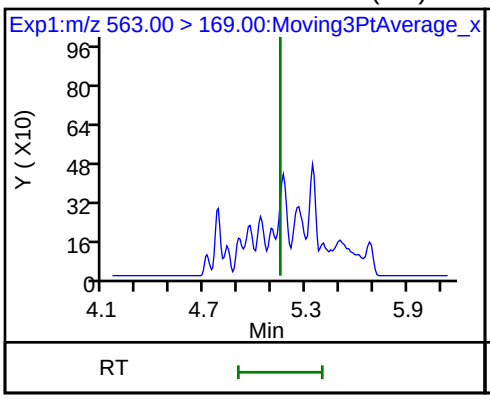

42 Perfluorodecanesulfonic acid (ND)



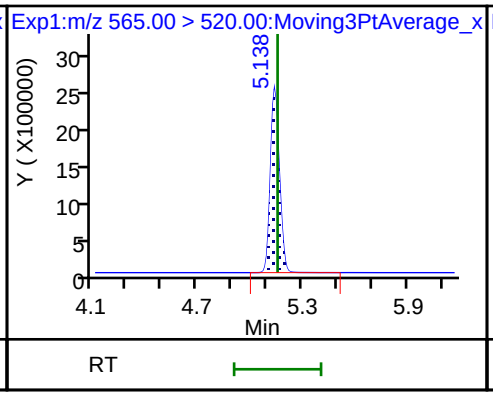

45 Perfluoroundecanoic acid (ND)



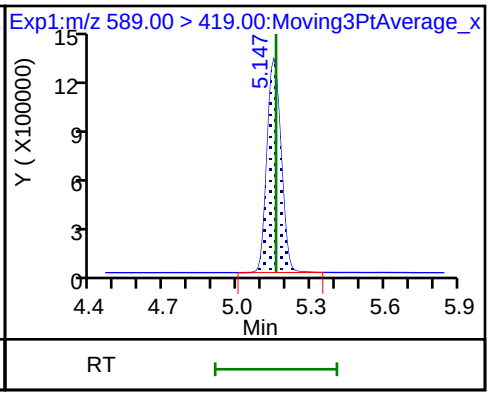

45 Perfluoroundecanoic acid (ND)



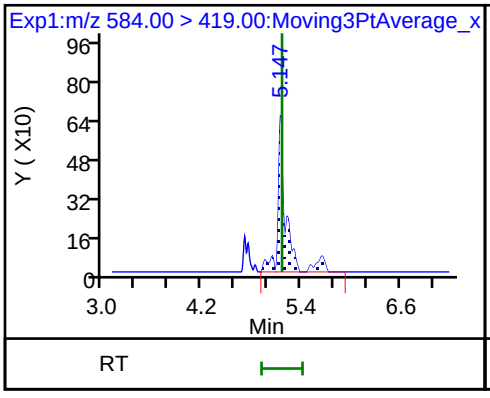

D 43 13C2 PFUnA



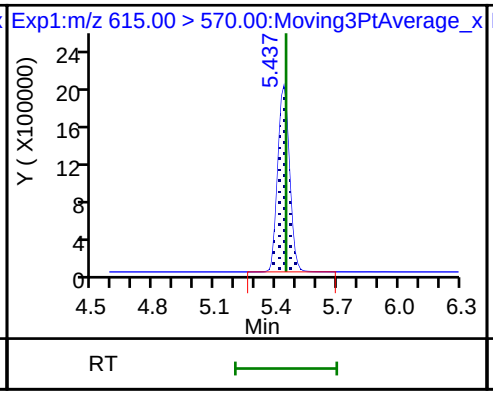

D 44 d5-NEtFOSAA



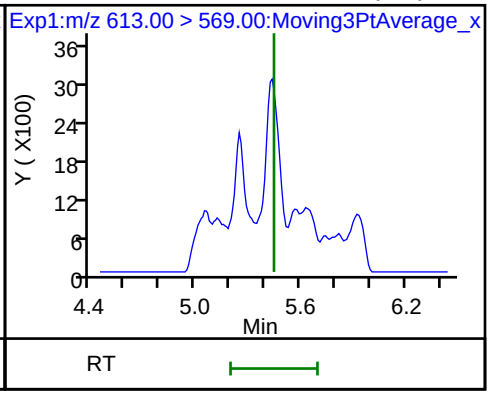

46 NEtFOSA



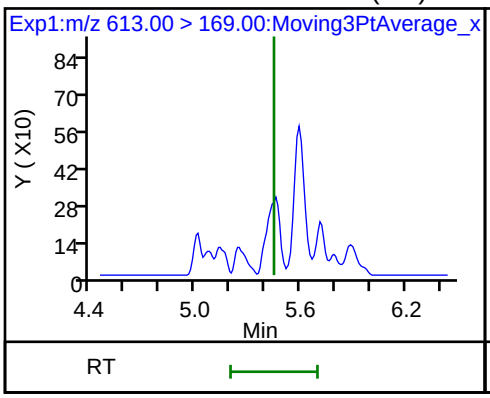

D 56 13C2 PFDoA



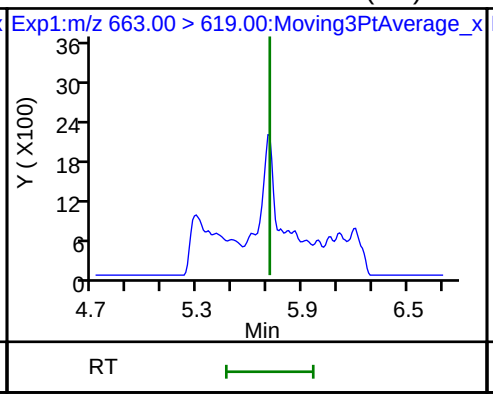

57 Perfluorododecanoic acid (ND)



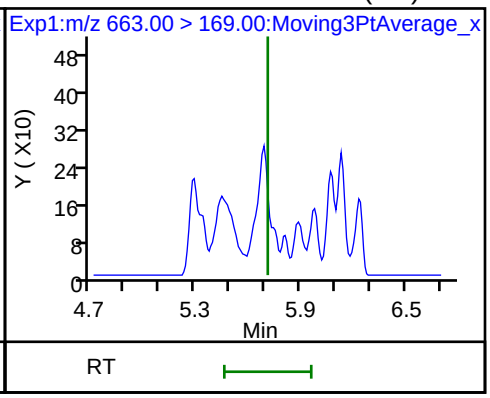
57 Perfluorododecanoic acid (ND)



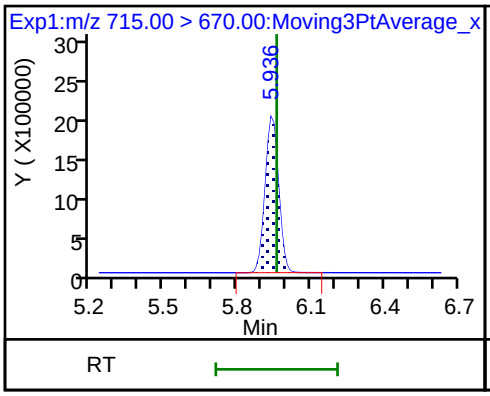

60 Perfluorotridecanoic acid (ND)



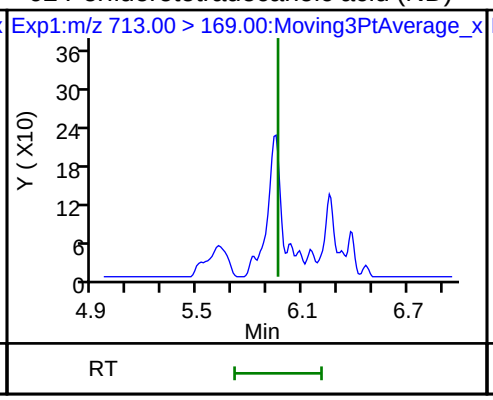

60 Perfluorotridecanoic acid (ND)



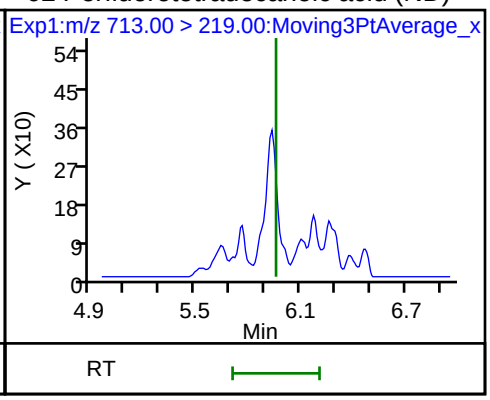

D 61 13C2 PFTeDA




62 Perfluorotetradecanoic acid (ND)




62 Perfluorotetradecanoic acid (ND)



Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

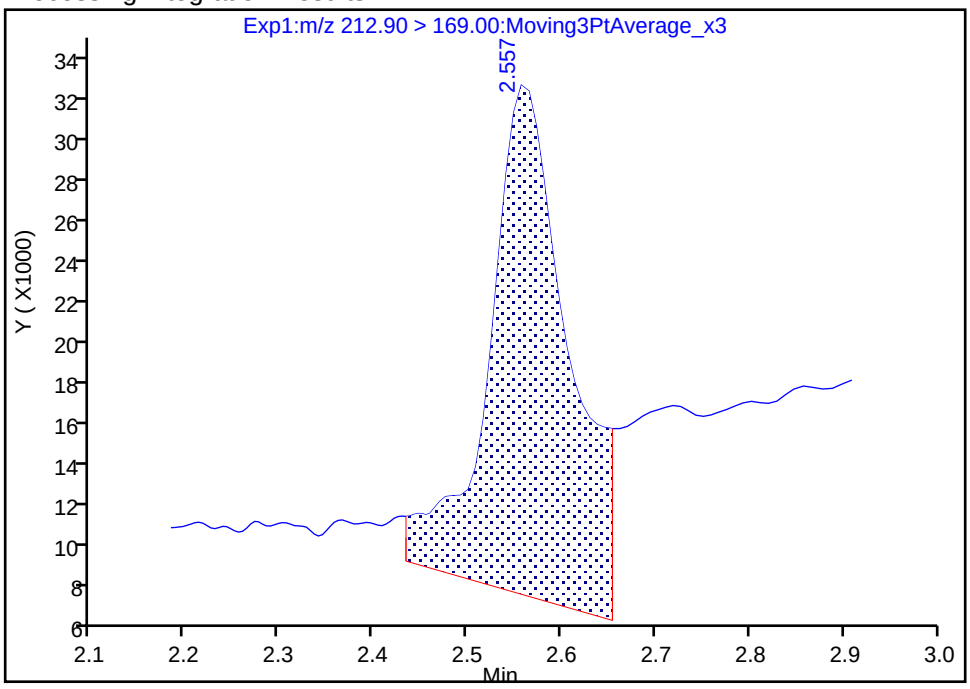
| | | | | | |
|---|---|---|---|---|---|
| Data File: | \\chromfs\Sacramento\ChromData\A18\20200911-103101.b\2020.09.11_A18_PFC_A_020.d | | | | |
| Injection Date: | 11-Sep-2020 13:18:27 | Instrument ID: | A18 | | |
| Lims ID: | 460-217547-E-6-A | Lab Sample ID: | 320-217547-6 | | |
| Client ID: | DUP | | | | |
| Operator ID: | TAISACA18-PC\A-18 | ALS Bottle#: | 11 | Worklist Smp#: | 6 |
| Injection Vol: | 20.0 ul | Dil. Factor: | 1.0000 | | |
| Method: | PFAS_A18V2 | Limit Group: | LC PFC ICAL | | |
| Column: | Gemini C18 3um 3mm x 50 mm ( 3.00mm) | Detector | EXP1 | | |

## 2 Perfluorobutanoic acid, CAS: 375-22-4

Signal: 1

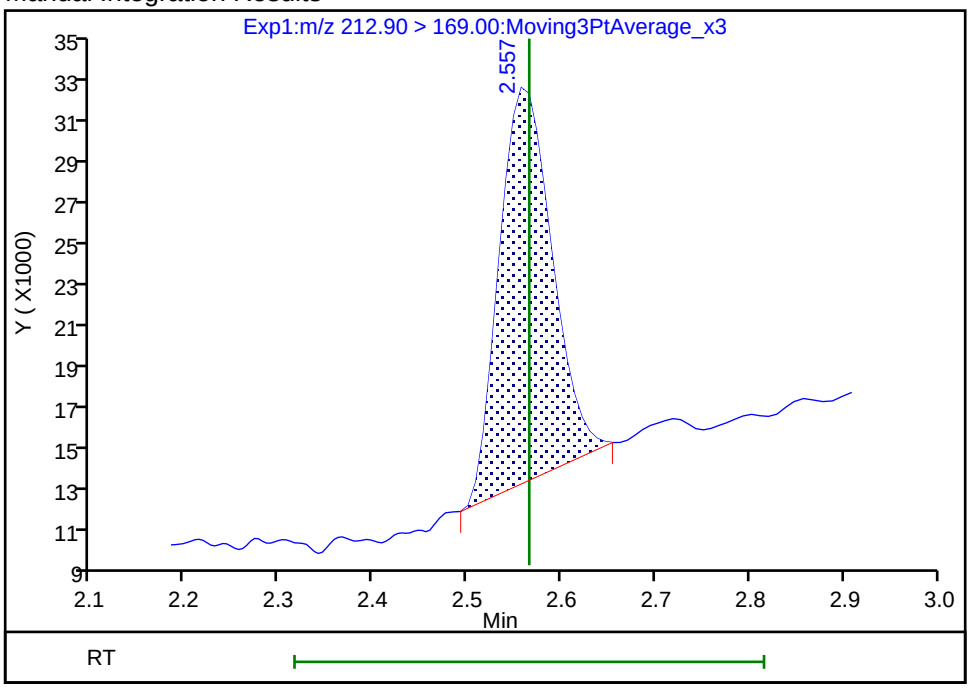
Processing Integration Results

RT: 2.56
Area: 146421
Amount: 0.035744
Amount Units: ng/ml




Manual Integration Results

RT: 2.56
Area: 72055
Amount: 0.017590
Amount Units: ng/ml




Reviewer: sanjumnair, 14-Sep-2020 10:08:22

Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

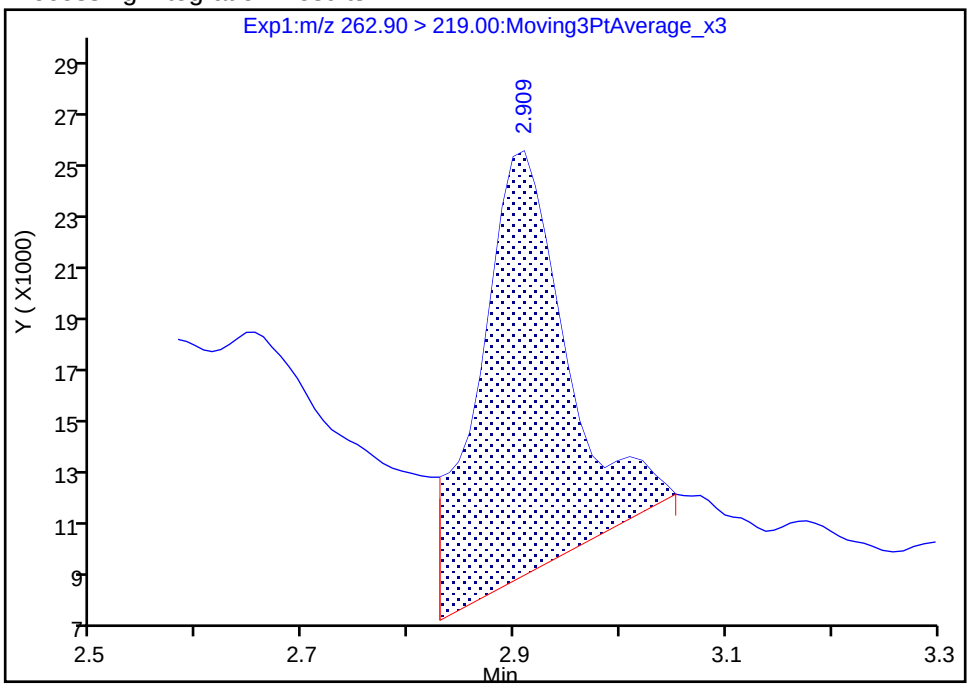
| | | | | | |
|---|---|---|---|---|---|
| Data File: | \\chromfs\Sacramento\ChromData\A18\20200911-103101.b\2020.09.11_A18_PFC_A_020.d | | | | |
| Injection Date: | 11-Sep-2020 13:18:27 | Instrument ID: | A18 | | |
| Lims ID: | 460-217547-E-6-A | Lab Sample ID: | 320-217547-6 | | |
| Client ID: | DUP | | | | |
| Operator ID: | TAISACA18-PC\A-18 | ALS Bottle#: | 11 | Worklist Smp#: | 6 |
| Injection Vol: | 20.0 ul | Dil. Factor: | 1.0000 | | |
| Method: | PFAS_A18V2 | Limit Group: | LC PFC ICAL | | |
| Column: | Gemini C18 3um 3mm x 50 mm ( 3.00mm) | Detector | EXP1 | | |

## 5 Perfluoropentanoic acid, CAS: 2706-90-3

Signal: 1

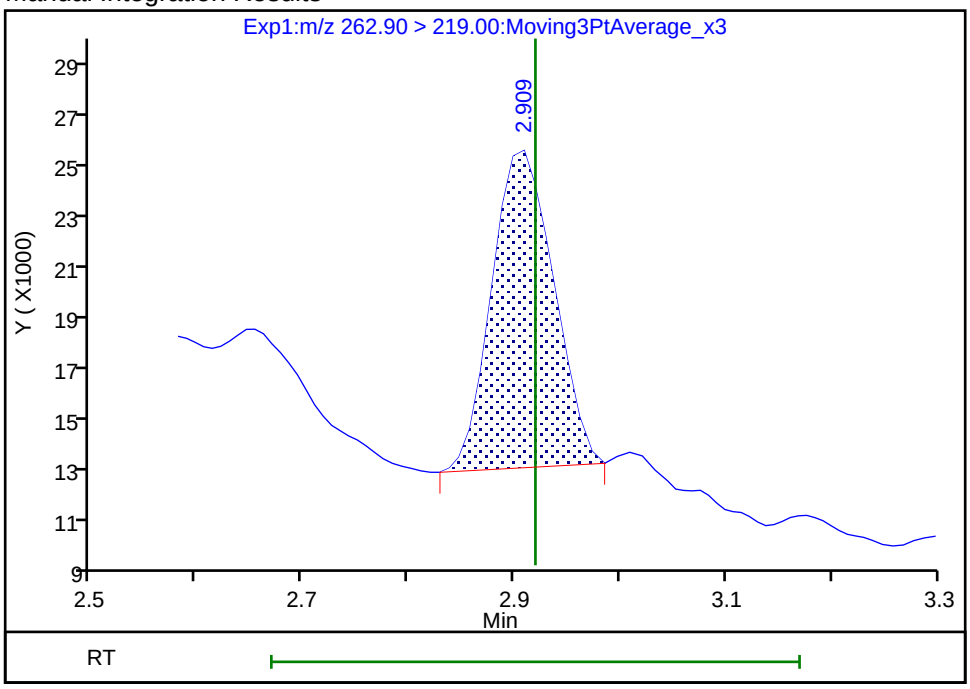
Processing Integration Results

RT: 2.91
Area: 90326
Amount: 0.018601
Amount Units: ng/ml




Manual Integration Results

RT: 2.91
Area: 48064
Amount: 0.009898
Amount Units: ng/ml




Reviewer: sanjumnair, 14-Sep-2020 10:08:32

Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

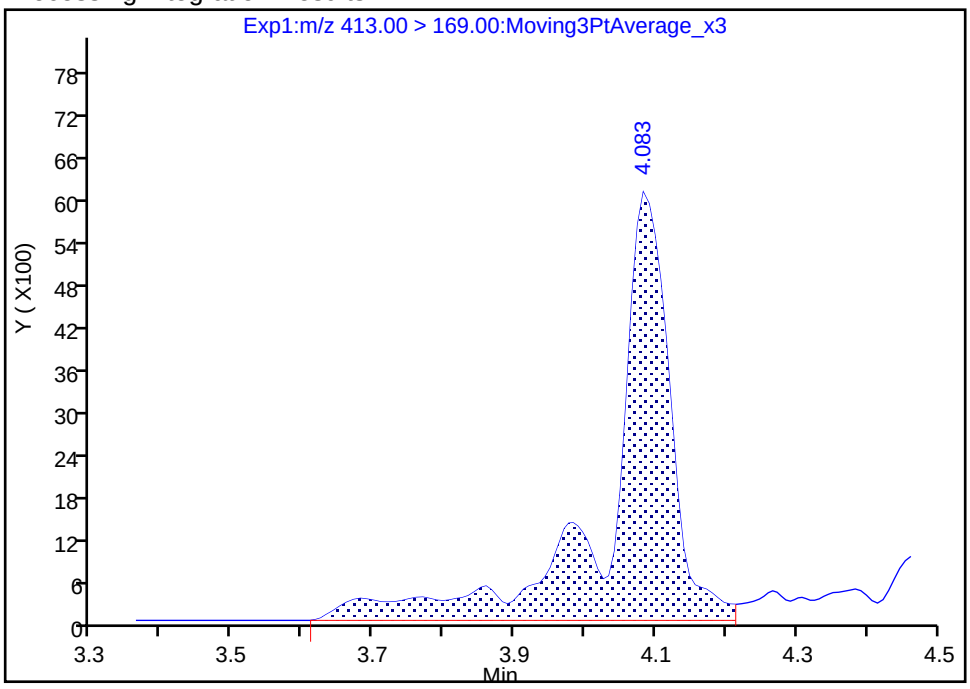
| | | | | | |
|---|---|---|---|---|---|
| Data File: | \\chromfs\Sacramento\ChromData\A18\20200911-103101.b\2020.09.11_A18_PFC_A_020.d | | | | |
| Injection Date: | 11-Sep-2020 13:18:27 | Instrument ID: | A18 | | |
| Lims ID: | 460-217547-E-6-A | Lab Sample ID: | 320-217547-6 | | |
| Client ID: | DUP | | | | |
| Operator ID: | TAISACA18-PC\A-18 | ALS Bottle#: | 11 | Worklist Smp#: | 6 |
| Injection Vol: | 20.0 ul | Dil. Factor: | 1.0000 | | |
| Method: | PFAS_A18V2 | Limit Group: | LC PFC ICAL | | |
| Column: | Gemini C18 3um 3mm x 50 mm ( 3.00mm) | Detector | EXP1 | | |

## 22 Perfluorooctanoic acid, CAS: 335-67-1

Signal: 2

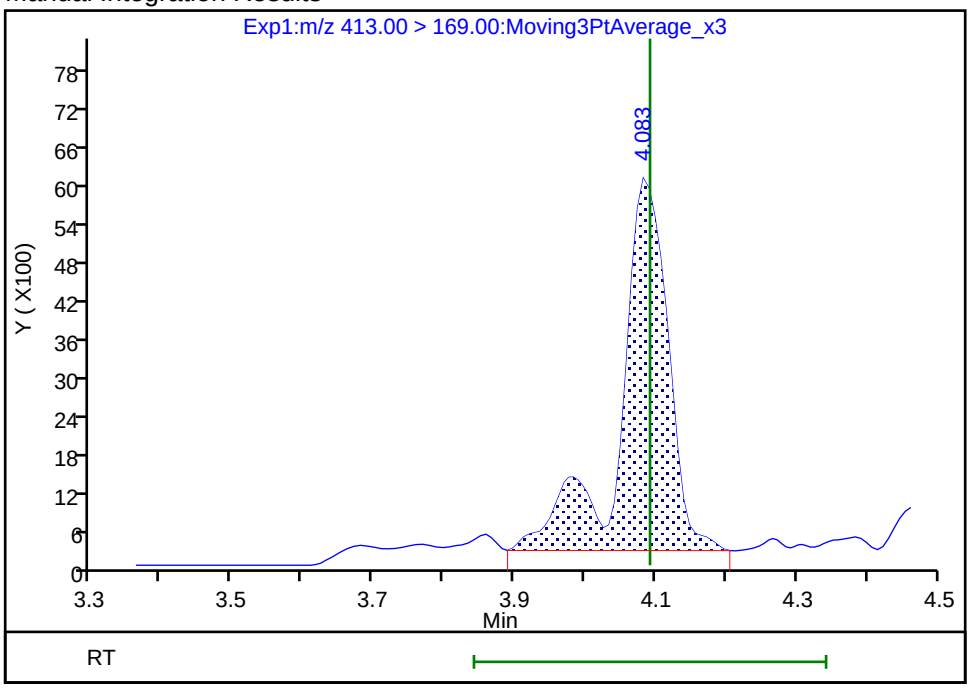
Processing Integration Results

RT: 4.08
Area: 36967
Amount: 0.029000
Amount Units: ng/ml




Manual Integration Results

RT: 4.08
Area: 27799
Amount: 0.014600
Amount Units: ng/ml




Reviewer: sanjumnair, 14-Sep-2020 10:09:10

Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

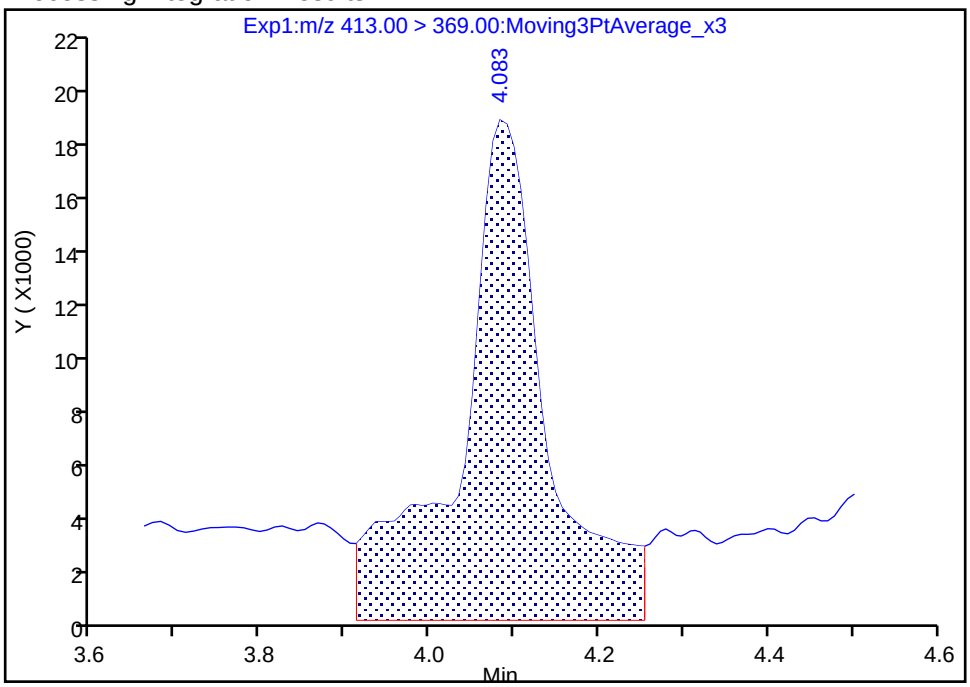
| | | | | | |
|---|---|---|---|---|---|
| Data File: | \\chromfs\Sacramento\ChromData\A18\20200911-103101.b\2020.09.11_A18_PFC_A_020.d | | | | |
| Injection Date: | 11-Sep-2020 13:18:27 | Instrument ID: | A18 | | |
| Lims ID: | 460-217547-E-6-A | Lab Sample ID: | 320-217547-6 | | |
| Client ID: | DUP | | | | |
| Operator ID: | TAISACA18-PC\A-18 | ALS Bottle#: | 11 | Worklist Smp#: | 6 |
| Injection Vol: | 20.0 ul | Dil. Factor: | 1.0000 | | |
| Method: | PFAS_A18V2 | Limit Group: | LC PFC ICAL | | |
| Column: | Gemini C18 3um 3mm x 50 mm ( 3.00mm) | Detector | EXP1 | | |

## 22 Perfluorooctanoic acid, CAS: 335-67-1

Signal: 1

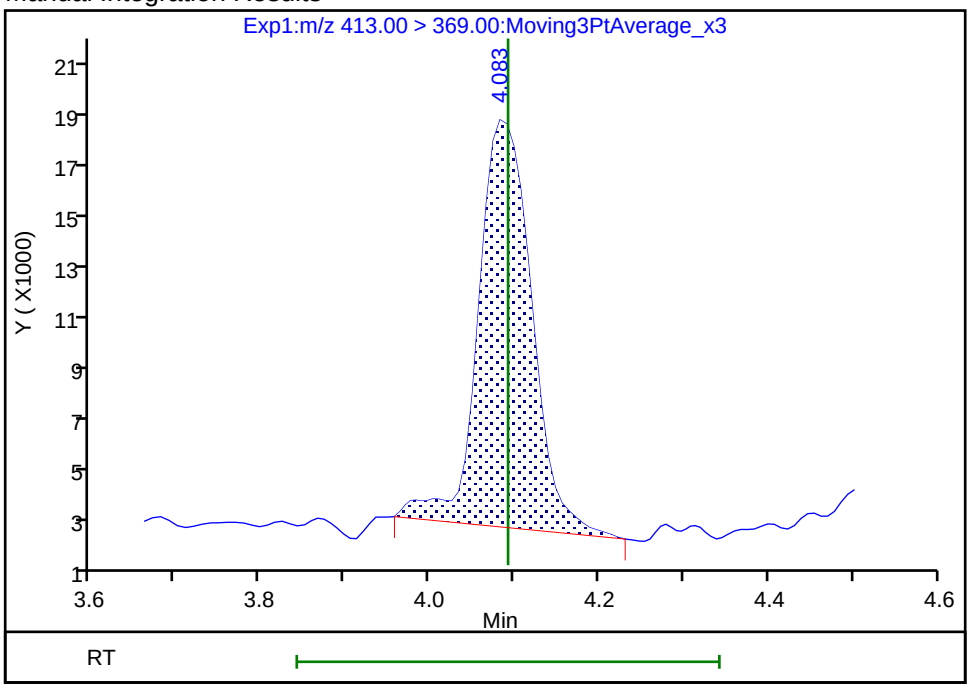
Processing Integration Results

RT: 4.08
Area: 133033
Amount: 0.029000
Amount Units: ng/ml




Manual Integration Results

RT: 4.08
Area: 66976
Amount: 0.014600
Amount Units: ng/ml




Reviewer: sanjumnair, 14-Sep-2020 10:09:16
Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

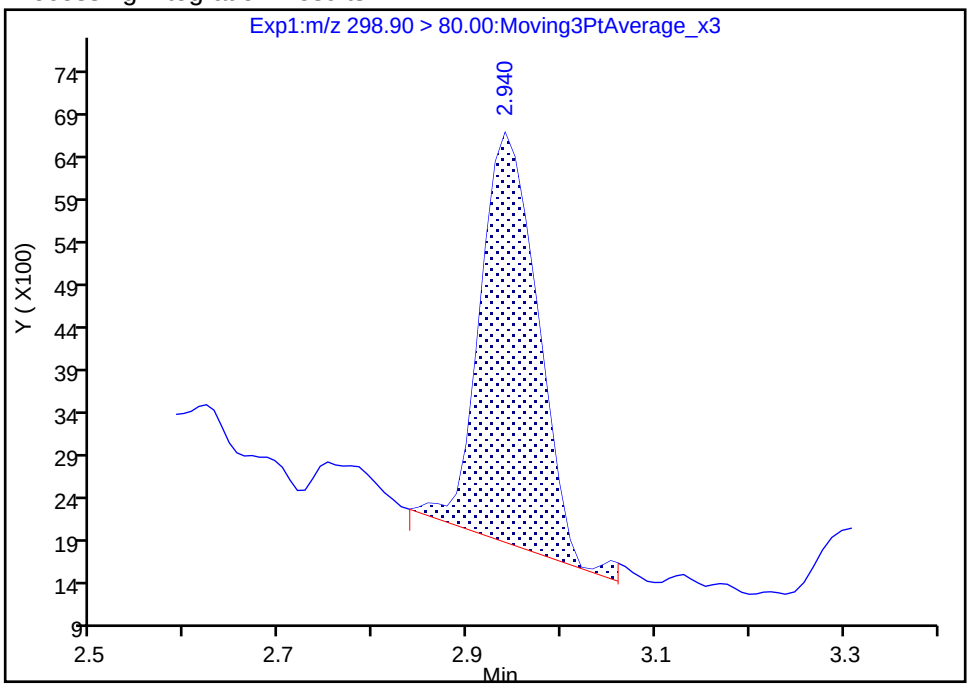
| | | | | | |
|---|---|---|---|---|---|
| Data File: | \\chromfs\Sacramento\ChromData\A18\20200911-103101.b\2020.09.11_A18_PFC_A_020.d | | | | |
| Injection Date: | 11-Sep-2020 13:18:27 | Instrument ID: | A18 | | |
| Lims ID: | 460-217547-E-6-A | Lab Sample ID: | 320-217547-6 | | |
| Client ID: | DUP | | | | |
| Operator ID: | TAISACA18-PC\A-18 | ALS Bottle#: | 11 | Worklist Smp#: | 6 |
| Injection Vol: | 20.0 ul | Dil. Factor: | 1.0000 | | |
| Method: | PFAS_A18V2 | Limit Group: | LC PFC ICAL | | |
| Column: | Gemini C18 3um 3mm x 50 mm ( 3.00mm) | Detector | EXP1 | | |

## 6 Perfluorobutanesulfonic acid, CAS: 375-73-5

Signal: 1

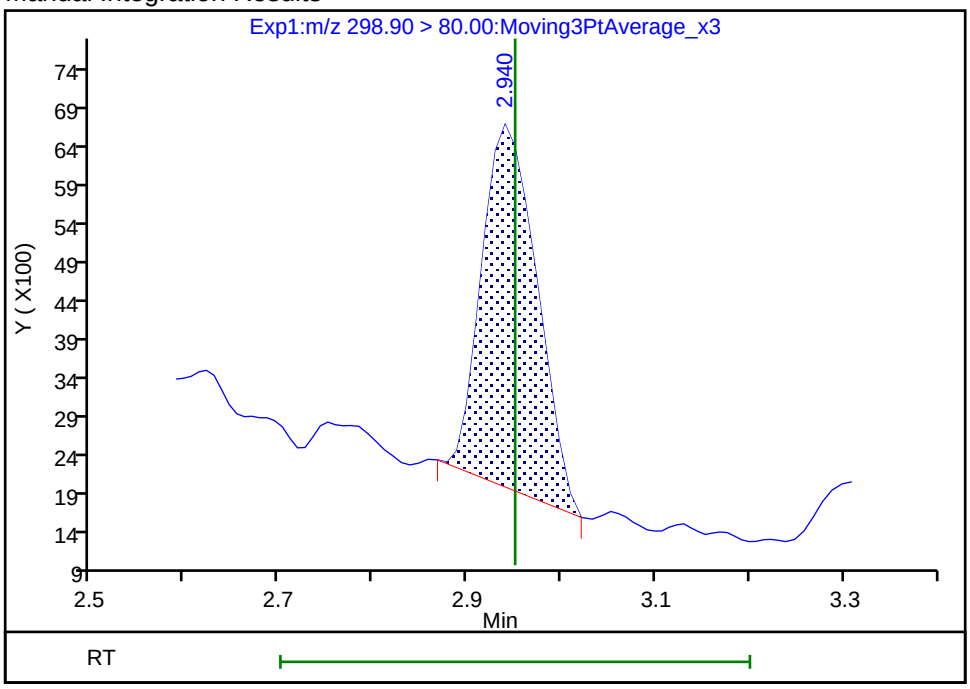
Processing Integration Results

RT: 2.94
Area: 20180
Amount: 0.004592
Amount Units: ng/ml




Manual Integration Results

RT: 2.94
Area: 18902
Amount: 0.004301
Amount Units: ng/ml




Reviewer: sanjumnair, 14-Sep-2020 10:08:39
Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

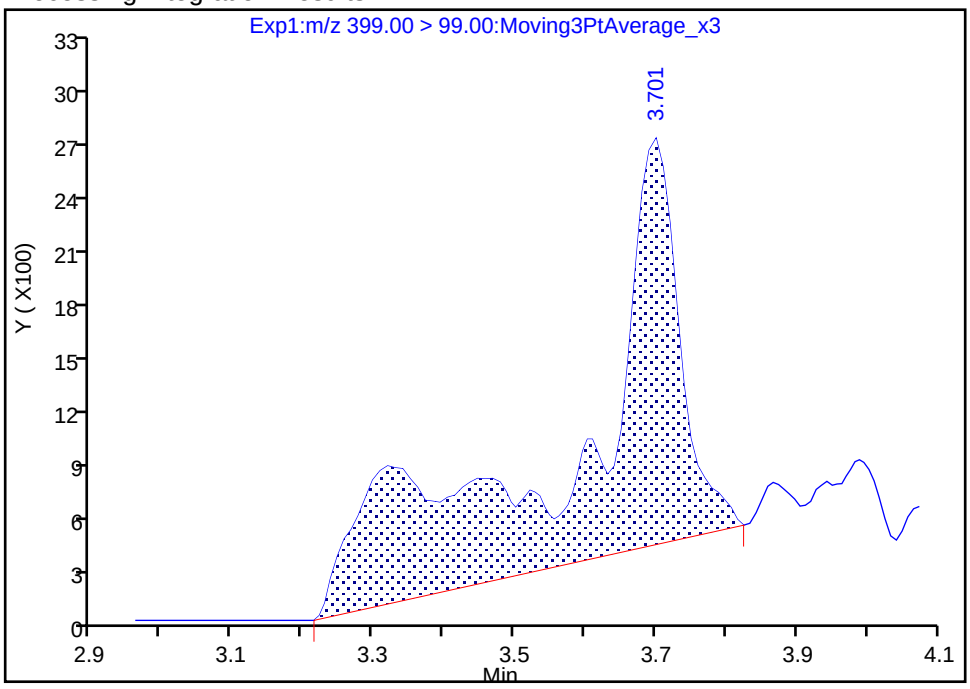
| | | | | | |
|---|---|---|---|---|---|
| Data File: | \\chromfs\Sacramento\ChromData\A18\20200911-103101.b\2020.09.11_A18_PFC_A_020.d | | | | |
| Injection Date: | 11-Sep-2020 13:18:27 | Instrument ID: | A18 | | |
| Lims ID: | 460-217547-E-6-A | Lab Sample ID: | 320-217547-6 | | |
| Client ID: | DUP | | | | |
| Operator ID: | TAISACA18-PC\A-18 | ALS Bottle#: | 11 | Worklist Smp#: | 6 |
| Injection Vol: | 20.0 ul | Dil. Factor: | 1.0000 | | |
| Method: | PFAS_A18V2 | Limit Group: | LC PFC ICAL | | |
| Column: | Gemini C18 3um 3mm x 50 mm ( 3.00mm) | Detector | EXP1 | | |

## 15 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 2

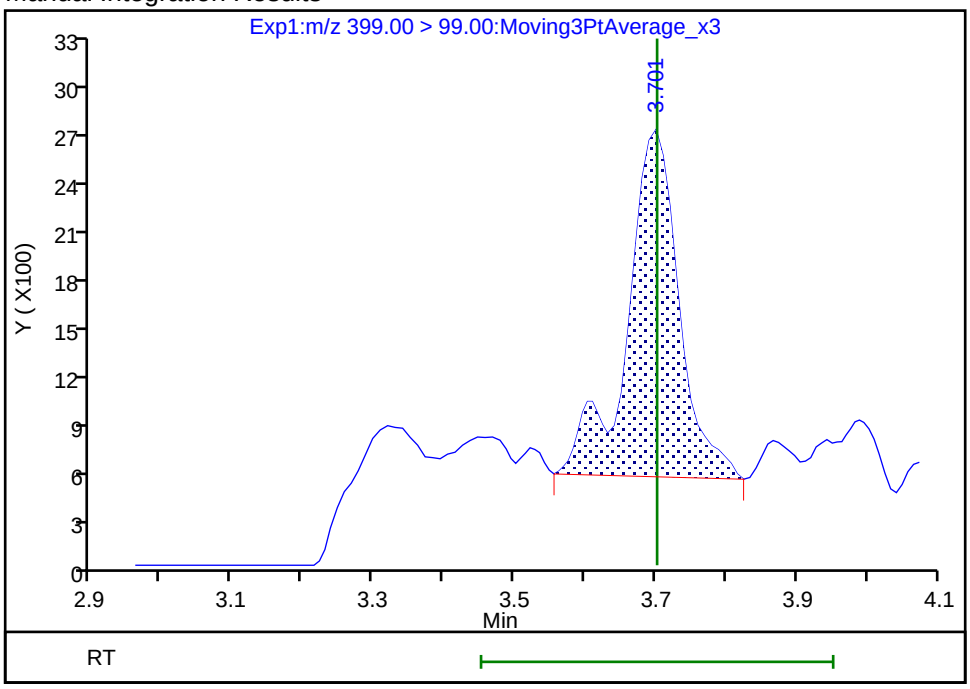
Processing Integration Results

RT: 3.70
Area: 23724
Amount: 0.021417
Amount Units: ng/ml




Manual Integration Results

RT: 3.70
Area: 11100
Amount: 0.009290
Amount Units: ng/ml




Reviewer: sanjumnair, 14-Sep-2020 10:08:53
Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

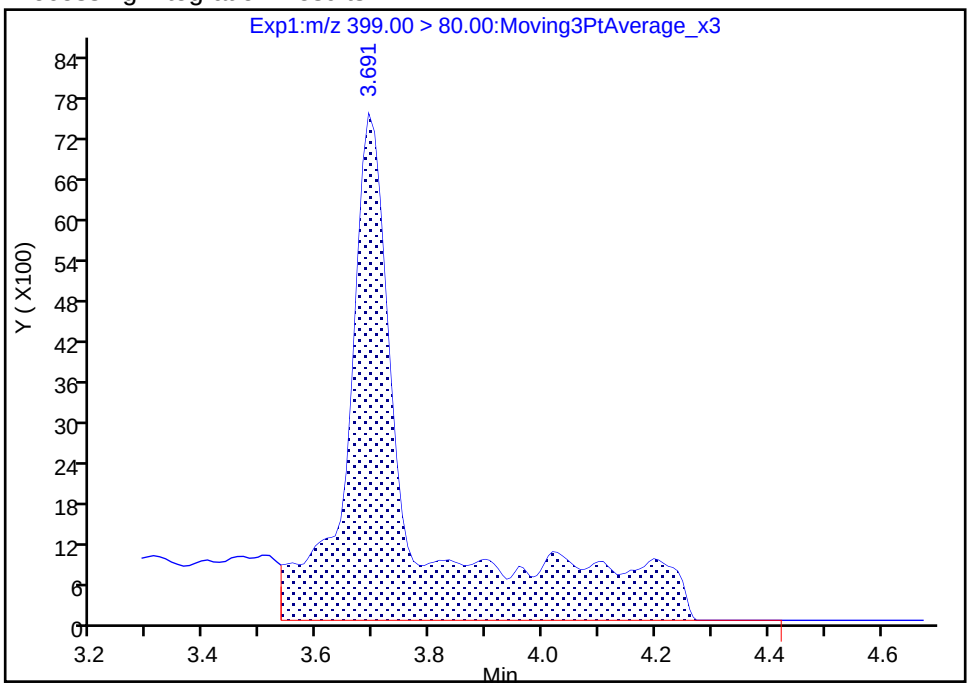
| | | | | | |
|---|---|---|---|---|---|
| Data File: | \\chromfs\Sacramento\ChromData\A18\20200911-103101.b\2020.09.11_A18_PFC_A_020.d | | | | |
| Injection Date: | 11-Sep-2020 13:18:27 | Instrument ID: | A18 | | |
| Lims ID: | 460-217547-E-6-A | Lab Sample ID: | 320-217547-6 | | |
| Client ID: | DUP | | | | |
| Operator ID: | TAISACA18-PC\A-18 | ALS Bottle#: | 11 | Worklist Smp#: | 6 |
| Injection Vol: | 20.0 ul | Dil. Factor: | 1.0000 | | |
| Method: | PFAS_A18V2 | Limit Group: | LC PFC ICAL | | |
| Column: | Gemini C18 3um 3mm x 50 mm ( 3.00mm) | Detector | EXP1 | | |

## 15 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 1

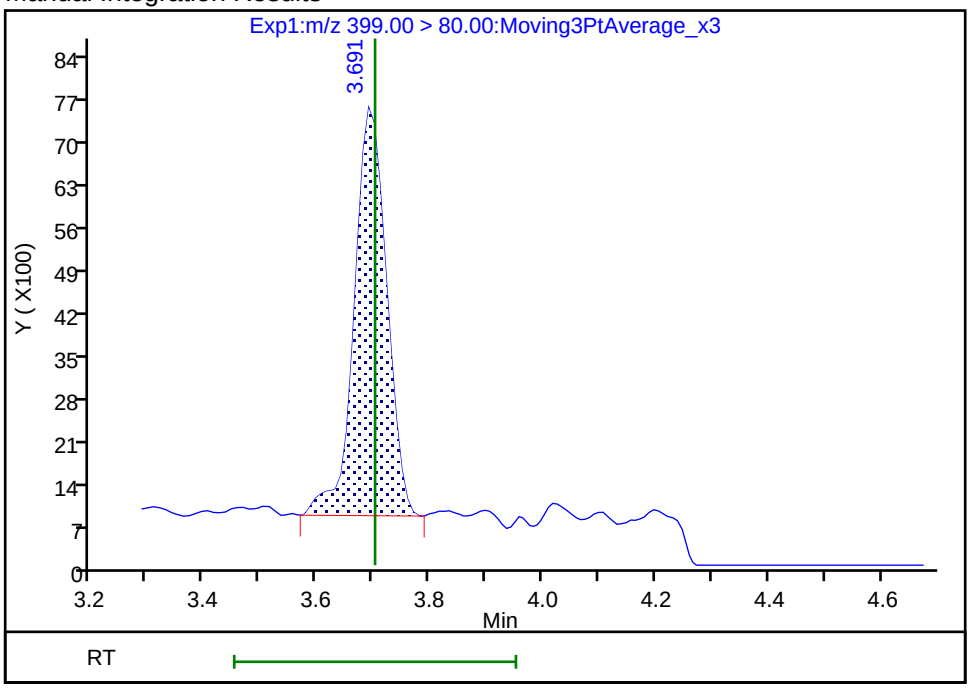
Processing Integration Results

RT: 3.69
Area: 61437
Amount: 0.021417
Amount Units: ng/ml




Manual Integration Results

RT: 3.69
Area: 26650
Amount: 0.009290
Amount Units: ng/ml




Reviewer: sanjumnair, 14-Sep-2020 10:09:00
Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

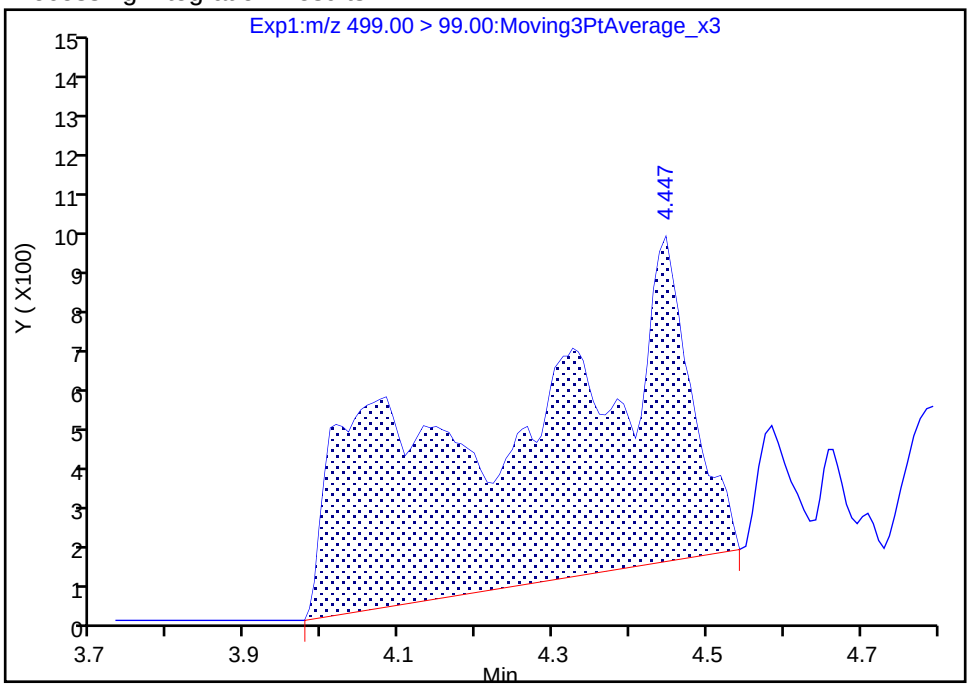
| | | | | | |
|---|---|---|---|---|---|
| Data File: | \\chromfs\Sacramento\ChromData\A18\20200911-103101.b\2020.09.11_A18_PFC_A_020.d | | | | |
| Injection Date: | 11-Sep-2020 13:18:27 | Instrument ID: | A18 | | |
| Lims ID: | 460-217547-E-6-A | Lab Sample ID: | 320-217547-6 | | |
| Client ID: | DUP | | | | |
| Operator ID: | TAISACA18-PC\A-18 | ALS Bottle#: | 11 | Worklist Smp#: | 6 |
| Injection Vol: | 20.0 ul | Dil. Factor: | 1.0000 | | |
| Method: | PFAS_A18V2 | Limit Group: | LC PFC ICAL | | |
| Column: | Gemini C18 3um 3mm x 50 mm ( 3.00mm) | Detector | EXP1 | | |

## 29 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 2

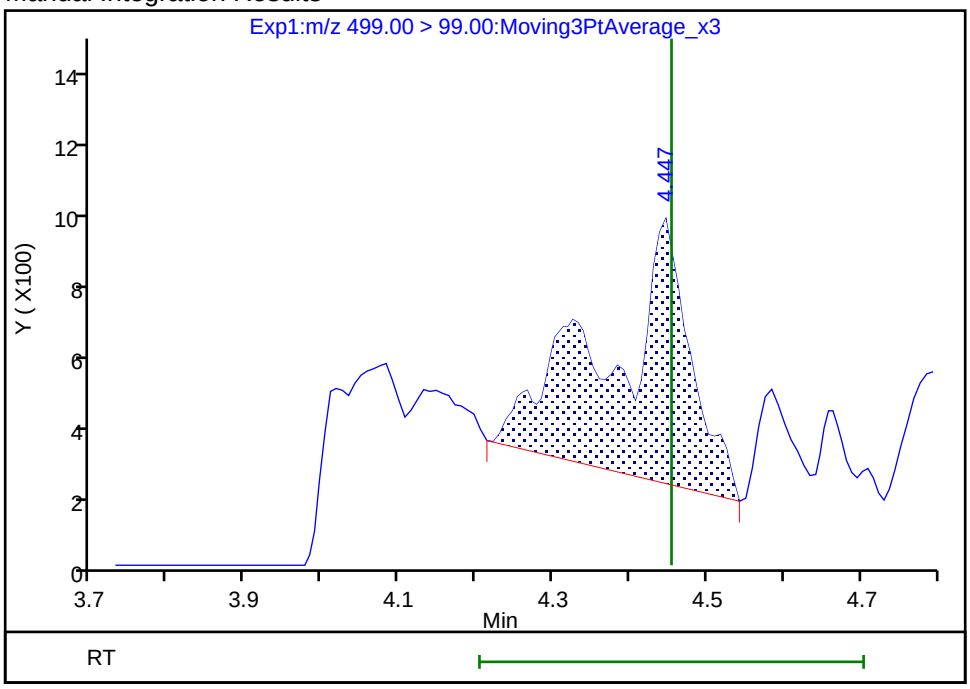
Processing Integration Results

RT: 4.45
Area: 13362
Amount: 0.026640
Amount Units: ng/ml




Manual Integration Results

RT: 4.45
Area: 5271
Amount: 0.019726
Amount Units: ng/ml




Reviewer: sanjumnair, 14-Sep-2020 10:09:23

Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

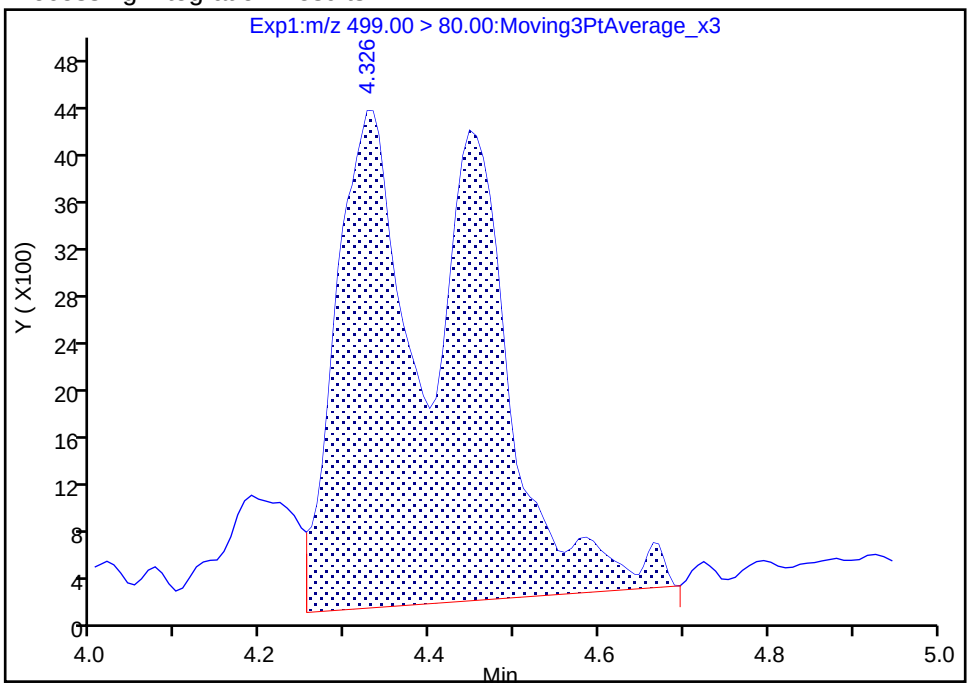
| | | | | | |
|---|---|---|---|---|---|
| Data File: | \\chromfs\Sacramento\ChromData\A18\20200911-103101.b\2020.09.11_A18_PFC_A_020.d | | | | |
| Injection Date: | 11-Sep-2020 13:18:27 | Instrument ID: | A18 | | |
| Lims ID: | 460-217547-E-6-A | Lab Sample ID: | 320-217547-6 | | |
| Client ID: | DUP | | | | |
| Operator ID: | TAISACA18-PC\A-18 | ALS Bottle#: | 11 | Worklist Smp#: | 6 |
| Injection Vol: | 20.0 ul | Dil. Factor: | 1.0000 | | |
| Method: | PFAS_A18V2 | Limit Group: | LC PFC ICAL | | |
| Column: | Gemini C18 3um 3mm x 50 mm ( 3.00mm) | Detector | EXP1 | | |

## 29 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 1

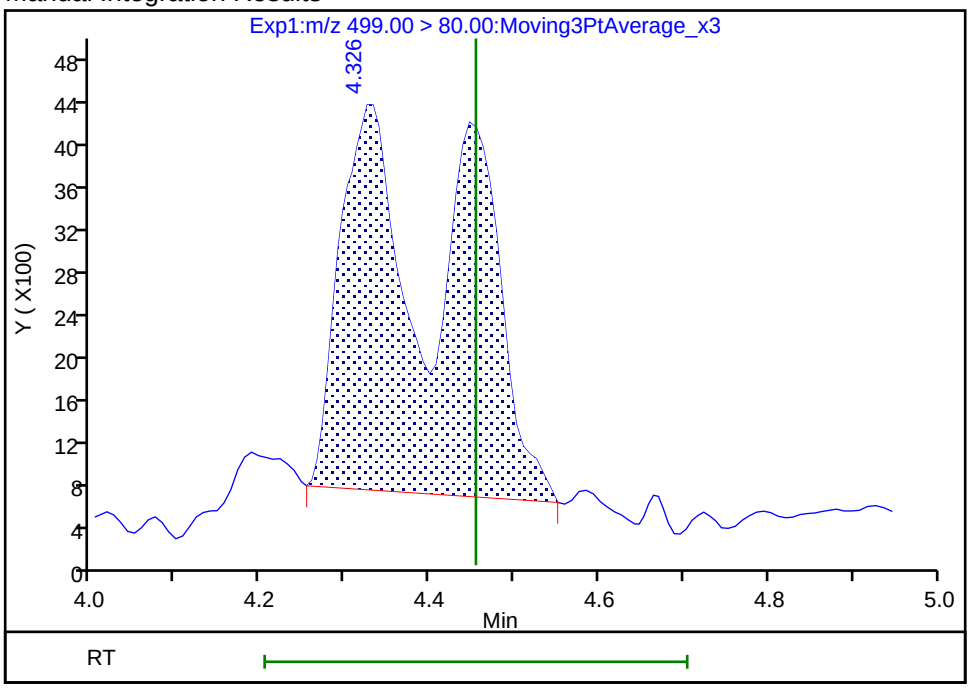
Processing Integration Results

RT: 4.33
Area: 45131
Amount: 0.026640
Amount Units: ng/ml




Manual Integration Results

RT: 4.33
Area: 33418
Amount: 0.019726
Amount Units: ng/ml




Reviewer: sanjumnair, 14-Sep-2020 10:09:36
Audit Action: Manually Integrated Audit Reason: Baseline

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento  Job No.: 460-217547-1

SDG No.:

Client Sample ID: FB  Lab Sample ID: 460-217547-7

Matrix: Water  Lab File ID: 2020.09.10_A18_PFC_A_077.d

Analysis Method: 537 (modified)  Date Collected: 09/02/2020 14:30

Extraction Method: 3535  Date Extracted: 09/09/2020 18:52

Sample wt/vol: 254.5(mL)  Date Analyzed: 09/10/2020 15:38

Con. Extract Vol.: 10.00(mL)  Dilution Factor: 1

Injection Volume: 20(uL)  GC Column: Gemini C18 3x50 ID: 3(mm)

% Moisture:  GPC Cleanup:(Y/N) N

Analysis Batch No.: 411087  Units: ng/L

| CAS NO. | COMPOUND NAME | RESULT | Q | RL | MDL |
|---|---|---|---|---|---|
| 375-22-4 | Perfluorobutanoic acid (PFBA) | 0.35 | J B | 1.96 | 0.34 |
| 2706-90-3 | Perfluoropentanoic acid (PFPeA) | 0.48 | U | 1.96 | 0.48 |
| 307-24-4 | Perfluorohexanoic acid (PFHxA) | 0.57 | U | 1.96 | 0.57 |
| 375-85-9 | Perfluoroheptanoic acid (PFHpA) | 0.25 | U | 1.96 | 0.25 |
| 335-67-1 | Perfluorooctanoic acid (PFOA) | 0.83 | U | 1.96 | 0.83 |
| 375-95-1 | Perfluorononanoic acid (PFNA) | 0.27 | U | 1.96 | 0.27 |
| 335-76-2 | Perfluorodecanoic acid (PFDA) | 0.30 | U | 1.96 | 0.30 |
| 2058-94-8 | Perfluoroundecanoic acid (PFUnA) | 1.08 | U | 1.96 | 1.08 |
| 307-55-1 | Perfluorododecanoic acid (PFDoA) | 0.54 | U | 1.96 | 0.54 |
| 72629-94-8 | Perfluorotridecanoic acid (PFTriA) | 1.28 | U | 1.96 | 1.28 |
| 376-06-7 | Perfluorotetradecanoic acid (PFTeA) | 0.28 | U | 1.96 | 0.28 |
| 375-73-5 | Perfluorobutanesulfonic acid (PFBS) | 0.20 | U | 1.96 | 0.20 |
| 355-46-4 | Perfluorohexanesulfonic acid (PFHxS) | 0.27 | J B | 1.96 | 0.17 |
| 375-92-8 | Perfluoroheptanesulfonic Acid (PFHpS) | 0.19 | U | 1.96 | 0.19 |
| 1763-23-1 | Perfluorooctanesulfonic acid (PFOS) | 0.53 | U | 1.96 | 0.53 |
| 335-77-3 | Perfluorodecanesulfonic acid (PFDS) | 0.31 | U | 1.96 | 0.31 |
| 754-91-6 | Perfluorooctanesulfonamide (FOSA) | 0.34 | U | 1.96 | 0.34 |
| 2355-31-9 | N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA) | 3.05 | U | 19.6 | 3.05 |
| 2991-50-6 | N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA) | 1.87 | U | 19.6 | 1.87 |
| 27619-97-2 | 6:2 FTS | 1.96 | U | 19.6 | 1.96 |
| 39108-34-4 | 8:2 FTS | 1.96 | U | 19.6 | 1.96 |

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento  Job No.: 460-217547-1

SDG No.:

Client Sample ID: FB  Lab Sample ID: 460-217547-7

Matrix: Water  Lab File ID: 2020.09.10_A18_PFC_A_077.d

Analysis Method: 537 (modified)  Date Collected: 09/02/2020 14:30

Extraction Method: 3535  Date Extracted: 09/09/2020 18:52

Sample wt/vol: 254.5(mL)  Date Analyzed: 09/10/2020 15:38

Con. Extract Vol.: 10.00(mL)  Dilution Factor: 1

Injection Volume: 20(uL)  GC Column: Gemini C18 3x50 ID: 3(mm)

% Moisture:  GPC Cleanup:(Y/N) N

Analysis Batch No.: 411087  Units: ng/L

| CAS NO. | ISOTOPE DILUTION | %REC | Q | LIMITS |
|---|---|---|---|---|
| STL00992 | 13C4 PFBA | 84 | | 25-150 |
| STL01893 | 13C5 PFPeA | 90 | | 25-150 |
| STL00993 | 13C2 PFHxA | 102 | | 25-150 |
| STL01892 | 13C4 PFHpA | 101 | | 25-150 |
| STL00990 | 13C4 PFOA | 100 | | 25-150 |
| STL00995 | 13C5 PFNA | 102 | | 25-150 |
| STL00996 | 13C2 PFDA | 106 | | 25-150 |
| STL00997 | 13C2 PFUnA | 114 | | 25-150 |
| STL00998 | 13C2 PFDoA | 96 | | 25-150 |
| STL02116 | 13C2 PFTeDA | 93 | | 25-150 |
| STL02337 | 13C3 PFBS | 97 | | 25-150 |
| STL00994 | 18O2 PFHxS | 101 | | 25-150 |
| STL00991 | 13C4 PFOS | 101 | | 25-150 |
| STL01056 | 13C8 FOSA | 88 | | 25-150 |
| STL02118 | d3-NMeFOSAA | 87 | | 25-150 |
| STL02117 | d5-NEtFOSAA | 89 | | 25-150 |
| STL02279 | M2-6:2 FTS | 112 | | 25-150 |
| STL02280 | M2-8:2 FTS | 118 | | 25-150 |

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\A18\20200910-103041.b\2020.09.10_A18_PFC_A_077.d
Lims ID: 460-217547-D-7-A
Client ID: FB
Sample Type: Client
Inject. Date: 10-Sep-2020 15:38:41 ALS Bottle#: 41 Worklist Smp#: 5
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Sample Info: 460-217547-d-7-a
Misc. Info.: Plate: 4 Rack: 1
Operator ID: TAISACA18-PC\A-18 Instrument ID: A18

Method: \\chromfs\Sacramento\ChromData\A18\20200910-103041.b\PFAS_A18V2.m
Limit Group: LC PFC ICAL
Last Update: 11-Sep-2020 08:32:55 Calib Date: 25-Aug-2020 17:37:57
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\A18\20200825-102078.b\2020.08.25_A18_ICAL_A_017.d

Column 1 : Gemini C18 3um 3mm x 50 mm ( 3.00 mm) Det: EXP1
Process Host: CTX1040

First Level Reviewer: sanjumnair Date: 11-Sep-2020 08:32:55
Ratio Calibration: CCV Sample: \\chromfs\Sacramento\ChromData\A18\20200910-103041.b\2020.09.10_A18_PFC_A_073.d

| Signal | RT | EXP RT | DLT RT | REL RT | Response | Amount ng/ml | Ratio(Limits) | %Rec | S/N | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| D 1 13C4 PFBA | | | | | | | | | | |
| 217.00 > 172.00 | 2.546 | 2.557 | -0.011 | 0.624 | 15962388 | 2.11 | | 84.3 | 9384 | |
| 2 Perfluorobutanoic acid | | | | | | | | | | M |
| 212.90 > 169.00 | 2.546 | 2.557 | -0.011 | 1.000 | 49837 | 0.008993 | | | 2.1 | M |
| D 4 13C5 PFPeA | | | | | | | | | | |
| 267.90 > 223.00 | 2.896 | 2.909 | -0.013 | 0.710 | 13237125 | 2.25 | | 89.9 | 5471 | |
| 5 Perfluoropentanoic acid | | | | | | | | | | M |
| 262.90 > 219.00 | 2.896 | 2.909 | -0.013 | 1.000 | 41578 | 0.007877 | | | 2.0 | M |
| 6 Perfluorobutanesulfonic acid | | | | | | | | | | |
| 298.90 > 80.00 | 2.937 | 2.940 | -0.003 | 1.000 | 9096 | 0.002017 | Target=2.30 | | 2.0 | |
| 298.90 > 99.00 | 2.937 | 2.940 | -0.003 | 1.000 | 5269 | | 1.73(1.15-3.45) | | 1.4 | |
| D 9 13C3 PFBS | | | | | | | | | | |
| 301.90 > 80.00 | 2.937 | 2.940 | -0.003 | 0.720 | 10384929 | 2.25 | | 96.6 | 5262 | |
| D 11 13C2 PFHxA | | | | | | | | | | |
| 315.00 > 270.00 | 3.275 | 3.278 | -0.003 | 0.803 | 15007795 | 2.55 | | 102 | 8996 | |
| 16 Perfluoroheptanoic acid | | | | | | | | | | |
| 363.00 > 319.00 | 3.686 | 3.691 | -0.005 | 1.000 | 15471 | 0.003006 | Target=4.05 | | 1.6 | |
| 363.00 > 169.00 | 3.676 | 3.691 | -0.015 | 0.997 | 2714 | | 5.70(2.03-6.08) | | 2.3 | |
| 15 Perfluorohexanesulfonic acid | | | | | | | | | | M |
| 399.00 > 80.00 | 3.686 | 3.691 | -0.005 | 1.000 | 19878 | 0.006789 | Target=3.35 | | 8.1 | M |
| 399.00 > 99.00 | 3.686 | 3.691 | -0.005 | 1.000 | 5141 | | 3.87(1.67-5.02) | | 4.0 | M |
| D 17 18O2 PFHxS | | | | | | | | | | |
| 403.00 > 84.00 | 3.686 | 3.691 | -0.005 | 0.904 | 5860854 | 2.40 | | 101 | 8908 | |
| D 18 13C4 PFHpA | | | | | | | | | | |
| 367.00 > 322.00 | 3.686 | 3.691 | -0.005 | 0.904 | 12694199 | 2.53 | | 101 | 5474 | |
| 21 6:2 FTS | | | | | | | | | | |
| 427.00 > 407.00 | 4.063 | 4.058 | 0.005 | 1.000 | 10839 | 0.004505 | | | 14.7 | |

| Signal | RT | EXP RT | DLT RT | REL RT | Response | Amount ng/ml | Ratio(Limits) | %Rec | S/N | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| D 20 M2-6:2 FTS | | | | | | | | | | |
| 429.00 > 81.00 | 4.063 | 4.058 | 0.005 | 0.996 | 2485576 | 2.66 | | 112 | 1767 | |
| 22 Perfluorooctanoic acid | | | | | | | | | | M |
| 413.00 > 369.00 | 4.080 | 4.082 | -0.002 | 1.000 | 35247 | 0.007196 | Target=3.01 | | 4.6 | M |
| 413.00 > 169.00 | 4.080 | 4.082 | -0.002 | 1.000 | 13816 | | 2.55(1.50-4.51) | | 10.3 | M |
| * 23 13C2 PFOA | | | | | | | | | | |
| 415.00 > 370.00 | 4.080 | 4.082 | -0.002 | | 11939642 | 2.50 | | | 6682 | |
| D 25 13C4 PFOA | | | | | | | | | | |
| 417.00 > 372.00 | 4.080 | 4.082 | -0.002 | 1.000 | 12000060 | 2.51 | | 100 | 8204 | |
| D 27 13C4 PFOS | | | | | | | | | | |
| 503.00 > 80.00 | 4.443 | 4.446 | -0.003 | 1.089 | 3996317 | 2.41 | | 101 | 1839 | |
| D 30 13C5 PFNA | | | | | | | | | | |
| 468.00 > 423.00 | 4.459 | 4.462 | -0.003 | 1.093 | 9833326 | 2.55 | | 102 | 9496 | |
| D 33 13C8 FOSA | | | | | | | | | | |
| 506.00 > 78.00 | 4.783 | 4.786 | -0.003 | 1.172 | 5863981 | 2.20 | | 87.9 | 5967 | |
| 34 Perfluorooctanesulfonamide | | | | | | | | | | |
| 498.00 > 78.00 | 4.792 | 4.786 | 0.006 | 1.002 | 10645 | 0.004877 | | | 54.9 | |
| D 39 13C2 PFDA | | | | | | | | | | |
| 515.00 > 470.00 | 4.817 | 4.820 | -0.003 | 1.181 | 9906155 | 2.65 | | 106 | 10001 | |
| 36 8:2 FTS | | | | | | | | | | |
| 527.00 > 507.00 | 4.826 | 4.820 | 0.006 | 1.002 | 2988 | 0.001054 | | | 25.9 | |
| D 38 M2-8:2 FTS | | | | | | | | | | |
| 529.00 > 81.00 | 4.817 | 4.820 | -0.003 | 1.181 | 3825093 | 2.84 | | 118 | 2864 | |
| D 40 d3-NMeFOSAA | | | | | | | | | | |
| 573.00 > 419.00 | 4.986 | 4.978 | 0.008 | 1.222 | 5456238 | 2.17 | | 87.0 | 4759 | |
| 41 NMeFOSAA | | | | | | | | | | |
| 570.00 > 419.00 | 4.986 | 4.989 | -0.003 | 1.000 | 5397 | 0.003334 | | | 5.4 | |
| D 43 13C2 PFUnA | | | | | | | | | | |
| 565.00 > 520.00 | 5.137 | 5.139 | -0.002 | 1.259 | 10572290 | 2.85 | | 114 | 13711 | |
| D 44 d5-NEtFOSAA | | | | | | | | | | |
| 589.00 > 419.00 | 5.146 | 5.148 | -0.002 | 1.261 | 5871510 | 2.21 | | 88.5 | 3621 | |
| 46 NEtFOSA | | | | | | | | | | |
| 584.00 > 419.00 | 5.164 | 5.157 | 0.007 | 1.004 | 5630 | 0.003547 | | | 21.9 | |
| D 56 13C2 PFDoA | | | | | | | | | | |
| 615.00 > 570.00 | 5.425 | 5.437 | -0.012 | 1.330 | 8774671 | 2.40 | | 96.1 | 8797 | |
| D 61 13C2 PFTeDA | | | | | | | | | | |
| 715.00 > 670.00 | 5.936 | 5.948 | -0.012 | 1.455 | 7022493 | 2.33 | | 93.2 | 10415 | |

## QC Flag Legend

Review Flags

M - Manually Integrated

Report Date: 11-Sep-2020 08:32:56 Chrom Revision: 2.3 09-Sep-2020 15:12:58

Eurofins TestAmerica, Sacramento

Data File: \\chromfs\Sacramento\ChromData\A18\20200910-103041.b\2020.09.10_A18_PFC_A_077.d

Injection Date: 10-Sep-2020 15:38:41 Instrument ID: A18

Lims ID: 460-217547-D-7-A Lab Sample ID: 320-217547-7

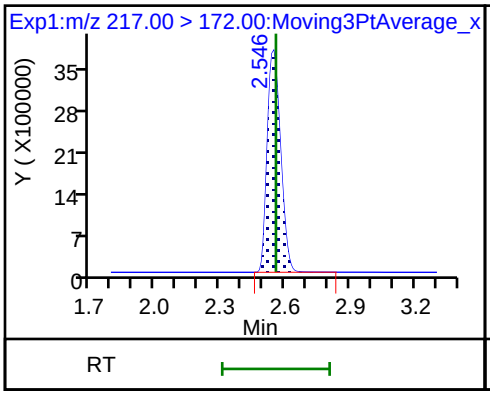
Client ID: FB

Operator ID: TAISACA18-PC\A-18 ALS Bottle#: 41 Worklist Smp#: 5

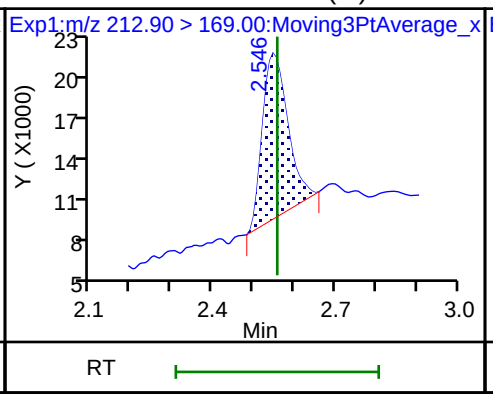
Injection Vol: 20.0 ul Dil. Factor: 1.0000

Method: PFAS_A18V2 Limit Group: LC PFC ICAL

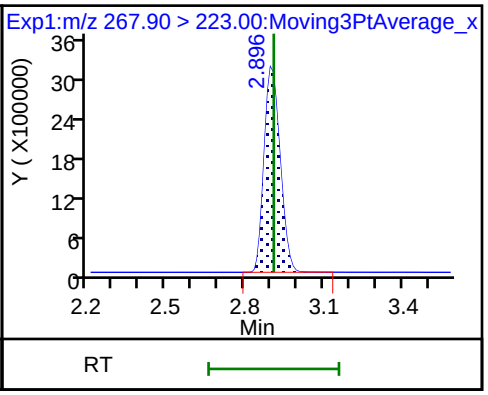
D 1 13C4 PFBA



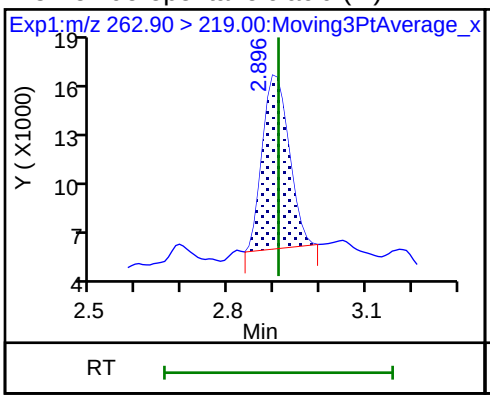

2 Perfluorobutanoic acid (M)



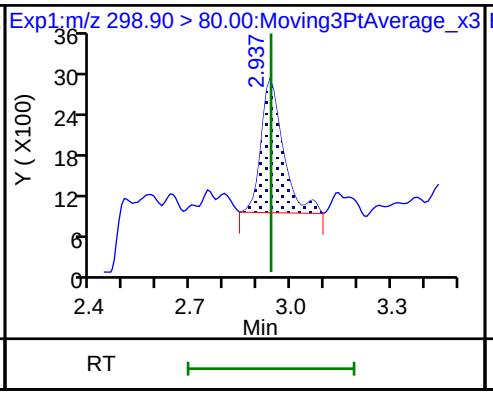

D 4 13C5 PFPeA



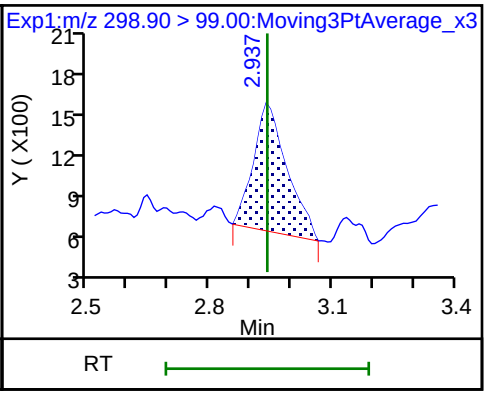

5 Perfluoropentanoic acid (M)



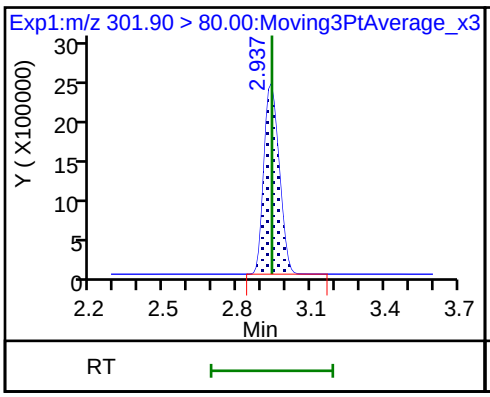

6 Perfluorobutanesulfonic acid



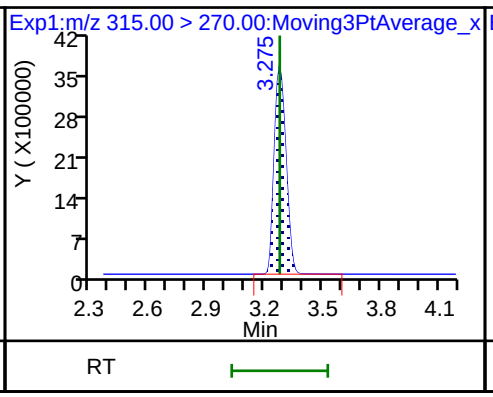

6 Perfluorobutanesulfonic acid



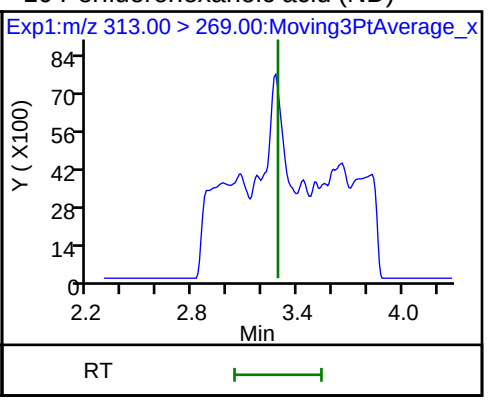

D 9 13C3 PFBS



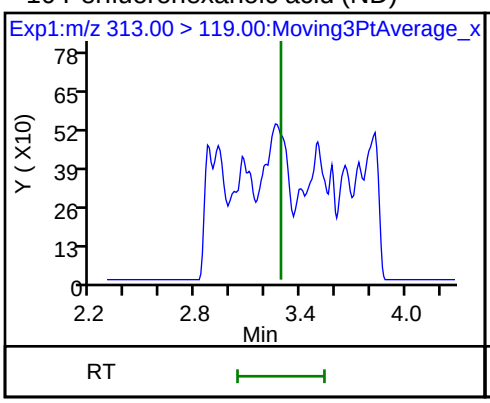

D 11 13C2 PFHxA



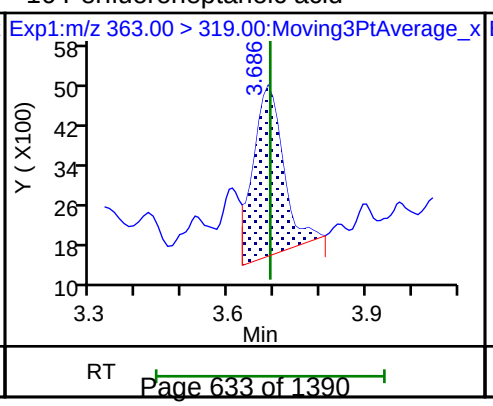

10 Perfluorohexanoic acid (ND)



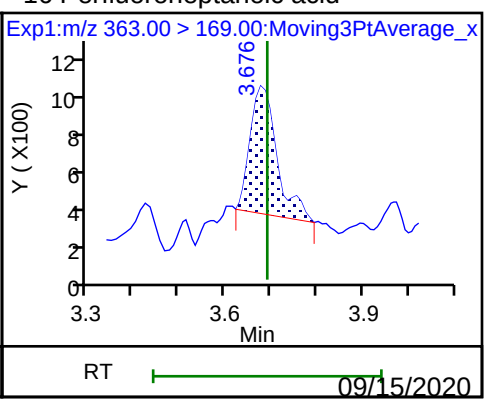

10 Perfluorohexanoic acid (ND)



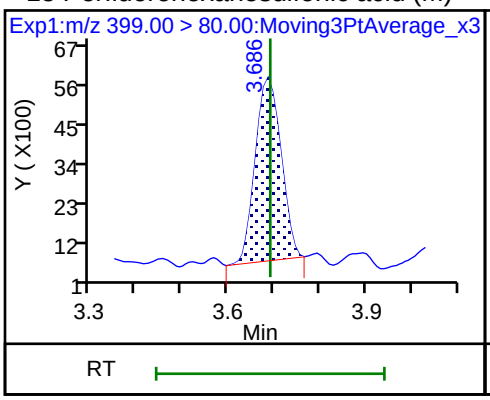

16 Perfluoroheptanoic acid



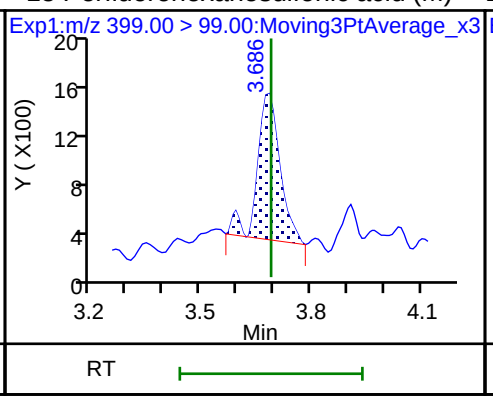

16 Perfluoroheptanoic acid



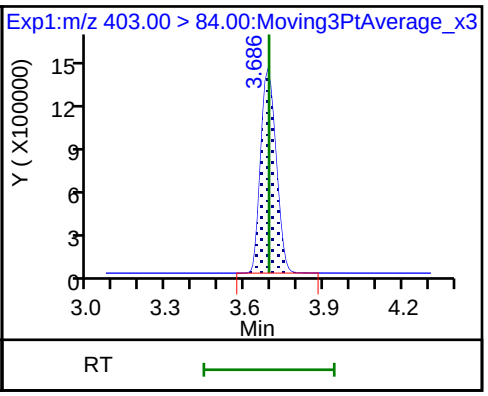
15 Perfluorohexanesulfonic acid (M)



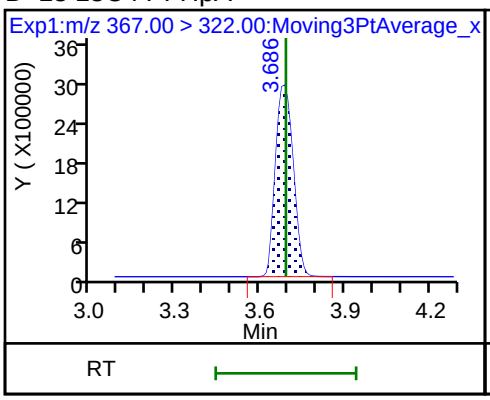

15 Perfluorohexanesulfonic acid (M)



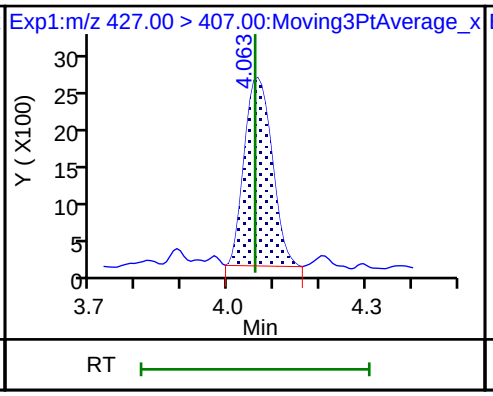

D 17 18O2 PFHxS



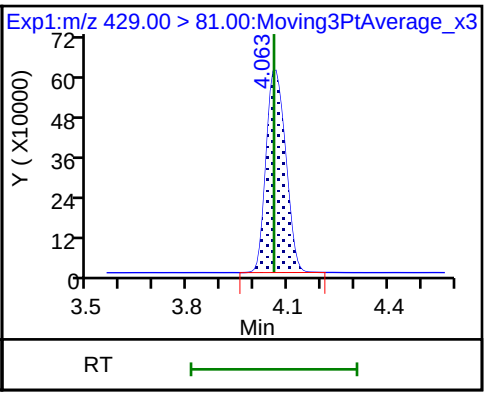

D 18 13C4 PFHpA



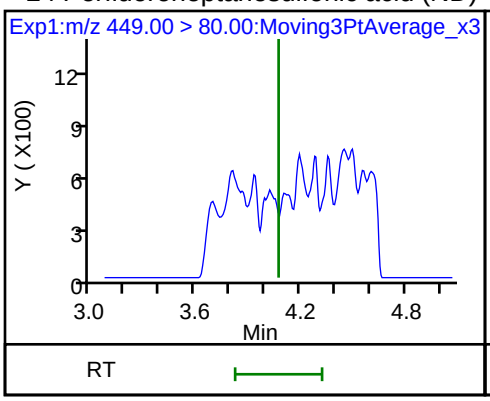

21 6:2 FTS



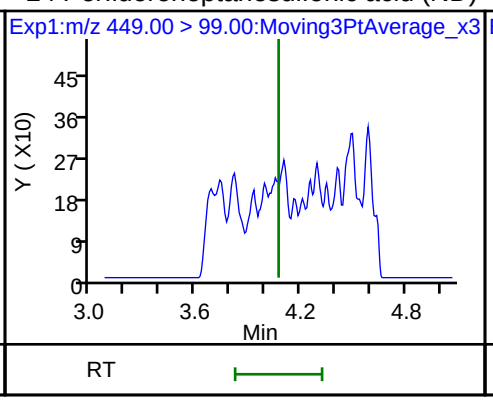

D 20 M2-6:2 FTS



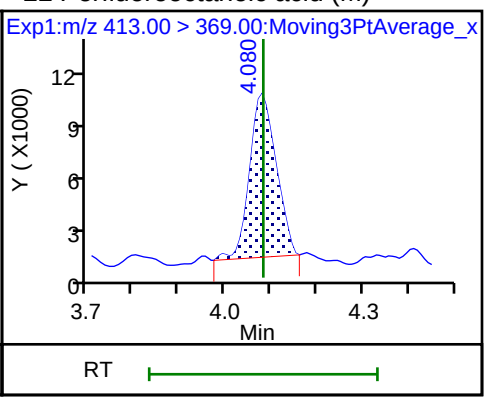

24 Perfluoroheptanesulfonic acid (ND)



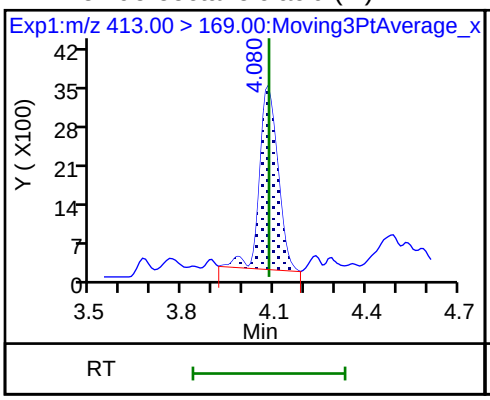

24 Perfluoroheptanesulfonic acid (ND)



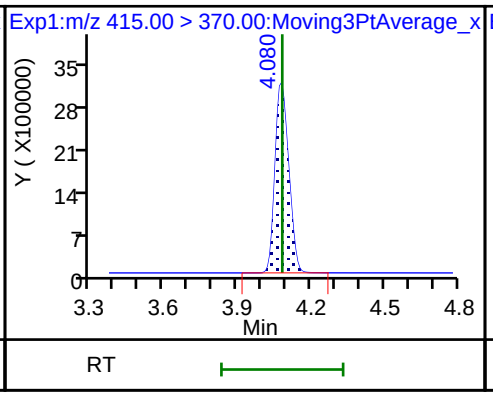

22 Perfluorooctanoic acid (M)



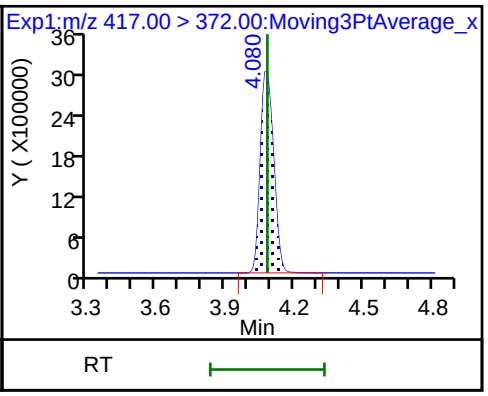

22 Perfluorooctanoic acid (M)



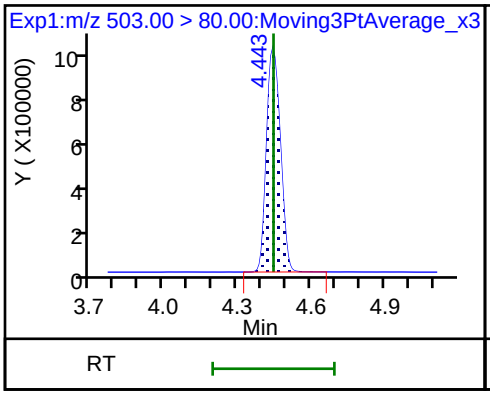

* 23 13C2 PFOA



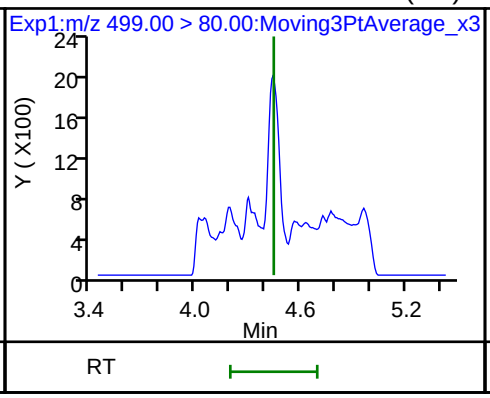

D 25 13C4 PFOA



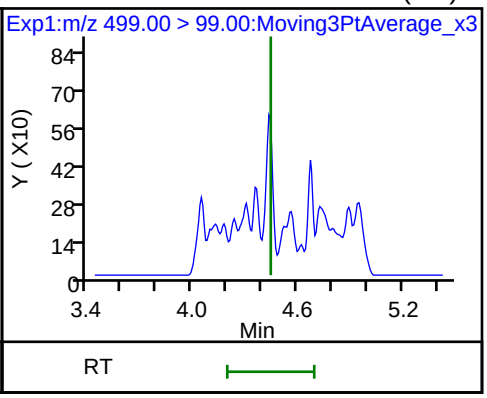
D 27 13C4 PFOS



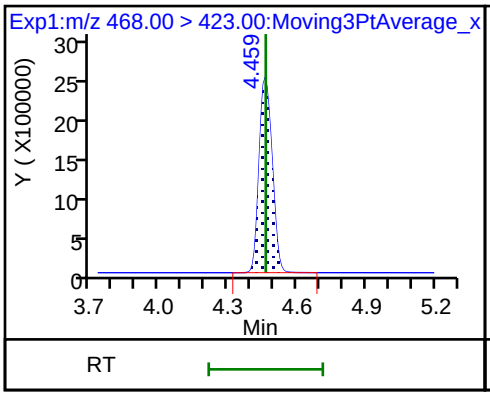

29 Perfluorooctanesulfonic acid (ND)



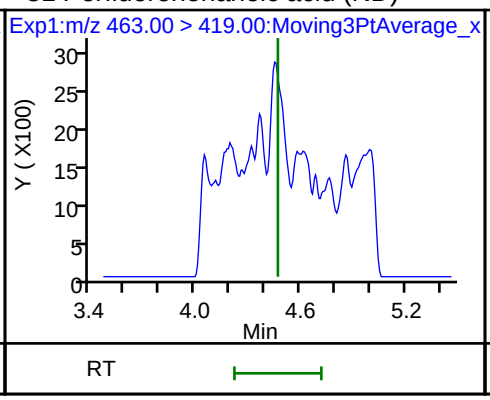

29 Perfluorooctanesulfonic acid (ND)



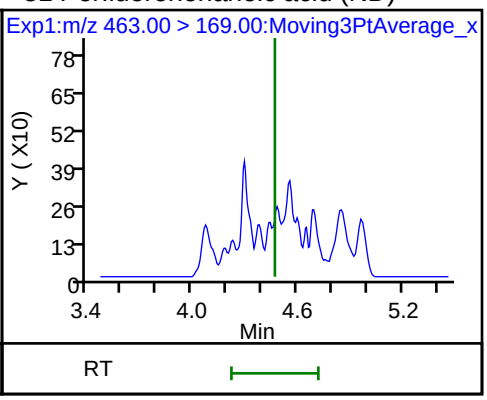

D 30 13C5 PFNA



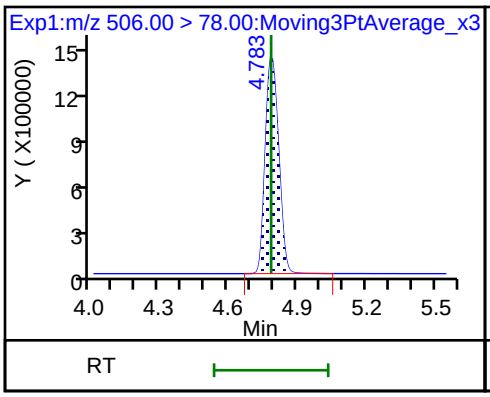

31 Perfluorononanoic acid (ND)



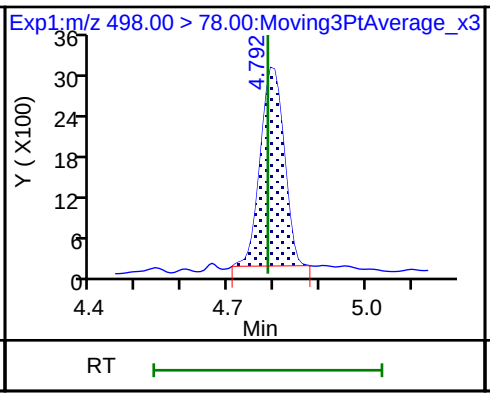

31 Perfluorononanoic acid (ND)



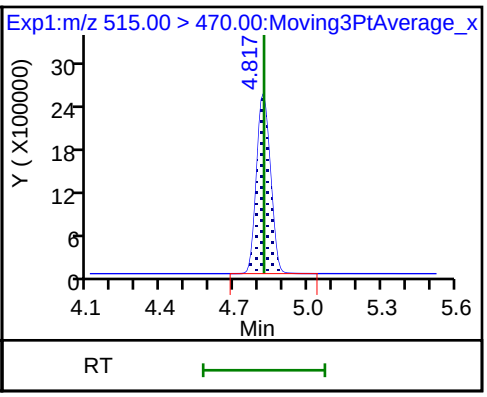

D 33 13C8 FOSA



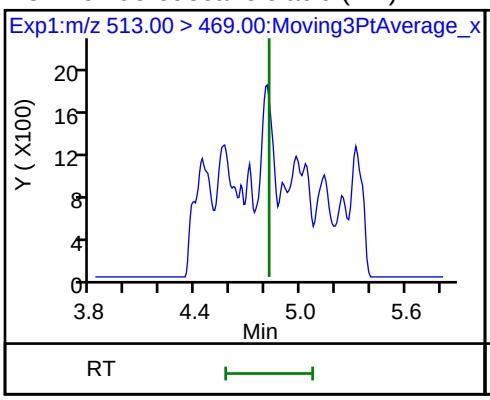

34 Perfluorooctanesulfonamide



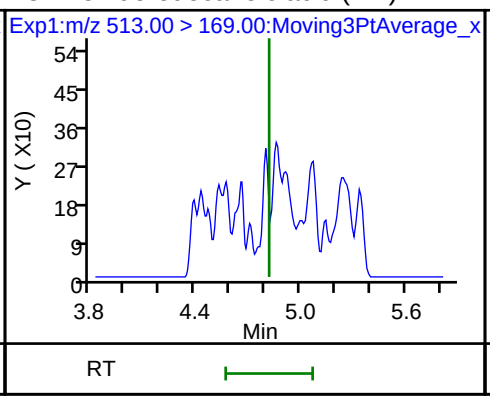

D 39 13C2 PFDA



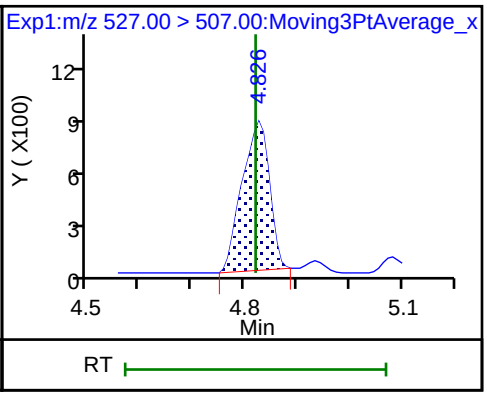

37 Perfluorodecanoic acid (ND)



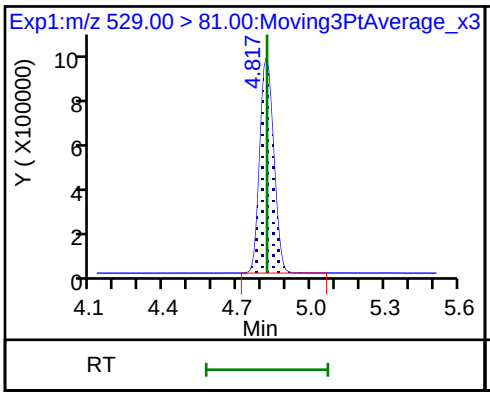

37 Perfluorodecanoic acid (ND)



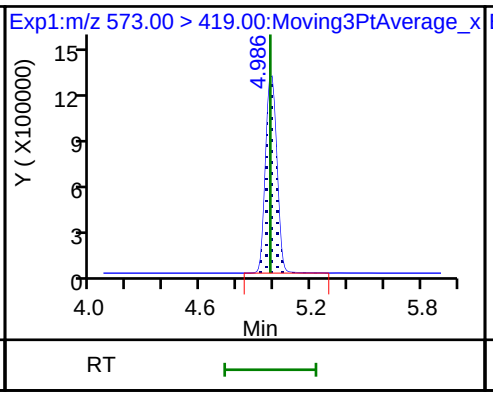

36 8:2 FTS



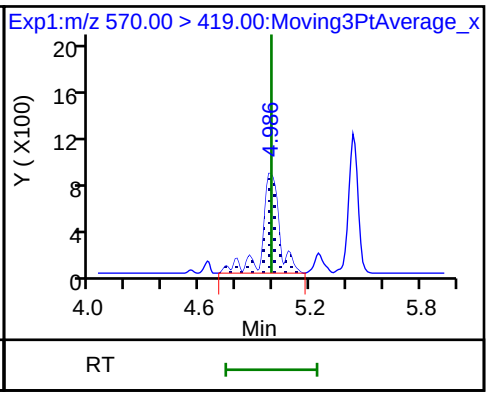
D 38 M2-8:2 FTS



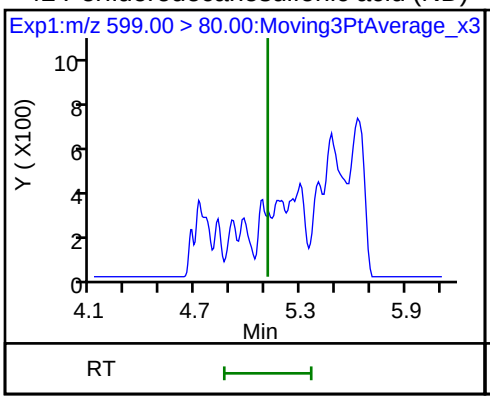

D 40 d3-NMeFOSAA



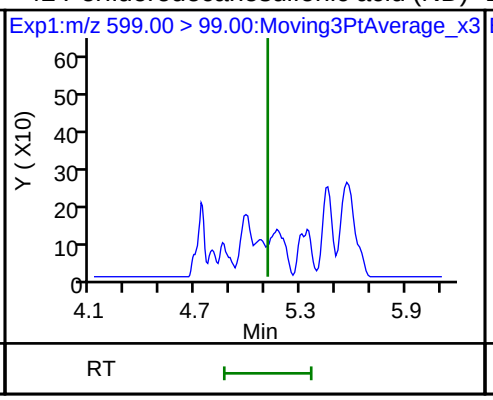

41 NMeFOSAA



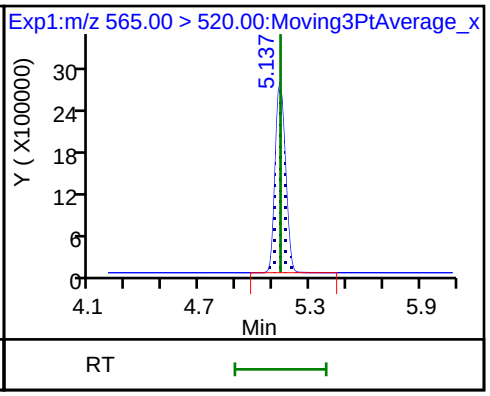

42 Perfluorodecanesulfonic acid (ND)



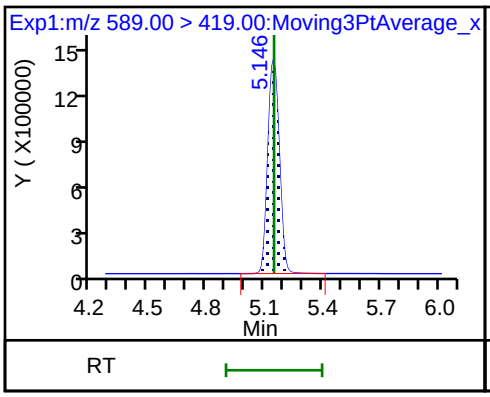

42 Perfluorodecanesulfonic acid (ND)



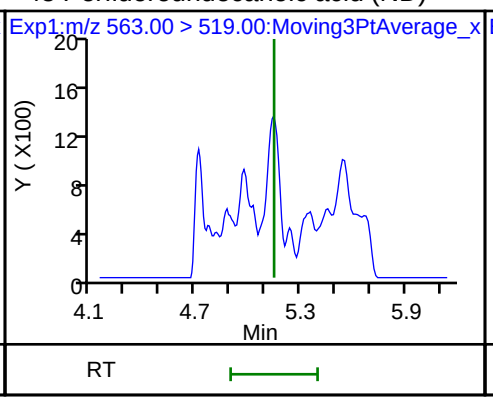

D 43 13C2 PFUnA



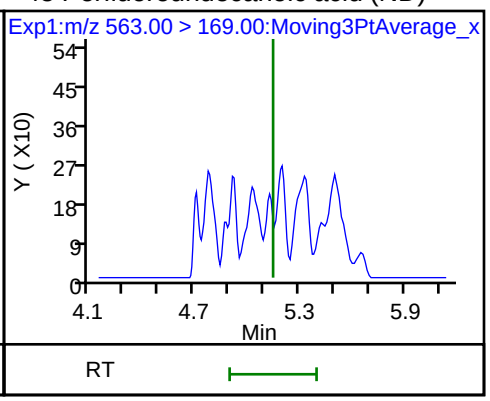

D 44 d5-NEtFOSAA



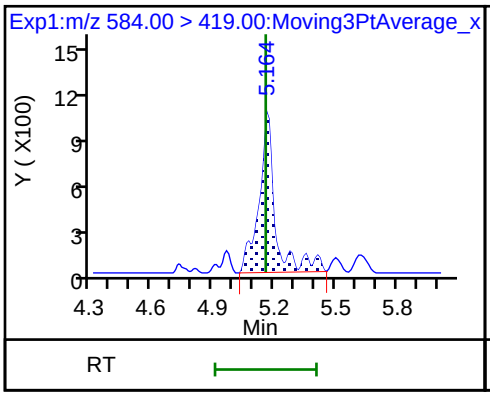

45 Perfluoroundecanoic acid (ND)



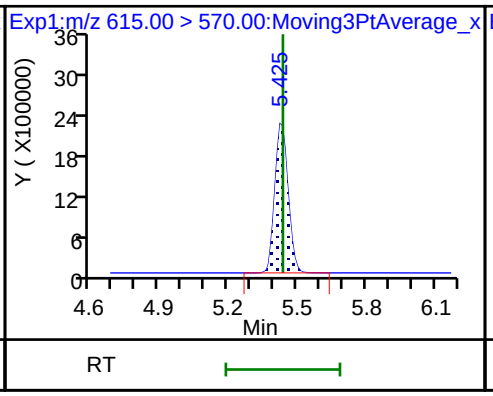

45 Perfluoroundecanoic acid (ND)



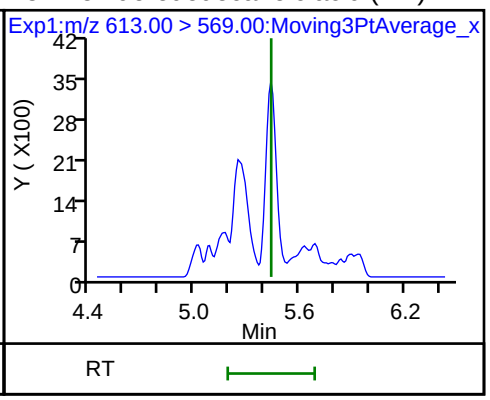

46 NEtFOSA



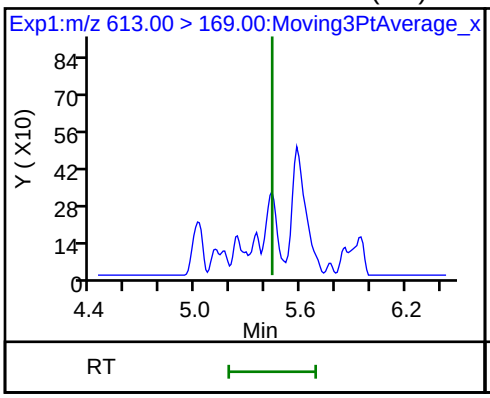

D 56 13C2 PFDoA



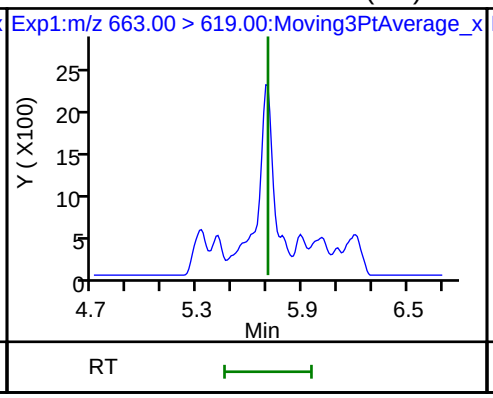

57 Perfluorododecanoic acid (ND)



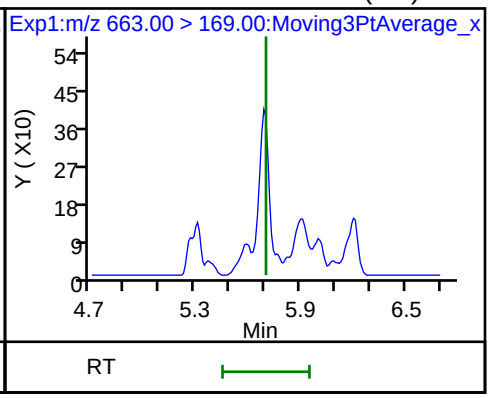
57 Perfluorododecanoic acid (ND)



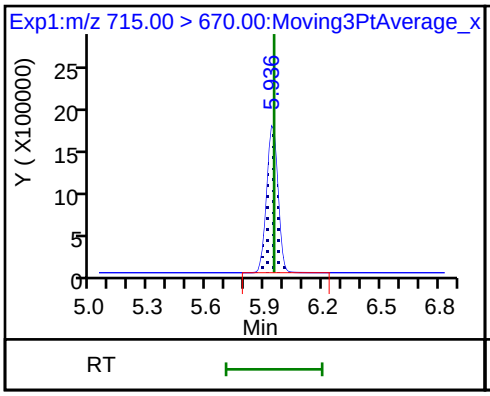

60 Perfluorotridecanoic acid (ND)



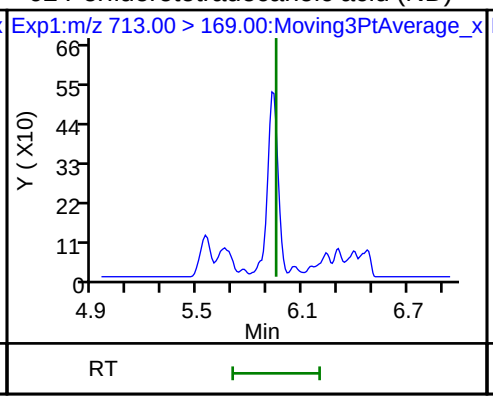

60 Perfluorotridecanoic acid (ND)



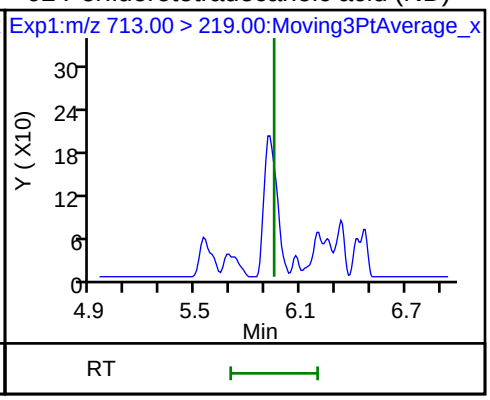

D 61 13C2 PFTeDA




62 Perfluorotetradecanoic acid (ND)




62 Perfluorotetradecanoic acid (ND)



Eurofins TestAmerica, Sacramento

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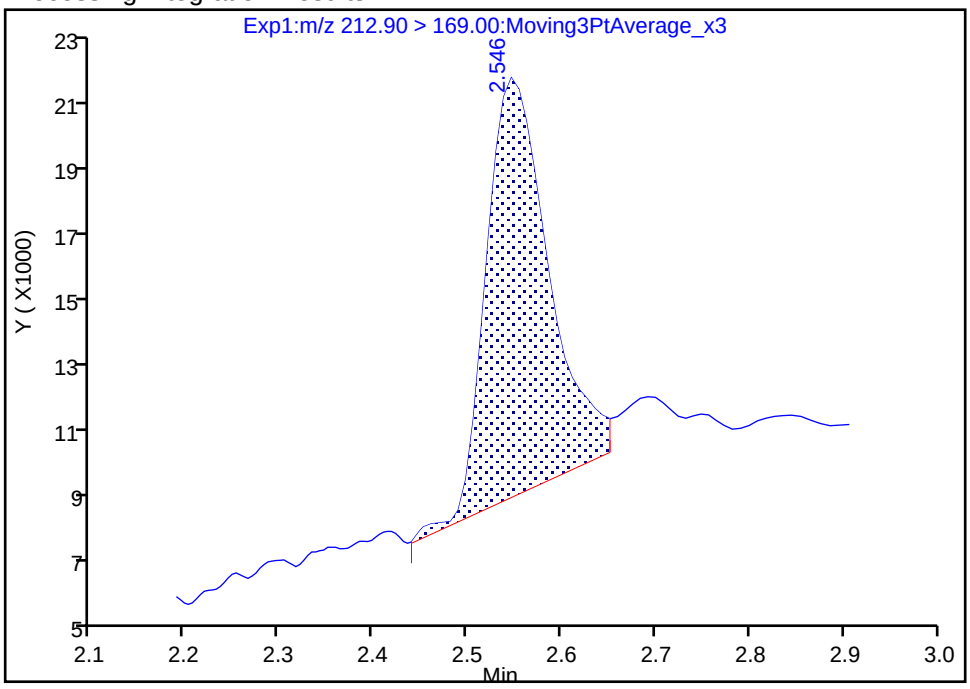
| Injection Date: | 10-Sep-2020 15:38:41 | Instrument ID: | A18 | | |
| Lims ID: | 460-217547-D-7-A | Lab Sample ID: | 320-217547-7 | | |
| Client ID: | FB | | | | |
| Operator ID: | TAISACA18-PC\A-18 | ALS Bottle#: | 41 | Worklist Smp#: | 5 |
| Injection Vol: | 20.0 ul | Dil. Factor: | 1.0000 | | |
| Method: | PFAS_A18V2 | Limit Group: | LC PFC ICAL | | |
| Column: | Gemini C18 3um 3mm x 50 mm ( 3.00mm) | Detector | EXP1 | | |

## 2 Perfluorobutanoic acid, CAS: 375-22-4

Signal: 1

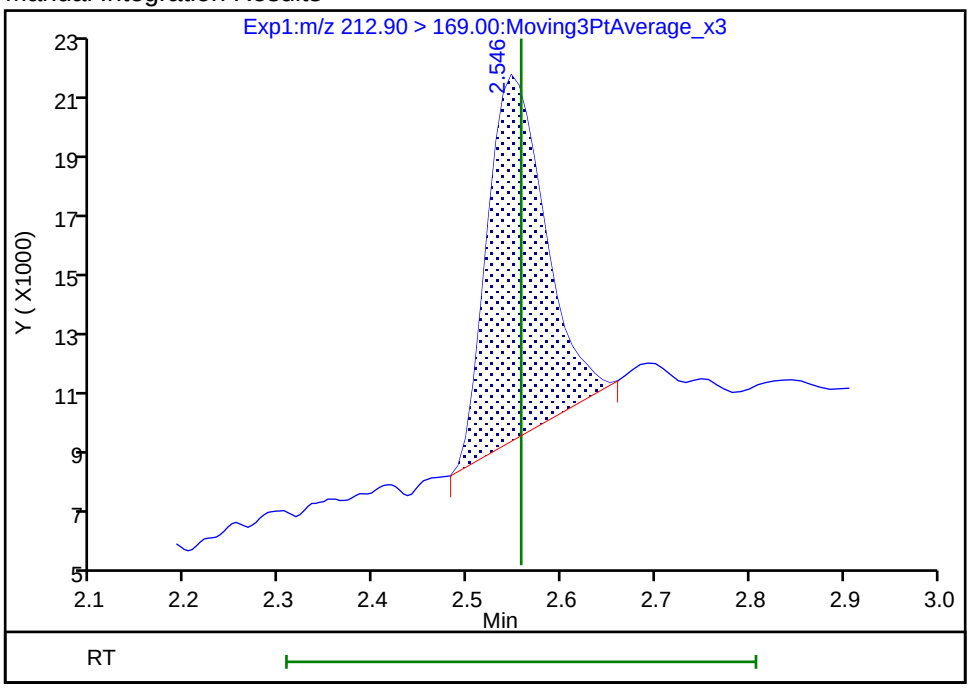
Processing Integration Results

RT: 2.55
Area: 55461
Amount: 0.010008
Amount Units: ng/ml




Manual Integration Results

RT: 2.55
Area: 49837
Amount: 0.008993
Amount Units: ng/ml




Reviewer: sanjumnair, 11-Sep-2020 08:31:58
Audit Action: Manually Integrated Audit Reason: Baseline

Eurofins TestAmerica, Sacramento

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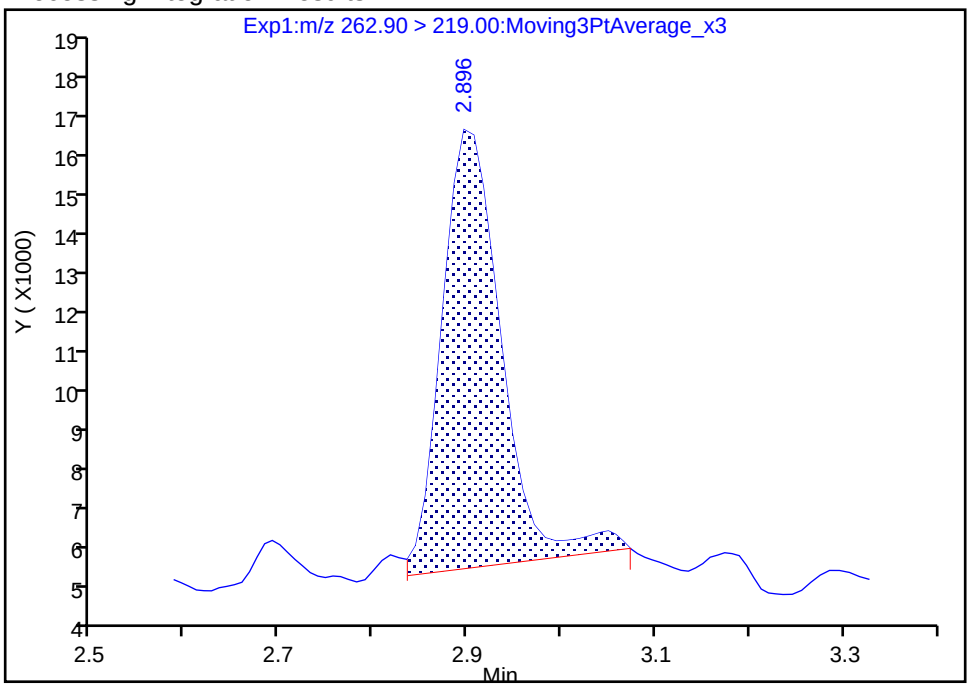
| Injection Date: | 10-Sep-2020 15:38:41 | Instrument ID: | A18 | | |
| Lims ID: | 460-217547-D-7-A | Lab Sample ID: | 320-217547-7 | | |
| Client ID: | FB | | | | |
| Operator ID: | TAISACA18-PC\A-18 | ALS Bottle#: | 41 | Worklist Smp#: | 5 |
| Injection Vol: | 20.0 ul | Dil. Factor: | 1.0000 | | |
| Method: | PFAS_A18V2 | Limit Group: | LC PFC ICAL | | |
| Column: | Gemini C18 3um 3mm x 50 mm ( 3.00mm) | Detector | EXP1 | | |

## 5 Perfluoropentanoic acid, CAS: 2706-90-3

Signal: 1

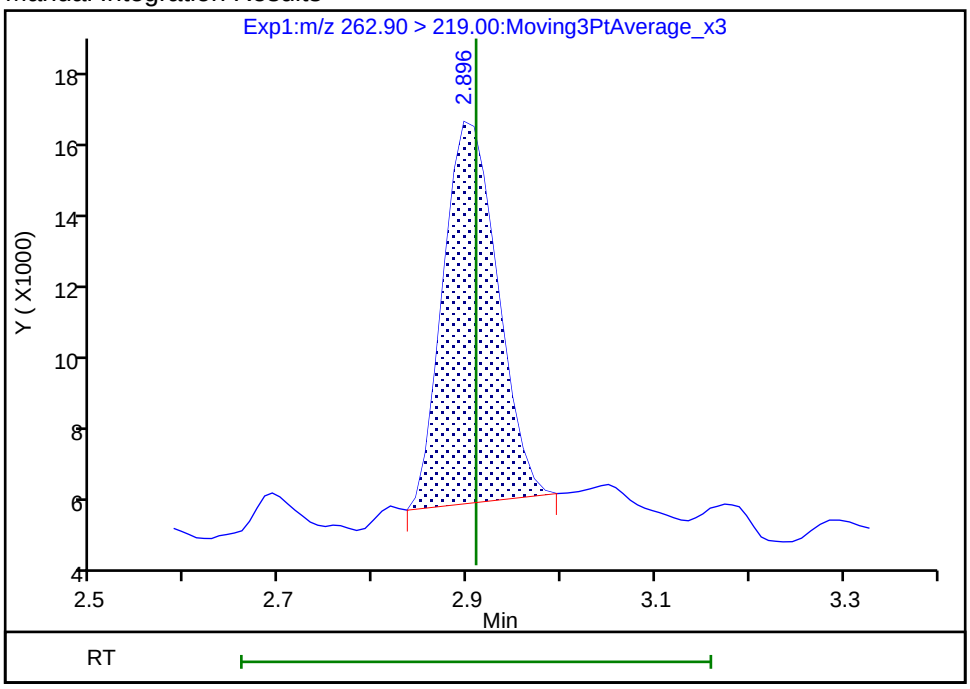
Processing Integration Results

RT: 2.90
Area: 47153
Amount: 0.008933
Amount Units: ng/ml




Manual Integration Results

RT: 2.90
Area: 41578
Amount: 0.007877
Amount Units: ng/ml




Reviewer: sanjumnair, 11-Sep-2020 08:32:06
Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

| | | | | | |
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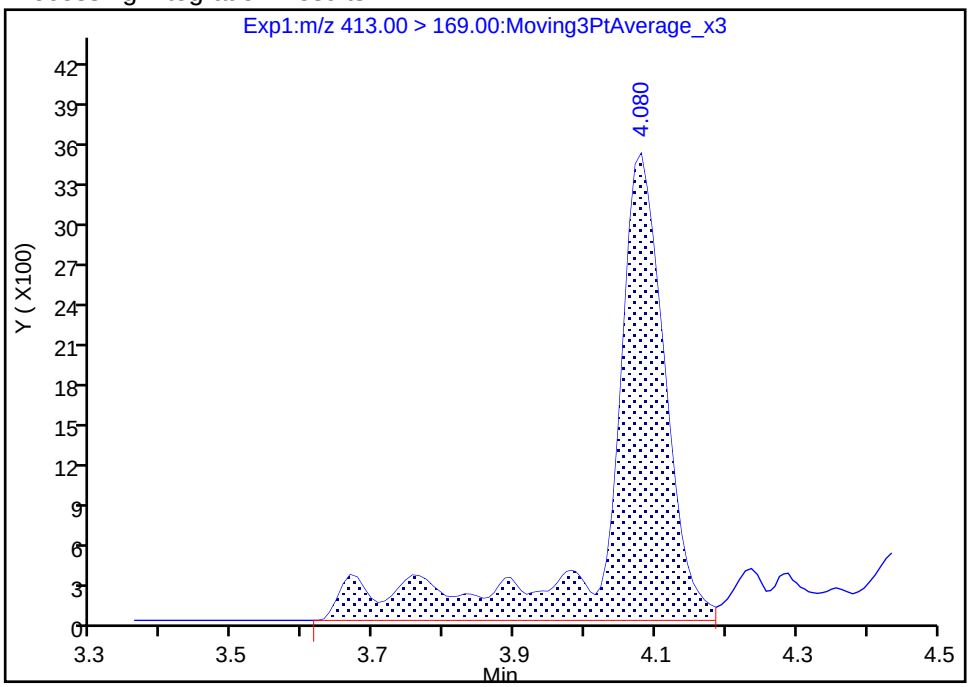
| Injection Date: | 10-Sep-2020 15:38:41 | Instrument ID: | A18 | | |
| Lims ID: | 460-217547-D-7-A | Lab Sample ID: | 320-217547-7 | | |
| Client ID: | FB | | | | |
| Operator ID: | TAISACA18-PC\A-18 | ALS Bottle#: | 41 | Worklist Smp#: | 5 |
| Injection Vol: | 20.0 ul | Dil. Factor: | 1.0000 | | |
| Method: | PFAS_A18V2 | Limit Group: | LC PFC ICAL | | |
| Column: | Gemini C18 3um 3mm x 50 mm ( 3.00mm) | Detector | EXP1 | | |

## 22 Perfluorooctanoic acid, CAS: 335-67-1

Signal: 2

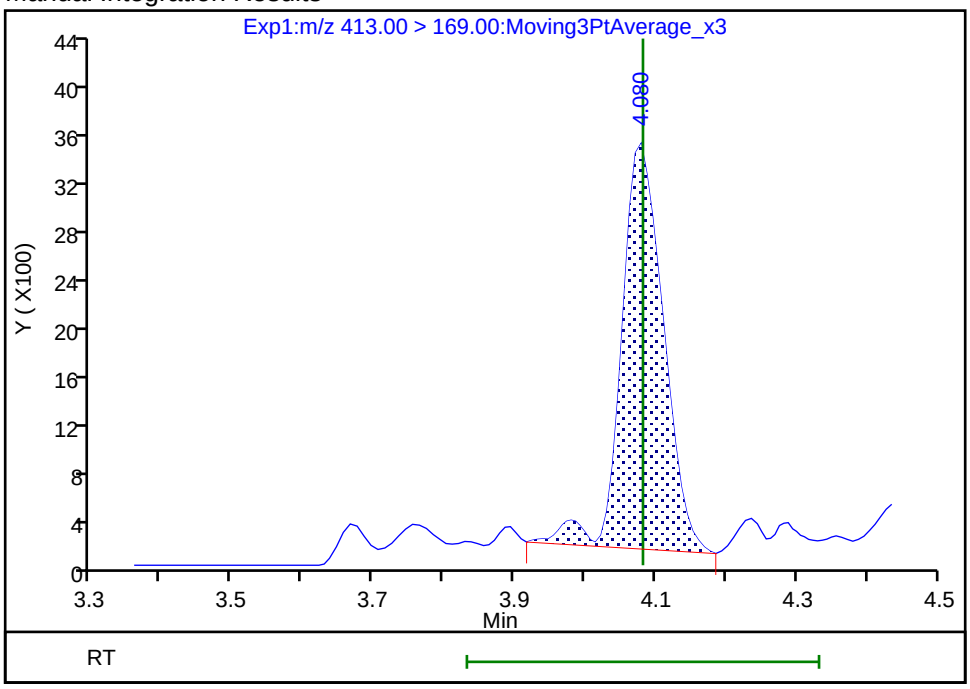
Processing Integration Results

RT: 4.08
Area: 19974
Amount: 0.016117
Amount Units: ng/ml




Manual Integration Results

RT: 4.08
Area: 13816
Amount: 0.007196
Amount Units: ng/ml




Reviewer: sanjumnair, 11-Sep-2020 08:32:38

Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

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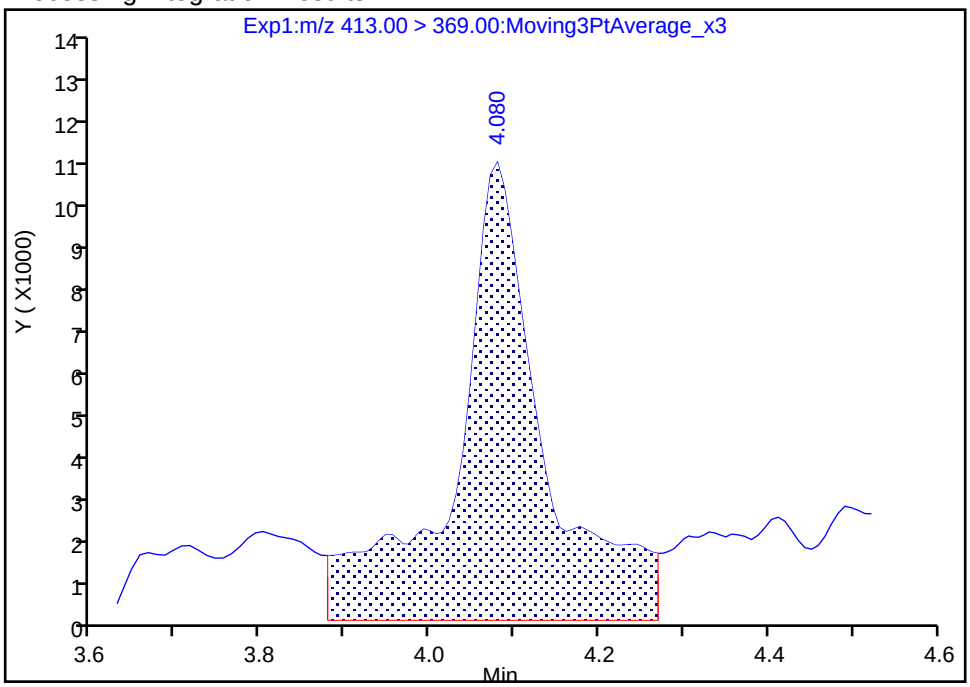
| Lims ID: | 460-217547-D-7-A | Lab Sample ID: | 320-217547-7 | | |
| Client ID: | FB | | | | |
| Operator ID: | TAISACA18-PC\A-18 | ALS Bottle#: | 41 | Worklist Smp#: | 5 |
| Injection Vol: | 20.0 ul | Dil. Factor: | 1.0000 | | |
| Method: | PFAS_A18V2 | Limit Group: | LC PFC ICAL | | |
| Column: | Gemini C18 3um 3mm x 50 mm ( 3.00mm) | Detector | EXP1 | | |

## 22 Perfluorooctanoic acid, CAS: 335-67-1

Signal: 1

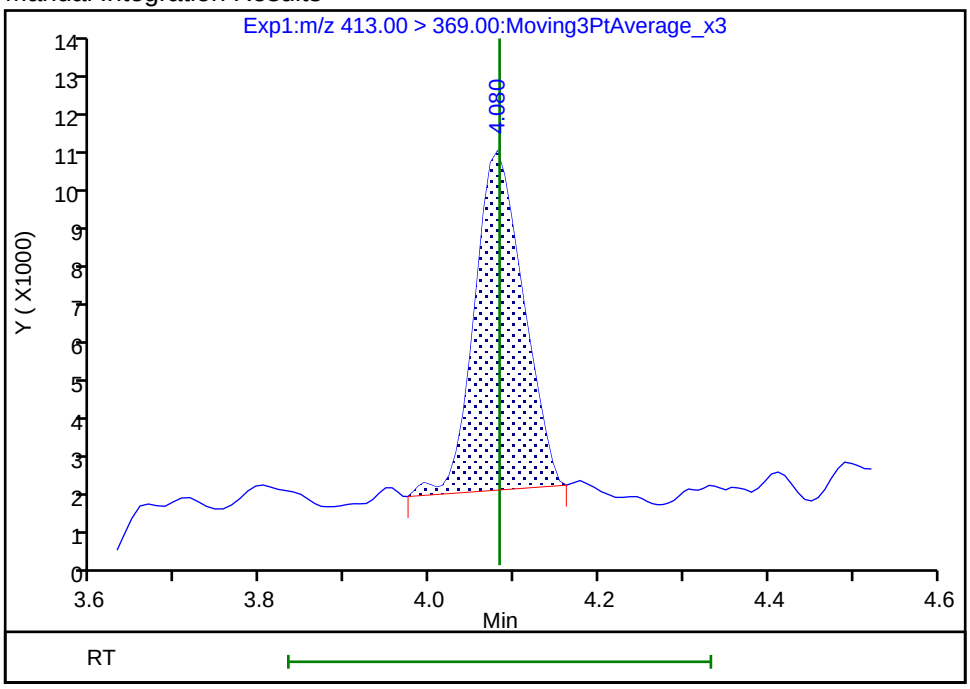
Processing Integration Results

RT: 4.08
Area: 78938
Amount: 0.016117
Amount Units: ng/ml




Manual Integration Results

RT: 4.08
Area: 35247
Amount: 0.007196
Amount Units: ng/ml




Reviewer: sanjumnair, 11-Sep-2020 08:32:43
Audit Action: Manually Integrated Audit Reason: Baseline

Eurofins TestAmerica, Sacramento

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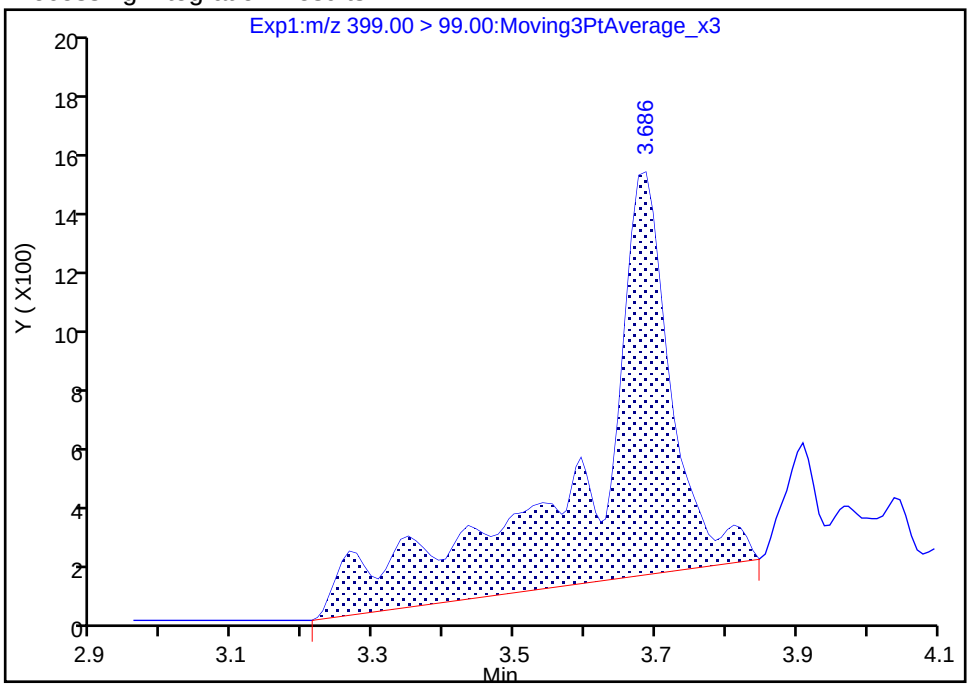
| Injection Date: | 10-Sep-2020 15:38:41 | Instrument ID: | A18 | | |
| Lims ID: | 460-217547-D-7-A | Lab Sample ID: | 320-217547-7 | | |
| Client ID: | FB | | | | |
| Operator ID: | TAISACA18-PC\A-18 | ALS Bottle#: | 41 | Worklist Smp#: | 5 |
| Injection Vol: | 20.0 ul | Dil. Factor: | 1.0000 | | |
| Method: | PFAS_A18V2 | Limit Group: | LC PFC ICAL | | |
| Column: | Gemini C18 3um 3mm x 50 mm ( 3.00mm) | Detector | EXP1 | | |

## 15 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 2

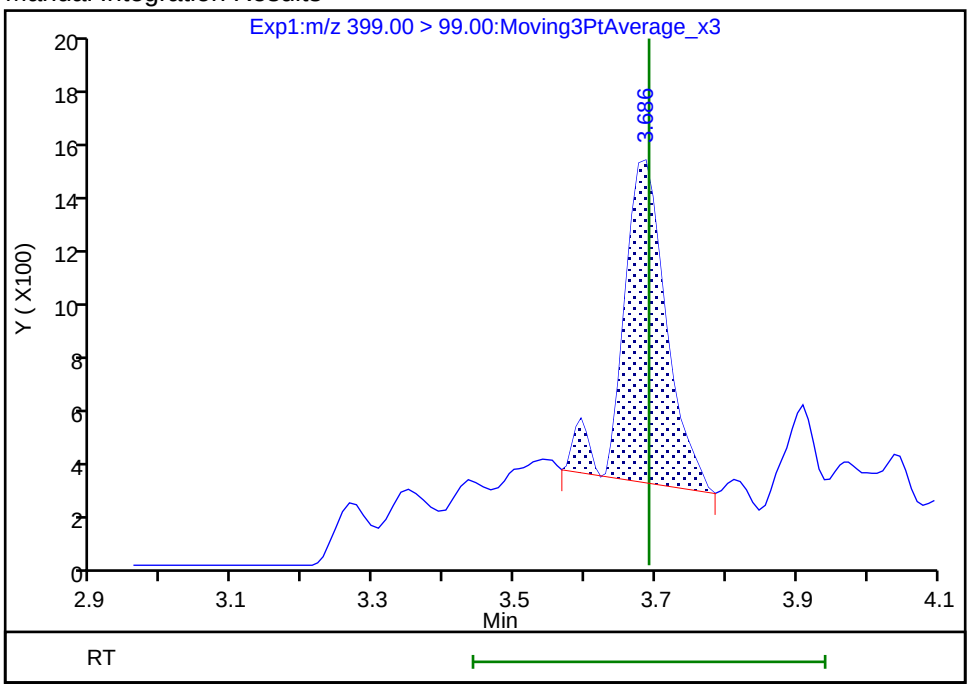
Processing Integration Results

RT: 3.69
Area: 11729
Amount: 0.012707
Amount Units: ng/ml




Manual Integration Results

RT: 3.69
Area: 5141
Amount: 0.006789
Amount Units: ng/ml




Reviewer: sanjumnair, 11-Sep-2020 08:32:22
Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

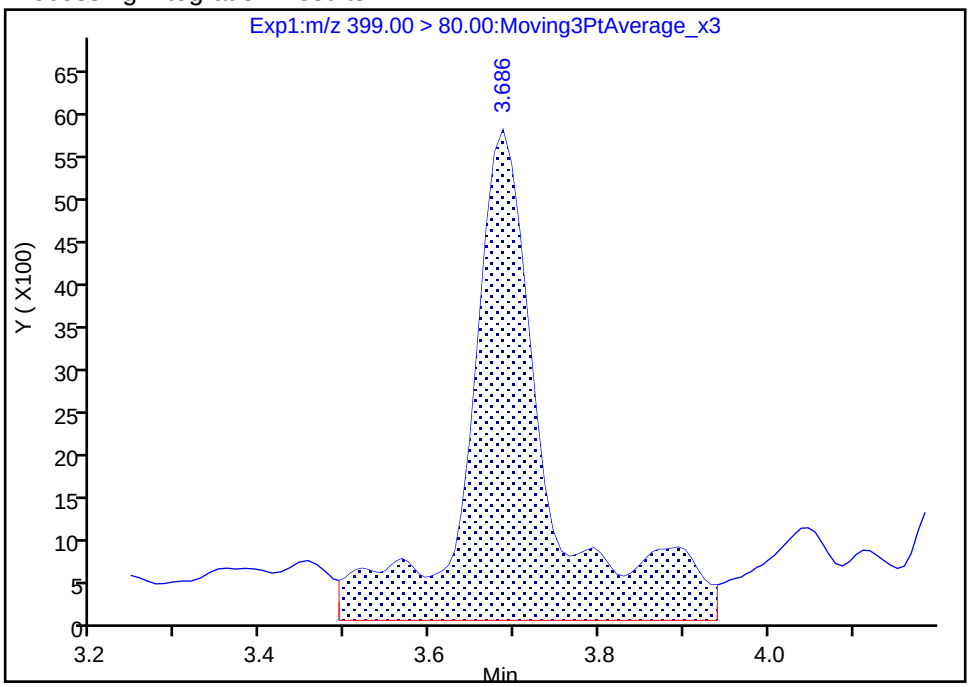
| | | | | | |
|---|---|---|---|---|---|
| Data File: | \\chromfs\Sacramento\ChromData\A18\20200910-103041.b\2020.09.10_A18_PFC_A_077.d | | | | |
| Injection Date: | 10-Sep-2020 15:38:41 | Instrument ID: | A18 | | |
| Lims ID: | 460-217547-D-7-A | Lab Sample ID: | 320-217547-7 | | |
| Client ID: | FB | | | | |
| Operator ID: | TAISACA18-PC\A-18 | ALS Bottle#: | 41 | Worklist Smp#: | 5 |
| Injection Vol: | 20.0 ul | Dil. Factor: | 1.0000 | | |
| Method: | PFAS_A18V2 | Limit Group: | LC PFC ICAL | | |
| Column: | Gemini C18 3um 3mm x 50 mm ( 3.00mm) | Detector | EXP1 | | |

## 15 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 1

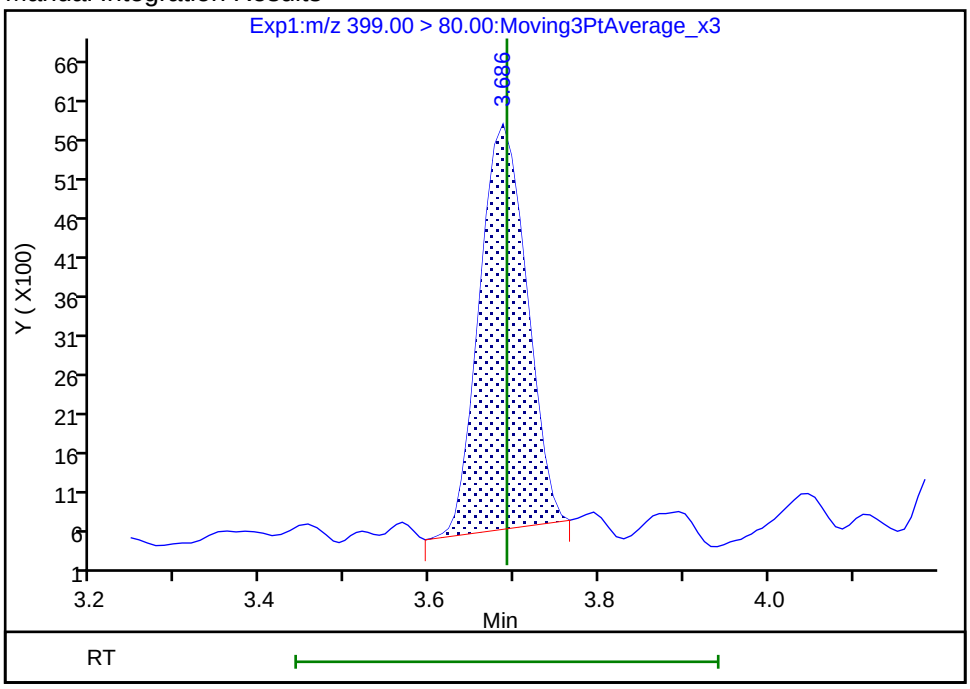
Processing Integration Results

RT: 3.69
Area: 37203
Amount: 0.012707
Amount Units: ng/ml




Manual Integration Results

RT: 3.69
Area: 19878
Amount: 0.006789
Amount Units: ng/ml




Reviewer: sanjumnair, 11-Sep-2020 08:32:29
Audit Action: Manually Integrated Audit Reason: Baseline

FORM VI
LCMS BY ISOTOPIC DILUTION - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 460-217547-1 Analy Batch No.: 406555

SDG No.:

Instrument ID: A18 GC Column: Gemini C18 ID: 3(mm) Heated Purge: (Y/N) N

Calibration Start Date: 08/25/2020 16:43 Calibration End Date: 08/25/2020 17:37 Calibration ID: 51647

Calibration Files:

| LEVEL: | LAB SAMPLE ID: | LAB FILE ID: |
|---|---|---|
| Level 1 | IC 320-406555/2 | 2020.08.25_A18_ICAL_A_011.d |
| Level 2 | IC 320-406555/3 | 2020.08.25_A18_ICAL_A_012.d |
| Level 3 | IC 320-406555/4 | 2020.08.25_A18_ICAL_A_013.d |
| Level 4 | IC 320-406555/5 | 2020.08.25_A18_ICAL_A_014.d |
| Level 5 | IC 320-406555/6 | 2020.08.25_A18_ICAL_A_015.d |
| Level 6 | IC 320-406555/7 | 2020.08.25_A18_ICAL_A_016.d |
| Level 7 | IC 320-406555/8 | 2020.08.25_A18_ICAL_A_017.d |

| ANALYTE | RRF | | | | | CURVE TYPE | COEFFICIENT | | | # | MIN RRF | %RSD | # | MAX %RSD | R^2 OR COD | # | MIN R^2 OR COD |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | LVL 1<br>LVL 6 | LVL 2<br>LVL 7 | LVL 3 | LVL 4 | LVL 5 | | B | M1 | M2 | | | | | | | | |
| Perfluorobutanoic acid (PFBA) | +++++<br>0.8788 | 0.7965<br>0.8642 | 0.8164 | 0.9194 | 0.9321 | AveID | | 0.8679 | | | | 6.2 | | 35.0 | | | |
| Perfluoropentanoic acid (PFPeA) | +++++<br>0.9457 | 1.0311<br>0.9616 | 0.9644 | 1.0091 | 1.0698 | AveID | | 0.9969 | | | | 4.8 | | 35.0 | | | |
| Perfluorobutanesulfonic acid (PFBS) | 0.9991<br>1.0276 | 0.9511<br>1.0015 | 0.9275 | 1.0686 | 1.0932 | AveID | | 1.0098 | | | | 5.9 | | 35.0 | | | |
| 4:2 FTS | 2.0216<br>2.3707 | 2.0450<br>2.2387 | 2.1336 | 2.5678 | 2.5339 | AveID | | 2.2730 | | | | 9.8 | | 35.0 | | | |
| Perfluorohexanoic acid (PFHxA) | +++++<br>0.8742 | 0.9654<br>0.9122 | 0.8917 | 1.0185 | 1.1210 | AveID | | 0.9638 | | | | 9.7 | | 35.0 | | | |
| Perfluoropentanesulfonic acid (PFPeS) | 0.7018<br>0.8012 | 0.7340<br>0.8037 | 0.7819 | 0.8355 | 0.8896 | AveID | | 0.7925 | | | | 7.9 | | 50.0 | | | |
| HFPO-DA (GenX) | 0.9638<br>0.9900 | 0.9277<br>0.9605 | 0.8878 | 1.0532 | 1.0362 | AveID | | 0.9742 | | | | 6.0 | | 35.0 | | | |
| Perfluoroheptanoic acid (PFHpA) | 0.9657<br>1.0262 | 1.0856<br>1.0314 | 0.9662 | 1.0290 | 0.9922 | AveID | | 1.0138 | | | | 4.2 | | 35.0 | | | |
| Perfluorohexanesulfonic acid (PFHxS) | 1.3549<br>1.1392 | 1.2167<br>1.1235 | 1.1779 | 1.1229 | 1.1351 | AveID | | 1.1815 | | | | 7.1 | | 35.0 | | | |
| 4,8-Dioxa-3H-perfluorononanoic acid (ADONA) | 8.7475<br>9.6941 | 9.1253<br>8.7505 | 9.6406 | 10.603 | 10.515 | AveID | | 9.5823 | | | | 8.0 | | 50.0 | | | |
| 6:2 FTS | 2.5128<br>2.1863 | 2.3177<br>2.1277 | 2.1707 | 2.3703 | 2.4061 | AveID | | 2.2988 | | | | 6.2 | | 35.0 | | | |
| Perfluoroheptanesulfonic Acid (PFHpS) | 1.0496<br>1.1462 | 1.0544<br>1.0987 | 1.0930 | 1.2039 | 1.1775 | AveID | | 1.1176 | | | | 5.3 | | 50.0 | | | |
| Perfluorooctanoic acid (PFOA) | 1.2170<br>0.9082 | 1.0137<br>0.9113 | 0.9517 | 1.0603 | 1.0805 | AveID | | 1.0204 | | | | 10.8 | | 35.0 | | | |
| Perfluorooctanesulfonic acid (PFOS) | 0.9513<br>1.0616 | 0.9642<br>1.0536 | 1.0050 | 1.0923 | 1.1172 | AveID | | 1.0350 | | | | 6.1 | | 35.0 | | | |

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
LCMS BY ISOTOPIC DILUTION - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 460-217547-1 Analy Batch No.: 406555

SDG No.:

Instrument ID: A18 GC Column: Gemini C18 ID: 3(mm) Heated Purge: (Y/N) N

Calibration Start Date: 08/25/2020 16:43 Calibration End Date: 08/25/2020 17:37 Calibration ID: 51647

| ANALYTE | RRF | | | | | CURVE TYPE | COEFFICIENT | | | # | MIN RRF | %RSD | # | MAX %RSD | R^2 OR COD | # | MIN R^2 OR COD |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | LVL 1<br>LVL 6 | LVL 2<br>LVL 7 | LVL 3 | LVL 4 | LVL 5 | | B | M1 | M2 | | | | | | | | |
| Perfluorononanoic acid (PFNA) | 0.8810<br>0.9408 | 0.8811<br>0.8429 | 0.9927 | 1.0431 | 1.1314 | AveID | | 0.9590 | | | | 10.8 | | 35.0 | | | |
| F-53B Major | 2.8508<br>3.4000 | 2.9376<br>3.3635 | 3.1240 | 3.4960 | 3.4797 | AveID | | 3.2359 | | | | 8.2 | | 50.0 | | | |
| Perfluorooctanesulfonamide (FOSA) | 0.8894<br>0.9173 | 0.8822<br>0.9652 | 0.9146 | 0.9866 | 0.9581 | AveID | | 0.9305 | | | | 4.3 | | 35.0 | | | |
| Perfluorononanesulfonic acid (PFNS) | 0.8871<br>0.9502 | 0.8702<br>0.8714 | 0.9991 | 1.0097 | 0.9702 | AveID | | 0.9368 | | | | 6.4 | | 50.0 | | | |
| Perfluorodecanoic acid (PFDA) | 0.9378<br>0.9491 | 0.8229<br>0.9723 | 0.9683 | 1.0939 | 1.0030 | AveID | | 0.9639 | | | | 8.4 | | 35.0 | | | |
| 8:2 FTS | 1.7244<br>1.8051 | 1.6240<br>1.7293 | 1.6603 | 1.9392 | 1.9431 | AveID | | 1.7750 | | | | 7.2 | | 35.0 | | | |
| N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA) | 0.6674<br>0.7910 | 0.6947<br>0.8236 | 0.6940 | 0.7669 | 0.7541 | AveID | | 0.7417 | | | | 7.8 | | 35.0 | | | |
| Perfluorodecanesulfonic acid (PFDS) | 0.7191<br>0.8607 | 0.8409<br>0.8384 | 0.8239 | 0.8818 | 0.8804 | AveID | | 0.8350 | | | | 6.7 | | 50.0 | | | |
| Perfluoroundecanoic acid (PFUnA) | 0.7260<br>0.7106 | 0.6358<br>0.7376 | 0.6759 | 0.8020 | 0.7891 | AveID | | 0.7253 | | | | 8.1 | | 35.0 | | | |
| N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA) | 0.5603<br>0.7625 | 0.5831<br>0.7960 | 0.5972 | 0.6909 | 0.7407 | AveID | | 0.6758 | | | | 14.1 | | 35.0 | | | |
| NMeFOSE | 0.8745<br>1.0752 | 1.0568<br>1.1205 | 1.0494 | 1.1409 | 1.2394 | AveID | | 1.0795 | | | | 10.3 | | 35.0 | | | |
| NMeFOSA | 0.8276<br>0.9664 | 0.8511<br>0.9292 | 0.9210 | 1.1205 | 1.1082 | AveID | | 0.9606 | | | | 12.0 | | 35.0 | | | |
| F-53B Minor | 3.4882<br>4.3805 | 3.7488<br>4.3313 | 3.8166 | 4.3761 | 4.5705 | AveID | | 4.1017 | | | | 10.0 | | 50.0 | | | |
| NEtFOSE | 0.8260<br>1.1506 | 1.0227<br>1.0006 | 1.1349 | 1.2093 | 1.1662 | AveID | | 1.0729 | | | | 12.4 | | 35.0 | | | |
| NEtFOSA | 0.9349<br>1.0028 | 1.1274<br>1.0135 | 1.0349 | 1.1506 | 1.1446 | AveID | | 1.0584 | | | | 7.9 | | 35.0 | | | |
| Perfluorododecanoic acid (PFDoA) | +++++<br>0.9888 | 0.9762<br>0.9710 | 1.0603 | 1.0333 | 1.1055 | AveID | | 1.0225 | | | | 5.2 | | 35.0 | | | |
| 10:2 FTS | 1.9258<br>2.0619 | 1.8782<br>1.9418 | 1.9881 | 2.1950 | 2.1074 | AveID | | 2.0140 | | | | 5.6 | | 50.0 | | | |
| Perfluorododecanesulfonic acid (PFDoS) | 0.3213<br>0.3398 | 0.3485<br>0.3461 | 0.3092 | 0.3309 | 0.3343 | AveID | | 0.3329 | | | | 4.2 | | 50.0 | | | |
| Perfluorotridecanoic acid (PFTriA) | +++++<br>0.8975 | 1.0195<br>0.9651 | 0.8649 | 0.8530 | 1.0452 | AveID | | 0.9409 | | | | 8.6 | | 50.0 | | | |
| Perfluorotetradecanoic acid (PFTeA) | 0.0766<br>0.0842 | 0.0886<br>0.0813 | 0.0881 | 0.0809 | 0.0910 | AveID | | 0.0844 | | | | 6.1 | | 35.0 | | | |

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
LCMS BY ISOTOPIC DILUTION - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 460-217547-1 Analy Batch No.: 406555

SDG No.:

Instrument ID: A18 GC Column: Gemini C18 ID: 3(mm) Heated Purge: (Y/N) N

Calibration Start Date: 08/25/2020 16:43 Calibration End Date: 08/25/2020 17:37 Calibration ID: 51647

| ANALYTE | RRF | | | | | CURVE TYPE | COEFFICIENT | | | # | MIN RRF | %RSD | # | MAX %RSD | R^2 OR COD | # | MIN R^2 OR COD |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | LVL 1<br>LVL 6 | LVL 2<br>LVL 7 | LVL 3 | LVL 4 | LVL 5 | | B | M1 | M2 | | | | | | | | |
| Perfluoro-n-hexadecanoic acid (PFHxDA) | 1.7564<br>0.8053 | 1.2050<br>0.8810 | 0.9850 | 0.9458 | 0.9386 | L2ID | 0.0209 | 0.8774 | | | | | | | 0.9940 | | 0.9900 |
| Perfluoro-n-octadecanoic acid (PFODA) | 0.5234<br>0.6068 | 0.5953<br>0.7289 | 0.6417 | 0.7743 | 0.7528 | AveID | | 0.6605 | | | | 14.2 | | 50.0 | | | |
| 13C4 PFBA | 1.4854<br>1.5534 | 1.5421<br>1.6647 | 1.5768 | 1.5783 | 1.6967 | Ave | | 1.5853 | | | | 4.6 | | 50.0 | | | |
| 13C5 PFPeA | 1.1603<br>1.2478 | 1.2281<br>1.2625 | 1.2428 | 1.2199 | 1.2708 | Ave | | 1.2332 | | | | 3.0 | | 50.0 | | | |
| 13C3 PFBS | 0.9184<br>0.9290 | 0.9519<br>0.9767 | 0.9599 | 0.9964 | 1.0460 | Ave | | 0.9684 | | | | 4.5 | | 50.0 | | | |
| M2-4:2 FTS | 0.2314<br>0.2175 | 0.2422<br>0.2211 | 0.2496 | 0.2293 | 0.2420 | Ave | | 0.2333 | | | | 5.1 | | 50.0 | | | |
| 13C2 PFHxA | 1.1847<br>1.2587 | 1.2322<br>1.2477 | 1.2900 | 1.1997 | 1.2029 | Ave | | 1.2308 | | | | 3.0 | | 50.0 | | | |
| 13C3 HFPO-DA | 0.2399<br>0.2430 | 0.2515<br>0.2670 | 0.2514 | 0.2401 | 0.2698 | Ave | | 0.2518 | | | | 4.9 | | 50.0 | | | |
| 13C4 PFHpA | 1.0083<br>1.0317 | 0.9866<br>1.0121 | 1.1007 | 1.0434 | 1.1733 | Ave | | 1.0509 | | | | 6.2 | | 50.0 | | | |
| 18O2 PFHxS | 0.4858<br>0.4906 | 0.5012<br>0.5086 | 0.5110 | 0.5255 | 0.5595 | Ave | | 0.5117 | | | | 4.9 | | 50.0 | | | |
| M2-6:2 FTS | 0.2010<br>0.1781 | 0.1997<br>0.1736 | 0.2065 | 0.2058 | 0.2059 | Ave | | 0.1958 | | | | 7.1 | | 50.0 | | | |
| 13C4 PFOA | 0.9236<br>0.9997 | 1.0415<br>0.9443 | 1.0722 | 0.9898 | 1.0356 | Ave | | 1.0010 | | | | 5.4 | | 50.0 | | | |
| 13C4 PFOS | 0.3281<br>0.3319 | 0.3442<br>0.3575 | 0.3457 | 0.3467 | 0.3717 | Ave | | 0.3465 | | | | 4.3 | | 50.0 | | | |
| 13C5 PFNA | 0.8219<br>0.7315 | 0.8187<br>0.8002 | 0.8044 | 0.8027 | 0.8644 | Ave | | 0.8063 | | | | 4.9 | | 50.0 | | | |
| 13C8 FOSA | 0.5270<br>0.5418 | 0.5658<br>0.5665 | 0.5522 | 0.5530 | 0.6069 | Ave | | 0.5590 | | | | 4.5 | | 50.0 | | | |
| 13C2 PFDA | 0.8732<br>0.7154 | 0.8807<br>0.7081 | 0.7436 | 0.7795 | 0.7798 | Ave | | 0.7829 | | | | 8.9 | | 50.0 | | | |
| M2-8:2 FTS | 0.2960<br>0.2431 | 0.3133<br>0.2311 | 0.3142 | 0.2911 | 0.2874 | Ave | | 0.2823 | | | | 11.6 | | 50.0 | | | |
| d3-NMeFOSAA | 0.5076<br>0.5114 | 0.5129<br>0.5478 | 0.5205 | 0.5087 | 0.5694 | Ave | | 0.5255 | | | | 4.5 | | 50.0 | | | |
| 13C2 PFUnA | 0.7114<br>0.7856 | 0.8107<br>0.7732 | 0.8014 | 0.8125 | 0.7359 | Ave | | 0.7758 | | | | 5.0 | | 50.0 | | | |
| d5-NEtFOSAA | 0.5713<br>0.5011 | 0.5803<br>0.4848 | 0.5887 | 0.5782 | 0.5848 | Ave | | 0.5556 | | | | 7.8 | | 50.0 | | | |

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
LCMS BY ISOTOPIC DILUTION - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 460-217547-1 Analy Batch No.: 406555

SDG No.:

Instrument ID: A18 GC Column: Gemini C18 ID: 3(mm) Heated Purge: (Y/N) N

Calibration Start Date: 08/25/2020 16:43 Calibration End Date: 08/25/2020 17:37 Calibration ID: 51647

| ANALYTE | RRF | | | | | CURVE TYPE | COEFFICIENT | | | # | MIN RRF | %RSD | # | MAX %RSD | R^2 OR COD | # | MIN R^2 OR COD |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | LVL 1<br>LVL 6 | LVL 2<br>LVL 7 | LVL 3 | LVL 4 | LVL 5 | | B | M1 | M2 | | | | | | | | |
| d7-N-MeFOSE-M | 0.1392<br>0.1395 | 0.1294<br>0.1537 | 0.1367 | 0.1276 | 0.1426 | Ave | | 0.1384 | | | | 6.3 | | 50.0 | | | |
| d-N-MeFOSA-M | 0.1715<br>0.2053 | 0.1856<br>0.2297 | 0.1831 | 0.1918 | 0.2087 | Ave | | 0.1965 | | | | 9.9 | | 50.0 | | | |
| d9-N-EtFOSE-M | 0.1674<br>0.1537 | 0.1547<br>0.1945 | 0.1609 | 0.1600 | 0.1985 | Ave | | 0.1700 | | | | 11.0 | | 50.0 | | | |
| d-N-EtFOSA-M | 0.1850<br>0.2116 | 0.1869<br>0.2306 | 0.1873 | 0.1941 | 0.2124 | Ave | | 0.2011 | | | | 8.6 | | 50.0 | | | |
| 13C2 PFDoA | +++++<br>0.7181 | 0.7408<br>0.7234 | 0.8064 | 0.8535 | 0.7481 | Ave | | 0.7650 | | | | 7.0 | | 50.0 | | | |
| 13C2 PFTeDA | 0.6585<br>0.6504 | 0.6437<br>0.5917 | 0.6092 | 0.6375 | 0.6269 | Ave | | 0.6311 | | | | 3.8 | | 50.0 | | | |
| 13C2 PFHxDA | 0.4614<br>0.4576 | 0.4945<br>0.4749 | 0.4342 | 0.4213 | 0.4889 | Ave | | 0.4618 | | | | 5.9 | | 50.0 | | | |
| 13C8 PFOA | 0.6749<br>0.6190 | 0.7076<br>0.6808 | 0.6965 | 0.6849 | 0.6656 | Ave | | 0.6756 | | | | 4.2 | | 50.0 | | | |
| 13C8 PFOS | 0.1054<br>0.1058 | 0.1104<br>0.1078 | 0.1092 | 0.1077 | 0.1112 | Ave | | 0.1082 | | | | 2.0 | | 50.0 | | | |

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
LCMS BY ISOTOPIC DILUTION - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 460-217547-1 Analy Batch No.: 406555

SDG No.:

Instrument ID: A18 GC Column: Gemini C18 ID: 3(mm) Heated Purge: (Y/N) N

Calibration Start Date: 08/25/2020 16:43 Calibration End Date: 08/25/2020 17:37 Calibration ID: 51647

Calibration Files:

| LEVEL: | LAB SAMPLE ID: | LAB FILE ID: |
|---|---|---|
| Level 1 | IC 320-406555/2 | 2020.08.25_A18_ICAL_A_011.d |
| Level 2 | IC 320-406555/3 | 2020.08.25_A18_ICAL_A_012.d |
| Level 3 | IC 320-406555/4 | 2020.08.25_A18_ICAL_A_013.d |
| Level 4 | IC 320-406555/5 | 2020.08.25_A18_ICAL_A_014.d |
| Level 5 | IC 320-406555/6 | 2020.08.25_A18_ICAL_A_015.d |
| Level 6 | IC 320-406555/7 | 2020.08.25_A18_ICAL_A_016.d |
| Level 7 | IC 320-406555/8 | 2020.08.25_A18_ICAL_A_017.d |

| ANALYTE | IS REF | CURVE TYPE | RESPONSE | | | | | CONCENTRATION (NG/ML) | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | LVL 1<br>LVL 6 | LVL 2<br>LVL 7 | LVL 3 | LVL 4 | LVL 5 | LVL 1<br>LVL 6 | LVL 2<br>LVL 7 | LVL 3 | LVL 4 | LVL 5 |
| Perfluorobutanoic acid (PFBA) | | AveID | +++++<br>30004201 | 279410<br>56740145 | 1434703 | 6131943 | 15043941 | +++++<br>5.00 | 0.0500<br>10.0 | 0.250 | 1.00 | 2.50 |
| Perfluoropentanoic acid (PFPeA) | | AveID | +++++<br>25936244 | 288057<br>47880922 | 1335754 | 5201851 | 12932809 | +++++<br>5.00 | 0.0500<br>10.0 | 0.250 | 1.00 | 2.50 |
| Perfluorobutanesulfonic acid (PFBS) | | AveID | 99013<br>18549061 | 182071<br>34105255 | 877185 | 3977334 | 9615968 | 0.0221<br>4.42 | 0.0442<br>8.84 | 0.221 | 0.884 | 2.21 |
| 4:2 FTS | | AveID | 53342<br>10586753 | 105243<br>18232538 | 554249 | 2323852 | 5448117 | 0.0234<br>4.67 | 0.0467<br>9.34 | 0.234 | 0.934 | 2.34 |
| Perfluorohexanoic acid (PFHxA) | | AveID | +++++<br>24185372 | 270599<br>44890403 | 1281954 | 5163146 | 12827055 | +++++<br>5.00 | 0.0500<br>10.0 | 0.250 | 1.00 | 2.50 |
| Perfluoropentanesulfonic acid (PFPeS) | | AveID | 73804<br>15346854 | 149083<br>29038841 | 784647 | 3300035 | 8302940 | 0.0235<br>4.69 | 0.0469<br>9.38 | 0.235 | 0.938 | 2.35 |
| HFPO-DA (GenX) | | AveID | 28220<br>5287445 | 53068<br>10115867 | 248757 | 1068621 | 2659360 | 0.0250<br>5.00 | 0.0500<br>10.0 | 0.250 | 1.00 | 2.50 |
| Perfluoroheptanoic acid (PFHpA) | | AveID | 118869<br>23268900 | 243648<br>41173087 | 1185266 | 4537270 | 11074099 | 0.0250<br>5.00 | 0.0500<br>10.0 | 0.250 | 1.00 | 2.50 |
| Perfluorohexanesulfonic acid (PFHxS) | | AveID | 73118<br>11177725 | 126222<br>20508587 | 610412 | 2269071 | 5498056 | 0.0228<br>4.55 | 0.0455<br>9.10 | 0.228 | 0.910 | 2.28 |
| 4,8-Dioxa-3H-perfluorononanoic acid (ADONA) | | AveID | 330079<br>66616540 | 673135<br>116216620 | 3498730 | 14631457 | 35025003 | 0.0236<br>4.71 | 0.0471<br>9.42 | 0.236 | 0.942 | 2.36 |
| 6:2 FTS | | AveID | 58465<br>8115080 | 99806<br>13812377 | 473474 | 1954343 | 4467087 | 0.0237<br>4.74 | 0.0474<br>9.48 | 0.237 | 0.948 | 2.37 |
| Perfluoroheptanesulfonic Acid (PFHpS) | | AveID | 40027<br>7960398 | 78602<br>14746979 | 400864 | 1678911 | 3963683 | 0.0238<br>4.76 | 0.0476<br>9.52 | 0.238 | 0.952 | 2.38 |
| Perfluorooctanoic acid (PFOA) | | AveID | 137219<br>19956418 | 240184<br>33940571 | 1137192 | 4439056 | 10655191 | 0.0250<br>5.00 | 0.0500<br>10.0 | 0.250 | 1.00 | 2.50 |
| Perfluorooctanesulfonic acid (PFOS) | | AveID | 35364<br>7186938 | 70065<br>13785552 | 359317 | 1484922 | 3665824 | 0.0232<br>4.64 | 0.0464<br>9.28 | 0.232 | 0.928 | 2.32 |
| Perfluorononanoic acid (PFNA) | | AveID | 88392<br>15126434 | 164095<br>26602259 | 889961 | 3545158 | 9321539 | 0.0250<br>5.00 | 0.0500<br>10.0 | 0.250 | 1.00 | 2.51 |

FORM VI
LCMS BY ISOTOPIC DILUTION - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 460-217547-1 Analy Batch No.: 406555

SDG No.:

Instrument ID: A18 GC Column: Gemini C18 ID: 3(mm) Heated Purge: (Y/N) N

Calibration Start Date: 08/25/2020 16:43 Calibration End Date: 08/25/2020 17:37 Calibration ID: 51647

| ANALYTE | IS REF | CURVE TYPE | RESPONSE | | | | | CONCENTRATION (NG/ML) | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | LVL 1<br>LVL 6 | LVL 2<br>LVL 7 | LVL 3 | LVL 4 | LVL 5 | LVL 1<br>LVL 6 | LVL 2<br>LVL 7 | LVL 3 | LVL 4 | LVL 5 |
| F-53B Major | | AveID | 106429<br>23116216 | 214392<br>44196767 | 1121719 | 4773068 | 11467134 | 0.0233<br>4.66 | 0.0466<br>9.32 | 0.233 | 0.932 | 2.33 |
| Perfluorooctanesulfonamide (FOSA) | | AveID | 57218<br>10924659 | 113545<br>21565996 | 562825 | 2305329 | 5530939 | 0.0250<br>5.00 | 0.0500<br>10.0 | 0.250 | 1.00 | 2.50 |
| Perfluorononanesulfonic acid (PFNS) | | AveID | 34114<br>6654063 | 65415<br>11794985 | 369502 | 1419890 | 3293468 | 0.0240<br>4.80 | 0.0480<br>9.60 | 0.240 | 0.960 | 2.40 |
| Perfluorodecanoic acid (PFDA) | | AveID | 99970<br>14925465 | 164851<br>27154808 | 802442 | 3603160 | 7439717 | 0.0250<br>5.00 | 0.0500<br>10.0 | 0.250 | 1.00 | 2.50 |
| 8:2 FTS | | AveID | 59696<br>9239140 | 110874<br>15102670 | 556880 | 2284820 | 5089997 | 0.0240<br>4.79 | 0.0479<br>9.58 | 0.240 | 0.958 | 2.40 |
| N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA) | | AveID | 41357<br>8891336 | 81058<br>17794078 | 402573 | 1648495 | 4084387 | 0.0250<br>5.00 | 0.0500<br>10.0 | 0.250 | 1.00 | 2.50 |
| Perfluorodecanesulfonic acid (PFDS) | | AveID | 27769<br>6052828 | 63477<br>11394459 | 305989 | 1245321 | 3000844 | 0.0241<br>4.82 | 0.0482<br>9.64 | 0.241 | 0.964 | 2.41 |
| Perfluoroundecanoic acid (PFUnA) | | AveID | 63047<br>12270214 | 117260<br>22491178 | 603692 | 2756370 | 5529773 | 0.0250<br>5.00 | 0.0500<br>10.0 | 0.250 | 1.00 | 2.50 |
| N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA) | | AveID | 39077<br>8399275 | 76967<br>15220352 | 391811 | 1688059 | 4120421 | 0.0250<br>5.00 | 0.0500<br>10.0 | 0.250 | 1.00 | 2.50 |
| NMeFOSE | | AveID | 14857<br>3296405 | 31116<br>6794003 | 159827 | 615221 | 1681316 | 0.0250<br>5.00 | 0.0500<br>10.0 | 0.250 | 1.00 | 2.50 |
| NMeFOSA | | AveID | 17321<br>4360251 | 35943<br>8417031 | 187901 | 907971 | 2200383 | 0.0250<br>5.00 | 0.0500<br>10.0 | 0.250 | 1.00 | 2.50 |
| F-53B Minor | | AveID | 131623<br>30101960 | 276531<br>57524539 | 1385108 | 6038721 | 15223672 | 0.0236<br>4.71 | 0.0471<br>9.42 | 0.236 | 0.942 | 2.36 |
| NEtFOSE | | AveID | 16882<br>3886177 | 35999<br>7675582 | 203478 | 817562 | 2201944 | 0.0250<br>5.00 | 0.0500<br>10.0 | 0.250 | 1.00 | 2.50 |
| NEtFOSA | | AveID | 21111<br>4663831 | 47929<br>9216155 | 215981 | 943681 | 2312855 | 0.0250<br>5.00 | 0.0500<br>10.0 | 0.250 | 1.00 | 2.50 |
| Perfluorododecanoic acid (PFDoA) | | AveID | +++++<br>15608260 | 164490<br>27702397 | 952853 | 3749242 | 7914890 | +++++<br>5.00 | 0.0500<br>10.0 | 0.250 | 1.01 | 2.52 |
| 10:2 FTS | | AveID | 67089<br>10619740 | 129032<br>17064790 | 671004 | 2602419 | 5554903 | 0.0241<br>4.82 | 0.0482<br>9.64 | 0.241 | 0.964 | 2.41 |
| Perfluorododecanesulfonic acid (PFDoS) | | AveID | 12460<br>2399332 | 26418<br>4723160 | 115329 | 469292 | 1144299 | 0.0242<br>4.84 | 0.0484<br>9.68 | 0.242 | 0.968 | 2.42 |
| Perfluorotridecanoic acid (PFTriA) | | AveID | +++++<br>14166734 | 171790<br>27534864 | 777286 | 3076494 | 7438469 | +++++<br>5.00 | 0.0500<br>10.0 | 0.250 | 1.00 | 2.50 |
| Perfluorotetradecanoic acid (PFTeA) | | AveID | 6156<br>1203652 | 12981<br>1898401 | 59784 | 218083 | 543432 | 0.0250<br>5.00 | 0.0500<br>10.0 | 0.250 | 1.00 | 2.50 |
| Perfluoro-n-hexadecanoic acid (PFHxDA) | | L2ID | 98927<br>8100551 | 135536<br>16501588 | 476686 | 1683662 | 4364853 | 0.0250<br>5.00 | 0.0500<br>10.0 | 0.250 | 1.00 | 2.50 |
| Perfluoro-n-octadecanoic acid (PFODA) | | AveID | 29478<br>6103585 | 66963<br>13652717 | 310536 | 1378512 | 3501130 | 0.0250<br>5.00 | 0.0500<br>10.0 | 0.250 | 1.00 | 2.50 |

FORM VI
LCMS BY ISOTOPIC DILUTION - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 460-217547-1 Analy Batch No.: 406555

SDG No.:

Instrument ID: A18 GC Column: Gemini C18 ID: 3(mm) Heated Purge: (Y/N) N

Calibration Start Date: 08/25/2020 16:43 Calibration End Date: 08/25/2020 17:37 Calibration ID: 51647

| ANALYTE | IS REF | CURVE TYPE | RESPONSE | | | | | CONCENTRATION (NG/ML) | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | LVL 1<br>LVL 6 | LVL 2<br>LVL 7 | LVL 3 | LVL 4 | LVL 5 | LVL 1<br>LVL 6 | LVL 2<br>LVL 7 | LVL 3 | LVL 4 | LVL 5 |
| 13C4 PFBA | 13PF<br>OA | Ave | 18132924<br>17071288 | 17539640<br>16413711 | 17572811 | 16673548 | 16140239 | 2.50<br>2.50 | 2.50<br>2.50 | 2.50 | 2.50 | 2.50 |
| 13C5 PFPeA | 13PF<br>OA | Ave | 14164604<br>13713409 | 13968137<br>12448068 | 13850765 | 12887366 | 12089027 | 2.50<br>2.50 | 2.50<br>2.50 | 2.50 | 2.50 | 2.50 |
| 13C3 PFBS | 13PF<br>OA | Ave | 10426219<br>9495273 | 10069352<br>8956338 | 9949547 | 9789648 | 9254167 | 2.33<br>2.33 | 2.33<br>2.33 | 2.33 | 2.33 | 2.33 |
| M2-4:2 FTS | 13PF<br>OA | Ave | 2638569<br>2232877 | 2573214<br>2036093 | 2597711 | 2262460 | 2150089 | 2.34<br>2.34 | 2.34<br>2.34 | 2.34 | 2.34 | 2.34 |
| 13C2 PFHxA | 13PF<br>OA | Ave | 14462351<br>13833154 | 14014978<br>12302361 | 14376817 | 12673553 | 11442684 | 2.50<br>2.50 | 2.50<br>2.50 | 2.50 | 2.50 | 2.50 |
| 13C3 HFPO-DA | 13PF<br>OA | Ave | 2927999<br>2670374 | 2860041<br>2632961 | 2802026 | 2536511 | 2566383 | 2.50<br>2.50 | 2.50<br>2.50 | 2.50 | 2.50 | 2.50 |
| 13C4 PFHpA | 13PF<br>OA | Ave | 12308941<br>11337825 | 11221961<br>9979836 | 12267287 | 11023105 | 11161570 | 2.50<br>2.50 | 2.50<br>2.50 | 2.50 | 2.50 | 2.50 |
| 18O2 PFHxS | 13PF<br>OA | Ave | 5610177<br>5100068 | 5392336<br>4743964 | 5387347 | 5251864 | 5035082 | 2.37<br>2.37 | 2.37<br>2.37 | 2.37 | 2.37 | 2.37 |
| M2-6:2 FTS | 13PF<br>OA | Ave | 2331568<br>1859778 | 2157624<br>1626381 | 2185821 | 2065620 | 1860491 | 2.38<br>2.38 | 2.38<br>2.38 | 2.38 | 2.38 | 2.38 |
| 13C4 PFOA | 13PF<br>OA | Ave | 11275248<br>10986603 | 11846326<br>9310596 | 11949440 | 10456450 | 9851180 | 2.50<br>2.50 | 2.50<br>2.50 | 2.50 | 2.50 | 2.50 |
| 13C4 PFOS | 13PF<br>OA | Ave | 3829485<br>3486990 | 3743125<br>3369647 | 3683093 | 3501137 | 3380331 | 2.39<br>2.39 | 2.39<br>2.39 | 2.39 | 2.39 | 2.39 |
| 13C5 PFNA | 13PF<br>OA | Ave | 10032863<br>8038803 | 9311565<br>7890530 | 8965418 | 8480054 | 8222813 | 2.50<br>2.50 | 2.50<br>2.50 | 2.50 | 2.50 | 2.50 |
| 13C8 FOSA | 13PF<br>OA | Ave | 6433355<br>5954676 | 6435127<br>5585611 | 6153721 | 5841724 | 5772966 | 2.50<br>2.50 | 2.50<br>2.50 | 2.50 | 2.50 | 2.50 |
| 13C2 PFDA | 13PF<br>OA | Ave | 10660071<br>7862594 | 10016493<br>6981751 | 8286827 | 8234495 | 7417834 | 2.50<br>2.50 | 2.50<br>2.50 | 2.50 | 2.50 | 2.50 |
| M2-8:2 FTS | 13PF<br>OA | Ave | 3461927<br>2559241 | 3413693<br>2183392 | 3354161 | 2945635 | 2619467 | 2.40<br>2.40 | 2.40<br>2.40 | 2.40 | 2.40 | 2.40 |
| d3-NMeFOSAA | 13PF<br>OA | Ave | 6196740<br>5620374 | 5834171<br>5401400 | 5800390 | 5374136 | 5416409 | 2.50<br>2.50 | 2.50<br>2.50 | 2.50 | 2.50 | 2.50 |
| 13C2 PFUnA | 13PF<br>OA | Ave | 8683933<br>8633431 | 9221199<br>7623503 | 8931580 | 8583621 | 7000959 | 2.50<br>2.50 | 2.50<br>2.50 | 2.50 | 2.50 | 2.50 |
| d5-NEtFOSAA | 13PF<br>OA | Ave | 6974320<br>5507372 | 6600178<br>4780383 | 6561199 | 6107918 | 5563223 | 2.50<br>2.50 | 2.50<br>2.50 | 2.50 | 2.50 | 2.50 |
| d7-N-MeFOSE-M | 13PF<br>OA | Ave | 8494552<br>7664729 | 7361005<br>7579410 | 7614914 | 6740557 | 6782732 | 12.5<br>12.5 | 12.5<br>12.5 | 12.5 | 12.5 | 12.5 |
| d-N-MeFOSA-M | 13PF<br>OA | Ave | 2093005<br>2255932 | 2111503<br>2264660 | 2040174 | 2025907 | 1985528 | 2.50<br>2.50 | 2.50<br>2.50 | 2.50 | 2.50 | 2.50 |
| d9-N-EtFOSE-M | 13PF<br>OA | Ave | 10219224<br>8444122 | 8799748<br>9589089 | 8964785 | 8451063 | 9440764 | 12.5<br>12.5 | 12.5<br>12.5 | 12.5 | 12.5 | 12.5 |

FORM VI
LCMS BY ISOTOPIC DILUTION - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 460-217547-1 Analy Batch No.: 406555

SDG No.:

Instrument ID: A18 GC Column: Gemini C18 ID: 3(mm) Heated Purge: (Y/N) N

Calibration Start Date: 08/25/2020 16:43 Calibration End Date: 08/25/2020 17:37 Calibration ID: 51647

| ANALYTE | IS REF | CURVE TYPE | RESPONSE | | | | | CONCENTRATION (NG/ML) | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | LVL 1<br>LVL 6 | LVL 2<br>LVL 7 | LVL 3 | LVL 4 | LVL 5 | LVL 1<br>LVL 6 | LVL 2<br>LVL 7 | LVL 3 | LVL 4 | LVL 5 |
| d-N-EtFOSA-M | 13PF<br>OA | Ave | 2258068<br>2325340 | 2125583<br>2273331 | 2086889 | 2050346 | 2020717 | 2.50<br>2.50 | 2.50<br>2.50 | 2.50 | 2.50 | 2.50 |
| 13C2 PFDoA | 13PF<br>OA | Ave | +++++<br>7892285 | 8425257<br>7132495 | 8986881 | 9016643 | 7116690 | +++++<br>2.50 | 2.50<br>2.50 | 2.50 | 2.50 | 2.50 |
| 13C2 PFTeDA | 13PF<br>OA | Ave | 8038301<br>7148108 | 7321736<br>5834435 | 6789692 | 6734824 | 5963271 | 2.50<br>2.50 | 2.50<br>2.50 | 2.50 | 2.50 | 2.50 |
| 13C2 PFHxDA | 13PF<br>OA | Ave | 5632241<br>5029525 | 5624126<br>4682798 | 4839549 | 4450584 | 4650620 | 2.50<br>2.50 | 2.50<br>2.50 | 2.50 | 2.50 | 2.50 |
| 13C8 PFOA | 13PF<br>OA | Ave | 8066210<br>6660436 | 7878856<br>6572152 | 7599439 | 7083297 | 6198885 | 2.45<br>2.45 | 2.45<br>2.45 | 2.45 | 2.45 | 2.45 |
| 13C8 PFOS | 13PF<br>OA | Ave | 1229842<br>1111635 | 1200648<br>1015761 | 1162967 | 1087755 | 1011458 | 2.39<br>2.39 | 2.39<br>2.39 | 2.39 | 2.39 | 2.39 |

Curve Type Legend:

Ave = Average ISTD
AveID = Average isotope dilution
L2ID = Linear 1/conc^2 IsoDil

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\A18\20200825-102078.b\2020.08.25_A18_ICAL_A_011.d
Lims ID: IC STD 1
Client ID:
Sample Type: IC Calib Level: 1
Inject. Date: 25-Aug-2020 16:43:14 ALS Bottle#: 6 Worklist Smp#: 2
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Sample Info: CAL STD 1 (21)
Misc. Info.: Plate: 1 Rack: 1
Operator ID: TAISACA18-PC\A-18 Instrument ID: A18
Sublist: chrom-PFAS_A18V2*sub1

Method: \\chromfs\Sacramento\ChromData\A18\20200825-102078.b\PFAS_A18V2.m
Limit Group: LC PFC ICAL
Last Update: 26-Aug-2020 10:42:16 Calib Date: 25-Aug-2020 17:37:57
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\A18\20200825-102078.b\2020.08.25_A18_ICAL_A_017.d

Column 1 : Gemini C18 3um 3mm x 50 mm ( 3.00 mm) Det: EXP1
Process Host: CTX1029

First Level Reviewer: fariasa Date: 26-Aug-2020 10:42:16
Ratio Calibration: Average of Initial Calibration

| Signal | RT | EXP RT | DLT RT | REL RT | Response | Amount ng/ml | Ratio(Limits) | %Rec | S/N | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| D 1 13C4 PFBA | | | | | | | | | | |
| 217.00 > 172.00 | 2.576 | 2.577 | -0.001 | 0.619 | 18132924 | 2.34 | | 93.7 | 10249 | |
| 2 Perfluorobutanoic acid | | | | | | | | | | |
| 212.90 > 169.00 | 2.576 | 2.580 | -0.004 | 1.000 | 143339 | 0.0228 | | 91.1 | 5.5 | |
| D 4 13C5 PFPeA | | | | | | | | | | |
| 267.90 > 223.00 | 2.944 | 2.941 | 0.003 | 0.707 | 14164604 | 2.35 | | 94.1 | 5748 | |
| 5 Perfluoropentanoic acid | | | | | | | | | | M |
| 262.90 > 219.00 | 2.944 | 2.941 | 0.003 | 1.000 | 175237 | 0.0310 | | 124 | 8.5 | M |
| D 9 13C3 PFBS | | | | | | | | | | |
| 301.90 > 80.00 | 2.979 | 2.977 | 0.002 | 0.716 | 10426219 | 2.20 | | 94.8 | 4404 | |
| 6 Perfluorobutanesulfonic acid | | | | | | | | | | |
| 298.90 > 80.00 | 2.979 | 2.982 | -0.003 | 1.000 | 99013 | 0.0219 | Target=2.30 | 98.9 | 22.2 | |
| 298.90 > 99.00 | 2.979 | 2.982 | -0.003 | 1.000 | 43417 | | 2.28(1.15-3.45) | 98.9 | 16.5 | |
| 8 4:2 FTS | | | | | | | | | | |
| 327.00 > 307.00 | 3.297 | 3.288 | 0.009 | 1.000 | 53342 | 0.0208 | | 88.9 | 419 | |
| D 7 M2-4:2 FTS | | | | | | | | | | |
| 329.00 > 81.00 | 3.297 | 3.288 | 0.009 | 0.792 | 2638569 | 2.32 | | 99.2 | 1063 | |
| 10 Perfluorohexanoic acid | | | | | | | | | | M |
| 313.00 > 269.00 | 3.339 | 3.334 | 0.005 | 1.000 | 139898 | 0.0251 | Target=13.78 | 100 | 11.4 | M |
| 313.00 > 119.00 | 3.339 | 3.334 | 0.005 | 1.000 | 10432 | | 13.41(6.89-20.66) | 100 | 7.9 | |
| D 11 13C2 PFHxA | | | | | | | | | | |
| 315.00 > 270.00 | 3.339 | 3.334 | 0.005 | 0.802 | 14462351 | 2.41 | | 96.3 | 8500 | |
| 12 Perfluoropentanesulfonic acid | | | | | | | | | | M |
| 349.00 > 80.00 | 3.350 | 3.349 | 0.001 | 1.124 | 73804 | 0.0208 | Target=3.02 | 88.6 | 17.5 | |
| 349.00 > 99.00 | 3.350 | 3.349 | 0.001 | 1.124 | 24636 | | 3.00(1.51-4.52) | 88.6 | 17.4 | M |
| 13 HPFO-DA | | | | | | | | | | |
| 285.00 > 169.00 | 3.467 | 3.463 | 0.004 | 1.000 | 28220 | 0.0247 | | 98.9 | 125 | |

| Signal | RT | EXP RT | DLT RT | REL RT | Response | Amount ng/ml | Ratio(Limits) | %Rec | S/N | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| D 14 13C3 HFPO-DA | | | | | | | | | | |
| 287.00 > 169.00 | 3.467 | 3.463 | 0.004 | 0.833 | 2927999 | 2.38 | | 95.3 | 6688 | |
| 16 Perfluoroheptanoic acid | | | | | | | | | | |
| 363.00 > 319.00 | 3.756 | 3.750 | 0.006 | 1.000 | 118869 | 0.0238 | Target=3.84 | 95.3 | 14.8 | |
| 363.00 > 169.00 | 3.756 | 3.750 | 0.006 | 1.000 | 29948 | | 3.97(1.92-5.76) | 95.3 | 20.4 | |
| D 18 13C4 PFHpA | | | | | | | | | | |
| 367.00 > 322.00 | 3.756 | 3.750 | 0.006 | 0.902 | 12308941 | 2.40 | | 95.9 | 6338 | |
| 15 Perfluorohexanesulfonic acid | | | | | | | | | | M |
| 399.00 > 80.00 | 3.756 | 3.752 | 0.004 | 1.000 | 73118 | 0.0261 | Target=3.50 | 115 | 22.6 | M |
| 399.00 > 99.00 | 3.756 | 3.752 | 0.004 | 1.000 | 20749 | | 3.52(1.75-5.25) | 115 | 16.9 | M |
| D 17 18O2 PFHxS | | | | | | | | | | |
| 403.00 > 84.00 | 3.756 | 3.752 | 0.004 | 0.902 | 5610177 | 2.25 | | 94.9 | 5610 | |
| 19 DONA | | | | | | | | | | |
| 377.00 > 251.00 | 3.803 | 3.800 | 0.003 | 0.841 | 330079 | 0.0215 | Target=2.42 | 91.3 | 430 | |
| 377.00 > 85.00 | 3.803 | 3.800 | 0.003 | 0.841 | 131465 | | 2.51(1.21-3.63) | 91.3 | 159 | |
| 21 6:2 FTS | | | | | | | | | | |
| 427.00 > 407.00 | 4.137 | 4.127 | 0.010 | 1.000 | 58465 | 0.0259 | | 109 | 100 | |
| D 20 M2-6:2 FTS | | | | | | | | | | |
| 429.00 > 81.00 | 4.137 | 4.127 | 0.010 | 0.994 | 2331568 | 2.44 | | 103 | 1568 | |
| 24 Perfluoroheptanesulfonic acid | | | | | | | | | | |
| 449.00 > 80.00 | 4.154 | 4.143 | 0.011 | 0.918 | 40027 | 0.0224 | Target=4.40 | 93.9 | 21.0 | |
| 449.00 > 99.00 | 4.154 | 4.143 | 0.011 | 0.918 | 9664 | | 4.14(2.20-6.60) | 93.9 | 14.8 | |
| $ 26 13C8 PFOA | | | | | | | | | | |
| 421.00 > 376.00 | 4.154 | 4.147 | 0.007 | 0.998 | 8066210 | 2.44 | | 99.9 | 8438 | |
| D 25 13C4 PFOA | | | | | | | | | | |
| 417.00 > 372.00 | 4.162 | 4.150 | 0.012 | 1.000 | 11275248 | 2.31 | | 92.3 | 6321 | |
| 22 Perfluorooctanoic acid | | | | | | | | | | M |
| 413.00 > 369.00 | 4.154 | 4.150 | 0.004 | 0.998 | 137219 | 0.0298 | Target=2.94 | 119 | 21.3 | M |
| 413.00 > 169.00 | 4.162 | 4.150 | 0.012 | 1.000 | 49716 | | 2.76(1.47-4.41) | 119 | 51.7 | M |
| * 23 13C2 PFOA | | | | | | | | | | |
| 415.00 > 370.00 | 4.162 | 4.151 | 0.011 | | 12207545 | 2.50 | | | 7584 | |
| $ 28 13C8 PFOS | | | | | | | | | | |
| 507.00 > 99.00 | 4.523 | 4.514 | 0.009 | 1.087 | 1229842 | 2.33 | | 97.4 | 3635 | |
| D 27 13C4 PFOS | | | | | | | | | | |
| 503.00 > 80.00 | 4.523 | 4.516 | 0.007 | 1.087 | 3829485 | 2.26 | | 94.7 | 1472 | |
| 29 Perfluorooctanesulfonic acid | | | | | | | | | | M |
| 499.00 > 80.00 | 4.531 | 4.518 | 0.013 | 1.002 | 35364 | 0.0213 | Target=4.53 | 91.9 | 11.4 | M |
| 499.00 > 99.00 | 4.523 | 4.518 | 0.005 | 1.000 | 9090 | | 3.89(2.26-6.79) | 91.9 | 13.4 | M |
| D 30 13C5 PFNA | | | | | | | | | | |
| 468.00 > 423.00 | 4.540 | 4.533 | 0.007 | 1.091 | 10032863 | 2.55 | | 102 | 16542 | |
| 31 Perfluorononanoic acid | | | | | | | | | | M |
| 463.00 > 419.00 | 4.548 | 4.537 | 0.011 | 1.002 | 88392 | 0.0230 | Target=8.97 | 91.9 | 16.8 | M |
| 463.00 > 169.00 | 4.540 | 4.537 | 0.003 | 1.000 | 9163 | | 9.65(4.48-13.45) | 91.9 | 14.9 | M |
| 32 9ClFOS | | | | | | | | | | |
| 531.00 > 351.00 | 4.730 | 4.724 | 0.006 | 1.046 | 106429 | 0.0205 | | 88.1 | 346 | |
| D 33 13C8 FOSA | | | | | | | | | | |
| 506.00 > 78.00 | 4.828 | 4.830 | -0.002 | 1.160 | 6433355 | 2.36 | | 94.3 | 4831 | |

| Signal | RT | EXP RT | DLT RT | REL RT | Response | Amount ng/ml | Ratio(Limits) | %Rec | S/N | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| 34 Perfluorooctanesulfonamide | | | | | | | | | | |
| 498.00 > 78.00 | 4.828 | 4.830 | -0.002 | 1.000 | 57218 | 0.0239 | | 95.6 | 374 | |
| 35 Perfluorononanesulfonic acid | | | | | | | | | | |
| 549.00 > 80.00 | 4.880 | 4.868 | 0.012 | 1.079 | 34114 | 0.0227 | Target=2.85 | 94.7 | 23.3 | |
| 549.00 > 99.00 | 4.871 | 4.868 | 0.003 | 1.077 | 11224 | | 3.04(1.43-4.28) | 94.7 | 20.6 | |
| D 39 13C2 PFDA | | | | | | | | | | |
| 515.00 > 470.00 | 4.897 | 4.892 | 0.005 | 1.177 | 10660071 | 2.79 | | 112 | 11551 | |
| D 38 M2-8:2 FTS | | | | | | | | | | |
| 529.00 > 81.00 | 4.907 | 4.897 | 0.010 | 1.179 | 3461927 | 2.51 | | 105 | 1707 | |
| 36 8:2 FTS | | | | | | | | | | |
| 527.00 > 507.00 | 4.907 | 4.898 | 0.009 | 1.000 | 59696 | 0.0233 | | 97.1 | 522 | |
| 37 Perfluorodecanoic acid | | | | | | | | | | |
| 513.00 > 469.00 | 4.907 | 4.896 | 0.011 | 1.002 | 99970 | 0.0243 | Target=10.16 | 97.3 | 38.6 | |
| 513.00 > 169.00 | 4.897 | 4.896 | 0.001 | 1.000 | 10410 | | 9.60(5.08-15.24) | 97.3 | 19.9 | |
| D 40 d3-NMeFOSAA | | | | | | | | | | |
| 573.00 > 419.00 | 5.075 | 5.062 | 0.013 | 1.219 | 6196740 | 2.42 | | 96.6 | 3666 | |
| 41 NMeFOSAA | | | | | | | | | | M |
| 570.00 > 419.00 | 5.075 | 5.065 | 0.010 | 1.000 | 41357 | 0.0225 | | 90.0 | 94.0 | M |
| 42 Perfluorodecanesulfonic acid | | | | | | | | | | |
| 599.00 > 80.00 | 5.202 | 5.191 | 0.011 | 1.150 | 27769 | 0.0208 | Target=2.77 | 86.1 | 26.5 | |
| 599.00 > 99.00 | 5.202 | 5.191 | 0.011 | 1.150 | 11556 | | 2.40(1.38-4.15) | 86.1 | 48.3 | |
| D 43 13C2 PFUnA | | | | | | | | | | |
| 565.00 > 520.00 | 5.229 | 5.221 | 0.008 | 1.256 | 8683933 | 2.29 | | 91.7 | 10133 | |
| 45 Perfluoroundecanoic acid | | | | | | | | | | |
| 563.00 > 519.00 | 5.229 | 5.221 | 0.008 | 1.000 | 63047 | 0.0250 | Target=8.43 | 100 | 38.1 | |
| 563.00 > 169.00 | 5.238 | 5.221 | 0.017 | 1.002 | 6430 | | 9.81(4.22-12.65) | 100 | 11.0 | |
| D 44 d5-NEtFOSAA | | | | | | | | | | |
| 589.00 > 419.00 | 5.238 | 5.227 | 0.011 | 1.259 | 6974320 | 2.57 | | 103 | 7941 | |
| 46 NEtFOSA | | | | | | | | | | M |
| 584.00 > 419.00 | 5.248 | 5.236 | 0.012 | 1.002 | 39077 | 0.0207 | | 82.9 | 171 | M |
| D 47 d7-N-MeFOSE-M | | | | | | | | | | |
| 623.00 > 59.00 | 5.279 | 5.272 | 0.007 | 1.268 | 8494552 | 12.6 | | 101 | 3512 | |
| 48 N-MeFOSE-M | | | | | | | | | | |
| 616.00 > 59.00 | 5.289 | 5.285 | 0.004 | 1.002 | 14857 | 0.0203 | | 81.0 | 20.5 | |
| D 49 d-N-MeFOSA-M | | | | | | | | | | |
| 515.00 > 169.00 | 5.299 | 5.295 | 0.004 | 1.273 | 2093005 | 2.18 | | 87.2 | 47.1 | |
| 50 NMeFOSA | | | | | | | | | | M |
| 512.00 > 169.00 | 5.299 | 5.301 | -0.002 | 1.000 | 17321 | 0.0215 | | 86.2 | 50.3 | M |
| 51 11ClFOS | | | | | | | | | | |
| 631.00 > 451.00 | 5.375 | 5.363 | 0.012 | 1.188 | 131623 | 0.0200 | | 85.0 | 838 | |
| D 52 d9-N-EtFOSE-M | | | | | | | | | | |
| 639.00 > 59.00 | 5.448 | 5.443 | 0.005 | 1.309 | 10219224 | 12.3 | | 98.5 | 1533 | |
| 53 N-EtFOSE-M | | | | | | | | | | |
| 630.00 > 59.00 | 5.459 | 5.456 | 0.003 | 1.002 | 16882 | 0.0192 | | 77.0 | 10.1 | |
| D 54 d-N-EtFOSA-M | | | | | | | | | | |
| 531.00 > 169.00 | 5.469 | 5.471 | -0.002 | 1.314 | 2258068 | 2.30 | | 92.0 | 443 | |

| Signal | RT | EXP RT | DLT RT | REL RT | Response | Amount ng/ml | Ratio(Limits) | %Rec | S/N | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| 55 N-EtFOSA-M | | | | | | | | | | M |
| 526.00 > 169.00 | 5.480 | 5.480 | 0.0 | 1.002 | 21111 | 0.0221 | | 88.3 | 46.9 | M |
| D 56 13C2 PFDoA | | | | | | | | | | |
| 615.00 > 570.00 | 5.530 | 5.521 | 0.009 | 1.329 | 12301937 | 3.29 | | 132 | 9653 | |
| 57 Perfluorododecanoic acid | | | | | | | | | | |
| 613.00 > 569.00 | 5.530 | 5.523 | 0.007 | 1.000 | 97159 | 0.0193 | Target=9.12 | 77.2 | 44.7 | |
| 613.00 > 169.00 | 5.530 | 5.523 | 0.007 | 1.000 | 16850 | | 5.77(4.56-13.69) | 77.2 | 35.9 | |
| 58 10:2 FTS | | | | | | | | | | |
| 627.00 > 607.00 | 5.555 | 5.541 | 0.014 | 1.132 | 67089 | 0.0230 | | 95.6 | 515 | |
| 59 PFDoS | | | | | | | | | | |
| 699.00 > 80.00 | 5.774 | 5.751 | 0.023 | 1.277 | 12460 | 0.0234 | Target=0.72 | 96.5 | 21.3 | |
| 699.00 > 99.00 | 5.765 | 5.751 | 0.014 | 1.275 | 16227 | | 0.77(0.36-1.07) | 96.5 | 116 | |
| 60 Perfluorotridecanoic acid | | | | | | | | | | |
| 663.00 > 619.00 | 5.812 | 5.795 | 0.017 | 1.051 | 80765 | 0.0174 | Target=6.78 | 69.8 | 49.8 | |
| 663.00 > 169.00 | 5.812 | 5.795 | 0.017 | 1.051 | 11535 | | 7.00(3.39-10.17) | 69.8 | 44.4 | |
| D 61 13C2 PFTeDA | | | | | | | | | | |
| 715.00 > 670.00 | 6.053 | 6.038 | 0.015 | 1.454 | 8038301 | 2.61 | | 104 | 8232 | |
| 62 Perfluorotetradecanoic acid | | | | | | | | | | |
| 713.00 > 169.00 | 6.063 | 6.041 | 0.022 | 1.002 | 6156 | 0.0227 | Target=0.85 | 90.7 | 50.6 | |
| 713.00 > 219.00 | 6.042 | 6.041 | 0.001 | 0.998 | 7352 | | 0.84(0.43-1.28) | 90.7 | 64.1 | |
| D 64 13C2 PFHxDA | | | | | | | | | | |
| 815.00 > 770.00 | 6.530 | 6.505 | 0.025 | 1.569 | 5632241 | 2.50 | | 99.9 | 7053 | |
| 63 Perfluorohexadecanoic acid | | | | | | | | | | |
| 813.00 > 769.00 | 6.530 | 6.507 | 0.023 | 1.000 | 98927 | 0.0262 | Target=10.21 | 105 | 98.0 | |
| 813.00 > 169.00 | 6.523 | 6.507 | 0.016 | 0.999 | 8757 | | 11.30(5.11-15.32) | 105 | 80.9 | |
| 65 Perfluorooctadecanoic acid | | | | | | | | | | M |
| 913.00 > 869.00 | 7.047 | 7.009 | 0.038 | 1.079 | 29478 | 0.0198 | Target=12.45 | 79.2 | 46.6 | a |
| 913.00 > 169.00 | 7.047 | 7.009 | 0.038 | 1.079 | 2482 | | 11.88(6.22-18.67) | 79.2 | 50.3 | M |

## QC Flag Legend

Review Flags

M - Manually Integrated

## Reagents:

LCPFC_LL1_00021 Amount Added: 1.00 Units: mL

Report Date: 26-Aug-2020 10:42:18 Chrom Revision: 2.3 20-Aug-2020 13:57:12

Eurofins TestAmerica, Sacramento

Data File: \\chromfs\Sacramento\ChromData\A18\20200825-102078.b\2020.08.25_A18_ICAL_A_011.d

Injection Date: 25-Aug-2020 16:43:14 Instrument ID: A18

Lims ID: IC STD 1

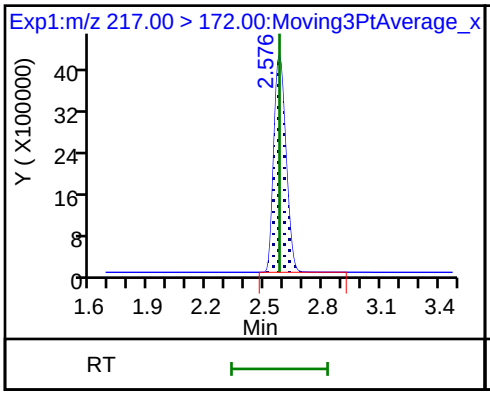
Client ID:

Operator ID: TAISACA18-PC\A-18 ALS Bottle#: 6 Worklist Smp#: 2

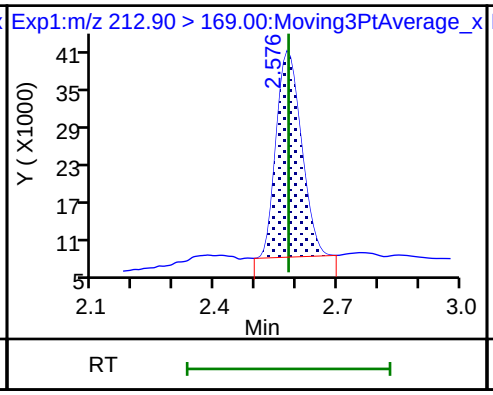
Injection Vol: 20.0 ul Dil. Factor: 1.0000

Method: PFAS_A18V2 Limit Group: LC PFC ICAL

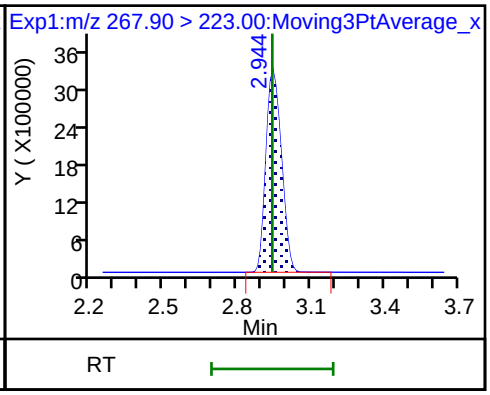
D 1 13C4 PFBA



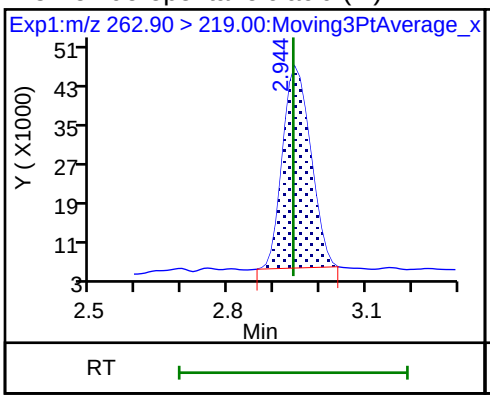

2 Perfluorobutanoic acid



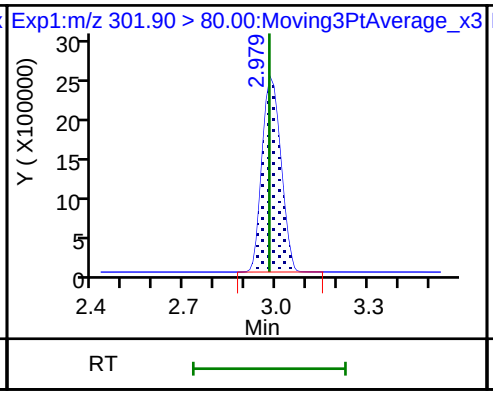

D 4 13C5 PFPeA



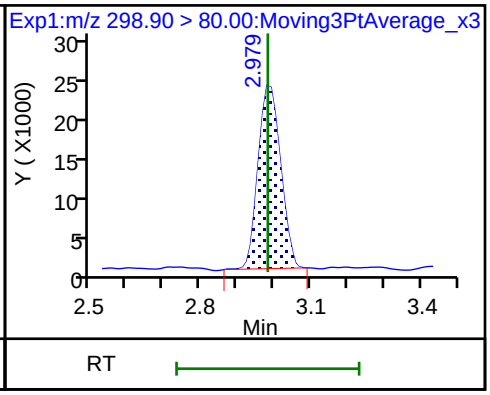

5 Perfluoropentanoic acid (M)



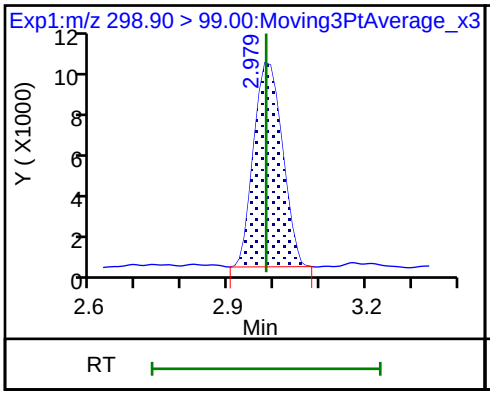

D 9 13C3 PFBS



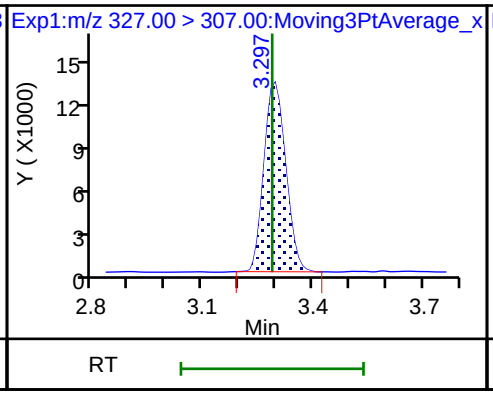

6 Perfluorobutanesulfonic acid



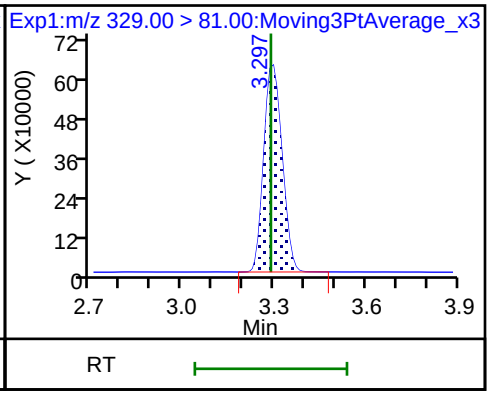

6 Perfluorobutanesulfonic acid



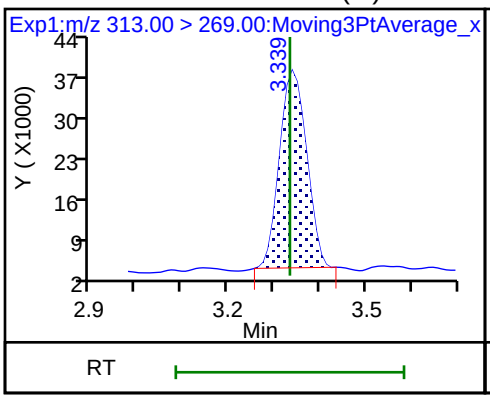

8 4:2 FTS



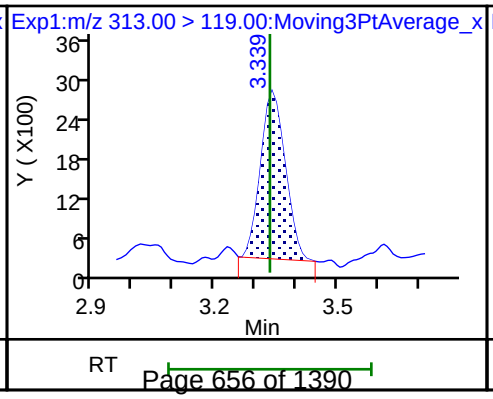

D 7 M2-4:2 FTS



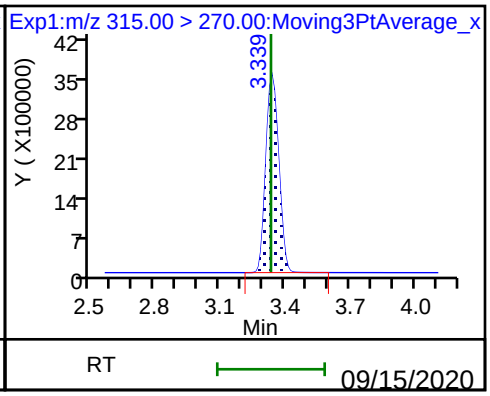

10 Perfluorohexanoic acid (M)



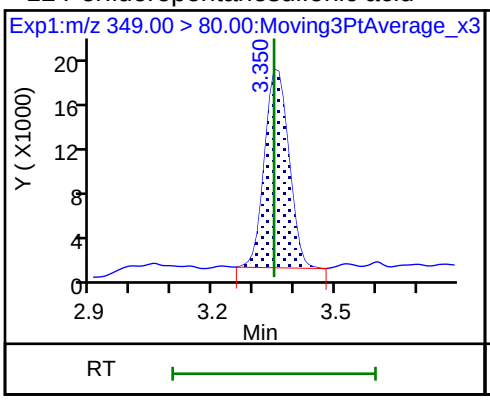

10 Perfluorohexanoic acid



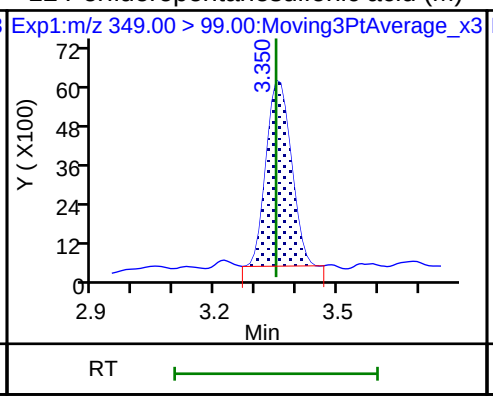

D 11 13C2 PFHxA



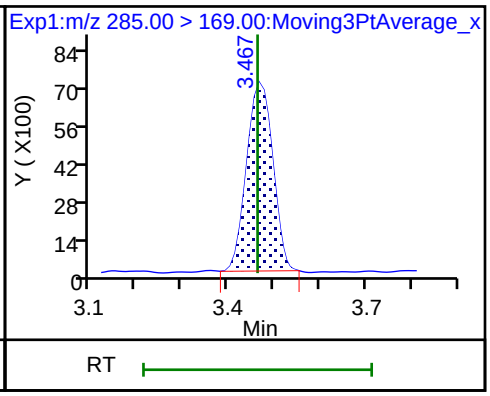
12 Perfluoropentanesulfonic acid



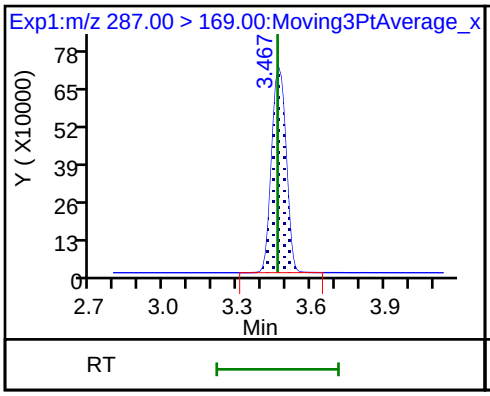

12 Perfluoropentanesulfonic acid (M)



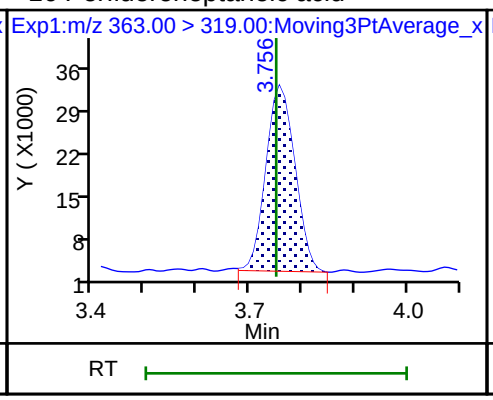

13 HPFO-DA



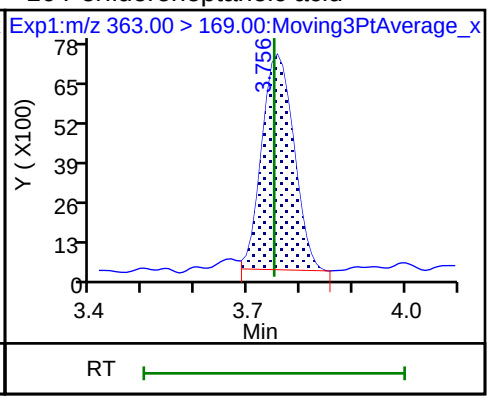

D 14 13C3 HFPO-DA



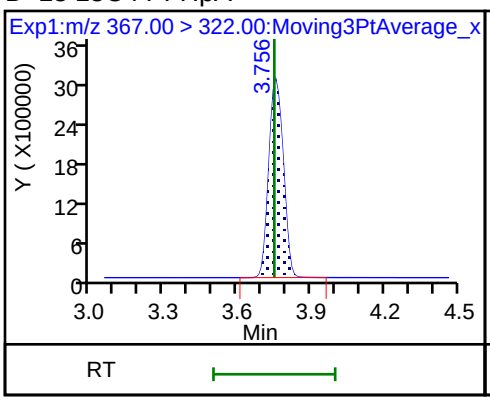

16 Perfluoroheptanoic acid



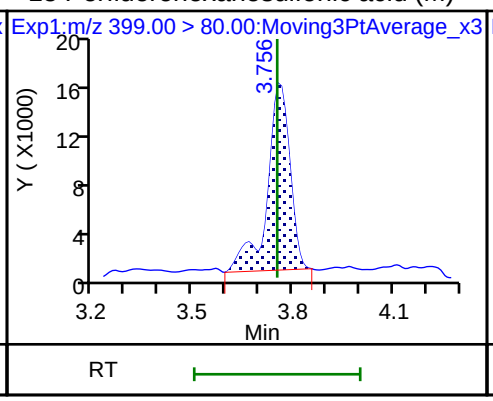

16 Perfluoroheptanoic acid



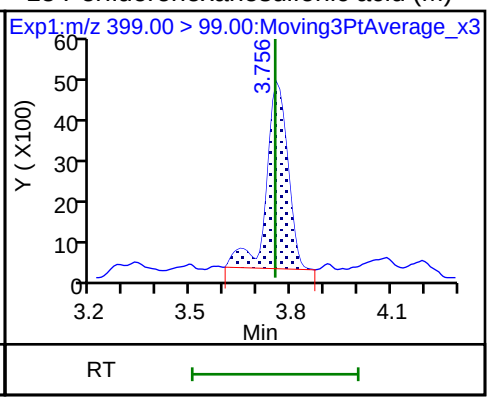

D 18 13C4 PFHpA



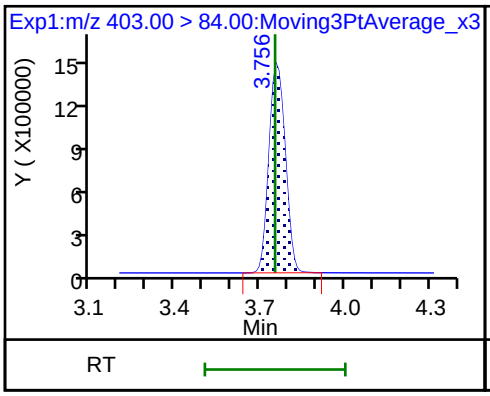

15 Perfluorohexanesulfonic acid (M)



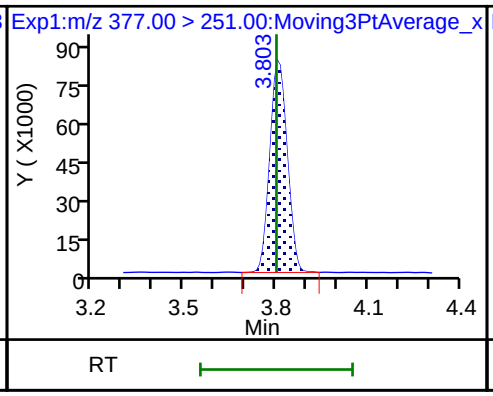

15 Perfluorohexanesulfonic acid (M)



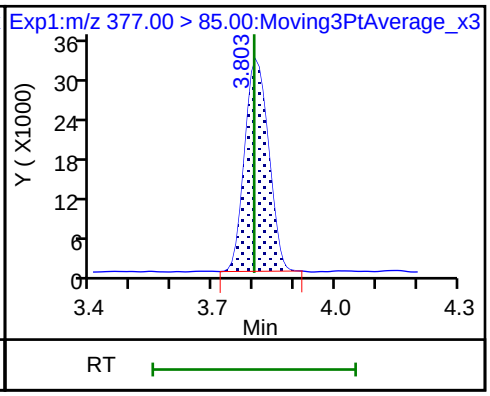

D 17 18O2 PFHxS



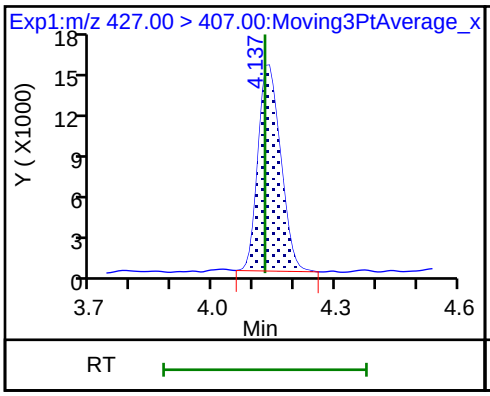

19 DONA




19 DONA



21 6:2 FTS

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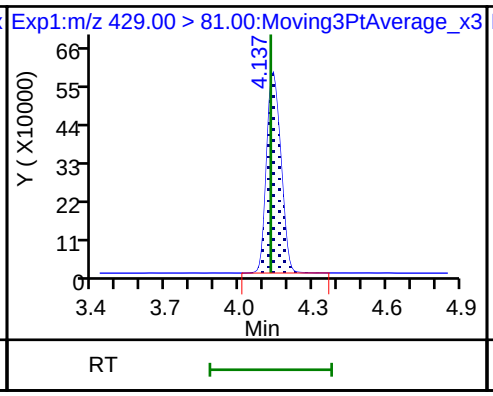
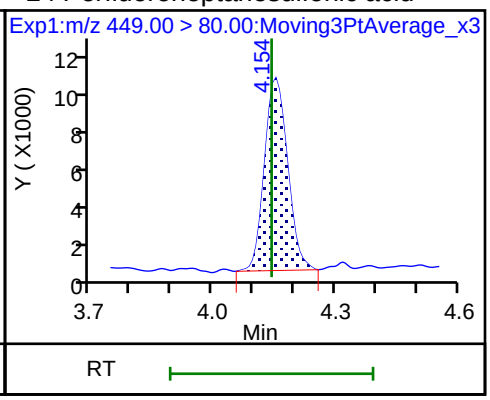
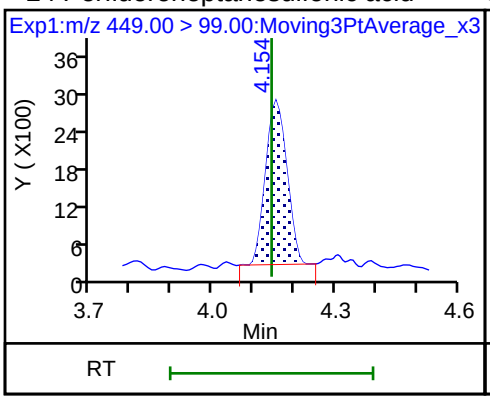


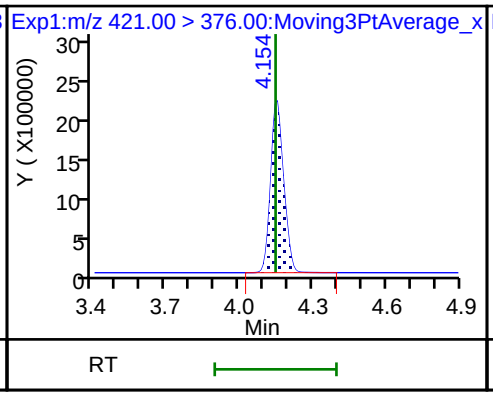

24 Perfluoroheptanesulfonic acid



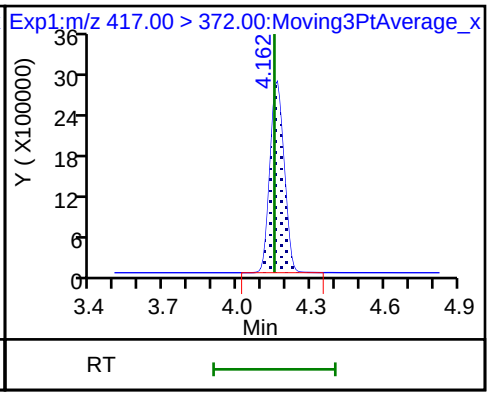

24 Perfluoroheptanesulfonic acid



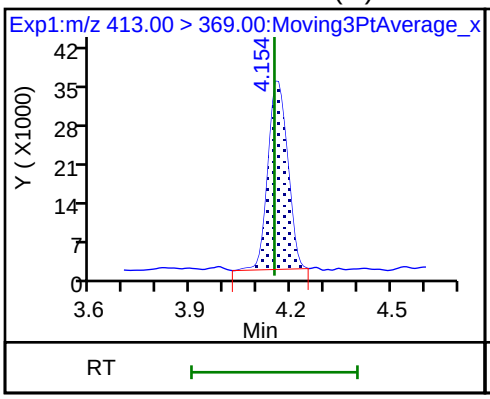

$ 26 13C8 PFOA



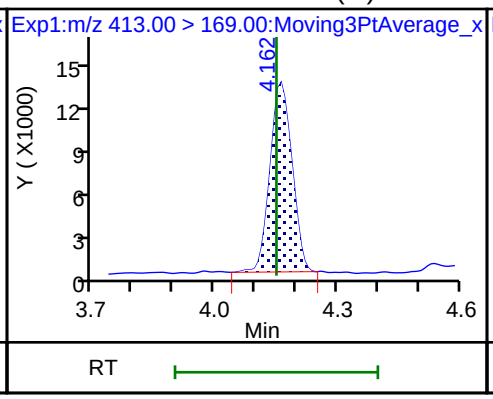

D 25 13C4 PFOA



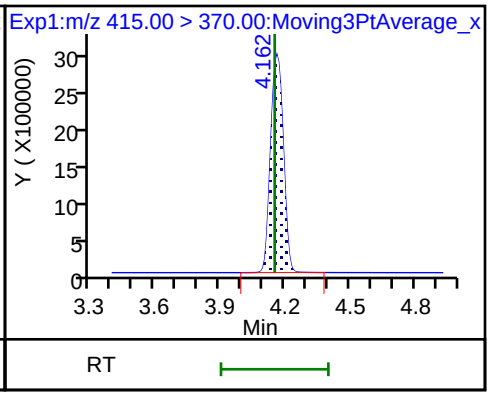

22 Perfluorooctanoic acid (M)



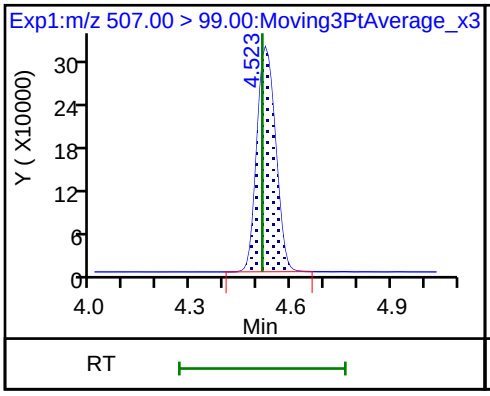

22 Perfluorooctanoic acid (M)



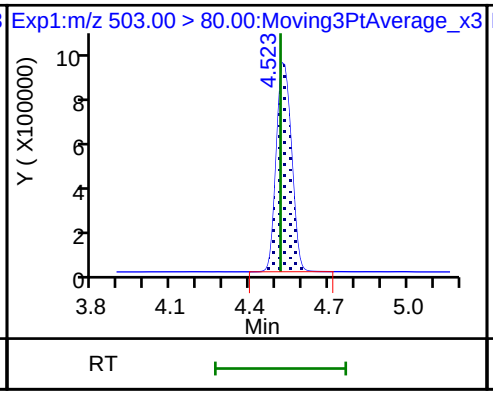

* 23 13C2 PFOA



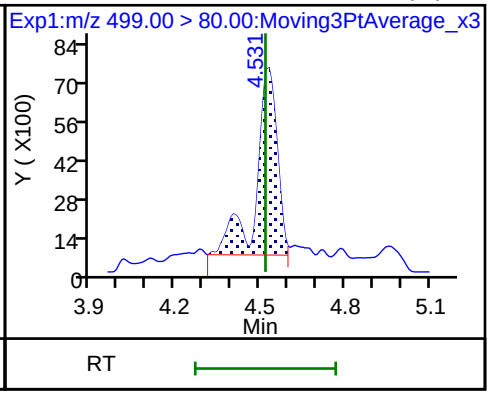

$ 28 13C8 PFOS



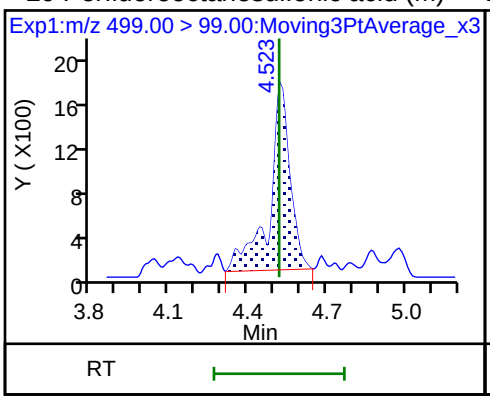

D 27 13C4 PFOS



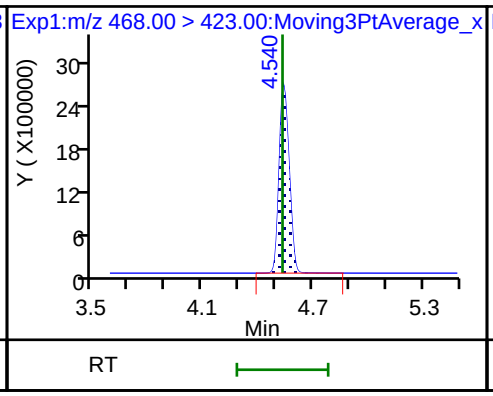

29 Perfluorooctanesulfonic acid (M)



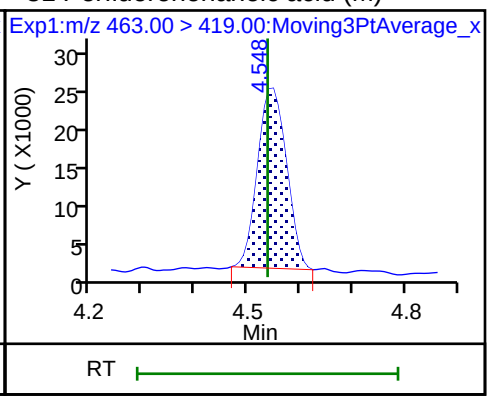
29 Perfluorooctanesulfonic acid (M)



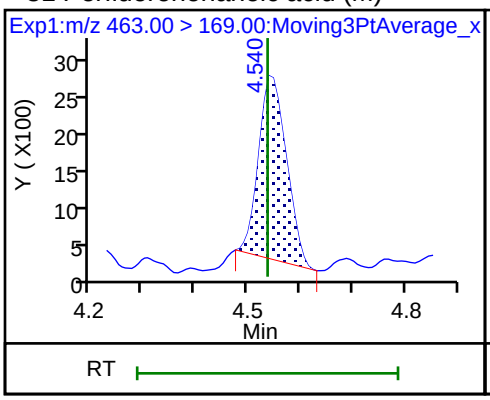

D 30 13C5 PFNA



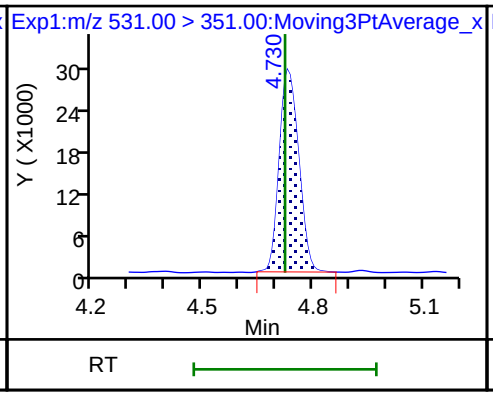

31 Perfluorononanoic acid (M)



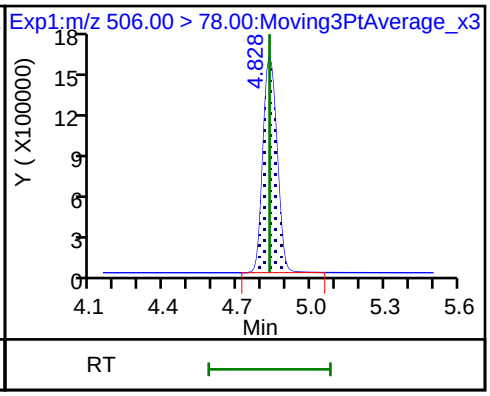

31 Perfluorononanoic acid (M)



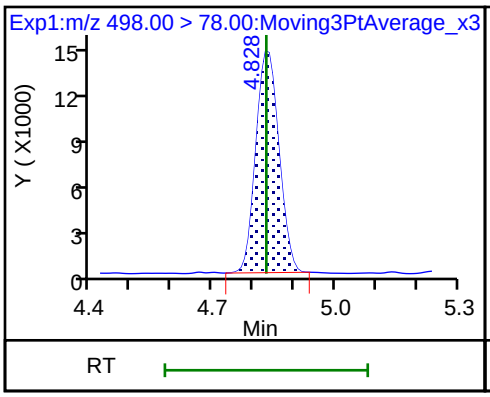

32 9ClFOS



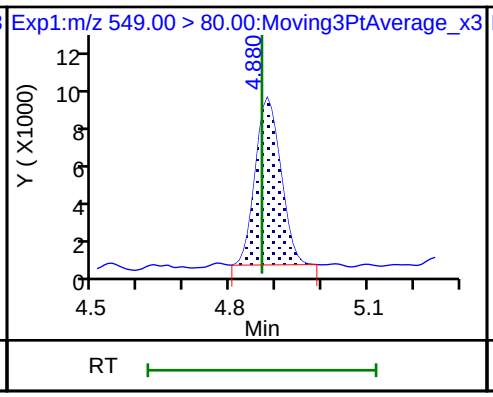

D 33 13C8 FOSA



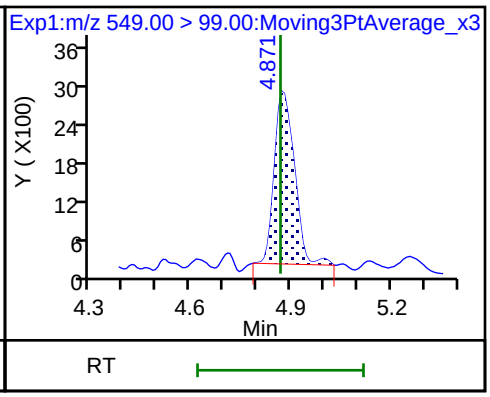

34 Perfluorooctanesulfonamide



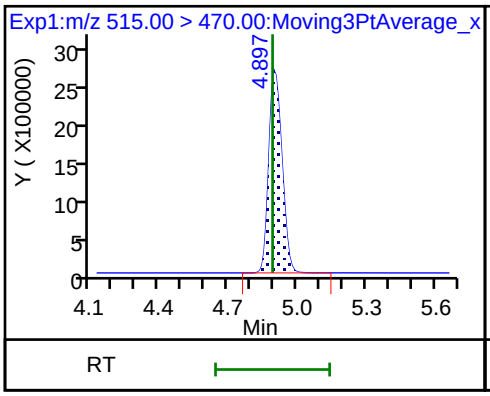

35 Perfluorononanesulfonic acid



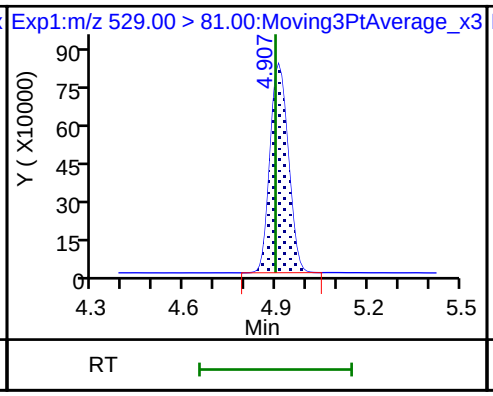

35 Perfluorononanesulfonic acid



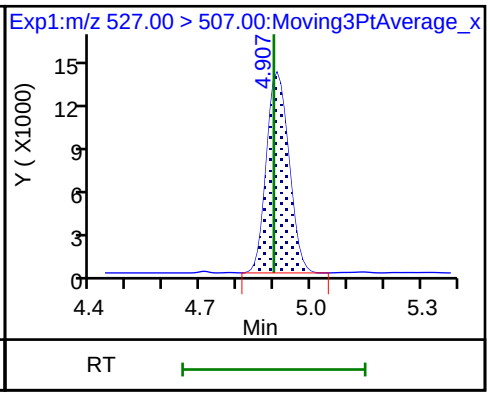

D 39 13C2 PFDA



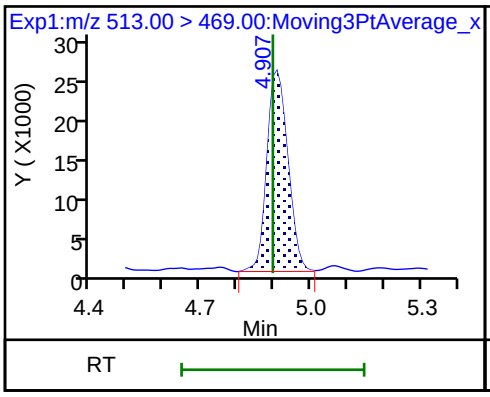

D 38 M2-8:2 FTS



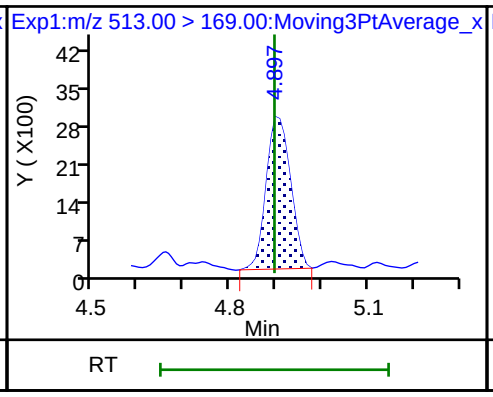

36 8:2 FTS



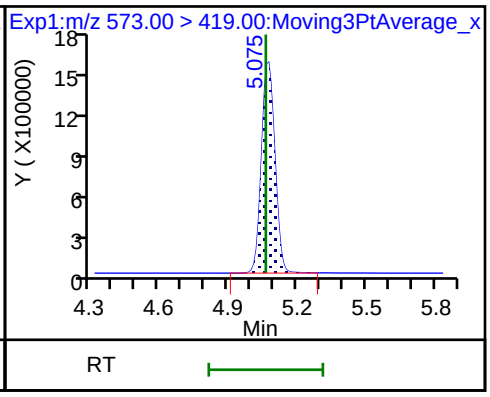
37 Perfluorodecanoic acid



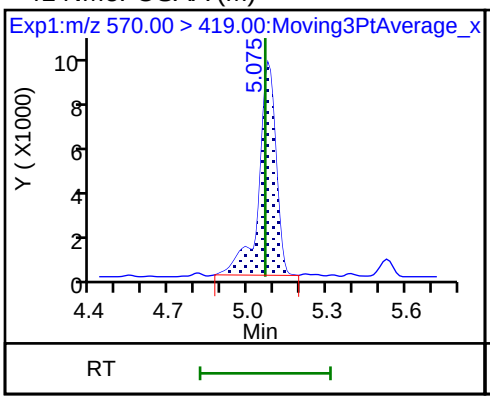

37 Perfluorodecanoic acid



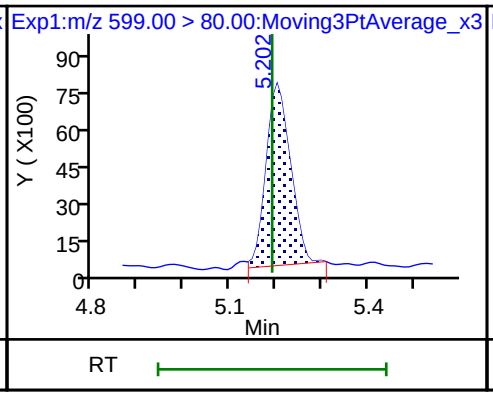

D 40 d3-NMeFOSAA



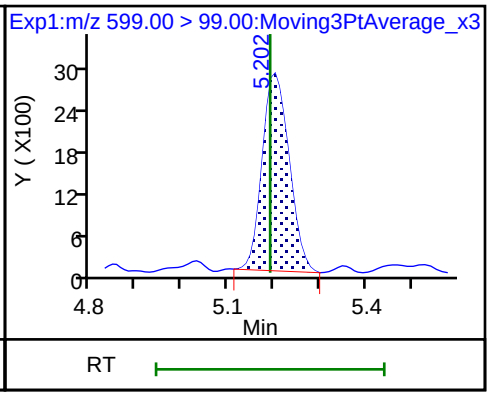

41 NMeFOSAA (M)



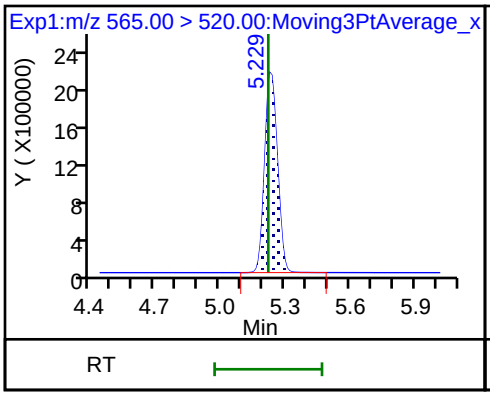

42 Perfluorodecanesulfonic acid



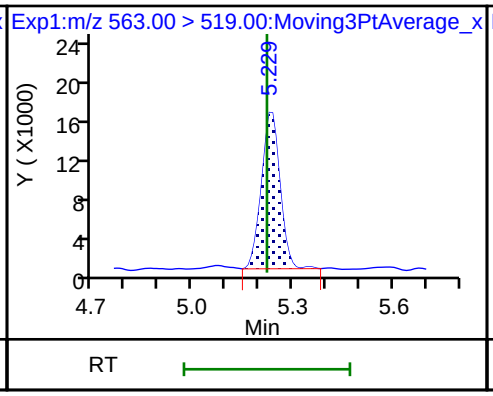

42 Perfluorodecanesulfonic acid



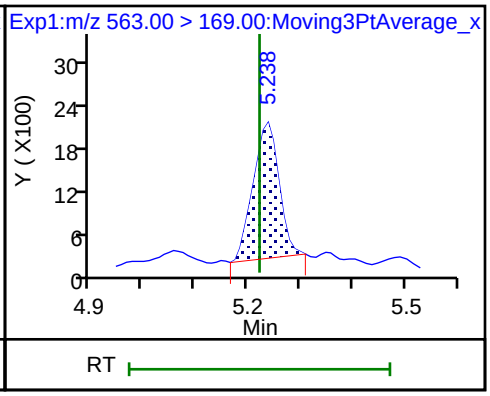

D 43 13C2 PFUnA



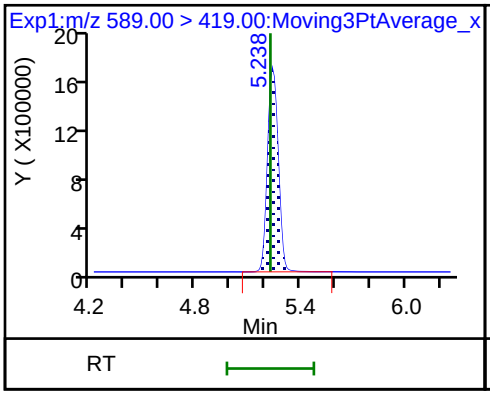

45 Perfluoroundecanoic acid



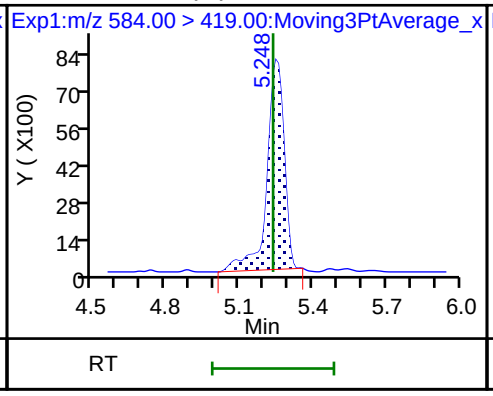

45 Perfluoroundecanoic acid



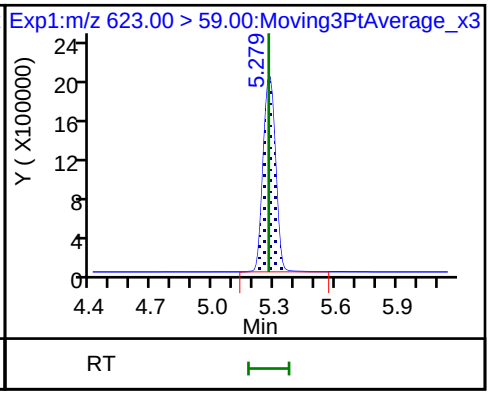

D 44 d5-NEtFOSAA



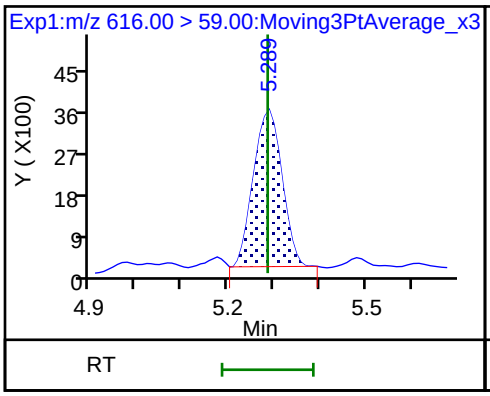

46 NEtFOSA (M)



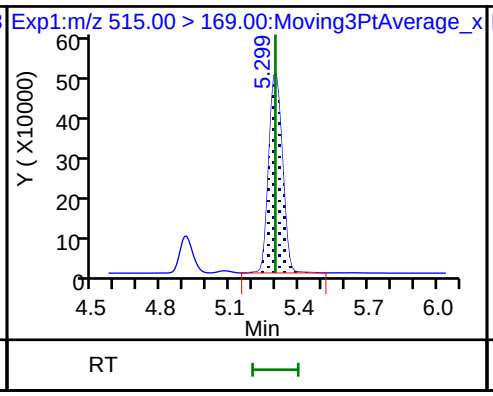

D 47 d7-N-MeFOSE-M



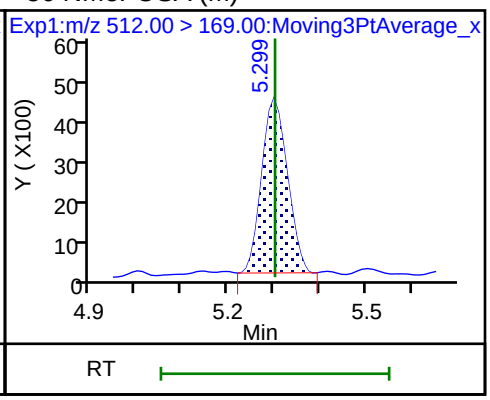
48 N-MeFOSE-M



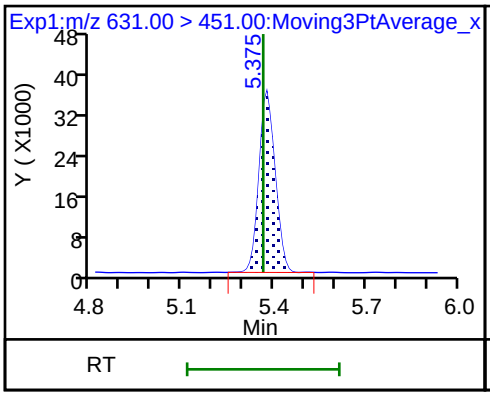

D 49 d-N-MeFOSA-M



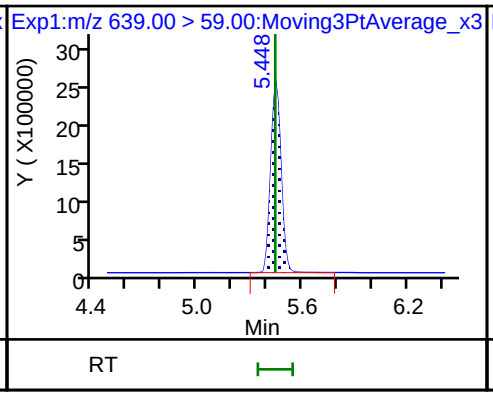

50 NMeFOSA (M)



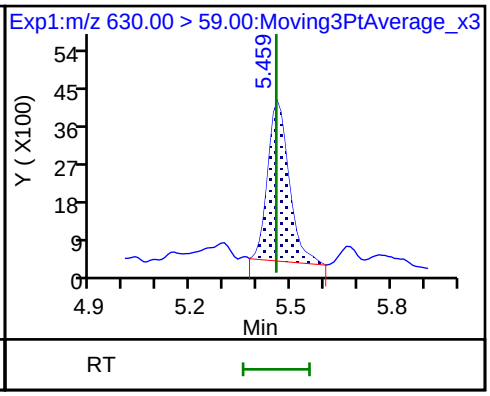

51 11ClFOS



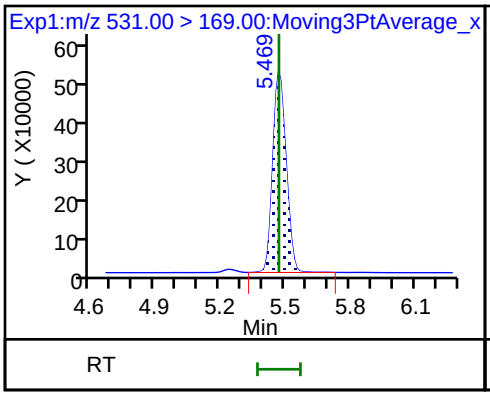

D 52 d9-N-EtFOSE-M



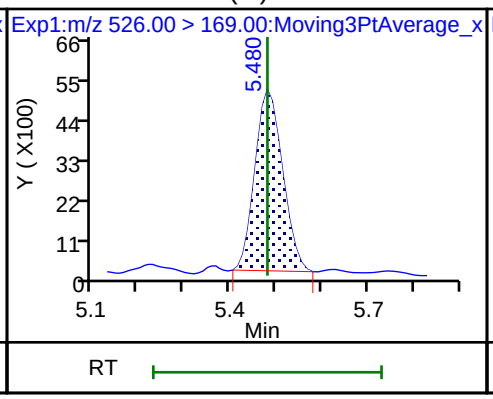

53 N-EtFOSE-M



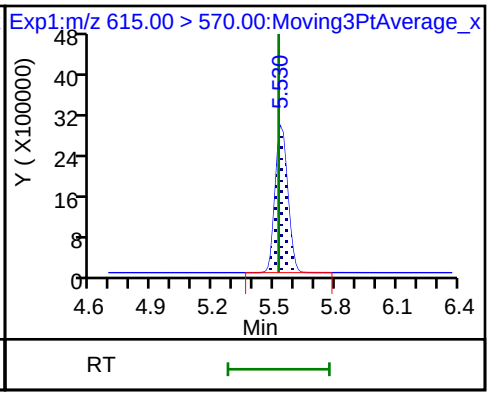

D 54 d-N-EtFOSA-M



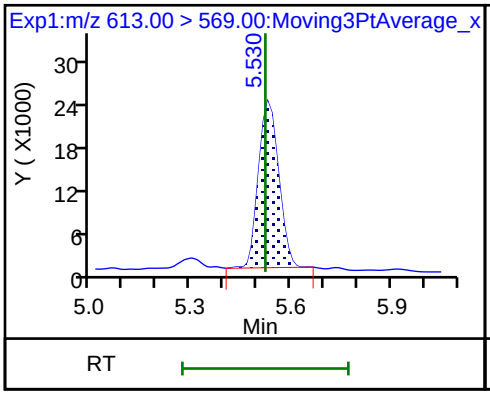

55 N-EtFOSA-M (M)



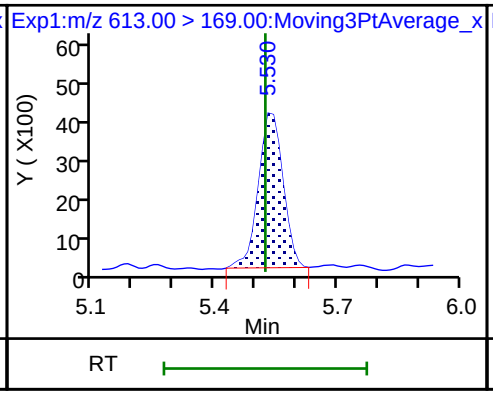

D 56 13C2 PFDoA



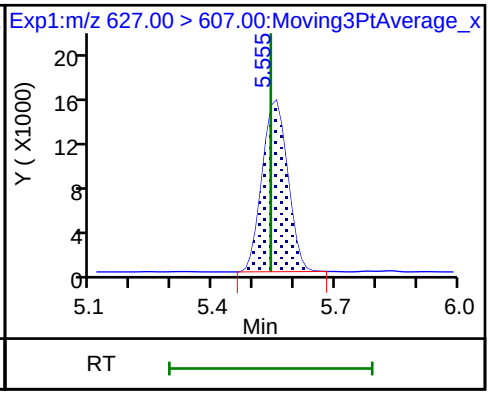

57 Perfluorododecanoic acid



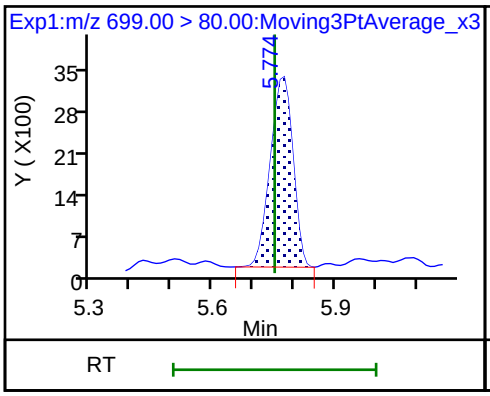

57 Perfluorododecanoic acid



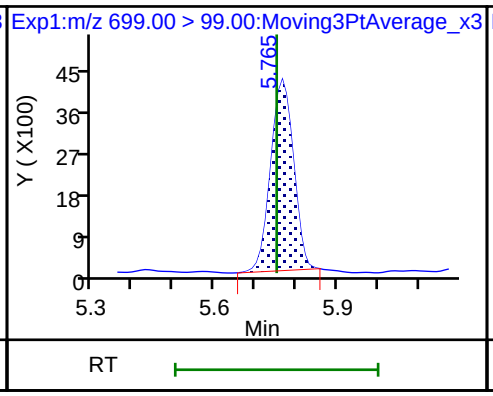

58 10:2 FTS



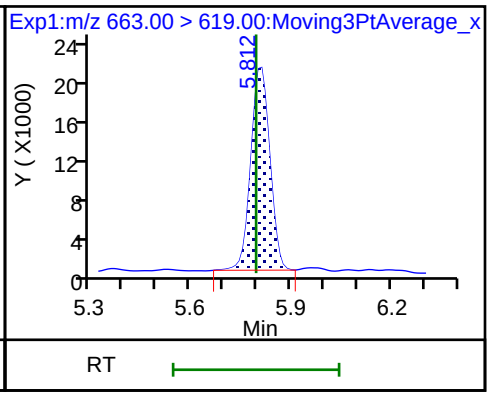
59 PFDoS



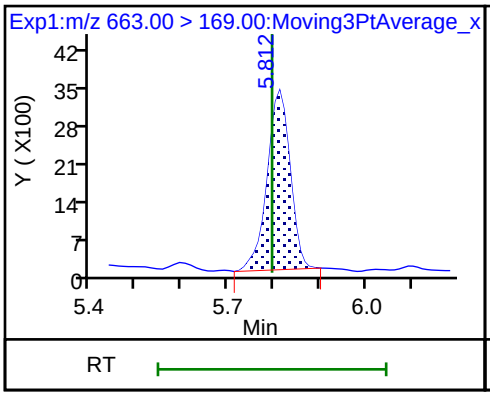

59 PFDoS



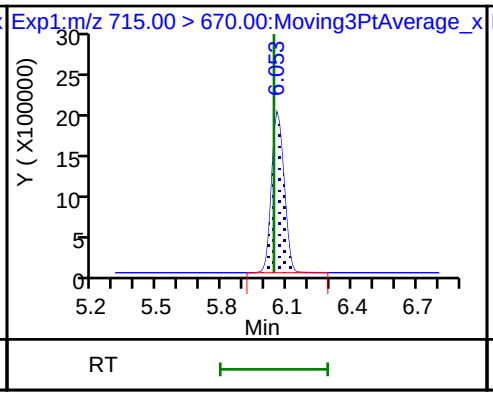

60 Perfluorotridecanoic acid



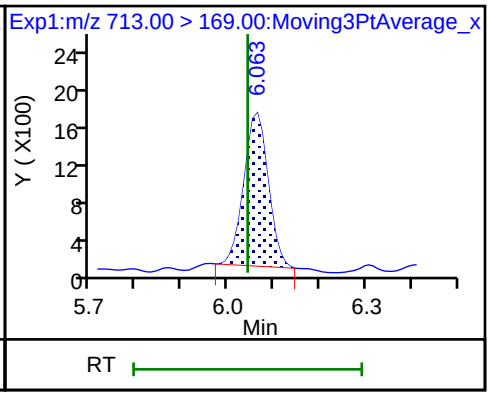

60 Perfluorotridecanoic acid



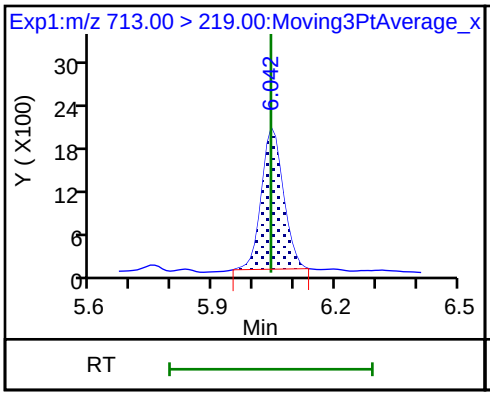

D 61 13C2 PFTeDA



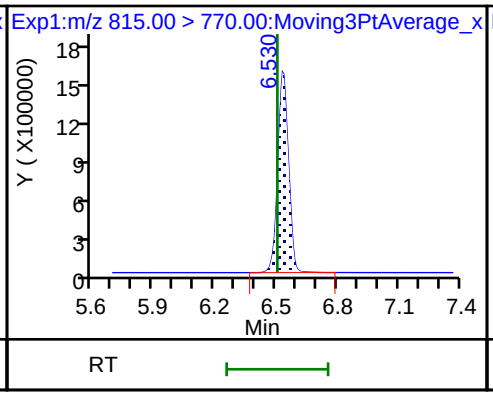

62 Perfluorotetradecanoic acid



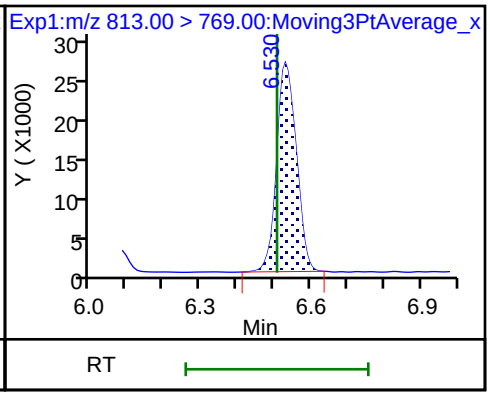

62 Perfluorotetradecanoic acid



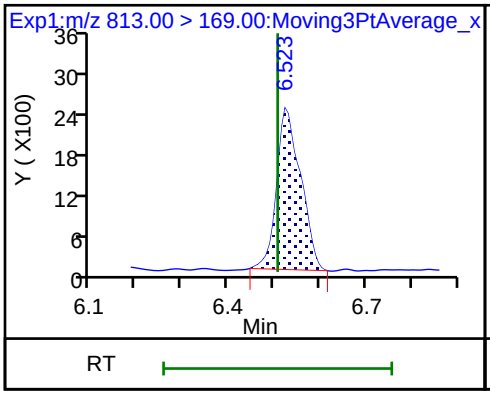

D 64 13C2 PFHxDA



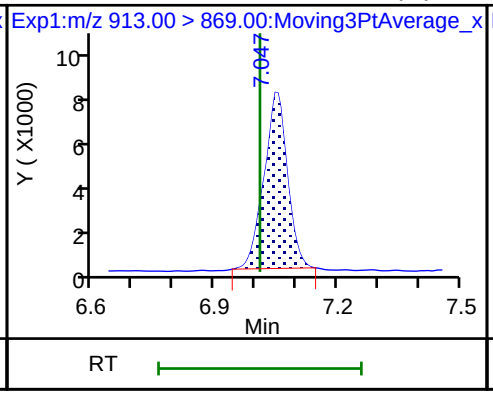

63 Perfluorohexadecanoic acid



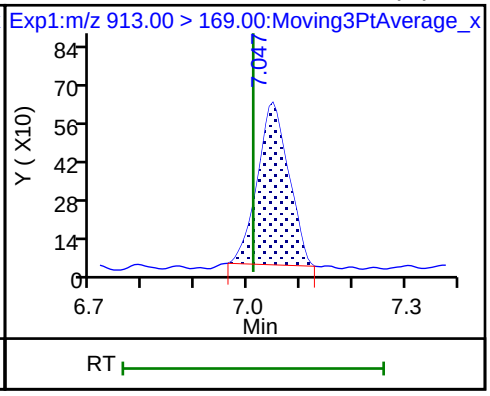

63 Perfluorohexadecanoic acid




65 Perfluorooctadecanoic acid (M)




65 Perfluorooctadecanoic acid (M)



Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

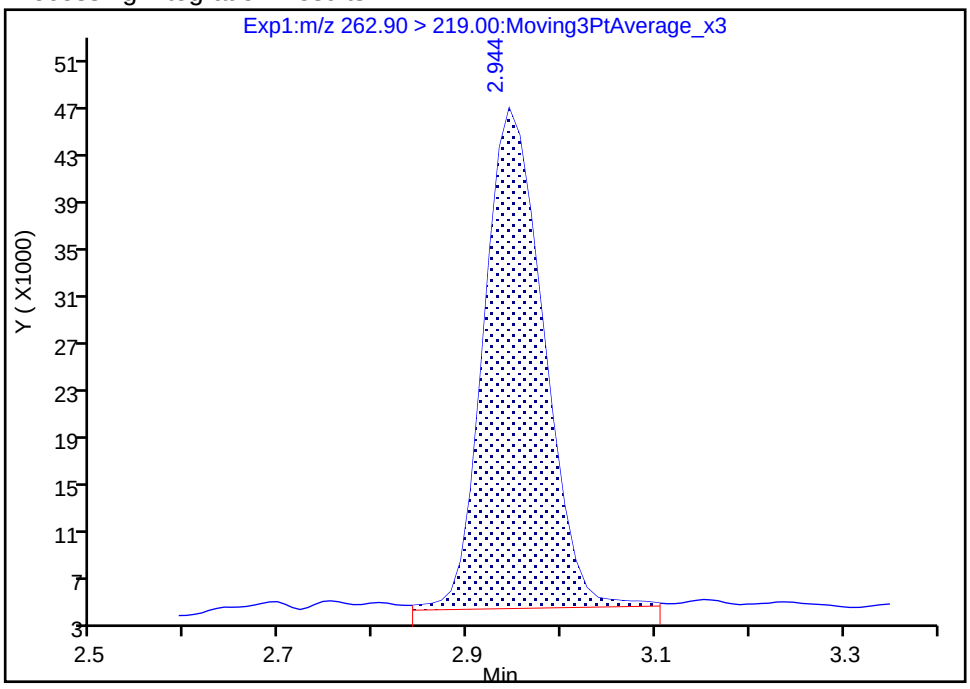
Data File: \\chromfs\Sacramento\ChromData\A18\20200825-102078.b\2020.08.25_A18_ICAL_A_011.d
Injection Date: 25-Aug-2020 16:43:14 Instrument ID: A18
Lims ID: IC STD 1
Client ID:
Operator ID: TAISACA18-PC\A-18 ALS Bottle#: 6 Worklist Smp#: 2
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFAS_A18V2 Limit Group: LC PFC ICAL
Column: Gemini C18 3um 3mm x 50 mm ( 3.00mm) Detector EXP1

## 5 Perfluoropentanoic acid, CAS: 2706-90-3

Signal: 1

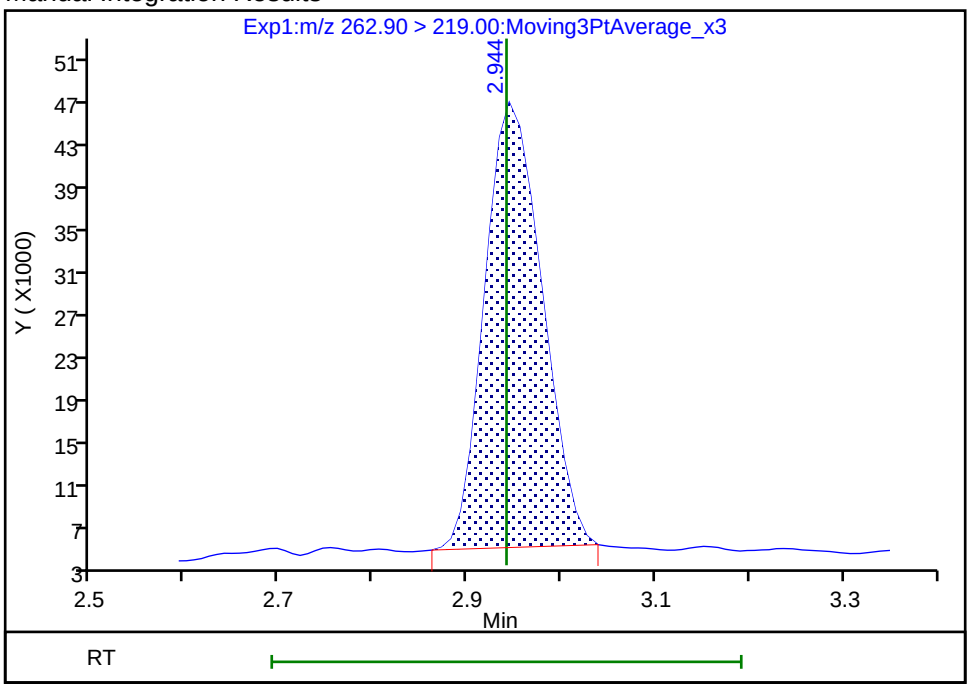
Processing Integration Results

RT: 2.94
Area: 184747
Amount: 0.030607
Amount Units: ng/ml




Manual Integration Results

RT: 2.94
Area: 175237
Amount: 0.031023
Amount Units: ng/ml




Reviewer: fariasa, 26-Aug-2020 05:42:23
Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

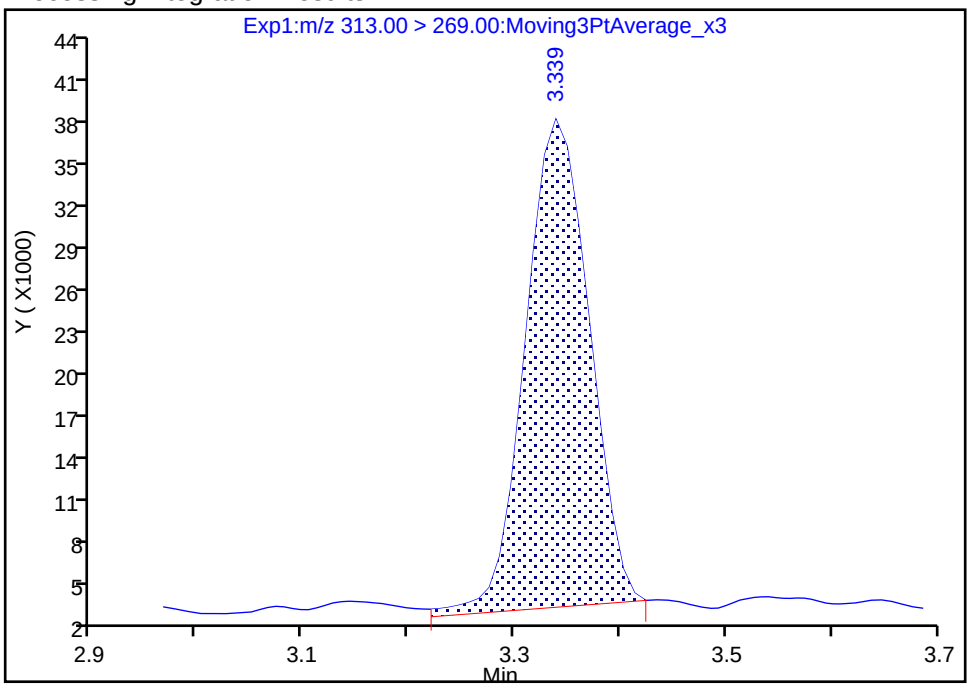
Data File: \\chromfs\Sacramento\ChromData\A18\20200825-102078.b\2020.08.25_A18_ICAL_A_011.d
Injection Date: 25-Aug-2020 16:43:14 Instrument ID: A18
Lims ID: IC STD 1
Client ID:
Operator ID: TAISACA18-PC\A-18 ALS Bottle#: 6 Worklist Smp#: 2
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFAS_A18V2 Limit Group: LC PFC ICAL
Column: Gemini C18 3um 3mm x 50 mm ( 3.00mm) Detector EXP1

## 10 Perfluorohexanoic acid, CAS: 307-24-4

Signal: 1

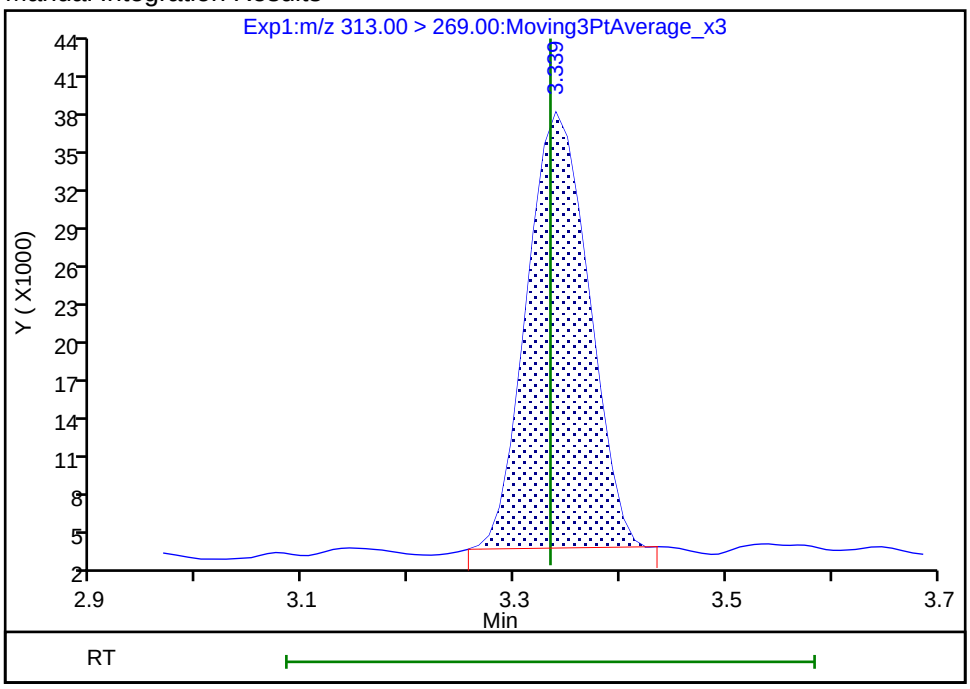
Processing Integration Results

RT: 3.34
Area: 145382
Amount: 0.025915
Amount Units: ng/ml




Manual Integration Results

RT: 3.34
Area: 139898
Amount: 0.025091
Amount Units: ng/ml




Reviewer: fariasa, 26-Aug-2020 05:42:32
Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

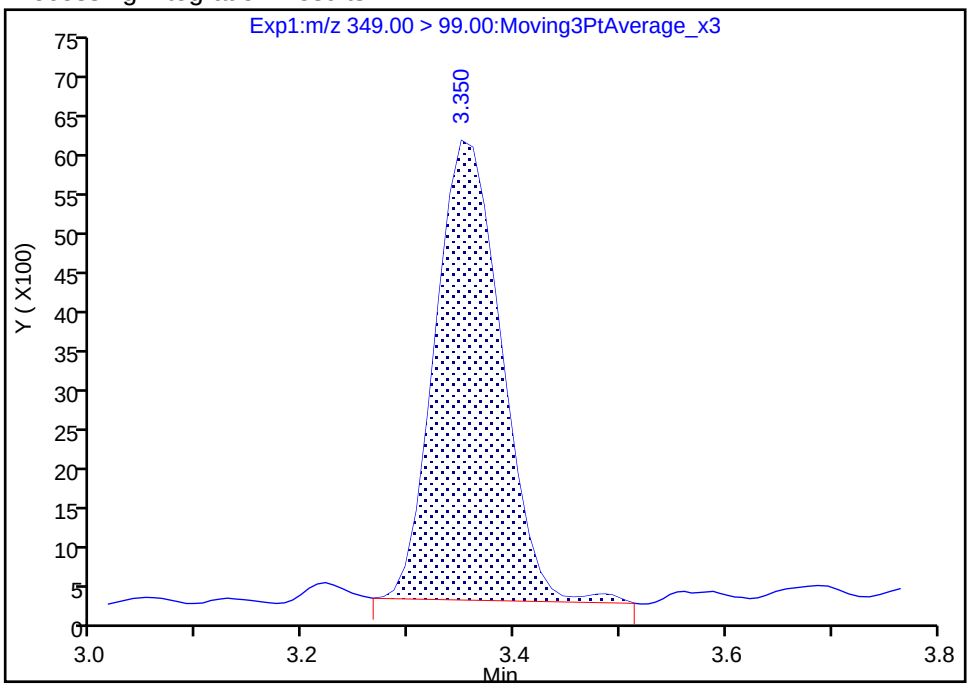
Data File: \\chromfs\Sacramento\ChromData\A18\20200825-102078.b\2020.08.25_A18_ICAL_A_011.d
Injection Date: 25-Aug-2020 16:43:14 Instrument ID: A18
Lims ID: IC STD 1
Client ID:
Operator ID: TAISACA18-PC\A-18 ALS Bottle#: 6 Worklist Smp#: 2
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFAS_A18V2 Limit Group: LC PFC ICAL
Column: Gemini C18 3um 3mm x 50 mm ( 3.00mm) Detector EXP1

## 12 Perfluoropentanesulfonic acid, CAS: 2706-91-4

Signal: 2

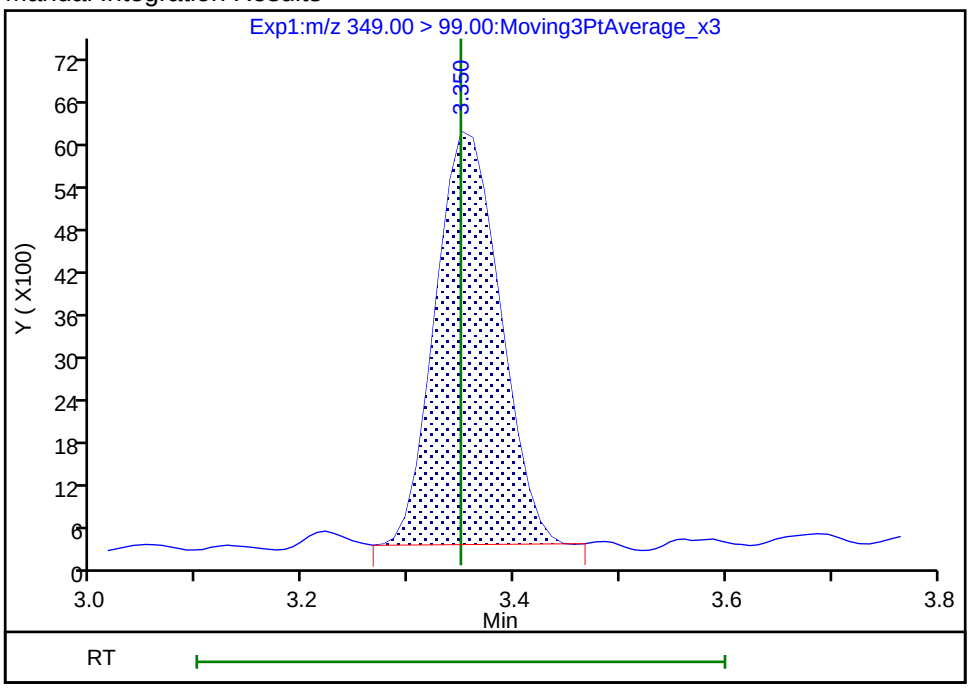
Processing Integration Results

RT: 3.35
Area: 25292
Amount: 0.020766
Amount Units: ng/ml




Manual Integration Results

RT: 3.35
Area: 24636
Amount: 0.020766
Amount Units: ng/ml




Reviewer: fariasa, 26-Aug-2020 05:42:40
Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

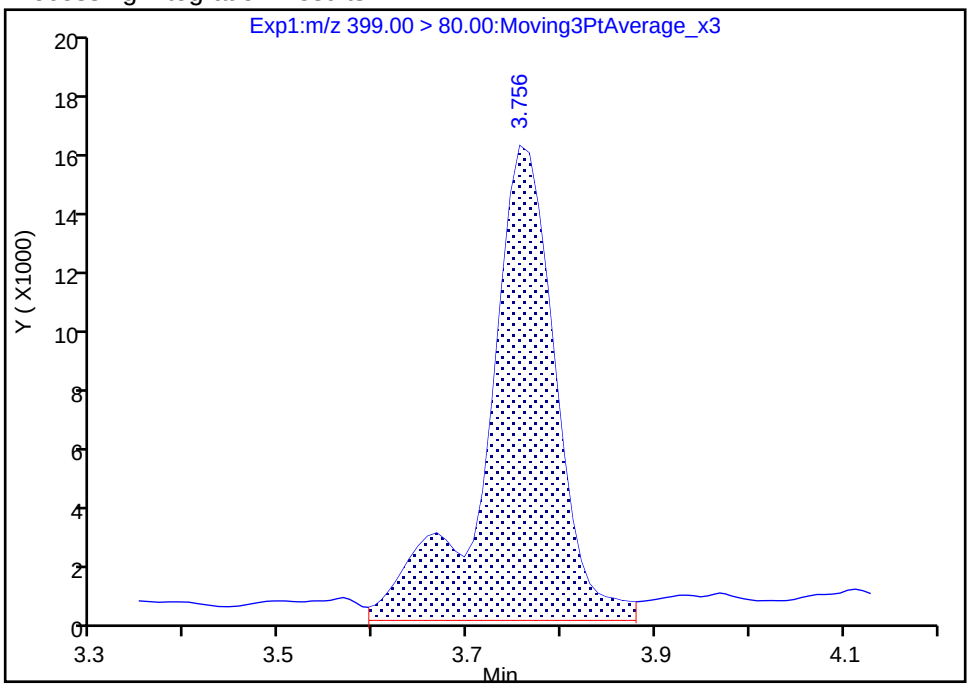
Data File: \\chromfs\Sacramento\ChromData\A18\20200825-102078.b\2020.08.25_A18_ICAL_A_011.d
Injection Date: 25-Aug-2020 16:43:14 Instrument ID: A18
Lims ID: IC STD 1
Client ID:
Operator ID: TAISACA18-PC\A-18 ALS Bottle#: 6 Worklist Smp#: 2
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFAS_A18V2 Limit Group: LC PFC ICAL
Column: Gemini C18 3um 3mm x 50 mm ( 3.00mm) Detector EXP1

## 15 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 1

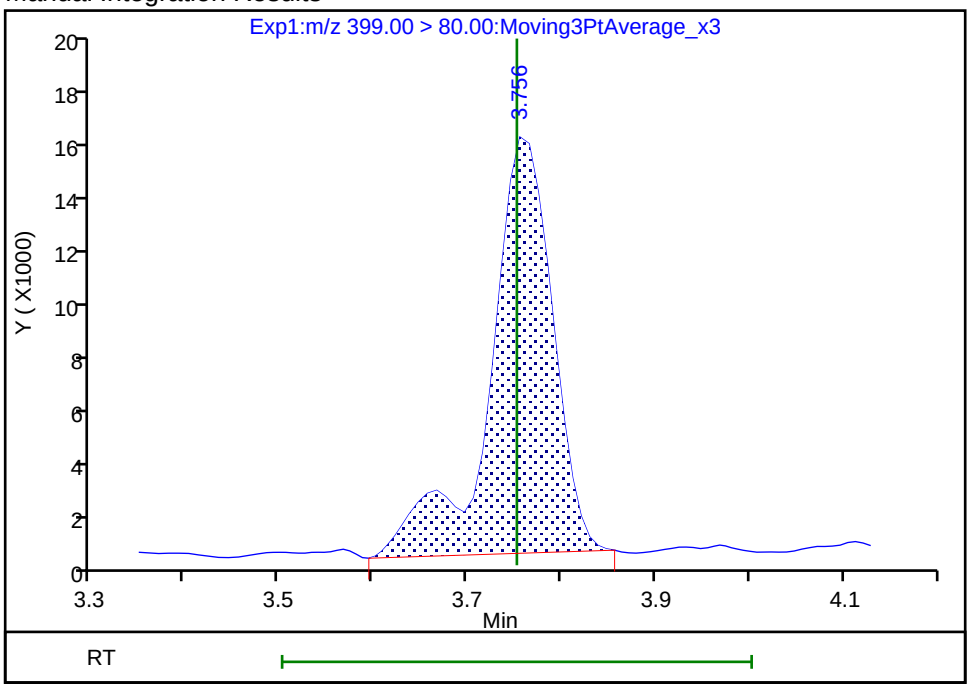
Processing Integration Results

RT: 3.76
Area: 83356
Amount: 0.029075
Amount Units: ng/ml




Manual Integration Results

RT: 3.76
Area: 73118
Amount: 0.026089
Amount Units: ng/ml




Reviewer: fariasa, 26-Aug-2020 05:42:49
Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

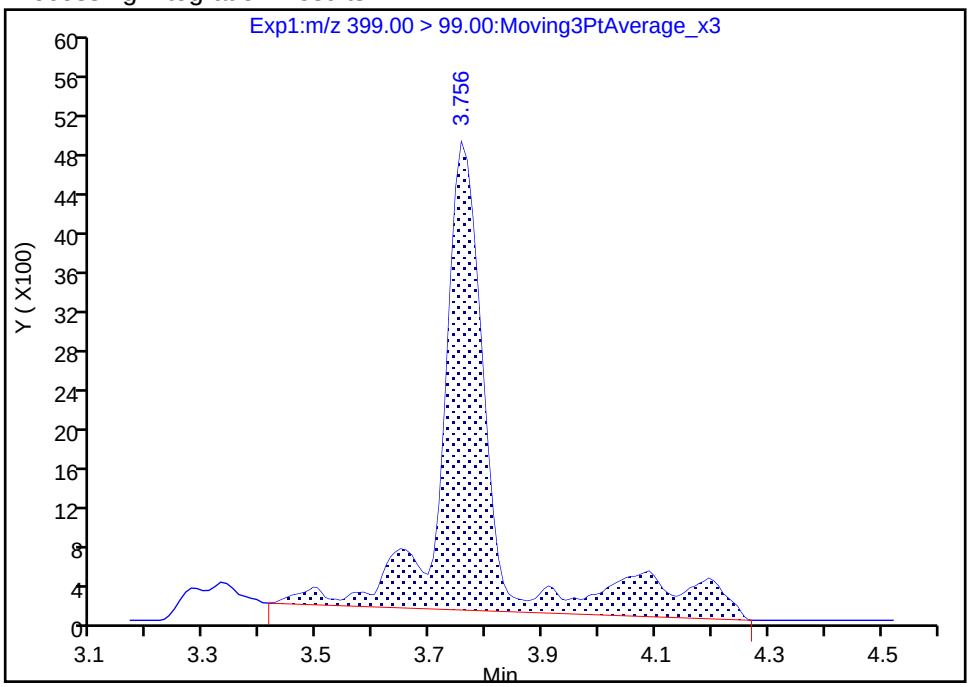
Data File: \\chromfs\Sacramento\ChromData\A18\20200825-102078.b\2020.08.25_A18_ICAL_A_011.d
Injection Date: 25-Aug-2020 16:43:14 Instrument ID: A18
Lims ID: IC STD 1
Client ID:
Operator ID: TAISACA18-PC\A-18 ALS Bottle#: 6 Worklist Smp#: 2
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFAS_A18V2 Limit Group: LC PFC ICAL
Column: Gemini C18 3um 3mm x 50 mm ( 3.00mm) Detector EXP1

## 15 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 2

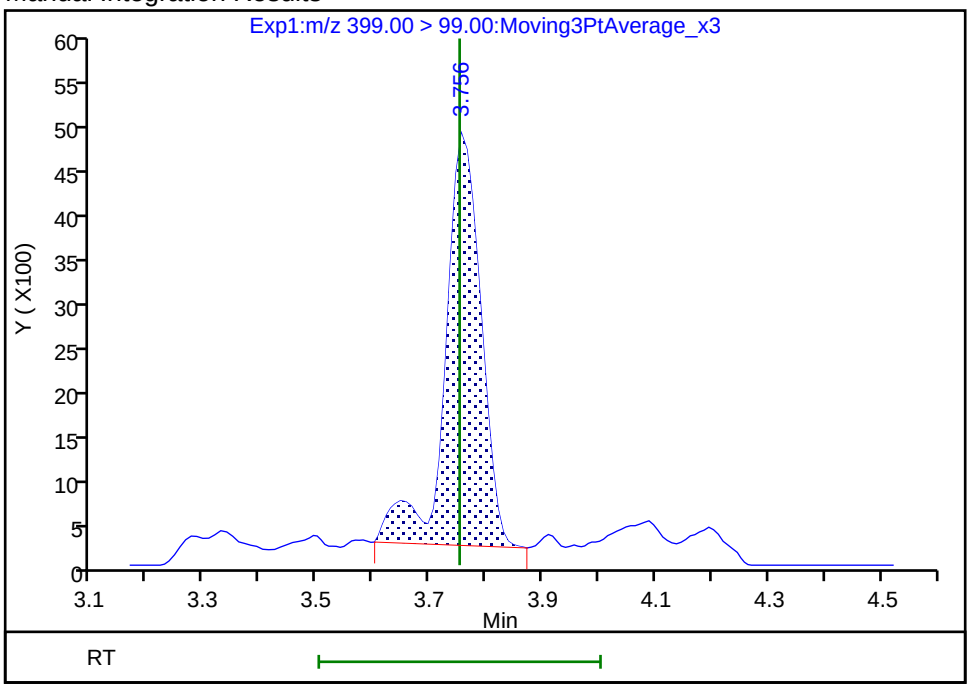
Processing Integration Results

RT: 3.76
Area: 30002
Amount: 0.029075
Amount Units: ng/ml




Manual Integration Results

RT: 3.76
Area: 20749
Amount: 0.026089
Amount Units: ng/ml




Reviewer: fariasa, 26-Aug-2020 05:42:56
Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

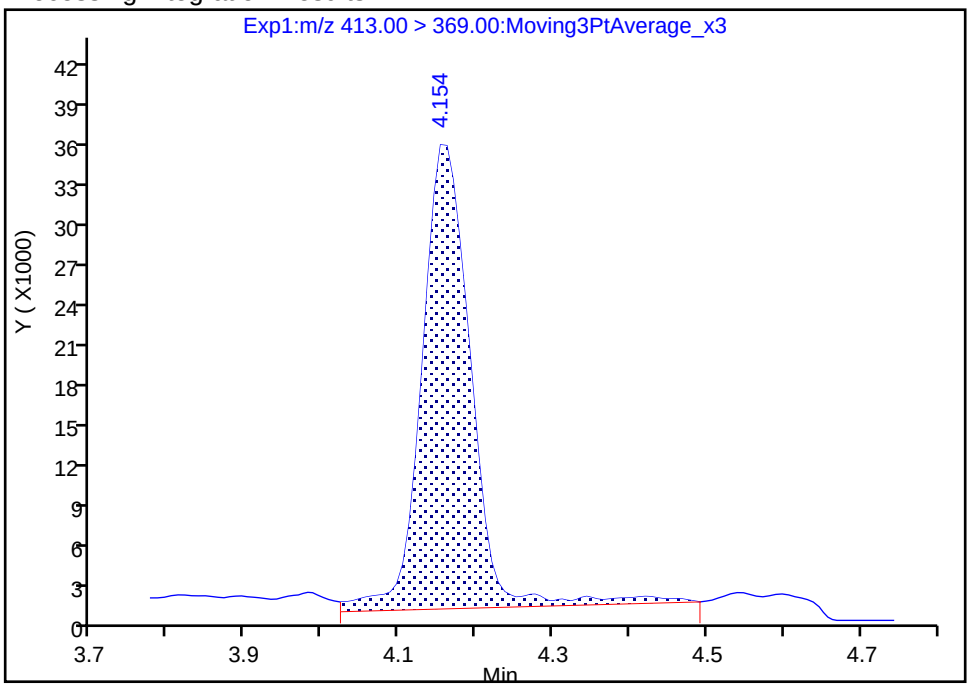
Data File: \\chromfs\Sacramento\ChromData\A18\20200825-102078.b\2020.08.25_A18_ICAL_A_011.d
Injection Date: 25-Aug-2020 16:43:14 Instrument ID: A18
Lims ID: IC STD 1
Client ID:
Operator ID: TAISACA18-PC\A-18 ALS Bottle#: 6 Worklist Smp#: 2
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFAS_A18V2 Limit Group: LC PFC ICAL
Column: Gemini C18 3um 3mm x 50 mm ( 3.00mm) Detector EXP1

## 22 Perfluorooctanoic acid, CAS: 335-67-1

Signal: 1

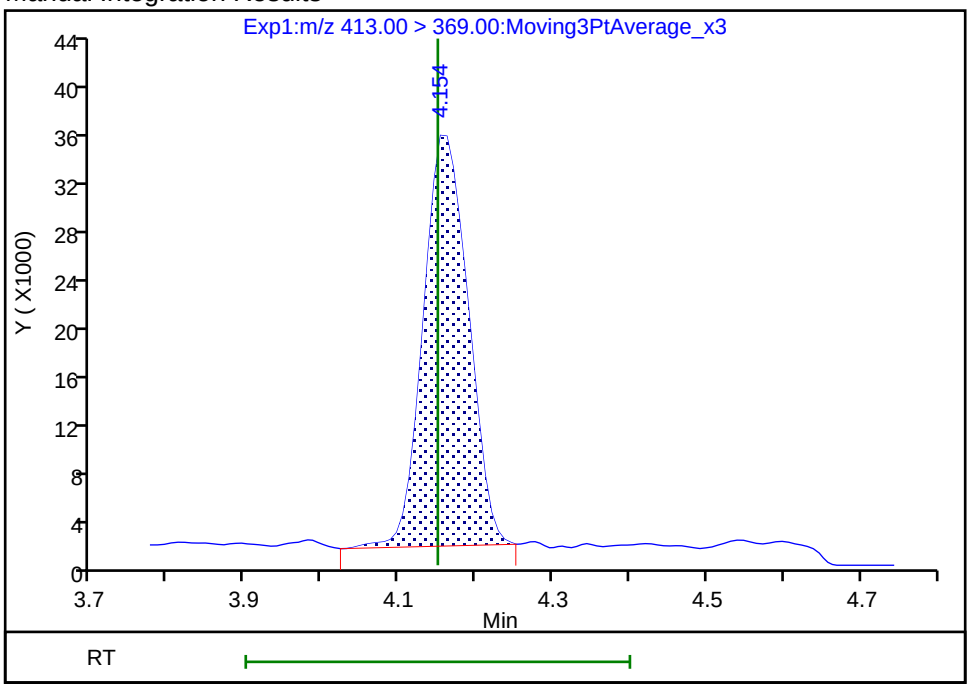
Processing Integration Results

RT: 4.15
Area: 153665
Amount: 0.031257
Amount Units: ng/ml




Manual Integration Results

RT: 4.15
Area: 137219
Amount: 0.029817
Amount Units: ng/ml




Reviewer: fariasa, 26-Aug-2020 05:43:30
Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

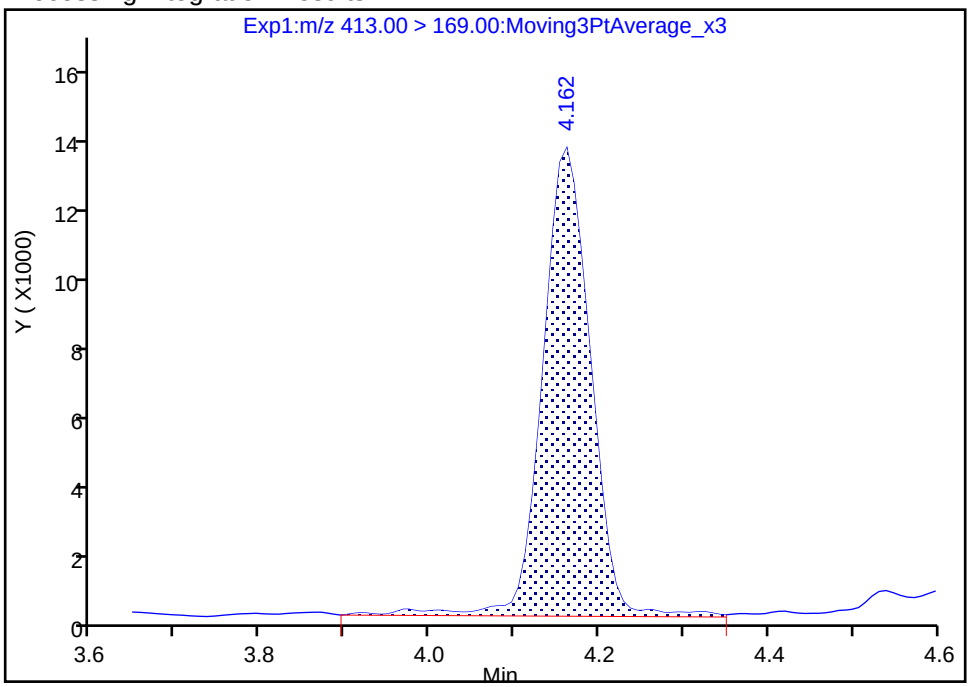
Data File: \\chromfs\Sacramento\ChromData\A18\20200825-102078.b\2020.08.25_A18_ICAL_A_011.d
Injection Date: 25-Aug-2020 16:43:14 Instrument ID: A18
Lims ID: IC STD 1
Client ID:
Operator ID: TAISACA18-PC\A-18 ALS Bottle#: 6 Worklist Smp#: 2
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFAS_A18V2 Limit Group: LC PFC ICAL
Column: Gemini C18 3um 3mm x 50 mm ( 3.00mm) Detector EXP1

## 22 Perfluorooctanoic acid, CAS: 335-67-1

Signal: 2

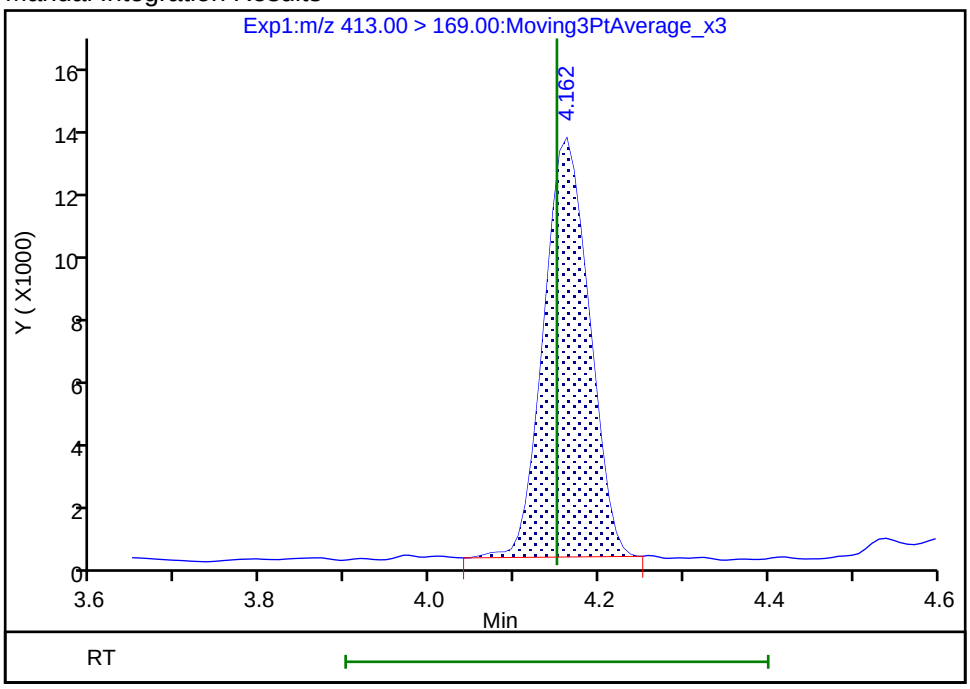
Processing Integration Results

RT: 4.16
Area: 53051
Amount: 0.031257
Amount Units: ng/ml




Manual Integration Results

RT: 4.16
Area: 49716
Amount: 0.029817
Amount Units: ng/ml




Reviewer: fariasa, 26-Aug-2020 05:43:38
Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

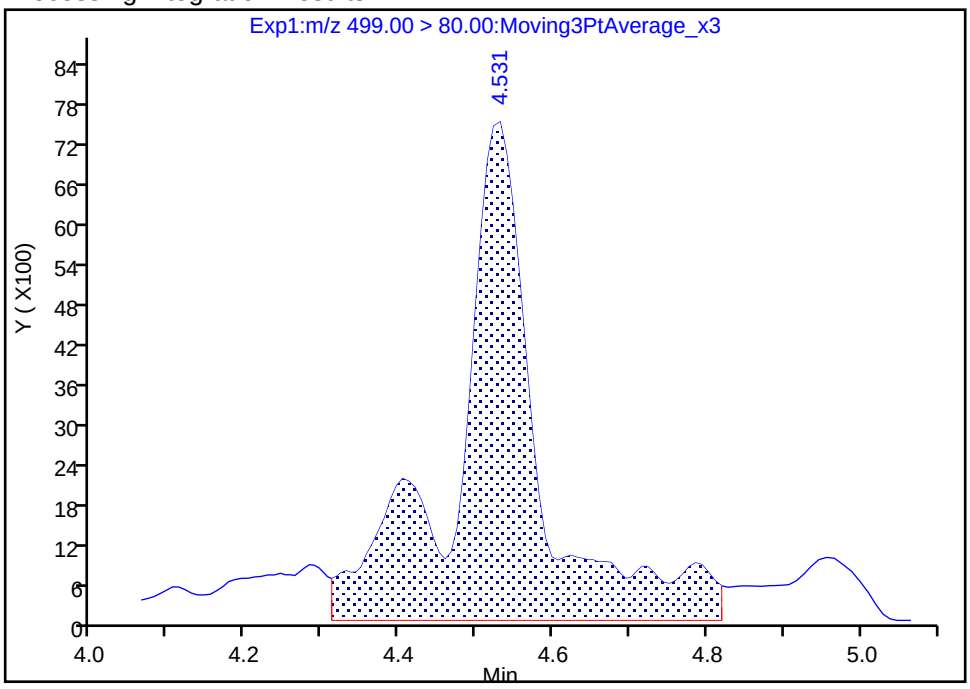
Data File: \\chromfs\Sacramento\ChromData\A18\20200825-102078.b\2020.08.25_A18_ICAL_A_011.d
Injection Date: 25-Aug-2020 16:43:14 Instrument ID: A18
Lims ID: IC STD 1
Client ID:
Operator ID: TAISACA18-PC\A-18 ALS Bottle#: 6 Worklist Smp#: 2
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFAS_A18V2 Limit Group: LC PFC ICAL
Column: Gemini C18 3um 3mm x 50 mm ( 3.00mm) Detector EXP1

## 29 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 1

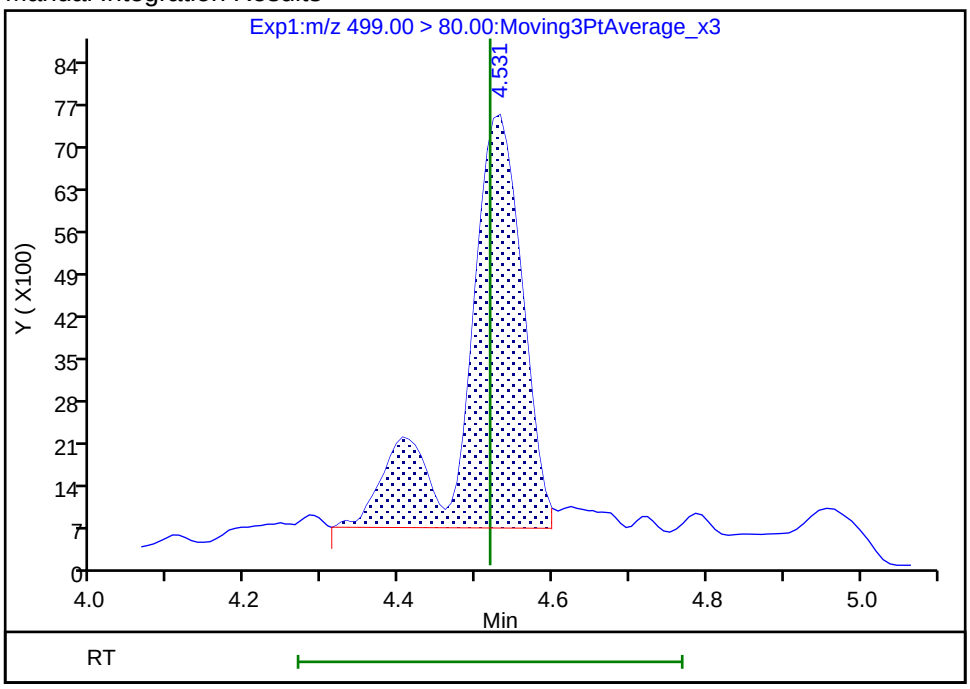
Processing Integration Results

RT: 4.53
Area: 56494
Amount: 0.031687
Amount Units: ng/ml




Manual Integration Results

RT: 4.53
Area: 35364
Amount: 0.021324
Amount Units: ng/ml




Reviewer: fariasa, 26-Aug-2020 05:44:40
Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

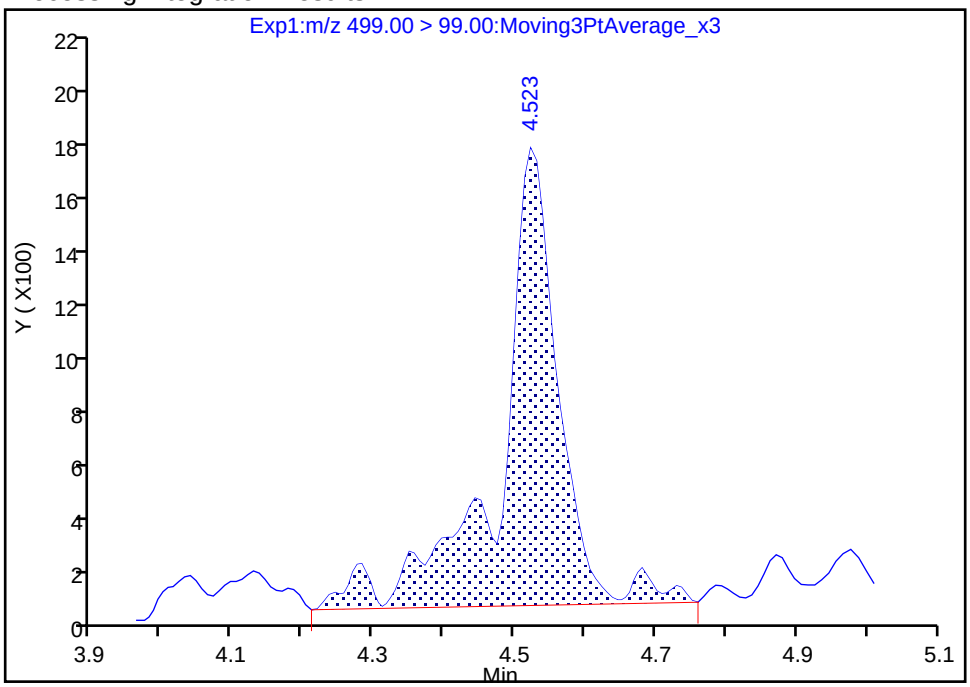
Data File: \\chromfs\Sacramento\ChromData\A18\20200825-102078.b\2020.08.25_A18_ICAL_A_011.d
Injection Date: 25-Aug-2020 16:43:14 Instrument ID: A18
Lims ID: IC STD 1
Client ID:
Operator ID: TAISACA18-PC\A-18 ALS Bottle#: 6 Worklist Smp#: 2
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFAS_A18V2 Limit Group: LC PFC ICAL
Column: Gemini C18 3um 3mm x 50 mm ( 3.00mm) Detector EXP1

## 29 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 2

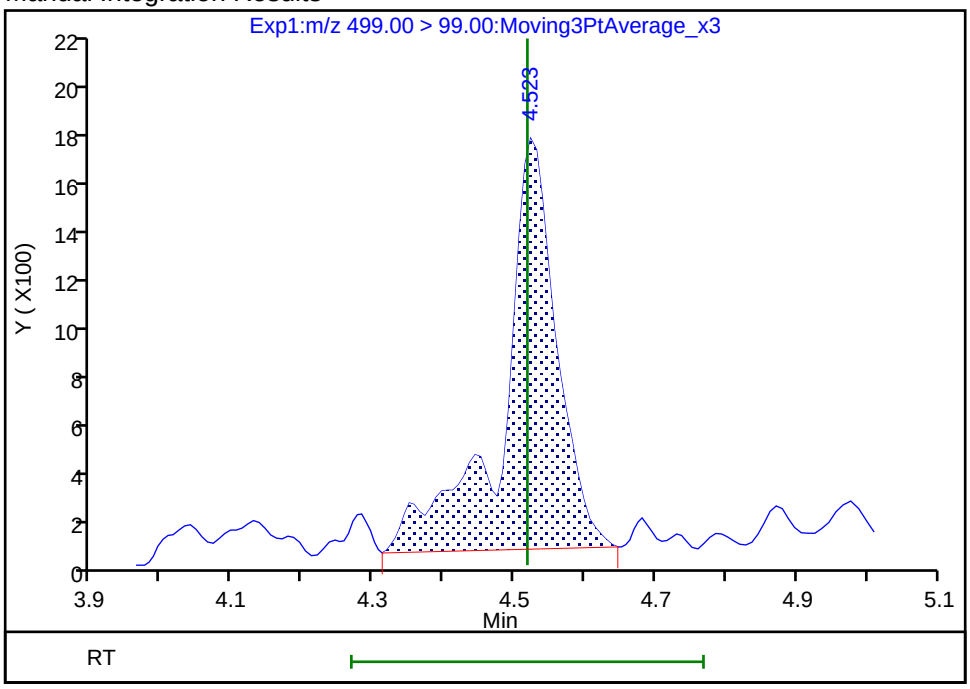
Processing Integration Results

RT: 4.52
Area: 10079
Amount: 0.031687
Amount Units: ng/ml




Manual Integration Results

RT: 4.52
Area: 9090
Amount: 0.021324
Amount Units: ng/ml




Reviewer: fariasa, 26-Aug-2020 05:45:08
Audit Action: Manually Integrated Audit Reason: Baseline

Eurofins TestAmerica, Sacramento

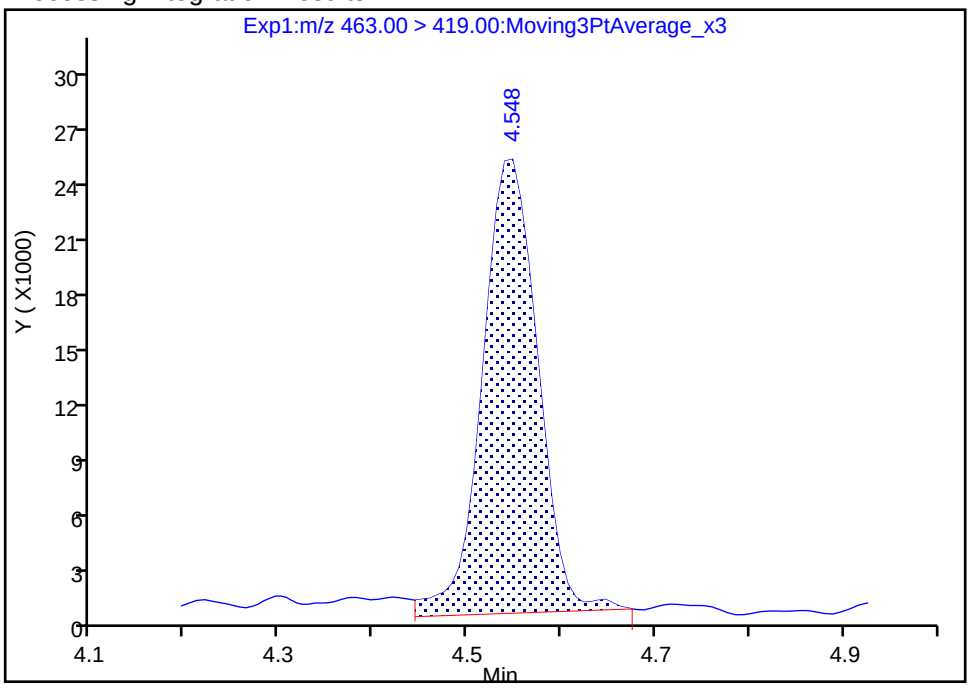
Data File: \\chromfs\Sacramento\ChromData\A18\20200825-102078.b\2020.08.25_A18_ICAL_A_011.d
Injection Date: 25-Aug-2020 16:43:14 Instrument ID: A18
Lims ID: IC STD 1
Client ID:
Operator ID: TAISACA18-PC\A-18 ALS Bottle#: 6 Worklist Smp#: 2
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFAS_A18V2 Limit Group: LC PFC ICAL
Column: Gemini C18 3um 3mm x 50 mm ( 3.00mm) Detector EXP1

## 31 Perfluorononanoic acid, CAS: 375-95-1

Signal: 1

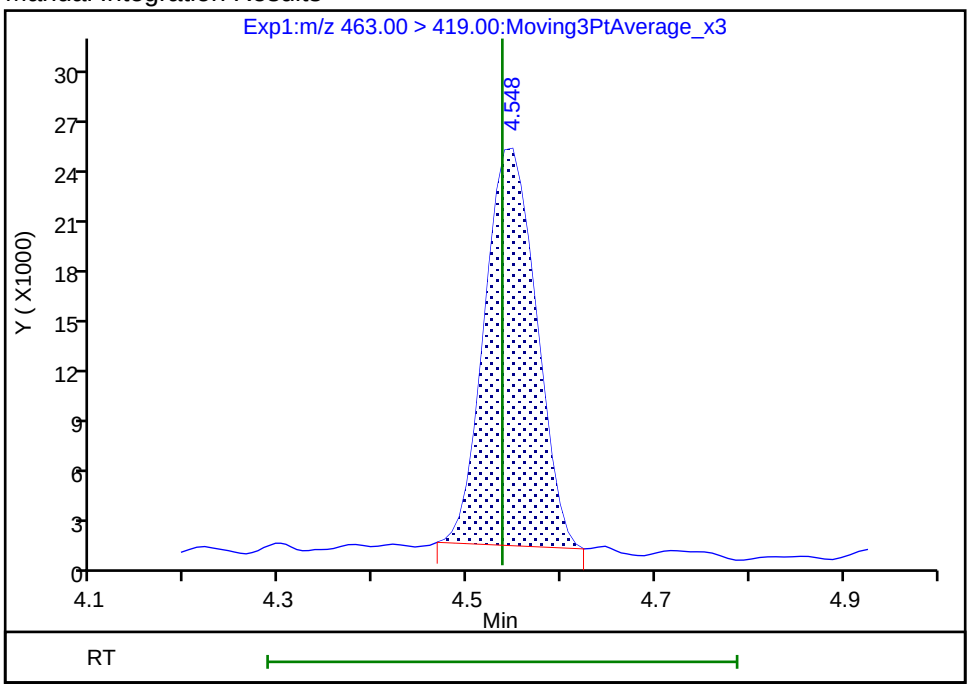
Processing Integration Results

RT: 4.55
Area: 98018
Amount: 0.025110
Amount Units: ng/ml




Manual Integration Results

RT: 4.55
Area: 88392
Amount: 0.022968
Amount Units: ng/ml




Reviewer: fariasa, 26-Aug-2020 05:45:21
Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

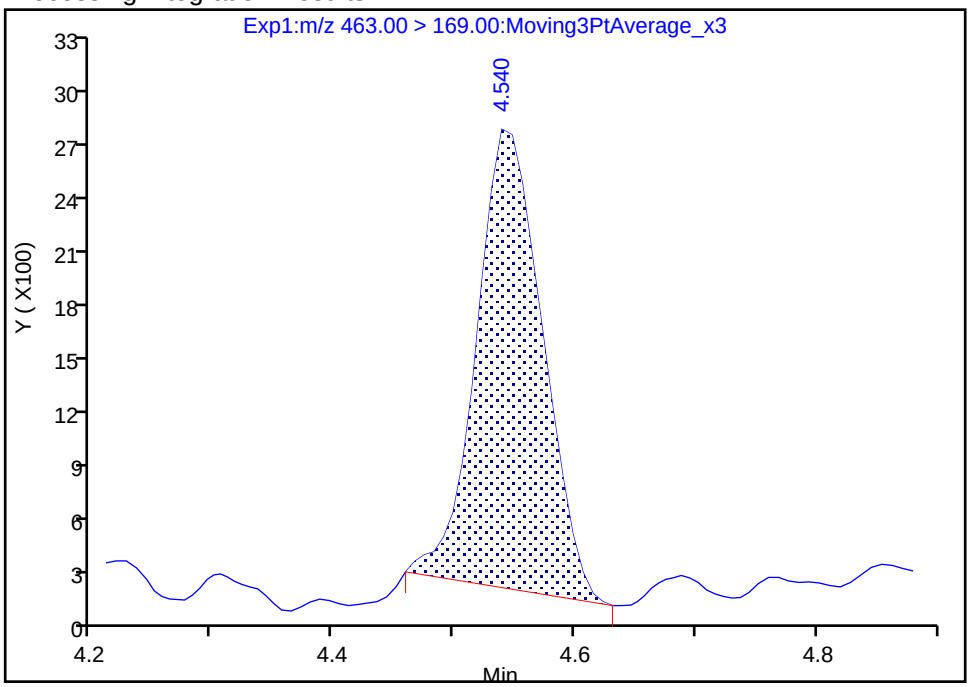
Data File: \\chromfs\Sacramento\ChromData\A18\20200825-102078.b\2020.08.25_A18_ICAL_A_011.d
Injection Date: 25-Aug-2020 16:43:14 Instrument ID: A18
Lims ID: IC STD 1
Client ID:
Operator ID: TAISACA18-PC\A-18 ALS Bottle#: 6 Worklist Smp#: 2
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFAS_A18V2 Limit Group: LC PFC ICAL
Column: Gemini C18 3um 3mm x 50 mm ( 3.00mm) Detector EXP1

## 31 Perfluorononanoic acid, CAS: 375-95-1

Signal: 2

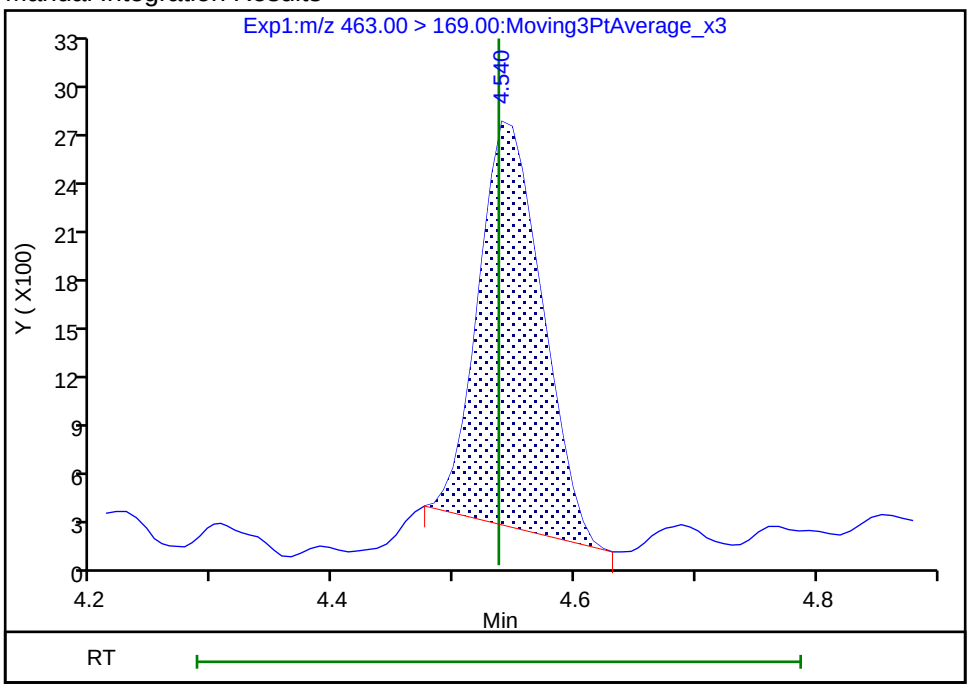
Processing Integration Results

RT: 4.54
Area: 9746
Amount: 0.025110
Amount Units: ng/ml




Manual Integration Results

RT: 4.54
Area: 9163
Amount: 0.022968
Amount Units: ng/ml




Reviewer: fariasa, 26-Aug-2020 05:45:31
Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

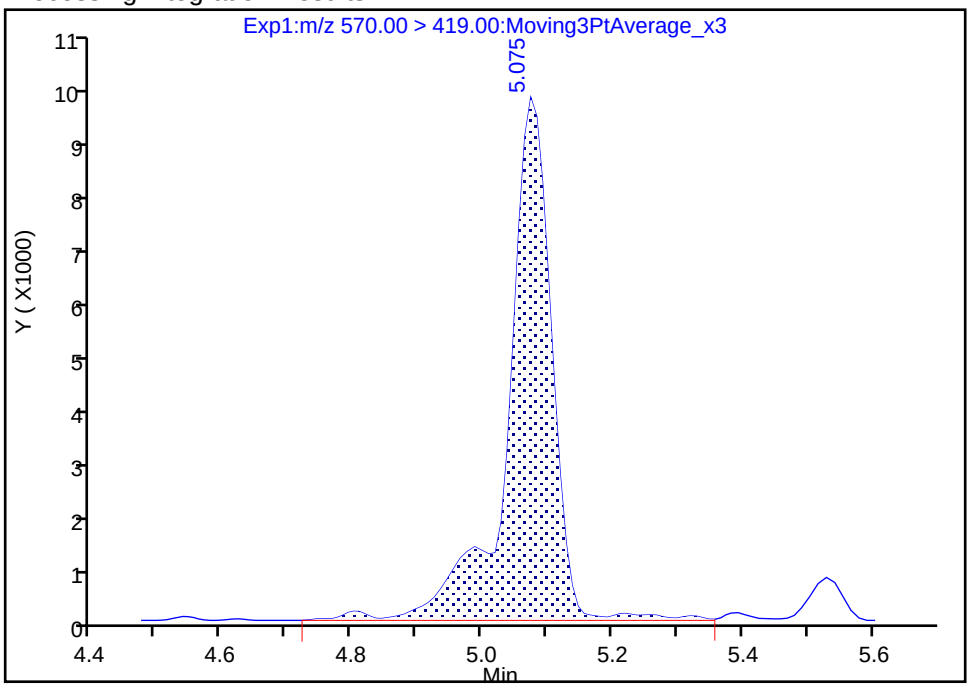
Data File: \\chromfs\Sacramento\ChromData\A18\20200825-102078.b\2020.08.25_A18_ICAL_A_011.d
Injection Date: 25-Aug-2020 16:43:14 Instrument ID: A18
Lims ID: IC STD 1
Client ID:
Operator ID: TAISACA18-PC\A-18 ALS Bottle#: 6 Worklist Smp#: 2
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFAS_A18V2 Limit Group: LC PFC ICAL
Column: Gemini C18 3um 3mm x 50 mm ( 3.00mm) Detector EXP1

## 41 NMeFOSAA, CAS: 2355-31-9

Signal: 1

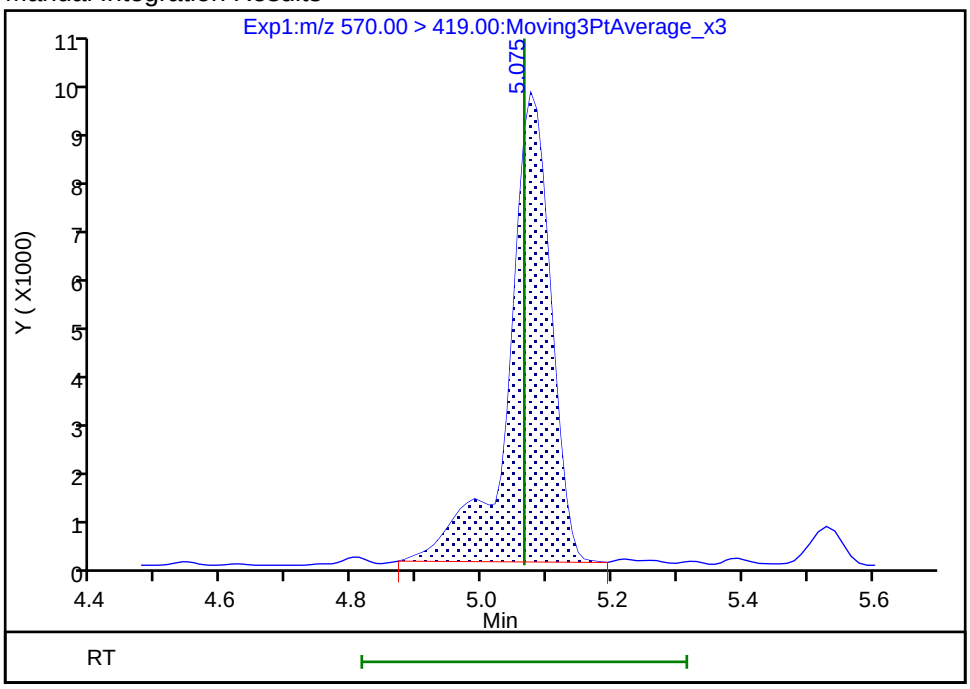
Processing Integration Results

RT: 5.07
Area: 43928
Amount: 0.023632
Amount Units: ng/ml




Manual Integration Results

RT: 5.07
Area: 41357
Amount: 0.022497
Amount Units: ng/ml




Reviewer: fariasa, 26-Aug-2020 05:50:09
Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

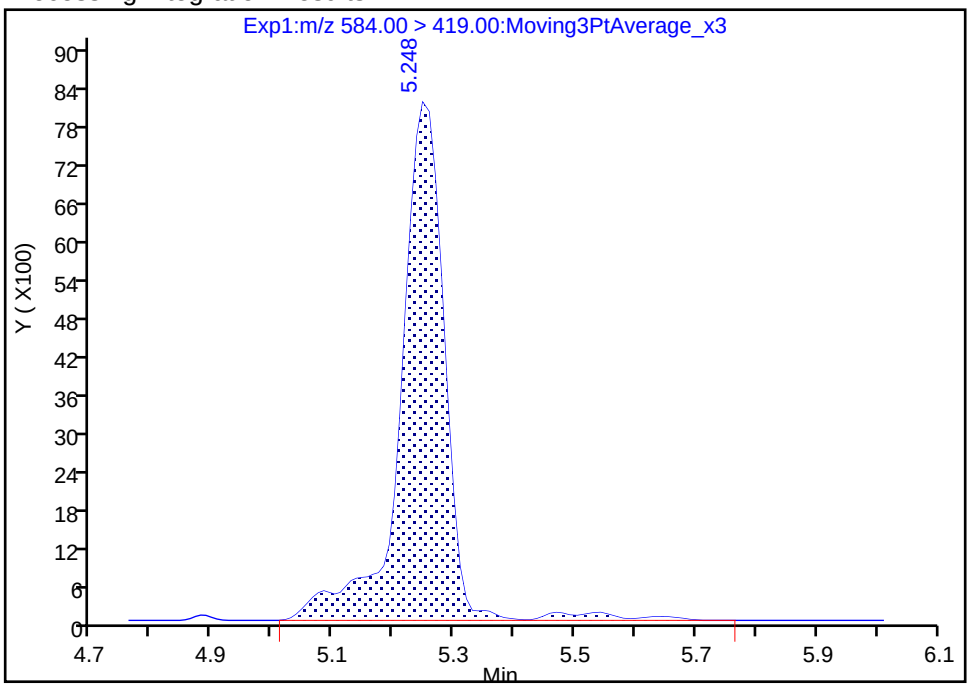
Data File: \\chromfs\Sacramento\ChromData\A18\20200825-102078.b\2020.08.25_A18_ICAL_A_011.d
Injection Date: 25-Aug-2020 16:43:14 Instrument ID: A18
Lims ID: IC STD 1
Client ID:
Operator ID: TAISACA18-PC\A-18 ALS Bottle#: 6 Worklist Smp#: 2
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFAS_A18V2 Limit Group: LC PFC ICAL
Column: Gemini C18 3um 3mm x 50 mm ( 3.00mm) Detector EXP1

## 46 NEtFOSA, CAS: 2991-50-6

Signal: 1

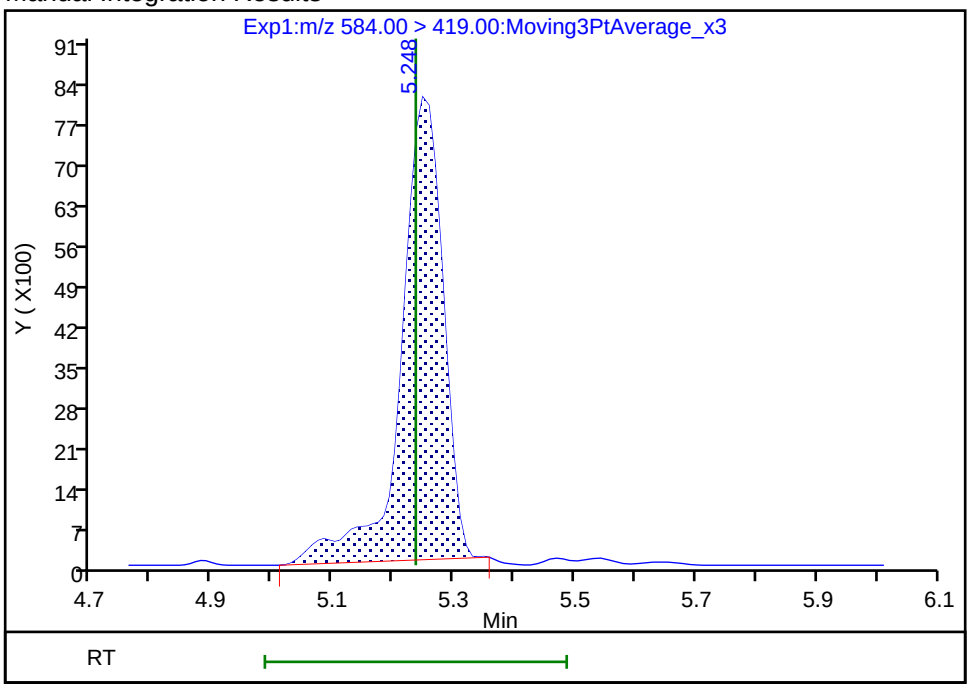
Processing Integration Results

RT: 5.25
Area: 41754
Amount: 0.021843
Amount Units: ng/ml




Manual Integration Results

RT: 5.25
Area: 39077
Amount: 0.020727
Amount Units: ng/ml




Reviewer: fariasa, 26-Aug-2020 05:50:20
Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

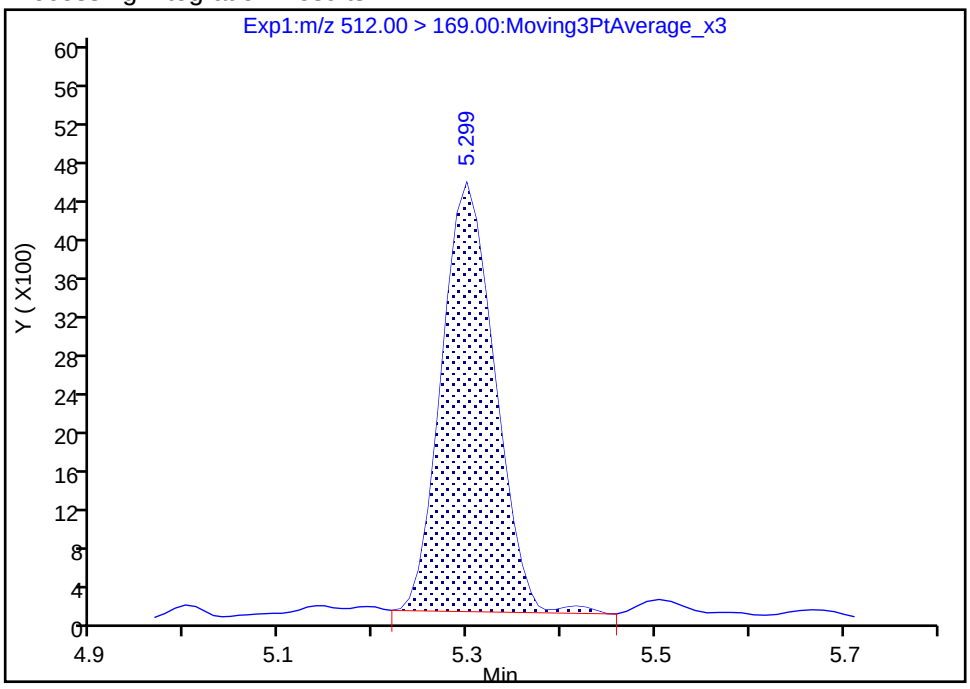
Data File: \\chromfs\Sacramento\ChromData\A18\20200825-102078.b\2020.08.25_A18_ICAL_A_011.d
Injection Date: 25-Aug-2020 16:43:14 Instrument ID: A18
Lims ID: IC STD 1
Client ID:
Operator ID: TAISACA18-PC\A-18 ALS Bottle#: 6 Worklist Smp#: 2
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFAS_A18V2 Limit Group: LC PFC ICAL
Column: Gemini C18 3um 3mm x 50 mm ( 3.00mm) Detector EXP1

## 50 NMeFOSA, CAS: 31506-32-8

Signal: 1

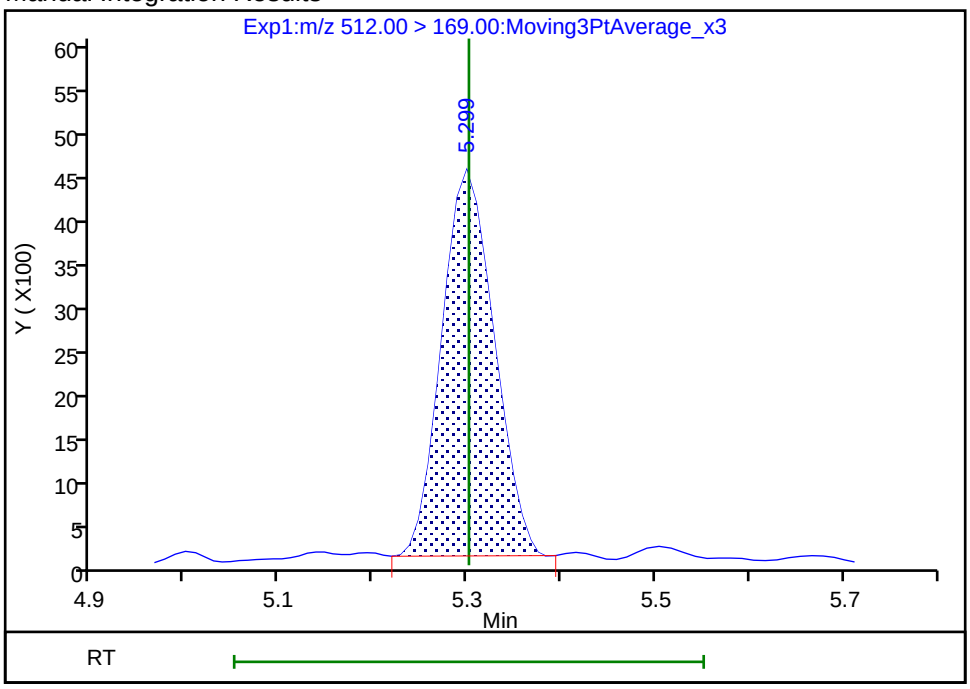
Processing Integration Results

RT: 5.30
Area: 17667
Amount: 0.021824
Amount Units: ng/ml




Manual Integration Results

RT: 5.30
Area: 17321
Amount: 0.021539
Amount Units: ng/ml




Reviewer: fariasa, 26-Aug-2020 05:50:27
Audit Action: Manually Integrated Audit Reason: Baseline

Eurofins TestAmerica, Sacramento

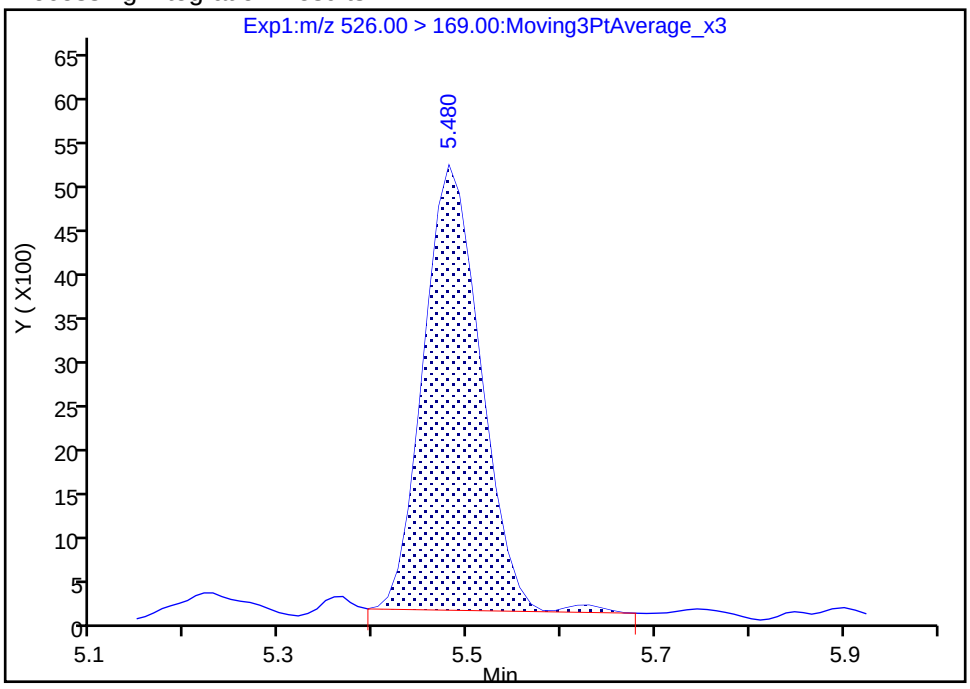
Data File: \\chromfs\Sacramento\ChromData\A18\20200825-102078.b\2020.08.25_A18_ICAL_A_011.d
Injection Date: 25-Aug-2020 16:43:14 Instrument ID: A18
Lims ID: IC STD 1
Client ID:
Operator ID: TAISACA18-PC\A-18 ALS Bottle#: 6 Worklist Smp#: 2
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFAS_A18V2 Limit Group: LC PFC ICAL
Column: Gemini C18 3um 3mm x 50 mm ( 3.00mm) Detector EXP1

## 55 N-EtFOSA-M, CAS: 4151-50-2

Signal: 1

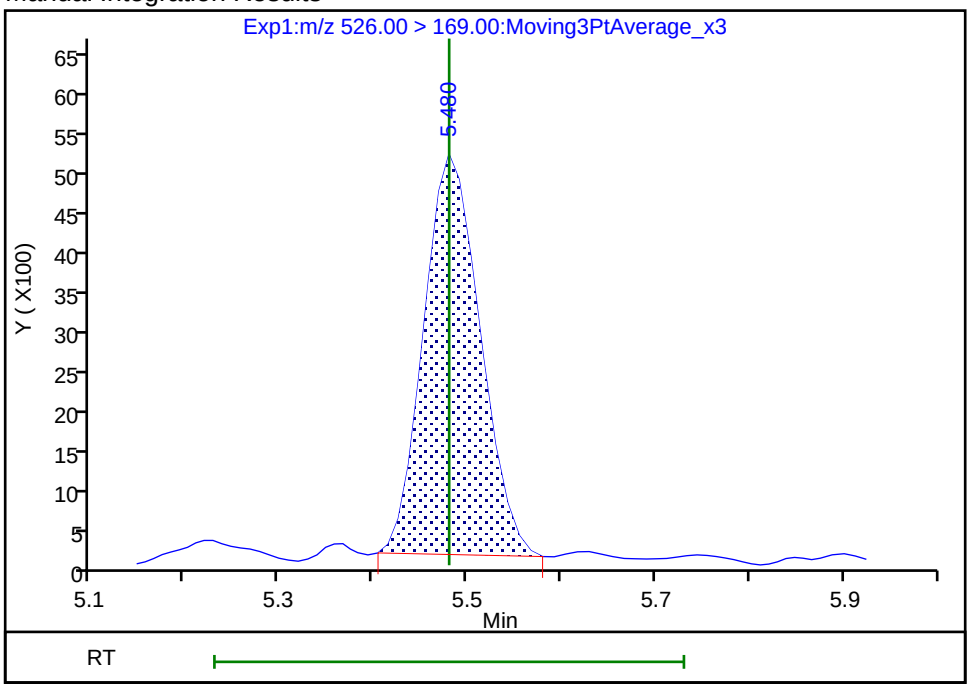
Processing Integration Results

RT: 5.48
Area: 21544
Amount: 0.022478
Amount Units: ng/ml




Manual Integration Results

RT: 5.48
Area: 21111
Amount: 0.022083
Amount Units: ng/ml




Reviewer: fariasa, 26-Aug-2020 05:50:35
Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

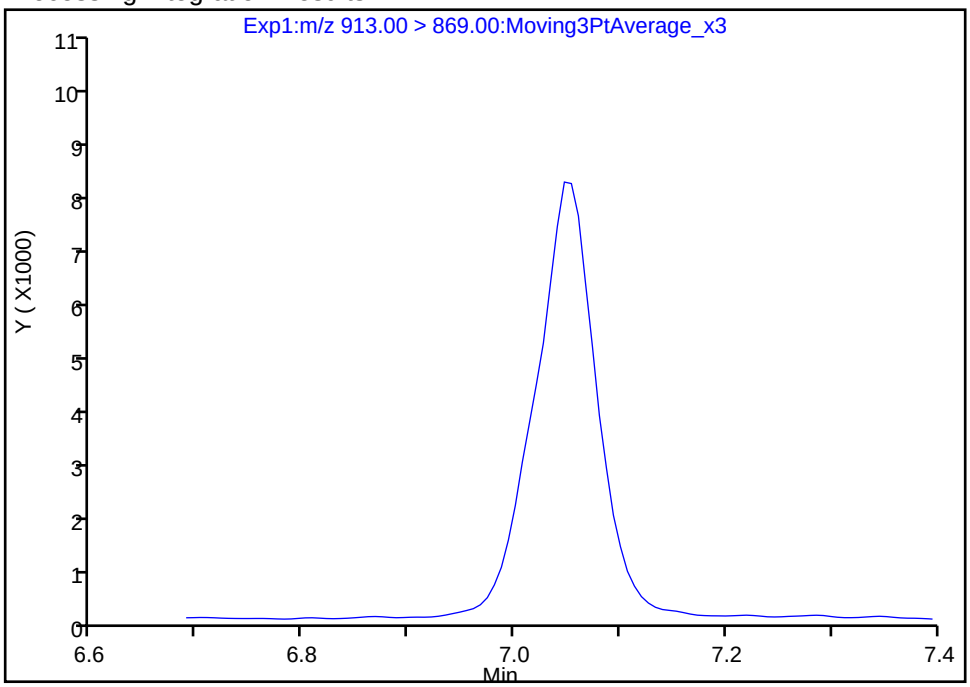
Data File: \\chromfs\Sacramento\ChromData\A18\20200825-102078.b\2020.08.25_A18_ICAL_A_011.d
Injection Date: 25-Aug-2020 16:43:14 Instrument ID: A18
Lims ID: IC STD 1
Client ID:
Operator ID: TAISACA18-PC\A-18 ALS Bottle#: 6 Worklist Smp#: 2
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFAS_A18V2 Limit Group: LC PFC ICAL
Column: Gemini C18 3um 3mm x 50 mm ( 3.00mm) Detector EXP1

## 65 Perfluorooctadecanoic acid, CAS: 16517-11-6

Signal: 1

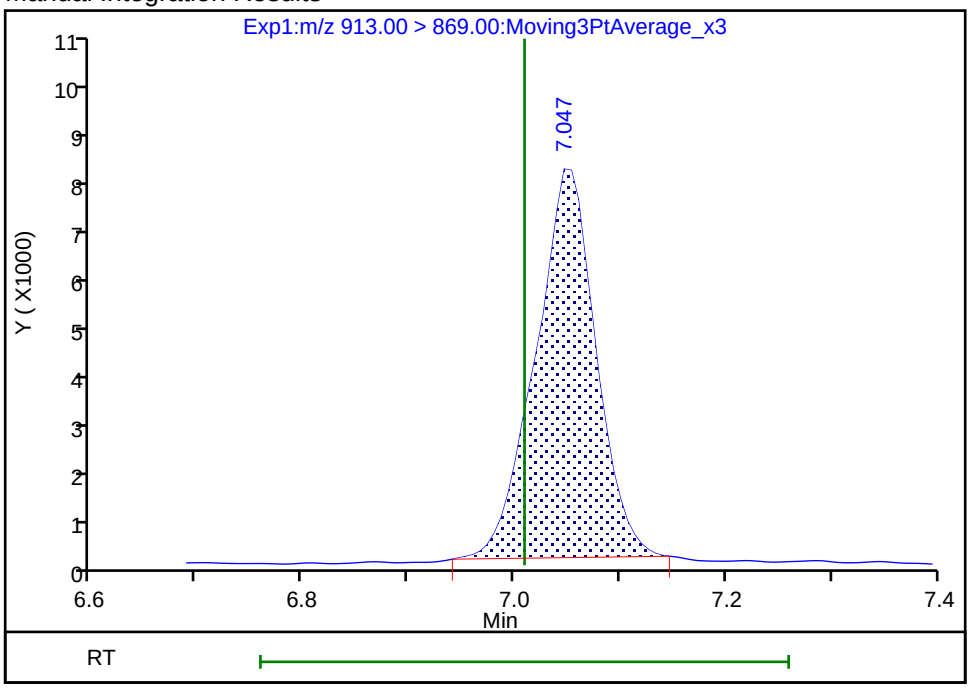
Not Detected
Expected RT: 7.01

Processing Integration Results




Manual Integration Results

RT: 7.05
Area: 29478
Amount: 0.019811
Amount Units: ng/ml




Reviewer: fariasa, 26-Aug-2020 05:51:27
Audit Action: Assigned Compound ID Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

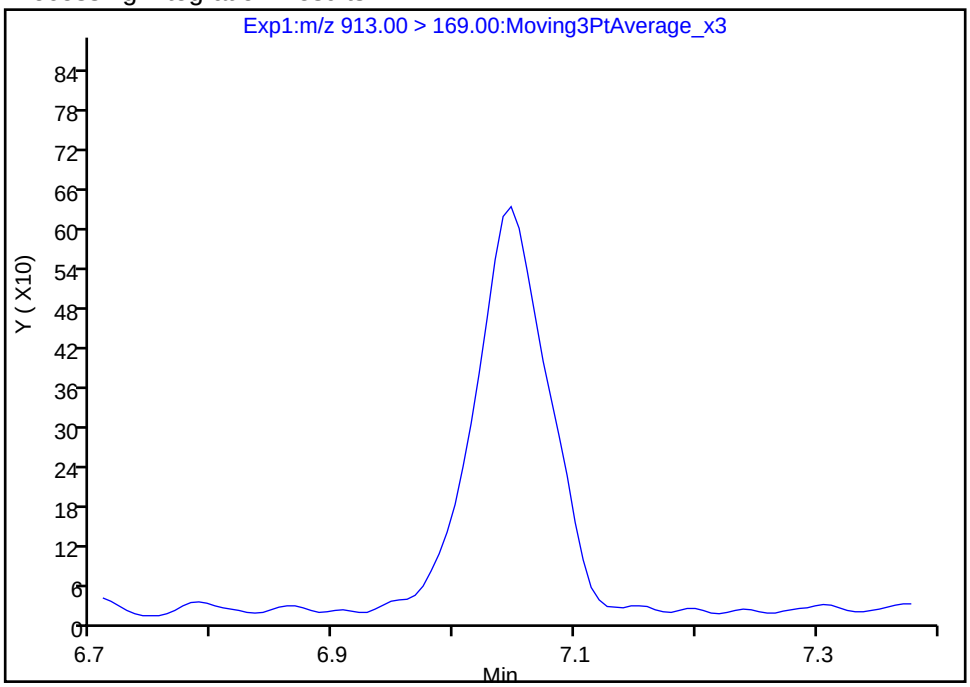
Data File: \\chromfs\Sacramento\ChromData\A18\20200825-102078.b\2020.08.25_A18_ICAL_A_011.d
Injection Date: 25-Aug-2020 16:43:14 Instrument ID: A18
Lims ID: IC STD 1
Client ID:
Operator ID: TAISACA18-PC\A-18 ALS Bottle#: 6 Worklist Smp#: 2
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFAS_A18V2 Limit Group: LC PFC ICAL
Column: Gemini C18 3um 3mm x 50 mm ( 3.00 mm) Detector EXP1

## 65 Perfluorooctadecanoic acid, CAS: 16517-11-6

Signal: 2

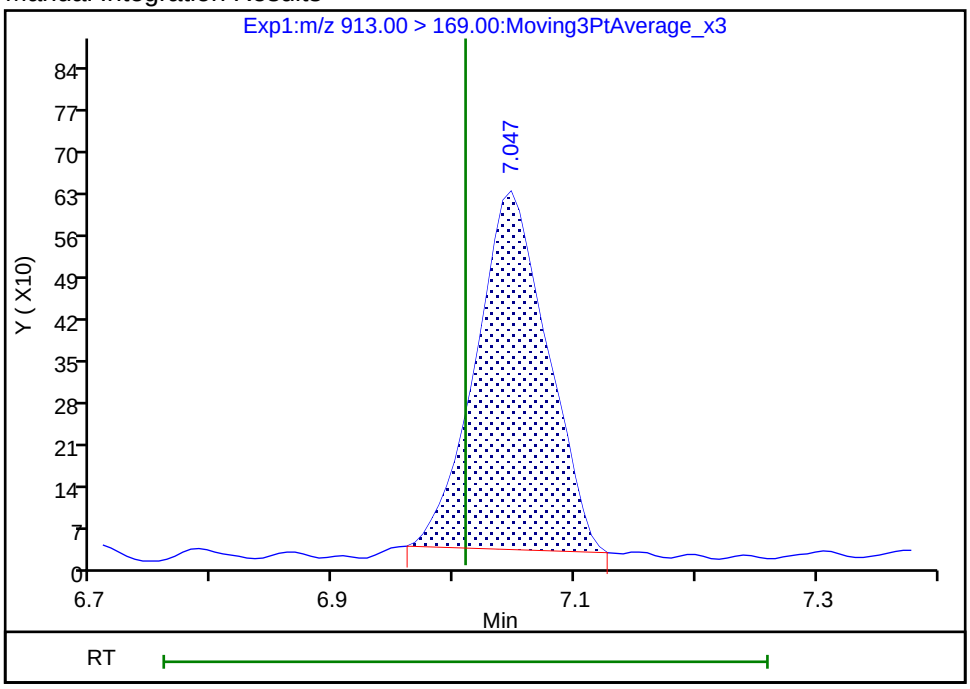
Not Detected
Expected RT: 7.01

Processing Integration Results




Manual Integration Results

RT: 7.05
Area: 2482
Amount: 0.019811
Amount Units: ng/ml




Reviewer: fariasa, 26-Aug-2020 05:51:56
Audit Action: Manually Integrated Audit Reason: Assign Peak

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\A18\20200825-102078.b\2020.08.25_A18_ICAL_A_012.d
Lims ID: IC STD 2
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 25-Aug-2020 16:52:21 ALS Bottle#: 7 Worklist Smp#: 3
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Sample Info: CAL STD 2 (20)
Misc. Info.: Plate: 1 Rack: 1
Operator ID: TAISACA18-PC\A-18 Instrument ID: A18
Sublist: chrom-PFAS_A18V2*sub1

Method: \\chromfs\Sacramento\ChromData\A18\20200825-102078.b\PFAS_A18V2.m
Limit Group: LC PFC ICAL
Last Update: 26-Aug-2020 10:42:26 Calib Date: 25-Aug-2020 17:37:57
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\A18\20200825-102078.b\2020.08.25_A18_ICAL_A_017.d

Column 1 : Gemini C18 3um 3mm x 50 mm ( 3.00 mm) Det: EXP1
Process Host: CTX1029

First Level Reviewer: fariasa Date: 26-Aug-2020 05:54:24
Ratio Calibration: Average of Initial Calibration

| Signal | RT | EXP RT | DLT RT | REL RT | Response | Amount ng/ml | Ratio(Limits) | %Rec | S/N | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| D 1 13C4 PFBA | | | | | | | | | | |
| 217.00 > 172.00 | 2.573 | 2.577 | -0.004 | 0.621 | 17539640 | 2.43 | | 97.3 | 8413 | |
| 2 Perfluorobutanoic acid | | | | | | | | | | |
| 212.90 > 169.00 | 2.582 | 2.580 | 0.002 | 1.003 | 279410 | 0.0459 | | 91.8 | 13.0 | |
| 5 Perfluoropentanoic acid | | | | | | | | | | M |
| 262.90 > 219.00 | 2.940 | 2.941 | -0.001 | 1.000 | 288057 | 0.0517 | | 103 | 15.7 | M |
| D 4 13C5 PFPeA | | | | | | | | | | |
| 267.90 > 223.00 | 2.940 | 2.941 | -0.001 | 0.709 | 13968137 | 2.49 | | 99.6 | 5891 | |
| D 9 13C3 PFBS | | | | | | | | | | |
| 301.90 > 80.00 | 2.973 | 2.977 | -0.004 | 0.717 | 10069352 | 2.29 | | 98.3 | 4277 | |
| 6 Perfluorobutanesulfonic acid | | | | | | | | | | |
| 298.90 > 80.00 | 2.973 | 2.982 | -0.009 | 1.000 | 182071 | 0.0416 | Target=2.30 | 94.2 | 40.1 | |
| 298.90 > 99.00 | 2.973 | 2.982 | -0.009 | 1.000 | 83766 | | 2.17(1.15-3.45) | 94.2 | 33.2 | |
| D 7 M2-4:2 FTS | | | | | | | | | | |
| 329.00 > 81.00 | 3.288 | 3.288 | 0.0 | 0.793 | 2573214 | 2.42 | | 104 | 1010 | |
| 8 4:2 FTS | | | | | | | | | | |
| 327.00 > 307.00 | 3.288 | 3.288 | 0.0 | 1.000 | 105243 | 0.0420 | | 90.0 | 775 | |
| 10 Perfluorohexanoic acid | | | | | | | | | | |
| 313.00 > 269.00 | 3.330 | 3.334 | -0.004 | 1.000 | 270599 | 0.0501 | Target=13.78 | 100 | 23.2 | |
| 313.00 > 119.00 | 3.330 | 3.334 | -0.004 | 1.000 | 18463 | | 14.66(6.89-20.66) | 100 | 16.3 | |
| D 11 13C2 PFHxA | | | | | | | | | | |
| 315.00 > 270.00 | 3.330 | 3.334 | -0.004 | 0.803 | 14014978 | 2.50 | | 100 | 7448 | |
| 12 Perfluoropentanesulfonic acid | | | | | | | | | | |
| 349.00 > 80.00 | 3.341 | 3.349 | -0.008 | 1.124 | 149083 | 0.0434 | Target=3.02 | 92.6 | 35.4 | |
| 349.00 > 99.00 | 3.352 | 3.349 | 0.003 | 1.127 | 49925 | | 2.99(1.51-4.52) | 92.6 | 40.0 | |
| 13 HPFO-DA | | | | | | | | | | |
| 285.00 > 169.00 | 3.458 | 3.463 | -0.005 | 1.000 | 53068 | 0.0476 | | 95.2 | 223 | |

| Signal | RT | EXP RT | DLT RT | REL RT | Response | Amount ng/ml | Ratio(Limits) | %Rec | S/N | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| D 14 13C3 HFPO-DA | | | | | | | | | | |
| 287.00 > 169.00 | 3.458 | 3.463 | -0.005 | 0.834 | 2860041 | 2.50 | | 99.9 | 5592 | |
| 16 Perfluoroheptanoic acid | | | | | | | | | | |
| 363.00 > 319.00 | 3.751 | 3.750 | 0.001 | 1.000 | 243648 | 0.0535 | Target=3.84 | 107 | 30.1 | |
| 363.00 > 169.00 | 3.741 | 3.750 | -0.009 | 0.997 | 62183 | | 3.92(1.92-5.76) | 107 | 46.3 | |
| D 18 13C4 PFHpA | | | | | | | | | | |
| 367.00 > 322.00 | 3.751 | 3.750 | 0.001 | 0.904 | 11221961 | 2.35 | | 93.9 | 8376 | |
| D 17 18O2 PFHxS | | | | | | | | | | |
| 403.00 > 84.00 | 3.751 | 3.752 | -0.001 | 0.904 | 5392336 | 2.32 | | 97.9 | 6338 | |
| 15 Perfluorohexanesulfonic acid | | | | | | | | | | M |
| 399.00 > 80.00 | 3.751 | 3.752 | -0.001 | 1.000 | 126222 | 0.0469 | Target=3.50 | 103 | 40.6 | |
| 399.00 > 99.00 | 3.751 | 3.752 | -0.001 | 1.000 | 35066 | | 3.60(1.75-5.25) | 103 | 33.2 | M |
| 19 DONA | | | | | | | | | | |
| 377.00 > 251.00 | 3.798 | 3.800 | -0.002 | 0.841 | 673135 | 0.0449 | Target=2.42 | 95.2 | 812 | |
| 377.00 > 85.00 | 3.798 | 3.800 | -0.002 | 0.841 | 274532 | | 2.45(1.21-3.63) | 95.2 | 436 | |
| D 20 M2-6:2 FTS | | | | | | | | | | |
| 429.00 > 81.00 | 4.123 | 4.127 | -0.004 | 0.994 | 2157624 | 2.42 | | 102 | 1284 | |
| 21 6:2 FTS | | | | | | | | | | |
| 427.00 > 407.00 | 4.123 | 4.127 | -0.004 | 1.000 | 99806 | 0.0478 | | 101 | 157 | |
| 24 Perfluoroheptanesulfonic acid | | | | | | | | | | |
| 449.00 > 80.00 | 4.139 | 4.143 | -0.004 | 0.916 | 78602 | 0.0449 | Target=4.40 | 94.3 | 38.5 | |
| 449.00 > 99.00 | 4.131 | 4.143 | -0.012 | 0.914 | 16608 | | 4.73(2.20-6.60) | 94.3 | 29.0 | |
| $ 26 13C8 PFOA | | | | | | | | | | |
| 421.00 > 376.00 | 4.147 | 4.147 | 0.0 | 1.000 | 7878856 | 2.56 | | 105 | 5703 | |
| D 25 13C4 PFOA | | | | | | | | | | |
| 417.00 > 372.00 | 4.147 | 4.150 | -0.003 | 1.000 | 11846326 | 2.60 | | 104 | 9802 | |
| 22 Perfluorooctanoic acid | | | | | | | | | | M |
| 413.00 > 369.00 | 4.147 | 4.150 | -0.003 | 1.000 | 240184 | 0.0497 | Target=2.94 | 99.3 | 39.5 | M |
| 413.00 > 169.00 | 4.155 | 4.150 | 0.005 | 1.002 | 87609 | | 2.74(1.47-4.41) | 99.3 | 84.4 | |
| * 23 13C2 PFOA | | | | | | | | | | |
| 415.00 > 370.00 | 4.147 | 4.151 | -0.004 | | 11373826 | 2.50 | | | 8085 | |
| $ 28 13C8 PFOS | | | | | | | | | | |
| 507.00 > 99.00 | 4.517 | 4.514 | 0.003 | 1.089 | 1200648 | 2.44 | | 102 | 3580 | |
| D 27 13C4 PFOS | | | | | | | | | | |
| 503.00 > 80.00 | 4.517 | 4.516 | 0.001 | 1.089 | 3743125 | 2.37 | | 99.3 | 1488 | |
| 29 Perfluorooctanesulfonic acid | | | | | | | | | | M |
| 499.00 > 80.00 | 4.517 | 4.518 | -0.001 | 1.000 | 70065 | 0.0432 | Target=4.53 | 93.2 | 23.9 | M |
| 499.00 > 99.00 | 4.517 | 4.518 | -0.001 | 1.000 | 16976 | | 4.13(2.26-6.79) | 93.2 | 25.9 | M |
| D 30 13C5 PFNA | | | | | | | | | | |
| 468.00 > 423.00 | 4.534 | 4.533 | 0.001 | 1.093 | 9311565 | 2.54 | | 102 | 7380 | |
| 31 Perfluorononanoic acid | | | | | | | | | | |
| 463.00 > 419.00 | 4.542 | 4.537 | 0.005 | 1.002 | 164095 | 0.0459 | Target=8.97 | 91.9 | 30.5 | |
| 463.00 > 169.00 | 4.534 | 4.537 | -0.003 | 1.000 | 18657 | | 8.80(4.48-13.45) | 91.9 | 25.9 | |
| 32 9ClFOS | | | | | | | | | | |
| 531.00 > 351.00 | 4.723 | 4.724 | -0.001 | 1.046 | 214392 | 0.0423 | | 90.8 | 911 | |
| D 33 13C8 FOSA | | | | | | | | | | |
| 506.00 > 78.00 | 4.828 | 4.830 | -0.002 | 1.164 | 6435127 | 2.53 | | 101 | 12688 | |

| Signal | RT | EXP RT | DLT RT | REL RT | Response | Amount ng/ml | Ratio(Limits) | %Rec | S/N | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| 34 Perfluorooctanesulfonamide | | | | | | | | | | |
| 498.00 > 78.00 | 4.828 | 4.830 | -0.002 | 1.000 | 113545 | 0.0474 | | 94.8 | 727 | |
| 35 Perfluorononanesulfonic acid | | | | | | | | | | |
| 549.00 > 80.00 | 4.872 | 4.868 | 0.004 | 1.078 | 65415 | 0.0446 | Target=2.85 | 92.9 | 50.5 | |
| 549.00 > 99.00 | 4.872 | 4.868 | 0.004 | 1.078 | 22994 | | 2.84(1.43-4.28) | 92.9 | 50.6 | |
| D 39 13C2 PFDA | | | | | | | | | | |
| 515.00 > 470.00 | 4.889 | 4.892 | -0.003 | 1.179 | 10016493 | 2.81 | | 112 | 11177 | |
| 37 Perfluorodecanoic acid | | | | | | | | | | |
| 513.00 > 469.00 | 4.898 | 4.896 | 0.002 | 1.002 | 164851 | 0.0427 | Target=10.16 | 85.4 | 61.6 | |
| 513.00 > 169.00 | 4.898 | 4.896 | 0.002 | 1.002 | 17004 | | 9.69(5.08-15.24) | 85.4 | 31.0 | |
| D 38 M2-8:2 FTS | | | | | | | | | | |
| 529.00 > 81.00 | 4.898 | 4.897 | 0.001 | 1.181 | 3413693 | 2.66 | | 111 | 1823 | |
| 36 8:2 FTS | | | | | | | | | | |
| 527.00 > 507.00 | 4.898 | 4.898 | 0.0 | 1.000 | 110874 | 0.0438 | | 91.5 | 1270 | |
| D 40 d3-NMeFOSAA | | | | | | | | | | |
| 573.00 > 419.00 | 5.066 | 5.062 | 0.004 | 1.222 | 5834171 | 2.44 | | 97.6 | 4941 | |
| 41 NMeFOSAA | | | | | | | | | | |
| 570.00 > 419.00 | 5.066 | 5.065 | 0.001 | 1.000 | 81058 | 0.0468 | | 93.7 | 157 | |
| 42 Perfluorodecanesulfonic acid | | | | | | | | | | |
| 599.00 > 80.00 | 5.193 | 5.191 | 0.002 | 1.150 | 63477 | 0.0485 | Target=2.77 | 101 | 62.0 | |
| 599.00 > 99.00 | 5.193 | 5.191 | 0.002 | 1.150 | 23520 | | 2.70(1.38-4.15) | 101 | 85.9 | |
| D 43 13C2 PFUnA | | | | | | | | | | |
| 565.00 > 520.00 | 5.220 | 5.221 | -0.001 | 1.259 | 9221199 | 2.61 | | 105 | 11729 | |
| 45 Perfluoroundecanoic acid | | | | | | | | | | M |
| 563.00 > 519.00 | 5.220 | 5.221 | -0.001 | 1.000 | 117260 | 0.0438 | Target=8.43 | 87.7 | 66.7 | |
| 563.00 > 169.00 | 5.220 | 5.221 | -0.001 | 1.000 | 15887 | | 7.38(4.22-12.65) | 87.7 | 24.2 | M |
| D 44 d5-NEtFOSAA | | | | | | | | | | |
| 589.00 > 419.00 | 5.230 | 5.227 | 0.003 | 1.261 | 6600178 | 2.61 | | 104 | 3241 | |
| 46 NEtFOSA | | | | | | | | | | M |
| 584.00 > 419.00 | 5.239 | 5.236 | 0.003 | 1.002 | 76967 | 0.0431 | | 86.3 | 277 | M |
| D 47 d7-N-MeFOSE-M | | | | | | | | | | |
| 623.00 > 59.00 | 5.269 | 5.272 | -0.003 | 1.271 | 7361005 | 11.7 | | 93.5 | 2879 | |
| 48 N-MeFOSE-M | | | | | | | | | | |
| 616.00 > 59.00 | 5.280 | 5.285 | -0.005 | 1.002 | 31116 | 0.0489 | | 97.9 | 46.8 | |
| D 49 d-N-MeFOSA-M | | | | | | | | | | |
| 515.00 > 169.00 | 5.290 | 5.295 | -0.005 | 1.276 | 2111503 | 2.36 | | 94.5 | 52.3 | |
| 50 NMeFOSA | | | | | | | | | | M |
| 512.00 > 169.00 | 5.300 | 5.301 | -0.001 | 1.002 | 35943 | 0.0443 | | 88.6 | 79.1 | M |
| 51 11ClFOS | | | | | | | | | | |
| 631.00 > 451.00 | 5.367 | 5.363 | 0.004 | 1.188 | 276531 | 0.0430 | | 91.4 | 868 | |
| D 52 d9-N-EtFOSE-M | | | | | | | | | | |
| 639.00 > 59.00 | 5.437 | 5.443 | -0.006 | 1.311 | 8799748 | 11.4 | | 91.0 | 1250 | |
| 53 N-EtFOSE-M | | | | | | | | | | |
| 630.00 > 59.00 | 5.448 | 5.456 | -0.008 | 1.002 | 35999 | 0.0477 | | 95.3 | 32.3 | |
| D 54 d-N-EtFOSA-M | | | | | | | | | | |
| 531.00 > 169.00 | 5.469 | 5.471 | -0.002 | 1.319 | 2125583 | 2.32 | | 92.9 | 402 | |

| Signal | RT | EXP RT | DLT RT | REL RT | Response | Amount ng/ml | Ratio(Limits) | %Rec | S/N | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| 55 N-EtFOSA-M | | | | | | | | | | |
| 526.00 > 169.00 | 5.480 | 5.480 | 0.0 | 1.002 | 47929 | 0.0533 | | 107 | 94.1 | |
| D 56 13C2 PFDoA | | | | | | | | | | |
| 615.00 > 570.00 | 5.530 | 5.521 | 0.009 | 1.333 | 8425257 | 2.42 | | 96.8 | 6629 | |
| 57 Perfluorododecanoic acid | | | | | | | | | | M |
| 613.00 > 569.00 | 5.530 | 5.523 | 0.007 | 1.000 | 164490 | 0.0477 | Target=9.12 | 95.5 | 77.3 | |
| 613.00 > 169.00 | 5.530 | 5.523 | 0.007 | 1.000 | 20293 | | 8.11(4.56-13.69) | 95.5 | 45.5 | M |
| 58 10:2 FTS | | | | | | | | | | |
| 627.00 > 607.00 | 5.542 | 5.541 | 0.001 | 1.132 | 129032 | 0.0449 | | 93.3 | 886 | |
| 59 PFDoS | | | | | | | | | | |
| 699.00 > 80.00 | 5.755 | 5.751 | 0.004 | 1.274 | 26418 | 0.0507 | Target=0.72 | 105 | 29.3 | |
| 699.00 > 99.00 | 5.755 | 5.751 | 0.004 | 1.274 | 34324 | | 0.77(0.36-1.07) | 105 | 222 | |
| 60 Perfluorotridecanoic acid | | | | | | | | | | |
| 663.00 > 619.00 | 5.793 | 5.795 | -0.002 | 1.048 | 171790 | 0.0542 | Target=6.78 | 108 | 113 | |
| 663.00 > 169.00 | 5.793 | 5.795 | -0.002 | 1.048 | 22701 | | 7.57(3.39-10.17) | 108 | 87.9 | |
| D 61 13C2 PFTeDA | | | | | | | | | | |
| 715.00 > 670.00 | 6.042 | 6.038 | 0.004 | 1.457 | 7321736 | 2.55 | | 102 | 6430 | |
| 62 Perfluorotetradecanoic acid | | | | | | | | | | |
| 713.00 > 169.00 | 6.052 | 6.041 | 0.011 | 1.002 | 12981 | 0.0525 | Target=0.85 | 105 | 90.1 | |
| 713.00 > 219.00 | 6.042 | 6.041 | 0.001 | 1.000 | 14672 | | 0.88(0.43-1.28) | 105 | 115 | |
| D 64 13C2 PFHxDA | | | | | | | | | | |
| 815.00 > 770.00 | 6.510 | 6.505 | 0.005 | 1.570 | 5624126 | 2.68 | | 107 | 5424 | |
| 63 Perfluorohexadecanoic acid | | | | | | | | | | |
| 813.00 > 769.00 | 6.517 | 6.507 | 0.010 | 1.001 | 135536 | 0.0448 | Target=10.21 | 89.6 | 133 | |
| 813.00 > 169.00 | 6.517 | 6.507 | 0.010 | 1.001 | 13920 | | 9.74(5.11-15.32) | 89.6 | 146 | |
| 65 Perfluorooctadecanoic acid | | | | | | | | | | |
| 913.00 > 869.00 | 7.034 | 7.009 | 0.025 | 1.080 | 66963 | 0.0451 | Target=12.45 | 90.1 | 96.1 | |
| 913.00 > 169.00 | 7.021 | 7.009 | 0.012 | 1.078 | 4636 | | 14.44(6.22-18.67) | 90.1 | 85.8 | |

## QC Flag Legend

Review Flags

M - Manually Integrated

## Reagents:

LCPFC_LL2_00020 Amount Added: 1.00 Units: mL

Report Date: 26-Aug-2020 10:42:28 Chrom Revision: 2.3 20-Aug-2020 13:57:12

Eurofins TestAmerica, Sacramento

Data File: \\chromfs\Sacramento\ChromData\A18\20200825-102078.b\2020.08.25_A18_ICAL_A_012.d

Injection Date: 25-Aug-2020 16:52:21 Instrument ID: A18

Lims ID: IC STD 2

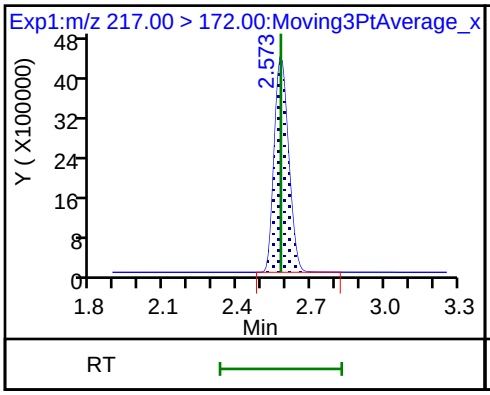
Client ID:

Operator ID: TAISACA18-PC\A-18 ALS Bottle#: 7 Worklist Smp#: 3

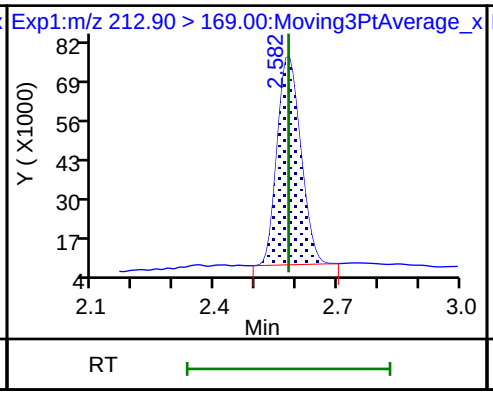
Injection Vol: 20.0 ul Dil. Factor: 1.0000

Method: PFAS_A18V2 Limit Group: LC PFC ICAL

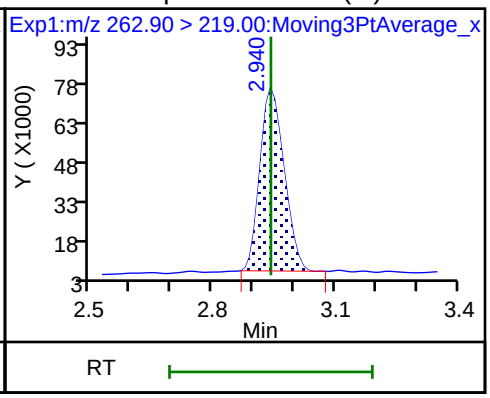
D 1 13C4 PFBA




2 Perfluorobutanoic acid




5 Perfluoropentanoic acid (M)

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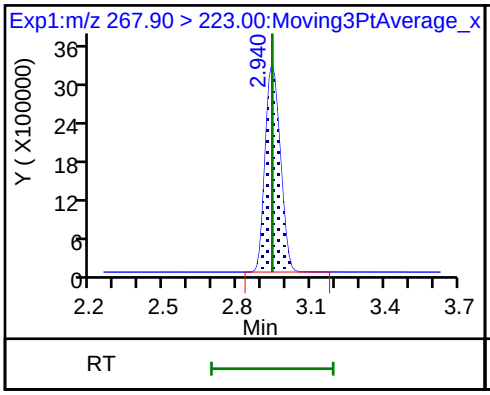
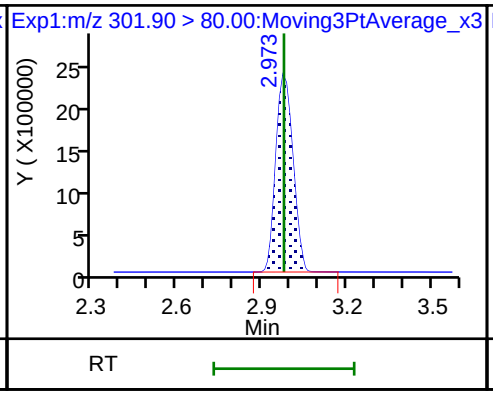
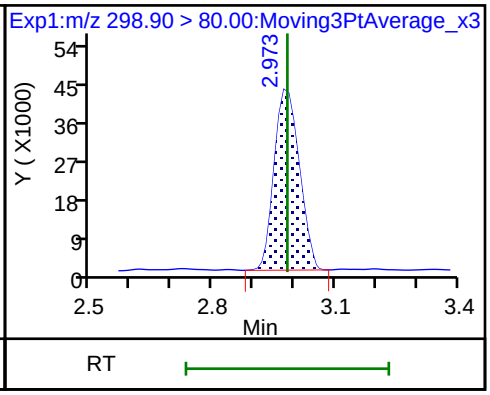


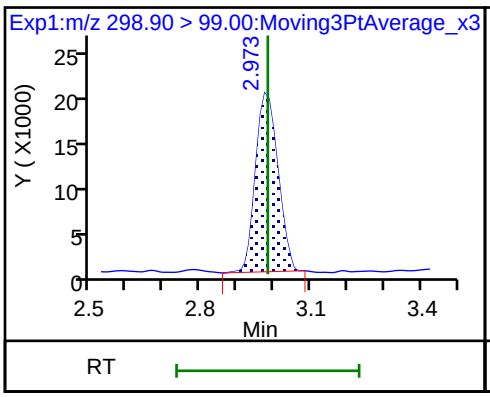

D 9 13C3 PFBS



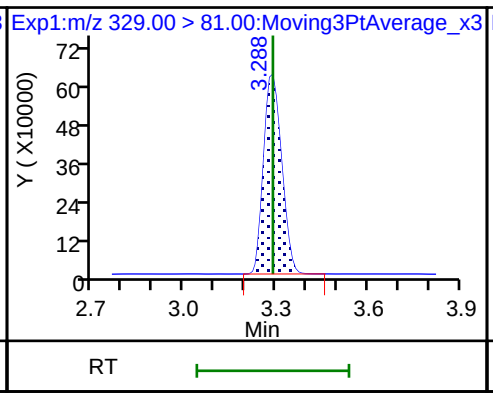

6 Perfluorobutanesulfonic acid



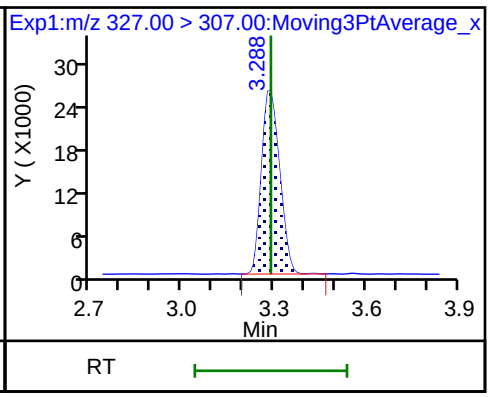

6 Perfluorobutanesulfonic acid




D 7 M2-4:2 FTS




8 4:2 FTS

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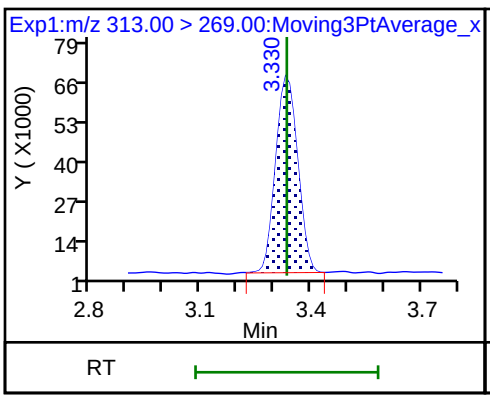
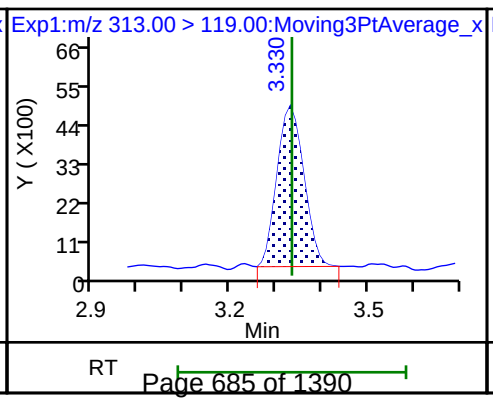
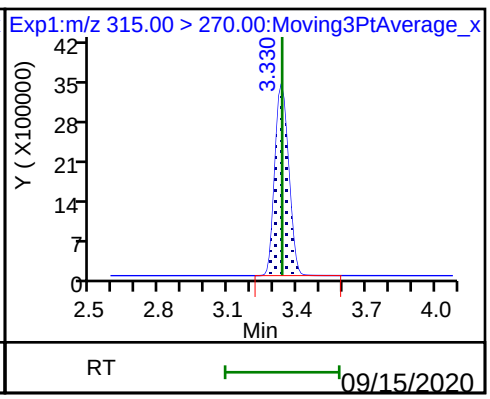



10 Perfluorohexanoic acid




D 11 13C2 PFHxA



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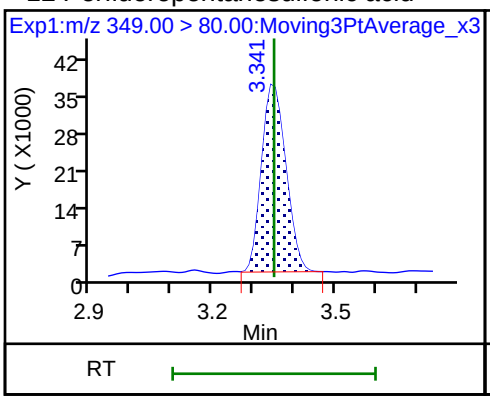


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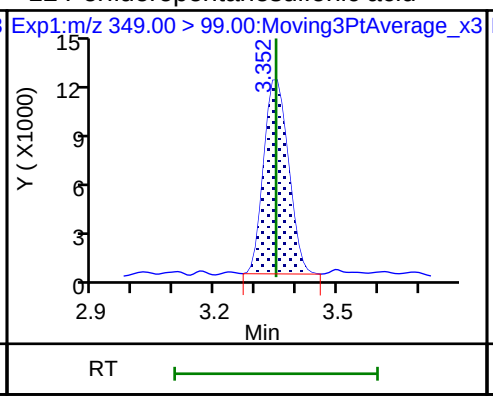
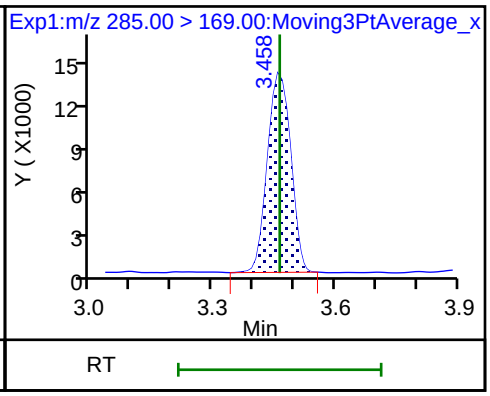
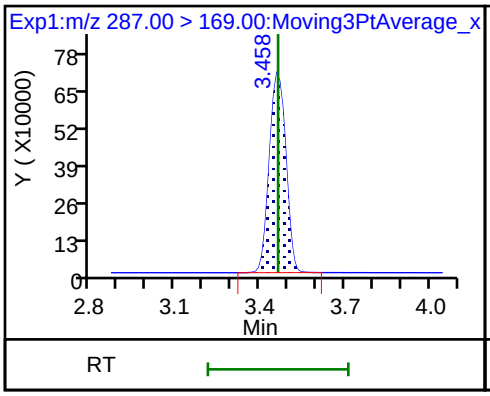



13 HPFO-DA




D 14 13C3 HFPO-DA

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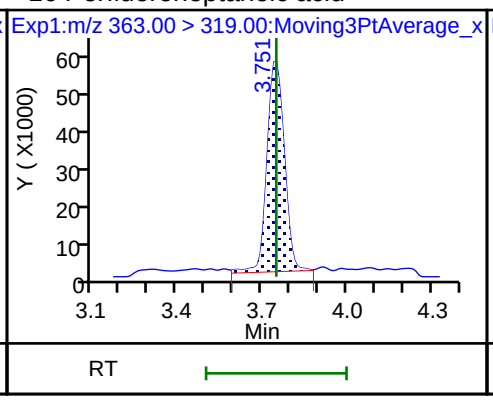


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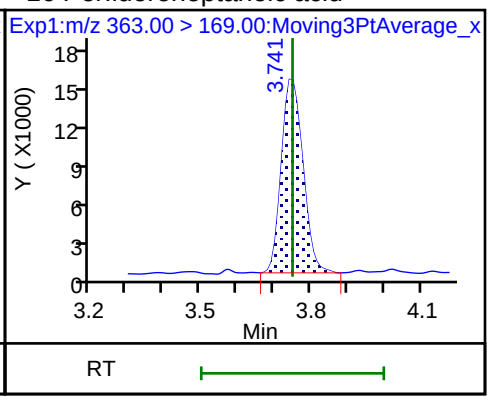
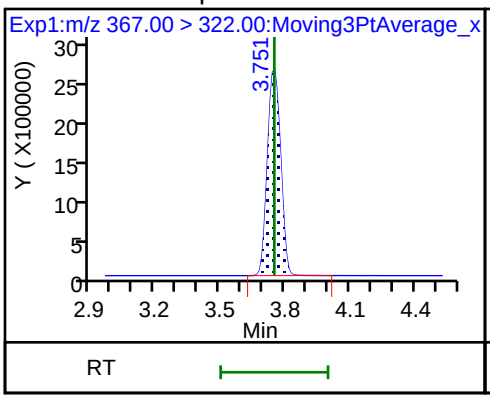



D 18 13C4 PFHpA

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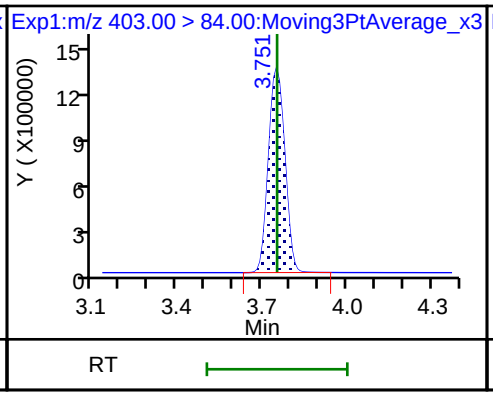


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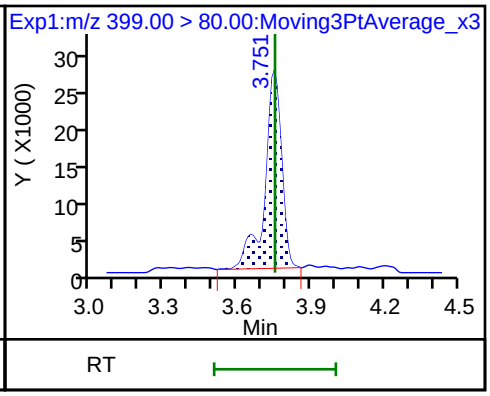
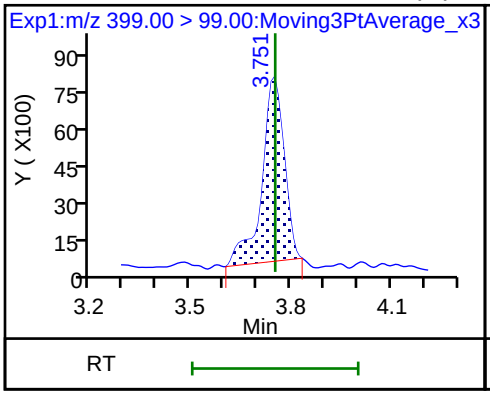
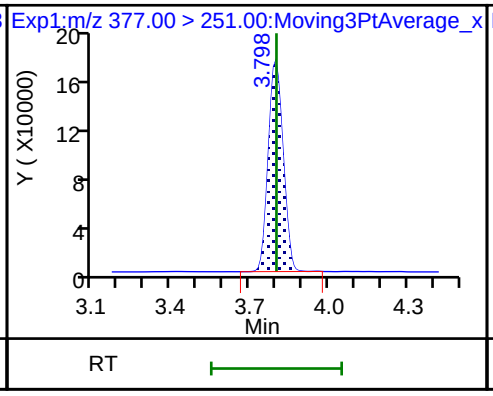



15 Perfluorohexanesulfonic acid (M)




19 DONA

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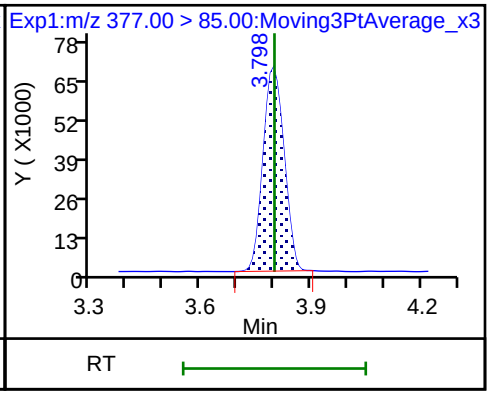
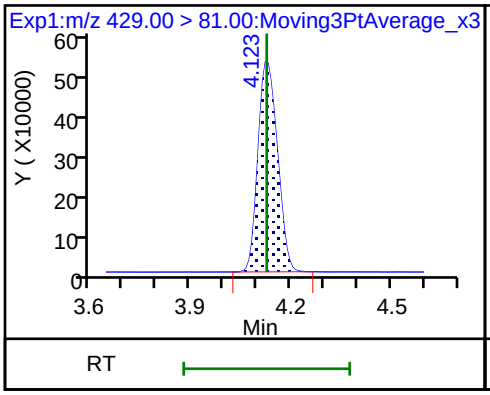
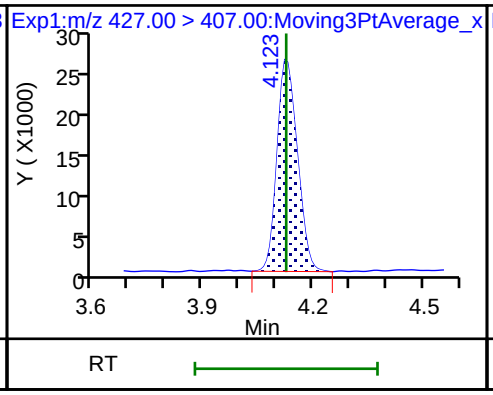


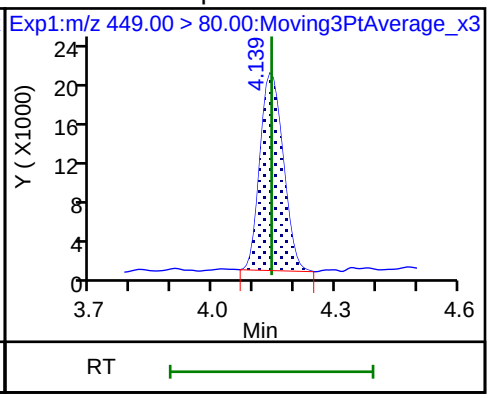
D 20 M2-6:2 FTS




21 6:2 FTS




24 Perfluoroheptanesulfonic acid

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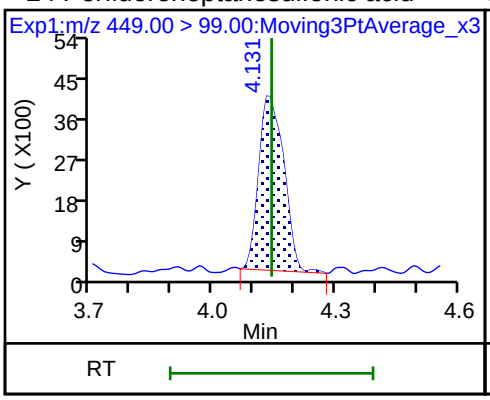
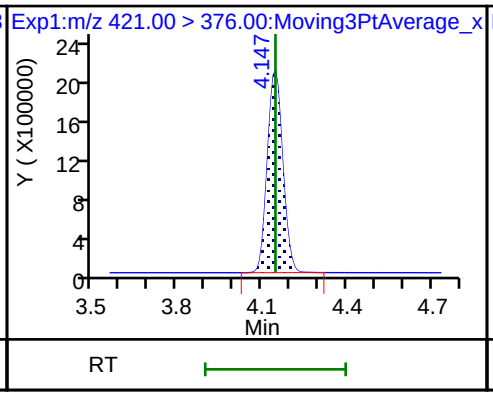



$ 26 13C8 PFOA

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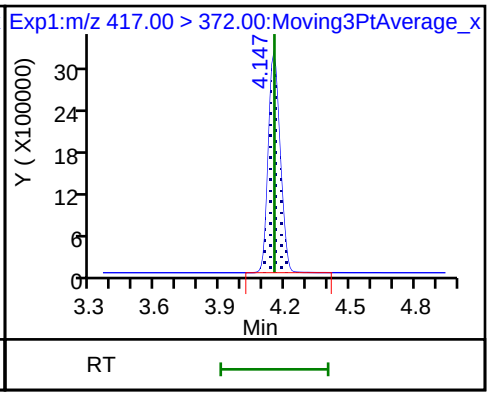
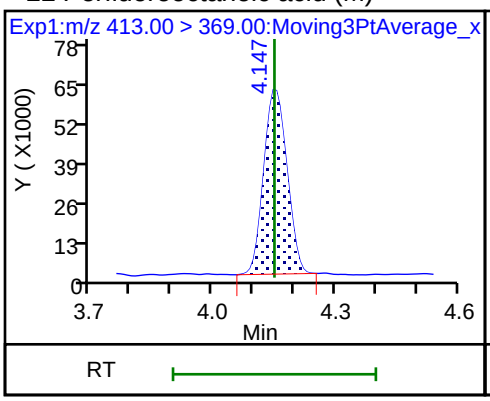
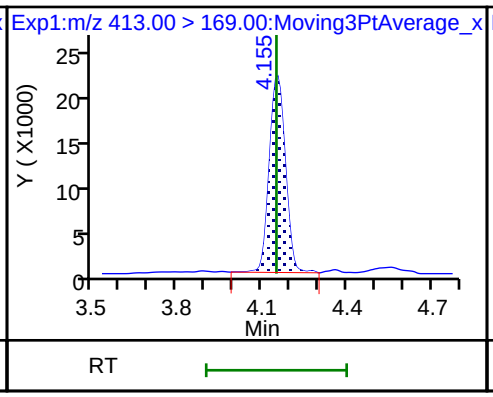


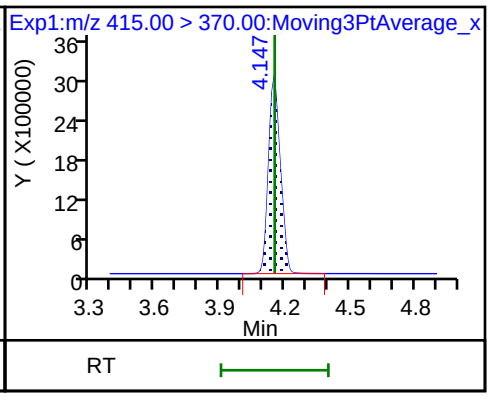

22 Perfluorooctanoic acid (M)




22 Perfluorooctanoic acid




* 23 13C2 PFOA

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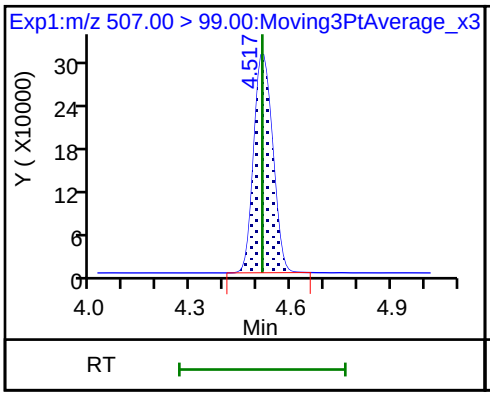


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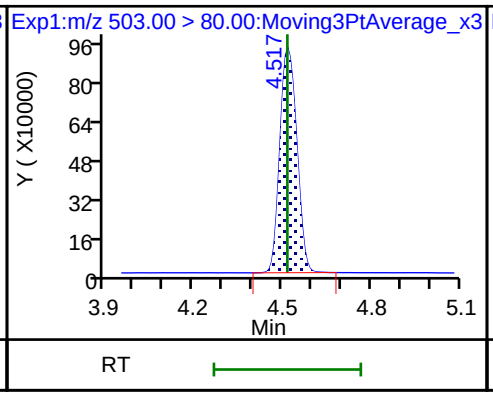
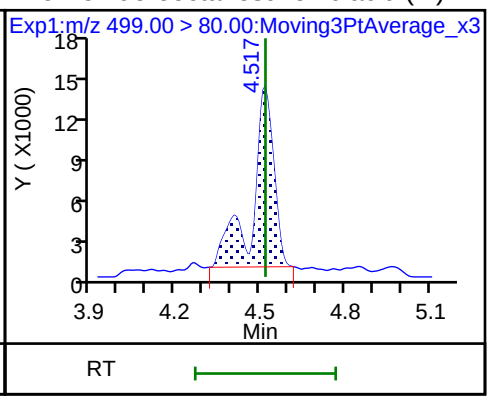
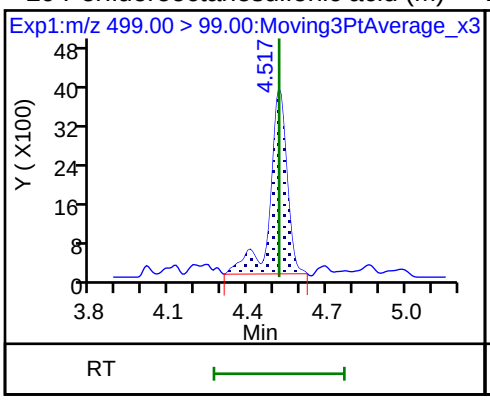



29 Perfluorooctanesulfonic acid (M)



29 Perfluorooctanesulfonic acid (M)

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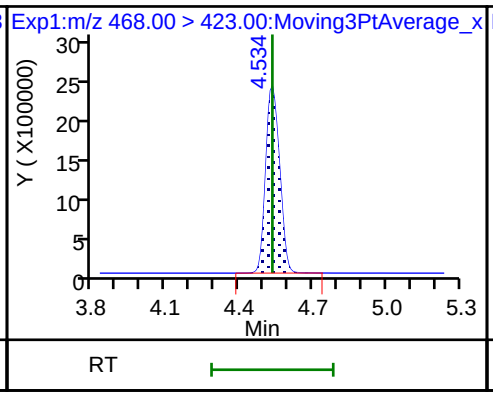
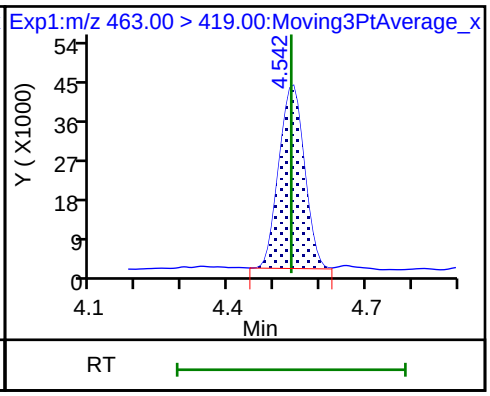
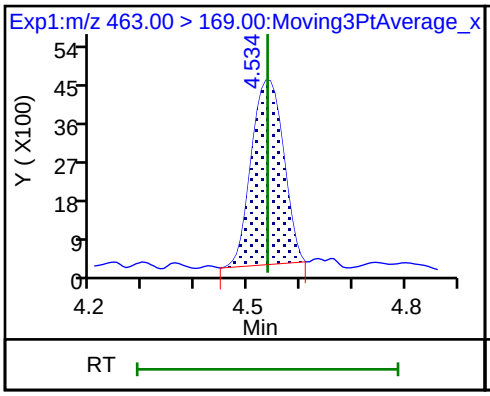


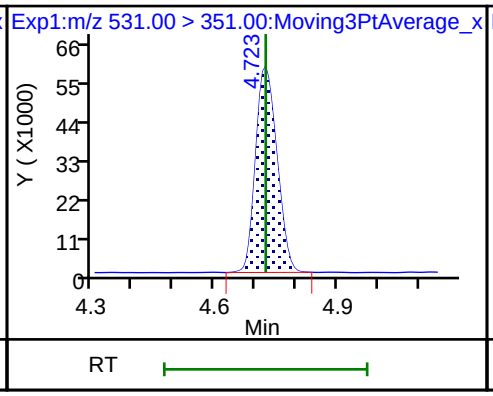

31 Perfluorononanoic acid



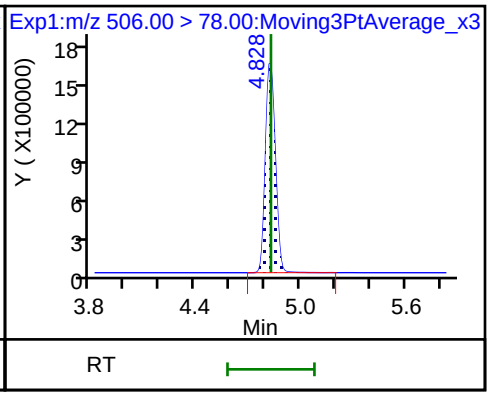

31 Perfluorononanoic acid



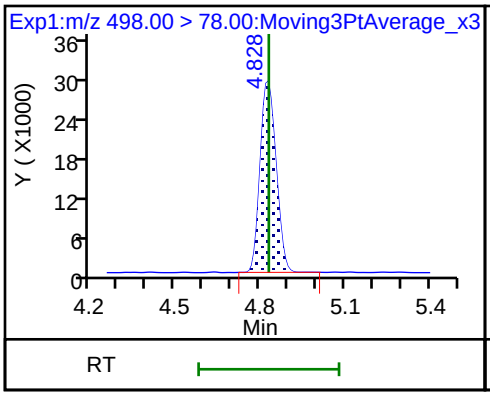

32 9ClFOS



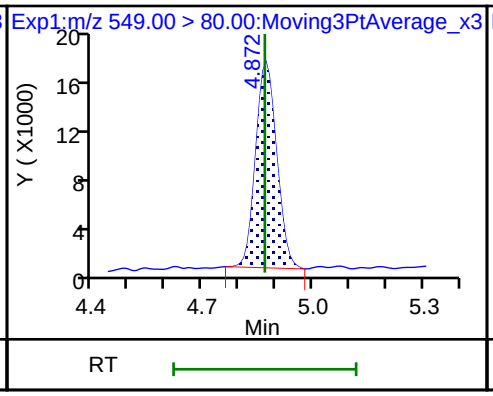

D 33 13C8 FOSA



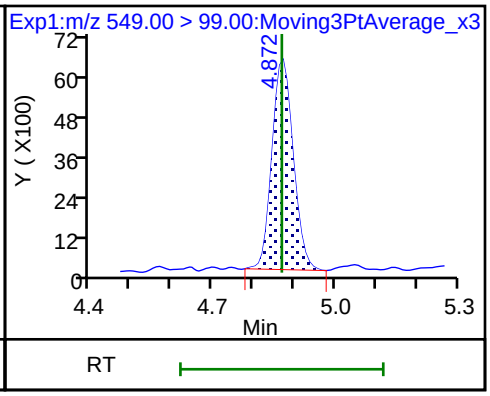

34 Perfluorooctanesulfonamide



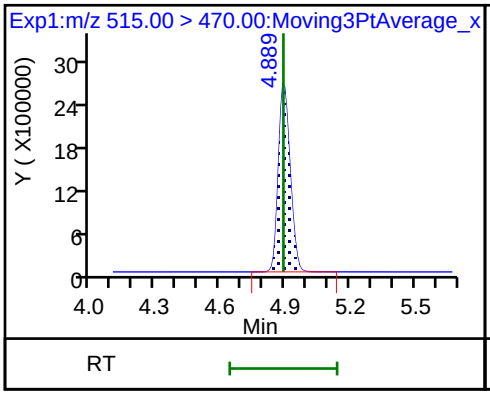

35 Perfluorononanesulfonic acid




35 Perfluorononanesulfonic acid




D 39 13C2 PFDA

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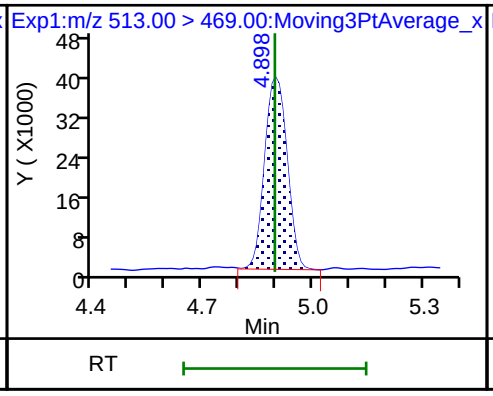
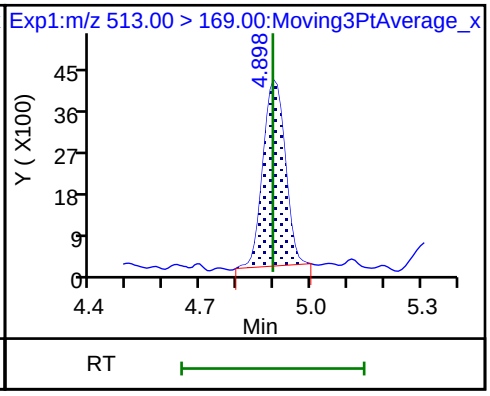
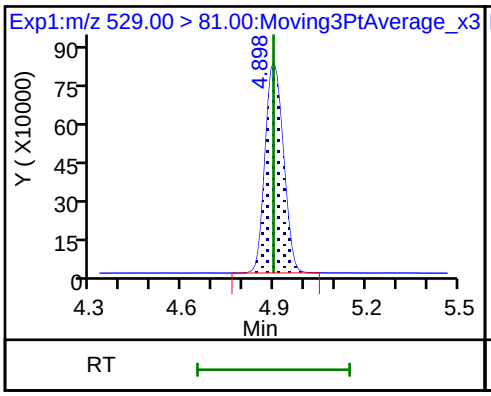


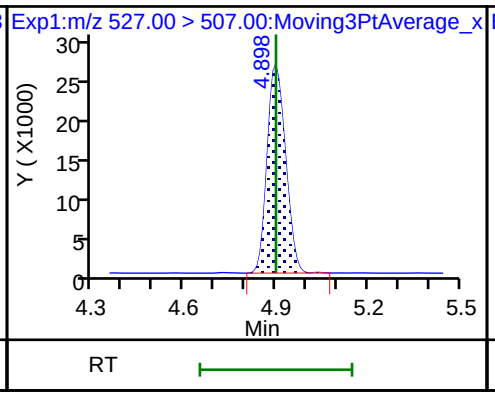

37 Perfluorodecanoic acid



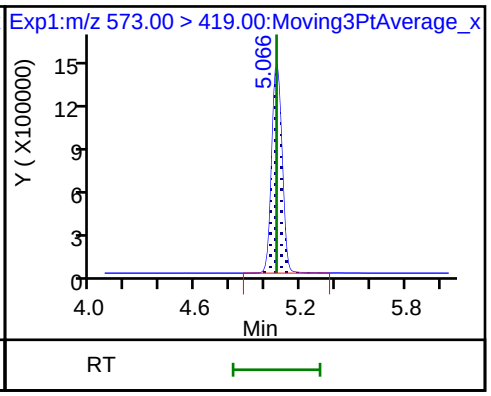
D 38 M2-8:2 FTS



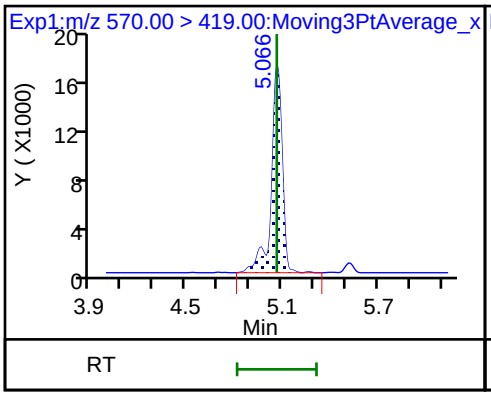

36 8:2 FTS



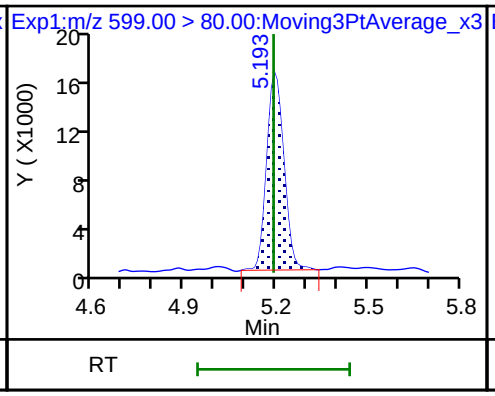

D 40 d3-NMeFOSAA



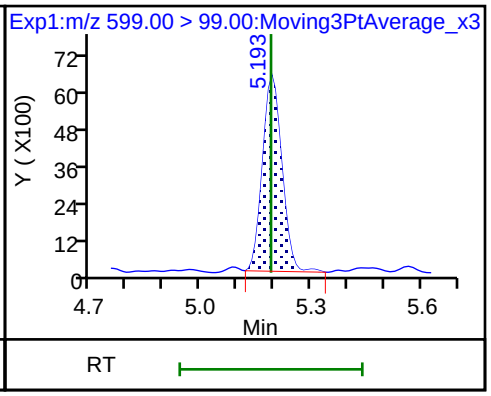

41 NMeFOSAA



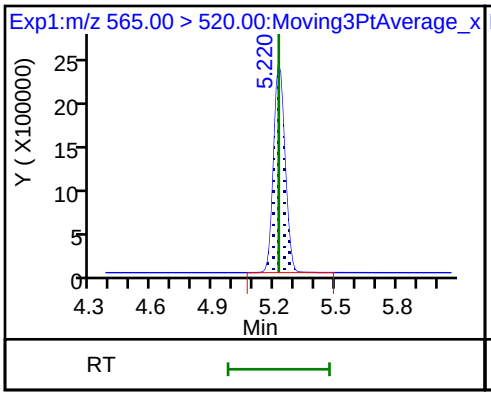

42 Perfluorodecanesulfonic acid



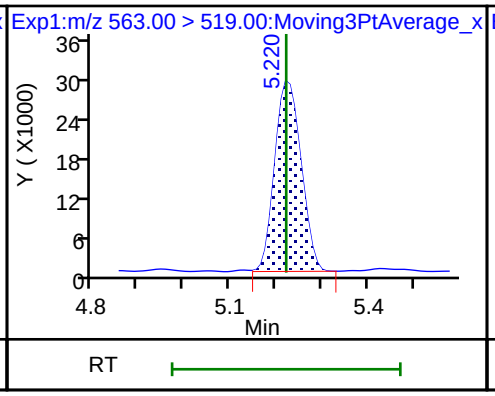

42 Perfluorodecanesulfonic acid



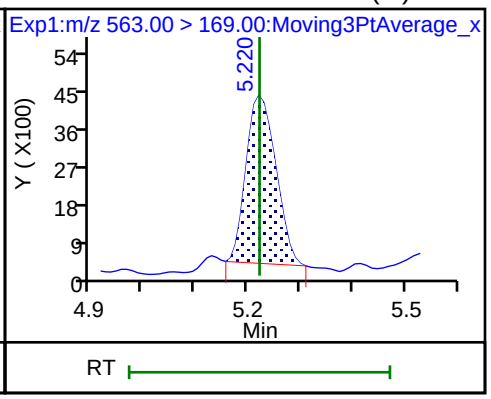

D 43 13C2 PFUnA



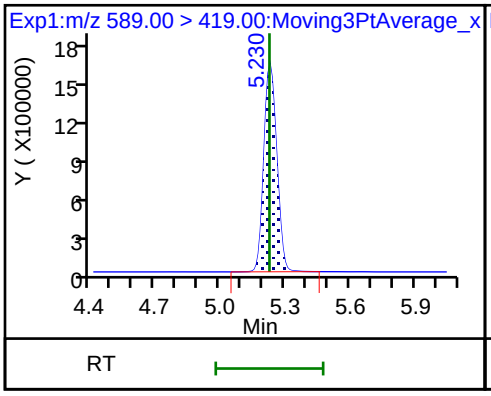

45 Perfluoroundecanoic acid



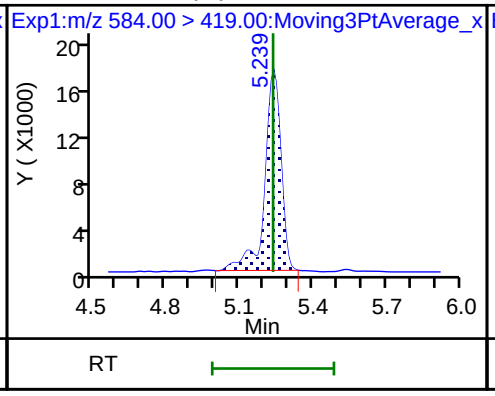

45 Perfluoroundecanoic acid (M)



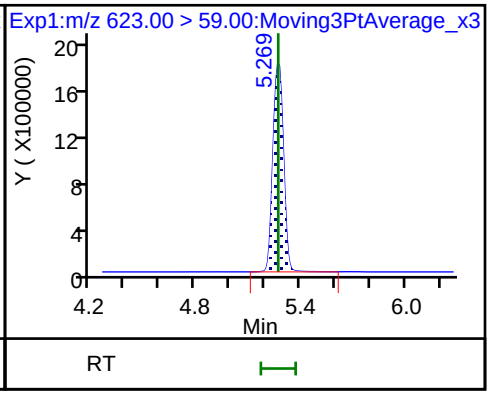

D 44 d5-NEtFOSAA



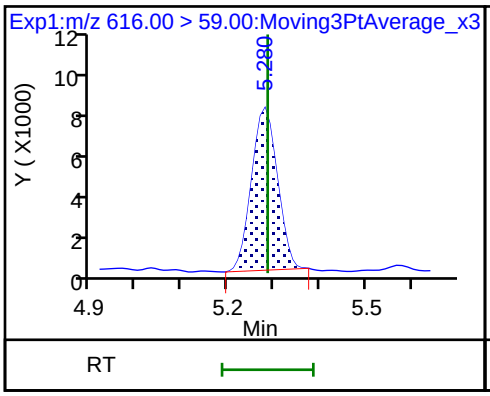

46 NEtFOSA (M)



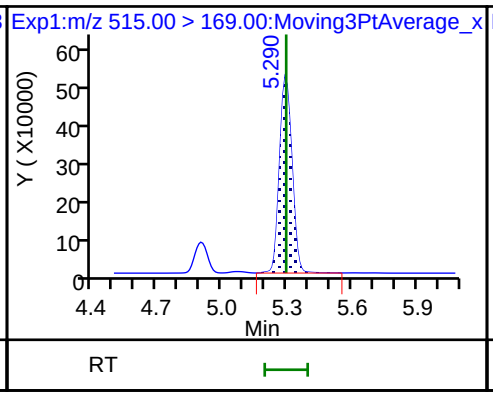

D 47 d7-N-MeFOSE-M



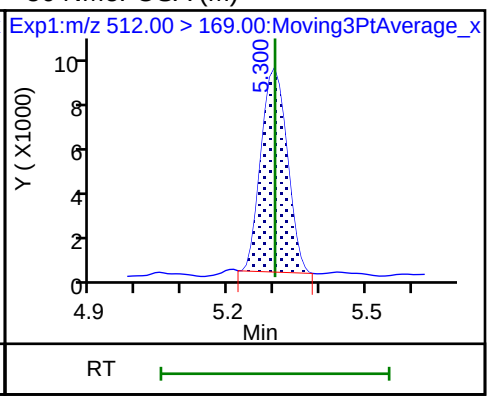
48 N-MeFOSE-M



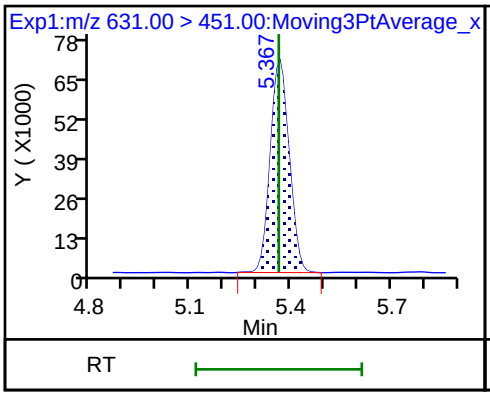

D 49 d-N-MeFOSA-M



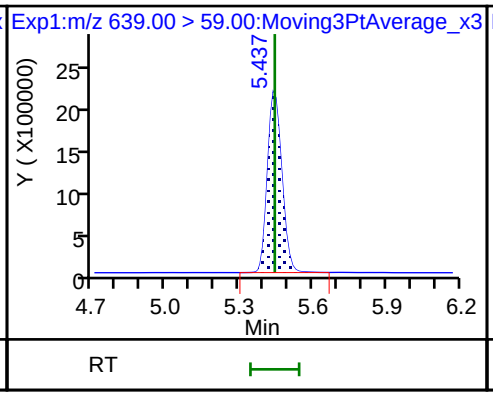

50 NMeFOSA (M)



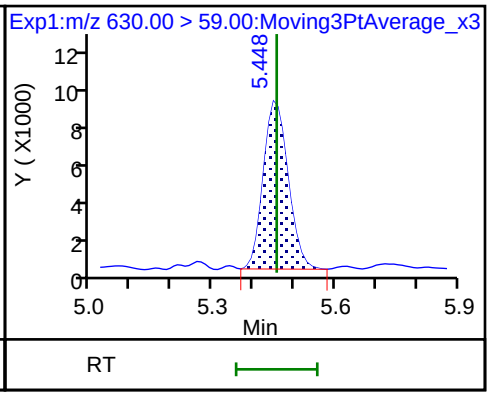

51 11ClFOS



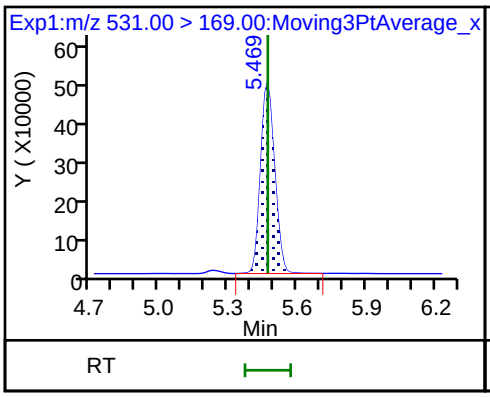

D 52 d9-N-EtFOSE-M



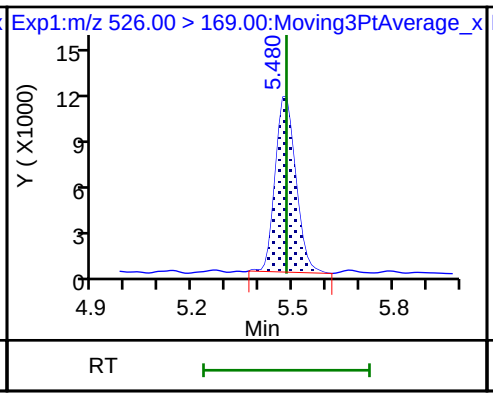

53 N-EtFOSE-M



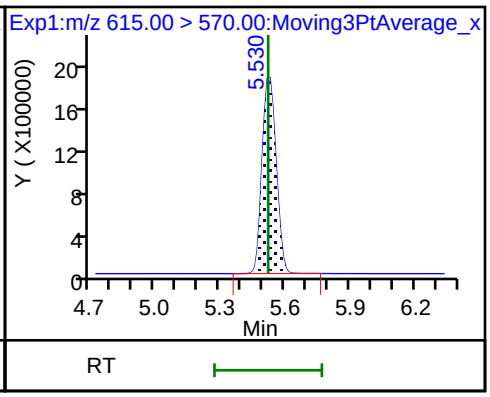

D 54 d-N-EtFOSA-M



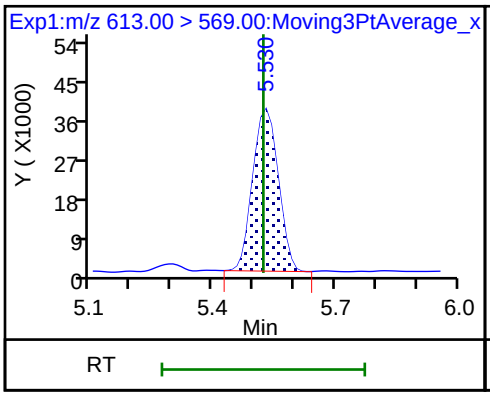

55 N-EtFOSA-M



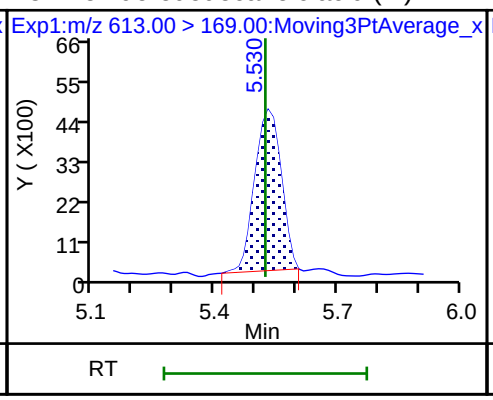

D 56 13C2 PFDoA



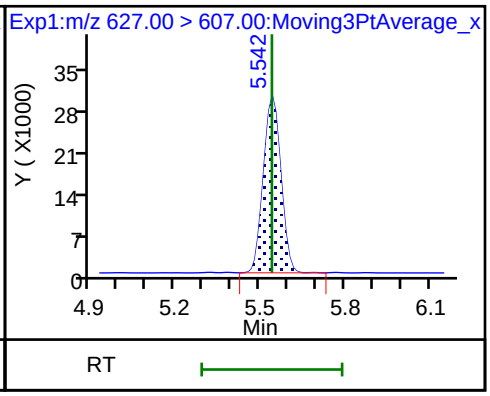

57 Perfluorododecanoic acid



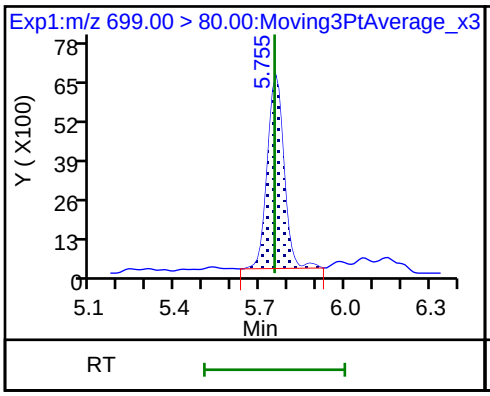

57 Perfluorododecanoic acid (M)



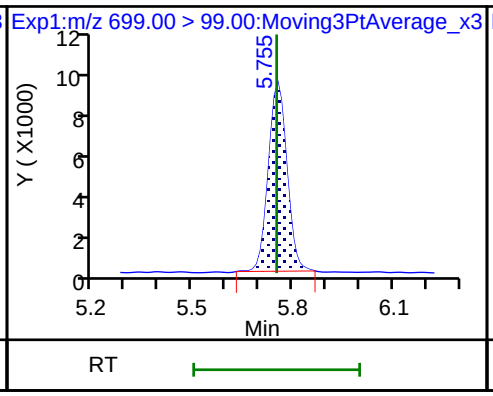

58 10:2 FTS



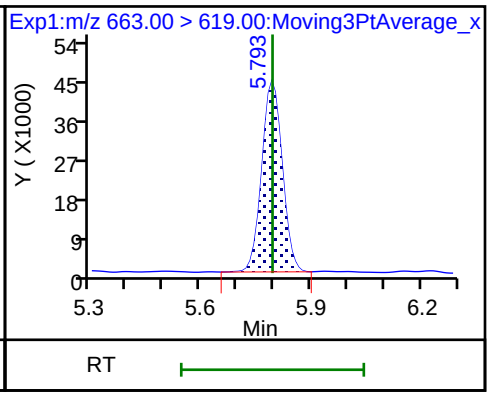
59 PFDoS



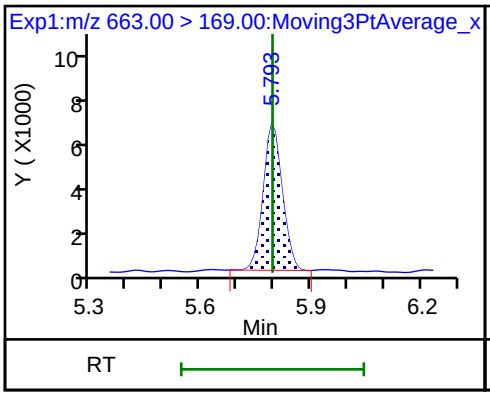

59 PFDoS



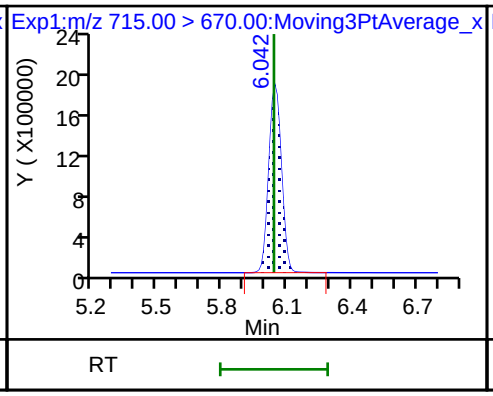

60 Perfluorotridecanoic acid



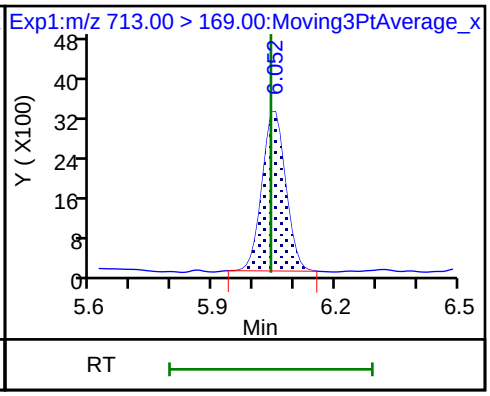

60 Perfluorotridecanoic acid



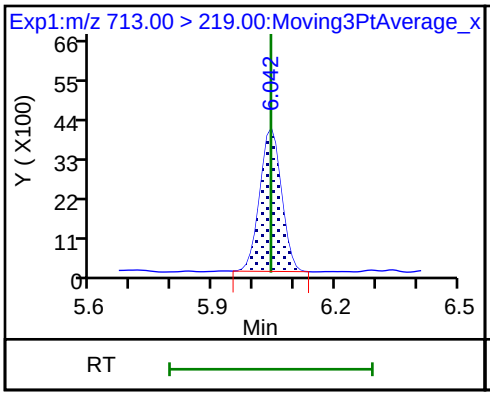

D 61 13C2 PFTeDA



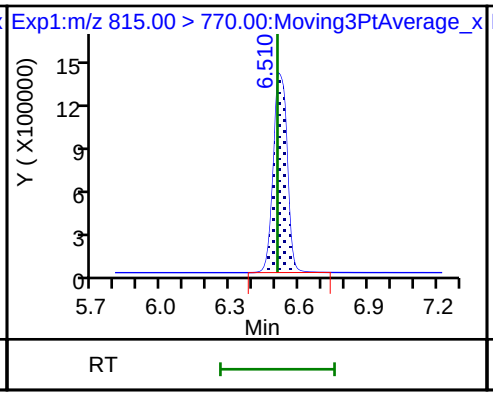

62 Perfluorotetradecanoic acid



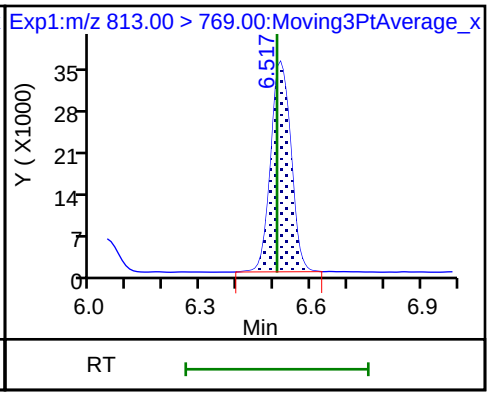

62 Perfluorotetradecanoic acid



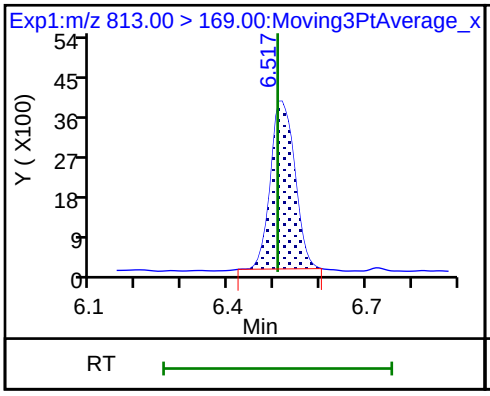

D 64 13C2 PFHxDA



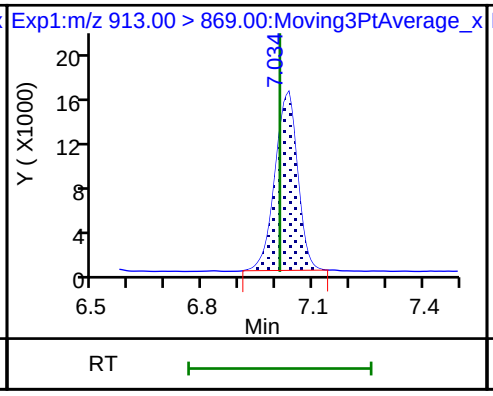

63 Perfluorohexadecanoic acid



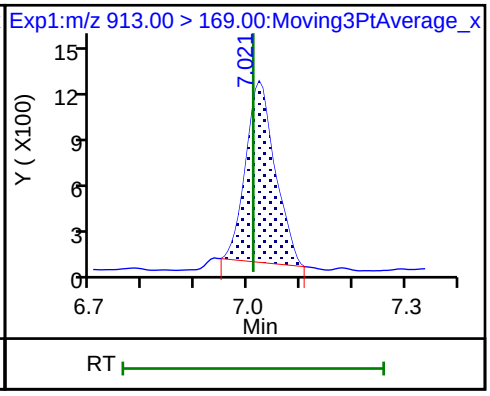

63 Perfluorohexadecanoic acid




65 Perfluorooctadecanoic acid




65 Perfluorooctadecanoic acid



Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

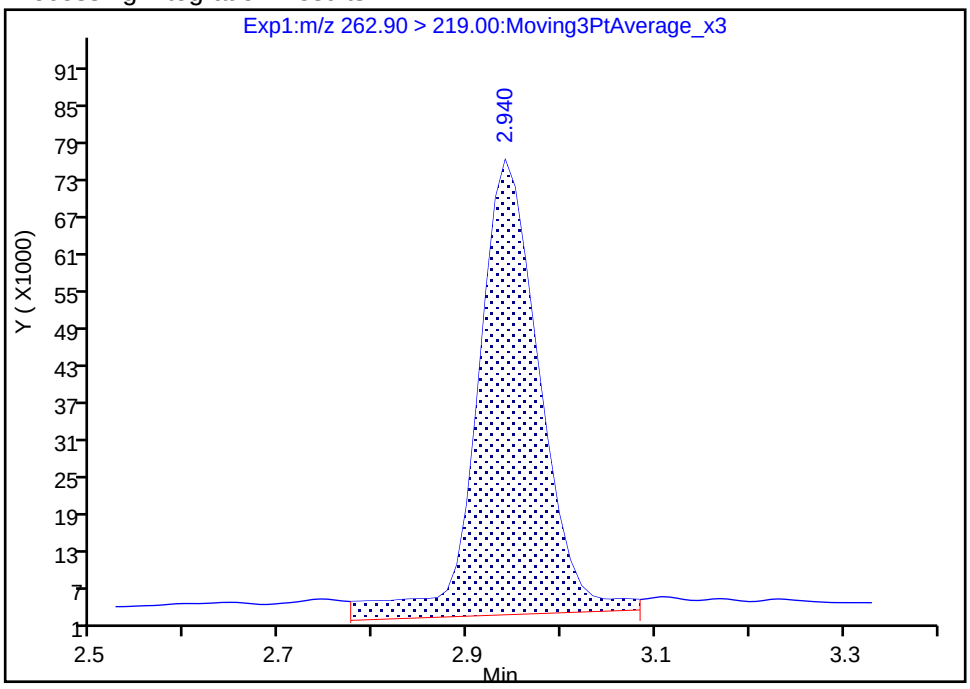
| | | | | | |
|---|---|---|---|---|---|
| Data File: | \\chromfs\Sacramento\ChromData\A18\20200825-102078.b\2020.08.25_A18_ICAL_A_012.d | | | | |
| Injection Date: | 25-Aug-2020 16:52:21 | Instrument ID: | A18 | | |
| Lims ID: | IC STD 2 | | | | |
| Client ID: | | | | | |
| Operator ID: | TAISACA18-PC\A-18 | ALS Bottle#: | 7 | Worklist Smp#: | 3 |
| Injection Vol: | 20.0 ul | Dil. Factor: | 1.0000 | | |
| Method: | PFAS_A18V2 | Limit Group: | LC PFC ICAL | | |
| Column: | Gemini C18 3um 3mm x 50 mm ( 3.00mm) | Detector | EXP1 | | |

## 5 Perfluoropentanoic acid, CAS: 2706-90-3

Signal: 1

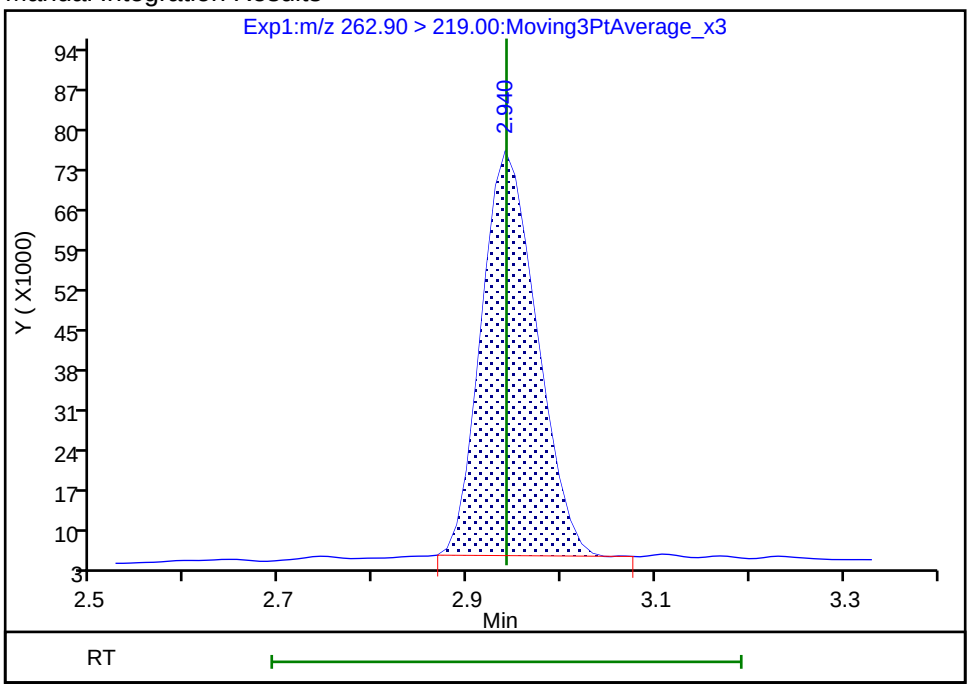
Processing Integration Results

RT: 2.94
Area: 335944
Amount: 0.056952
Amount Units: ng/ml




Manual Integration Results

RT: 2.94
Area: 288057
Amount: 0.051714
Amount Units: ng/ml




Reviewer: fariasa, 26-Aug-2020 05:52:32

Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

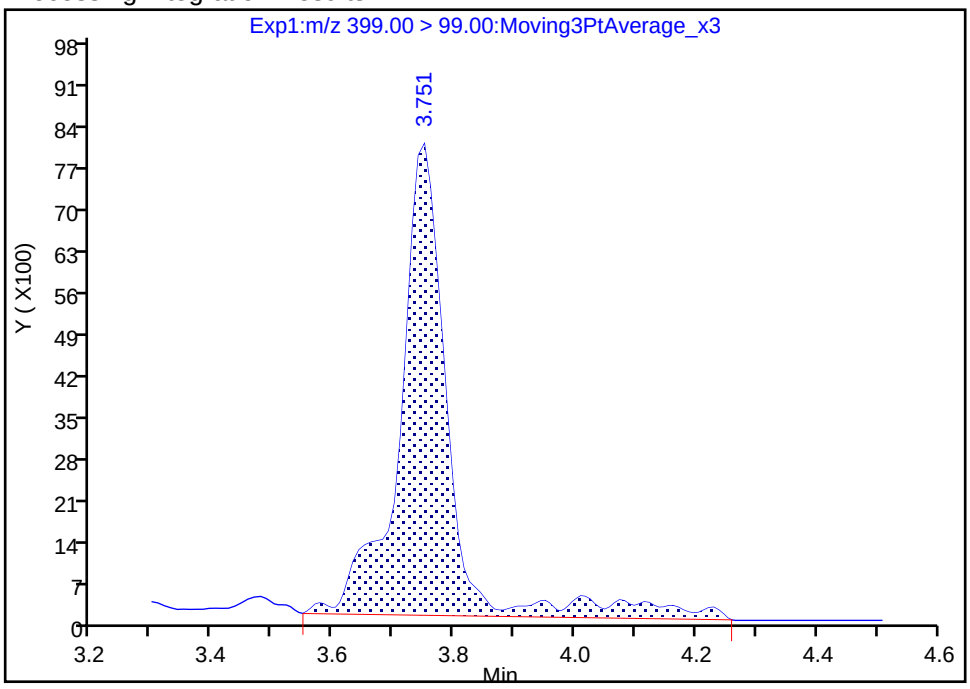
Data File: \\chromfs\Sacramento\ChromData\A18\20200825-102078.b\2020.08.25_A18_ICAL_A_012.d
Injection Date: 25-Aug-2020 16:52:21 Instrument ID: A18
Lims ID: IC STD 2
Client ID:
Operator ID: TAISACA18-PC\A-18 ALS Bottle#: 7 Worklist Smp#: 3
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFAS_A18V2 Limit Group: LC PFC ICAL
Column: Gemini C18 3um 3mm x 50 mm ( 3.00mm) Detector EXP1

## 15 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 2

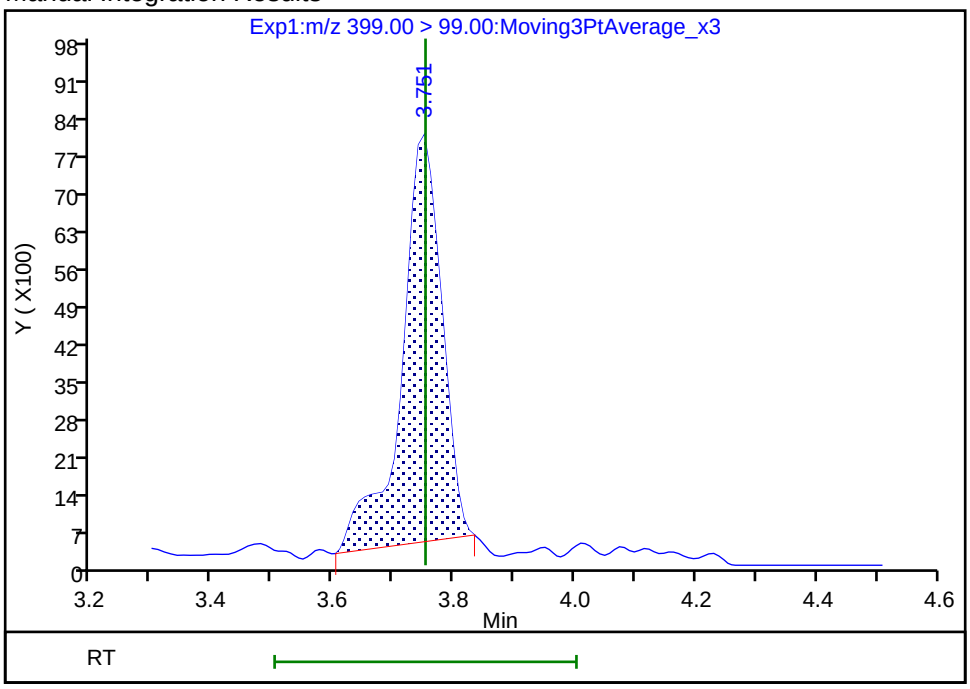
Processing Integration Results

RT: 3.75
Area: 44864
Amount: 0.046857
Amount Units: ng/ml




Manual Integration Results

RT: 3.75
Area: 35066
Amount: 0.046857
Amount Units: ng/ml




Reviewer: fariasa, 26-Aug-2020 05:52:53
Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

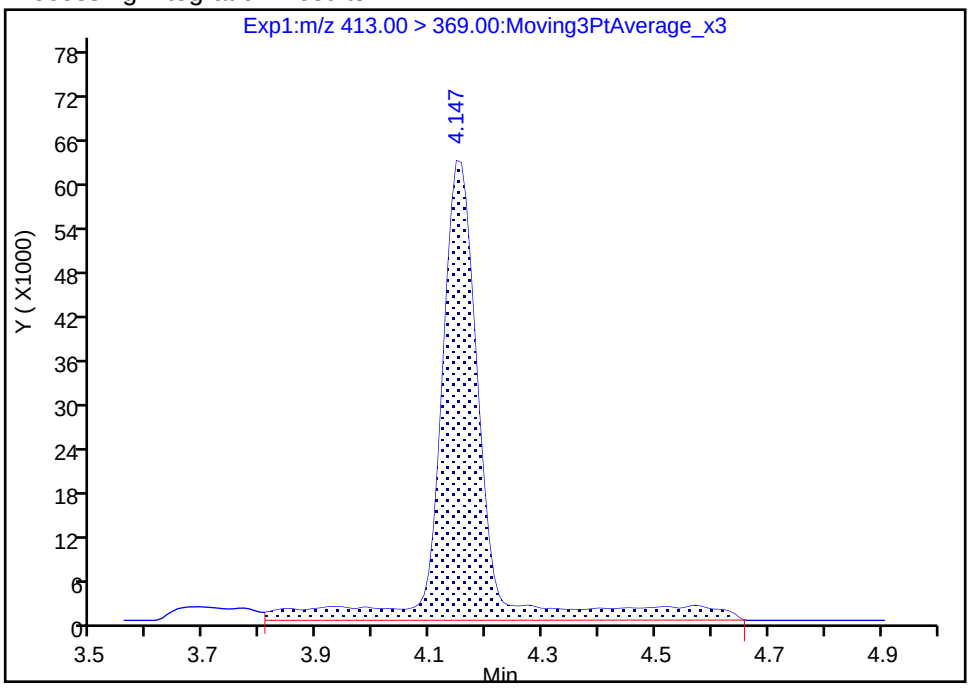
Data File: \\chromfs\Sacramento\ChromData\A18\20200825-102078.b\2020.08.25_A18_ICAL_A_012.d
Injection Date: 25-Aug-2020 16:52:21 Instrument ID: A18
Lims ID: IC STD 2
Client ID:
Operator ID: TAISACA18-PC\A-18 ALS Bottle#: 7 Worklist Smp#: 3
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFAS_A18V2 Limit Group: LC PFC ICAL
Column: Gemini C18 3um 3mm x 50 mm ( 3.00mm) Detector EXP1

## 22 Perfluorooctanoic acid, CAS: 335-67-1

Signal: 1

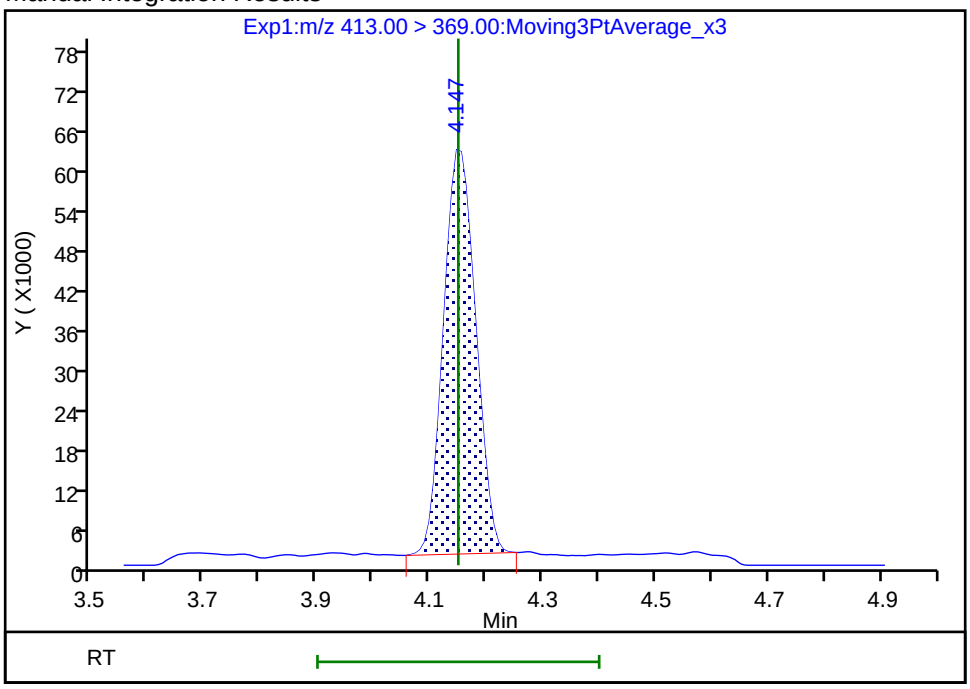
Processing Integration Results

RT: 4.15
Area: 321111
Amount: 0.063381
Amount Units: ng/ml




Manual Integration Results

RT: 4.15
Area: 240184
Amount: 0.049674
Amount Units: ng/ml




Reviewer: fariasa, 26-Aug-2020 05:53:08
Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

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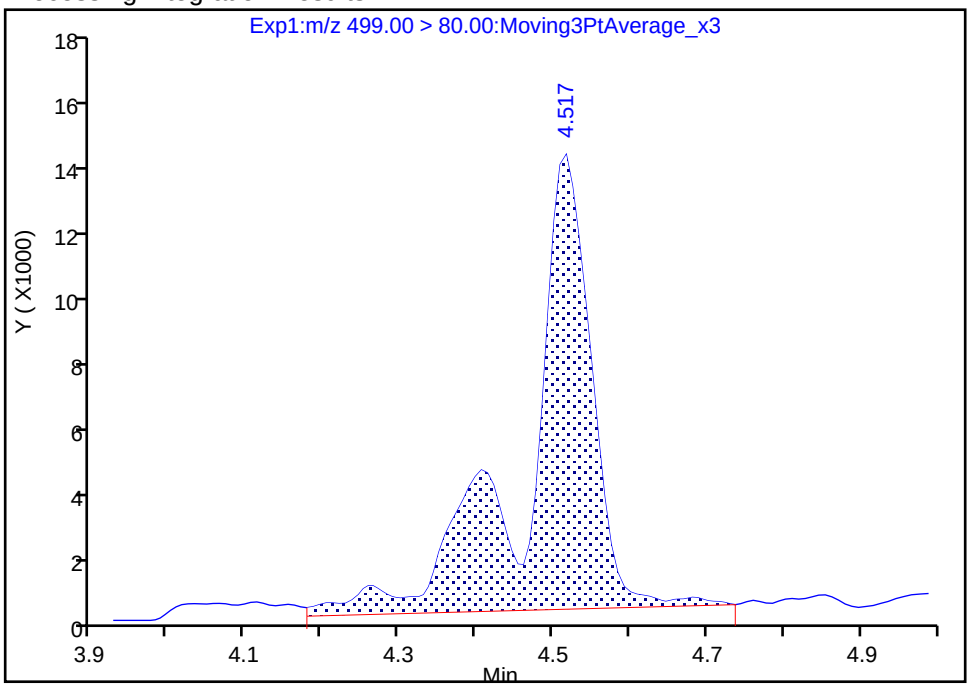
Injection Date: 25-Aug-2020 16:52:21 Instrument ID: A18
Lims ID: IC STD 2
Client ID:
Operator ID: TAISACA18-PC\A-18 ALS Bottle#: 7 Worklist Smp#: 3
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFAS_A18V2 Limit Group: LC PFC ICAL
Column: Gemini C18 3um 3mm x 50 mm ( 3.00mm) Detector EXP1

## 29 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 1

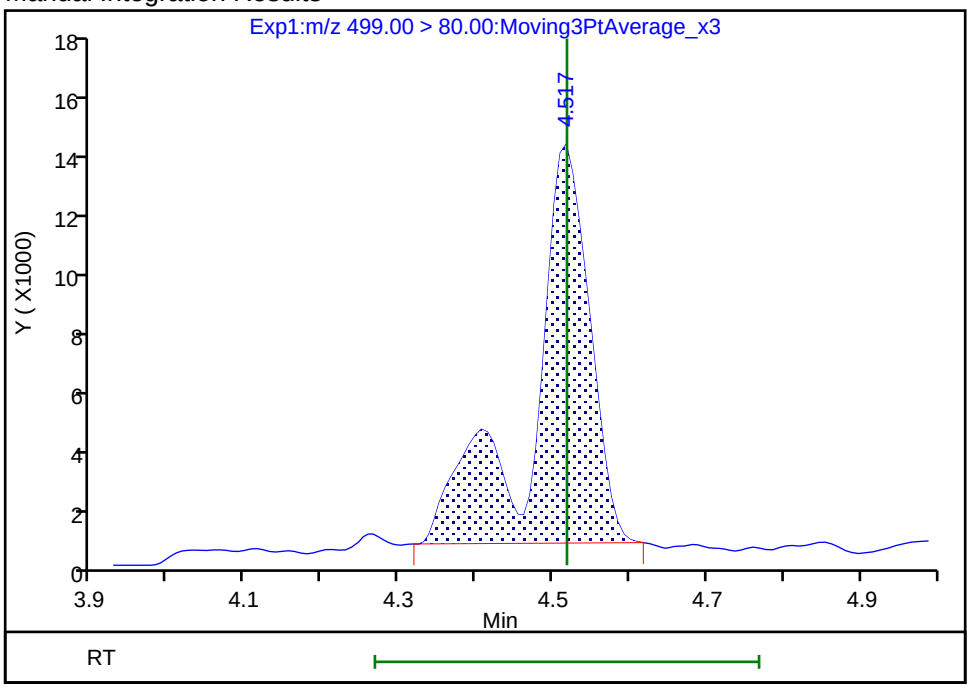
Processing Integration Results

RT: 4.52
Area: 83365
Amount: 0.051604
Amount Units: ng/ml




Manual Integration Results

RT: 4.52
Area: 70065
Amount: 0.043222
Amount Units: ng/ml




Reviewer: fariasa, 26-Aug-2020 05:53:25
Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

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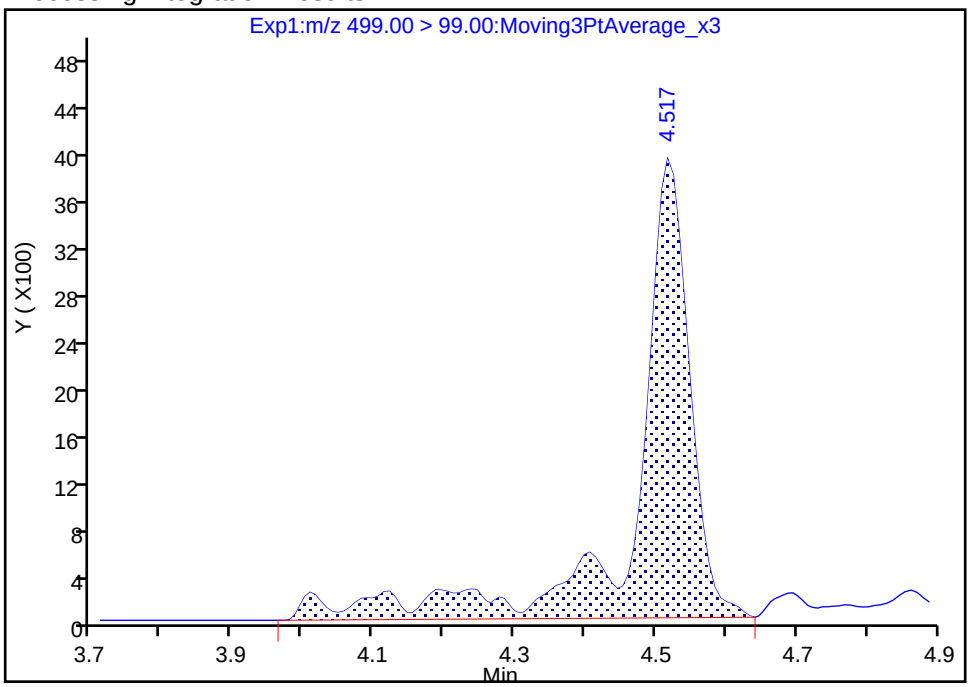
Injection Date: 25-Aug-2020 16:52:21 Instrument ID: A18
Lims ID: IC STD 2
Client ID:
Operator ID: TAISACA18-PC\A-18 ALS Bottle#: 7 Worklist Smp#: 3
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFAS_A18V2 Limit Group: LC PFC ICAL
Column: Gemini C18 3um 3mm x 50 mm ( 3.00mm) Detector EXP1

## 29 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 2

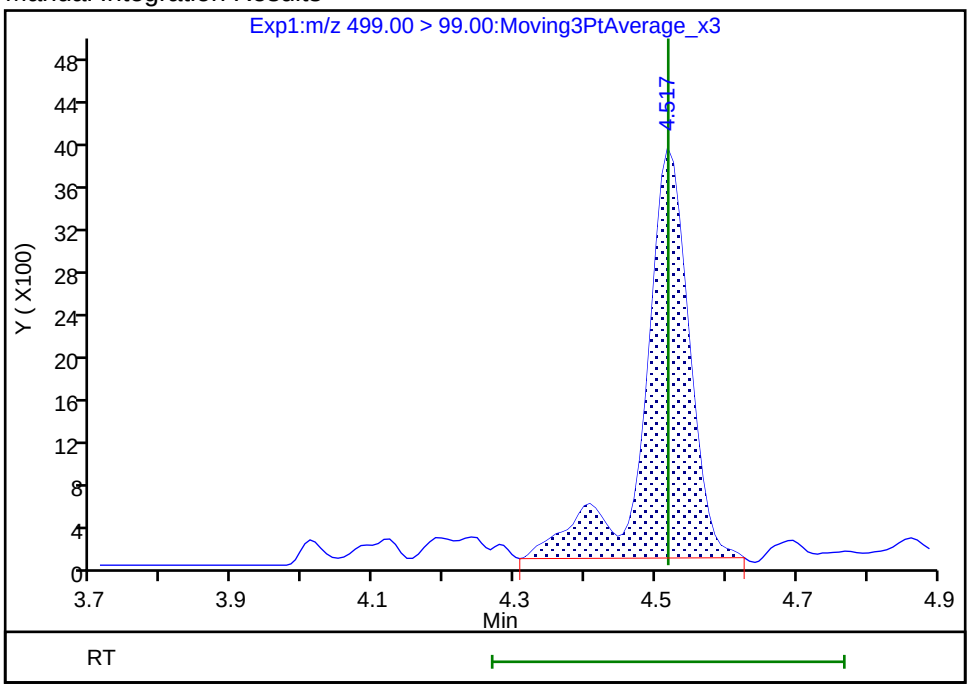
Processing Integration Results

RT: 4.52
Area: 21023
Amount: 0.051604
Amount Units: ng/ml




Manual Integration Results

RT: 4.52
Area: 16976
Amount: 0.043222
Amount Units: ng/ml




Reviewer: fariasa, 26-Aug-2020 05:53:29
Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

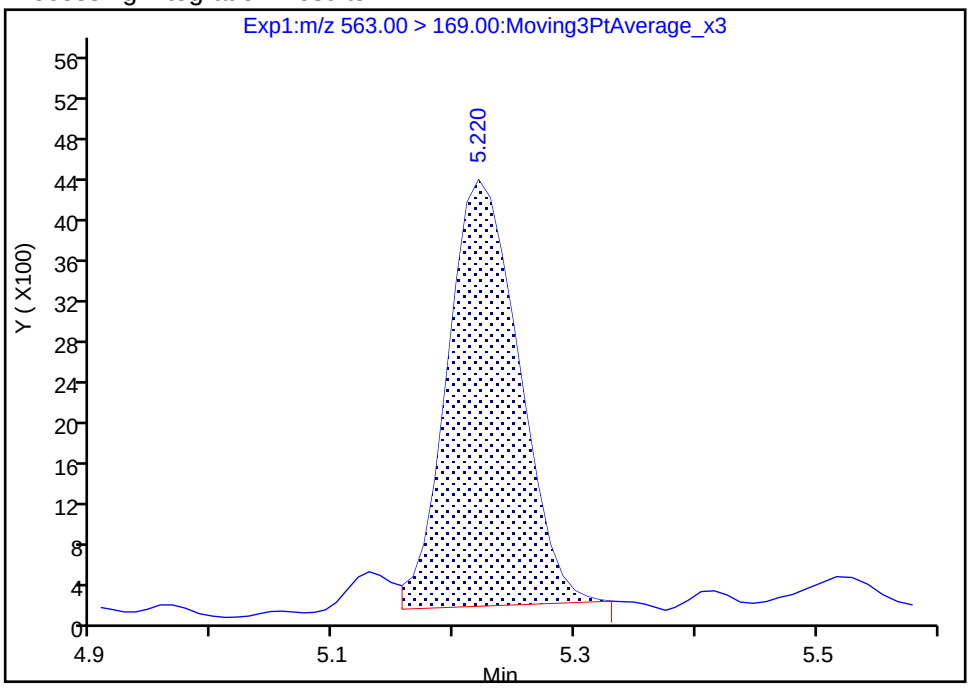
Data File: \\chromfs\Sacramento\ChromData\A18\20200825-102078.b\2020.08.25_A18_ICAL_A_012.d
Injection Date: 25-Aug-2020 16:52:21 Instrument ID: A18
Lims ID: IC STD 2
Client ID:
Operator ID: TAISACA18-PC\A-18 ALS Bottle#: 7 Worklist Smp#: 3
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFAS_A18V2 Limit Group: LC PFC ICAL
Column: Gemini C18 3um 3mm x 50 mm ( 3.00mm) Detector EXP1

## 45 Perfluoroundecanoic acid, CAS: 2058-94-8

Signal: 2

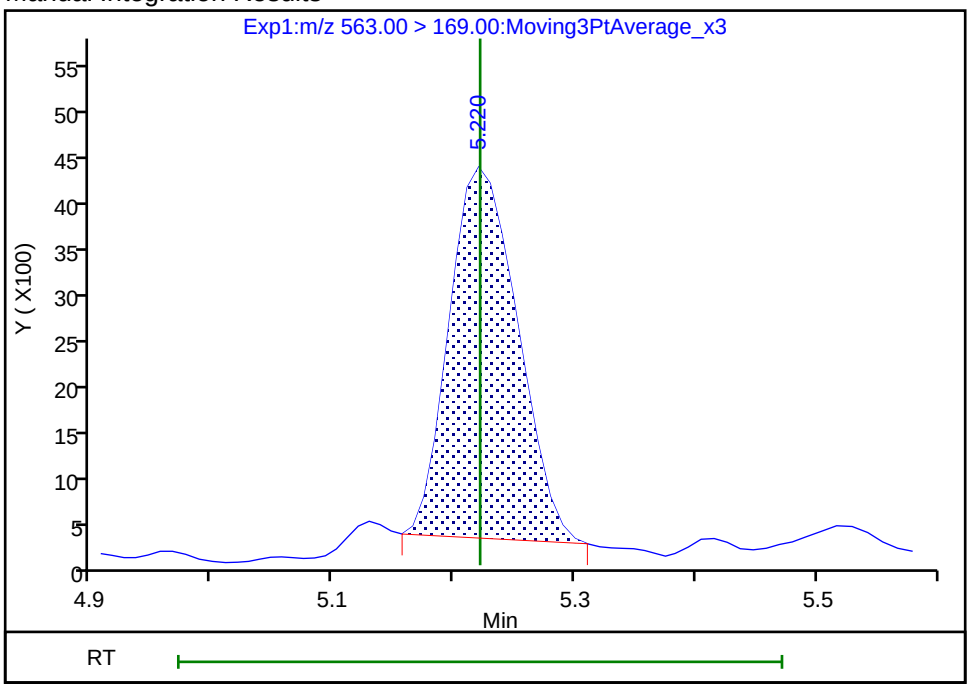
Processing Integration Results

RT: 5.22
Area: 17222
Amount: 0.043832
Amount Units: ng/ml




Manual Integration Results

RT: 5.22
Area: 15887
Amount: 0.043832
Amount Units: ng/ml




Reviewer: fariasa, 26-Aug-2020 05:53:46
Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

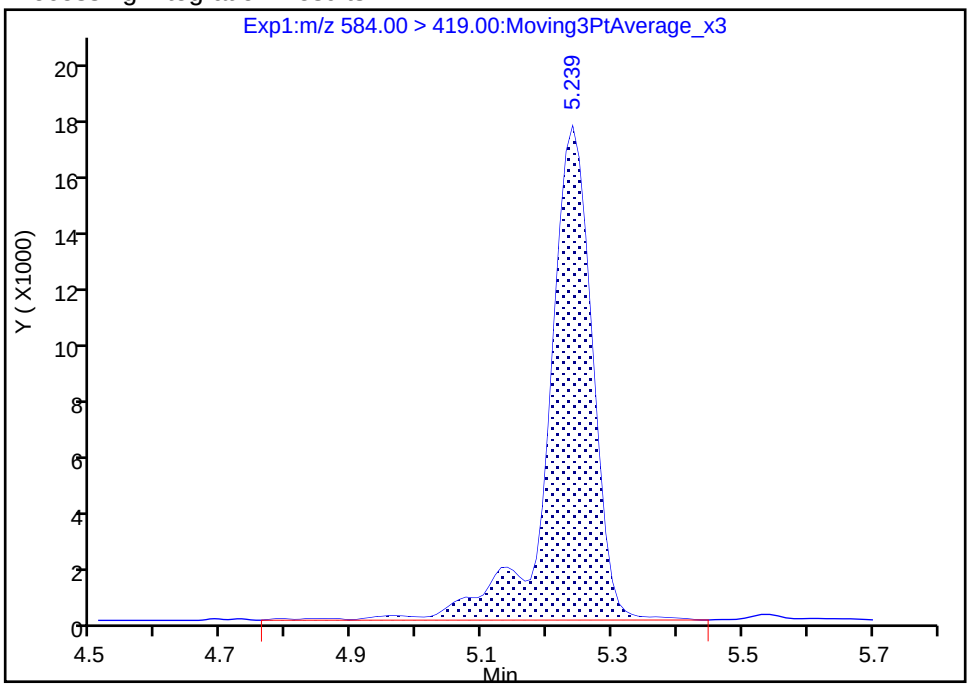
Data File: \\chromfs\Sacramento\ChromData\A18\20200825-102078.b\2020.08.25_A18_ICAL_A_012.d
Injection Date: 25-Aug-2020 16:52:21 Instrument ID: A18
Lims ID: IC STD 2
Client ID:
Operator ID: TAISACA18-PC\A-18 ALS Bottle#: 7 Worklist Smp#: 3
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFAS_A18V2 Limit Group: LC PFC ICAL
Column: Gemini C18 3um 3mm x 50 mm ( 3.00mm) Detector EXP1

## 46 NEtFOSA, CAS: 2991-50-6

Signal: 1

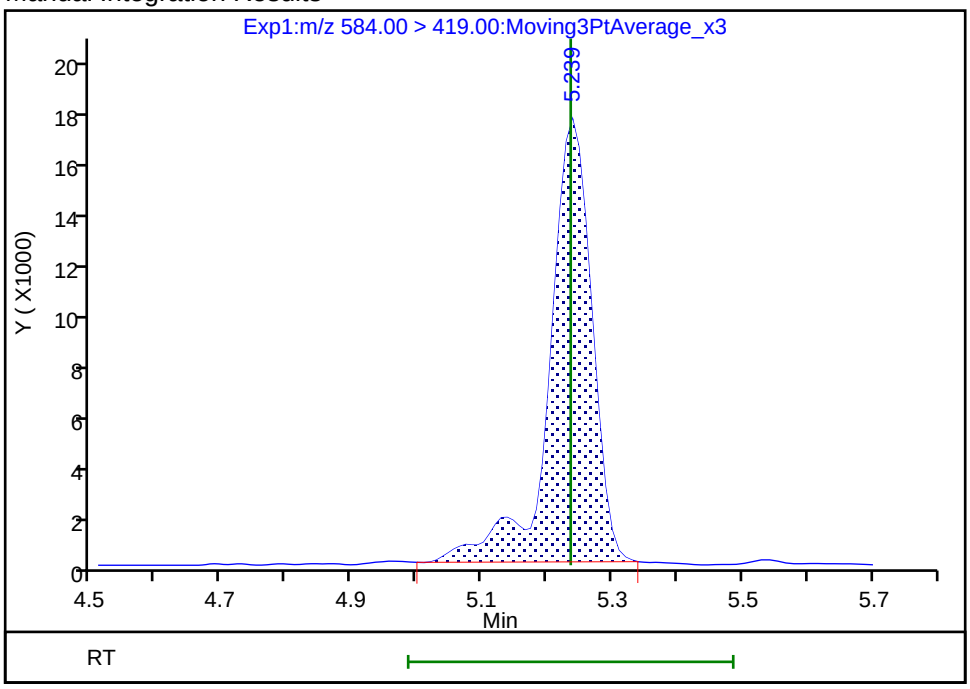
Processing Integration Results

RT: 5.24
Area: 80586
Amount: 0.044907
Amount Units: ng/ml




Manual Integration Results

RT: 5.24
Area: 76967
Amount: 0.043139
Amount Units: ng/ml




Reviewer: fariasa, 26-Aug-2020 05:53:55
Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

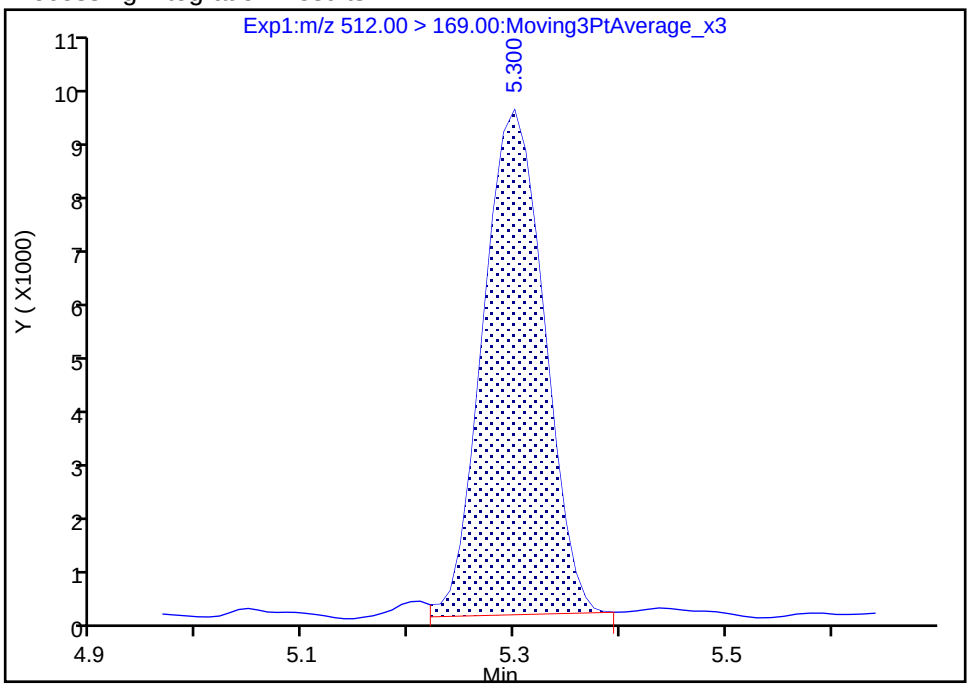
| | | | | | |
|---|---|---|---|---|---|
| Data File: | \\chromfs\Sacramento\ChromData\A18\20200825-102078.b\2020.08.25_A18_ICAL_A_012.d | | | | |
| Injection Date: | 25-Aug-2020 16:52:21 | Instrument ID: | A18 | | |
| Lims ID: | IC STD 2 | | | | |
| Client ID: | | | | | |
| Operator ID: | TAISACA18-PC\A-18 | ALS Bottle#: | 7 | Worklist Smp#: | 3 |
| Injection Vol: | 20.0 ul | Dil. Factor: | 1.0000 | | |
| Method: | PFAS_A18V2 | Limit Group: | LC PFC ICAL | | |
| Column: | Gemini C18 3um 3mm x 50 mm ( 3.00mm) | Detector | EXP1 | | |

## 50 NMeFOSA, CAS: 31506-32-8

Signal: 1

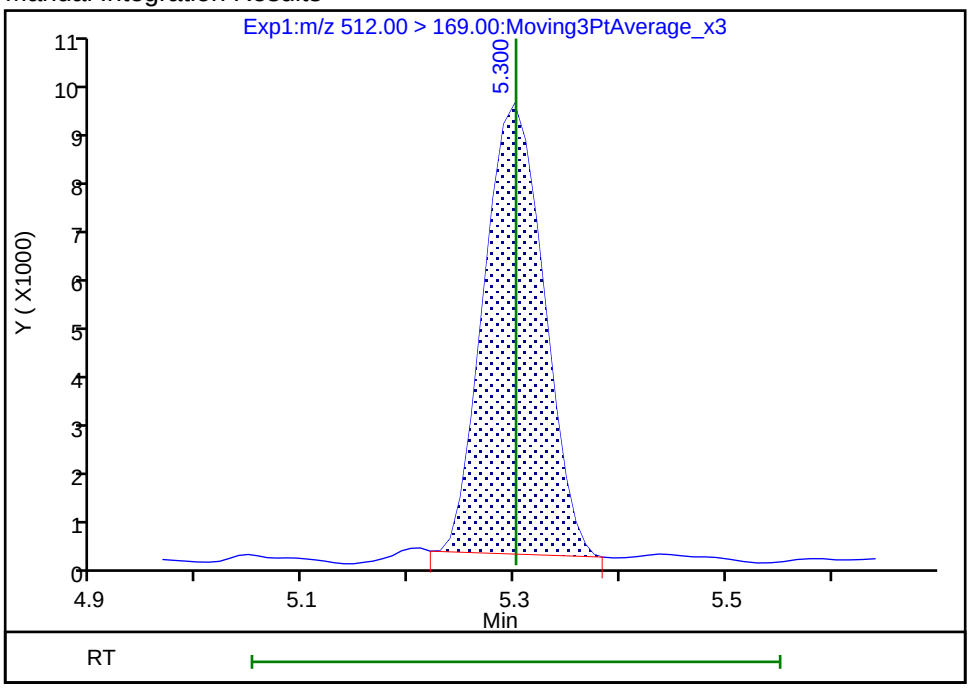
Processing Integration Results

RT: 5.30
Area: 37133
Amount: 0.045579
Amount Units: ng/ml




Manual Integration Results

RT: 5.30
Area: 35943
Amount: 0.044303
Amount Units: ng/ml




Reviewer: fariasa, 26-Aug-2020 05:54:04

Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

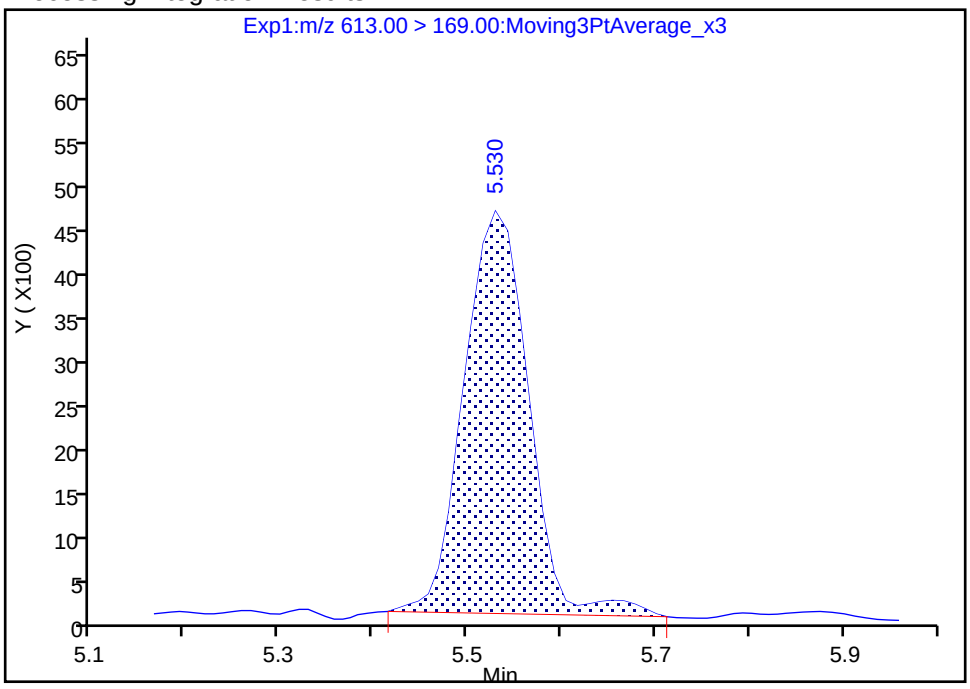
Data File: \\chromfs\Sacramento\ChromData\A18\20200825-102078.b\2020.08.25_A18_ICAL_A_012.d
Injection Date: 25-Aug-2020 16:52:21 Instrument ID: A18
Lims ID: IC STD 2
Client ID:
Operator ID: TAISACA18-PC\A-18 ALS Bottle#: 7 Worklist Smp#: 3
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFAS_A18V2 Limit Group: LC PFC ICAL
Column: Gemini C18 3um 3mm x 50 mm ( 3.00mm) Detector EXP1

## 57 Perfluorododecanoic acid, CAS: 307-55-1

Signal: 2

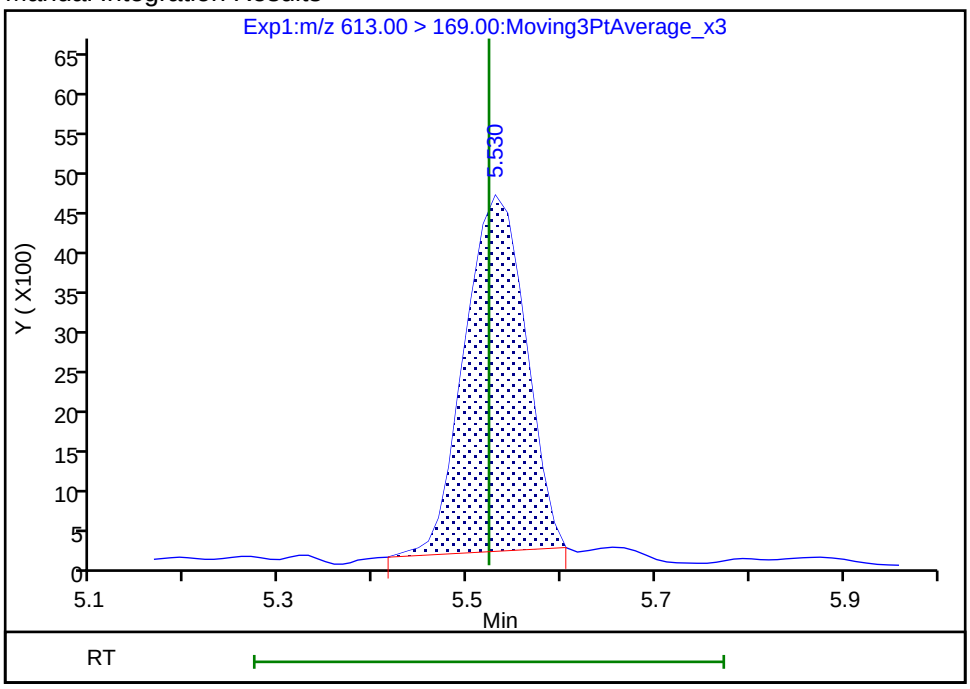
Processing Integration Results

RT: 5.53
Area: 21976
Amount: 0.049338
Amount Units: ng/ml




Manual Integration Results

RT: 5.53
Area: 20293
Amount: 0.047734
Amount Units: ng/ml




Reviewer: fariasa, 26-Aug-2020 05:54:14
Audit Action: Manually Integrated Audit Reason: Baseline

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\A18\20200825-102078.b\2020.08.25_A18_ICAL_A_013.d
Lims ID: IC STD 3
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 25-Aug-2020 17:01:30 ALS Bottle#: 8 Worklist Smp#: 4
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Sample Info: CAL STD 3 (19)
Misc. Info.: Plate: 1 Rack: 1
Operator ID: TAISACA18-PC\A-18 Instrument ID: A18
Sublist: chrom-PFAS_A18V2*sub1

Method: \\chromfs\Sacramento\ChromData\A18\20200825-102078.b\PFAS_A18V2.m
Limit Group: LC PFC ICAL
Last Update: 26-Aug-2020 10:42:35 Calib Date: 25-Aug-2020 17:37:57
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\A18\20200825-102078.b\2020.08.25_A18_ICAL_A_017.d

Column 1 : Gemini C18 3um 3mm x 50 mm ( 3.00 mm) Det: EXP1
Process Host: CTX1029

First Level Reviewer: fariasa Date: 26-Aug-2020 06:02:59
Ratio Calibration: Average of Initial Calibration

| Signal | RT | EXP RT | DLT RT | REL RT | Response | Amount ng/ml | Ratio(Limits) | %Rec | S/N | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| D 1 13C4 PFBA | | | | | | | | | | |
| 217.00 > 172.00 | 2.582 | 2.577 | 0.005 | 0.622 | 17572811 | 2.49 | | 99.5 | 7917 | |
| 2 Perfluorobutanoic acid | | | | | | | | | | |
| 212.90 > 169.00 | 2.582 | 2.580 | 0.002 | 1.000 | 1434703 | 0.2352 | | 94.1 | 63.1 | |
| 5 Perfluoropentanoic acid | | | | | | | | | | |
| 262.90 > 219.00 | 2.940 | 2.941 | -0.001 | 1.000 | 1335754 | 0.2418 | | 96.7 | 69.1 | |
| D 4 13C5 PFPeA | | | | | | | | | | |
| 267.90 > 223.00 | 2.940 | 2.941 | -0.001 | 0.709 | 13850765 | 2.52 | | 101 | 7291 | |
| D 9 13C3 PFBS | | | | | | | | | | |
| 301.90 > 80.00 | 2.974 | 2.977 | -0.003 | 0.717 | 9949547 | 2.30 | | 99.1 | 4253 | |
| 6 Perfluorobutanesulfonic acid | | | | | | | | | | |
| 298.90 > 80.00 | 2.986 | 2.982 | 0.004 | 1.004 | 877185 | 0.2030 | Target=2.30 | 91.9 | 191 | |
| 298.90 > 99.00 | 2.986 | 2.982 | 0.004 | 1.004 | 389793 | | 2.25(1.15-3.45) | 91.9 | 158 | |
| 8 4:2 FTS | | | | | | | | | | |
| 327.00 > 307.00 | 3.288 | 3.288 | 0.0 | 1.000 | 554249 | 0.2192 | | 93.9 | 3081 | |
| D 7 M2-4:2 FTS | | | | | | | | | | |
| 329.00 > 81.00 | 3.288 | 3.288 | 0.0 | 0.793 | 2597711 | 2.50 | | 107 | 1106 | |
| 10 Perfluorohexanoic acid | | | | | | | | | | |
| 313.00 > 269.00 | 3.331 | 3.334 | -0.003 | 1.000 | 1281954 | 0.2313 | Target=13.78 | 92.5 | 111 | |
| 313.00 > 119.00 | 3.331 | 3.334 | -0.003 | 1.000 | 89809 | | 14.27(6.89-20.66) | 92.5 | 77.0 | |
| D 11 13C2 PFHxA | | | | | | | | | | |
| 315.00 > 270.00 | 3.331 | 3.334 | -0.003 | 0.803 | 14376817 | 2.62 | | 105 | 7057 | |
| 12 Perfluoropentanesulfonic acid | | | | | | | | | | |
| 349.00 > 80.00 | 3.352 | 3.349 | 0.003 | 1.127 | 784647 | 0.2314 | Target=3.02 | 98.7 | 181 | |
| 349.00 > 99.00 | 3.352 | 3.349 | 0.003 | 1.127 | 257817 | | 3.04(1.51-4.52) | 98.7 | 225 | |
| 13 HPFO-DA | | | | | | | | | | |
| 285.00 > 169.00 | 3.458 | 3.463 | -0.005 | 1.000 | 248757 | 0.2278 | | 91.1 | 990 | |

| Signal | RT | EXP RT | DLT RT | REL RT | Response | Amount ng/ml | Ratio(Limits) | %Rec | S/N | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| D 14 13C3 HFPO-DA | | | | | | | | | | |
| 287.00 > 169.00 | 3.458 | 3.463 | -0.005 | 0.834 | 2802026 | 2.50 | | 99.8 | 8835 | |
| 16 Perfluoroheptanoic acid | | | | | | | | | | |
| 363.00 > 319.00 | 3.750 | 3.750 | 0.0 | 1.000 | 1185266 | 0.2383 | Target=3.84 | 95.3 | 153 | |
| 363.00 > 169.00 | 3.750 | 3.750 | 0.0 | 1.000 | 312608 | | 3.79(1.92-5.76) | 95.3 | 224 | |
| D 18 13C4 PFHpA | | | | | | | | | | |
| 367.00 > 322.00 | 3.750 | 3.750 | 0.0 | 0.904 | 12267287 | 2.62 | | 105 | 10130 | |
| D 17 18O2 PFHxS | | | | | | | | | | |
| 403.00 > 84.00 | 3.750 | 3.752 | -0.002 | 0.904 | 5387347 | 2.36 | | 99.9 | 6409 | |
| 15 Perfluorohexanesulfonic acid | | | | | | | | | | |
| 399.00 > 80.00 | 3.750 | 3.752 | -0.002 | 1.000 | 610412 | 0.2268 | Target=3.50 | 99.7 | 232 | |
| 399.00 > 99.00 | 3.750 | 3.752 | -0.002 | 1.000 | 167489 | | 3.64(1.75-5.25) | 99.7 | 160 | |
| 19 DONA | | | | | | | | | | |
| 377.00 > 251.00 | 3.799 | 3.800 | -0.001 | 0.841 | 3498730 | 0.2369 | Target=2.42 | 101 | 2909 | |
| 377.00 > 85.00 | 3.799 | 3.800 | -0.001 | 0.841 | 1389149 | | 2.52(1.21-3.63) | 101 | 1936 | |
| D 20 M2-6:2 FTS | | | | | | | | | | |
| 429.00 > 81.00 | 4.124 | 4.127 | -0.003 | 0.994 | 2185821 | 2.50 | | 105 | 1467 | |
| 21 6:2 FTS | | | | | | | | | | |
| 427.00 > 407.00 | 4.124 | 4.127 | -0.003 | 1.000 | 473474 | 0.2238 | | 94.4 | 756 | |
| 24 Perfluoroheptanesulfonic acid | | | | | | | | | | |
| 449.00 > 80.00 | 4.140 | 4.143 | -0.003 | 0.916 | 400864 | 0.2328 | Target=4.40 | 97.8 | 187 | |
| 449.00 > 99.00 | 4.140 | 4.143 | -0.003 | 0.916 | 92595 | | 4.33(2.20-6.60) | 97.8 | 148 | |
| D 25 13C4 PFOA | | | | | | | | | | |
| 417.00 > 372.00 | 4.148 | 4.150 | -0.002 | 1.000 | 11949440 | 2.68 | | 107 | 6114 | |
| 22 Perfluorooctanoic acid | | | | | | | | | | |
| 413.00 > 369.00 | 4.148 | 4.150 | -0.002 | 1.000 | 1137192 | 0.2332 | Target=2.94 | 93.3 | 209 | |
| 413.00 > 169.00 | 4.156 | 4.150 | 0.006 | 1.002 | 349089 | | 3.26(1.47-4.41) | 93.3 | 624 | |
| $ 26 13C8 PFOA | | | | | | | | | | |
| 421.00 > 376.00 | 4.140 | 4.147 | -0.007 | 0.998 | 7599439 | 2.52 | | 103 | 7784 | |
| * 23 13C2 PFOA | | | | | | | | | | |
| 415.00 > 370.00 | 4.148 | 4.151 | -0.003 | | 11144889 | 2.50 | | | 9184 | |
| $ 28 13C8 PFOS | | | | | | | | | | |
| 507.00 > 99.00 | 4.510 | 4.514 | -0.004 | 1.087 | 1162967 | 2.41 | | 101 | 2954 | |
| D 27 13C4 PFOS | | | | | | | | | | |
| 503.00 > 80.00 | 4.518 | 4.516 | 0.002 | 1.089 | 3683093 | 2.38 | | 99.8 | 1487 | |
| 29 Perfluorooctanesulfonic acid | | | | | | | | | | M |
| 499.00 > 80.00 | 4.518 | 4.518 | 0.0 | 1.000 | 359317 | 0.2253 | Target=4.53 | 97.1 | 116 | M |
| 499.00 > 99.00 | 4.510 | 4.518 | -0.008 | 0.998 | 77031 | | 4.66(2.26-6.79) | 97.1 | 142 | |
| D 30 13C5 PFNA | | | | | | | | | | |
| 468.00 > 423.00 | 4.535 | 4.533 | 0.002 | 1.093 | 8965418 | 2.49 | | 99.8 | 7906 | |
| 31 Perfluorononanoic acid | | | | | | | | | | |
| 463.00 > 419.00 | 4.526 | 4.537 | -0.011 | 0.998 | 889961 | 0.2588 | Target=8.97 | 104 | 159 | |
| 463.00 > 169.00 | 4.535 | 4.537 | -0.002 | 1.000 | 102571 | | 8.68(4.48-13.45) | 104 | 160 | |
| 32 9ClFOS | | | | | | | | | | |
| 531.00 > 351.00 | 4.724 | 4.724 | 0.0 | 1.046 | 1121719 | 0.2249 | | 96.5 | 3320 | |
| 34 Perfluorooctanesulfonamide | | | | | | | | | | |
| 498.00 > 78.00 | 4.829 | 4.830 | -0.001 | 1.000 | 562825 | 0.2457 | | 98.3 | 1822 | |

| Signal | RT | EXP RT | DLT RT | REL RT | Response | Amount ng/ml | Ratio(Limits) | %Rec | S/N | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| D 33 13C8 FOSA | | | | | | | | | | |
| 506.00 > 78.00 | 4.829 | 4.830 | -0.001 | 1.164 | 6153721 | 2.47 | | 98.8 | 4973 | |
| 35 Perfluorononanesulfonic acid | | | | | | | | | | |
| 549.00 > 80.00 | 4.864 | 4.868 | -0.004 | 1.076 | 369502 | 0.2559 | Target=2.85 | 107 | 250 | |
| 549.00 > 99.00 | 4.864 | 4.868 | -0.004 | 1.076 | 124715 | | 2.96(1.43-4.28) | 107 | 259 | |
| D 39 13C2 PFDA | | | | | | | | | | |
| 515.00 > 470.00 | 4.890 | 4.892 | -0.002 | 1.179 | 8286827 | 2.37 | | 95.0 | 8665 | |
| 37 Perfluorodecanoic acid | | | | | | | | | | |
| 513.00 > 469.00 | 4.890 | 4.896 | -0.006 | 1.000 | 802442 | 0.2511 | Target=10.16 | 100 | 313 | |
| 513.00 > 169.00 | 4.898 | 4.896 | 0.002 | 1.002 | 76672 | | 10.47(5.08-15.24) | 100 | 111 | |
| D 38 M2-8:2 FTS | | | | | | | | | | |
| 529.00 > 81.00 | 4.898 | 4.897 | 0.001 | 1.181 | 3354161 | 2.67 | | 111 | 2326 | |
| 36 8:2 FTS | | | | | | | | | | |
| 527.00 > 507.00 | 4.898 | 4.898 | 0.0 | 1.000 | 556880 | 0.2240 | | 93.5 | 2867 | |
| D 40 d3-NMeFOSAA | | | | | | | | | | |
| 573.00 > 419.00 | 5.057 | 5.062 | -0.005 | 1.219 | 5800390 | 2.48 | | 99.0 | 4661 | |
| 41 NMeFOSAA | | | | | | | | | | M |
| 570.00 > 419.00 | 5.066 | 5.065 | 0.001 | 1.002 | 402573 | 0.2339 | | 93.6 | 483 | M |
| 42 Perfluorodecanesulfonic acid | | | | | | | | | | |
| 599.00 > 80.00 | 5.193 | 5.191 | 0.002 | 1.149 | 305989 | 0.2378 | Target=2.77 | 98.7 | 268 | |
| 599.00 > 99.00 | 5.193 | 5.191 | 0.002 | 1.149 | 108636 | | 2.82(1.38-4.15) | 98.7 | 384 | |
| D 43 13C2 PFUnA | | | | | | | | | | |
| 565.00 > 520.00 | 5.219 | 5.221 | -0.002 | 1.258 | 8931580 | 2.58 | | 103 | 7066 | |
| 45 Perfluoroundecanoic acid | | | | | | | | | | |
| 563.00 > 519.00 | 5.219 | 5.221 | -0.002 | 1.000 | 603692 | 0.2330 | Target=8.43 | 93.2 | 295 | |
| 563.00 > 169.00 | 5.219 | 5.221 | -0.002 | 1.000 | 79029 | | 7.64(4.22-12.65) | 93.2 | 98.8 | |
| D 44 d5-NEtFOSAA | | | | | | | | | | |
| 589.00 > 419.00 | 5.229 | 5.227 | 0.002 | 1.261 | 6561199 | 2.65 | | 106 | 4901 | |
| 46 NEtFOSA | | | | | | | | | | |
| 584.00 > 419.00 | 5.238 | 5.236 | 0.002 | 1.002 | 391811 | 0.2209 | | 88.4 | 5063 | |
| D 47 d7-N-MeFOSE-M | | | | | | | | | | |
| 623.00 > 59.00 | 5.268 | 5.272 | -0.004 | 1.270 | 7614914 | 12.3 | | 98.7 | 2969 | |
| 48 N-MeFOSE-M | | | | | | | | | | |
| 616.00 > 59.00 | 5.279 | 5.285 | -0.006 | 1.002 | 159827 | 0.2430 | | 97.2 | 255 | |
| D 49 d-N-MeFOSA-M | | | | | | | | | | |
| 515.00 > 169.00 | 5.289 | 5.295 | -0.006 | 1.275 | 2040174 | 2.33 | | 93.2 | 51.1 | |
| 50 NMeFOSA | | | | | | | | | | |
| 512.00 > 169.00 | 5.299 | 5.301 | -0.002 | 1.002 | 187901 | 0.2397 | | 95.9 | 341 | |
| 51 11ClFOS | | | | | | | | | | |
| 631.00 > 451.00 | 5.367 | 5.363 | 0.004 | 1.188 | 1385108 | 0.2191 | | 93.0 | 2951 | |
| D 52 d9-N-EtFOSE-M | | | | | | | | | | |
| 639.00 > 59.00 | 5.437 | 5.443 | -0.006 | 1.311 | 8964785 | 11.8 | | 94.7 | 1648 | |
| 53 N-EtFOSE-M | | | | | | | | | | |
| 630.00 > 59.00 | 5.459 | 5.456 | 0.003 | 1.004 | 203478 | 0.2644 | | 106 | 216 | |
| D 54 d-N-EtFOSA-M | | | | | | | | | | |
| 531.00 > 169.00 | 5.469 | 5.471 | -0.002 | 1.318 | 2086889 | 2.33 | | 93.1 | 344 | |

| Signal | RT | EXP RT | DLT RT | REL RT | Response | Amount ng/ml | Ratio(Limits) | %Rec | S/N | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| 55 N-EtFOSA-M | | | | | | | | | | |
| 526.00 > 169.00 | 5.480 | 5.480 | 0.0 | 1.002 | 215981 | 0.2445 | | 97.8 | 249 | |
| D 56 13C2 PFDoA | | | | | | | | | | |
| 615.00 > 570.00 | 5.530 | 5.521 | 0.009 | 1.333 | 8986881 | 2.64 | | 105 | 8149 | |
| 57 Perfluorododecanoic acid | | | | | | | | | | |
| 613.00 > 569.00 | 5.530 | 5.523 | 0.007 | 1.000 | 952853 | 0.2592 | Target=9.12 | 104 | 495 | |
| 613.00 > 169.00 | 5.530 | 5.523 | 0.007 | 1.000 | 91590 | | 10.40(4.56-13.69) | 104 | 213 | |
| 58 10:2 FTS | | | | | | | | | | |
| 627.00 > 607.00 | 5.543 | 5.541 | 0.002 | 1.132 | 671004 | 0.2379 | | 98.7 | 4175 | |
| 59 PFDoS | | | | | | | | | | |
| 699.00 > 80.00 | 5.755 | 5.751 | 0.004 | 1.274 | 115329 | 0.2248 | Target=0.72 | 92.9 | 140 | |
| 699.00 > 99.00 | 5.755 | 5.751 | 0.004 | 1.274 | 165533 | | 0.70(0.36-1.07) | 92.9 | 957 | |
| 60 Perfluorotridecanoic acid | | | | | | | | | | |
| 663.00 > 619.00 | 5.802 | 5.795 | 0.007 | 1.049 | 777286 | 0.2298 | Target=6.78 | 91.9 | 563 | |
| 663.00 > 169.00 | 5.793 | 5.795 | -0.002 | 1.048 | 113105 | | 6.87(3.39-10.17) | 91.9 | 256 | |
| D 61 13C2 PFTeDA | | | | | | | | | | |
| 715.00 > 670.00 | 6.043 | 6.038 | 0.005 | 1.457 | 6789692 | 2.41 | | 96.5 | 9281 | |
| 62 Perfluorotetradecanoic acid | | | | | | | | | | |
| 713.00 > 169.00 | 6.043 | 6.041 | 0.002 | 1.000 | 59784 | 0.2608 | Target=0.85 | 104 | 358 | |
| 713.00 > 219.00 | 6.032 | 6.041 | -0.009 | 0.998 | 79011 | | 0.76(0.43-1.28) | 104 | 632 | |
| D 64 13C2 PFHxDA | | | | | | | | | | |
| 815.00 > 770.00 | 6.510 | 6.505 | 0.005 | 1.569 | 4839549 | 2.35 | | 94.0 | 4730 | |
| 63 Perfluorohexadecanoic acid | | | | | | | | | | |
| 813.00 > 769.00 | 6.504 | 6.507 | -0.003 | 0.999 | 476686 | 0.2568 | Target=10.21 | 103 | 406 | |
| 813.00 > 169.00 | 6.504 | 6.507 | -0.003 | 0.999 | 47167 | | 10.11(5.11-15.32) | 103 | 356 | |
| 65 Perfluorooctadecanoic acid | | | | | | | | | | |
| 913.00 > 869.00 | 7.021 | 7.009 | 0.012 | 1.078 | 310536 | 0.2429 | Target=12.45 | 97.2 | 352 | |
| 913.00 > 169.00 | 7.014 | 7.009 | 0.005 | 1.077 | 24817 | | 12.51(6.22-18.67) | 97.2 | 320 | |

## QC Flag Legend

Review Flags

M - Manually Integrated

## Reagents:

LCPFC_LL3_00019 Amount Added: 1.00 Units: mL

Report Date: 26-Aug-2020 10:42:36 Chrom Revision: 2.3 20-Aug-2020 13:57:12

Eurofins TestAmerica, Sacramento

Data File: \\chromfs\Sacramento\ChromData\A18\20200825-102078.b\2020.08.25_A18_ICAL_A_013.d

Injection Date: 25-Aug-2020 17:01:30 Instrument ID: A18

Lims ID: IC STD 3

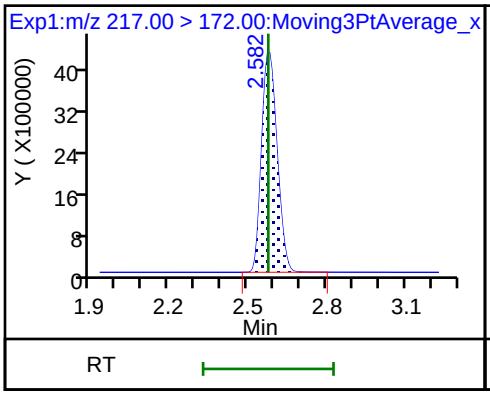
Client ID:

Operator ID: TAISACA18-PC\A-18 ALS Bottle#: 8 Worklist Smp#: 4

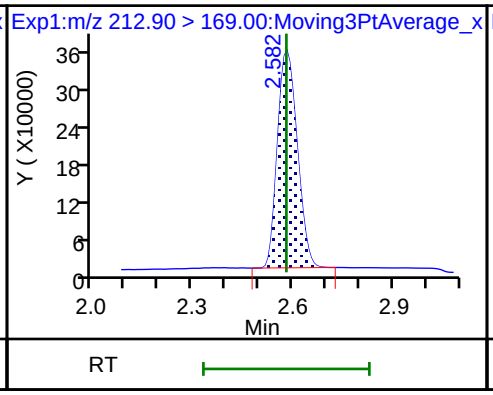
Injection Vol: 20.0 ul Dil. Factor: 1.0000

Method: PFAS_A18V2 Limit Group: LC PFC ICAL

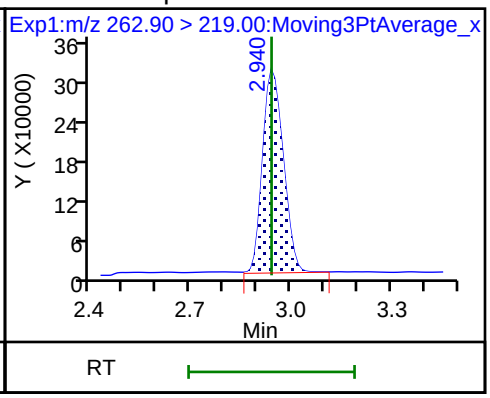
D 1 13C4 PFBA




2 Perfluorobutanoic acid




5 Perfluoropentanoic acid

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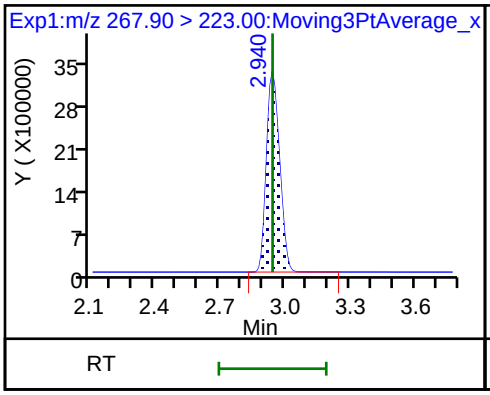
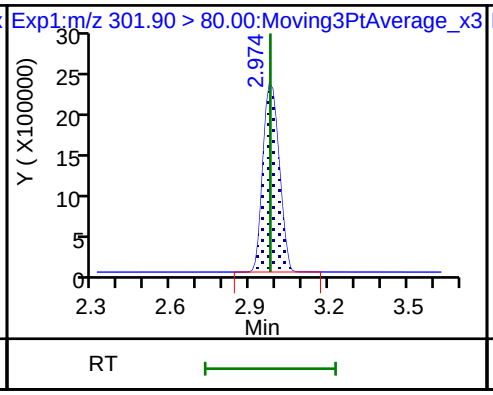
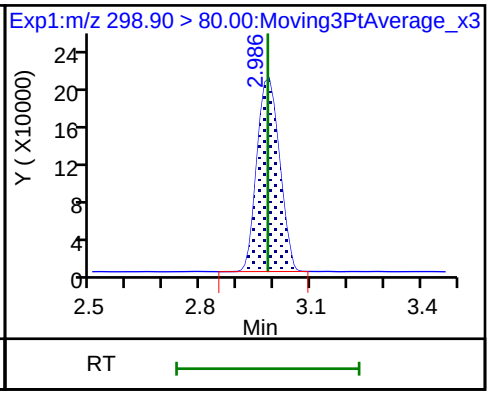



D 9 13C3 PFBS




6 Perfluorobutanesulfonic acid

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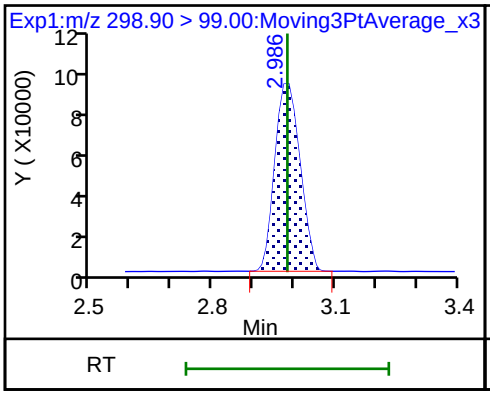
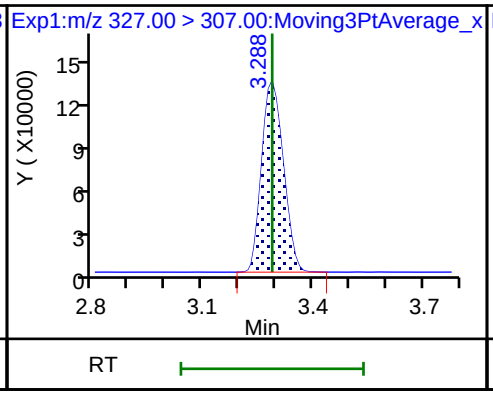
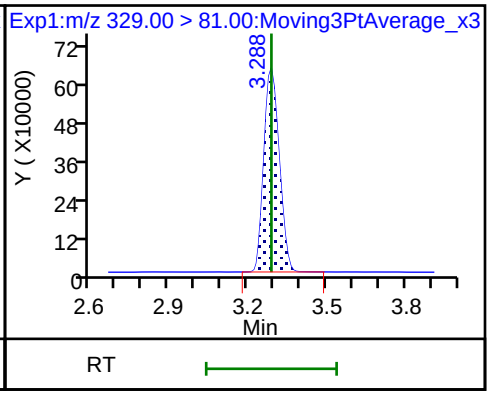


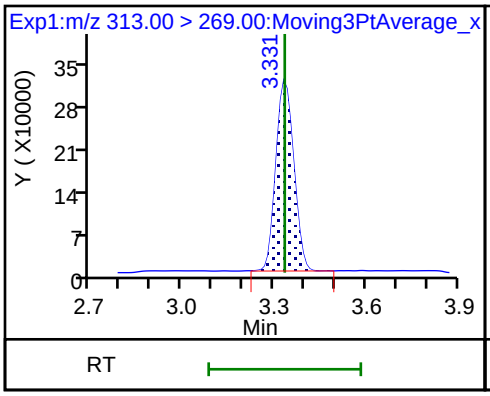

8 4:2 FTS




D 7 M2-4:2 FTS




10 Perfluorohexanoic acid

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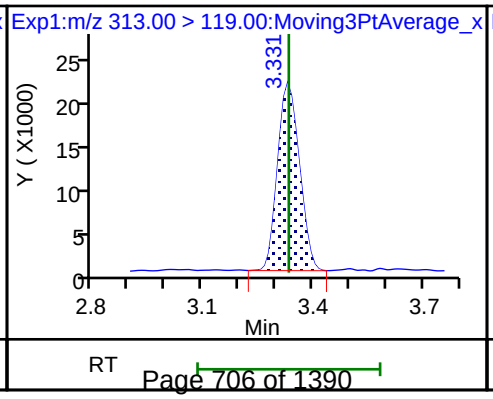
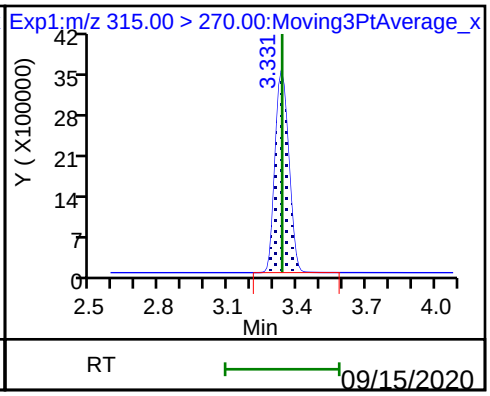



D 11 13C2 PFHxA



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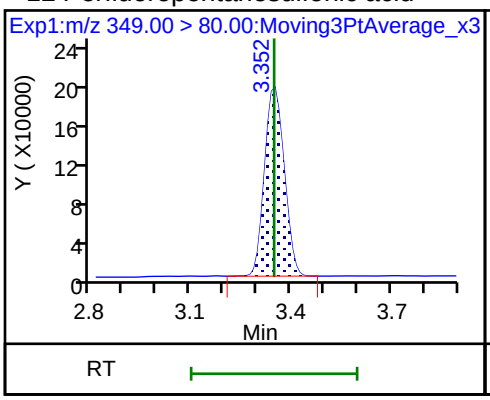
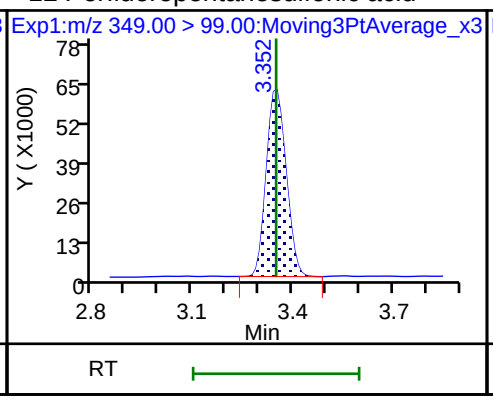
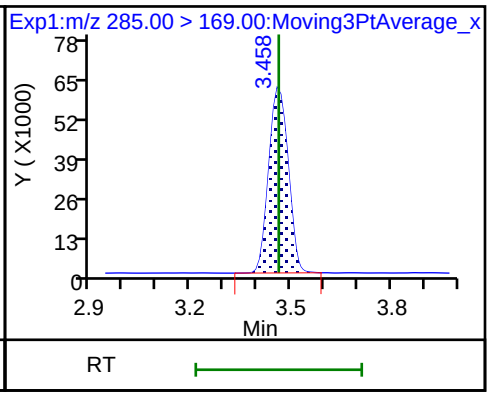


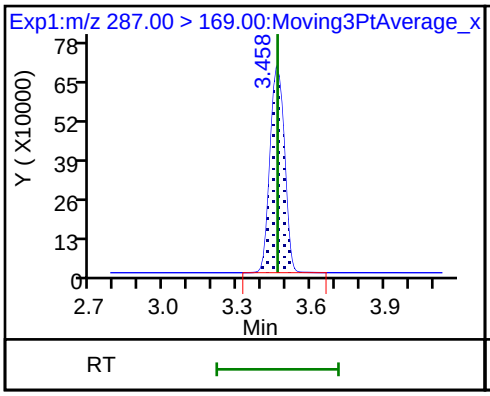

12 Perfluoropentanesulfonic acid



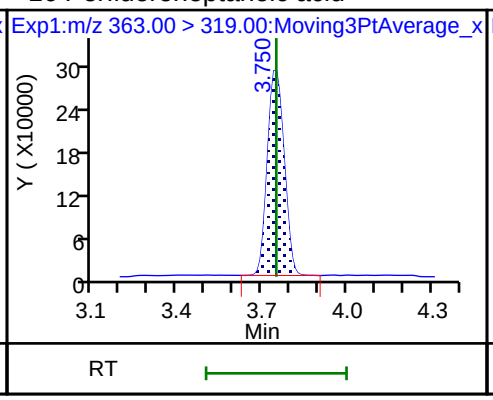

13 HPFO-DA




D 14 13C3 HFPO-DA




16 Perfluoroheptanoic acid

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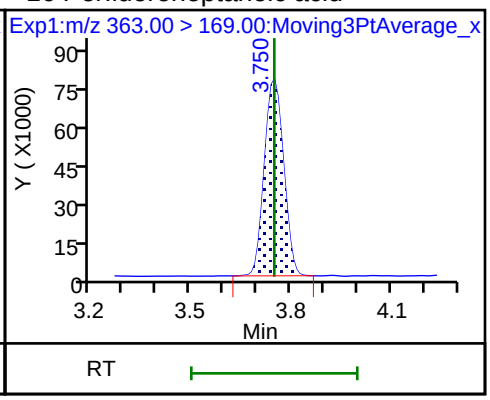
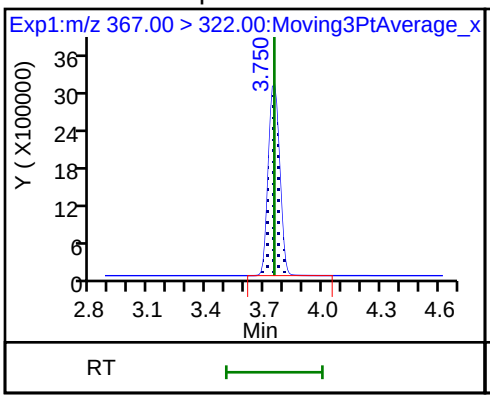
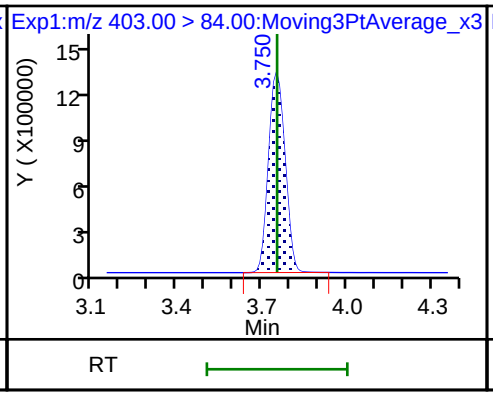



D 18 13C4 PFHpA




D 17 18O2 PFHxS

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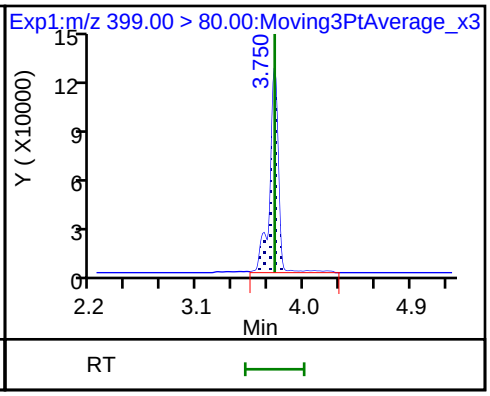


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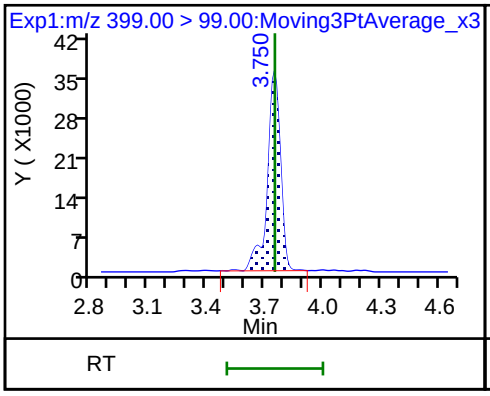
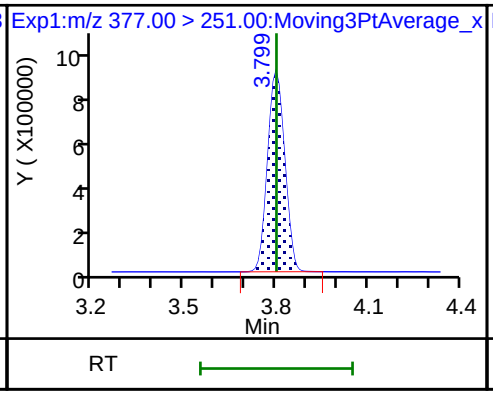



19 DONA

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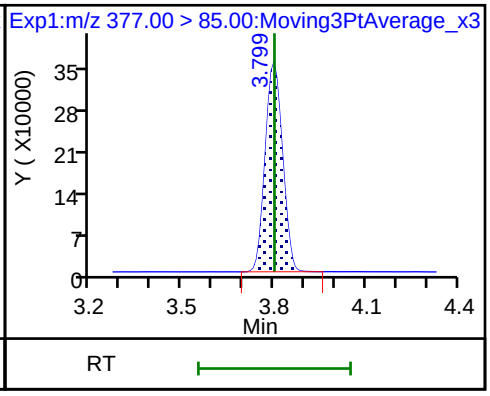
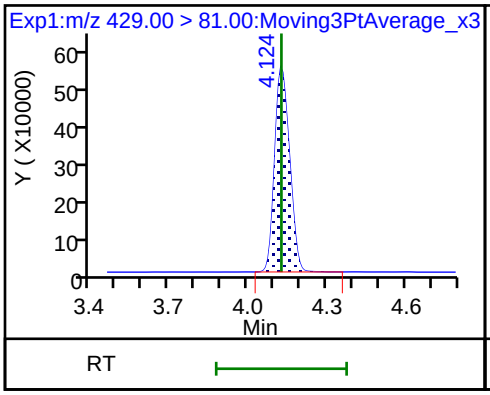
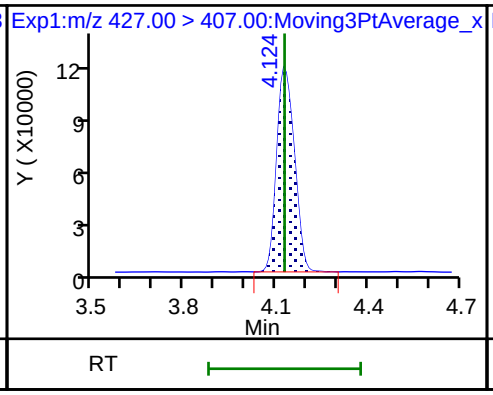


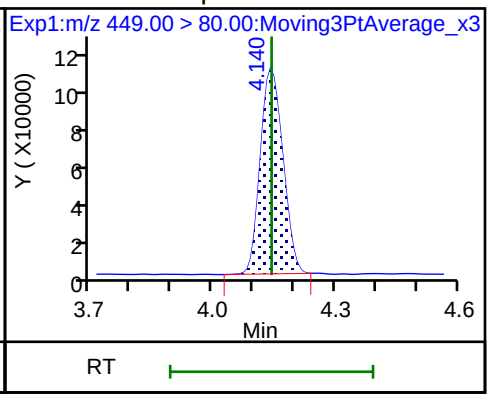
D 20 M2-6:2 FTS




21 6:2 FTS




24 Perfluoroheptanesulfonic acid

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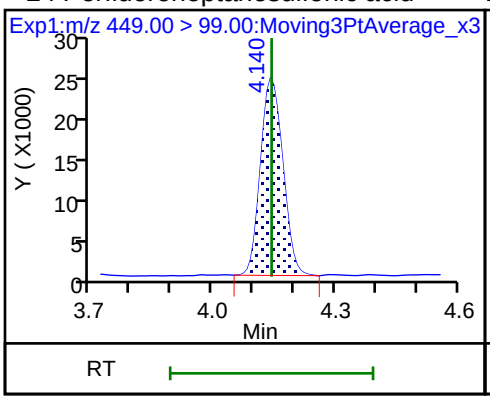
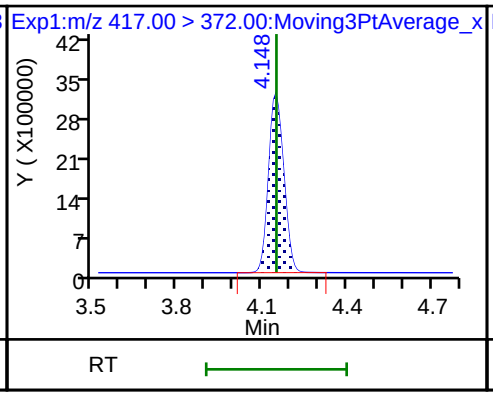
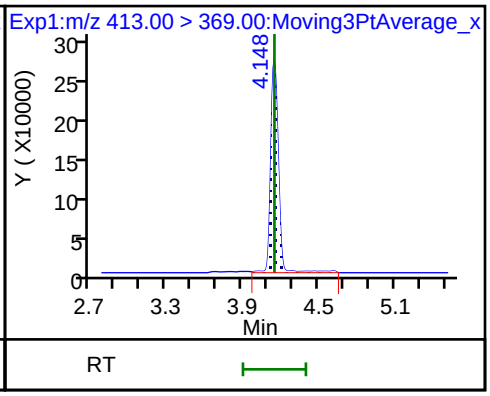


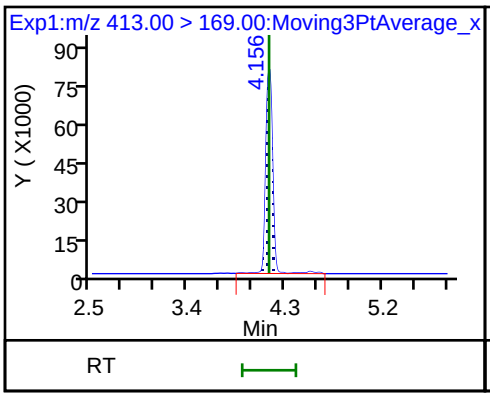

D 25 13C4 PFOA



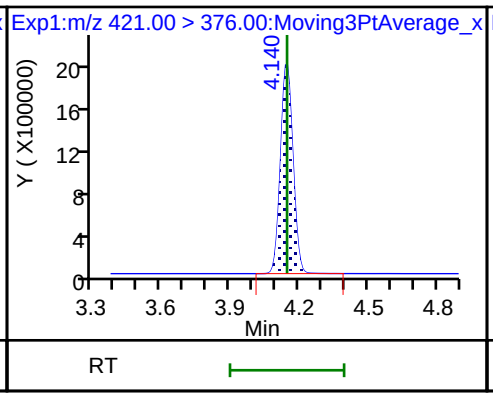

22 Perfluorooctanoic acid



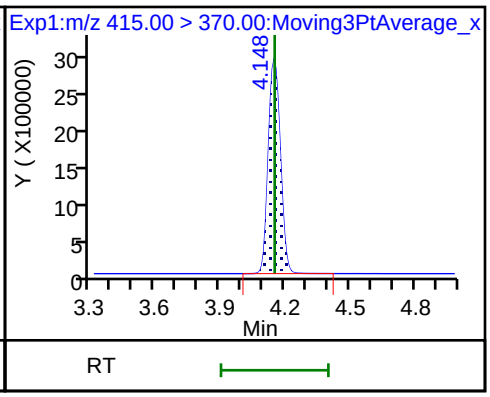

22 Perfluorooctanoic acid



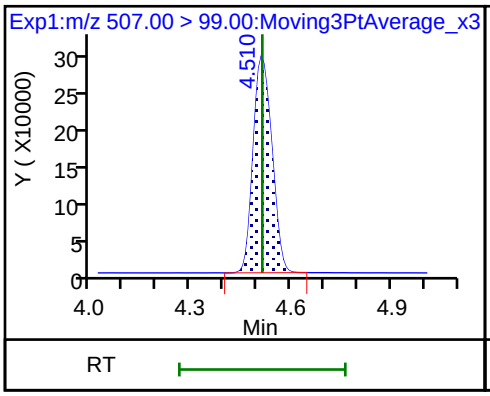

$ 26 13C8 PFOA




* 23 13C2 PFOA




$ 28 13C8 PFOS

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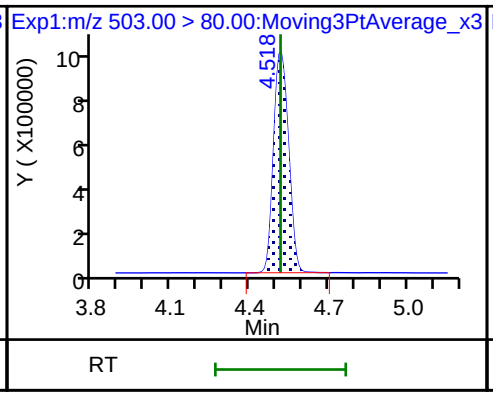
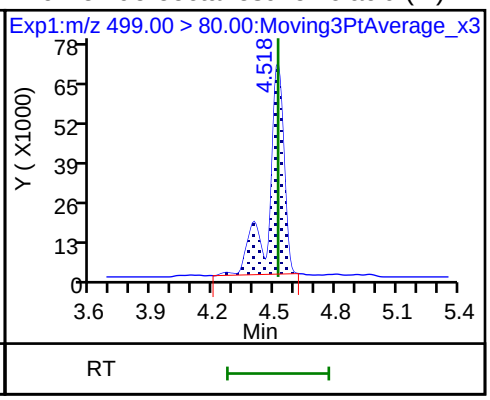
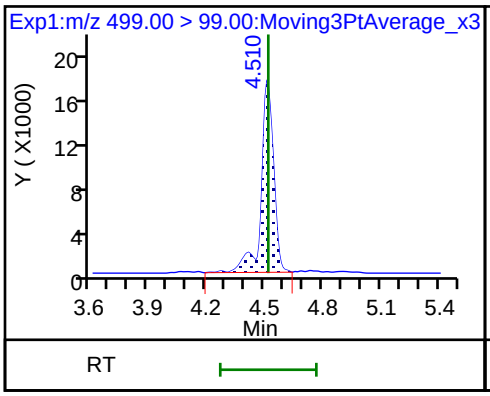


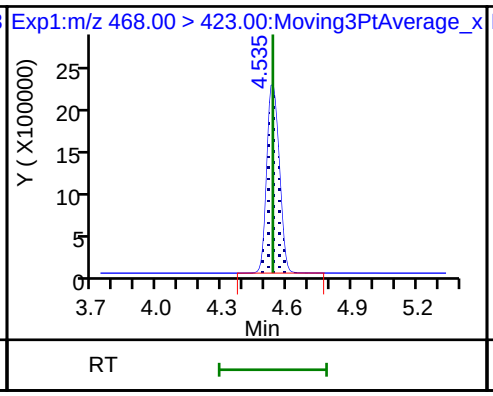

29 Perfluorooctanesulfonic acid (M)



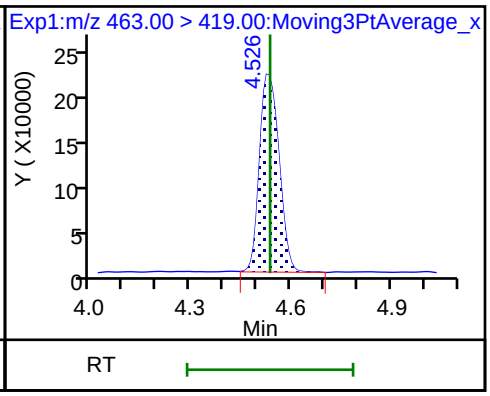
29 Perfluorooctanesulfonic acid



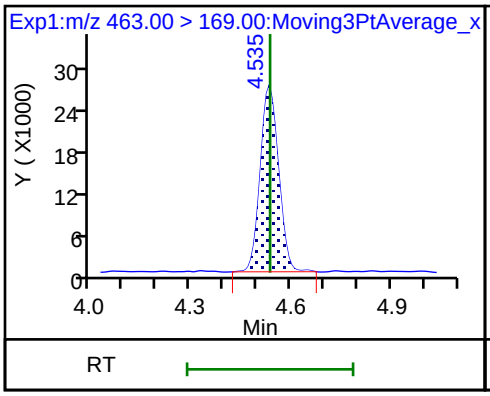

D 30 13C5 PFNA



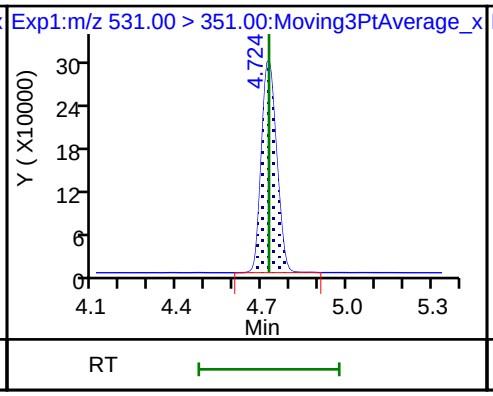

31 Perfluorononanoic acid



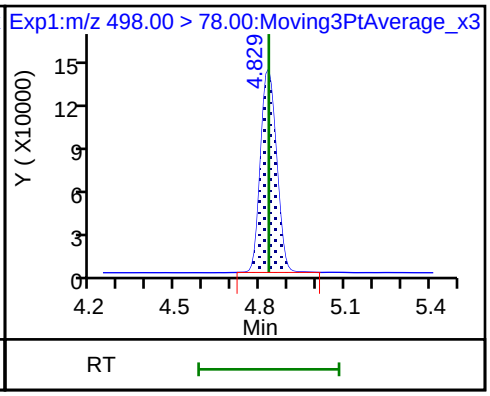

31 Perfluorononanoic acid



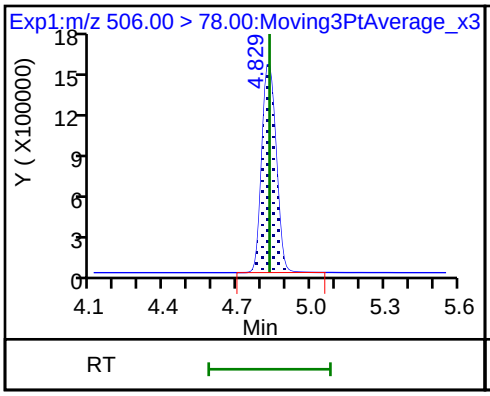

32 9ClFOS



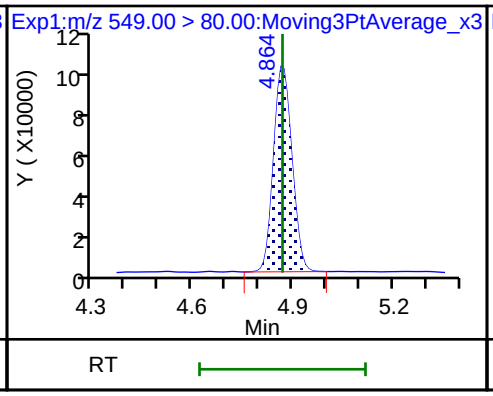

34 Perfluorooctanesulfonamide



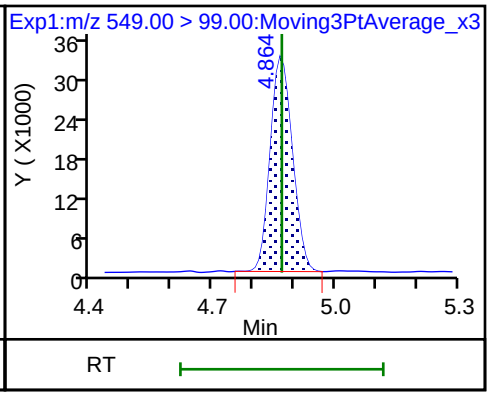

D 33 13C8 FOSA



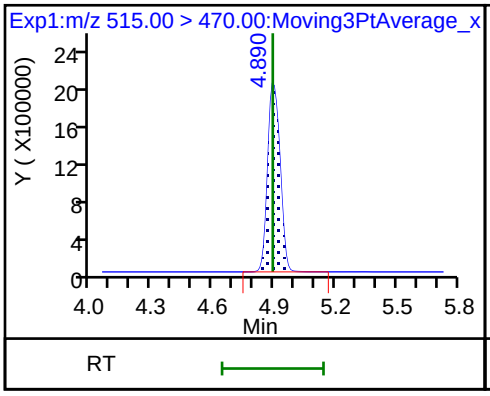

35 Perfluorononanesulfonic acid



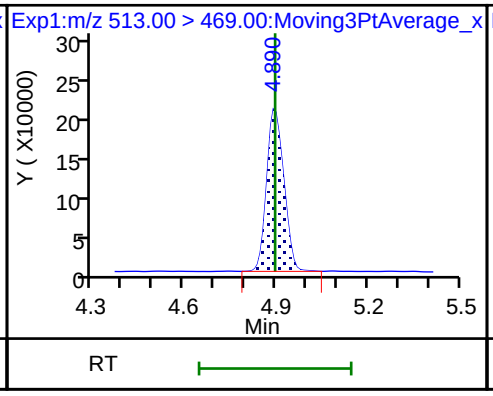

35 Perfluorononanesulfonic acid



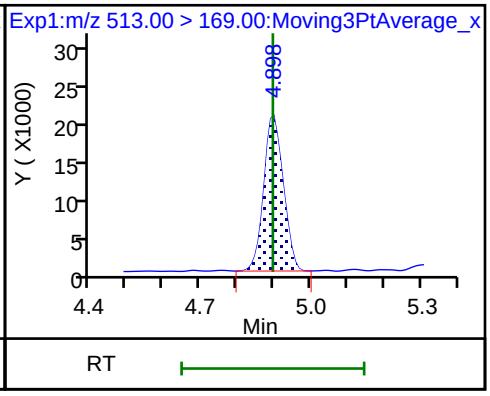

D 39 13C2 PFDA



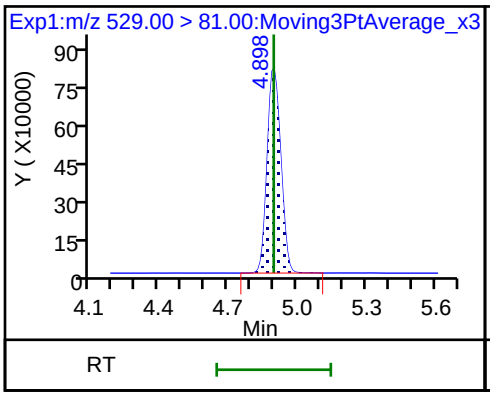

37 Perfluorodecanoic acid



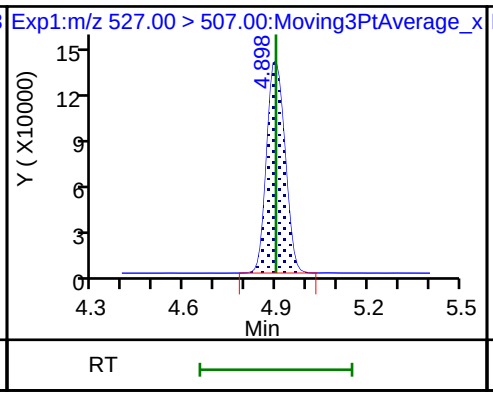

37 Perfluorodecanoic acid



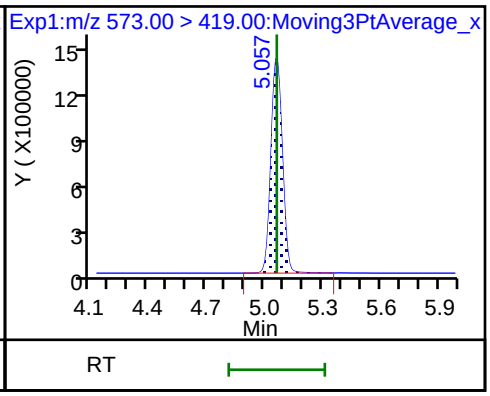
D 38 M2-8:2 FTS



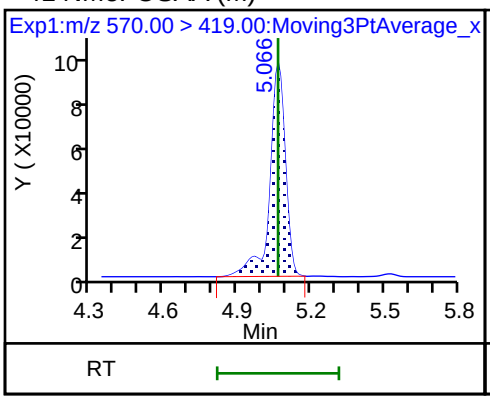

36 8:2 FTS



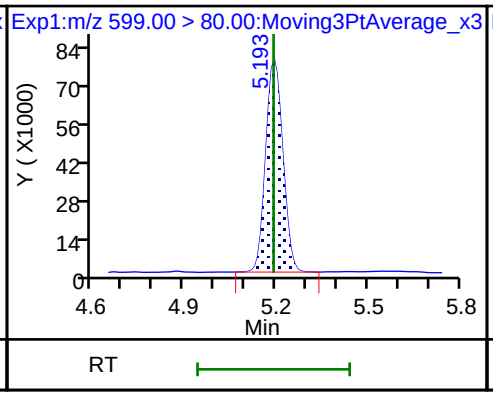

D 40 d3-NMeFOSAA



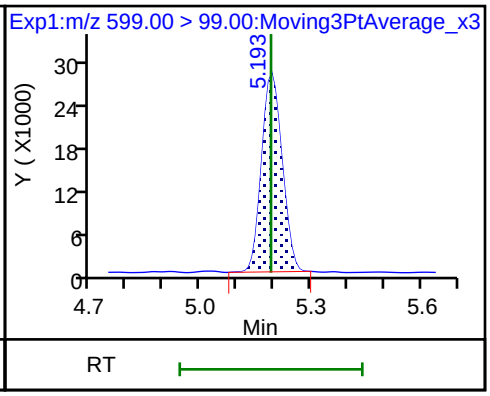

41 NMeFOSAA (M)



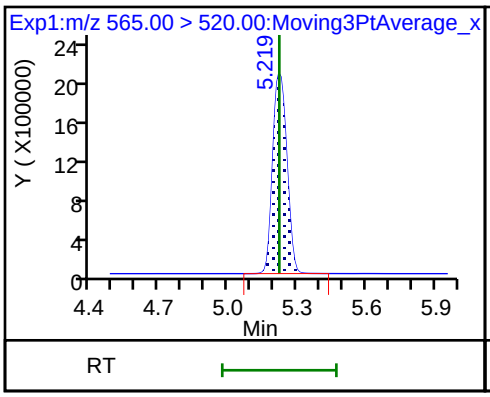

42 Perfluorodecanesulfonic acid



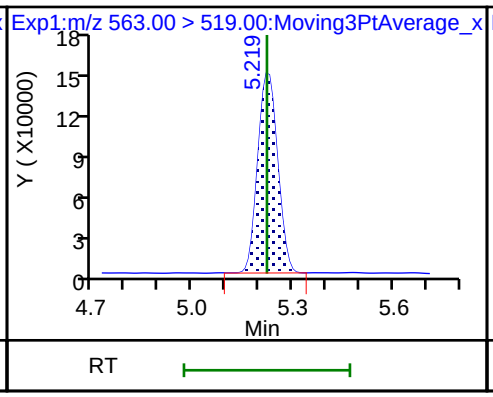

42 Perfluorodecanesulfonic acid



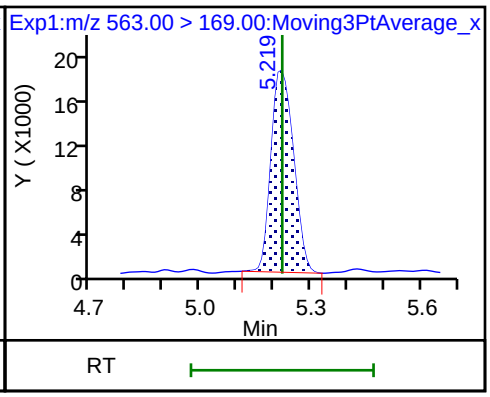

D 43 13C2 PFUnA



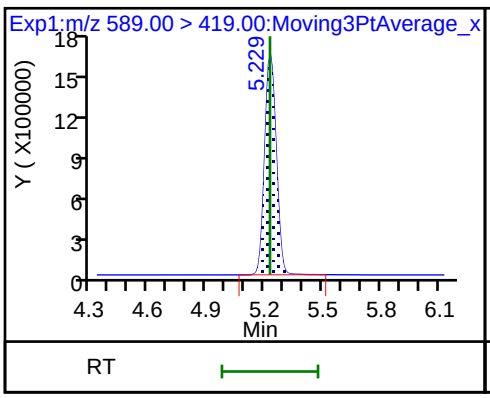

45 Perfluoroundecanoic acid



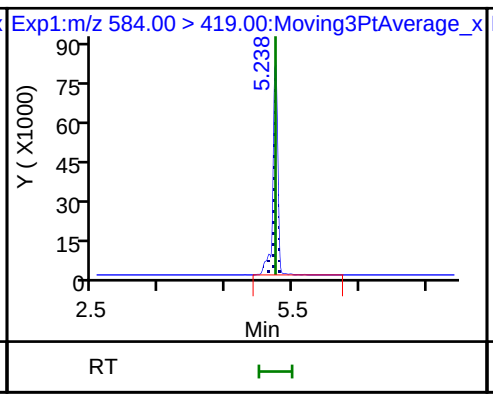

45 Perfluoroundecanoic acid



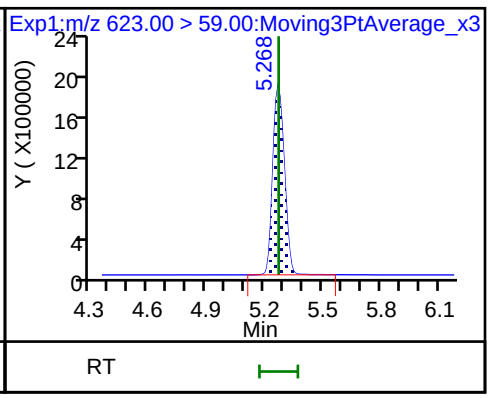

D 44 d5-NEtFOSAA



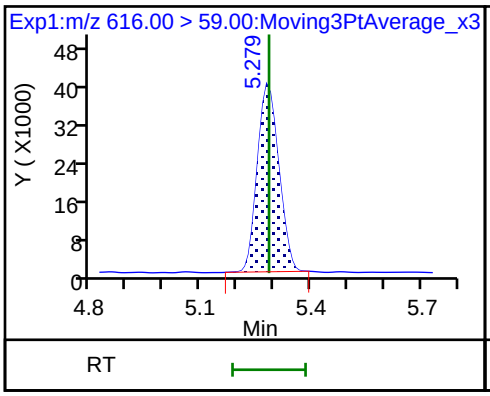

46 NEtFOSA



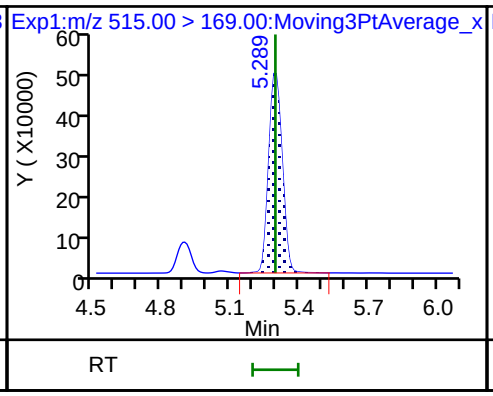

D 47 d7-N-MeFOSE-M



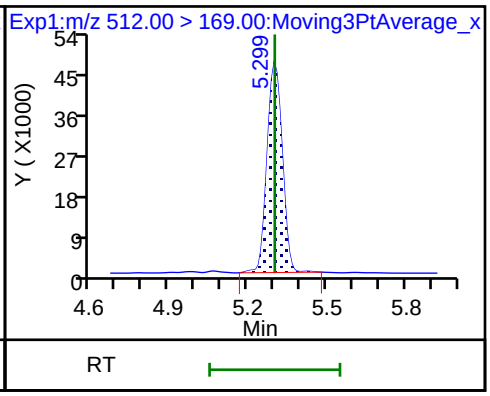
48 N-MeFOSE-M



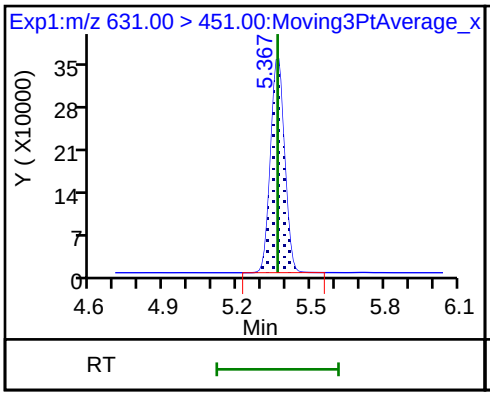

D 49 d-N-MeFOSA-M



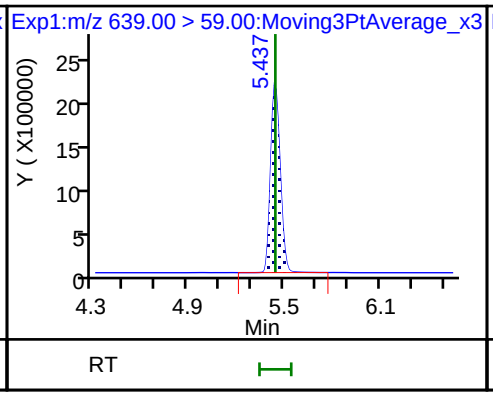

50 NMeFOSA



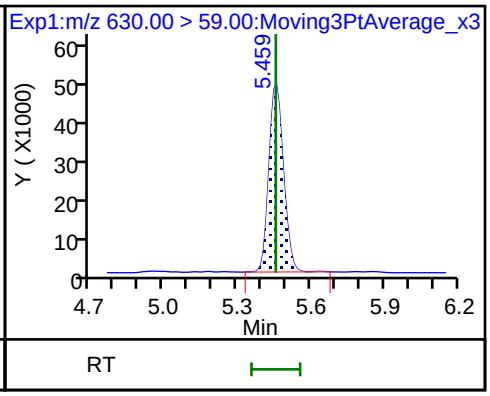

51 11ClFOS



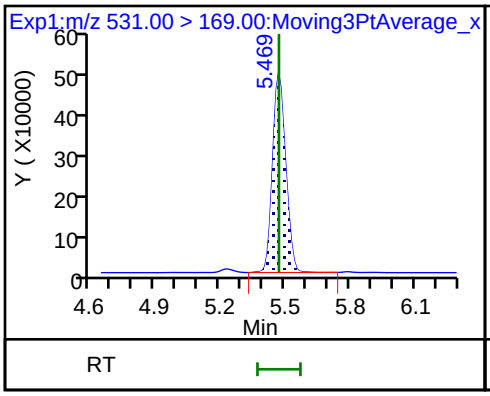

D 52 d9-N-EtFOSE-M



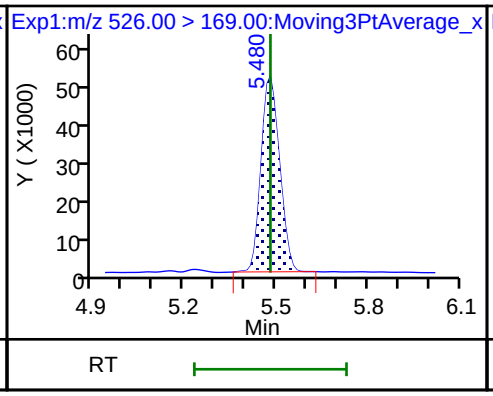

53 N-EtFOSE-M



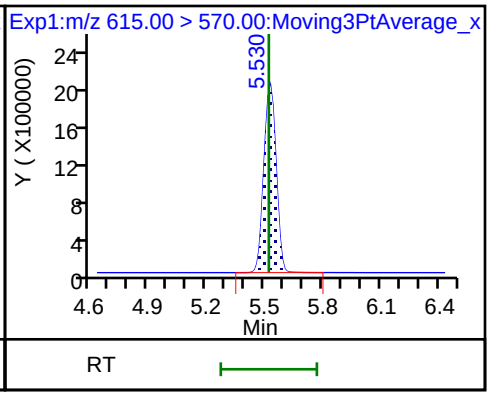

D 54 d-N-EtFOSA-M



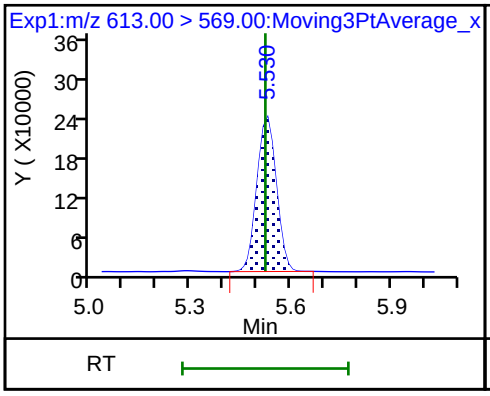

55 N-EtFOSA-M



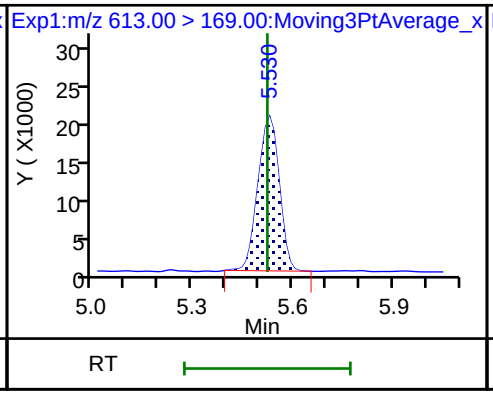

D 56 13C2 PFDoA



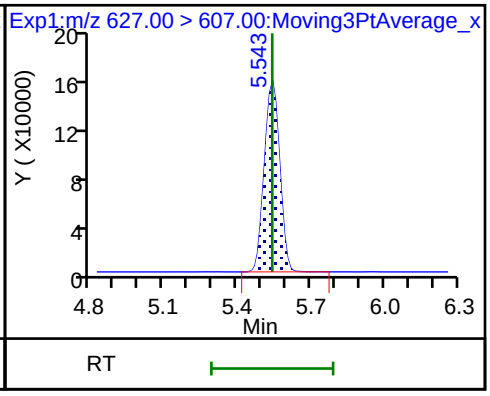

57 Perfluorododecanoic acid



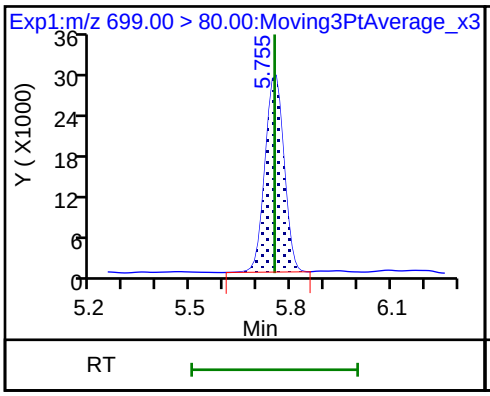

57 Perfluorododecanoic acid



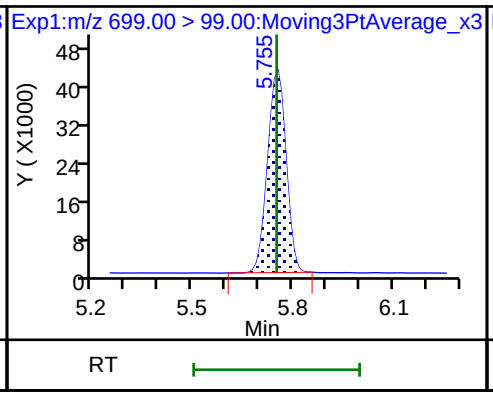

58 10:2 FTS



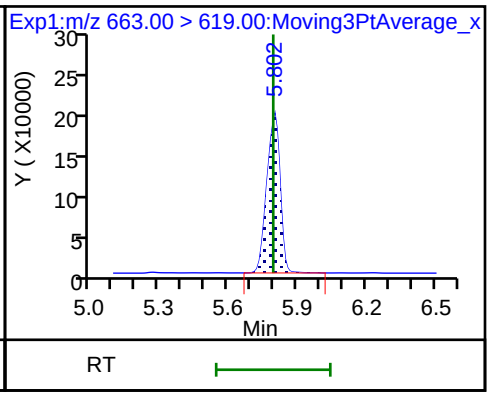
59 PFDoS



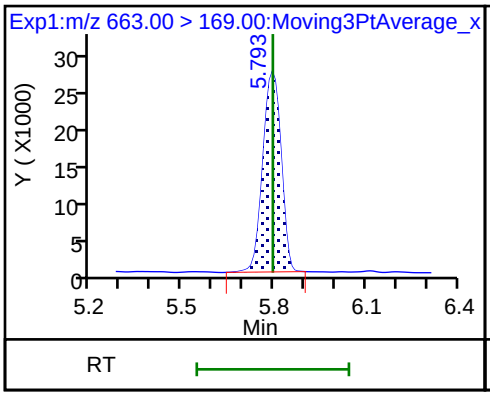

59 PFDoS



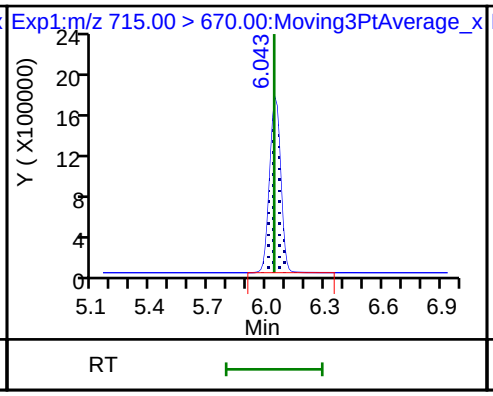

60 Perfluorotridecanoic acid



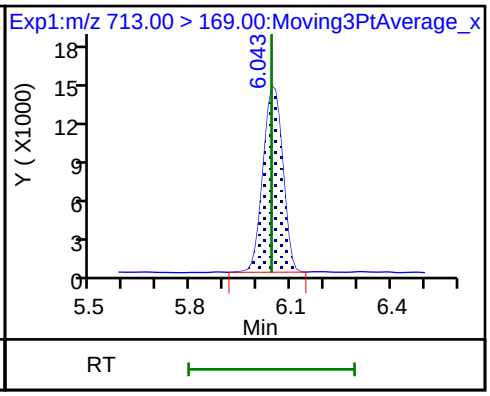

60 Perfluorotridecanoic acid



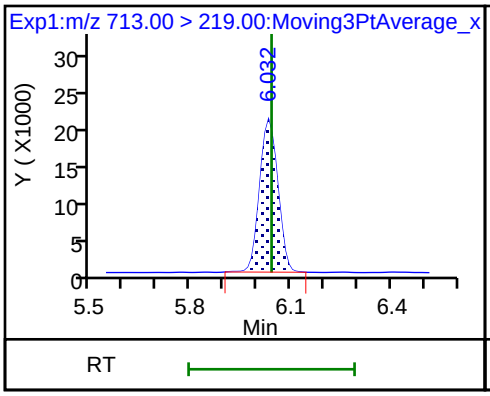

D 61 13C2 PFTeDA



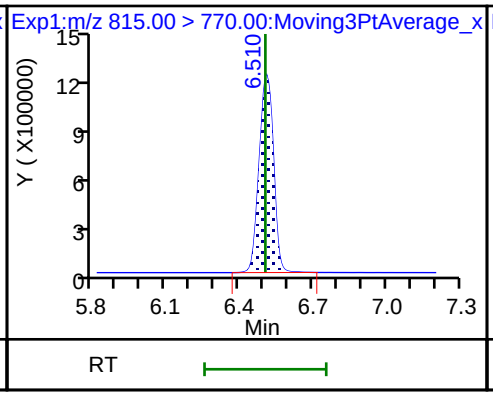

62 Perfluorotetradecanoic acid



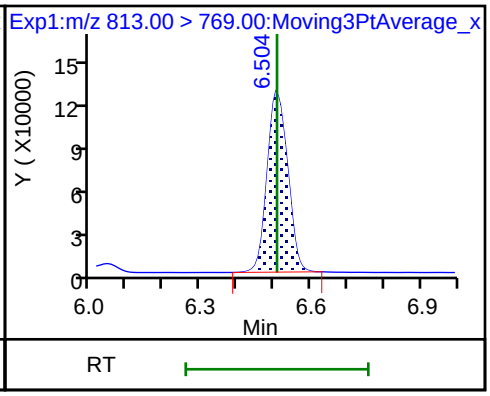

62 Perfluorotetradecanoic acid



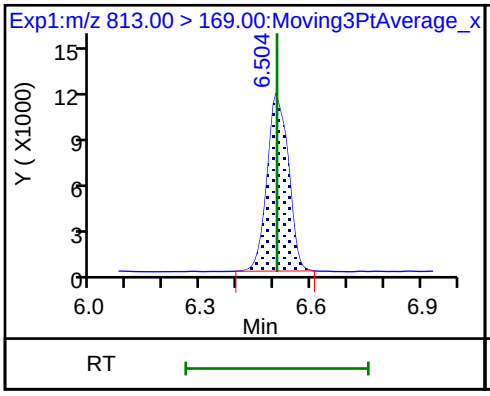

D 64 13C2 PFHxDA



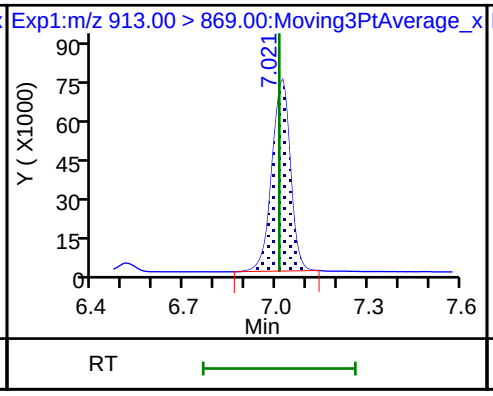

63 Perfluorohexadecanoic acid



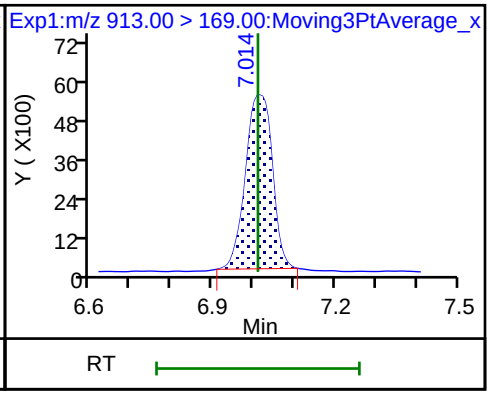

63 Perfluorohexadecanoic acid




65 Perfluorooctadecanoic acid




65 Perfluorooctadecanoic acid



Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

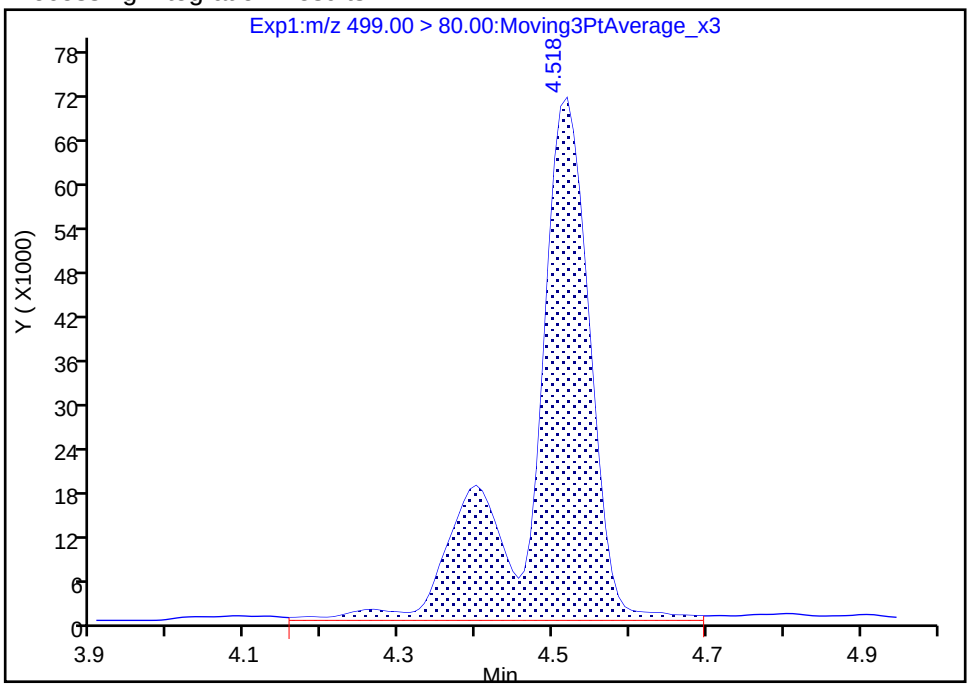
Data File: \\chromfs\Sacramento\ChromData\A18\20200825-102078.b\2020.08.25_A18_ICAL_A_013.d
Injection Date: 25-Aug-2020 17:01:30 Instrument ID: A18
Lims ID: IC STD 3
Client ID:
Operator ID: TAISACA18-PC\A-18 ALS Bottle#: 8 Worklist Smp#: 4
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFAS_A18V2 Limit Group: LC PFC ICAL
Column: Gemini C18 3um 3mm x 50 mm ( 3.00mm) Detector EXP1

## 29 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 1

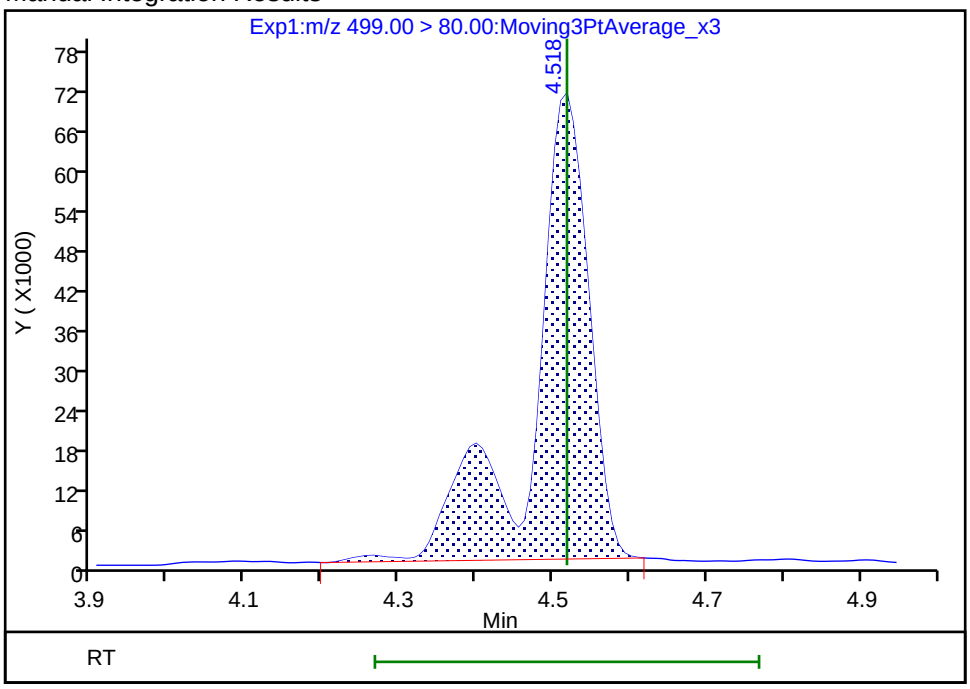
Processing Integration Results

RT: 4.52
Area: 383257
Amount: 0.247377
Amount Units: ng/ml




Manual Integration Results

RT: 4.52
Area: 359317
Amount: 0.225272
Amount Units: ng/ml




Reviewer: fariasa, 26-Aug-2020 06:02:29
Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

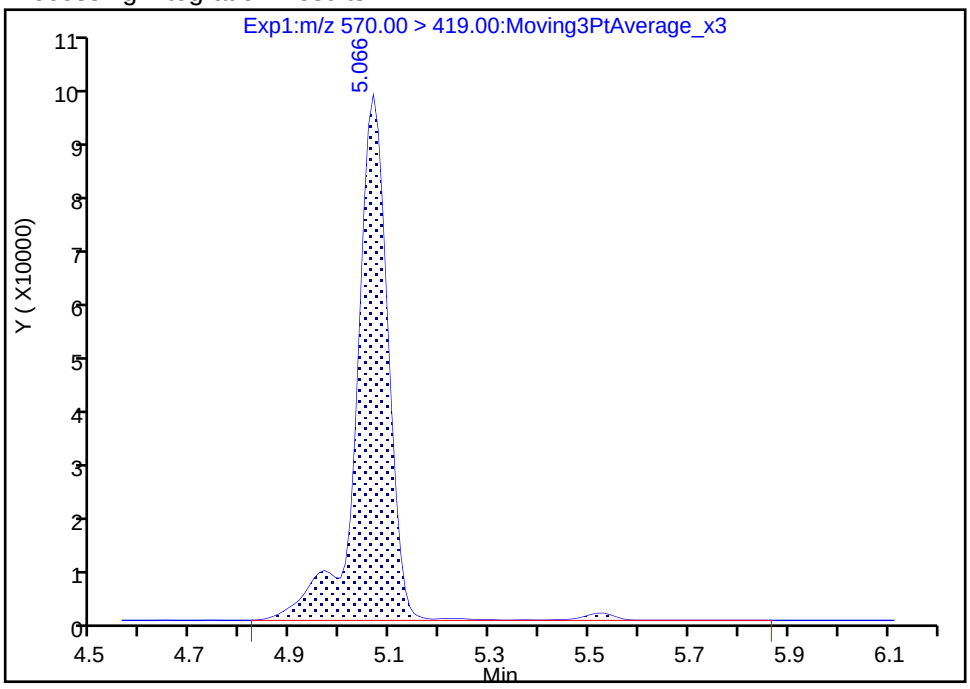
Data File: \\chromfs\Sacramento\ChromData\A18\20200825-102078.b\2020.08.25_A18_ICAL_A_013.d
Injection Date: 25-Aug-2020 17:01:30 Instrument ID: A18
Lims ID: IC STD 3
Client ID:
Operator ID: TAISACA18-PC\A-18 ALS Bottle#: 8 Worklist Smp#: 4
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFAS_A18V2 Limit Group: LC PFC ICAL
Column: Gemini C18 3um 3mm x 50 mm ( 3.00mm) Detector EXP1

## 41 NMeFOSAA, CAS: 2355-31-9

Signal: 1

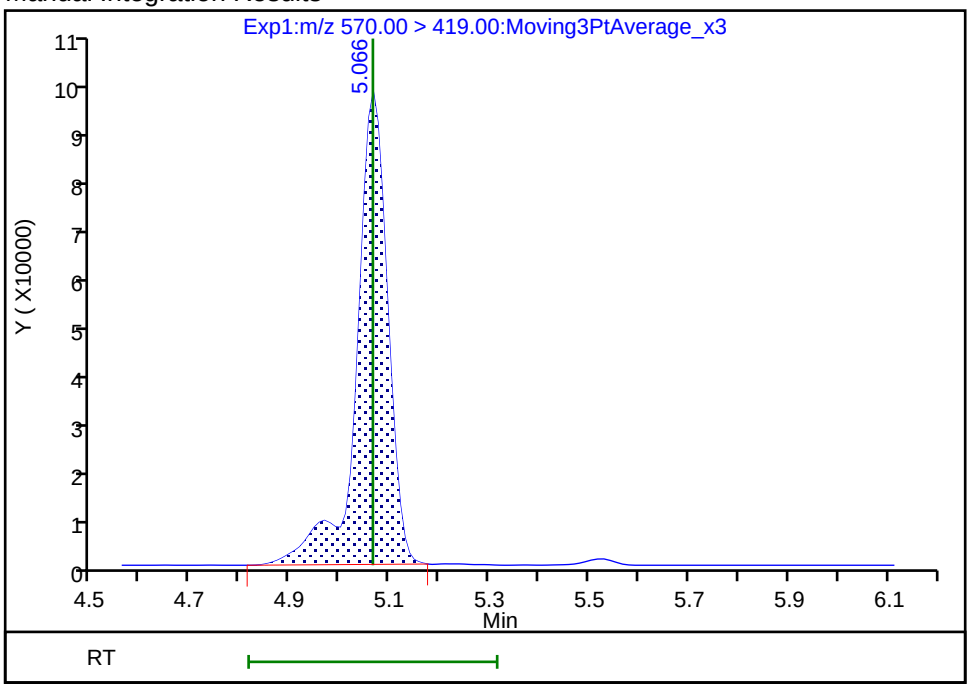
Processing Integration Results

RT: 5.07
Area: 412005
Amount: 0.238682
Amount Units: ng/ml




Manual Integration Results

RT: 5.07
Area: 402573
Amount: 0.233949
Amount Units: ng/ml




Reviewer: fariasa, 26-Aug-2020 06:02:44
Audit Action: Manually Integrated Audit Reason: Baseline

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\A18\20200825-102078.b\2020.08.25_A18_ICAL_A_014.d
Lims ID: IC STD 4
Client ID:
Sample Type: ICIS Calib Level: 4
Inject. Date: 25-Aug-2020 17:10:36 ALS Bottle#: 9 Worklist Smp#: 5
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Sample Info: CAL STD 4 (30)
Misc. Info.: Plate: 1 Rack: 1
Operator ID: TAISACA18-PC\A-18 Instrument ID: A18
Sublist: chrom-PFAS_A18V2*sub1

Method: \\chromfs\Sacramento\ChromData\A18\20200825-102078.b\PFAS_A18V2.m
Limit Group: LC PFC ICAL
Last Update: 26-Aug-2020 10:42:45 Calib Date: 25-Aug-2020 17:37:57
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\A18\20200825-102078.b\2020.08.25_A18_ICAL_A_017.d

Column 1 : Gemini C18 3um 3mm x 50 mm ( 3.00 mm) Det: EXP1
Process Host: CTX1029

First Level Reviewer: fariasa Date: 26-Aug-2020 05:41:45
Ratio Calibration: Average of Initial Calibration

| Signal | RT | EXP RT | DLT RT | REL RT | Response | Amount ng/ml | Ratio(Limits) | %Rec | S/N | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| D 1 13C4 PFBA | | | | | | | | | | |
| 217.00 > 172.00 | 2.573 | 2.577 | -0.004 | 0.618 | 16673548 | 2.49 | | 99.6 | 8578 | |
| 2 Perfluorobutanoic acid | | | | | | | | | | |
| 212.90 > 169.00 | 2.573 | 2.580 | -0.007 | 1.000 | 6131943 | 1.06 | | 106 | 244 | |
| 5 Perfluoropentanoic acid | | | | | | | | | | |
| 262.90 > 219.00 | 2.940 | 2.941 | -0.001 | 1.000 | 5201851 | 1.01 | | 101 | 259 | |
| D 4 13C5 PFPeA | | | | | | | | | | |
| 267.90 > 223.00 | 2.940 | 2.941 | -0.001 | 0.706 | 12887366 | 2.47 | | 98.9 | 5321 | |
| D 9 13C3 PFBS | | | | | | | | | | |
| 301.90 > 80.00 | 2.973 | 2.977 | -0.004 | 0.714 | 9789648 | 2.39 | | 103 | 4378 | |
| 6 Perfluorobutanesulfonic acid | | | | | | | | | | |
| 298.90 > 80.00 | 2.985 | 2.982 | 0.003 | 1.004 | 3977334 | 0.9354 | Target=2.30 | 106 | 849 | |
| 298.90 > 99.00 | 2.985 | 2.982 | 0.003 | 1.004 | 1710548 | | 2.33(1.15-3.45) | 106 | 672 | |
| D 7 M2-4:2 FTS | | | | | | | | | | |
| 329.00 > 81.00 | 3.288 | 3.288 | 0.0 | 0.790 | 2262460 | 2.29 | | 98.3 | 979 | |
| 8 4:2 FTS | | | | | | | | | | |
| 327.00 > 307.00 | 3.288 | 3.288 | 0.0 | 1.000 | 2323852 | 1.06 | | 113 | 8679 | |
| 10 Perfluorohexanoic acid | | | | | | | | | | |
| 313.00 > 269.00 | 3.341 | 3.334 | 0.007 | 1.000 | 5163146 | 1.06 | Target=13.78 | 106 | 424 | |
| 313.00 > 119.00 | 3.341 | 3.334 | 0.007 | 1.000 | 377402 | | 13.68(6.89-20.66) | 106 | 292 | |
| D 11 13C2 PFHxA | | | | | | | | | | |
| 315.00 > 270.00 | 3.341 | 3.334 | 0.007 | 0.802 | 12673553 | 2.44 | | 97.5 | 5304 | |
| 12 Perfluoropentanesulfonic acid | | | | | | | | | | |
| 349.00 > 80.00 | 3.352 | 3.349 | 0.003 | 1.127 | 3300035 | 0.9889 | Target=3.02 | 105 | 748 | |
| 349.00 > 99.00 | 3.352 | 3.349 | 0.003 | 1.127 | 1090992 | | 3.02(1.51-4.52) | 105 | 811 | |
| 13 HPFO-DA | | | | | | | | | | |
| 285.00 > 169.00 | 3.469 | 3.463 | 0.006 | 1.000 | 1068621 | 1.08 | | 108 | 3554 | |

| Signal | RT | EXP RT | DLT RT | REL RT | Response | Amount ng/ml | Ratio(Limits) | %Rec | S/N | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| D 14 13C3 HFPO-DA | | | | | | | | | | |
| 287.00 > 169.00 | 3.469 | 3.463 | 0.006 | 0.833 | 2536511 | 2.38 | | 95.4 | 5125 | |
| 16 Perfluoroheptanoic acid | | | | | | | | | | |
| 363.00 > 319.00 | 3.750 | 3.750 | 0.0 | 1.000 | 4537270 | 1.02 | Target=3.84 | 102 | 570 | |
| 363.00 > 169.00 | 3.750 | 3.750 | 0.0 | 1.000 | 1175771 | | 3.86(1.92-5.76) | 102 | 767 | |
| D 18 13C4 PFHpA | | | | | | | | | | |
| 367.00 > 322.00 | 3.750 | 3.750 | 0.0 | 0.901 | 11023105 | 2.48 | | 99.3 | 8595 | |
| D 17 18O2 PFHxS | | | | | | | | | | |
| 403.00 > 84.00 | 3.760 | 3.752 | 0.008 | 0.903 | 5251864 | 2.43 | | 103 | 6737 | |
| 15 Perfluorohexanesulfonic acid | | | | | | | | | | |
| 399.00 > 80.00 | 3.760 | 3.752 | 0.008 | 1.000 | 2269071 | 0.8649 | Target=3.50 | 95.0 | 955 | |
| 399.00 > 99.00 | 3.760 | 3.752 | 0.008 | 1.000 | 673632 | | 3.37(1.75-5.25) | 95.0 | 663 | |
| 19 DONA | | | | | | | | | | |
| 377.00 > 251.00 | 3.807 | 3.800 | 0.007 | 0.841 | 14631457 | 1.04 | Target=2.42 | 111 | 6210 | |
| 377.00 > 85.00 | 3.798 | 3.800 | -0.002 | 0.839 | 5897895 | | 2.48(1.21-3.63) | 111 | 5206 | |
| D 20 M2-6:2 FTS | | | | | | | | | | |
| 429.00 > 81.00 | 4.131 | 4.127 | 0.004 | 0.992 | 2065620 | 2.50 | | 105 | 1314 | |
| 21 6:2 FTS | | | | | | | | | | |
| 427.00 > 407.00 | 4.131 | 4.127 | 0.004 | 1.000 | 1954343 | 0.9775 | | 103 | 2270 | |
| 24 Perfluoroheptanesulfonic acid | | | | | | | | | | |
| 449.00 > 80.00 | 4.148 | 4.143 | 0.005 | 0.917 | 1678911 | 1.03 | Target=4.40 | 108 | 741 | |
| 449.00 > 99.00 | 4.148 | 4.143 | 0.005 | 0.917 | 373914 | | 4.49(2.20-6.60) | 108 | 606 | |
| $ 26 13C8 PFOA | | | | | | | | | | |
| 421.00 > 376.00 | 4.156 | 4.147 | 0.009 | 0.998 | 7083297 | 2.48 | | 101 | 7081 | |
| D 25 13C4 PFOA | | | | | | | | | | |
| 417.00 > 372.00 | 4.156 | 4.150 | 0.006 | 0.998 | 10456450 | 2.47 | | 98.9 | 5364 | |
| 22 Perfluorooctanoic acid | | | | | | | | | | |
| 413.00 > 369.00 | 4.156 | 4.150 | 0.006 | 1.000 | 4439056 | 1.04 | Target=2.94 | 104 | 848 | |
| 413.00 > 169.00 | 4.156 | 4.150 | 0.006 | 1.000 | 1429845 | | 3.10(1.47-4.41) | 104 | 1917 | |
| * 23 13C2 PFOA | | | | | | | | | | |
| 415.00 > 370.00 | 4.164 | 4.151 | 0.013 | | 10564097 | 2.50 | | | 5935 | |
| $ 28 13C8 PFOS | | | | | | | | | | |
| 507.00 > 99.00 | 4.518 | 4.514 | 0.004 | 1.085 | 1087755 | 2.38 | | 99.5 | 3500 | |
| D 27 13C4 PFOS | | | | | | | | | | |
| 503.00 > 80.00 | 4.526 | 4.516 | 0.010 | 1.087 | 3501137 | 2.39 | | 100 | 1374 | |
| 29 Perfluorooctanesulfonic acid | | | | | | | | | | M |
| 499.00 > 80.00 | 4.526 | 4.518 | 0.008 | 1.000 | 1484922 | 0.9793 | Target=4.53 | 106 | 386 | M |
| 499.00 > 99.00 | 4.526 | 4.518 | 0.008 | 1.000 | 313496 | | 4.74(2.26-6.79) | 106 | 470 | |
| 31 Perfluorononanoic acid | | | | | | | | | | |
| 463.00 > 419.00 | 4.542 | 4.537 | 0.005 | 1.000 | 3545158 | 1.09 | Target=8.97 | 109 | 581 | |
| 463.00 > 169.00 | 4.542 | 4.537 | 0.005 | 1.000 | 382752 | | 9.26(4.48-13.45) | 109 | 481 | |
| D 30 13C5 PFNA | | | | | | | | | | |
| 468.00 > 423.00 | 4.542 | 4.533 | 0.009 | 1.091 | 8480054 | 2.49 | | 99.6 | 5263 | |
| 32 9ClFOS | | | | | | | | | | |
| 531.00 > 351.00 | 4.731 | 4.724 | 0.007 | 1.045 | 4773068 | 1.01 | | 108 | 8712 | |
| D 33 13C8 FOSA | | | | | | | | | | |
| 506.00 > 78.00 | 4.837 | 4.830 | 0.007 | 1.162 | 5841724 | 2.47 | | 98.9 | 3968 | |

| Signal | RT | EXP RT | DLT RT | REL RT | Response | Amount ng/ml | Ratio(Limits) | %Rec | S/N | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| 34 Perfluorooctanesulfonamide | | | | | | | | | | |
| 498.00 > 78.00 | 4.837 | 4.830 | 0.007 | 1.000 | 2305329 | 1.06 | | 106 | 4979 | |
| 35 Perfluorononanesulfonic acid | | | | | | | | | | |
| 549.00 > 80.00 | 4.872 | 4.868 | 0.004 | 1.077 | 1419890 | 1.03 | Target=2.85 | 108 | 981 | |
| 549.00 > 99.00 | 4.872 | 4.868 | 0.004 | 1.077 | 519071 | | 2.74(1.43-4.28) | 108 | 1107 | |
| D 39 13C2 PFDA | | | | | | | | | | |
| 515.00 > 470.00 | 4.898 | 4.892 | 0.006 | 1.176 | 8234495 | 2.49 | | 99.6 | 11781 | |
| 37 Perfluorodecanoic acid | | | | | | | | | | |
| 513.00 > 469.00 | 4.898 | 4.896 | 0.002 | 1.000 | 3603160 | 1.13 | Target=10.16 | 113 | 1456 | |
| 513.00 > 169.00 | 4.898 | 4.896 | 0.002 | 1.000 | 375667 | | 9.59(5.08-15.24) | 113 | 219 | |
| D 38 M2-8:2 FTS | | | | | | | | | | |
| 529.00 > 81.00 | 4.908 | 4.897 | 0.011 | 1.179 | 2945635 | 2.47 | | 103 | 1605 | |
| 36 8:2 FTS | | | | | | | | | | |
| 527.00 > 507.00 | 4.908 | 4.898 | 0.010 | 1.000 | 2284820 | 1.05 | | 109 | 3838 | |
| D 40 d3-NMeFOSAA | | | | | | | | | | |
| 573.00 > 419.00 | 5.066 | 5.062 | 0.004 | 1.217 | 5374136 | 2.42 | | 96.8 | 3697 | |
| 41 NMeFOSAA | | | | | | | | | | |
| 570.00 > 419.00 | 5.075 | 5.065 | 0.010 | 1.002 | 1648495 | 1.03 | | 103 | 13563 | |
| 42 Perfluorodecanesulfonic acid | | | | | | | | | | |
| 599.00 > 80.00 | 5.193 | 5.191 | 0.002 | 1.148 | 1245321 | 1.02 | Target=2.77 | 106 | 1091 | |
| 599.00 > 99.00 | 5.193 | 5.191 | 0.002 | 1.148 | 445403 | | 2.80(1.38-4.15) | 106 | 1467 | |
| D 43 13C2 PFUnA | | | | | | | | | | |
| 565.00 > 520.00 | 5.230 | 5.221 | 0.009 | 1.256 | 8583621 | 2.62 | | 105 | 15140 | |
| 45 Perfluoroundecanoic acid | | | | | | | | | | |
| 563.00 > 519.00 | 5.221 | 5.221 | 0.0 | 0.998 | 2756370 | 1.11 | Target=8.43 | 111 | 1305 | |
| 563.00 > 169.00 | 5.230 | 5.221 | 0.009 | 1.000 | 319144 | | 8.64(4.22-12.65) | 111 | 643 | |
| D 44 d5-NEtFOSAA | | | | | | | | | | |
| 589.00 > 419.00 | 5.230 | 5.227 | 0.003 | 1.256 | 6107918 | 2.60 | | 104 | 4844 | |
| 46 NEtFOSA | | | | | | | | | | |
| 584.00 > 419.00 | 5.240 | 5.236 | 0.004 | 1.002 | 1688059 | 1.02 | | 102 | 357841 | |
| D 47 d7-N-MeFOSE-M | | | | | | | | | | |
| 623.00 > 59.00 | 5.280 | 5.272 | 0.008 | 1.268 | 6740557 | 11.5 | | 92.2 | 2121 | |
| 48 N-MeFOSE-M | | | | | | | | | | |
| 616.00 > 59.00 | 5.290 | 5.285 | 0.005 | 1.002 | 615221 | 1.06 | | 106 | 771 | |
| D 49 d-N-MeFOSA-M | | | | | | | | | | |
| 515.00 > 169.00 | 5.300 | 5.295 | 0.005 | 1.273 | 2025907 | 2.44 | | 97.6 | 59.3 | |
| 50 NMeFOSA | | | | | | | | | | |
| 512.00 > 169.00 | 5.311 | 5.301 | 0.010 | 1.002 | 907971 | 1.17 | | 117 | 571 | |
| 51 11ClFOS | | | | | | | | | | |
| 631.00 > 451.00 | 5.367 | 5.363 | 0.004 | 1.186 | 6038721 | 1.01 | | 107 | 12923 | |
| D 52 d9-N-EtFOSE-M | | | | | | | | | | |
| 639.00 > 59.00 | 5.448 | 5.443 | 0.005 | 1.308 | 8451063 | 11.8 | | 94.1 | 1398 | |
| 53 N-EtFOSE-M | | | | | | | | | | |
| 630.00 > 59.00 | 5.470 | 5.456 | 0.014 | 1.004 | 817562 | 1.13 | | 113 | 661 | |
| D 54 d-N-EtFOSA-M | | | | | | | | | | |
| 531.00 > 169.00 | 5.480 | 5.471 | 0.009 | 1.316 | 2050346 | 2.41 | | 96.5 | 283 | |

| Signal | RT | EXP RT | DLT RT | REL RT | Response | Amount ng/ml | Ratio(Limits) | %Rec | S/N | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| 55 N-EtFOSA-M | | | | | | | | | | |
| 526.00 > 169.00 | 5.491 | 5.480 | 0.011 | 1.002 | 943681 | 1.09 | | 109 | 383 | |
| D 56 13C2 PFDoA | | | | | | | | | | |
| 615.00 > 570.00 | 5.530 | 5.521 | 0.009 | 1.328 | 9016643 | 2.79 | | 112 | 7887 | |
| 57 Perfluorododecanoic acid | | | | | | | | | | |
| 613.00 > 569.00 | 5.530 | 5.523 | 0.007 | 1.000 | 3749242 | 1.02 | Target=9.12 | 101 | 1446 | |
| 613.00 > 169.00 | 5.530 | 5.523 | 0.007 | 1.000 | 407481 | | 9.20(4.56-13.69) | 101 | 1023 | |
| 58 10:2 FTS | | | | | | | | | | |
| 627.00 > 607.00 | 5.543 | 5.541 | 0.002 | 1.129 | 2602419 | 1.05 | | 109 | 4137 | |
| 59 PFDoS | | | | | | | | | | |
| 699.00 > 80.00 | 5.755 | 5.751 | 0.004 | 1.272 | 469292 | 0.9624 | Target=0.72 | 99.4 | 763 | |
| 699.00 > 99.00 | 5.755 | 5.751 | 0.004 | 1.272 | 666829 | | 0.70(0.36-1.07) | 99.4 | 2762 | |
| 60 Perfluorotridecanoic acid | | | | | | | | | | |
| 663.00 > 619.00 | 5.802 | 5.795 | 0.007 | 1.049 | 3076494 | 0.9066 | Target=6.78 | 90.7 | 1869 | |
| 663.00 > 169.00 | 5.793 | 5.795 | -0.002 | 1.048 | 527109 | | 5.84(3.39-10.17) | 90.7 | 1339 | |
| D 61 13C2 PFTeDA | | | | | | | | | | |
| 715.00 > 670.00 | 6.053 | 6.038 | 0.015 | 1.454 | 6734824 | 2.53 | | 101 | 9361 | |
| 62 Perfluorotetradecanoic acid | | | | | | | | | | |
| 713.00 > 169.00 | 6.053 | 6.041 | 0.012 | 1.000 | 218083 | 0.9593 | Target=0.85 | 95.8 | 867 | |
| 713.00 > 219.00 | 6.032 | 6.041 | -0.009 | 0.997 | 265748 | | 0.82(0.43-1.28) | 95.8 | 1526 | |
| 63 Perfluorohexadecanoic acid | | | | | | | | | | |
| 813.00 > 769.00 | 6.510 | 6.507 | 0.003 | 1.000 | 1683662 | 1.05 | Target=10.21 | 105 | 1116 | |
| 813.00 > 169.00 | 6.504 | 6.507 | -0.003 | 0.999 | 182226 | | 9.24(5.11-15.32) | 105 | 1173 | |
| D 64 13C2 PFHxDA | | | | | | | | | | |
| 815.00 > 770.00 | 6.510 | 6.505 | 0.005 | 1.563 | 4450584 | 2.28 | | 91.2 | 5484 | |
| 65 Perfluorooctadecanoic acid | | | | | | | | | | |
| 913.00 > 869.00 | 7.007 | 7.009 | -0.002 | 1.076 | 1378512 | 1.17 | Target=12.45 | 117 | 1243 | |
| 913.00 > 169.00 | 7.001 | 7.009 | -0.008 | 1.075 | 111893 | | 12.32(6.22-18.67) | 117 | 1035 | |

## QC Flag Legend

Review Flags

M - Manually Integrated

## Reagents:

LCPFC_LL4_00030 Amount Added: 1.00 Units: mL

Report Date: 26-Aug-2020 10:42:46 Chrom Revision: 2.3 20-Aug-2020 13:57:12

Eurofins TestAmerica, Sacramento

Data File: \\chromfs\Sacramento\ChromData\A18\20200825-102078.b\2020.08.25_A18_ICAL_A_014.d

Injection Date: 25-Aug-2020 17:10:36 Instrument ID: A18

Lims ID: IC STD 4

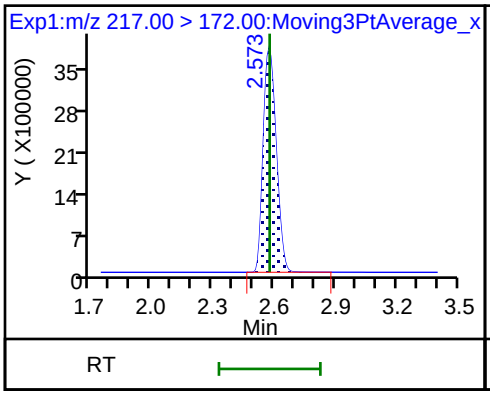
Client ID:

Operator ID: TAISACA18-PC\A-18 ALS Bottle#: 9 Worklist Smp#: 5

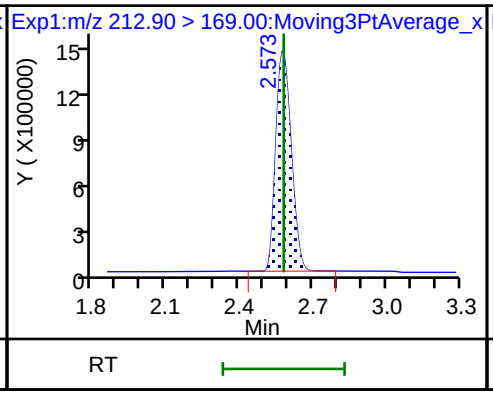
Injection Vol: 20.0 ul Dil. Factor: 1.0000

Method: PFAS_A18V2 Limit Group: LC PFC ICAL

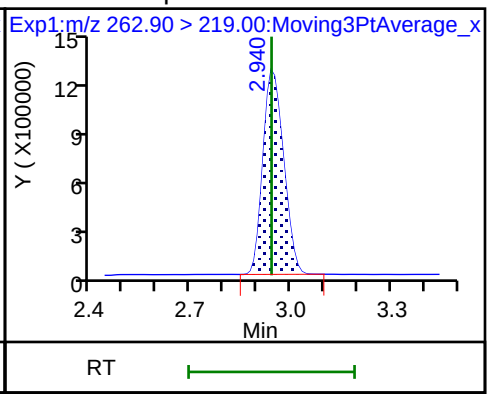
D 1 13C4 PFBA



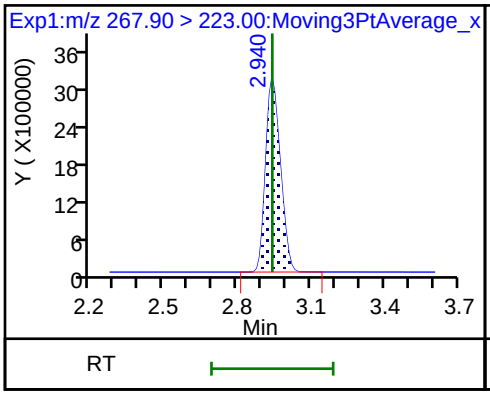

2 Perfluorobutanoic acid



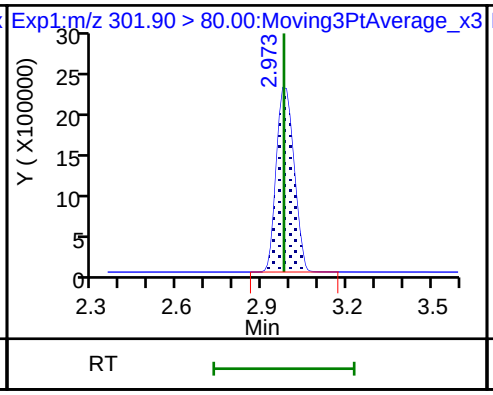

5 Perfluoropentanoic acid



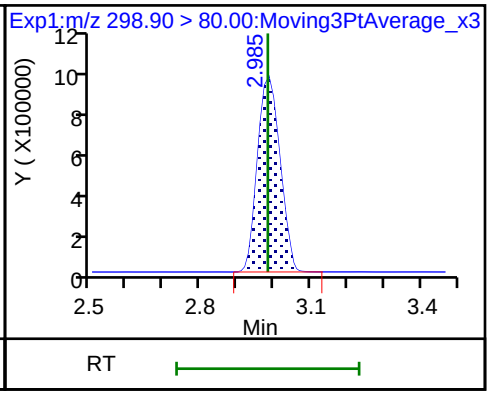

D 4 13C5 PFPeA



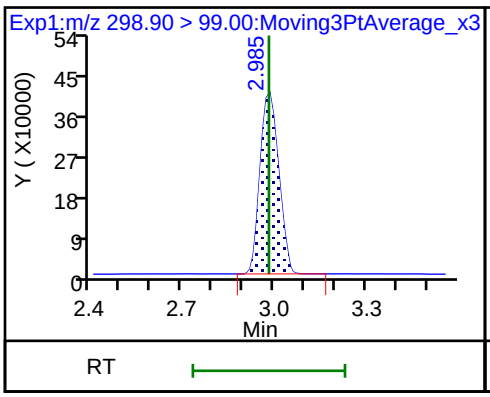

D 9 13C3 PFBS



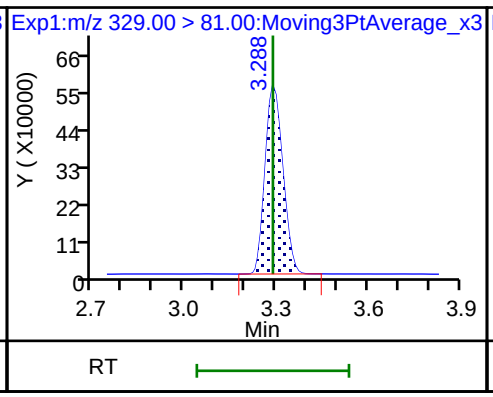

6 Perfluorobutanesulfonic acid



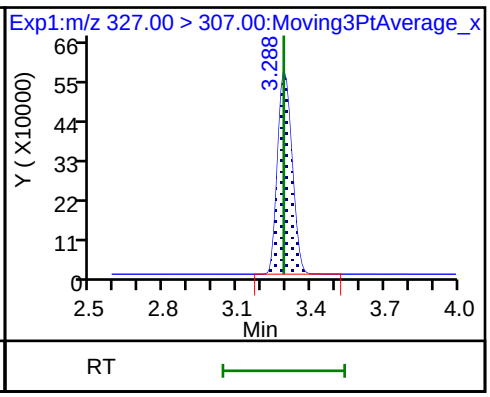

6 Perfluorobutanesulfonic acid



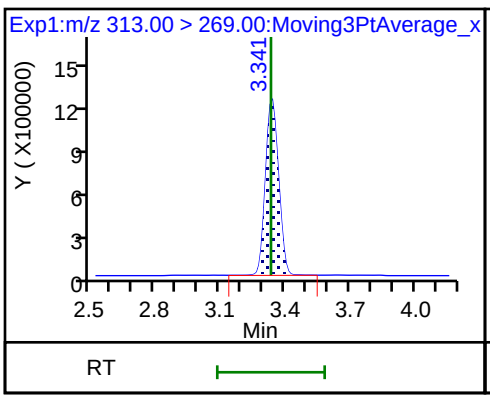

D 7 M2-4:2 FTS



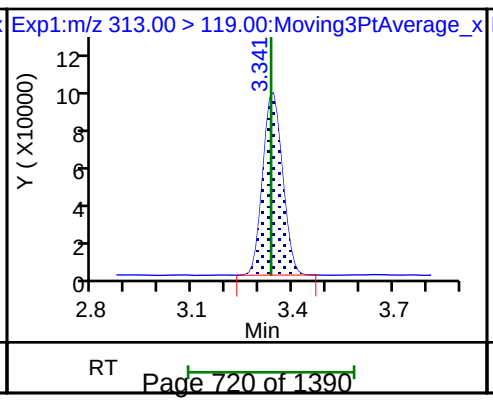

8 4:2 FTS



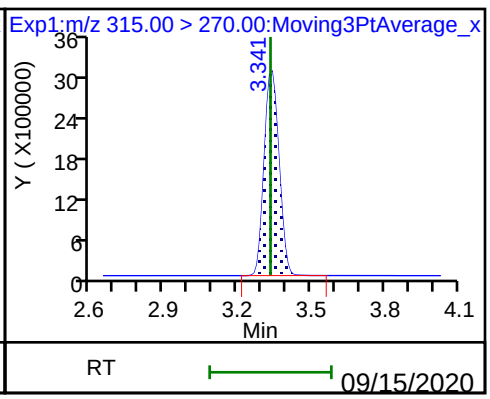

10 Perfluorohexanoic acid



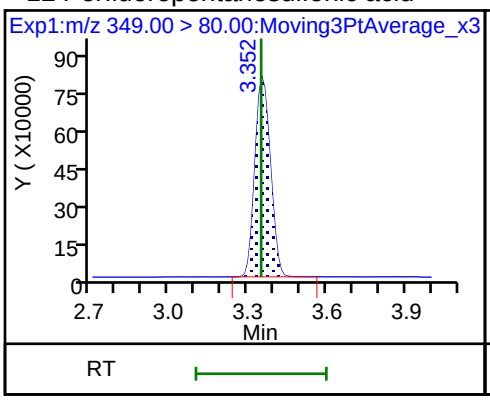

10 Perfluorohexanoic acid



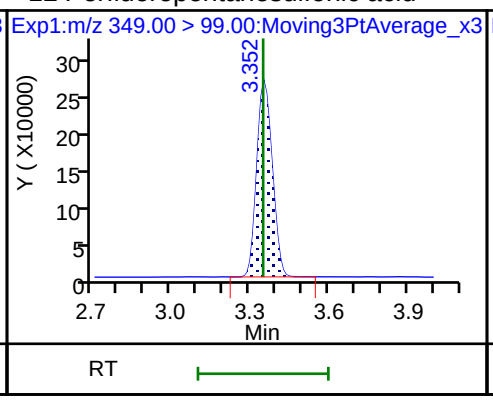

D 11 13C2 PFHxA



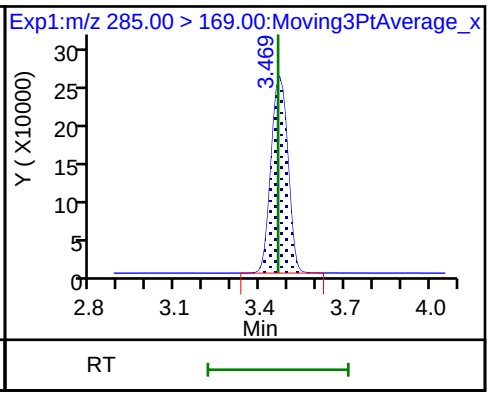
12 Perfluoropentanesulfonic acid



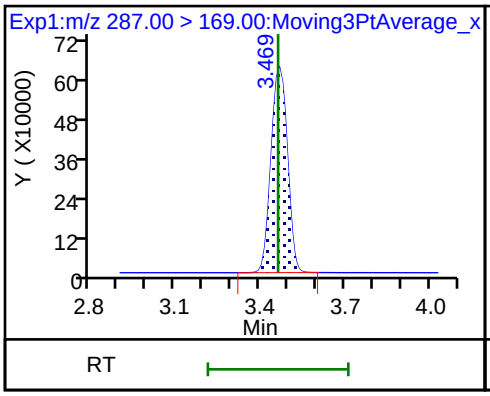

12 Perfluoropentanesulfonic acid



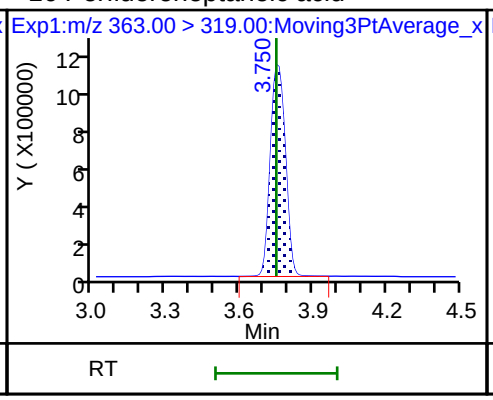

13 HPFO-DA



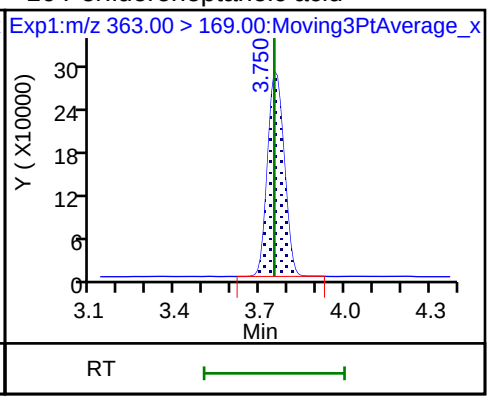

D 14 13C3 HFPO-DA



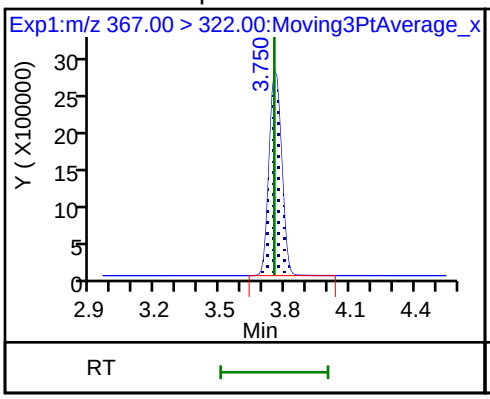

16 Perfluoroheptanoic acid



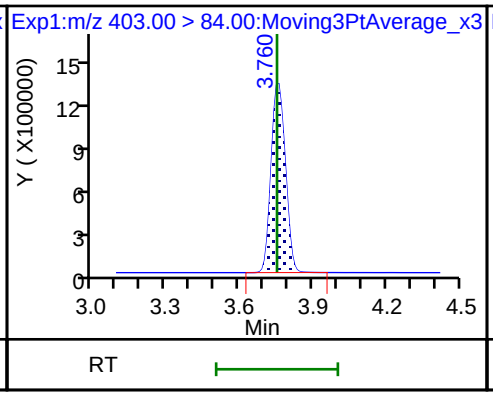

16 Perfluoroheptanoic acid



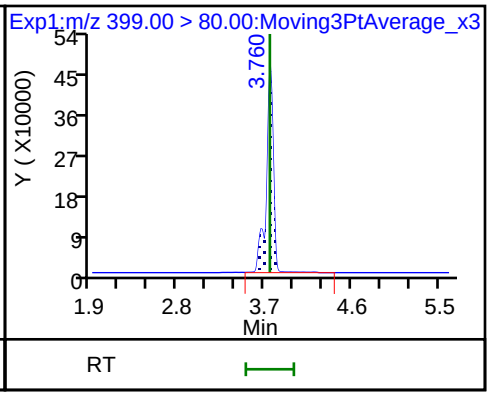

D 18 13C4 PFHpA



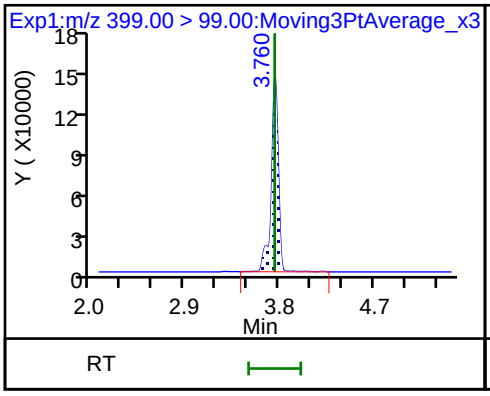

D 17 18O2 PFHxS



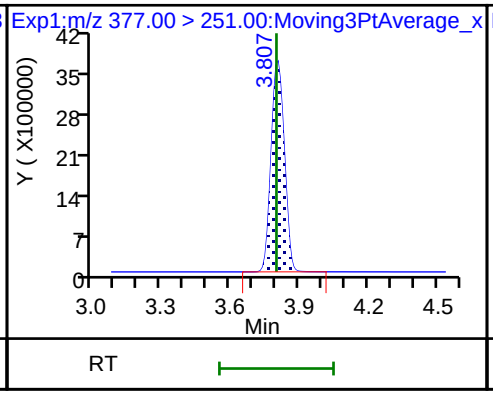

15 Perfluorohexanesulfonic acid



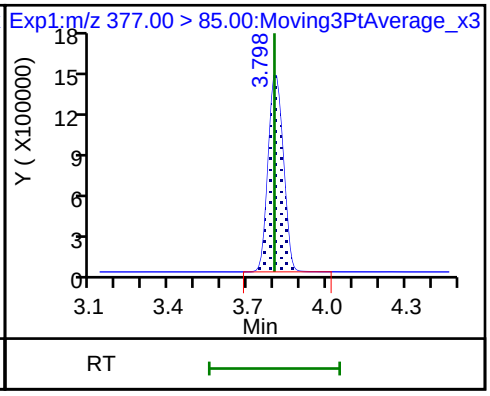

15 Perfluorohexanesulfonic acid



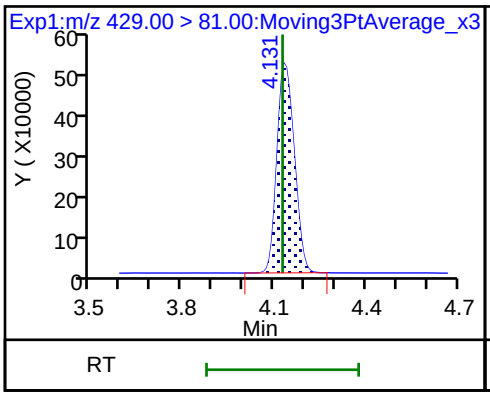

19 DONA



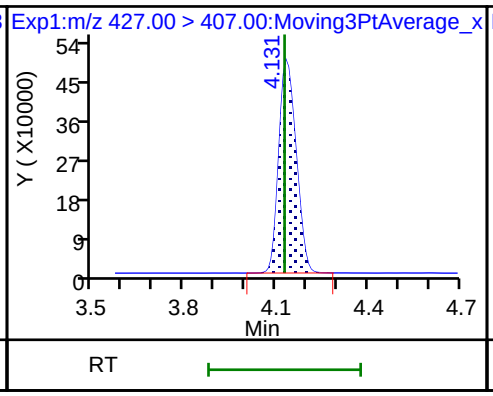

19 DONA



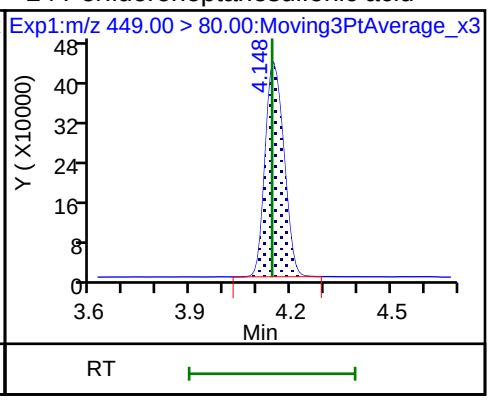
D 20 M2-6:2 FTS



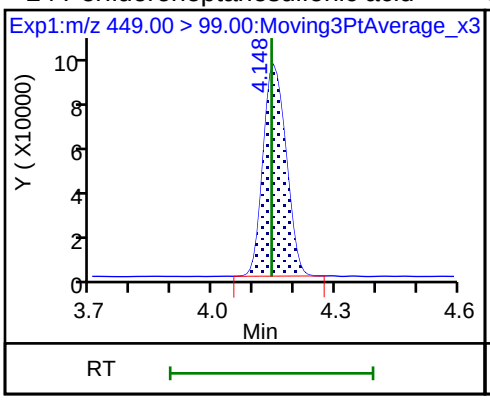

21 6:2 FTS



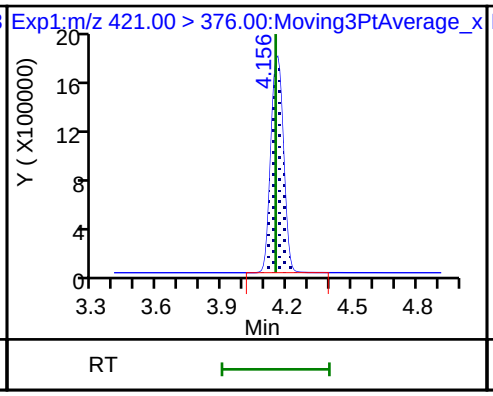

24 Perfluoroheptanesulfonic acid



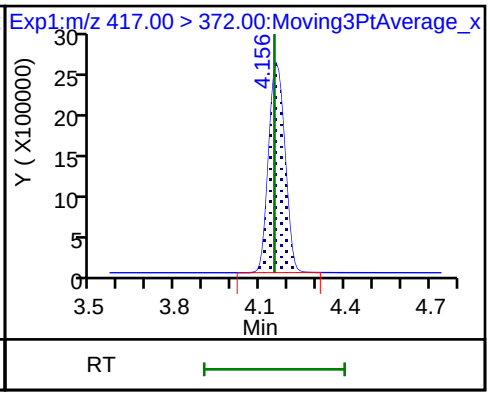

24 Perfluoroheptanesulfonic acid



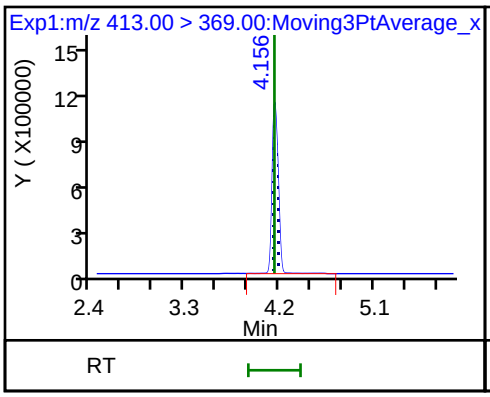

$ 26 13C8 PFOA



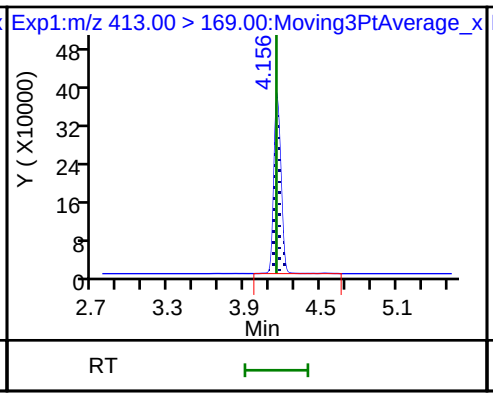

D 25 13C4 PFOA



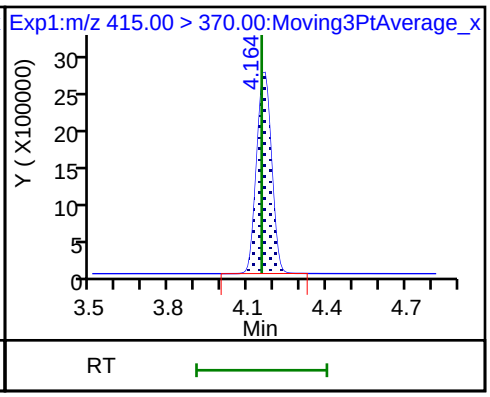

22 Perfluorooctanoic acid



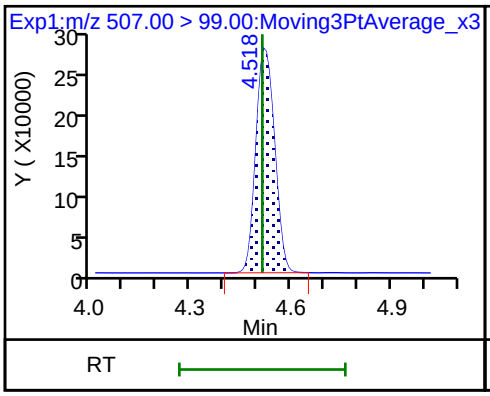

22 Perfluorooctanoic acid



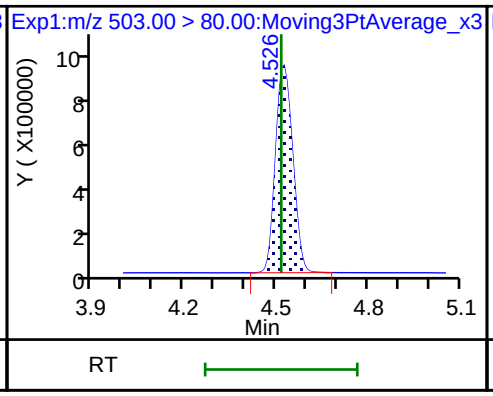

* 23 13C2 PFOA



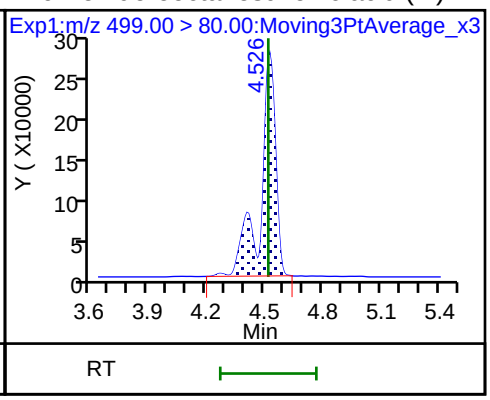

$ 28 13C8 PFOS



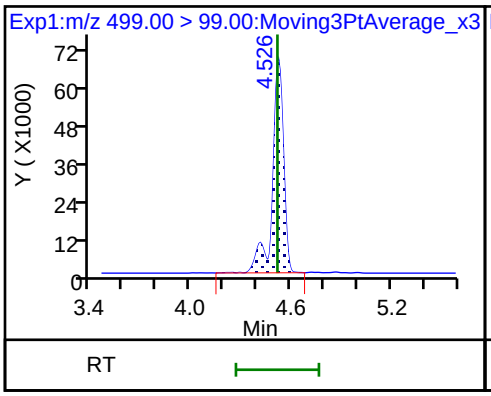

D 27 13C4 PFOS



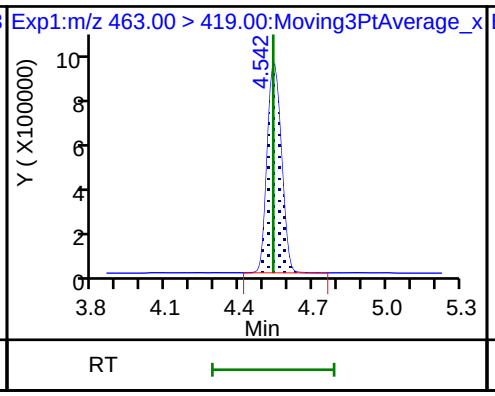

29 Perfluorooctanesulfonic acid (M)



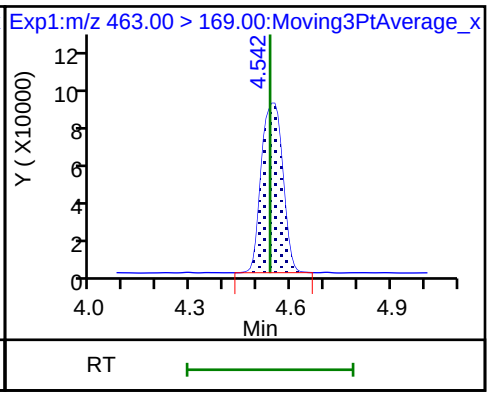
29 Perfluorooctanesulfonic acid



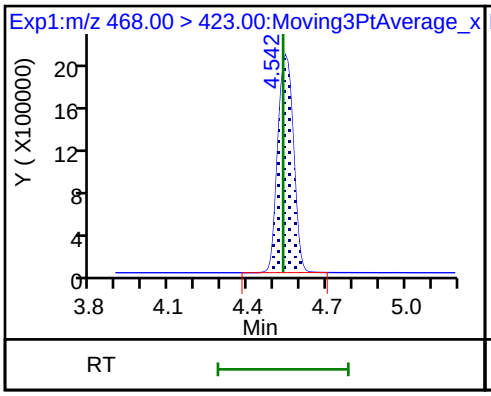

31 Perfluorononanoic acid



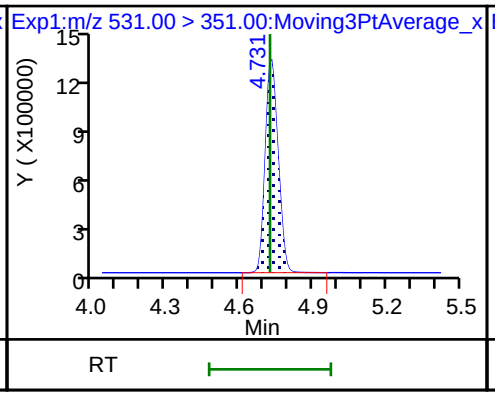

31 Perfluorononanoic acid



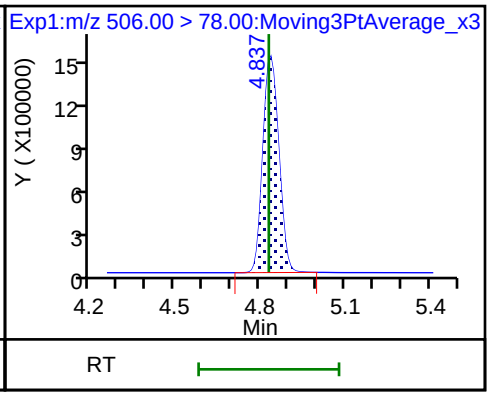

D 30 13C5 PFNA



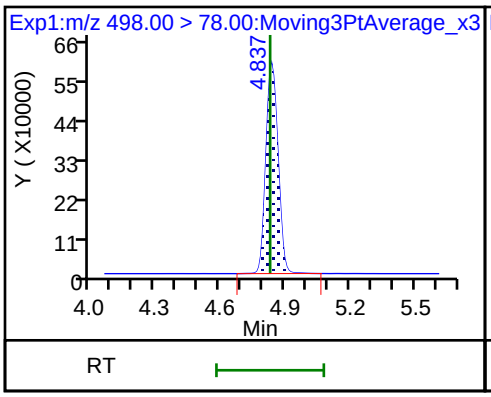

32 9ClFOS



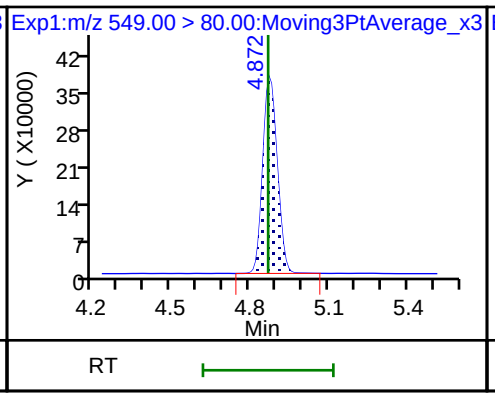

D 33 13C8 FOSA



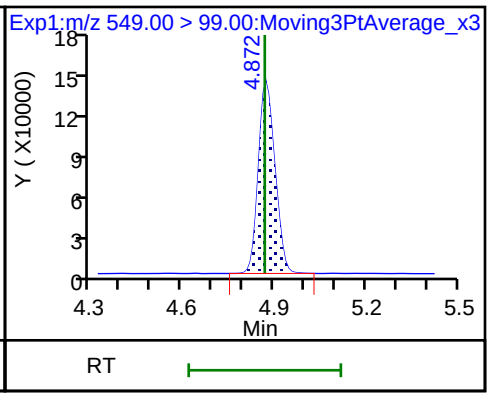

34 Perfluorooctanesulfonamide



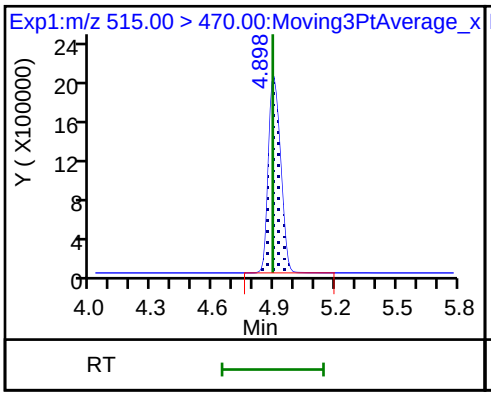

35 Perfluorononanesulfonic acid



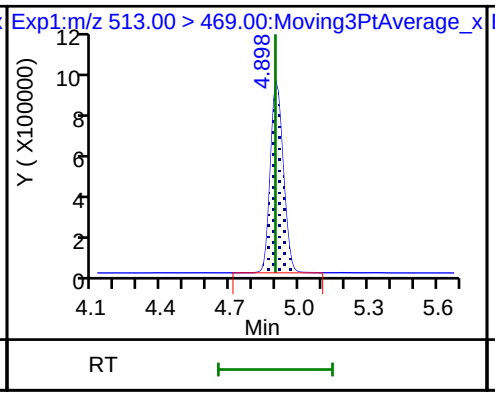

35 Perfluorononanesulfonic acid



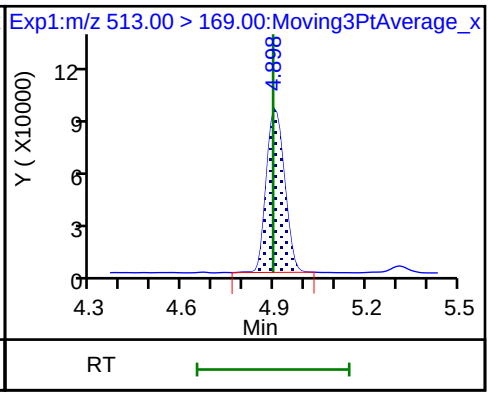

D 39 13C2 PFDA



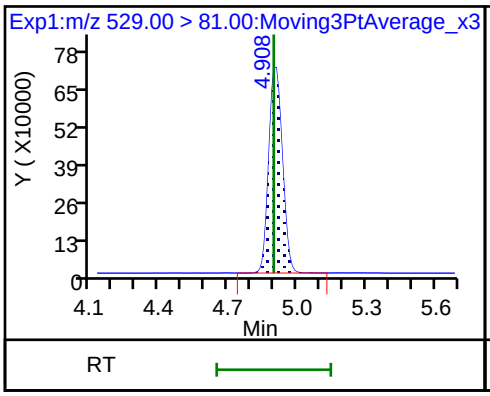

37 Perfluorodecanoic acid



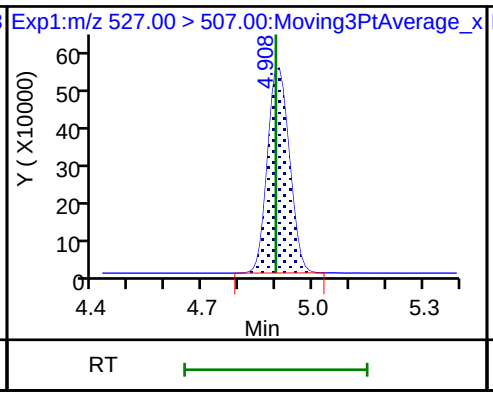

37 Perfluorodecanoic acid



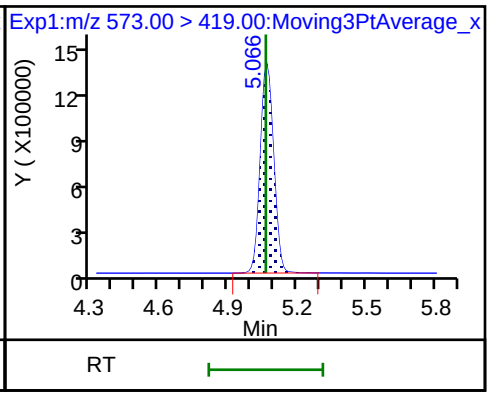
D 38 M2-8:2 FTS



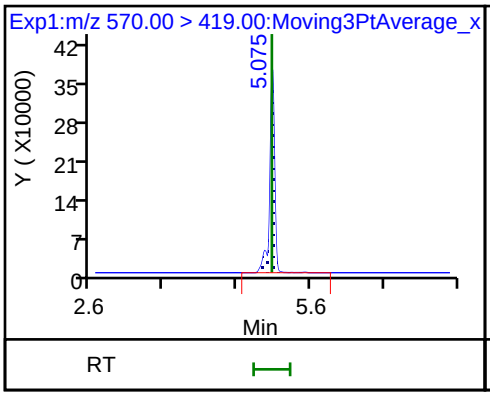

36 8:2 FTS



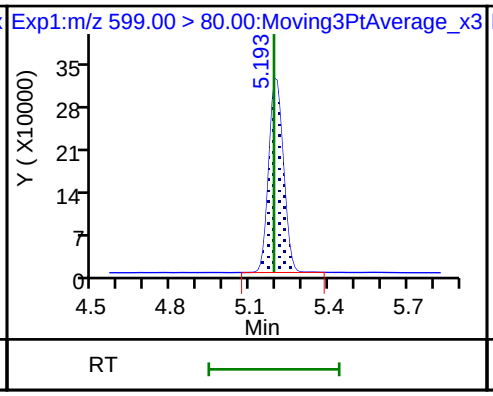

D 40 d3-NMeFOSAA



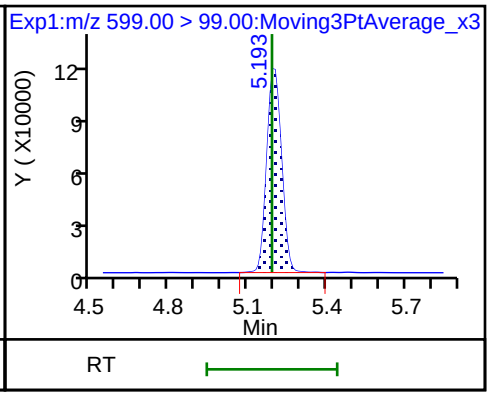

41 NMeFOSAA



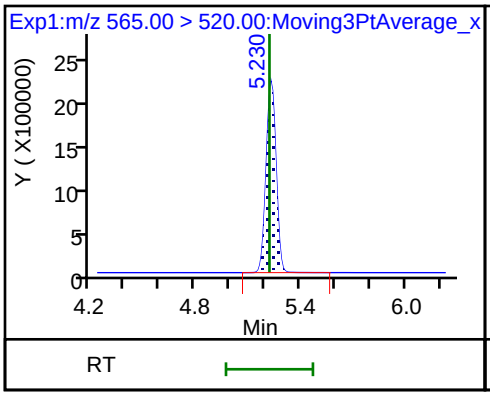

42 Perfluorodecanesulfonic acid



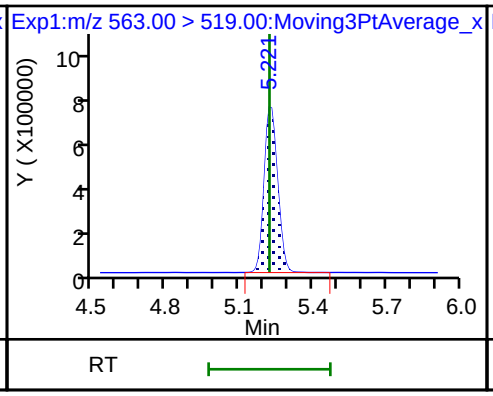

42 Perfluorodecanesulfonic acid



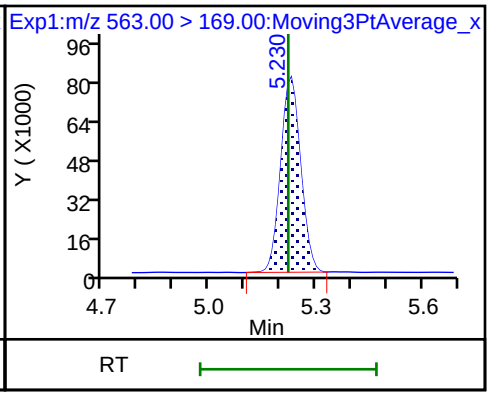

D 43 13C2 PFUnA



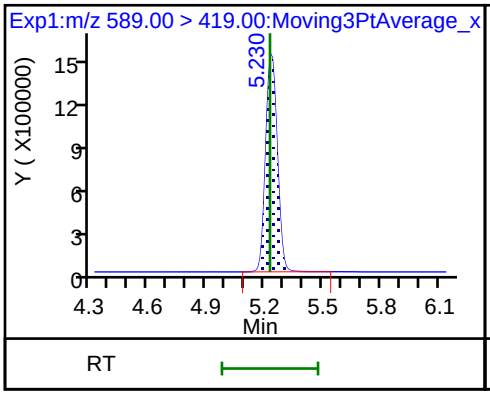

45 Perfluoroundecanoic acid



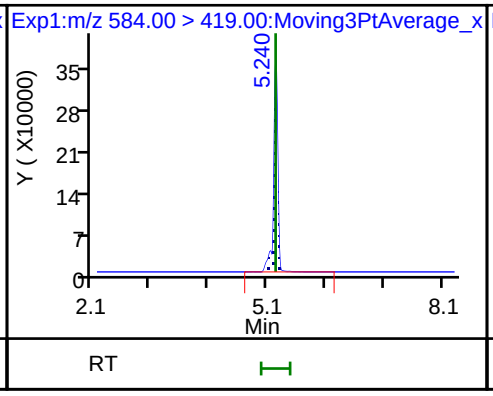

45 Perfluoroundecanoic acid



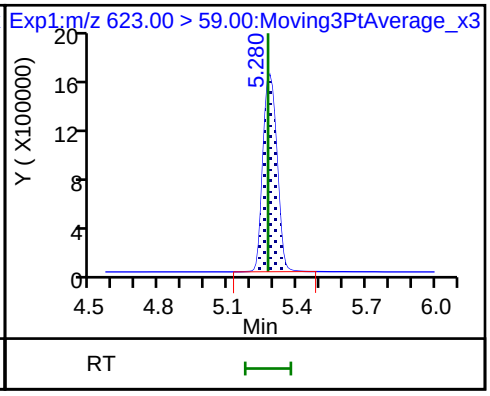

D 44 d5-NEtFOSAA



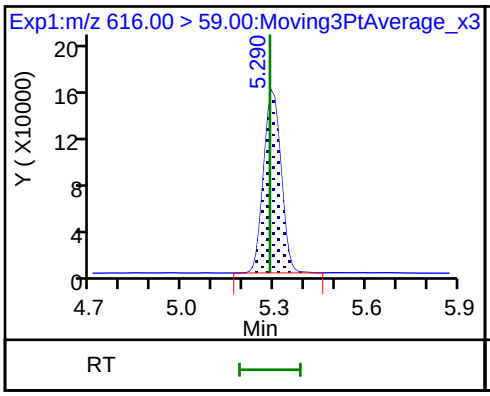

46 NEtFOSA



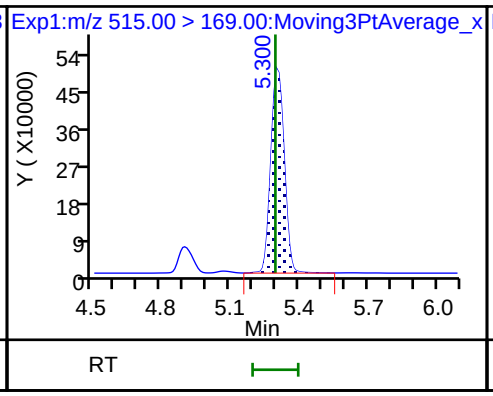

D 47 d7-N-MeFOSE-M



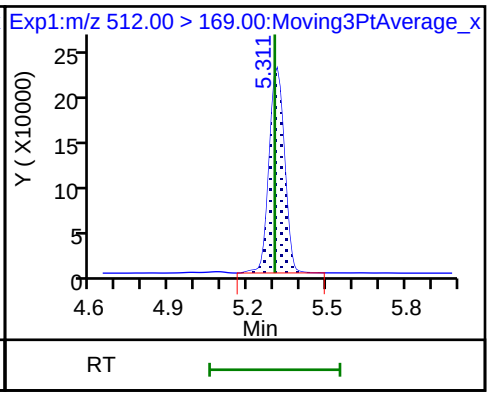
48 N-MeFOSE-M



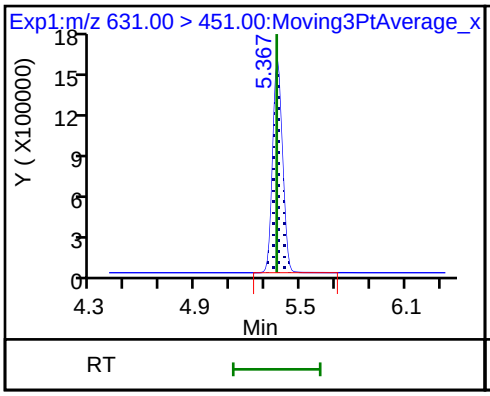

D 49 d-N-MeFOSA-M



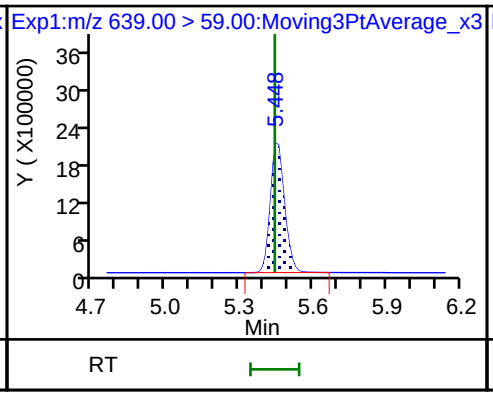

50 NMeFOSA



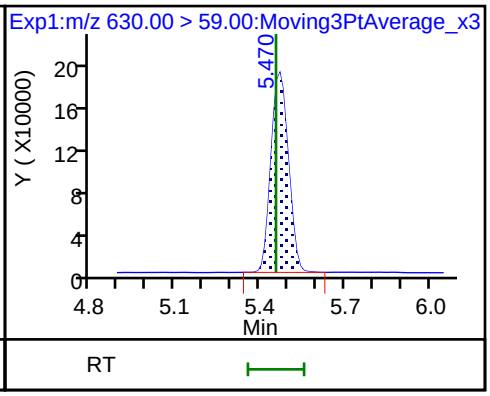

51 11ClFOS



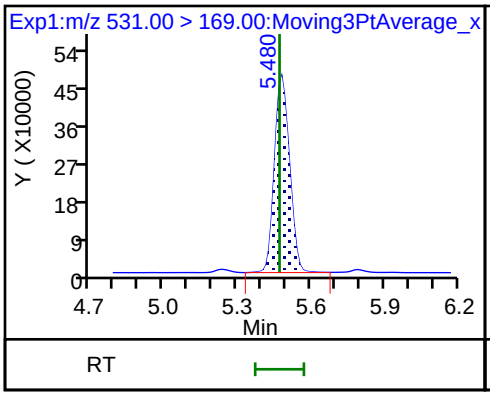

D 52 d9-N-EtFOSE-M



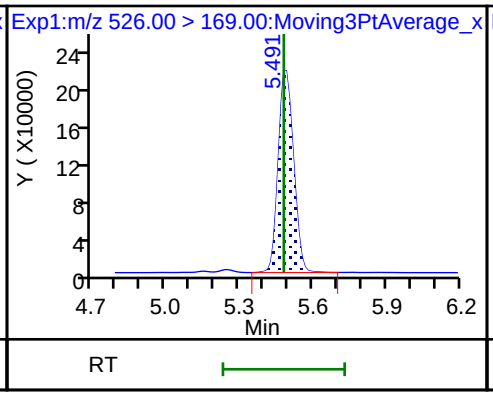

53 N-EtFOSE-M



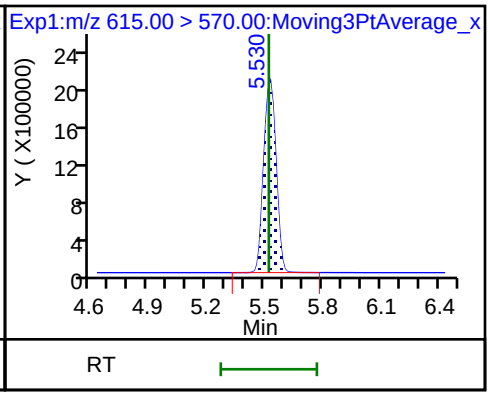

D 54 d-N-EtFOSA-M



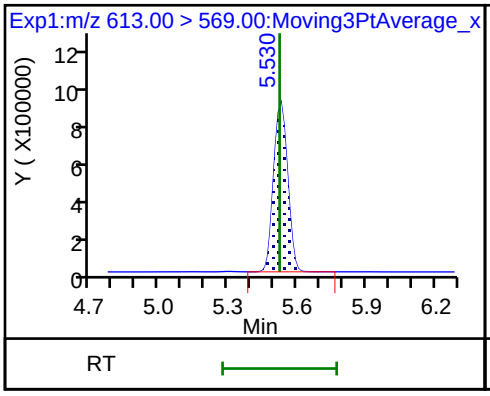

55 N-EtFOSA-M



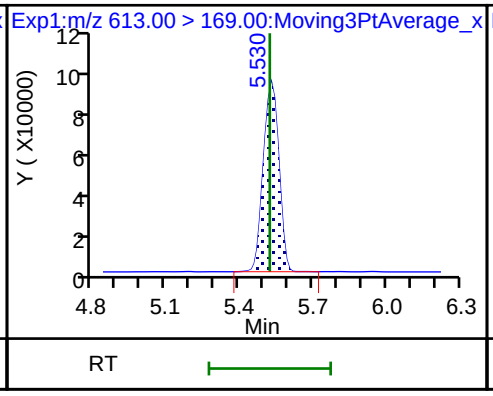

D 56 13C2 PFDoA



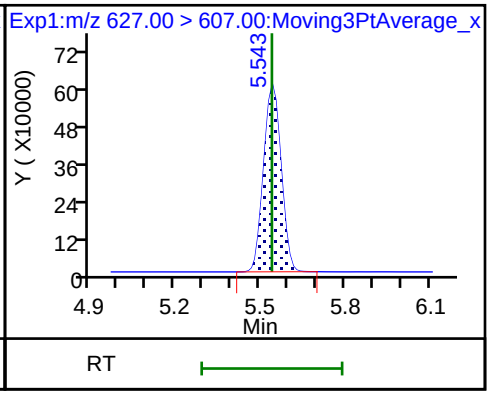

57 Perfluorododecanoic acid



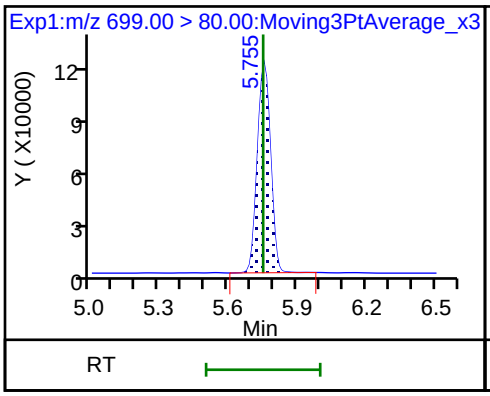

57 Perfluorododecanoic acid



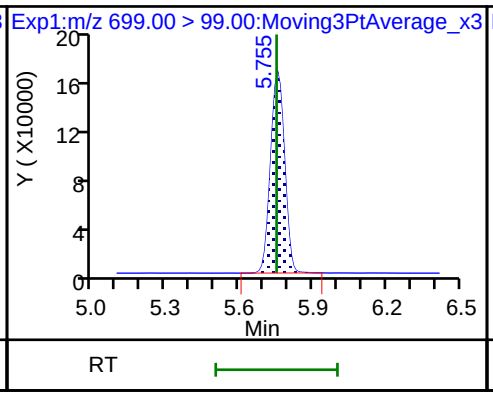

58 10:2 FTS



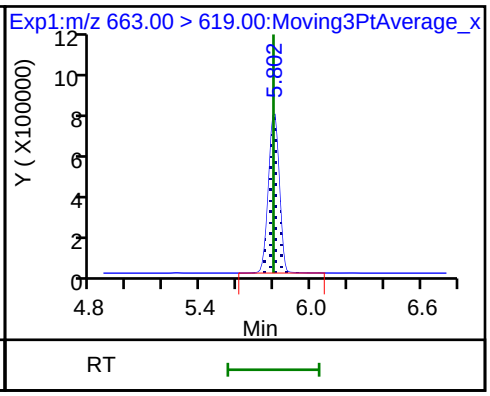
59 PFDoS



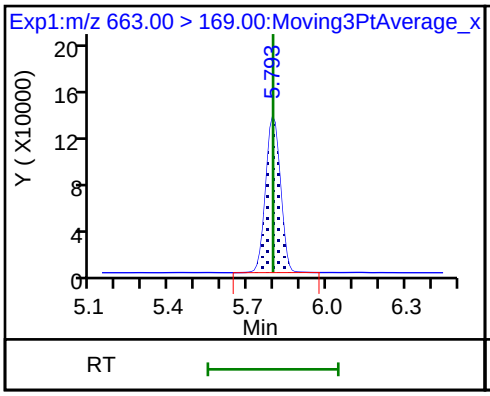

59 PFDoS



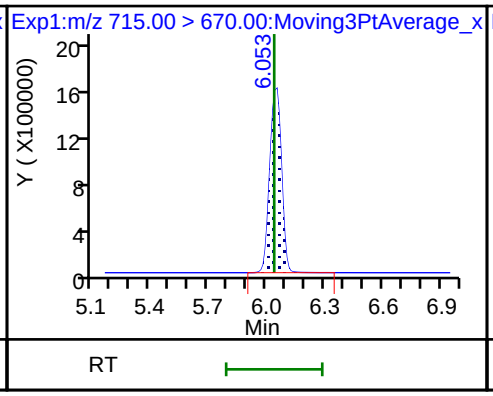

60 Perfluorotridecanoic acid



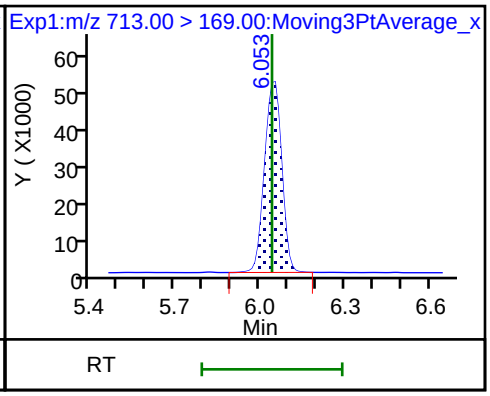

60 Perfluorotridecanoic acid



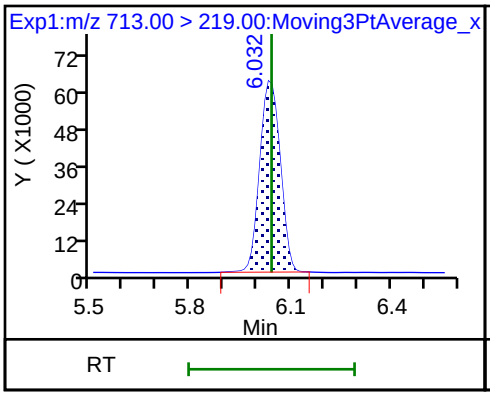

D 61 13C2 PFTeDA



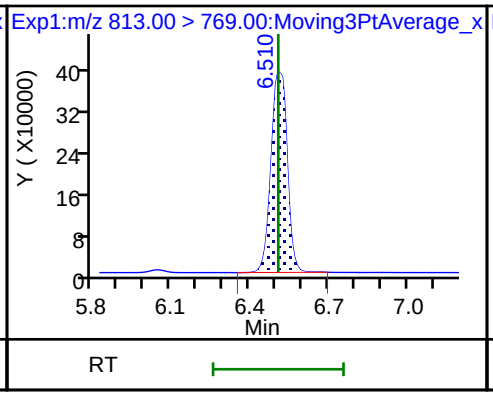

62 Perfluorotetradecanoic acid



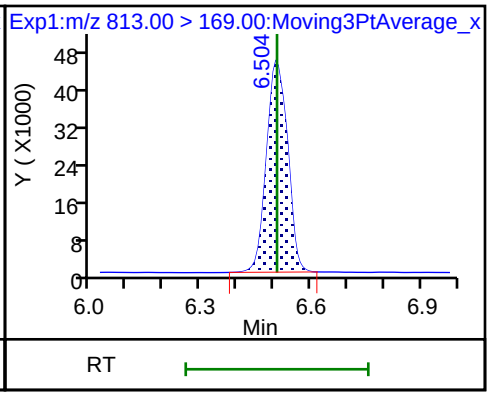

62 Perfluorotetradecanoic acid



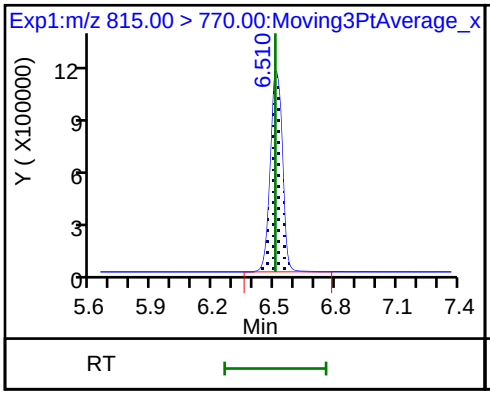

63 Perfluorohexadecanoic acid



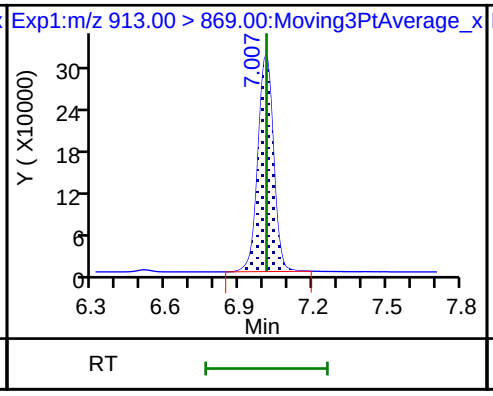

63 Perfluorohexadecanoic acid



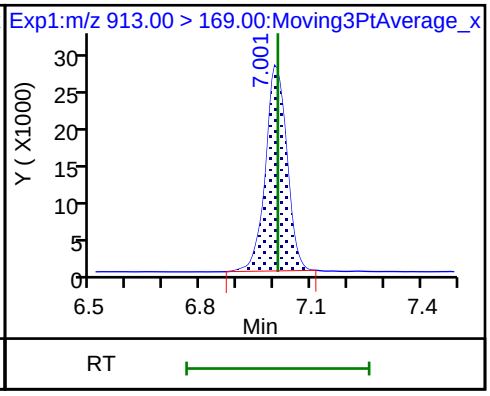

D 64 13C2 PFHxDA




65 Perfluorooctadecanoic acid




65 Perfluorooctadecanoic acid



Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

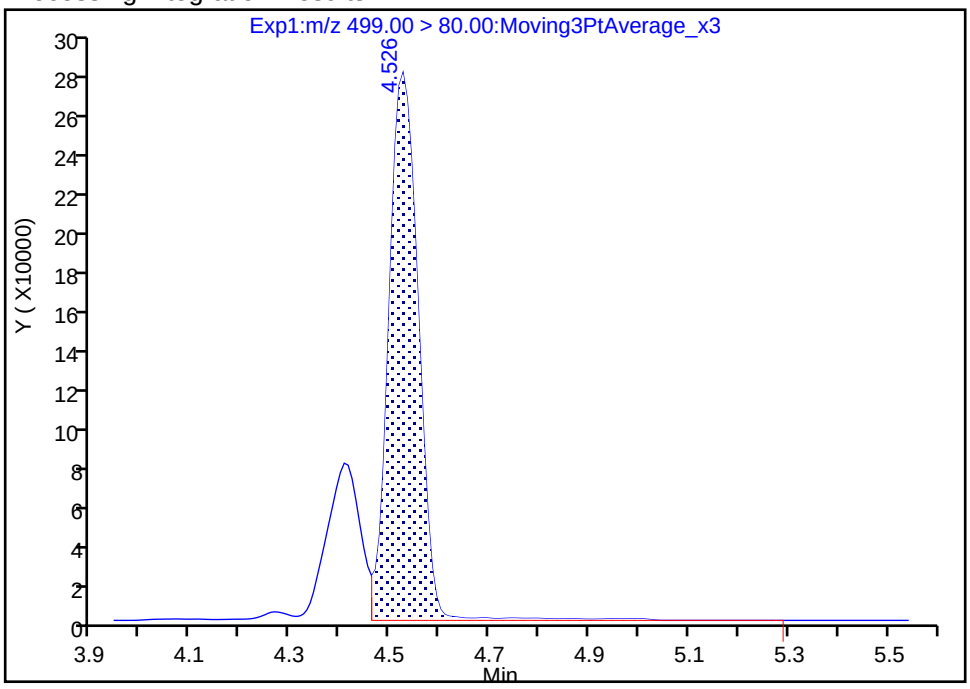
Data File: \\chromfs\Sacramento\ChromData\A18\20200825-102078.b\2020.08.25_A18_ICAL_A_014.d
Injection Date: 25-Aug-2020 17:10:36 Instrument ID: A18
Lims ID: IC STD 4
Client ID:
Operator ID: TAISACA18-PC\A-18 ALS Bottle#: 9 Worklist Smp#: 5
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFAS_A18V2 Limit Group: LC PFC ICAL
Column: Gemini C18 3um 3mm x 50 mm ( 3.00mm) Detector EXP1

## 29 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 1

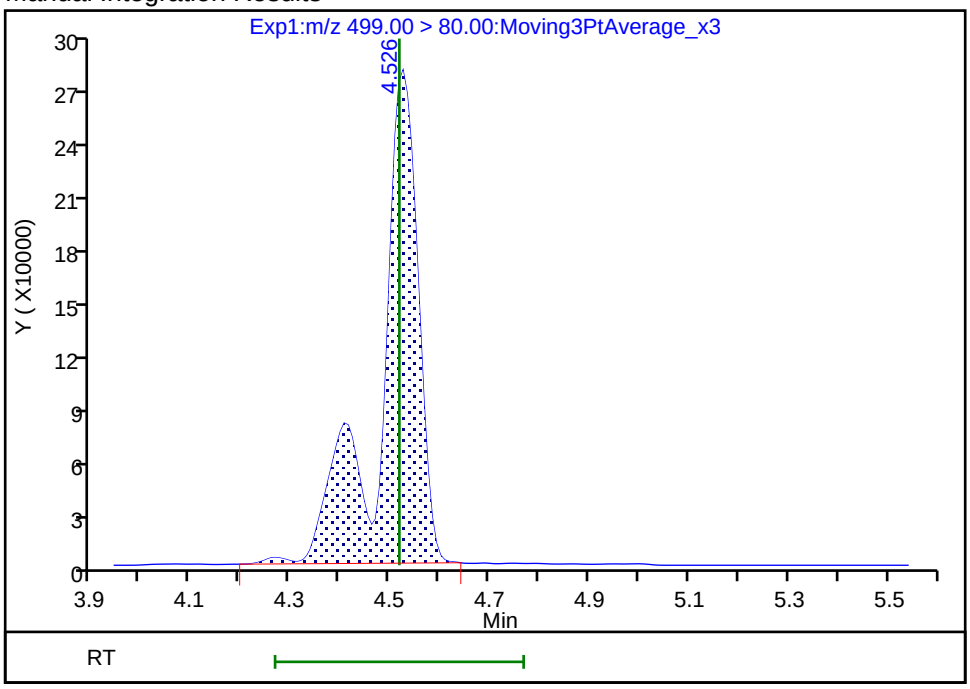
Processing Integration Results

RT: 4.53
Area: 1145570
Amount: 0.928000
Amount Units: ng/ml




Manual Integration Results

RT: 4.53
Area: 1484922
Amount: 0.979348
Amount Units: ng/ml




Reviewer: fariasa, 26-Aug-2020 05:39:50
Audit Action: Manually Integrated Audit Reason: Isomers

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\A18\20200825-102078.b\2020.08.25_A18_ICAL_A_015.d
Lims ID: IC STD 5
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 25-Aug-2020 17:19:42 ALS Bottle#: 10 Worklist Smp#: 6
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Sample Info: CAL STD 5 (31)
Misc. Info.: Plate: 1 Rack: 1
Operator ID: TAISACA18-PC\A-18 Instrument ID: A18
Sublist: chrom-PFAS_A18V2*sub1

Method: \\chromfs\Sacramento\ChromData\A18\20200825-102078.b\PFAS_A18V2.m
Limit Group: LC PFC ICAL
Last Update: 26-Aug-2020 10:42:54 Calib Date: 25-Aug-2020 17:37:57
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\A18\20200825-102078.b\2020.08.25_A18_ICAL_A_017.d

Column 1 : Gemini C18 3um 3mm x 50 mm ( 3.00 mm) Det: EXP1
Process Host: CTX1029

First Level Reviewer: fariasa Date: 26-Aug-2020 06:03:56
Ratio Calibration: Average of Initial Calibration

| Signal | RT | EXP RT | DLT RT | REL RT | Response | Amount ng/ml | Ratio(Limits) | %Rec | S/N | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| D 1 13C4 PFBA | | | | | | | | | | |
| 217.00 > 172.00 | 2.563 | 2.577 | -0.014 | 0.621 | 16140239 | 2.68 | | 107 | 8877 | |
| 2 Perfluorobutanoic acid | | | | | | | | | | |
| 212.90 > 169.00 | 2.571 | 2.580 | -0.009 | 1.003 | 15043941 | 2.68 | | 107 | 594 | |
| 5 Perfluoropentanoic acid | | | | | | | | | | |
| 262.90 > 219.00 | 2.927 | 2.941 | -0.014 | 1.000 | 12932809 | 2.68 | | 107 | 650 | |
| D 4 13C5 PFPeA | | | | | | | | | | |
| 267.90 > 223.00 | 2.927 | 2.941 | -0.014 | 0.709 | 12089027 | 2.58 | | 103 | 5525 | |
| D 9 13C3 PFBS | | | | | | | | | | |
| 301.90 > 80.00 | 2.971 | 2.977 | -0.006 | 0.720 | 9254167 | 2.51 | | 108 | 4619 | |
| 6 Perfluorobutanesulfonic acid | | | | | | | | | | |
| 298.90 > 80.00 | 2.971 | 2.982 | -0.011 | 1.000 | 9615968 | 2.39 | Target=2.30 | 108 | 1862 | |
| 298.90 > 99.00 | 2.971 | 2.982 | -0.011 | 1.000 | 4058802 | | 2.37(1.15-3.45) | 108 | 1494 | |
| 8 4:2 FTS | | | | | | | | | | |
| 327.00 > 307.00 | 3.275 | 3.288 | -0.013 | 1.000 | 5448117 | 2.60 | | 111 | 11469 | |
| D 7 M2-4:2 FTS | | | | | | | | | | |
| 329.00 > 81.00 | 3.275 | 3.288 | -0.013 | 0.793 | 2150089 | 2.42 | | 104 | 893 | |
| 10 Perfluorohexanoic acid | | | | | | | | | | |
| 313.00 > 269.00 | 3.317 | 3.334 | -0.017 | 1.000 | 12827055 | 2.91 | Target=13.78 | 116 | 949 | |
| 313.00 > 119.00 | 3.317 | 3.334 | -0.017 | 1.000 | 892091 | | 14.38(6.89-20.66) | 116 | 650 | |
| D 11 13C2 PFHxA | | | | | | | | | | |
| 315.00 > 270.00 | 3.317 | 3.334 | -0.017 | 0.803 | 11442684 | 2.44 | | 97.7 | 5599 | |
| 12 Perfluoropentanesulfonic acid | | | | | | | | | | |
| 349.00 > 80.00 | 3.338 | 3.349 | -0.011 | 1.124 | 8302940 | 2.63 | Target=3.02 | 112 | 1533 | |
| 349.00 > 99.00 | 3.338 | 3.349 | -0.011 | 1.124 | 2685197 | | 3.09(1.51-4.52) | 112 | 1821 | |
| 13 HPFO-DA | | | | | | | | | | |
| 285.00 > 169.00 | 3.445 | 3.463 | -0.018 | 1.000 | 2659360 | 2.66 | | 106 | 4388 | |

| Signal | RT | EXP RT | DLT RT | REL RT | Response | Amount ng/ml | Ratio(Limits) | %Rec | S/N | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| D 14 13C3 HFPO-DA | | | | | | | | | | |
| 287.00 > 169.00 | 3.445 | 3.463 | -0.018 | 0.834 | 2566383 | 2.68 | | 107 | 5841 | |
| D 18 13C4 PFHpA | | | | | | | | | | |
| 367.00 > 322.00 | 3.735 | 3.750 | -0.015 | 0.905 | 11161570 | 2.79 | | 112 | 7439 | |
| 16 Perfluoroheptanoic acid | | | | | | | | | | |
| 363.00 > 319.00 | 3.735 | 3.750 | -0.015 | 1.000 | 11074099 | 2.45 | Target=3.84 | 97.9 | 1174 | |
| 363.00 > 169.00 | 3.735 | 3.750 | -0.015 | 1.000 | 3068041 | | 3.61(1.92-5.76) | 97.9 | 1775 | |
| 15 Perfluorohexanesulfonic acid | | | | | | | | | | |
| 399.00 > 80.00 | 3.735 | 3.752 | -0.017 | 1.000 | 5498056 | 2.19 | Target=3.50 | 96.1 | 1692 | |
| 399.00 > 99.00 | 3.735 | 3.752 | -0.017 | 1.000 | 1605082 | | 3.43(1.75-5.25) | 96.1 | 1674 | |
| D 17 18O2 PFHxS | | | | | | | | | | |
| 403.00 > 84.00 | 3.735 | 3.752 | -0.017 | 0.905 | 5035082 | 2.59 | | 109 | 7991 | |
| 19 DONA | | | | | | | | | | |
| 377.00 > 251.00 | 3.785 | 3.800 | -0.015 | 0.841 | 35025003 | 2.58 | Target=2.42 | 110 | 17958 | |
| 377.00 > 85.00 | 3.785 | 3.800 | -0.015 | 0.841 | 14358153 | | 2.44(1.21-3.63) | 110 | 7919 | |
| D 20 M2-6:2 FTS | | | | | | | | | | |
| 429.00 > 81.00 | 4.112 | 4.127 | -0.015 | 0.996 | 1860491 | 2.50 | | 105 | 1144 | |
| 21 6:2 FTS | | | | | | | | | | |
| 427.00 > 407.00 | 4.112 | 4.127 | -0.015 | 1.000 | 4467087 | 2.48 | | 105 | 5382 | |
| 24 Perfluoroheptanesulfonic acid | | | | | | | | | | |
| 449.00 > 80.00 | 4.129 | 4.143 | -0.014 | 0.918 | 3963683 | 2.51 | Target=4.40 | 105 | 1333 | |
| 449.00 > 99.00 | 4.129 | 4.143 | -0.014 | 0.918 | 913129 | | 4.34(2.20-6.60) | 105 | 1165 | |
| $ 26 13C8 PFOA | | | | | | | | | | |
| 421.00 > 376.00 | 4.129 | 4.147 | -0.018 | 1.000 | 6198885 | 2.41 | | 98.5 | 5212 | |
| D 25 13C4 PFOA | | | | | | | | | | |
| 417.00 > 372.00 | 4.129 | 4.150 | -0.021 | 1.000 | 9851180 | 2.59 | | 103 | 9308 | |
| 22 Perfluorooctanoic acid | | | | | | | | | | |
| 413.00 > 369.00 | 4.137 | 4.150 | -0.013 | 1.002 | 10655191 | 2.65 | Target=2.94 | 106 | 2159 | |
| 413.00 > 169.00 | 4.137 | 4.150 | -0.013 | 1.002 | 3444552 | | 3.09(1.47-4.41) | 106 | 6385 | |
| * 23 13C2 PFOA | | | | | | | | | | |
| 415.00 > 370.00 | 4.129 | 4.151 | -0.022 | | 9512827 | 2.50 | | | 5591 | |
| $ 28 13C8 PFOS | | | | | | | | | | |
| 507.00 > 99.00 | 4.499 | 4.514 | -0.015 | 1.090 | 1011458 | 2.46 | | 103 | 3687 | |
| D 27 13C4 PFOS | | | | | | | | | | |
| 503.00 > 80.00 | 4.499 | 4.516 | -0.017 | 1.090 | 3380331 | 2.56 | | 107 | 1454 | |
| 29 Perfluorooctanesulfonic acid | | | | | | | | | | M |
| 499.00 > 80.00 | 4.499 | 4.518 | -0.019 | 1.000 | 3665824 | 2.50 | Target=4.53 | 108 | 828 | M |
| 499.00 > 99.00 | 4.499 | 4.518 | -0.019 | 1.000 | 777070 | | 4.72(2.26-6.79) | 108 | 1084 | |
| D 30 13C5 PFNA | | | | | | | | | | |
| 468.00 > 423.00 | 4.514 | 4.533 | -0.019 | 1.093 | 8222813 | 2.68 | | 107 | 9068 | |
| 31 Perfluorononanoic acid | | | | | | | | | | |
| 463.00 > 419.00 | 4.522 | 4.537 | -0.015 | 1.002 | 9321539 | 2.96 | Target=8.97 | 118 | 1522 | |
| 463.00 > 169.00 | 4.522 | 4.537 | -0.015 | 1.002 | 959506 | | 9.71(4.48-13.45) | 118 | 1293 | |
| 32 9ClFOS | | | | | | | | | | |
| 531.00 > 351.00 | 4.707 | 4.724 | -0.017 | 1.046 | 11467134 | 2.51 | | 108 | 12560 | |
| 34 Perfluorooctanesulfonamide | | | | | | | | | | |
| 498.00 > 78.00 | 4.817 | 4.830 | -0.013 | 1.000 | 5530939 | 2.57 | | 103 | 6370 | |

| Signal | RT | EXP RT | DLT RT | REL RT | Response | Amount ng/ml | Ratio(Limits) | %Rec | S/N | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| D 33 13C8 FOSA | | | | | | | | | | |
| 506.00 > 78.00 | 4.817 | 4.830 | -0.013 | 1.167 | 5772966 | 2.71 | | 109 | 8563 | |
| 35 Perfluorononanesulfonic acid | | | | | | | | | | |
| 549.00 > 80.00 | 4.852 | 4.868 | -0.016 | 1.079 | 3293468 | 2.49 | Target=2.85 | 104 | 1951 | |
| 549.00 > 99.00 | 4.852 | 4.868 | -0.016 | 1.079 | 1170755 | | 2.81(1.43-4.28) | 104 | 1892 | |
| D 39 13C2 PFDA | | | | | | | | | | |
| 515.00 > 470.00 | 4.878 | 4.892 | -0.014 | 1.181 | 7417834 | 2.49 | | 99.6 | 9359 | |
| 37 Perfluorodecanoic acid | | | | | | | | | | |
| 513.00 > 469.00 | 4.878 | 4.896 | -0.018 | 1.000 | 7439717 | 2.60 | Target=10.16 | 104 | 2199 | |
| 513.00 > 169.00 | 4.878 | 4.896 | -0.018 | 1.000 | 662102 | | 11.24(5.08-15.24) | 104 | 210 | |
| D 38 M2-8:2 FTS | | | | | | | | | | |
| 529.00 > 81.00 | 4.878 | 4.897 | -0.019 | 1.181 | 2619467 | 2.44 | | 102 | 1479 | |
| 36 8:2 FTS | | | | | | | | | | |
| 527.00 > 507.00 | 4.878 | 4.898 | -0.020 | 1.000 | 5089997 | 2.62 | | 109 | 13873 | |
| D 40 d3-NMeFOSAA | | | | | | | | | | |
| 573.00 > 419.00 | 5.046 | 5.062 | -0.016 | 1.222 | 5416409 | 2.71 | | 108 | 4030 | |
| 41 NMeFOSAA | | | | | | | | | | |
| 570.00 > 419.00 | 5.046 | 5.065 | -0.019 | 1.000 | 4084387 | 2.54 | | 102 | 56428 | |
| 42 Perfluorodecanesulfonic acid | | | | | | | | | | |
| 599.00 > 80.00 | 5.173 | 5.191 | -0.018 | 1.150 | 3000844 | 2.54 | Target=2.77 | 105 | 2970 | |
| 599.00 > 99.00 | 5.173 | 5.191 | -0.018 | 1.150 | 1030165 | | 2.91(1.38-4.15) | 105 | 5862 | |
| 45 Perfluoroundecanoic acid | | | | | | | | | | |
| 563.00 > 519.00 | 5.209 | 5.221 | -0.012 | 0.998 | 5529773 | 2.72 | Target=8.43 | 109 | 2841 | |
| 563.00 > 169.00 | 5.209 | 5.221 | -0.012 | 0.998 | 639665 | | 8.64(4.22-12.65) | 109 | 1259 | |
| D 43 13C2 PFUnA | | | | | | | | | | |
| 565.00 > 520.00 | 5.218 | 5.221 | -0.003 | 1.264 | 7000959 | 2.37 | | 94.9 | 7879 | |
| D 44 d5-NEtFOSAA | | | | | | | | | | |
| 589.00 > 419.00 | 5.209 | 5.227 | -0.018 | 1.262 | 5563223 | 2.63 | | 105 | 3523 | |
| 46 NEtFOSA | | | | | | | | | | |
| 584.00 > 419.00 | 5.218 | 5.236 | -0.018 | 1.002 | 4120421 | 2.74 | | 110 | 1656 | |
| D 47 d7-N-MeFOSE-M | | | | | | | | | | |
| 623.00 > 59.00 | 5.257 | 5.272 | -0.015 | 1.273 | 6782732 | 12.9 | | 103 | 2308 | |
| 48 N-MeFOSE-M | | | | | | | | | | |
| 616.00 > 59.00 | 5.277 | 5.285 | -0.008 | 1.004 | 1681316 | 2.87 | | 115 | 1739 | |
| D 49 d-N-MeFOSA-M | | | | | | | | | | |
| 515.00 > 169.00 | 5.287 | 5.295 | -0.008 | 1.281 | 1985528 | 2.66 | | 106 | 48.4 | |
| 50 NMeFOSA | | | | | | | | | | |
| 512.00 > 169.00 | 5.287 | 5.301 | -0.014 | 1.000 | 2200383 | 2.88 | | 115 | 641 | |
| 51 11ClFOS | | | | | | | | | | |
| 631.00 > 451.00 | 5.347 | 5.363 | -0.016 | 1.189 | 15223672 | 2.62 | | 111 | 16784 | |
| D 52 d9-N-EtFOSE-M | | | | | | | | | | |
| 639.00 > 59.00 | 5.436 | 5.443 | -0.007 | 1.317 | 9440764 | 14.6 | | 117 | 1918 | |
| 53 N-EtFOSE-M | | | | | | | | | | |
| 630.00 > 59.00 | 5.446 | 5.456 | -0.010 | 1.002 | 2201944 | 2.72 | | 109 | 2278 | |
| D 54 d-N-EtFOSA-M | | | | | | | | | | |
| 531.00 > 169.00 | 5.457 | 5.471 | -0.014 | 1.322 | 2020717 | 2.64 | | 106 | 178 | |

| Signal | RT | EXP RT | DLT RT | REL RT | Response | Amount ng/ml | Ratio(Limits) | %Rec | S/N | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| 55 N-EtFOSA-M | | | | | | | | | | |
| 526.00 > 169.00 | 5.468 | 5.480 | -0.012 | 1.002 | 2312855 | 2.70 | | 108 | 443 | |
| D 56 13C2 PFDoA | | | | | | | | | | |
| 615.00 > 570.00 | 5.502 | 5.521 | -0.019 | 1.333 | 7116690 | 2.44 | | 97.8 | 7277 | |
| 57 Perfluorododecanoic acid | | | | | | | | | | |
| 613.00 > 569.00 | 5.502 | 5.523 | -0.021 | 1.000 | 7914890 | 2.72 | Target=9.12 | 108 | 3022 | |
| 613.00 > 169.00 | 5.502 | 5.523 | -0.021 | 1.000 | 870587 | | 9.09(4.56-13.69) | 108 | 1381 | |
| 58 10:2 FTS | | | | | | | | | | |
| 627.00 > 607.00 | 5.528 | 5.541 | -0.013 | 1.133 | 5554903 | 2.52 | | 105 | 5321 | |
| 59 PFDoS | | | | | | | | | | |
| 699.00 > 80.00 | 5.733 | 5.751 | -0.018 | 1.274 | 1144299 | 2.43 | Target=0.72 | 100 | 1307 | |
| 699.00 > 99.00 | 5.733 | 5.751 | -0.018 | 1.274 | 1664899 | | 0.69(0.36-1.07) | 100 | 4495 | |
| 60 Perfluorotridecanoic acid | | | | | | | | | | |
| 663.00 > 619.00 | 5.783 | 5.795 | -0.012 | 1.051 | 7438469 | 2.78 | Target=6.78 | 111 | 3236 | |
| 663.00 > 169.00 | 5.783 | 5.795 | -0.012 | 1.051 | 1131272 | | 6.58(3.39-10.17) | 111 | 1874 | |
| D 61 13C2 PFTeDA | | | | | | | | | | |
| 715.00 > 670.00 | 6.022 | 6.038 | -0.016 | 1.459 | 5963271 | 2.48 | | 99.3 | 5312 | |
| 62 Perfluorotetradecanoic acid | | | | | | | | | | |
| 713.00 > 169.00 | 6.022 | 6.041 | -0.019 | 1.000 | 543432 | 2.70 | Target=0.85 | 108 | 2135 | |
| 713.00 > 219.00 | 6.011 | 6.041 | -0.030 | 0.998 | 642121 | | 0.85(0.43-1.28) | 108 | 2797 | |
| D 64 13C2 PFHxDA | | | | | | | | | | |
| 815.00 > 770.00 | 6.481 | 6.505 | -0.024 | 1.570 | 4650620 | 2.65 | | 106 | 5659 | |
| 63 Perfluorohexadecanoic acid | | | | | | | | | | |
| 813.00 > 769.00 | 6.490 | 6.507 | -0.017 | 1.001 | 4364853 | 2.65 | Target=10.21 | 106 | 2744 | |
| 813.00 > 169.00 | 6.490 | 6.507 | -0.017 | 1.001 | 394899 | | 11.05(5.11-15.32) | 106 | 1855 | |
| 65 Perfluorooctadecanoic acid | | | | | | | | | | |
| 913.00 > 869.00 | 6.983 | 7.009 | -0.026 | 1.077 | 3501130 | 2.85 | Target=12.45 | 114 | 2317 | |
| 913.00 > 169.00 | 6.983 | 7.009 | -0.026 | 1.077 | 267349 | | 13.10(6.22-18.67) | 114 | 1813 | |

## QC Flag Legend

Review Flags

M - Manually Integrated

## Reagents:

LCPFC_LL5_00031 Amount Added: 1.00 Units: mL

Report Date: 26-Aug-2020 10:42:56 Chrom Revision: 2.3 20-Aug-2020 13:57:12

Eurofins TestAmerica, Sacramento

Data File: \\chromfs\Sacramento\ChromData\A18\20200825-102078.b\2020.08.25_A18_ICAL_A_015.d

Injection Date: 25-Aug-2020 17:19:42 Instrument ID: A18

Lims ID: IC STD 5

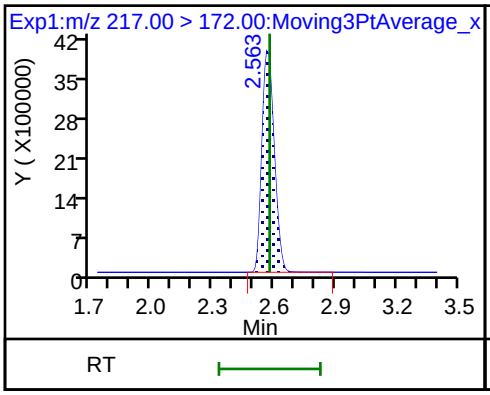
Client ID:

Operator ID: TAISACA18-PC\A-18 ALS Bottle#: 10 Worklist Smp#: 6

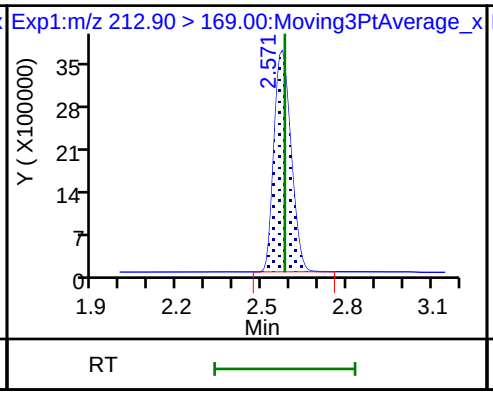
Injection Vol: 20.0 ul Dil. Factor: 1.0000

Method: PFAS_A18V2 Limit Group: LC PFC ICAL

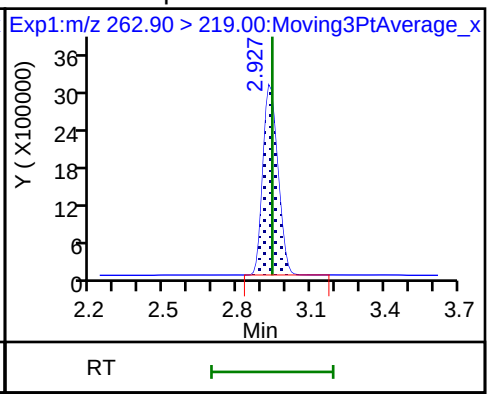
D 1 13C4 PFBA




2 Perfluorobutanoic acid




5 Perfluoropentanoic acid

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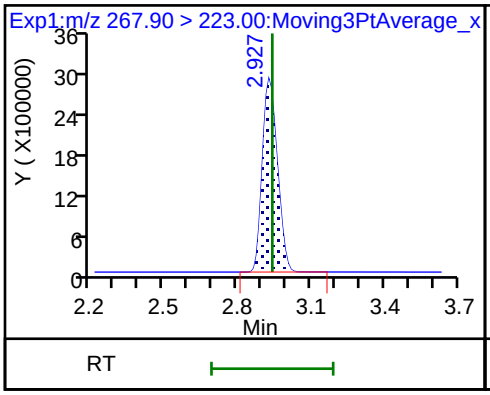
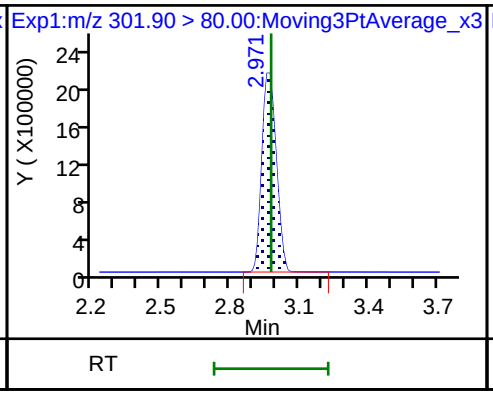
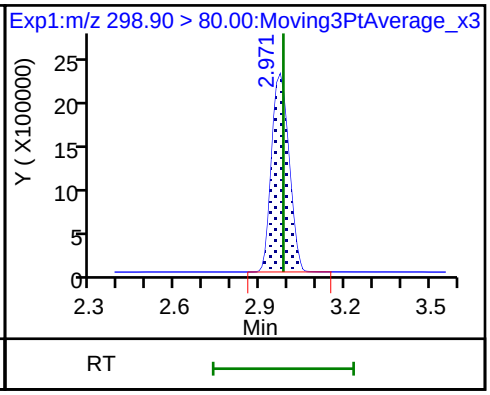



D 9 13C3 PFBS




6 Perfluorobutanesulfonic acid

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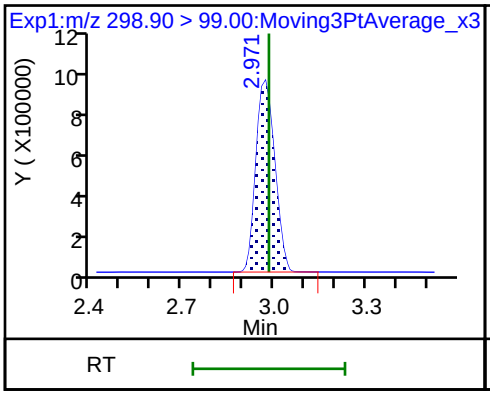
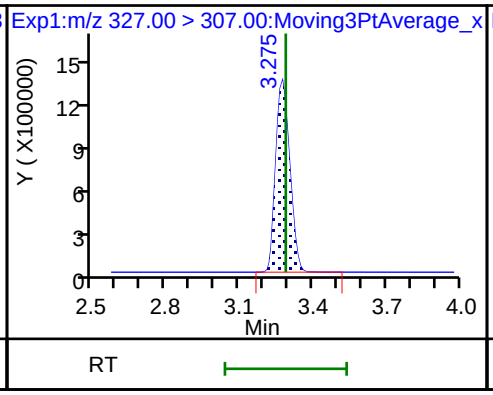
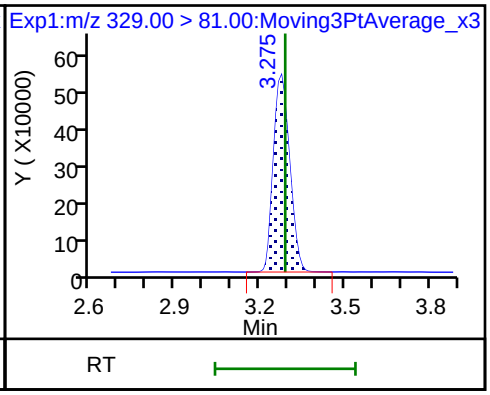


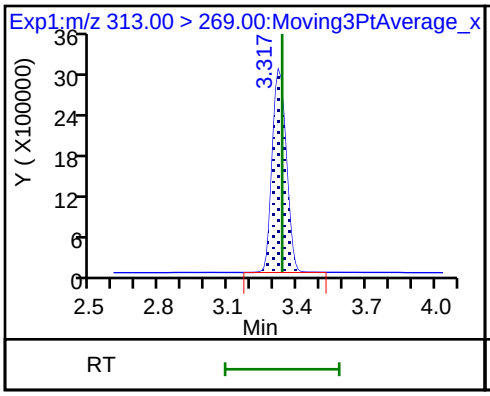

8 4:2 FTS




D 7 M2-4:2 FTS




10 Perfluorohexanoic acid

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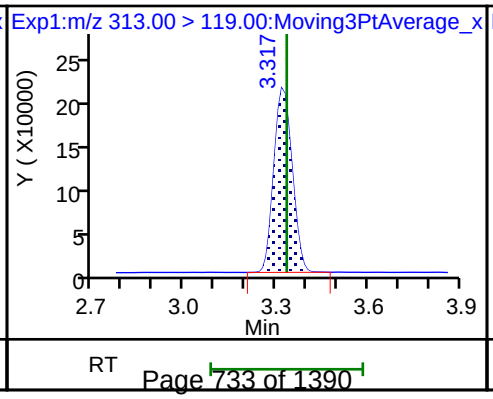
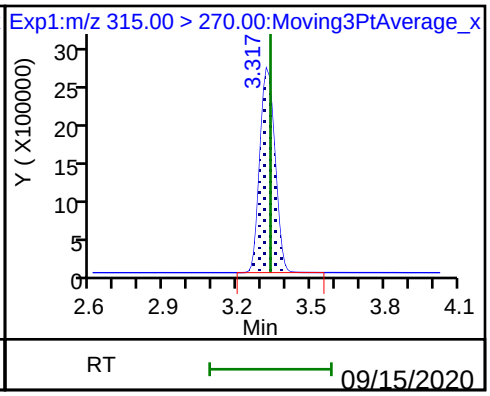



D 11 13C2 PFHxA



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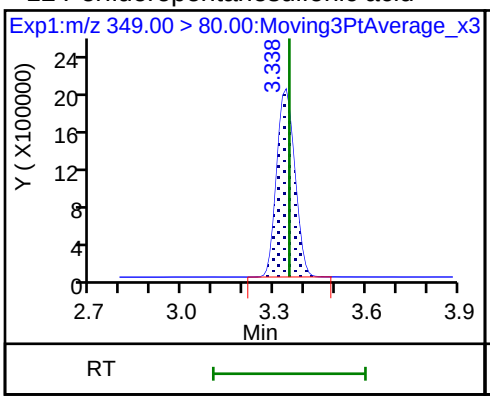


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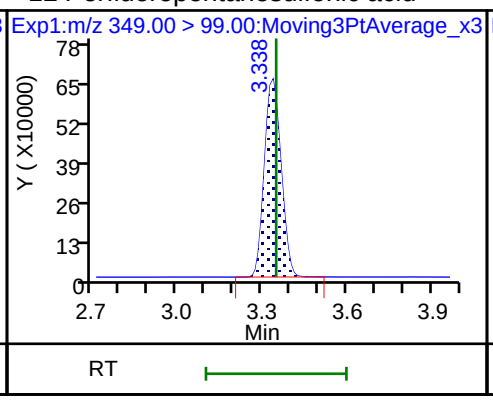
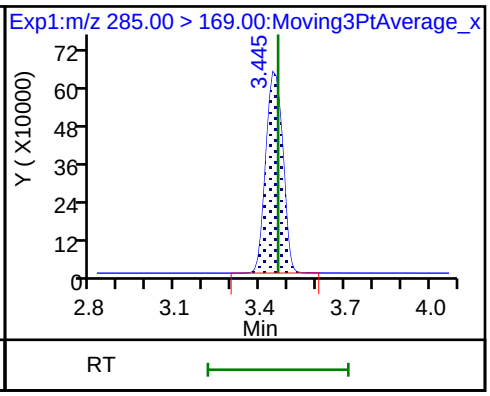
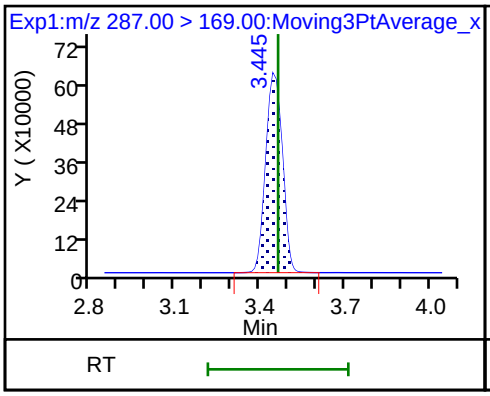



13 HPFO-DA




D 14 13C3 HFPO-DA

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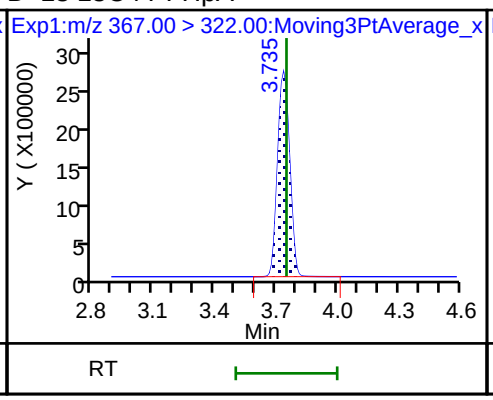
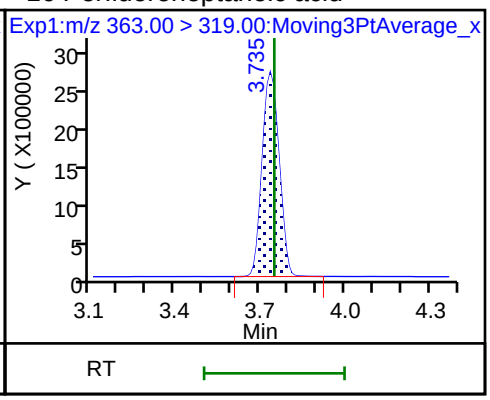



16 Perfluoroheptanoic acid

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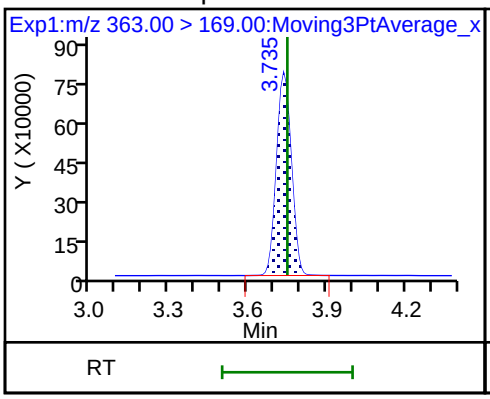


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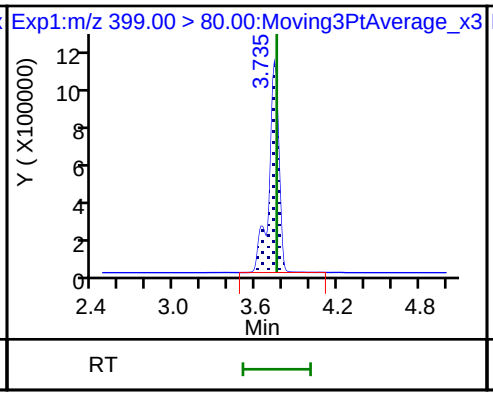


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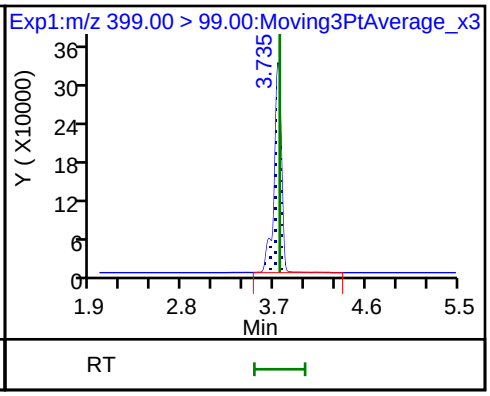
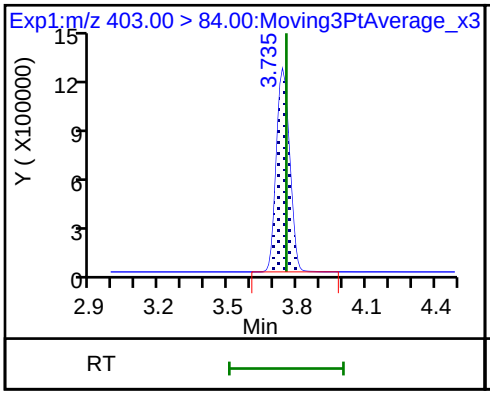
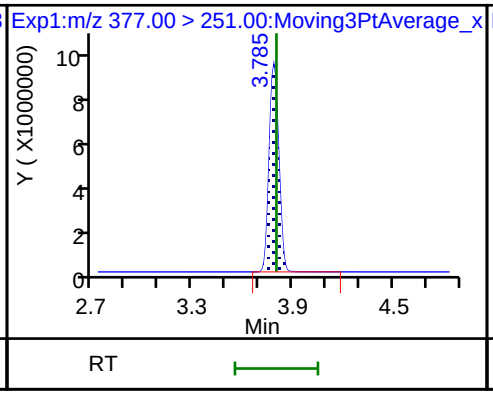



D 17 18O2 PFHxS




19 DONA

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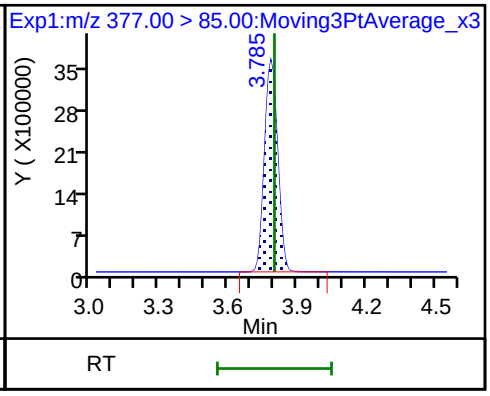
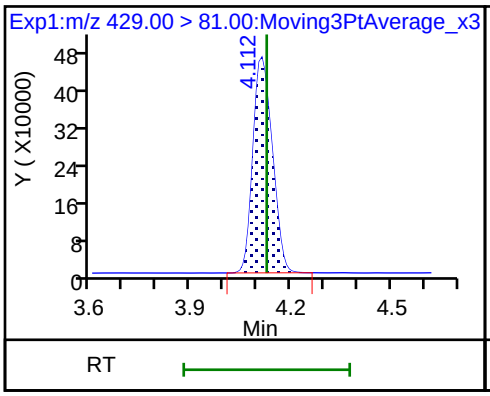
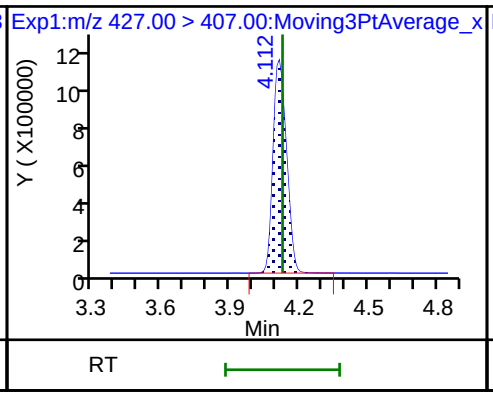


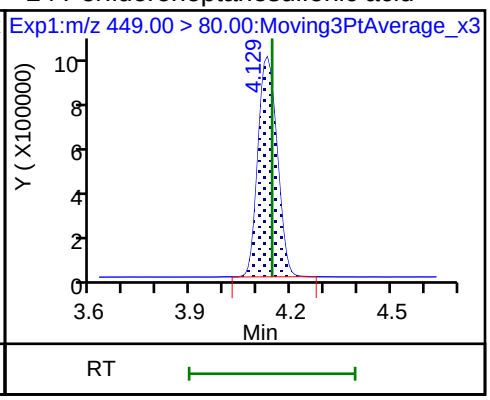
D 20 M2-6:2 FTS




21 6:2 FTS




24 Perfluoroheptanesulfonic acid

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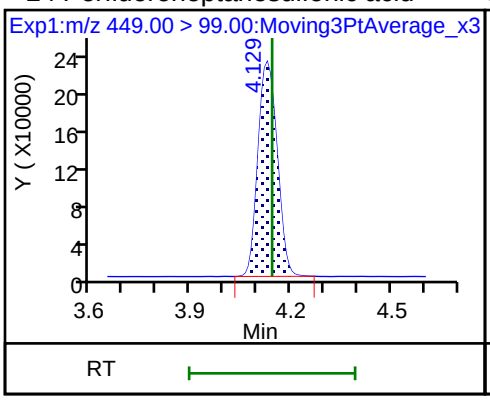
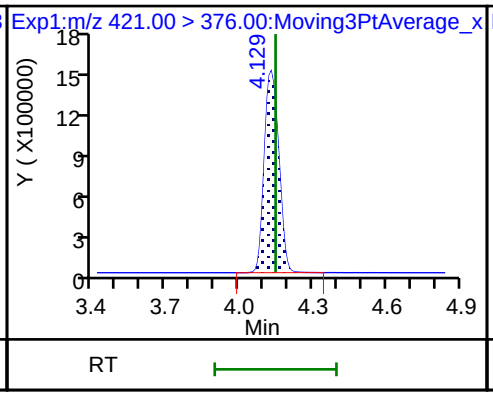



$ 26 13C8 PFOA

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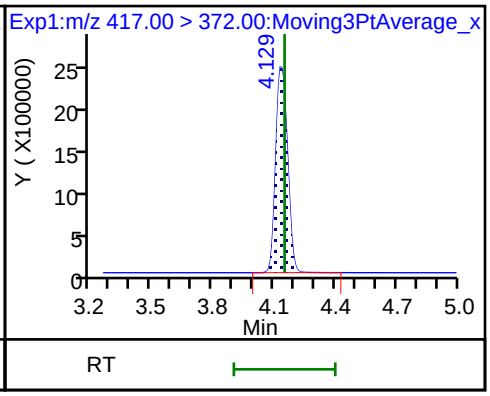
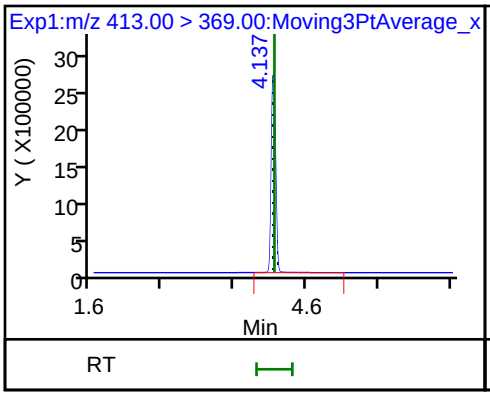
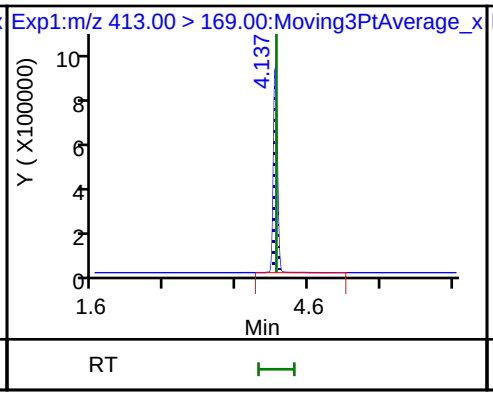


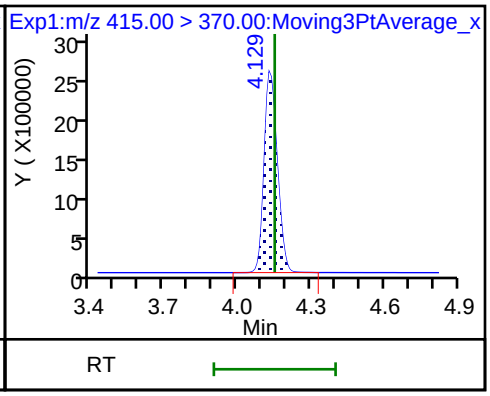

22 Perfluorooctanoic acid




22 Perfluorooctanoic acid




* 23 13C2 PFOA

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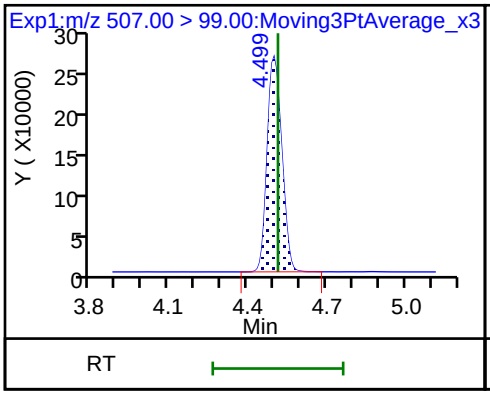


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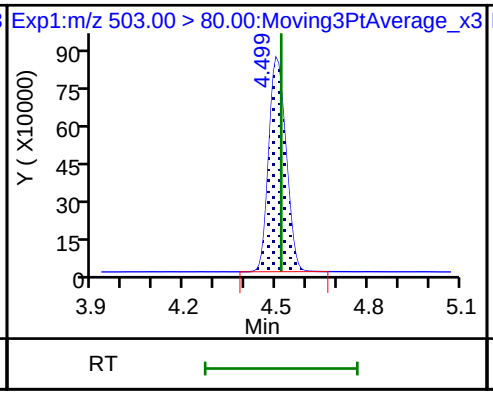
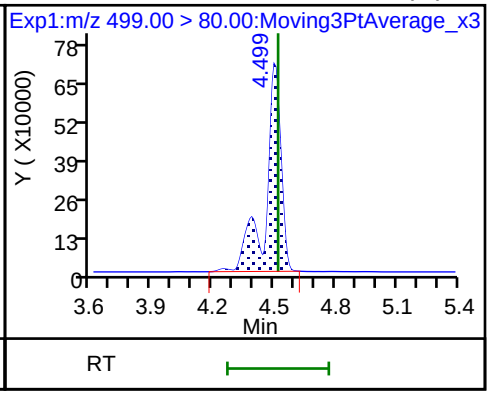
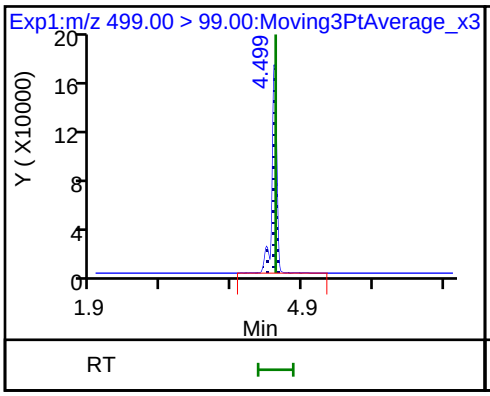



29 Perfluorooctanesulfonic acid (M)



29 Perfluorooctanesulfonic acid

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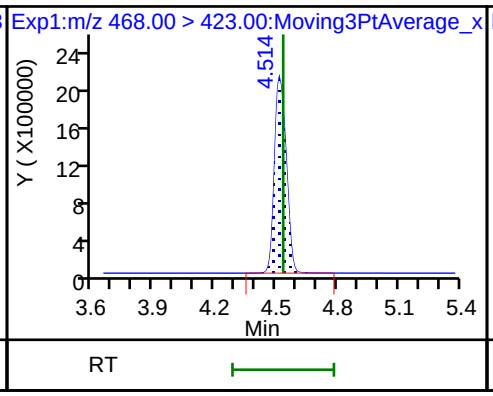
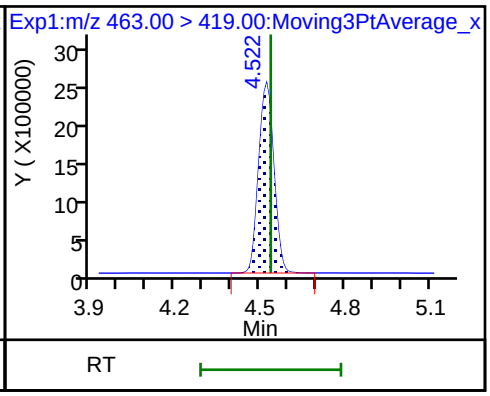
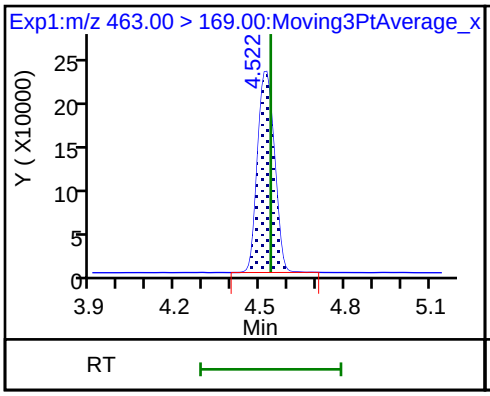


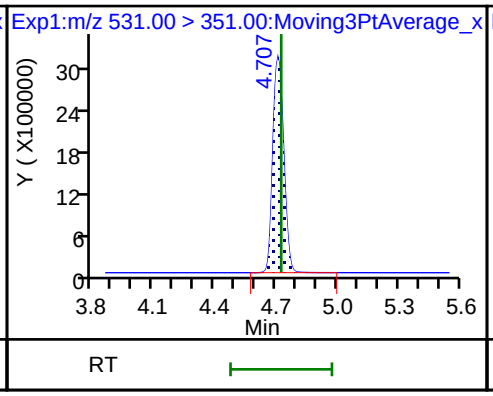

31 Perfluorononanoic acid



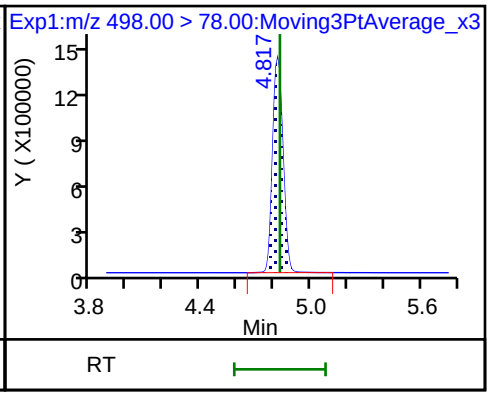

31 Perfluorononanoic acid




32 9ClFOS




34 Perfluorooctanesulfonamide

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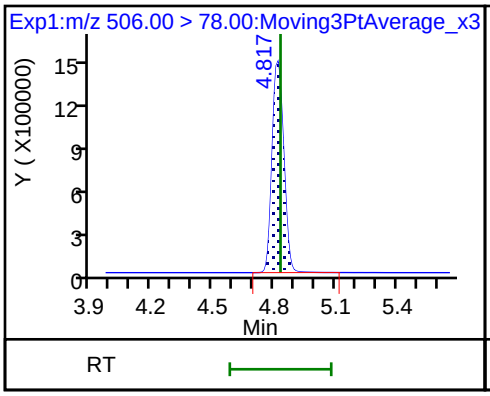


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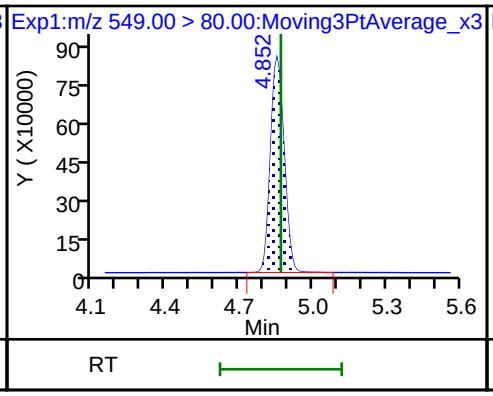


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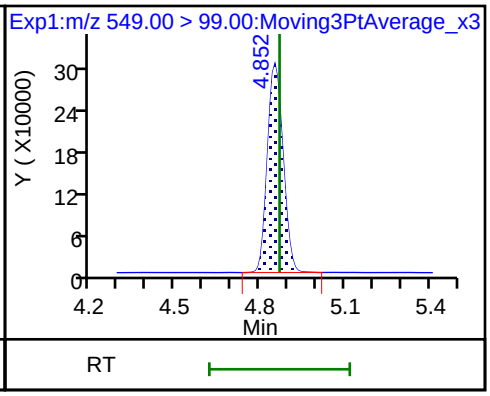


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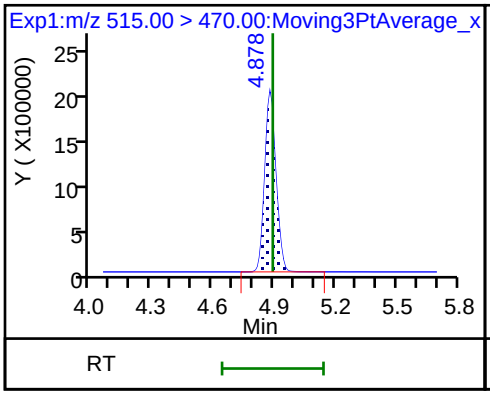
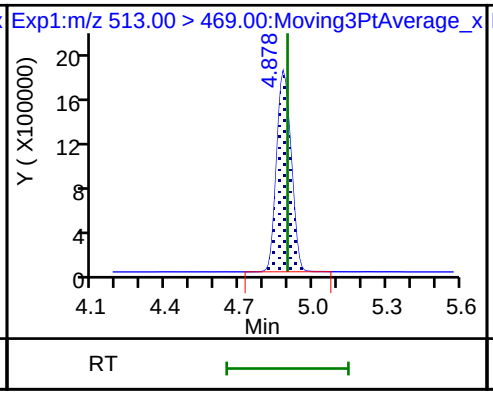
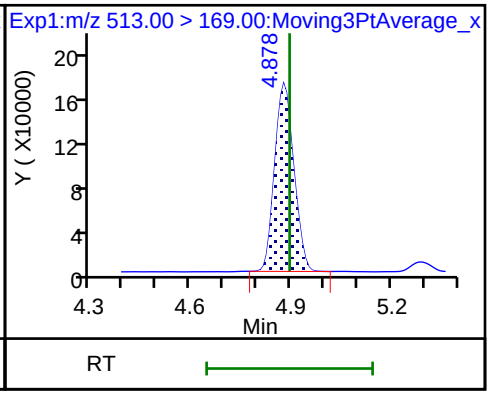


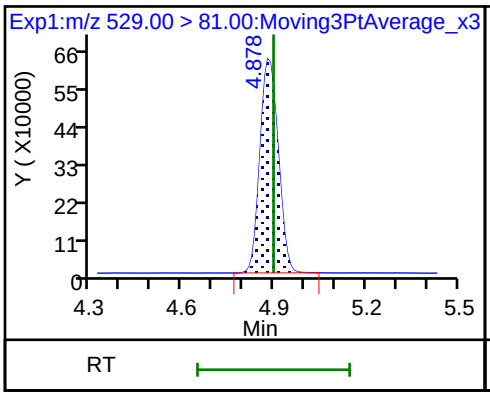

37 Perfluorodecanoic acid



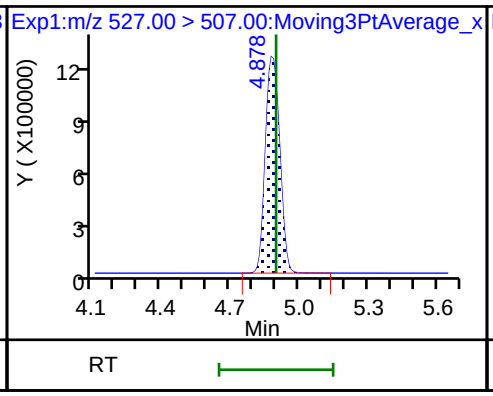

37 Perfluorodecanoic acid



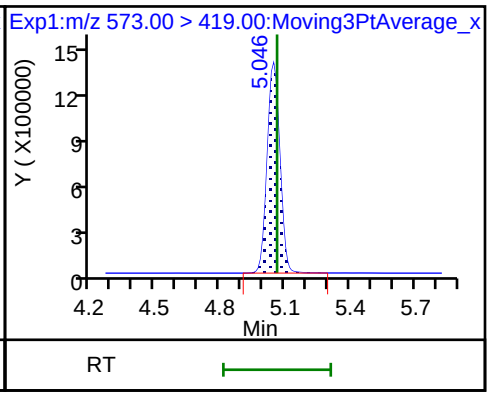
D 38 M2-8:2 FTS



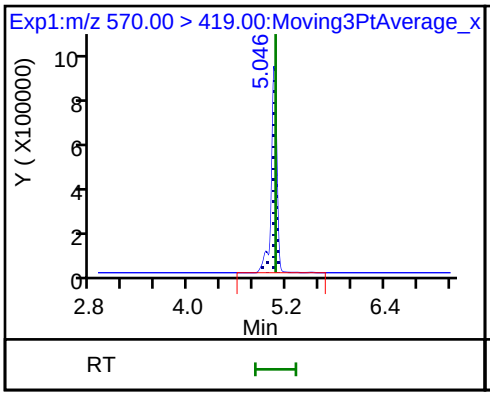

36 8:2 FTS



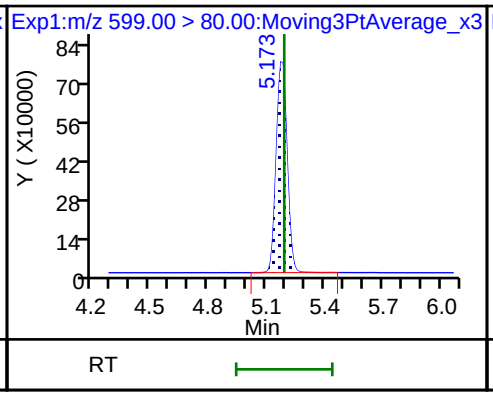

D 40 d3-NMeFOSAA



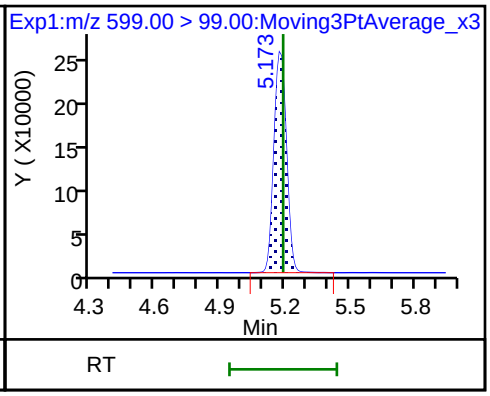

41 NMeFOSAA



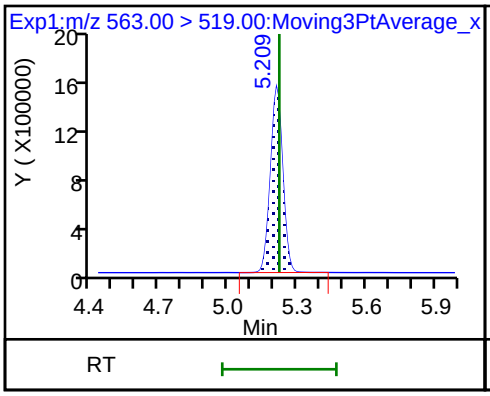

42 Perfluorodecanesulfonic acid



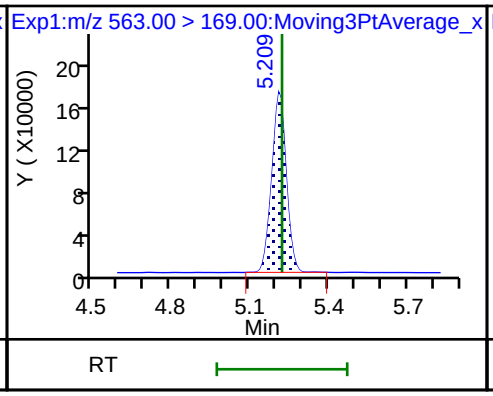

42 Perfluorodecanesulfonic acid



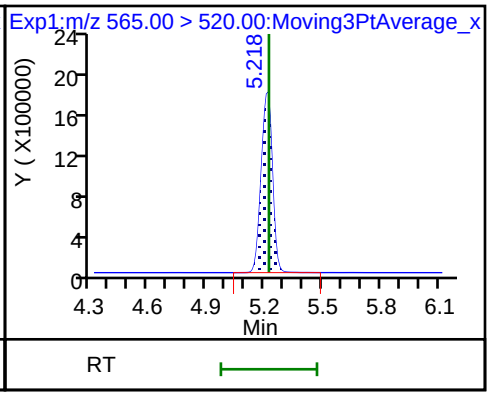

45 Perfluoroundecanoic acid



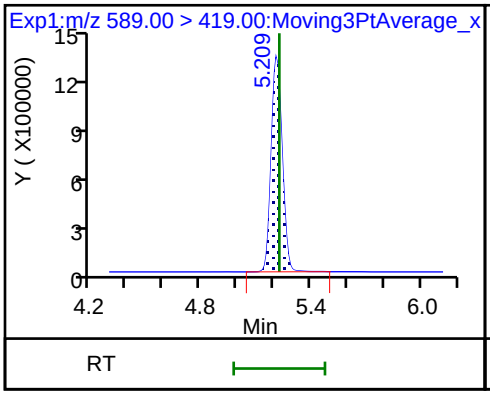

45 Perfluoroundecanoic acid



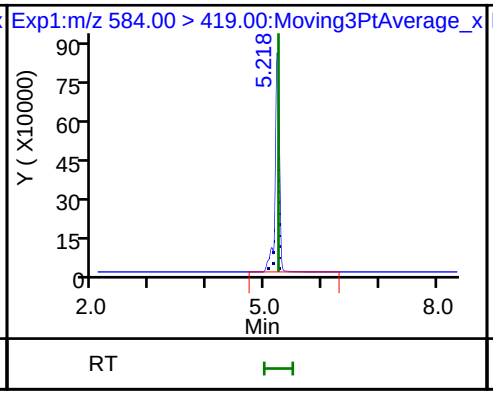

D 43 13C2 PFUnA



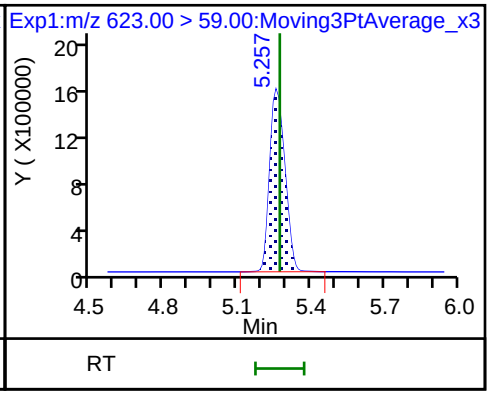

D 44 d5-NEtFOSAA



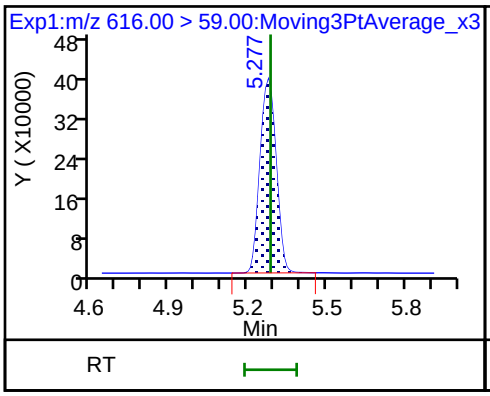

46 NEtFOSA



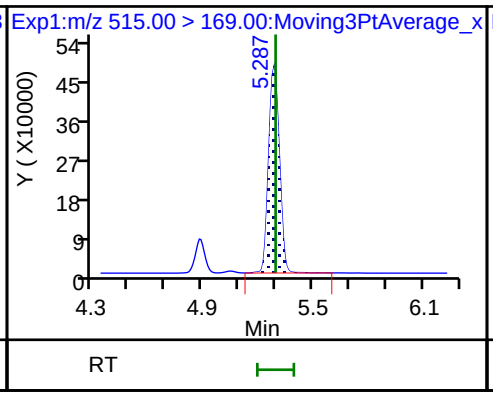

D 47 d7-N-MeFOSE-M



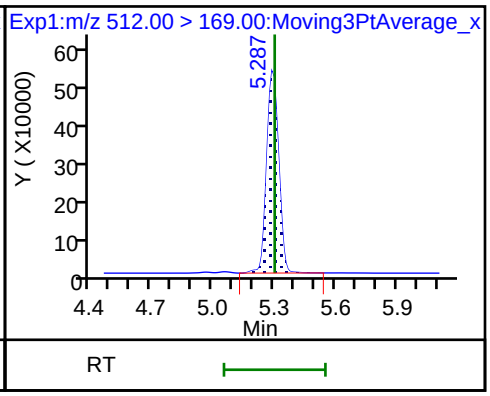
48 N-MeFOSE-M



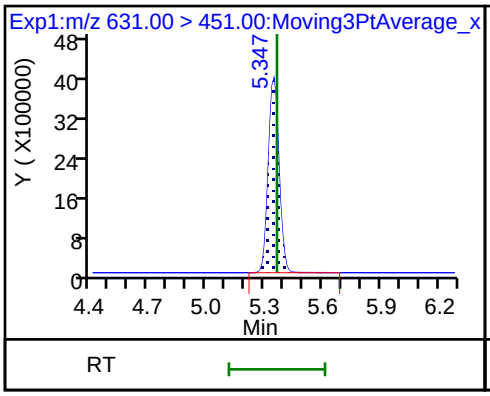

D 49 d-N-MeFOSA-M



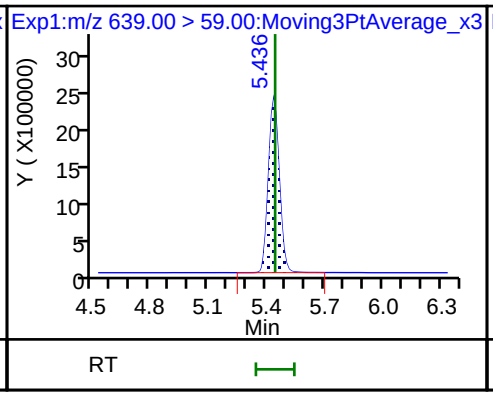

50 NMeFOSA



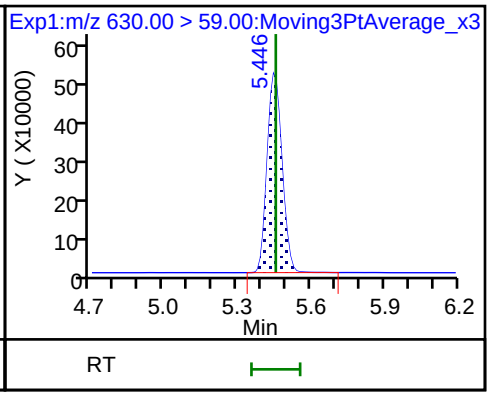

51 11ClFOS



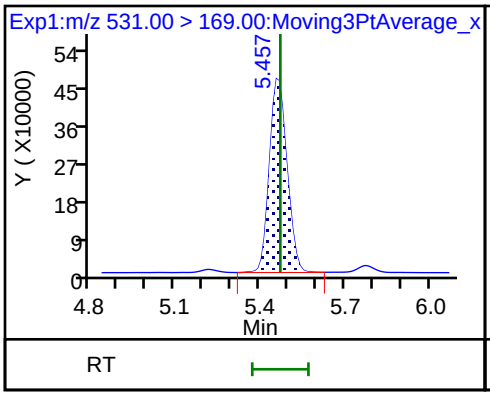

D 52 d9-N-EtFOSE-M



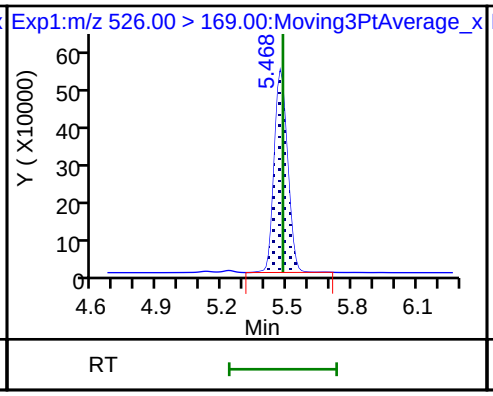

53 N-EtFOSE-M



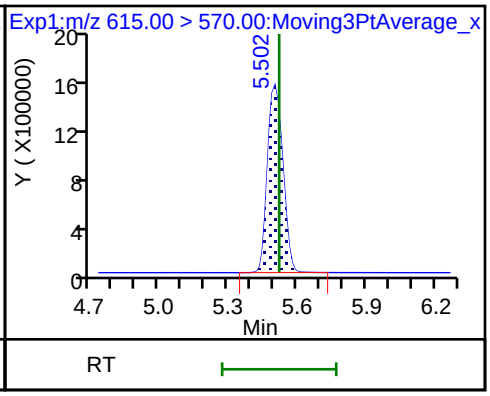

D 54 d-N-EtFOSA-M



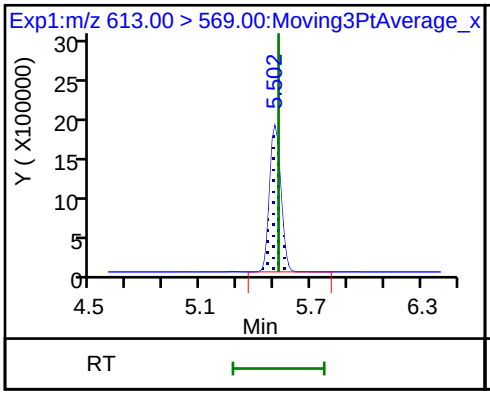

55 N-EtFOSA-M



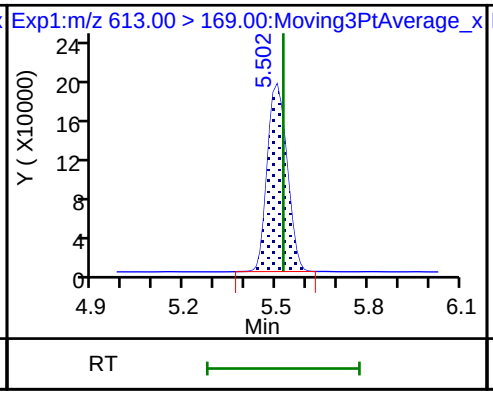

D 56 13C2 PFDoA



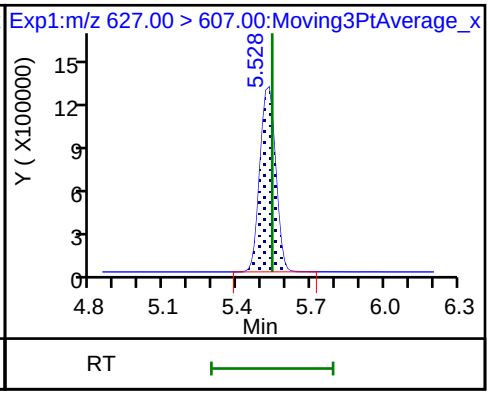

57 Perfluorododecanoic acid



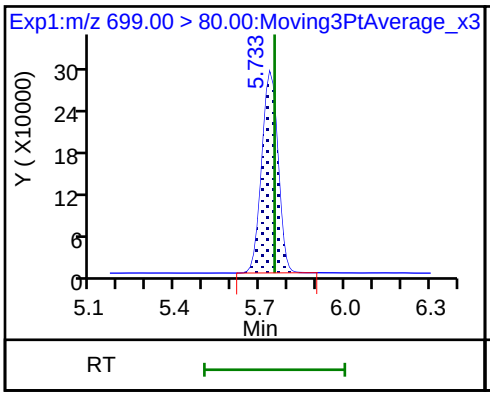

57 Perfluorododecanoic acid



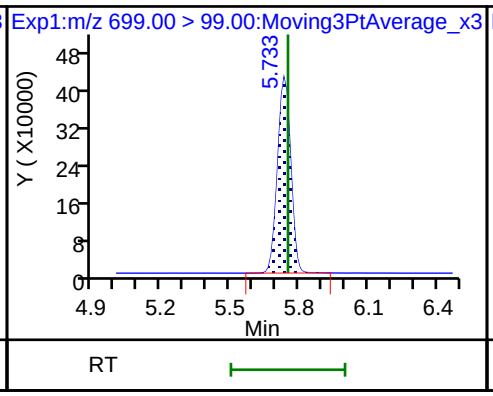

58 10:2 FTS



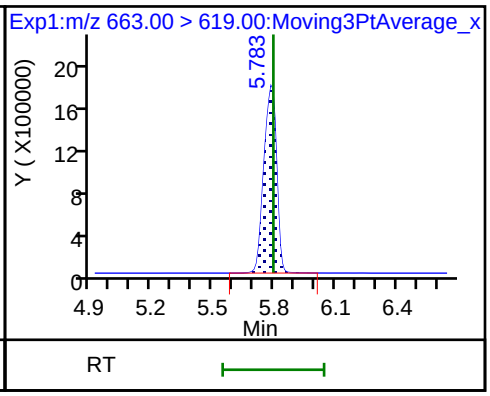
59 PFDoS



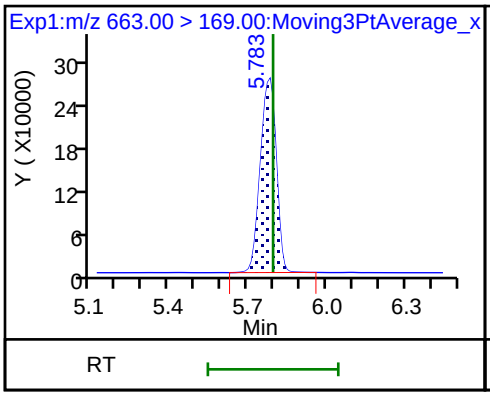

59 PFDoS



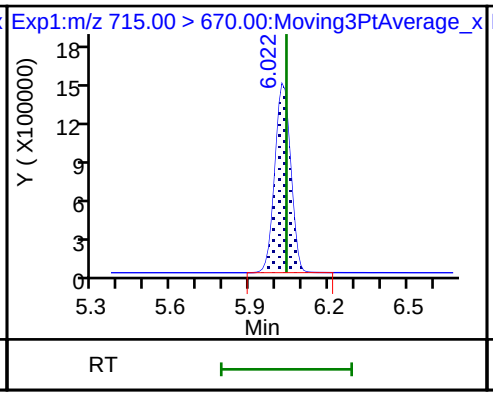

60 Perfluorotridecanoic acid



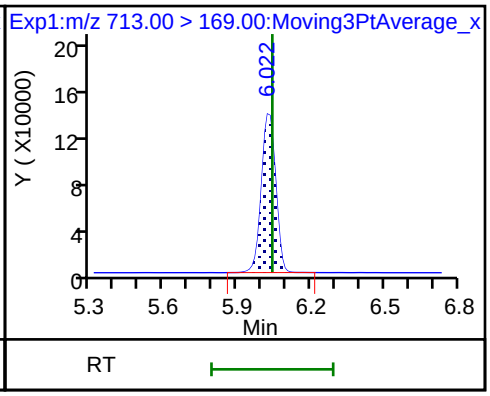

60 Perfluorotridecanoic acid



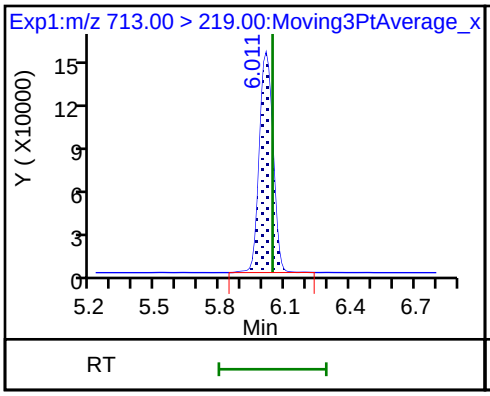

D 61 13C2 PFTeDA



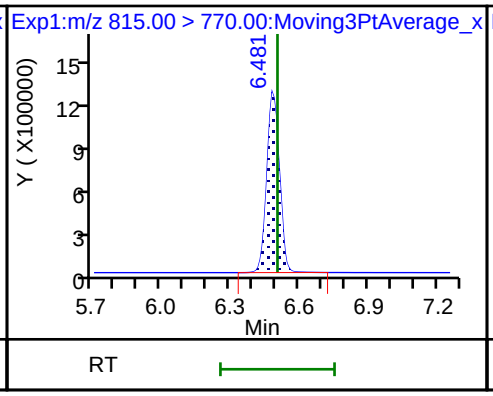

62 Perfluorotetradecanoic acid



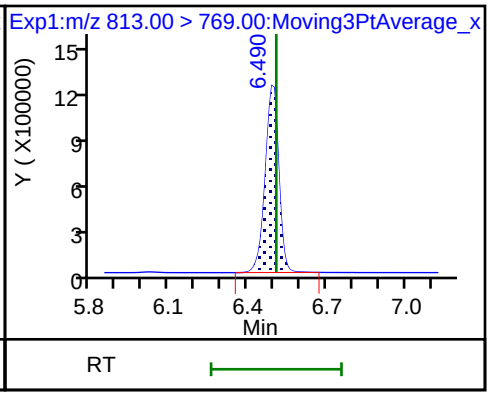

62 Perfluorotetradecanoic acid



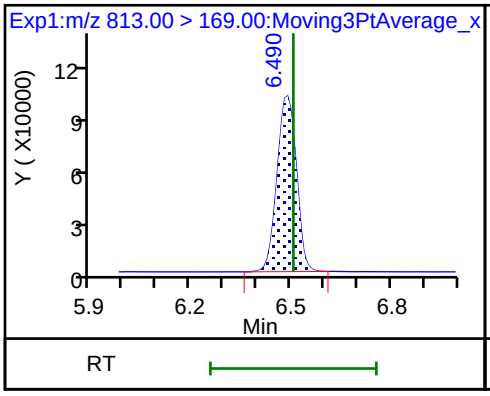

D 64 13C2 PFHxDA



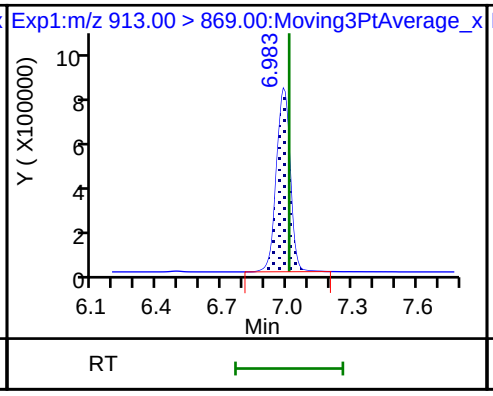

63 Perfluorohexadecanoic acid



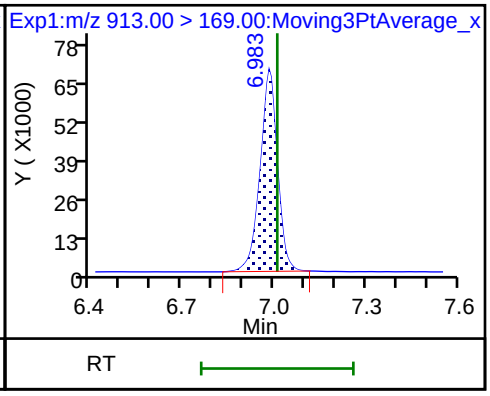

63 Perfluorohexadecanoic acid




65 Perfluorooctadecanoic acid




65 Perfluorooctadecanoic acid



Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

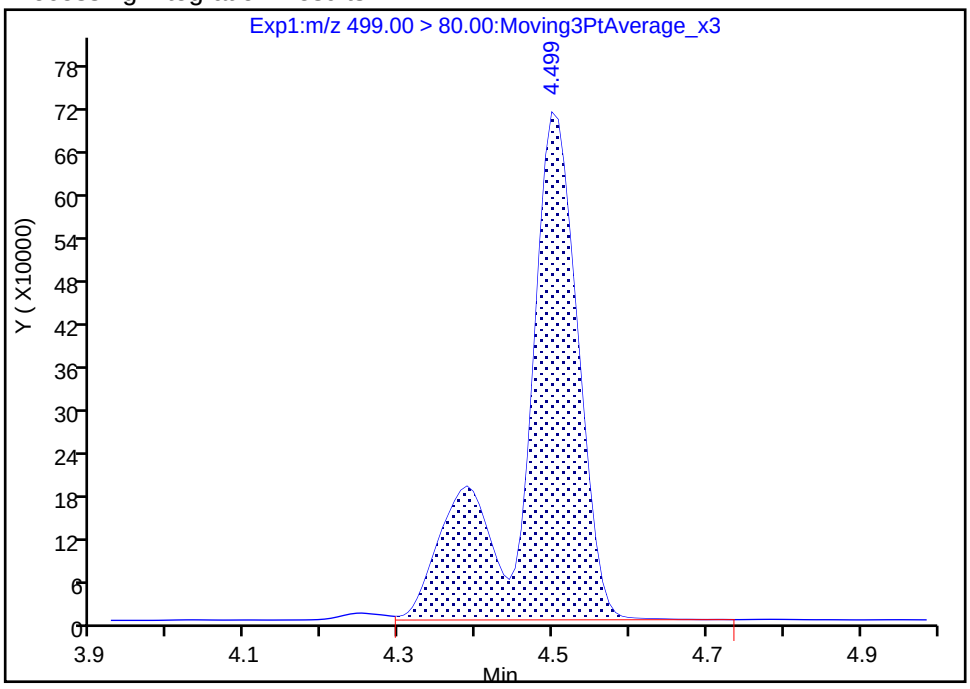
Data File: \\chromfs\Sacramento\ChromData\A18\20200825-102078.b\2020.08.25_A18_ICAL_A_015.d
Injection Date: 25-Aug-2020 17:19:42 Instrument ID: A18
Lims ID: IC STD 5
Client ID:
Operator ID: TAISACA18-PC\A-18 ALS Bottle#: 10 Worklist Smp#: 6
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFAS_A18V2 Limit Group: LC PFC ICAL
Column: Gemini C18 3um 3mm x 50 mm ( 3.00 mm) Detector EXP1

## 29 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 1

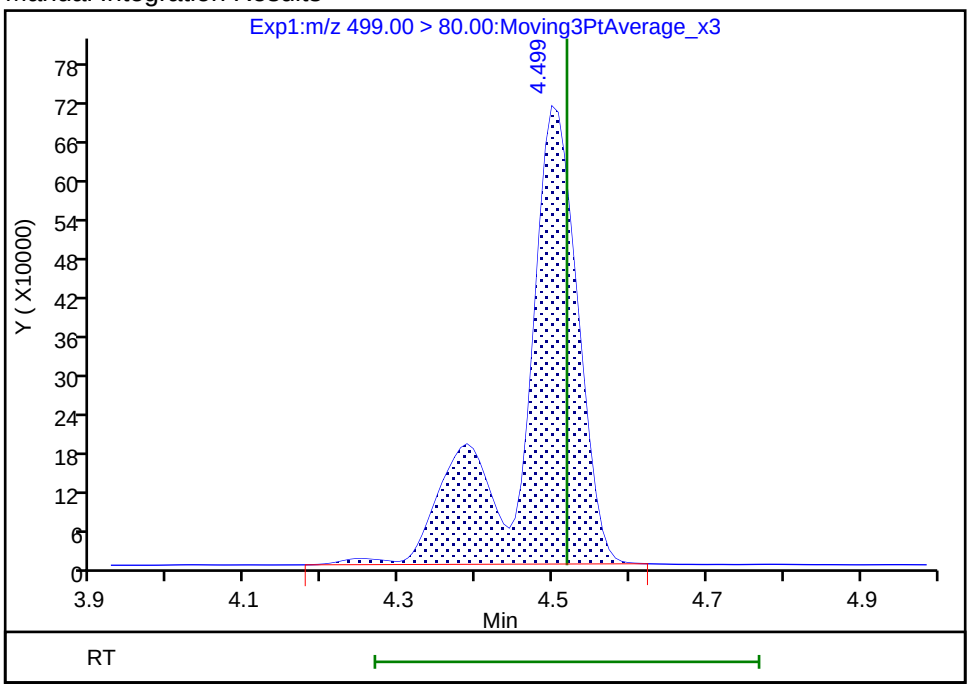
Processing Integration Results

RT: 4.50
Area: 3654200
Amount: 2.594584
Amount Units: ng/ml




Manual Integration Results

RT: 4.50
Area: 3665824
Amount: 2.504118
Amount Units: ng/ml




Reviewer: fariasa, 26-Aug-2020 06:03:38
Audit Action: Manually Integrated Audit Reason: Isomers

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\A18\20200825-102078.b\2020.08.25_A18_ICAL_A_016.d
Lims ID: IC STD 6
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 25-Aug-2020 17:28:48 ALS Bottle#: 11 Worklist Smp#: 7
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Sample Info: CAL STD 6 (25)
Misc. Info.: Plate: 1 Rack: 1
Operator ID: TAISACA18-PC\A-18 Instrument ID: A18
Sublist: chrom-PFAS_A18V2*sub1

Method: \\chromfs\Sacramento\ChromData\A18\20200825-102078.b\PFAS_A18V2.m
Limit Group: LC PFC ICAL
Last Update: 26-Aug-2020 10:43:03 Calib Date: 25-Aug-2020 17:37:57
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\A18\20200825-102078.b\2020.08.25_A18_ICAL_A_017.d

Column 1 : Gemini C18 3um 3mm x 50 mm ( 3.00 mm) Det: EXP1
Process Host: CTX1029

First Level Reviewer: fariasa Date: 26-Aug-2020 06:04:46
Ratio Calibration: Average of Initial Calibration

| Signal | RT | EXP RT | DLT RT | REL RT | Response | Amount ng/ml | Ratio(Limits) | %Rec | S/N | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| D 1 13C4 PFBA | | | | | | | | | | |
| 217.00 > 172.00 | 2.587 | 2.577 | 0.010 | 0.622 | 17071288 | 2.45 | | 98.0 | 7993 | |
| 2 Perfluorobutanoic acid | | | | | | | | | | |
| 212.90 > 169.00 | 2.587 | 2.580 | 0.007 | 1.000 | 30004201 | 5.06 | | 101 | 1186 | |
| 5 Perfluoropentanoic acid | | | | | | | | | | |
| 262.90 > 219.00 | 2.947 | 2.941 | 0.006 | 1.000 | 25936244 | 4.74 | | 94.9 | 1336 | |
| D 4 13C5 PFPeA | | | | | | | | | | |
| 267.90 > 223.00 | 2.947 | 2.941 | 0.006 | 0.708 | 13713409 | 2.53 | | 101 | 5569 | |
| D 9 13C3 PFBS | | | | | | | | | | |
| 301.90 > 80.00 | 2.982 | 2.977 | 0.005 | 0.717 | 9495273 | 2.23 | | 95.9 | 4260 | |
| 6 Perfluorobutanesulfonic acid | | | | | | | | | | |
| 298.90 > 80.00 | 2.994 | 2.982 | 0.012 | 1.004 | 18549061 | 4.50 | Target=2.30 | 102 | 3368 | |
| 298.90 > 99.00 | 2.994 | 2.982 | 0.012 | 1.004 | 7898606 | | 2.35(1.15-3.45) | 102 | 2690 | |
| D 7 M2-4:2 FTS | | | | | | | | | | |
| 329.00 > 81.00 | 3.295 | 3.288 | 0.007 | 0.792 | 2232877 | 2.18 | | 93.2 | 971 | |
| 8 4:2 FTS | | | | | | | | | | |
| 327.00 > 307.00 | 3.295 | 3.288 | 0.007 | 1.000 | 10586753 | 4.87 | | 104 | 13361 | |
| 10 Perfluorohexanoic acid | | | | | | | | | | |
| 313.00 > 269.00 | 3.338 | 3.334 | 0.004 | 1.000 | 24185372 | 4.53 | Target=13.78 | 90.7 | 1642 | |
| 313.00 > 119.00 | 3.338 | 3.334 | 0.004 | 1.000 | 1888643 | | 12.81(6.89-20.66) | 90.7 | 1221 | |
| D 11 13C2 PFHxA | | | | | | | | | | |
| 315.00 > 270.00 | 3.338 | 3.334 | 0.004 | 0.802 | 13833154 | 2.56 | | 102 | 5449 | |
| 12 Perfluoropentanesulfonic acid | | | | | | | | | | |
| 349.00 > 80.00 | 3.359 | 3.349 | 0.010 | 1.126 | 15346854 | 4.74 | Target=3.02 | 101 | 3025 | |
| 349.00 > 99.00 | 3.359 | 3.349 | 0.010 | 1.126 | 5149483 | | 2.98(1.51-4.52) | 101 | 2248 | |
| 13 HPFO-DA | | | | | | | | | | |
| 285.00 > 169.00 | 3.476 | 3.463 | 0.013 | 1.000 | 5287445 | 5.08 | | 102 | 4592 | |

| Signal | RT | EXP RT | DLT RT | REL RT | Response | Amount ng/ml | Ratio(Limits) | %Rec | S/N | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| D 14 13C3 HFPO-DA | | | | | | | | | | |
| 287.00 > 169.00 | 3.476 | 3.463 | 0.013 | 0.836 | 2670374 | 2.41 | | 96.5 | 4914 | |
| D 18 13C4 PFHpA | | | | | | | | | | |
| 367.00 > 322.00 | 3.755 | 3.750 | 0.005 | 0.902 | 11337825 | 2.45 | | 98.2 | 6779 | |
| 16 Perfluoroheptanoic acid | | | | | | | | | | |
| 363.00 > 319.00 | 3.755 | 3.750 | 0.005 | 1.000 | 23268900 | 5.06 | Target=3.84 | 101 | 2392 | |
| 363.00 > 169.00 | 3.764 | 3.750 | 0.014 | 1.003 | 6137409 | | 3.79(1.92-5.76) | 101 | 3098 | |
| 15 Perfluorohexanesulfonic acid | | | | | | | | | | |
| 399.00 > 80.00 | 3.764 | 3.752 | 0.012 | 1.000 | 11177725 | 4.39 | Target=3.50 | 96.4 | 5252 | |
| 399.00 > 99.00 | 3.764 | 3.752 | 0.012 | 1.000 | 3205606 | | 3.49(1.75-5.25) | 96.4 | 3724 | |
| D 17 18O2 PFHxS | | | | | | | | | | |
| 403.00 > 84.00 | 3.764 | 3.752 | 0.012 | 0.905 | 5100068 | 2.27 | | 95.9 | 5111 | |
| 19 DONA | | | | | | | | | | |
| 377.00 > 251.00 | 3.811 | 3.800 | 0.011 | 0.843 | 66616540 | 4.76 | Target=2.42 | 101 | 21114 | |
| 377.00 > 85.00 | 3.811 | 3.800 | 0.011 | 0.843 | 27995843 | | 2.38(1.21-3.63) | 101 | 9275 | |
| D 20 M2-6:2 FTS | | | | | | | | | | |
| 429.00 > 81.00 | 4.136 | 4.127 | 0.009 | 0.994 | 1859778 | 2.16 | | 91.0 | 1289 | |
| 21 6:2 FTS | | | | | | | | | | |
| 427.00 > 407.00 | 4.136 | 4.127 | 0.009 | 1.000 | 8115080 | 4.51 | | 95.1 | 6654 | |
| * 23 13C2 PFOA | | | | | | | | | | |
| 415.00 > 370.00 | 4.161 | 4.151 | 0.010 | | 10989918 | 2.50 | | | 6306 | |
| 24 Perfluoroheptanesulfonic acid | | | | | | | | | | |
| 449.00 > 80.00 | 4.152 | 4.143 | 0.009 | 0.918 | 7960398 | 4.88 | Target=4.40 | 103 | 2507 | |
| 449.00 > 99.00 | 4.152 | 4.143 | 0.009 | 0.918 | 1834088 | | 4.34(2.20-6.60) | 103 | 1847 | |
| $ 26 13C8 PFOA | | | | | | | | | | |
| 421.00 > 376.00 | 4.152 | 4.147 | 0.005 | 0.998 | 6660436 | 2.24 | | 91.6 | 4520 | |
| D 25 13C4 PFOA | | | | | | | | | | |
| 417.00 > 372.00 | 4.161 | 4.150 | 0.011 | 1.000 | 10986603 | 2.50 | | 99.9 | 9240 | |
| 22 Perfluorooctanoic acid | | | | | | | | | | |
| 413.00 > 369.00 | 4.161 | 4.150 | 0.011 | 1.000 | 19956418 | 4.45 | Target=2.94 | 89.0 | 4015 | |
| 413.00 > 169.00 | 4.161 | 4.150 | 0.011 | 1.000 | 6809040 | | 2.93(1.47-4.41) | 89.0 | 11537 | |
| $ 28 13C8 PFOS | | | | | | | | | | |
| 507.00 > 99.00 | 4.521 | 4.514 | 0.007 | 1.087 | 1111635 | 2.34 | | 97.8 | 2881 | |
| D 27 13C4 PFOS | | | | | | | | | | |
| 503.00 > 80.00 | 4.521 | 4.516 | 0.005 | 1.087 | 3486990 | 2.29 | | 95.8 | 1540 | |
| 29 Perfluorooctanesulfonic acid | | | | | | | | | | M |
| 499.00 > 80.00 | 4.521 | 4.518 | 0.003 | 1.000 | 7186938 | 4.76 | Target=4.53 | 103 | 1207 | M |
| 499.00 > 99.00 | 4.521 | 4.518 | 0.003 | 1.000 | 1488684 | | 4.83(2.26-6.79) | 103 | 1322 | |
| D 30 13C5 PFNA | | | | | | | | | | |
| 468.00 > 423.00 | 4.538 | 4.533 | 0.005 | 1.091 | 8038803 | 2.27 | | 90.7 | 8847 | |
| 31 Perfluorononanoic acid | | | | | | | | | | |
| 463.00 > 419.00 | 4.538 | 4.537 | 0.001 | 1.000 | 15126434 | 4.91 | Target=8.97 | 98.1 | 2004 | |
| 463.00 > 169.00 | 4.538 | 4.537 | 0.001 | 1.000 | 1764451 | | 8.57(4.48-13.45) | 98.1 | 1644 | |
| 32 9ClFOS | | | | | | | | | | |
| 531.00 > 351.00 | 4.734 | 4.724 | 0.010 | 1.047 | 23116216 | 4.90 | | 105 | 28943 | |
| D 33 13C8 FOSA | | | | | | | | | | |
| 506.00 > 78.00 | 4.841 | 4.830 | 0.011 | 1.163 | 5954676 | 2.42 | | 96.9 | 7398 | |

| Signal | RT | EXP RT | DLT RT | REL RT | Response | Amount ng/ml | Ratio(Limits) | %Rec | S/N | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| 34 Perfluorooctanesulfonamide | | | | | | | | | | |
| 498.00 > 78.00 | 4.841 | 4.830 | 0.011 | 1.000 | 10924659 | 4.93 | | 98.6 | 8467 | |
| 35 Perfluorononanesulfonic acid | | | | | | | | | | |
| 549.00 > 80.00 | 4.875 | 4.868 | 0.007 | 1.078 | 6654063 | 4.87 | Target=2.85 | 101 | 3561 | |
| 549.00 > 99.00 | 4.875 | 4.868 | 0.007 | 1.078 | 2392228 | | 2.78(1.43-4.28) | 101 | 3224 | |
| D 39 13C2 PFDA | | | | | | | | | | |
| 515.00 > 470.00 | 4.902 | 4.892 | 0.010 | 1.178 | 7862594 | 2.28 | | 91.4 | 9831 | |
| 37 Perfluorodecanoic acid | | | | | | | | | | |
| 513.00 > 469.00 | 4.902 | 4.896 | 0.006 | 1.000 | 14925465 | 4.92 | Target=10.16 | 98.5 | 4286 | |
| 513.00 > 169.00 | 4.902 | 4.896 | 0.006 | 1.000 | 1559590 | | 9.57(5.08-15.24) | 98.5 | 202 | |
| D 38 M2-8:2 FTS | | | | | | | | | | |
| 529.00 > 81.00 | 4.902 | 4.897 | 0.005 | 1.178 | 2559241 | 2.06 | | 86.1 | 1488 | |
| 36 8:2 FTS | | | | | | | | | | |
| 527.00 > 507.00 | 4.912 | 4.898 | 0.014 | 1.002 | 9239140 | 4.87 | | 102 | 18048 | |
| D 40 d3-NMeFOSAA | | | | | | | | | | |
| 573.00 > 419.00 | 5.069 | 5.062 | 0.007 | 1.218 | 5620374 | 2.43 | | 97.3 | 6069 | |
| 41 NMeFOSAA | | | | | | | | | | |
| 570.00 > 419.00 | 5.069 | 5.065 | 0.004 | 1.000 | 8891336 | 5.33 | | 107 | 41230 | |
| 42 Perfluorodecanesulfonic acid | | | | | | | | | | |
| 599.00 > 80.00 | 5.197 | 5.191 | 0.006 | 1.149 | 6052828 | 4.97 | Target=2.77 | 103 | 4927 | |
| 599.00 > 99.00 | 5.197 | 5.191 | 0.006 | 1.149 | 2101230 | | 2.88(1.38-4.15) | 103 | 3772 | |
| 45 Perfluoroundecanoic acid | | | | | | | | | | |
| 563.00 > 519.00 | 5.233 | 5.221 | 0.012 | 1.002 | 12270214 | 4.90 | Target=8.43 | 98.0 | 4768 | |
| 563.00 > 169.00 | 5.224 | 5.221 | 0.003 | 1.000 | 1595674 | | 7.69(4.22-12.65) | 98.0 | 2318 | |
| D 44 d5-NEtFOSAA | | | | | | | | | | |
| 589.00 > 419.00 | 5.233 | 5.227 | 0.006 | 1.258 | 5507372 | 2.25 | | 90.2 | 4616 | |
| D 43 13C2 PFUnA | | | | | | | | | | |
| 565.00 > 520.00 | 5.224 | 5.221 | 0.003 | 1.256 | 8633431 | 2.53 | | 101 | 9943 | |
| 46 NEtFOSA | | | | | | | | | | |
| 584.00 > 419.00 | 5.243 | 5.236 | 0.007 | 1.002 | 8399275 | 5.64 | | 113 | 45993 | |
| D 47 d7-N-MeFOSE-M | | | | | | | | | | |
| 623.00 > 59.00 | 5.284 | 5.272 | 0.012 | 1.270 | 7664729 | 12.6 | | 101 | 4162 | |
| 48 N-MeFOSE-M | | | | | | | | | | |
| 616.00 > 59.00 | 5.294 | 5.285 | 0.009 | 1.002 | 3296405 | 4.98 | | 99.6 | 2768 | |
| D 49 d-N-MeFOSA-M | | | | | | | | | | |
| 515.00 > 169.00 | 5.304 | 5.295 | 0.009 | 1.275 | 2255932 | 2.61 | | 104 | 77.7 | |
| 50 NMeFOSA | | | | | | | | | | |
| 512.00 > 169.00 | 5.314 | 5.301 | 0.013 | 1.002 | 4360251 | 5.03 | | 101 | 871 | |
| 51 11ClFOS | | | | | | | | | | |
| 631.00 > 451.00 | 5.370 | 5.363 | 0.007 | 1.188 | 30101960 | 5.03 | | 107 | 152081 | |
| D 52 d9-N-EtFOSE-M | | | | | | | | | | |
| 639.00 > 59.00 | 5.450 | 5.443 | 0.007 | 1.310 | 8444122 | 11.3 | | 90.4 | 1706 | |
| 53 N-EtFOSE-M | | | | | | | | | | |
| 630.00 > 59.00 | 5.461 | 5.456 | 0.005 | 1.002 | 3886177 | 5.36 | | 107 | 2931 | |
| D 54 d-N-EtFOSA-M | | | | | | | | | | |
| 531.00 > 169.00 | 5.483 | 5.471 | 0.012 | 1.318 | 2325340 | 2.63 | | 105 | 123 | |

| Signal | RT | EXP RT | DLT RT | REL RT | Response | Amount ng/ml | Ratio(Limits) | %Rec | S/N | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| 55 N-EtFOSA-M | | | | | | | | | | |
| 526.00 > 169.00 | 5.483 | 5.480 | 0.003 | 1.000 | 4663831 | 4.74 | | 94.7 | 525 | |
| D 56 13C2 PFDoA | | | | | | | | | | |
| 615.00 > 570.00 | 5.522 | 5.521 | 0.001 | 1.327 | 7892285 | 2.35 | | 93.9 | 9987 | |
| 57 Perfluorododecanoic acid | | | | | | | | | | |
| 613.00 > 569.00 | 5.535 | 5.523 | 0.011 | 1.002 | 15608260 | 4.84 | Target=9.12 | 96.7 | 4969 | |
| 613.00 > 169.00 | 5.522 | 5.523 | -0.001 | 1.000 | 1677973 | | 9.30(4.56-13.69) | 96.7 | 2033 | |
| 58 10:2 FTS | | | | | | | | | | |
| 627.00 > 607.00 | 5.547 | 5.541 | 0.006 | 1.132 | 10619740 | 4.93 | | 102 | 15203 | |
| 59 PFDoS | | | | | | | | | | |
| 699.00 > 80.00 | 5.749 | 5.751 | -0.002 | 1.272 | 2399332 | 4.94 | Target=0.72 | 102 | 2421 | |
| 699.00 > 99.00 | 5.749 | 5.751 | -0.002 | 1.272 | 3427368 | | 0.70(0.36-1.07) | 102 | 5632 | |
| 60 Perfluorotridecanoic acid | | | | | | | | | | |
| 663.00 > 619.00 | 5.788 | 5.795 | -0.007 | 1.048 | 14166734 | 4.77 | Target=6.78 | 95.4 | 3912 | |
| 663.00 > 169.00 | 5.788 | 5.795 | -0.007 | 1.048 | 1930040 | | 7.34(3.39-10.17) | 95.4 | 1997 | |
| D 61 13C2 PFTeDA | | | | | | | | | | |
| 715.00 > 670.00 | 6.036 | 6.038 | -0.002 | 1.451 | 7148108 | 2.58 | | 103 | 7718 | |
| 62 Perfluorotetradecanoic acid | | | | | | | | | | |
| 713.00 > 169.00 | 6.036 | 6.041 | -0.005 | 1.000 | 1203652 | 4.99 | Target=0.85 | 99.8 | 4214 | |
| 713.00 > 219.00 | 6.026 | 6.041 | -0.015 | 0.998 | 1240663 | | 0.97(0.43-1.28) | 99.8 | 3471 | |
| D 64 13C2 PFHxDA | | | | | | | | | | |
| 815.00 > 770.00 | 6.501 | 6.505 | -0.004 | 1.562 | 5029525 | 2.48 | | 99.1 | 6072 | |
| 63 Perfluorohexadecanoic acid | | | | | | | | | | |
| 813.00 > 769.00 | 6.501 | 6.507 | -0.006 | 1.000 | 8100551 | 4.57 | Target=10.21 | 91.3 | 3300 | |
| 813.00 > 169.00 | 6.494 | 6.507 | -0.013 | 0.999 | 884514 | | 9.16(5.11-15.32) | 91.3 | 2841 | |
| 65 Perfluorooctadecanoic acid | | | | | | | | | | |
| 913.00 > 869.00 | 6.991 | 7.009 | -0.018 | 1.075 | 6103585 | 4.59 | Target=12.45 | 91.9 | 3205 | |
| 913.00 > 169.00 | 6.991 | 7.009 | -0.018 | 1.075 | 562621 | | 10.85(6.22-18.67) | 91.9 | 2378 | |

## QC Flag Legend

Review Flags

M - Manually Integrated

## Reagents:

LCPFC_LL6_00025 Amount Added: 1.00 Units: mL

Report Date: 26-Aug-2020 10:43:05 Chrom Revision: 2.3 20-Aug-2020 13:57:12

Eurofins TestAmerica, Sacramento

Data File: \\chromfs\Sacramento\ChromData\A18\20200825-102078.b\2020.08.25_A18_ICAL_A_016.d

Injection Date: 25-Aug-2020 17:28:48 Instrument ID: A18

Lims ID: IC STD 6

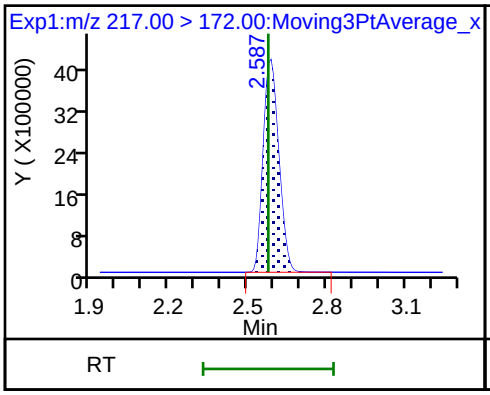
Client ID:

Operator ID: TAISACA18-PC\A-18 ALS Bottle#: 11 Worklist Smp#: 7

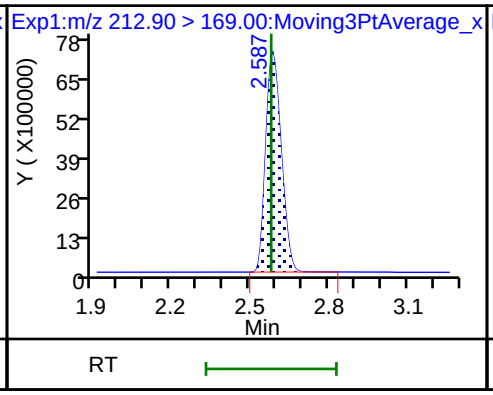
Injection Vol: 20.0 ul Dil. Factor: 1.0000

Method: PFAS_A18V2 Limit Group: LC PFC ICAL

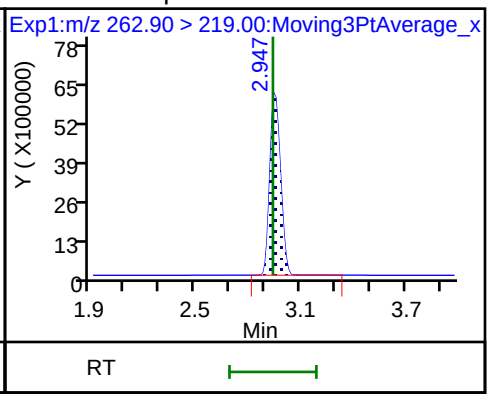
D 1 13C4 PFBA



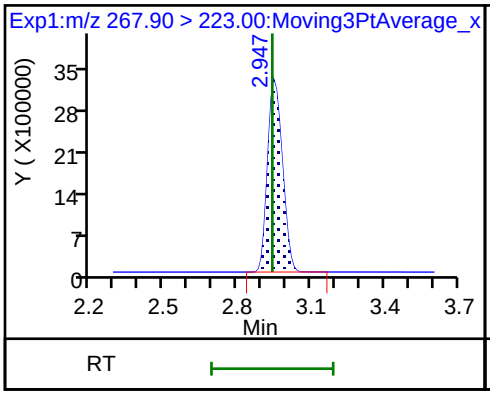

2 Perfluorobutanoic acid



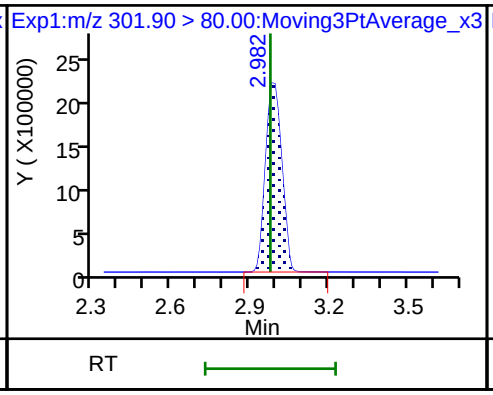

5 Perfluoropentanoic acid



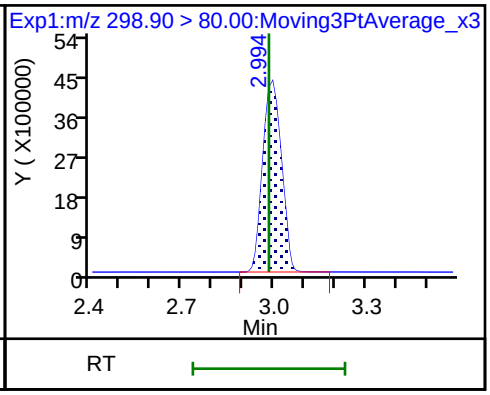

D 4 13C5 PFPeA



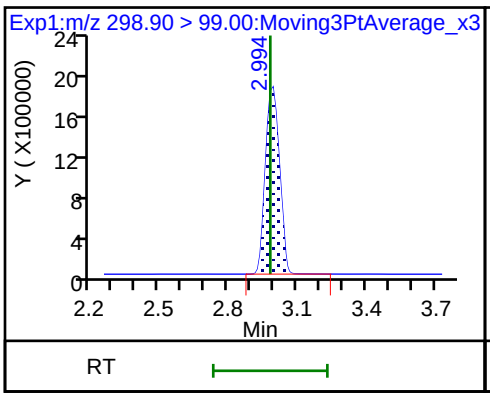

D 9 13C3 PFBS



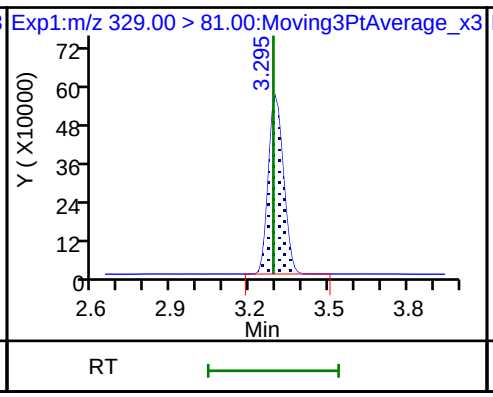

6 Perfluorobutanesulfonic acid



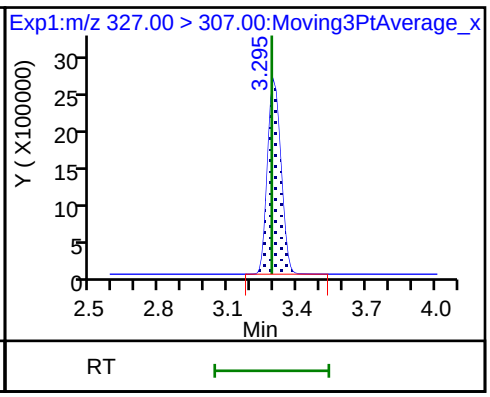

6 Perfluorobutanesulfonic acid



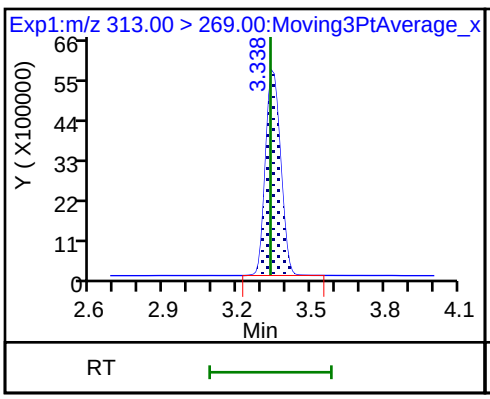

D 7 M2-4:2 FTS



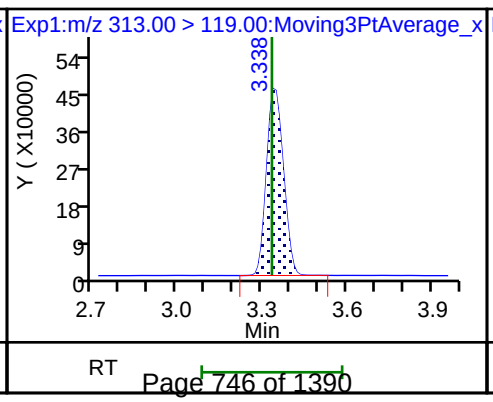

8 4:2 FTS



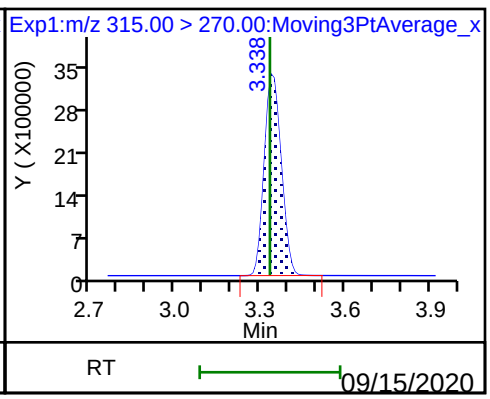

10 Perfluorohexanoic acid



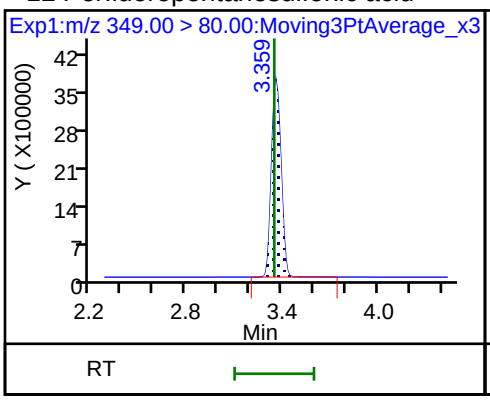

10 Perfluorohexanoic acid



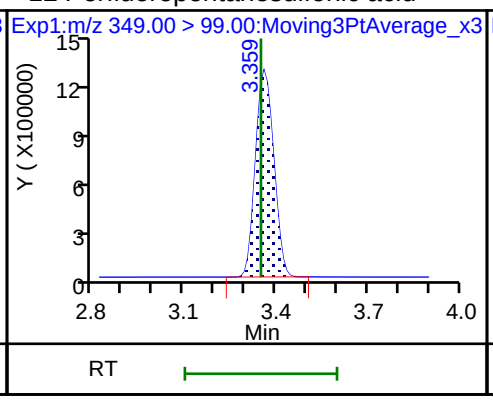

D 11 13C2 PFHxA



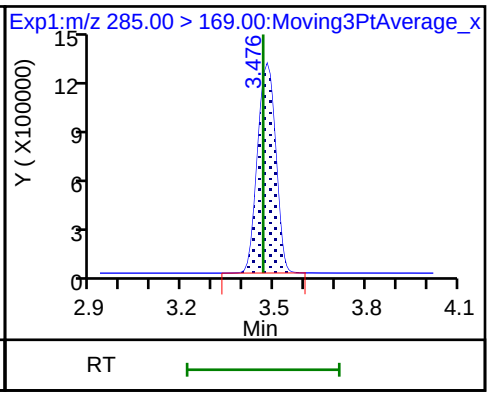
12 Perfluoropentanesulfonic acid



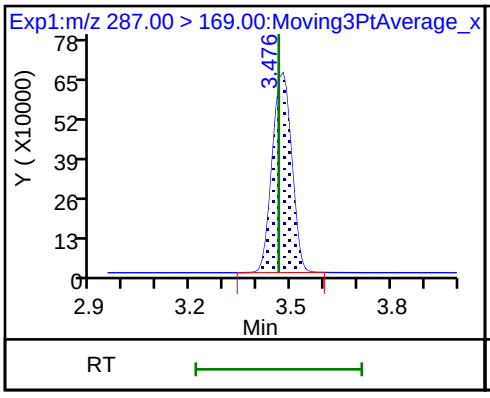

12 Perfluoropentanesulfonic acid



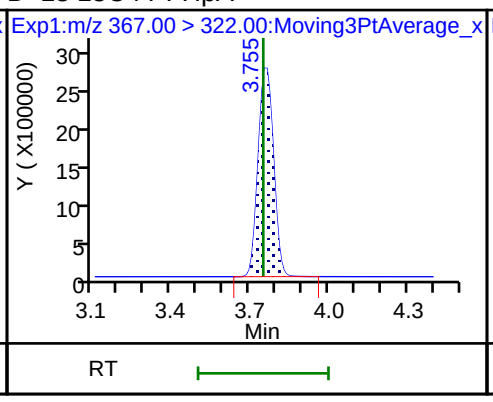

13 HPFO-DA



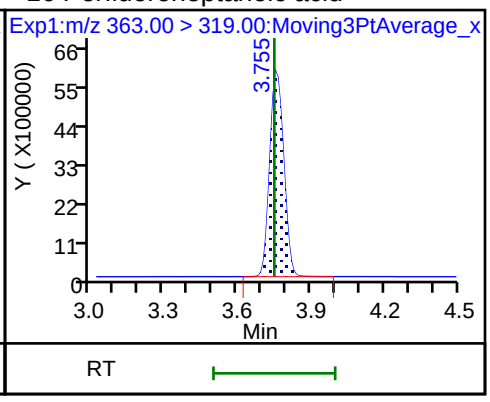

D 14 13C3 HFPO-DA



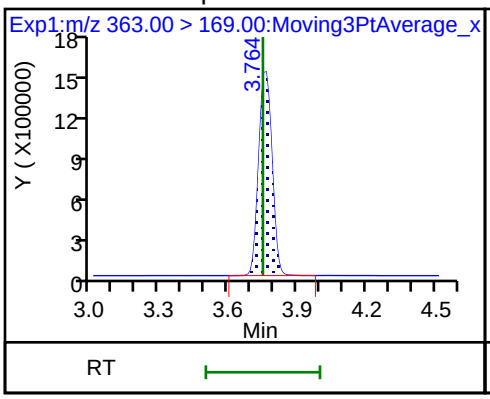

D 18 13C4 PFHpA



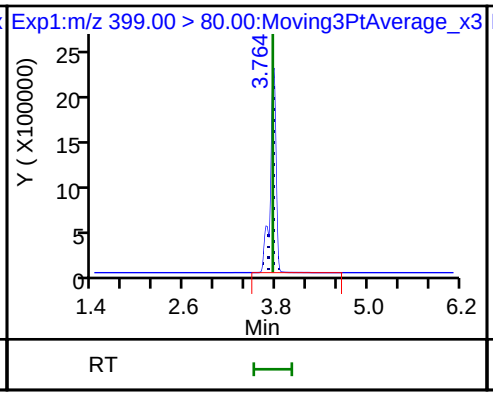

16 Perfluoroheptanoic acid



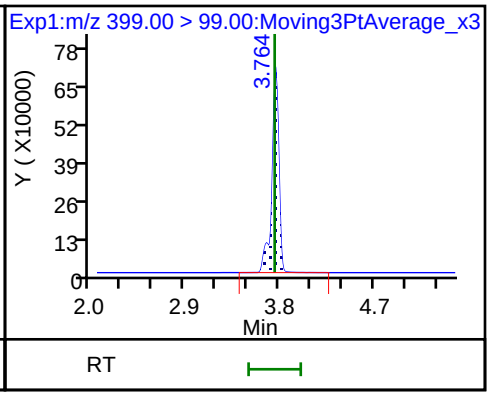

16 Perfluoroheptanoic acid



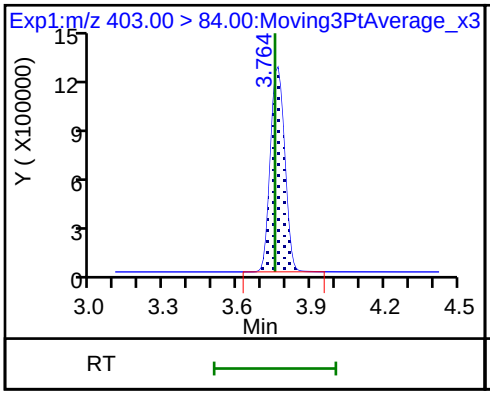

15 Perfluorohexanesulfonic acid



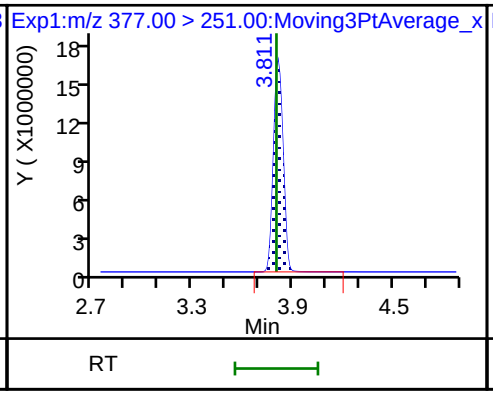

15 Perfluorohexanesulfonic acid



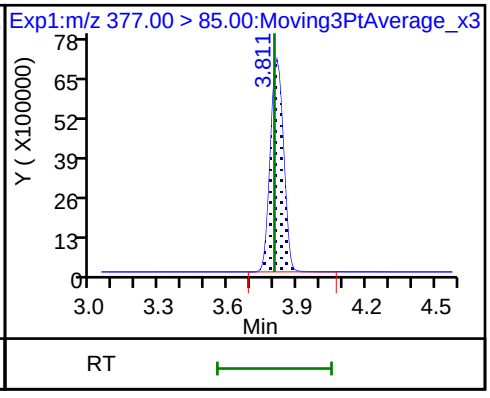

D 17 18O2 PFHxS



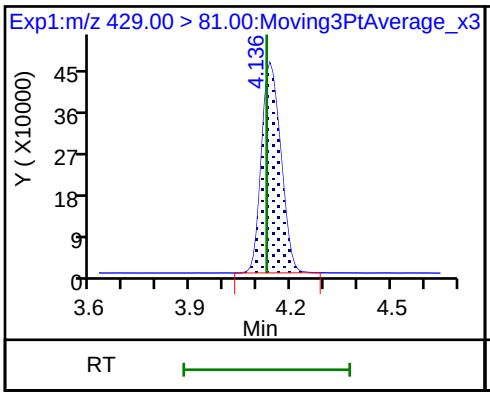

19 DONA



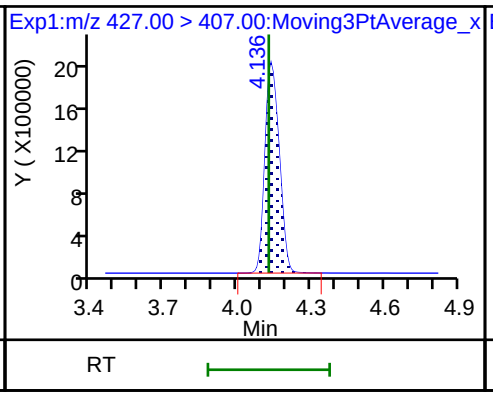

19 DONA



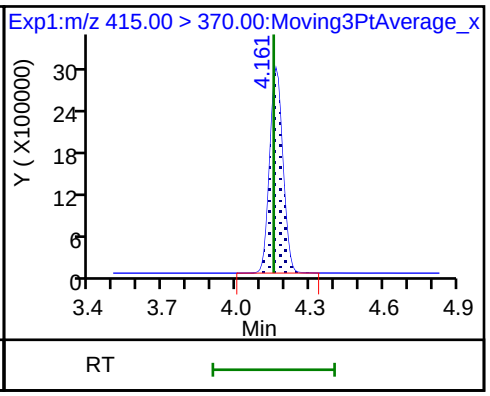
D 20 M2-6:2 FTS



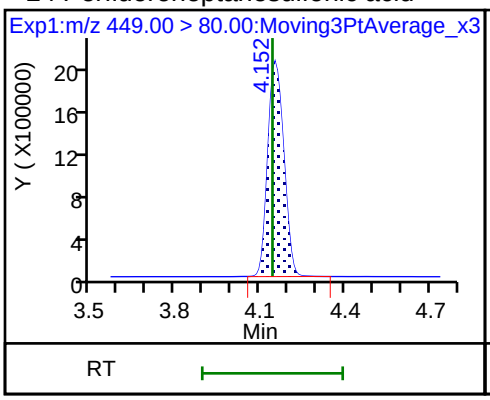

21 6:2 FTS



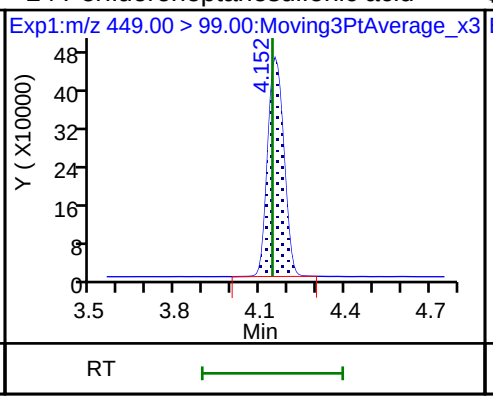

* 23 13C2 PFOA



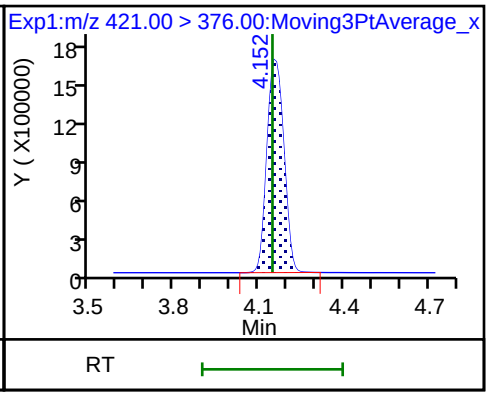

24 Perfluoroheptanesulfonic acid



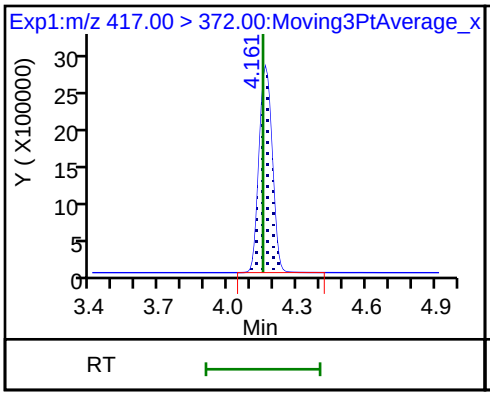

24 Perfluoroheptanesulfonic acid



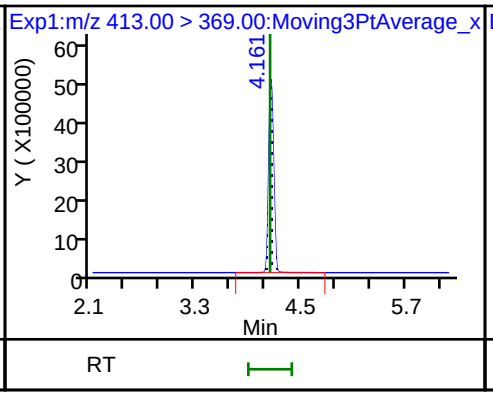

$ 26 13C8 PFOA



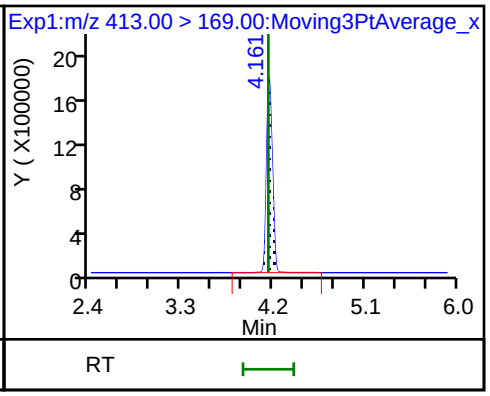

D 25 13C4 PFOA



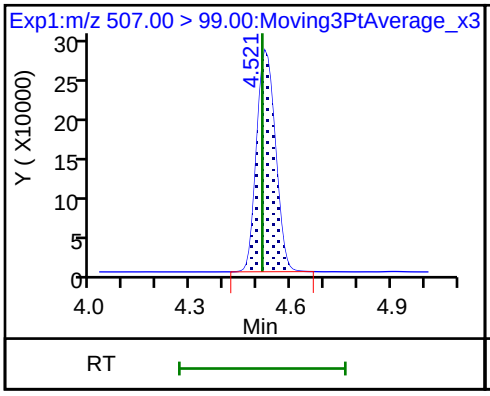

22 Perfluorooctanoic acid




22 Perfluorooctanoic acid




$ 28 13C8 PFOS

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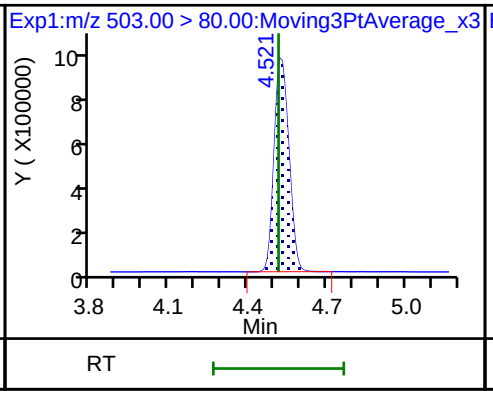
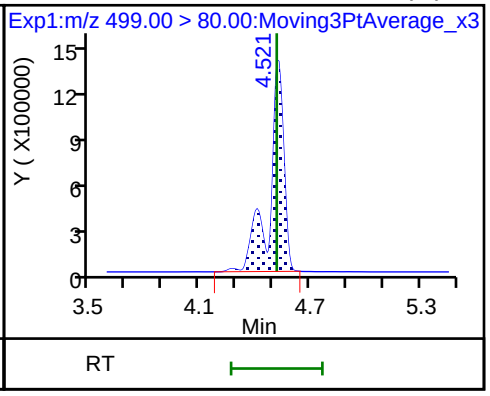
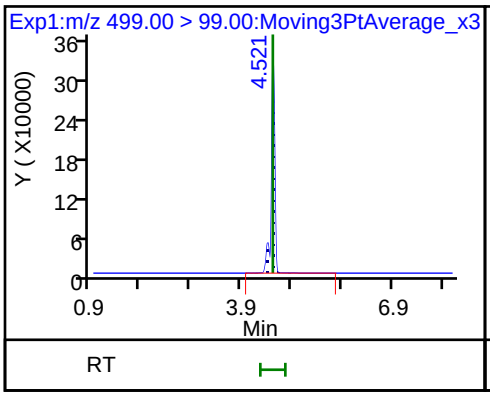


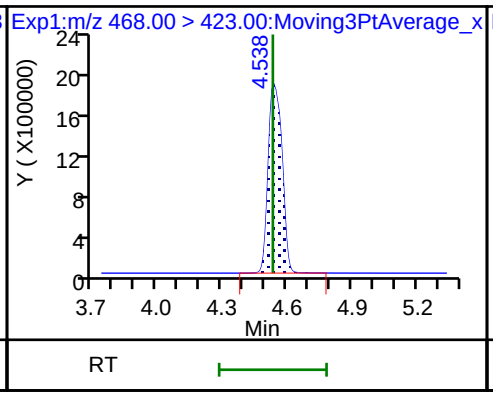

29 Perfluorooctanesulfonic acid (M)



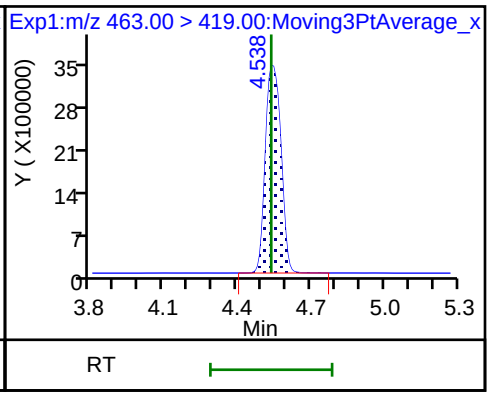
29 Perfluorooctanesulfonic acid



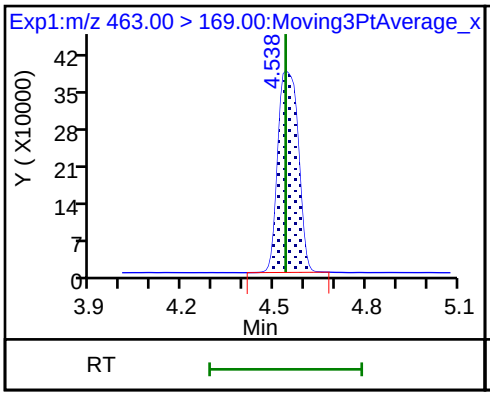

D 30 13C5 PFNA



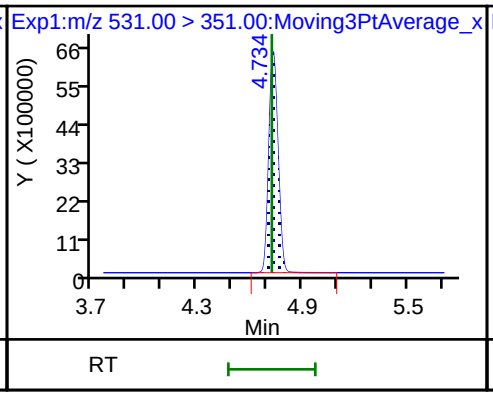

31 Perfluorononanoic acid



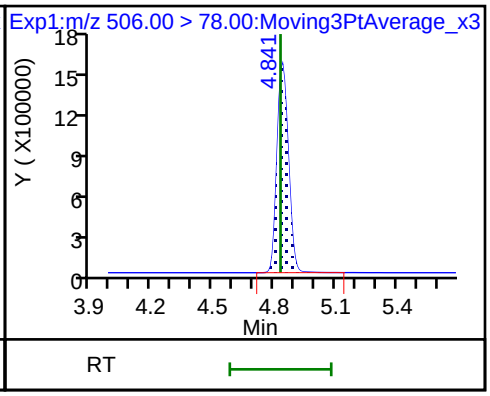

31 Perfluorononanoic acid



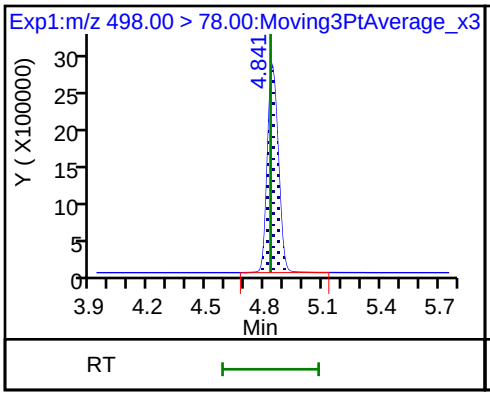

32 9ClFOS



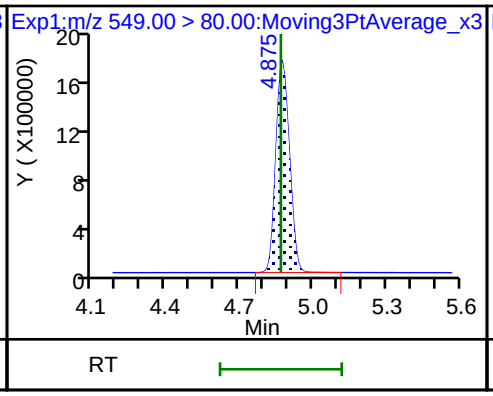

D 33 13C8 FOSA



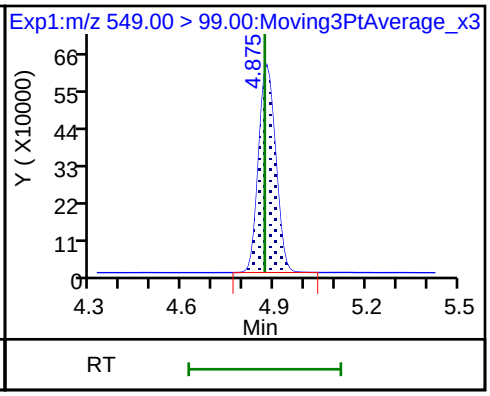

34 Perfluorooctanesulfonamide



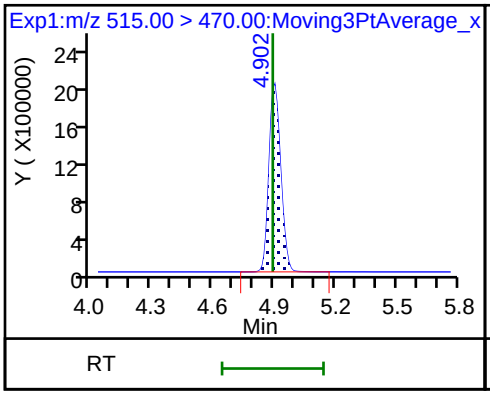

35 Perfluorononanesulfonic acid



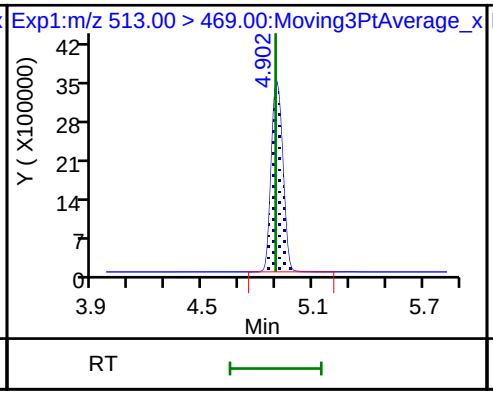

35 Perfluorononanesulfonic acid



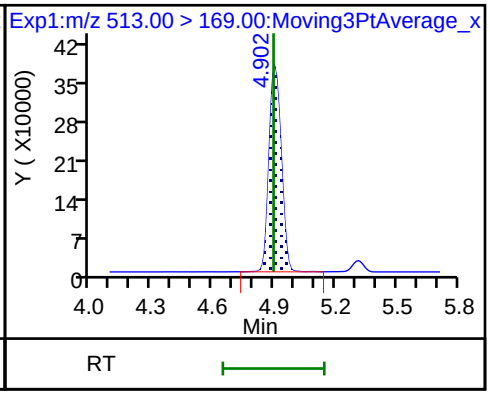

D 39 13C2 PFDA



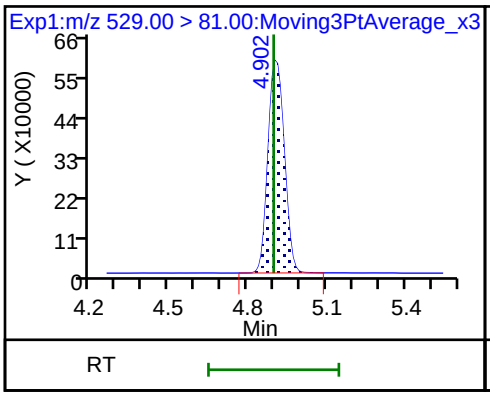

37 Perfluorodecanoic acid



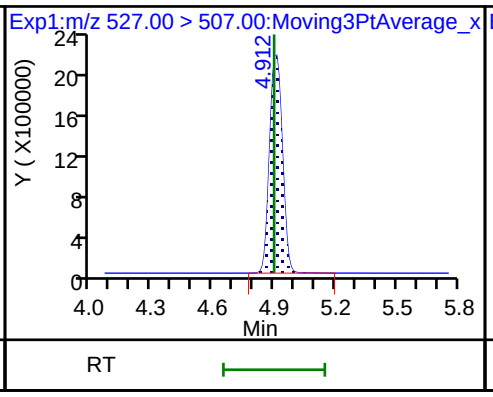

37 Perfluorodecanoic acid



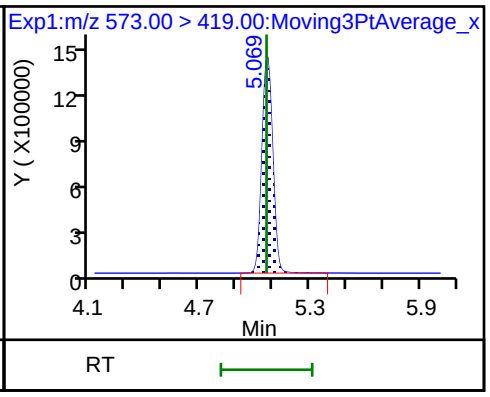
D 38 M2-8:2 FTS



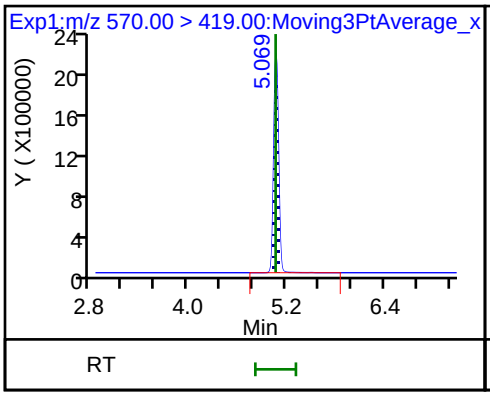

36 8:2 FTS



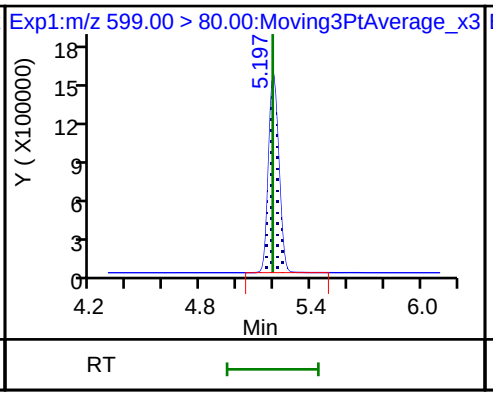

D 40 d3-NMeFOSAA




41 NMeFOSAA




42 Perfluorodecanesulfonic acid

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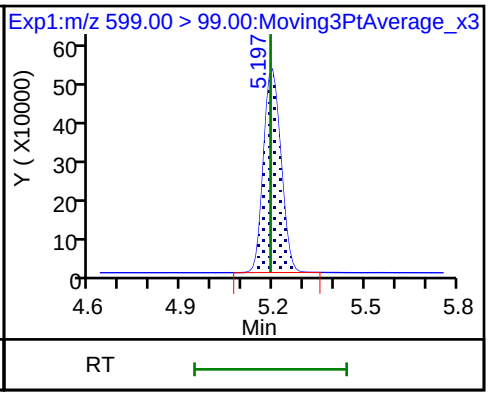
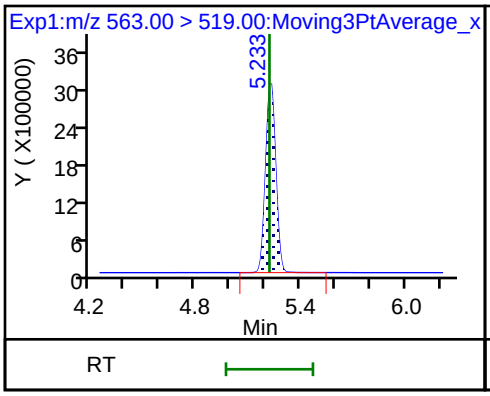
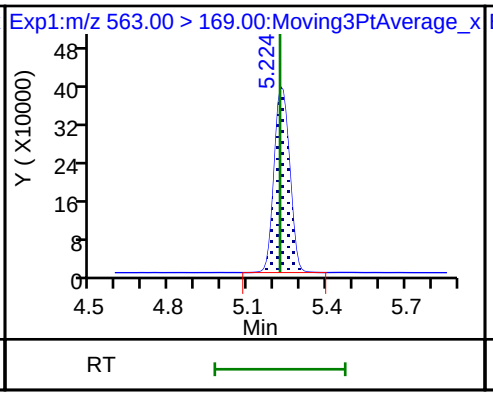


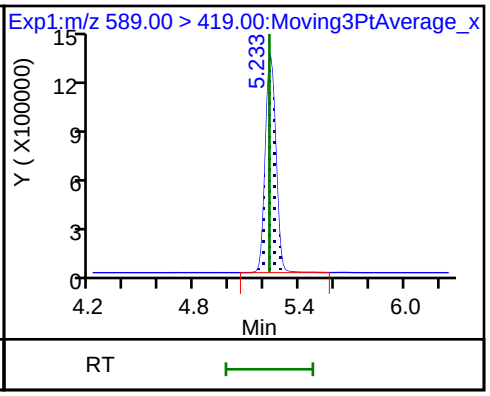

45 Perfluoroundecanoic acid



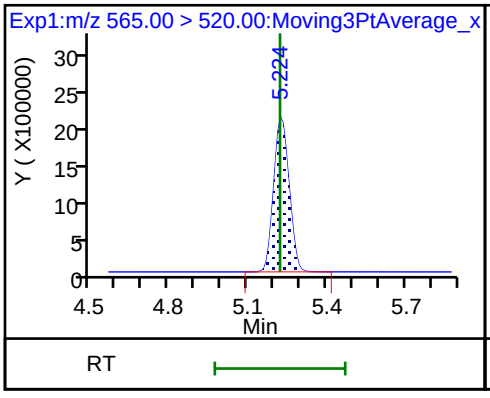

45 Perfluoroundecanoic acid



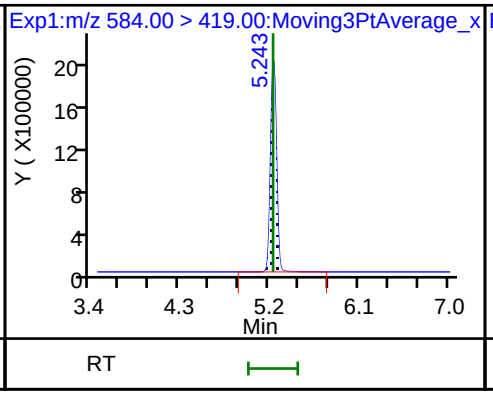

D 44 d5-NEtFOSAA



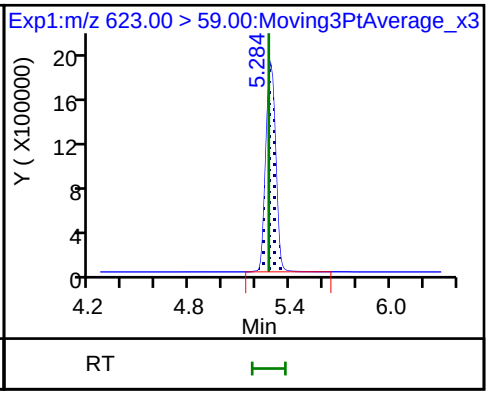

D 43 13C2 PFUnA



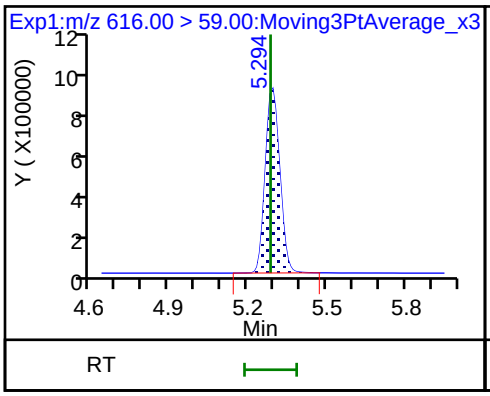

46 NEtFOSA



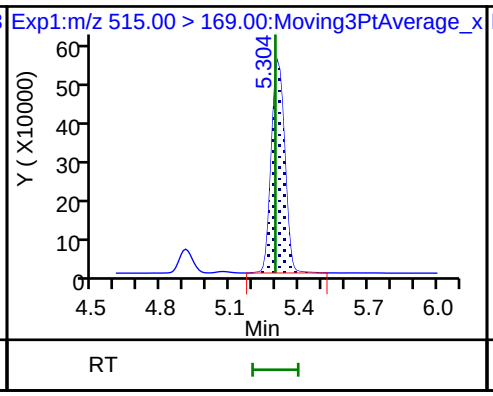

D 47 d7-N-MeFOSE-M



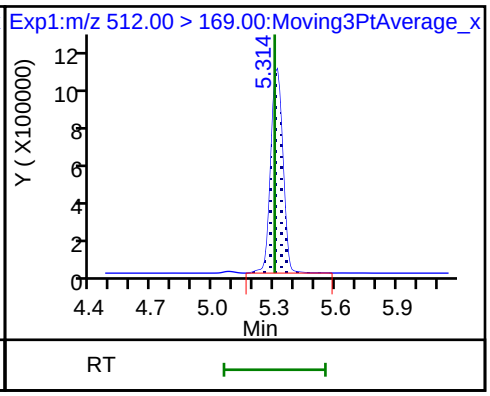
48 N-MeFOSE-M



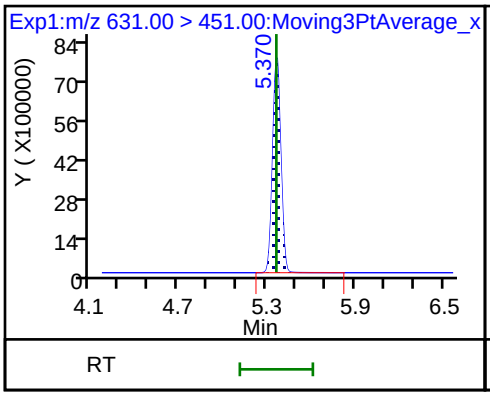

D 49 d-N-MeFOSA-M



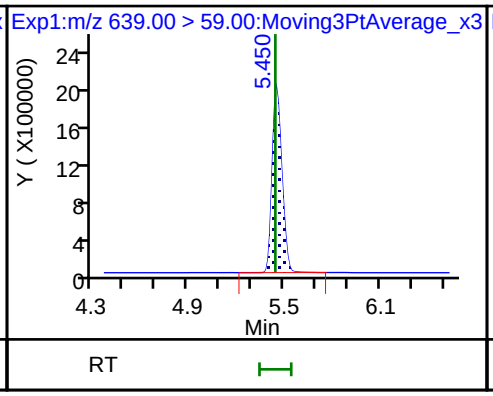

50 NMeFOSA



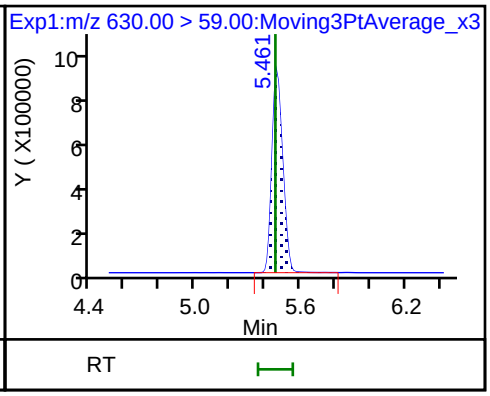

51 11ClFOS



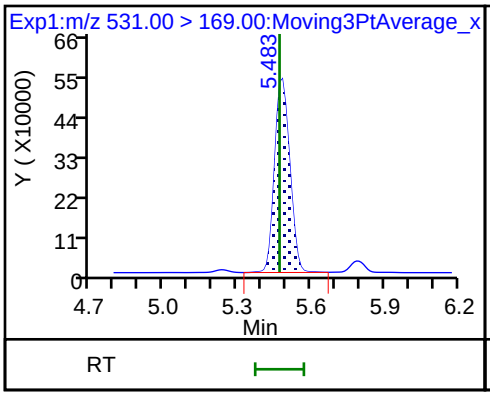

D 52 d9-N-EtFOSE-M



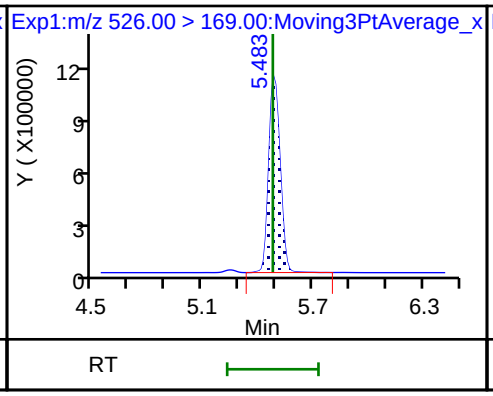

53 N-EtFOSE-M



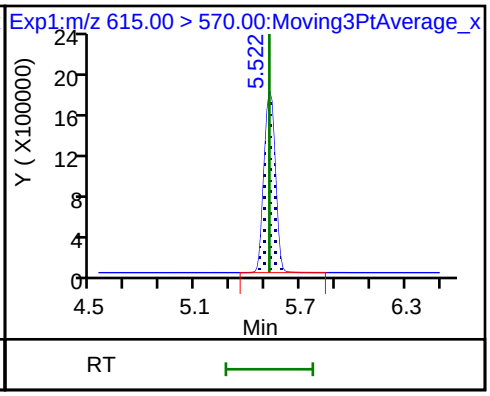

D 54 d-N-EtFOSA-M



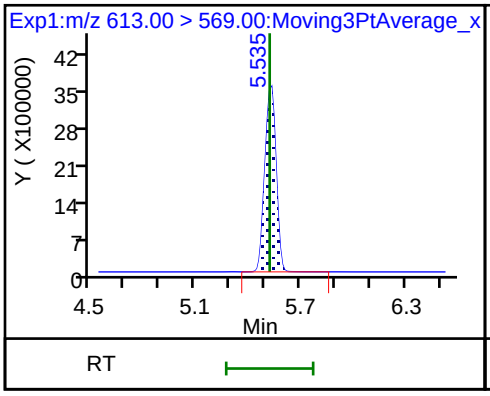

55 N-EtFOSA-M



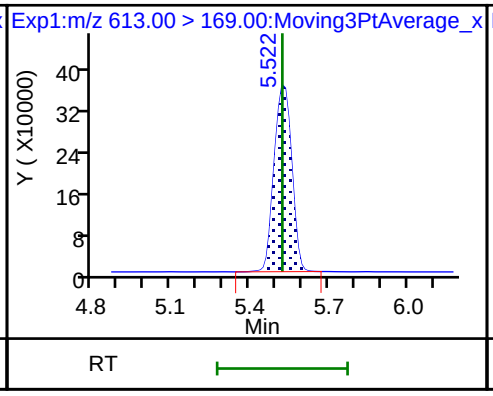

D 56 13C2 PFDoA



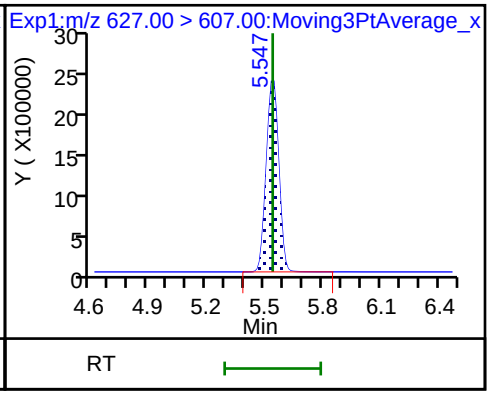

57 Perfluorododecanoic acid



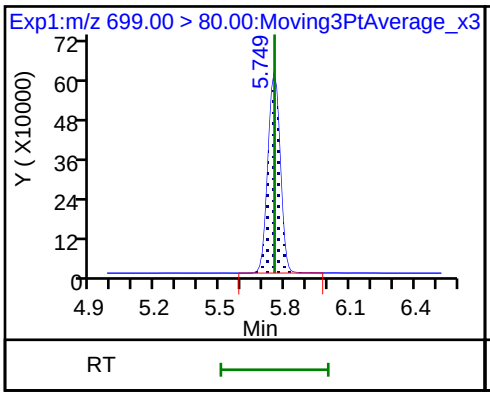

57 Perfluorododecanoic acid



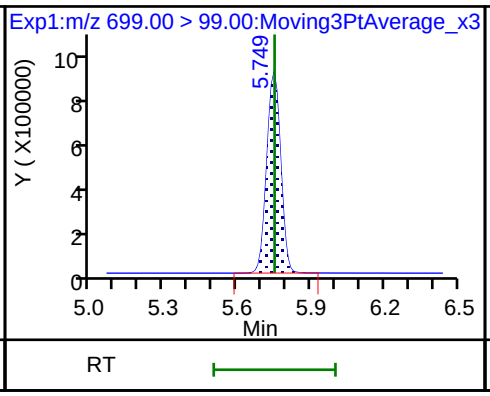

58 10:2 FTS



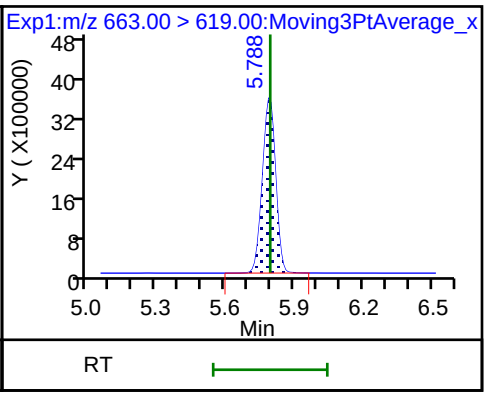
59 PFDoS



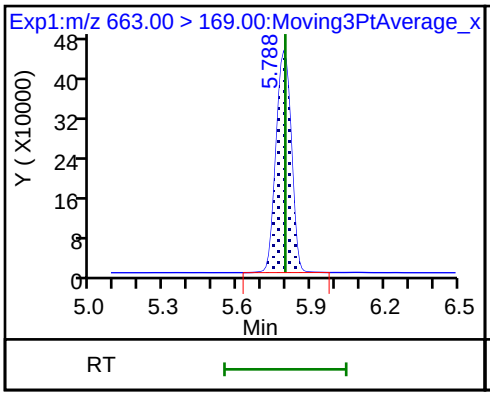

59 PFDoS



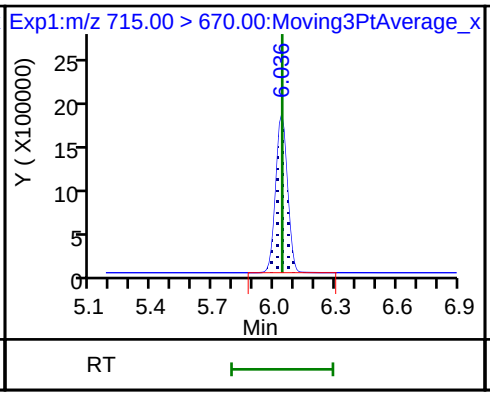

60 Perfluorotridecanoic acid



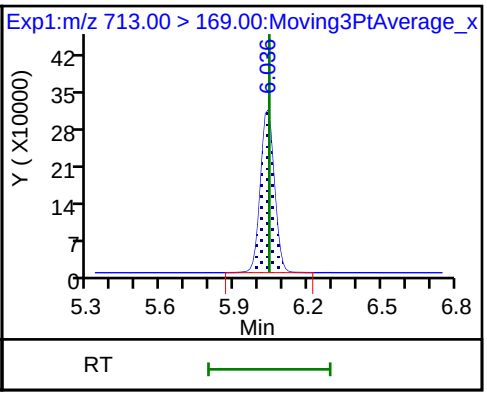

60 Perfluorotridecanoic acid



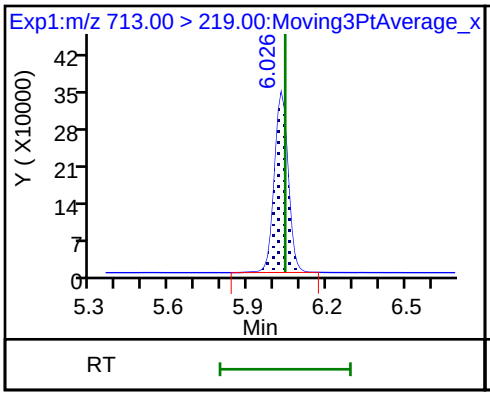

D 61 13C2 PFTeDA



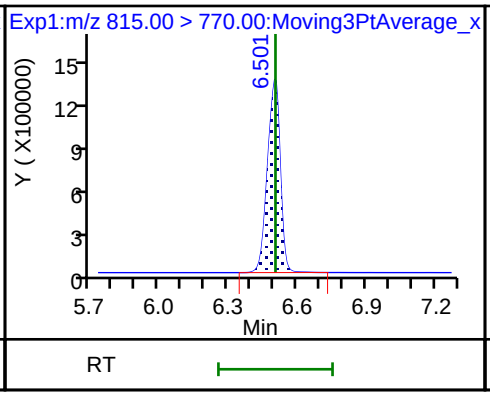

62 Perfluorotetradecanoic acid



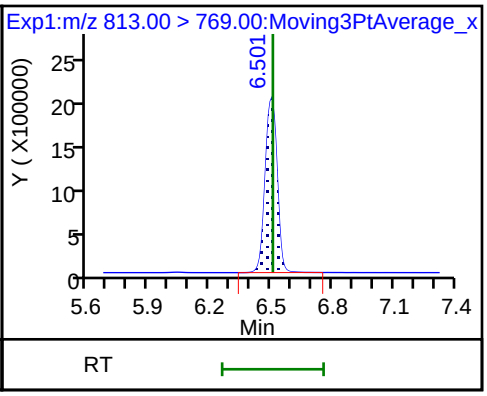

62 Perfluorotetradecanoic acid



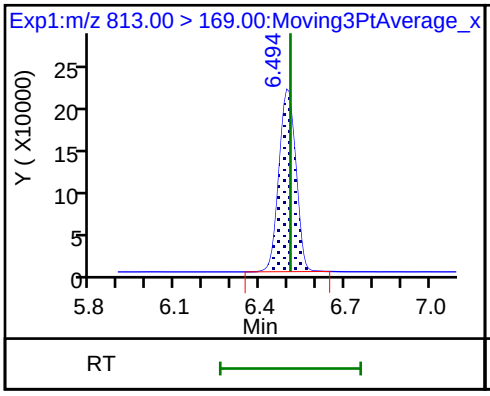

D 64 13C2 PFHxDA



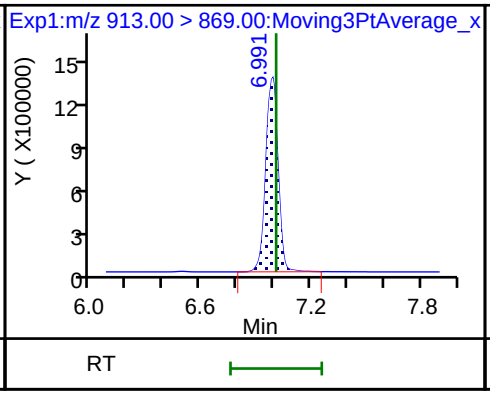

63 Perfluorohexadecanoic acid



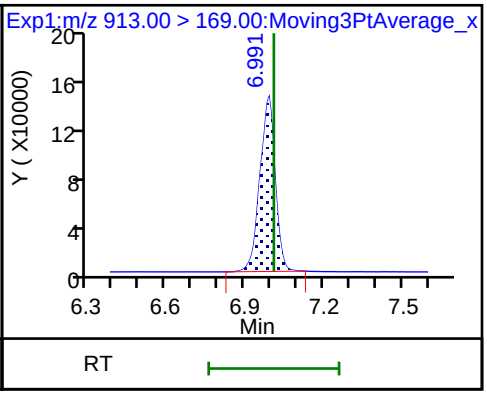

63 Perfluorohexadecanoic acid




65 Perfluorooctadecanoic acid




65 Perfluorooctadecanoic acid



Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

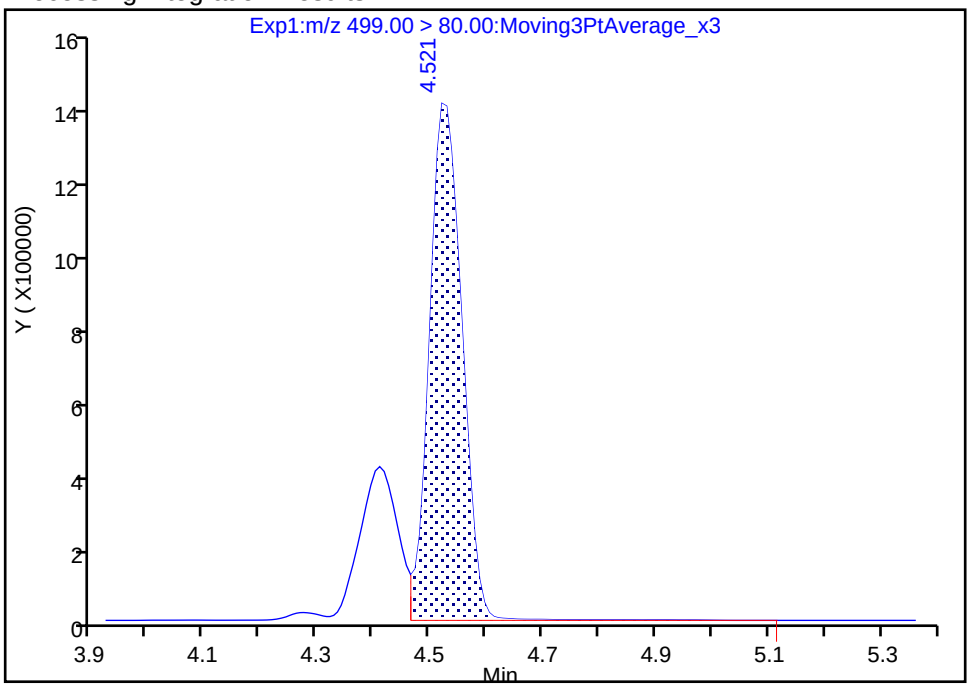
Data File: \\chromfs\Sacramento\ChromData\A18\20200825-102078.b\2020.08.25_A18_ICAL_A_016.d
Injection Date: 25-Aug-2020 17:28:48 Instrument ID: A18
Lims ID: IC STD 6
Client ID:
Operator ID: TAISACA18-PC\A-18 ALS Bottle#: 11 Worklist Smp#: 7
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFAS_A18V2 Limit Group: LC PFC ICAL
Column: Gemini C18 3um 3mm x 50 mm ( 3.00mm) Detector EXP1

## 29 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 1

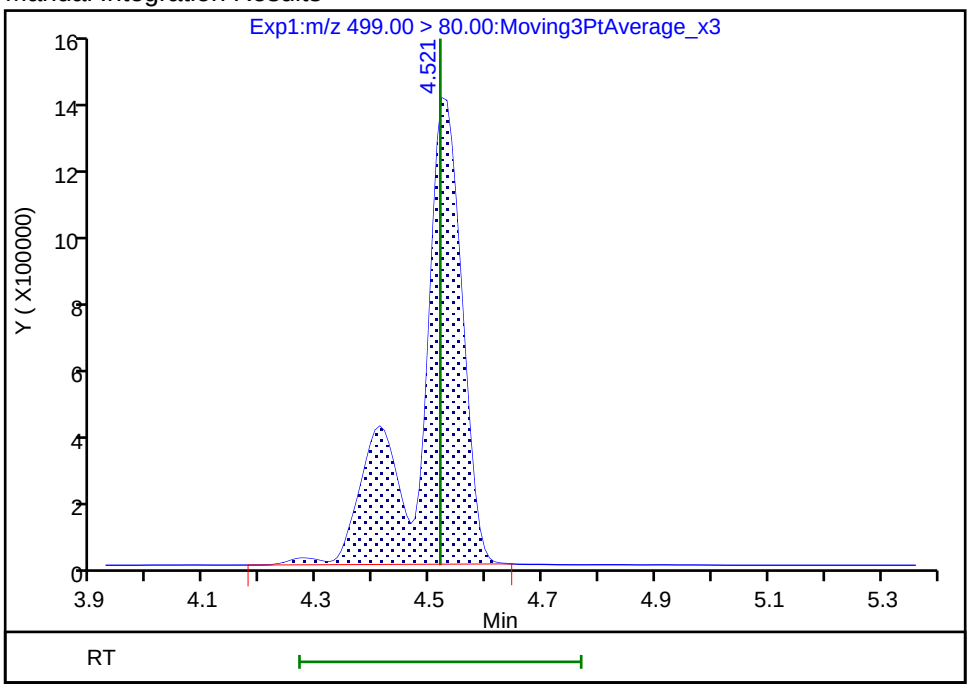
Processing Integration Results

RT: 4.52
Area: 5350627
Amount: 3.681019
Amount Units: ng/ml




Manual Integration Results

RT: 4.52
Area: 7186938
Amount: 4.759218
Amount Units: ng/ml




Reviewer: fariasa, 26-Aug-2020 06:04:30
Audit Action: Manually Integrated Audit Reason: Isomers

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\A18\20200825-102078.b\2020.08.25_A18_ICAL_A_017.d
Lims ID: IC STD 7
Client ID:
Sample Type: IC Calib Level: 7
Inject. Date: 25-Aug-2020 17:37:57 ALS Bottle#: 12 Worklist Smp#: 8
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Sample Info: CAL STD 7 (24)
Misc. Info.: Plate: 1 Rack: 1
Operator ID: TAISACA18-PC\A-18 Instrument ID: A18
Sublist: chrom-PFAS_A18V2*sub1

Method: \\chromfs\Sacramento\ChromData\A18\20200825-102078.b\PFAS_A18V2.m
Limit Group: LC PFC ICAL
Last Update: 26-Aug-2020 10:43:12 Calib Date: 25-Aug-2020 17:37:57
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\A18\20200825-102078.b\2020.08.25_A18_ICAL_A_017.d

Column 1 : Gemini C18 3um 3mm x 50 mm ( 3.00 mm) Det: EXP1
Process Host: CTX1029

First Level Reviewer: fariasa Date: 26-Aug-2020 06:05:22
Ratio Calibration: Average of Initial Calibration

| Signal | RT | EXP RT | DLT RT | REL RT | Response | Amount ng/ml | Ratio(Limits) | %Rec | S/N | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| D 1 13C4 PFBA | | | | | | | | | | |
| 217.00 > 172.00 | 2.582 | 2.577 | 0.005 | 0.622 | 16413711 | 2.63 | | 105 | 7757 | |
| 2 Perfluorobutanoic acid | | | | | | | | | | |
| 212.90 > 169.00 | 2.590 | 2.580 | 0.010 | 1.003 | 56740145 | 9.96 | | 99.6 | 2144 | |
| 5 Perfluoropentanoic acid | | | | | | | | | | |
| 262.90 > 219.00 | 2.951 | 2.941 | 0.010 | 1.000 | 47880922 | 9.65 | | 96.5 | 2285 | |
| D 4 13C5 PFPeA | | | | | | | | | | |
| 267.90 > 223.00 | 2.951 | 2.941 | 0.010 | 0.711 | 12448068 | 2.56 | | 102 | 5071 | |
| D 9 13C3 PFBS | | | | | | | | | | |
| 301.90 > 80.00 | 2.986 | 2.977 | 0.009 | 0.720 | 8956338 | 2.35 | | 101 | 4004 | |
| 6 Perfluorobutanesulfonic acid | | | | | | | | | | |
| 298.90 > 80.00 | 2.986 | 2.982 | 0.004 | 1.000 | 34105255 | 8.77 | Target=2.30 | 99.2 | 6719 | |
| 298.90 > 99.00 | 2.986 | 2.982 | 0.004 | 1.000 | 14620564 | | 2.33(1.15-3.45) | 99.2 | 5049 | |
| 8 4:2 FTS | | | | | | | | | | |
| 327.00 > 307.00 | 3.288 | 3.288 | 0.0 | 1.000 | 18232538 | 9.20 | | 98.5 | 12561 | |
| D 7 M2-4:2 FTS | | | | | | | | | | |
| 329.00 > 81.00 | 3.288 | 3.288 | 0.0 | 0.793 | 2036093 | 2.21 | | 94.8 | 941 | |
| 10 Perfluorohexanoic acid | | | | | | | | | | |
| 313.00 > 269.00 | 3.341 | 3.334 | 0.007 | 1.000 | 44890403 | 9.46 | Target=13.78 | 94.6 | 2751 | |
| 313.00 > 119.00 | 3.341 | 3.334 | 0.007 | 1.000 | 3493122 | | 12.85(6.89-20.66) | 94.6 | 1688 | |
| D 11 13C2 PFHxA | | | | | | | | | | |
| 315.00 > 270.00 | 3.341 | 3.334 | 0.007 | 0.805 | 12302361 | 2.53 | | 101 | 6826 | |
| 12 Perfluoropentanesulfonic acid | | | | | | | | | | |
| 349.00 > 80.00 | 3.352 | 3.349 | 0.003 | 1.123 | 29038841 | 9.51 | Target=3.02 | 101 | 4426 | |
| 349.00 > 99.00 | 3.352 | 3.349 | 0.003 | 1.123 | 9714798 | | 2.99(1.51-4.52) | 101 | 3836 | |
| 13 HPFO-DA | | | | | | | | | | |
| 285.00 > 169.00 | 3.469 | 3.463 | 0.006 | 1.000 | 10115867 | 9.86 | | 98.6 | 10111 | |

| Signal | RT | EXP RT | DLT RT | REL RT | Response | Amount ng/ml | Ratio(Limits) | %Rec | S/N | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| D 14 13C3 HFPO-DA | | | | | | | | | | |
| 287.00 > 169.00 | 3.469 | 3.463 | 0.006 | 0.836 | 2632961 | 2.65 | | 106 | 5261 | |
| 16 Perfluoroheptanoic acid | | | | | | | | | | |
| 363.00 > 319.00 | 3.750 | 3.750 | 0.0 | 1.000 | 41173087 | 10.2 | Target=3.84 | 102 | 3744 | |
| 363.00 > 169.00 | 3.750 | 3.750 | 0.0 | 1.000 | 10430431 | | 3.95(1.92-5.76) | 102 | 3945 | |
| D 18 13C4 PFHpA | | | | | | | | | | |
| 367.00 > 322.00 | 3.750 | 3.750 | 0.0 | 0.904 | 9979836 | 2.41 | | 96.3 | 7094 | |
| D 17 18O2 PFHxS | | | | | | | | | | |
| 403.00 > 84.00 | 3.750 | 3.752 | -0.002 | 0.904 | 4743964 | 2.35 | | 99.4 | 5176 | |
| 15 Perfluorohexanesulfonic acid | | | | | | | | | | |
| 399.00 > 80.00 | 3.750 | 3.752 | -0.002 | 1.000 | 20508587 | 8.65 | Target=3.50 | 95.1 | 9345 | |
| 399.00 > 99.00 | 3.750 | 3.752 | -0.002 | 1.000 | 5972295 | | 3.43(1.75-5.25) | 95.1 | 6528 | |
| 19 DONA | | | | | | | | | | |
| 377.00 > 251.00 | 3.799 | 3.800 | -0.001 | 0.843 | 116216620 | 8.60 | Target=2.42 | 91.3 | 20519 | |
| 377.00 > 85.00 | 3.799 | 3.800 | -0.001 | 0.843 | 53526438 | | 2.17(1.21-3.63) | 91.3 | 20640 | |
| D 20 M2-6:2 FTS | | | | | | | | | | |
| 429.00 > 81.00 | 4.124 | 4.127 | -0.003 | 0.994 | 1626381 | 2.11 | | 88.7 | 992 | |
| 21 6:2 FTS | | | | | | | | | | |
| 427.00 > 407.00 | 4.124 | 4.127 | -0.003 | 1.000 | 13812377 | 8.77 | | 92.6 | 8081 | |
| 24 Perfluoroheptanesulfonic acid | | | | | | | | | | |
| 449.00 > 80.00 | 4.140 | 4.143 | -0.003 | 0.919 | 14746979 | 9.36 | Target=4.40 | 98.3 | 4839 | |
| 449.00 > 99.00 | 4.140 | 4.143 | -0.003 | 0.919 | 3349525 | | 4.40(2.20-6.60) | 98.3 | 3236 | |
| $ 26 13C8 PFOA | | | | | | | | | | |
| 421.00 > 376.00 | 4.148 | 4.147 | 0.001 | 1.000 | 6572152 | 2.47 | | 101 | 3338 | |
| D 25 13C4 PFOA | | | | | | | | | | |
| 417.00 > 372.00 | 4.148 | 4.150 | -0.002 | 1.000 | 9310596 | 2.36 | | 94.3 | 6931 | |
| 22 Perfluorooctanoic acid | | | | | | | | | | |
| 413.00 > 369.00 | 4.148 | 4.150 | -0.002 | 1.000 | 33940571 | 8.93 | Target=2.94 | 89.3 | 5308 | |
| 413.00 > 169.00 | 4.148 | 4.150 | -0.002 | 1.000 | 12649032 | | 2.68(1.47-4.41) | 89.3 | 15767 | |
| * 23 13C2 PFOA | | | | | | | | | | |
| 415.00 > 370.00 | 4.148 | 4.151 | -0.003 | | 9860148 | 2.50 | | | 4205 | |
| $ 28 13C8 PFOS | | | | | | | | | | |
| 507.00 > 99.00 | 4.507 | 4.514 | -0.007 | 1.087 | 1015761 | 2.38 | | 99.6 | 1728 | |
| D 27 13C4 PFOS | | | | | | | | | | |
| 503.00 > 80.00 | 4.507 | 4.516 | -0.009 | 1.087 | 3369647 | 2.47 | | 103 | 1357 | |
| 29 Perfluorooctanesulfonic acid | | | | | | | | | | |
| 499.00 > 80.00 | 4.515 | 4.518 | -0.003 | 1.002 | 13785552 | 9.45 | Target=4.53 | 102 | 2538 | |
| 499.00 > 99.00 | 4.507 | 4.518 | -0.011 | 1.000 | 2907749 | | 4.74(2.26-6.79) | 102 | 1617 | |
| D 30 13C5 PFNA | | | | | | | | | | |
| 468.00 > 423.00 | 4.531 | 4.533 | -0.002 | 1.092 | 7890530 | 2.48 | | 99.3 | 7686 | |
| 31 Perfluorononanoic acid | | | | | | | | | | |
| 463.00 > 419.00 | 4.540 | 4.537 | 0.003 | 1.002 | 26602259 | 8.79 | Target=8.97 | 87.9 | 3038 | |
| 463.00 > 169.00 | 4.531 | 4.537 | -0.006 | 1.000 | 3277623 | | 8.12(4.48-13.45) | 87.9 | 2575 | |
| 32 9ClFOS | | | | | | | | | | |
| 531.00 > 351.00 | 4.717 | 4.724 | -0.007 | 1.046 | 44196767 | 9.69 | | 104 | 47410 | |
| 34 Perfluorooctanesulfonamide | | | | | | | | | | |
| 498.00 > 78.00 | 4.829 | 4.830 | -0.001 | 1.000 | 21565996 | 10.4 | | 104 | 11691 | |

| Signal | RT | EXP RT | DLT RT | REL RT | Response | Amount ng/ml | Ratio(Limits) | %Rec | S/N | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| D 33 13C8 FOSA | | | | | | | | | | |
| 506.00 > 78.00 | 4.829 | 4.830 | -0.001 | 1.164 | 5585611 | 2.53 | | 101 | 7808 | |
| 35 Perfluorononanesulfonic acid | | | | | | | | | | |
| 549.00 > 80.00 | 4.863 | 4.868 | -0.005 | 1.079 | 11794985 | 8.93 | Target=2.85 | 93.0 | 5032 | |
| 549.00 > 99.00 | 4.863 | 4.868 | -0.005 | 1.079 | 4237806 | | 2.78(1.43-4.28) | 93.0 | 4194 | |
| D 39 13C2 PFDA | | | | | | | | | | |
| 515.00 > 470.00 | 4.889 | 4.892 | -0.003 | 1.179 | 6981751 | 2.26 | | 90.4 | 9979 | |
| 37 Perfluorodecanoic acid | | | | | | | | | | |
| 513.00 > 469.00 | 4.898 | 4.896 | 0.002 | 1.002 | 27154808 | 10.1 | Target=10.16 | 101 | 6239 | |
| 513.00 > 169.00 | 4.889 | 4.896 | -0.007 | 1.000 | 2477798 | | 10.96(5.08-15.24) | 101 | 167 | |
| D 38 M2-8:2 FTS | | | | | | | | | | |
| 529.00 > 81.00 | 4.889 | 4.897 | -0.008 | 1.179 | 2183392 | 1.96 | | 81.9 | 1202 | |
| 36 8:2 FTS | | | | | | | | | | |
| 527.00 > 507.00 | 4.889 | 4.898 | -0.009 | 1.000 | 15102670 | 9.33 | | 97.4 | 6946 | |
| D 40 d3-NMeFOSAA | | | | | | | | | | |
| 573.00 > 419.00 | 5.056 | 5.062 | -0.006 | 1.219 | 5401400 | 2.61 | | 104 | 4317 | |
| 41 NMeFOSAA | | | | | | | | | | |
| 570.00 > 419.00 | 5.056 | 5.065 | -0.009 | 1.000 | 17794078 | 11.1 | | 111 | 46382 | |
| 42 Perfluorodecanesulfonic acid | | | | | | | | | | |
| 599.00 > 80.00 | 5.184 | 5.191 | -0.007 | 1.150 | 11394459 | 9.68 | Target=2.77 | 100 | 9270 | |
| 599.00 > 99.00 | 5.184 | 5.191 | -0.007 | 1.150 | 3971592 | | 2.87(1.38-4.15) | 100 | 7572 | |
| D 43 13C2 PFUnA | | | | | | | | | | |
| 565.00 > 520.00 | 5.210 | 5.221 | -0.011 | 1.256 | 7623503 | 2.49 | | 99.7 | 8999 | |
| 45 Perfluoroundecanoic acid | | | | | | | | | | |
| 563.00 > 519.00 | 5.219 | 5.221 | -0.002 | 1.002 | 22491178 | 10.2 | Target=8.43 | 102 | 5929 | |
| 563.00 > 169.00 | 5.219 | 5.221 | -0.002 | 1.002 | 2439519 | | 9.22(4.22-12.65) | 102 | 3246 | |
| D 44 d5-NEtFOSAA | | | | | | | | | | |
| 589.00 > 419.00 | 5.219 | 5.227 | -0.008 | 1.258 | 4780383 | 2.18 | | 87.3 | 3758 | |
| 46 NEtFOSA | | | | | | | | | | |
| 584.00 > 419.00 | 5.229 | 5.236 | -0.007 | 1.002 | 15220352 | 11.8 | | 118 | 40258 | |
| D 47 d7-N-MeFOSE-M | | | | | | | | | | |
| 623.00 > 59.00 | 5.268 | 5.272 | -0.004 | 1.270 | 7579410 | 13.9 | | 111 | 3904 | |
| 48 N-MeFOSE-M | | | | | | | | | | |
| 616.00 > 59.00 | 5.289 | 5.285 | 0.004 | 1.004 | 6794003 | 10.4 | | 104 | 8369 | |
| D 49 d-N-MeFOSA-M | | | | | | | | | | |
| 515.00 > 169.00 | 5.299 | 5.295 | 0.004 | 1.277 | 2264660 | 2.92 | | 117 | 82.2 | |
| 50 NMeFOSA | | | | | | | | | | |
| 512.00 > 169.00 | 5.299 | 5.301 | -0.002 | 1.000 | 8417031 | 9.67 | | 96.7 | 833 | |
| 51 11ClFOS | | | | | | | | | | |
| 631.00 > 451.00 | 5.348 | 5.363 | -0.015 | 1.187 | 57524539 | 9.95 | | 106 | 11699 | |
| D 52 d9-N-EtFOSE-M | | | | | | | | | | |
| 639.00 > 59.00 | 5.447 | 5.443 | 0.004 | 1.313 | 9589089 | 14.3 | | 114 | 2500 | |
| 53 N-EtFOSE-M | | | | | | | | | | |
| 630.00 > 59.00 | 5.447 | 5.456 | -0.009 | 1.000 | 7675582 | 9.33 | | 93.3 | 6945 | |
| D 54 d-N-EtFOSA-M | | | | | | | | | | |
| 531.00 > 169.00 | 5.469 | 5.471 | -0.002 | 1.318 | 2273331 | 2.87 | | 115 | 95.0 | |

| Signal | RT | EXP RT | DLT RT | REL RT | Response | Amount ng/ml | Ratio(Limits) | %Rec | S/N | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| 55 N-EtFOSA-M | | | | | | | | | | |
| 526.00 > 169.00 | 5.480 | 5.480 | 0.0 | 1.002 | 9216155 | 9.58 | | 95.8 | 628 | |
| D 56 13C2 PFDoA | | | | | | | | | | |
| 615.00 > 570.00 | 5.504 | 5.521 | -0.017 | 1.327 | 7132495 | 2.36 | | 94.6 | 6670 | |
| 57 Perfluorododecanoic acid | | | | | | | | | | |
| 613.00 > 569.00 | 5.504 | 5.523 | -0.019 | 1.000 | 27702397 | 9.50 | Target=9.12 | 95.0 | 7832 | |
| 613.00 > 169.00 | 5.504 | 5.523 | -0.019 | 1.000 | 3205500 | | 8.64(4.56-13.69) | 95.0 | 3338 | |
| 58 10:2 FTS | | | | | | | | | | |
| 627.00 > 607.00 | 5.529 | 5.541 | -0.012 | 1.131 | 17064790 | 9.29 | | 96.4 | 7266 | |
| 59 PFDoS | | | | | | | | | | |
| 699.00 > 80.00 | 5.733 | 5.751 | -0.018 | 1.272 | 4723160 | 10.1 | Target=0.72 | 104 | 3983 | |
| 699.00 > 99.00 | 5.733 | 5.751 | -0.018 | 1.272 | 6938141 | | 0.68(0.36-1.07) | 104 | 8369 | |
| 60 Perfluorotridecanoic acid | | | | | | | | | | |
| 663.00 > 619.00 | 5.783 | 5.795 | -0.012 | 1.051 | 27534864 | 10.3 | Target=6.78 | 103 | 6958 | |
| 663.00 > 169.00 | 5.774 | 5.795 | -0.021 | 1.049 | 4251848 | | 6.48(3.39-10.17) | 103 | 3771 | |
| D 61 13C2 PFTeDA | | | | | | | | | | |
| 715.00 > 670.00 | 6.022 | 6.038 | -0.016 | 1.452 | 5834435 | 2.34 | | 93.8 | 5873 | |
| 62 Perfluorotetradecanoic acid | | | | | | | | | | |
| 713.00 > 169.00 | 6.022 | 6.041 | -0.019 | 1.000 | 1898401 | 9.64 | Target=0.85 | 96.4 | 3063 | |
| 713.00 > 219.00 | 6.022 | 6.041 | -0.019 | 1.000 | 2206268 | | 0.86(0.43-1.28) | 96.4 | 4203 | |
| D 64 13C2 PFHxDA | | | | | | | | | | |
| 815.00 > 770.00 | 6.490 | 6.505 | -0.015 | 1.564 | 4682798 | 2.57 | | 103 | 4757 | |
| 63 Perfluorohexadecanoic acid | | | | | | | | | | |
| 813.00 > 769.00 | 6.499 | 6.507 | -0.008 | 1.001 | 16501588 | 10.0 | Target=10.21 | 100 | 5145 | |
| 813.00 > 169.00 | 6.499 | 6.507 | -0.008 | 1.001 | 1516223 | | 10.88(5.11-15.32) | 100 | 3237 | |
| 65 Perfluorooctadecanoic acid | | | | | | | | | | |
| 913.00 > 869.00 | 6.983 | 7.009 | -0.026 | 1.076 | 13652717 | 11.0 | Target=12.45 | 110 | 4044 | |
| 913.00 > 169.00 | 6.983 | 7.009 | -0.026 | 1.076 | 1134600 | | 12.03(6.22-18.67) | 110 | 3924 | |

## Reagents:

LCPFC_LL7_00024 Amount Added: 1.00 Units: mL

Report Date: 26-Aug-2020 10:43:14 Chrom Revision: 2.3 20-Aug-2020 13:57:12

Eurofins TestAmerica, Sacramento

Data File: \\chromfs\Sacramento\ChromData\A18\20200825-102078.b\2020.08.25_A18_ICAL_A_017.d

Injection Date: 25-Aug-2020 17:37:57 Instrument ID: A18

Lims ID: IC STD 7

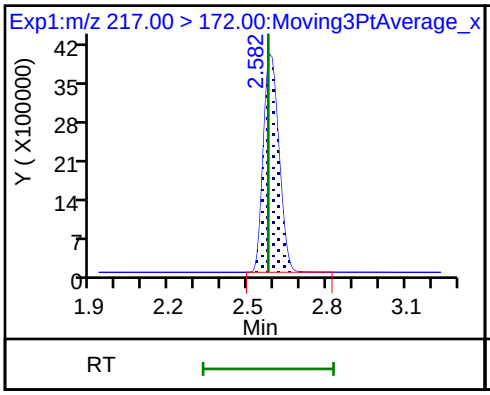
Client ID:

Operator ID: TAISACA18-PC\A-18 ALS Bottle#: 12 Worklist Smp#: 8

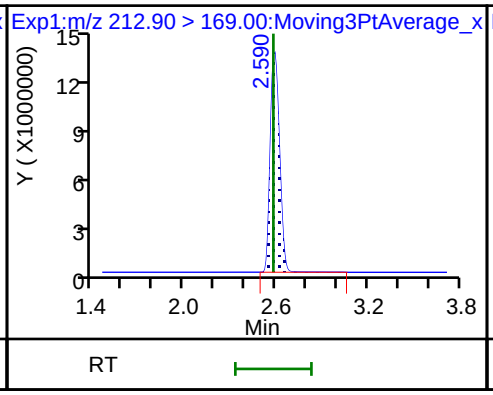
Injection Vol: 20.0 ul Dil. Factor: 1.0000

Method: PFAS_A18V2 Limit Group: LC PFC ICAL

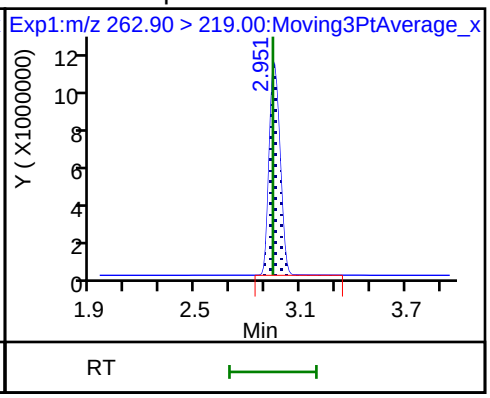
D 1 13C4 PFBA



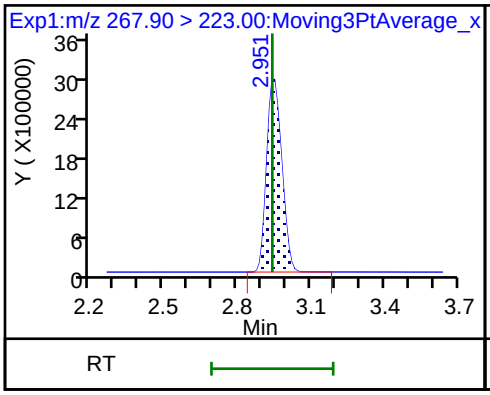

2 Perfluorobutanoic acid



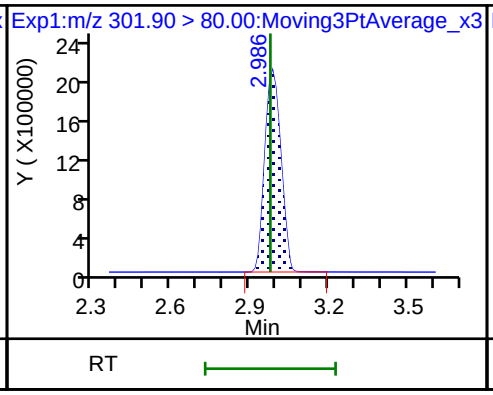

5 Perfluoropentanoic acid



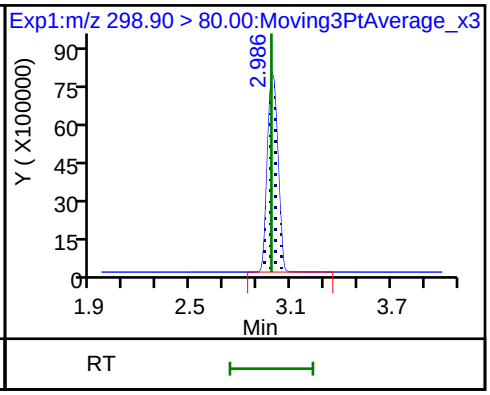

D 4 13C5 PFPeA



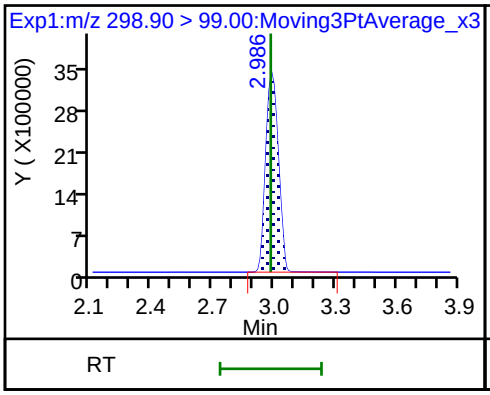

D 9 13C3 PFBS



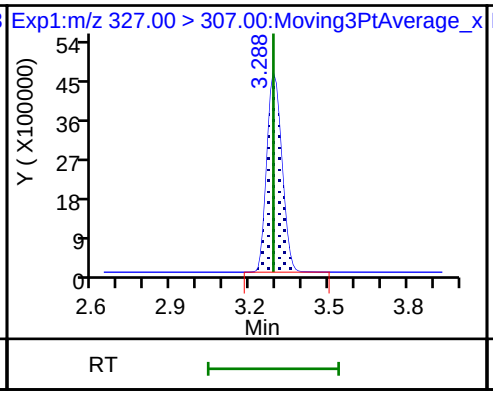

6 Perfluorobutanesulfonic acid



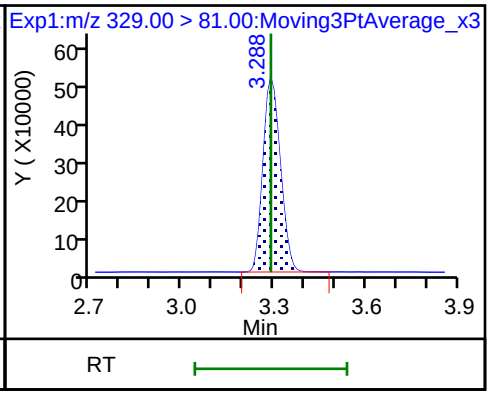

6 Perfluorobutanesulfonic acid



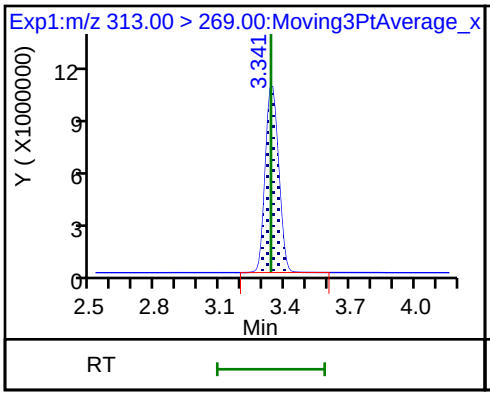

8 4:2 FTS



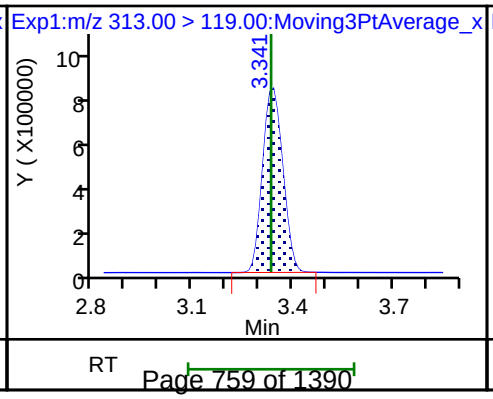

D 7 M2-4:2 FTS



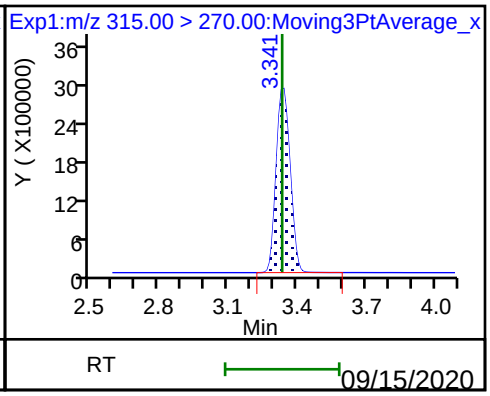

10 Perfluorohexanoic acid



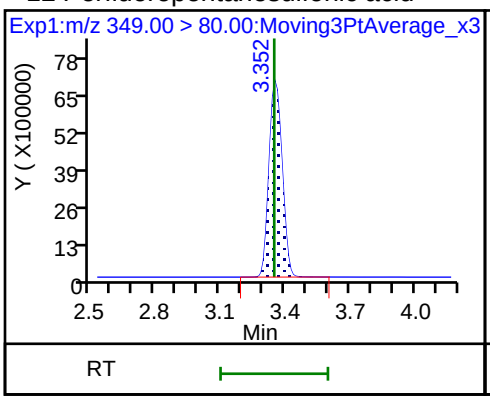

10 Perfluorohexanoic acid



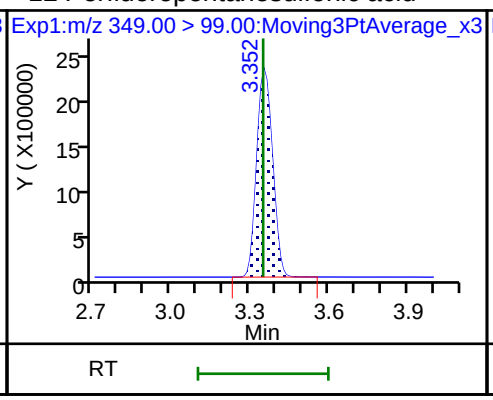

D 11 13C2 PFHxA



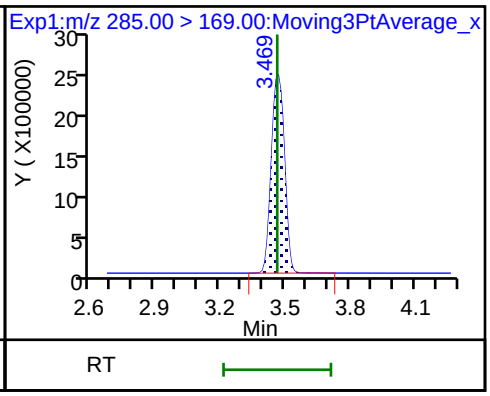
12 Perfluoropentanesulfonic acid



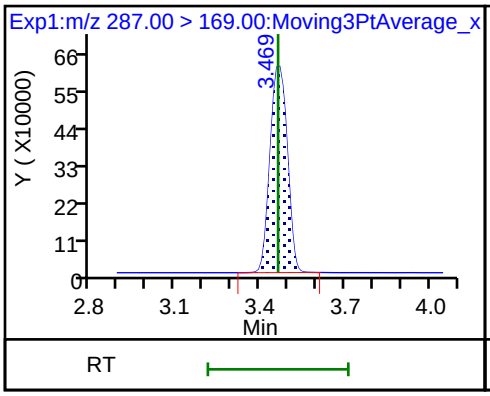

12 Perfluoropentanesulfonic acid



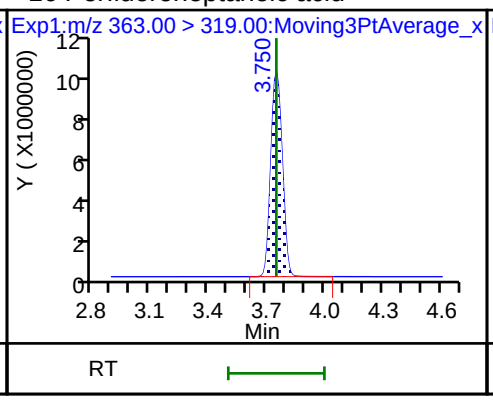

13 HPFO-DA



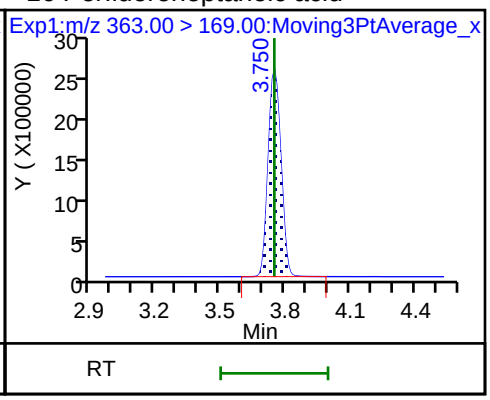

D 14 13C3 HFPO-DA



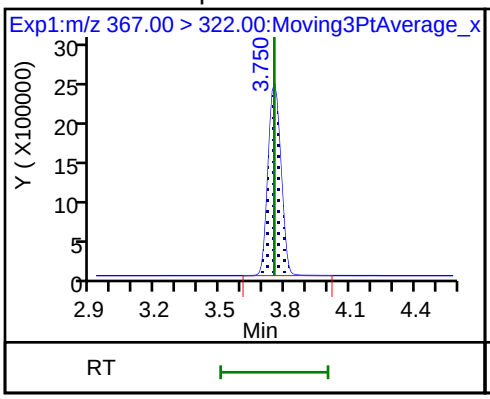

16 Perfluoroheptanoic acid



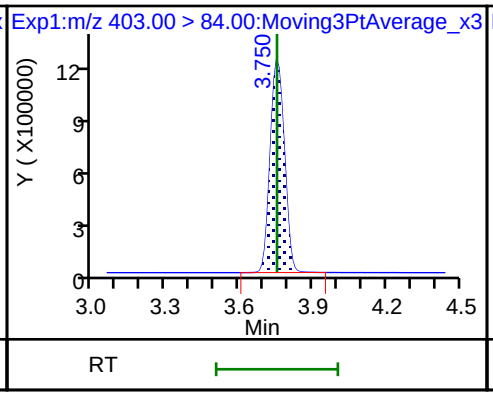

16 Perfluoroheptanoic acid



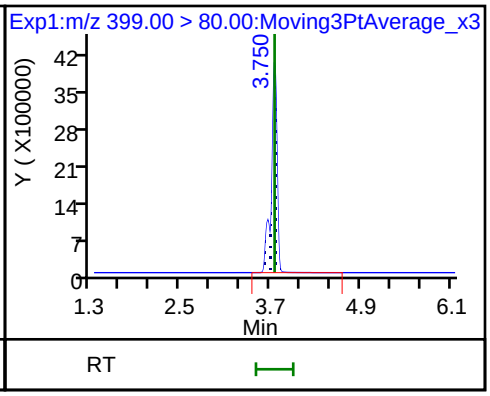

D 18 13C4 PFHpA



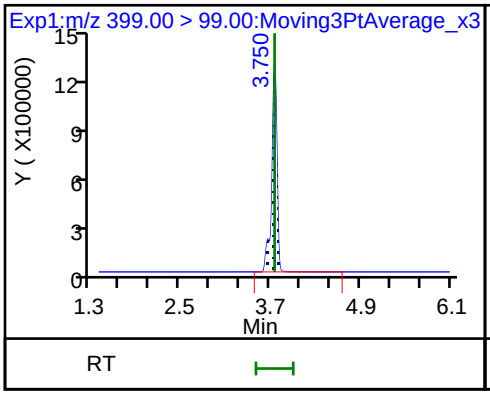

D 17 18O2 PFHxS



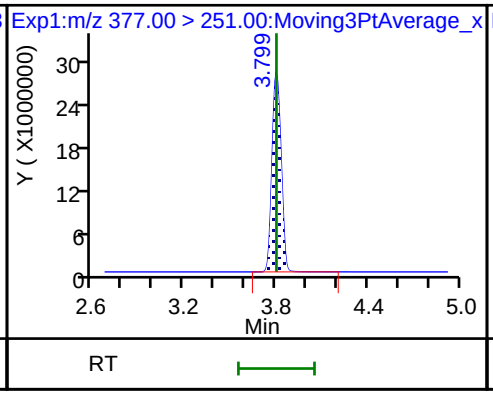

15 Perfluorohexanesulfonic acid



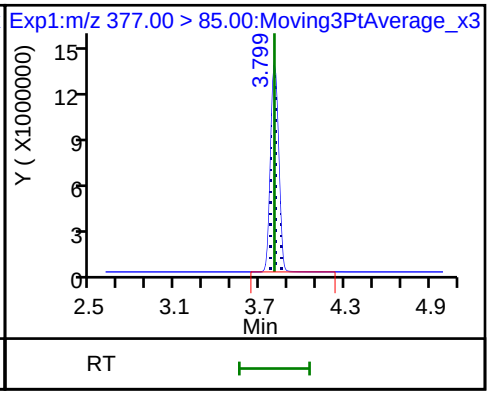

15 Perfluorohexanesulfonic acid



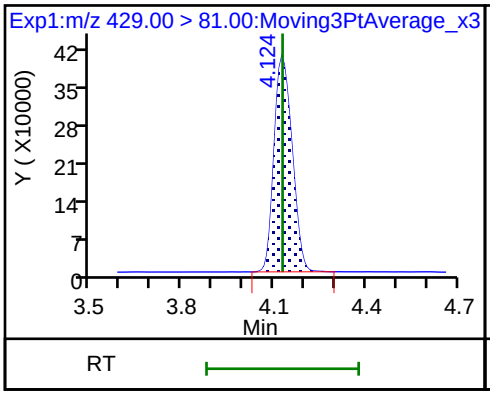

19 DONA



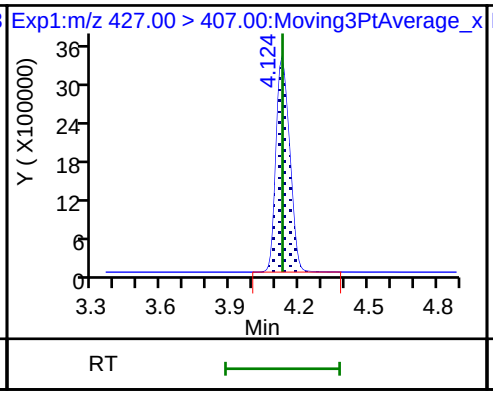

19 DONA



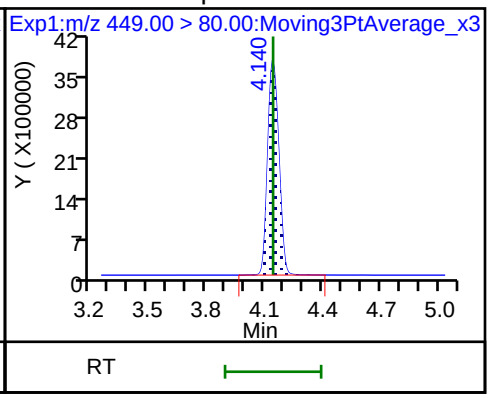
D 20 M2-6:2 FTS



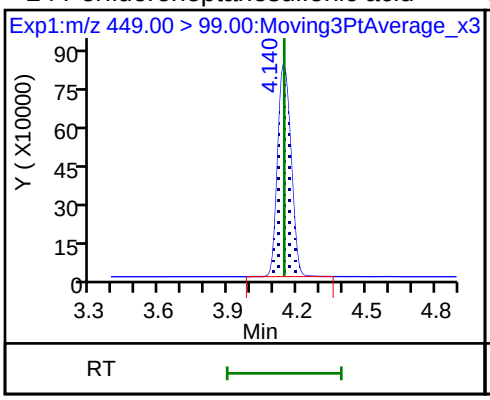

21 6:2 FTS



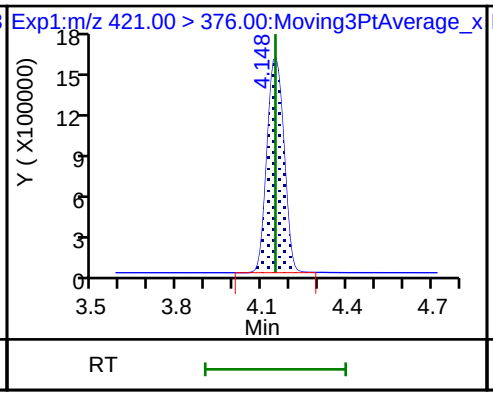

24 Perfluoroheptanesulfonic acid



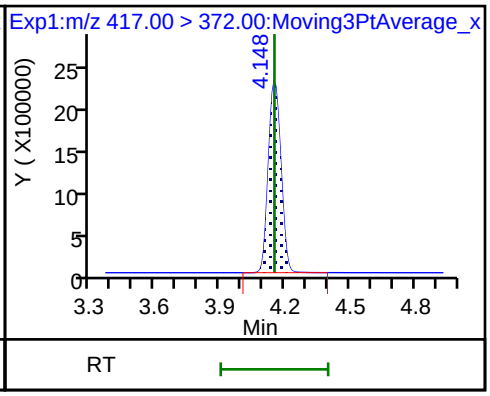

24 Perfluoroheptanesulfonic acid



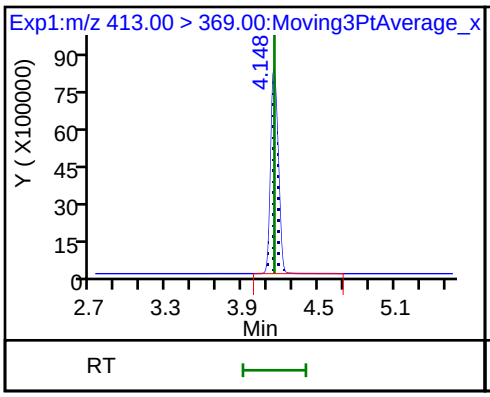

$ 26 13C8 PFOA



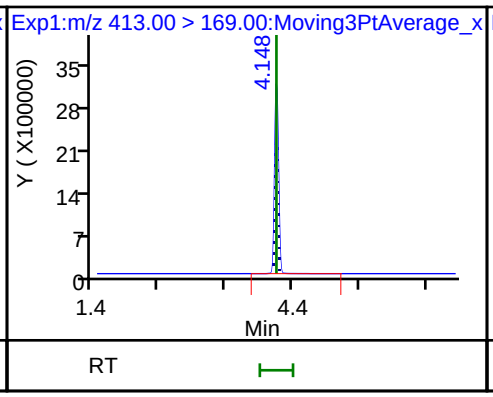

D 25 13C4 PFOA



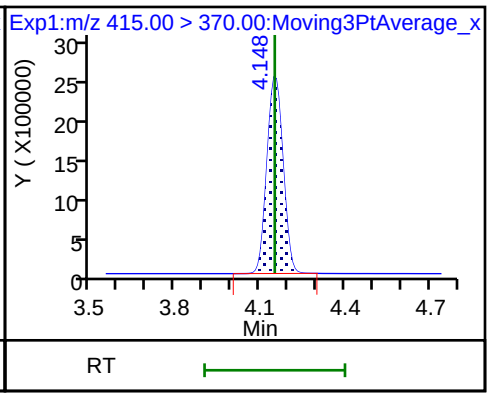

22 Perfluorooctanoic acid



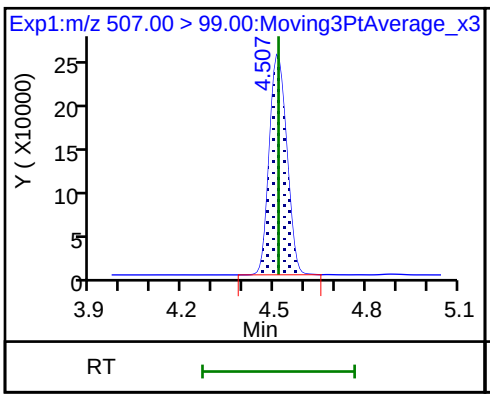

22 Perfluorooctanoic acid



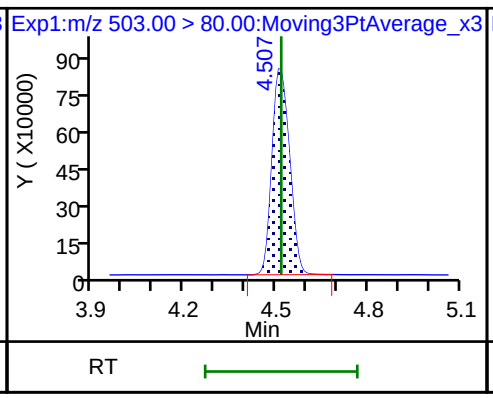

* 23 13C2 PFOA



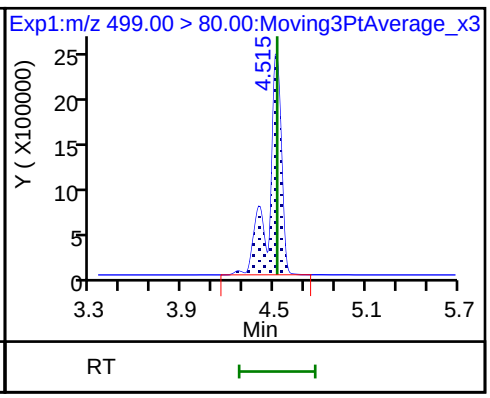

$ 28 13C8 PFOS



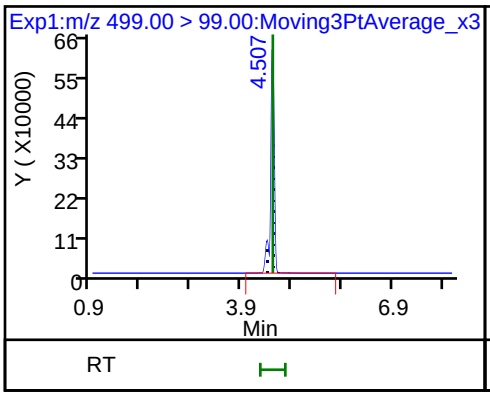

D 27 13C4 PFOS



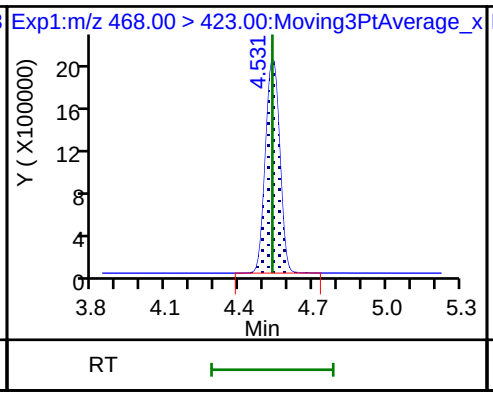

29 Perfluorooctanesulfonic acid



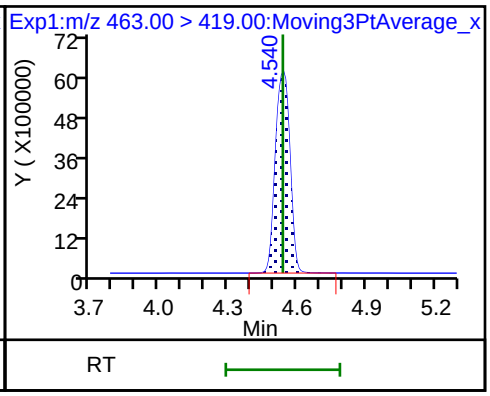
29 Perfluorooctanesulfonic acid



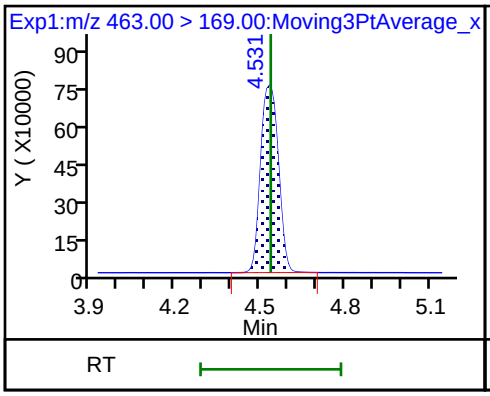

D 30 13C5 PFNA



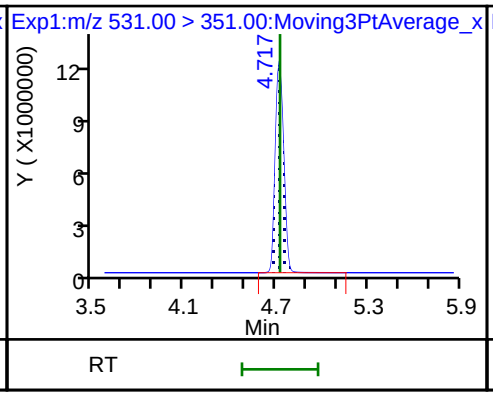

31 Perfluorononanoic acid



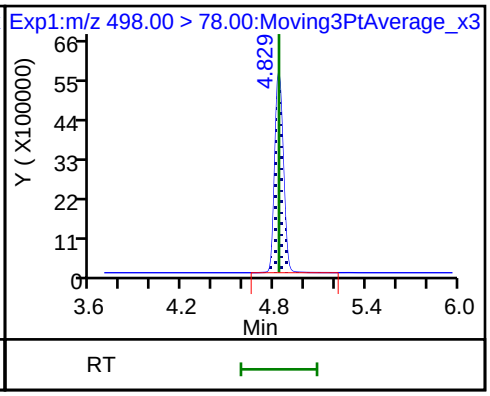

31 Perfluorononanoic acid



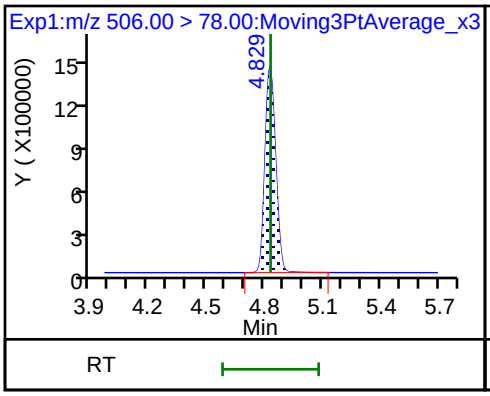

32 9ClFOS



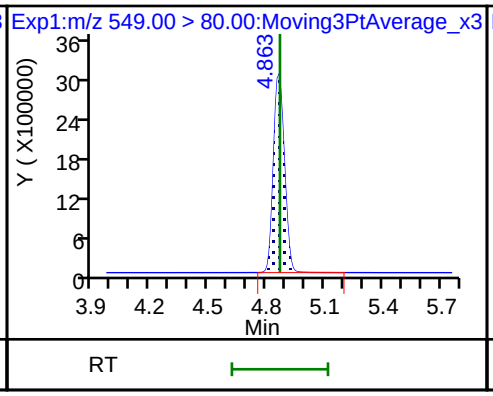

34 Perfluorooctanesulfonamide



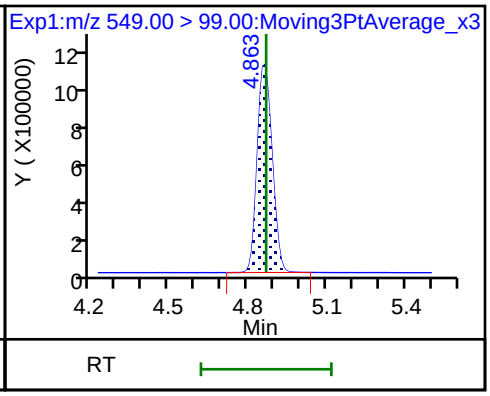

D 33 13C8 FOSA



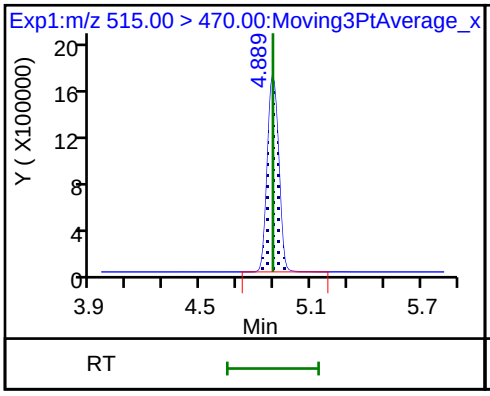

35 Perfluorononanesulfonic acid



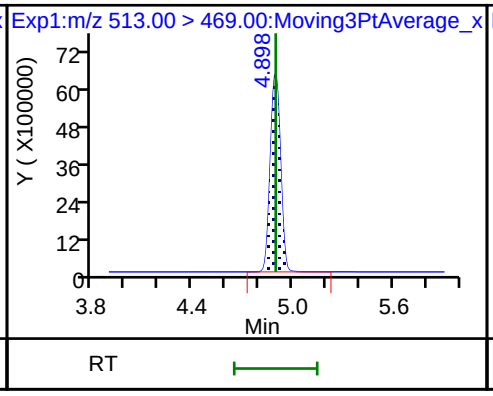

35 Perfluorononanesulfonic acid



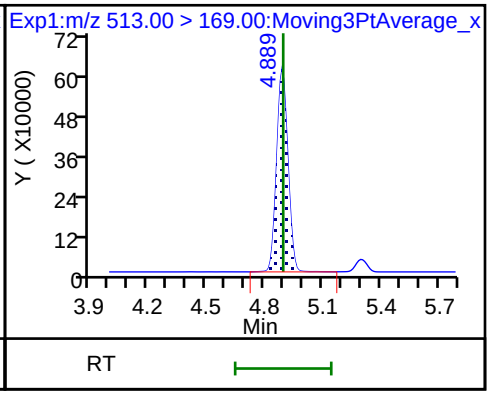

D 39 13C2 PFDA



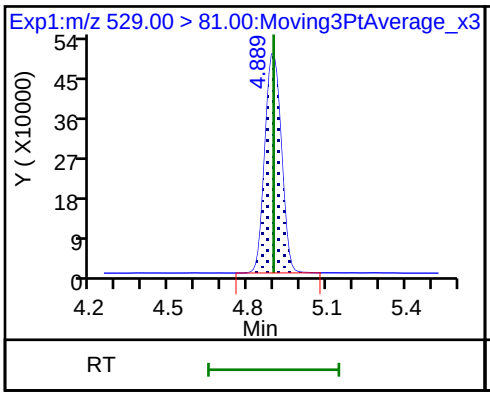

37 Perfluorodecanoic acid



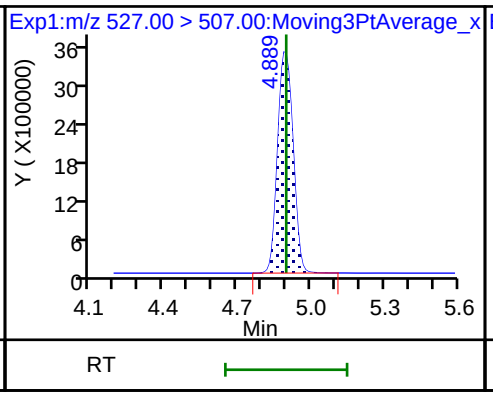

37 Perfluorodecanoic acid



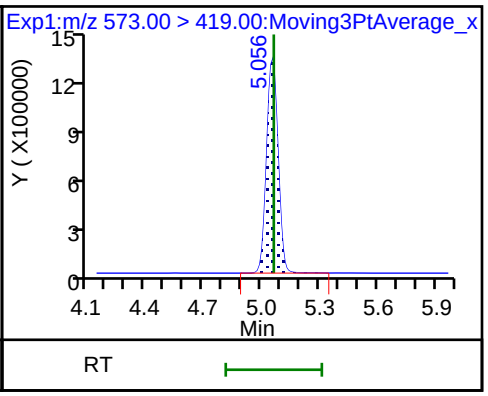
D 38 M2-8:2 FTS



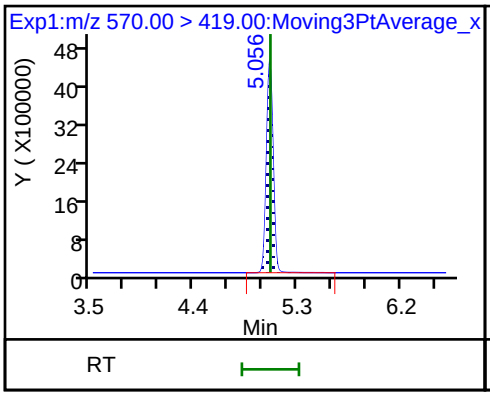

36 8:2 FTS



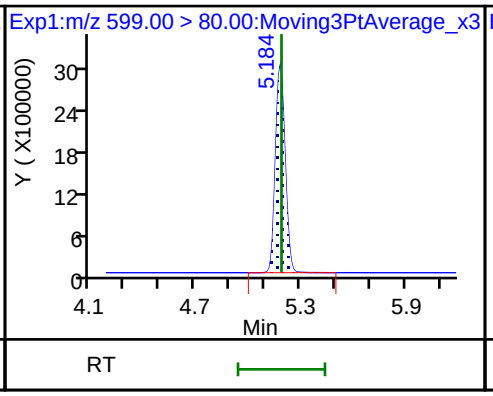

D 40 d3-NMeFOSAA



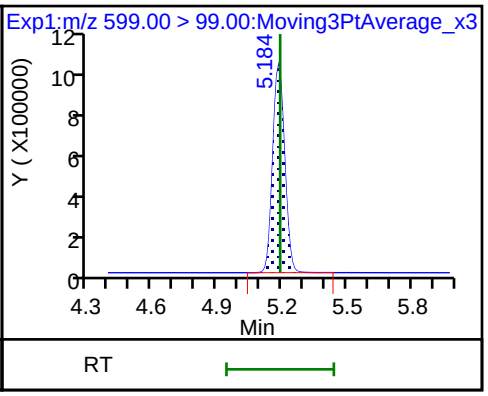

41 NMeFOSAA



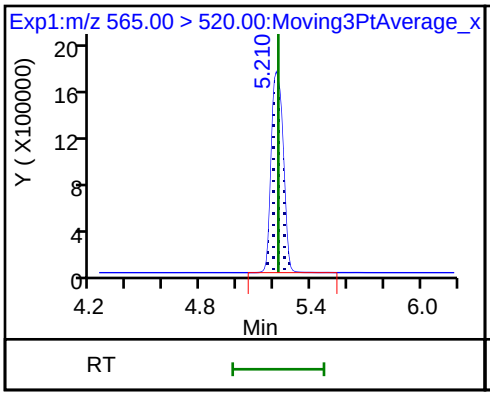

42 Perfluorodecanesulfonic acid



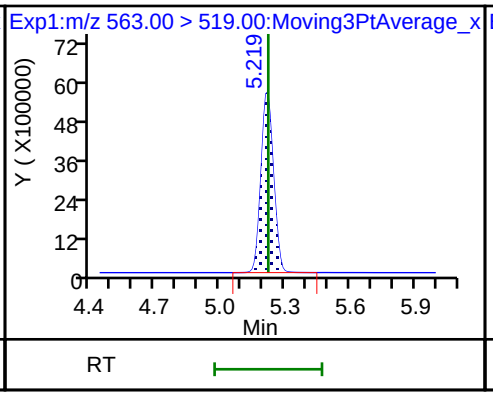

42 Perfluorodecanesulfonic acid



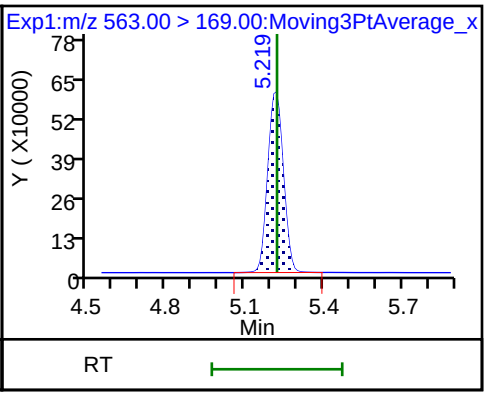

D 43 13C2 PFUnA



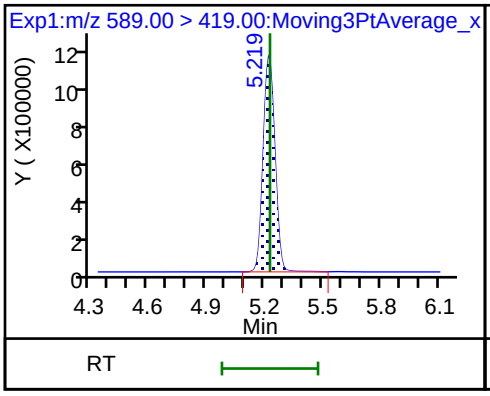

45 Perfluoroundecanoic acid



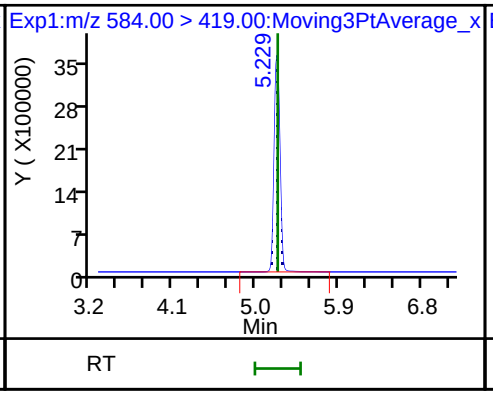

45 Perfluoroundecanoic acid



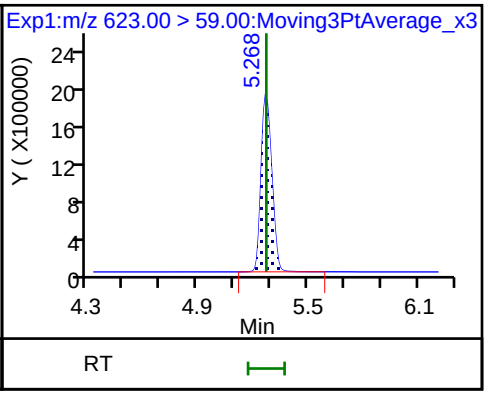

D 44 d5-NEtFOSAA



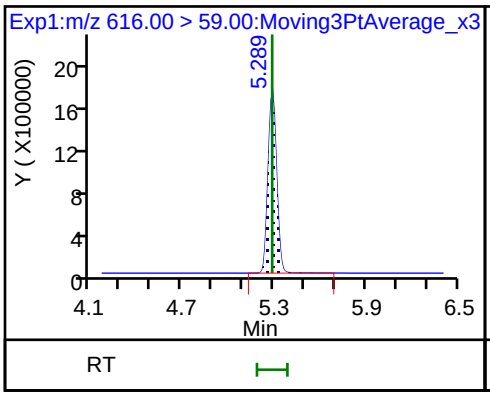

46 NEtFOSA



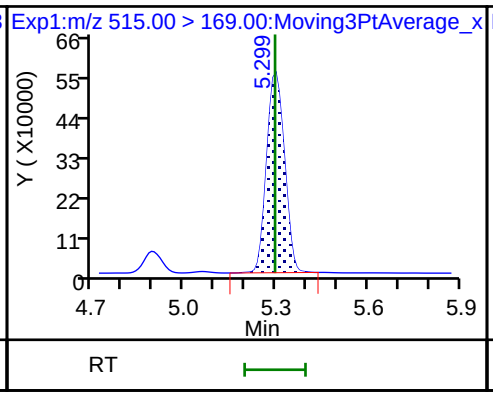

D 47 d7-N-MeFOSE-M



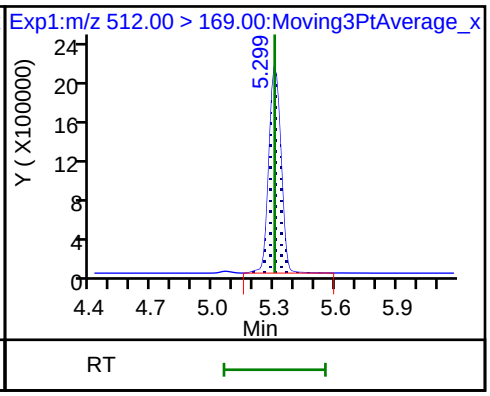
48 N-MeFOSE-M



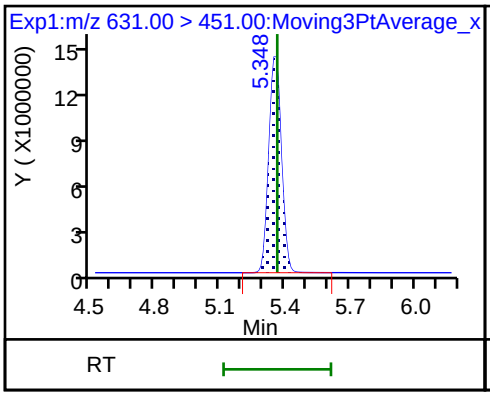

D 49 d-N-MeFOSA-M



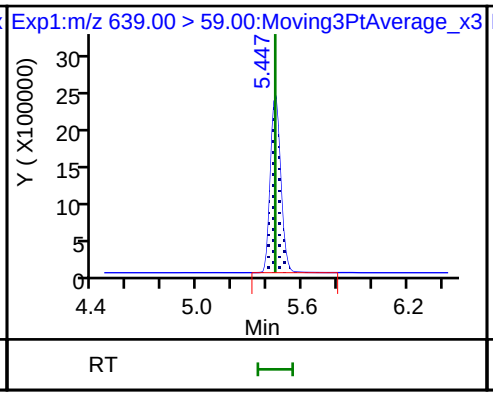

50 NMeFOSA



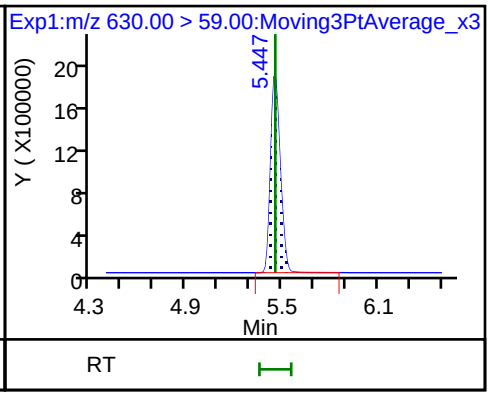

51 11ClFOS



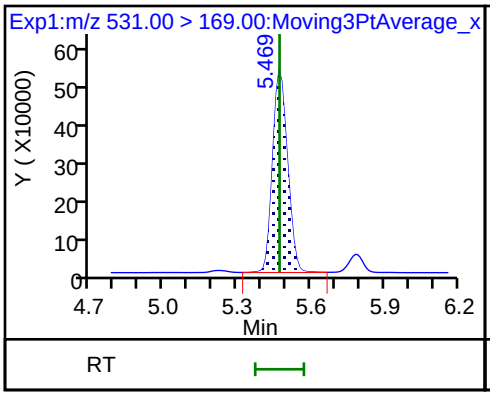

D 52 d9-N-EtFOSE-M



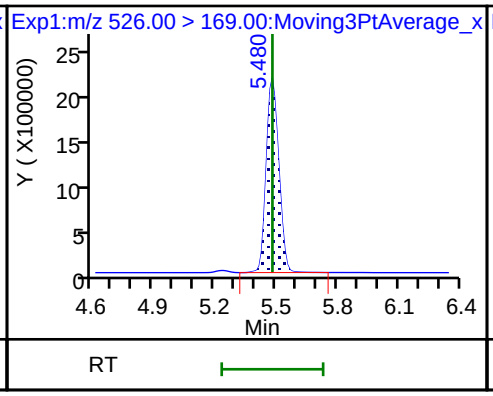

53 N-EtFOSE-M



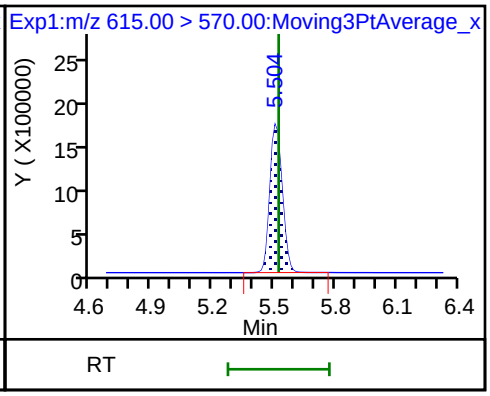

D 54 d-N-EtFOSA-M



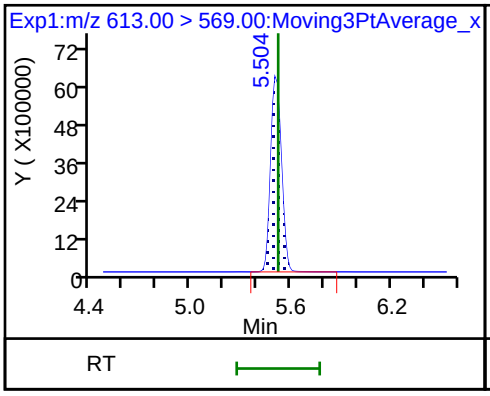

55 N-EtFOSA-M



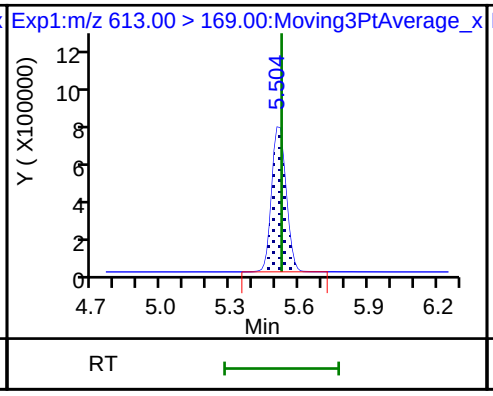

D 56 13C2 PFDoA



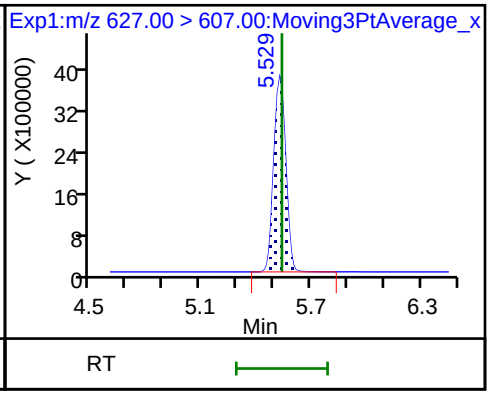

57 Perfluorododecanoic acid



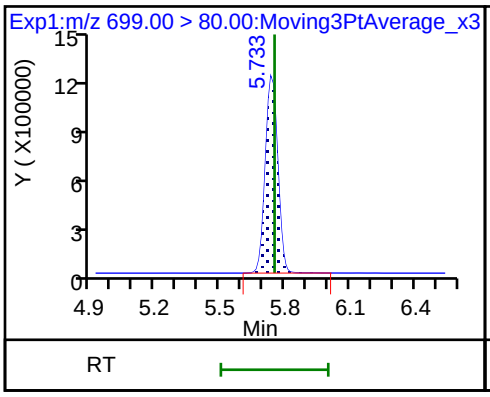

57 Perfluorododecanoic acid



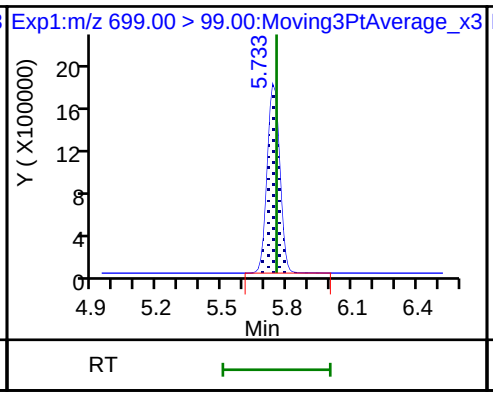

58 10:2 FTS



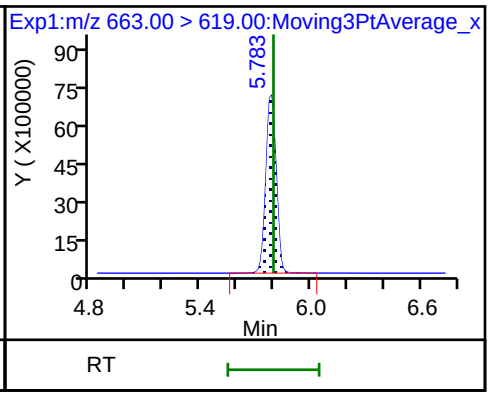
59 PFDoS



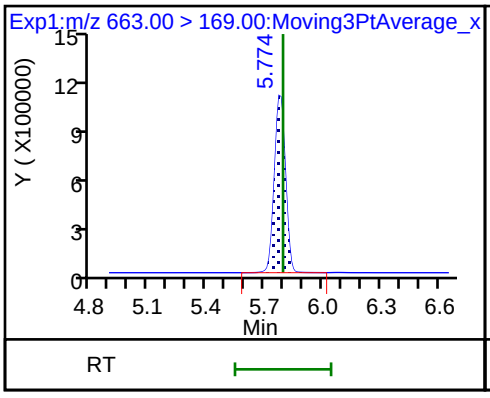

59 PFDoS



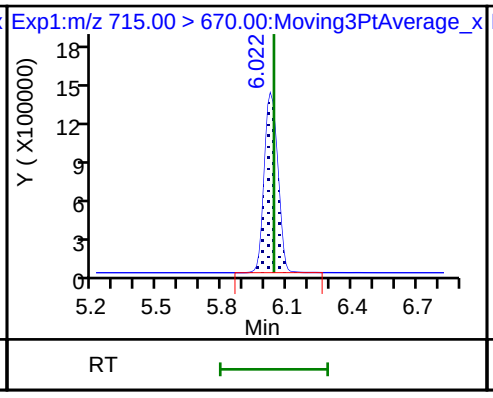

60 Perfluorotridecanoic acid



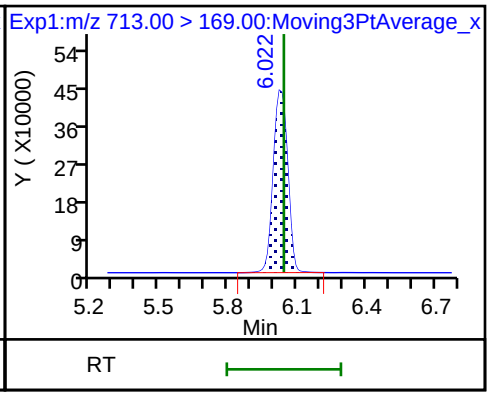

60 Perfluorotridecanoic acid



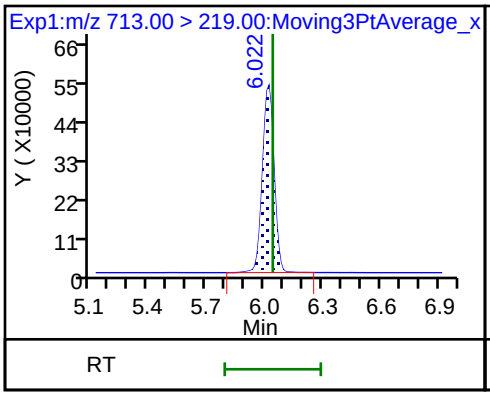

D 61 13C2 PFTeDA



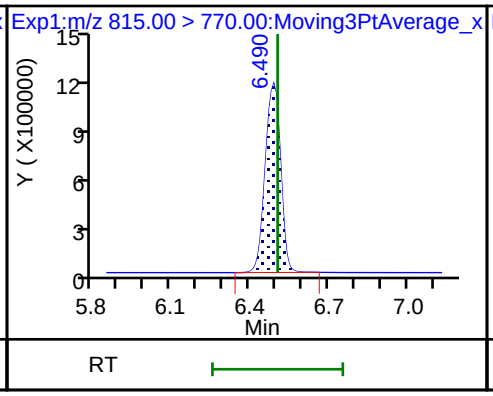

62 Perfluorotetradecanoic acid



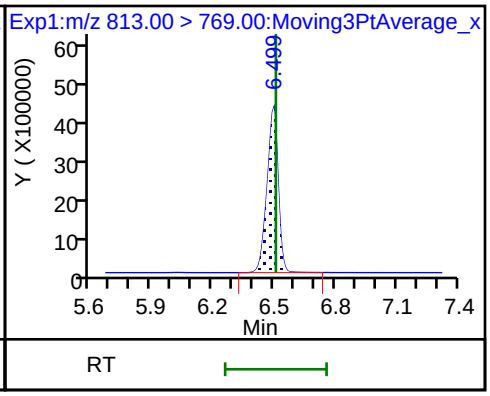

62 Perfluorotetradecanoic acid



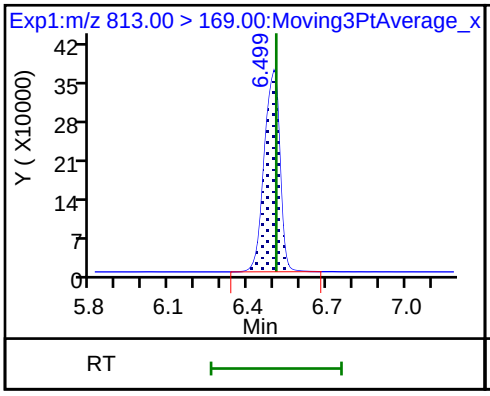

D 64 13C2 PFHxDA



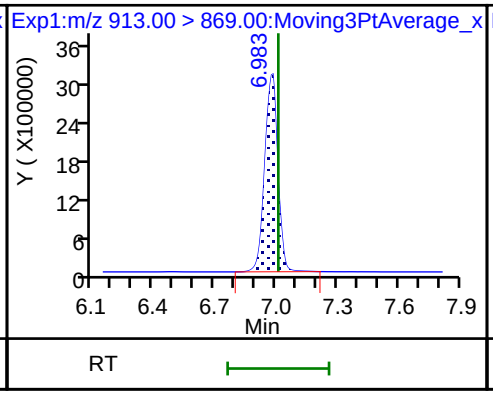

63 Perfluorohexadecanoic acid



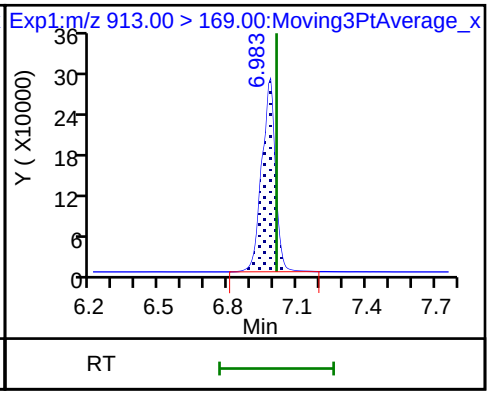

63 Perfluorohexadecanoic acid




65 Perfluorooctadecanoic acid




65 Perfluorooctadecanoic acid



FORM VI
LCMS BY ISOTOPIC DILUTION - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 460-217547-1 Analy Batch No.: 410935

SDG No.:

Instrument ID: A9 GC Column: Acquity ID: 2.1(mm) Heated Purge: (Y/N) N

Calibration Start Date: 09/10/2020 10:18 Calibration End Date: 09/10/2020 12:29 Calibration ID: 51814

Calibration Files:

| LEVEL: | LAB SAMPLE ID: | LAB FILE ID: |
|---|---|---|
| Level 1 | IC 320-410935/2 | 2020.09.10_A9 _PFC_ICAL_A_016.d |
| Level 2 | IC 320-410935/3 | 2020.09.10_A9 _PFC_ICAL_A_017.d |
| Level 3 | IC 320-410935/4 | 2020.09.10_A9 _PFC_ICAL_A_018.d |
| Level 4 | IC 320-410935/5 | 2020.09.10_A9 _PFC_ICAL_A_019.d |
| Level 5 | IC 320-410935/6 | 2020.09.10_A9 _PFC_ICAL_A_020.d |
| Level 6 | IC 320-410935/7 | 2020.09.10_A9 _PFC_ICAL_A_021.d |
| Level 7 | IC 320-410935/13 | 2020.09.10_A9 _PFC_ICAL_AA_022.d |

| ANALYTE | RRF | | | | | CURVE TYPE | COEFFICIENT | | | # | MIN RRF | %RSD | # | MAX %RSD | R^2 OR COD | # | MIN R^2 OR COD |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | LVL 1<br>LVL 6 | LVL 2<br>LVL 7 | LVL 3 | LVL 4 | LVL 5 | | B | M1 | M2 | | | | | | | | |
| Perfluorobutanoic acid (PFBA) | 0.7984<br>0.8724 | 0.8085<br>0.7802 | 0.8809 | 0.9930 | 0.9806 | AveID | | 0.8734 | | | | 9.8 | | 35.0 | | | |
| Perfluoropentanoic acid (PFPeA) | 1.2236<br>0.9301 | 1.0568<br>0.8432 | 0.9557 | 1.0564 | 1.0576 | AveID | | 1.0176 | | | | 12.0 | | 35.0 | | | |
| Perfluorobutanesulfonic acid (PFBS) | 0.9954<br>0.9053 | 0.9876<br>0.8439 | 1.0369 | 1.1321 | 1.0823 | AveID | | 0.9977 | | | | 9.9 | | 35.0 | | | |
| 4:2 FTS | 1.6048<br>2.0978 | 1.8955<br>1.9010 | 1.8943 | 2.3096 | 2.1429 | AveID | | 1.9780 | | | | 11.5 | | 35.0 | | | |
| Perfluorohexanoic acid (PFHxA) | 0.8200<br>0.7814 | 0.8436<br>0.7581 | 0.8148 | 0.8865 | 0.9359 | AveID | | 0.8343 | | | | 7.3 | | 35.0 | | | |
| Perfluoropentanesulfonic acid (PFPeS) | 0.3671<br>0.4054 | 0.3812<br>0.3832 | 0.4016 | 0.4218 | 0.4506 | AveID | | 0.4016 | | | | 7.0 | | 50.0 | | | |
| HFPO-DA (GenX) | 0.3984<br>0.4009 | 0.3707<br>0.3835 | 0.3613 | 0.4298 | 0.4265 | AveID | | 0.3959 | | | | 6.6 | | 35.0 | | | |
| Perfluoroheptanoic acid (PFHpA) | 1.1188<br>1.0690 | 1.1768<br>0.9477 | 1.1031 | 1.1617 | 1.1866 | AveID | | 1.1091 | | | | 7.5 | | 35.0 | | | |
| Perfluorohexanesulfonic acid (PFHxS) | 1.3468<br>1.1387 | 1.1811<br>1.0845 | 1.1224 | 1.1617 | 1.2215 | AveID | | 1.1795 | | | | 7.3 | | 35.0 | | | |
| 4,8-Dioxa-3H-perfluorononanoic acid (ADONA) | 1.8302<br>1.7547 | 1.6897<br>1.4714 | 1.8301 | 2.0923 | 2.0240 | AveID | | 1.8132 | | | | 11.4 | | 50.0 | | | |
| 6:2 FTS | 1.7229<br>1.4874 | 1.3811<br>1.4725 | 1.4525 | 1.6127 | 1.6628 | AveID | | 1.5417 | | | | 8.1 | | 35.0 | | | |
| Perfluoroheptanesulfonic Acid (PFHpS) | 0.8601<br>0.9443 | 0.8552<br>0.8323 | 0.8917 | 1.0252 | 1.0623 | AveID | | 0.9244 | | | | 9.7 | | 50.0 | | | |
| Perfluorooctanoic acid (PFOA) | 1.3089<br>0.9615 | 1.1345<br>0.8881 | 1.0886 | 1.0953 | 1.0725 | AveID | | 1.0785 | | | | 12.4 | | 35.0 | | | |
| Perfluorooctanesulfonic acid (PFOS) | 1.0782<br>1.0649 | 0.9432<br>0.9717 | 0.9821 | 1.0796 | 1.1580 | AveID | | 1.0397 | | | | 7.3 | | 35.0 | | | |

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
LCMS BY ISOTOPIC DILUTION - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 460-217547-1 Analy Batch No.: 410935

SDG No.:

Instrument ID: A9 GC Column: Acquity ID: 2.1(mm) Heated Purge: (Y/N) N

Calibration Start Date: 09/10/2020 10:18 Calibration End Date: 09/10/2020 12:29 Calibration ID: 51814

| ANALYTE | RRF | | | | | CURVE TYPE | COEFFICIENT | | | # | MIN RRF | %RSD | # | MAX %RSD | R^2 OR COD | # | MIN R^2 OR COD |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | LVL 1<br>LVL 6 | LVL 2<br>LVL 7 | LVL 3 | LVL 4 | LVL 5 | | B | M1 | M2 | | | | | | | | |
| Perfluorononanoic acid (PFNA) | 0.9941<br>0.9924 | 0.9537<br>0.9239 | 1.0217 | 1.0435 | 1.0398 | AveID | | 0.9956 | | | | 4.5 | | 35.0 | | | |
| F-53B Major | 0.6094<br>0.6379 | 0.5073<br>0.5994 | 0.6254 | 0.6657 | 0.7470 | AveID | | 0.6274 | | | | 11.5 | | 50.0 | | | |
| Perfluorooctanesulfonamide (FOSA) | 2.7919<br>2.6408 | 2.8747<br>2.4914 | 2.8497 | 2.9033 | 2.9200 | AveID | | 2.7817 | | | | 5.7 | | 35.0 | | | |
| Perfluorononanesulfonic acid (PFNS) | 0.7178<br>0.7587 | 0.7404<br>0.6606 | 0.7828 | 0.8317 | 0.8215 | AveID | | 0.7591 | | | | 7.9 | | 50.0 | | | |
| Perfluorodecanoic acid (PFDA) | 0.9574<br>0.9943 | 0.9743<br>0.8406 | 1.0440 | 1.0943 | 1.0815 | AveID | | 0.9981 | | | | 8.7 | | 35.0 | | | |
| 8:2 FTS | 1.2097<br>1.2933 | 1.3896<br>1.2691 | 1.1625 | 1.2781 | 1.4169 | AveID | | 1.2884 | | | | 7.0 | | 35.0 | | | |
| N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA) | 0.6243<br>0.8250 | 0.6571<br>0.8318 | 0.7788 | 0.7933 | 0.8045 | AveID | | 0.7593 | | | | 11.0 | | 35.0 | | | |
| Perfluorodecanesulfonic acid (PFDS) | 0.8252<br>0.8461 | 0.7478<br>0.7978 | 0.8333 | 0.9132 | 0.9810 | AveID | | 0.8492 | | | | 9.0 | | 50.0 | | | |
| Perfluoroundecanoic acid (PFUnA) | 0.6284<br>0.7224 | 0.6636<br>0.6866 | 0.6952 | 0.7282 | 0.7490 | AveID | | 0.6962 | | | | 5.9 | | 35.0 | | | |
| N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA) | 0.7879<br>0.9088 | 0.7478<br>0.8626 | 0.7425 | 0.8237 | 0.8048 | AveID | | 0.8112 | | | | 7.4 | | 35.0 | | | |
| NMeFOSE | 1.1354<br>1.0508 | 0.8405<br>1.0312 | 0.9786 | 1.1361 | 1.1306 | AveID | | 1.0433 | | | | 10.4 | | 35.0 | | | |
| NMeFOSA | 1.0323<br>1.0075 | 0.9583<br>1.0292 | 0.9351 | 1.1496 | 1.1895 | AveID | | 1.0431 | | | | 9.0 | | 35.0 | | | |
| F-53B Minor | 0.5965<br>0.7644 | 0.5993<br>0.7393 | 0.6905 | 0.8708 | 0.9181 | AveID | | 0.7398 | | | | 16.8 | | 50.0 | | | |
| NEtFOSE | 1.0362<br>1.0198 | 0.8057<br>1.0457 | 0.9479 | 1.0626 | 1.0390 | AveID | | 0.9939 | | | | 9.1 | | 35.0 | | | |
| Perfluorododecanoic acid (PFDoA) | 0.8254<br>0.9151 | 0.9409<br>0.8067 | 1.0044 | 0.9667 | 0.9786 | AveID | | 0.9197 | | | | 8.3 | | 35.0 | | | |
| NEtFOSA | 0.9884<br>0.9651 | 0.9486<br>0.9722 | 0.9404 | 1.0695 | 1.0814 | AveID | | 0.9951 | | | | 5.7 | | 35.0 | | | |
| 10:2 FTS | 0.7542<br>0.8456 | 0.8744<br>0.8885 | 0.7372 | 0.7508 | 0.8993 | AveID | | 0.8214 | | | | 8.7 | | 50.0 | | | |
| Perfluorododecanesulfonic acid (PFDoS) | 0.1099<br>0.1363 | 0.1135<br>0.1348 | 0.1220 | 0.1283 | 0.1432 | AveID | | 0.1269 | | | | 9.7 | | 50.0 | | | |
| Perfluorotridecanoic acid (PFTriA) | 0.6732<br>0.7174 | 0.6743<br>0.6425 | 0.7707 | 0.8009 | 0.8077 | AveID | | 0.7267 | | | | 9.2 | | 50.0 | | | |
| Perfluorotetradecanoic acid (PFTeA) | 0.2102<br>0.1691 | 0.1583<br>0.1608 | 0.1799 | 0.1767 | 0.1798 | AveID | | 0.1764 | | | | 9.8 | | 35.0 | | | |

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
LCMS BY ISOTOPIC DILUTION - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 460-217547-1 Analy Batch No.: 410935

SDG No.:

Instrument ID: A9 GC Column: Acquity ID: 2.1(mm) Heated Purge: (Y/N) N

Calibration Start Date: 09/10/2020 10:18 Calibration End Date: 09/10/2020 12:29 Calibration ID: 51814

| ANALYTE | RRF | | | | | CURVE TYPE | COEFFICIENT | | | # | MIN RRF | %RSD | # | MAX %RSD | R^2 OR COD | # | MIN R^2 OR COD |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | LVL 1<br>LVL 6 | LVL 2<br>LVL 7 | LVL 3 | LVL 4 | LVL 5 | | B | M1 | M2 | | | | | | | | |
| Perfluoro-n-hexadecanoic acid (PFHxDA) | 1.7556<br>0.9145 | 1.2422<br>0.8693 | 0.9350 | 1.0123 | 0.9895 | L2ID | 0.0200 | 0.9147 | | | | | | | 0.9940 | | 0.9900 |
| Perfluoro-n-octadecanoic acid (PFODA) | 0.6896<br>0.7308 | 0.6698<br>0.6901 | 0.6937 | 0.8108 | 0.9509 | AveID | | 0.7480 | | | | 13.5 | | 50.0 | | | |
| 13C4 PFBA | 1.3324<br>1.3469 | 1.2870<br>1.4548 | 1.3405 | 1.3297 | 1.3569 | Ave | | 1.3497 | | | | 3.8 | | 50.0 | | | |
| 13C5 PFPeA | 1.1305<br>1.1572 | 1.0969<br>1.2020 | 1.1876 | 1.0856 | 1.1079 | Ave | | 1.1382 | | | | 4.0 | | 50.0 | | | |
| 13C3 PFBS | 2.2704<br>2.2747 | 2.1272<br>2.3284 | 2.2096 | 2.2690 | 2.2610 | Ave | | 2.2486 | | | | 2.8 | | 50.0 | | | |
| M2-4:2 FTS | 0.2463<br>0.2183 | 0.2152<br>0.2193 | 0.2268 | 0.2151 | 0.2217 | Ave | | 0.2233 | | | | 4.9 | | 50.0 | | | |
| 13C2 PFHxA | 1.0817<br>1.1028 | 1.0087<br>1.1124 | 1.0582 | 1.0382 | 1.0067 | Ave | | 1.0584 | | | | 4.0 | | 50.0 | | | |
| 13C3 HFPO-DA | 0.7312<br>0.7475 | 0.6883<br>0.7756 | 0.7176 | 0.7169 | 0.7076 | Ave | | 0.7264 | | | | 3.9 | | 50.0 | | | |
| 13C4 PFHpA | 1.0606<br>1.0242 | 0.9779<br>1.0508 | 1.0380 | 1.0321 | 1.0265 | Ave | | 1.0300 | | | | 2.6 | | 50.0 | | | |
| 18O2 PFHxS | 1.0840<br>1.0431 | 1.0201<br>1.0805 | 1.1134 | 1.0985 | 1.0908 | Ave | | 1.0758 | | | | 3.0 | | 50.0 | | | |
| M2-6:2 FTS | 0.2021<br>0.1899 | 0.1924<br>0.1828 | 0.1948 | 0.1944 | 0.1913 | Ave | | 0.1925 | | | | 3.0 | | 50.0 | | | |
| 13C4 PFOA | 0.9910<br>0.9401 | 0.9467<br>0.9922 | 0.9327 | 0.9835 | 0.9718 | Ave | | 0.9654 | | | | 2.6 | | 50.0 | | | |
| 13C4 PFOS | 1.1223<br>1.0946 | 1.1177<br>1.1900 | 1.1235 | 1.1210 | 1.0904 | Ave | | 1.1228 | | | | 2.9 | | 50.0 | | | |
| 13C5 PFNA | 0.8171<br>0.7936 | 0.8086<br>0.8513 | 0.8185 | 0.8985 | 0.8756 | Ave | | 0.8376 | | | | 4.6 | | 50.0 | | | |
| 13C8 FOSA | 0.5550<br>0.5316 | 0.5074<br>0.5224 | 0.5263 | 0.5284 | 0.5246 | Ave | | 0.5280 | | | | 2.7 | | 50.0 | | | |
| 13C2 PFDA | 1.1198<br>1.0437 | 1.0575<br>1.0577 | 1.0867 | 1.0102 | 1.0666 | Ave | | 1.0632 | | | | 3.2 | | 50.0 | | | |
| M2-8:2 FTS | 0.2684<br>0.2208 | 0.2235<br>0.2132 | 0.2503 | 0.2522 | 0.2216 | Ave | | 0.2357 | | | | 8.9 | | 50.0 | | | |
| d3-NMeFOSAA | 0.5340<br>0.5485 | 0.5214<br>0.5688 | 0.5106 | 0.5017 | 0.5149 | Ave | | 0.5286 | | | | 4.5 | | 50.0 | | | |
| 13C2 PFUnA | 0.7979<br>0.8094 | 0.7936<br>0.8322 | 0.8260 | 0.8432 | 0.8364 | Ave | | 0.8198 | | | | 2.4 | | 50.0 | | | |
| d5-NEtFOSAA | 0.3501<br>0.3458 | 0.3437<br>0.3504 | 0.3670 | 0.3620 | 0.3600 | Ave | | 0.3541 | | | | 2.5 | | 50.0 | | | |

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
LCMS BY ISOTOPIC DILUTION - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 460-217547-1 Analy Batch No.: 410935

SDG No.:

Instrument ID: A9 GC Column: Acquity ID: 2.1(mm) Heated Purge: (Y/N) N

Calibration Start Date: 09/10/2020 10:18 Calibration End Date: 09/10/2020 12:29 Calibration ID: 51814

| ANALYTE | RRF | | | | | CURVE TYPE | COEFFICIENT | | | # | MIN RRF | %RSD | # | MAX %RSD | R^2 OR COD | # | MIN R^2 OR COD |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | LVL 1<br>LVL 6 | LVL 2<br>LVL 7 | LVL 3 | LVL 4 | LVL 5 | | B | M1 | M2 | | | | | | | | |
| d7-N-MeFOSE-M | 0.1734<br>0.1674 | 0.1672<br>0.1789 | 0.1705 | 0.1611 | 0.1714 | Ave | | 0.1700 | | | | 3.3 | | 50.0 | | | |
| d-N-MeFOSA-M | 0.2311<br>0.2558 | 0.2176<br>0.2654 | 0.2313 | 0.2279 | 0.2353 | Ave | | 0.2378 | | | | 7.0 | | 50.0 | | | |
| d9-N-EtFOSE-M | 0.1738<br>0.1767 | 0.1722<br>0.1937 | 0.1779 | 0.1727 | 0.1825 | Ave | | 0.1785 | | | | 4.3 | | 50.0 | | | |
| d-N-EtFOSA-M | 0.2385<br>0.2687 | 0.2289<br>0.2720 | 0.2363 | 0.2405 | 0.2432 | Ave | | 0.2469 | | | | 6.8 | | 50.0 | | | |
| 13C2 PFDoA | 0.8389<br>0.7939 | 0.7987<br>0.8329 | 0.7732 | 0.7926 | 0.8054 | Ave | | 0.8051 | | | | 2.9 | | 50.0 | | | |
| 13C2 PFTeDA | 0.5545<br>0.5608 | 0.5421<br>0.6091 | 0.5439 | 0.5613 | 0.5586 | Ave | | 0.5615 | | | | 4.0 | | 50.0 | | | |
| 13C2 PFHxDA | 0.4152<br>0.4316 | 0.4193<br>0.4502 | 0.4141 | 0.3980 | 0.3781 | Ave | | 0.4152 | | | | 5.5 | | 50.0 | | | |
| 13C8 PFOA | 0.7951<br>0.6656 | 0.7995<br>0.9302 | 0.8111 | 0.8171 | 0.8429 | Ave | | 0.8088 | | | | 9.7 | | 50.0 | | | |
| 13C8 PFOS | 0.2654<br>0.2601 | 0.2432<br>0.2630 | 0.2572 | 0.2504 | 0.2402 | Ave | | 0.2542 | | | | 3.9 | | 50.0 | | | |

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
LCMS BY ISOTOPIC DILUTION - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 460-217547-1 Analy Batch No.: 410935

SDG No.:

Instrument ID: A9 GC Column: Acquity ID: 2.1(mm) Heated Purge: (Y/N) N

Calibration Start Date: 09/10/2020 10:18 Calibration End Date: 09/10/2020 12:29 Calibration ID: 51814

Calibration Files:

| LEVEL: | LAB SAMPLE ID: | LAB FILE ID: |
|---|---|---|
| Level 1 | IC 320-410935/2 | 2020.09.10_A9 _PFC_ICAL_A_016.d |
| Level 2 | IC 320-410935/3 | 2020.09.10_A9 _PFC_ICAL_A_017.d |
| Level 3 | IC 320-410935/4 | 2020.09.10_A9 _PFC_ICAL_A_018.d |
| Level 4 | IC 320-410935/5 | 2020.09.10_A9 _PFC_ICAL_A_019.d |
| Level 5 | IC 320-410935/6 | 2020.09.10_A9 _PFC_ICAL_A_020.d |
| Level 6 | IC 320-410935/7 | 2020.09.10_A9 _PFC_ICAL_A_021.d |
| Level 7 | IC 320-410935/13 | 2020.09.10_A9 _PFC_ICAL_AA_022.d |

| ANALYTE | IS REF | CURVE TYPE | RESPONSE | | | | | CONCENTRATION (NG/ML) | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | LVL 1<br>LVL 6 | LVL 2<br>LVL 7 | LVL 3 | LVL 4 | LVL 5 | LVL 1<br>LVL 6 | LVL 2<br>LVL 7 | LVL 3 | LVL 4 | LVL 5 |
| Perfluorobutanoic acid (PFBA) | | AveID | 69313<br>14698994 | 137934<br>26016733 | 755326 | 3251427 | 7863642 | 0.0250<br>5.00 | 0.0500<br>10.0 | 0.250 | 1.00 | 2.50 |
| Perfluoropentanoic acid (PFPeA) | | AveID | 90133<br>13464235 | 153662<br>23231288 | 725976 | 2824036 | 6924391 | 0.0250<br>5.00 | 0.0500<br>10.0 | 0.250 | 1.00 | 2.50 |
| Perfluorobutanesulfonic acid (PFBS) | | AveID | 130179<br>22773485 | 246180<br>39815345 | 1295442 | 5591416 | 12784101 | 0.0221<br>4.42 | 0.0442<br>8.84 | 0.221 | 0.884 | 2.21 |
| 4:2 FTS | | AveID | 24055<br>5351034 | 50503<br>8926658 | 256695 | 1142837 | 2622239 | 0.0234<br>4.67 | 0.0467<br>9.34 | 0.234 | 0.934 | 2.34 |
| Perfluorohexanoic acid (PFHxA) | | AveID | 57793<br>10779295 | 112791<br>19328145 | 551503 | 2266324 | 5568440 | 0.0250<br>5.00 | 0.0500<br>10.0 | 0.250 | 1.00 | 2.50 |
| Perfluoropentanesulfonic acid (PFPeS) | | AveID | 50944<br>10821051 | 100810<br>19185228 | 532432 | 2210542 | 5647334 | 0.0235<br>4.69 | 0.0469<br>9.38 | 0.235 | 0.938 | 2.35 |
| HFPO-DA (GenX) | | AveID | 18983<br>3748656 | 33818<br>6818485 | 165835 | 758774 | 1783468 | 0.0250<br>5.00 | 0.0500<br>10.0 | 0.250 | 1.00 | 2.50 |
| Perfluoroheptanoic acid (PFHpA) | | AveID | 77317<br>13697410 | 152546<br>22824600 | 732378 | 2952448 | 7198107 | 0.0250<br>5.00 | 0.0500<br>10.0 | 0.250 | 1.00 | 2.50 |
| Perfluorohexanesulfonic acid (PFHxS) | | AveID | 86565<br>13521969 | 145334<br>24439953 | 727417 | 2859421 | 7166091 | 0.0228<br>4.55 | 0.0455<br>9.10 | 0.228 | 0.910 | 2.28 |
| 4,8-Dioxa-3H-perfluorononanoic acid (ADONA) | | AveID | 126078<br>22633015 | 235814<br>37803976 | 1238833 | 5440739 | 12286344 | 0.0236<br>4.71 | 0.0471<br>9.42 | 0.236 | 0.942 | 2.36 |
| 6:2 FTS | | AveID | 21509<br>3349205 | 33398<br>5847420 | 171579 | 731791 | 1781972 | 0.0237<br>4.74 | 0.0474<br>9.48 | 0.237 | 0.948 | 2.37 |
| Perfluoroheptanesulfonic Acid (PFHpS) | | AveID | 59882<br>12310163 | 120618<br>21612393 | 610012 | 2694297 | 6516571 | 0.0238<br>4.76 | 0.0476<br>9.52 | 0.238 | 0.952 | 2.38 |
| Perfluorooctanoic acid (PFOA) | | AveID | 84521<br>11308200 | 142372<br>20197112 | 649485 | 2655085 | 6159339 | 0.0250<br>5.00 | 0.0500<br>10.0 | 0.250 | 1.00 | 2.50 |
| Perfluorooctanesulfonic acid (PFOS) | | AveID | 73172<br>13532057 | 129682<br>24594195 | 654930 | 2765721 | 6924966 | 0.0232<br>4.64 | 0.0464<br>9.28 | 0.232 | 0.928 | 2.32 |
| Perfluorononanoic acid (PFNA) | | AveID | 52926<br>9851874 | 102230<br>18028540 | 534880 | 2313472 | 5380779 | 0.0250<br>5.00 | 0.0500<br>10.0 | 0.250 | 1.00 | 2.50 |

FORM VI
LCMS BY ISOTOPIC DILUTION - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 460-217547-1 Analy Batch No.: 410935

SDG No.:

Instrument ID: A9 GC Column: Acquity ID: 2.1(mm) Heated Purge: (Y/N) N

Calibration Start Date: 09/10/2020 10:18 Calibration End Date: 09/10/2020 12:29 Calibration ID: 51814

| ANALYTE | IS REF | CURVE TYPE | RESPONSE | | | | | CONCENTRATION (NG/ML) | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | LVL 1<br>LVL 6 | LVL 2<br>LVL 7 | LVL 3 | LVL 4 | LVL 5 | LVL 1<br>LVL 6 | LVL 2<br>LVL 7 | LVL 3 | LVL 4 | LVL 5 |
| F-53B Major | | AveID | 41537<br>8140600 | 70052<br>15237600 | 418832 | 1712587 | 4486251 | 0.0233<br>4.66 | 0.0466<br>9.32 | 0.233 | 0.932 | 2.33 |
| Perfluorooctanesulfonamide (FOSA) | | AveID | 100960<br>17563337 | 193336<br>29831465 | 959339 | 3777803 | 9052662 | 0.0250<br>5.00 | 0.0500<br>10.0 | 0.250 | 1.00 | 2.50 |
| Perfluorononanesulfonic acid (PFNS) | | AveID | 50392<br>9973320 | 105305<br>17298133 | 540009 | 2204044 | 5081895 | 0.0240<br>4.80 | 0.0480<br>9.60 | 0.240 | 0.960 | 2.40 |
| Perfluorodecanoic acid (PFDA) | | AveID | 69860<br>12982222 | 136570<br>20379921 | 725683 | 2722259 | 6816935 | 0.0250<br>5.00 | 0.0500<br>10.0 | 0.250 | 1.00 | 2.50 |
| 8:2 FTS | | AveID | 20267<br>3422014 | 39446<br>5940630 | 178280 | 760505 | 1777666 | 0.0240<br>4.79 | 0.0479<br>9.58 | 0.240 | 0.958 | 2.40 |
| N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA) | | AveID | 21721<br>5660500 | 45421<br>10844354 | 254355 | 980061 | 2448364 | 0.0250<br>5.00 | 0.0500<br>10.0 | 0.250 | 1.00 | 2.50 |
| Perfluorodecanesulfonic acid (PFDS) | | AveID | 58175<br>11169249 | 106796<br>20976727 | 577252 | 2430075 | 6094197 | 0.0241<br>4.82 | 0.0482<br>9.64 | 0.241 | 0.964 | 2.41 |
| Perfluoroundecanoic acid (PFUnA) | | AveID | 32671<br>7315314 | 69809<br>13097707 | 367263 | 1513496 | 3702181 | 0.0250<br>5.00 | 0.0500<br>10.0 | 0.250 | 1.00 | 2.50 |
| N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA) | | AveID | 17973<br>3931329 | 34070<br>6927848 | 174286 | 734316 | 1712166 | 0.0250<br>5.00 | 0.0500<br>10.0 | 0.250 | 1.00 | 2.50 |
| NMeFOSE | | AveID | 12829<br>2200699 | 18624<br>4229635 | 106728 | 450645 | 1144996 | 0.0250<br>5.00 | 0.0500<br>10.0 | 0.250 | 1.00 | 2.50 |
| NMeFOSA | | AveID | 15545<br>3224319 | 27638<br>6260597 | 138365 | 645147 | 1653934 | 0.0250<br>5.00 | 0.0500<br>10.0 | 0.250 | 1.00 | 2.50 |
| F-53B Minor | | AveID | 41091<br>9859916 | 83643<br>18995447 | 467393 | 2264304 | 5572953 | 0.0236<br>4.71 | 0.0471<br>9.42 | 0.236 | 0.942 | 2.36 |
| NEtFOSE | | AveID | 11732<br>2254902 | 18393<br>4643129 | 107836 | 451734 | 1120322 | 0.0250<br>5.00 | 0.0500<br>10.0 | 0.250 | 1.00 | 2.50 |
| Perfluorododecanoic acid (PFDoA) | | AveID | 45119<br>9088336 | 99619<br>15400710 | 496720 | 1897971 | 4657557 | 0.0250<br>5.00 | 0.0500<br>10.0 | 0.250 | 1.01 | 2.50 |
| NEtFOSA | | AveID | 15363<br>3243753 | 28777<br>6060955 | 142130 | 633467 | 1554311 | 0.0250<br>5.00 | 0.0500<br>10.0 | 0.250 | 1.00 | 2.50 |
| 10:2 FTS | | AveID | 12715<br>2251394 | 24976<br>4185075 | 113753 | 449573 | 1135361 | 0.0241<br>4.82 | 0.0482<br>9.64 | 0.241 | 0.964 | 2.41 |
| Perfluorododecanesulfonic acid (PFDoS) | | AveID | 7783<br>1806840 | 16271<br>3559961 | 84857 | 342753 | 893169 | 0.0242<br>4.84 | 0.0484<br>9.68 | 0.242 | 0.968 | 2.42 |
| Perfluorotridecanoic acid (PFTriA) | | AveID | 36800<br>7125186 | 71389<br>12266037 | 381160 | 1563186 | 3844406 | 0.0250<br>5.00 | 0.0500<br>10.0 | 0.250 | 1.00 | 2.50 |
| Perfluorotetradecanoic acid (PFTeA) | | AveID | 7595<br>1186334 | 11378<br>2245611 | 62584 | 244523 | 593557 | 0.0250<br>5.00 | 0.0500<br>10.0 | 0.250 | 1.00 | 2.50 |
| Perfluoro-n-hexadecanoic acid (PFHxDA) | | L2ID | 47498<br>4937240 | 69039<br>8969968 | 247697 | 992148 | 2210855 | 0.0250<br>5.00 | 0.0500<br>10.0 | 0.250 | 1.00 | 2.50 |
| Perfluoro-n-octadecanoic acid (PFODA) | | AveID | 18658<br>3945625 | 37227<br>7120596 | 183768 | 794719 | 2124571 | 0.0250<br>5.00 | 0.0500<br>10.0 | 0.250 | 1.00 | 2.50 |

FORM VI
LCMS BY ISOTOPIC DILUTION - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 460-217547-1 Analy Batch No.: 410935

SDG No.:

Instrument ID: A9 GC Column: Acquity ID: 2.1(mm) Heated Purge: (Y/N) N

Calibration Start Date: 09/10/2020 10:18 Calibration End Date: 09/10/2020 12:29 Calibration ID: 51814

| ANALYTE | IS REF | CURVE TYPE | RESPONSE | | | | | CONCENTRATION (NG/ML) | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | LVL 1<br>LVL 6 | LVL 2<br>LVL 7 | LVL 3 | LVL 4 | LVL 5 | LVL 1<br>LVL 6 | LVL 2<br>LVL 7 | LVL 3 | LVL 4 | LVL 5 |
| 13C4 PFBA | 13PF<br>OA | Ave | 8681635<br>8424890 | 8530166<br>8336188 | 8574576 | 8185504 | 8019248 | 2.50<br>2.50 | 2.50<br>2.50 | 2.50 | 2.50 | 2.50 |
| 13C5 PFPeA | 13PF<br>OA | Ave | 7365999<br>7238418 | 7270115<br>6887818 | 7596317 | 6683295 | 6547408 | 2.50<br>2.50 | 2.50<br>2.50 | 2.50 | 2.50 | 2.50 |
| 13C3 PFBS | 13PF<br>OA | Ave | 13758101<br>13232169 | 13111521<br>12408129 | 13144085 | 12990046 | 12426682 | 2.33<br>2.33 | 2.33<br>2.33 | 2.33 | 2.33 | 2.33 |
| M2-4:2 FTS | 13PF<br>OA | Ave | 1498962<br>1275389 | 1332209<br>1173922 | 1355074 | 1237052 | 1223709 | 2.34<br>2.34 | 2.34<br>2.34 | 2.34 | 2.34 | 2.34 |
| 13C2 PFHxA | 13PF<br>OA | Ave | 7048312<br>6897732 | 6685304<br>6374110 | 6768409 | 6391446 | 5949563 | 2.50<br>2.50 | 2.50<br>2.50 | 2.50 | 2.50 | 2.50 |
| 13C3 HFPO-DA | 13PF<br>OA | Ave | 4764722<br>4675328 | 4561962<br>4444390 | 4590213 | 4413524 | 4181969 | 2.50<br>2.50 | 2.50<br>2.50 | 2.50 | 2.50 | 2.50 |
| 13C4 PFHpA | 13PF<br>OA | Ave | 6910814<br>6406416 | 6481134<br>6021243 | 6639108 | 6353500 | 6066212 | 2.50<br>2.50 | 2.50<br>2.50 | 2.50 | 2.50 | 2.50 |
| 18O2 PFHxS | 13PF<br>OA | Ave | 6681612<br>6172326 | 6395663<br>5857043 | 6737106 | 6397044 | 6098488 | 2.37<br>2.37 | 2.37<br>2.37 | 2.37 | 2.37 | 2.37 |
| M2-6:2 FTS | 13PF<br>OA | Ave | 1251075<br>1128229 | 1211683<br>994866 | 1183789 | 1136846 | 1073906 | 2.38<br>2.38 | 2.38<br>2.38 | 2.38 | 2.38 | 2.38 |
| 13C4 PFOA | 13PF<br>OA | Ave | 6457425<br>5880244 | 6274406<br>5685447 | 5966056 | 6054330 | 5743064 | 2.50<br>2.50 | 2.50<br>2.50 | 2.50 | 2.50 | 2.50 |
| 13C4 PFOS | 13PF<br>OA | Ave | 6991246<br>6545285 | 7081760<br>6518762 | 6869985 | 6597517 | 6160459 | 2.39<br>2.39 | 2.39<br>2.39 | 2.39 | 2.39 | 2.39 |
| 13C5 PFNA | 13PF<br>OA | Ave | 5324119<br>4963721 | 5359539<br>4878315 | 5235235 | 5531319 | 5174599 | 2.50<br>2.50 | 2.50<br>2.50 | 2.50 | 2.50 | 2.50 |
| 13C8 FOSA | 13PF<br>OA | Ave | 3616177<br>3325401 | 3362698<br>2993418 | 3366493 | 3252977 | 3100275 | 2.50<br>2.50 | 2.50<br>2.50 | 2.50 | 2.50 | 2.50 |
| 13C2 PFDA | 13PF<br>OA | Ave | 7296508<br>6528469 | 7008972<br>6061061 | 6950885 | 6218902 | 6303374 | 2.50<br>2.50 | 2.50<br>2.50 | 2.50 | 2.50 | 2.50 |
| M2-8:2 FTS | 13PF<br>OA | Ave | 1675390<br>1323008 | 1419334<br>1170256 | 1533540 | 1487565 | 1254651 | 2.40<br>2.40 | 2.40<br>2.40 | 2.40 | 2.40 | 2.40 |
| d3-NMeFOSAA | 13PF<br>OA | Ave | 3479311<br>3430778 | 3456007<br>3259183 | 3265971 | 3088740 | 3043182 | 2.50<br>2.50 | 2.50<br>2.50 | 2.50 | 2.50 | 2.50 |
| 13C2 PFUnA | 13PF<br>OA | Ave | 5199324<br>5062947 | 5260148<br>4768918 | 5283112 | 5190650 | 4942965 | 2.50<br>2.50 | 2.50<br>2.50 | 2.50 | 2.50 | 2.50 |
| d5-NEtFOSAA | 13PF<br>OA | Ave | 2280997<br>2162876 | 2277884<br>2007740 | 2347427 | 2228634 | 2127548 | 2.50<br>2.50 | 2.50<br>2.50 | 2.50 | 2.50 | 2.50 |
| d7-N-MeFOSE-M | 13PF<br>OA | Ave | 5649485<br>5236014 | 5539720<br>5127070 | 5453120 | 4958225 | 5063638 | 12.5<br>12.5 | 12.5<br>12.5 | 12.5 | 12.5 | 12.5 |
| d-N-MeFOSA-M | 13PF<br>OA | Ave | 1505895<br>1600165 | 1442000<br>1520689 | 1479722 | 1402993 | 1390439 | 2.50<br>2.50 | 2.50<br>2.50 | 2.50 | 2.50 | 2.50 |
| d9-N-EtFOSE-M | 13PF<br>OA | Ave | 5660827<br>5527700 | 5707198<br>5550151 | 5688046 | 5314215 | 5391350 | 12.5<br>12.5 | 12.5<br>12.5 | 12.5 | 12.5 | 12.5 |

FORM VI
LCMS BY ISOTOPIC DILUTION - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 460-217547-1 Analy Batch No.: 410935

SDG No.:

Instrument ID: A9 GC Column: Acquity ID: 2.1(mm) Heated Purge: (Y/N) N

Calibration Start Date: 09/10/2020 10:18 Calibration End Date: 09/10/2020 12:29 Calibration ID: 51814

| ANALYTE | IS REF | CURVE TYPE | RESPONSE | | | | | CONCENTRATION (NG/ML) | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | LVL 1<br>LVL 6 | LVL 2<br>LVL 7 | LVL 3 | LVL 4 | LVL 5 | LVL 1<br>LVL 6 | LVL 2<br>LVL 7 | LVL 3 | LVL 4 | LVL 5 |
| d-N-EtFOSA-M | 13PF<br>OA | Ave | 1554351<br>1680611 | 1516817<br>1558608 | 1511320 | 1480814 | 1437287 | 2.50<br>2.50 | 2.50<br>2.50 | 2.50 | 2.50 | 2.50 |
| 13C2 PFDoA | 13PF<br>OA | Ave | 5466137<br>4965995 | 5293603<br>4772733 | 4945538 | 4879307 | 4759594 | 2.50<br>2.50 | 2.50<br>2.50 | 2.50 | 2.50 | 2.50 |
| 13C2 PFTeDA | 13PF<br>OA | Ave | 3612854<br>3507700 | 3593219<br>3490257 | 3478825 | 3455387 | 3301033 | 2.50<br>2.50 | 2.50<br>2.50 | 2.50 | 2.50 | 2.50 |
| 13C2 PFHxDA | 13PF<br>OA | Ave | 2705504<br>2699505 | 2778903<br>2579666 | 2649042 | 2450268 | 2234345 | 2.50<br>2.50 | 2.50<br>2.50 | 2.50 | 2.50 | 2.50 |
| 13C8 PFOA | 13PF<br>OA | Ave | 5071767<br>4075755 | 5187915<br>5218033 | 5079092 | 4924358 | 4876993 | 2.45<br>2.45 | 2.45<br>2.45 | 2.45 | 2.45 | 2.45 |
| 13C8 PFOS | 13PF<br>OA | Ave | 1653033<br>1555416 | 1541260<br>1440919 | 1572962 | 1473644 | 1357043 | 2.39<br>2.39 | 2.39<br>2.39 | 2.39 | 2.39 | 2.39 |

Curve Type Legend:

Ave = Average ISTD
AveID = Average isotope dilution
L2ID = Linear 1/conc^2 IsoDil

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\A9\20200910-102999.b\2020.09.10_A9 _PFC_ICAL_A_016.d
Lims ID: IC L1
Client ID:
Sample Type: IC Calib Level: 1
Inject. Date: 10-Sep-2020 10:18:34 ALS Bottle#: 10 Worklist Smp#: 2
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Sample Info: CAL STD1_21
Misc. Info.: Plate: 1 Rack: 1
Operator ID: SACINSTRLCMS02 Instrument ID: A9
Sublist: chrom-PFAS_A9*sub16

Method: \\chromfs\Sacramento\ChromData\A9\20200910-102999.b\PFAS_A9.m
Limit Group: LC PFC ICAL
Last Update: 10-Sep-2020 13:14:04 Calib Date: 10-Sep-2020 12:29:20
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\A9\20200910-102999.b\2020.09.10_A9 _PFC_ICAL_AA_022.d

Column 1 : Det: EXP1
Process Host: CTX1016

First Level Reviewer: zibaa Date: 10-Sep-2020 10:37:58
Ratio Calibration: Average of Initial Calibration

| Signal | RT | EXP RT | DLT RT | REL RT | Response | Amount ng/ml | Ratio(Limits) | %Rec | S/N | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| D 1 13C4 PFBA | | | | | | | | | | |
| 217.00 > 172.00 | 1.900 | 1.901 | -0.001 | 0.561 | 8681635 | 2.47 | | 98.7 | 3375 | |
| 2 Perfluorobutanoic acid | | | | | | | | | | M |
| 212.90 > 169.00 | 1.908 | 1.904 | 0.004 | 1.004 | 69313 | 0.0229 | | 91.4 | 5.2 | M |
| D 4 13C5 PFPeA | | | | | | | | | | |
| 267.90 > 223.00 | 2.214 | 2.211 | 0.003 | 0.654 | 7365999 | 2.48 | | 99.3 | 3206 | |
| 3 Perfluoropentanoic acid | | | | | | | | | | M |
| 262.90 > 219.00 | 2.214 | 2.211 | 0.003 | 1.000 | 90133 | 0.0301 | | 120 | 7.6 | M |
| D 6 13C3 PFBS | | | | | | | | | | |
| 301.90 > 80.00 | 2.243 | 2.241 | 0.002 | 0.662 | 13758101 | 2.35 | | 101 | 2987 | |
| 5 Perfluorobutanesulfonic acid | | | | | | | | | | M |
| 298.90 > 80.00 | 2.243 | 2.244 | -0.001 | 1.000 | 130179 | 0.0221 | Target=3.10 | 99.8 | 11.6 | M |
| 298.90 > 99.00 | 2.243 | 2.244 | -0.001 | 1.000 | 40896 | | 3.18(1.55-4.65) | 99.8 | 11.4 | |
| D 8 M2-4:2 FTS | | | | | | | | | | |
| 329.00 > 81.00 | 2.536 | 2.533 | 0.003 | 0.749 | 1498962 | 2.58 | | 110 | 830 | |
| 9 1H,1H,2H,2H-perfluorohexanesulfo | | | | | | | | | | |
| 327.00 > 307.00 | 2.536 | 2.535 | 0.001 | 1.000 | 24055 | 0.0189 | | 81.1 | 146 | |
| D 10 13C2 PFHxA | | | | | | | | | | |
| 315.00 > 270.00 | 2.578 | 2.573 | 0.005 | 0.761 | 7048312 | 2.56 | | 102 | 3547 | |
| 11 Perfluorohexanoic acid | | | | | | | | | | M |
| 313.00 > 269.00 | 2.578 | 2.573 | 0.005 | 1.000 | 57793 | 0.0246 | Target=9.68 | 98.3 | 9.3 | M |
| 313.00 > 119.00 | 2.568 | 2.573 | -0.005 | 0.996 | 6073 | | 9.52(4.84-14.52) | 98.3 | 3.9 | |
| 12 Perfluoropentanesulfonic acid | | | | | | | | | | M |
| 349.00 > 80.00 | 2.589 | 2.587 | 0.002 | 1.154 | 50944 | 0.0214 | Target=2.01 | 91.4 | 14.2 | M |
| 349.00 > 99.00 | 2.589 | 2.587 | 0.002 | 1.154 | 23693 | | 2.15(1.00-3.01) | 91.4 | 29.2 | |
| 14 Perfluoro(2-propoxypropanoic) ac | | | | | | | | | | |
| 285.00 > 169.00 | 2.696 | 2.691 | 0.005 | 1.000 | 18983 | 0.0252 | | 101 | 112 | |

| Signal | RT | EXP RT | DLT RT | REL RT | Response | Amount ng/ml | Ratio(Limits) | %Rec | S/N | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| D 13 13C3 HFPO-DA | | | | | | | | | | |
| 287.00 > 169.00 | 2.696 | 2.692 | 0.004 | 0.796 | 4764722 | 2.52 | | 101 | 4656 | |
| D 15 13C4 PFHpA | | | | | | | | | | |
| 367.00 > 322.00 | 2.968 | 2.965 | 0.003 | 0.877 | 6910814 | 2.57 | | 103 | 4048 | |
| 18 Perfluoroheptanoic acid | | | | | | | | | | M |
| 363.00 > 319.00 | 2.974 | 2.966 | 0.008 | 1.002 | 77317 | 0.0252 | Target=3.74 | 101 | 14.6 | M |
| 363.00 > 169.00 | 2.968 | 2.966 | 0.002 | 1.000 | 20838 | | 3.71(1.87-5.61) | 101 | 19.7 | |
| D 17 18O2 PFHxS | | | | | | | | | | |
| 403.00 > 84.00 | 2.974 | 2.969 | 0.005 | 0.878 | 6681612 | 2.38 | | 101 | 1956 | |
| 16 Perfluorohexanesulfonic acid | | | | | | | | | | M |
| 399.00 > 80.00 | 2.980 | 2.971 | 0.009 | 1.002 | 86565 | 0.0260 | Target=3.29 | 114 | 26.2 | M |
| 399.00 > 99.00 | 2.980 | 2.971 | 0.009 | 1.002 | 27606 | | 3.14(1.65-4.94) | 114 | 26.6 | M |
| 19 DONA | | | | | | | | | | |
| 377.00 > 251.00 | 3.024 | 3.017 | 0.007 | 0.804 | 126078 | 0.0238 | Target=1.80 | 101 | 266 | |
| 377.00 > 85.00 | 3.017 | 3.017 | 0.0 | 0.802 | 62980 | | 2.00(0.90-2.70) | 101 | 153 | |
| D 20 M2-6:2 FTS | | | | | | | | | | |
| 429.00 > 81.00 | 3.360 | 3.352 | 0.008 | 0.992 | 1251075 | 2.49 | | 105 | 1240 | |
| 22 1H,1H,2H,2H-perfluorooctanesulfo | | | | | | | | | | |
| 427.00 > 407.00 | 3.360 | 3.353 | 0.007 | 1.000 | 21509 | 0.0265 | | 112 | 39.6 | |
| $ 21 13C8 PFOA | | | | | | | | | | |
| 421.00 > 376.00 | 3.368 | 3.362 | 0.006 | 0.995 | 5071767 | 2.41 | | 98.3 | 5663 | |
| 23 Perfluoroheptanesulfonic acid | | | | | | | | | | M |
| 449.00 > 80.00 | 3.376 | 3.369 | 0.007 | 0.898 | 59882 | 0.0221 | Target=3.65 | 93.0 | 21.1 | M |
| 449.00 > 99.00 | 3.376 | 3.369 | 0.007 | 0.898 | 16337 | | 3.67(1.83-5.48) | 93.0 | 47.8 | |
| 24 Perfluorooctanoic acid | | | | | | | | | | M |
| 413.00 > 369.00 | 3.376 | 3.375 | 0.001 | 0.997 | 84521 | 0.0303 | Target=2.37 | 121 | 21.3 | M |
| 413.00 > 169.00 | 3.386 | 3.375 | 0.011 | 1.000 | 34639 | | 2.44(1.19-3.56) | 121 | 47.9 | |
| * 25 13C2 PFOA | | | | | | | | | | |
| 415.00 > 370.00 | 3.386 | 3.376 | 0.010 | | 6515967 | 2.50 | | | 4301 | |
| D 26 13C4 PFOA | | | | | | | | | | |
| 417.00 > 372.00 | 3.386 | 3.376 | 0.010 | 1.000 | 6457425 | 2.57 | | 103 | 3633 | |
| $ 27 13C8 PFOS | | | | | | | | | | |
| 507.00 > 99.00 | 3.753 | 3.748 | 0.005 | 1.108 | 1653033 | 2.49 | | 104 | 3034 | |
| 28 Perfluorooctanesulfonic acid | | | | | | | | | | M |
| 499.00 > 80.00 | 3.762 | 3.756 | 0.006 | 1.000 | 73172 | 0.0241 | Target=4.12 | 104 | 11.3 | M |
| 499.00 > 99.00 | 3.762 | 3.756 | 0.006 | 1.000 | 16625 | | 4.40(2.06-6.17) | 104 | 36.5 | M |
| D 31 13C4 PFOS | | | | | | | | | | |
| 503.00 > 80.00 | 3.762 | 3.756 | 0.006 | 1.111 | 6991246 | 2.39 | | 100.0 | 1542 | |
| D 29 13C5 PFNA | | | | | | | | | | |
| 468.00 > 423.00 | 3.780 | 3.767 | 0.013 | 1.116 | 5324119 | 2.44 | | 97.6 | 2881 | |
| 30 Perfluorononanoic acid | | | | | | | | | | |
| 463.00 > 419.00 | 3.780 | 3.770 | 0.010 | 1.000 | 52926 | 0.0250 | Target=4.21 | 99.8 | 42.8 | |
| 463.00 > 169.00 | 3.780 | 3.770 | 0.010 | 1.000 | 12883 | | 4.11(2.11-6.32) | 99.8 | 20.3 | |
| 32 9-Chlorohexadecafluoro-3-oxanona | | | | | | | | | | |
| 531.00 > 351.00 | 3.965 | 3.956 | 0.009 | 1.054 | 41537 | 0.0226 | | 97.1 | 202 | |
| D 36 13C8 FOSA | | | | | | | | | | |
| 506.00 > 78.00 | 4.091 | 4.086 | 0.005 | 1.208 | 3616177 | 2.63 | | 105 | 3559 | |

| Signal | RT | EXP RT | DLT RT | REL RT | Response | Amount ng/ml | Ratio(Limits) | %Rec | S/N | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| 34 Perfluorooctanesulfonamide | | | | | | | | | | |
| 498.00 > 78.00 | 4.091 | 4.086 | 0.005 | 1.000 | 100960 | 0.0251 | | 100 | 220 | |
| 35 Perfluorononanesulfonic acid | | | | | | | | | | M |
| 549.00 > 80.00 | 4.118 | 4.106 | 0.012 | 1.095 | 50392 | 0.0227 | Target=5.56 | 94.6 | 32.1 | |
| 549.00 > 99.00 | 4.118 | 4.106 | 0.012 | 1.095 | 9023 | | 5.58(2.78-8.34) | 94.6 | 30.6 | M |
| D 33 13C2 PFDA | | | | | | | | | | |
| 515.00 > 470.00 | 4.135 | 4.130 | 0.005 | 1.221 | 7296508 | 2.63 | | 105 | 5783 | |
| 38 Perfluorodecanoic acid | | | | | | | | | | |
| 513.00 > 469.00 | 4.144 | 4.132 | 0.012 | 1.002 | 69860 | 0.0240 | Target=14.33 | 95.9 | 48.5 | |
| 513.00 > 169.00 | 4.153 | 4.132 | 0.021 | 1.004 | 4344 | | 16.08(7.16-21.49) | 95.9 | 12.9 | |
| D 37 M2-8:2 FTS | | | | | | | | | | |
| 529.00 > 81.00 | 4.144 | 4.133 | 0.011 | 1.224 | 1675390 | 2.73 | | 114 | 1219 | |
| 39 1H,1H,2H,2H-perfluorodecanesulfo | | | | | | | | | | M |
| 527.00 > 507.00 | 4.153 | 4.135 | 0.018 | 1.002 | 20267 | 0.0225 | | 93.9 | 202 | M |
| D 41 d3-NMeFOSAA | | | | | | | | | | |
| 573.00 > 419.00 | 4.307 | 4.295 | 0.011 | 1.272 | 3479311 | 2.53 | | 101 | 3340 | |
| 40 N-methylperfluorooctanesulfonami | | | | | | | | | | |
| 570.00 > 419.00 | 4.307 | 4.299 | 0.007 | 1.000 | 21721 | 0.0206 | | 82.2 | 1.9 | |
| 42 Perfluorodecanesulfonic acid | | | | | | | | | | |
| 599.00 > 80.00 | 4.443 | 4.427 | 0.016 | 1.181 | 58175 | 0.0234 | Target=4.29 | 97.2 | 24.9 | |
| 599.00 > 99.00 | 4.434 | 4.427 | 0.007 | 1.179 | 12486 | | 4.66(2.15-6.44) | 97.2 | 45.6 | |
| D 46 13C2 PFUnA | | | | | | | | | | |
| 565.00 > 520.00 | 4.469 | 4.455 | 0.013 | 1.320 | 5199324 | 2.43 | | 97.3 | 5111 | |
| 43 Perfluoroundecanoic acid | | | | | | | | | | M |
| 563.00 > 519.00 | 4.469 | 4.455 | 0.013 | 1.000 | 32671 | 0.0226 | Target=6.74 | 90.3 | 48.4 | M |
| 563.00 > 169.00 | 4.469 | 4.455 | 0.013 | 1.000 | 3844 | | 8.50(3.37-10.11) | 90.3 | 9.5 | M |
| D 45 d5-NEtFOSAA | | | | | | | | | | |
| 589.00 > 419.00 | 4.469 | 4.460 | 0.008 | 1.320 | 2280997 | 2.47 | | 98.9 | 2230 | |
| 44 N-ethylperfluorooctanesulfonamid | | | | | | | | | | M |
| 584.00 > 419.00 | 4.477 | 4.467 | 0.010 | 1.002 | 17973 | 0.0243 | | 97.1 | 146 | M |
| D 47 d7-N-MeFOSE-M | | | | | | | | | | |
| 623.00 > 59.00 | 4.546 | 4.546 | 0.0 | 1.342 | 5649485 | 12.8 | | 102 | 4827 | |
| 48 2-(N-methylperfluoro-1-octanesul | | | | | | | | | | |
| 616.00 > 59.00 | 4.563 | 4.557 | 0.006 | 1.004 | 12829 | 0.0272 | | 109 | 26.6 | |
| D 49 d-N-MeFOSA-M | | | | | | | | | | |
| 515.00 > 169.00 | 4.563 | 4.565 | -0.002 | 1.348 | 1505895 | 2.43 | | 97.2 | 220 | |
| 50 NMeFOSA | | | | | | | | | | |
| 512.00 > 169.00 | 4.572 | 4.569 | 0.003 | 1.002 | 15545 | 0.0247 | | 99.0 | 79.3 | |
| 51 11-Chloroeicosafluoro-3-oxaundec | | | | | | | | | | M |
| 631.00 > 451.00 | 4.599 | 4.588 | 0.011 | 1.222 | 41091 | 0.0190 | | 80.6 | 271 | M |
| D 53 d9-N-EtFOSE-M | | | | | | | | | | |
| 639.00 > 59.00 | 4.721 | 4.718 | 0.003 | 1.394 | 5660827 | 12.2 | | 97.3 | 5552 | |
| 54 2-(N-ethylperfluoro-1-octanesulf | | | | | | | | | | |
| 630.00 > 59.00 | 4.730 | 4.731 | -0.001 | 1.002 | 11732 | 0.0261 | | 104 | 29.7 | |
| 52 Perfluorododecanoic acid | | | | | | | | | | M |
| 613.00 > 569.00 | 4.763 | 4.747 | 0.016 | 1.002 | 45119 | 0.0224 | Target=6.67 | 89.8 | 64.7 | M |
| 613.00 > 169.00 | 4.763 | 4.747 | 0.016 | 1.002 | 7832 | | 5.76(3.34-10.01) | 89.8 | 62.8 | |

| Signal | RT | EXP RT | DLT RT | REL RT | Response | Amount ng/ml | Ratio(Limits) | %Rec | S/N | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| D 56 13C2 PFDoA | | | | | | | | | | |
| 615.00 > 570.00 | 4.756 | 4.747 | 0.009 | 1.405 | 5466137 | 2.60 | | 104 | 5032 | |
| D 58 d-N-EtFOSA-M | | | | | | | | | | |
| 531.00 > 169.00 | 4.739 | 4.741 | -0.002 | 1.400 | 1554351 | 2.42 | | 96.6 | 1048 | |
| 57 N-ethylperfluoro-1-octanesulfona | | | | | | | | | | |
| 526.00 > 169.00 | 4.748 | 4.749 | -0.001 | 1.002 | 15363 | 0.0248 | | 99.3 | 61.9 | |
| 55 1H,1H,2H,2H-perfluorododecanesul | | | | | | | | | | |
| 627.00 > 607.00 | 4.778 | 4.766 | 0.012 | 1.153 | 12715 | 0.0221 | | 91.8 | 223 | |
| 59 Perfluorododecanesulfonic acid ( | | | | | | | | | | |
| 699.00 > 80.00 | 4.994 | 4.978 | 0.016 | 1.327 | 7783 | 0.0210 | Target=1.02 | 86.7 | 13.3 | |
| 699.00 > 99.00 | 4.994 | 4.978 | 0.016 | 1.327 | 8598 | | 0.91(0.51-1.53) | 86.7 | 68.2 | |
| 60 Perfluorotridecanoic acid | | | | | | | | | | M |
| 663.00 > 619.00 | 5.029 | 5.013 | 0.016 | 1.057 | 36800 | 0.0232 | Target=4.80 | 92.6 | 144 | M |
| 663.00 > 169.00 | 5.029 | 5.013 | 0.016 | 1.057 | 7515 | | 4.90(2.40-7.20) | 92.6 | 46.5 | |
| D 62 13C2 PFTeDA | | | | | | | | | | |
| 715.00 > 670.00 | 5.276 | 5.258 | 0.018 | 1.558 | 3612854 | 2.47 | | 98.8 | 5115 | |
| 61 Perfluorotetradecanoic acid | | | | | | | | | | |
| 713.00 > 169.00 | 5.276 | 5.259 | 0.017 | 1.000 | 7595 | 0.0298 | Target=1.37 | 119 | 83.1 | |
| 713.00 > 219.00 | 5.285 | 5.259 | 0.026 | 1.002 | 5204 | | 1.46(0.69-2.06) | 119 | 42.9 | |
| D 63 13C2 PFHxDA | | | | | | | | | | |
| 815.00 > 770.00 | 5.726 | 5.703 | 0.023 | 1.691 | 2705504 | 2.50 | | 100 | 6854 | |
| 64 Perfluorohexadecanoic acid | | | | | | | | | | M |
| 813.00 > 769.00 | 5.726 | 5.705 | 0.021 | 1.000 | 47498 | 0.0261 | Target=4.63 | 104 | 118 | M |
| 813.00 > 169.00 | 5.726 | 5.705 | 0.021 | 1.000 | 9855 | | 4.82(2.32-6.95) | 104 | 111 | |
| 65 Perfluorooctadecanoic acid | | | | | | | | | | M |
| 913.00 > 869.00 | 6.173 | 6.139 | 0.034 | 1.078 | 18658 | 0.0231 | Target=4.01 | 92.2 | 90.5 | M |
| 913.00 > 169.00 | 6.173 | 6.139 | 0.034 | 1.078 | 5090 | | 3.67(2.01-6.02) | 92.2 | 53.6 | |

## QC Flag Legend

Review Flags

M - Manually Integrated

## Reagents:

LCPFC_LL1_00021 Amount Added: 1.00 Units: mL

Report Date: 10-Sep-2020 13:14:08 Chrom Revision: 2.3 09-Sep-2020 15:12:58

Eurofins TestAmerica, Sacramento

Data File: \\chromfs\Sacramento\ChromData\A9\20200910-102999.b\2020.09.10_A9 _PFC_ICAL_A_016.d

Injection Date: 10-Sep-2020 10:18:34 Instrument ID: A9

Lims ID: IC L1

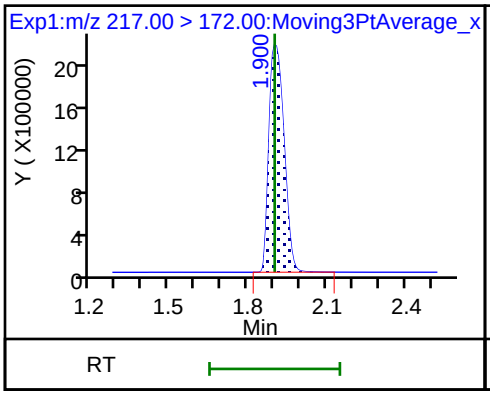
Client ID:

Operator ID: SACINSTRLCMS02 ALS Bottle#: 10 Worklist Smp#: 2

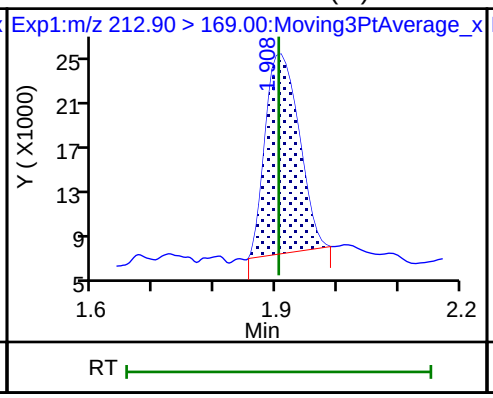
Injection Vol: 20.0 ul Dil. Factor: 1.0000

Method: PFAS_A9 Limit Group: LC PFC ICAL

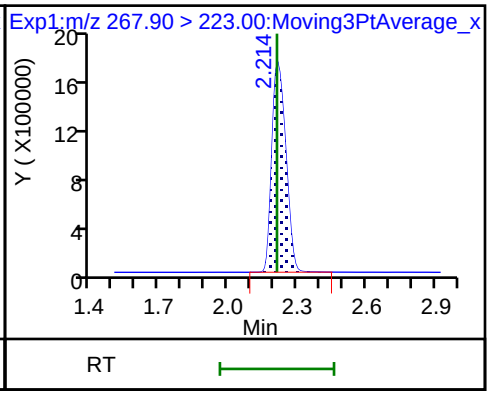
D 1 13C4 PFBA



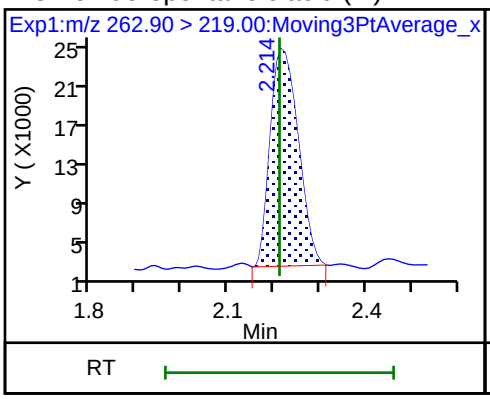

2 Perfluorobutanoic acid (M)



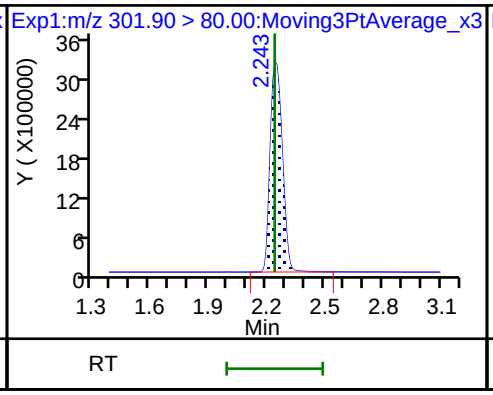

D 4 13C5 PFPeA



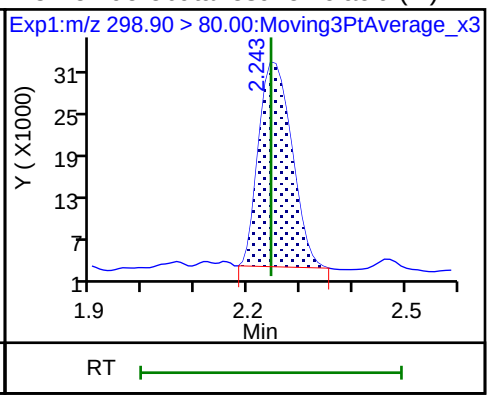

3 Perfluoropentanoic acid (M)



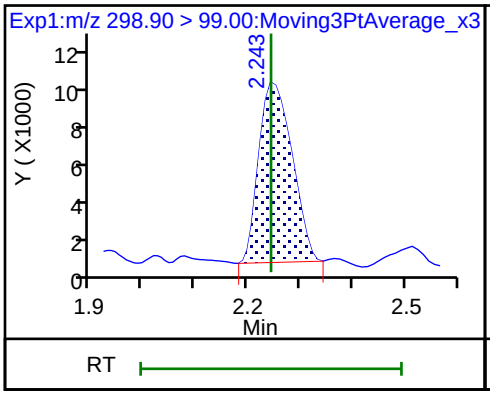

D 6 13C3 PFBS



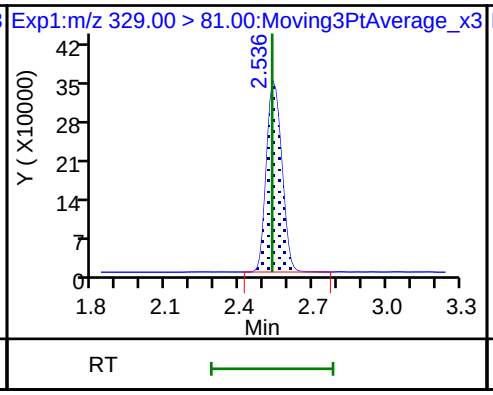

5 Perfluorobutanesulfonic acid (M)



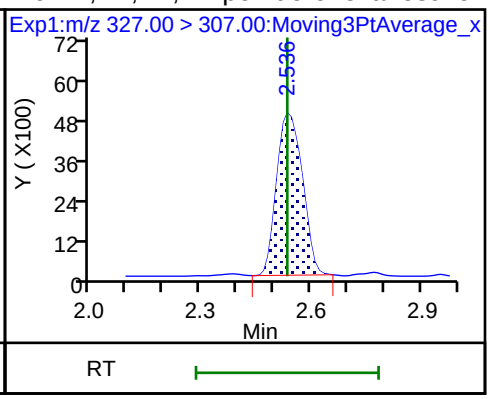

5 Perfluorobutanesulfonic acid



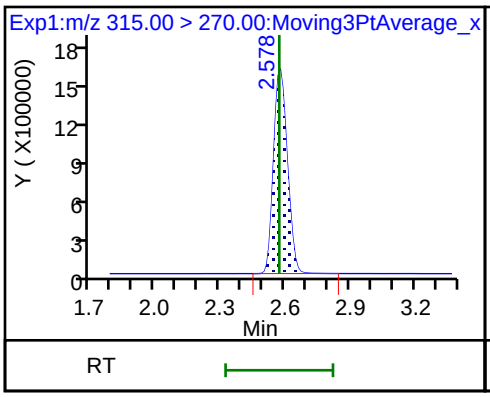

D 8 M2-4:2 FTS



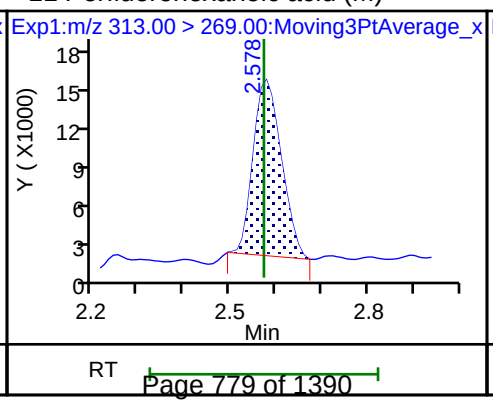

9 1H,1H,2H,2H-perfluorohexanesulfo



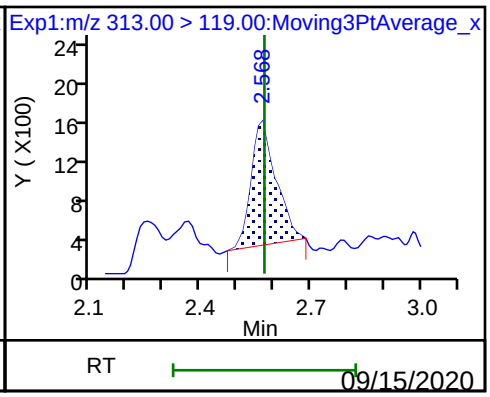

D 10 13C2 PFHxA



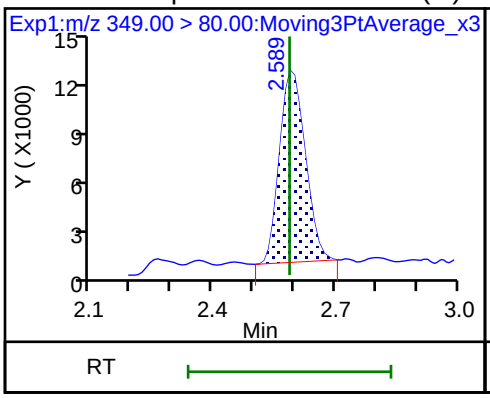

11 Perfluorohexanoic acid (M)



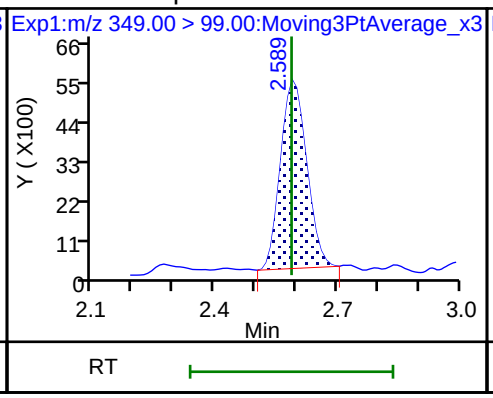

11 Perfluorohexanoic acid



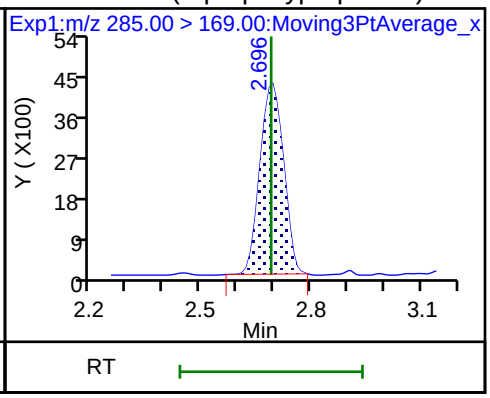
12 Perfluoropentanesulfonic acid (M)



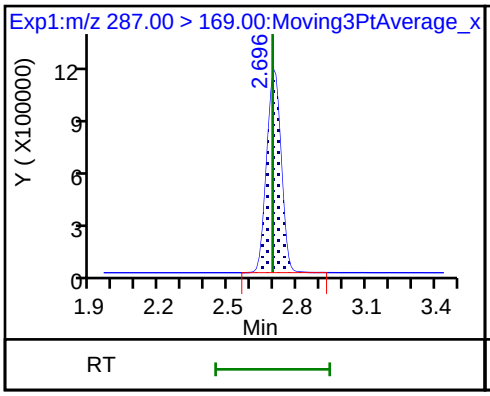

12 Perfluoropentanesulfonic acid



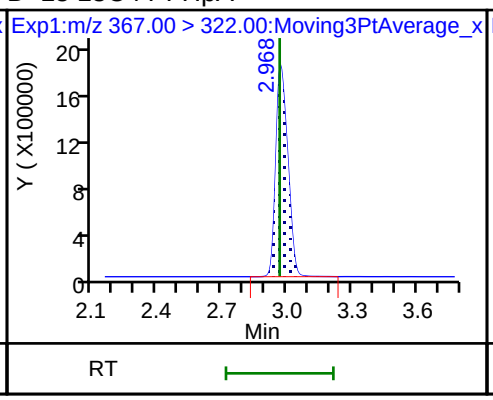

14 Perfluoro(2-propoxypropanoic) ac



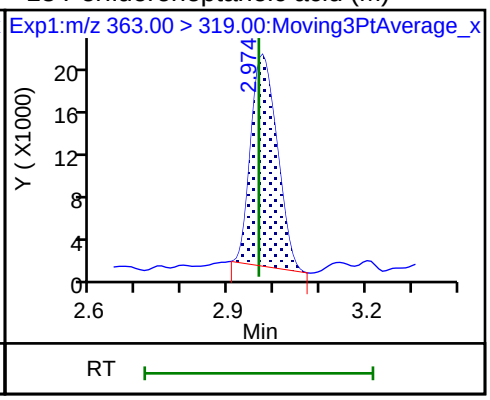

D 13 13C3 HFPO-DA



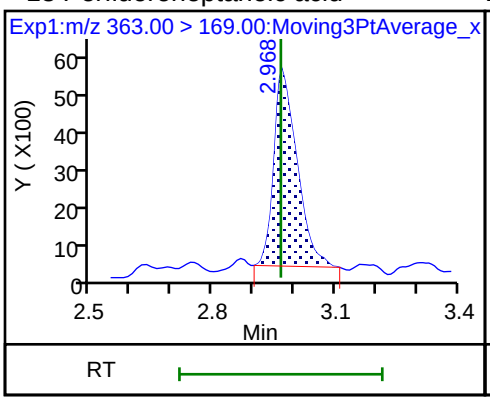

D 15 13C4 PFHpA



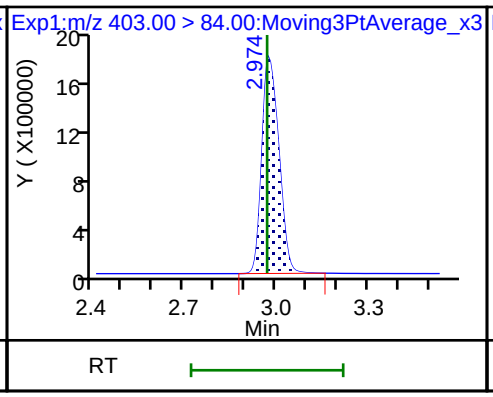

18 Perfluoroheptanoic acid (M)



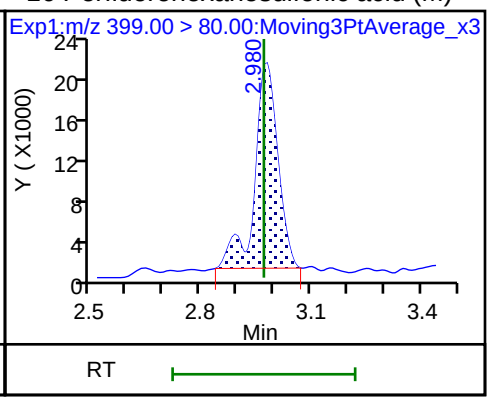

18 Perfluoroheptanoic acid



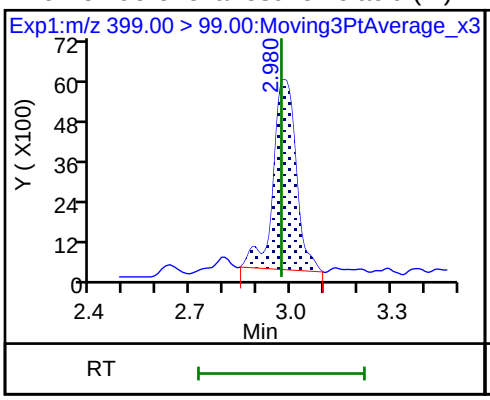

D 17 18O2 PFHxS



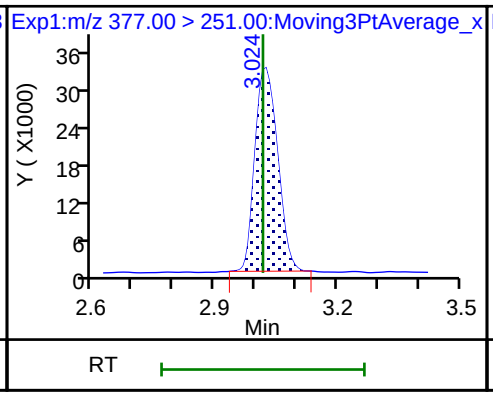

16 Perfluorohexanesulfonic acid (M)



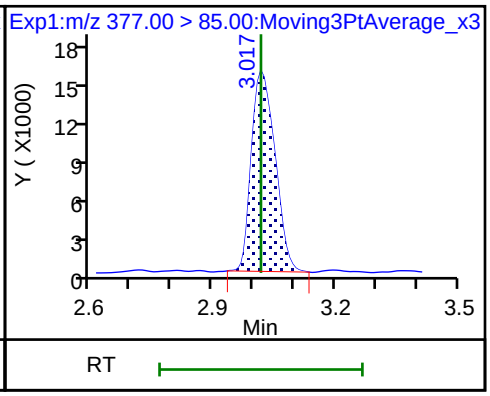

16 Perfluorohexanesulfonic acid (M)



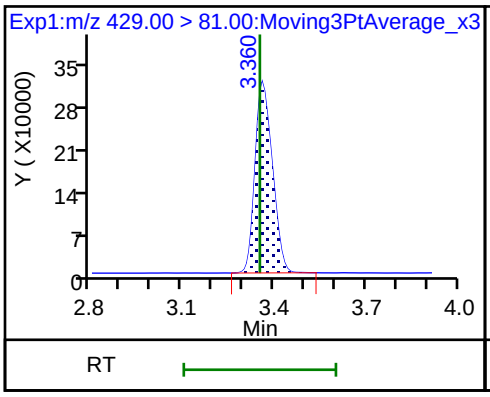

19 DONA



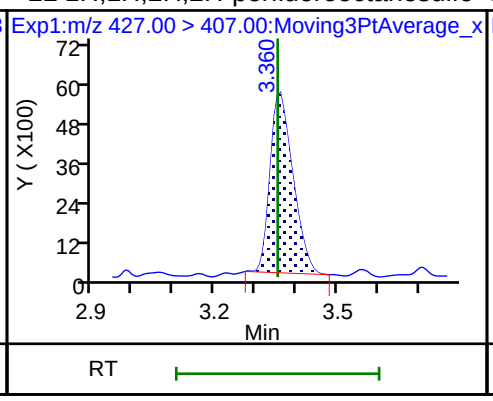

19 DONA



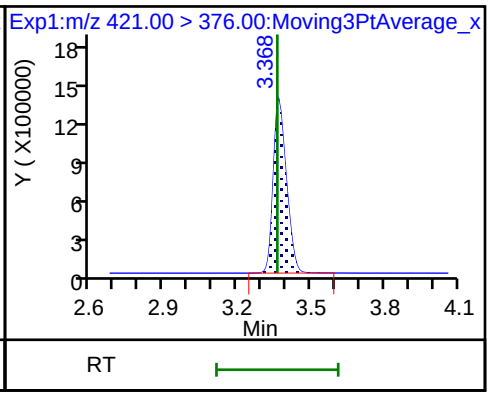
D 20 M2-6:2 FTS



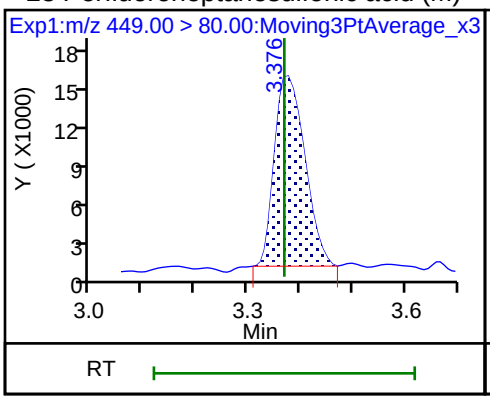

22 1H,1H,2H,2H-perfluorooctanesulfo



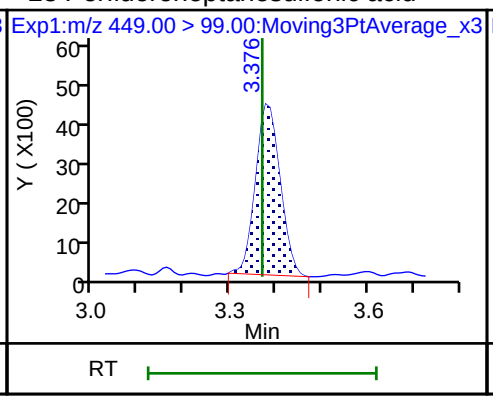

$ 21 13C8 PFOA



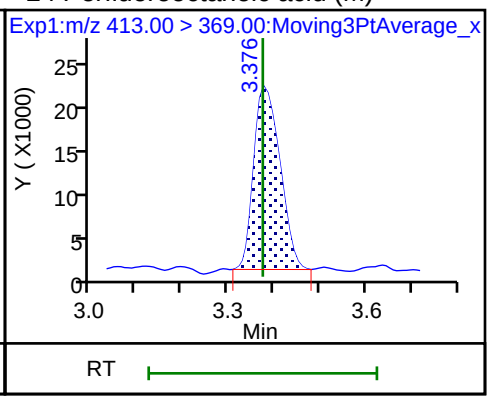

23 Perfluoroheptanesulfonic acid (M)



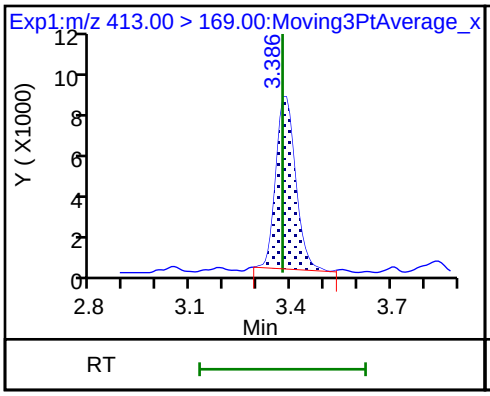

23 Perfluoroheptanesulfonic acid



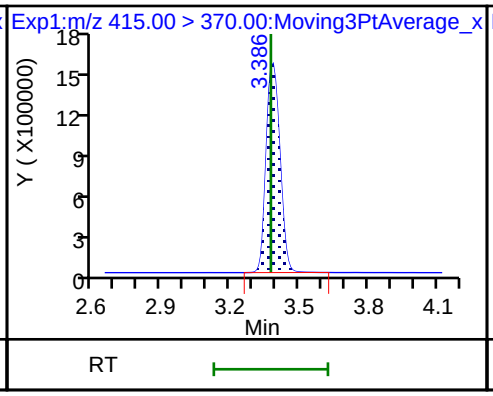

24 Perfluorooctanoic acid (M)



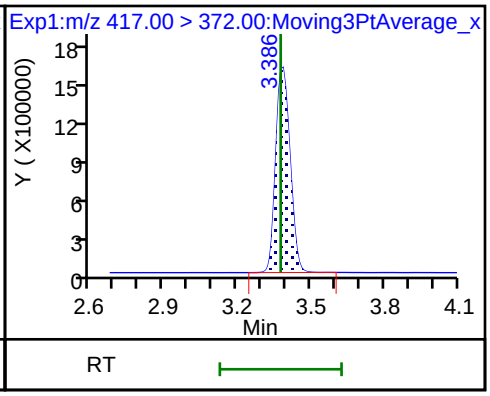

24 Perfluorooctanoic acid



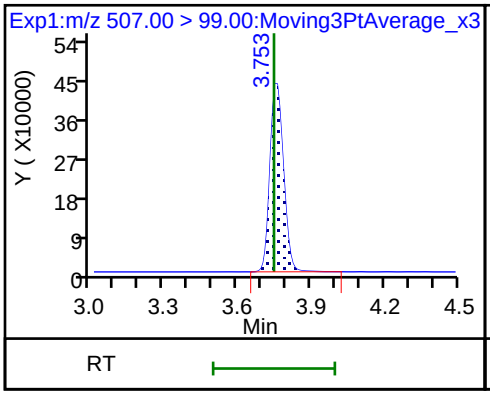

* 25 13C2 PFOA



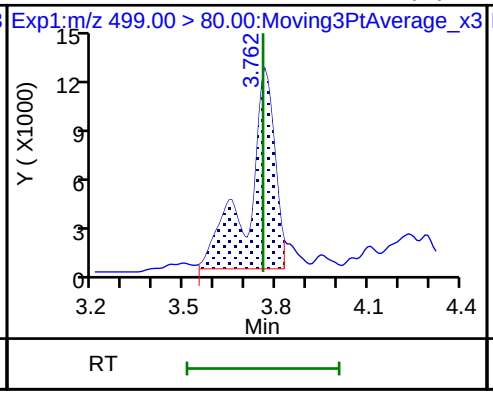

D 26 13C4 PFOA



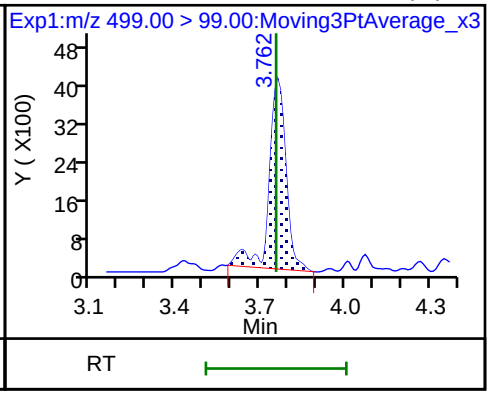

$ 27 13C8 PFOS



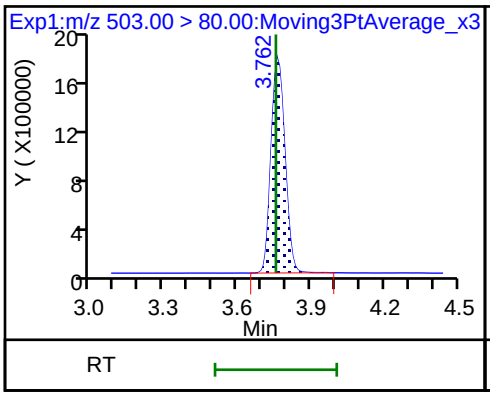

28 Perfluorooctanesulfonic acid (M)



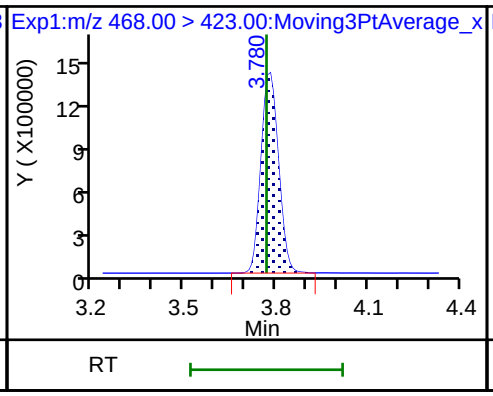

28 Perfluorooctanesulfonic acid (M)



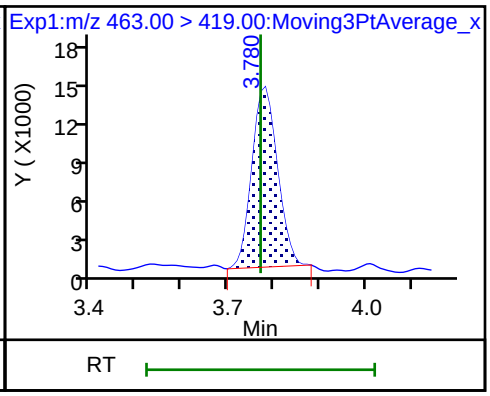
D 31 13C4 PFOS



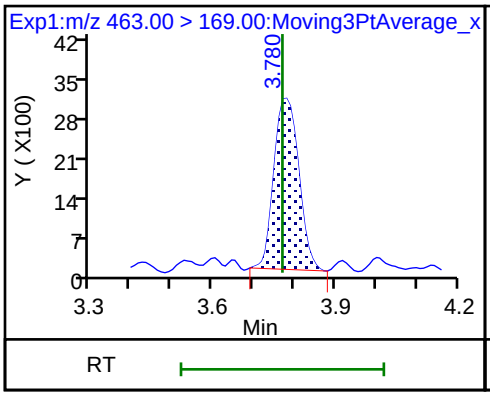

D 29 13C5 PFNA



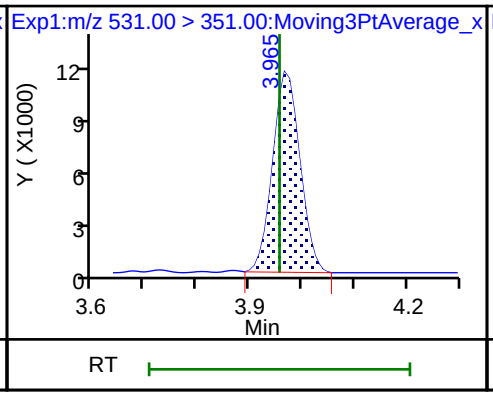

30 Perfluorononanoic acid



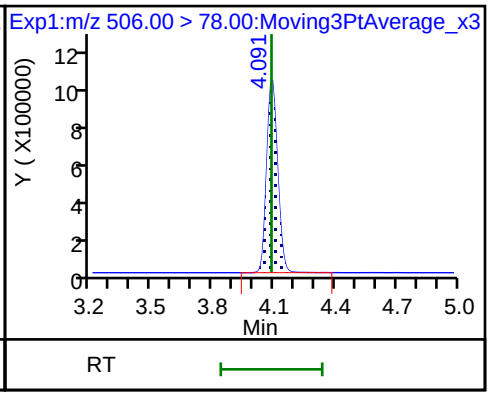

30 Perfluorononanoic acid



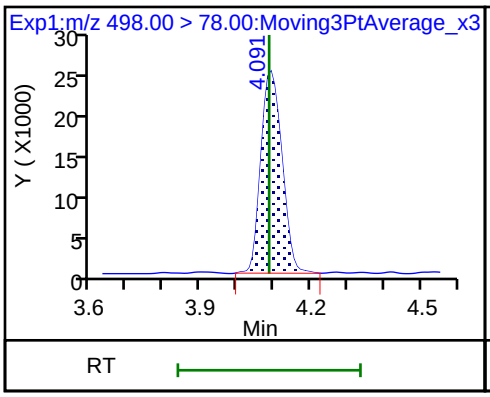

32 9-Chlorohexadecafluoro-3-oxanona



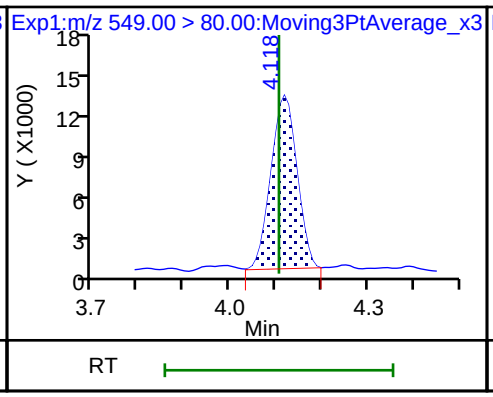

D 36 13C8 FOSA



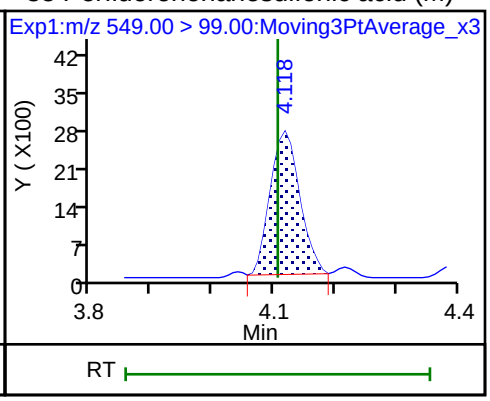

34 Perfluorooctanesulfonamide



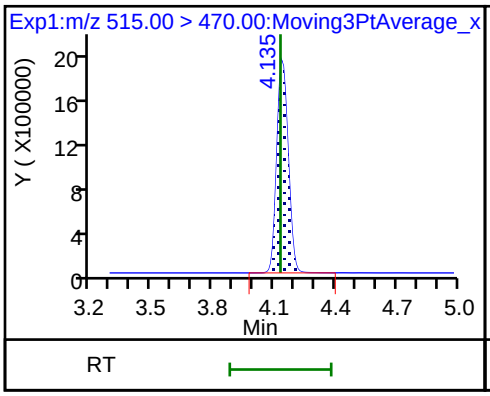

35 Perfluorononanesulfonic acid



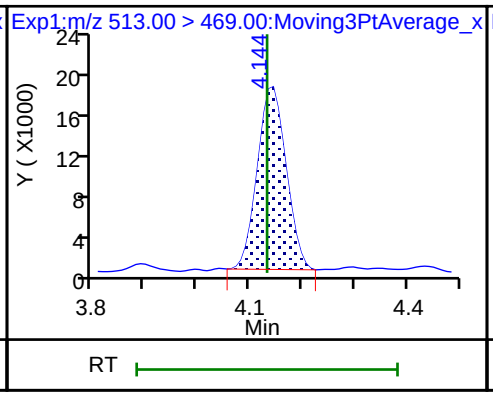

35 Perfluorononanesulfonic acid (M)



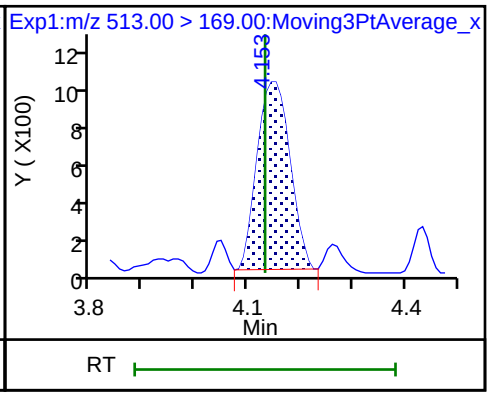

D 33 13C2 PFDA



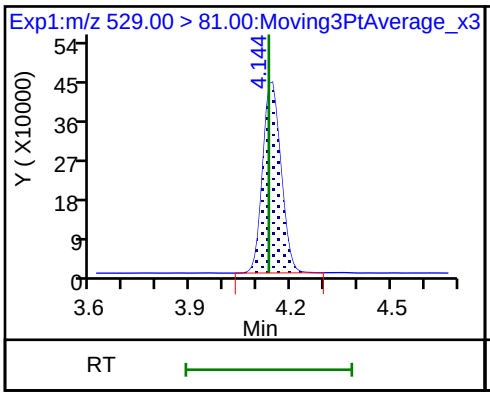

38 Perfluorodecanoic acid



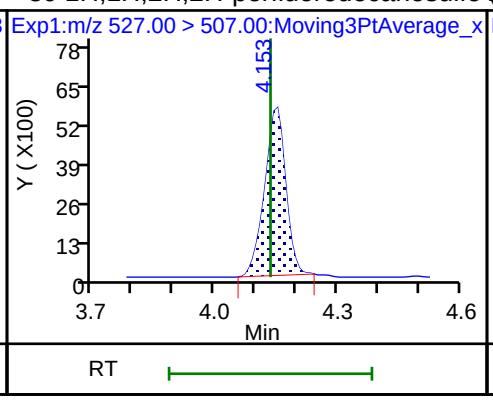

38 Perfluorodecanoic acid



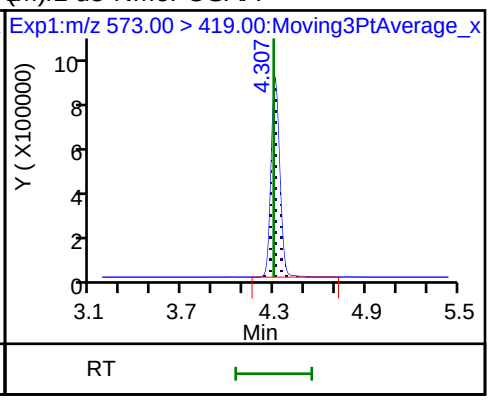
D 37 M2-8:2 FTS



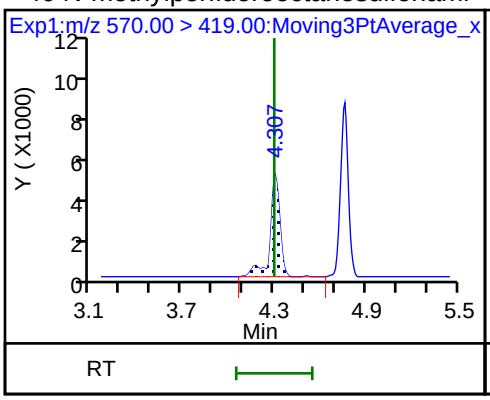

39 1H,1H,2H,2H-perfluorodecanesulfo (M)



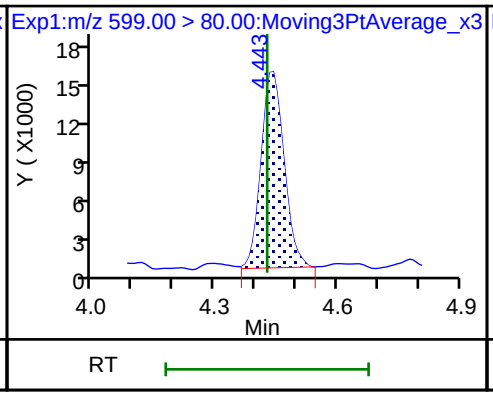

D 41 d3-NMeFOSAA



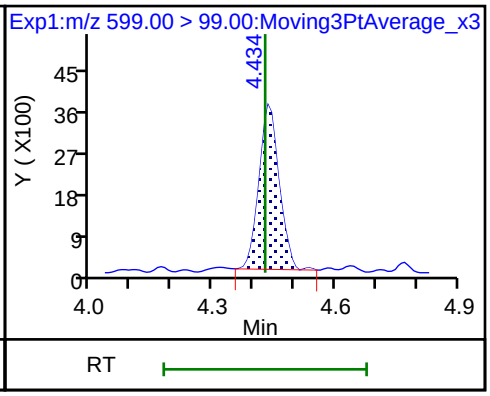

40 N-methylperfluorooctanesulfonami



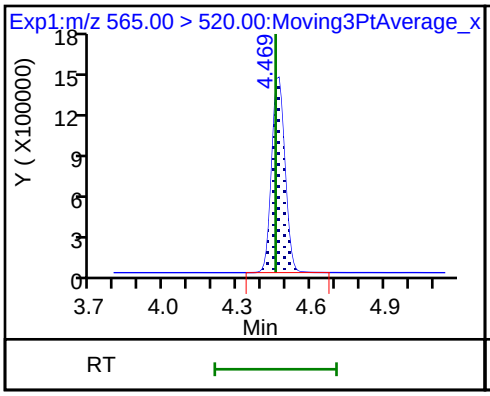

42 Perfluorodecanesulfonic acid



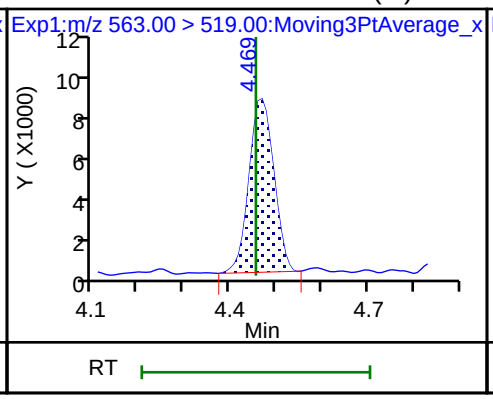

42 Perfluorodecanesulfonic acid



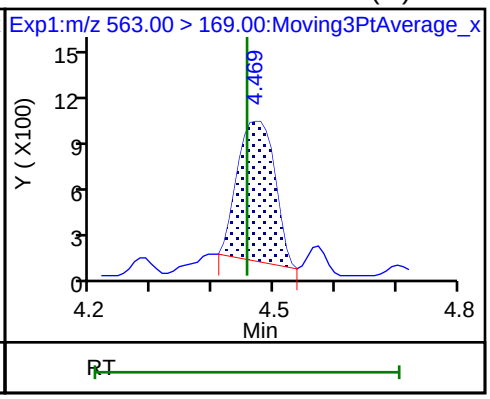

D 46 13C2 PFUnA



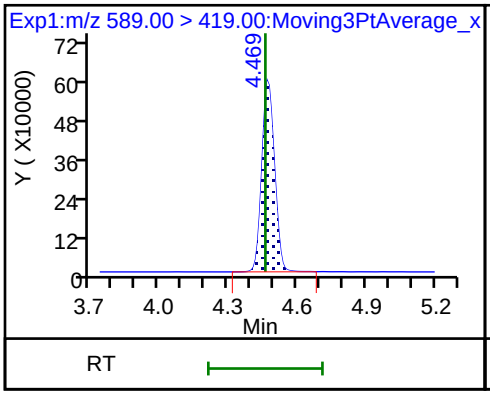

43 Perfluoroundecanoic acid (M)



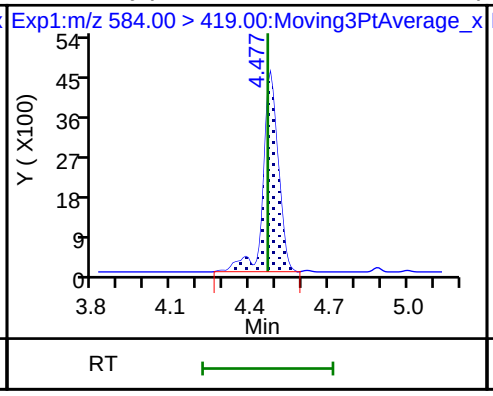

43 Perfluoroundecanoic acid (M)



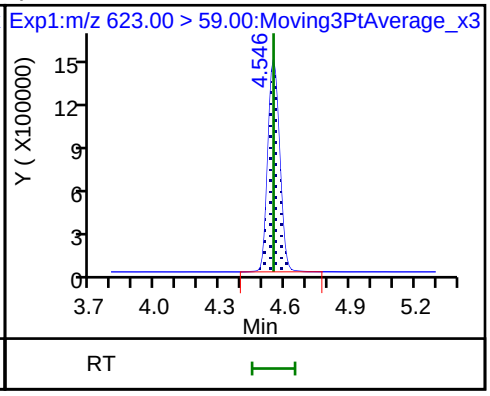

D 45 d5-NEtFOSAA



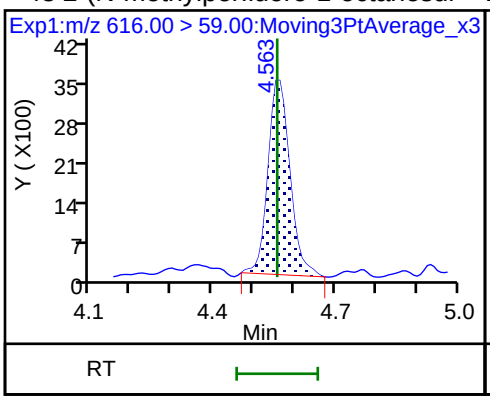

44 N-ethylperfluorooctanesulfonamid (M)



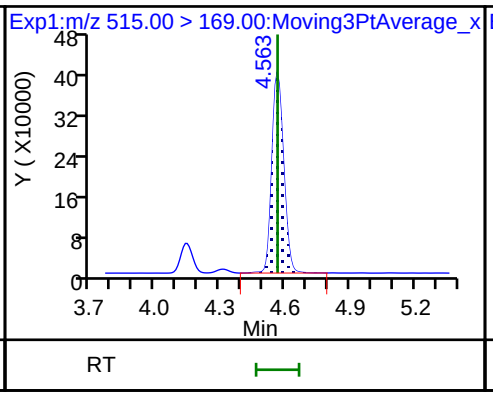

D 47 d7-N-MeFOSE-M



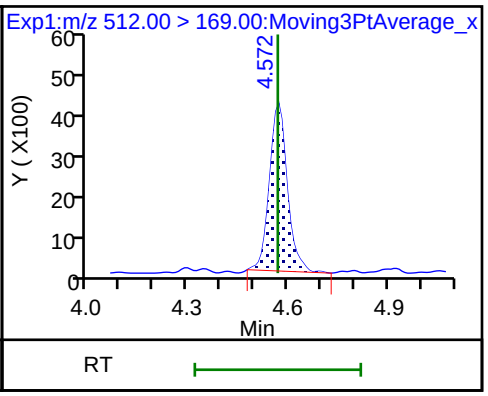
48 2-(N-methylperfluoro-1-octanesul



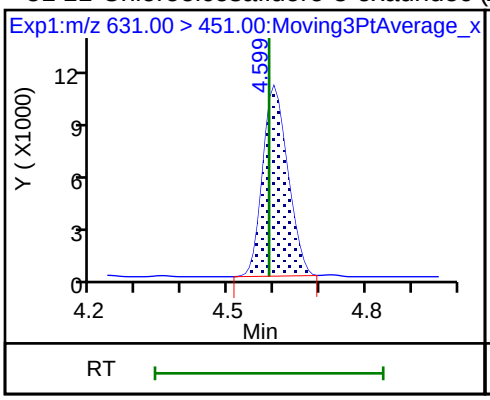

D 49 d-N-MeFOSA-M



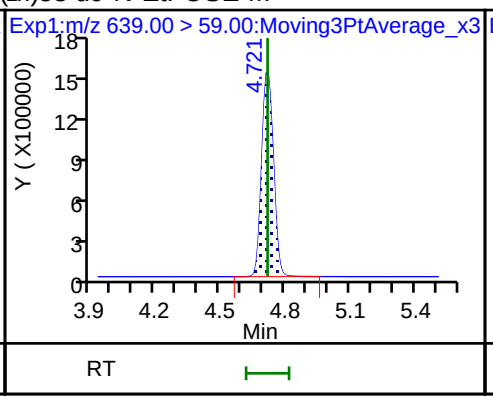

50 NMeFOSA



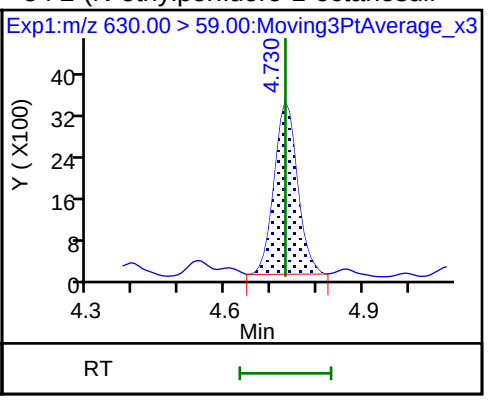

51 11-Chloroeicosafluoro-3-oxaundec (M)



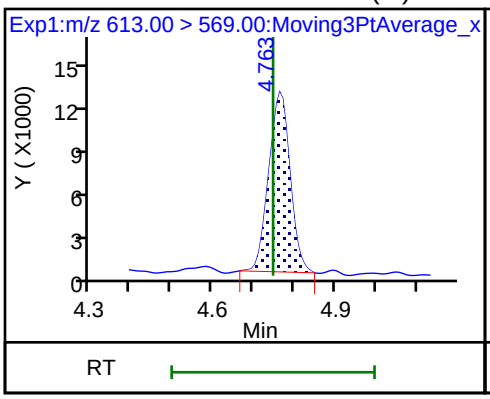

D 53 d9-N-EtFOSE-M



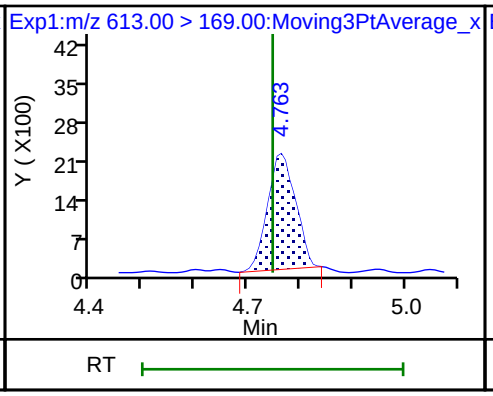

54 2-(N-ethylperfluoro-1-octanesulf



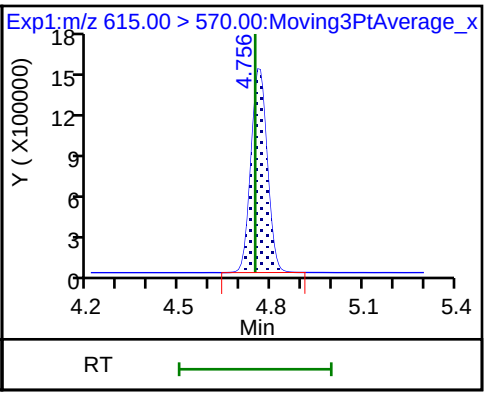

52 Perfluorododecanoic acid (M)



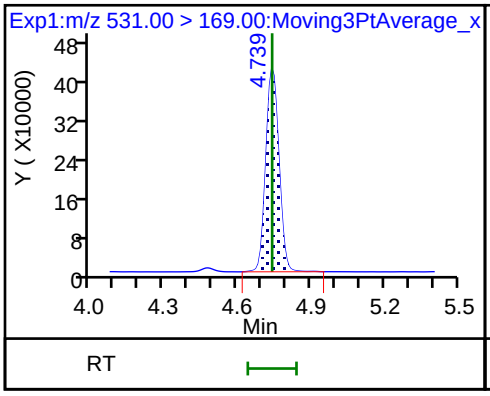

52 Perfluorododecanoic acid



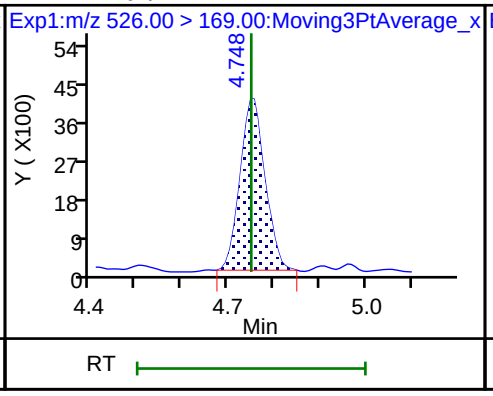

D 56 13C2 PFDoA



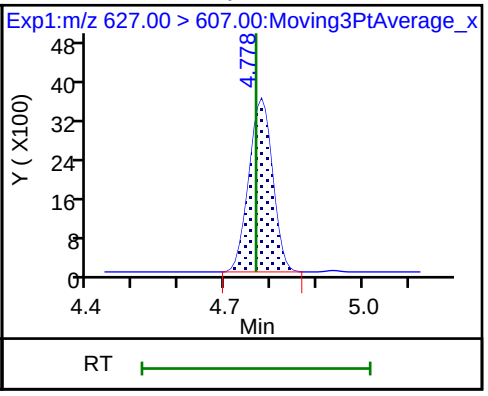

D 58 d-N-EtFOSA-M



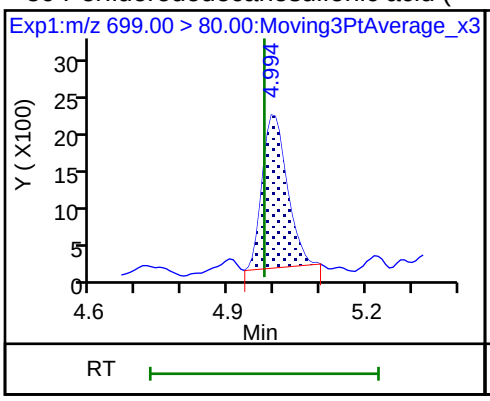

57 N-ethylperfluoro-1-octanesulfona



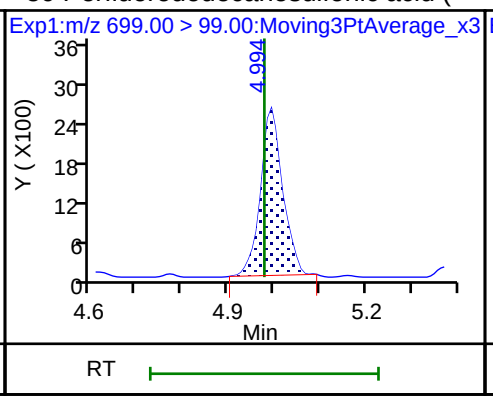

55 1H,1H,2H,2H-perfluorododecanesul



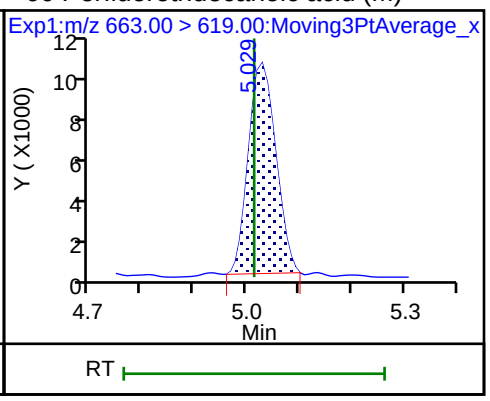
59 Perfluorododecanesulfonic acid (



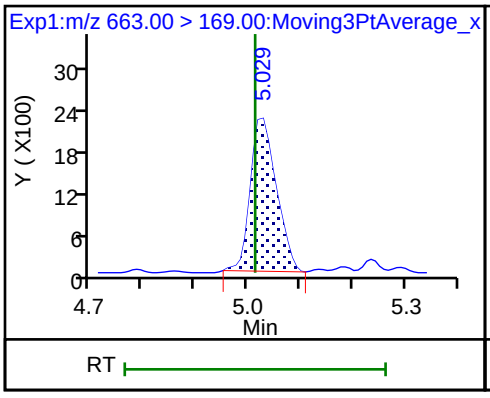

59 Perfluorododecanesulfonic acid (



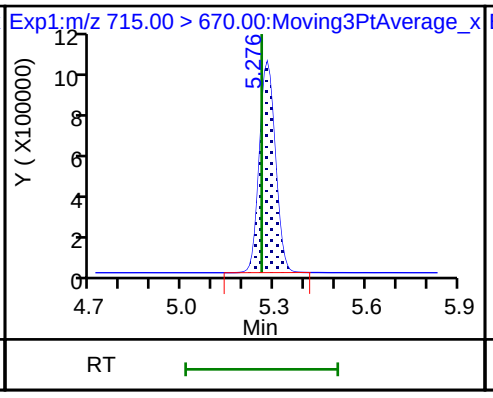

60 Perfluorotridecanoic acid (M)



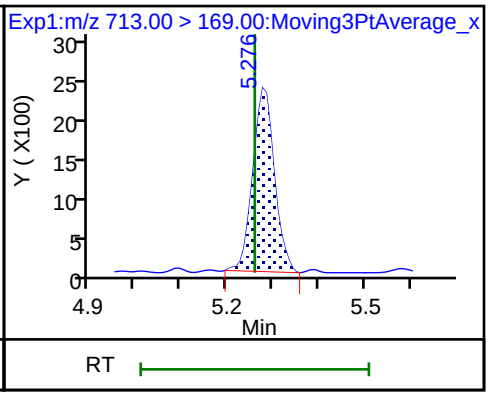

60 Perfluorotridecanoic acid



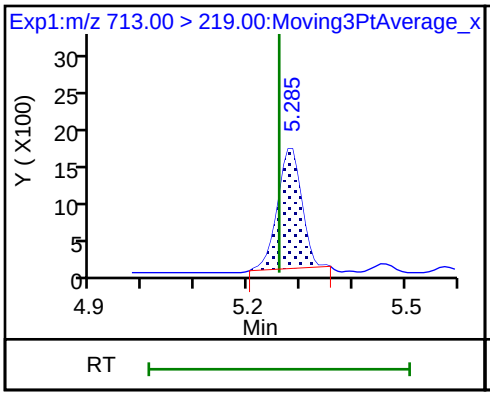

D 62 13C2 PFTeDA



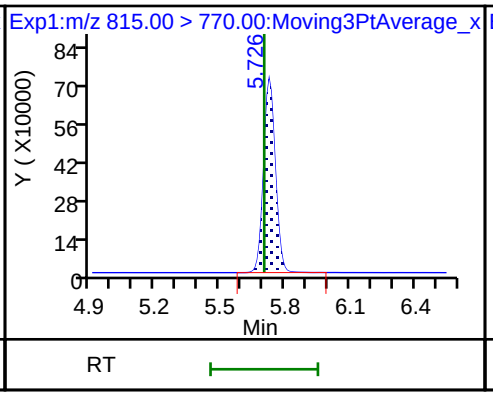

61 Perfluorotetradecanoic acid



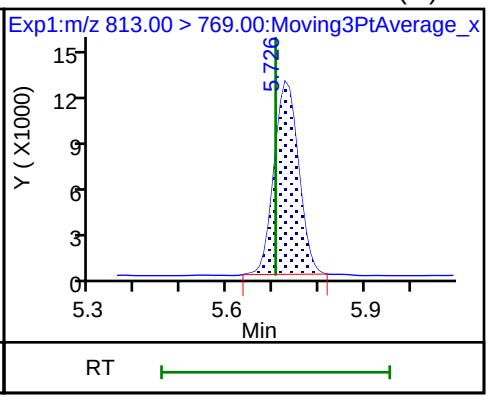

61 Perfluorotetradecanoic acid



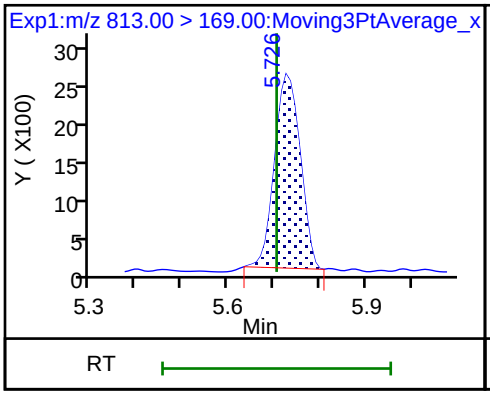

D 63 13C2 PFHxDA



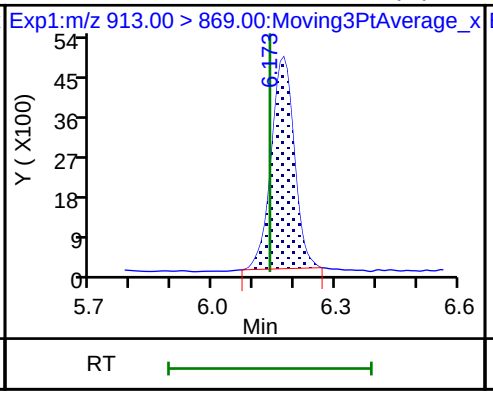

64 Perfluorohexadecanoic acid (M)



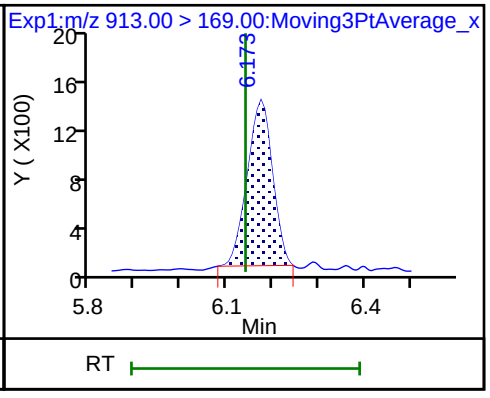

64 Perfluorohexadecanoic acid




65 Perfluorooctadecanoic acid (M)




65 Perfluorooctadecanoic acid



Eurofins TestAmerica, Sacramento

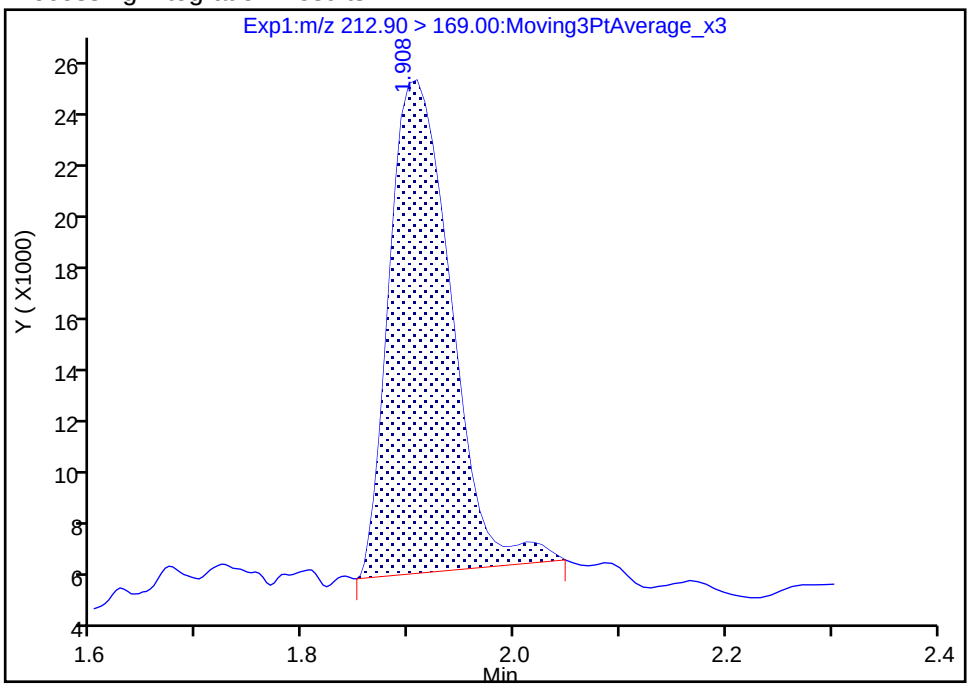
Data File: \\chromfs\Sacramento\ChromData\A9\20200910-102999.b\2020.09.10_A9 _PFC_ICAL_A_016.d
Injection Date: 10-Sep-2020 10:18:34 Instrument ID: A9
Lims ID: IC L1
Client ID:
Operator ID: SACINSTRLCMS02 ALS Bottle#: 10 Worklist Smp#: 2
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFAS_A9 Limit Group: LC PFC ICAL
Column: Detector EXP1

## 2 Perfluorobutanoic acid, CAS: 375-22-4

Signal: 1

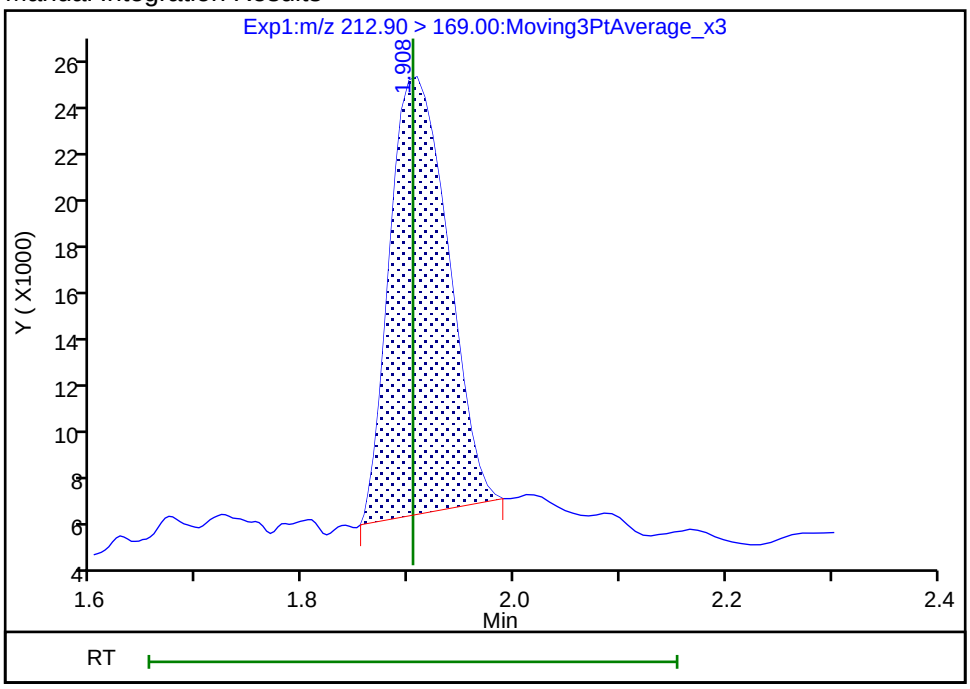
Processing Integration Results

RT: 1.91
Area: 74605
Amount: 0.025220
Amount Units: ng/ml




Manual Integration Results

RT: 1.91
Area: 69313
Amount: 0.022852
Amount Units: ng/ml




Reviewer: zibaa, 10-Sep-2020 10:44:38
Audit Action: Manually Integrated Audit Reason: Baseline

Eurofins TestAmerica, Sacramento

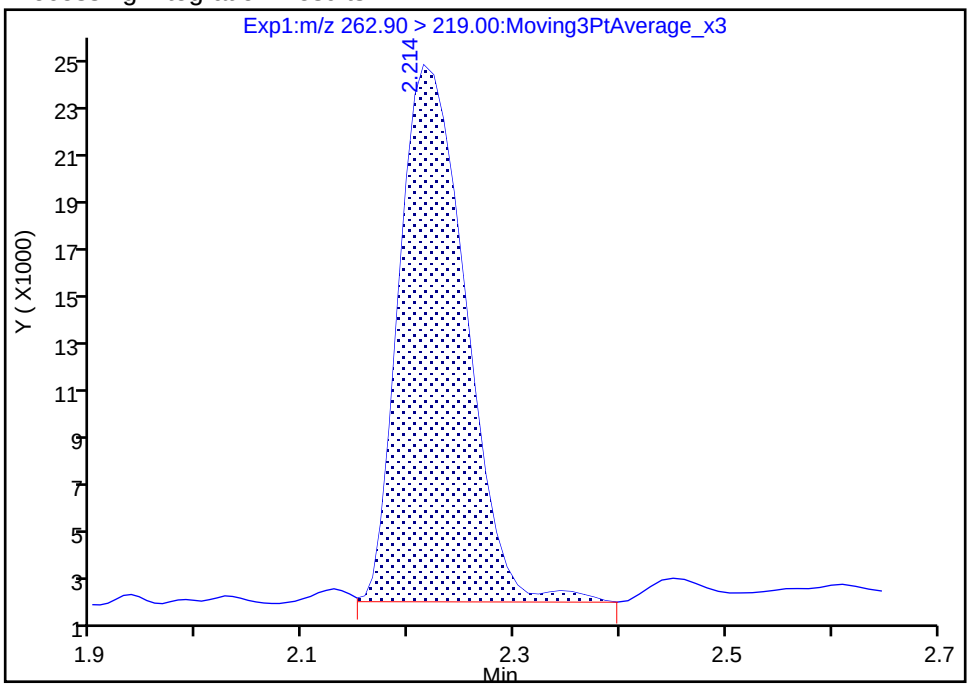
Data File: \\chromfs\Sacramento\ChromData\A9\20200910-102999.b\2020.09.10_A9 _PFC_ICAL_A_016.d
Injection Date: 10-Sep-2020 10:18:34 Instrument ID: A9
Lims ID: IC L1
Client ID:
Operator ID: SACINSTRLCMS02 ALS Bottle#: 10 Worklist Smp#: 2
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFAS_A9 Limit Group: LC PFC ICAL
Column: Detector EXP1

## 3 Perfluoropentanoic acid, CAS: 2706-90-3

Signal: 1

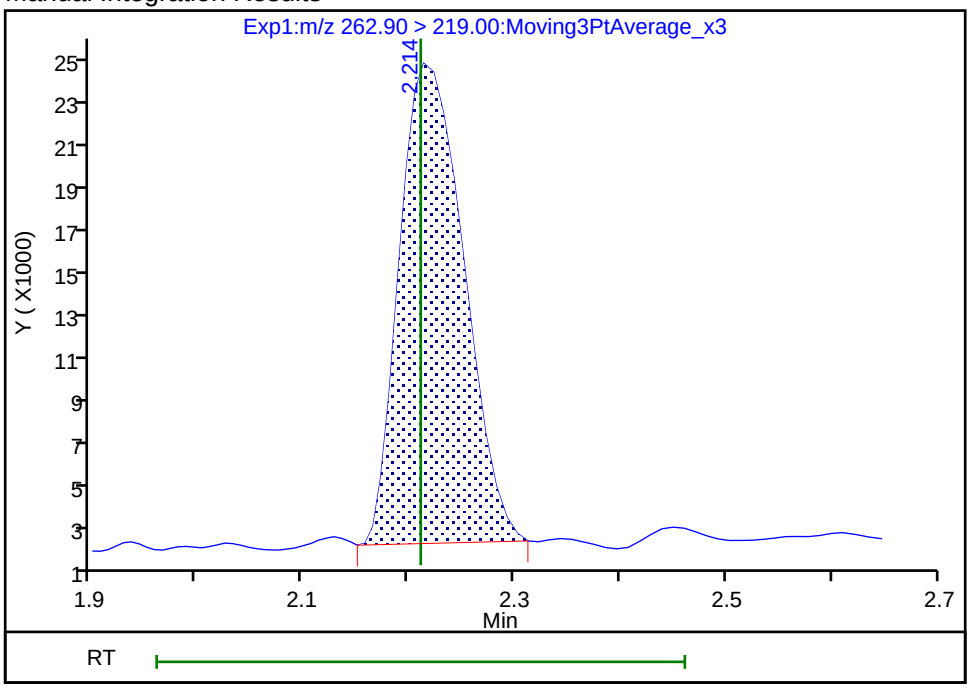
Processing Integration Results

RT: 2.21
Area: 93918
Amount: 0.025605
Amount Units: ng/ml




Manual Integration Results

RT: 2.21
Area: 90133
Amount: 0.030061
Amount Units: ng/ml




Reviewer: zibaa, 10-Sep-2020 10:45:09
Audit Action: Manually Integrated Audit Reason: Baseline

Eurofins TestAmerica, Sacramento

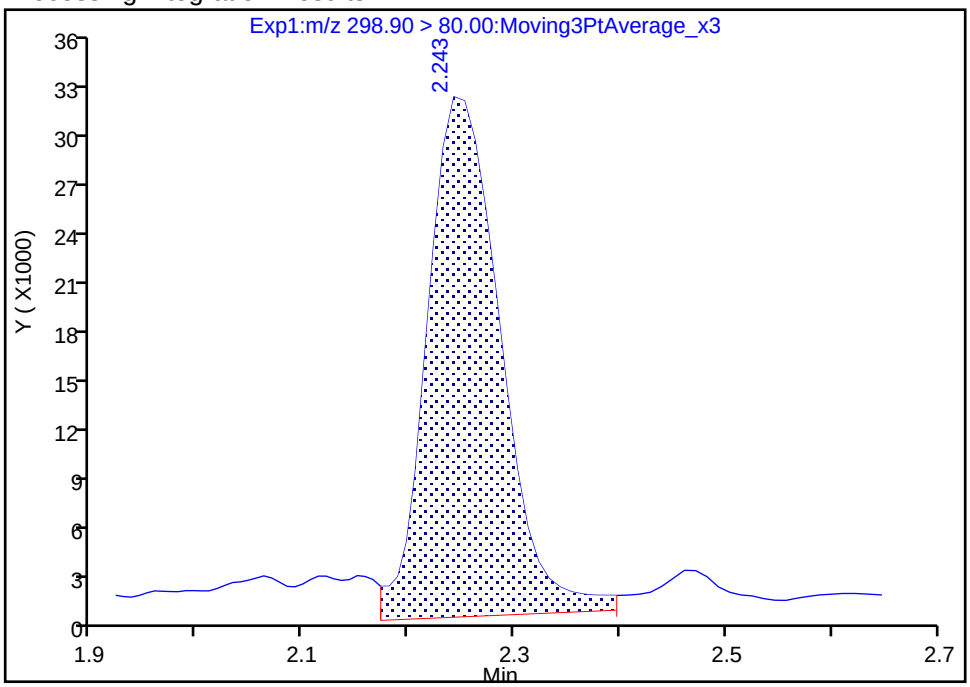
Data File: \\chromfs\Sacramento\ChromData\A9\20200910-102999.b\2020.09.10_A9 _PFC_ICAL_A_016.d
Injection Date: 10-Sep-2020 10:18:34 Instrument ID: A9
Lims ID: IC L1
Client ID:
Operator ID: SACINSTRLCMS02 ALS Bottle#: 10 Worklist Smp#: 2
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFAS_A9 Limit Group: LC PFC ICAL
Column: Detector EXP1

## 5 Perfluorobutanesulfonic acid, CAS: 375-73-5

Signal: 1

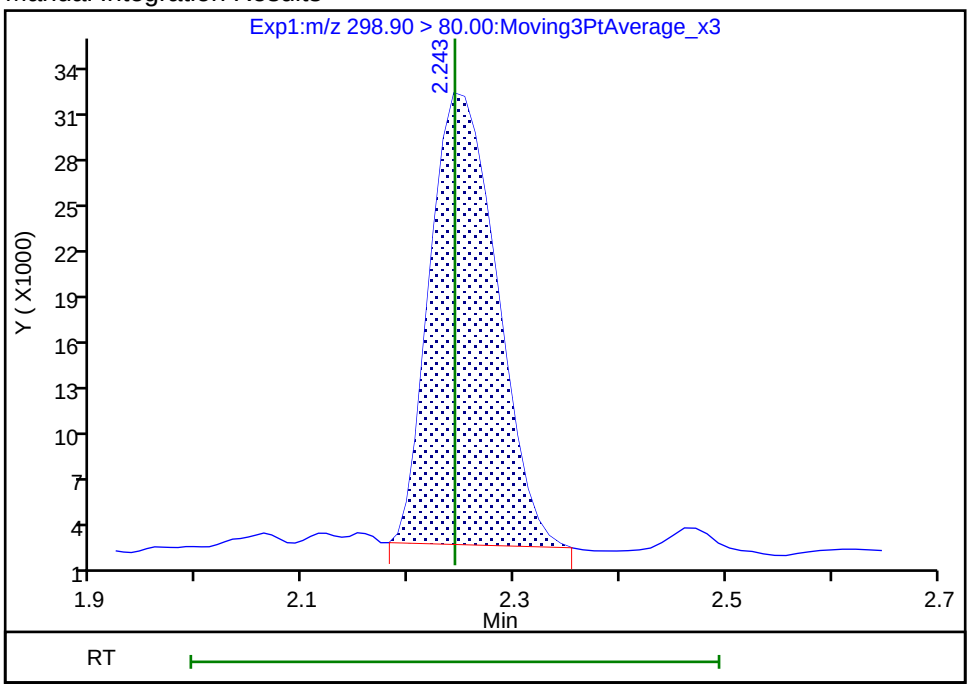
Processing Integration Results

RT: 2.24
Area: 150456
Amount: 0.022864
Amount Units: ng/ml




Manual Integration Results

RT: 2.24
Area: 130179
Amount: 0.022051
Amount Units: ng/ml




Reviewer: zibaa, 10-Sep-2020 10:45:32
Audit Action: Manually Integrated Audit Reason: Baseline

Eurofins TestAmerica, Sacramento

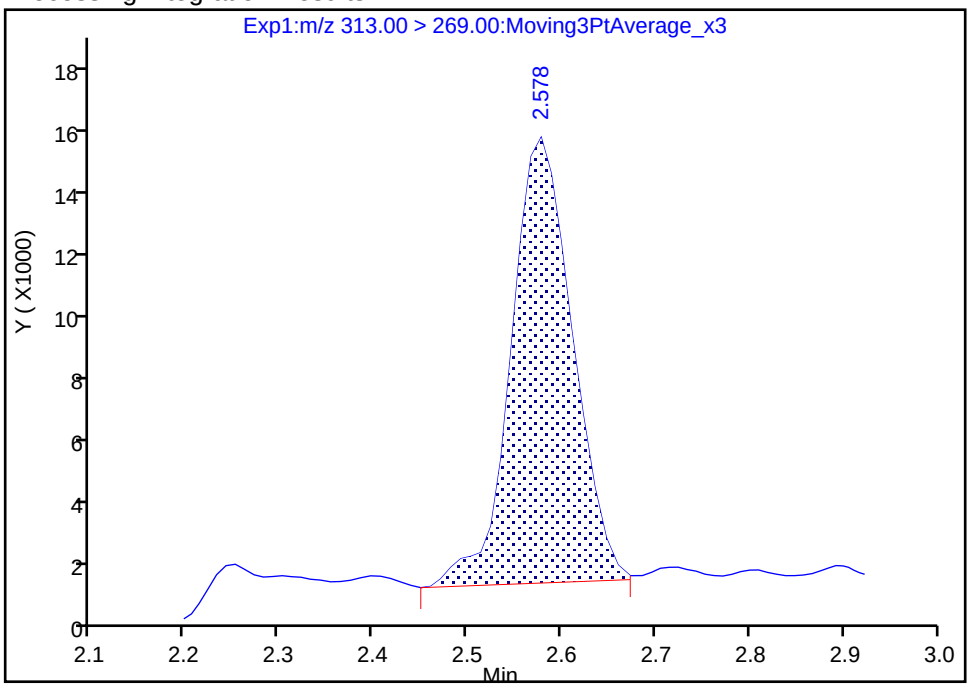
Data File: \\chromfs\Sacramento\ChromData\A9\20200910-102999.b\2020.09.10_A9 _PFC_ICAL_A_016.d
Injection Date: 10-Sep-2020 10:18:34 Instrument ID: A9
Lims ID: IC L1
Client ID:
Operator ID: SACINSTRLCMS02 ALS Bottle#: 10 Worklist Smp#: 2
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFAS_A9 Limit Group: LC PFC ICAL
Column: Detector EXP1

## 11 Perfluorohexanoic acid, CAS: 307-24-4

Signal: 1

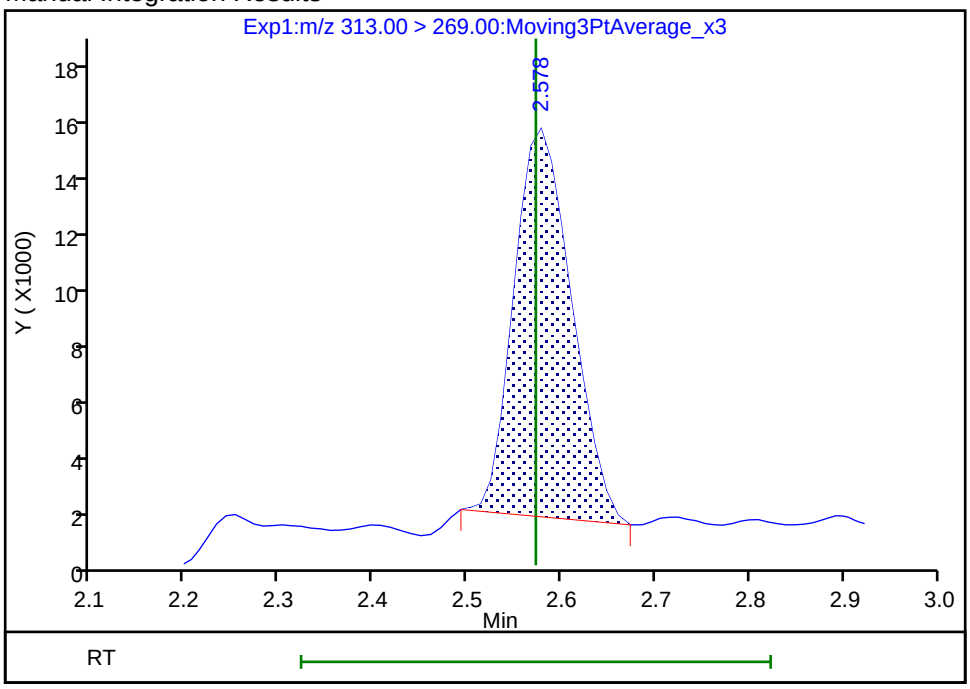
Processing Integration Results

RT: 2.58
Area: 63990
Amount: 0.024903
Amount Units: ng/ml




Manual Integration Results

RT: 2.58
Area: 57793
Amount: 0.024570
Amount Units: ng/ml




Reviewer: zibaa, 10-Sep-2020 10:46:22
Audit Action: Manually Integrated Audit Reason: Baseline

Eurofins TestAmerica, Sacramento

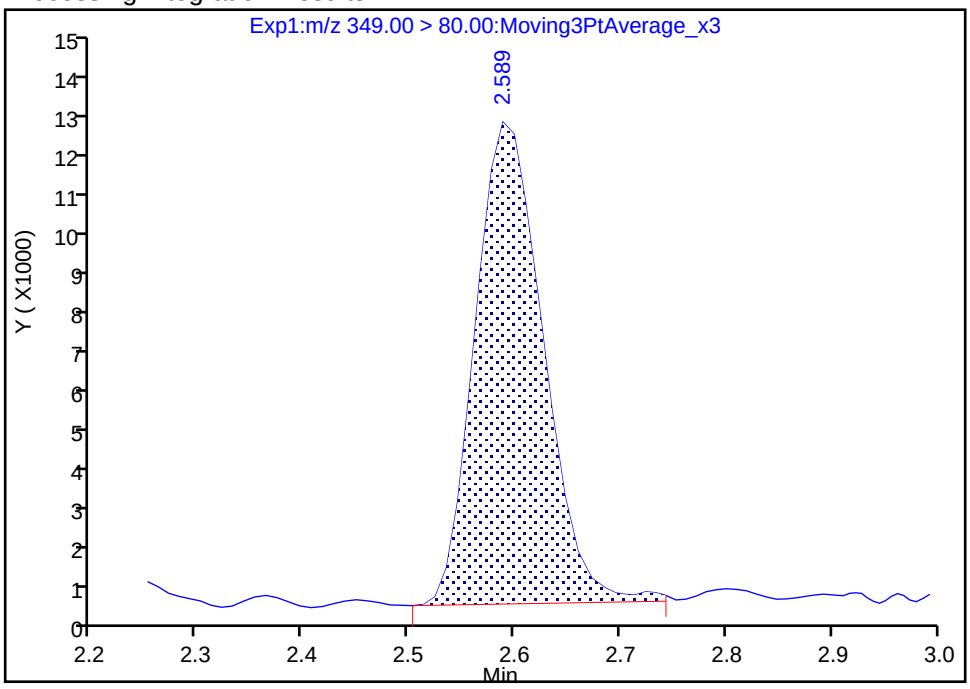
Data File: \\chromfs\Sacramento\ChromData\A9\20200910-102999.b\2020.09.10_A9 _PFC_ICAL_A_016.d
Injection Date: 10-Sep-2020 10:18:34 Instrument ID: A9
Lims ID: IC L1
Client ID:
Operator ID: SACINSTRLCMS02 ALS Bottle#: 10 Worklist Smp#: 2
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFAS_A9 Limit Group: LC PFC ICAL
Column: Detector EXP1

## 12 Perfluoropentanesulfonic acid, CAS: 2706-91-4

Signal: 1

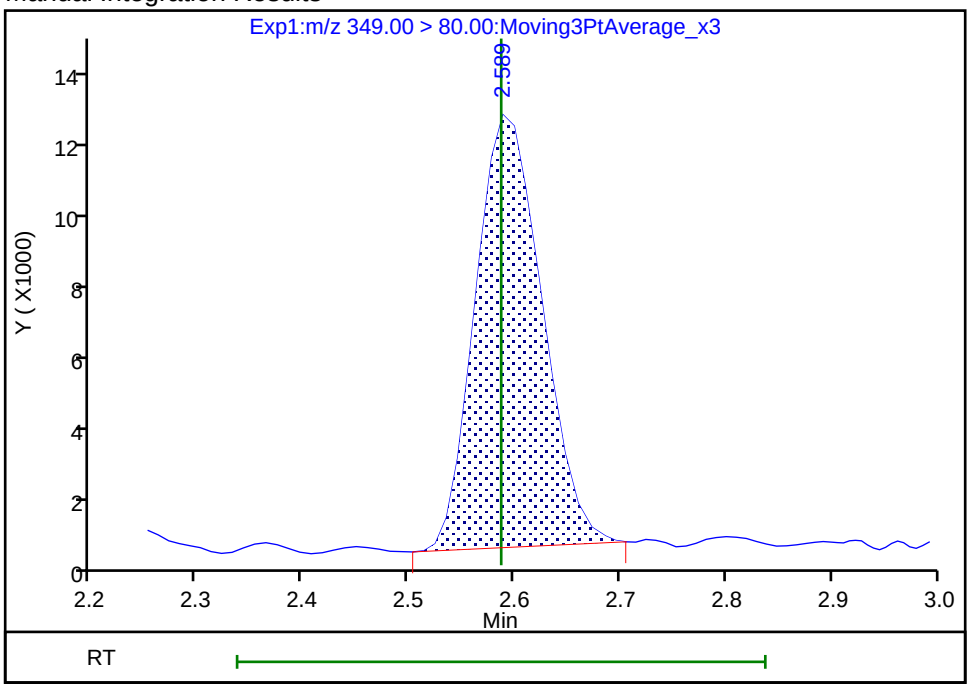
Processing Integration Results

RT: 2.59
Area: 52482
Amount: 0.023359
Amount Units: ng/ml




Manual Integration Results

RT: 2.59
Area: 50944
Amount: 0.021439
Amount Units: ng/ml




Reviewer: zibaa, 10-Sep-2020 10:46:45
Audit Action: Manually Integrated Audit Reason: Baseline

Eurofins TestAmerica, Sacramento

| | | | | | |
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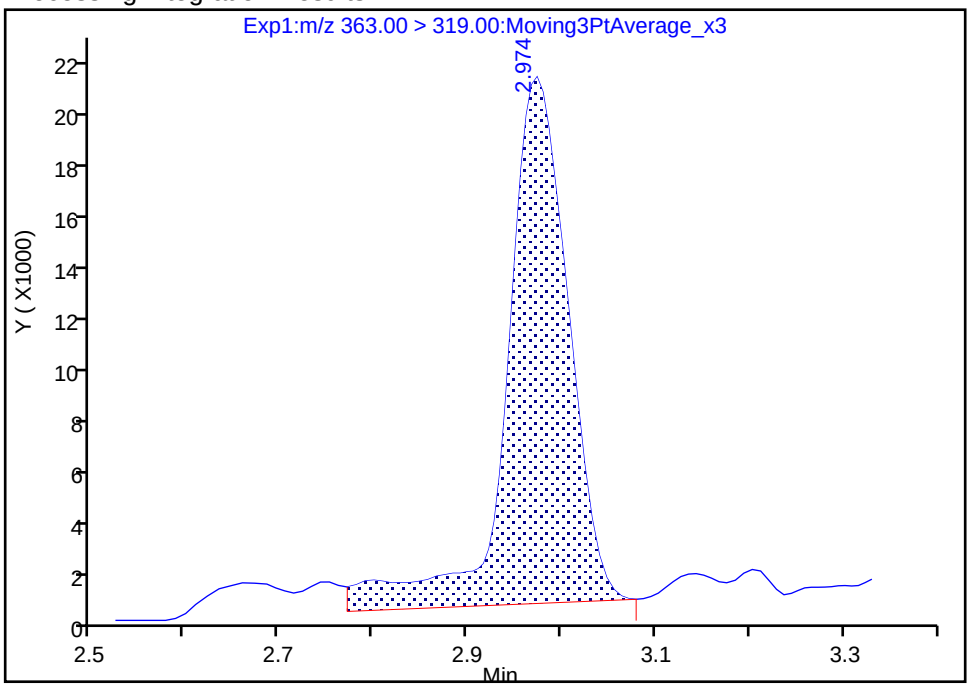
| Injection Date: | 10-Sep-2020 10:18:34 | Instrument ID: | A9 | | |
| Lims ID: | IC L1 | | | | |
| Client ID: | | | | | |
| Operator ID: | SACINSTRLCMS02 | ALS Bottle#: | 10 | Worklist Smp#: | 2 |
| Injection Vol: | 20.0 ul | Dil. Factor: | 1.0000 | | |
| Method: | PFAS_A9 | Limit Group: | LC PFC ICAL | | |
| Column: | | Detector | EXP1 | | |

## 18 Perfluoroheptanoic acid, CAS: 375-85-9

Signal: 1

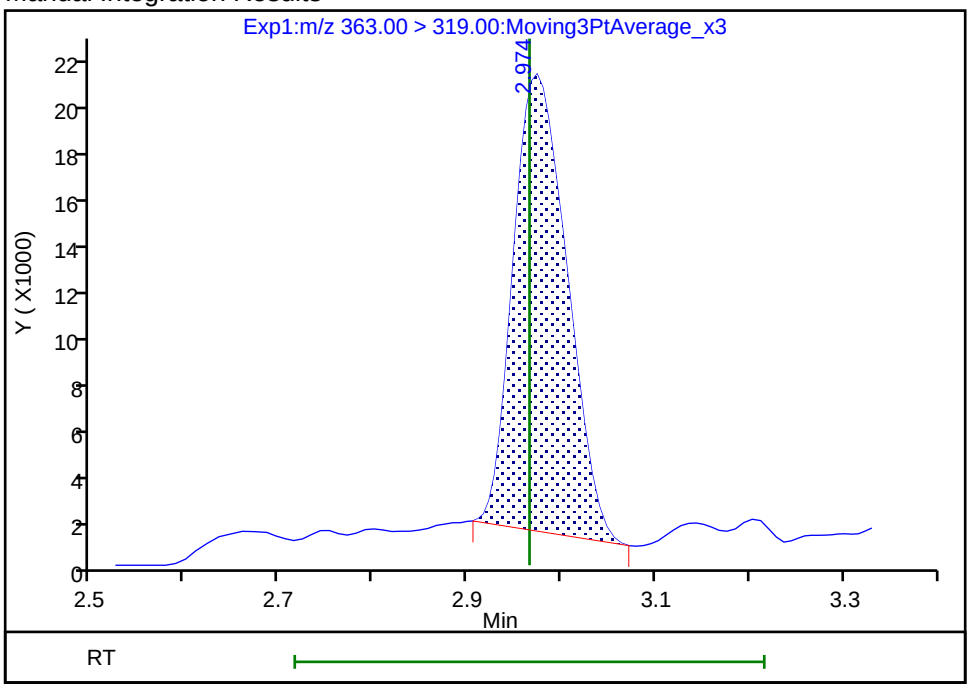
Processing Integration Results

RT: 2.97
Area: 93187
Amount: 0.026344
Amount Units: ng/ml




Manual Integration Results

RT: 2.97
Area: 77317
Amount: 0.025218
Amount Units: ng/ml




Reviewer: zibaa, 10-Sep-2020 10:47:45
Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

| | | | | | |
|---|---|---|---|---|---|
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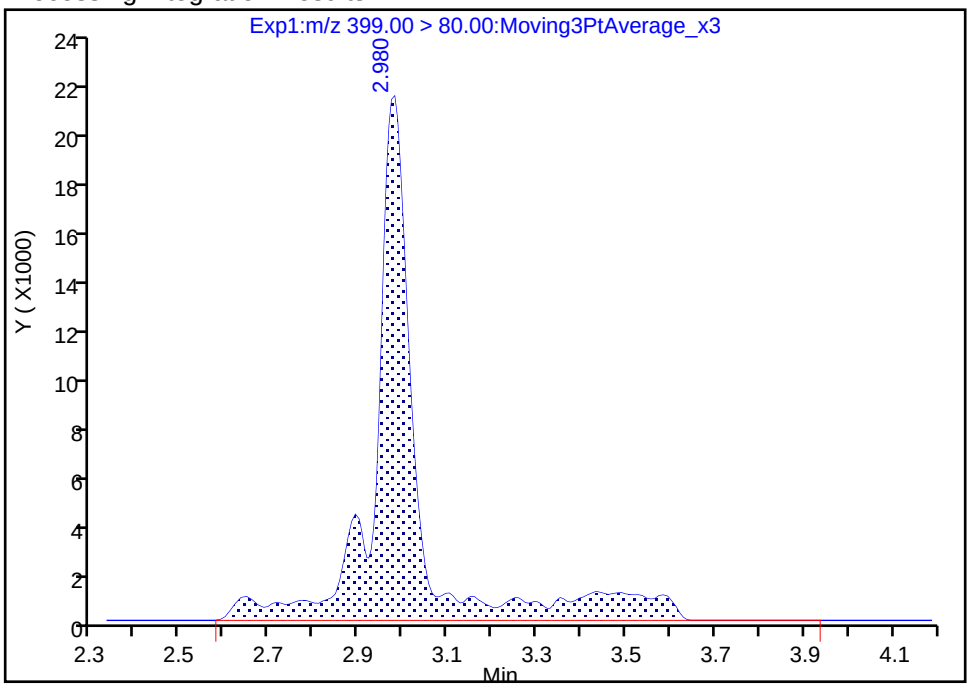
| Injection Date: | 10-Sep-2020 10:18:34 | Instrument ID: | A9 | | |
| Lims ID: | IC L1 | | | | |
| Client ID: | | | | | |
| Operator ID: | SACINSTRLCMS02 | ALS Bottle#: | 10 | Worklist Smp#: | 2 |
| Injection Vol: | 20.0 ul | Dil. Factor: | 1.0000 | | |
| Method: | PFAS_A9 | Limit Group: | LC PFC ICAL | | |
| Column: | | Detector | EXP1 | | |

## 16 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 1

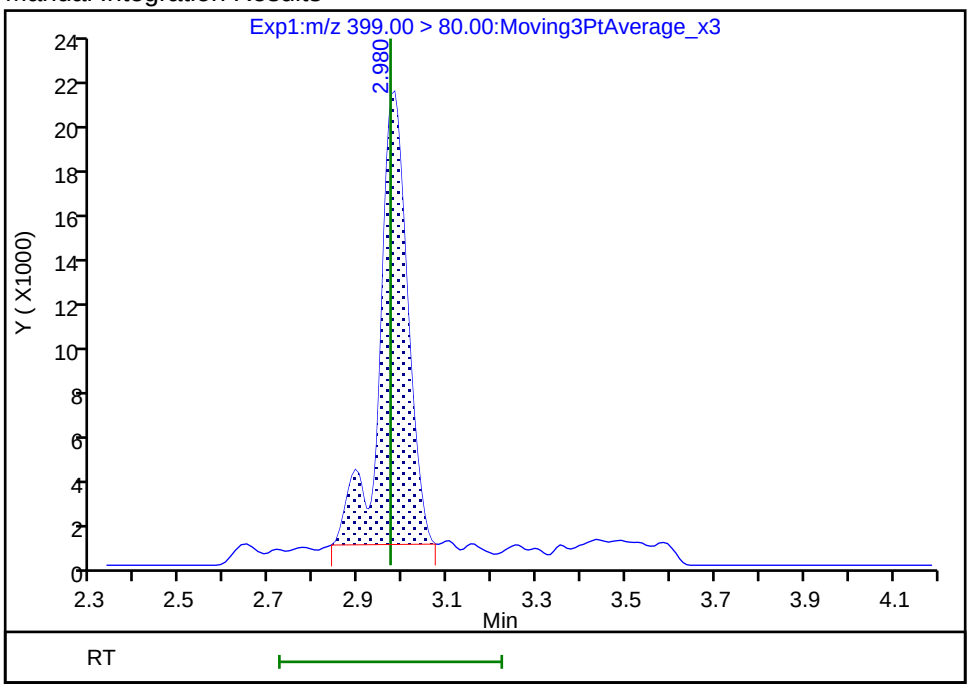
Processing Integration Results

RT: 2.98
Area: 136639
Amount: 0.025975
Amount Units: ng/ml




Manual Integration Results

RT: 2.98
Area: 86565
Amount: 0.025976
Amount Units: ng/ml




Reviewer: zibaa, 10-Sep-2020 10:48:16

Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

| | | | | | |
|---|---|---|---|---|---|
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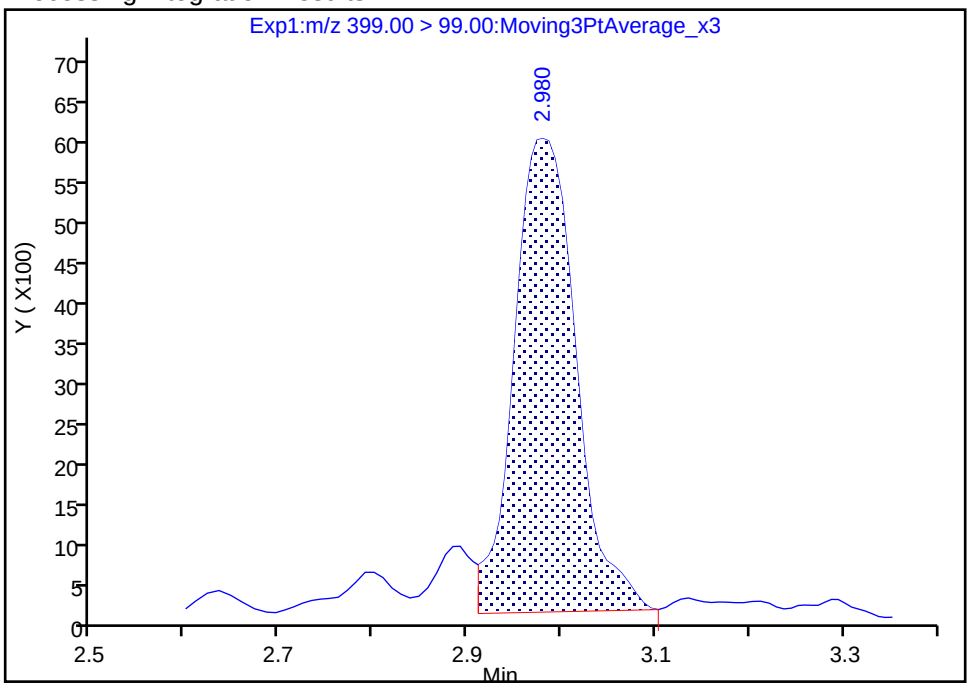
| Injection Date: | 10-Sep-2020 10:18:34 | Instrument ID: | A9 | | |
| Lims ID: | IC L1 | | | | |
| Client ID: | | | | | |
| Operator ID: | SACINSTRLCMS02 | ALS Bottle#: | 10 | Worklist Smp#: | 2 |
| Injection Vol: | 20.0 ul | Dil. Factor: | 1.0000 | | |
| Method: | PFAS_A9 | Limit Group: | LC PFC ICAL | | |
| Column: | | Detector | EXP1 | | |

## 16 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 2

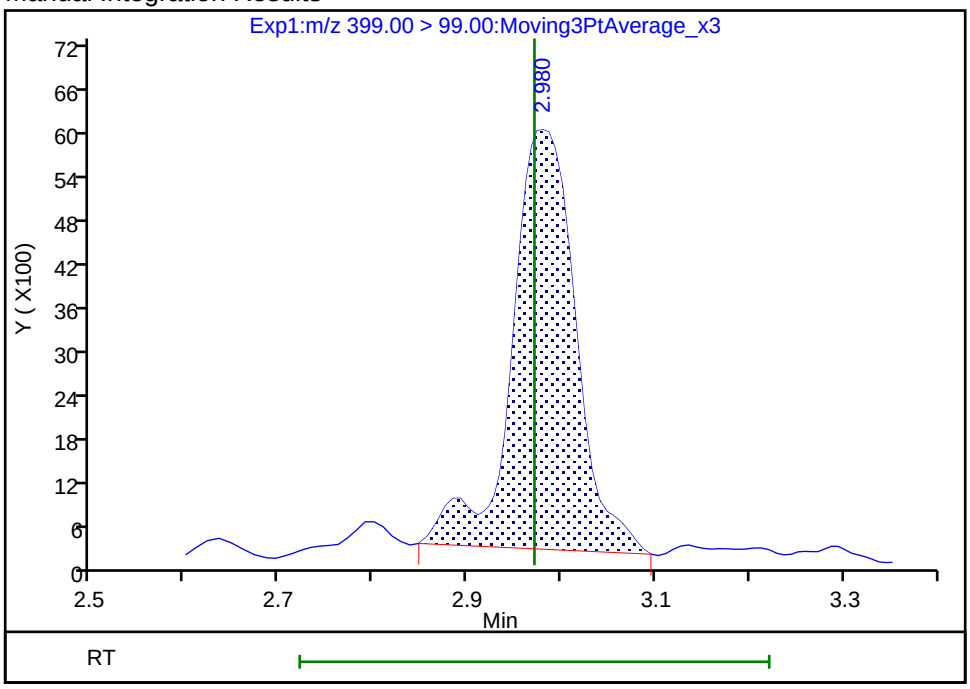
Processing Integration Results

RT: 2.98
Area: 27126
Amount: 0.025975
Amount Units: ng/ml




Manual Integration Results

RT: 2.98
Area: 27606
Amount: 0.025976
Amount Units: ng/ml




Reviewer: zibaa, 10-Sep-2020 10:48:49
Audit Action: Manually Integrated Audit Reason: Isomers

Eurofins TestAmerica, Sacramento

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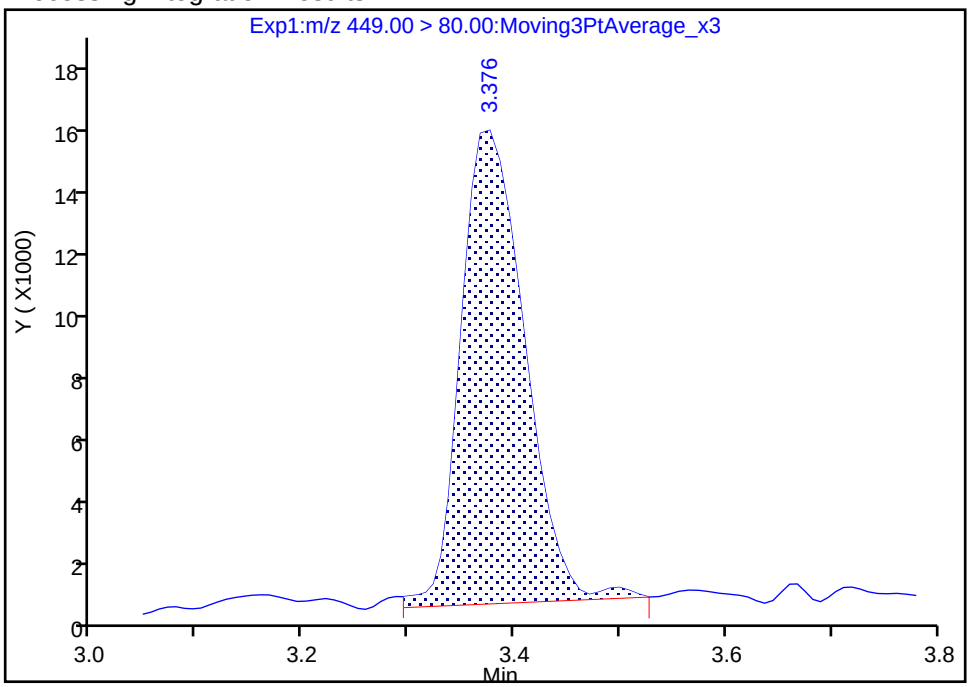
|---|---|---|---|---|---|
| Data File: | \\chromfs\Sacramento\ChromData\A9\20200910-102999.b\2020.09.10_A9 _PFC_ICAL_A_016.d | | | | |
| Injection Date: | 10-Sep-2020 10:18:34 | Instrument ID: | A9 | | |
| Lims ID: | IC L1 | | | | |
| Client ID: | | | | | |
| Operator ID: | SACINSTRLCMS02 | ALS Bottle#: | 10 | Worklist Smp#: | 2 |
| Injection Vol: | 20.0 ul | Dil. Factor: | 1.0000 | | |
| Method: | PFAS_A9 | Limit Group: | LC PFC ICAL | | |
| Column: | | Detector | EXP1 | | |

## 23 Perfluoroheptanesulfonic acid, CAS: 375-92-8

Signal: 1

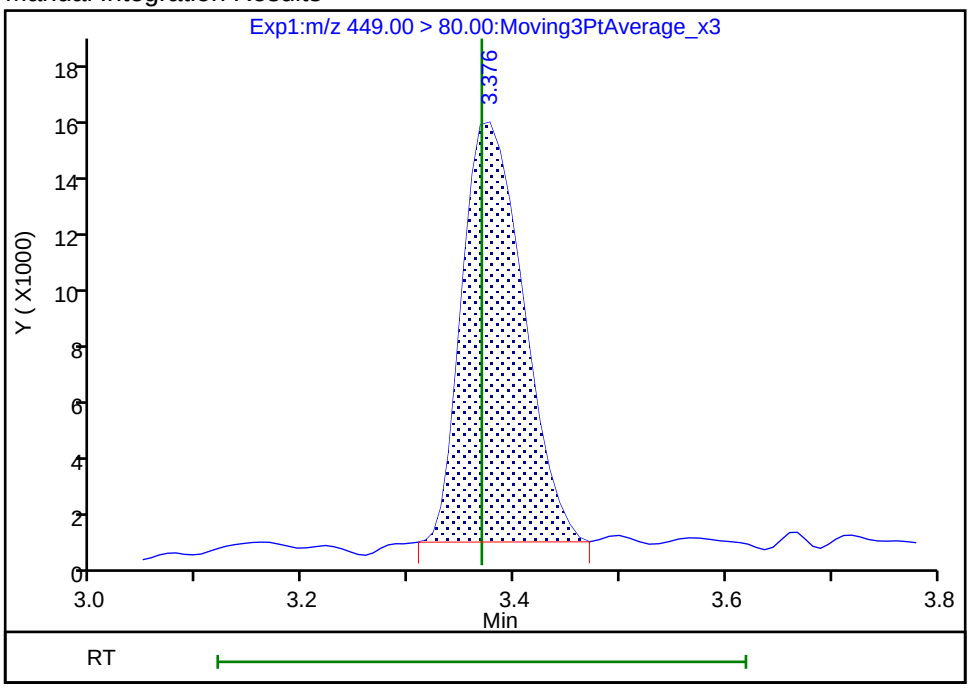
Processing Integration Results

RT: 3.38
Area: 63650
Amount: 0.024087
Amount Units: ng/ml




Manual Integration Results

RT: 3.38
Area: 59882
Amount: 0.022144
Amount Units: ng/ml




Reviewer: zibaa, 10-Sep-2020 10:49:39
Audit Action: Manually Integrated Audit Reason: Baseline

Eurofins TestAmerica, Sacramento

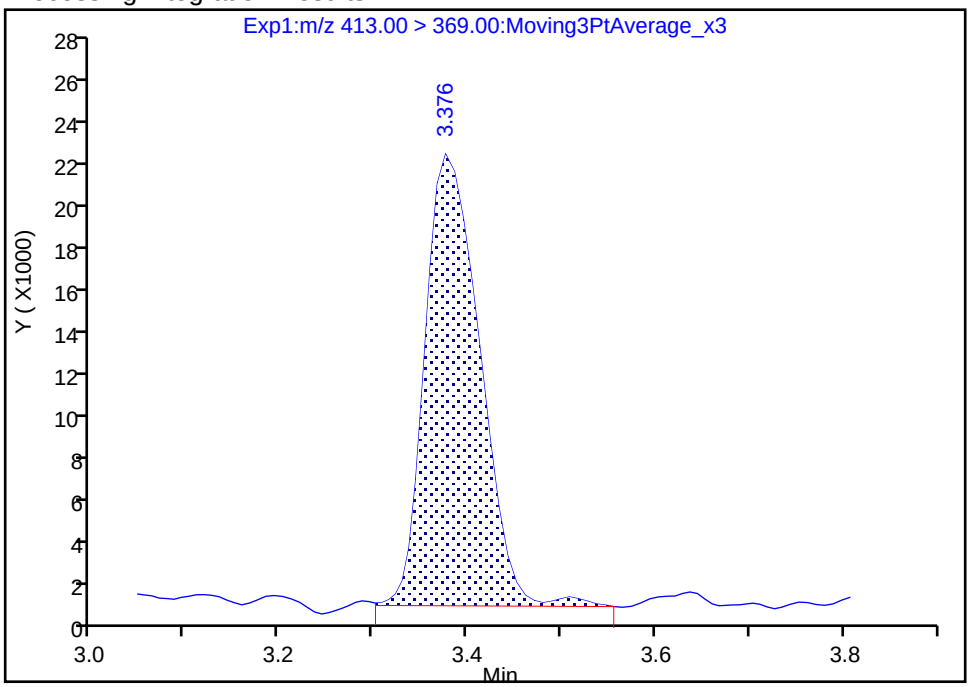
Data File: \\chromfs\Sacramento\ChromData\A9\20200910-102999.b\2020.09.10_A9 _PFC_ICAL_A_016.d
Injection Date: 10-Sep-2020 10:18:34 Instrument ID: A9
Lims ID: IC L1
Client ID:
Operator ID: SACINSTRLCMS02 ALS Bottle#: 10 Worklist Smp#: 2
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFAS_A9 Limit Group: LC PFC ICAL
Column: Detector EXP1

## 24 Perfluorooctanoic acid, CAS: 335-67-1

Signal: 1

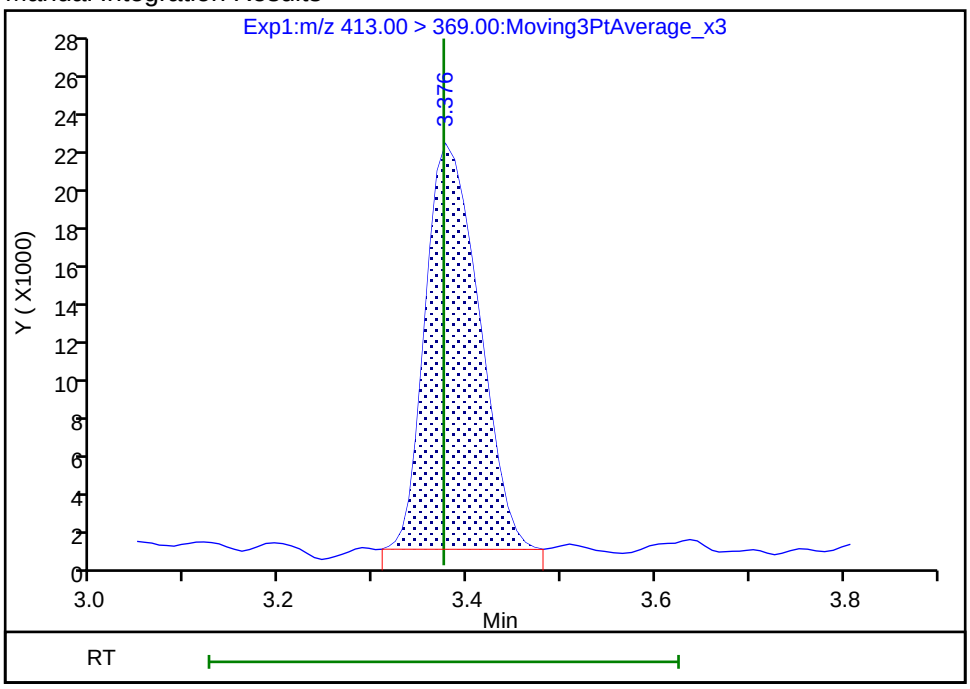
Processing Integration Results

RT: 3.38
Area: 87190
Amount: 0.026599
Amount Units: ng/ml




Manual Integration Results

RT: 3.38
Area: 84521
Amount: 0.030341
Amount Units: ng/ml




Reviewer: zibaa, 10-Sep-2020 10:50:14
Audit Action: Manually Integrated Audit Reason: Baseline

Eurofins TestAmerica, Sacramento

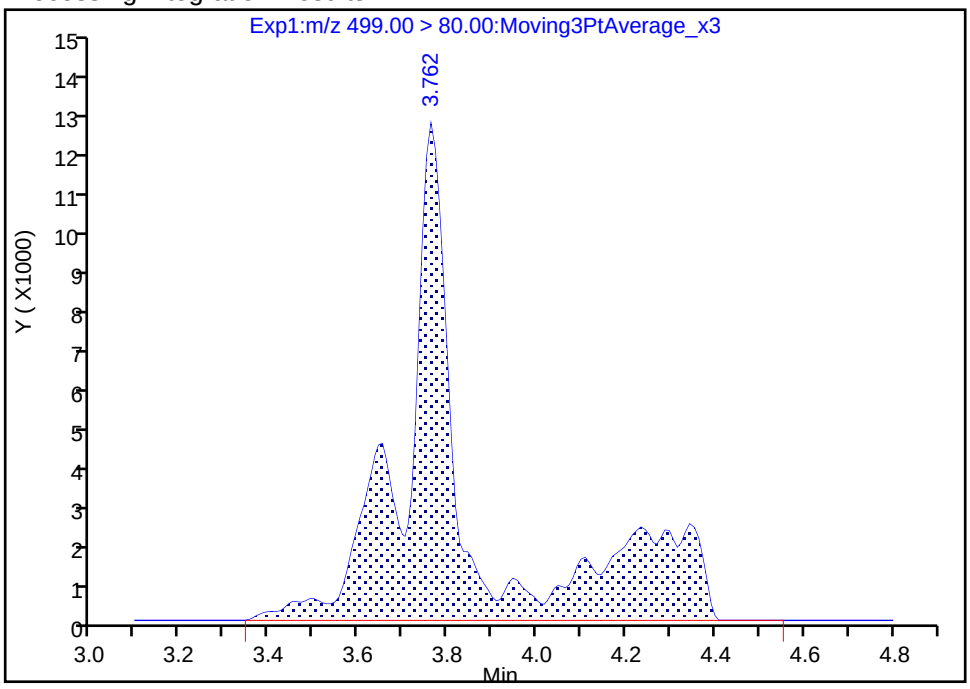
Data File: \\chromfs\Sacramento\ChromData\A9\20200910-102999.b\2020.09.10_A9 _PFC_ICAL_A_016.d
Injection Date: 10-Sep-2020 10:18:34 Instrument ID: A9
Lims ID: IC L1
Client ID:
Operator ID: SACINSTRLCMS02 ALS Bottle#: 10 Worklist Smp#: 2
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFAS_A9 Limit Group: LC PFC ICAL
Column: Detector EXP1

## 28 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 1

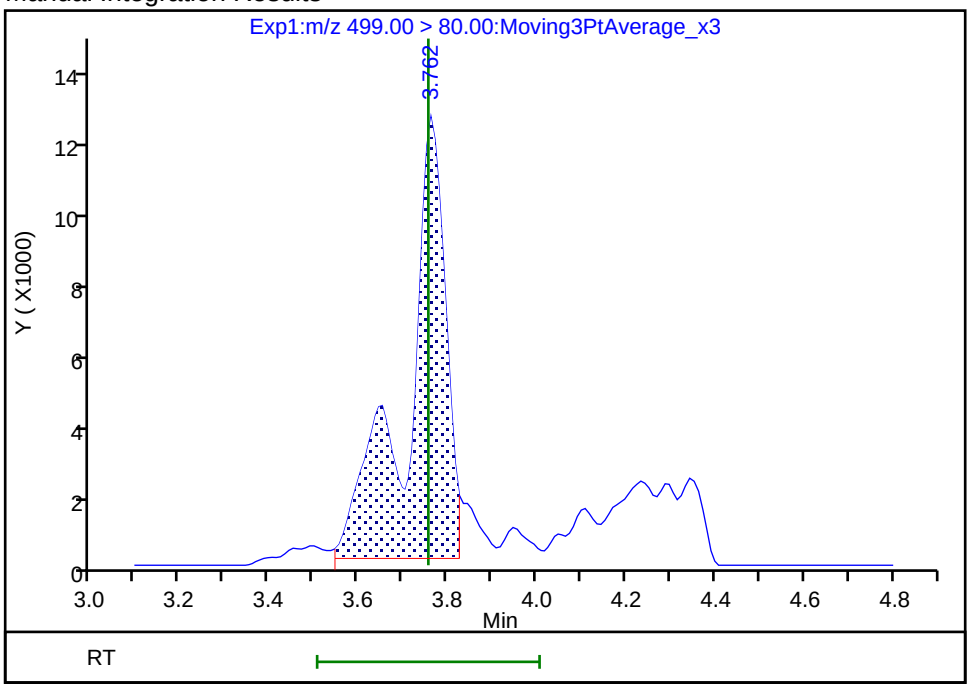
RT: 3.76
Area: 126589
Amount: 0.025772
Amount Units: ng/ml

Processing Integration Results




RT: 3.76
Area: 73172
Amount: 0.024060
Amount Units: ng/ml

Manual Integration Results




Reviewer: zibaa, 10-Sep-2020 10:51:23
Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

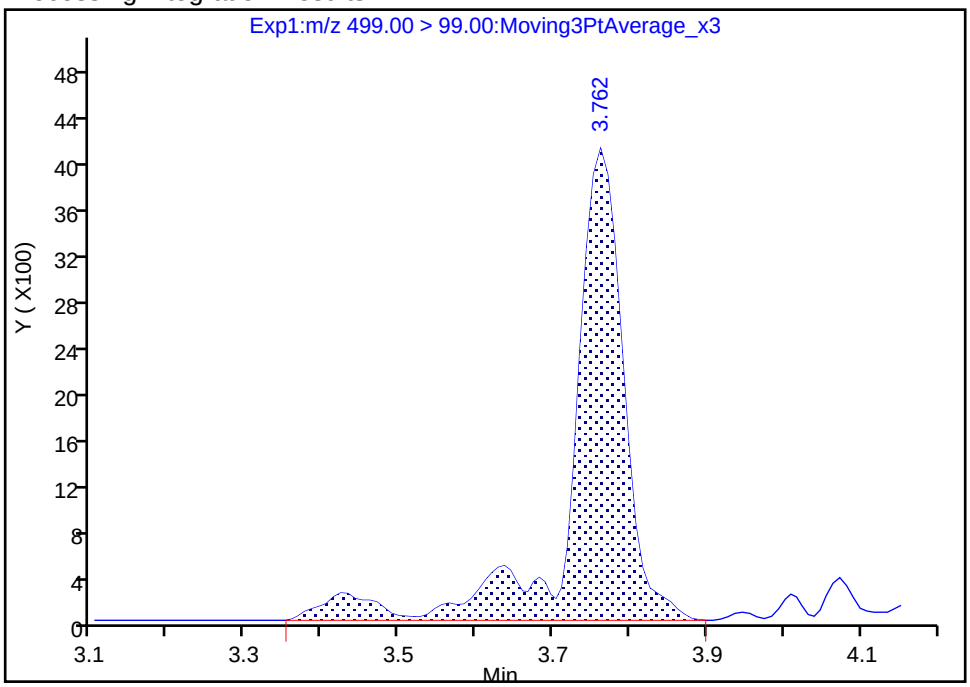
Data File: \\chromfs\Sacramento\ChromData\A9\20200910-102999.b\2020.09.10_A9 _PFC_ICAL_A_016.d
Injection Date: 10-Sep-2020 10:18:34 Instrument ID: A9
Lims ID: IC L1
Client ID:
Operator ID: SACINSTRLCMS02 ALS Bottle#: 10 Worklist Smp#: 2
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFAS_A9 Limit Group: LC PFC ICAL
Column: Detector EXP1

## 28 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 2

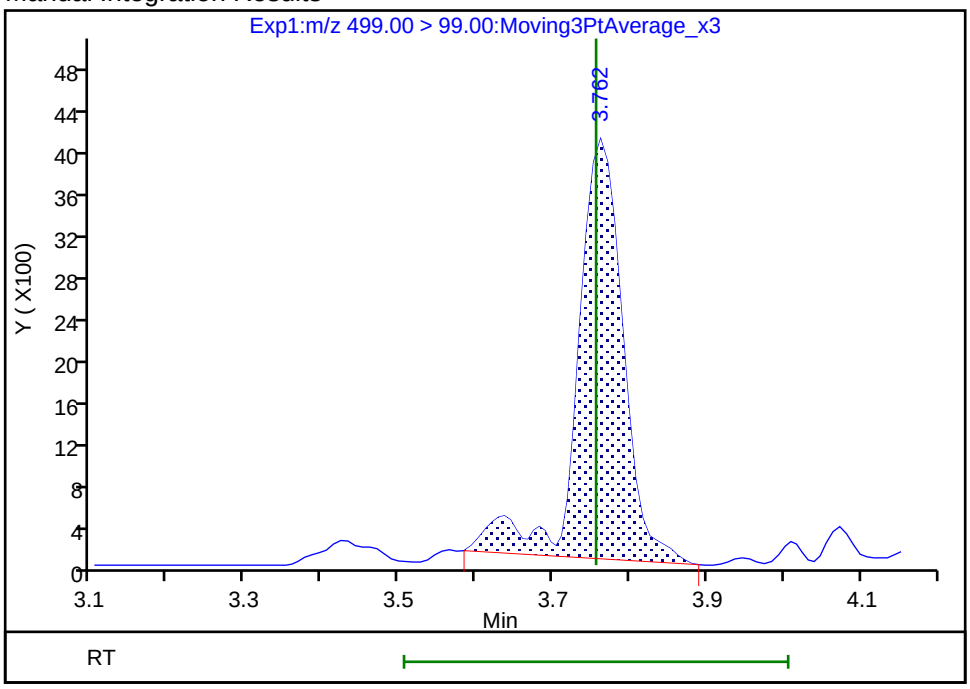
Processing Integration Results

RT: 3.76
Area: 19515
Amount: 0.025772
Amount Units: ng/ml




Manual Integration Results

RT: 3.76
Area: 16625
Amount: 0.024060
Amount Units: ng/ml




Reviewer: zibaa, 10-Sep-2020 10:51:56
Audit Action: Manually Integrated Audit Reason: Baseline

Eurofins TestAmerica, Sacramento

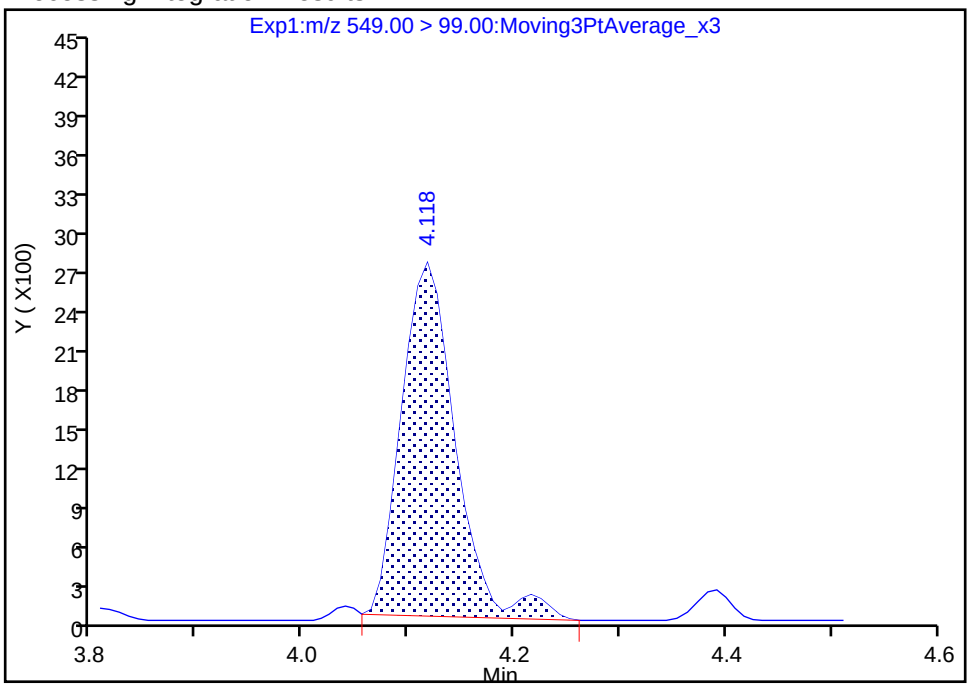
Data File: \\chromfs\Sacramento\ChromData\A9\20200910-102999.b\2020.09.10_A9 _PFC_ICAL_A_016.d
Injection Date: 10-Sep-2020 10:18:34 Instrument ID: A9
Lims ID: IC L1
Client ID:
Operator ID: SACINSTRLCMS02 ALS Bottle#: 10 Worklist Smp#: 2
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFAS_A9 Limit Group: LC PFC ICAL
Column: Detector EXP1

## 35 Perfluorononanesulfonic acid, CAS: 68259-12-1

Signal: 2

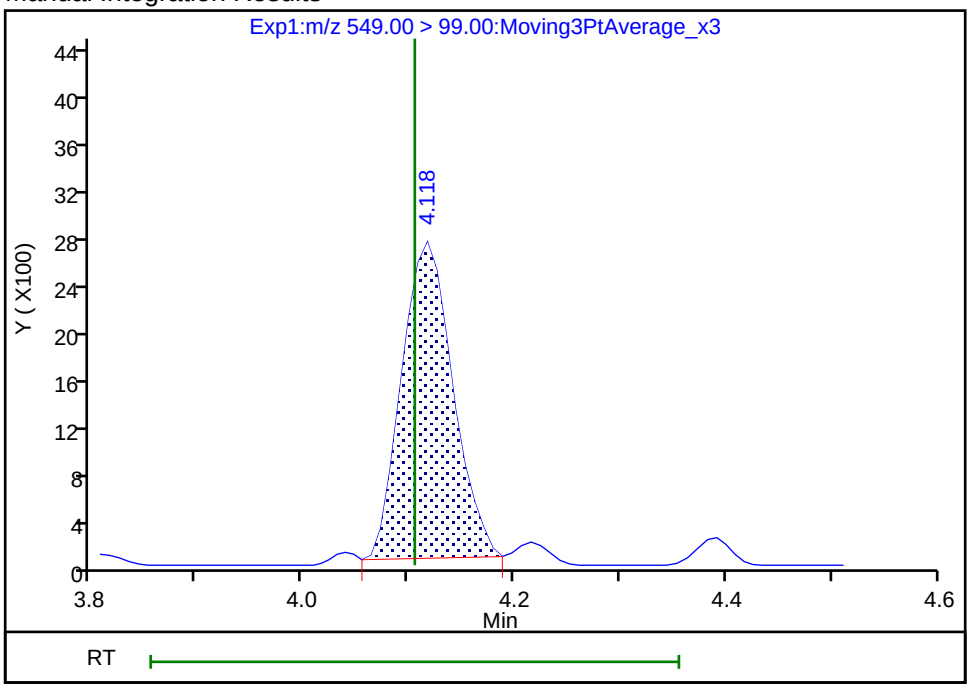
Processing Integration Results

RT: 4.12
Area: 9669
Amount: 0.023488
Amount Units: ng/ml




Manual Integration Results

RT: 4.12
Area: 9023
Amount: 0.022695
Amount Units: ng/ml




Reviewer: zibaa, 10-Sep-2020 10:53:07
Audit Action: Manually Integrated Audit Reason: Baseline

Eurofins TestAmerica, Sacramento

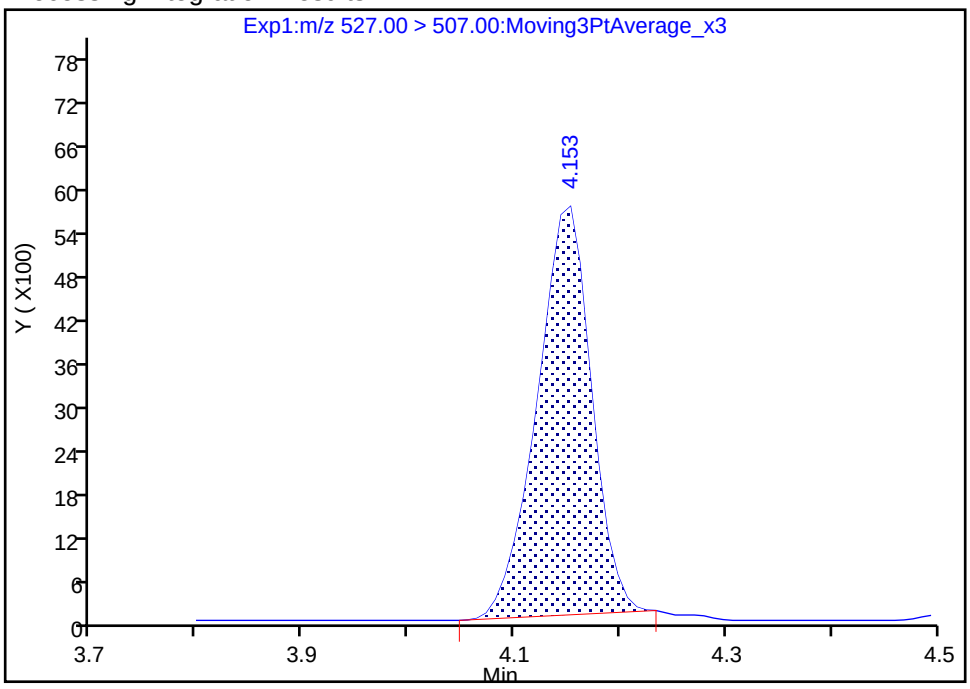
Data File: \\chromfs\Sacramento\ChromData\A9\20200910-102999.b\2020.09.10_A9 _PFC_ICAL_A_016.d
Injection Date: 10-Sep-2020 10:18:34 Instrument ID: A9
Lims ID: IC L1
Client ID:
Operator ID: SACINSTRLCMS02 ALS Bottle#: 10 Worklist Smp#: 2
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFAS_A9 Limit Group: LC PFC ICAL
Column: Detector EXP1

## 39 1H,1H,2H,2H-perfluorodecanesulfo, CAS: 39108-34-4

Signal: 1

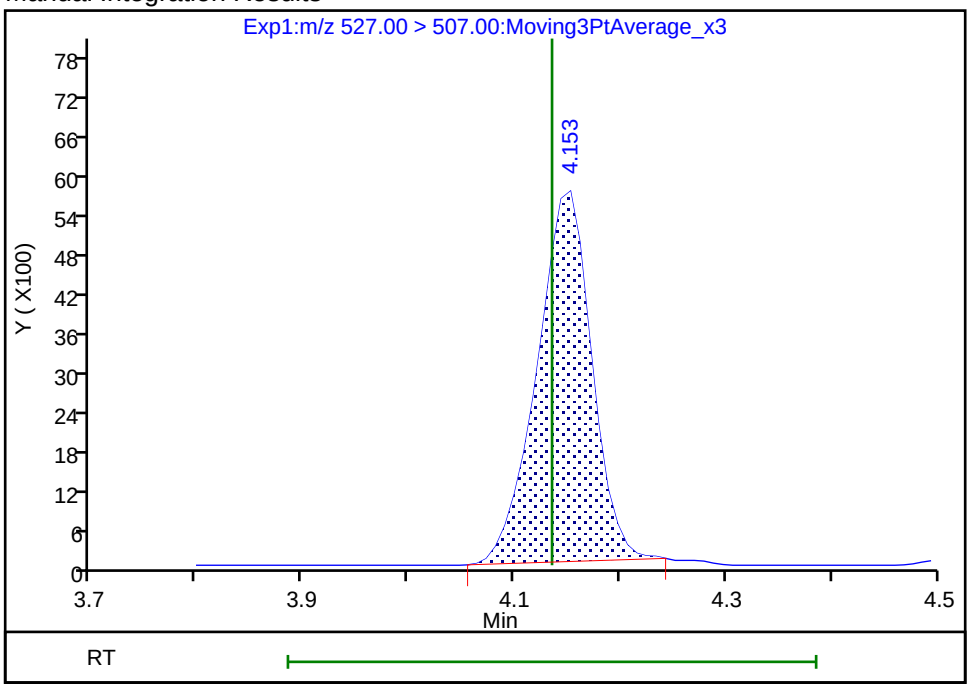
Processing Integration Results

RT: 4.15
Area: 20068
Amount: 0.022175
Amount Units: ng/ml




Manual Integration Results

RT: 4.15
Area: 20267
Amount: 0.022486
Amount Units: ng/ml




Reviewer: zibaa, 10-Sep-2020 10:53:38
Audit Action: Manually Integrated Audit Reason: Baseline

Eurofins TestAmerica, Sacramento

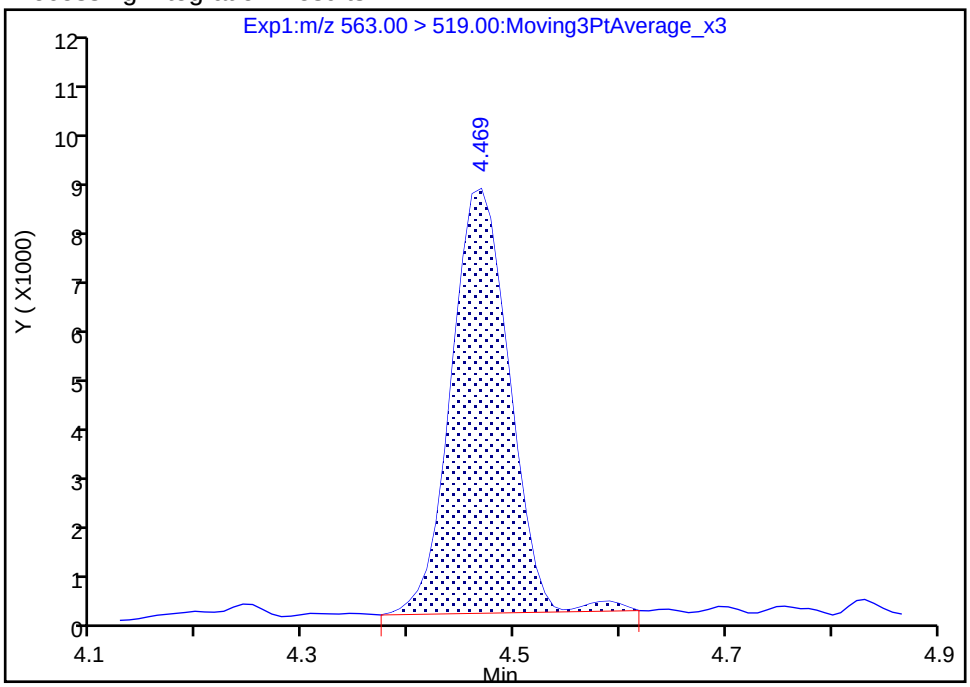
Data File: \\chromfs\Sacramento\ChromData\A9\20200910-102999.b\2020.09.10_A9 _PFC_ICAL_A_016.d
Injection Date: 10-Sep-2020 10:18:34 Instrument ID: A9
Lims ID: IC L1
Client ID:
Operator ID: SACINSTRLCMS02 ALS Bottle#: 10 Worklist Smp#: 2
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFAS_A9 Limit Group: LC PFC ICAL
Column: Detector EXP1

## 43 Perfluoroundecanoic acid, CAS: 2058-94-8

Signal: 1

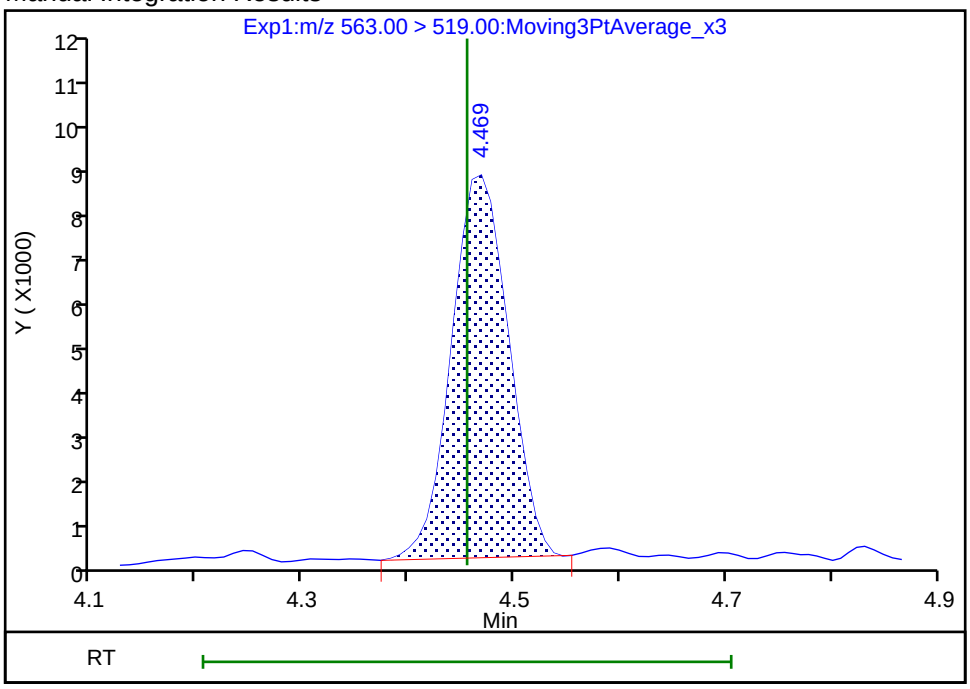
Processing Integration Results

RT: 4.47
Area: 33415
Amount: 0.024180
Amount Units: ng/ml




Manual Integration Results

RT: 4.47
Area: 32671
Amount: 0.022564
Amount Units: ng/ml




Reviewer: zibaa, 10-Sep-2020 10:54:10
Audit Action: Manually Integrated Audit Reason: Baseline

Eurofins TestAmerica, Sacramento

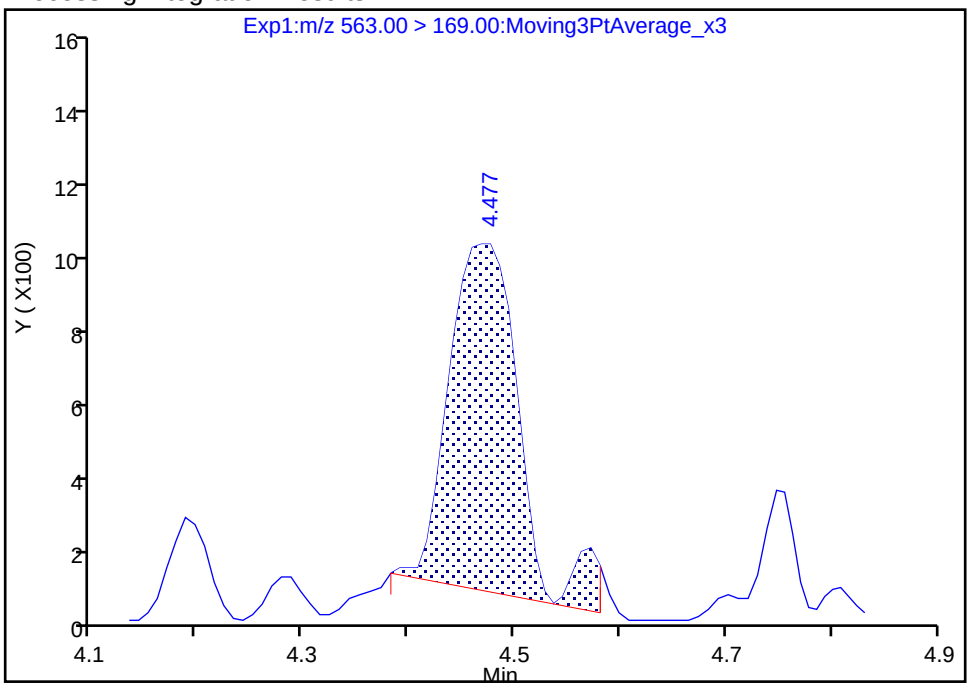
Data File: \\chromfs\Sacramento\ChromData\A9\20200910-102999.b\2020.09.10_A9 _PFC_ICAL_A_016.d
Injection Date: 10-Sep-2020 10:18:34 Instrument ID: A9
Lims ID: IC L1
Client ID:
Operator ID: SACINSTRLCMS02 ALS Bottle#: 10 Worklist Smp#: 2
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFAS_A9 Limit Group: LC PFC ICAL
Column: Detector EXP1

## 43 Perfluoroundecanoic acid, CAS: 2058-94-8

Signal: 2

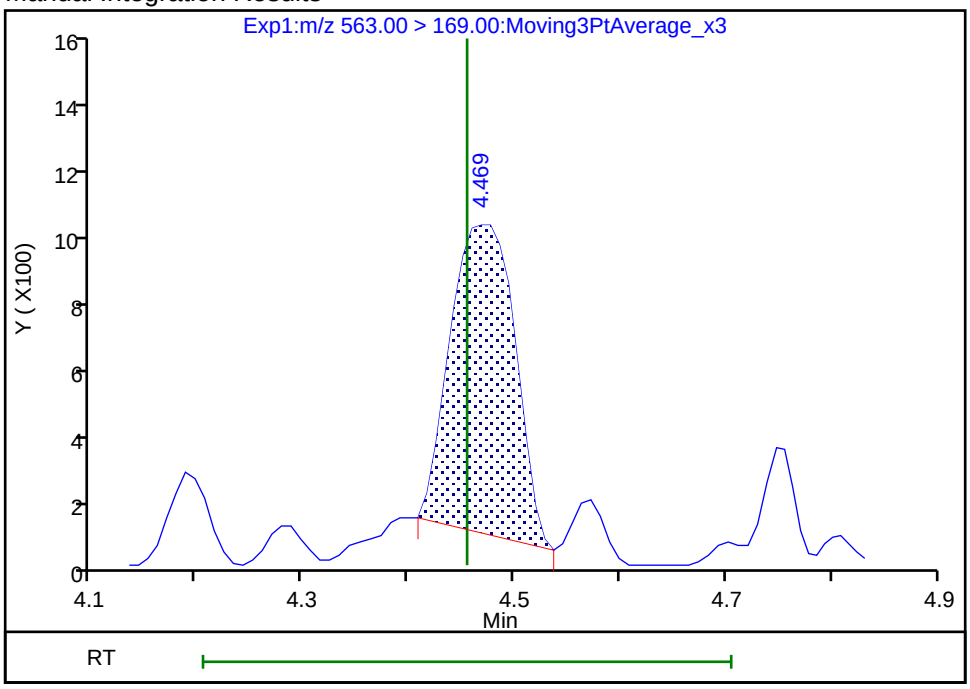
Processing Integration Results

RT: 4.48
Area: 4245
Amount: 0.024180
Amount Units: ng/ml




Manual Integration Results

RT: 4.47
Area: 3844
Amount: 0.022564
Amount Units: ng/ml




Reviewer: zibaa, 10-Sep-2020 10:54:21
Audit Action: Manually Integrated Audit Reason: Baseline

Eurofins TestAmerica, Sacramento

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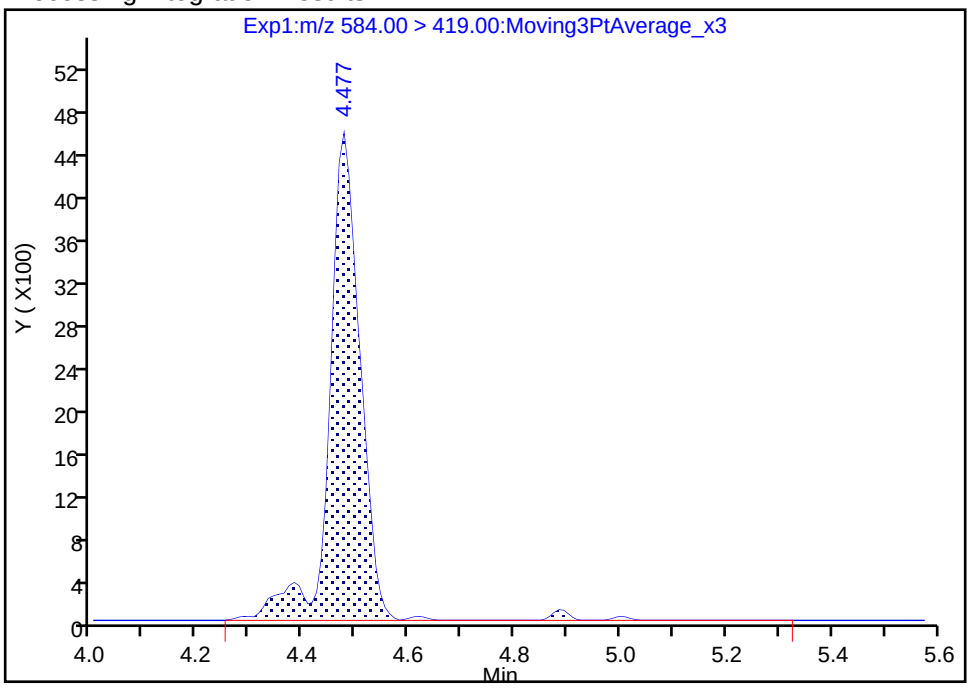
|---|---|---|---|---|---|
| Data File: | \\chromfs\Sacramento\ChromData\A9\20200910-102999.b\2020.09.10_A9 _PFC_ICAL_A_016.d | | | | |
| Injection Date: | 10-Sep-2020 10:18:34 | Instrument ID: | A9 | | |
| Lims ID: | IC L1 | | | | |
| Client ID: | | | | | |
| Operator ID: | SACINSTRLCMS02 | ALS Bottle#: | 10 | Worklist Smp#: | 2 |
| Injection Vol: | 20.0 ul | Dil. Factor: | 1.0000 | | |
| Method: | PFAS_A9 | Limit Group: | LC PFC ICAL | | |
| Column: | | Detector | EXP1 | | |

## 44 N-ethylperfluorooctanesulfonamid, CAS: 2991-50-6

Signal: 1

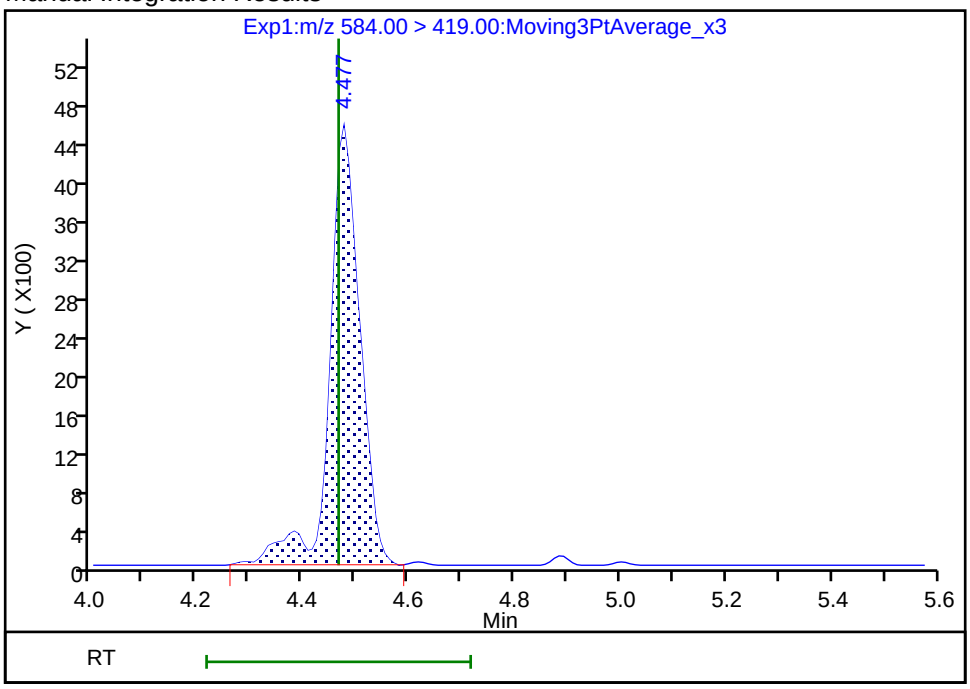
Processing Integration Results

RT: 4.48
Area: 18417
Amount: 0.025429
Amount Units: ng/ml




Manual Integration Results

RT: 4.48
Area: 17973
Amount: 0.024284
Amount Units: ng/ml




Reviewer: zibaa, 10-Sep-2020 10:55:01
Audit Action: Manually Integrated Audit Reason: Baseline

Eurofins TestAmerica, Sacramento

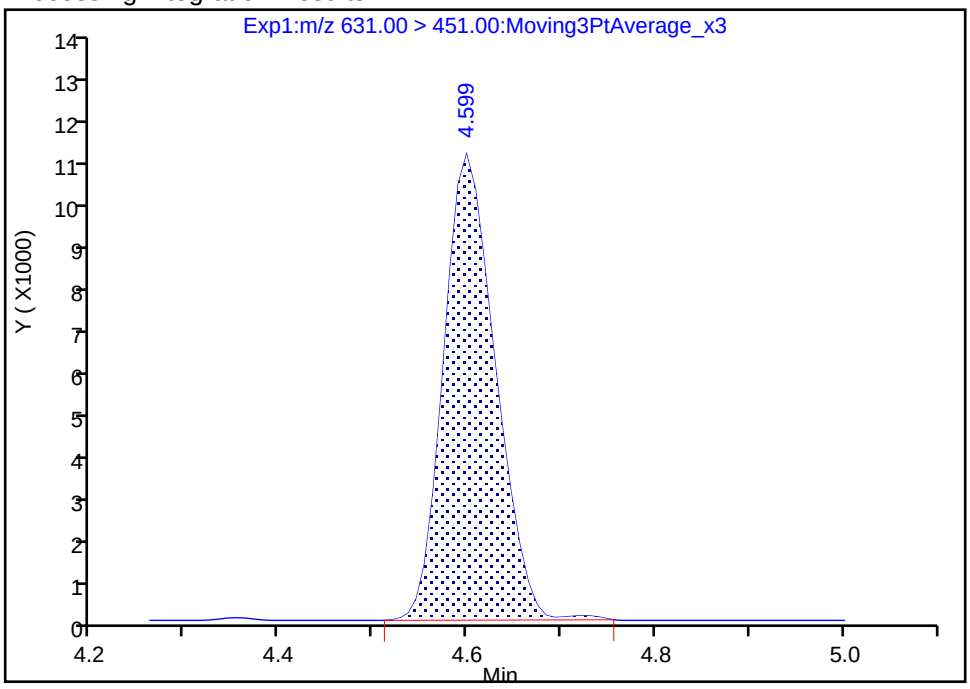
Data File: \\chromfs\Sacramento\ChromData\A9\20200910-102999.b\2020.09.10_A9 _PFC_ICAL_A_016.d
Injection Date: 10-Sep-2020 10:18:34 Instrument ID: A9
Lims ID: IC L1
Client ID:
Operator ID: SACINSTRLCMS02 ALS Bottle#: 10 Worklist Smp#: 2
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFAS_A9 Limit Group: LC PFC ICAL
Column: Detector EXP1

## 51 11-Chloroeicosafluoro-3-oxaundec, CAS: 763051-92-9

Signal: 1

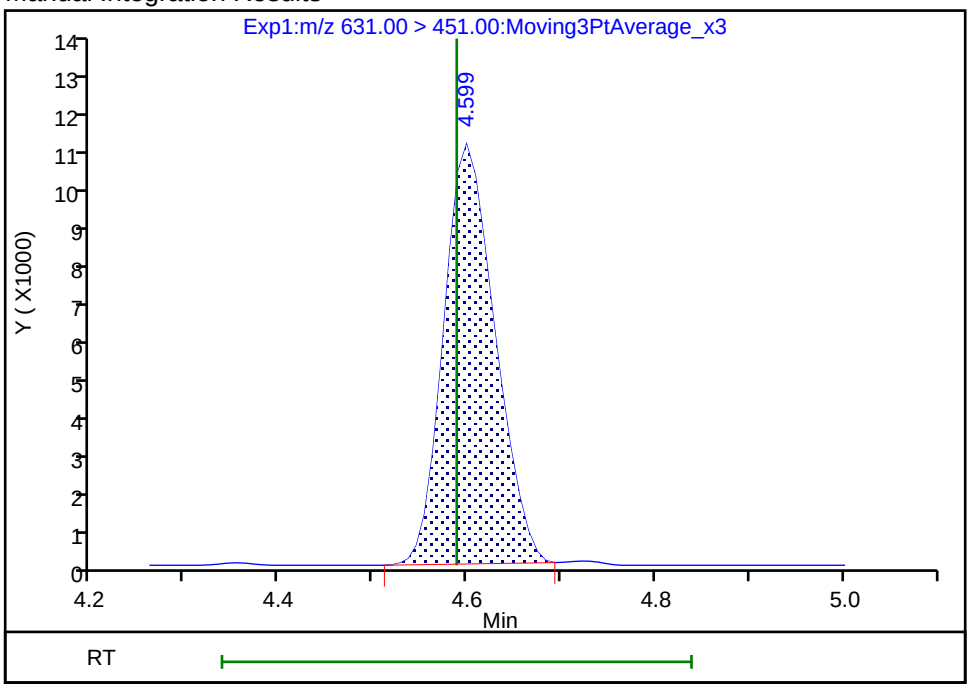
Processing Integration Results

RT: 4.60
Area: 41658
Amount: 0.023655
Amount Units: ng/ml




Manual Integration Results

RT: 4.60
Area: 41091
Amount: 0.018987
Amount Units: ng/ml




Reviewer: zibaa, 10-Sep-2020 10:55:36
Audit Action: Manually Integrated Audit Reason: Baseline

Eurofins TestAmerica, Sacramento

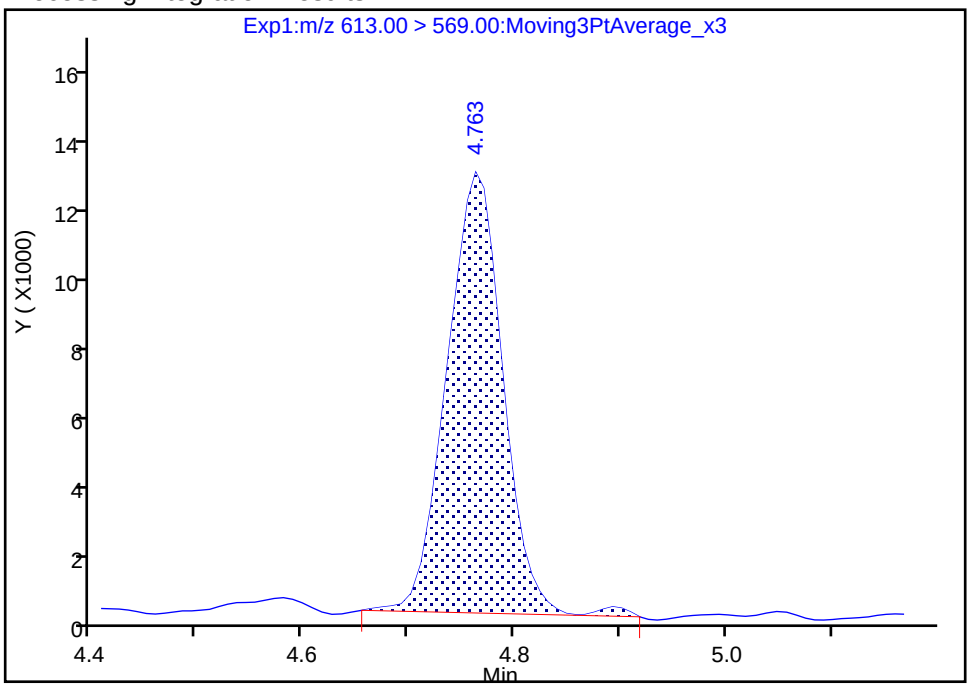
Data File: \\chromfs\Sacramento\ChromData\A9\20200910-102999.b\2020.09.10_A9 _PFC_ICAL_A_016.d
Injection Date: 10-Sep-2020 10:18:34 Instrument ID: A9
Lims ID: IC L1
Client ID:
Operator ID: SACINSTRLCMS02 ALS Bottle#: 10 Worklist Smp#: 2
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFAS_A9 Limit Group: LC PFC ICAL
Column: Detector EXP1

## 52 Perfluorododecanoic acid, CAS: 307-55-1

Signal: 1

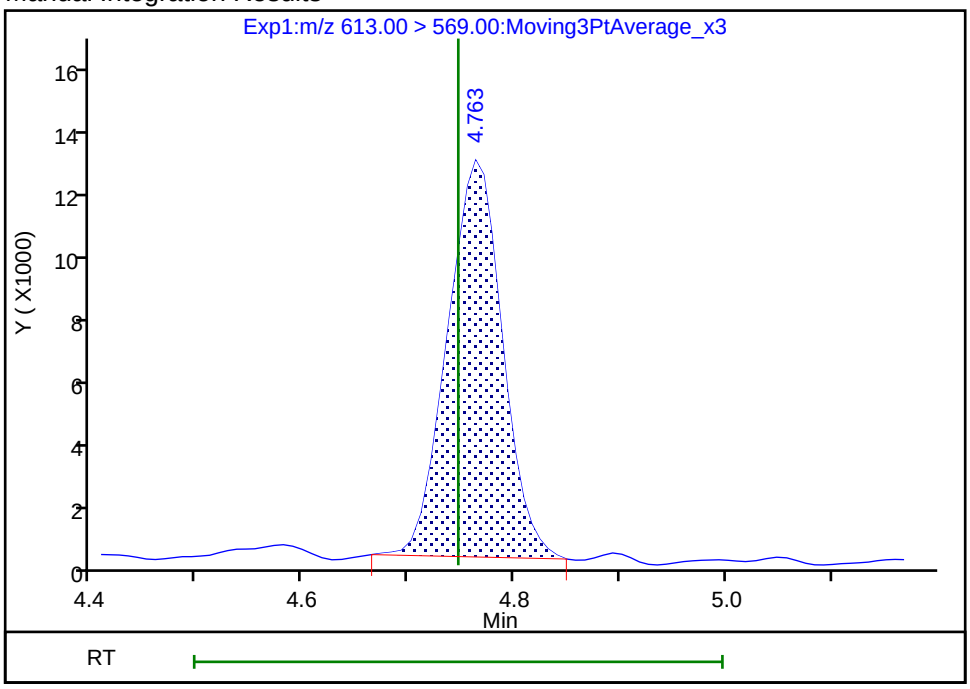
Processing Integration Results

RT: 4.76
Area: 46205
Amount: 0.023661
Amount Units: ng/ml




Manual Integration Results

RT: 4.76
Area: 45119
Amount: 0.022438
Amount Units: ng/ml




Reviewer: zibaa, 10-Sep-2020 10:56:26
Audit Action: Manually Integrated Audit Reason: Baseline

Eurofins TestAmerica, Sacramento

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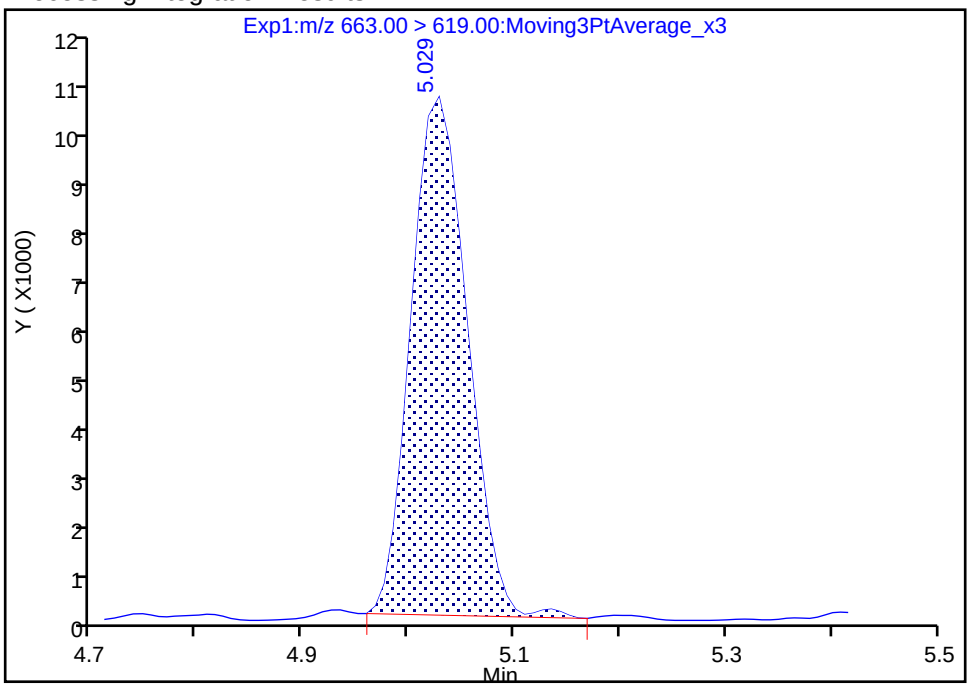
|---|---|---|---|---|---|
| Data File: | \\chromfs\Sacramento\ChromData\A9\20200910-102999.b\2020.09.10_A9 _PFC_ICAL_A_016.d | | | | |
| Injection Date: | 10-Sep-2020 10:18:34 | Instrument ID: | A9 | | |
| Lims ID: | IC L1 | | | | |
| Client ID: | | | | | |
| Operator ID: | SACINSTRLCMS02 | ALS Bottle#: | 10 | Worklist Smp#: | 2 |
| Injection Vol: | 20.0 ul | Dil. Factor: | 1.0000 | | |
| Method: | PFAS_A9 | Limit Group: | LC PFC ICAL | | |
| Column: | | Detector | EXP1 | | |

## 60 Perfluorotridecanoic acid, CAS: 72629-94-8

Signal: 1

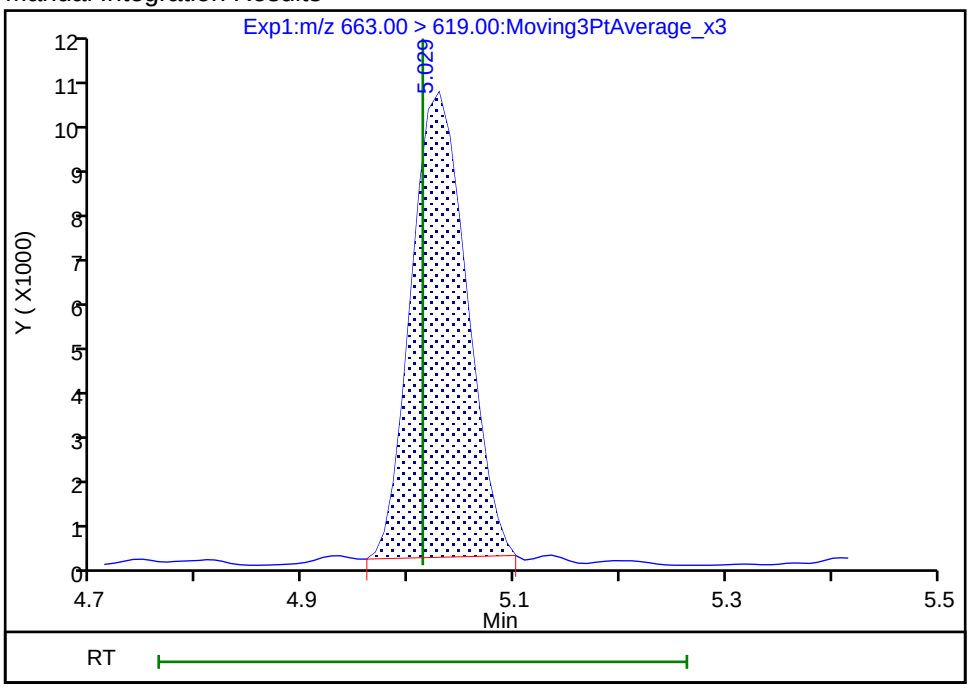
Processing Integration Results

RT: 5.03
Area: 37755
Amount: 0.025301
Amount Units: ng/ml




Manual Integration Results

RT: 5.03
Area: 36800
Amount: 0.023161
Amount Units: ng/ml




Reviewer: zibaa, 10-Sep-2020 10:57:06
Audit Action: Manually Integrated Audit Reason: Baseline

Eurofins TestAmerica, Sacramento

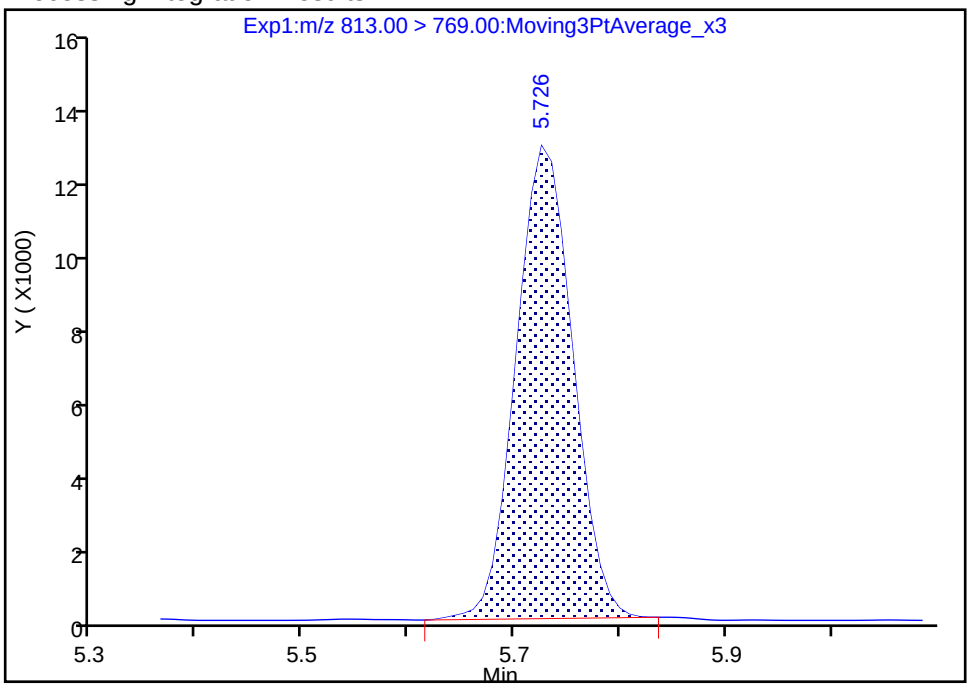
Data File: \\chromfs\Sacramento\ChromData\A9\20200910-102999.b\2020.09.10_A9 _PFC_ICAL_A_016.d
Injection Date: 10-Sep-2020 10:18:34 Instrument ID: A9
Lims ID: IC L1
Client ID:
Operator ID: SACINSTRLCMS02 ALS Bottle#: 10 Worklist Smp#: 2
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFAS_A9 Limit Group: LC PFC ICAL
Column: Detector EXP1

## 64 Perfluorohexadecanoic acid, CAS: 67905-19-5

Signal: 1

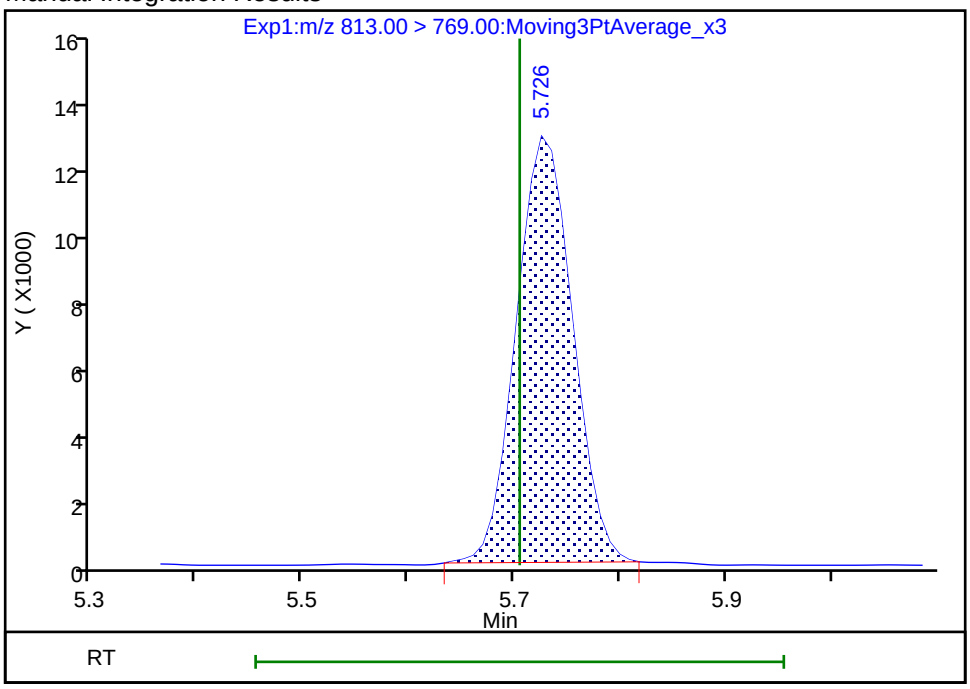
Processing Integration Results

RT: 5.73
Area: 47955
Amount: 0.029398
Amount Units: ng/ml




Manual Integration Results

RT: 5.73
Area: 47498
Amount: 0.026093
Amount Units: ng/ml




Reviewer: zibaa, 10-Sep-2020 10:57:42
Audit Action: Manually Integrated Audit Reason: Baseline

Eurofins TestAmerica, Sacramento

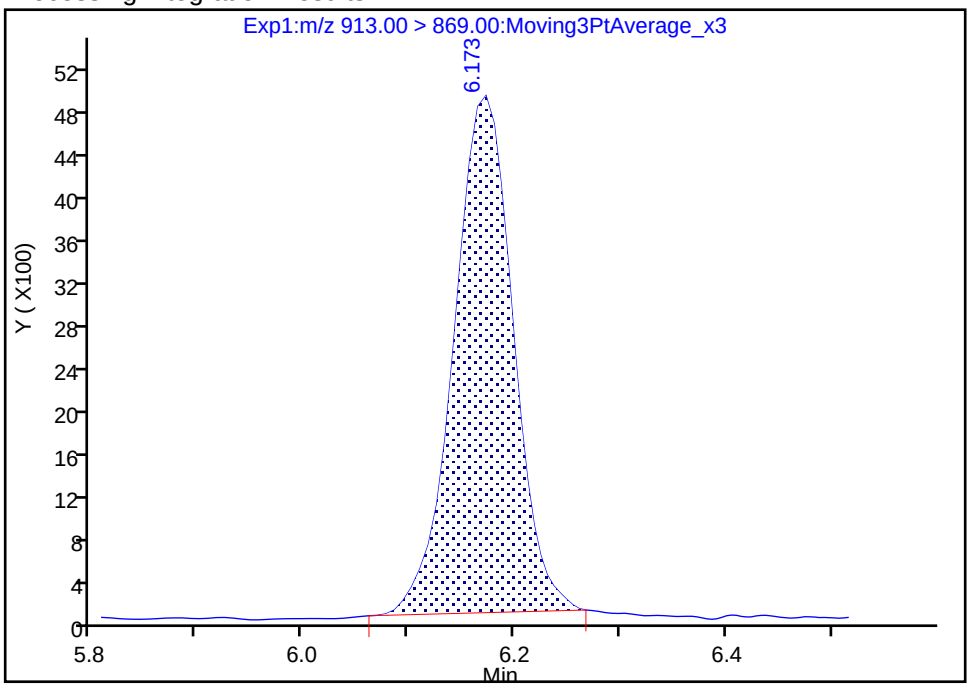
| | | | | | |
|---|---|---|---|---|---|
| Data File: | \\chromfs\Sacramento\ChromData\A9\20200910-102999.b\2020.09.10_A9 _PFC_ICAL_A_016.d | | | | |
| Injection Date: | 10-Sep-2020 10:18:34 | Instrument ID: | A9 | | |
| Lims ID: | IC L1 | | | | |
| Client ID: | | | | | |
| Operator ID: | SACINSTRLCMS02 | ALS Bottle#: | 10 | Worklist Smp#: | 2 |
| Injection Vol: | 20.0 ul | Dil. Factor: | 1.0000 | | |
| Method: | PFAS_A9 | Limit Group: | LC PFC ICAL | | |
| Column: | | Detector | EXP1 | | |

## 65 Perfluorooctadecanoic acid, CAS: 16517-11-6

Signal: 1

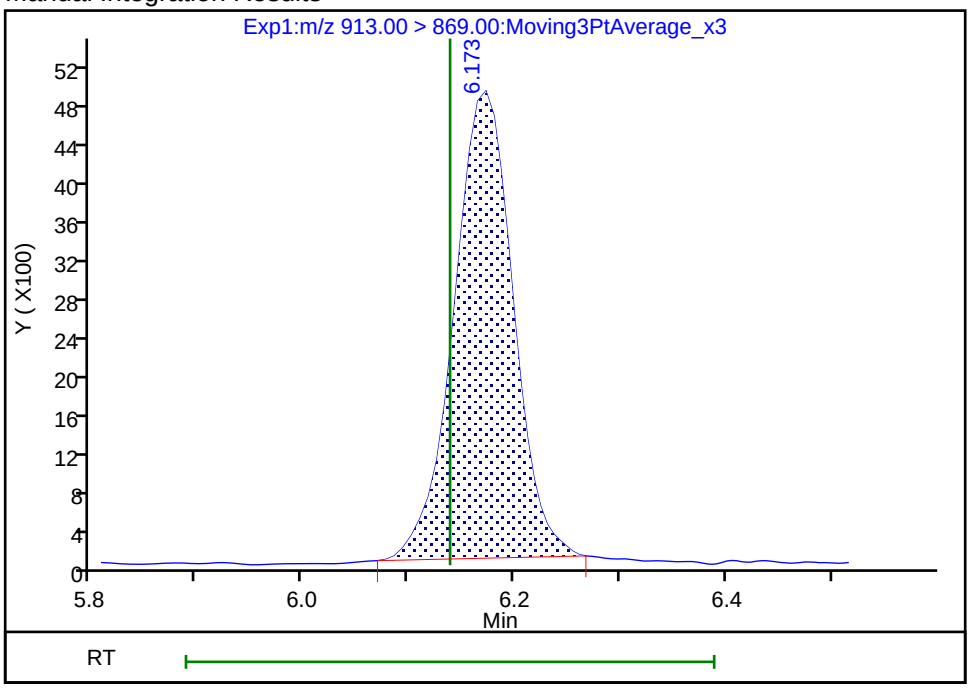
Processing Integration Results

RT: 6.17
Area: 18670
Amount: 0.025372
Amount Units: ng/ml




Manual Integration Results

RT: 6.17
Area: 18658
Amount: 0.023050
Amount Units: ng/ml




Reviewer: zibaa, 10-Sep-2020 10:57:57
Audit Action: Manually Integrated Audit Reason: Baseline

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\A9\20200910-102999.b\2020.09.10_A9 _PFC_ICAL_A_017.d
Lims ID: IC L2
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 10-Sep-2020 10:27:55 ALS Bottle#: 11 Worklist Smp#: 3
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Sample Info: CAL STD2_20
Misc. Info.: Plate: 1 Rack: 1
Operator ID: SACINSTRLCMS02 Instrument ID: A9
Sublist: chrom-PFAS_A9*sub16

Method: \\chromfs\Sacramento\ChromData\A9\20200910-102999.b\PFAS_A9.m
Limit Group: LC PFC ICAL
Last Update: 10-Sep-2020 13:14:15 Calib Date: 10-Sep-2020 12:29:20
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\A9\20200910-102999.b\2020.09.10_A9 _PFC_ICAL_AA_022.d

Column 1 : Det: EXP1
Process Host: CTX1016

First Level Reviewer: zibaa Date: 10-Sep-2020 11:13:51
Ratio Calibration: Average of Initial Calibration

| Signal | RT | EXP RT | DLT RT | REL RT | Response | Amount ng/ml | Ratio(Limits) | %Rec | S/N | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| D 1 13C4 PFBA | | | | | | | | | | |
| 217.00 > 172.00 | 1.902 | 1.901 | 0.001 | 0.563 | 8530166 | 2.38 | | 95.4 | 3122 | |
| 2 Perfluorobutanoic acid | | | | | | | | | | M |
| 212.90 > 169.00 | 1.902 | 1.904 | -0.002 | 1.000 | 137934 | 0.0463 | | 92.6 | 10.3 | M |
| D 4 13C5 PFPeA | | | | | | | | | | |
| 267.90 > 223.00 | 2.207 | 2.211 | -0.004 | 0.654 | 7270115 | 2.41 | | 96.4 | 3781 | |
| 3 Perfluoropentanoic acid | | | | | | | | | | M |
| 262.90 > 219.00 | 2.207 | 2.211 | -0.004 | 1.000 | 153662 | 0.0519 | | 104 | 13.1 | M |
| D 6 13C3 PFBS | | | | | | | | | | |
| 301.90 > 80.00 | 2.244 | 2.241 | 0.003 | 0.664 | 13111521 | 2.20 | | 94.6 | 3246 | |
| 5 Perfluorobutanesulfonic acid | | | | | | | | | | M |
| 298.90 > 80.00 | 2.244 | 2.244 | 0.0 | 1.000 | 246180 | 0.0438 | Target=3.10 | 99.0 | 22.0 | M |
| 298.90 > 99.00 | 2.244 | 2.244 | 0.0 | 1.000 | 78132 | | 3.15(1.55-4.65) | 99.0 | 15.4 | |
| D 8 M2-4:2 FTS | | | | | | | | | | |
| 329.00 > 81.00 | 2.537 | 2.533 | 0.004 | 0.751 | 1332209 | 2.25 | | 96.4 | 821 | |
| 9 1H,1H,2H,2H-perfluorohexanesulfo | | | | | | | | | | |
| 327.00 > 307.00 | 2.537 | 2.535 | 0.002 | 1.000 | 50503 | 0.0448 | | 95.8 | 836 | |
| D 10 13C2 PFHxA | | | | | | | | | | |
| 315.00 > 270.00 | 2.569 | 2.573 | -0.004 | 0.761 | 6685304 | 2.38 | | 95.3 | 2857 | |
| 11 Perfluorohexanoic acid | | | | | | | | | | M |
| 313.00 > 269.00 | 2.569 | 2.573 | -0.004 | 1.000 | 112791 | 0.0506 | Target=9.68 | 101 | 18.0 | M |
| 313.00 > 119.00 | 2.569 | 2.573 | -0.004 | 1.000 | 11801 | | 9.56(4.84-14.52) | 101 | 7.4 | M |
| 12 Perfluoropentanesulfonic acid | | | | | | | | | | |
| 349.00 > 80.00 | 2.591 | 2.587 | 0.004 | 1.154 | 100810 | 0.0445 | Target=2.01 | 94.9 | 27.2 | |
| 349.00 > 99.00 | 2.591 | 2.587 | 0.004 | 1.154 | 51265 | | 1.97(1.00-3.01) | 94.9 | 59.1 | |
| D 13 13C3 HFPO-DA | | | | | | | | | | |
| 287.00 > 169.00 | 2.696 | 2.692 | 0.004 | 0.798 | 4561962 | 2.37 | | 94.8 | 4348 | |

| Signal | RT | EXP RT | DLT RT | REL RT | Response | Amount ng/ml | Ratio(Limits) | %Rec | S/N | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| 14 Perfluoro(2-propoxypropanoic) ac | | | | | | | | | | M |
| 285.00 > 169.00 | 2.687 | 2.691 | -0.004 | 0.996 | 33818 | 0.0468 | | 93.6 | 178 | M |
| D 15 13C4 PFHpA | | | | | | | | | | |
| 367.00 > 322.00 | 2.963 | 2.965 | -0.002 | 0.877 | 6481134 | 2.37 | | 94.9 | 3817 | |
| D 17 18O2 PFHxS | | | | | | | | | | |
| 403.00 > 84.00 | 2.969 | 2.969 | 0.0 | 0.879 | 6395663 | 2.24 | | 94.8 | 3248 | |
| 18 Perfluoroheptanoic acid | | | | | | | | | | M |
| 363.00 > 319.00 | 2.969 | 2.966 | 0.003 | 1.002 | 152546 | 0.0531 | Target=3.74 | 106 | 32.1 | M |
| 363.00 > 169.00 | 2.969 | 2.966 | 0.003 | 1.002 | 36134 | | 4.22(1.87-5.61) | 106 | 40.4 | |
| 16 Perfluorohexanesulfonic acid | | | | | | | | | | M |
| 399.00 > 80.00 | 2.969 | 2.971 | -0.002 | 1.000 | 145334 | 0.0456 | Target=3.29 | 100 | 35.8 | M |
| 399.00 > 99.00 | 2.963 | 2.971 | -0.008 | 0.998 | 45392 | | 3.20(1.65-4.94) | 100 | 37.6 | M |
| 19 DONA | | | | | | | | | | |
| 377.00 > 251.00 | 3.017 | 3.017 | 0.0 | 0.802 | 235814 | 0.0439 | Target=1.80 | 93.2 | 406 | |
| 377.00 > 85.00 | 3.017 | 3.017 | 0.0 | 0.802 | 127960 | | 1.84(0.90-2.70) | 93.2 | 253 | |
| D 20 M2-6:2 FTS | | | | | | | | | | |
| 429.00 > 81.00 | 3.353 | 3.352 | 0.001 | 0.993 | 1211683 | 2.37 | | 100.0 | 760 | |
| 22 1H,1H,2H,2H-perfluorooctanesulfo | | | | | | | | | | |
| 427.00 > 407.00 | 3.360 | 3.353 | 0.007 | 1.002 | 33398 | 0.0425 | | 89.6 | 57.0 | |
| $ 21 13C8 PFOA | | | | | | | | | | |
| 421.00 > 376.00 | 3.360 | 3.362 | -0.002 | 0.995 | 5187915 | 2.42 | | 98.9 | 6360 | |
| 24 Perfluorooctanoic acid | | | | | | | | | | M |
| 413.00 > 369.00 | 3.377 | 3.375 | 0.002 | 1.000 | 142372 | 0.0526 | Target=2.37 | 105 | 36.7 | M |
| 413.00 > 169.00 | 3.377 | 3.375 | 0.002 | 1.000 | 58415 | | 2.44(1.19-3.56) | 105 | 90.7 | |
| 23 Perfluoroheptanesulfonic acid | | | | | | | | | | M |
| 449.00 > 80.00 | 3.368 | 3.369 | -0.001 | 0.895 | 120618 | 0.0440 | Target=3.65 | 92.5 | 39.8 | M |
| 449.00 > 99.00 | 3.368 | 3.369 | -0.001 | 0.895 | 31901 | | 3.78(1.83-5.48) | 92.5 | 77.5 | |
| D 26 13C4 PFOA | | | | | | | | | | |
| 417.00 > 372.00 | 3.377 | 3.376 | 0.001 | 1.000 | 6274406 | 2.45 | | 98.1 | 4938 | |
| * 25 13C2 PFOA | | | | | | | | | | |
| 415.00 > 370.00 | 3.377 | 3.376 | 0.001 | | 6627803 | 2.50 | | | 4421 | |
| $ 27 13C8 PFOS | | | | | | | | | | |
| 507.00 > 99.00 | 3.753 | 3.748 | 0.005 | 1.111 | 1541260 | 2.29 | | 95.7 | 1817 | |
| D 31 13C4 PFOS | | | | | | | | | | |
| 503.00 > 80.00 | 3.762 | 3.756 | 0.006 | 1.114 | 7081760 | 2.38 | | 99.5 | 1631 | |
| 28 Perfluorooctanesulfonic acid | | | | | | | | | | M |
| 499.00 > 80.00 | 3.753 | 3.756 | -0.003 | 0.998 | 129682 | 0.0421 | Target=4.12 | 90.7 | 22.2 | M |
| 499.00 > 99.00 | 3.753 | 3.756 | -0.003 | 0.998 | 33146 | | 3.91(2.06-6.17) | 90.7 | 78.6 | M |
| D 29 13C5 PFNA | | | | | | | | | | |
| 468.00 > 423.00 | 3.771 | 3.767 | 0.004 | 1.117 | 5359539 | 2.41 | | 96.5 | 3717 | |
| 30 Perfluorononanoic acid | | | | | | | | | | |
| 463.00 > 419.00 | 3.771 | 3.770 | 0.001 | 1.000 | 102230 | 0.0479 | Target=4.21 | 95.8 | 85.9 | |
| 463.00 > 169.00 | 3.771 | 3.770 | 0.001 | 1.000 | 23382 | | 4.37(2.11-6.32) | 95.8 | 41.7 | |
| 32 9-Chlorohexadecafluoro-3-oxanona | | | | | | | | | | |
| 531.00 > 351.00 | 3.956 | 3.956 | 0.0 | 1.052 | 70052 | 0.0377 | | 80.9 | 242 | |
| D 36 13C8 FOSA | | | | | | | | | | |
| 506.00 > 78.00 | 4.082 | 4.086 | -0.004 | 1.209 | 3362698 | 2.40 | | 96.1 | 2632 | |

| Signal | RT | EXP RT | DLT RT | REL RT | Response | Amount ng/ml | Ratio(Limits) | %Rec | S/N | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| 34 Perfluorooctanesulfonamide | | | | | | | | | | |
| 498.00 > 78.00 | 4.082 | 4.086 | -0.004 | 1.000 | 193336 | 0.0517 | | 103 | 326 | |
| 35 Perfluorononanesulfonic acid | | | | | | | | | | M |
| 549.00 > 80.00 | 4.109 | 4.106 | 0.003 | 1.092 | 105305 | 0.0468 | Target=5.56 | 97.5 | 65.6 | M |
| 549.00 > 99.00 | 4.109 | 4.106 | 0.003 | 1.092 | 21473 | | 4.90(2.78-8.34) | 97.5 | 118 | |
| D 33 13C2 PFDA | | | | | | | | | | |
| 515.00 > 470.00 | 4.136 | 4.130 | 0.006 | 1.225 | 7008972 | 2.49 | | 99.5 | 3813 | |
| D 37 M2-8:2 FTS | | | | | | | | | | |
| 529.00 > 81.00 | 4.136 | 4.133 | 0.003 | 1.225 | 1419334 | 2.27 | | 94.8 | 1099 | |
| 38 Perfluorodecanoic acid | | | | | | | | | | |
| 513.00 > 469.00 | 4.136 | 4.132 | 0.004 | 1.000 | 136570 | 0.0488 | Target=14.33 | 97.6 | 84.3 | |
| 513.00 > 169.00 | 4.136 | 4.132 | 0.004 | 1.000 | 10455 | | 13.06(7.16-21.49) | 97.6 | 35.9 | |
| 39 1H,1H,2H,2H-perfluorodecanesulfo | | | | | | | | | | |
| 527.00 > 507.00 | 4.136 | 4.135 | 0.001 | 1.000 | 39446 | 0.0517 | | 108 | 273 | |
| D 41 d3-NMeFOSAA | | | | | | | | | | |
| 573.00 > 419.00 | 4.298 | 4.295 | 0.003 | 1.273 | 3456007 | 2.47 | | 98.7 | 2379 | |
| 40 N-methylperfluorooctanesulfonami | | | | | | | | | | |
| 570.00 > 419.00 | 4.298 | 4.299 | -0.001 | 1.000 | 45421 | 0.0433 | | 86.5 | 5.7 | |
| 42 Perfluorodecanesulfonic acid | | | | | | | | | | M |
| 599.00 > 80.00 | 4.426 | 4.427 | -0.001 | 1.176 | 106796 | 0.0424 | Target=4.29 | 88.1 | 47.6 | M |
| 599.00 > 99.00 | 4.434 | 4.427 | 0.007 | 1.179 | 27977 | | 3.82(2.15-6.44) | 88.1 | 99.9 | |
| D 46 13C2 PFUnA | | | | | | | | | | |
| 565.00 > 520.00 | 4.460 | 4.455 | 0.005 | 1.321 | 5260148 | 2.42 | | 96.8 | 6249 | |
| D 45 d5-NEtFOSAA | | | | | | | | | | |
| 589.00 > 419.00 | 4.460 | 4.460 | 0.0 | 1.321 | 2277884 | 2.43 | | 97.0 | 2826 | |
| 43 Perfluoroundecanoic acid | | | | | | | | | | M |
| 563.00 > 519.00 | 4.460 | 4.455 | 0.005 | 1.000 | 69809 | 0.0477 | Target=6.74 | 95.3 | 88.5 | M |
| 563.00 > 169.00 | 4.452 | 4.455 | -0.003 | 0.998 | 12386 | | 5.64(3.37-10.11) | 95.3 | 39.7 | M |
| 44 N-ethylperfluorooctanesulfonamid | | | | | | | | | | M |
| 584.00 > 419.00 | 4.469 | 4.467 | 0.002 | 1.002 | 34070 | 0.0461 | | 92.2 | 168 | M |
| D 47 d7-N-MeFOSE-M | | | | | | | | | | |
| 623.00 > 59.00 | 4.537 | 4.546 | -0.009 | 1.344 | 5539720 | 12.3 | | 98.3 | 5996 | |
| 48 2-(N-methylperfluoro-1-octanesul | | | | | | | | | | |
| 616.00 > 59.00 | 4.554 | 4.557 | -0.003 | 1.004 | 18624 | 0.0403 | | 80.6 | 41.6 | |
| D 49 d-N-MeFOSA-M | | | | | | | | | | |
| 515.00 > 169.00 | 4.563 | 4.565 | -0.002 | 1.351 | 1442000 | 2.29 | | 91.5 | 220 | |
| 50 NMeFOSA | | | | | | | | | | |
| 512.00 > 169.00 | 4.563 | 4.569 | -0.006 | 1.000 | 27638 | 0.0459 | | 91.9 | 121 | |
| 51 11-Chloroeicosafluoro-3-oxaundec | | | | | | | | | | |
| 631.00 > 451.00 | 4.590 | 4.588 | 0.002 | 1.220 | 83643 | 0.0382 | | 81.0 | 233 | |
| D 53 d9-N-EtFOSE-M | | | | | | | | | | |
| 639.00 > 59.00 | 4.712 | 4.718 | -0.006 | 1.395 | 5707198 | 12.1 | | 96.5 | 5559 | |
| 54 2-(N-ethylperfluoro-1-octanesulf | | | | | | | | | | |
| 630.00 > 59.00 | 4.721 | 4.731 | -0.010 | 1.002 | 18393 | 0.0405 | | 81.1 | 45.5 | |
| D 58 d-N-EtFOSA-M | | | | | | | | | | |
| 531.00 > 169.00 | 4.739 | 4.741 | -0.002 | 1.403 | 1516817 | 2.32 | | 92.7 | 983 | |

| Signal | RT | EXP RT | DLT RT | REL RT | Response | Amount ng/ml | Ratio(Limits) | %Rec | S/N | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| 57 N-ethylperfluoro-1-octanesulfona | | | | | | | | | | |
| 526.00 > 169.00 | 4.748 | 4.749 | -0.001 | 1.002 | 28777 | 0.0477 | | 95.3 | 95.2 | |
| D 56 13C2 PFDoA | | | | | | | | | | |
| 615.00 > 570.00 | 4.756 | 4.747 | 0.009 | 1.408 | 5293603 | 2.48 | | 99.2 | 7987 | |
| 52 Perfluorododecanoic acid | | | | | | | | | | M |
| 613.00 > 569.00 | 4.748 | 4.747 | 0.001 | 0.998 | 99619 | 0.0512 | Target=6.67 | 102 | 155 | |
| 613.00 > 169.00 | 4.756 | 4.747 | 0.009 | 1.000 | 16285 | | 6.12(3.34-10.01) | 102 | 67.2 | M |
| 55 1H,1H,2H,2H-perfluorododecanesul | | | | | | | | | | |
| 627.00 > 607.00 | 4.771 | 4.766 | 0.005 | 1.154 | 24976 | 0.0513 | | 106 | 233 | |
| 59 Perfluorododecanesulfonic acid ( | | | | | | | | | | |
| 699.00 > 80.00 | 4.985 | 4.978 | 0.007 | 1.325 | 16271 | 0.0433 | Target=1.02 | 89.4 | 31.4 | |
| 699.00 > 99.00 | 4.985 | 4.978 | 0.007 | 1.325 | 15010 | | 1.08(0.51-1.53) | 89.4 | 87.8 | |
| 60 Perfluorotridecanoic acid | | | | | | | | | | |
| 663.00 > 619.00 | 5.019 | 5.013 | 0.006 | 1.055 | 71389 | 0.0464 | Target=4.80 | 92.8 | 253 | |
| 663.00 > 169.00 | 5.019 | 5.013 | 0.006 | 1.055 | 14440 | | 4.94(2.40-7.20) | 92.8 | 193 | |
| D 62 13C2 PFTeDA | | | | | | | | | | |
| 715.00 > 670.00 | 5.269 | 5.258 | 0.011 | 1.560 | 3593219 | 2.41 | | 96.6 | 5811 | |
| 61 Perfluorotetradecanoic acid | | | | | | | | | | |
| 713.00 > 169.00 | 5.269 | 5.259 | 0.010 | 1.000 | 11378 | 0.0449 | Target=1.37 | 89.7 | 93.5 | |
| 713.00 > 219.00 | 5.260 | 5.259 | 0.001 | 0.998 | 9079 | | 1.25(0.69-2.06) | 89.7 | 74.5 | |
| D 63 13C2 PFHxDA | | | | | | | | | | |
| 815.00 > 770.00 | 5.717 | 5.703 | 0.014 | 1.693 | 2778903 | 2.52 | | 101 | 7110 | |
| 64 Perfluorohexadecanoic acid | | | | | | | | | | |
| 813.00 > 769.00 | 5.717 | 5.705 | 0.012 | 1.000 | 69039 | 0.0460 | Target=4.63 | 92.0 | 188 | |
| 813.00 > 169.00 | 5.717 | 5.705 | 0.012 | 1.000 | 15337 | | 4.50(2.32-6.95) | 92.0 | 133 | |
| 65 Perfluorooctadecanoic acid | | | | | | | | | | |
| 913.00 > 869.00 | 6.158 | 6.139 | 0.019 | 1.077 | 37227 | 0.0448 | Target=4.01 | 89.6 | 154 | |
| 913.00 > 169.00 | 6.158 | 6.139 | 0.019 | 1.077 | 9063 | | 4.11(2.01-6.02) | 89.6 | 102 | |

## QC Flag Legend

Review Flags

M - Manually Integrated

## Reagents:

LCPFC_LL2_00020 Amount Added: 1.00 Units: mL

Report Date: 10-Sep-2020 13:14:20 Chrom Revision: 2.3 09-Sep-2020 15:12:58

Eurofins TestAmerica, Sacramento

Data File: \\chromfs\Sacramento\ChromData\A9\20200910-102999.b\2020.09.10_A9 _PFC_ICAL_A_017.d

Injection Date: 10-Sep-2020 10:27:55 Instrument ID: A9

Lims ID: IC L2

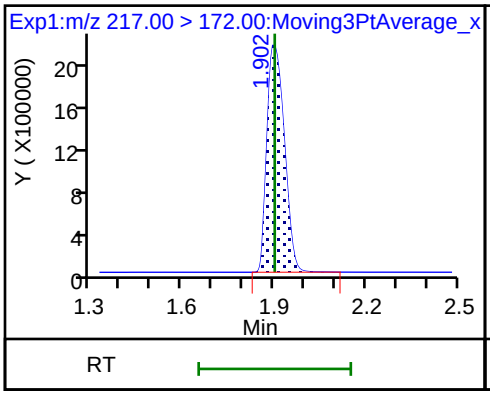
Client ID:

Operator ID: SACINSTRLCMS02 ALS Bottle#: 11 Worklist Smp#: 3

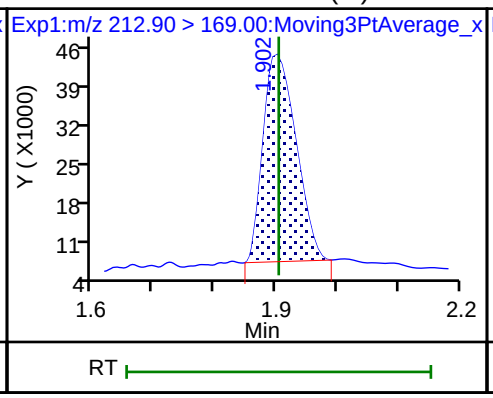
Injection Vol: 20.0 ul Dil. Factor: 1.0000

Method: PFAS_A9 Limit Group: LC PFC ICAL

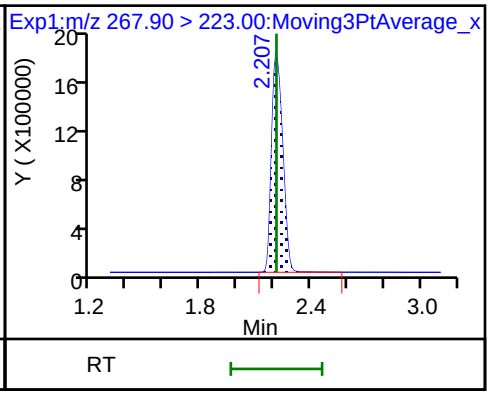
D 1 13C4 PFBA



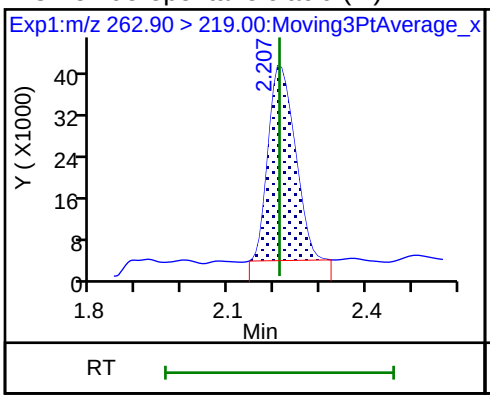

2 Perfluorobutanoic acid (M)



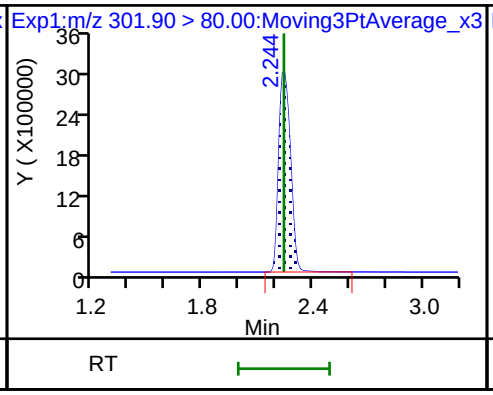

D 4 13C5 PFPeA



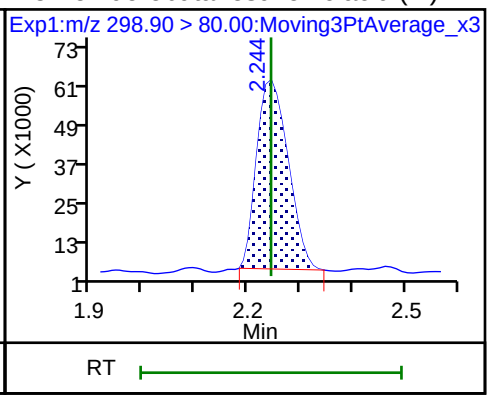

3 Perfluoropentanoic acid (M)



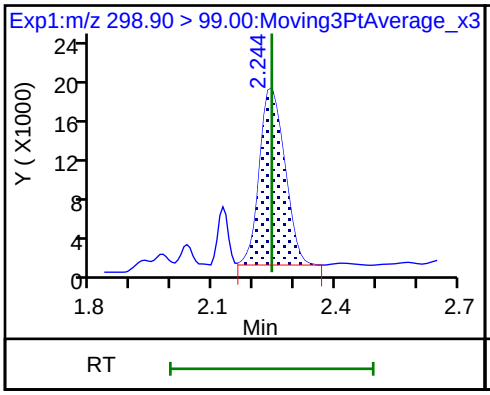

D 6 13C3 PFBS



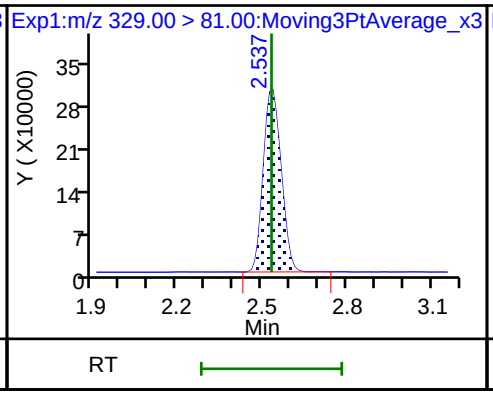

5 Perfluorobutanesulfonic acid (M)



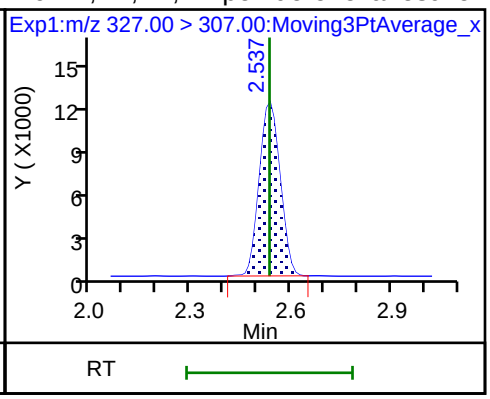

5 Perfluorobutanesulfonic acid



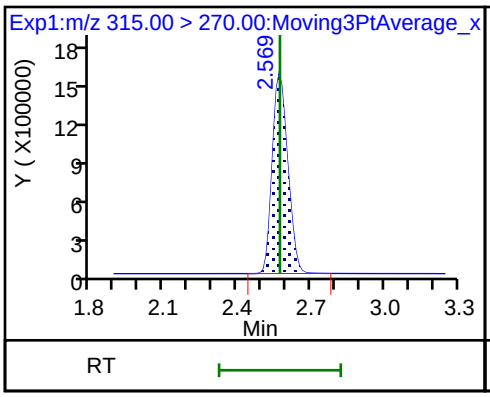

D 8 M2-4:2 FTS



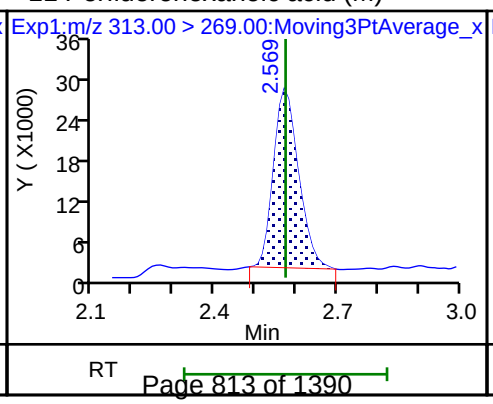

9 1H,1H,2H,2H-perfluorohexanesulfo



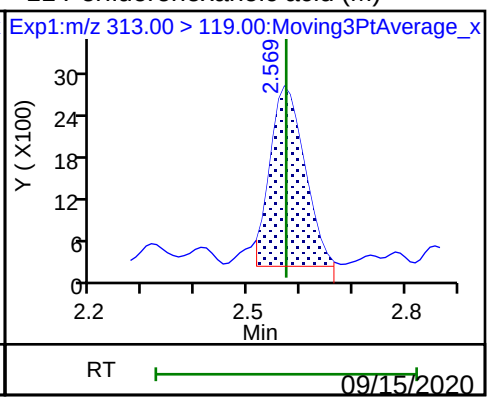

D 10 13C2 PFHxA



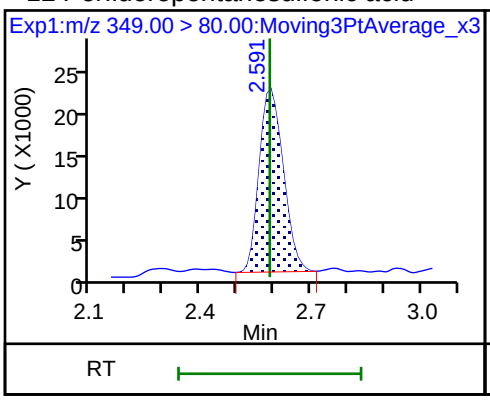

11 Perfluorohexanoic acid (M)



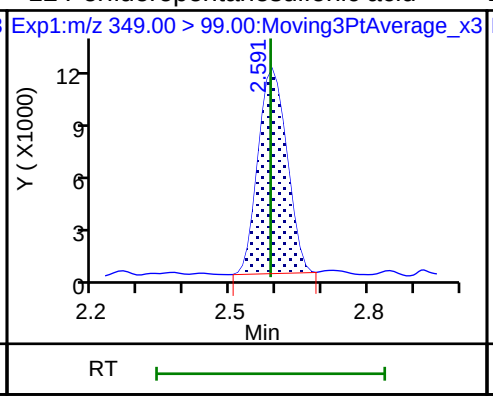

11 Perfluorohexanoic acid (M)



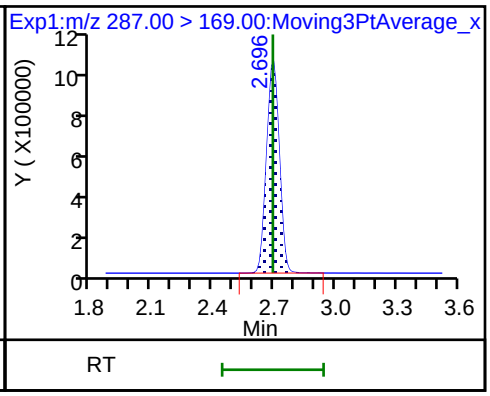
12 Perfluoropentanesulfonic acid



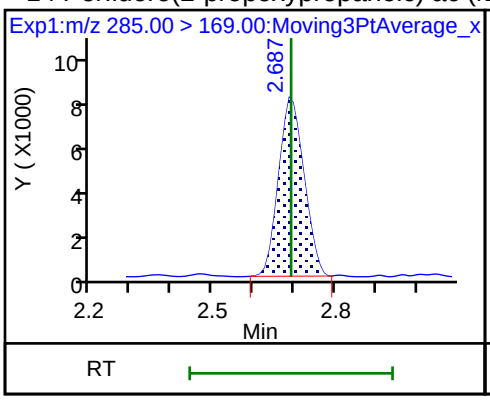

12 Perfluoropentanesulfonic acid



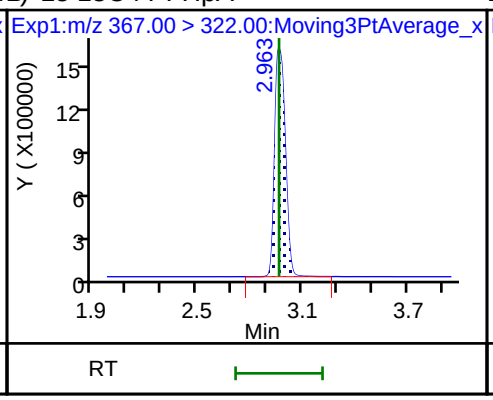

D 13 13C3 HFPO-DA



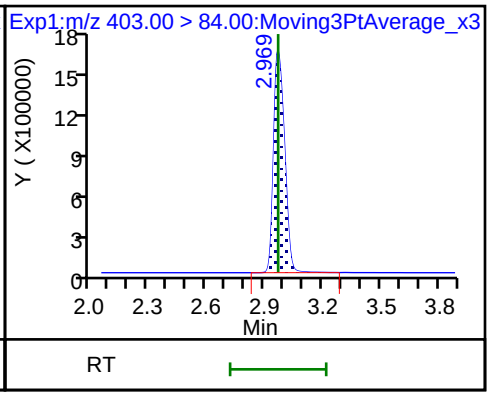

14 Perfluoro(2-propoxypropanoic) ac (M)



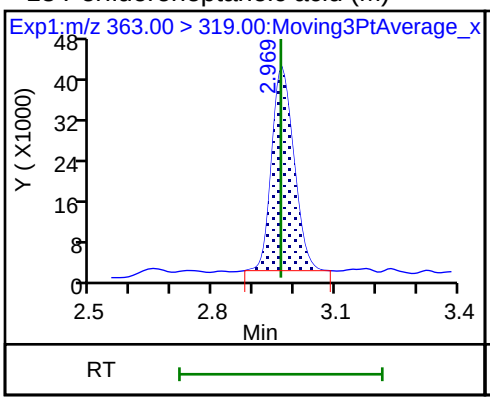

D 15 13C4 PFHpA



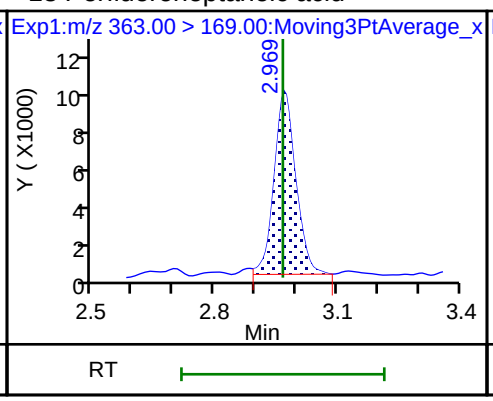

D 17 18O2 PFHxS



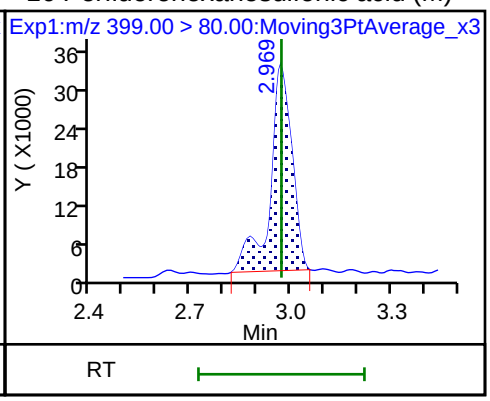

18 Perfluoroheptanoic acid (M)



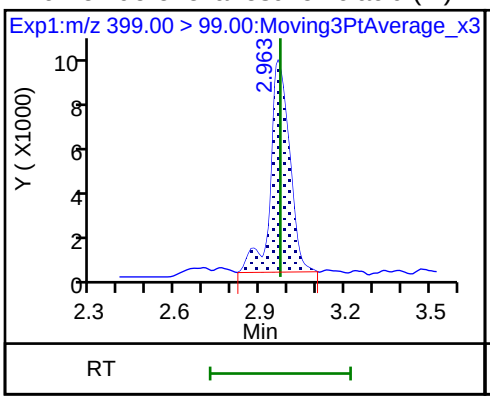

18 Perfluoroheptanoic acid



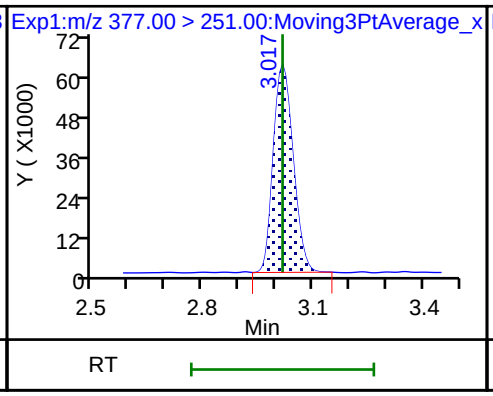

16 Perfluorohexanesulfonic acid (M)



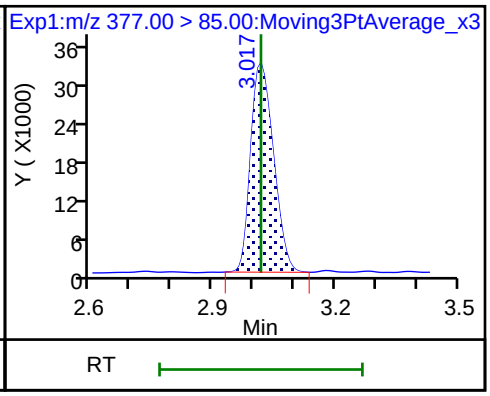

16 Perfluorohexanesulfonic acid (M)



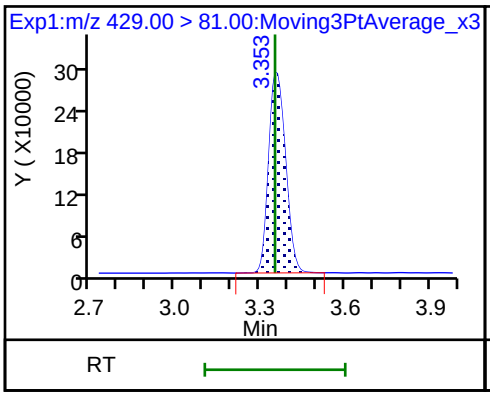

19 DONA



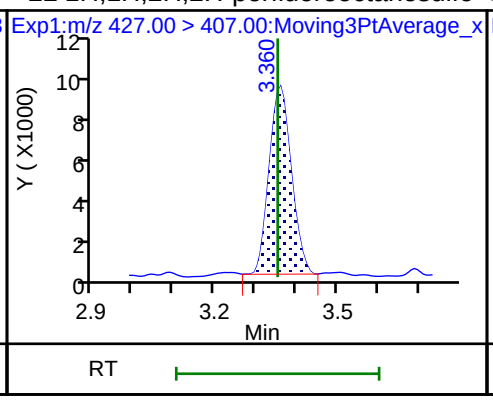

19 DONA



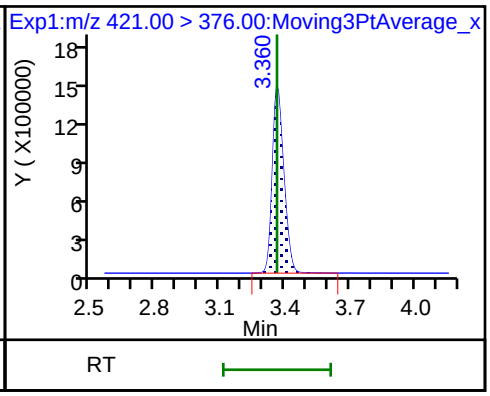
D 20 M2-6:2 FTS



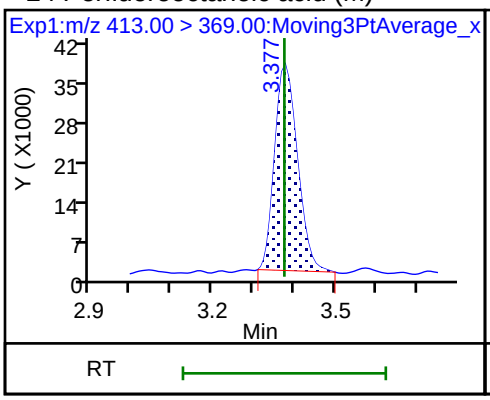

22 1H,1H,2H,2H-perfluorooctanesulfo



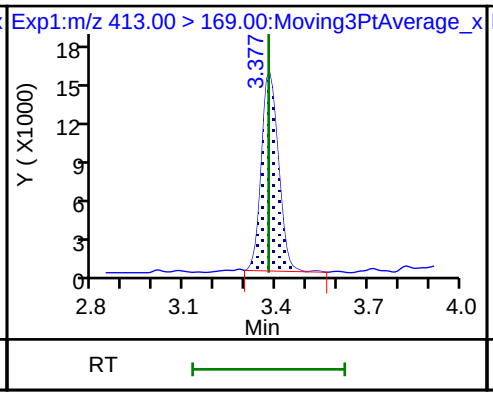

$ 21 13C8 PFOA



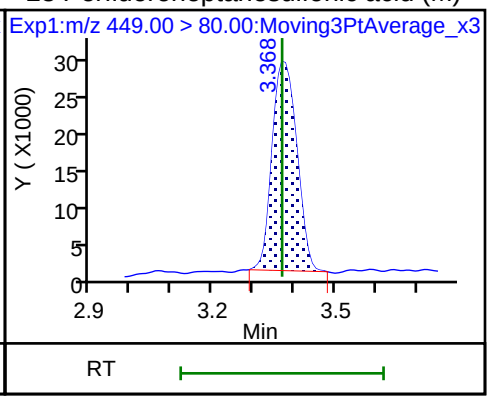

24 Perfluorooctanoic acid (M)



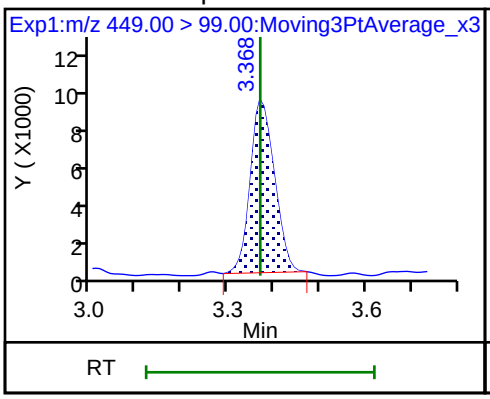

24 Perfluorooctanoic acid



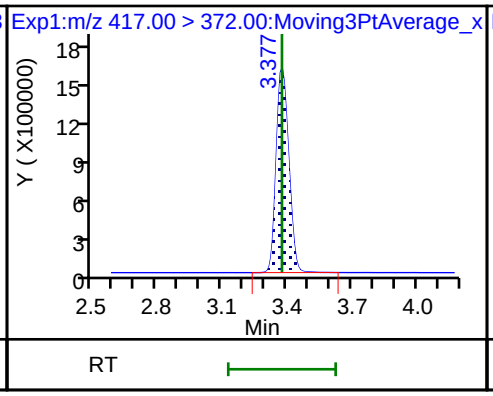

23 Perfluoroheptanesulfonic acid (M)



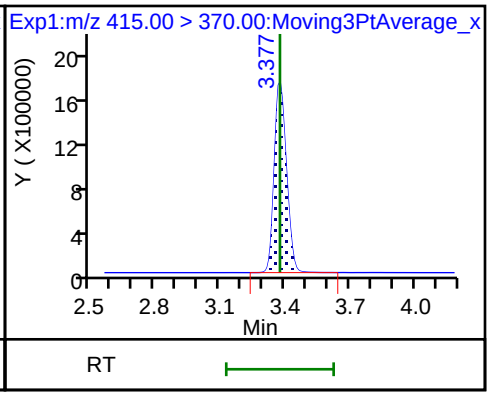

23 Perfluoroheptanesulfonic acid



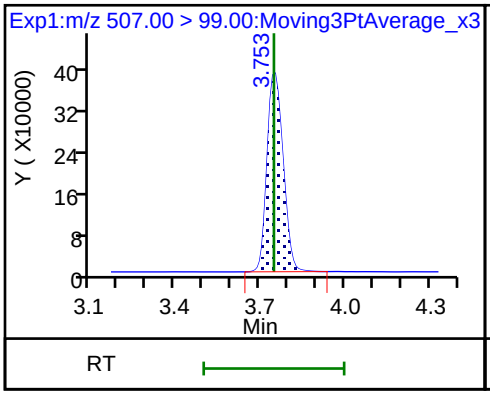

D 26 13C4 PFOA



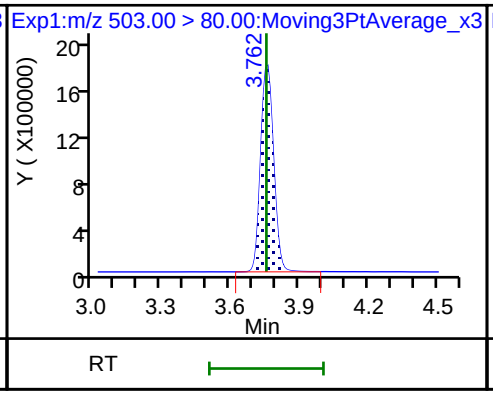

* 25 13C2 PFOA



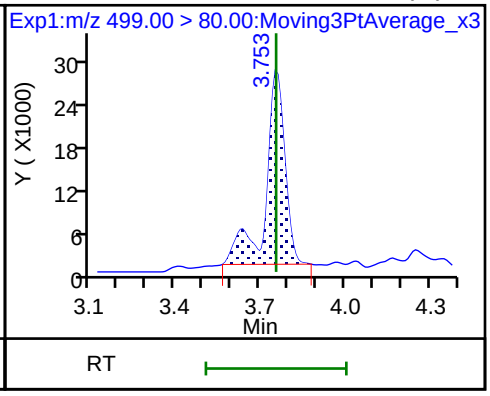

$ 27 13C8 PFOS



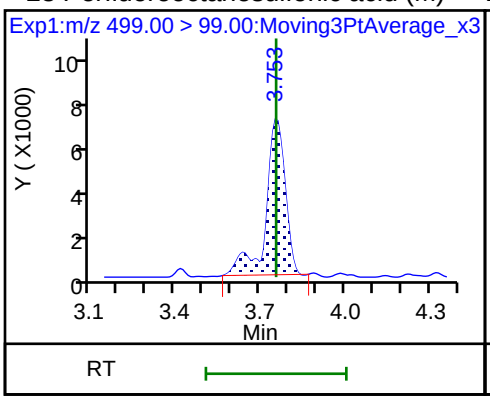

D 31 13C4 PFOS



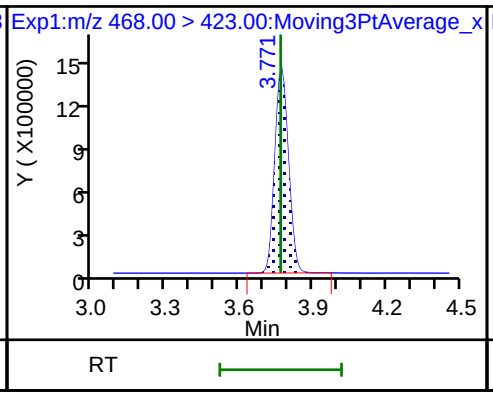

28 Perfluorooctanesulfonic acid (M)



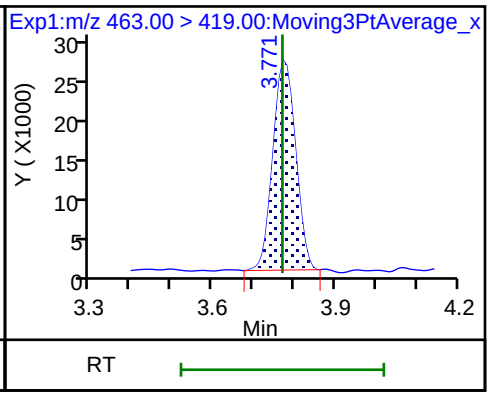
28 Perfluorooctanesulfonic acid (M)



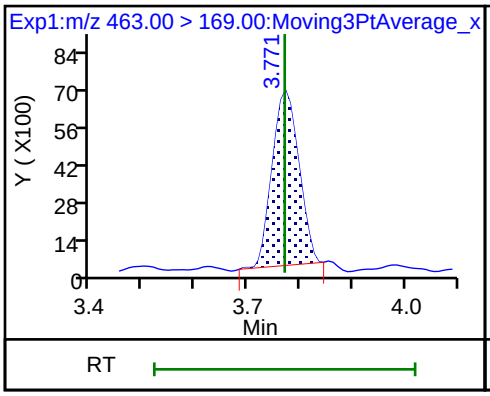

D 29 13C5 PFNA



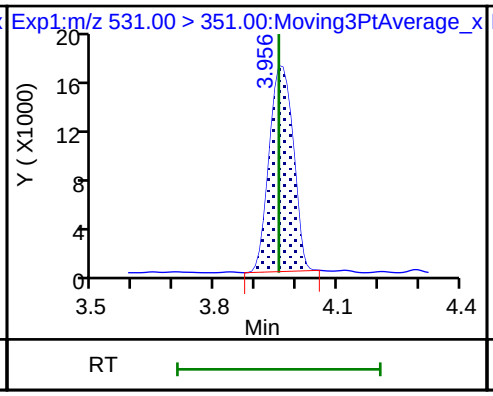

30 Perfluorononanoic acid



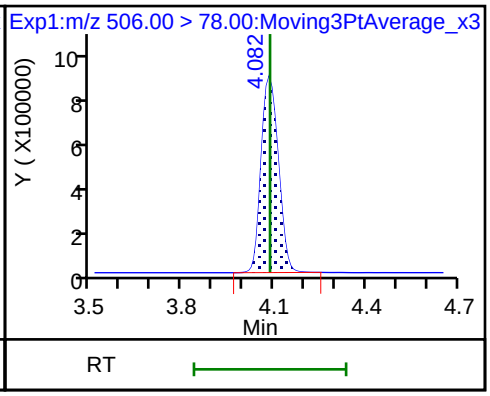

30 Perfluorononanoic acid



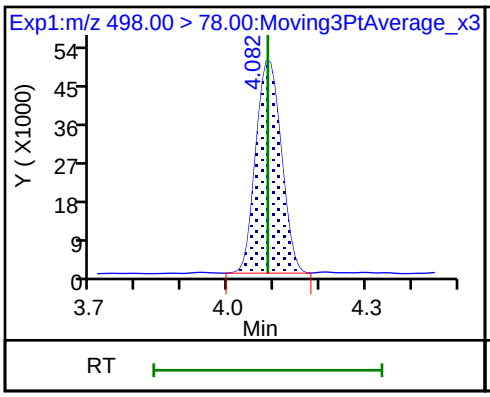

32 9-Chlorohexadecafluoro-3-oxanona



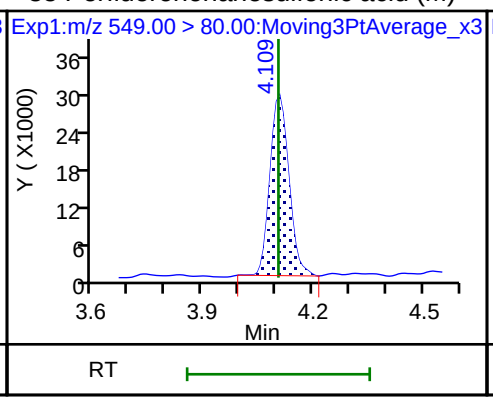

D 36 13C8 FOSA



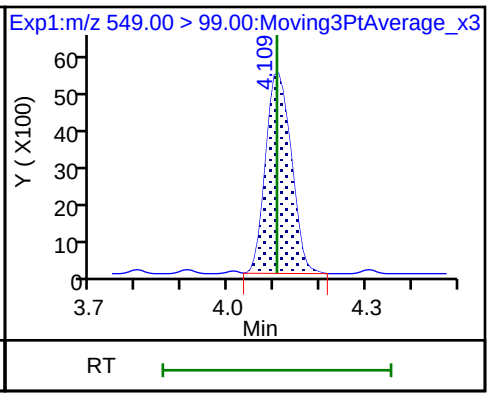

34 Perfluorooctanesulfonamide



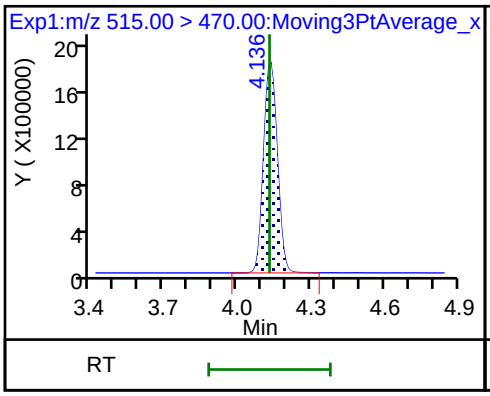

35 Perfluorononanesulfonic acid (M)



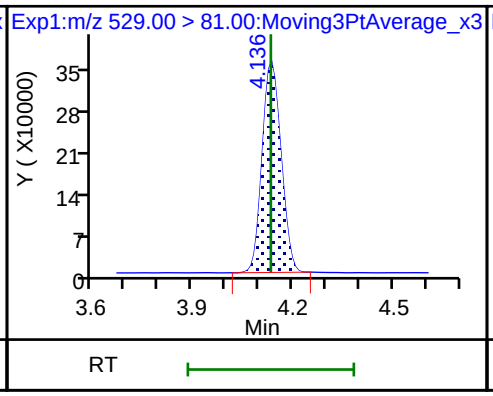

35 Perfluorononanesulfonic acid



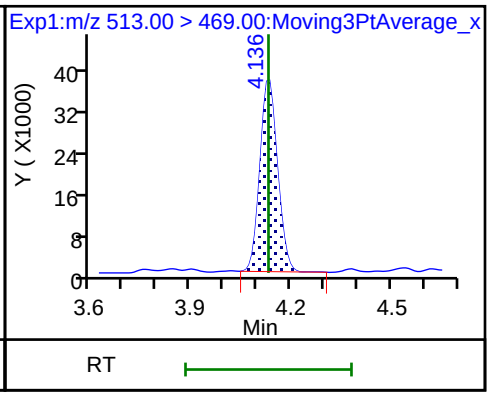

D 33 13C2 PFDA



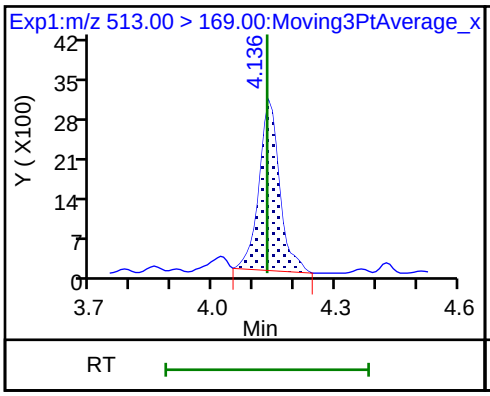

D 37 M2-8:2 FTS



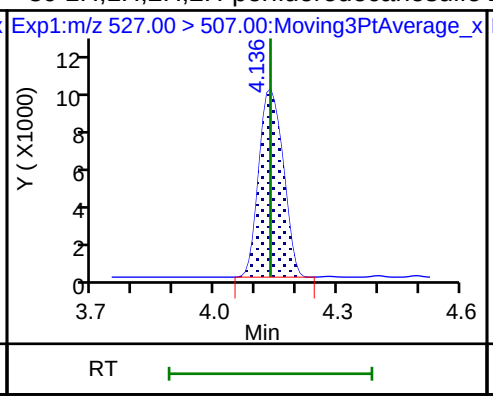

38 Perfluorodecanoic acid



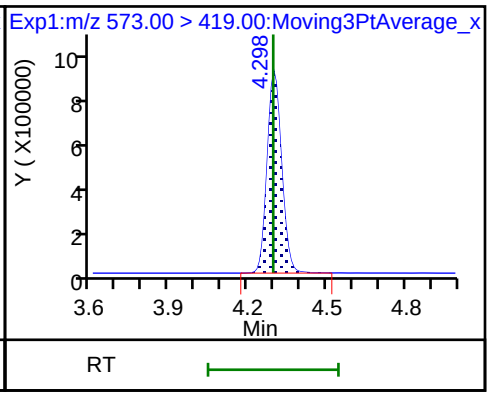
38 Perfluorodecanoic acid



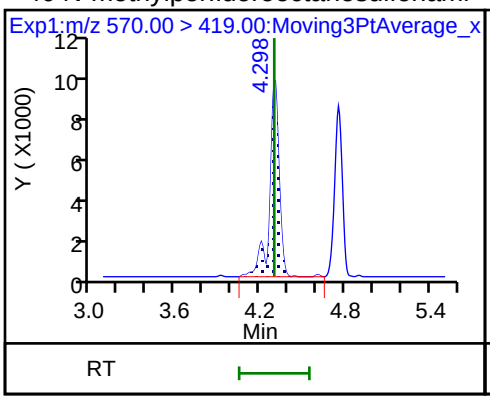

39 1H,1H,2H,2H-perfluorodecanesulfo



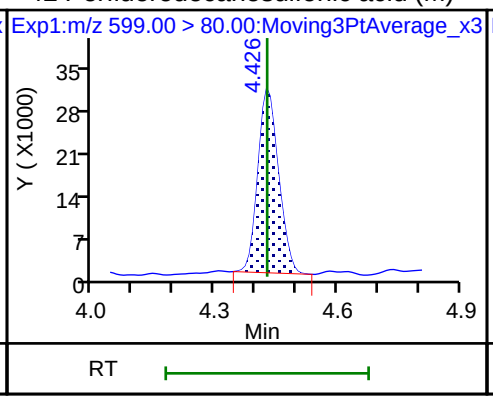

D 41 d3-NMeFOSAA



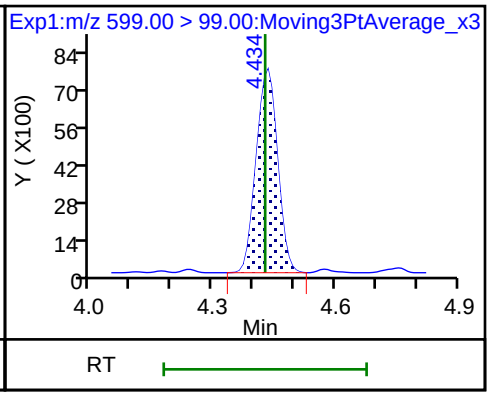

40 N-methylperfluorooctanesulfonami



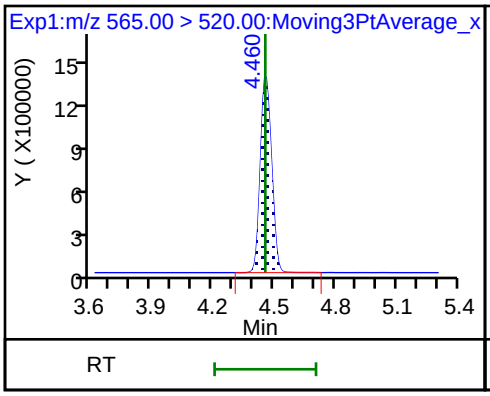

42 Perfluorodecanesulfonic acid (M)



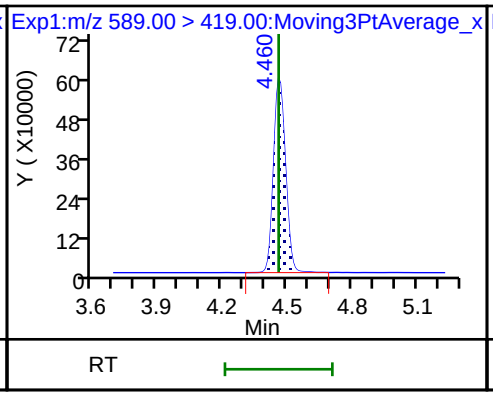

42 Perfluorodecanesulfonic acid



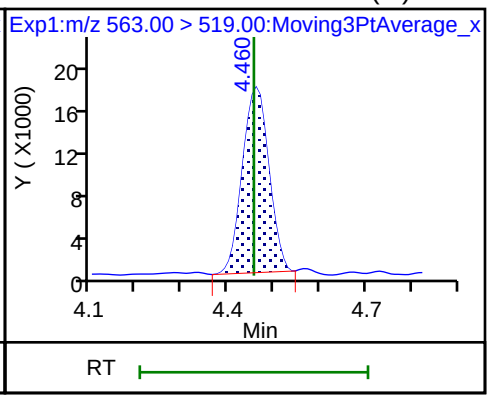

D 46 13C2 PFUnA



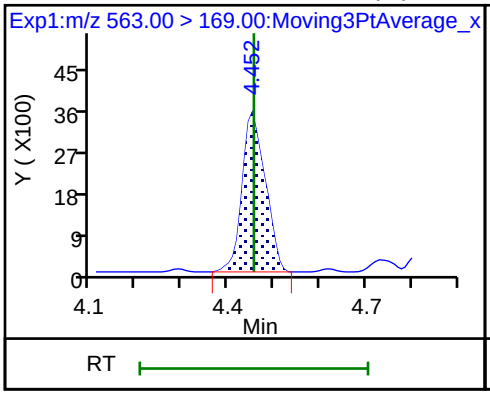

D 45 d5-NEtFOSAA



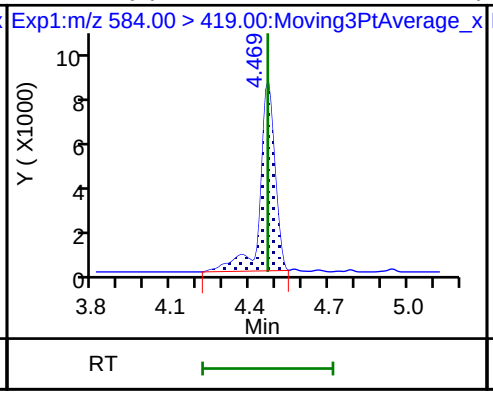

43 Perfluoroundecanoic acid (M)



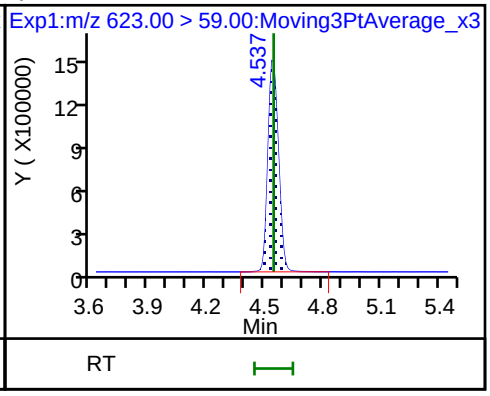

43 Perfluoroundecanoic acid (M)



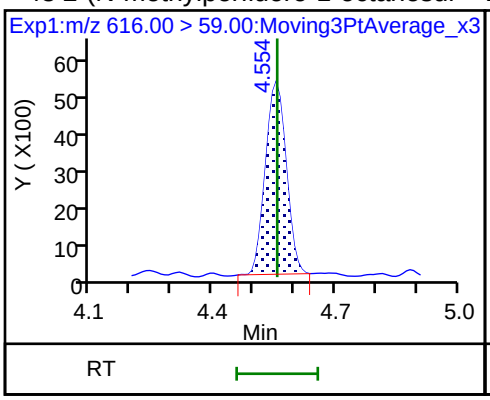

44 N-ethylperfluorooctanesulfonamid (M)



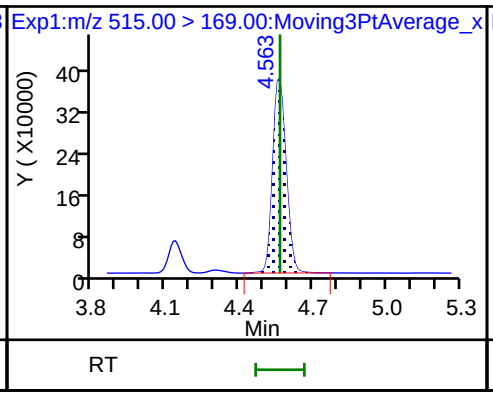

D 47 d7-N-MeFOSE-M



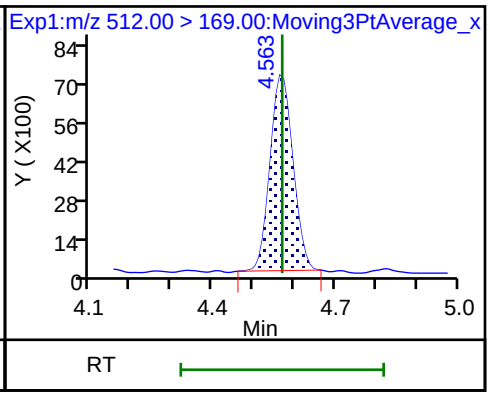
48 2-(N-methylperfluoro-1-octanesul



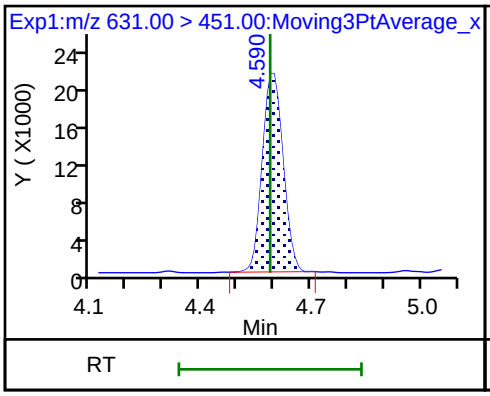

D 49 d-N-MeFOSA-M



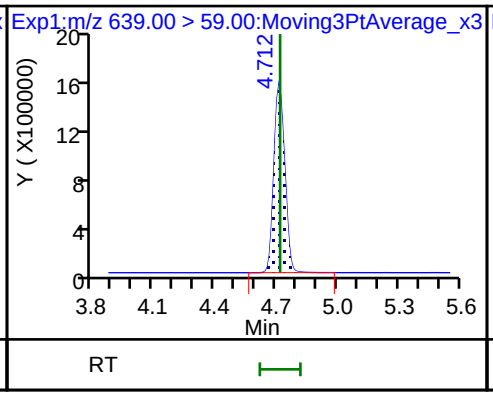

50 NMeFOSA



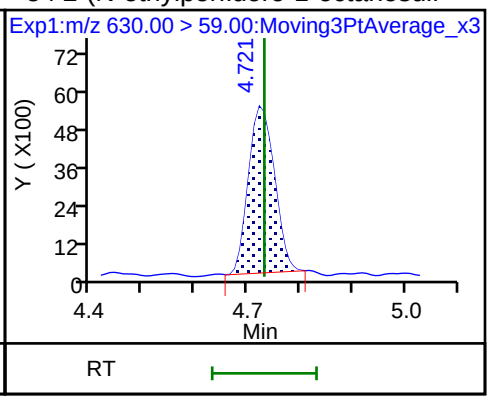

51 11-Chloroeicosafluoro-3-oxaundec



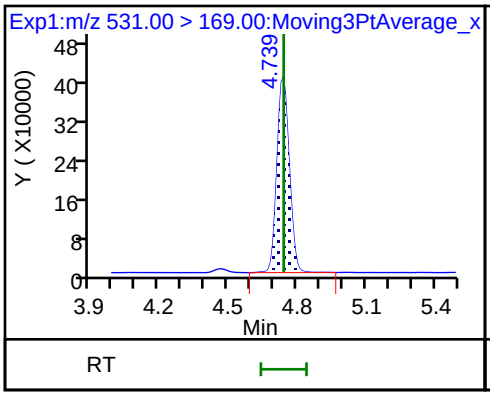

D 53 d9-N-EtFOSE-M



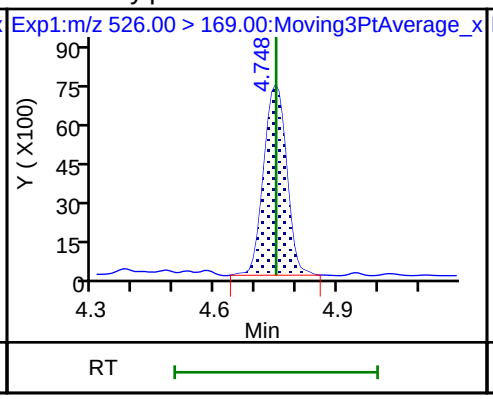

54 2-(N-ethylperfluoro-1-octanesulf



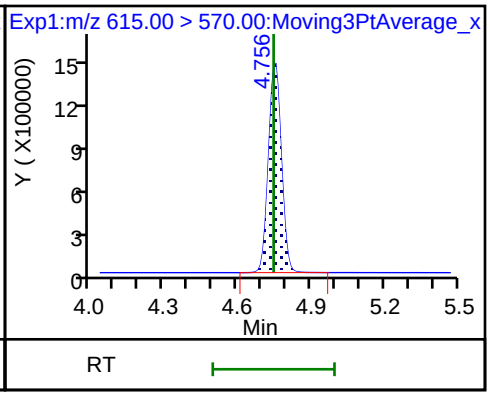

D 58 d-N-EtFOSA-M



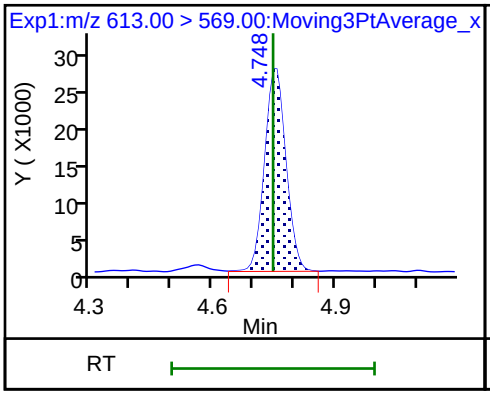

57 N-ethylperfluoro-1-octanesulfona



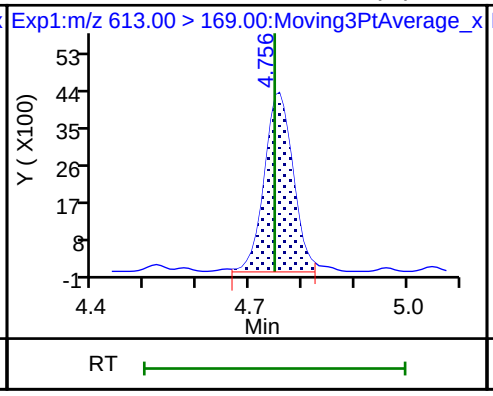

D 56 13C2 PFDoA



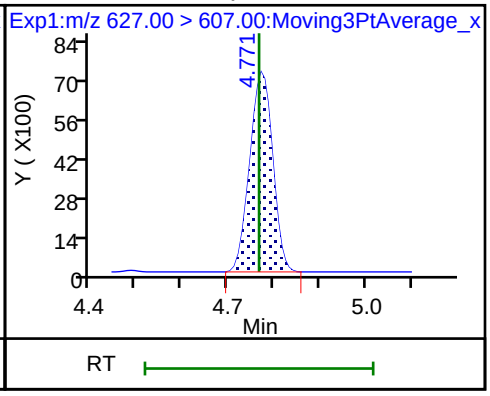

52 Perfluorododecanoic acid



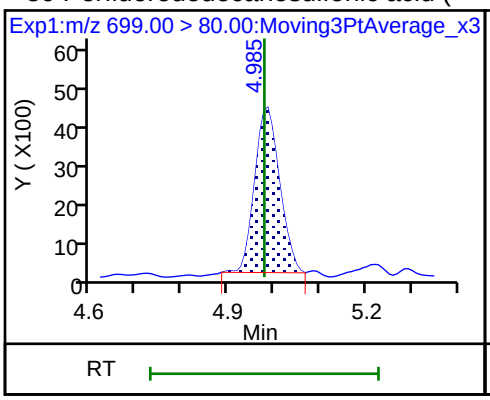

52 Perfluorododecanoic acid (M)



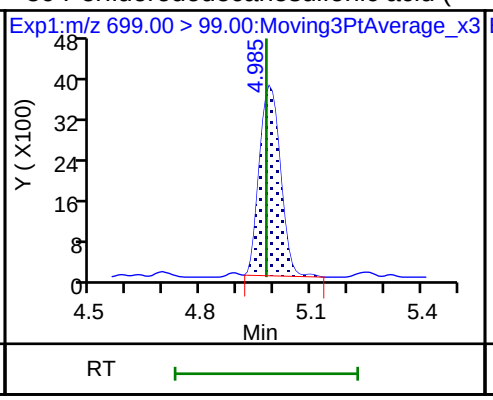

55 1H,1H,2H,2H-perfluorododecanesul



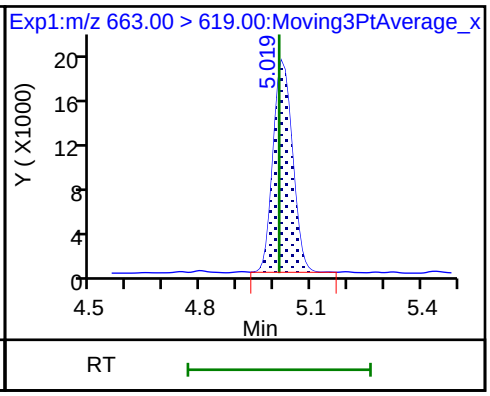
59 Perfluorododecanesulfonic acid (



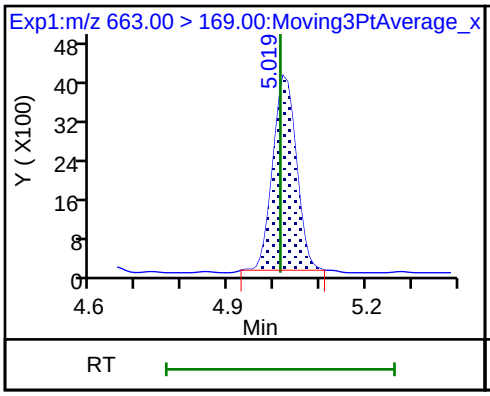

59 Perfluorododecanesulfonic acid (



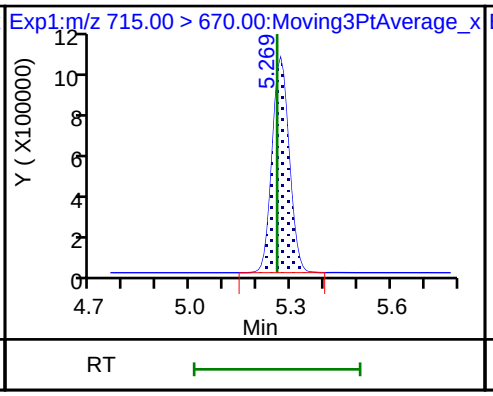

60 Perfluorotridecanoic acid



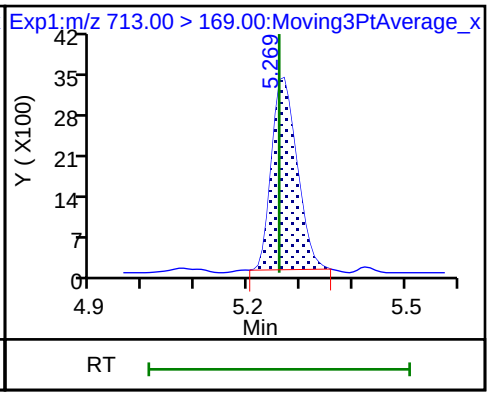

60 Perfluorotridecanoic acid



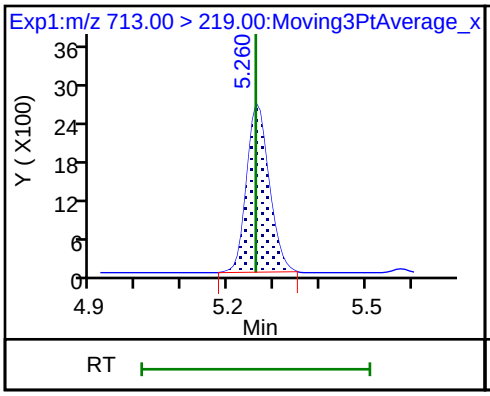

D 62 13C2 PFTeDA



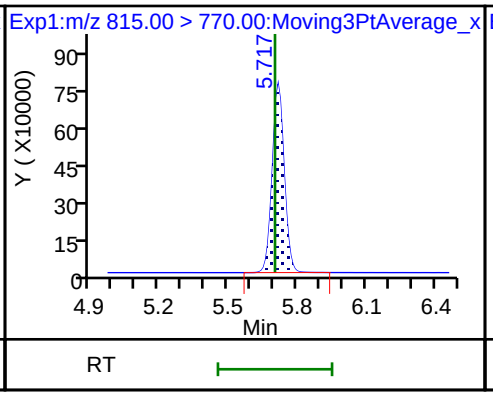

61 Perfluorotetradecanoic acid



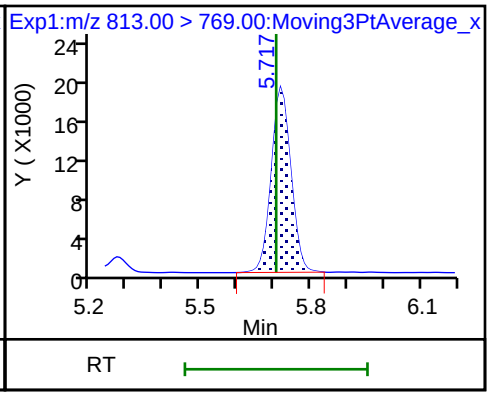

61 Perfluorotetradecanoic acid



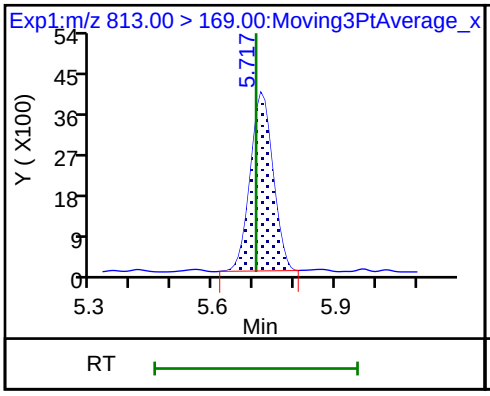

D 63 13C2 PFHxDA



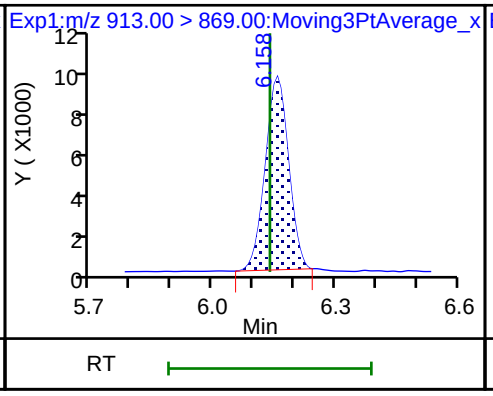

64 Perfluorohexadecanoic acid



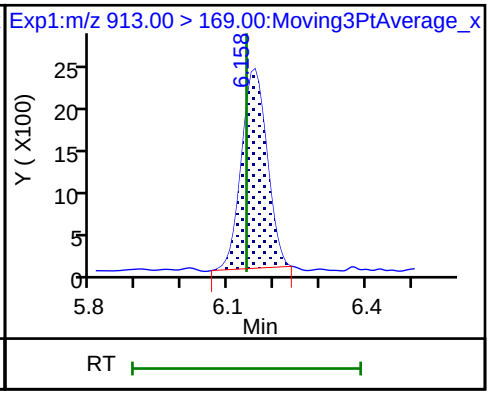

64 Perfluorohexadecanoic acid




65 Perfluorooctadecanoic acid




65 Perfluorooctadecanoic acid



Eurofins TestAmerica, Sacramento

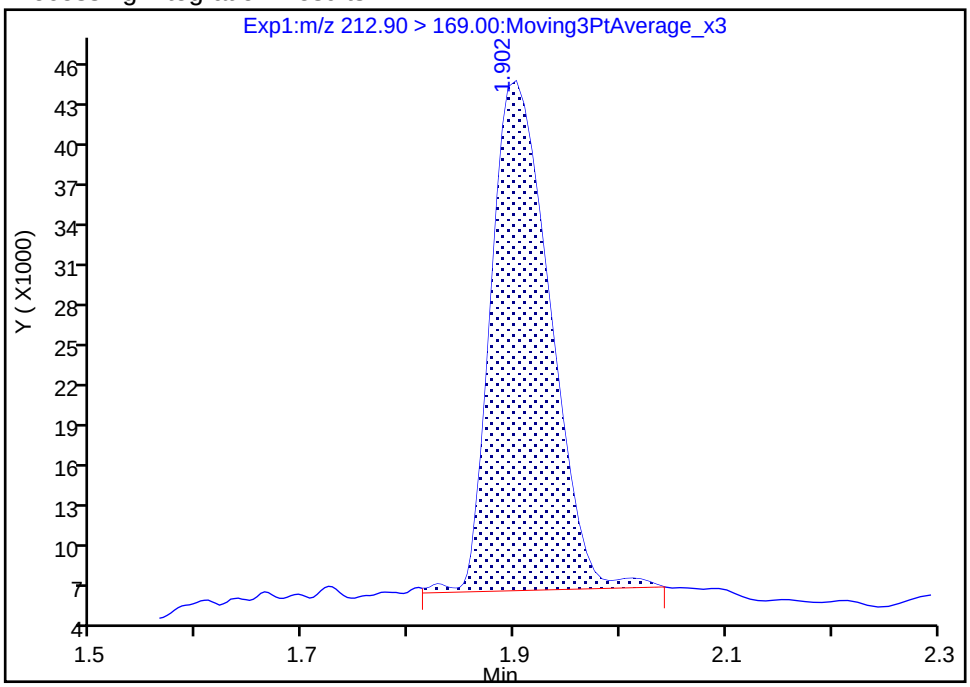
Data File: \\chromfs\Sacramento\ChromData\A9\20200910-102999.b\2020.09.10_A9 _PFC_ICAL_A_017.d
Injection Date: 10-Sep-2020 10:27:55 Instrument ID: A9
Lims ID: IC L2
Client ID:
Operator ID: SACINSTRLCMS02 ALS Bottle#: 11 Worklist Smp#: 3
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFAS_A9 Limit Group: LC PFC ICAL
Column: Detector EXP1

## 2 Perfluorobutanoic acid, CAS: 375-22-4

Signal: 1

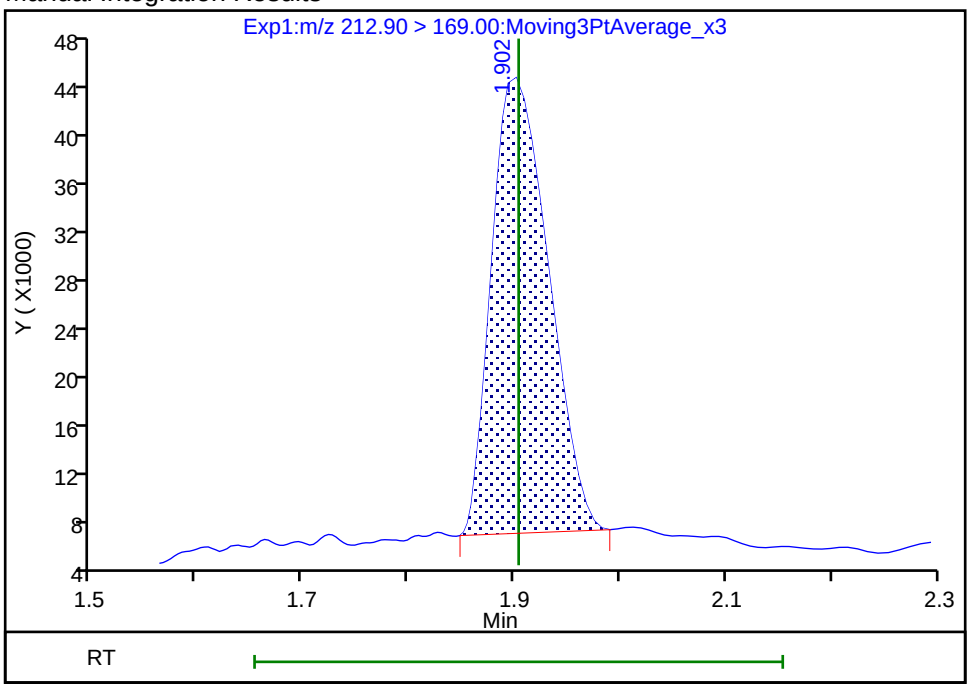
Processing Integration Results

RT: 1.90
Area: 144047
Amount: 0.051399
Amount Units: ng/ml




Manual Integration Results

RT: 1.90
Area: 137934
Amount: 0.046283
Amount Units: ng/ml




Reviewer: zibaa, 10-Sep-2020 11:00:57
Audit Action: Manually Integrated Audit Reason: Baseline

Eurofins TestAmerica, Sacramento

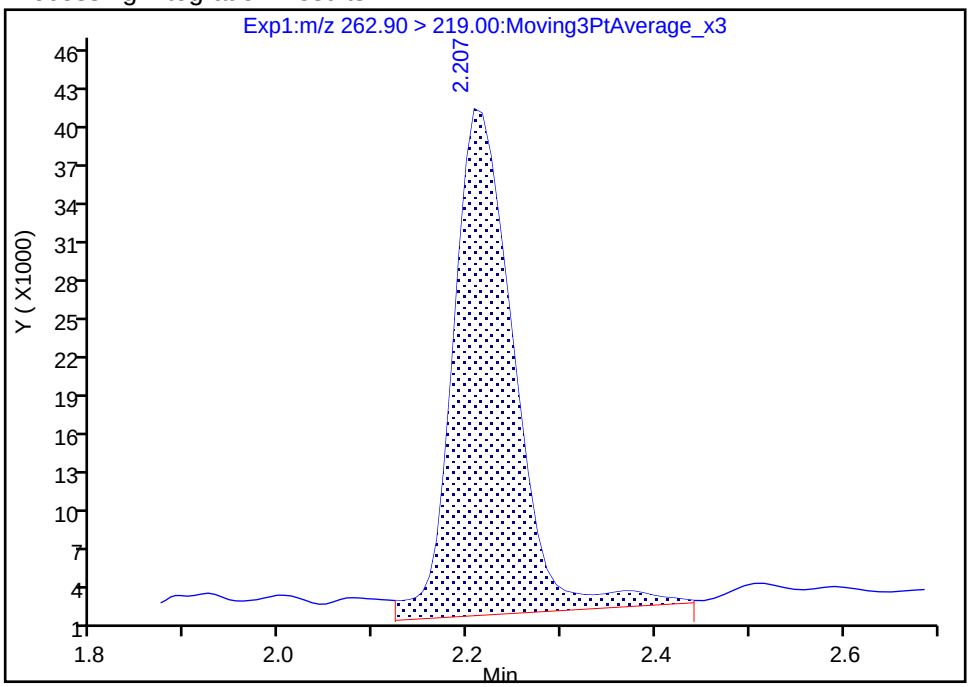
| | | | | | |
|---|---|---|---|---|---|
| Data File: | \\chromfs\Sacramento\ChromData\A9\20200910-102999.b\2020.09.10_A9 _PFC_ICAL_A_017.d | | | | |
| Injection Date: | 10-Sep-2020 10:27:55 | Instrument ID: | A9 | | |
| Lims ID: | IC L2 | | | | |
| Client ID: | | | | | |
| Operator ID: | SACINSTRLCMS02 | ALS Bottle#: | 11 | Worklist Smp#: | 3 |
| Injection Vol: | 20.0 ul | Dil. Factor: | 1.0000 | | |
| Method: | PFAS_A9 | Limit Group: | LC PFC ICAL | | |
| Column: | | Detector | EXP1 | | |

## 3 Perfluoropentanoic acid, CAS: 2706-90-3

Signal: 1

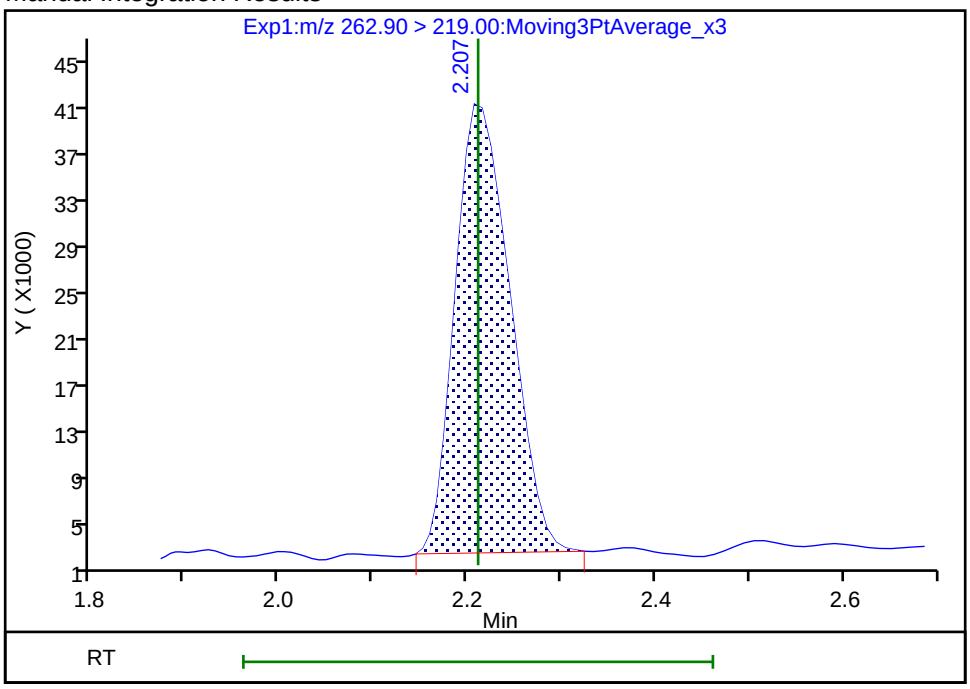
Processing Integration Results

RT: 2.21
Area: 176623
Amount: 0.049817
Amount Units: ng/ml




Manual Integration Results

RT: 2.21
Area: 153662
Amount: 0.051925
Amount Units: ng/ml




Reviewer: zibaa, 10-Sep-2020 11:01:22
Audit Action: Manually Integrated Audit Reason: Baseline

Eurofins TestAmerica, Sacramento

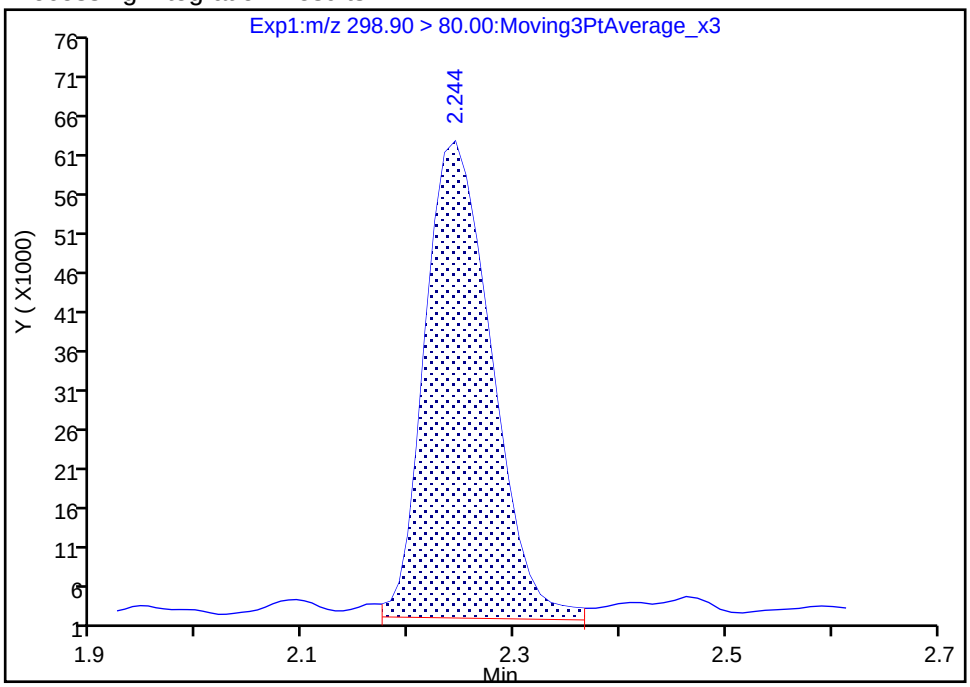
| | | | | | |
|---|---|---|---|---|---|
| Data File: | \\chromfs\Sacramento\ChromData\A9\20200910-102999.b\2020.09.10_A9 _PFC_ICAL_A_017.d | | | | |
| Injection Date: | 10-Sep-2020 10:27:55 | Instrument ID: | A9 | | |
| Lims ID: | IC L2 | | | | |
| Client ID: | | | | | |
| Operator ID: | SACINSTRLCMS02 | ALS Bottle#: | 11 | Worklist Smp#: | 3 |
| Injection Vol: | 20.0 ul | Dil. Factor: | 1.0000 | | |
| Method: | PFAS_A9 | Limit Group: | LC PFC ICAL | | |
| Column: | | Detector | EXP1 | | |

## 5 Perfluorobutanesulfonic acid, CAS: 375-73-5

Signal: 1

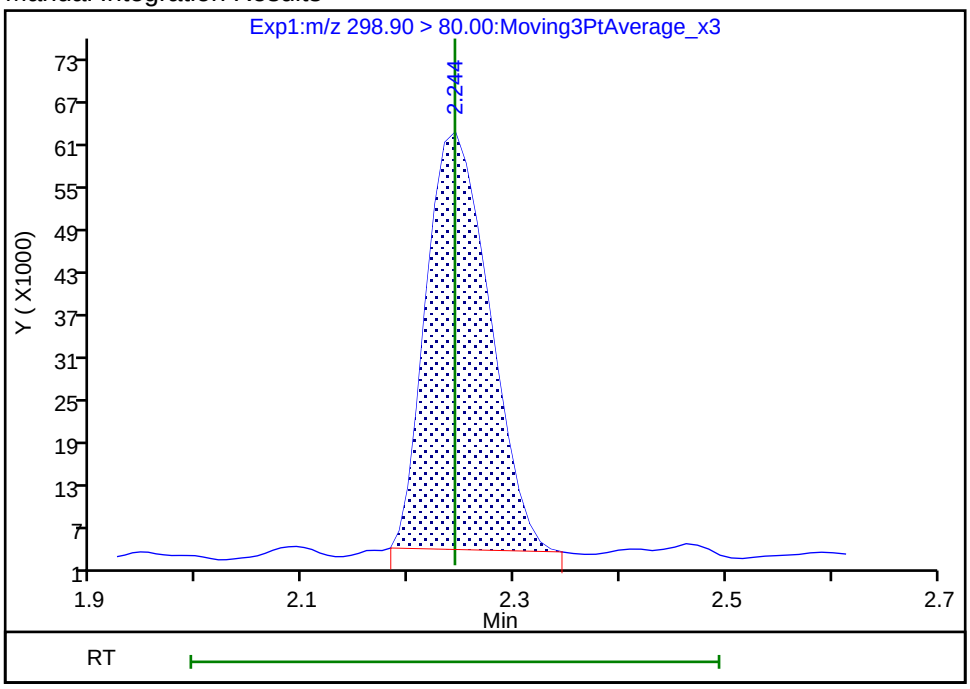
Processing Integration Results

RT: 2.24
Area: 267599
Amount: 0.045869
Amount Units: ng/ml




Manual Integration Results

RT: 2.24
Area: 246180
Amount: 0.043756
Amount Units: ng/ml




Reviewer: zibaa, 10-Sep-2020 11:01:39
Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

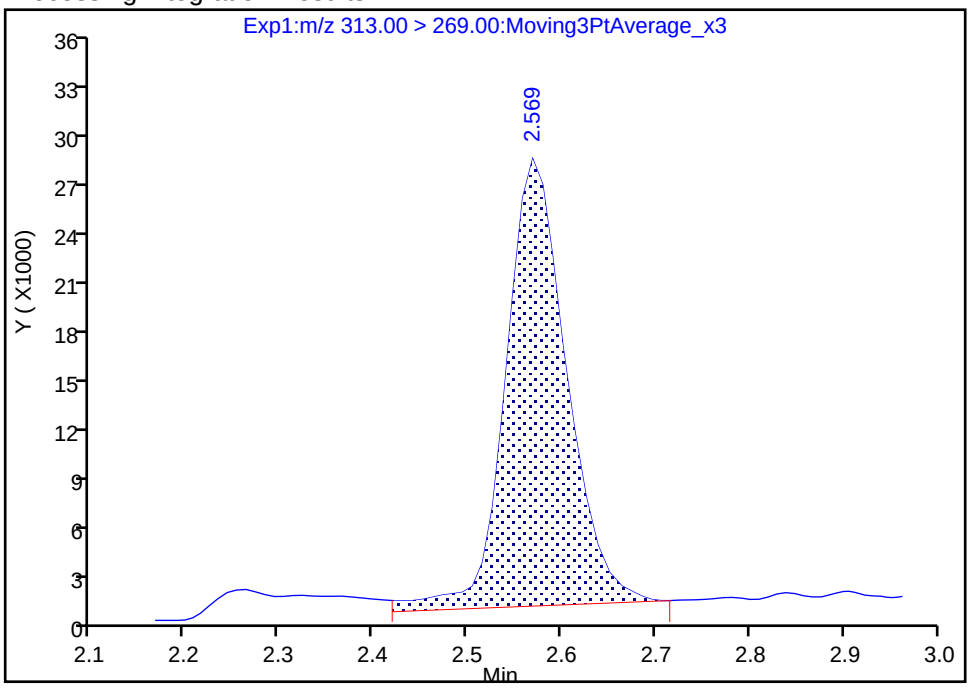
Data File: \\chromfs\Sacramento\ChromData\A9\20200910-102999.b\2020.09.10_A9 _PFC_ICAL_A_017.d
Injection Date: 10-Sep-2020 10:27:55 Instrument ID: A9
Lims ID: IC L2
Client ID:
Operator ID: SACINSTRLCMS02 ALS Bottle#: 11 Worklist Smp#: 3
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFAS_A9 Limit Group: LC PFC ICAL
Column: Detector EXP1

## 11 Perfluorohexanoic acid, CAS: 307-24-4

Signal: 1

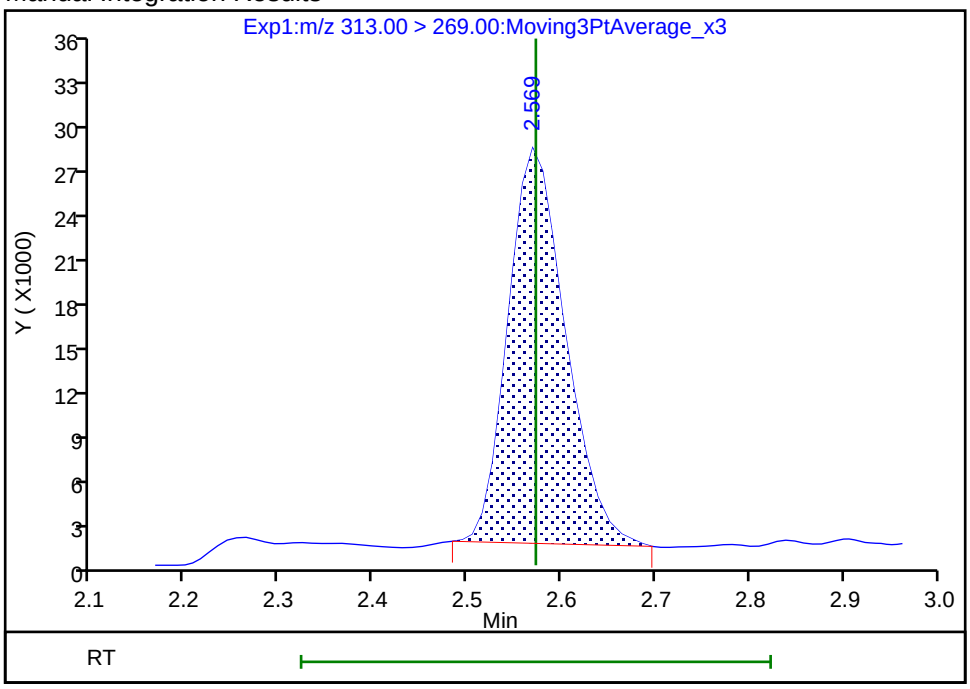
Processing Integration Results

RT: 2.57
Area: 122335
Amount: 0.052738
Amount Units: ng/ml




Manual Integration Results

RT: 2.57
Area: 112791
Amount: 0.050555
Amount Units: ng/ml




Reviewer: zibaa, 10-Sep-2020 11:02:05
Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

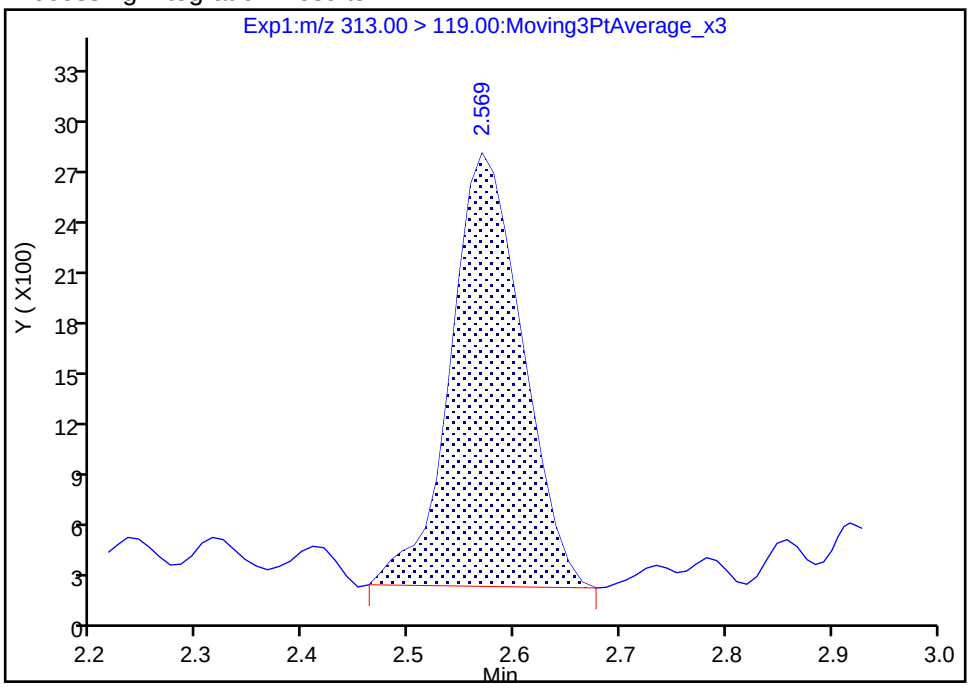
Data File: \\chromfs\Sacramento\ChromData\A9\20200910-102999.b\2020.09.10_A9 _PFC_ICAL_A_017.d
Injection Date: 10-Sep-2020 10:27:55 Instrument ID: A9
Lims ID: IC L2
Client ID:
Operator ID: SACINSTRLCMS02 ALS Bottle#: 11 Worklist Smp#: 3
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFAS_A9 Limit Group: LC PFC ICAL
Column: Detector EXP1

## 11 Perfluorohexanoic acid, CAS: 307-24-4

Signal: 2

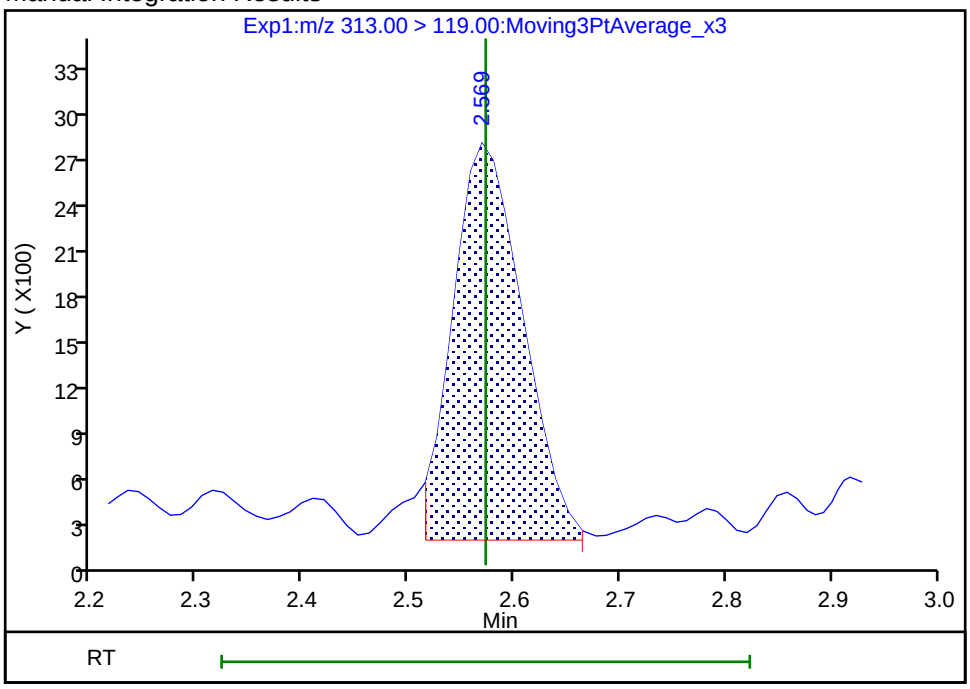
Processing Integration Results

RT: 2.57
Area: 12034
Amount: 0.052738
Amount Units: ng/ml




Manual Integration Results

RT: 2.57
Area: 11801
Amount: 0.050555
Amount Units: ng/ml




Reviewer: zibaa, 10-Sep-2020 11:02:48
Audit Action: Manually Integrated Audit Reason: Baseline

Eurofins TestAmerica, Sacramento

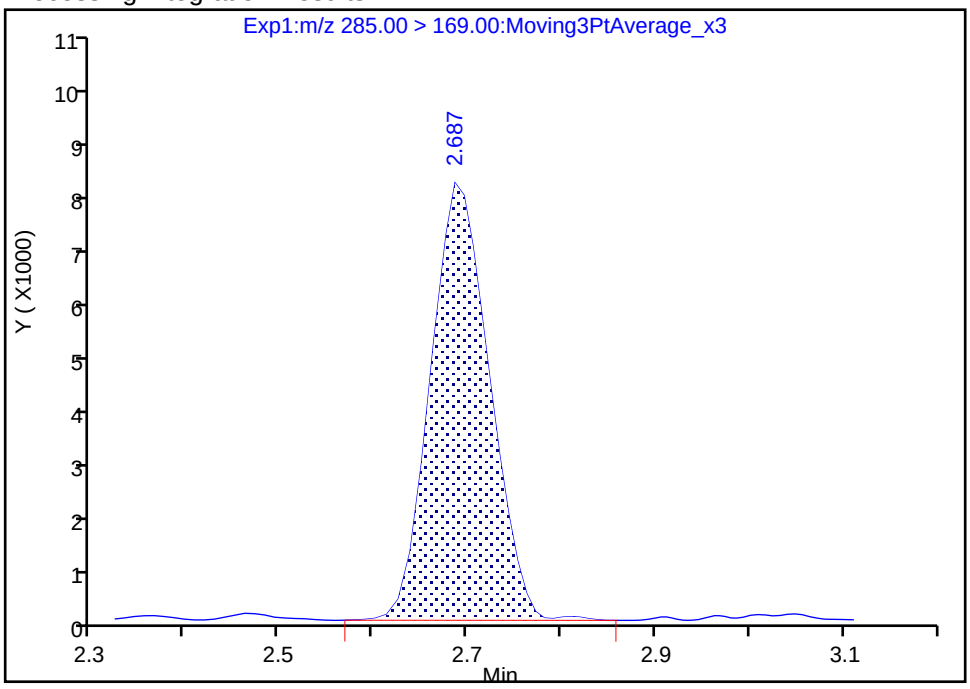
Data File: \\chromfs\Sacramento\ChromData\A9\20200910-102999.b\2020.09.10_A9 _PFC_ICAL_A_017.d
Injection Date: 10-Sep-2020 10:27:55 Instrument ID: A9
Lims ID: IC L2
Client ID:
Operator ID: SACINSTRLCMS02 ALS Bottle#: 11 Worklist Smp#: 3
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFAS_A9 Limit Group: LC PFC ICAL
Column: Detector EXP1

## 14 Perfluoro(2-propoxypropanoic) ac, CAS: 13252-13-6

Signal: 1

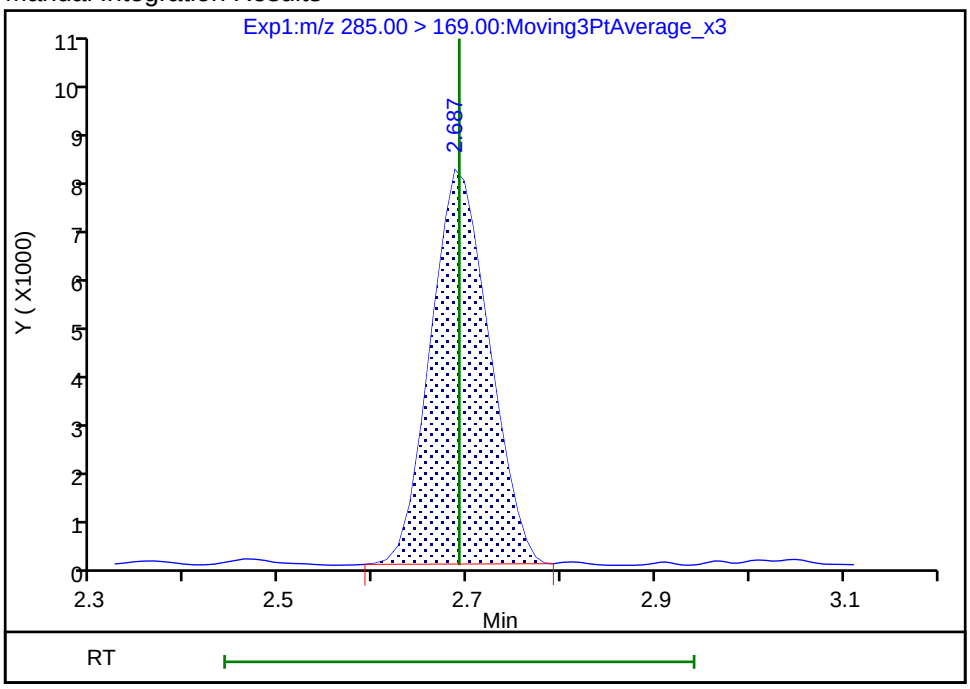
Processing Integration Results

RT: 2.69
Area: 34226
Amount: 0.048495
Amount Units: ng/ml




Manual Integration Results

RT: 2.69
Area: 33818
Amount: 0.046816
Amount Units: ng/ml




Reviewer: zibaa, 10-Sep-2020 11:03:37
Audit Action: Manually Integrated Audit Reason: Baseline

Eurofins TestAmerica, Sacramento

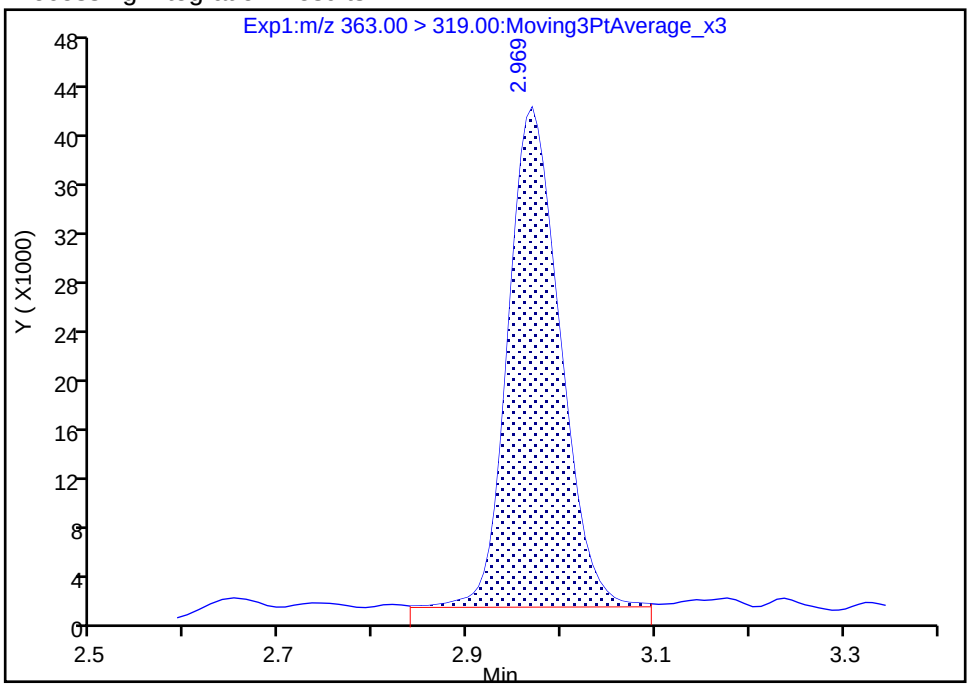
| | | | | | |
|---|---|---|---|---|---|
| Data File: | \\chromfs\Sacramento\ChromData\A9\20200910-102999.b\2020.09.10_A9 _PFC_ICAL_A_017.d | | | | |
| Injection Date: | 10-Sep-2020 10:27:55 | Instrument ID: | A9 | | |
| Lims ID: | IC L2 | | | | |
| Client ID: | | | | | |
| Operator ID: | SACINSTRLCMS02 | ALS Bottle#: | 11 | Worklist Smp#: | 3 |
| Injection Vol: | 20.0 ul | Dil. Factor: | 1.0000 | | |
| Method: | PFAS_A9 | Limit Group: | LC PFC ICAL | | |
| Column: | | Detector | EXP1 | | |

## 18 Perfluoroheptanoic acid, CAS: 375-85-9

Signal: 1

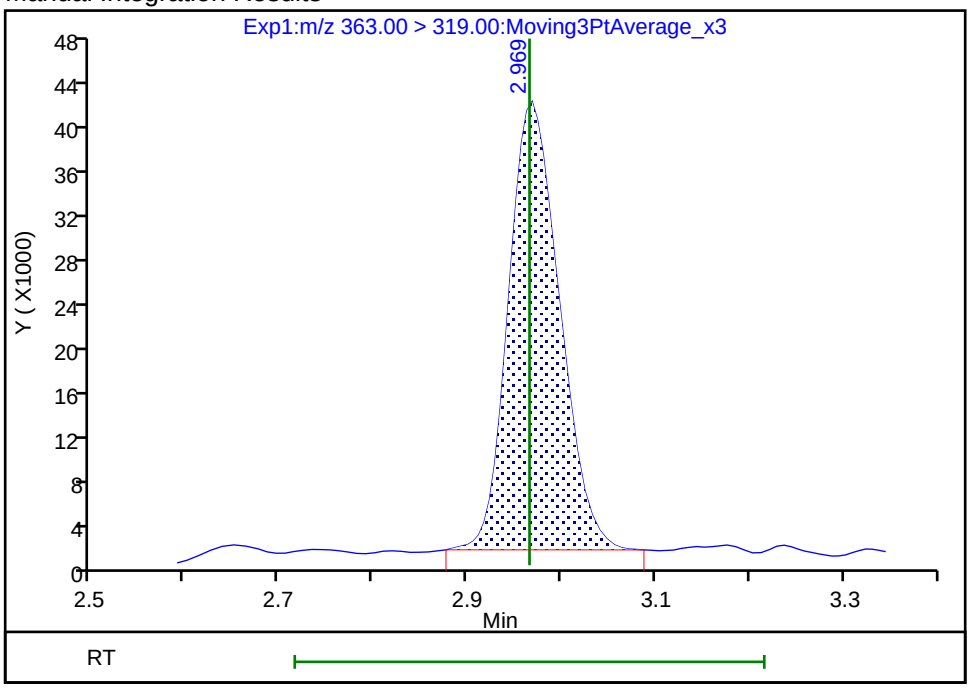
Processing Integration Results

RT: 2.97
Area: 156949
Amount: 0.051975
Amount Units: ng/ml




Manual Integration Results

RT: 2.97
Area: 152546
Amount: 0.053053
Amount Units: ng/ml




Reviewer: zibaa, 10-Sep-2020 11:04:01
Audit Action: Manually Integrated Audit Reason: Baseline

Eurofins TestAmerica, Sacramento

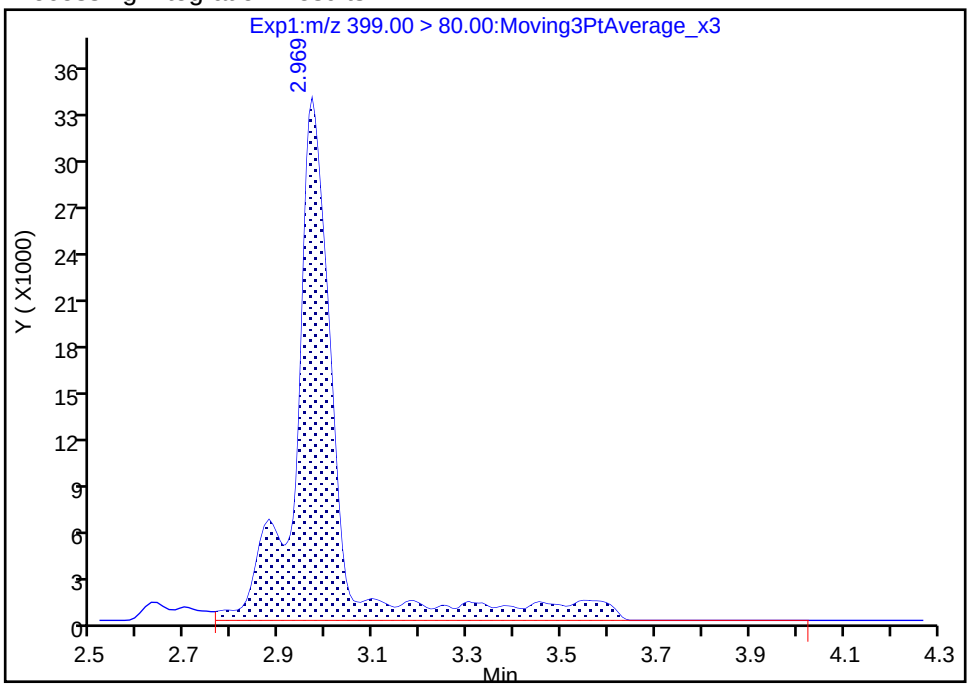
Data File: \\chromfs\Sacramento\ChromData\A9\20200910-102999.b\2020.09.10_A9 _PFC_ICAL_A_017.d
Injection Date: 10-Sep-2020 10:27:55 Instrument ID: A9
Lims ID: IC L2
Client ID:
Operator ID: SACINSTRLCMS02 ALS Bottle#: 11 Worklist Smp#: 3
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFAS_A9 Limit Group: LC PFC ICAL
Column: Detector EXP1

## 16 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 1

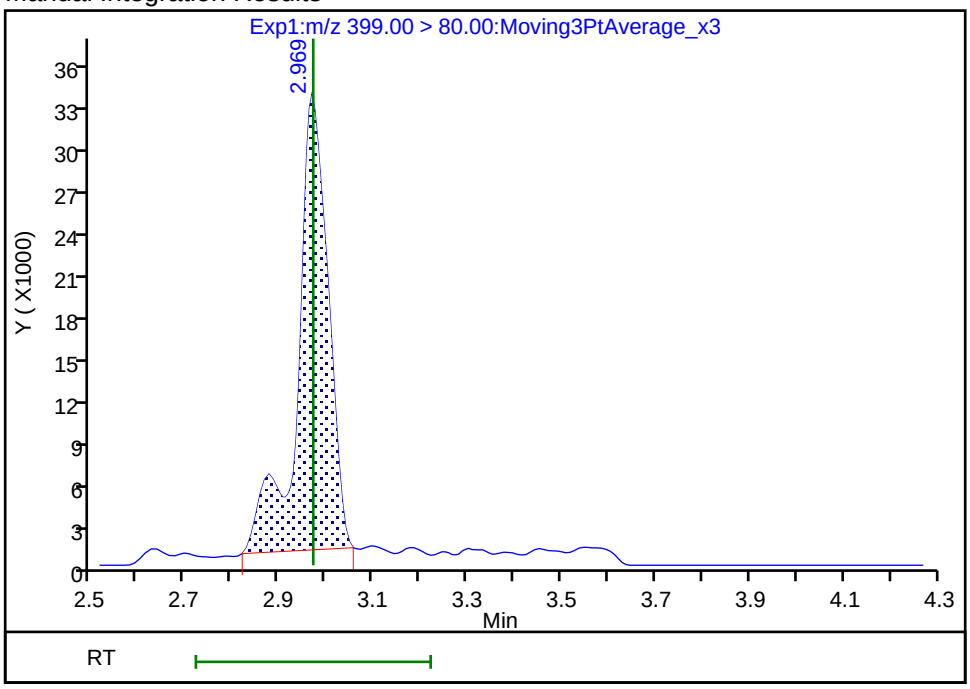
Processing Integration Results

RT: 2.97
Area: 196621
Amount: 0.049380
Amount Units: ng/ml




Manual Integration Results

RT: 2.97
Area: 145334
Amount: 0.045562
Amount Units: ng/ml




Reviewer: zibaa, 10-Sep-2020 11:04:46
Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

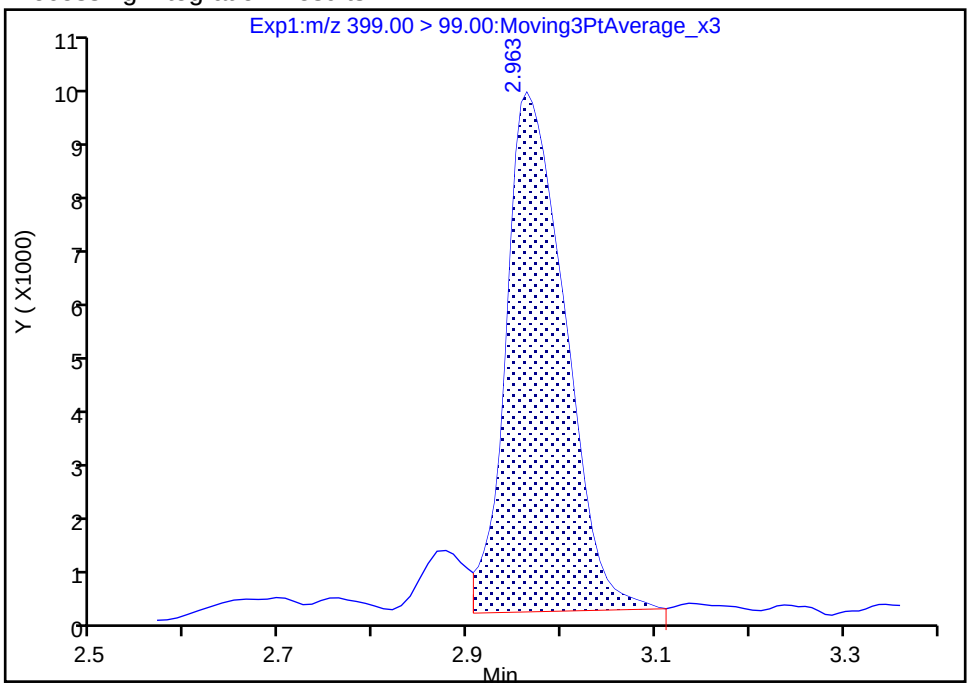
Data File: \\chromfs\Sacramento\ChromData\A9\20200910-102999.b\2020.09.10_A9 _PFC_ICAL_A_017.d
Injection Date: 10-Sep-2020 10:27:55 Instrument ID: A9
Lims ID: IC L2
Client ID:
Operator ID: SACINSTRLCMS02 ALS Bottle#: 11 Worklist Smp#: 3
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFAS_A9 Limit Group: LC PFC ICAL
Column: Detector EXP1

## 16 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 2

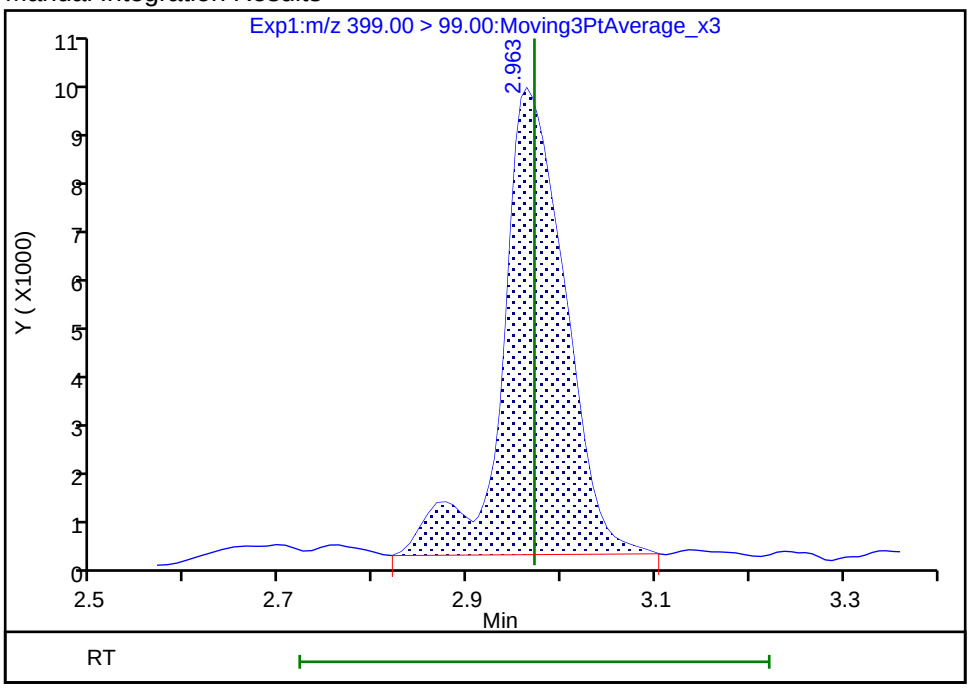
Processing Integration Results

RT: 2.96
Area: 42458
Amount: 0.049380
Amount Units: ng/ml




Manual Integration Results

RT: 2.96
Area: 45392
Amount: 0.045562
Amount Units: ng/ml




Reviewer: zibaa, 10-Sep-2020 11:05:03
Audit Action: Manually Integrated Audit Reason: Isomers

Eurofins TestAmerica, Sacramento

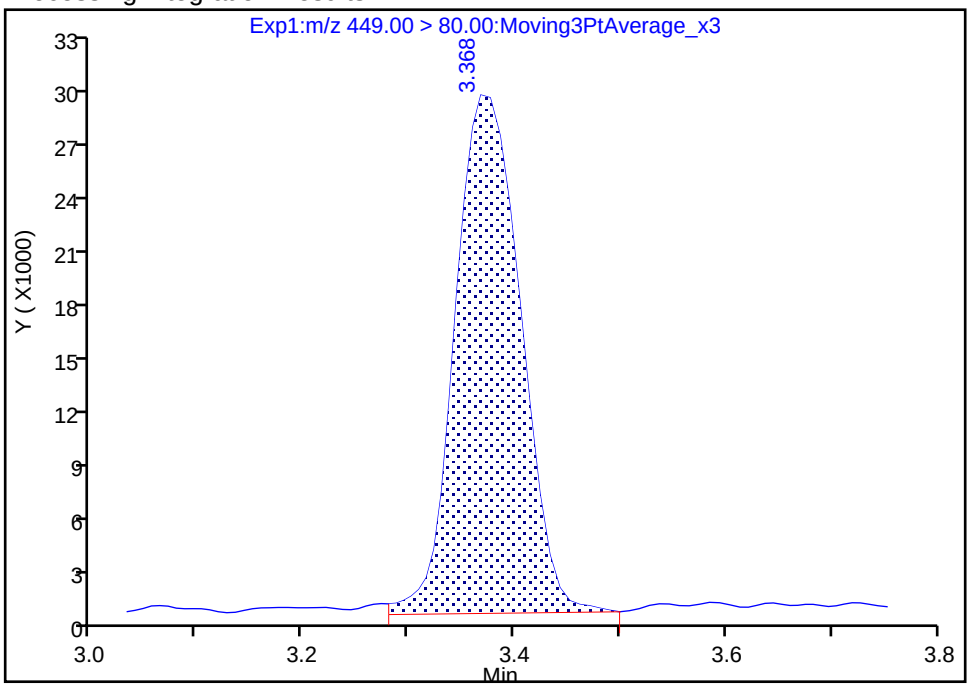
Data File: \\chromfs\Sacramento\ChromData\A9\20200910-102999.b\2020.09.10_A9 _PFC_ICAL_A_017.d
Injection Date: 10-Sep-2020 10:27:55 Instrument ID: A9
Lims ID: IC L2
Client ID:
Operator ID: SACINSTRLCMS02 ALS Bottle#: 11 Worklist Smp#: 3
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFAS_A9 Limit Group: LC PFC ICAL
Column: Detector EXP1

## 23 Perfluoroheptanesulfonic acid, CAS: 375-92-8

Signal: 1

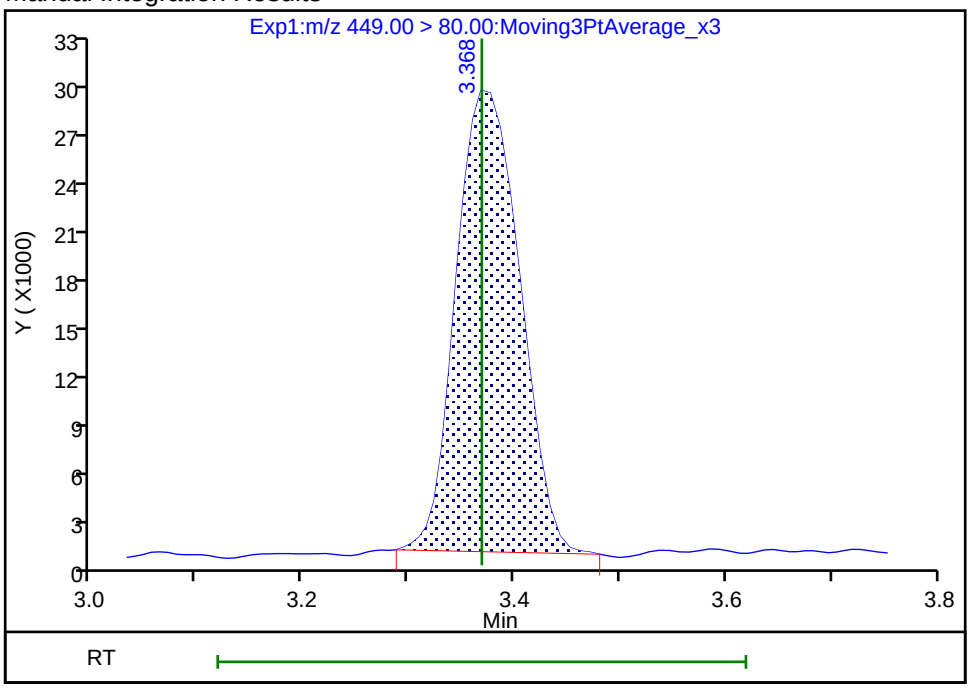
Processing Integration Results

RT: 3.37
Area: 125879
Amount: 0.048479
Amount Units: ng/ml




Manual Integration Results

RT: 3.37
Area: 120618
Amount: 0.044034
Amount Units: ng/ml




Reviewer: zibaa, 10-Sep-2020 11:05:35
Audit Action: Manually Integrated Audit Reason: Isomers

Eurofins TestAmerica, Sacramento

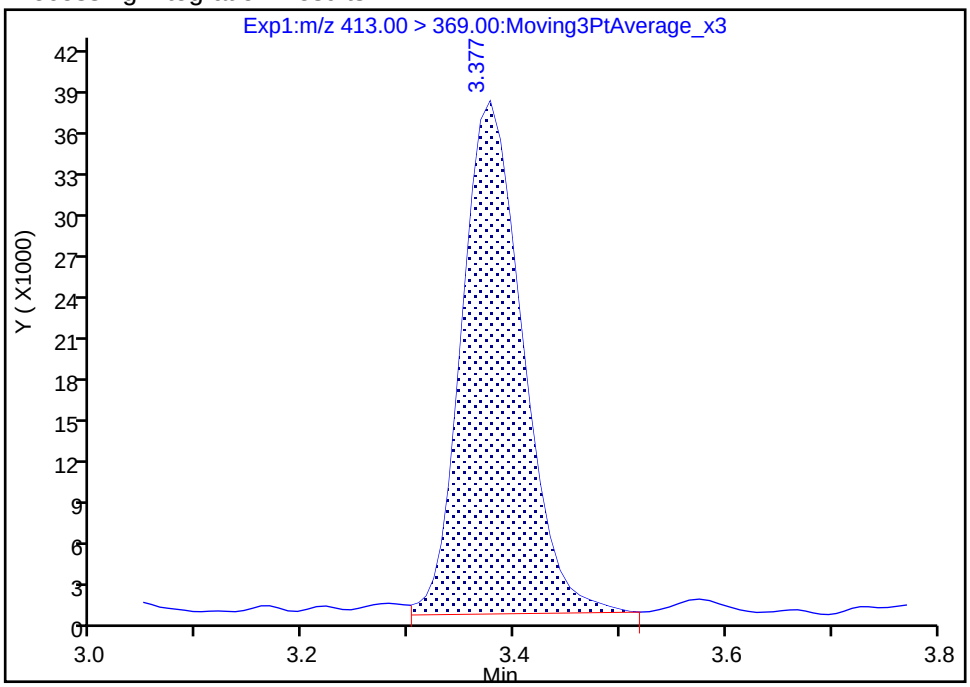
Data File: \\chromfs\Sacramento\ChromData\A9\20200910-102999.b\2020.09.10_A9 _PFC_ICAL_A_017.d
Injection Date: 10-Sep-2020 10:27:55 Instrument ID: A9
Lims ID: IC L2
Client ID:
Operator ID: SACINSTRLCMS02 ALS Bottle#: 11 Worklist Smp#: 3
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFAS_A9 Limit Group: LC PFC ICAL
Column: Detector EXP1

## 24 Perfluorooctanoic acid, CAS: 335-67-1

Signal: 1

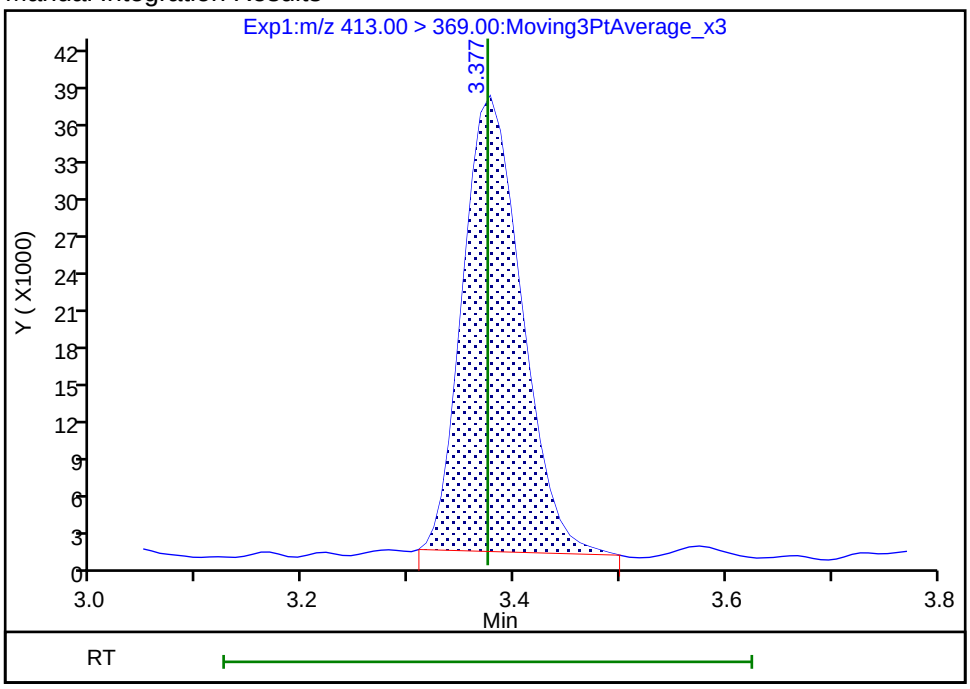
Processing Integration Results

RT: 3.38
Area: 149062
Amount: 0.047576
Amount Units: ng/ml




Manual Integration Results

RT: 3.38
Area: 142372
Amount: 0.052599
Amount Units: ng/ml




Reviewer: zibaa, 10-Sep-2020 11:05:59
Audit Action: Manually Integrated Audit Reason: Isomers

Eurofins TestAmerica, Sacramento

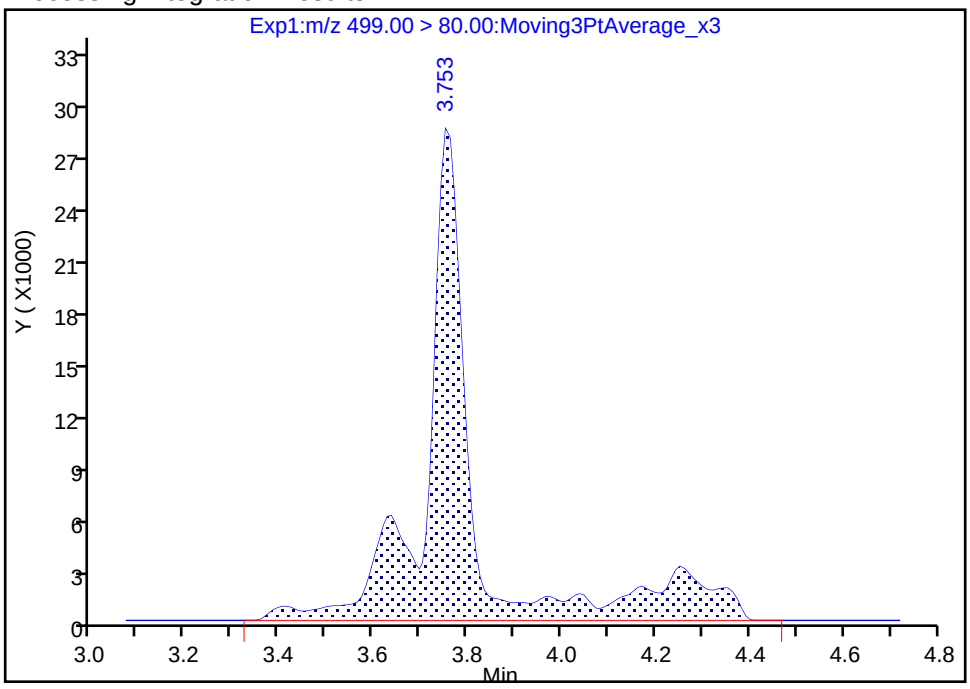
Data File: \\chromfs\Sacramento\ChromData\A9\20200910-102999.b\2020.09.10_A9 _PFC_ICAL_A_017.d
Injection Date: 10-Sep-2020 10:27:55 Instrument ID: A9
Lims ID: IC L2
Client ID:
Operator ID: SACINSTRLCMS02 ALS Bottle#: 11 Worklist Smp#: 3
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFAS_A9 Limit Group: LC PFC ICAL
Column: Detector EXP1

## 28 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 1

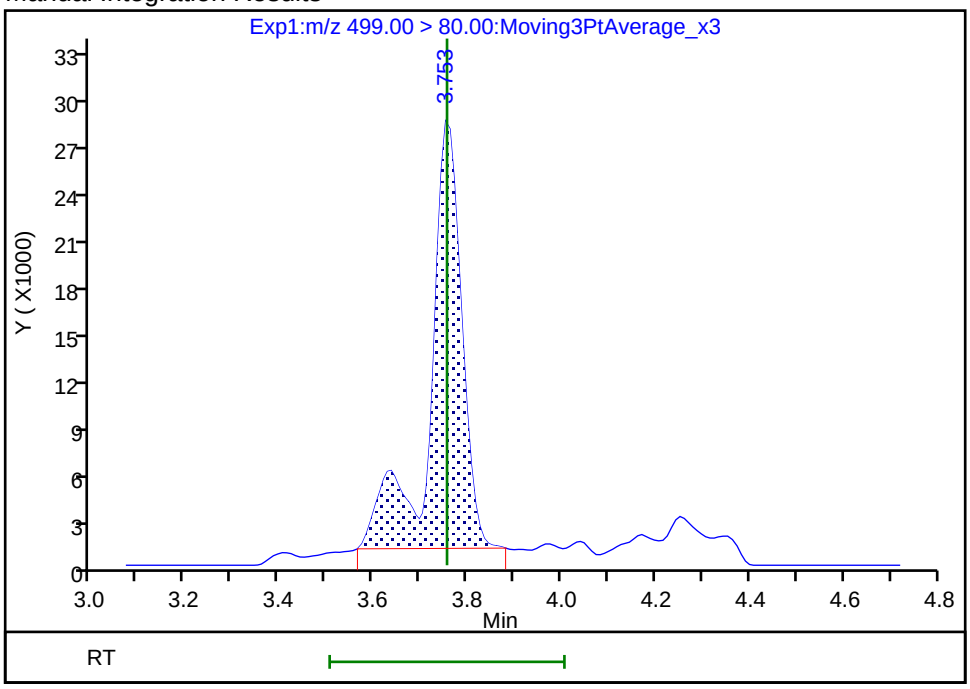
Processing Integration Results

RT: 3.75
Area: 205274
Amount: 0.053886
Amount Units: ng/ml




Manual Integration Results

RT: 3.75
Area: 129682
Amount: 0.042096
Amount Units: ng/ml




Reviewer: zibaa, 10-Sep-2020 11:06:28
Audit Action: Manually Integrated Audit Reason: Isomers

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

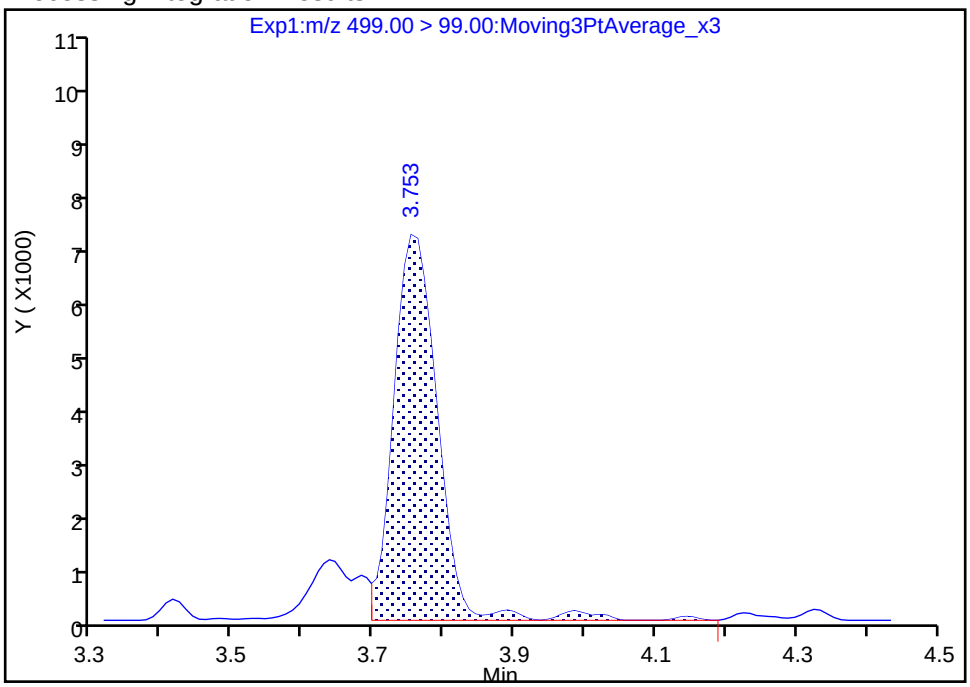
Data File: \\chromfs\Sacramento\ChromData\A9\20200910-102999.b\2020.09.10_A9 _PFC_ICAL_A_017.d
Injection Date: 10-Sep-2020 10:27:55 Instrument ID: A9
Lims ID: IC L2
Client ID:
Operator ID: SACINSTRLCMS02 ALS Bottle#: 11 Worklist Smp#: 3
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFAS_A9 Limit Group: LC PFC ICAL
Column: Detector EXP1

## 28 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 2

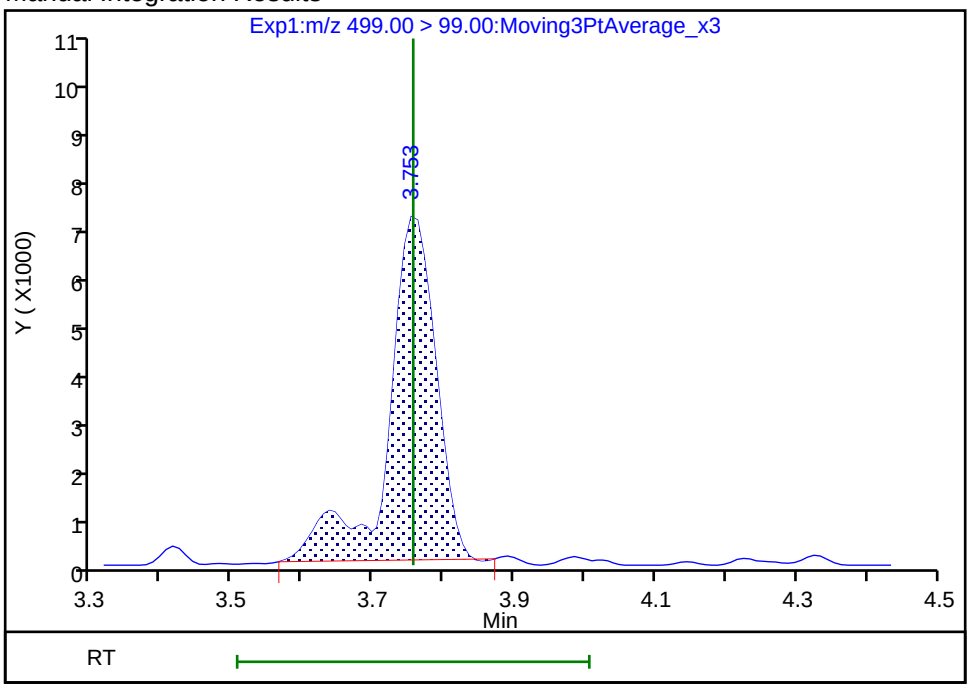
Processing Integration Results

RT: 3.75
Area: 30833
Amount: 0.053886
Amount Units: ng/ml




Manual Integration Results

RT: 3.75
Area: 33146
Amount: 0.042096
Amount Units: ng/ml




Reviewer: zibaa, 10-Sep-2020 11:06:45
Audit Action: Manually Integrated Audit Reason: Isomers

Eurofins TestAmerica, Sacramento

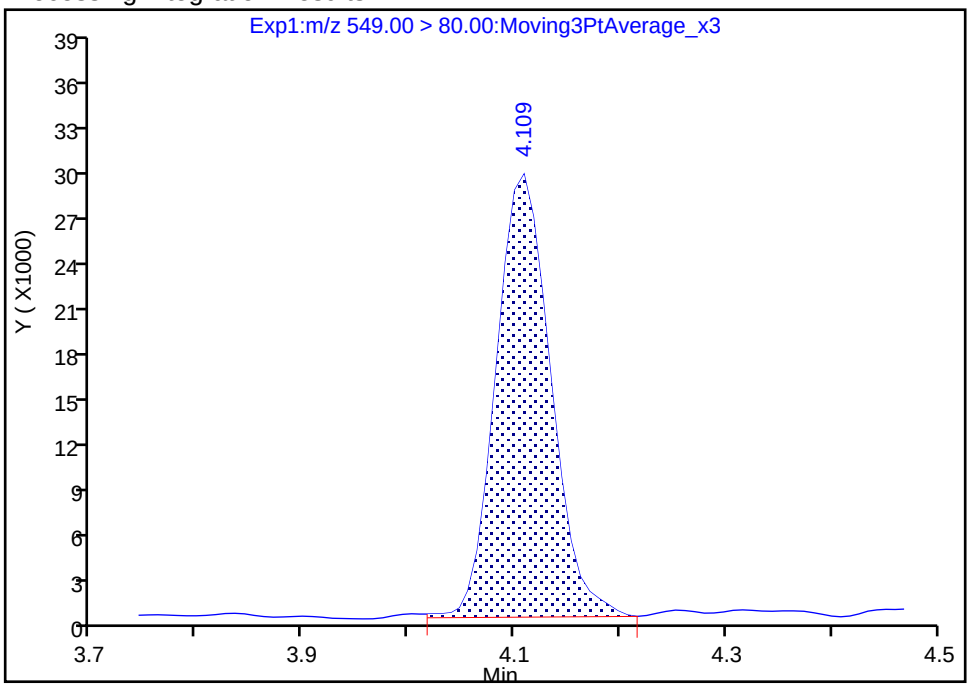
Data File: \\chromfs\Sacramento\ChromData\A9\20200910-102999.b\2020.09.10_A9 _PFC_ICAL_A_017.d
Injection Date: 10-Sep-2020 10:27:55 Instrument ID: A9
Lims ID: IC L2
Client ID:
Operator ID: SACINSTRLCMS02 ALS Bottle#: 11 Worklist Smp#: 3
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFAS_A9 Limit Group: LC PFC ICAL
Column: Detector EXP1

## 35 Perfluorononanesulfonic acid, CAS: 68259-12-1

Signal: 1

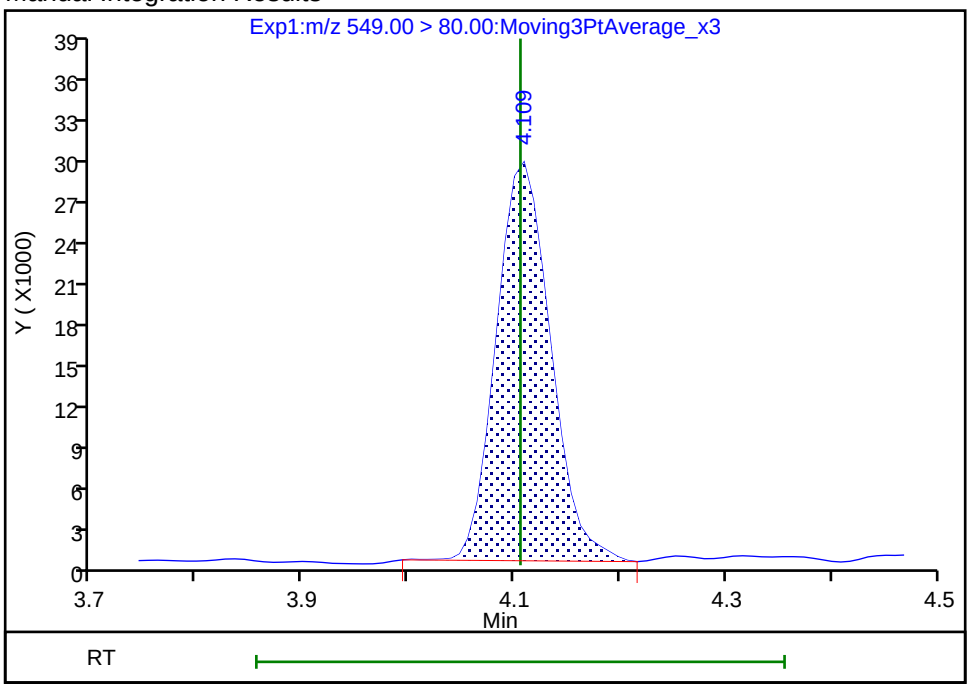
Processing Integration Results

RT: 4.11
Area: 106542
Amount: 0.049025
Amount Units: ng/ml




Manual Integration Results

RT: 4.11
Area: 105305
Amount: 0.046819
Amount Units: ng/ml




Reviewer: zibaa, 10-Sep-2020 11:07:46
Audit Action: Manually Integrated Audit Reason: Baseline

Eurofins TestAmerica, Sacramento

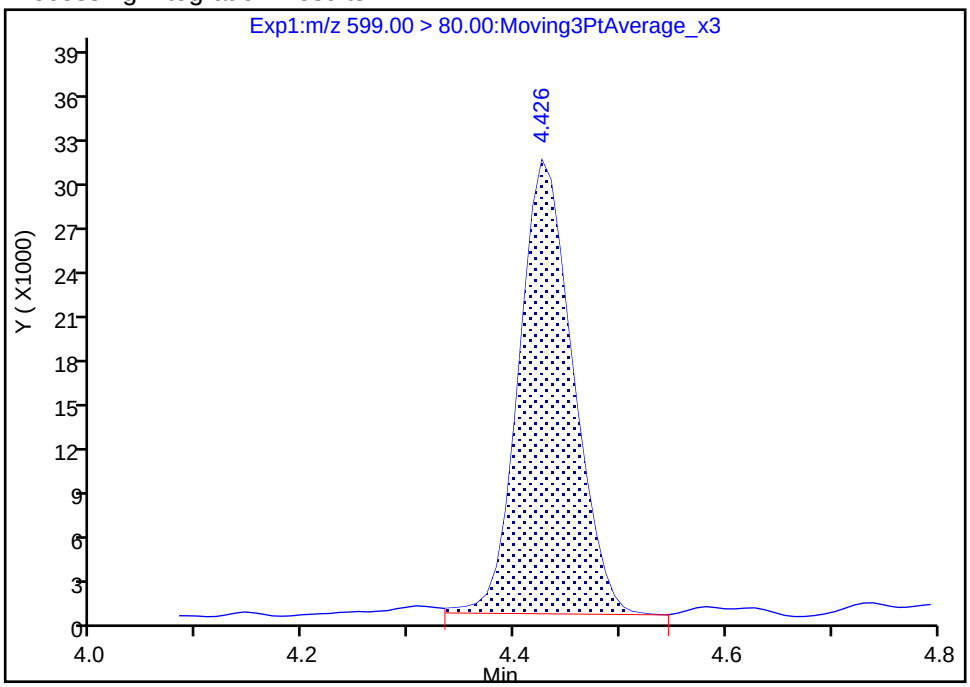
Data File: \\chromfs\Sacramento\ChromData\A9\20200910-102999.b\2020.09.10_A9 _PFC_ICAL_A_017.d
Injection Date: 10-Sep-2020 10:27:55 Instrument ID: A9
Lims ID: IC L2
Client ID:
Operator ID: SACINSTRLCMS02 ALS Bottle#: 11 Worklist Smp#: 3
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFAS_A9 Limit Group: LC PFC ICAL
Column: Detector EXP1

## 42 Perfluorodecanesulfonic acid, CAS: 335-77-3

Signal: 1

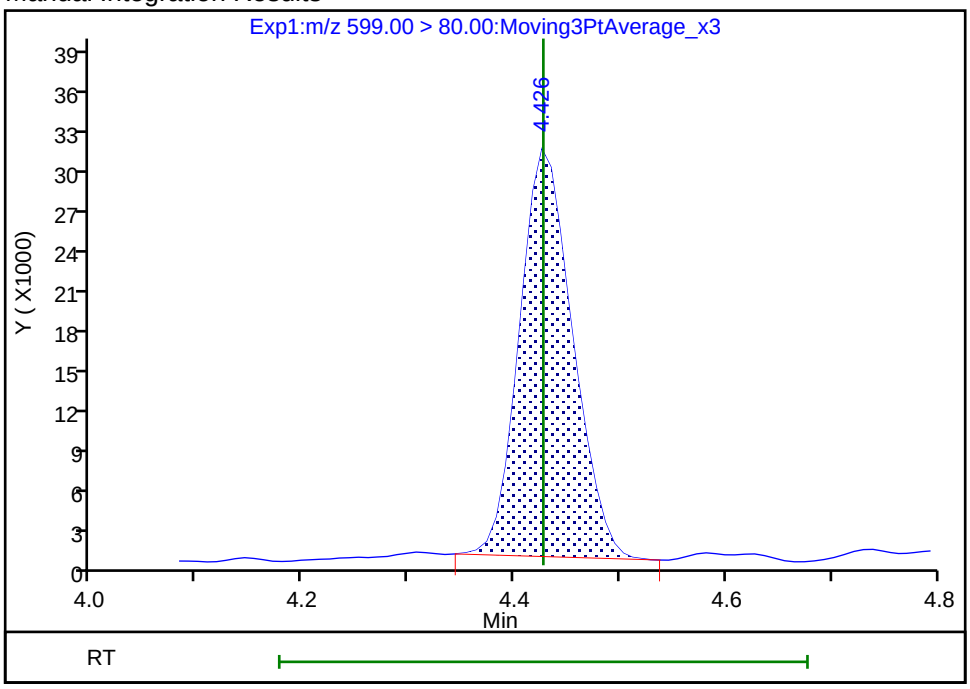
Processing Integration Results

RT: 4.43
Area: 109114
Amount: 0.046343
Amount Units: ng/ml




Manual Integration Results

RT: 4.43
Area: 106796
Amount: 0.042442
Amount Units: ng/ml




Reviewer: zibaa, 10-Sep-2020 11:09:25
Audit Action: Manually Integrated Audit Reason: Baseline

Eurofins TestAmerica, Sacramento

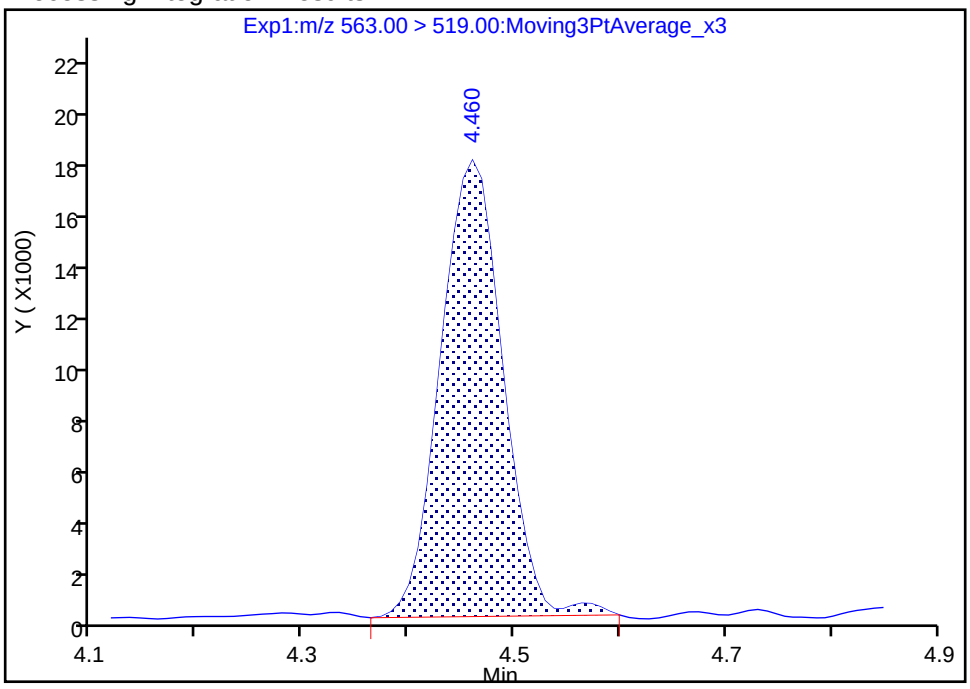
| | | | | | |
|---|---|---|---|---|---|
| Data File: | \\chromfs\Sacramento\ChromData\A9\20200910-102999.b\2020.09.10_A9 _PFC_ICAL_A_017.d | | | | |
| Injection Date: | 10-Sep-2020 10:27:55 | Instrument ID: | A9 | | |
| Lims ID: | IC L2 | | | | |
| Client ID: | | | | | |
| Operator ID: | SACINSTRLCMS02 | ALS Bottle#: | 11 | Worklist Smp#: | 3 |
| Injection Vol: | 20.0 ul | Dil. Factor: | 1.0000 | | |
| Method: | PFAS_A9 | Limit Group: | LC PFC ICAL | | |
| Column: | | Detector | EXP1 | | |

## 43 Perfluoroundecanoic acid, CAS: 2058-94-8

Signal: 1

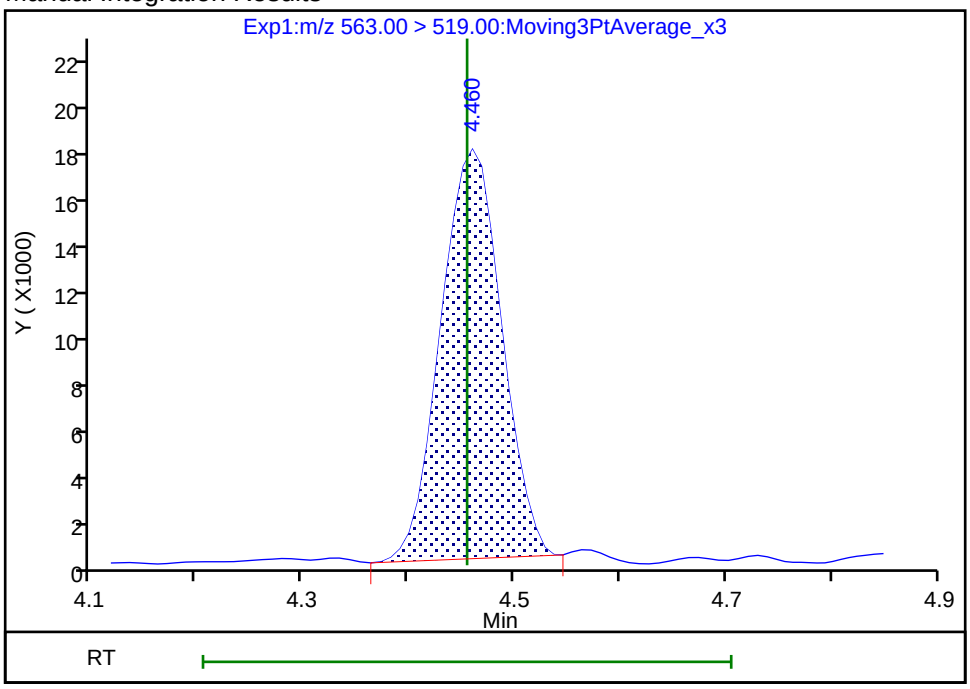
Processing Integration Results

RT: 4.46
Area: 72197
Amount: 0.052202
Amount Units: ng/ml




Manual Integration Results

RT: 4.46
Area: 69809
Amount: 0.047657
Amount Units: ng/ml




Reviewer: zibaa, 10-Sep-2020 11:09:49
Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

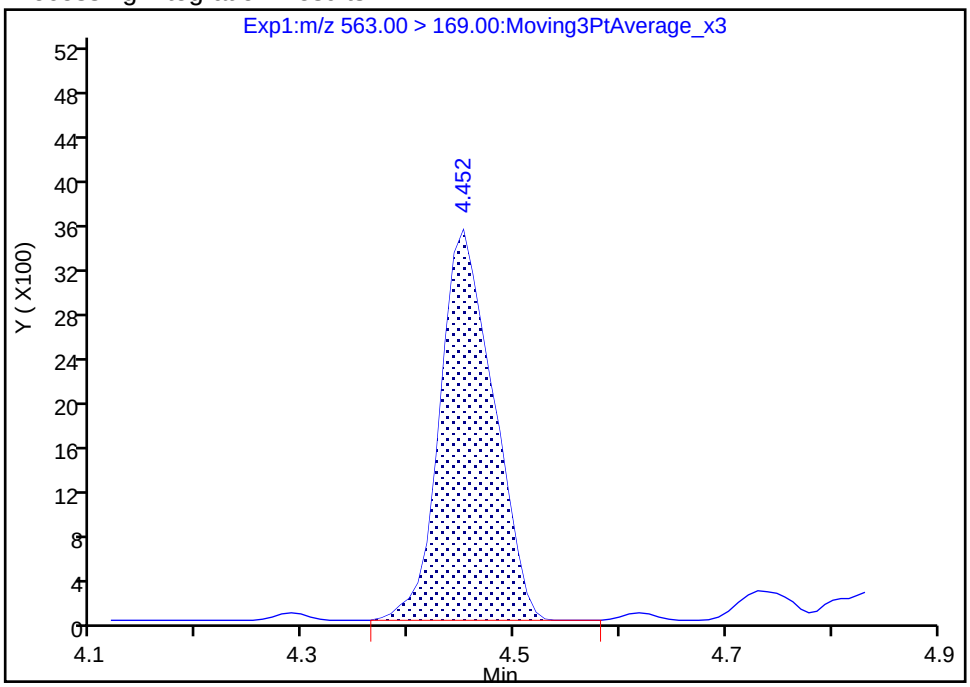
Data File: \\chromfs\Sacramento\ChromData\A9\20200910-102999.b\2020.09.10_A9 _PFC_ICAL_A_017.d
Injection Date: 10-Sep-2020 10:27:55 Instrument ID: A9
Lims ID: IC L2
Client ID:
Operator ID: SACINSTRLCMS02 ALS Bottle#: 11 Worklist Smp#: 3
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFAS_A9 Limit Group: LC PFC ICAL
Column: Detector EXP1

## 43 Perfluoroundecanoic acid, CAS: 2058-94-8

Signal: 2

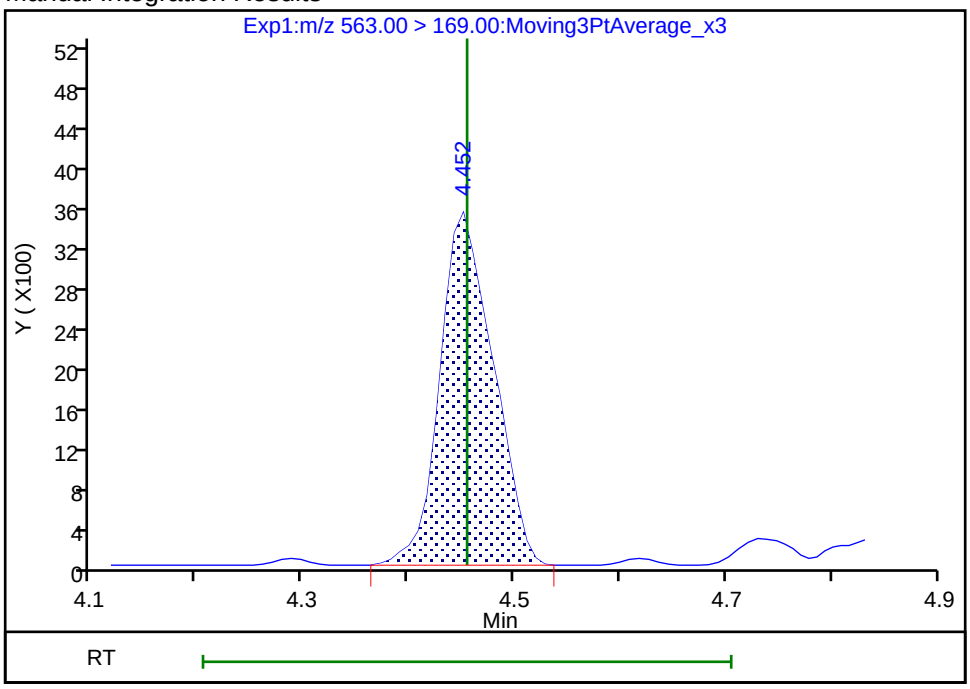
Processing Integration Results

RT: 4.45
Area: 12386
Amount: 0.052202
Amount Units: ng/ml




Manual Integration Results

RT: 4.45
Area: 12386
Amount: 0.047657
Amount Units: ng/ml




Reviewer: zibaa, 10-Sep-2020 11:10:09
Audit Action: Manually Integrated Audit Reason: Baseline

Eurofins TestAmerica, Sacramento

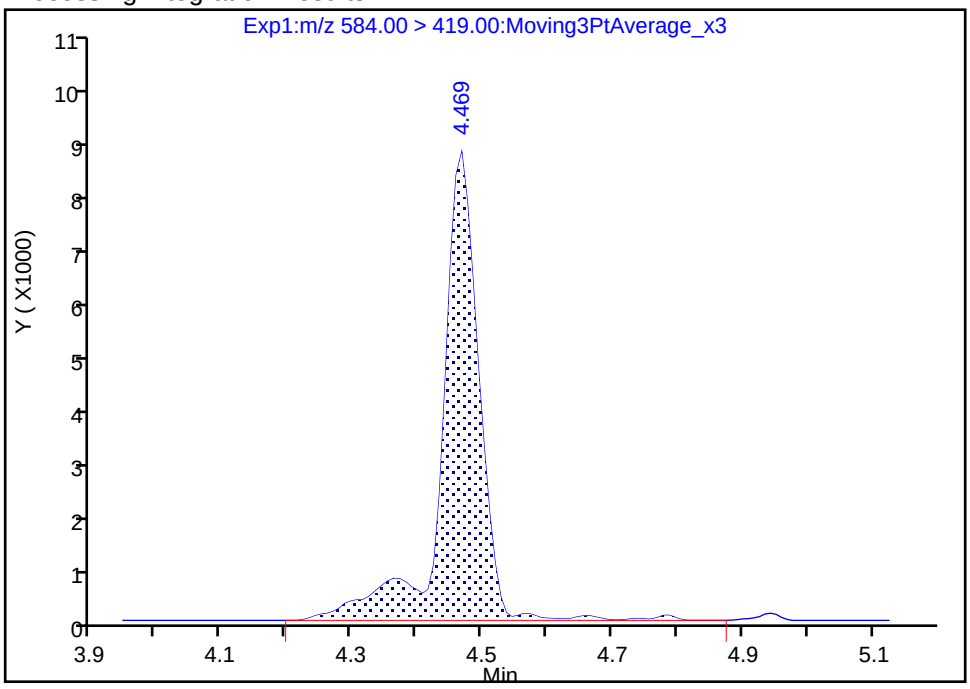
| | | | | | |
|---|---|---|---|---|---|
| Data File: | \\chromfs\Sacramento\ChromData\A9\20200910-102999.b\2020.09.10_A9 _PFC_ICAL_A_017.d | | | | |
| Injection Date: | 10-Sep-2020 10:27:55 | Instrument ID: | A9 | | |
| Lims ID: | IC L2 | | | | |
| Client ID: | | | | | |
| Operator ID: | SACINSTRLCMS02 | ALS Bottle#: | 11 | Worklist Smp#: | 3 |
| Injection Vol: | 20.0 ul | Dil. Factor: | 1.0000 | | |
| Method: | PFAS_A9 | Limit Group: | LC PFC ICAL | | |
| Column: | | Detector | EXP1 | | |

## 44 N-ethylperfluorooctanesulfonamid, CAS: 2991-50-6

Signal: 1

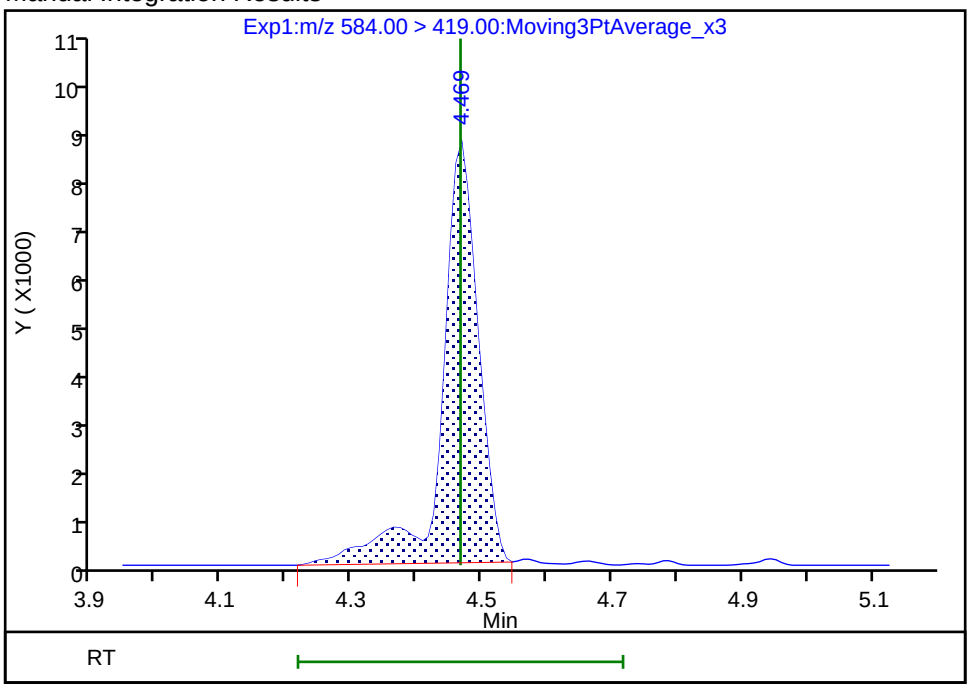
Processing Integration Results

RT: 4.47
Area: 35544
Amount: 0.049753
Amount Units: ng/ml




Manual Integration Results

RT: 4.47
Area: 34070
Amount: 0.046097
Amount Units: ng/ml




Reviewer: zibaa, 10-Sep-2020 11:10:47
Audit Action: Manually Integrated Audit Reason: Baseline

Eurofins TestAmerica, Sacramento

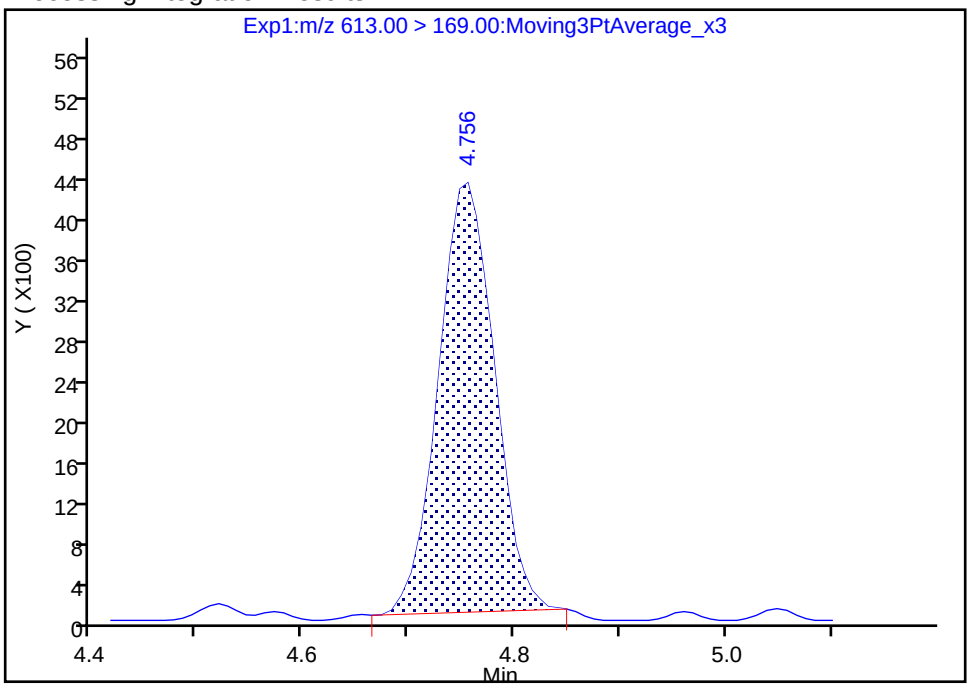
Data File: \\chromfs\Sacramento\ChromData\A9\20200910-102999.b\2020.09.10_A9 _PFC_ICAL_A_017.d
Injection Date: 10-Sep-2020 10:27:55 Instrument ID: A9
Lims ID: IC L2
Client ID:
Operator ID: SACINSTRLCMS02 ALS Bottle#: 11 Worklist Smp#: 3
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFAS_A9 Limit Group: LC PFC ICAL
Column: Detector EXP1

## 52 Perfluorododecanoic acid, CAS: 307-55-1

Signal: 2

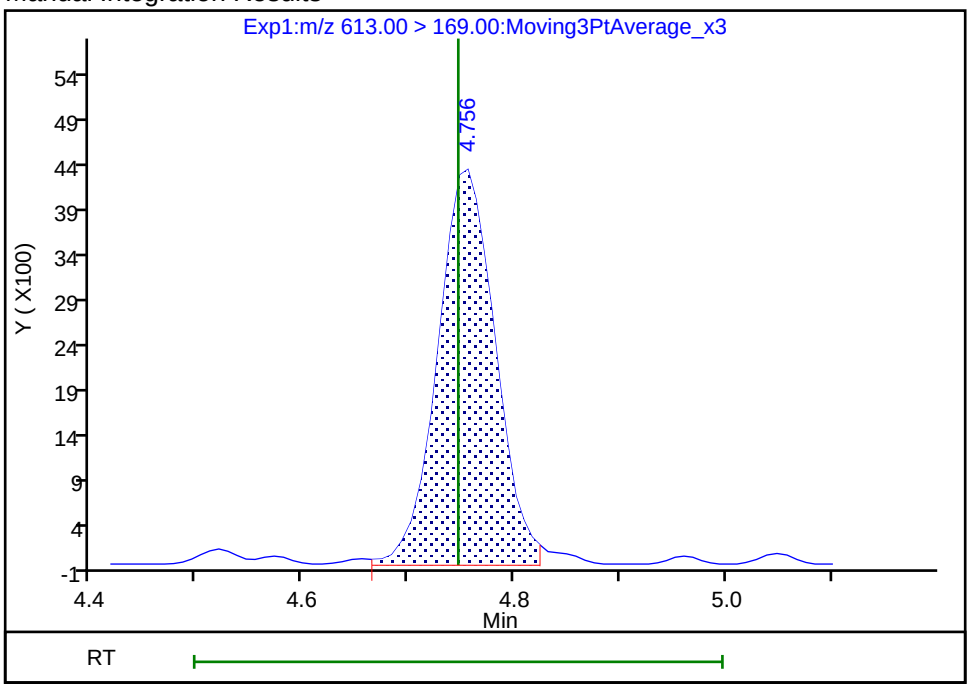
Processing Integration Results

RT: 4.76
Area: 15478
Amount: 0.053270
Amount Units: ng/ml




Manual Integration Results

RT: 4.76
Area: 16285
Amount: 0.051156
Amount Units: ng/ml




Reviewer: zibaa, 10-Sep-2020 11:11:54
Audit Action: Manually Integrated Audit Reason: Baseline

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\A9\20200910-102999.b\2020.09.10_A9 _PFC_ICAL_A_018.d
Lims ID: IC L3
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 10-Sep-2020 10:37:16 ALS Bottle#: 12 Worklist Smp#: 4
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Sample Info: CAL STD3_19
Misc. Info.: Plate: 1 Rack: 1
Operator ID: SACINSTRLCMS02 Instrument ID: A9
Sublist: chrom-PFAS_A9*sub16

Method: \\chromfs\Sacramento\ChromData\A9\20200910-102999.b\PFAS_A9.m
Limit Group: LC PFC ICAL
Last Update: 10-Sep-2020 13:14:27 Calib Date: 10-Sep-2020 12:29:20
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\A9\20200910-102999.b\2020.09.10_A9 _PFC_ICAL_AA_022.d

Column 1 : Det: EXP1
Process Host: CTX1016

First Level Reviewer: zibaa Date: 10-Sep-2020 11:19:37
Ratio Calibration: Average of Initial Calibration

| Signal | RT | EXP RT | DLT RT | REL RT | Response | Amount ng/ml | Ratio(Limits) | %Rec | S/N | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| D 1 13C4 PFBA | | | | | | | | | | |
| 217.00 > 172.00 | 1.909 | 1.901 | 0.008 | 0.565 | 8574576 | 2.48 | | 99.3 | 3351 | |
| 2 Perfluorobutanoic acid | | | | | | | | | | |
| 212.90 > 169.00 | 1.909 | 1.904 | 0.005 | 1.000 | 755326 | 0.2521 | | 101 | 54.1 | |
| 3 Perfluoropentanoic acid | | | | | | | | | | |
| 262.90 > 219.00 | 2.215 | 2.211 | 0.004 | 1.000 | 725976 | 0.2348 | | 93.9 | 59.2 | |
| D 4 13C5 PFPeA | | | | | | | | | | |
| 267.90 > 223.00 | 2.215 | 2.211 | 0.004 | 0.656 | 7596317 | 2.61 | | 104 | 3833 | |
| D 6 13C3 PFBS | | | | | | | | | | |
| 301.90 > 80.00 | 2.244 | 2.241 | 0.003 | 0.664 | 13144085 | 2.28 | | 98.3 | 2814 | |
| 5 Perfluorobutanesulfonic acid | | | | | | | | | | M |
| 298.90 > 80.00 | 2.244 | 2.244 | 0.0 | 1.000 | 1295442 | 0.2297 | Target=3.10 | 104 | 94.2 | M |
| 298.90 > 99.00 | 2.254 | 2.244 | 0.010 | 1.004 | 396090 | | 3.27(1.55-4.65) | 104 | 104 | |
| 9 1H,1H,2H,2H-perfluorohexanesulfo | | | | | | | | | | |
| 327.00 > 307.00 | 2.537 | 2.535 | 0.002 | 1.000 | 256695 | 0.2236 | | 95.8 | 1272 | |
| D 8 M2-4:2 FTS | | | | | | | | | | |
| 329.00 > 81.00 | 2.537 | 2.533 | 0.004 | 0.751 | 1355074 | 2.37 | | 102 | 859 | |
| 11 Perfluorohexanoic acid | | | | | | | | | | |
| 313.00 > 269.00 | 2.580 | 2.573 | 0.007 | 1.000 | 551503 | 0.2442 | Target=9.68 | 97.7 | 81.5 | |
| 313.00 > 119.00 | 2.580 | 2.573 | 0.007 | 1.000 | 54217 | | 10.17(4.84-14.52) | 97.7 | 39.5 | |
| D 10 13C2 PFHxA | | | | | | | | | | |
| 315.00 > 270.00 | 2.580 | 2.573 | 0.007 | 0.763 | 6768409 | 2.50 | | 100.0 | 2945 | |
| 12 Perfluoropentanesulfonic acid | | | | | | | | | | |
| 349.00 > 80.00 | 2.590 | 2.587 | 0.003 | 1.154 | 532432 | 0.2345 | Target=2.01 | 100 | 134 | |
| 349.00 > 99.00 | 2.590 | 2.587 | 0.003 | 1.154 | 260592 | | 2.04(1.00-3.01) | 100 | 305 | |
| 14 Perfluoro(2-propoxypropanoic) ac | | | | | | | | | | |
| 285.00 > 169.00 | 2.697 | 2.691 | 0.006 | 1.000 | 165835 | 0.2282 | | 91.3 | 829 | |

| Signal | RT | EXP RT | DLT RT | REL RT | Response | Amount ng/ml | Ratio(Limits) | %Rec | S/N | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| D 13 13C3 HFPO-DA | | | | | | | | | | |
| 287.00 > 169.00 | 2.697 | 2.692 | 0.005 | 0.798 | 4590213 | 2.47 | | 98.8 | 4176 | |
| D 15 13C4 PFHpA | | | | | | | | | | |
| 367.00 > 322.00 | 2.970 | 2.965 | 0.005 | 0.879 | 6639108 | 2.52 | | 101 | 2577 | |
| 18 Perfluoroheptanoic acid | | | | | | | | | | |
| 363.00 > 319.00 | 2.970 | 2.966 | 0.004 | 1.000 | 732378 | 0.2487 | Target=3.74 | 99.5 | 142 | |
| 363.00 > 169.00 | 2.970 | 2.966 | 0.004 | 1.000 | 192659 | | 3.80(1.87-5.61) | 99.5 | 202 | |
| 16 Perfluorohexanesulfonic acid | | | | | | | | | | M |
| 399.00 > 80.00 | 2.975 | 2.971 | 0.004 | 1.000 | 727417 | 0.2165 | Target=3.29 | 95.2 | 147 | |
| 399.00 > 99.00 | 2.975 | 2.971 | 0.004 | 1.000 | 212871 | | 3.42(1.65-4.94) | 95.2 | 193 | M |
| D 17 18O2 PFHxS | | | | | | | | | | |
| 403.00 > 84.00 | 2.975 | 2.969 | 0.006 | 0.880 | 6737106 | 2.45 | | 103 | 3283 | |
| 19 DONA | | | | | | | | | | |
| 377.00 > 251.00 | 3.018 | 3.017 | 0.001 | 0.802 | 1238833 | 0.2377 | Target=1.80 | 101 | 2280 | |
| 377.00 > 85.00 | 3.018 | 3.017 | 0.001 | 0.802 | 650367 | | 1.90(0.90-2.70) | 101 | 983 | |
| D 20 M2-6:2 FTS | | | | | | | | | | |
| 429.00 > 81.00 | 3.362 | 3.352 | 0.010 | 0.995 | 1183789 | 2.40 | | 101 | 1251 | |
| 22 1H,1H,2H,2H-perfluorooctanesulfo | | | | | | | | | | |
| 427.00 > 407.00 | 3.362 | 3.353 | 0.009 | 1.000 | 171579 | 0.2233 | | 94.2 | 257 | |
| $ 21 13C8 PFOA | | | | | | | | | | |
| 421.00 > 376.00 | 3.362 | 3.362 | 0.0 | 0.995 | 5079092 | 2.45 | | 100 | 6608 | |
| 23 Perfluoroheptanesulfonic acid | | | | | | | | | | |
| 449.00 > 80.00 | 3.371 | 3.369 | 0.002 | 0.895 | 610012 | 0.2296 | Target=3.65 | 96.5 | 210 | |
| 449.00 > 99.00 | 3.371 | 3.369 | 0.002 | 0.895 | 169525 | | 3.60(1.83-5.48) | 96.5 | 357 | |
| 24 Perfluorooctanoic acid | | | | | | | | | | |
| 413.00 > 369.00 | 3.379 | 3.375 | 0.004 | 1.000 | 649485 | 0.2524 | Target=2.37 | 101 | 153 | |
| 413.00 > 169.00 | 3.379 | 3.375 | 0.004 | 1.000 | 274516 | | 2.37(1.19-3.56) | 101 | 336 | |
| * 25 13C2 PFOA | | | | | | | | | | |
| 415.00 > 370.00 | 3.379 | 3.376 | 0.003 | | 6396362 | 2.50 | | | 4306 | |
| D 26 13C4 PFOA | | | | | | | | | | |
| 417.00 > 372.00 | 3.379 | 3.376 | 0.003 | 1.000 | 5966056 | 2.42 | | 96.6 | 3242 | |
| $ 27 13C8 PFOS | | | | | | | | | | |
| 507.00 > 99.00 | 3.756 | 3.748 | 0.008 | 1.111 | 1572962 | 2.42 | | 101 | 1733 | |
| 28 Perfluorooctanesulfonic acid | | | | | | | | | | M |
| 499.00 > 80.00 | 3.765 | 3.756 | 0.009 | 1.000 | 654930 | 0.2191 | Target=4.12 | 94.5 | 113 | M |
| 499.00 > 99.00 | 3.765 | 3.756 | 0.009 | 1.000 | 163427 | | 4.01(2.06-6.17) | 94.5 | 435 | |
| D 31 13C4 PFOS | | | | | | | | | | |
| 503.00 > 80.00 | 3.765 | 3.756 | 0.009 | 1.114 | 6869985 | 2.39 | | 100 | 1600 | |
| 30 Perfluorononanoic acid | | | | | | | | | | |
| 463.00 > 419.00 | 3.774 | 3.770 | 0.004 | 1.000 | 534880 | 0.2566 | Target=4.21 | 103 | 342 | |
| 463.00 > 169.00 | 3.774 | 3.770 | 0.004 | 1.000 | 116920 | | 4.57(2.11-6.32) | 103 | 285 | |
| D 29 13C5 PFNA | | | | | | | | | | |
| 468.00 > 423.00 | 3.774 | 3.767 | 0.007 | 1.117 | 5235235 | 2.44 | | 97.7 | 4583 | |
| 32 9-Chlorohexadecafluoro-3-oxanona | | | | | | | | | | |
| 531.00 > 351.00 | 3.959 | 3.956 | 0.003 | 1.052 | 418832 | 0.2322 | | 99.7 | 1122 | |
| 34 Perfluorooctanesulfonamide | | | | | | | | | | |
| 498.00 > 78.00 | 4.086 | 4.086 | 0.0 | 1.000 | 959339 | 0.2561 | | 102 | 1447 | |

| Signal | RT | EXP RT | DLT RT | REL RT | Response | Amount ng/ml | Ratio(Limits) | %Rec | S/N | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| D 36 13C8 FOSA | | | | | | | | | | |
| 506.00 > 78.00 | 4.086 | 4.086 | 0.0 | 1.209 | 3366493 | 2.49 | | 99.7 | 3012 | |
| 35 Perfluorononanesulfonic acid | | | | | | | | | | |
| 549.00 > 80.00 | 4.113 | 4.106 | 0.007 | 1.093 | 540009 | 0.2475 | Target=5.56 | 103 | 324 | |
| 549.00 > 99.00 | 4.113 | 4.106 | 0.007 | 1.093 | 97827 | | 5.52(2.78-8.34) | 103 | 462 | |
| 38 Perfluorodecanoic acid | | | | | | | | | | |
| 513.00 > 469.00 | 4.140 | 4.132 | 0.008 | 1.000 | 725683 | 0.2615 | Target=14.33 | 105 | 519 | |
| 513.00 > 169.00 | 4.131 | 4.132 | -0.001 | 0.998 | 46171 | | 15.72(7.16-21.49) | 105 | 144 | |
| D 33 13C2 PFDA | | | | | | | | | | |
| 515.00 > 470.00 | 4.140 | 4.130 | 0.010 | 1.225 | 6950885 | 2.56 | | 102 | 5052 | |
| 39 1H,1H,2H,2H-perfluorodecanesulfo | | | | | | | | | | |
| 527.00 > 507.00 | 4.140 | 4.135 | 0.005 | 1.000 | 178280 | 0.2161 | | 90.2 | 945 | |
| D 37 M2-8:2 FTS | | | | | | | | | | |
| 529.00 > 81.00 | 4.140 | 4.133 | 0.007 | 1.225 | 1533540 | 2.54 | | 106 | 1175 | |
| 40 N-methylperfluorooctanesulfonami | | | | | | | | | | |
| 570.00 > 419.00 | 4.311 | 4.299 | 0.012 | 1.002 | 254355 | 0.2564 | | 103 | 22.7 | |
| D 41 d3-NMeFOSAA | | | | | | | | | | |
| 573.00 > 419.00 | 4.302 | 4.295 | 0.007 | 1.273 | 3265971 | 2.42 | | 96.6 | 2392 | |
| 42 Perfluorodecanesulfonic acid | | | | | | | | | | |
| 599.00 > 80.00 | 4.430 | 4.427 | 0.003 | 1.177 | 577252 | 0.2365 | Target=4.29 | 98.1 | 272 | |
| 599.00 > 99.00 | 4.430 | 4.427 | 0.003 | 1.177 | 138288 | | 4.17(2.15-6.44) | 98.1 | 346 | |
| 43 Perfluoroundecanoic acid | | | | | | | | | | |
| 563.00 > 519.00 | 4.465 | 4.455 | 0.010 | 1.000 | 367263 | 0.2496 | Target=6.74 | 99.9 | 514 | |
| 563.00 > 169.00 | 4.456 | 4.455 | 0.001 | 0.998 | 52662 | | 6.97(3.37-10.11) | 99.9 | 140 | |
| D 46 13C2 PFUnA | | | | | | | | | | |
| 565.00 > 520.00 | 4.465 | 4.455 | 0.010 | 1.321 | 5283112 | 2.52 | | 101 | 7176 | |
| D 45 d5-NEtFOSAA | | | | | | | | | | |
| 589.00 > 419.00 | 4.465 | 4.460 | 0.005 | 1.321 | 2347427 | 2.59 | | 104 | 1441 | |
| 44 N-ethylperfluorooctanesulfonamid | | | | | | | | | | |
| 584.00 > 419.00 | 4.473 | 4.467 | 0.006 | 1.002 | 174286 | 0.2288 | | 91.5 | 276 | |
| D 47 d7-N-MeFOSE-M | | | | | | | | | | |
| 623.00 > 59.00 | 4.550 | 4.546 | 0.004 | 1.346 | 5453120 | 12.5 | | 100 | 4567 | |
| 48 2-(N-methylperfluoro-1-octanesul | | | | | | | | | | |
| 616.00 > 59.00 | 4.559 | 4.557 | 0.002 | 1.002 | 106728 | 0.2345 | | 93.8 | 254 | |
| D 49 d-N-MeFOSA-M | | | | | | | | | | |
| 515.00 > 169.00 | 4.568 | 4.565 | 0.003 | 1.352 | 1479722 | 2.43 | | 97.3 | 212 | |
| 50 NMeFOSA | | | | | | | | | | |
| 512.00 > 169.00 | 4.577 | 4.569 | 0.008 | 1.002 | 138365 | 0.2241 | | 89.6 | 536 | |
| 51 11-Chloroeicosafluoro-3-oxaundec | | | | | | | | | | |
| 631.00 > 451.00 | 4.595 | 4.588 | 0.007 | 1.220 | 467393 | 0.2198 | | 93.3 | 1105 | |
| D 53 d9-N-EtFOSE-M | | | | | | | | | | |
| 639.00 > 59.00 | 4.726 | 4.718 | 0.008 | 1.399 | 5688046 | 12.5 | | 99.6 | 6043 | |
| 54 2-(N-ethylperfluoro-1-octanesulf | | | | | | | | | | |
| 630.00 > 59.00 | 4.735 | 4.731 | 0.004 | 1.002 | 107836 | 0.2384 | | 95.4 | 243 | |
| D 58 d-N-EtFOSA-M | | | | | | | | | | |
| 531.00 > 169.00 | 4.744 | 4.741 | 0.003 | 1.404 | 1511320 | 2.39 | | 95.7 | 996 | |

| Signal | RT | EXP RT | DLT RT | REL RT | Response | Amount ng/ml | Ratio(Limits) | %Rec | S/N | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| 52 Perfluorododecanoic acid | | | | | | | | | | |
| 613.00 > 569.00 | 4.752 | 4.747 | 0.005 | 1.000 | 496720 | 0.2730 | Target=6.67 | 109 | 661 | |
| 613.00 > 169.00 | 4.759 | 4.747 | 0.012 | 1.002 | 66415 | | 7.48(3.34-10.01) | 109 | 300 | |
| 57 N-ethylperfluoro-1-octanesulfona | | | | | | | | | | |
| 526.00 > 169.00 | 4.752 | 4.749 | 0.003 | 1.002 | 142130 | 0.2363 | | 94.5 | 381 | |
| D 56 13C2 PFDoA | | | | | | | | | | |
| 615.00 > 570.00 | 4.752 | 4.747 | 0.005 | 1.406 | 4945538 | 2.40 | | 96.0 | 6130 | |
| 55 1H,1H,2H,2H-perfluorododecanesul | | | | | | | | | | |
| 627.00 > 607.00 | 4.775 | 4.766 | 0.009 | 1.153 | 113753 | 0.2163 | | 89.7 | 818 | |
| 59 Perfluorododecanesulfonic acid ( | | | | | | | | | | |
| 699.00 > 80.00 | 4.989 | 4.978 | 0.011 | 1.325 | 84857 | 0.2327 | Target=1.02 | 96.2 | 125 | |
| 699.00 > 99.00 | 4.989 | 4.978 | 0.011 | 1.325 | 78318 | | 1.08(0.51-1.53) | 96.2 | 520 | |
| 60 Perfluorotridecanoic acid | | | | | | | | | | |
| 663.00 > 619.00 | 5.024 | 5.013 | 0.011 | 1.057 | 381160 | 0.2651 | Target=4.80 | 106 | 1254 | |
| 663.00 > 169.00 | 5.024 | 5.013 | 0.011 | 1.057 | 75177 | | 5.07(2.40-7.20) | 106 | 278 | |
| 61 Perfluorotetradecanoic acid | | | | | | | | | | |
| 713.00 > 169.00 | 5.272 | 5.259 | 0.013 | 1.000 | 62584 | 0.2549 | Target=1.37 | 102 | 456 | |
| 713.00 > 219.00 | 5.264 | 5.259 | 0.005 | 0.998 | 42435 | | 1.47(0.69-2.06) | 102 | 686 | |
| D 62 13C2 PFTeDA | | | | | | | | | | |
| 715.00 > 670.00 | 5.272 | 5.258 | 0.014 | 1.560 | 3478825 | 2.42 | | 96.9 | 4256 | |
| 64 Perfluorohexadecanoic acid | | | | | | | | | | |
| 813.00 > 769.00 | 5.720 | 5.705 | 0.015 | 1.000 | 247697 | 0.2337 | Target=4.63 | 93.5 | 669 | |
| 813.00 > 169.00 | 5.720 | 5.705 | 0.015 | 1.000 | 52916 | | 4.68(2.32-6.95) | 93.5 | 413 | |
| D 63 13C2 PFHxDA | | | | | | | | | | |
| 815.00 > 770.00 | 5.720 | 5.703 | 0.017 | 1.693 | 2649042 | 2.49 | | 99.7 | 4577 | |
| 65 Perfluorooctadecanoic acid | | | | | | | | | | |
| 913.00 > 869.00 | 6.153 | 6.139 | 0.014 | 1.076 | 183768 | 0.2319 | Target=4.01 | 92.7 | 602 | |
| 913.00 > 169.00 | 6.153 | 6.139 | 0.014 | 1.076 | 46477 | | 3.95(2.01-6.02) | 92.7 | 402 | |

## QC Flag Legend

Review Flags

M - Manually Integrated

## Reagents:

LCPFC_LL3_00019 Amount Added: 1.00 Units: mL

Report Date: 10-Sep-2020 13:14:31 Chrom Revision: 2.3 09-Sep-2020 15:12:58

Eurofins TestAmerica, Sacramento

Data File: \\chromfs\Sacramento\ChromData\A9\20200910-102999.b\2020.09.10_A9 _PFC_ICAL_A_018.d

Injection Date: 10-Sep-2020 10:37:16 Instrument ID: A9

Lims ID: IC L3

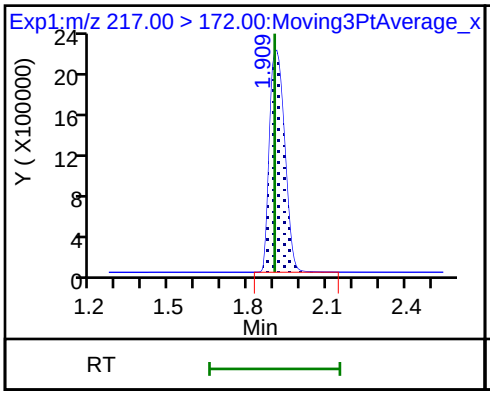
Client ID:

Operator ID: SACINSTRLCMS02 ALS Bottle#: 12 Worklist Smp#: 4

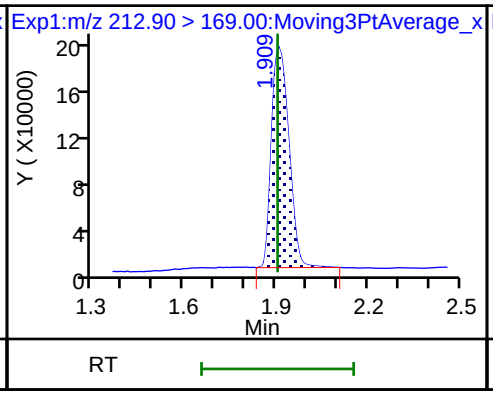
Injection Vol: 20.0 ul Dil. Factor: 1.0000

Method: PFAS_A9 Limit Group: LC PFC ICAL

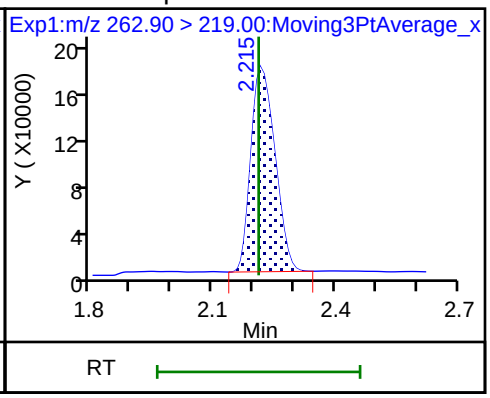
D 1 13C4 PFBA



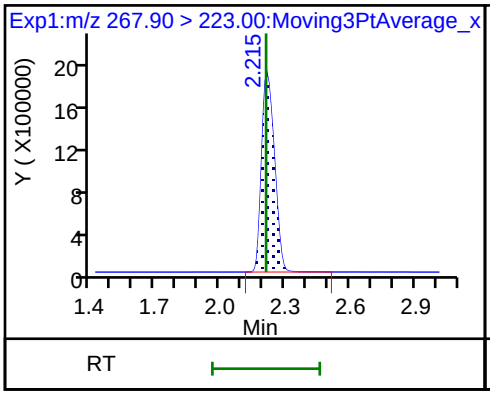

2 Perfluorobutanoic acid



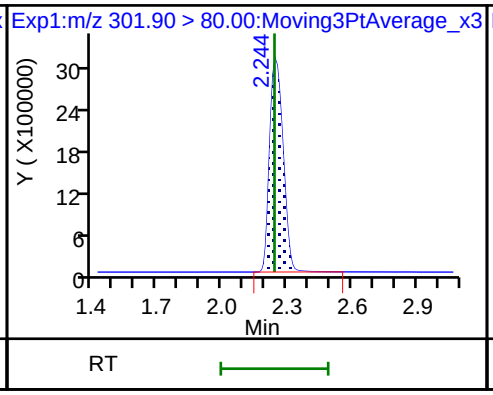

3 Perfluoropentanoic acid



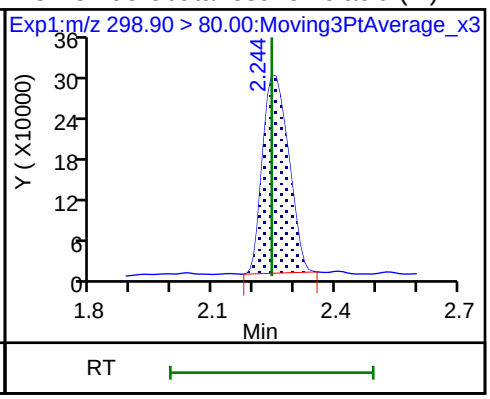

D 4 13C5 PFPeA



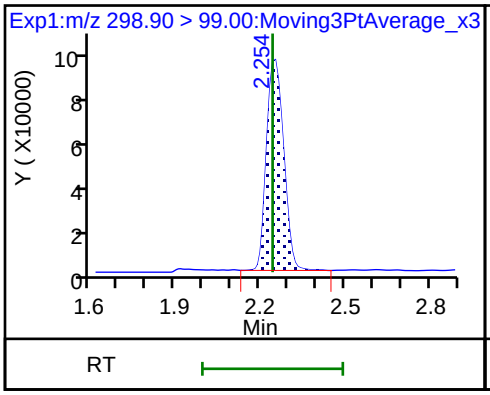

D 6 13C3 PFBS



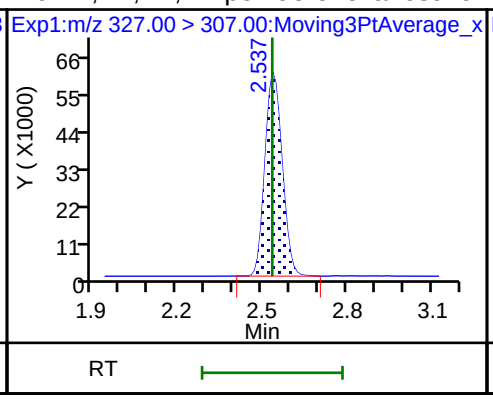

5 Perfluorobutanesulfonic acid (M)



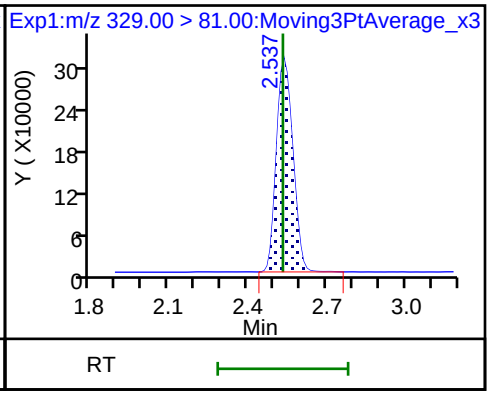

5 Perfluorobutanesulfonic acid



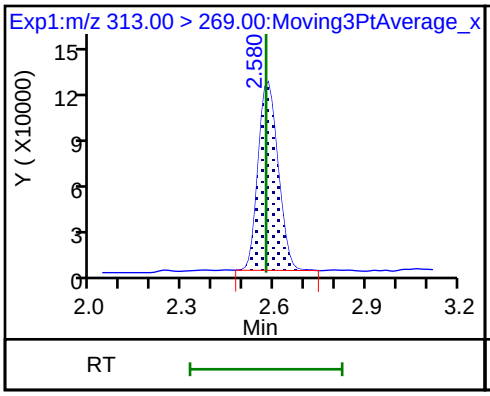

9 1H,1H,2H,2H-perfluorohexanesulfo



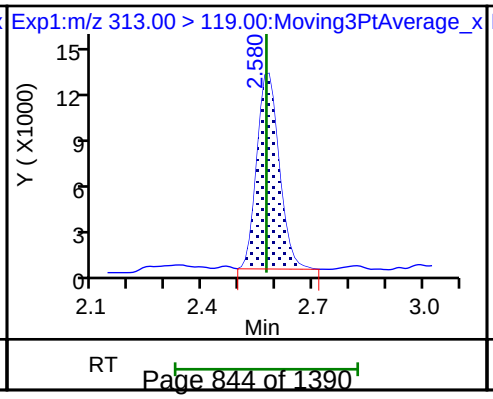

D 8 M2-4:2 FTS



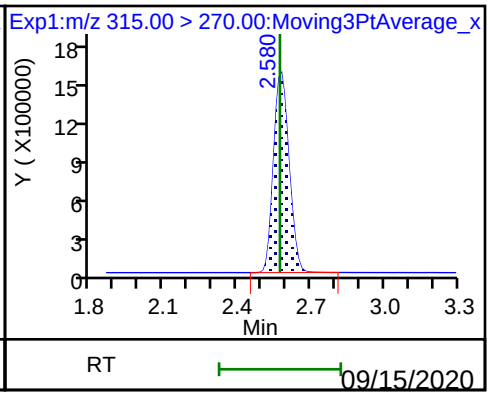

11 Perfluorohexanoic acid



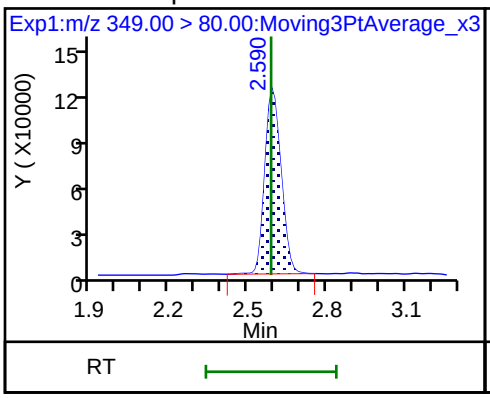

11 Perfluorohexanoic acid



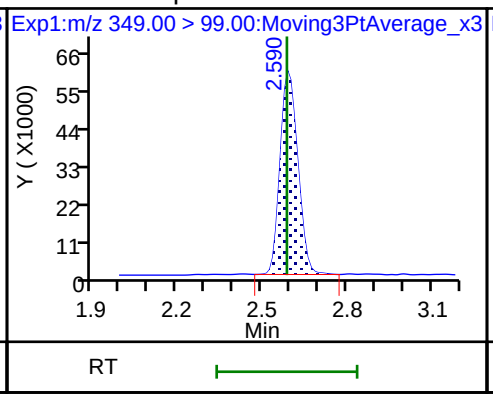

D 10 13C2 PFHxA



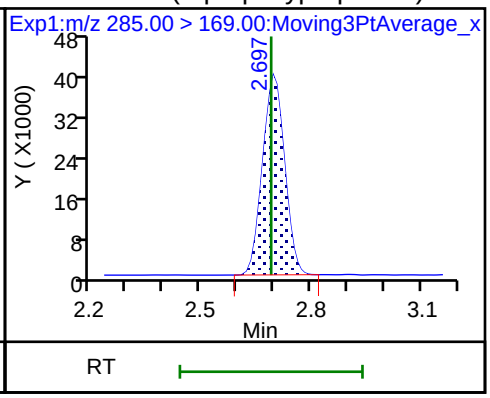
12 Perfluoropentanesulfonic acid



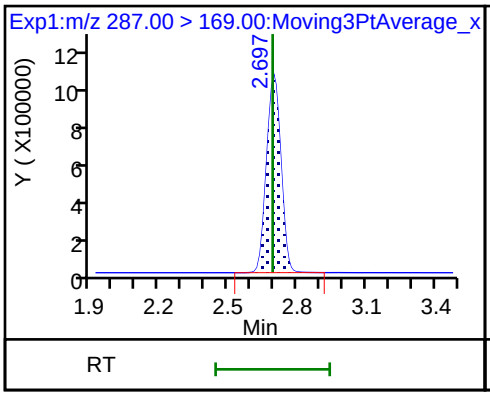

12 Perfluoropentanesulfonic acid



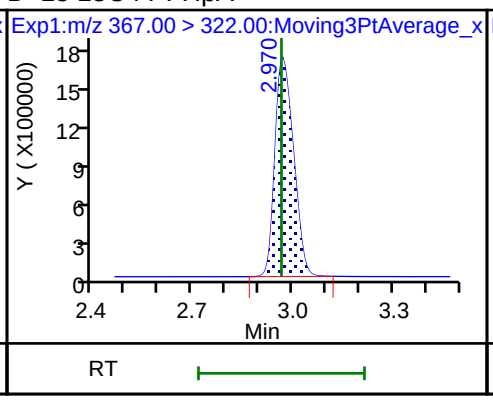

14 Perfluoro(2-propoxypropanoic) ac



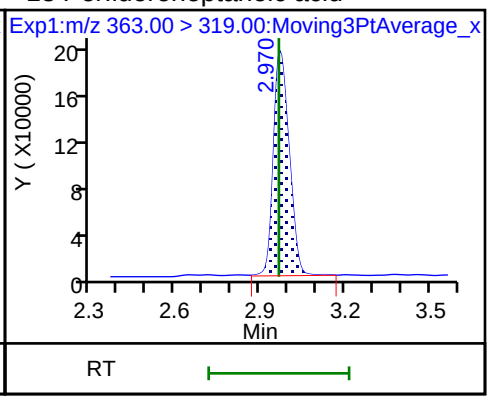

D 13 13C3 HFPO-DA



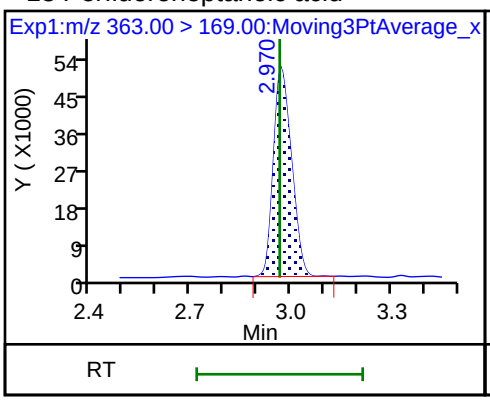

D 15 13C4 PFHpA



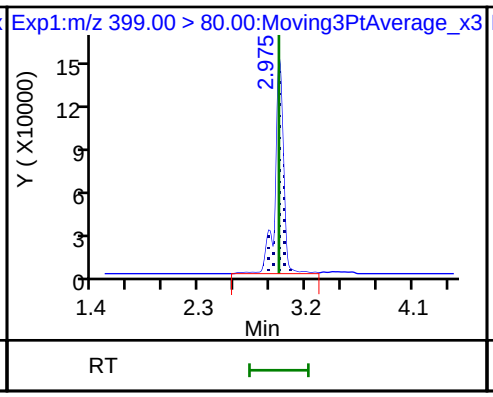

18 Perfluoroheptanoic acid



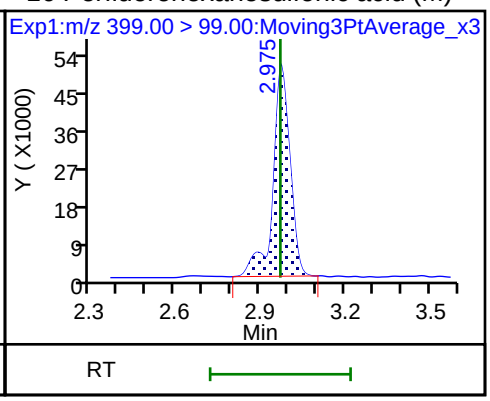

18 Perfluoroheptanoic acid



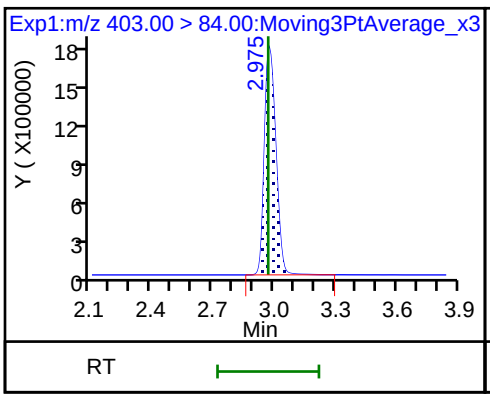

16 Perfluorohexanesulfonic acid



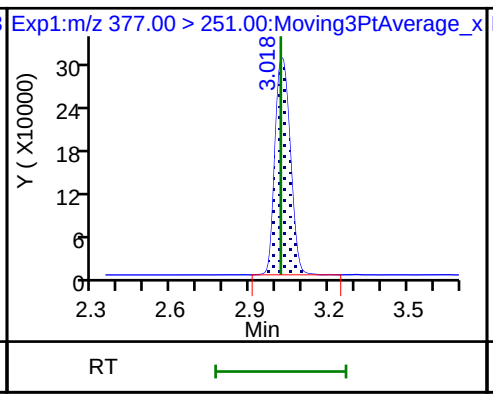

16 Perfluorohexanesulfonic acid (M)



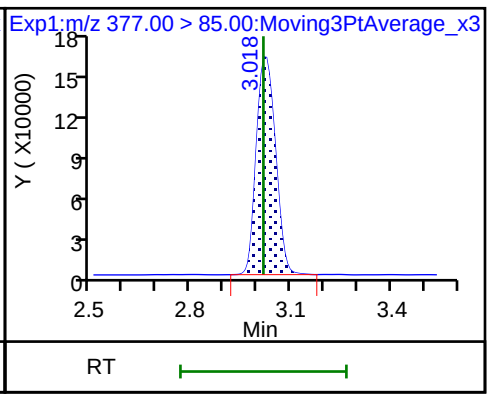

D 17 18O2 PFHxS



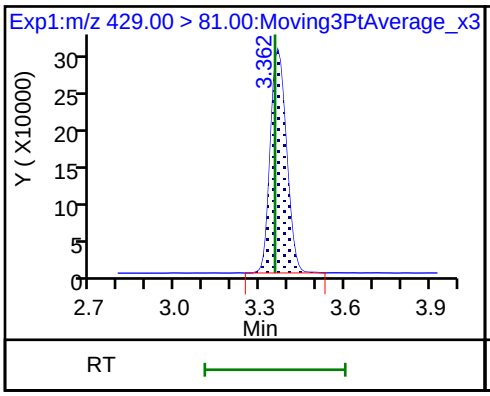

19 DONA



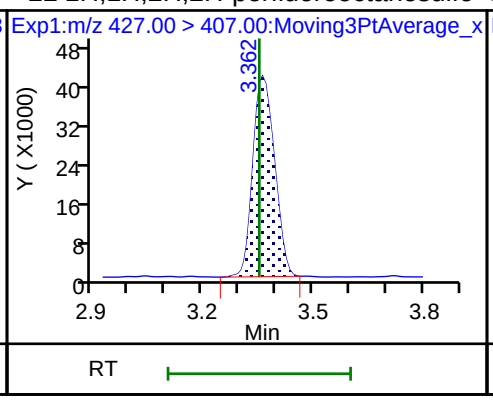

19 DONA



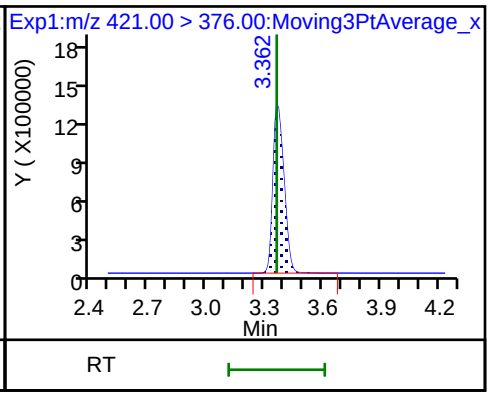
D 20 M2-6:2 FTS



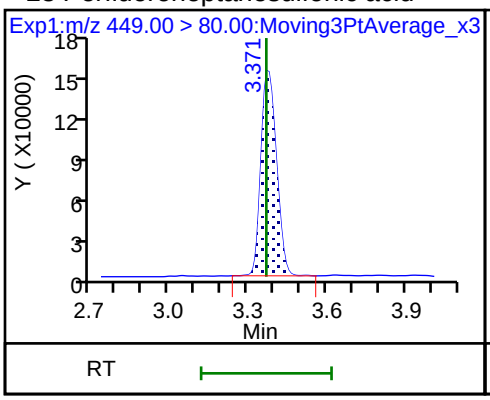

22 1H,1H,2H,2H-perfluorooctanesulfo



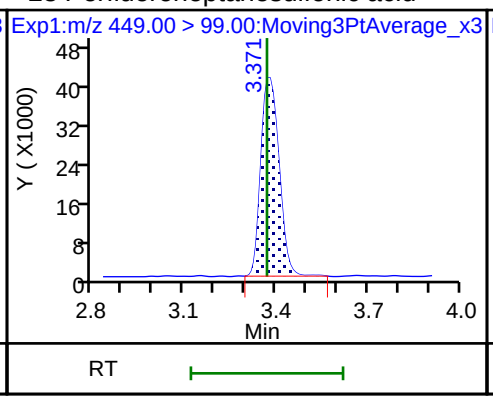

$ 21 13C8 PFOA



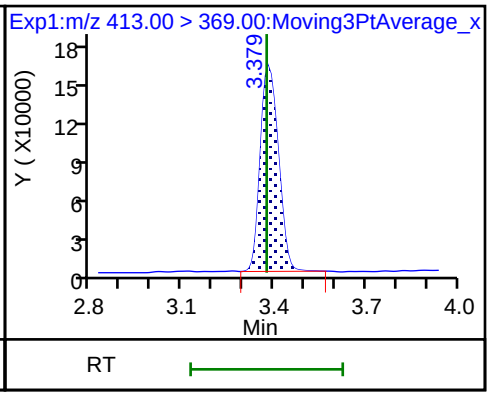

23 Perfluoroheptanesulfonic acid



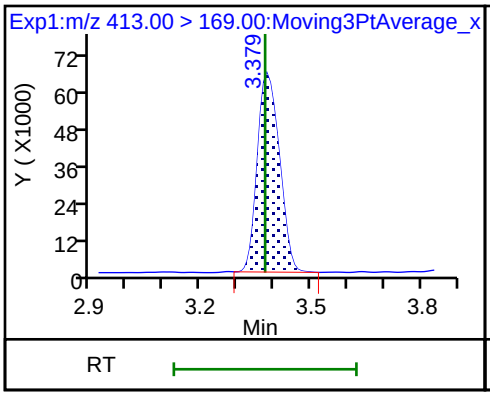

23 Perfluoroheptanesulfonic acid



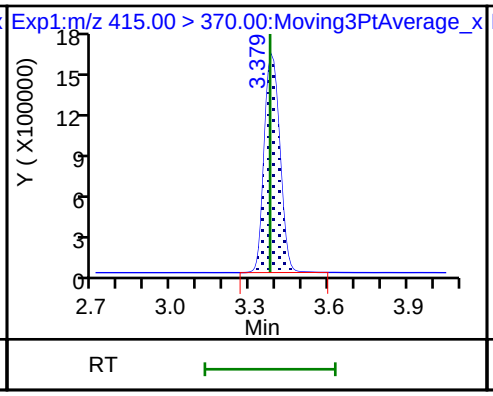

24 Perfluorooctanoic acid



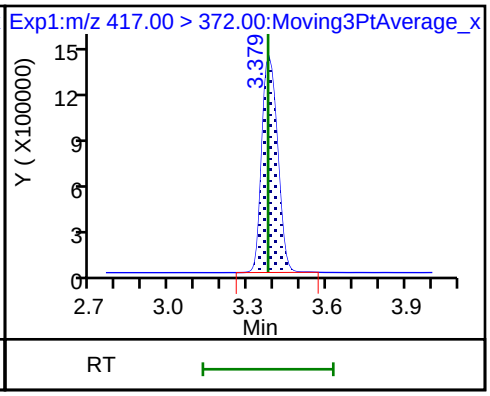

24 Perfluorooctanoic acid



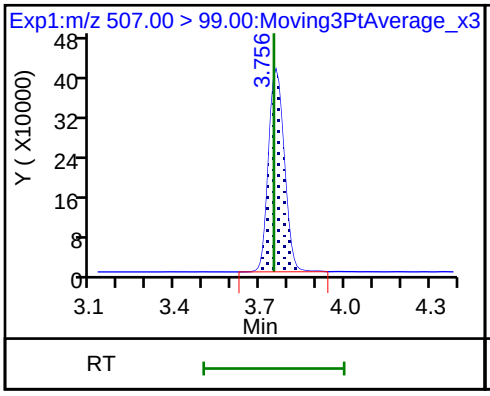

* 25 13C2 PFOA



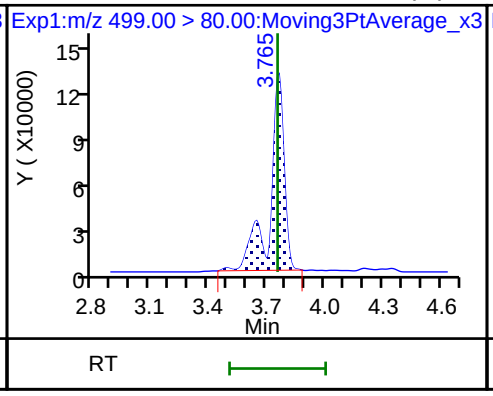

D 26 13C4 PFOA



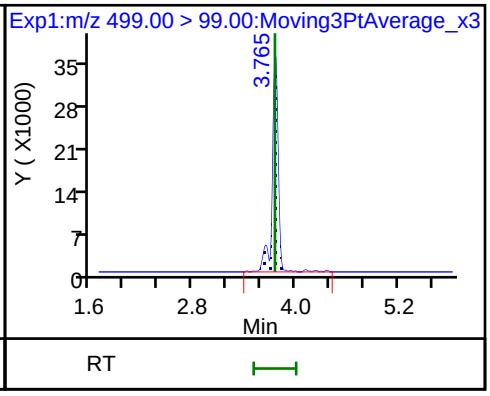

$ 27 13C8 PFOS



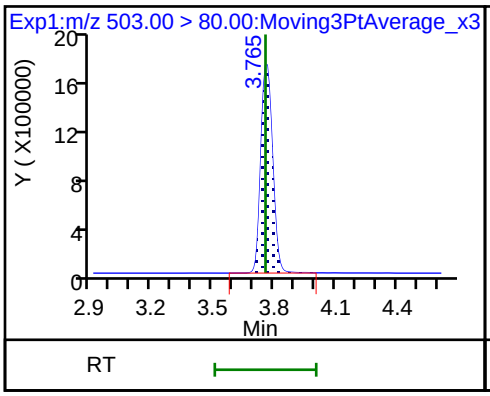

28 Perfluorooctanesulfonic acid (M)



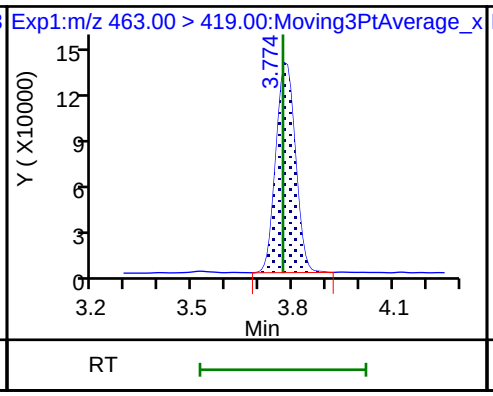

28 Perfluorooctanesulfonic acid



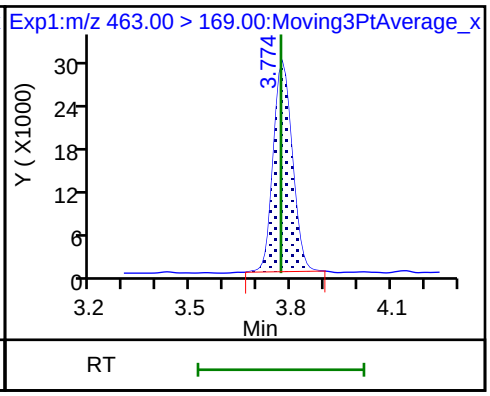
D 31 13C4 PFOS



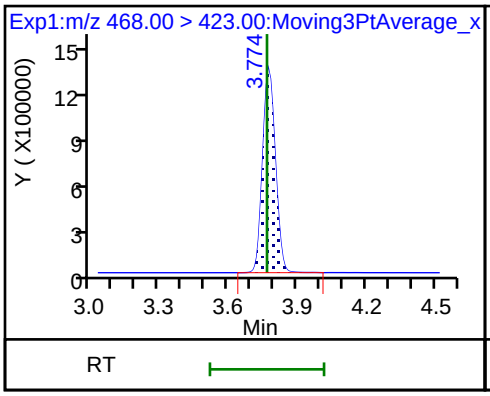

30 Perfluorononanoic acid



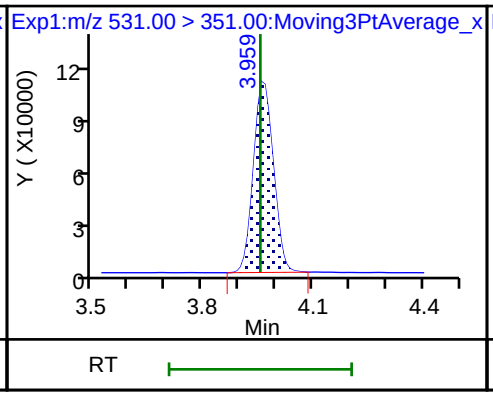

30 Perfluorononanoic acid



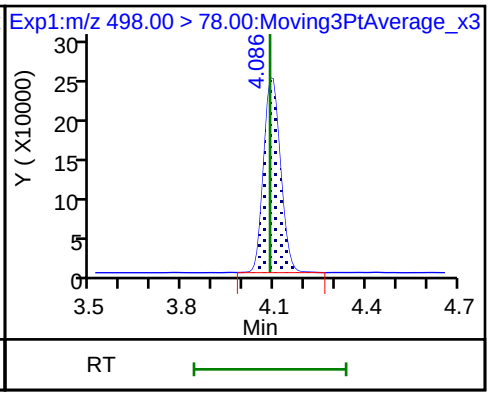

D 29 13C5 PFNA



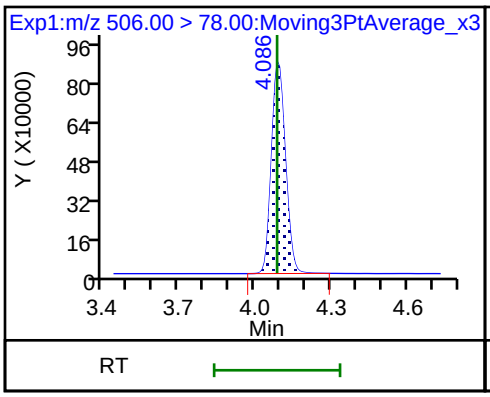

32 9-Chlorohexadecafluoro-3-oxanona



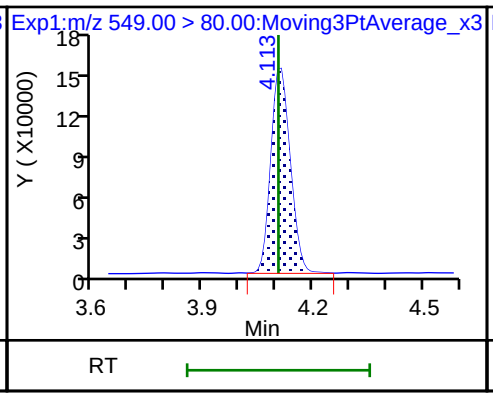

34 Perfluorooctanesulfonamide



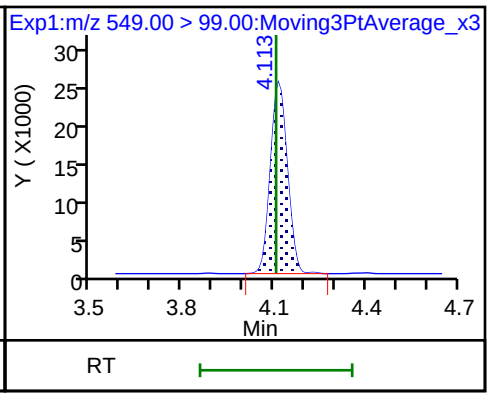

D 36 13C8 FOSA



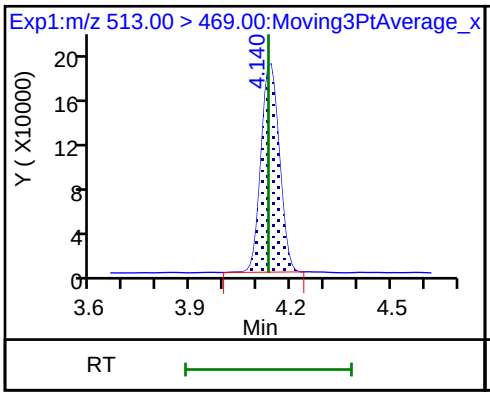

35 Perfluorononanesulfonic acid



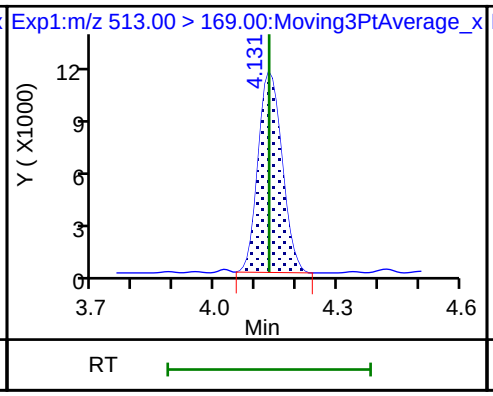

35 Perfluorononanesulfonic acid



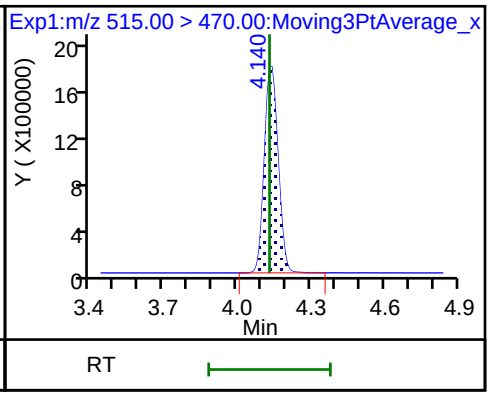

38 Perfluorodecanoic acid



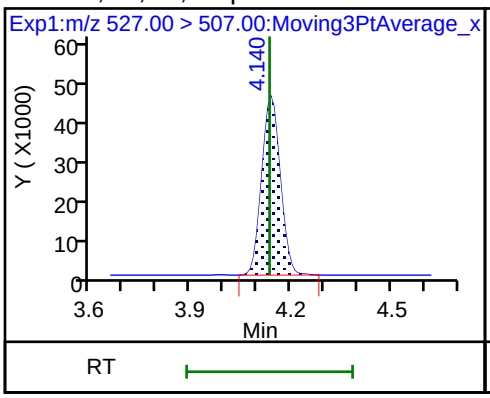

38 Perfluorodecanoic acid



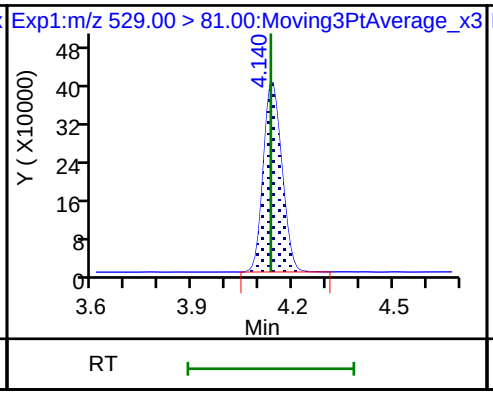

D 33 13C2 PFDA



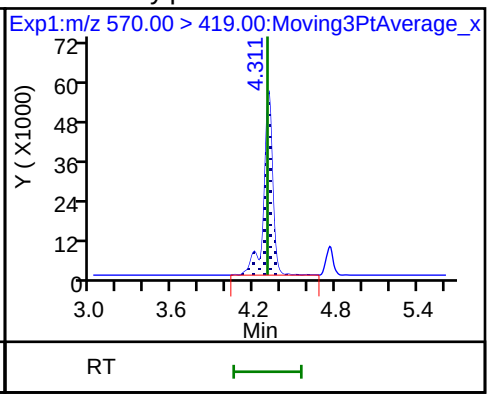
39 1H,1H,2H,2H-perfluorodecanesulfo



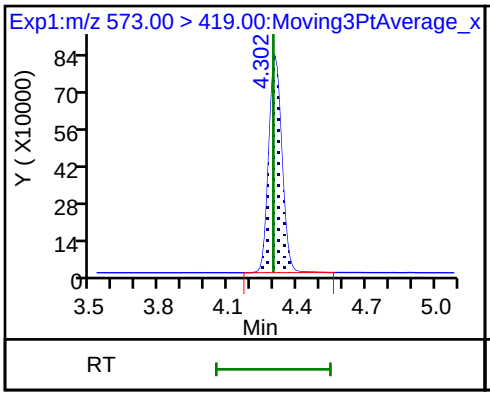

D 37 M2-8:2 FTS



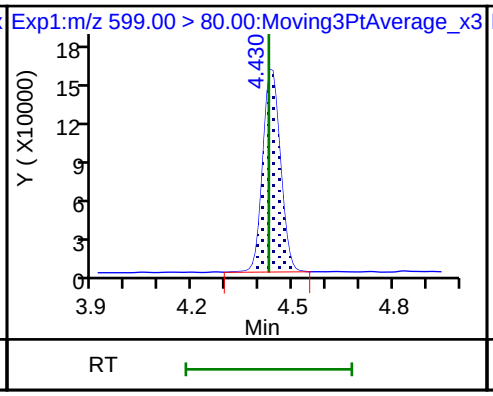

40 N-methylperfluorooctanesulfonami



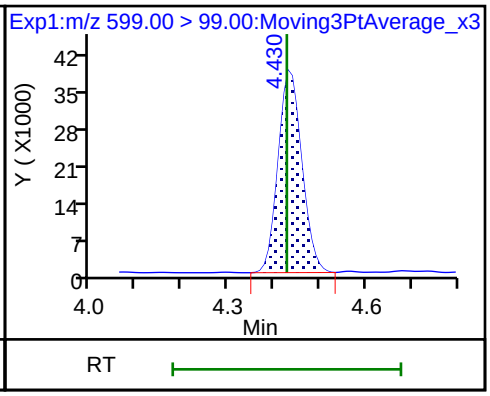

D 41 d3-NMeFOSAA



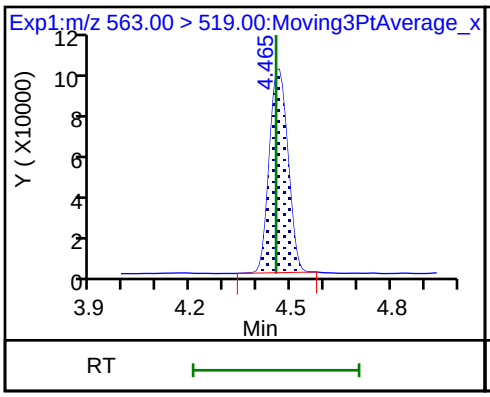

42 Perfluorodecanesulfonic acid



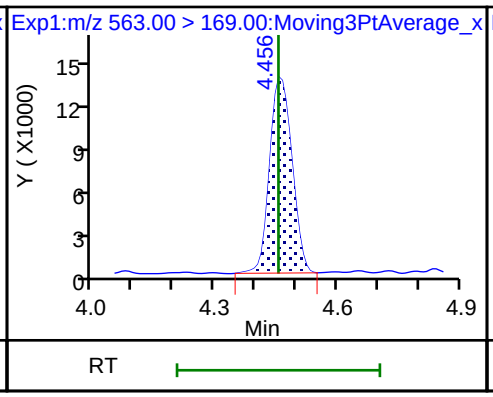

42 Perfluorodecanesulfonic acid



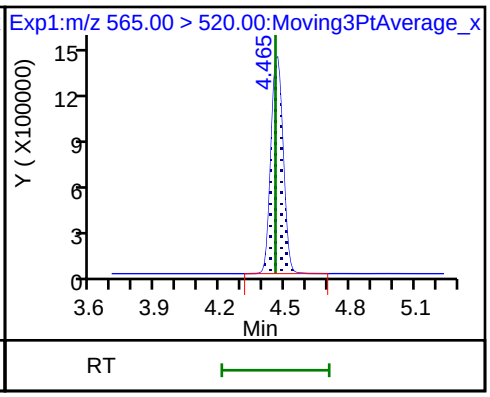

43 Perfluoroundecanoic acid



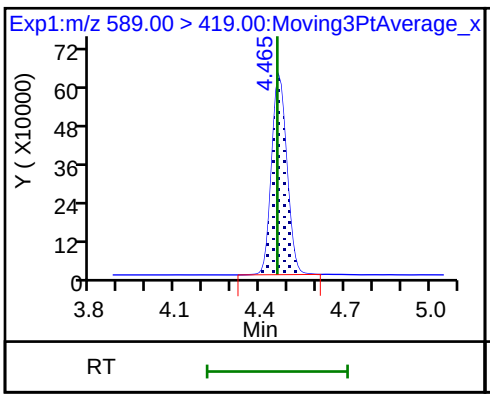

43 Perfluoroundecanoic acid



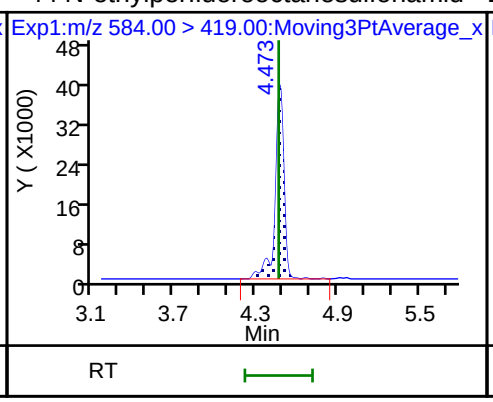

D 46 13C2 PFUnA



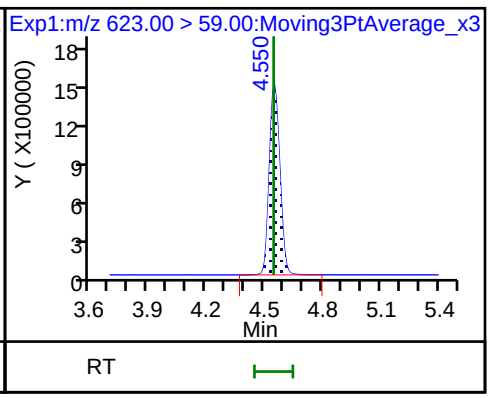

D 45 d5-NEtFOSAA



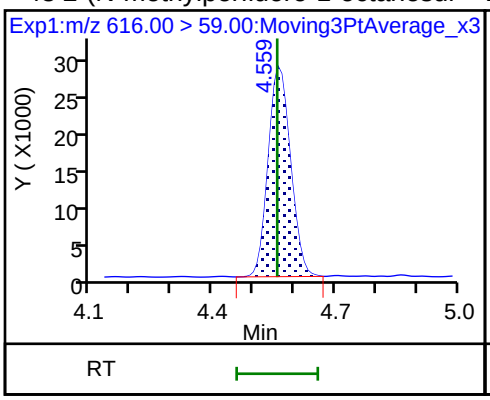

44 N-ethylperfluorooctanesulfonamid



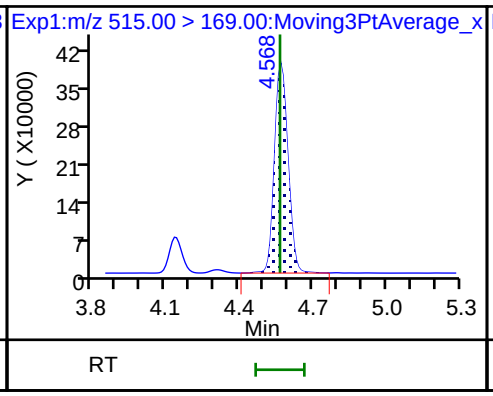

D 47 d7-N-MeFOSE-M



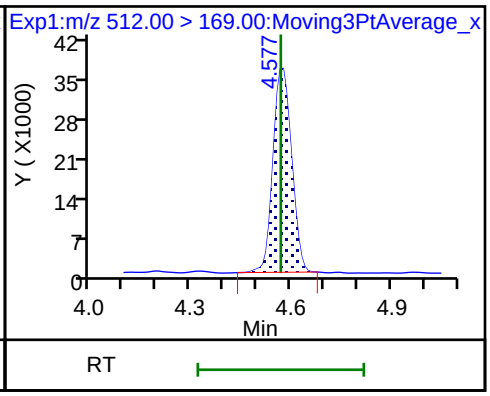
48 2-(N-methylperfluoro-1-octanesul



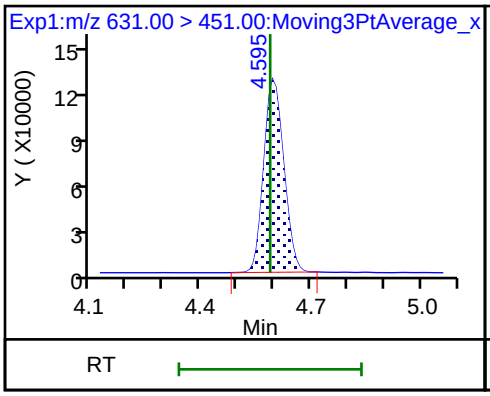

D 49 d-N-MeFOSA-M



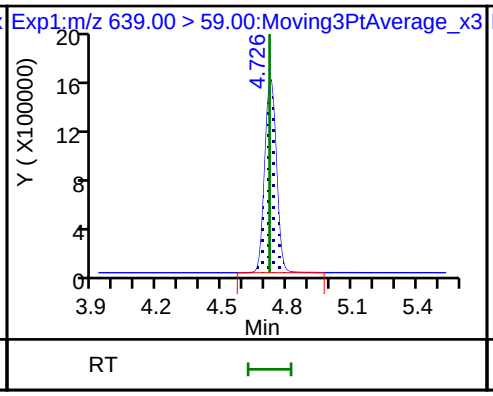

50 NMeFOSA



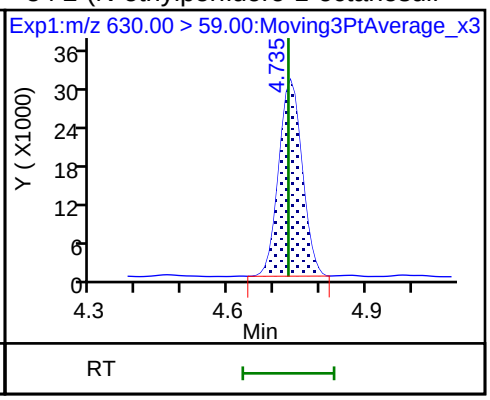

51 11-Chloroeicosafluoro-3-oxaundec



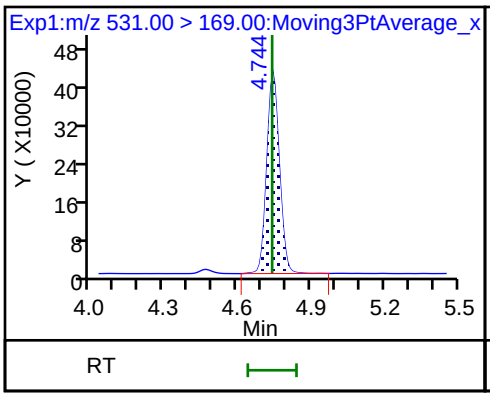

D 53 d9-N-EtFOSE-M



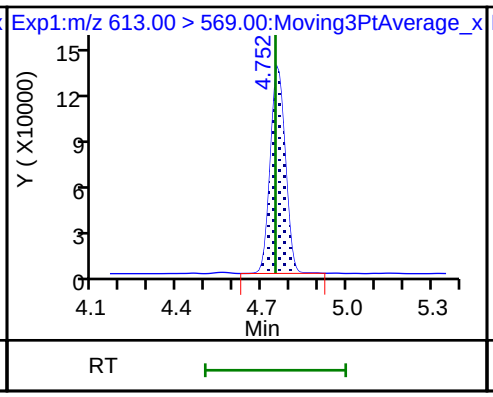

54 2-(N-ethylperfluoro-1-octanesulf



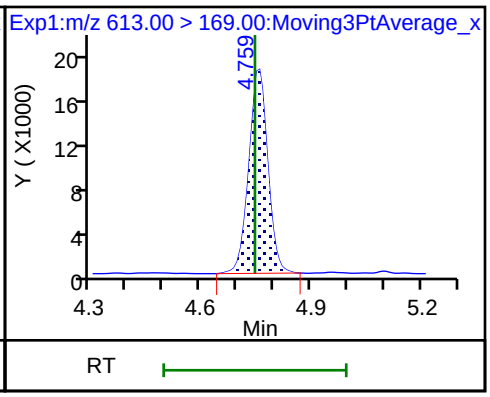

D 58 d-N-EtFOSA-M



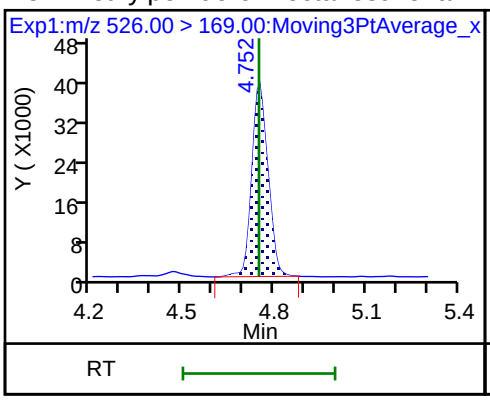

52 Perfluorododecanoic acid



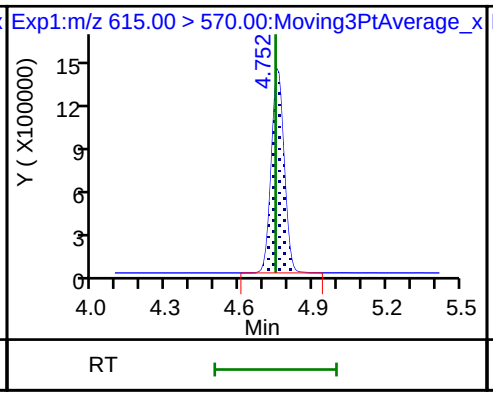

52 Perfluorododecanoic acid



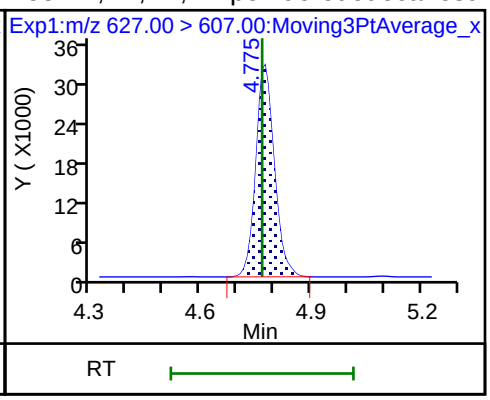

57 N-ethylperfluoro-1-octanesulfona



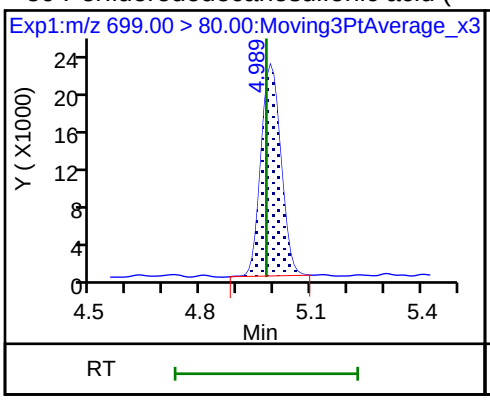

D 56 13C2 PFDoA



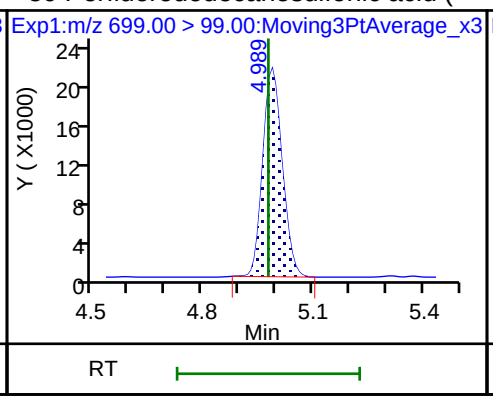

55 1H,1H,2H,2H-perfluorododecanesul



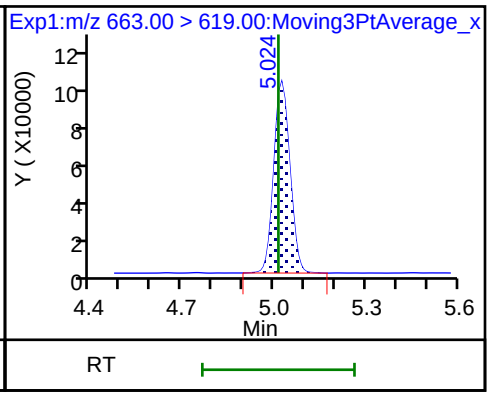
59 Perfluorododecanesulfonic acid (



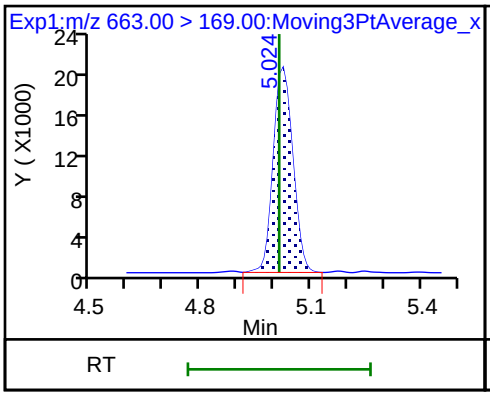

59 Perfluorododecanesulfonic acid (



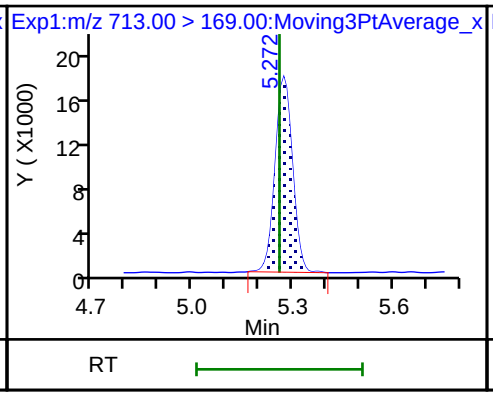

60 Perfluorotridecanoic acid



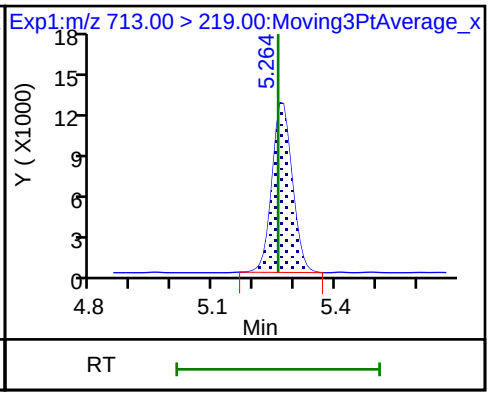

60 Perfluorotridecanoic acid



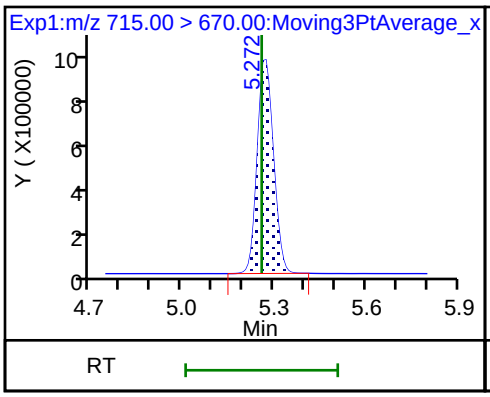

61 Perfluorotetradecanoic acid



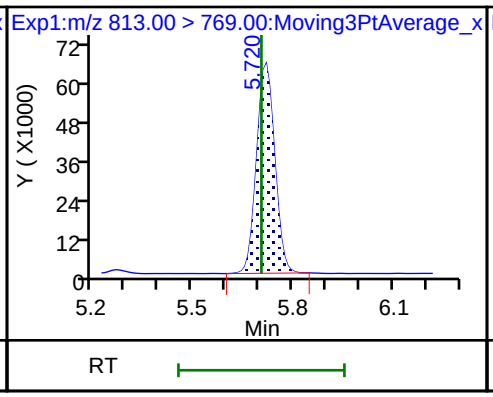

61 Perfluorotetradecanoic acid



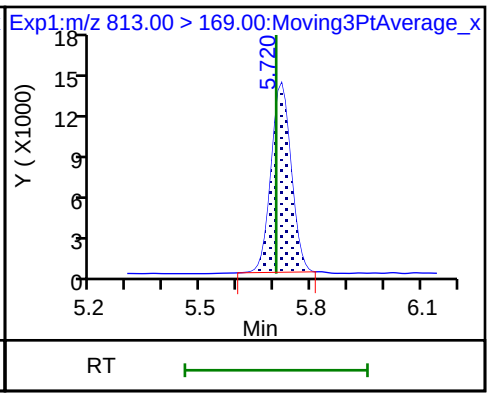

D 62 13C2 PFTeDA



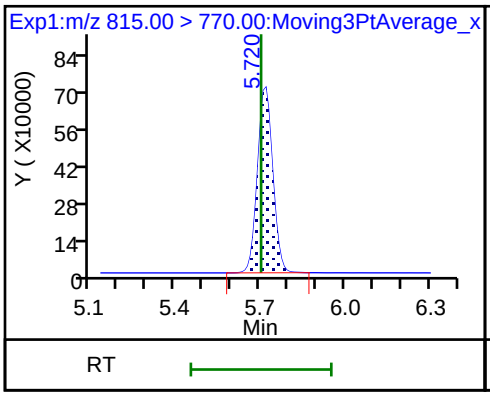

64 Perfluorohexadecanoic acid



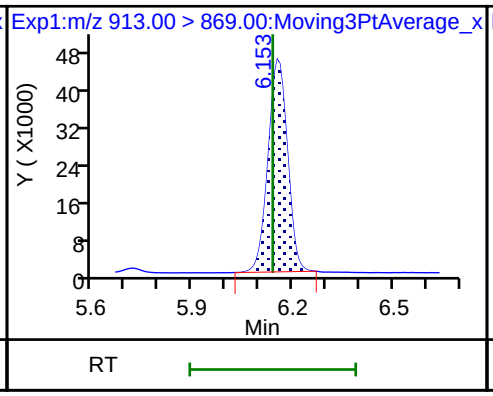

64 Perfluorohexadecanoic acid



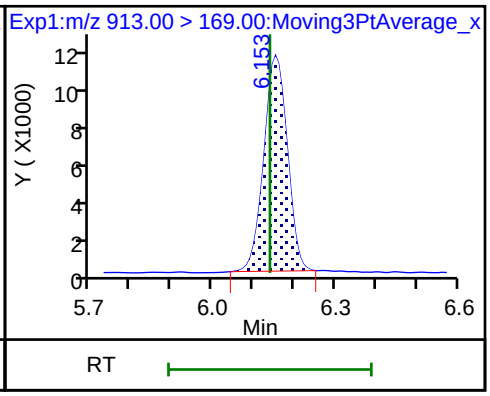

D 63 13C2 PFHxDA




65 Perfluorooctadecanoic acid




65 Perfluorooctadecanoic acid



Eurofins TestAmerica, Sacramento

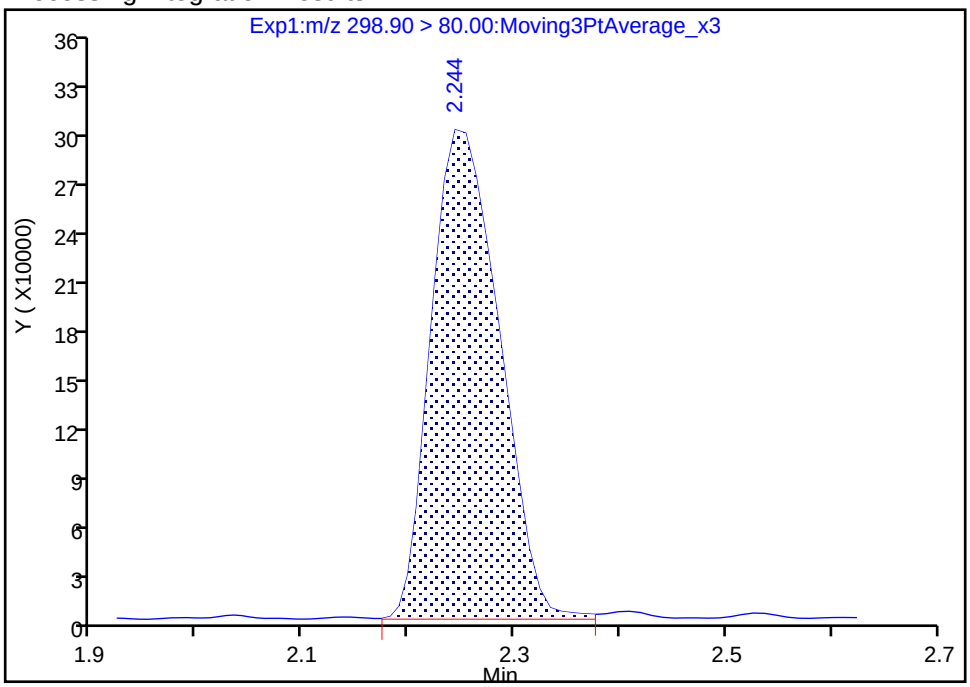
Data File: \\chromfs\Sacramento\ChromData\A9\20200910-102999.b\2020.09.10_A9 _PFC_ICAL_A_018.d
Injection Date: 10-Sep-2020 10:37:16 Instrument ID: A9
Lims ID: IC L3
Client ID:
Operator ID: SACINSTRLCMS02 ALS Bottle#: 12 Worklist Smp#: 4
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFAS_A9 Limit Group: LC PFC ICAL
Column: Detector EXP1

## 5 Perfluorobutanesulfonic acid, CAS: 375-73-5

Signal: 1

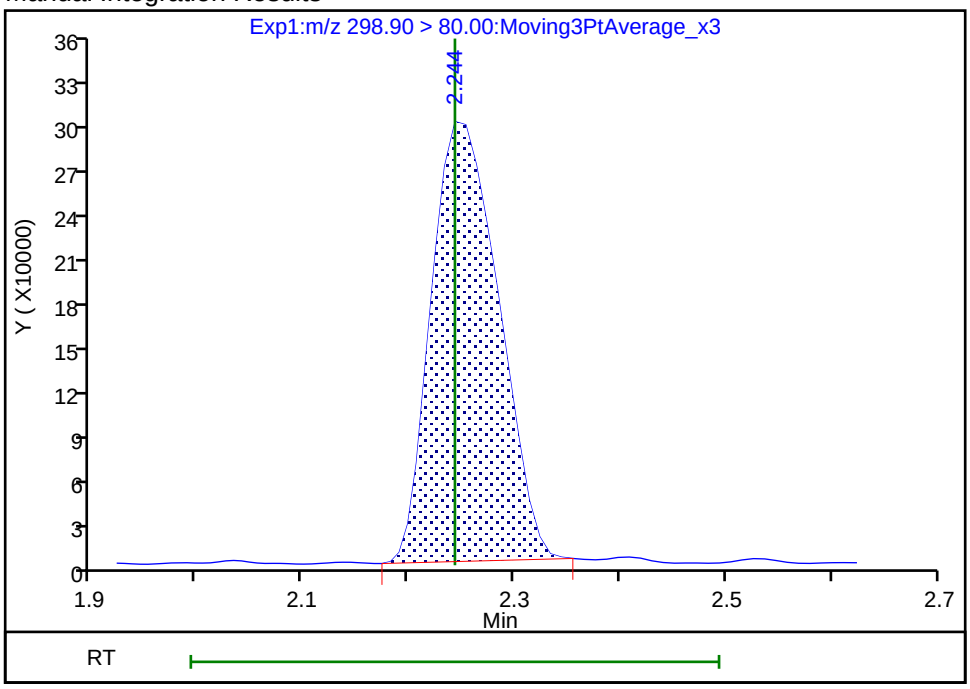
Processing Integration Results

RT: 2.24
Area: 1322452
Amount: 0.222532
Amount Units: ng/ml




Manual Integration Results

RT: 2.24
Area: 1295442
Amount: 0.229684
Amount Units: ng/ml




Reviewer: zibaa, 10-Sep-2020 11:15:42
Audit Action: Manually Integrated Audit Reason: Baseline

Eurofins TestAmerica, Sacramento

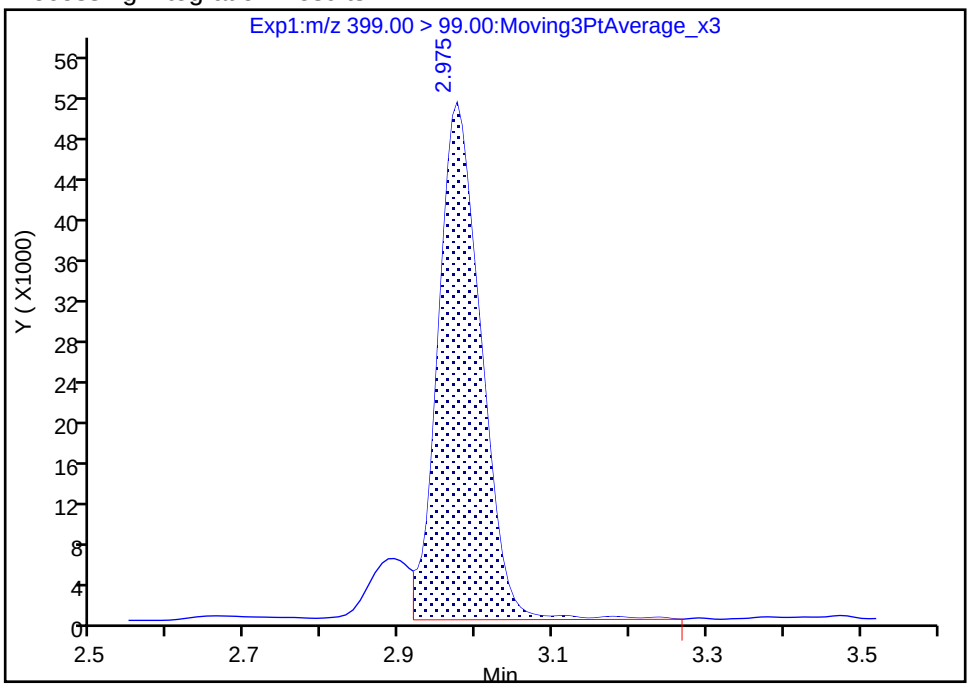
Data File: \\chromfs\Sacramento\ChromData\A9\20200910-102999.b\2020.09.10_A9 _PFC_ICAL_A_018.d
Injection Date: 10-Sep-2020 10:37:16 Instrument ID: A9
Lims ID: IC L3
Client ID:
Operator ID: SACINSTRLCMS02 ALS Bottle#: 12 Worklist Smp#: 4
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFAS_A9 Limit Group: LC PFC ICAL
Column: Detector EXP1

## 16 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 2

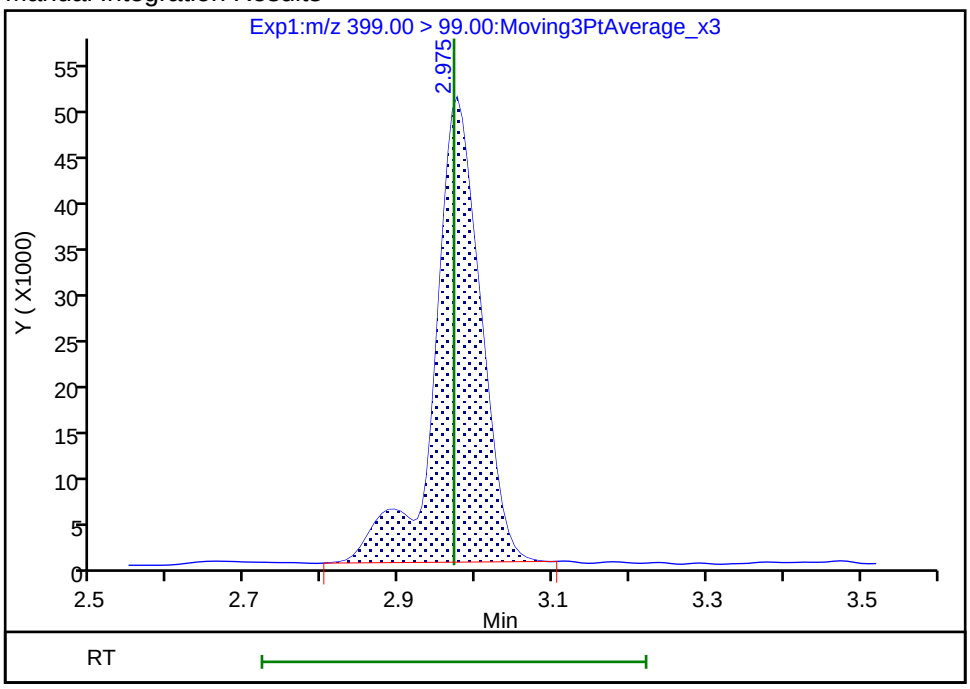
Processing Integration Results

RT: 2.98
Area: 197330
Amount: 0.211608
Amount Units: ng/ml




Manual Integration Results

RT: 2.98
Area: 212871
Amount: 0.216485
Amount Units: ng/ml




Reviewer: zibaa, 10-Sep-2020 11:16:22
Audit Action: Manually Integrated Audit Reason: Isomers

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

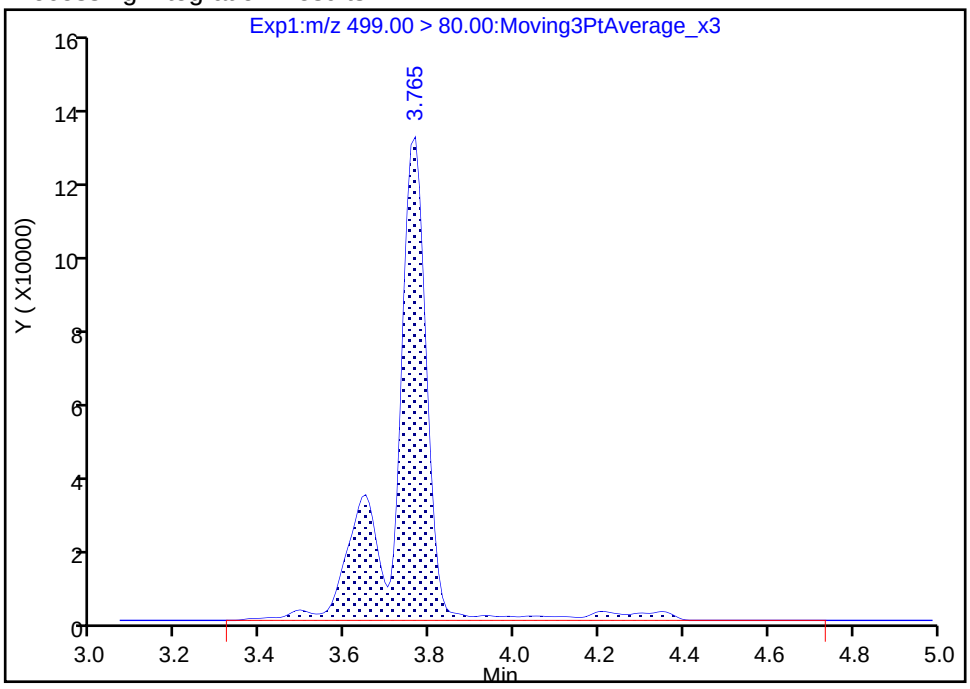
Data File: \\chromfs\Sacramento\ChromData\A9\20200910-102999.b\2020.09.10_A9 _PFC_ICAL_A_018.d
Injection Date: 10-Sep-2020 10:37:16 Instrument ID: A9
Lims ID: IC L3
Client ID:
Operator ID: SACINSTRLCMS02 ALS Bottle#: 12 Worklist Smp#: 4
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFAS_A9 Limit Group: LC PFC ICAL
Column: Detector EXP1

## 28 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 1

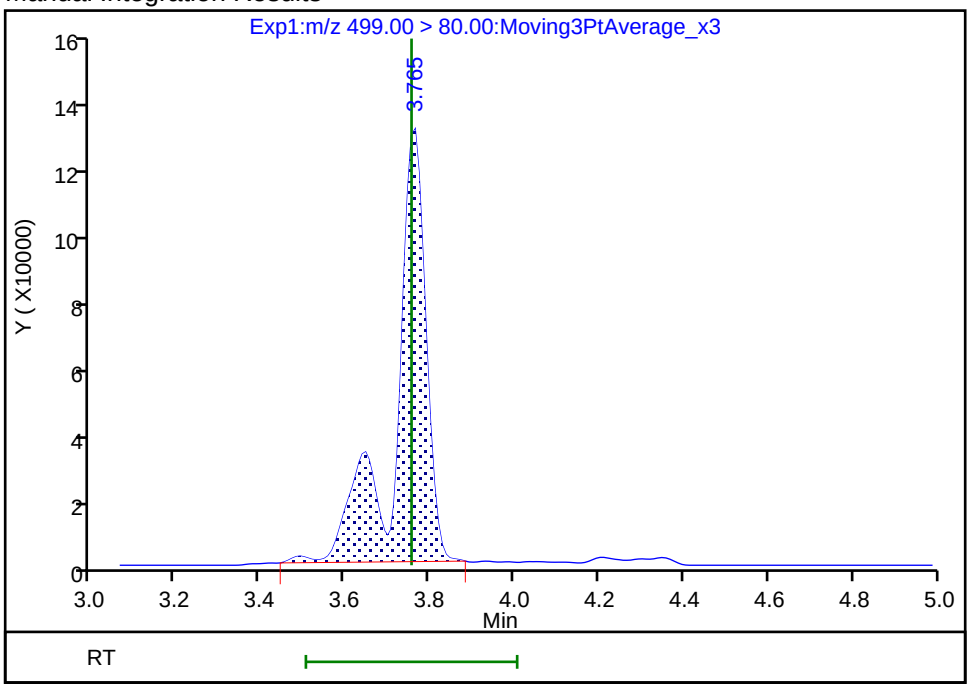
Processing Integration Results

RT: 3.76
Area: 723531
Amount: 0.234381
Amount Units: ng/ml




Manual Integration Results

RT: 3.76
Area: 654930
Amount: 0.219148
Amount Units: ng/ml




Reviewer: zibaa, 10-Sep-2020 11:17:21
Audit Action: Manually Integrated Audit Reason: Baseline

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\A9\20200910-102999.b\2020.09.10_A9 _PFC_ICAL_A_019.d
Lims ID: IC L4
Client ID:
Sample Type: ICIS Calib Level: 4
Inject. Date: 10-Sep-2020 10:46:36 ALS Bottle#: 13 Worklist Smp#: 5
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Sample Info: CAL STD4_30
Misc. Info.: Plate: 1 Rack: 1
Operator ID: SACINSTRLCMS02 Instrument ID: A9
Sublist: chrom-PFAS_A9*sub16

Method: \\chromfs\Sacramento\ChromData\A9\20200910-102999.b\PFAS_A9.m
Limit Group: LC PFC ICAL
Last Update: 10-Sep-2020 13:14:37 Calib Date: 10-Sep-2020 12:29:20
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\A9\20200910-102999.b\2020.09.10_A9 _PFC_ICAL_AA_022.d

Column 1 : Det: EXP1
Process Host: CTX1016

First Level Reviewer: zibaa Date: 10-Sep-2020 11:23:43
Ratio Calibration: Average of Initial Calibration

| Signal | RT | EXP RT | DLT RT | REL RT | Response | Amount ng/ml | Ratio(Limits) | %Rec | S/N | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| D 1 13C4 PFBA | | | | | | | | | | |
| 217.00 > 172.00 | 1.901 | 1.901 | 0.0 | 0.564 | 8185504 | 2.46 | | 98.5 | 3204 | |
| 2 Perfluorobutanoic acid | | | | | | | | | | |
| 212.90 > 169.00 | 1.901 | 1.904 | -0.003 | 1.000 | 3251427 | 1.14 | | 114 | 242 | |
| D 4 13C5 PFPeA | | | | | | | | | | |
| 267.90 > 223.00 | 2.207 | 2.211 | -0.004 | 0.655 | 6683295 | 2.38 | | 95.4 | 3472 | |
| 3 Perfluoropentanoic acid | | | | | | | | | | |
| 262.90 > 219.00 | 2.207 | 2.211 | -0.004 | 1.000 | 2824036 | 1.04 | | 104 | 244 | |
| 5 Perfluorobutanesulfonic acid | | | | | | | | | | |
| 298.90 > 80.00 | 2.244 | 2.244 | 0.0 | 1.004 | 5591416 | 1.00 | Target=3.10 | 113 | 399 | |
| 298.90 > 99.00 | 2.234 | 2.244 | -0.010 | 1.000 | 1653102 | | 3.38(1.55-4.65) | 113 | 369 | |
| D 6 13C3 PFBS | | | | | | | | | | |
| 301.90 > 80.00 | 2.234 | 2.241 | -0.007 | 0.663 | 12990046 | 2.35 | | 101 | 4666 | |
| 9 1H,1H,2H,2H-perfluorohexanesulfo | | | | | | | | | | |
| 327.00 > 307.00 | 2.537 | 2.535 | 0.002 | 1.004 | 1142837 | 1.09 | | 117 | 6591 | |
| D 8 M2-4:2 FTS | | | | | | | | | | |
| 329.00 > 81.00 | 2.526 | 2.533 | -0.007 | 0.749 | 1237052 | 2.25 | | 96.4 | 673 | |
| D 10 13C2 PFHxA | | | | | | | | | | |
| 315.00 > 270.00 | 2.569 | 2.573 | -0.004 | 0.762 | 6391446 | 2.45 | | 98.1 | 3246 | |
| 11 Perfluorohexanoic acid | | | | | | | | | | |
| 313.00 > 269.00 | 2.569 | 2.573 | -0.004 | 1.000 | 2266324 | 1.06 | Target=9.68 | 106 | 325 | |
| 313.00 > 119.00 | 2.569 | 2.573 | -0.004 | 1.000 | 244616 | | 9.26(4.84-14.52) | 106 | 185 | |
| 12 Perfluoropentanesulfonic acid | | | | | | | | | | |
| 349.00 > 80.00 | 2.580 | 2.587 | -0.007 | 1.155 | 2210542 | 0.9853 | Target=2.01 | 105 | 508 | |
| 349.00 > 99.00 | 2.580 | 2.587 | -0.007 | 1.155 | 1103398 | | 2.00(1.00-3.01) | 105 | 773 | |
| 14 Perfluoro(2-propoxypropanoic) ac | | | | | | | | | | |
| 285.00 > 169.00 | 2.686 | 2.691 | -0.005 | 1.000 | 758774 | 1.09 | | 109 | 3230 | |

| Signal | RT | EXP RT | DLT RT | REL RT | Response | Amount ng/ml | Ratio(Limits) | %Rec | S/N | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| D 13 13C3 HFPO-DA | | | | | | | | | | |
| 287.00 > 169.00 | 2.686 | 2.692 | -0.006 | 0.797 | 4413524 | 2.47 | | 98.7 | 3056 | |
| D 15 13C4 PFHpA | | | | | | | | | | |
| 367.00 > 322.00 | 2.959 | 2.965 | -0.007 | 0.878 | 6353500 | 2.51 | | 100 | 3277 | |
| 18 Perfluoroheptanoic acid | | | | | | | | | | |
| 363.00 > 319.00 | 2.959 | 2.966 | -0.008 | 1.000 | 2952448 | 1.05 | Target=3.74 | 105 | 531 | |
| 363.00 > 169.00 | 2.959 | 2.966 | -0.008 | 1.000 | 767862 | | 3.85(1.87-5.61) | 105 | 684 | |
| D 17 18O2 PFHxS | | | | | | | | | | |
| 403.00 > 84.00 | 2.964 | 2.969 | -0.005 | 0.879 | 6397044 | 2.41 | | 102 | 3273 | |
| 16 Perfluorohexanesulfonic acid | | | | | | | | | | M |
| 399.00 > 80.00 | 2.964 | 2.971 | -0.007 | 1.000 | 2859421 | 0.8962 | Target=3.29 | 98.5 | 577 | |
| 399.00 > 99.00 | 2.964 | 2.971 | -0.007 | 1.000 | 820713 | | 3.48(1.65-4.94) | 98.5 | 469 | M |
| 19 DONA | | | | | | | | | | |
| 377.00 > 251.00 | 3.011 | 3.017 | -0.006 | 0.803 | 5440739 | 1.09 | Target=1.80 | 115 | 4004 | |
| 377.00 > 85.00 | 3.011 | 3.017 | -0.006 | 0.803 | 2927941 | | 1.86(0.90-2.70) | 115 | 3699 | |
| D 20 M2-6:2 FTS | | | | | | | | | | |
| 429.00 > 81.00 | 3.347 | 3.352 | -0.005 | 0.993 | 1136846 | 2.40 | | 101 | 1273 | |
| 22 1H,1H,2H,2H-perfluorooctanesulfo | | | | | | | | | | |
| 427.00 > 407.00 | 3.347 | 3.353 | -0.006 | 1.000 | 731791 | 0.99 | | 105 | 1061 | |
| $ 21 13C8 PFOA | | | | | | | | | | |
| 421.00 > 376.00 | 3.354 | 3.362 | -0.008 | 0.995 | 4924358 | 2.47 | | 101 | 6048 | |
| 23 Perfluoroheptanesulfonic acid | | | | | | | | | | |
| 449.00 > 80.00 | 3.362 | 3.369 | -0.007 | 0.897 | 2694297 | 1.06 | Target=3.65 | 111 | 880 | |
| 449.00 > 99.00 | 3.362 | 3.369 | -0.007 | 0.897 | 712823 | | 3.78(1.83-5.48) | 111 | 958 | |
| 24 Perfluorooctanoic acid | | | | | | | | | | |
| 413.00 > 369.00 | 3.371 | 3.375 | -0.004 | 1.000 | 2655085 | 1.02 | Target=2.37 | 102 | 526 | |
| 413.00 > 169.00 | 3.371 | 3.375 | -0.004 | 1.000 | 1076530 | | 2.47(1.19-3.56) | 102 | 1114 | |
| * 25 13C2 PFOA | | | | | | | | | | |
| 415.00 > 370.00 | 3.371 | 3.376 | -0.005 | | 6156052 | 2.50 | | | 4701 | |
| D 26 13C4 PFOA | | | | | | | | | | |
| 417.00 > 372.00 | 3.371 | 3.376 | -0.005 | 1.000 | 6054330 | 2.55 | | 102 | 4916 | |
| $ 27 13C8 PFOS | | | | | | | | | | |
| 507.00 > 99.00 | 3.747 | 3.748 | -0.001 | 1.112 | 1473644 | 2.35 | | 98.5 | 2057 | |
| 28 Perfluorooctanesulfonic acid | | | | | | | | | | M |
| 499.00 > 80.00 | 3.757 | 3.756 | 0.0 | 1.002 | 2765721 | 0.9637 | Target=4.12 | 104 | 356 | |
| 499.00 > 99.00 | 3.747 | 3.756 | -0.009 | 1.000 | 652160 | | 4.24(2.06-6.17) | 104 | 874 | M |
| D 31 13C4 PFOS | | | | | | | | | | |
| 503.00 > 80.00 | 3.747 | 3.756 | -0.009 | 1.112 | 6597517 | 2.39 | | 99.8 | 1450 | |
| 30 Perfluorononanoic acid | | | | | | | | | | |
| 463.00 > 419.00 | 3.766 | 3.770 | -0.004 | 1.000 | 2313472 | 1.05 | Target=4.21 | 105 | 1662 | |
| 463.00 > 169.00 | 3.766 | 3.770 | -0.004 | 1.000 | 538397 | | 4.30(2.11-6.32) | 105 | 1082 | |
| D 29 13C5 PFNA | | | | | | | | | | |
| 468.00 > 423.00 | 3.766 | 3.767 | -0.001 | 1.117 | 5531319 | 2.68 | | 107 | 4810 | |
| 32 9-Chlorohexadecafluoro-3-oxanona | | | | | | | | | | |
| 531.00 > 351.00 | 3.951 | 3.956 | -0.005 | 1.054 | 1712587 | 0.9888 | | 106 | 2078 | |
| D 36 13C8 FOSA | | | | | | | | | | |
| 506.00 > 78.00 | 4.079 | 4.086 | -0.007 | 1.210 | 3252977 | 2.50 | | 100 | 2704 | |

| Signal | RT | EXP RT | DLT RT | REL RT | Response | Amount ng/ml | Ratio(Limits) | %Rec | S/N | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| 34 Perfluorooctanesulfonamide | | | | | | | | | | |
| 498.00 > 78.00 | 4.079 | 4.086 | -0.007 | 1.000 | 3777803 | 1.04 | | 104 | 2777 | |
| 35 Perfluorononanesulfonic acid | | | | | | | | | | |
| 549.00 > 80.00 | 4.097 | 4.106 | -0.009 | 1.093 | 2204044 | 1.05 | Target=5.56 | 110 | 1260 | |
| 549.00 > 99.00 | 4.105 | 4.106 | -0.001 | 1.096 | 354130 | | 6.22(2.78-8.34) | 110 | 1218 | |
| 38 Perfluorodecanoic acid | | | | | | | | | | |
| 513.00 > 469.00 | 4.123 | 4.132 | -0.009 | 1.000 | 2722259 | 1.10 | Target=14.33 | 110 | 1406 | |
| 513.00 > 169.00 | 4.123 | 4.132 | -0.009 | 1.000 | 179528 | | 15.16(7.16-21.49) | 110 | 299 | |
| 39 1H,1H,2H,2H-perfluorodecanesulfo | | | | | | | | | | |
| 527.00 > 507.00 | 4.132 | 4.135 | -0.003 | 1.000 | 760505 | 0.9503 | | 99.2 | 4574 | |
| D 33 13C2 PFDA | | | | | | | | | | |
| 515.00 > 470.00 | 4.123 | 4.130 | -0.007 | 1.223 | 6218902 | 2.38 | | 95.0 | 4860 | |
| D 37 M2-8:2 FTS | | | | | | | | | | |
| 529.00 > 81.00 | 4.132 | 4.133 | -0.001 | 1.226 | 1487565 | 2.56 | | 107 | 1249 | |
| D 41 d3-NMeFOSAA | | | | | | | | | | |
| 573.00 > 419.00 | 4.294 | 4.295 | -0.001 | 1.274 | 3088740 | 2.37 | | 94.9 | 2222 | |
| 40 N-methylperfluorooctanesulfonami | | | | | | | | | | M |
| 570.00 > 419.00 | 4.294 | 4.299 | -0.005 | 1.000 | 980061 | 1.04 | | 104 | 201 | M |
| 42 Perfluorodecanesulfonic acid | | | | | | | | | | |
| 599.00 > 80.00 | 4.423 | 4.427 | -0.004 | 1.180 | 2430075 | 1.04 | Target=4.29 | 108 | 999 | |
| 599.00 > 99.00 | 4.423 | 4.427 | -0.004 | 1.180 | 527232 | | 4.61(2.15-6.44) | 108 | 1367 | |
| 43 Perfluoroundecanoic acid | | | | | | | | | | |
| 563.00 > 519.00 | 4.449 | 4.455 | -0.006 | 1.000 | 1513496 | 1.05 | Target=6.74 | 105 | 1835 | |
| 563.00 > 169.00 | 4.449 | 4.455 | -0.006 | 1.000 | 229521 | | 6.59(3.37-10.11) | 105 | 556 | |
| D 46 13C2 PFUnA | | | | | | | | | | |
| 565.00 > 520.00 | 4.449 | 4.455 | -0.006 | 1.320 | 5190650 | 2.57 | | 103 | 7871 | |
| D 45 d5-NEtFOSAA | | | | | | | | | | |
| 589.00 > 419.00 | 4.457 | 4.460 | -0.003 | 1.322 | 2228634 | 2.56 | | 102 | 3444 | |
| 44 N-ethylperfluorooctanesulfonamid | | | | | | | | | | |
| 584.00 > 419.00 | 4.466 | 4.467 | -0.001 | 1.002 | 734316 | 1.02 | | 102 | 9722 | |
| D 47 d7-N-MeFOSE-M | | | | | | | | | | |
| 623.00 > 59.00 | 4.543 | 4.546 | -0.003 | 1.348 | 4958225 | 11.8 | | 94.8 | 4579 | |
| 48 2-(N-methylperfluoro-1-octanesul | | | | | | | | | | |
| 616.00 > 59.00 | 4.551 | 4.557 | -0.006 | 1.002 | 450645 | 1.09 | | 109 | 950 | |
| D 49 d-N-MeFOSA-M | | | | | | | | | | |
| 515.00 > 169.00 | 4.560 | 4.565 | -0.005 | 1.353 | 1402993 | 2.40 | | 95.9 | 230 | |
| 50 NMeFOSA | | | | | | | | | | |
| 512.00 > 169.00 | 4.570 | 4.569 | 0.001 | 1.002 | 645147 | 1.10 | | 110 | 978 | |
| 51 11-Chloroeicosafluoro-3-oxaundec | | | | | | | | | | |
| 631.00 > 451.00 | 4.588 | 4.588 | 0.0 | 1.224 | 2264304 | 1.11 | | 118 | 2721 | |
| D 53 d9-N-EtFOSE-M | | | | | | | | | | |
| 639.00 > 59.00 | 4.719 | 4.718 | 0.001 | 1.400 | 5314215 | 12.1 | | 96.7 | 4978 | |
| 54 2-(N-ethylperfluoro-1-octanesulf | | | | | | | | | | |
| 630.00 > 59.00 | 4.728 | 4.731 | -0.003 | 1.002 | 451734 | 1.07 | | 107 | 936 | |
| D 58 d-N-EtFOSA-M | | | | | | | | | | |
| 531.00 > 169.00 | 4.737 | 4.741 | -0.004 | 1.405 | 1480814 | 2.44 | | 97.4 | 915 | |

| Signal | RT | EXP RT | DLT RT | REL RT | Response | Amount ng/ml | Ratio(Limits) | %Rec | S/N | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| 52 Perfluorododecanoic acid | | | | | | | | | | |
| 613.00 > 569.00 | 4.746 | 4.747 | -0.001 | 1.000 | 1897971 | 1.06 | Target=6.67 | 105 | 2467 | |
| 613.00 > 169.00 | 4.746 | 4.747 | -0.001 | 1.000 | 276673 | | 6.86(3.34-10.01) | 105 | 1966 | |
| 57 N-ethylperfluoro-1-octanesulfona | | | | | | | | | | |
| 526.00 > 169.00 | 4.746 | 4.749 | -0.003 | 1.002 | 633467 | 1.07 | | 107 | 656 | |
| D 56 13C2 PFDoA | | | | | | | | | | |
| 615.00 > 570.00 | 4.746 | 4.747 | -0.001 | 1.408 | 4879307 | 2.46 | | 98.5 | 7671 | |
| 55 1H,1H,2H,2H-perfluorododecanesul | | | | | | | | | | |
| 627.00 > 607.00 | 4.761 | 4.766 | -0.005 | 1.152 | 449573 | 0.8812 | | 91.4 | 1751 | |
| 59 Perfluorododecanesulfonic acid ( | | | | | | | | | | |
| 699.00 > 80.00 | 4.974 | 4.978 | -0.004 | 1.327 | 342753 | 0.9788 | Target=1.02 | 101 | 717 | |
| 699.00 > 99.00 | 4.974 | 4.978 | -0.004 | 1.327 | 344176 | | 1.00(0.51-1.53) | 101 | 1458 | |
| 60 Perfluorotridecanoic acid | | | | | | | | | | |
| 663.00 > 619.00 | 5.008 | 5.013 | -0.005 | 1.055 | 1563186 | 1.10 | Target=4.80 | 110 | 2359 | |
| 663.00 > 169.00 | 5.016 | 5.013 | 0.003 | 1.057 | 342486 | | 4.56(2.40-7.20) | 110 | 1258 | |
| 61 Perfluorotetradecanoic acid | | | | | | | | | | |
| 713.00 > 169.00 | 5.257 | 5.259 | -0.002 | 1.000 | 244523 | 1.00 | Target=1.37 | 100 | 1297 | |
| 713.00 > 219.00 | 5.257 | 5.259 | -0.002 | 1.000 | 181996 | | 1.34(0.69-2.06) | 100 | 1163 | |
| D 62 13C2 PFTeDA | | | | | | | | | | |
| 715.00 > 670.00 | 5.257 | 5.258 | -0.001 | 1.560 | 3455387 | 2.50 | | 100.0 | 5914 | |
| 64 Perfluorohexadecanoic acid | | | | | | | | | | |
| 813.00 > 769.00 | 5.705 | 5.705 | 0.0 | 1.000 | 992148 | 1.08 | Target=4.63 | 108 | 2148 | |
| 813.00 > 169.00 | 5.705 | 5.705 | 0.0 | 1.000 | 213806 | | 4.64(2.32-6.95) | 108 | 1371 | |
| D 63 13C2 PFHxDA | | | | | | | | | | |
| 815.00 > 770.00 | 5.705 | 5.703 | 0.002 | 1.693 | 2450268 | 2.40 | | 95.9 | 5520 | |
| 65 Perfluorooctadecanoic acid | | | | | | | | | | |
| 913.00 > 869.00 | 6.140 | 6.139 | 0.001 | 1.076 | 794719 | 1.08 | Target=4.01 | 108 | 1399 | |
| 913.00 > 169.00 | 6.140 | 6.139 | 0.001 | 1.076 | 198255 | | 4.01(2.01-6.02) | 108 | 968 | |

## QC Flag Legend

Review Flags

M - Manually Integrated

## Reagents:

LCPFC_LL4_00030 Amount Added: 1.00 Units: mL

Report Date: 10-Sep-2020 13:14:41 Chrom Revision: 2.3 09-Sep-2020 15:12:58

Eurofins TestAmerica, Sacramento

Data File: \\chromfs\Sacramento\ChromData\A9\20200910-102999.b\2020.09.10_A9 _PFC_ICAL_A_019.d

Injection Date: 10-Sep-2020 10:46:36 Instrument ID: A9

Lims ID: IC L4

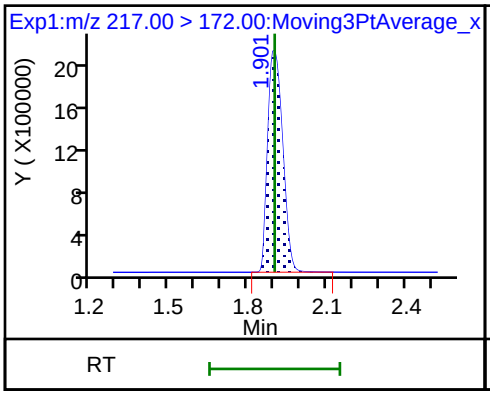
Client ID:

Operator ID: SACINSTRLCMS02 ALS Bottle#: 13 Worklist Smp#: 5

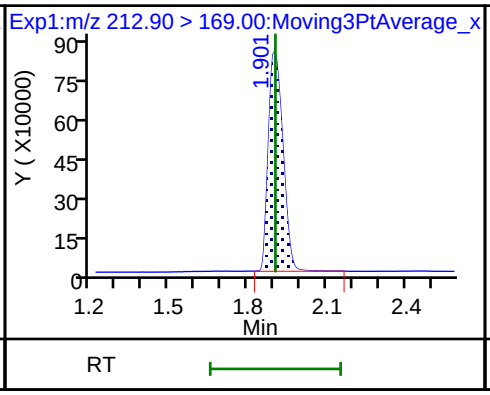
Injection Vol: 20.0 ul Dil. Factor: 1.0000

Method: PFAS_A9 Limit Group: LC PFC ICAL

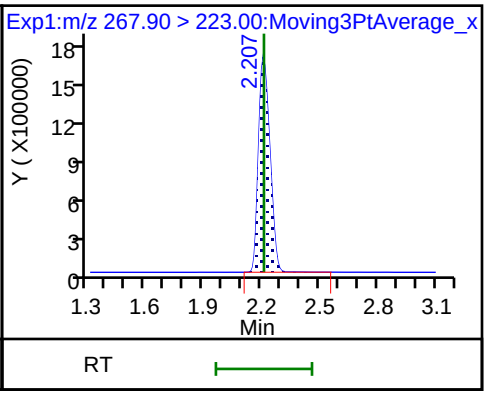
D 1 13C4 PFBA



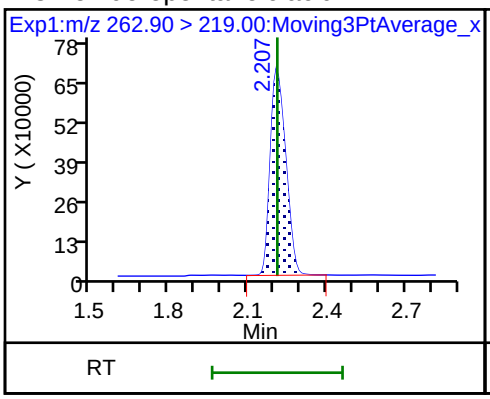

2 Perfluorobutanoic acid



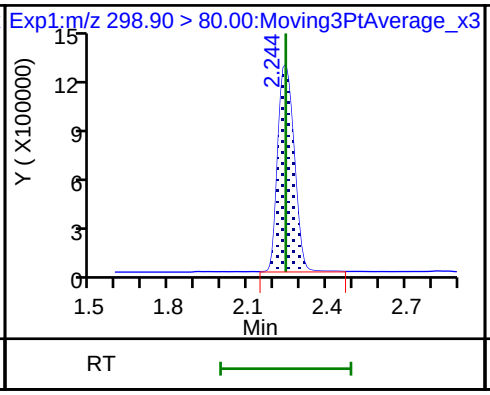

D 4 13C5 PFPeA



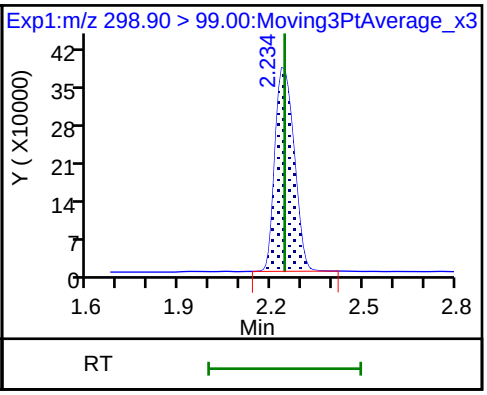

3 Perfluoropentanoic acid



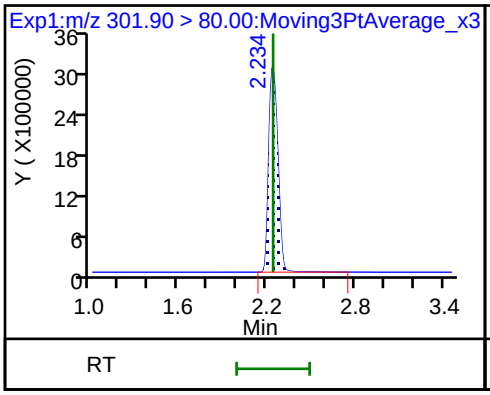

5 Perfluorobutanesulfonic acid



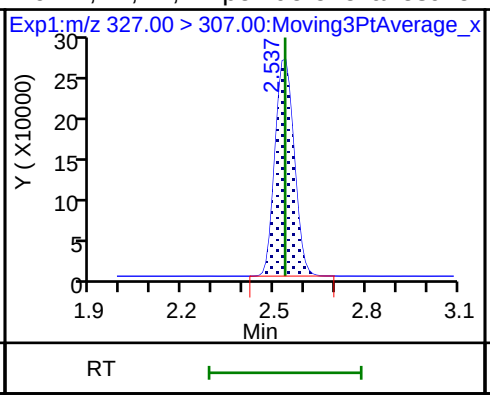

5 Perfluorobutanesulfonic acid



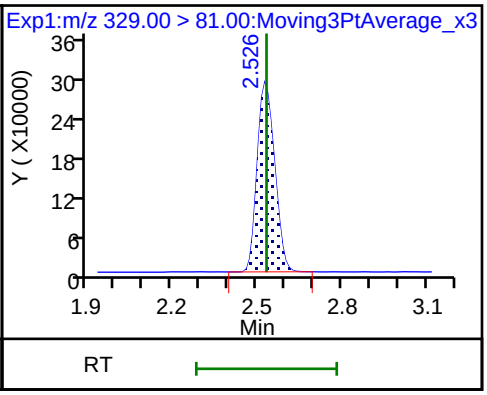

D 6 13C3 PFBS



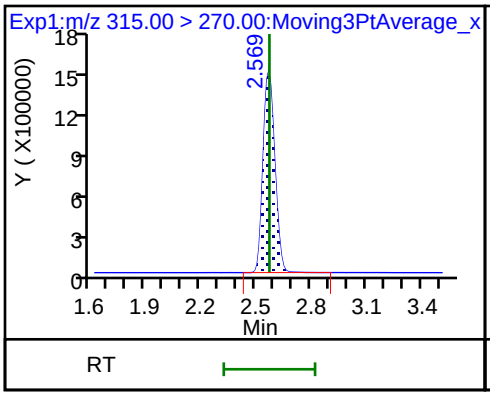

9 1H,1H,2H,2H-perfluorohexanesulfo



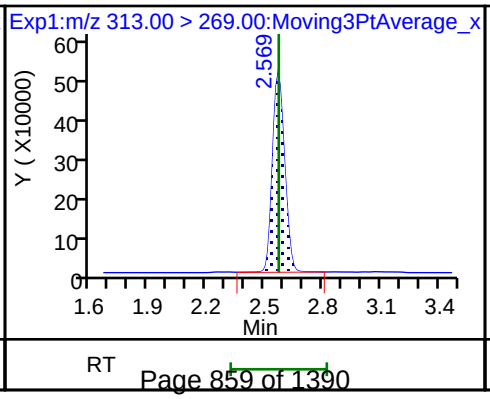

D 8 M2-4:2 FTS



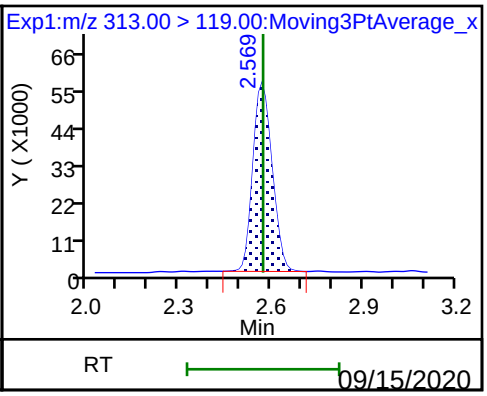

D 10 13C2 PFHxA



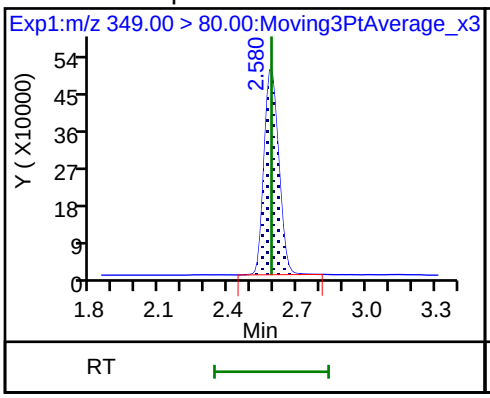

11 Perfluorohexanoic acid



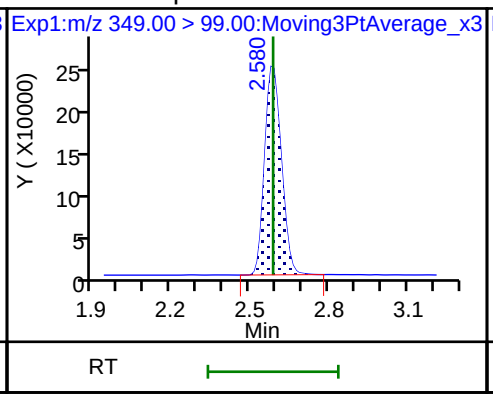

11 Perfluorohexanoic acid



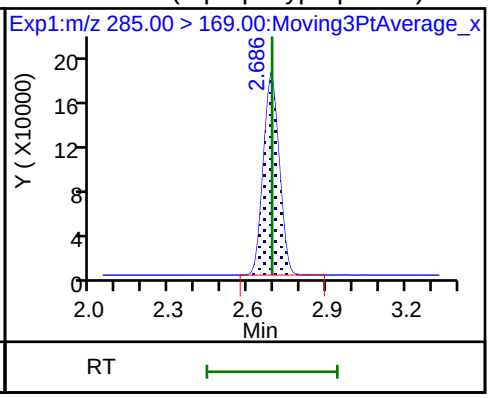
12 Perfluoropentanesulfonic acid



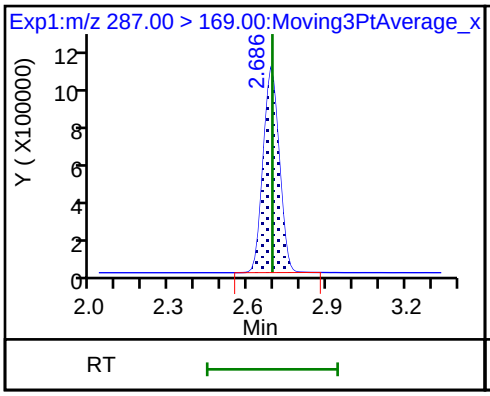

12 Perfluoropentanesulfonic acid



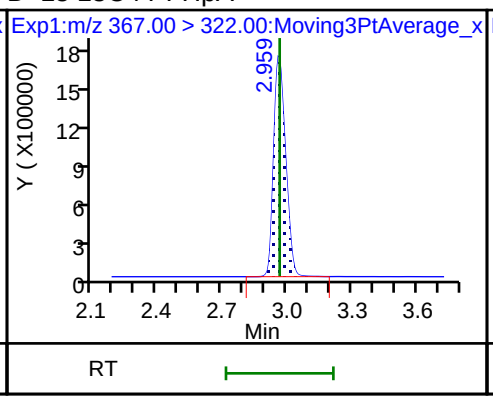

14 Perfluoro(2-propoxypropanoic) ac



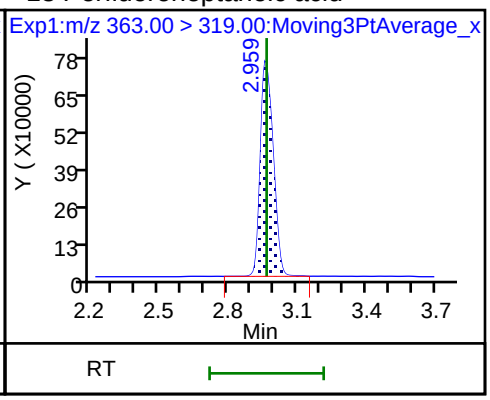

D 13 13C3 HFPO-DA



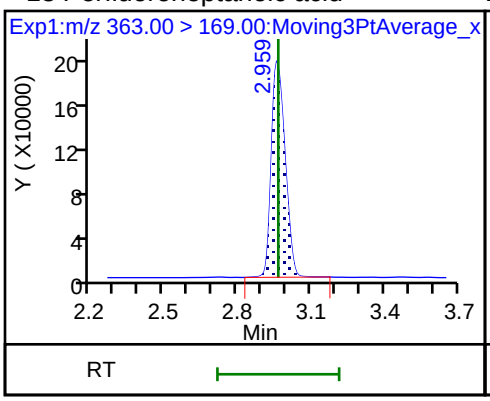

D 15 13C4 PFHpA



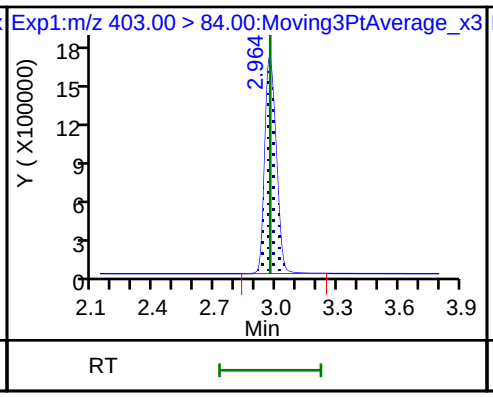

18 Perfluoroheptanoic acid



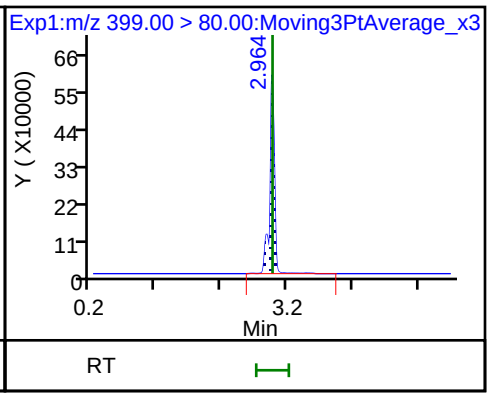

18 Perfluoroheptanoic acid



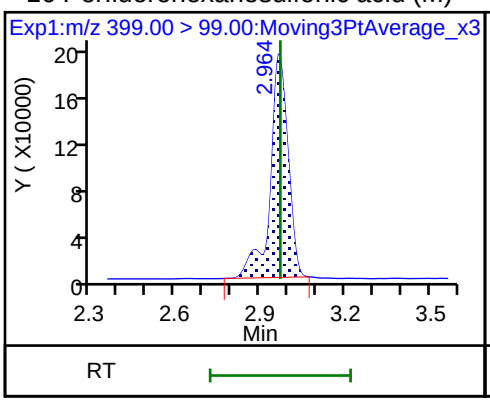

D 17 18O2 PFHxS



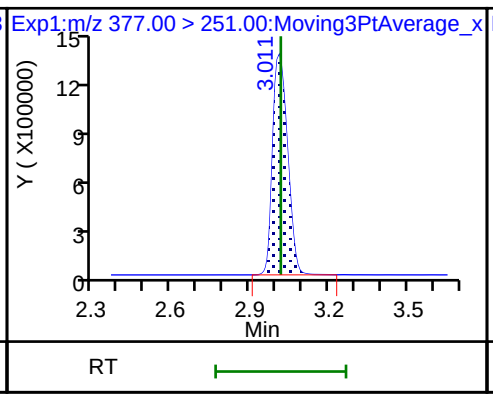

16 Perfluorohexanesulfonic acid



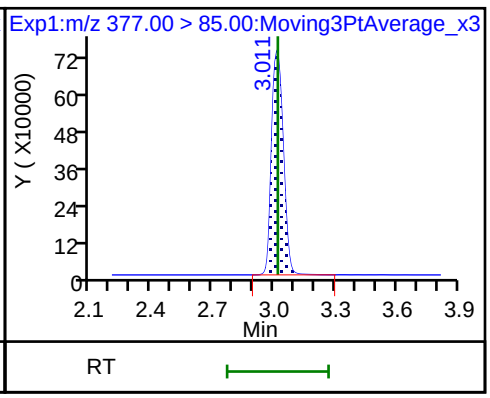

16 Perfluorohexanesulfonic acid (M)



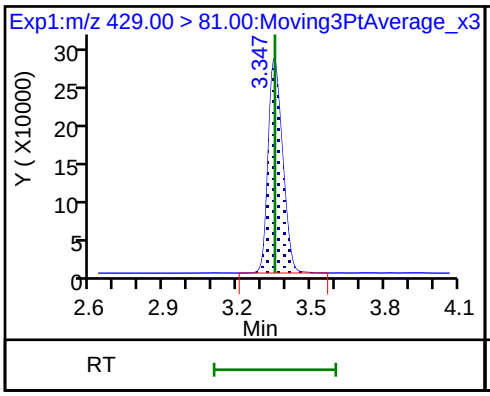

19 DONA



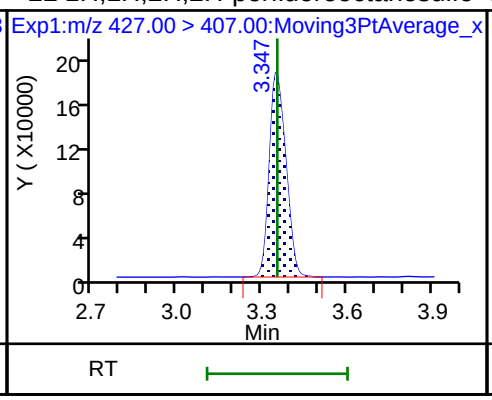

19 DONA



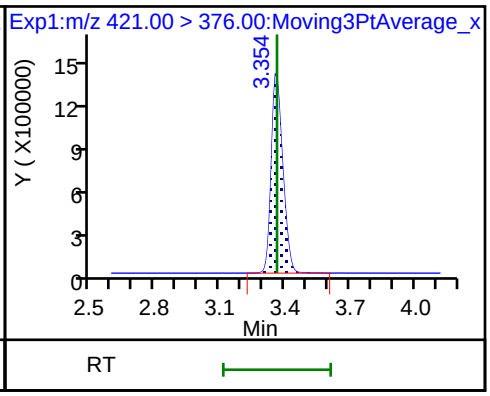
D 20 M2-6:2 FTS



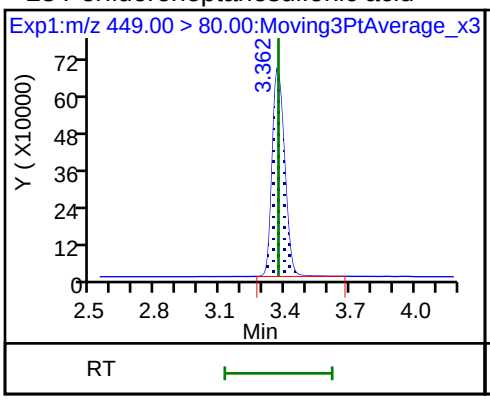

22 1H,1H,2H,2H-perfluorooctanesulfo



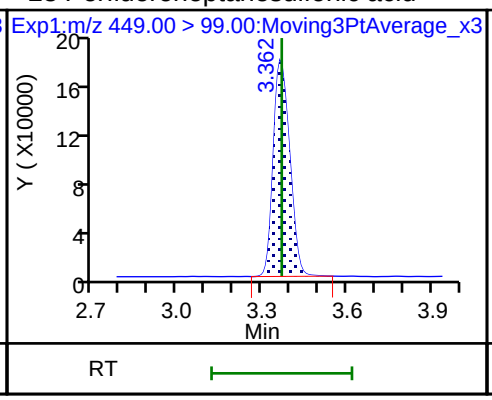

$ 21 13C8 PFOA



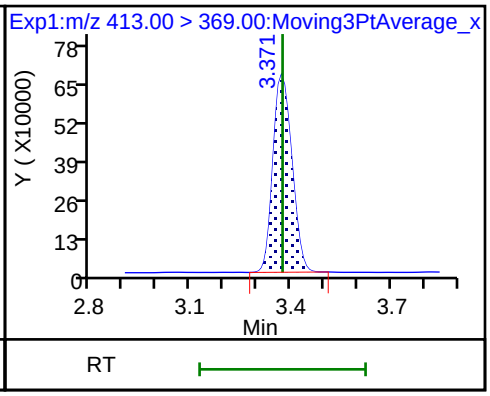

23 Perfluoroheptanesulfonic acid



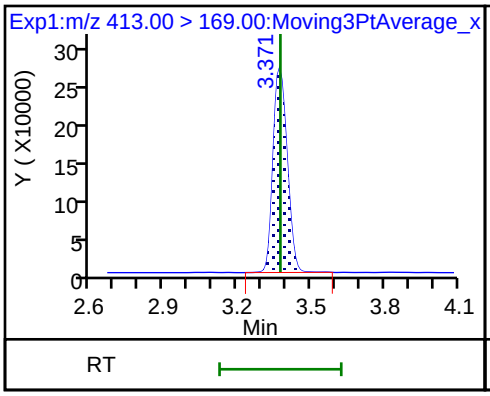

23 Perfluoroheptanesulfonic acid



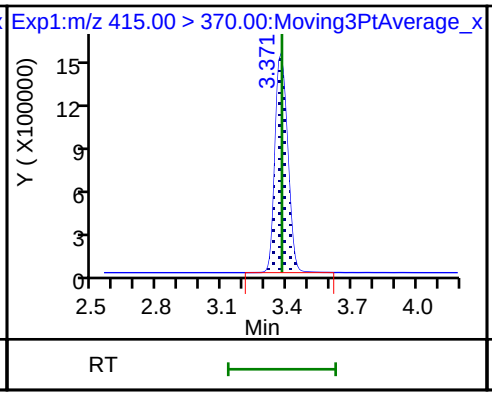

24 Perfluorooctanoic acid




24 Perfluorooctanoic acid




* 25 13C2 PFOA

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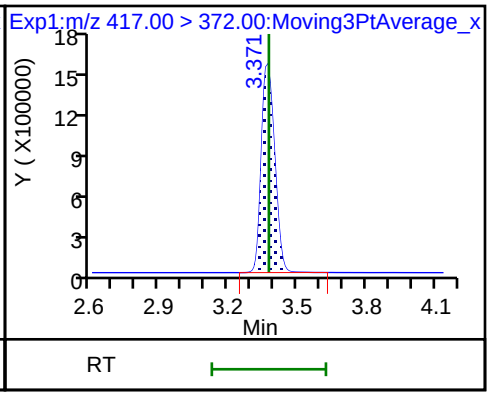
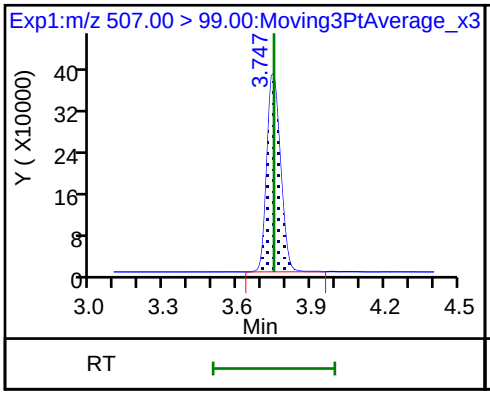
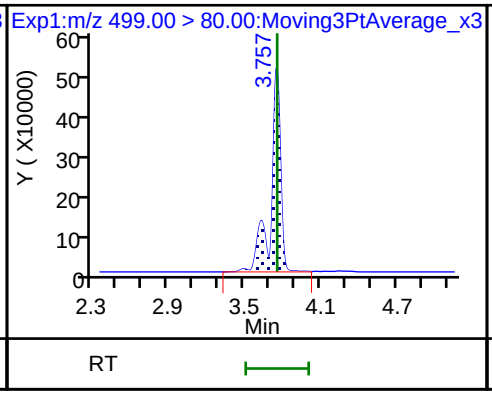


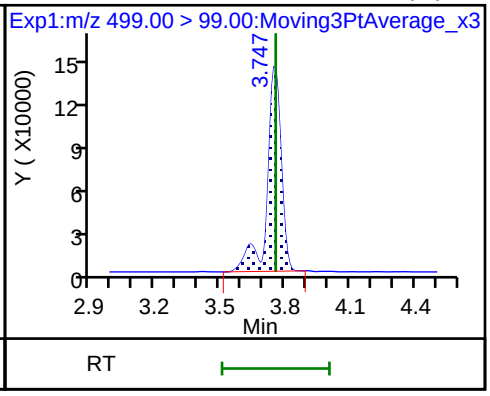

$ 27 13C8 PFOS



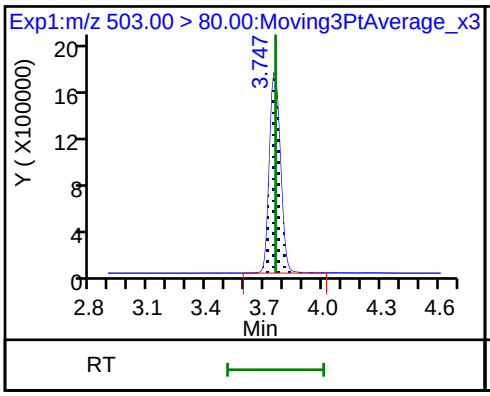

28 Perfluorooctanesulfonic acid



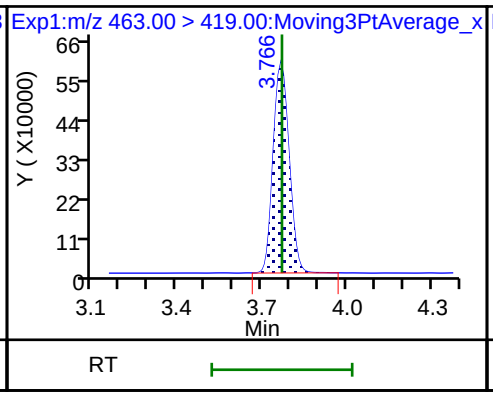

28 Perfluorooctanesulfonic acid (M)



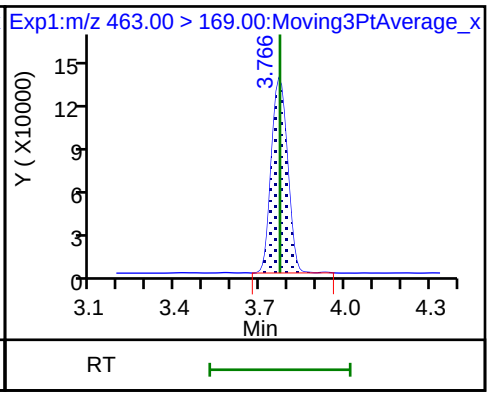
D 31 13C4 PFOS



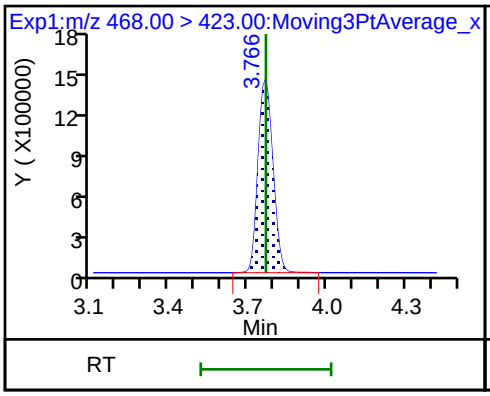

30 Perfluorononanoic acid



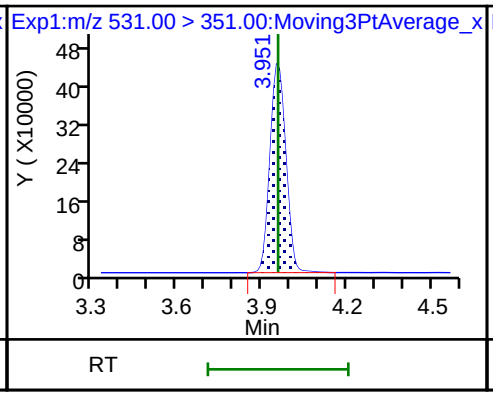

30 Perfluorononanoic acid



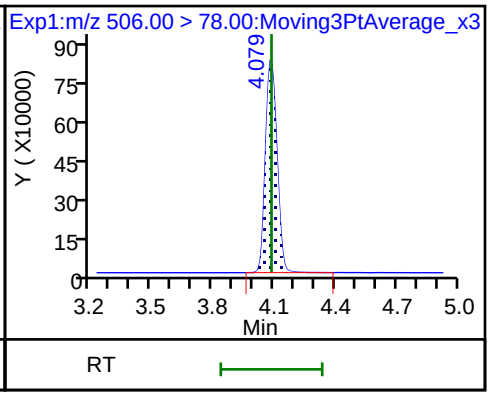

D 29 13C5 PFNA



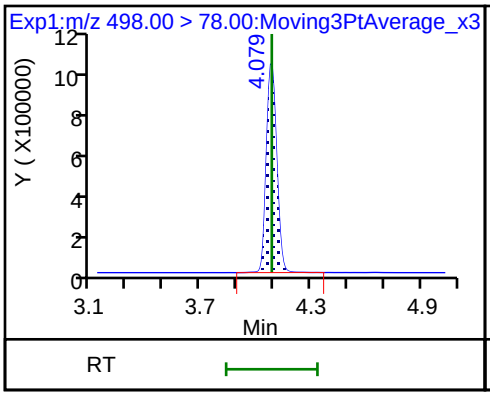

32 9-Chlorohexadecafluoro-3-oxanona



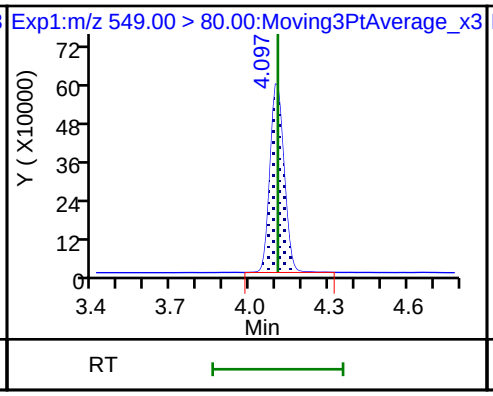

D 36 13C8 FOSA



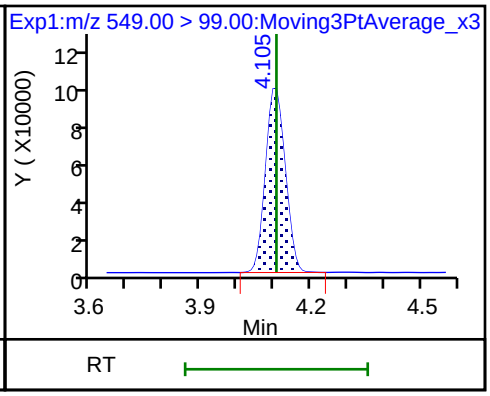

34 Perfluorooctanesulfonamide



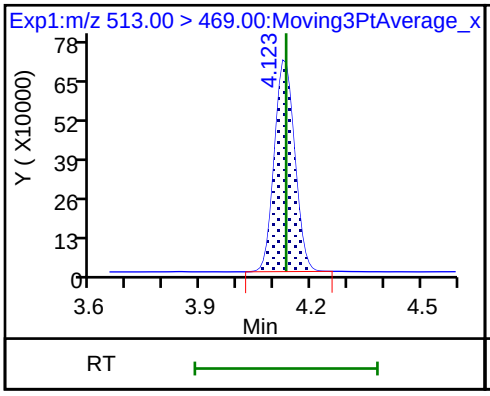

35 Perfluorononanesulfonic acid



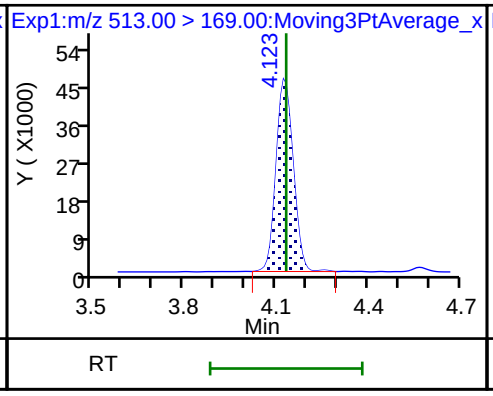

35 Perfluorononanesulfonic acid



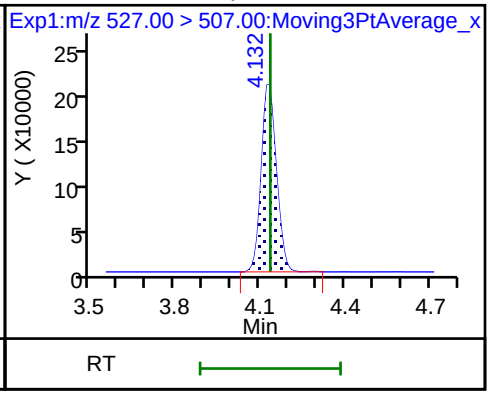

38 Perfluorodecanoic acid



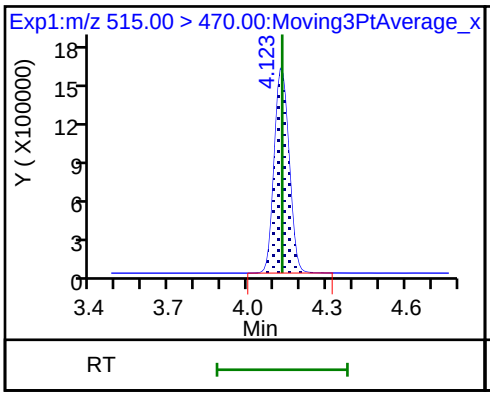

38 Perfluorodecanoic acid



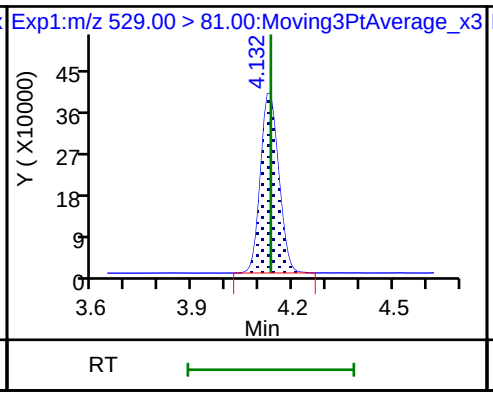

39 1H,1H,2H,2H-perfluorodecanesulfo



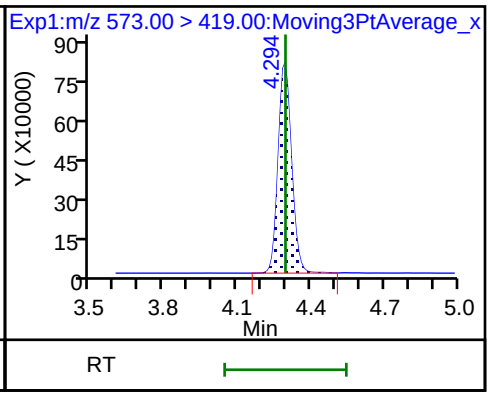
D 33 13C2 PFDA



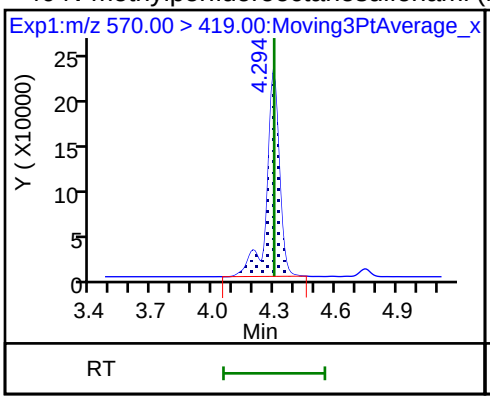

D 37 M2-8:2 FTS



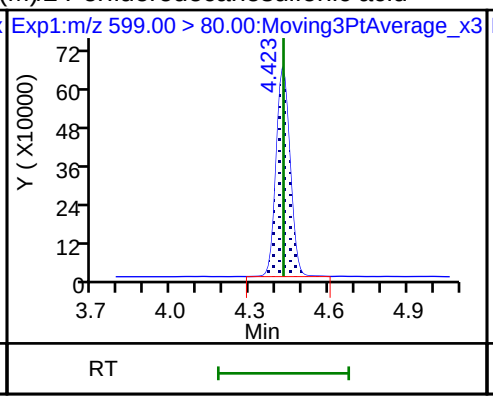

D 41 d3-NMeFOSAA



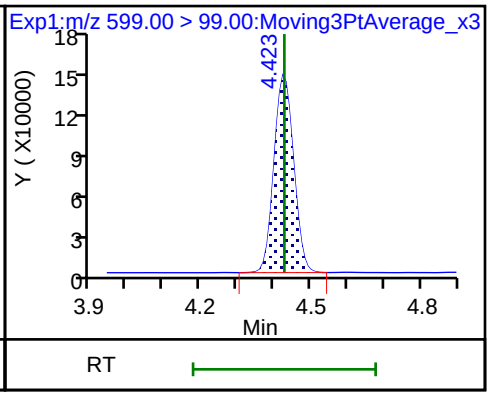

40 N-methylperfluorooctanesulfonami (M)



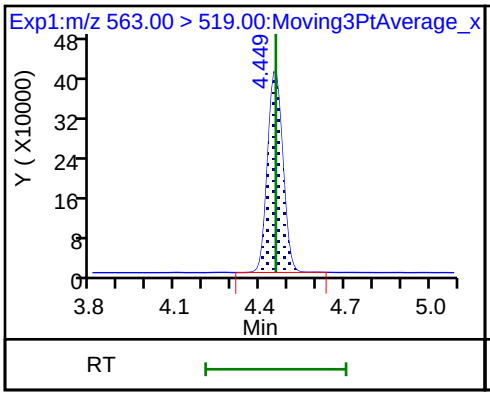

42 Perfluorodecanesulfonic acid



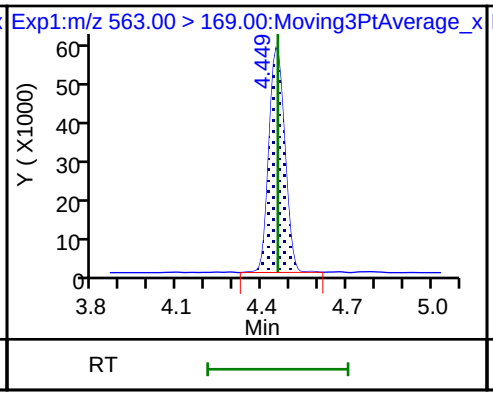

42 Perfluorodecanesulfonic acid



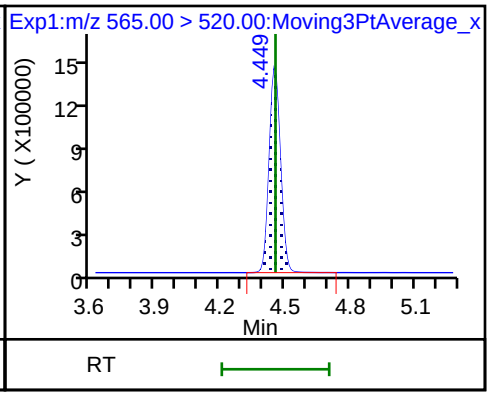

43 Perfluoroundecanoic acid



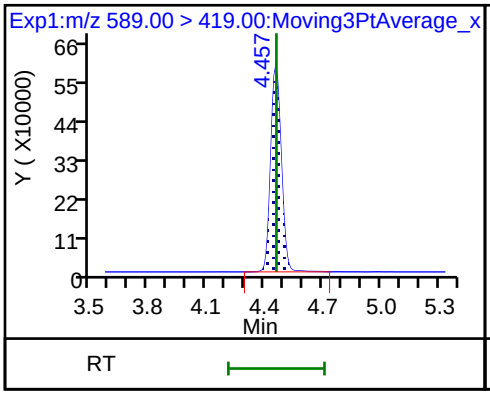

43 Perfluoroundecanoic acid



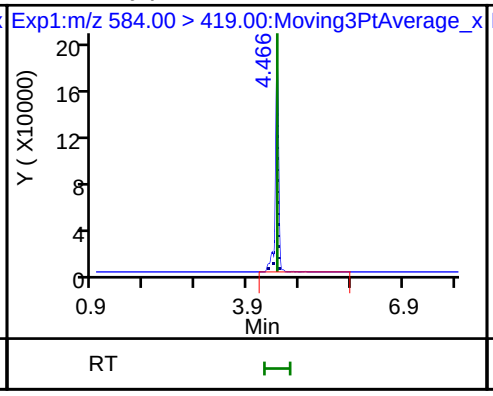

D 46 13C2 PFUnA



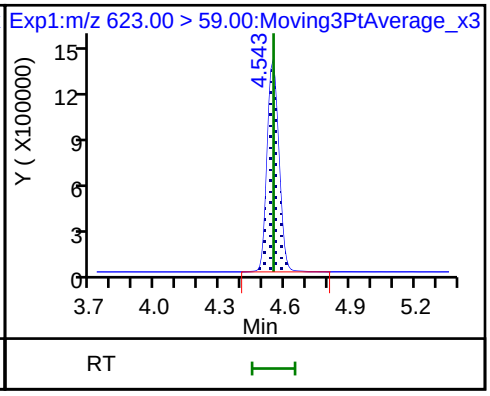

D 45 d5-NEtFOSAA



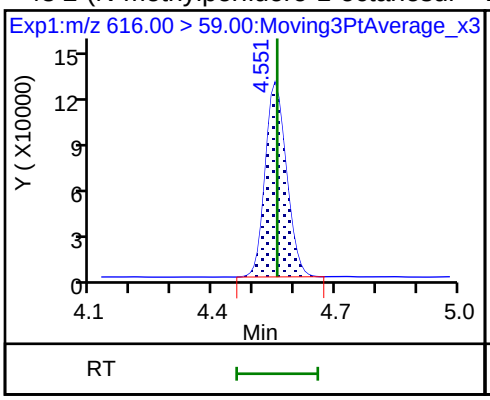

44 N-ethylperfluorooctanesulfonamid



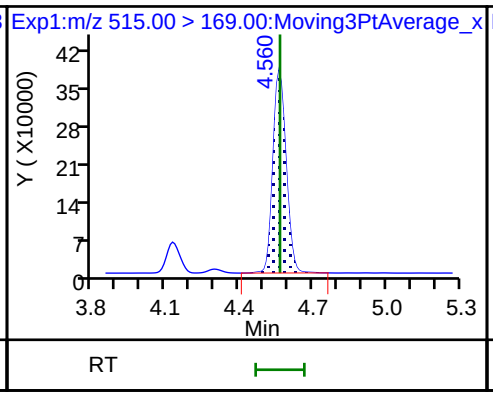

D 47 d7-N-MeFOSE-M



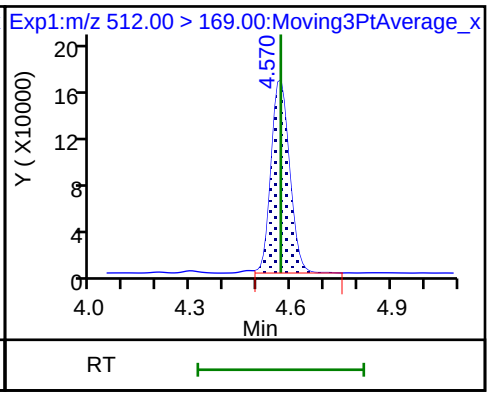
48 2-(N-methylperfluoro-1-octanesul



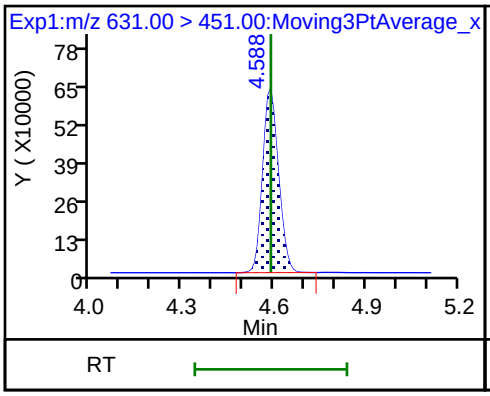

D 49 d-N-MeFOSA-M



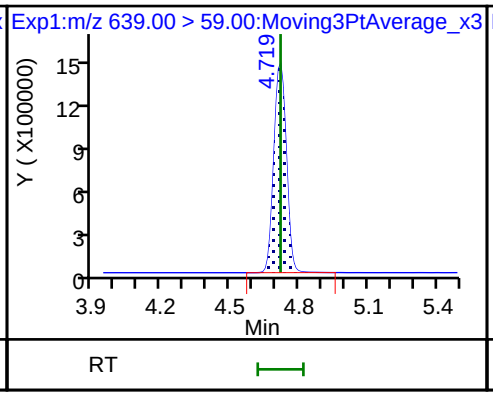

50 NMeFOSA



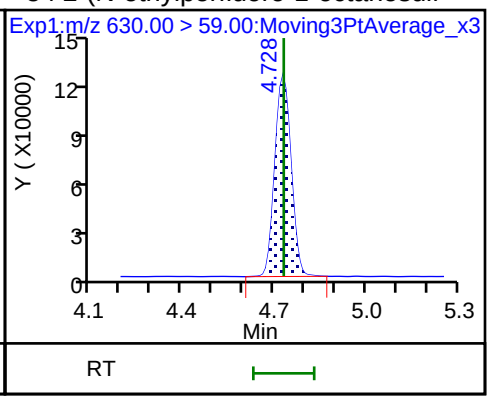

51 11-Chloroeicosafluoro-3-oxaundec



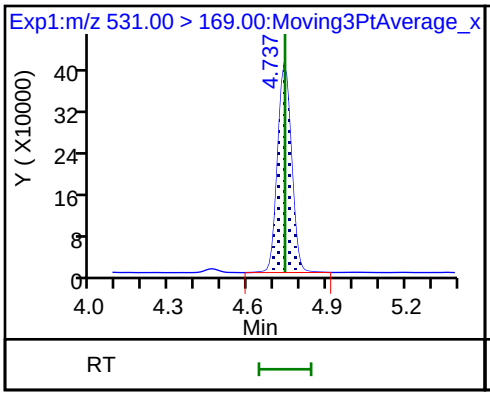

D 53 d9-N-EtFOSE-M



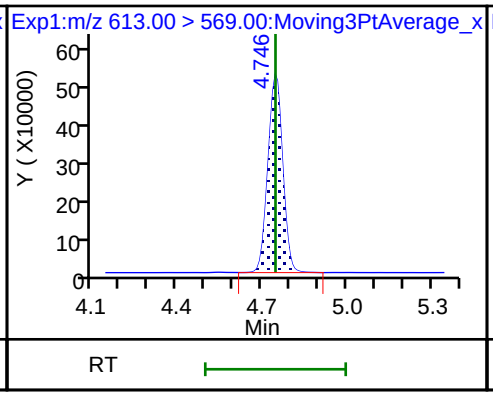

54 2-(N-ethylperfluoro-1-octanesulf



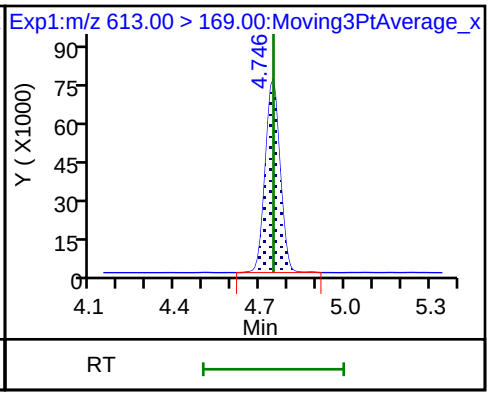

D 58 d-N-EtFOSA-M



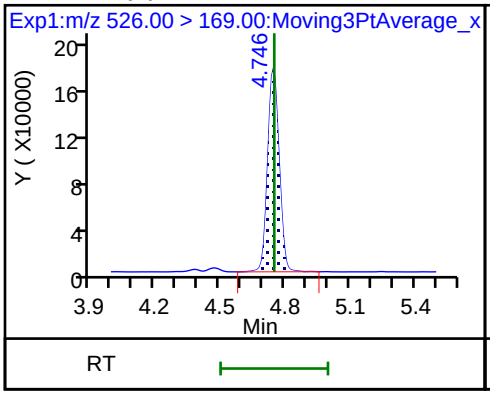

52 Perfluorododecanoic acid



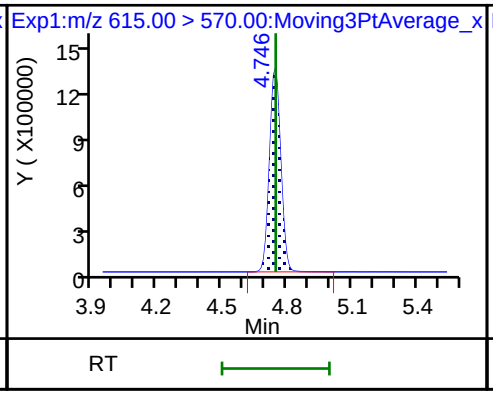

52 Perfluorododecanoic acid



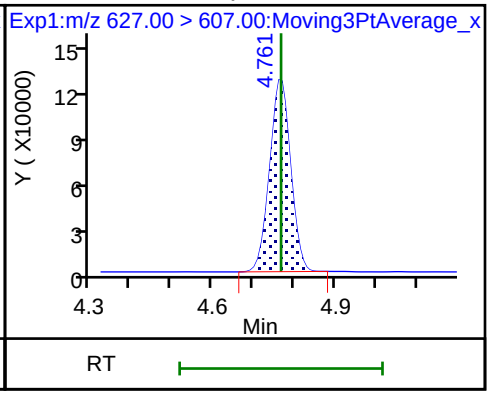

57 N-ethylperfluoro-1-octanesulfona



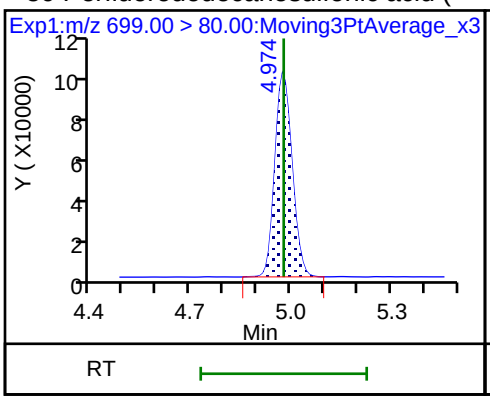

D 56 13C2 PFDoA



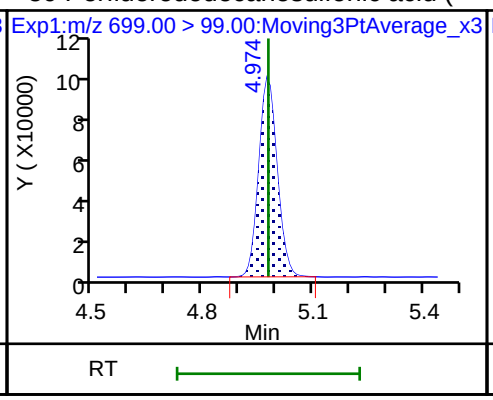

55 1H,1H,2H,2H-perfluorododecanesul



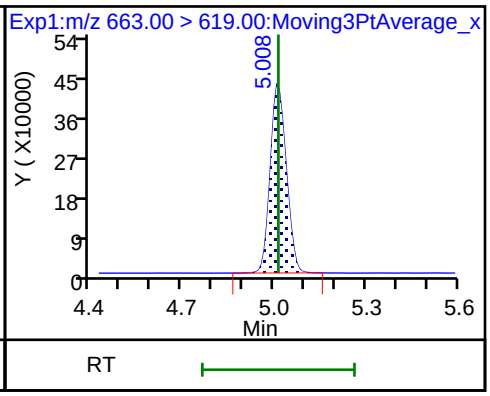
59 Perfluorododecanesulfonic acid (



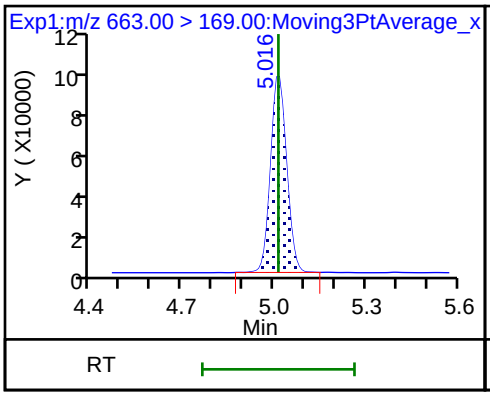

59 Perfluorododecanesulfonic acid (



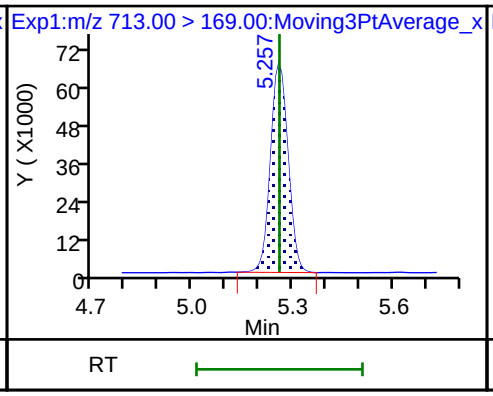

60 Perfluorotridecanoic acid



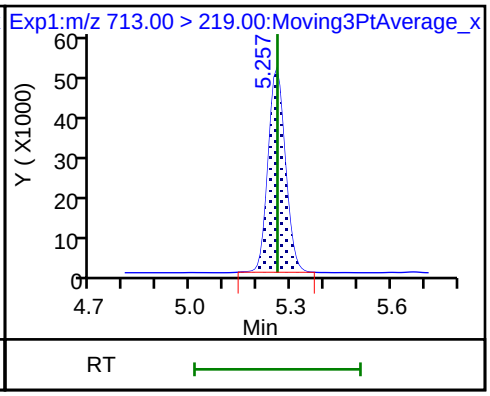

60 Perfluorotridecanoic acid



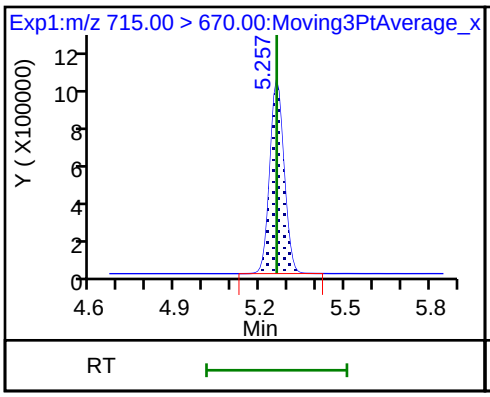

61 Perfluorotetradecanoic acid



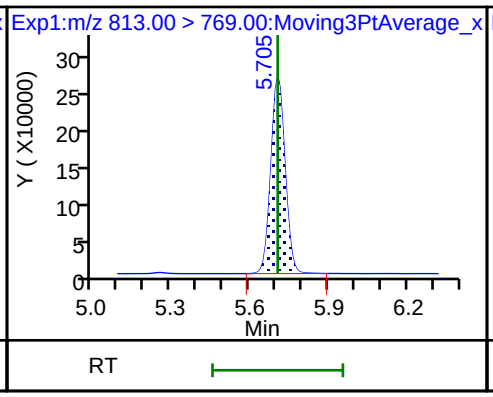

61 Perfluorotetradecanoic acid



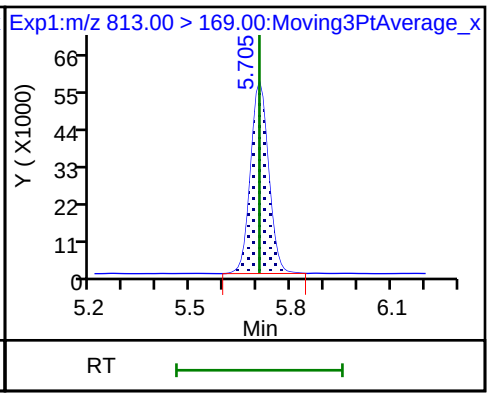

D 62 13C2 PFTeDA



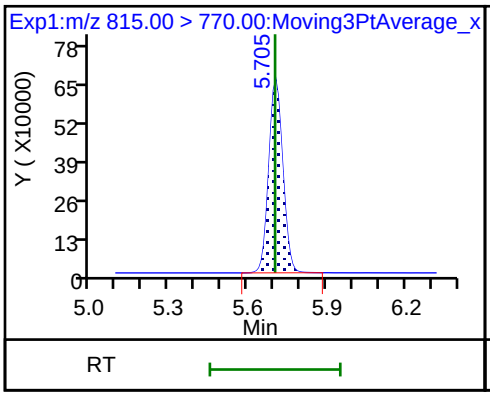

64 Perfluorohexadecanoic acid



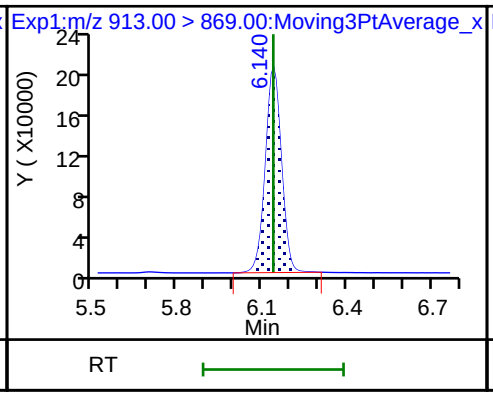

64 Perfluorohexadecanoic acid



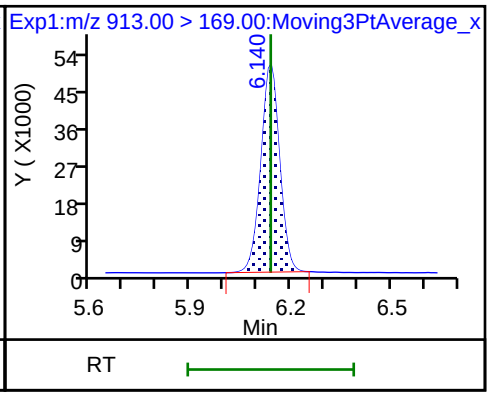

D 63 13C2 PFHxDA




65 Perfluorooctadecanoic acid




65 Perfluorooctadecanoic acid



Eurofins TestAmerica, Sacramento

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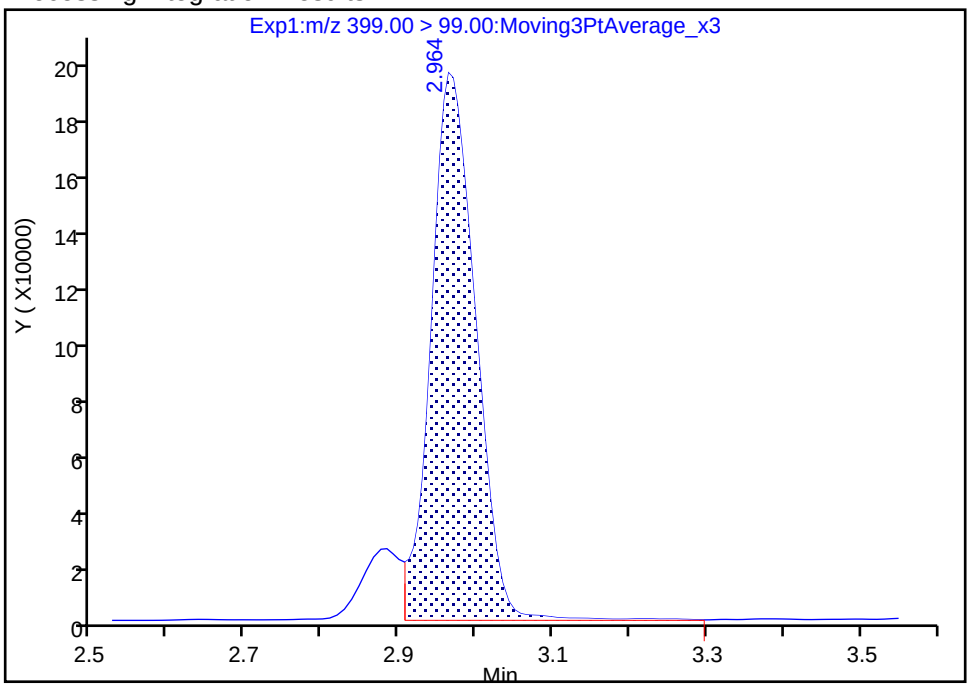
|---|---|---|---|---|---|
| Data File: | \\chromfs\Sacramento\ChromData\A9\20200910-102999.b\2020.09.10_A9 _PFC_ICAL_A_019.d | | | | |
| Injection Date: | 10-Sep-2020 10:46:36 | Instrument ID: | A9 | | |
| Lims ID: | IC L4 | | | | |
| Client ID: | | | | | |
| Operator ID: | SACINSTRLCMS02 | ALS Bottle#: | 13 | Worklist Smp#: | 5 |
| Injection Vol: | 20.0 ul | Dil. Factor: | 1.0000 | | |
| Method: | PFAS_A9 | Limit Group: | LC PFC ICAL | | |
| Column: | | Detector | EXP1 | | |

## 16 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 2

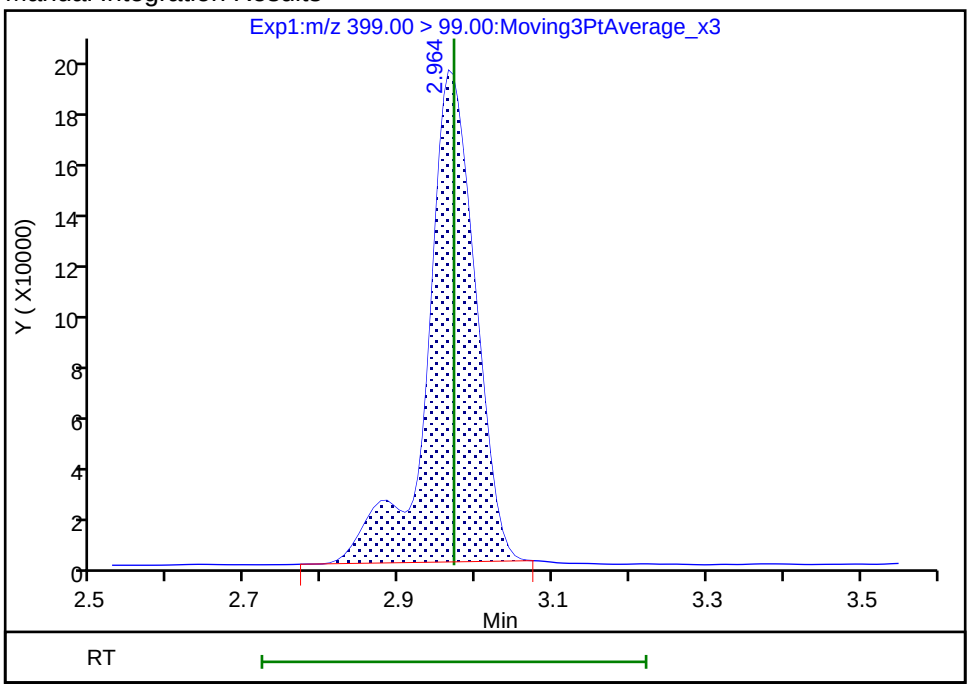
Processing Integration Results

RT: 2.96
Area: 760926
Amount: 0.876035
Amount Units: ng/ml




Manual Integration Results

RT: 2.96
Area: 820713
Amount: 0.896225
Amount Units: ng/ml




Reviewer: zibaa, 10-Sep-2020 11:21:14
Audit Action: Manually Integrated Audit Reason: Isomers

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

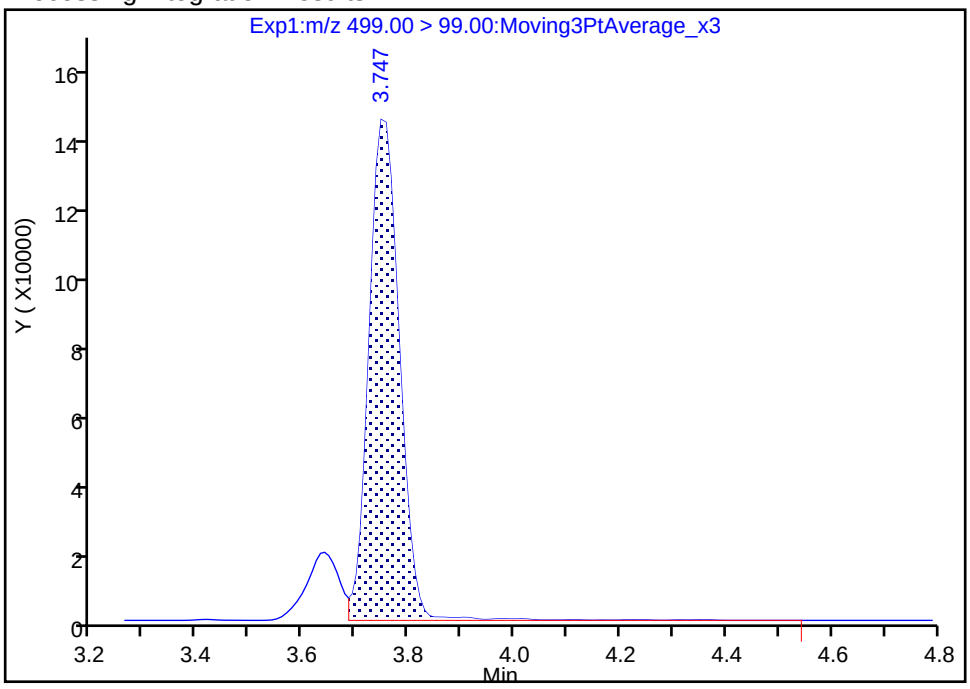
Data File: \\chromfs\Sacramento\ChromData\A9\20200910-102999.b\2020.09.10_A9 _PFC_ICAL_A_019.d
Injection Date: 10-Sep-2020 10:46:36 Instrument ID: A9
Lims ID: IC L4
Client ID:
Operator ID: SACINSTRLCMS02 ALS Bottle#: 13 Worklist Smp#: 5
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFAS_A9 Limit Group: LC PFC ICAL
Column: Detector EXP1

## 28 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 2

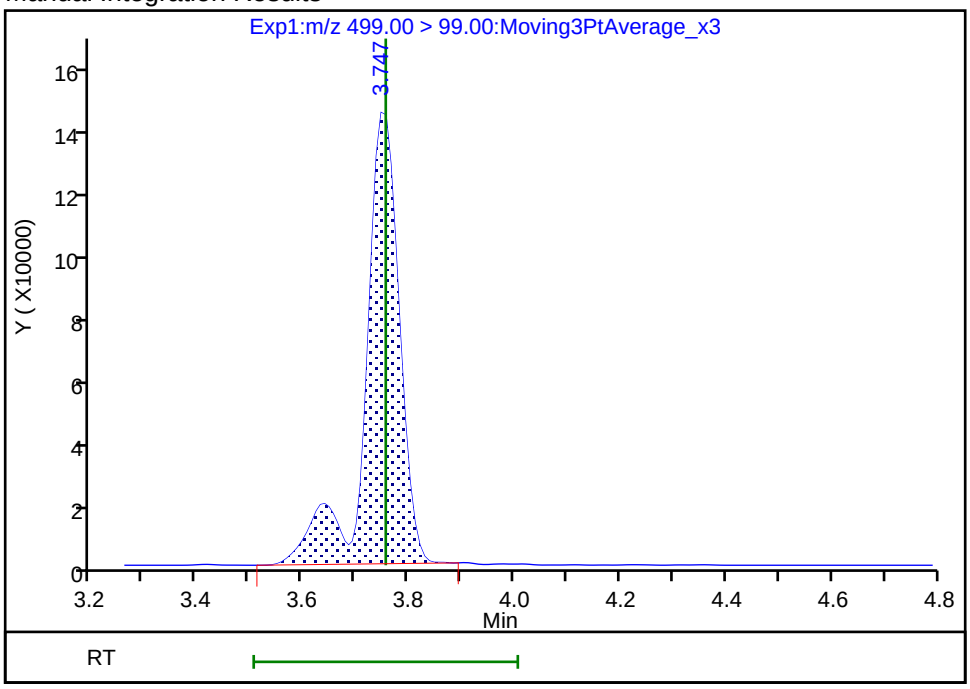
Processing Integration Results

RT: 3.75
Area: 581889
Amount: 0.951149
Amount Units: ng/ml




Manual Integration Results

RT: 3.75
Area: 652160
Amount: 0.963666
Amount Units: ng/ml




Reviewer: zibaa, 10-Sep-2020 11:21:37
Audit Action: Manually Integrated Audit Reason: Isomers

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

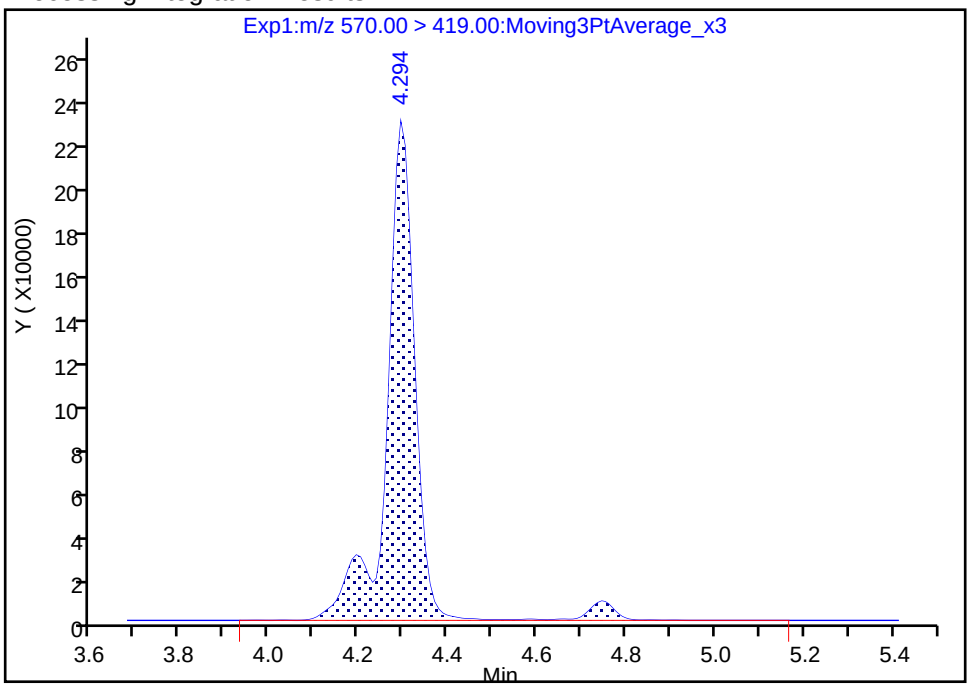
| | | | | | |
|---|---|---|---|---|---|
| Data File: | \\chromfs\Sacramento\ChromData\A9\20200910-102999.b\2020.09.10_A9 _PFC_ICAL_A_019.d | | | | |
| Injection Date: | 10-Sep-2020 10:46:36 | Instrument ID: | A9 | | |
| Lims ID: | IC L4 | | | | |
| Client ID: | | | | | |
| Operator ID: | SACINSTRLCMS02 | ALS Bottle#: | 13 | Worklist Smp#: | 5 |
| Injection Vol: | 20.0 ul | Dil. Factor: | 1.0000 | | |
| Method: | PFAS_A9 | Limit Group: | LC PFC ICAL | | |
| Column: | | Detector | EXP1 | | |

## 40 N-methylperfluorooctanesulfonami, CAS: 2355-31-9

Signal: 1

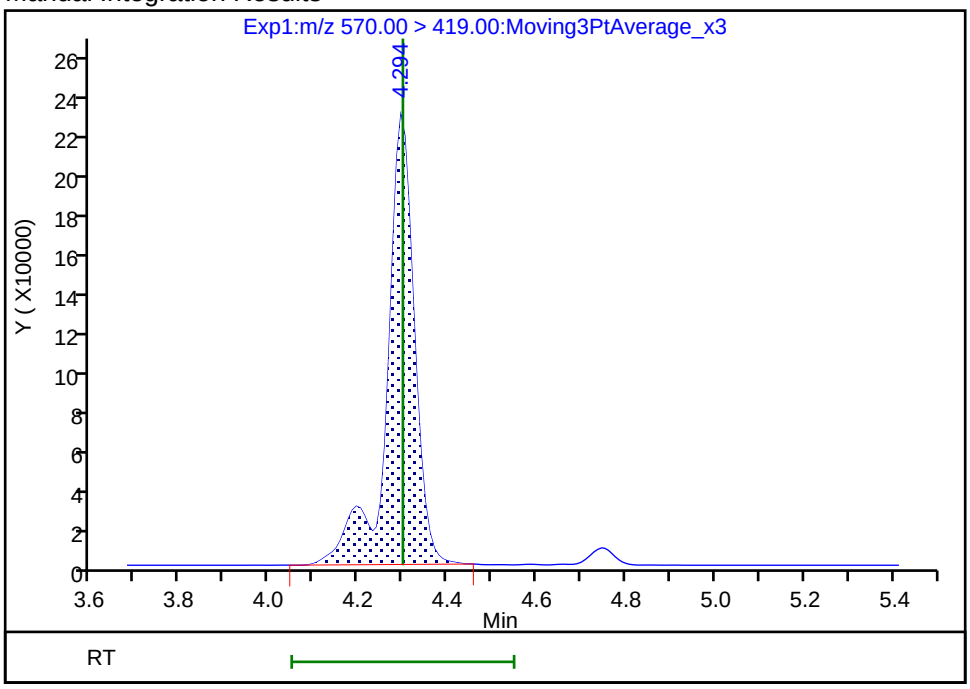
Processing Integration Results

RT: 4.29
Area: 1026488
Amount: 1.118458
Amount Units: ng/ml




Manual Integration Results

RT: 4.29
Area: 980061
Amount: 1.044774
Amount Units: ng/ml




Reviewer: zibaa, 10-Sep-2020 11:22:06

Audit Action: Manually Integrated Audit Reason: Baseline

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\A9\20200910-102999.b\2020.09.10_A9 _PFC_ICAL_A_020.d
Lims ID: IC L5
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 10-Sep-2020 10:55:57 ALS Bottle#: 14 Worklist Smp#: 6
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Sample Info: CAL STD5_31
Misc. Info.: Plate: 1 Rack: 1
Operator ID: SACINSTRLCMS02 Instrument ID: A9
Sublist: chrom-PFAS_A9*sub16

Method: \\chromfs\Sacramento\ChromData\A9\20200910-102999.b\PFAS_A9.m
Limit Group: LC PFC ICAL
Last Update: 10-Sep-2020 13:14:48 Calib Date: 10-Sep-2020 12:29:20
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\A9\20200910-102999.b\2020.09.10_A9 _PFC_ICAL_AA_022.d

Column 1 : Det: EXP1
Process Host: CTX1016

First Level Reviewer: zibaa Date: 10-Sep-2020 11:30:47
Ratio Calibration: Average of Initial Calibration

| Signal | RT | EXP RT | DLT RT | REL RT | Response | Amount ng/ml | Ratio(Limits) | %Rec | S/N | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| 2 Perfluorobutanoic acid | | | | | | | | | | |
| 212.90 > 169.00 | 1.894 | 1.904 | -0.010 | 1.000 | 7863642 | 2.81 | | 112 | 520 | |
| D 1 13C4 PFBA | | | | | | | | | | |
| 217.00 > 172.00 | 1.894 | 1.901 | -0.007 | 0.563 | 8019248 | 2.51 | | 101 | 3324 | |
| 3 Perfluoropentanoic acid | | | | | | | | | | |
| 262.90 > 219.00 | 2.207 | 2.211 | -0.004 | 1.000 | 6924391 | 2.60 | | 104 | 583 | |
| D 4 13C5 PFPeA | | | | | | | | | | |
| 267.90 > 223.00 | 2.207 | 2.211 | -0.004 | 0.657 | 6547408 | 2.43 | | 97.3 | 3312 | |
| D 6 13C3 PFBS | | | | | | | | | | |
| 301.90 > 80.00 | 2.233 | 2.241 | -0.008 | 0.664 | 12426682 | 2.34 | | 101 | 3655 | |
| 5 Perfluorobutanesulfonic acid | | | | | | | | | | |
| 298.90 > 80.00 | 2.233 | 2.244 | -0.011 | 1.000 | 12784101 | 2.40 | Target=3.10 | 108 | 712 | |
| 298.90 > 99.00 | 2.233 | 2.244 | -0.011 | 1.000 | 4164866 | | 3.07(1.55-4.65) | 108 | 899 | |
| D 8 M2-4:2 FTS | | | | | | | | | | |
| 329.00 > 81.00 | 2.526 | 2.533 | -0.007 | 0.751 | 1223709 | 2.32 | | 99.3 | 746 | |
| 9 1H,1H,2H,2H-perfluorohexanesulfo | | | | | | | | | | |
| 327.00 > 307.00 | 2.526 | 2.535 | -0.009 | 1.000 | 2622239 | 2.53 | | 108 | 8492 | |
| 11 Perfluorohexanoic acid | | | | | | | | | | |
| 313.00 > 269.00 | 2.568 | 2.573 | -0.005 | 1.000 | 5568440 | 2.80 | Target=9.68 | 112 | 727 | |
| 313.00 > 119.00 | 2.568 | 2.573 | -0.005 | 1.000 | 550520 | | 10.11(4.84-14.52) | 112 | 357 | |
| D 10 13C2 PFHxA | | | | | | | | | | |
| 315.00 > 270.00 | 2.568 | 2.573 | -0.005 | 0.764 | 5949563 | 2.38 | | 95.1 | 2302 | |
| 12 Perfluoropentanesulfonic acid | | | | | | | | | | |
| 349.00 > 80.00 | 2.579 | 2.587 | -0.008 | 1.155 | 5647334 | 2.63 | Target=2.01 | 112 | 1088 | |
| 349.00 > 99.00 | 2.579 | 2.587 | -0.008 | 1.155 | 2685469 | | 2.10(1.00-3.01) | 112 | 1481 | |
| 14 Perfluoro(2-propoxypropanoic) ac | | | | | | | | | | |
| 285.00 > 169.00 | 2.687 | 2.691 | -0.004 | 1.000 | 1783468 | 2.69 | | 108 | 2965 | |

| Signal | RT | EXP RT | DLT RT | REL RT | Response | Amount ng/ml | Ratio(Limits) | %Rec | S/N | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| D 13 13C3 HFPO-DA | | | | | | | | | | |
| 287.00 > 169.00 | 2.687 | 2.692 | -0.005 | 0.799 | 4181969 | 2.44 | | 97.4 | 4319 | |
| D 15 13C4 PFHpA | | | | | | | | | | |
| 367.00 > 322.00 | 2.958 | 2.965 | -0.007 | 0.880 | 6066212 | 2.49 | | 99.7 | 3297 | |
| 18 Perfluoroheptanoic acid | | | | | | | | | | |
| 363.00 > 319.00 | 2.952 | 2.966 | -0.014 | 0.998 | 7198107 | 2.67 | Target=3.74 | 107 | 1261 | |
| 363.00 > 169.00 | 2.958 | 2.966 | -0.008 | 1.000 | 1887305 | | 3.81(1.87-5.61) | 107 | 1446 | |
| 16 Perfluorohexanesulfonic acid | | | | | | | | | | M |
| 399.00 > 80.00 | 2.958 | 2.971 | -0.013 | 0.998 | 7166091 | 2.36 | Target=3.29 | 104 | 1514137 | |
| 399.00 > 99.00 | 2.963 | 2.971 | -0.008 | 1.000 | 2074536 | | 3.45(1.65-4.94) | 104 | 886 | M |
| D 17 18O2 PFHxS | | | | | | | | | | |
| 403.00 > 84.00 | 2.963 | 2.969 | -0.006 | 0.882 | 6098488 | 2.40 | | 101 | 1936 | |
| 19 DONA | | | | | | | | | | |
| 377.00 > 251.00 | 3.010 | 3.017 | -0.007 | 0.804 | 12286344 | 2.63 | Target=1.80 | 112 | 6958 | |
| 377.00 > 85.00 | 3.010 | 3.017 | -0.007 | 0.804 | 7243301 | | 1.70(0.90-2.70) | 112 | 6354 | |
| 22 1H,1H,2H,2H-perfluorooctanesulfo | | | | | | | | | | |
| 427.00 > 407.00 | 3.346 | 3.353 | -0.007 | 1.000 | 1781972 | 2.56 | | 108 | 2164 | |
| D 20 M2-6:2 FTS | | | | | | | | | | |
| 429.00 > 81.00 | 3.346 | 3.352 | -0.006 | 0.995 | 1073906 | 2.36 | | 99.4 | 942 | |
| $ 21 13C8 PFOA | | | | | | | | | | |
| 421.00 > 376.00 | 3.354 | 3.362 | -0.008 | 0.998 | 4876993 | 2.55 | | 104 | 6257 | |
| 23 Perfluoroheptanesulfonic acid | | | | | | | | | | |
| 449.00 > 80.00 | 3.361 | 3.369 | -0.008 | 0.897 | 6516571 | 2.73 | Target=3.65 | 115 | 2166 | |
| 449.00 > 99.00 | 3.361 | 3.369 | -0.008 | 0.897 | 1681078 | | 3.88(1.83-5.48) | 115 | 1743 | |
| 24 Perfluorooctanoic acid | | | | | | | | | | |
| 413.00 > 369.00 | 3.361 | 3.375 | -0.014 | 0.997 | 6159339 | 2.49 | Target=2.37 | 99.4 | 1082 | |
| 413.00 > 169.00 | 3.361 | 3.375 | -0.014 | 0.997 | 2500674 | | 2.46(1.19-3.56) | 99.4 | 2185 | |
| * 25 13C2 PFOA | | | | | | | | | | |
| 415.00 > 370.00 | 3.361 | 3.376 | -0.015 | | 5909870 | 2.50 | | | 5366 | |
| D 26 13C4 PFOA | | | | | | | | | | |
| 417.00 > 372.00 | 3.370 | 3.376 | -0.006 | 1.003 | 5743064 | 2.52 | | 101 | 5214 | |
| $ 27 13C8 PFOS | | | | | | | | | | |
| 507.00 > 99.00 | 3.737 | 3.748 | -0.011 | 1.112 | 1357043 | 2.26 | | 94.5 | 2108 | |
| D 31 13C4 PFOS | | | | | | | | | | |
| 503.00 > 80.00 | 3.746 | 3.756 | -0.010 | 1.114 | 6160459 | 2.32 | | 97.1 | 1415 | |
| 28 Perfluorooctanesulfonic acid | | | | | | | | | | M |
| 499.00 > 80.00 | 3.746 | 3.756 | -0.010 | 1.000 | 6924966 | 2.58 | Target=4.12 | 111 | 649 | M |
| 499.00 > 99.00 | 3.746 | 3.756 | -0.010 | 1.000 | 1636862 | | 4.23(2.06-6.17) | 111 | 1613 | M |
| 30 Perfluorononanoic acid | | | | | | | | | | |
| 463.00 > 419.00 | 3.764 | 3.770 | -0.006 | 1.002 | 5380779 | 2.61 | Target=4.21 | 104 | 3623 | |
| 463.00 > 169.00 | 3.764 | 3.770 | -0.006 | 1.002 | 1265200 | | 4.25(2.11-6.32) | 104 | 1816 | |
| D 29 13C5 PFNA | | | | | | | | | | |
| 468.00 > 423.00 | 3.755 | 3.767 | -0.012 | 1.117 | 5174599 | 2.61 | | 105 | 4196 | |
| 32 9-Chlorohexadecafluoro-3-oxanona | | | | | | | | | | |
| 531.00 > 351.00 | 3.949 | 3.956 | -0.007 | 1.054 | 4486251 | 2.77 | | 119 | 6540 | |
| 34 Perfluorooctanesulfonamide | | | | | | | | | | |
| 498.00 > 78.00 | 4.077 | 4.086 | -0.009 | 1.000 | 9052662 | 2.62 | | 105 | 2706 | |

| Signal | RT | EXP RT | DLT RT | REL RT | Response | Amount ng/ml | Ratio(Limits) | %Rec | S/N | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| D 36 13C8 FOSA | | | | | | | | | | |
| 506.00 > 78.00 | 4.077 | 4.086 | -0.009 | 1.213 | 3100275 | 2.48 | | 99.4 | 3024 | |
| 35 Perfluorononanesulfonic acid | | | | | | | | | | |
| 549.00 > 80.00 | 4.095 | 4.106 | -0.011 | 1.093 | 5081895 | 2.60 | Target=5.56 | 108 | 1763 | |
| 549.00 > 99.00 | 4.095 | 4.106 | -0.011 | 1.093 | 846532 | | 6.00(2.78-8.34) | 108 | 2580 | |
| 38 Perfluorodecanoic acid | | | | | | | | | | |
| 513.00 > 469.00 | 4.122 | 4.132 | -0.010 | 1.000 | 6816935 | 2.71 | Target=14.33 | 108 | 2959 | |
| 513.00 > 169.00 | 4.122 | 4.132 | -0.010 | 1.000 | 460697 | | 14.80(7.16-21.49) | 108 | 400 | |
| D 33 13C2 PFDA | | | | | | | | | | |
| 515.00 > 470.00 | 4.122 | 4.130 | -0.008 | 1.226 | 6303374 | 2.51 | | 100 | 4120 | |
| 39 1H,1H,2H,2H-perfluorodecanesulfo | | | | | | | | | | |
| 527.00 > 507.00 | 4.122 | 4.135 | -0.013 | 1.000 | 1777666 | 2.63 | | 110 | 2823 | |
| D 37 M2-8:2 FTS | | | | | | | | | | |
| 529.00 > 81.00 | 4.122 | 4.133 | -0.011 | 1.226 | 1254651 | 2.25 | | 94.0 | 855 | |
| 40 N-methylperfluorooctanesulfonami | | | | | | | | | | M |
| 570.00 > 419.00 | 4.293 | 4.299 | -0.006 | 1.002 | 2448364 | 2.65 | | 106 | 396 | M |
| D 41 d3-NMeFOSAA | | | | | | | | | | |
| 573.00 > 419.00 | 4.283 | 4.295 | -0.012 | 1.274 | 3043182 | 2.44 | | 97.4 | 2867 | |
| 42 Perfluorodecanesulfonic acid | | | | | | | | | | |
| 599.00 > 80.00 | 4.421 | 4.427 | -0.006 | 1.180 | 6094197 | 2.78 | Target=4.29 | 116 | 2236 | |
| 599.00 > 99.00 | 4.421 | 4.427 | -0.006 | 1.180 | 1279471 | | 4.76(2.15-6.44) | 116 | 4186 | |
| 43 Perfluoroundecanoic acid | | | | | | | | | | |
| 563.00 > 519.00 | 4.447 | 4.455 | -0.008 | 1.000 | 3702181 | 2.69 | Target=6.74 | 108 | 4547 | |
| 563.00 > 169.00 | 4.447 | 4.455 | -0.008 | 1.000 | 562007 | | 6.59(3.37-10.11) | 108 | 1599 | |
| D 46 13C2 PFUnA | | | | | | | | | | |
| 565.00 > 520.00 | 4.447 | 4.455 | -0.008 | 1.323 | 4942965 | 2.55 | | 102 | 7236 | |
| D 45 d5-NEtFOSAA | | | | | | | | | | |
| 589.00 > 419.00 | 4.456 | 4.460 | -0.004 | 1.326 | 2127548 | 2.54 | | 102 | 2100 | |
| 44 N-ethylperfluorooctanesulfonamid | | | | | | | | | | |
| 584.00 > 419.00 | 4.456 | 4.467 | -0.011 | 1.000 | 1712166 | 2.48 | | 99.2 | 1528 | |
| D 47 d7-N-MeFOSE-M | | | | | | | | | | |
| 623.00 > 59.00 | 4.541 | 4.546 | -0.005 | 1.351 | 5063638 | 12.6 | | 101 | 4338 | |
| 48 2-(N-methylperfluoro-1-octanesul | | | | | | | | | | |
| 616.00 > 59.00 | 4.550 | 4.557 | -0.007 | 1.002 | 1144996 | 2.71 | | 108 | 2086 | |
| D 49 d-N-MeFOSA-M | | | | | | | | | | |
| 515.00 > 169.00 | 4.558 | 4.565 | -0.007 | 1.356 | 1390439 | 2.47 | | 98.9 | 215 | |
| 50 NMeFOSA | | | | | | | | | | |
| 512.00 > 169.00 | 4.558 | 4.569 | -0.011 | 1.000 | 1653934 | 2.85 | | 114 | 1679 | |
| 51 11-Chloroeicosafluoro-3-oxaundec | | | | | | | | | | |
| 631.00 > 451.00 | 4.577 | 4.588 | -0.011 | 1.222 | 5572953 | 2.92 | | 124 | 5289 | |
| D 53 d9-N-EtFOSE-M | | | | | | | | | | |
| 639.00 > 59.00 | 4.707 | 4.718 | -0.011 | 1.400 | 5391350 | 12.8 | | 102 | 3536 | |
| 54 2-(N-ethylperfluoro-1-octanesulf | | | | | | | | | | |
| 630.00 > 59.00 | 4.726 | 4.731 | -0.005 | 1.004 | 1120322 | 2.61 | | 105 | 1875 | |
| D 58 d-N-EtFOSA-M | | | | | | | | | | |
| 531.00 > 169.00 | 4.735 | 4.741 | -0.006 | 1.409 | 1437287 | 2.46 | | 98.5 | 766 | |

| Signal | RT | EXP RT | DLT RT | REL RT | Response | Amount ng/ml | Ratio(Limits) | %Rec | S/N | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| 52 Perfluorododecanoic acid | | | | | | | | | | |
| 613.00 > 569.00 | 4.735 | 4.747 | -0.012 | 1.000 | 4657557 | 2.66 | Target=6.67 | 106 | 3856 | |
| 613.00 > 169.00 | 4.735 | 4.747 | -0.012 | 1.000 | 649766 | | 7.17(3.34-10.01) | 106 | 2502 | |
| 57 N-ethylperfluoro-1-octanesulfona | | | | | | | | | | |
| 526.00 > 169.00 | 4.744 | 4.749 | -0.005 | 1.002 | 1554311 | 2.72 | | 109 | 749 | |
| D 56 13C2 PFDoA | | | | | | | | | | |
| 615.00 > 570.00 | 4.735 | 4.747 | -0.012 | 1.409 | 4759594 | 2.50 | | 100 | 9147 | |
| 55 1H,1H,2H,2H-perfluorododecanesul | | | | | | | | | | |
| 627.00 > 607.00 | 4.759 | 4.766 | -0.007 | 1.155 | 1135361 | 2.64 | | 109 | 3089 | |
| 59 Perfluorododecanesulfonic acid ( | | | | | | | | | | |
| 699.00 > 80.00 | 4.972 | 4.978 | -0.006 | 1.327 | 893169 | 2.73 | Target=1.02 | 113 | 1710 | |
| 699.00 > 99.00 | 4.972 | 4.978 | -0.006 | 1.327 | 842446 | | 1.06(0.51-1.53) | 113 | 5224 | |
| 60 Perfluorotridecanoic acid | | | | | | | | | | |
| 663.00 > 619.00 | 5.006 | 5.013 | -0.007 | 1.057 | 3844406 | 2.78 | Target=4.80 | 111 | 5918 | |
| 663.00 > 169.00 | 5.006 | 5.013 | -0.007 | 1.057 | 802558 | | 4.79(2.40-7.20) | 111 | 2402 | |
| 61 Perfluorotetradecanoic acid | | | | | | | | | | |
| 713.00 > 169.00 | 5.256 | 5.259 | -0.003 | 1.002 | 593557 | 2.55 | Target=1.37 | 102 | 1996 | |
| 713.00 > 219.00 | 5.247 | 5.259 | -0.012 | 1.000 | 431586 | | 1.38(0.69-2.06) | 102 | 2053 | |
| D 62 13C2 PFTeDA | | | | | | | | | | |
| 715.00 > 670.00 | 5.247 | 5.258 | -0.011 | 1.561 | 3301033 | 2.49 | | 99.5 | 7988 | |
| 64 Perfluorohexadecanoic acid | | | | | | | | | | |
| 813.00 > 769.00 | 5.701 | 5.705 | -0.004 | 1.002 | 2210855 | 2.68 | Target=4.63 | 107 | 3597 | |
| 813.00 > 169.00 | 5.701 | 5.705 | -0.004 | 1.002 | 467070 | | 4.73(2.32-6.95) | 107 | 2912 | |
| D 63 13C2 PFHxDA | | | | | | | | | | |
| 815.00 > 770.00 | 5.692 | 5.703 | -0.011 | 1.693 | 2234345 | 2.28 | | 91.1 | 4391 | |
| 65 Perfluorooctadecanoic acid | | | | | | | | | | |
| 913.00 > 869.00 | 6.137 | 6.139 | -0.002 | 1.078 | 2124571 | 3.18 | Target=4.01 | 127 | 1940 | |
| 913.00 > 169.00 | 6.137 | 6.139 | -0.002 | 1.078 | 501524 | | 4.24(2.01-6.02) | 127 | 1371 | |

## QC Flag Legend

Review Flags

M - Manually Integrated

## Reagents:

LCPFC_LL5_00032 Amount Added: 1.00 Units: mL

Report Date: 10-Sep-2020 13:14:51 Chrom Revision: 2.3 09-Sep-2020 15:12:58

Eurofins TestAmerica, Sacramento

Data File: \\chromfs\Sacramento\ChromData\A9\20200910-102999.b\2020.09.10_A9 _PFC_ICAL_A_020.d

Injection Date: 10-Sep-2020 10:55:57 Instrument ID: A9

Lims ID: IC L5

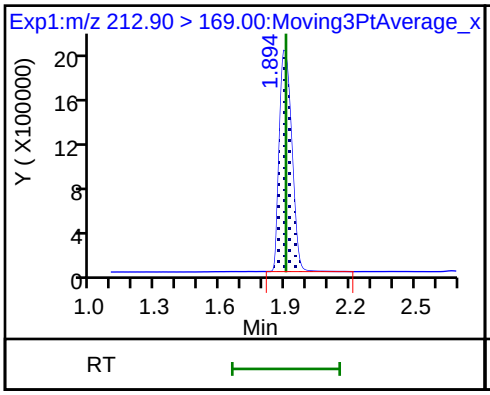
Client ID:

Operator ID: SACINSTRLCMS02 ALS Bottle#: 14 Worklist Smp#: 6

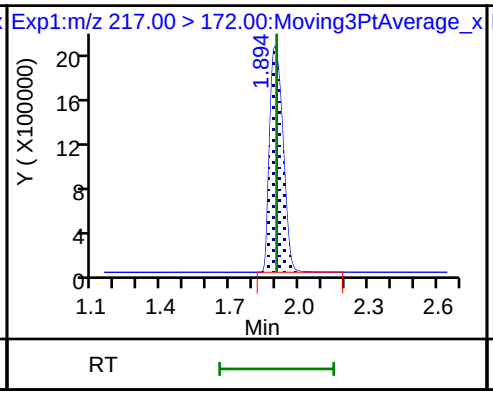
Injection Vol: 20.0 ul Dil. Factor: 1.0000

Method: PFAS_A9 Limit Group: LC PFC ICAL

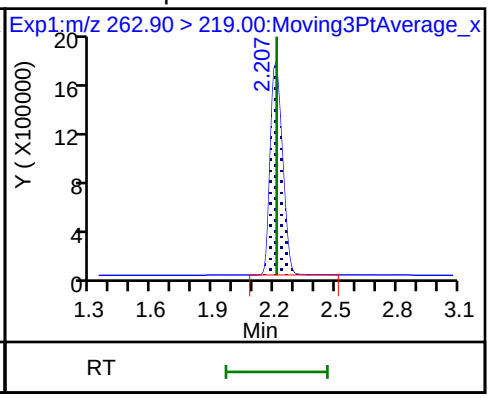
2 Perfluorobutanoic acid



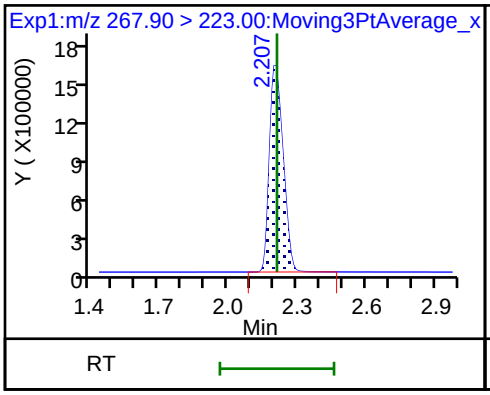

D 1 13C4 PFBA



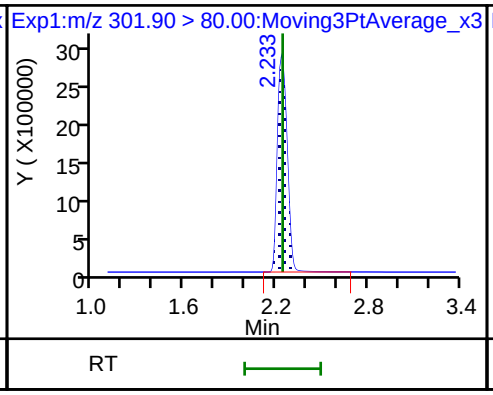

3 Perfluoropentanoic acid



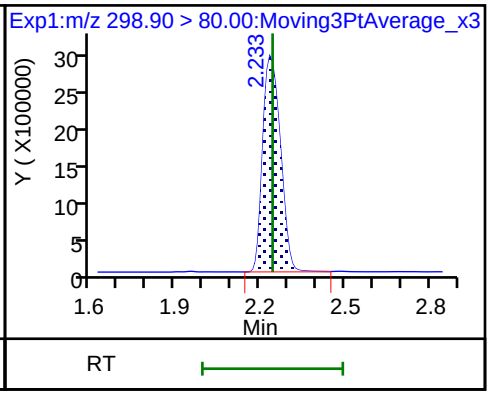

D 4 13C5 PFPeA



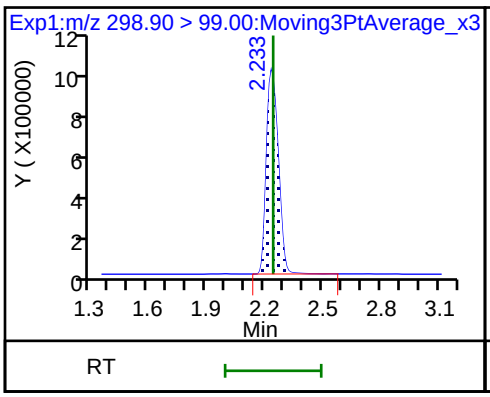

D 6 13C3 PFBS



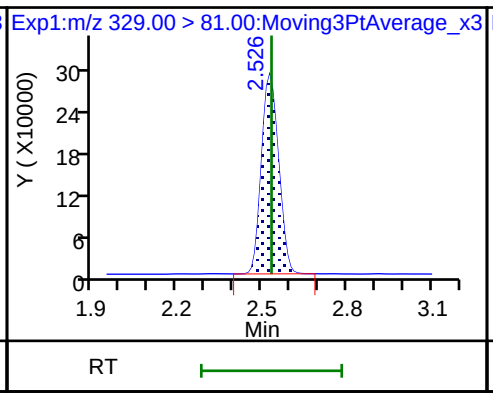

5 Perfluorobutanesulfonic acid



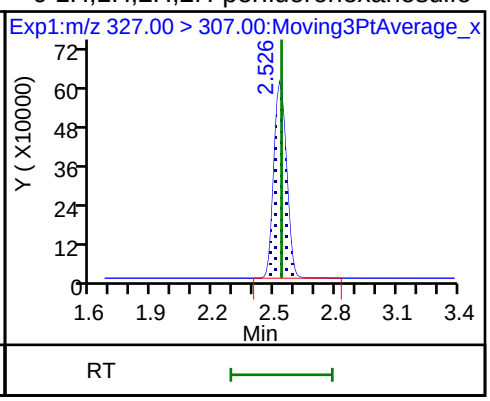

5 Perfluorobutanesulfonic acid



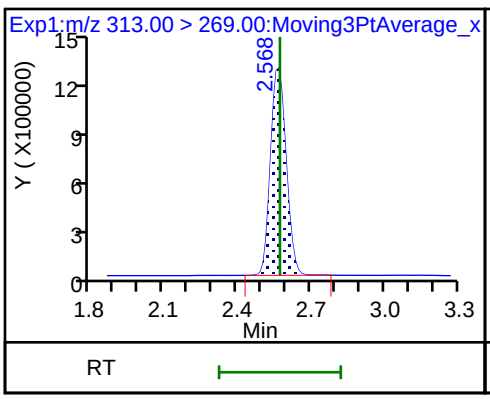

D 8 M2-4:2 FTS



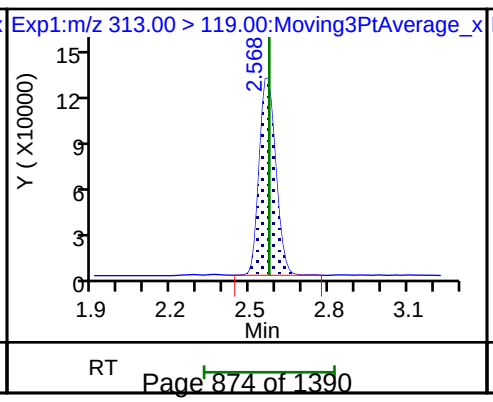

9 1H,1H,2H,2H-perfluorohexanesulfo



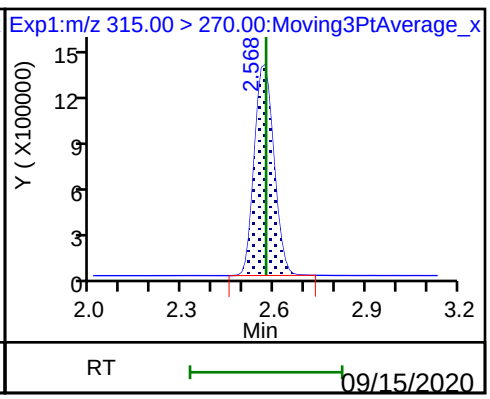

11 Perfluorohexanoic acid



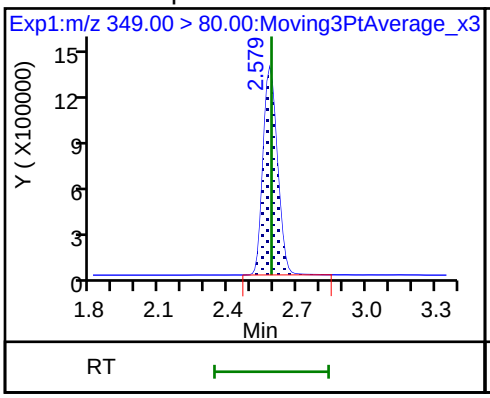

11 Perfluorohexanoic acid



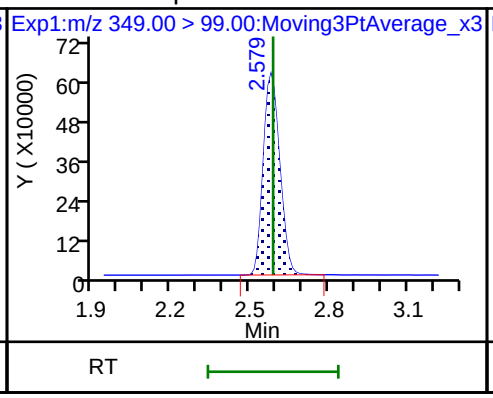

D 10 13C2 PFHxA



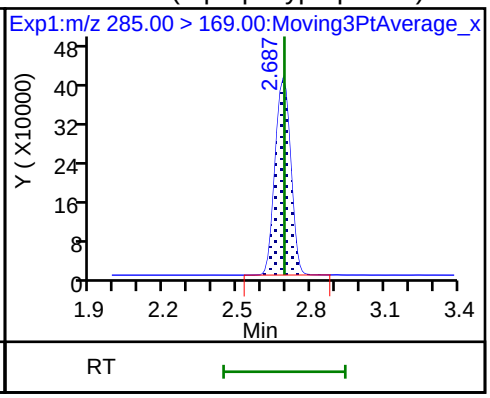
12 Perfluoropentanesulfonic acid



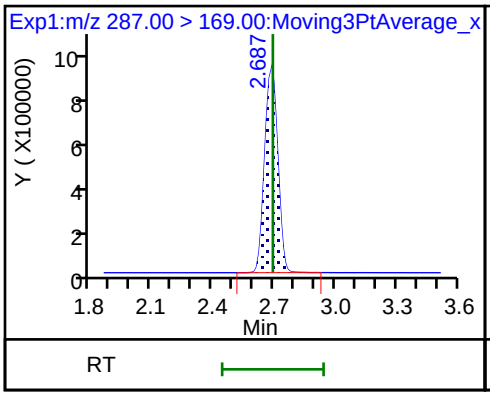

12 Perfluoropentanesulfonic acid



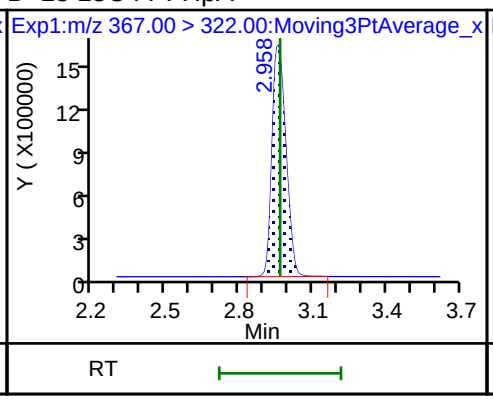

14 Perfluoro(2-propoxypropanoic) ac



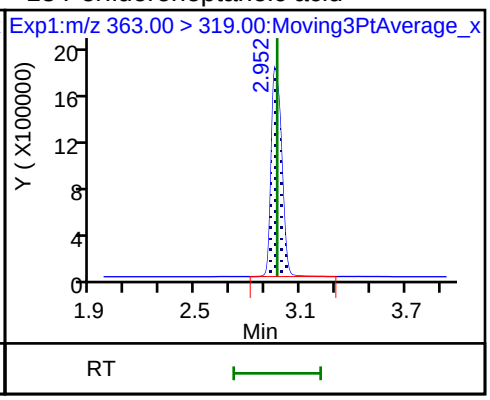

D 13 13C3 HFPO-DA



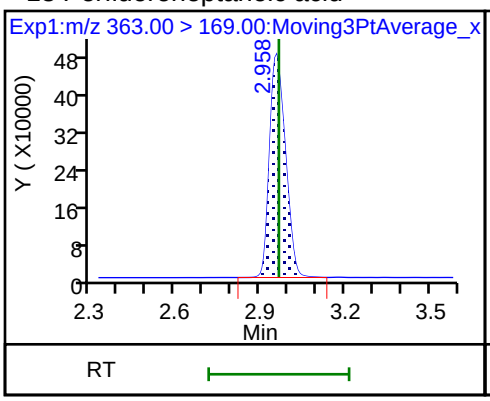

D 15 13C4 PFHpA



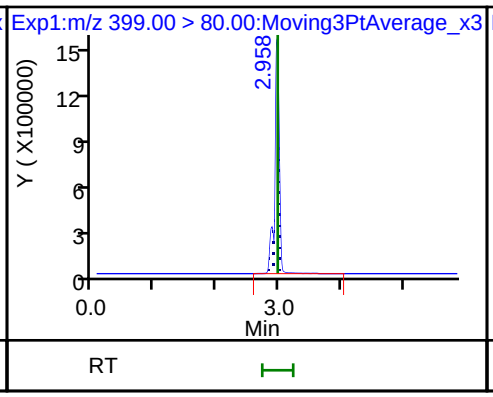

18 Perfluoroheptanoic acid



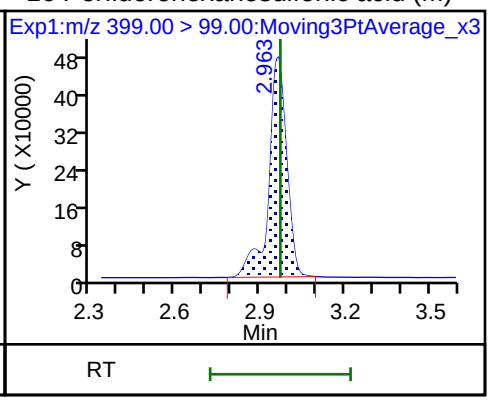

18 Perfluoroheptanoic acid



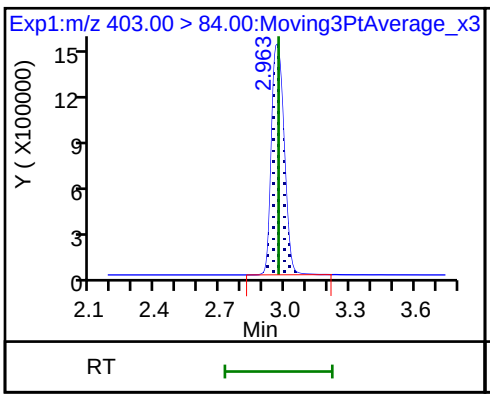

16 Perfluorohexanesulfonic acid



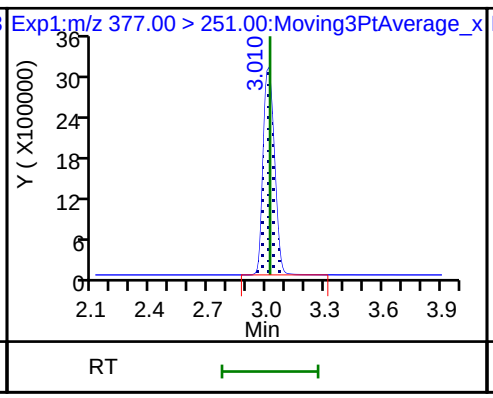

16 Perfluorohexanesulfonic acid (M)



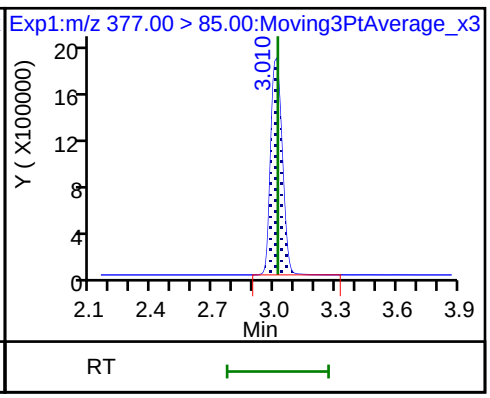

D 17 18O2 PFHxS



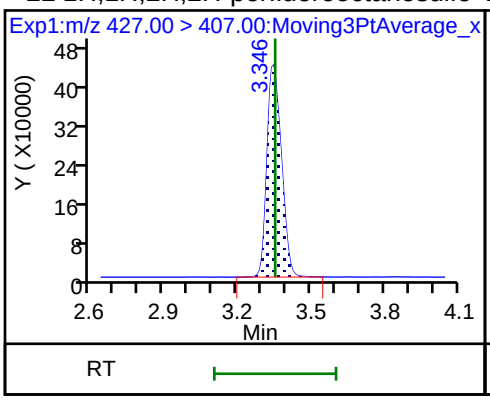

19 DONA



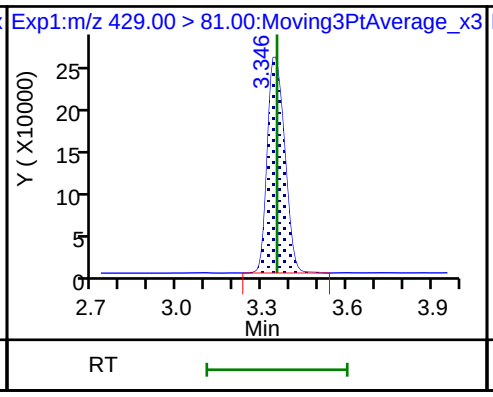

19 DONA



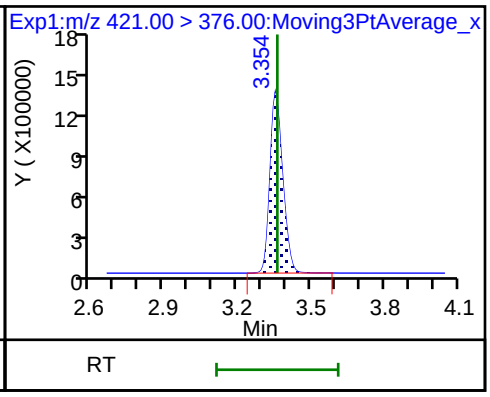
22 1H,1H,2H,2H-perfluorooctanesulfo



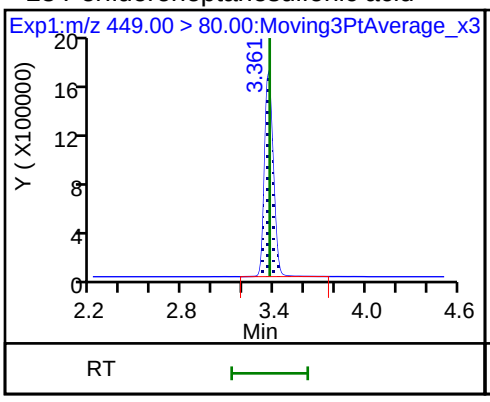

D 20 M2-6:2 FTS



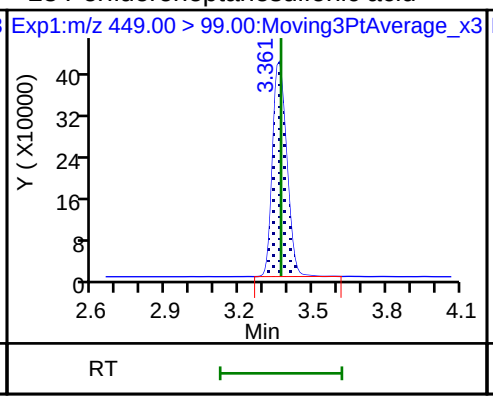

$ 21 13C8 PFOA



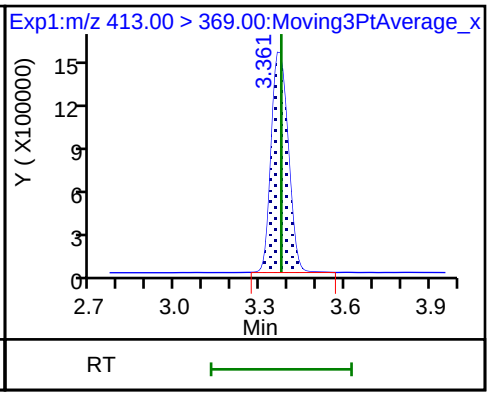

23 Perfluoroheptanesulfonic acid



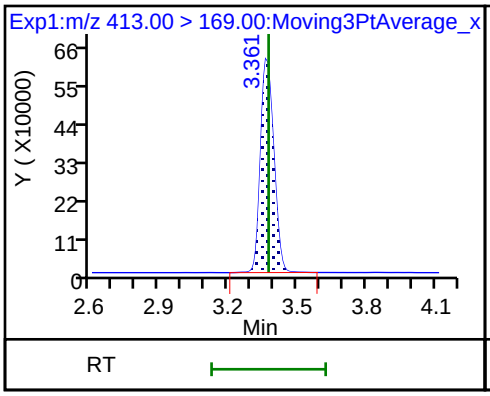

23 Perfluoroheptanesulfonic acid



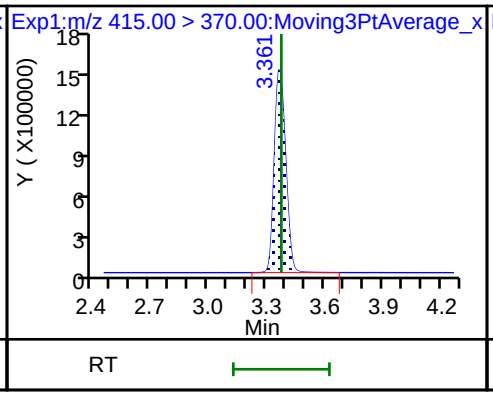

24 Perfluorooctanoic acid



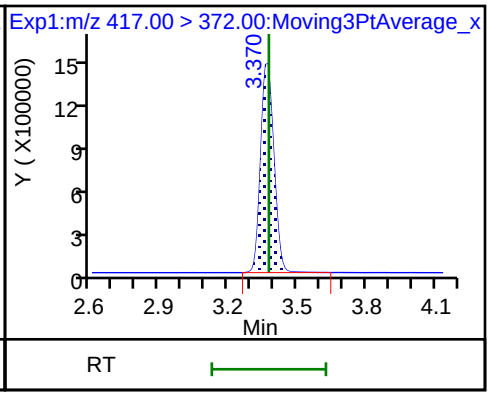

24 Perfluorooctanoic acid



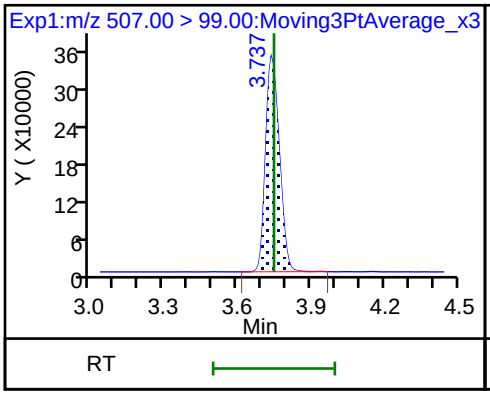

* 25 13C2 PFOA



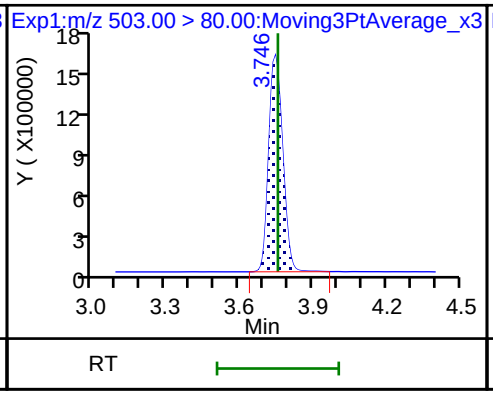

D 26 13C4 PFOA



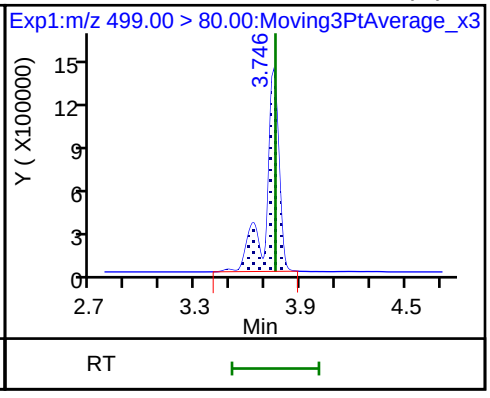

$ 27 13C8 PFOS



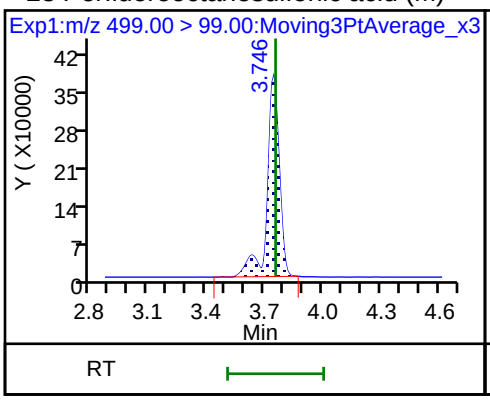

D 31 13C4 PFOS



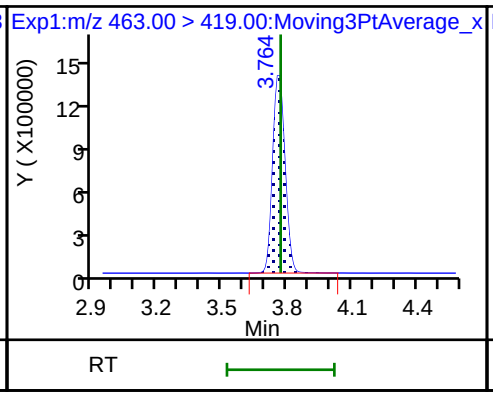

28 Perfluorooctanesulfonic acid (M)



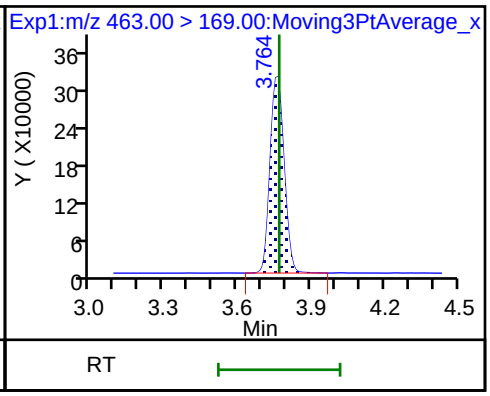
28 Perfluorooctanesulfonic acid (M)



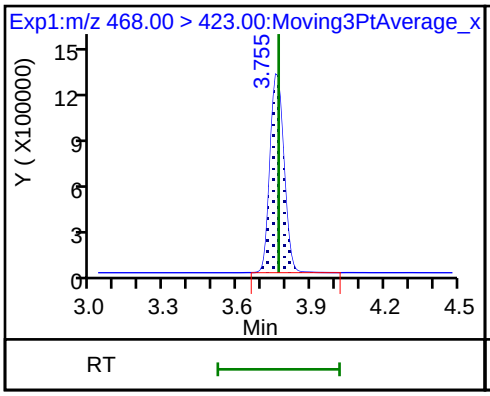

30 Perfluorononanoic acid



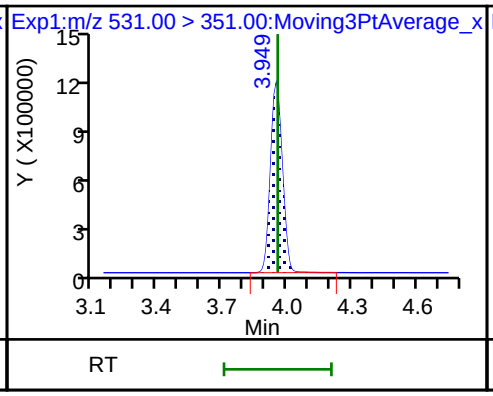

30 Perfluorononanoic acid



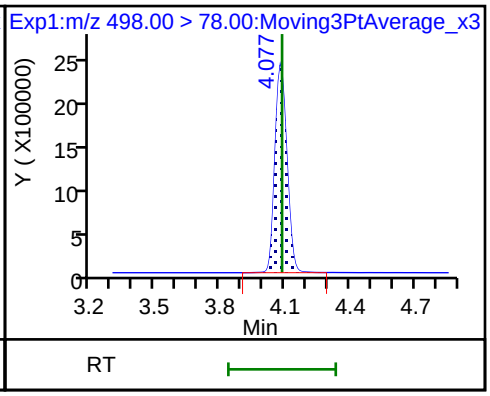

D 29 13C5 PFNA



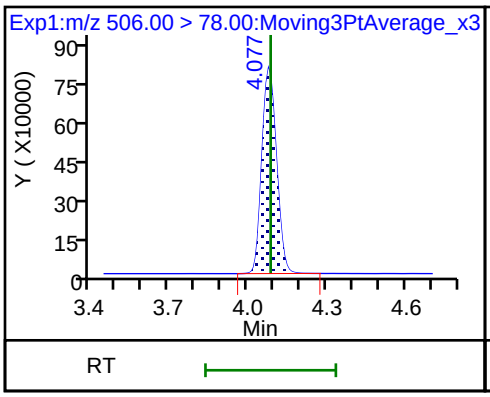

32 9-Chlorohexadecafluoro-3-oxanona



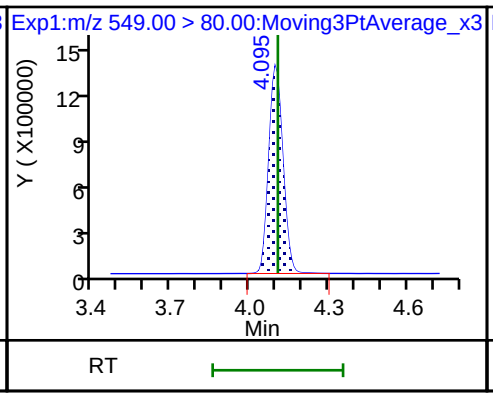

34 Perfluorooctanesulfonamide



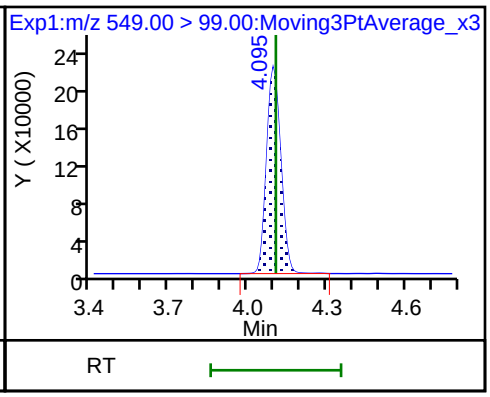

D 36 13C8 FOSA



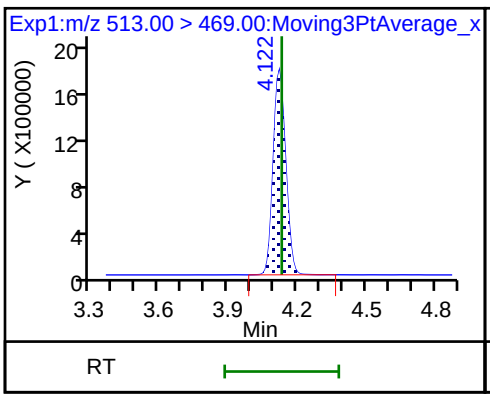

35 Perfluorononanesulfonic acid



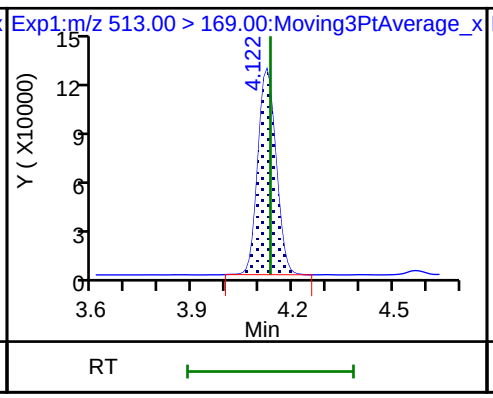

35 Perfluorononanesulfonic acid



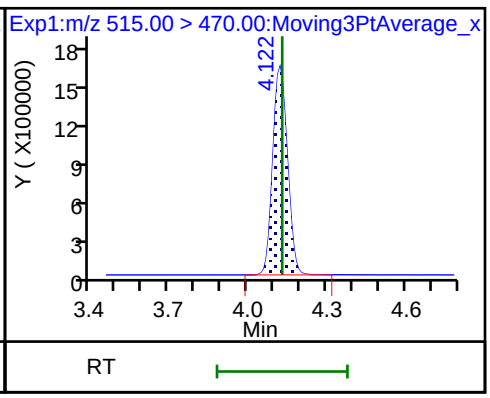

38 Perfluorodecanoic acid



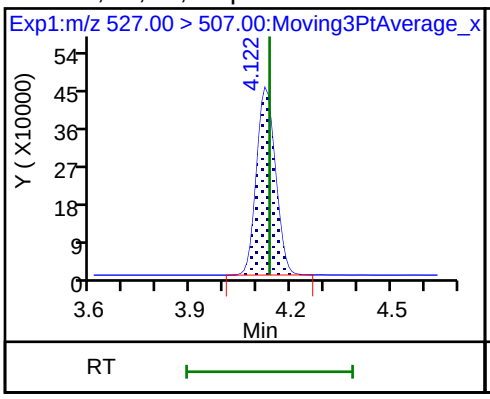

38 Perfluorodecanoic acid



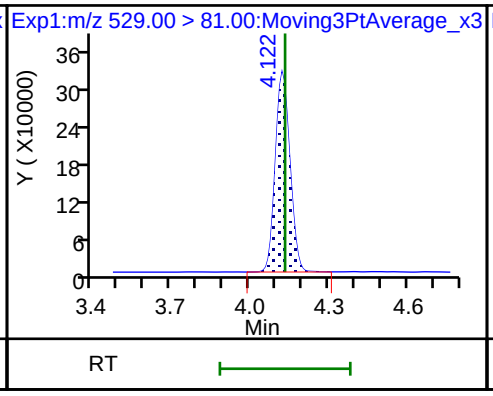

D 33 13C2 PFDA



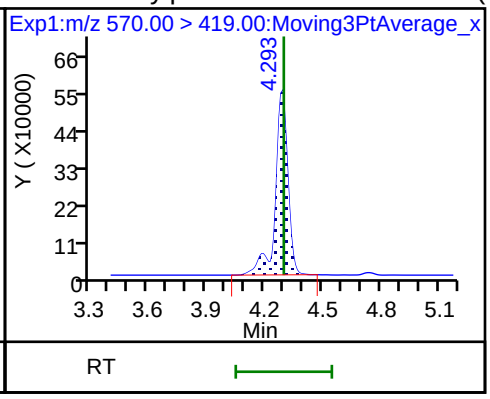
39 1H,1H,2H,2H-perfluorodecanesulfo



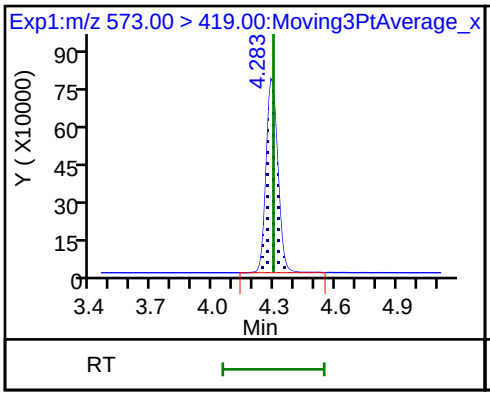

D 37 M2-8:2 FTS



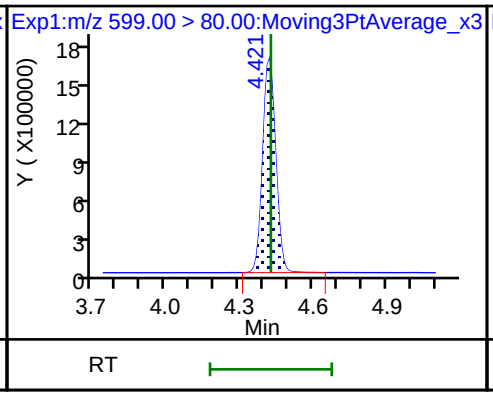

40 N-methylperfluorooctanesulfonami (M)



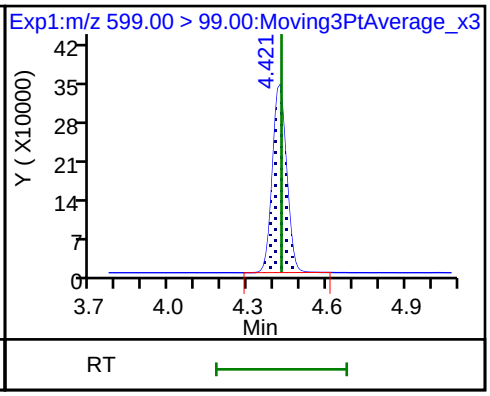

D 41 d3-NMeFOSAA



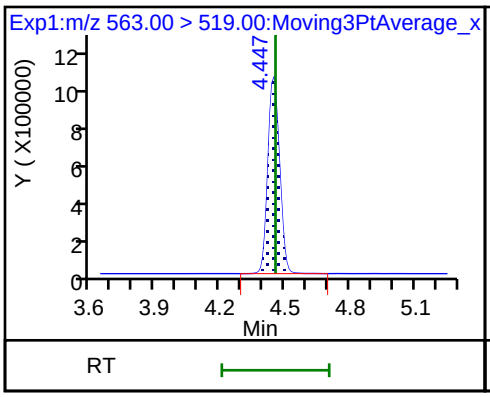

42 Perfluorodecanesulfonic acid



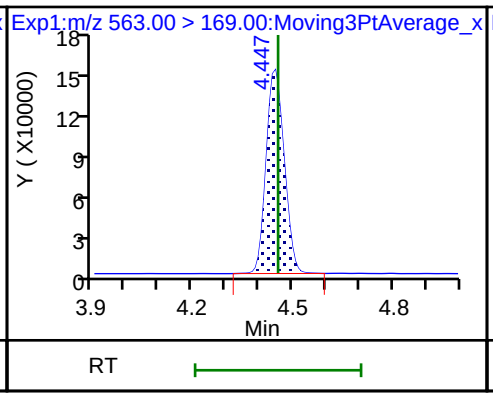

42 Perfluorodecanesulfonic acid



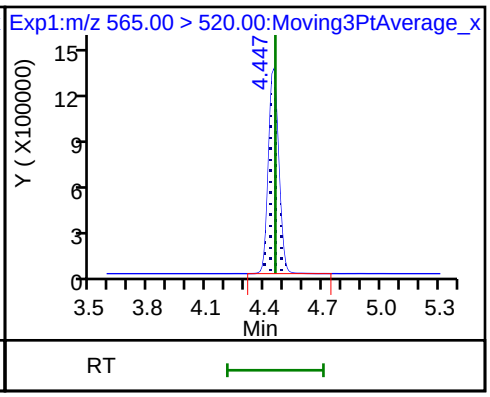

43 Perfluoroundecanoic acid



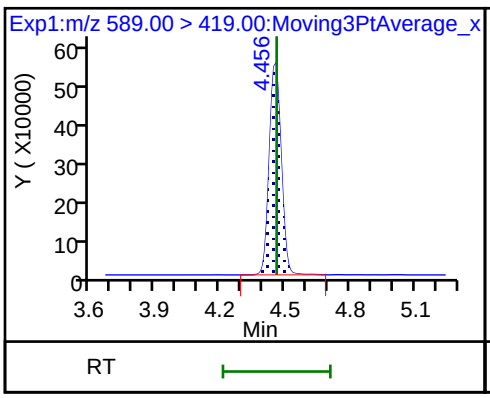

43 Perfluoroundecanoic acid



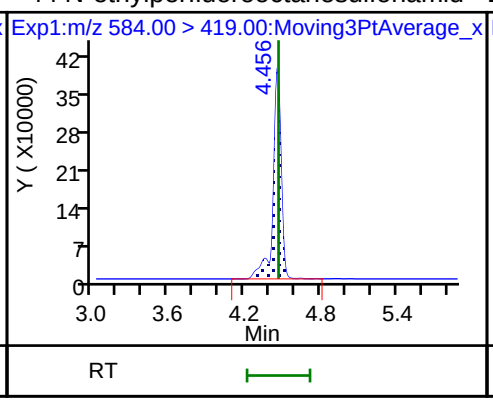

D 46 13C2 PFUnA



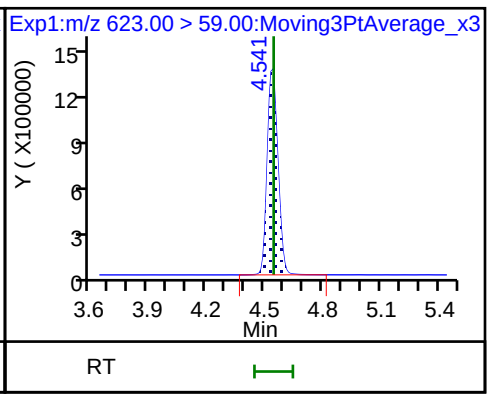

D 45 d5-NEtFOSAA



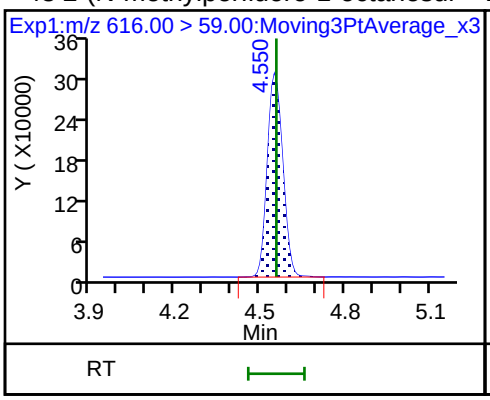

44 N-ethylperfluorooctanesulfonamid



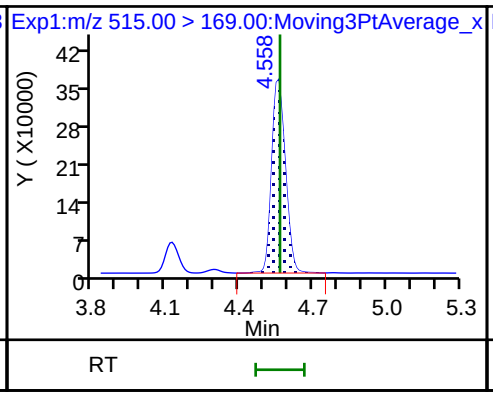

D 47 d7-N-MeFOSE-M



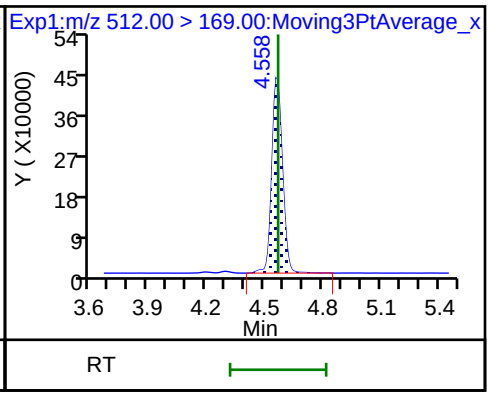
48 2-(N-methylperfluoro-1-octanesul



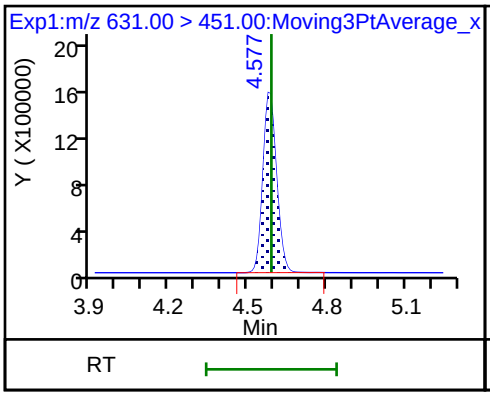

D 49 d-N-MeFOSA-M



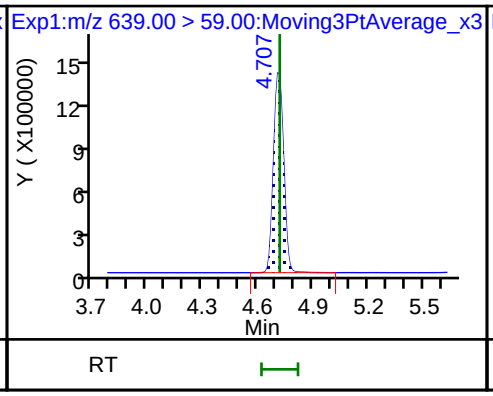

50 NMeFOSA



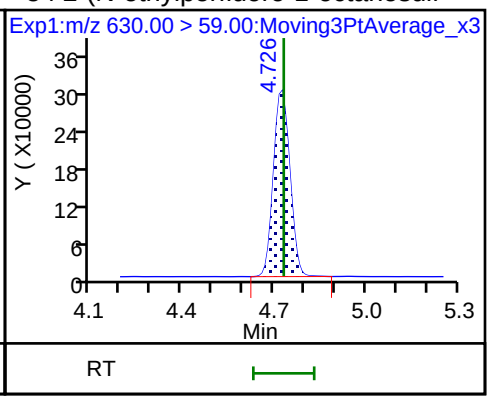

51 11-Chloroeicosafluoro-3-oxaundec



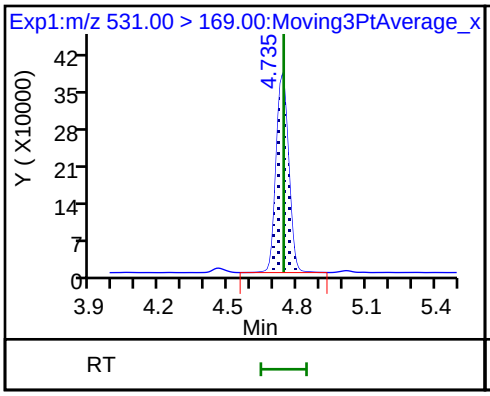

D 53 d9-N-EtFOSE-M



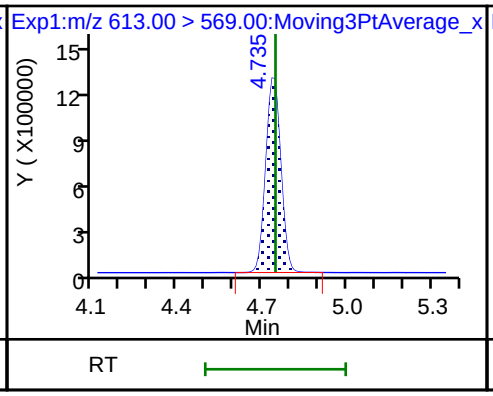

54 2-(N-ethylperfluoro-1-octanesulf



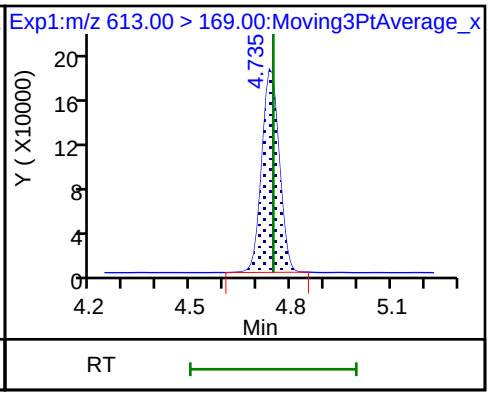

D 58 d-N-EtFOSA-M



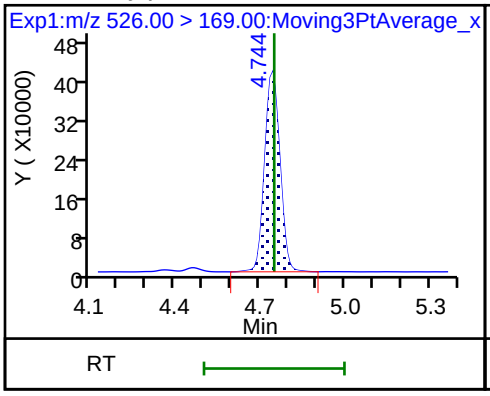

52 Perfluorododecanoic acid



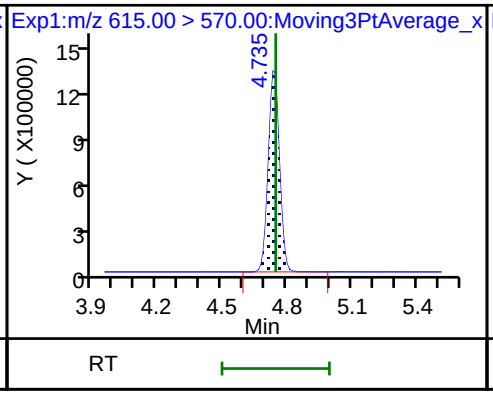

52 Perfluorododecanoic acid



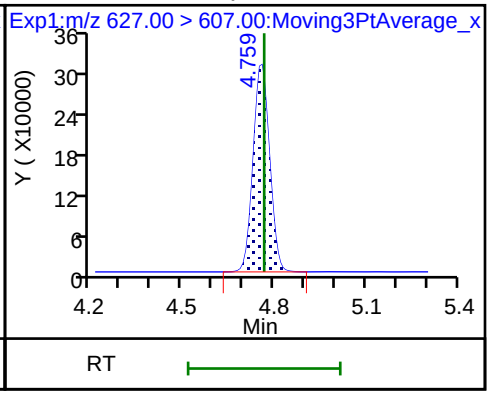

57 N-ethylperfluoro-1-octanesulfona



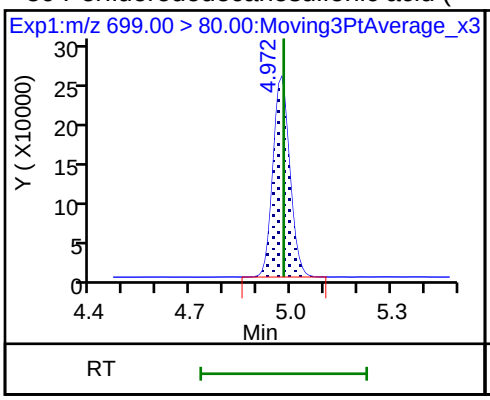

D 56 13C2 PFDoA



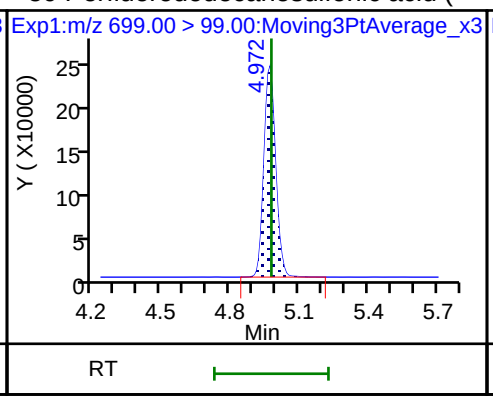

55 1H,1H,2H,2H-perfluorododecanesul



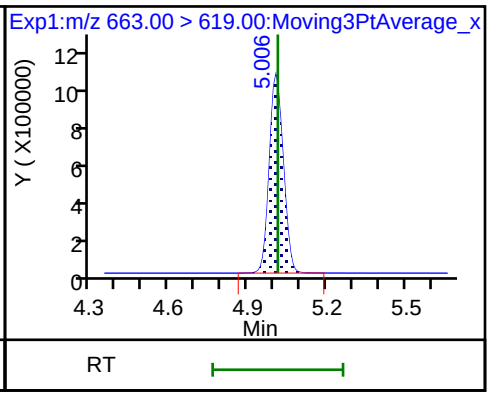
59 Perfluorododecanesulfonic acid (



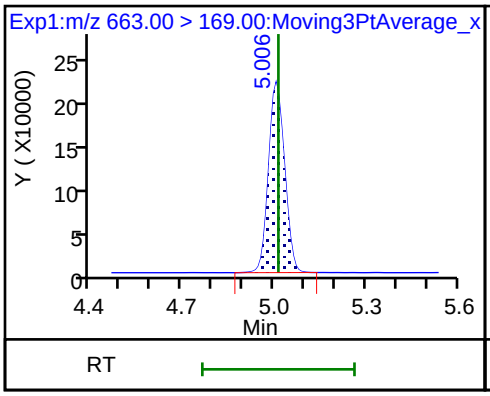

59 Perfluorododecanesulfonic acid (



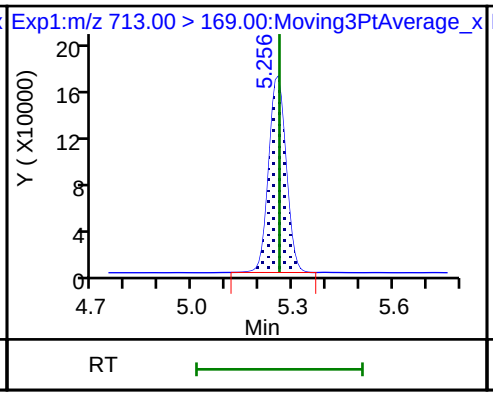

60 Perfluorotridecanoic acid



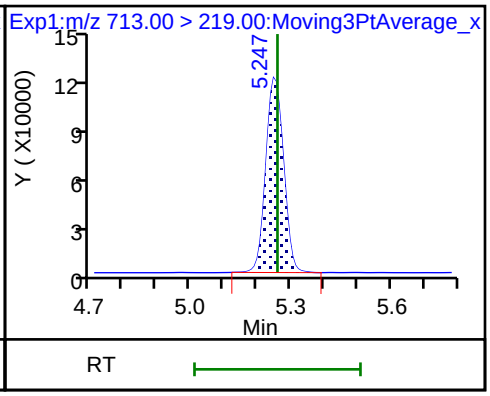

60 Perfluorotridecanoic acid



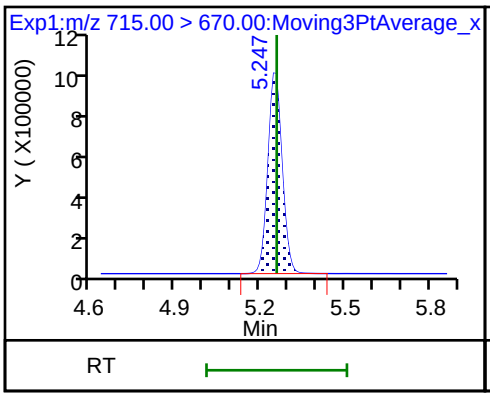

61 Perfluorotetradecanoic acid



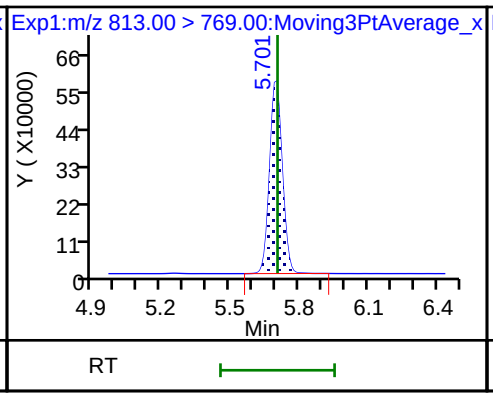

61 Perfluorotetradecanoic acid



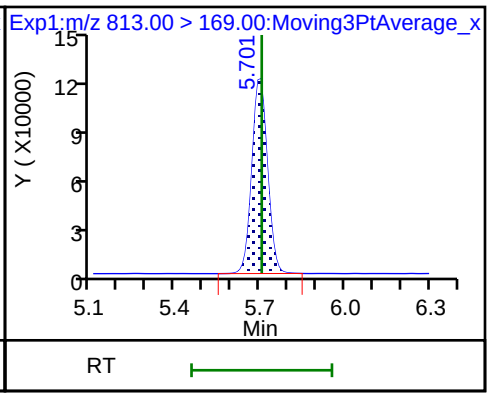

D 62 13C2 PFTeDA



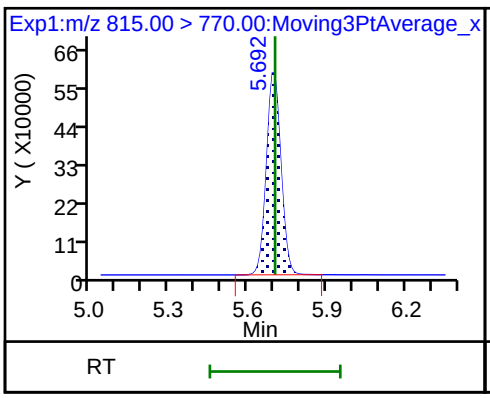

64 Perfluorohexadecanoic acid



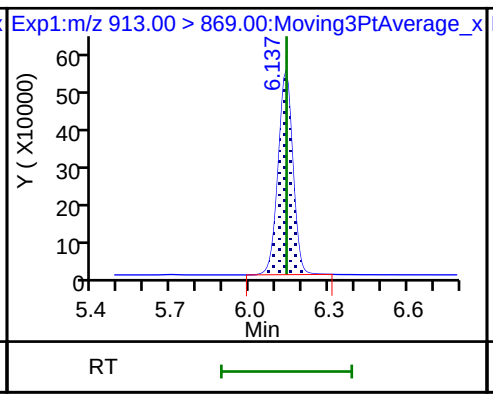

64 Perfluorohexadecanoic acid



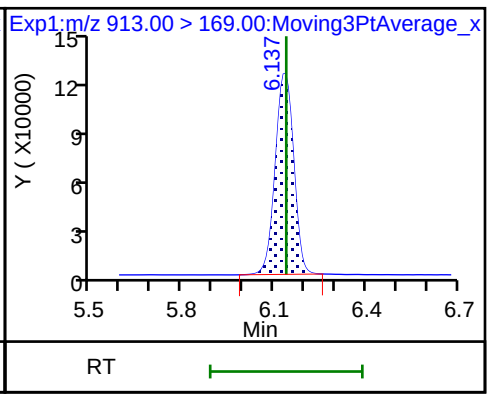

D 63 13C2 PFHxDA




65 Perfluorooctadecanoic acid




65 Perfluorooctadecanoic acid



Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

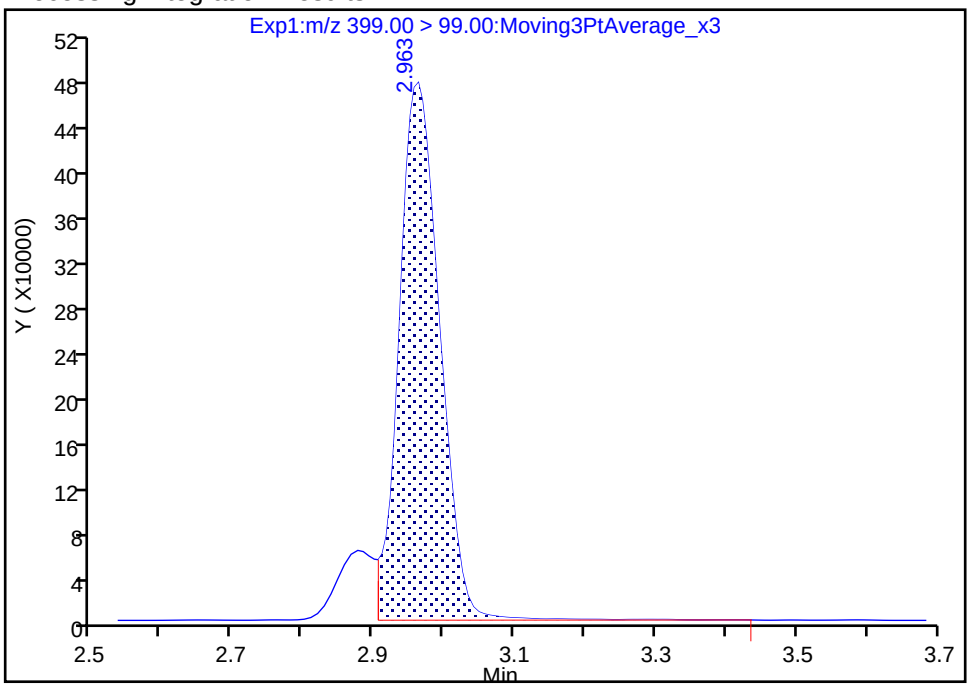
Data File: \\chromfs\Sacramento\ChromData\A9\20200910-102999.b\2020.09.10_A9 _PFC_ICAL_A_020.d
Injection Date: 10-Sep-2020 10:55:57 Instrument ID: A9
Lims ID: IC L5
Client ID:
Operator ID: SACINSTRLCMS02 ALS Bottle#: 14 Worklist Smp#: 6
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFAS_A9 Limit Group: LC PFC ICAL
Column: Detector EXP1

## 16 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 2

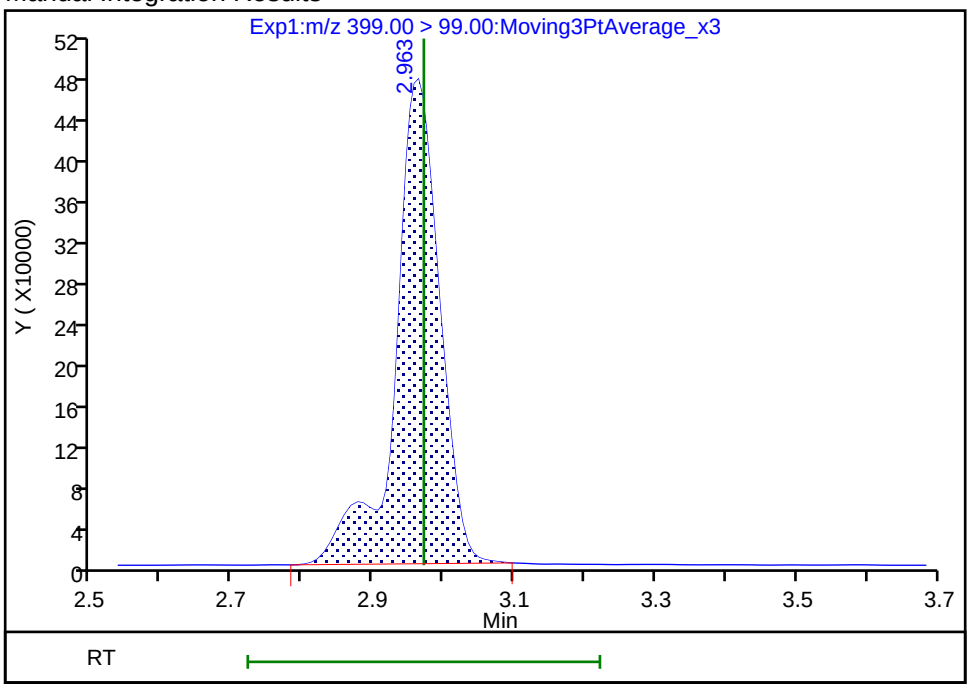
Processing Integration Results

RT: 2.96
Area: 1881556
Amount: 2.302941
Amount Units: ng/ml




Manual Integration Results

RT: 2.96
Area: 2074536
Amount: 2.356016
Amount Units: ng/ml




Reviewer: zibaa, 10-Sep-2020 11:25:55
Audit Action: Manually Integrated Audit Reason: Isomers

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

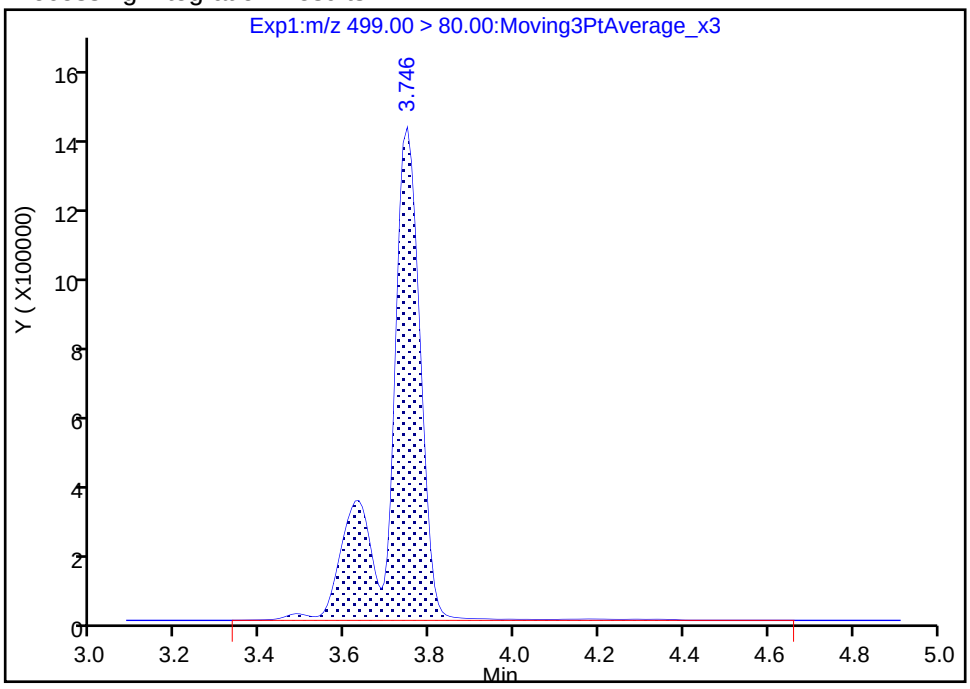
Data File: \\chromfs\Sacramento\ChromData\A9\20200910-102999.b\2020.09.10_A9 _PFC_ICAL_A_020.d
Injection Date: 10-Sep-2020 10:55:57 Instrument ID: A9
Lims ID: IC L5
Client ID:
Operator ID: SACINSTRLCMS02 ALS Bottle#: 14 Worklist Smp#: 6
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFAS_A9 Limit Group: LC PFC ICAL
Column: Detector EXP1

## 28 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 1

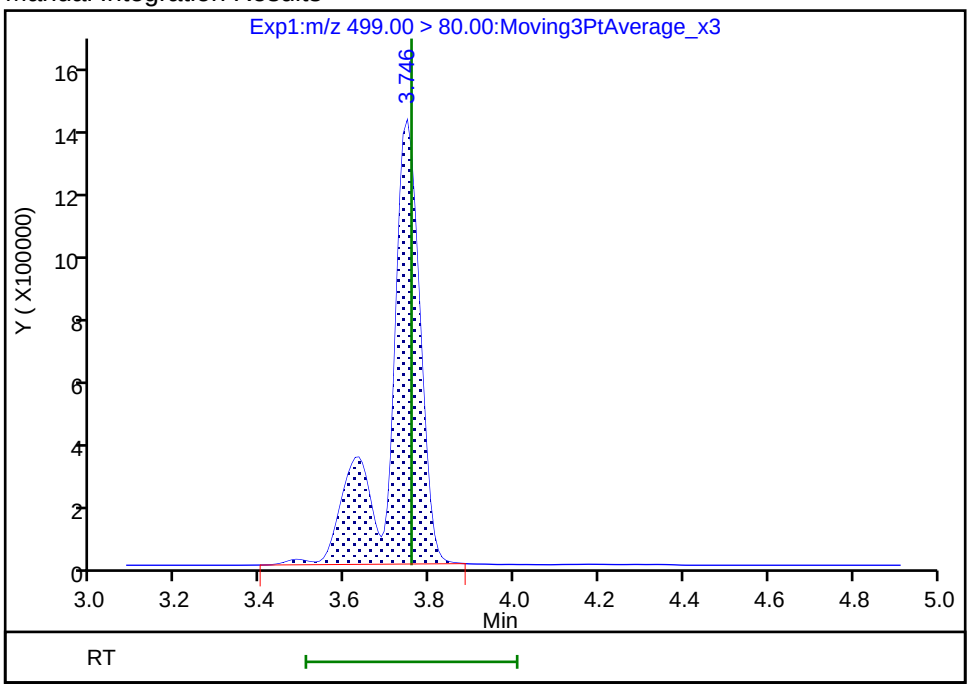
Processing Integration Results

RT: 3.75
Area: 7078236
Amount: 2.606951
Amount Units: ng/ml




Manual Integration Results

RT: 3.75
Area: 6924966
Amount: 2.584063
Amount Units: ng/ml




Reviewer: zibaa, 10-Sep-2020 11:26:49
Audit Action: Manually Integrated Audit Reason: Isomers

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

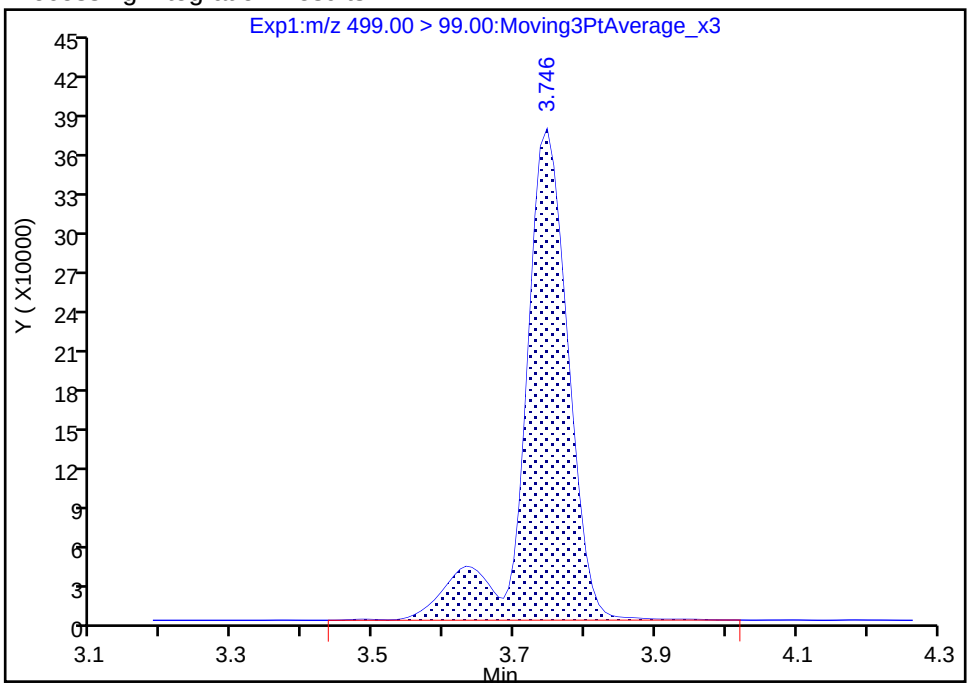
Data File: \\chromfs\Sacramento\ChromData\A9\20200910-102999.b\2020.09.10_A9 _PFC_ICAL_A_020.d
Injection Date: 10-Sep-2020 10:55:57 Instrument ID: A9
Lims ID: IC L5
Client ID:
Operator ID: SACINSTRLCMS02 ALS Bottle#: 14 Worklist Smp#: 6
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFAS_A9 Limit Group: LC PFC ICAL
Column: Detector EXP1

## 28 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 2

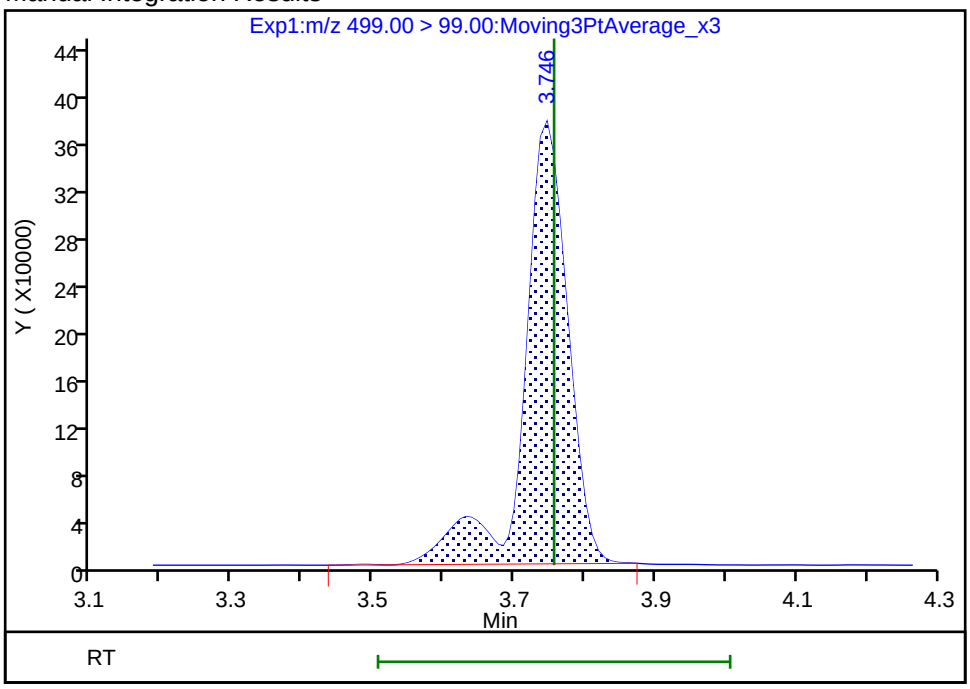
Processing Integration Results

RT: 3.75
Area: 1660071
Amount: 2.606951
Amount Units: ng/ml




Manual Integration Results

RT: 3.75
Area: 1636862
Amount: 2.584063
Amount Units: ng/ml




Reviewer: zibaa, 10-Sep-2020 11:27:06
Audit Action: Manually Integrated Audit Reason: Isomers

Eurofins TestAmerica, Sacramento

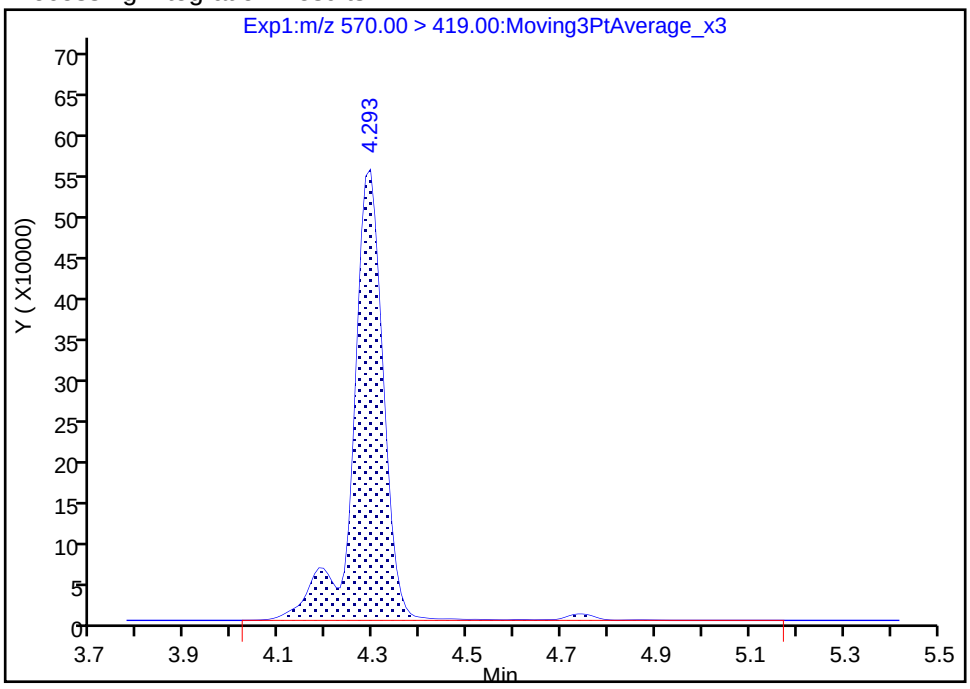
| | | | | | |
|---|---|---|---|---|---|
| Data File: | \\chromfs\Sacramento\ChromData\A9\20200910-102999.b\2020.09.10_A9 _PFC_ICAL_A_020.d | | | | |
| Injection Date: | 10-Sep-2020 10:55:57 | Instrument ID: | A9 | | |
| Lims ID: | IC L5 | | | | |
| Client ID: | | | | | |
| Operator ID: | SACINSTRLCMS02 | ALS Bottle#: | 14 | Worklist Smp#: | 6 |
| Injection Vol: | 20.0 ul | Dil. Factor: | 1.0000 | | |
| Method: | PFAS_A9 | Limit Group: | LC PFC ICAL | | |
| Column: | | Detector | EXP1 | | |

## 40 N-methylperfluorooctanesulfonami, CAS: 2355-31-9

Signal: 1

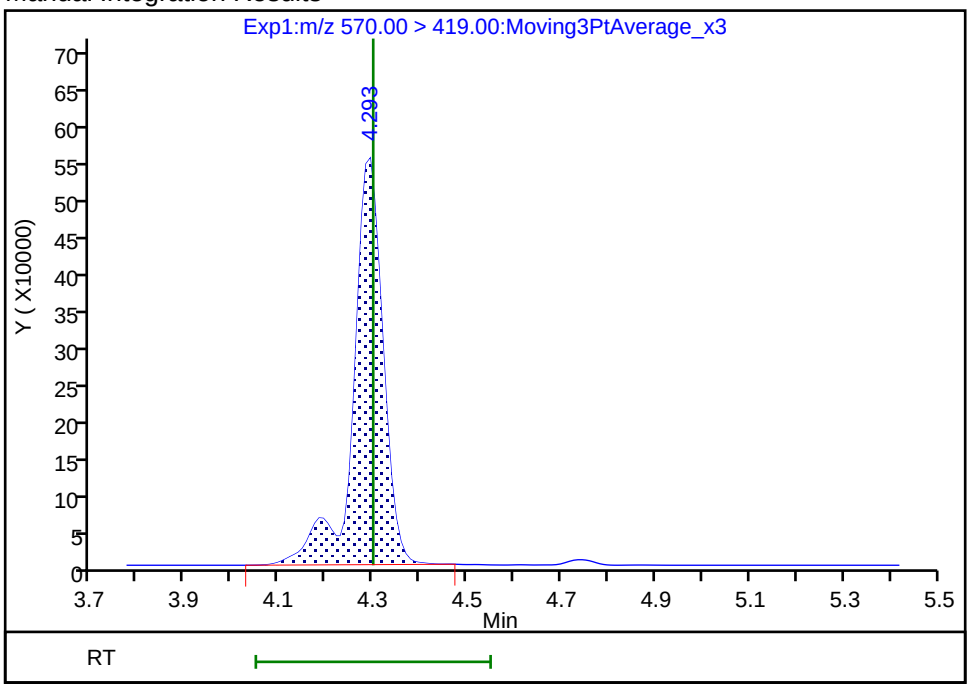
Processing Integration Results

RT: 4.29
Area: 2504917
Amount: 2.798522
Amount Units: ng/ml




Manual Integration Results

RT: 4.29
Area: 2448364
Amount: 2.649101
Amount Units: ng/ml




Reviewer: zibaa, 10-Sep-2020 11:27:46
Audit Action: Manually Integrated Audit Reason: Isomers

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\A9\20200910-102999.b\2020.09.10_A9 _PFC_ICAL_A_021.d
Lims ID: IC L6
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 10-Sep-2020 11:05:17 ALS Bottle#: 15 Worklist Smp#: 7
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Sample Info: CAL STD6_25
Misc. Info.: Plate: 1 Rack: 1
Operator ID: SACINSTRLCMS02 Instrument ID: A9
Sublist: chrom-PFAS_A9*sub16

Method: \\chromfs\Sacramento\ChromData\A9\20200910-102999.b\PFAS_A9.m
Limit Group: LC PFC ICAL
Last Update: 10-Sep-2020 13:14:58 Calib Date: 10-Sep-2020 12:29:20
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\A9\20200910-102999.b\2020.09.10_A9 _PFC_ICAL_AA_022.d

Column 1 : Det: EXP1
Process Host: CTX1016

First Level Reviewer: zibaa Date: 10-Sep-2020 11:34:45
Ratio Calibration: Average of Initial Calibration

| Signal | RT | EXP RT | DLT RT | REL RT | Response | Amount ng/ml | Ratio(Limits) | %Rec | S/N | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| D 1 13C4 PFBA | | | | | | | | | | |
| 217.00 > 172.00 | 1.916 | 1.901 | 0.015 | 0.562 | 8424890 | 2.49 | | 99.8 | 3212 | |
| 2 Perfluorobutanoic acid | | | | | | | | | | |
| 212.90 > 169.00 | 1.923 | 1.904 | 0.019 | 1.004 | 14698994 | 4.99 | | 99.9 | 995 | |
| D 4 13C5 PFPeA | | | | | | | | | | |
| 267.90 > 223.00 | 2.234 | 2.211 | 0.023 | 0.656 | 7238418 | 2.54 | | 102 | 3719 | |
| 3 Perfluoropentanoic acid | | | | | | | | | | |
| 262.90 > 219.00 | 2.234 | 2.211 | 0.023 | 1.000 | 13464235 | 4.57 | | 91.4 | 1018 | |
| D 6 13C3 PFBS | | | | | | | | | | |
| 301.90 > 80.00 | 2.264 | 2.241 | 0.023 | 0.664 | 13232169 | 2.35 | | 101 | 2812 | |
| 5 Perfluorobutanesulfonic acid | | | | | | | | | | |
| 298.90 > 80.00 | 2.264 | 2.244 | 0.020 | 1.000 | 22773485 | 4.01 | Target=3.10 | 90.7 | 1339 | |
| 298.90 > 99.00 | 2.264 | 2.244 | 0.020 | 1.000 | 7829054 | | 2.91(1.55-4.65) | 90.7 | 1552 | |
| D 8 M2-4:2 FTS | | | | | | | | | | |
| 329.00 > 81.00 | 2.558 | 2.533 | 0.025 | 0.751 | 1275389 | 2.28 | | 97.8 | 815 | |
| 9 1H,1H,2H,2H-perfluorohexanesulfo | | | | | | | | | | |
| 327.00 > 307.00 | 2.558 | 2.535 | 0.023 | 1.000 | 5351034 | 4.95 | | 106 | 9924 | |
| D 10 13C2 PFHxA | | | | | | | | | | |
| 315.00 > 270.00 | 2.590 | 2.573 | 0.017 | 0.760 | 6897732 | 2.60 | | 104 | 3719 | |
| 11 Perfluorohexanoic acid | | | | | | | | | | |
| 313.00 > 269.00 | 2.590 | 2.573 | 0.017 | 1.000 | 10779295 | 4.68 | Target=9.68 | 93.7 | 1470 | |
| 313.00 > 119.00 | 2.590 | 2.573 | 0.017 | 1.000 | 1077249 | | 10.01(4.84-14.52) | 93.7 | 626 | |
| 12 Perfluoropentanesulfonic acid | | | | | | | | | | |
| 349.00 > 80.00 | 2.611 | 2.587 | 0.024 | 1.154 | 10821051 | 4.73 | Target=2.01 | 101 | 1560 | |
| 349.00 > 99.00 | 2.611 | 2.587 | 0.024 | 1.154 | 5622760 | | 1.92(1.00-3.01) | 101 | 2258 | |
| D 13 13C3 HFPO-DA | | | | | | | | | | |
| 287.00 > 169.00 | 2.716 | 2.692 | 0.024 | 0.797 | 4675328 | 2.57 | | 103 | 4308 | |

| Signal | RT | EXP RT | DLT RT | REL RT | Response | Amount ng/ml | Ratio(Limits) | %Rec | S/N | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| 14 Perfluoro(2-propoxypropanoic) ac | | | | | | | | | | |
| 285.00 > 169.00 | 2.716 | 2.691 | 0.025 | 1.000 | 3748656 | 5.06 | | 101 | 4567 | |
| 18 Perfluoroheptanoic acid | | | | | | | | | | |
| 363.00 > 319.00 | 2.994 | 2.966 | 0.028 | 1.000 | 13697410 | 4.82 | Target=3.74 | 96.4 | 2084 | |
| 363.00 > 169.00 | 2.994 | 2.966 | 0.028 | 1.000 | 3845699 | | 3.56(1.87-5.61) | 96.4 | 2813 | |
| D 15 13C4 PFHpA | | | | | | | | | | |
| 367.00 > 322.00 | 2.994 | 2.965 | 0.029 | 0.879 | 6406416 | 2.49 | | 99.4 | 4425 | |
| 16 Perfluorohexanesulfonic acid | | | | | | | | | | M |
| 399.00 > 80.00 | 2.994 | 2.971 | 0.023 | 1.000 | 13521969 | 4.39 | Target=3.29 | 96.5 | 1001 | |
| 399.00 > 99.00 | 2.994 | 2.971 | 0.023 | 1.000 | 4142358 | | 3.26(1.65-4.94) | 96.5 | 943 | M |
| D 17 18O2 PFHxS | | | | | | | | | | |
| 403.00 > 84.00 | 2.994 | 2.969 | 0.025 | 0.879 | 6172326 | 2.29 | | 97.0 | 3537 | |
| 19 DONA | | | | | | | | | | |
| 377.00 > 251.00 | 3.042 | 3.017 | 0.025 | 0.804 | 22633015 | 4.56 | Target=1.80 | 96.8 | 7365 | |
| 377.00 > 85.00 | 3.042 | 3.017 | 0.025 | 0.804 | 13530118 | | 1.67(0.90-2.70) | 96.8 | 7883 | |
| D 20 M2-6:2 FTS | | | | | | | | | | |
| 429.00 > 81.00 | 3.379 | 3.352 | 0.027 | 0.992 | 1128229 | 2.34 | | 98.6 | 1110 | |
| 22 1H,1H,2H,2H-perfluorooctanesulfo | | | | | | | | | | |
| 427.00 > 407.00 | 3.379 | 3.353 | 0.026 | 1.000 | 3349205 | 4.57 | | 96.5 | 3221 | |
| $ 21 13C8 PFOA | | | | | | | | | | |
| 421.00 > 376.00 | 3.398 | 3.362 | 0.036 | 0.997 | 4075755 | 2.01 | | 82.3 | 3969 | |
| 24 Perfluorooctanoic acid | | | | | | | | | | |
| 413.00 > 369.00 | 3.407 | 3.375 | 0.032 | 1.000 | 11308200 | 4.46 | Target=2.37 | 89.2 | 1859 | |
| 413.00 > 169.00 | 3.407 | 3.375 | 0.032 | 1.000 | 4965143 | | 2.28(1.19-3.56) | 89.2 | 3529 | |
| * 25 13C2 PFOA | | | | | | | | | | |
| 415.00 > 370.00 | 3.407 | 3.376 | 0.031 | | 6254928 | 2.50 | | | 4536 | |
| 23 Perfluoroheptanesulfonic acid | | | | | | | | | | |
| 449.00 > 80.00 | 3.398 | 3.369 | 0.029 | 0.898 | 12310163 | 4.86 | Target=3.65 | 102 | 2065 | |
| 449.00 > 99.00 | 3.398 | 3.369 | 0.029 | 0.898 | 3438034 | | 3.58(1.83-5.48) | 102 | 2972 | |
| D 26 13C4 PFOA | | | | | | | | | | |
| 417.00 > 372.00 | 3.407 | 3.376 | 0.031 | 1.000 | 5880244 | 2.43 | | 97.4 | 5098 | |
| $ 27 13C8 PFOS | | | | | | | | | | |
| 507.00 > 99.00 | 3.774 | 3.748 | 0.026 | 1.107 | 1555416 | 2.45 | | 102 | 1671 | |
| D 31 13C4 PFOS | | | | | | | | | | |
| 503.00 > 80.00 | 3.783 | 3.756 | 0.027 | 1.110 | 6545285 | 2.33 | | 97.5 | 1686 | |
| 28 Perfluorooctanesulfonic acid | | | | | | | | | | |
| 499.00 > 80.00 | 3.783 | 3.756 | 0.027 | 1.000 | 13532057 | 4.75 | Target=4.12 | 102 | 980 | |
| 499.00 > 99.00 | 3.783 | 3.756 | 0.027 | 1.000 | 3267478 | | 4.14(2.06-6.17) | 102 | 2624 | |
| D 29 13C5 PFNA | | | | | | | | | | |
| 468.00 > 423.00 | 3.792 | 3.767 | 0.025 | 1.113 | 4963721 | 2.37 | | 94.7 | 4790 | |
| 30 Perfluorononanoic acid | | | | | | | | | | |
| 463.00 > 419.00 | 3.792 | 3.770 | 0.022 | 1.000 | 9851874 | 4.98 | Target=4.21 | 99.7 | 5266 | |
| 463.00 > 169.00 | 3.792 | 3.770 | 0.022 | 1.000 | 2465631 | | 4.00(2.11-6.32) | 99.7 | 2878 | |
| 32 9-Chlorohexadecafluoro-3-oxanona | | | | | | | | | | |
| 531.00 > 351.00 | 3.978 | 3.956 | 0.022 | 1.052 | 8140600 | 4.74 | | 102 | 4055 | |
| D 36 13C8 FOSA | | | | | | | | | | |
| 506.00 > 78.00 | 4.113 | 4.086 | 0.027 | 1.207 | 3325401 | 2.52 | | 101 | 2969 | |

| Signal | RT | EXP RT | DLT RT | REL RT | Response | Amount ng/ml | Ratio(Limits) | %Rec | S/N | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| 34 Perfluorooctanesulfonamide | | | | | | | | | | |
| 498.00 > 78.00 | 4.113 | 4.086 | 0.027 | 1.000 | 17563337 | 4.75 | | 94.9 | 4774 | |
| 35 Perfluorononanesulfonic acid | | | | | | | | | | |
| 549.00 > 80.00 | 4.131 | 4.106 | 0.025 | 1.092 | 9973320 | 4.80 | Target=5.56 | 100.0 | 2587 | |
| 549.00 > 99.00 | 4.131 | 4.106 | 0.025 | 1.092 | 1804360 | | 5.53(2.78-8.34) | 100.0 | 2607 | |
| D 33 13C2 PFDA | | | | | | | | | | |
| 515.00 > 470.00 | 4.148 | 4.130 | 0.018 | 1.217 | 6528469 | 2.45 | | 98.2 | 5335 | |
| D 37 M2-8:2 FTS | | | | | | | | | | |
| 529.00 > 81.00 | 4.157 | 4.133 | 0.024 | 1.220 | 1323008 | 2.24 | | 93.7 | 1094 | |
| 38 Perfluorodecanoic acid | | | | | | | | | | |
| 513.00 > 469.00 | 4.157 | 4.132 | 0.025 | 1.002 | 12982222 | 4.98 | Target=14.33 | 99.6 | 4767 | |
| 513.00 > 169.00 | 4.157 | 4.132 | 0.025 | 1.002 | 959108 | | 13.54(7.16-21.49) | 99.6 | 413 | |
| 39 1H,1H,2H,2H-perfluorodecanesulfo | | | | | | | | | | |
| 527.00 > 507.00 | 4.157 | 4.135 | 0.022 | 1.000 | 3422014 | 4.81 | | 100 | 3929 | |
| D 41 d3-NMeFOSAA | | | | | | | | | | |
| 573.00 > 419.00 | 4.320 | 4.295 | 0.025 | 1.268 | 3430778 | 2.59 | | 104 | 2020 | |
| 40 N-methylperfluorooctanesulfonami | | | | | | | | | | |
| 570.00 > 419.00 | 4.320 | 4.299 | 0.021 | 1.000 | 5660500 | 5.43 | | 109 | 641 | |
| 42 Perfluorodecanesulfonic acid | | | | | | | | | | |
| 599.00 > 80.00 | 4.447 | 4.427 | 0.020 | 1.176 | 11169249 | 4.80 | Target=4.29 | 99.6 | 3012 | |
| 599.00 > 99.00 | 4.447 | 4.427 | 0.020 | 1.176 | 2722852 | | 4.10(2.15-6.44) | 99.6 | 3970 | |
| D 46 13C2 PFUnA | | | | | | | | | | |
| 565.00 > 520.00 | 4.473 | 4.455 | 0.018 | 1.313 | 5062947 | 2.47 | | 98.7 | 5558 | |
| 43 Perfluoroundecanoic acid | | | | | | | | | | |
| 563.00 > 519.00 | 4.473 | 4.455 | 0.018 | 1.000 | 7315314 | 5.19 | Target=6.74 | 104 | 6708 | |
| 563.00 > 169.00 | 4.473 | 4.455 | 0.018 | 1.000 | 1107225 | | 6.61(3.37-10.11) | 104 | 3122 | |
| D 45 d5-NEtFOSAA | | | | | | | | | | |
| 589.00 > 419.00 | 4.481 | 4.460 | 0.021 | 1.315 | 2162876 | 2.44 | | 97.6 | 1680 | |
| 44 N-ethylperfluorooctanesulfonamid | | | | | | | | | | |
| 584.00 > 419.00 | 4.490 | 4.467 | 0.023 | 1.002 | 3931329 | 5.60 | | 112 | 2624 | |
| D 47 d7-N-MeFOSE-M | | | | | | | | | | |
| 623.00 > 59.00 | 4.568 | 4.546 | 0.022 | 1.340 | 5236014 | 12.3 | | 98.5 | 5053 | |
| 48 2-(N-methylperfluoro-1-octanesul | | | | | | | | | | |
| 616.00 > 59.00 | 4.577 | 4.557 | 0.020 | 1.002 | 2200699 | 5.04 | | 101 | 3134 | |
| D 49 d-N-MeFOSA-M | | | | | | | | | | |
| 515.00 > 169.00 | 4.586 | 4.565 | 0.021 | 1.346 | 1600165 | 2.69 | | 108 | 250 | |
| 50 NMeFOSA | | | | | | | | | | |
| 512.00 > 169.00 | 4.586 | 4.569 | 0.017 | 1.000 | 3224319 | 4.83 | | 96.6 | 2093 | |
| 51 11-Chloroeicosafluoro-3-oxaundec | | | | | | | | | | |
| 631.00 > 451.00 | 4.613 | 4.588 | 0.025 | 1.220 | 9859916 | 4.87 | | 103 | 5738 | |
| D 53 d9-N-EtFOSE-M | | | | | | | | | | |
| 639.00 > 59.00 | 4.735 | 4.718 | 0.017 | 1.390 | 5527700 | 12.4 | | 99.0 | 6058 | |
| 54 2-(N-ethylperfluoro-1-octanesulf | | | | | | | | | | |
| 630.00 > 59.00 | 4.752 | 4.731 | 0.021 | 1.004 | 2254902 | 5.13 | | 103 | 3706 | |
| D 58 d-N-EtFOSA-M | | | | | | | | | | |
| 531.00 > 169.00 | 4.759 | 4.741 | 0.018 | 1.397 | 1680611 | 2.72 | | 109 | 874 | |

| Signal | RT | EXP RT | DLT RT | REL RT | Response | Amount ng/ml | Ratio(Limits) | %Rec | S/N | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| D 56 13C2 PFDoA | | | | | | | | | | |
| 615.00 > 570.00 | 4.767 | 4.747 | 0.020 | 1.399 | 4965995 | 2.47 | | 98.6 | 10129 | |
| 52 Perfluorododecanoic acid | | | | | | | | | | |
| 613.00 > 569.00 | 4.767 | 4.747 | 0.020 | 1.000 | 9088336 | 4.97 | Target=6.67 | 99.5 | 5812 | |
| 613.00 > 169.00 | 4.759 | 4.747 | 0.012 | 0.998 | 1294982 | | 7.02(3.34-10.01) | 99.5 | 4290 | |
| 57 N-ethylperfluoro-1-octanesulfona | | | | | | | | | | |
| 526.00 > 169.00 | 4.767 | 4.749 | 0.018 | 1.002 | 3243753 | 4.85 | | 97.0 | 1065 | |
| 55 1H,1H,2H,2H-perfluorododecanesul | | | | | | | | | | |
| 627.00 > 607.00 | 4.782 | 4.766 | 0.016 | 1.150 | 2251394 | 4.96 | | 103 | 4587 | |
| 59 Perfluorododecanesulfonic acid ( | | | | | | | | | | |
| 699.00 > 80.00 | 4.989 | 4.978 | 0.011 | 1.319 | 1806840 | 5.20 | Target=1.02 | 107 | 2374 | |
| 699.00 > 99.00 | 4.989 | 4.978 | 0.011 | 1.319 | 1827083 | | 0.99(0.51-1.53) | 107 | 6236 | |
| 60 Perfluorotridecanoic acid | | | | | | | | | | |
| 663.00 > 619.00 | 5.024 | 5.013 | 0.011 | 1.054 | 7125186 | 4.94 | Target=4.80 | 98.7 | 7903 | |
| 663.00 > 169.00 | 5.024 | 5.013 | 0.011 | 1.054 | 1524781 | | 4.67(2.40-7.20) | 98.7 | 3764 | |
| D 62 13C2 PFTeDA | | | | | | | | | | |
| 715.00 > 670.00 | 5.264 | 5.258 | 0.006 | 1.545 | 3507700 | 2.50 | | 99.9 | 5632 | |
| 61 Perfluorotetradecanoic acid | | | | | | | | | | |
| 713.00 > 169.00 | 5.264 | 5.259 | 0.005 | 1.000 | 1186334 | 4.79 | Target=1.37 | 95.9 | 3683 | |
| 713.00 > 219.00 | 5.264 | 5.259 | 0.005 | 1.000 | 867997 | | 1.37(0.69-2.06) | 95.9 | 3938 | |
| D 63 13C2 PFHxDA | | | | | | | | | | |
| 815.00 > 770.00 | 5.701 | 5.703 | -0.002 | 1.673 | 2699505 | 2.60 | | 104 | 5922 | |
| 64 Perfluorohexadecanoic acid | | | | | | | | | | |
| 813.00 > 769.00 | 5.710 | 5.705 | 0.005 | 1.002 | 4937240 | 4.98 | Target=4.63 | 99.5 | 5494 | |
| 813.00 > 169.00 | 5.701 | 5.705 | -0.004 | 1.000 | 1075429 | | 4.59(2.32-6.95) | 99.5 | 3775 | |
| 65 Perfluorooctadecanoic acid | | | | | | | | | | |
| 913.00 > 869.00 | 6.137 | 6.139 | -0.002 | 1.076 | 3945625 | 4.89 | Target=4.01 | 97.7 | 2169 | |
| 913.00 > 169.00 | 6.137 | 6.139 | -0.002 | 1.076 | 978432 | | 4.03(2.01-6.02) | 97.7 | 1692 | |

## QC Flag Legend

Review Flags

M - Manually Integrated

## Reagents:

LCPFC_LL6_00025 Amount Added: 1.00 Units: mL

Report Date: 10-Sep-2020 13:15:02 Chrom Revision: 2.3 09-Sep-2020 15:12:58

Eurofins TestAmerica, Sacramento

Data File: \\chromfs\Sacramento\ChromData\A9\20200910-102999.b\2020.09.10_A9 _PFC_ICAL_A_021.d

Injection Date: 10-Sep-2020 11:05:17 Instrument ID: A9

Lims ID: IC L6

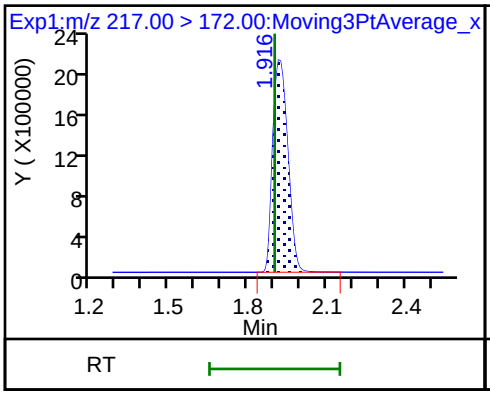
Client ID:

Operator ID: SACINSTRLCMS02 ALS Bottle#: 15 Worklist Smp#: 7

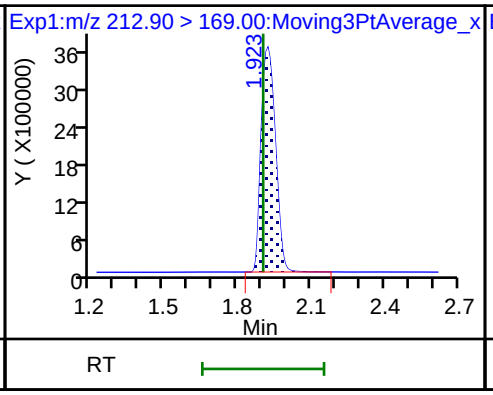
Injection Vol: 20.0 ul Dil. Factor: 1.0000

Method: PFAS_A9 Limit Group: LC PFC ICAL

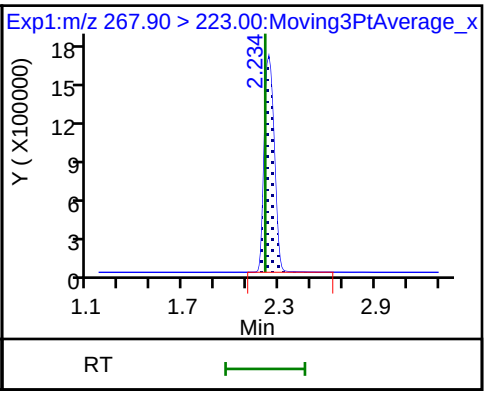
D 1 13C4 PFBA




2 Perfluorobutanoic acid




D 4 13C5 PFPeA

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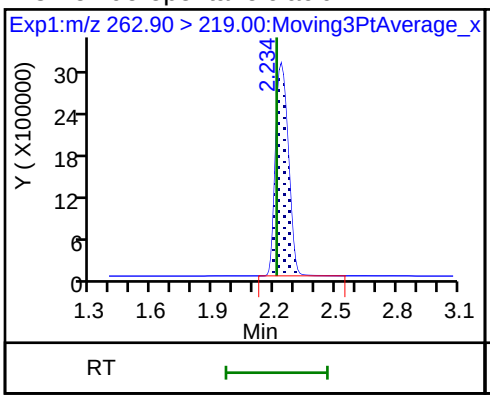
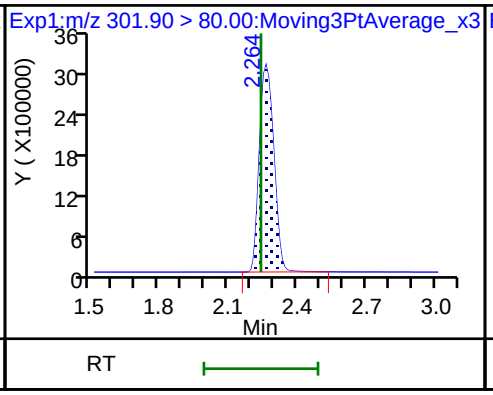
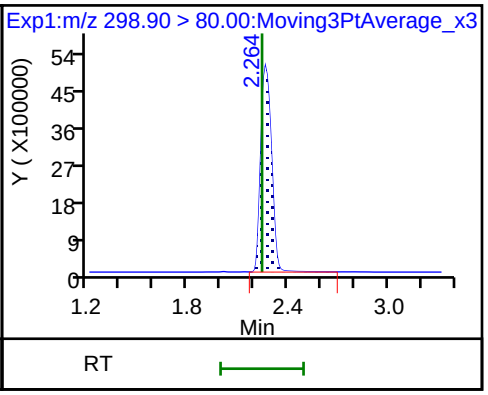


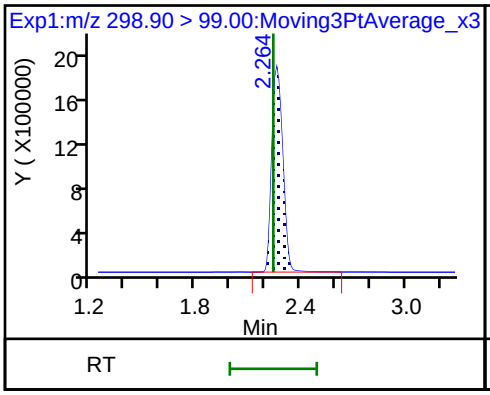

D 6 13C3 PFBS



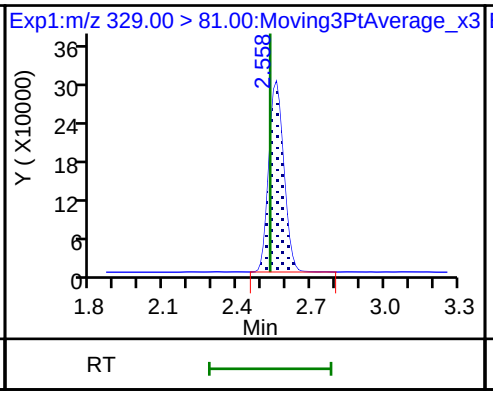

5 Perfluorobutanesulfonic acid



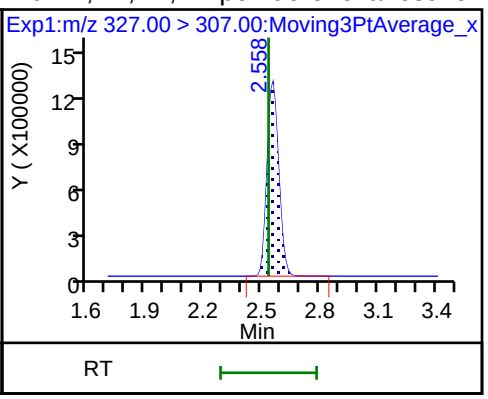

5 Perfluorobutanesulfonic acid



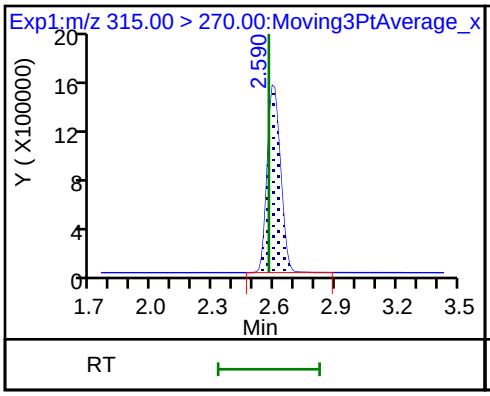

D 8 M2-4:2 FTS



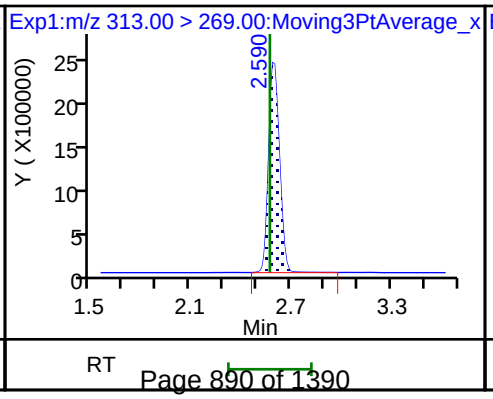

9 1H,1H,2H,2H-perfluorohexanesulfo



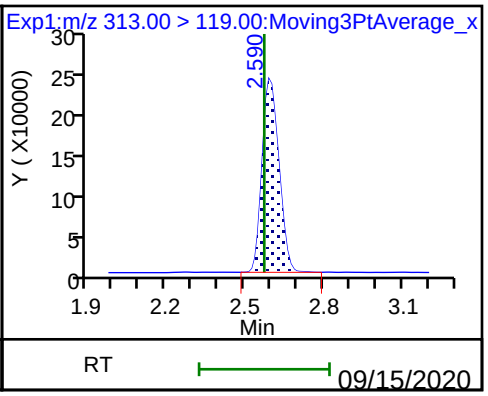

D 10 13C2 PFHxA



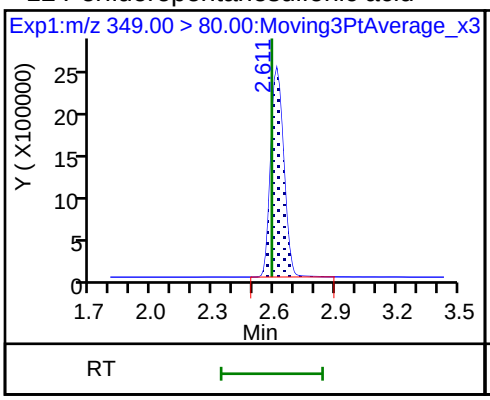

11 Perfluorohexanoic acid



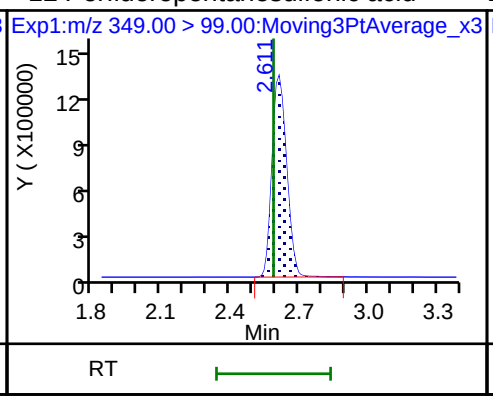

11 Perfluorohexanoic acid



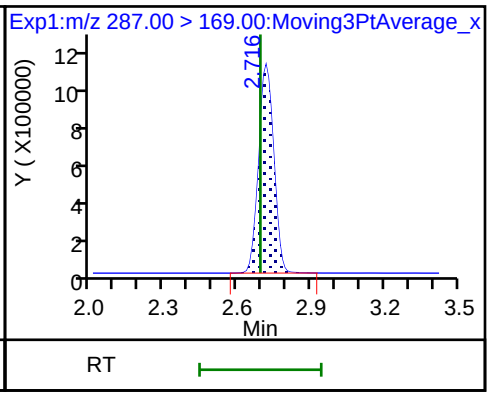
12 Perfluoropentanesulfonic acid



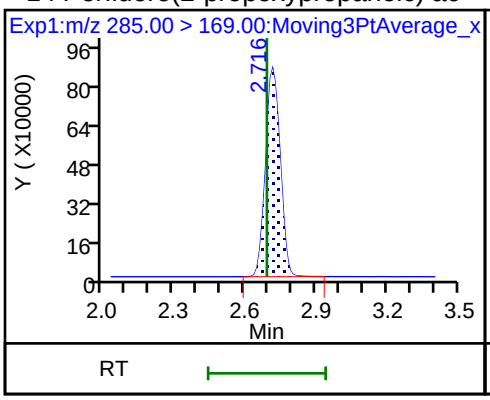

12 Perfluoropentanesulfonic acid



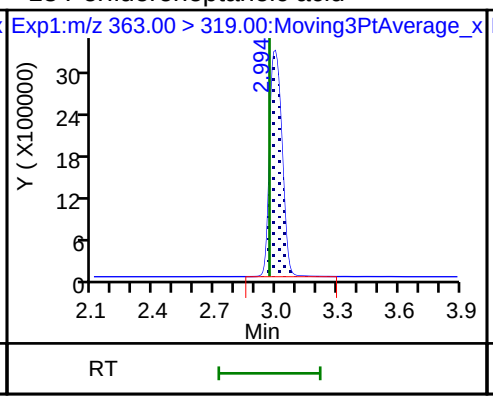

D 13 13C3 HFPO-DA



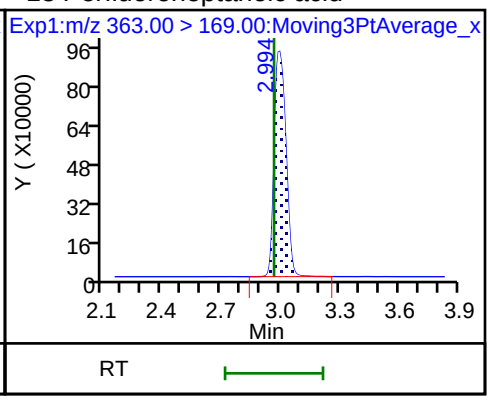

14 Perfluoro(2-propoxypropanoic) ac



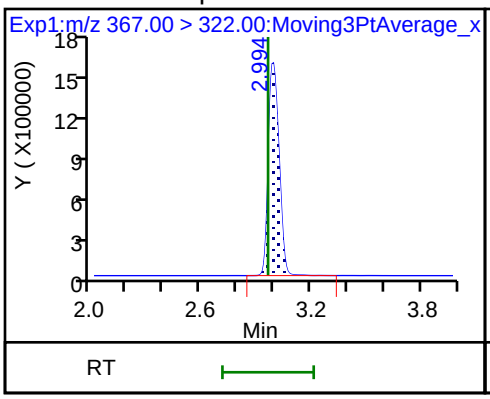

18 Perfluoroheptanoic acid



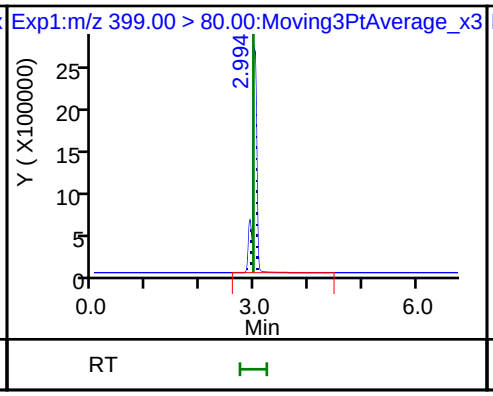

18 Perfluoroheptanoic acid



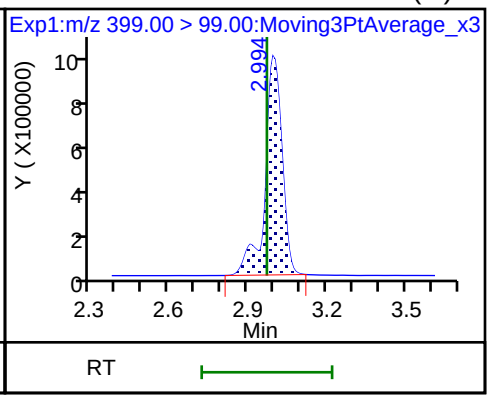

D 15 13C4 PFHpA



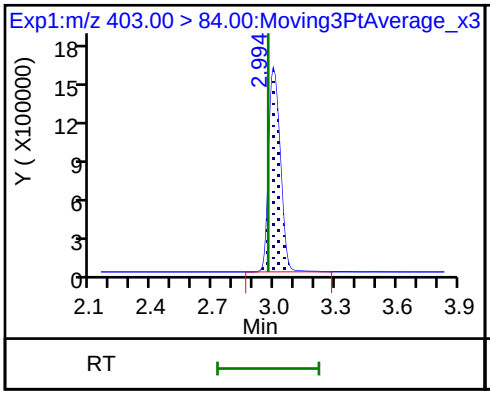

16 Perfluorohexanesulfonic acid



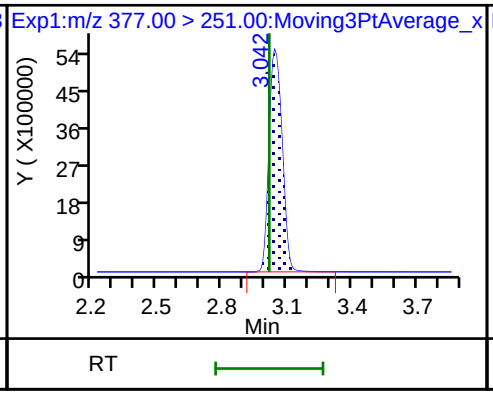

16 Perfluorohexanesulfonic acid (M)



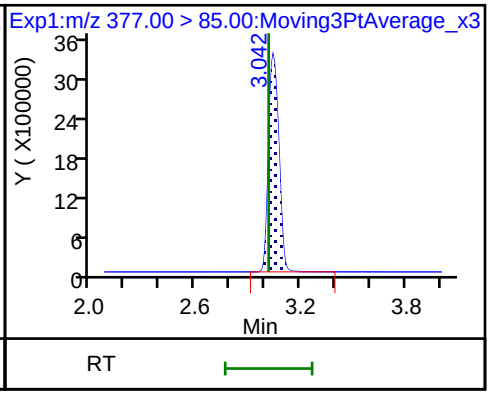

D 17 18O2 PFHxS



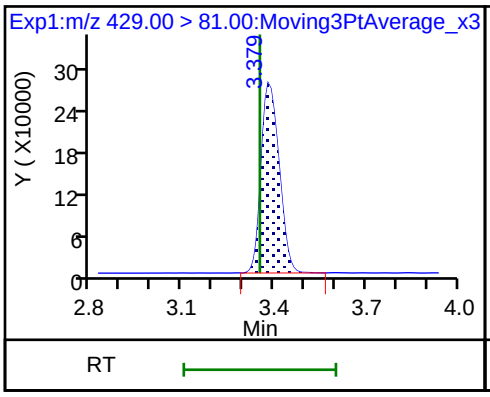

19 DONA



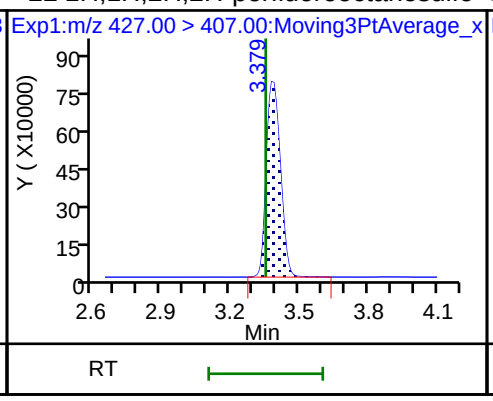

19 DONA



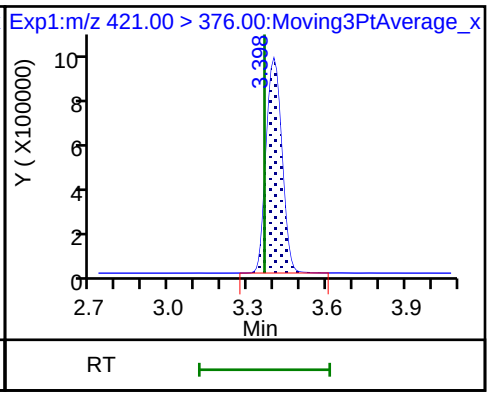
D 20 M2-6:2 FTS



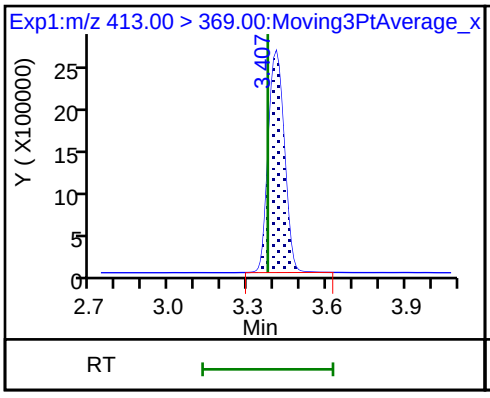

22 1H,1H,2H,2H-perfluorooctanesulfo



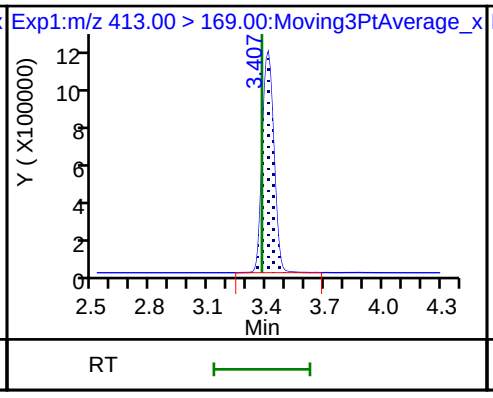

$ 21 13C8 PFOA



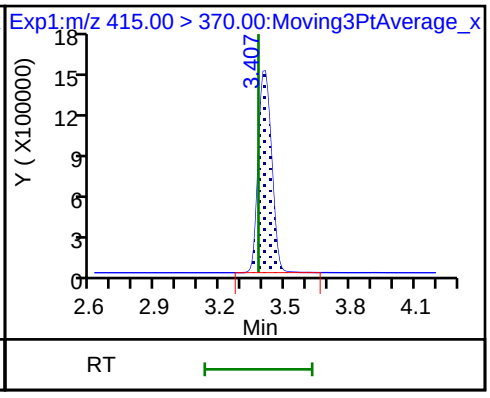

24 Perfluorooctanoic acid



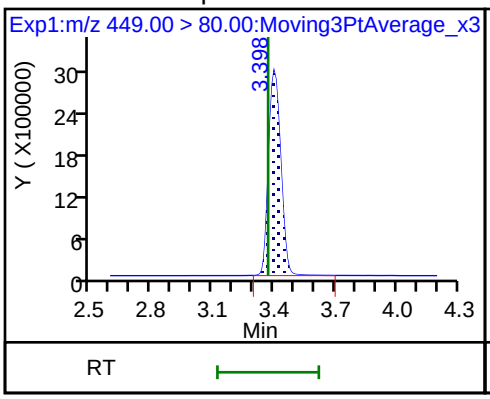

24 Perfluorooctanoic acid



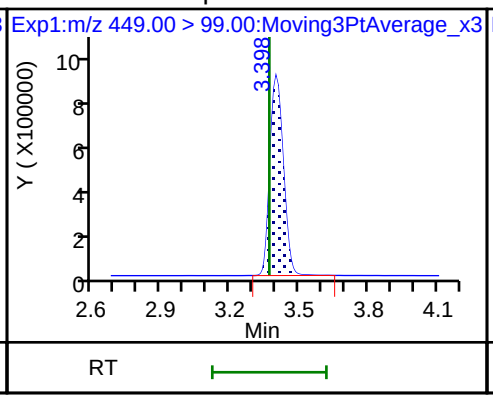

* 25 13C2 PFOA



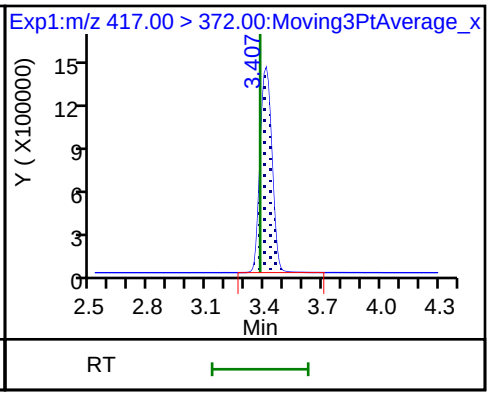

23 Perfluoroheptanesulfonic acid



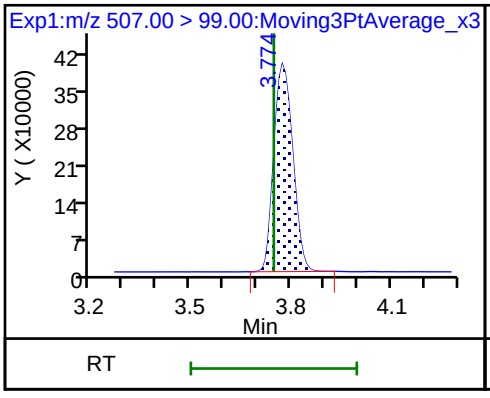

23 Perfluoroheptanesulfonic acid



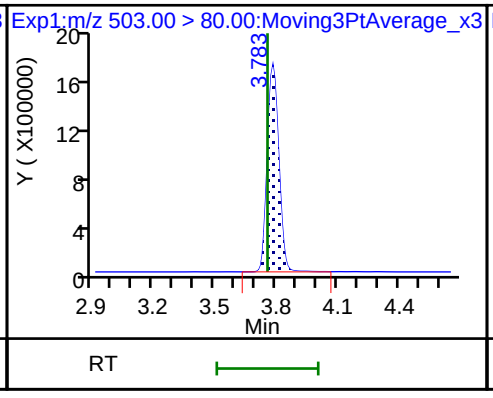

D 26 13C4 PFOA



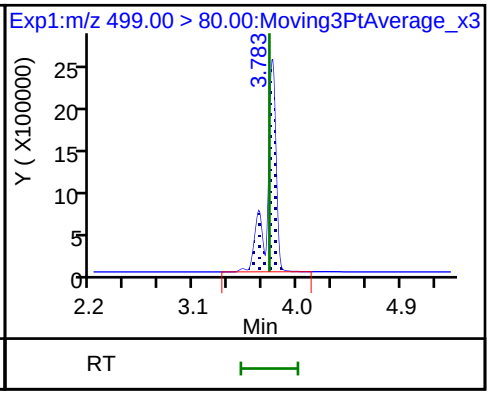

$ 27 13C8 PFOS



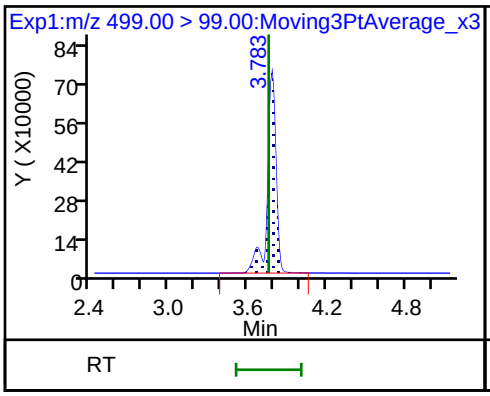

D 31 13C4 PFOS



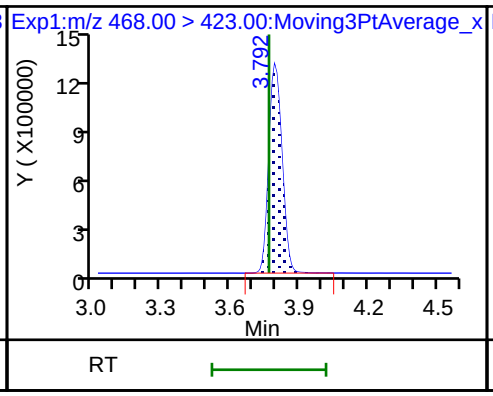

28 Perfluorooctanesulfonic acid



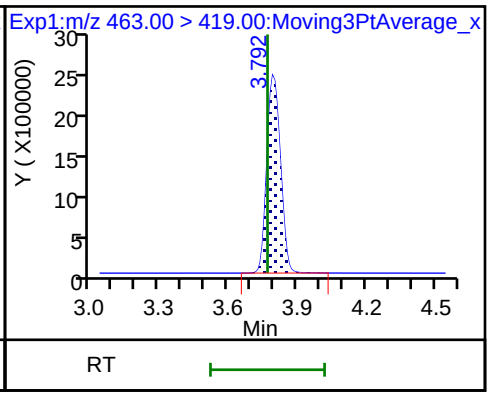
28 Perfluorooctanesulfonic acid



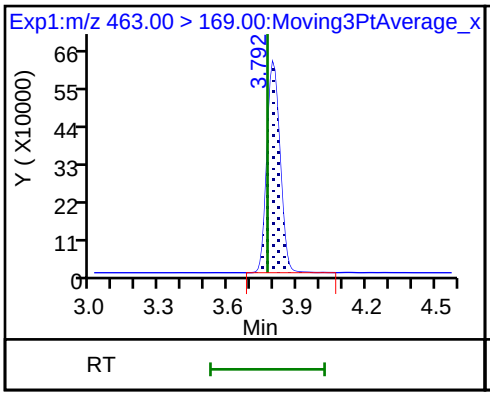

D 29 13C5 PFNA



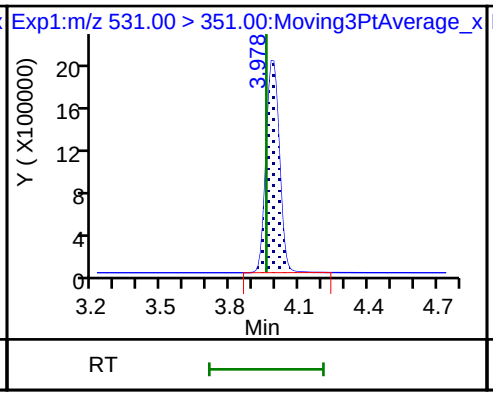

30 Perfluorononanoic acid



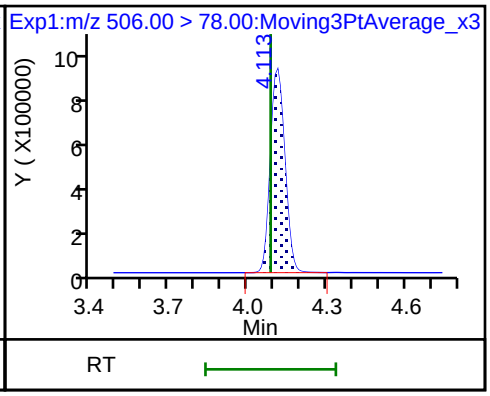

30 Perfluorononanoic acid



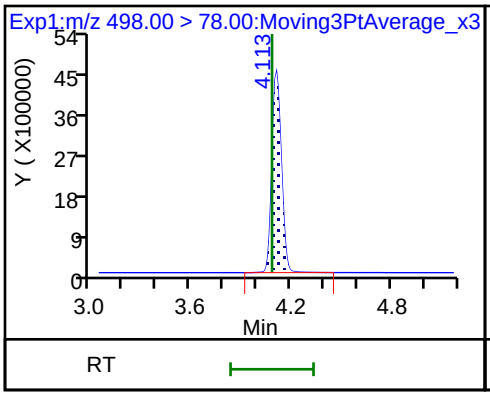

32 9-Chlorohexadecafluoro-3-oxanona



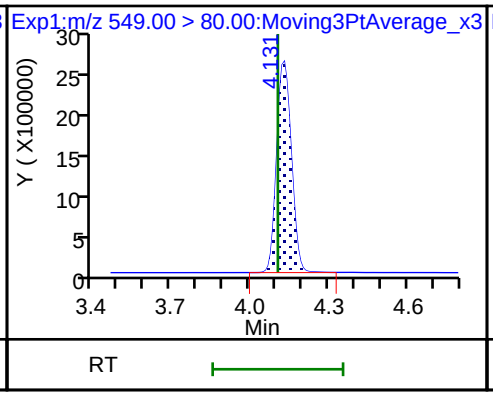

D 36 13C8 FOSA



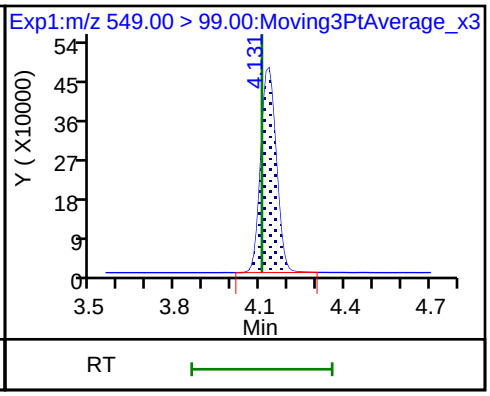

34 Perfluorooctanesulfonamide



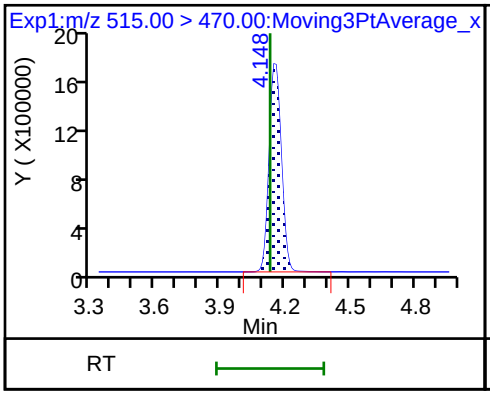

35 Perfluorononanesulfonic acid



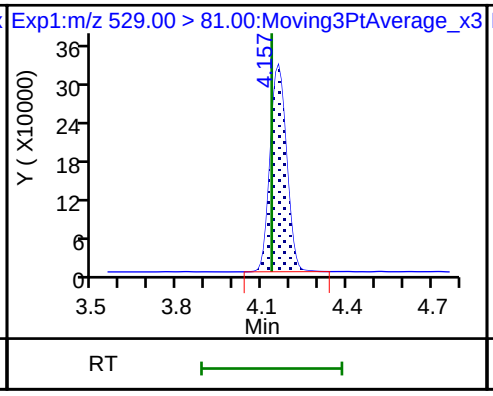

35 Perfluorononanesulfonic acid



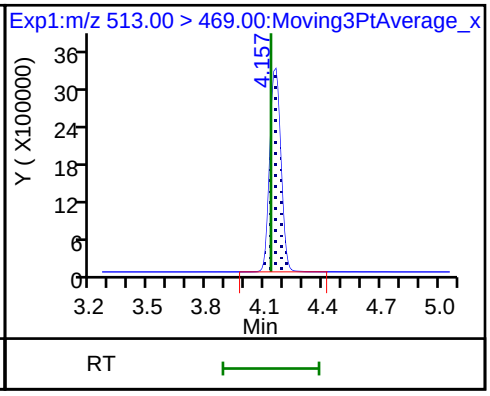

D 33 13C2 PFDA



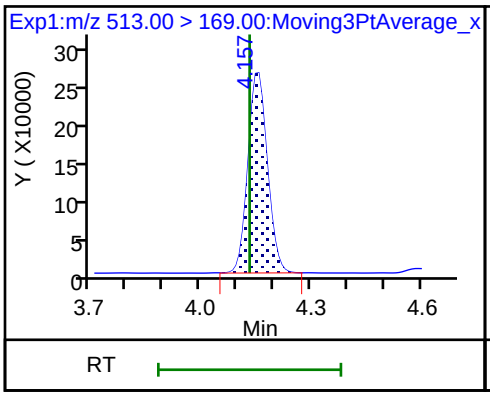

D 37 M2-8:2 FTS



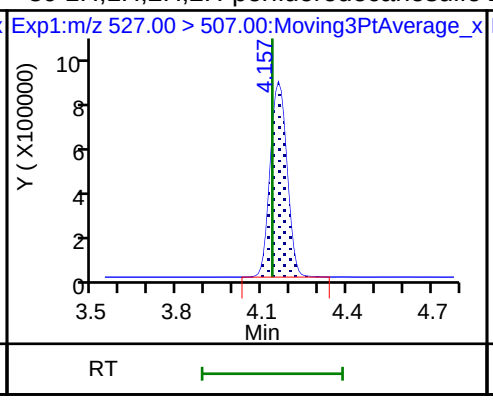

38 Perfluorodecanoic acid



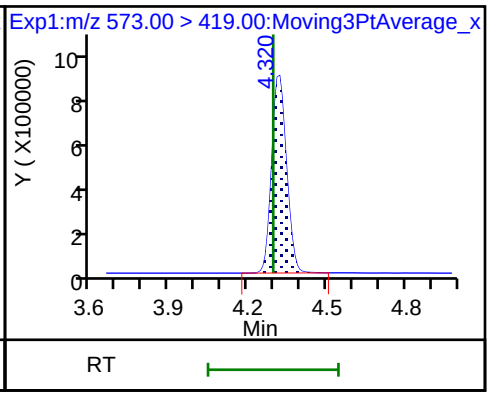
38 Perfluorodecanoic acid



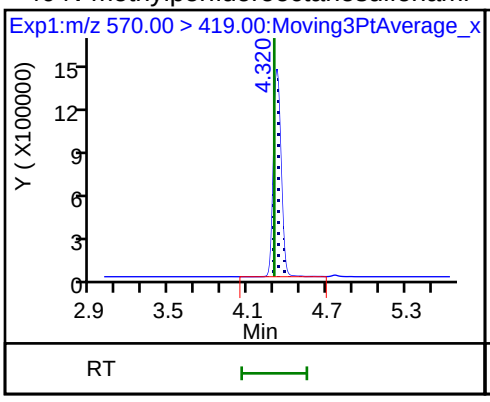

39 1H,1H,2H,2H-perfluorodecanesulfo



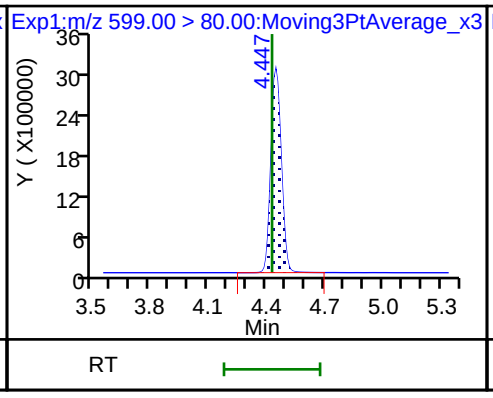

D 41 d3-NMeFOSAA



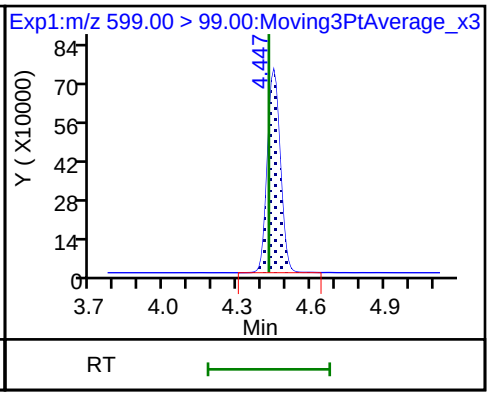

40 N-methylperfluorooctanesulfonami



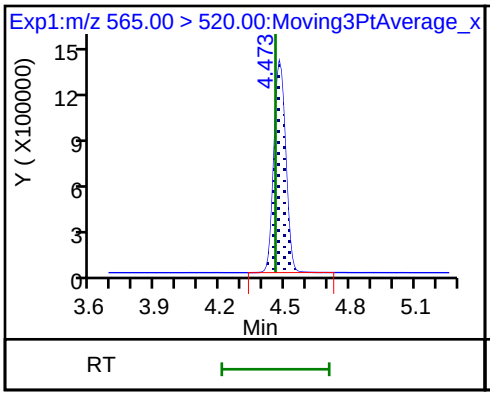

42 Perfluorodecanesulfonic acid



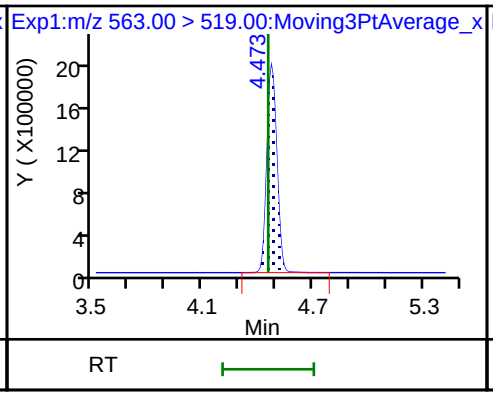

42 Perfluorodecanesulfonic acid



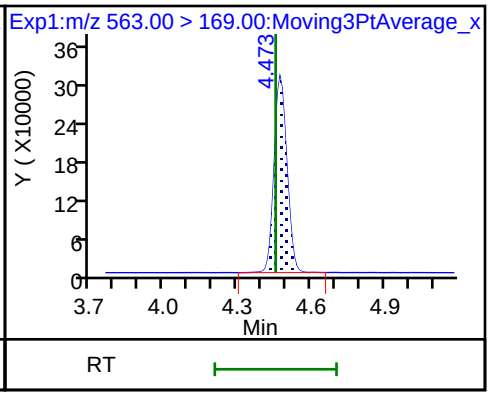

D 46 13C2 PFUnA



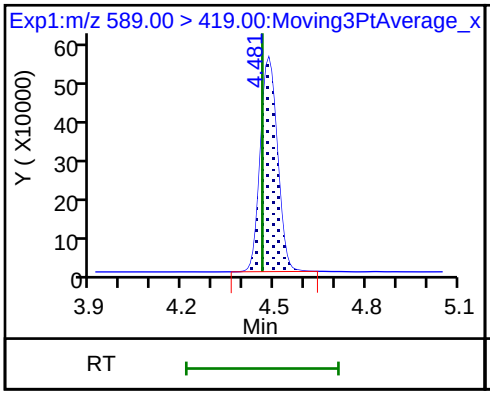

43 Perfluoroundecanoic acid



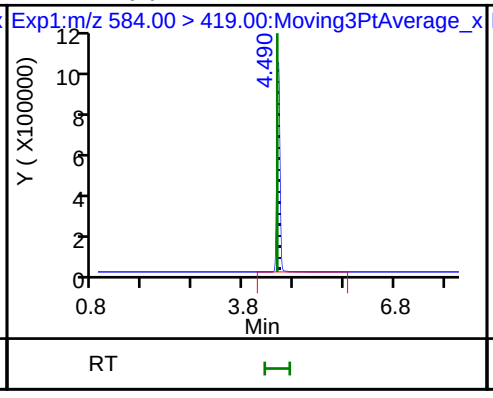

43 Perfluoroundecanoic acid



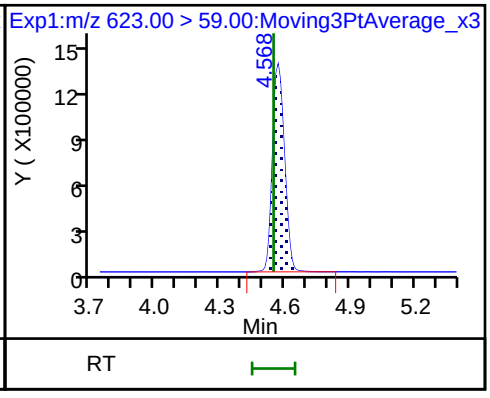

D 45 d5-NEtFOSAA



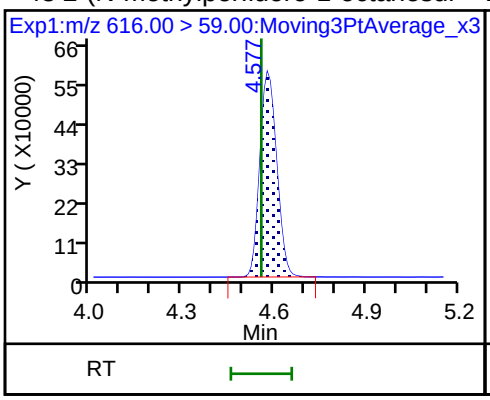

44 N-ethylperfluorooctanesulfonamid



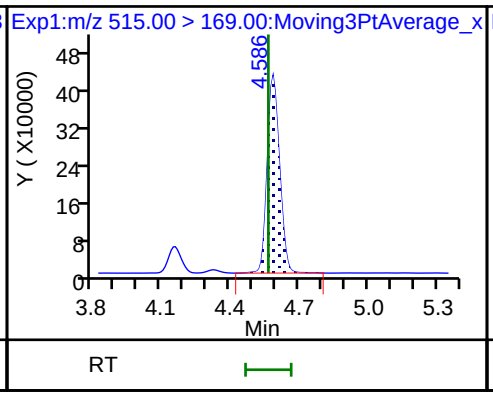

D 47 d7-N-MeFOSE-M



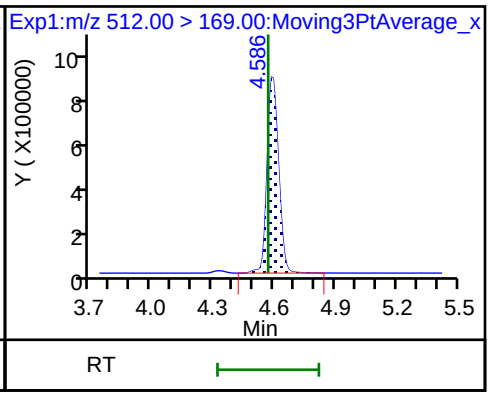
48 2-(N-methylperfluoro-1-octanesul



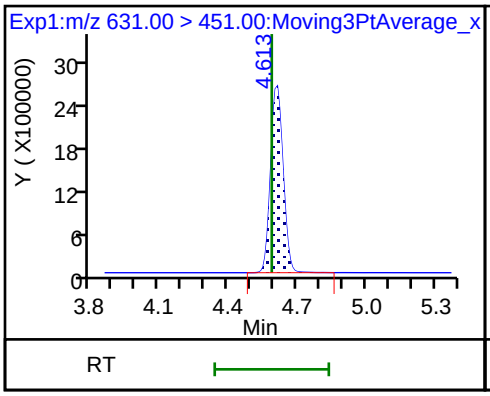

D 49 d-N-MeFOSA-M



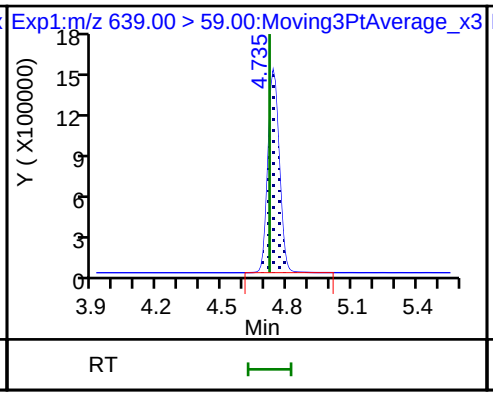

50 NMeFOSA



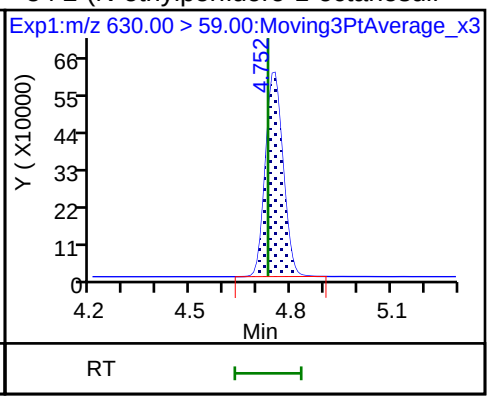

51 11-Chloroeicosafluoro-3-oxaundec



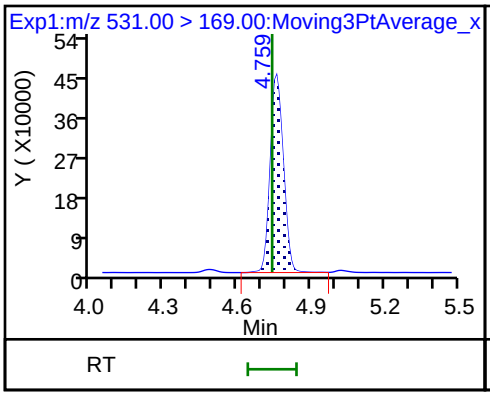

D 53 d9-N-EtFOSE-M



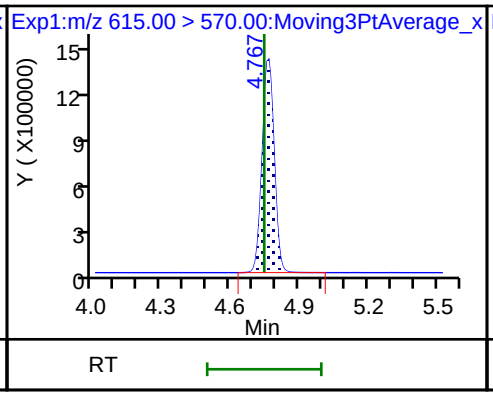

54 2-(N-ethylperfluoro-1-octanesulf



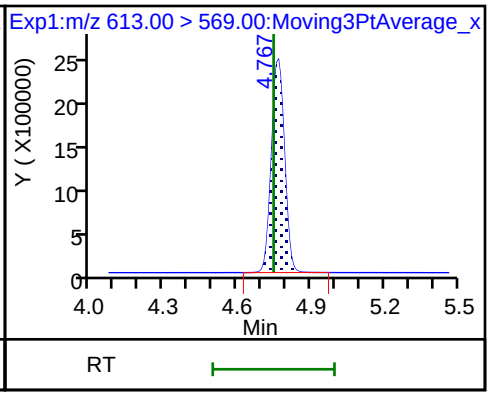

D 58 d-N-EtFOSA-M



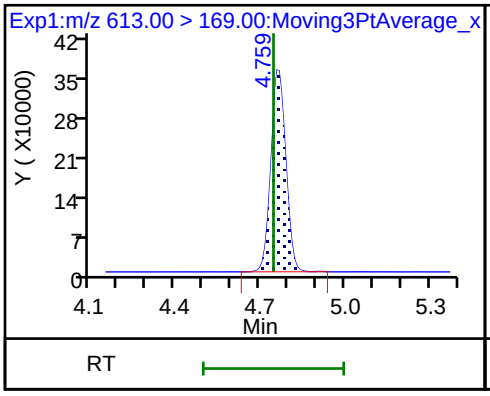

D 56 13C2 PFDoA



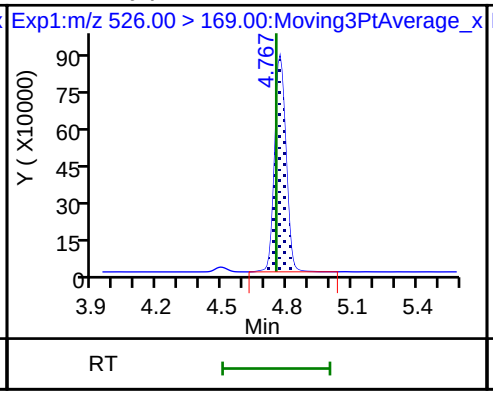

52 Perfluorododecanoic acid



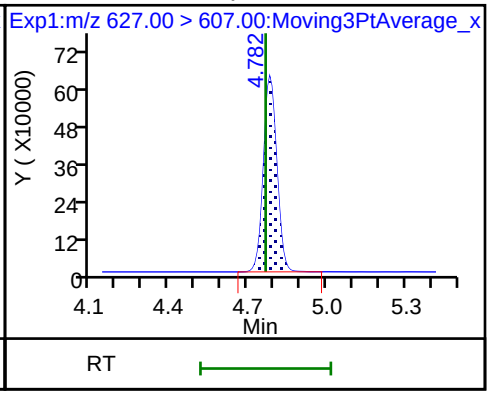

52 Perfluorododecanoic acid



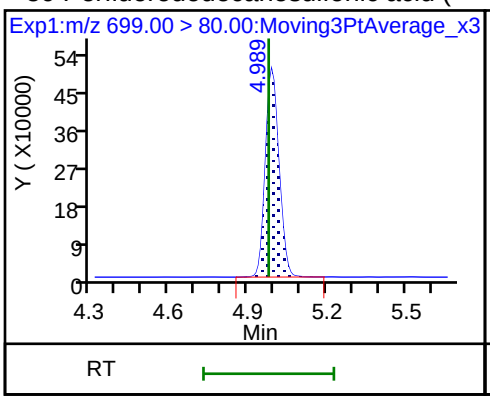

57 N-ethylperfluoro-1-octanesulfona



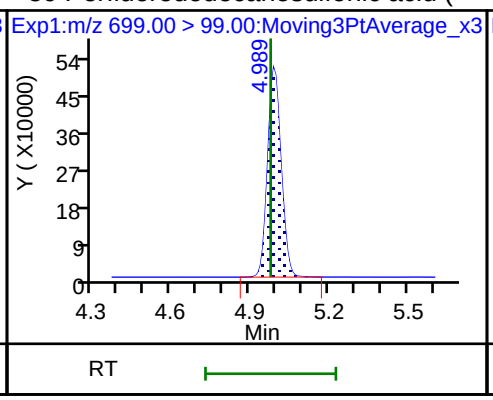

55 1H,1H,2H,2H-perfluorododecanesul



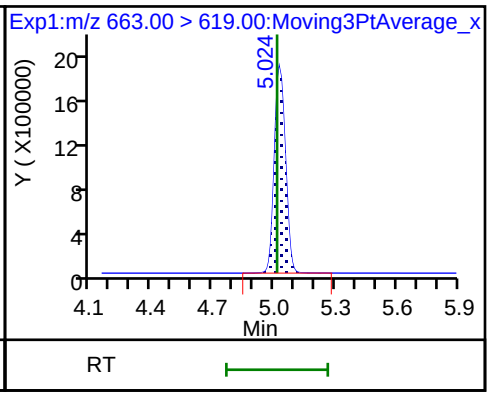
59 Perfluorododecanesulfonic acid (



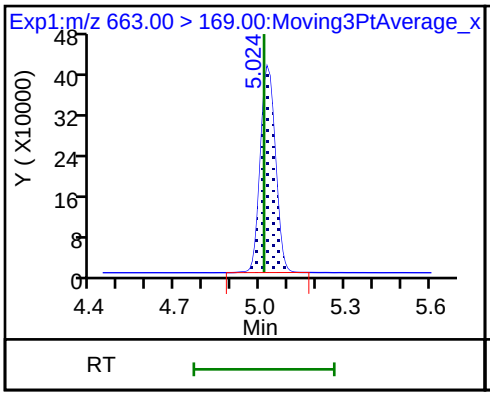

59 Perfluorododecanesulfonic acid (



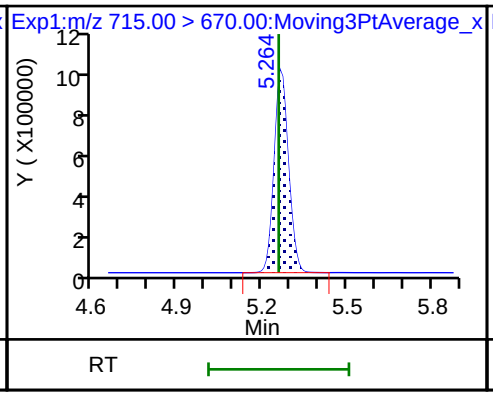

60 Perfluorotridecanoic acid



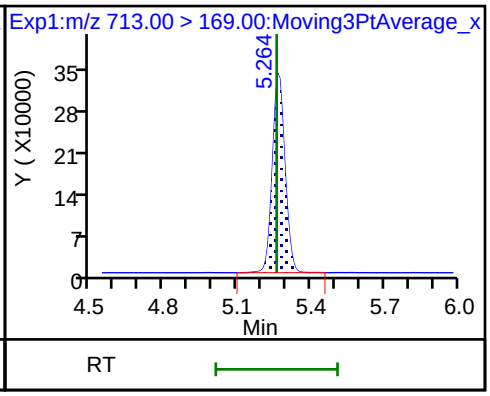

60 Perfluorotridecanoic acid



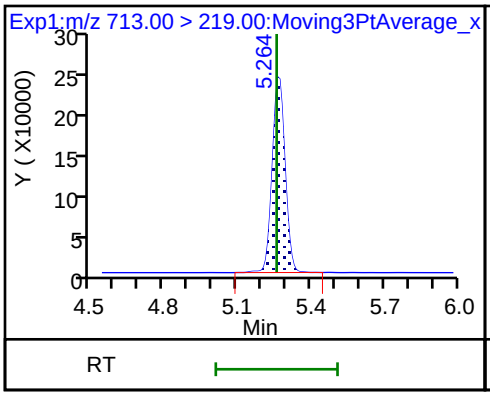

D 62 13C2 PFTeDA



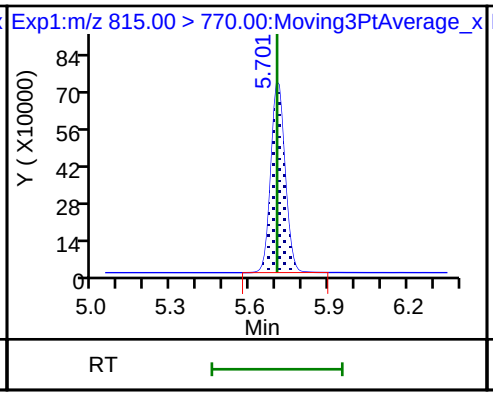

61 Perfluorotetradecanoic acid



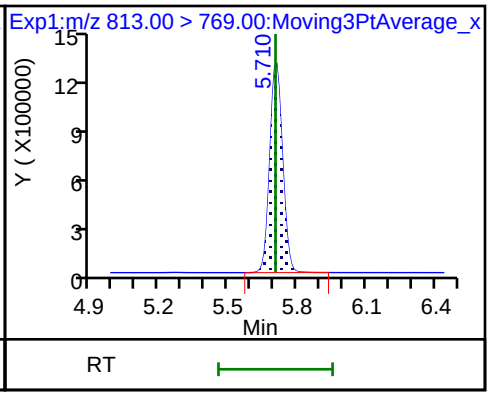

61 Perfluorotetradecanoic acid



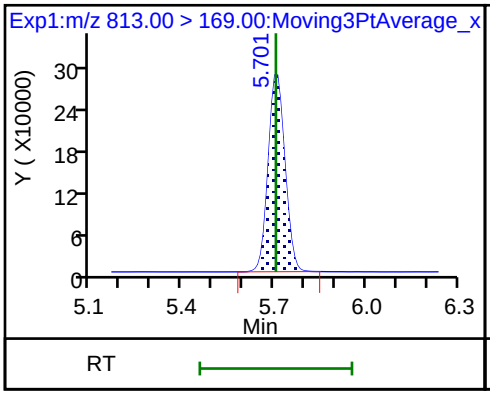

D 63 13C2 PFHxDA



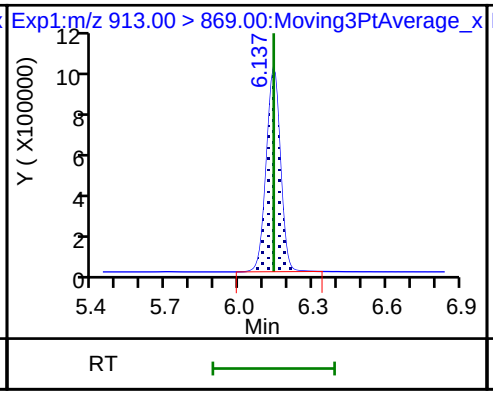

64 Perfluorohexadecanoic acid



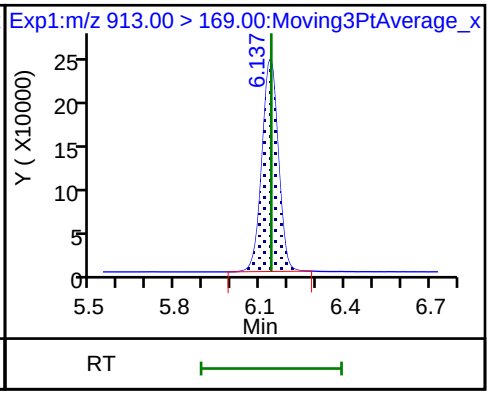

64 Perfluorohexadecanoic acid




65 Perfluorooctadecanoic acid




65 Perfluorooctadecanoic acid



Eurofins TestAmerica, Sacramento

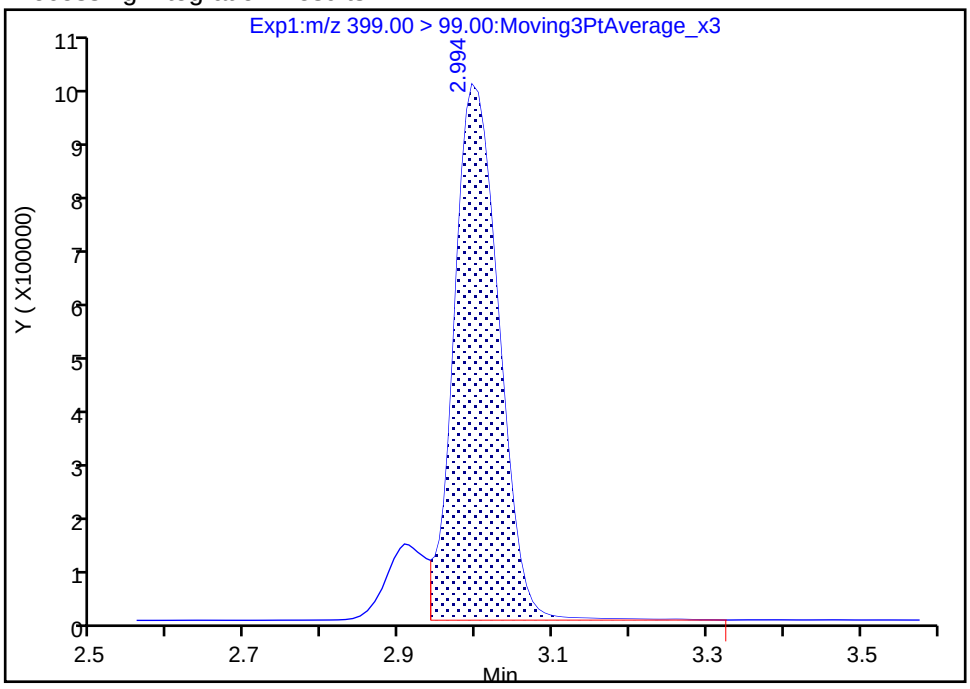
| | | | | | |
|---|---|---|---|---|---|
| Data File: | \\chromfs\Sacramento\ChromData\A9\20200910-102999.b\2020.09.10_A9 _PFC_ICAL_A_021.d | | | | |
| Injection Date: | 10-Sep-2020 11:05:17 | Instrument ID: | A9 | | |
| Lims ID: | IC L6 | | | | |
| Client ID: | | | | | |
| Operator ID: | SACINSTRLCMS02 | ALS Bottle#: | 15 | Worklist Smp#: | 7 |
| Injection Vol: | 20.0 ul | Dil. Factor: | 1.0000 | | |
| Method: | PFAS_A9 | Limit Group: | LC PFC ICAL | | |
| Column: | | Detector | EXP1 | | |

## 16 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 2

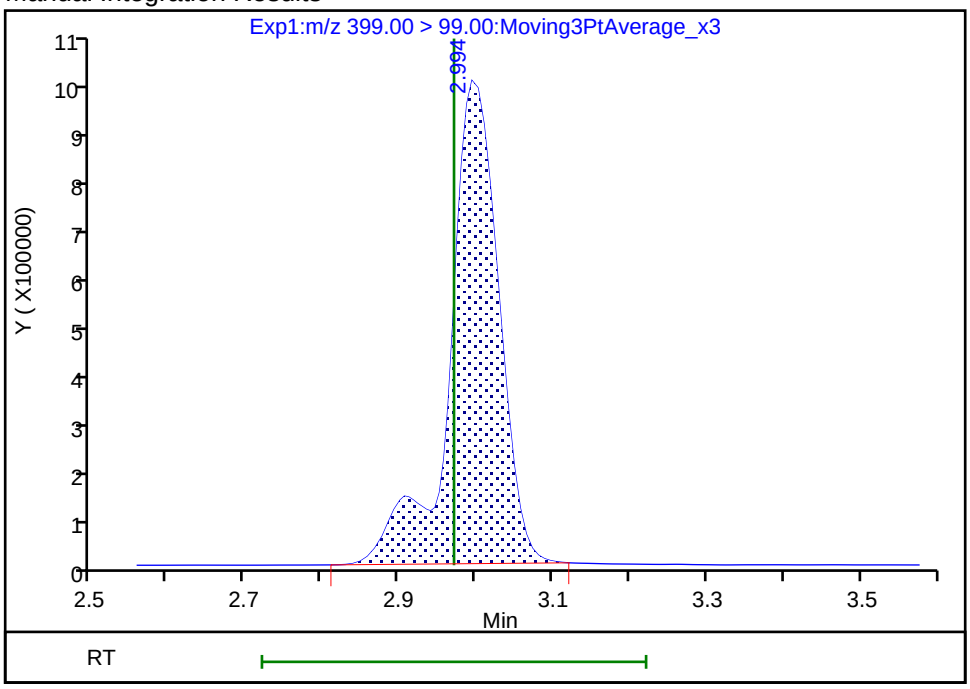
Processing Integration Results

RT: 2.99
Area: 3739336
Amount: 4.406403
Amount Units: ng/ml




Manual Integration Results

RT: 2.99
Area: 4142358
Amount: 4.392474
Amount Units: ng/ml




Reviewer: zibaa, 10-Sep-2020 11:32:24
Audit Action: Manually Integrated Audit Reason: Isomers

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\A9\20200910-102999.b\2020.09.10_A9 _PFC_ICAL_AA_022.d
Lims ID: IC L7
Client ID:
Sample Type: IC Calib Level: 7
Inject. Date: 10-Sep-2020 12:29:20 ALS Bottle#: 16 Worklist Smp#: 13
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Sample Info: CAL STD7_24
Misc. Info.: Plate: 1 Rack: 1
Operator ID: SACINSTRLCMS02 Instrument ID: A9
Sublist: chrom-PFAS_A9*sub16

Method: \\chromfs\Sacramento\ChromData\A9\20200910-102999.b\PFAS_A9.m
Limit Group: LC PFC ICAL
Last Update: 10-Sep-2020 13:15:08 Calib Date: 10-Sep-2020 12:29:20
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\A9\20200910-102999.b\2020.09.10_A9 _PFC_ICAL_AA_022.d

Column 1 : Det: EXP1
Process Host: CTX1016

First Level Reviewer: zibaa Date: 10-Sep-2020 12:59:43
Ratio Calibration: Average of Initial Calibration

| Signal | RT | EXP RT | DLT RT | REL RT | Response | Amount ng/ml | Ratio(Limits) | %Rec | S/N | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| D 1 13C4 PFBA | | | | | | | | | | |
| 217.00 > 172.00 | 1.893 | 1.901 | -0.008 | 0.565 | 8336188 | 2.69 | | 108 | 3116 | |
| 2 Perfluorobutanoic acid | | | | | | | | | | |
| 212.90 > 169.00 | 1.893 | 1.904 | -0.011 | 1.000 | 26016733 | 8.93 | | 89.3 | 1726 | |
| D 4 13C5 PFPeA | | | | | | | | | | |
| 267.90 > 223.00 | 2.198 | 2.211 | -0.013 | 0.656 | 6887818 | 2.64 | | 106 | 2787 | |
| 3 Perfluoropentanoic acid | | | | | | | | | | |
| 262.90 > 219.00 | 2.198 | 2.211 | -0.013 | 1.000 | 23231288 | 8.29 | | 82.9 | 1836 | |
| D 6 13C3 PFBS | | | | | | | | | | |
| 301.90 > 80.00 | 2.233 | 2.241 | -0.008 | 0.666 | 12408129 | 2.41 | | 104 | 2732 | |
| 5 Perfluorobutanesulfonic acid | | | | | | | | | | |
| 298.90 > 80.00 | 2.233 | 2.244 | -0.011 | 1.000 | 39815345 | 7.48 | Target=3.10 | 84.6 | 2328 | |
| 298.90 > 99.00 | 2.233 | 2.244 | -0.011 | 1.000 | 14546931 | | 2.74(1.55-4.65) | 84.6 | 2555 | |
| D 8 M2-4:2 FTS | | | | | | | | | | |
| 329.00 > 81.00 | 2.515 | 2.533 | -0.018 | 0.750 | 1173922 | 2.29 | | 98.2 | 893 | |
| 9 1H,1H,2H,2H-perfluorohexanesulfo | | | | | | | | | | |
| 327.00 > 307.00 | 2.526 | 2.535 | -0.009 | 1.004 | 8926658 | 8.98 | | 96.1 | 13126 | |
| D 10 13C2 PFHxA | | | | | | | | | | |
| 315.00 > 270.00 | 2.558 | 2.573 | -0.015 | 0.763 | 6374110 | 2.63 | | 105 | 3439 | |
| 11 Perfluorohexanoic acid | | | | | | | | | | |
| 313.00 > 269.00 | 2.558 | 2.573 | -0.015 | 1.000 | 19328145 | 9.09 | Target=9.68 | 90.9 | 2343 | |
| 313.00 > 119.00 | 2.558 | 2.573 | -0.015 | 1.000 | 2115130 | | 9.14(4.84-14.52) | 90.9 | 1293 | |
| 12 Perfluoropentanesulfonic acid | | | | | | | | | | |
| 349.00 > 80.00 | 2.579 | 2.587 | -0.008 | 1.155 | 19185228 | 8.95 | Target=2.01 | 95.4 | 2631 | |
| 349.00 > 99.00 | 2.579 | 2.587 | -0.008 | 1.155 | 10228189 | | 1.88(1.00-3.01) | 95.4 | 2561 | |
| D 13 13C3 HFPO-DA | | | | | | | | | | |
| 287.00 > 169.00 | 2.674 | 2.692 | -0.018 | 0.797 | 4444390 | 2.67 | | 107 | 3977 | |

| Signal | RT | EXP RT | DLT RT | REL RT | Response | Amount ng/ml | Ratio(Limits) | %Rec | S/N | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| 14 Perfluoro(2-propoxypropanoic) ac | | | | | | | | | | |
| 285.00 > 169.00 | 2.674 | 2.691 | -0.017 | 1.000 | 6818485 | 9.69 | | 96.9 | 4008 | |
| D 17 18O2 PFHxS | | | | | | | | | | |
| 403.00 > 84.00 | 2.957 | 2.969 | -0.012 | 0.882 | 5857043 | 2.38 | | 100 | 2833 | |
| D 15 13C4 PFHpA | | | | | | | | | | |
| 367.00 > 322.00 | 2.952 | 2.965 | -0.013 | 0.880 | 6021243 | 2.55 | | 102 | 3416 | |
| 16 Perfluorohexanesulfonic acid | | | | | | | | | | M |
| 399.00 > 80.00 | 2.957 | 2.971 | -0.014 | 1.000 | 24439953 | 8.37 | Target=3.29 | 91.9 | 1158 | |
| 399.00 > 99.00 | 2.957 | 2.971 | -0.014 | 1.000 | 7961571 | | 3.07(1.65-4.94) | 91.9 | 1400 | M |
| 18 Perfluoroheptanoic acid | | | | | | | | | | |
| 363.00 > 319.00 | 2.952 | 2.966 | -0.014 | 1.000 | 22824600 | 8.54 | Target=3.74 | 85.4 | 2513 | |
| 363.00 > 169.00 | 2.952 | 2.966 | -0.014 | 1.000 | 7089932 | | 3.22(1.87-5.61) | 85.4 | 3062 | |
| 19 DONA | | | | | | | | | | |
| 377.00 > 251.00 | 3.002 | 3.017 | -0.015 | 0.803 | 37803976 | 7.64 | Target=1.80 | 81.1 | 11288 | |
| 377.00 > 85.00 | 3.002 | 3.017 | -0.015 | 0.803 | 23538154 | | 1.61(0.90-2.70) | 81.1 | 7390 | |
| D 20 M2-6:2 FTS | | | | | | | | | | |
| 429.00 > 81.00 | 3.331 | 3.352 | -0.021 | 0.993 | 994866 | 2.25 | | 94.9 | 1032 | |
| 22 1H,1H,2H,2H-perfluorooctanesulfo | | | | | | | | | | |
| 427.00 > 407.00 | 3.331 | 3.353 | -0.022 | 1.000 | 5847420 | 9.05 | | 95.5 | 4163 | |
| $ 21 13C8 PFOA | | | | | | | | | | |
| 421.00 > 376.00 | 3.346 | 3.362 | -0.016 | 0.998 | 5218033 | 2.81 | | 115 | 6850 | |
| 23 Perfluoroheptanesulfonic acid | | | | | | | | | | |
| 449.00 > 80.00 | 3.353 | 3.369 | -0.016 | 0.897 | 21612393 | 8.57 | Target=3.65 | 90.0 | 2276 | |
| 449.00 > 99.00 | 3.353 | 3.369 | -0.016 | 0.897 | 6598072 | | 3.28(1.83-5.48) | 90.0 | 2456 | |
| D 26 13C4 PFOA | | | | | | | | | | |
| 417.00 > 372.00 | 3.353 | 3.376 | -0.023 | 1.000 | 5685447 | 2.57 | | 103 | 5572 | |
| 24 Perfluorooctanoic acid | | | | | | | | | | |
| 413.00 > 369.00 | 3.353 | 3.375 | -0.022 | 1.000 | 20197112 | 8.23 | Target=2.37 | 82.3 | 3017 | |
| 413.00 > 169.00 | 3.361 | 3.375 | -0.014 | 1.002 | 9354471 | | 2.16(1.19-3.56) | 82.3 | 4811 | |
| * 25 13C2 PFOA | | | | | | | | | | |
| 415.00 > 370.00 | 3.353 | 3.376 | -0.023 | | 5730185 | 2.50 | | | 3043 | |
| $ 27 13C8 PFOS | | | | | | | | | | |
| 507.00 > 99.00 | 3.729 | 3.748 | -0.019 | 1.112 | 1440919 | 2.47 | | 103 | 2434 | |
| D 31 13C4 PFOS | | | | | | | | | | |
| 503.00 > 80.00 | 3.737 | 3.756 | -0.019 | 1.114 | 6518762 | 2.53 | | 106 | 1700 | |
| 28 Perfluorooctanesulfonic acid | | | | | | | | | | |
| 499.00 > 80.00 | 3.737 | 3.756 | -0.019 | 1.000 | 24594195 | 8.67 | Target=4.12 | 93.5 | 1103 | |
| 499.00 > 99.00 | 3.737 | 3.756 | -0.019 | 1.000 | 6341156 | | 3.88(2.06-6.17) | 93.5 | 2692 | |
| D 29 13C5 PFNA | | | | | | | | | | |
| 468.00 > 423.00 | 3.746 | 3.767 | -0.021 | 1.117 | 4878315 | 2.54 | | 102 | 7512 | |
| 30 Perfluorononanoic acid | | | | | | | | | | |
| 463.00 > 419.00 | 3.746 | 3.770 | -0.024 | 1.000 | 18028540 | 9.28 | Target=4.21 | 92.8 | 6282 | |
| 463.00 > 169.00 | 3.746 | 3.770 | -0.024 | 1.000 | 4663544 | | 3.87(2.11-6.32) | 92.8 | 2718 | |
| 32 9-Chlorohexadecafluoro-3-oxanona | | | | | | | | | | |
| 531.00 > 351.00 | 3.939 | 3.956 | -0.017 | 1.054 | 15237600 | 8.90 | | 95.5 | 6490 | |
| D 36 13C8 FOSA | | | | | | | | | | |
| 506.00 > 78.00 | 4.079 | 4.086 | -0.008 | 1.216 | 2993418 | 2.47 | | 98.9 | 3317 | |

| Signal | RT | EXP RT | DLT RT | REL RT | Response | Amount ng/ml | Ratio(Limits) | %Rec | S/N | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| 34 Perfluorooctanesulfonamide | | | | | | | | | | |
| 498.00 > 78.00 | 4.079 | 4.086 | -0.008 | 1.000 | 29831465 | 8.96 | | 89.6 | 4148 | |
| 35 Perfluorononanesulfonic acid | | | | | | | | | | |
| 549.00 > 80.00 | 4.087 | 4.106 | -0.019 | 1.094 | 17298133 | 8.36 | Target=5.56 | 87.0 | 3704 | |
| 549.00 > 99.00 | 4.079 | 4.106 | -0.028 | 1.091 | 3360285 | | 5.15(2.78-8.34) | 87.0 | 5755 | |
| D 33 13C2 PFDA | | | | | | | | | | |
| 515.00 > 470.00 | 4.114 | 4.130 | -0.016 | 1.227 | 6061061 | 2.49 | | 99.5 | 6236 | |
| D 37 M2-8:2 FTS | | | | | | | | | | |
| 529.00 > 81.00 | 4.114 | 4.133 | -0.019 | 1.227 | 1170256 | 2.17 | | 90.4 | 909 | |
| 38 Perfluorodecanoic acid | | | | | | | | | | |
| 513.00 > 469.00 | 4.114 | 4.132 | -0.018 | 1.000 | 20379921 | 8.42 | Target=14.33 | 84.2 | 6366 | |
| 513.00 > 169.00 | 4.114 | 4.132 | -0.018 | 1.000 | 1708537 | | 11.93(7.16-21.49) | 84.2 | 368 | |
| 39 1H,1H,2H,2H-perfluorodecanesulfo | | | | | | | | | | |
| 527.00 > 507.00 | 4.114 | 4.135 | -0.021 | 1.000 | 5940630 | 9.44 | | 98.5 | 6344 | |
| D 41 d3-NMeFOSAA | | | | | | | | | | |
| 573.00 > 419.00 | 4.276 | 4.295 | -0.019 | 1.275 | 3259183 | 2.69 | | 108 | 2287 | |
| 40 N-methylperfluorooctanesulfonami | | | | | | | | | | |
| 570.00 > 419.00 | 4.276 | 4.299 | -0.023 | 1.000 | 10844354 | 11.0 | | 110 | 145724 | |
| 42 Perfluorodecanesulfonic acid | | | | | | | | | | |
| 599.00 > 80.00 | 4.405 | 4.427 | -0.022 | 1.179 | 20976727 | 9.06 | Target=4.29 | 93.9 | 4541 | |
| 599.00 > 99.00 | 4.405 | 4.427 | -0.022 | 1.179 | 5356240 | | 3.92(2.15-6.44) | 93.9 | 5852 | |
| D 46 13C2 PFUnA | | | | | | | | | | |
| 565.00 > 520.00 | 4.431 | 4.455 | -0.024 | 1.321 | 4768918 | 2.54 | | 102 | 7479 | |
| 43 Perfluoroundecanoic acid | | | | | | | | | | |
| 563.00 > 519.00 | 4.431 | 4.455 | -0.024 | 1.000 | 13097707 | 9.86 | Target=6.74 | 98.6 | 6818 | |
| 563.00 > 169.00 | 4.431 | 4.455 | -0.024 | 1.000 | 2089251 | | 6.27(3.37-10.11) | 98.6 | 3975 | |
| D 45 d5-NEtFOSAA | | | | | | | | | | |
| 589.00 > 419.00 | 4.440 | 4.460 | -0.020 | 1.324 | 2007740 | 2.47 | | 98.9 | 1745 | |
| 44 N-ethylperfluorooctanesulfonamid | | | | | | | | | | |
| 584.00 > 419.00 | 4.448 | 4.467 | -0.019 | 1.002 | 6927848 | 10.6 | | 106 | 102265 | |
| D 47 d7-N-MeFOSE-M | | | | | | | | | | |
| 623.00 > 59.00 | 4.542 | 4.546 | -0.004 | 1.355 | 5127070 | 13.2 | | 105 | 4920 | |
| 48 2-(N-methylperfluoro-1-octanesul | | | | | | | | | | |
| 616.00 > 59.00 | 4.551 | 4.557 | -0.006 | 1.002 | 4229635 | 9.88 | | 98.8 | 5010 | |
| D 49 d-N-MeFOSA-M | | | | | | | | | | |
| 515.00 > 169.00 | 4.560 | 4.565 | -0.005 | 1.360 | 1520689 | 2.79 | | 112 | 246 | |
| 50 NMeFOSA | | | | | | | | | | |
| 512.00 > 169.00 | 4.560 | 4.569 | -0.009 | 1.000 | 6260597 | 9.87 | | 98.7 | 2416 | |
| 51 11-Chloroeicosafluoro-3-oxaundec | | | | | | | | | | |
| 631.00 > 451.00 | 4.569 | 4.588 | -0.019 | 1.223 | 18995447 | 9.41 | | 99.9 | 6121 | |
| D 53 d9-N-EtFOSE-M | | | | | | | | | | |
| 639.00 > 59.00 | 4.709 | 4.718 | -0.009 | 1.404 | 5550151 | 13.6 | | 109 | 5083 | |
| 54 2-(N-ethylperfluoro-1-octanesulf | | | | | | | | | | |
| 630.00 > 59.00 | 4.728 | 4.731 | -0.003 | 1.004 | 4643129 | 10.5 | | 105 | 6088 | |
| D 58 d-N-EtFOSA-M | | | | | | | | | | |
| 531.00 > 169.00 | 4.737 | 4.741 | -0.004 | 1.412 | 1558608 | 2.75 | | 110 | 806 | |

| Signal | RT | EXP RT | DLT RT | REL RT | Response | Amount ng/ml | Ratio(Limits) | %Rec | S/N | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| D 56 13C2 PFDoA | | | | | | | | | | |
| 615.00 > 570.00 | 4.728 | 4.747 | -0.019 | 1.410 | 4772733 | 2.59 | | 103 | 6688 | |
| 52 Perfluorododecanoic acid | | | | | | | | | | |
| 613.00 > 569.00 | 4.728 | 4.747 | -0.019 | 1.000 | 15400710 | 8.77 | Target=6.67 | 87.7 | 8034 | |
| 613.00 > 169.00 | 4.728 | 4.747 | -0.019 | 1.000 | 2446749 | | 6.29(3.34-10.01) | 87.7 | 5172 | |
| 57 N-ethylperfluoro-1-octanesulfona | | | | | | | | | | |
| 526.00 > 169.00 | 4.746 | 4.749 | -0.003 | 1.002 | 6060955 | 9.77 | | 97.7 | 1028 | |
| 55 1H,1H,2H,2H-perfluorododecanesul | | | | | | | | | | |
| 627.00 > 607.00 | 4.746 | 4.766 | -0.020 | 1.154 | 4185075 | 10.4 | | 108 | 13879 | |
| 59 Perfluorododecanesulfonic acid ( | | | | | | | | | | |
| 699.00 > 80.00 | 4.957 | 4.978 | -0.021 | 1.327 | 3559961 | 10.3 | Target=1.02 | 106 | 4630 | |
| 699.00 > 99.00 | 4.949 | 4.978 | -0.029 | 1.324 | 3559978 | | 1.00(0.51-1.53) | 106 | 8455 | |
| 60 Perfluorotridecanoic acid | | | | | | | | | | |
| 663.00 > 619.00 | 4.990 | 5.013 | -0.023 | 1.056 | 12266037 | 8.84 | Target=4.80 | 88.4 | 10868 | |
| 663.00 > 169.00 | 4.990 | 5.013 | -0.023 | 1.056 | 2630849 | | 4.66(2.40-7.20) | 88.4 | 4340 | |
| D 62 13C2 PFTeDA | | | | | | | | | | |
| 715.00 > 670.00 | 5.232 | 5.258 | -0.026 | 1.560 | 3490257 | 2.71 | | 108 | 5806 | |
| 61 Perfluorotetradecanoic acid | | | | | | | | | | |
| 713.00 > 169.00 | 5.232 | 5.259 | -0.027 | 1.000 | 2245611 | 9.12 | Target=1.37 | 91.2 | 5503 | |
| 713.00 > 219.00 | 5.232 | 5.259 | -0.027 | 1.000 | 1683803 | | 1.33(0.69-2.06) | 91.2 | 4672 | |
| D 63 13C2 PFHxDA | | | | | | | | | | |
| 815.00 > 770.00 | 5.668 | 5.703 | -0.035 | 1.690 | 2579666 | 2.71 | | 108 | 6298 | |
| 64 Perfluorohexadecanoic acid | | | | | | | | | | |
| 813.00 > 769.00 | 5.668 | 5.705 | -0.037 | 1.000 | 8969968 | 9.48 | Target=4.63 | 94.8 | 5955 | |
| 813.00 > 169.00 | 5.668 | 5.705 | -0.037 | 1.000 | 2010908 | | 4.46(2.32-6.95) | 94.8 | 6266 | |
| 65 Perfluorooctadecanoic acid | | | | | | | | | | |
| 913.00 > 869.00 | 6.092 | 6.139 | -0.047 | 1.075 | 7120596 | 9.23 | Target=4.01 | 92.3 | 2909 | |
| 913.00 > 169.00 | 6.092 | 6.139 | -0.047 | 1.075 | 1745340 | | 4.08(2.01-6.02) | 92.3 | 2295 | |

## QC Flag Legend

Review Flags

M - Manually Integrated

## Reagents:

LCPFC_LL7_00024 Amount Added: 1.00 Units: mL

Report Date: 10-Sep-2020 13:15:12 Chrom Revision: 2.3 09-Sep-2020 15:12:58

Eurofins TestAmerica, Sacramento

Data File: \\chromfs\Sacramento\ChromData\A9\20200910-102999.b\2020.09.10_A9 _PFC_ICAL_AA_022.d

Injection Date: 10-Sep-2020 12:29:20 Instrument ID: A9

Lims ID: IC L7

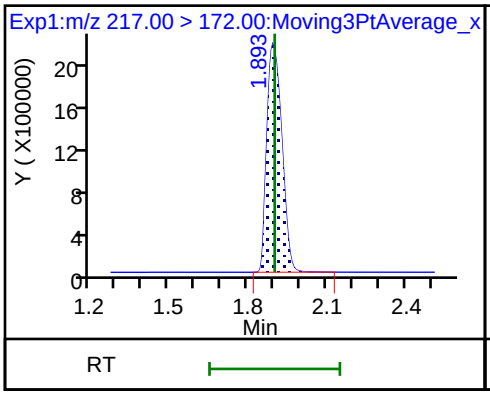
Client ID:

Operator ID: SACINSTRLCMS02 ALS Bottle#: 16 Worklist Smp#: 13

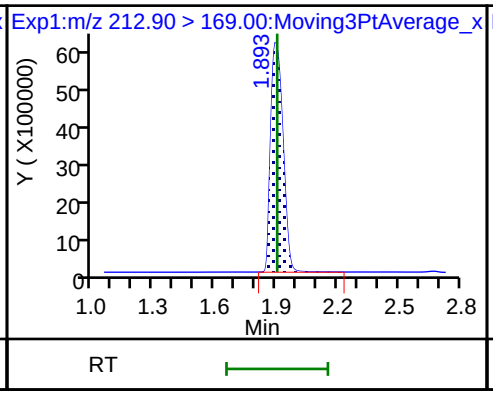
Injection Vol: 20.0 ul Dil. Factor: 1.0000

Method: PFAS_A9 Limit Group: LC PFC ICAL

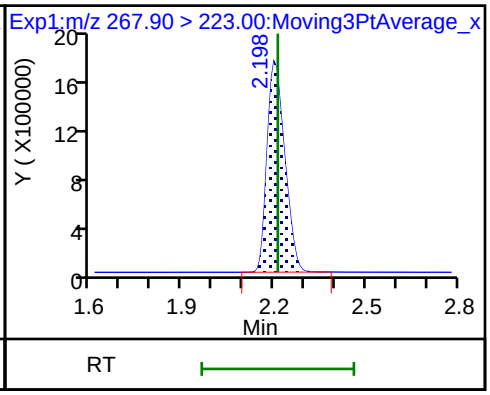
D 1 13C4 PFBA



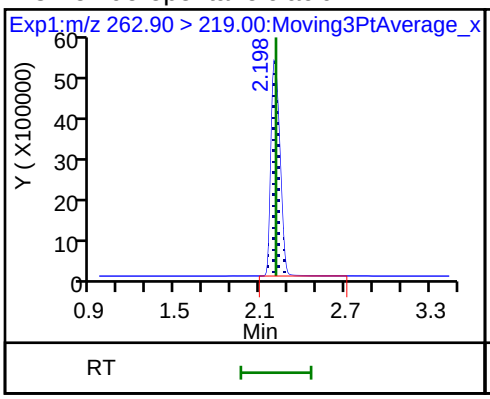

2 Perfluorobutanoic acid



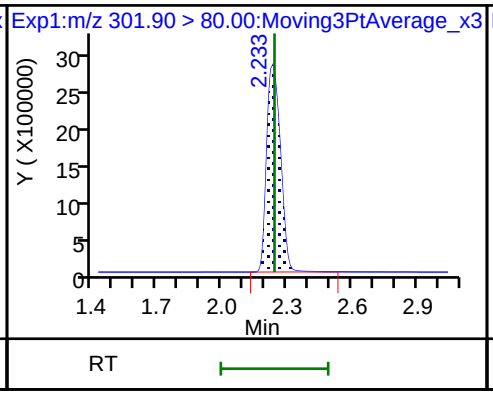

D 4 13C5 PFPeA



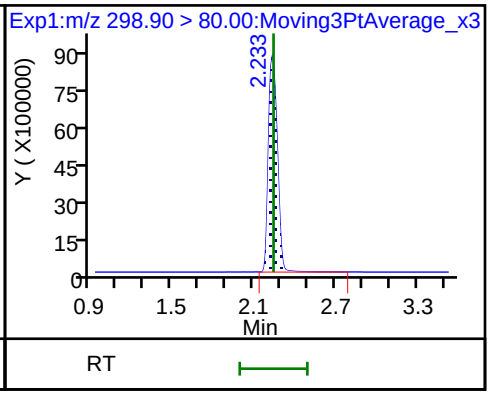

3 Perfluoropentanoic acid



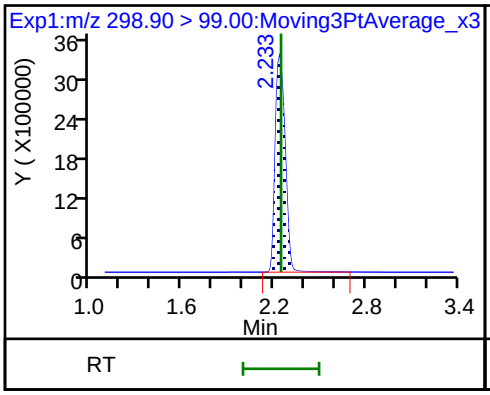

D 6 13C3 PFBS



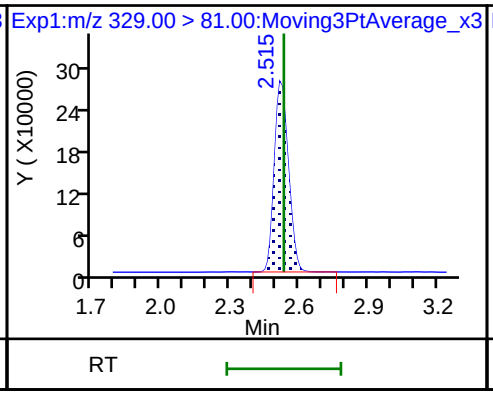

5 Perfluorobutanesulfonic acid



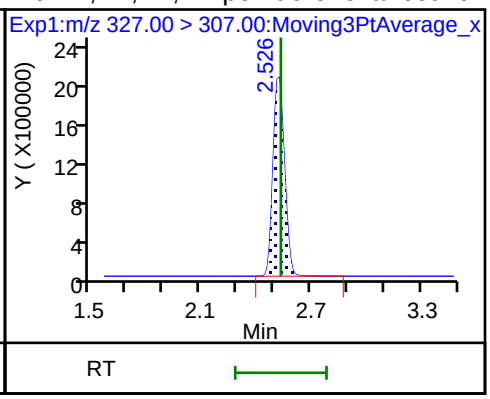

5 Perfluorobutanesulfonic acid



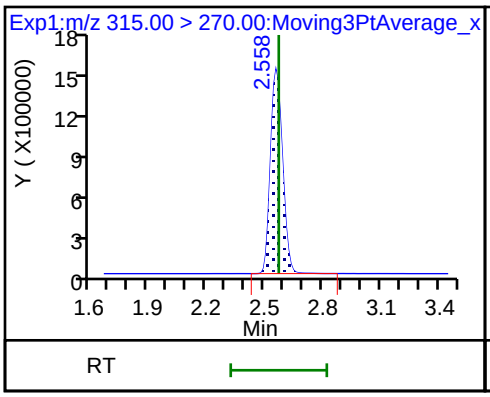

D 8 M2-4:2 FTS



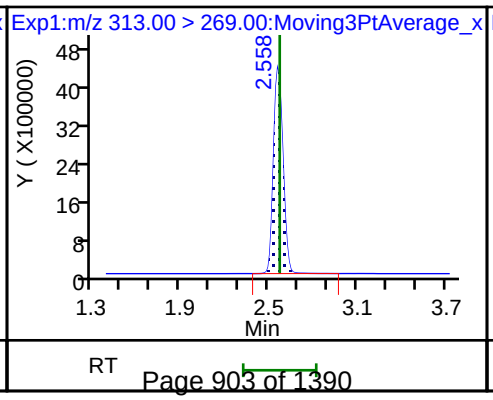

9 1H,1H,2H,2H-perfluorohexanesulfo



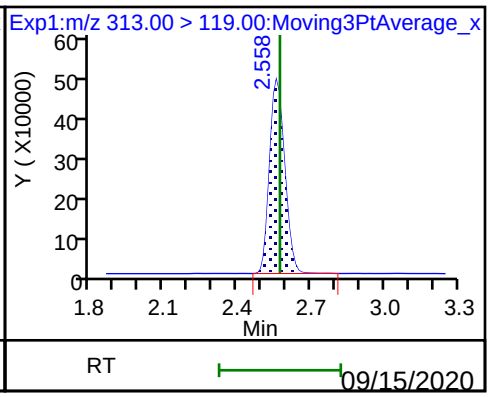

D 10 13C2 PFHxA



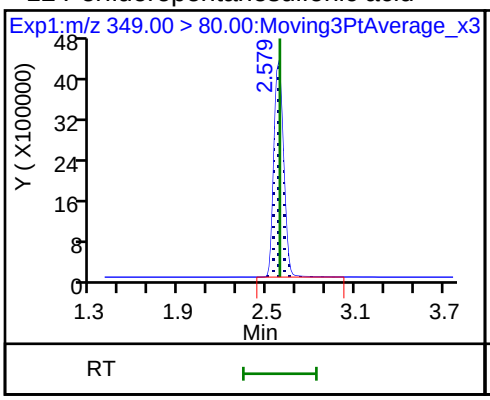

11 Perfluorohexanoic acid



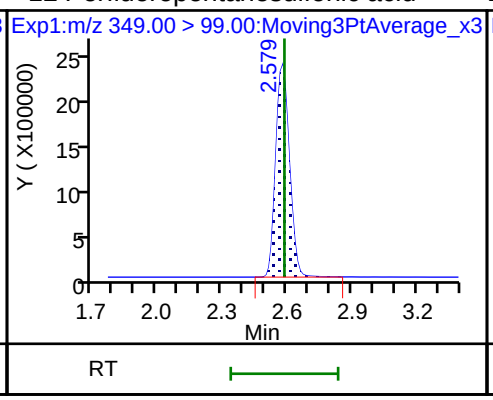

11 Perfluorohexanoic acid



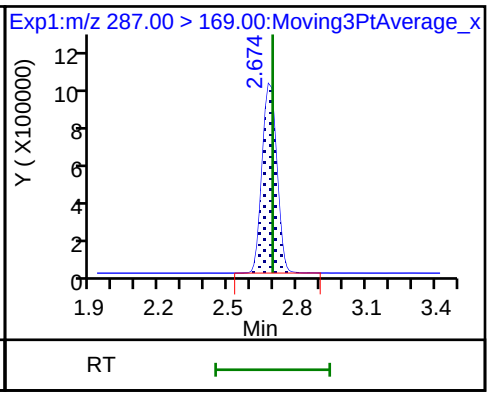
12 Perfluoropentanesulfonic acid



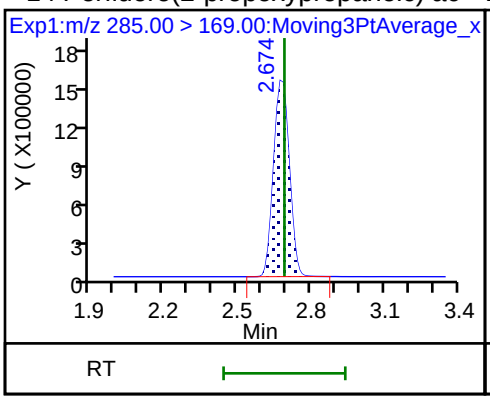

12 Perfluoropentanesulfonic acid



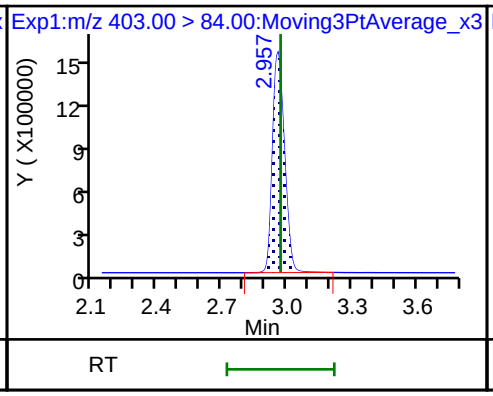

D 13 13C3 HFPO-DA



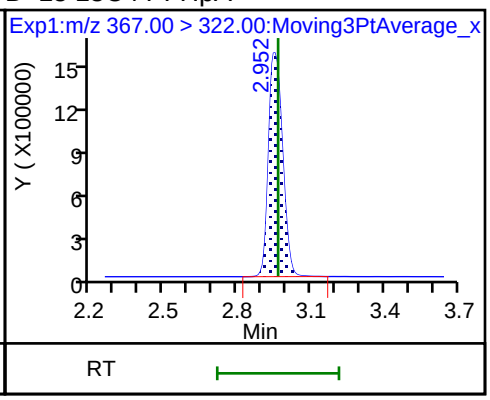

14 Perfluoro(2-propoxypropanoic) ac



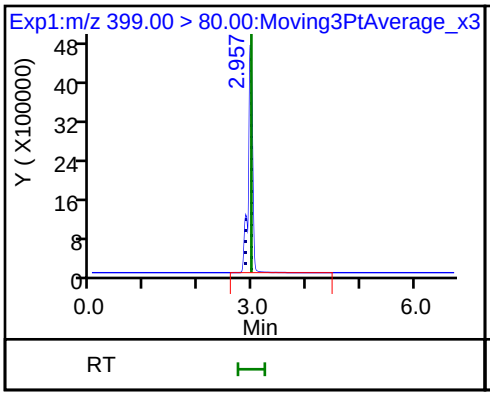

D 17 18O2 PFHxS



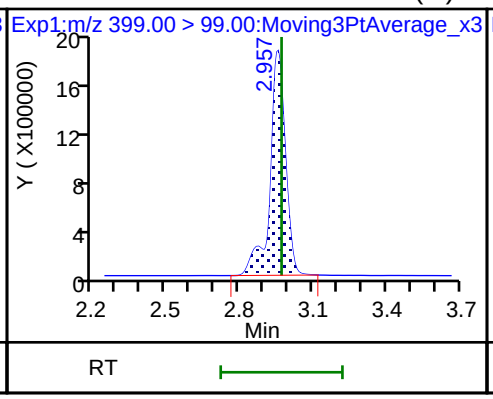

D 15 13C4 PFHpA



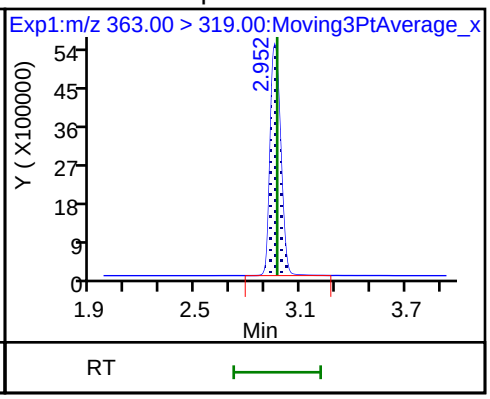

16 Perfluorohexanesulfonic acid



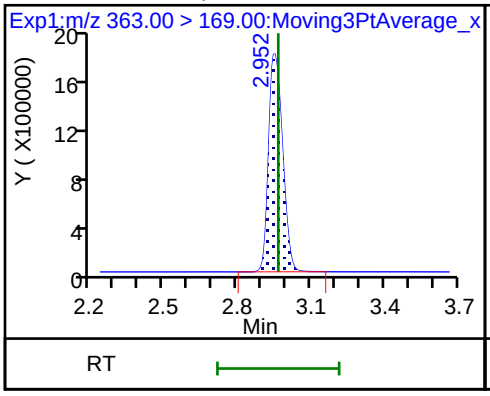

16 Perfluorohexanesulfonic acid (M)



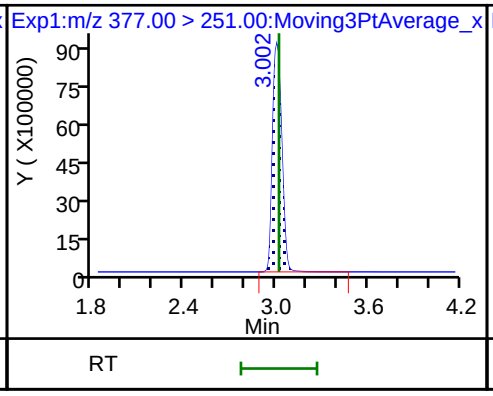

18 Perfluoroheptanoic acid



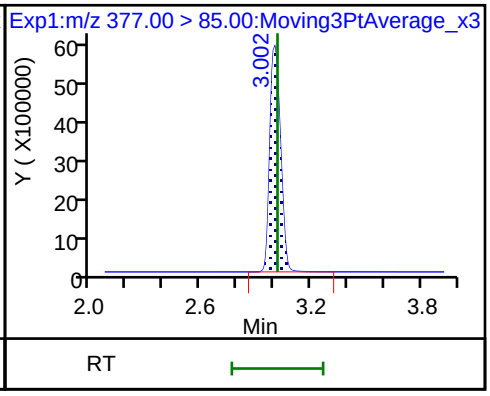

18 Perfluoroheptanoic acid



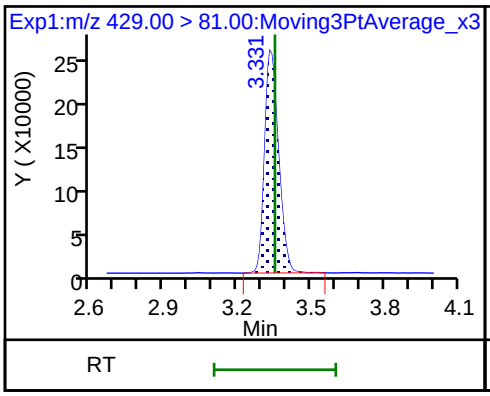

19 DONA



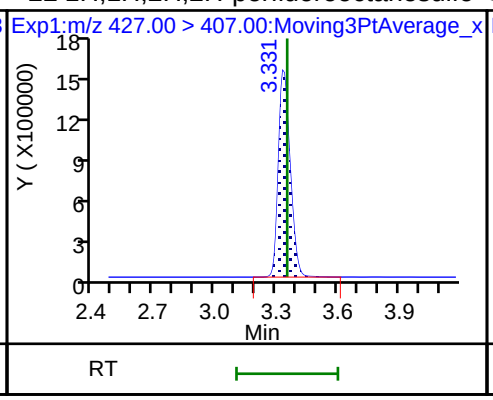

19 DONA



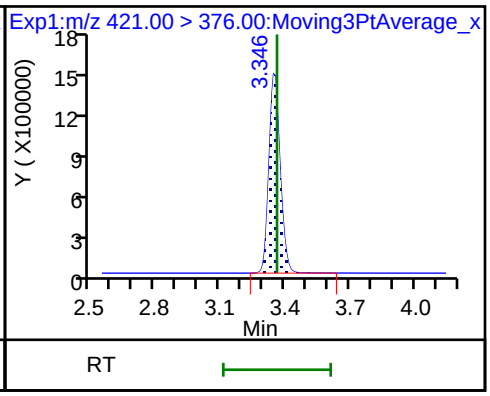
D 20 M2-6:2 FTS



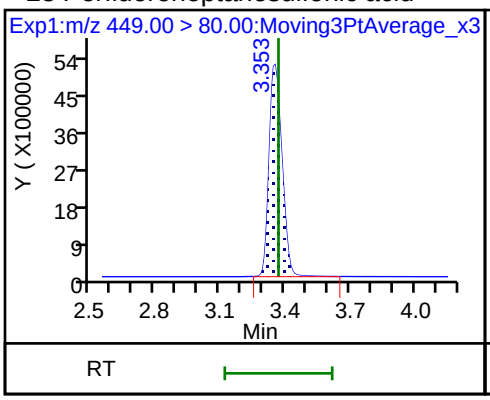

22 1H,1H,2H,2H-perfluorooctanesulfo



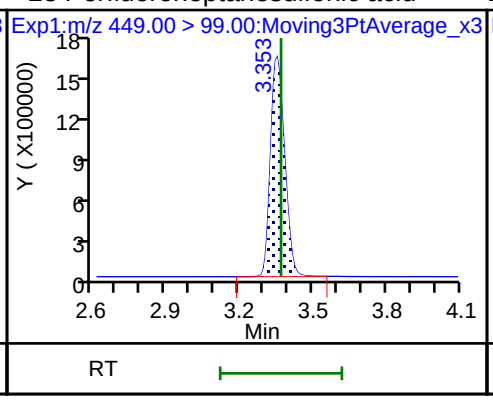

$ 21 13C8 PFOA



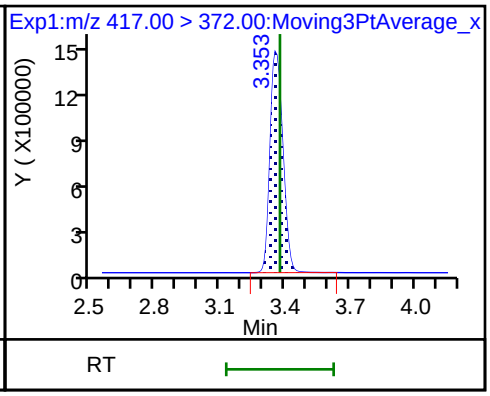

23 Perfluoroheptanesulfonic acid



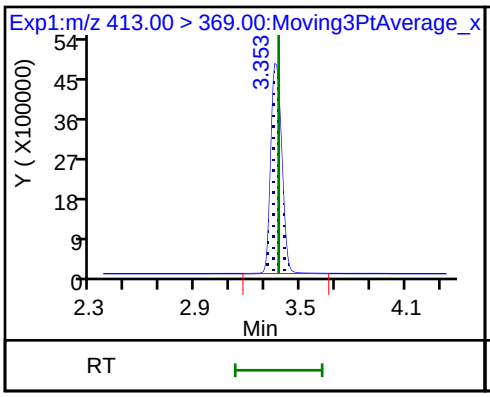

23 Perfluoroheptanesulfonic acid



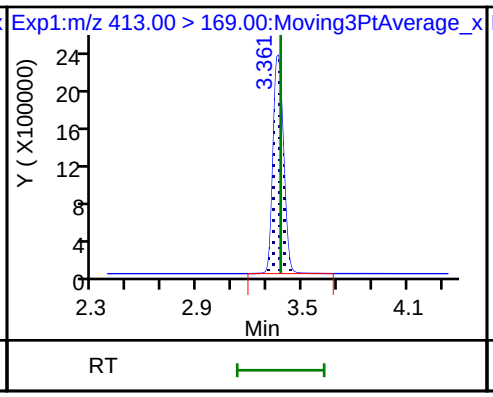

D 26 13C4 PFOA



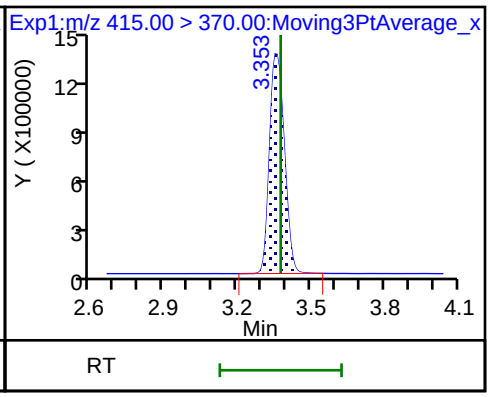

24 Perfluorooctanoic acid



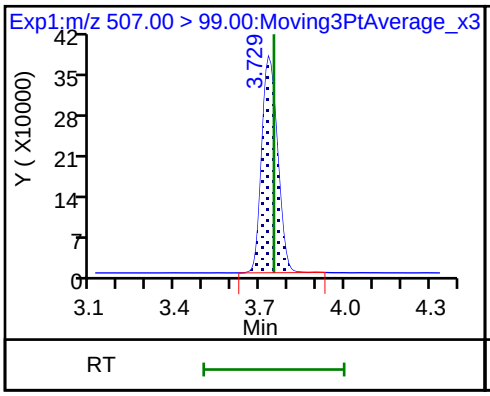

24 Perfluorooctanoic acid



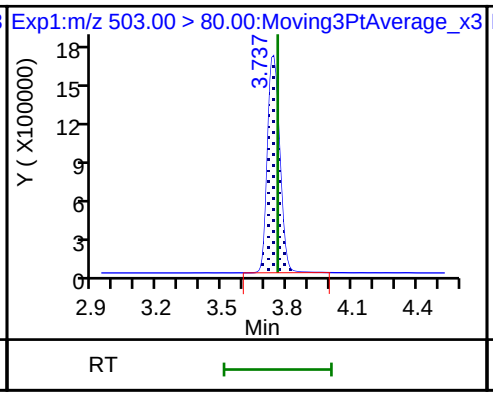

* 25 13C2 PFOA



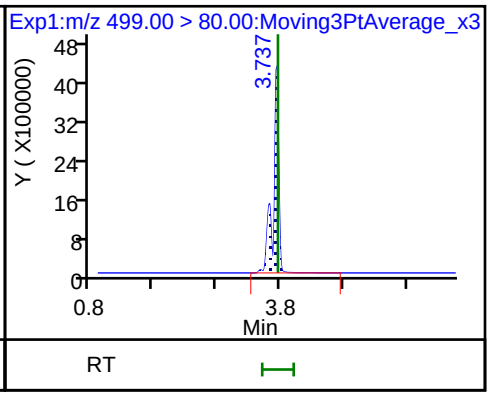

$ 27 13C8 PFOS



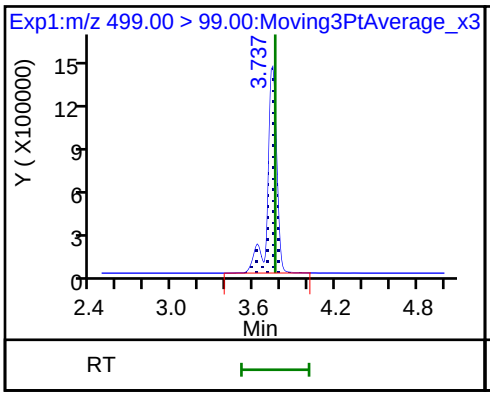

D 31 13C4 PFOS



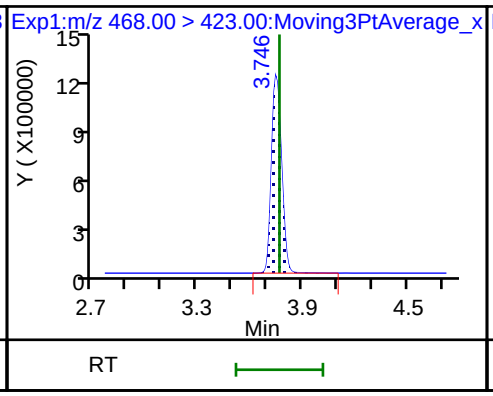

28 Perfluorooctanesulfonic acid



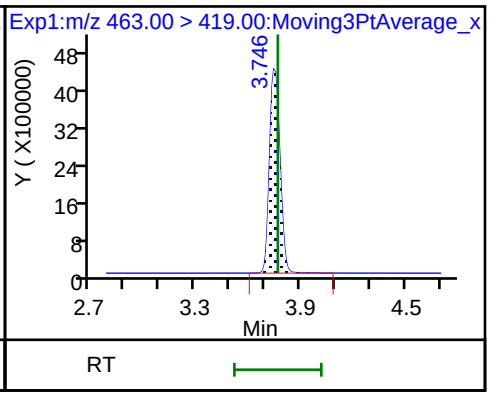
28 Perfluorooctanesulfonic acid



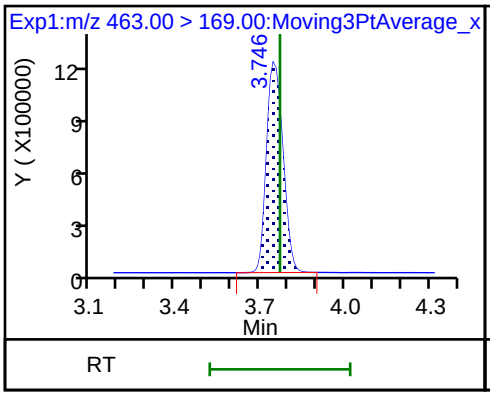

D 29 13C5 PFNA



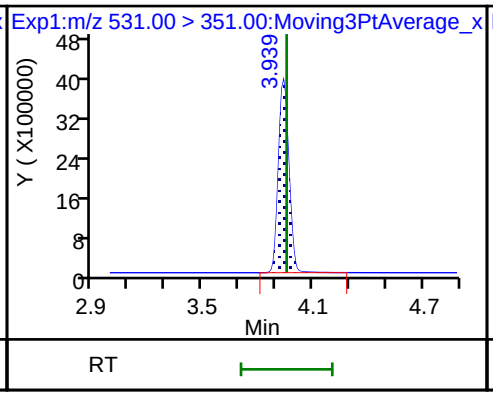

30 Perfluorononanoic acid



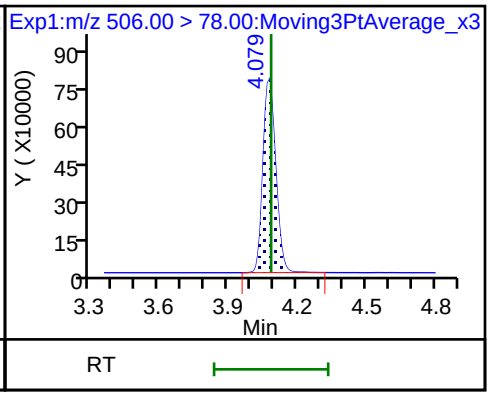

30 Perfluorononanoic acid



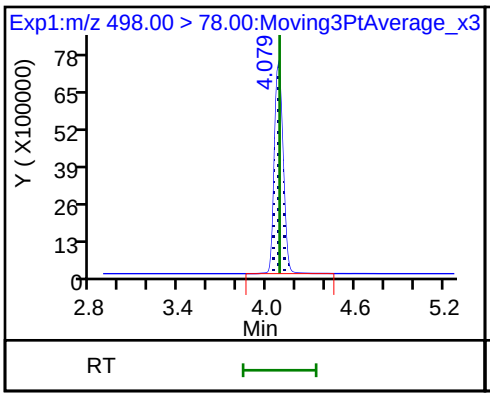

32 9-Chlorohexadecafluoro-3-oxanona



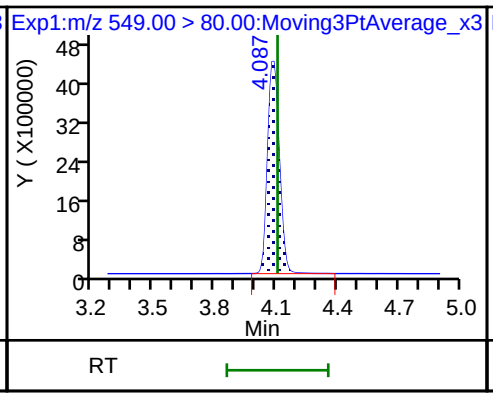

D 36 13C8 FOSA



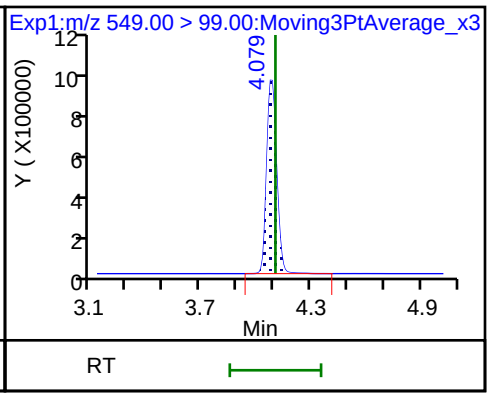

34 Perfluorooctanesulfonamide



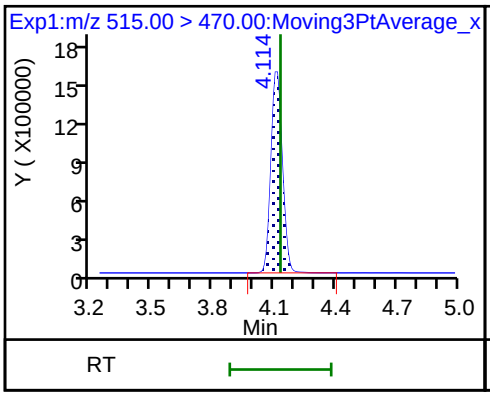

35 Perfluorononanesulfonic acid



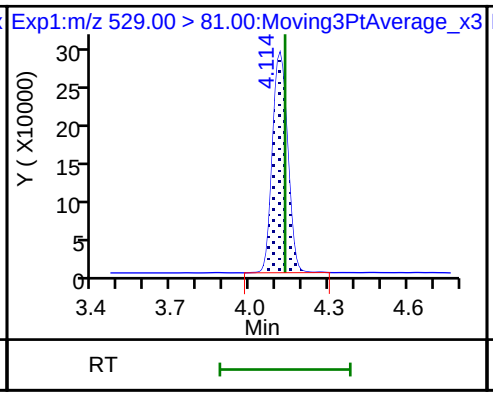

35 Perfluorononanesulfonic acid



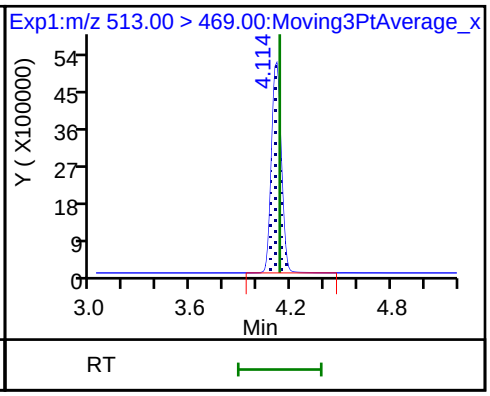

D 33 13C2 PFDA



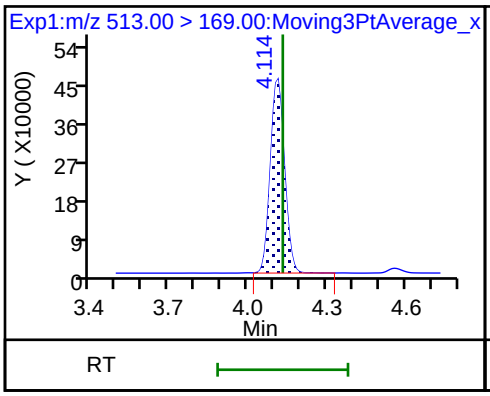

D 37 M2-8:2 FTS



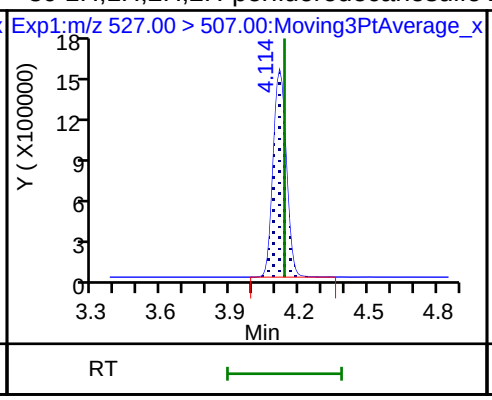

38 Perfluorodecanoic acid



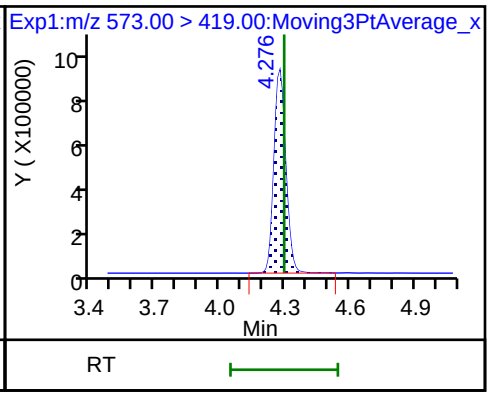
38 Perfluorodecanoic acid



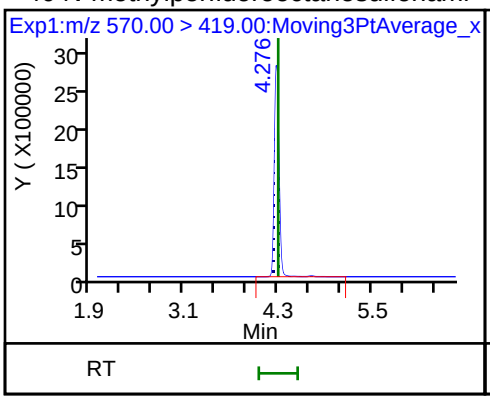

39 1H,1H,2H,2H-perfluorodecanesulfo



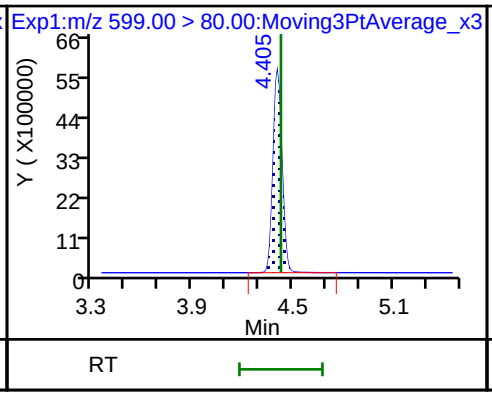

D 41 d3-NMeFOSAA



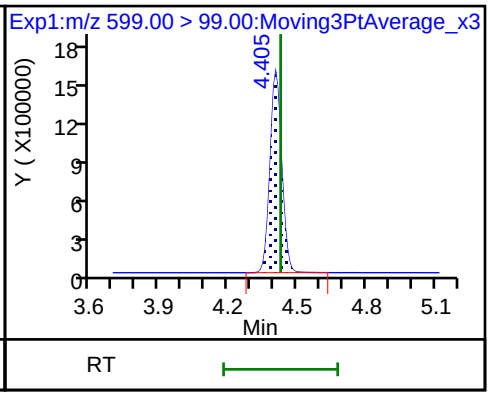

40 N-methylperfluorooctanesulfonami



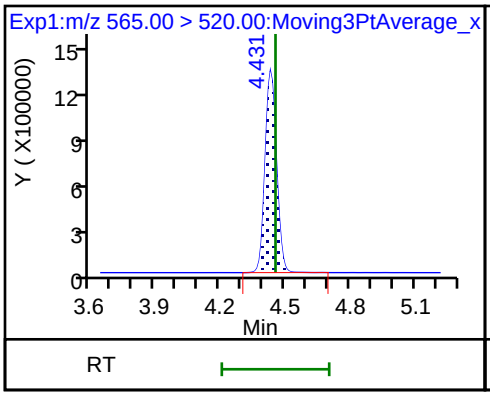

42 Perfluorodecanesulfonic acid



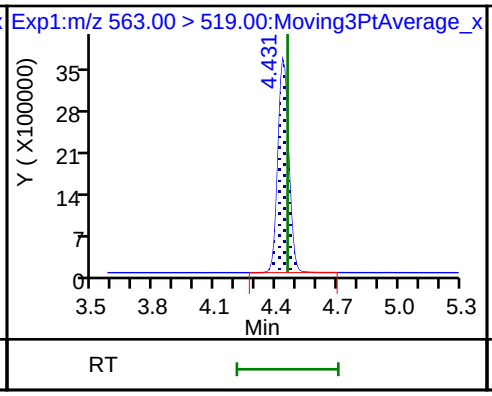

42 Perfluorodecanesulfonic acid



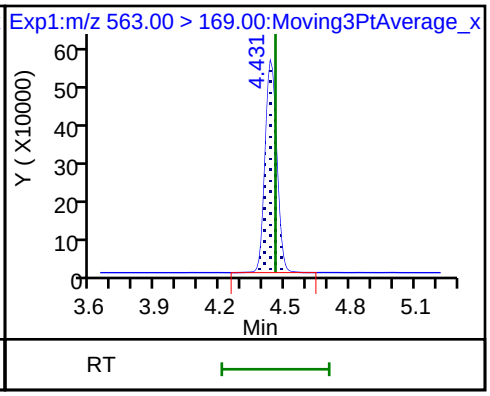

D 46 13C2 PFUnA



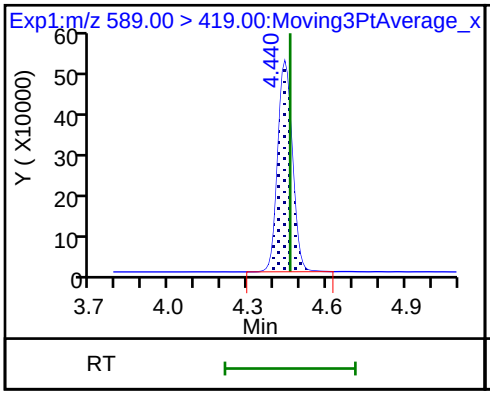

43 Perfluoroundecanoic acid



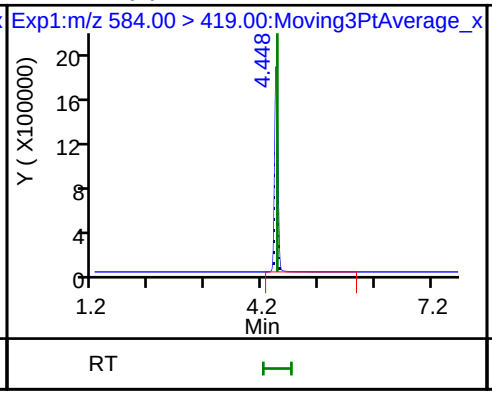

43 Perfluoroundecanoic acid



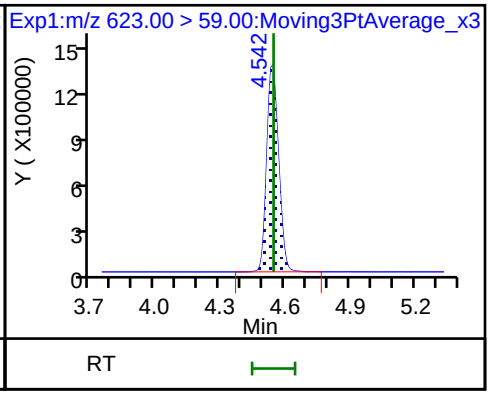

D 45 d5-NEtFOSAA



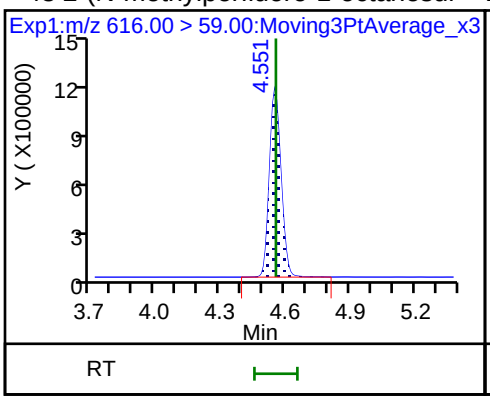

44 N-ethylperfluorooctanesulfonamid



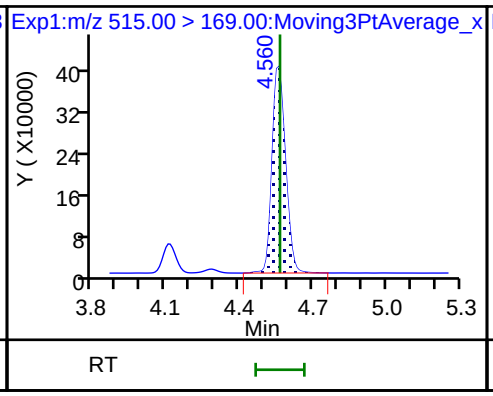

D 47 d7-N-MeFOSE-M



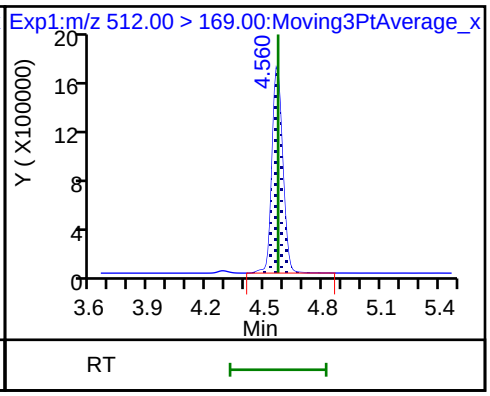
48 2-(N-methylperfluoro-1-octanesul



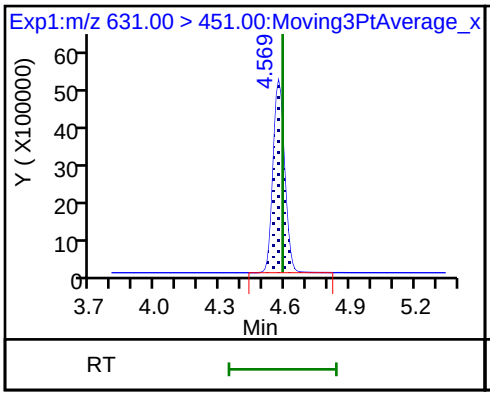

D 49 d-N-MeFOSA-M



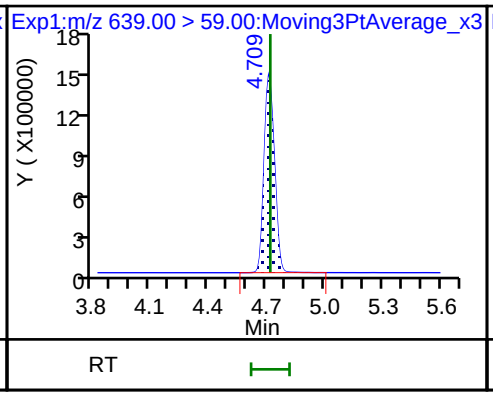

50 NMeFOSA



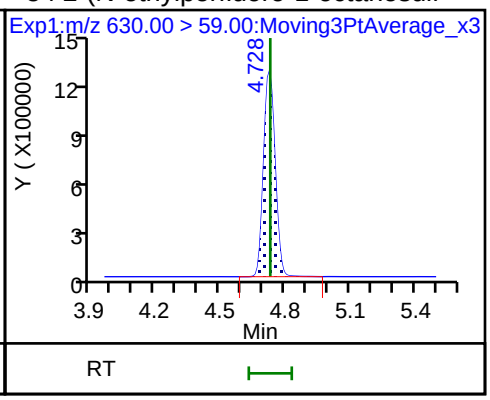

51 11-Chloroeicosafluoro-3-oxaundec



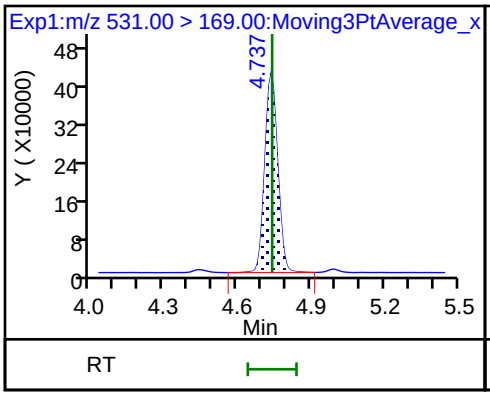

D 53 d9-N-EtFOSE-M



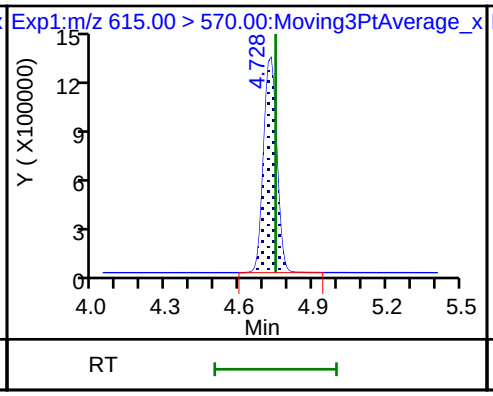

54 2-(N-ethylperfluoro-1-octanesulf



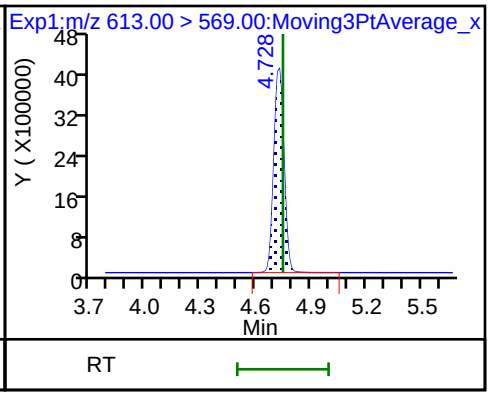

D 58 d-N-EtFOSA-M



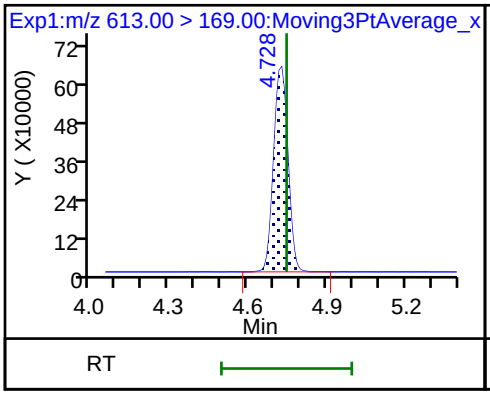

D 56 13C2 PFDoA



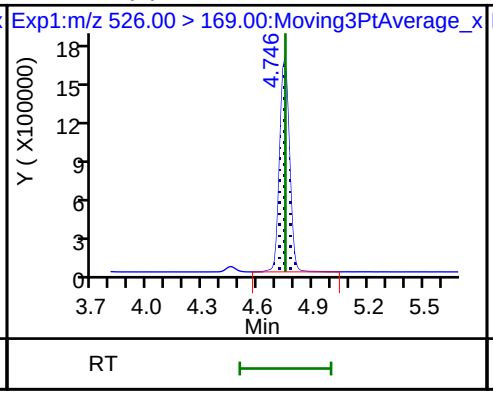

52 Perfluorododecanoic acid



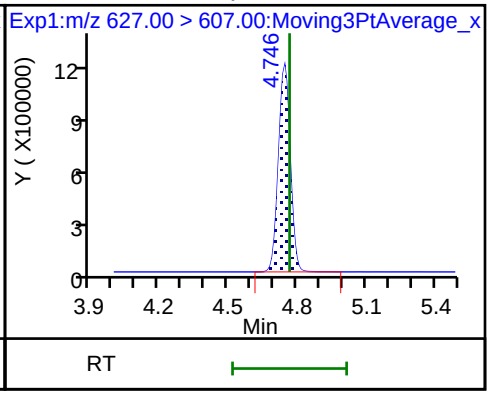

52 Perfluorododecanoic acid



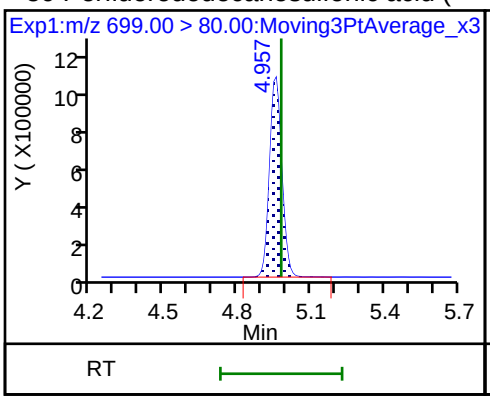

57 N-ethylperfluoro-1-octanesulfona



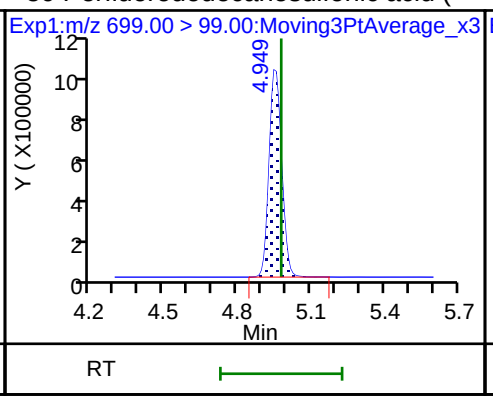

55 1H,1H,2H,2H-perfluorododecanesul



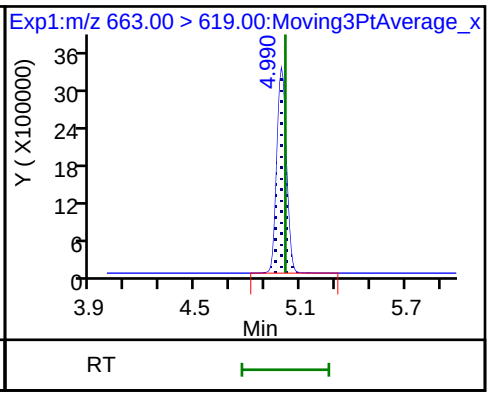
59 Perfluorododecanesulfonic acid (



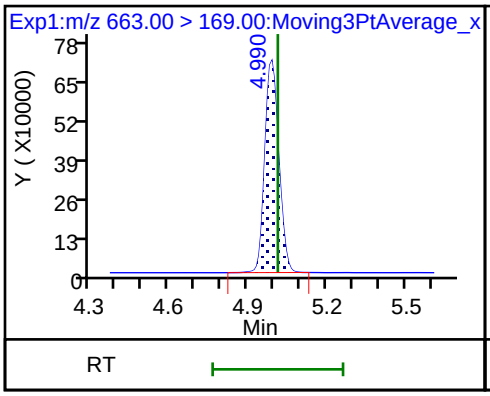

59 Perfluorododecanesulfonic acid (



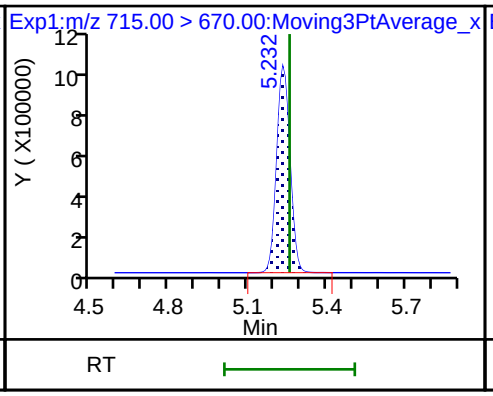

60 Perfluorotridecanoic acid



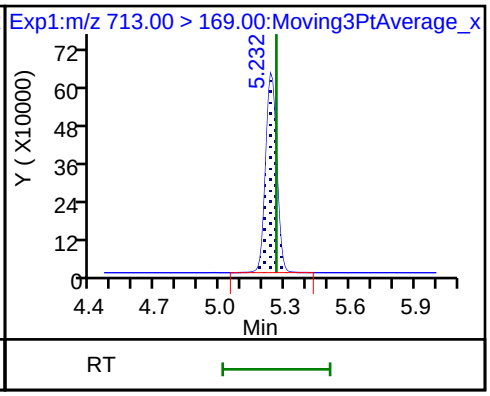

60 Perfluorotridecanoic acid



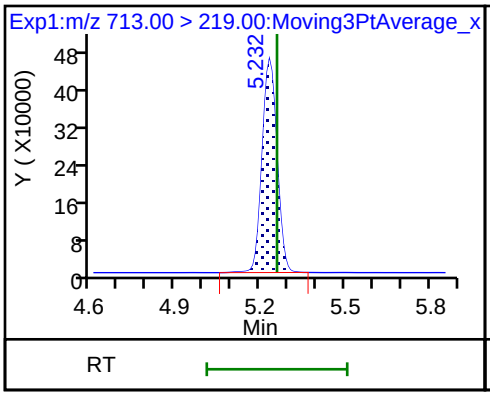

D 62 13C2 PFTeDA



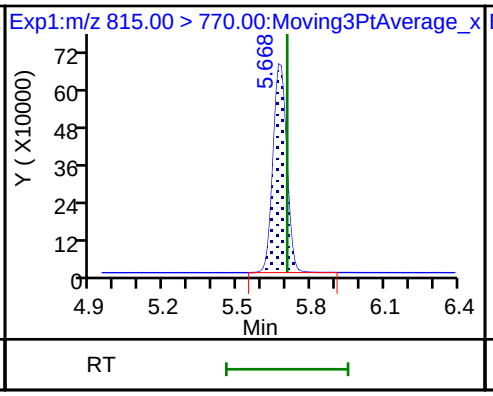

61 Perfluorotetradecanoic acid



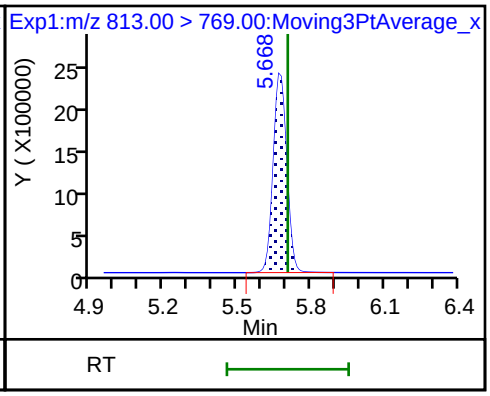

61 Perfluorotetradecanoic acid



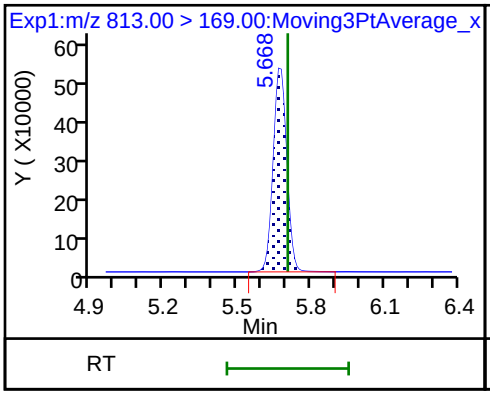

D 63 13C2 PFHxDA



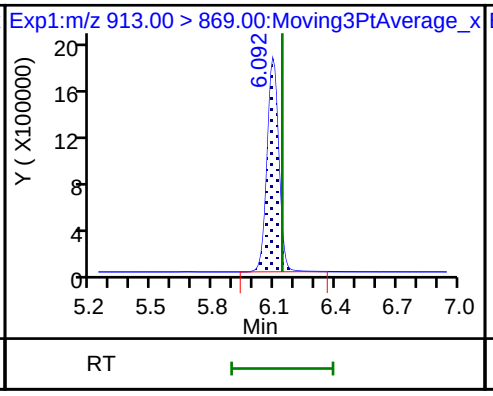

64 Perfluorohexadecanoic acid



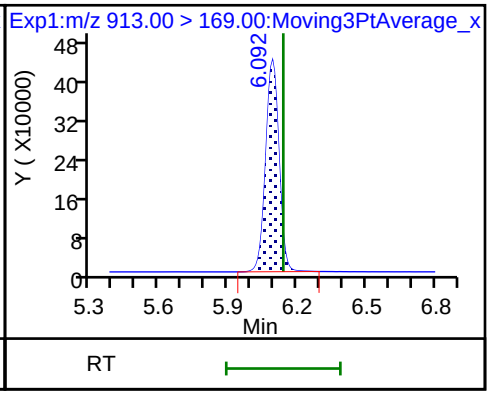

64 Perfluorohexadecanoic acid




65 Perfluorooctadecanoic acid




65 Perfluorooctadecanoic acid



Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

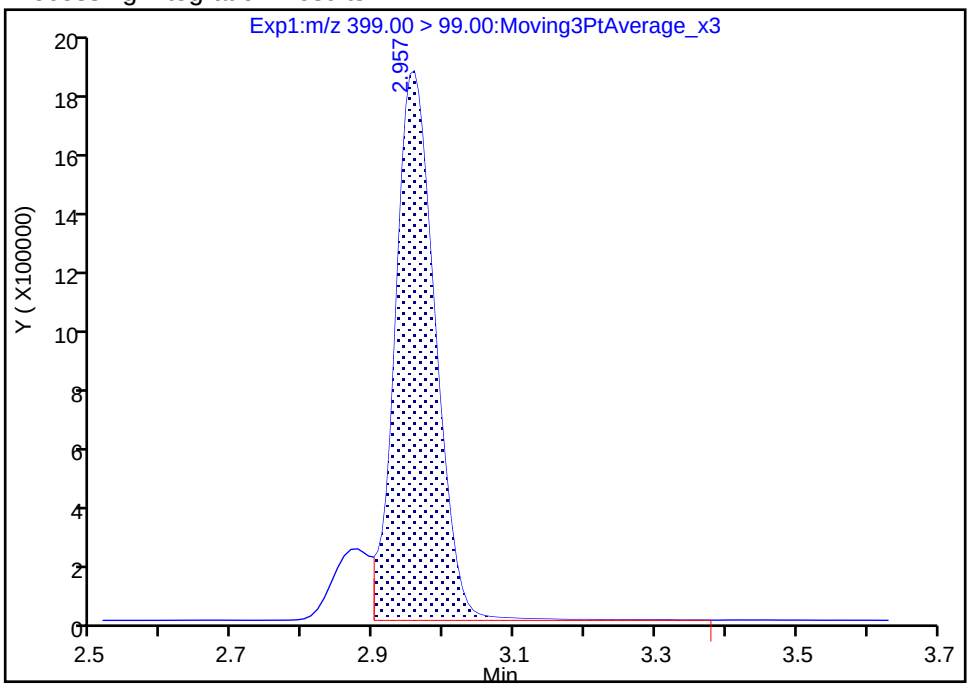
Data File: \\chromfs\Sacramento\ChromData\A9\20200910-102999.b\2020.09.10_A9 _PFC_ICAL_AA_022.d
Injection Date: 10-Sep-2020 12:29:20 Instrument ID: A9
Lims ID: IC L7
Client ID:
Operator ID: SACINSTRLCMS02 ALS Bottle#: 16 Worklist Smp#: 13
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFAS_A9 Limit Group: LC PFC ICAL
Column: Detector EXP1

## 16 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 2

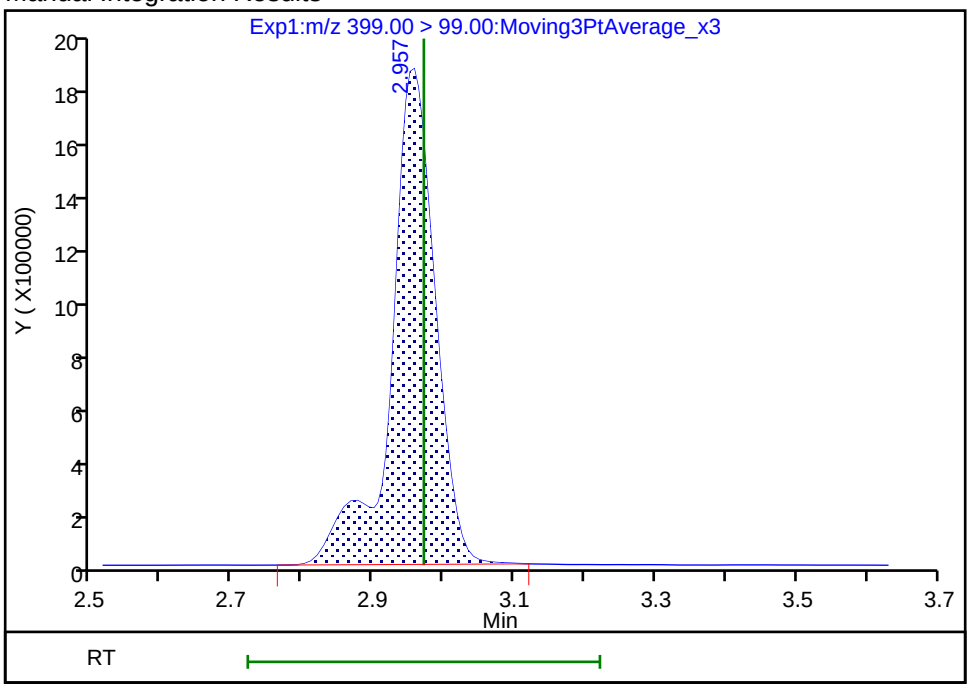
Processing Integration Results

RT: 2.96
Area: 7179478
Amount: 8.366428
Amount Units: ng/ml




Manual Integration Results

RT: 2.96
Area: 7961571
Amount: 8.366428
Amount Units: ng/ml




Reviewer: zibaa, 10-Sep-2020 12:57:12
Audit Action: Manually Integrated Audit Reason: Isomers

FORM VII
LCMS CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Sacramento  Job No.: 460-217547-1

SDG No.:

Lab Sample ID: ICV 320-406555/10  Calibration Date: 08/25/2020 17:56

Instrument ID: A18  Calib Start Date: 08/25/2020 16:43

GC Column: Gemini C18 3x50  ID: 3.00(mm)  Calib End Date: 08/25/2020 17:37

Lab File ID: 2020.08.25_A18_ICAL_A_019.d  Conc. Units: ng/mL

| ANALYTE | CURVE TYPE | AVE RRF | RRF | MIN RRF | CALC AMOUNT | SPIKE AMOUNT | %D | MAX %D |
|---|---|---|---|---|---|---|---|---|
| Perfluorobutanoic acid (PFBA) | AveID | 0.8679 | 0.8711 | | 2.51 | 2.50 | 0.4 | 40.0 |
| Perfluoropentanoic acid (PFPeA) | AveID | 0.997 | 0.9901 | | 2.48 | 2.50 | -0.7 | 40.0 |
| Perfluorobutanesulfonic acid (PFBS) | AveID | 1.010 | 1.016 | | 2.52 | 2.50 | 0.6 | 50.0 |
| 4:2 FTS | AveID | 2.273 | 2.316 | | 2.38 | 2.34 | 1.9 | 50.0 |
| Perfluorohexanoic acid (PFHxA) | AveID | 0.9638 | 0.996 | | 2.58 | 2.50 | 3.3 | 40.0 |
| Perfluoropentanesulfonic acid (PFPeS) | AveID | 0.7925 | 0.7690 | | 2.28 | 2.35 | -3.0 | 50.0 |
| HFPO-DA (GenX) | AveID | 0.9742 | 1.003 | | 2.57 | 2.50 | 3.0 | 40.0 |
| Perfluoroheptanoic acid (PFHpA) | AveID | 1.014 | 0.9762 | | 2.41 | 2.50 | -3.7 | 40.0 |
| Perfluorohexanesulfonic acid (PFHxS) | AveID | 1.181 | 1.174 | | 2.48 | 2.50 | -0.6 | 40.0 |
| 4,8-Dioxa-3H-perfluorononanoic acid (ADONA) | AveID | 9.582 | 9.684 | | 2.53 | 2.50 | 1.1 | 50.0 |
| 6:2 FTS | AveID | 2.299 | 2.122 | | 2.19 | 2.37 | -7.7 | 40.0 |
| Perfluoroheptanesulfonic Acid (PFHpS) | AveID | 1.118 | 1.118 | | 2.38 | 2.38 | 0.0 | 50.0 |
| Perfluorooctanoic acid (PFOA) | AveID | 1.020 | 1.037 | | 2.54 | 2.50 | 1.6 | 40.0 |
| Perfluorooctanesulfonic acid (PFOS) | AveID | 1.035 | 0.9822 | | 2.37 | 2.50 | -5.1 | 40.0 |
| Perfluorononanoic acid (PFNA) | AveID | 0.9590 | 1.279 | | 3.33 | 2.50 | 33.4 | 40.0 |
| F-53B Major | AveID | 3.236 | 3.282 | | 2.54 | 2.50 | 1.4 | 50.0 |
| Perfluorooctanesulfonamide (FOSA) | AveID | 0.9305 | 0.9067 | | 2.44 | 2.50 | -2.6 | 40.0 |
| Perfluorononanesulfonic acid (PFNS) | AveID | 0.9368 | 0.9057 | | 2.32 | 2.40 | -3.3 | 50.0 |
| 8:2 FTS | AveID | 1.775 | 1.811 | | 2.44 | 2.40 | 2.0 | 40.0 |
| Perfluorodecanoic acid (PFDA) | AveID | 0.9639 | 0.9146 | | 2.37 | 2.50 | -5.1 | 40.0 |
| N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA) | AveID | 0.7417 | 0.6894 | | 2.32 | 2.50 | -7.1 | 40.0 |
| Perfluorodecanesulfonic acid (PFDS) | AveID | 0.8350 | 0.7745 | | 2.24 | 2.41 | -7.2 | 50.0 |
| N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA) | AveID | 0.6758 | 0.6644 | | 2.46 | 2.50 | -1.7 | 40.0 |
| Perfluoroundecanoic acid (PFUnA) | AveID | 0.7253 | 0.7746 | | 2.67 | 2.50 | 6.8 | 40.0 |
| NMeFOSE | AveID | 1.080 | 1.073 | | 2.49 | 2.50 | -0.6 | 40.0 |
| NMeFOSA | AveID | 0.9606 | 0.7837 | | 2.04 | 2.50 | -18.4 | 50.0 |
| F-53B Minor | AveID | 4.102 | 4.010 | | 2.44 | 2.50 | -2.2 | 50.0 |
| NEtFOSE | AveID | 1.073 | 1.064 | | 2.48 | 2.50 | -0.8 | 40.0 |
| NEtFOSA | AveID | 1.058 | 0.8109 | | 1.92 | 2.50 | -23.4 | 40.0 |
| Perfluorododecanoic acid (PFDoA) | AveID | 1.023 | 0.8265 | | 2.02 | 2.50 | -19.2 | 40.0 |
| 10:2 FTS | AveID | 2.014 | 1.971 | | 2.36 | 2.41 | -2.2 | 50.0 |
| Perfluorododecanesulfonic acid (PFDoS) | AveID | 0.3329 | 0.3221 | | 2.34 | 2.42 | -3.2 | 50.0 |

FORM VII 537 (modified)

FORM VII
LCMS CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Sacramento  Job No.: 460-217547-1

SDG No.:

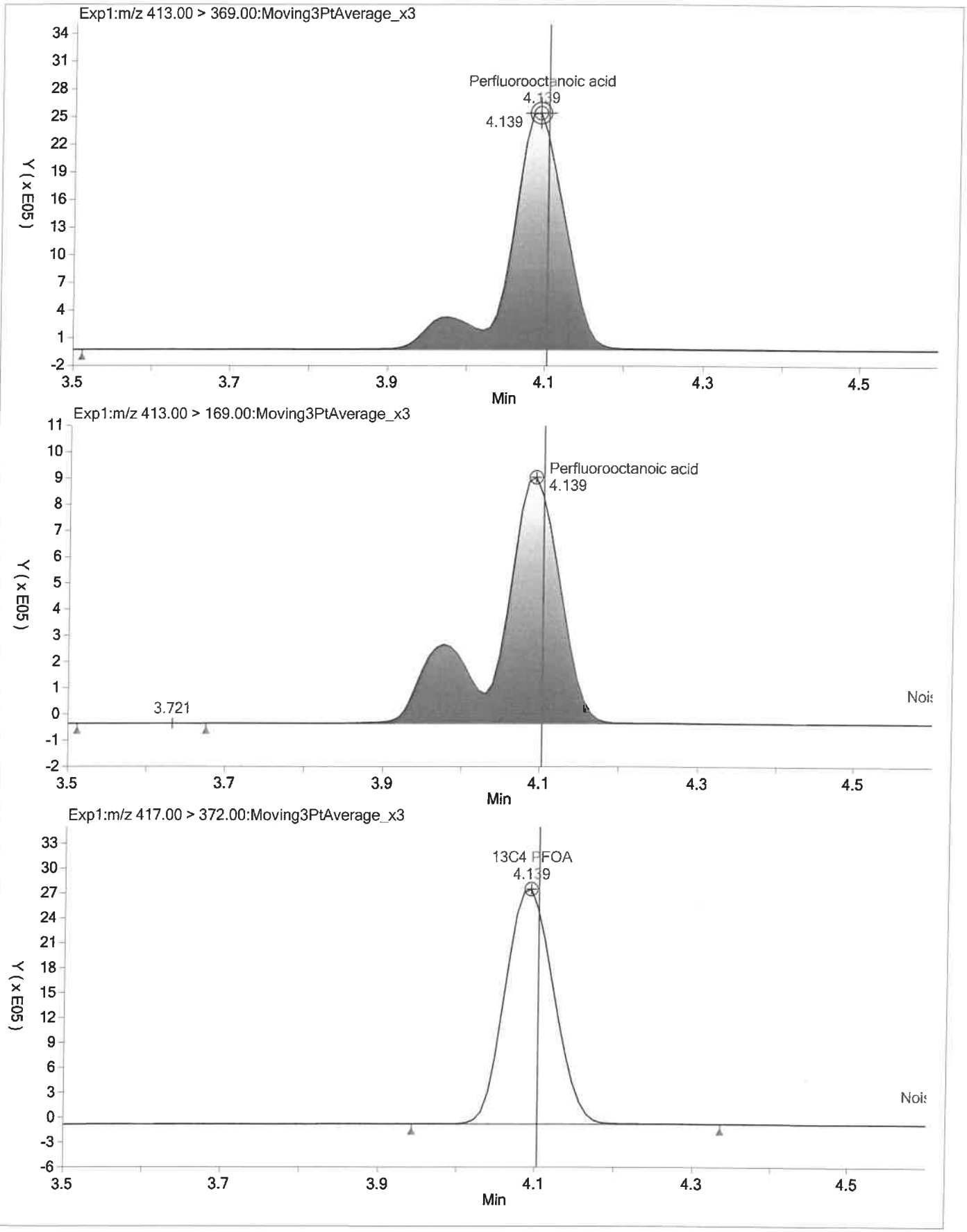
Lab Sample ID: ICV 320-406555/10  Calibration Date: 08/25/2020 17:56

Instrument ID: A18  Calib Start Date: 08/25/2020 16:43

GC Column: Gemini C18 3x50  ID: 3.00(mm)  Calib End Date: 08/25/2020 17:37

Lab File ID: 2020.08.25_A18_ICAL_A_019.d  Conc. Units: ng/mL

| ANALYTE | CURVE TYPE | AVE RRF | RRF | MIN RRF | CALC AMOUNT | SPIKE AMOUNT | %D | MAX %D |
|---|---|---|---|---|---|---|---|---|
| Perfluorotridecanoic acid (PFTriA) | AveID | 0.9409 | 0.7267 | | 1.93 | 2.50 | -22.8 | 50.0 |
| Perfluorotetradecanoic acid (PFTeA) | AveID | 0.0844 | 0.0969 | | 2.87 | 2.50 | 14.8 | 50.0 |
| Perfluoro-n-hexadecanoic acid (PFHxDA) | L2ID | | 0.8964 | | 2.53 | 2.50 | 1.2 | 50.0 |
| Perfluoro-n-octadecanoic acid (PFODA) | AveID | 0.6605 | 0.6813 | | 2.58 | 2.50 | 3.2 | 50.0 |
| 13C4 PFBA | Ave | 1.585 | 1.609 | | 2.54 | 2.50 | 1.5 | 50.0 |
| 13C5 PFPeA | Ave | 1.233 | 1.203 | | 2.44 | 2.50 | -2.4 | 50.0 |
| 13C3 PFBS | Ave | 0.9684 | 1.002 | | 2.41 | 2.33 | 3.5 | 50.0 |
| M2-4:2 FTS | Ave | 0.2333 | 0.2164 | | 2.17 | 2.34 | -7.2 | 50.0 |
| 13C2 PFHxA | Ave | 1.231 | 1.285 | | 2.61 | 2.50 | 4.4 | 50.0 |
| 13C3 HFPO-DA | Ave | 0.2518 | 0.2504 | | 2.49 | 2.50 | -0.6 | 50.0 |
| 13C4 PFHpA | Ave | 1.051 | 1.139 | | 2.71 | 2.50 | 8.4 | 50.0 |
| 18O2 PFHxS | Ave | 0.5117 | 0.5194 | | 2.40 | 2.37 | 1.5 | 50.0 |
| M2-6:2 FTS | Ave | 0.1958 | 0.1942 | | 2.36 | 2.38 | -0.8 | 50.0 |
| 13C4 PFOA | Ave | 1.001 | 0.9054 | | 2.26 | 2.50 | -9.5 | 50.0 |
| 13C4 PFOS | Ave | 0.3465 | 0.3545 | | 2.45 | 2.39 | 2.3 | 50.0 |
| 13C5 PFNA | Ave | 0.8063 | 0.6961 | | 2.16 | 2.50 | -13.7 | 50.0 |
| 13C8 FOSA | Ave | 0.5590 | 0.5630 | | 2.52 | 2.50 | 0.7 | 50.0 |
| 13C2 PFDA | Ave | 0.7829 | 0.8809 | | 2.81 | 2.50 | 12.5 | 50.0 |
| M2-8:2 FTS | Ave | 0.2823 | 0.2677 | | 2.27 | 2.40 | -5.2 | 50.0 |
| d3-NMeFOSAA | Ave | 0.5255 | 0.5376 | | 2.56 | 2.50 | 2.3 | 50.0 |
| 13C2 PFUnA | Ave | 0.7758 | 0.7715 | | 2.49 | 2.50 | -0.6 | 50.0 |
| d5-NEtFOSAA | Ave | 0.5556 | 0.5547 | | 2.50 | 2.50 | -0.2 | 50.0 |
| d7-N-MeFOSE-M | Ave | 0.1384 | 0.1526 | | 13.8 | 12.5 | 10.3 | 50.0 |
| d-N-MeFOSA-M | Ave | 0.1965 | 0.1961 | | 2.50 | 2.50 | -0.2 | 50.0 |
| d9-N-EtFOSE-M | Ave | 0.1700 | 0.1467 | | 10.8 | 12.5 | -13.7 | 50.0 |
| d-N-EtFOSA-M | Ave | 0.2011 | 0.2042 | | 2.54 | 2.50 | 1.6 | 50.0 |
| 13C2 PFDoA | Ave | 0.7650 | 0.9317 | | 3.05 | 2.50 | 21.8 | 50.0 |
| 13C2 PFTeDA | Ave | 0.6311 | 0.5734 | | 2.27 | 2.50 | -9.2 | 50.0 |
| 13C2 PFHxDA | Ave | 0.4618 | 0.4670 | | 2.53 | 2.50 | 1.1 | 50.0 |
| 13C8 PFOA | Ave | 0.6756 | 0.6944 | | 2.52 | 2.45 | 2.8 | 50.0 |
| 13C8 PFOS | Ave | 0.1082 | 0.1074 | | 2.37 | 2.39 | -0.7 | 50.0 |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Perfluorooctanoic acid
4.139
4.139
Y ( x E05 )
Min
Exp1:m/z 413.00 > 169.00:Moving3PtAverage_x3
Perfluorooctanoic acid
4.139
3.721
Nois
Y ( x E05 )
Min
Exp1:m/z 417.00 > 372.00:Moving3PtAverage_x3
13C4 PFOA
4.139
Nois
Y ( x E05 )
Min

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\A18\20200825-102078.b\2020.08.25_A18_ICAL_A_019.d
Lims ID: ICV
Client ID:
Sample Type: ICV
Inject. Date: 25-Aug-2020 17:56:13 ALS Bottle#: 14 Worklist Smp#: 10
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Sample Info: ICV (44)
Misc. Info.: Plate: 1 Rack: 1
Operator ID: TAISACA18-PC\A-18 Instrument ID: A18
Sublist:

Method: \\chromfs\Sacramento\ChromData\A18\20200825-102078.b\PFAS_A18V2.m
Limit Group: LC PFC ICAL
Last Update: 26-Aug-2020 10:44:05 Calib Date: 25-Aug-2020 17:37:57
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\A18\20200825-102078.b\2020.08.25_A18_ICAL_A_017.d

Column 1 : Gemini C18 3um 3mm x 50 mm ( 3.00 mm) Det: EXP1
Process Host: CTX1029

First Level Reviewer: fariasa Date: 26-Aug-2020 06:08:32
Ratio Calibration: Average of Initial Calibration

| Signal | RT | EXP RT | DLT RT | REL RT | Response | Amount ng/ml | Ratio(Limits) | %Rec | S/N | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| D 1 13C4 PFBA | | | | | | | | | | |
| 217.00 > 172.00 | 2.565 | 2.576 | -0.011 | 0.620 | 17397189 | 2.54 | | 101 | 6861 | |
| 2 Perfluorobutanoic acid | | | | | | | | | | |
| 212.90 > 169.00 | 2.573 | 2.576 | -0.003 | 1.003 | 15153823 | 2.51 | | | 524 | |
| 5 Perfluoropentanoic acid | | | | | | | | | | |
| 262.90 > 219.00 | 2.930 | 2.944 | -0.014 | 1.000 | 12881033 | 2.48 | | | 600 | |
| D 4 13C5 PFPeA | | | | | | | | | | |
| 267.90 > 223.00 | 2.930 | 2.944 | -0.014 | 0.708 | 13010009 | 2.44 | | 97.6 | 6287 | |
| D 9 13C3 PFBS | | | | | | | | | | |
| 301.90 > 80.00 | 2.973 | 2.979 | -0.006 | 0.718 | 10075111 | 2.41 | | 103 | 4541 | |
| 6 Perfluorobutanesulfonic acid | | | | | | | | | | |
| 298.90 > 80.00 | 2.973 | 2.979 | -0.006 | 1.000 | 11003815 | 2.51 | Target=2.30 | | 2154 | |
| 298.90 > 99.00 | 2.973 | 2.979 | -0.006 | 1.000 | 4866165 | | 2.26(1.15-3.45) | | 1532 | |
| 8 4:2 FTS | | | | | | | | | | |
| 327.00 > 307.00 | 3.278 | 3.297 | -0.019 | 1.000 | 5061673 | 2.38 | | | 12968 | |
| D 7 M2-4:2 FTS | | | | | | | | | | |
| 329.00 > 81.00 | 3.278 | 3.297 | -0.019 | 0.792 | 2185368 | 2.17 | | 92.8 | 960 | |
| 10 Perfluorohexanoic acid | | | | | | | | | | |
| 313.00 > 269.00 | 3.330 | 3.339 | -0.009 | 1.003 | 13836739 | 2.58 | Target=13.78 | | 945 | |
| 313.00 > 119.00 | 3.320 | 3.339 | -0.019 | 1.000 | 1061407 | | 13.04(6.89-20.66) | | 734 | |
| D 11 13C2 PFHxA | | | | | | | | | | |
| 315.00 > 270.00 | 3.320 | 3.339 | -0.019 | 0.802 | 13892177 | 2.61 | | 104 | 5974 | |
| 12 Perfluoropentanesulfonic acid | | | | | | | | | | |
| 349.00 > 80.00 | 3.341 | 3.350 | -0.009 | 1.124 | 7814378 | 2.28 | Target=3.02 | | 1725 | |
| 349.00 > 99.00 | 3.341 | 3.350 | -0.009 | 1.124 | 2533332 | | 3.08(1.51-4.52) | | 1526 | |
| 13 HPFO-DA | | | | | | | | | | |
| 285.00 > 169.00 | 3.447 | 3.467 | -0.020 | 1.000 | 2715555 | 2.57 | | | 4298 | |

| Signal | RT | EXP RT | DLT RT | REL RT | Response | Amount ng/ml | Ratio(Limits) | %Rec | S/N | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| D 14 13C3 HFPO-DA | | | | | | | | | | |
| 287.00 > 169.00 | 3.447 | 3.467 | -0.020 | 0.833 | 2707455 | 2.49 | | 99.4 | 5493 | |
| 16 Perfluoroheptanoic acid | | | | | | | | | | |
| 363.00 > 319.00 | 3.740 | 3.756 | -0.016 | 1.000 | 12024504 | 2.41 | Target=3.84 | | 1302 | |
| 363.00 > 169.00 | 3.740 | 3.756 | -0.016 | 1.000 | 3255387 | | 3.69(1.92-5.76) | | 1863 | |
| D 18 13C4 PFHpA | | | | | | | | | | |
| 367.00 > 322.00 | 3.740 | 3.756 | -0.016 | 0.904 | 12317873 | 2.71 | | 108 | 8354 | |
| D 17 18O2 PFHxS | | | | | | | | | | |
| 403.00 > 84.00 | 3.740 | 3.756 | -0.016 | 0.904 | 5312882 | 2.40 | | 102 | 8582 | |
| 15 Perfluorohexanesulfonic acid | | | | | | | | | | |
| 399.00 > 80.00 | 3.740 | 3.756 | -0.016 | 1.000 | 6592703 | 2.48 | Target=3.50 | | 3248 | |
| 399.00 > 99.00 | 3.740 | 3.756 | -0.016 | 1.000 | 1779859 | | 3.70(1.75-5.25) | | 1126 | |
| 19 DONA | | | | | | | | | | |
| 377.00 > 251.00 | 3.789 | 3.803 | -0.014 | 0.842 | 37117029 | 2.53 | Target=2.42 | | 7689 | |
| 377.00 > 85.00 | 3.789 | 3.803 | -0.014 | 0.842 | 15119397 | | 2.45(1.21-3.63) | | 6540 | |
| D 20 M2-6:2 FTS | | | | | | | | | | |
| 429.00 > 81.00 | 4.115 | 4.137 | -0.022 | 0.994 | 1994342 | 2.36 | | 99.2 | 1335 | |
| 21 6:2 FTS | | | | | | | | | | |
| 427.00 > 407.00 | 4.115 | 4.137 | -0.022 | 1.000 | 4223076 | 2.19 | | | 3335 | |
| 22 Perfluorooctanoic acid | | | | | | | | | | |
| 413.00 > 369.00 | 4.131 | 4.154 | -0.023 | 0.998 | 10151401 | 2.54 | Target=2.94 | | 1074 | |
| 413.00 > 169.00 | 4.140 | 4.154 | -0.014 | 1.000 | 3545726 | | 2.86(1.47-4.41) | | 5788 | |
| 24 Perfluoroheptanesulfonic acid | | | | | | | | | | |
| 449.00 > 80.00 | 4.131 | 4.154 | -0.023 | 0.918 | 4078118 | 2.38 | Target=4.40 | | 1290 | |
| 449.00 > 99.00 | 4.131 | 4.154 | -0.023 | 0.918 | 908596 | | 4.49(2.20-6.60) | | 1239 | |
| $ 26 13C8 PFOA | | | | | | | | | | |
| 421.00 > 376.00 | 4.140 | 4.154 | -0.014 | 1.000 | 7350744 | 2.52 | | 103 | 4465 | |
| D 25 13C4 PFOA | | | | | | | | | | |
| 417.00 > 372.00 | 4.140 | 4.162 | -0.022 | 1.000 | 9789906 | 2.26 | | 90.5 | 5134 | |
| * 23 13C2 PFOA | | | | | | | | | | |
| 415.00 > 370.00 | 4.140 | 4.162 | -0.022 | | 10812430 | 2.50 | | | 9478 | |
| $ 28 13C8 PFOS | | | | | | | | | | |
| 507.00 > 99.00 | 4.494 | 4.523 | -0.029 | 1.086 | 1110519 | 2.37 | | 99.3 | 3175 | |
| D 27 13C4 PFOS | | | | | | | | | | |
| 503.00 > 80.00 | 4.502 | 4.523 | -0.021 | 1.088 | 3664048 | 2.44 | | 102 | 1647 | |
| 29 Perfluorooctanesulfonic acid | | | | | | | | | | |
| 499.00 > 80.00 | 4.502 | 4.531 | -0.029 | 1.000 | 3764469 | 2.37 | Target=4.53 | | 763 | |
| 499.00 > 99.00 | 4.502 | 4.531 | -0.029 | 1.000 | 794252 | | 4.74(2.26-6.79) | | 756 | |
| D 30 13C5 PFNA | | | | | | | | | | |
| 468.00 > 423.00 | 4.510 | 4.540 | -0.030 | 1.089 | 7526756 | 2.16 | | 86.3 | 10750 | |
| 31 Perfluorononanoic acid | | | | | | | | | | |
| 463.00 > 419.00 | 4.518 | 4.548 | -0.030 | 1.002 | 9627201 | 3.33 | Target=8.97 | | 1482 | |
| 463.00 > 169.00 | 4.518 | 4.548 | -0.030 | 1.002 | 1066862 | | 9.02(4.48-13.45) | | 1222 | |
| 32 9ClFOS | | | | | | | | | | |
| 531.00 > 351.00 | 4.702 | 4.730 | -0.028 | 1.045 | 12579834 | 2.54 | | | 14132 | |
| 34 Perfluorooctanesulfonamide | | | | | | | | | | |
| 498.00 > 78.00 | 4.820 | 4.828 | -0.008 | 1.000 | 5518852 | 2.44 | | | 3846 | |

| Signal | RT | EXP RT | DLT RT | REL RT | Response | Amount ng/ml | Ratio(Limits) | %Rec | S/N | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| D 33 13C8 FOSA | | | | | | | | | | |
| 506.00 > 78.00 | 4.820 | 4.828 | -0.008 | 1.164 | 6086932 | 2.52 | | 101 | 8593 | |
| 35 Perfluorononanesulfonic acid | | | | | | | | | | |
| 549.00 > 80.00 | 4.855 | 4.880 | -0.025 | 1.078 | 3332390 | 2.32 | Target=2.85 | | 1780 | |
| 549.00 > 99.00 | 4.855 | 4.880 | -0.025 | 1.078 | 1167139 | | 2.86(1.43-4.28) | | 1825 | |
| D 39 13C2 PFDA | | | | | | | | | | |
| 515.00 > 470.00 | 4.872 | 4.897 | -0.025 | 1.177 | 9524873 | 2.81 | | 113 | 20968 | |
| 37 Perfluorodecanoic acid | | | | | | | | | | |
| 513.00 > 469.00 | 4.880 | 4.907 | -0.027 | 1.002 | 8711509 | 2.37 | Target=10.16 | | 2562 | |
| 513.00 > 169.00 | 4.880 | 4.907 | -0.027 | 1.002 | 950044 | | 9.17(5.08-15.24) | | 289 | |
| D 38 M2-8:2 FTS | | | | | | | | | | |
| 529.00 > 81.00 | 4.880 | 4.907 | -0.027 | 1.179 | 2773294 | 2.27 | | 94.8 | 1504 | |
| 36 8:2 FTS | | | | | | | | | | |
| 527.00 > 507.00 | 4.880 | 4.907 | -0.027 | 1.000 | 5023116 | 2.44 | | | 6585 | |
| D 40 d3-NMeFOSAA | | | | | | | | | | |
| 573.00 > 419.00 | 5.039 | 5.075 | -0.036 | 1.217 | 5812322 | 2.56 | | 102 | 4359 | |
| 41 NMeFOSAA | | | | | | | | | | |
| 570.00 > 419.00 | 5.048 | 5.075 | -0.027 | 1.002 | 4006753 | 2.32 | | | 29628 | |
| 42 Perfluorodecanesulfonic acid | | | | | | | | | | |
| 599.00 > 80.00 | 5.175 | 5.202 | -0.027 | 1.150 | 2861688 | 2.24 | Target=2.77 | | 2212 | |
| 599.00 > 99.00 | 5.175 | 5.202 | -0.027 | 1.150 | 1029720 | | 2.78(1.38-4.15) | | 1871 | |
| D 43 13C2 PFUnA | | | | | | | | | | |
| 565.00 > 520.00 | 5.202 | 5.229 | -0.027 | 1.257 | 8341373 | 2.49 | | 99.4 | 5432 | |
| 45 Perfluoroundecanoic acid | | | | | | | | | | |
| 563.00 > 519.00 | 5.211 | 5.229 | -0.018 | 1.002 | 6461307 | 2.67 | Target=8.43 | | 2579 | |
| 563.00 > 169.00 | 5.211 | 5.229 | -0.018 | 1.002 | 719900 | | 8.98(4.22-12.65) | | 369 | |
| D 44 d5-NEtFOSAA | | | | | | | | | | |
| 589.00 > 419.00 | 5.202 | 5.238 | -0.036 | 1.257 | 5997387 | 2.50 | | 99.8 | 4672 | |
| 46 NEtFOSA | | | | | | | | | | |
| 584.00 > 419.00 | 5.211 | 5.248 | -0.037 | 1.002 | 3984863 | 2.46 | | | 19621 | |
| D 47 d7-N-MeFOSE-M | | | | | | | | | | |
| 623.00 > 59.00 | 5.259 | 5.279 | -0.020 | 1.270 | 8248407 | 13.8 | | 110 | 5135 | |
| 48 N-MeFOSE-M | | | | | | | | | | |
| 616.00 > 59.00 | 5.280 | 5.289 | -0.009 | 1.004 | 1770356 | 2.49 | | | 2365 | |
| D 49 d-N-MeFOSA-M | | | | | | | | | | |
| 515.00 > 169.00 | 5.290 | 5.299 | -0.009 | 1.278 | 2120375 | 2.49 | | 99.8 | 47.3 | |
| 50 NMeFOSA | | | | | | | | | | |
| 512.00 > 169.00 | 5.300 | 5.299 | 0.001 | 1.002 | 1661720 | 2.04 | | | 534 | |
| 51 11ClFOS | | | | | | | | | | |
| 631.00 > 451.00 | 5.340 | 5.375 | -0.035 | 1.186 | 15367392 | 2.44 | | | 25471 | |
| D 52 d9-N-EtFOSE-M | | | | | | | | | | |
| 639.00 > 59.00 | 5.437 | 5.448 | -0.011 | 1.313 | 7931566 | 10.8 | | 86.3 | 2325 | |
| 53 N-EtFOSE-M | | | | | | | | | | |
| 630.00 > 59.00 | 5.448 | 5.459 | -0.011 | 1.002 | 1687494 | 2.48 | | | 1646 | |
| D 54 d-N-EtFOSA-M | | | | | | | | | | |
| 531.00 > 169.00 | 5.469 | 5.469 | 0.0 | 1.321 | 2208252 | 2.54 | | 102 | 194 | |

| Signal | RT | EXP RT | DLT RT | REL RT | Response | Amount ng/ml | Ratio(Limits) | %Rec | S/N | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| 55 N-EtFOSA-M | | | | | | | | | | |
| 526.00 > 169.00 | 5.469 | 5.480 | -0.011 | 1.000 | 1790628 | 1.92 | | | 346 | |
| D 56 13C2 PFDoA | | | | | | | | | | |
| 615.00 > 570.00 | 5.504 | 5.530 | -0.026 | 1.330 | 10073696 | 3.04 | | 122 | 13535 | |
| 57 Perfluorododecanoic acid | | | | | | | | | | |
| 613.00 > 569.00 | 5.504 | 5.530 | -0.026 | 1.000 | 8325750 | 2.02 | Target=9.12 | | 3543 | |
| 613.00 > 169.00 | 5.491 | 5.530 | -0.039 | 0.998 | 968463 | | 8.60(4.56-13.69) | | 1554 | |
| 58 10:2 FTS | | | | | | | | | | |
| 627.00 > 607.00 | 5.517 | 5.555 | -0.038 | 1.130 | 5499389 | 2.36 | | | 8426 | |
| 59 PFDoS | | | | | | | | | | |
| 699.00 > 80.00 | 5.723 | 5.774 | -0.051 | 1.271 | 1194979 | 2.34 | Target=0.72 | | 1271 | |
| 699.00 > 99.00 | 5.723 | 5.774 | -0.051 | 1.271 | 1702168 | | 0.70(0.36-1.07) | | 4690 | |
| 60 Perfluorotridecanoic acid | | | | | | | | | | |
| 663.00 > 619.00 | 5.774 | 5.812 | -0.038 | 1.049 | 7320609 | 1.93 | Target=6.78 | | 3518 | |
| 663.00 > 169.00 | 5.774 | 5.812 | -0.038 | 1.049 | 1050084 | | 6.97(3.39-10.17) | | 717 | |
| D 61 13C2 PFTeDA | | | | | | | | | | |
| 715.00 > 670.00 | 6.012 | 6.053 | -0.041 | 1.452 | 6199387 | 2.27 | | 90.8 | 9309 | |
| 62 Perfluorotetradecanoic acid | | | | | | | | | | |
| 713.00 > 169.00 | 6.012 | 6.063 | -0.051 | 1.000 | 600820 | 2.87 | Target=0.85 | | 1809 | |
| 713.00 > 219.00 | 6.012 | 6.063 | -0.051 | 1.000 | 635923 | | 0.94(0.43-1.28) | | 317 | |
| D 64 13C2 PFHxDA | | | | | | | | | | |
| 815.00 > 770.00 | 6.481 | 6.530 | -0.049 | 1.566 | 5049478 | 2.53 | | 101 | 6411 | |
| 63 Perfluorohexadecanoic acid | | | | | | | | | | |
| 813.00 > 769.00 | 6.473 | 6.530 | -0.057 | 0.999 | 4526506 | 2.53 | Target=10.21 | | 2441 | |
| 813.00 > 169.00 | 6.473 | 6.530 | -0.057 | 0.999 | 478101 | | 9.47(5.11-15.32) | | 2280 | |
| 65 Perfluorooctadecanoic acid | | | | | | | | | | |
| 913.00 > 869.00 | 6.954 | 7.047 | -0.093 | 1.073 | 3440193 | 2.58 | Target=12.45 | | 2272 | |
| 913.00 > 169.00 | 6.954 | 7.047 | -0.093 | 1.073 | 254124 | | 13.54(6.22-18.67) | | 1831 | |

## Reagents:

LCPFCIC_FULL_00044 Amount Added: 1.00 Units: mL

Report Date: 26-Aug-2020 10:44:06 Chrom Revision: 2.3 20-Aug-2020 13:57:12

Eurofins TestAmerica, Sacramento

Data File: \\chromfs\Sacramento\ChromData\A18\20200825-102078.b\2020.08.25_A18_ICAL_A_019.d

Injection Date: 25-Aug-2020 17:56:13 Instrument ID: A18

Lims ID: ICV

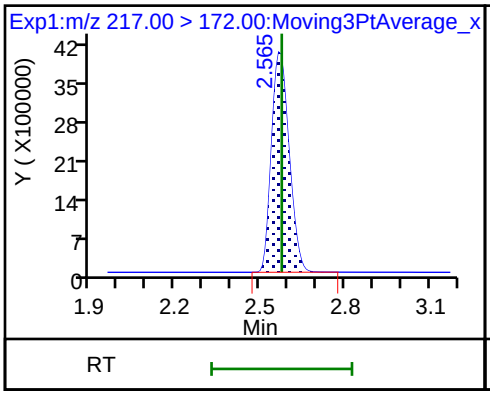
Client ID:

Operator ID: TAISACA18-PC\A-18 ALS Bottle#: 14 Worklist Smp#: 10

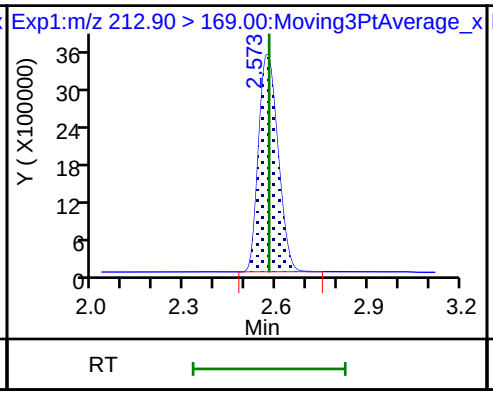
Injection Vol: 20.0 ul Dil. Factor: 1.0000

Method: PFAS_A18V2 Limit Group: LC PFC ICAL

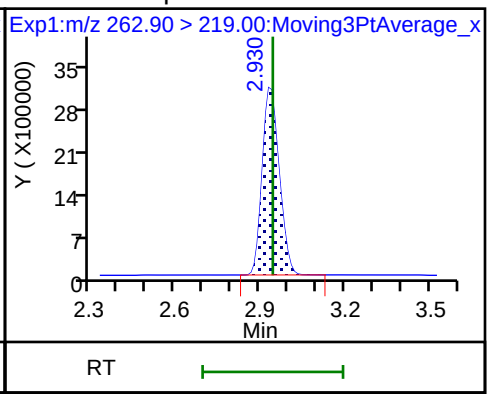
D 1 13C4 PFBA



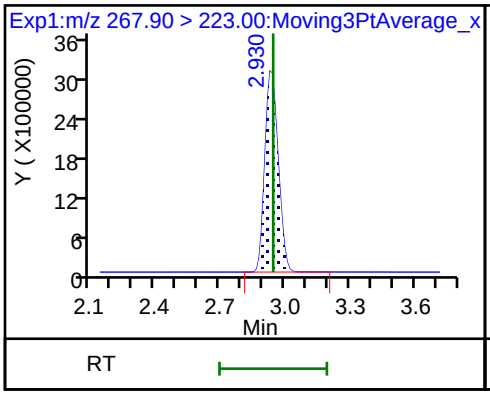

2 Perfluorobutanoic acid



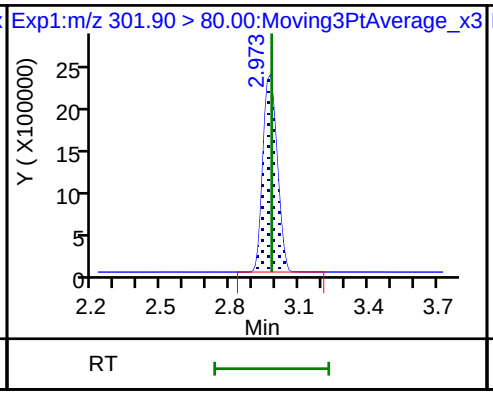

5 Perfluoropentanoic acid



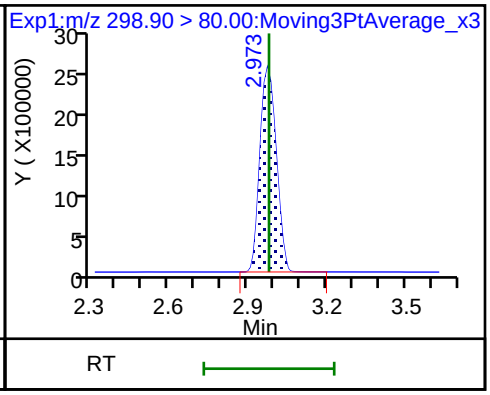

D 4 13C5 PFPeA



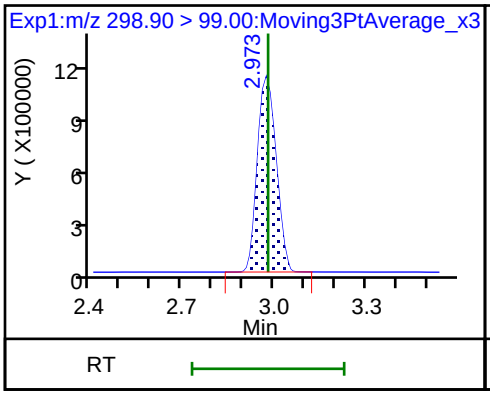

D 9 13C3 PFBS



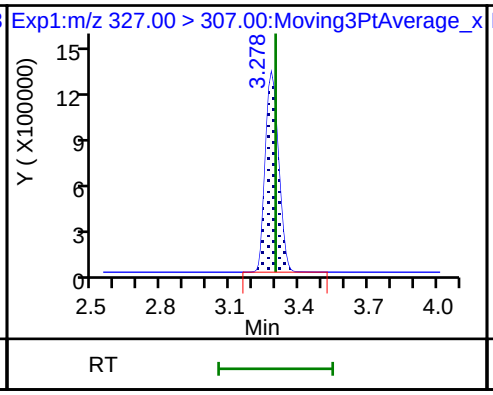

6 Perfluorobutanesulfonic acid



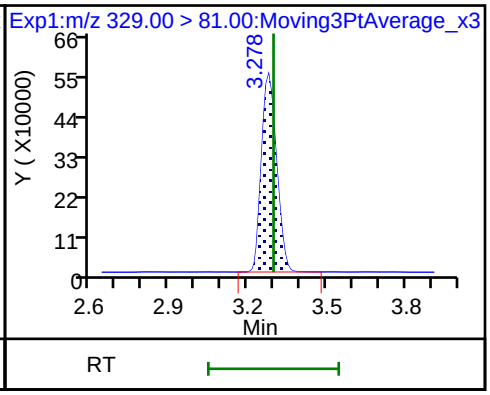

6 Perfluorobutanesulfonic acid



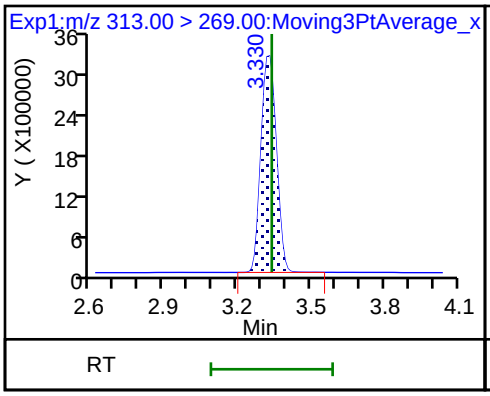

8 4:2 FTS



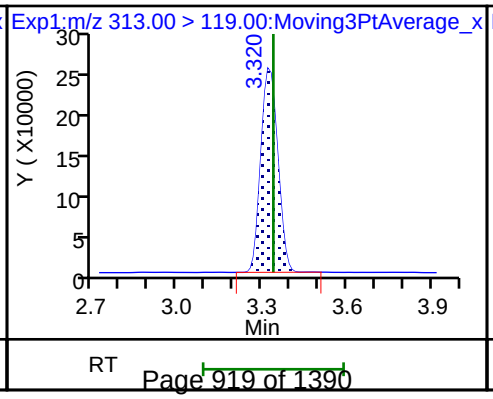

D 7 M2-4:2 FTS



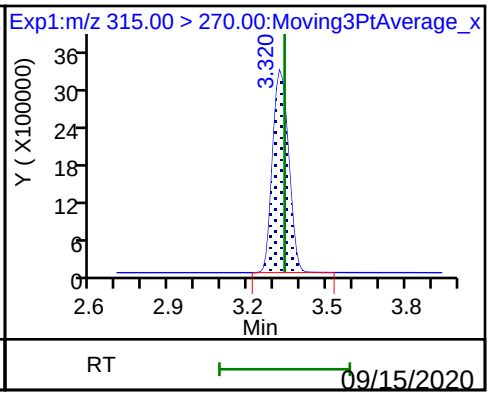

10 Perfluorohexanoic acid



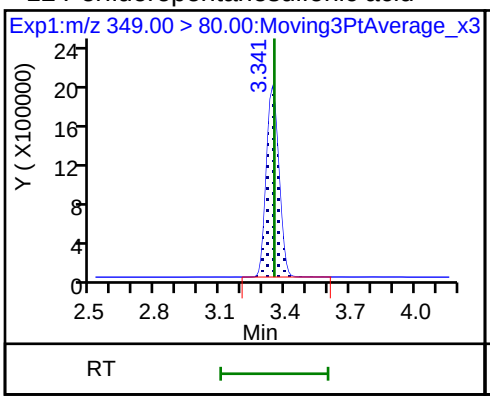

10 Perfluorohexanoic acid



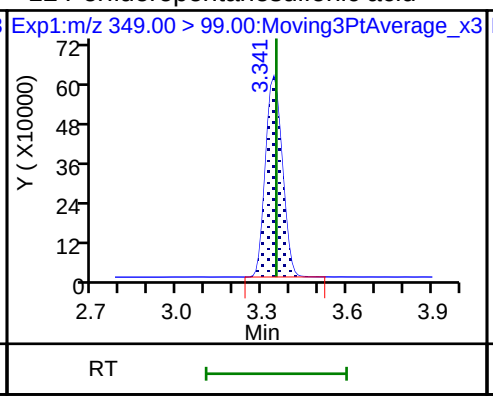

D 11 13C2 PFHxA



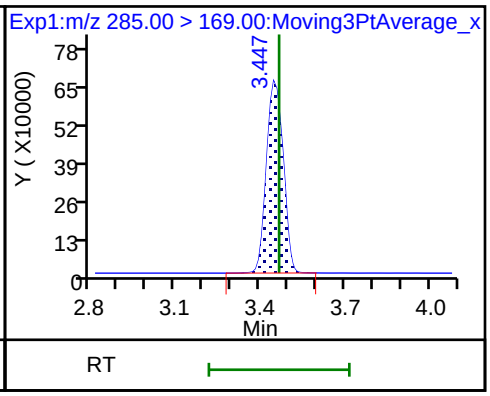
12 Perfluoropentanesulfonic acid



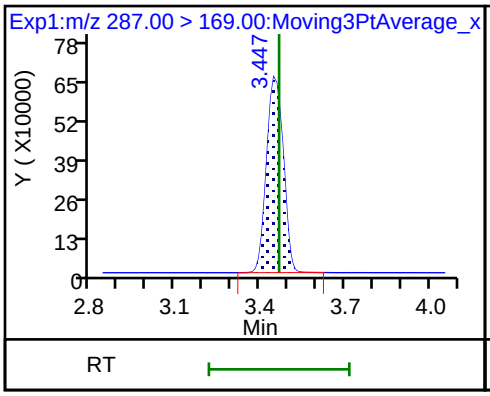

12 Perfluoropentanesulfonic acid



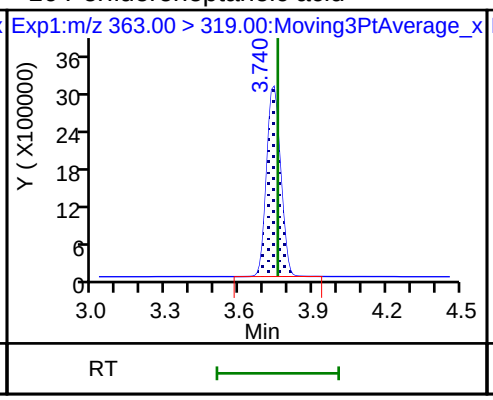

13 HPFO-DA



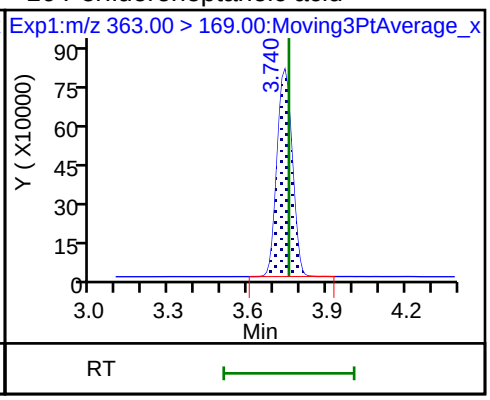

D 14 13C3 HFPO-DA



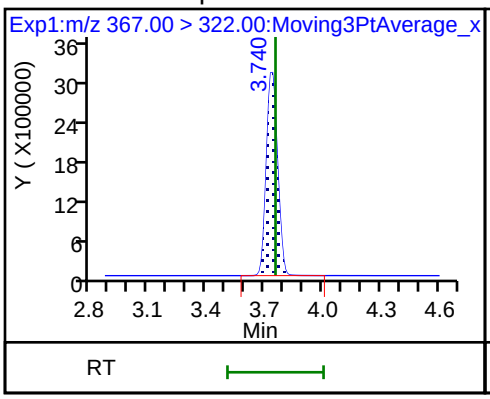

16 Perfluoroheptanoic acid



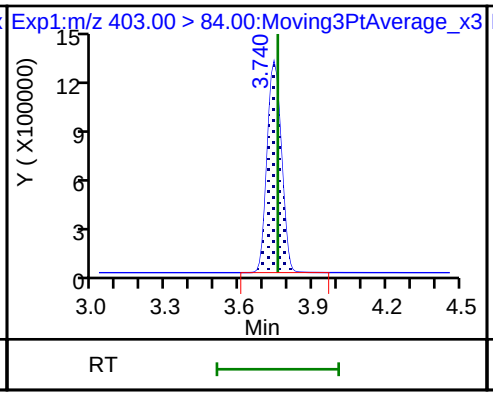

16 Perfluoroheptanoic acid



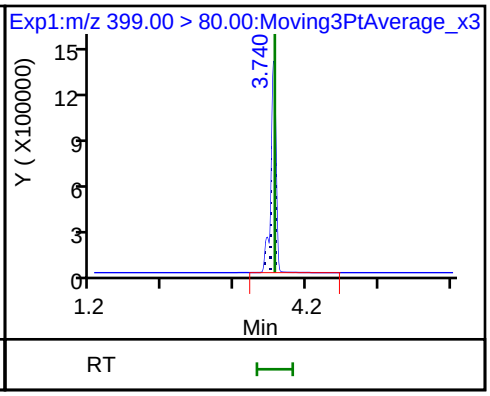

D 18 13C4 PFHpA



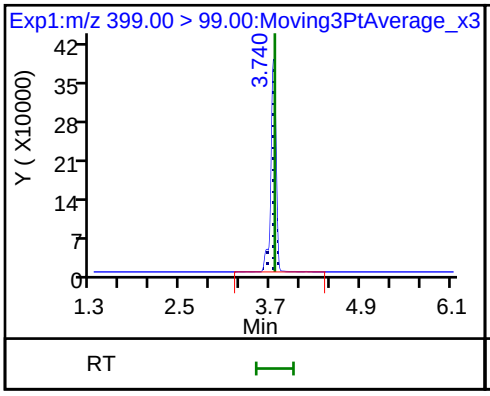

D 17 18O2 PFHxS



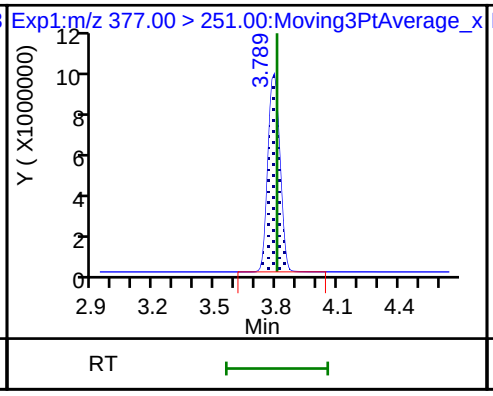

15 Perfluorohexanesulfonic acid



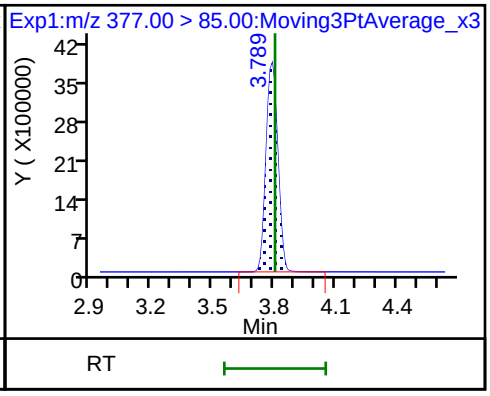

15 Perfluorohexanesulfonic acid



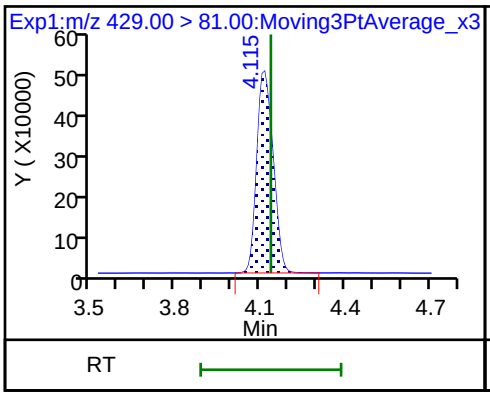

19 DONA



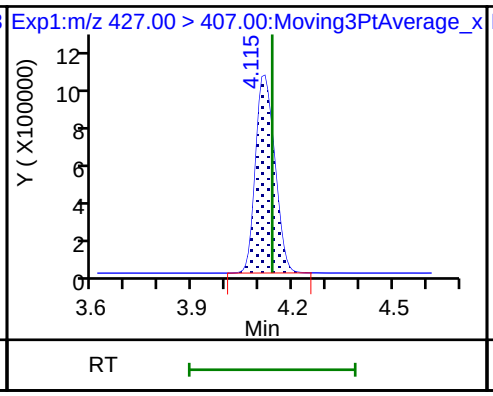

19 DONA



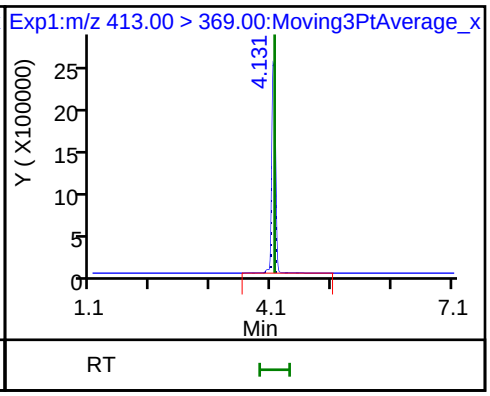
D 20 M2-6:2 FTS



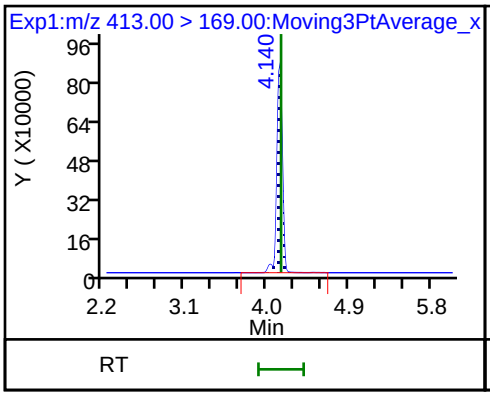

21 6:2 FTS



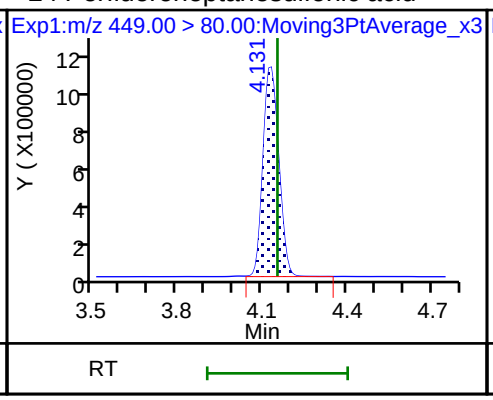

22 Perfluorooctanoic acid



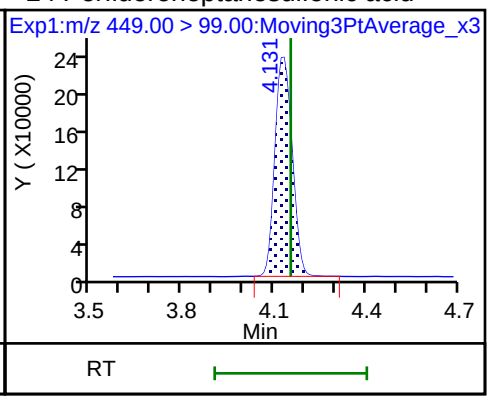

22 Perfluorooctanoic acid



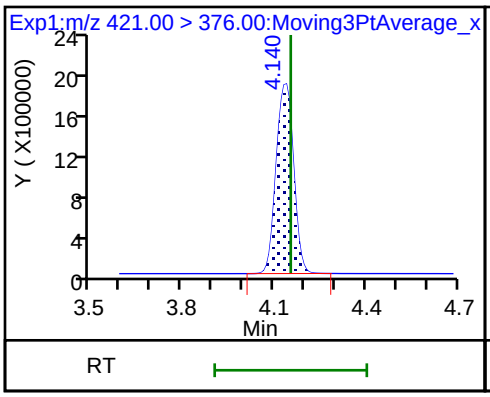

24 Perfluoroheptanesulfonic acid



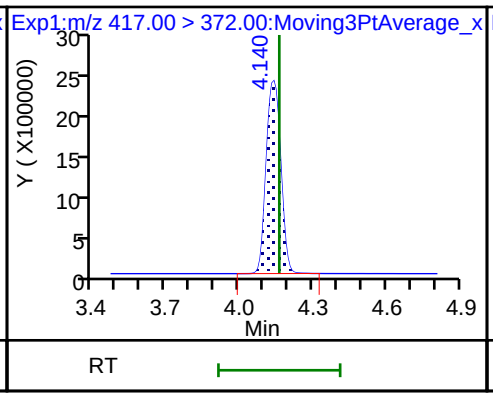

24 Perfluoroheptanesulfonic acid



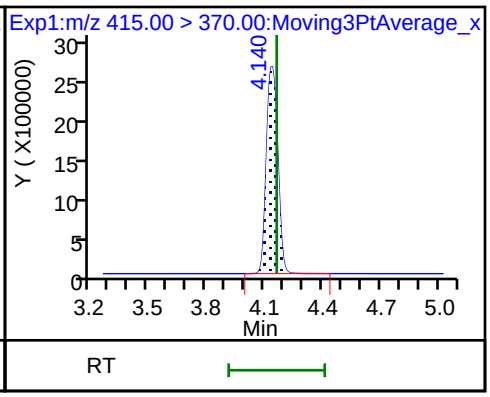

$ 26 13C8 PFOA



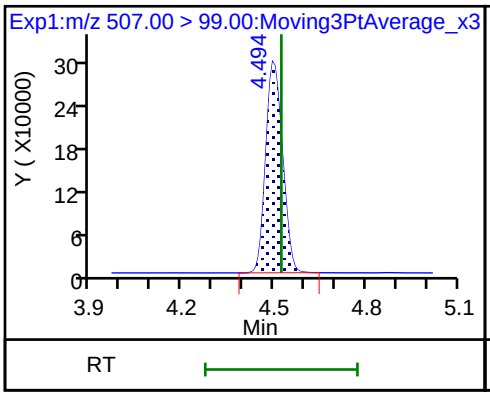

D 25 13C4 PFOA



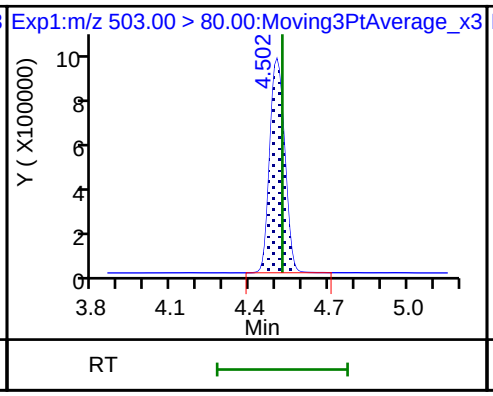

* 23 13C2 PFOA



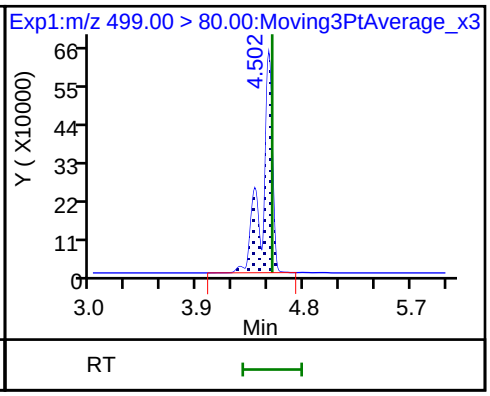

$ 28 13C8 PFOS



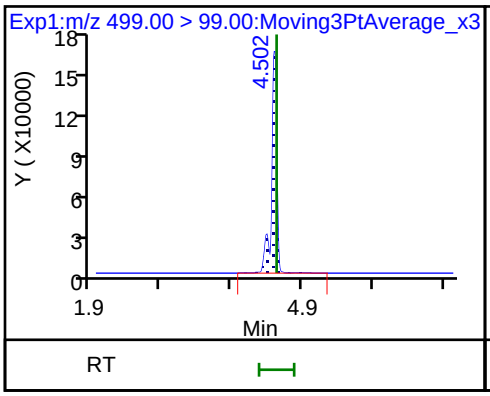

D 27 13C4 PFOS



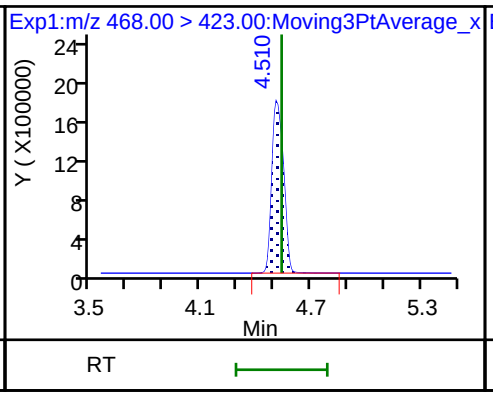

29 Perfluorooctanesulfonic acid



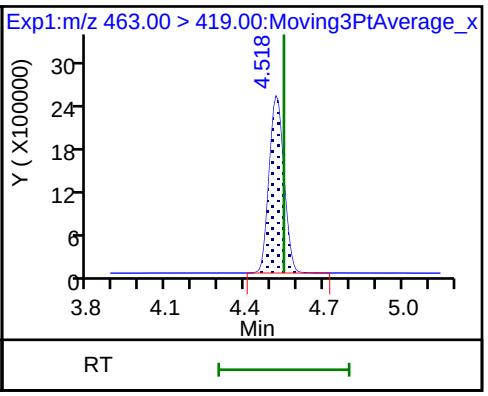
29 Perfluorooctanesulfonic acid



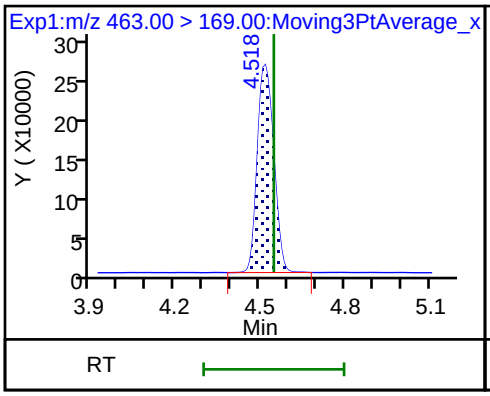

D 30 13C5 PFNA



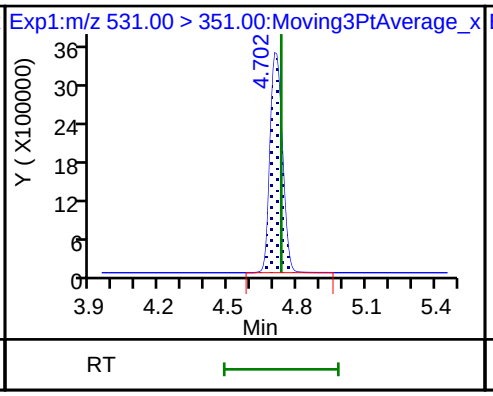

31 Perfluorononanoic acid



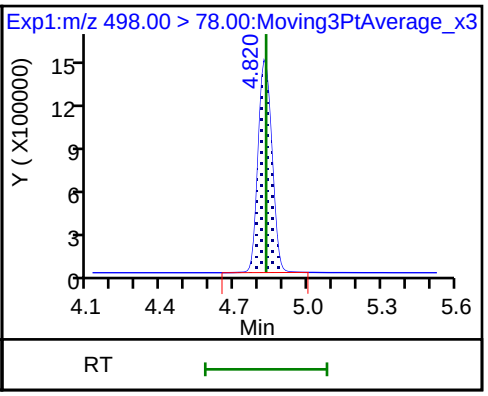

31 Perfluorononanoic acid



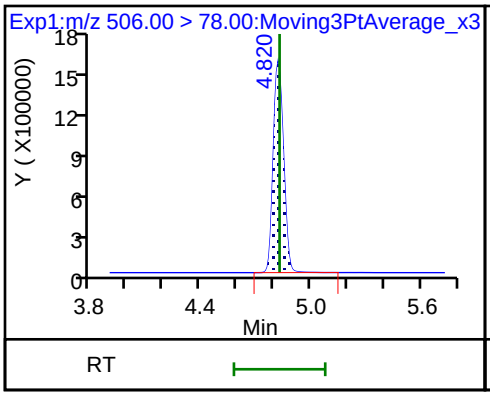

32 9ClFOS



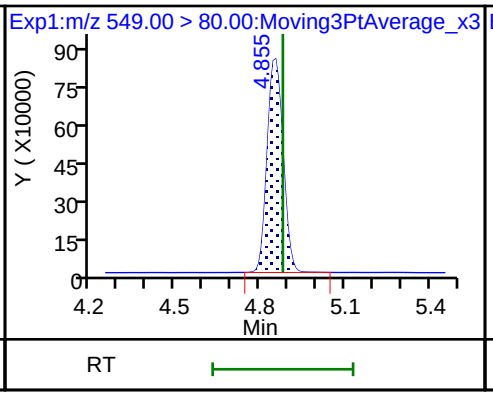

34 Perfluorooctanesulfonamide



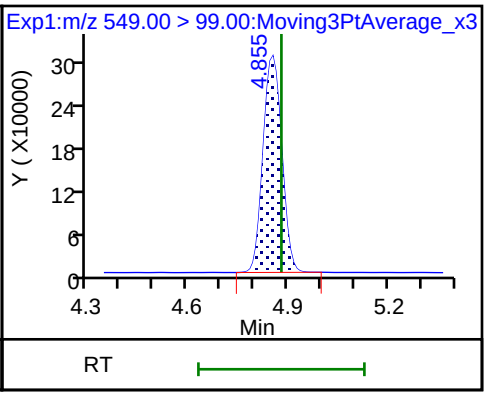

D 33 13C8 FOSA



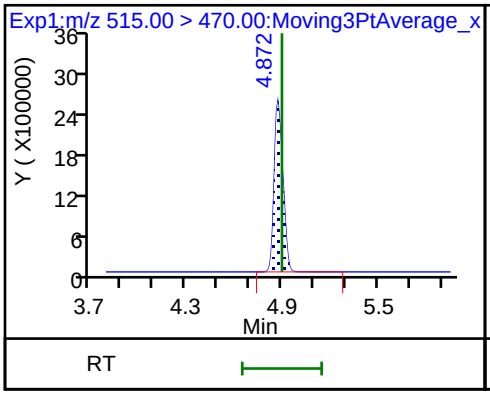

35 Perfluorononanesulfonic acid



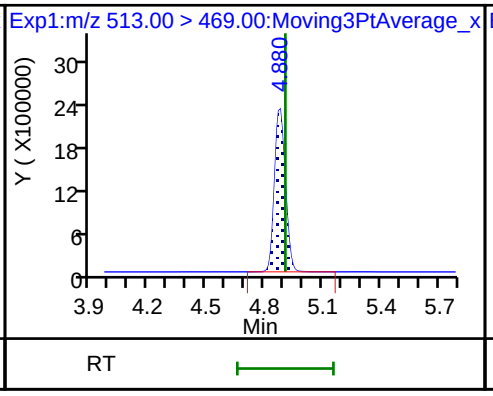

35 Perfluorononanesulfonic acid



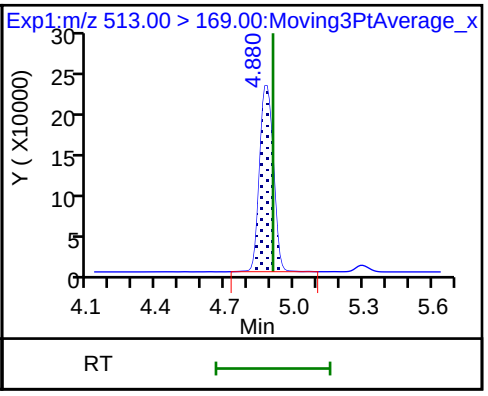

D 39 13C2 PFDA



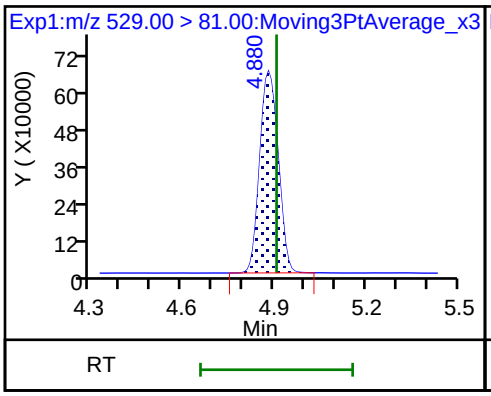

37 Perfluorodecanoic acid



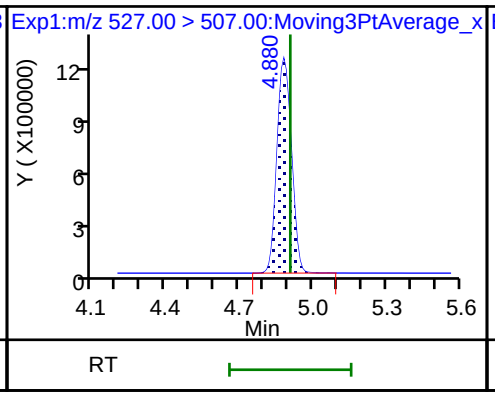

37 Perfluorodecanoic acid



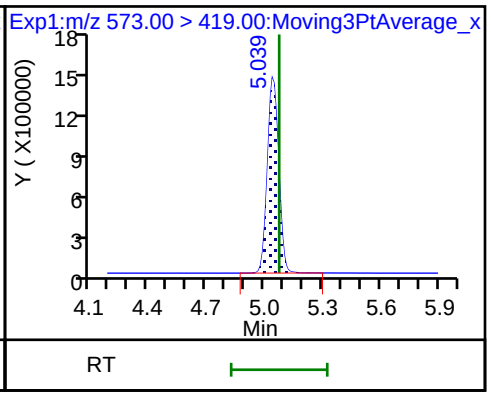
D 38 M2-8:2 FTS



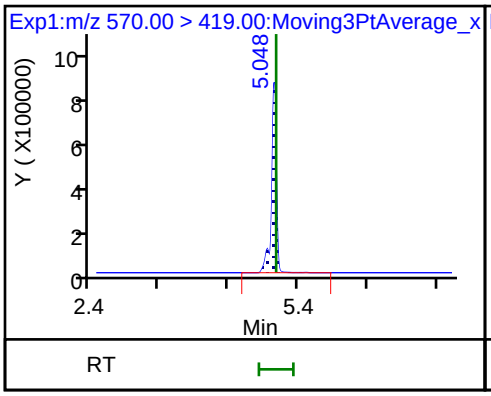

36 8:2 FTS



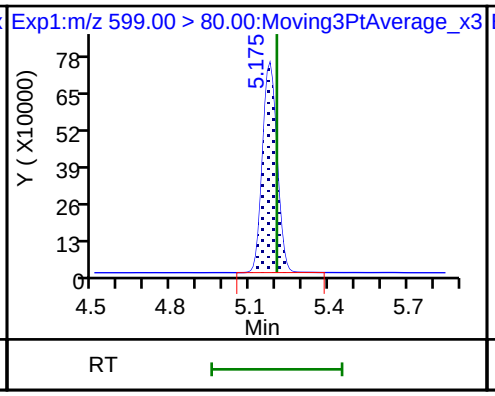

D 40 d3-NMeFOSAA



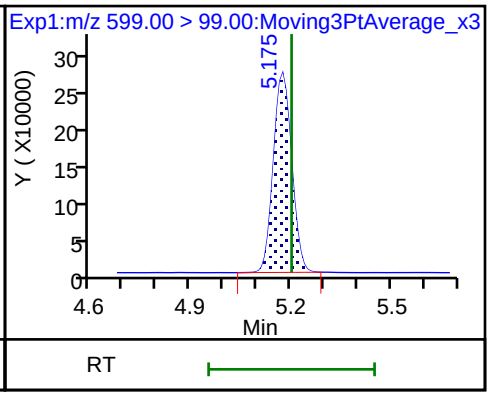

41 NMeFOSAA



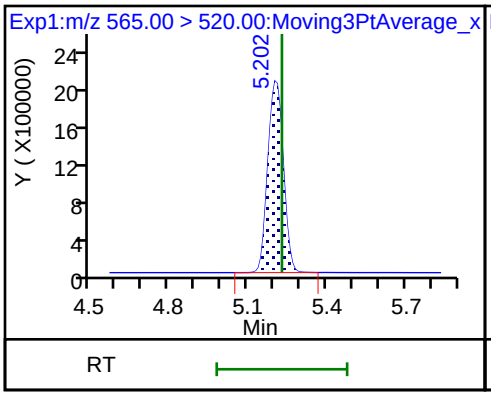

42 Perfluorodecanesulfonic acid



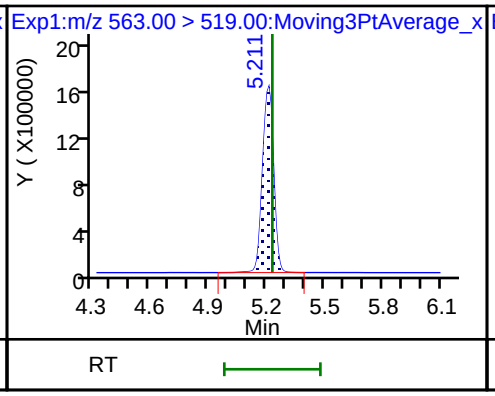

42 Perfluorodecanesulfonic acid



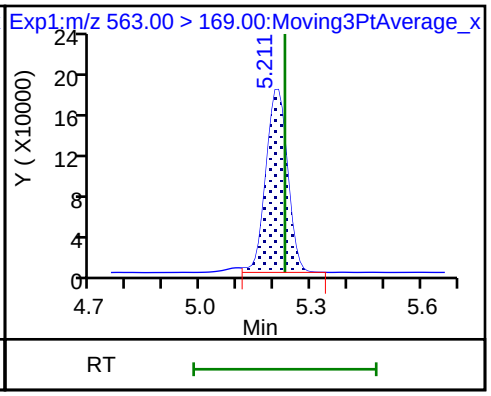

D 43 13C2 PFUnA



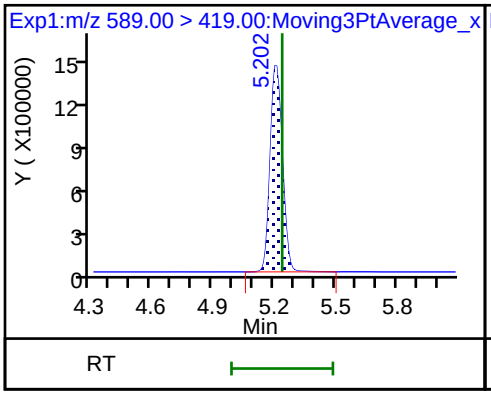

45 Perfluoroundecanoic acid



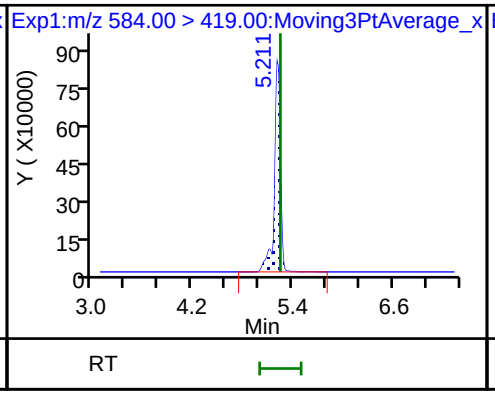

45 Perfluoroundecanoic acid



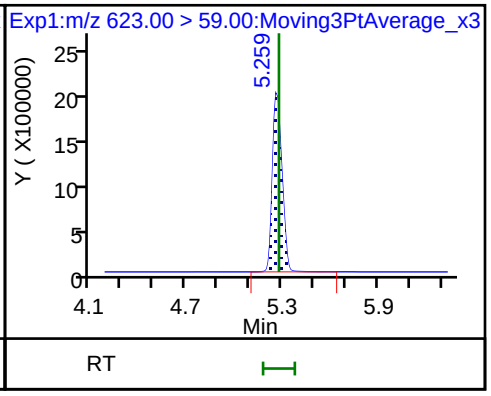

D 44 d5-NEtFOSAA



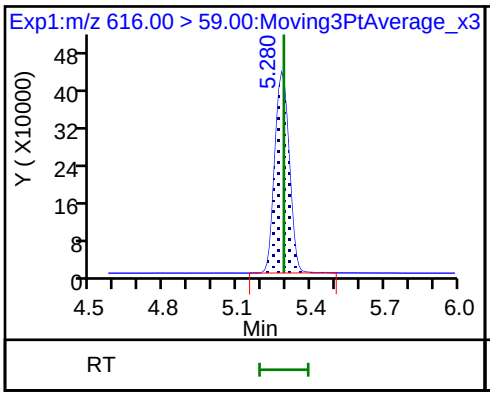

46 NEtFOSA



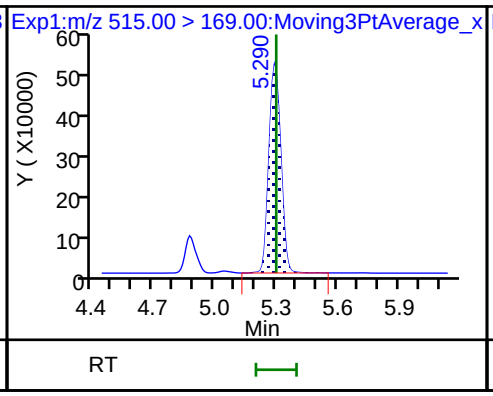

D 47 d7-N-MeFOSE-M



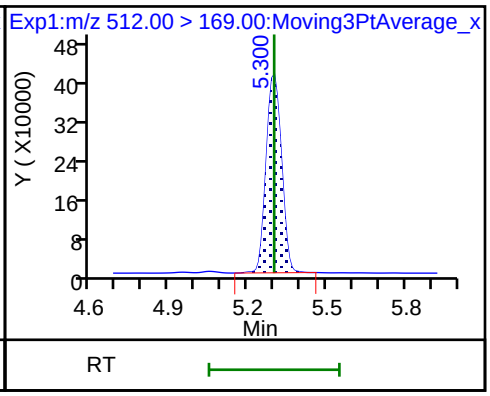
48 N-MeFOSE-M



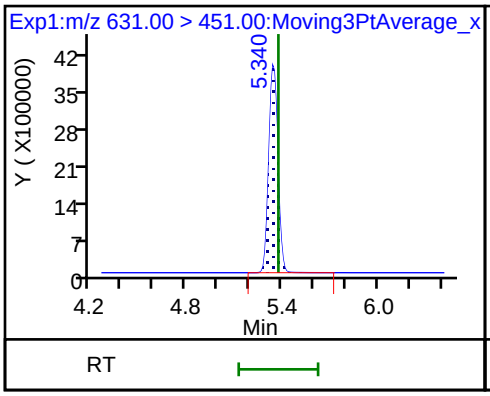

D 49 d-N-MeFOSA-M



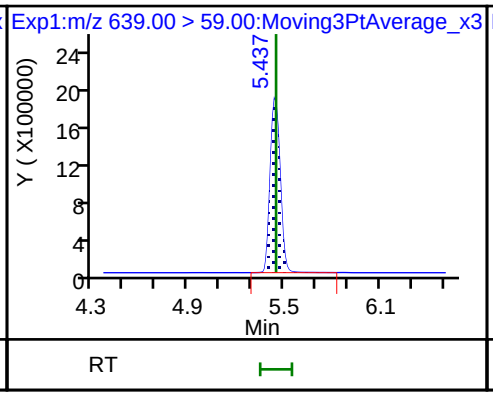

50 NMeFOSA



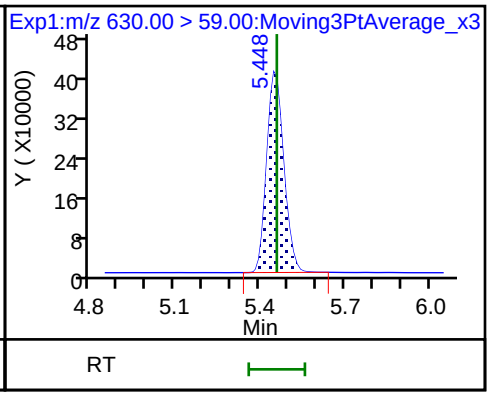

51 11ClFOS



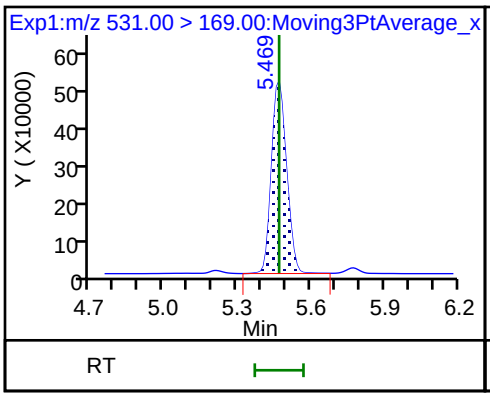

D 52 d9-N-EtFOSE-M



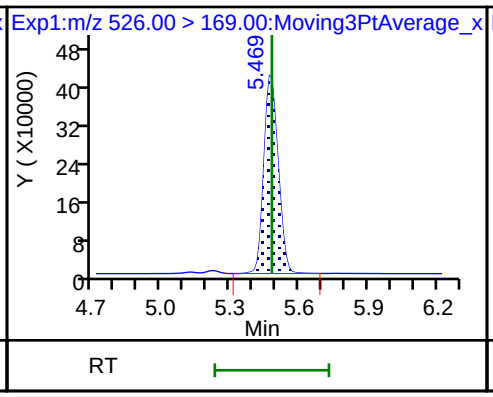

53 N-EtFOSE-M



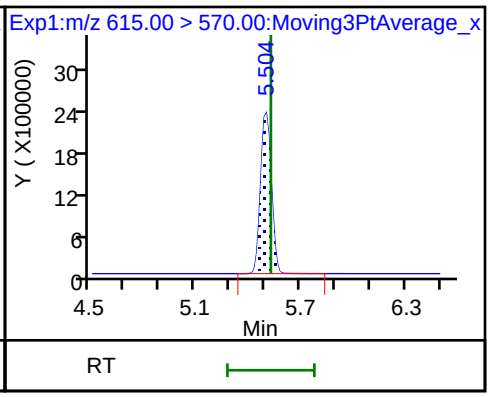

D 54 d-N-EtFOSA-M



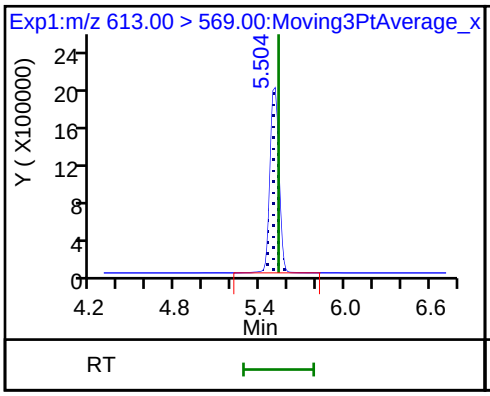

55 N-EtFOSA-M



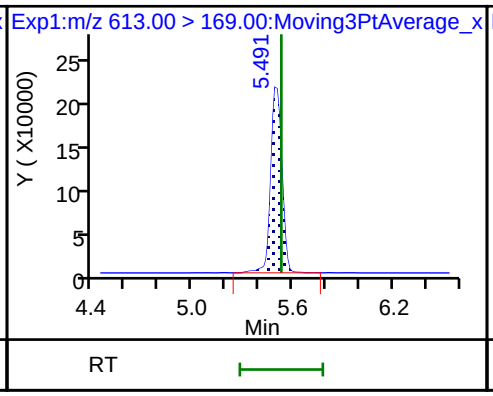

D 56 13C2 PFDoA



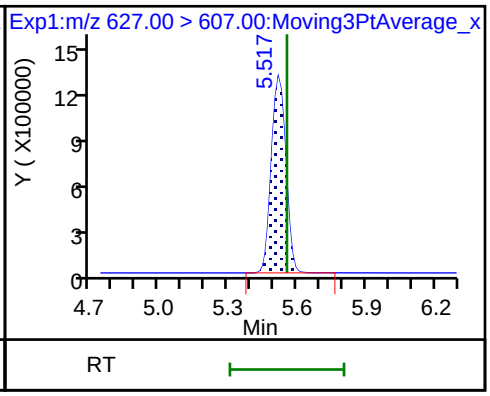

57 Perfluorododecanoic acid



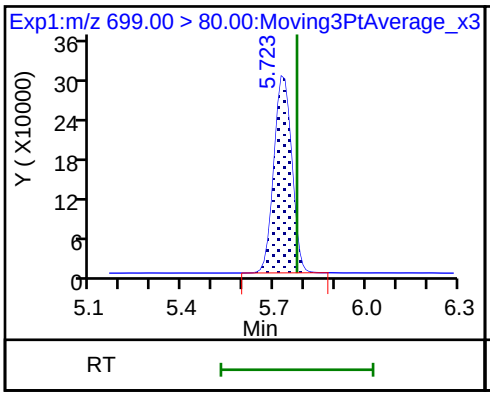

57 Perfluorododecanoic acid



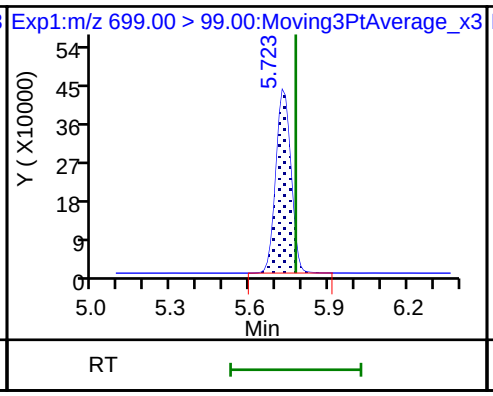

58 10:2 FTS



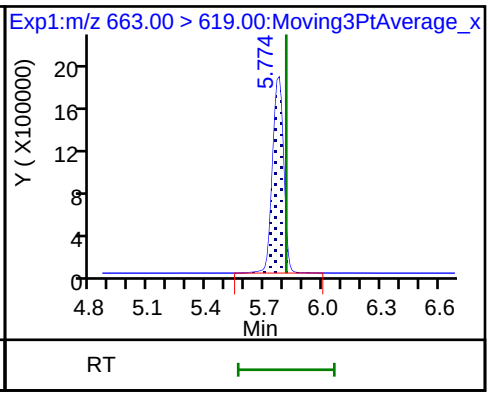
59 PFDoS



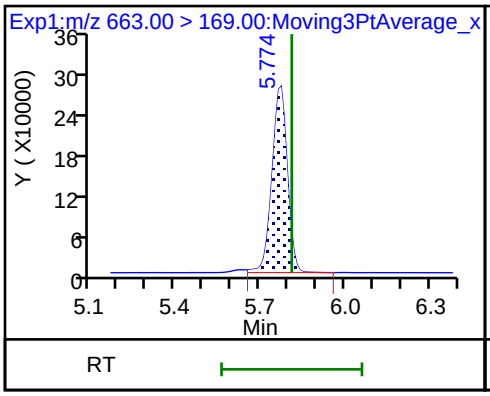

59 PFDoS



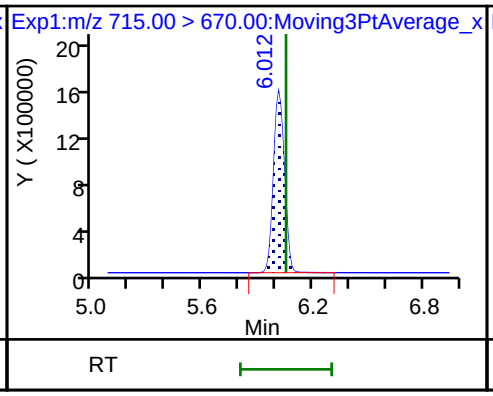

60 Perfluorotridecanoic acid



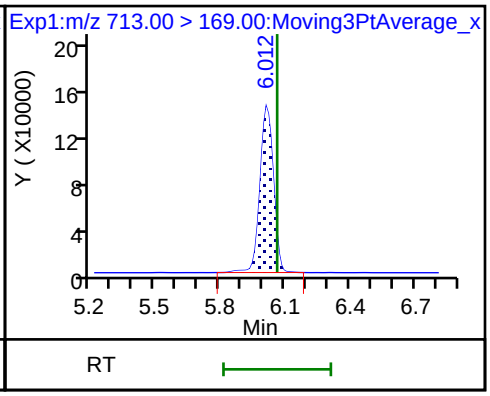

60 Perfluorotridecanoic acid



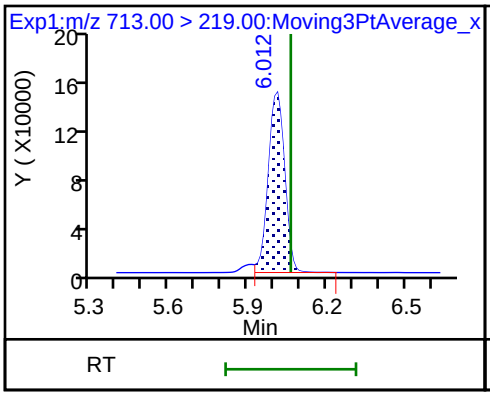

D 61 13C2 PFTeDA



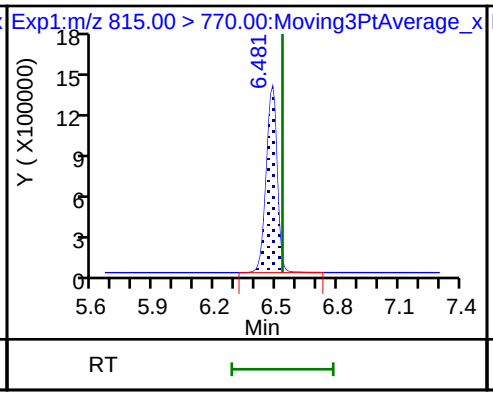

62 Perfluorotetradecanoic acid



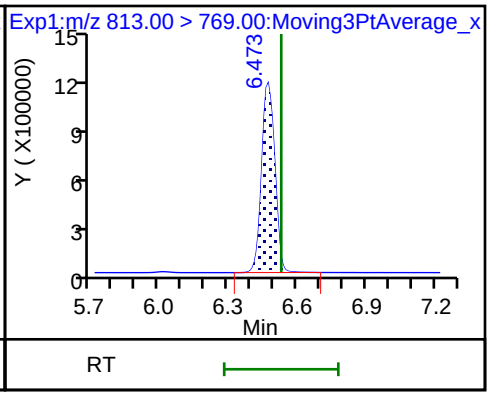

62 Perfluorotetradecanoic acid



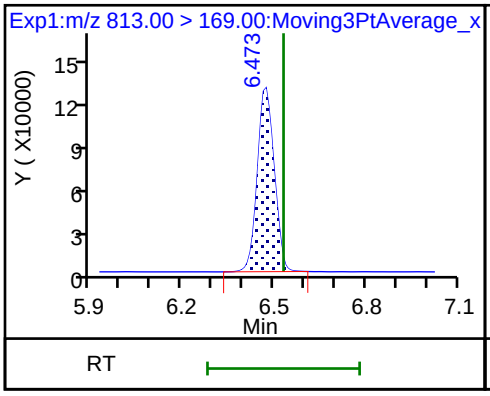

D 64 13C2 PFHxDA



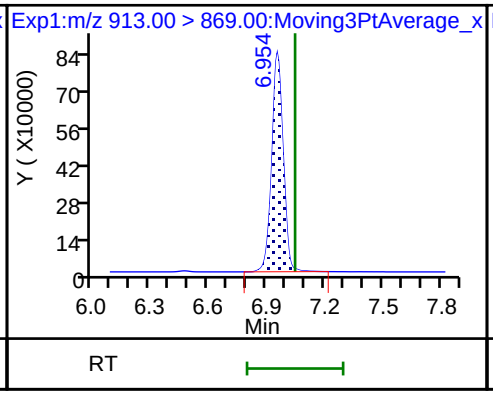

63 Perfluorohexadecanoic acid



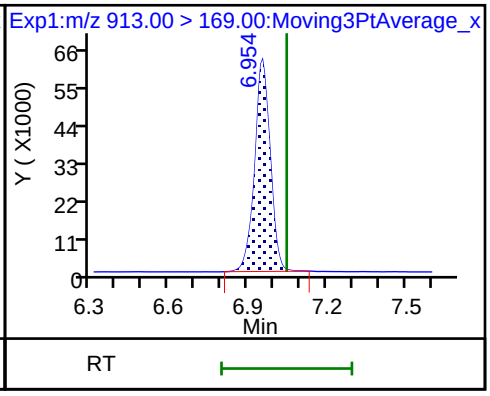

63 Perfluorohexadecanoic acid




65 Perfluorooctadecanoic acid




65 Perfluorooctadecanoic acid



FORM VII
LCMS CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Sacramento  Job No.: 460-217547-1

SDG No.:

Lab Sample ID: CCVL 320-410948/2  Calibration Date: 09/10/2020 12:45

Instrument ID: A18  Calib Start Date: 08/25/2020 16:43

GC Column: Gemini C18 3x50  ID: 3.00(mm)  Calib End Date: 08/25/2020 17:37

Lab File ID: 2020.09.10_A18_PFC_AAA_017.d  Conc. Units: ng/mL

| ANALYTE | CURVE TYPE | AVE RRF | RRF | MIN RRF | CALC AMOUNT | SPIKE AMOUNT | %D | MAX %D |
|---|---|---|---|---|---|---|---|---|
| Perfluorobutanoic acid (PFBA) | AveID | 0.8679 | 0.7817 | | 0.0450 | 0.0500 | -9.9 | 50.0 |
| Perfluoropentanoic acid (PFPeA) | AveID | 0.997 | 1.073 | | 0.0538 | 0.0500 | 7.6 | 50.0 |
| Perfluorobutanesulfonic acid (PFBS) | AveID | 1.010 | 0.9302 | | 0.0407 | 0.0442 | -7.9 | 50.0 |
| 4:2 FTS | AveID | 2.273 | 2.317 | | 0.476 | 0.467 | 1.9 | 50.0 |
| Perfluorohexanoic acid (PFHxA) | AveID | 0.9638 | 0.9359 | | 0.0486 | 0.0500 | -2.9 | 50.0 |
| Perfluoropentanesulfonic acid (PFPeS) | AveID | 0.7925 | 0.7304 | | 0.0432 | 0.0469 | -7.8 | 50.0 |
| HFPO-DA (GenX) | AveID | 0.9742 | 0.9127 | | 0.0468 | 0.0500 | -6.3 | 50.0 |
| Perfluoroheptanoic acid (PFHpA) | AveID | 1.014 | 0.9412 | | 0.0464 | 0.0500 | -7.2 | 50.0 |
| Perfluorohexanesulfonic acid (PFHxS) | AveID | 1.181 | 1.174 | | 0.0452 | 0.0455 | -0.6 | 50.0 |
| 4,8-Dioxa-3H-perfluorononanoic acid (ADONA) | AveID | 9.582 | 8.243 | | 0.0405 | 0.0471 | -14.0 | 50.0 |
| 6:2 FTS | AveID | 2.299 | 2.339 | | 0.482 | 0.474 | 1.8 | 50.0 |
| Perfluoroheptanesulfonic Acid (PFHpS) | AveID | 1.118 | 1.038 | | 0.0442 | 0.0476 | -7.1 | 50.0 |
| Perfluorooctanoic acid (PFOA) | AveID | 1.020 | 1.059 | | 0.0519 | 0.0500 | 3.8 | 50.0 |
| Perfluorooctanesulfonic acid (PFOS) | AveID | 1.035 | 1.043 | | 0.0467 | 0.0464 | 0.7 | 50.0 |
| Perfluorononanoic acid (PFNA) | AveID | 0.9590 | 0.9003 | | 0.0469 | 0.0500 | -6.1 | 50.0 |
| F-53B Major | AveID | 3.236 | 2.895 | | 0.0417 | 0.0466 | -10.5 | 50.0 |
| Perfluorooctanesulfonamide (FOSA) | AveID | 0.9305 | 0.8846 | | 0.0475 | 0.0500 | -4.9 | 50.0 |
| Perfluorononanesulfonic acid (PFNS) | AveID | 0.9368 | 0.8579 | | 0.0440 | 0.0480 | -8.4 | 50.0 |
| Perfluorodecanoic acid (PFDA) | AveID | 0.9639 | 0.8086 | | 0.0419 | 0.0500 | -16.1 | 50.0 |
| 8:2 FTS | AveID | 1.775 | 1.605 | | 0.433 | 0.479 | -9.6 | 50.0 |
| N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA) | AveID | 0.7417 | 0.5816 | | 0.392 | 0.500 | -21.6 | 50.0 |
| Perfluorodecanesulfonic acid (PFDS) | AveID | 0.8350 | 0.6975 | | 0.0403 | 0.0482 | -16.5 | 50.0 |
| Perfluoroundecanoic acid (PFUnA) | AveID | 0.7253 | 0.5947 | | 0.0410 | 0.0500 | -18.0 | 50.0 |
| N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA) | AveID | 0.6758 | 0.5986 | | 0.443 | 0.500 | -11.4 | 50.0 |
| NMeFOSE | AveID | 1.080 | 1.152 | | 0.0534 | 0.0500 | 6.7 | 50.0 |
| NMeFOSA | AveID | 0.9606 | 0.8433 | | 0.750 | 0.0500 | -12.2 | 50.0 |
| F-53B Minor | AveID | 4.102 | 3.278 | | 0.0376 | 0.0471 | -20.1 | 50.0 |
| NEtFOSE | AveID | 1.073 | 0.997 | | 0.0464 | 0.0500 | -7.1 | 50.0 |
| NEtFOSA | AveID | 1.058 | 0.9735 | | 1.00 | 0.0500 | -8.0 | 50.0 |
| Perfluorododecanoic acid (PFDoA) | AveID | 1.023 | 0.8265 | | 0.0404 | 0.0500 | -19.2 | 50.0 |
| 10:2 FTS | AveID | 2.014 | 1.975 | | 0.0473 | 0.0482 | -2.0 | 50.0 |
| Perfluorododecanesulfonic acid (PFDoS) | AveID | 0.3329 | 0.2958 | | 0.0430 | 0.0484 | -11.1 | 50.0 |

FORM VII 537 (modified)

FORM VII
LCMS CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Sacramento  Job No.: 460-217547-1

SDG No.:

Lab Sample ID: CCVL 320-410948/2  Calibration Date: 09/10/2020 12:45

Instrument ID: A18  Calib Start Date: 08/25/2020 16:43

GC Column: Gemini C18 3x50  ID: 3.00(mm)  Calib End Date: 08/25/2020 17:37

Lab File ID: 2020.09.10_A18_PFC_AAA_017.d  Conc. Units: ng/mL

| ANALYTE | CURVE TYPE | AVE RRF | RRF | MIN RRF | CALC AMOUNT | SPIKE AMOUNT | %D | MAX %D |
|---|---|---|---|---|---|---|---|---|
| Perfluorotridecanoic acid (PFTriA) | AveID | 0.9409 | 0.7272 | | 0.0386 | 0.0500 | -22.7 | 50.0 |
| Perfluorotetradecanoic acid (PFTeA) | AveID | 0.0844 | 0.1062 | | 0.0629 | 0.0500 | 25.8 | 50.0 |
| Perfluoro-n-hexadecanoic acid (PFHxDA) | L2ID | | 1.163 | | 0.0424 | 0.0500 | -15.1 | 50.0 |
| Perfluoro-n-octadecanoic acid (PFODA) | AveID | 0.6605 | 0.7099 | | 0.0537 | 0.0500 | 7.5 | 50.0 |
| 13C4 PFBA | Ave | 1.585 | 1.485 | | 2.34 | 2.50 | -6.3 | 50.0 |
| 13C5 PFPeA | Ave | 1.233 | 1.226 | | 2.49 | 2.50 | -0.6 | 50.0 |
| 13C3 PFBS | Ave | 0.9684 | 1.028 | | 2.47 | 2.33 | 6.1 | 50.0 |
| M2-4:2 FTS | Ave | 0.2333 | 0.2308 | | 2.31 | 2.34 | -1.1 | 50.0 |
| 13C2 PFHxA | Ave | 1.231 | 1.322 | | 2.69 | 2.50 | 7.4 | 50.0 |
| 13C3 HFPO-DA | Ave | 0.2518 | 0.2332 | | 2.32 | 2.50 | -7.4 | 50.0 |
| 13C4 PFHpA | Ave | 1.051 | 1.083 | | 2.58 | 2.50 | 3.0 | 50.0 |
| 18O2 PFHxS | Ave | 0.5117 | 0.5625 | | 2.60 | 2.37 | 9.9 | 50.0 |
| M2-6:2 FTS | Ave | 0.1958 | 0.2003 | | 2.43 | 2.38 | 2.3 | 50.0 |
| 13C4 PFOA | Ave | 1.001 | 1.064 | | 2.66 | 2.50 | 6.3 | 50.0 |
| 13C4 PFOS | Ave | 0.3465 | 0.3679 | | 2.54 | 2.39 | 6.2 | 50.0 |
| 13C5 PFNA | Ave | 0.8063 | 0.8576 | | 2.66 | 2.50 | 6.4 | 50.0 |
| 13C8 FOSA | Ave | 0.5590 | 0.5831 | | 2.61 | 2.50 | 4.3 | 50.0 |
| M2-8:2 FTS | Ave | 0.2823 | 0.2861 | | 2.43 | 2.40 | 1.3 | 50.0 |
| 13C2 PFDA | Ave | 0.7829 | 0.9292 | | 2.97 | 2.50 | 18.7 | 50.0 |
| d3-NMeFOSAA | Ave | 0.5255 | 0.5183 | | 2.47 | 2.50 | -1.4 | 50.0 |
| 13C2 PFUnA | Ave | 0.7758 | 0.9248 | | 2.98 | 2.50 | 19.2 | 50.0 |
| d5-NEtFOSAA | Ave | 0.5556 | 0.5968 | | 2.69 | 2.50 | 7.4 | 50.0 |
| d7-N-MeFOSE-M | Ave | 0.1384 | 0.1573 | | 14.2 | 12.5 | 13.7 | 50.0 |
| d-N-MeFOSA-M | Ave | 0.1965 | 0.2097 | | 2.67 | 2.50 | 6.7 | 50.0 |
| d9-N-EtFOSE-M | Ave | 0.1700 | 0.1952 | | 14.4 | 12.5 | 14.8 | 50.0 |
| d-N-EtFOSA-M | Ave | 0.2011 | 0.2128 | | 2.65 | 2.50 | 5.8 | 50.0 |
| 13C2 PFDoA | Ave | 0.7650 | 0.9564 | | 3.13 | 2.50 | 25.0 | 50.0 |
| 13C2 PFTeDA | Ave | 0.6311 | 0.6654 | | 2.64 | 2.50 | 5.4 | 50.0 |
| 13C2 PFHxDA | Ave | 0.4618 | 0.4815 | | 2.61 | 2.50 | 4.3 | 50.0 |
| 13C8 PFOA | Ave | 0.6756 | 0.7736 | | 2.80 | 2.45 | 14.5 | 50.0 |
| 13C8 PFOS | Ave | 0.1082 | 0.1073 | | 2.37 | 2.39 | -0.9 | 50.0 |

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\A18\20200910-103001.b\2020.09.10_A18_PFC_AAA_017.d
Lims ID: CCVL
Client ID:
Sample Type: CCVL
Inject. Date: 10-Sep-2020 12:45:05 ALS Bottle#: 51 Worklist Smp#: 2
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Sample Info: CCVL (26)
Misc. Info.: Plate: 4 Rack: 1
Operator ID: TAISACA18-PC\A-18 Instrument ID: A18
Sublist: chrom-PFAS_A18V2*sub1

Method: \\chromfs\Sacramento\ChromData\A18\20200910-103001.b\PFAS_A18V2.m
Limit Group: LC PFC ICAL
Last Update: 10-Sep-2020 13:21:23 Calib Date: 25-Aug-2020 17:37:57
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\A18\20200825-102078.b\2020.08.25_A18_ICAL_A_017.d

Column 1 : Gemini C18 3um 3mm x 50 mm ( 3.00 mm) Det: EXP1
Process Host: CTX1002

First Level Reviewer: vangm Date: 10-Sep-2020 13:21:23
Ratio Calibration: Average of Initial Calibration

| Signal | RT | EXP RT | DLT RT | REL RT | Response | Amount ng/ml | Ratio(Limits) | %Rec | S/N | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| D 1 13C4 PFBA | | | | | | | | | | |
| 217.00 > 172.00 | 2.565 | 2.555 | 0.010 | 0.626 | 16810864 | 2.34 | | 93.7 | 7657 | |
| 2 Perfluorobutanoic acid | | | | | | | | | | |
| 212.90 > 169.00 | 2.565 | 2.555 | 0.010 | 1.000 | 262810 | 0.0450 | | 90.1 | 19.1 | |
| D 4 13C5 PFPeA | | | | | | | | | | |
| 267.90 > 223.00 | 2.919 | 2.907 | 0.012 | 0.712 | 13872585 | 2.48 | | 99.4 | 5535 | |
| 5 Perfluoropentanoic acid | | | | | | | | | | |
| 262.90 > 219.00 | 2.919 | 2.907 | 0.012 | 1.000 | 297729 | 0.0538 | | 108 | 17.8 | |
| D 9 13C3 PFBS | | | | | | | | | | |
| 301.90 > 80.00 | 2.950 | 2.938 | 0.012 | 0.720 | 10817121 | 2.47 | | 106 | 4427 | |
| 6 Perfluorobutanesulfonic acid | | | | | | | | | | |
| 298.90 > 80.00 | 2.950 | 2.948 | 0.002 | 1.000 | 191296 | 0.0407 | Target=2.30 | 92.1 | 43.3 | |
| 298.90 > 99.00 | 2.950 | 2.948 | 0.002 | 1.000 | 83615 | | 2.29(1.15-3.45) | | 33.5 | |
| D 7 M2-4:2 FTS | | | | | | | | | | |
| 329.00 > 81.00 | 3.248 | 3.236 | 0.012 | 0.792 | 2439878 | 2.31 | | 98.9 | 1068 | |
| 8 4:2 FTS | | | | | | | | | | |
| 327.00 > 307.00 | 3.248 | 3.236 | 0.012 | 1.000 | 1130480 | 0.4760 | | 102 | 6397 | |
| D 11 13C2 PFHxA | | | | | | | | | | |
| 315.00 > 270.00 | 3.298 | 3.286 | 0.012 | 0.805 | 14962770 | 2.69 | | 107 | 6775 | |
| 10 Perfluorohexanoic acid | | | | | | | | | | |
| 313.00 > 269.00 | 3.298 | 3.286 | 0.012 | 1.000 | 280074 | 0.0486 | Target=13.78 | 97.1 | 28.8 | |
| 313.00 > 119.00 | 3.298 | 3.286 | 0.012 | 1.000 | 21190 | | 13.22(6.89-20.66) | | 14.0 | |
| 12 Perfluoropentanesulfonic acid | | | | | | | | | | |
| 349.00 > 80.00 | 3.309 | 3.296 | 0.013 | 1.122 | 159379 | 0.0432 | Target=3.02 | 92.2 | 36.6 | |
| 349.00 > 99.00 | 3.309 | 3.296 | 0.013 | 1.122 | 56308 | | 2.83(1.51-4.52) | | 48.5 | |
| D 14 13C3 HFPO-DA | | | | | | | | | | |
| 287.00 > 169.00 | 3.426 | 3.413 | 0.013 | 0.836 | 2639535 | 2.32 | | 92.6 | 5398 | |

| Signal | RT | EXP RT | DLT RT | REL RT | Response | Amount ng/ml | Ratio(Limits) | %Rec | S/N | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| 13 HPFO-DA | | | | | | | | | | |
| 285.00 > 169.00 | 3.426 | 3.413 | 0.013 | 1.000 | 48184 | 0.0468 | | 93.7 | 300 | |
| D 18 13C4 PFHpA | | | | | | | | | | |
| 367.00 > 322.00 | 3.701 | 3.696 | 0.005 | 0.903 | 12251897 | 2.58 | | 103 | 6095 | |
| D 17 18O2 PFHxS | | | | | | | | | | |
| 403.00 > 84.00 | 3.711 | 3.696 | 0.015 | 0.905 | 6023069 | 2.60 | | 110 | 5990 | |
| 16 Perfluoroheptanoic acid | | | | | | | | | | |
| 363.00 > 319.00 | 3.701 | 3.696 | 0.005 | 1.000 | 230628 | 0.0464 | Target=3.84 | 92.8 | 33.3 | |
| 363.00 > 169.00 | 3.711 | 3.696 | 0.015 | 1.003 | 58225 | | 3.96(1.92-5.76) | | 49.1 | |
| 15 Perfluorohexanesulfonic acid | | | | | | | | | | M |
| 399.00 > 80.00 | 3.711 | 3.696 | 0.015 | 1.000 | 136082 | 0.0452 | Target=3.50 | 99.4 | 43.5 | M |
| 399.00 > 99.00 | 3.711 | 3.696 | 0.015 | 1.000 | 37981 | | 3.58(1.75-5.25) | | 35.5 | M |
| 19 DONA | | | | | | | | | | |
| 377.00 > 251.00 | 3.750 | 3.746 | 0.004 | 0.840 | 646748 | 0.0405 | Target=2.42 | 86.0 | 978 | |
| 377.00 > 85.00 | 3.750 | 3.746 | 0.004 | 0.840 | 279962 | | 2.31(1.21-3.63) | | 539 | |
| D 20 M2-6:2 FTS | | | | | | | | | | |
| 429.00 > 81.00 | 4.074 | 4.072 | 0.002 | 0.994 | 2153133 | 2.43 | | 102 | 1503 | |
| 21 6:2 FTS | | | | | | | | | | |
| 427.00 > 407.00 | 4.082 | 4.072 | 0.010 | 1.002 | 1005285 | 0.4824 | | 102 | 1445 | |
| 24 Perfluoroheptanesulfonic acid | | | | | | | | | | |
| 449.00 > 80.00 | 4.099 | 4.080 | 0.019 | 0.919 | 82314 | 0.0442 | Target=4.40 | 92.9 | 40.9 | |
| 449.00 > 99.00 | 4.091 | 4.080 | 0.011 | 0.917 | 19232 | | 4.28(2.20-6.60) | | 29.7 | |
| $ 26 13C8 PFOA | | | | | | | | | | |
| 421.00 > 376.00 | 4.099 | 4.080 | 0.019 | 1.000 | 8571400 | 2.80 | | 114 | 6856 | |
| 22 Perfluorooctanoic acid | | | | | | | | | | M |
| 413.00 > 369.00 | 4.099 | 4.096 | 0.003 | 0.998 | 254970 | 0.0519 | Target=2.94 | 104 | 40.6 | M |
| 413.00 > 169.00 | 4.107 | 4.096 | 0.011 | 1.000 | 89878 | | 2.84(1.47-4.41) | | 77.9 | |
| D 25 13C4 PFOA | | | | | | | | | | |
| 417.00 > 372.00 | 4.107 | 4.096 | 0.011 | 1.002 | 12039662 | 2.66 | | 106 | 4514 | |
| * 23 13C2 PFOA | | | | | | | | | | |
| 415.00 > 370.00 | 4.099 | 4.096 | 0.003 | | 11318081 | 2.50 | | | 5963 | |
| $ 28 13C8 PFOS | | | | | | | | | | |
| 507.00 > 99.00 | 4.462 | 4.451 | 0.011 | 1.089 | 1160691 | 2.37 | | 99.1 | 2575 | |
| D 27 13C4 PFOS | | | | | | | | | | |
| 503.00 > 80.00 | 4.462 | 4.451 | 0.011 | 1.089 | 3981120 | 2.54 | | 106 | 1624 | |
| 29 Perfluorooctanesulfonic acid | | | | | | | | | | M |
| 499.00 > 80.00 | 4.470 | 4.459 | 0.011 | 1.002 | 80586 | 0.0467 | Target=4.53 | 101 | 31.0 | M |
| 499.00 > 99.00 | 4.462 | 4.459 | 0.003 | 1.000 | 18255 | | 4.41(2.26-6.79) | | 34.7 | M |
| D 30 13C5 PFNA | | | | | | | | | | |
| 468.00 > 423.00 | 4.478 | 4.467 | 0.011 | 1.093 | 9706225 | 2.66 | | 106 | 8126 | |
| 31 Perfluorononanoic acid | | | | | | | | | | |
| 463.00 > 419.00 | 4.486 | 4.467 | 0.019 | 1.002 | 174779 | 0.0469 | Target=8.97 | 93.9 | 42.0 | |
| 463.00 > 169.00 | 4.478 | 4.467 | 0.011 | 1.000 | 19665 | | 8.89(4.48-13.45) | | 37.1 | |
| 32 9ClFOS | | | | | | | | | | |
| 531.00 > 351.00 | 4.670 | 4.657 | 0.013 | 1.046 | 224701 | 0.0417 | | 89.5 | 659 | |
| D 33 13C8 FOSA | | | | | | | | | | |
| 506.00 > 78.00 | 4.795 | 4.791 | 0.003 | 1.170 | 6599934 | 2.61 | | 104 | 7087 | |

| Signal | RT | EXP RT | DLT RT | REL RT | Response | Amount ng/ml | Ratio(Limits) | %Rec | S/N | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| 34 Perfluorooctanesulfonamide | | | | | | | | | | |
| 498.00 > 78.00 | 4.795 | 4.791 | 0.003 | 1.000 | 116764 | 0.0475 | | 95.1 | 525 | |
| 35 Perfluorononanesulfonic acid | | | | | | | | | | |
| 549.00 > 80.00 | 4.812 | 4.800 | 0.012 | 1.078 | 68596 | 0.0440 | Target=2.85 | 91.6 | 55.2 | |
| 549.00 > 99.00 | 4.812 | 4.800 | 0.012 | 1.078 | 25329 | | 2.71(1.43-4.28) | | 56.7 | |
| 37 Perfluorodecanoic acid | | | | | | | | | | |
| 513.00 > 469.00 | 4.837 | 4.826 | 0.011 | 0.998 | 170075 | 0.0419 | Target=10.16 | 83.9 | 75.2 | |
| 513.00 > 169.00 | 4.837 | 4.826 | 0.011 | 0.998 | 17623 | | 9.65(5.08-15.24) | | 28.0 | |
| D 39 13C2 PFDA | | | | | | | | | | |
| 515.00 > 470.00 | 4.846 | 4.826 | 0.020 | 1.182 | 10517037 | 2.97 | | 119 | 5745 | |
| D 38 M2-8:2 FTS | | | | | | | | | | |
| 529.00 > 81.00 | 4.837 | 4.834 | 0.003 | 1.180 | 3101583 | 2.43 | | 101 | 1950 | |
| 36 8:2 FTS | | | | | | | | | | |
| 527.00 > 507.00 | 4.846 | 4.834 | 0.012 | 1.002 | 995458 | 0.4331 | | 90.4 | 4391 | |
| D 40 d3-NMeFOSAA | | | | | | | | | | |
| 573.00 > 419.00 | 5.011 | 4.997 | 0.014 | 1.223 | 5866181 | 2.47 | | 98.6 | 3850 | |
| 41 NMeFOSAA | | | | | | | | | | |
| 570.00 > 419.00 | 5.011 | 4.997 | 0.014 | 1.000 | 682312 | 0.3921 | | 78.4 | 3815 | |
| 42 Perfluorodecanesulfonic acid | | | | | | | | | | |
| 599.00 > 80.00 | 5.130 | 5.128 | 0.002 | 1.150 | 55998 | 0.0403 | Target=2.77 | 83.5 | 63.2 | |
| 599.00 > 99.00 | 5.130 | 5.128 | 0.002 | 1.150 | 22504 | | 2.49(1.38-4.15) | | 133 | |
| D 43 13C2 PFUnA | | | | | | | | | | |
| 565.00 > 520.00 | 5.166 | 5.155 | 0.011 | 1.260 | 10466903 | 2.98 | | 119 | 9509 | |
| 45 Perfluoroundecanoic acid | | | | | | | | | | M |
| 563.00 > 519.00 | 5.166 | 5.155 | 0.011 | 1.000 | 124501 | 0.0410 | Target=8.43 | 82.0 | 83.8 | |
| 563.00 > 169.00 | 5.166 | 5.155 | 0.011 | 1.000 | 14232 | | 8.75(4.22-12.65) | | 30.1 | M |
| D 44 d5-NEtFOSAA | | | | | | | | | | |
| 589.00 > 419.00 | 5.166 | 5.164 | 0.002 | 1.260 | 6754601 | 2.69 | | 107 | 4592 | |
| 46 NEtFOSA | | | | | | | | | | |
| 584.00 > 419.00 | 5.175 | 5.173 | 0.002 | 1.002 | 808633 | 0.4429 | | 88.6 | 7181 | |
| D 47 d7-N-MeFOSE-M | | | | | | | | | | |
| 623.00 > 59.00 | 5.259 | 5.256 | 0.003 | 1.283 | 8903504 | 14.2 | | 114 | 6574 | |
| 48 N-MeFOSE-M | | | | | | | | | | |
| 616.00 > 59.00 | 5.269 | 5.267 | 0.003 | 1.002 | 41036 | 0.0534 | | 107 | 83.1 | |
| D 49 d-N-MeFOSA-M | | | | | | | | | | |
| 515.00 > 169.00 | 5.269 | 5.267 | 0.003 | 1.286 | 2373423 | 2.67 | | 107 | 46.8 | |
| 50 NMeFOSA | | | | | | | | | | |
| 512.00 > 169.00 | 5.280 | 5.277 | 0.003 | 1.002 | 40030 | 0.0439 | | 87.8 | 65.5 | |
| 51 11ClFOS | | | | | | | | | | |
| 631.00 > 451.00 | 5.300 | 5.297 | 0.003 | 1.188 | 257206 | 0.0376 | | 79.9 | 1250 | |
| D 52 d9-N-EtFOSE-M | | | | | | | | | | |
| 639.00 > 59.00 | 5.426 | 5.424 | 0.002 | 1.324 | 11044673 | 14.4 | | 115 | 5620 | |
| 53 N-EtFOSE-M | | | | | | | | | | |
| 630.00 > 59.00 | 5.437 | 5.435 | 0.002 | 1.002 | 44027 | 0.0464 | | 92.9 | 105 | |
| D 54 d-N-EtFOSA-M | | | | | | | | | | |
| 531.00 > 169.00 | 5.448 | 5.446 | 0.002 | 1.329 | 2408242 | 2.65 | | 106 | 436 | |

| Signal | RT | EXP RT | DLT RT | REL RT | Response | Amount ng/ml | Ratio(Limits) | %Rec | S/N | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| 57 Perfluorododecanoic acid | | | | | | | | | | |
| 613.00 > 569.00 | 5.459 | 5.446 | 0.013 | 1.000 | 178919 | 0.0404 | Target=9.12 | 80.8 | 84.1 | |
| 613.00 > 169.00 | 5.459 | 5.446 | 0.013 | 1.000 | 18666 | | 9.59(4.56-13.69) | | 38.3 | |
| 55 N-EtFOSA-M | | | | | | | | | | |
| 526.00 > 169.00 | 5.459 | 5.457 | 0.002 | 1.002 | 46887 | 0.0460 | | 92.0 | 31.1 | |
| D 56 13C2 PFDoA | | | | | | | | | | |
| 615.00 > 570.00 | 5.459 | 5.457 | 0.002 | 1.332 | 10824348 | 3.13 | | 125 | 8544 | |
| 58 10:2 FTS | | | | | | | | | | |
| 627.00 > 607.00 | 5.469 | 5.467 | 0.002 | 1.131 | 123254 | 0.0473 | | 98.0 | 662 | |
| 59 PFDoS | | | | | | | | | | |
| 699.00 > 80.00 | 5.690 | 5.677 | 0.013 | 1.275 | 23849 | 0.0430 | Target=0.72 | 88.9 | 29.5 | |
| 699.00 > 99.00 | 5.690 | 5.677 | 0.013 | 1.275 | 32254 | | 0.74(0.36-1.07) | | 116 | |
| 60 Perfluorotridecanoic acid | | | | | | | | | | |
| 663.00 > 619.00 | 5.723 | 5.711 | 0.012 | 1.048 | 157425 | 0.0386 | Target=6.78 | 77.3 | 120 | |
| 663.00 > 169.00 | 5.723 | 5.711 | 0.012 | 1.048 | 22789 | | 6.91(3.39-10.17) | | 54.2 | |
| 62 Perfluorotetradecanoic acid | | | | | | | | | | |
| 713.00 > 169.00 | 5.971 | 5.959 | 0.012 | 1.000 | 15991 | 0.0629 | Target=0.85 | 126 | 104 | |
| 713.00 > 219.00 | 5.959 | 5.959 | 0.0 | 0.998 | 15185 | | 1.05(0.43-1.28) | | 131 | |
| D 61 13C2 PFTeDA | | | | | | | | | | |
| 715.00 > 670.00 | 5.971 | 5.970 | 0.001 | 1.457 | 7531527 | 2.64 | | 105 | 9273 | |
| D 64 13C2 PFHxDA | | | | | | | | | | |
| 815.00 > 770.00 | 6.421 | 6.403 | 0.018 | 1.566 | 5450085 | 2.61 | | 104 | 6625 | |
| 63 Perfluorohexadecanoic acid | | | | | | | | | | |
| 813.00 > 769.00 | 6.412 | 6.412 | 0.0 | 0.999 | 126809 | 0.0424 | Target=10.21 | 84.9 | 108 | |
| 813.00 > 169.00 | 6.421 | 6.412 | 0.009 | 1.000 | 15950 | | 7.95(5.11-15.32) | | 128 | |
| 65 Perfluorooctadecanoic acid | | | | | | | | | | |
| 913.00 > 869.00 | 6.868 | 6.861 | 0.007 | 1.070 | 77377 | 0.0537 | Target=12.45 | 107 | 90.5 | |
| 913.00 > 169.00 | 6.868 | 6.861 | 0.007 | 1.070 | 6360 | | 12.17(6.22-18.67) | | 109 | |

## QC Flag Legend

Review Flags

M - Manually Integrated

## Reagents:

LCPFC_LLCCVL_00026 Amount Added: 1.00 Units: mL

Report Date: 10-Sep-2020 13:21:25 Chrom Revision: 2.3 09-Sep-2020 15:12:58

Eurofins TestAmerica, Sacramento

Data File: \\chromfs\Sacramento\ChromData\A18\20200910-103001.b\2020.09.10_A18_PFC_AAA_017.d

Injection Date: 10-Sep-2020 12:45:05 Instrument ID: A18

Lims ID: CCVL

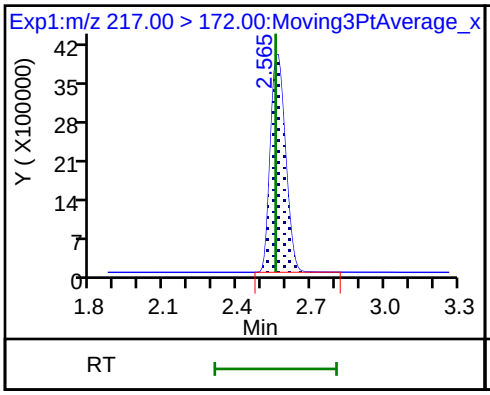
Client ID:

Operator ID: TAISACA18-PC\A-18 ALS Bottle#: 51 Worklist Smp#: 2

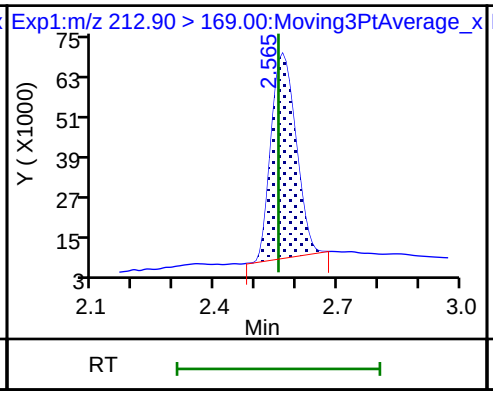
Injection Vol: 20.0 ul Dil. Factor: 1.0000

Method: PFAS_A18V2 Limit Group: LC PFC ICAL

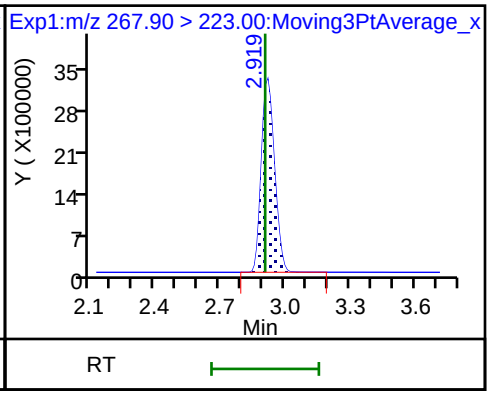
D 1 13C4 PFBA



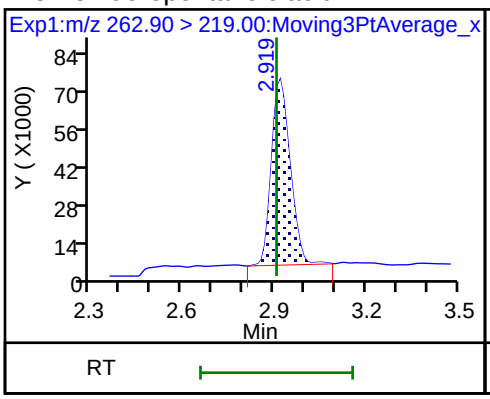

2 Perfluorobutanoic acid



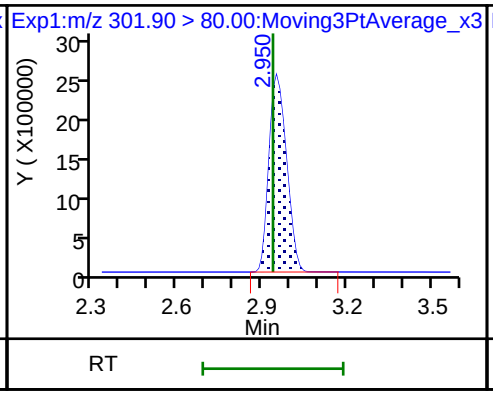

D 4 13C5 PFPeA



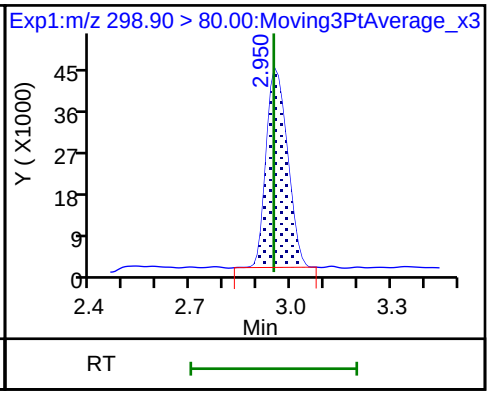

5 Perfluoropentanoic acid



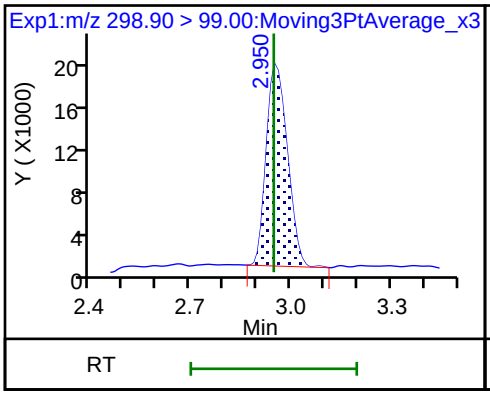

D 9 13C3 PFBS



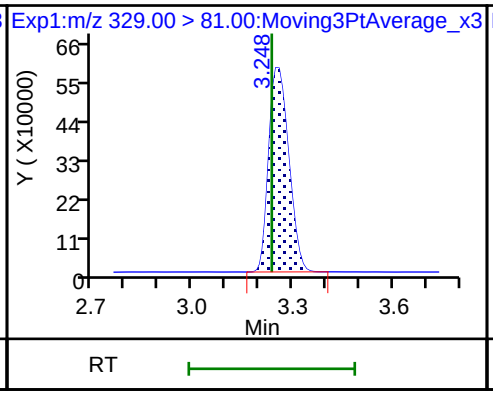

6 Perfluorobutanesulfonic acid



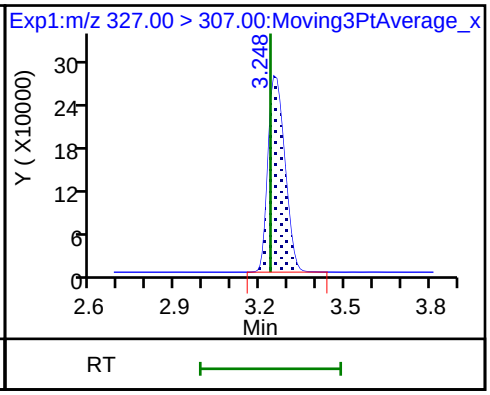

6 Perfluorobutanesulfonic acid



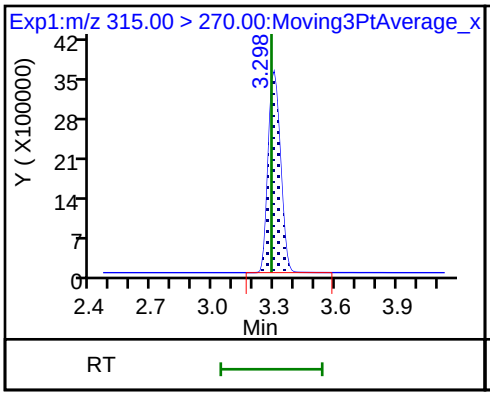

D 7 M2-4:2 FTS



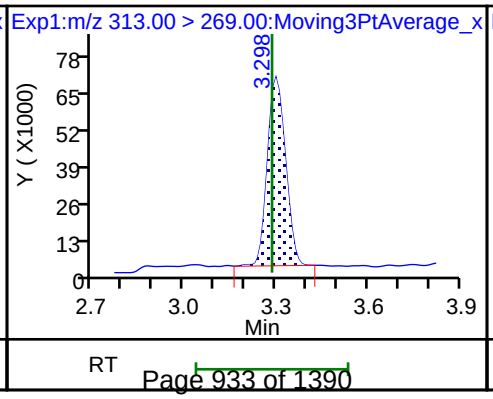

8 4:2 FTS



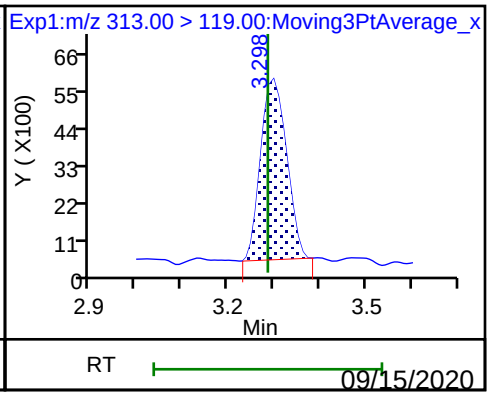

D 11 13C2 PFHxA



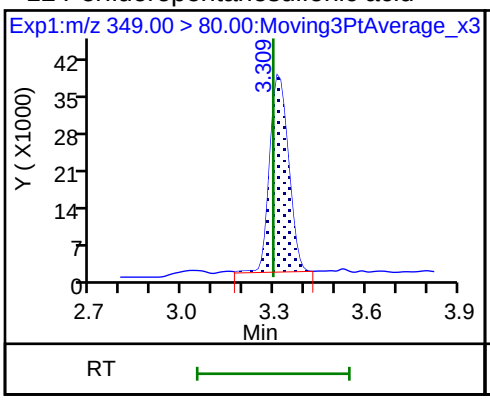

10 Perfluorohexanoic acid



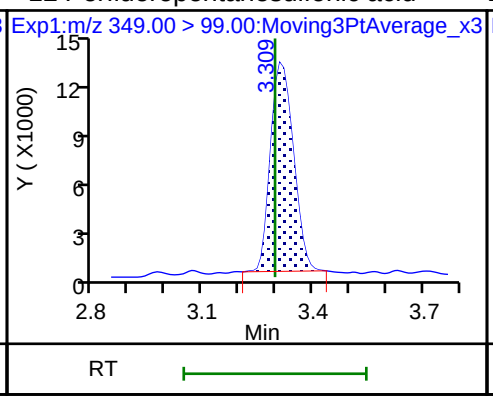

10 Perfluorohexanoic acid



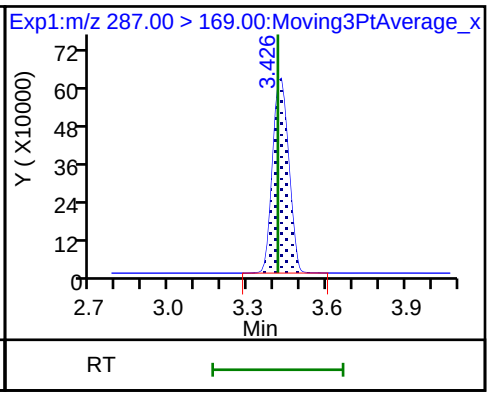
12 Perfluoropentanesulfonic acid



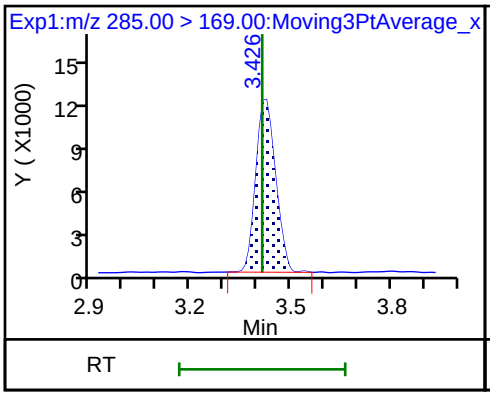

12 Perfluoropentanesulfonic acid



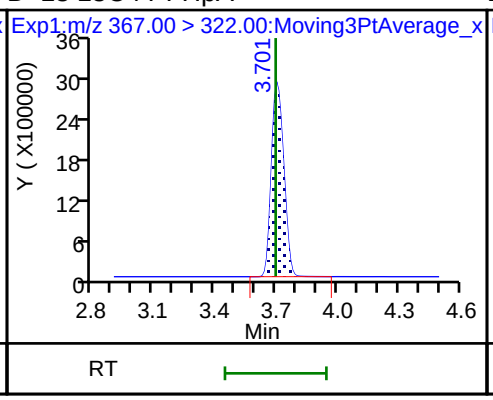

D 14 13C3 HFPO-DA



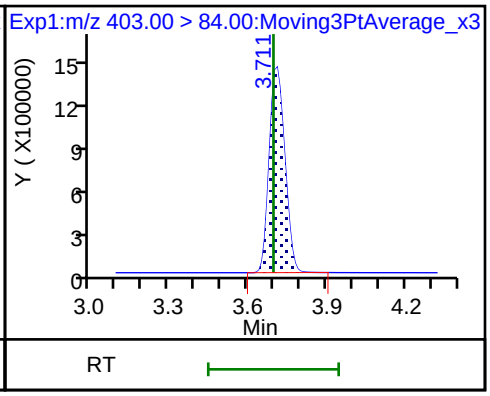

13 HPFO-DA



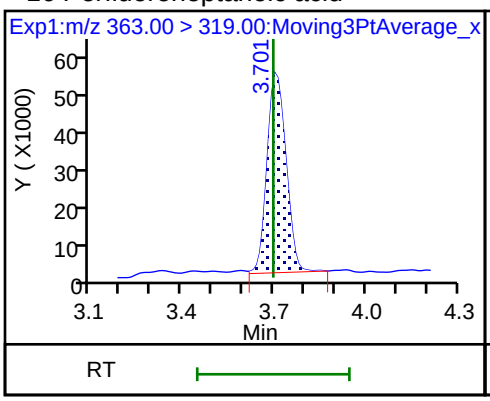

D 18 13C4 PFHpA



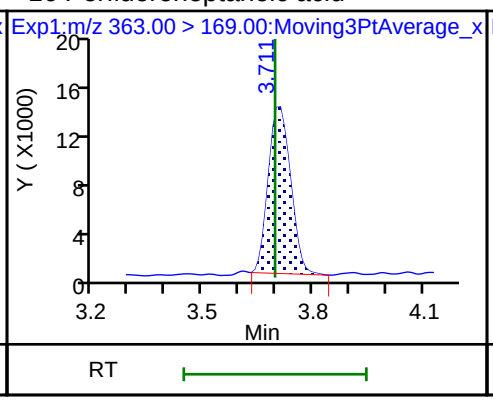

D 17 18O2 PFHxS



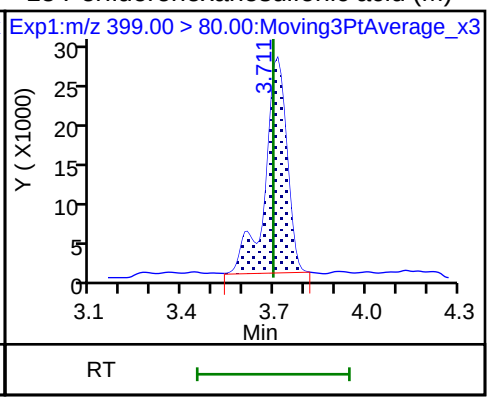

16 Perfluoroheptanoic acid



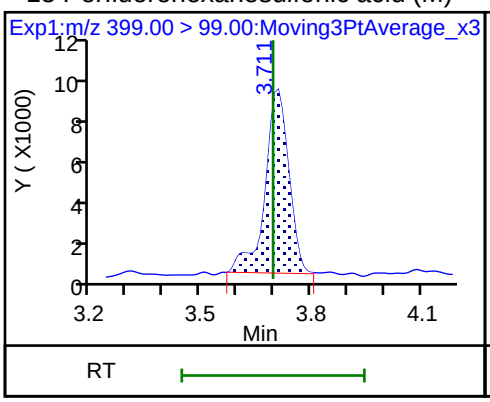

16 Perfluoroheptanoic acid



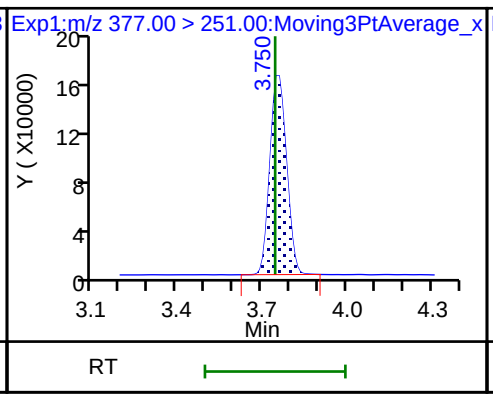

15 Perfluorohexanesulfonic acid (M)



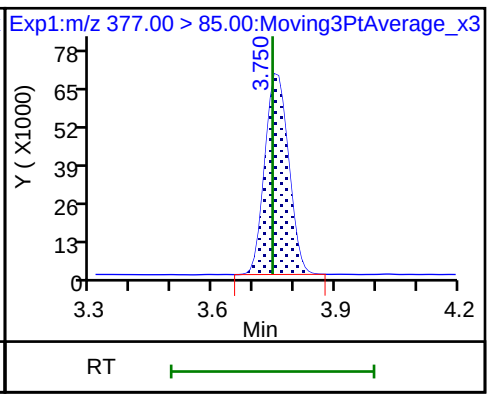

15 Perfluorohexanesulfonic acid (M)



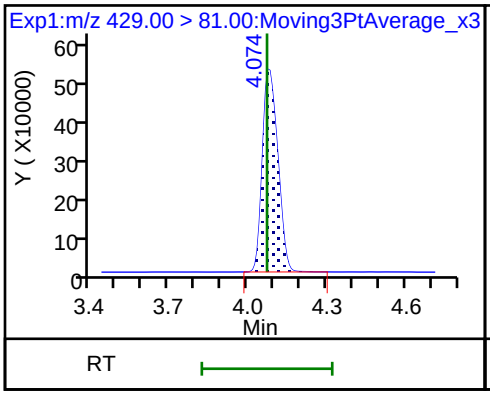

19 DONA



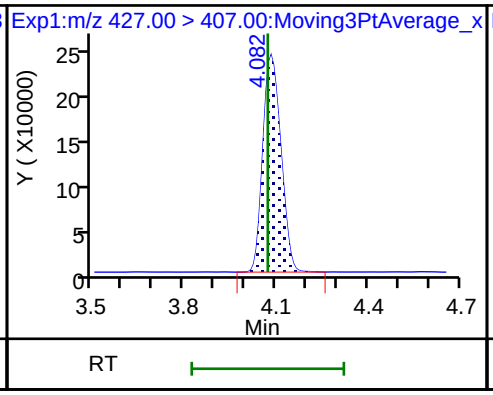

19 DONA



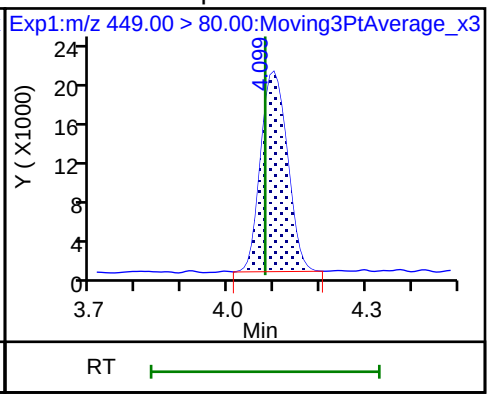
D 20 M2-6:2 FTS



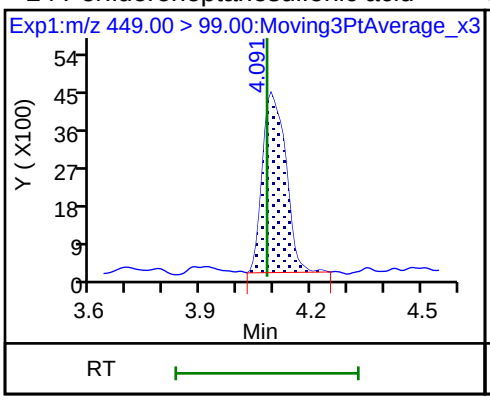

21 6:2 FTS



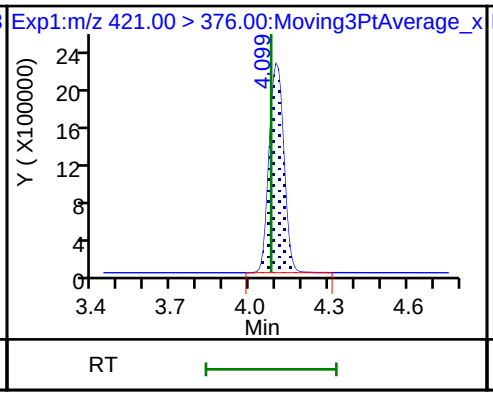

24 Perfluoroheptanesulfonic acid



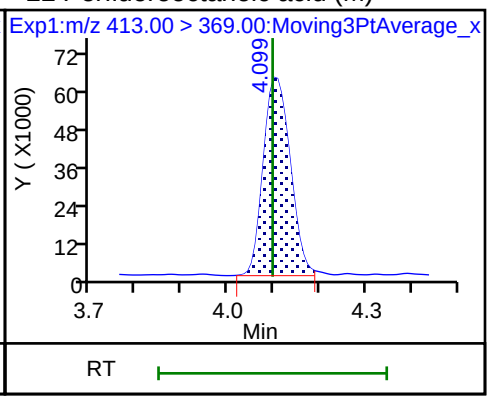

24 Perfluoroheptanesulfonic acid



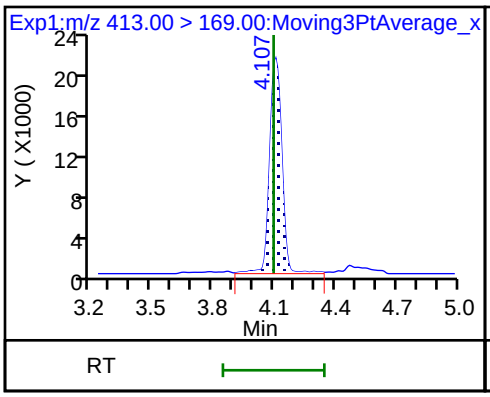

$ 26 13C8 PFOA



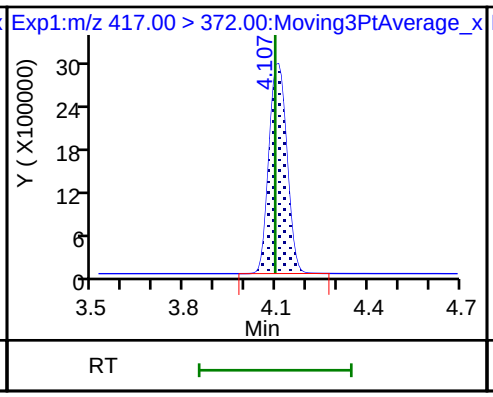

22 Perfluorooctanoic acid (M)



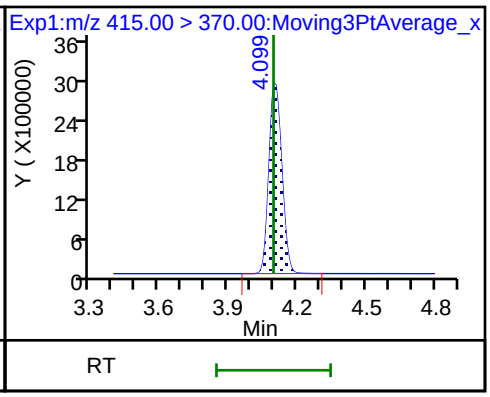

22 Perfluorooctanoic acid



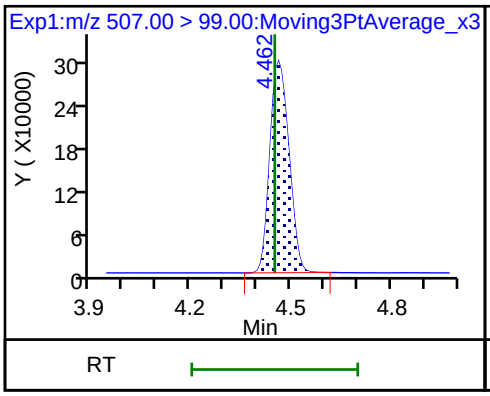

D 25 13C4 PFOA



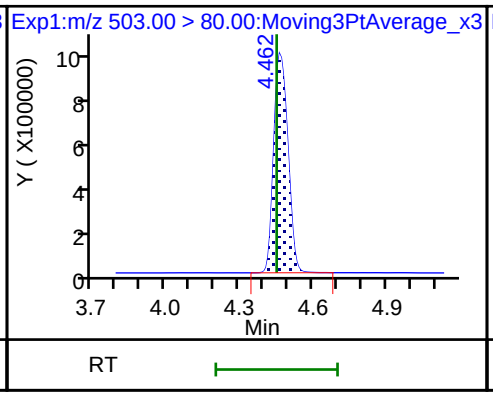

* 23 13C2 PFOA



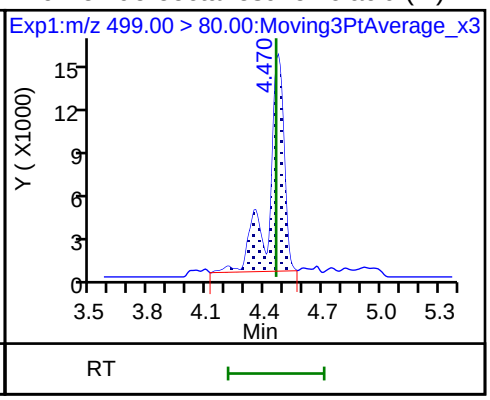

$ 28 13C8 PFOS



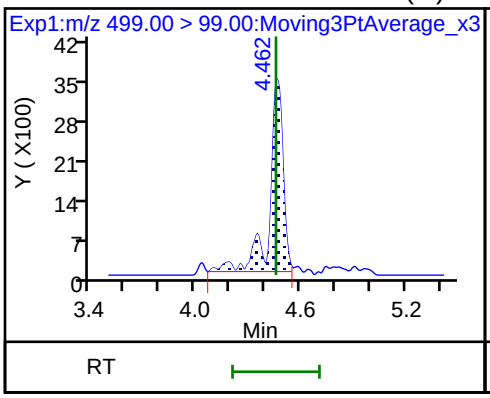

D 27 13C4 PFOS



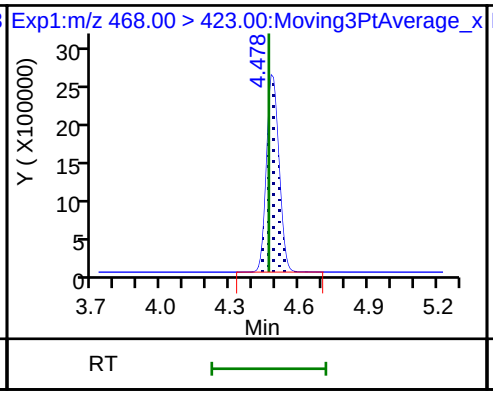

29 Perfluorooctanesulfonic acid (M)



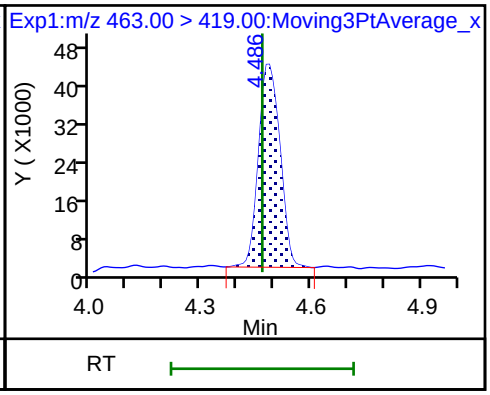
29 Perfluorooctanesulfonic acid (M)



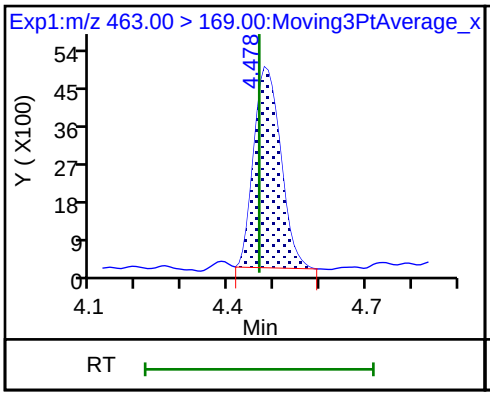

D 30 13C5 PFNA



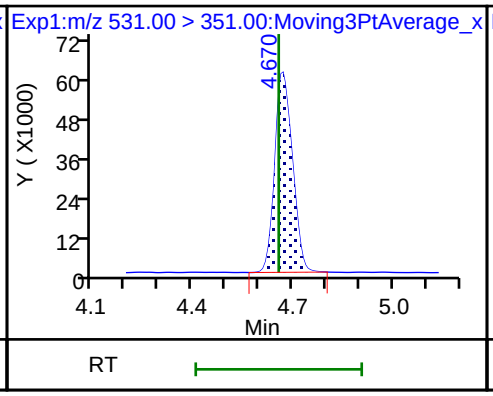

31 Perfluorononanoic acid



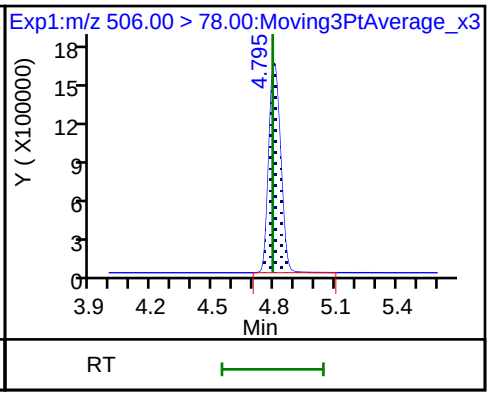

31 Perfluorononanoic acid



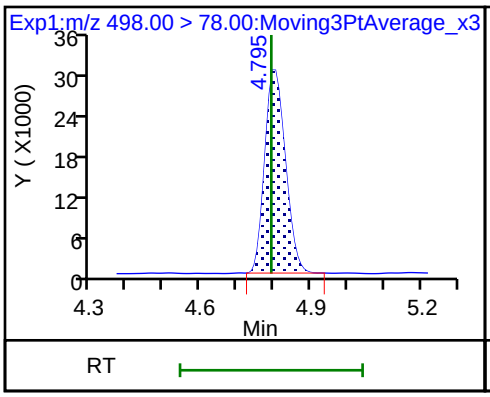

32 9ClFOS



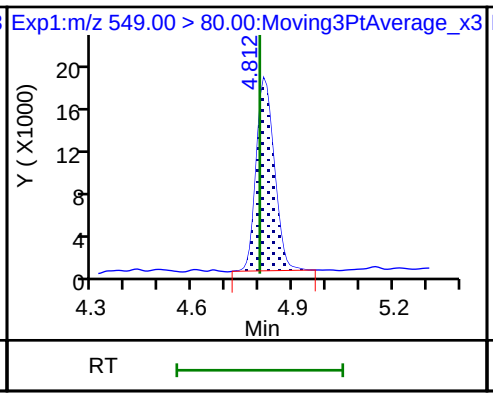

D 33 13C8 FOSA



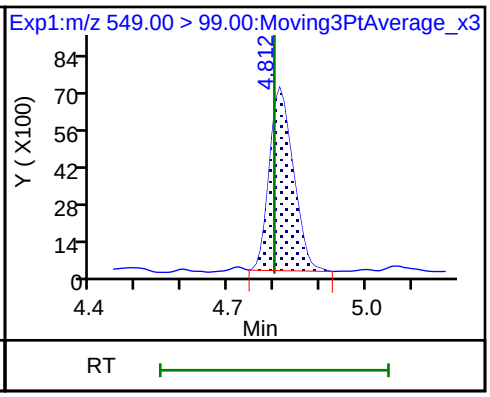

34 Perfluorooctanesulfonamide



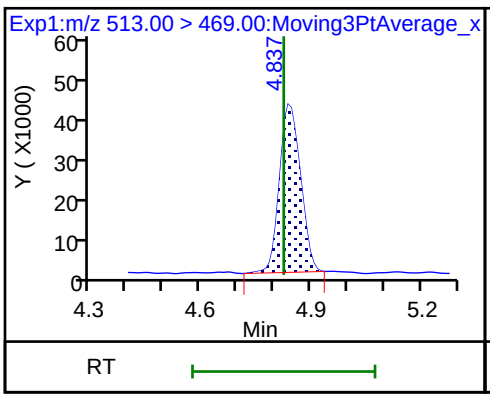

35 Perfluorononanesulfonic acid



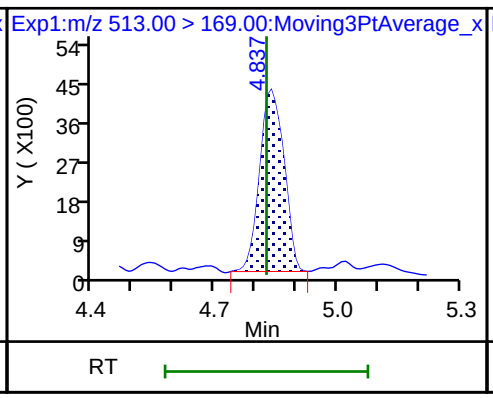

35 Perfluorononanesulfonic acid



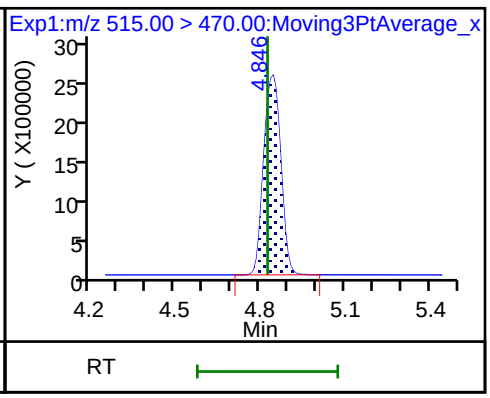

37 Perfluorodecanoic acid



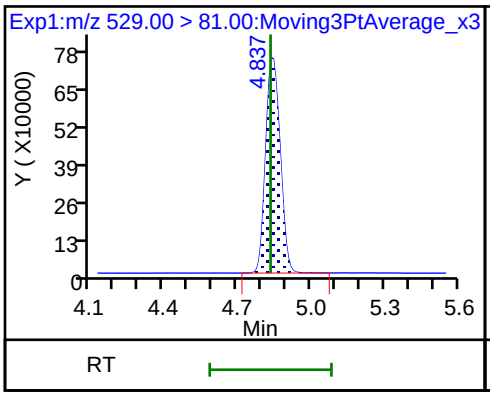

37 Perfluorodecanoic acid



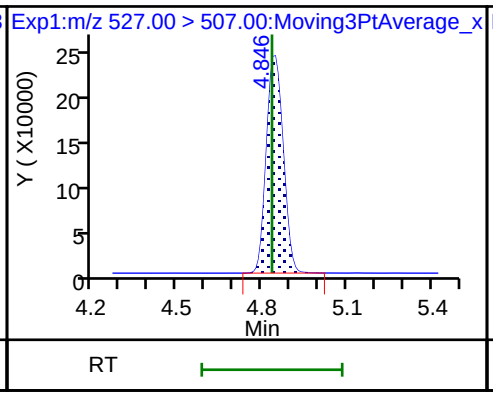

D 39 13C2 PFDA



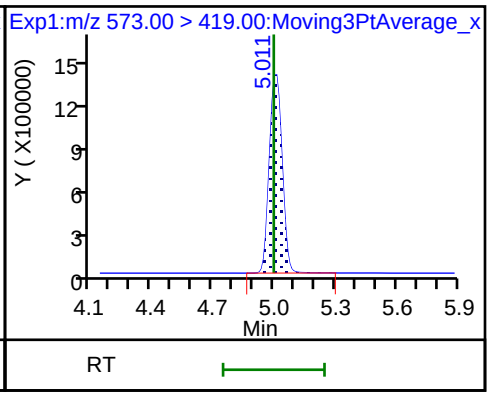
D 38 M2-8:2 FTS



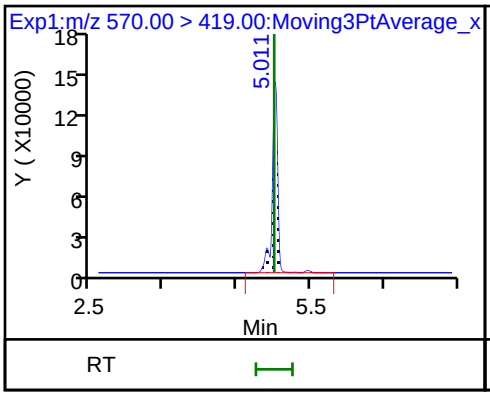

36 8:2 FTS



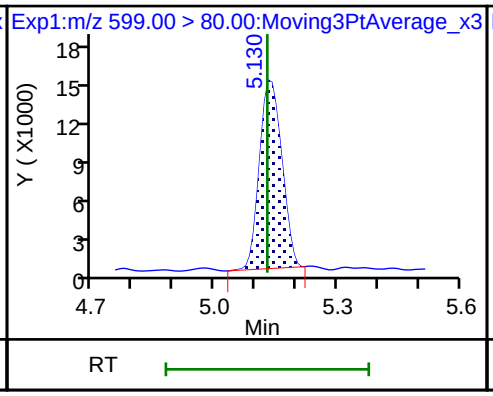

D 40 d3-NMeFOSAA



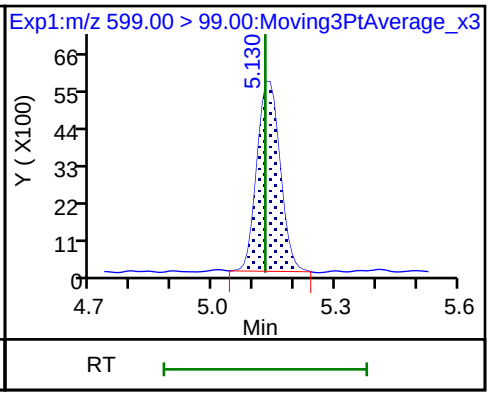

41 NMeFOSAA



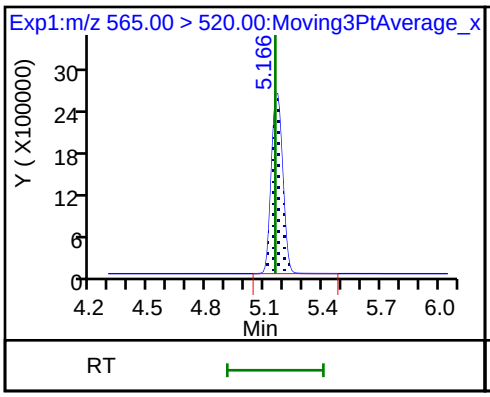

42 Perfluorodecanesulfonic acid



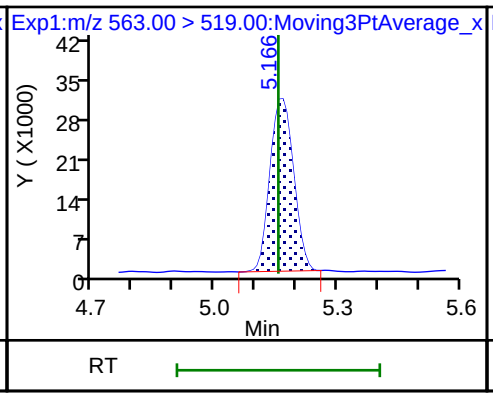

42 Perfluorodecanesulfonic acid



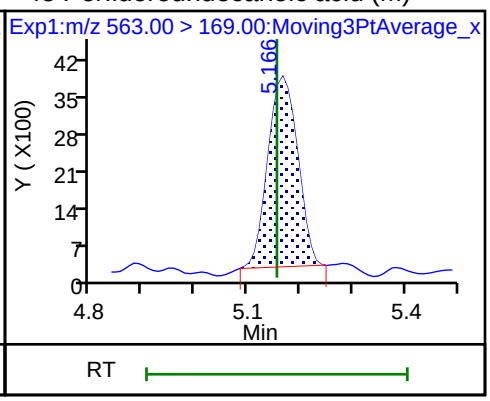

D 43 13C2 PFUnA



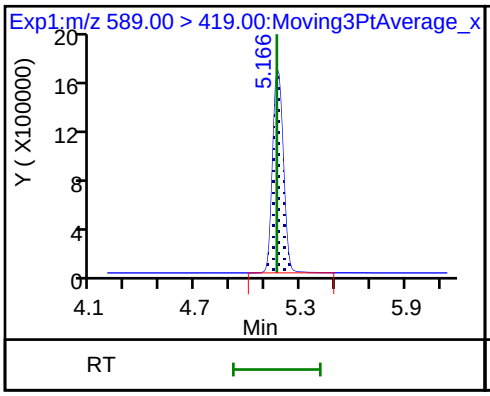

45 Perfluoroundecanoic acid



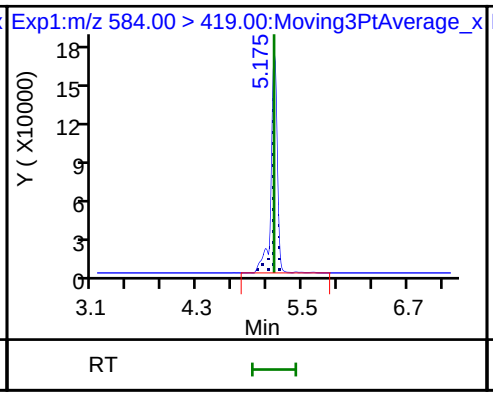

45 Perfluoroundecanoic acid (M)



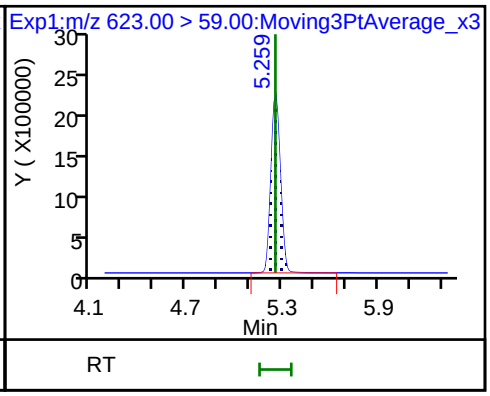

D 44 d5-NEtFOSAA



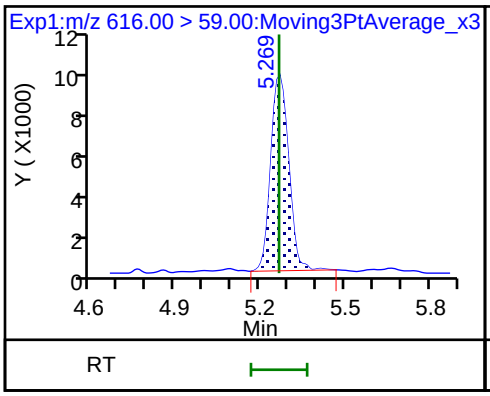

46 NEtFOSA



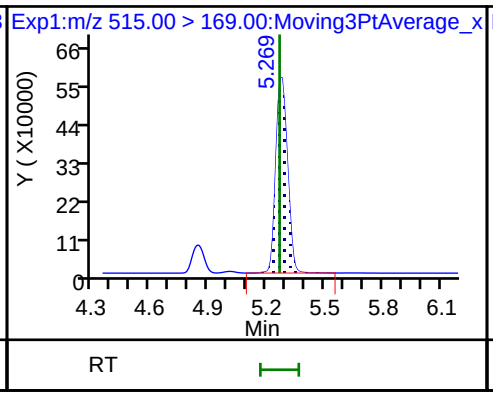

D 47 d7-N-MeFOSE-M



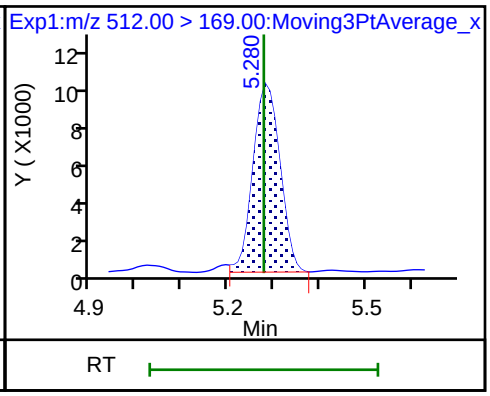
48 N-MeFOSE-M



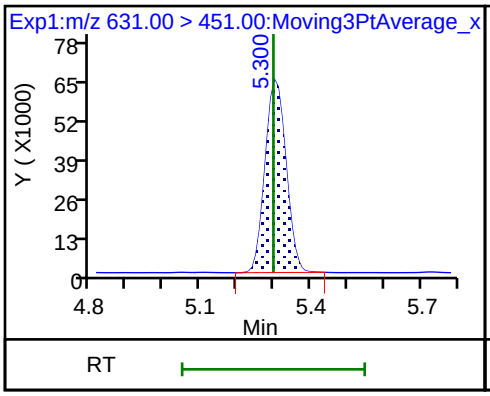

D 49 d-N-MeFOSA-M



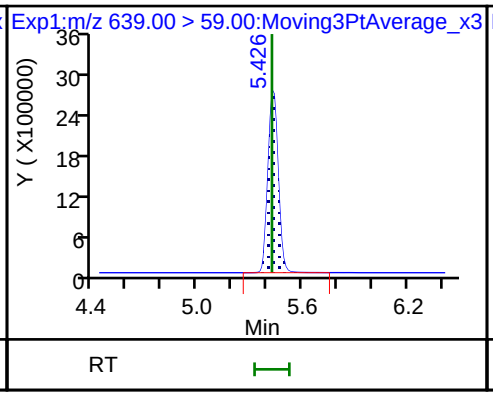

50 NMeFOSA



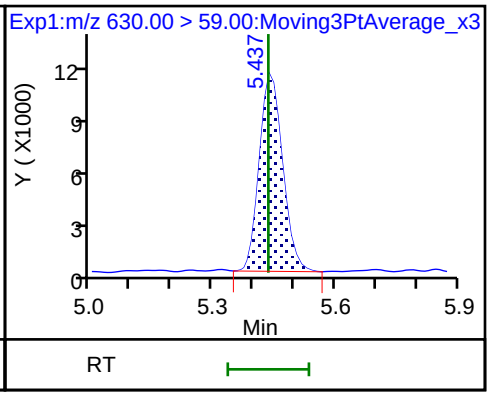

51 11ClFOS



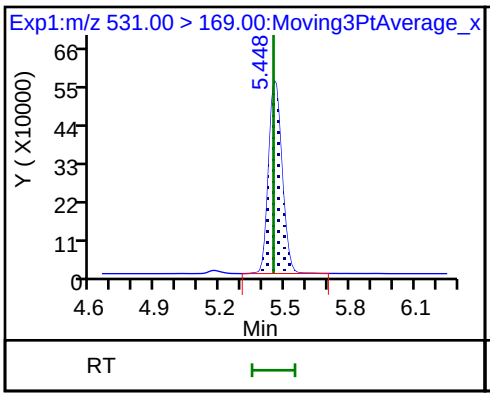

D 52 d9-N-EtFOSE-M



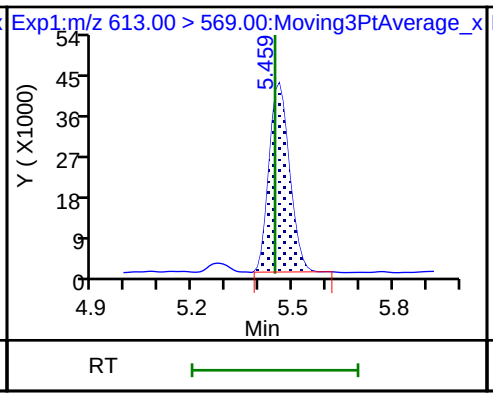

53 N-EtFOSE-M



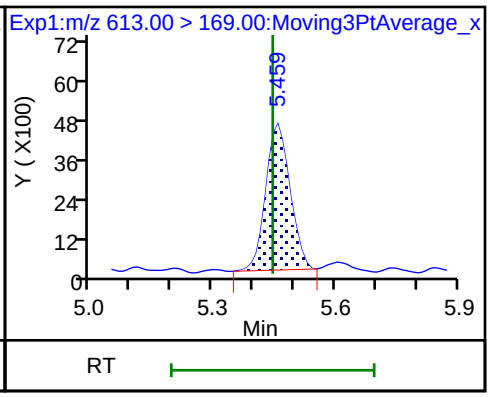

D 54 d-N-EtFOSA-M



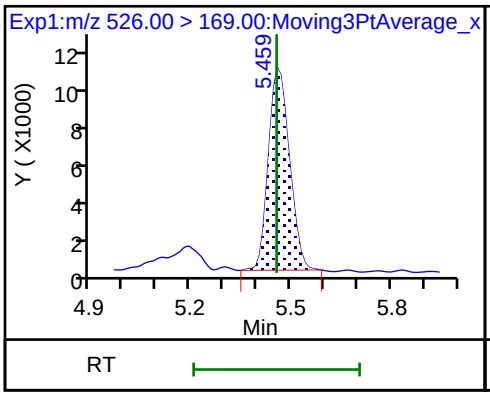

57 Perfluorododecanoic acid



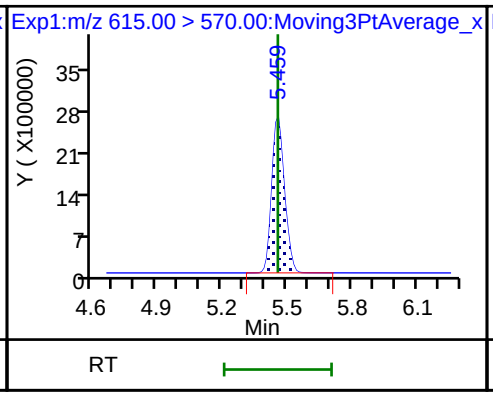

57 Perfluorododecanoic acid



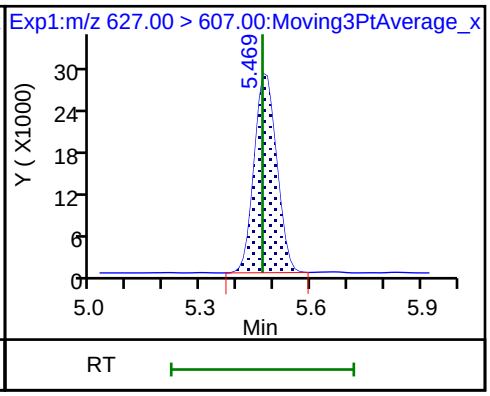

55 N-EtFOSA-M



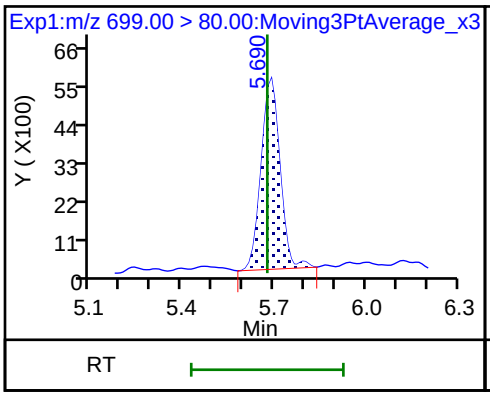

D 56 13C2 PFDoA



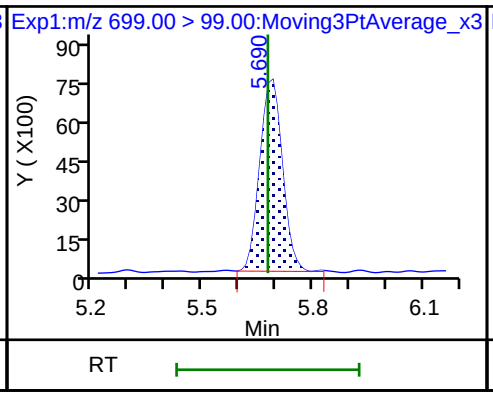

58 10:2 FTS



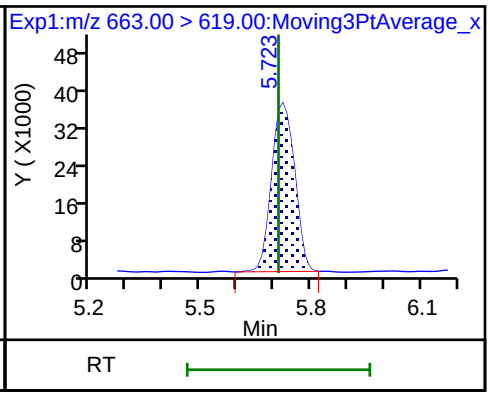
59 PFDoS



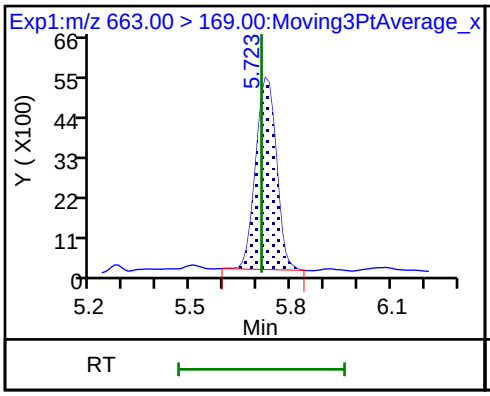

59 PFDoS



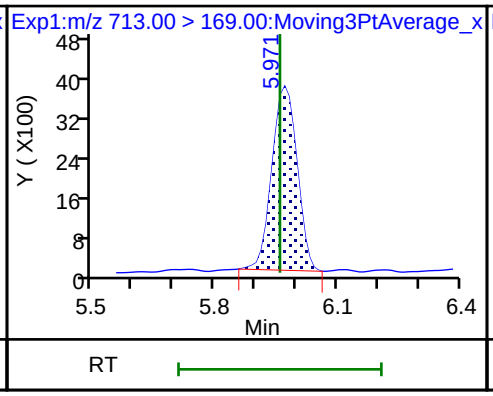

60 Perfluorotridecanoic acid



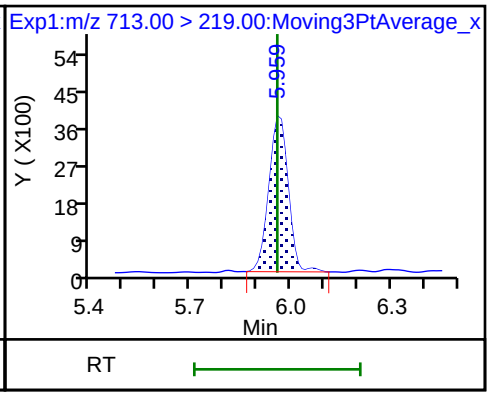

60 Perfluorotridecanoic acid



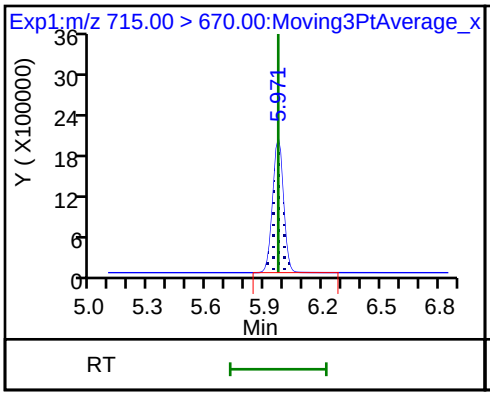

62 Perfluorotetradecanoic acid



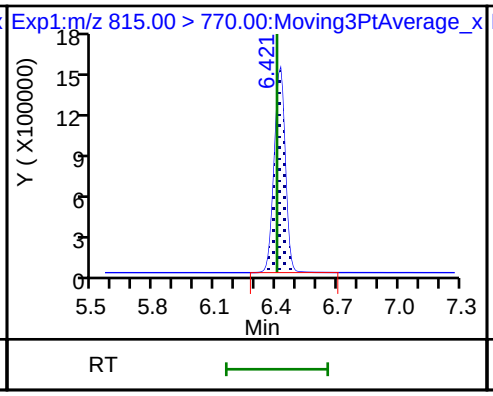

62 Perfluorotetradecanoic acid



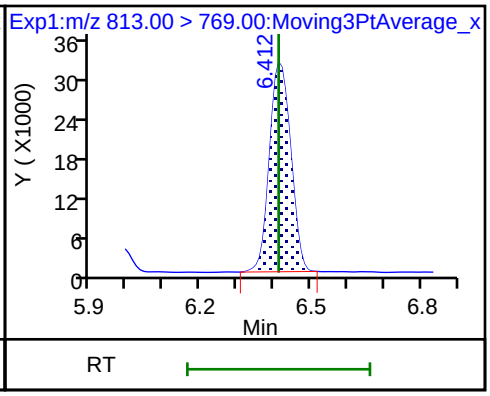

D 61 13C2 PFTeDA



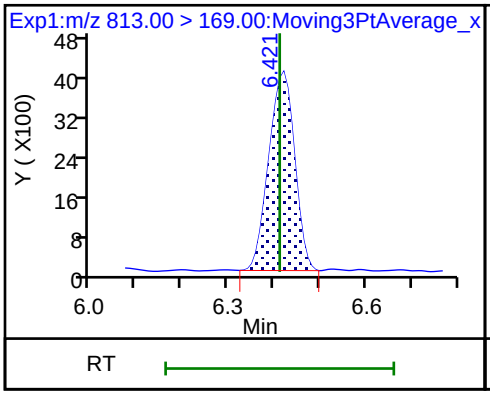

D 64 13C2 PFHxDA



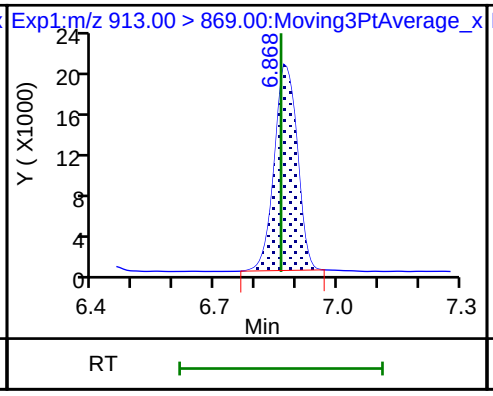

63 Perfluorohexadecanoic acid



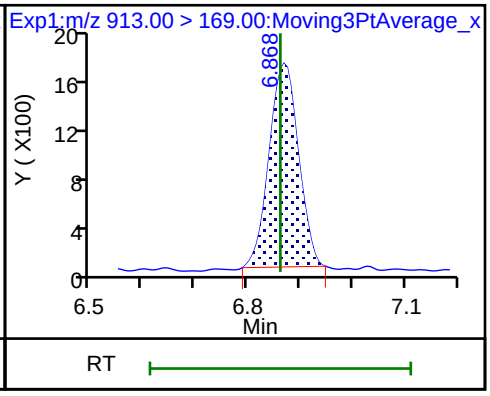

63 Perfluorohexadecanoic acid




65 Perfluorooctadecanoic acid




65 Perfluorooctadecanoic acid



Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

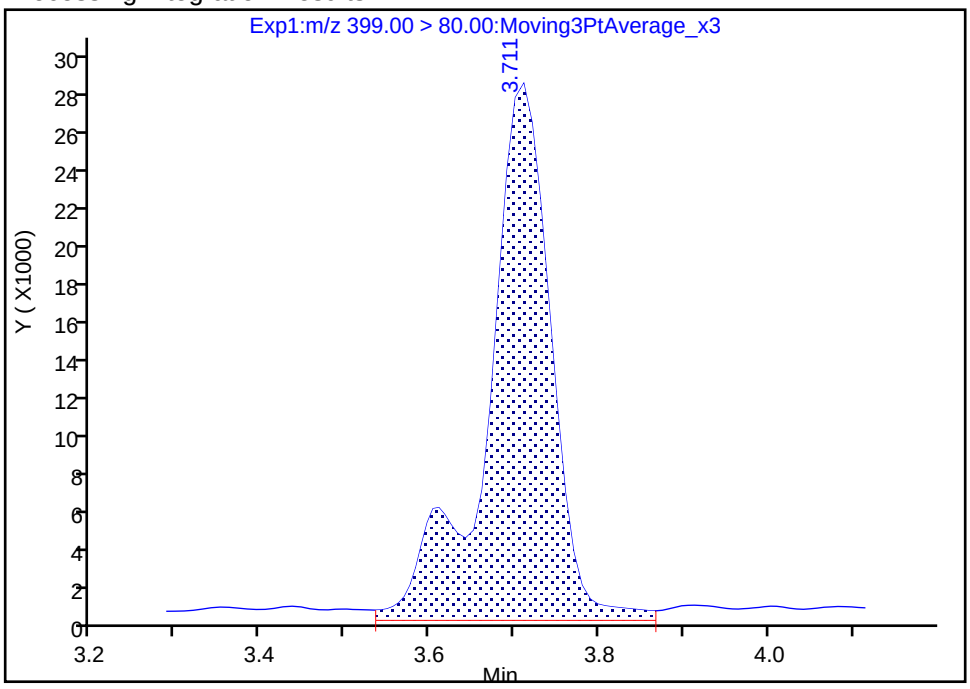
Data File: \\chromfs\Sacramento\ChromData\A18\20200910-103001.b\2020.09.10_A18_PFC_AAA_017.d
Injection Date: 10-Sep-2020 12:45:05 Instrument ID: A18
Lims ID: CCVL
Client ID:
Operator ID: TAISACA18-PC\A-18 ALS Bottle#: 51 Worklist Smp#: 2
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFAS_A18V2 Limit Group: LC PFC ICAL
Column: Gemini C18 3um 3mm x 50 mm ( 3.00mm) Detector EXP1

## 15 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 1

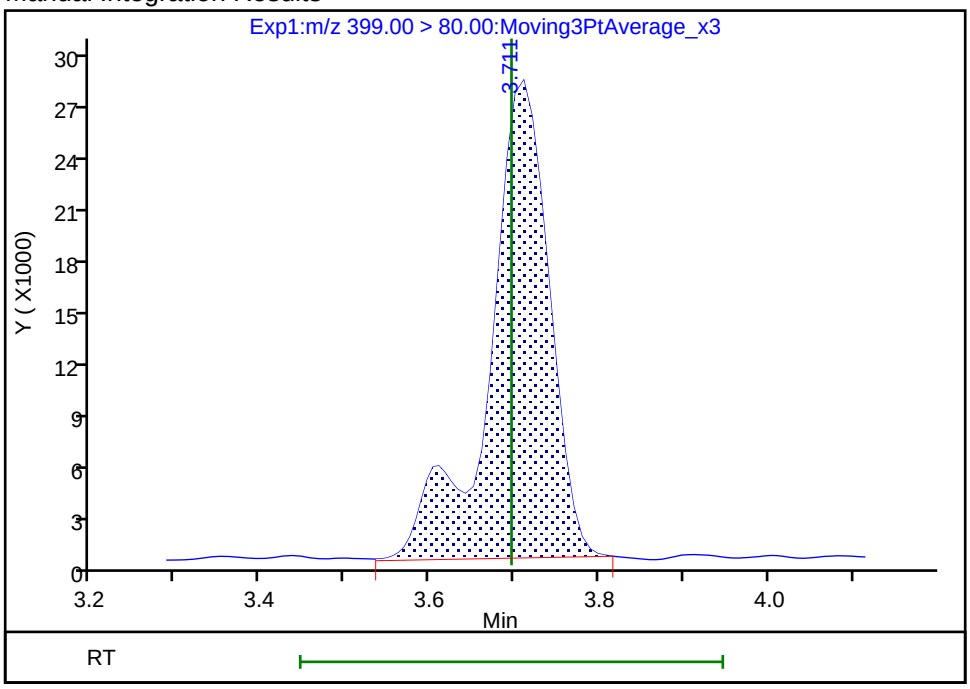
Processing Integration Results

RT: 3.71
Area: 147429
Amount: 0.048998
Amount Units: ng/ml




Manual Integration Results

RT: 3.71
Area: 136082
Amount: 0.045227
Amount Units: ng/ml




Reviewer: vangm, 10-Sep-2020 13:20:21
Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

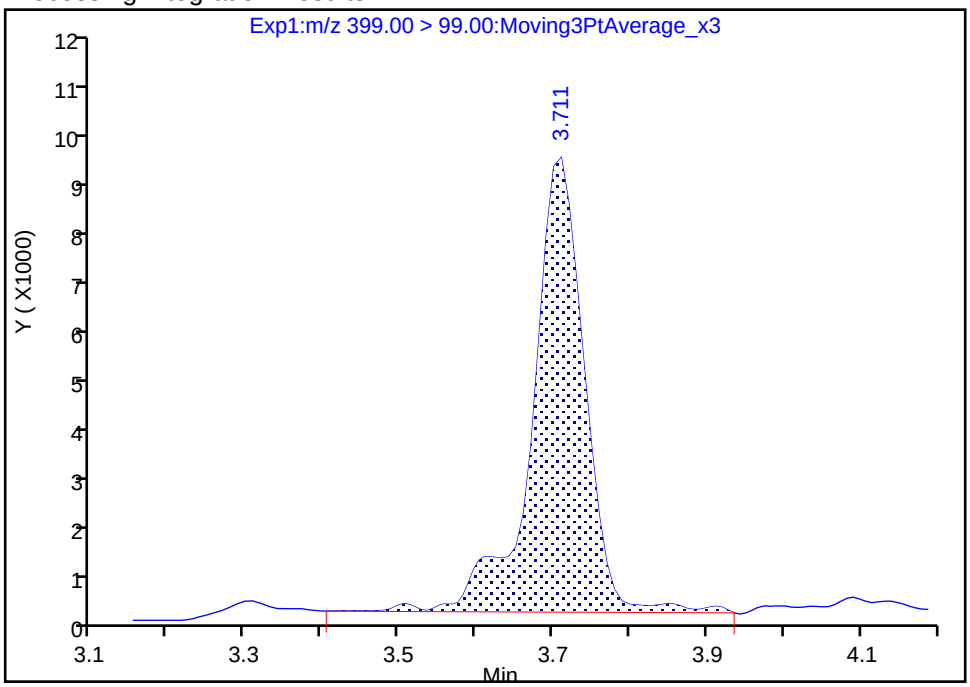
Data File: \\chromfs\Sacramento\ChromData\A18\20200910-103001.b\2020.09.10_A18_PFC_AAA_017.d
Injection Date: 10-Sep-2020 12:45:05 Instrument ID: A18
Lims ID: CCVL
Client ID:
Operator ID: TAISACA18-PC\A-18 ALS Bottle#: 51 Worklist Smp#: 2
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFAS_A18V2 Limit Group: LC PFC ICAL
Column: Gemini C18 3um 3mm x 50 mm ( 3.00 mm) Detector EXP1

## 15 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 2

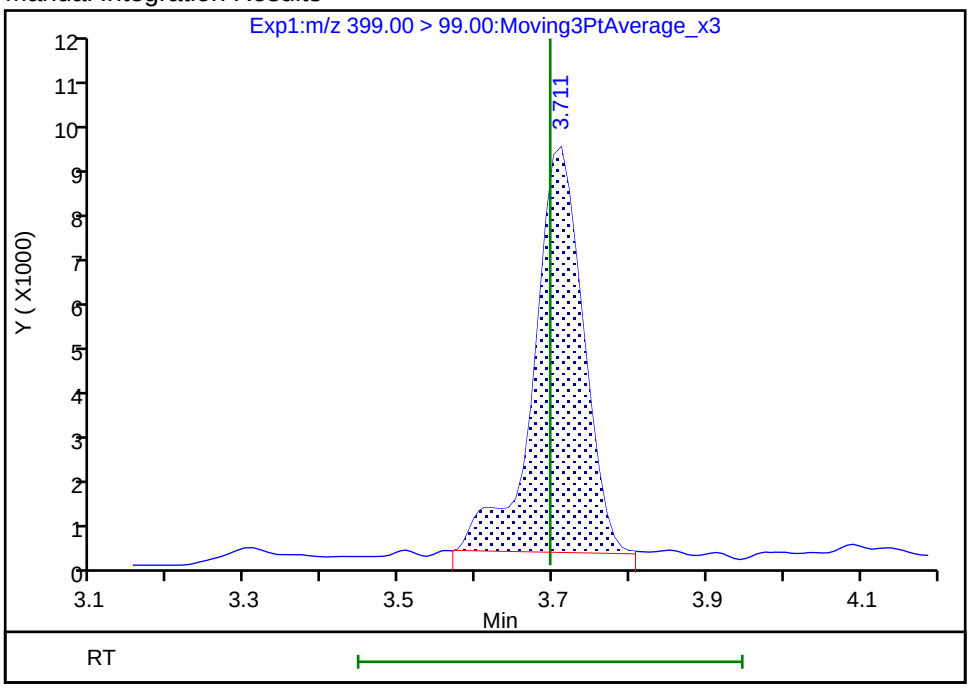
Processing Integration Results

RT: 3.71
Area: 41051
Amount: 0.048998
Amount Units: ng/ml




Manual Integration Results

RT: 3.71
Area: 37981
Amount: 0.045227
Amount Units: ng/ml




Reviewer: vangm, 10-Sep-2020 13:20:26
Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

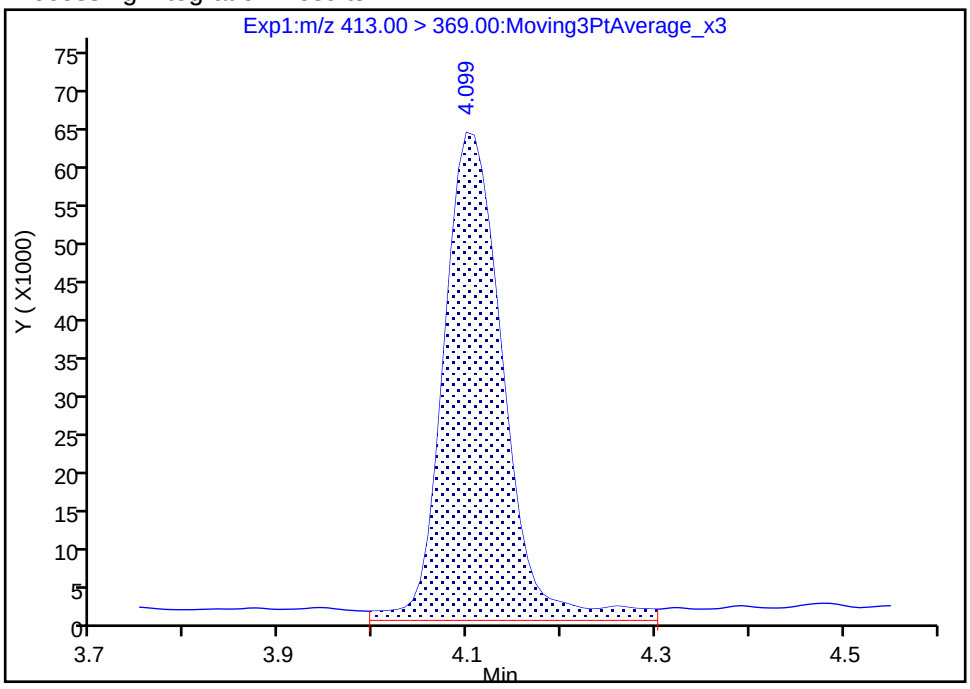
Data File: \\chromfs\Sacramento\ChromData\A18\20200910-103001.b\2020.09.10_A18_PFC_AAA_017.d
Injection Date: 10-Sep-2020 12:45:05 Instrument ID: A18
Lims ID: CCVL
Client ID:
Operator ID: TAISACA18-PC\A-18 ALS Bottle#: 51 Worklist Smp#: 2
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFAS_A18V2 Limit Group: LC PFC ICAL
Column: Gemini C18 3um 3mm x 50 mm ( 3.00mm) Detector EXP1

## 22 Perfluorooctanoic acid, CAS: 335-67-1

Signal: 1

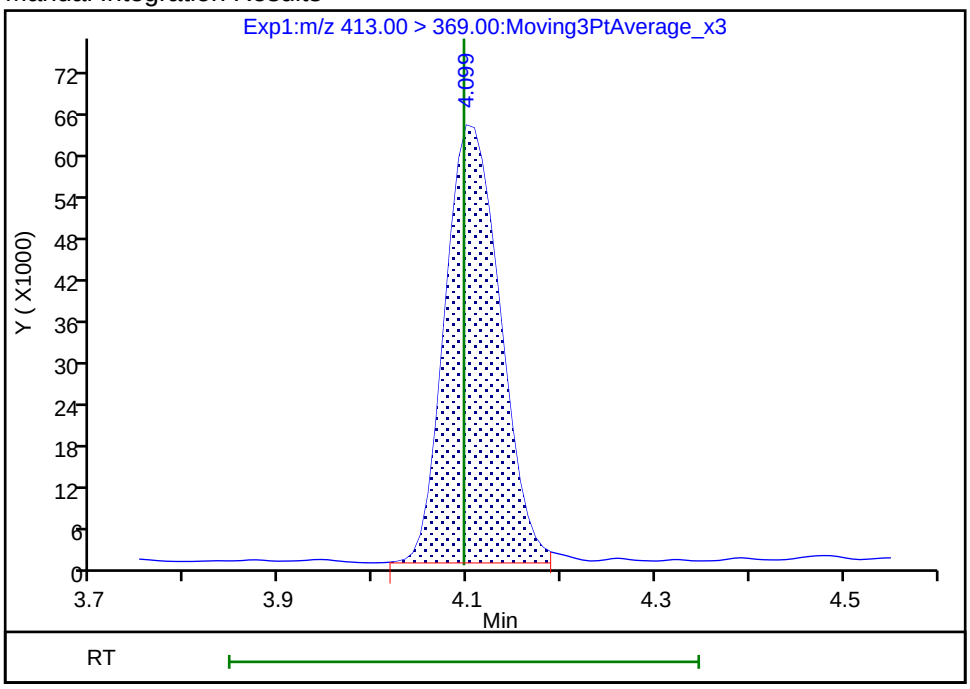
Processing Integration Results

RT: 4.10
Area: 280874
Amount: 0.057157
Amount Units: ng/ml




Manual Integration Results

RT: 4.10
Area: 254970
Amount: 0.051886
Amount Units: ng/ml




Reviewer: vangm, 10-Sep-2020 13:20:39
Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

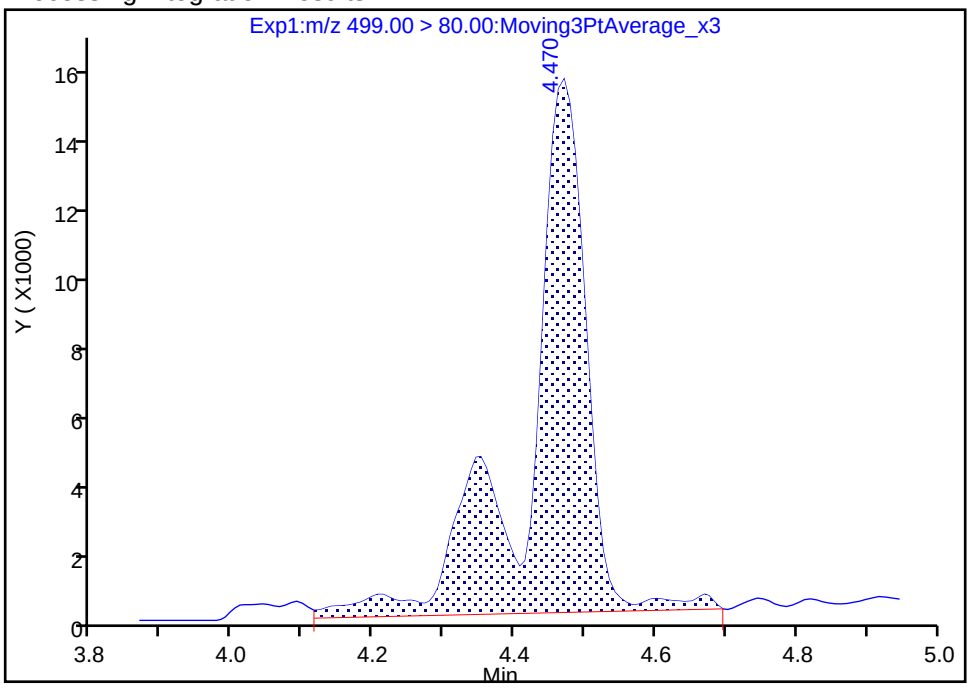
Data File: \\chromfs\Sacramento\ChromData\A18\20200910-103001.b\2020.09.10_A18_PFC_AAA_017.d
Injection Date: 10-Sep-2020 12:45:05 Instrument ID: A18
Lims ID: CCVL
Client ID:
Operator ID: TAISACA18-PC\A-18 ALS Bottle#: 51 Worklist Smp#: 2
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFAS_A18V2 Limit Group: LC PFC ICAL
Column: Gemini C18 3um 3mm x 50 mm ( 3.00mm) Detector EXP1

## 29 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 1

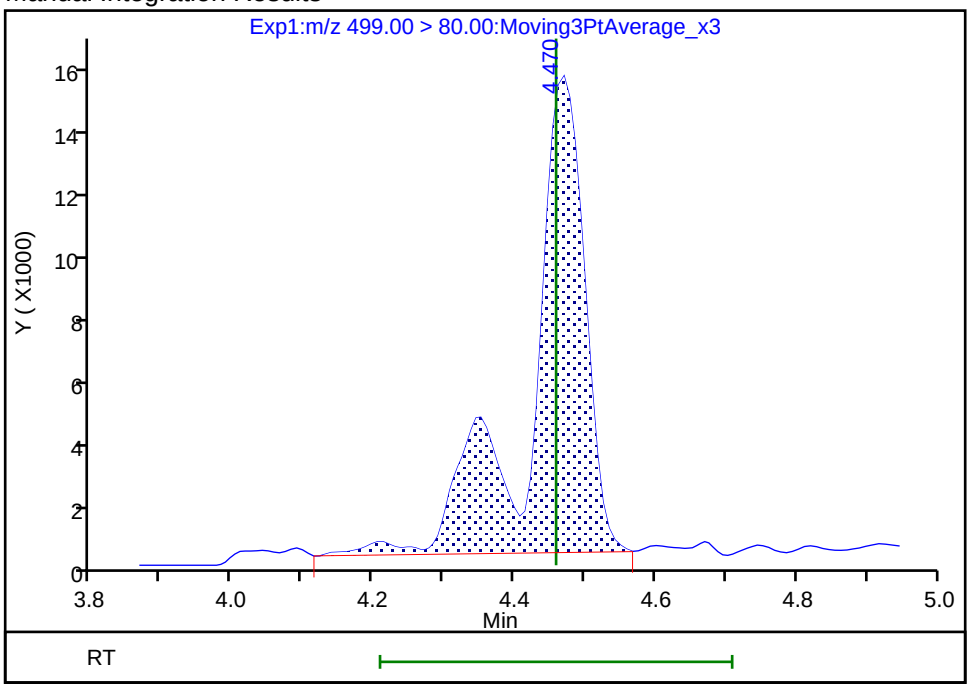
Processing Integration Results

RT: 4.47
Area: 87853
Amount: 0.050956
Amount Units: ng/ml




Manual Integration Results

RT: 4.47
Area: 80586
Amount: 0.046741
Amount Units: ng/ml




Reviewer: vangm, 10-Sep-2020 13:20:49
Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

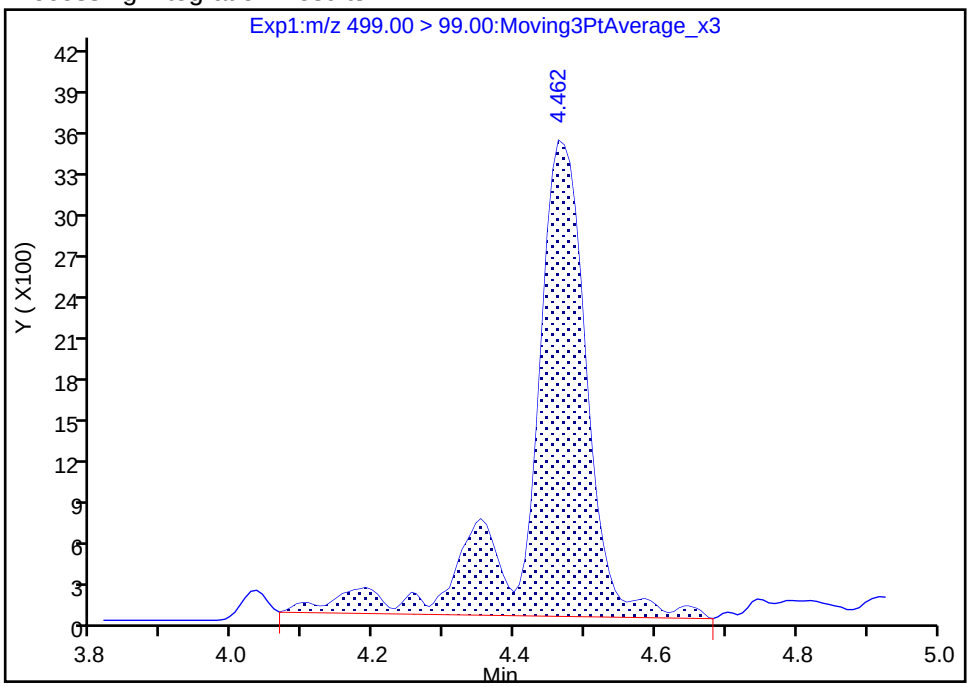
| | | | | | |
|---|---|---|---|---|---|
| Data File: | \\chromfs\Sacramento\ChromData\A18\20200910-103001.b\2020.09.10_A18_PFC_AAA_017.d | | | | |
| Injection Date: | 10-Sep-2020 12:45:05 | Instrument ID: | A18 | | |
| Lims ID: | CCVL | | | | |
| Client ID: | | | | | |
| Operator ID: | TAISACA18-PC\A-18 | ALS Bottle#: | 51 | Worklist Smp#: | 2 |
| Injection Vol: | 20.0 ul | Dil. Factor: | 1.0000 | | |
| Method: | PFAS_A18V2 | Limit Group: | LC PFC ICAL | | |
| Column: | Gemini C18 3um 3mm x 50 mm ( 3.00 mm) | Detector | EXP1 | | |

## 29 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 2

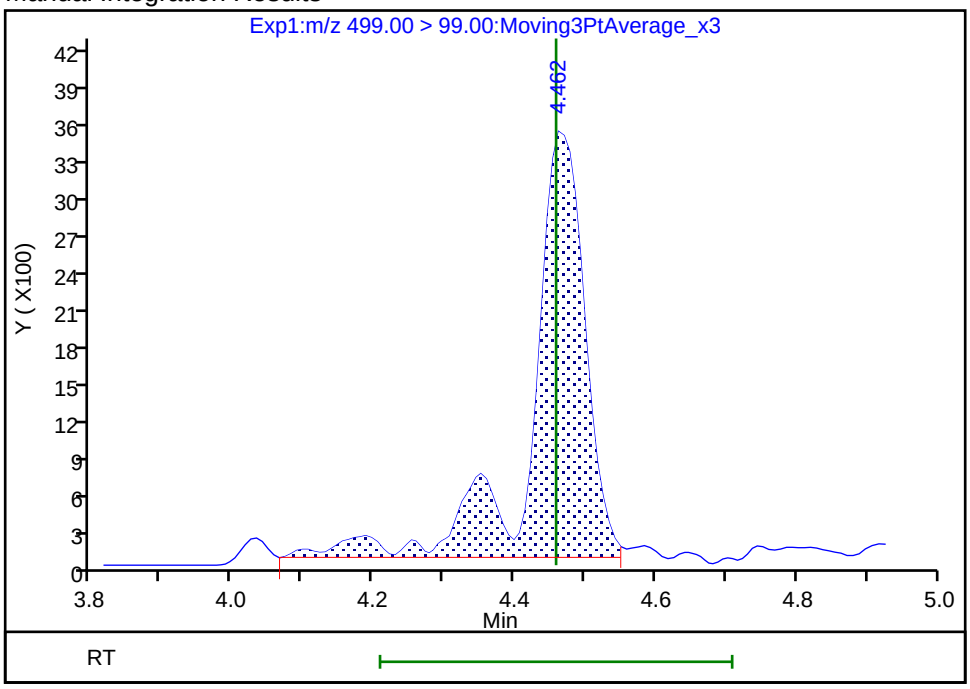
Processing Integration Results

RT: 4.46
Area: 19546
Amount: 0.050956
Amount Units: ng/ml




Manual Integration Results

RT: 4.46
Area: 18255
Amount: 0.046741
Amount Units: ng/ml




Reviewer: vangm, 10-Sep-2020 13:20:59
Audit Action: Manually Integrated Audit Reason: Baseline

Eurofins TestAmerica, Sacramento

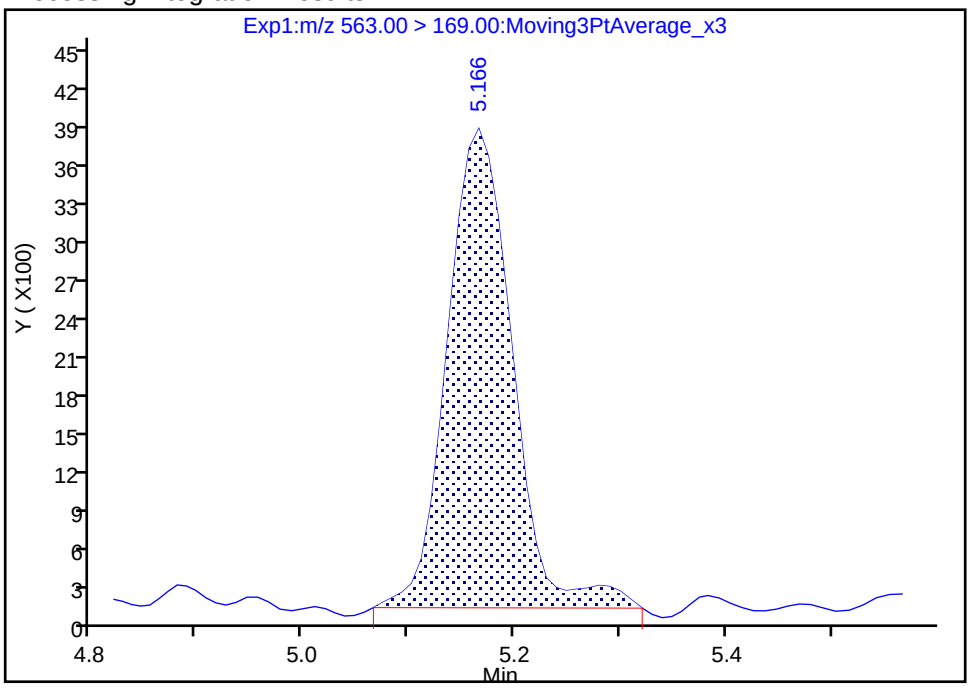
Data File: \\chromfs\Sacramento\ChromData\A18\20200910-103001.b\2020.09.10_A18_PFC_AAA_017.d
Injection Date: 10-Sep-2020 12:45:05 Instrument ID: A18
Lims ID: CCVL
Client ID:
Operator ID: TAISACA18-PC\A-18 ALS Bottle#: 51 Worklist Smp#: 2
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFAS_A18V2 Limit Group: LC PFC ICAL
Column: Gemini C18 3um 3mm x 50 mm ( 3.00mm) Detector EXP1

## 45 Perfluoroundecanoic acid, CAS: 2058-94-8

Signal: 2

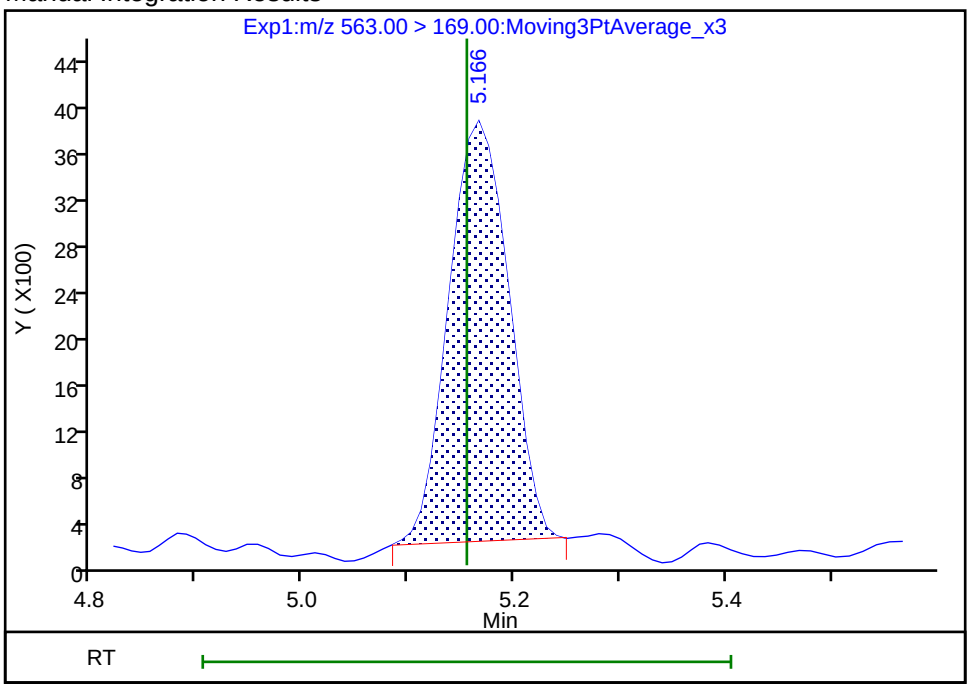
Processing Integration Results

RT: 5.17
Area: 15900
Amount: 0.041000
Amount Units: ng/ml




Manual Integration Results

RT: 5.17
Area: 14232
Amount: 0.041000
Amount Units: ng/ml




Reviewer: vangm, 10-Sep-2020 13:21:11
Audit Action: Manually Integrated Audit Reason: Baseline

FORM VII
LCMS CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Sacramento  Job No.: 460-217547-1

SDG No.:

Lab Sample ID: CCV 320-410948/3  Calibration Date: 09/10/2020 12:54

Instrument ID: A18  Calib Start Date: 08/25/2020 16:43

GC Column: Gemini C18 3x50  ID: 3.00(mm)  Calib End Date: 08/25/2020 17:37

Lab File ID: 2020.09.10_A18_PFC_AAA_018.d  Conc. Units: ng/mL

| ANALYTE | CURVE TYPE | AVE RRF | RRF | MIN RRF | CALC AMOUNT | SPIKE AMOUNT | %D | MAX %D |
|---|---|---|---|---|---|---|---|---|
| Perfluorobutanoic acid (PFBA) | AveID | 0.8679 | 0.9451 | | 1.09 | 1.00 | 8.9 | 40.0 |
| Perfluoropentanoic acid (PFPeA) | AveID | 0.997 | 1.105 | | 1.11 | 1.00 | 10.8 | 40.0 |
| Perfluorobutanesulfonic acid (PFBS) | AveID | 1.010 | 1.058 | | 0.926 | 0.884 | 4.8 | 50.0 |
| 4:2 FTS | AveID | 2.273 | 2.562 | | 1.05 | 0.934 | 12.7 | 50.0 |
| Perfluorohexanoic acid (PFHxA) | AveID | 0.9638 | 1.052 | | 1.09 | 1.00 | 9.2 | 40.0 |
| Perfluoropentanesulfonic acid (PFPeS) | AveID | 0.7925 | 0.8529 | | 1.01 | 0.938 | 7.6 | 50.0 |
| HFPO-DA (GenX) | AveID | 0.9742 | 1.097 | | 1.13 | 1.00 | 12.6 | 40.0 |
| Perfluoroheptanoic acid (PFHpA) | AveID | 1.014 | 1.031 | | 1.02 | 1.00 | 1.7 | 40.0 |
| Perfluorohexanesulfonic acid (PFHxS) | AveID | 1.181 | 1.148 | | 0.885 | 0.910 | -2.8 | 40.0 |
| 4,8-Dioxa-3H-perfluorononanoic acid (ADONA) | AveID | 9.582 | 10.42 | | 1.02 | 0.942 | 8.7 | 50.0 |
| 6:2 FTS | AveID | 2.299 | 2.338 | | 0.964 | 0.948 | 1.7 | 40.0 |
| Perfluoroheptanesulfonic Acid (PFHpS) | AveID | 1.118 | 1.298 | | 1.11 | 0.952 | 16.1 | 50.0 |
| Perfluorooctanoic acid (PFOA) | AveID | 1.020 | 1.018 | | 0.998 | 1.00 | -0.3 | 40.0 |
| Perfluorooctanesulfonic acid (PFOS) | AveID | 1.035 | 1.136 | | 1.02 | 0.928 | 9.8 | 40.0 |
| Perfluorononanoic acid (PFNA) | AveID | 0.9590 | 0.9905 | | 1.04 | 1.00 | 3.3 | 40.0 |
| F-53B Major | AveID | 3.236 | 3.499 | | 1.01 | 0.932 | 8.1 | 50.0 |
| Perfluorooctanesulfonamide (FOSA) | AveID | 0.9305 | 0.9803 | | 1.05 | 1.00 | 5.4 | 40.0 |
| Perfluorononanesulfonic acid (PFNS) | AveID | 0.9368 | 1.012 | | 1.04 | 0.960 | 8.0 | 50.0 |
| Perfluorodecanoic acid (PFDA) | AveID | 0.9639 | 0.9212 | | 0.956 | 1.00 | -4.4 | 40.0 |
| 8:2 FTS | AveID | 1.775 | 1.900 | | 1.03 | 0.958 | 7.0 | 40.0 |
| N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA) | AveID | 0.7417 | 0.7722 | | 1.04 | 1.00 | 4.1 | 40.0 |
| Perfluorodecanesulfonic acid (PFDS) | AveID | 0.8350 | 0.9198 | | 1.06 | 0.964 | 10.2 | 50.0 |
| Perfluoroundecanoic acid (PFUnA) | AveID | 0.7253 | 0.8587 | | 1.19 | 1.00 | 18.4 | 40.0 |
| N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA) | AveID | 0.6758 | 0.7143 | | 1.06 | 1.00 | 5.7 | 40.0 |
| NMeFOSE | AveID | 1.080 | 1.217 | | 1.13 | 1.00 | 12.8 | 40.0 |
| NMeFOSA | AveID | 0.9606 | 1.074 | | 1.12 | 1.00 | 11.8 | 50.0 |
| F-53B Minor | AveID | 4.102 | 4.610 | | 1.06 | 0.942 | 12.4 | 50.0 |
| NEtFOSE | AveID | 1.073 | 1.205 | | 1.12 | 1.00 | 12.3 | 40.0 |
| Perfluorododecanoic acid (PFDoA) | AveID | 1.023 | 1.059 | | 1.04 | 1.01 | 3.6 | 40.0 |
| NEtFOSA | AveID | 1.058 | 1.133 | | 1.07 | 1.00 | 7.1 | 40.0 |
| 10:2 FTS | AveID | 2.014 | 2.363 | | 1.13 | 0.964 | 17.4 | 50.0 |
| Perfluorododecanesulfonic acid (PFDoS) | AveID | 0.3329 | 0.3369 | | 0.980 | 0.968 | 1.2 | 50.0 |

FORM VII 537 (modified)

FORM VII
LCMS CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Sacramento  Job No.: 460-217547-1

SDG No.:

Lab Sample ID: CCV 320-410948/3  Calibration Date: 09/10/2020 12:54

Instrument ID: A18  Calib Start Date: 08/25/2020 16:43

GC Column: Gemini C18 3x50  ID: 3.00(mm)  Calib End Date: 08/25/2020 17:37

Lab File ID: 2020.09.10_A18_PFC_AAA_018.d  Conc. Units: ng/mL

| ANALYTE | CURVE TYPE | AVE RRF | RRF | MIN RRF | CALC AMOUNT | SPIKE AMOUNT | %D | MAX %D |
|---|---|---|---|---|---|---|---|---|
| Perfluorotridecanoic acid (PFTriA) | AveID | 0.9409 | 0.995 | | 1.06 | 1.00 | 5.8 | 50.0 |
| Perfluorotetradecanoic acid (PFTeA) | AveID | 0.0844 | 0.0857 | | 1.02 | 1.00 | 1.6 | 50.0 |
| Perfluoro-n-hexadecanoic acid (PFHxDA) | L2ID | | 0.999 | | 1.12 | 1.00 | 11.5 | 50.0 |
| Perfluoro-n-octadecanoic acid (PFODA) | AveID | 0.6605 | 0.6283 | | 0.951 | 1.00 | -4.9 | 50.0 |
| 13C4 PFBA | Ave | 1.585 | 1.553 | | 2.45 | 2.50 | -2.0 | 50.0 |
| 13C5 PFPeA | Ave | 1.233 | 1.164 | | 2.36 | 2.50 | -5.6 | 50.0 |
| 13C3 PFBS | Ave | 0.9684 | 1.052 | | 2.53 | 2.33 | 8.7 | 50.0 |
| M2-4:2 FTS | Ave | 0.2333 | 0.2331 | | 2.33 | 2.34 | -0.0 | 50.0 |
| 13C2 PFHxA | Ave | 1.231 | 1.257 | | 2.55 | 2.50 | 2.2 | 50.0 |
| 13C3 HFPO-DA | Ave | 0.2518 | 0.2413 | | 2.40 | 2.50 | -4.2 | 50.0 |
| 13C4 PFHpA | Ave | 1.051 | 1.144 | | 2.72 | 2.50 | 8.9 | 50.0 |
| 18O2 PFHxS | Ave | 0.5117 | 0.5618 | | 2.60 | 2.37 | 9.8 | 50.0 |
| M2-6:2 FTS | Ave | 0.1958 | 0.2058 | | 2.50 | 2.38 | 5.1 | 50.0 |
| 13C4 PFOA | Ave | 1.001 | 1.018 | | 2.54 | 2.50 | 1.7 | 50.0 |
| 13C4 PFOS | Ave | 0.3465 | 0.3595 | | 2.48 | 2.39 | 3.7 | 50.0 |
| 13C5 PFNA | Ave | 0.8063 | 0.9041 | | 2.80 | 2.50 | 12.1 | 50.0 |
| 13C8 FOSA | Ave | 0.5590 | 0.5999 | | 2.68 | 2.50 | 7.3 | 50.0 |
| 13C2 PFDA | Ave | 0.7829 | 0.8130 | | 2.60 | 2.50 | 3.8 | 50.0 |
| M2-8:2 FTS | Ave | 0.2823 | 0.2710 | | 2.30 | 2.40 | -4.0 | 50.0 |
| d3-NMeFOSAA | Ave | 0.5255 | 0.5335 | | 2.54 | 2.50 | 1.5 | 50.0 |
| 13C2 PFUnA | Ave | 0.7758 | 0.8885 | | 2.86 | 2.50 | 14.5 | 50.0 |
| d5-NEtFOSAA | Ave | 0.5556 | 0.5916 | | 2.66 | 2.50 | 6.5 | 50.0 |
| d7-N-MeFOSE-M | Ave | 0.1384 | 0.1630 | | 14.7 | 12.5 | 17.8 | 50.0 |
| d-N-MeFOSA-M | Ave | 0.1965 | 0.2132 | | 2.71 | 2.50 | 8.5 | 50.0 |
| d9-N-EtFOSE-M | Ave | 0.1700 | 0.1794 | | 13.2 | 12.5 | 5.6 | 50.0 |
| d-N-EtFOSA-M | Ave | 0.2011 | 0.2070 | | 2.57 | 2.50 | 2.9 | 50.0 |
| 13C2 PFDoA | Ave | 0.7650 | 0.8479 | | 2.77 | 2.50 | 10.8 | 50.0 |
| 13C2 PFTeDA | Ave | 0.6311 | 0.7138 | | 2.83 | 2.50 | 13.1 | 50.0 |
| 13C2 PFHxDA | Ave | 0.4618 | 0.5483 | | 2.97 | 2.50 | 18.7 | 50.0 |
| 13C8 PFOA | Ave | 0.6756 | 0.8216 | | 2.98 | 2.45 | 21.6 | 50.0 |
| 13C8 PFOS | Ave | 0.1082 | 0.1156 | | 2.55 | 2.39 | 6.8 | 50.0 |

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\A18\20200910-103001.b\2020.09.10_A18_PFC_AAA_018.d
Lims ID: CCV L4
Client ID:
Sample Type: CCVIS
Inject. Date: 10-Sep-2020 12:54:15 ALS Bottle#: 52 Worklist Smp#: 3
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Sample Info: CCV L4 (30)
Misc. Info.: Plate: 4 Rack: 1
Operator ID: TAISACA18-PC\A-18 Instrument ID: A18
Sublist: chrom-PFAS_A18V2*sub1

Method: \\chromfs\Sacramento\ChromData\A18\20200910-103001.b\PFAS_A18V2.m
Limit Group: LC PFC ICAL
Last Update: 10-Sep-2020 13:22:05 Calib Date: 25-Aug-2020 17:37:57
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\A18\20200825-102078.b\2020.08.25_A18_ICAL_A_017.d

Column 1 : Gemini C18 3um 3mm x 50 mm ( 3.00 mm) Det: EXP1
Process Host: CTX1002

First Level Reviewer: vangm Date: 10-Sep-2020 13:22:05
Ratio Calibration: Average of Initial Calibration

| Signal | RT | EXP RT | DLT RT | REL RT | Response | Amount ng/ml | Ratio(Limits) | %Rec | S/N | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| D 1 13C4 PFBA | | | | | | | | | | |
| 217.00 > 172.00 | 2.555 | 2.555 | 0.0 | 0.624 | 16404727 | 2.45 | | 98.0 | 7250 | |
| 2 Perfluorobutanoic acid | | | | | | | | | | |
| 212.90 > 169.00 | 2.555 | 2.555 | 0.0 | 1.000 | 6201636 | 1.09 | | 109 | 451 | |
| D 4 13C5 PFPeA | | | | | | | | | | |
| 267.90 > 223.00 | 2.907 | 2.907 | 0.0 | 0.710 | 12289872 | 2.36 | | 94.4 | 5020 | |
| 5 Perfluoropentanoic acid | | | | | | | | | | |
| 262.90 > 219.00 | 2.907 | 2.907 | 0.0 | 1.000 | 5432211 | 1.11 | | 111 | 319 | |
| D 9 13C3 PFBS | | | | | | | | | | |
| 301.90 > 80.00 | 2.938 | 2.938 | 0.0 | 0.717 | 10337529 | 2.53 | | 109 | 4689 | |
| 6 Perfluorobutanesulfonic acid | | | | | | | | | | |
| 298.90 > 80.00 | 2.948 | 2.948 | 0.0 | 1.004 | 4159294 | 0.9264 | Target=2.30 | 105 | 866 | |
| 298.90 > 99.00 | 2.938 | 2.948 | -0.010 | 1.000 | 1758332 | | 2.37(1.15-3.45) | | 683 | |
| D 7 M2-4:2 FTS | | | | | | | | | | |
| 329.00 > 81.00 | 3.236 | 3.236 | 0.0 | 0.790 | 2299183 | 2.33 | | 99.9 | 1171 | |
| 8 4:2 FTS | | | | | | | | | | |
| 327.00 > 307.00 | 3.236 | 3.236 | 0.0 | 1.000 | 2356350 | 1.05 | | 113 | 9533 | |
| D 11 13C2 PFHxA | | | | | | | | | | |
| 315.00 > 270.00 | 3.286 | 3.286 | 0.0 | 0.802 | 13280496 | 2.55 | | 102 | 5058 | |
| 10 Perfluorohexanoic acid | | | | | | | | | | |
| 313.00 > 269.00 | 3.286 | 3.286 | 0.0 | 1.000 | 5589753 | 1.09 | Target=13.78 | 109 | 503 | |
| 313.00 > 119.00 | 3.286 | 3.286 | 0.0 | 1.000 | 412825 | | 13.54(6.89-20.66) | | 247 | |
| 12 Perfluoropentanesulfonic acid | | | | | | | | | | |
| 349.00 > 80.00 | 3.296 | 3.296 | 0.0 | 1.122 | 3557013 | 1.01 | Target=3.02 | 108 | 750 | |
| 349.00 > 99.00 | 3.296 | 3.296 | 0.0 | 1.122 | 1167061 | | 3.05(1.51-4.52) | | 916 | |
| D 14 13C3 HFPO-DA | | | | | | | | | | |
| 287.00 > 169.00 | 3.413 | 3.413 | 0.0 | 0.833 | 2548162 | 2.40 | | 95.8 | 5158 | |

| Signal | RT | EXP RT | DLT RT | REL RT | Response | Amount ng/ml | Ratio(Limits) | %Rec | S/N | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| 13 HPFO-DA | | | | | | | | | | |
| 285.00 > 169.00 | 3.413 | 3.413 | 0.0 | 1.000 | 1117993 | 1.13 | | 113 | 3641 | |
| D 17 18O2 PFHxS | | | | | | | | | | |
| 403.00 > 84.00 | 3.696 | 3.696 | 0.0 | 0.902 | 5613082 | 2.60 | | 110 | 4797 | |
| D 18 13C4 PFHpA | | | | | | | | | | |
| 367.00 > 322.00 | 3.696 | 3.696 | 0.0 | 0.902 | 12084106 | 2.72 | | 109 | 4983 | |
| 15 Perfluorohexanesulfonic acid | | | | | | | | | | |
| 399.00 > 80.00 | 3.696 | 3.696 | 0.0 | 1.000 | 2480298 | 0.8845 | Target=3.50 | 97.2 | 765 | |
| 399.00 > 99.00 | 3.696 | 3.696 | 0.0 | 1.000 | 727140 | | 3.41(1.75-5.25) | | 715 | |
| 16 Perfluoroheptanoic acid | | | | | | | | | | |
| 363.00 > 319.00 | 3.696 | 3.696 | 0.0 | 1.000 | 4983445 | 1.02 | Target=3.84 | 102 | 657 | |
| 363.00 > 169.00 | 3.686 | 3.696 | -0.010 | 0.997 | 1339228 | | 3.72(1.92-5.76) | | 1069 | |
| 19 DONA | | | | | | | | | | |
| 377.00 > 251.00 | 3.746 | 3.746 | 0.0 | 0.841 | 14908644 | 1.02 | Target=2.42 | 109 | 6242 | |
| 377.00 > 85.00 | 3.746 | 3.746 | 0.0 | 0.841 | 6179407 | | 2.41(1.21-3.63) | | 4573 | |
| D 20 M2-6:2 FTS | | | | | | | | | | |
| 429.00 > 81.00 | 4.072 | 4.072 | 0.0 | 0.994 | 2064475 | 2.50 | | 105 | 1470 | |
| 21 6:2 FTS | | | | | | | | | | |
| 427.00 > 407.00 | 4.072 | 4.072 | 0.0 | 1.000 | 1926796 | 0.9642 | | 102 | 3293 | |
| 24 Perfluoroheptanesulfonic acid | | | | | | | | | | |
| 449.00 > 80.00 | 4.080 | 4.080 | 0.0 | 0.917 | 1876992 | 1.11 | Target=4.40 | 116 | 755 | |
| 449.00 > 99.00 | 4.080 | 4.080 | 0.0 | 0.917 | 427633 | | 4.39(2.20-6.60) | | 569 | |
| $ 26 13C8 PFOA | | | | | | | | | | |
| 421.00 > 376.00 | 4.080 | 4.080 | 0.0 | 0.996 | 8494440 | 2.98 | | 122 | 5113 | |
| 22 Perfluorooctanoic acid | | | | | | | | | | |
| 413.00 > 369.00 | 4.096 | 4.096 | 0.0 | 1.000 | 4382581 | 1.00 | Target=2.94 | 99.7 | 841 | |
| 413.00 > 169.00 | 4.088 | 4.096 | -0.008 | 0.998 | 1478774 | | 2.96(1.47-4.41) | | 7975 | |
| D 25 13C4 PFOA | | | | | | | | | | |
| 417.00 > 372.00 | 4.096 | 4.096 | 0.0 | 1.000 | 10755160 | 2.54 | | 102 | 4906 | |
| * 23 13C2 PFOA | | | | | | | | | | |
| 415.00 > 370.00 | 4.096 | 4.096 | 0.0 | | 10561280 | 2.50 | | | 5683 | |
| $ 28 13C8 PFOS | | | | | | | | | | |
| 507.00 > 99.00 | 4.451 | 4.451 | 0.0 | 1.087 | 1166968 | 2.55 | | 107 | 3009 | |
| D 27 13C4 PFOS | | | | | | | | | | |
| 503.00 > 80.00 | 4.451 | 4.451 | 0.0 | 1.087 | 3630081 | 2.48 | | 104 | 1410 | |
| 29 Perfluorooctanesulfonic acid | | | | | | | | | | M |
| 499.00 > 80.00 | 4.459 | 4.459 | 0.0 | 1.002 | 1601488 | 1.02 | Target=4.53 | 110 | 486 | M |
| 499.00 > 99.00 | 4.451 | 4.459 | -0.008 | 1.000 | 336115 | | 4.76(2.26-6.79) | | 545 | |
| D 30 13C5 PFNA | | | | | | | | | | |
| 468.00 > 423.00 | 4.467 | 4.467 | 0.0 | 1.091 | 9548404 | 2.80 | | 112 | 5332 | |
| 31 Perfluorononanoic acid | | | | | | | | | | |
| 463.00 > 419.00 | 4.467 | 4.467 | 0.0 | 1.000 | 3790477 | 1.03 | Target=8.97 | 103 | 788 | |
| 463.00 > 169.00 | 4.475 | 4.467 | 0.008 | 1.002 | 421785 | | 8.99(4.48-13.45) | | 613 | |
| 32 9ClFOS | | | | | | | | | | |
| 531.00 > 351.00 | 4.657 | 4.657 | 0.0 | 1.046 | 4953068 | 1.01 | | 108 | 4976 | |
| D 33 13C8 FOSA | | | | | | | | | | |
| 506.00 > 78.00 | 4.791 | 4.791 | 0.0 | 1.170 | 6335485 | 2.68 | | 107 | 5532 | |

| Signal | RT | EXP RT | DLT RT | REL RT | Response | Amount ng/ml | Ratio(Limits) | %Rec | S/N | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| 34 Perfluorooctanesulfonamide | | | | | | | | | | |
| 498.00 > 78.00 | 4.791 | 4.791 | 0.0 | 1.000 | 2484348 | 1.05 | | 105 | 3329 | |
| 35 Perfluorononanesulfonic acid | | | | | | | | | | |
| 549.00 > 80.00 | 4.800 | 4.800 | 0.0 | 1.078 | 1474954 | 1.04 | Target=2.85 | 108 | 1047 | |
| 549.00 > 99.00 | 4.808 | 4.800 | 0.008 | 1.080 | 537830 | | 2.74(1.43-4.28) | | 916 | |
| 37 Perfluorodecanoic acid | | | | | | | | | | |
| 513.00 > 469.00 | 4.826 | 4.826 | 0.0 | 1.000 | 3163918 | 0.9557 | Target=10.16 | 95.6 | 1289 | |
| 513.00 > 169.00 | 4.826 | 4.826 | 0.0 | 1.000 | 353938 | | 8.94(5.08-15.24) | | 233 | |
| D 39 13C2 PFDA | | | | | | | | | | |
| 515.00 > 470.00 | 4.826 | 4.826 | 0.0 | 1.178 | 8586618 | 2.60 | | 104 | 6578 | |
| D 38 M2-8:2 FTS | | | | | | | | | | |
| 529.00 > 81.00 | 4.834 | 4.834 | 0.0 | 1.180 | 2742146 | 2.30 | | 96.0 | 1540 | |
| 36 8:2 FTS | | | | | | | | | | |
| 527.00 > 507.00 | 4.834 | 4.834 | 0.0 | 1.000 | 2083961 | 1.03 | | 107 | 5833 | |
| D 40 d3-NMeFOSAA | | | | | | | | | | |
| 573.00 > 419.00 | 4.997 | 4.997 | 0.0 | 1.220 | 5634252 | 2.54 | | 102 | 2769 | |
| 41 NMeFOSAA | | | | | | | | | | |
| 570.00 > 419.00 | 4.997 | 4.997 | 0.0 | 1.000 | 1740417 | 1.04 | | 104 | 11453 | |
| 42 Perfluorodecanesulfonic acid | | | | | | | | | | |
| 599.00 > 80.00 | 5.128 | 5.128 | 0.0 | 1.152 | 1346774 | 1.06 | Target=2.77 | 110 | 1046 | |
| 599.00 > 99.00 | 5.128 | 5.128 | 0.0 | 1.152 | 468969 | | 2.87(1.38-4.15) | | 1343 | |
| D 43 13C2 PFUnA | | | | | | | | | | |
| 565.00 > 520.00 | 5.155 | 5.155 | 0.0 | 1.258 | 9383706 | 2.86 | | 115 | 8988 | |
| 45 Perfluoroundecanoic acid | | | | | | | | | | |
| 563.00 > 519.00 | 5.155 | 5.155 | 0.0 | 1.000 | 3226433 | 1.19 | Target=8.43 | 118 | 1795 | |
| 563.00 > 169.00 | 5.155 | 5.155 | 0.0 | 1.000 | 364432 | | 8.85(4.22-12.65) | | 487 | |
| D 44 d5-NEtFOSAA | | | | | | | | | | |
| 589.00 > 419.00 | 5.164 | 5.164 | 0.0 | 1.261 | 6248107 | 2.66 | | 106 | 2229 | |
| 46 NEtFOSA | | | | | | | | | | |
| 584.00 > 419.00 | 5.173 | 5.173 | 0.0 | 1.002 | 1785149 | 1.06 | | 106 | 1410 | |
| D 47 d7-N-MeFOSE-M | | | | | | | | | | |
| 623.00 > 59.00 | 5.256 | 5.256 | 0.0 | 1.283 | 8605213 | 14.7 | | 118 | 5036 | |
| 48 N-MeFOSE-M | | | | | | | | | | |
| 616.00 > 59.00 | 5.267 | 5.267 | 0.0 | 1.002 | 838051 | 1.13 | | 113 | 1218 | |
| D 49 d-N-MeFOSA-M | | | | | | | | | | |
| 515.00 > 169.00 | 5.267 | 5.267 | 0.0 | 1.286 | 2252060 | 2.71 | | 109 | 44.8 | |
| 50 NMeFOSA | | | | | | | | | | |
| 512.00 > 169.00 | 5.277 | 5.277 | 0.0 | 1.002 | 967411 | 1.12 | | 112 | 558 | |
| 51 11ClFOS | | | | | | | | | | |
| 631.00 > 451.00 | 5.297 | 5.297 | 0.0 | 1.190 | 6595637 | 1.06 | | 112 | 6900 | |
| D 52 d9-N-EtFOSE-M | | | | | | | | | | |
| 639.00 > 59.00 | 5.424 | 5.424 | 0.0 | 1.324 | 9475778 | 13.2 | | 106 | 4327 | |
| 53 N-EtFOSE-M | | | | | | | | | | |
| 630.00 > 59.00 | 5.435 | 5.435 | 0.0 | 1.002 | 913590 | 1.12 | | 112 | 1759 | |
| D 54 d-N-EtFOSA-M | | | | | | | | | | |
| 531.00 > 169.00 | 5.446 | 5.446 | 0.0 | 1.330 | 2186014 | 2.57 | | 103 | 284 | |

| Signal | RT | EXP RT | DLT RT | REL RT | Response | Amount ng/ml | Ratio(Limits) | %Rec | S/N | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| 57 Perfluorododecanoic acid | | | | | | | | | | |
| 613.00 > 569.00 | 5.446 | 5.446 | 0.0 | 0.998 | 3817152 | 1.04 | Target=9.12 | 104 | 1422 | |
| 613.00 > 169.00 | 5.457 | 5.446 | 0.011 | 1.000 | 434880 | | 8.78(4.56-13.69) | | 1033 | |
| 55 N-EtFOSA-M | | | | | | | | | | |
| 526.00 > 169.00 | 5.457 | 5.457 | 0.0 | 1.002 | 990860 | 1.07 | | 107 | 362 | |
| D 56 13C2 PFDoA | | | | | | | | | | |
| 615.00 > 570.00 | 5.457 | 5.457 | 0.0 | 1.332 | 8955283 | 2.77 | | 111 | 11295 | |
| 58 10:2 FTS | | | | | | | | | | |
| 627.00 > 607.00 | 5.467 | 5.467 | 0.0 | 1.131 | 2608630 | 1.13 | | 117 | 3599 | |
| 59 PFDoS | | | | | | | | | | |
| 699.00 > 80.00 | 5.677 | 5.677 | 0.0 | 1.275 | 495304 | 0.9796 | Target=0.72 | 101 | 567 | |
| 699.00 > 99.00 | 5.677 | 5.677 | 0.0 | 1.275 | 723860 | | 0.68(0.36-1.07) | | 2103 | |
| 60 Perfluorotridecanoic acid | | | | | | | | | | |
| 663.00 > 619.00 | 5.711 | 5.711 | 0.0 | 1.047 | 3565595 | 1.06 | Target=6.78 | 106 | 2349 | |
| 663.00 > 169.00 | 5.711 | 5.711 | 0.0 | 1.047 | 554289 | | 6.43(3.39-10.17) | | 1163 | |
| 62 Perfluorotetradecanoic acid | | | | | | | | | | |
| 713.00 > 169.00 | 5.959 | 5.959 | 0.0 | 0.998 | 258800 | 1.02 | Target=0.85 | 102 | 1173 | |
| 713.00 > 219.00 | 5.947 | 5.959 | -0.012 | 0.996 | 256409 | | 1.01(0.43-1.28) | | 1034 | |
| D 61 13C2 PFTeDA | | | | | | | | | | |
| 715.00 > 670.00 | 5.970 | 5.970 | 0.0 | 1.457 | 7539008 | 2.83 | | 113 | 7145 | |
| D 64 13C2 PFHxDA | | | | | | | | | | |
| 815.00 > 770.00 | 6.403 | 6.403 | 0.0 | 1.563 | 5790506 | 2.97 | | 119 | 6053 | |
| 63 Perfluorohexadecanoic acid | | | | | | | | | | |
| 813.00 > 769.00 | 6.412 | 6.412 | 0.0 | 1.001 | 2314737 | 1.12 | Target=10.21 | 112 | 1673 | |
| 813.00 > 169.00 | 6.412 | 6.412 | 0.0 | 1.001 | 222337 | | 10.41(5.11-15.32) | | 1286 | |
| 65 Perfluorooctadecanoic acid | | | | | | | | | | |
| 913.00 > 869.00 | 6.861 | 6.861 | 0.0 | 1.072 | 1455233 | 0.9513 | Target=12.45 | 95.1 | 1199 | |
| 913.00 > 169.00 | 6.861 | 6.861 | 0.0 | 1.072 | 127781 | | 11.39(6.22-18.67) | | 1256 | |

## QC Flag Legend

Review Flags

M - Manually Integrated

## Reagents:

LCPFC_LL4_00030 Amount Added: 1.00 Units: mL

Report Date: 10-Sep-2020 13:22:06 Chrom Revision: 2.3 09-Sep-2020 15:12:58

Eurofins TestAmerica, Sacramento

Data File: \\chromfs\Sacramento\ChromData\A18\20200910-103001.b\2020.09.10_A18_PFC_AAA_018.d

Injection Date: 10-Sep-2020 12:54:15 Instrument ID: A18

Lims ID: CCV L4

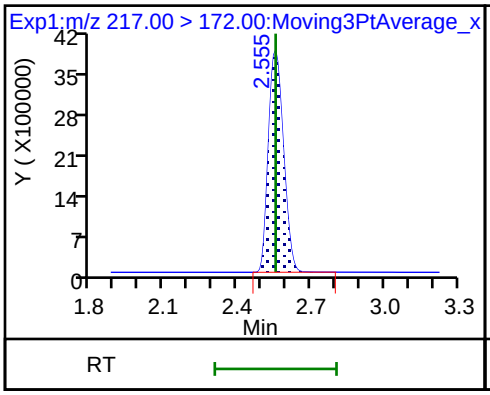
Client ID:

Operator ID: TAISACA18-PC\A-18 ALS Bottle#: 52 Worklist Smp#: 3

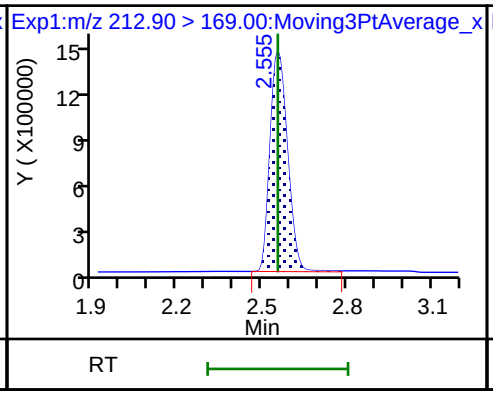
Injection Vol: 20.0 ul Dil. Factor: 1.0000

Method: PFAS_A18V2 Limit Group: LC PFC ICAL

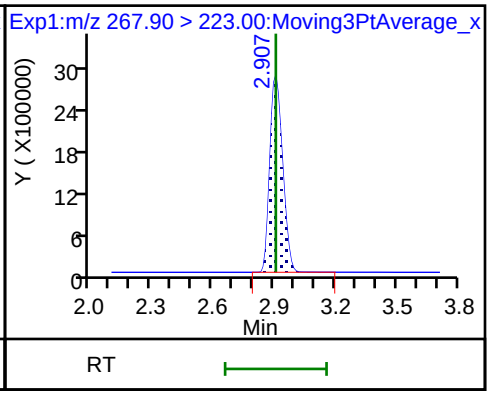
D 1 13C4 PFBA



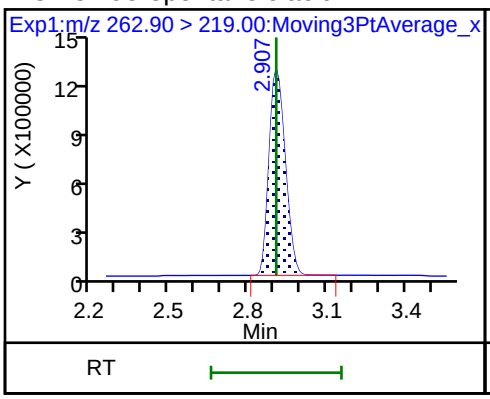

2 Perfluorobutanoic acid



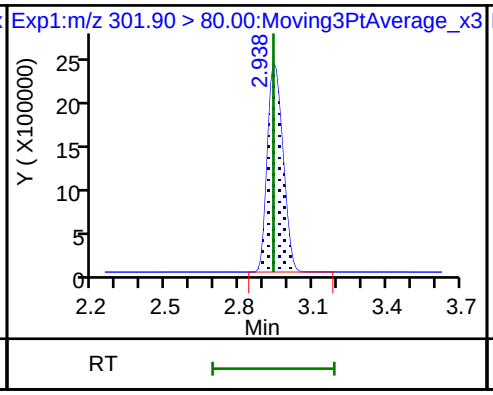

D 4 13C5 PFPeA



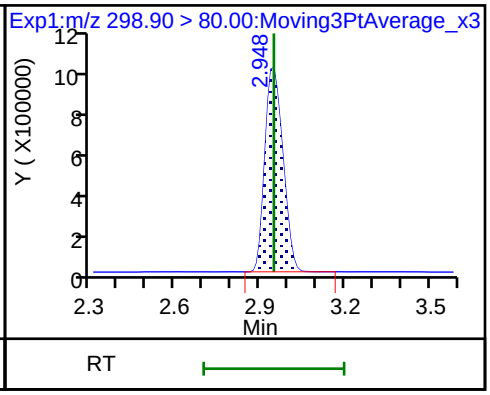

5 Perfluoropentanoic acid



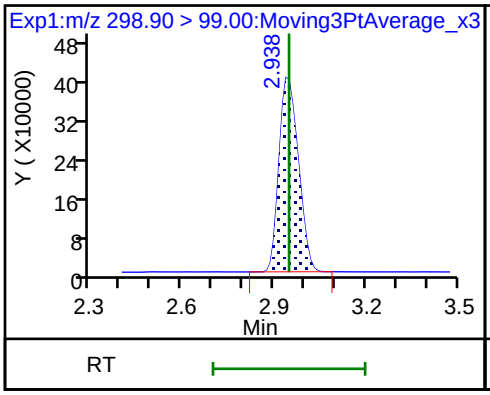

D 9 13C3 PFBS



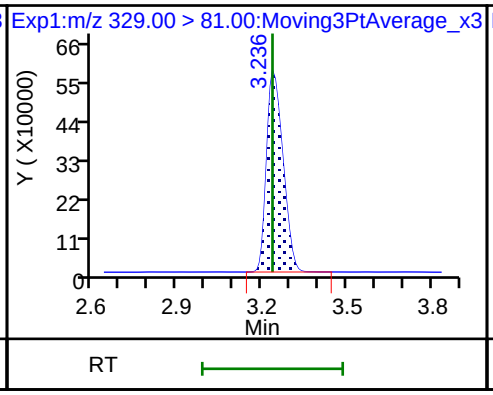

6 Perfluorobutanesulfonic acid



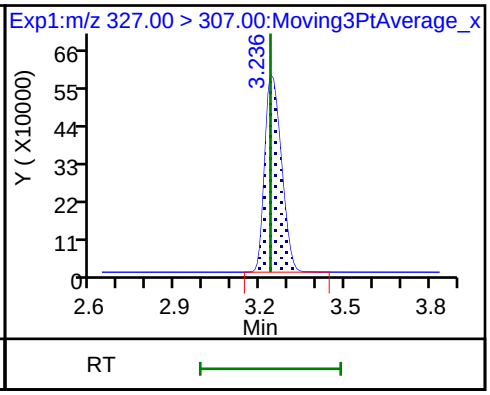

6 Perfluorobutanesulfonic acid



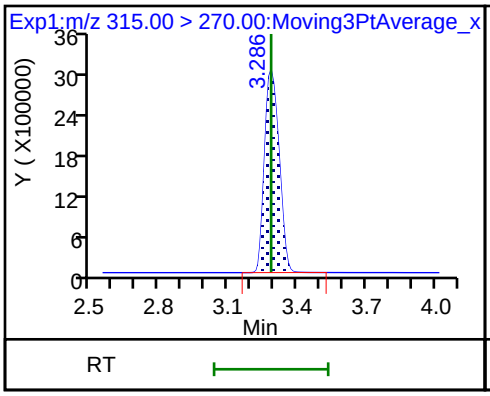

D 7 M2-4:2 FTS



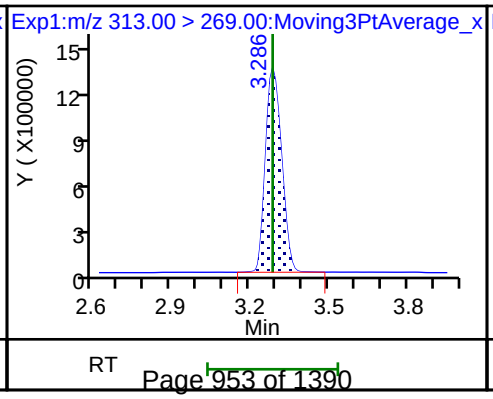

8 4:2 FTS



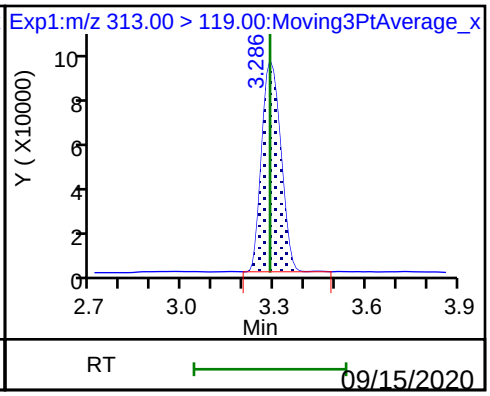

D 11 13C2 PFHxA



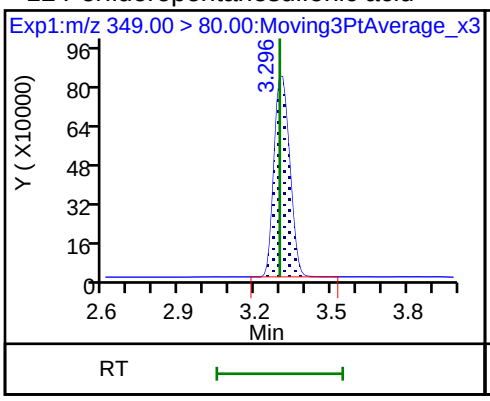

10 Perfluorohexanoic acid



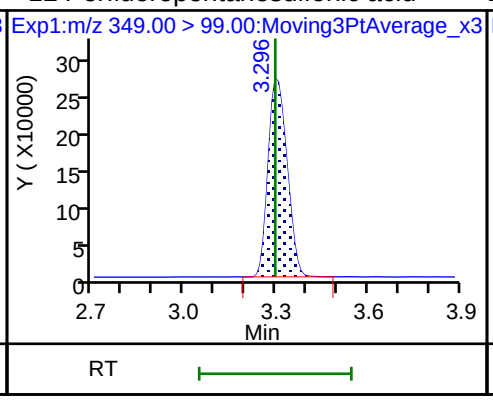

10 Perfluorohexanoic acid



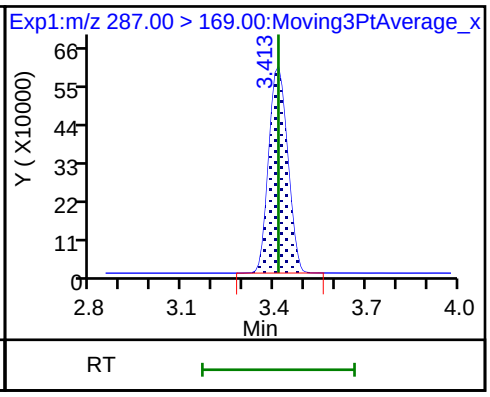
12 Perfluoropentanesulfonic acid



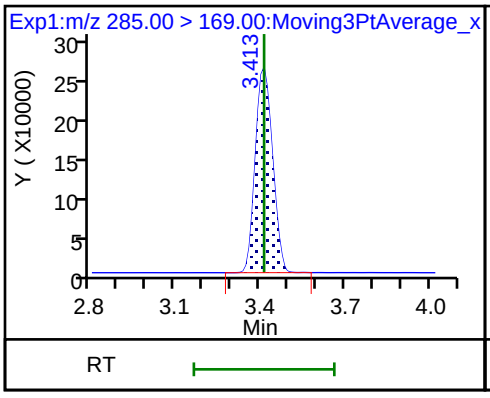

12 Perfluoropentanesulfonic acid



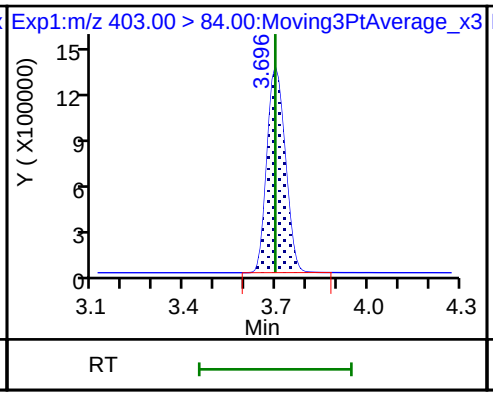

D 14 13C3 HFPO-DA



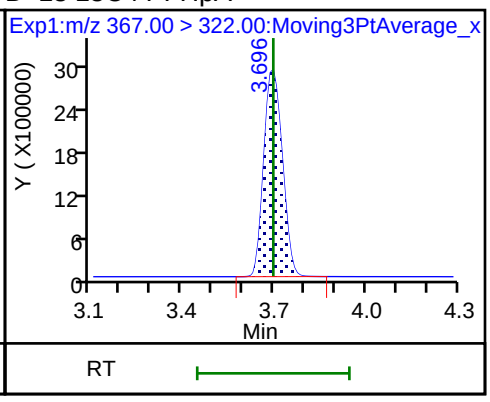

13 HPFO-DA



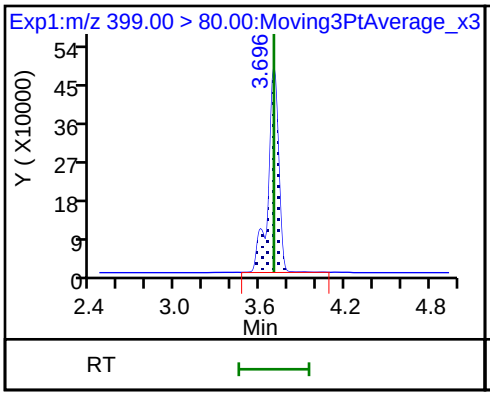

D 17 18O2 PFHxS



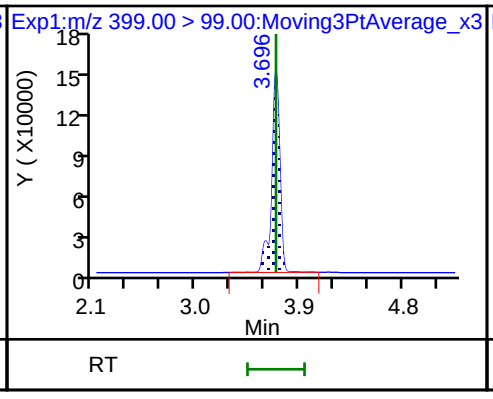

D 18 13C4 PFHpA



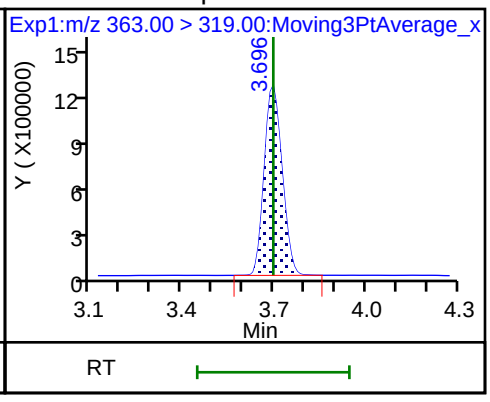

15 Perfluorohexanesulfonic acid



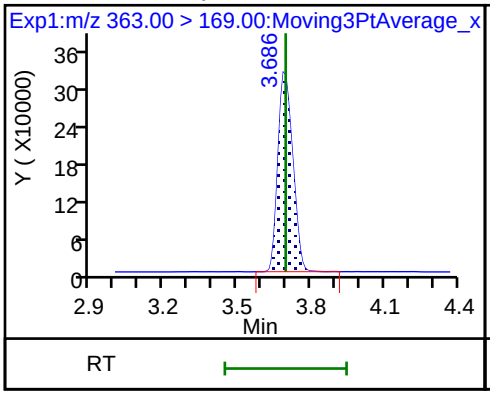

15 Perfluorohexanesulfonic acid



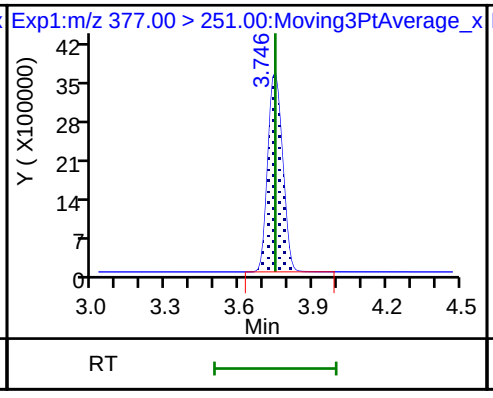

16 Perfluoroheptanoic acid



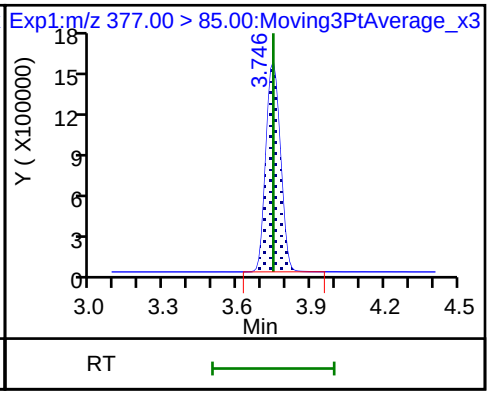

16 Perfluoroheptanoic acid



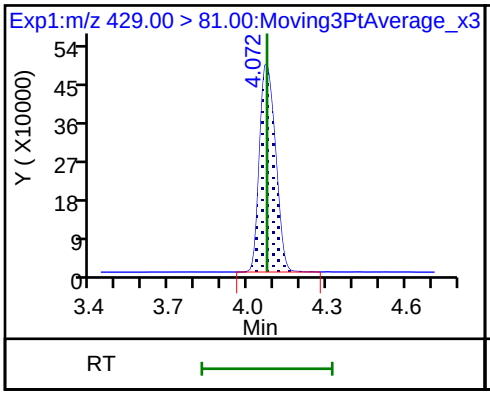

19 DONA



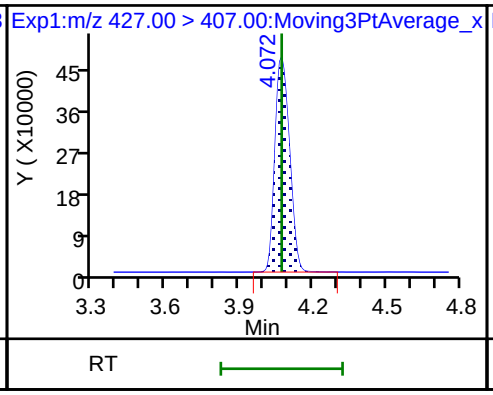

19 DONA



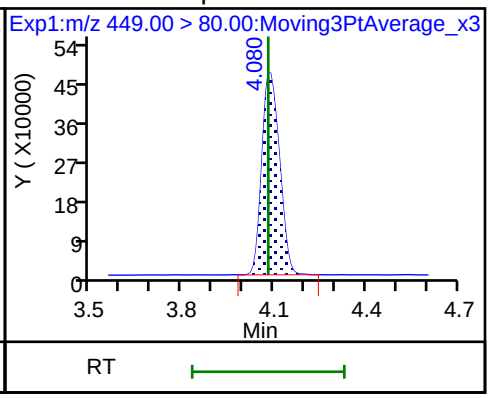
D 20 M2-6:2 FTS



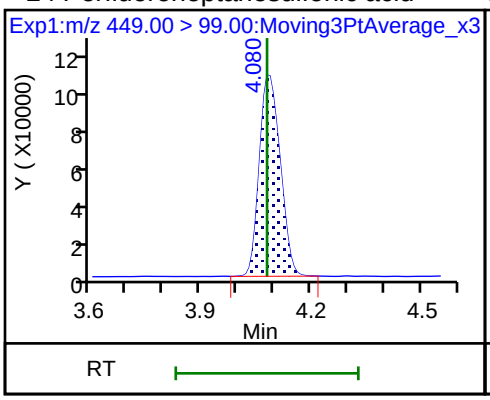

21 6:2 FTS



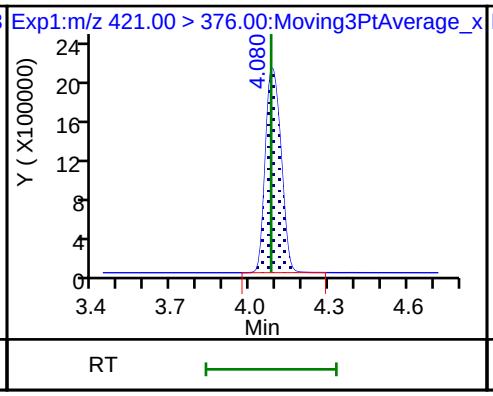

24 Perfluoroheptanesulfonic acid



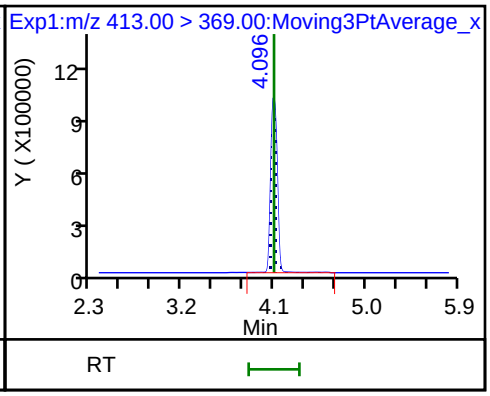

24 Perfluoroheptanesulfonic acid



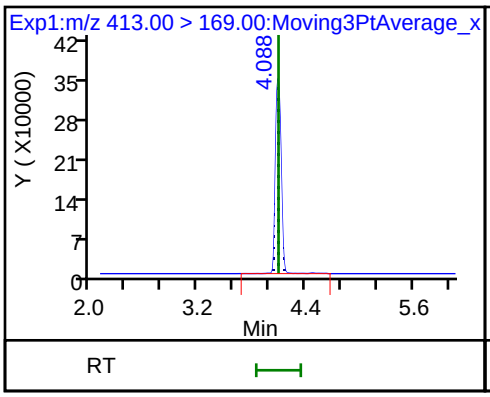

$ 26 13C8 PFOA



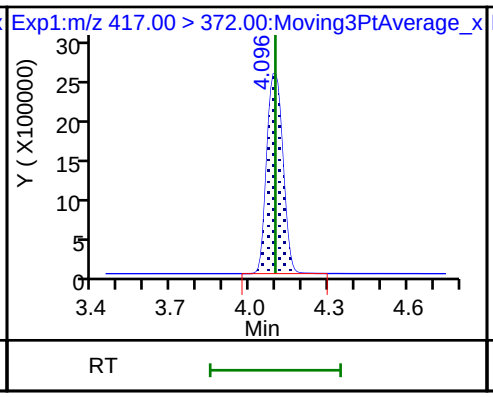

22 Perfluorooctanoic acid



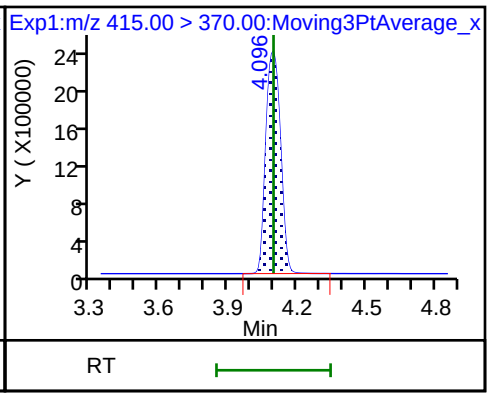

22 Perfluorooctanoic acid



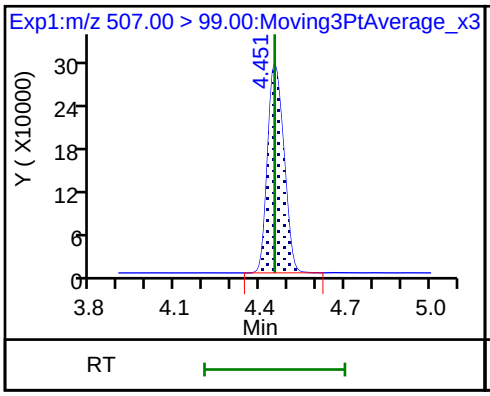

D 25 13C4 PFOA



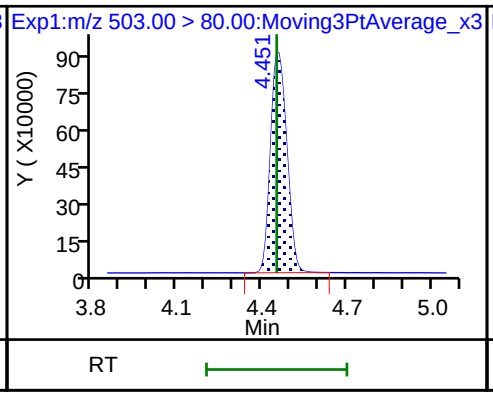

* 23 13C2 PFOA



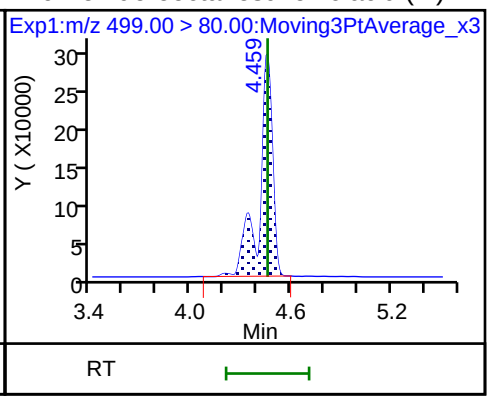

$ 28 13C8 PFOS



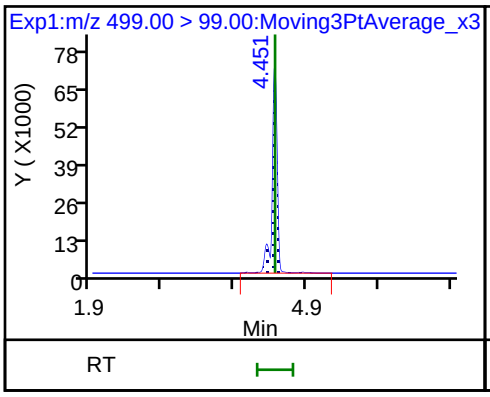

D 27 13C4 PFOS



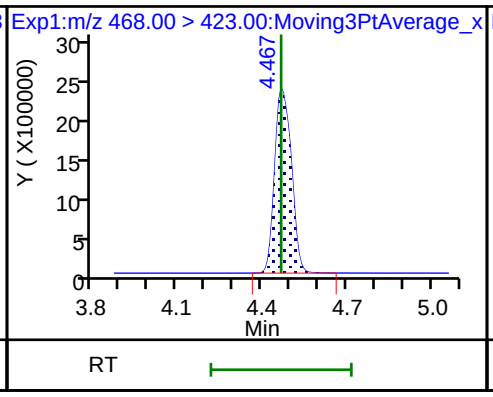

29 Perfluorooctanesulfonic acid (M)



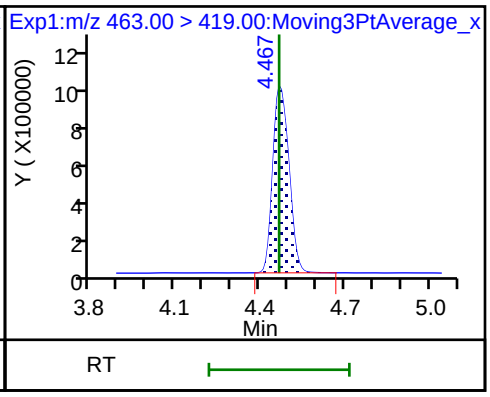
29 Perfluorooctanesulfonic acid



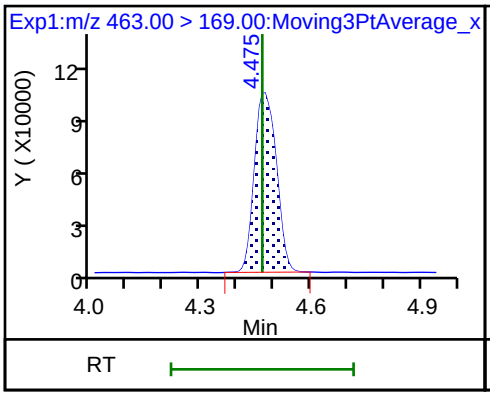

D 30 13C5 PFNA



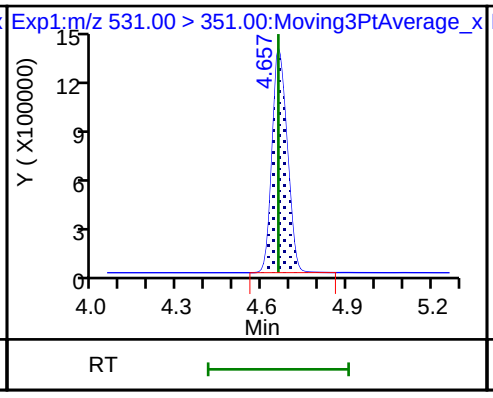

31 Perfluorononanoic acid



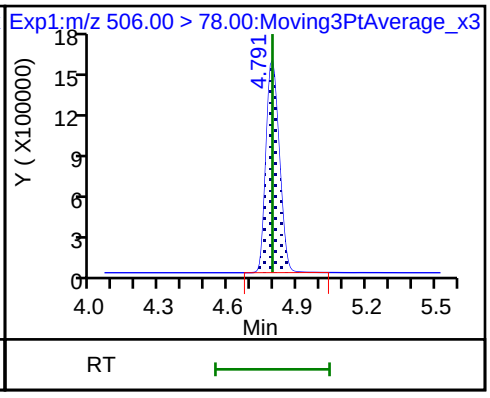

31 Perfluorononanoic acid



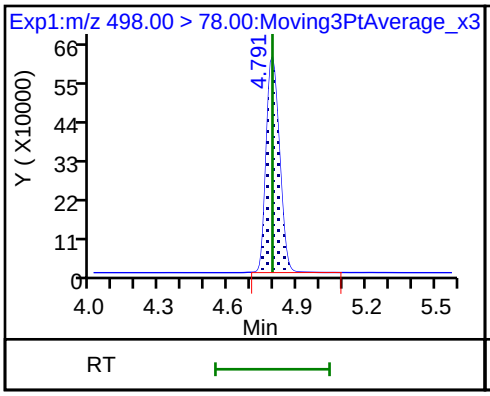

32 9ClFOS



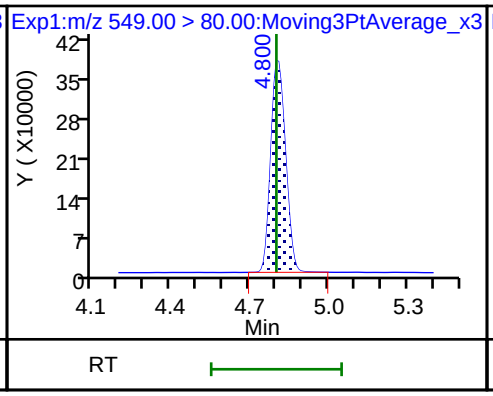

D 33 13C8 FOSA



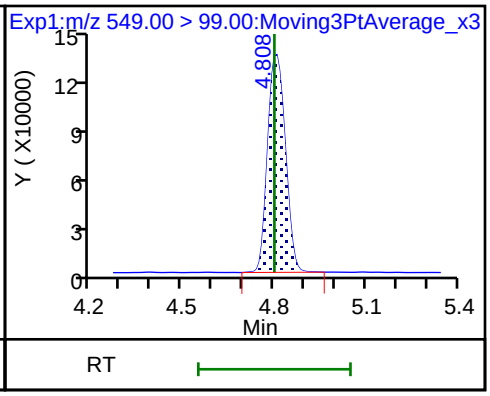

34 Perfluorooctanesulfonamide



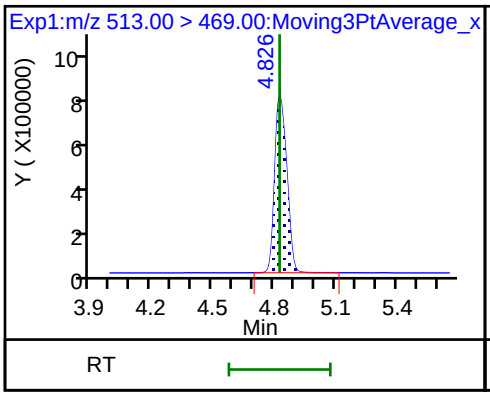

35 Perfluorononanesulfonic acid



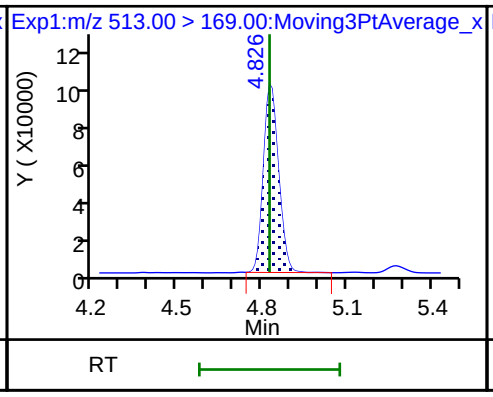

35 Perfluorononanesulfonic acid



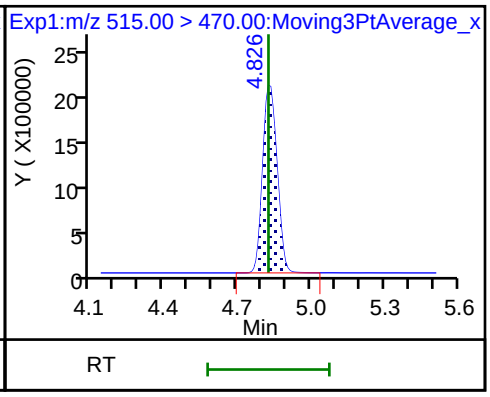

37 Perfluorodecanoic acid



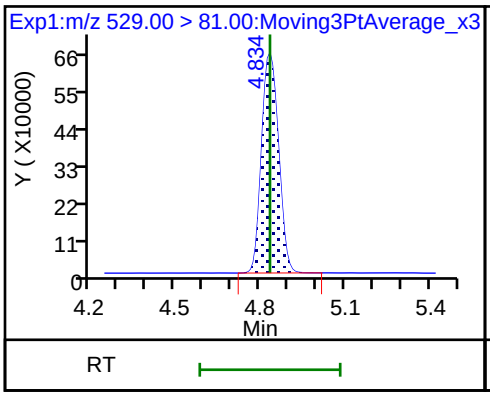

37 Perfluorodecanoic acid



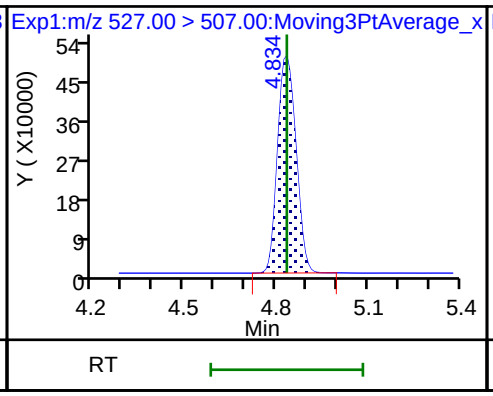

D 39 13C2 PFDA



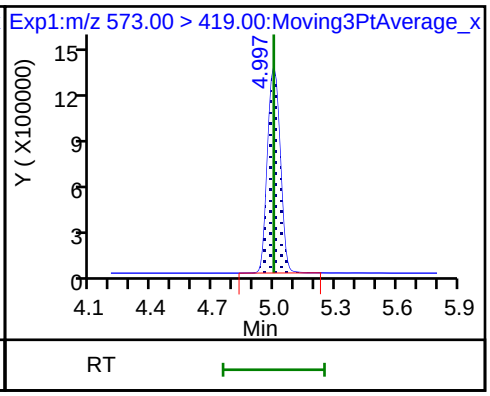
D 38 M2-8:2 FTS



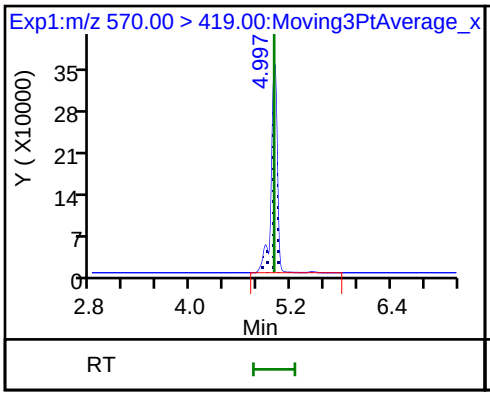

36 8:2 FTS



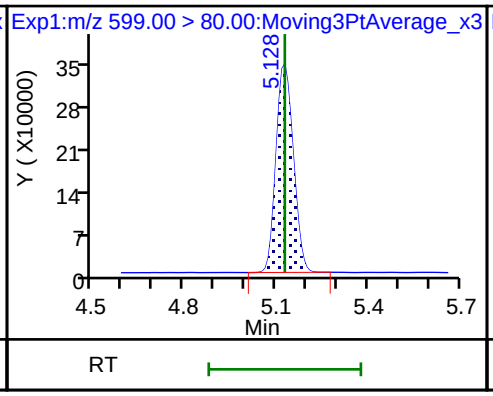

D 40 d3-NMeFOSAA



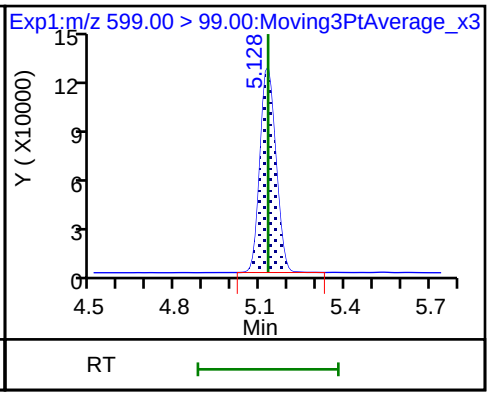

41 NMeFOSAA



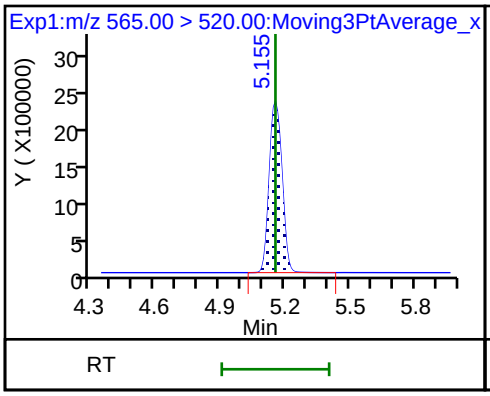

42 Perfluorodecanesulfonic acid



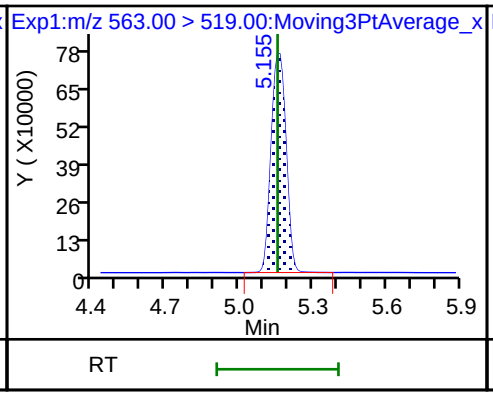

42 Perfluorodecanesulfonic acid



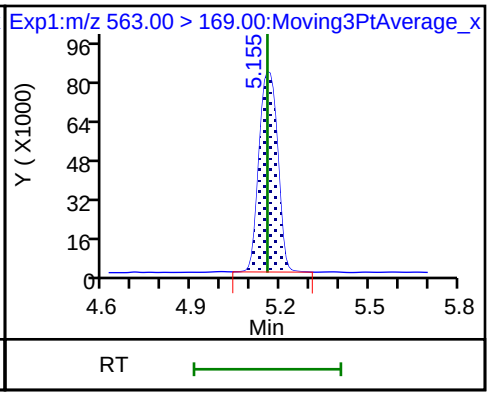

D 43 13C2 PFUnA



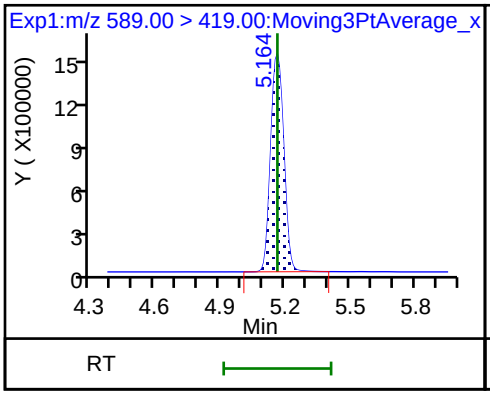

45 Perfluoroundecanoic acid



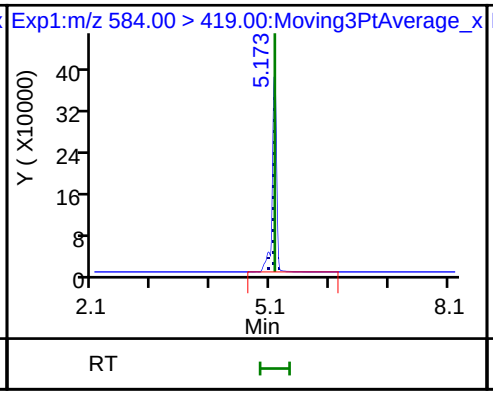

45 Perfluoroundecanoic acid



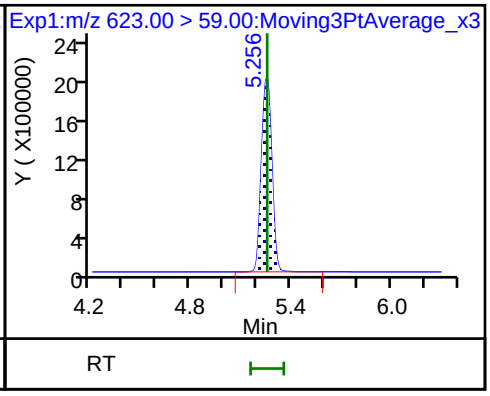

D 44 d5-NEtFOSAA



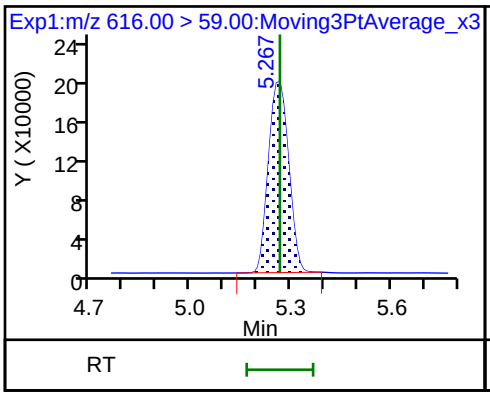

46 NEtFOSA



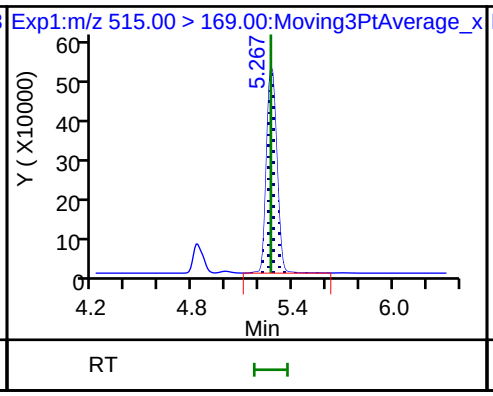

D 47 d7-N-MeFOSE-M



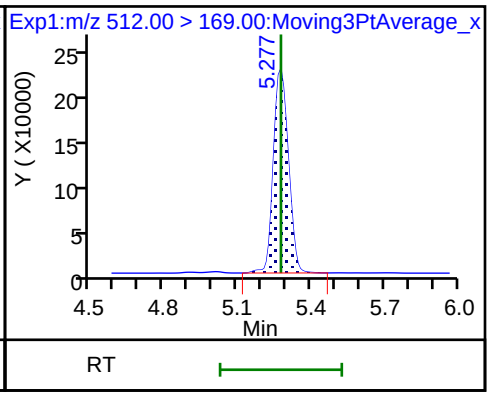
48 N-MeFOSE-M



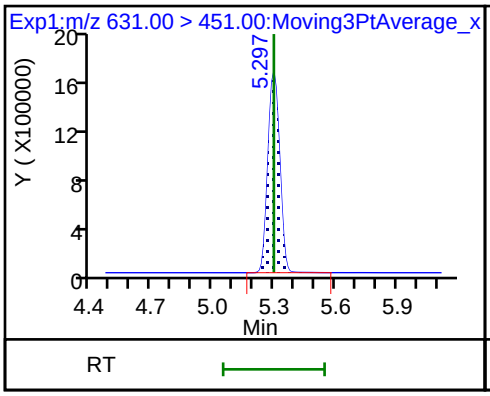

D 49 d-N-MeFOSA-M



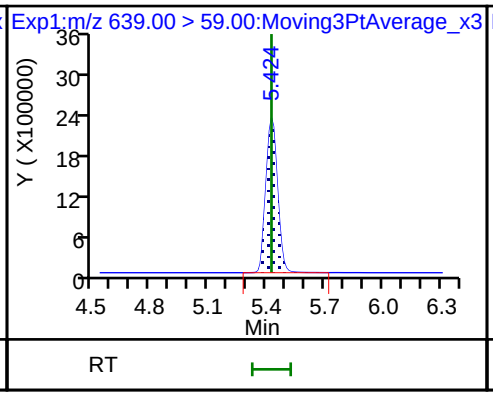

50 NMeFOSA



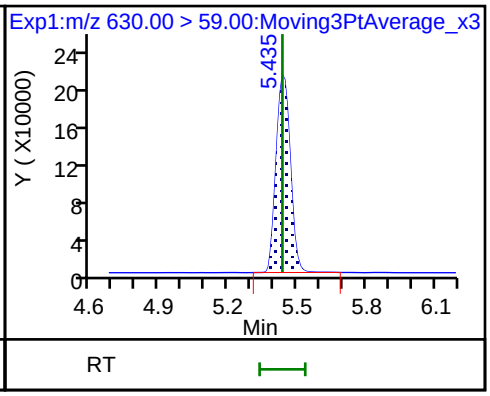

51 11ClFOS



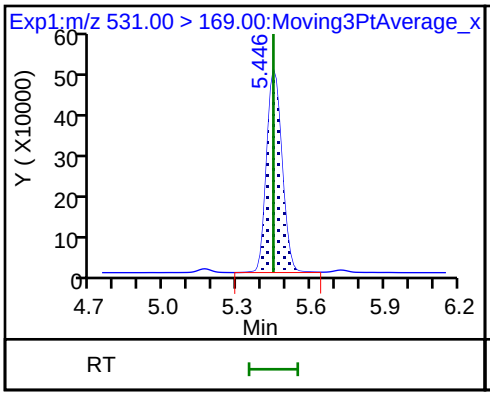

D 52 d9-N-EtFOSE-M



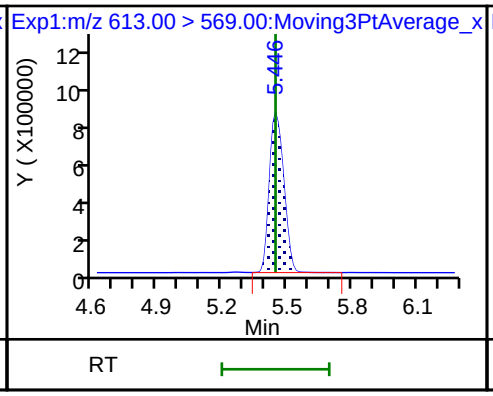

53 N-EtFOSE-M



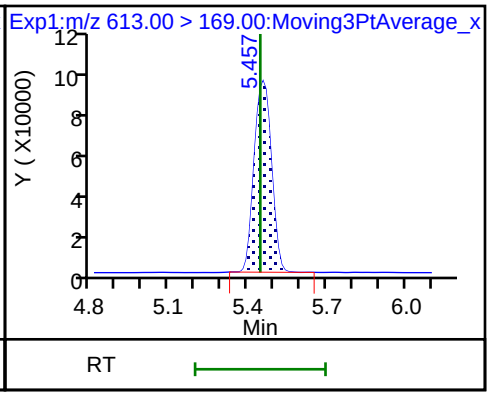

D 54 d-N-EtFOSA-M



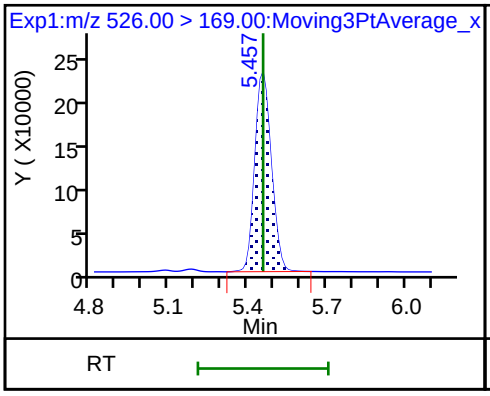

57 Perfluorododecanoic acid



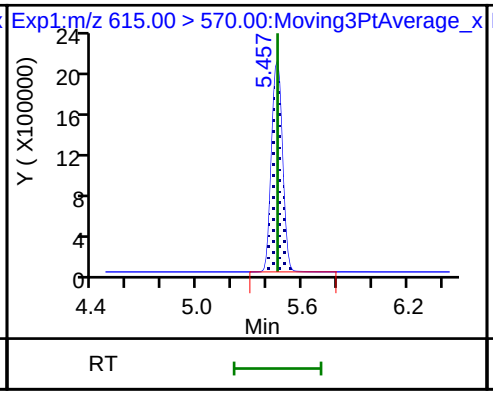

57 Perfluorododecanoic acid



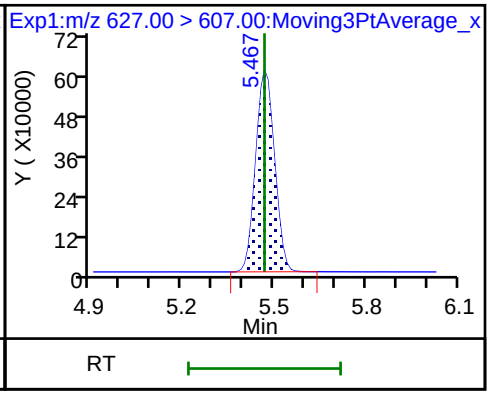

55 N-EtFOSA-M



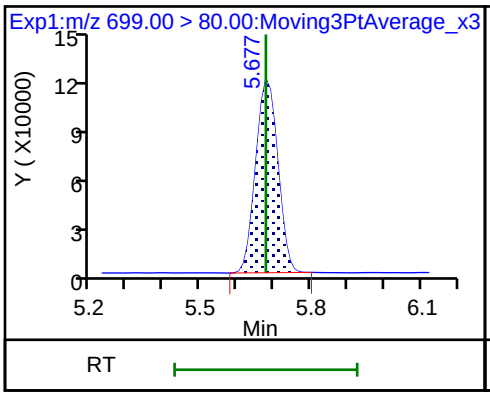

D 56 13C2 PFDoA



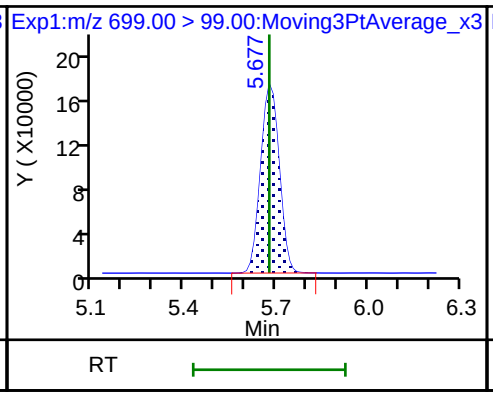

58 10:2 FTS



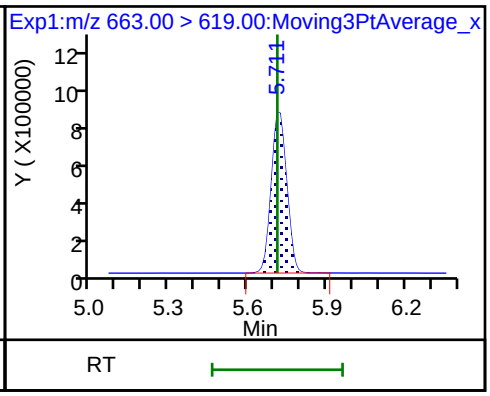
59 PFDoS



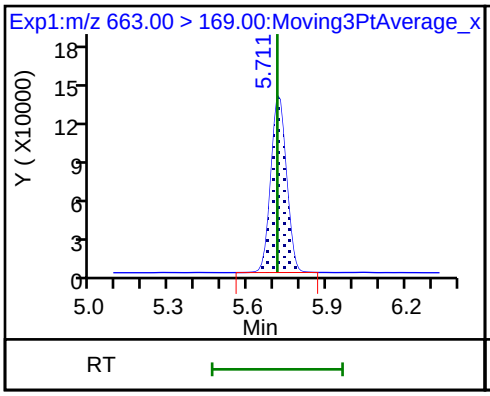

59 PFDoS



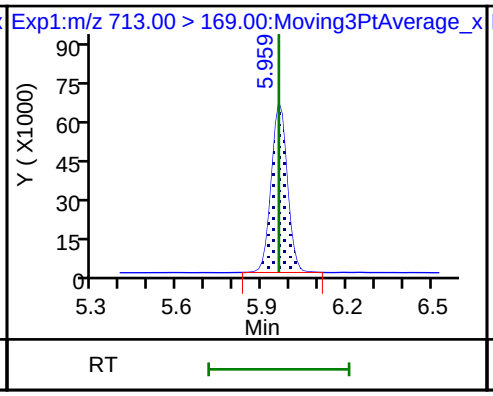

60 Perfluorotridecanoic acid



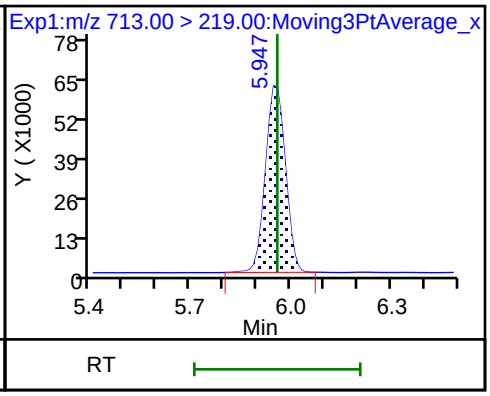

60 Perfluorotridecanoic acid



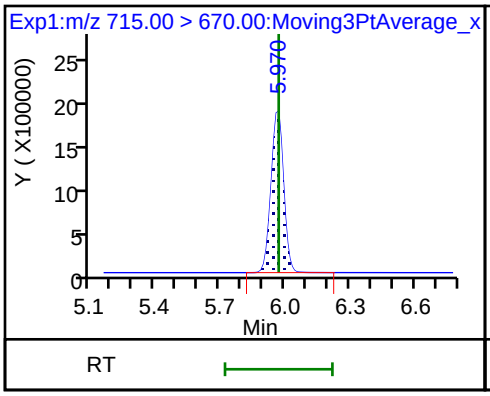

62 Perfluorotetradecanoic acid



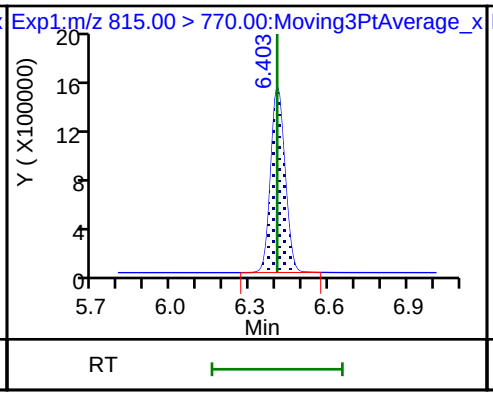

62 Perfluorotetradecanoic acid



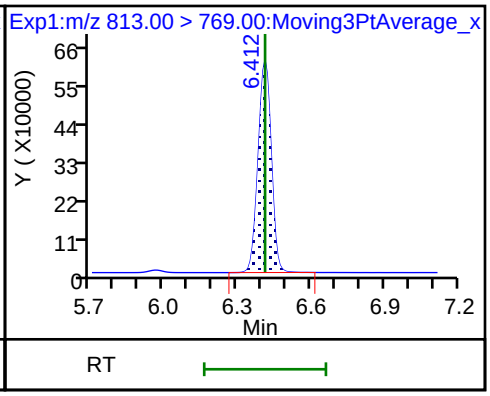

D 61 13C2 PFTeDA



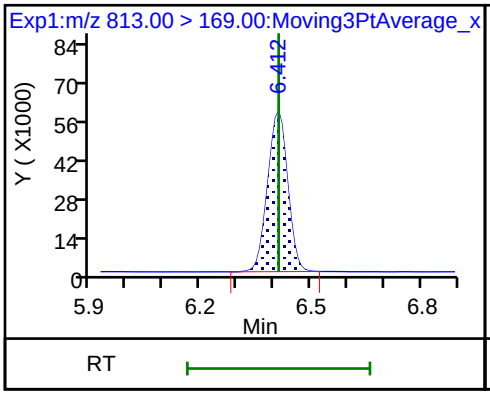

D 64 13C2 PFHxDA



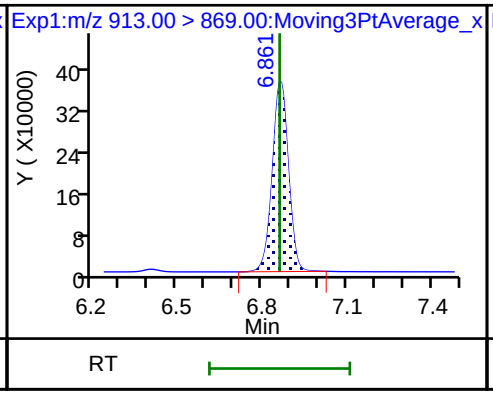

63 Perfluorohexadecanoic acid



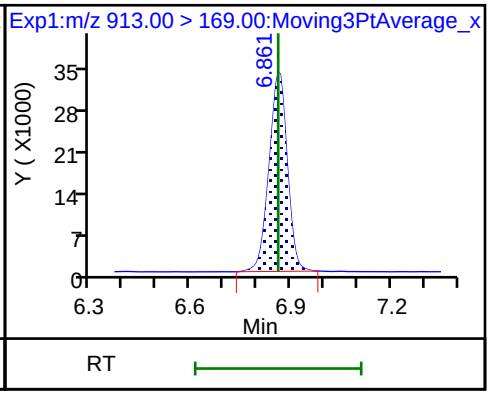

63 Perfluorohexadecanoic acid




65 Perfluorooctadecanoic acid




65 Perfluorooctadecanoic acid



Eurofins TestAmerica, Sacramento

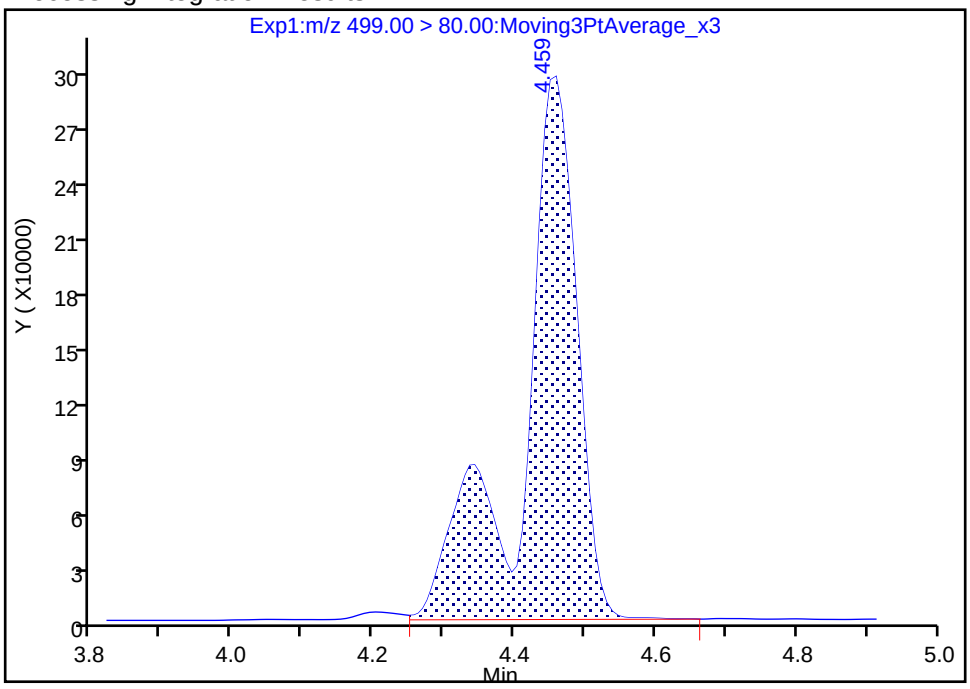
Data File: \\chromfs\Sacramento\ChromData\A18\20200910-103001.b\2020.09.10_A18_PFC_AAA_018.d
Injection Date: 10-Sep-2020 12:54:15 Instrument ID: A18
Lims ID: CCV L4
Client ID:
Operator ID: TAISACA18-PC\A-18 ALS Bottle#: 52 Worklist Smp#: 3
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFAS_A18V2 Limit Group: LC PFC ICAL
Column: Gemini C18 3um 3mm x 50 mm ( 3.00mm) Detector EXP1

## 29 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 1

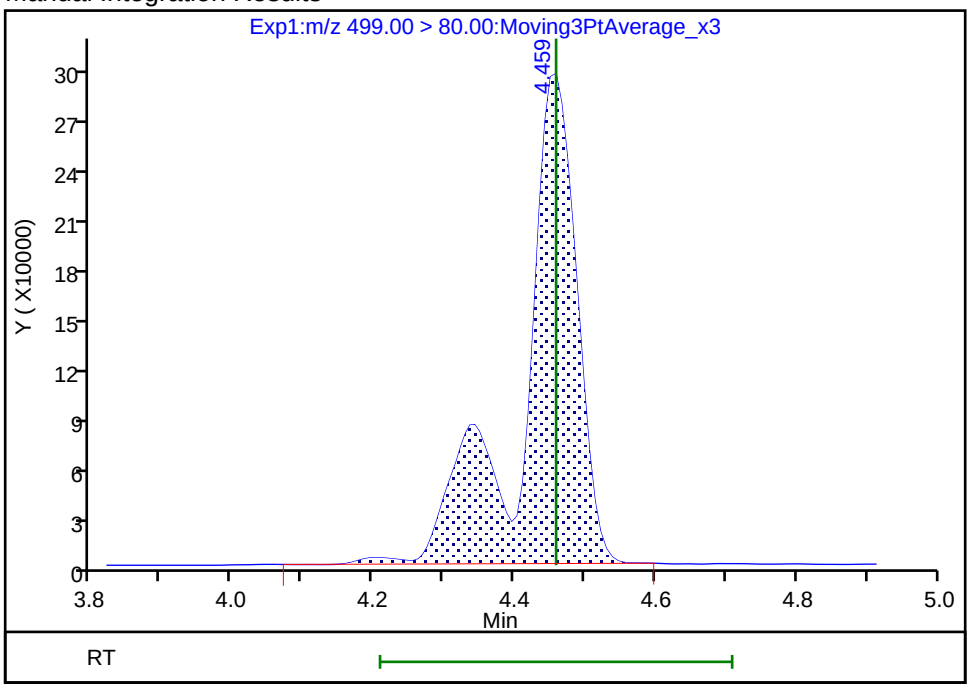
Processing Integration Results

RT: 4.46
Area: 1598455
Amount: 1.016779
Amount Units: ng/ml




Manual Integration Results

RT: 4.46
Area: 1601488
Amount: 1.018708
Amount Units: ng/ml




Reviewer: vangm, 10-Sep-2020 13:21:55
Audit Action: Manually Integrated Audit Reason: Isomers

FORM VII
LCMS CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Sacramento  Job No.: 460-217547-1

SDG No.:

Lab Sample ID: CCV 320-411087/1  Calibration Date: 09/10/2020 15:02

Instrument ID: A18  Calib Start Date: 08/25/2020 16:43

GC Column: Gemini C18 3x50  ID: 3.00(mm)  Calib End Date: 08/25/2020 17:37

Lab File ID: 2020.09.10_A18_PFC_A_073.d  Conc. Units: ng/mL

| ANALYTE | CURVE TYPE | AVE RRF | RRF | MIN RRF | CALC AMOUNT | SPIKE AMOUNT | %D | MAX %D |
|---|---|---|---|---|---|---|---|---|
| Perfluorobutanoic acid (PFBA) | AveID | 0.8679 | 0.9230 | | 1.06 | 1.00 | 6.3 | 40.0 |
| Perfluoropentanoic acid (PFPeA) | AveID | 0.997 | 1.064 | | 1.07 | 1.00 | 6.7 | 40.0 |
| Perfluorobutanesulfonic acid (PFBS) | AveID | 1.010 | 1.058 | | 0.926 | 0.884 | 4.8 | 50.0 |
| 4:2 FTS | AveID | 2.273 | 2.524 | | 1.04 | 0.934 | 11.0 | 50.0 |
| Perfluorohexanoic acid (PFHxA) | AveID | 0.9638 | 1.001 | | 1.04 | 1.00 | 3.9 | 40.0 |
| Perfluoropentanesulfonic acid (PFPeS) | AveID | 0.7925 | 0.8373 | | 0.991 | 0.938 | 5.7 | 50.0 |
| HFPO-DA (GenX) | AveID | 0.9742 | 1.051 | | 1.08 | 1.00 | 7.9 | 40.0 |
| Perfluoroheptanoic acid (PFHpA) | AveID | 1.014 | 1.122 | | 1.11 | 1.00 | 10.7 | 40.0 |
| Perfluorohexanesulfonic acid (PFHxS) | AveID | 1.181 | 1.132 | | 0.872 | 0.910 | -4.2 | 40.0 |
| 4,8-Dioxa-3H-perfluorononanoic acid (ADONA) | AveID | 9.582 | 10.26 | | 1.01 | 0.942 | 7.0 | 50.0 |
| 6:2 FTS | AveID | 2.299 | 2.283 | | 0.942 | 0.948 | -0.7 | 40.0 |
| Perfluoroheptanesulfonic Acid (PFHpS) | AveID | 1.118 | 1.170 | | 0.997 | 0.952 | 4.7 | 50.0 |
| Perfluorooctanoic acid (PFOA) | AveID | 1.020 | 1.167 | | 1.15 | 1.00 | 14.4 | 40.0 |
| Perfluorooctanesulfonic acid (PFOS) | AveID | 1.035 | 1.129 | | 1.01 | 0.928 | 9.0 | 40.0 |
| Perfluorononanoic acid (PFNA) | AveID | 0.9590 | 1.007 | | 1.05 | 1.00 | 5.0 | 40.0 |
| F-53B Major | AveID | 3.236 | 3.372 | | 0.971 | 0.932 | 4.2 | 50.0 |
| Perfluorooctanesulfonamide (FOSA) | AveID | 0.9305 | 0.9635 | | 1.04 | 1.00 | 3.5 | 40.0 |
| Perfluorononanesulfonic acid (PFNS) | AveID | 0.9368 | 0.9911 | | 1.02 | 0.960 | 5.8 | 50.0 |
| 8:2 FTS | AveID | 1.775 | 1.949 | | 1.05 | 0.958 | 9.8 | 40.0 |
| Perfluorodecanoic acid (PFDA) | AveID | 0.9639 | 0.8479 | | 0.880 | 1.00 | -12.0 | 40.0 |
| N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA) | AveID | 0.7417 | 0.7530 | | 1.02 | 1.00 | 1.5 | 40.0 |
| Perfluorodecanesulfonic acid (PFDS) | AveID | 0.8350 | 0.8813 | | 1.02 | 0.964 | 5.5 | 50.0 |
| Perfluoroundecanoic acid (PFUnA) | AveID | 0.7253 | 0.6701 | | 0.925 | 1.00 | -7.6 | 40.0 |
| N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA) | AveID | 0.6758 | 0.7098 | | 1.05 | 1.00 | 5.0 | 40.0 |
| NMeFOSE | AveID | 1.080 | 1.288 | | 1.19 | 1.00 | 19.3 | 40.0 |
| NMeFOSA | AveID | 0.9606 | 1.076 | | 1.12 | 1.00 | 12.1 | 50.0 |
| F-53B Minor | AveID | 4.102 | 4.332 | | 0.995 | 0.942 | 5.6 | 50.0 |
| NEtFOSE | AveID | 1.073 | 1.126 | | 1.05 | 1.00 | 5.0 | 40.0 |
| Perfluorododecanoic acid (PFDoA) | AveID | 1.023 | 0.9900 | | 0.974 | 1.01 | -3.2 | 40.0 |
| NEtFOSA | AveID | 1.058 | 1.177 | | 1.11 | 1.00 | 11.2 | 40.0 |
| 10:2 FTS | AveID | 2.014 | 2.393 | | 1.15 | 0.964 | 18.8 | 50.0 |
| Perfluorododecanesulfonic acid (PFDoS) | AveID | 0.3329 | 0.3263 | | 0.949 | 0.968 | -2.0 | 50.0 |

FORM VII
LCMS CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Sacramento  Job No.: 460-217547-1

SDG No.:

Lab Sample ID: CCV 320-411087/1  Calibration Date: 09/10/2020 15:02

Instrument ID: A18  Calib Start Date: 08/25/2020 16:43

GC Column: Gemini C18 3x50  ID: 3.00(mm)  Calib End Date: 08/25/2020 17:37

Lab File ID: 2020.09.10_A18_PFC_A_073.d  Conc. Units: ng/mL

| ANALYTE | CURVE TYPE | AVE RRF | RRF | MIN RRF | CALC AMOUNT | SPIKE AMOUNT | %D | MAX %D |
|---|---|---|---|---|---|---|---|---|
| Perfluorotridecanoic acid (PFTriA) | AveID | 0.9409 | 1.204 | | 1.28 | 1.00 | 28.0 | 50.0 |
| Perfluorotetradecanoic acid (PFTeA) | AveID | 0.0844 | 0.1103 | | 1.31 | 1.00 | 30.7 | 50.0 |
| Perfluoro-n-hexadecanoic acid (PFHxDA) | L2ID | | 0.9462 | | 1.06 | 1.00 | 5.5 | 50.0 |
| Perfluoro-n-octadecanoic acid (PFODA) | AveID | 0.6605 | 0.7669 | | 1.16 | 1.00 | 16.1 | 50.0 |
| 13C4 PFBA | Ave | 1.585 | 1.599 | | 2.52 | 2.50 | 0.8 | 50.0 |
| 13C5 PFPeA | Ave | 1.233 | 1.173 | | 2.38 | 2.50 | -4.9 | 50.0 |
| 13C3 PFBS | Ave | 0.9684 | 1.081 | | 2.60 | 2.33 | 11.6 | 50.0 |
| M2-4:2 FTS | Ave | 0.2333 | 0.2365 | | 2.37 | 2.34 | 1.4 | 50.0 |
| 13C2 PFHxA | Ave | 1.231 | 1.313 | | 2.67 | 2.50 | 6.6 | 50.0 |
| 13C3 HFPO-DA | Ave | 0.2518 | 0.2510 | | 2.49 | 2.50 | -0.3 | 50.0 |
| 13C4 PFHpA | Ave | 1.051 | 1.099 | | 2.61 | 2.50 | 4.6 | 50.0 |
| 18O2 PFHxS | Ave | 0.5117 | 0.5758 | | 2.66 | 2.37 | 12.5 | 50.0 |
| M2-6:2 FTS | Ave | 0.1958 | 0.2093 | | 2.54 | 2.38 | 6.9 | 50.0 |
| 13C4 PFOA | Ave | 1.001 | 1.004 | | 2.51 | 2.50 | 0.3 | 50.0 |
| 13C4 PFOS | Ave | 0.3465 | 0.3785 | | 2.61 | 2.39 | 9.2 | 50.0 |
| 13C5 PFNA | Ave | 0.8063 | 0.9449 | | 2.93 | 2.50 | 17.2 | 50.0 |
| 13C8 FOSA | Ave | 0.5590 | 0.6151 | | 2.75 | 2.50 | 10.0 | 50.0 |
| 13C2 PFDA | Ave | 0.7829 | 0.9176 | | 2.93 | 2.50 | 17.2 | 50.0 |
| M2-8:2 FTS | Ave | 0.2823 | 0.2843 | | 2.41 | 2.40 | 0.7 | 50.0 |
| d3-NMeFOSAA | Ave | 0.5255 | 0.5668 | | 2.70 | 2.50 | 7.9 | 50.0 |
| 13C2 PFUnA | Ave | 0.7758 | 0.9369 | | 3.02 | 2.50 | 20.8 | 50.0 |
| d5-NEtFOSAA | Ave | 0.5556 | 0.6047 | | 2.72 | 2.50 | 8.8 | 50.0 |
| d7-N-MeFOSE-M | Ave | 0.1384 | 0.1651 | | 14.9 | 12.5 | 19.3 | 50.0 |
| d-N-MeFOSA-M | Ave | 0.1965 | 0.2192 | | 2.79 | 2.50 | 11.5 | 50.0 |
| d9-N-EtFOSE-M | Ave | 0.1700 | 0.1985 | | 14.6 | 12.5 | 16.8 | 50.0 |
| 13C2 PFDoA | Ave | 0.7650 | 0.8634 | | 2.82 | 2.50 | 12.9 | 50.0 |
| d-N-EtFOSA-M | Ave | 0.2011 | 0.2078 | | 2.58 | 2.50 | 3.3 | 50.0 |
| 13C2 PFTeDA | Ave | 0.6311 | 0.6729 | | 2.67 | 2.50 | 6.6 | 50.0 |
| 13C2 PFHxDA | Ave | 0.4618 | 0.5246 | | 2.84 | 2.50 | 13.6 | 50.0 |
| 13C8 PFOA | Ave | 0.6756 | 0.8119 | | 2.94 | 2.45 | 20.2 | 50.0 |
| 13C8 PFOS | Ave | 0.1082 | 0.1184 | | 2.62 | 2.39 | 9.5 | 50.0 |

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\A18\20200910-103041.b\2020.09.10_A18_PFC_A_073.d
Lims ID: CCV L4
Client ID:
Sample Type: CCV
Inject. Date: 10-Sep-2020 15:02:11 ALS Bottle#: 52 Worklist Smp#: 1
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Sample Info: CCV L4
Misc. Info.: Plate: 4 Rack: 1
Operator ID: TAISACA18-PC\A-18 Instrument ID: A18
Sublist: chrom-PFAS_A18V2*sub1

Method: \\chromfs\Sacramento\ChromData\A18\20200910-103041.b\PFAS_A18V2.m
Limit Group: LC PFC ICAL
Last Update: 11-Sep-2020 08:42:21 Calib Date: 25-Aug-2020 17:37:57
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\A18\20200825-102078.b\2020.08.25_A18_ICAL_A_017.d

Column 1 : Gemini C18 3um 3mm x 50 mm ( 3.00 mm) Det: EXP1
Process Host: CTX1040

First Level Reviewer: sanjumnair Date: 11-Sep-2020 08:42:21
Ratio Calibration: Average of Initial Calibration

| Signal | RT | EXP RT | DLT RT | REL RT | Response | Amount ng/ml | Ratio(Limits) | %Rec | S/N | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| D 1 13C4 PFBA | | | | | | | | | | |
| 217.00 > 172.00 | 2.557 | 2.557 | 0.0 | 0.626 | 16220054 | 2.52 | | 101 | 7780 | |
| 2 Perfluorobutanoic acid | | | | | | | | | | |
| 212.90 > 169.00 | 2.557 | 2.557 | 0.0 | 1.000 | 5988481 | 1.06 | | 106 | 306 | |
| D 4 13C5 PFPeA | | | | | | | | | | |
| 267.90 > 223.00 | 2.909 | 2.909 | 0.0 | 0.713 | 11896289 | 2.38 | | 95.1 | 4054 | |
| 5 Perfluoropentanoic acid | | | | | | | | | | |
| 262.90 > 219.00 | 2.909 | 2.909 | 0.0 | 1.000 | 5061483 | 1.07 | | 107 | 224 | |
| D 9 13C3 PFBS | | | | | | | | | | |
| 301.90 > 80.00 | 2.940 | 2.940 | 0.0 | 0.720 | 10197568 | 2.59 | | 112 | 5038 | |
| 6 Perfluorobutanesulfonic acid | | | | | | | | | | |
| 298.90 > 80.00 | 2.940 | 2.940 | 0.0 | 1.000 | 4101533 | 0.9261 | Target=2.30 | 105 | 879 | |
| 298.90 > 99.00 | 2.940 | 2.940 | 0.0 | 1.000 | 1785239 | | 2.30(1.15-3.45) | | 591 | |
| D 7 M2-4:2 FTS | | | | | | | | | | |
| 329.00 > 81.00 | 3.238 | 3.238 | 0.0 | 0.793 | 2241357 | 2.37 | | 101 | 1019 | |
| 8 4:2 FTS | | | | | | | | | | |
| 327.00 > 307.00 | 3.238 | 3.238 | 0.0 | 1.000 | 2262698 | 1.04 | | 111 | 8331 | |
| D 11 13C2 PFHxA | | | | | | | | | | |
| 315.00 > 270.00 | 3.278 | 3.278 | 0.0 | 0.803 | 13316684 | 2.67 | | 107 | 7278 | |
| 10 Perfluorohexanoic acid | | | | | | | | | | |
| 313.00 > 269.00 | 3.288 | 3.288 | 0.0 | 1.003 | 5332717 | 1.04 | Target=13.78 | 104 | 356 | |
| 313.00 > 119.00 | 3.288 | 3.288 | 0.0 | 1.003 | 399497 | | 13.35(6.89-20.66) | | 219 | |
| 12 Perfluoropentanesulfonic acid | | | | | | | | | | |
| 349.00 > 80.00 | 3.298 | 3.298 | 0.0 | 1.122 | 3444896 | 0.99 | Target=3.02 | 106 | 715 | |
| 349.00 > 99.00 | 3.298 | 3.298 | 0.0 | 1.122 | 1160363 | | 2.97(1.51-4.52) | | 657 | |
| D 14 13C3 HFPO-DA | | | | | | | | | | |
| 287.00 > 169.00 | 3.405 | 3.405 | 0.0 | 0.834 | 2546827 | 2.49 | | 99.7 | 3737 | |

| Signal | RT | EXP RT | DLT RT | REL RT | Response | Amount ng/ml | Ratio(Limits) | %Rec | S/N | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| 13 HPFO-DA | | | | | | | | | | |
| 285.00 > 169.00 | 3.405 | 3.405 | 0.0 | 1.000 | 1070625 | 1.08 | | 108 | 2686 | |
| D 18 13C4 PFHpA | | | | | | | | | | |
| 367.00 > 322.00 | 3.691 | 3.691 | 0.0 | 0.904 | 11148005 | 2.61 | | 105 | 7753 | |
| D 17 18O2 PFHxS | | | | | | | | | | |
| 403.00 > 84.00 | 3.691 | 3.691 | 0.0 | 0.904 | 5527056 | 2.66 | | 113 | 5817 | |
| 15 Perfluorohexanesulfonic acid | | | | | | | | | | |
| 399.00 > 80.00 | 3.691 | 3.691 | 0.0 | 1.000 | 2408297 | 0.8722 | Target=3.50 | 95.8 | 1131 | |
| 399.00 > 99.00 | 3.691 | 3.691 | 0.0 | 1.000 | 719597 | | 3.35(1.75-5.25) | | 469 | |
| 16 Perfluoroheptanoic acid | | | | | | | | | | |
| 363.00 > 319.00 | 3.691 | 3.691 | 0.0 | 1.000 | 5005088 | 1.11 | Target=3.84 | 111 | 559 | |
| 363.00 > 169.00 | 3.691 | 3.691 | 0.0 | 1.000 | 1234615 | | 4.05(1.92-5.76) | | 783 | |
| 19 DONA | | | | | | | | | | |
| 377.00 > 251.00 | 3.740 | 3.740 | 0.0 | 0.841 | 14840088 | 1.01 | Target=2.42 | 107 | 6574 | |
| 377.00 > 85.00 | 3.740 | 3.740 | 0.0 | 0.841 | 6200096 | | 2.39(1.21-3.63) | | 3853 | |
| D 20 M2-6:2 FTS | | | | | | | | | | |
| 429.00 > 81.00 | 4.058 | 4.058 | 0.0 | 0.994 | 2017285 | 2.54 | | 107 | 1364 | |
| 21 6:2 FTS | | | | | | | | | | |
| 427.00 > 407.00 | 4.058 | 4.058 | 0.0 | 1.000 | 1838530 | 0.9416 | | 99.3 | 1823 | |
| 24 Perfluoroheptanesulfonic acid | | | | | | | | | | |
| 449.00 > 80.00 | 4.074 | 4.074 | 0.0 | 0.916 | 1711639 | 1.00 | Target=4.40 | 105 | 693 | |
| 449.00 > 99.00 | 4.074 | 4.074 | 0.0 | 0.916 | 403749 | | 4.24(2.20-6.60) | | 456 | |
| D 25 13C4 PFOA | | | | | | | | | | |
| 417.00 > 372.00 | 4.082 | 4.082 | 0.0 | 1.000 | 10187699 | 2.51 | | 100 | 4870 | |
| * 23 13C2 PFOA | | | | | | | | | | |
| 415.00 > 370.00 | 4.082 | 4.082 | 0.0 | | 10146011 | 2.50 | | | 6079 | |
| $ 26 13C8 PFOA | | | | | | | | | | |
| 421.00 > 376.00 | 4.082 | 4.082 | 0.0 | 1.000 | 8065010 | 2.94 | | 120 | 6335 | |
| 22 Perfluorooctanoic acid | | | | | | | | | | |
| 413.00 > 369.00 | 4.082 | 4.082 | 0.0 | 1.000 | 4760824 | 1.14 | Target=2.94 | 114 | 702 | |
| 413.00 > 169.00 | 4.082 | 4.082 | 0.0 | 1.000 | 1583021 | | 3.01(1.47-4.41) | | 3846 | |
| 29 Perfluorooctanesulfonic acid | | | | | | | | | | M |
| 499.00 > 80.00 | 4.446 | 4.446 | 0.0 | 1.000 | 1608900 | 1.01 | Target=4.53 | 109 | 665 | M |
| 499.00 > 99.00 | 4.446 | 4.446 | 0.0 | 1.000 | 354044 | | 4.54(2.26-6.79) | | 12663 | |
| D 27 13C4 PFOS | | | | | | | | | | |
| 503.00 > 80.00 | 4.446 | 4.446 | 0.0 | 1.089 | 3671440 | 2.61 | | 109 | 1450 | |
| $ 28 13C8 PFOS | | | | | | | | | | |
| 507.00 > 99.00 | 4.446 | 4.446 | 0.0 | 1.089 | 1148833 | 2.62 | | 109 | 2452 | |
| 31 Perfluorononanoic acid | | | | | | | | | | |
| 463.00 > 419.00 | 4.470 | 4.470 | 0.0 | 1.002 | 3869061 | 1.05 | Target=8.97 | 105 | 688 | |
| 463.00 > 169.00 | 4.462 | 4.470 | -0.008 | 1.000 | 458164 | | 8.44(4.48-13.45) | | 688 | |
| D 30 13C5 PFNA | | | | | | | | | | |
| 468.00 > 423.00 | 4.462 | 4.462 | 0.0 | 1.093 | 9587243 | 2.93 | | 117 | 7898 | |
| 32 9ClFOS | | | | | | | | | | |
| 531.00 > 351.00 | 4.647 | 4.647 | 0.0 | 1.045 | 4827595 | 0.9712 | | 104 | 4394 | |
| D 33 13C8 FOSA | | | | | | | | | | |
| 506.00 > 78.00 | 4.786 | 4.786 | 0.0 | 1.172 | 6241246 | 2.75 | | 110 | 5452 | |

| Signal | RT | EXP RT | DLT RT | REL RT | Response | Amount ng/ml | Ratio(Limits) | %Rec | S/N | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| 35 Perfluorononanesulfonic acid | | | | | | | | | | |
| 549.00 > 80.00 | 4.794 | 4.794 | 0.0 | 1.078 | 1461593 | 1.02 | Target=2.85 | 106 | 982 | |
| 549.00 > 99.00 | 4.794 | 4.794 | 0.0 | 1.078 | 524604 | | 2.79(1.43-4.28) | | 868 | |
| 34 Perfluorooctanesulfonamide | | | | | | | | | | |
| 498.00 > 78.00 | 4.786 | 4.786 | 0.0 | 1.000 | 2405332 | 1.04 | | 104 | 4764 | |
| D 39 13C2 PFDA | | | | | | | | | | |
| 515.00 > 470.00 | 4.820 | 4.820 | 0.0 | 1.181 | 9310095 | 2.93 | | 117 | 11269 | |
| 37 Perfluorodecanoic acid | | | | | | | | | | |
| 513.00 > 469.00 | 4.820 | 4.820 | 0.0 | 1.000 | 3157727 | 0.8797 | Target=10.16 | 88.0 | 890 | |
| 513.00 > 169.00 | 4.811 | 4.820 | -0.009 | 0.998 | 357534 | | 8.83(5.08-15.24) | | 201 | |
| D 38 M2-8:2 FTS | | | | | | | | | | |
| 529.00 > 81.00 | 4.820 | 4.820 | 0.0 | 1.181 | 2763039 | 2.41 | | 101 | 1764 | |
| 36 8:2 FTS | | | | | | | | | | |
| 527.00 > 507.00 | 4.820 | 4.820 | 0.0 | 1.000 | 2153640 | 1.05 | | 110 | 4377 | |
| D 40 d3-NMeFOSAA | | | | | | | | | | |
| 573.00 > 419.00 | 4.978 | 4.978 | 0.0 | 1.219 | 5750582 | 2.70 | | 108 | 2801 | |
| 41 NMeFOSAA | | | | | | | | | | |
| 570.00 > 419.00 | 4.989 | 4.989 | 0.0 | 1.002 | 1732082 | 1.02 | | 102 | 1132 | |
| 42 Perfluorodecanesulfonic acid | | | | | | | | | | |
| 599.00 > 80.00 | 5.112 | 5.112 | 0.0 | 1.150 | 1305105 | 1.02 | Target=2.77 | 106 | 978 | |
| 599.00 > 99.00 | 5.112 | 5.112 | 0.0 | 1.150 | 457395 | | 2.85(1.38-4.15) | | 1104 | |
| 45 Perfluoroundecanoic acid | | | | | | | | | | |
| 563.00 > 519.00 | 5.148 | 5.148 | 0.0 | 1.002 | 2550679 | 0.9249 | Target=8.43 | 92.4 | 1164 | |
| 563.00 > 169.00 | 5.139 | 5.148 | -0.009 | 1.000 | 302001 | | 8.45(4.22-12.65) | | 414 | |
| D 43 13C2 PFUnA | | | | | | | | | | |
| 565.00 > 520.00 | 5.139 | 5.139 | 0.0 | 1.259 | 9505889 | 3.02 | | 121 | 8640 | |
| D 44 d5-NEtFOSAA | | | | | | | | | | |
| 589.00 > 419.00 | 5.148 | 5.148 | 0.0 | 1.261 | 6135640 | 2.72 | | 109 | 3093 | |
| 46 NEtFOSA | | | | | | | | | | |
| 584.00 > 419.00 | 5.157 | 5.157 | 0.0 | 1.002 | 1742104 | 1.05 | | 105 | 1746 | |
| D 47 d7-N-MeFOSE-M | | | | | | | | | | |
| 623.00 > 59.00 | 5.240 | 5.240 | 0.0 | 1.284 | 8376518 | 14.9 | | 119 | 3780 | |
| 48 N-MeFOSE-M | | | | | | | | | | |
| 616.00 > 59.00 | 5.249 | 5.249 | 0.0 | 1.002 | 863269 | 1.19 | | 119 | 1138 | |
| D 49 d-N-MeFOSA-M | | | | | | | | | | |
| 515.00 > 169.00 | 5.259 | 5.259 | 0.0 | 1.288 | 2224078 | 2.79 | | 112 | 51.3 | |
| 51 11ClFOS | | | | | | | | | | |
| 631.00 > 451.00 | 5.280 | 5.280 | 0.0 | 1.187 | 6268327 | 0.99 | | 106 | 6875 | |
| 50 NMeFOSA | | | | | | | | | | |
| 512.00 > 169.00 | 5.270 | 5.270 | 0.0 | 1.002 | 957598 | 1.12 | | 112 | 538 | |
| D 52 d9-N-EtFOSE-M | | | | | | | | | | |
| 639.00 > 59.00 | 5.416 | 5.416 | 0.0 | 1.327 | 10068793 | 14.6 | | 117 | 3607 | |
| D 56 13C2 PFDoA | | | | | | | | | | |
| 615.00 > 570.00 | 5.437 | 5.437 | 0.0 | 1.332 | 8760534 | 2.82 | | 113 | 6695 | |
| 53 N-EtFOSE-M | | | | | | | | | | |
| 630.00 > 59.00 | 5.426 | 5.426 | 0.0 | 1.002 | 907022 | 1.05 | | 105 | 1272 | |

| Signal | RT | EXP RT | DLT RT | REL RT | Response | Amount ng/ml | Ratio(Limits) | %Rec | S/N | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| 57 Perfluorododecanoic acid | | | | | | | | | | |
| 613.00 > 569.00 | 5.437 | 5.437 | 0.0 | 1.000 | 3490135 | 0.9740 | Target=9.12 | 96.8 | 1274 | |
| 613.00 > 169.00 | 5.437 | 5.437 | 0.0 | 1.000 | 421709 | | 8.28(4.56-13.69) | | 903 | |
| D 54 d-N-EtFOSA-M | | | | | | | | | | |
| 531.00 > 169.00 | 5.437 | 5.437 | 0.0 | 1.332 | 2107990 | 2.58 | | 103 | 264 | |
| 55 N-EtFOSA-M | | | | | | | | | | |
| 526.00 > 169.00 | 5.448 | 5.448 | 0.0 | 1.002 | 992154 | 1.11 | | 111 | 341 | |
| 58 10:2 FTS | | | | | | | | | | |
| 627.00 > 607.00 | 5.459 | 5.459 | 0.0 | 1.133 | 2661075 | 1.15 | | 119 | 3931 | |
| 59 PFDoS | | | | | | | | | | |
| 699.00 > 80.00 | 5.667 | 5.667 | 0.0 | 1.275 | 485147 | 0.9487 | Target=0.72 | 98.0 | 540 | |
| 699.00 > 99.00 | 5.667 | 5.667 | 0.0 | 1.275 | 679869 | | 0.71(0.36-1.07) | | 1468 | |
| 60 Perfluorotridecanoic acid | | | | | | | | | | |
| 663.00 > 619.00 | 5.701 | 5.701 | 0.0 | 1.049 | 4219612 | 1.28 | Target=6.78 | 128 | 2207 | |
| 663.00 > 169.00 | 5.701 | 5.701 | 0.0 | 1.049 | 578718 | | 7.29(3.39-10.17) | | 917 | |
| 62 Perfluorotetradecanoic acid | | | | | | | | | | |
| 713.00 > 169.00 | 5.948 | 5.948 | 0.0 | 1.000 | 301506 | 1.31 | Target=0.85 | 131 | 1377 | |
| 713.00 > 219.00 | 5.937 | 5.948 | -0.011 | 0.998 | 302440 | | 1.00(0.43-1.28) | | 1928 | |
| D 61 13C2 PFTeDA | | | | | | | | | | |
| 715.00 > 670.00 | 5.948 | 5.948 | 0.0 | 1.457 | 6827275 | 2.67 | | 107 | 10156 | |
| D 64 13C2 PFHxDA | | | | | | | | | | |
| 815.00 > 770.00 | 6.377 | 6.377 | 0.0 | 1.562 | 5322160 | 2.84 | | 114 | 5983 | |
| 63 Perfluorohexadecanoic acid | | | | | | | | | | |
| 813.00 > 769.00 | 6.386 | 6.386 | 0.0 | 1.001 | 2014403 | 1.05 | Target=10.21 | 105 | 1394 | |
| 813.00 > 169.00 | 6.386 | 6.386 | 0.0 | 1.001 | 202085 | | 9.97(5.11-15.32) | | 1223 | |
| 65 Perfluorooctadecanoic acid | | | | | | | | | | |
| 913.00 > 869.00 | 6.835 | 6.835 | 0.0 | 1.072 | 1632584 | 1.16 | Target=12.45 | 116 | 1606 | |
| 913.00 > 169.00 | 6.829 | 6.835 | -0.006 | 1.071 | 134838 | | 12.11(6.22-18.67) | | 1137 | |

## QC Flag Legend

Review Flags

M - Manually Integrated

## Reagents:

LCPFC_LL4_00030 Amount Added: 1.00 Units: mL

Report Date: 11-Sep-2020 08:42:21 Chrom Revision: 2.3 09-Sep-2020 15:12:58

Eurofins TestAmerica, Sacramento

Data File: \\chromfs\Sacramento\ChromData\A18\20200910-103041.b\2020.09.10_A18_PFC_A_073.d

Injection Date: 10-Sep-2020 15:02:11 Instrument ID: A18

Lims ID: CCV L4

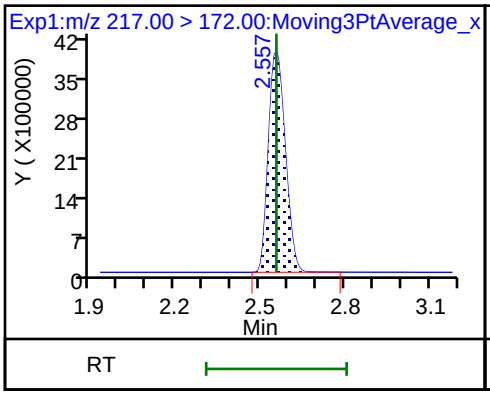
Client ID:

Operator ID: TAISACA18-PC\A-18 ALS Bottle#: 52 Worklist Smp#: 1

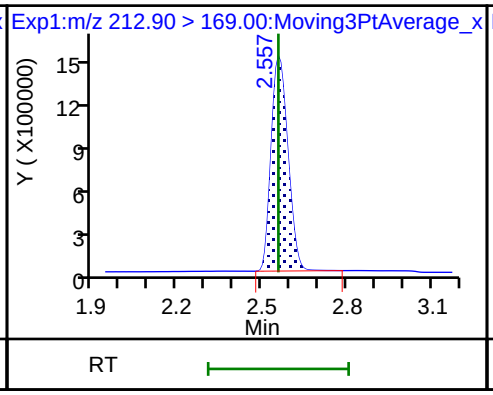
Injection Vol: 20.0 ul Dil. Factor: 1.0000

Method: PFAS_A18V2 Limit Group: LC PFC ICAL

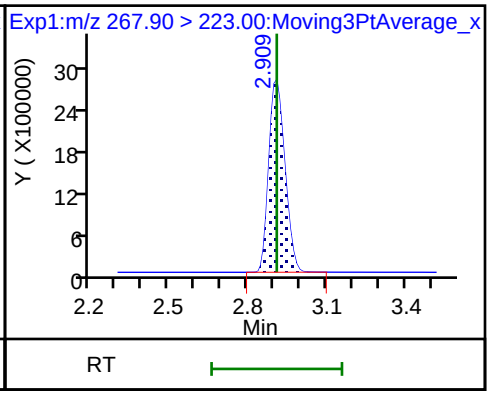
D 1 13C4 PFBA



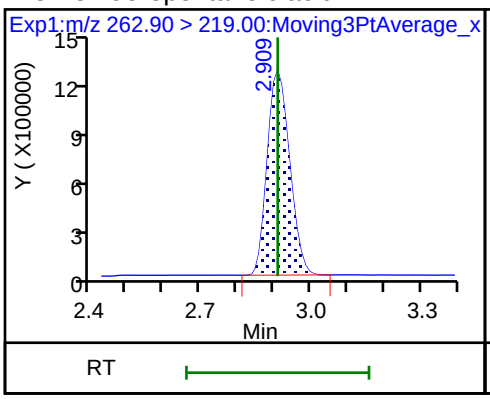

2 Perfluorobutanoic acid



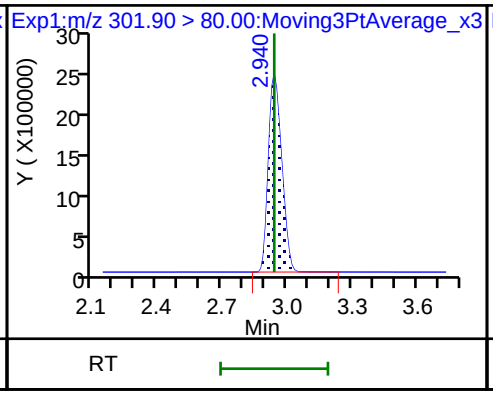

D 4 13C5 PFPeA



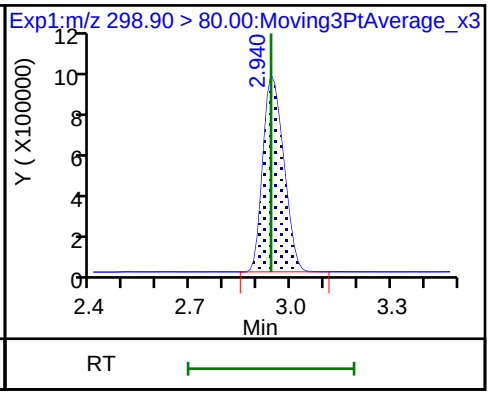

5 Perfluoropentanoic acid



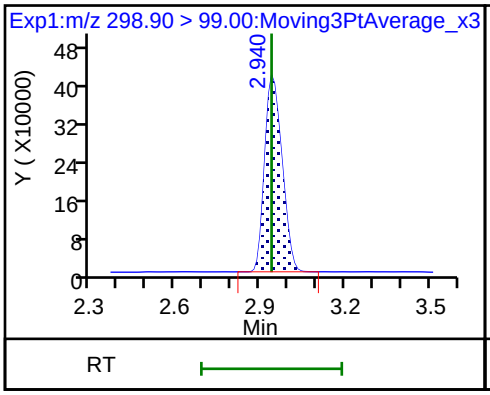

D 9 13C3 PFBS



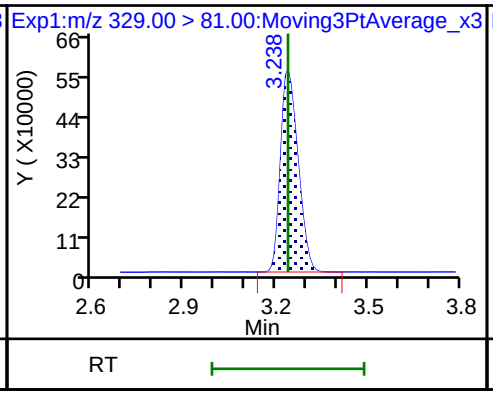

6 Perfluorobutanesulfonic acid



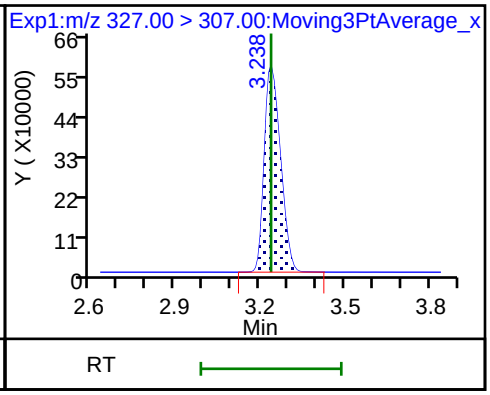

6 Perfluorobutanesulfonic acid



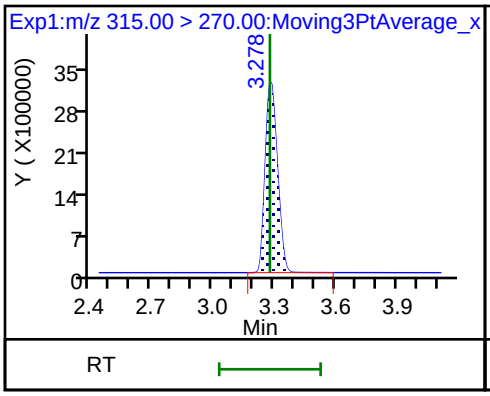

D 7 M2-4:2 FTS



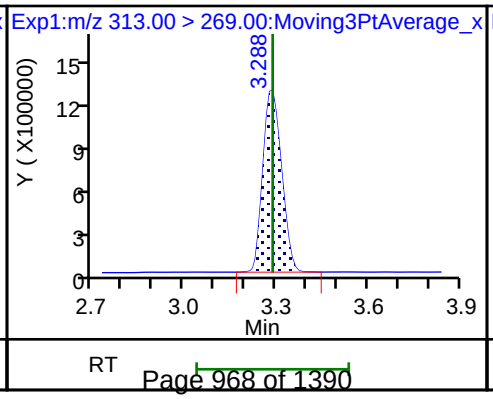

8 4:2 FTS



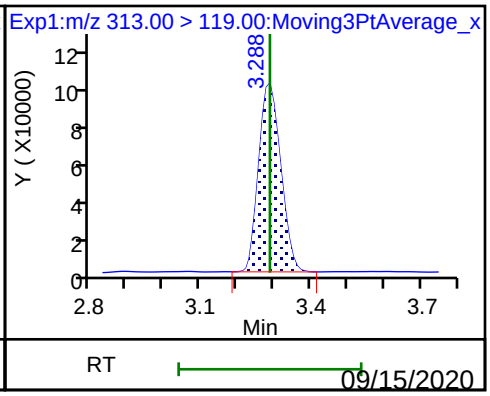

D 11 13C2 PFHxA



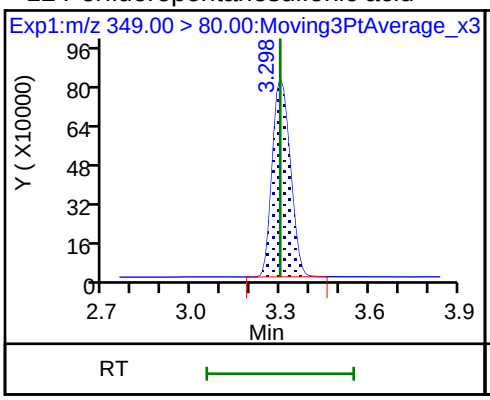

10 Perfluorohexanoic acid



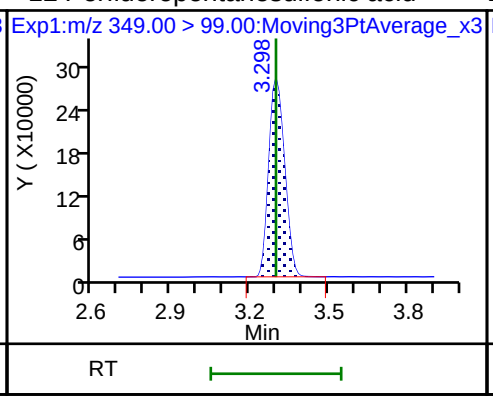

10 Perfluorohexanoic acid



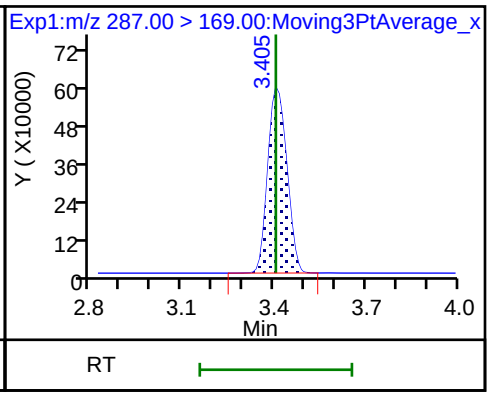
12 Perfluoropentanesulfonic acid



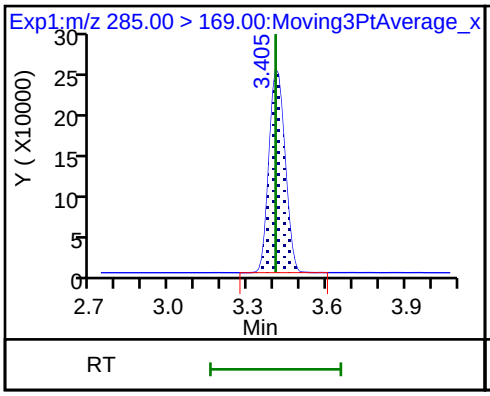

12 Perfluoropentanesulfonic acid



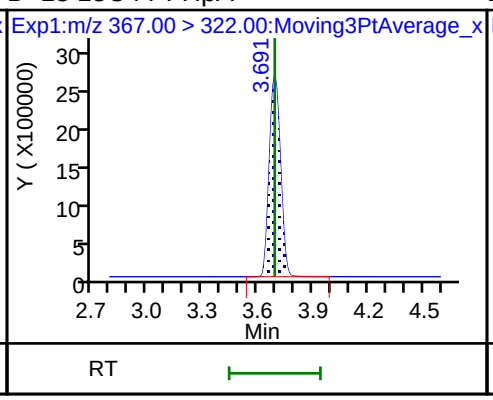

D 14 13C3 HFPO-DA



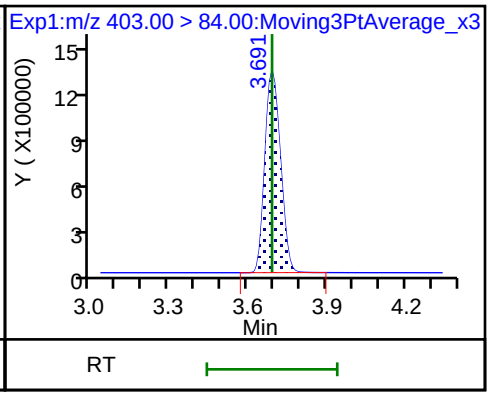

13 HPFO-DA



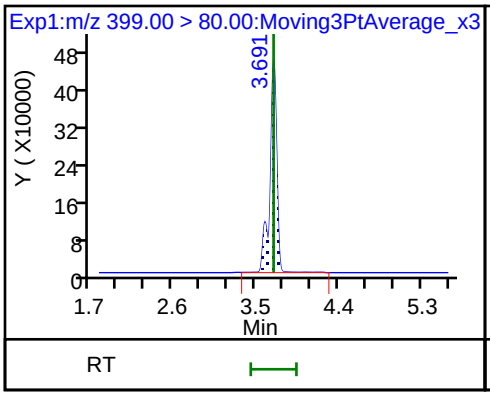

D 18 13C4 PFHpA



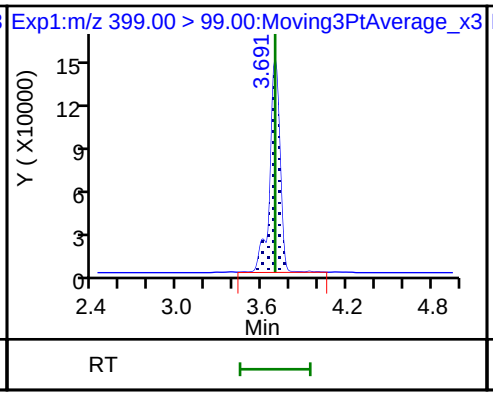

D 17 18O2 PFHxS



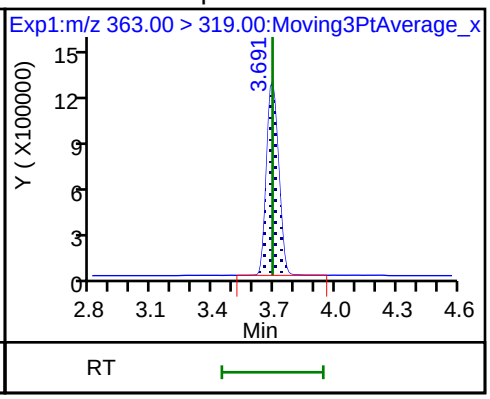

15 Perfluorohexanesulfonic acid



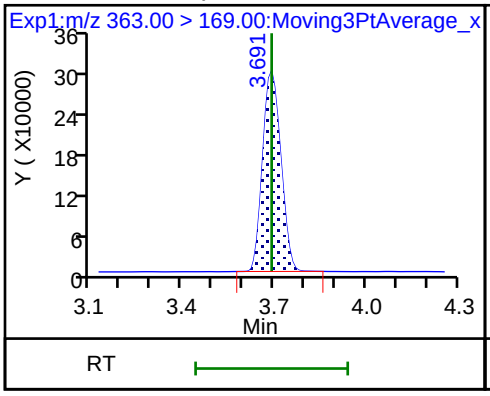

15 Perfluorohexanesulfonic acid



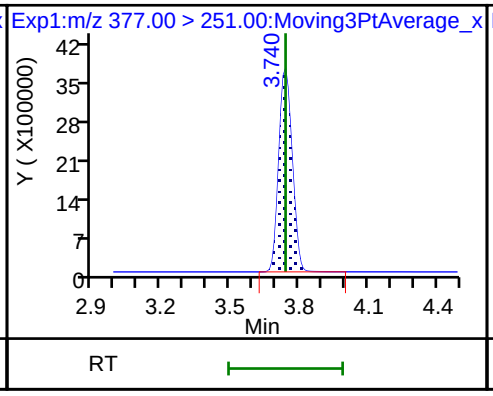

16 Perfluoroheptanoic acid



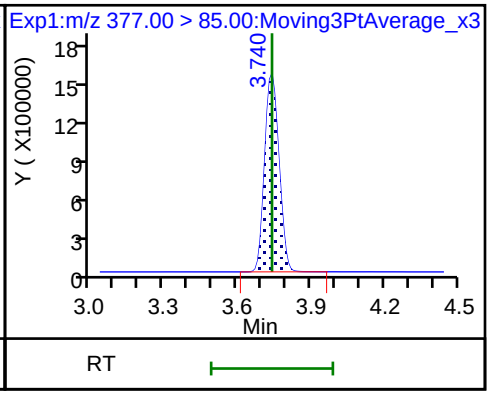

16 Perfluoroheptanoic acid



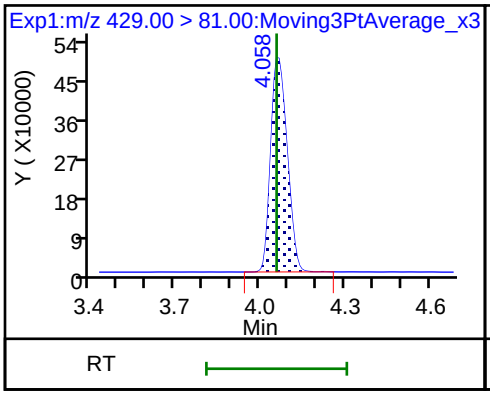

19 DONA



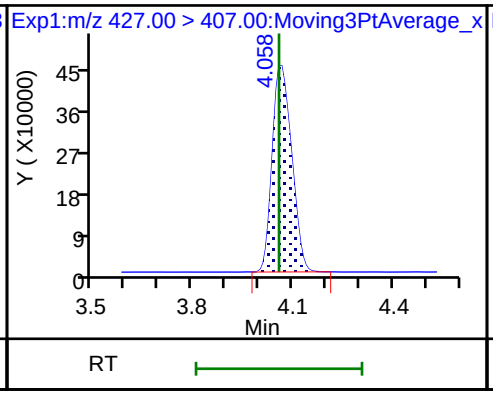

19 DONA



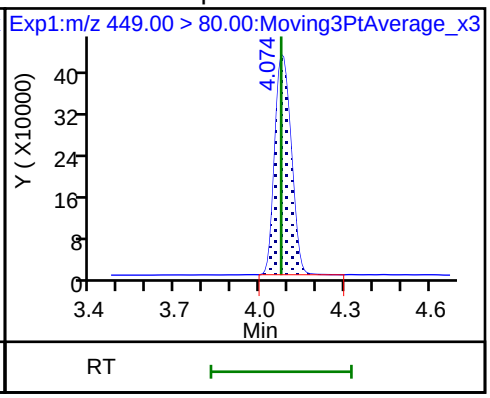
D 20 M2-6:2 FTS



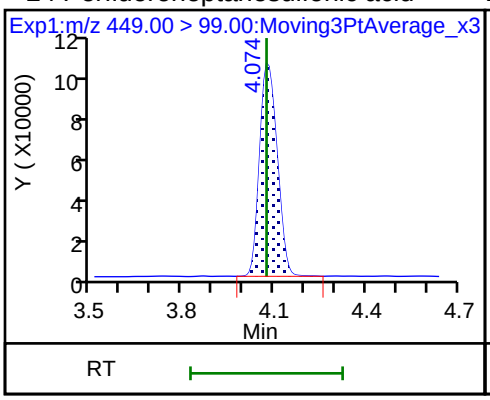

21 6:2 FTS



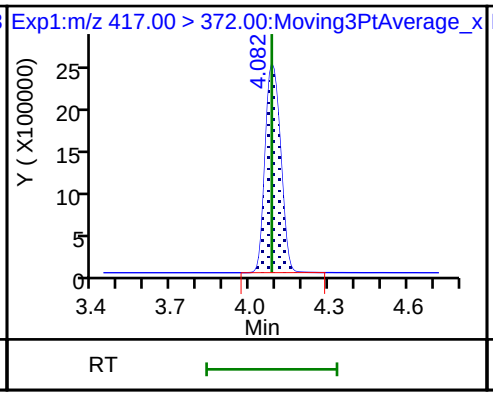

24 Perfluoroheptanesulfonic acid



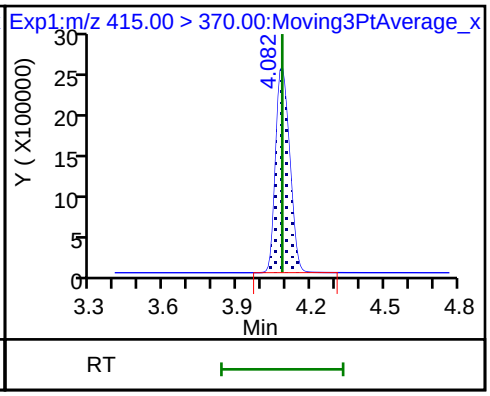

24 Perfluoroheptanesulfonic acid



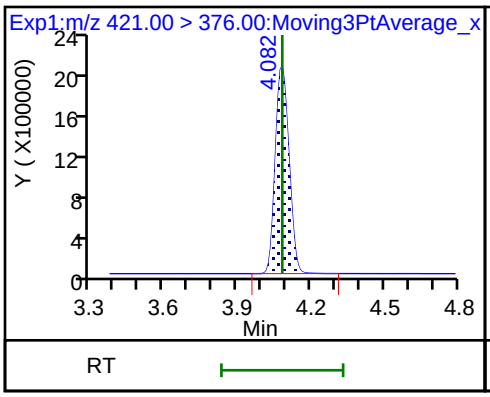

D 25 13C4 PFOA



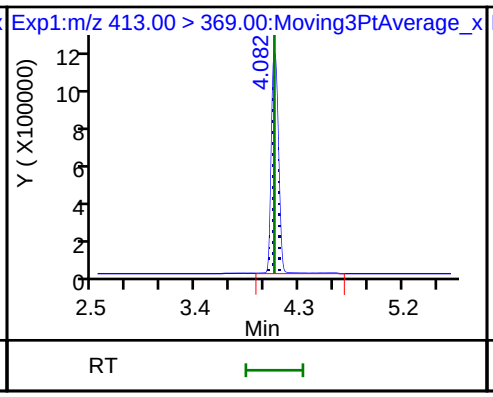

* 23 13C2 PFOA



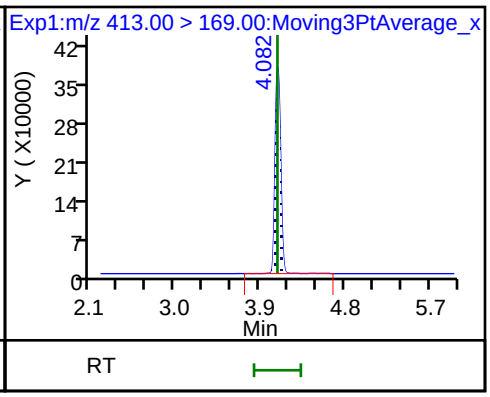

$ 26 13C8 PFOA



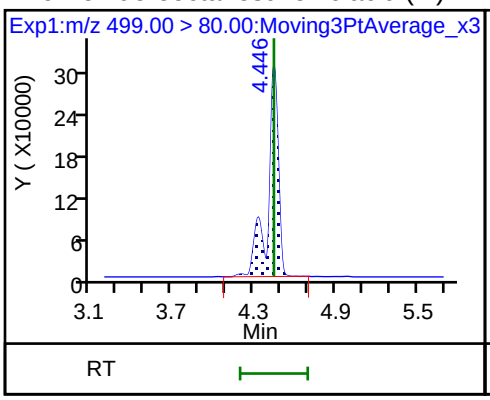

22 Perfluorooctanoic acid



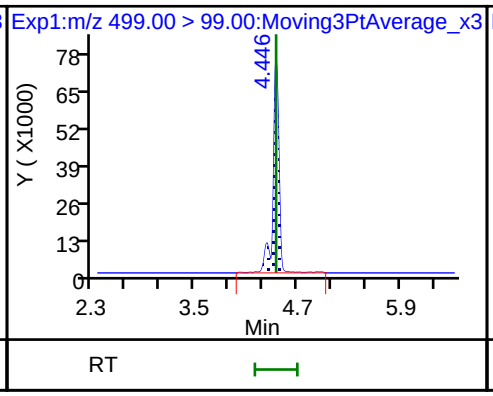

22 Perfluorooctanoic acid



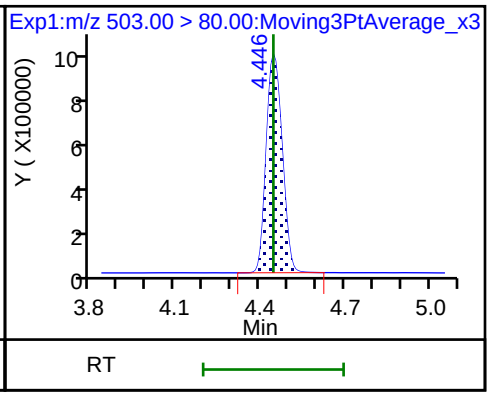

29 Perfluorooctanesulfonic acid (M)



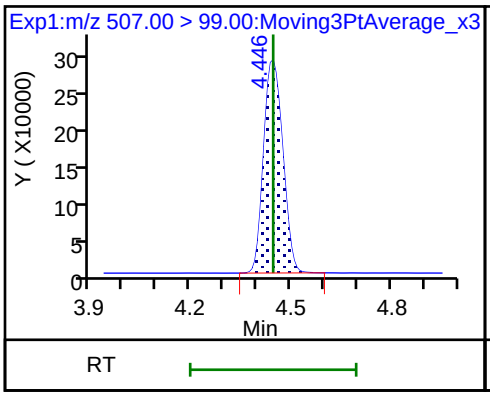

29 Perfluorooctanesulfonic acid



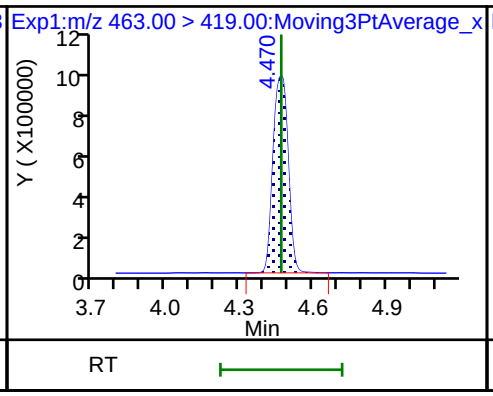

D 27 13C4 PFOS



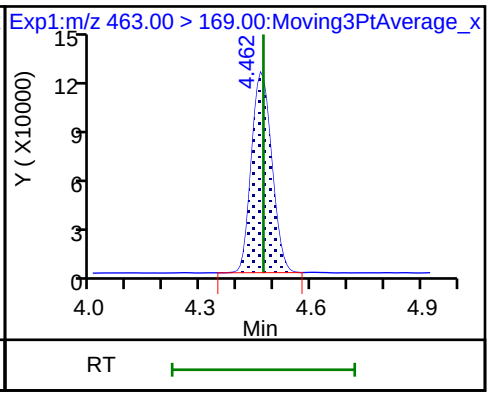
$ 28 13C8 PFOS



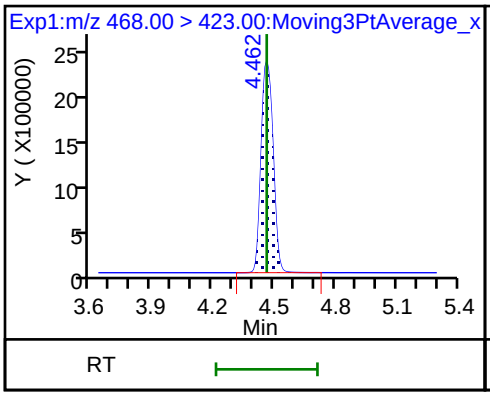

31 Perfluorononanoic acid



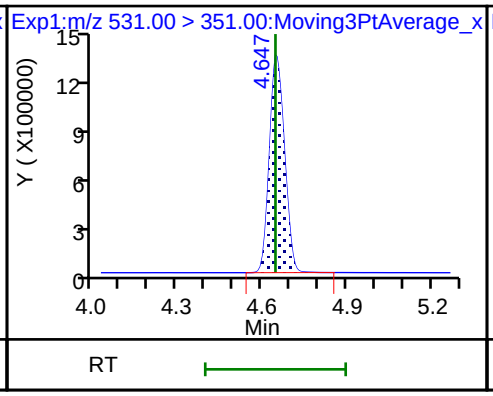

31 Perfluorononanoic acid



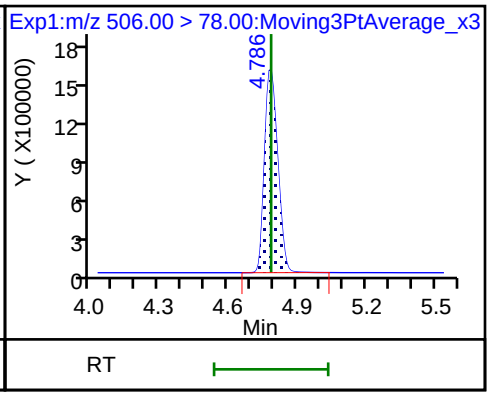

D 30 13C5 PFNA



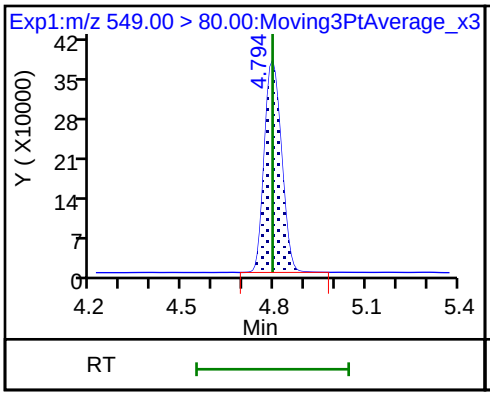

32 9ClFOS



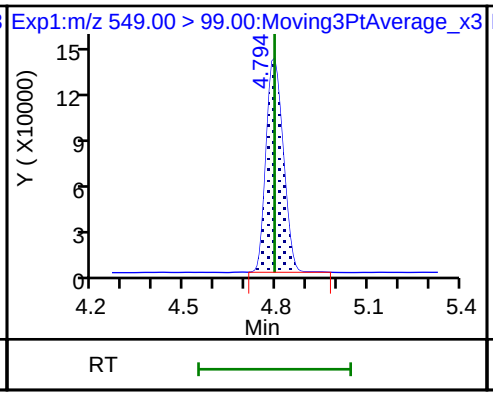

D 33 13C8 FOSA



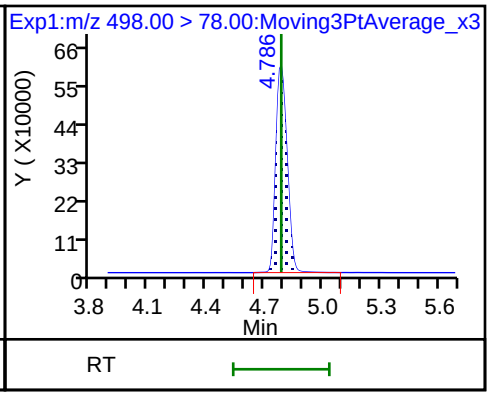

35 Perfluorononanesulfonic acid



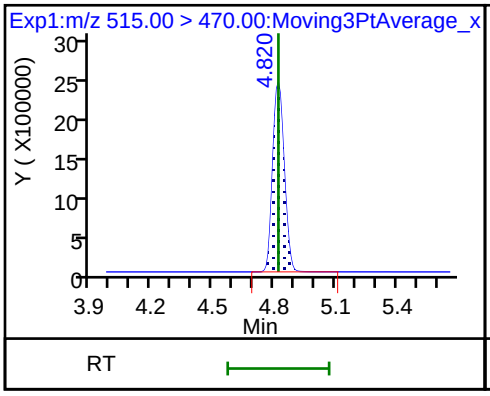

35 Perfluorononanesulfonic acid



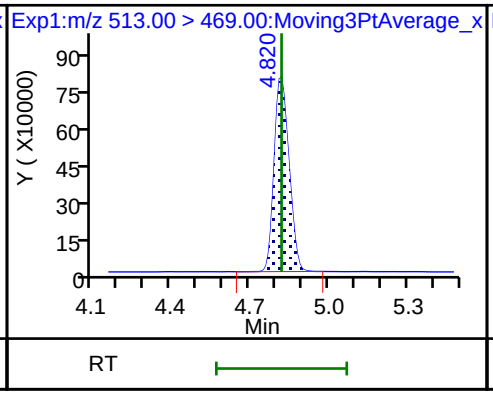

34 Perfluorooctanesulfonamide



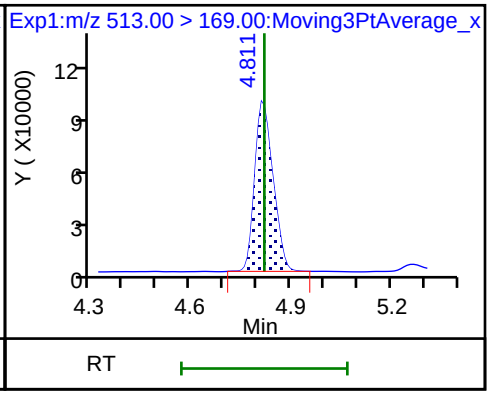

D 39 13C2 PFDA



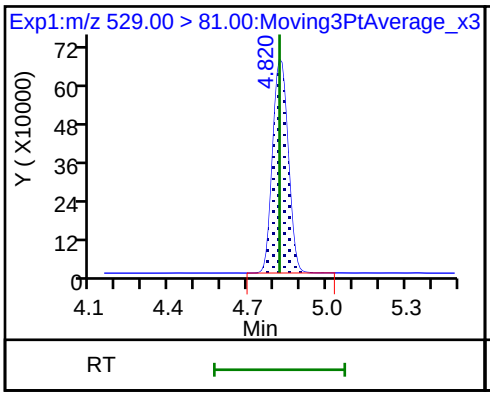

37 Perfluorodecanoic acid



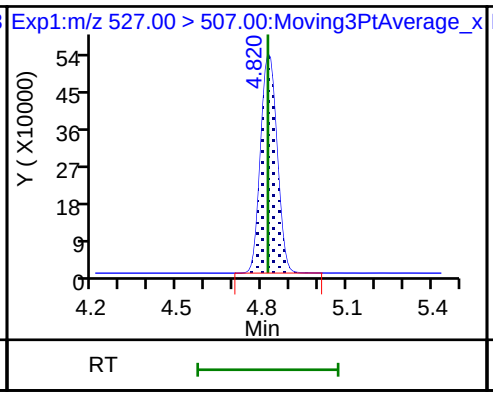

37 Perfluorodecanoic acid



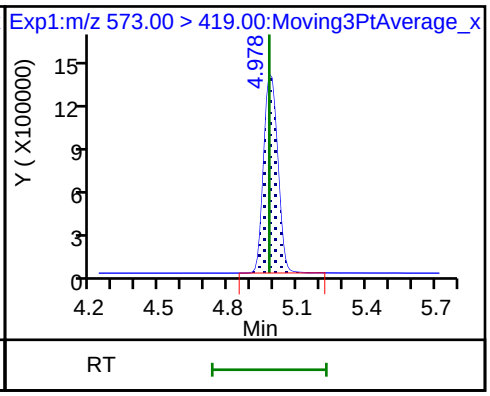
D 38 M2-8:2 FTS



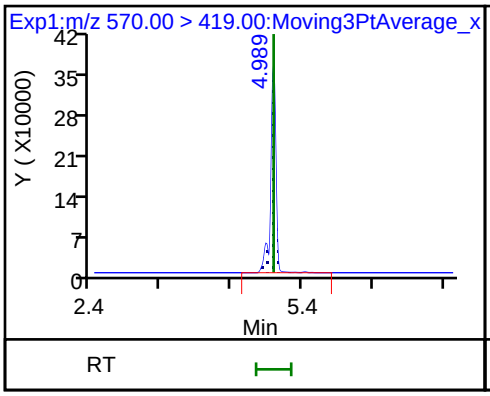

36 8:2 FTS



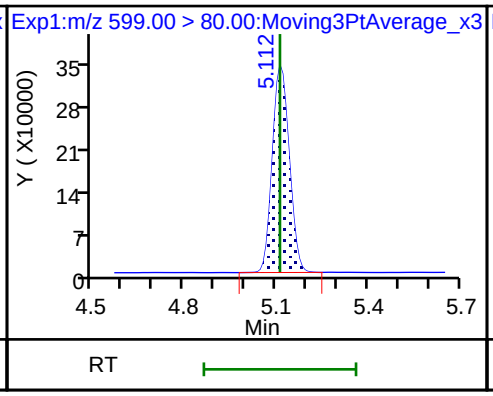

D 40 d3-NMeFOSAA



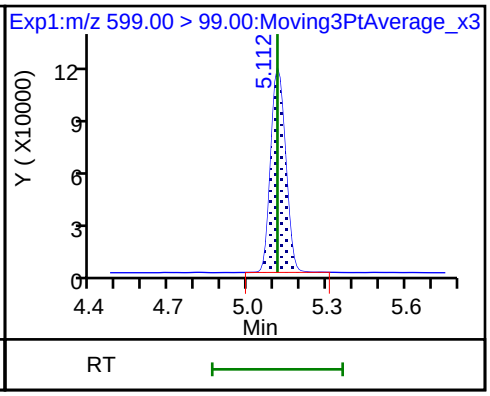

41 NMeFOSAA



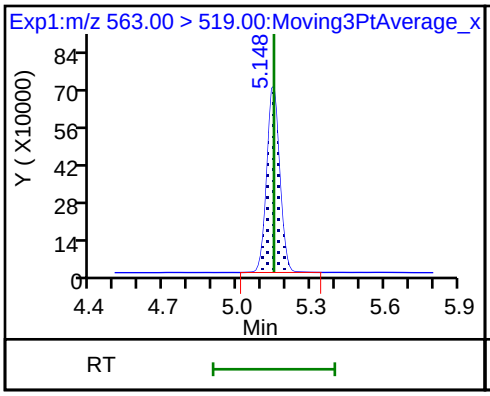

42 Perfluorodecanesulfonic acid



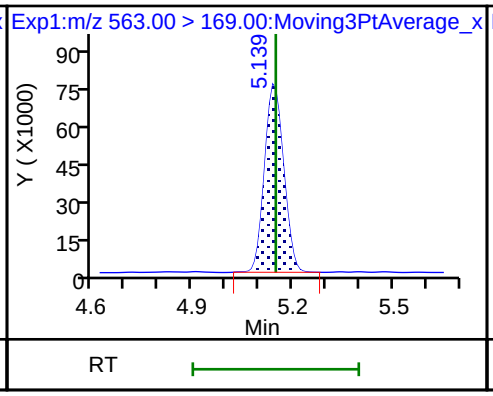

42 Perfluorodecanesulfonic acid



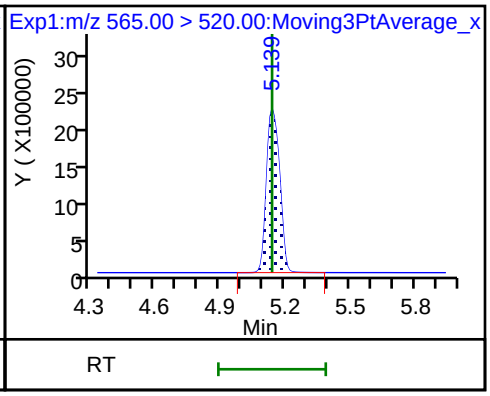

45 Perfluoroundecanoic acid



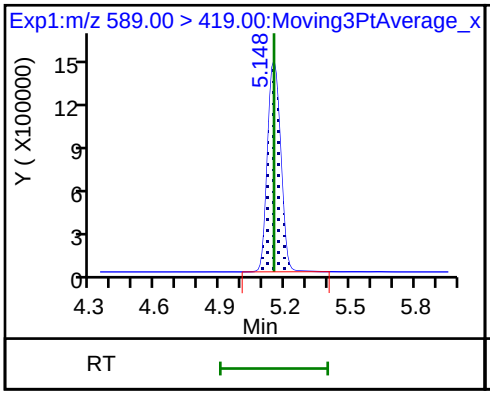

45 Perfluoroundecanoic acid



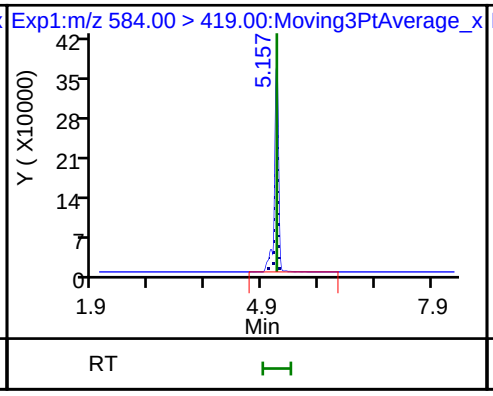

D 43 13C2 PFUnA



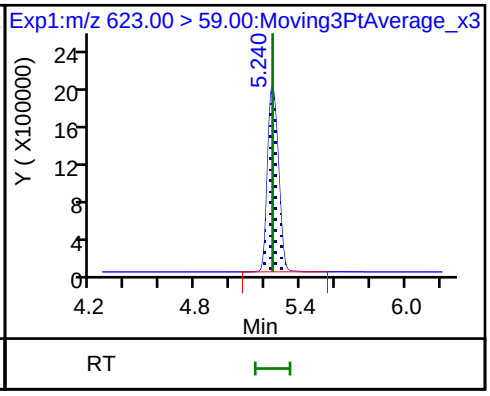

D 44 d5-NEtFOSAA



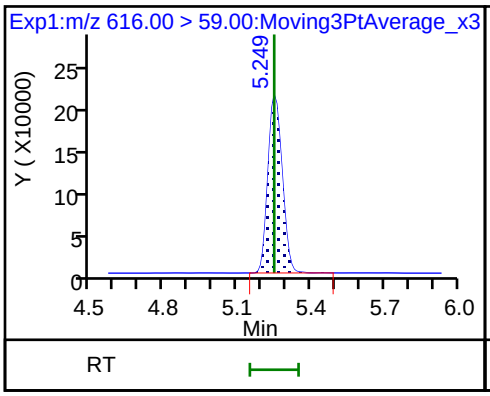

46 NEtFOSA



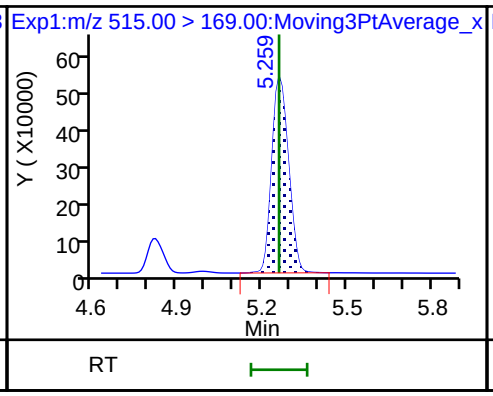

D 47 d7-N-MeFOSE-M



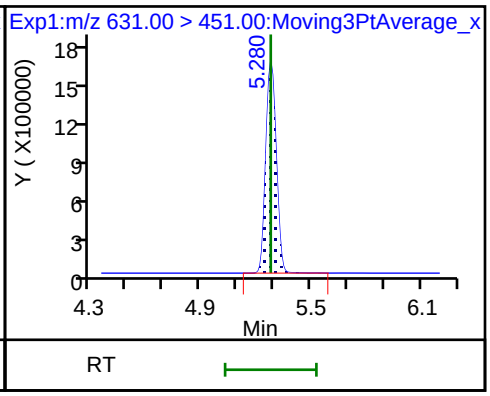
48 N-MeFOSE-M



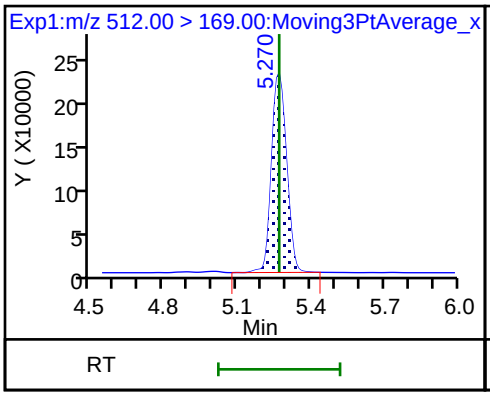

D 49 d-N-MeFOSA-M



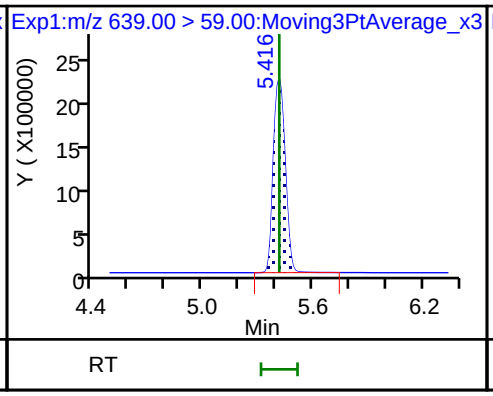

51 11ClFOS



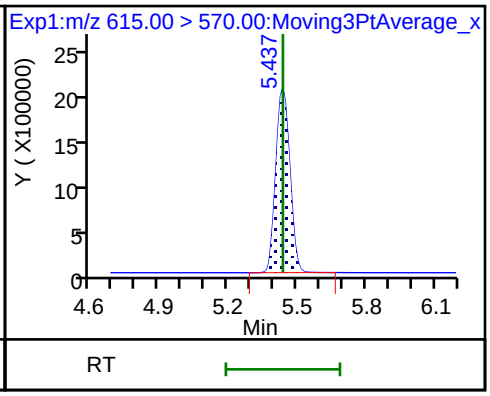

50 NMeFOSA



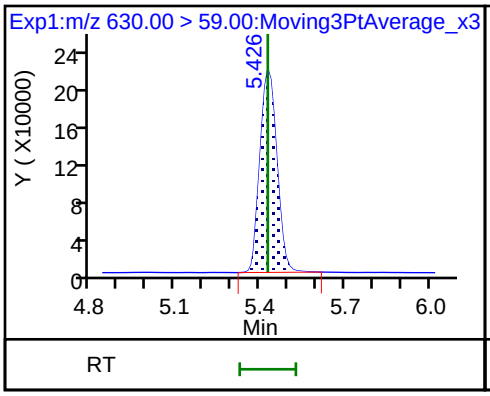

D 52 d9-N-EtFOSE-M



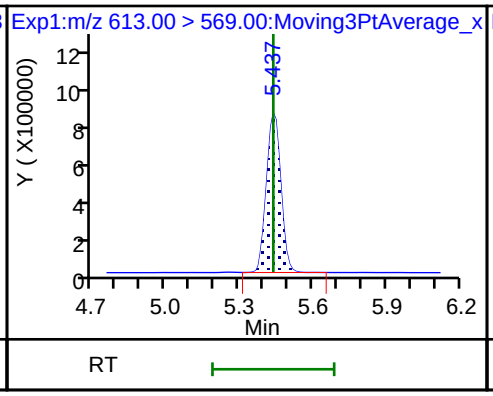

D 56 13C2 PFDoA



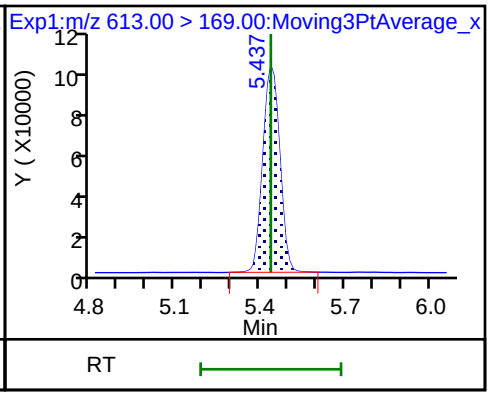

53 N-EtFOSE-M



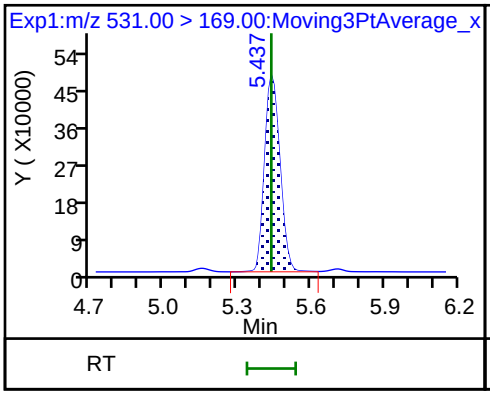

57 Perfluorododecanoic acid



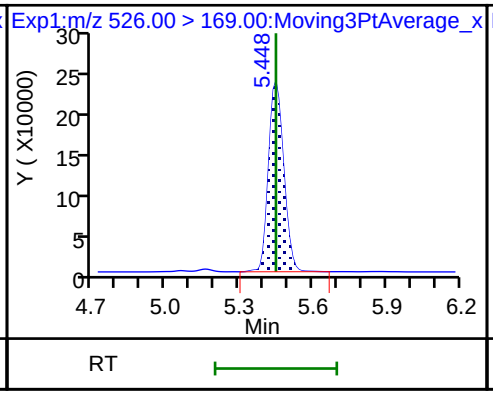

57 Perfluorododecanoic acid



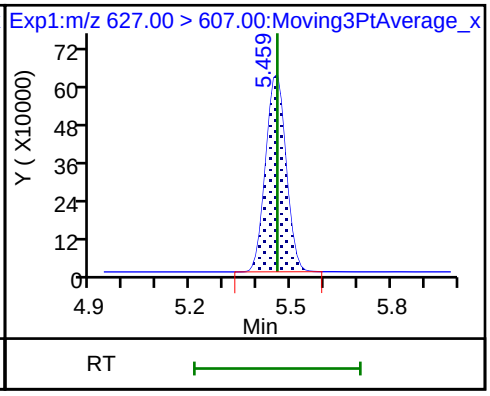

D 54 d-N-EtFOSA-M



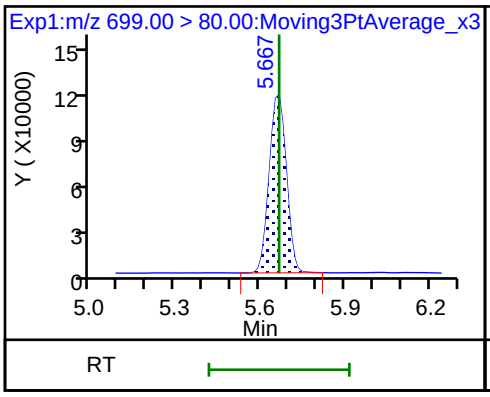

55 N-EtFOSA-M



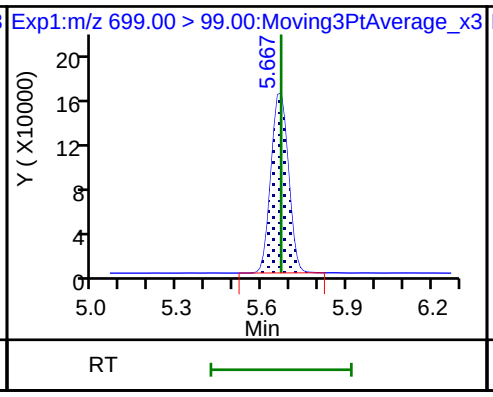

58 10:2 FTS



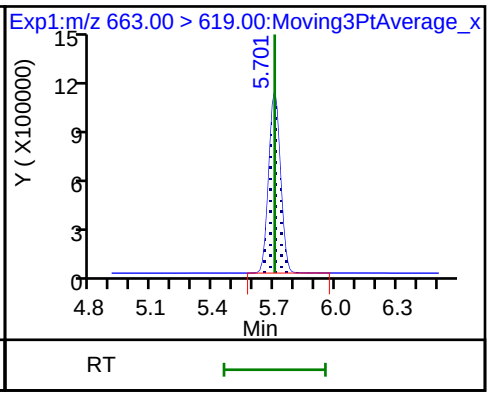
59 PFDoS



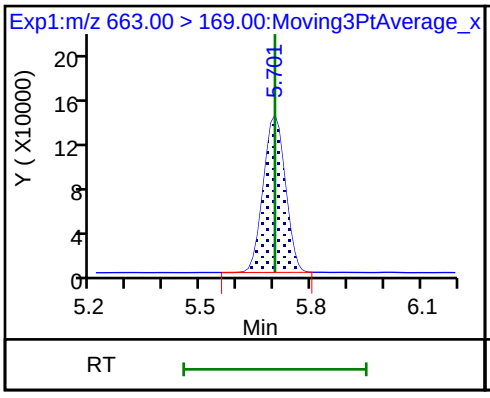

59 PFDoS



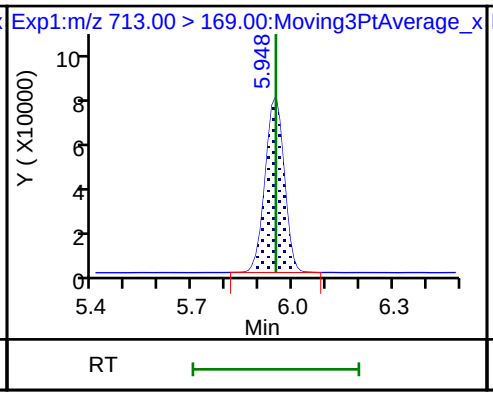

60 Perfluorotridecanoic acid



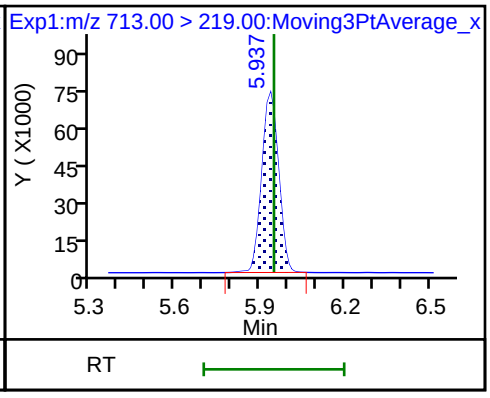

60 Perfluorotridecanoic acid



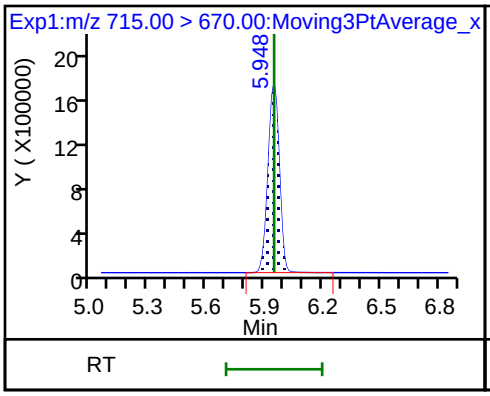

62 Perfluorotetradecanoic acid



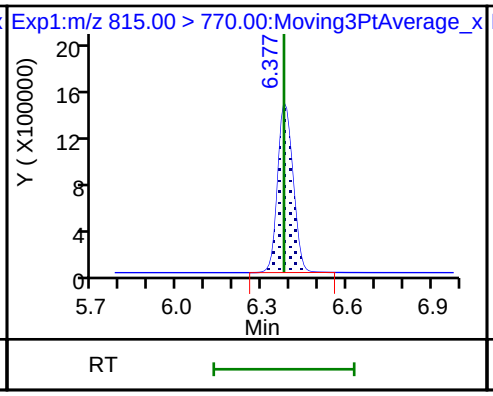

62 Perfluorotetradecanoic acid



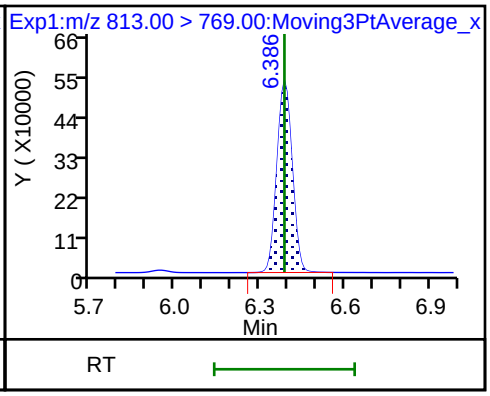

D 61 13C2 PFTeDA



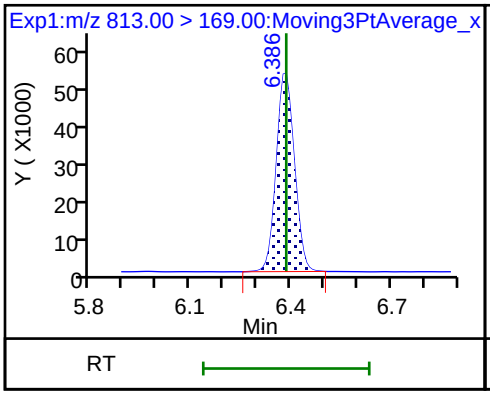

D 64 13C2 PFHxDA



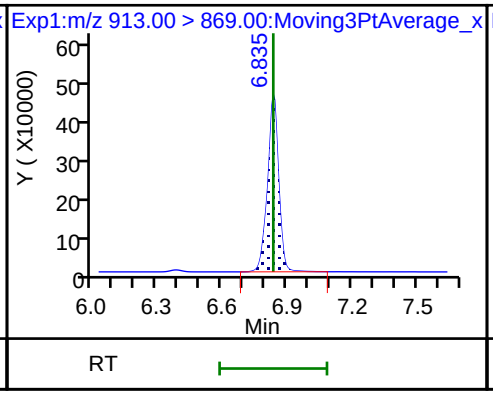

63 Perfluorohexadecanoic acid



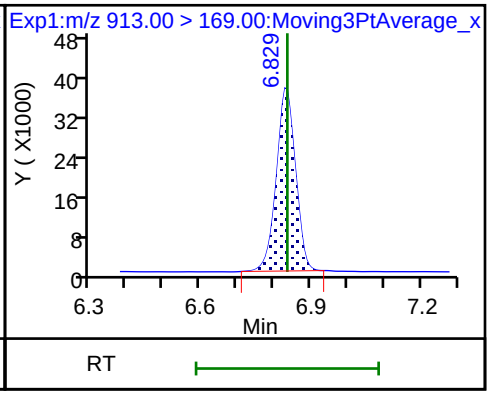

63 Perfluorohexadecanoic acid




65 Perfluorooctadecanoic acid




65 Perfluorooctadecanoic acid



Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

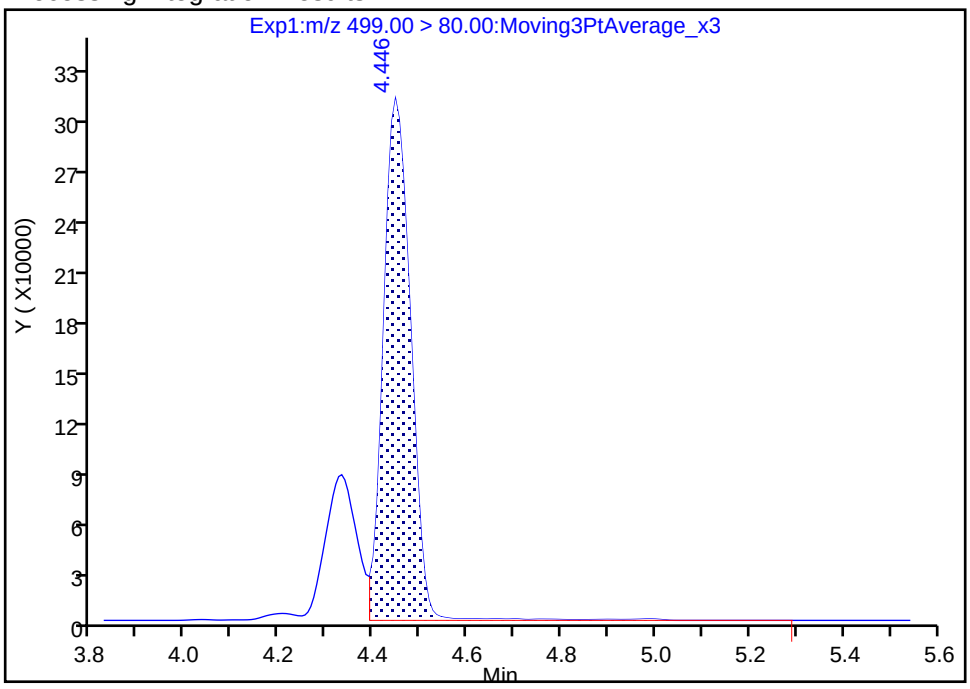
Data File: \\chromfs\Sacramento\ChromData\A18\20200910-103041.b\2020.09.10_A18_PFC_A_073.d
Injection Date: 10-Sep-2020 15:02:11 Instrument ID: A18
Lims ID: CCV L4
Client ID:
Operator ID: TAISACA18-PC\A-18 ALS Bottle#: 52 Worklist Smp#: 1
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFAS_A18V2 Limit Group: LC PFC ICAL
Column: Gemini C18 3um 3mm x 50 mm ( 3.00mm) Detector EXP1

## 29 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 1

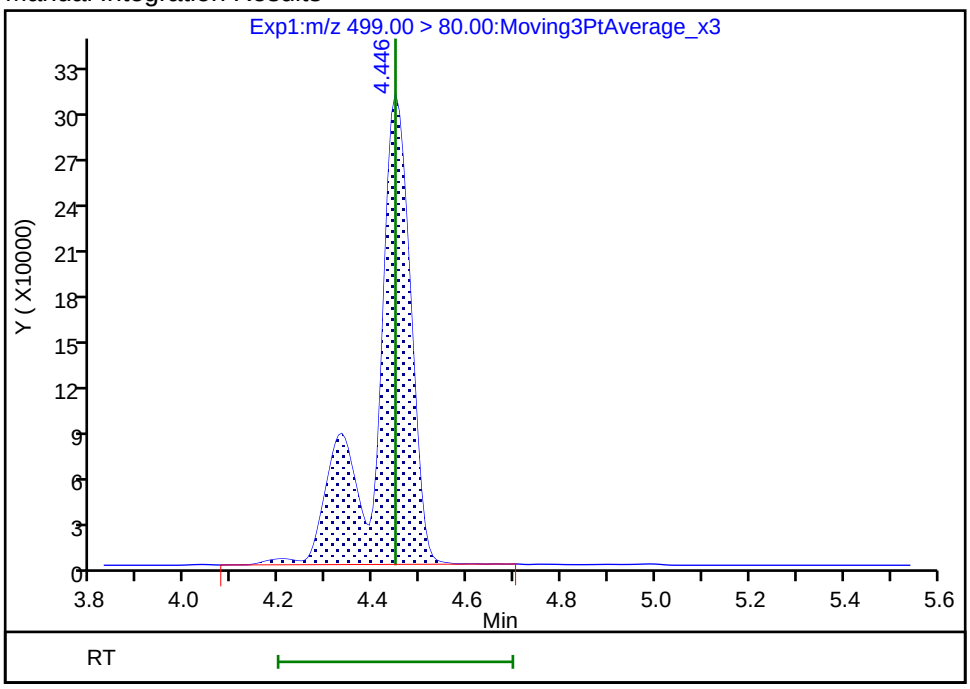
Processing Integration Results

RT: 4.45
Area: 1224438
Amount: 0.770092
Amount Units: ng/ml




Manual Integration Results

RT: 4.45
Area: 1608900
Amount: 1.011894
Amount Units: ng/ml




Reviewer: vangm, 10-Sep-2020 15:19:22
Audit Action: Manually Integrated Audit Reason: Isomers

FORM VII
LCMS CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Sacramento  Job No.: 460-217547-1

SDG No.:

Lab Sample ID: CCV 320-411087/13  Calibration Date: 09/10/2020 16:51

Instrument ID: A18  Calib Start Date: 08/25/2020 16:43

GC Column: Gemini C18 3x50  ID: 3.00(mm)  Calib End Date: 08/25/2020 17:37

Lab File ID: 2020.09.10_A18_PFC_A_085.d  Conc. Units: ng/mL

| ANALYTE | CURVE TYPE | AVE RRF | RRF | MIN RRF | CALC AMOUNT | SPIKE AMOUNT | %D | MAX %D |
|---|---|---|---|---|---|---|---|---|
| Perfluorobutanoic acid (PFBA) | AveID | 0.8679 | 0.9206 | | 2.65 | 2.50 | 6.1 | 40.0 |
| Perfluoropentanoic acid (PFPeA) | AveID | 0.997 | 1.065 | | 2.67 | 2.50 | 6.8 | 40.0 |
| Perfluorobutanesulfonic acid (PFBS) | AveID | 1.010 | 1.048 | | 2.29 | 2.21 | 3.8 | 50.0 |
| 4:2 FTS | AveID | 2.273 | 2.475 | | 2.54 | 2.34 | 8.9 | 50.0 |
| Perfluorohexanoic acid (PFHxA) | AveID | 0.9638 | 1.022 | | 2.65 | 2.50 | 6.0 | 40.0 |
| Perfluoropentanesulfonic acid (PFPeS) | AveID | 0.7925 | 0.8373 | | 2.48 | 2.35 | 5.6 | 50.0 |
| HFPO-DA (GenX) | AveID | 0.9742 | 1.080 | | 2.77 | 2.50 | 10.8 | 40.0 |
| Perfluoroheptanoic acid (PFHpA) | AveID | 1.014 | 0.9720 | | 2.40 | 2.50 | -4.1 | 40.0 |
| Perfluorohexanesulfonic acid (PFHxS) | AveID | 1.181 | 1.099 | | 2.12 | 2.28 | -7.0 | 40.0 |
| 4,8-Dioxa-3H-perfluorononanoic acid (ADONA) | AveID | 9.582 | 10.56 | | 2.60 | 2.36 | 10.2 | 50.0 |
| 6:2 FTS | AveID | 2.299 | 2.291 | | 2.36 | 2.37 | -0.4 | 40.0 |
| Perfluoroheptanesulfonic Acid (PFHpS) | AveID | 1.118 | 1.204 | | 2.56 | 2.38 | 7.7 | 50.0 |
| Perfluorooctanoic acid (PFOA) | AveID | 1.020 | 1.133 | | 2.78 | 2.50 | 11.0 | 40.0 |
| Perfluorooctanesulfonic acid (PFOS) | AveID | 1.035 | 1.107 | | 2.48 | 2.32 | 7.0 | 40.0 |
| Perfluorononanoic acid (PFNA) | AveID | 0.9590 | 1.084 | | 2.83 | 2.51 | 13.0 | 40.0 |
| F-53B Major | AveID | 3.236 | 3.385 | | 2.44 | 2.33 | 4.6 | 50.0 |
| Perfluorooctanesulfonamide (FOSA) | AveID | 0.9305 | 0.9556 | | 2.57 | 2.50 | 2.7 | 40.0 |
| Perfluorononanesulfonic acid (PFNS) | AveID | 0.9368 | 1.002 | | 2.57 | 2.40 | 6.9 | 50.0 |
| Perfluorodecanoic acid (PFDA) | AveID | 0.9639 | 1.026 | | 2.66 | 2.50 | 6.5 | 40.0 |
| 8:2 FTS | AveID | 1.775 | 1.923 | | 2.60 | 2.40 | 8.4 | 40.0 |
| N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA) | AveID | 0.7417 | 0.7468 | | 2.52 | 2.50 | 0.7 | 40.0 |
| Perfluorodecanesulfonic acid (PFDS) | AveID | 0.8350 | 0.9618 | | 2.78 | 2.41 | 15.2 | 50.0 |
| Perfluoroundecanoic acid (PFUnA) | AveID | 0.7253 | 0.6805 | | 2.35 | 2.50 | -6.2 | 40.0 |
| N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA) | AveID | 0.6758 | 0.7290 | | 2.70 | 2.50 | 7.9 | 40.0 |
| NMeFOSE | AveID | 1.080 | 1.062 | | 2.46 | 2.50 | -1.6 | 40.0 |
| NMeFOSA | AveID | 0.9606 | 1.119 | | 2.91 | 2.50 | 16.5 | 50.0 |
| F-53B Minor | AveID | 4.102 | 4.507 | | 2.59 | 2.36 | 9.9 | 50.0 |
| NEtFOSE | AveID | 1.073 | 1.169 | | 2.72 | 2.50 | 9.0 | 40.0 |
| Perfluorododecanoic acid (PFDoA) | AveID | 1.023 | 0.9776 | | 2.41 | 2.52 | -4.4 | 40.0 |
| 10:2 FTS | AveID | 2.014 | 2.272 | | 2.72 | 2.41 | 12.8 | 50.0 |
| NEtFOSA | AveID | 1.058 | 1.218 | | 2.88 | 2.50 | 15.1 | 40.0 |
| Perfluorododecanesulfonic acid (PFDoS) | AveID | 0.3329 | 0.3381 | | 2.46 | 2.42 | 1.6 | 50.0 |

FORM VII 537 (modified)

FORM VII
LCMS CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Sacramento  Job No.: 460-217547-1

SDG No.:

Lab Sample ID: CCV 320-411087/13  Calibration Date: 09/10/2020 16:51

Instrument ID: A18  Calib Start Date: 08/25/2020 16:43

GC Column: Gemini C18 3x50  ID: 3.00(mm)  Calib End Date: 08/25/2020 17:37

Lab File ID: 2020.09.10_A18_PFC_A_085.d  Conc. Units: ng/mL

| ANALYTE | CURVE TYPE | AVE RRF | RRF | MIN RRF | CALC AMOUNT | SPIKE AMOUNT | %D | MAX %D |
|---|---|---|---|---|---|---|---|---|
| Perfluorotridecanoic acid (PFTriA) | AveID | 0.9409 | 0.9366 | | 2.49 | 2.50 | -0.5 | 50.0 |
| Perfluorotetradecanoic acid (PFTeA) | AveID | 0.0844 | 0.0858 | | 2.55 | 2.50 | 1.7 | 50.0 |
| Perfluoro-n-hexadecanoic acid (PFHxDA) | L2ID | | 1.037 | | 2.93 | 2.50 | 17.2 | 50.0 |
| Perfluoro-n-octadecanoic acid (PFODA) | AveID | 0.6605 | 0.8597 | | 3.25 | 2.50 | 30.2 | 50.0 |
| 13C4 PFBA | Ave | 1.585 | 1.481 | | 2.34 | 2.50 | -6.6 | 50.0 |
| 13C5 PFPeA | Ave | 1.233 | 1.117 | | 2.26 | 2.50 | -9.5 | 50.0 |
| 13C3 PFBS | Ave | 0.9684 | 0.9811 | | 2.36 | 2.33 | 1.3 | 50.0 |
| M2-4:2 FTS | Ave | 0.2333 | 0.2181 | | 2.18 | 2.34 | -6.5 | 50.0 |
| 13C2 PFHxA | Ave | 1.231 | 1.221 | | 2.48 | 2.50 | -0.8 | 50.0 |
| 13C3 HFPO-DA | Ave | 0.2518 | 0.2401 | | 2.38 | 2.50 | -4.7 | 50.0 |
| 13C4 PFHpA | Ave | 1.051 | 1.091 | | 2.60 | 2.50 | 3.8 | 50.0 |
| 18O2 PFHxS | Ave | 0.5117 | 0.5320 | | 2.46 | 2.37 | 4.0 | 50.0 |
| M2-6:2 FTS | Ave | 0.1958 | 0.1808 | | 2.19 | 2.38 | -7.7 | 50.0 |
| 13C4 PFOA | Ave | 1.001 | 0.9629 | | 2.41 | 2.50 | -3.8 | 50.0 |
| 13C4 PFOS | Ave | 0.3465 | 0.3427 | | 2.36 | 2.39 | -1.1 | 50.0 |
| 13C5 PFNA | Ave | 0.8063 | 0.8552 | | 2.65 | 2.50 | 6.1 | 50.0 |
| 13C8 FOSA | Ave | 0.5590 | 0.5536 | | 2.48 | 2.50 | -1.0 | 50.0 |
| 13C2 PFDA | Ave | 0.7829 | 0.7957 | | 2.54 | 2.50 | 1.6 | 50.0 |
| M2-8:2 FTS | Ave | 0.2823 | 0.2395 | | 2.03 | 2.40 | -15.2 | 50.0 |
| d3-NMeFOSAA | Ave | 0.5255 | 0.5242 | | 2.49 | 2.50 | -0.2 | 50.0 |
| 13C2 PFUnA | Ave | 0.7758 | 0.8977 | | 2.89 | 2.50 | 15.7 | 50.0 |
| d5-NEtFOSAA | Ave | 0.5556 | 0.5390 | | 2.43 | 2.50 | -3.0 | 50.0 |
| d7-N-MeFOSE-M | Ave | 0.1384 | 0.1652 | | 14.9 | 12.5 | 19.4 | 50.0 |
| d-N-MeFOSA-M | Ave | 0.1965 | 0.1920 | | 2.44 | 2.50 | -2.3 | 50.0 |
| d9-N-EtFOSE-M | Ave | 0.1700 | 0.1996 | | 14.7 | 12.5 | 17.5 | 50.0 |
| 13C2 PFDoA | Ave | 0.7650 | 0.9009 | | 2.94 | 2.50 | 17.8 | 50.0 |
| d-N-EtFOSA-M | Ave | 0.2011 | 0.1850 | | 2.30 | 2.50 | -8.0 | 50.0 |
| 13C2 PFTeDA | Ave | 0.6311 | 0.7750 | | 3.07 | 2.50 | 22.8 | 50.0 |
| 13C2 PFHxDA | Ave | 0.4618 | 0.4872 | | 2.64 | 2.50 | 5.5 | 50.0 |
| 13C8 PFOA | Ave | 0.6756 | 0.7555 | | 2.74 | 2.45 | 11.8 | 50.0 |
| 13C8 PFOS | Ave | 0.1082 | 0.1082 | | 2.39 | 2.39 | -0.0 | 50.0 |

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\A18\20200910-103041.b\2020.09.10_A18_PFC_A_085.d
Lims ID: CCV L5
Client ID:
Sample Type: CCV
Inject. Date: 10-Sep-2020 16:51:37 ALS Bottle#: 53 Worklist Smp#: 13
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Sample Info: CCV L5
Misc. Info.: Plate: 4 Rack: 1
Operator ID: TAISACA18-PC\A-18 Instrument ID: A18
Sublist: chrom-PFAS_A18V2*sub1

Method: \\chromfs\Sacramento\ChromData\A18\20200910-103041.b\PFAS_A18V2.m
Limit Group: LC PFC ICAL
Last Update: 11-Sep-2020 08:39:03 Calib Date: 25-Aug-2020 17:37:57
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\A18\20200825-102078.b\2020.08.25_A18_ICAL_A_017.d

Column 1 : Gemini C18 3um 3mm x 50 mm ( 3.00 mm) Det: EXP1
Process Host: CTX1040

First Level Reviewer: sanjumnair Date: 11-Sep-2020 08:39:03
Ratio Calibration: Average of Initial Calibration

| Signal | RT | EXP RT | DLT RT | REL RT | Response | Amount ng/ml | Ratio(Limits) | %Rec | S/N | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| D 1 13C4 PFBA | | | | | | | | | | |
| 217.00 > 172.00 | 2.546 | 2.546 | 0.0 | 0.624 | 16160588 | 2.34 | | 93.4 | 8337 | |
| 2 Perfluorobutanoic acid | | | | | | | | | | |
| 212.90 > 169.00 | 2.546 | 2.546 | 0.0 | 1.000 | 14877457 | 2.65 | | 106 | 720 | |
| D 4 13C5 PFPeA | | | | | | | | | | |
| 267.90 > 223.00 | 2.896 | 2.896 | 0.0 | 0.710 | 12184111 | 2.26 | | 90.5 | 5117 | |
| 5 Perfluoropentanoic acid | | | | | | | | | | |
| 262.90 > 219.00 | 2.896 | 2.896 | 0.0 | 1.000 | 12970555 | 2.67 | | 107 | 542 | |
| 6 Perfluorobutanesulfonic acid | | | | | | | | | | |
| 298.90 > 80.00 | 2.937 | 2.937 | 0.0 | 1.004 | 9920119 | 2.29 | Target=2.30 | 104 | 2073 | |
| 298.90 > 99.00 | 2.937 | 2.937 | 0.0 | 1.004 | 4303712 | | 2.31(1.15-3.45) | | 1278 | |
| D 9 13C3 PFBS | | | | | | | | | | |
| 301.90 > 80.00 | 2.927 | 2.927 | 0.0 | 0.717 | 9955672 | 2.36 | | 101 | 3869 | |
| D 7 M2-4:2 FTS | | | | | | | | | | |
| 329.00 > 81.00 | 3.228 | 3.228 | 0.0 | 0.791 | 2222333 | 2.18 | | 93.5 | 1067 | |
| 8 4:2 FTS | | | | | | | | | | |
| 327.00 > 307.00 | 3.228 | 3.228 | 0.0 | 1.000 | 5499276 | 2.54 | | 109 | 12924 | |
| D 11 13C2 PFHxA | | | | | | | | | | |
| 315.00 > 270.00 | 3.275 | 3.275 | 0.0 | 0.803 | 13321318 | 2.48 | | 99.2 | 6415 | |
| 10 Perfluorohexanoic acid | | | | | | | | | | |
| 313.00 > 269.00 | 3.275 | 3.275 | 0.0 | 1.000 | 13608935 | 2.65 | Target=13.78 | 106 | 802 | |
| 313.00 > 119.00 | 3.275 | 3.275 | 0.0 | 1.000 | 950343 | | 14.32(6.89-20.66) | | 455 | |
| 12 Perfluoropentanesulfonic acid | | | | | | | | | | |
| 349.00 > 80.00 | 3.285 | 3.285 | 0.0 | 1.122 | 8407188 | 2.48 | Target=3.02 | 106 | 1594 | |
| 349.00 > 99.00 | 3.285 | 3.285 | 0.0 | 1.122 | 2863921 | | 2.94(1.51-4.52) | | 1530 | |
| 13 HPFO-DA | | | | | | | | | | |
| 285.00 > 169.00 | 3.402 | 3.402 | 0.0 | 1.000 | 2828325 | 2.77 | | 111 | 5588 | |

| Signal | RT | EXP RT | DLT RT | REL RT | Response | Amount ng/ml | Ratio(Limits) | %Rec | S/N | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| D 14 13C3 HFPO-DA | | | | | | | | | | |
| 287.00 > 169.00 | 3.402 | 3.402 | 0.0 | 0.834 | 2619439 | 2.38 | | 95.3 | 4763 | |
| 16 Perfluoroheptanoic acid | | | | | | | | | | |
| 363.00 > 319.00 | 3.676 | 3.676 | 0.0 | 1.000 | 11573438 | 2.40 | Target=3.84 | 95.9 | 1051 | |
| 363.00 > 169.00 | 3.676 | 3.676 | 0.0 | 1.000 | 3438330 | | 3.37(1.92-5.76) | | 1715 | |
| 15 Perfluorohexanesulfonic acid | | | | | | | | | | |
| 399.00 > 80.00 | 3.686 | 3.686 | 0.0 | 1.000 | 5804279 | 2.12 | Target=3.50 | 93.0 | 1715 | |
| 399.00 > 99.00 | 3.686 | 3.686 | 0.0 | 1.000 | 1698838 | | 3.42(1.75-5.25) | | 779 | |
| D 17 18O2 PFHxS | | | | | | | | | | |
| 403.00 > 84.00 | 3.686 | 3.686 | 0.0 | 0.904 | 5491721 | 2.46 | | 104 | 7271 | |
| D 18 13C4 PFHpA | | | | | | | | | | |
| 367.00 > 322.00 | 3.676 | 3.676 | 0.0 | 0.901 | 11906667 | 2.60 | | 104 | 7070 | |
| 19 DONA | | | | | | | | | | |
| 377.00 > 251.00 | 3.725 | 3.725 | 0.0 | 0.838 | 37195179 | 2.60 | Target=2.42 | 110 | 9175 | |
| 377.00 > 85.00 | 3.725 | 3.725 | 0.0 | 0.838 | 15279007 | | 2.43(1.21-3.63) | | 8513 | |
| 21 6:2 FTS | | | | | | | | | | |
| 427.00 > 407.00 | 4.055 | 4.055 | 0.0 | 1.000 | 4283373 | 2.36 | | 99.6 | 3881 | |
| D 20 M2-6:2 FTS | | | | | | | | | | |
| 429.00 > 81.00 | 4.055 | 4.055 | 0.0 | 0.994 | 1873847 | 2.19 | | 92.3 | 1221 | |
| 24 Perfluoroheptanesulfonic acid | | | | | | | | | | |
| 449.00 > 80.00 | 4.071 | 4.071 | 0.0 | 0.916 | 4285876 | 2.56 | Target=4.40 | 108 | 1405 | |
| 449.00 > 99.00 | 4.071 | 4.071 | 0.0 | 0.916 | 997435 | | 4.30(2.20-6.60) | | 1080 | |
| * 23 13C2 PFOA | | | | | | | | | | |
| 415.00 > 370.00 | 4.079 | 4.079 | 0.0 | | 10911451 | 2.50 | | | 5661 | |
| $ 26 13C8 PFOA | | | | | | | | | | |
| 421.00 > 376.00 | 4.071 | 4.071 | 0.0 | 0.998 | 8070240 | 2.74 | | 112 | 6797 | |
| 22 Perfluorooctanoic acid | | | | | | | | | | |
| 413.00 > 369.00 | 4.079 | 4.079 | 0.0 | 1.000 | 11916137 | 2.78 | Target=2.94 | 111 | 1324 | |
| 413.00 > 169.00 | 4.071 | 4.079 | -0.008 | 0.998 | 4194179 | | 2.84(1.47-4.41) | | 2179 | |
| D 25 13C4 PFOA | | | | | | | | | | |
| 417.00 > 372.00 | 4.079 | 4.079 | 0.0 | 1.000 | 10506416 | 2.40 | | 96.2 | 5445 | |
| D 27 13C4 PFOS | | | | | | | | | | |
| 503.00 > 80.00 | 4.443 | 4.443 | 0.0 | 1.089 | 3574792 | 2.36 | | 98.9 | 1446 | |
| $ 28 13C8 PFOS | | | | | | | | | | |
| 507.00 > 99.00 | 4.435 | 4.435 | 0.0 | 1.087 | 1128310 | 2.39 | | 100.0 | 2745 | |
| 29 Perfluorooctanesulfonic acid | | | | | | | | | | M |
| 499.00 > 80.00 | 4.443 | 4.443 | 0.0 | 1.000 | 3841863 | 2.48 | Target=4.53 | 107 | 1126 | M |
| 499.00 > 99.00 | 4.443 | 4.443 | 0.0 | 1.000 | 800731 | | 4.80(2.26-6.79) | | 954 | M |
| D 30 13C5 PFNA | | | | | | | | | | |
| 468.00 > 423.00 | 4.459 | 4.459 | 0.0 | 1.093 | 9330962 | 2.65 | | 106 | 6908 | |
| 31 Perfluorononanoic acid | | | | | | | | | | |
| 463.00 > 419.00 | 4.459 | 4.459 | 0.0 | 1.000 | 10134741 | 2.83 | Target=8.97 | 113 | 1813 | |
| 463.00 > 169.00 | 4.459 | 4.459 | 0.0 | 1.000 | 1191243 | | 8.51(4.48-13.45) | | 1823 | |
| 32 9ClFOS | | | | | | | | | | |
| 531.00 > 351.00 | 4.651 | 4.651 | 0.0 | 1.047 | 11795424 | 2.44 | | 105 | 10967 | |
| D 33 13C8 FOSA | | | | | | | | | | |
| 506.00 > 78.00 | 4.783 | 4.783 | 0.0 | 1.172 | 6040572 | 2.48 | | 99.0 | 5515 | |

| Signal | RT | EXP RT | DLT RT | REL RT | Response | Amount ng/ml | Ratio(Limits) | %Rec | S/N | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| 34 Perfluorooctanesulfonamide | | | | | | | | | | |
| 498.00 > 78.00 | 4.783 | 4.783 | 0.0 | 1.000 | 5772499 | 2.57 | | 103 | 3579 | |
| 35 Perfluorononanesulfonic acid | | | | | | | | | | |
| 549.00 > 80.00 | 4.791 | 4.791 | 0.0 | 1.078 | 3595203 | 2.57 | Target=2.85 | 107 | 2068 | |
| 549.00 > 99.00 | 4.791 | 4.791 | 0.0 | 1.078 | 1301895 | | 2.76(1.43-4.28) | | 1698 | |
| D 39 13C2 PFDA | | | | | | | | | | |
| 515.00 > 470.00 | 4.817 | 4.817 | 0.0 | 1.181 | 8682004 | 2.54 | | 102 | 8505 | |
| 37 Perfluorodecanoic acid | | | | | | | | | | |
| 513.00 > 469.00 | 4.817 | 4.817 | 0.0 | 1.000 | 8910715 | 2.66 | Target=10.16 | 106 | 2198 | |
| 513.00 > 169.00 | 4.817 | 4.817 | 0.0 | 1.000 | 848274 | | 10.50(5.08-15.24) | | 247 | |
| 36 8:2 FTS | | | | | | | | | | |
| 527.00 > 507.00 | 4.825 | 4.825 | 0.0 | 1.000 | 4816130 | 2.60 | | 108 | 5044 | |
| D 38 M2-8:2 FTS | | | | | | | | | | |
| 529.00 > 81.00 | 4.825 | 4.825 | 0.0 | 1.183 | 2503878 | 2.03 | | 84.8 | 1691 | |
| D 40 d3-NMeFOSAA | | | | | | | | | | |
| 573.00 > 419.00 | 4.986 | 4.986 | 0.0 | 1.222 | 5720092 | 2.49 | | 99.8 | 3165 | |
| 41 NMeFOSAA | | | | | | | | | | |
| 570.00 > 419.00 | 4.986 | 4.986 | 0.0 | 1.000 | 4271745 | 2.52 | | 101 | 27275 | |
| 42 Perfluorodecanesulfonic acid | | | | | | | | | | |
| 599.00 > 80.00 | 5.109 | 5.109 | 0.0 | 1.150 | 3466922 | 2.78 | Target=2.77 | 115 | 2264 | |
| 599.00 > 99.00 | 5.109 | 5.109 | 0.0 | 1.150 | 1172471 | | 2.96(1.38-4.15) | | 2350 | |
| D 43 13C2 PFUnA | | | | | | | | | | |
| 565.00 > 520.00 | 5.146 | 5.146 | 0.0 | 1.261 | 9794930 | 2.89 | | 116 | 8657 | |
| D 44 d5-NEtFOSAA | | | | | | | | | | |
| 589.00 > 419.00 | 5.146 | 5.146 | 0.0 | 1.261 | 5881306 | 2.43 | | 97.0 | 2766 | |
| 45 Perfluoroundecanoic acid | | | | | | | | | | |
| 563.00 > 519.00 | 5.137 | 5.137 | 0.0 | 0.998 | 6672141 | 2.35 | Target=8.43 | 93.8 | 2457 | |
| 563.00 > 169.00 | 5.137 | 5.137 | 0.0 | 0.998 | 921324 | | 7.24(4.22-12.65) | | 1119 | |
| 46 NEtFOSA | | | | | | | | | | |
| 584.00 > 419.00 | 5.155 | 5.155 | 0.0 | 1.002 | 4287528 | 2.70 | | 108 | 1468 | |
| D 47 d7-N-MeFOSE-M | | | | | | | | | | |
| 623.00 > 59.00 | 5.246 | 5.246 | 0.0 | 1.286 | 9014449 | 14.9 | | 119 | 3693 | |
| 48 N-MeFOSE-M | | | | | | | | | | |
| 616.00 > 59.00 | 5.256 | 5.256 | 0.0 | 1.002 | 1915122 | 2.46 | | 98.4 | 2074 | |
| D 49 d-N-MeFOSA-M | | | | | | | | | | |
| 515.00 > 169.00 | 5.266 | 5.266 | 0.0 | 1.291 | 2094514 | 2.44 | | 97.7 | 49.3 | |
| 50 NMeFOSA | | | | | | | | | | |
| 512.00 > 169.00 | 5.277 | 5.277 | 0.0 | 1.002 | 2344445 | 2.91 | | 117 | 646 | |
| 51 11ClFOS | | | | | | | | | | |
| 631.00 > 451.00 | 5.287 | 5.287 | 0.0 | 1.190 | 15874970 | 2.59 | | 110 | 12205 | |
| D 52 d9-N-EtFOSE-M | | | | | | | | | | |
| 639.00 > 59.00 | 5.424 | 5.424 | 0.0 | 1.330 | 10891178 | 14.7 | | 117 | 3561 | |
| 53 N-EtFOSE-M | | | | | | | | | | |
| 630.00 > 59.00 | 5.435 | 5.435 | 0.0 | 1.002 | 2546344 | 2.72 | | 109 | 2244 | |
| D 56 13C2 PFDoA | | | | | | | | | | |
| 615.00 > 570.00 | 5.435 | 5.435 | 0.0 | 1.332 | 9829758 | 2.94 | | 118 | 7876 | |

| Signal | RT | EXP RT | DLT RT | REL RT | Response | Amount ng/ml | Ratio(Limits) | %Rec | S/N | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| 57 Perfluorododecanoic acid | | | | | | | | | | |
| 613.00 > 569.00 | 5.435 | 5.435 | 0.0 | 1.000 | 9667707 | 2.40 | Target=9.12 | 95.6 | 3026 | |
| 613.00 > 169.00 | 5.435 | 5.435 | 0.0 | 1.000 | 1147860 | | 8.42(4.56-13.69) | | 1782 | |
| D 54 d-N-EtFOSA-M | | | | | | | | | | |
| 531.00 > 169.00 | 5.446 | 5.446 | 0.0 | 1.335 | 2019131 | 2.30 | | 92.0 | 217 | |
| 55 N-EtFOSA-M | | | | | | | | | | |
| 526.00 > 169.00 | 5.457 | 5.457 | 0.0 | 1.002 | 2459167 | 2.88 | | 115 | 446 | |
| 58 10:2 FTS | | | | | | | | | | |
| 627.00 > 607.00 | 5.457 | 5.457 | 0.0 | 1.131 | 5723925 | 2.72 | | 113 | 5209 | |
| 59 PFDoS | | | | | | | | | | |
| 699.00 > 80.00 | 5.665 | 5.665 | 0.0 | 1.275 | 1223662 | 2.46 | Target=0.72 | 102 | 1239 | |
| 699.00 > 99.00 | 5.665 | 5.665 | 0.0 | 1.275 | 1776699 | | 0.69(0.36-1.07) | | 2816 | |
| 60 Perfluorotridecanoic acid | | | | | | | | | | |
| 663.00 > 619.00 | 5.701 | 5.701 | 0.0 | 1.049 | 9206843 | 2.49 | Target=6.78 | 99.5 | 3652 | |
| 663.00 > 169.00 | 5.701 | 5.701 | 0.0 | 1.049 | 1288089 | | 7.15(3.39-10.17) | | 1918 | |
| D 61 13C2 PFTeDA | | | | | | | | | | |
| 715.00 > 670.00 | 5.947 | 5.947 | 0.0 | 1.458 | 8456331 | 3.07 | | 123 | 8167 | |
| 62 Perfluorotetradecanoic acid | | | | | | | | | | |
| 713.00 > 169.00 | 5.936 | 5.936 | 0.0 | 0.998 | 726488 | 2.55 | Target=0.85 | 102 | 2214 | |
| 713.00 > 219.00 | 5.936 | 5.936 | 0.0 | 0.998 | 771213 | | 0.94(0.43-1.28) | | 2786 | |
| D 64 13C2 PFHxDA | | | | | | | | | | |
| 815.00 > 770.00 | 6.376 | 6.376 | 0.0 | 1.563 | 5316507 | 2.64 | | 106 | 5767 | |
| 63 Perfluorohexadecanoic acid | | | | | | | | | | |
| 813.00 > 769.00 | 6.385 | 6.385 | 0.0 | 1.001 | 5511668 | 2.93 | Target=10.21 | 117 | 2797 | |
| 813.00 > 169.00 | 6.385 | 6.385 | 0.0 | 1.001 | 551679 | | 9.99(5.11-15.32) | | 2354 | |
| 65 Perfluorooctadecanoic acid | | | | | | | | | | |
| 913.00 > 869.00 | 6.823 | 6.823 | 0.0 | 1.070 | 4570466 | 3.25 | Target=12.45 | 130 | 2683 | |
| 913.00 > 169.00 | 6.823 | 6.823 | 0.0 | 1.070 | 375473 | | 12.17(6.22-18.67) | | 2222 | |

## QC Flag Legend

Review Flags

M - Manually Integrated

## Reagents:

LCPFC_LL5_00031 Amount Added: 1.00 Units: mL

Report Date: 11-Sep-2020 08:39:04 Chrom Revision: 2.3 09-Sep-2020 15:12:58

Eurofins TestAmerica, Sacramento

Data File: \\chromfs\Sacramento\ChromData\A18\20200910-103041.b\2020.09.10_A18_PFC_A_085.d

Injection Date: 10-Sep-2020 16:51:37 Instrument ID: A18

Lims ID: CCV L5

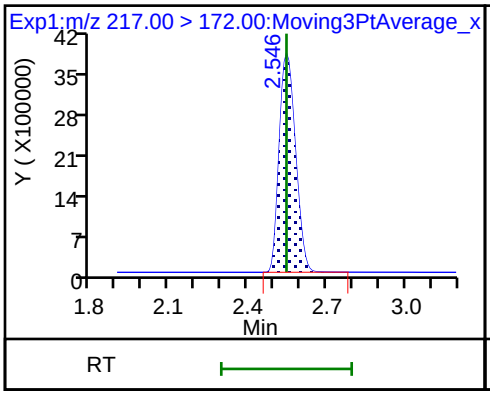
Client ID:

Operator ID: TAISACA18-PC\A-18 ALS Bottle#: 53 Worklist Smp#: 13

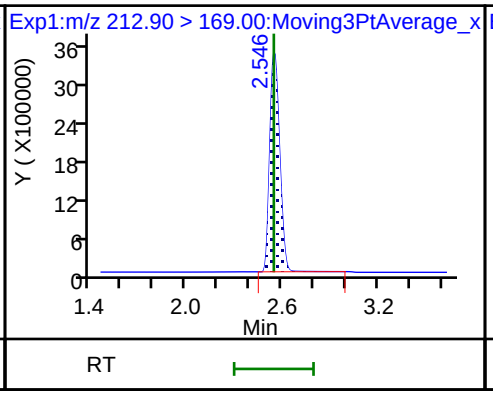
Injection Vol: 20.0 ul Dil. Factor: 1.0000

Method: PFAS_A18V2 Limit Group: LC PFC ICAL

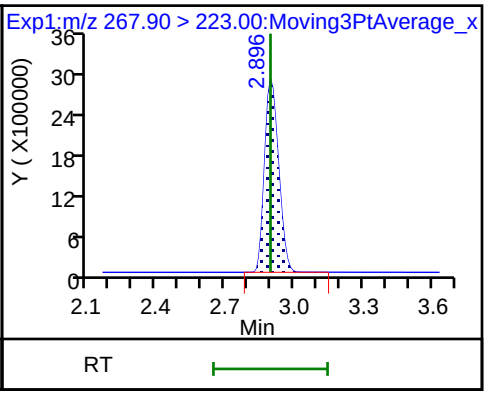
D 1 13C4 PFBA



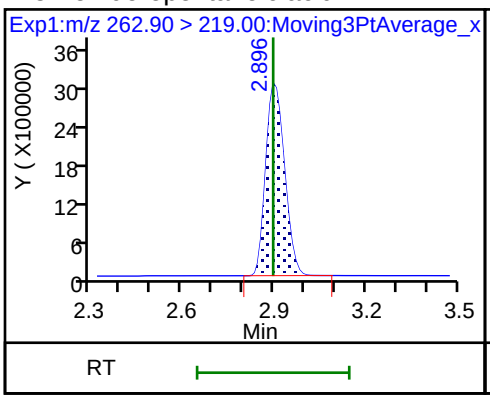

2 Perfluorobutanoic acid



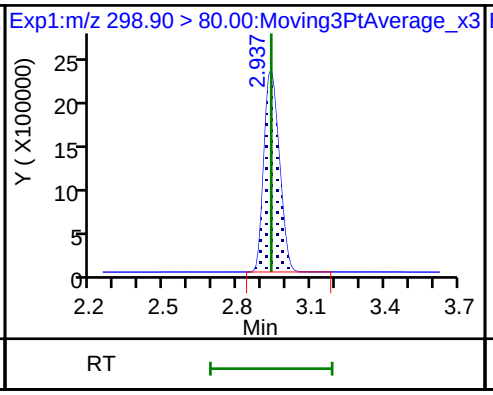

D 4 13C5 PFPeA



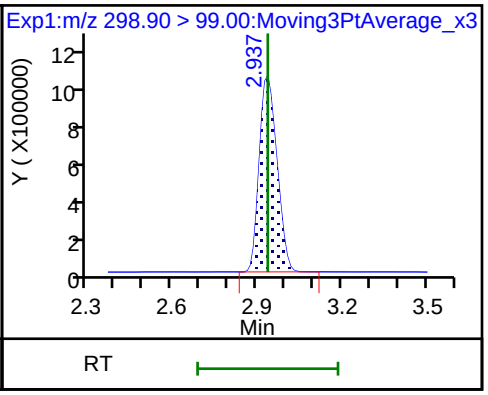

5 Perfluoropentanoic acid



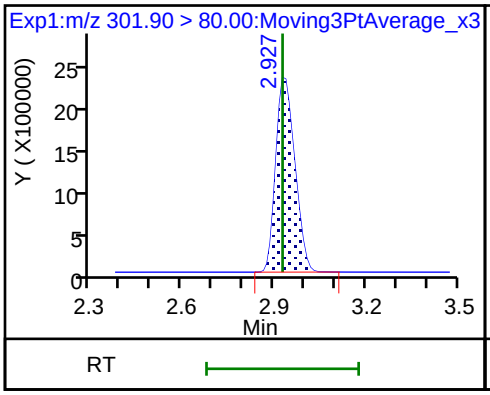

6 Perfluorobutanesulfonic acid



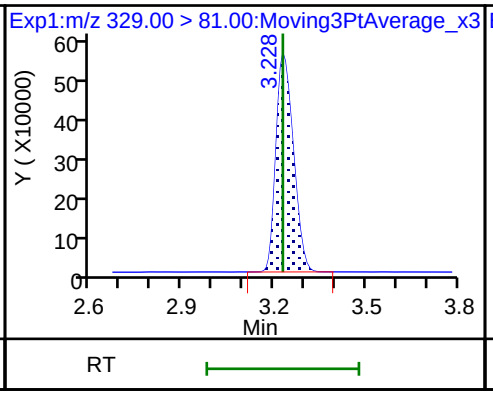

6 Perfluorobutanesulfonic acid



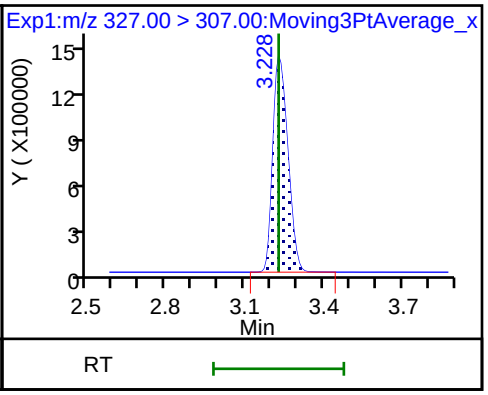

D 9 13C3 PFBS



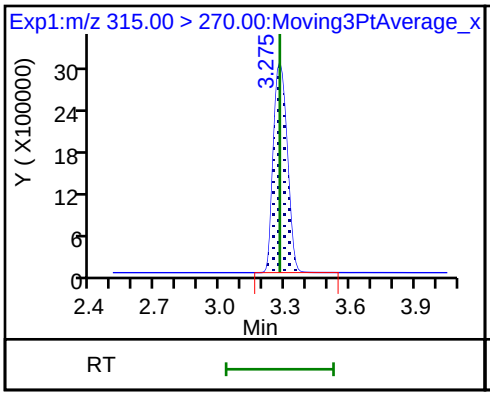

D 7 M2-4:2 FTS



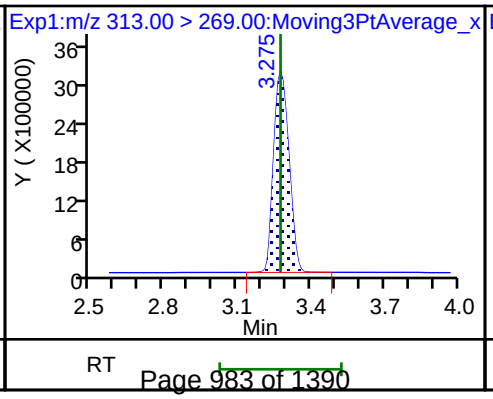

8 4:2 FTS



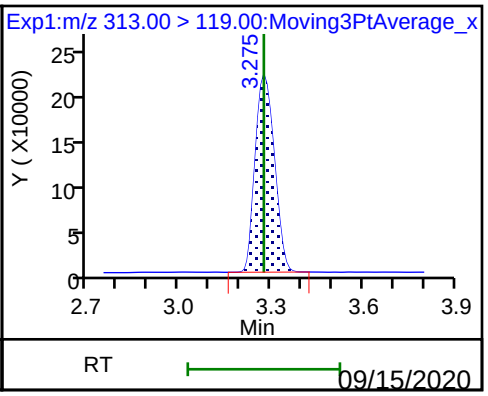

D 11 13C2 PFHxA



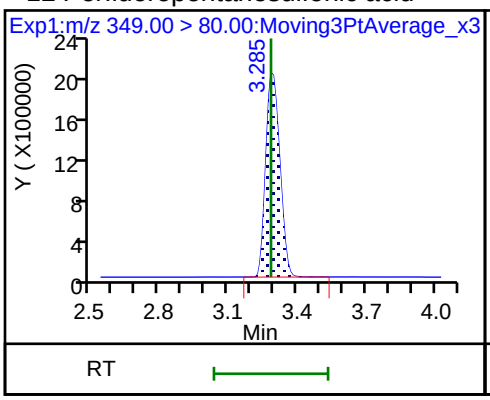

10 Perfluorohexanoic acid



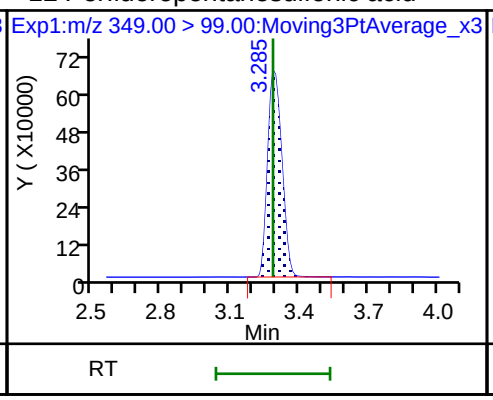

10 Perfluorohexanoic acid



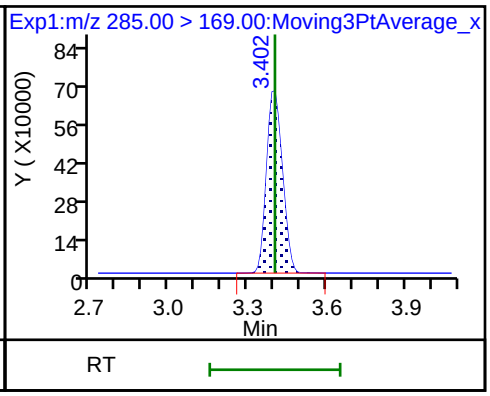
12 Perfluoropentanesulfonic acid



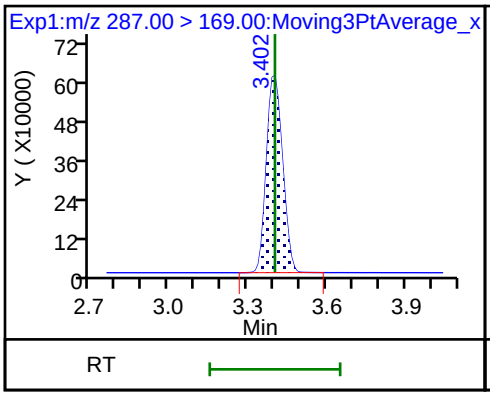

12 Perfluoropentanesulfonic acid



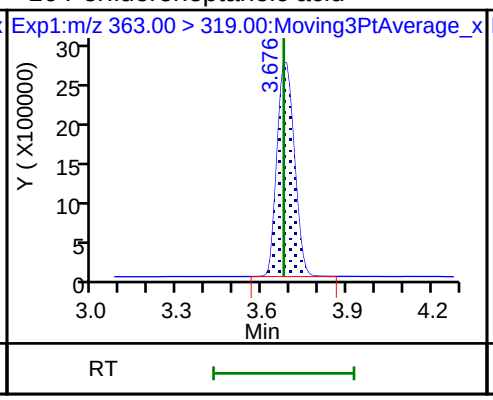

13 HPFO-DA



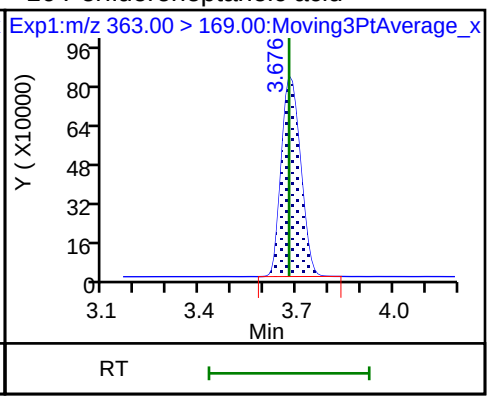

D 14 13C3 HFPO-DA



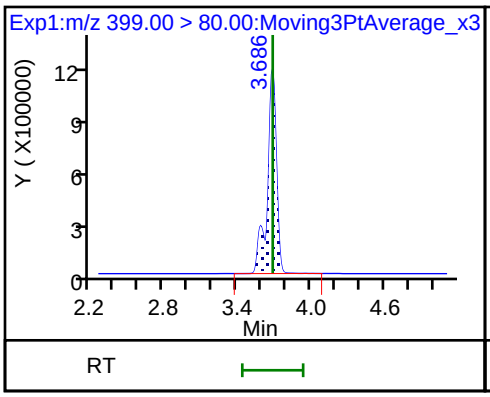

16 Perfluoroheptanoic acid




16 Perfluoroheptanoic acid




15 Perfluorohexanesulfonic acid

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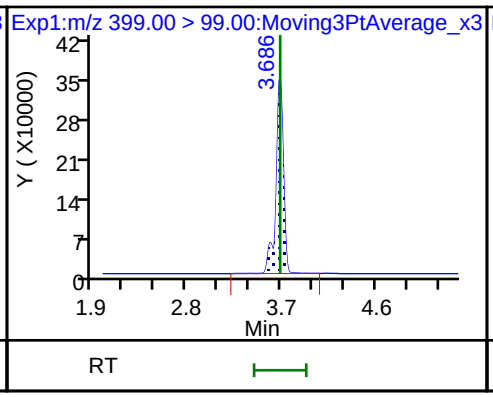
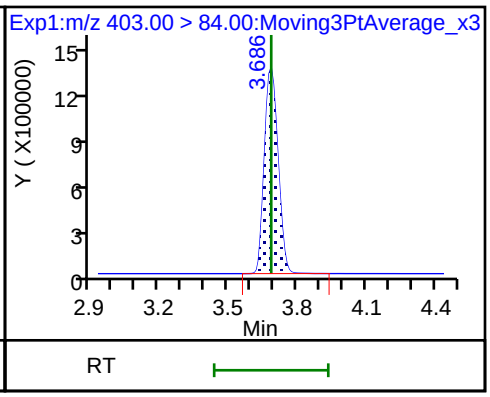
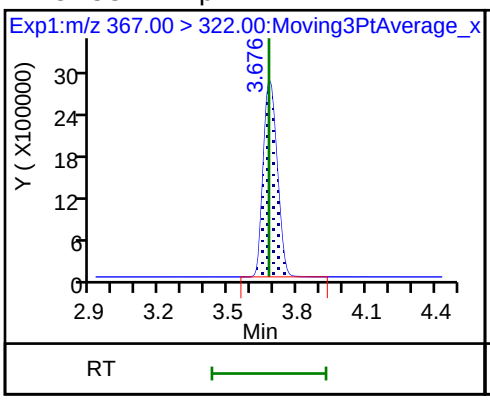


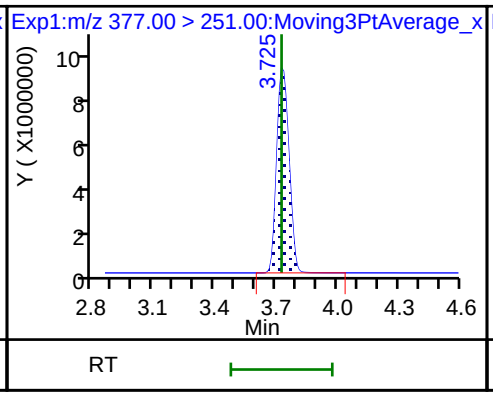

D 17 18O2 PFHxS



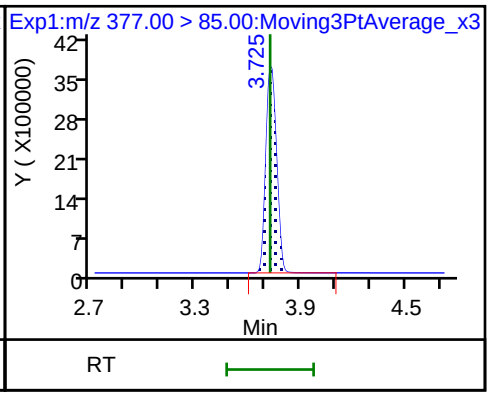

D 18 13C4 PFHpA



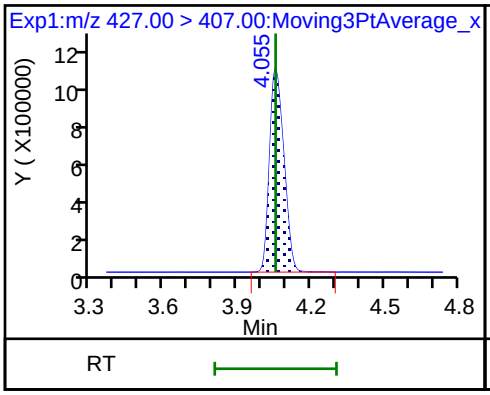

19 DONA



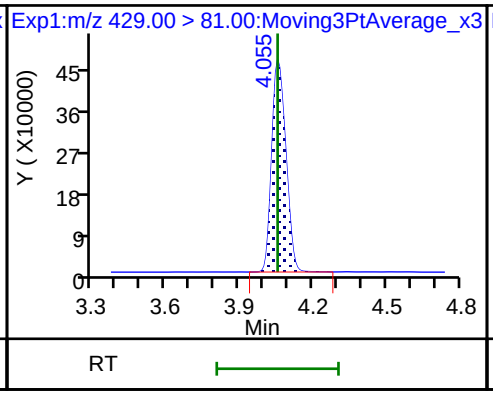

19 DONA



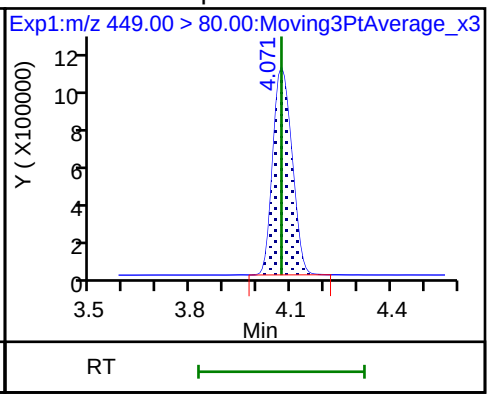
21 6:2 FTS



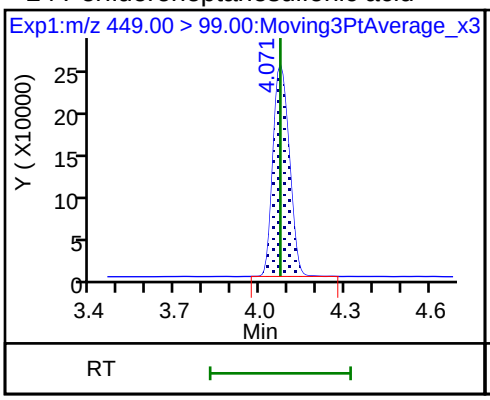

D 20 M2-6:2 FTS



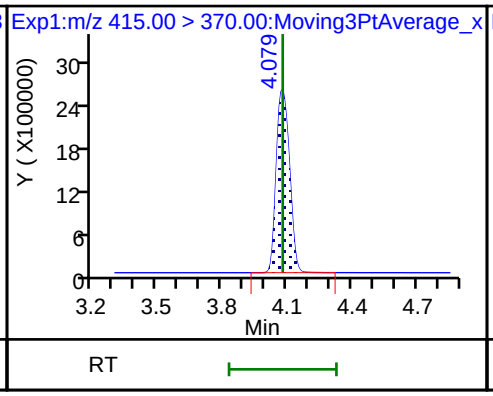

24 Perfluoroheptanesulfonic acid



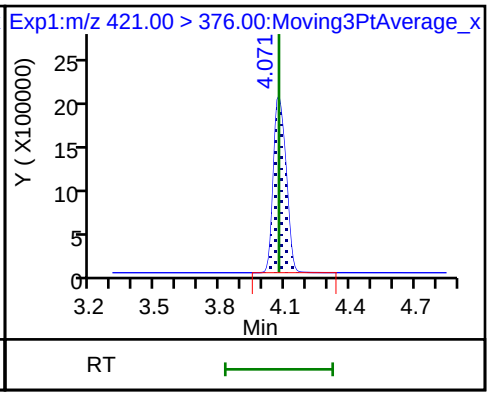

24 Perfluoroheptanesulfonic acid



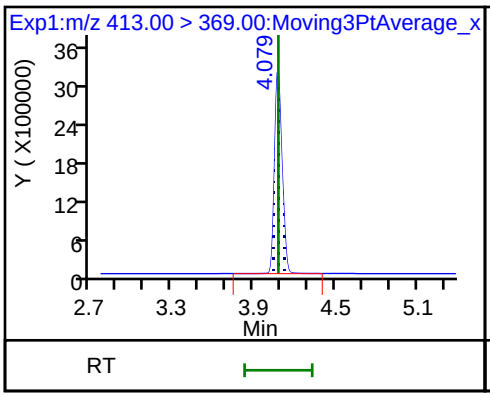

* 23 13C2 PFOA



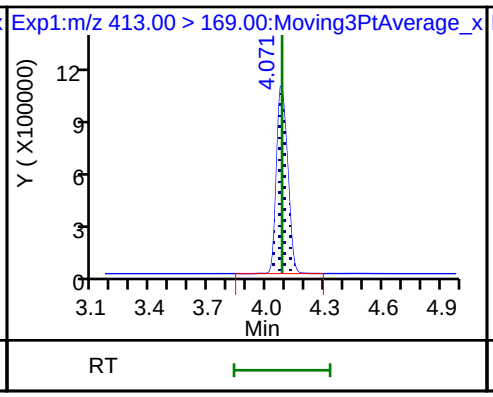

$ 26 13C8 PFOA



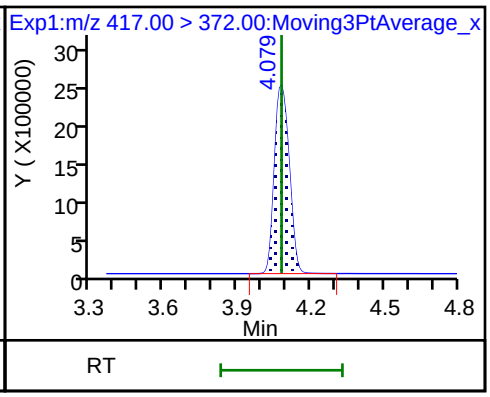

22 Perfluorooctanoic acid



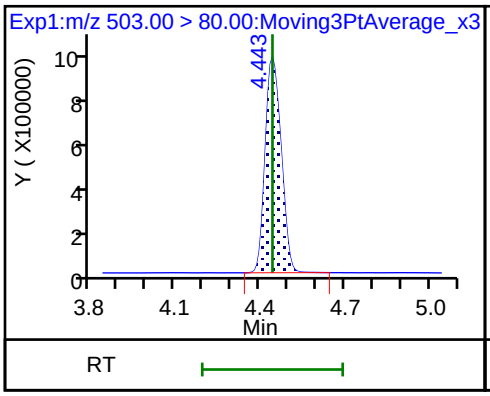

22 Perfluorooctanoic acid




D 25 13C4 PFOA




D 27 13C4 PFOS

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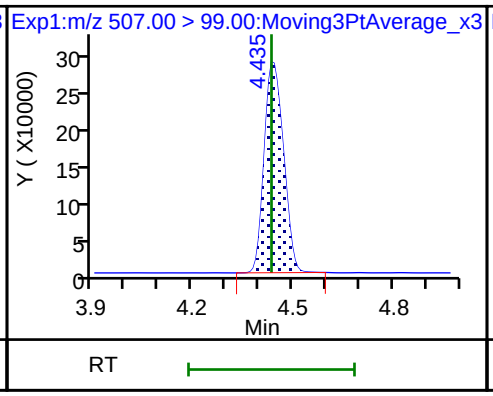
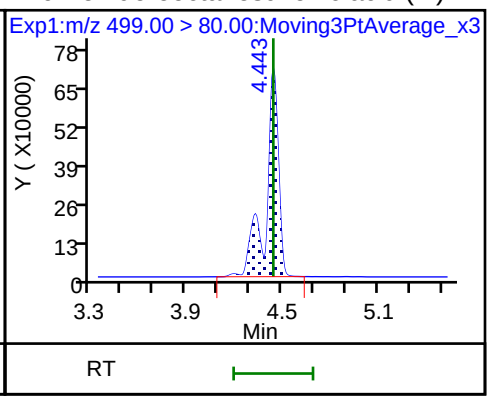
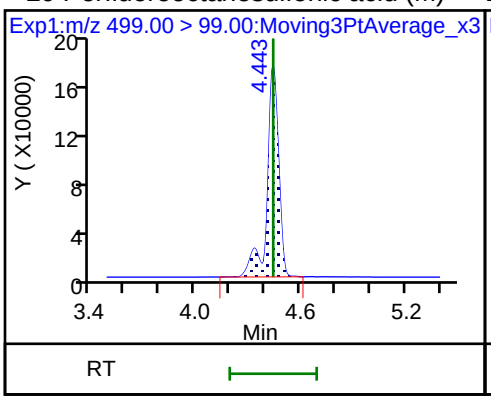


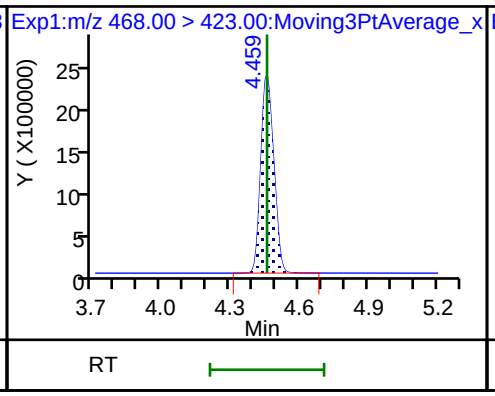

29 Perfluorooctanesulfonic acid (M)



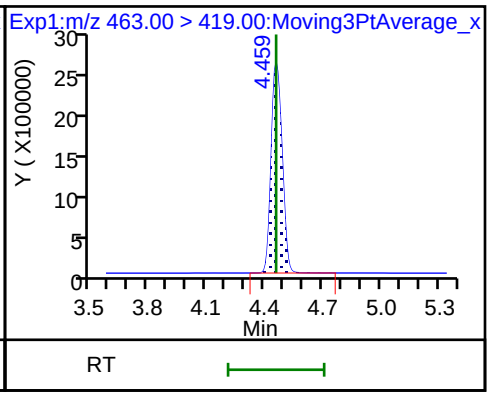
29 Perfluorooctanesulfonic acid (M)



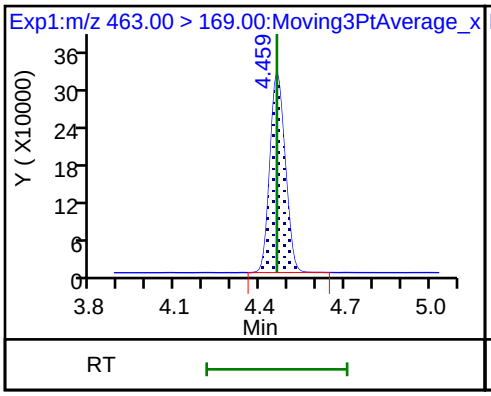

D 30 13C5 PFNA



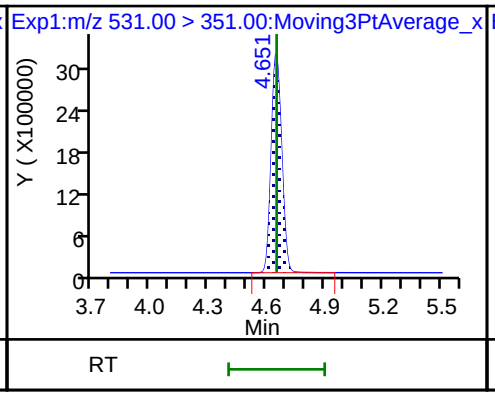

31 Perfluorononanoic acid



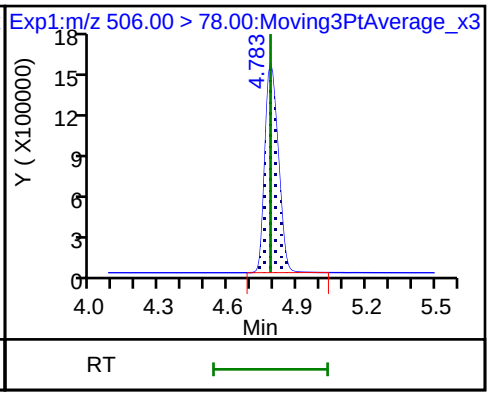

31 Perfluorononanoic acid



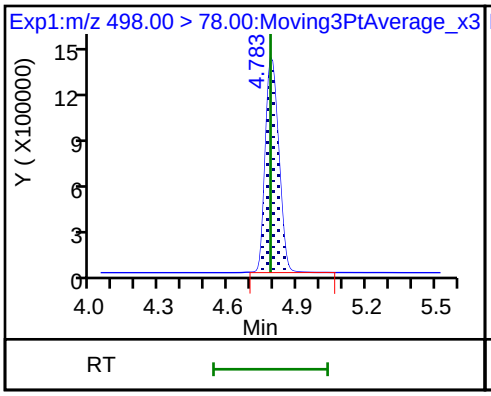

32 9ClFOS



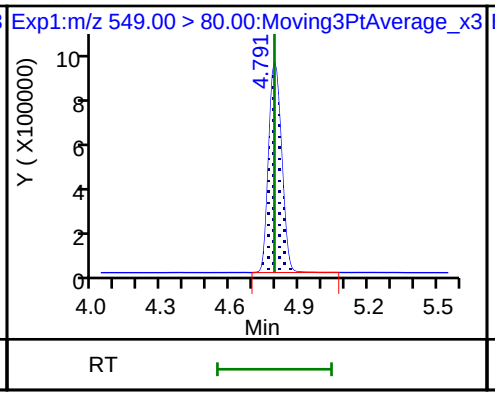

D 33 13C8 FOSA



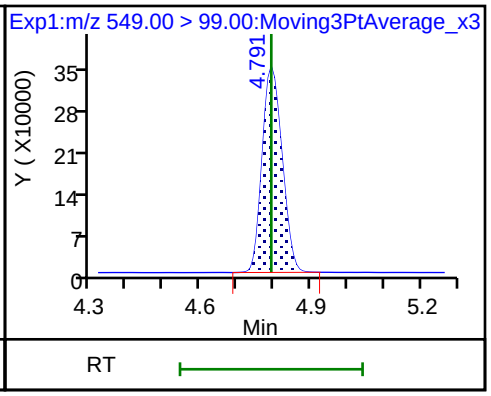

34 Perfluorooctanesulfonamide



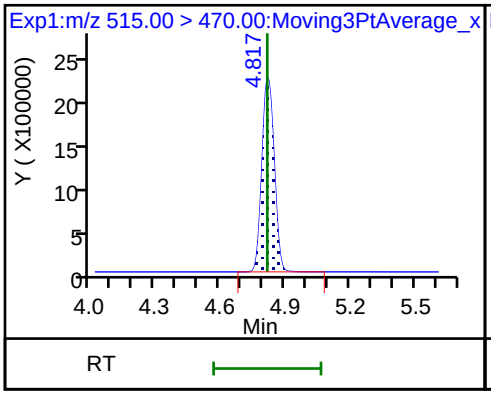

35 Perfluorononanesulfonic acid



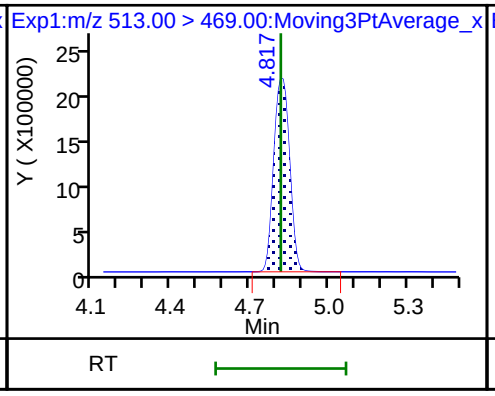

35 Perfluorononanesulfonic acid



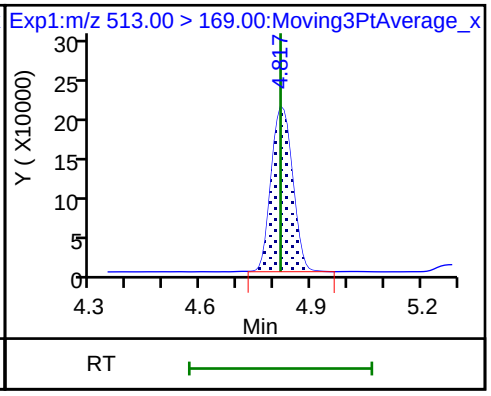

D 39 13C2 PFDA



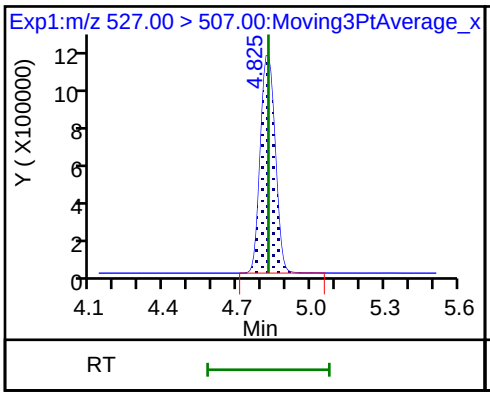

37 Perfluorodecanoic acid



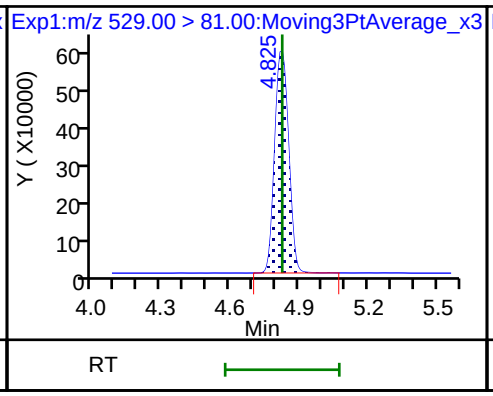

37 Perfluorodecanoic acid



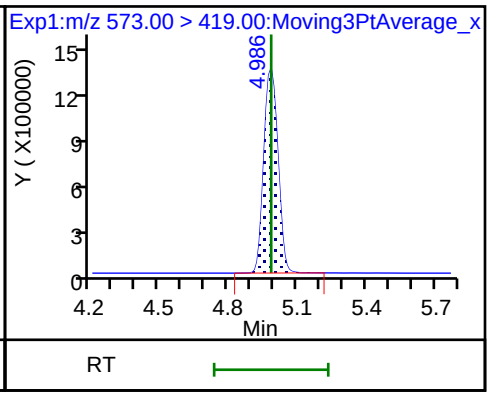
36 8:2 FTS



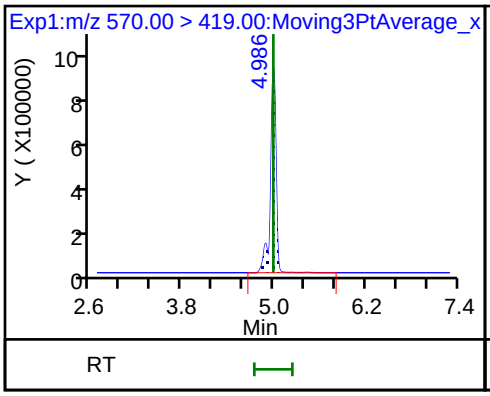

D 38 M2-8:2 FTS



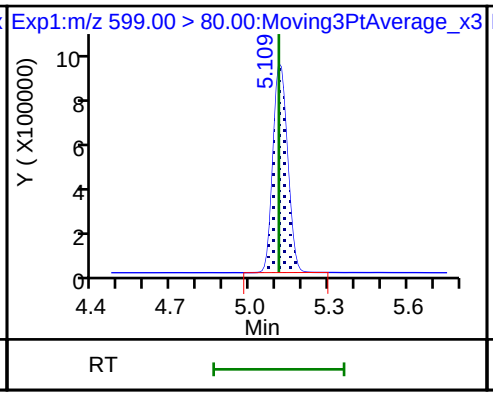

D 40 d3-NMeFOSAA



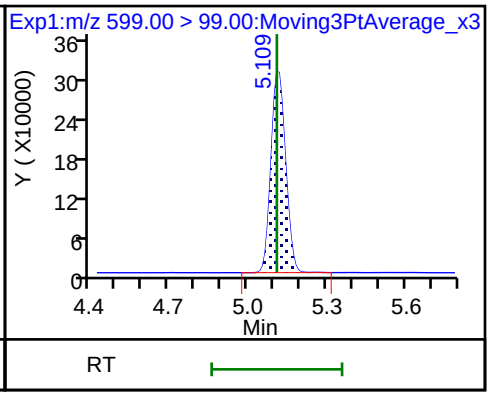

41 NMeFOSAA



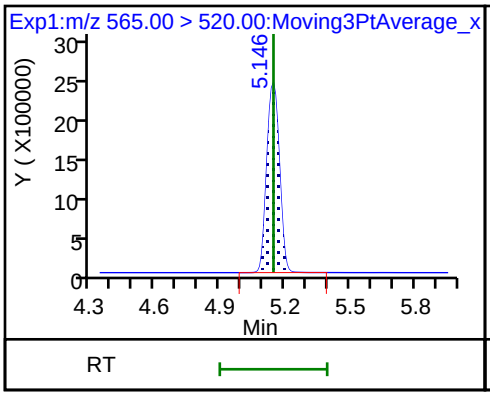

42 Perfluorodecanesulfonic acid



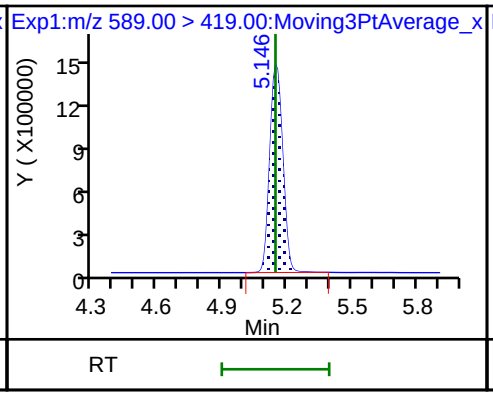

42 Perfluorodecanesulfonic acid



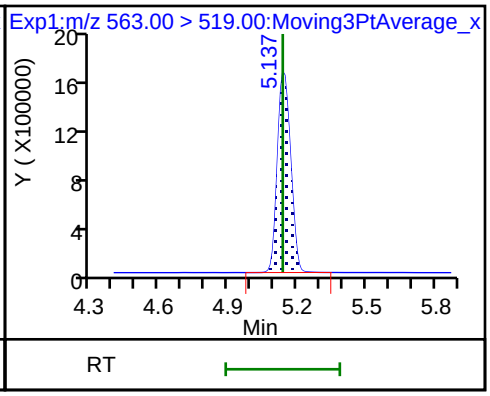

D 43 13C2 PFUnA



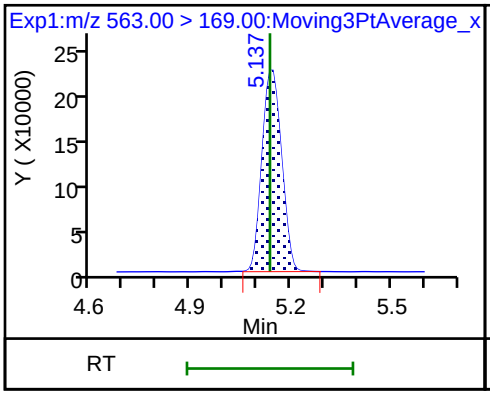

D 44 d5-NEtFOSAA



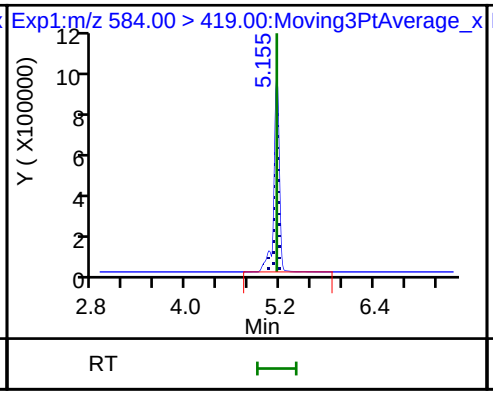

45 Perfluoroundecanoic acid



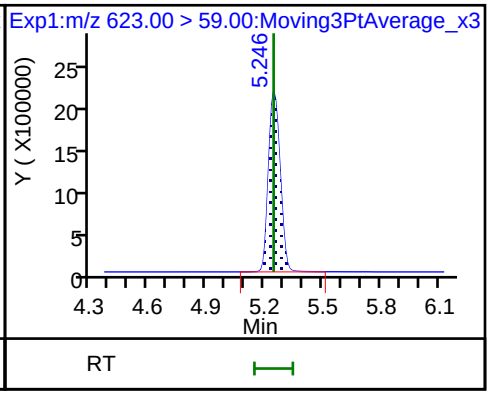

45 Perfluoroundecanoic acid



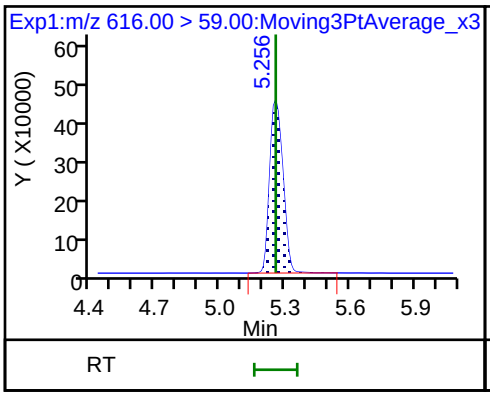

46 NEtFOSA



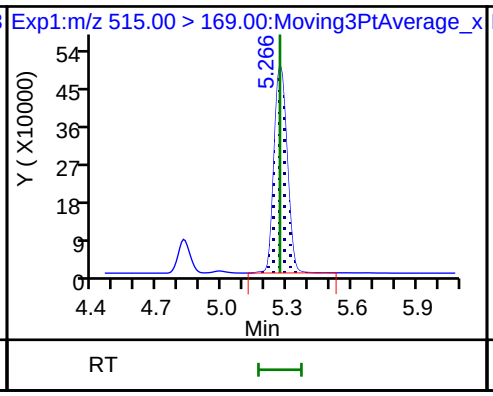

D 47 d7-N-MeFOSE-M



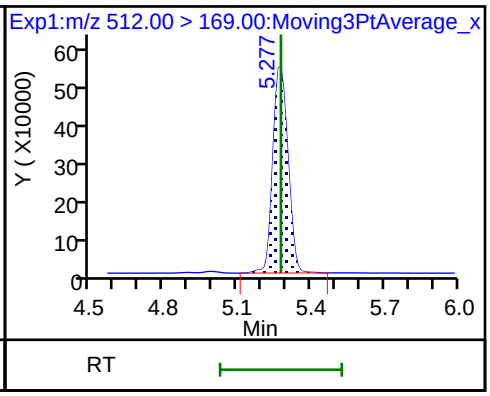
48 N-MeFOSE-M



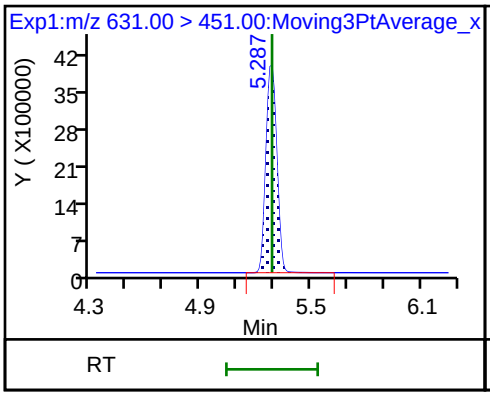

D 49 d-N-MeFOSA-M



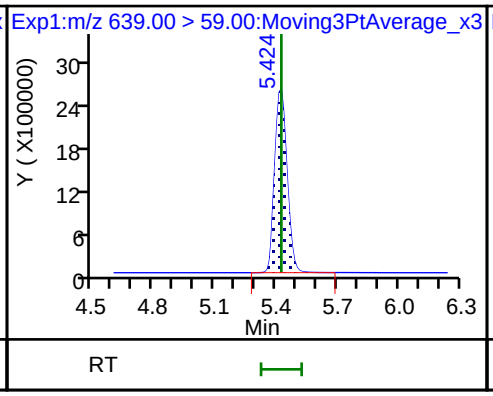

50 NMeFOSA



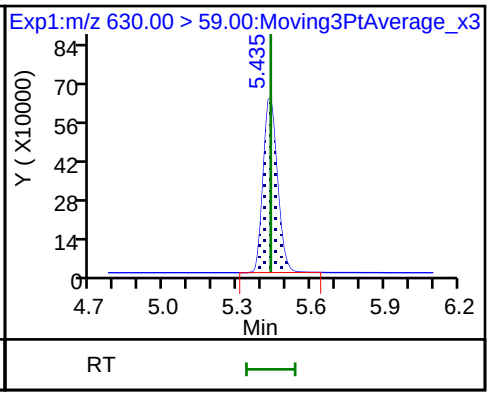

51 11ClFOS



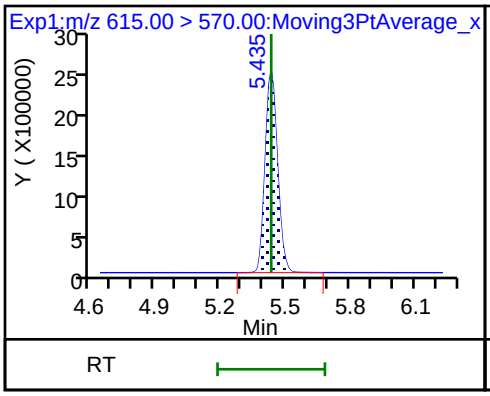

D 52 d9-N-EtFOSE-M



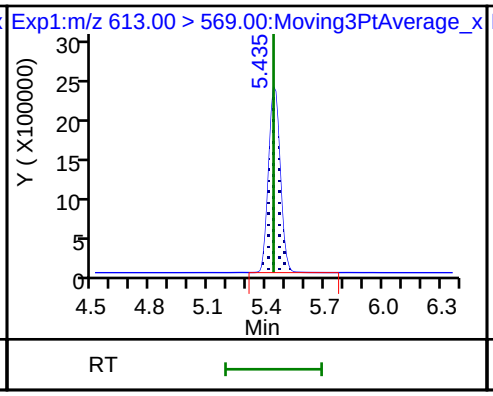

53 N-EtFOSE-M



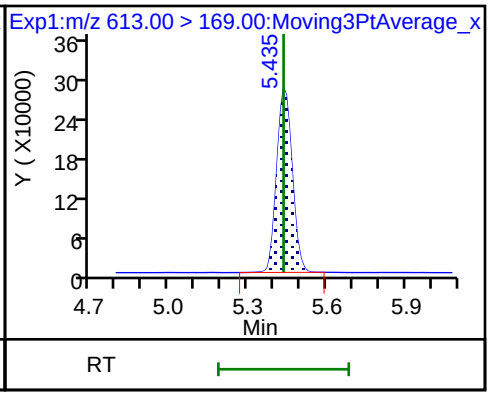

D 56 13C2 PFDoA



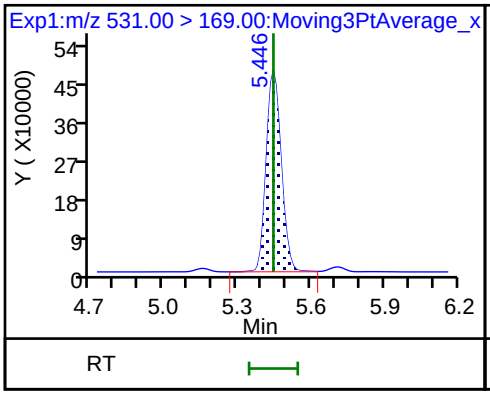

57 Perfluorododecanoic acid



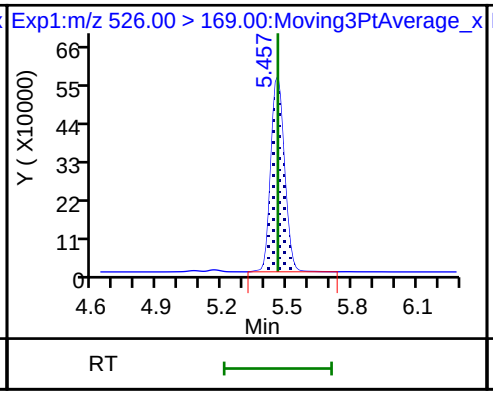

57 Perfluorododecanoic acid



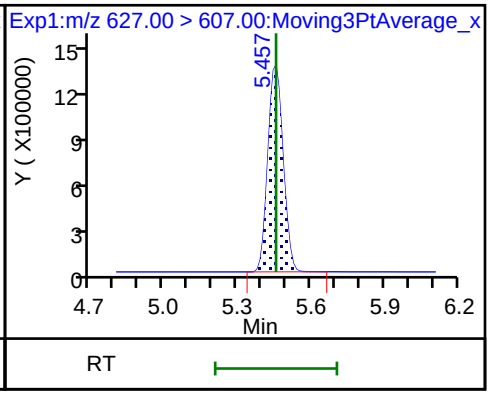

D 54 d-N-EtFOSA-M



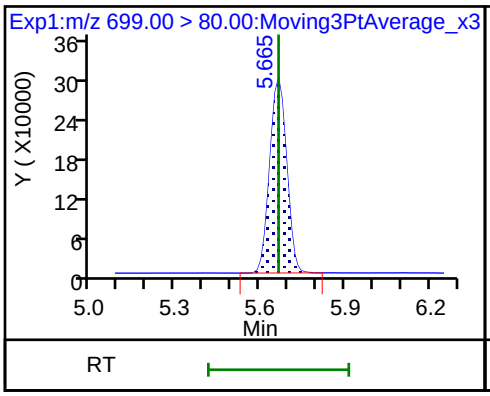

55 N-EtFOSA-M



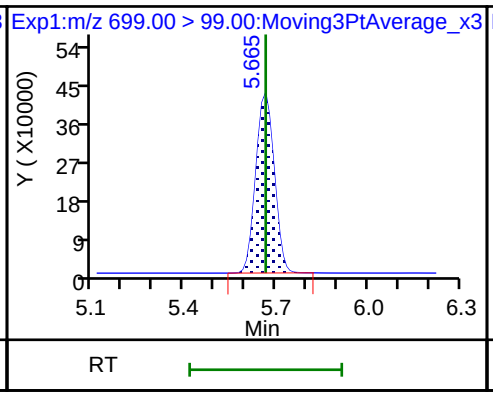

58 10:2 FTS



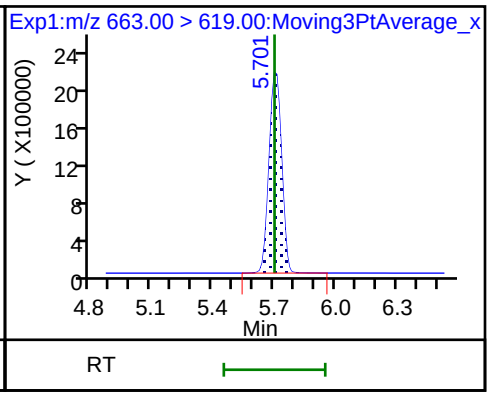
59 PFDoS



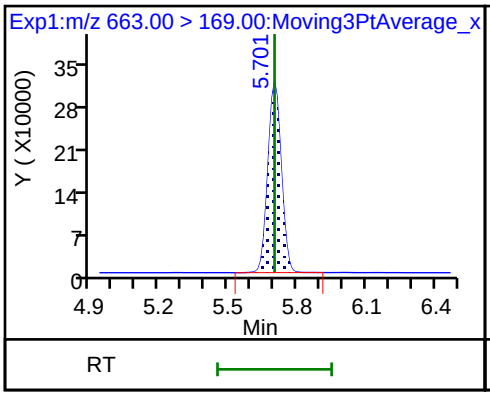

59 PFDoS



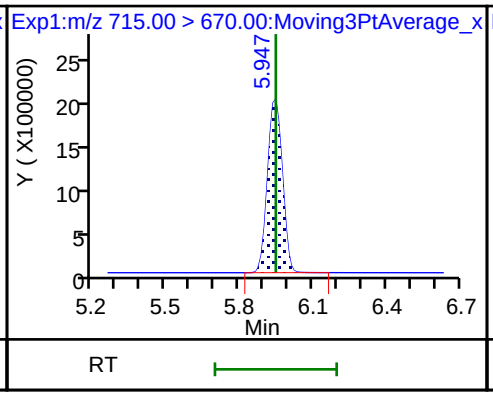

60 Perfluorotridecanoic acid



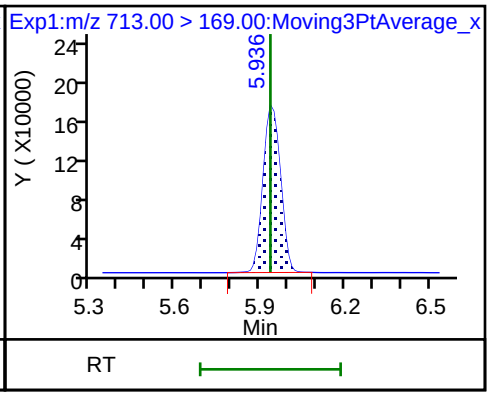

60 Perfluorotridecanoic acid



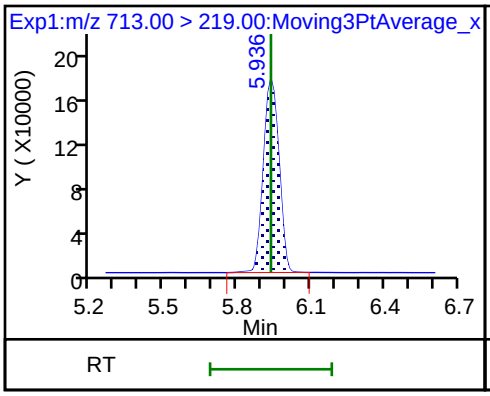

D 61 13C2 PFTeDA



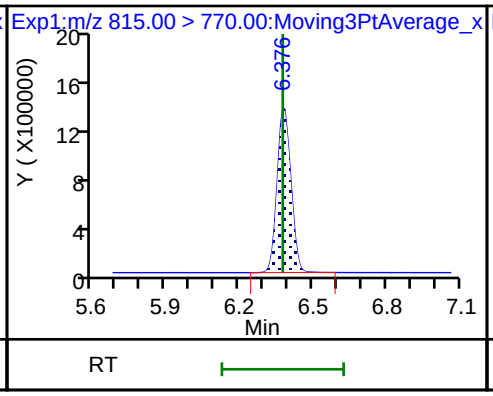

62 Perfluorotetradecanoic acid



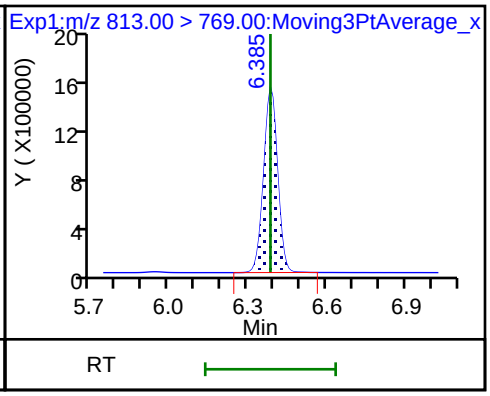

62 Perfluorotetradecanoic acid



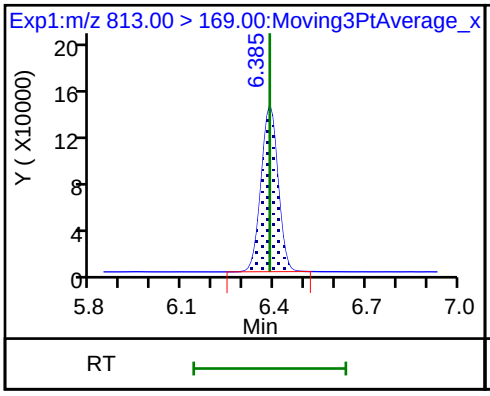

D 64 13C2 PFHxDA



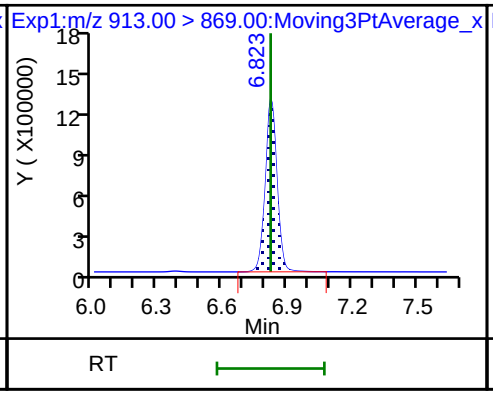

63 Perfluorohexadecanoic acid



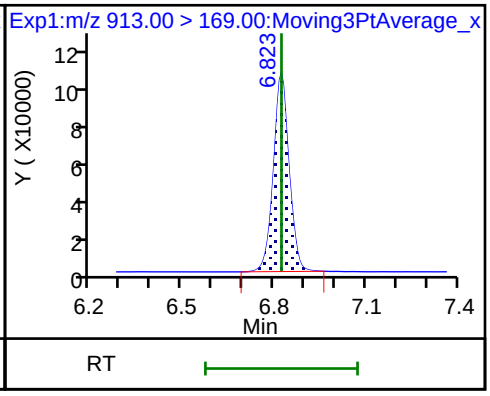

63 Perfluorohexadecanoic acid




65 Perfluorooctadecanoic acid




65 Perfluorooctadecanoic acid



Eurofins TestAmerica, Sacramento

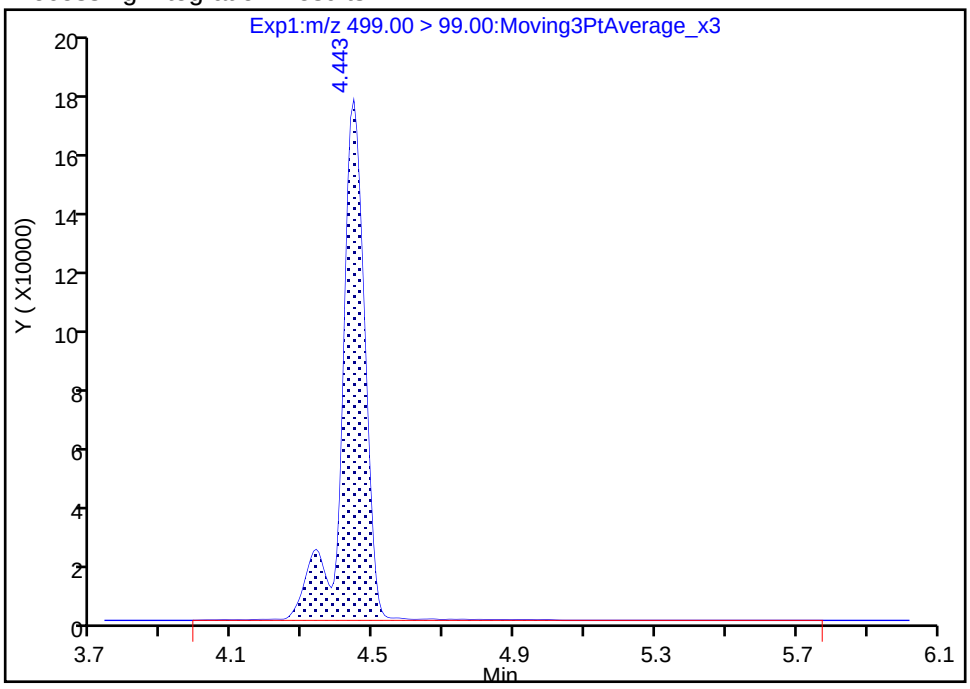
Data File: \\chromfs\Sacramento\ChromData\A18\20200910-103041.b\2020.09.10_A18_PFC_A_085.d
Injection Date: 10-Sep-2020 16:51:37 Instrument ID: A18
Lims ID: CCV L5
Client ID:
Operator ID: TAISACA18-PC\A-18 ALS Bottle#: 53 Worklist Smp#: 13
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFAS_A18V2 Limit Group: LC PFC ICAL
Column: Gemini C18 3um 3mm x 50 mm ( 3.00mm) Detector EXP1

## 29 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 2

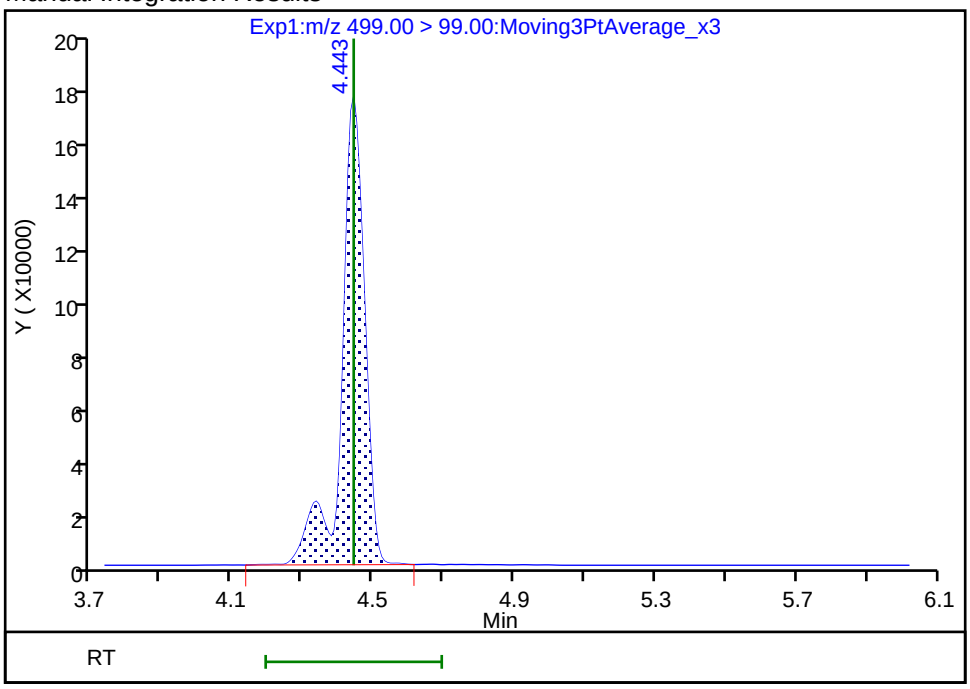
Processing Integration Results

RT: 4.44
Area: 811701
Amount: 1.831639
Amount Units: ng/ml




Manual Integration Results

RT: 4.44
Area: 800731
Amount: 2.481610
Amount Units: ng/ml




Reviewer: sanjumnair, 11-Sep-2020 08:38:49
Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

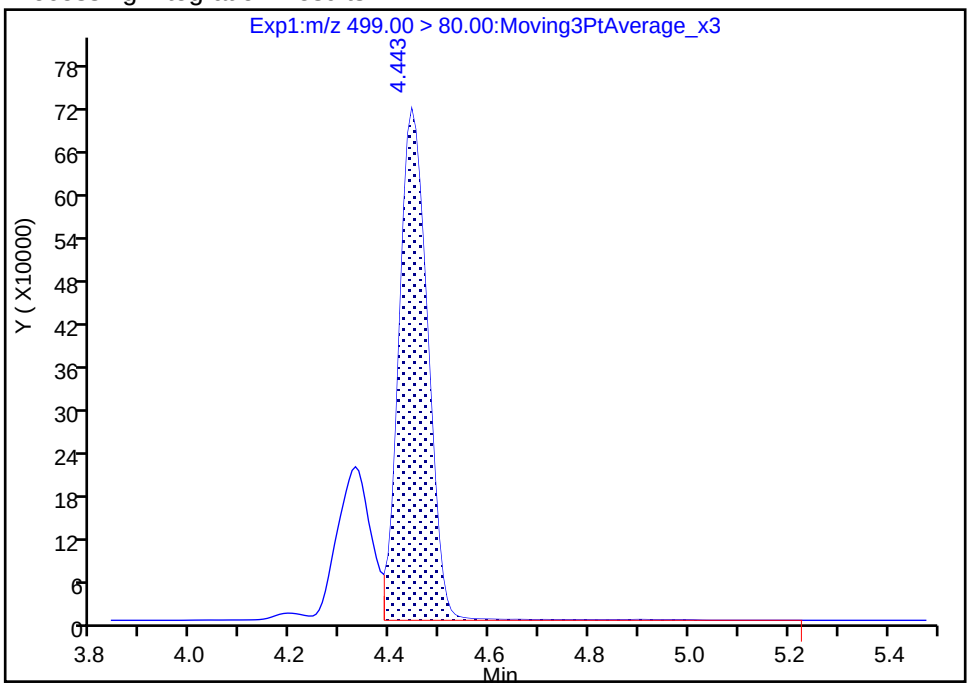
| | | | | | |
|---|---|---|---|---|---|
| Data File: | \\chromfs\Sacramento\ChromData\A18\20200910-103041.b\2020.09.10_A18_PFC_A_085.d | | | | |
| Injection Date: | 10-Sep-2020 16:51:37 | Instrument ID: | A18 | | |
| Lims ID: | CCV L5 | | | | |
| Client ID: | | | | | |
| Operator ID: | TAISACA18-PC\A-18 | ALS Bottle#: | 53 | Worklist Smp#: | 13 |
| Injection Vol: | 20.0 ul | Dil. Factor: | 1.0000 | | |
| Method: | PFAS_A18V2 | Limit Group: | LC PFC ICAL | | |
| Column: | Gemini C18 3um 3mm x 50 mm ( 3.00 mm) | Detector | EXP1 | | |

## 29 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 1

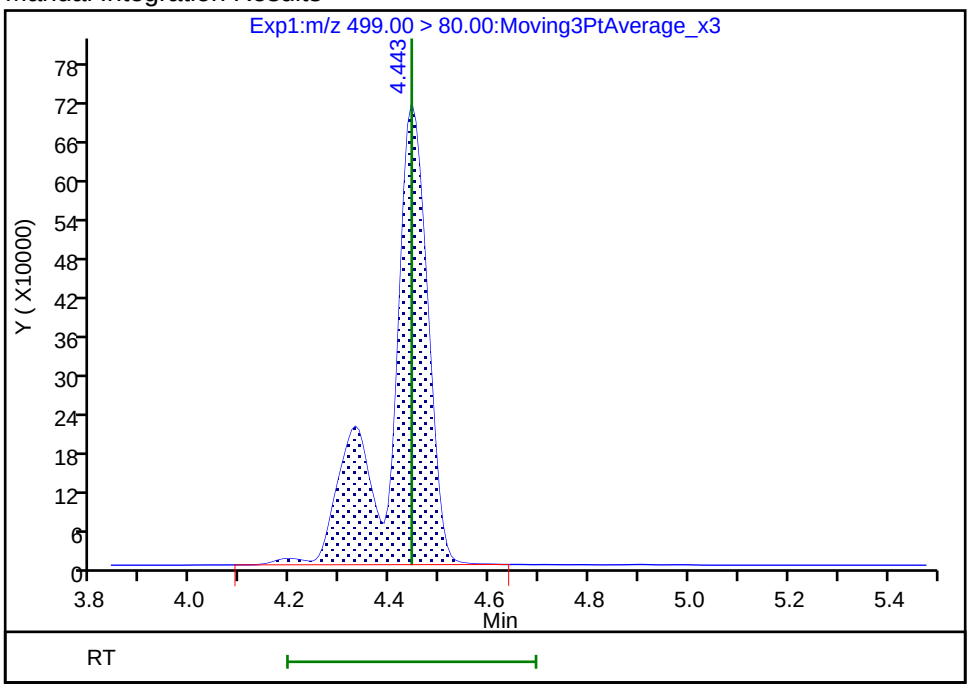
Processing Integration Results

RT: 4.44
Area: 2835622
Amount: 1.831639
Amount Units: ng/ml




Manual Integration Results

RT: 4.44
Area: 3841863
Amount: 2.481610
Amount Units: ng/ml




Reviewer: sanjumnair, 11-Sep-2020 08:38:55
Audit Action: Manually Integrated Audit Reason: Baseline

FORM VII
LCMS CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Sacramento  Job No.: 460-217547-1

SDG No.:

Lab Sample ID: CCVL 320-411371/2  Calibration Date: 09/11/2020 11:01

Instrument ID: A18  Calib Start Date: 08/25/2020 16:43

GC Column: Gemini C18 3x50  ID: 3.00(mm)  Calib End Date: 08/25/2020 17:37

Lab File ID: 2020.09.11_A18_PFC_A_005.d  Conc. Units: ng/mL

| ANALYTE | CURVE TYPE | AVE RRF | RRF | MIN RRF | CALC AMOUNT | SPIKE AMOUNT | %D | MAX %D |
|---|---|---|---|---|---|---|---|---|
| Perfluorobutanoic acid (PFBA) | AveID | 0.8679 | 0.8190 | | 0.0472 | 0.0500 | -5.6 | 50.0 |
| Perfluoropentanoic acid (PFPeA) | AveID | 0.997 | 1.061 | | 0.0532 | 0.0500 | 6.4 | 50.0 |
| Perfluorobutanesulfonic acid (PFBS) | AveID | 1.010 | 0.9247 | | 0.0405 | 0.0442 | -8.4 | 50.0 |
| 4:2 FTS | AveID | 2.273 | 2.238 | | 0.460 | 0.467 | -1.5 | 50.0 |
| Perfluorohexanoic acid (PFHxA) | AveID | 0.9638 | 0.9779 | | 0.0507 | 0.0500 | 1.5 | 50.0 |
| Perfluoropentanesulfonic acid (PFPeS) | AveID | 0.7925 | 0.7386 | | 0.0437 | 0.0469 | -6.8 | 50.0 |
| HFPO-DA (GenX) | AveID | 0.9742 | 0.8967 | | 0.0460 | 0.0500 | -8.0 | 50.0 |
| Perfluoroheptanoic acid (PFHpA) | AveID | 1.014 | 0.9376 | | 0.0462 | 0.0500 | -7.5 | 50.0 |
| Perfluorohexanesulfonic acid (PFHxS) | AveID | 1.181 | 1.182 | | 0.0455 | 0.0455 | 0.0 | 50.0 |
| 4,8-Dioxa-3H-perfluorononanoic acid (ADONA) | AveID | 9.582 | 8.884 | | 0.0437 | 0.0471 | -7.3 | 50.0 |
| 6:2 FTS | AveID | 2.299 | 2.394 | | 0.494 | 0.474 | 4.1 | 50.0 |
| Perfluoroheptanesulfonic Acid (PFHpS) | AveID | 1.118 | 1.023 | | 0.0435 | 0.0476 | -8.5 | 50.0 |
| Perfluorooctanoic acid (PFOA) | AveID | 1.020 | 1.122 | | 0.0550 | 0.0500 | 9.9 | 50.0 |
| Perfluorooctanesulfonic acid (PFOS) | AveID | 1.035 | 1.012 | | 0.0453 | 0.0464 | -2.3 | 50.0 |
| Perfluorononanoic acid (PFNA) | AveID | 0.9590 | 0.9302 | | 0.0485 | 0.0500 | -3.0 | 50.0 |
| F-53B Major | AveID | 3.236 | 2.937 | | 0.0423 | 0.0466 | -9.2 | 50.0 |
| Perfluorooctanesulfonamide (FOSA) | AveID | 0.9305 | 0.8871 | | 0.0477 | 0.0500 | -4.7 | 50.0 |
| Perfluorononanesulfonic acid (PFNS) | AveID | 0.9368 | 0.8191 | | 0.0420 | 0.0480 | -12.6 | 50.0 |
| 8:2 FTS | AveID | 1.775 | 1.612 | | 0.435 | 0.479 | -9.2 | 50.0 |
| Perfluorodecanoic acid (PFDA) | AveID | 0.9639 | 0.7436 | | 0.0386 | 0.0500 | -22.9 | 50.0 |
| N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA) | AveID | 0.7417 | 0.5976 | | 0.403 | 0.500 | -19.4 | 50.0 |
| Perfluorodecanesulfonic acid (PFDS) | AveID | 0.8350 | 0.7269 | | 0.0420 | 0.0482 | -13.0 | 50.0 |
| Perfluoroundecanoic acid (PFUnA) | AveID | 0.7253 | 0.6577 | | 0.0453 | 0.0500 | -9.3 | 50.0 |
| N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA) | AveID | 0.6758 | 0.6060 | | 0.448 | 0.500 | -10.3 | 50.0 |
| NMeFOSE | AveID | 1.080 | 0.9831 | | 0.0455 | 0.0500 | -8.9 | 50.0 |
| NMeFOSA | AveID | 0.9606 | 0.9290 | | 0.750 | 0.0500 | -3.3 | 50.0 |
| F-53B Minor | AveID | 4.102 | 3.309 | | 0.0380 | 0.0471 | -19.3 | 50.0 |
| NEtFOSE | AveID | 1.073 | 0.9893 | | 0.0461 | 0.0500 | -7.8 | 50.0 |
| NEtFOSA | AveID | 1.058 | 1.073 | | 1.00 | 0.0500 | 1.4 | 50.0 |
| Perfluorododecanoic acid (PFDoA) | AveID | 1.023 | 1.079 | | 0.0528 | 0.0500 | 5.5 | 50.0 |
| 10:2 FTS | AveID | 2.014 | 2.174 | | 0.0520 | 0.0482 | 7.9 | 50.0 |
| Perfluorododecanesulfonic acid (PFDoS) | AveID | 0.3329 | 0.3044 | | 0.0443 | 0.0484 | -8.5 | 50.0 |

FORM VII 537 (modified)

FORM VII
LCMS CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Sacramento  Job No.: 460-217547-1

SDG No.:

Lab Sample ID: CCVL 320-411371/2  Calibration Date: 09/11/2020 11:01

Instrument ID: A18  Calib Start Date: 08/25/2020 16:43

GC Column: Gemini C18 3x50  ID: 3.00(mm)  Calib End Date: 08/25/2020 17:37

Lab File ID: 2020.09.11_A18_PFC_A_005.d  Conc. Units: ng/mL

| ANALYTE | CURVE TYPE | AVE RRF | RRF | MIN RRF | CALC AMOUNT | SPIKE AMOUNT | %D | MAX %D |
|---|---|---|---|---|---|---|---|---|
| Perfluorotridecanoic acid (PFTriA) | AveID | 0.9409 | 0.8498 | | 0.0452 | 0.0500 | -9.7 | 50.0 |
| Perfluorotetradecanoic acid (PFTeA) | AveID | 0.0844 | 0.0699 | | 0.0414 | 0.0500 | -17.2 | 50.0 |
| Perfluoro-n-hexadecanoic acid (PFHxDA) | L2ID | | 1.334 | | 0.0522 | 0.0500 | 4.4 | 50.0 |
| Perfluoro-n-octadecanoic acid (PFODA) | AveID | 0.6605 | 0.7032 | | 0.0532 | 0.0500 | 6.5 | 50.0 |
| 13C4 PFBA | Ave | 1.585 | 1.526 | | 2.41 | 2.50 | -3.7 | 50.0 |
| 13C5 PFPeA | Ave | 1.233 | 1.245 | | 2.52 | 2.50 | 0.9 | 50.0 |
| 13C3 PFBS | Ave | 0.9684 | 1.024 | | 2.46 | 2.33 | 5.8 | 50.0 |
| M2-4:2 FTS | Ave | 0.2333 | 0.2306 | | 2.31 | 2.34 | -1.2 | 50.0 |
| 13C2 PFHxA | Ave | 1.231 | 1.333 | | 2.71 | 2.50 | 8.3 | 50.0 |
| 13C3 HFPO-DA | Ave | 0.2518 | 0.2533 | | 2.52 | 2.50 | 0.6 | 50.0 |
| 13C4 PFHpA | Ave | 1.051 | 1.166 | | 2.77 | 2.50 | 10.9 | 50.0 |
| 18O2 PFHxS | Ave | 0.5117 | 0.5658 | | 2.62 | 2.37 | 10.6 | 50.0 |
| M2-6:2 FTS | Ave | 0.1958 | 0.1951 | | 2.37 | 2.38 | -0.4 | 50.0 |
| 13C4 PFOA | Ave | 1.001 | 1.125 | | 2.81 | 2.50 | 12.4 | 50.0 |
| 13C4 PFOS | Ave | 0.3465 | 0.3743 | | 2.58 | 2.39 | 8.0 | 50.0 |
| 13C5 PFNA | Ave | 0.8063 | 0.9695 | | 3.01 | 2.50 | 20.3 | 50.0 |
| 13C8 FOSA | Ave | 0.5590 | 0.5974 | | 2.67 | 2.50 | 6.9 | 50.0 |
| 13C2 PFDA | Ave | 0.7829 | 1.002 | | 3.20 | 2.50 | 28.0 | 50.0 |
| M2-8:2 FTS | Ave | 0.2823 | 0.2874 | | 2.44 | 2.40 | 1.8 | 50.0 |
| d3-NMeFOSAA | Ave | 0.5255 | 0.5097 | | 2.43 | 2.50 | -3.0 | 50.0 |
| 13C2 PFUnA | Ave | 0.7758 | 0.8180 | | 2.64 | 2.50 | 5.4 | 50.0 |
| d5-NEtFOSAA | Ave | 0.5556 | 0.6040 | | 2.72 | 2.50 | 8.7 | 50.0 |
| d7-N-MeFOSE-M | Ave | 0.1384 | 0.1611 | | 14.6 | 12.5 | 16.4 | 50.0 |
| d-N-MeFOSA-M | Ave | 0.1965 | 0.2092 | | 2.66 | 2.50 | 6.5 | 50.0 |
| d9-N-EtFOSE-M | Ave | 0.1700 | 0.2063 | | 15.2 | 12.5 | 21.4 | 50.0 |
| d-N-EtFOSA-M | Ave | 0.2011 | 0.2000 | | 2.49 | 2.50 | -0.6 | 50.0 |
| 13C2 PFDoA | Ave | 0.7650 | 0.8825 | | 2.88 | 2.50 | 15.3 | 50.0 |
| 13C2 PFTeDA | Ave | 0.6311 | 0.7193 | | 2.85 | 2.50 | 14.0 | 50.0 |
| 13C2 PFHxDA | Ave | 0.4618 | 0.4990 | | 2.70 | 2.50 | 8.1 | 50.0 |
| 13C8 PFOA | Ave | 0.6756 | 0.7790 | | 2.82 | 2.45 | 15.3 | 50.0 |
| 13C8 PFOS | Ave | 0.1082 | 0.1044 | | 2.31 | 2.39 | -3.5 | 50.0 |

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\A18\20200911-103099.b\2020.09.11_A18_PFC_A_005.d
Lims ID: CCVL
Client ID:
Sample Type: CCVL
Inject. Date: 11-Sep-2020 11:01:18 ALS Bottle#: 51 Worklist Smp#: 2
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Sample Info: CCVL (26)
Misc. Info.: Plate: 1 Rack: 1
Operator ID: TAISACA18-PC\A-18 Instrument ID: A18
Sublist: chrom-PFAS_A18V2*sub1

Method: \\chromfs\Sacramento\ChromData\A18\20200911-103099.b\PFAS_A18V2.m
Limit Group: LC PFC ICAL
Last Update: 14-Sep-2020 10:00:30 Calib Date: 25-Aug-2020 17:37:57
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\A18\20200825-102078.b\2020.08.25_A18_ICAL_A_017.d

Column 1 : Gemini C18 3um 3mm x 50 mm ( 3.00 mm) Det: EXP1
Process Host: CTX1038

First Level Reviewer: fariasa Date: 11-Sep-2020 11:39:31
Ratio Calibration: Average of Initial Calibration

| Signal | RT | EXP RT | DLT RT | REL RT | Response | Amount ng/ml | Ratio(Limits) | %Rec | S/N | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| D 1 13C4 PFBA | | | | | | | | | | |
| 217.00 > 172.00 | 2.549 | 2.566 | -0.017 | 0.623 | 17154784 | 2.41 | | 96.3 | 10757 | |
| 2 Perfluorobutanoic acid | | | | | | | | | | |
| 212.90 > 169.00 | 2.549 | 2.566 | -0.017 | 1.000 | 280985 | 0.0472 | | 94.4 | 12.7 | |
| D 4 13C5 PFPeA | | | | | | | | | | |
| 267.90 > 223.00 | 2.899 | 2.920 | -0.021 | 0.709 | 13991854 | 2.52 | | 101 | 6150 | |
| 5 Perfluoropentanoic acid | | | | | | | | | | |
| 262.90 > 219.00 | 2.909 | 2.920 | -0.011 | 1.004 | 296768 | 0.0532 | | 106 | 13.0 | |
| D 9 13C3 PFBS | | | | | | | | | | |
| 301.90 > 80.00 | 2.940 | 2.951 | -0.011 | 0.719 | 10708011 | 2.46 | | 106 | 4459 | |
| 6 Perfluorobutanesulfonic acid | | | | | | | | | | |
| 298.90 > 80.00 | 2.940 | 2.951 | -0.011 | 1.000 | 188231 | 0.0405 | Target=2.30 | 91.6 | 45.3 | |
| 298.90 > 99.00 | 2.940 | 2.951 | -0.011 | 1.000 | 81134 | | 2.32(1.15-3.45) | | 30.6 | |
| D 7 M2-4:2 FTS | | | | | | | | | | |
| 329.00 > 81.00 | 3.239 | 3.251 | -0.012 | 0.792 | 2421488 | 2.31 | | 98.8 | 1149 | |
| 8 4:2 FTS | | | | | | | | | | |
| 327.00 > 307.00 | 3.239 | 3.251 | -0.012 | 1.000 | 1083943 | 0.4598 | | 98.5 | 4849 | |
| D 11 13C2 PFHxA | | | | | | | | | | |
| 315.00 > 270.00 | 3.288 | 3.301 | -0.013 | 0.804 | 14984517 | 2.71 | | 108 | 5331 | |
| 10 Perfluorohexanoic acid | | | | | | | | | | |
| 313.00 > 269.00 | 3.288 | 3.301 | -0.013 | 1.000 | 293061 | 0.0507 | Target=13.78 | 101 | 20.4 | |
| 313.00 > 119.00 | 3.288 | 3.301 | -0.013 | 1.000 | 22177 | | 13.21(6.89-20.66) | | 12.1 | |
| 12 Perfluoropentanesulfonic acid | | | | | | | | | | |
| 349.00 > 80.00 | 3.299 | 3.312 | -0.013 | 1.122 | 159540 | 0.0437 | Target=3.02 | 93.2 | 37.0 | |
| 349.00 > 99.00 | 3.299 | 3.312 | -0.013 | 1.122 | 58365 | | 2.73(1.51-4.52) | | 39.8 | |
| 13 HPFO-DA | | | | | | | | | | |
| 285.00 > 169.00 | 3.416 | 3.418 | -0.002 | 1.000 | 51067 | 0.0460 | | 92.0 | 301 | |

| Signal | RT | EXP RT | DLT RT | REL RT | Response | Amount ng/ml | Ratio(Limits) | %Rec | S/N | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| D 14 13C3 HFPO-DA | | | | | | | | | | |
| 287.00 > 169.00 | 3.416 | 3.418 | -0.002 | 0.835 | 2847595 | 2.51 | | 101 | 4451 | |
| 16 Perfluoroheptanoic acid | | | | | | | | | | |
| 363.00 > 319.00 | 3.701 | 3.702 | -0.001 | 1.003 | 245701 | 0.0462 | Target=3.84 | 92.5 | 28.8 | |
| 363.00 > 169.00 | 3.701 | 3.702 | -0.001 | 1.003 | 63243 | | 3.89(1.92-5.76) | | 53.6 | |
| D 18 13C4 PFHpA | | | | | | | | | | |
| 367.00 > 322.00 | 3.691 | 3.702 | -0.011 | 0.902 | 13102911 | 2.77 | | 111 | 6052 | |
| 15 Perfluorohexanesulfonic acid | | | | | | | | | | M |
| 399.00 > 80.00 | 3.701 | 3.702 | -0.001 | 1.000 | 136879 | 0.0455 | Target=3.50 | 100 | 46.0 | M |
| 399.00 > 99.00 | 3.701 | 3.702 | -0.001 | 1.000 | 38909 | | 3.52(1.75-5.25) | | 25.4 | M |
| D 17 18O2 PFHxS | | | | | | | | | | |
| 403.00 > 84.00 | 3.701 | 3.702 | -0.001 | 0.905 | 6017036 | 2.61 | | 111 | 5779 | |
| 19 DONA | | | | | | | | | | |
| 377.00 > 251.00 | 3.741 | 3.751 | -0.010 | 0.840 | 704369 | 0.0437 | Target=2.42 | 92.7 | 878 | |
| 377.00 > 85.00 | 3.741 | 3.751 | -0.010 | 0.840 | 276848 | | 2.54(1.21-3.63) | | 373 | |
| D 20 M2-6:2 FTS | | | | | | | | | | |
| 429.00 > 81.00 | 4.067 | 4.076 | -0.009 | 0.994 | 2083709 | 2.37 | | 99.6 | 1348 | |
| 21 6:2 FTS | | | | | | | | | | |
| 427.00 > 407.00 | 4.067 | 4.076 | -0.009 | 1.000 | 995415 | 0.4935 | | 104 | 1471 | |
| 24 Perfluoroheptanesulfonic acid | | | | | | | | | | |
| 449.00 > 80.00 | 4.091 | 4.092 | -0.001 | 0.918 | 81931 | 0.0435 | Target=4.40 | 91.5 | 38.9 | |
| 449.00 > 99.00 | 4.083 | 4.092 | -0.009 | 0.916 | 19899 | | 4.12(2.20-6.60) | | 28.5 | |
| $ 26 13C8 PFOA | | | | | | | | | | |
| 421.00 > 376.00 | 4.083 | 4.092 | -0.009 | 0.998 | 8573222 | 2.82 | | 115 | 5239 | |
| * 23 13C2 PFOA | | | | | | | | | | |
| 415.00 > 370.00 | 4.091 | 4.092 | -0.001 | | 11242049 | 2.50 | | | 6002 | |
| 22 Perfluorooctanoic acid | | | | | | | | | | M |
| 413.00 > 369.00 | 4.091 | 4.092 | -0.001 | 1.000 | 283739 | 0.0550 | Target=2.94 | 110 | 36.3 | M |
| 413.00 > 169.00 | 4.091 | 4.092 | -0.001 | 1.000 | 96415 | | 2.94(1.47-4.41) | | 85.6 | M |
| D 25 13C4 PFOA | | | | | | | | | | |
| 417.00 > 372.00 | 4.091 | 4.092 | -0.001 | 1.000 | 12648234 | 2.81 | | 112 | 6324 | |
| $ 28 13C8 PFOS | | | | | | | | | | |
| 507.00 > 99.00 | 4.455 | 4.454 | 0.001 | 1.089 | 1122322 | 2.31 | | 96.5 | 3248 | |
| D 27 13C4 PFOS | | | | | | | | | | |
| 503.00 > 80.00 | 4.455 | 4.454 | 0.001 | 1.089 | 4023170 | 2.58 | | 108 | 1837 | |
| 29 Perfluorooctanesulfonic acid | | | | | | | | | | M |
| 499.00 > 80.00 | 4.455 | 4.454 | 0.001 | 1.000 | 79009 | 0.0453 | Target=4.53 | 97.7 | 32.3 | M |
| 499.00 > 99.00 | 4.455 | 4.454 | 0.001 | 1.000 | 17660 | | 4.47(2.26-6.79) | | 23.5 | M |
| D 30 13C5 PFNA | | | | | | | | | | |
| 468.00 > 423.00 | 4.471 | 4.478 | -0.007 | 1.093 | 10899709 | 3.01 | | 120 | 7850 | |
| 31 Perfluorononanoic acid | | | | | | | | | | |
| 463.00 > 419.00 | 4.471 | 4.486 | -0.015 | 1.000 | 202774 | 0.0485 | Target=8.97 | 97.0 | 38.1 | |
| 463.00 > 169.00 | 4.471 | 4.486 | -0.015 | 1.000 | 23536 | | 8.62(4.48-13.45) | | 40.0 | |
| 32 9ClFOS | | | | | | | | | | |
| 531.00 > 351.00 | 4.659 | 4.658 | 0.001 | 1.046 | 230381 | 0.0423 | | 90.8 | 703 | |
| D 33 13C8 FOSA | | | | | | | | | | |
| 506.00 > 78.00 | 4.787 | 4.794 | -0.007 | 1.170 | 6716090 | 2.67 | | 107 | 5495 | |

| Signal | RT | EXP RT | DLT RT | REL RT | Response | Amount ng/ml | Ratio(Limits) | %Rec | S/N | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| 34 Perfluorooctanesulfonamide | | | | | | | | | | |
| 498.00 > 78.00 | 4.787 | 4.794 | -0.007 | 1.000 | 119151 | 0.0477 | | 95.3 | 695 | |
| 35 Perfluorononanesulfonic acid | | | | | | | | | | |
| 549.00 > 80.00 | 4.804 | 4.803 | 0.001 | 1.078 | 66186 | 0.0420 | Target=2.85 | 87.4 | 53.6 | |
| 549.00 > 99.00 | 4.804 | 4.803 | 0.001 | 1.078 | 24524 | | 2.70(1.43-4.28) | | 49.7 | |
| D 39 13C2 PFDA | | | | | | | | | | |
| 515.00 > 470.00 | 4.830 | 4.828 | 0.002 | 1.180 | 11262577 | 3.20 | | 128 | 12078 | |
| 37 Perfluorodecanoic acid | | | | | | | | | | |
| 513.00 > 469.00 | 4.838 | 4.828 | 0.010 | 1.002 | 167488 | 0.0386 | Target=10.16 | 77.1 | 51.3 | |
| 513.00 > 169.00 | 4.830 | 4.828 | 0.002 | 1.000 | 16491 | | 10.16(5.08-15.24) | | 29.3 | |
| 36 8:2 FTS | | | | | | | | | | |
| 527.00 > 507.00 | 4.830 | 4.837 | -0.007 | 0.998 | 997618 | 0.4349 | | 90.8 | 4170 | |
| D 38 M2-8:2 FTS | | | | | | | | | | |
| 529.00 > 81.00 | 4.838 | 4.837 | 0.001 | 1.183 | 3095066 | 2.44 | | 102 | 1907 | |
| D 40 d3-NMeFOSAA | | | | | | | | | | |
| 573.00 > 419.00 | 5.001 | 5.000 | 0.001 | 1.222 | 5730564 | 2.43 | | 97.0 | 3295 | |
| 41 NMeFOSAA | | | | | | | | | | |
| 570.00 > 419.00 | 5.001 | 5.000 | 0.001 | 1.000 | 684870 | 0.4029 | | 80.6 | 701 | |
| 42 Perfluorodecanesulfonic acid | | | | | | | | | | |
| 599.00 > 80.00 | 5.130 | 5.130 | 0.0 | 1.151 | 58976 | 0.0420 | Target=2.77 | 87.0 | 62.0 | |
| 599.00 > 99.00 | 5.121 | 5.130 | -0.009 | 1.149 | 20629 | | 2.86(1.38-4.15) | | 55.7 | |
| 45 Perfluoroundecanoic acid | | | | | | | | | | |
| 563.00 > 519.00 | 5.157 | 5.148 | 0.009 | 1.000 | 120957 | 0.0453 | Target=8.43 | 90.7 | 50.0 | |
| 563.00 > 169.00 | 5.148 | 5.148 | 0.0 | 0.998 | 12881 | | 9.39(4.22-12.65) | | 29.9 | |
| D 43 13C2 PFUnA | | | | | | | | | | |
| 565.00 > 520.00 | 5.157 | 5.157 | 0.0 | 1.260 | 9195611 | 2.64 | | 105 | 7521 | |
| D 44 d5-NEtFOSAA | | | | | | | | | | |
| 589.00 > 419.00 | 5.166 | 5.166 | 0.0 | 1.263 | 6789722 | 2.72 | | 109 | 3006 | |
| 46 NEtFOSA | | | | | | | | | | |
| 584.00 > 419.00 | 5.166 | 5.166 | 0.0 | 1.000 | 822892 | 0.4483 | | 89.7 | 1634 | |
| D 47 d7-N-MeFOSE-M | | | | | | | | | | |
| 623.00 > 59.00 | 5.239 | 5.248 | -0.009 | 1.281 | 9052857 | 14.5 | | 116 | 3417 | |
| 48 N-MeFOSE-M | | | | | | | | | | |
| 616.00 > 59.00 | 5.249 | 5.258 | -0.009 | 1.002 | 35601 | 0.0455 | | 91.1 | 53.7 | |
| D 49 d-N-MeFOSA-M | | | | | | | | | | |
| 515.00 > 169.00 | 5.259 | 5.269 | -0.010 | 1.285 | 2351820 | 2.66 | | 106 | 44.5 | |
| 50 NMeFOSA | | | | | | | | | | |
| 512.00 > 169.00 | 5.269 | 5.279 | -0.010 | 1.002 | 43695 | 0.0484 | | 96.7 | 54.6 | |
| 51 11ClFOS | | | | | | | | | | |
| 631.00 > 451.00 | 5.300 | 5.299 | 0.001 | 1.190 | 262374 | 0.0380 | | 80.7 | 1679 | |
| D 52 d9-N-EtFOSE-M | | | | | | | | | | |
| 639.00 > 59.00 | 5.415 | 5.426 | -0.011 | 1.324 | 11598704 | 15.2 | | 121 | 5740 | |
| 53 N-EtFOSE-M | | | | | | | | | | |
| 630.00 > 59.00 | 5.426 | 5.437 | -0.011 | 1.002 | 45900 | 0.0461 | | 92.2 | 68.4 | |
| D 54 d-N-EtFOSA-M | | | | | | | | | | |
| 531.00 > 169.00 | 5.437 | 5.447 | -0.010 | 1.329 | 2248255 | 2.49 | | 99.4 | 396 | |

| Signal | RT | EXP RT | DLT RT | REL RT | Response | Amount ng/ml | Ratio(Limits) | %Rec | S/N | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| 57 Perfluorododecanoic acid | | | | | | | | | | |
| 613.00 > 569.00 | 5.448 | 5.447 | 0.001 | 1.000 | 214137 | 0.0528 | Target=9.12 | 106 | 89.5 | |
| 613.00 > 169.00 | 5.448 | 5.447 | 0.001 | 1.000 | 20936 | | 10.23(4.56-13.69) | | 49.0 | |
| 55 N-EtFOSA-M | | | | | | | | | | |
| 526.00 > 169.00 | 5.448 | 5.458 | -0.010 | 1.002 | 48254 | 0.0507 | | 101 | 37.2 | |
| D 56 13C2 PFDoA | | | | | | | | | | |
| 615.00 > 570.00 | 5.448 | 5.458 | -0.010 | 1.332 | 9920565 | 2.88 | | 115 | 7042 | |
| 58 10:2 FTS | | | | | | | | | | |
| 627.00 > 607.00 | 5.469 | 5.469 | 0.0 | 1.130 | 135417 | 0.0520 | | 108 | 1436 | |
| 59 PFDoS | | | | | | | | | | |
| 699.00 > 80.00 | 5.679 | 5.678 | 0.001 | 1.275 | 24803 | 0.0443 | Target=0.72 | 91.5 | 29.6 | |
| 699.00 > 99.00 | 5.679 | 5.678 | 0.001 | 1.275 | 33303 | | 0.74(0.36-1.07) | | 139 | |
| 60 Perfluorotridecanoic acid | | | | | | | | | | |
| 663.00 > 619.00 | 5.723 | 5.722 | 0.001 | 1.050 | 168603 | 0.0452 | Target=6.78 | 90.3 | 122 | |
| 663.00 > 169.00 | 5.723 | 5.722 | 0.001 | 1.050 | 23130 | | 7.29(3.39-10.17) | | 64.6 | |
| 62 Perfluorotetradecanoic acid | | | | | | | | | | |
| 713.00 > 169.00 | 5.971 | 5.959 | 0.012 | 1.002 | 11297 | 0.0414 | Target=0.85 | 82.8 | 64.1 | |
| 713.00 > 219.00 | 5.959 | 5.959 | 0.0 | 1.000 | 15919 | | 0.71(0.43-1.28) | | 132 | |
| D 61 13C2 PFTeDA | | | | | | | | | | |
| 715.00 > 670.00 | 5.959 | 5.959 | 0.0 | 1.457 | 8086275 | 2.85 | | 114 | 6778 | |
| D 64 13C2 PFHxDA | | | | | | | | | | |
| 815.00 > 770.00 | 6.412 | 6.402 | 0.010 | 1.567 | 5610045 | 2.70 | | 108 | 5302 | |
| 63 Perfluorohexadecanoic acid | | | | | | | | | | |
| 813.00 > 769.00 | 6.420 | 6.411 | 0.009 | 1.001 | 149701 | 0.0522 | Target=10.21 | 104 | 129 | |
| 813.00 > 169.00 | 6.412 | 6.411 | 0.001 | 1.000 | 15838 | | 9.45(5.11-15.32) | | 148 | |
| 65 Perfluorooctadecanoic acid | | | | | | | | | | |
| 913.00 > 869.00 | 6.875 | 6.850 | 0.025 | 1.072 | 78901 | 0.0532 | Target=12.45 | 106 | 102 | |
| 913.00 > 169.00 | 6.875 | 6.850 | 0.025 | 1.072 | 6650 | | 11.86(6.22-18.67) | | 117 | |

## QC Flag Legend

Processing Flags

Review Flags

M - Manually Integrated

## Reagents:

LCPFC_LLCCVL_00026 Amount Added: 1.00 Units: mL

Report Date: 14-Sep-2020 10:00:32 Chrom Revision: 2.3 11-Sep-2020 20:57:08

Eurofins TestAmerica, Sacramento

Data File: \\chromfs\Sacramento\ChromData\A18\20200911-103099.b\2020.09.11_A18_PFC_A_005.d

Injection Date: 11-Sep-2020 11:01:18 Instrument ID: A18

Lims ID: CCVL

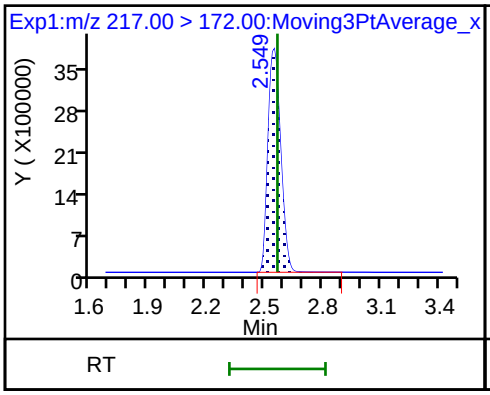
Client ID:

Operator ID: TAISACA18-PC\A-18 ALS Bottle#: 51 Worklist Smp#: 2

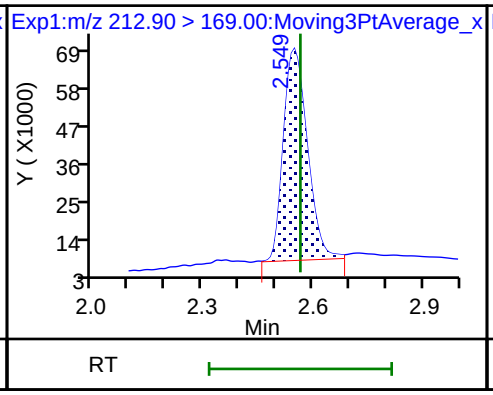
Injection Vol: 20.0 ul Dil. Factor: 1.0000

Method: PFAS_A18V2 Limit Group: LC PFC ICAL

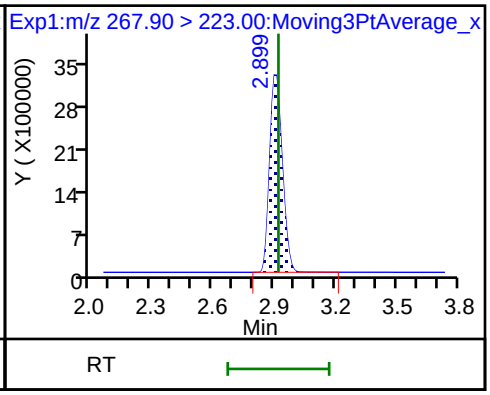
D 1 13C4 PFBA



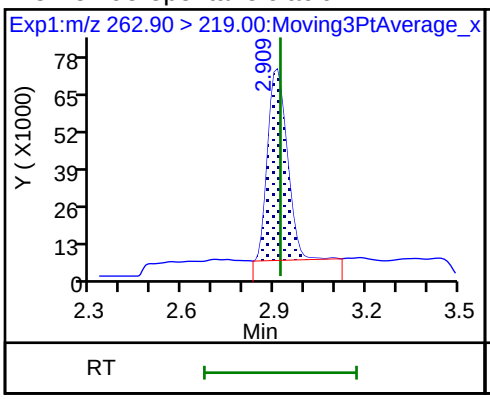

2 Perfluorobutanoic acid



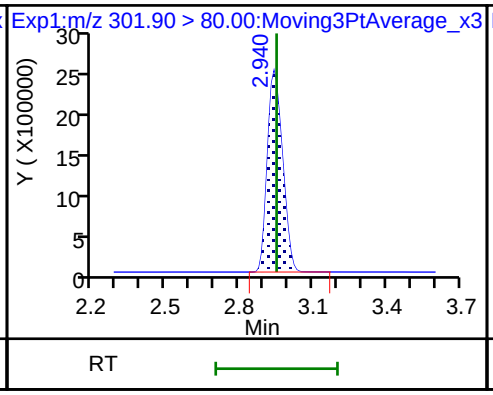

D 4 13C5 PFPeA



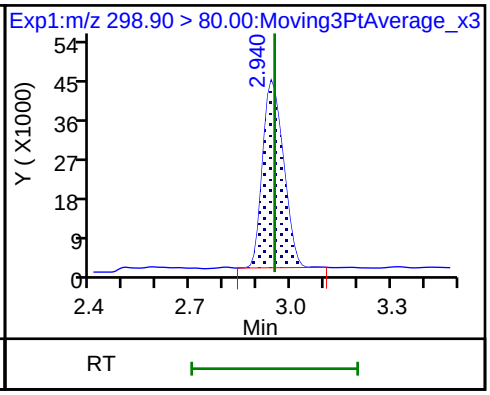

5 Perfluoropentanoic acid



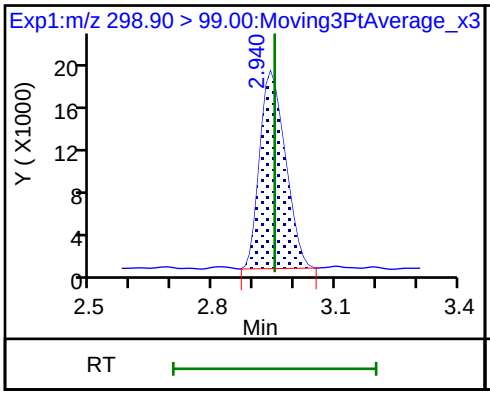

D 9 13C3 PFBS



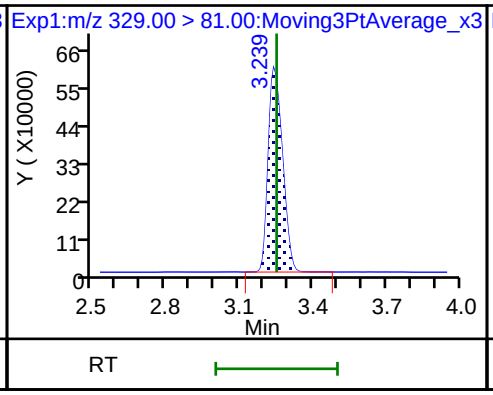

6 Perfluorobutanesulfonic acid



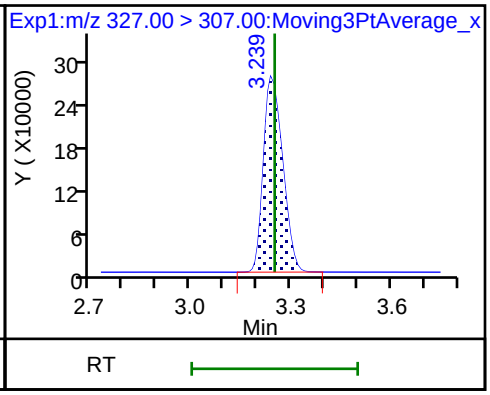

6 Perfluorobutanesulfonic acid



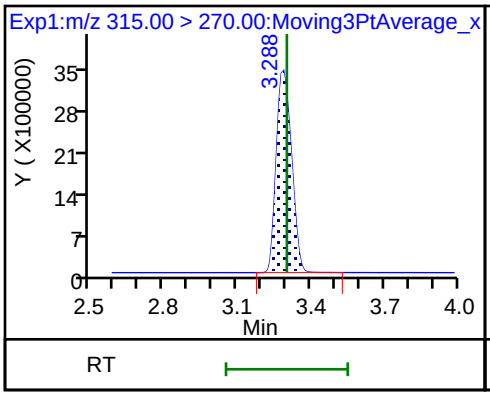

D 7 M2-4:2 FTS




8 4:2 FTS




D 11 13C2 PFHxA

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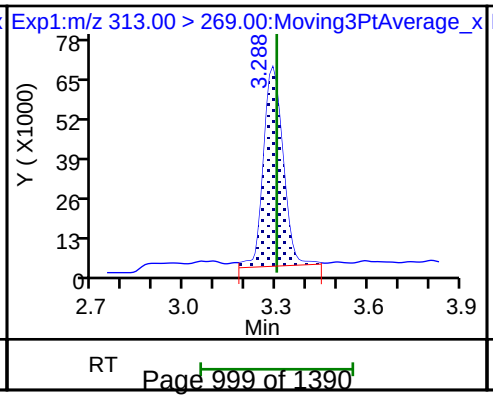
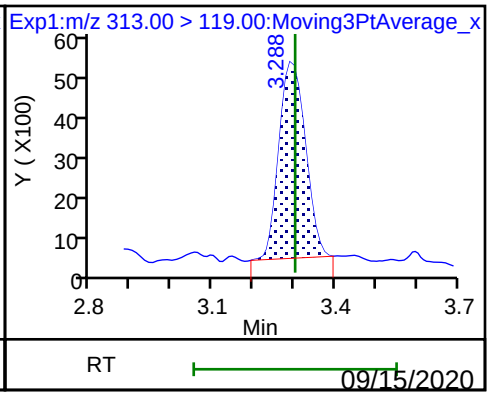
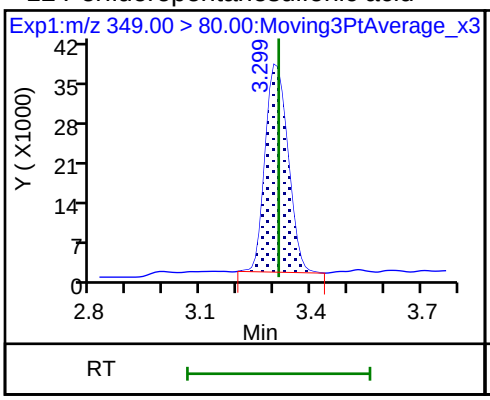


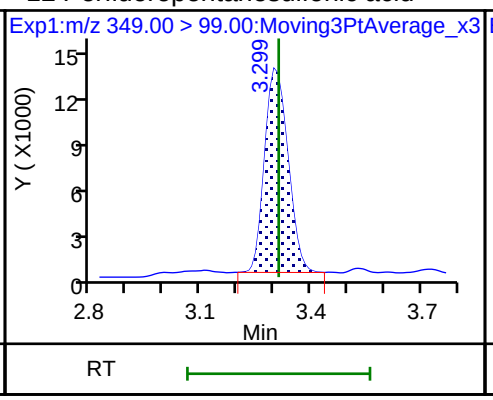

10 Perfluorohexanoic acid



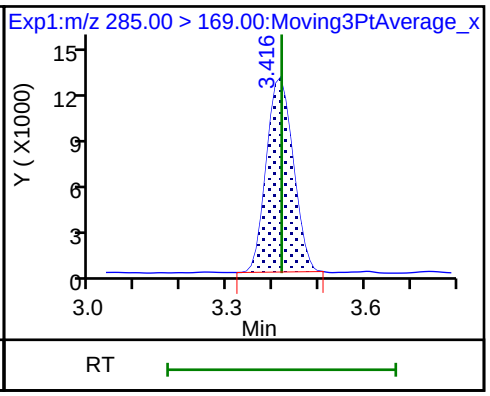
12 Perfluoropentanesulfonic acid



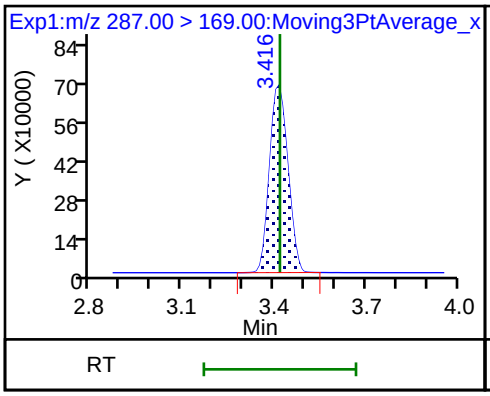

12 Perfluoropentanesulfonic acid



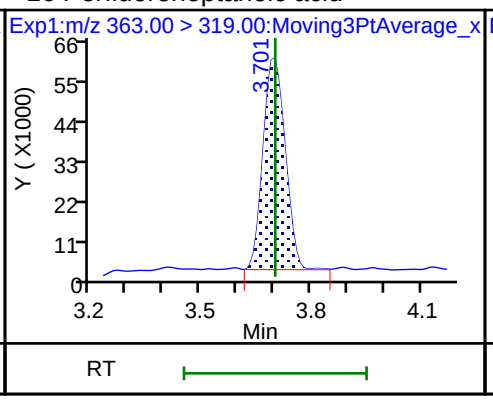

13 HPFO-DA



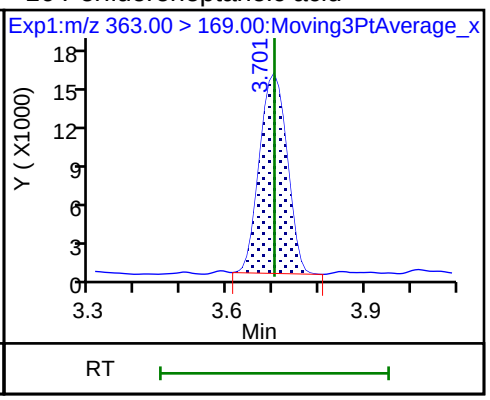

D 14 13C3 HFPO-DA



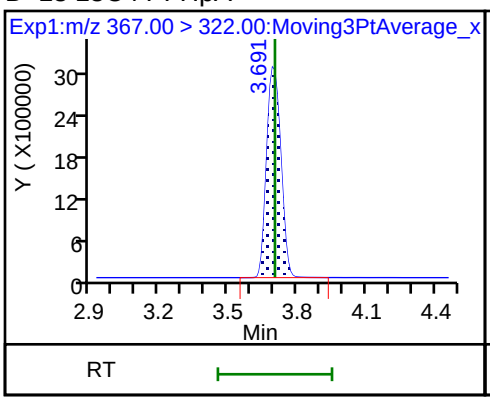

16 Perfluoroheptanoic acid



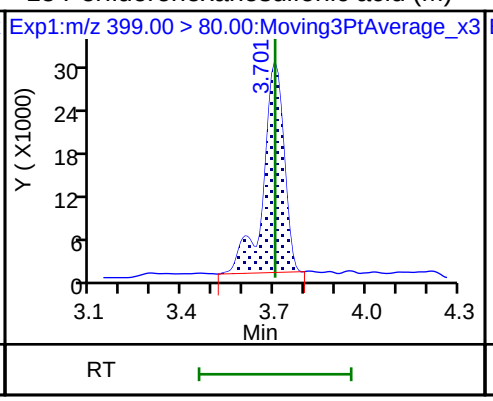

16 Perfluoroheptanoic acid




D 18 13C4 PFHpA




15 Perfluorohexanesulfonic acid (M)

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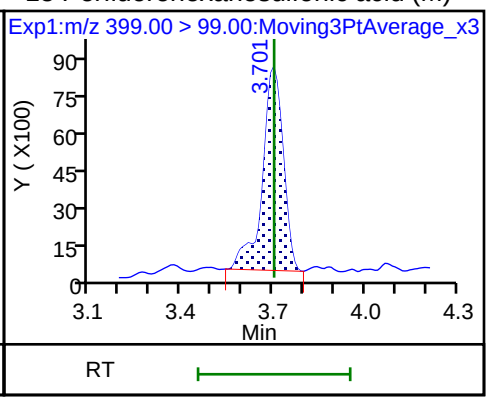
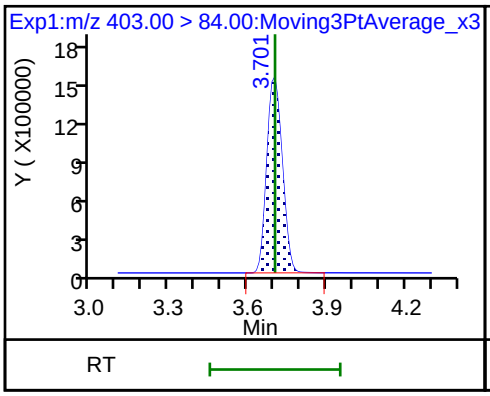
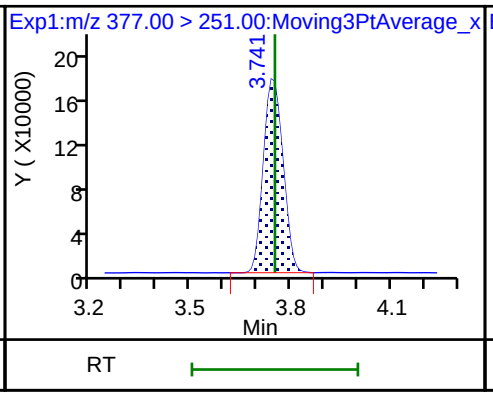


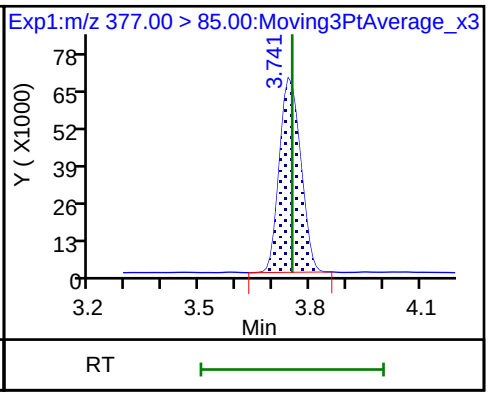

D 17 18O2 PFHxS



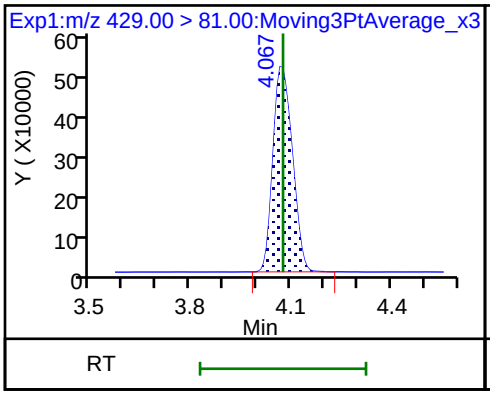

19 DONA



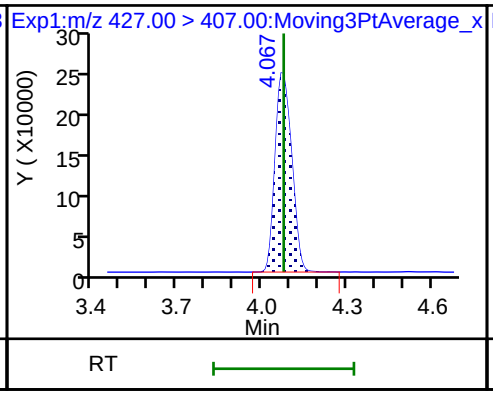

19 DONA



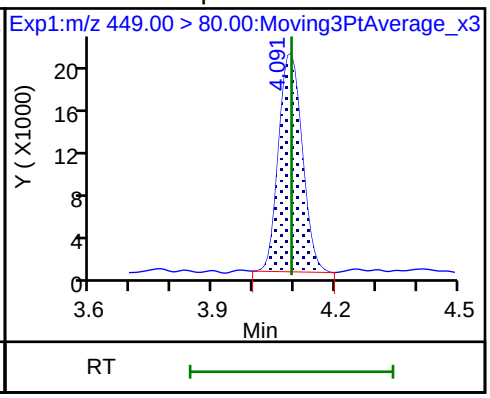
D 20 M2-6:2 FTS



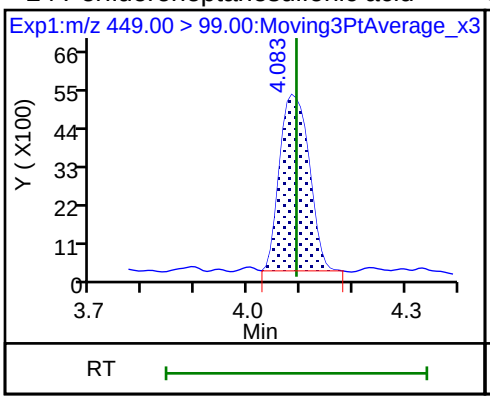

21 6:2 FTS



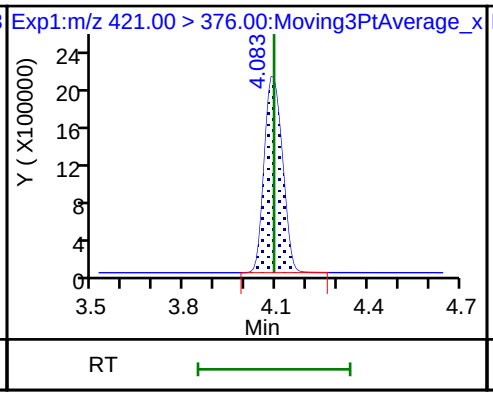

24 Perfluoroheptanesulfonic acid



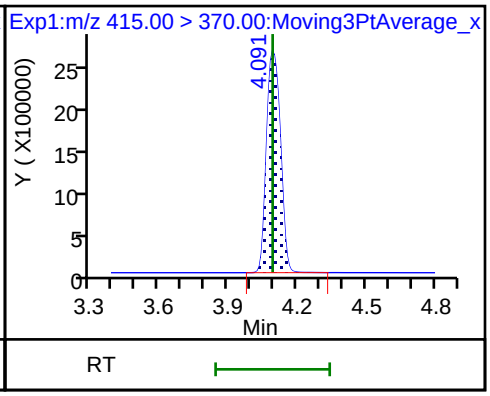

24 Perfluoroheptanesulfonic acid



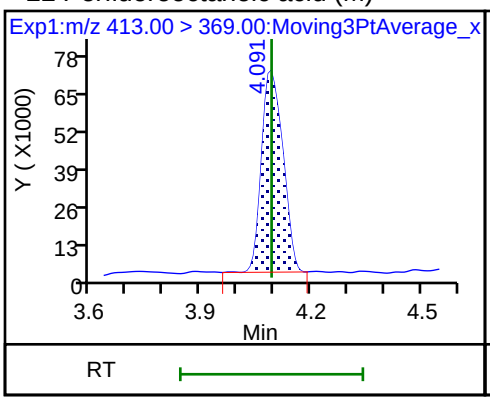

$ 26 13C8 PFOA



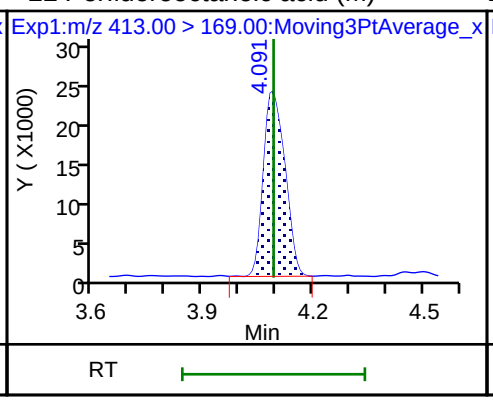

* 23 13C2 PFOA



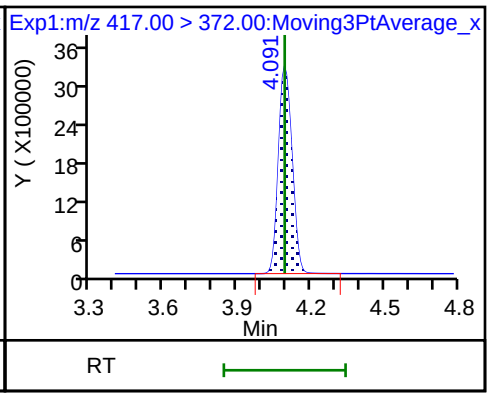

22 Perfluorooctanoic acid (M)



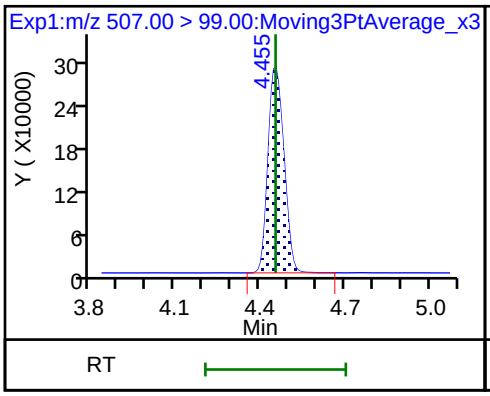

22 Perfluorooctanoic acid (M)




D 25 13C4 PFOA




$ 28 13C8 PFOS

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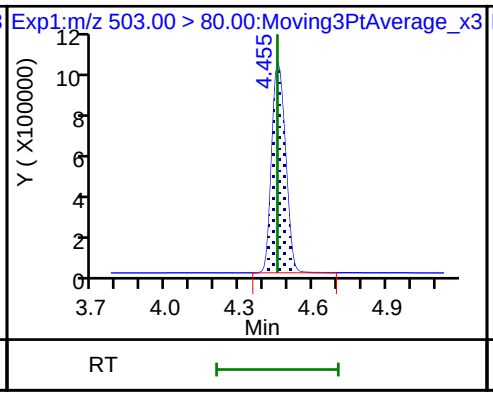
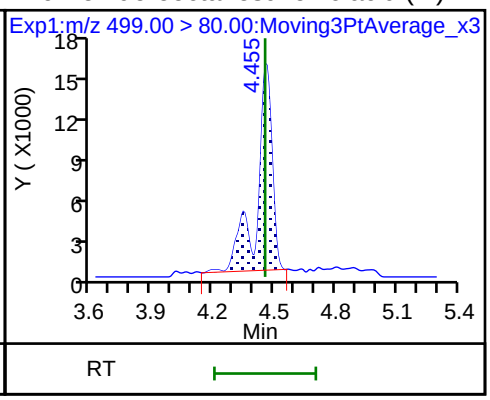
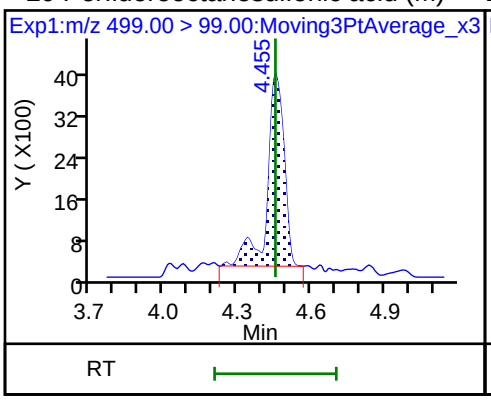


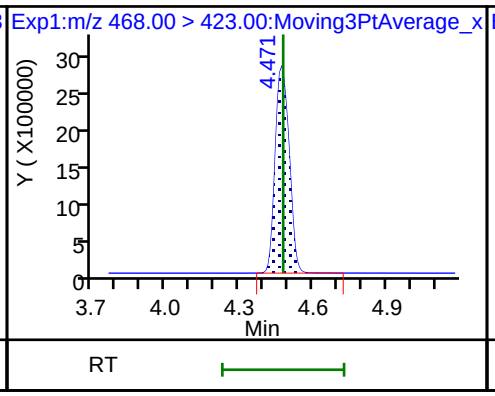

29 Perfluorooctanesulfonic acid (M)



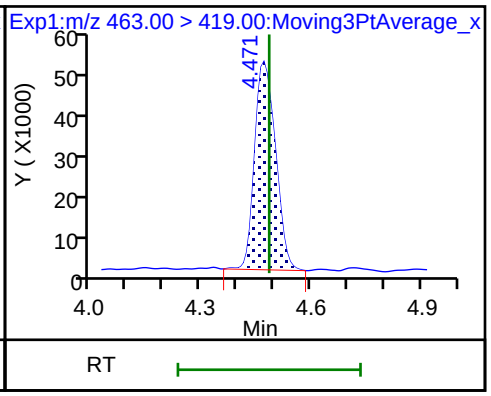
29 Perfluorooctanesulfonic acid (M)



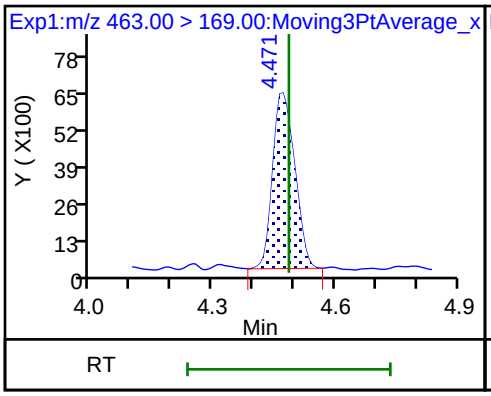

D 30 13C5 PFNA



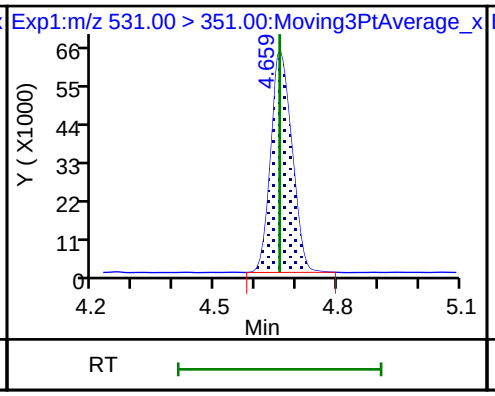

31 Perfluorononanoic acid



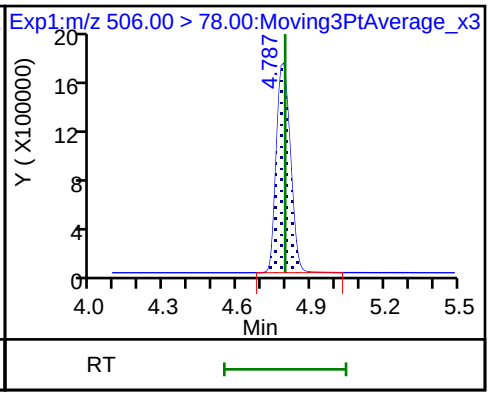

31 Perfluorononanoic acid



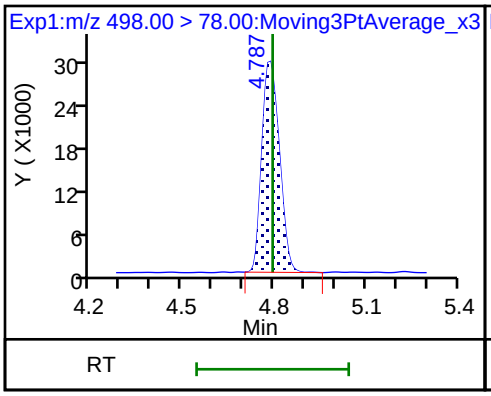

32 9ClFOS



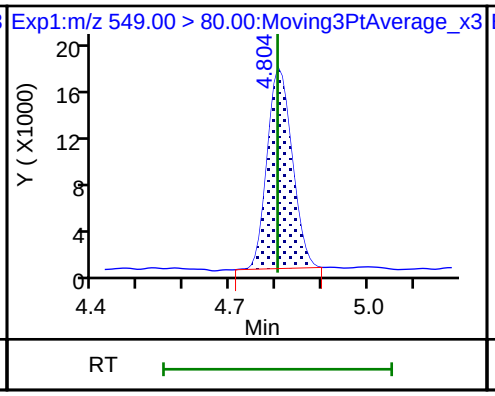

D 33 13C8 FOSA



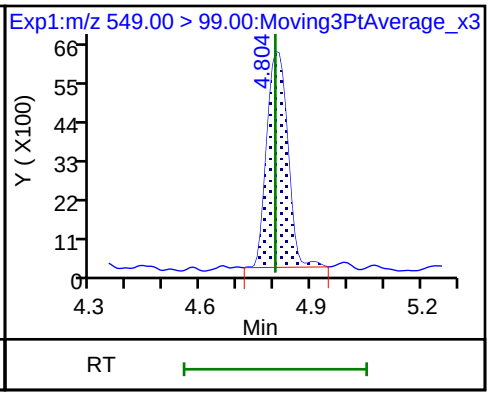

34 Perfluorooctanesulfonamide



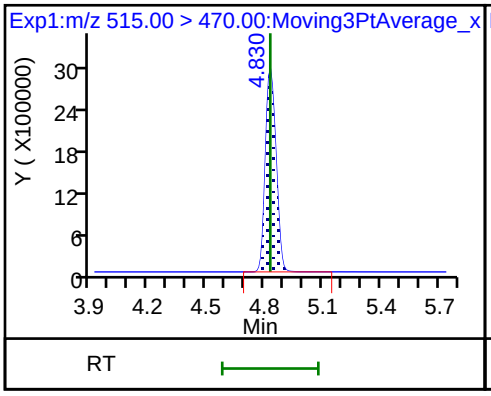

35 Perfluorononanesulfonic acid



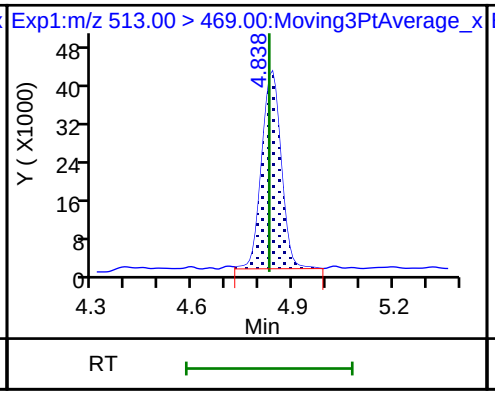

35 Perfluorononanesulfonic acid



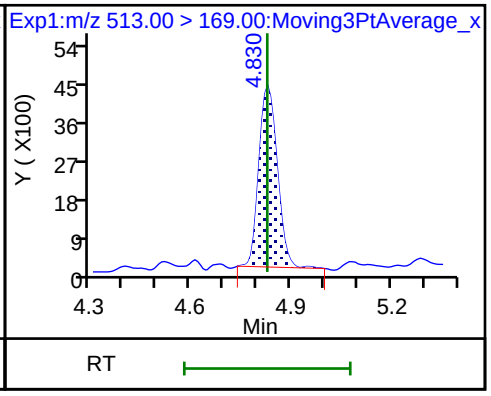

D 39 13C2 PFDA



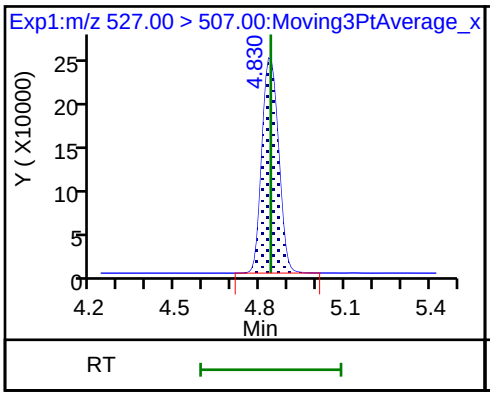

37 Perfluorodecanoic acid



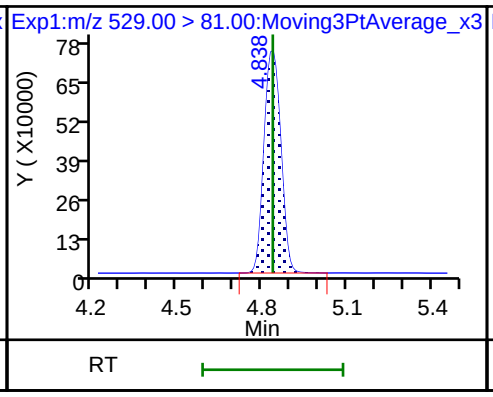

37 Perfluorodecanoic acid



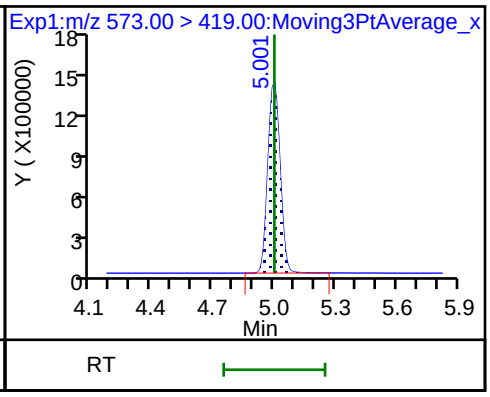
36 8:2 FTS



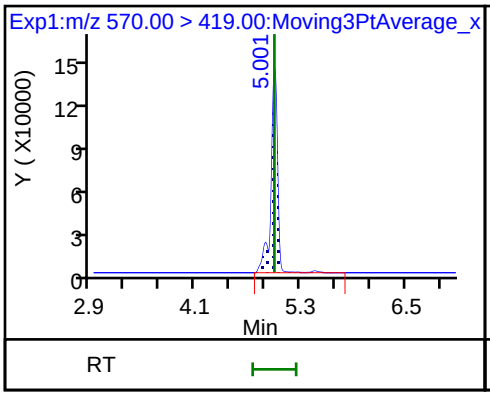

D 38 M2-8:2 FTS



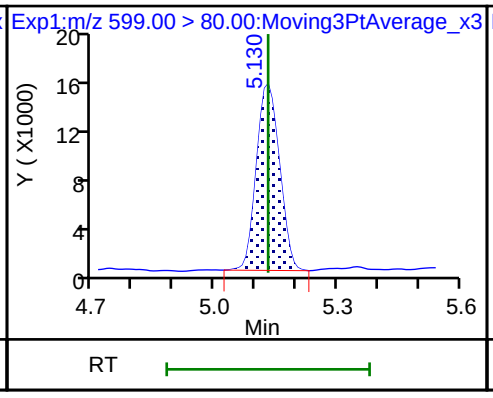

D 40 d3-NMeFOSAA



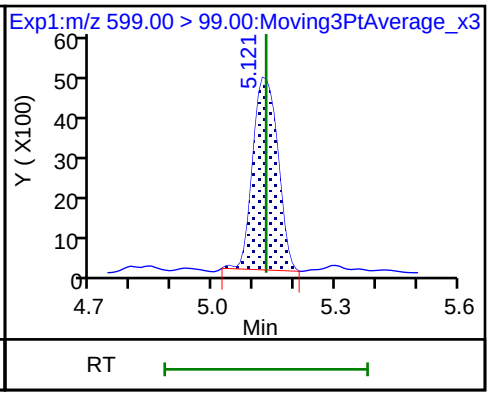

41 NMeFOSAA



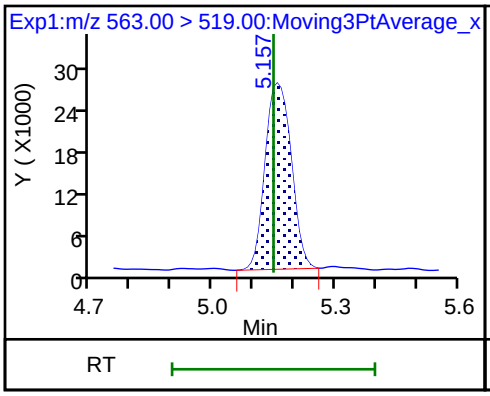

42 Perfluorodecanesulfonic acid



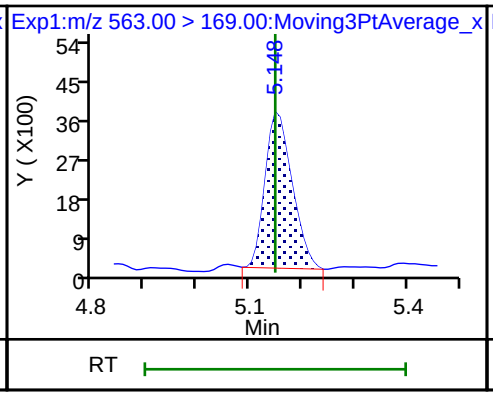

42 Perfluorodecanesulfonic acid



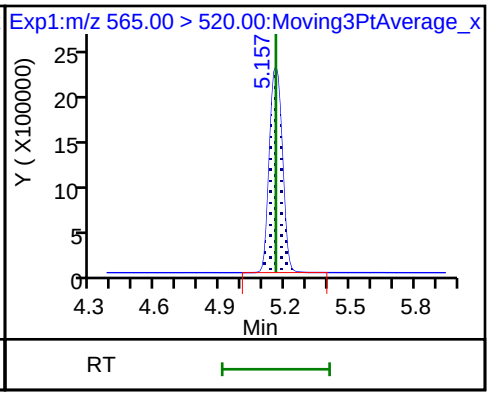

45 Perfluoroundecanoic acid



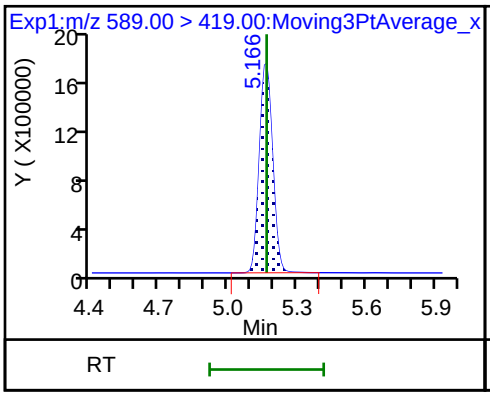

45 Perfluoroundecanoic acid



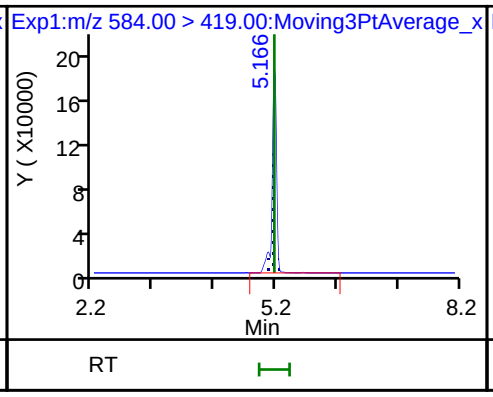

D 43 13C2 PFUnA



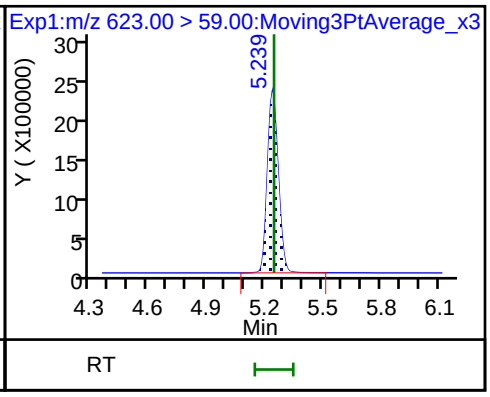

D 44 d5-NEtFOSAA



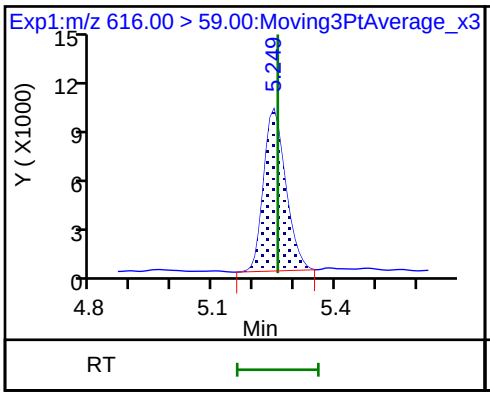

46 NEtFOSA



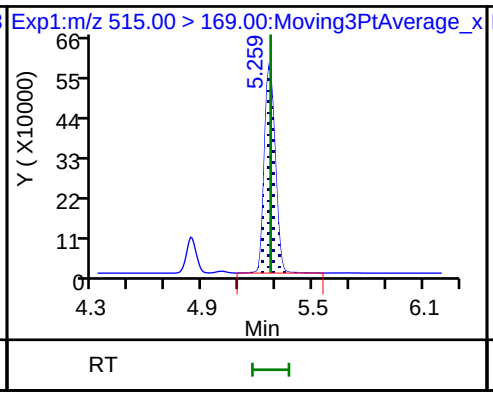

D 47 d7-N-MeFOSE-M



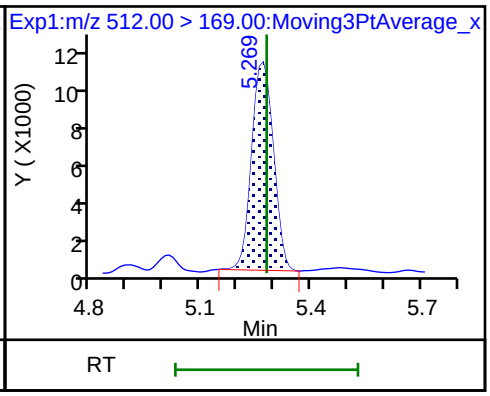
48 N-MeFOSE-M



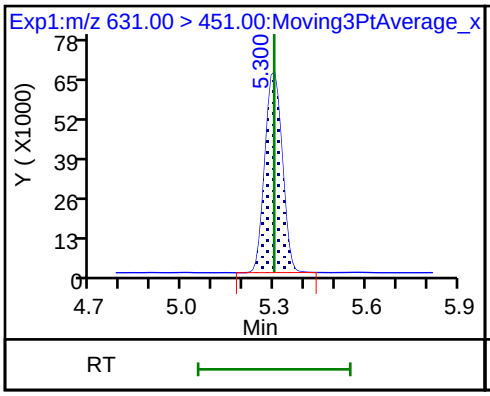

D 49 d-N-MeFOSA-M



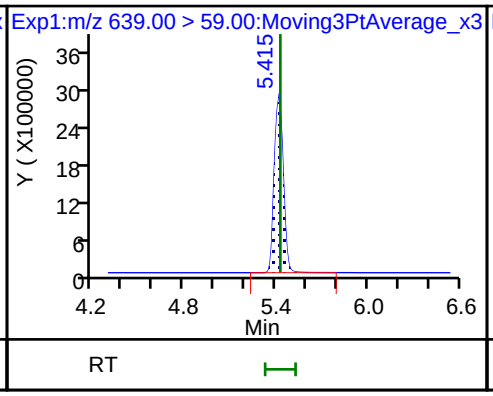

50 NMeFOSA



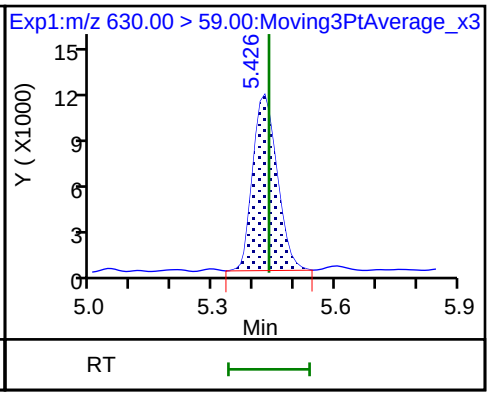

51 11ClFOS



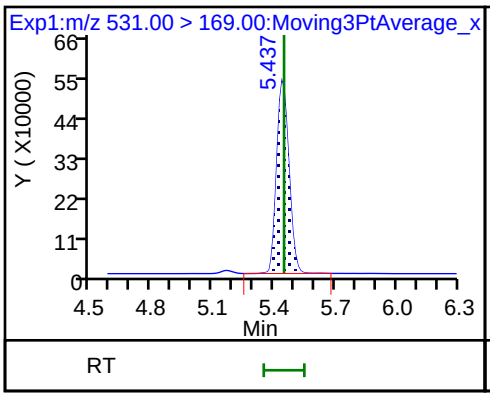

D 52 d9-N-EtFOSE-M



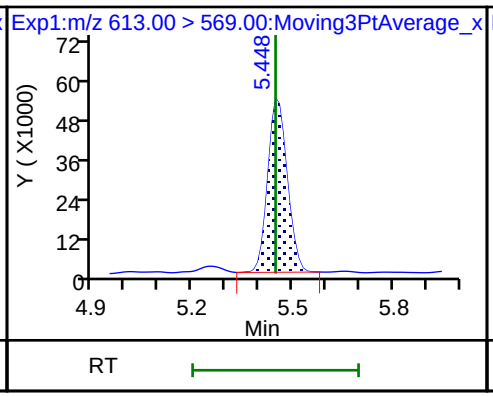

53 N-EtFOSE-M



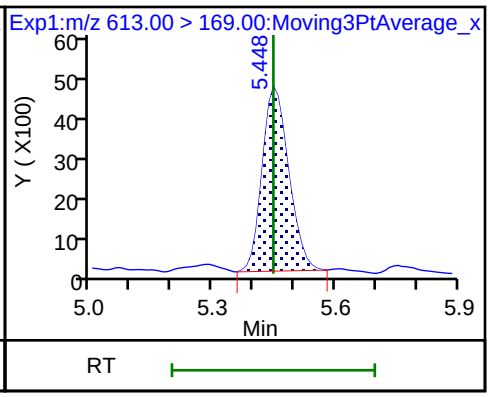

D 54 d-N-EtFOSA-M



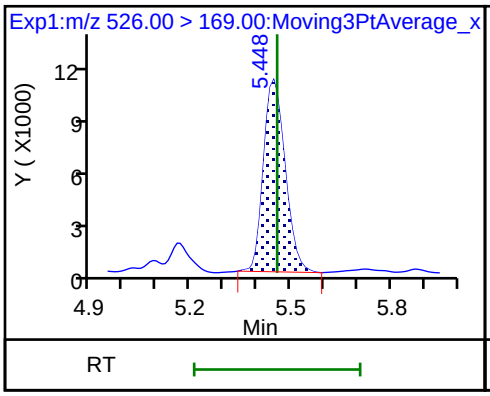

57 Perfluorododecanoic acid



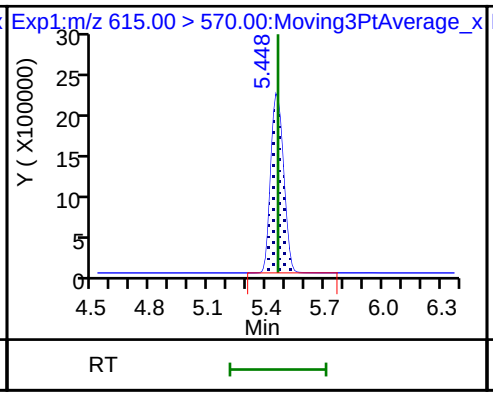

57 Perfluorododecanoic acid



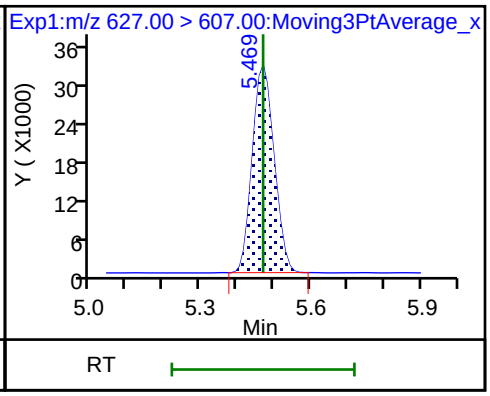

55 N-EtFOSA-M



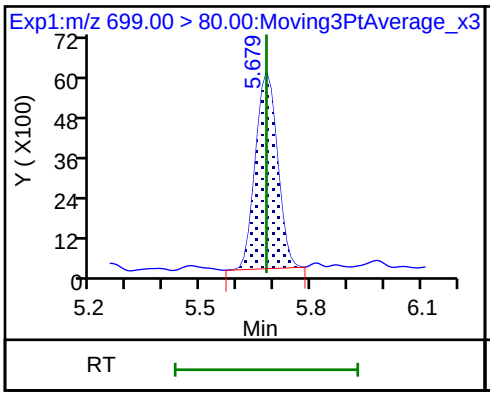

D 56 13C2 PFDoA



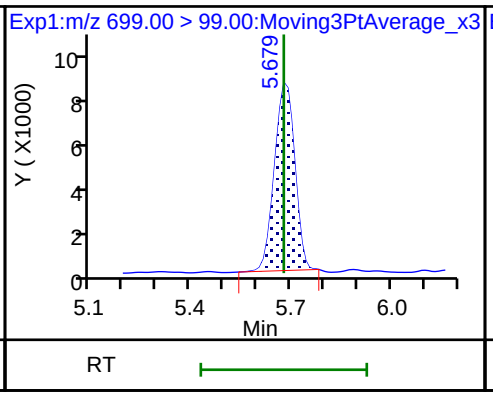

58 10:2 FTS



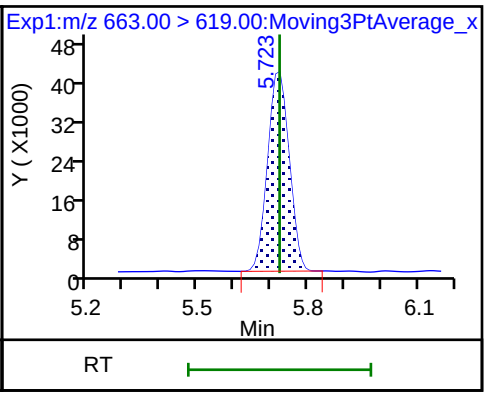
59 PFDoS



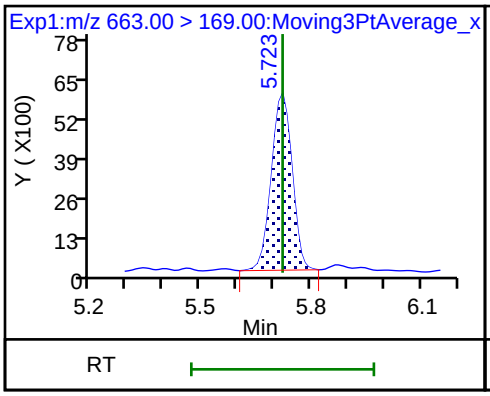

59 PFDoS



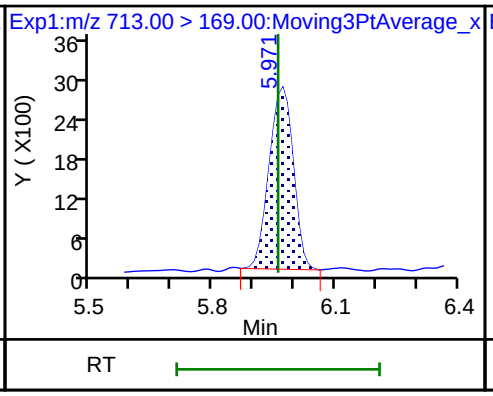

60 Perfluorotridecanoic acid



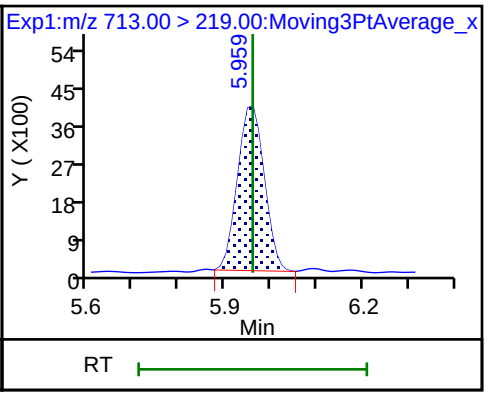

60 Perfluorotridecanoic acid



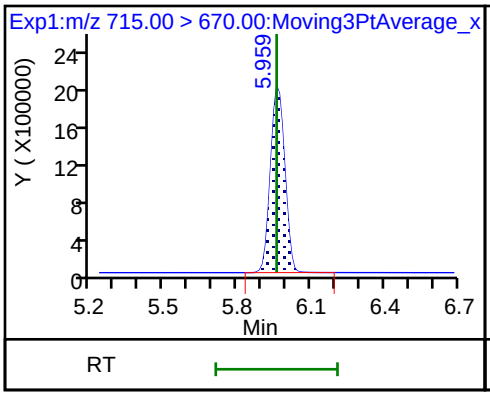

62 Perfluorotetradecanoic acid



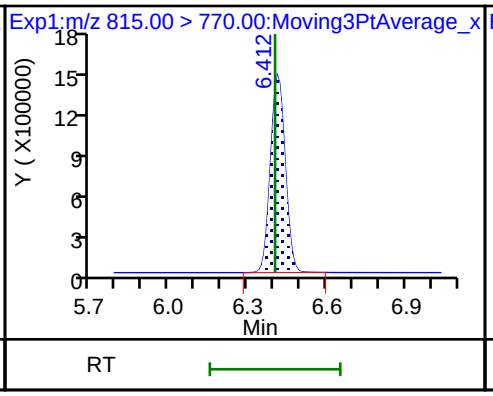

62 Perfluorotetradecanoic acid



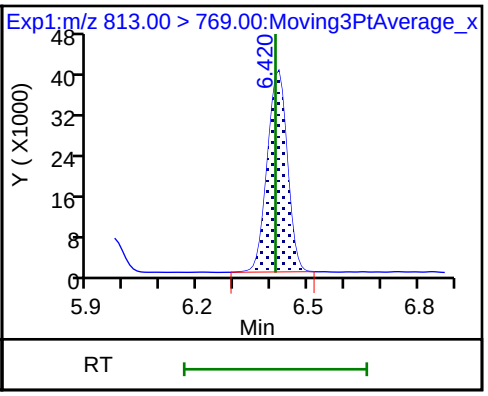

D 61 13C2 PFTeDA



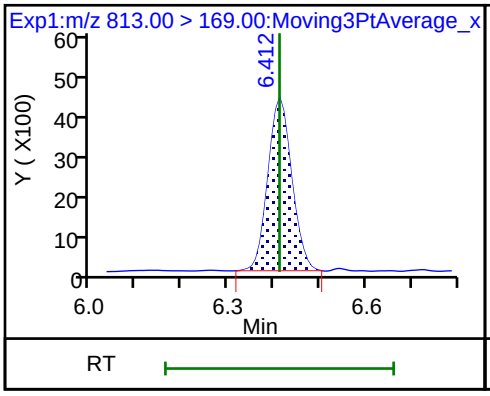

D 64 13C2 PFHxDA



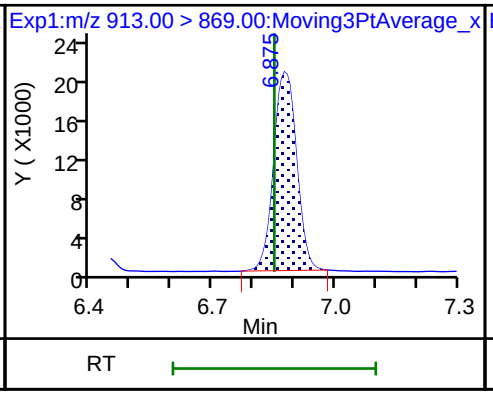

63 Perfluorohexadecanoic acid



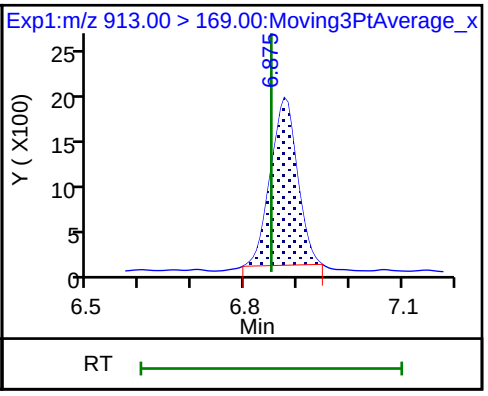

63 Perfluorohexadecanoic acid




65 Perfluorooctadecanoic acid




65 Perfluorooctadecanoic acid



Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

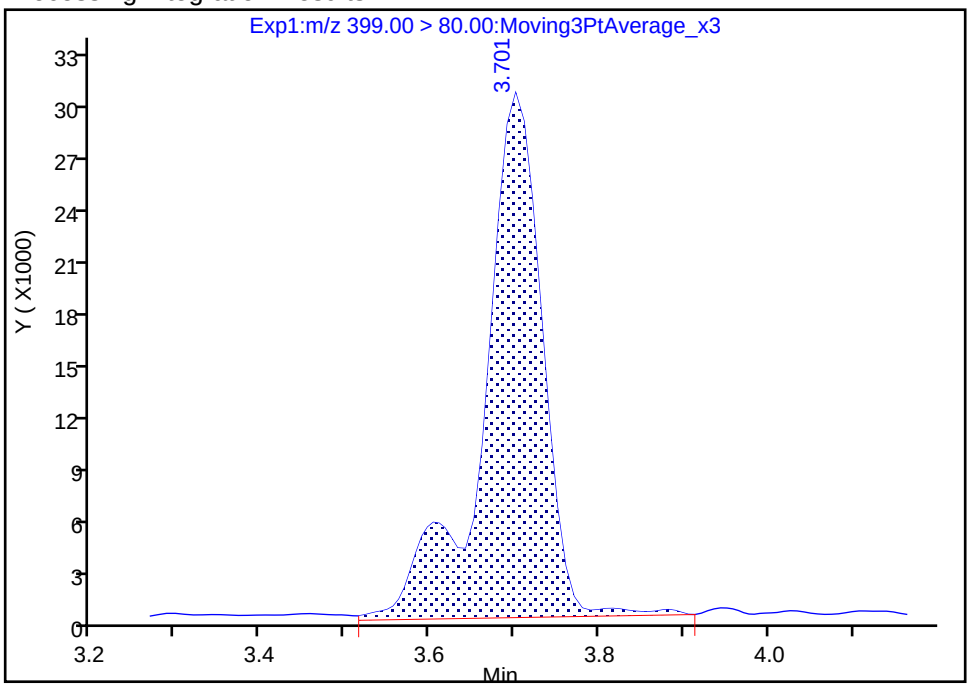
Data File: \\chromfs\Sacramento\ChromData\A18\20200911-103099.b\2020.09.11_A18_PFC_A_005.d
Injection Date: 11-Sep-2020 11:01:18 Instrument ID: A18
Lims ID: CCVL
Client ID:
Operator ID: TAISACA18-PC\A-18 ALS Bottle#: 51 Worklist Smp#: 2
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFAS_A18V2 Limit Group: LC PFC ICAL
Column: Gemini C18 3um 3mm x 50 mm ( 3.00mm) Detector EXP1

## 15 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 1

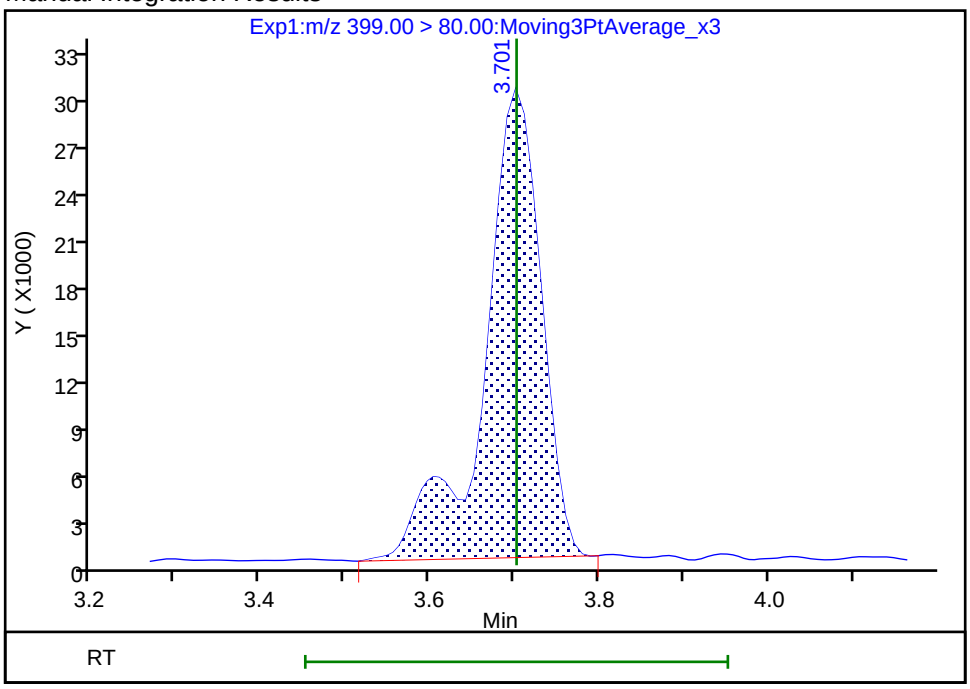
Processing Integration Results

RT: 3.70
Area: 143792
Amount: 0.047837
Amount Units: ng/ml




Manual Integration Results

RT: 3.70
Area: 136879
Amount: 0.045538
Amount Units: ng/ml




Reviewer: sanjumnair, 14-Sep-2020 09:59:34
Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

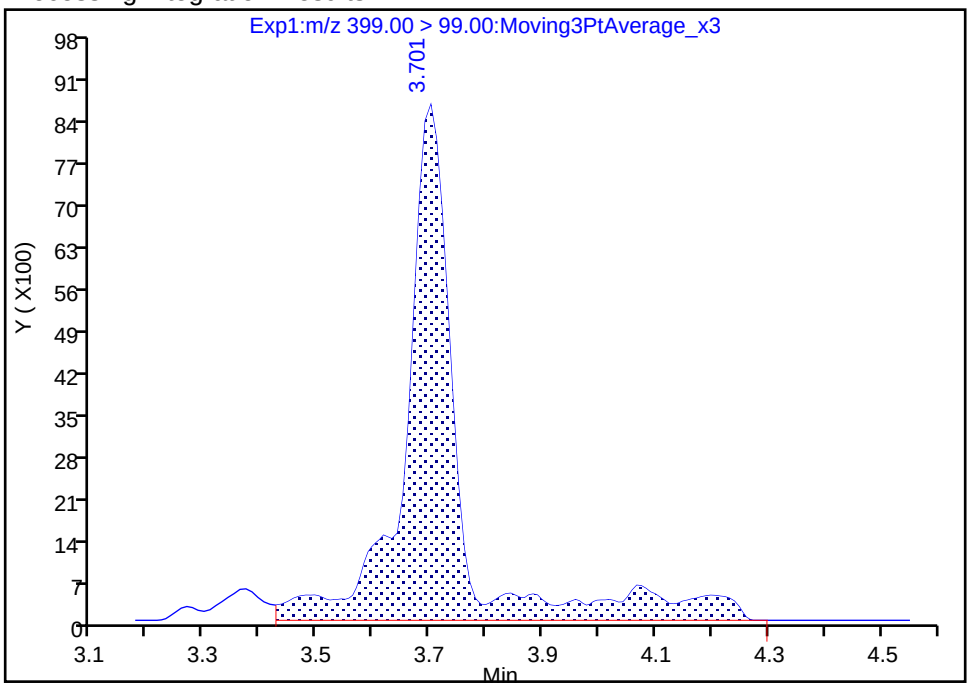
Data File: \\chromfs\Sacramento\ChromData\A18\20200911-103099.b\2020.09.11_A18_PFC_A_005.d
Injection Date: 11-Sep-2020 11:01:18 Instrument ID: A18
Lims ID: CCVL
Client ID:
Operator ID: TAISACA18-PC\A-18 ALS Bottle#: 51 Worklist Smp#: 2
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFAS_A18V2 Limit Group: LC PFC ICAL
Column: Gemini C18 3um 3mm x 50 mm ( 3.00mm) Detector EXP1

## 15 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 2

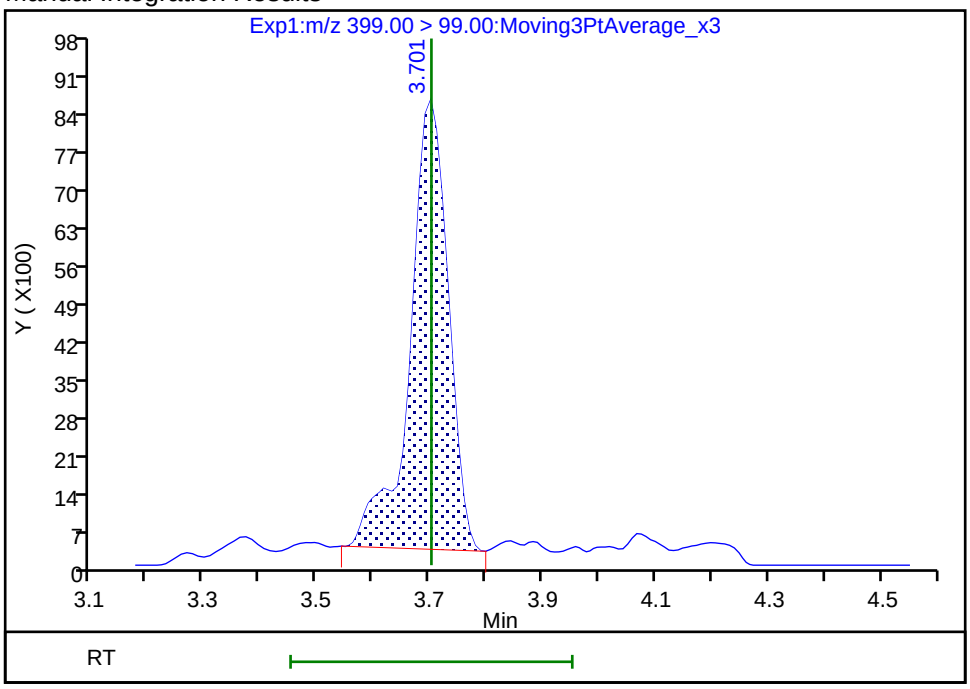
Processing Integration Results

RT: 3.70
Area: 55899
Amount: 0.047837
Amount Units: ng/ml




Manual Integration Results

RT: 3.70
Area: 38909
Amount: 0.045538
Amount Units: ng/ml




Reviewer: sanjumnair, 14-Sep-2020 09:59:40
Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

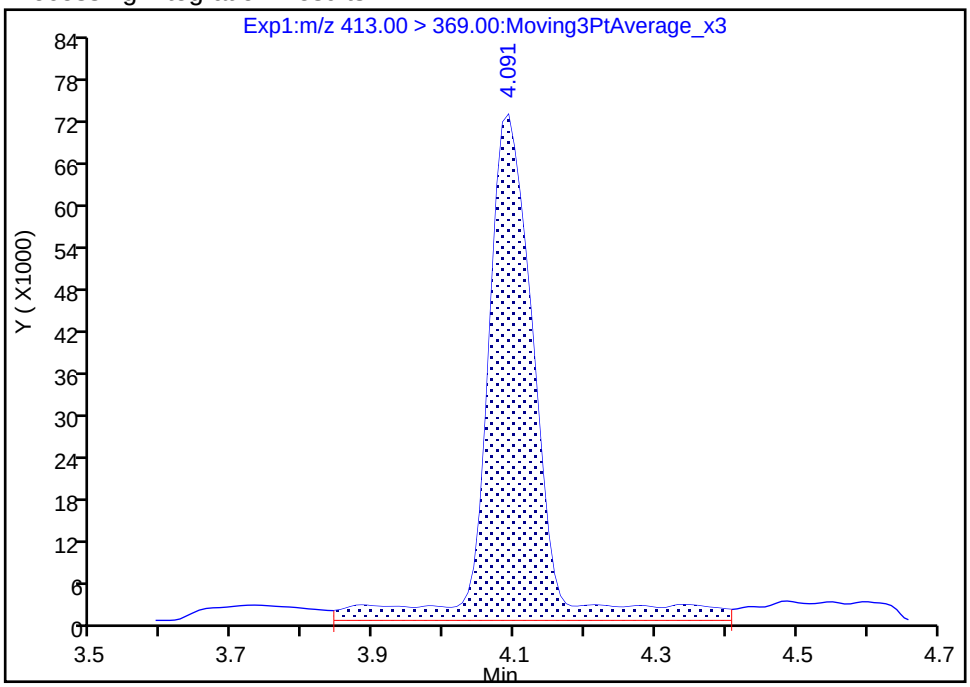
Data File: \\chromfs\Sacramento\ChromData\A18\20200911-103099.b\2020.09.11_A18_PFC_A_005.d
Injection Date: 11-Sep-2020 11:01:18 Instrument ID: A18
Lims ID: CCVL
Client ID:
Operator ID: TAISACA18-PC\A-18 ALS Bottle#: 51 Worklist Smp#: 2
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFAS_A18V2 Limit Group: LC PFC ICAL
Column: Gemini C18 3um 3mm x 50 mm ( 3.00mm) Detector EXP1

## 22 Perfluorooctanoic acid, CAS: 335-67-1

Signal: 1

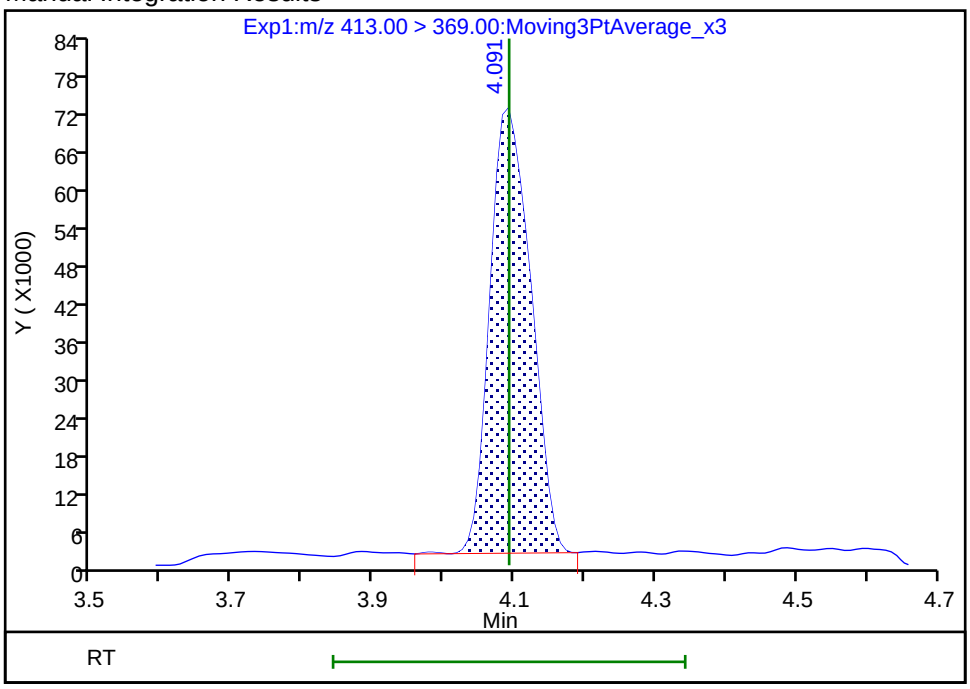
Processing Integration Results

RT: 4.09
Area: 349457
Amount: 0.067692
Amount Units: ng/ml




Manual Integration Results

RT: 4.09
Area: 283739
Amount: 0.054962
Amount Units: ng/ml




Reviewer: sanjumnair, 14-Sep-2020 09:59:50
Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

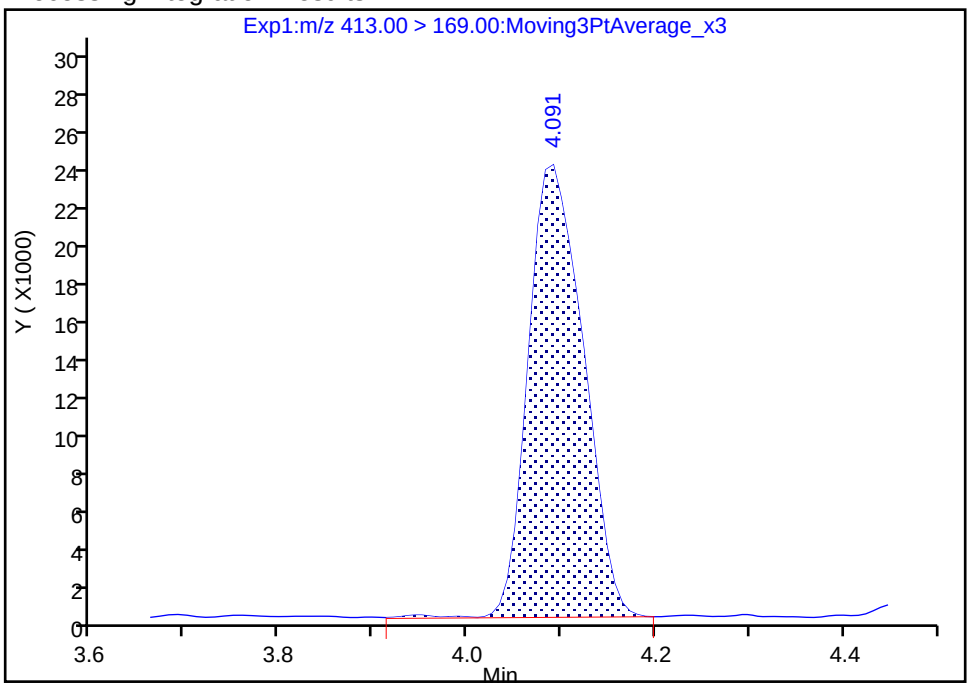
Data File: \\chromfs\Sacramento\ChromData\A18\20200911-103099.b\2020.09.11_A18_PFC_A_005.d
Injection Date: 11-Sep-2020 11:01:18 Instrument ID: A18
Lims ID: CCVL
Client ID:
Operator ID: TAISACA18-PC\A-18 ALS Bottle#: 51 Worklist Smp#: 2
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFAS_A18V2 Limit Group: LC PFC ICAL
Column: Gemini C18 3um 3mm x 50 mm ( 3.00mm) Detector EXP1

## 22 Perfluorooctanoic acid, CAS: 335-67-1

Signal: 2

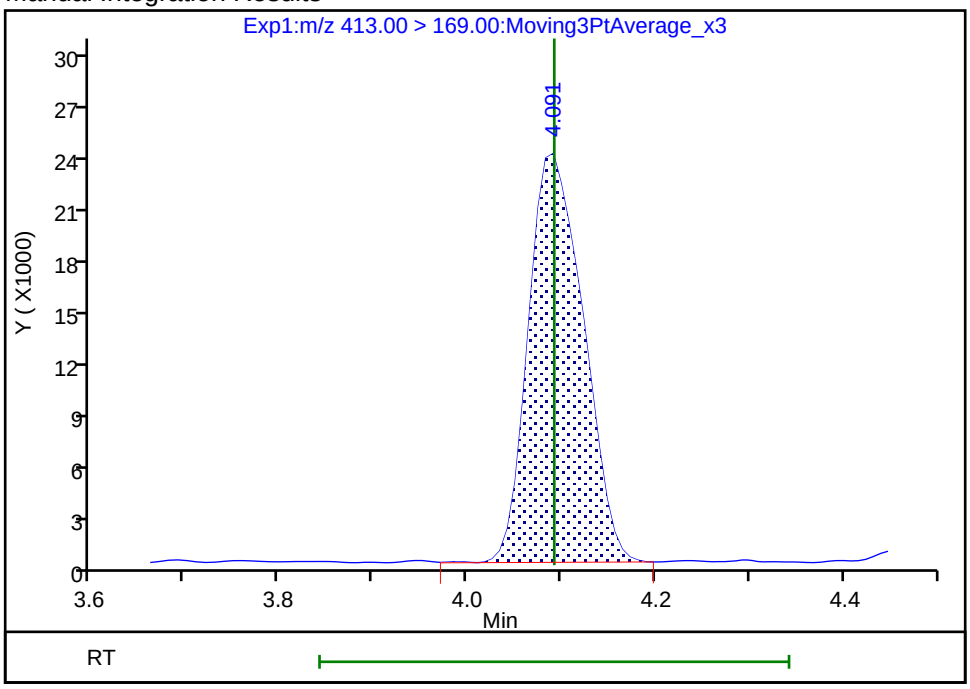
Processing Integration Results

RT: 4.09
Area: 96937
Amount: 0.067692
Amount Units: ng/ml




Manual Integration Results

RT: 4.09
Area: 96415
Amount: 0.054962
Amount Units: ng/ml




Reviewer: sanjumnair, 14-Sep-2020 10:00:04
Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

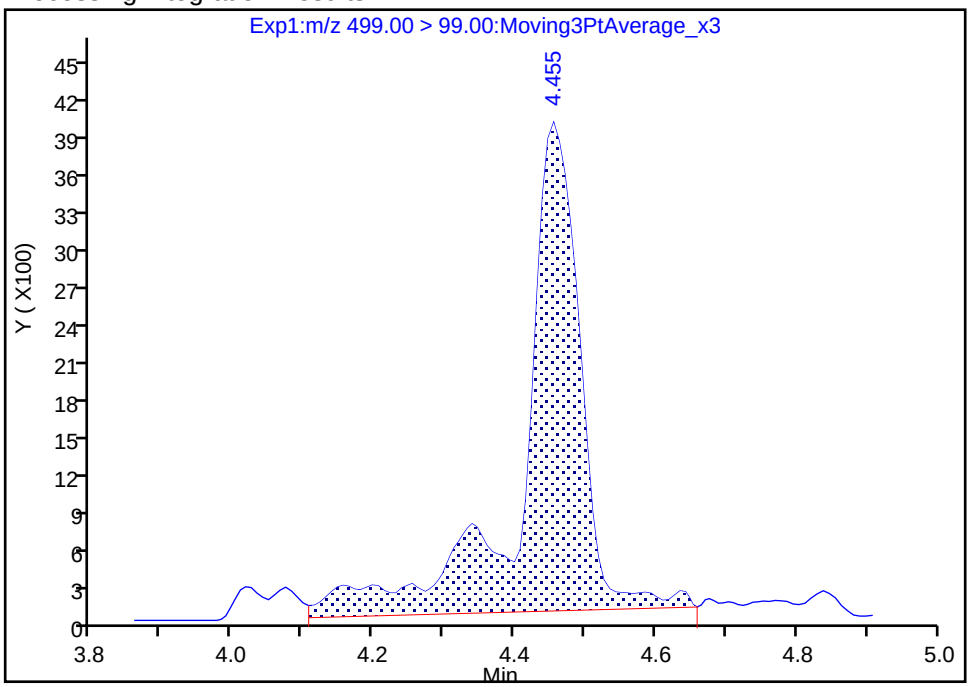
Data File: \\chromfs\Sacramento\ChromData\A18\20200911-103099.b\2020.09.11_A18_PFC_A_005.d
Injection Date: 11-Sep-2020 11:01:18 Instrument ID: A18
Lims ID: CCVL
Client ID:
Operator ID: TAISACA18-PC\A-18 ALS Bottle#: 51 Worklist Smp#: 2
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFAS_A18V2 Limit Group: LC PFC ICAL
Column: Gemini C18 3um 3mm x 50 mm ( 3.00mm) Detector EXP1

## 29 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 2

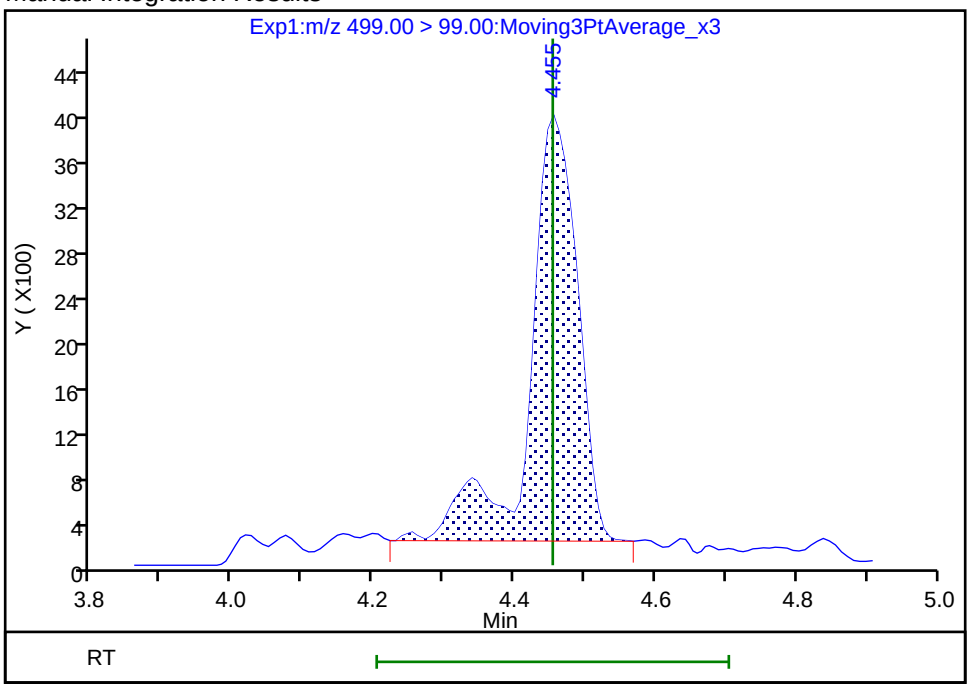
RT: 4.46
Area: 22600
Amount: 0.049685
Amount Units: ng/ml

Processing Integration Results




RT: 4.46
Area: 17660
Amount: 0.045347
Amount Units: ng/ml

Manual Integration Results




Reviewer: sanjumnair, 14-Sep-2020 10:00:13
Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

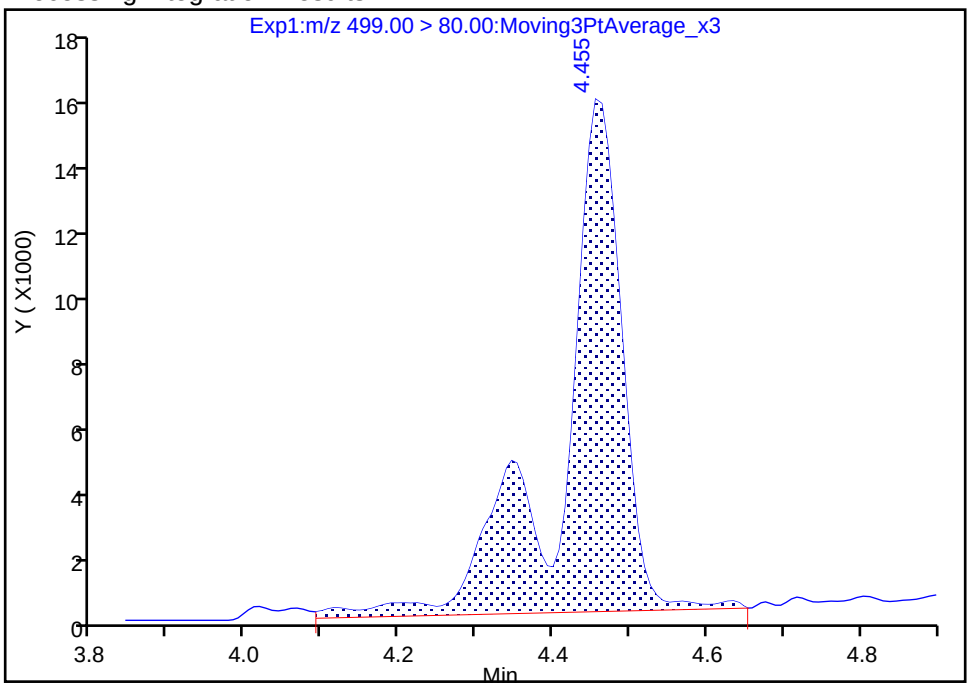
| | | | | | |
|---|---|---|---|---|---|
| Data File: | \\chromfs\Sacramento\ChromData\A18\20200911-103099.b\2020.09.11_A18_PFC_A_005.d | | | | |
| Injection Date: | 11-Sep-2020 11:01:18 | Instrument ID: | A18 | | |
| Lims ID: | CCVL | | | | |
| Client ID: | | | | | |
| Operator ID: | TAISACA18-PC\A-18 | ALS Bottle#: | 51 | Worklist Smp#: | 2 |
| Injection Vol: | 20.0 ul | Dil. Factor: | 1.0000 | | |
| Method: | PFAS_A18V2 | Limit Group: | LC PFC ICAL | | |
| Column: | Gemini C18 3um 3mm x 50 mm ( 3.00mm) | Detector | EXP1 | | |

## 29 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 1

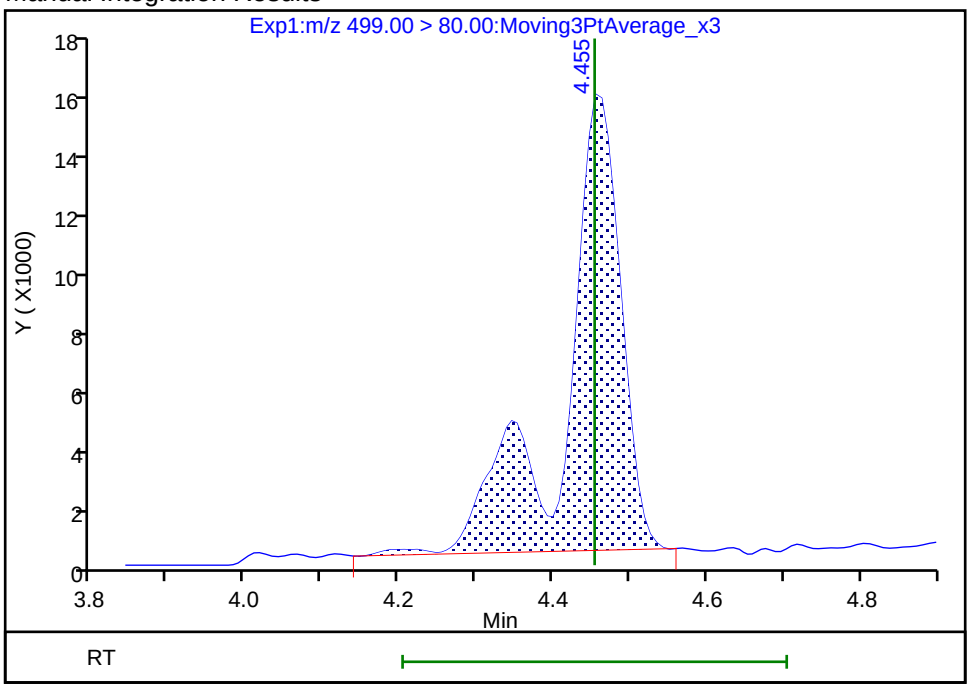
Processing Integration Results

RT: 4.46
Area: 86567
Amount: 0.049685
Amount Units: ng/ml




Manual Integration Results

RT: 4.46
Area: 79009
Amount: 0.045347
Amount Units: ng/ml




Reviewer: sanjumnair, 14-Sep-2020 10:00:21
Audit Action: Manually Integrated Audit Reason: Baseline

FORM VII
LCMS CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Sacramento  Job No.: 460-217547-1

SDG No.:

Lab Sample ID: CCV 320-411371/3  Calibration Date: 09/11/2020 11:10

Instrument ID: A18  Calib Start Date: 08/25/2020 16:43

GC Column: Gemini C18 3x50  ID: 3.00(mm)  Calib End Date: 08/25/2020 17:37

Lab File ID: 2020.09.11_A18_PFC_A_006.d  Conc. Units: ng/mL

| ANALYTE | CURVE TYPE | AVE RRF | RRF | MIN RRF | CALC AMOUNT | SPIKE AMOUNT | %D | MAX %D |
|---|---|---|---|---|---|---|---|---|
| Perfluorobutanoic acid (PFBA) | AveID | 0.8679 | 0.9190 | | 1.06 | 1.00 | 5.9 | 40.0 |
| Perfluoropentanoic acid (PFPeA) | AveID | 0.997 | 1.058 | | 1.06 | 1.00 | 6.1 | 40.0 |
| Perfluorobutanesulfonic acid (PFBS) | AveID | 1.010 | 1.053 | | 0.922 | 0.884 | 4.3 | 50.0 |
| 4:2 FTS | AveID | 2.273 | 2.513 | | 1.03 | 0.934 | 10.6 | 50.0 |
| Perfluorohexanoic acid (PFHxA) | AveID | 0.9638 | 0.9889 | | 1.03 | 1.00 | 2.6 | 40.0 |
| Perfluoropentanesulfonic acid (PFPeS) | AveID | 0.7925 | 0.8456 | | 1.00 | 0.938 | 6.7 | 50.0 |
| HFPO-DA (GenX) | AveID | 0.9742 | 1.040 | | 1.07 | 1.00 | 6.7 | 40.0 |
| Perfluoroheptanoic acid (PFHpA) | AveID | 1.014 | 1.019 | | 1.01 | 1.00 | 0.5 | 40.0 |
| Perfluorohexanesulfonic acid (PFHxS) | AveID | 1.181 | 1.114 | | 0.858 | 0.910 | -5.7 | 40.0 |
| 4,8-Dioxa-3H-perfluorononanoic acid (ADONA) | AveID | 9.582 | 10.59 | | 1.04 | 0.942 | 10.5 | 50.0 |
| 6:2 FTS | AveID | 2.299 | 2.398 | | 0.989 | 0.948 | 4.3 | 40.0 |
| Perfluoroheptanesulfonic Acid (PFHpS) | AveID | 1.118 | 1.204 | | 1.03 | 0.952 | 7.7 | 50.0 |
| Perfluorooctanoic acid (PFOA) | AveID | 1.020 | 1.057 | | 1.04 | 1.00 | 3.6 | 40.0 |
| Perfluorooctanesulfonic acid (PFOS) | AveID | 1.035 | 1.111 | | 0.997 | 0.928 | 7.4 | 40.0 |
| Perfluorononanoic acid (PFNA) | AveID | 0.9590 | 1.152 | | 1.20 | 1.00 | 20.2 | 40.0 |
| F-53B Major | AveID | 3.236 | 3.412 | | 0.983 | 0.932 | 5.4 | 50.0 |
| Perfluorooctanesulfonamide (FOSA) | AveID | 0.9305 | 0.9648 | | 1.04 | 1.00 | 3.7 | 40.0 |
| Perfluorononanesulfonic acid (PFNS) | AveID | 0.9368 | 1.030 | | 1.06 | 0.960 | 9.9 | 50.0 |
| 8:2 FTS | AveID | 1.775 | 1.858 | | 1.00 | 0.958 | 4.6 | 40.0 |
| Perfluorodecanoic acid (PFDA) | AveID | 0.9639 | 0.9027 | | 0.936 | 1.00 | -6.4 | 40.0 |
| N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA) | AveID | 0.7417 | 0.7573 | | 1.02 | 1.00 | 2.1 | 40.0 |
| Perfluorodecanesulfonic acid (PFDS) | AveID | 0.8350 | 0.8808 | | 1.02 | 0.964 | 5.5 | 50.0 |
| Perfluoroundecanoic acid (PFUnA) | AveID | 0.7253 | 0.7714 | | 1.07 | 1.00 | 6.4 | 40.0 |
| N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA) | AveID | 0.6758 | 0.7020 | | 1.04 | 1.00 | 3.9 | 40.0 |
| NMeFOSE | AveID | 1.080 | 1.253 | | 1.16 | 1.00 | 16.0 | 40.0 |
| NMeFOSA | AveID | 0.9606 | 1.041 | | 1.08 | 1.00 | 8.4 | 50.0 |
| F-53B Minor | AveID | 4.102 | 4.197 | | 0.964 | 0.942 | 2.3 | 50.0 |
| NEtFOSE | AveID | 1.073 | 1.161 | | 1.08 | 1.00 | 8.2 | 40.0 |
| NEtFOSA | AveID | 1.058 | 1.163 | | 1.10 | 1.00 | 9.8 | 40.0 |
| Perfluorododecanoic acid (PFDoA) | AveID | 1.023 | 0.9599 | | 0.944 | 1.01 | -6.1 | 40.0 |
| 10:2 FTS | AveID | 2.014 | 2.300 | | 1.10 | 0.964 | 14.2 | 50.0 |
| Perfluorododecanesulfonic acid (PFDoS) | AveID | 0.3329 | 0.3294 | | 0.958 | 0.968 | -1.0 | 50.0 |

FORM VII 537 (modified)

FORM VII
LCMS CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Sacramento  Job No.: 460-217547-1

SDG No.:

Lab Sample ID: CCV 320-411371/3  Calibration Date: 09/11/2020 11:10

Instrument ID: A18  Calib Start Date: 08/25/2020 16:43

GC Column: Gemini C18 3x50  ID: 3.00(mm)  Calib End Date: 08/25/2020 17:37

Lab File ID: 2020.09.11_A18_PFC_A_006.d  Conc. Units: ng/mL

| ANALYTE | CURVE TYPE | AVE RRF | RRF | MIN RRF | CALC AMOUNT | SPIKE AMOUNT | %D | MAX %D |
|---|---|---|---|---|---|---|---|---|
| Perfluorotridecanoic acid (PFTriA) | AveID | 0.9409 | 0.8457 | | 0.899 | 1.00 | -10.1 | 50.0 |
| Perfluorotetradecanoic acid (PFTeA) | AveID | 0.0844 | 0.1017 | | 1.21 | 1.00 | 20.6 | 50.0 |
| Perfluoro-n-hexadecanoic acid (PFHxDA) | L2ID | | 1.048 | | 1.17 | 1.00 | 17.1 | 50.0 |
| Perfluoro-n-octadecanoic acid (PFODA) | AveID | 0.6605 | 0.9311 | | 1.41 | 1.00 | 41.0 | 50.0 |
| 13C4 PFBA | Ave | 1.585 | 1.300 | | 2.05 | 2.50 | -18.0 | 50.0 |
| 13C5 PFPeA | Ave | 1.233 | 1.002 | | 2.03 | 2.50 | -18.8 | 50.0 |
| 13C3 PFBS | Ave | 0.9684 | 0.8641 | | 2.08 | 2.33 | -10.8 | 50.0 |
| M2-4:2 FTS | Ave | 0.2333 | 0.1824 | | 1.83 | 2.34 | -21.8 | 50.0 |
| 13C2 PFHxA | Ave | 1.231 | 1.124 | | 2.28 | 2.50 | -8.7 | 50.0 |
| 13C3 HFPO-DA | Ave | 0.2518 | 0.2166 | | 2.15 | 2.50 | -14.0 | 50.0 |
| 13C4 PFHpA | Ave | 1.051 | 0.9874 | | 2.35 | 2.50 | -6.0 | 50.0 |
| 18O2 PFHxS | Ave | 0.5117 | 0.4704 | | 2.17 | 2.37 | -8.1 | 50.0 |
| M2-6:2 FTS | Ave | 0.1958 | 0.1590 | | 1.93 | 2.38 | -18.8 | 50.0 |
| 13C4 PFOA | Ave | 1.001 | 0.9879 | | 2.47 | 2.50 | -1.3 | 50.0 |
| 13C4 PFOS | Ave | 0.3465 | 0.3032 | | 2.09 | 2.39 | -12.5 | 50.0 |
| 13C5 PFNA | Ave | 0.8063 | 0.7801 | | 2.42 | 2.50 | -3.2 | 50.0 |
| 13C8 FOSA | Ave | 0.5590 | 0.4944 | | 2.21 | 2.50 | -11.6 | 50.0 |
| 13C2 PFDA | Ave | 0.7829 | 0.7476 | | 2.39 | 2.50 | -4.5 | 50.0 |
| M2-8:2 FTS | Ave | 0.2823 | 0.2273 | | 1.93 | 2.40 | -19.5 | 50.0 |
| d3-NMeFOSAA | Ave | 0.5255 | 0.4407 | | 2.10 | 2.50 | -16.1 | 50.0 |
| 13C2 PFUnA | Ave | 0.7758 | 0.8218 | | 2.65 | 2.50 | 5.9 | 50.0 |
| d5-NEtFOSAA | Ave | 0.5556 | 0.5039 | | 2.27 | 2.50 | -9.3 | 50.0 |
| d7-N-MeFOSE-M | Ave | 0.1384 | 0.1402 | | 12.7 | 12.5 | 1.3 | 50.0 |
| d-N-MeFOSA-M | Ave | 0.1965 | 0.1734 | | 2.21 | 2.50 | -11.8 | 50.0 |
| d9-N-EtFOSE-M | Ave | 0.1700 | 0.1884 | | 13.9 | 12.5 | 10.9 | 50.0 |
| d-N-EtFOSA-M | Ave | 0.2011 | 0.1698 | | 2.11 | 2.50 | -15.6 | 50.0 |
| 13C2 PFDoA | Ave | 0.7650 | 0.9645 | | 3.15 | 2.50 | 26.1 | 50.0 |
| 13C2 PFTeDA | Ave | 0.6311 | 0.6133 | | 2.43 | 2.50 | -2.8 | 50.0 |
| 13C2 PFHxDA | Ave | 0.4618 | 0.4119 | | 2.23 | 2.50 | -10.8 | 50.0 |
| 13C8 PFOA | Ave | 0.6756 | 0.7428 | | 2.69 | 2.45 | 9.9 | 50.0 |
| 13C8 PFOS | Ave | 0.1082 | 0.0973 | | 2.15 | 2.39 | -10.1 | 50.0 |

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\A18\20200911-103099.b\2020.09.11_A18_PFC_A_006.d
Lims ID: CCV L4
Client ID:
Sample Type: CCVIS
Inject. Date: 11-Sep-2020 11:10:24 ALS Bottle#: 52 Worklist Smp#: 3
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Sample Info: CCV L4 (30)
Misc. Info.: Plate: 1 Rack: 1
Operator ID: TAISACA18-PC\A-18 Instrument ID: A18
Sublist: chrom-PFAS_A18V2*sub1

Method: \\chromfs\Sacramento\ChromData\A18\20200911-103099.b\PFAS_A18V2.m
Limit Group: LC PFC ICAL
Last Update: 14-Sep-2020 10:01:34 Calib Date: 25-Aug-2020 17:37:57
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\A18\20200825-102078.b\2020.08.25_A18_ICAL_A_017.d

Column 1 : Gemini C18 3um 3mm x 50 mm ( 3.00 mm) Det: EXP1
Process Host: CTX1038

First Level Reviewer: fariasa Date: 11-Sep-2020 11:41:25
Ratio Calibration: Average of Initial Calibration

| Signal | RT | EXP RT | DLT RT | REL RT | Response | Amount ng/ml | Ratio(Limits) | %Rec | S/N | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| D 1 13C4 PFBA | | | | | | | | | | |
| 217.00 > 172.00 | 2.557 | 2.557 | 0.0 | 0.624 | 16516876 | 2.05 | | 82.0 | 9565 | |
| 2 Perfluorobutanoic acid | | | | | | | | | | |
| 212.90 > 169.00 | 2.565 | 2.565 | 0.0 | 1.003 | 6071865 | 1.06 | | 106 | 293 | |
| D 4 13C5 PFPeA | | | | | | | | | | |
| 267.90 > 223.00 | 2.919 | 2.919 | 0.0 | 0.712 | 12727777 | 2.03 | | 81.2 | 4325 | |
| 5 Perfluoropentanoic acid | | | | | | | | | | |
| 262.90 > 219.00 | 2.919 | 2.919 | 0.0 | 1.000 | 5385992 | 1.06 | | 106 | 236 | |
| D 9 13C3 PFBS | | | | | | | | | | |
| 301.90 > 80.00 | 2.950 | 2.950 | 0.0 | 0.720 | 10208351 | 2.07 | | 89.2 | 3932 | |
| 6 Perfluorobutanesulfonic acid | | | | | | | | | | |
| 298.90 > 80.00 | 2.950 | 2.950 | 0.0 | 1.000 | 4086542 | 0.9217 | Target=2.30 | 104 | 891 | |
| 298.90 > 99.00 | 2.950 | 2.950 | 0.0 | 1.000 | 1763295 | | 2.32(1.15-3.45) | | 649 | |
| D 7 M2-4:2 FTS | | | | | | | | | | |
| 329.00 > 81.00 | 3.248 | 3.248 | 0.0 | 0.792 | 2164370 | 1.83 | | 78.2 | 1015 | |
| 8 4:2 FTS | | | | | | | | | | |
| 327.00 > 307.00 | 3.248 | 3.248 | 0.0 | 1.000 | 2175757 | 1.03 | | 111 | 7520 | |
| D 11 13C2 PFHxA | | | | | | | | | | |
| 315.00 > 270.00 | 3.298 | 3.298 | 0.0 | 0.805 | 14276065 | 2.28 | | 91.3 | 5349 | |
| 10 Perfluorohexanoic acid | | | | | | | | | | |
| 313.00 > 269.00 | 3.298 | 3.298 | 0.0 | 1.000 | 5647001 | 1.03 | Target=13.78 | 103 | 388 | |
| 313.00 > 119.00 | 3.298 | 3.298 | 0.0 | 1.000 | 436975 | | 12.92(6.89-20.66) | | 248 | |
| 12 Perfluoropentanesulfonic acid | | | | | | | | | | |
| 349.00 > 80.00 | 3.309 | 3.309 | 0.0 | 1.122 | 3482739 | 1.00 | Target=3.02 | 107 | 784 | |
| 349.00 > 99.00 | 3.309 | 3.309 | 0.0 | 1.122 | 1170855 | | 2.97(1.51-4.52) | | 754 | |
| 13 HPFO-DA | | | | | | | | | | |
| 285.00 > 169.00 | 3.426 | 3.426 | 0.0 | 1.000 | 1143974 | 1.07 | | 107 | 2778 | |

| Signal | RT | EXP RT | DLT RT | REL RT | Response | Amount ng/ml | Ratio(Limits) | %Rec | S/N | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| D 14 13C3 HFPO-DA | | | | | | | | | | |
| 287.00 > 169.00 | 3.426 | 3.426 | 0.0 | 0.836 | 2751176 | 2.15 | | 86.0 | 6346 | |
| D 18 13C4 PFHpA | | | | | | | | | | |
| 367.00 > 322.00 | 3.701 | 3.701 | 0.0 | 0.903 | 12542839 | 2.35 | | 94.0 | 8419 | |
| 16 Perfluoroheptanoic acid | | | | | | | | | | |
| 363.00 > 319.00 | 3.701 | 3.701 | 0.0 | 1.000 | 5111527 | 1.00 | Target=3.84 | 100 | 550 | |
| 363.00 > 169.00 | 3.701 | 3.701 | 0.0 | 1.000 | 1412196 | | 3.62(1.92-5.76) | | 1014 | |
| D 17 18O2 PFHxS | | | | | | | | | | |
| 403.00 > 84.00 | 3.711 | 3.711 | 0.0 | 0.905 | 5653425 | 2.17 | | 91.9 | 9171 | |
| 15 Perfluorohexanesulfonic acid | | | | | | | | | | M |
| 399.00 > 80.00 | 3.711 | 3.711 | 0.0 | 1.000 | 2423229 | 0.8580 | Target=3.50 | 94.3 | 683 | M |
| 399.00 > 99.00 | 3.711 | 3.711 | 0.0 | 1.000 | 697402 | | 3.47(1.75-5.25) | | 432 | M |
| 19 DONA | | | | | | | | | | |
| 377.00 > 251.00 | 3.750 | 3.750 | 0.0 | 0.840 | 15373482 | 1.04 | Target=2.42 | 111 | 4817 | |
| 377.00 > 85.00 | 3.750 | 3.750 | 0.0 | 0.840 | 6361255 | | 2.42(1.21-3.63) | | 4812 | |
| D 20 M2-6:2 FTS | | | | | | | | | | |
| 429.00 > 81.00 | 4.074 | 4.074 | 0.0 | 0.994 | 1918911 | 1.93 | | 81.2 | 1414 | |
| 21 6:2 FTS | | | | | | | | | | |
| 427.00 > 407.00 | 4.074 | 4.074 | 0.0 | 1.000 | 1836780 | 0.9889 | | 104 | 2957 | |
| * 23 13C2 PFOA | | | | | | | | | | |
| 415.00 > 370.00 | 4.099 | 4.099 | 0.0 | | 12703244 | 2.50 | | | 7387 | |
| 22 Perfluorooctanoic acid | | | | | | | | | | M |
| 413.00 > 369.00 | 4.099 | 4.099 | 0.0 | 1.000 | 5309552 | 1.04 | Target=2.94 | 104 | 621 | M |
| 413.00 > 169.00 | 4.099 | 4.099 | 0.0 | 1.000 | 1775774 | | 2.99(1.47-4.41) | | 1122 | M |
| 24 Perfluoroheptanesulfonic acid | | | | | | | | | | |
| 449.00 > 80.00 | 4.090 | 4.090 | 0.0 | 0.917 | 1765926 | 1.03 | Target=4.40 | 108 | 811 | |
| 449.00 > 99.00 | 4.090 | 4.090 | 0.0 | 0.917 | 416013 | | 4.24(2.20-6.60) | | 535 | |
| $ 26 13C8 PFOA | | | | | | | | | | |
| 421.00 > 376.00 | 4.090 | 4.090 | 0.0 | 0.998 | 9237591 | 2.69 | | 110 | 7328 | |
| D 25 13C4 PFOA | | | | | | | | | | |
| 417.00 > 372.00 | 4.099 | 4.099 | 0.0 | 1.000 | 12549874 | 2.47 | | 98.7 | 6049 | |
| $ 28 13C8 PFOS | | | | | | | | | | |
| 507.00 > 99.00 | 4.462 | 4.462 | 0.0 | 1.089 | 1181957 | 2.15 | | 89.9 | 2969 | |
| D 27 13C4 PFOS | | | | | | | | | | |
| 503.00 > 80.00 | 4.462 | 4.462 | 0.0 | 1.089 | 3682642 | 2.09 | | 87.5 | 1523 | |
| 29 Perfluorooctanesulfonic acid | | | | | | | | | | M |
| 499.00 > 80.00 | 4.462 | 4.462 | 0.0 | 1.000 | 1589264 | 1.00 | Target=4.53 | 107 | 492 | M |
| 499.00 > 99.00 | 4.462 | 4.462 | 0.0 | 1.000 | 328773 | | 4.83(2.26-6.79) | | 434 | M |
| D 30 13C5 PFNA | | | | | | | | | | |
| 468.00 > 423.00 | 4.486 | 4.486 | 0.0 | 1.094 | 9910059 | 2.42 | | 96.8 | 4965 | |
| 31 Perfluorononanoic acid | | | | | | | | | | |
| 463.00 > 419.00 | 4.486 | 4.486 | 0.0 | 1.000 | 4577325 | 1.20 | Target=8.97 | 120 | 811 | |
| 463.00 > 169.00 | 4.470 | 4.486 | -0.016 | 0.996 | 465145 | | 9.84(4.48-13.45) | | 749 | |
| 32 9ClFOS | | | | | | | | | | |
| 531.00 > 351.00 | 4.664 | 4.664 | 0.0 | 1.045 | 4899207 | 0.9826 | | 105 | 6807 | |
| D 33 13C8 FOSA | | | | | | | | | | |
| 506.00 > 78.00 | 4.786 | 4.786 | 0.0 | 1.168 | 6280011 | 2.21 | | 88.4 | 4382 | |

| Signal | RT | EXP RT | DLT RT | REL RT | Response | Amount ng/ml | Ratio(Limits) | %Rec | S/N | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| 34 Perfluorooctanesulfonamide | | | | | | | | | | |
| 498.00 > 78.00 | 4.794 | 4.794 | 0.0 | 1.002 | 2423586 | 1.04 | | 104 | 3612 | |
| 35 Perfluorononanesulfonic acid | | | | | | | | | | |
| 549.00 > 80.00 | 4.811 | 4.811 | 0.0 | 1.078 | 1522913 | 1.05 | Target=2.85 | 110 | 1073 | |
| 549.00 > 99.00 | 4.811 | 4.811 | 0.0 | 1.078 | 543341 | | 2.80(1.43-4.28) | | 854 | |
| D 39 13C2 PFDA | | | | | | | | | | |
| 515.00 > 470.00 | 4.837 | 4.837 | 0.0 | 1.180 | 9496473 | 2.39 | | 95.5 | 10840 | |
| 37 Perfluorodecanoic acid | | | | | | | | | | |
| 513.00 > 469.00 | 4.837 | 4.837 | 0.0 | 1.000 | 3428931 | 0.9365 | Target=10.16 | 93.6 | 940 | |
| 513.00 > 169.00 | 4.837 | 4.837 | 0.0 | 1.000 | 374437 | | 9.16(5.08-15.24) | | 215 | |
| 36 8:2 FTS | | | | | | | | | | |
| 527.00 > 507.00 | 4.837 | 4.837 | 0.0 | 1.000 | 2055591 | 1.00 | | 105 | 4771 | |
| D 38 M2-8:2 FTS | | | | | | | | | | |
| 529.00 > 81.00 | 4.837 | 4.837 | 0.0 | 1.180 | 2766510 | 1.93 | | 80.5 | 1893 | |
| D 40 d3-NMeFOSAA | | | | | | | | | | |
| 573.00 > 419.00 | 5.000 | 5.000 | 0.0 | 1.220 | 5598943 | 2.10 | | 83.9 | 3400 | |
| 41 NMeFOSAA | | | | | | | | | | |
| 570.00 > 419.00 | 5.011 | 5.011 | 0.0 | 1.002 | 1696036 | 1.02 | | 102 | 8289 | |
| 42 Perfluorodecanesulfonic acid | | | | | | | | | | |
| 599.00 > 80.00 | 5.130 | 5.130 | 0.0 | 1.150 | 1308327 | 1.02 | Target=2.77 | 105 | 1169 | |
| 599.00 > 99.00 | 5.130 | 5.130 | 0.0 | 1.150 | 462545 | | 2.83(1.38-4.15) | | 1210 | |
| 45 Perfluoroundecanoic acid | | | | | | | | | | |
| 563.00 > 519.00 | 5.157 | 5.157 | 0.0 | 1.000 | 3224489 | 1.06 | Target=8.43 | 106 | 1400 | |
| 563.00 > 169.00 | 5.157 | 5.157 | 0.0 | 1.000 | 372794 | | 8.65(4.22-12.65) | | 704 | |
| D 43 13C2 PFUnA | | | | | | | | | | |
| 565.00 > 520.00 | 5.157 | 5.157 | 0.0 | 1.258 | 10439296 | 2.65 | | 106 | 7147 | |
| D 44 d5-NEtFOSAA | | | | | | | | | | |
| 589.00 > 419.00 | 5.166 | 5.166 | 0.0 | 1.260 | 6401157 | 2.27 | | 90.7 | 3393 | |
| 46 NEtFOSA | | | | | | | | | | |
| 584.00 > 419.00 | 5.175 | 5.175 | 0.0 | 1.002 | 1797442 | 1.04 | | 104 | 9273 | |
| D 47 d7-N-MeFOSE-M | | | | | | | | | | |
| 623.00 > 59.00 | 5.239 | 5.239 | 0.0 | 1.278 | 8907504 | 12.7 | | 101 | 5326 | |
| 48 N-MeFOSE-M | | | | | | | | | | |
| 616.00 > 59.00 | 5.249 | 5.249 | 0.0 | 1.002 | 892625 | 1.16 | | 116 | 913 | |
| D 49 d-N-MeFOSA-M | | | | | | | | | | |
| 515.00 > 169.00 | 5.269 | 5.269 | 0.0 | 1.286 | 2202131 | 2.21 | | 88.2 | 42.8 | |
| 50 NMeFOSA | | | | | | | | | | |
| 512.00 > 169.00 | 5.269 | 5.269 | 0.0 | 1.000 | 917251 | 1.08 | | 108 | 410 | |
| 51 11ClFOS | | | | | | | | | | |
| 631.00 > 451.00 | 5.300 | 5.300 | 0.0 | 1.188 | 6092219 | 0.9639 | | 102 | 6578 | |
| D 52 d9-N-EtFOSE-M | | | | | | | | | | |
| 639.00 > 59.00 | 5.415 | 5.415 | 0.0 | 1.321 | 11967253 | 13.9 | | 111 | 4680 | |
| 53 N-EtFOSE-M | | | | | | | | | | |
| 630.00 > 59.00 | 5.437 | 5.437 | 0.0 | 1.004 | 1111872 | 1.08 | | 108 | 1722 | |
| D 54 d-N-EtFOSA-M | | | | | | | | | | |
| 531.00 > 169.00 | 5.448 | 5.448 | 0.0 | 1.329 | 2157061 | 2.11 | | 84.4 | 309 | |

| Signal | RT | EXP RT | DLT RT | REL RT | Response | Amount ng/ml | Ratio(Limits) | %Rec | S/N | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| 57 Perfluorododecanoic acid | | | | | | | | | | |
| 613.00 > 569.00 | 5.459 | 5.459 | 0.0 | 1.000 | 4732492 | 0.9444 | Target=9.12 | 93.9 | 1543 | |
| 613.00 > 169.00 | 5.459 | 5.459 | 0.0 | 1.000 | 552336 | | 8.57(4.56-13.69) | | 1385 | |
| 55 N-EtFOSA-M | | | | | | | | | | |
| 526.00 > 169.00 | 5.448 | 5.448 | 0.0 | 1.000 | 1003106 | 1.10 | | 110 | 373 | |
| D 56 13C2 PFDoA | | | | | | | | | | |
| 615.00 > 570.00 | 5.459 | 5.459 | 0.0 | 1.332 | 12251851 | 3.15 | | 126 | 13338 | |
| 58 10:2 FTS | | | | | | | | | | |
| 627.00 > 607.00 | 5.469 | 5.469 | 0.0 | 1.131 | 2561560 | 1.10 | | 114 | 3324 | |
| 59 PFDoS | | | | | | | | | | |
| 699.00 > 80.00 | 5.691 | 5.691 | 0.0 | 1.275 | 491372 | 0.9580 | Target=0.72 | 99.0 | 506 | |
| 699.00 > 99.00 | 5.691 | 5.691 | 0.0 | 1.275 | 696635 | | 0.71(0.36-1.07) | | 1934 | |
| 60 Perfluorotridecanoic acid | | | | | | | | | | |
| 663.00 > 619.00 | 5.723 | 5.723 | 0.0 | 1.048 | 4144541 | 0.8988 | Target=6.78 | 89.9 | 2155 | |
| 663.00 > 169.00 | 5.723 | 5.723 | 0.0 | 1.048 | 576204 | | 7.19(3.39-10.17) | | 1515 | |
| 62 Perfluorotetradecanoic acid | | | | | | | | | | |
| 713.00 > 169.00 | 5.971 | 5.971 | 0.0 | 1.000 | 317418 | 1.21 | Target=0.85 | 121 | 1379 | |
| 713.00 > 219.00 | 5.960 | 5.971 | -0.011 | 0.998 | 359319 | | 0.88(0.43-1.28) | | 1165 | |
| D 61 13C2 PFTeDA | | | | | | | | | | |
| 715.00 > 670.00 | 5.971 | 5.971 | 0.0 | 1.457 | 7791306 | 2.43 | | 97.2 | 7095 | |
| D 64 13C2 PFHxDA | | | | | | | | | | |
| 815.00 > 770.00 | 6.420 | 6.420 | 0.0 | 1.567 | 5232109 | 2.23 | | 89.2 | 5594 | |
| 63 Perfluorohexadecanoic acid | | | | | | | | | | |
| 813.00 > 769.00 | 6.420 | 6.420 | 0.0 | 1.000 | 2193932 | 1.17 | Target=10.21 | 117 | 1475 | |
| 813.00 > 169.00 | 6.412 | 6.420 | -0.008 | 0.999 | 226689 | | 9.68(5.11-15.32) | | 1392 | |
| 65 Perfluorooctadecanoic acid | | | | | | | | | | |
| 913.00 > 869.00 | 6.881 | 6.881 | 0.0 | 1.072 | 1948628 | 1.41 | Target=12.45 | 141 | 1600 | |
| 913.00 > 169.00 | 6.881 | 6.881 | 0.0 | 1.072 | 154693 | | 12.60(6.22-18.67) | | 1364 | |

## QC Flag Legend

Processing Flags

Review Flags

M - Manually Integrated

## Reagents:

LCPFC_LL4_00030 Amount Added: 1.00 Units: mL

Report Date: 14-Sep-2020 10:01:35 Chrom Revision: 2.3 11-Sep-2020 20:57:08

Eurofins TestAmerica, Sacramento

Data File: \\chromfs\Sacramento\ChromData\A18\20200911-103099.b\2020.09.11_A18_PFC_A_006.d

Injection Date: 11-Sep-2020 11:10:24 Instrument ID: A18

Lims ID: CCV L4

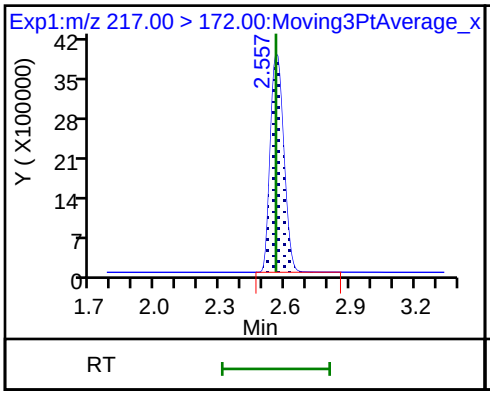
Client ID:

Operator ID: TAISACA18-PC\A-18 ALS Bottle#: 52 Worklist Smp#: 3

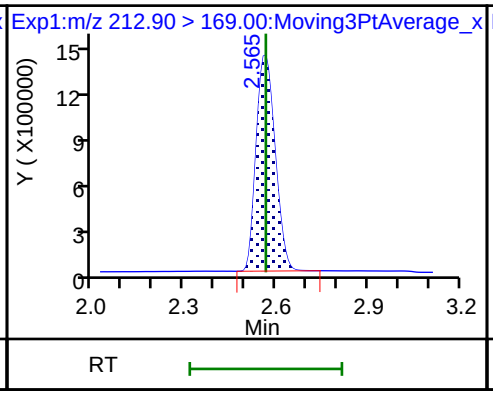
Injection Vol: 20.0 ul Dil. Factor: 1.0000

Method: PFAS_A18V2 Limit Group: LC PFC ICAL

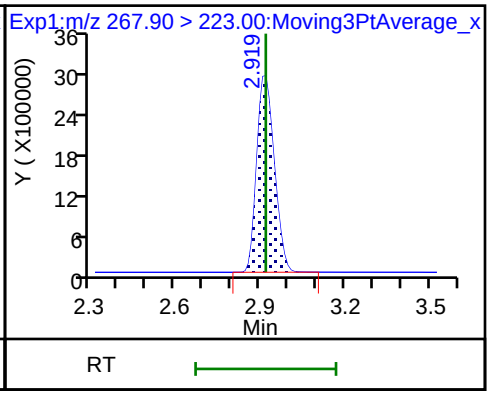
D 1 13C4 PFBA



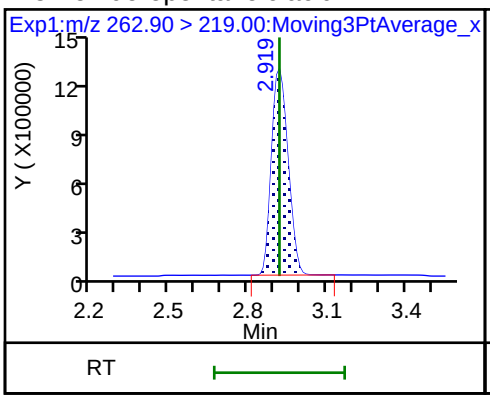

2 Perfluorobutanoic acid



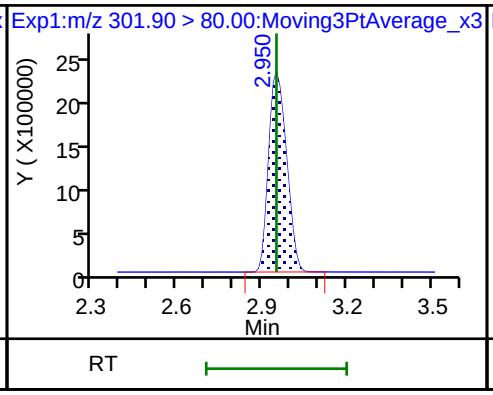

D 4 13C5 PFPeA



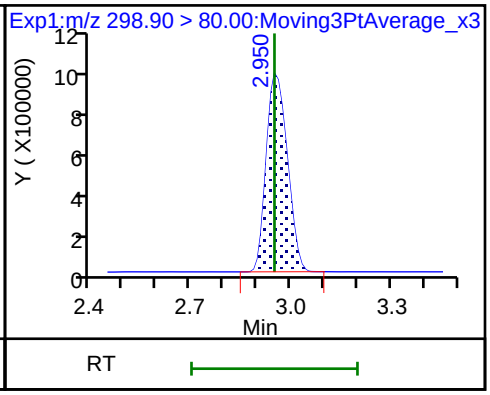

5 Perfluoropentanoic acid



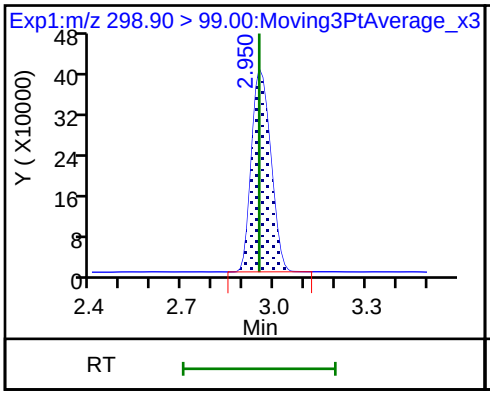

D 9 13C3 PFBS



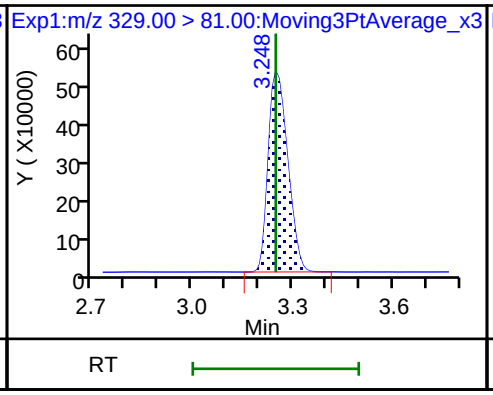

6 Perfluorobutanesulfonic acid



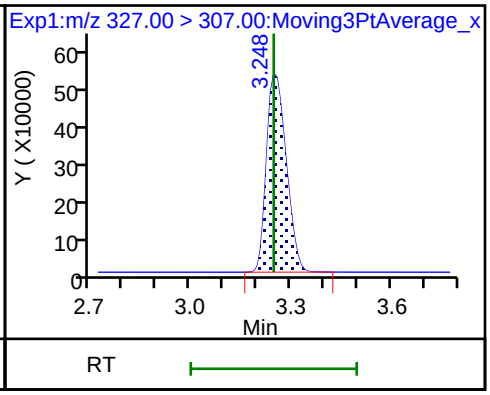

6 Perfluorobutanesulfonic acid



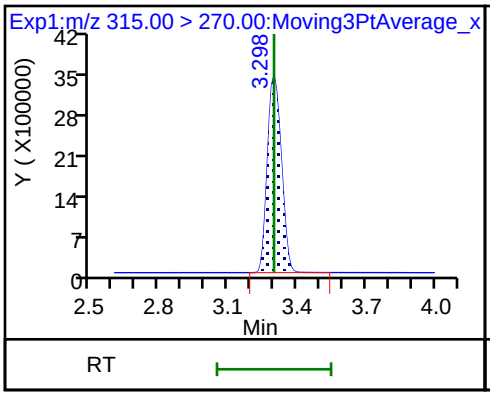

D 7 M2-4:2 FTS



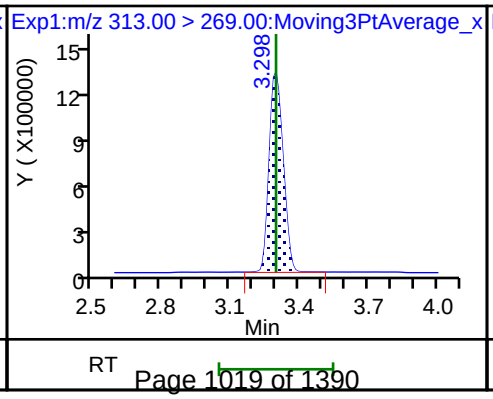

8 4:2 FTS



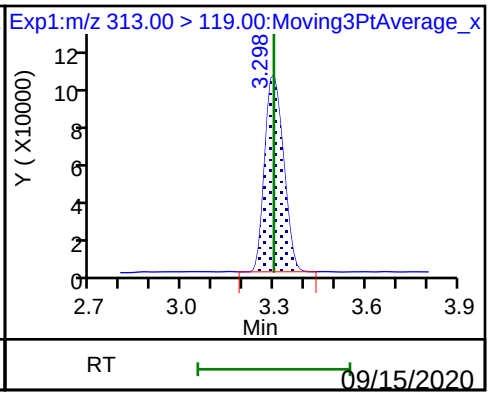

D 11 13C2 PFHxA



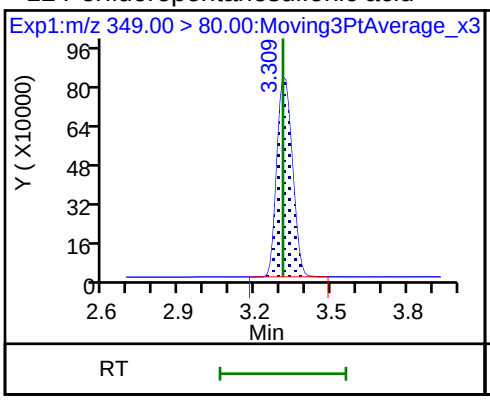

10 Perfluorohexanoic acid



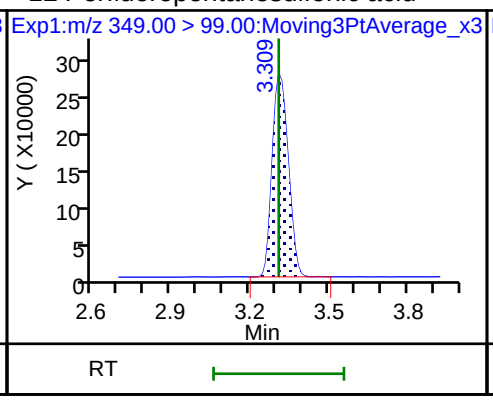

10 Perfluorohexanoic acid



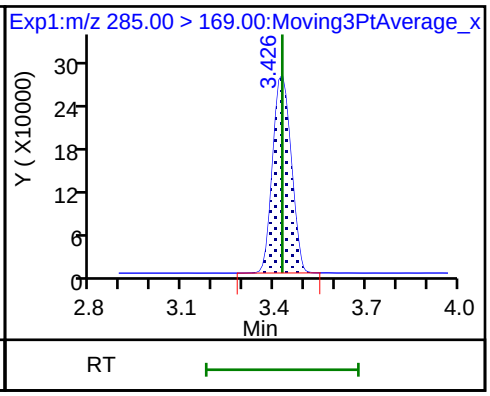
12 Perfluoropentanesulfonic acid



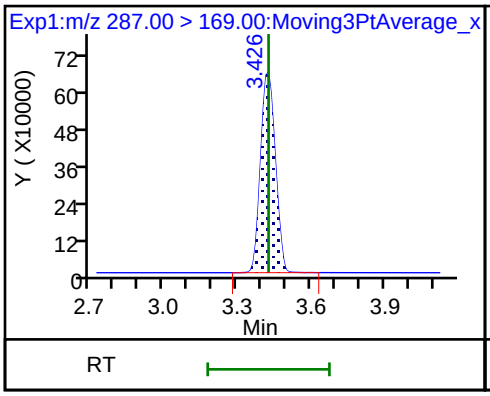

12 Perfluoropentanesulfonic acid



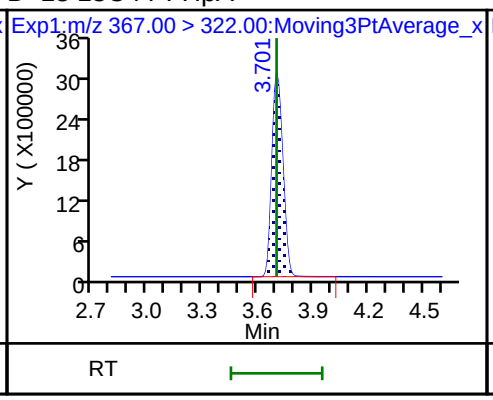

13 HPFO-DA



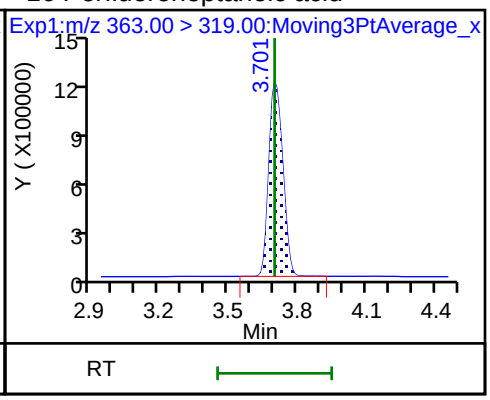

D 14 13C3 HFPO-DA



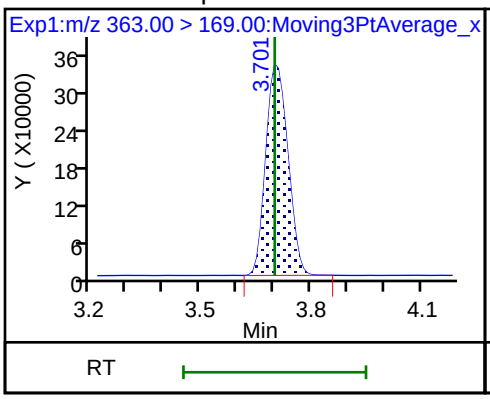

D 18 13C4 PFHpA



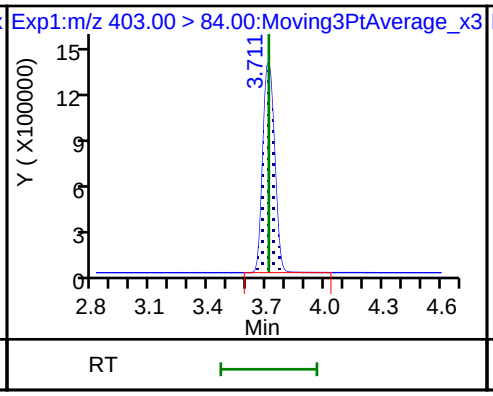

16 Perfluoroheptanoic acid



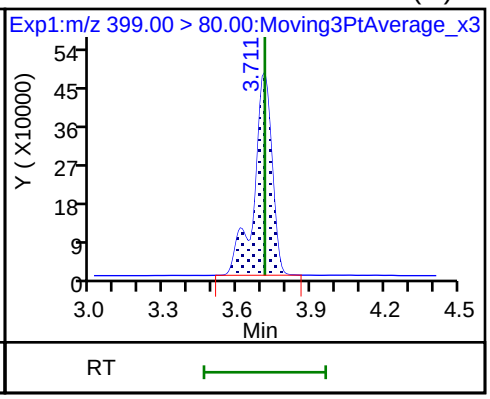

16 Perfluoroheptanoic acid



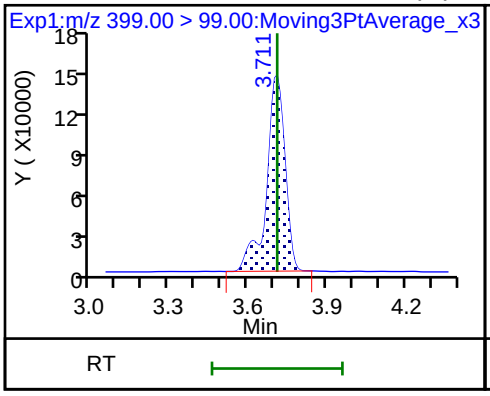

D 17 18O2 PFHxS



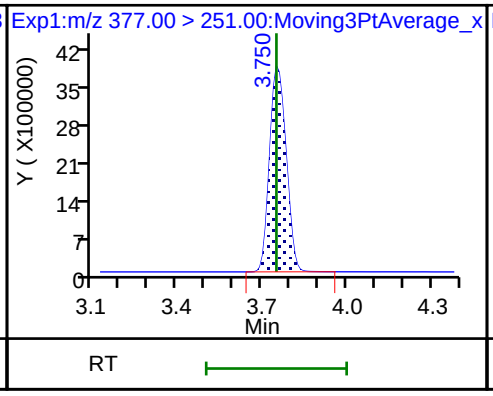

15 Perfluorohexanesulfonic acid (M)



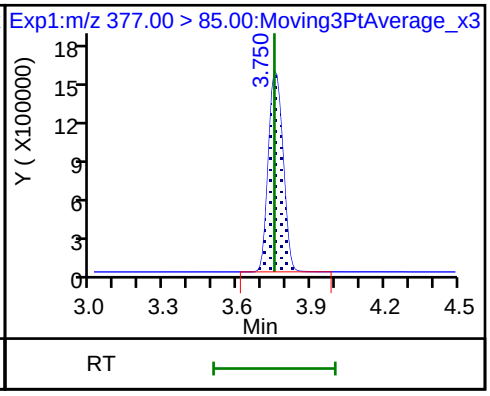

15 Perfluorohexanesulfonic acid (M)



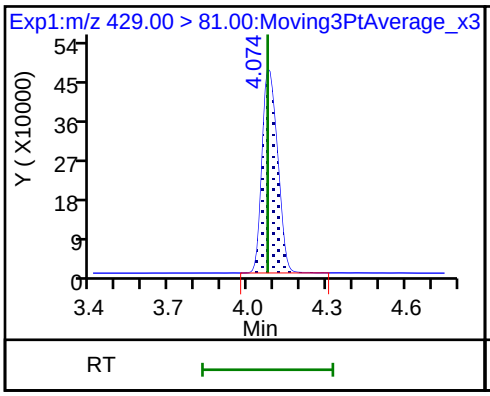

19 DONA



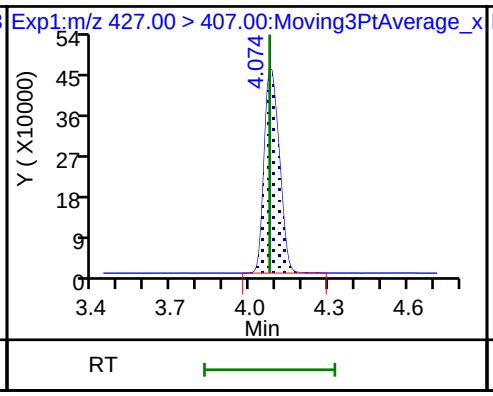

19 DONA



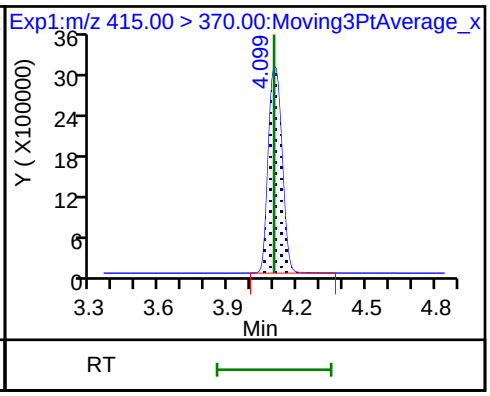
D 20 M2-6:2 FTS



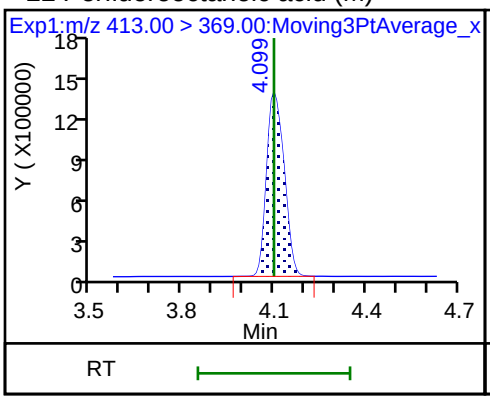

21 6:2 FTS



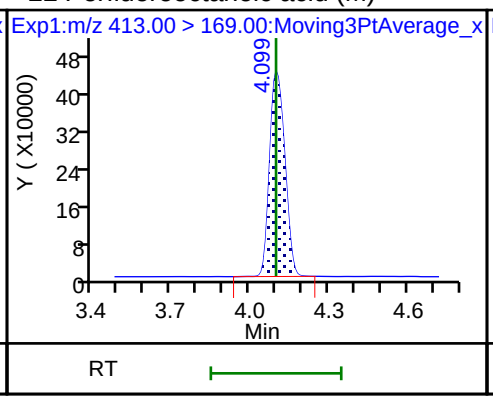

* 23 13C2 PFOA



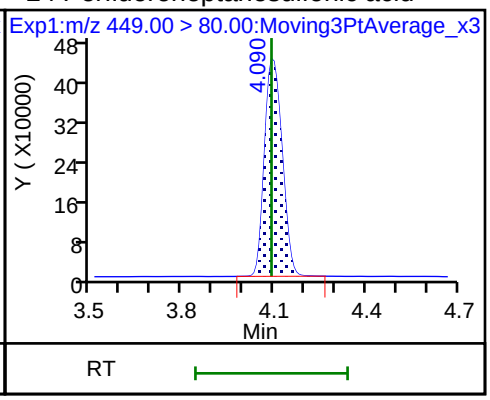

22 Perfluorooctanoic acid (M)



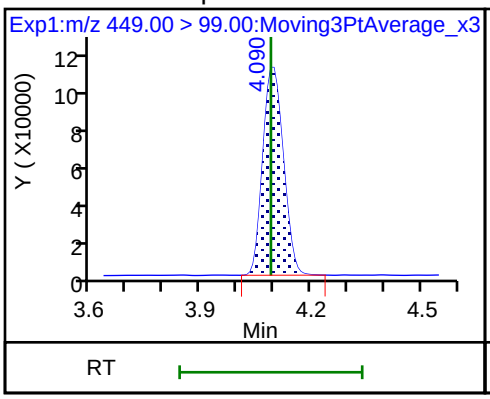

22 Perfluorooctanoic acid (M)



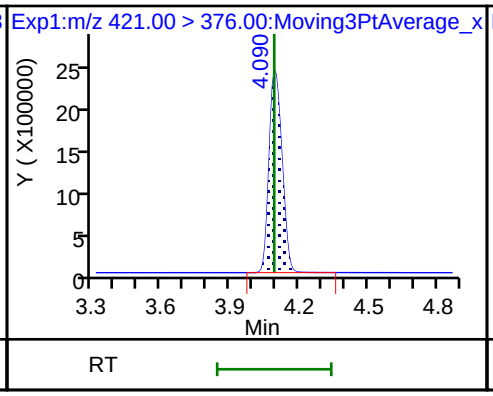

24 Perfluoroheptanesulfonic acid



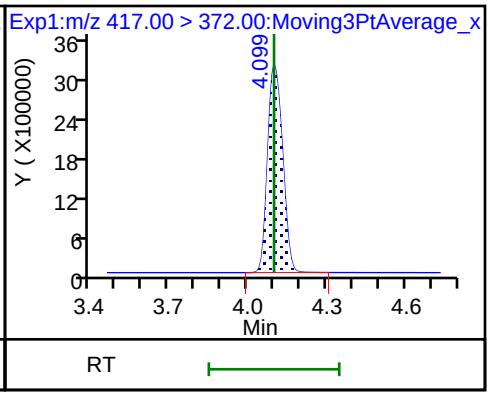

24 Perfluoroheptanesulfonic acid



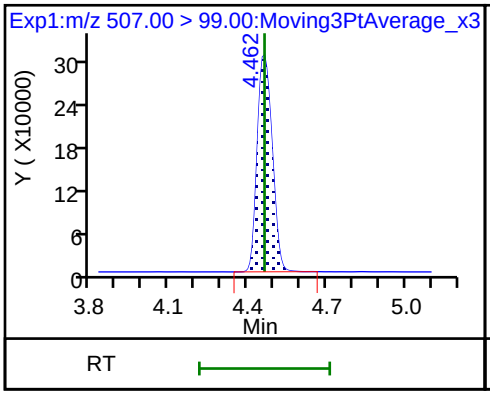

$ 26 13C8 PFOA



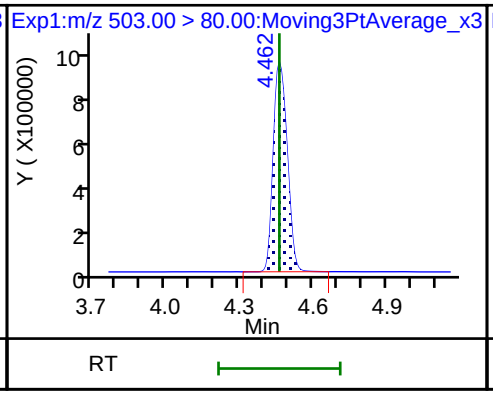

D 25 13C4 PFOA



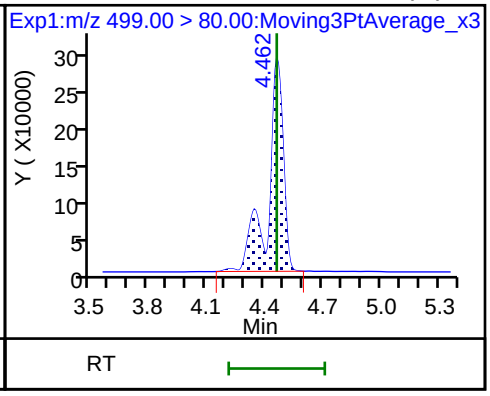

$ 28 13C8 PFOS



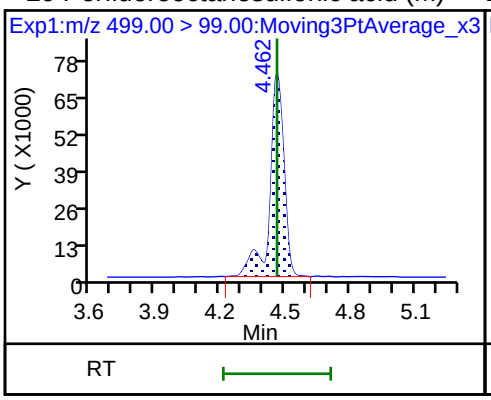

D 27 13C4 PFOS



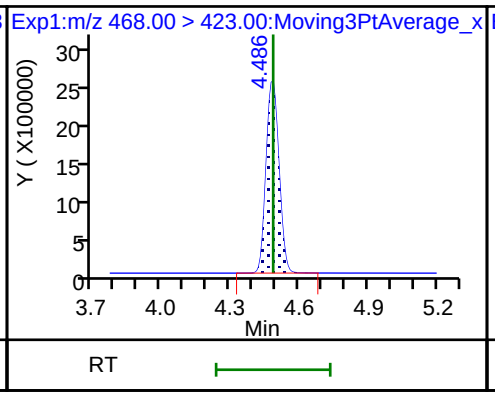

29 Perfluorooctanesulfonic acid (M)



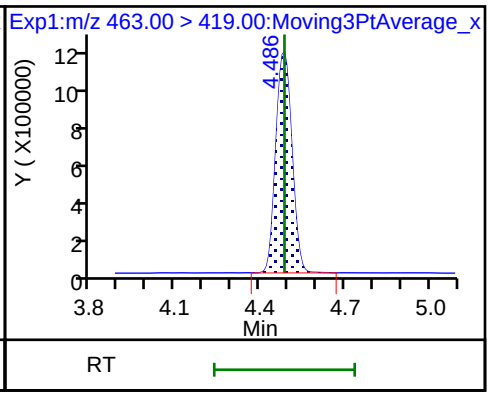
29 Perfluorooctanesulfonic acid (M)



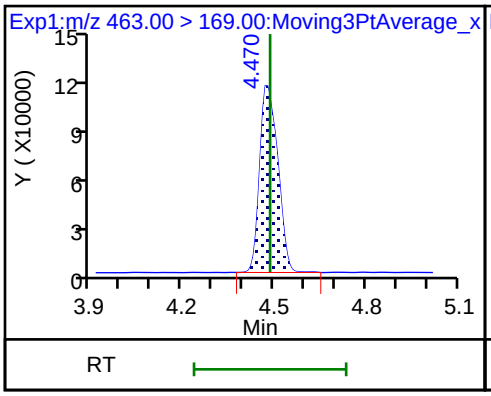

D 30 13C5 PFNA



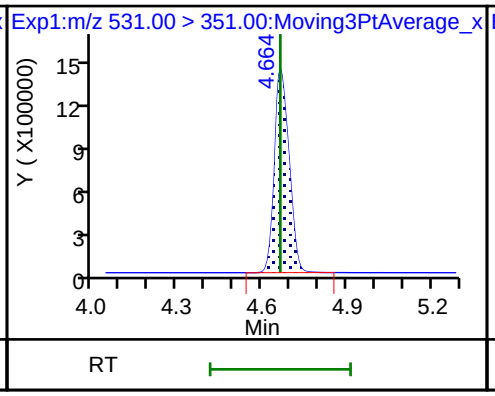

31 Perfluorononanoic acid



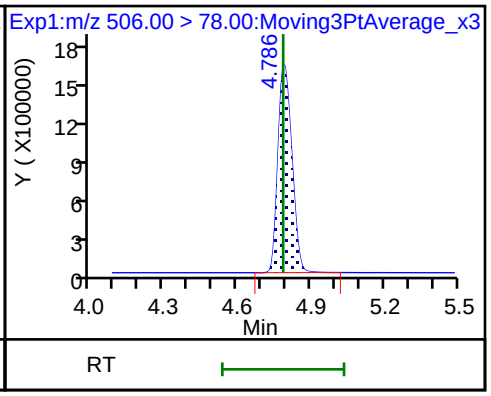

31 Perfluorononanoic acid



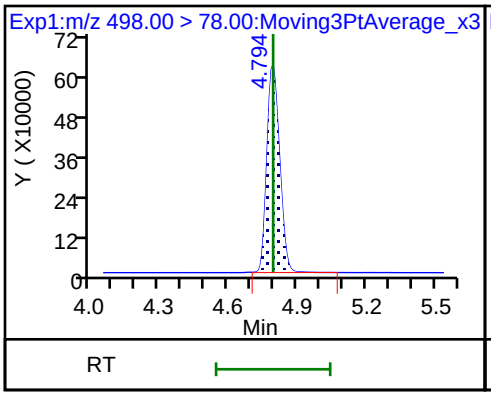

32 9ClFOS



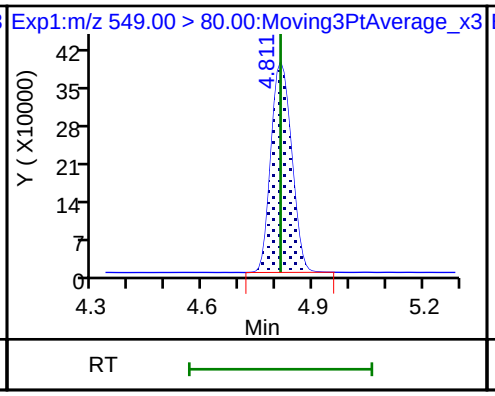

D 33 13C8 FOSA



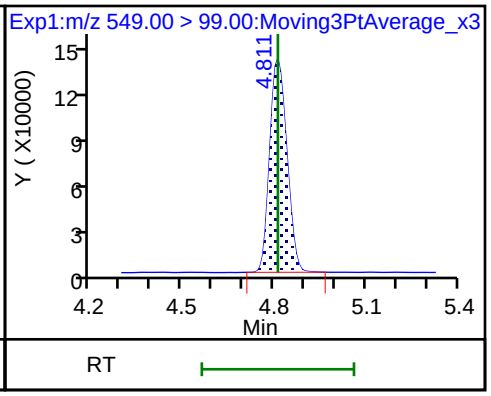

34 Perfluorooctanesulfonamide



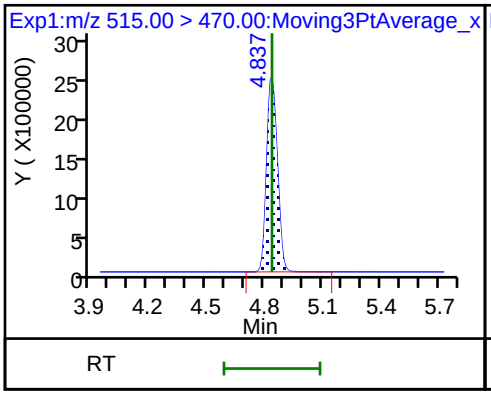

35 Perfluorononanesulfonic acid



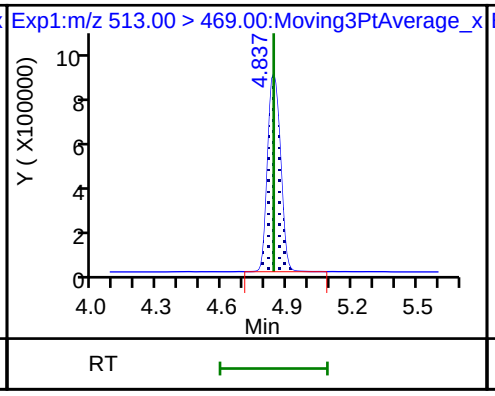

35 Perfluorononanesulfonic acid



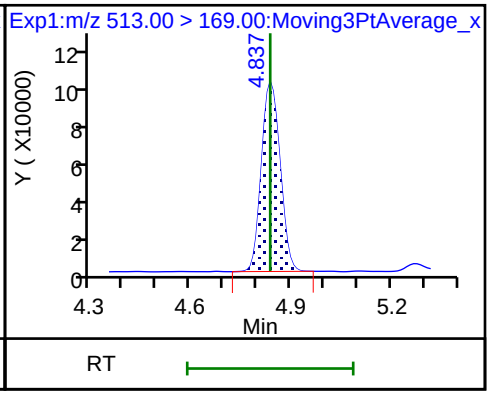

D 39 13C2 PFDA



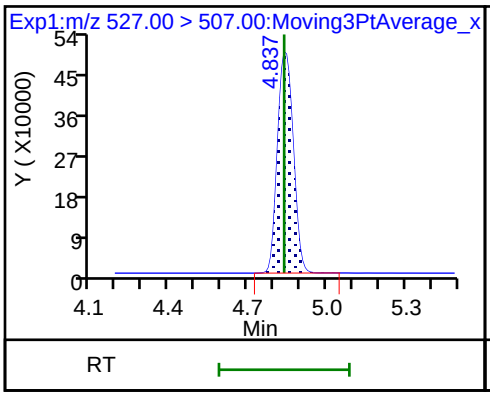

37 Perfluorodecanoic acid



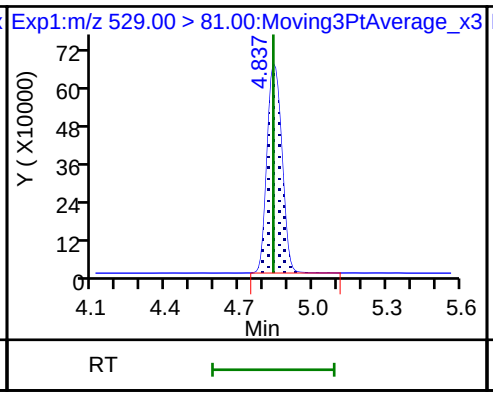

37 Perfluorodecanoic acid



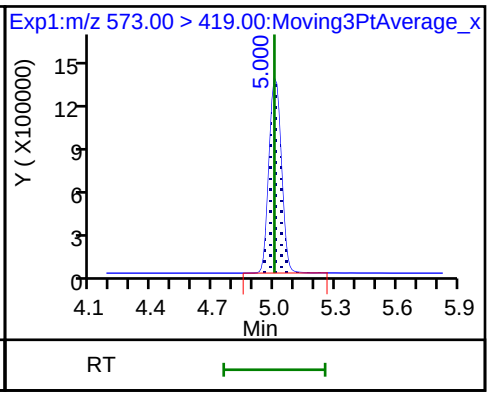
36 8:2 FTS



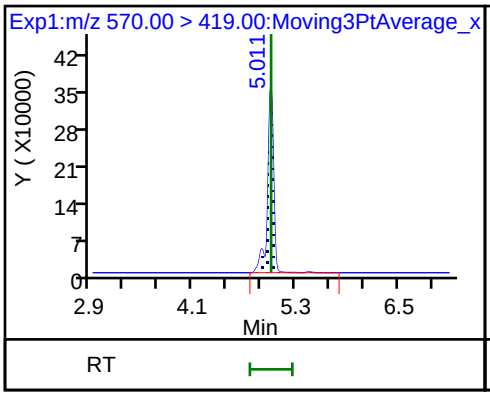

D 38 M2-8:2 FTS



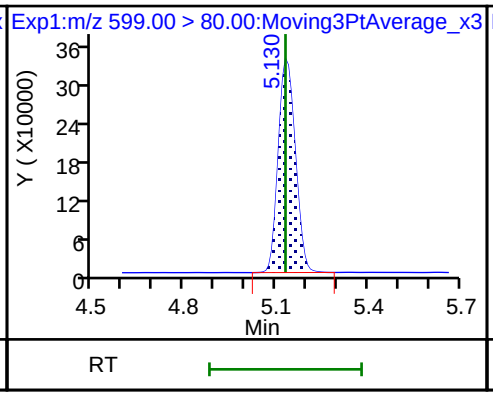

D 40 d3-NMeFOSAA



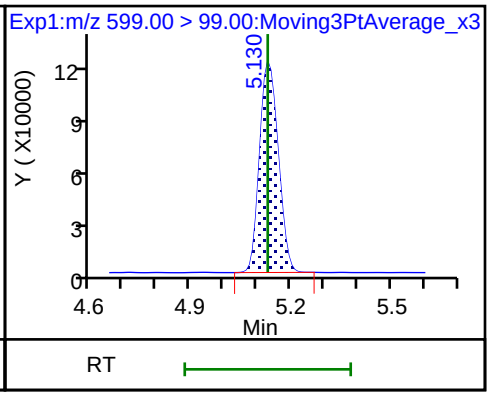

41 NMeFOSAA



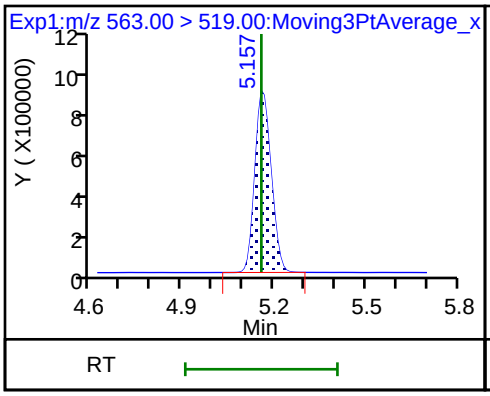

42 Perfluorodecanesulfonic acid



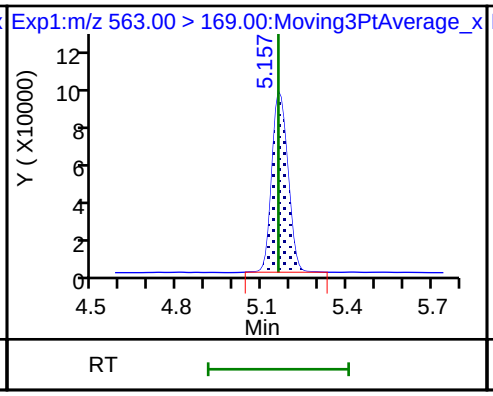

42 Perfluorodecanesulfonic acid



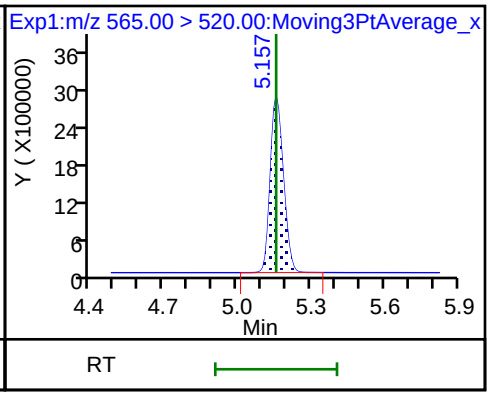

45 Perfluoroundecanoic acid



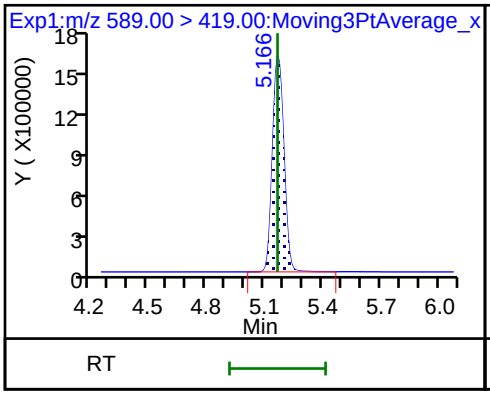

45 Perfluoroundecanoic acid



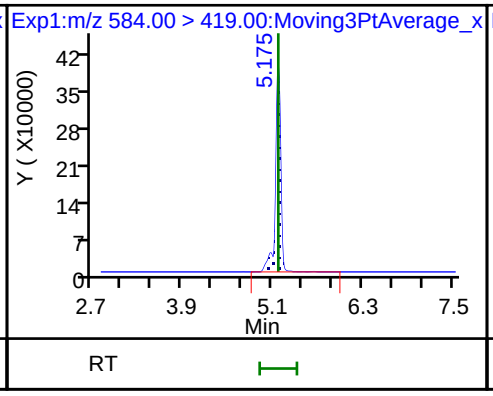

D 43 13C2 PFUnA



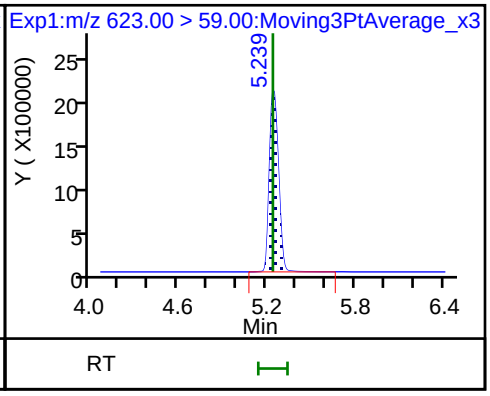

D 44 d5-NEtFOSAA



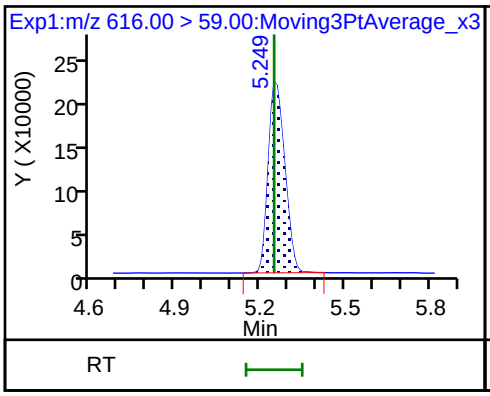

46 NEtFOSA



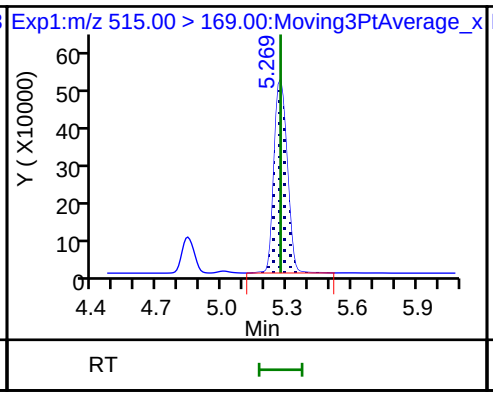

D 47 d7-N-MeFOSE-M



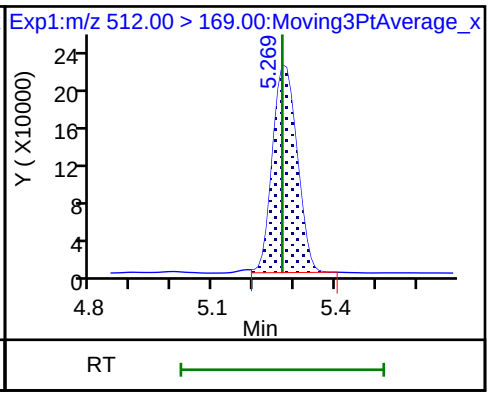
48 N-MeFOSE-M



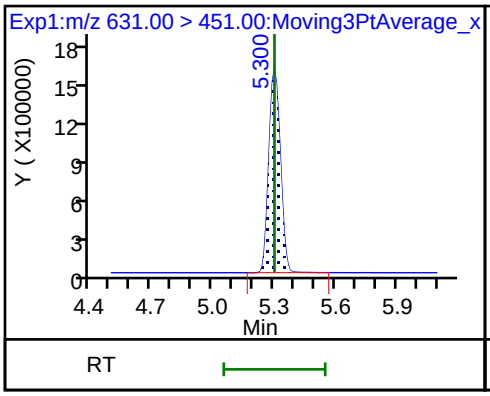

D 49 d-N-MeFOSA-M



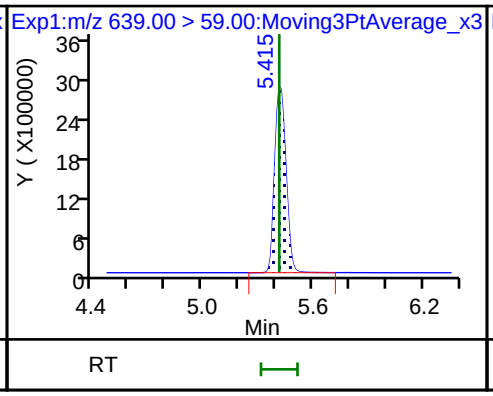

50 NMeFOSA



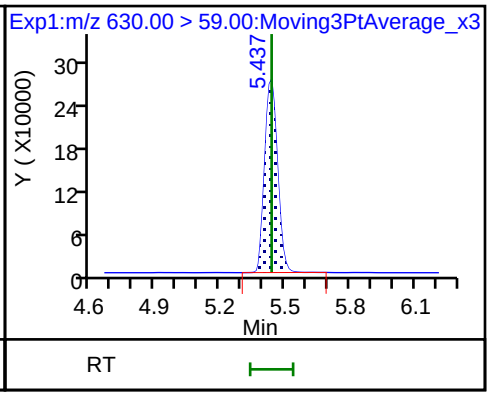

51 11ClFOS



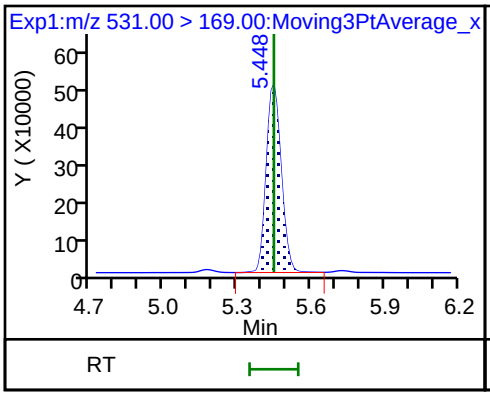

D 52 d9-N-EtFOSE-M



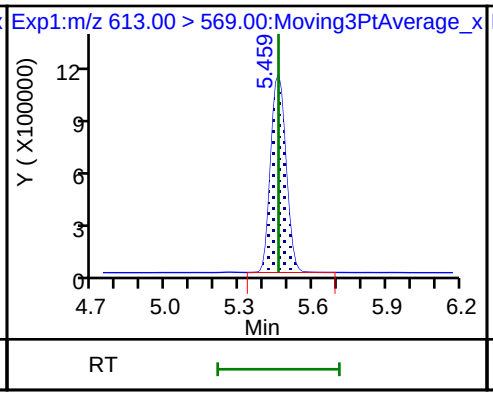

53 N-EtFOSE-M



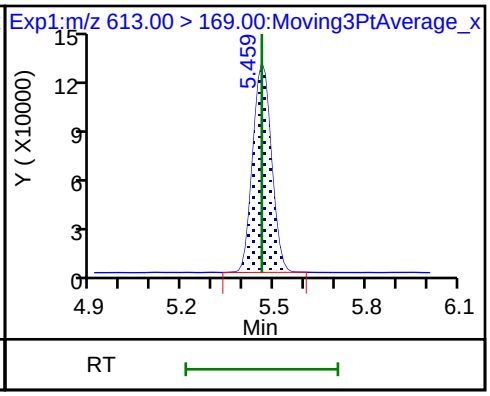

D 54 d-N-EtFOSA-M



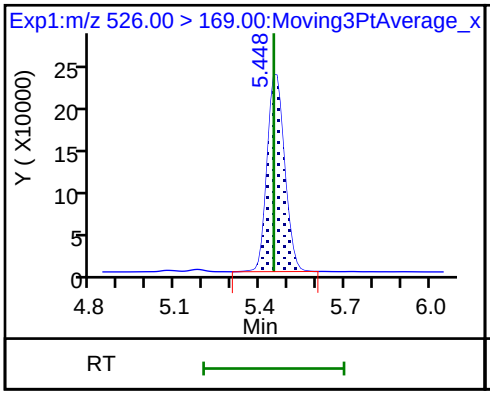

57 Perfluorododecanoic acid



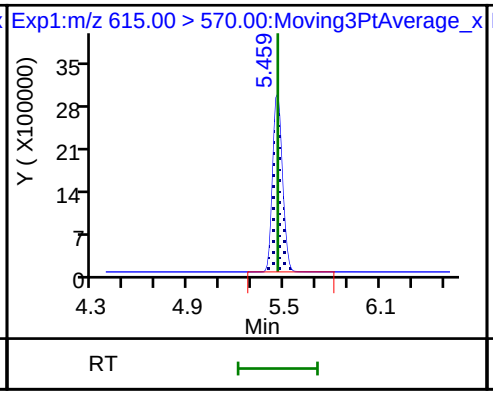

57 Perfluorododecanoic acid



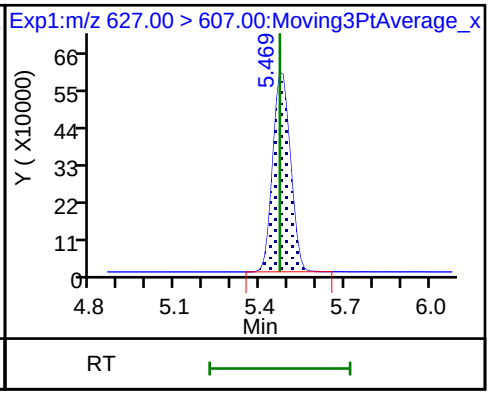

55 N-EtFOSA-M



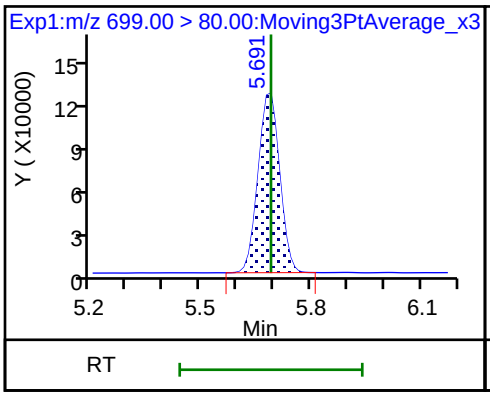

D 56 13C2 PFDoA



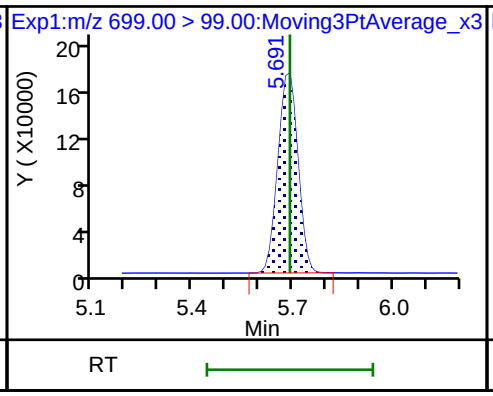

58 10:2 FTS



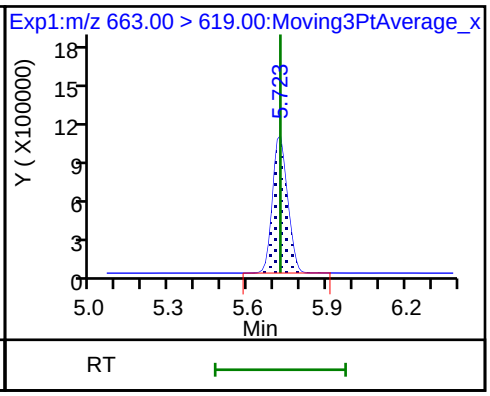
59 PFDoS



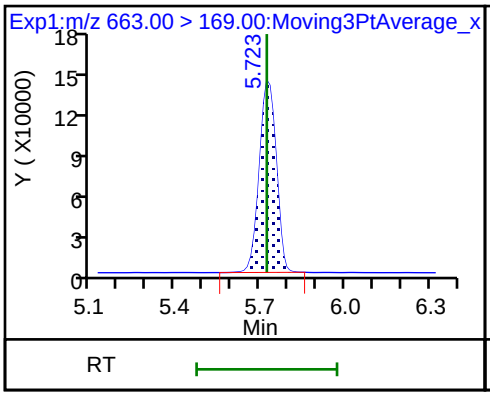

59 PFDoS



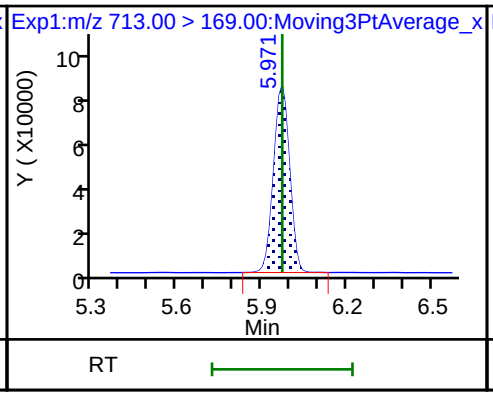

60 Perfluorotridecanoic acid



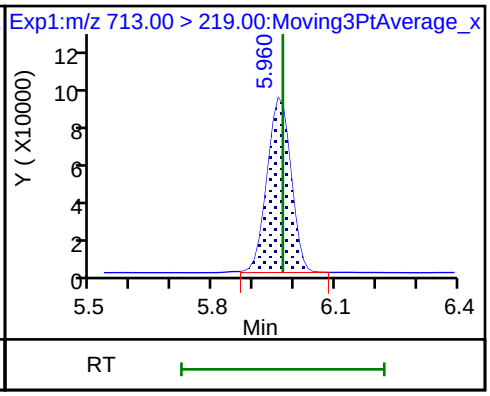

60 Perfluorotridecanoic acid



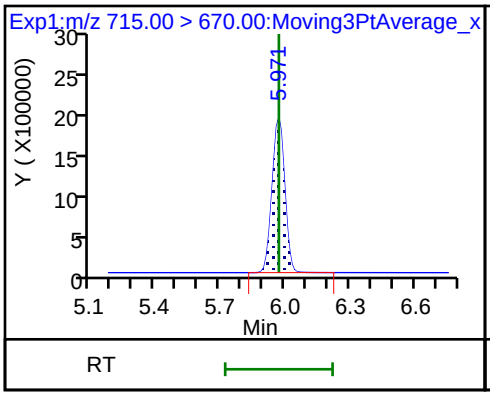

62 Perfluorotetradecanoic acid



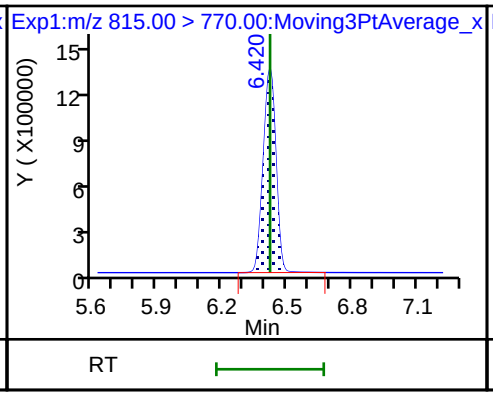

62 Perfluorotetradecanoic acid



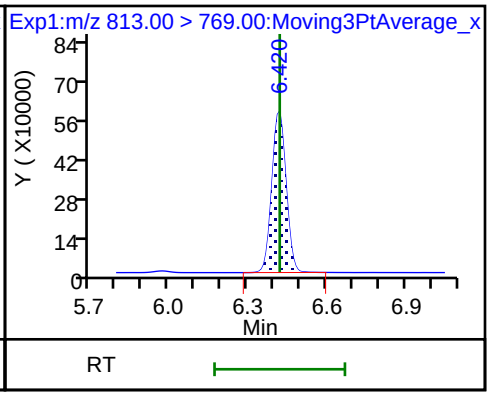

D 61 13C2 PFTeDA



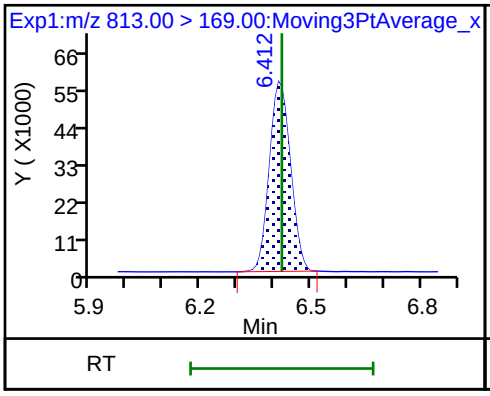

D 64 13C2 PFHxDA



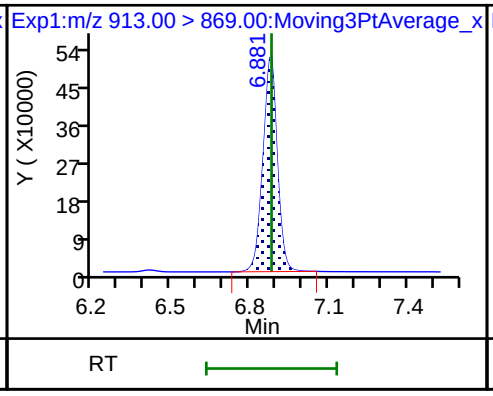

63 Perfluorohexadecanoic acid



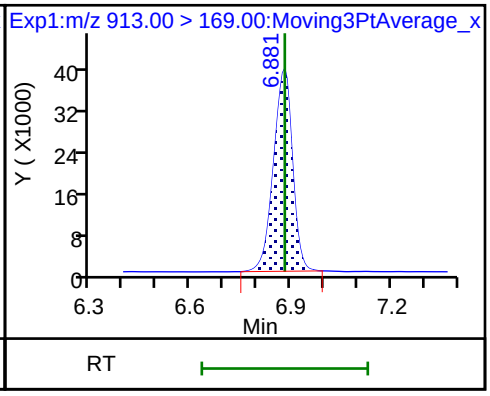

63 Perfluorohexadecanoic acid




65 Perfluorooctadecanoic acid




65 Perfluorooctadecanoic acid



Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

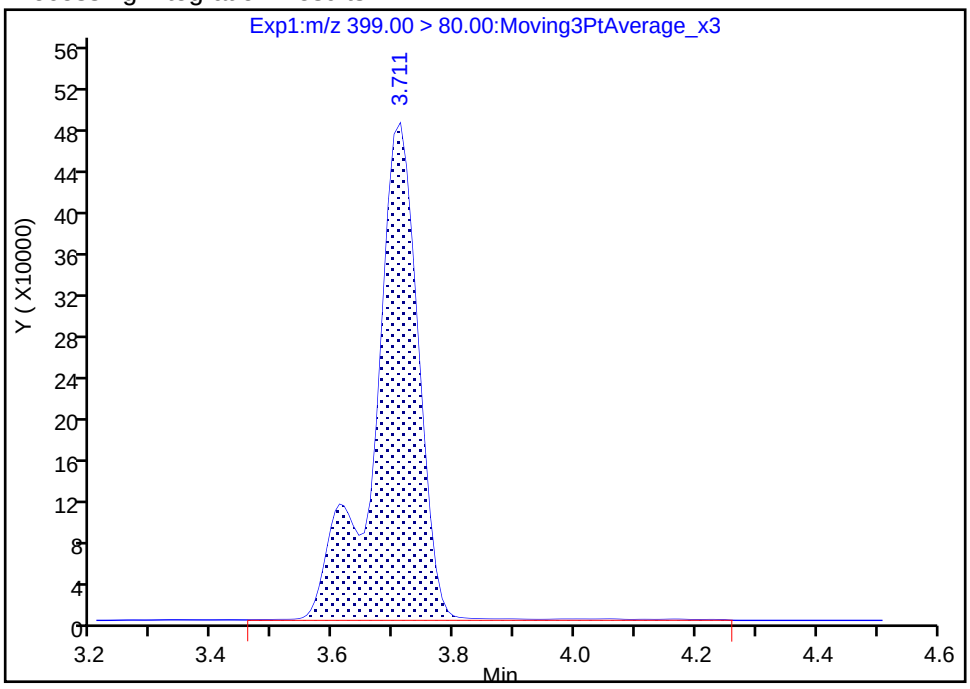
Data File: \\chromfs\Sacramento\ChromData\A18\20200911-103099.b\2020.09.11_A18_PFC_A_006.d
Injection Date: 11-Sep-2020 11:10:24 Instrument ID: A18
Lims ID: CCV L4
Client ID:
Operator ID: TAISACA18-PC\A-18 ALS Bottle#: 52 Worklist Smp#: 3
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFAS_A18V2 Limit Group: LC PFC ICAL
Column: Gemini C18 3um 3mm x 50 mm ( 3.00mm) Detector EXP1

## 15 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 1

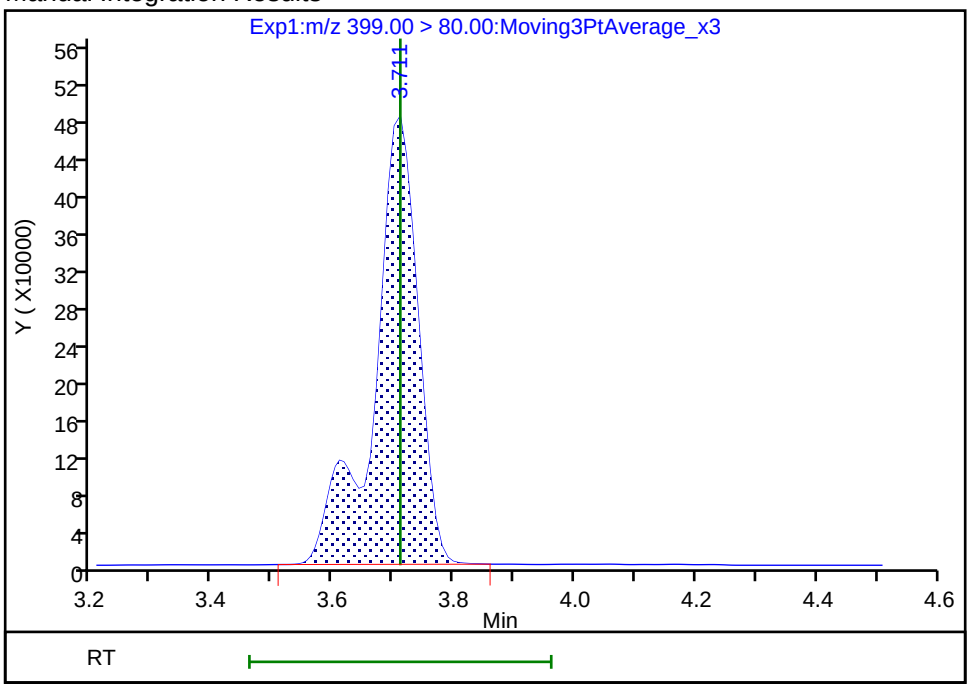
Processing Integration Results

RT: 3.71
Area: 2463744
Amount: 0.872368
Amount Units: ng/ml




Manual Integration Results

RT: 3.71
Area: 2423229
Amount: 0.858022
Amount Units: ng/ml




Reviewer: sanjumnair, 14-Sep-2020 10:00:52
Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

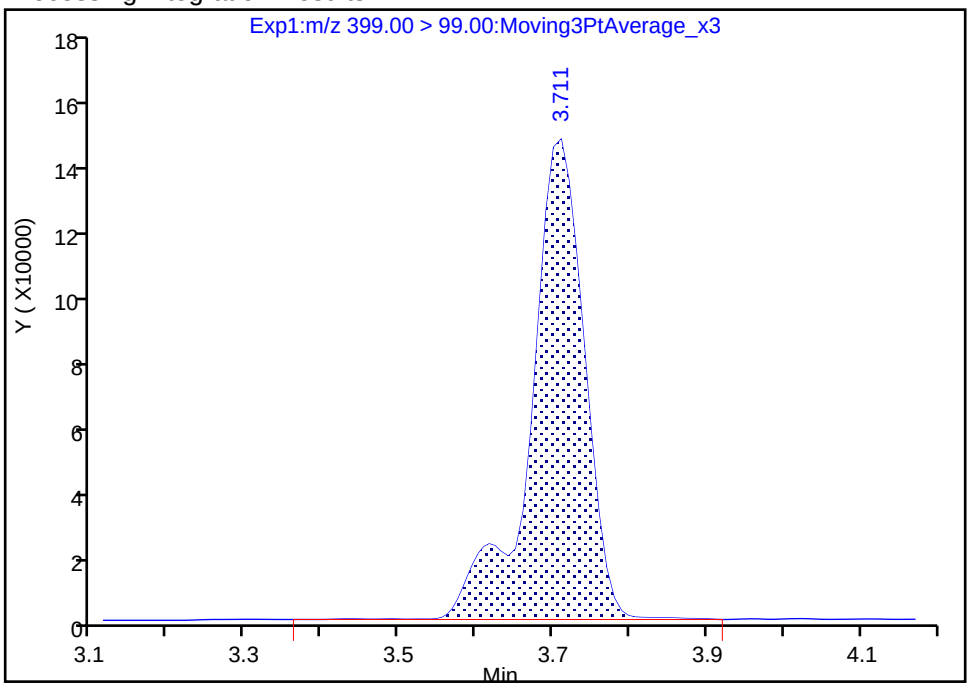
| | | | | | |
|---|---|---|---|---|---|
| Data File: | \\chromfs\Sacramento\ChromData\A18\20200911-103099.b\2020.09.11_A18_PFC_A_006.d | | | | |
| Injection Date: | 11-Sep-2020 11:10:24 | Instrument ID: | A18 | | |
| Lims ID: | CCV L4 | | | | |
| Client ID: | | | | | |
| Operator ID: | TAISACA18-PC\A-18 | ALS Bottle#: | 52 | Worklist Smp#: | 3 |
| Injection Vol: | 20.0 ul | Dil. Factor: | 1.0000 | | |
| Method: | PFAS_A18V2 | Limit Group: | LC PFC ICAL | | |
| Column: | Gemini C18 3um 3mm x 50 mm ( 3.00mm) | Detector | EXP1 | | |

## 15 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 2

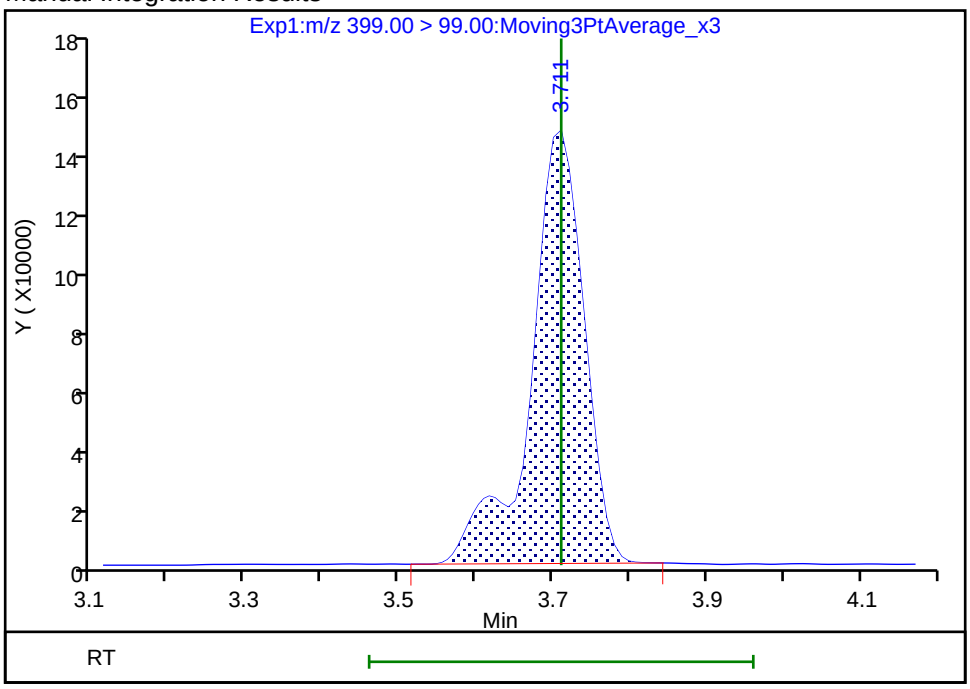
Processing Integration Results

RT: 3.71
Area: 705141
Amount: 0.872368
Amount Units: ng/ml




Manual Integration Results

RT: 3.71
Area: 697402
Amount: 0.858022
Amount Units: ng/ml




Reviewer: sanjumnair, 14-Sep-2020 10:00:58
Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

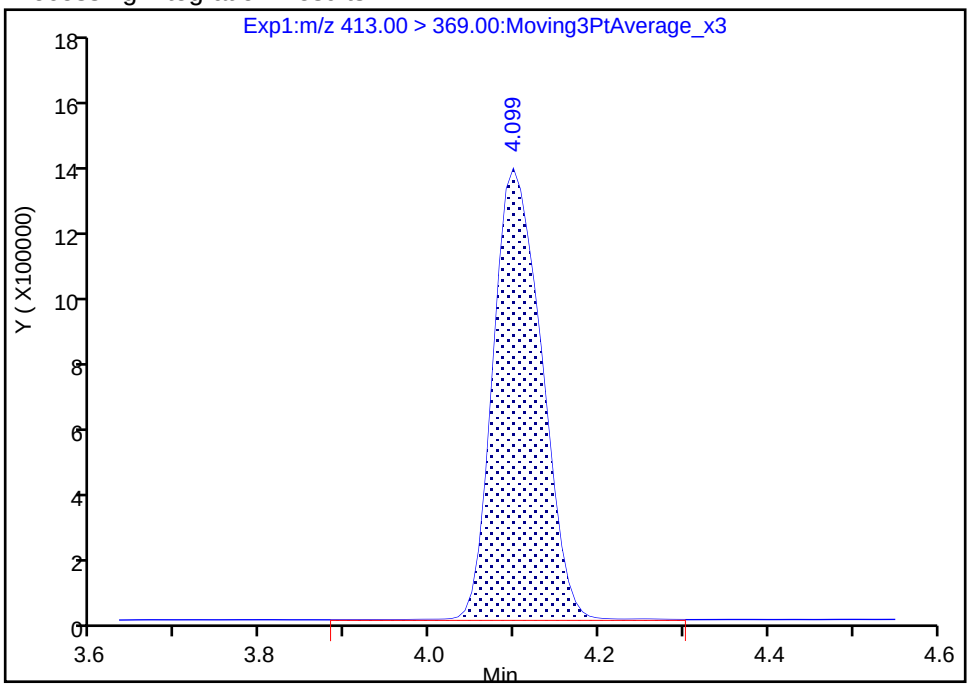
Data File: \\chromfs\Sacramento\ChromData\A18\20200911-103099.b\2020.09.11_A18_PFC_A_006.d
Injection Date: 11-Sep-2020 11:10:24 Instrument ID: A18
Lims ID: CCV L4
Client ID:
Operator ID: TAISACA18-PC\A-18 ALS Bottle#: 52 Worklist Smp#: 3
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFAS_A18V2 Limit Group: LC PFC ICAL
Column: Gemini C18 3um 3mm x 50 mm ( 3.00mm) Detector EXP1

## 22 Perfluorooctanoic acid, CAS: 335-67-1

Signal: 1

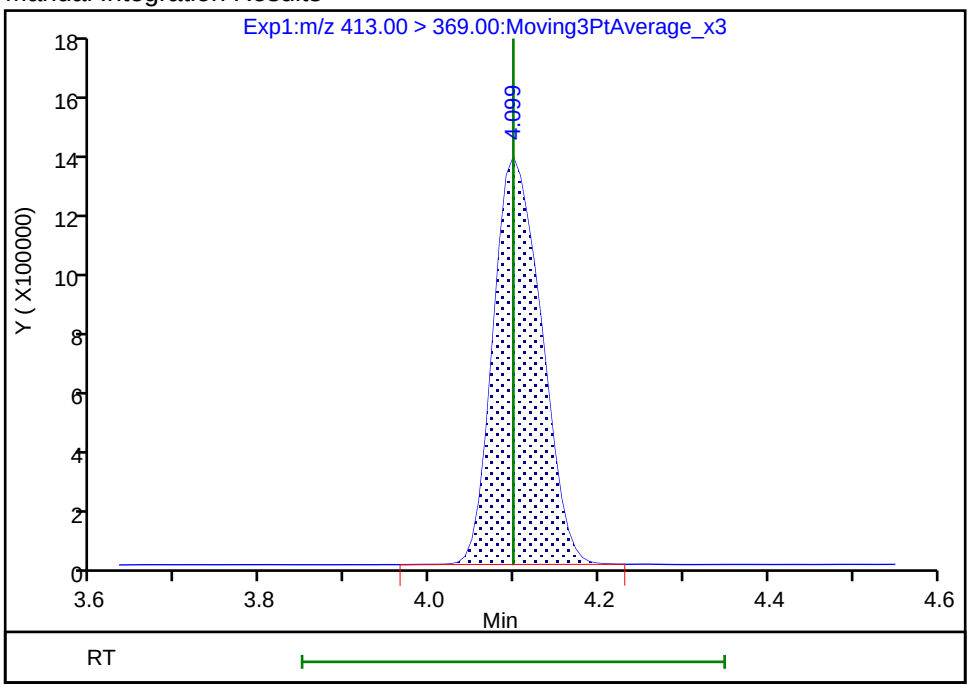
Processing Integration Results

RT: 4.10
Area: 5372454
Amount: 1.048830
Amount Units: ng/ml




Manual Integration Results

RT: 4.10
Area: 5309552
Amount: 1.036550
Amount Units: ng/ml




Reviewer: sanjumnair, 14-Sep-2020 10:01:09
Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

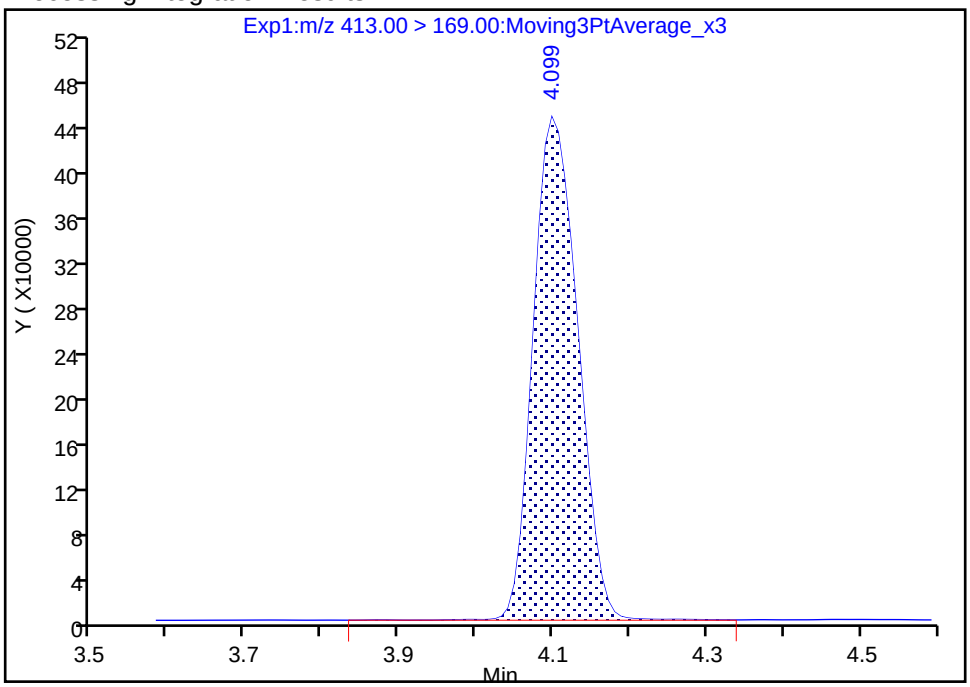
| | | | | | |
|---|---|---|---|---|---|
| Data File: | \\chromfs\Sacramento\ChromData\A18\20200911-103099.b\2020.09.11_A18_PFC_A_006.d | | | | |
| Injection Date: | 11-Sep-2020 11:10:24 | Instrument ID: | A18 | | |
| Lims ID: | CCV L4 | | | | |
| Client ID: | | | | | |
| Operator ID: | TAISACA18-PC\A-18 | ALS Bottle#: | 52 | Worklist Smp#: | 3 |
| Injection Vol: | 20.0 ul | Dil. Factor: | 1.0000 | | |
| Method: | PFAS_A18V2 | Limit Group: | LC PFC ICAL | | |
| Column: | Gemini C18 3um 3mm x 50 mm ( 3.00mm) | Detector | EXP1 | | |

## 22 Perfluorooctanoic acid, CAS: 335-67-1

Signal: 2

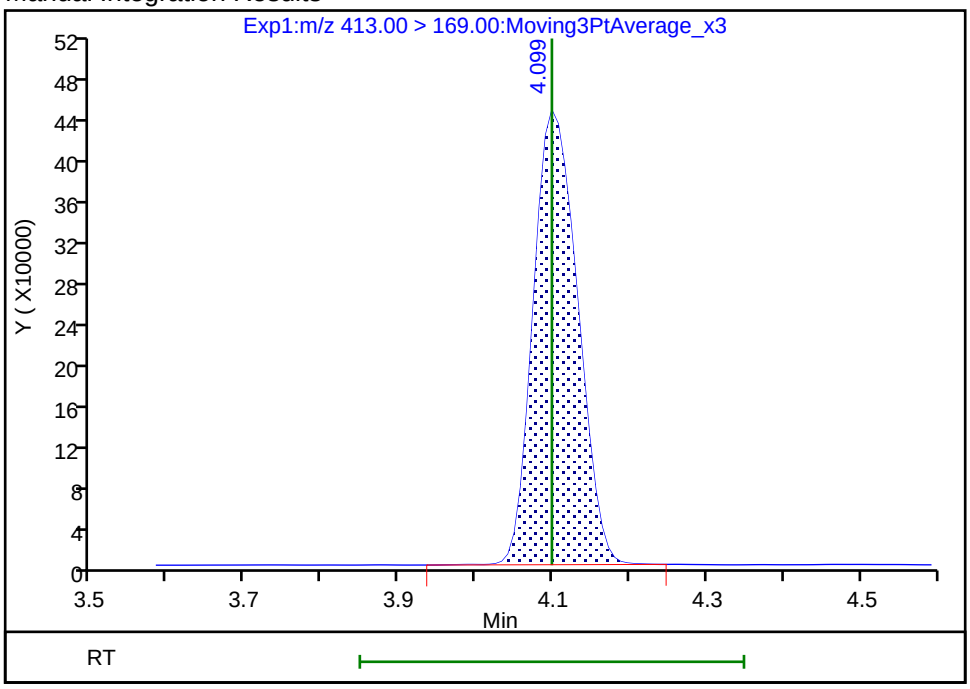
Processing Integration Results

RT: 4.10
Area: 1786161
Amount: 1.048830
Amount Units: ng/ml




Manual Integration Results

RT: 4.10
Area: 1775774
Amount: 1.036550
Amount Units: ng/ml




Reviewer: sanjumnair, 14-Sep-2020 10:01:16
Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

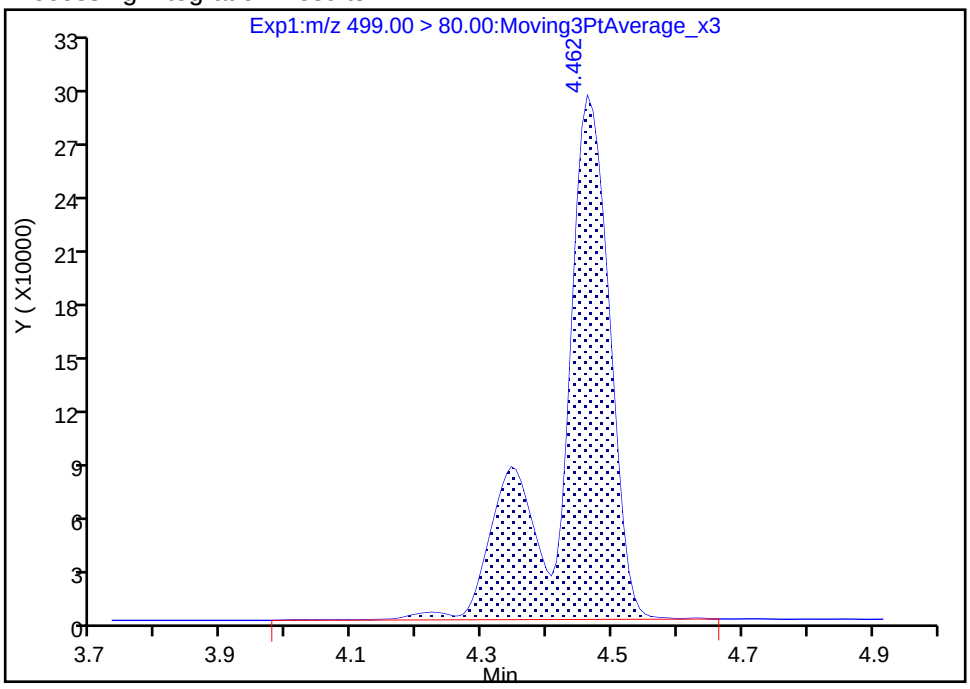
Data File: \\chromfs\Sacramento\ChromData\A18\20200911-103099.b\2020.09.11_A18_PFC_A_006.d
Injection Date: 11-Sep-2020 11:10:24 Instrument ID: A18
Lims ID: CCV L4
Client ID:
Operator ID: TAISACA18-PC\A-18 ALS Bottle#: 52 Worklist Smp#: 3
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFAS_A18V2 Limit Group: LC PFC ICAL
Column: Gemini C18 3um 3mm x 50 mm ( 3.00mm) Detector EXP1

## 29 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 1

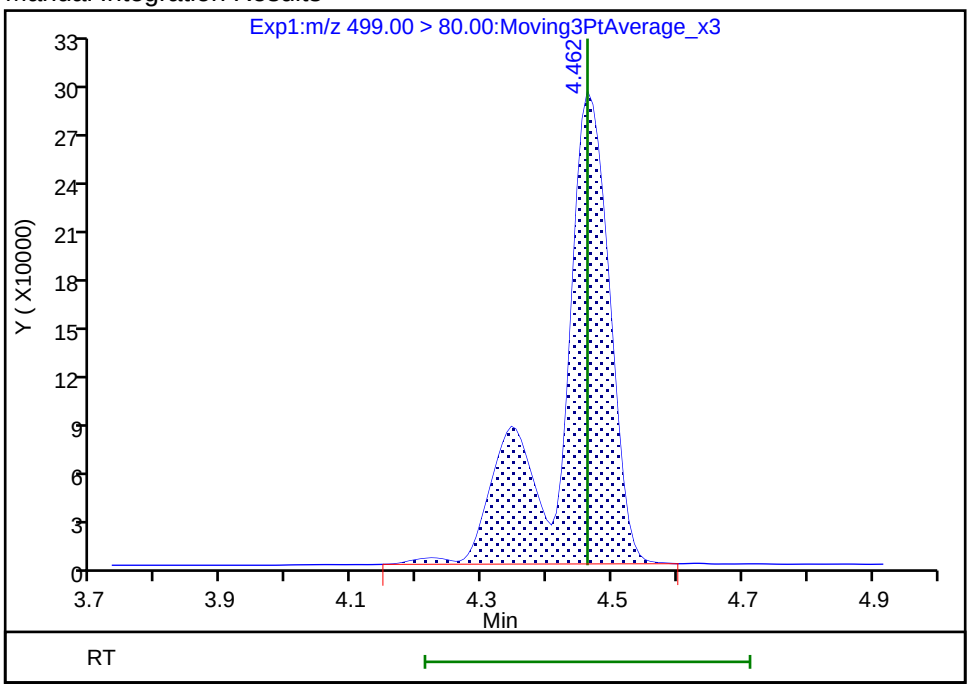
Processing Integration Results

RT: 4.46
Area: 1601184
Amount: 1.003978
Amount Units: ng/ml




Manual Integration Results

RT: 4.46
Area: 1589264
Amount: 0.996504
Amount Units: ng/ml




Reviewer: fariasa, 11-Sep-2020 11:41:00
Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

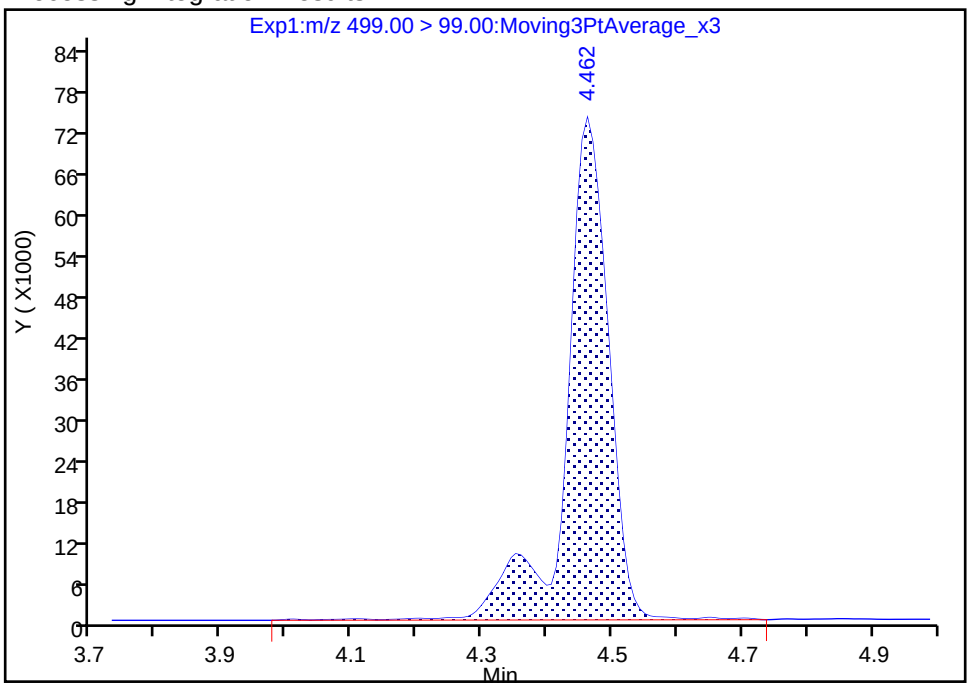
| | | | | | |
|---|---|---|---|---|---|
| Data File: | \\chromfs\Sacramento\ChromData\A18\20200911-103099.b\2020.09.11_A18_PFC_A_006.d | | | | |
| Injection Date: | 11-Sep-2020 11:10:24 | Instrument ID: | A18 | | |
| Lims ID: | CCV L4 | | | | |
| Client ID: | | | | | |
| Operator ID: | TAISACA18-PC\A-18 | ALS Bottle#: | 52 | Worklist Smp#: | 3 |
| Injection Vol: | 20.0 ul | Dil. Factor: | 1.0000 | | |
| Method: | PFAS_A18V2 | Limit Group: | LC PFC ICAL | | |
| Column: | Gemini C18 3um 3mm x 50 mm ( 3.00 mm) | Detector | EXP1 | | |

## 29 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 2

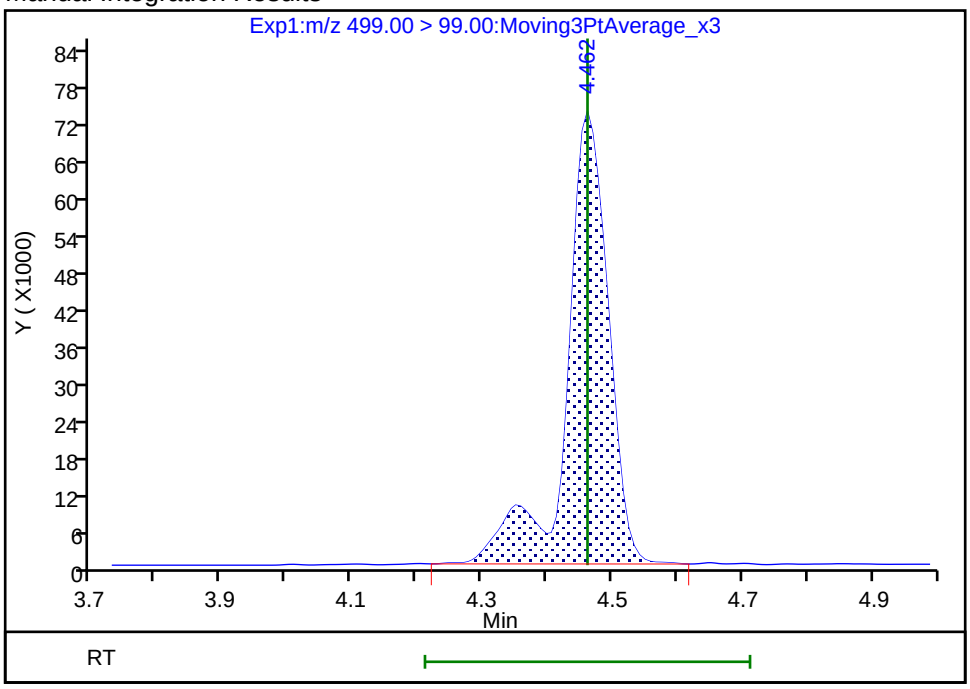
Processing Integration Results

RT: 4.46
Area: 335115
Amount: 1.003978
Amount Units: ng/ml




Manual Integration Results

RT: 4.46
Area: 328773
Amount: 0.996504
Amount Units: ng/ml




Reviewer: sanjumnair, 14-Sep-2020 10:01:26
Audit Action: Manually Integrated Audit Reason: Baseline

FORM VII
LCMS CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Sacramento  Job No.: 460-217547-1

SDG No.:

Lab Sample ID: CCV 320-411377/1  Calibration Date: 09/11/2020 12:32

Instrument ID: A18  Calib Start Date: 08/25/2020 16:43

GC Column: Gemini C18 3x50  ID: 3.00(mm)  Calib End Date: 08/25/2020 17:37

Lab File ID: 2020.09.11_A18_PFC_A_015.d  Conc. Units: ng/mL

| ANALYTE | CURVE TYPE | AVE RRF | RRF | MIN RRF | CALC AMOUNT | SPIKE AMOUNT | %D | MAX %D |
|---|---|---|---|---|---|---|---|---|
| Perfluorobutanoic acid (PFBA) | AveID | 0.8679 | 0.9127 | | 2.63 | 2.50 | 5.2 | 40.0 |
| Perfluoropentanoic acid (PFPeA) | AveID | 0.997 | 1.060 | | 2.66 | 2.50 | 6.3 | 40.0 |
| Perfluorobutanesulfonic acid (PFBS) | AveID | 1.010 | 1.072 | | 2.35 | 2.21 | 6.1 | 50.0 |
| 4:2 FTS | AveID | 2.273 | 2.465 | | 2.53 | 2.34 | 8.4 | 50.0 |
| Perfluorohexanoic acid (PFHxA) | AveID | 0.9638 | 1.011 | | 2.62 | 2.50 | 4.9 | 40.0 |
| Perfluoropentanesulfonic acid (PFPeS) | AveID | 0.7925 | 0.8360 | | 2.47 | 2.35 | 5.5 | 50.0 |
| HFPO-DA (GenX) | AveID | 0.9742 | 1.061 | | 2.72 | 2.50 | 8.9 | 40.0 |
| Perfluoroheptanoic acid (PFHpA) | AveID | 1.014 | 0.999 | | 2.46 | 2.50 | -1.5 | 40.0 |
| Perfluorohexanesulfonic acid (PFHxS) | AveID | 1.181 | 1.095 | | 2.11 | 2.28 | -7.3 | 40.0 |
| 4,8-Dioxa-3H-perfluorononanoic acid (ADONA) | AveID | 9.582 | 10.14 | | 2.49 | 2.36 | 5.8 | 50.0 |
| 6:2 FTS | AveID | 2.299 | 2.307 | | 2.38 | 2.37 | 0.4 | 40.0 |
| Perfluoroheptanesulfonic Acid (PFHpS) | AveID | 1.118 | 1.164 | | 2.48 | 2.38 | 4.2 | 50.0 |
| Perfluorooctanoic acid (PFOA) | AveID | 1.020 | 1.042 | | 2.56 | 2.50 | 2.1 | 40.0 |
| Perfluorooctanesulfonic acid (PFOS) | AveID | 1.035 | 1.079 | | 2.42 | 2.32 | 4.2 | 40.0 |
| Perfluorononanoic acid (PFNA) | AveID | 0.9590 | 0.9553 | | 2.50 | 2.51 | -0.4 | 40.0 |
| F-53B Major | AveID | 3.236 | 3.345 | | 2.41 | 2.33 | 3.4 | 50.0 |
| Perfluorooctanesulfonamide (FOSA) | AveID | 0.9305 | 0.9297 | | 2.50 | 2.50 | -0.0 | 40.0 |
| Perfluorononanesulfonic acid (PFNS) | AveID | 0.9368 | 0.9570 | | 2.45 | 2.40 | 2.2 | 50.0 |
| 8:2 FTS | AveID | 1.775 | 1.843 | | 2.49 | 2.40 | 3.8 | 40.0 |
| Perfluorodecanoic acid (PFDA) | AveID | 0.9639 | 0.8666 | | 2.25 | 2.50 | -10.1 | 40.0 |
| N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA) | AveID | 0.7417 | 0.7654 | | 2.58 | 2.50 | 3.2 | 40.0 |
| Perfluorodecanesulfonic acid (PFDS) | AveID | 0.8350 | 0.8653 | | 2.50 | 2.41 | 3.6 | 50.0 |
| Perfluoroundecanoic acid (PFUnA) | AveID | 0.7253 | 0.8480 | | 2.93 | 2.50 | 16.9 | 40.0 |
| N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA) | AveID | 0.6758 | 0.7317 | | 2.71 | 2.50 | 8.3 | 40.0 |
| NMeFOSE | AveID | 1.080 | 1.187 | | 2.75 | 2.50 | 10.0 | 40.0 |
| NMeFOSA | AveID | 0.9606 | 1.166 | | 3.04 | 2.50 | 21.4 | 50.0 |
| F-53B Minor | AveID | 4.102 | 4.160 | | 2.39 | 2.36 | 1.4 | 50.0 |
| NEtFOSE | AveID | 1.073 | 1.198 | | 2.79 | 2.50 | 11.6 | 40.0 |
| Perfluorododecanoic acid (PFDoA) | AveID | 1.023 | 0.8837 | | 2.17 | 2.52 | -13.6 | 40.0 |
| NEtFOSA | AveID | 1.058 | 1.184 | | 2.80 | 2.50 | 11.9 | 40.0 |
| 10:2 FTS | AveID | 2.014 | 2.219 | | 2.66 | 2.41 | 10.2 | 50.0 |
| Perfluorododecanesulfonic acid (PFDoS) | AveID | 0.3329 | 0.3213 | | 2.34 | 2.42 | -3.5 | 50.0 |

FORM VII 537 (modified)

FORM VII
LCMS CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Sacramento  Job No.: 460-217547-1

SDG No.:

Lab Sample ID: CCV 320-411377/1  Calibration Date: 09/11/2020 12:32

Instrument ID: A18  Calib Start Date: 08/25/2020 16:43

GC Column: Gemini C18 3x50  ID: 3.00(mm)  Calib End Date: 08/25/2020 17:37

Lab File ID: 2020.09.11_A18_PFC_A_015.d  Conc. Units: ng/mL

| ANALYTE | CURVE TYPE | AVE RRF | RRF | MIN RRF | CALC AMOUNT | SPIKE AMOUNT | %D | MAX %D |
|---|---|---|---|---|---|---|---|---|
| Perfluorotridecanoic acid (PFTriA) | AveID | 0.9409 | 1.158 | | 3.08 | 2.50 | 23.0 | 50.0 |
| Perfluorotetradecanoic acid (PFTeA) | AveID | 0.0844 | 0.0895 | | 2.65 | 2.50 | 6.0 | 50.0 |
| Perfluoro-n-hexadecanoic acid (PFHxDA) | L2ID | | 0.9463 | | 2.67 | 2.50 | 6.9 | 50.0 |
| Perfluoro-n-octadecanoic acid (PFODA) | AveID | 0.6605 | 0.9594 | | 3.63 | 2.50 | 45.3 | 50.0 |
| 13C4 PFBA | Ave | 1.585 | 1.465 | | 2.31 | 2.50 | -7.6 | 50.0 |
| 13C5 PFPeA | Ave | 1.233 | 1.094 | | 2.22 | 2.50 | -11.3 | 50.0 |
| 13C3 PFBS | Ave | 0.9684 | 0.9539 | | 2.29 | 2.33 | -1.5 | 50.0 |
| M2-4:2 FTS | Ave | 0.2333 | 0.2027 | | 2.03 | 2.34 | -13.1 | 50.0 |
| 13C2 PFHxA | Ave | 1.231 | 1.186 | | 2.41 | 2.50 | -3.6 | 50.0 |
| 13C3 HFPO-DA | Ave | 0.2518 | 0.2326 | | 2.31 | 2.50 | -7.6 | 50.0 |
| 13C4 PFHpA | Ave | 1.051 | 1.059 | | 2.52 | 2.50 | 0.8 | 50.0 |
| 18O2 PFHxS | Ave | 0.5117 | 0.5307 | | 2.45 | 2.37 | 3.7 | 50.0 |
| M2-6:2 FTS | Ave | 0.1958 | 0.1717 | | 2.08 | 2.38 | -12.3 | 50.0 |
| 13C4 PFOA | Ave | 1.001 | 1.075 | | 2.68 | 2.50 | 7.4 | 50.0 |
| 13C4 PFOS | Ave | 0.3465 | 0.3492 | | 2.41 | 2.39 | 0.8 | 50.0 |
| 13C5 PFNA | Ave | 0.8063 | 0.8479 | | 2.63 | 2.50 | 5.2 | 50.0 |
| 13C8 FOSA | Ave | 0.5590 | 0.5487 | | 2.45 | 2.50 | -1.8 | 50.0 |
| 13C2 PFDA | Ave | 0.7829 | 0.8298 | | 2.65 | 2.50 | 6.0 | 50.0 |
| M2-8:2 FTS | Ave | 0.2823 | 0.2452 | | 2.08 | 2.40 | -13.1 | 50.0 |
| d3-NMeFOSAA | Ave | 0.5255 | 0.4886 | | 2.33 | 2.50 | -7.0 | 50.0 |
| 13C2 PFUnA | Ave | 0.7758 | 0.8438 | | 2.72 | 2.50 | 8.8 | 50.0 |
| d5-NEtFOSAA | Ave | 0.5556 | 0.5150 | | 2.32 | 2.50 | -7.3 | 50.0 |
| d7-N-MeFOSE-M | Ave | 0.1384 | 0.1606 | | 14.5 | 12.5 | 16.0 | 50.0 |
| d-N-MeFOSA-M | Ave | 0.1965 | 0.1803 | | 2.29 | 2.50 | -8.3 | 50.0 |
| d9-N-EtFOSE-M | Ave | 0.1700 | 0.1982 | | 14.6 | 12.5 | 16.6 | 50.0 |
| 13C2 PFDoA | Ave | 0.7650 | 0.8183 | | 2.67 | 2.50 | 7.0 | 50.0 |
| d-N-EtFOSA-M | Ave | 0.2011 | 0.1774 | | 2.21 | 2.50 | -11.8 | 50.0 |
| 13C2 PFTeDA | Ave | 0.6311 | 0.7346 | | 2.91 | 2.50 | 16.4 | 50.0 |
| 13C2 PFHxDA | Ave | 0.4618 | 0.4817 | | 2.61 | 2.50 | 4.3 | 50.0 |
| 13C8 PFOA | Ave | 0.6756 | 0.7151 | | 2.59 | 2.45 | 5.8 | 50.0 |
| 13C8 PFOS | Ave | 0.1082 | 0.1042 | | 2.30 | 2.39 | -3.7 | 50.0 |

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\A18\20200911-103101.b\2020.09.11_A18_PFC_A_015.d
Lims ID: CCV L5
Client ID:
Sample Type: CCV
Inject. Date: 11-Sep-2020 12:32:41 ALS Bottle#: 53 Worklist Smp#: 1
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Sample Info: CCV L5
Misc. Info.: Plate: 1 Rack: 1
Operator ID: TAISACA18-PC\A-18 Instrument ID: A18
Sublist: chrom-PFAS_A18V2*sub1

Method: \\chromfs\Sacramento\ChromData\A18\20200911-103101.b\PFAS_A18V2.m
Limit Group: LC PFC ICAL
Last Update: 14-Sep-2020 09:08:18 Calib Date: 25-Aug-2020 17:37:57
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\A18\20200825-102078.b\2020.08.25_A18_ICAL_A_017.d

Column 1 : Gemini C18 3um 3mm x 50 mm ( 3.00 mm) Det: EXP1
Process Host: CTX1038

First Level Reviewer: sanjumnair Date: 14-Sep-2020 09:08:18
Ratio Calibration: Average of Initial Calibration

| Signal | RT | EXP RT | DLT RT | REL RT | Response | Amount ng/ml | Ratio(Limits) | %Rec | S/N | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| D 1 13C4 PFBA | | | | | | | | | | |
| 217.00 > 172.00 | 2.566 | 2.566 | 0.0 | 0.627 | 17022673 | 2.31 | | 92.4 | 8896 | |
| 2 Perfluorobutanoic acid | | | | | | | | | | |
| 212.90 > 169.00 | 2.566 | 2.566 | 0.0 | 1.000 | 15537184 | 2.63 | | 105 | 649 | |
| D 4 13C5 PFPeA | | | | | | | | | | |
| 267.90 > 223.00 | 2.909 | 2.909 | 0.0 | 0.711 | 12712778 | 2.22 | | 88.7 | 4618 | |
| 5 Perfluoropentanoic acid | | | | | | | | | | |
| 262.90 > 219.00 | 2.920 | 2.920 | 0.0 | 1.004 | 13477479 | 2.66 | | 106 | 547 | |
| D 9 13C3 PFBS | | | | | | | | | | |
| 301.90 > 80.00 | 2.951 | 2.951 | 0.0 | 0.721 | 10307192 | 2.29 | | 98.5 | 4774 | |
| 6 Perfluorobutanesulfonic acid | | | | | | | | | | |
| 298.90 > 80.00 | 2.951 | 2.951 | 0.0 | 1.000 | 10499031 | 2.35 | Target=2.30 | 106 | 2167 | |
| 298.90 > 99.00 | 2.951 | 2.951 | 0.0 | 1.000 | 4429924 | | 2.37(1.15-3.45) | | 1336 | |
| D 7 M2-4:2 FTS | | | | | | | | | | |
| 329.00 > 81.00 | 3.251 | 3.251 | 0.0 | 0.794 | 2199940 | 2.03 | | 86.9 | 1044 | |
| 8 4:2 FTS | | | | | | | | | | |
| 327.00 > 307.00 | 3.251 | 3.251 | 0.0 | 1.000 | 5422076 | 2.53 | | 108 | 11332 | |
| D 11 13C2 PFHxA | | | | | | | | | | |
| 315.00 > 270.00 | 3.290 | 3.290 | 0.0 | 0.804 | 13783400 | 2.41 | | 96.4 | 5344 | |
| 10 Perfluorohexanoic acid | | | | | | | | | | |
| 313.00 > 269.00 | 3.290 | 3.290 | 0.0 | 1.000 | 13930774 | 2.62 | Target=13.78 | 105 | 775 | |
| 313.00 > 119.00 | 3.290 | 3.290 | 0.0 | 1.000 | 1058367 | | 13.16(6.89-20.66) | | 506 | |
| 12 Perfluoropentanesulfonic acid | | | | | | | | | | |
| 349.00 > 80.00 | 3.312 | 3.312 | 0.0 | 1.122 | 8690785 | 2.47 | Target=3.02 | 105 | 1661 | |
| 349.00 > 99.00 | 3.312 | 3.312 | 0.0 | 1.122 | 2934866 | | 2.96(1.51-4.52) | | 1388 | |
| 13 HPFO-DA | | | | | | | | | | |
| 285.00 > 169.00 | 3.418 | 3.418 | 0.0 | 1.000 | 2867202 | 2.72 | | 109 | 4533 | |

| Signal | RT | EXP RT | DLT RT | REL RT | Response | Amount ng/ml | Ratio(Limits) | %Rec | S/N | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| D 14 13C3 HFPO-DA | | | | | | | | | | |
| 287.00 > 169.00 | 3.418 | 3.418 | 0.0 | 0.835 | 2703167 | 2.31 | | 92.4 | 4476 | |
| D 18 13C4 PFHpA | | | | | | | | | | |
| 367.00 > 322.00 | 3.702 | 3.702 | 0.0 | 0.905 | 12305371 | 2.52 | | 101 | 5229 | |
| 16 Perfluoroheptanoic acid | | | | | | | | | | |
| 363.00 > 319.00 | 3.702 | 3.702 | 0.0 | 1.000 | 12287192 | 2.46 | Target=3.84 | 98.5 | 1064 | |
| 363.00 > 169.00 | 3.702 | 3.702 | 0.0 | 1.000 | 3326747 | | 3.69(1.92-5.76) | | 1861 | |
| D 17 18O2 PFHxS | | | | | | | | | | |
| 403.00 > 84.00 | 3.702 | 3.702 | 0.0 | 0.905 | 5833710 | 2.45 | | 104 | 5843 | |
| 15 Perfluorohexanesulfonic acid | | | | | | | | | | |
| 399.00 > 80.00 | 3.702 | 3.702 | 0.0 | 1.000 | 6145849 | 2.11 | Target=3.50 | 92.7 | 1822 | |
| 399.00 > 99.00 | 3.702 | 3.702 | 0.0 | 1.000 | 1836497 | | 3.35(1.75-5.25) | | 1017 | |
| 19 DONA | | | | | | | | | | |
| 377.00 > 251.00 | 3.751 | 3.751 | 0.0 | 0.842 | 38747006 | 2.49 | Target=2.42 | 106 | 11295 | |
| 377.00 > 85.00 | 3.751 | 3.751 | 0.0 | 0.842 | 15998952 | | 2.42(1.21-3.63) | | 6574 | |
| D 20 M2-6:2 FTS | | | | | | | | | | |
| 429.00 > 81.00 | 4.068 | 4.068 | 0.0 | 0.994 | 1895649 | 2.08 | | 87.7 | 1205 | |
| 21 6:2 FTS | | | | | | | | | | |
| 427.00 > 407.00 | 4.068 | 4.068 | 0.0 | 1.000 | 4364000 | 2.38 | | 100 | 3875 | |
| $ 26 13C8 PFOA | | | | | | | | | | |
| 421.00 > 376.00 | 4.084 | 4.084 | 0.0 | 0.998 | 8134639 | 2.59 | | 106 | 6040 | |
| 24 Perfluoroheptanesulfonic acid | | | | | | | | | | |
| 449.00 > 80.00 | 4.084 | 4.084 | 0.0 | 0.917 | 4498355 | 2.48 | Target=4.40 | 104 | 1568 | |
| 449.00 > 99.00 | 4.084 | 4.084 | 0.0 | 0.917 | 1033712 | | 4.35(2.20-6.60) | | 1042 | |
| D 25 13C4 PFOA | | | | | | | | | | |
| 417.00 > 372.00 | 4.092 | 4.092 | 0.0 | 1.000 | 12487081 | 2.68 | | 107 | 8877 | |
| 22 Perfluorooctanoic acid | | | | | | | | | | |
| 413.00 > 369.00 | 4.092 | 4.092 | 0.0 | 1.000 | 13024813 | 2.56 | Target=2.94 | 102 | 1920 | |
| 413.00 > 169.00 | 4.092 | 4.092 | 0.0 | 1.000 | 4483394 | | 2.91(1.47-4.41) | | 388891 | |
| * 23 13C2 PFOA | | | | | | | | | | |
| 415.00 > 370.00 | 4.092 | 4.092 | 0.0 | | 11619087 | 2.50 | | | 5393 | |
| $ 28 13C8 PFOS | | | | | | | | | | |
| 507.00 > 99.00 | 4.454 | 4.454 | 0.0 | 1.088 | 1157902 | 2.30 | | 96.3 | 2354 | |
| D 27 13C4 PFOS | | | | | | | | | | |
| 503.00 > 80.00 | 4.454 | 4.454 | 0.0 | 1.088 | 3879252 | 2.41 | | 101 | 1667 | |
| 29 Perfluorooctanesulfonic acid | | | | | | | | | | M |
| 499.00 > 80.00 | 4.454 | 4.454 | 0.0 | 1.000 | 4062986 | 2.42 | Target=4.53 | 104 | 1020 | M |
| 499.00 > 99.00 | 4.454 | 4.454 | 0.0 | 1.000 | 861653 | | 4.72(2.26-6.79) | | 824 | M |
| D 30 13C5 PFNA | | | | | | | | | | |
| 468.00 > 423.00 | 4.470 | 4.470 | 0.0 | 1.092 | 9851275 | 2.63 | | 105 | 7582 | |
| 31 Perfluorononanoic acid | | | | | | | | | | |
| 463.00 > 419.00 | 4.478 | 4.478 | 0.0 | 1.002 | 9429827 | 2.50 | Target=8.97 | 99.6 | 1333 | |
| 463.00 > 169.00 | 4.470 | 4.478 | -0.008 | 1.000 | 1166806 | | 8.08(4.48-13.45) | | 1463 | |
| 32 9ClFOS | | | | | | | | | | |
| 531.00 > 351.00 | 4.658 | 4.658 | 0.0 | 1.046 | 12652175 | 2.41 | | 103 | 11858 | |
| D 33 13C8 FOSA | | | | | | | | | | |
| 506.00 > 78.00 | 4.786 | 4.786 | 0.0 | 1.169 | 6375070 | 2.45 | | 98.2 | 8041 | |

| Signal | RT | EXP RT | DLT RT | REL RT | Response | Amount ng/ml | Ratio(Limits) | %Rec | S/N | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| 34 Perfluorooctanesulfonamide | | | | | | | | | | |
| 498.00 > 78.00 | 4.786 | 4.786 | 0.0 | 1.000 | 5927154 | 2.50 | | 99.9 | 4751 | |
| 35 Perfluorononanesulfonic acid | | | | | | | | | | |
| 549.00 > 80.00 | 4.803 | 4.803 | 0.0 | 1.078 | 3727919 | 2.45 | Target=2.85 | 102 | 2101 | |
| 549.00 > 99.00 | 4.803 | 4.803 | 0.0 | 1.078 | 1341279 | | 2.78(1.43-4.28) | | 1663 | |
| D 39 13C2 PFDA | | | | | | | | | | |
| 515.00 > 470.00 | 4.828 | 4.828 | 0.0 | 1.180 | 9641548 | 2.65 | | 106 | 6814 | |
| 37 Perfluorodecanoic acid | | | | | | | | | | |
| 513.00 > 469.00 | 4.828 | 4.828 | 0.0 | 1.000 | 8354947 | 2.25 | Target=10.16 | 89.9 | 1864 | |
| 513.00 > 169.00 | 4.828 | 4.828 | 0.0 | 1.000 | 773192 | | 10.81(5.08-15.24) | | 203 | |
| 36 8:2 FTS | | | | | | | | | | |
| 527.00 > 507.00 | 4.828 | 4.828 | 0.0 | 1.000 | 5031223 | 2.49 | | 104 | 9115 | |
| D 38 M2-8:2 FTS | | | | | | | | | | |
| 529.00 > 81.00 | 4.828 | 4.828 | 0.0 | 1.180 | 2729589 | 2.08 | | 86.9 | 1588 | |
| D 40 d3-NMeFOSAA | | | | | | | | | | |
| 573.00 > 419.00 | 5.000 | 5.000 | 0.0 | 1.222 | 5676981 | 2.32 | | 93.0 | 3277 | |
| 41 NMeFOSAA | | | | | | | | | | |
| 570.00 > 419.00 | 5.000 | 5.000 | 0.0 | 1.000 | 4345165 | 2.58 | | 103 | 228595 | |
| 42 Perfluorodecanesulfonic acid | | | | | | | | | | |
| 599.00 > 80.00 | 5.120 | 5.120 | 0.0 | 1.150 | 3384841 | 2.50 | Target=2.77 | 104 | 2141 | |
| 599.00 > 99.00 | 5.120 | 5.120 | 0.0 | 1.150 | 1194021 | | 2.83(1.38-4.15) | | 2364 | |
| 45 Perfluoroundecanoic acid | | | | | | | | | | |
| 563.00 > 519.00 | 5.148 | 5.148 | 0.0 | 0.998 | 8321844 | 2.93 | Target=8.43 | 117 | 2721 | |
| 563.00 > 169.00 | 5.148 | 5.148 | 0.0 | 0.998 | 867029 | | 9.60(4.22-12.65) | | 1592 | |
| D 43 13C2 PFUnA | | | | | | | | | | |
| 565.00 > 520.00 | 5.157 | 5.157 | 0.0 | 1.260 | 9804030 | 2.72 | | 109 | 9716 | |
| D 44 d5-NEtFOSAA | | | | | | | | | | |
| 589.00 > 419.00 | 5.157 | 5.157 | 0.0 | 1.260 | 5983583 | 2.32 | | 92.7 | 3331 | |
| 46 NEtFOSA | | | | | | | | | | |
| 584.00 > 419.00 | 5.166 | 5.166 | 0.0 | 1.002 | 4378026 | 2.71 | | 108 | 58786 | |
| D 47 d7-N-MeFOSE-M | | | | | | | | | | |
| 623.00 > 59.00 | 5.249 | 5.249 | 0.0 | 1.283 | 9329364 | 14.5 | | 116 | 4407 | |
| 48 N-MeFOSE-M | | | | | | | | | | |
| 616.00 > 59.00 | 5.259 | 5.259 | 0.0 | 1.002 | 2215179 | 2.75 | | 110 | 2070 | |
| D 49 d-N-MeFOSA-M | | | | | | | | | | |
| 515.00 > 169.00 | 5.269 | 5.269 | 0.0 | 1.288 | 2094499 | 2.29 | | 91.7 | 40.4 | |
| 50 NMeFOSA | | | | | | | | | | |
| 512.00 > 169.00 | 5.269 | 5.269 | 0.0 | 1.000 | 2442943 | 3.04 | | 121 | 657 | |
| 51 11ClFOS | | | | | | | | | | |
| 631.00 > 451.00 | 5.290 | 5.290 | 0.0 | 1.188 | 15902445 | 2.39 | | 101 | 14909 | |
| D 52 d9-N-EtFOSE-M | | | | | | | | | | |
| 639.00 > 59.00 | 5.415 | 5.415 | 0.0 | 1.323 | 11515359 | 14.6 | | 117 | 6037 | |
| 53 N-EtFOSE-M | | | | | | | | | | |
| 630.00 > 59.00 | 5.437 | 5.437 | 0.0 | 1.004 | 2758336 | 2.79 | | 112 | 2674 | |
| 57 Perfluorododecanoic acid | | | | | | | | | | |
| 613.00 > 569.00 | 5.448 | 5.448 | 0.0 | 1.000 | 8452131 | 2.17 | Target=9.12 | 86.4 | 2072 | |
| 613.00 > 169.00 | 5.448 | 5.448 | 0.0 | 1.000 | 978306 | | 8.64(4.56-13.69) | | 1459 | |

| Signal | RT | EXP RT | DLT RT | REL RT | Response | Amount ng/ml | Ratio(Limits) | %Rec | S/N | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| D 56 13C2 PFDoA | | | | | | | | | | |
| 615.00 > 570.00 | 5.448 | 5.448 | 0.0 | 1.331 | 9507876 | 2.67 | | 107 | 7054 | |
| D 54 d-N-EtFOSA-M | | | | | | | | | | |
| 531.00 > 169.00 | 5.448 | 5.448 | 0.0 | 1.331 | 2060864 | 2.20 | | 88.2 | 195 | |
| 55 N-EtFOSA-M | | | | | | | | | | |
| 526.00 > 169.00 | 5.458 | 5.458 | 0.0 | 1.002 | 2440402 | 2.80 | | 112 | 396 | |
| 58 10:2 FTS | | | | | | | | | | |
| 627.00 > 607.00 | 5.469 | 5.469 | 0.0 | 1.133 | 6094498 | 2.66 | | 110 | 10057 | |
| 59 PFDoS | | | | | | | | | | |
| 699.00 > 80.00 | 5.666 | 5.666 | 0.0 | 1.272 | 1262048 | 2.34 | Target=0.72 | 96.5 | 1189 | |
| 699.00 > 99.00 | 5.678 | 5.666 | 0.012 | 1.275 | 1843492 | | 0.68(0.36-1.07) | | 2699 | |
| 60 Perfluorotridecanoic acid | | | | | | | | | | |
| 663.00 > 619.00 | 5.712 | 5.712 | 0.0 | 1.049 | 11007379 | 3.08 | Target=6.78 | 123 | 5750 | |
| 663.00 > 169.00 | 5.712 | 5.712 | 0.0 | 1.049 | 1470593 | | 7.48(3.39-10.17) | | 2348 | |
| D 61 13C2 PFTeDA | | | | | | | | | | |
| 715.00 > 670.00 | 5.959 | 5.959 | 0.0 | 1.456 | 8535883 | 2.91 | | 116 | 7581 | |
| 62 Perfluorotetradecanoic acid | | | | | | | | | | |
| 713.00 > 169.00 | 5.959 | 5.959 | 0.0 | 1.000 | 764528 | 2.65 | Target=0.85 | 106 | 1981 | |
| 713.00 > 219.00 | 5.948 | 5.959 | -0.011 | 0.998 | 688253 | | 1.11(0.43-1.28) | | 3173 | |
| D 64 13C2 PFHxDA | | | | | | | | | | |
| 815.00 > 770.00 | 6.394 | 6.394 | 0.0 | 1.562 | 5597075 | 2.61 | | 104 | 6024 | |
| 63 Perfluorohexadecanoic acid | | | | | | | | | | |
| 813.00 > 769.00 | 6.394 | 6.394 | 0.0 | 1.000 | 5296267 | 2.67 | Target=10.21 | 107 | 2641 | |
| 813.00 > 169.00 | 6.394 | 6.394 | 0.0 | 1.000 | 463731 | | 11.42(5.11-15.32) | | 1909 | |
| 65 Perfluorooctadecanoic acid | | | | | | | | | | |
| 913.00 > 869.00 | 6.848 | 6.848 | 0.0 | 1.071 | 5369978 | 3.63 | Target=12.45 | 145 | 2634 | |
| 913.00 > 169.00 | 6.841 | 6.848 | -0.007 | 1.070 | 395702 | | 13.57(6.22-18.67) | | 2006 | |

## QC Flag Legend

Processing Flags

Review Flags

M - Manually Integrated

## Reagents:

LCPFC_LL5_00031 Amount Added: 1.00 Units: mL

Report Date: 14-Sep-2020 09:08:19 Chrom Revision: 2.3 11-Sep-2020 20:57:08

Eurofins TestAmerica, Sacramento

Data File: \\chromfs\Sacramento\ChromData\A18\20200911-103101.b\2020.09.11_A18_PFC_A_015.d

Injection Date: 11-Sep-2020 12:32:41 Instrument ID: A18

Lims ID: CCV L5

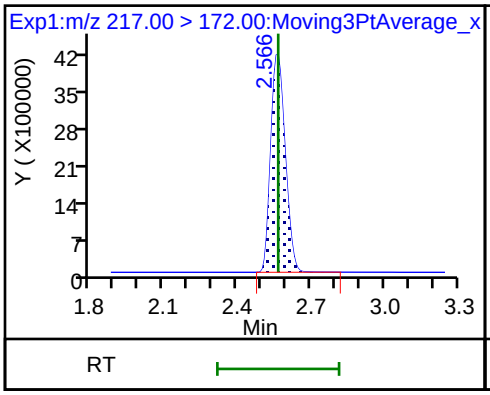
Client ID:

Operator ID: TAISACA18-PC\A-18 ALS Bottle#: 53 Worklist Smp#: 1

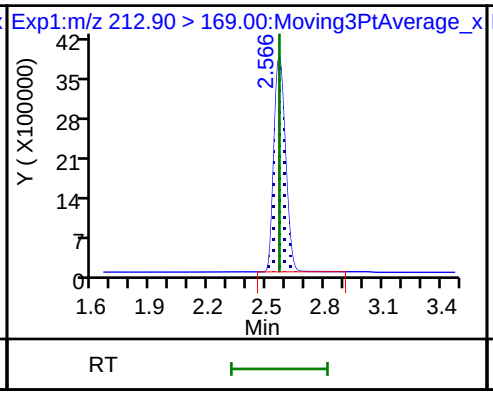
Injection Vol: 20.0 ul Dil. Factor: 1.0000

Method: PFAS_A18V2 Limit Group: LC PFC ICAL

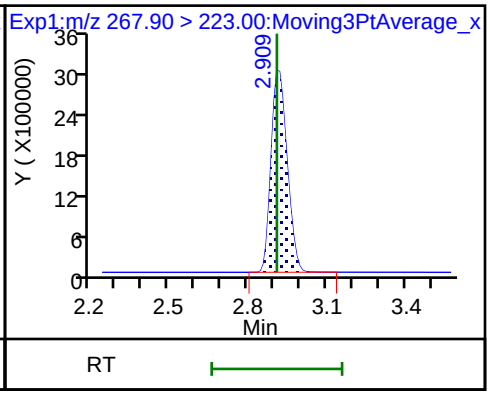
D 1 13C4 PFBA



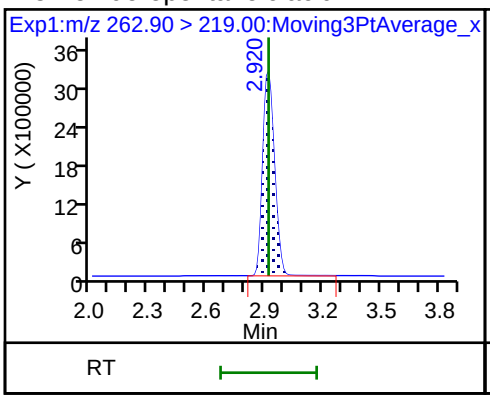

2 Perfluorobutanoic acid



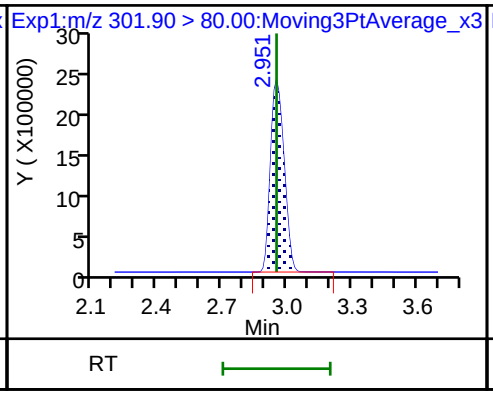

D 4 13C5 PFPeA



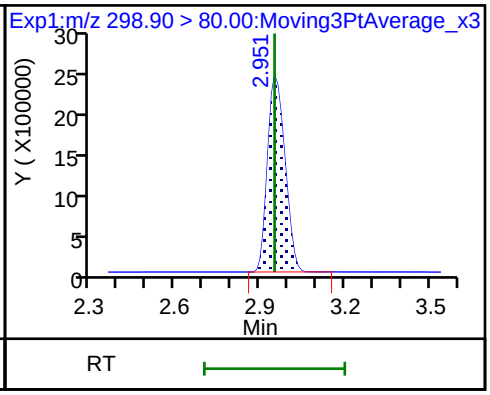

5 Perfluoropentanoic acid



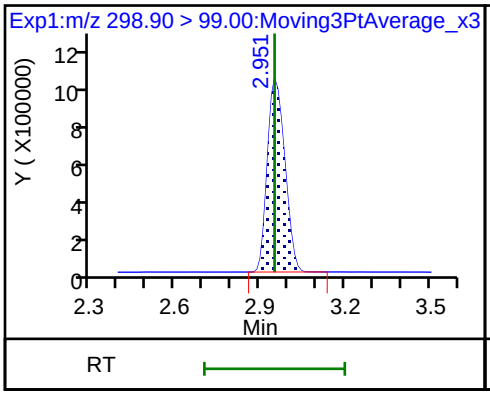

D 9 13C3 PFBS



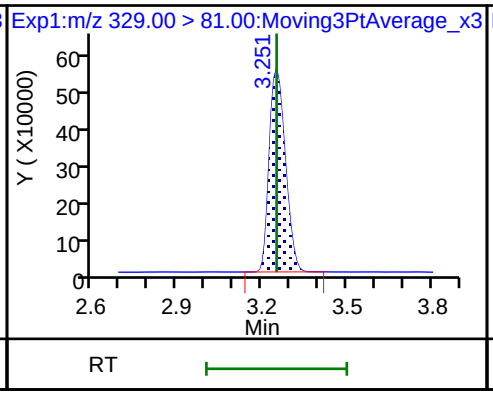

6 Perfluorobutanesulfonic acid



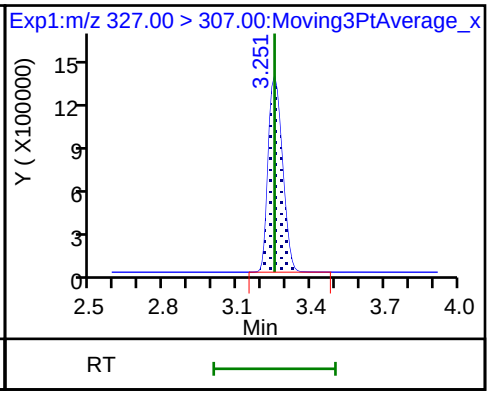

6 Perfluorobutanesulfonic acid



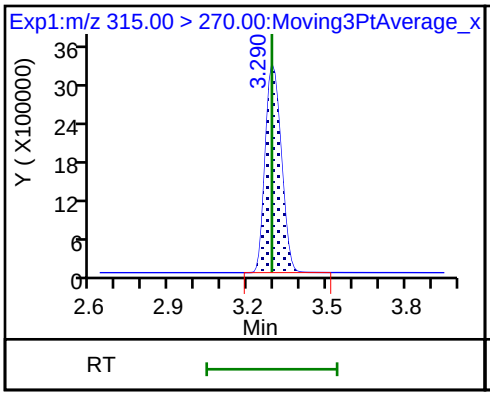

D 7 M2-4:2 FTS



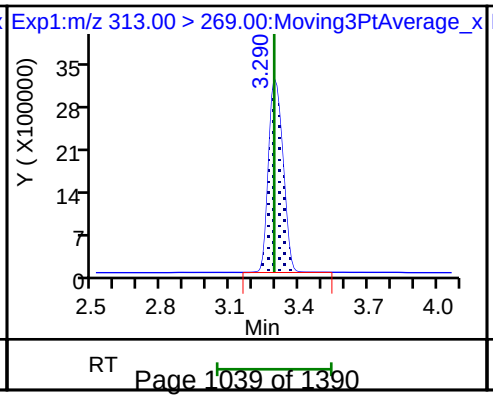

8 4:2 FTS



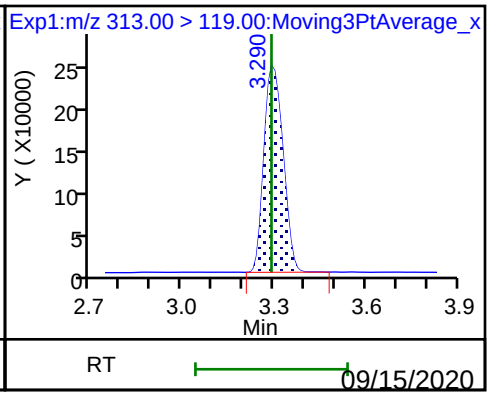

D 11 13C2 PFHxA



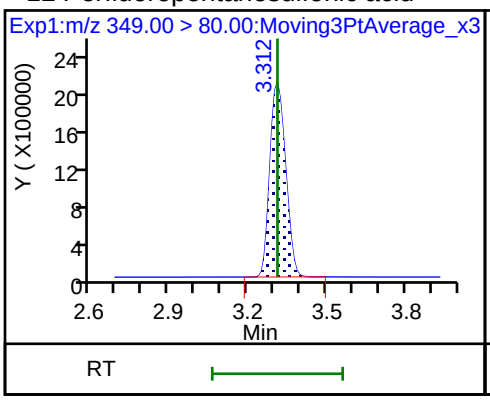

10 Perfluorohexanoic acid



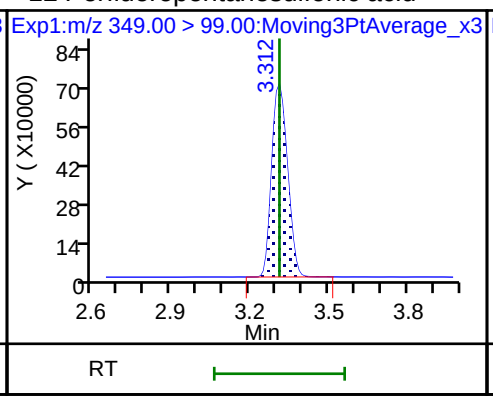

10 Perfluorohexanoic acid



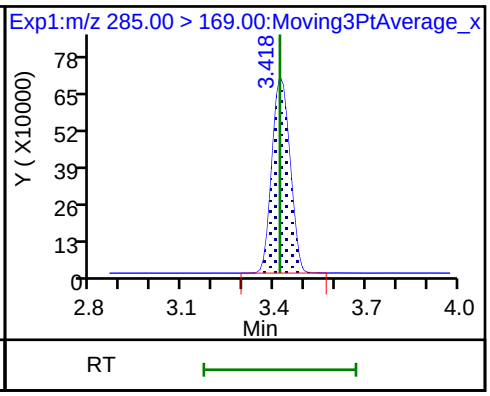
12 Perfluoropentanesulfonic acid



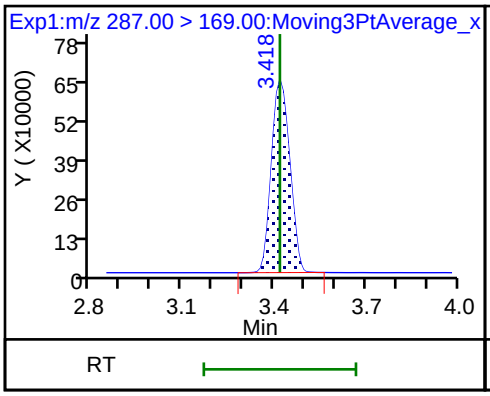

12 Perfluoropentanesulfonic acid



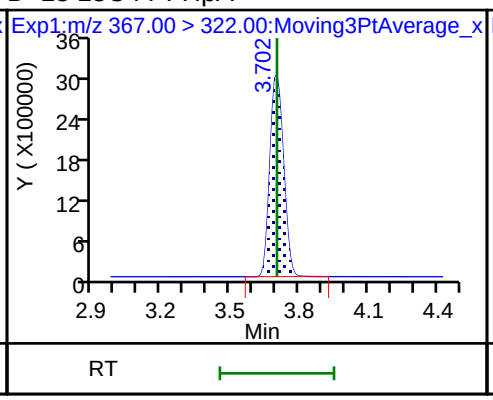

13 HPFO-DA



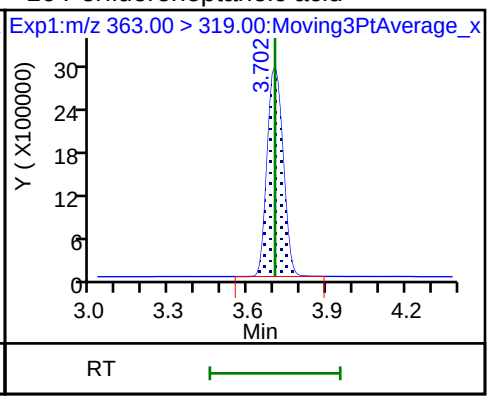

D 14 13C3 HFPO-DA



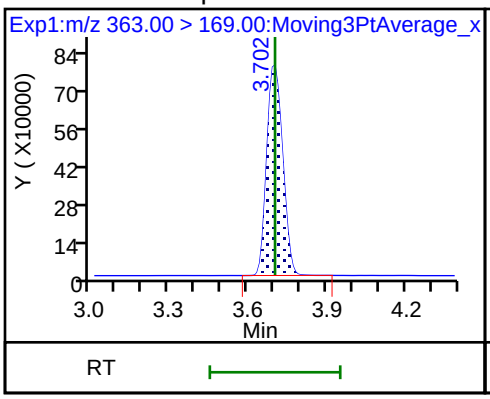

D 18 13C4 PFHpA



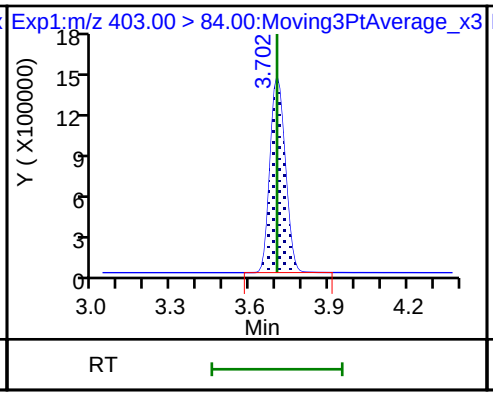

16 Perfluoroheptanoic acid



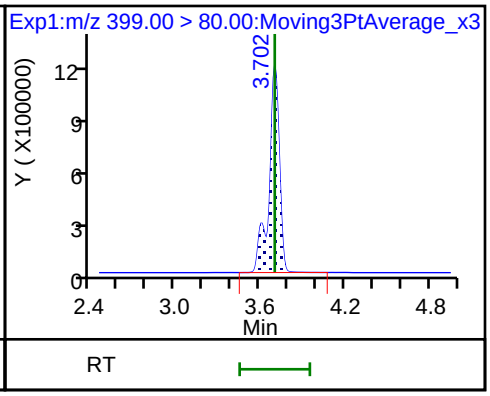

16 Perfluoroheptanoic acid



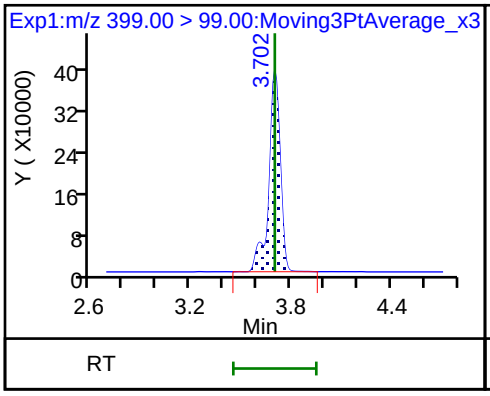

D 17 18O2 PFHxS



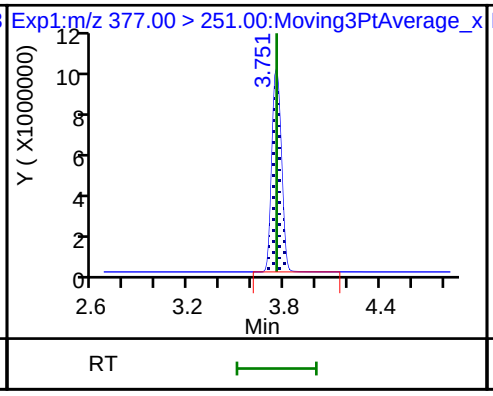

15 Perfluorohexanesulfonic acid



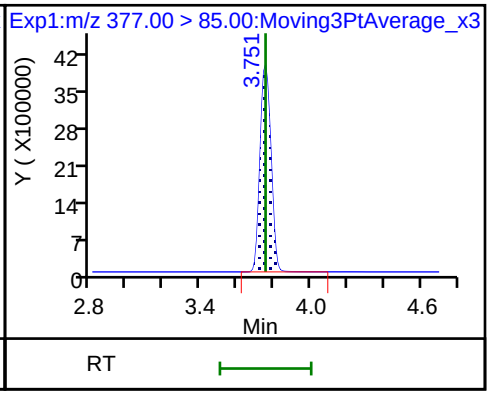

15 Perfluorohexanesulfonic acid



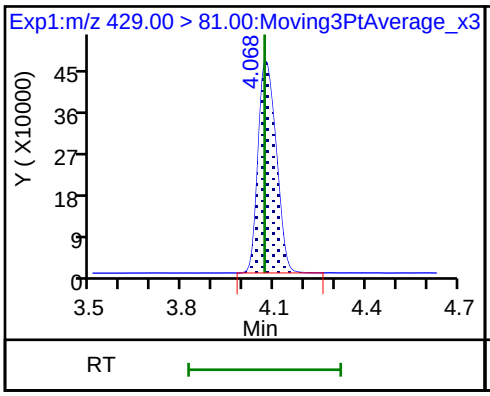

19 DONA



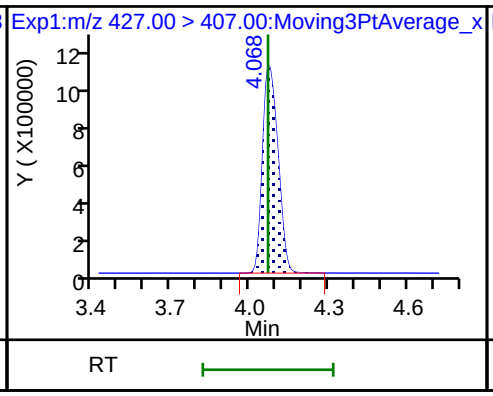

19 DONA



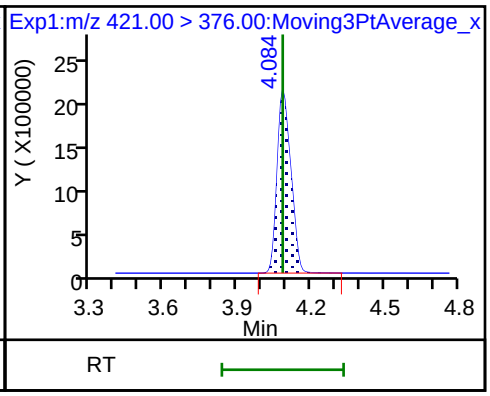
D 20 M2-6:2 FTS



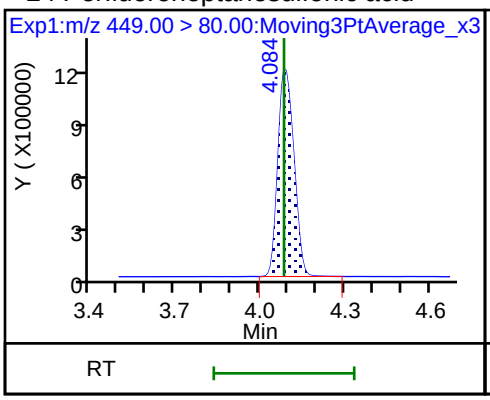

21 6:2 FTS



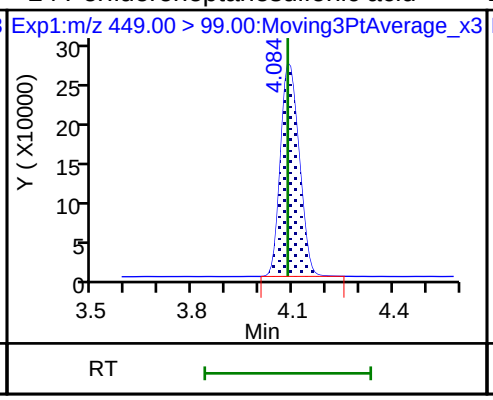

$ 26 13C8 PFOA



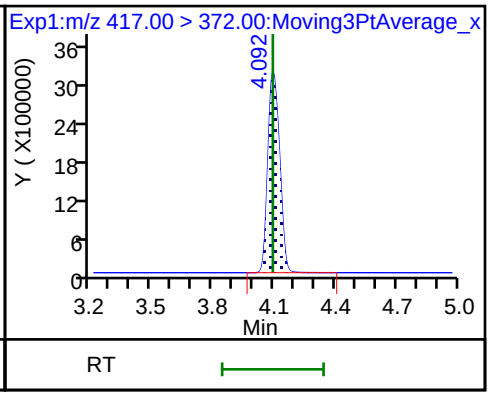

24 Perfluoroheptanesulfonic acid



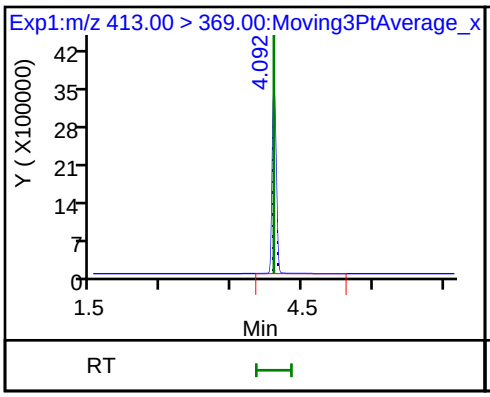

24 Perfluoroheptanesulfonic acid



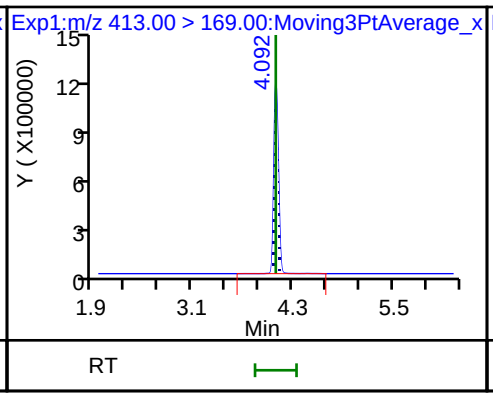

D 25 13C4 PFOA



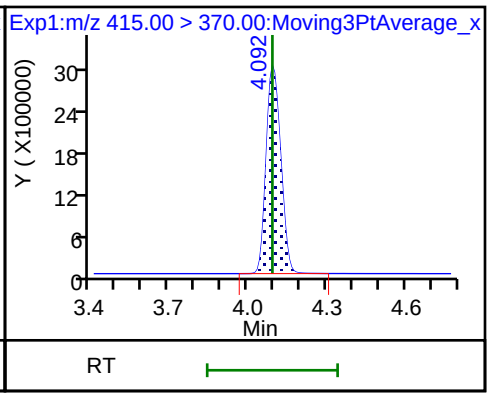

22 Perfluorooctanoic acid



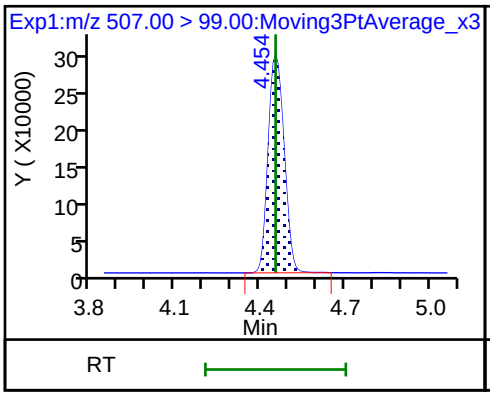

22 Perfluorooctanoic acid



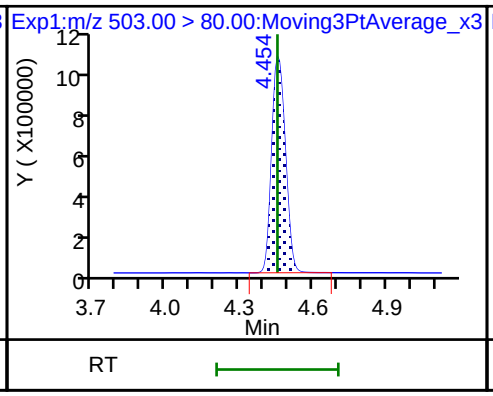

* 23 13C2 PFOA



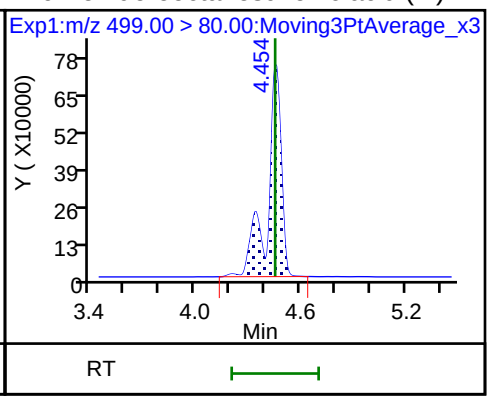

$ 28 13C8 PFOS



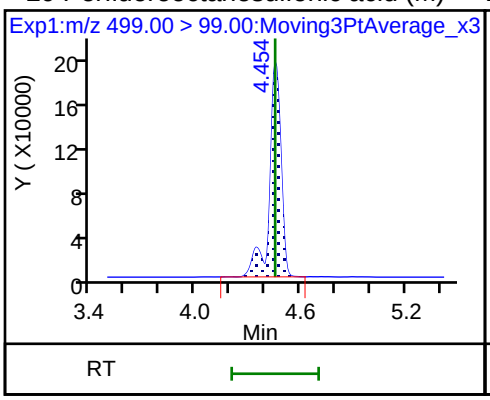

D 27 13C4 PFOS



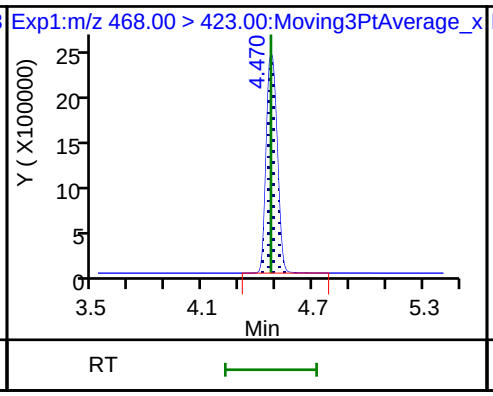

29 Perfluorooctanesulfonic acid (M)



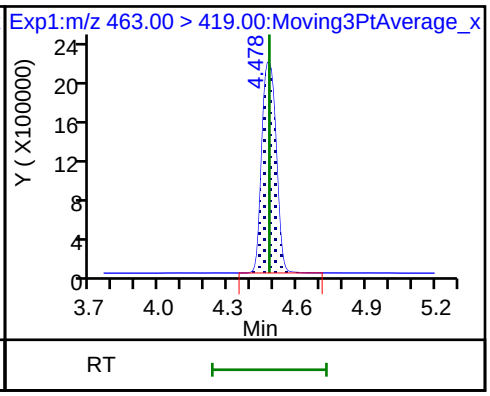
29 Perfluorooctanesulfonic acid (M)



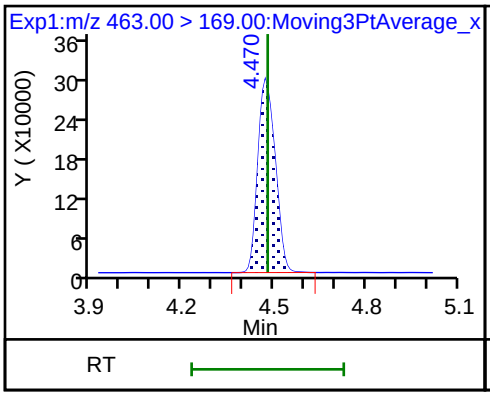

D 30 13C5 PFNA



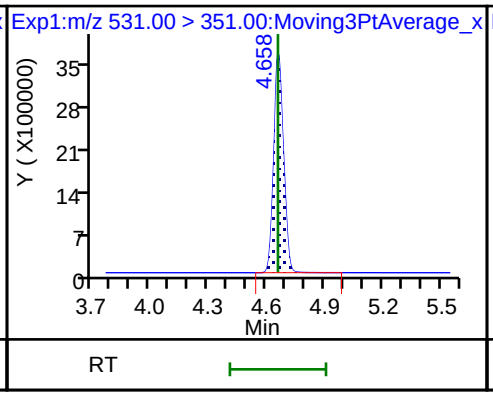

31 Perfluorononanoic acid



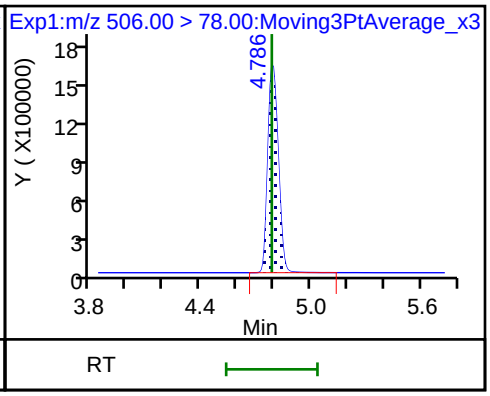

31 Perfluorononanoic acid



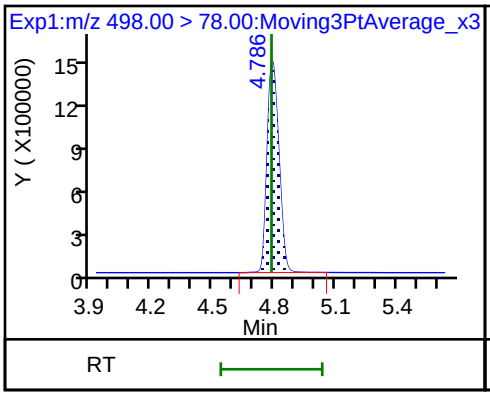

32 9ClFOS



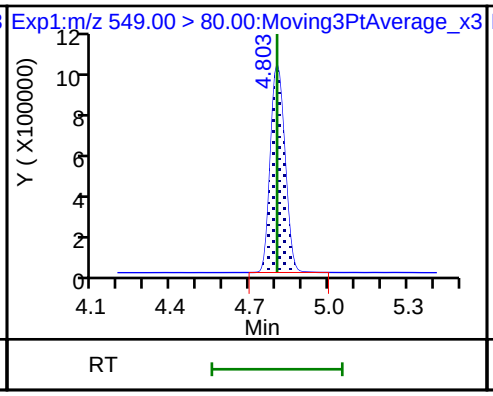

D 33 13C8 FOSA



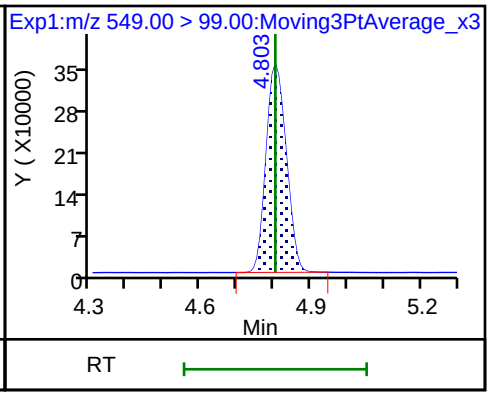

34 Perfluorooctanesulfonamide



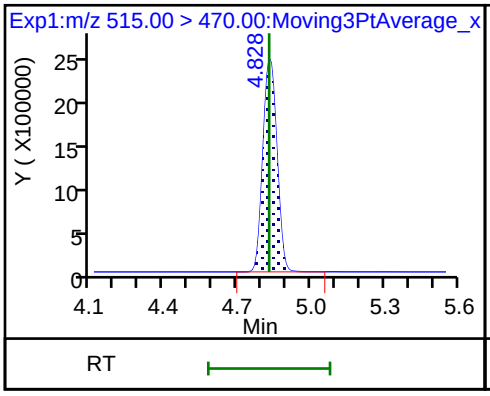

35 Perfluorononanesulfonic acid



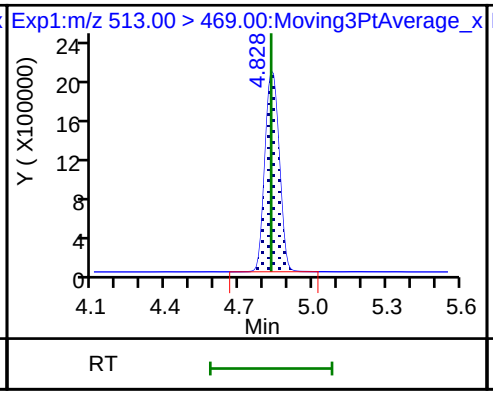

35 Perfluorononanesulfonic acid



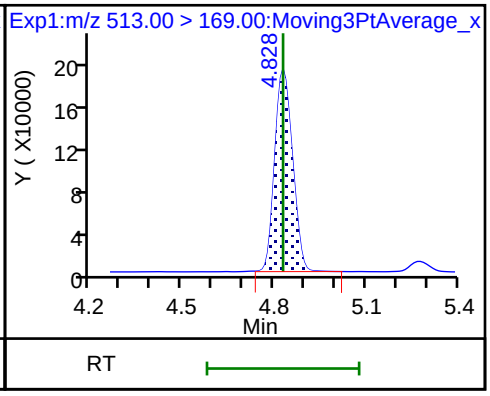

D 39 13C2 PFDA



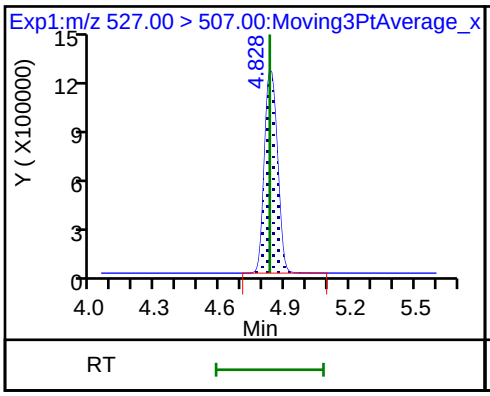

37 Perfluorodecanoic acid



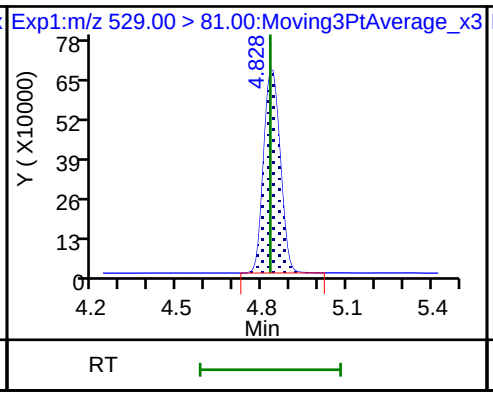

37 Perfluorodecanoic acid



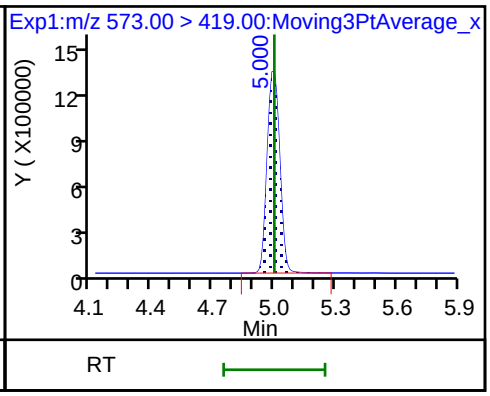
36 8:2 FTS



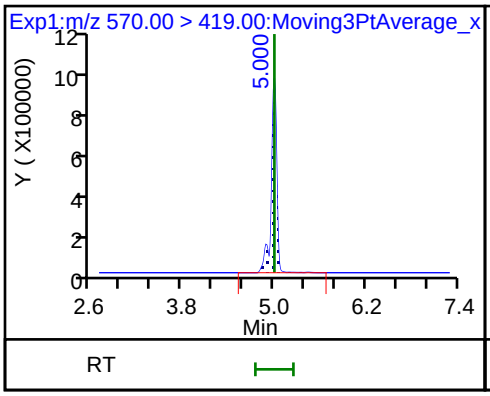

D 38 M2-8:2 FTS



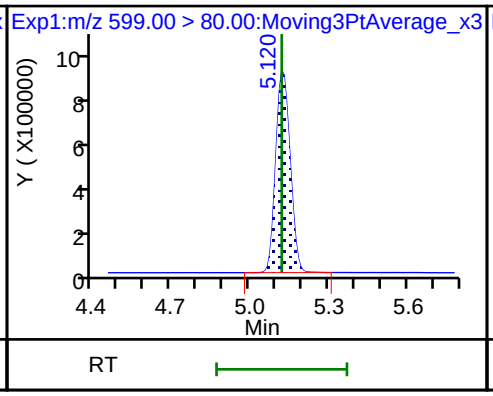

D 40 d3-NMeFOSAA



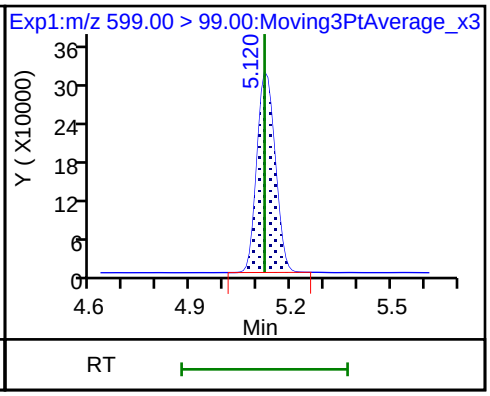

41 NMeFOSAA



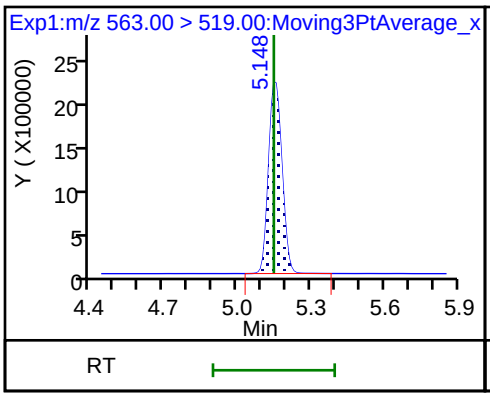

42 Perfluorodecanesulfonic acid



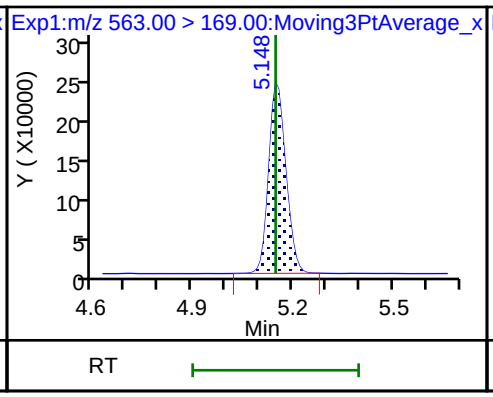

42 Perfluorodecanesulfonic acid



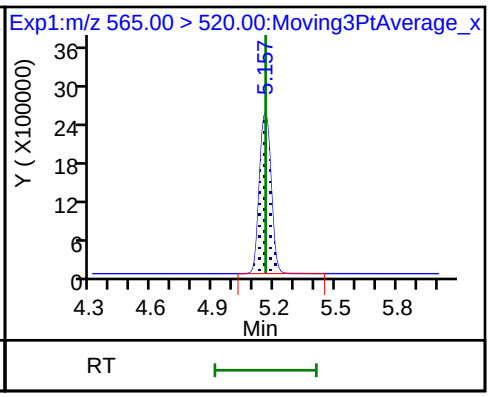

45 Perfluoroundecanoic acid



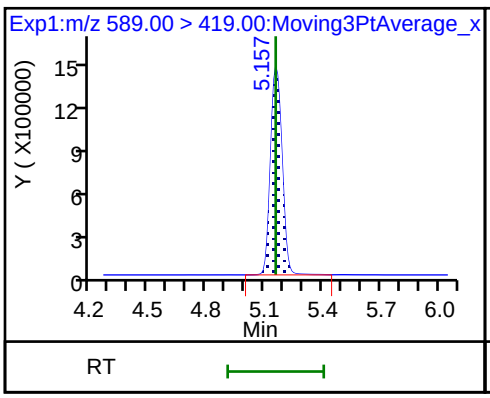

45 Perfluoroundecanoic acid



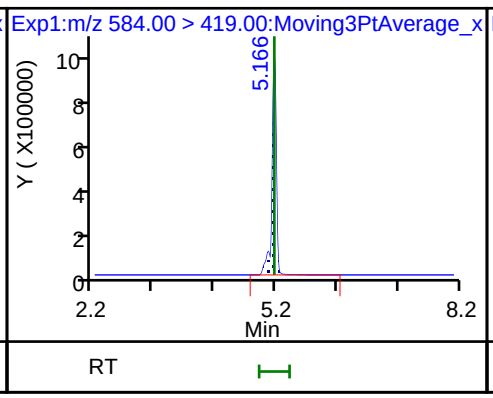

D 43 13C2 PFUnA



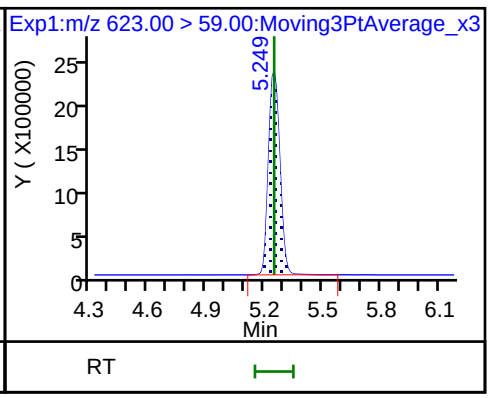

D 44 d5-NEtFOSAA



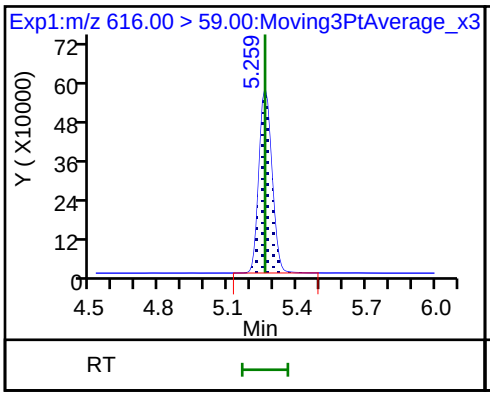

46 NEtFOSA



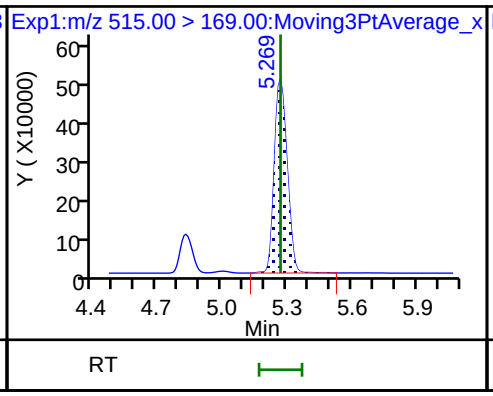

D 47 d7-N-MeFOSE-M



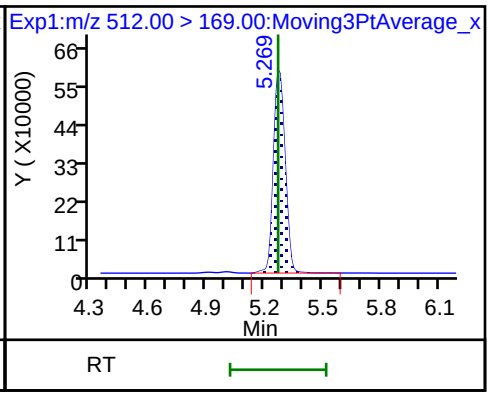
48 N-MeFOSE-M



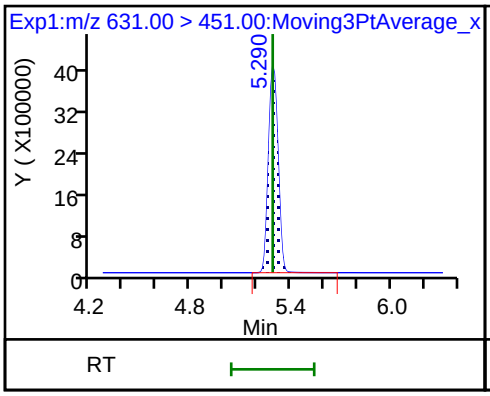

D 49 d-N-MeFOSA-M



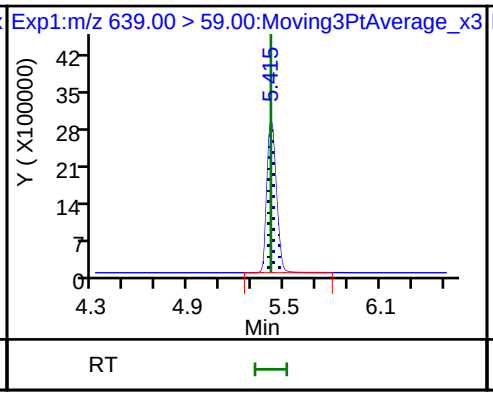

50 NMeFOSA



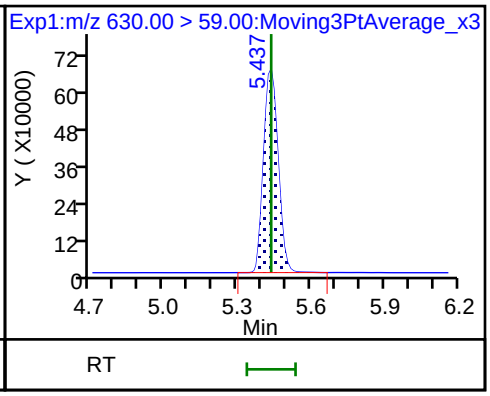

51 11ClFOS



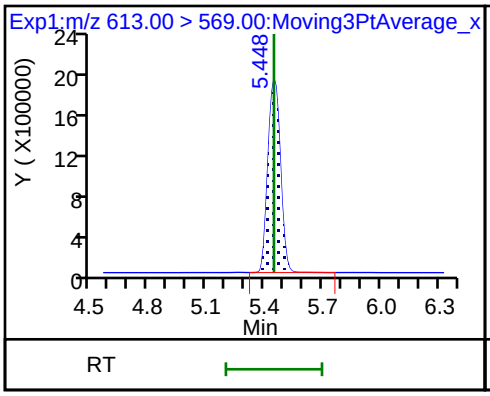

D 52 d9-N-EtFOSE-M



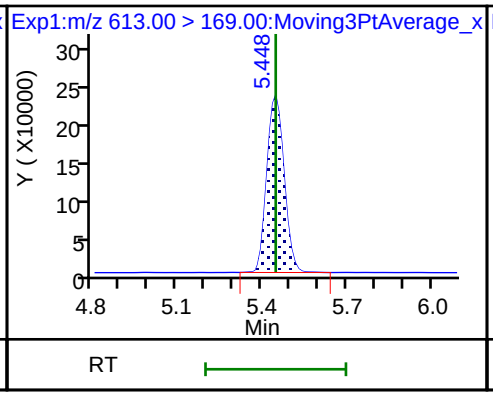

53 N-EtFOSE-M



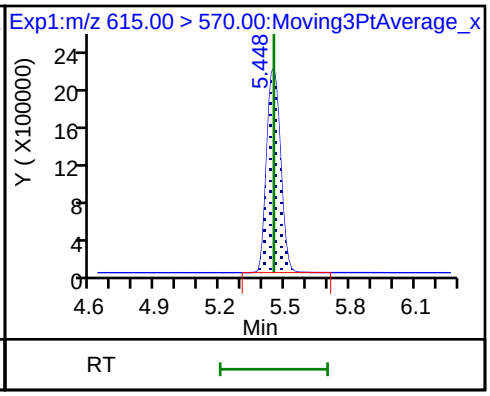

57 Perfluorododecanoic acid



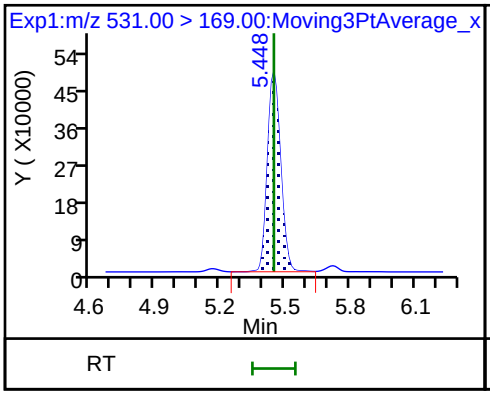

57 Perfluorododecanoic acid



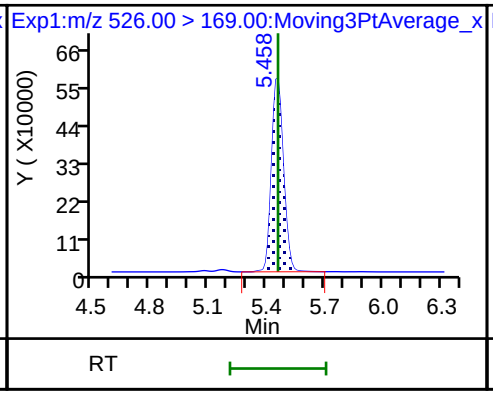

D 56 13C2 PFDoA



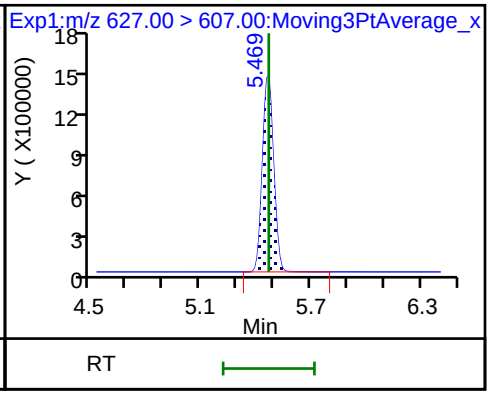

D 54 d-N-EtFOSA-M



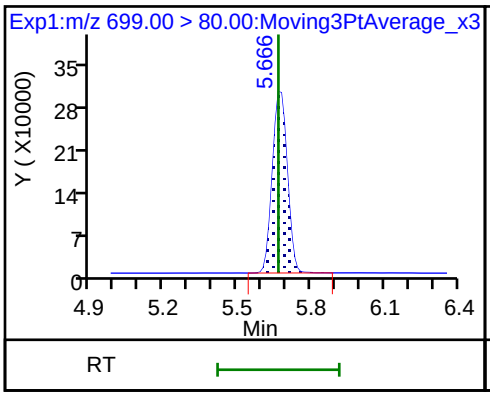

55 N-EtFOSA-M



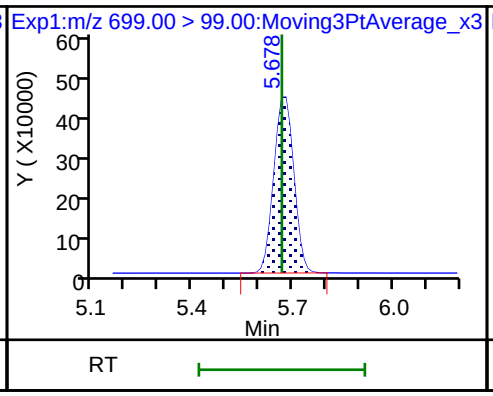

58 10:2 FTS



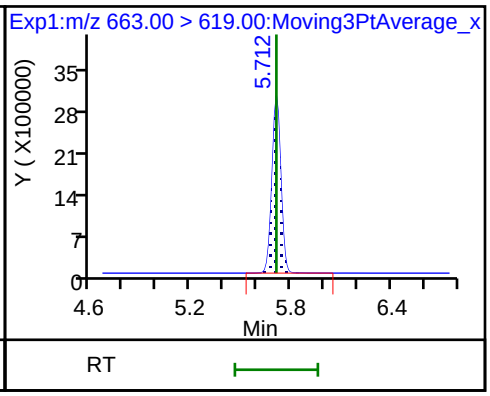
59 PFDoS



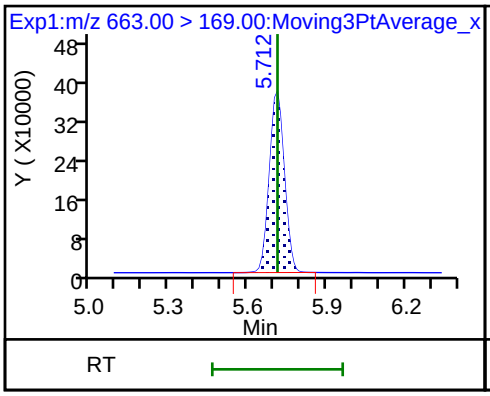

59 PFDoS



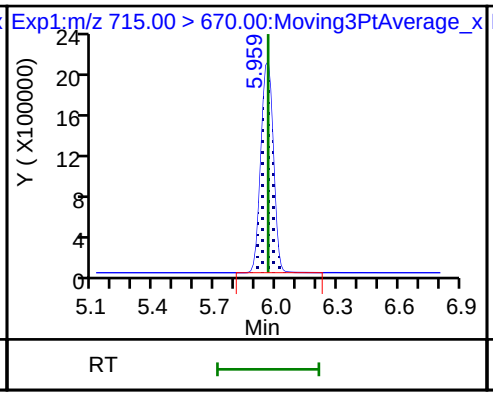

60 Perfluorotridecanoic acid



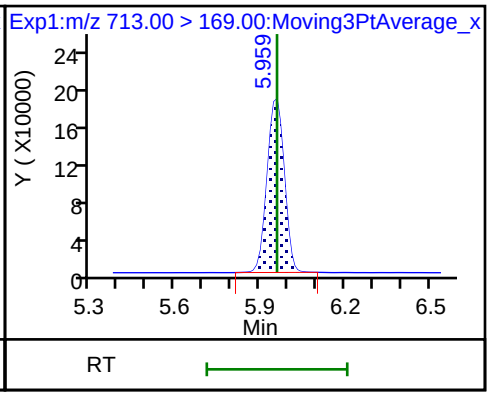

60 Perfluorotridecanoic acid



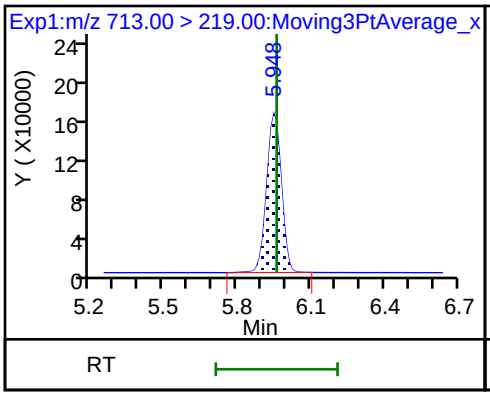

D 61 13C2 PFTeDA



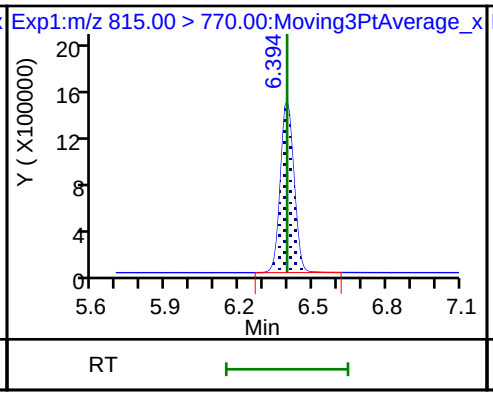

62 Perfluorotetradecanoic acid



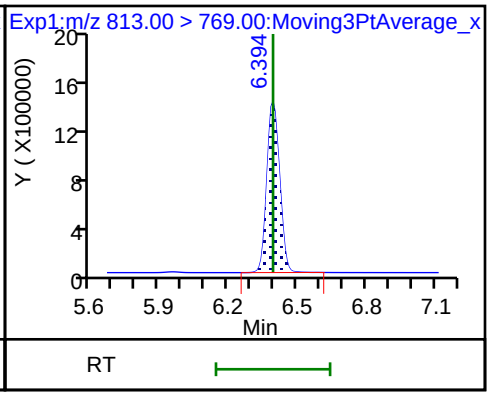

62 Perfluorotetradecanoic acid



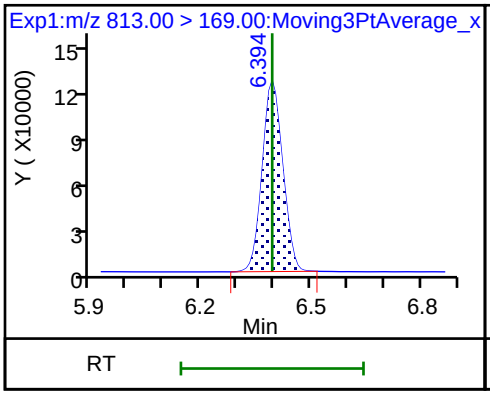

D 64 13C2 PFHxDA



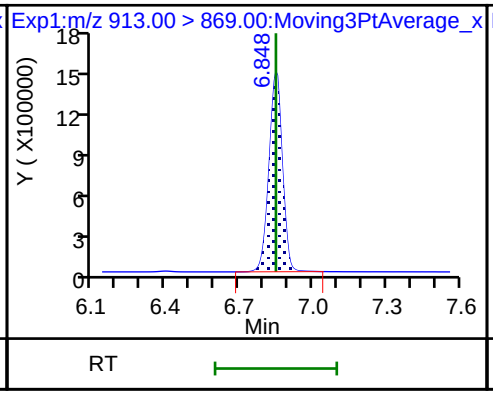

63 Perfluorohexadecanoic acid



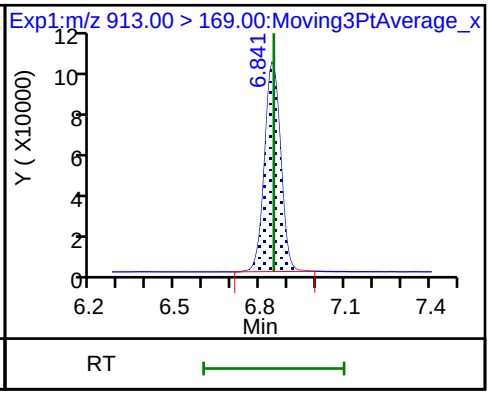

63 Perfluorohexadecanoic acid




65 Perfluorooctadecanoic acid




65 Perfluorooctadecanoic acid



Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

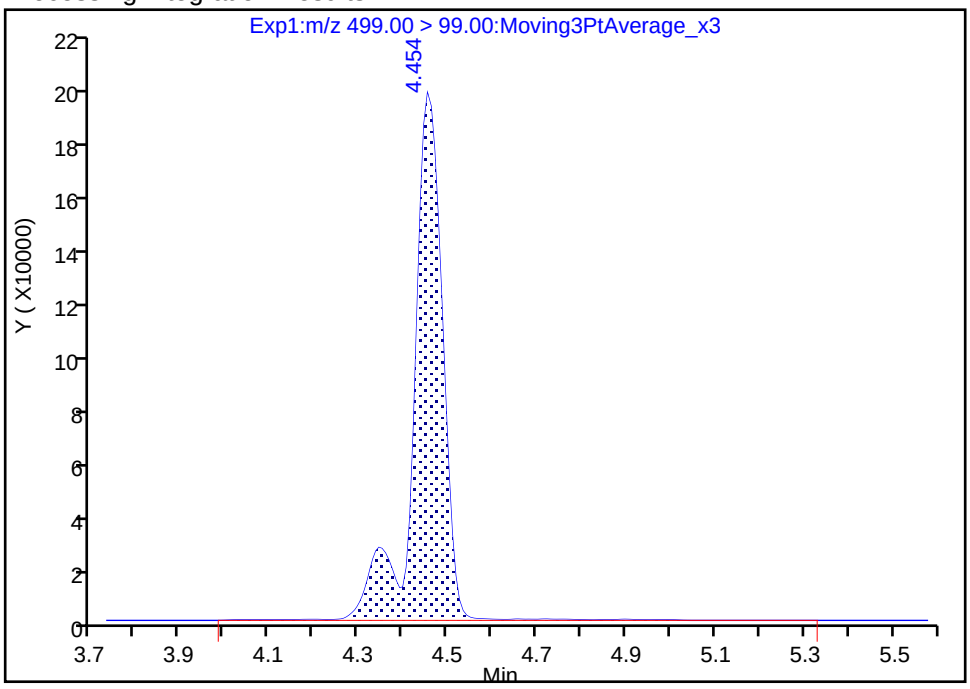
Data File: \\chromfs\Sacramento\ChromData\A18\20200911-103101.b\2020.09.11_A18_PFC_A_015.d
Injection Date: 11-Sep-2020 12:32:41 Instrument ID: A18
Lims ID: CCV L5
Client ID:
Operator ID: TAISACA18-PC\A-18 ALS Bottle#: 53 Worklist Smp#: 1
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFAS_A18V2 Limit Group: LC PFC ICAL
Column: Gemini C18 3um 3mm x 50 mm ( 3.00mm) Detector EXP1

## 29 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 2

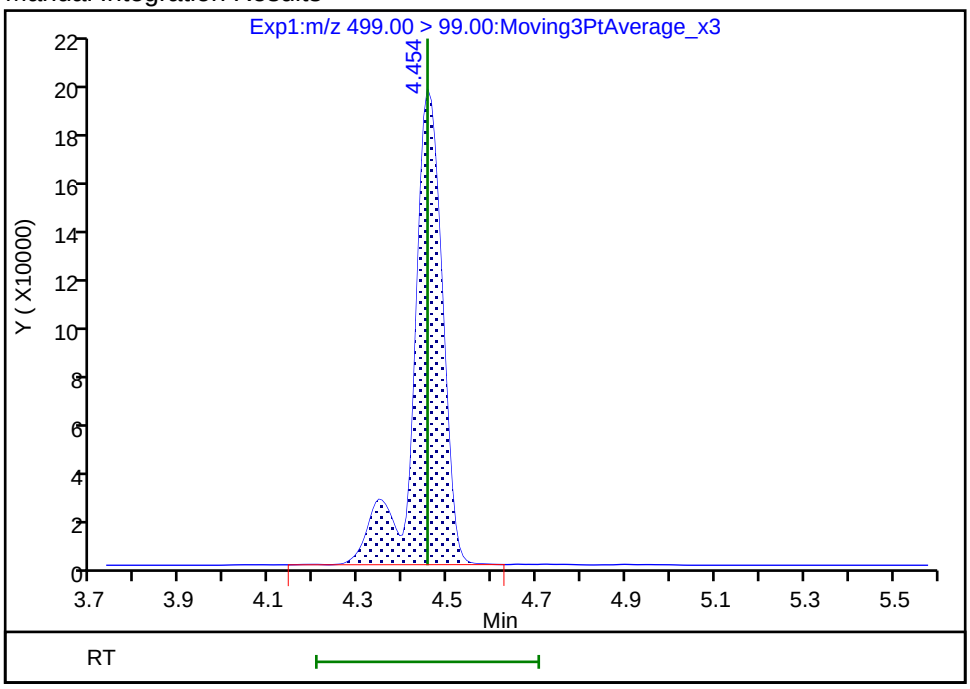
Processing Integration Results

RT: 4.45
Area: 875723
Amount: 2.412096
Amount Units: ng/ml




Manual Integration Results

RT: 4.45
Area: 861653
Amount: 2.418465
Amount Units: ng/ml




Reviewer: sanjumnair, 14-Sep-2020 09:08:03
Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

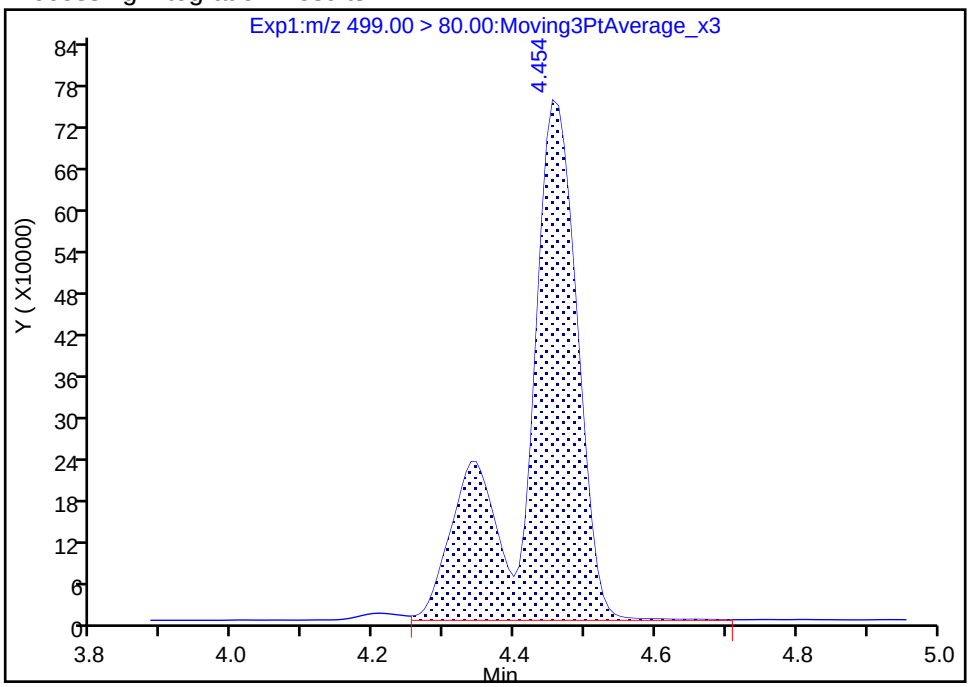
| | | | | | |
|---|---|---|---|---|---|
| Data File: | \\chromfs\Sacramento\ChromData\A18\20200911-103101.b\2020.09.11_A18_PFC_A_015.d | | | | |
| Injection Date: | 11-Sep-2020 12:32:41 | Instrument ID: | A18 | | |
| Lims ID: | CCV L5 | | | | |
| Client ID: | | | | | |
| Operator ID: | TAISACA18-PC\A-18 | ALS Bottle#: | 53 | Worklist Smp#: | 1 |
| Injection Vol: | 20.0 ul | Dil. Factor: | 1.0000 | | |
| Method: | PFAS_A18V2 | Limit Group: | LC PFC ICAL | | |
| Column: | Gemini C18 3um 3mm x 50 mm ( 3.00 mm) | Detector | EXP1 | | |

## 29 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 1

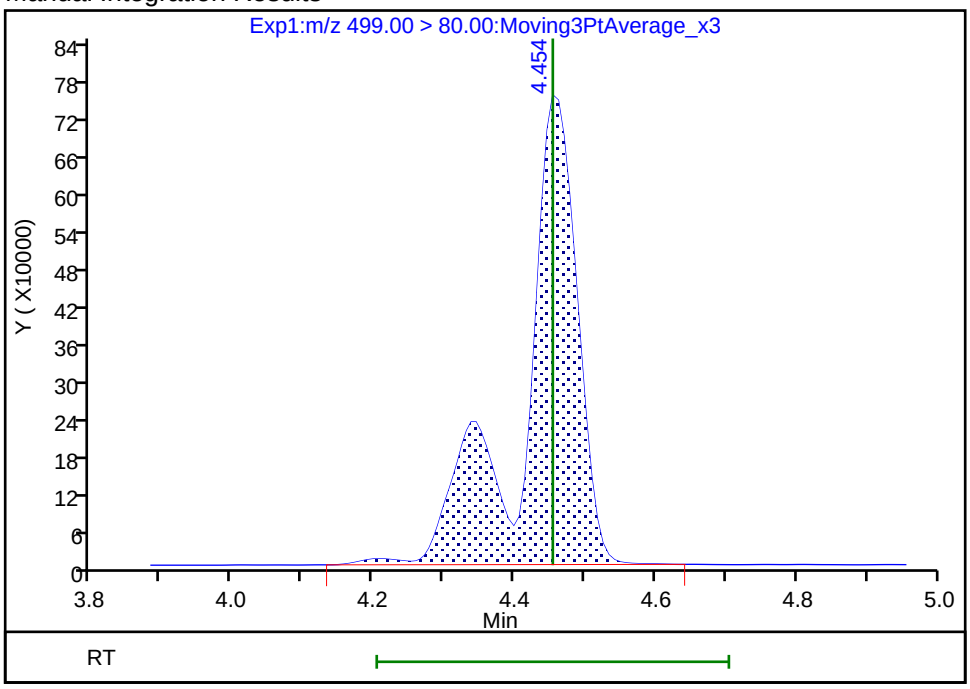
Processing Integration Results

RT: 4.45
Area: 4052287
Amount: 2.412096
Amount Units: ng/ml




Manual Integration Results

RT: 4.45
Area: 4062986
Amount: 2.418465
Amount Units: ng/ml




Reviewer: sanjumnair, 14-Sep-2020 09:08:11
Audit Action: Manually Integrated Audit Reason: Baseline

FORM VII
LCMS CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Sacramento  Job No.: 460-217547-1

SDG No.:

Lab Sample ID: CCV 320-411377/10  Calibration Date: 09/11/2020 13:54

Instrument ID: A18  Calib Start Date: 08/25/2020 16:43

GC Column: Gemini C18 3x50  ID: 3.00(mm)  Calib End Date: 08/25/2020 17:37

Lab File ID: 2020.09.11_A18_PFC_A_024.d  Conc. Units: ng/mL

| ANALYTE | CURVE TYPE | AVE RRF | RRF | MIN RRF | CALC AMOUNT | SPIKE AMOUNT | %D | MAX %D |
|---|---|---|---|---|---|---|---|---|
| Perfluorobutanoic acid (PFBA) | AveID | 0.8679 | 0.9293 | | 1.07 | 1.00 | 7.1 | 40.0 |
| Perfluoropentanoic acid (PFPeA) | AveID | 0.997 | 1.089 | | 1.09 | 1.00 | 9.2 | 40.0 |
| Perfluorobutanesulfonic acid (PFBS) | AveID | 1.010 | 1.095 | | 0.958 | 0.884 | 8.4 | 50.0 |
| 4:2 FTS | AveID | 2.273 | 2.597 | | 1.07 | 0.934 | 14.2 | 50.0 |
| Perfluorohexanoic acid (PFHxA) | AveID | 0.9638 | 1.003 | | 1.04 | 1.00 | 4.1 | 40.0 |
| Perfluoropentanesulfonic acid (PFPeS) | AveID | 0.7925 | 0.8832 | | 1.05 | 0.938 | 11.4 | 50.0 |
| HFPO-DA (GenX) | AveID | 0.9742 | 1.050 | | 1.08 | 1.00 | 7.7 | 40.0 |
| Perfluoroheptanoic acid (PFHpA) | AveID | 1.014 | 1.039 | | 1.03 | 1.00 | 2.5 | 40.0 |
| Perfluorohexanesulfonic acid (PFHxS) | AveID | 1.181 | 1.132 | | 0.872 | 0.910 | -4.2 | 40.0 |
| 4,8-Dioxa-3H-perfluorononanoic acid (ADONA) | AveID | 9.582 | 10.53 | | 1.04 | 0.942 | 9.9 | 50.0 |
| 6:2 FTS | AveID | 2.299 | 2.365 | | 0.975 | 0.948 | 2.9 | 40.0 |
| Perfluoroheptanesulfonic Acid (PFHpS) | AveID | 1.118 | 1.209 | | 1.03 | 0.952 | 8.2 | 50.0 |
| Perfluorooctanoic acid (PFOA) | AveID | 1.020 | 1.082 | | 1.06 | 1.00 | 6.1 | 40.0 |
| Perfluorooctanesulfonic acid (PFOS) | AveID | 1.035 | 1.115 | | 1.00 | 0.928 | 7.7 | 40.0 |
| Perfluorononanoic acid (PFNA) | AveID | 0.9590 | 1.047 | | 1.09 | 1.00 | 9.2 | 40.0 |
| F-53B Major | AveID | 3.236 | 3.500 | | 1.01 | 0.932 | 8.2 | 50.0 |
| Perfluorooctanesulfonamide (FOSA) | AveID | 0.9305 | 0.9787 | | 1.05 | 1.00 | 5.2 | 40.0 |
| Perfluorononanesulfonic acid (PFNS) | AveID | 0.9368 | 1.032 | | 1.06 | 0.960 | 10.2 | 50.0 |
| 8:2 FTS | AveID | 1.775 | 1.962 | | 1.06 | 0.958 | 10.5 | 40.0 |
| Perfluorodecanoic acid (PFDA) | AveID | 0.9639 | 0.9081 | | 0.942 | 1.00 | -5.8 | 40.0 |
| N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA) | AveID | 0.7417 | 0.7728 | | 1.04 | 1.00 | 4.2 | 40.0 |
| Perfluorodecanesulfonic acid (PFDS) | AveID | 0.8350 | 0.9191 | | 1.06 | 0.964 | 10.1 | 50.0 |
| Perfluoroundecanoic acid (PFUnA) | AveID | 0.7253 | 0.7968 | | 1.10 | 1.00 | 9.9 | 40.0 |
| N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA) | AveID | 0.6758 | 0.7325 | | 1.08 | 1.00 | 8.4 | 40.0 |
| NMeFOSE | AveID | 1.080 | 1.298 | | 1.20 | 1.00 | 20.2 | 40.0 |
| NMeFOSA | AveID | 0.9606 | 1.083 | | 1.13 | 1.00 | 12.7 | 50.0 |
| F-53B Minor | AveID | 4.102 | 4.405 | | 1.01 | 0.942 | 7.4 | 50.0 |
| NEtFOSE | AveID | 1.073 | 1.027 | | 0.957 | 1.00 | -4.3 | 40.0 |
| Perfluorododecanoic acid (PFDoA) | AveID | 1.023 | 0.8339 | | 0.820 | 1.01 | -18.4 | 40.0 |
| 10:2 FTS | AveID | 2.014 | 2.453 | | 1.17 | 0.964 | 21.8 | 50.0 |
| NEtFOSA | AveID | 1.058 | 1.173 | | 1.11 | 1.00 | 10.8 | 40.0 |
| Perfluorododecanesulfonic acid (PFDoS) | AveID | 0.3329 | 0.3455 | | 1.01 | 0.968 | 3.8 | 50.0 |

FORM VII 537 (modified)

FORM VII
LCMS CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Sacramento  Job No.: 460-217547-1

SDG No.:

Lab Sample ID: CCV 320-411377/10  Calibration Date: 09/11/2020 13:54

Instrument ID: A18  Calib Start Date: 08/25/2020 16:43

GC Column: Gemini C18 3x50  ID: 3.00(mm)  Calib End Date: 08/25/2020 17:37

Lab File ID: 2020.09.11_A18_PFC_A_024.d  Conc. Units: ng/mL

| ANALYTE | CURVE TYPE | AVE RRF | RRF | MIN RRF | CALC AMOUNT | SPIKE AMOUNT | %D | MAX %D |
|---|---|---|---|---|---|---|---|---|
| Perfluorotridecanoic acid (PFTriA) | AveID | 0.9409 | 1.046 | | 1.11 | 1.00 | 11.1 | 50.0 |
| Perfluorotetradecanoic acid (PFTeA) | AveID | 0.0844 | 0.0908 | | 1.08 | 1.00 | 7.6 | 50.0 |
| Perfluoro-n-hexadecanoic acid (PFHxDA) | L2ID | | 1.053 | | 1.18 | 1.00 | 17.6 | 50.0 |
| Perfluoro-n-octadecanoic acid (PFODA) | AveID | 0.6605 | 0.8518 | | 1.29 | 1.00 | 29.0 | 50.0 |
| 13C4 PFBA | Ave | 1.585 | 1.384 | | 2.18 | 2.50 | -12.7 | 50.0 |
| 13C5 PFPeA | Ave | 1.233 | 1.042 | | 2.11 | 2.50 | -15.5 | 50.0 |
| 13C3 PFBS | Ave | 0.9684 | 0.8956 | | 2.15 | 2.33 | -7.5 | 50.0 |
| M2-4:2 FTS | Ave | 0.2333 | 0.1848 | | 1.85 | 2.34 | -20.8 | 50.0 |
| 13C2 PFHxA | Ave | 1.231 | 1.203 | | 2.44 | 2.50 | -2.2 | 50.0 |
| 13C3 HFPO-DA | Ave | 0.2518 | 0.2243 | | 2.23 | 2.50 | -10.9 | 50.0 |
| 13C4 PFHpA | Ave | 1.051 | 0.9802 | | 2.33 | 2.50 | -6.7 | 50.0 |
| 18O2 PFHxS | Ave | 0.5117 | 0.5030 | | 2.33 | 2.37 | -1.7 | 50.0 |
| M2-6:2 FTS | Ave | 0.1958 | 0.1638 | | 1.99 | 2.38 | -16.3 | 50.0 |
| 13C4 PFOA | Ave | 1.001 | 0.9568 | | 2.39 | 2.50 | -4.4 | 50.0 |
| 13C4 PFOS | Ave | 0.3465 | 0.3237 | | 2.23 | 2.39 | -6.6 | 50.0 |
| 13C5 PFNA | Ave | 0.8063 | 0.8288 | | 2.57 | 2.50 | 2.8 | 50.0 |
| 13C8 FOSA | Ave | 0.5590 | 0.5092 | | 2.28 | 2.50 | -8.9 | 50.0 |
| 13C2 PFDA | Ave | 0.7829 | 0.7730 | | 2.47 | 2.50 | -1.3 | 50.0 |
| M2-8:2 FTS | Ave | 0.2823 | 0.2347 | | 1.99 | 2.40 | -16.9 | 50.0 |
| d3-NMeFOSAA | Ave | 0.5255 | 0.4479 | | 2.13 | 2.50 | -14.8 | 50.0 |
| 13C2 PFUnA | Ave | 0.7758 | 0.8699 | | 2.80 | 2.50 | 12.1 | 50.0 |
| d5-NEtFOSAA | Ave | 0.5556 | 0.4852 | | 2.18 | 2.50 | -12.7 | 50.0 |
| d7-N-MeFOSE-M | Ave | 0.1384 | 0.1482 | | 13.4 | 12.5 | 7.1 | 50.0 |
| d-N-MeFOSA-M | Ave | 0.1965 | 0.1837 | | 2.34 | 2.50 | -6.5 | 50.0 |
| d9-N-EtFOSE-M | Ave | 0.1700 | 0.2105 | | 15.5 | 12.5 | 23.8 | 50.0 |
| 13C2 PFDoA | Ave | 0.7650 | 0.9376 | | 3.06 | 2.50 | 22.6 | 50.0 |
| d-N-EtFOSA-M | Ave | 0.2011 | 0.1831 | | 2.28 | 2.50 | -8.9 | 50.0 |
| 13C2 PFTeDA | Ave | 0.6311 | 0.6721 | | 2.66 | 2.50 | 6.5 | 50.0 |
| 13C2 PFHxDA | Ave | 0.4618 | 0.4254 | | 2.30 | 2.50 | -7.9 | 50.0 |
| 13C8 PFOA | Ave | 0.6756 | 0.6983 | | 2.53 | 2.45 | 3.4 | 50.0 |
| 13C8 PFOS | Ave | 0.1082 | 0.0996 | | 2.20 | 2.39 | -7.9 | 50.0 |

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\A18\20200911-103101.b\2020.09.11_A18_PFC_A_024.d
Lims ID: CCV L4
Client ID:
Sample Type: CCV
Inject. Date: 11-Sep-2020 13:54:54 ALS Bottle#: 52 Worklist Smp#: 10
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Sample Info: CCV L4
Misc. Info.: Plate: 1 Rack: 1
Operator ID: TAISACA18-PC\A-18 Instrument ID: A18
Sublist: chrom-PFAS_A18V2*sub1

Method: \\chromfs\Sacramento\ChromData\A18\20200911-103101.b\PFAS_A18V2.m
Limit Group: LC PFC ICAL
Last Update: 14-Sep-2020 10:12:34 Calib Date: 25-Aug-2020 17:37:57
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\A18\20200825-102078.b\2020.08.25_A18_ICAL_A_017.d

Column 1 : Gemini C18 3um 3mm x 50 mm ( 3.00 mm) Det: EXP1
Process Host: CTX1038

First Level Reviewer: sanjumnair Date: 14-Sep-2020 10:12:34
Ratio Calibration: Average of Initial Calibration

| Signal | RT | EXP RT | DLT RT | REL RT | Response | Amount ng/ml | Ratio(Limits) | %Rec | S/N | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| D 1 13C4 PFBA | | | | | | | | | | |
| 217.00 > 172.00 | 2.557 | 2.557 | 0.0 | 0.625 | 16145912 | 2.18 | | 87.3 | 6380 | |
| 2 Perfluorobutanoic acid | | | | | | | | | | |
| 212.90 > 169.00 | 2.557 | 2.557 | 0.0 | 1.000 | 6001889 | 1.07 | | 107 | 122 | |
| D 4 13C5 PFPeA | | | | | | | | | | |
| 267.90 > 223.00 | 2.909 | 2.909 | 0.0 | 0.711 | 12153027 | 2.11 | | 84.5 | 3446 | |
| 5 Perfluoropentanoic acid | | | | | | | | | | |
| 262.90 > 219.00 | 2.909 | 2.909 | 0.0 | 1.000 | 5291496 | 1.09 | | 109 | 121 | |
| D 9 13C3 PFBS | | | | | | | | | | |
| 301.90 > 80.00 | 2.940 | 2.940 | 0.0 | 0.719 | 9718618 | 2.15 | | 92.5 | 4607 | |
| 6 Perfluorobutanesulfonic acid | | | | | | | | | | |
| 298.90 > 80.00 | 2.950 | 2.950 | 0.0 | 1.004 | 4045396 | 0.9584 | Target=2.30 | 108 | 944 | |
| 298.90 > 99.00 | 2.950 | 2.950 | 0.0 | 1.004 | 1732299 | | 2.34(1.15-3.45) | | 365 | |
| D 7 M2-4:2 FTS | | | | | | | | | | |
| 329.00 > 81.00 | 3.238 | 3.238 | 0.0 | 0.792 | 2014306 | 1.85 | | 79.2 | 824 | |
| 8 4:2 FTS | | | | | | | | | | |
| 327.00 > 307.00 | 3.238 | 3.238 | 0.0 | 1.000 | 2092183 | 1.07 | | 114 | 6709 | |
| D 11 13C2 PFHxA | | | | | | | | | | |
| 315.00 > 270.00 | 3.288 | 3.288 | 0.0 | 0.804 | 14039857 | 2.44 | | 97.8 | 5454 | |
| 10 Perfluorohexanoic acid | | | | | | | | | | |
| 313.00 > 269.00 | 3.288 | 3.288 | 0.0 | 1.000 | 5634444 | 1.04 | Target=13.78 | 104 | 192 | |
| 313.00 > 119.00 | 3.288 | 3.288 | 0.0 | 1.000 | 417428 | | 13.50(6.89-20.66) | | 189 | |
| 12 Perfluoropentanesulfonic acid | | | | | | | | | | |
| 349.00 > 80.00 | 3.309 | 3.309 | 0.0 | 1.126 | 3463112 | 1.05 | Target=3.02 | 111 | 871 | |
| 349.00 > 99.00 | 3.298 | 3.309 | -0.011 | 1.122 | 1153909 | | 3.00(1.51-4.52) | | 367 | |
| D 14 13C3 HFPO-DA | | | | | | | | | | |
| 287.00 > 169.00 | 3.415 | 3.415 | 0.0 | 0.835 | 2617710 | 2.23 | | 89.1 | 3689 | |

| Signal | RT | EXP RT | DLT RT | REL RT | Response | Amount ng/ml | Ratio(Limits) | %Rec | S/N | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| 13 HPFO-DA | | | | | | | | | | |
| 285.00 > 169.00 | 3.415 | 3.415 | 0.0 | 1.000 | 1098976 | 1.08 | | 108 | 2380 | |
| D 17 18O2 PFHxS | | | | | | | | | | |
| 403.00 > 84.00 | 3.701 | 3.701 | 0.0 | 0.905 | 5551925 | 2.32 | | 98.3 | 4315 | |
| D 18 13C4 PFHpA | | | | | | | | | | |
| 367.00 > 322.00 | 3.691 | 3.691 | 0.0 | 0.902 | 11437433 | 2.33 | | 93.3 | 4820 | |
| 16 Perfluoroheptanoic acid | | | | | | | | | | |
| 363.00 > 319.00 | 3.691 | 3.691 | 0.0 | 1.000 | 4752271 | 1.02 | Target=3.84 | 102 | 301 | |
| 363.00 > 169.00 | 3.691 | 3.691 | 0.0 | 1.000 | 1238799 | | 3.84(1.92-5.76) | | 581 | |
| 15 Perfluorohexanesulfonic acid | | | | | | | | | | |
| 399.00 > 80.00 | 3.701 | 3.701 | 0.0 | 1.000 | 2418312 | 0.8719 | Target=3.50 | 95.8 | 1042 | |
| 399.00 > 99.00 | 3.691 | 3.701 | -0.010 | 0.997 | 712546 | | 3.39(1.75-5.25) | | 272 | |
| 19 DONA | | | | | | | | | | |
| 377.00 > 251.00 | 3.740 | 3.740 | 0.0 | 0.841 | 14987602 | 1.04 | Target=2.42 | 110 | 6656 | |
| 377.00 > 85.00 | 3.740 | 3.740 | 0.0 | 0.841 | 6096803 | | 2.46(1.21-3.63) | | 2202 | |
| D 20 M2-6:2 FTS | | | | | | | | | | |
| 429.00 > 81.00 | 4.066 | 4.066 | 0.0 | 0.994 | 1816094 | 1.99 | | 83.7 | 1054 | |
| 21 6:2 FTS | | | | | | | | | | |
| 427.00 > 407.00 | 4.066 | 4.066 | 0.0 | 1.000 | 1714586 | 0.9754 | | 103 | 1790 | |
| $ 26 13C8 PFOA | | | | | | | | | | |
| 421.00 > 376.00 | 4.082 | 4.082 | 0.0 | 0.998 | 7977042 | 2.53 | | 103 | 4738 | |
| 24 Perfluoroheptanesulfonic acid | | | | | | | | | | |
| 449.00 > 80.00 | 4.082 | 4.082 | 0.0 | 0.918 | 1738719 | 1.03 | Target=4.40 | 108 | 730 | |
| 449.00 > 99.00 | 4.082 | 4.082 | 0.0 | 0.918 | 400794 | | 4.34(2.20-6.60) | | 256 | |
| D 25 13C4 PFOA | | | | | | | | | | |
| 417.00 > 372.00 | 4.082 | 4.082 | 0.0 | 0.998 | 11164737 | 2.39 | | 95.6 | 5178 | |
| 22 Perfluorooctanoic acid | | | | | | | | | | |
| 413.00 > 369.00 | 4.090 | 4.090 | 0.0 | 1.002 | 4837857 | 1.06 | Target=2.94 | 106 | 469 | |
| 413.00 > 169.00 | 4.090 | 4.090 | 0.0 | 1.002 | 1723546 | | 2.81(1.47-4.41) | | 860 | |
| * 23 13C2 PFOA | | | | | | | | | | |
| 415.00 > 370.00 | 4.090 | 4.090 | 0.0 | | 11668243 | 2.50 | | | 4919 | |
| D 27 13C4 PFOS | | | | | | | | | | |
| 503.00 > 80.00 | 4.446 | 4.446 | 0.0 | 1.087 | 3611273 | 2.23 | | 93.4 | 1577 | |
| $ 28 13C8 PFOS | | | | | | | | | | |
| 507.00 > 99.00 | 4.446 | 4.446 | 0.0 | 1.087 | 1111436 | 2.20 | | 92.1 | 2479 | |
| 29 Perfluorooctanesulfonic acid | | | | | | | | | | M |
| 499.00 > 80.00 | 4.446 | 4.446 | 0.0 | 1.000 | 1563599 | 1.00 | Target=4.53 | 108 | 515 | M |
| 499.00 > 99.00 | 4.446 | 4.446 | 0.0 | 1.000 | 330130 | | 4.74(2.26-6.79) | | 259 | M |
| D 30 13C5 PFNA | | | | | | | | | | |
| 468.00 > 423.00 | 4.462 | 4.462 | 0.0 | 1.091 | 9670822 | 2.57 | | 103 | 5018 | |
| 31 Perfluorononanoic acid | | | | | | | | | | |
| 463.00 > 419.00 | 4.462 | 4.462 | 0.0 | 1.000 | 4057649 | 1.09 | Target=8.97 | 109 | 493 | |
| 463.00 > 169.00 | 4.462 | 4.462 | 0.0 | 1.000 | 506114 | | 8.02(4.48-13.45) | | 605 | |
| 32 9ClFOS | | | | | | | | | | |
| 531.00 > 351.00 | 4.652 | 4.652 | 0.0 | 1.046 | 4929470 | 1.01 | | 108 | 6879 | |
| D 33 13C8 FOSA | | | | | | | | | | |
| 506.00 > 78.00 | 4.786 | 4.786 | 0.0 | 1.170 | 5941806 | 2.28 | | 91.1 | 4672 | |

| Signal | RT | EXP RT | DLT RT | REL RT | Response | Amount ng/ml | Ratio(Limits) | %Rec | S/N | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| 34 Perfluorooctanesulfonamide | | | | | | | | | | |
| 498.00 > 78.00 | 4.786 | 4.786 | 0.0 | 1.000 | 2326055 | 1.05 | | 105 | 2963 | |
| 35 Perfluorononanesulfonic acid | | | | | | | | | | |
| 549.00 > 80.00 | 4.794 | 4.794 | 0.0 | 1.078 | 1497011 | 1.06 | Target=2.85 | 110 | 1034 | |
| 549.00 > 99.00 | 4.794 | 4.794 | 0.0 | 1.078 | 514538 | | 2.91(1.43-4.28) | | 579 | |
| D 39 13C2 PFDA | | | | | | | | | | |
| 515.00 > 470.00 | 4.820 | 4.820 | 0.0 | 1.178 | 9019684 | 2.47 | | 98.7 | 7693 | |
| D 38 M2-8:2 FTS | | | | | | | | | | |
| 529.00 > 81.00 | 4.820 | 4.820 | 0.0 | 1.178 | 2623928 | 1.99 | | 83.1 | 1522 | |
| 37 Perfluorodecanoic acid | | | | | | | | | | |
| 513.00 > 469.00 | 4.820 | 4.820 | 0.0 | 1.000 | 3276238 | 0.9421 | Target=10.16 | 94.2 | 566 | |
| 513.00 > 169.00 | 4.820 | 4.820 | 0.0 | 1.000 | 328981 | | 9.96(5.08-15.24) | | 159 | |
| 36 8:2 FTS | | | | | | | | | | |
| 527.00 > 507.00 | 4.820 | 4.820 | 0.0 | 1.000 | 2059284 | 1.06 | | 111 | 4462 | |
| D 40 d3-NMeFOSAA | | | | | | | | | | |
| 573.00 > 419.00 | 4.989 | 4.989 | 0.0 | 1.220 | 5226700 | 2.13 | | 85.2 | 2330 | |
| 41 NMeFOSAA | | | | | | | | | | |
| 570.00 > 419.00 | 4.989 | 4.989 | 0.0 | 1.000 | 1615692 | 1.04 | | 104 | 1201 | |
| 42 Perfluorodecanesulfonic acid | | | | | | | | | | |
| 599.00 > 80.00 | 5.111 | 5.111 | 0.0 | 1.150 | 1338751 | 1.06 | Target=2.77 | 110 | 1074 | |
| 599.00 > 99.00 | 5.111 | 5.111 | 0.0 | 1.150 | 465161 | | 2.88(1.38-4.15) | | 754 | |
| 45 Perfluoroundecanoic acid | | | | | | | | | | |
| 563.00 > 519.00 | 5.139 | 5.139 | 0.0 | 1.000 | 3238508 | 1.10 | Target=8.43 | 110 | 911 | |
| 563.00 > 169.00 | 5.148 | 5.139 | 0.009 | 1.002 | 359483 | | 9.01(4.22-12.65) | | 512 | |
| D 43 13C2 PFUnA | | | | | | | | | | |
| 565.00 > 520.00 | 5.139 | 5.139 | 0.0 | 1.256 | 10150455 | 2.80 | | 112 | 5256 | |
| D 44 d5-NEtFOSAA | | | | | | | | | | |
| 589.00 > 419.00 | 5.148 | 5.148 | 0.0 | 1.259 | 5661369 | 2.18 | | 87.3 | 3342 | |
| 46 NEtFOSA | | | | | | | | | | |
| 584.00 > 419.00 | 5.157 | 5.157 | 0.0 | 1.002 | 1658879 | 1.08 | | 108 | 1872 | |
| D 47 d7-N-MeFOSE-M | | | | | | | | | | |
| 623.00 > 59.00 | 5.248 | 5.248 | 0.0 | 1.283 | 8648913 | 13.4 | | 107 | 2349 | |
| 48 N-MeFOSE-M | | | | | | | | | | |
| 616.00 > 59.00 | 5.258 | 5.258 | 0.0 | 1.002 | 897980 | 1.20 | | 120 | 607 | |
| D 49 d-N-MeFOSA-M | | | | | | | | | | |
| 515.00 > 169.00 | 5.269 | 5.269 | 0.0 | 1.288 | 2143162 | 2.34 | | 93.5 | 52.6 | |
| 50 NMeFOSA | | | | | | | | | | |
| 512.00 > 169.00 | 5.269 | 5.269 | 0.0 | 1.000 | 928092 | 1.13 | | 113 | 505 | |
| 51 11ClFOS | | | | | | | | | | |
| 631.00 > 451.00 | 5.279 | 5.279 | 0.0 | 1.187 | 6270119 | 1.01 | | 107 | 4937 | |
| D 52 d9-N-EtFOSE-M | | | | | | | | | | |
| 639.00 > 59.00 | 5.415 | 5.415 | 0.0 | 1.324 | 12280213 | 15.5 | | 124 | 3646 | |
| 53 N-EtFOSE-M | | | | | | | | | | |
| 630.00 > 59.00 | 5.437 | 5.437 | 0.0 | 1.004 | 1008864 | 0.9572 | | 95.7 | 852 | |
| D 56 13C2 PFDoA | | | | | | | | | | |
| 615.00 > 570.00 | 5.437 | 5.437 | 0.0 | 1.329 | 10939888 | 3.06 | | 123 | 9303 | |

| Signal | RT | EXP RT | DLT RT | REL RT | Response | Amount ng/ml | Ratio(Limits) | %Rec | S/N | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| 57 Perfluorododecanoic acid | | | | | | | | | | |
| 613.00 > 569.00 | 5.437 | 5.437 | 0.0 | 1.000 | 3671109 | 0.8205 | Target=9.12 | 81.6 | 882 | |
| 613.00 > 169.00 | 5.437 | 5.437 | 0.0 | 1.000 | 562002 | | 6.53(4.56-13.69) | | 1207 | |
| D 54 d-N-EtFOSA-M | | | | | | | | | | |
| 531.00 > 169.00 | 5.448 | 5.448 | 0.0 | 1.332 | 2136726 | 2.28 | | 91.1 | 303 | |
| 55 N-EtFOSA-M | | | | | | | | | | |
| 526.00 > 169.00 | 5.448 | 5.448 | 0.0 | 1.000 | 1002207 | 1.11 | | 111 | 385 | |
| 58 10:2 FTS | | | | | | | | | | |
| 627.00 > 607.00 | 5.448 | 5.448 | 0.0 | 1.130 | 2591246 | 1.17 | | 122 | 5822 | |
| 59 PFDoS | | | | | | | | | | |
| 699.00 > 80.00 | 5.667 | 5.667 | 0.0 | 1.274 | 505323 | 1.00 | Target=0.72 | 104 | 531 | |
| 699.00 > 99.00 | 5.667 | 5.667 | 0.0 | 1.274 | 696791 | | 0.73(0.36-1.07) | | 1472 | |
| 60 Perfluorotridecanoic acid | | | | | | | | | | |
| 663.00 > 619.00 | 5.701 | 5.701 | 0.0 | 1.049 | 4576201 | 1.11 | Target=6.78 | 111 | 1760 | |
| 663.00 > 169.00 | 5.701 | 5.701 | 0.0 | 1.049 | 542174 | | 8.44(3.39-10.17) | | 885 | |
| D 61 13C2 PFTeDA | | | | | | | | | | |
| 715.00 > 670.00 | 5.936 | 5.936 | 0.0 | 1.451 | 7842120 | 2.66 | | 106 | 7027 | |
| 62 Perfluorotetradecanoic acid | | | | | | | | | | |
| 713.00 > 169.00 | 5.948 | 5.948 | 0.0 | 1.002 | 285221 | 1.08 | Target=0.85 | 108 | 1073 | |
| 713.00 > 219.00 | 5.936 | 5.948 | -0.012 | 1.000 | 295186 | | 0.97(0.43-1.28) | | 982 | |
| D 64 13C2 PFHxDA | | | | | | | | | | |
| 815.00 > 770.00 | 6.377 | 6.377 | 0.0 | 1.559 | 4963534 | 2.30 | | 92.1 | 5245 | |
| 63 Perfluorohexadecanoic acid | | | | | | | | | | |
| 813.00 > 769.00 | 6.385 | 6.385 | 0.0 | 1.001 | 2089790 | 1.18 | Target=10.21 | 118 | 1181 | |
| 813.00 > 169.00 | 6.385 | 6.385 | 0.0 | 1.001 | 213668 | | 9.78(5.11-15.32) | | 1327 | |
| 65 Perfluorooctadecanoic acid | | | | | | | | | | |
| 913.00 > 869.00 | 6.822 | 6.822 | 0.0 | 1.070 | 1691182 | 1.29 | Target=12.45 | 129 | 1244 | |
| 913.00 > 169.00 | 6.822 | 6.822 | 0.0 | 1.070 | 147079 | | 11.50(6.22-18.67) | | 1329 | |

## QC Flag Legend

Processing Flags

Review Flags

M - Manually Integrated

## Reagents:

LCPFC_LL4_00030 Amount Added: 1.00 Units: mL

Report Date: 14-Sep-2020 10:12:34 Chrom Revision: 2.3 11-Sep-2020 20:57:08

Eurofins TestAmerica, Sacramento

Data File: \\chromfs\Sacramento\ChromData\A18\20200911-103101.b\2020.09.11_A18_PFC_A_024.d

Injection Date: 11-Sep-2020 13:54:54 Instrument ID: A18

Lims ID: CCV L4

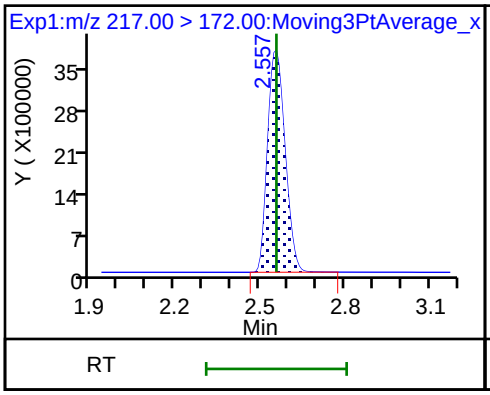
Client ID:

Operator ID: TAISACA18-PC\A-18 ALS Bottle#: 52 Worklist Smp#: 10

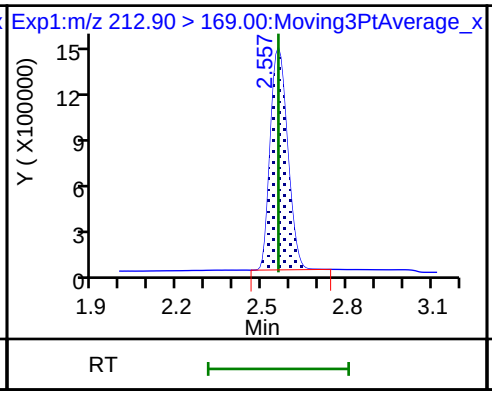
Injection Vol: 20.0 ul Dil. Factor: 1.0000

Method: PFAS_A18V2 Limit Group: LC PFC ICAL

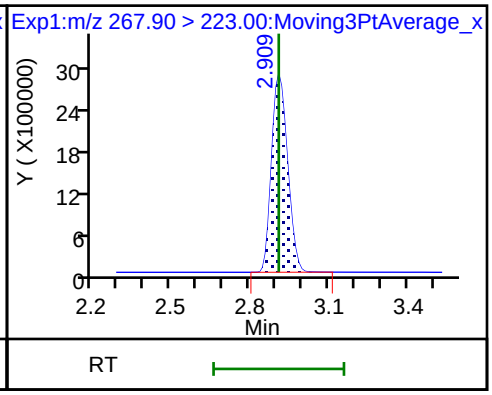
D 1 13C4 PFBA



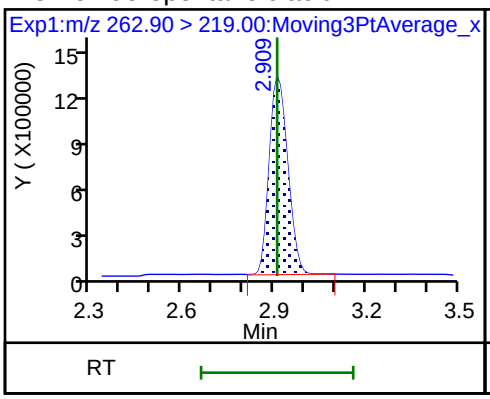

2 Perfluorobutanoic acid



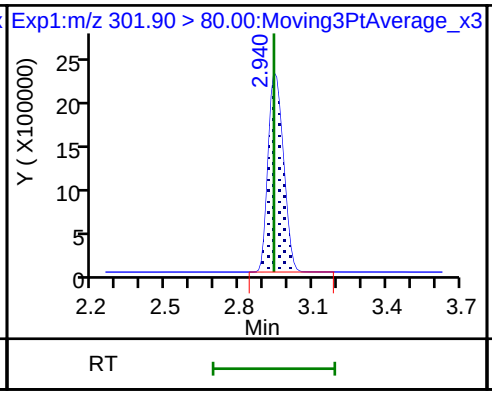

D 4 13C5 PFPeA



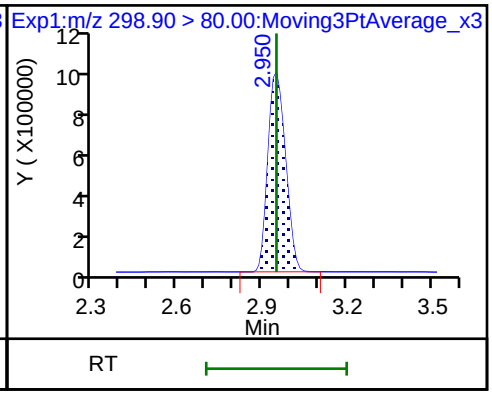

5 Perfluoropentanoic acid



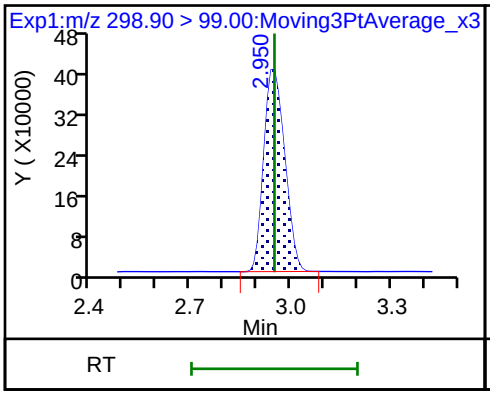

D 9 13C3 PFBS



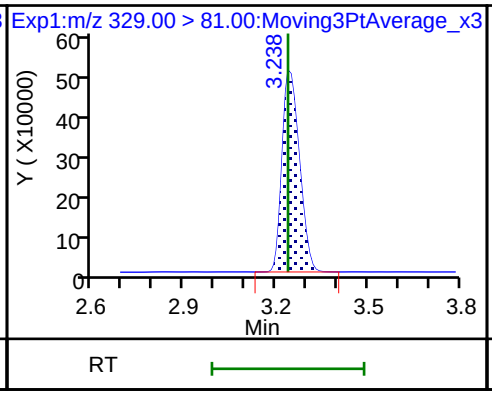

6 Perfluorobutanesulfonic acid



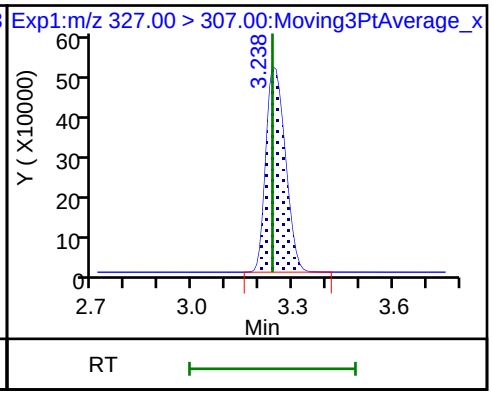

6 Perfluorobutanesulfonic acid



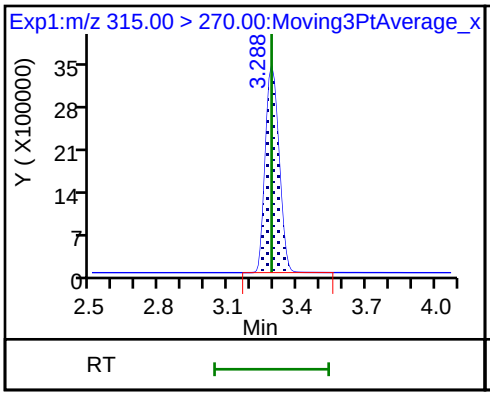

D 7 M2-4:2 FTS



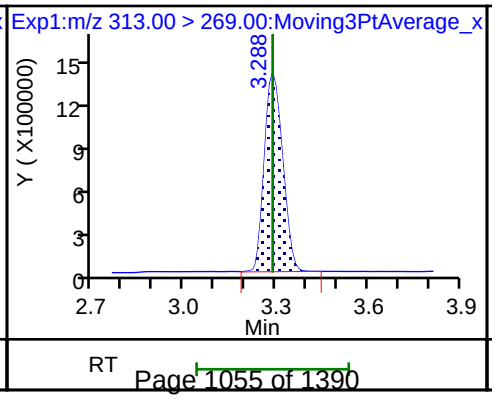

8 4:2 FTS



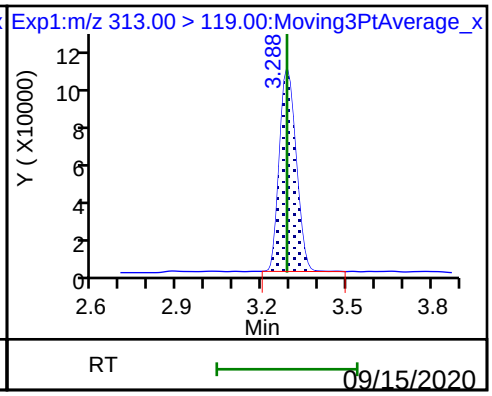

D 11 13C2 PFHxA



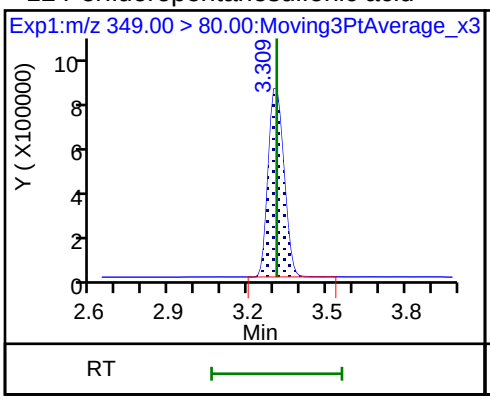

10 Perfluorohexanoic acid



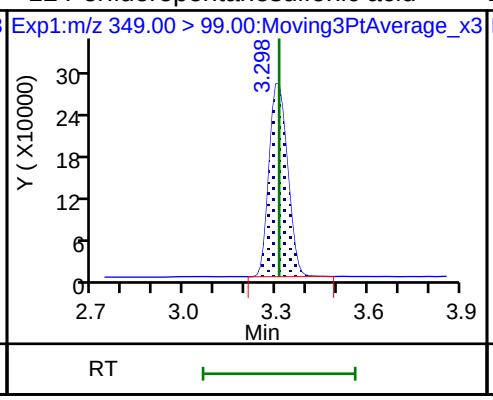

10 Perfluorohexanoic acid



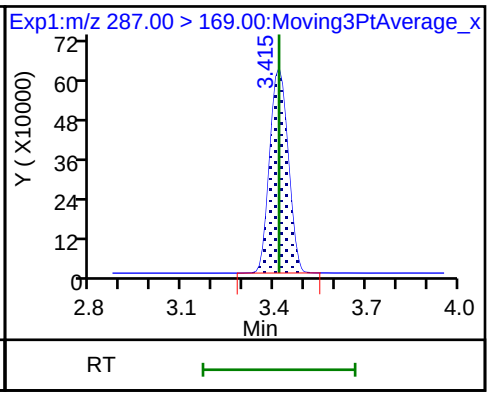
12 Perfluoropentanesulfonic acid



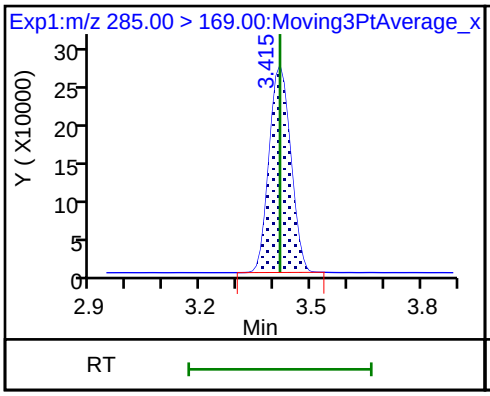

12 Perfluoropentanesulfonic acid



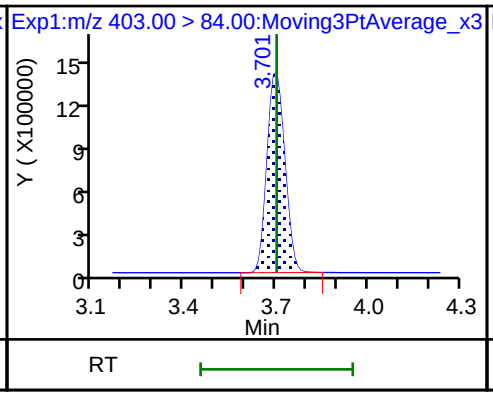

D 14 13C3 HFPO-DA



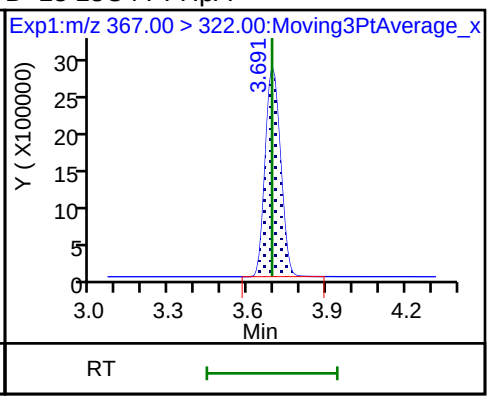

13 HPFO-DA



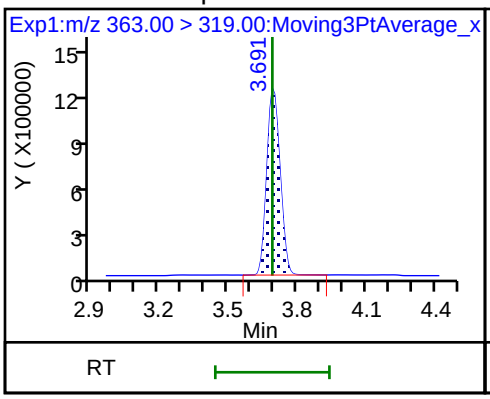

D 17 18O2 PFHxS



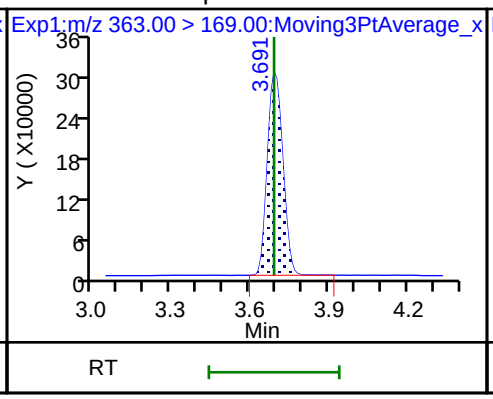

D 18 13C4 PFHpA



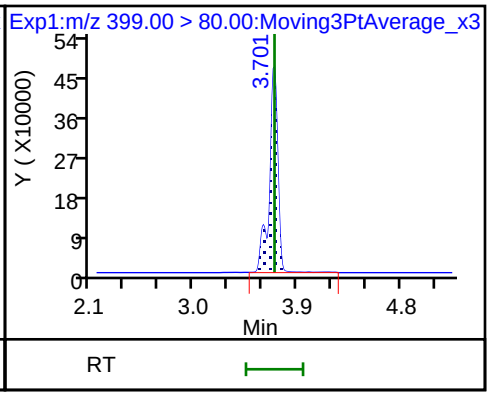

16 Perfluoroheptanoic acid



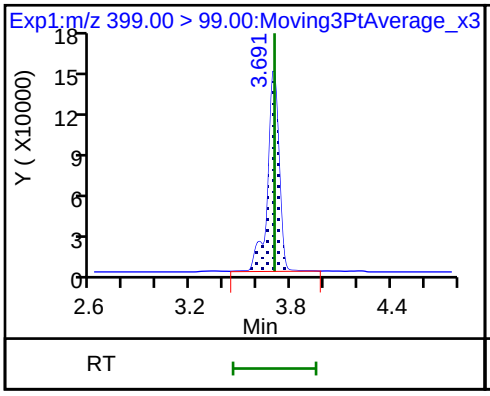

16 Perfluoroheptanoic acid



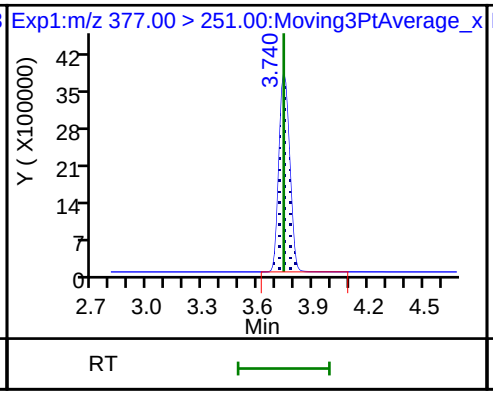

15 Perfluorohexanesulfonic acid



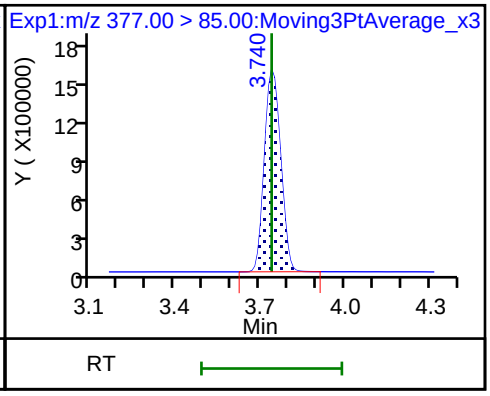

15 Perfluorohexanesulfonic acid



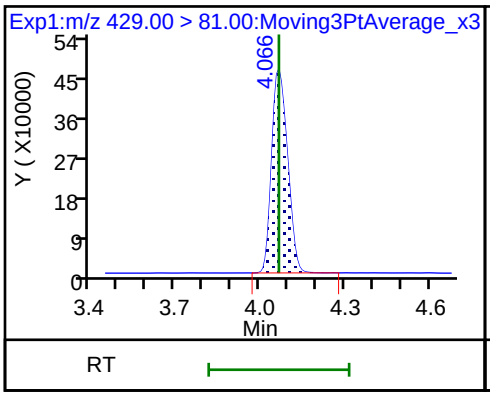

19 DONA



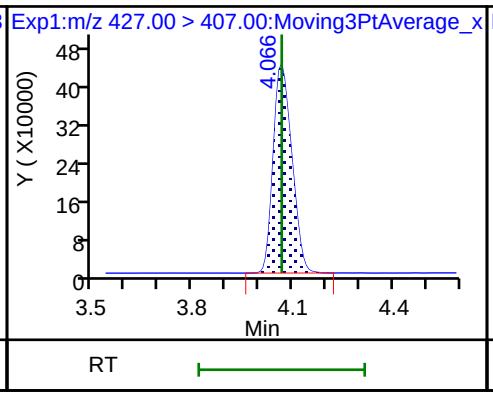

19 DONA



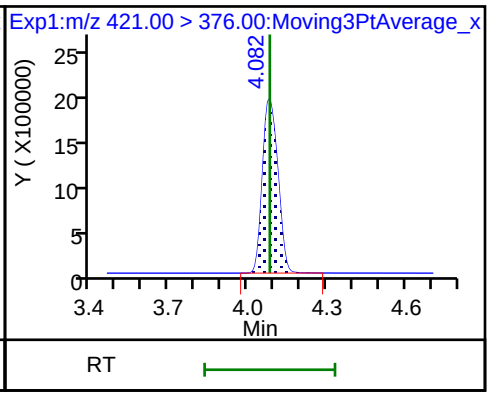
D 20 M2-6:2 FTS



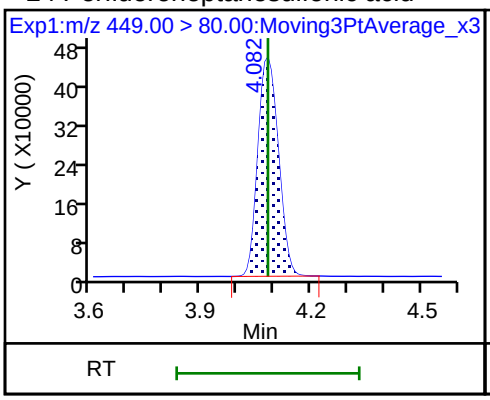

21 6:2 FTS



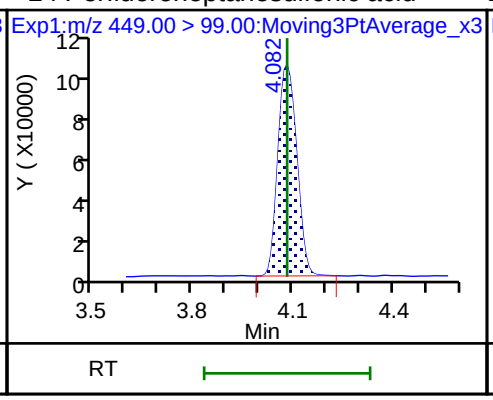

$ 26 13C8 PFOA



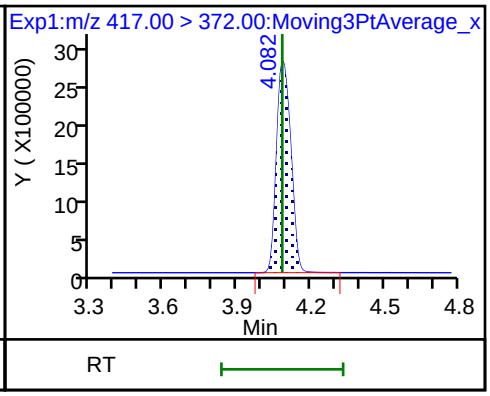

24 Perfluoroheptanesulfonic acid



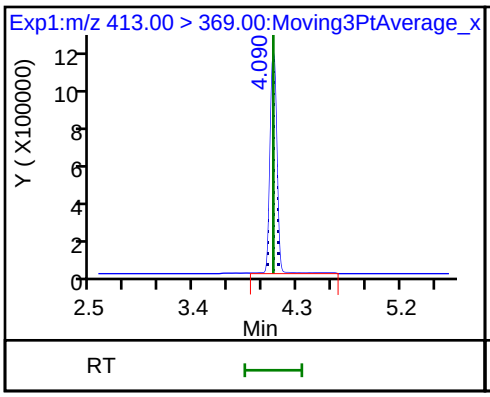

24 Perfluoroheptanesulfonic acid



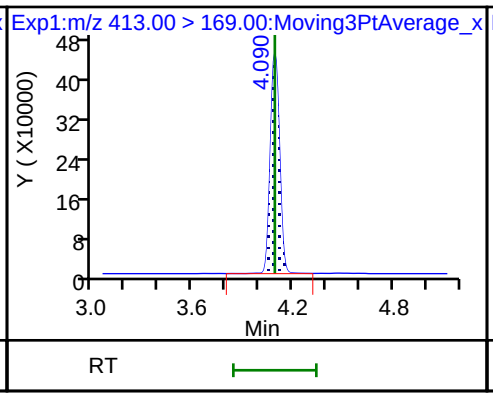

D 25 13C4 PFOA



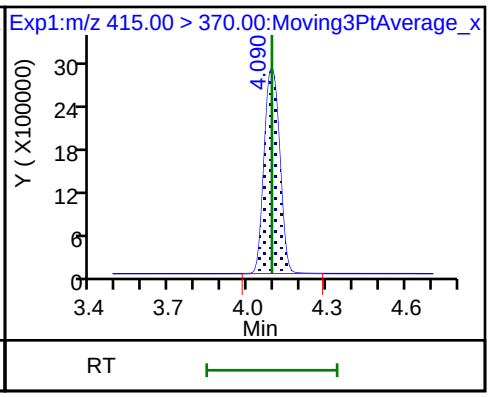

22 Perfluorooctanoic acid



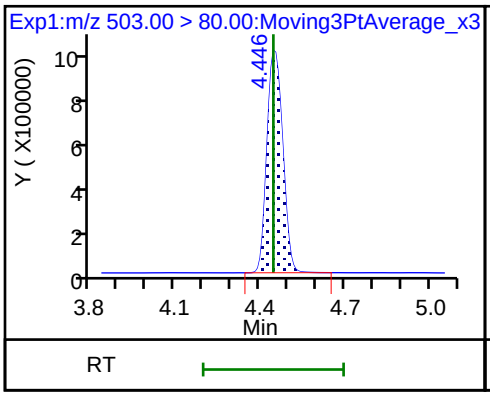

22 Perfluorooctanoic acid



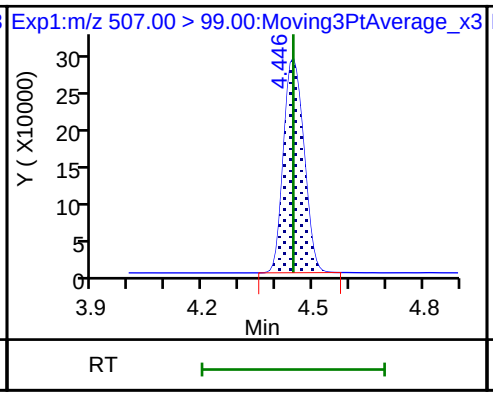

* 23 13C2 PFOA



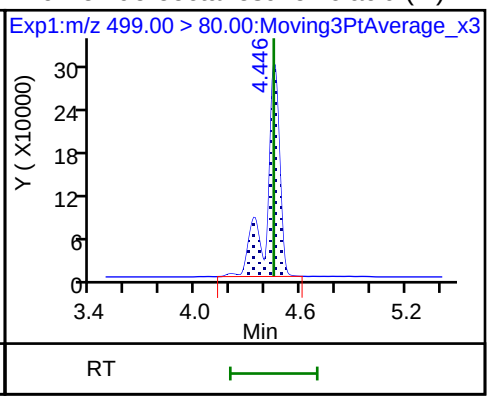

D 27 13C4 PFOS



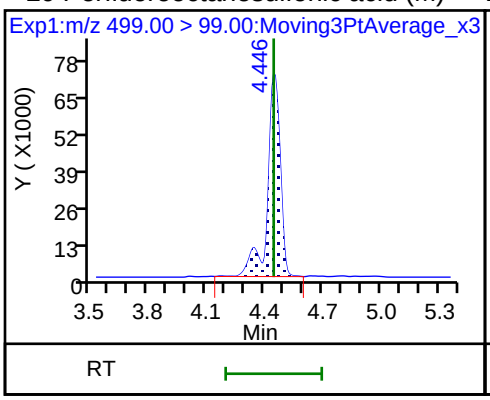

$ 28 13C8 PFOS



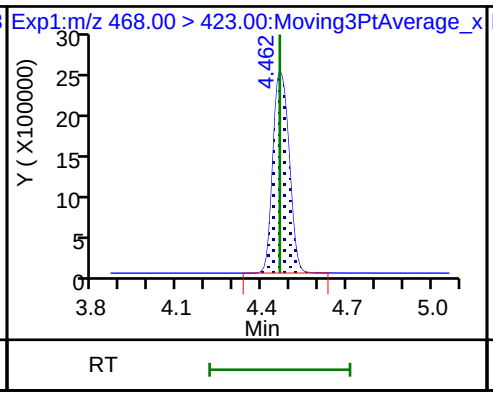

29 Perfluorooctanesulfonic acid (M)



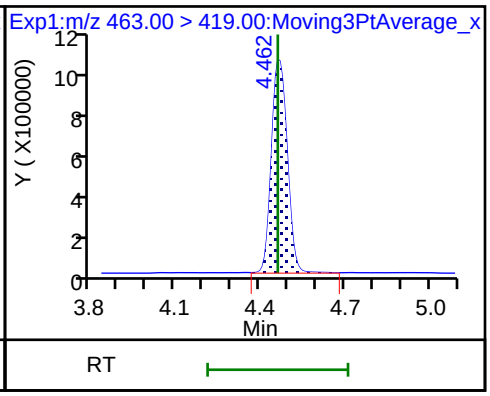
29 Perfluorooctanesulfonic acid (M)



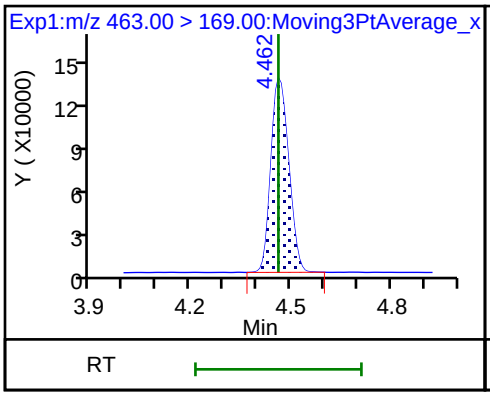

D 30 13C5 PFNA



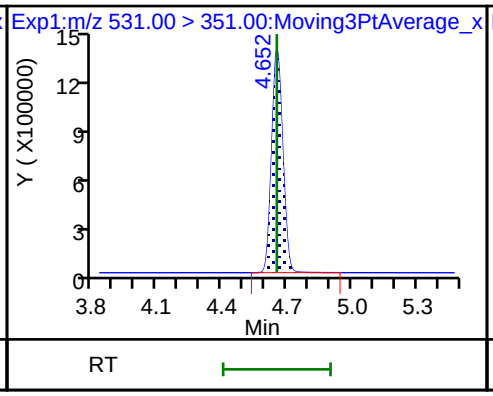

31 Perfluorononanoic acid



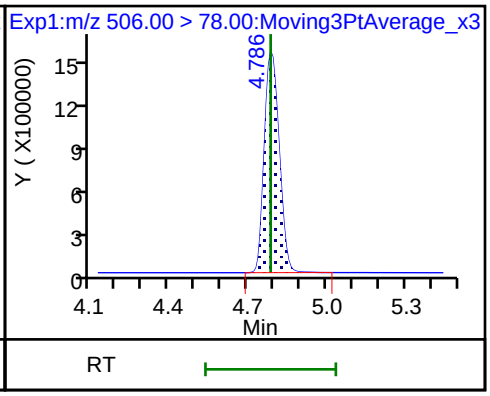

31 Perfluorononanoic acid



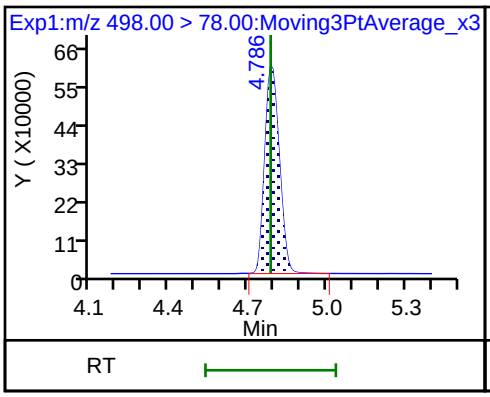

32 9ClFOS



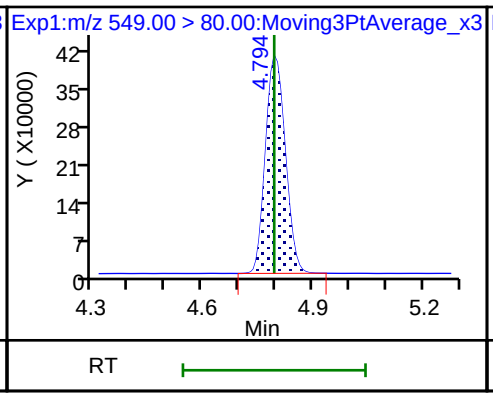

D 33 13C8 FOSA



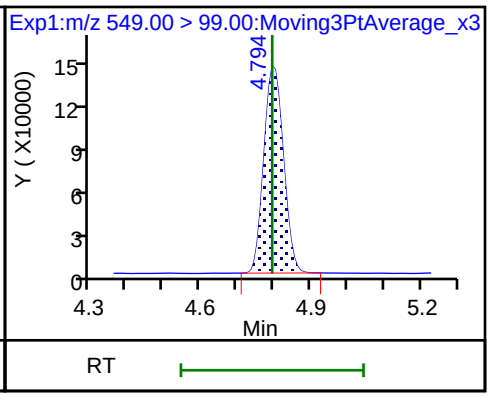

34 Perfluorooctanesulfonamide



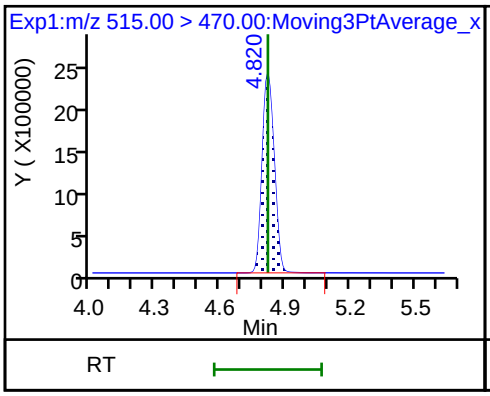

35 Perfluorononanesulfonic acid



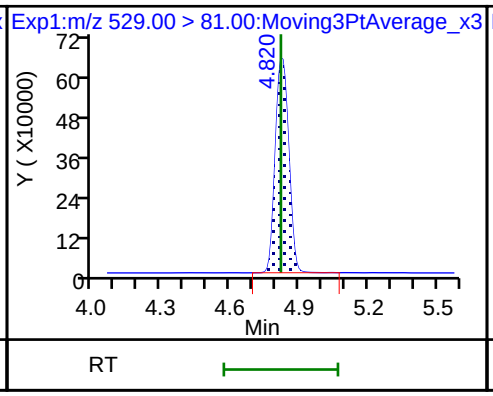

35 Perfluorononanesulfonic acid



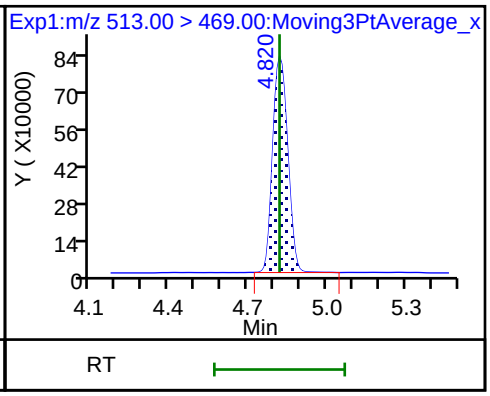

D 39 13C2 PFDA



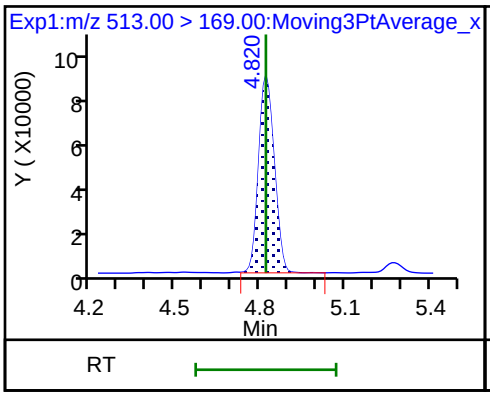

D 38 M2-8:2 FTS



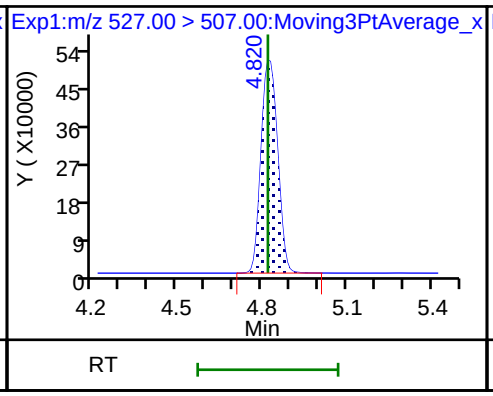

37 Perfluorodecanoic acid



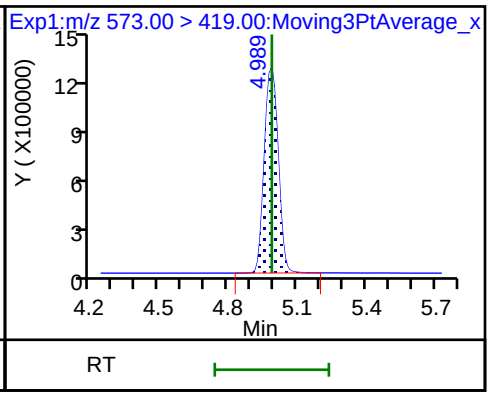
37 Perfluorodecanoic acid



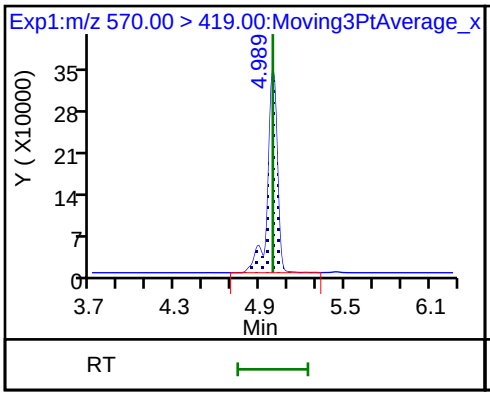

36 8:2 FTS



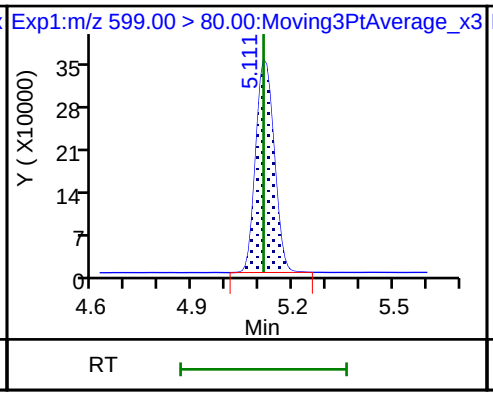

D 40 d3-NMeFOSAA



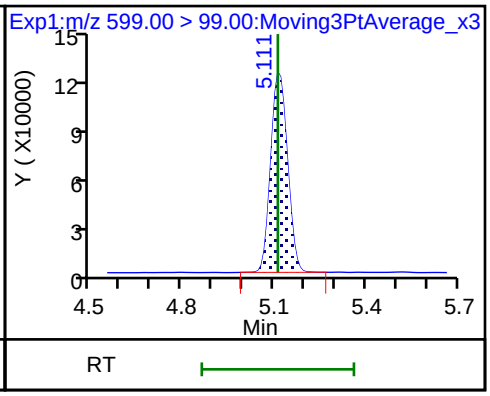

41 NMeFOSAA



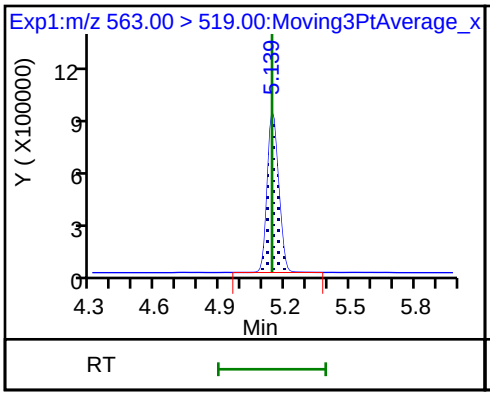

42 Perfluorodecanesulfonic acid



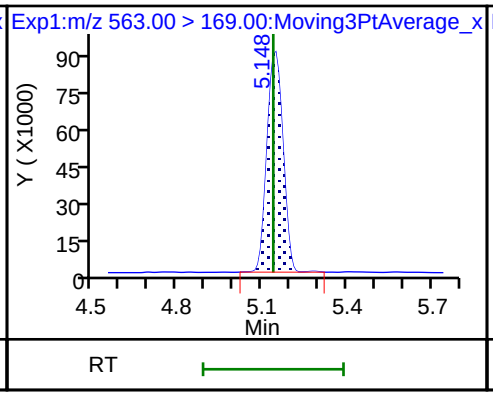

42 Perfluorodecanesulfonic acid



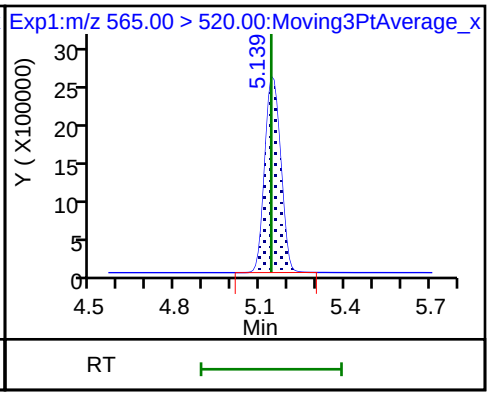

45 Perfluoroundecanoic acid



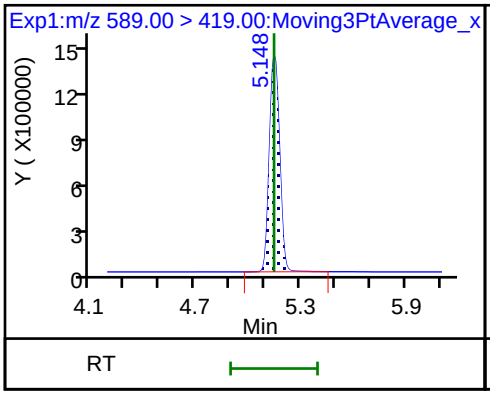

45 Perfluoroundecanoic acid



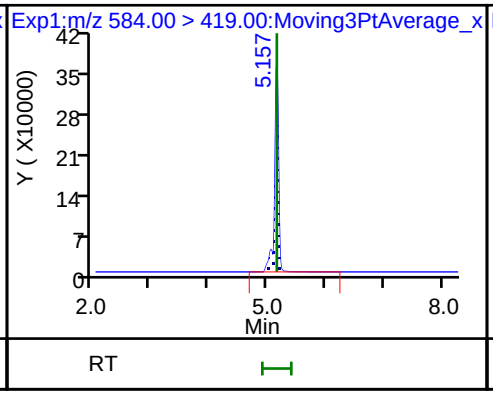

D 43 13C2 PFUnA



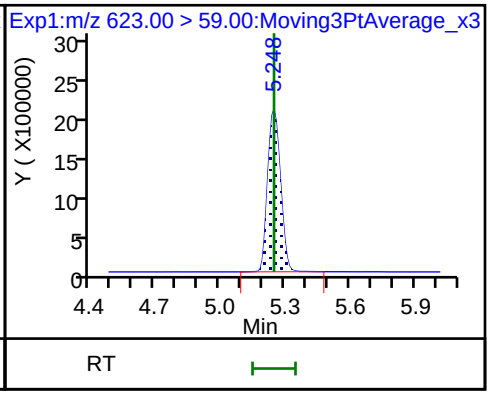

D 44 d5-NEtFOSAA



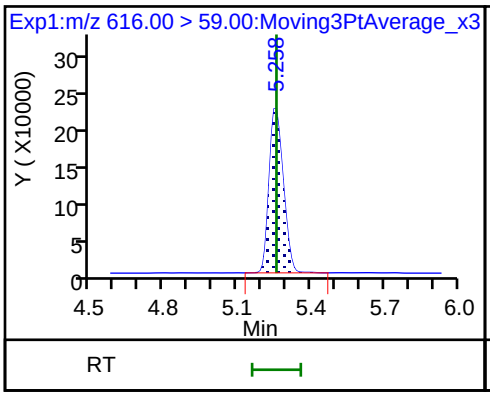

46 NEtFOSA



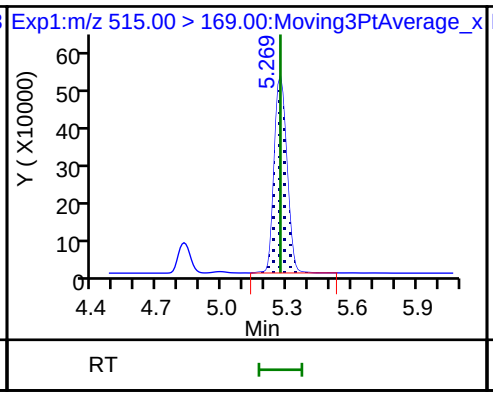

D 47 d7-N-MeFOSE-M



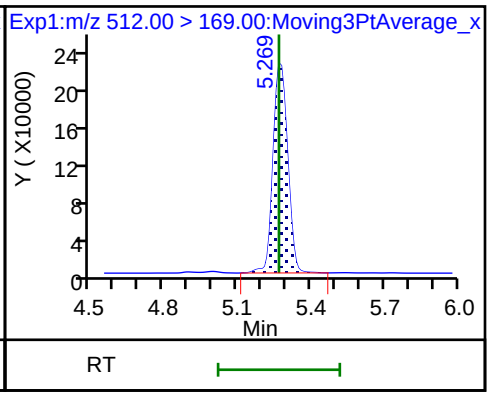
48 N-MeFOSE-M



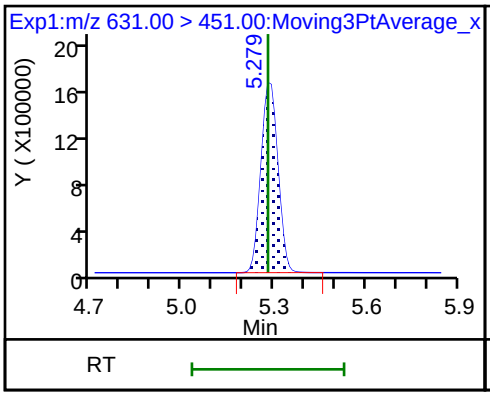

D 49 d-N-MeFOSA-M



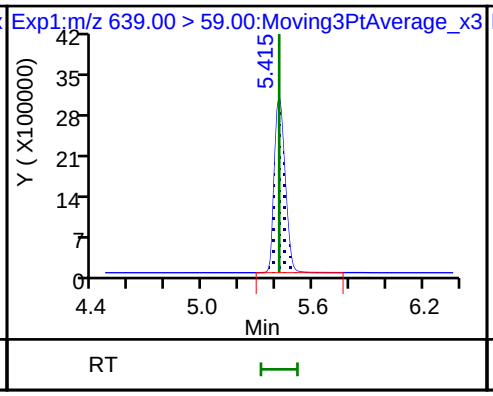

50 NMeFOSA



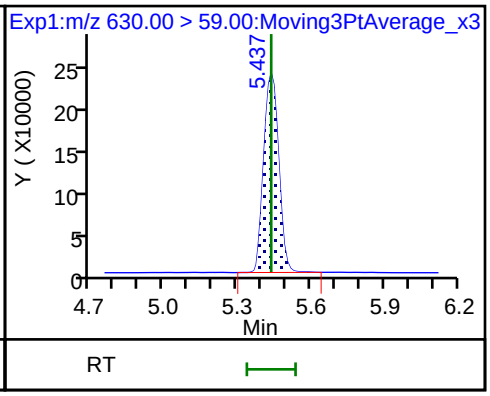

51 11ClFOS



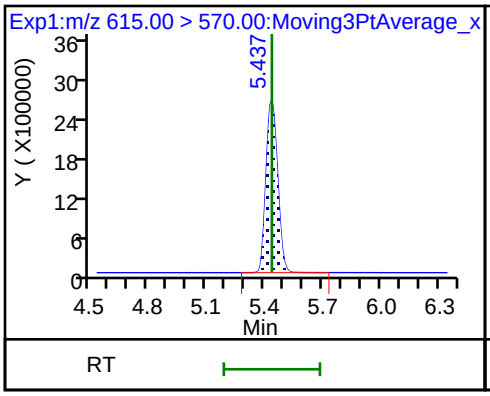

D 52 d9-N-EtFOSE-M



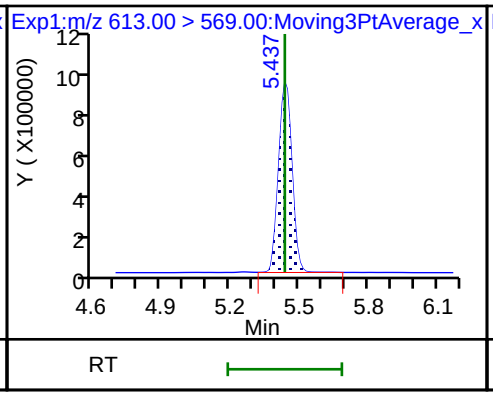

53 N-EtFOSE-M



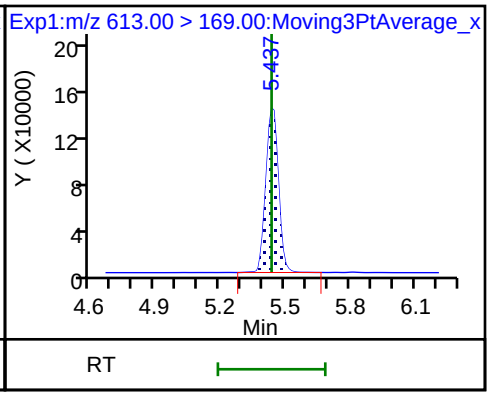

D 56 13C2 PFDoA



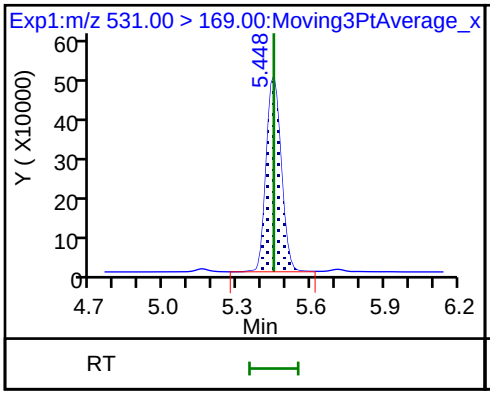

57 Perfluorododecanoic acid



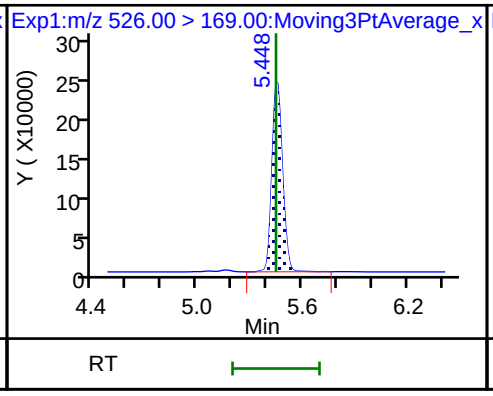

57 Perfluorododecanoic acid



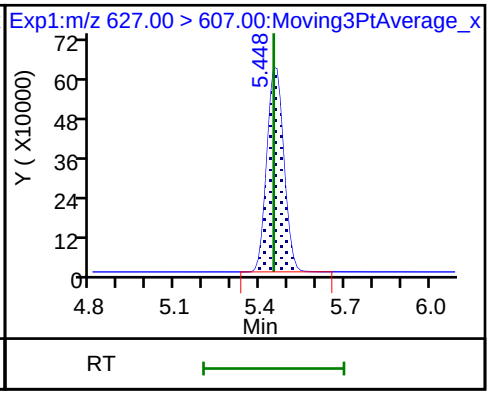

D 54 d-N-EtFOSA-M



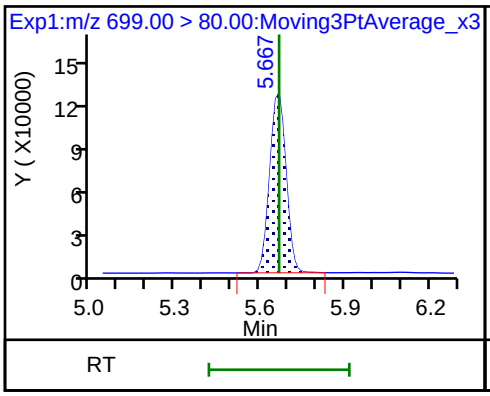

55 N-EtFOSA-M



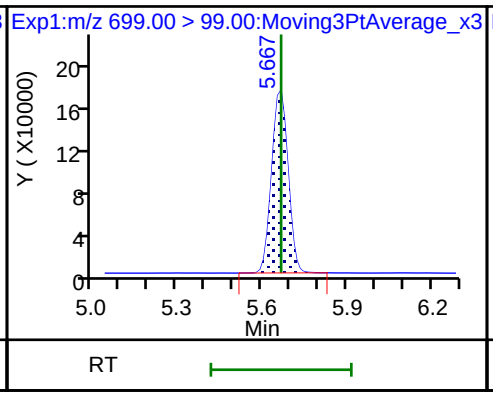

58 10:2 FTS



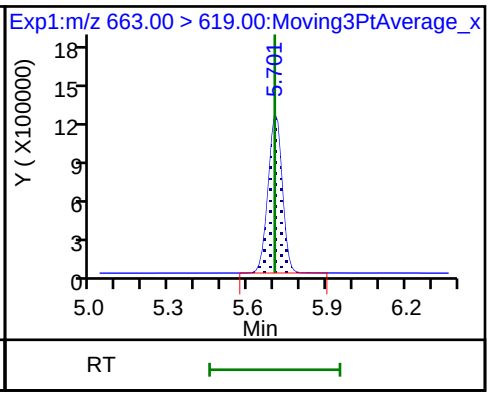
59 PFDoS



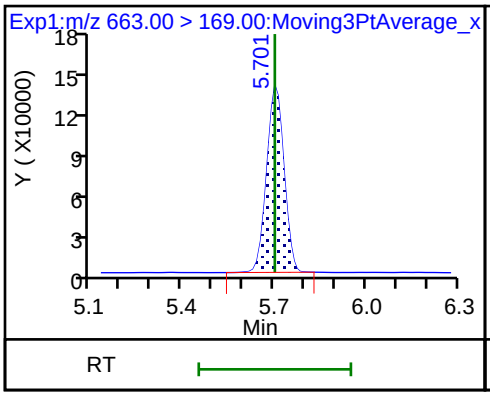

59 PFDoS



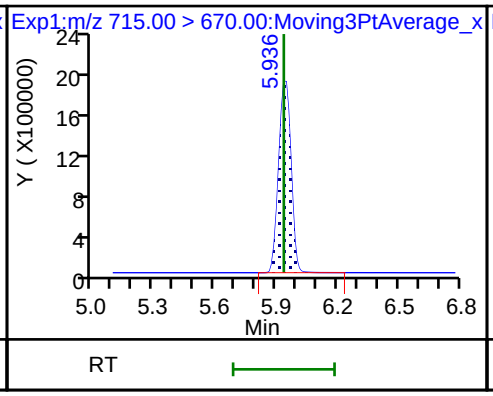

60 Perfluorotridecanoic acid



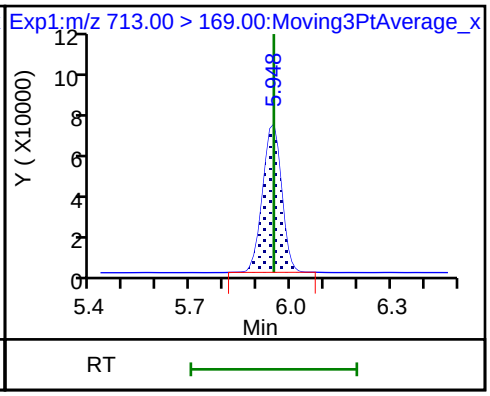

60 Perfluorotridecanoic acid



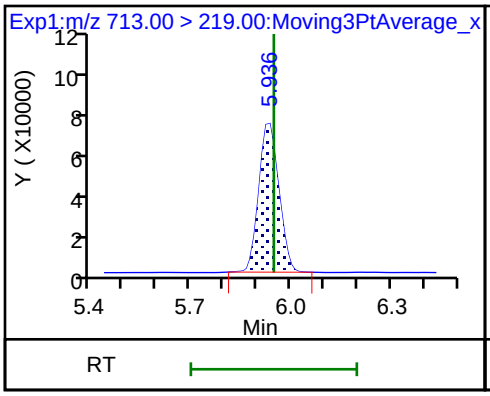

D 61 13C2 PFTeDA



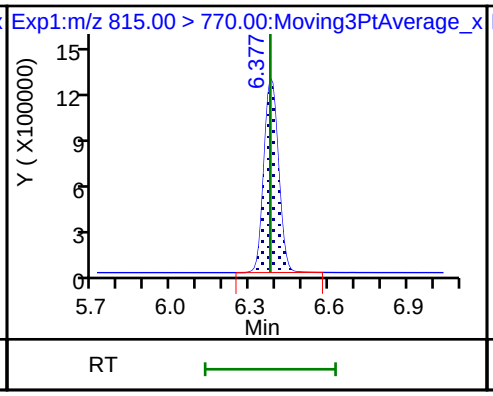

62 Perfluorotetradecanoic acid



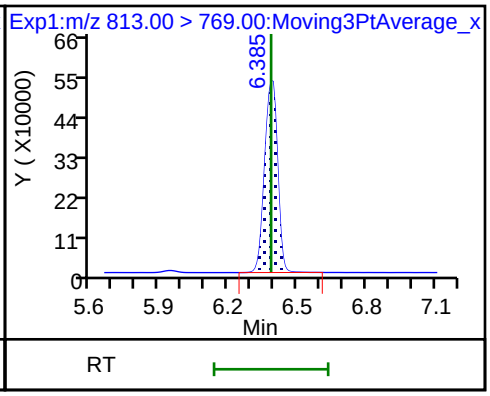

62 Perfluorotetradecanoic acid



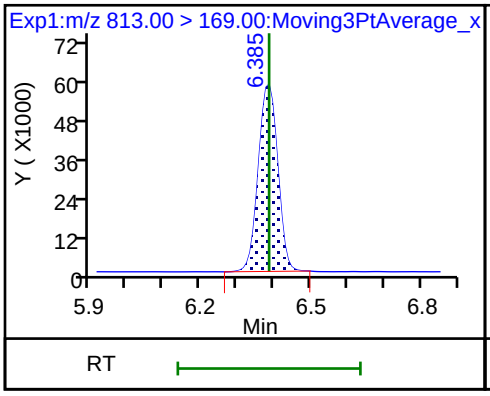

D 64 13C2 PFHxDA



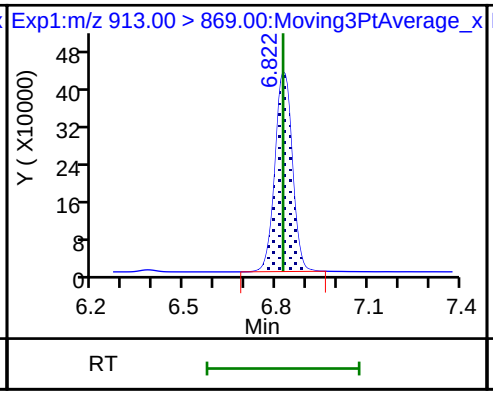

63 Perfluorohexadecanoic acid



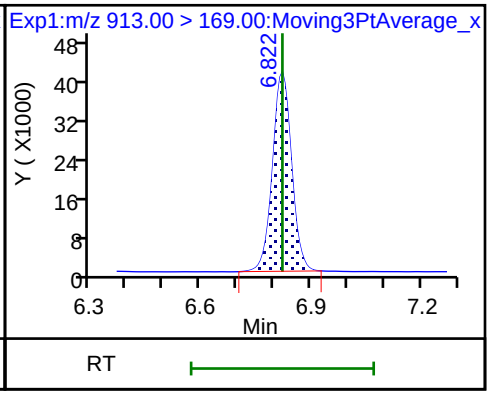

63 Perfluorohexadecanoic acid




65 Perfluorooctadecanoic acid




65 Perfluorooctadecanoic acid



Eurofins TestAmerica, Sacramento

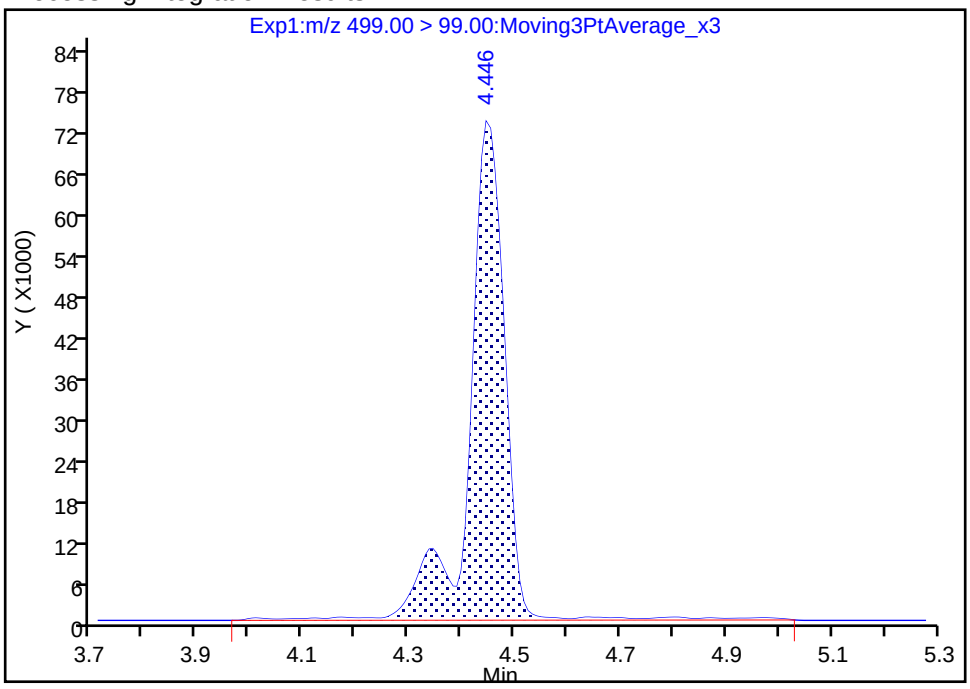
Data File: \\chromfs\Sacramento\ChromData\A18\20200911-103101.b\2020.09.11_A18_PFC_A_024.d
Injection Date: 11-Sep-2020 13:54:54 Instrument ID: A18
Lims ID: CCV L4
Client ID:
Operator ID: TAISACA18-PC\A-18 ALS Bottle#: 52 Worklist Smp#: 10
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFAS_A18V2 Limit Group: LC PFC ICAL
Column: Gemini C18 3um 3mm x 50 mm ( 3.00mm) Detector EXP1

## 29 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 2

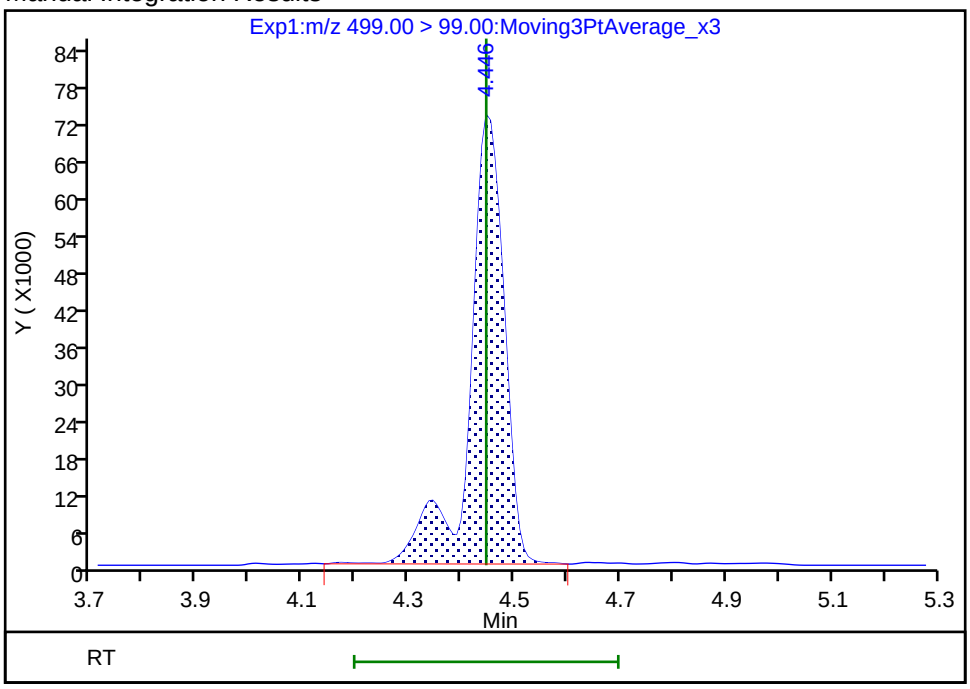
Processing Integration Results

RT: 4.45
Area: 343984
Amount: 0.749063
Amount Units: ng/ml




Manual Integration Results

RT: 4.45
Area: 330130
Amount: 0.999787
Amount Units: ng/ml




Reviewer: sanjumnair, 14-Sep-2020 10:12:21
Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

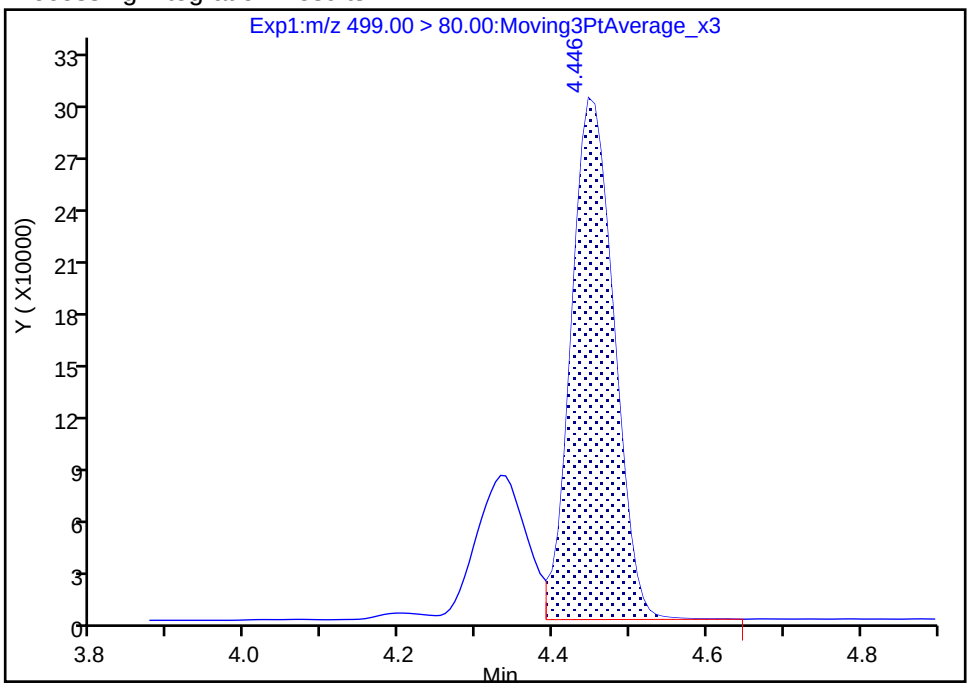
Data File: \\chromfs\Sacramento\ChromData\A18\20200911-103101.b\2020.09.11_A18_PFC_A_024.d
Injection Date: 11-Sep-2020 13:54:54 Instrument ID: A18
Lims ID: CCV L4
Client ID:
Operator ID: TAISACA18-PC\A-18 ALS Bottle#: 52 Worklist Smp#: 10
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFAS_A18V2 Limit Group: LC PFC ICAL
Column: Gemini C18 3um 3mm x 50 mm ( 3.00 mm) Detector EXP1

## 29 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 1

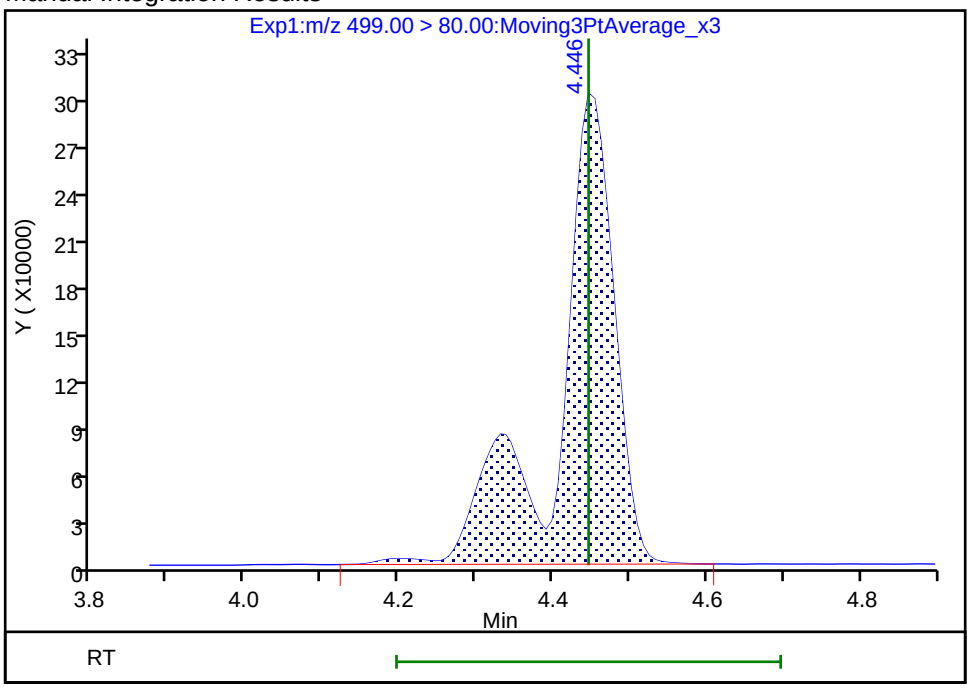
Processing Integration Results

RT: 4.45
Area: 1171483
Amount: 0.749063
Amount Units: ng/ml




Manual Integration Results

RT: 4.45
Area: 1563599
Amount: 0.999787
Amount Units: ng/ml




Reviewer: sanjumnair, 14-Sep-2020 10:12:26
Audit Action: Manually Integrated Audit Reason: Baseline

FORM VII
LCMS CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Sacramento  Job No.: 460-217547-1

SDG No.:

Lab Sample ID: ICV 320-410935/15  Calibration Date: 09/10/2020 12:48

Instrument ID: A9  Calib Start Date: 09/10/2020 10:18

GC Column: Acquity  ID: 2.10(mm)  Calib End Date: 09/10/2020 12:29

Lab File ID: 2020.09.10_A9 _PFC_ICAL_AA_024.d  Conc. Units: ng/mL

| ANALYTE | CURVE TYPE | AVE RRF | RRF | MIN RRF | CALC AMOUNT | SPIKE AMOUNT | %D | MAX %D |
|---|---|---|---|---|---|---|---|---|
| Perfluorobutanoic acid (PFBA) | AveID | 0.8734 | 0.9128 | | 2.61 | 2.50 | 4.5 | 40.0 |
| Perfluoropentanoic acid (PFPeA) | AveID | 1.018 | 0.9837 | | 2.42 | 2.50 | -3.3 | 40.0 |
| Perfluorobutanesulfonic acid (PFBS) | AveID | 0.998 | 1.051 | | 2.63 | 2.50 | 5.3 | 50.0 |
| 4:2 FTS | AveID | 1.978 | 2.029 | | 2.40 | 2.34 | 2.6 | 50.0 |
| Perfluorohexanoic acid (PFHxA) | AveID | 0.8343 | 0.9112 | | 2.73 | 2.50 | 9.2 | 40.0 |
| Perfluoropentanesulfonic acid (PFPeS) | AveID | 0.4016 | 0.4249 | | 2.48 | 2.35 | 5.8 | 50.0 |
| HFPO-DA (GenX) | AveID | 0.3959 | 0.3975 | | 2.51 | 2.50 | 0.4 | 40.0 |
| Perfluoroheptanoic acid (PFHpA) | AveID | 1.109 | 1.118 | | 2.52 | 2.50 | 0.8 | 40.0 |
| Perfluorohexanesulfonic acid (PFHxS) | AveID | 1.180 | 1.175 | | 2.49 | 2.50 | -0.4 | 40.0 |
| 4,8-Dioxa-3H-perfluorononanoic acid (ADONA) | AveID | 1.813 | 1.808 | | 2.49 | 2.50 | -0.3 | 50.0 |
| 6:2 FTS | AveID | 1.542 | 1.627 | | 2.50 | 2.37 | 5.6 | 40.0 |
| Perfluoroheptanesulfonic Acid (PFHpS) | AveID | 0.9244 | 0.9389 | | 2.42 | 2.38 | 1.6 | 50.0 |
| Perfluorooctanoic acid (PFOA) | AveID | 1.078 | 1.016 | | 2.36 | 2.50 | -5.8 | 40.0 |
| Perfluorooctanesulfonic acid (PFOS) | AveID | 1.040 | 1.001 | | 2.41 | 2.50 | -3.7 | 40.0 |
| Perfluorononanoic acid (PFNA) | AveID | 0.996 | 1.146 | | 2.88 | 2.50 | 15.1 | 40.0 |
| F-53B Major | AveID | 0.6274 | 0.6513 | | 2.60 | 2.50 | 3.8 | 50.0 |
| Perfluorooctanesulfonamide (FOSA) | AveID | 2.782 | 2.680 | | 2.41 | 2.50 | -3.7 | 40.0 |
| Perfluorononanesulfonic acid (PFNS) | AveID | 0.7591 | 0.7596 | | 2.40 | 2.40 | 0.0 | 50.0 |
| 8:2 FTS | AveID | 1.288 | 1.197 | | 2.23 | 2.40 | -7.1 | 40.0 |
| Perfluorodecanoic acid (PFDA) | AveID | 0.998 | 1.090 | | 2.73 | 2.50 | 9.2 | 40.0 |
| N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA) | AveID | 0.7593 | 0.7787 | | 2.56 | 2.50 | 2.6 | 40.0 |
| Perfluorodecanesulfonic acid (PFDS) | AveID | 0.8492 | 0.8617 | | 2.45 | 2.41 | 1.5 | 50.0 |
| Perfluoroundecanoic acid (PFUnA) | AveID | 0.6962 | 0.7295 | | 2.62 | 2.50 | 4.8 | 40.0 |
| N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA) | AveID | 0.8112 | 0.8077 | | 2.49 | 2.50 | -0.4 | 40.0 |
| NMeFOSE | AveID | 1.043 | 0.9744 | | 2.34 | 2.50 | -6.6 | 40.0 |
| F-53B Minor | AveID | 0.7398 | 0.7887 | | 2.67 | 2.50 | 6.6 | 50.0 |
| NMeFOSA | AveID | 1.043 | 0.8062 | | 1.93 | 2.50 | -22.7 | 50.0 |
| NEtFOSE | AveID | 0.9939 | 0.9282 | | 2.34 | 2.50 | -6.6 | 40.0 |
| Perfluorododecanoic acid (PFDoA) | AveID | 0.9197 | 0.9762 | | 2.65 | 2.50 | 6.1 | 40.0 |
| 10:2 FTS | AveID | 0.8214 | 0.7773 | | 2.28 | 2.41 | -5.4 | 50.0 |
| NEtFOSA | AveID | 0.995 | 0.7877 | | 1.98 | 2.50 | -20.8 | 40.0 |
| Perfluorododecanesulfonic acid (PFDoS) | AveID | 0.1269 | 0.1225 | | 2.34 | 2.42 | -3.4 | 50.0 |

FORM VII 537 (modified)

FORM VII
LCMS CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Sacramento  Job No.: 460-217547-1

SDG No.:

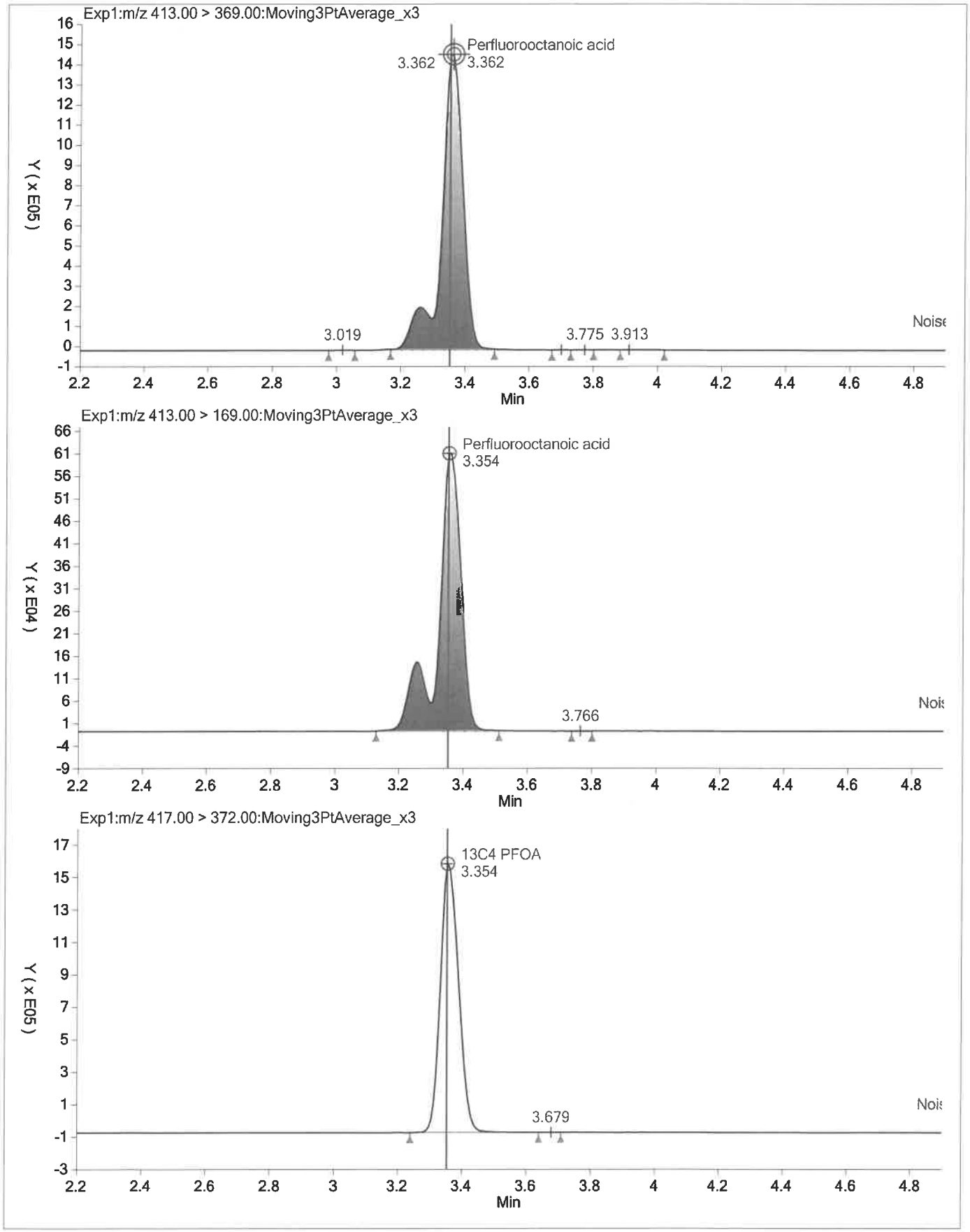
Lab Sample ID: ICV 320-410935/15  Calibration Date: 09/10/2020 12:48

Instrument ID: A9  Calib Start Date: 09/10/2020 10:18

GC Column: Acquity  ID: 2.10(mm)  Calib End Date: 09/10/2020 12:29

Lab File ID: 2020.09.10_A9 _PFC_ICAL_AA_024.d  Conc. Units: ng/mL

| ANALYTE | CURVE TYPE | AVE RRF | RRF | MIN RRF | CALC AMOUNT | SPIKE AMOUNT | %D | MAX %D |
|---|---|---|---|---|---|---|---|---|
| Perfluorotridecanoic acid (PFTriA) | AveID | 0.7267 | 0.6791 | | 2.34 | 2.50 | -6.5 | 50.0 |
| Perfluorotetradecanoic acid (PFTeA) | AveID | 0.1764 | 0.1866 | | 2.64 | 2.50 | 5.8 | 50.0 |
| Perfluoro-n-hexadecanoic acid (PFHxDA) | L2ID | | 0.9529 | | 2.58 | 2.50 | 3.3 | 50.0 |
| Perfluoro-n-octadecanoic acid (PFODA) | AveID | 0.7480 | 0.7577 | | 2.53 | 2.50 | 1.3 | 50.0 |
| 13C4 PFBA | Ave | 1.350 | 1.409 | | 2.61 | 2.50 | 4.4 | 50.0 |
| 13C5 PFPeA | Ave | 1.138 | 1.097 | | 2.41 | 2.50 | -3.7 | 50.0 |
| 13C3 PFBS | Ave | 2.249 | 2.217 | | 2.29 | 2.33 | -1.4 | 50.0 |
| M2-4:2 FTS | Ave | 0.2233 | 0.2103 | | 2.20 | 2.34 | -5.8 | 50.0 |
| 13C2 PFHxA | Ave | 1.058 | 1.087 | | 2.57 | 2.50 | 2.7 | 50.0 |
| 13C3 HFPO-DA | Ave | 0.7264 | 0.7592 | | 2.61 | 2.50 | 4.5 | 50.0 |
| 13C4 PFHpA | Ave | 1.030 | 1.042 | | 2.53 | 2.50 | 1.2 | 50.0 |
| 18O2 PFHxS | Ave | 1.076 | 1.138 | | 2.50 | 2.37 | 5.8 | 50.0 |
| M2-6:2 FTS | Ave | 0.1925 | 0.1793 | | 2.21 | 2.38 | -6.9 | 50.0 |
| 13C4 PFOA | Ave | 0.9654 | 0.997 | | 2.58 | 2.50 | 3.3 | 50.0 |
| 13C4 PFOS | Ave | 1.123 | 1.140 | | 2.43 | 2.39 | 1.6 | 50.0 |
| 13C5 PFNA | Ave | 0.8376 | 0.8506 | | 2.54 | 2.50 | 1.6 | 50.0 |
| 13C8 FOSA | Ave | 0.5280 | 0.5580 | | 2.64 | 2.50 | 5.7 | 50.0 |
| 13C2 PFDA | Ave | 1.063 | 1.096 | | 2.58 | 2.50 | 3.1 | 50.0 |
| M2-8:2 FTS | Ave | 0.2357 | 0.2334 | | 2.37 | 2.40 | -1.0 | 50.0 |
| d3-NMeFOSAA | Ave | 0.5286 | 0.5122 | | 2.42 | 2.50 | -3.1 | 50.0 |
| 13C2 PFUnA | Ave | 0.8198 | 0.8533 | | 2.60 | 2.50 | 4.1 | 50.0 |
| d5-NEtFOSAA | Ave | 0.3541 | 0.3587 | | 2.53 | 2.50 | 1.3 | 50.0 |
| d7-N-MeFOSE-M | Ave | 0.1700 | 0.1761 | | 13.0 | 12.5 | 3.6 | 50.0 |
| d-N-MeFOSA-M | Ave | 0.2378 | 0.2506 | | 2.64 | 2.50 | 5.4 | 50.0 |
| d9-N-EtFOSE-M | Ave | 0.1785 | 0.1900 | | 13.3 | 12.5 | 6.4 | 50.0 |
| 13C2 PFDoA | Ave | 0.8051 | 0.7587 | | 2.36 | 2.50 | -5.8 | 50.0 |
| d-N-EtFOSA-M | Ave | 0.2469 | 0.2502 | | 2.53 | 2.50 | 1.4 | 50.0 |
| 13C2 PFTeDA | Ave | 0.5615 | 0.5161 | | 2.30 | 2.50 | -8.1 | 50.0 |
| 13C2 PFHxDA | Ave | 0.4152 | 0.3686 | | 2.22 | 2.50 | -11.2 | 50.0 |
| 13C8 PFOA | Ave | 0.8088 | 0.9474 | | 2.87 | 2.45 | 17.1 | 50.0 |
| 13C8 PFOS | Ave | 0.2542 | 0.2484 | | 2.34 | 2.39 | -2.3 | 50.0 |


Exp1:m/z 413.00 > 369.00:Moving3PtAverage_x3
Perfluorooctanoic acid
3.362
3.362
3.019
3.775
3.913
Y ( x E05 )
Min
Exp1:m/z 413.00 > 169.00:Moving3PtAverage_x3
Perfluorooctanoic acid
3.354
3.766
Y ( x E04 )
Min
Exp1:m/z 417.00 > 372.00:Moving3PtAverage_x3
13C4 PFOA
3.354
3.679
Y ( x E05 )
Min

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\A9\20200910-102999.b\2020.09.10_A9 _PFC_ICAL_AA_024.d
Lims ID: ICV
Client ID:
Sample Type: ICV
Inject. Date: 10-Sep-2020 12:48:01 ALS Bottle#: 18 Worklist Smp#: 15
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Sample Info: ICV_44
Misc. Info.: Plate: 1 Rack: 1
Operator ID: SACINSTRLCMS02 Instrument ID: A9
Sublist:

Method: \\chromfs\Sacramento\ChromData\A9\20200910-102999.b\PFAS_A9.m
Limit Group: LC PFC ICAL
Last Update: 10-Sep-2020 13:33:00 Calib Date: 10-Sep-2020 12:29:20
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\A9\20200910-102999.b\2020.09.10_A9 _PFC_ICAL_AA_022.d

Column 1 : Det: EXP1
Process Host: CTX1016

First Level Reviewer: zibaa Date: 10-Sep-2020 13:33:00
Ratio Calibration: Average of Initial Calibration

| Signal | RT | EXP RT | DLT RT | REL RT | Response | Amount ng/ml | Ratio(Limits) | %Rec | S/N | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| D 1 13C4 PFBA | | | | | | | | | | |
| 217.00 > 172.00 | 1.893 | 1.893 | 0.0 | 0.565 | 8606018 | 2.61 | | 104 | 3198 | |
| 2 Perfluorobutanoic acid | | | | | | | | | | |
| 212.90 > 169.00 | 1.893 | 1.893 | 0.0 | 1.000 | 7855556 | 2.61 | | | 530 | |
| D 4 13C5 PFPeA | | | | | | | | | | |
| 267.90 > 223.00 | 2.198 | 2.198 | 0.0 | 0.656 | 6695664 | 2.41 | | 96.3 | 3301 | |
| 3 Perfluoropentanoic acid | | | | | | | | | | |
| 262.90 > 219.00 | 2.198 | 2.198 | 0.0 | 1.000 | 6586411 | 2.42 | | | 554 | |
| D 6 13C3 PFBS | | | | | | | | | | |
| 301.90 > 80.00 | 2.233 | 2.233 | 0.0 | 0.666 | 12589342 | 2.29 | | 98.6 | 2119 | |
| 5 Perfluorobutanesulfonic acid | | | | | | | | | | |
| 298.90 > 80.00 | 2.233 | 2.233 | 0.0 | 1.000 | 14223191 | 2.63 | Target=3.10 | | 935 | |
| 298.90 > 99.00 | 2.233 | 2.233 | 0.0 | 1.000 | 4803204 | | 2.96(1.55-4.65) | | 1046 | |
| D 8 M2-4:2 FTS | | | | | | | | | | |
| 329.00 > 81.00 | 2.514 | 2.515 | -0.001 | 0.750 | 1199269 | 2.20 | | 94.2 | 652 | |
| 9 1H,1H,2H,2H-perfluorohexanesulfo | | | | | | | | | | |
| 327.00 > 307.00 | 2.514 | 2.526 | -0.012 | 1.000 | 2433808 | 2.40 | | | 5605 | |
| D 10 13C2 PFHxA | | | | | | | | | | |
| 315.00 > 270.00 | 2.557 | 2.558 | -0.001 | 0.763 | 6638685 | 2.57 | | 103 | 3774 | |
| 11 Perfluorohexanoic acid | | | | | | | | | | |
| 313.00 > 269.00 | 2.557 | 2.558 | -0.001 | 1.000 | 6049059 | 2.73 | Target=9.68 | | 834 | |
| 313.00 > 119.00 | 2.557 | 2.558 | -0.001 | 1.000 | 585840 | | 10.33(4.84-14.52) | | 412 | |
| 12 Perfluoropentanesulfonic acid | | | | | | | | | | |
| 349.00 > 80.00 | 2.578 | 2.579 | -0.001 | 1.155 | 5394732 | 2.48 | Target=2.01 | | 1087 | |
| 349.00 > 99.00 | 2.568 | 2.579 | -0.011 | 1.150 | 2750953 | | 1.96(1.00-3.01) | | 1648 | |
| 14 Perfluoro(2-propoxypropanoic) ac | | | | | | | | | | |
| 285.00 > 169.00 | 2.686 | 2.674 | 0.012 | 1.005 | 1842526 | 2.51 | | | 2918 | |

| Signal | RT | EXP RT | DLT RT | REL RT | Response | Amount ng/ml | Ratio(Limits) | %Rec | S/N | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| D 13 13C3 HFPO-DA | | | | | | | | | | |
| 287.00 > 169.00 | 2.673 | 2.674 | -0.001 | 0.797 | 4635728 | 2.61 | | 105 | 4176 | |
| D 15 13C4 PFHpA | | | | | | | | | | |
| 367.00 > 322.00 | 2.951 | 2.952 | -0.001 | 0.880 | 6364694 | 2.53 | | 101 | 3165 | |
| 18 Perfluoroheptanoic acid | | | | | | | | | | |
| 363.00 > 319.00 | 2.951 | 2.952 | -0.001 | 1.000 | 7113546 | 2.52 | Target=3.74 | | 1313 | |
| 363.00 > 169.00 | 2.946 | 2.952 | -0.006 | 0.998 | 1822904 | | 3.90(1.87-5.61) | | 1515 | |
| D 17 18O2 PFHxS | | | | | | | | | | |
| 403.00 > 84.00 | 2.951 | 2.957 | -0.006 | 0.880 | 6571506 | 2.50 | | 106 | 3754 | |
| 16 Perfluorohexanesulfonic acid | | | | | | | | | | M |
| 399.00 > 80.00 | 2.951 | 2.957 | -0.006 | 1.000 | 8160156 | 2.49 | Target=3.29 | | 924 | |
| 399.00 > 99.00 | 2.951 | 2.957 | -0.006 | 1.000 | 2355056 | | 3.46(1.65-4.94) | | 1012 | M |
| 19 DONA | | | | | | | | | | |
| 377.00 > 251.00 | 3.001 | 3.002 | -0.001 | 0.805 | 12585852 | 2.49 | Target=1.80 | | 5183 | |
| 377.00 > 85.00 | 2.993 | 3.002 | -0.009 | 0.803 | 7221240 | | 1.74(0.90-2.70) | | 4858 | |
| D 20 M2-6:2 FTS | | | | | | | | | | |
| 429.00 > 81.00 | 3.330 | 3.331 | -0.001 | 0.993 | 1039970 | 2.21 | | 93.1 | 1208 | |
| 22 1H,1H,2H,2H-perfluorooctanesulfo | | | | | | | | | | |
| 427.00 > 407.00 | 3.330 | 3.331 | -0.001 | 1.000 | 1688757 | 2.50 | | | 1597 | |
| $ 21 13C8 PFOA | | | | | | | | | | |
| 421.00 > 376.00 | 3.345 | 3.346 | -0.001 | 0.998 | 5663028 | 2.87 | | 117 | 5789 | |
| 23 Perfluoroheptanesulfonic acid | | | | | | | | | | |
| 449.00 > 80.00 | 3.352 | 3.353 | -0.001 | 0.900 | 6223218 | 2.42 | Target=3.65 | | 1354 | |
| 449.00 > 99.00 | 3.352 | 3.353 | -0.001 | 0.900 | 1631499 | | 3.81(1.83-5.48) | | 1492 | |
| 24 Perfluorooctanoic acid | | | | | | | | | | |
| 413.00 > 369.00 | 3.352 | 3.353 | -0.001 | 1.000 | 6187017 | 2.36 | Target=2.37 | | 461 | |
| 413.00 > 169.00 | 3.352 | 3.353 | -0.001 | 1.000 | 2566089 | | 2.41(1.19-3.56) | | 347 | |
| * 25 13C2 PFOA | | | | | | | | | | |
| 415.00 > 370.00 | 3.352 | 3.353 | -0.001 | | 6105955 | 2.50 | | | 4523 | |
| D 26 13C4 PFOA | | | | | | | | | | |
| 417.00 > 372.00 | 3.352 | 3.353 | -0.001 | 1.000 | 6087527 | 2.58 | | 103 | 5151 | |
| $ 27 13C8 PFOS | | | | | | | | | | |
| 507.00 > 99.00 | 3.727 | 3.729 | -0.002 | 1.112 | 1450230 | 2.34 | | 97.7 | 1551 | |
| 28 Perfluorooctanesulfonic acid | | | | | | | | | | |
| 499.00 > 80.00 | 3.734 | 3.737 | -0.003 | 1.002 | 6968942 | 2.41 | Target=4.12 | | 621 | |
| 499.00 > 99.00 | 3.727 | 3.737 | -0.010 | 1.000 | 1570141 | | 4.44(2.06-6.17) | | 1951 | |
| D 31 13C4 PFOS | | | | | | | | | | |
| 503.00 > 80.00 | 3.727 | 3.737 | -0.010 | 1.112 | 6655945 | 2.43 | | 102 | 1676 | |
| D 29 13C5 PFNA | | | | | | | | | | |
| 468.00 > 423.00 | 3.744 | 3.746 | -0.002 | 1.117 | 5193940 | 2.54 | | 102 | 3869 | |
| 30 Perfluorononanoic acid | | | | | | | | | | |
| 463.00 > 419.00 | 3.744 | 3.746 | -0.002 | 1.000 | 5952123 | 2.88 | Target=4.21 | | 2723 | |
| 463.00 > 169.00 | 3.744 | 3.746 | -0.002 | 1.000 | 1360307 | | 4.38(2.11-6.32) | | 1640 | |
| 32 9-Chlorohexadecafluoro-3-oxanona | | | | | | | | | | |
| 531.00 > 351.00 | 3.937 | 3.939 | -0.002 | 1.056 | 4534352 | 2.59 | | | 6352 | |
| D 36 13C8 FOSA | | | | | | | | | | |
| 506.00 > 78.00 | 4.073 | 4.079 | -0.005 | 1.215 | 3407239 | 2.64 | | 106 | 3758 | |

| Signal | RT | EXP RT | DLT RT | REL RT | Response | Amount ng/ml | Ratio(Limits) | %Rec | S/N | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| 34 Perfluorooctanesulfonamide | | | | | | | | | | |
| 498.00 > 78.00 | 4.073 | 4.079 | -0.005 | 1.000 | 9130873 | 2.41 | | | 3261 | |
| 35 Perfluorononanesulfonic acid | | | | | | | | | | |
| 549.00 > 80.00 | 4.082 | 4.087 | -0.005 | 1.095 | 5076992 | 2.40 | Target=5.56 | | 1973 | |
| 549.00 > 99.00 | 4.082 | 4.087 | -0.005 | 1.095 | 808589 | | 6.28(2.78-8.34) | | 1666 | |
| D 33 13C2 PFDA | | | | | | | | | | |
| 515.00 > 470.00 | 4.109 | 4.114 | -0.005 | 1.226 | 6690270 | 2.58 | | 103 | 5553 | |
| 38 Perfluorodecanoic acid | | | | | | | | | | |
| 513.00 > 469.00 | 4.109 | 4.114 | -0.005 | 1.000 | 7292732 | 2.73 | Target=14.33 | | 3614 | |
| 513.00 > 169.00 | 4.109 | 4.114 | -0.005 | 1.000 | 499910 | | 14.59(7.16-21.49) | | 395 | |
| D 37 M2-8:2 FTS | | | | | | | | | | |
| 529.00 > 81.00 | 4.109 | 4.114 | -0.005 | 1.226 | 1365421 | 2.37 | | 99.0 | 1425 | |
| 39 1H,1H,2H,2H-perfluorodecanesulfo | | | | | | | | | | |
| 527.00 > 507.00 | 4.109 | 4.114 | -0.005 | 1.000 | 1634585 | 2.23 | | | 3114 | |
| D 41 d3-NMeFOSAA | | | | | | | | | | |
| 573.00 > 419.00 | 4.270 | 4.276 | -0.006 | 1.274 | 3127520 | 2.42 | | 96.9 | 2760 | |
| 40 N-methylperfluorooctanesulfonami | | | | | | | | | | M |
| 570.00 > 419.00 | 4.279 | 4.276 | 0.003 | 1.002 | 2435453 | 2.56 | | | 417 | M |
| 42 Perfluorodecanesulfonic acid | | | | | | | | | | |
| 599.00 > 80.00 | 4.400 | 4.405 | -0.005 | 1.181 | 5783126 | 2.45 | Target=4.29 | | 1973 | |
| 599.00 > 99.00 | 4.400 | 4.405 | -0.005 | 1.181 | 1271650 | | 4.55(2.15-6.44) | | 2568 | |
| D 46 13C2 PFUnA | | | | | | | | | | |
| 565.00 > 520.00 | 4.426 | 4.431 | -0.005 | 1.320 | 5210329 | 2.60 | | 104 | 7079 | |
| 43 Perfluoroundecanoic acid | | | | | | | | | | |
| 563.00 > 519.00 | 4.426 | 4.431 | -0.005 | 1.000 | 3801055 | 2.62 | Target=6.74 | | 2628 | |
| 563.00 > 169.00 | 4.426 | 4.431 | -0.005 | 1.000 | 541383 | | 7.02(3.37-10.11) | | 301 | |
| D 45 d5-NEtFOSAA | | | | | | | | | | |
| 589.00 > 419.00 | 4.434 | 4.440 | -0.006 | 1.323 | 2190090 | 2.53 | | 101 | 2043 | |
| 44 N-ethylperfluorooctanesulfonamid | | | | | | | | | | |
| 584.00 > 419.00 | 4.443 | 4.448 | -0.005 | 1.002 | 1769015 | 2.49 | | | 1486 | |
| D 47 d7-N-MeFOSE-M | | | | | | | | | | |
| 623.00 > 59.00 | 4.537 | 4.542 | -0.005 | 1.353 | 5376473 | 13.0 | | 104 | 4603 | |
| 48 2-(N-methylperfluoro-1-octanesul | | | | | | | | | | |
| 616.00 > 59.00 | 4.546 | 4.551 | -0.005 | 1.002 | 1047811 | 2.33 | | | 1985 | |
| D 49 d-N-MeFOSA-M | | | | | | | | | | |
| 515.00 > 169.00 | 4.554 | 4.560 | -0.006 | 1.358 | 1530287 | 2.64 | | 105 | 232 | |
| 50 NMeFOSA | | | | | | | | | | |
| 512.00 > 169.00 | 4.563 | 4.560 | 0.003 | 1.002 | 1233723 | 1.93 | | | 1353 | |
| 51 11-Chloroeicosafluoro-3-oxaundec | | | | | | | | | | |
| 631.00 > 451.00 | 4.563 | 4.569 | -0.006 | 1.224 | 5490877 | 2.66 | | | 4142 | |
| D 53 d9-N-EtFOSE-M | | | | | | | | | | |
| 639.00 > 59.00 | 4.712 | 4.709 | 0.003 | 1.405 | 5800502 | 13.3 | | 106 | 4457 | |
| 54 2-(N-ethylperfluoro-1-octanesulf | | | | | | | | | | |
| 630.00 > 59.00 | 4.721 | 4.728 | -0.007 | 1.002 | 1076863 | 2.33 | | | 2139 | |
| 52 Perfluorododecanoic acid | | | | | | | | | | |
| 613.00 > 569.00 | 4.721 | 4.728 | -0.007 | 1.000 | 4522218 | 2.65 | Target=6.67 | | 2801 | |
| 613.00 > 169.00 | 4.721 | 4.728 | -0.007 | 1.000 | 631382 | | 7.16(3.34-10.01) | | 1848 | |

| Signal | RT | EXP RT | DLT RT | REL RT | Response | Amount ng/ml | Ratio(Limits) | %Rec | S/N | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| D 56 13C2 PFDoA | | | | | | | | | | |
| 615.00 > 570.00 | 4.721 | 4.728 | -0.007 | 1.408 | 4632592 | 2.36 | | 94.2 | 8830 | |
| D 58 d-N-EtFOSA-M | | | | | | | | | | |
| 531.00 > 169.00 | 4.739 | 4.737 | 0.002 | 1.414 | 1527797 | 2.53 | | 101 | 869 | |
| 57 N-ethylperfluoro-1-octanesulfona | | | | | | | | | | |
| 526.00 > 169.00 | 4.739 | 4.746 | -0.007 | 1.000 | 1203376 | 1.98 | | | 567 | |
| 55 1H,1H,2H,2H-perfluorododecanesul | | | | | | | | | | |
| 627.00 > 607.00 | 4.739 | 4.746 | -0.007 | 1.153 | 1068049 | 2.28 | | | 5614 | |
| 59 Perfluorododecanesulfonic acid ( | | | | | | | | | | |
| 699.00 > 80.00 | 4.952 | 4.957 | -0.005 | 1.329 | 825575 | 2.34 | Target=1.02 | | 1503 | |
| 699.00 > 99.00 | 4.952 | 4.957 | -0.005 | 1.329 | 815643 | | 1.01(0.51-1.53) | | 3435 | |
| 60 Perfluorotridecanoic acid | | | | | | | | | | |
| 663.00 > 619.00 | 4.985 | 4.990 | -0.005 | 1.056 | 3146221 | 2.34 | Target=4.80 | | 5286 | |
| 663.00 > 169.00 | 4.985 | 4.990 | -0.005 | 1.056 | 680471 | | 4.62(2.40-7.20) | | 646 | |
| D 62 13C2 PFTeDA | | | | | | | | | | |
| 715.00 > 670.00 | 5.227 | 5.232 | -0.005 | 1.559 | 3151305 | 2.30 | | 91.9 | 5367 | |
| 61 Perfluorotetradecanoic acid | | | | | | | | | | |
| 713.00 > 169.00 | 5.227 | 5.232 | -0.005 | 1.000 | 588031 | 2.64 | Target=1.37 | | 2413 | |
| 713.00 > 219.00 | 5.227 | 5.232 | -0.005 | 1.000 | 459014 | | 1.28(0.69-2.06) | | 375 | |
| D 63 13C2 PFHxDA | | | | | | | | | | |
| 815.00 > 770.00 | 5.661 | 5.668 | -0.007 | 1.689 | 2250395 | 2.22 | | 88.8 | 5267 | |
| 64 Perfluorohexadecanoic acid | | | | | | | | | | |
| 813.00 > 769.00 | 5.670 | 5.668 | 0.002 | 1.002 | 2144438 | 2.58 | Target=4.63 | | 3802 | |
| 813.00 > 169.00 | 5.670 | 5.668 | 0.002 | 1.002 | 454129 | | 4.72(2.32-6.95) | | 2723 | |
| 65 Perfluorooctadecanoic acid | | | | | | | | | | |
| 913.00 > 869.00 | 6.086 | 6.092 | -0.006 | 1.075 | 1705181 | 2.53 | Target=4.01 | | 2003 | |
| 913.00 > 169.00 | 6.086 | 6.092 | -0.006 | 1.075 | 419328 | | 4.07(2.01-6.02) | | 1430 | |

## QC Flag Legend

Review Flags

M - Manually Integrated

## Reagents:

LCPFCIC_FULL_00044 Amount Added: 1.00 Units: mL

Report Date: 10-Sep-2020 13:33:04 Chrom Revision: 2.3 09-Sep-2020 15:12:58

Eurofins TestAmerica, Sacramento

Data File: \\chromfs\Sacramento\ChromData\A9\20200910-102999.b\2020.09.10_A9 _PFC_ICAL_AA_024.d

Injection Date: 10-Sep-2020 12:48:01 Instrument ID: A9

Lims ID: ICV

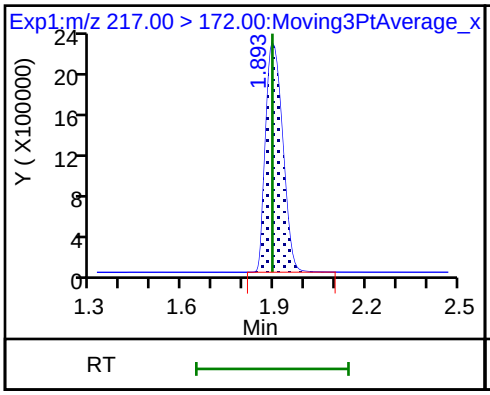
Client ID:

Operator ID: SACINSTRLCMS02 ALS Bottle#: 18 Worklist Smp#: 15

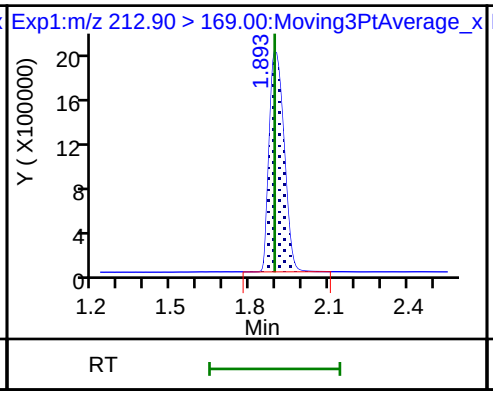
Injection Vol: 20.0 ul Dil. Factor: 1.0000

Method: PFAS_A9 Limit Group: LC PFC ICAL

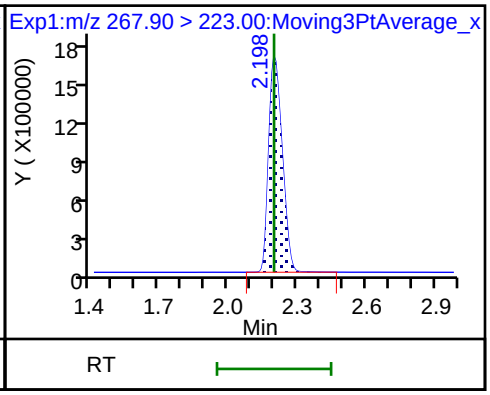
D 1 13C4 PFBA



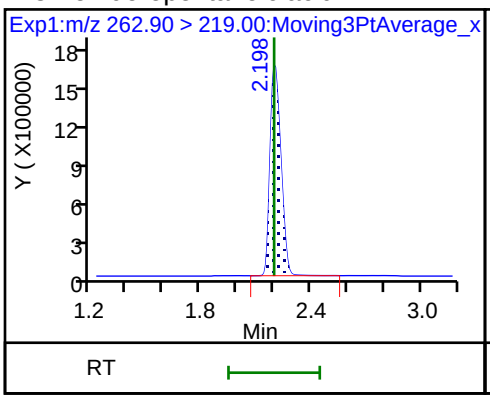

2 Perfluorobutanoic acid



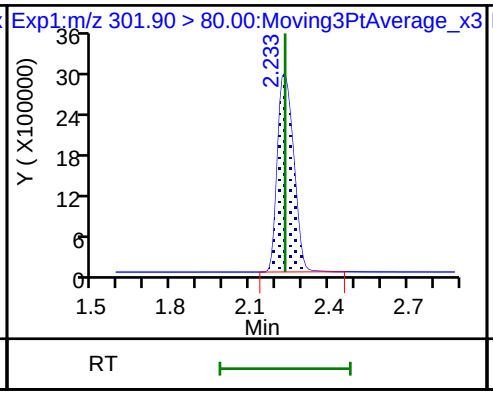

D 4 13C5 PFPeA



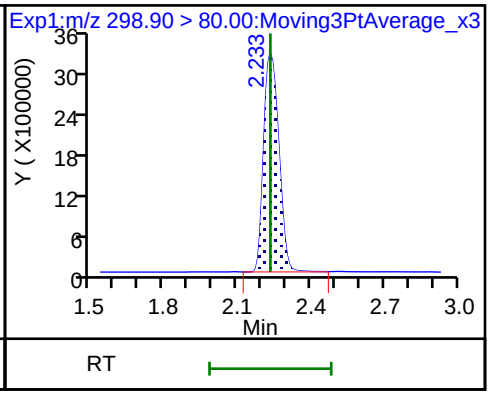

3 Perfluoropentanoic acid



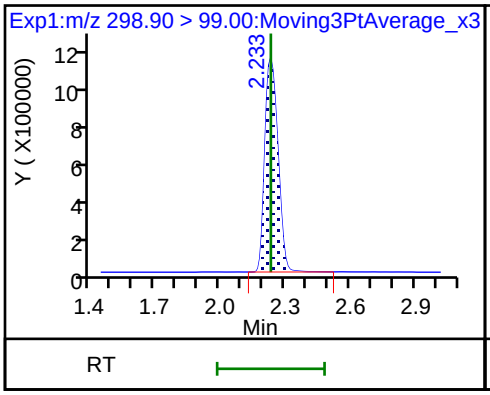

D 6 13C3 PFBS



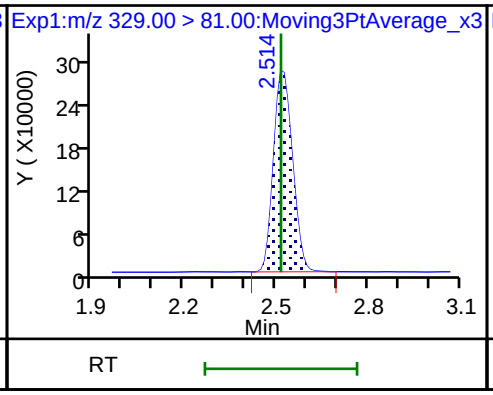

5 Perfluorobutanesulfonic acid



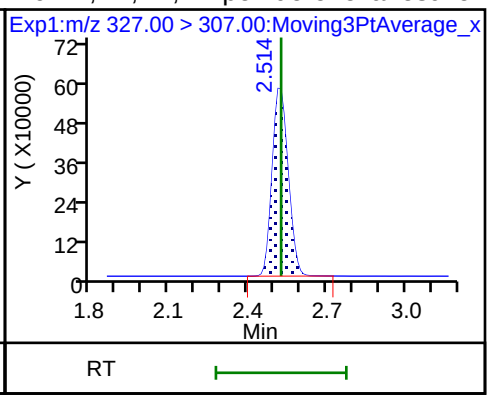

5 Perfluorobutanesulfonic acid



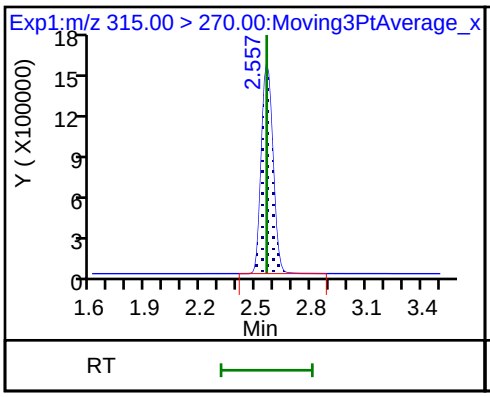

D 8 M2-4:2 FTS



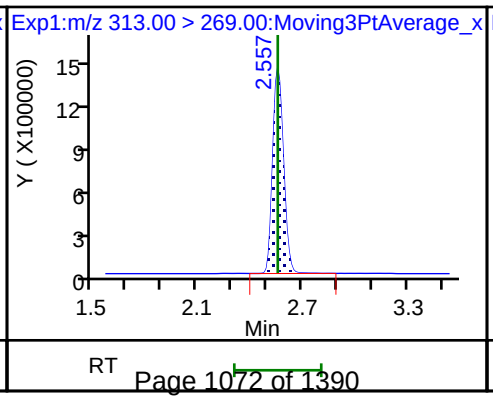

9 1H,1H,2H,2H-perfluorohexanesulfo



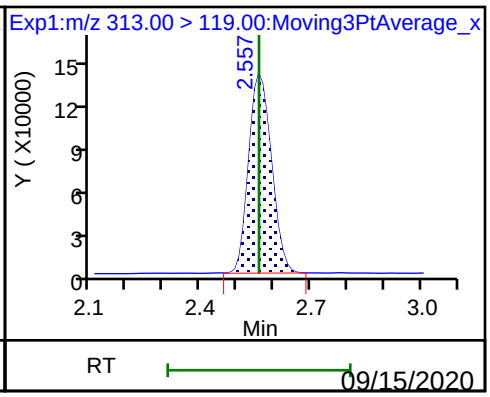

D 10 13C2 PFHxA



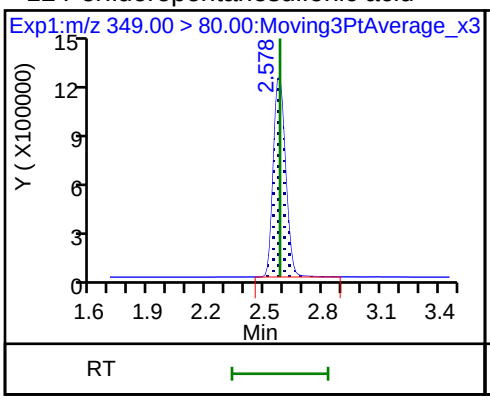

11 Perfluorohexanoic acid



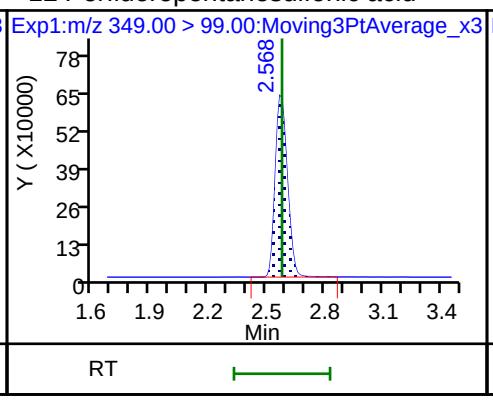

11 Perfluorohexanoic acid



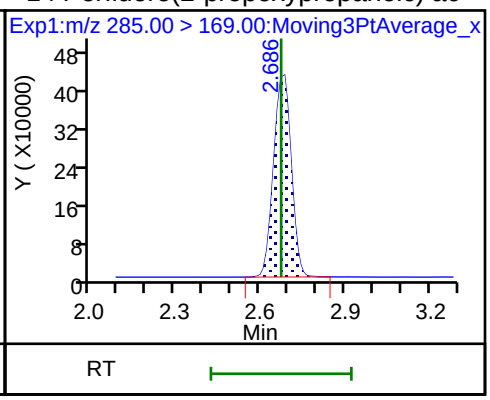
12 Perfluoropentanesulfonic acid



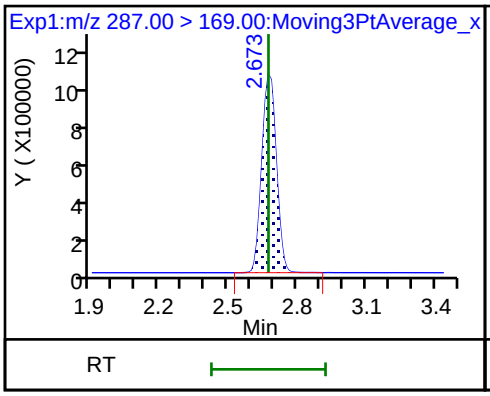

12 Perfluoropentanesulfonic acid



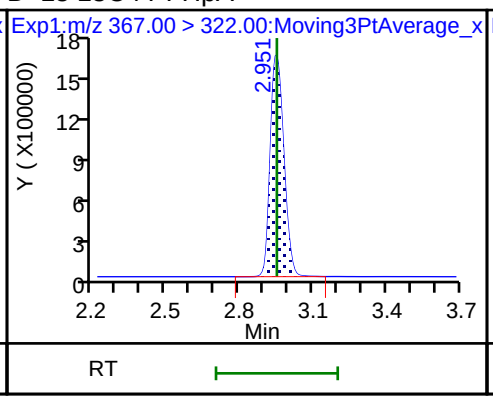

14 Perfluoro(2-propoxypropanoic) ac



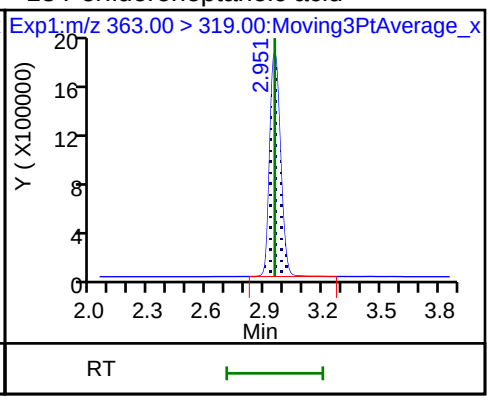

D 13 13C3 HFPO-DA



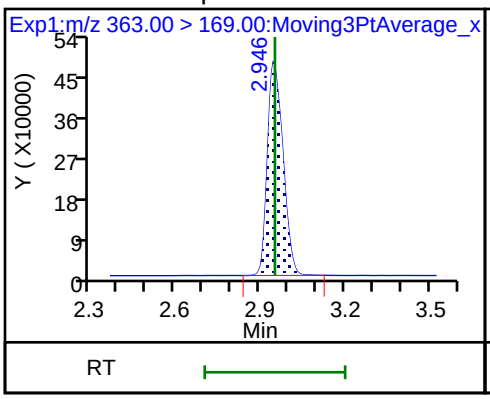

D 15 13C4 PFHpA



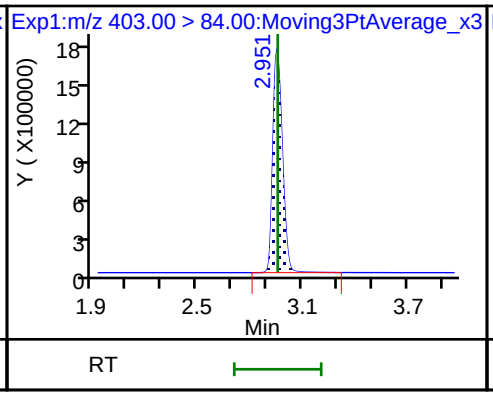

18 Perfluoroheptanoic acid



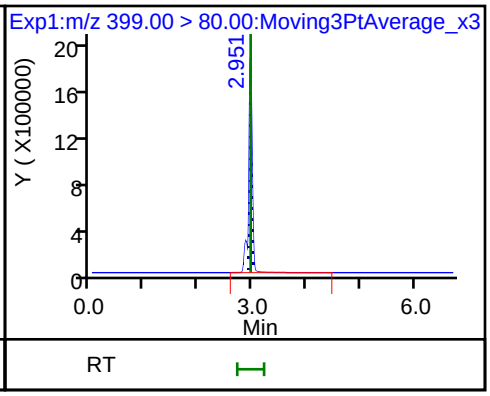

18 Perfluoroheptanoic acid



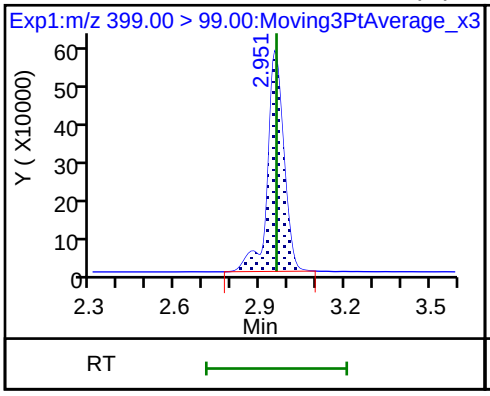

D 17 18O2 PFHxS



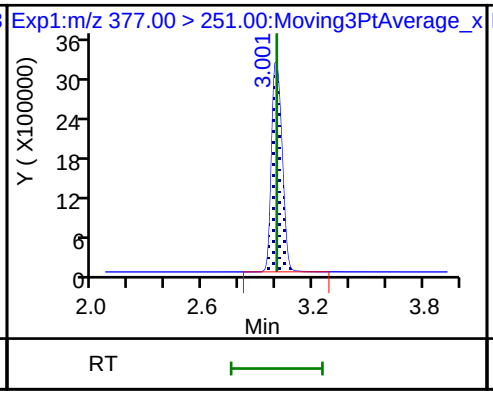

16 Perfluorohexanesulfonic acid




16 Perfluorohexanesulfonic acid (M)




19 DONA

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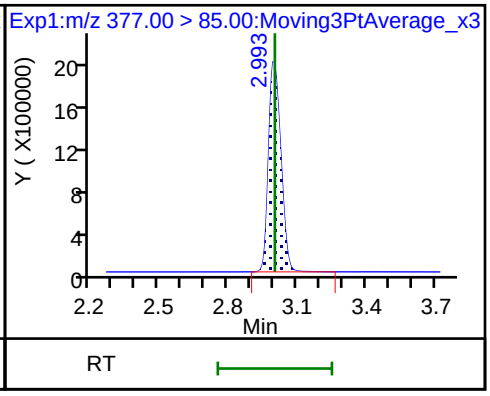
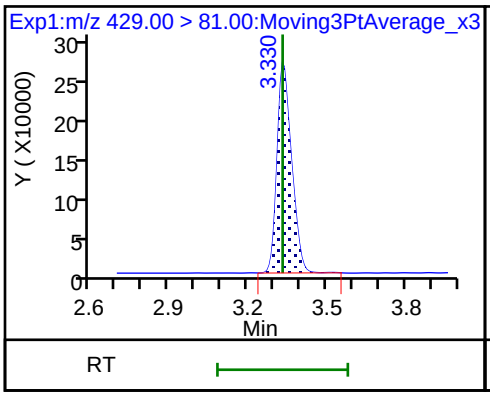
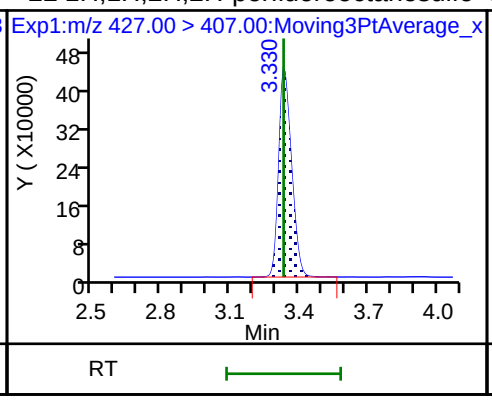


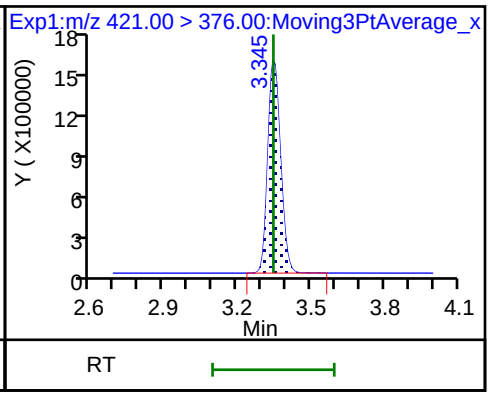
D 20 M2-6:2 FTS



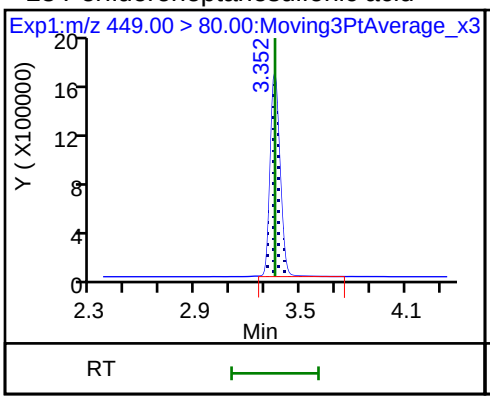

22 1H,1H,2H,2H-perfluorooctanesulfo



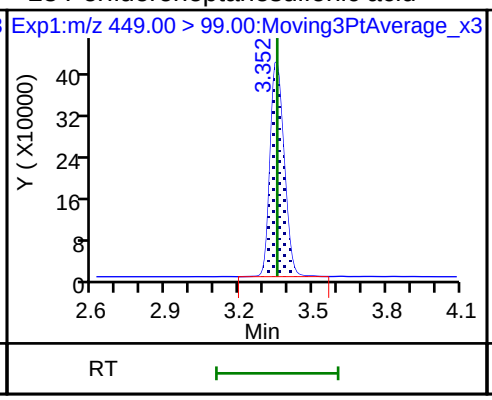

$ 21 13C8 PFOA



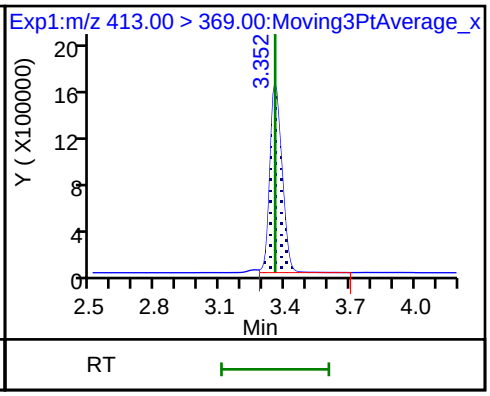

23 Perfluoroheptanesulfonic acid



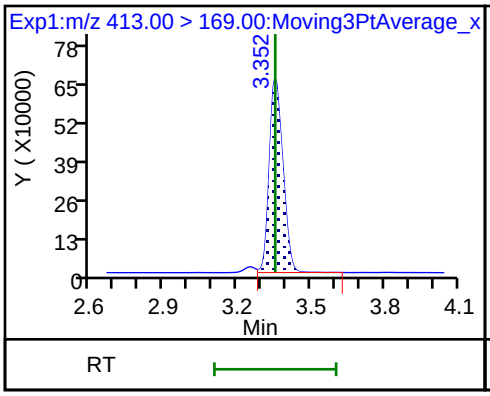

23 Perfluoroheptanesulfonic acid



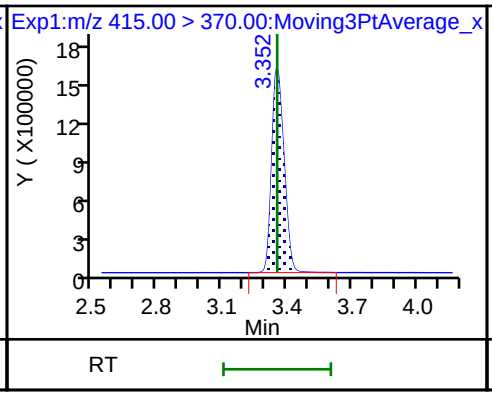

24 Perfluorooctanoic acid




24 Perfluorooctanoic acid




* 25 13C2 PFOA

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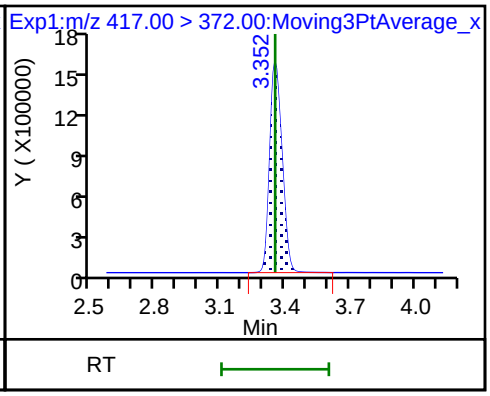
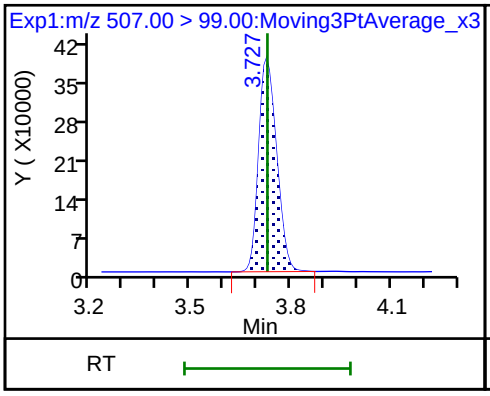
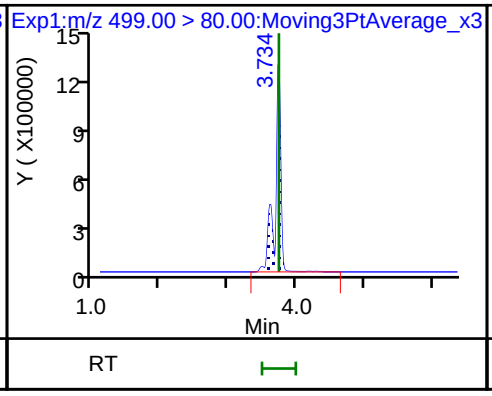


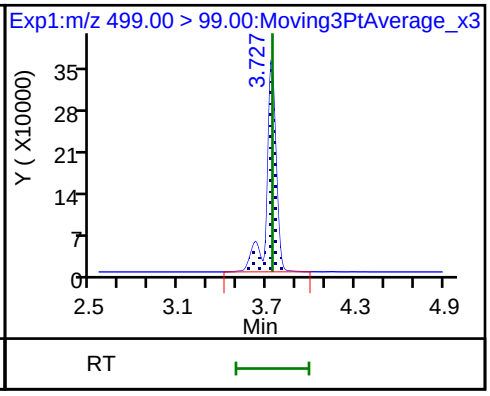

$ 27 13C8 PFOS




28 Perfluorooctanesulfonic acid




28 Perfluorooctanesulfonic acid



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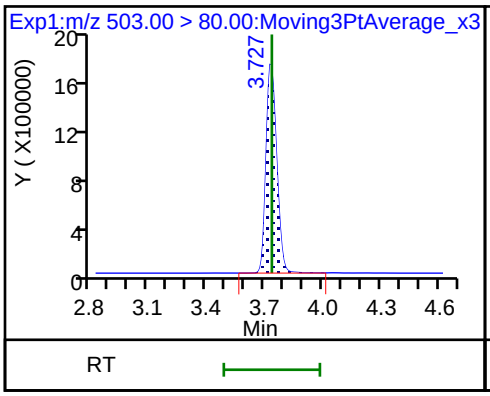
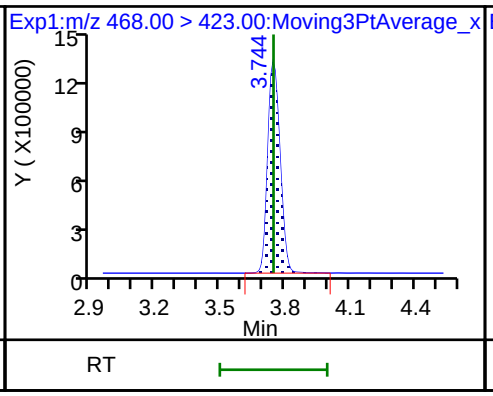
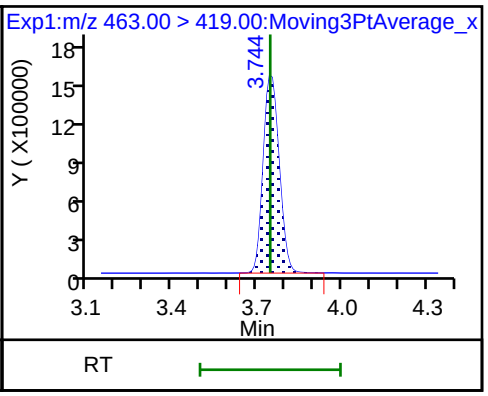


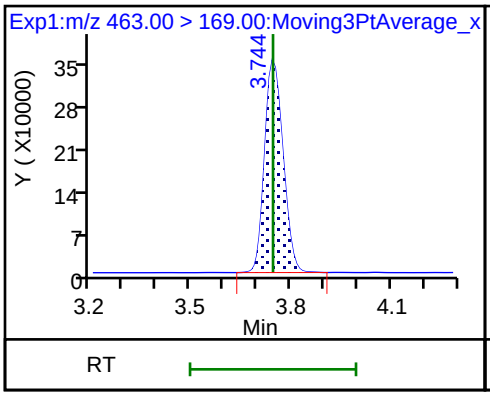

D 29 13C5 PFNA



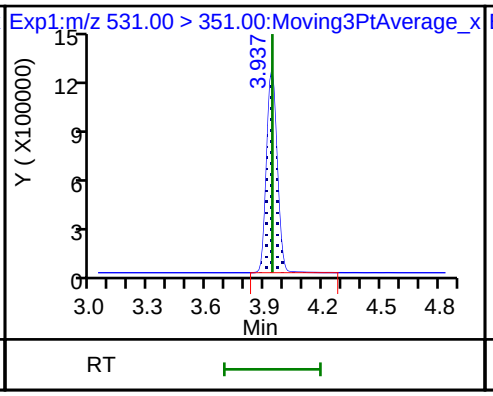

30 Perfluorononanoic acid



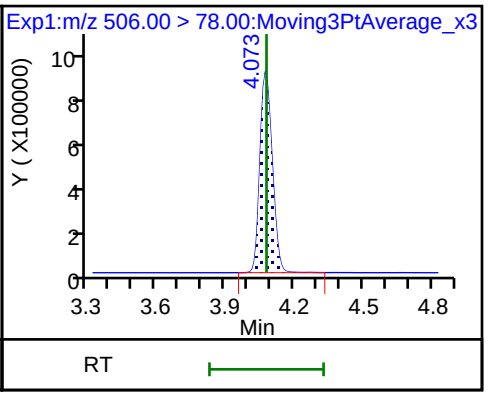

30 Perfluorononanoic acid



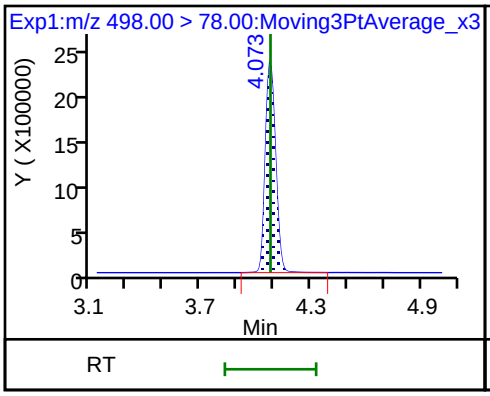

32 9-Chlorohexadecafluoro-3-oxanona



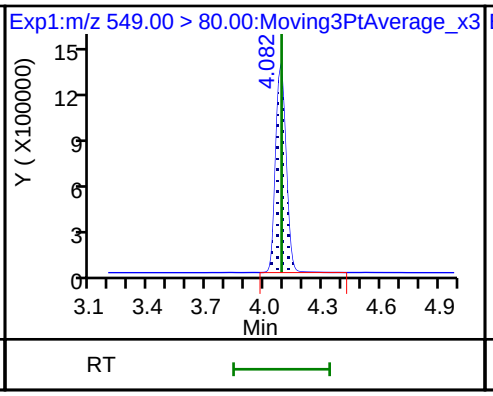

D 36 13C8 FOSA



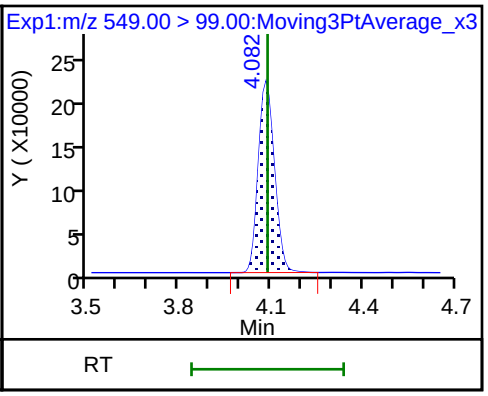

34 Perfluorooctanesulfonamide



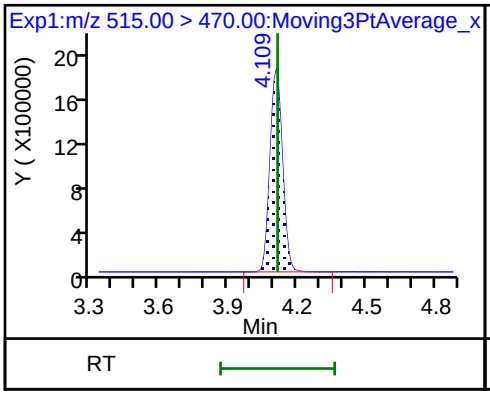

35 Perfluorononanesulfonic acid



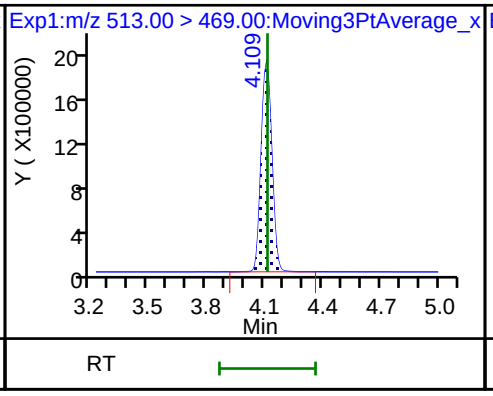

35 Perfluorononanesulfonic acid



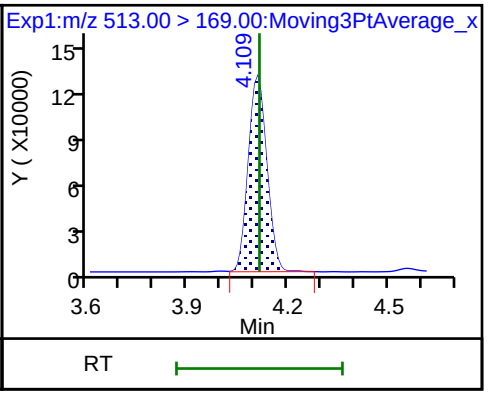

D 33 13C2 PFDA



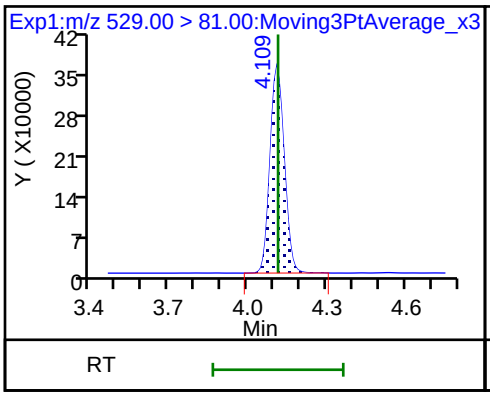

38 Perfluorodecanoic acid



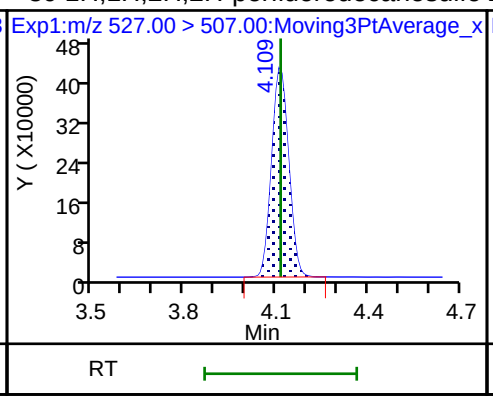

38 Perfluorodecanoic acid



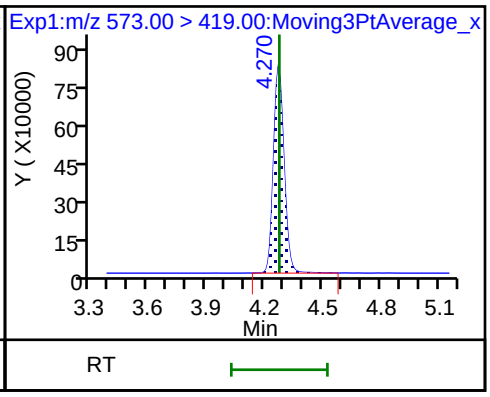
D 37 M2-8:2 FTS



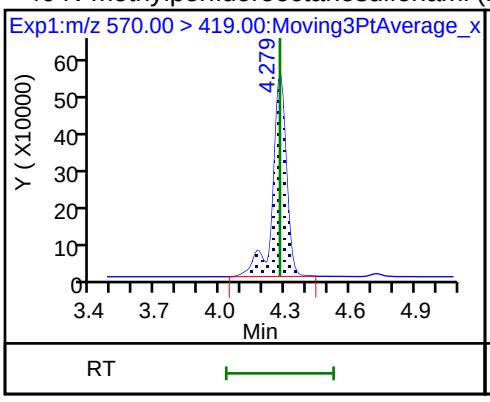

39 1H,1H,2H,2H-perfluorodecanesulfo



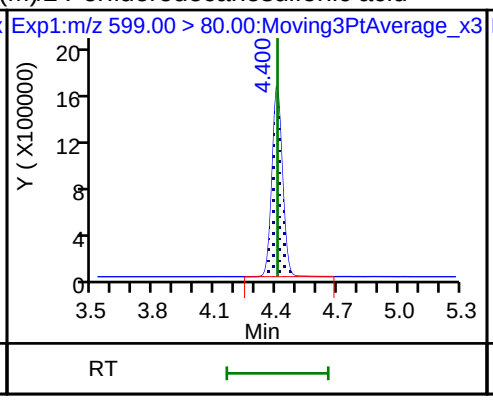

D 41 d3-NMeFOSAA



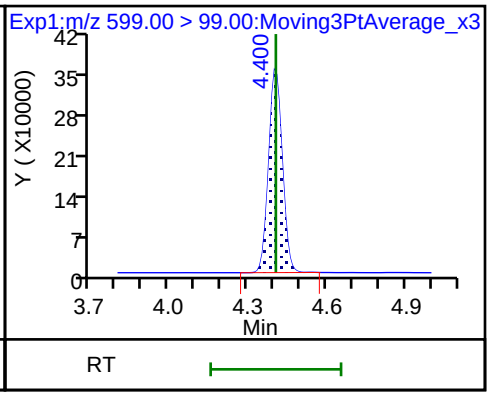

40 N-methylperfluorooctanesulfonami (M)



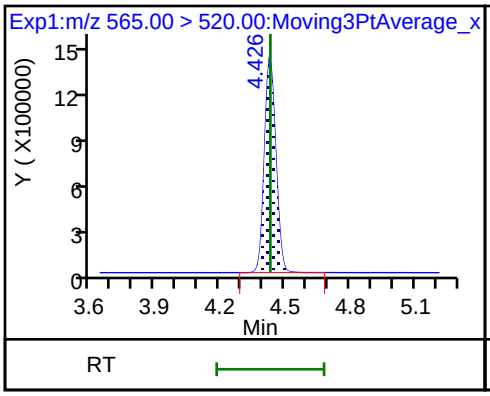

42 Perfluorodecanesulfonic acid



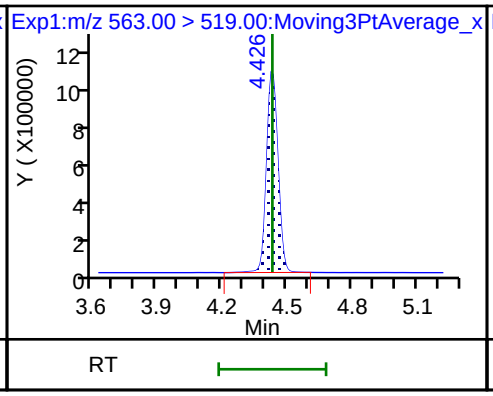

42 Perfluorodecanesulfonic acid



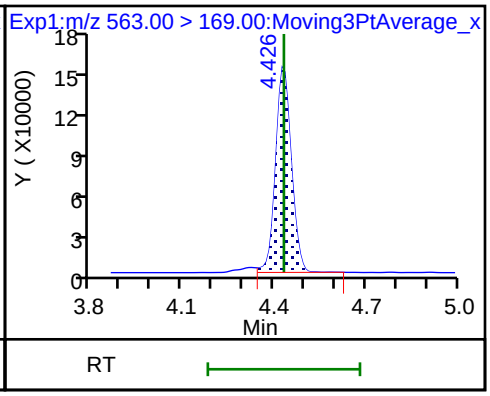

D 46 13C2 PFUnA



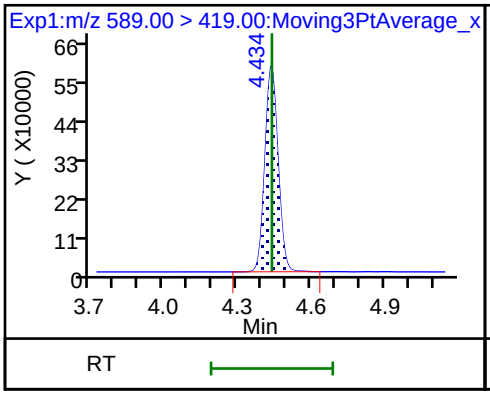

43 Perfluoroundecanoic acid



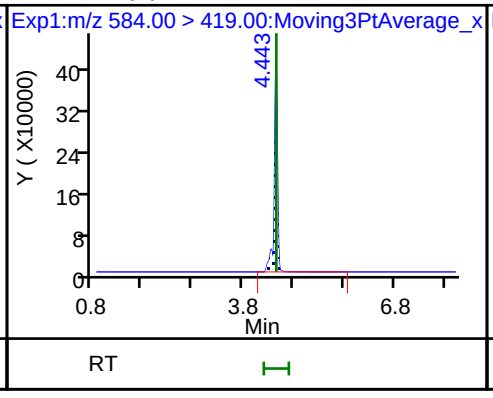

43 Perfluoroundecanoic acid



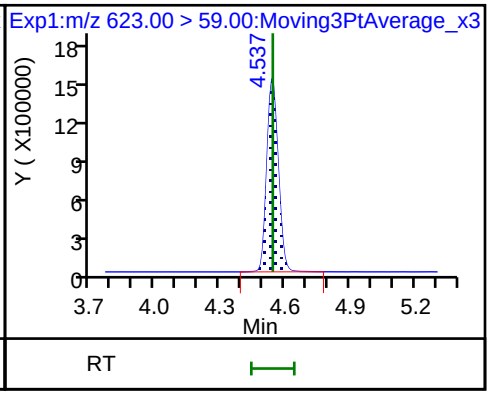

D 45 d5-NEtFOSAA



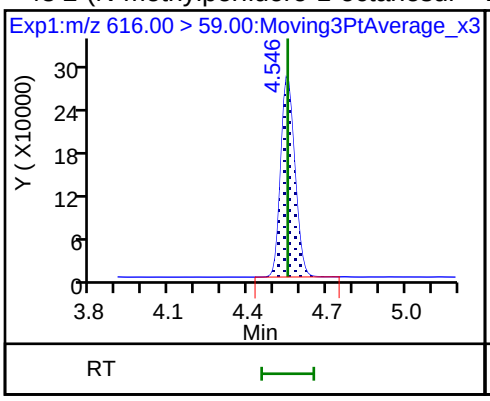

44 N-ethylperfluorooctanesulfonamid



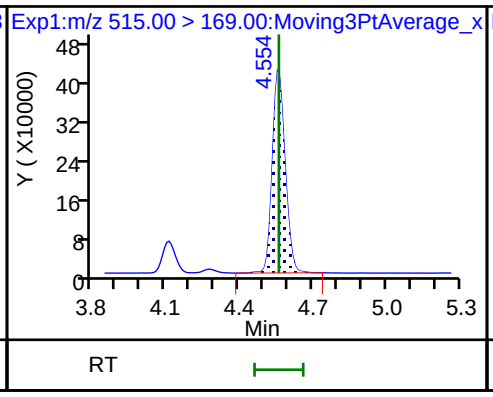

D 47 d7-N-MeFOSE-M



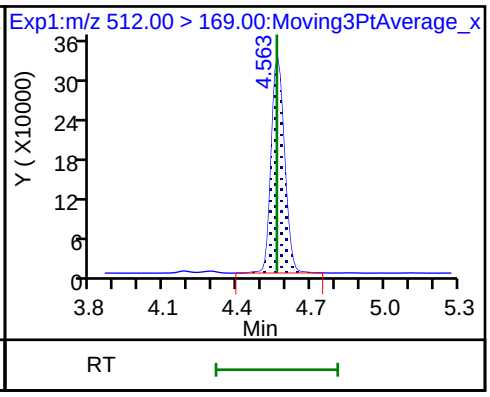
48 2-(N-methylperfluoro-1-octanesul



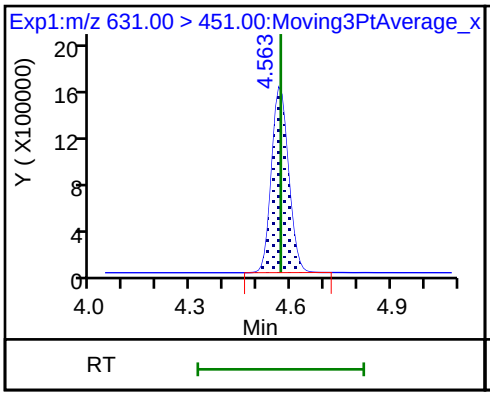

D 49 d-N-MeFOSA-M



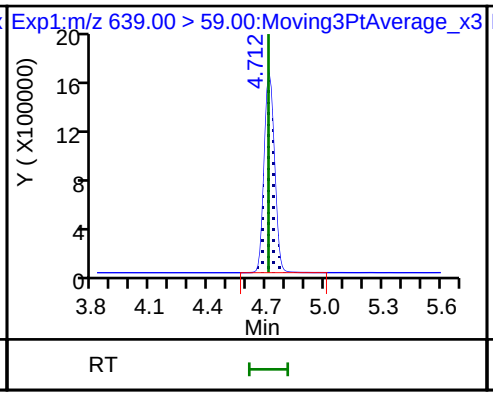

50 NMeFOSA



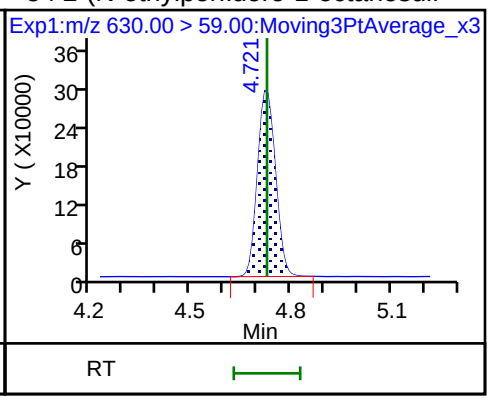

51 11-Chloroeicosafluoro-3-oxaundec



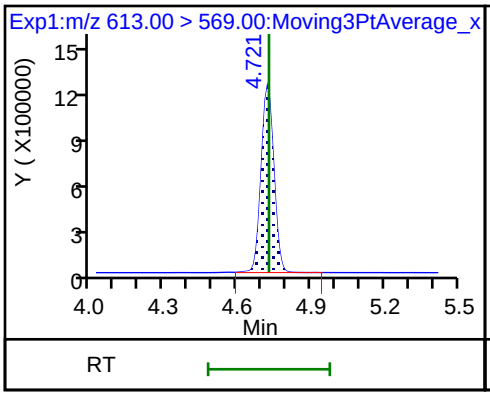

D 53 d9-N-EtFOSE-M



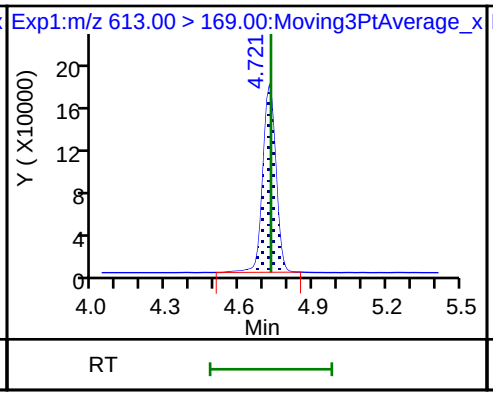

54 2-(N-ethylperfluoro-1-octanesulf



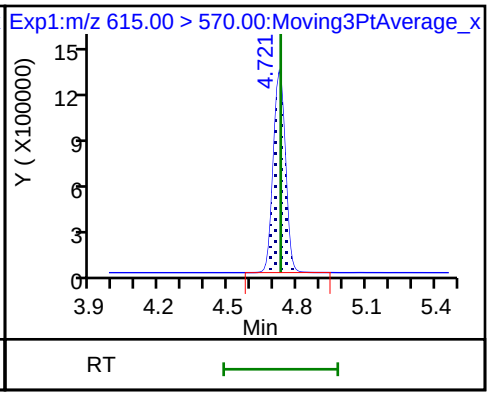

52 Perfluorododecanoic acid



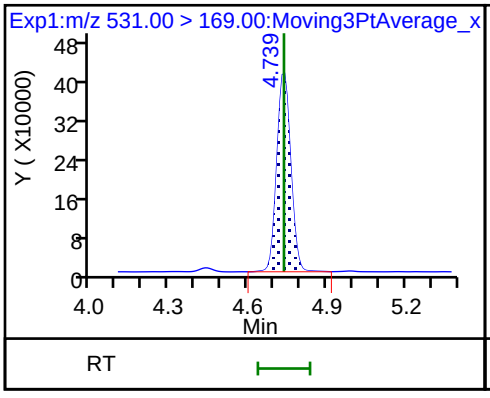

52 Perfluorododecanoic acid



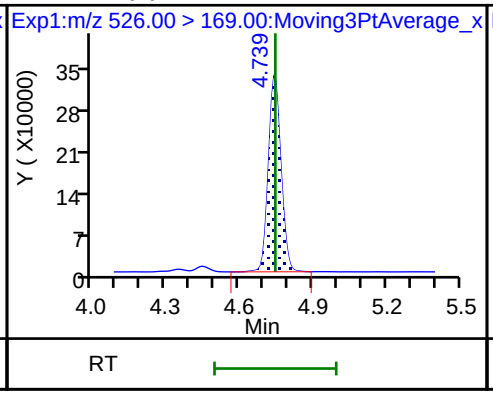

D 56 13C2 PFDoA



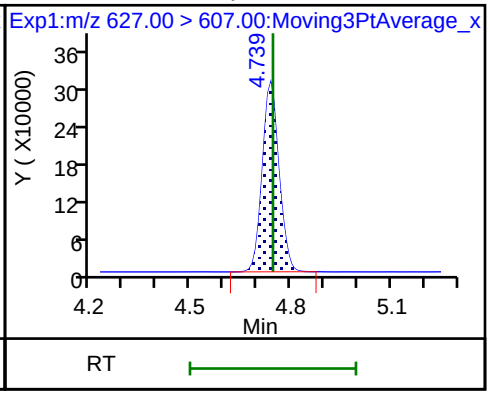

D 58 d-N-EtFOSA-M



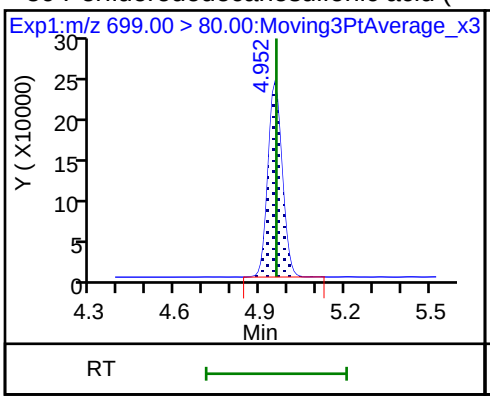

57 N-ethylperfluoro-1-octanesulfona



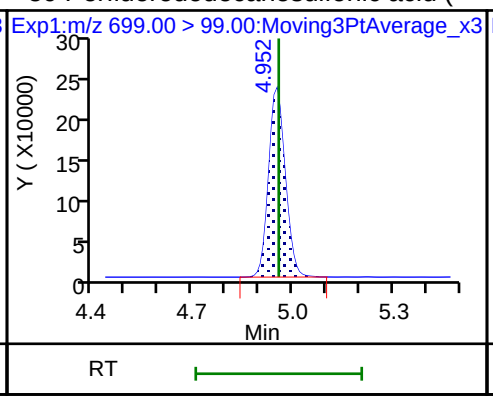

55 1H,1H,2H,2H-perfluorododecanesul



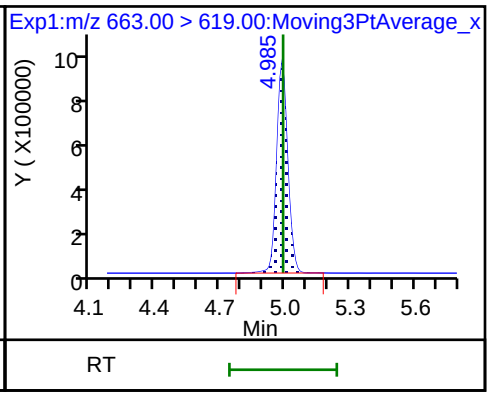
59 Perfluorododecanesulfonic acid (



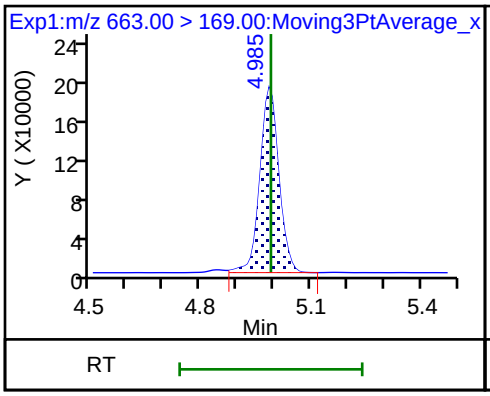

59 Perfluorododecanesulfonic acid (



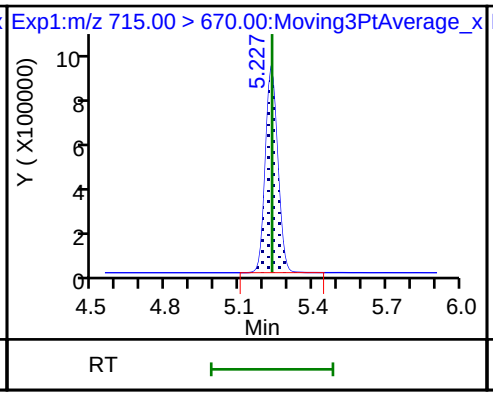

60 Perfluorotridecanoic acid



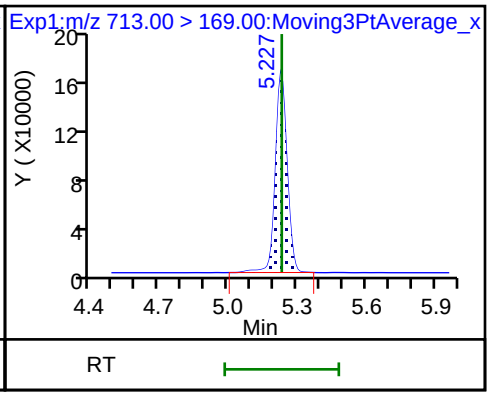

60 Perfluorotridecanoic acid



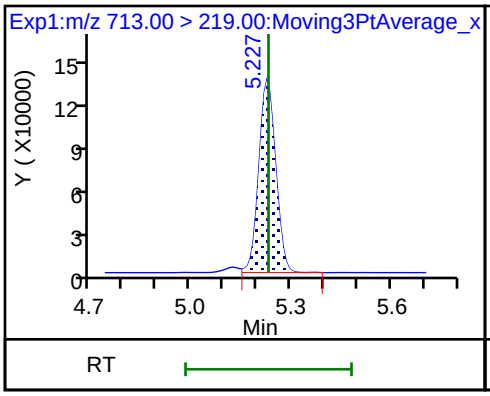

D 62 13C2 PFTeDA



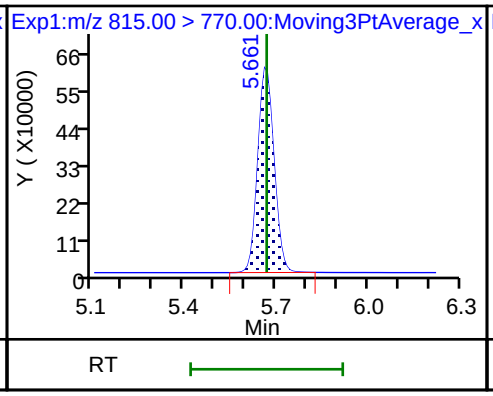

61 Perfluorotetradecanoic acid



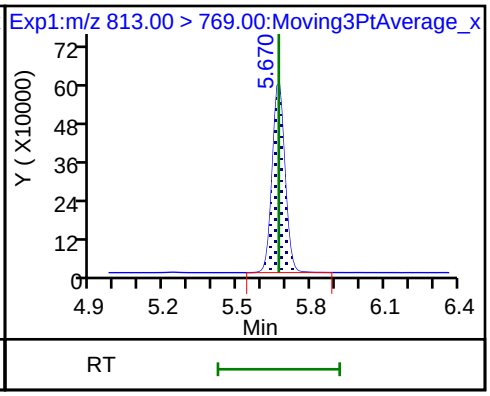

61 Perfluorotetradecanoic acid



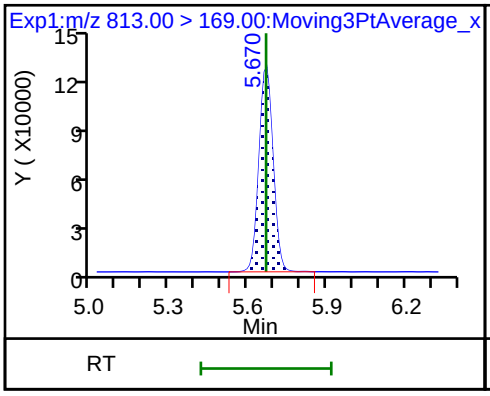

D 63 13C2 PFHxDA



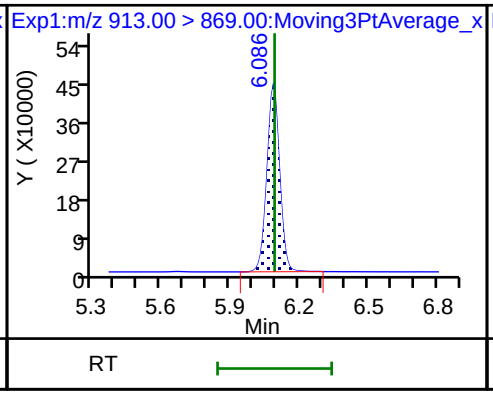

64 Perfluorohexadecanoic acid



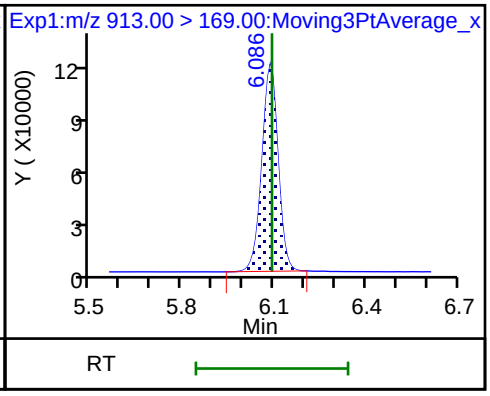

64 Perfluorohexadecanoic acid




65 Perfluorooctadecanoic acid




65 Perfluorooctadecanoic acid



Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

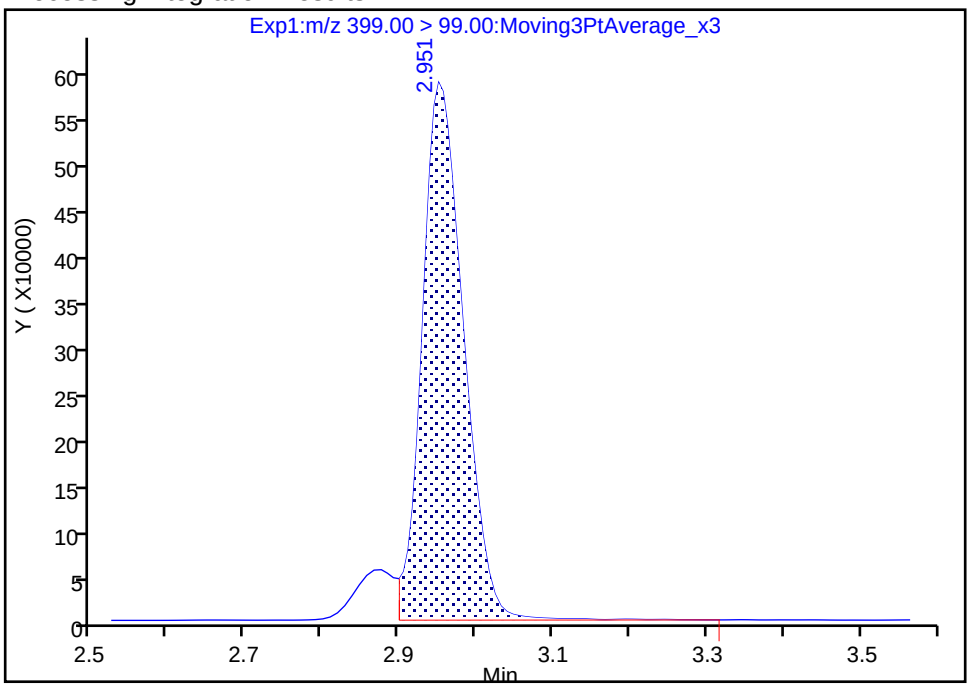
Data File: \\chromfs\Sacramento\ChromData\A9\20200910-102999.b\2020.09.10_A9 _PFC_ICAL_AA_024.d
Injection Date: 10-Sep-2020 12:48:01 Instrument ID: A9
Lims ID: ICV
Client ID:
Operator ID: SACINSTRLCMS02 ALS Bottle#: 18 Worklist Smp#: 15
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFAS_A9 Limit Group: LC PFC ICAL
Column: Detector EXP1

## 16 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 2

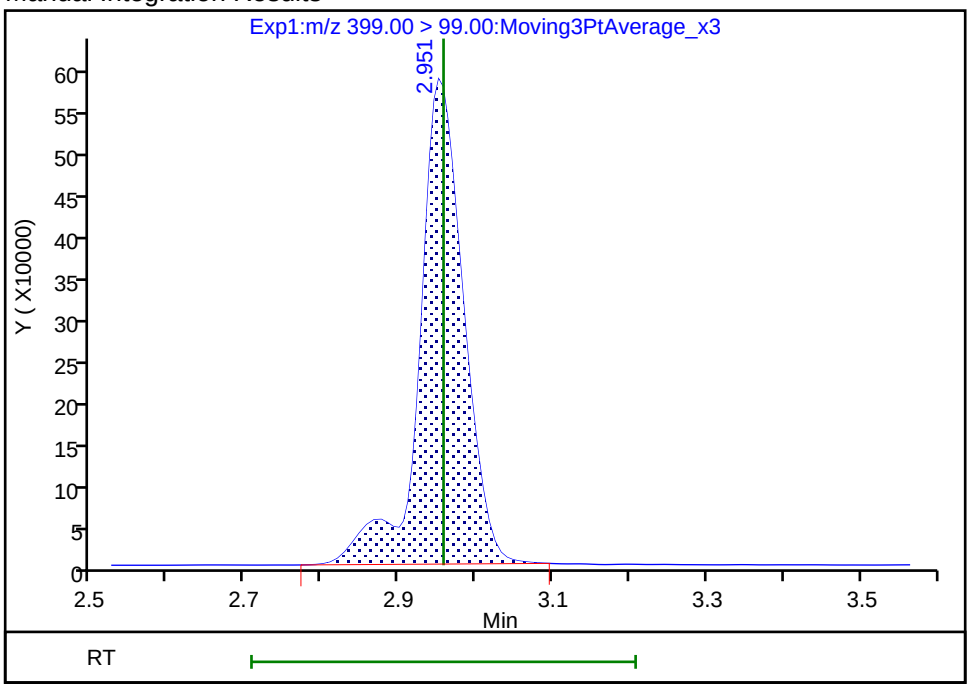
Processing Integration Results

RT: 2.95
Area: 2186000
Amount: 2.489727
Amount Units: ng/ml




Manual Integration Results

RT: 2.95
Area: 2355056
Amount: 2.489727
Amount Units: ng/ml




Reviewer: zibaa, 10-Sep-2020 13:25:44
Audit Action: Manually Integrated Audit Reason: Isomers

Eurofins TestAmerica, Sacramento

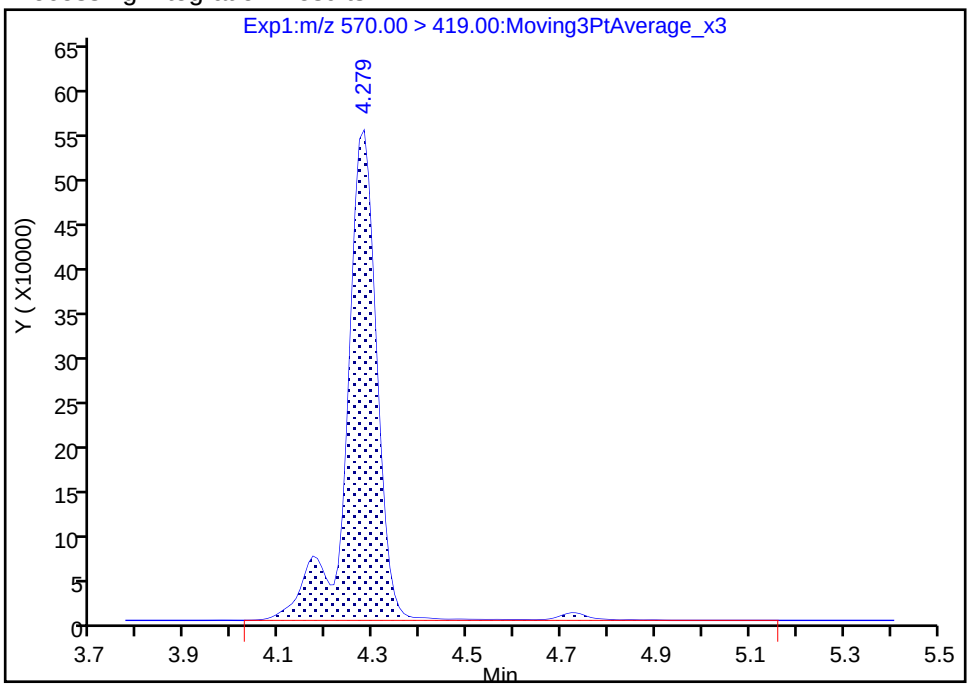
| | | | | | |
|---|---|---|---|---|---|
| Data File: | \\chromfs\Sacramento\ChromData\A9\20200910-102999.b\2020.09.10_A9 _PFC_ICAL_AA_024.d | | | | |
| Injection Date: | 10-Sep-2020 12:48:01 | Instrument ID: | A9 | | |
| Lims ID: | ICV | | | | |
| Client ID: | | | | | |
| Operator ID: | SACINSTRLCMS02 | ALS Bottle#: | 18 | Worklist Smp#: | 15 |
| Injection Vol: | 20.0 ul | Dil. Factor: | 1.0000 | | |
| Method: | PFAS_A9 | Limit Group: | LC PFC ICAL | | |
| Column: | | Detector | EXP1 | | |

## 40 N-methylperfluorooctanesulfonami, CAS: 2355-31-9

Signal: 1

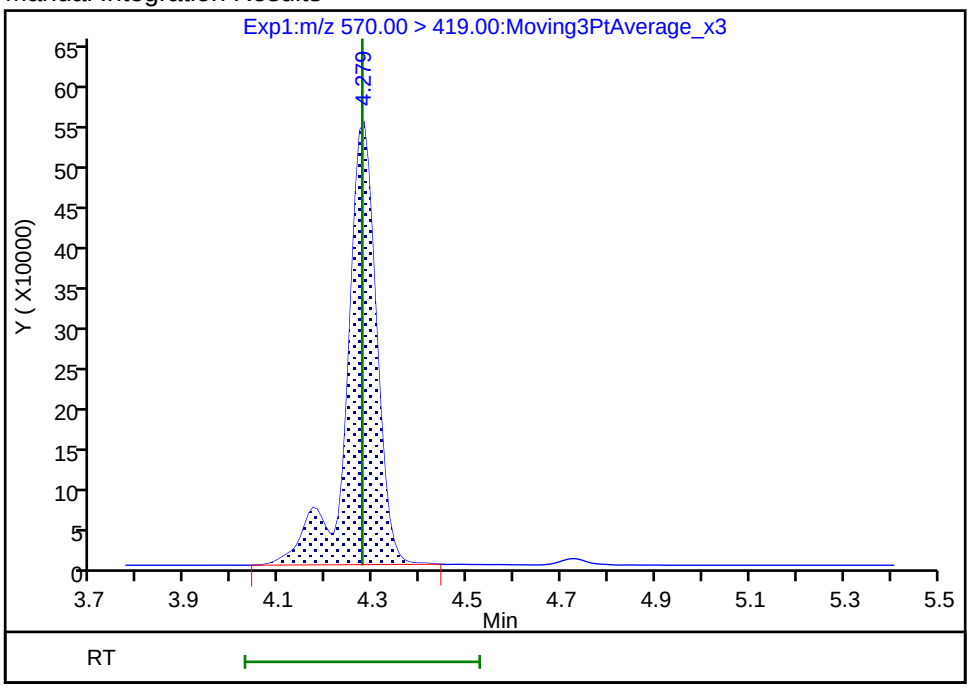
Processing Integration Results

RT: 4.28
Area: 2497257
Amount: 2.629139
Amount Units: ng/ml




Manual Integration Results

RT: 4.28
Area: 2435453
Amount: 2.564071
Amount Units: ng/ml




Reviewer: zibaa, 10-Sep-2020 13:26:48
Audit Action: Manually Integrated Audit Reason: Baseline

FORM VII
LCMS CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Sacramento  Job No.: 460-217547-1

SDG No.:

Lab Sample ID: CCVL 320-411300/2  Calibration Date: 09/11/2020 09:40

Instrument ID: A9  Calib Start Date: 09/10/2020 10:18

GC Column: Acquity  ID: 2.10(mm)  Calib End Date: 09/10/2020 12:29

Lab File ID: 2020.09.11_A9_PFC_AA_005.d  Conc. Units: ng/mL

| ANALYTE | CURVE TYPE | AVE RRF | RRF | MIN RRF | CALC AMOUNT | SPIKE AMOUNT | %D | MAX %D |
|---|---|---|---|---|---|---|---|---|
| Perfluorobutanoic acid (PFBA) | AveID | 0.8734 | 0.8208 | | 0.0470 | 0.0500 | -6.0 | 50.0 |
| Perfluoropentanoic acid (PFPeA) | AveID | 1.018 | 1.171 | | 0.0575 | 0.0500 | 15.0 | 50.0 |
| Perfluorobutanesulfonic acid (PFBS) | AveID | 0.998 | 0.9541 | | 0.0423 | 0.0442 | -4.4 | 50.0 |
| 4:2 FTS | AveID | 1.978 | 1.926 | | 0.455 | 0.467 | -2.6 | 50.0 |
| Perfluorohexanoic acid (PFHxA) | AveID | 0.8343 | 0.7594 | | 0.0455 | 0.0500 | -9.0 | 50.0 |
| Perfluoropentanesulfonic acid (PFPeS) | AveID | 0.4016 | 0.3842 | | 0.0449 | 0.0469 | -4.3 | 50.0 |
| HFPO-DA (GenX) | AveID | 0.3959 | 0.3662 | | 0.0463 | 0.0500 | -7.5 | 50.0 |
| Perfluoroheptanoic acid (PFHpA) | AveID | 1.109 | 1.013 | | 0.0457 | 0.0500 | -8.7 | 50.0 |
| Perfluorohexanesulfonic acid (PFHxS) | AveID | 1.180 | 1.056 | | 0.0407 | 0.0455 | -10.5 | 50.0 |
| 4,8-Dioxa-3H-perfluorononanoic acid (ADONA) | AveID | 1.813 | 1.616 | | 0.0420 | 0.0471 | -10.9 | 50.0 |
| 6:2 FTS | AveID | 1.542 | 1.555 | | 0.478 | 0.474 | 0.9 | 50.0 |
| Perfluoroheptanesulfonic Acid (PFHpS) | AveID | 0.9244 | 0.8488 | | 0.0437 | 0.0476 | -8.2 | 50.0 |
| Perfluorooctanoic acid (PFOA) | AveID | 1.078 | 1.055 | | 0.0489 | 0.0500 | -2.1 | 50.0 |
| Perfluorooctanesulfonic acid (PFOS) | AveID | 1.040 | 0.9527 | | 0.0425 | 0.0464 | -8.4 | 50.0 |
| Perfluorononanoic acid (PFNA) | AveID | 0.996 | 1.033 | | 0.0519 | 0.0500 | 3.8 | 50.0 |
| F-53B Major | AveID | 0.6274 | 0.5593 | | 0.0415 | 0.0466 | -10.9 | 50.0 |
| Perfluorooctanesulfonamide (FOSA) | AveID | 2.782 | 2.853 | | 0.0513 | 0.0500 | 2.6 | 50.0 |
| Perfluorononanesulfonic acid (PFNS) | AveID | 0.7591 | 0.7371 | | 0.0466 | 0.0480 | -2.9 | 50.0 |
| Perfluorodecanoic acid (PFDA) | AveID | 0.998 | 0.9606 | | 0.0481 | 0.0500 | -3.7 | 50.0 |
| 8:2 FTS | AveID | 1.288 | 1.054 | | 0.392 | 0.479 | -18.2 | 50.0 |
| N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA) | AveID | 0.7593 | 0.6511 | | 0.429 | 0.500 | -14.2 | 50.0 |
| Perfluorodecanesulfonic acid (PFDS) | AveID | 0.8492 | 0.7967 | | 0.0452 | 0.0482 | -6.2 | 50.0 |
| Perfluoroundecanoic acid (PFUnA) | AveID | 0.6962 | 0.5896 | | 0.0423 | 0.0500 | -15.3 | 50.0 |
| N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA) | AveID | 0.8112 | 0.7368 | | 0.454 | 0.500 | -9.2 | 50.0 |
| NMeFOSE | AveID | 1.043 | 0.9399 | | 0.0450 | 0.0500 | -9.9 | 50.0 |
| NMeFOSA | AveID | 1.043 | 1.001 | | 0.750 | 0.0500 | -4.1 | 50.0 |
| F-53B Minor | AveID | 0.7398 | 0.5868 | | 0.0374 | 0.0471 | -20.7 | 50.0 |
| NEtFOSE | AveID | 0.9939 | 0.9014 | | 0.0454 | 0.0500 | -9.3 | 50.0 |
| Perfluorododecanoic acid (PFDoA) | AveID | 0.9197 | 0.8822 | | 0.0480 | 0.0500 | -4.1 | 50.0 |
| NEtFOSA | AveID | 0.995 | 0.6909 | | 1.00 | 0.0500 | -30.6 | 50.0 |
| 10:2 FTS | AveID | 0.8214 | 0.7633 | | 0.0448 | 0.0482 | -7.1 | 50.0 |
| Perfluorododecanesulfonic acid (PFDoS) | AveID | 0.1269 | 0.1148 | | 0.0438 | 0.0484 | -9.5 | 50.0 |

FORM VII 537 (modified)

FORM VII
LCMS CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Sacramento  Job No.: 460-217547-1

SDG No.:

Lab Sample ID: CCVL 320-411300/2  Calibration Date: 09/11/2020 09:40

Instrument ID: A9  Calib Start Date: 09/10/2020 10:18

GC Column: Acquity  ID: 2.10(mm)  Calib End Date: 09/10/2020 12:29

Lab File ID: 2020.09.11_A9_PFC_AA_005.d  Conc. Units: ng/mL

| ANALYTE | CURVE TYPE | AVE RRF | RRF | MIN RRF | CALC AMOUNT | SPIKE AMOUNT | %D | MAX %D |
|---|---|---|---|---|---|---|---|---|
| Perfluorotridecanoic acid (PFTriA) | AveID | 0.7267 | 0.6676 | | 0.0459 | 0.0500 | -8.1 | 50.0 |
| Perfluorotetradecanoic acid (PFTeA) | AveID | 0.1764 | 0.1660 | | 0.0470 | 0.0500 | -5.9 | 50.0 |
| Perfluoro-n-hexadecanoic acid (PFHxDA) | L2ID | | 1.263 | | 0.0472 | 0.0500 | -5.7 | 50.0 |
| Perfluoro-n-octadecanoic acid (PFODA) | AveID | 0.7480 | 0.6906 | | 0.0462 | 0.0500 | -7.7 | 50.0 |
| 13C4 PFBA | Ave | 1.350 | 1.431 | | 2.65 | 2.50 | 6.0 | 50.0 |
| 13C5 PFPeA | Ave | 1.138 | 1.218 | | 2.67 | 2.50 | 7.0 | 50.0 |
| 13C3 PFBS | Ave | 2.249 | 2.434 | | 2.52 | 2.33 | 8.3 | 50.0 |
| M2-4:2 FTS | Ave | 0.2233 | 0.2114 | | 2.21 | 2.34 | -5.3 | 50.0 |
| 13C2 PFHxA | Ave | 1.058 | 1.136 | | 2.68 | 2.50 | 7.3 | 50.0 |
| 13C3 HFPO-DA | Ave | 0.7264 | 0.7872 | | 2.71 | 2.50 | 8.4 | 50.0 |
| 13C4 PFHpA | Ave | 1.030 | 1.135 | | 2.76 | 2.50 | 10.2 | 50.0 |
| 18O2 PFHxS | Ave | 1.076 | 1.219 | | 2.68 | 2.37 | 13.3 | 50.0 |
| M2-6:2 FTS | Ave | 0.1925 | 0.1786 | | 2.20 | 2.38 | -7.2 | 50.0 |
| 13C4 PFOA | Ave | 0.9654 | 1.023 | | 2.65 | 2.50 | 6.0 | 50.0 |
| 13C4 PFOS | Ave | 1.123 | 1.264 | | 2.69 | 2.39 | 12.6 | 50.0 |
| 13C5 PFNA | Ave | 0.8376 | 0.9001 | | 2.69 | 2.50 | 7.5 | 50.0 |
| 13C8 FOSA | Ave | 0.5280 | 0.5477 | | 2.59 | 2.50 | 3.7 | 50.0 |
| 13C2 PFDA | Ave | 1.063 | 1.186 | | 2.79 | 2.50 | 11.6 | 50.0 |
| M2-8:2 FTS | Ave | 0.2357 | 0.2255 | | 2.29 | 2.40 | -4.3 | 50.0 |
| d3-NMeFOSAA | Ave | 0.5286 | 0.4456 | | 2.11 | 2.50 | -15.7 | 50.0 |
| 13C2 PFUnA | Ave | 0.8198 | 0.8904 | | 2.72 | 2.50 | 8.6 | 50.0 |
| d5-NEtFOSAA | Ave | 0.3541 | 0.3564 | | 2.52 | 2.50 | 0.7 | 50.0 |
| d7-N-MeFOSE-M | Ave | 0.1700 | 0.1687 | | 12.4 | 12.5 | -0.8 | 50.0 |
| d-N-MeFOSA-M | Ave | 0.2378 | 0.2483 | | 2.61 | 2.50 | 4.4 | 50.0 |
| d9-N-EtFOSE-M | Ave | 0.1785 | 0.1865 | | 13.1 | 12.5 | 4.5 | 50.0 |
| 13C2 PFDoA | Ave | 0.8051 | 0.8536 | | 2.65 | 2.50 | 6.0 | 50.0 |
| d-N-EtFOSA-M | Ave | 0.2469 | 0.2693 | | 2.73 | 2.50 | 9.1 | 50.0 |
| 13C2 PFTeDA | Ave | 0.5615 | 0.5739 | | 2.56 | 2.50 | 2.2 | 50.0 |
| 13C2 PFHxDA | Ave | 0.4152 | 0.4195 | | 2.53 | 2.50 | 1.0 | 50.0 |
| 13C8 PFOA | Ave | 0.8088 | 0.8130 | | 2.46 | 2.45 | 0.5 | 50.0 |
| 13C8 PFOS | Ave | 0.2542 | 0.2488 | | 2.34 | 2.39 | -2.1 | 50.0 |

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\A9\20200911-103077.b\2020.09.11_A9_PFC_AA_005.d
Lims ID: CCVL
Client ID:
Sample Type: CCVL
Inject. Date: 11-Sep-2020 09:40:01 ALS Bottle#: 42 Worklist Smp#: 2
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Sample Info: CCVL (26)
Misc. Info.: Plate: 1 Rack: 1
Operator ID: SACINSTRLCMS02 Instrument ID: A9
Sublist: chrom-PFAS_A9*sub16

Method: \\chromfs\Sacramento\ChromData\A9\20200911-103077.b\PFAS_A9.m
Limit Group: LC PFC ICAL
Last Update: 11-Sep-2020 10:29:55 Calib Date: 10-Sep-2020 12:29:20
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\A9\20200910-102999.b\2020.09.10_A9 _PFC_ICAL_AA_022.d

Column 1 : Det: EXP1
Process Host: CTX1061

First Level Reviewer: zibaa Date: 11-Sep-2020 10:25:24
Ratio Calibration: Average of Initial Calibration

| Signal | RT | EXP RT | DLT RT | REL RT | Response | Amount ng/ml | Ratio(Limits) | %Rec | S/N | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| D 1 13C4 PFBA | | | | | | | | | | |
| 217.00 > 172.00 | 1.908 | 1.900 | 0.008 | 0.566 | 8188506 | 2.65 | | 106 | 3024 | |
| 2 Perfluorobutanoic acid | | | | | | | | | | M |
| 212.90 > 169.00 | 1.908 | 1.900 | 0.008 | 1.000 | 134420 | 0.0470 | | 94.0 | 7.8 | M |
| D 4 13C5 PFPeA | | | | | | | | | | |
| 267.90 > 223.00 | 2.215 | 2.206 | 0.009 | 0.657 | 6970155 | 2.67 | | 107 | 3386 | |
| 3 Perfluoropentanoic acid | | | | | | | | | | |
| 262.90 > 219.00 | 2.215 | 2.206 | 0.009 | 1.000 | 163191 | 0.0575 | | 115 | 10.7 | |
| D 6 13C3 PFBS | | | | | | | | | | |
| 301.90 > 80.00 | 2.243 | 2.233 | 0.010 | 0.666 | 12959767 | 2.52 | | 108 | 4025 | |
| 5 Perfluorobutanesulfonic acid | | | | | | | | | | M |
| 298.90 > 80.00 | 2.243 | 2.243 | 0.0 | 1.000 | 235066 | 0.0423 | Target=3.10 | 95.6 | 20.9 | M |
| 298.90 > 99.00 | 2.243 | 2.243 | 0.0 | 1.000 | 75174 | | 3.13(1.55-4.65) | | 16.7 | M |
| D 8 M2-4:2 FTS | | | | | | | | | | |
| 329.00 > 81.00 | 2.536 | 2.525 | 0.011 | 0.753 | 1130383 | 2.21 | | 94.7 | 678 | |
| 9 1H,1H,2H,2H-perfluorohexanesulfo | | | | | | | | | | |
| 327.00 > 307.00 | 2.536 | 2.525 | 0.011 | 1.000 | 435435 | 0.4547 | | 97.4 | 3399 | |
| D 10 13C2 PFHxA | | | | | | | | | | |
| 315.00 > 270.00 | 2.568 | 2.568 | 0.0 | 0.762 | 6502592 | 2.68 | | 107 | 3112 | |
| 11 Perfluorohexanoic acid | | | | | | | | | | M |
| 313.00 > 269.00 | 2.579 | 2.568 | 0.011 | 1.004 | 98765 | 0.0455 | Target=9.68 | 91.0 | 12.4 | |
| 313.00 > 119.00 | 2.568 | 2.568 | 0.0 | 1.000 | 10792 | | 9.15(4.84-14.52) | | 8.5 | M |
| 12 Perfluoropentanesulfonic acid | | | | | | | | | | M |
| 349.00 > 80.00 | 2.590 | 2.578 | 0.012 | 1.154 | 100442 | 0.0449 | Target=2.01 | 95.7 | 37.4 | |
| 349.00 > 99.00 | 2.590 | 2.578 | 0.012 | 1.154 | 43423 | | 2.31(1.00-3.01) | | 43.1 | M |
| D 13 13C3 HFPO-DA | | | | | | | | | | |
| 287.00 > 169.00 | 2.696 | 2.686 | 0.010 | 0.800 | 4506100 | 2.71 | | 108 | 3902 | |

| Signal | RT | EXP RT | DLT RT | REL RT | Response | Amount ng/ml | Ratio(Limits) | %Rec | S/N | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| 14 Perfluoro(2-propoxypropanoic) ac | | | | | | | | | | |
| 285.00 > 169.00 | 2.696 | 2.686 | 0.010 | 1.000 | 33003 | 0.0463 | | 92.5 | 225 | |
| D 15 13C4 PFHpA | | | | | | | | | | |
| 367.00 > 322.00 | 2.969 | 2.957 | 0.012 | 0.881 | 6498375 | 2.76 | | 110 | 4006 | |
| 18 Perfluoroheptanoic acid | | | | | | | | | | M |
| 363.00 > 319.00 | 2.963 | 2.963 | 0.0 | 0.998 | 131631 | 0.0457 | Target=3.74 | 91.3 | 21.5 | M |
| 363.00 > 169.00 | 2.963 | 2.963 | 0.0 | 0.998 | 37925 | | 3.47(1.87-5.61) | | 43.7 | |
| 16 Perfluorohexanesulfonic acid | | | | | | | | | | M |
| 399.00 > 80.00 | 2.969 | 2.963 | 0.006 | 1.000 | 134099 | 0.0407 | Target=3.29 | 89.5 | 40.4 | M |
| 399.00 > 99.00 | 2.969 | 2.963 | 0.006 | 1.000 | 40850 | | 3.28(1.65-4.94) | | 33.6 | M |
| D 17 18O2 PFHxS | | | | | | | | | | |
| 403.00 > 84.00 | 2.969 | 2.963 | 0.006 | 0.881 | 6602307 | 2.68 | | 113 | 3564 | |
| 19 DONA | | | | | | | | | | |
| 377.00 > 251.00 | 3.018 | 3.009 | 0.009 | 0.804 | 220304 | 0.0420 | Target=1.80 | 89.1 | 620 | |
| 377.00 > 85.00 | 3.018 | 3.009 | 0.009 | 0.804 | 120556 | | 1.83(0.90-2.70) | | 239 | |
| D 20 M2-6:2 FTS | | | | | | | | | | |
| 429.00 > 81.00 | 3.354 | 3.345 | 0.009 | 0.995 | 971364 | 2.20 | | 92.8 | 883 | |
| 22 1H,1H,2H,2H-perfluorooctanesulfo | | | | | | | | | | |
| 427.00 > 407.00 | 3.354 | 3.345 | 0.009 | 1.000 | 301447 | 0.4781 | | 101 | 480 | |
| $ 21 13C8 PFOA | | | | | | | | | | |
| 421.00 > 376.00 | 3.362 | 3.361 | 0.001 | 0.997 | 4555974 | 2.46 | | 101 | 4762 | |
| 23 Perfluoroheptanesulfonic acid | | | | | | | | | | M |
| 449.00 > 80.00 | 3.370 | 3.361 | 0.009 | 0.897 | 116925 | 0.0437 | Target=3.65 | 91.8 | 48.8 | M |
| 449.00 > 99.00 | 3.370 | 3.361 | 0.009 | 0.897 | 31492 | | 3.71(1.83-5.48) | | 77.9 | |
| 24 Perfluorooctanoic acid | | | | | | | | | | M |
| 413.00 > 369.00 | 3.370 | 3.368 | 0.002 | 1.000 | 123671 | 0.0489 | Target=2.37 | 97.9 | 27.0 | M |
| 413.00 > 169.00 | 3.379 | 3.368 | 0.011 | 1.003 | 57467 | | 2.15(1.19-3.56) | | 80.4 | |
| * 25 13C2 PFOA | | | | | | | | | | |
| 415.00 > 370.00 | 3.370 | 3.368 | 0.002 | | 5724089 | 2.50 | | | 3884 | |
| D 26 13C4 PFOA | | | | | | | | | | |
| 417.00 > 372.00 | 3.370 | 3.368 | 0.002 | 1.000 | 5858484 | 2.65 | | 106 | 4747 | |
| 28 Perfluorooctanesulfonic acid | | | | | | | | | | M |
| 499.00 > 80.00 | 3.756 | 3.744 | 0.012 | 1.000 | 127930 | 0.0425 | Target=4.12 | 91.6 | 24.3 | M |
| 499.00 > 99.00 | 3.747 | 3.744 | 0.003 | 0.998 | 32253 | | 3.97(2.06-6.17) | | 103 | |
| D 31 13C4 PFOS | | | | | | | | | | |
| 503.00 > 80.00 | 3.756 | 3.744 | 0.012 | 1.114 | 6916858 | 2.69 | | 113 | 2104 | |
| $ 27 13C8 PFOS | | | | | | | | | | |
| 507.00 > 99.00 | 3.747 | 3.744 | 0.003 | 1.112 | 1361306 | 2.34 | | 97.9 | 1693 | |
| D 29 13C5 PFNA | | | | | | | | | | |
| 468.00 > 423.00 | 3.765 | 3.754 | 0.011 | 1.117 | 5152452 | 2.69 | | 107 | 5045 | |
| 30 Perfluorononanoic acid | | | | | | | | | | M |
| 463.00 > 419.00 | 3.765 | 3.763 | 0.002 | 1.000 | 106478 | 0.0519 | Target=4.21 | 104 | 71.1 | |
| 463.00 > 169.00 | 3.774 | 3.763 | 0.011 | 1.002 | 21240 | | 5.01(2.11-6.32) | | 46.9 | M |
| 32 9-Chlorohexadecafluoro-3-oxanona | | | | | | | | | | |
| 531.00 > 351.00 | 3.959 | 3.947 | 0.012 | 1.054 | 75430 | 0.0415 | | 89.1 | 213 | |
| D 36 13C8 FOSA | | | | | | | | | | |
| 506.00 > 78.00 | 4.087 | 4.083 | 0.004 | 1.213 | 3135026 | 2.59 | | 104 | 3315 | |

| Signal | RT | EXP RT | DLT RT | REL RT | Response | Amount ng/ml | Ratio(Limits) | %Rec | S/N | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| 34 Perfluorooctanesulfonamide | | | | | | | | | | |
| 498.00 > 78.00 | 4.087 | 4.083 | 0.004 | 1.000 | 178910 | 0.0513 | | 103 | 497 | |
| 35 Perfluorononanesulfonic acid | | | | | | | | | | |
| 549.00 > 80.00 | 4.104 | 4.092 | 0.012 | 1.093 | 102396 | 0.0466 | Target=5.56 | 97.1 | 78.2 | |
| 549.00 > 99.00 | 4.104 | 4.092 | 0.012 | 1.093 | 17019 | | 6.02(2.78-8.34) | | 129 | |
| D 33 13C2 PFDA | | | | | | | | | | |
| 515.00 > 470.00 | 4.122 | 4.118 | 0.004 | 1.223 | 6791146 | 2.79 | | 112 | 6291 | |
| 38 Perfluorodecanoic acid | | | | | | | | | | M |
| 513.00 > 469.00 | 4.122 | 4.118 | 0.004 | 1.000 | 130478 | 0.0481 | Target=14.33 | 96.3 | 93.4 | M |
| 513.00 > 169.00 | 4.140 | 4.118 | 0.022 | 1.004 | 10076 | | 12.95(7.16-21.49) | | 41.6 | |
| 39 1H,1H,2H,2H-perfluorodecanesulfo | | | | | | | | | | |
| 527.00 > 507.00 | 4.131 | 4.118 | 0.013 | 1.000 | 260727 | 0.3920 | | 81.8 | 3672 | |
| D 37 M2-8:2 FTS | | | | | | | | | | |
| 529.00 > 81.00 | 4.131 | 4.127 | 0.004 | 1.226 | 1236460 | 2.29 | | 95.7 | 1477 | |
| D 41 d3-NMeFOSAA | | | | | | | | | | |
| 573.00 > 419.00 | 4.293 | 4.280 | 0.013 | 1.274 | 2550626 | 2.11 | | 84.3 | 2171 | |
| 40 N-methylperfluorooctanesulfonami | | | | | | | | | | M |
| 570.00 > 419.00 | 4.293 | 4.289 | 0.004 | 1.000 | 332138 | 0.4288 | | 85.8 | 89.9 | M |
| 42 Perfluorodecanesulfonic acid | | | | | | | | | | |
| 599.00 > 80.00 | 4.422 | 4.418 | 0.004 | 1.177 | 111136 | 0.0452 | Target=4.29 | 93.8 | 61.1 | |
| 599.00 > 99.00 | 4.431 | 4.418 | 0.013 | 1.180 | 26966 | | 4.12(2.15-6.44) | | 143 | |
| D 46 13C2 PFUnA | | | | | | | | | | |
| 565.00 > 520.00 | 4.448 | 4.444 | 0.004 | 1.320 | 5096747 | 2.72 | | 109 | 6561 | |
| 43 Perfluoroundecanoic acid | | | | | | | | | | M |
| 563.00 > 519.00 | 4.448 | 4.444 | 0.004 | 1.000 | 60103 | 0.0423 | Target=6.74 | 84.7 | 69.8 | M |
| 563.00 > 169.00 | 4.448 | 4.444 | 0.004 | 1.000 | 8779 | | 6.85(3.37-10.11) | | 46.9 | |
| D 45 d5-NEtFOSAA | | | | | | | | | | |
| 589.00 > 419.00 | 4.456 | 4.452 | 0.004 | 1.322 | 2040282 | 2.52 | | 101 | 2468 | |
| 44 N-ethylperfluorooctanesulfonamid | | | | | | | | | | |
| 584.00 > 419.00 | 4.465 | 4.452 | 0.013 | 1.002 | 300676 | 0.4542 | | 90.8 | 1802 | |
| D 47 d7-N-MeFOSE-M | | | | | | | | | | |
| 623.00 > 59.00 | 4.551 | 4.538 | 0.013 | 1.350 | 4827248 | 12.4 | | 99.2 | 4269 | |
| 48 2-(N-methylperfluoro-1-octanesul | | | | | | | | | | |
| 616.00 > 59.00 | 4.559 | 4.555 | 0.004 | 1.002 | 18149 | 0.0450 | | 90.1 | 48.2 | |
| D 49 d-N-MeFOSA-M | | | | | | | | | | |
| 515.00 > 169.00 | 4.568 | 4.564 | 0.004 | 1.355 | 1421344 | 2.61 | | 104 | 238 | |
| 50 NMeFOSA | | | | | | | | | | |
| 512.00 > 169.00 | 4.568 | 4.564 | 0.004 | 1.000 | 28450 | 0.0480 | | 95.9 | 117 | |
| 51 11-Chloroeicosafluoro-3-oxaundec | | | | | | | | | | |
| 631.00 > 451.00 | 4.586 | 4.582 | 0.004 | 1.221 | 79992 | 0.0374 | | 79.3 | 472 | |
| D 53 d9-N-EtFOSE-M | | | | | | | | | | |
| 639.00 > 59.00 | 4.717 | 4.713 | 0.004 | 1.400 | 5337944 | 13.1 | | 104 | 4868 | |
| D 56 13C2 PFDoA | | | | | | | | | | |
| 615.00 > 570.00 | 4.745 | 4.732 | 0.013 | 1.408 | 4886112 | 2.65 | | 106 | 9245 | |
| 54 2-(N-ethylperfluoro-1-octanesulf | | | | | | | | | | |
| 630.00 > 59.00 | 4.736 | 4.732 | 0.004 | 1.004 | 19247 | 0.0454 | | 90.7 | 40.8 | |

| Signal | RT | EXP RT | DLT RT | REL RT | Response | Amount ng/ml | Ratio(Limits) | %Rec | S/N | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| 52 Perfluorododecanoic acid | | | | | | | | | | |
| 613.00 > 569.00 | 4.745 | 4.732 | 0.013 | 1.000 | 86210 | 0.0480 | Target=6.67 | 95.9 | 130 | |
| 613.00 > 169.00 | 4.745 | 4.732 | 0.013 | 1.000 | 14549 | | 5.93(3.34-10.01) | | 77.3 | |
| D 58 d-N-EtFOSA-M | | | | | | | | | | |
| 531.00 > 169.00 | 4.745 | 4.741 | 0.004 | 1.408 | 1541528 | 2.73 | | 109 | 1083 | |
| 57 N-ethylperfluoro-1-octanesulfona | | | | | | | | | | |
| 526.00 > 169.00 | 4.752 | 4.748 | 0.004 | 1.002 | 21301 | 0.0347 | | 69.4 | 55.2 | |
| 55 1H,1H,2H,2H-perfluorododecanesul | | | | | | | | | | |
| 627.00 > 607.00 | 4.760 | 4.756 | 0.004 | 1.152 | 18993 | 0.0448 | | 92.9 | 191 | |
| 59 Perfluorododecanesulfonic acid ( | | | | | | | | | | M |
| 699.00 > 80.00 | 4.973 | 4.969 | 0.004 | 1.324 | 16086 | 0.0438 | Target=1.02 | 90.5 | 29.7 | |
| 699.00 > 99.00 | 4.973 | 4.969 | 0.004 | 1.324 | 15536 | | 1.04(0.51-1.53) | | 86.1 | M |
| 60 Perfluorotridecanoic acid | | | | | | | | | | |
| 663.00 > 619.00 | 5.006 | 5.003 | 0.004 | 1.055 | 65242 | 0.0459 | Target=4.80 | 91.9 | 338 | |
| 663.00 > 169.00 | 5.006 | 5.003 | 0.004 | 1.055 | 13409 | | 4.87(2.40-7.20) | | 155 | |
| D 62 13C2 PFTeDA | | | | | | | | | | |
| 715.00 > 670.00 | 5.256 | 5.253 | 0.003 | 1.560 | 3284887 | 2.56 | | 102 | 6270 | |
| 61 Perfluorotetradecanoic acid | | | | | | | | | | M |
| 713.00 > 169.00 | 5.256 | 5.253 | 0.003 | 1.000 | 10905 | 0.0470 | Target=1.37 | 94.1 | 121 | |
| 713.00 > 219.00 | 5.256 | 5.253 | 0.003 | 1.000 | 6875 | | 1.59(0.69-2.06) | | 37.3 | M |
| 64 Perfluorohexadecanoic acid | | | | | | | | | | |
| 813.00 > 769.00 | 5.702 | 5.690 | 0.012 | 1.000 | 60664 | 0.0472 | Target=4.63 | 94.3 | 164 | |
| 813.00 > 169.00 | 5.702 | 5.690 | 0.012 | 1.000 | 12245 | | 4.95(2.32-6.95) | | 118 | |
| D 63 13C2 PFHxDA | | | | | | | | | | |
| 815.00 > 770.00 | 5.702 | 5.690 | 0.012 | 1.692 | 2401379 | 2.53 | | 101 | 5304 | |
| 65 Perfluorooctadecanoic acid | | | | | | | | | | |
| 913.00 > 869.00 | 6.129 | 6.120 | 0.009 | 1.075 | 33167 | 0.0462 | Target=4.01 | 92.3 | 185 | |
| 913.00 > 169.00 | 6.129 | 6.120 | 0.009 | 1.075 | 7669 | | 4.32(2.01-6.02) | | 91.6 | |

## QC Flag Legend

Review Flags

M - Manually Integrated

## Reagents:

LCPFC_LLCCVL_00026 Amount Added: 1.00 Units: mL

Report Date: 11-Sep-2020 10:29:57 Chrom Revision: 2.3 09-Sep-2020 15:12:58

Eurofins TestAmerica, Sacramento

Data File: \\chromfs\Sacramento\ChromData\A9\20200911-103077.b\2020.09.11_A9_PFC_AA_005.d

Injection Date: 11-Sep-2020 09:40:01 Instrument ID: A9

Lims ID: CCVL

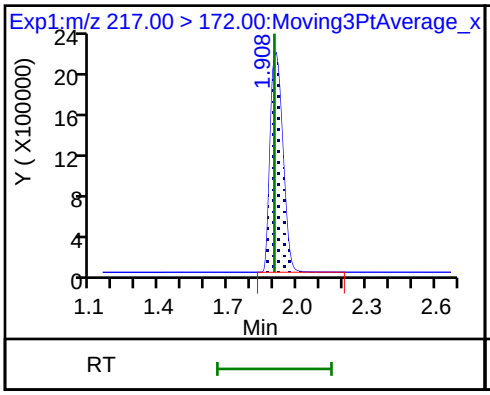
Client ID:

Operator ID: SACINSTRLCMS02 ALS Bottle#: 42 Worklist Smp#: 2

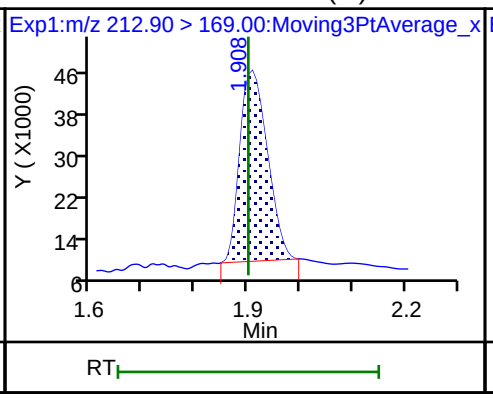
Injection Vol: 20.0 ul Dil. Factor: 1.0000

Method: PFAS_A9 Limit Group: LC PFC ICAL

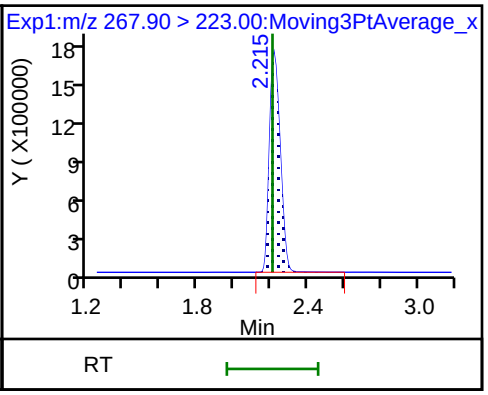
D 1 13C4 PFBA



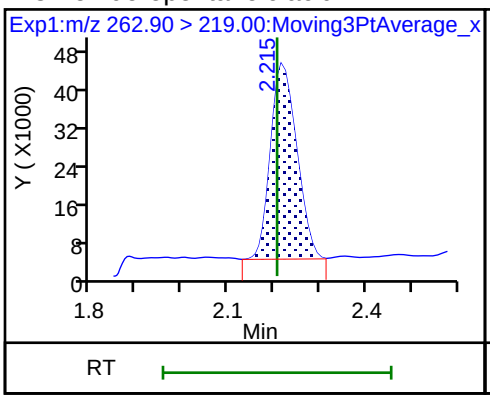

2 Perfluorobutanoic acid (M)



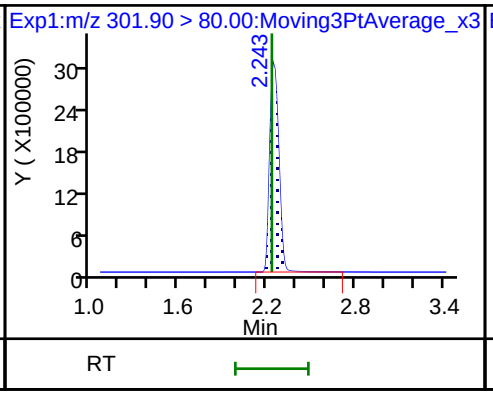

D 4 13C5 PFPeA



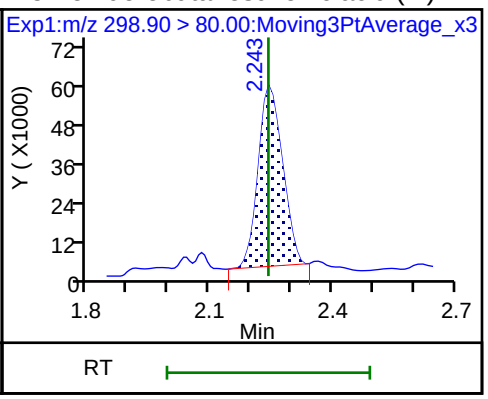

3 Perfluoropentanoic acid



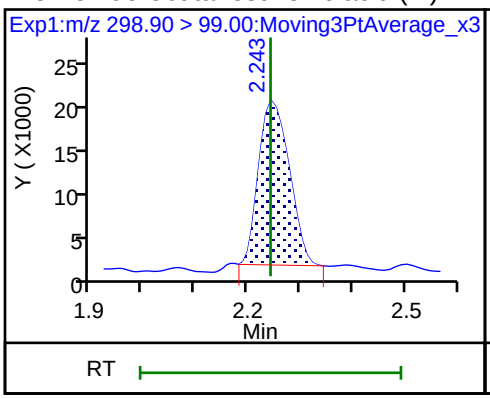

D 6 13C3 PFBS



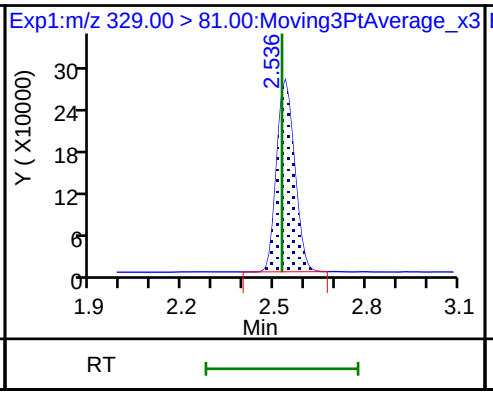

5 Perfluorobutanesulfonic acid (M)



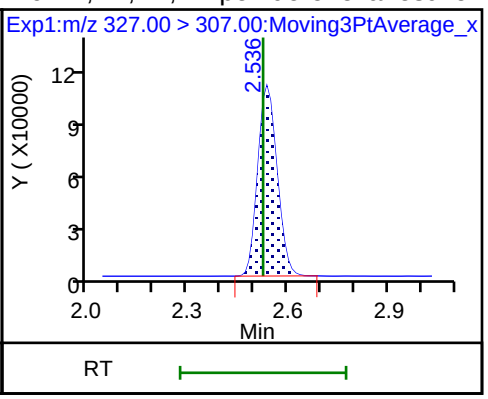

5 Perfluorobutanesulfonic acid (M)



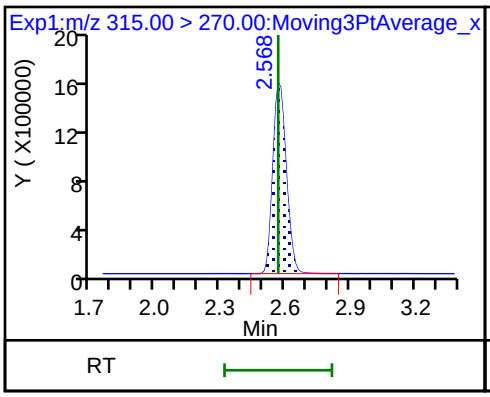

D 8 M2-4:2 FTS



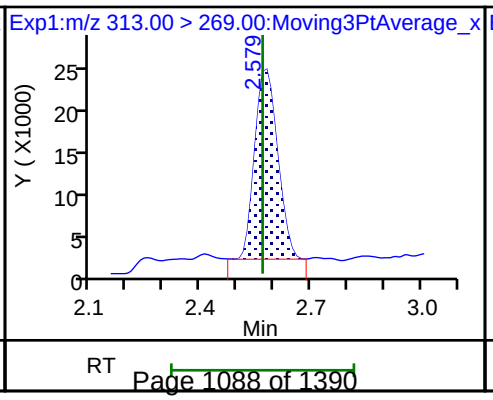

9 1H,1H,2H,2H-perfluorohexanesulfo



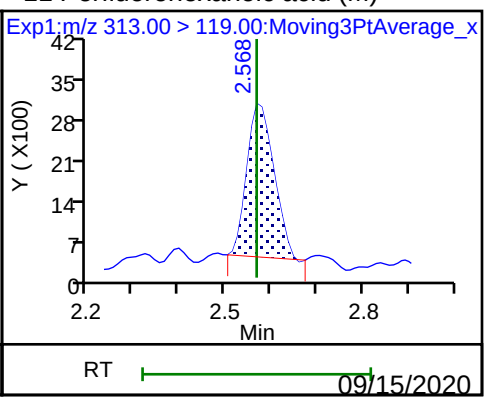

D 10 13C2 PFHxA



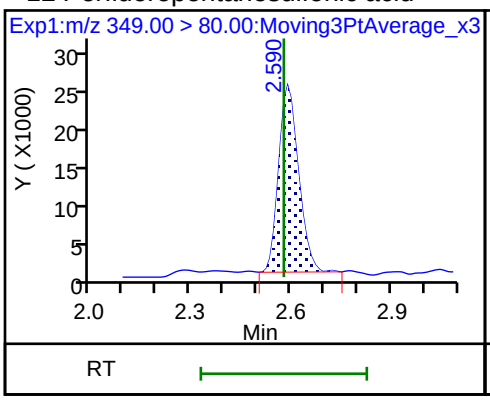

11 Perfluorohexanoic acid



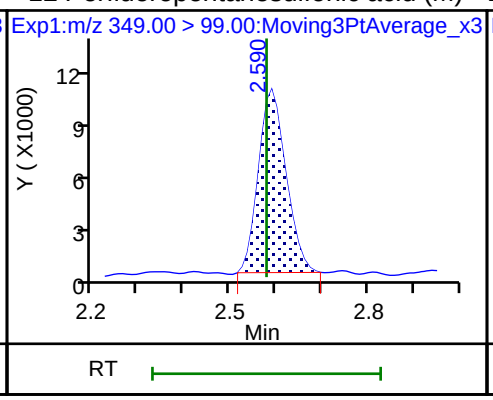

11 Perfluorohexanoic acid (M)



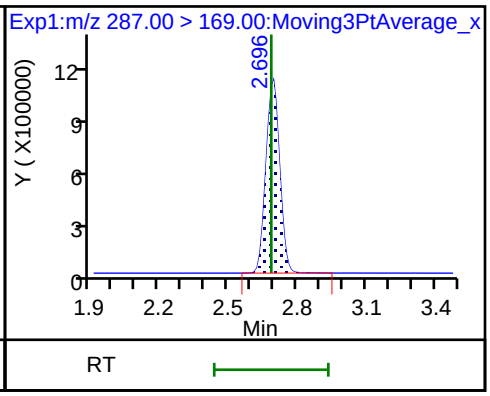
12 Perfluoropentanesulfonic acid



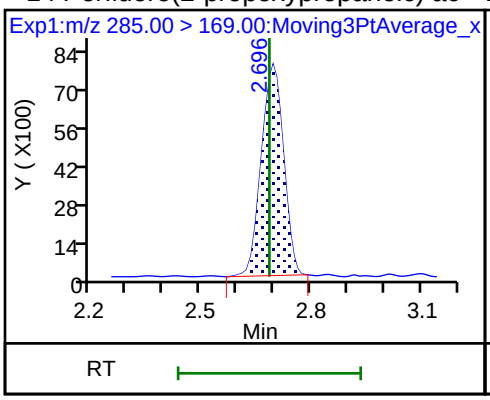

12 Perfluoropentanesulfonic acid (M)



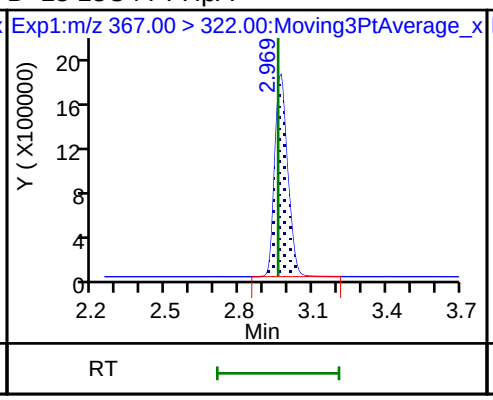

D 13 13C3 HFPO-DA



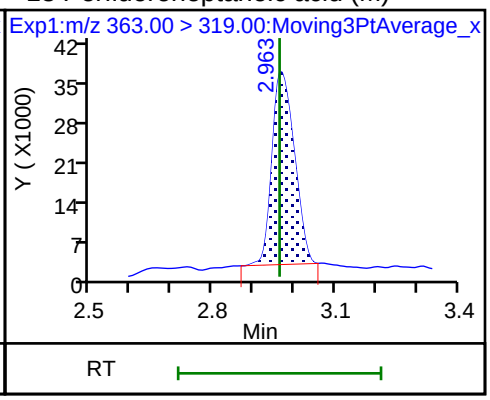

14 Perfluoro(2-propoxypropanoic) ac



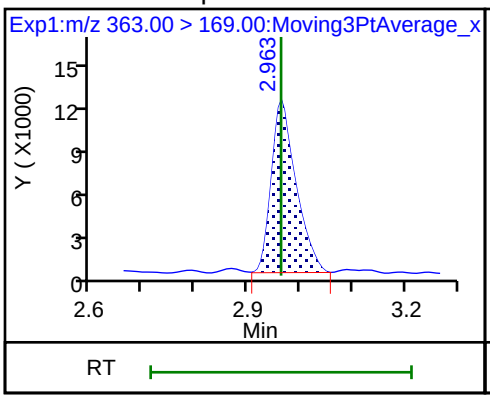

D 15 13C4 PFHpA



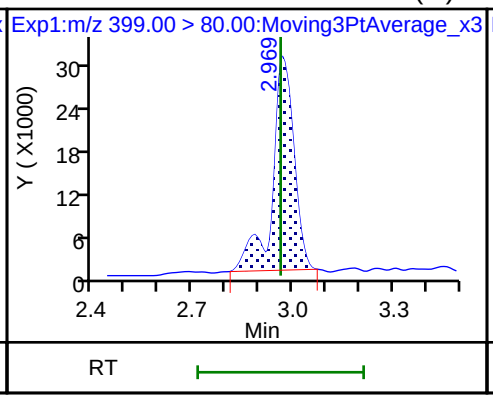

18 Perfluoroheptanoic acid (M)



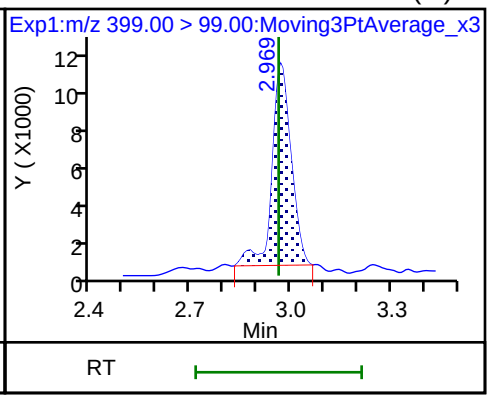

18 Perfluoroheptanoic acid



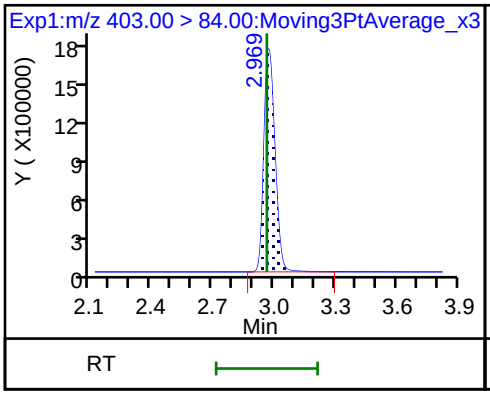

16 Perfluorohexanesulfonic acid (M)



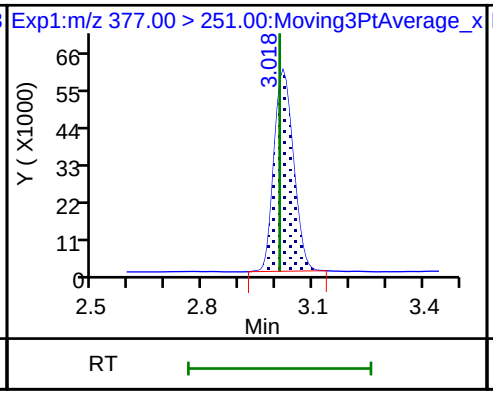

16 Perfluorohexanesulfonic acid (M)



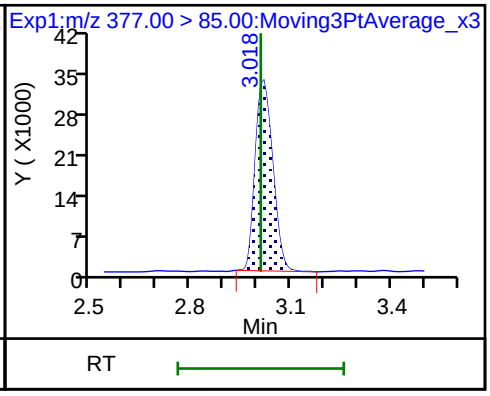

D 17 18O2 PFHxS



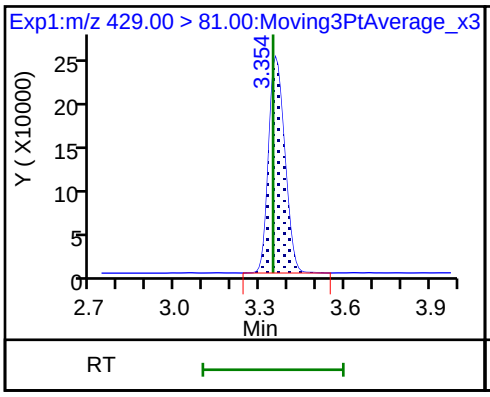

19 DONA



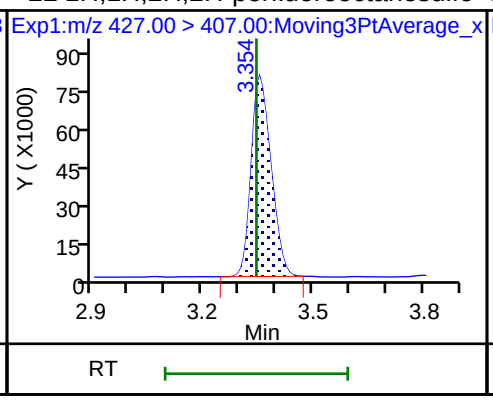

19 DONA



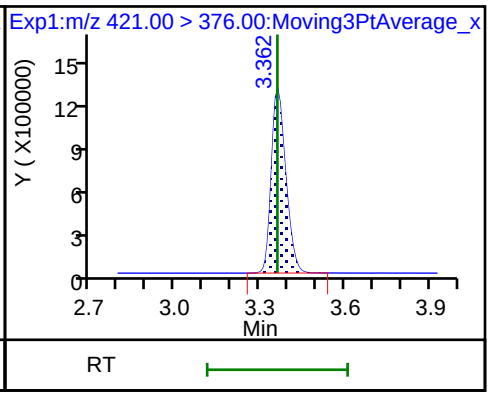
D 20 M2-6:2 FTS



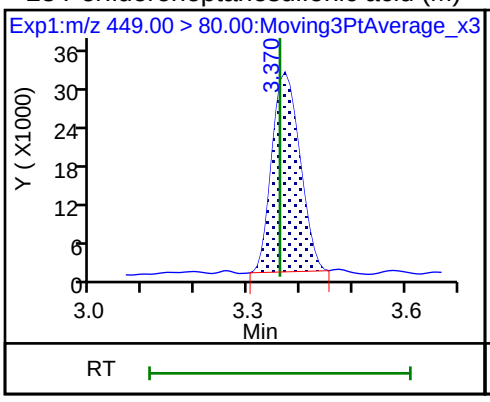

22 1H,1H,2H,2H-perfluorooctanesulfo



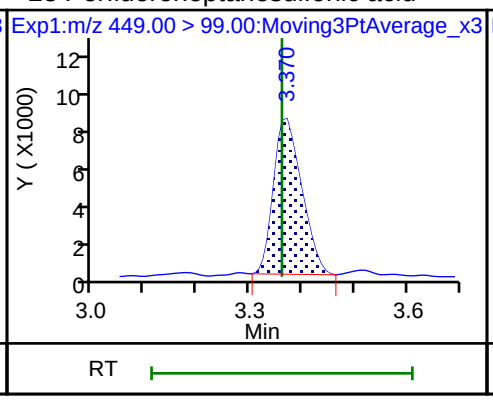

$ 21 13C8 PFOA



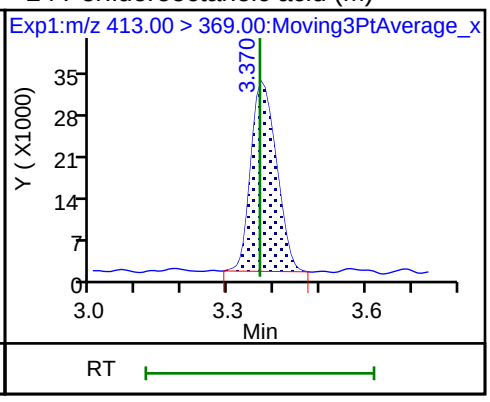

23 Perfluoroheptanesulfonic acid (M)



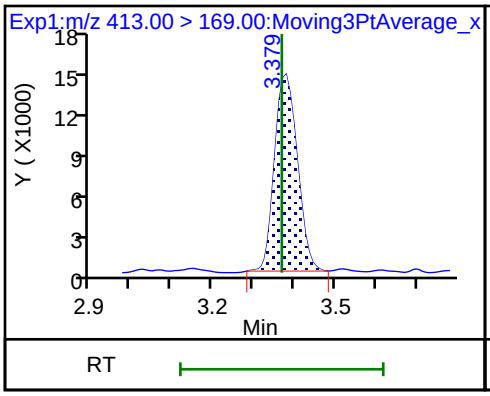

23 Perfluoroheptanesulfonic acid



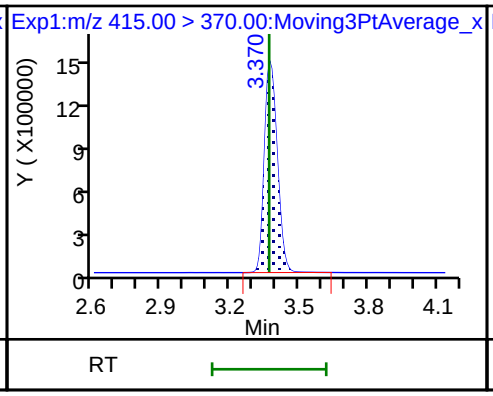

24 Perfluorooctanoic acid (M)



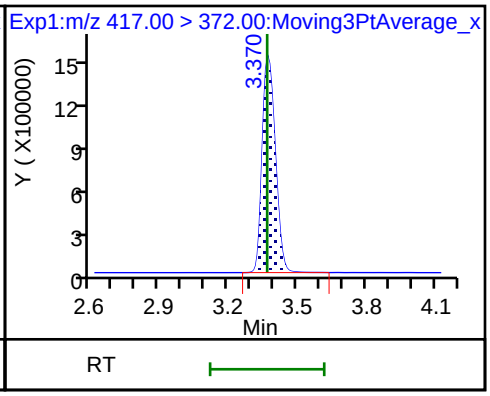

24 Perfluorooctanoic acid



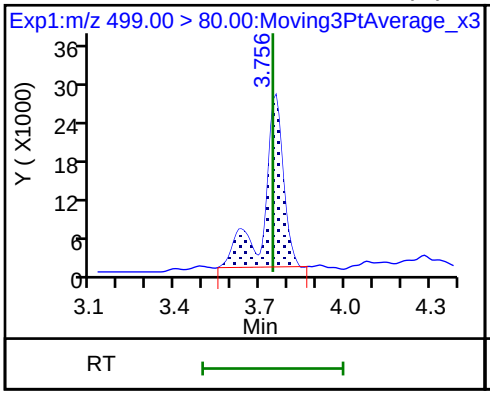

* 25 13C2 PFOA



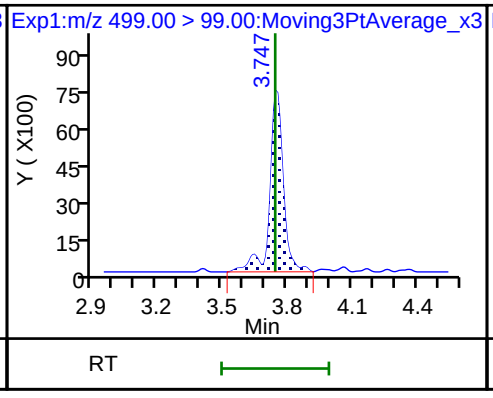

D 26 13C4 PFOA



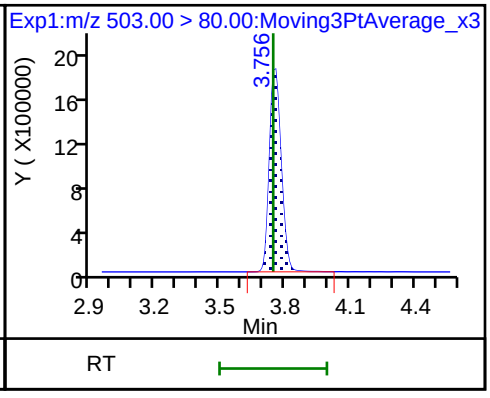

28 Perfluorooctanesulfonic acid (M)



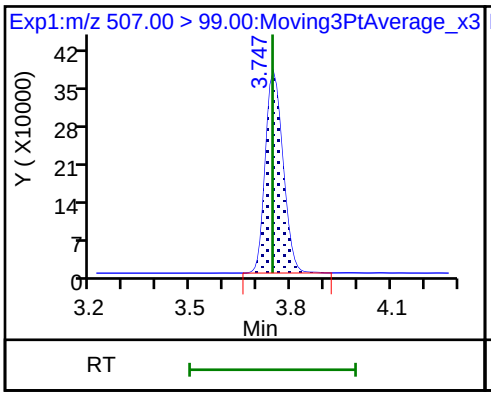

28 Perfluorooctanesulfonic acid



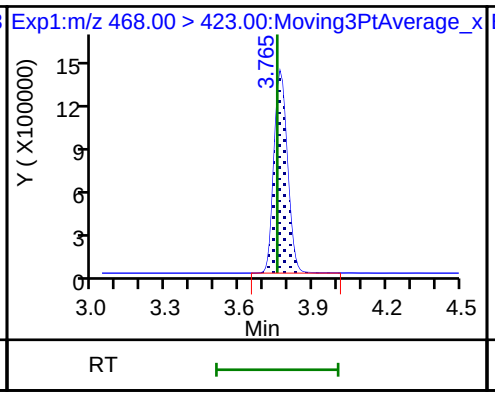

D 31 13C4 PFOS



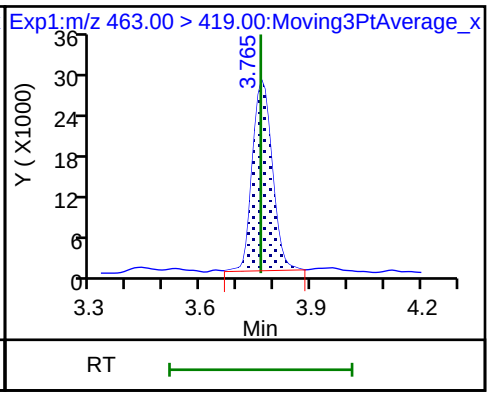
$ 27 13C8 PFOS



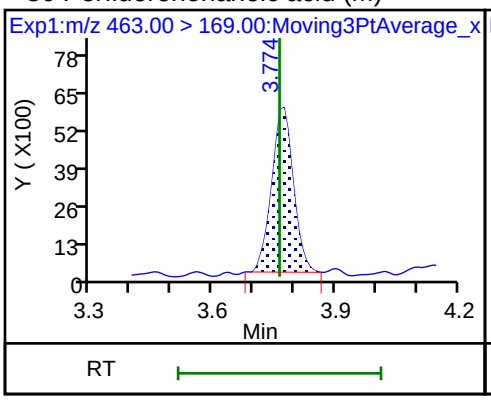

D 29 13C5 PFNA



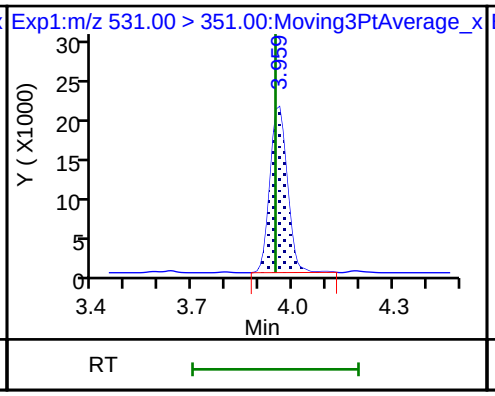

30 Perfluorononanoic acid



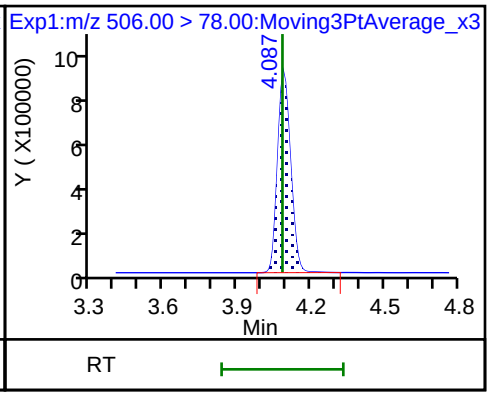

30 Perfluorononanoic acid (M)



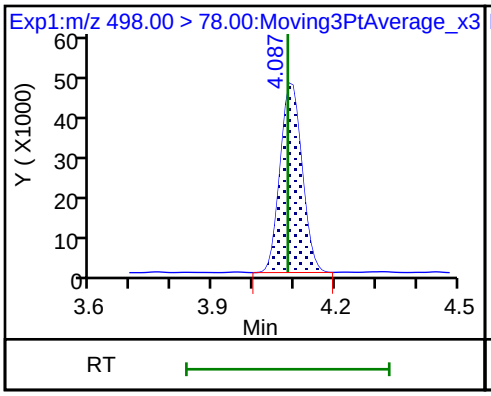

32 9-Chlorohexadecafluoro-3-oxanona



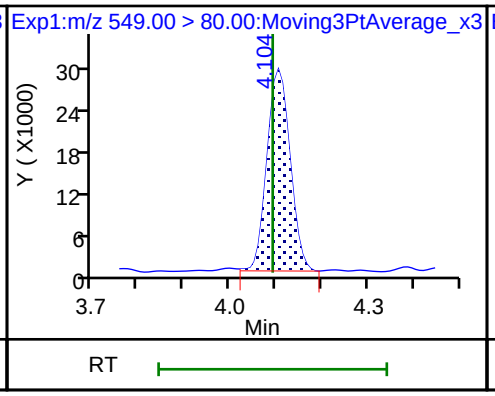

D 36 13C8 FOSA



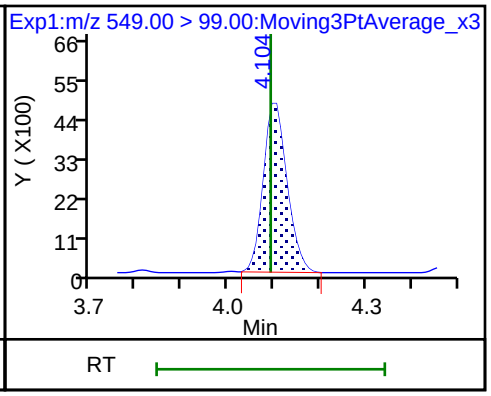

34 Perfluorooctanesulfonamide



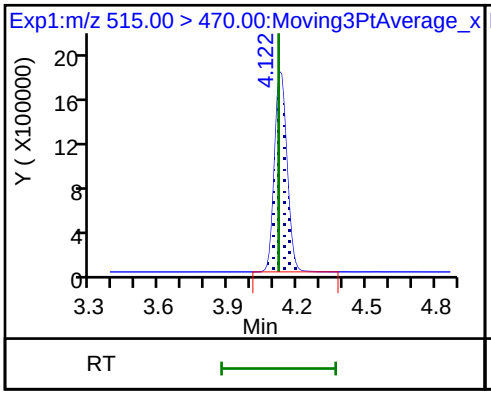

35 Perfluorononanesulfonic acid



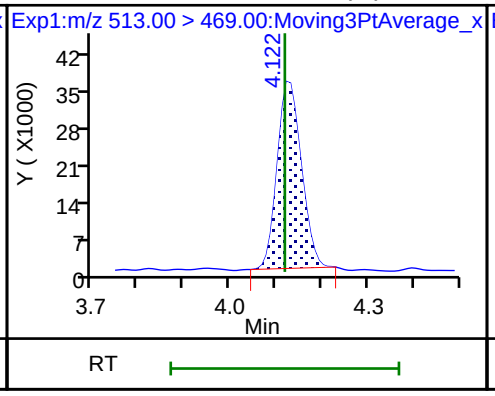

35 Perfluorononanesulfonic acid



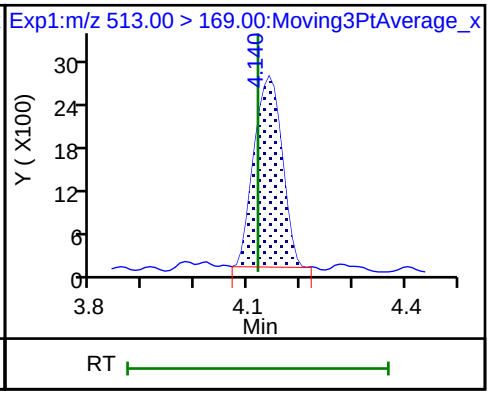

D 33 13C2 PFDA



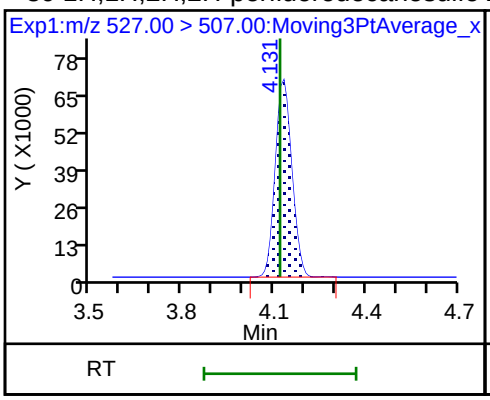

38 Perfluorodecanoic acid (M)



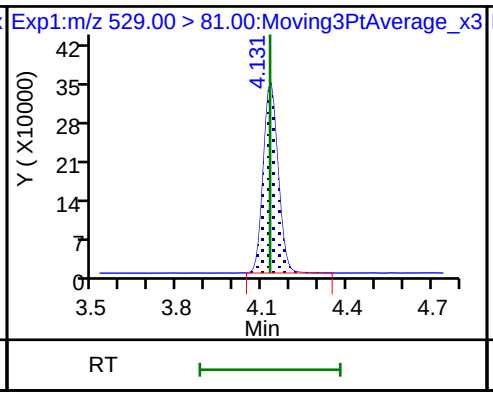

38 Perfluorodecanoic acid



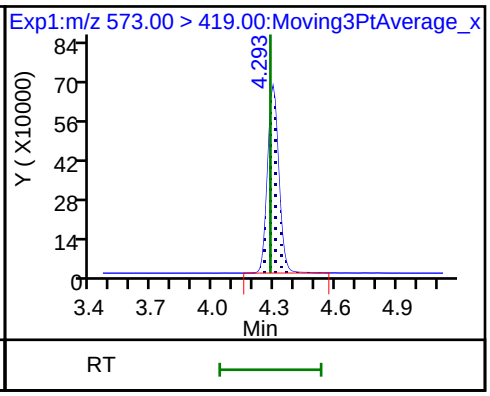
39 1H,1H,2H,2H-perfluorodecanesulfo



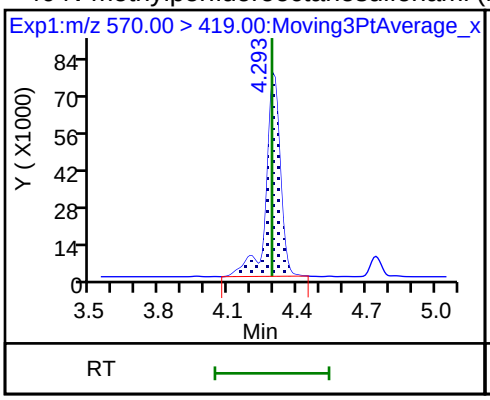

D 37 M2-8:2 FTS



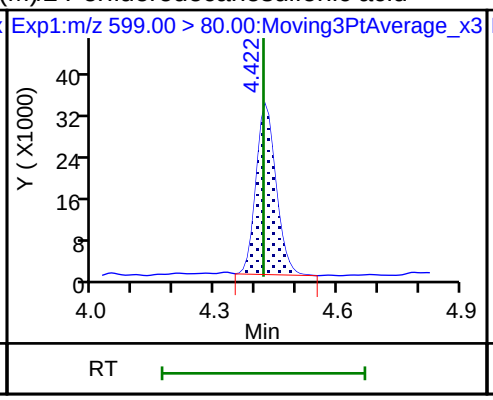

D 41 d3-NMeFOSAA



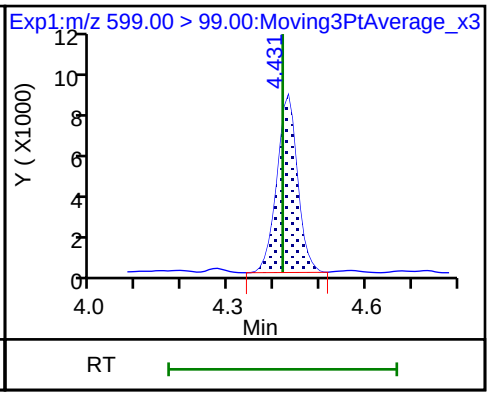

40 N-methylperfluorooctanesulfonami (M)



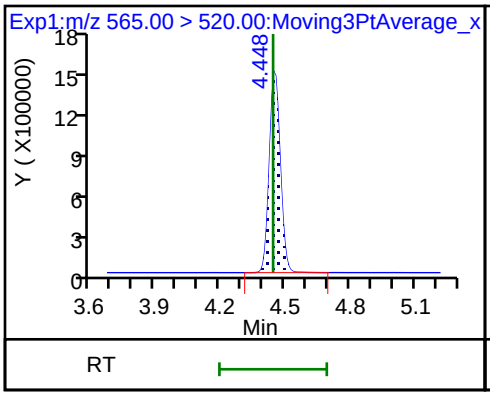

42 Perfluorodecanesulfonic acid



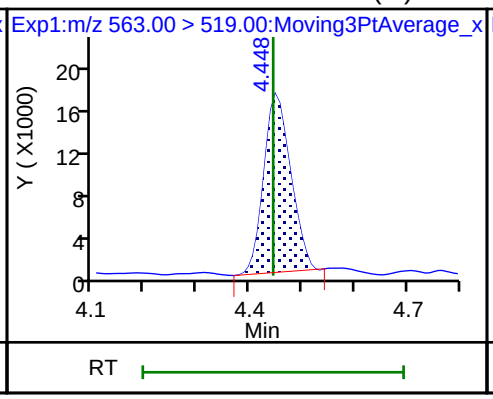

42 Perfluorodecanesulfonic acid



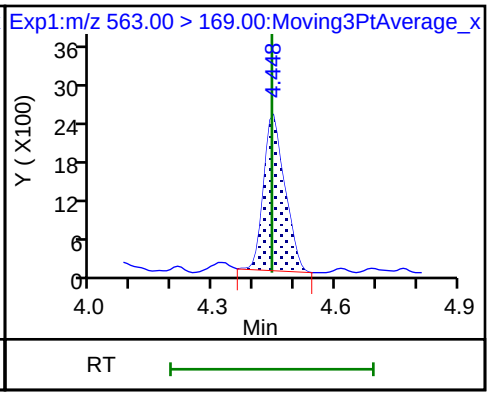

D 46 13C2 PFUnA



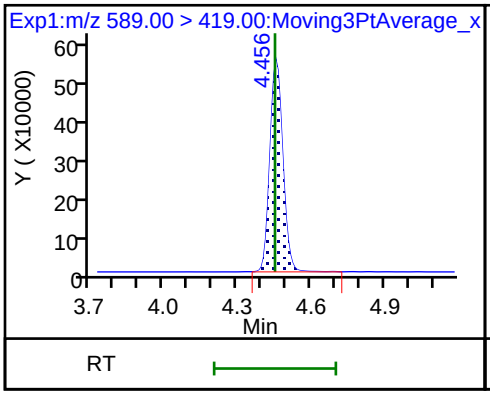

43 Perfluoroundecanoic acid (M)



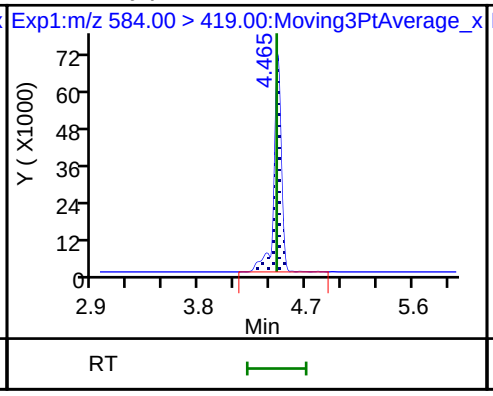

43 Perfluoroundecanoic acid



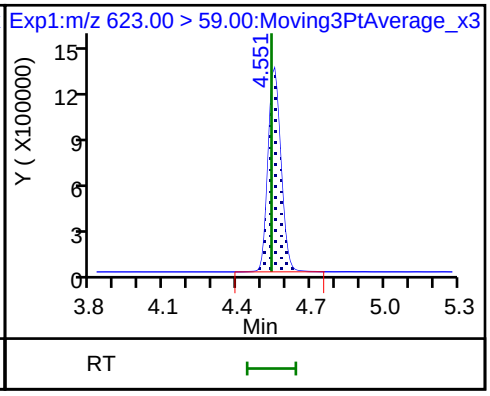

D 45 d5-NEtFOSAA



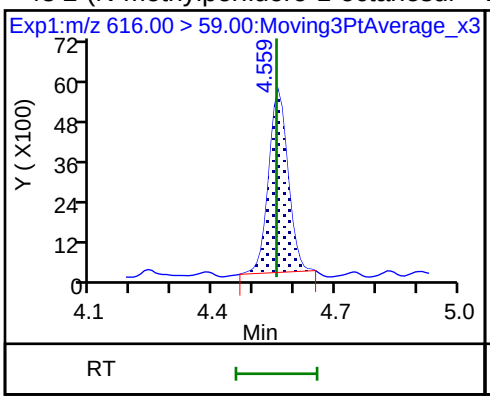

44 N-ethylperfluorooctanesulfonamid



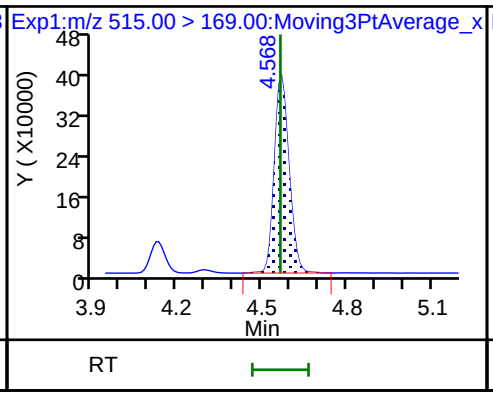

D 47 d7-N-MeFOSE-M



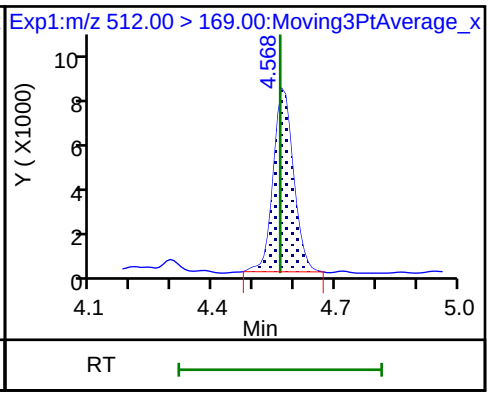
48 2-(N-methylperfluoro-1-octanesul



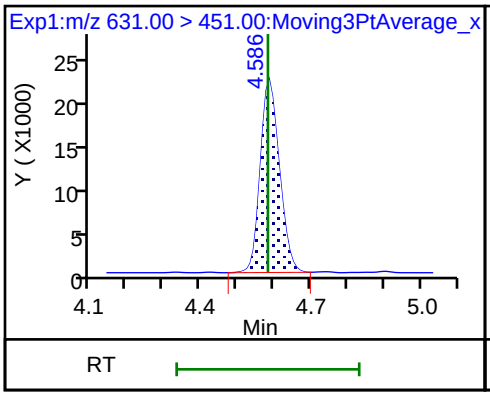

D 49 d-N-MeFOSA-M



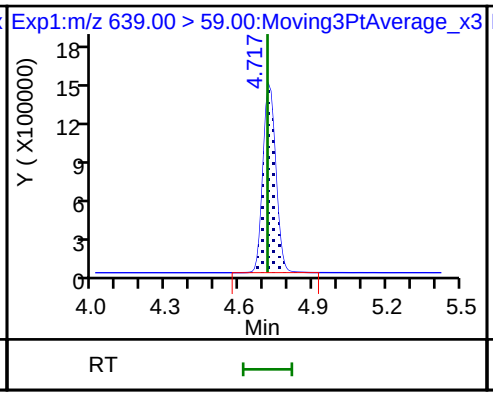

50 NMeFOSA



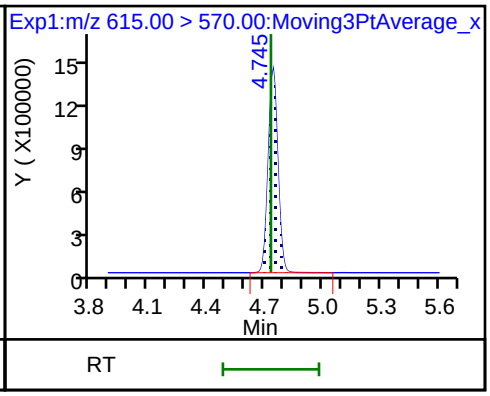

51 11-Chloroeicosafluoro-3-oxaundec



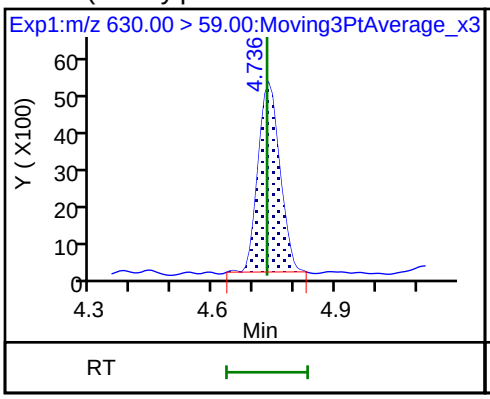

D 53 d9-N-EtFOSE-M



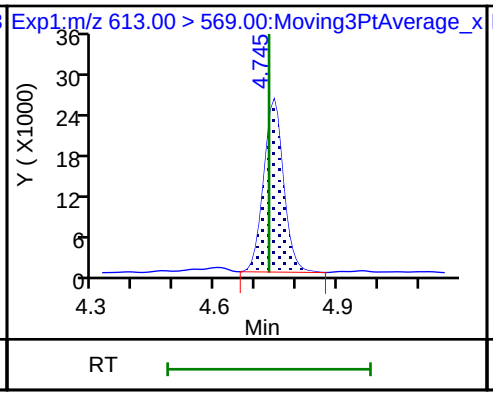

D 56 13C2 PFDoA



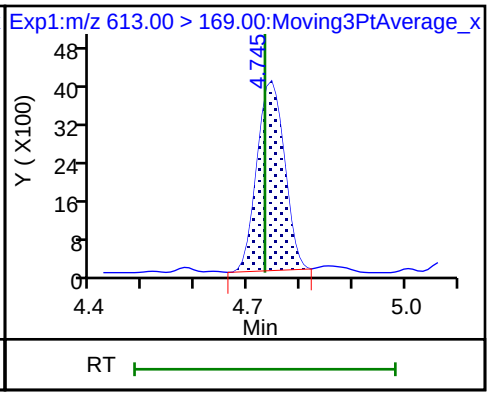

54 2-(N-ethylperfluoro-1-octanesulf



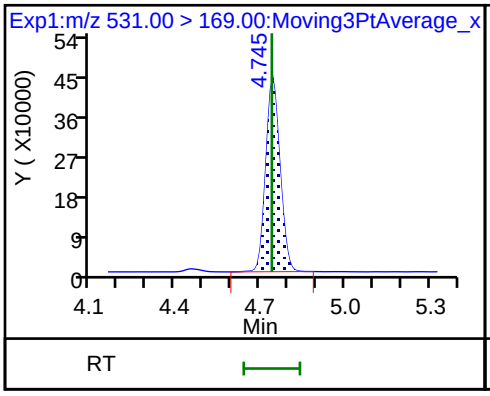

52 Perfluorododecanoic acid



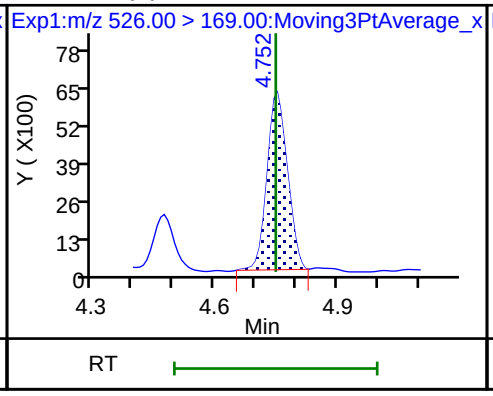

52 Perfluorododecanoic acid



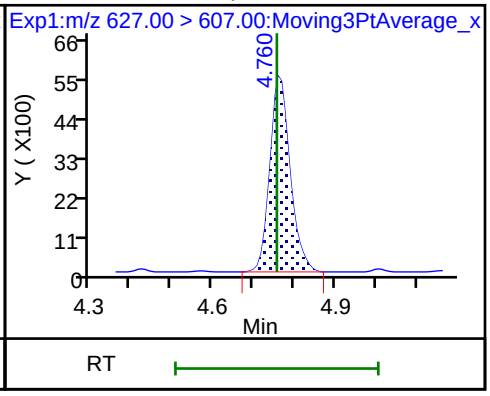

D 58 d-N-EtFOSA-M



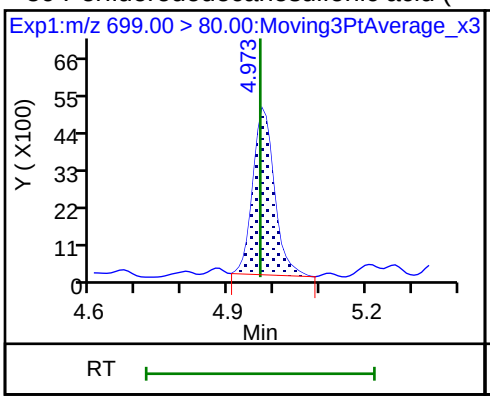

57 N-ethylperfluoro-1-octanesulfona



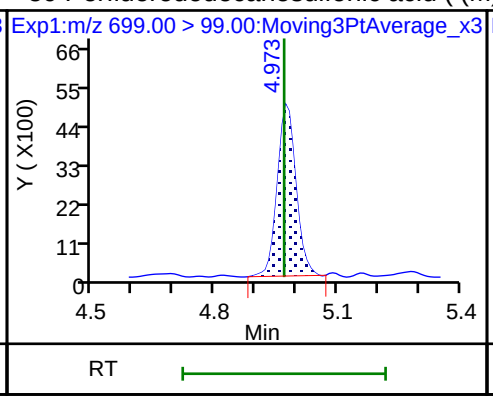

55 1H,1H,2H,2H-perfluorododecanesul



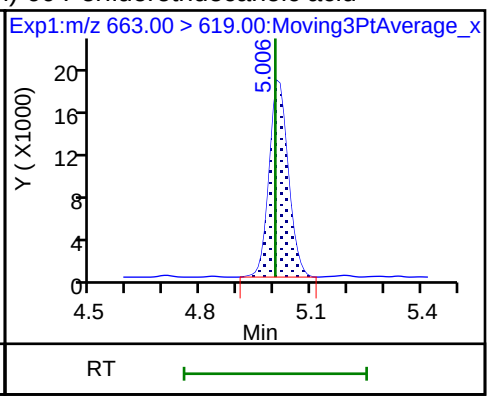
59 Perfluorododecanesulfonic acid (



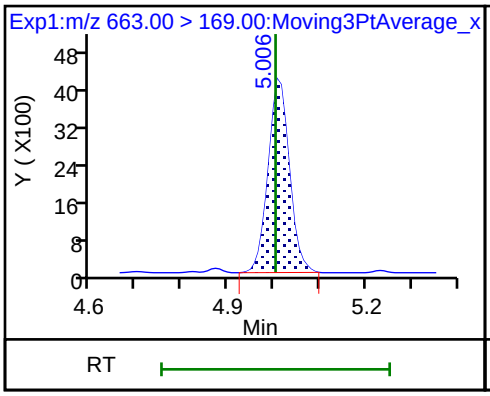

59 Perfluorododecanesulfonic acid ( (M)



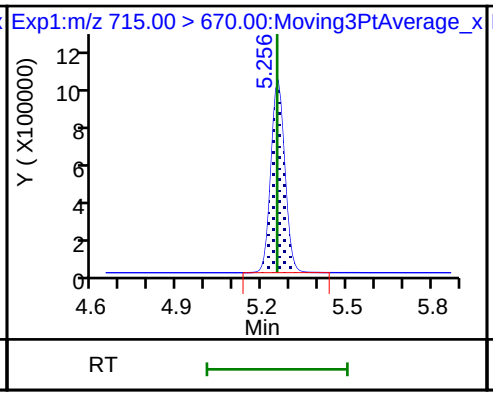

60 Perfluorotridecanoic acid



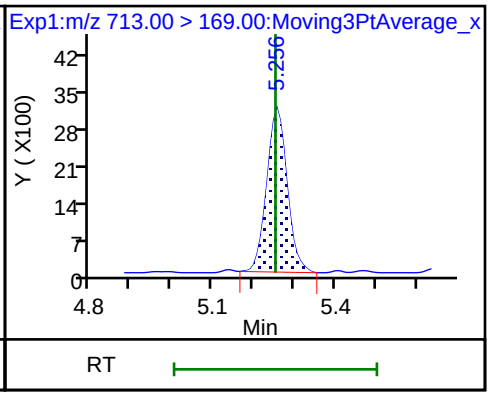

60 Perfluorotridecanoic acid



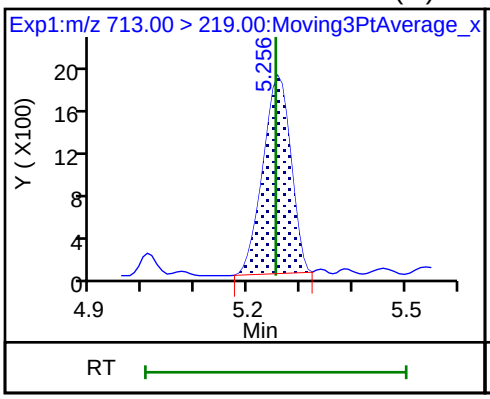

D 62 13C2 PFTeDA



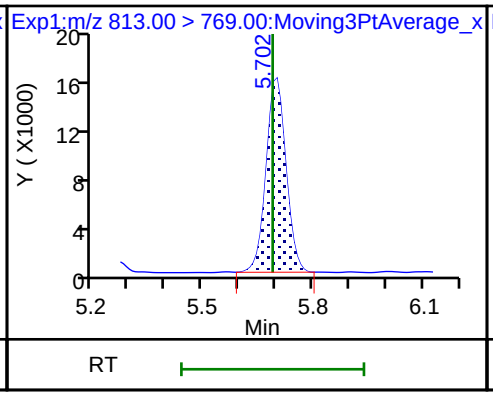

61 Perfluorotetradecanoic acid



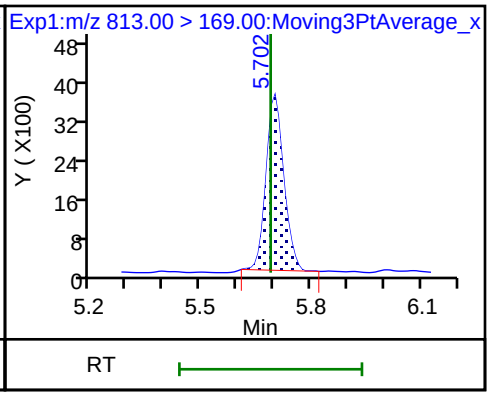

61 Perfluorotetradecanoic acid (M)



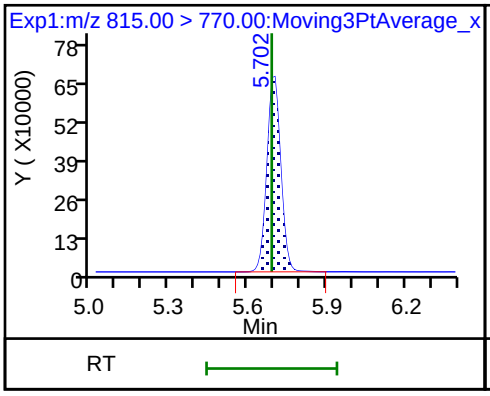

64 Perfluorohexadecanoic acid



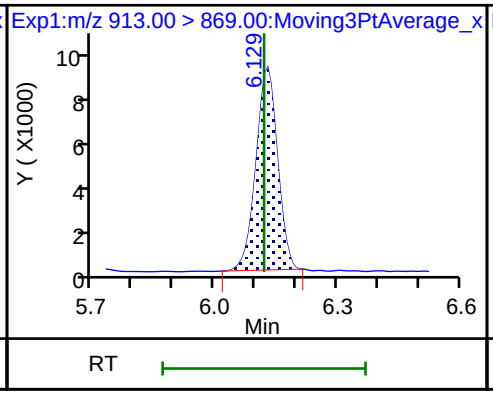

64 Perfluorohexadecanoic acid



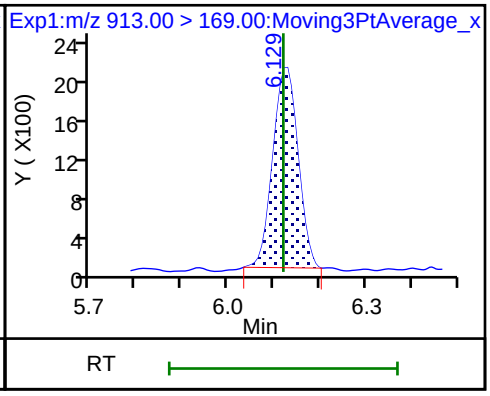

D 63 13C2 PFHxDA




65 Perfluorooctadecanoic acid




65 Perfluorooctadecanoic acid



Eurofins TestAmerica, Sacramento

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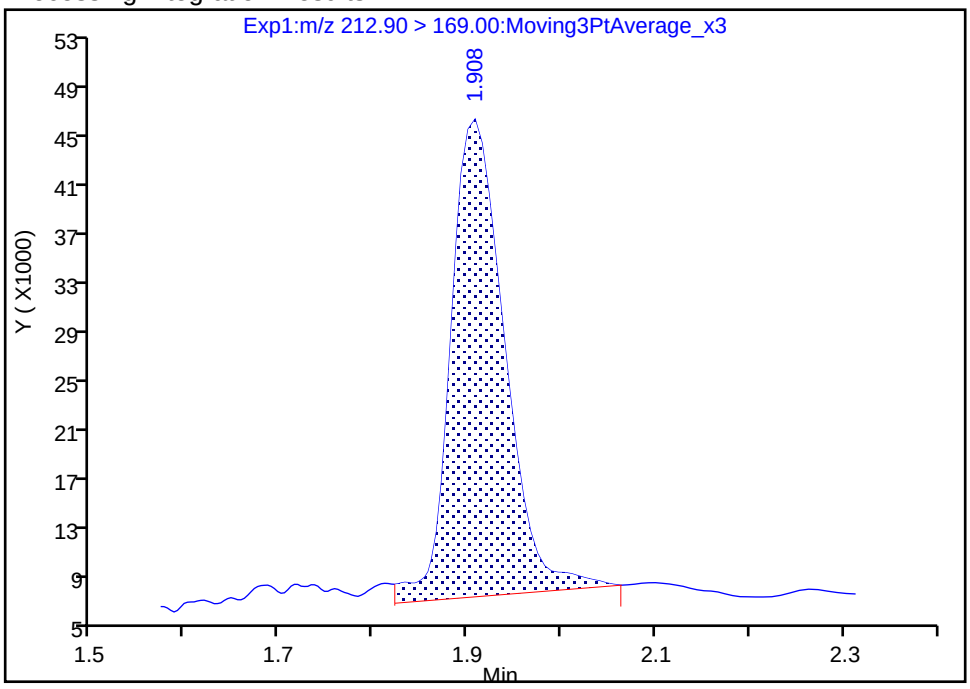
|---|---|---|---|---|---|
| Data File: | \\chromfs\Sacramento\ChromData\A9\20200911-103077.b\2020.09.11_A9_PFC_AA_005.d | | | | |
| Injection Date: | 11-Sep-2020 09:40:01 | Instrument ID: | A9 | | |
| Lims ID: | CCVL | | | | |
| Client ID: | | | | | |
| Operator ID: | SACINSTRLCMS02 | ALS Bottle#: | 42 | Worklist Smp#: | 2 |
| Injection Vol: | 20.0 ul | Dil. Factor: | 1.0000 | | |
| Method: | PFAS_A9 | Limit Group: | LC PFC ICAL | | |
| Column: | | Detector | EXP1 | | |

## 2 Perfluorobutanoic acid, CAS: 375-22-4

Signal: 1

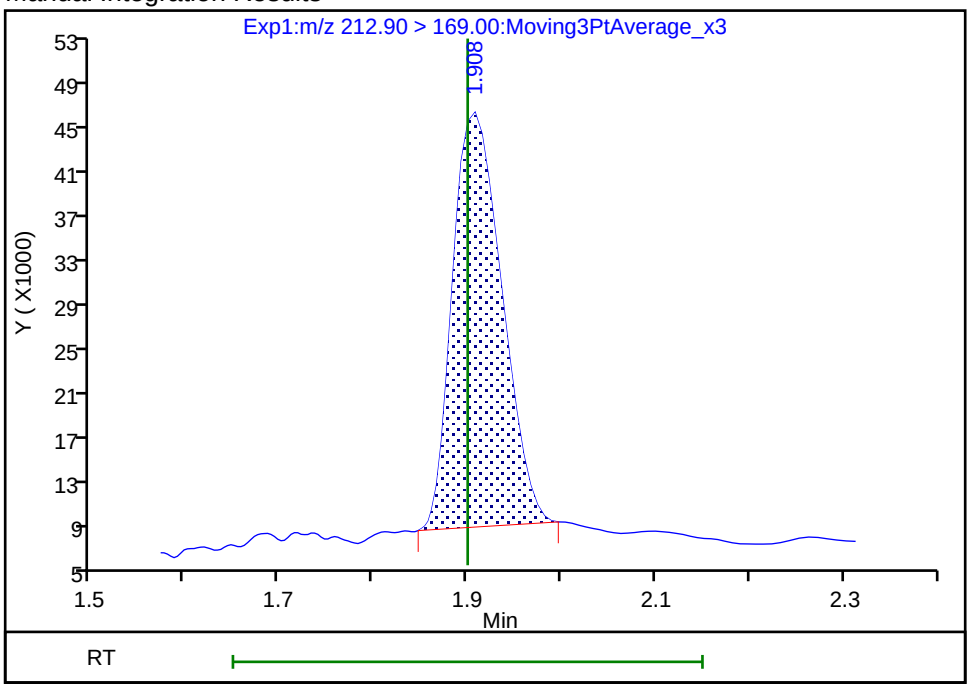
Processing Integration Results

RT: 1.91
Area: 153008
Amount: 0.053484
Amount Units: ng/ml




Manual Integration Results

RT: 1.91
Area: 134420
Amount: 0.046986
Amount Units: ng/ml




Reviewer: zibaa, 11-Sep-2020 10:10:48
Audit Action: Manually Integrated Audit Reason: Baseline

Eurofins TestAmerica, Sacramento

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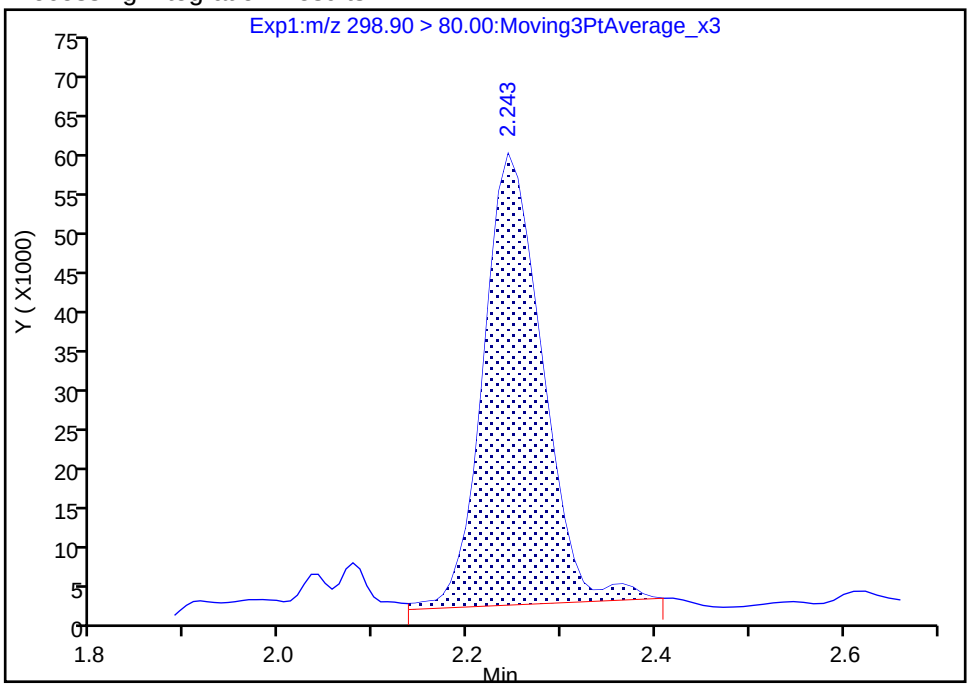
|---|---|---|---|---|---|
| Data File: | \\chromfs\Sacramento\ChromData\A9\20200911-103077.b\2020.09.11_A9_PFC_AA_005.d | | | | |
| Injection Date: | 11-Sep-2020 09:40:01 | Instrument ID: | A9 | | |
| Lims ID: | CCVL | | | | |
| Client ID: | | | | | |
| Operator ID: | SACINSTRLCMS02 | ALS Bottle#: | 42 | Worklist Smp#: | 2 |
| Injection Vol: | 20.0 ul | Dil. Factor: | 1.0000 | | |
| Method: | PFAS_A9 | Limit Group: | LC PFC ICAL | | |
| Column: | | Detector | EXP1 | | |

## 5 Perfluorobutanesulfonic acid, CAS: 375-73-5

Signal: 1

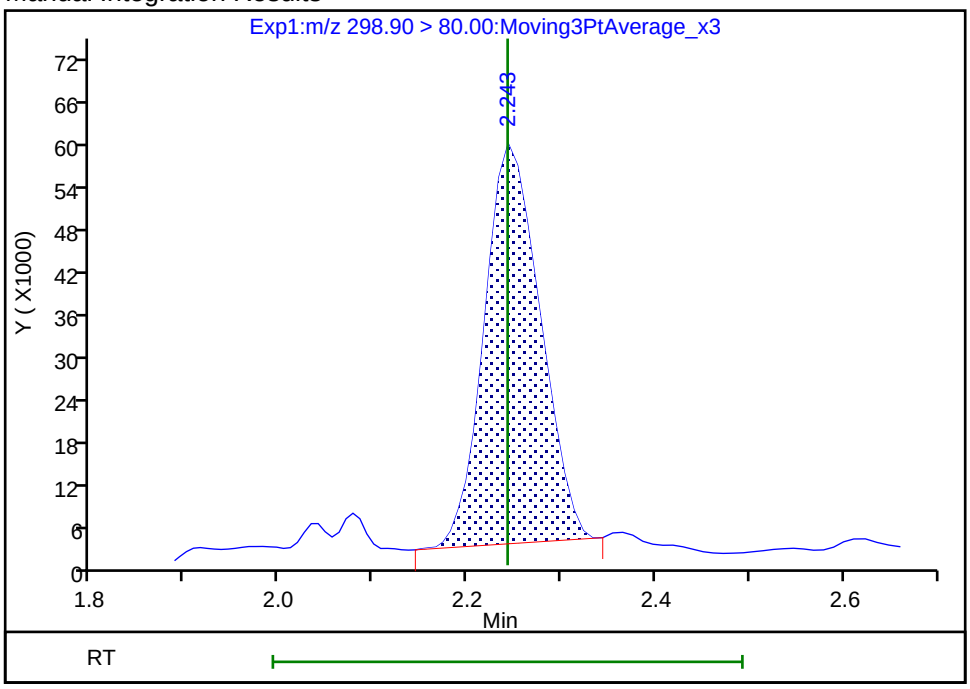
Processing Integration Results

RT: 2.24
Area: 253208
Amount: 0.045533
Amount Units: ng/ml




Manual Integration Results

RT: 2.24
Area: 235066
Amount: 0.042270
Amount Units: ng/ml




Reviewer: zibaa, 11-Sep-2020 10:21:29
Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

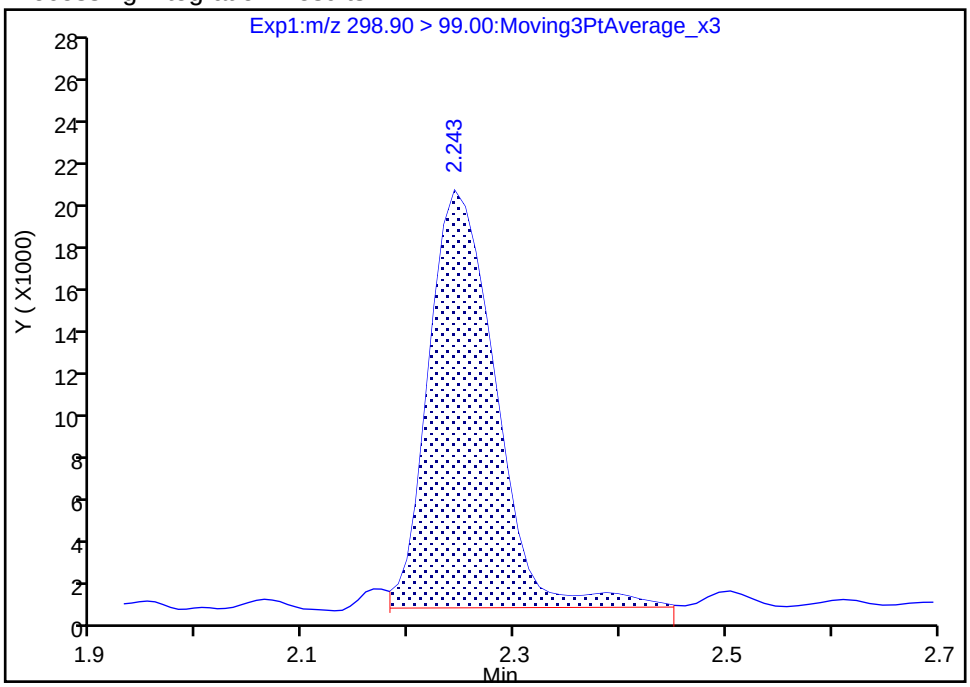
| | | | | | |
|---|---|---|---|---|---|
| Data File: | \\chromfs\Sacramento\ChromData\A9\20200911-103077.b\2020.09.11_A9_PFC_AA_005.d | | | | |
| Injection Date: | 11-Sep-2020 09:40:01 | Instrument ID: | A9 | | |
| Lims ID: | CCVL | | | | |
| Client ID: | | | | | |
| Operator ID: | SACINSTRLCMS02 | ALS Bottle#: | 42 | Worklist Smp#: | 2 |
| Injection Vol: | 20.0 ul | Dil. Factor: | 1.0000 | | |
| Method: | PFAS_A9 | Limit Group: | LC PFC ICAL | | |
| Column: | | Detector | EXP1 | | |

## 5 Perfluorobutanesulfonic acid, CAS: 375-73-5

Signal: 2

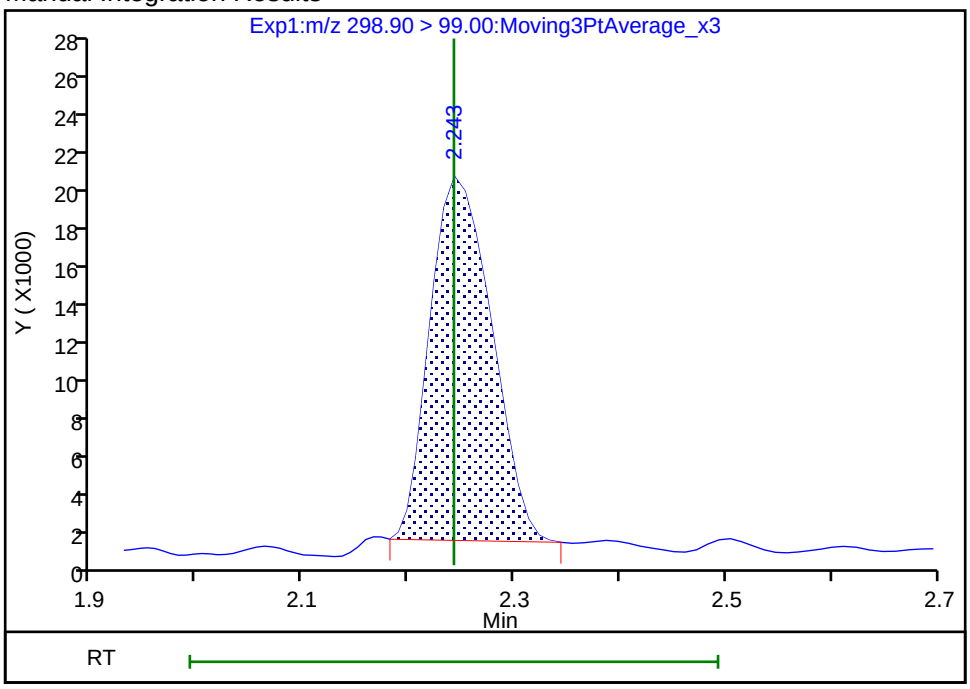
Processing Integration Results

RT: 2.24
Area: 84622
Amount: 0.045533
Amount Units: ng/ml




Manual Integration Results

RT: 2.24
Area: 75174
Amount: 0.042270
Amount Units: ng/ml




Reviewer: zibaa, 11-Sep-2020 10:21:35
Audit Action: Manually Integrated Audit Reason: Baseline

Eurofins TestAmerica, Sacramento

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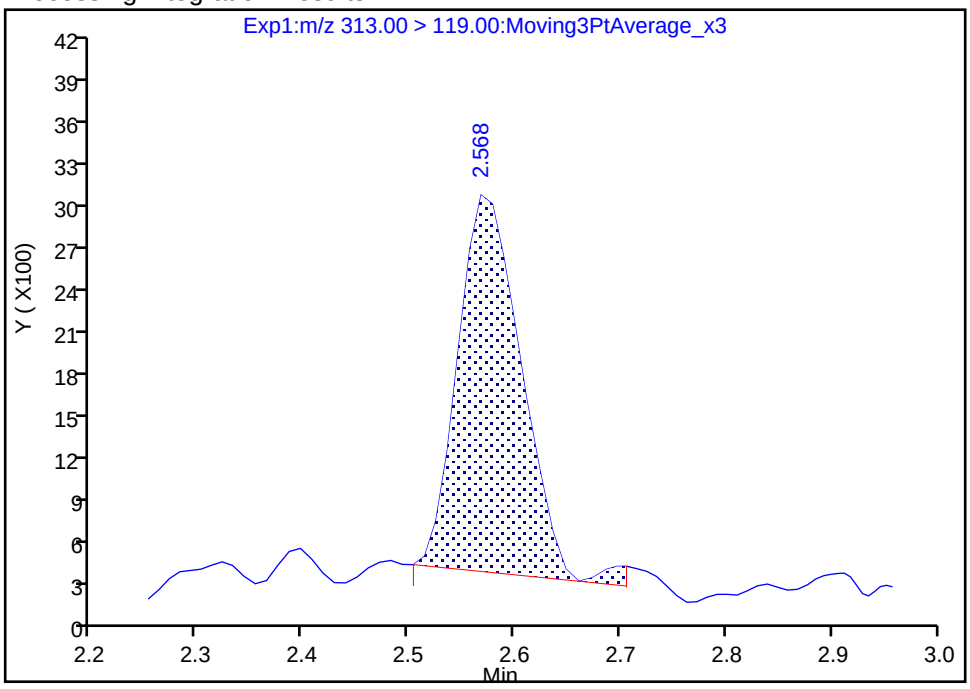
|---|---|---|---|---|---|
| Data File: | \\chromfs\Sacramento\ChromData\A9\20200911-103077.b\2020.09.11_A9_PFC_AA_005.d | | | | |
| Injection Date: | 11-Sep-2020 09:40:01 | Instrument ID: | A9 | | |
| Lims ID: | CCVL | | | | |
| Client ID: | | | | | |
| Operator ID: | SACINSTRLCMS02 | ALS Bottle#: | 42 | Worklist Smp#: | 2 |
| Injection Vol: | 20.0 ul | Dil. Factor: | 1.0000 | | |
| Method: | PFAS_A9 | Limit Group: | LC PFC ICAL | | |
| Column: | | Detector | EXP1 | | |

## 11 Perfluorohexanoic acid, CAS: 307-24-4

Signal: 2

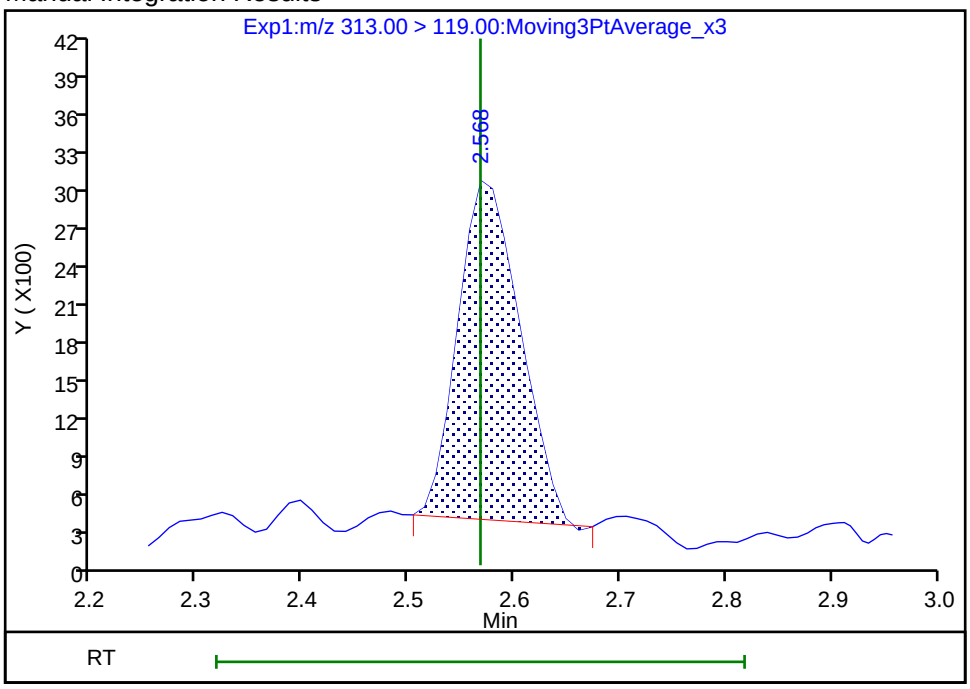
Processing Integration Results

RT: 2.57
Area: 11168
Amount: 0.045512
Amount Units: ng/ml




Manual Integration Results

RT: 2.57
Area: 10792
Amount: 0.045512
Amount Units: ng/ml




Reviewer: zibaa, 11-Sep-2020 10:21:53
Audit Action: Manually Integrated Audit Reason: Baseline

Eurofins TestAmerica, Sacramento

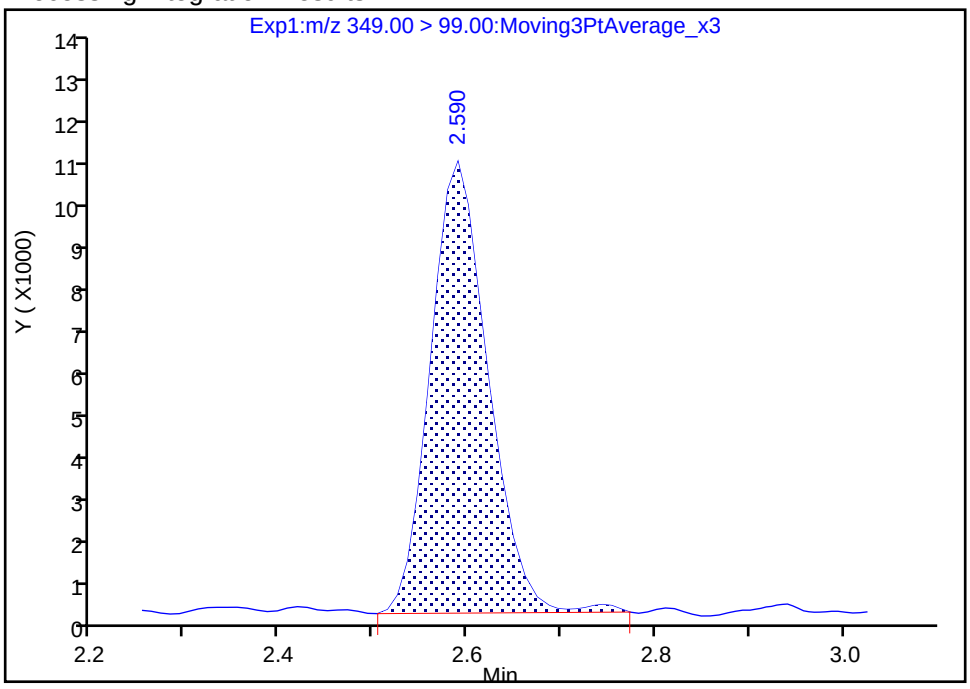
| | | | | | |
|---|---|---|---|---|---|
| Data File: | \\chromfs\Sacramento\ChromData\A9\20200911-103077.b\2020.09.11_A9_PFC_AA_005.d | | | | |
| Injection Date: | 11-Sep-2020 09:40:01 | Instrument ID: | A9 | | |
| Lims ID: | CCVL | | | | |
| Client ID: | | | | | |
| Operator ID: | SACINSTRLCMS02 | ALS Bottle#: | 42 | Worklist Smp#: | 2 |
| Injection Vol: | 20.0 ul | Dil. Factor: | 1.0000 | | |
| Method: | PFAS_A9 | Limit Group: | LC PFC ICAL | | |
| Column: | | Detector | EXP1 | | |

## 12 Perfluoropentanesulfonic acid, CAS: 2706-91-4

Signal: 2

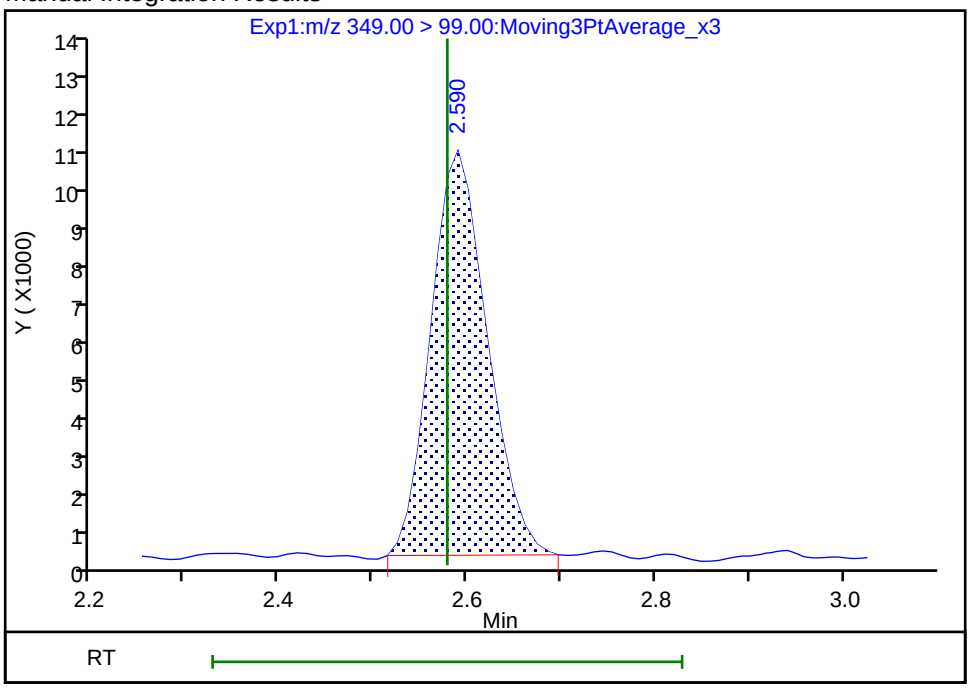
Processing Integration Results

RT: 2.59
Area: 44909
Amount: 0.044873
Amount Units: ng/ml




Manual Integration Results

RT: 2.59
Area: 43423
Amount: 0.044873
Amount Units: ng/ml




Reviewer: zibaa, 11-Sep-2020 10:22:09
Audit Action: Manually Integrated Audit Reason: Baseline

Eurofins TestAmerica, Sacramento

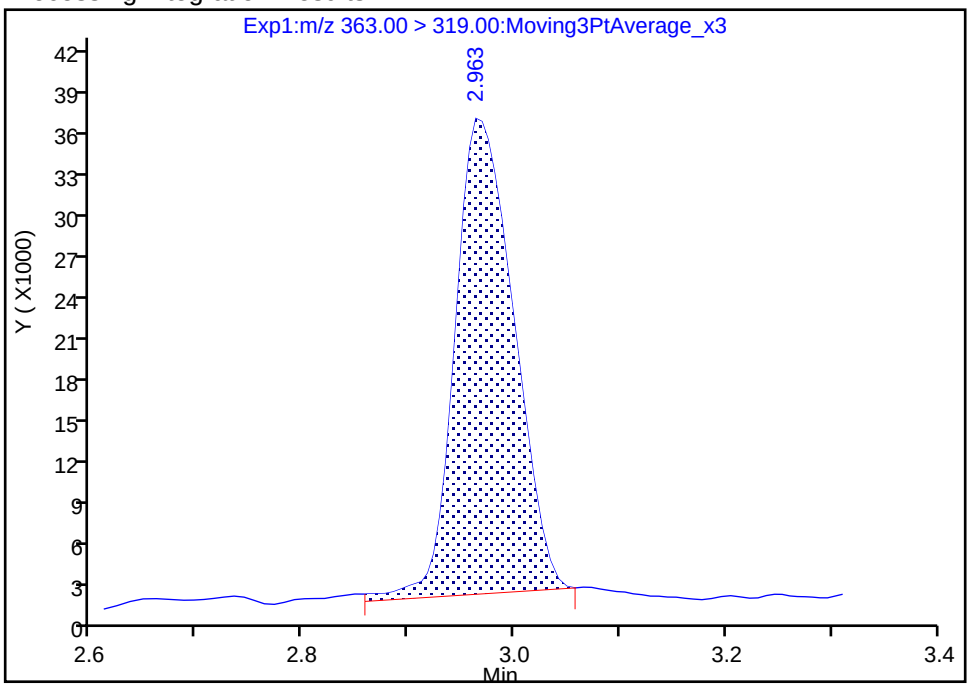
Data File: \\chromfs\Sacramento\ChromData\A9\20200911-103077.b\2020.09.11_A9_PFC_AA_005.d
Injection Date: 11-Sep-2020 09:40:01 Instrument ID: A9
Lims ID: CCVL
Client ID:
Operator ID: SACINSTRLCMS02 ALS Bottle#: 42 Worklist Smp#: 2
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFAS_A9 Limit Group: LC PFC ICAL
Column: Detector EXP1

## 18 Perfluoroheptanoic acid, CAS: 375-85-9

Signal: 1

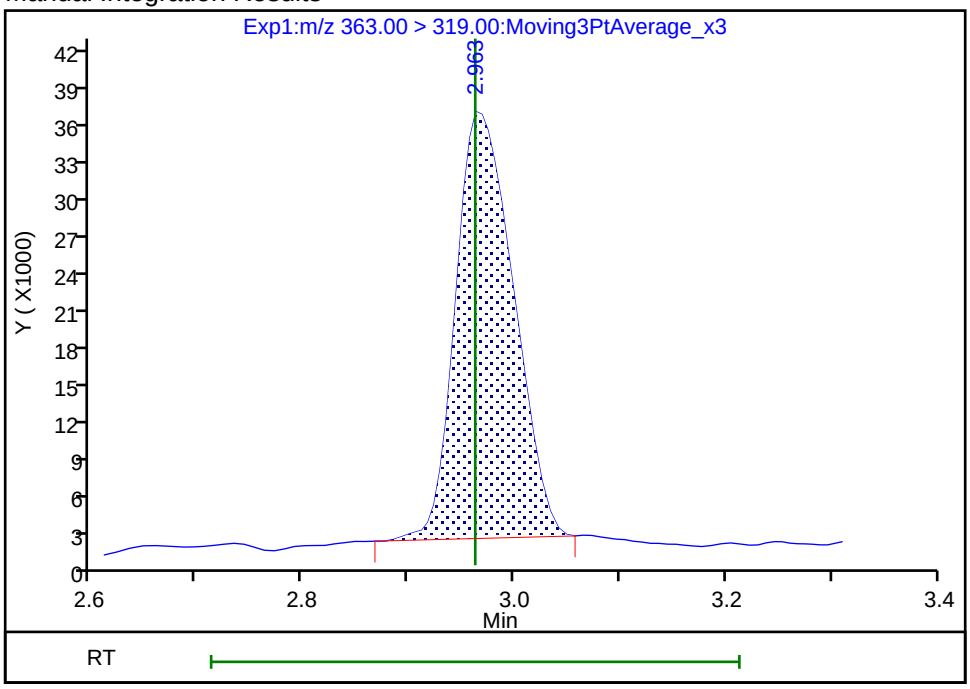
Processing Integration Results

RT: 2.96
Area: 134862
Amount: 0.046779
Amount Units: ng/ml




Manual Integration Results

RT: 2.96
Area: 131631
Amount: 0.045658
Amount Units: ng/ml




Reviewer: zibaa, 11-Sep-2020 10:28:56
Audit Action: Manually Integrated Audit Reason: Baseline

Eurofins TestAmerica, Sacramento

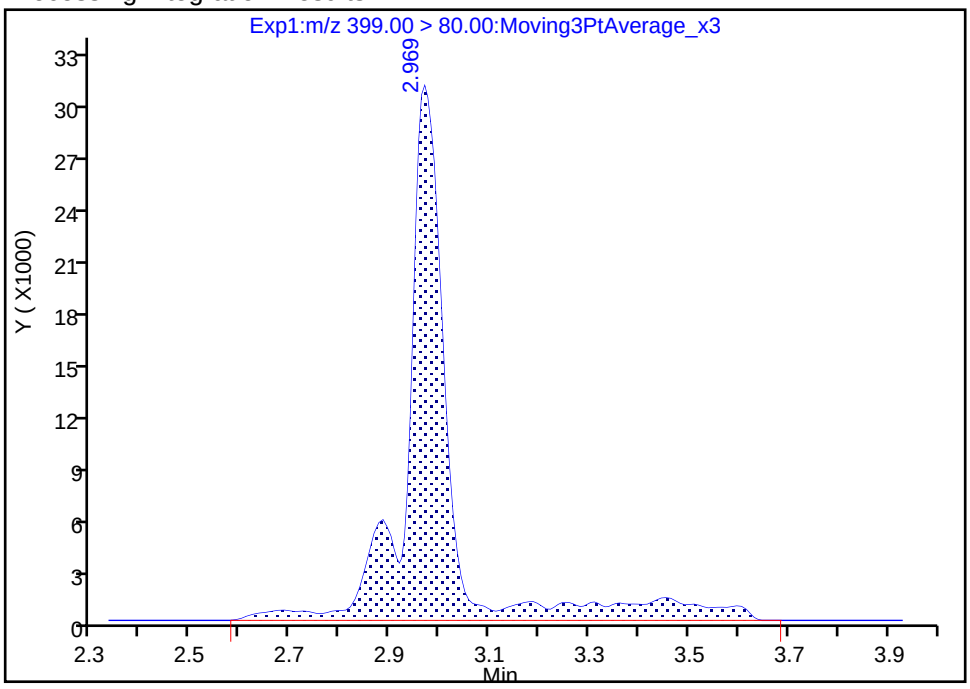
Data File: \\chromfs\Sacramento\ChromData\A9\20200911-103077.b\2020.09.11_A9_PFC_AA_005.d
Injection Date: 11-Sep-2020 09:40:01 Instrument ID: A9
Lims ID: CCVL
Client ID:
Operator ID: SACINSTRLCMS02 ALS Bottle#: 42 Worklist Smp#: 2
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFAS_A9 Limit Group: LC PFC ICAL
Column: Detector EXP1

## 16 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 1

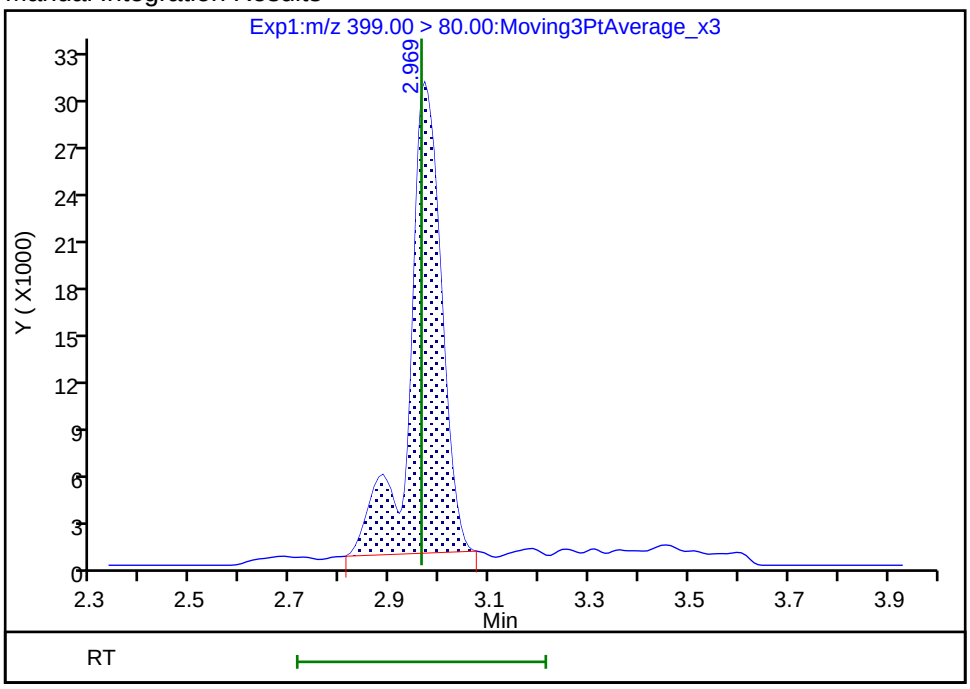
Processing Integration Results

RT: 2.97
Area: 180403
Amount: 0.054786
Amount Units: ng/ml




Manual Integration Results

RT: 2.97
Area: 134099
Amount: 0.040724
Amount Units: ng/ml




Reviewer: zibaa, 11-Sep-2020 10:22:30
Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

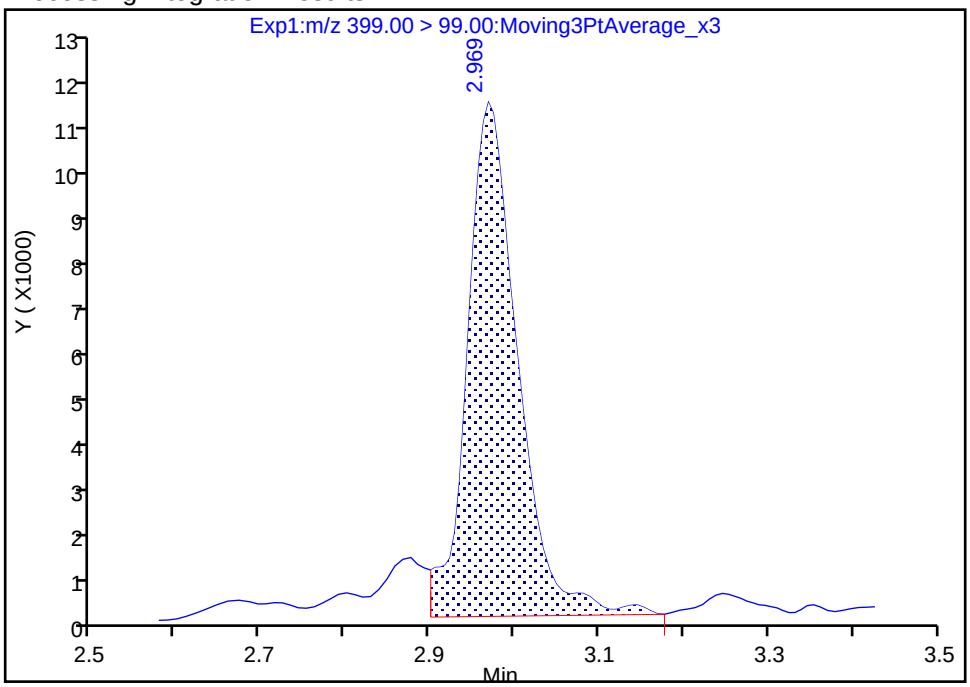
| | | | | | |
|---|---|---|---|---|---|
| Data File: | \\chromfs\Sacramento\ChromData\A9\20200911-103077.b\2020.09.11_A9_PFC_AA_005.d | | | | |
| Injection Date: | 11-Sep-2020 09:40:01 | Instrument ID: | A9 | | |
| Lims ID: | CCVL | | | | |
| Client ID: | | | | | |
| Operator ID: | SACINSTRLCMS02 | ALS Bottle#: | 42 | Worklist Smp#: | 2 |
| Injection Vol: | 20.0 ul | Dil. Factor: | 1.0000 | | |
| Method: | PFAS_A9 | Limit Group: | LC PFC ICAL | | |
| Column: | | Detector | EXP1 | | |

## 16 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 2

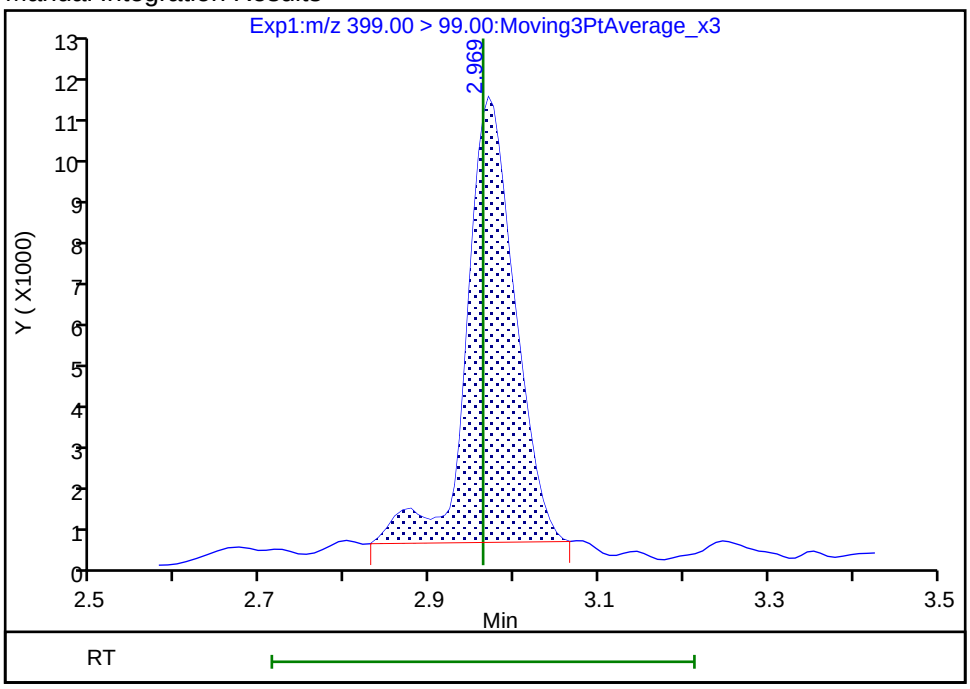
Processing Integration Results

RT: 2.97
Area: 44490
Amount: 0.054786
Amount Units: ng/ml




Manual Integration Results

RT: 2.97
Area: 40850
Amount: 0.040724
Amount Units: ng/ml




Reviewer: zibaa, 11-Sep-2020 10:22:43
Audit Action: Manually Integrated Audit Reason: Baseline

Eurofins TestAmerica, Sacramento

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|---|---|---|---|---|---|
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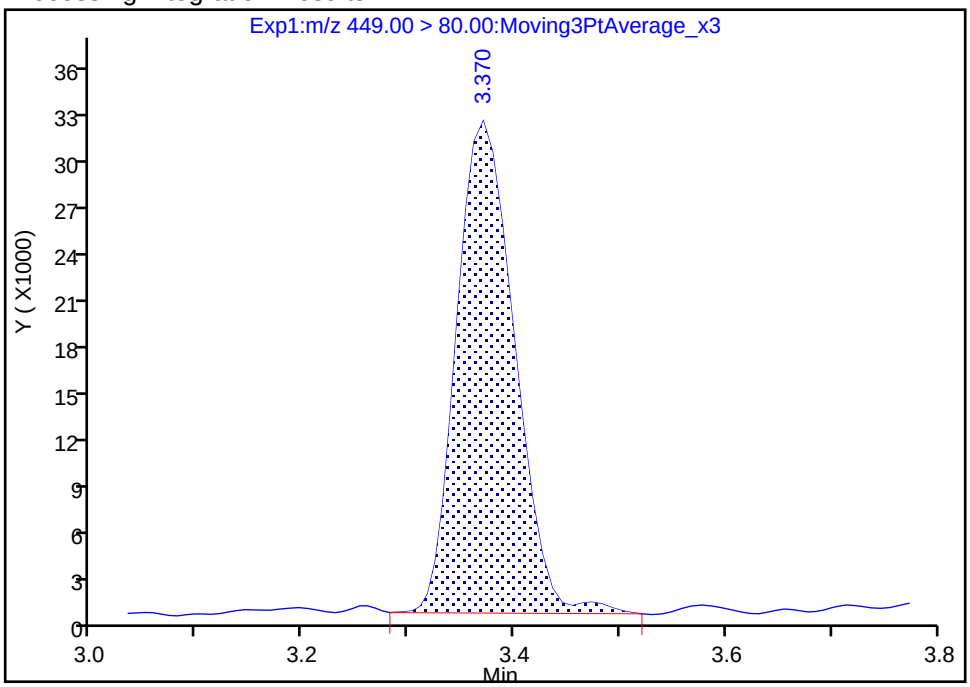
| Injection Date: | 11-Sep-2020 09:40:01 | Instrument ID: | A9 | | |
| Lims ID: | CCVL | | | | |
| Client ID: | | | | | |
| Operator ID: | SACINSTRLCMS02 | ALS Bottle#: | 42 | Worklist Smp#: | 2 |
| Injection Vol: | 20.0 ul | Dil. Factor: | 1.0000 | | |
| Method: | PFAS_A9 | Limit Group: | LC PFC ICAL | | |
| Column: | | Detector | EXP1 | | |

## 23 Perfluoroheptanesulfonic acid, CAS: 375-92-8

Signal: 1

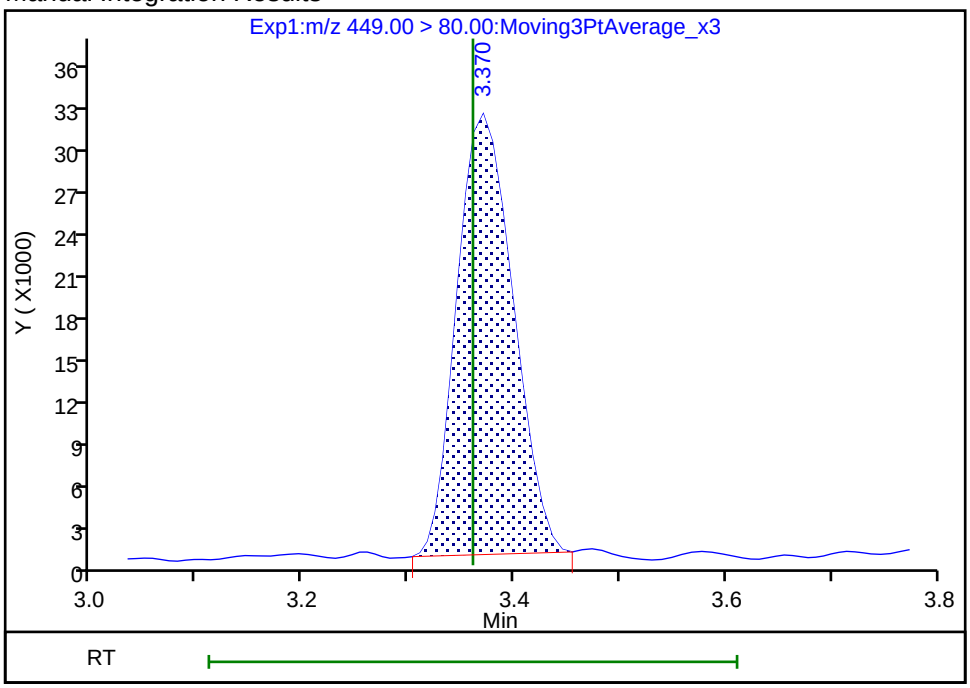
Processing Integration Results

RT: 3.37
Area: 121496
Amount: 0.045412
Amount Units: ng/ml




Manual Integration Results

RT: 3.37
Area: 116925
Amount: 0.043703
Amount Units: ng/ml




Reviewer: zibaa, 11-Sep-2020 10:23:02
Audit Action: Manually Integrated Audit Reason: Baseline

Eurofins TestAmerica, Sacramento

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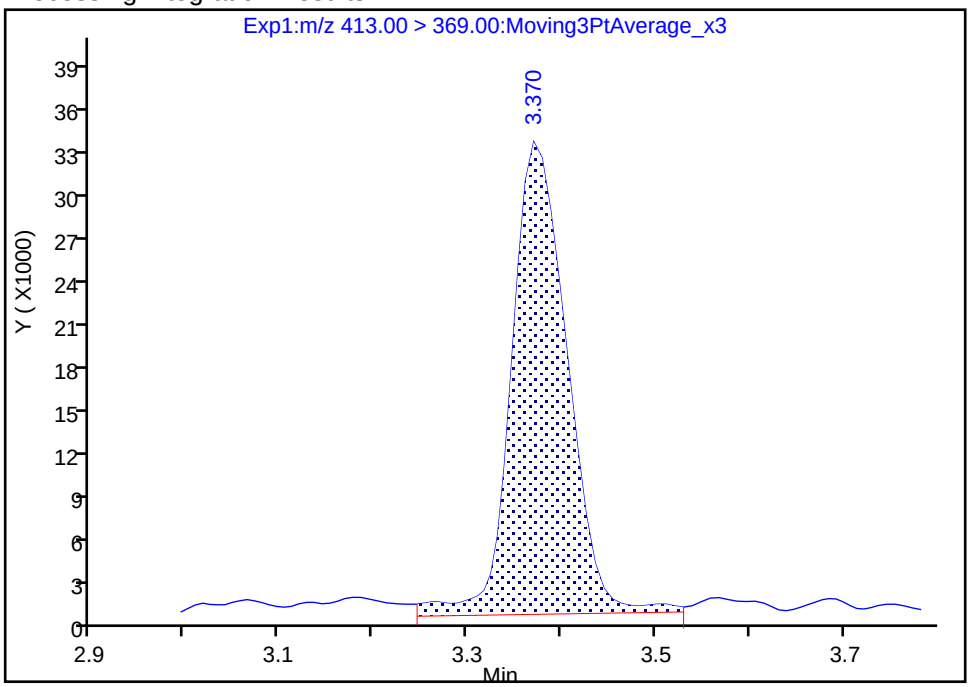
|---|---|---|---|---|---|
| Data File: | \\chromfs\Sacramento\ChromData\A9\20200911-103077.b\2020.09.11_A9_PFC_AA_005.d | | | | |
| Injection Date: | 11-Sep-2020 09:40:01 | Instrument ID: | A9 | | |
| Lims ID: | CCVL | | | | |
| Client ID: | | | | | |
| Operator ID: | SACINSTRLCMS02 | ALS Bottle#: | 42 | Worklist Smp#: | 2 |
| Injection Vol: | 20.0 ul | Dil. Factor: | 1.0000 | | |
| Method: | PFAS_A9 | Limit Group: | LC PFC ICAL | | |
| Column: | | Detector | EXP1 | | |

## 24 Perfluorooctanoic acid, CAS: 335-67-1

Signal: 1

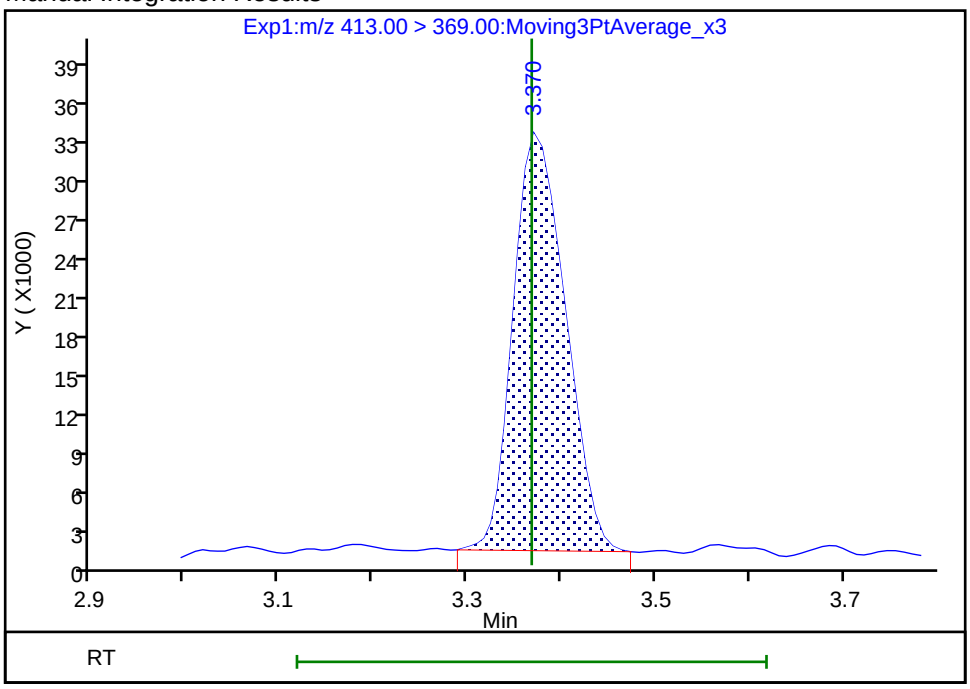
Processing Integration Results

RT: 3.37
Area: 135185
Amount: 0.053489
Amount Units: ng/ml




Manual Integration Results

RT: 3.37
Area: 123671
Amount: 0.048933
Amount Units: ng/ml




Reviewer: zibaa, 11-Sep-2020 10:23:21
Audit Action: Manually Integrated Audit Reason: Baseline

Eurofins TestAmerica, Sacramento

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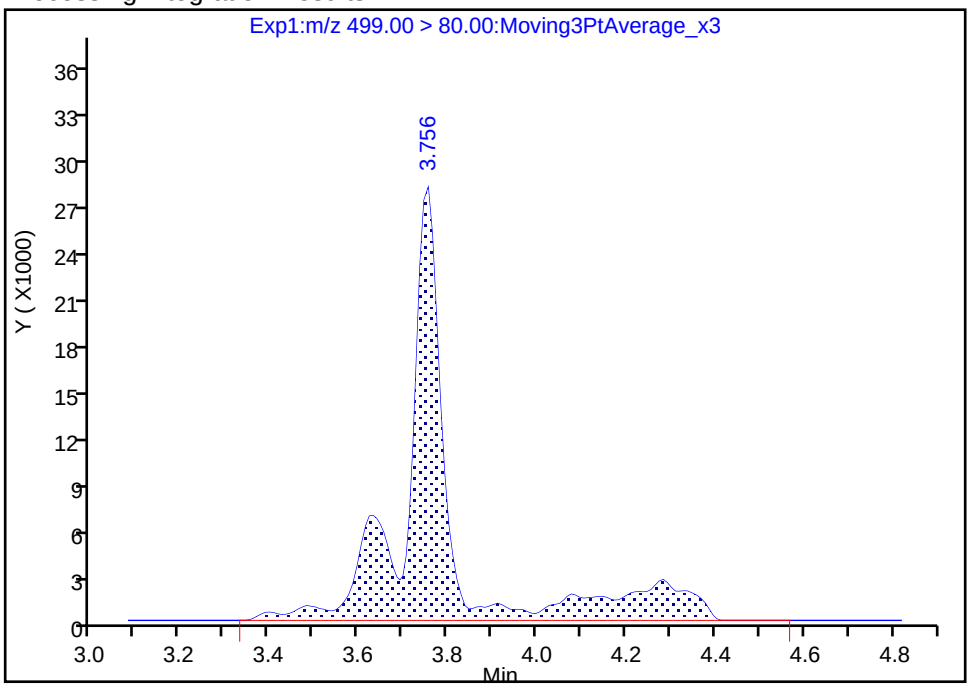
|---|---|---|---|---|---|
| Data File: | \\chromfs\Sacramento\ChromData\A9\20200911-103077.b\2020.09.11_A9_PFC_AA_005.d | | | | |
| Injection Date: | 11-Sep-2020 09:40:01 | Instrument ID: | A9 | | |
| Lims ID: | CCVL | | | | |
| Client ID: | | | | | |
| Operator ID: | SACINSTRLCMS02 | ALS Bottle#: | 42 | Worklist Smp#: | 2 |
| Injection Vol: | 20.0 ul | Dil. Factor: | 1.0000 | | |
| Method: | PFAS_A9 | Limit Group: | LC PFC ICAL | | |
| Column: | | Detector | EXP1 | | |

## 28 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 1

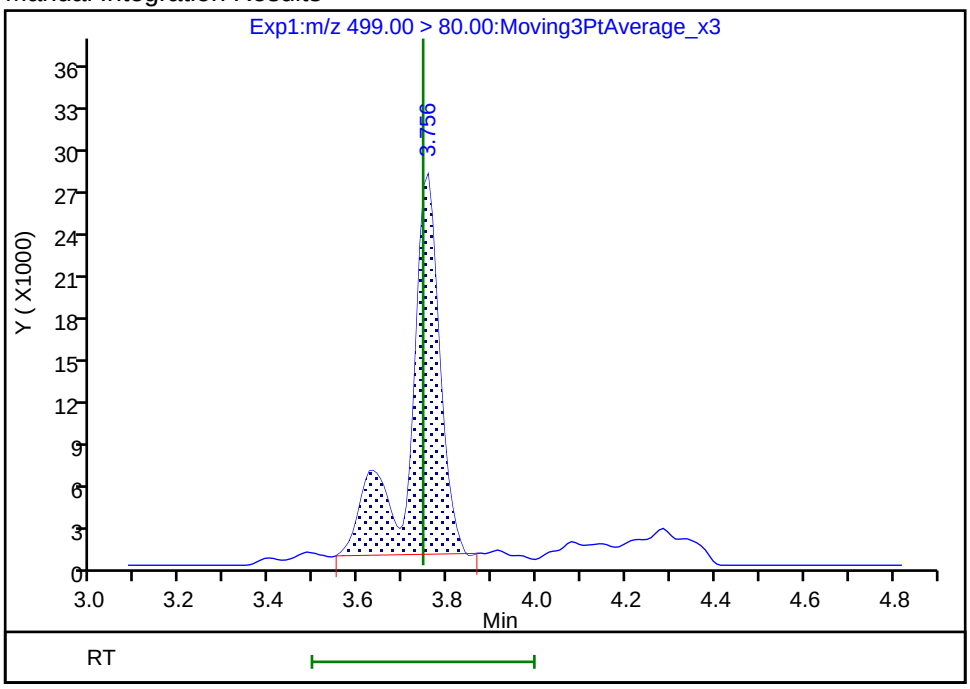
Processing Integration Results

RT: 3.76
Area: 191788
Amount: 0.063740
Amount Units: ng/ml




Manual Integration Results

RT: 3.76
Area: 127930
Amount: 0.042517
Amount Units: ng/ml




Reviewer: zibaa, 11-Sep-2020 10:08:07
Audit Action: Manually Integrated Audit Reason: Baseline

Eurofins TestAmerica, Sacramento

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|---|---|---|---|---|---|
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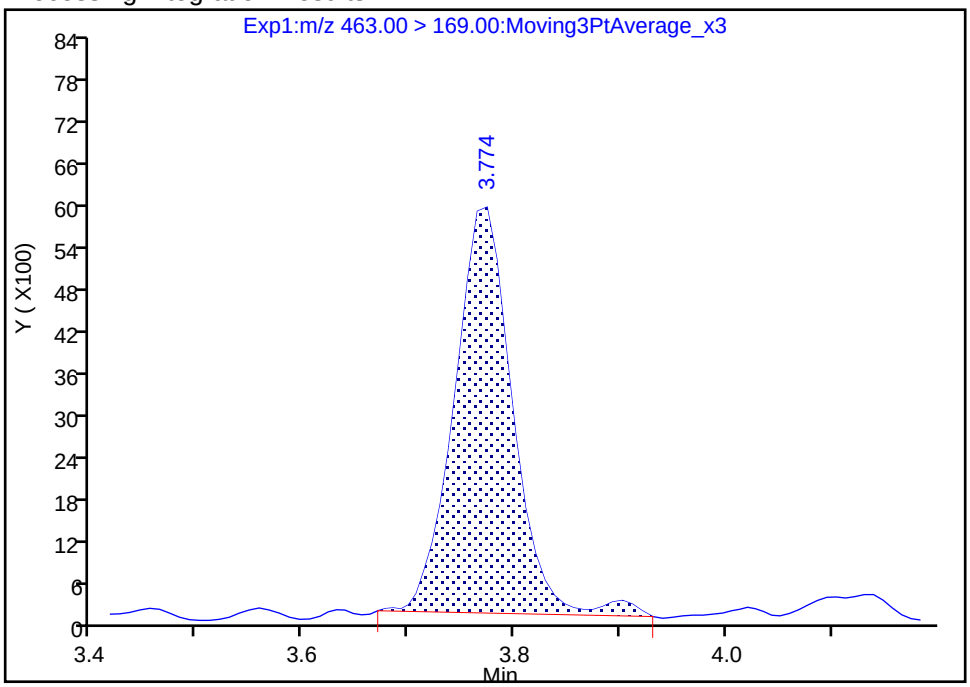
| Injection Date: | 11-Sep-2020 09:40:01 | Instrument ID: | A9 | | |
| Lims ID: | CCVL | | | | |
| Client ID: | | | | | |
| Operator ID: | SACINSTRLCMS02 | ALS Bottle#: | 42 | Worklist Smp#: | 2 |
| Injection Vol: | 20.0 ul | Dil. Factor: | 1.0000 | | |
| Method: | PFAS_A9 | Limit Group: | LC PFC ICAL | | |
| Column: | | Detector | EXP1 | | |

## 30 Perfluorononanoic acid, CAS: 375-95-1

Signal: 2

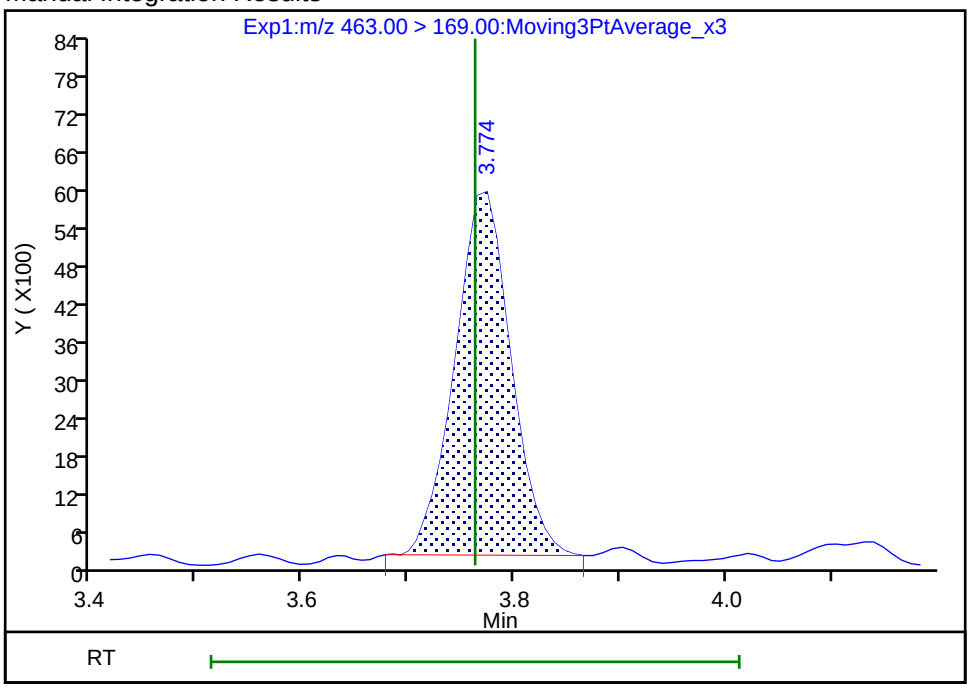
Processing Integration Results

RT: 3.77
Area: 22381
Amount: 0.051892
Amount Units: ng/ml




Manual Integration Results

RT: 3.77
Area: 21240
Amount: 0.051892
Amount Units: ng/ml




Reviewer: zibaa, 11-Sep-2020 10:23:33
Audit Action: Manually Integrated Audit Reason: Baseline

Eurofins TestAmerica, Sacramento

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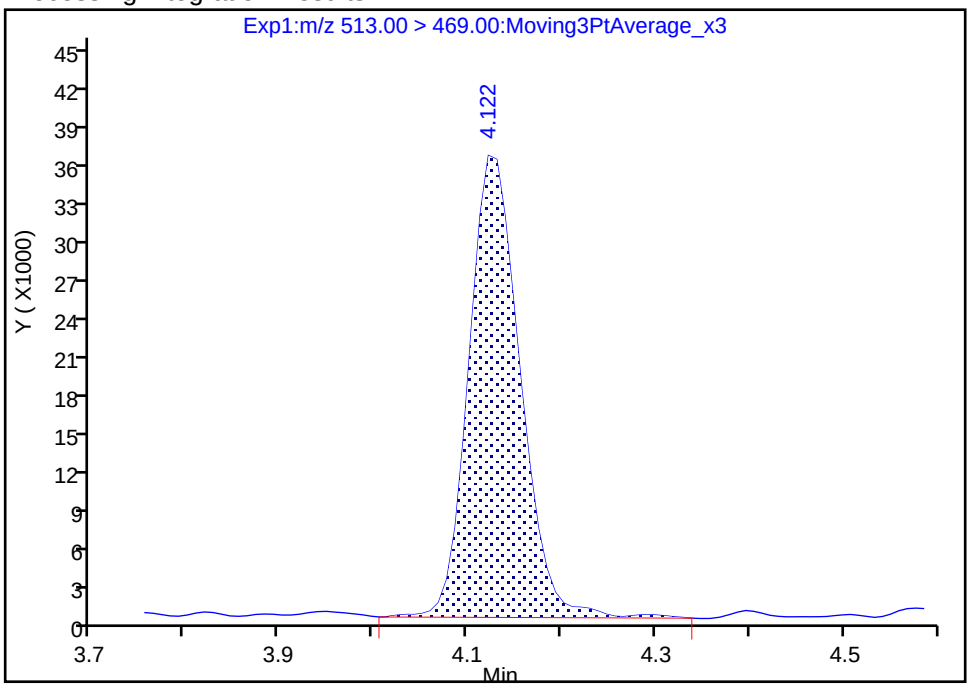
|---|---|---|---|---|---|
| Data File: | \\chromfs\Sacramento\ChromData\A9\20200911-103077.b\2020.09.11_A9_PFC_AA_005.d | | | | |
| Injection Date: | 11-Sep-2020 09:40:01 | Instrument ID: | A9 | | |
| Lims ID: | CCVL | | | | |
| Client ID: | | | | | |
| Operator ID: | SACINSTRLCMS02 | ALS Bottle#: | 42 | Worklist Smp#: | 2 |
| Injection Vol: | 20.0 ul | Dil. Factor: | 1.0000 | | |
| Method: | PFAS_A9 | Limit Group: | LC PFC ICAL | | |
| Column: | | Detector | EXP1 | | |

## 38 Perfluorodecanoic acid, CAS: 335-76-2

Signal: 1

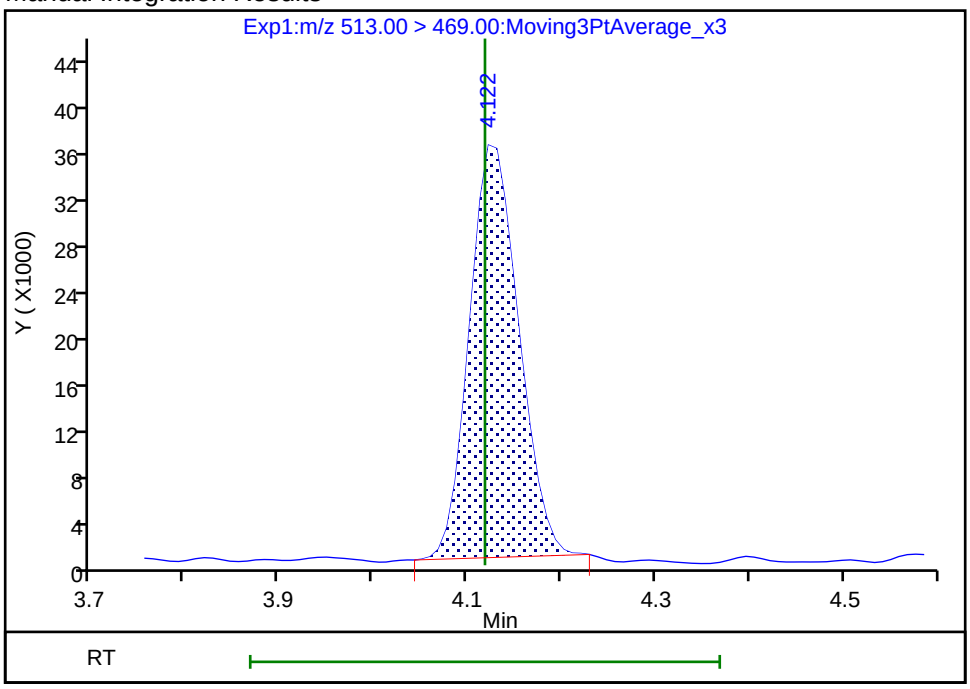
Processing Integration Results

RT: 4.12
Area: 137354
Amount: 0.050662
Amount Units: ng/ml




Manual Integration Results

RT: 4.12
Area: 130478
Amount: 0.048126
Amount Units: ng/ml




Reviewer: zibaa, 11-Sep-2020 10:23:59
Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

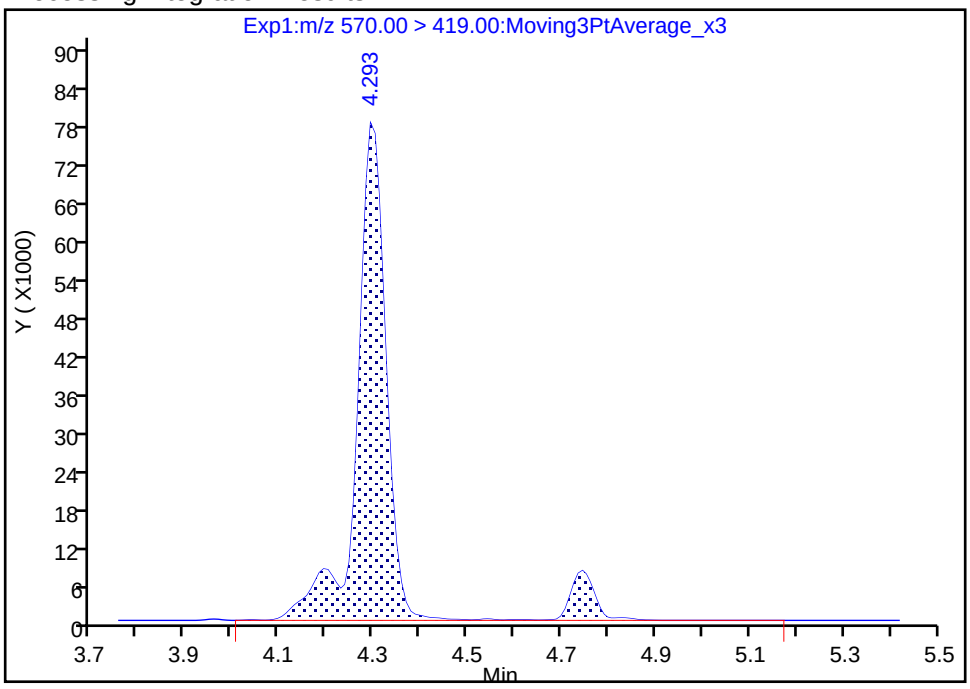
| | | | | | |
|---|---|---|---|---|---|
| Data File: | \\chromfs\Sacramento\ChromData\A9\20200911-103077.b\2020.09.11_A9_PFC_AA_005.d | | | | |
| Injection Date: | 11-Sep-2020 09:40:01 | Instrument ID: | A9 | | |
| Lims ID: | CCVL | | | | |
| Client ID: | | | | | |
| Operator ID: | SACINSTRLCMS02 | ALS Bottle#: | 42 | Worklist Smp#: | 2 |
| Injection Vol: | 20.0 ul | Dil. Factor: | 1.0000 | | |
| Method: | PFAS_A9 | Limit Group: | LC PFC ICAL | | |
| Column: | | Detector | EXP1 | | |

## 40 N-methylperfluorooctanesulfonami, CAS: 2355-31-9

Signal: 1

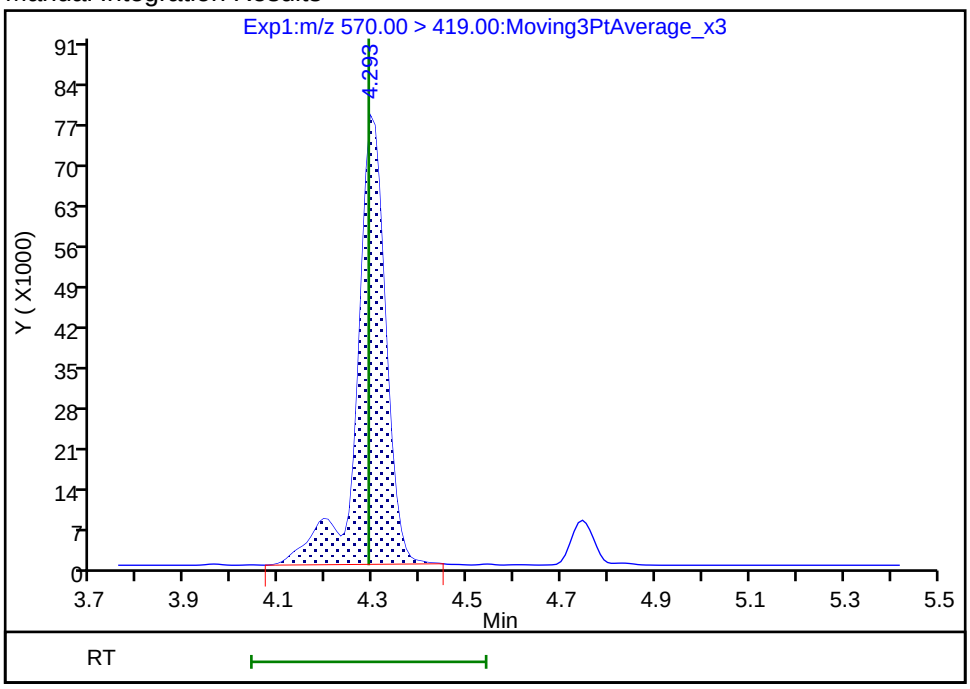
Processing Integration Results

RT: 4.29
Area: 363851
Amount: 0.469707
Amount Units: ng/ml




Manual Integration Results

RT: 4.29
Area: 332138
Amount: 0.428768
Amount Units: ng/ml




Reviewer: zibaa, 11-Sep-2020 10:24:09

Audit Action: Manually Integrated Audit Reason: Baseline

Eurofins TestAmerica, Sacramento

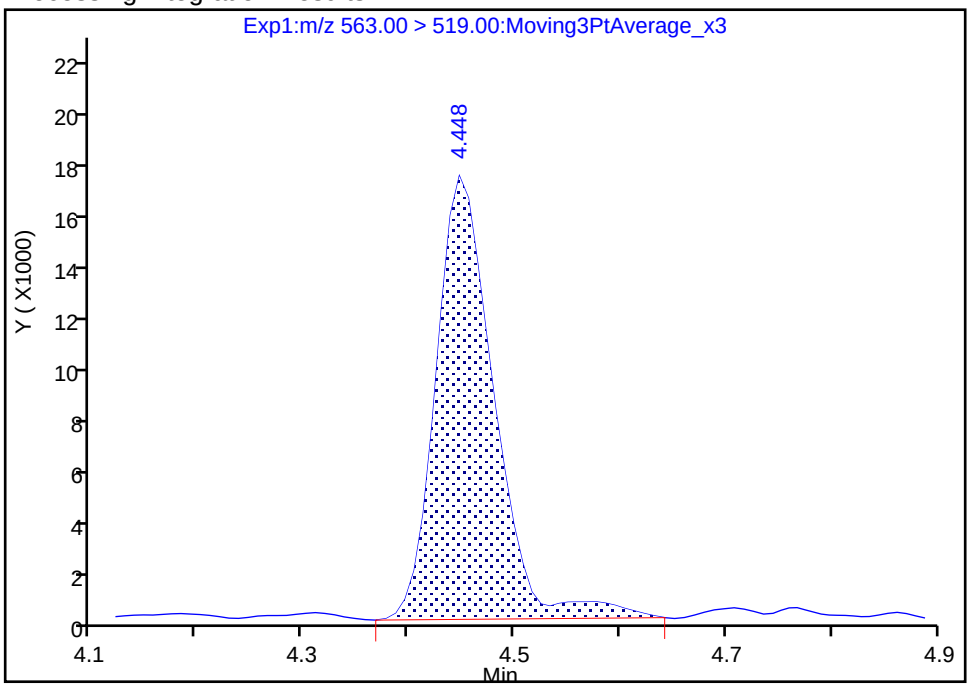
| | | | | | |
|---|---|---|---|---|---|
| Data File: | \\chromfs\Sacramento\ChromData\A9\20200911-103077.b\2020.09.11_A9_PFC_AA_005.d | | | | |
| Injection Date: | 11-Sep-2020 09:40:01 | Instrument ID: | A9 | | |
| Lims ID: | CCVL | | | | |
| Client ID: | | | | | |
| Operator ID: | SACINSTRLCMS02 | ALS Bottle#: | 42 | Worklist Smp#: | 2 |
| Injection Vol: | 20.0 ul | Dil. Factor: | 1.0000 | | |
| Method: | PFAS_A9 | Limit Group: | LC PFC ICAL | | |
| Column: | | Detector | EXP1 | | |

## 43 Perfluoroundecanoic acid, CAS: 2058-94-8

Signal: 1

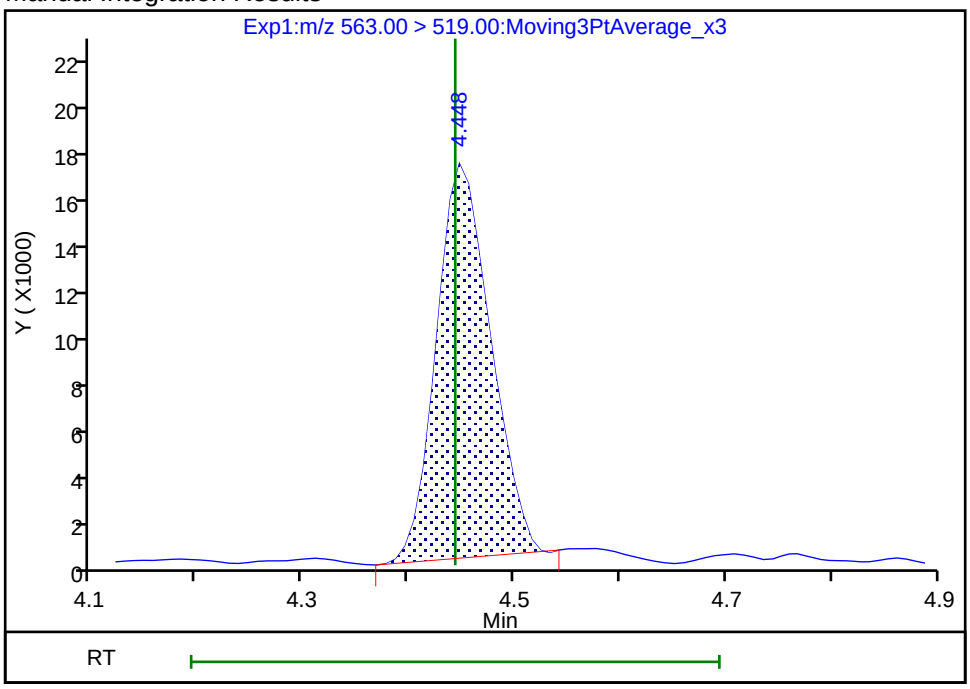
Processing Integration Results

RT: 4.45
Area: 65666
Amount: 0.046265
Amount Units: ng/ml




Manual Integration Results

RT: 4.45
Area: 60103
Amount: 0.042346
Amount Units: ng/ml




Reviewer: zibaa, 11-Sep-2020 10:24:33
Audit Action: Manually Integrated Audit Reason: Baseline

Eurofins TestAmerica, Sacramento

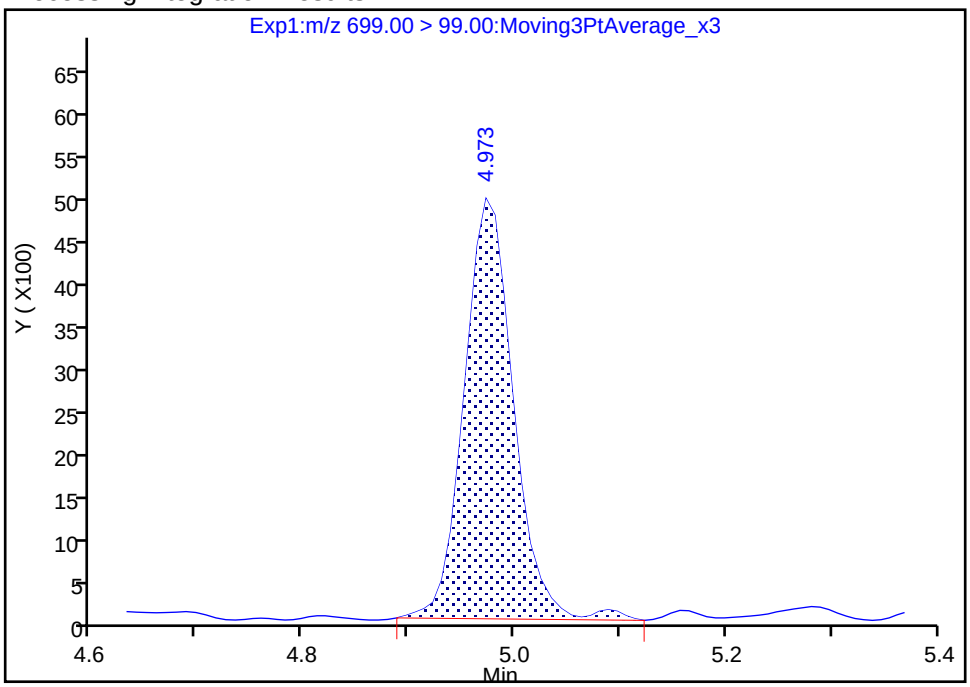
Data File: \\chromfs\Sacramento\ChromData\A9\20200911-103077.b\2020.09.11_A9_PFC_AA_005.d
Injection Date: 11-Sep-2020 09:40:01 Instrument ID: A9
Lims ID: CCVL
Client ID:
Operator ID: SACINSTRLCMS02 ALS Bottle#: 42 Worklist Smp#: 2
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFAS_A9 Limit Group: LC PFC ICAL
Column: Detector EXP1

## 59 Perfluorododecanesulfonic acid (, CAS: 79780-39-5

Signal: 2

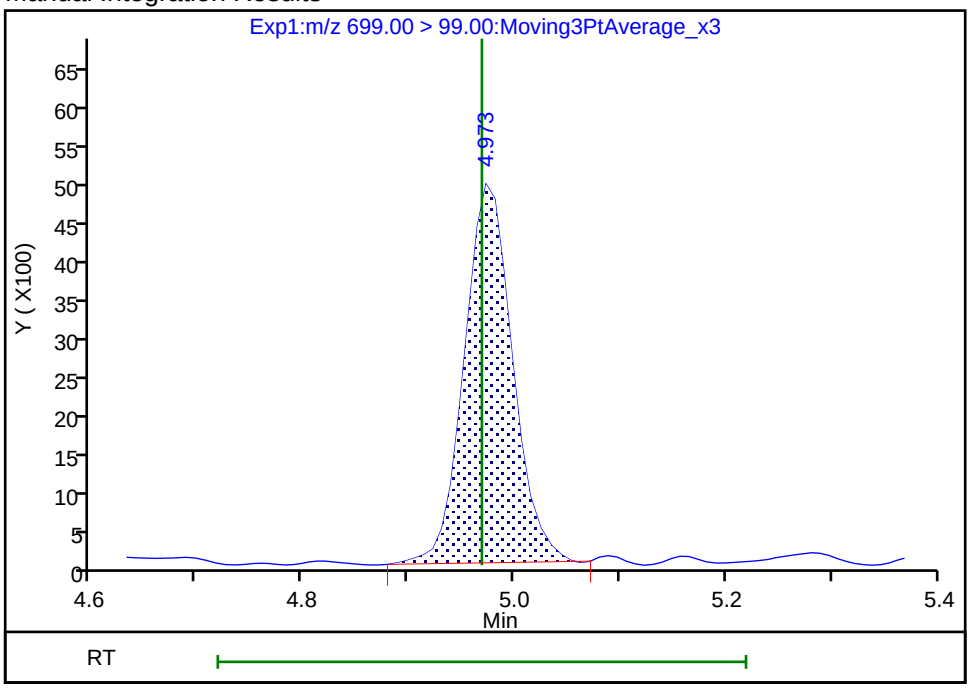
Processing Integration Results

RT: 4.97
Area: 15910
Amount: 0.043815
Amount Units: ng/ml




Manual Integration Results

RT: 4.97
Area: 15536
Amount: 0.043815
Amount Units: ng/ml




Reviewer: zibaa, 11-Sep-2020 10:24:58
Audit Action: Manually Integrated Audit Reason: Baseline

Eurofins TestAmerica, Sacramento

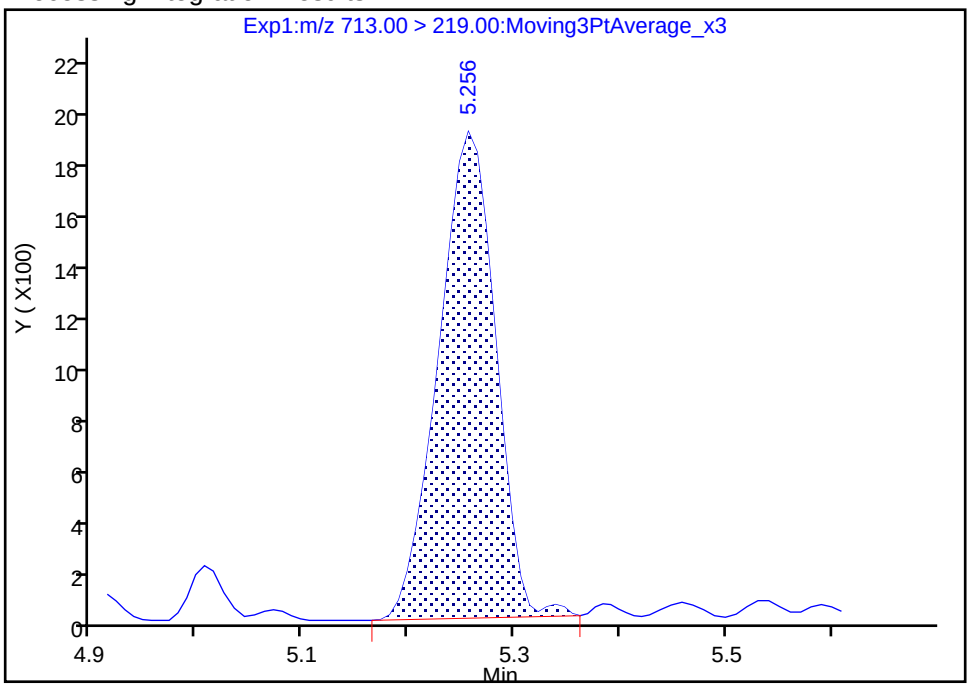
Data File: \\chromfs\Sacramento\ChromData\A9\20200911-103077.b\2020.09.11_A9_PFC_AA_005.d
Injection Date: 11-Sep-2020 09:40:01 Instrument ID: A9
Lims ID: CCVL
Client ID:
Operator ID: SACINSTRLCMS02 ALS Bottle#: 42 Worklist Smp#: 2
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFAS_A9 Limit Group: LC PFC ICAL
Column: Detector EXP1

## 61 Perfluorotetradecanoic acid, CAS: 376-06-7

Signal: 2

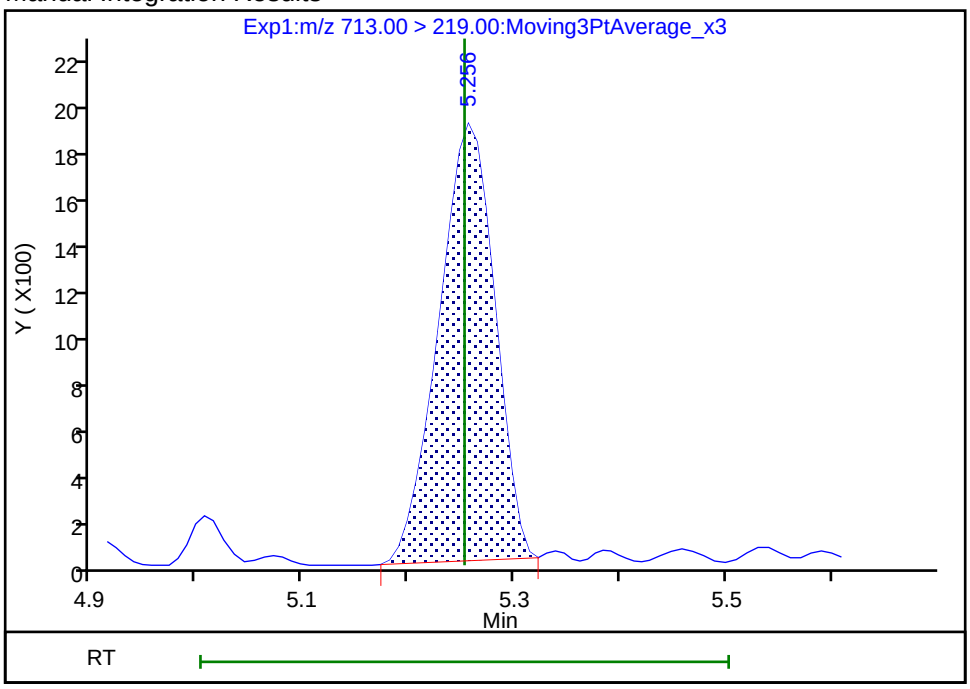
Processing Integration Results

RT: 5.26
Area: 7030
Amount: 0.047043
Amount Units: ng/ml




Manual Integration Results

RT: 5.26
Area: 6875
Amount: 0.047043
Amount Units: ng/ml




Reviewer: zibaa, 11-Sep-2020 10:29:40
Audit Action: Manually Integrated Audit Reason: Baseline

FORM VII
LCMS CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Sacramento  Job No.: 460-217547-1

SDG No.:

Lab Sample ID: CCV 320-411300/3  Calibration Date: 09/11/2020 09:49

Instrument ID: A9  Calib Start Date: 09/10/2020 10:18

GC Column: Acquity  ID: 2.10(mm)  Calib End Date: 09/10/2020 12:29

Lab File ID: 2020.09.11_A9_PFC_AA_006.d  Conc. Units: ng/mL

| ANALYTE | CURVE TYPE | AVE RRF | RRF | MIN RRF | CALC AMOUNT | SPIKE AMOUNT | %D | MAX %D |
|---|---|---|---|---|---|---|---|---|
| Perfluorobutanoic acid (PFBA) | AveID | 0.8734 | 0.9816 | | 1.12 | 1.00 | 12.4 | 40.0 |
| Perfluoropentanoic acid (PFPeA) | AveID | 1.018 | 1.125 | | 1.11 | 1.00 | 10.6 | 40.0 |
| Perfluorobutanesulfonic acid (PFBS) | AveID | 0.998 | 1.131 | | 1.00 | 0.884 | 13.3 | 50.0 |
| 4:2 FTS | AveID | 1.978 | 2.256 | | 1.07 | 0.934 | 14.1 | 50.0 |
| Perfluorohexanoic acid (PFHxA) | AveID | 0.8343 | 0.8835 | | 1.06 | 1.00 | 5.9 | 40.0 |
| Perfluoropentanesulfonic acid (PFPeS) | AveID | 0.4016 | 0.4260 | | 0.995 | 0.938 | 6.1 | 50.0 |
| HFPO-DA (GenX) | AveID | 0.3959 | 0.4087 | | 1.03 | 1.00 | 3.3 | 40.0 |
| Perfluoroheptanoic acid (PFHpA) | AveID | 1.109 | 1.180 | | 1.06 | 1.00 | 6.4 | 40.0 |
| Perfluorohexanesulfonic acid (PFHxS) | AveID | 1.180 | 1.132 | | 0.873 | 0.910 | -4.0 | 40.0 |
| 4,8-Dioxa-3H-perfluorononanoic acid (ADONA) | AveID | 1.813 | 2.052 | | 1.07 | 0.942 | 13.2 | 50.0 |
| 6:2 FTS | AveID | 1.542 | 1.557 | | 0.957 | 0.948 | 1.0 | 40.0 |
| Perfluoroheptanesulfonic Acid (PFHpS) | AveID | 0.9244 | 1.019 | | 1.05 | 0.952 | 10.2 | 50.0 |
| Perfluorooctanoic acid (PFOA) | AveID | 1.078 | 1.112 | | 1.03 | 1.00 | 3.1 | 40.0 |
| Perfluorooctanesulfonic acid (PFOS) | AveID | 1.040 | 1.106 | | 0.988 | 0.928 | 6.4 | 40.0 |
| Perfluorononanoic acid (PFNA) | AveID | 0.996 | 1.093 | | 1.10 | 1.00 | 9.8 | 40.0 |
| F-53B Major | AveID | 0.6274 | 0.6784 | | 1.01 | 0.932 | 8.1 | 50.0 |
| Perfluorooctanesulfonamide (FOSA) | AveID | 2.782 | 2.921 | | 1.05 | 1.00 | 5.0 | 40.0 |
| Perfluorononanesulfonic acid (PFNS) | AveID | 0.7591 | 0.8073 | | 1.02 | 0.960 | 6.4 | 50.0 |
| 8:2 FTS | AveID | 1.288 | 1.430 | | 1.06 | 0.958 | 11.0 | 40.0 |
| Perfluorodecanoic acid (PFDA) | AveID | 0.998 | 1.072 | | 1.07 | 1.00 | 7.4 | 40.0 |
| N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA) | AveID | 0.7593 | 0.8347 | | 1.10 | 1.00 | 9.9 | 40.0 |
| Perfluorodecanesulfonic acid (PFDS) | AveID | 0.8492 | 0.9191 | | 1.04 | 0.964 | 8.2 | 50.0 |
| Perfluoroundecanoic acid (PFUnA) | AveID | 0.6962 | 0.7675 | | 1.10 | 1.00 | 10.2 | 40.0 |
| N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA) | AveID | 0.8112 | 0.8284 | | 1.02 | 1.00 | 2.1 | 40.0 |
| NMeFOSE | AveID | 1.043 | 1.077 | | 1.03 | 1.00 | 3.3 | 40.0 |
| NMeFOSA | AveID | 1.043 | 1.147 | | 1.10 | 1.00 | 10.0 | 50.0 |
| F-53B Minor | AveID | 0.7398 | 0.8180 | | 1.04 | 0.942 | 10.6 | 50.0 |
| NEtFOSE | AveID | 0.9939 | 0.9615 | | 0.967 | 1.00 | -3.3 | 40.0 |
| Perfluorododecanoic acid (PFDoA) | AveID | 0.9197 | 1.026 | | 1.12 | 1.01 | 11.6 | 40.0 |
| NEtFOSA | AveID | 0.995 | 1.082 | | 1.09 | 1.00 | 8.7 | 40.0 |
| 10:2 FTS | AveID | 0.8214 | 0.8305 | | 0.975 | 0.964 | 1.1 | 50.0 |
| Perfluorododecanesulfonic acid (PFDoS) | AveID | 0.1269 | 0.1296 | | 0.989 | 0.968 | 2.2 | 50.0 |

FORM VII 537 (modified)

FORM VII
LCMS CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Sacramento  Job No.: 460-217547-1

SDG No.:

Lab Sample ID: CCV 320-411300/3  Calibration Date: 09/11/2020 09:49

Instrument ID: A9  Calib Start Date: 09/10/2020 10:18

GC Column: Acquity  ID: 2.10(mm)  Calib End Date: 09/10/2020 12:29

Lab File ID: 2020.09.11_A9_PFC_AA_006.d  Conc. Units: ng/mL

| ANALYTE | CURVE TYPE | AVE RRF | RRF | MIN RRF | CALC AMOUNT | SPIKE AMOUNT | %D | MAX %D |
|---|---|---|---|---|---|---|---|---|
| Perfluorotridecanoic acid (PFTriA) | AveID | 0.7267 | 0.8177 | | 1.13 | 1.00 | 12.5 | 50.0 |
| Perfluorotetradecanoic acid (PFTeA) | AveID | 0.1764 | 0.1904 | | 1.08 | 1.00 | 7.9 | 50.0 |
| Perfluoro-n-hexadecanoic acid (PFHxDA) | L2ID | | 0.9541 | | 1.02 | 1.00 | 2.1 | 50.0 |
| Perfluoro-n-octadecanoic acid (PFODA) | AveID | 0.7480 | 0.8287 | | 1.11 | 1.00 | 10.8 | 50.0 |
| 13C4 PFBA | Ave | 1.350 | 1.345 | | 2.49 | 2.50 | -0.3 | 50.0 |
| 13C5 PFPeA | Ave | 1.138 | 1.075 | | 2.36 | 2.50 | -5.6 | 50.0 |
| 13C3 PFBS | Ave | 2.249 | 2.250 | | 2.33 | 2.33 | 0.0 | 50.0 |
| M2-4:2 FTS | Ave | 0.2233 | 0.1796 | | 1.88 | 2.34 | -19.5 | 50.0 |
| 13C2 PFHxA | Ave | 1.058 | 1.041 | | 2.46 | 2.50 | -1.7 | 50.0 |
| 13C3 HFPO-DA | Ave | 0.7264 | 0.7021 | | 2.42 | 2.50 | -3.3 | 50.0 |
| 13C4 PFHpA | Ave | 1.030 | 1.051 | | 2.55 | 2.50 | 2.0 | 50.0 |
| 18O2 PFHxS | Ave | 1.076 | 1.116 | | 2.45 | 2.37 | 3.7 | 50.0 |
| M2-6:2 FTS | Ave | 0.1925 | 0.1663 | | 2.05 | 2.38 | -13.6 | 50.0 |
| 13C4 PFOA | Ave | 0.9654 | 0.9625 | | 2.49 | 2.50 | -0.3 | 50.0 |
| 13C4 PFOS | Ave | 1.123 | 1.113 | | 2.37 | 2.39 | -0.9 | 50.0 |
| 13C5 PFNA | Ave | 0.8376 | 0.8208 | | 2.45 | 2.50 | -2.0 | 50.0 |
| 13C8 FOSA | Ave | 0.5280 | 0.5302 | | 2.51 | 2.50 | 0.4 | 50.0 |
| 13C2 PFDA | Ave | 1.063 | 1.039 | | 2.44 | 2.50 | -2.3 | 50.0 |
| M2-8:2 FTS | Ave | 0.2357 | 0.1891 | | 1.92 | 2.40 | -19.8 | 50.0 |
| d3-NMeFOSAA | Ave | 0.5286 | 0.4395 | | 2.08 | 2.50 | -16.9 | 50.0 |
| 13C2 PFUnA | Ave | 0.8198 | 0.8012 | | 2.44 | 2.50 | -2.3 | 50.0 |
| d5-NEtFOSAA | Ave | 0.3541 | 0.3155 | | 2.23 | 2.50 | -10.9 | 50.0 |
| d7-N-MeFOSE-M | Ave | 0.1700 | 0.1691 | | 12.4 | 12.5 | -0.5 | 50.0 |
| d-N-MeFOSA-M | Ave | 0.2378 | 0.2238 | | 2.35 | 2.50 | -5.9 | 50.0 |
| d9-N-EtFOSE-M | Ave | 0.1785 | 0.1863 | | 13.0 | 12.5 | 4.4 | 50.0 |
| 13C2 PFDoA | Ave | 0.8051 | 0.7479 | | 2.32 | 2.50 | -7.1 | 50.0 |
| d-N-EtFOSA-M | Ave | 0.2469 | 0.2337 | | 2.37 | 2.50 | -5.4 | 50.0 |
| 13C2 PFTeDA | Ave | 0.5615 | 0.5166 | | 2.30 | 2.50 | -8.0 | 50.0 |
| 13C2 PFHxDA | Ave | 0.4152 | 0.3933 | | 2.37 | 2.50 | -5.3 | 50.0 |
| 13C8 PFOA | Ave | 0.8088 | 0.8820 | | 2.67 | 2.45 | 9.1 | 50.0 |
| 13C8 PFOS | Ave | 0.2542 | 0.2575 | | 2.42 | 2.39 | 1.3 | 50.0 |

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\A9\20200911-103077.b\2020.09.11_A9_PFC_AA_006.d
Lims ID: CCV L4
Client ID:
Sample Type: CCVIS
Inject. Date: 11-Sep-2020 09:49:21 ALS Bottle#: 43 Worklist Smp#: 3
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Sample Info: CCV L4 (30)
Misc. Info.: Plate: 1 Rack: 1
Operator ID: SACINSTRLCMS02 Instrument ID: A9
Sublist: chrom-PFAS_A9*sub16

Method: \\chromfs\Sacramento\ChromData\A9\20200911-103077.b\PFAS_A9.m
Limit Group: LC PFC ICAL
Last Update: 11-Sep-2020 10:32:41 Calib Date: 10-Sep-2020 12:29:20
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\A9\20200910-102999.b\2020.09.10_A9 _PFC_ICAL_AA_022.d

Column 1 : Det: EXP1
Process Host: CTX1061

First Level Reviewer: zibaa Date: 11-Sep-2020 10:32:41
Ratio Calibration: Average of Initial Calibration

| Signal | RT | EXP RT | DLT RT | REL RT | Response | Amount ng/ml | Ratio(Limits) | %Rec | S/N | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| D 1 13C4 PFBA | | | | | | | | | | |
| 217.00 > 172.00 | 1.900 | 1.900 | 0.0 | 0.564 | 8182312 | 2.49 | | 99.7 | 2849 | |
| 2 Perfluorobutanoic acid | | | | | | | | | | |
| 212.90 > 169.00 | 1.900 | 1.900 | 0.0 | 1.000 | 3212573 | 1.12 | | 112 | 207 | |
| D 4 13C5 PFPeA | | | | | | | | | | |
| 267.90 > 223.00 | 2.206 | 2.206 | 0.0 | 0.655 | 6538863 | 2.36 | | 94.4 | 2515 | |
| 3 Perfluoropentanoic acid | | | | | | | | | | |
| 262.90 > 219.00 | 2.206 | 2.206 | 0.0 | 1.000 | 2943171 | 1.11 | | 111 | 193 | |
| D 6 13C3 PFBS | | | | | | | | | | |
| 301.90 > 80.00 | 2.233 | 2.233 | 0.0 | 0.663 | 12726745 | 2.33 | | 100 | 3438 | |
| 5 Perfluorobutanesulfonic acid | | | | | | | | | | |
| 298.90 > 80.00 | 2.243 | 2.243 | 0.0 | 1.004 | 5471298 | 1.00 | Target=3.10 | 113 | 478 | |
| 298.90 > 99.00 | 2.233 | 2.243 | -0.010 | 1.000 | 1639065 | | 3.34(1.55-4.65) | | 259 | |
| D 8 M2-4:2 FTS | | | | | | | | | | |
| 329.00 > 81.00 | 2.525 | 2.525 | 0.0 | 0.750 | 1020578 | 1.88 | | 80.5 | 671 | |
| 9 1H,1H,2H,2H-perfluorohexanesulfo | | | | | | | | | | |
| 327.00 > 307.00 | 2.525 | 2.525 | 0.0 | 1.000 | 921116 | 1.07 | | 114 | 4674 | |
| D 10 13C2 PFHxA | | | | | | | | | | |
| 315.00 > 270.00 | 2.568 | 2.568 | 0.0 | 0.762 | 6329639 | 2.46 | | 98.3 | 2642 | |
| 11 Perfluorohexanoic acid | | | | | | | | | | |
| 313.00 > 269.00 | 2.568 | 2.568 | 0.0 | 1.000 | 2236775 | 1.06 | Target=9.68 | 106 | 270 | |
| 313.00 > 119.00 | 2.568 | 2.568 | 0.0 | 1.000 | 232044 | | 9.64(4.84-14.52) | | 167 | |
| 12 Perfluoropentanesulfonic acid | | | | | | | | | | |
| 349.00 > 80.00 | 2.578 | 2.578 | 0.0 | 1.155 | 2187389 | 1.00 | Target=2.01 | 106 | 667 | |
| 349.00 > 99.00 | 2.578 | 2.578 | 0.0 | 1.155 | 1107229 | | 1.98(1.00-3.01) | | 936 | |
| D 13 13C3 HFPO-DA | | | | | | | | | | |
| 287.00 > 169.00 | 2.686 | 2.686 | 0.0 | 0.798 | 4270812 | 2.42 | | 96.7 | 3565 | |

| Signal | RT | EXP RT | DLT RT | REL RT | Response | Amount ng/ml | Ratio(Limits) | %Rec | S/N | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| 14 Perfluoro(2-propoxypropanoic) ac | | | | | | | | | | |
| 285.00 > 169.00 | 2.686 | 2.686 | 0.0 | 1.000 | 698262 | 1.03 | | 103 | 2453 | |
| D 15 13C4 PFHpA | | | | | | | | | | |
| 367.00 > 322.00 | 2.957 | 2.957 | 0.0 | 0.878 | 6391817 | 2.55 | | 102 | 3792 | |
| 18 Perfluoroheptanoic acid | | | | | | | | | | |
| 363.00 > 319.00 | 2.963 | 2.963 | 0.0 | 1.002 | 3016356 | 1.06 | Target=3.74 | 106 | 442 | |
| 363.00 > 169.00 | 2.957 | 2.963 | -0.006 | 1.000 | 749023 | | 4.03(1.87-5.61) | | 609 | |
| 16 Perfluorohexanesulfonic acid | | | | | | | | | | M |
| 399.00 > 80.00 | 2.963 | 2.963 | 0.0 | 1.000 | 2796181 | 0.8732 | Target=3.29 | 96.0 | 613 | |
| 399.00 > 99.00 | 2.963 | 2.963 | 0.0 | 1.000 | 832887 | | 3.36(1.65-4.94) | | 442 | M |
| D 17 18O2 PFHxS | | | | | | | | | | |
| 403.00 > 84.00 | 2.963 | 2.963 | 0.0 | 0.880 | 6420473 | 2.45 | | 104 | 3049 | |
| 19 DONA | | | | | | | | | | |
| 377.00 > 251.00 | 3.009 | 3.009 | 0.0 | 0.804 | 5234589 | 1.07 | Target=1.80 | 113 | 5005 | |
| 377.00 > 85.00 | 3.009 | 3.009 | 0.0 | 0.804 | 2794325 | | 1.87(0.90-2.70) | | 2524 | |
| D 20 M2-6:2 FTS | | | | | | | | | | |
| 429.00 > 81.00 | 3.345 | 3.345 | 0.0 | 0.993 | 960763 | 2.05 | | 86.4 | 1102 | |
| 22 1H,1H,2H,2H-perfluorooctanesulfo | | | | | | | | | | |
| 427.00 > 407.00 | 3.345 | 3.345 | 0.0 | 1.000 | 596992 | 0.9572 | | 101 | 837 | |
| $ 21 13C8 PFOA | | | | | | | | | | |
| 421.00 > 376.00 | 3.361 | 3.361 | 0.0 | 0.998 | 5252443 | 2.67 | | 109 | 5323 | |
| 23 Perfluoroheptanesulfonic acid | | | | | | | | | | |
| 449.00 > 80.00 | 3.361 | 3.361 | 0.0 | 0.897 | 2627338 | 1.05 | Target=3.65 | 110 | 802 | |
| 449.00 > 99.00 | 3.361 | 3.361 | 0.0 | 0.897 | 705009 | | 3.73(1.83-5.48) | | 1316 | |
| 24 Perfluorooctanoic acid | | | | | | | | | | |
| 413.00 > 369.00 | 3.368 | 3.368 | 0.0 | 1.000 | 2607737 | 1.03 | Target=2.37 | 103 | 571 | |
| 413.00 > 169.00 | 3.368 | 3.368 | 0.0 | 1.000 | 1120969 | | 2.33(1.19-3.56) | | 1351 | |
| * 25 13C2 PFOA | | | | | | | | | | |
| 415.00 > 370.00 | 3.368 | 3.368 | 0.0 | | 6083088 | 2.50 | | | 4477 | |
| D 26 13C4 PFOA | | | | | | | | | | |
| 417.00 > 372.00 | 3.368 | 3.368 | 0.0 | 1.000 | 5855115 | 2.49 | | 99.7 | 4848 | |
| 28 Perfluorooctanesulfonic acid | | | | | | | | | | |
| 499.00 > 80.00 | 3.744 | 3.744 | 0.0 | 1.000 | 2780560 | 0.9875 | Target=4.12 | 106 | 359 | |
| 499.00 > 99.00 | 3.744 | 3.744 | 0.0 | 1.000 | 639350 | | 4.35(2.06-6.17) | | 1241 | |
| D 31 13C4 PFOS | | | | | | | | | | |
| 503.00 > 80.00 | 3.744 | 3.744 | 0.0 | 1.112 | 6472511 | 2.37 | | 99.1 | 2069 | |
| $ 27 13C8 PFOS | | | | | | | | | | |
| 507.00 > 99.00 | 3.744 | 3.744 | 0.0 | 1.112 | 1497188 | 2.42 | | 101 | 2246 | |
| D 29 13C5 PFNA | | | | | | | | | | |
| 468.00 > 423.00 | 3.754 | 3.754 | 0.0 | 1.114 | 4993249 | 2.45 | | 98.0 | 3680 | |
| 30 Perfluorononanoic acid | | | | | | | | | | |
| 463.00 > 419.00 | 3.763 | 3.763 | 0.0 | 1.002 | 2188073 | 1.10 | Target=4.21 | 110 | 1476 | |
| 463.00 > 169.00 | 3.763 | 3.763 | 0.0 | 1.002 | 506067 | | 4.32(2.11-6.32) | | 863 | |
| 32 9-Chlorohexadecafluoro-3-oxanona | | | | | | | | | | |
| 531.00 > 351.00 | 3.947 | 3.947 | 0.0 | 1.054 | 1712341 | 1.01 | | 108 | 4313 | |
| D 36 13C8 FOSA | | | | | | | | | | |
| 506.00 > 78.00 | 4.083 | 4.083 | 0.0 | 1.212 | 3225117 | 2.51 | | 100 | 3113 | |

| Signal | RT | EXP RT | DLT RT | REL RT | Response | Amount ng/ml | Ratio(Limits) | %Rec | S/N | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| 34 Perfluorooctanesulfonamide | | | | | | | | | | |
| 498.00 > 78.00 | 4.083 | 4.083 | 0.0 | 1.000 | 3768857 | 1.05 | | 105 | 2389 | |
| 35 Perfluorononanesulfonic acid | | | | | | | | | | |
| 549.00 > 80.00 | 4.092 | 4.092 | 0.0 | 1.093 | 2098790 | 1.02 | Target=5.56 | 106 | 1415 | |
| 549.00 > 99.00 | 4.092 | 4.092 | 0.0 | 1.093 | 356161 | | 5.89(2.78-8.34) | | 1098 | |
| D 33 13C2 PFDA | | | | | | | | | | |
| 515.00 > 470.00 | 4.118 | 4.118 | 0.0 | 1.223 | 6320469 | 2.44 | | 97.7 | 3906 | |
| 38 Perfluorodecanoic acid | | | | | | | | | | |
| 513.00 > 469.00 | 4.118 | 4.118 | 0.0 | 1.000 | 2710195 | 1.07 | Target=14.33 | 107 | 1323 | |
| 513.00 > 169.00 | 4.118 | 4.118 | 0.0 | 1.000 | 186071 | | 14.57(7.16-21.49) | | 296 | |
| 39 1H,1H,2H,2H-perfluorodecanesulfo | | | | | | | | | | |
| 527.00 > 507.00 | 4.118 | 4.118 | 0.0 | 0.998 | 630149 | 1.06 | | 111 | 2918 | |
| D 37 M2-8:2 FTS | | | | | | | | | | |
| 529.00 > 81.00 | 4.127 | 4.127 | 0.0 | 1.225 | 1101883 | 1.92 | | 80.2 | 980 | |
| D 41 d3-NMeFOSAA | | | | | | | | | | |
| 573.00 > 419.00 | 4.280 | 4.280 | 0.0 | 1.271 | 2673305 | 2.08 | | 83.1 | 1784 | |
| 40 N-methylperfluorooctanesulfonami | | | | | | | | | | M |
| 570.00 > 419.00 | 4.289 | 4.289 | 0.0 | 1.002 | 892527 | 1.10 | | 110 | 197 | M |
| 42 Perfluorodecanesulfonic acid | | | | | | | | | | |
| 599.00 > 80.00 | 4.418 | 4.418 | 0.0 | 1.180 | 2399590 | 1.04 | Target=4.29 | 108 | 1096 | |
| 599.00 > 99.00 | 4.418 | 4.418 | 0.0 | 1.180 | 503645 | | 4.76(2.15-6.44) | | 1125 | |
| D 46 13C2 PFUnA | | | | | | | | | | |
| 565.00 > 520.00 | 4.444 | 4.444 | 0.0 | 1.319 | 4874030 | 2.44 | | 97.7 | 7582 | |
| 43 Perfluoroundecanoic acid | | | | | | | | | | |
| 563.00 > 519.00 | 4.444 | 4.444 | 0.0 | 1.000 | 1497842 | 1.10 | Target=6.74 | 110 | 1810 | |
| 563.00 > 169.00 | 4.444 | 4.444 | 0.0 | 1.000 | 216009 | | 6.93(3.37-10.11) | | 755 | |
| D 45 d5-NEtFOSAA | | | | | | | | | | |
| 589.00 > 419.00 | 4.452 | 4.452 | 0.0 | 1.322 | 1919429 | 2.23 | | 89.1 | 1745 | |
| 44 N-ethylperfluorooctanesulfonamid | | | | | | | | | | |
| 584.00 > 419.00 | 4.452 | 4.452 | 0.0 | 1.000 | 636037 | 1.02 | | 102 | 8262 | |
| D 47 d7-N-MeFOSE-M | | | | | | | | | | |
| 623.00 > 59.00 | 4.538 | 4.538 | 0.0 | 1.347 | 5142286 | 12.4 | | 99.5 | 4588 | |
| 48 2-(N-methylperfluoro-1-octanesul | | | | | | | | | | |
| 616.00 > 59.00 | 4.555 | 4.555 | 0.0 | 1.004 | 443230 | 1.03 | | 103 | 817 | |
| D 49 d-N-MeFOSA-M | | | | | | | | | | |
| 515.00 > 169.00 | 4.564 | 4.564 | 0.0 | 1.355 | 1361469 | 2.35 | | 94.1 | 231 | |
| 50 NMeFOSA | | | | | | | | | | |
| 512.00 > 169.00 | 4.564 | 4.564 | 0.0 | 1.000 | 624704 | 1.10 | | 110 | 1282 | |
| 51 11-Chloroeicosafluoro-3-oxaundec | | | | | | | | | | |
| 631.00 > 451.00 | 4.582 | 4.582 | 0.0 | 1.224 | 2086836 | 1.04 | | 111 | 4076 | |
| D 53 d9-N-EtFOSE-M | | | | | | | | | | |
| 639.00 > 59.00 | 4.713 | 4.713 | 0.0 | 1.399 | 5665176 | 13.0 | | 104 | 3508 | |
| D 56 13C2 PFDoA | | | | | | | | | | |
| 615.00 > 570.00 | 4.732 | 4.732 | 0.0 | 1.405 | 4549362 | 2.32 | | 92.9 | 4558 | |
| 54 2-(N-ethylperfluoro-1-octanesulf | | | | | | | | | | |
| 630.00 > 59.00 | 4.732 | 4.732 | 0.0 | 1.004 | 435769 | 0.9675 | | 96.7 | 840 | |

| Signal | RT | EXP RT | DLT RT | REL RT | Response | Amount ng/ml | Ratio(Limits) | %Rec | S/N | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| 52 Perfluorododecanoic acid | | | | | | | | | | |
| 613.00 > 569.00 | 4.732 | 4.732 | 0.0 | 1.000 | 1878835 | 1.12 | Target=6.67 | 112 | 1850 | |
| 613.00 > 169.00 | 4.732 | 4.732 | 0.0 | 1.000 | 251553 | | 7.47(3.34-10.01) | | 1029 | |
| D 58 d-N-EtFOSA-M | | | | | | | | | | |
| 531.00 > 169.00 | 4.741 | 4.741 | 0.0 | 1.408 | 1421335 | 2.37 | | 94.6 | 1041 | |
| 57 N-ethylperfluoro-1-octanesulfona | | | | | | | | | | |
| 526.00 > 169.00 | 4.748 | 4.748 | 0.0 | 1.002 | 615223 | 1.09 | | 109 | 735 | |
| 55 1H,1H,2H,2H-perfluorododecanesul | | | | | | | | | | |
| 627.00 > 607.00 | 4.756 | 4.756 | 0.0 | 1.152 | 368341 | 0.9747 | | 101 | 1614 | |
| 59 Perfluorododecanesulfonic acid ( | | | | | | | | | | |
| 699.00 > 80.00 | 4.969 | 4.969 | 0.0 | 1.327 | 339727 | 0.9889 | Target=1.02 | 102 | 805 | |
| 699.00 > 99.00 | 4.969 | 4.969 | 0.0 | 1.327 | 316844 | | 1.07(0.51-1.53) | | 1507 | |
| 60 Perfluorotridecanoic acid | | | | | | | | | | |
| 663.00 > 619.00 | 5.003 | 5.003 | 0.0 | 1.057 | 1487969 | 1.13 | Target=4.80 | 113 | 4097 | |
| 663.00 > 169.00 | 5.003 | 5.003 | 0.0 | 1.057 | 307592 | | 4.84(2.40-7.20) | | 2135 | |
| D 62 13C2 PFTeDA | | | | | | | | | | |
| 715.00 > 670.00 | 5.253 | 5.253 | 0.0 | 1.559 | 3142226 | 2.30 | | 92.0 | 7119 | |
| 61 Perfluorotetradecanoic acid | | | | | | | | | | |
| 713.00 > 169.00 | 5.253 | 5.253 | 0.0 | 1.000 | 239510 | 1.08 | Target=1.37 | 108 | 2201 | |
| 713.00 > 219.00 | 5.244 | 5.253 | -0.009 | 0.998 | 160690 | | 1.49(0.69-2.06) | | 1074 | |
| 64 Perfluorohexadecanoic acid | | | | | | | | | | |
| 813.00 > 769.00 | 5.690 | 5.690 | 0.0 | 1.000 | 913109 | 1.02 | Target=4.63 | 102 | 1897 | |
| 813.00 > 169.00 | 5.690 | 5.690 | 0.0 | 1.000 | 191156 | | 4.78(2.32-6.95) | | 1585 | |
| D 63 13C2 PFHxDA | | | | | | | | | | |
| 815.00 > 770.00 | 5.690 | 5.690 | 0.0 | 1.689 | 2392627 | 2.37 | | 94.7 | 5593 | |
| 65 Perfluorooctadecanoic acid | | | | | | | | | | |
| 913.00 > 869.00 | 6.120 | 6.120 | 0.0 | 1.076 | 793093 | 1.11 | Target=4.01 | 111 | 1614 | |
| 913.00 > 169.00 | 6.120 | 6.120 | 0.0 | 1.076 | 191296 | | 4.15(2.01-6.02) | | 1075 | |

## QC Flag Legend

Review Flags

M - Manually Integrated

## Reagents:

LCPFC_LL4_00030 Amount Added: 1.00 Units: mL

Report Date: 11-Sep-2020 10:32:42 Chrom Revision: 2.3 09-Sep-2020 15:12:58

Eurofins TestAmerica, Sacramento

Data File: \\chromfs\Sacramento\ChromData\A9\20200911-103077.b\2020.09.11_A9_PFC_AA_006.d

Injection Date: 11-Sep-2020 09:49:21 Instrument ID: A9

Lims ID: CCV L4

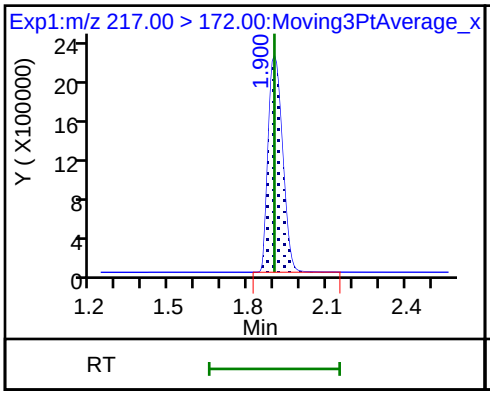
Client ID:

Operator ID: SACINSTRLCMS02 ALS Bottle#: 43 Worklist Smp#: 3

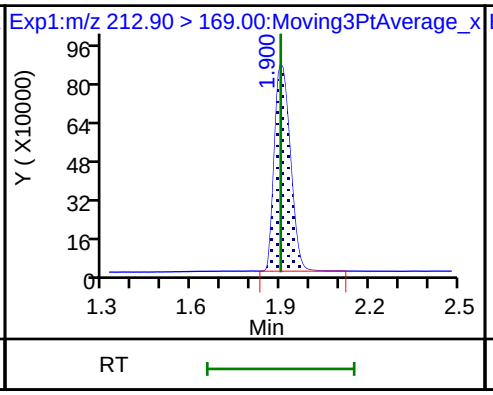
Injection Vol: 20.0 ul Dil. Factor: 1.0000

Method: PFAS_A9 Limit Group: LC PFC ICAL

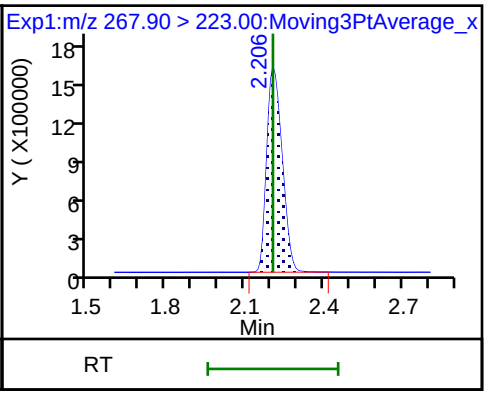
D 1 13C4 PFBA



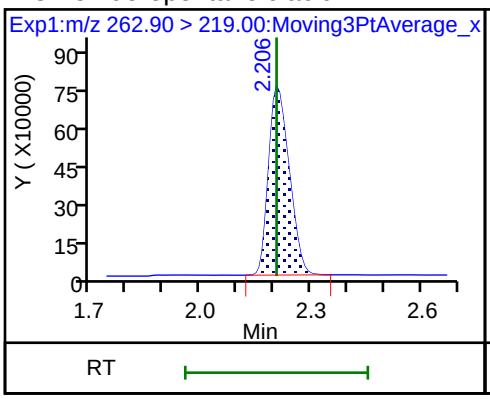

2 Perfluorobutanoic acid



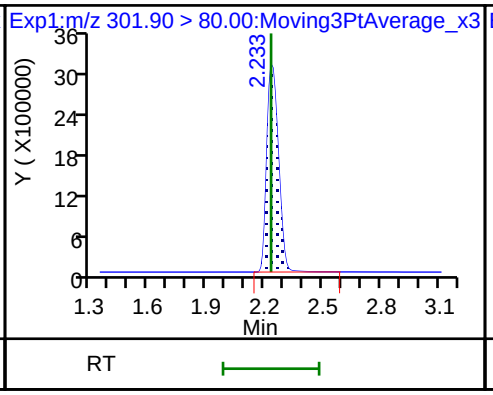

D 4 13C5 PFPeA



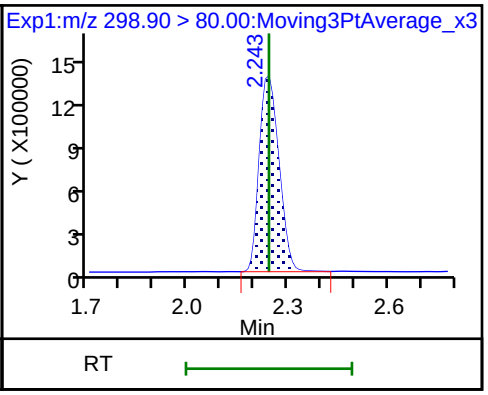

3 Perfluoropentanoic acid



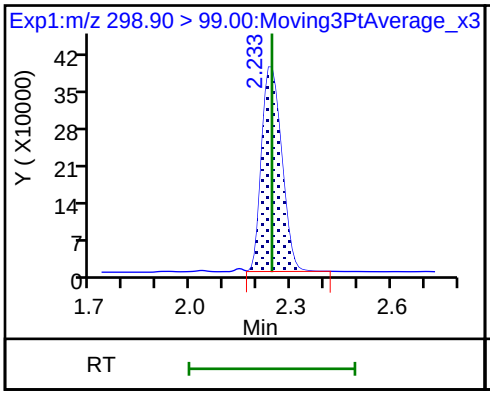

D 6 13C3 PFBS



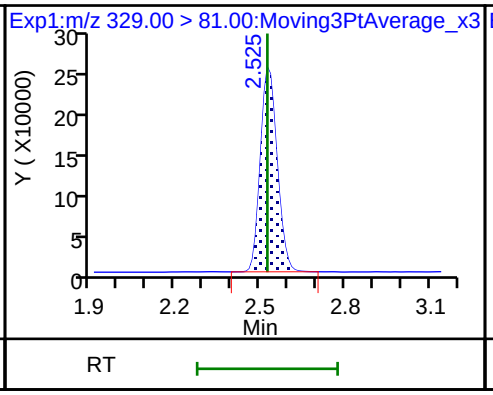

5 Perfluorobutanesulfonic acid



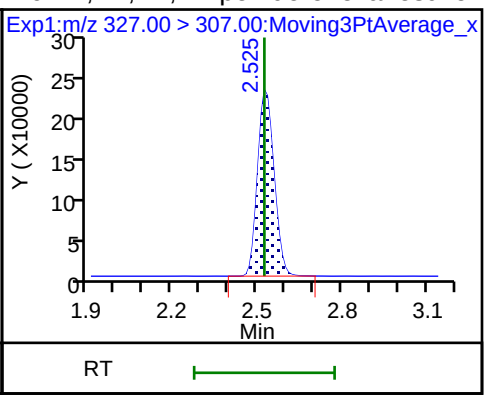

5 Perfluorobutanesulfonic acid



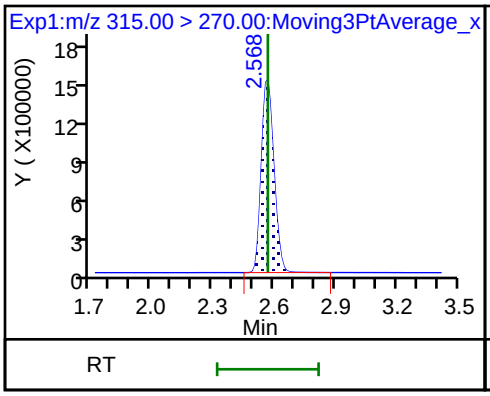

D 8 M2-4:2 FTS



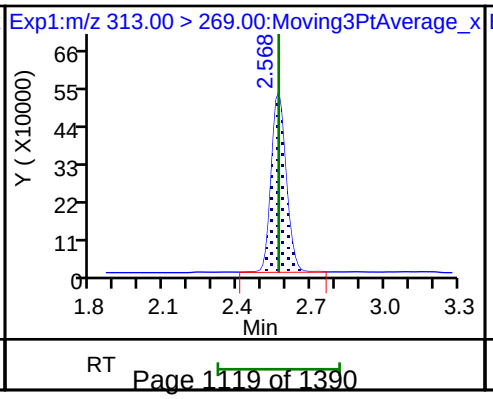

9 1H,1H,2H,2H-perfluorohexanesulfo



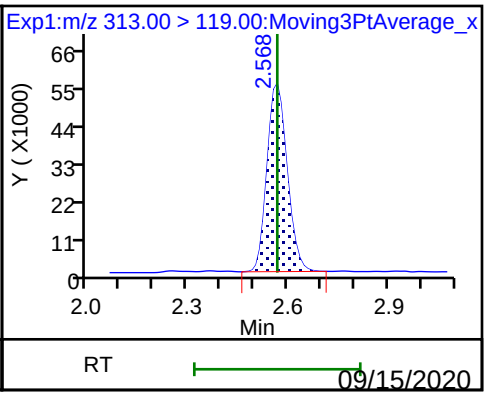

D 10 13C2 PFHxA



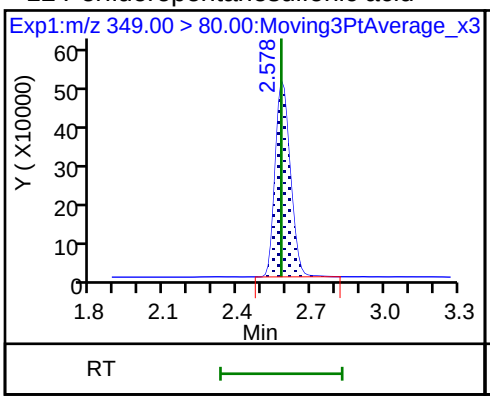

11 Perfluorohexanoic acid



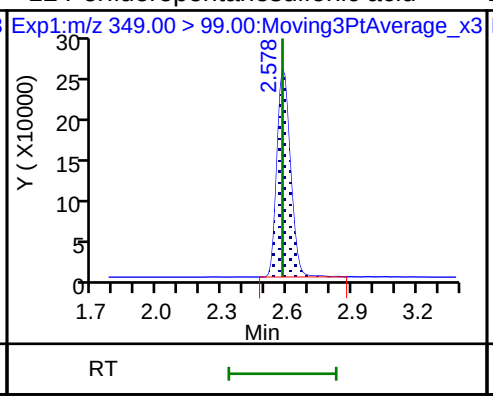

11 Perfluorohexanoic acid



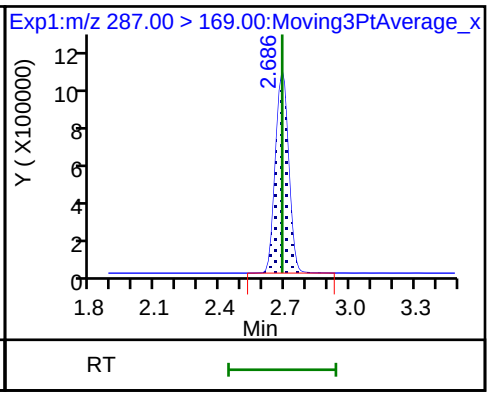
12 Perfluoropentanesulfonic acid



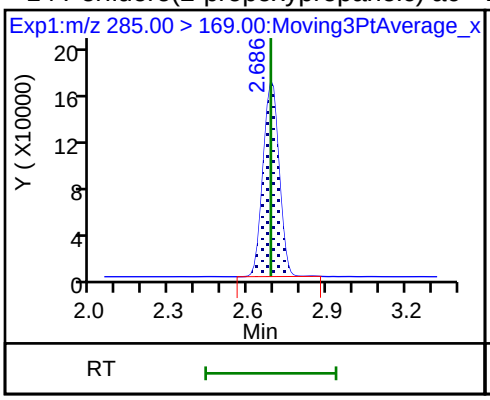

12 Perfluoropentanesulfonic acid



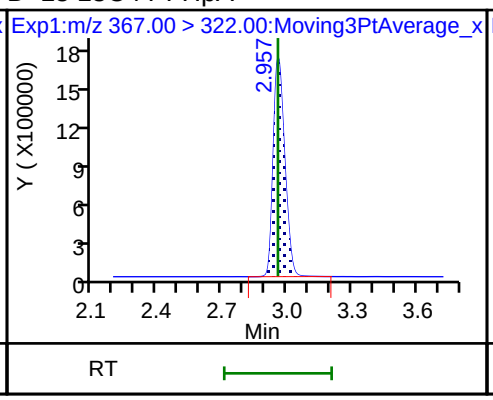

D 13 13C3 HFPO-DA



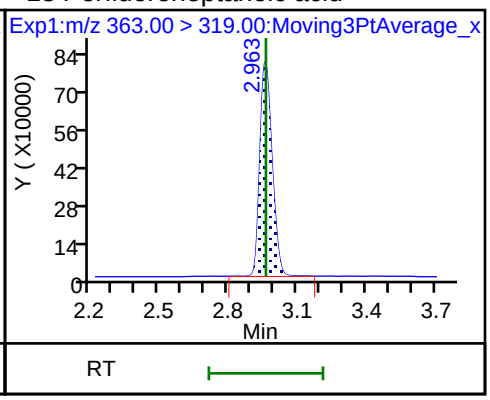

14 Perfluoro(2-propoxypropanoic) ac



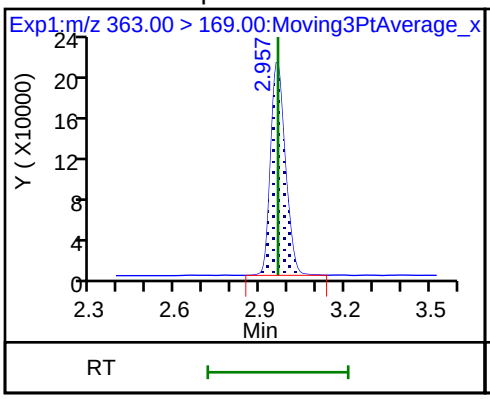

D 15 13C4 PFHpA



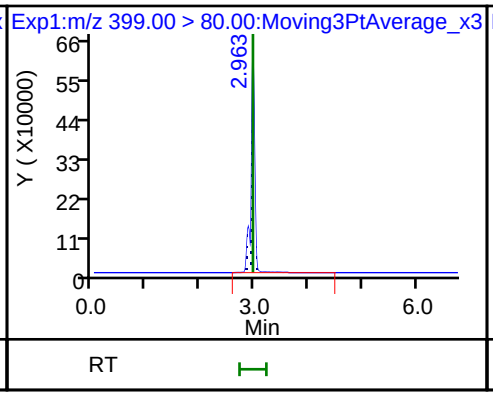

18 Perfluoroheptanoic acid



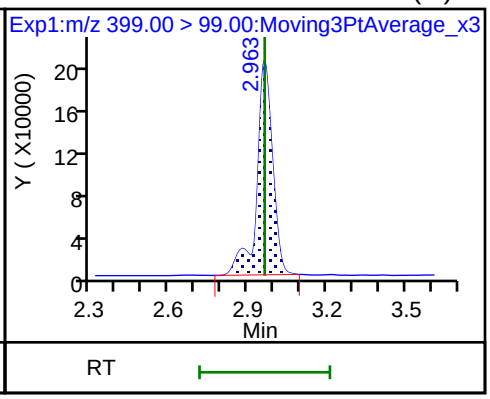

18 Perfluoroheptanoic acid



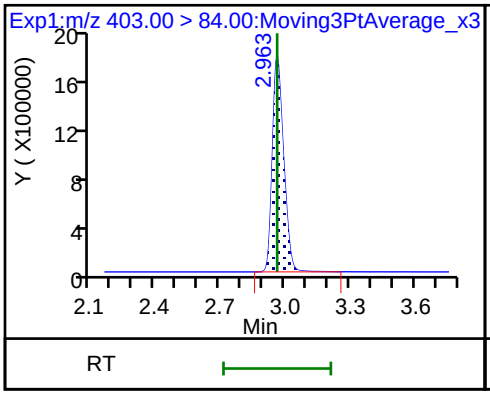

16 Perfluorohexanesulfonic acid



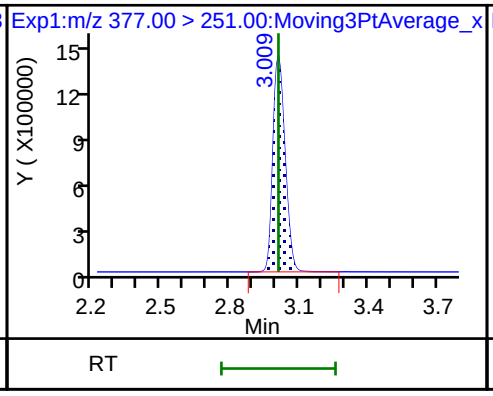

16 Perfluorohexanesulfonic acid (M)



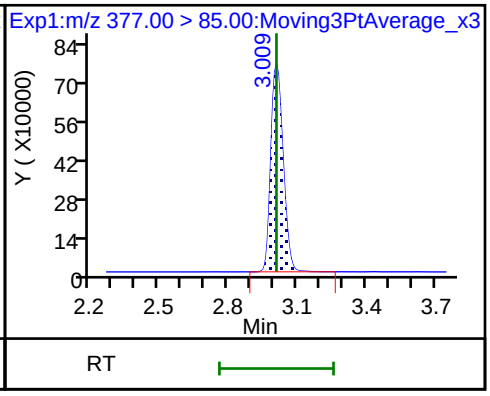

D 17 18O2 PFHxS



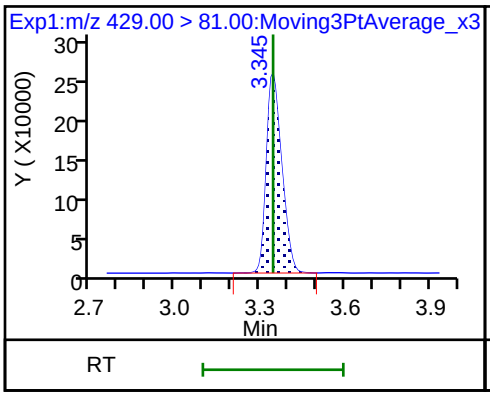

19 DONA



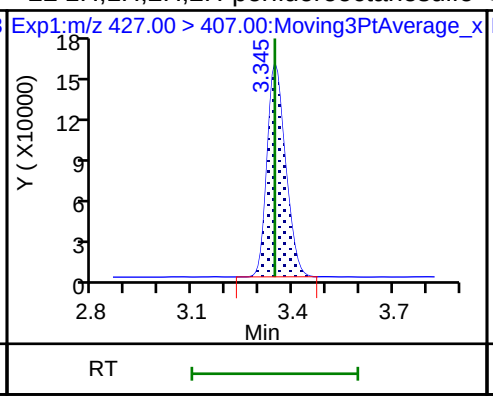

19 DONA



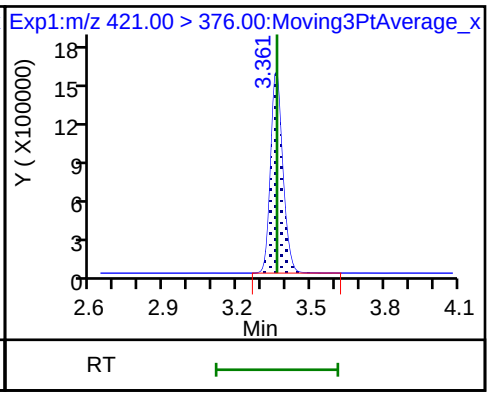
D 20 M2-6:2 FTS



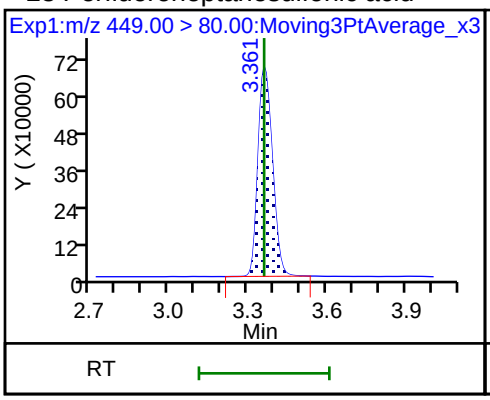

22 1H,1H,2H,2H-perfluorooctanesulfo



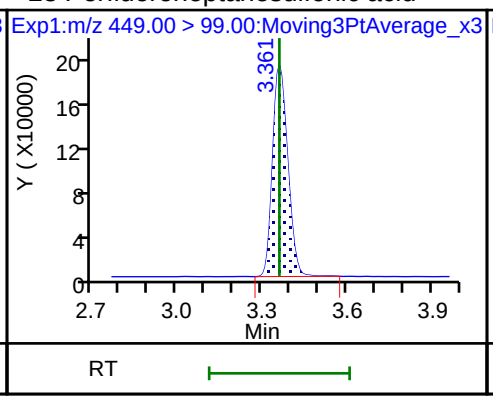

$ 21 13C8 PFOA



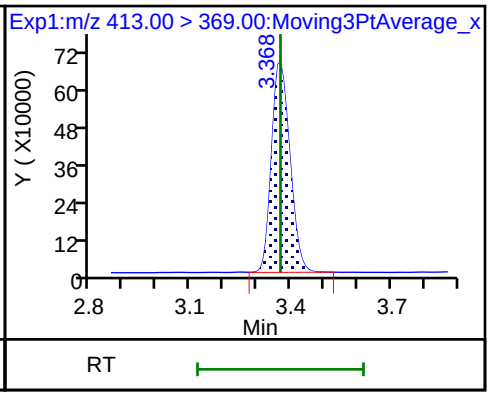

23 Perfluoroheptanesulfonic acid



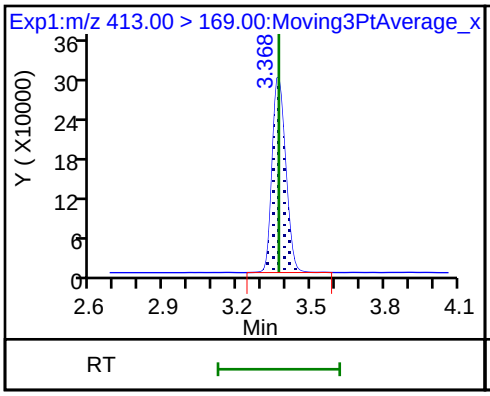

23 Perfluoroheptanesulfonic acid



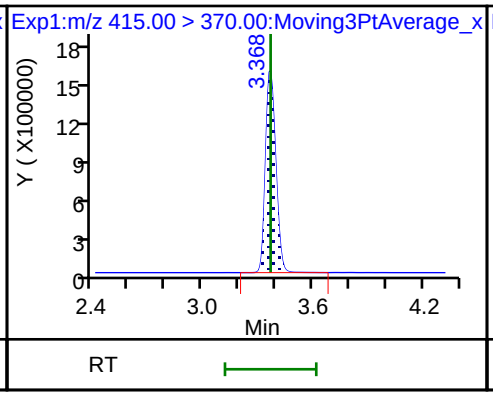

24 Perfluorooctanoic acid



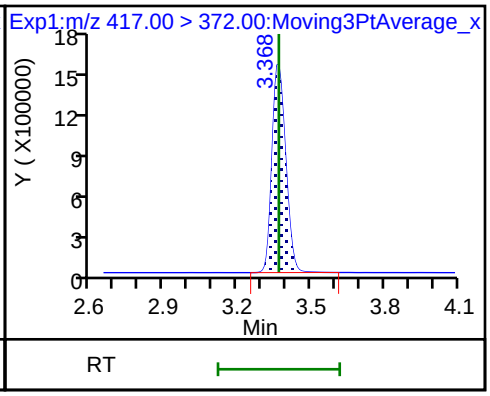

24 Perfluorooctanoic acid



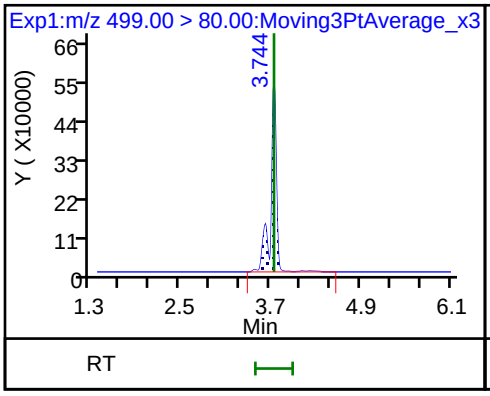

* 25 13C2 PFOA



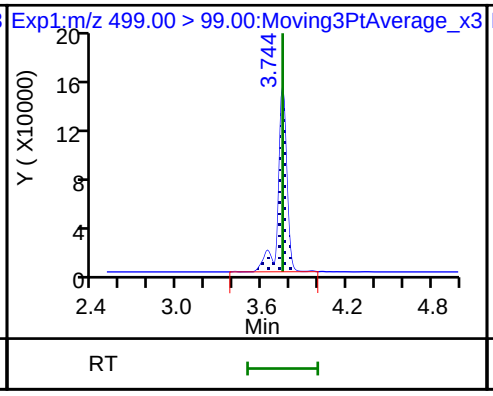

D 26 13C4 PFOA



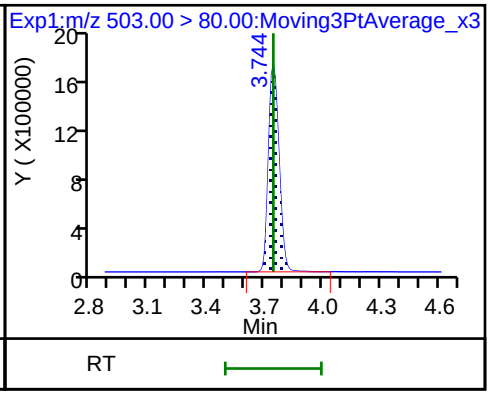

28 Perfluorooctanesulfonic acid



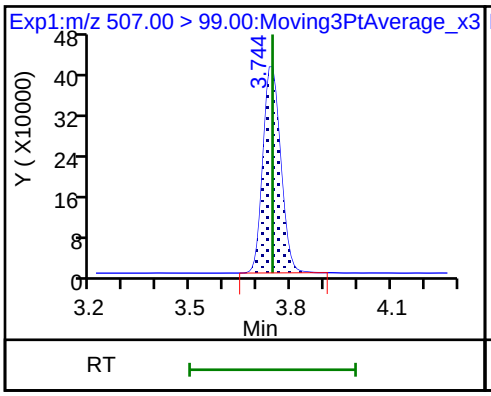

28 Perfluorooctanesulfonic acid




D 31 13C4 PFOS



$ 27 13C8 PFOS

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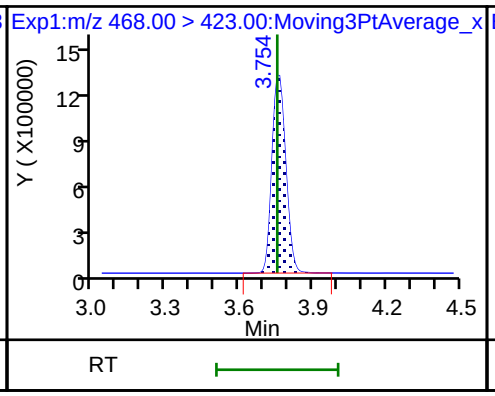
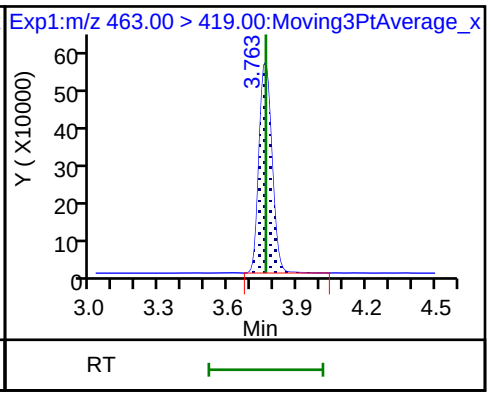
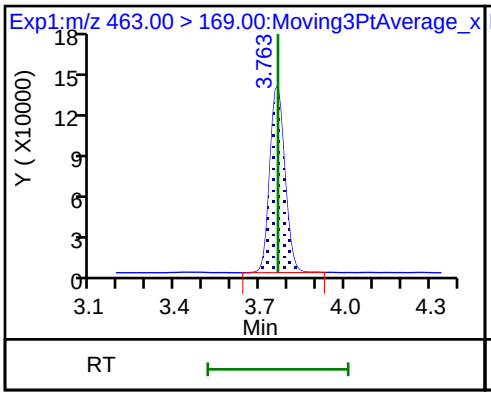


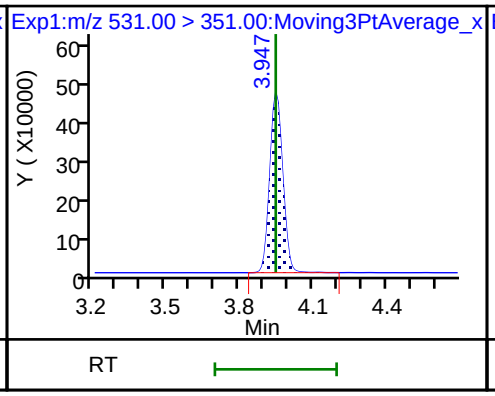

30 Perfluorononanoic acid



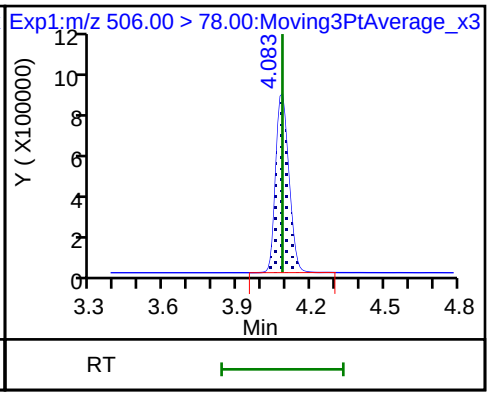

30 Perfluorononanoic acid



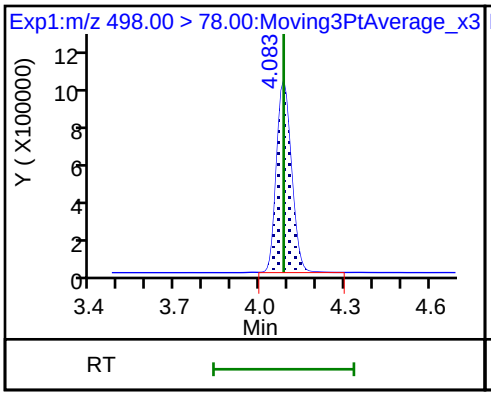

32 9-Chlorohexadecafluoro-3-oxanona



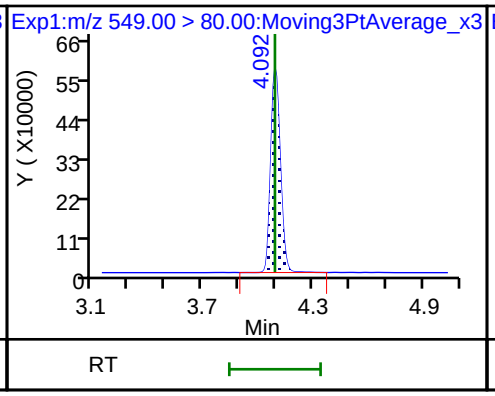

D 36 13C8 FOSA



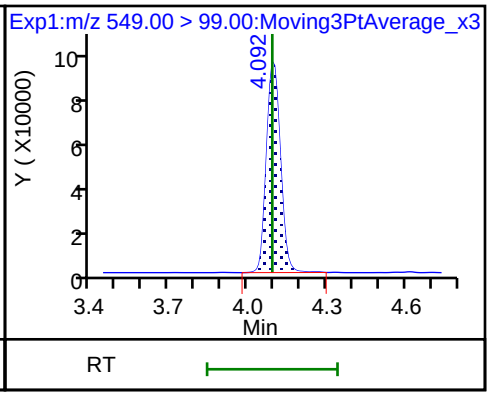

34 Perfluorooctanesulfonamide



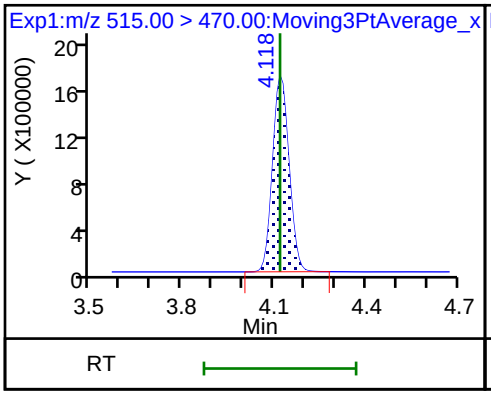

35 Perfluorononanesulfonic acid



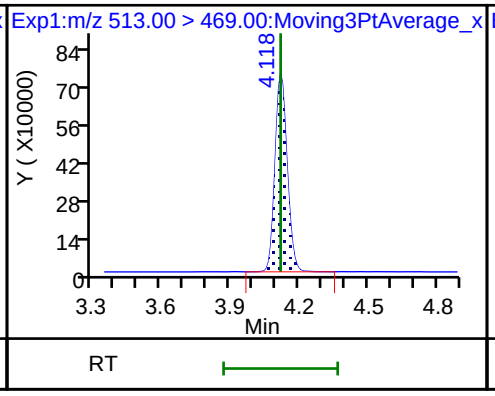

35 Perfluorononanesulfonic acid



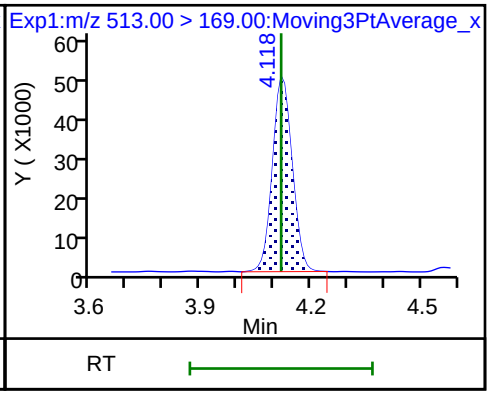

D 33 13C2 PFDA



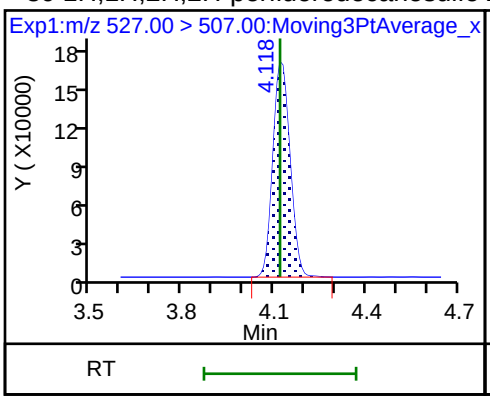

38 Perfluorodecanoic acid



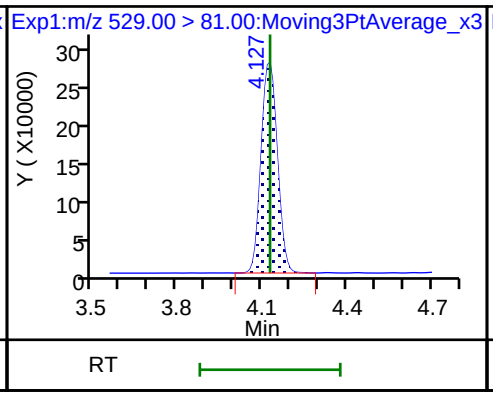

38 Perfluorodecanoic acid



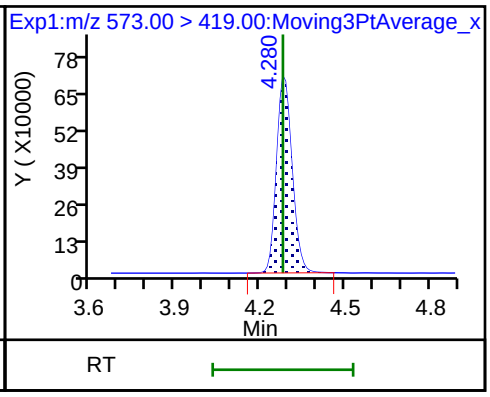
39 1H,1H,2H,2H-perfluorodecanesulfo



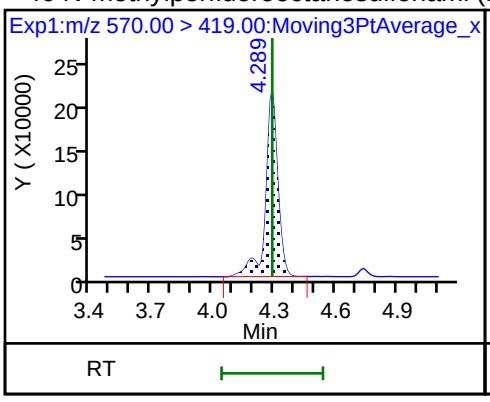

D 37 M2-8:2 FTS



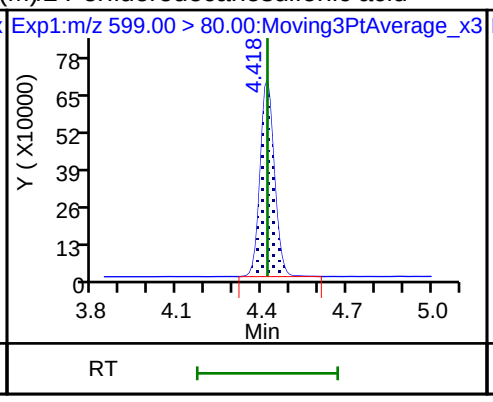

D 41 d3-NMeFOSAA



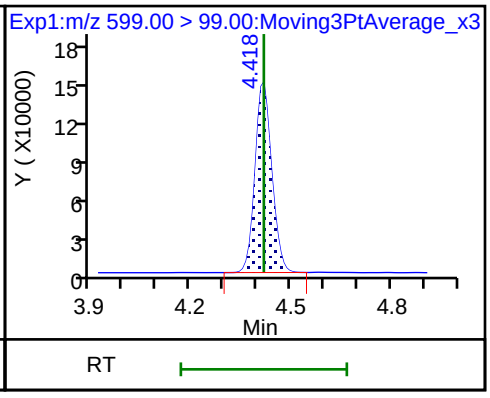

40 N-methylperfluorooctanesulfonami (M)



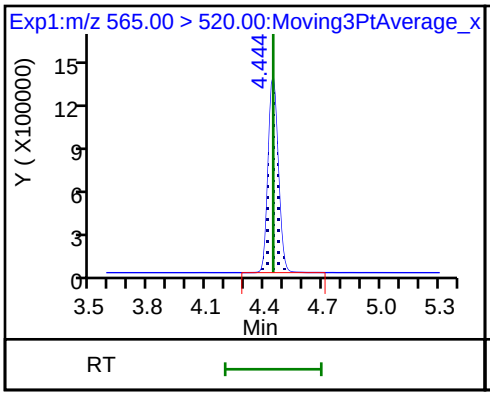

42 Perfluorodecanesulfonic acid



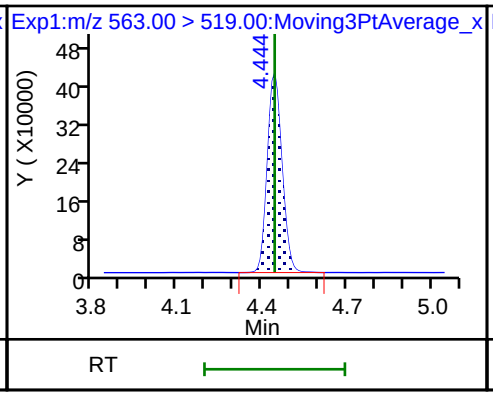

42 Perfluorodecanesulfonic acid



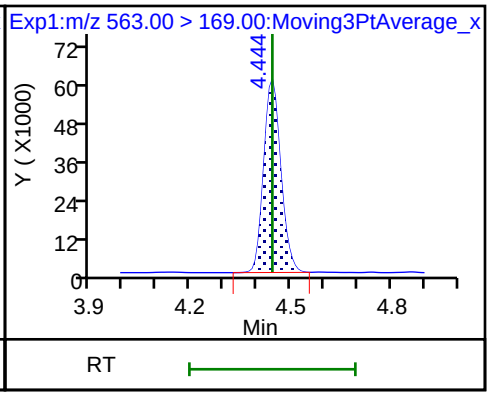

D 46 13C2 PFUnA



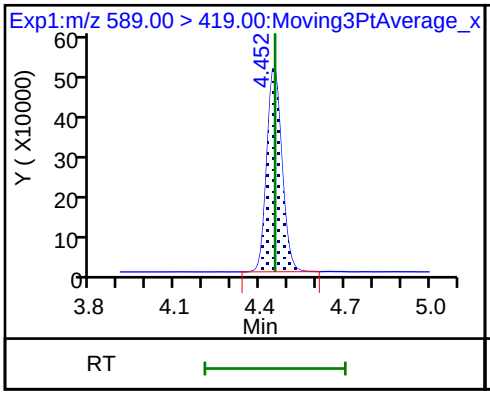

43 Perfluoroundecanoic acid



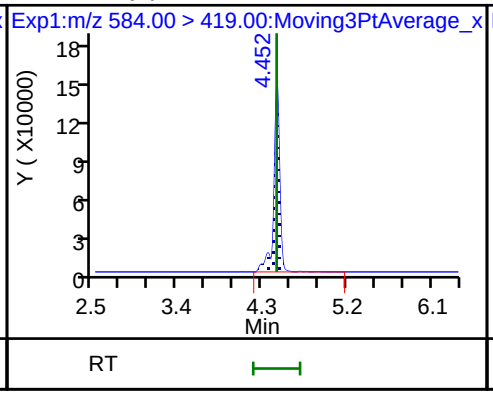

43 Perfluoroundecanoic acid



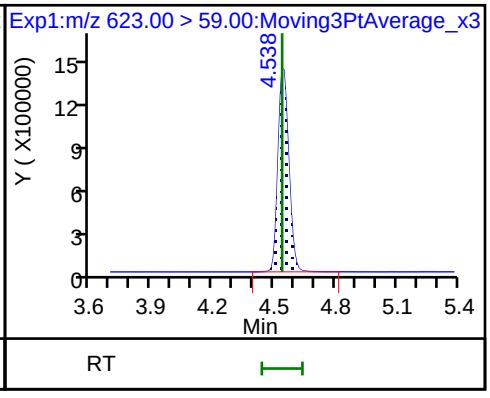

D 45 d5-NEtFOSAA



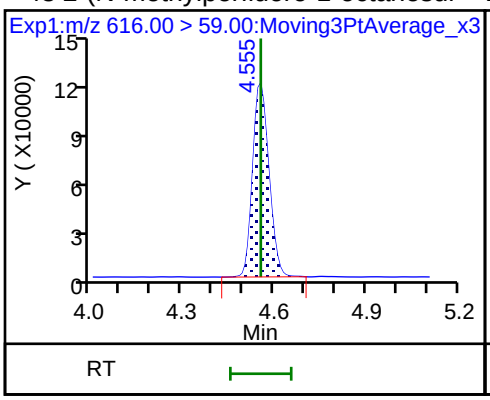

44 N-ethylperfluorooctanesulfonamid



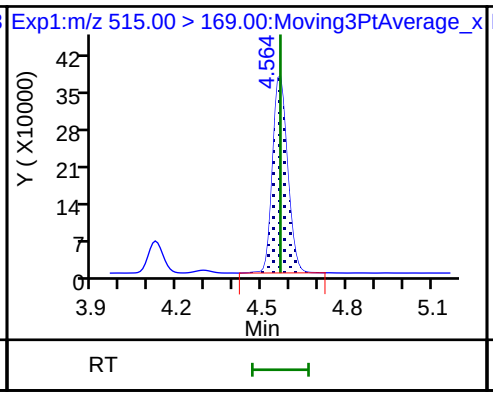

D 47 d7-N-MeFOSE-M



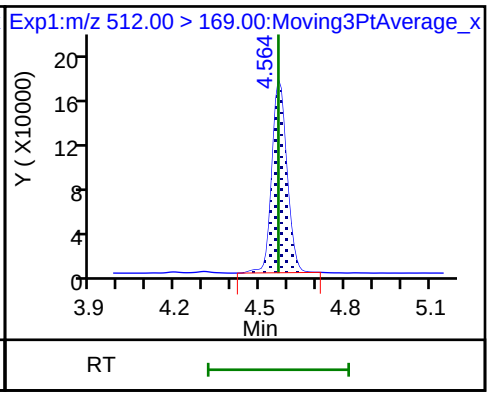
48 2-(N-methylperfluoro-1-octanesul



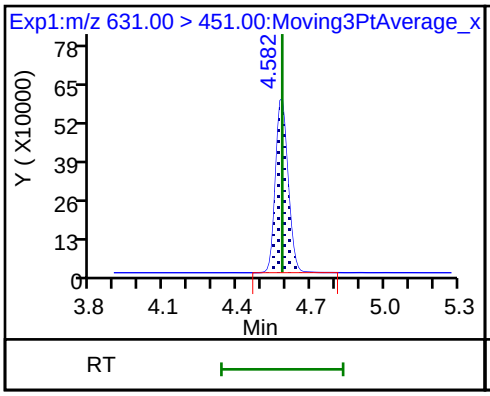

D 49 d-N-MeFOSA-M



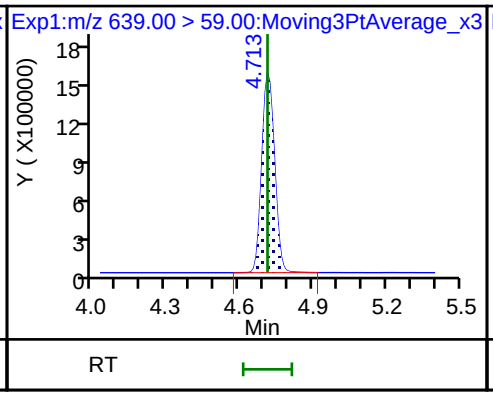

50 NMeFOSA



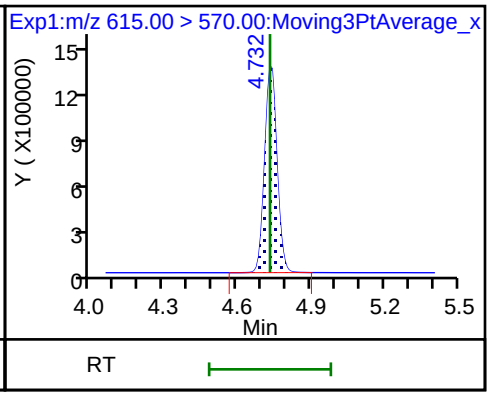

51 11-Chloroeicosafluoro-3-oxaundec



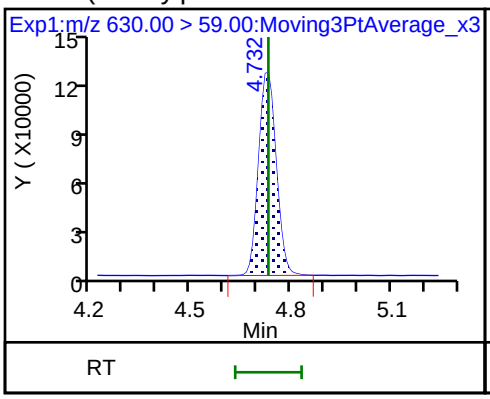

D 53 d9-N-EtFOSE-M



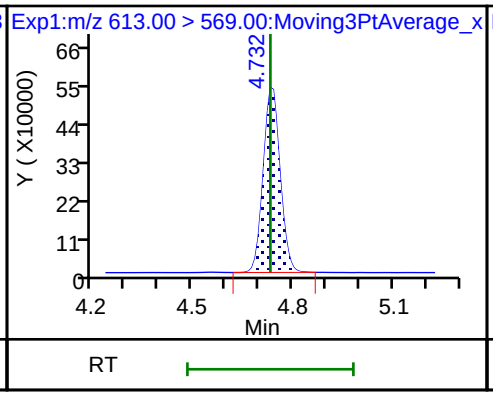

D 56 13C2 PFDoA



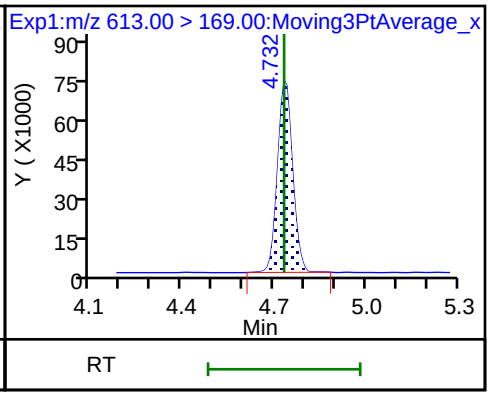

54 2-(N-ethylperfluoro-1-octanesulf



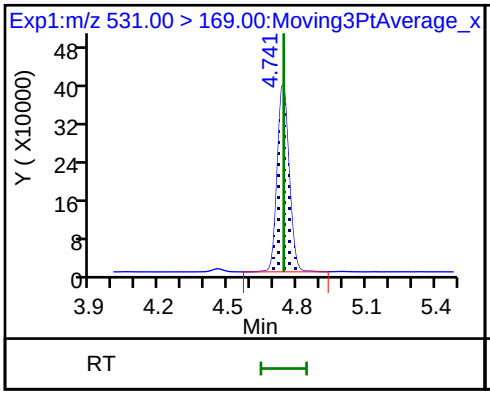

52 Perfluorododecanoic acid



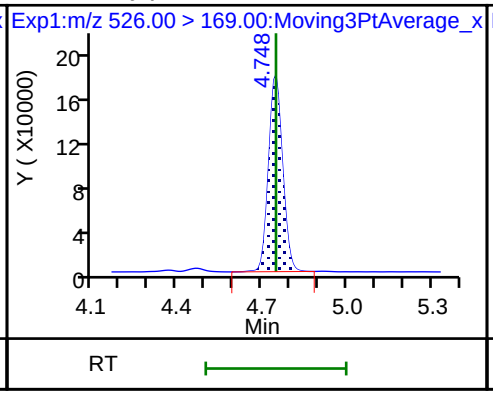

52 Perfluorododecanoic acid



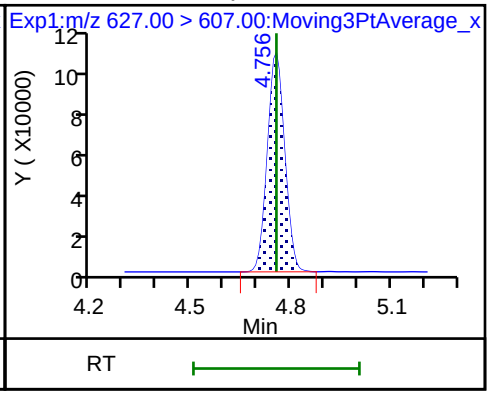

D 58 d-N-EtFOSA-M



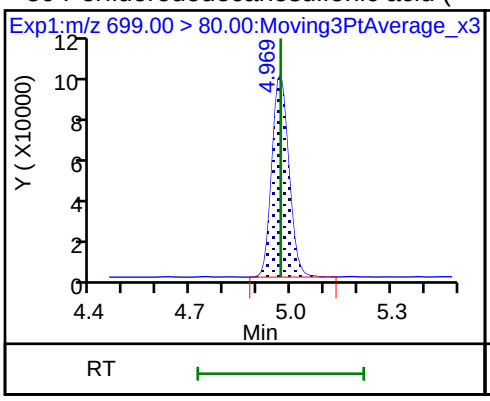

57 N-ethylperfluoro-1-octanesulfona



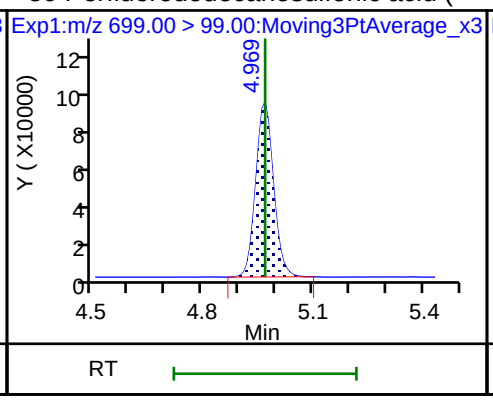

55 1H,1H,2H,2H-perfluorododecanesul



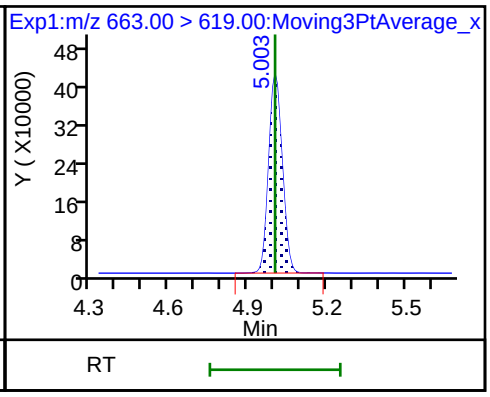
59 Perfluorododecanesulfonic acid (



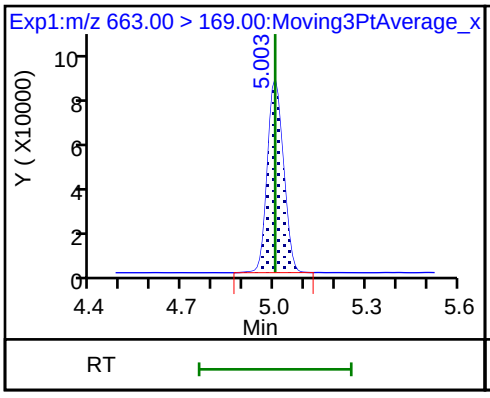

59 Perfluorododecanesulfonic acid (



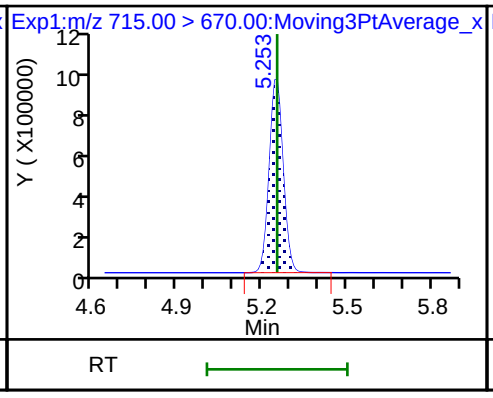

60 Perfluorotridecanoic acid



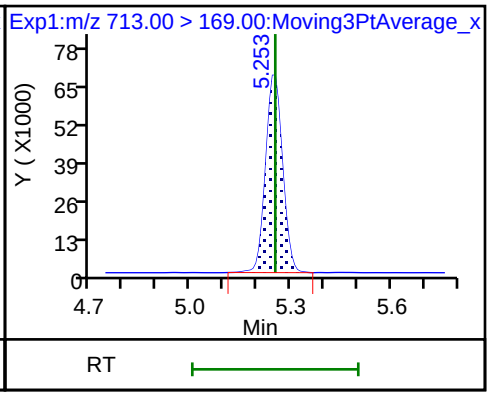

60 Perfluorotridecanoic acid



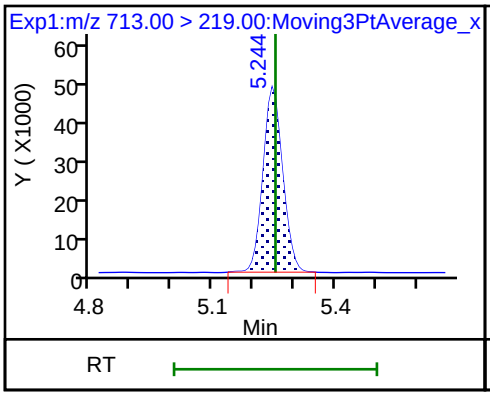

D 62 13C2 PFTeDA



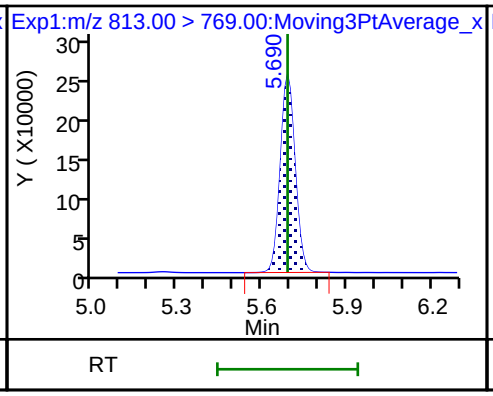

61 Perfluorotetradecanoic acid



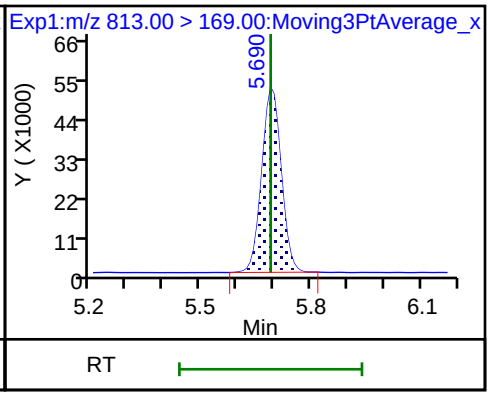

61 Perfluorotetradecanoic acid



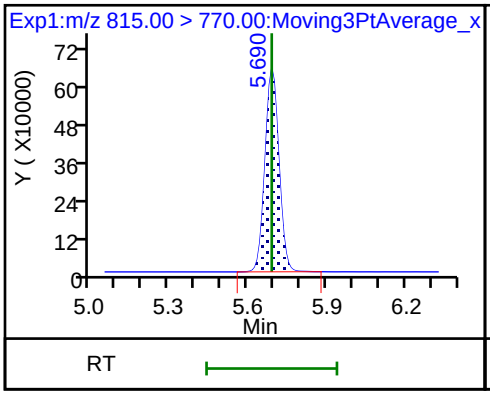

64 Perfluorohexadecanoic acid



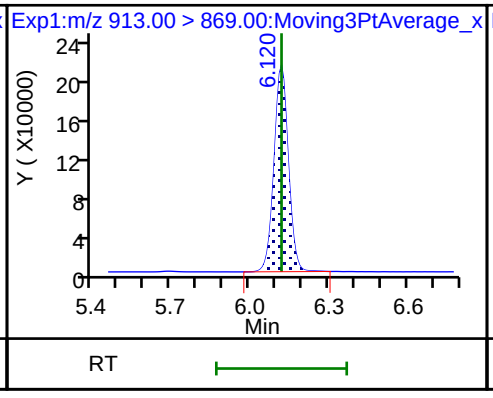

64 Perfluorohexadecanoic acid



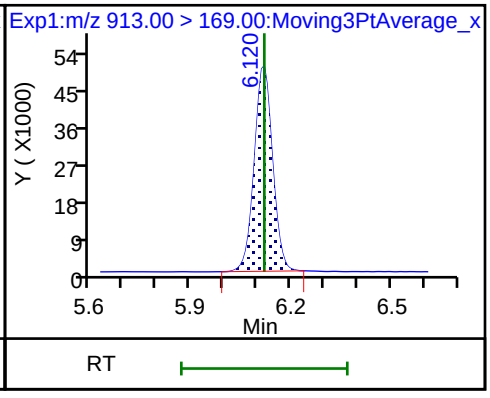

D 63 13C2 PFHxDA




65 Perfluorooctadecanoic acid




65 Perfluorooctadecanoic acid



Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

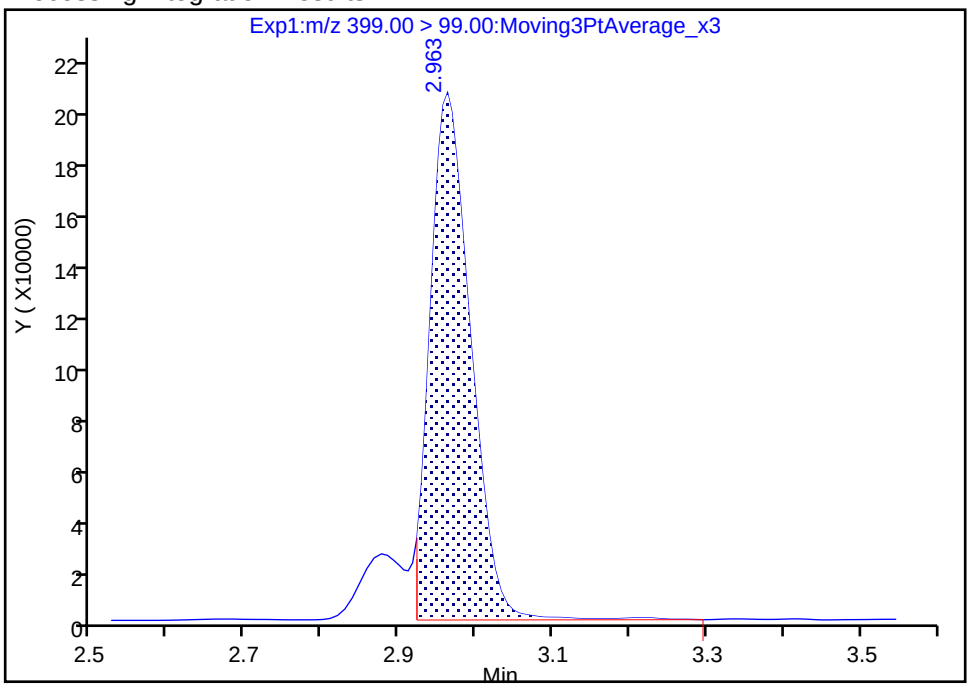
| | | | | | |
|---|---|---|---|---|---|
| Data File: | \\chromfs\Sacramento\ChromData\A9\20200911-103077.b\2020.09.11_A9_PFC_AA_006.d | | | | |
| Injection Date: | 11-Sep-2020 09:49:21 | Instrument ID: | A9 | | |
| Lims ID: | CCV L4 | | | | |
| Client ID: | | | | | |
| Operator ID: | SACINSTRLCMS02 | ALS Bottle#: | 43 | Worklist Smp#: | 3 |
| Injection Vol: | 20.0 ul | Dil. Factor: | 1.0000 | | |
| Method: | PFAS_A9 | Limit Group: | LC PFC ICAL | | |
| Column: | | Detector | EXP1 | | |

## 16 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 2

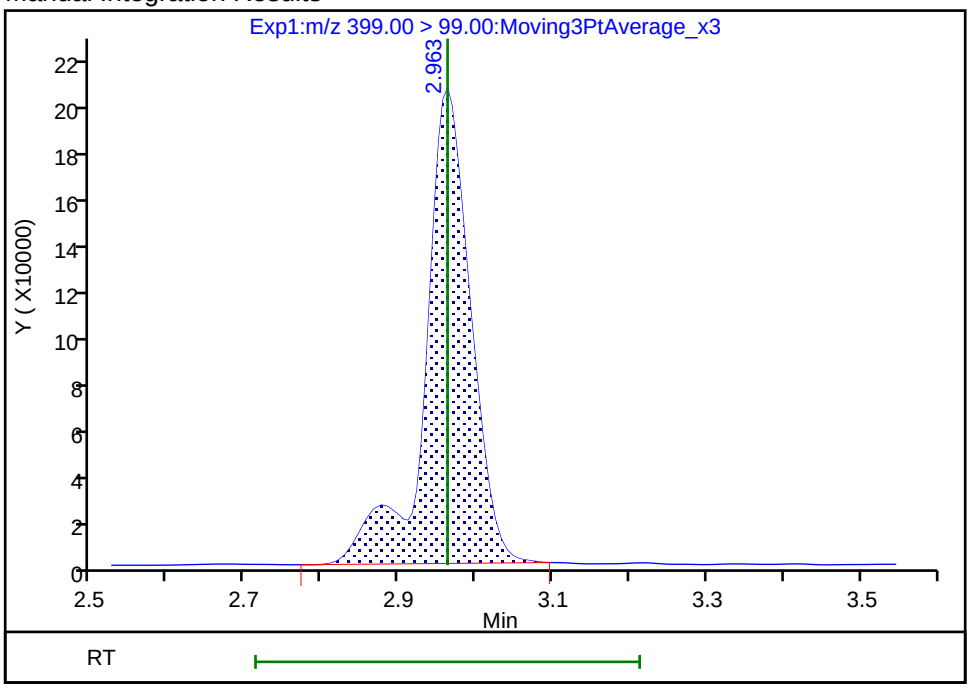
Processing Integration Results

RT: 2.96
Area: 736838
Amount: 0.873205
Amount Units: ng/ml




Manual Integration Results

RT: 2.96
Area: 832887
Amount: 0.873205
Amount Units: ng/ml




Reviewer: zibaa, 11-Sep-2020 10:31:19

Audit Action: Manually Integrated Audit Reason: Isomers

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

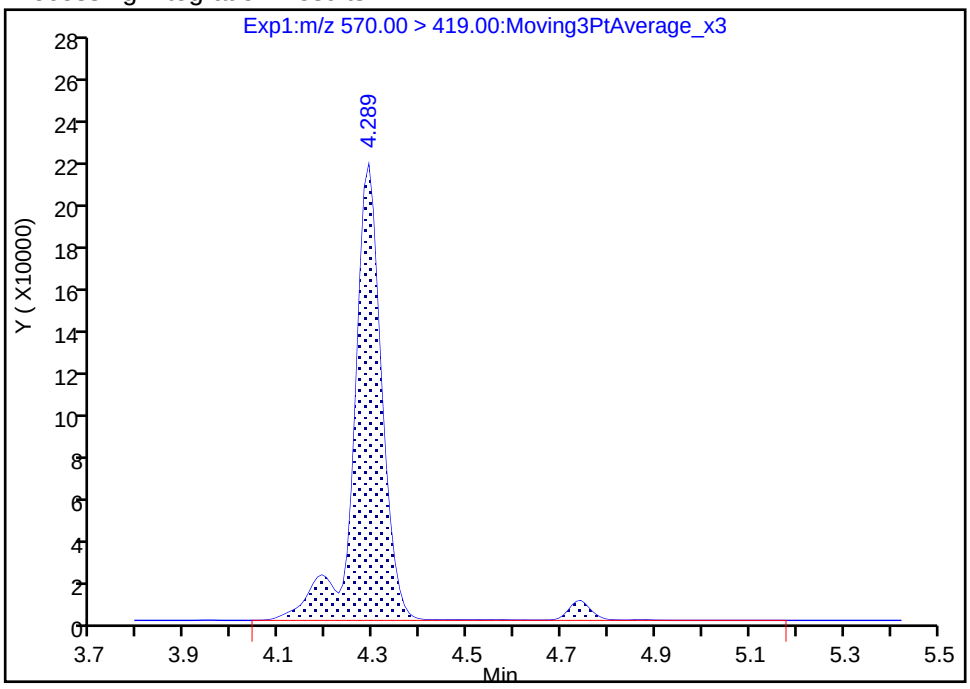
| | | | | | |
|---|---|---|---|---|---|
| Data File: | \\chromfs\Sacramento\ChromData\A9\20200911-103077.b\2020.09.11_A9_PFC_AA_006.d | | | | |
| Injection Date: | 11-Sep-2020 09:49:21 | Instrument ID: | A9 | | |
| Lims ID: | CCV L4 | | | | |
| Client ID: | | | | | |
| Operator ID: | SACINSTRLCMS02 | ALS Bottle#: | 43 | Worklist Smp#: | 3 |
| Injection Vol: | 20.0 ul | Dil. Factor: | 1.0000 | | |
| Method: | PFAS_A9 | Limit Group: | LC PFC ICAL | | |
| Column: | | Detector | EXP1 | | |

## 40 N-methylperfluorooctanesulfonami, CAS: 2355-31-9

Signal: 1

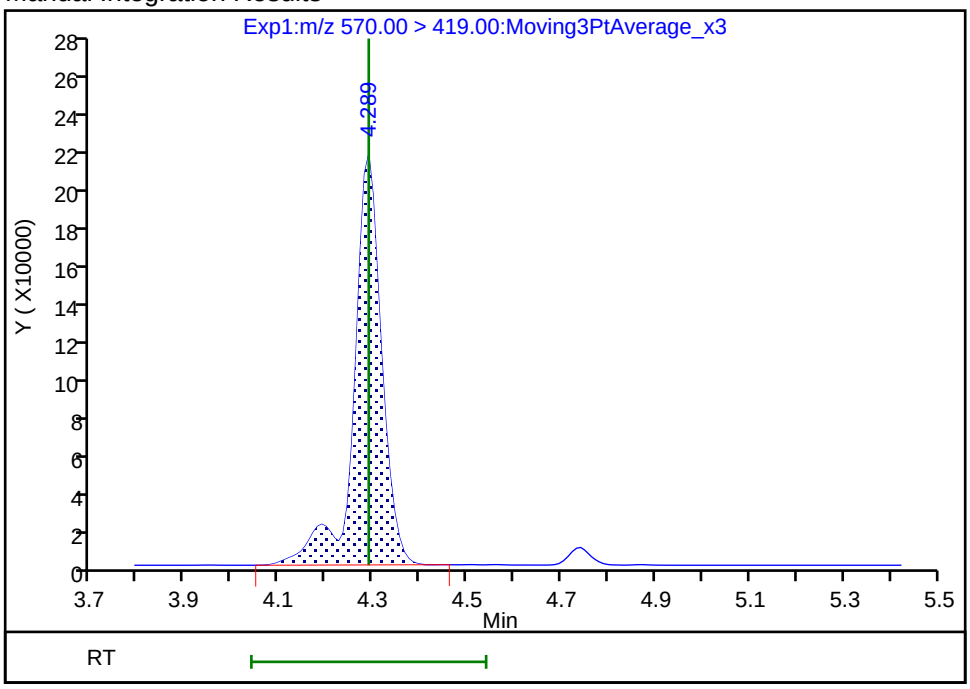
Processing Integration Results

RT: 4.29
Area: 929910
Amount: 1.145362
Amount Units: ng/ml




Manual Integration Results

RT: 4.29
Area: 892527
Amount: 1.099318
Amount Units: ng/ml




Reviewer: zibaa, 11-Sep-2020 10:31:47

Audit Action: Manually Integrated Audit Reason: Baseline

FORM VII
LCMS CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Sacramento  Job No.: 460-217547-1

SDG No.:

Lab Sample ID: CCV 320-411454/1  Calibration Date: 09/11/2020 13:05

Instrument ID: A9  Calib Start Date: 09/10/2020 10:18

GC Column: Acquity  ID: 2.10(mm)  Calib End Date: 09/10/2020 12:29

Lab File ID: 2020.09.11_A9_PFC_AA_024.d  Conc. Units: ng/mL

| ANALYTE | CURVE TYPE | AVE RRF | RRF | MIN RRF | CALC AMOUNT | SPIKE AMOUNT | %D | MAX %D |
|---|---|---|---|---|---|---|---|---|
| Perfluorobutanoic acid (PFBA) | AveID | 0.8734 | 0.9897 | | 1.13 | 1.00 | 13.3 | 40.0 |
| Perfluoropentanoic acid (PFPeA) | AveID | 1.018 | 1.131 | | 1.11 | 1.00 | 11.2 | 40.0 |
| Perfluorobutanesulfonic acid (PFBS) | AveID | 0.998 | 1.154 | | 1.02 | 0.884 | 15.7 | 50.0 |
| 4:2 FTS | AveID | 1.978 | 2.036 | | 0.961 | 0.934 | 2.9 | 50.0 |
| Perfluorohexanoic acid (PFHxA) | AveID | 0.8343 | 0.9123 | | 1.09 | 1.00 | 9.3 | 40.0 |
| Perfluoropentanesulfonic acid (PFPeS) | AveID | 0.4016 | 0.4372 | | 1.02 | 0.938 | 8.9 | 50.0 |
| HFPO-DA (GenX) | AveID | 0.3959 | 0.4327 | | 1.09 | 1.00 | 9.3 | 40.0 |
| Perfluoroheptanoic acid (PFHpA) | AveID | 1.109 | 1.177 | | 1.06 | 1.00 | 6.1 | 40.0 |
| Perfluorohexanesulfonic acid (PFHxS) | AveID | 1.180 | 1.191 | | 0.919 | 0.910 | 0.9 | 40.0 |
| 4,8-Dioxa-3H-perfluorononanoic acid (ADONA) | AveID | 1.813 | 2.062 | | 1.07 | 0.942 | 13.7 | 50.0 |
| 6:2 FTS | AveID | 1.542 | 1.640 | | 1.01 | 0.948 | 6.4 | 40.0 |
| Perfluoroheptanesulfonic Acid (PFHpS) | AveID | 0.9244 | 1.011 | | 1.04 | 0.952 | 9.4 | 50.0 |
| Perfluorooctanoic acid (PFOA) | AveID | 1.078 | 1.101 | | 1.02 | 1.00 | 2.0 | 40.0 |
| Perfluorooctanesulfonic acid (PFOS) | AveID | 1.040 | 1.127 | | 1.01 | 0.928 | 8.4 | 40.0 |
| Perfluorononanoic acid (PFNA) | AveID | 0.996 | 1.032 | | 1.04 | 1.00 | 3.7 | 40.0 |
| F-53B Major | AveID | 0.6274 | 0.6884 | | 1.02 | 0.932 | 9.7 | 50.0 |
| Perfluorononanesulfonic acid (PFNS) | AveID | 0.7591 | 0.7991 | | 1.01 | 0.960 | 5.3 | 50.0 |
| Perfluorooctanesulfonamide (FOSA) | AveID | 2.782 | 2.890 | | 1.04 | 1.00 | 3.9 | 40.0 |
| 8:2 FTS | AveID | 1.288 | 1.428 | | 1.06 | 0.958 | 10.9 | 40.0 |
| Perfluorodecanoic acid (PFDA) | AveID | 0.998 | 1.053 | | 1.06 | 1.00 | 5.5 | 40.0 |
| N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA) | AveID | 0.7593 | 0.8957 | | 1.18 | 1.00 | 18.0 | 40.0 |
| Perfluorodecanesulfonic acid (PFDS) | AveID | 0.8492 | 0.9057 | | 1.03 | 0.964 | 6.7 | 50.0 |
| Perfluoroundecanoic acid (PFUnA) | AveID | 0.6962 | 0.7502 | | 1.08 | 1.00 | 7.8 | 40.0 |
| N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA) | AveID | 0.8112 | 0.8182 | | 1.01 | 1.00 | 0.9 | 40.0 |
| NMeFOSE | AveID | 1.043 | 1.090 | | 1.04 | 1.00 | 4.4 | 40.0 |
| F-53B Minor | AveID | 0.7398 | 0.9291 | | 1.18 | 0.942 | 25.6 | 50.0 |
| NMeFOSA | AveID | 1.043 | 1.163 | | 1.12 | 1.00 | 11.5 | 50.0 |
| Perfluorododecanoic acid (PFDoA) | AveID | 0.9197 | 1.054 | | 1.15 | 1.01 | 14.6 | 40.0 |
| NEtFOSE | AveID | 0.9939 | 1.013 | | 1.02 | 1.00 | 2.0 | 40.0 |
| 10:2 FTS | AveID | 0.8214 | 0.9115 | | 1.07 | 0.964 | 11.0 | 50.0 |
| NEtFOSA | AveID | 0.995 | 1.131 | | 1.14 | 1.00 | 13.6 | 40.0 |
| Perfluorododecanesulfonic acid (PFDoS) | AveID | 0.1269 | 0.1233 | | 0.941 | 0.968 | -2.8 | 50.0 |

FORM VII 537 (modified)

FORM VII
LCMS CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Sacramento  Job No.: 460-217547-1

SDG No.:

Lab Sample ID: CCV 320-411454/1  Calibration Date: 09/11/2020 13:05

Instrument ID: A9  Calib Start Date: 09/10/2020 10:18

GC Column: Acquity  ID: 2.10(mm)  Calib End Date: 09/10/2020 12:29

Lab File ID: 2020.09.11_A9_PFC_AA_024.d  Conc. Units: ng/mL

| ANALYTE | CURVE TYPE | AVE RRF | RRF | MIN RRF | CALC AMOUNT | SPIKE AMOUNT | %D | MAX %D |
|---|---|---|---|---|---|---|---|---|
| Perfluorotridecanoic acid (PFTriA) | AveID | 0.7267 | 0.8525 | | 1.17 | 1.00 | 17.3 | 50.0 |
| Perfluorotetradecanoic acid (PFTeA) | AveID | 0.1764 | 0.1817 | | 1.03 | 1.00 | 3.0 | 50.0 |
| Perfluoro-n-hexadecanoic acid (PFHxDA) | L2ID | | 0.9894 | | 1.06 | 1.00 | 6.0 | 50.0 |
| Perfluoro-n-octadecanoic acid (PFODA) | AveID | 0.7480 | 0.7771 | | 1.04 | 1.00 | 3.9 | 50.0 |
| 13C4 PFBA | Ave | 1.350 | 1.347 | | 2.50 | 2.50 | -0.2 | 50.0 |
| 13C5 PFPeA | Ave | 1.138 | 1.053 | | 2.31 | 2.50 | -7.5 | 50.0 |
| 13C3 PFBS | Ave | 2.249 | 2.271 | | 2.35 | 2.33 | 1.0 | 50.0 |
| M2-4:2 FTS | Ave | 0.2233 | 0.2139 | | 2.24 | 2.34 | -4.2 | 50.0 |
| 13C2 PFHxA | Ave | 1.058 | 0.999 | | 2.36 | 2.50 | -5.6 | 50.0 |
| 13C3 HFPO-DA | Ave | 0.7264 | 0.7124 | | 2.45 | 2.50 | -1.9 | 50.0 |
| 13C4 PFHpA | Ave | 1.030 | 1.030 | | 2.50 | 2.50 | 0.0 | 50.0 |
| 18O2 PFHxS | Ave | 1.076 | 1.108 | | 2.44 | 2.37 | 3.0 | 50.0 |
| M2-6:2 FTS | Ave | 0.1925 | 0.1880 | | 2.32 | 2.38 | -2.4 | 50.0 |
| 13C4 PFOA | Ave | 0.9654 | 0.9924 | | 2.57 | 2.50 | 2.8 | 50.0 |
| 13C4 PFOS | Ave | 1.123 | 1.160 | | 2.47 | 2.39 | 3.4 | 50.0 |
| 13C5 PFNA | Ave | 0.8376 | 0.9217 | | 2.75 | 2.50 | 10.0 | 50.0 |
| 13C8 FOSA | Ave | 0.5280 | 0.5636 | | 2.67 | 2.50 | 6.7 | 50.0 |
| 13C2 PFDA | Ave | 1.063 | 1.120 | | 2.63 | 2.50 | 5.3 | 50.0 |
| M2-8:2 FTS | Ave | 0.2357 | 0.2297 | | 2.33 | 2.40 | -2.6 | 50.0 |
| d3-NMeFOSAA | Ave | 0.5286 | 0.4544 | | 2.15 | 2.50 | -14.0 | 50.0 |
| 13C2 PFUnA | Ave | 0.8198 | 0.8316 | | 2.54 | 2.50 | 1.4 | 50.0 |
| d5-NEtFOSAA | Ave | 0.3541 | 0.3411 | | 2.41 | 2.50 | -3.7 | 50.0 |
| d7-N-MeFOSE-M | Ave | 0.1700 | 0.1717 | | 12.6 | 12.5 | 1.0 | 50.0 |
| d-N-MeFOSA-M | Ave | 0.2378 | 0.2314 | | 2.43 | 2.50 | -2.7 | 50.0 |
| 13C2 PFDoA | Ave | 0.8051 | 0.7565 | | 2.35 | 2.50 | -6.0 | 50.0 |
| d9-N-EtFOSE-M | Ave | 0.1785 | 0.1817 | | 12.7 | 12.5 | 1.8 | 50.0 |
| d-N-EtFOSA-M | Ave | 0.2469 | 0.2394 | | 2.43 | 2.50 | -3.0 | 50.0 |
| 13C2 PFTeDA | Ave | 0.5615 | 0.5374 | | 2.39 | 2.50 | -4.3 | 50.0 |
| 13C2 PFHxDA | Ave | 0.4152 | 0.4131 | | 2.49 | 2.50 | -0.5 | 50.0 |
| 13C8 PFOA | Ave | 0.8088 | 0.9812 | | 2.97 | 2.45 | 21.3 | 50.0 |
| 13C8 PFOS | Ave | 0.2542 | 0.2540 | | 2.39 | 2.39 | -0.0 | 50.0 |

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\A9\20200911-103120.b\2020.09.11_A9_PFC_AA_024.d
Lims ID: CCV L4
Client ID:
Sample Type: CCV
Inject. Date: 11-Sep-2020 13:05:37 ALS Bottle#: 43 Worklist Smp#: 1
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Sample Info: CCV L4
Misc. Info.: Plate: 1 Rack: 1
Operator ID: SACINSTRLCMS02 Instrument ID: A9
Sublist: chrom-PFAS_A9*sub16

Method: \\chromfs\Sacramento\ChromData\A9\20200911-103120.b\PFAS_A9.m
Limit Group: LC PFC ICAL
Last Update: 11-Sep-2020 14:25:41 Calib Date: 10-Sep-2020 12:29:20
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\A9\20200910-102999.b\2020.09.10_A9 _PFC_ICAL_AA_022.d

Column 1 : Det: EXP1
Process Host: CTX1061

First Level Reviewer: zibaa Date: 11-Sep-2020 14:25:41
Ratio Calibration: Average of Initial Calibration

| Signal | RT | EXP RT | DLT RT | REL RT | Response | Amount ng/ml | Ratio(Limits) | %Rec | S/N | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| D 1 13C4 PFBA | | | | | | | | | | |
| 217.00 > 172.00 | 1.893 | 1.893 | 0.0 | 0.566 | 8088479 | 2.50 | | 99.8 | 2730 | |
| 2 Perfluorobutanoic acid | | | | | | | | | | |
| 212.90 > 169.00 | 1.893 | 1.893 | 0.0 | 1.000 | 3202060 | 1.13 | | 113 | 104 | |
| D 4 13C5 PFPeA | | | | | | | | | | |
| 267.90 > 223.00 | 2.198 | 2.198 | 0.0 | 0.657 | 6322392 | 2.31 | | 92.5 | 2269 | |
| 3 Perfluoropentanoic acid | | | | | | | | | | |
| 262.90 > 219.00 | 2.198 | 2.198 | 0.0 | 1.000 | 2860733 | 1.11 | | 111 | 119 | |
| D 6 13C3 PFBS | | | | | | | | | | |
| 301.90 > 80.00 | 2.223 | 2.223 | 0.0 | 0.665 | 12676227 | 2.35 | | 101 | 2933 | |
| 5 Perfluorobutanesulfonic acid | | | | | | | | | | |
| 298.90 > 80.00 | 2.233 | 2.233 | 0.0 | 1.004 | 5561009 | 1.02 | Target=3.10 | 116 | 450 | |
| 298.90 > 99.00 | 2.223 | 2.233 | -0.010 | 1.000 | 1694614 | | 3.28(1.55-4.65) | | 266 | |
| 9 1H,1H,2H,2H-perfluorohexanesulfo | | | | | | | | | | |
| 327.00 > 307.00 | 2.514 | 2.514 | 0.0 | 1.000 | 976694 | 0.9614 | | 103 | 3844 | |
| D 8 M2-4:2 FTS | | | | | | | | | | |
| 329.00 > 81.00 | 2.514 | 2.514 | 0.0 | 0.752 | 1199282 | 2.24 | | 95.8 | 588 | |
| D 10 13C2 PFHxA | | | | | | | | | | |
| 315.00 > 270.00 | 2.557 | 2.557 | 0.0 | 0.764 | 5996693 | 2.36 | | 94.4 | 2179 | |
| 11 Perfluorohexanoic acid | | | | | | | | | | |
| 313.00 > 269.00 | 2.557 | 2.557 | 0.0 | 1.000 | 2188200 | 1.09 | Target=9.68 | 109 | 162 | |
| 313.00 > 119.00 | 2.557 | 2.557 | 0.0 | 1.000 | 209885 | | 10.43(4.84-14.52) | | 121 | |
| 12 Perfluoropentanesulfonic acid | | | | | | | | | | |
| 349.00 > 80.00 | 2.568 | 2.568 | 0.0 | 1.155 | 2235969 | 1.02 | Target=2.01 | 109 | 534 | |
| 349.00 > 99.00 | 2.568 | 2.568 | 0.0 | 1.155 | 1078674 | | 2.07(1.00-3.01) | | 461 | |
| D 13 13C3 HFPO-DA | | | | | | | | | | |
| 287.00 > 169.00 | 2.673 | 2.673 | 0.0 | 0.799 | 4276237 | 2.45 | | 98.1 | 2883 | |

| Signal | RT | EXP RT | DLT RT | REL RT | Response | Amount ng/ml | Ratio(Limits) | %Rec | S/N | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| 14 Perfluoro(2-propoxypropanoic) ac | | | | | | | | | | |
| 285.00 > 169.00 | 2.673 | 2.673 | 0.0 | 1.000 | 740160 | 1.09 | | 109 | 1565 | |
| D 15 13C4 PFHpA | | | | | | | | | | |
| 367.00 > 322.00 | 2.940 | 2.940 | 0.0 | 0.879 | 6185305 | 2.50 | | 100 | 3085 | |
| D 17 18O2 PFHxS | | | | | | | | | | |
| 403.00 > 84.00 | 2.946 | 2.946 | 0.0 | 0.881 | 6291389 | 2.44 | | 103 | 3138 | |
| 16 Perfluorohexanesulfonic acid | | | | | | | | | | M |
| 399.00 > 80.00 | 2.946 | 2.946 | 0.0 | 1.000 | 2882465 | 0.9186 | Target=3.29 | 101 | 578 | |
| 399.00 > 99.00 | 2.946 | 2.946 | 0.0 | 1.000 | 825621 | | 3.49(1.65-4.94) | | 331 | M |
| 18 Perfluoroheptanoic acid | | | | | | | | | | |
| 363.00 > 319.00 | 2.946 | 2.946 | 0.0 | 1.002 | 2910864 | 1.06 | Target=3.74 | 106 | 314 | |
| 363.00 > 169.00 | 2.946 | 2.946 | 0.0 | 1.002 | 778060 | | 3.74(1.87-5.61) | | 565 | |
| 19 DONA | | | | | | | | | | |
| 377.00 > 251.00 | 2.993 | 2.993 | 0.0 | 0.805 | 5411667 | 1.07 | Target=1.80 | 114 | 3194 | |
| 377.00 > 85.00 | 2.993 | 2.993 | 0.0 | 0.805 | 2879803 | | 1.88(0.90-2.70) | | 1839 | |
| D 20 M2-6:2 FTS | | | | | | | | | | |
| 429.00 > 81.00 | 3.324 | 3.324 | 0.0 | 0.994 | 1071788 | 2.32 | | 97.6 | 832 | |
| 22 1H,1H,2H,2H-perfluorooctanesulfo | | | | | | | | | | |
| 427.00 > 407.00 | 3.331 | 3.331 | 0.0 | 1.002 | 701764 | 1.01 | | 106 | 554 | |
| $ 21 13C8 PFOA | | | | | | | | | | |
| 421.00 > 376.00 | 3.338 | 3.338 | 0.0 | 0.998 | 5765790 | 2.97 | | 121 | 7375 | |
| D 26 13C4 PFOA | | | | | | | | | | |
| 417.00 > 372.00 | 3.345 | 3.345 | 0.0 | 1.000 | 5956847 | 2.57 | | 103 | 4488 | |
| 24 Perfluorooctanoic acid | | | | | | | | | | |
| 413.00 > 369.00 | 3.345 | 3.345 | 0.0 | 1.000 | 2625058 | 1.02 | Target=2.37 | 102 | 412 | |
| 413.00 > 169.00 | 3.345 | 3.345 | 0.0 | 1.000 | 1075558 | | 2.44(1.19-3.56) | | 777 | |
| * 25 13C2 PFOA | | | | | | | | | | |
| 415.00 > 370.00 | 3.345 | 3.345 | 0.0 | | 6002612 | 2.50 | | | 4308 | |
| 23 Perfluoroheptanesulfonic acid | | | | | | | | | | |
| 449.00 > 80.00 | 3.345 | 3.345 | 0.0 | 0.899 | 2682616 | 1.04 | Target=3.65 | 109 | 759 | |
| 449.00 > 99.00 | 3.345 | 3.345 | 0.0 | 0.899 | 730559 | | 3.67(1.83-5.48) | | 857 | |
| D 31 13C4 PFOS | | | | | | | | | | |
| 503.00 > 80.00 | 3.720 | 3.720 | 0.0 | 1.112 | 6659447 | 2.47 | | 103 | 1677 | |
| $ 27 13C8 PFOS | | | | | | | | | | |
| 507.00 > 99.00 | 3.720 | 3.720 | 0.0 | 1.112 | 1457678 | 2.39 | | 99.9 | 2985 | |
| 28 Perfluorooctanesulfonic acid | | | | | | | | | | M |
| 499.00 > 80.00 | 3.727 | 3.727 | 0.0 | 1.002 | 2914364 | 1.01 | Target=4.12 | 108 | 341 | |
| 499.00 > 99.00 | 3.727 | 3.727 | 0.0 | 1.002 | 651844 | | 4.47(2.06-6.17) | | 585 | M |
| D 29 13C5 PFNA | | | | | | | | | | |
| 468.00 > 423.00 | 3.735 | 3.735 | 0.0 | 1.117 | 5532577 | 2.75 | | 110 | 5003 | |
| 30 Perfluorononanoic acid | | | | | | | | | | |
| 463.00 > 419.00 | 3.735 | 3.735 | 0.0 | 1.000 | 2289418 | 1.04 | Target=4.21 | 104 | 478 | |
| 463.00 > 169.00 | 3.735 | 3.735 | 0.0 | 1.000 | 536653 | | 4.27(2.11-6.32) | | 696 | |
| 32 9-Chlorohexadecafluoro-3-oxanona | | | | | | | | | | |
| 531.00 > 351.00 | 3.928 | 3.928 | 0.0 | 1.056 | 1787816 | 1.02 | | 110 | 2480 | |
| 34 Perfluorooctanesulfonamide | | | | | | | | | | |
| 498.00 > 78.00 | 4.074 | 4.074 | 0.0 | 1.000 | 3910139 | 1.04 | | 104 | 2778 | |

| Signal | RT | EXP RT | DLT RT | REL RT | Response | Amount ng/ml | Ratio(Limits) | %Rec | S/N | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| 35 Perfluorononanesulfonic acid | | | | | | | | | | |
| 549.00 > 80.00 | 4.074 | 4.074 | 0.0 | 1.095 | 2137515 | 1.01 | Target=5.56 | 105 | 1040 | |
| 549.00 > 99.00 | 4.074 | 4.074 | 0.0 | 1.095 | 382975 | | 5.58(2.78-8.34) | | 1197 | |
| D 36 13C8 FOSA | | | | | | | | | | |
| 506.00 > 78.00 | 4.074 | 4.074 | 0.0 | 1.218 | 3382778 | 2.67 | | 107 | 2361 | |
| D 33 13C2 PFDA | | | | | | | | | | |
| 515.00 > 470.00 | 4.100 | 4.100 | 0.0 | 1.226 | 6720362 | 2.63 | | 105 | 5401 | |
| 38 Perfluorodecanoic acid | | | | | | | | | | |
| 513.00 > 469.00 | 4.100 | 4.100 | 0.0 | 1.000 | 2829475 | 1.05 | Target=14.33 | 105 | 1149 | |
| 513.00 > 169.00 | 4.100 | 4.100 | 0.0 | 1.000 | 196129 | | 14.43(7.16-21.49) | | 280 | |
| 39 1H,1H,2H,2H-perfluorodecanesulfo | | | | | | | | | | |
| 527.00 > 507.00 | 4.100 | 4.100 | 0.0 | 1.000 | 754551 | 1.06 | | 111 | 2226 | |
| D 37 M2-8:2 FTS | | | | | | | | | | |
| 529.00 > 81.00 | 4.100 | 4.100 | 0.0 | 1.226 | 1320745 | 2.33 | | 97.4 | 759 | |
| D 41 d3-NMeFOSAA | | | | | | | | | | |
| 573.00 > 419.00 | 4.262 | 4.262 | 0.0 | 1.274 | 2727534 | 2.15 | | 86.0 | 1748 | |
| 40 N-methylperfluorooctanesulfonami | | | | | | | | | | M |
| 570.00 > 419.00 | 4.271 | 4.271 | 0.0 | 1.002 | 977265 | 1.18 | | 118 | 198 | M |
| 42 Perfluorodecanesulfonic acid | | | | | | | | | | |
| 599.00 > 80.00 | 4.392 | 4.392 | 0.0 | 1.181 | 2432844 | 1.03 | Target=4.29 | 107 | 867 | |
| 599.00 > 99.00 | 4.392 | 4.392 | 0.0 | 1.181 | 553477 | | 4.40(2.15-6.44) | | 1171 | |
| D 46 13C2 PFUnA | | | | | | | | | | |
| 565.00 > 520.00 | 4.418 | 4.418 | 0.0 | 1.321 | 4991585 | 2.54 | | 101 | 7073 | |
| 43 Perfluoroundecanoic acid | | | | | | | | | | |
| 563.00 > 519.00 | 4.418 | 4.418 | 0.0 | 1.000 | 1499302 | 1.08 | Target=6.74 | 108 | 1448 | |
| 563.00 > 169.00 | 4.426 | 4.418 | 0.008 | 1.002 | 236125 | | 6.35(3.37-10.11) | | 731 | |
| D 45 d5-NEtFOSAA | | | | | | | | | | |
| 589.00 > 419.00 | 4.426 | 4.426 | 0.0 | 1.323 | 2047290 | 2.41 | | 96.3 | 2204 | |
| 44 N-ethylperfluorooctanesulfonamid | | | | | | | | | | |
| 584.00 > 419.00 | 4.435 | 4.435 | 0.0 | 1.002 | 670010 | 1.01 | | 101 | 1086 | |
| D 47 d7-N-MeFOSE-M | | | | | | | | | | |
| 623.00 > 59.00 | 4.538 | 4.538 | 0.0 | 1.356 | 5153249 | 12.6 | | 101 | 2667 | |
| 48 2-(N-methylperfluoro-1-octanesul | | | | | | | | | | |
| 616.00 > 59.00 | 4.546 | 4.546 | 0.0 | 1.002 | 449229 | 1.04 | | 104 | 640 | |
| D 49 d-N-MeFOSA-M | | | | | | | | | | |
| 515.00 > 169.00 | 4.555 | 4.555 | 0.0 | 1.362 | 1388979 | 2.43 | | 97.3 | 223 | |
| 51 11-Chloroeicosafluoro-3-oxaundec | | | | | | | | | | |
| 631.00 > 451.00 | 4.555 | 4.555 | 0.0 | 1.225 | 2438709 | 1.18 | | 126 | 3963 | |
| 50 NMeFOSA | | | | | | | | | | |
| 512.00 > 169.00 | 4.564 | 4.564 | 0.0 | 1.002 | 646067 | 1.11 | | 111 | 1043 | |
| D 53 d9-N-EtFOSE-M | | | | | | | | | | |
| 639.00 > 59.00 | 4.713 | 4.713 | 0.0 | 1.409 | 5454766 | 12.7 | | 102 | 1792 | |
| D 56 13C2 PFDoA | | | | | | | | | | |
| 615.00 > 570.00 | 4.713 | 4.713 | 0.0 | 1.409 | 4540903 | 2.35 | | 94.0 | 5622 | |
| 52 Perfluorododecanoic acid | | | | | | | | | | |
| 613.00 > 569.00 | 4.713 | 4.713 | 0.0 | 1.000 | 1925613 | 1.15 | Target=6.67 | 115 | 1623 | |
| 613.00 > 169.00 | 4.713 | 4.713 | 0.0 | 1.000 | 266344 | | 7.23(3.34-10.01) | | 1190 | |

| Signal | RT | EXP RT | DLT RT | REL RT | Response | Amount ng/ml | Ratio(Limits) | %Rec | S/N | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| 54 2-(N-ethylperfluoro-1-octanesulf | | | | | | | | | | |
| 630.00 > 59.00 | 4.722 | 4.722 | 0.0 | 1.002 | 442258 | 1.02 | | 102 | 636 | |
| 55 1H,1H,2H,2H-perfluorododecanesul | | | | | | | | | | |
| 627.00 > 607.00 | 4.731 | 4.731 | 0.0 | 1.154 | 484564 | 1.07 | | 111 | 3729 | |
| D 58 d-N-EtFOSA-M | | | | | | | | | | |
| 531.00 > 169.00 | 4.731 | 4.731 | 0.0 | 1.414 | 1437255 | 2.42 | | 97.0 | 950 | |
| 57 N-ethylperfluoro-1-octanesulfona | | | | | | | | | | |
| 526.00 > 169.00 | 4.740 | 4.740 | 0.0 | 1.002 | 649941 | 1.14 | | 114 | 707 | |
| 59 Perfluorododecanesulfonic acid ( | | | | | | | | | | |
| 699.00 > 80.00 | 4.944 | 4.944 | 0.0 | 1.329 | 332604 | 0.9410 | Target=1.02 | 97.2 | 511 | |
| 699.00 > 99.00 | 4.944 | 4.944 | 0.0 | 1.329 | 338707 | | 0.98(0.51-1.53) | | 1587 | |
| 60 Perfluorotridecanoic acid | | | | | | | | | | |
| 663.00 > 619.00 | 4.977 | 4.977 | 0.0 | 1.056 | 1548450 | 1.17 | Target=4.80 | 117 | 2773 | |
| 663.00 > 169.00 | 4.977 | 4.977 | 0.0 | 1.056 | 302778 | | 5.11(2.40-7.20) | | 1888 | |
| D 62 13C2 PFTeDA | | | | | | | | | | |
| 715.00 > 670.00 | 5.219 | 5.219 | 0.0 | 1.560 | 3225747 | 2.39 | | 95.7 | 4540 | |
| 61 Perfluorotetradecanoic acid | | | | | | | | | | |
| 713.00 > 169.00 | 5.219 | 5.219 | 0.0 | 1.000 | 234707 | 1.03 | Target=1.37 | 103 | 1389 | |
| 713.00 > 219.00 | 5.219 | 5.219 | 0.0 | 1.000 | 186056 | | 1.26(0.69-2.06) | | 967 | |
| 64 Perfluorohexadecanoic acid | | | | | | | | | | |
| 813.00 > 769.00 | 5.652 | 5.652 | 0.0 | 1.000 | 981454 | 1.06 | Target=4.63 | 106 | 2392 | |
| 813.00 > 169.00 | 5.652 | 5.652 | 0.0 | 1.000 | 214119 | | 4.58(2.32-6.95) | | 1321 | |
| D 63 13C2 PFHxDA | | | | | | | | | | |
| 815.00 > 770.00 | 5.652 | 5.652 | 0.0 | 1.690 | 2479919 | 2.49 | | 99.5 | 5233 | |
| 65 Perfluorooctadecanoic acid | | | | | | | | | | |
| 913.00 > 869.00 | 6.063 | 6.063 | 0.0 | 1.073 | 770887 | 1.04 | Target=4.01 | 104 | 1288 | |
| 913.00 > 169.00 | 6.063 | 6.063 | 0.0 | 1.073 | 181454 | | 4.25(2.01-6.02) | | 940 | |

## QC Flag Legend

Review Flags

M - Manually Integrated

## Reagents:

LCPFC_LL4_00030 Amount Added: 1.00 Units: mL

Report Date: 11-Sep-2020 14:25:43 Chrom Revision: 2.3 09-Sep-2020 15:12:58

Eurofins TestAmerica, Sacramento

Data File: \\chromfs\Sacramento\ChromData\A9\20200911-103120.b\2020.09.11_A9_PFC_AA_024.d

Injection Date: 11-Sep-2020 13:05:37 Instrument ID: A9

Lims ID: CCV L4

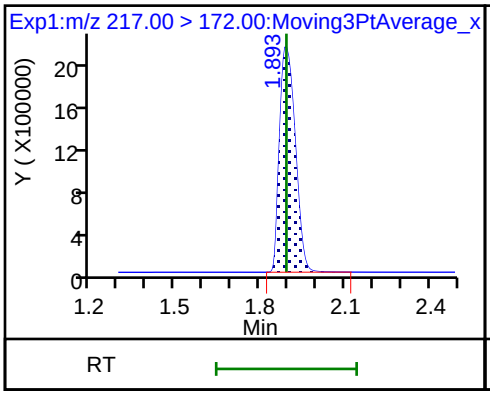
Client ID:

Operator ID: SACINSTRLCMS02 ALS Bottle#: 43 Worklist Smp#: 1

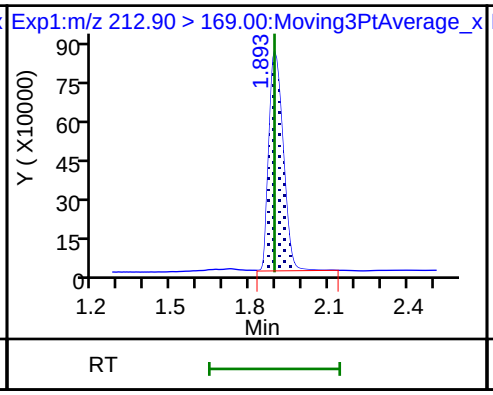
Injection Vol: 20.0 ul Dil. Factor: 1.0000

Method: PFAS_A9 Limit Group: LC PFC ICAL

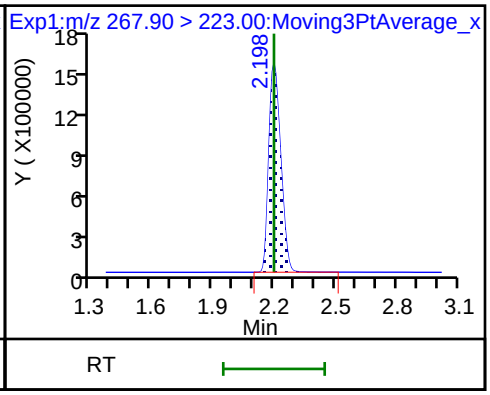
D 1 13C4 PFBA



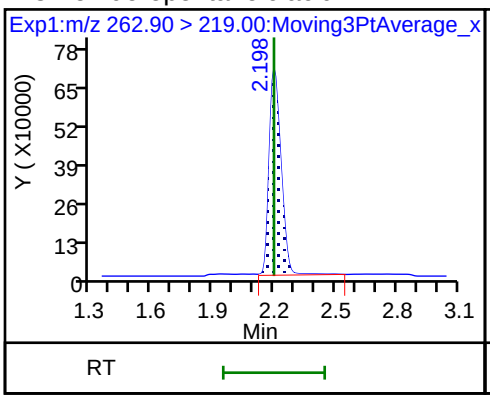

2 Perfluorobutanoic acid



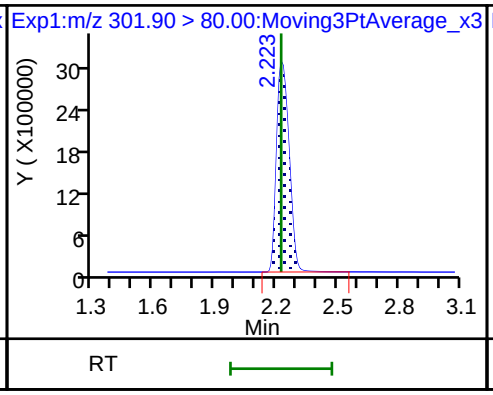

D 4 13C5 PFPeA



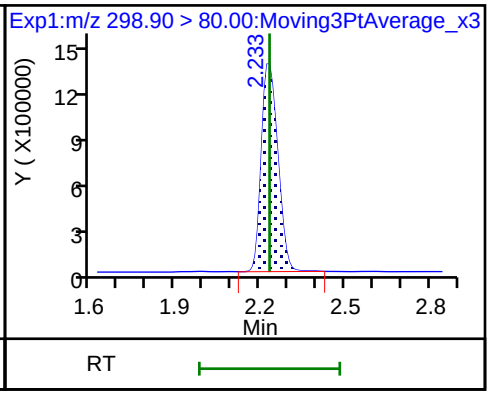

3 Perfluoropentanoic acid



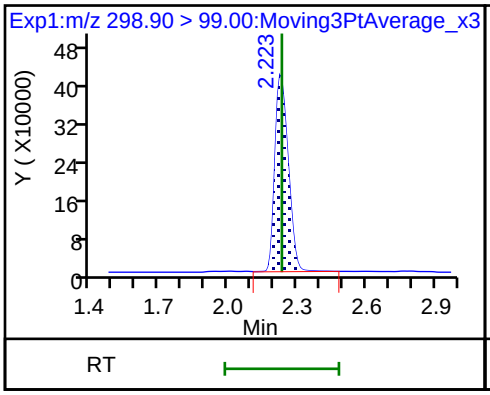

D 6 13C3 PFBS



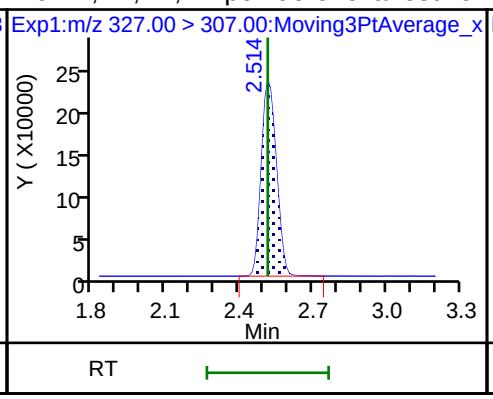

5 Perfluorobutanesulfonic acid



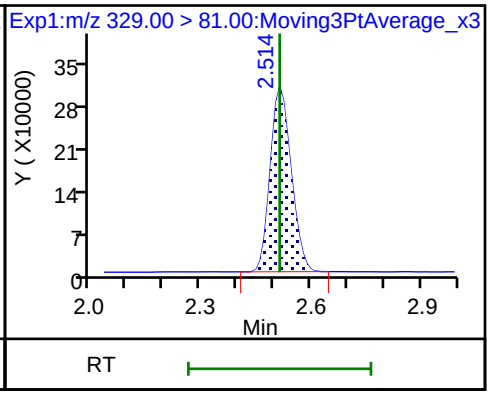

5 Perfluorobutanesulfonic acid



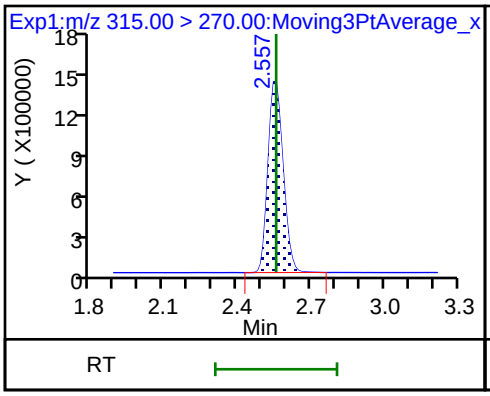

9 1H,1H,2H,2H-perfluorohexanesulfo



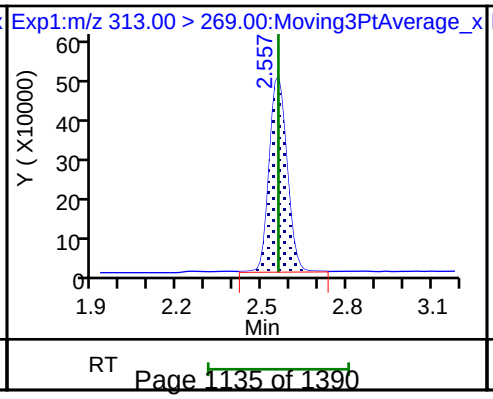

D 8 M2-4:2 FTS



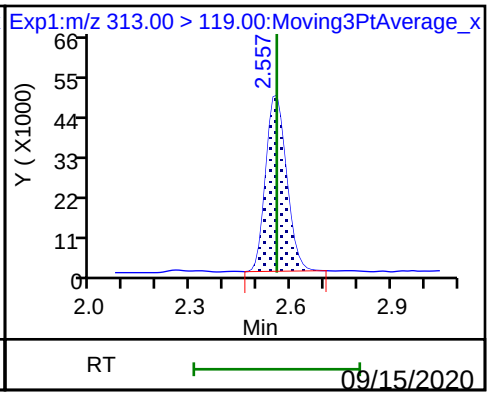

D 10 13C2 PFHxA



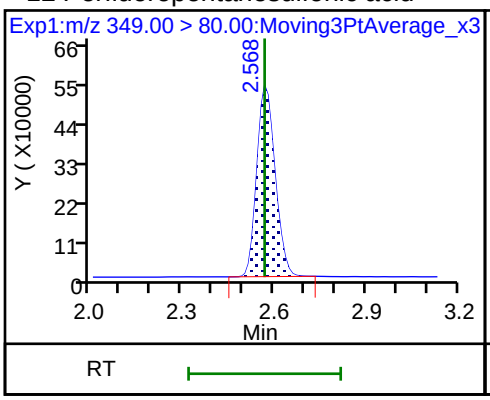

11 Perfluorohexanoic acid



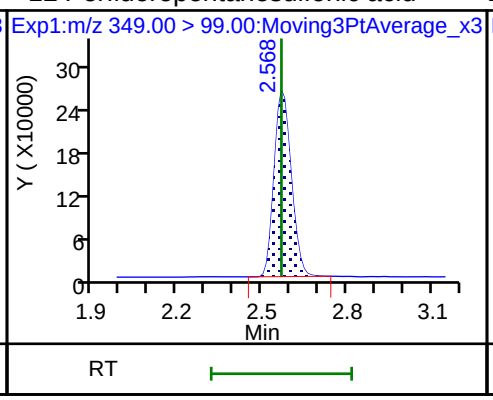

11 Perfluorohexanoic acid



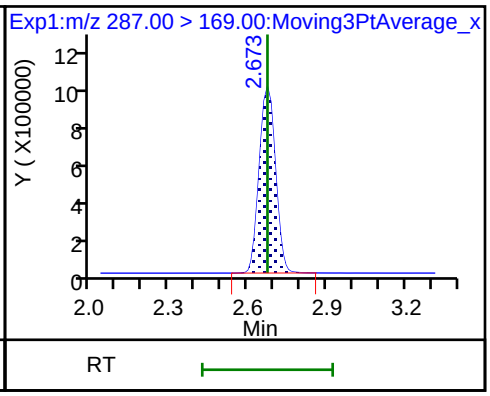
12 Perfluoropentanesulfonic acid



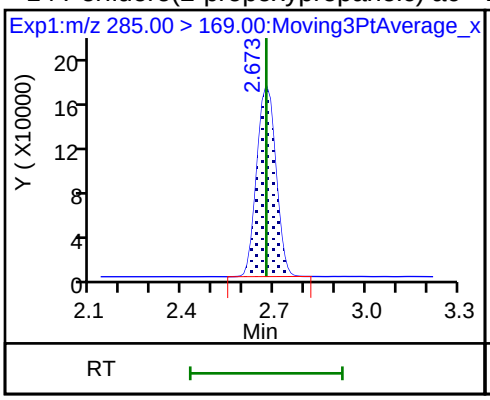

12 Perfluoropentanesulfonic acid



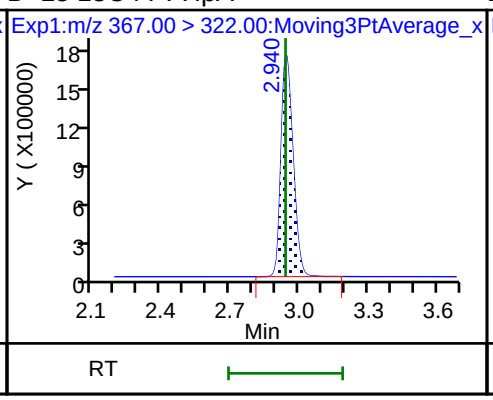

D 13 13C3 HFPO-DA



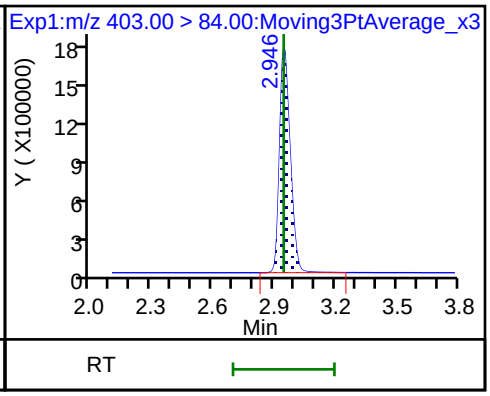

14 Perfluoro(2-propoxypropanoic) ac



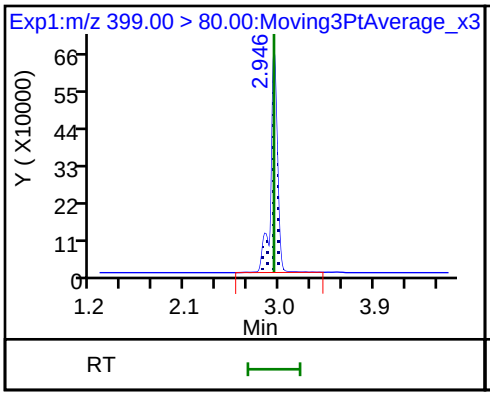

D 15 13C4 PFHpA



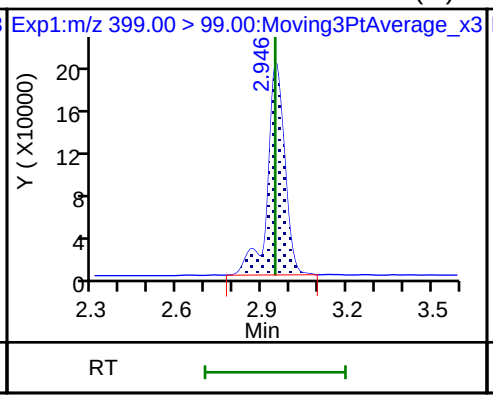

D 17 18O2 PFHxS



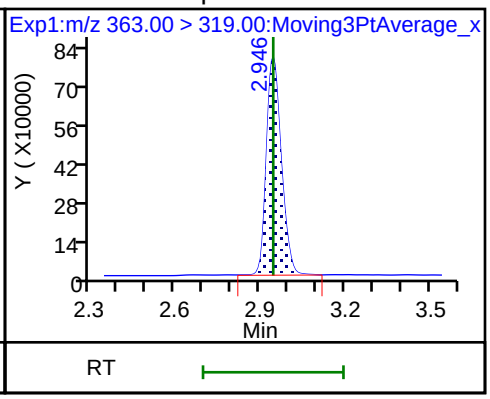

16 Perfluorohexanesulfonic acid



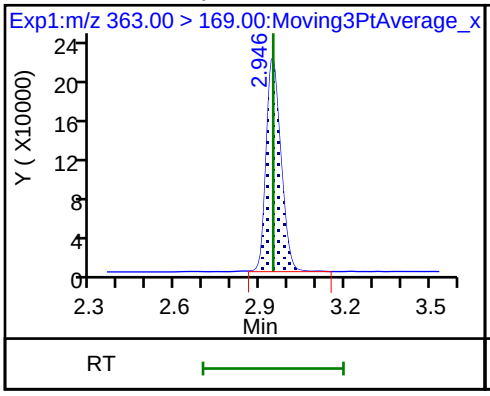

16 Perfluorohexanesulfonic acid (M)



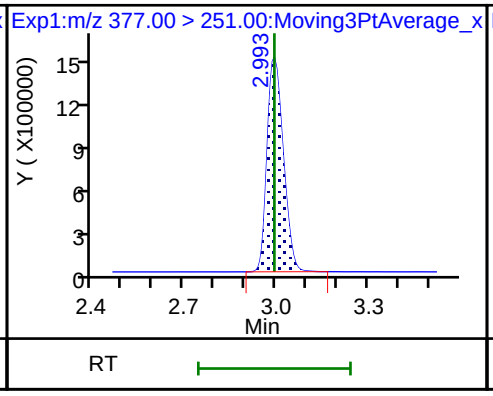

18 Perfluoroheptanoic acid



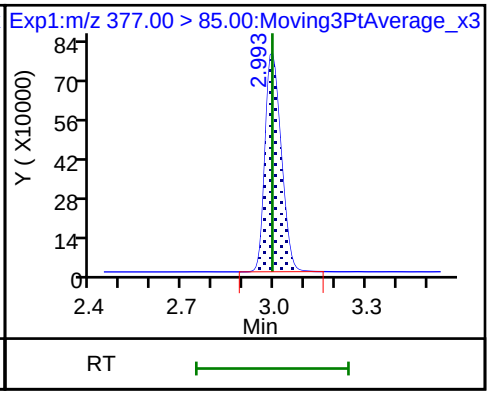

18 Perfluoroheptanoic acid



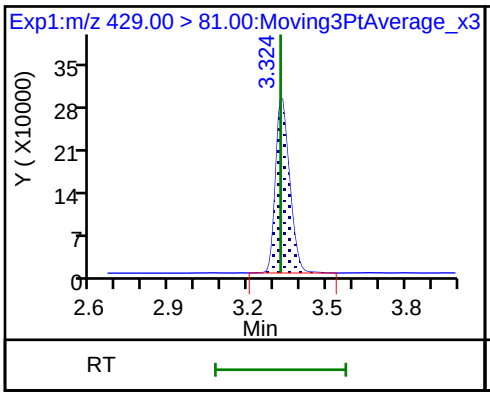

19 DONA



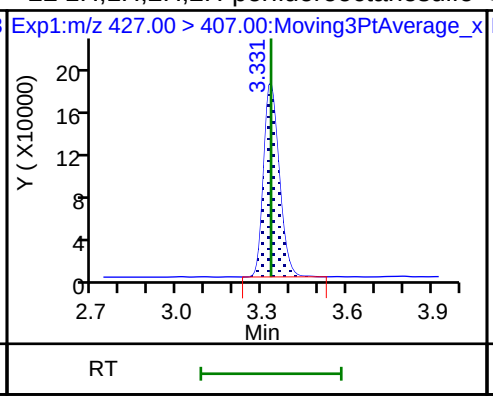

19 DONA



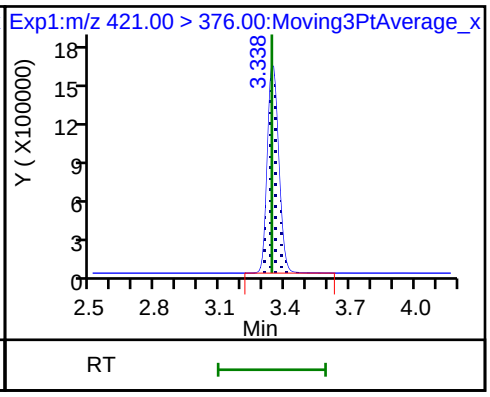
D 20 M2-6:2 FTS



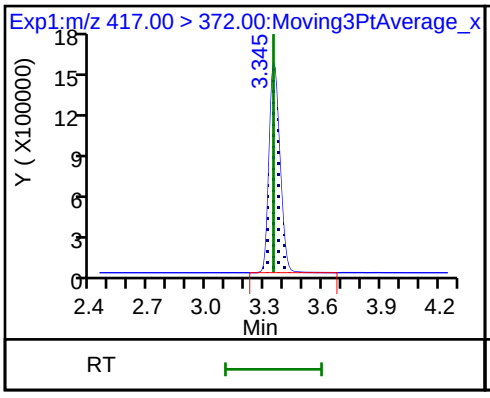

22 1H,1H,2H,2H-perfluorooctanesulfo



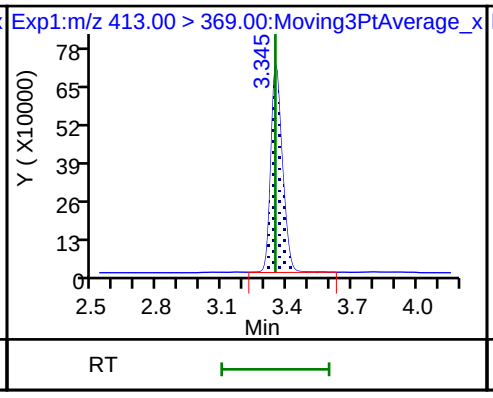

$ 21 13C8 PFOA



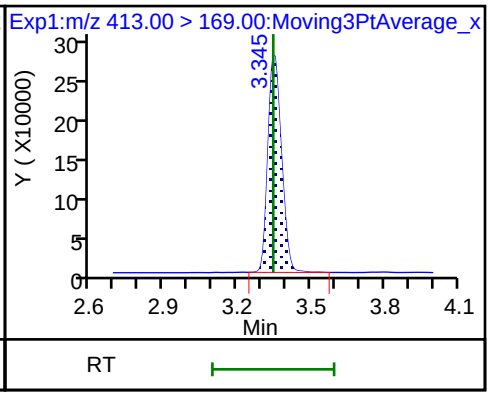

D 26 13C4 PFOA



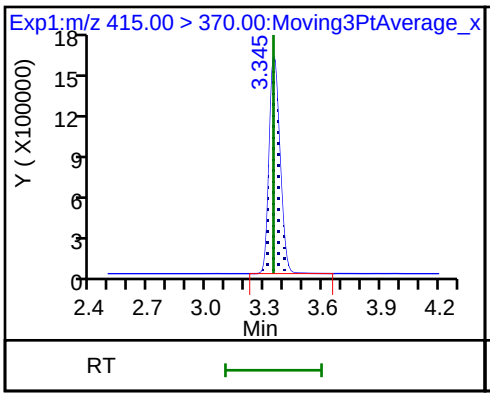

24 Perfluorooctanoic acid



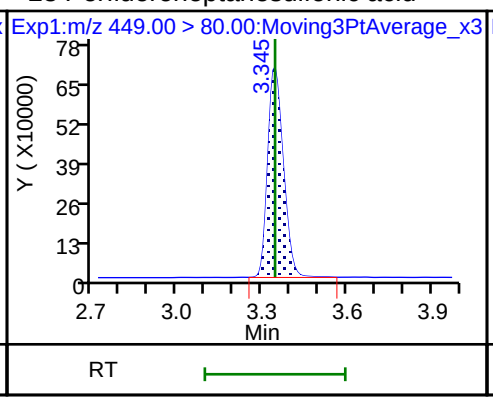

24 Perfluorooctanoic acid



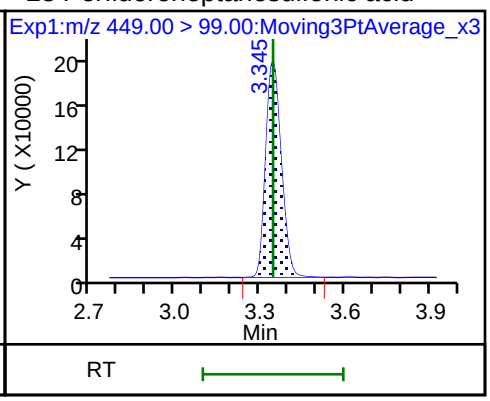

* 25 13C2 PFOA



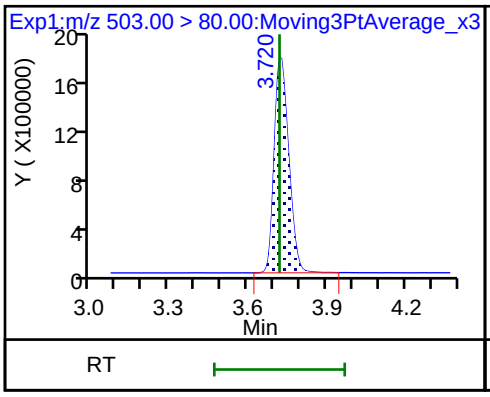

23 Perfluoroheptanesulfonic acid




23 Perfluoroheptanesulfonic acid




D 31 13C4 PFOS

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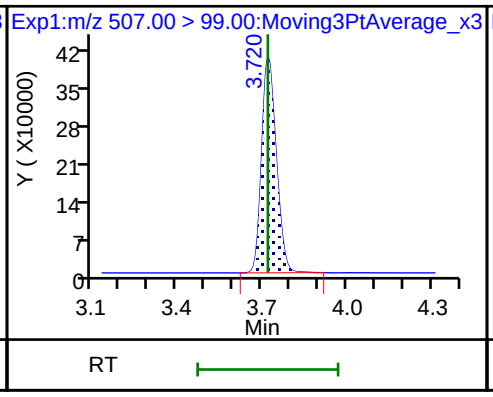
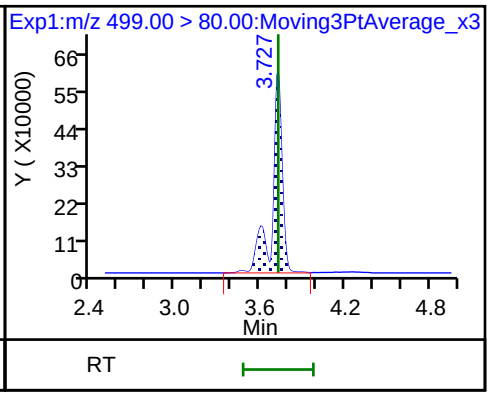
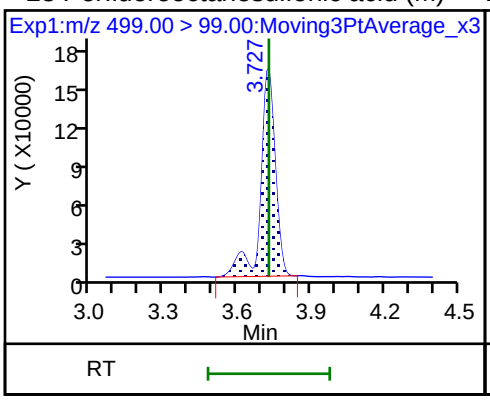


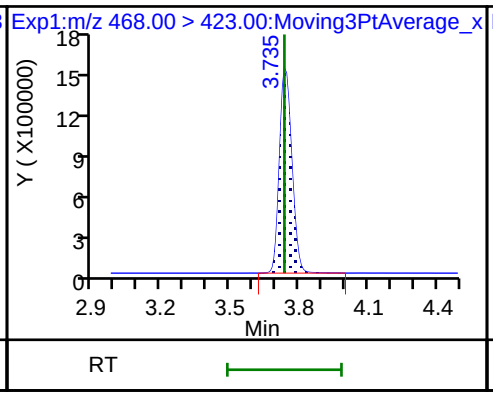

28 Perfluorooctanesulfonic acid



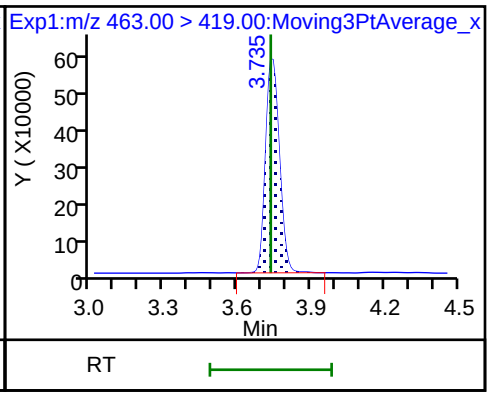
28 Perfluorooctanesulfonic acid (M)




D 29 13C5 PFNA




30 Perfluorononanoic acid

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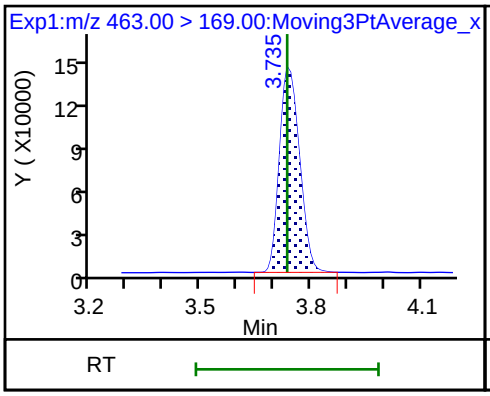
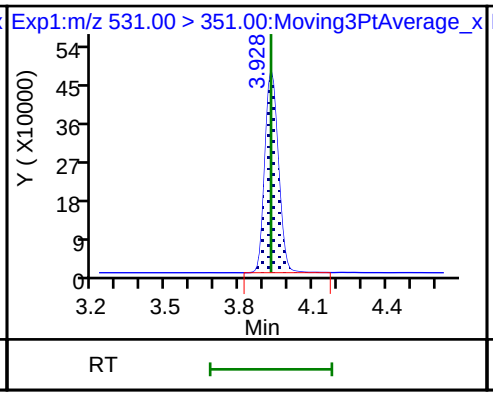
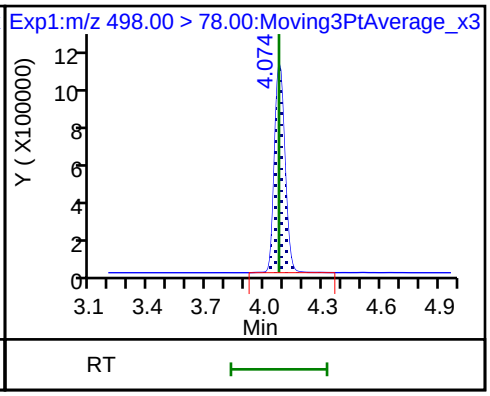


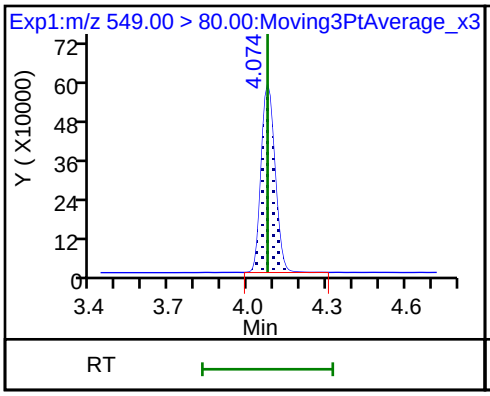

32 9-Chlorohexadecafluoro-3-oxanona



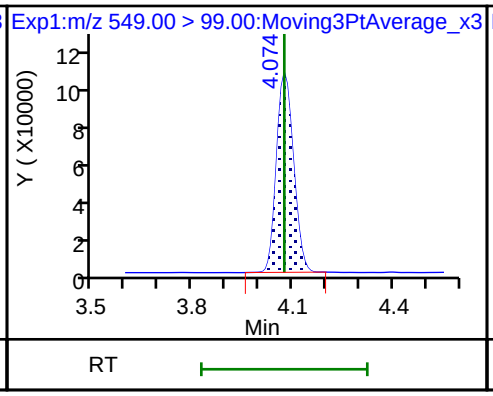

34 Perfluorooctanesulfonamide



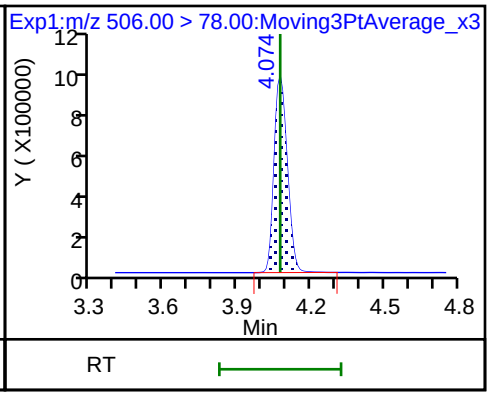

35 Perfluorononanesulfonic acid




35 Perfluorononanesulfonic acid




D 36 13C8 FOSA

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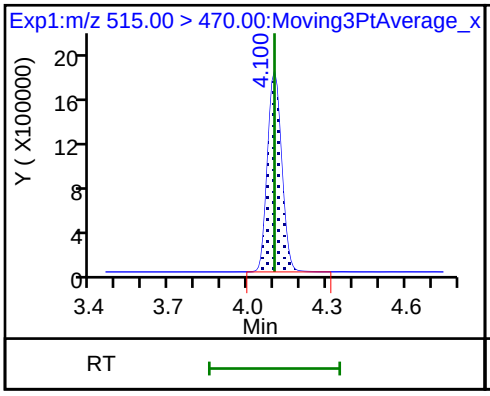
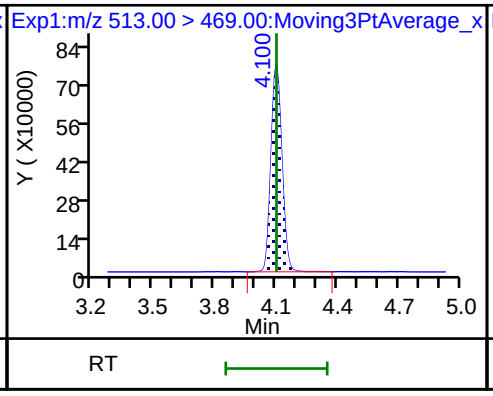
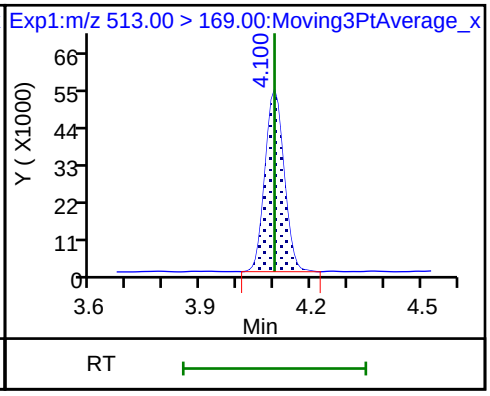


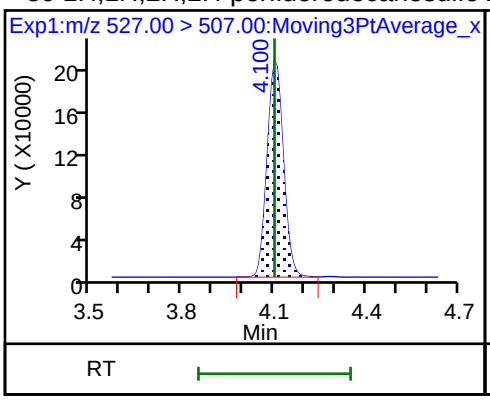

38 Perfluorodecanoic acid



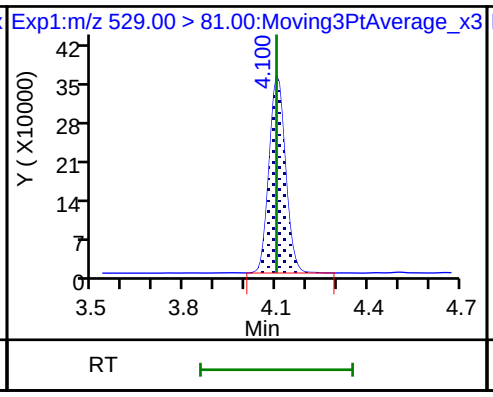

38 Perfluorodecanoic acid



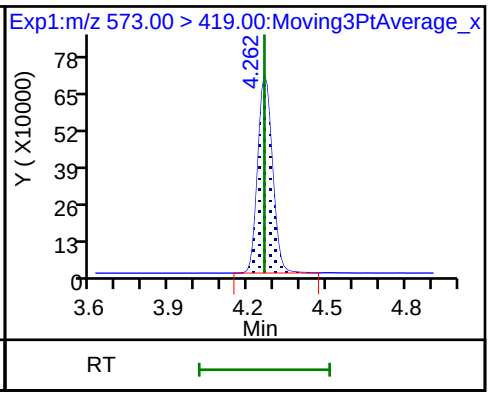
39 1H,1H,2H,2H-perfluorodecanesulfo



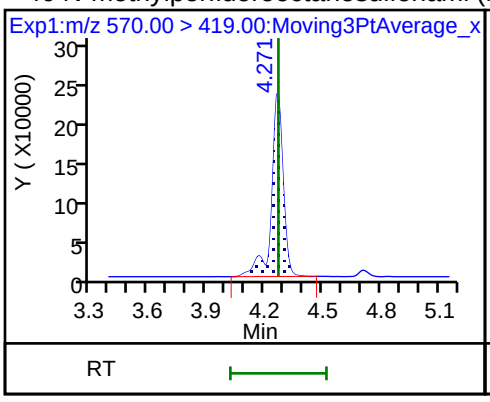

D 37 M2-8:2 FTS



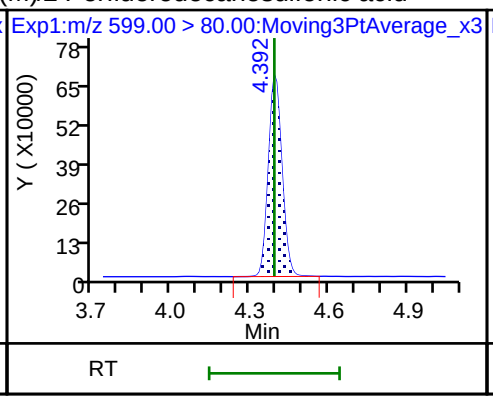

D 41 d3-NMeFOSAA



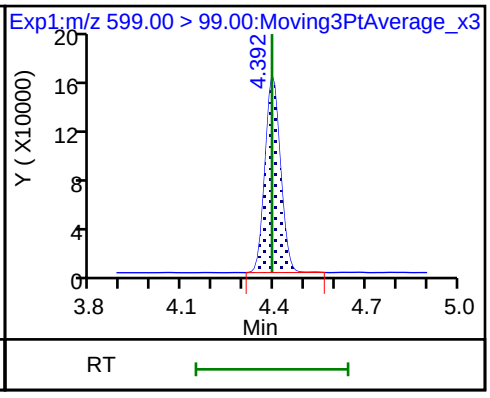

40 N-methylperfluorooctanesulfonami (M)



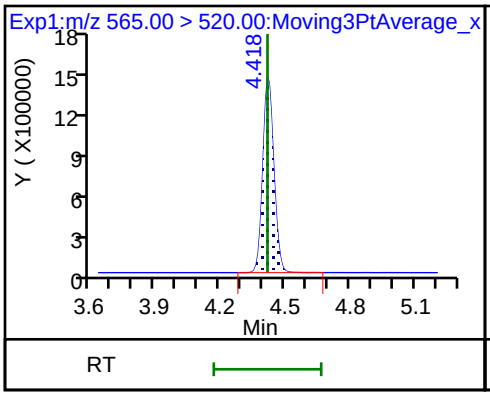

42 Perfluorodecanesulfonic acid



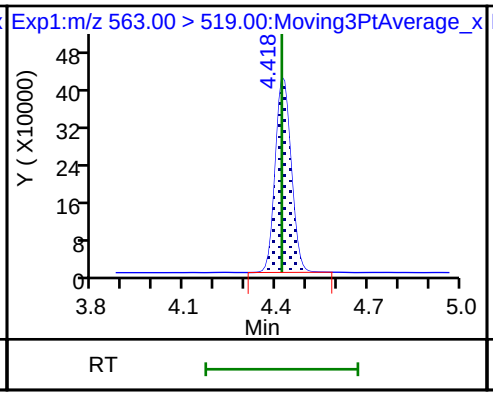

42 Perfluorodecanesulfonic acid



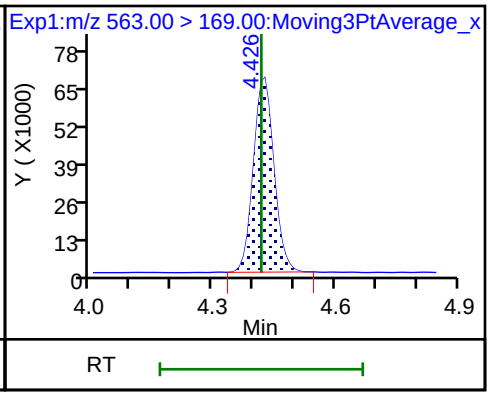

D 46 13C2 PFUnA



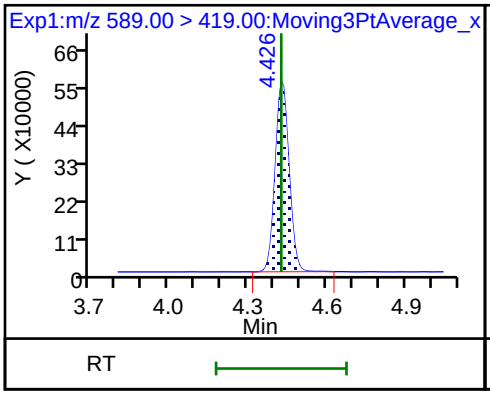

43 Perfluoroundecanoic acid



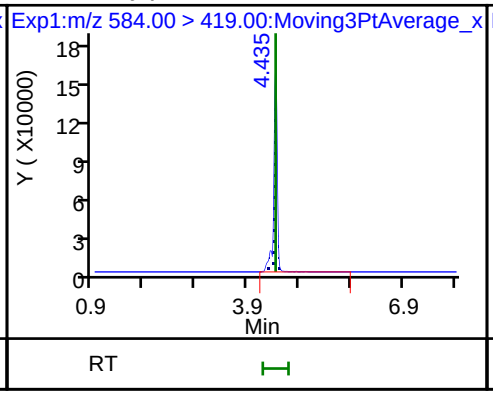

43 Perfluoroundecanoic acid



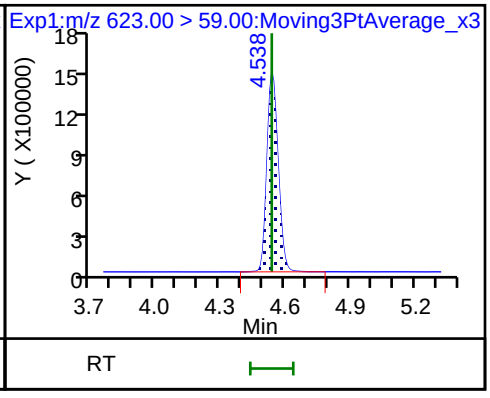

D 45 d5-NEtFOSAA



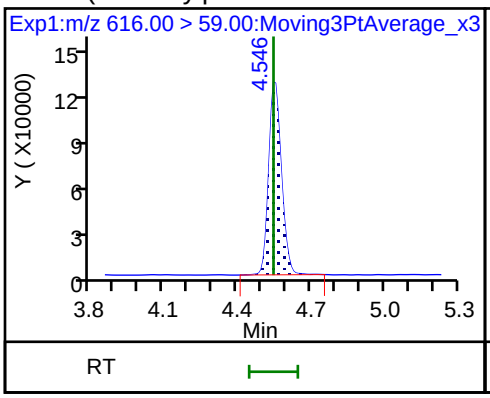

44 N-ethylperfluorooctanesulfonamid



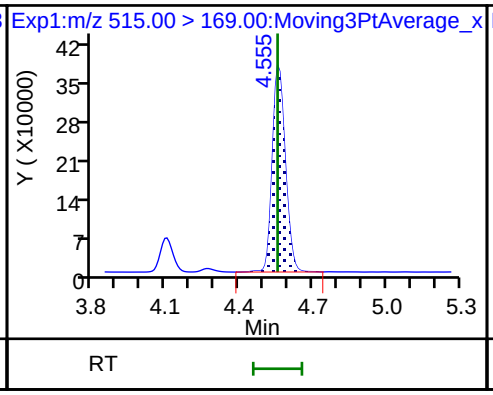

D 47 d7-N-MeFOSE-M



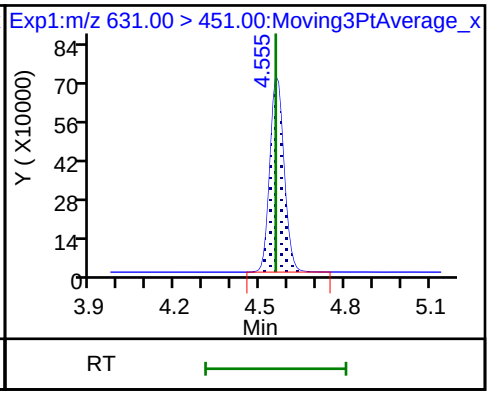
48 2-(N-methylperfluoro-1-octanesul



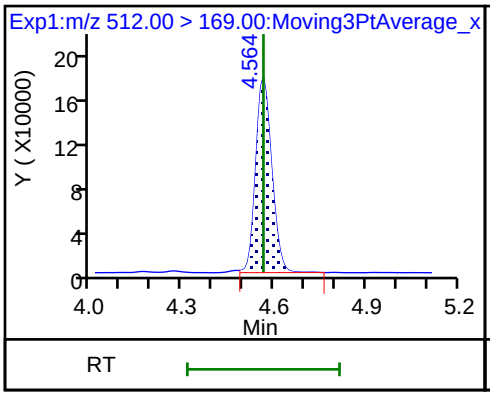

D 49 d-N-MeFOSA-M



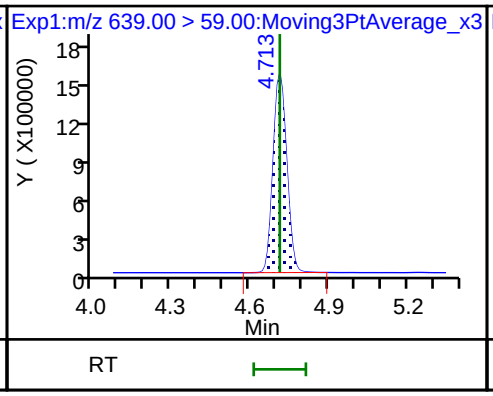

51 11-Chloroeicosafluoro-3-oxaundec



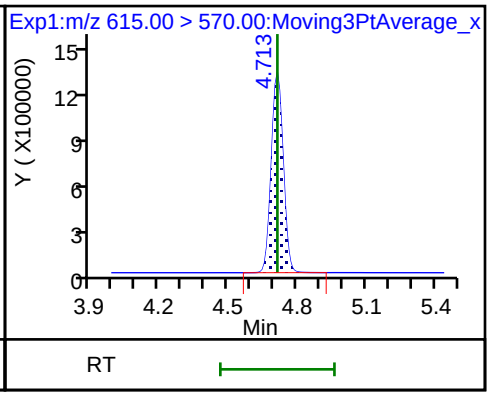

50 NMeFOSA



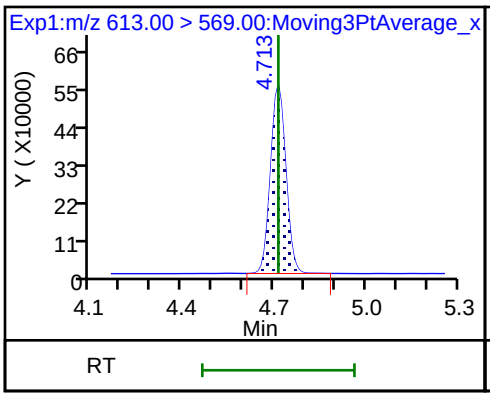

D 53 d9-N-EtFOSE-M



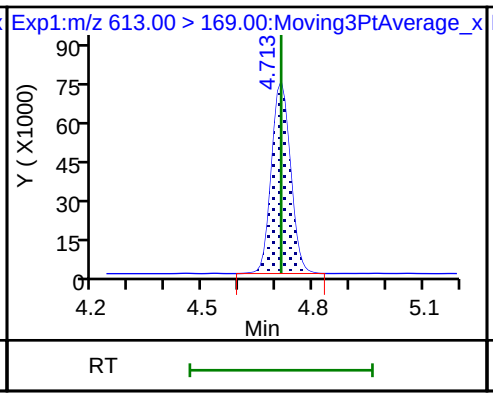

D 56 13C2 PFDoA



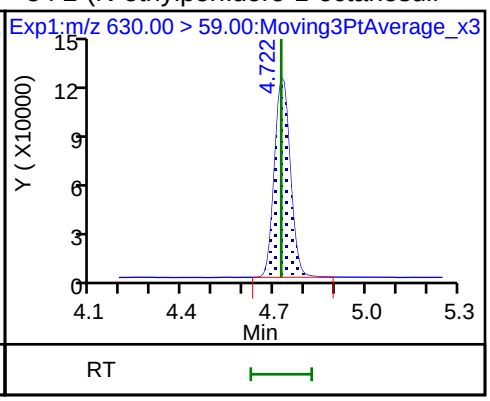

52 Perfluorododecanoic acid



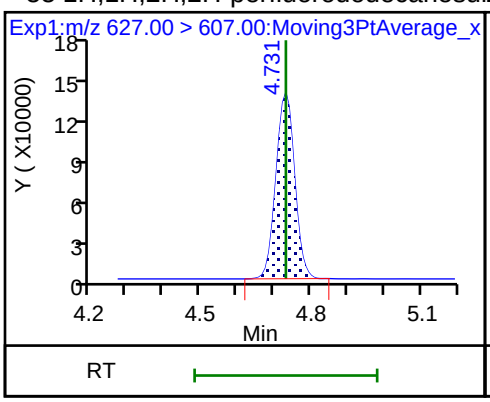

52 Perfluorododecanoic acid



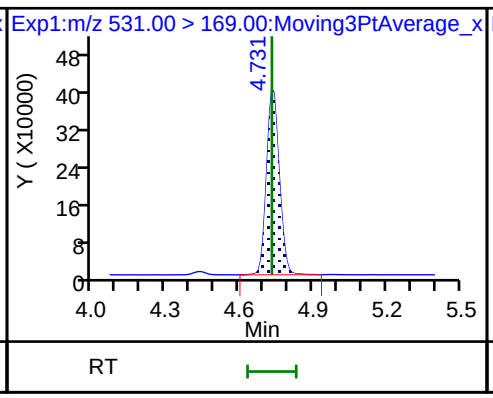

54 2-(N-ethylperfluoro-1-octanesulf



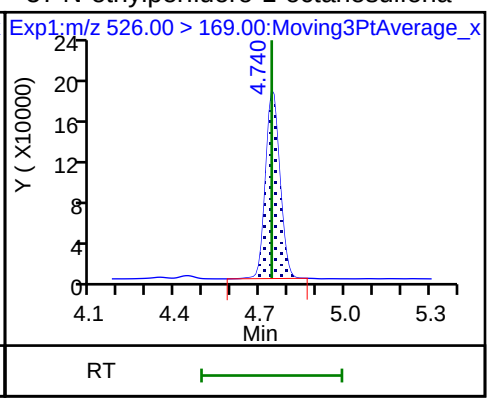

55 1H,1H,2H,2H-perfluorododecanesul



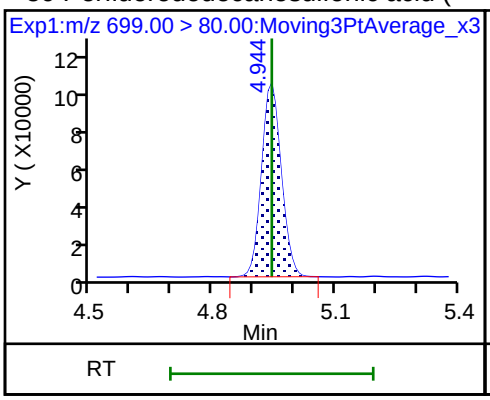

D 58 d-N-EtFOSA-M



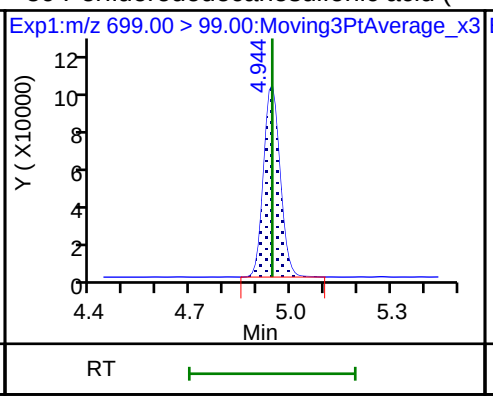

57 N-ethylperfluoro-1-octanesulfona



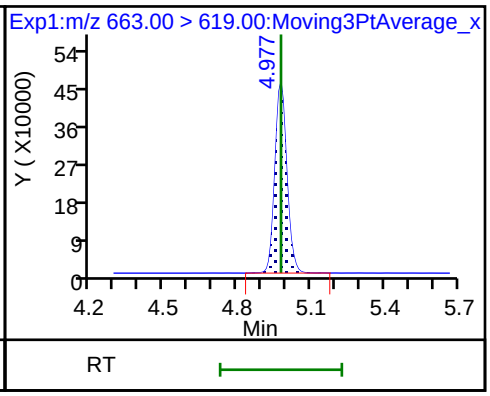
59 Perfluorododecanesulfonic acid (



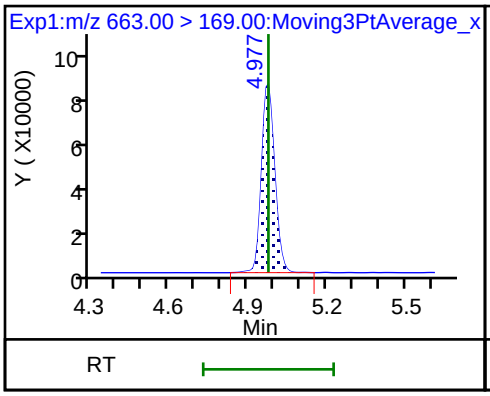

59 Perfluorododecanesulfonic acid (



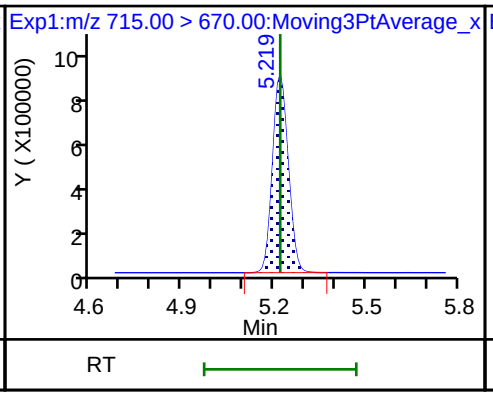

60 Perfluorotridecanoic acid



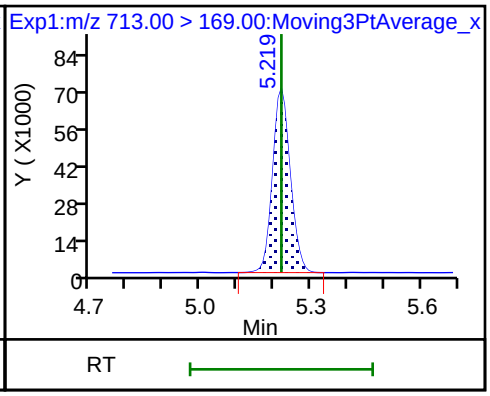

60 Perfluorotridecanoic acid



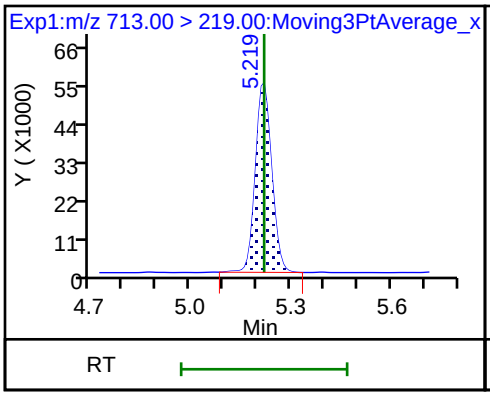

D 62 13C2 PFTeDA



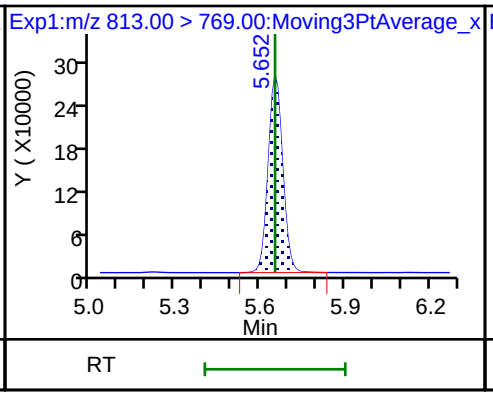

61 Perfluorotetradecanoic acid



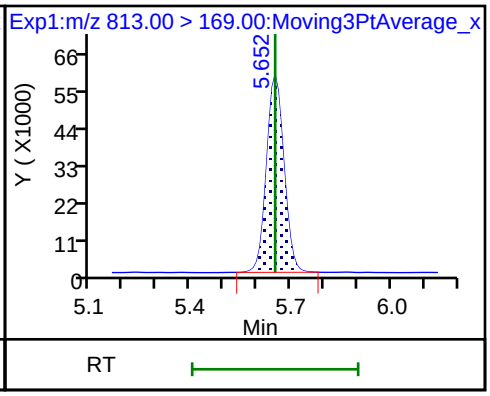

61 Perfluorotetradecanoic acid



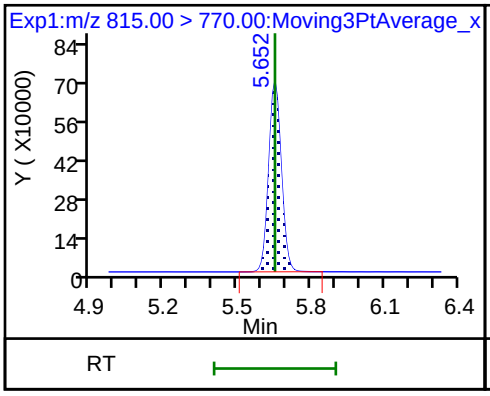

64 Perfluorohexadecanoic acid



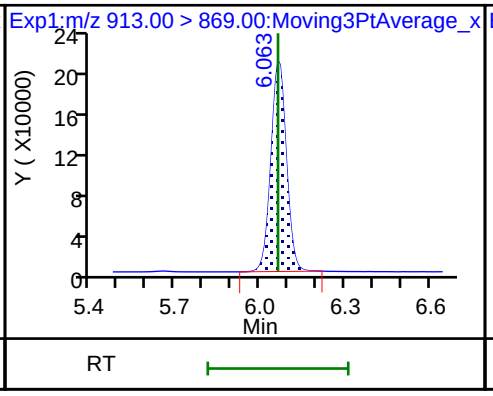

64 Perfluorohexadecanoic acid



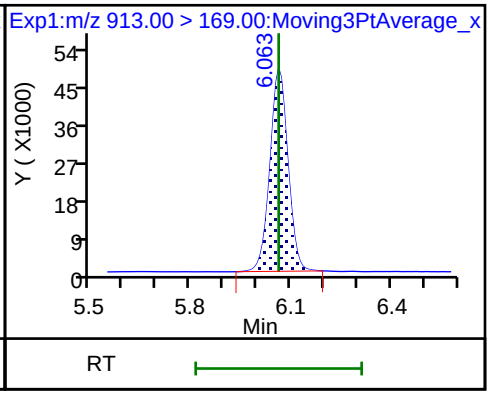

D 63 13C2 PFHxDA




65 Perfluorooctadecanoic acid




65 Perfluorooctadecanoic acid



Eurofins TestAmerica, Sacramento

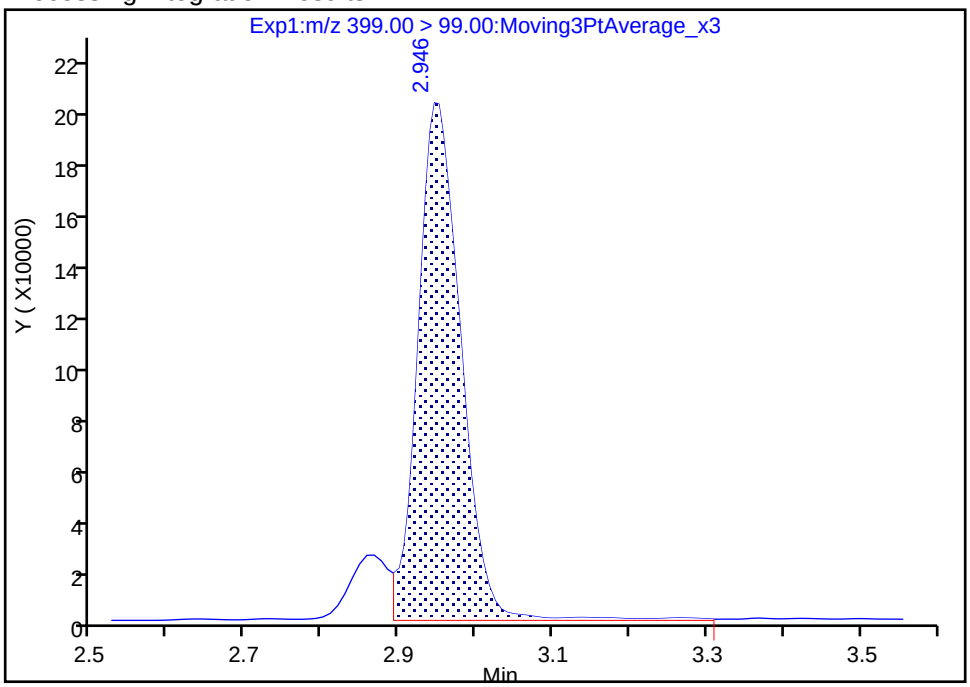
Data File: \\chromfs\Sacramento\ChromData\A9\20200911-103120.b\2020.09.11_A9_PFC_AA_024.d
Injection Date: 11-Sep-2020 13:05:37 Instrument ID: A9
Lims ID: CCV L4
Client ID:
Operator ID: SACINSTRLCMS02 ALS Bottle#: 43 Worklist Smp#: 1
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFAS_A9 Limit Group: LC PFC ICAL
Column: Detector EXP1

## 16 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 2

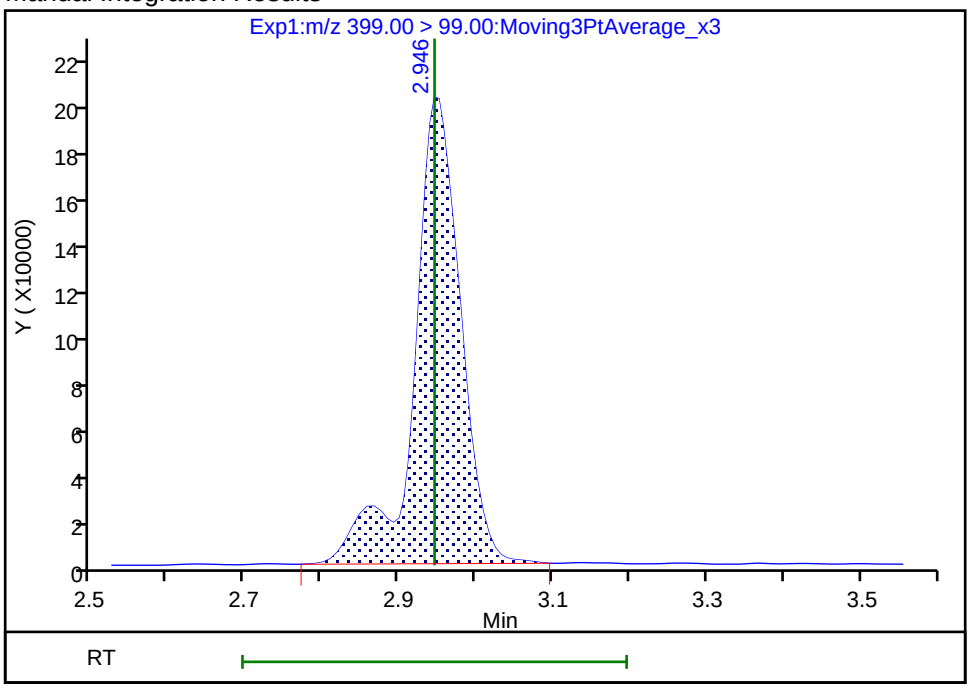
Processing Integration Results

RT: 2.95
Area: 761450
Amount: 0.918619
Amount Units: ng/ml




Manual Integration Results

RT: 2.95
Area: 825621
Amount: 0.918619
Amount Units: ng/ml




Reviewer: zibaa, 11-Sep-2020 14:23:20
Audit Action: Manually Integrated Audit Reason: Isomers

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

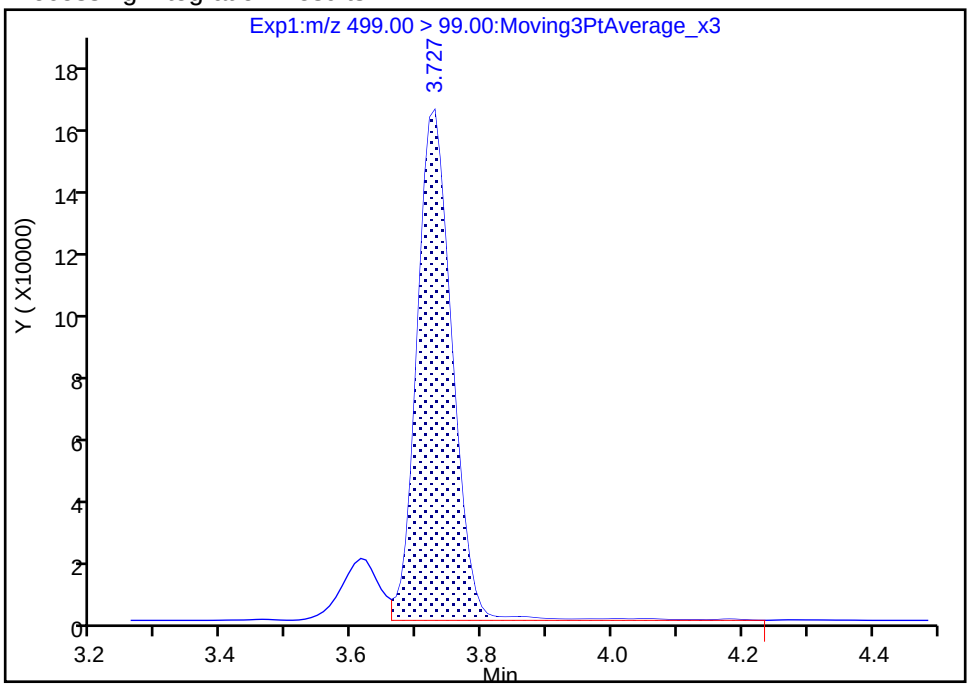
| | | | | | |
|---|---|---|---|---|---|
| Data File: | \\chromfs\Sacramento\ChromData\A9\20200911-103120.b\2020.09.11_A9_PFC_AA_024.d | | | | |
| Injection Date: | 11-Sep-2020 13:05:37 | Instrument ID: | A9 | | |
| Lims ID: | CCV L4 | | | | |
| Client ID: | | | | | |
| Operator ID: | SACINSTRLCMS02 | ALS Bottle#: | 43 | Worklist Smp#: | 1 |
| Injection Vol: | 20.0 ul | Dil. Factor: | 1.0000 | | |
| Method: | PFAS_A9 | Limit Group: | LC PFC ICAL | | |
| Column: | | Detector | EXP1 | | |

## 28 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 2

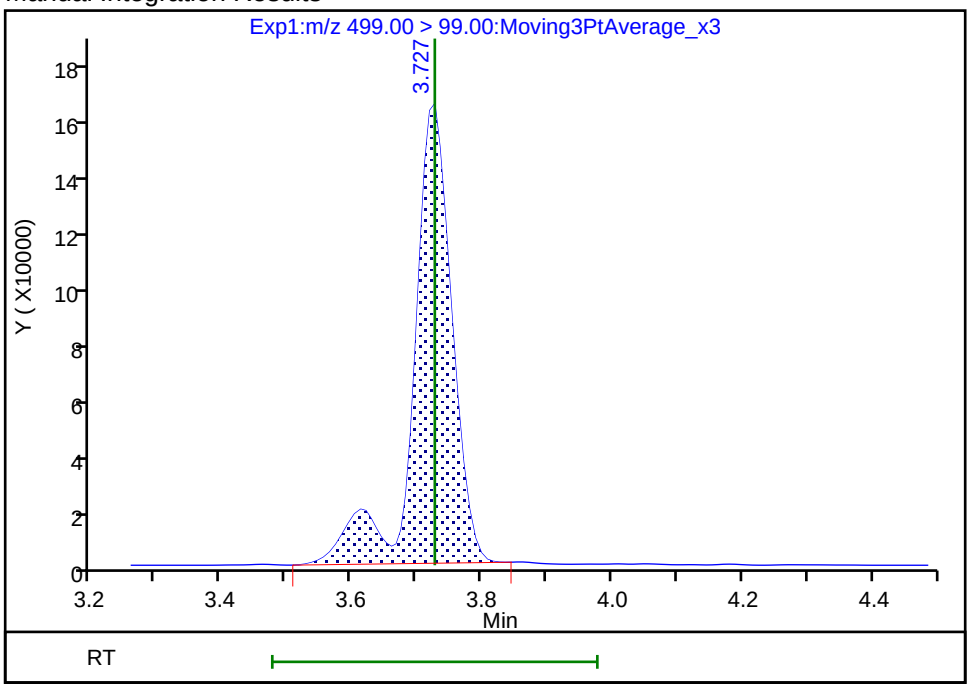
Processing Integration Results

RT: 3.73
Area: 594809
Amount: 1.006014
Amount Units: ng/ml




Manual Integration Results

RT: 3.73
Area: 651844
Amount: 1.006014
Amount Units: ng/ml




Reviewer: zibaa, 11-Sep-2020 14:23:33

Audit Action: Manually Integrated Audit Reason: Isomers

Eurofins TestAmerica, Sacramento

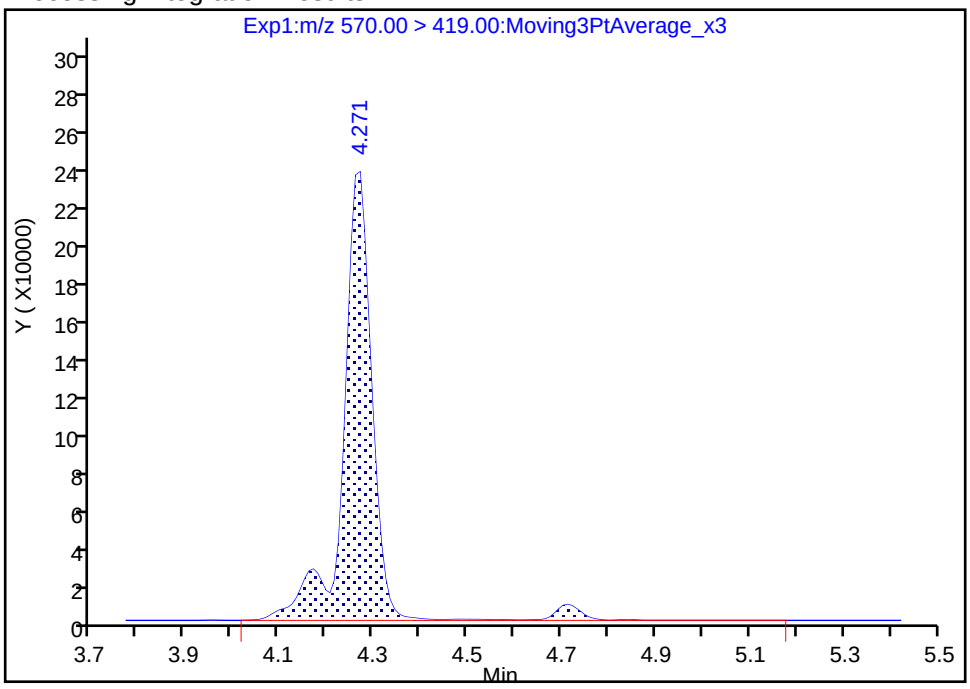
| | | | | | |
|---|---|---|---|---|---|
| Data File: | \\chromfs\Sacramento\ChromData\A9\20200911-103120.b\2020.09.11_A9_PFC_AA_024.d | | | | |
| Injection Date: | 11-Sep-2020 13:05:37 | Instrument ID: | A9 | | |
| Lims ID: | CCV L4 | | | | |
| Client ID: | | | | | |
| Operator ID: | SACINSTRLCMS02 | ALS Bottle#: | 43 | Worklist Smp#: | 1 |
| Injection Vol: | 20.0 ul | Dil. Factor: | 1.0000 | | |
| Method: | PFAS_A9 | Limit Group: | LC PFC ICAL | | |
| Column: | | Detector | EXP1 | | |

## 40 N-methylperfluorooctanesulfonami, CAS: 2355-31-9

Signal: 1

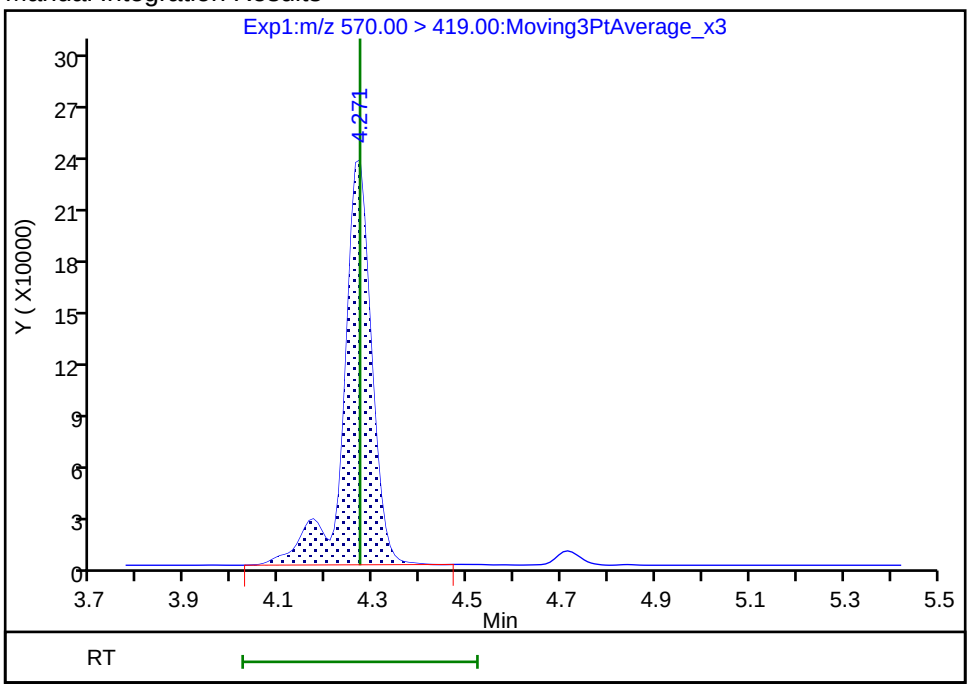
Processing Integration Results

RT: 4.27
Area: 1017565
Amount: 1.228407
Amount Units: ng/ml




Manual Integration Results

RT: 4.27
Area: 977265
Amount: 1.179757
Amount Units: ng/ml




Reviewer: zibaa, 11-Sep-2020 14:23:54
Audit Action: Manually Integrated Audit Reason: Baseline

FORM VII
LCMS CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Sacramento  Job No.: 460-217547-1

SDG No.:

Lab Sample ID: CCV 320-411454/13  Calibration Date: 09/11/2020 14:57

Instrument ID: A9  Calib Start Date: 09/10/2020 10:18

GC Column: Acquity  ID: 2.10(mm)  Calib End Date: 09/10/2020 12:29

Lab File ID: 2020.09.11_A9_PFC_AA_036.d  Conc. Units: ng/mL

| ANALYTE | CURVE TYPE | AVE RRF | RRF | MIN RRF | CALC AMOUNT | SPIKE AMOUNT | %D | MAX %D |
|---|---|---|---|---|---|---|---|---|
| Perfluorobutanoic acid (PFBA) | AveID | 0.8734 | 0.9874 | | 2.83 | 2.50 | 13.0 | 40.0 |
| Perfluoropentanoic acid (PFPeA) | AveID | 1.018 | 1.089 | | 2.68 | 2.50 | 7.0 | 40.0 |
| Perfluorobutanesulfonic acid (PFBS) | AveID | 0.998 | 1.034 | | 2.29 | 2.21 | 3.7 | 50.0 |
| 4:2 FTS | AveID | 1.978 | 2.205 | | 2.60 | 2.34 | 11.5 | 50.0 |
| Perfluorohexanoic acid (PFHxA) | AveID | 0.8343 | 0.9058 | | 2.71 | 2.50 | 8.6 | 40.0 |
| Perfluoropentanesulfonic acid (PFPeS) | AveID | 0.4016 | 0.4536 | | 2.65 | 2.35 | 12.9 | 50.0 |
| HFPO-DA (GenX) | AveID | 0.3959 | 0.4137 | | 2.61 | 2.50 | 4.5 | 40.0 |
| Perfluoroheptanoic acid (PFHpA) | AveID | 1.109 | 1.129 | | 2.55 | 2.50 | 1.8 | 40.0 |
| Perfluorohexanesulfonic acid (PFHxS) | AveID | 1.180 | 1.181 | | 2.28 | 2.28 | 0.1 | 40.0 |
| 4,8-Dioxa-3H-perfluorononanoic acid (ADONA) | AveID | 1.813 | 1.818 | | 2.36 | 2.36 | 0.3 | 50.0 |
| 6:2 FTS | AveID | 1.542 | 1.622 | | 2.49 | 2.37 | 5.2 | 40.0 |
| Perfluoroheptanesulfonic Acid (PFHpS) | AveID | 0.9244 | 0.9551 | | 2.46 | 2.38 | 3.3 | 50.0 |
| Perfluorooctanoic acid (PFOA) | AveID | 1.078 | 1.185 | | 2.75 | 2.50 | 9.8 | 40.0 |
| Perfluorooctanesulfonic acid (PFOS) | AveID | 1.040 | 1.077 | | 2.40 | 2.32 | 3.6 | 40.0 |
| Perfluorononanoic acid (PFNA) | AveID | 0.996 | 1.070 | | 2.69 | 2.51 | 7.5 | 40.0 |
| F-53B Major | AveID | 0.6274 | 0.6892 | | 2.56 | 2.33 | 9.8 | 50.0 |
| Perfluorononanesulfonic acid (PFNS) | AveID | 0.7591 | 0.8232 | | 2.60 | 2.40 | 8.4 | 50.0 |
| Perfluorooctanesulfonamide (FOSA) | AveID | 2.782 | 2.797 | | 2.51 | 2.50 | 0.6 | 40.0 |
| 8:2 FTS | AveID | 1.288 | 1.413 | | 2.63 | 2.40 | 9.6 | 40.0 |
| Perfluorodecanoic acid (PFDA) | AveID | 0.998 | 0.999 | | 2.50 | 2.50 | 0.0 | 40.0 |
| N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA) | AveID | 0.7593 | 0.8124 | | 2.68 | 2.50 | 7.0 | 40.0 |
| Perfluorodecanesulfonic acid (PFDS) | AveID | 0.8492 | 0.9097 | | 2.58 | 2.41 | 7.1 | 50.0 |
| Perfluoroundecanoic acid (PFUnA) | AveID | 0.6962 | 0.7222 | | 2.60 | 2.50 | 3.7 | 40.0 |
| N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA) | AveID | 0.8112 | 0.8606 | | 2.65 | 2.50 | 6.1 | 40.0 |
| NMeFOSE | AveID | 1.043 | 1.077 | | 2.58 | 2.50 | 3.2 | 40.0 |
| F-53B Minor | AveID | 0.7398 | 0.9532 | | 3.03 | 2.36 | 28.8 | 50.0 |
| NMeFOSA | AveID | 1.043 | 1.269 | | 3.04 | 2.50 | 21.7 | 50.0 |
| Perfluorododecanoic acid (PFDoA) | AveID | 0.9197 | 1.111 | | 3.04 | 2.52 | 20.8 | 40.0 |
| 10:2 FTS | AveID | 0.8214 | 0.9755 | | 2.86 | 2.41 | 18.8 | 50.0 |
| NEtFOSE | AveID | 0.9939 | 1.013 | | 2.55 | 2.50 | 1.9 | 40.0 |
| NEtFOSA | AveID | 0.995 | 1.068 | | 2.68 | 2.50 | 7.4 | 40.0 |
| Perfluorododecanesulfonic acid (PFDoS) | AveID | 0.1269 | 0.1371 | | 2.62 | 2.42 | 8.1 | 50.0 |

FORM VII 537 (modified)

FORM VII
LCMS CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Sacramento  Job No.: 460-217547-1

SDG No.:

Lab Sample ID: CCV 320-411454/13  Calibration Date: 09/11/2020 14:57

Instrument ID: A9  Calib Start Date: 09/10/2020 10:18

GC Column: Acquity  ID: 2.10(mm)  Calib End Date: 09/10/2020 12:29

Lab File ID: 2020.09.11_A9_PFC_AA_036.d  Conc. Units: ng/mL

| ANALYTE | CURVE TYPE | AVE RRF | RRF | MIN RRF | CALC AMOUNT | SPIKE AMOUNT | %D | MAX %D |
|---|---|---|---|---|---|---|---|---|
| Perfluorotridecanoic acid (PFTriA) | AveID | 0.7267 | 0.8131 | | 2.80 | 2.50 | 11.9 | 50.0 |
| Perfluorotetradecanoic acid (PFTeA) | AveID | 0.1764 | 0.1739 | | 2.47 | 2.50 | -1.4 | 50.0 |
| Perfluoro-n-hexadecanoic acid (PFHxDA) | L2ID | | 0.9757 | | 2.65 | 2.50 | 5.8 | 50.0 |
| Perfluoro-n-octadecanoic acid (PFODA) | AveID | 0.7480 | 0.8298 | | 2.77 | 2.50 | 10.9 | 50.0 |
| 13C4 PFBA | Ave | 1.350 | 1.333 | | 2.47 | 2.50 | -1.2 | 50.0 |
| 13C5 PFPeA | Ave | 1.138 | 1.056 | | 2.32 | 2.50 | -7.2 | 50.0 |
| 13C3 PFBS | Ave | 2.249 | 2.324 | | 2.40 | 2.33 | 3.4 | 50.0 |
| M2-4:2 FTS | Ave | 0.2233 | 0.1896 | | 1.98 | 2.34 | -15.1 | 50.0 |
| 13C2 PFHxA | Ave | 1.058 | 1.026 | | 2.43 | 2.50 | -3.0 | 50.0 |
| 13C3 HFPO-DA | Ave | 0.7264 | 0.7101 | | 2.44 | 2.50 | -2.2 | 50.0 |
| 13C4 PFHpA | Ave | 1.030 | 1.036 | | 2.52 | 2.50 | 0.6 | 50.0 |
| 18O2 PFHxS | Ave | 1.076 | 1.113 | | 2.45 | 2.37 | 3.5 | 50.0 |
| M2-6:2 FTS | Ave | 0.1925 | 0.1702 | | 2.10 | 2.38 | -11.6 | 50.0 |
| 13C4 PFOA | Ave | 0.9654 | 0.9105 | | 2.36 | 2.50 | -5.7 | 50.0 |
| 13C4 PFOS | Ave | 1.123 | 1.182 | | 2.52 | 2.39 | 5.3 | 50.0 |
| 13C5 PFNA | Ave | 0.8376 | 0.8366 | | 2.50 | 2.50 | -0.1 | 50.0 |
| 13C8 FOSA | Ave | 0.5280 | 0.5367 | | 2.54 | 2.50 | 1.7 | 50.0 |
| 13C2 PFDA | Ave | 1.063 | 1.086 | | 2.55 | 2.50 | 2.1 | 50.0 |
| M2-8:2 FTS | Ave | 0.2357 | 0.2064 | | 2.10 | 2.40 | -12.5 | 50.0 |
| d3-NMeFOSAA | Ave | 0.5286 | 0.4766 | | 2.25 | 2.50 | -9.8 | 50.0 |
| 13C2 PFUnA | Ave | 0.8198 | 0.8657 | | 2.64 | 2.50 | 5.6 | 50.0 |
| d5-NEtFOSAA | Ave | 0.3541 | 0.3241 | | 2.29 | 2.50 | -8.5 | 50.0 |
| d7-N-MeFOSE-M | Ave | 0.1700 | 0.1775 | | 13.1 | 12.5 | 4.4 | 50.0 |
| d-N-MeFOSA-M | Ave | 0.2378 | 0.2195 | | 2.31 | 2.50 | -7.7 | 50.0 |
| 13C2 PFDoA | Ave | 0.8051 | 0.7766 | | 2.41 | 2.50 | -3.5 | 50.0 |
| d9-N-EtFOSE-M | Ave | 0.1785 | 0.1905 | | 13.3 | 12.5 | 6.7 | 50.0 |
| d-N-EtFOSA-M | Ave | 0.2469 | 0.2469 | | 2.50 | 2.50 | 0.0 | 50.0 |
| 13C2 PFTeDA | Ave | 0.5615 | 0.5600 | | 2.49 | 2.50 | -0.3 | 50.0 |
| 13C2 PFHxDA | Ave | 0.4152 | 0.4216 | | 2.54 | 2.50 | 1.5 | 50.0 |
| 13C8 PFOA | Ave | 0.8088 | 0.9395 | | 2.84 | 2.45 | 16.2 | 50.0 |
| 13C8 PFOS | Ave | 0.2542 | 0.2577 | | 2.42 | 2.39 | 1.4 | 50.0 |

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\A9\20200911-103120.b\2020.09.11_A9_PFC_AA_036.d
Lims ID: CCV L5
Client ID:
Sample Type: CCV
Inject. Date: 11-Sep-2020 14:57:52 ALS Bottle#: 44 Worklist Smp#: 13
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Sample Info: CCV L5
Misc. Info.: Plate: 1 Rack: 1
Operator ID: SACINSTRLCMS02 Instrument ID: A9
Sublist: chrom-PFAS_A9*sub16

Method: \\chromfs\Sacramento\ChromData\A9\20200911-103120.b\PFAS_A9.m
Limit Group: LC PFC ICAL
Last Update: 11-Sep-2020 16:57:16 Calib Date: 10-Sep-2020 12:29:20
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\A9\20200910-102999.b\2020.09.10_A9 _PFC_ICAL_AA_022.d

Column 1 : Det: EXP1
Process Host: CTX1061

First Level Reviewer: zibaa Date: 11-Sep-2020 16:57:16
Ratio Calibration: Average of Initial Calibration

| Signal | RT | EXP RT | DLT RT | REL RT | Response | Amount ng/ml | Ratio(Limits) | %Rec | S/N | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| D 1 13C4 PFBA | | | | | | | | | | |
| 217.00 > 172.00 | 1.892 | 1.893 | -0.001 | 0.566 | 8007312 | 2.47 | | 98.8 | 2681 | |
| 2 Perfluorobutanoic acid | | | | | | | | | | |
| 212.90 > 169.00 | 1.892 | 1.893 | -0.001 | 1.000 | 7906230 | 2.83 | | 113 | 209 | |
| D 4 13C5 PFPeA | | | | | | | | | | |
| 267.90 > 223.00 | 2.198 | 2.198 | 0.0 | 0.657 | 6345264 | 2.32 | | 92.8 | 2288 | |
| 3 Perfluoropentanoic acid | | | | | | | | | | |
| 262.90 > 219.00 | 2.198 | 2.198 | 0.0 | 1.000 | 6911430 | 2.68 | | 107 | 221 | |
| D 6 13C3 PFBS | | | | | | | | | | |
| 301.90 > 80.00 | 2.223 | 2.223 | 0.0 | 0.665 | 12985044 | 2.40 | | 103 | 4026 | |
| 5 Perfluorobutanesulfonic acid | | | | | | | | | | |
| 298.90 > 80.00 | 2.223 | 2.233 | -0.010 | 1.000 | 12766443 | 2.29 | Target=3.10 | 104 | 912 | |
| 298.90 > 99.00 | 2.223 | 2.233 | -0.010 | 1.000 | 4196205 | | 3.04(1.55-4.65) | | 615 | |
| 9 1H,1H,2H,2H-perfluorohexanesulfo | | | | | | | | | | |
| 327.00 > 307.00 | 2.514 | 2.514 | 0.0 | 1.000 | 2345026 | 2.60 | | 111 | 7918 | |
| D 8 M2-4:2 FTS | | | | | | | | | | |
| 329.00 > 81.00 | 2.514 | 2.514 | 0.0 | 0.752 | 1063734 | 1.98 | | 84.9 | 495 | |
| D 10 13C2 PFHxA | | | | | | | | | | |
| 315.00 > 270.00 | 2.546 | 2.557 | -0.011 | 0.761 | 6165710 | 2.42 | | 97.0 | 2332 | |
| 11 Perfluorohexanoic acid | | | | | | | | | | |
| 313.00 > 269.00 | 2.557 | 2.557 | 0.0 | 1.004 | 5584941 | 2.71 | Target=9.68 | 109 | 340 | |
| 313.00 > 119.00 | 2.546 | 2.557 | -0.011 | 1.000 | 542748 | | 10.29(4.84-14.52) | | 296 | |
| 12 Perfluoropentanesulfonic acid | | | | | | | | | | |
| 349.00 > 80.00 | 2.568 | 2.568 | 0.0 | 1.155 | 5940074 | 2.65 | Target=2.01 | 113 | 1428 | |
| 349.00 > 99.00 | 2.568 | 2.568 | 0.0 | 1.155 | 2788312 | | 2.13(1.00-3.01) | | 931 | |
| D 13 13C3 HFPO-DA | | | | | | | | | | |
| 287.00 > 169.00 | 2.673 | 2.673 | 0.0 | 0.799 | 4265471 | 2.44 | | 97.8 | 2412 | |

| Signal | RT | EXP RT | DLT RT | REL RT | Response | Amount ng/ml | Ratio(Limits) | %Rec | S/N | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| 14 Perfluoro(2-propoxypropanoic) ac | | | | | | | | | | |
| 285.00 > 169.00 | 2.673 | 2.673 | 0.0 | 1.000 | 1764629 | 2.61 | | 105 | 3331 | |
| D 15 13C4 PFHpA | | | | | | | | | | |
| 367.00 > 322.00 | 2.940 | 2.940 | 0.0 | 0.879 | 6223873 | 2.51 | | 101 | 3185 | |
| D 17 18O2 PFHxS | | | | | | | | | | |
| 403.00 > 84.00 | 2.946 | 2.946 | 0.0 | 0.881 | 6325998 | 2.45 | | 103 | 3666 | |
| 16 Perfluorohexanesulfonic acid | | | | | | | | | | M |
| 399.00 > 80.00 | 2.946 | 2.946 | 0.0 | 1.000 | 7185076 | 2.28 | Target=3.29 | 100 | 913 | |
| 399.00 > 99.00 | 2.946 | 2.946 | 0.0 | 1.000 | 2046439 | | 3.51(1.65-4.94) | | 611 | M |
| 18 Perfluoroheptanoic acid | | | | | | | | | | |
| 363.00 > 319.00 | 2.940 | 2.946 | -0.006 | 1.000 | 7027679 | 2.55 | Target=3.74 | 102 | 579 | |
| 363.00 > 169.00 | 2.940 | 2.946 | -0.006 | 1.000 | 1903450 | | 3.69(1.87-5.61) | | 983 | |
| 19 DONA | | | | | | | | | | |
| 377.00 > 251.00 | 2.987 | 2.993 | -0.006 | 0.803 | 12156853 | 2.36 | Target=1.80 | 100 | 5328 | |
| 377.00 > 85.00 | 2.987 | 2.993 | -0.006 | 0.803 | 6983301 | | 1.74(0.90-2.70) | | 2999 | |
| D 20 M2-6:2 FTS | | | | | | | | | | |
| 429.00 > 81.00 | 3.324 | 3.324 | 0.0 | 0.994 | 971345 | 2.10 | | 88.4 | 748 | |
| 22 1H,1H,2H,2H-perfluorooctanesulfo | | | | | | | | | | |
| 427.00 > 407.00 | 3.324 | 3.331 | -0.007 | 1.000 | 1572513 | 2.49 | | 105 | 1181 | |
| $ 21 13C8 PFOA | | | | | | | | | | |
| 421.00 > 376.00 | 3.338 | 3.338 | 0.0 | 0.998 | 5524905 | 2.84 | | 116 | 8957 | |
| D 26 13C4 PFOA | | | | | | | | | | |
| 417.00 > 372.00 | 3.345 | 3.345 | 0.0 | 1.000 | 5469523 | 2.36 | | 94.3 | 4013 | |
| 24 Perfluorooctanoic acid | | | | | | | | | | |
| 413.00 > 369.00 | 3.345 | 3.345 | 0.0 | 1.000 | 6486113 | 2.75 | Target=2.37 | 110 | 909 | |
| 413.00 > 169.00 | 3.345 | 3.345 | 0.0 | 1.000 | 2580667 | | 2.51(1.19-3.56) | | 1294 | |
| * 25 13C2 PFOA | | | | | | | | | | |
| 415.00 > 370.00 | 3.345 | 3.345 | 0.0 | | 6006964 | 2.50 | | | 4063 | |
| 23 Perfluoroheptanesulfonic acid | | | | | | | | | | |
| 449.00 > 80.00 | 3.338 | 3.345 | -0.007 | 0.897 | 6455360 | 2.46 | Target=3.65 | 103 | 1348 | |
| 449.00 > 99.00 | 3.338 | 3.345 | -0.007 | 0.897 | 1742211 | | 3.71(1.83-5.48) | | 1340 | |
| D 31 13C4 PFOS | | | | | | | | | | |
| 503.00 > 80.00 | 3.720 | 3.720 | 0.0 | 1.112 | 6786991 | 2.52 | | 105 | 2067 | |
| $ 27 13C8 PFOS | | | | | | | | | | |
| 507.00 > 99.00 | 3.712 | 3.720 | -0.008 | 1.110 | 1479949 | 2.42 | | 101 | 2725 | |
| 28 Perfluorooctanesulfonic acid | | | | | | | | | | M |
| 499.00 > 80.00 | 3.720 | 3.727 | -0.007 | 1.000 | 7093112 | 2.40 | Target=4.12 | 104 | 642 | |
| 499.00 > 99.00 | 3.720 | 3.727 | -0.007 | 1.000 | 1615927 | | 4.39(2.06-6.17) | | 1209 | M |
| D 29 13C5 PFNA | | | | | | | | | | |
| 468.00 > 423.00 | 3.735 | 3.735 | 0.0 | 1.117 | 5025148 | 2.50 | | 99.9 | 4065 | |
| 30 Perfluorononanoic acid | | | | | | | | | | |
| 463.00 > 419.00 | 3.735 | 3.735 | 0.0 | 1.000 | 5386976 | 2.69 | Target=4.21 | 107 | 1827 | |
| 463.00 > 169.00 | 3.735 | 3.735 | 0.0 | 1.000 | 1282182 | | 4.20(2.11-6.32) | | 1316 | |
| 32 9-Chlorohexadecafluoro-3-oxanona | | | | | | | | | | |
| 531.00 > 351.00 | 3.928 | 3.928 | 0.0 | 1.056 | 4559909 | 2.56 | | 110 | 3964 | |
| D 36 13C8 FOSA | | | | | | | | | | |
| 506.00 > 78.00 | 4.074 | 4.074 | 0.0 | 1.218 | 3224161 | 2.54 | | 102 | 2502 | |

| Signal | RT | EXP RT | DLT RT | REL RT | Response | Amount ng/ml | Ratio(Limits) | %Rec | S/N | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| 34 Perfluorooctanesulfonamide | | | | | | | | | | |
| 498.00 > 78.00 | 4.074 | 4.074 | 0.0 | 1.000 | 9018741 | 2.51 | | 101 | 3256 | |
| 35 Perfluorononanesulfonic acid | | | | | | | | | | |
| 549.00 > 80.00 | 4.065 | 4.074 | -0.009 | 1.093 | 5610149 | 2.60 | Target=5.56 | 108 | 2204 | |
| 549.00 > 99.00 | 4.065 | 4.074 | -0.009 | 1.093 | 931888 | | 6.02(2.78-8.34) | | 2197 | |
| D 33 13C2 PFDA | | | | | | | | | | |
| 515.00 > 470.00 | 4.092 | 4.100 | -0.008 | 1.223 | 6521388 | 2.55 | | 102 | 6707 | |
| 38 Perfluorodecanoic acid | | | | | | | | | | |
| 513.00 > 469.00 | 4.092 | 4.100 | -0.008 | 1.000 | 6513076 | 2.50 | Target=14.33 | 100 | 1967 | |
| 513.00 > 169.00 | 4.092 | 4.100 | -0.008 | 1.000 | 457884 | | 14.22(7.16-21.49) | | 292 | |
| 39 1H,1H,2H,2H-perfluorodecanesulfo | | | | | | | | | | |
| 527.00 > 507.00 | 4.092 | 4.100 | -0.008 | 1.000 | 1677456 | 2.63 | | 110 | 2941 | |
| D 37 M2-8:2 FTS | | | | | | | | | | |
| 529.00 > 81.00 | 4.092 | 4.100 | -0.008 | 1.223 | 1187564 | 2.10 | | 87.5 | 772 | |
| D 41 d3-NMeFOSAA | | | | | | | | | | |
| 573.00 > 419.00 | 4.262 | 4.262 | 0.0 | 1.274 | 2862909 | 2.25 | | 90.2 | 2211 | |
| 40 N-methylperfluorooctanesulfonami | | | | | | | | | | |
| 570.00 > 419.00 | 4.262 | 4.271 | -0.009 | 1.000 | 2325964 | 2.68 | | 107 | 275 | |
| 42 Perfluorodecanesulfonic acid | | | | | | | | | | |
| 599.00 > 80.00 | 4.392 | 4.392 | 0.0 | 1.181 | 6226007 | 2.58 | Target=4.29 | 107 | 1786 | |
| 599.00 > 99.00 | 4.392 | 4.392 | 0.0 | 1.181 | 1375993 | | 4.52(2.15-6.44) | | 2113 | |
| D 46 13C2 PFUnA | | | | | | | | | | |
| 565.00 > 520.00 | 4.418 | 4.418 | 0.0 | 1.321 | 5200439 | 2.64 | | 106 | 6600 | |
| 43 Perfluoroundecanoic acid | | | | | | | | | | |
| 563.00 > 519.00 | 4.418 | 4.418 | 0.0 | 1.000 | 3759730 | 2.60 | Target=6.74 | 104 | 2495 | |
| 563.00 > 169.00 | 4.418 | 4.418 | 0.0 | 1.000 | 550592 | | 6.83(3.37-10.11) | | 1103 | |
| D 45 d5-NEtFOSAA | | | | | | | | | | |
| 589.00 > 419.00 | 4.418 | 4.426 | -0.008 | 1.321 | 1946967 | 2.29 | | 91.5 | 2051 | |
| 44 N-ethylperfluorooctanesulfonamid | | | | | | | | | | |
| 584.00 > 419.00 | 4.427 | 4.435 | -0.008 | 1.002 | 1675549 | 2.65 | | 106 | 1129 | |
| D 47 d7-N-MeFOSE-M | | | | | | | | | | |
| 623.00 > 59.00 | 4.538 | 4.538 | 0.0 | 1.357 | 5330903 | 13.1 | | 104 | 3848 | |
| 48 2-(N-methylperfluoro-1-octanesul | | | | | | | | | | |
| 616.00 > 59.00 | 4.547 | 4.546 | 0.0 | 1.002 | 1148500 | 2.58 | | 103 | 1245 | |
| D 49 d-N-MeFOSA-M | | | | | | | | | | |
| 515.00 > 169.00 | 4.555 | 4.555 | 0.0 | 1.362 | 1318450 | 2.31 | | 92.3 | 200 | |
| 51 11-Chloroeicosafluoro-3-oxaundec | | | | | | | | | | |
| 631.00 > 451.00 | 4.555 | 4.555 | 0.0 | 1.225 | 6374680 | 3.03 | | 129 | 8400 | |
| 50 NMeFOSA | | | | | | | | | | |
| 512.00 > 169.00 | 4.564 | 4.564 | 0.0 | 1.002 | 1673371 | 3.04 | | 122 | 1825 | |
| D 53 d9-N-EtFOSE-M | | | | | | | | | | |
| 639.00 > 59.00 | 4.713 | 4.713 | 0.0 | 1.409 | 5722259 | 13.3 | | 107 | 3518 | |
| D 56 13C2 PFDoA | | | | | | | | | | |
| 615.00 > 570.00 | 4.704 | 4.713 | -0.009 | 1.406 | 4665257 | 2.41 | | 96.5 | 5654 | |
| 52 Perfluorododecanoic acid | | | | | | | | | | |
| 613.00 > 569.00 | 4.704 | 4.713 | -0.009 | 1.000 | 5213884 | 3.04 | Target=6.67 | 121 | 3663 | |
| 613.00 > 169.00 | 4.704 | 4.713 | -0.009 | 1.000 | 704057 | | 7.41(3.34-10.01) | | 1636 | |

| Signal | RT | EXP RT | DLT RT | REL RT | Response | Amount ng/ml | Ratio(Limits) | %Rec | S/N | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| 54 2-(N-ethylperfluoro-1-octanesulf | | | | | | | | | | |
| 630.00 > 59.00 | 4.723 | 4.722 | 0.001 | 1.002 | 1159141 | 2.55 | | 102 | 1444 | |
| 55 1H,1H,2H,2H-perfluorododecanesul | | | | | | | | | | |
| 627.00 > 607.00 | 4.723 | 4.731 | -0.008 | 1.154 | 1165721 | 2.86 | | 119 | 4620 | |
| D 58 d-N-EtFOSA-M | | | | | | | | | | |
| 531.00 > 169.00 | 4.732 | 4.731 | 0.001 | | 1483096 | 2.50 | | 100 | 885 | |
| 57 N-ethylperfluoro-1-octanesulfona | | | | | | | | | | |
| 526.00 > 169.00 | 4.741 | 4.740 | 0.001 | 1.002 | 1584465 | 2.68 | | 107 | 807 | |
| 59 Perfluorododecanesulfonic acid ( | | | | | | | | | | |
| 699.00 > 80.00 | 4.935 | 4.944 | -0.009 | 1.327 | 942282 | 2.62 | Target=1.02 | 108 | 1542 | |
| 699.00 > 99.00 | 4.935 | 4.944 | -0.009 | 1.327 | 882883 | | 1.07(0.51-1.53) | | 2625 | |
| 60 Perfluorotridecanoic acid | | | | | | | | | | |
| 663.00 > 619.00 | 4.969 | 4.977 | -0.008 | 1.056 | 3793229 | 2.80 | Target=4.80 | 112 | 3942 | |
| 663.00 > 169.00 | 4.969 | 4.977 | -0.008 | 1.056 | 828452 | | 4.58(2.40-7.20) | | 3710 | |
| D 62 13C2 PFTeDA | | | | | | | | | | |
| 715.00 > 670.00 | 5.211 | 5.219 | -0.008 | 1.558 | 3363771 | 2.49 | | 99.7 | 5959 | |
| 61 Perfluorotetradecanoic acid | | | | | | | | | | |
| 713.00 > 169.00 | 5.211 | 5.219 | -0.008 | 1.000 | 585675 | 2.47 | Target=1.37 | 98.6 | 2161 | |
| 713.00 > 219.00 | 5.211 | 5.219 | -0.008 | 1.000 | 450158 | | 1.30(0.69-2.06) | | 2068 | |
| 64 Perfluorohexadecanoic acid | | | | | | | | | | |
| 813.00 > 769.00 | 5.643 | 5.652 | -0.009 | 1.000 | 2471103 | 2.64 | Target=4.63 | 106 | 3260 | |
| 813.00 > 169.00 | 5.643 | 5.652 | -0.009 | 1.000 | 515274 | | 4.80(2.32-6.95) | | 2310 | |
| D 63 13C2 PFHxDA | | | | | | | | | | |
| 815.00 > 770.00 | 5.643 | 5.652 | -0.009 | 1.687 | 2532603 | 2.54 | | 102 | 5238 | |
| 65 Perfluorooctadecanoic acid | | | | | | | | | | |
| 913.00 > 869.00 | 6.047 | 6.063 | -0.016 | 1.072 | 2101444 | 2.77 | Target=4.01 | 111 | 2180 | |
| 913.00 > 169.00 | 6.047 | 6.063 | -0.016 | 1.072 | 495594 | | 4.24(2.01-6.02) | | 1505 | |

## QC Flag Legend

Review Flags

M - Manually Integrated

## Reagents:

LCPFC_LL5_00031 Amount Added: 1.00 Units: mL

Report Date: 11-Sep-2020 16:57:19 Chrom Revision: 2.3 09-Sep-2020 15:12:58

Eurofins TestAmerica, Sacramento

Data File: \\chromfs\Sacramento\ChromData\A9\20200911-103120.b\2020.09.11_A9_PFC_AA_036.d

Injection Date: 11-Sep-2020 14:57:52 Instrument ID: A9

Lims ID: CCV L5

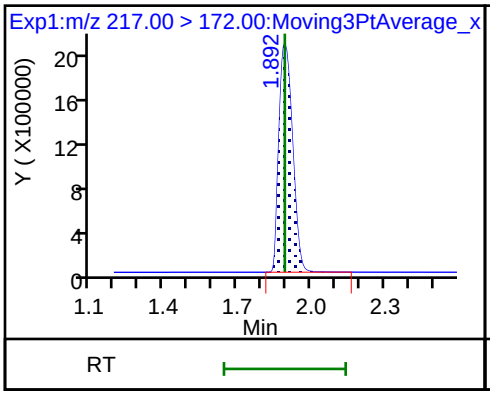
Client ID:

Operator ID: SACINSTRLCMS02 ALS Bottle#: 44 Worklist Smp#: 13

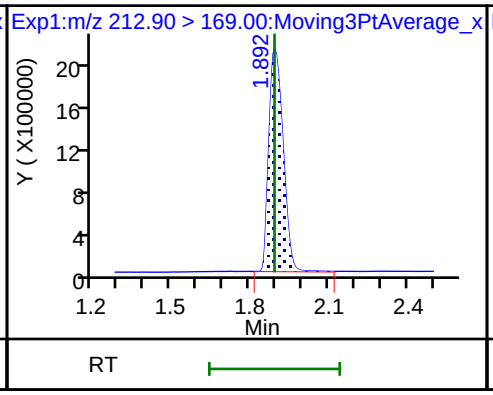
Injection Vol: 20.0 ul Dil. Factor: 1.0000

Method: PFAS_A9 Limit Group: LC PFC ICAL

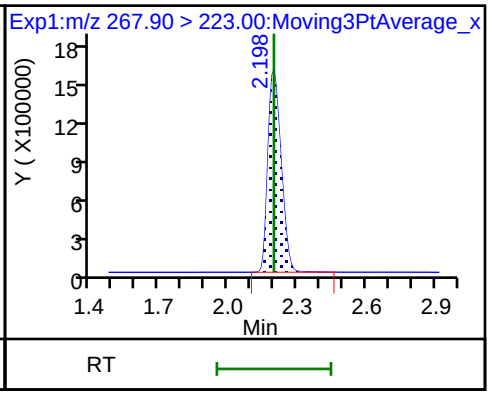
D 1 13C4 PFBA




2 Perfluorobutanoic acid




D 4 13C5 PFPeA

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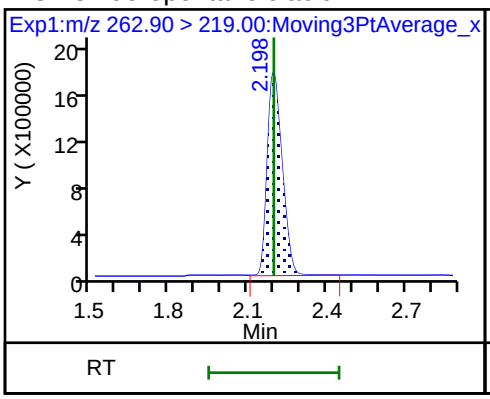
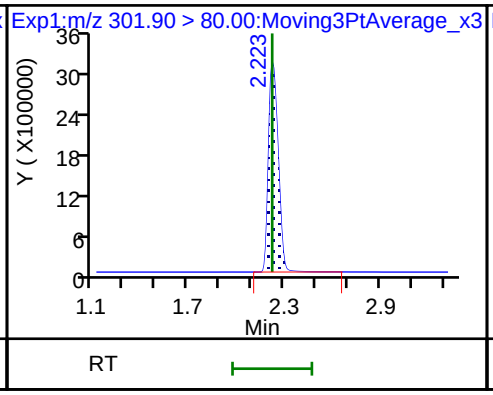
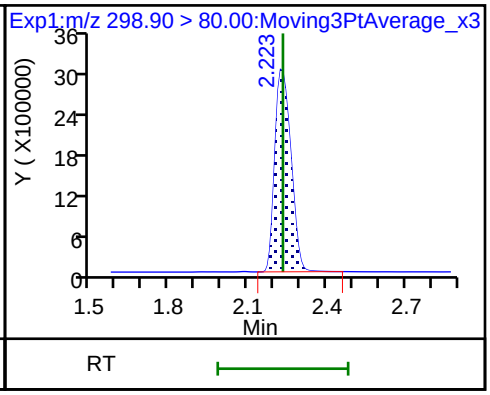


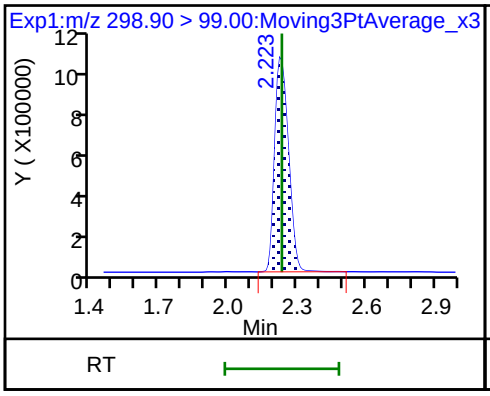

D 6 13C3 PFBS



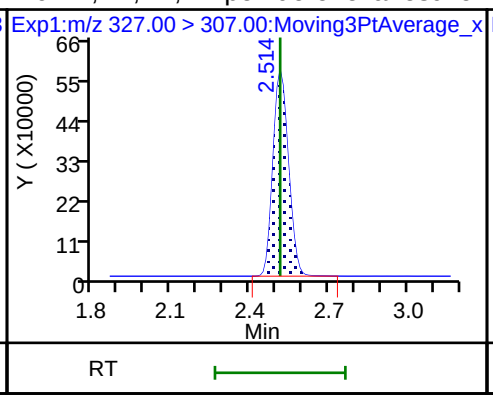

5 Perfluorobutanesulfonic acid



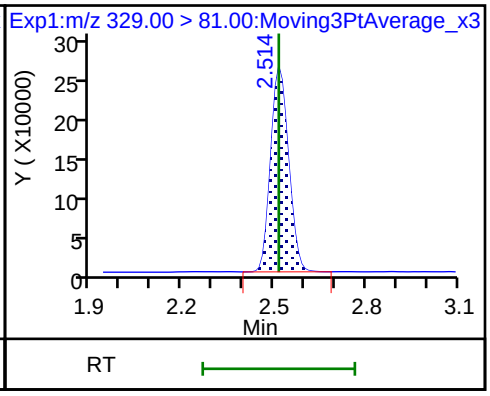

5 Perfluorobutanesulfonic acid



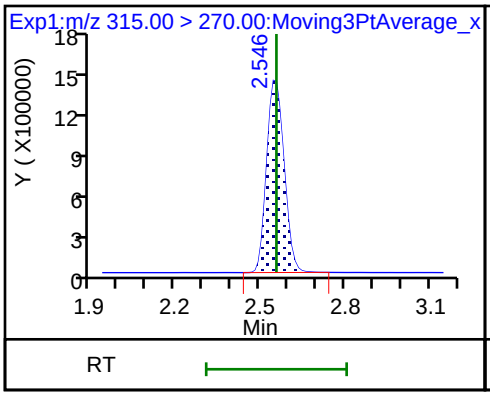

9 1H,1H,2H,2H-perfluorohexanesulfo




D 8 M2-4:2 FTS




D 10 13C2 PFHxA

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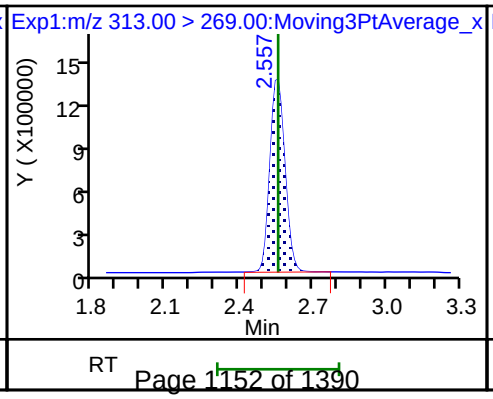
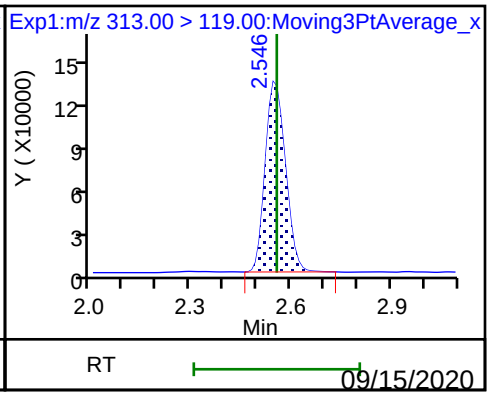
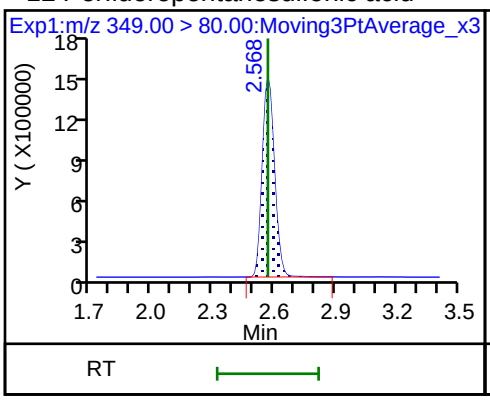



11 Perfluorohexanoic acid



12 Perfluoropentanesulfonic acid

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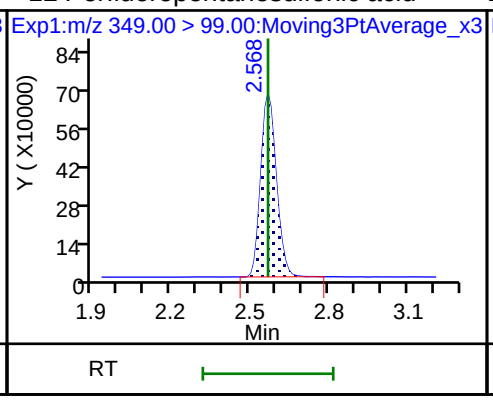
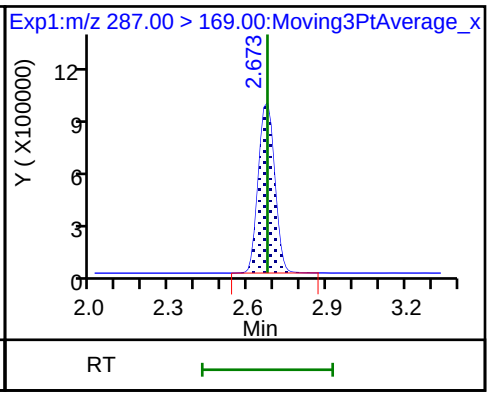
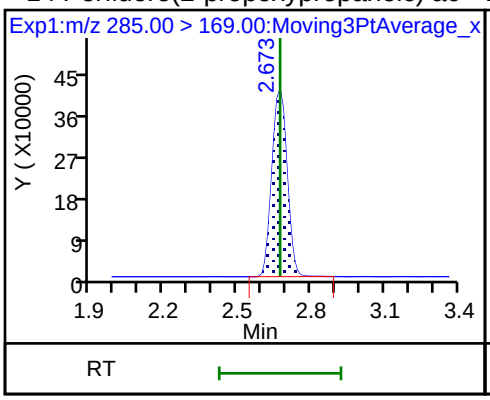


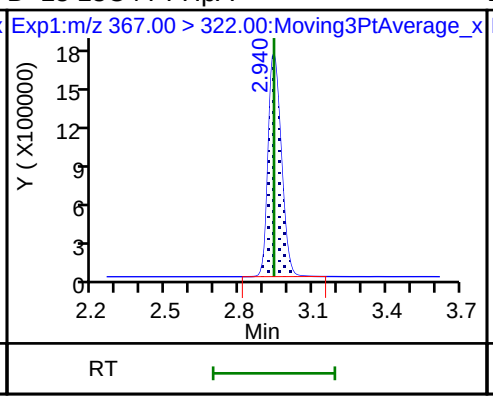

D 13 13C3 HFPO-DA




14 Perfluoro(2-propoxypropanoic) ac




D 15 13C4 PFHpA

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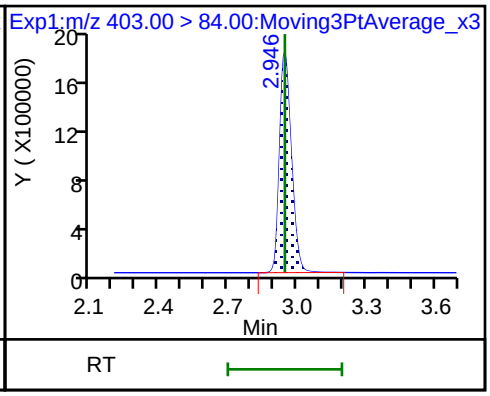
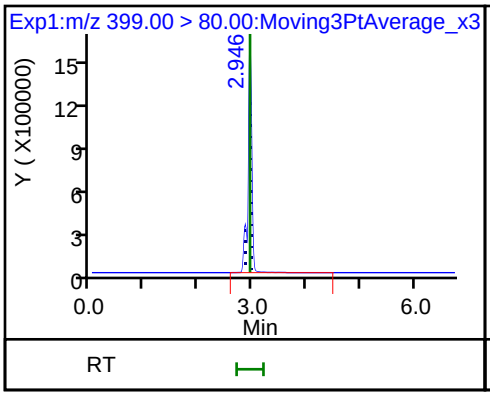
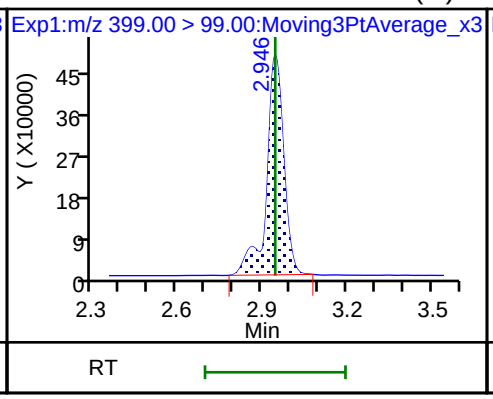


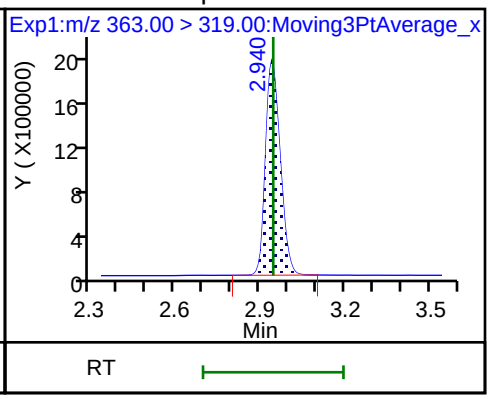

16 Perfluorohexanesulfonic acid




16 Perfluorohexanesulfonic acid (M)




18 Perfluoroheptanoic acid

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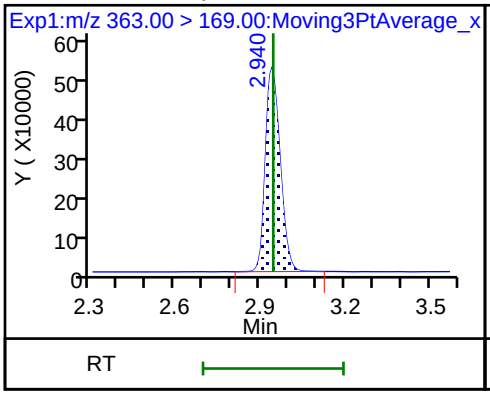
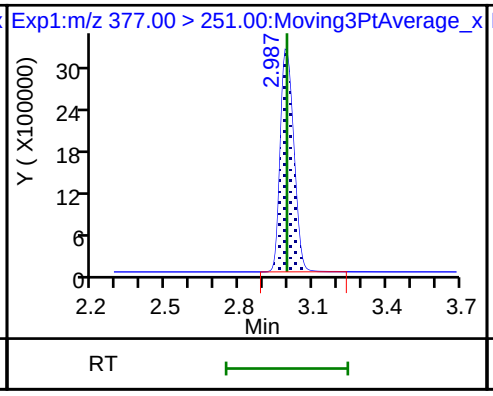



19 DONA

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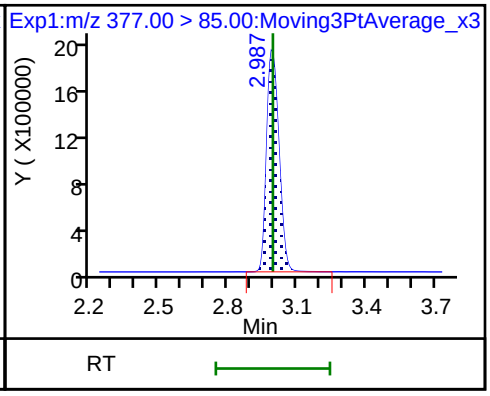
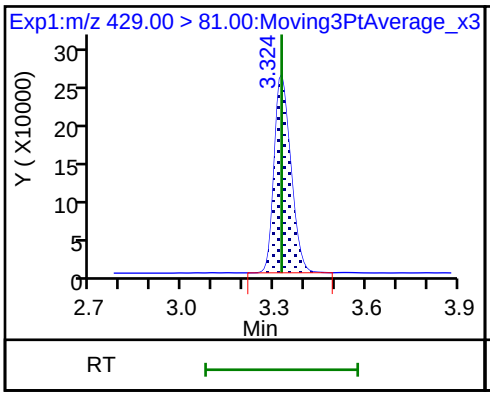
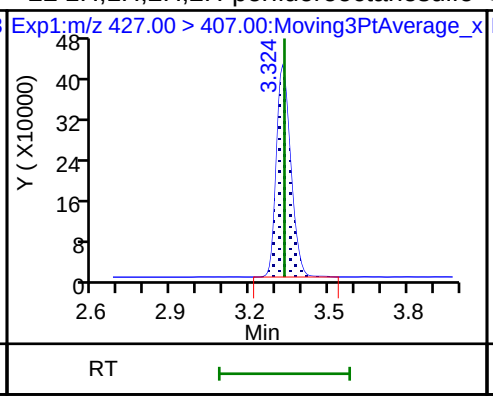


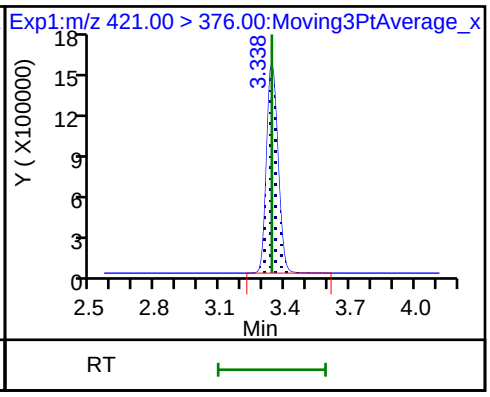
D 20 M2-6:2 FTS



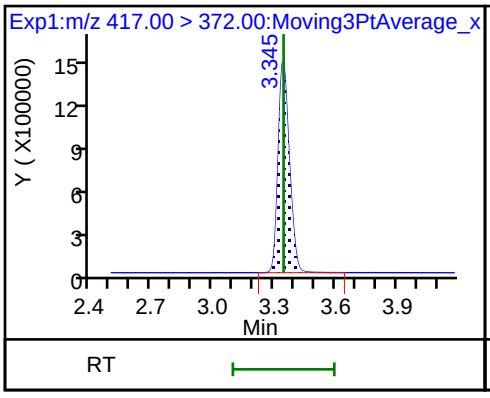

22 1H,1H,2H,2H-perfluorooctanesulfo



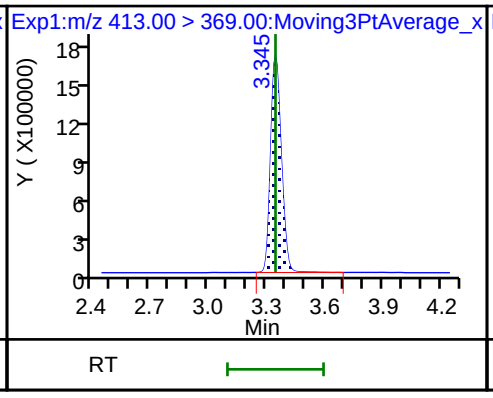

$ 21 13C8 PFOA



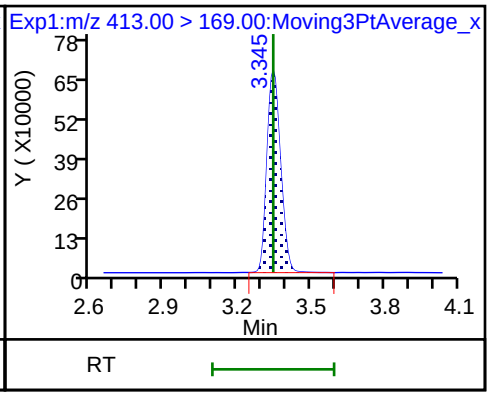

D 26 13C4 PFOA



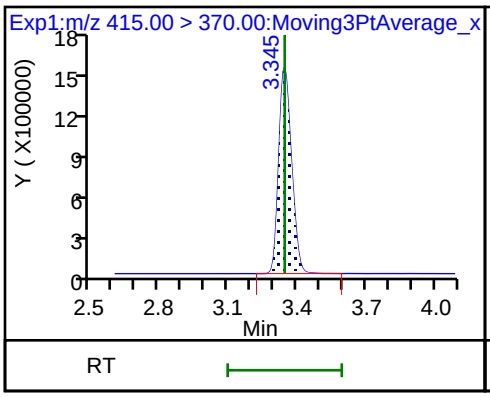

24 Perfluorooctanoic acid



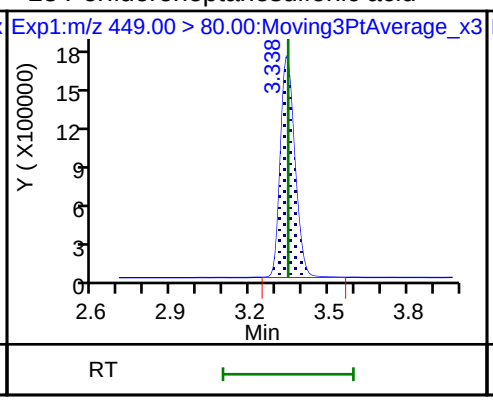

24 Perfluorooctanoic acid




* 25 13C2 PFOA




23 Perfluoroheptanesulfonic acid

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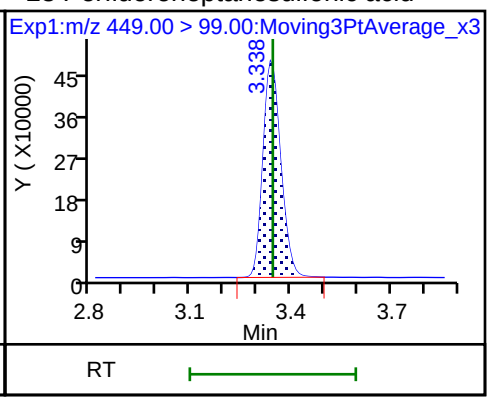
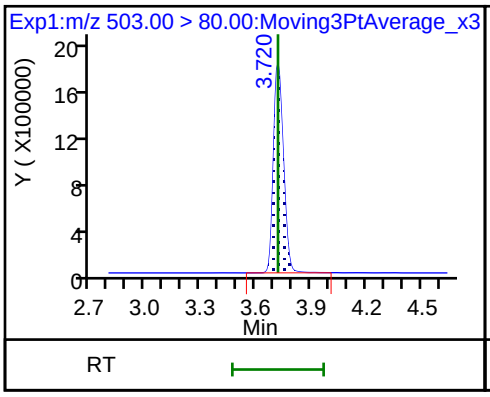



D 31 13C4 PFOS

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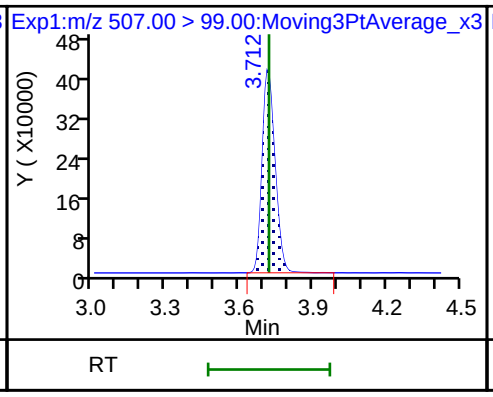
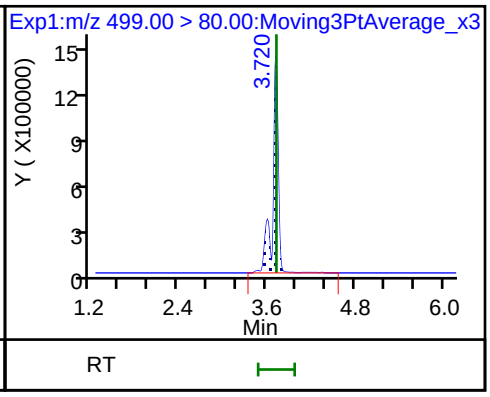
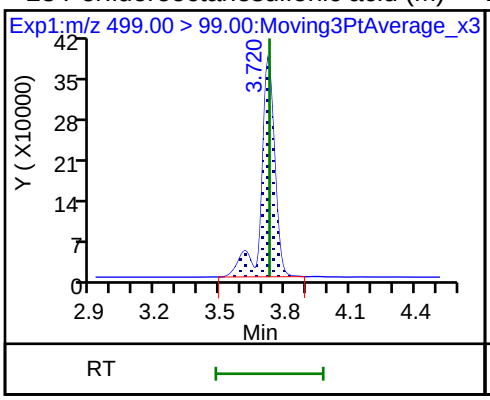



28 Perfluorooctanesulfonic acid



28 Perfluorooctanesulfonic acid (M)

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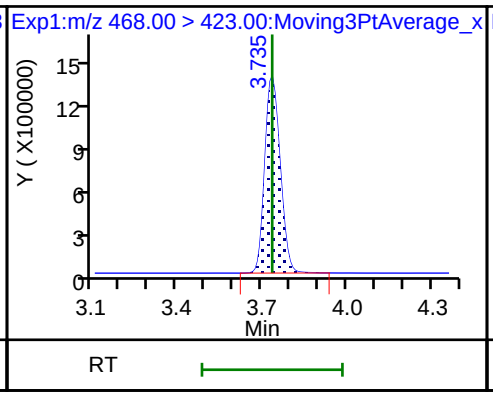
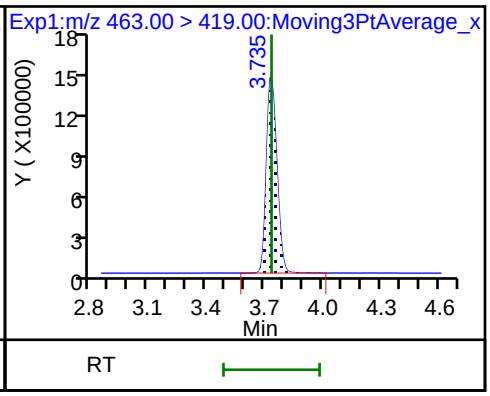



30 Perfluorononanoic acid

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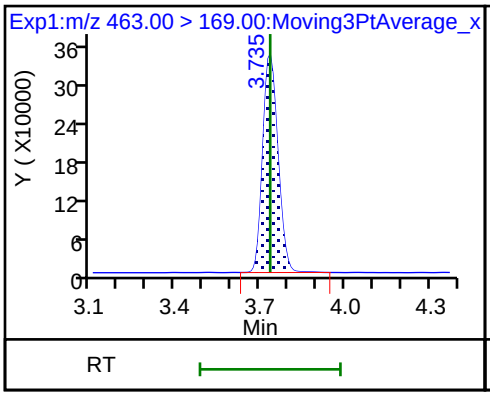
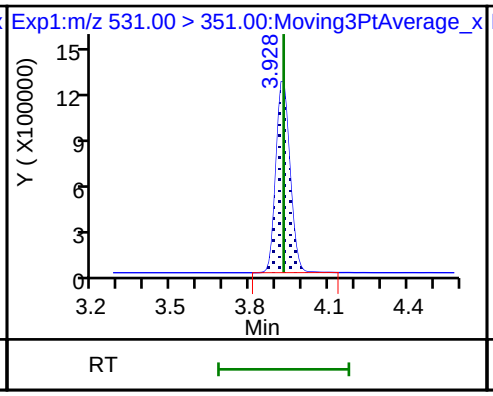



32 9-Chlorohexadecafluoro-3-oxanona

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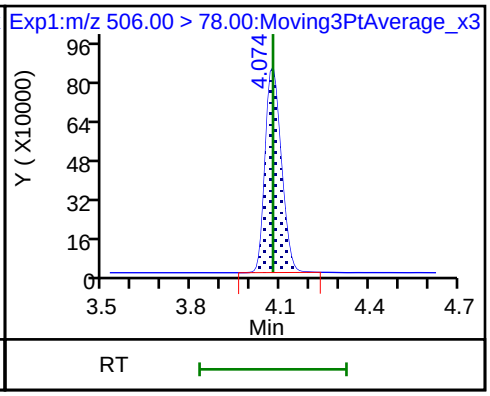
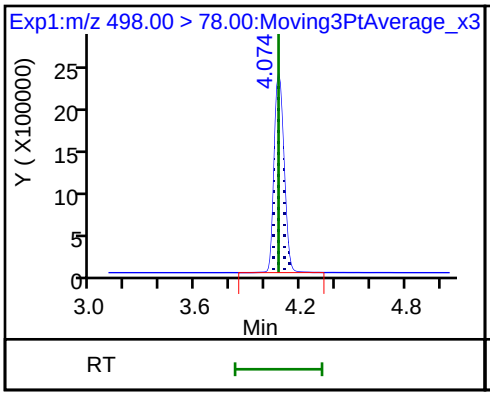
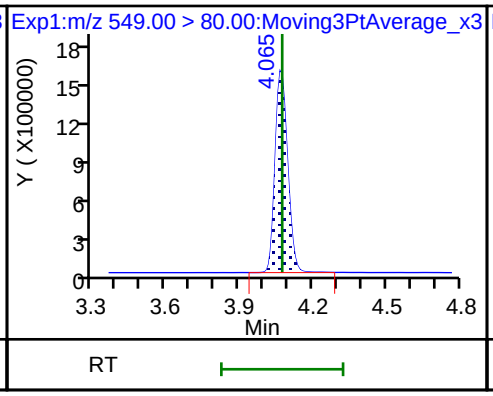


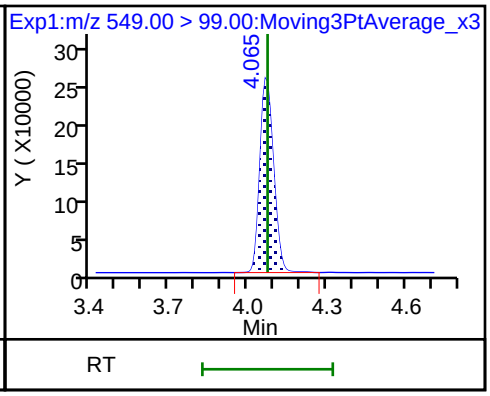

34 Perfluorooctanesulfonamide



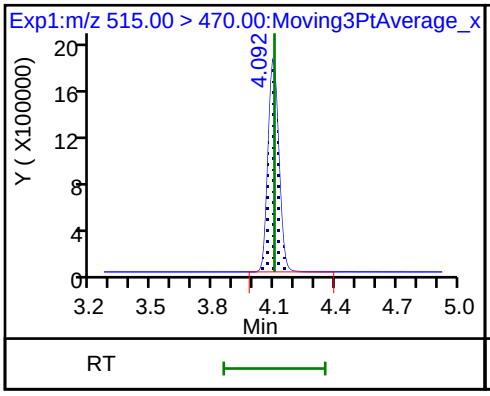

35 Perfluorononanesulfonic acid



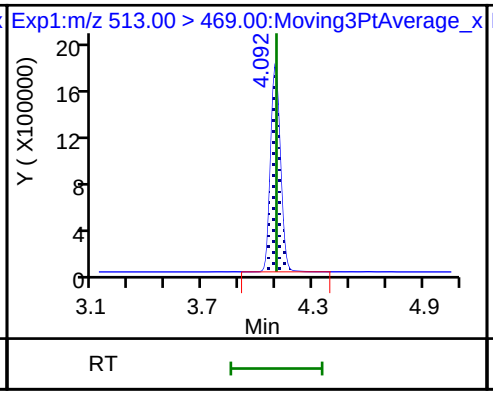

35 Perfluorononanesulfonic acid



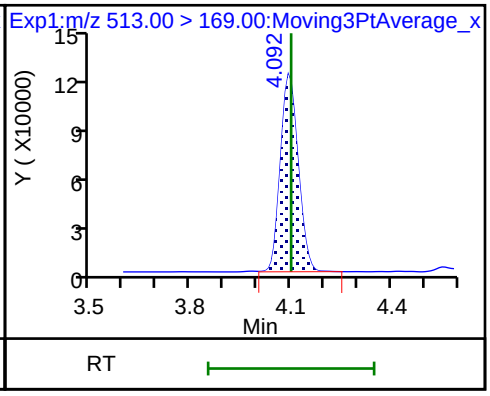

D 33 13C2 PFDA



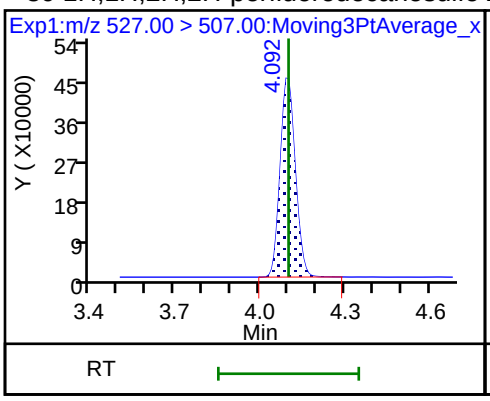

38 Perfluorodecanoic acid



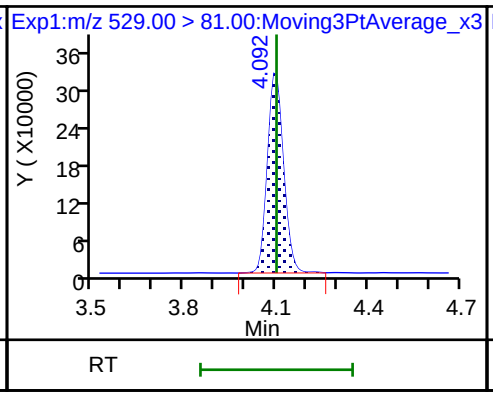

38 Perfluorodecanoic acid



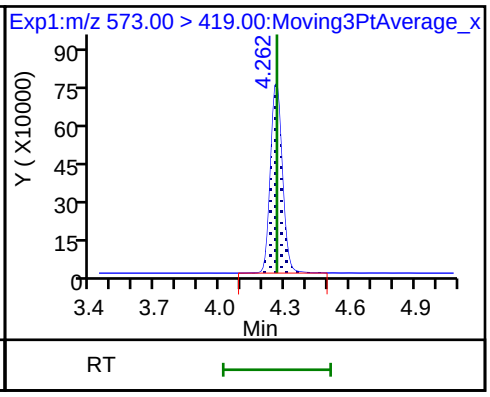
39 1H,1H,2H,2H-perfluorodecanesulfo



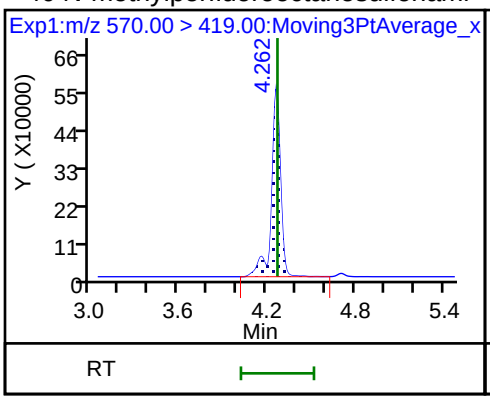

D 37 M2-8:2 FTS



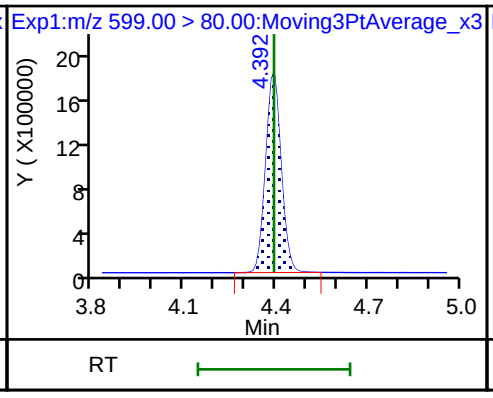

D 41 d3-NMeFOSAA



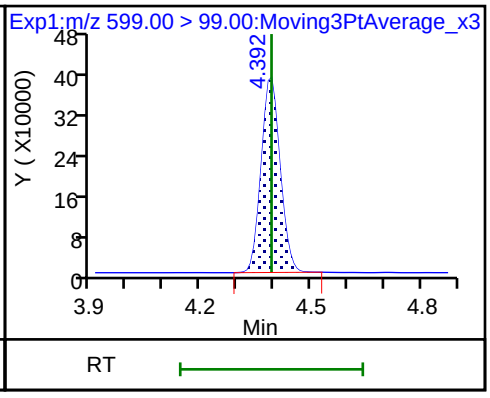

40 N-methylperfluorooctanesulfonami



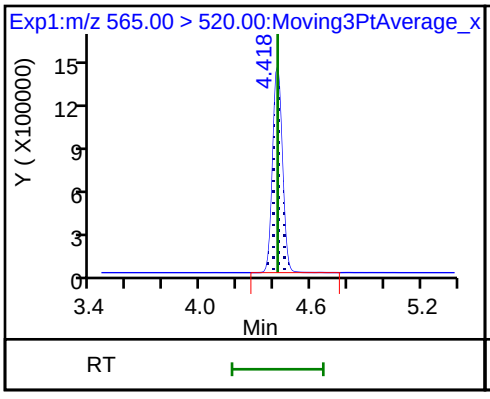

42 Perfluorodecanesulfonic acid



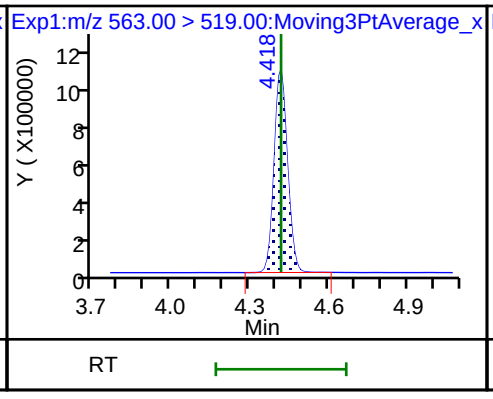

42 Perfluorodecanesulfonic acid



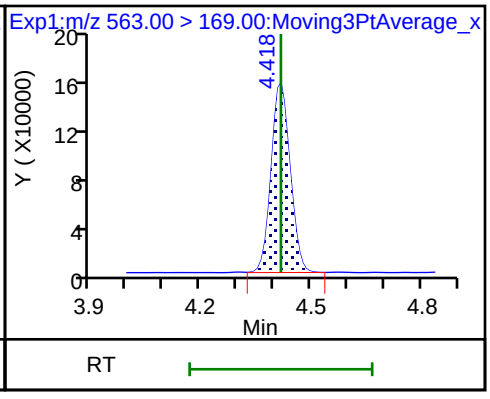

D 46 13C2 PFUnA



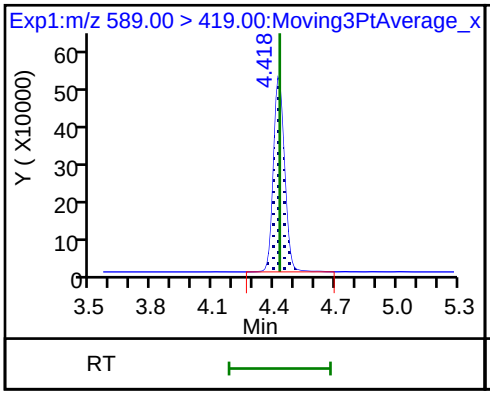

43 Perfluoroundecanoic acid



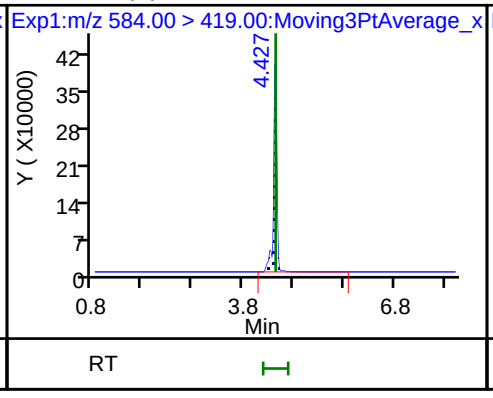

43 Perfluoroundecanoic acid



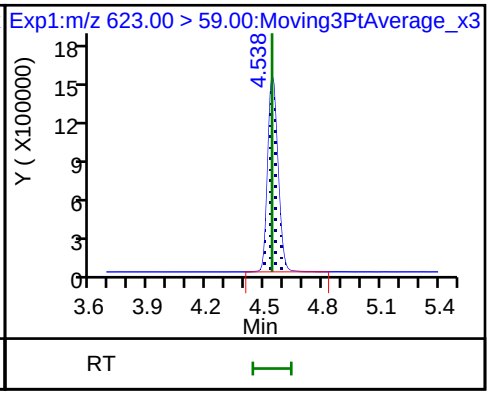

D 45 d5-NEtFOSAA



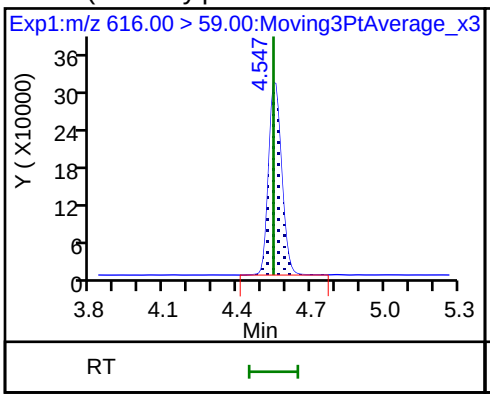

44 N-ethylperfluorooctanesulfonamid



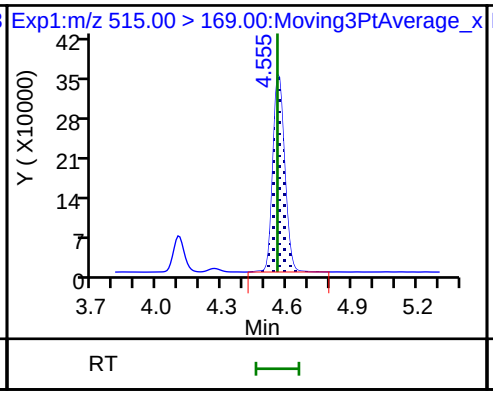

D 47 d7-N-MeFOSE-M



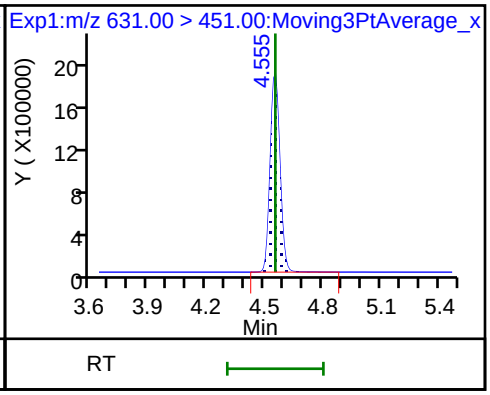
48 2-(N-methylperfluoro-1-octanesul



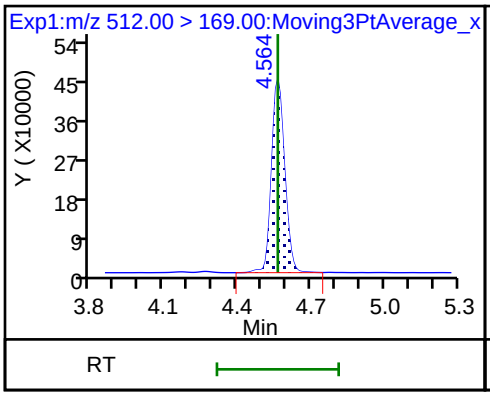

D 49 d-N-MeFOSA-M



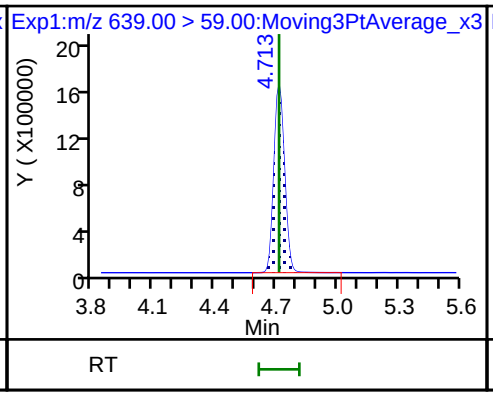

51 11-Chloroeicosafluoro-3-oxaundec



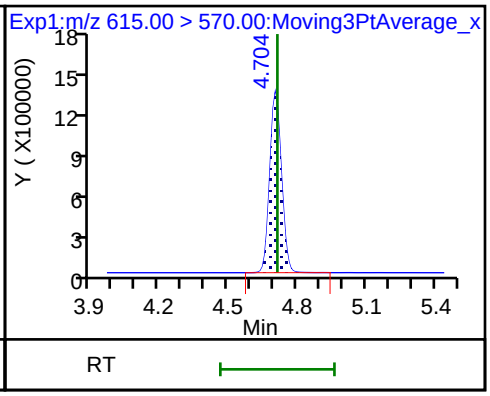

50 NMeFOSA



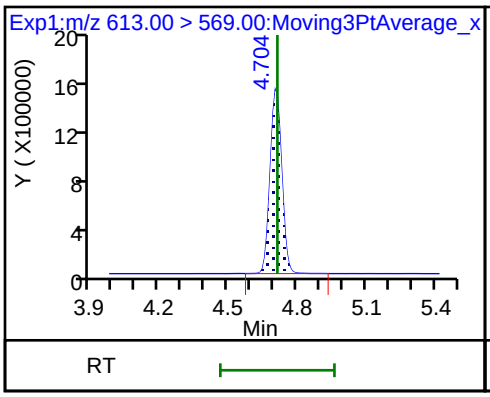

D 53 d9-N-EtFOSE-M



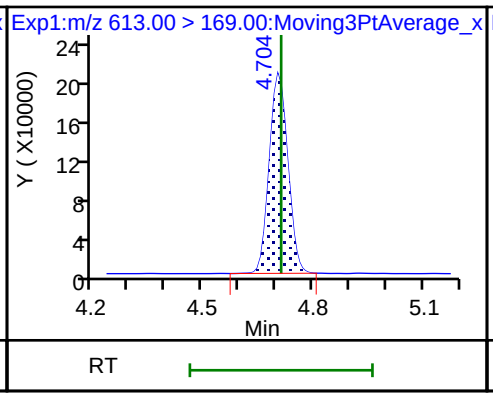

D 56 13C2 PFDoA



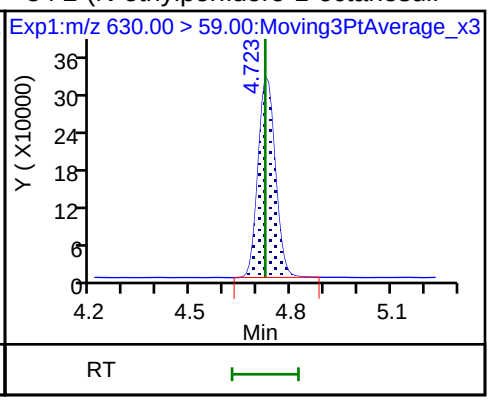

52 Perfluorododecanoic acid



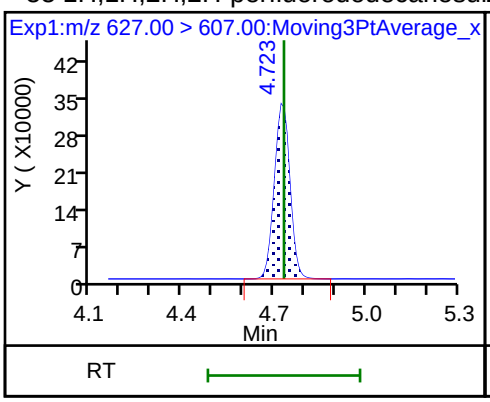

52 Perfluorododecanoic acid



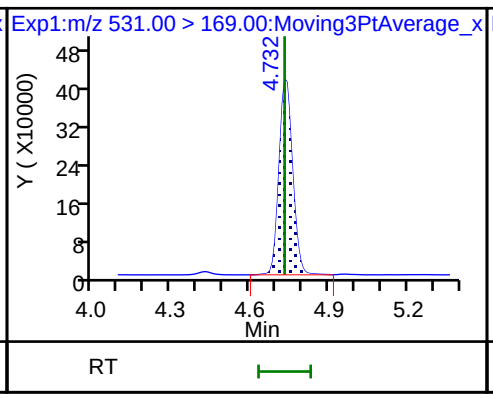

54 2-(N-ethylperfluoro-1-octanesulf



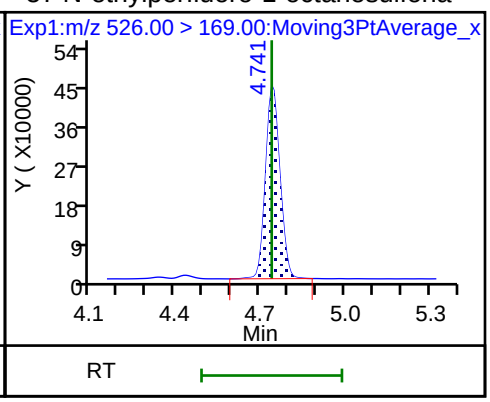

55 1H,1H,2H,2H-perfluorododecanesul



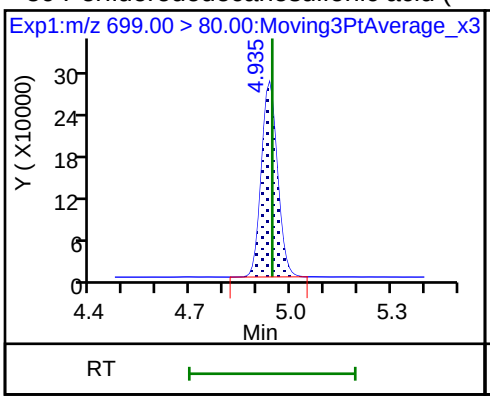

D 58 d-N-EtFOSA-M



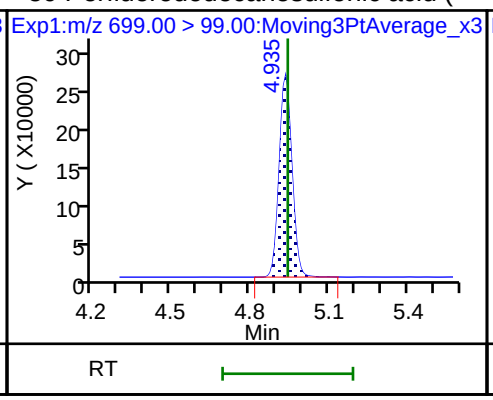

57 N-ethylperfluoro-1-octanesulfona



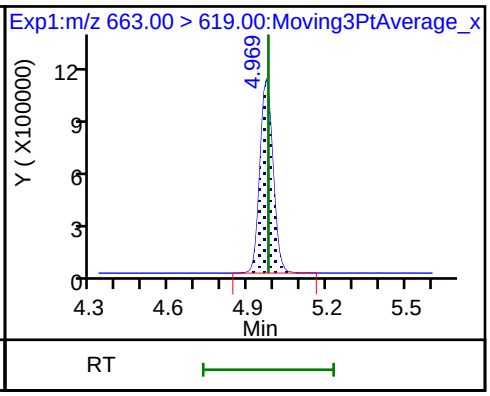
59 Perfluorododecanesulfonic acid (



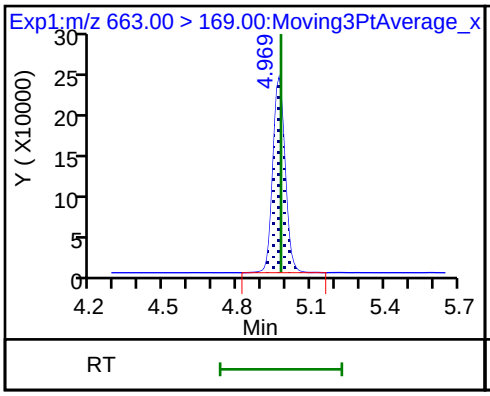

59 Perfluorododecanesulfonic acid (



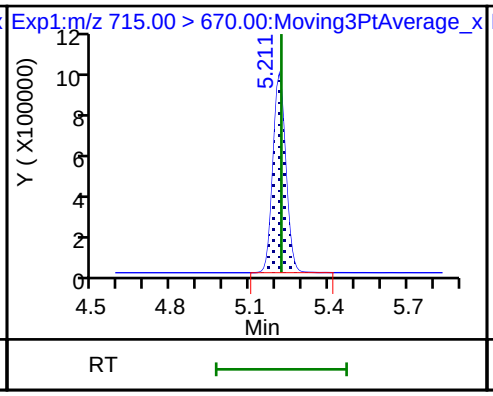

60 Perfluorotridecanoic acid



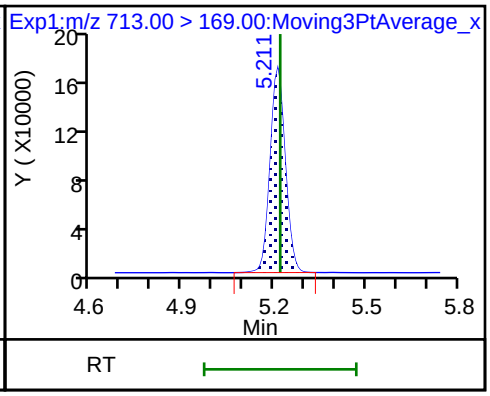

60 Perfluorotridecanoic acid



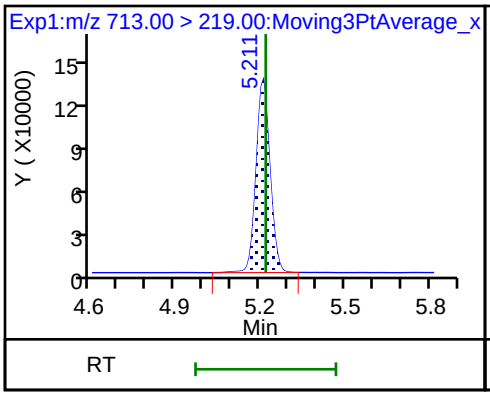

D 62 13C2 PFTeDA



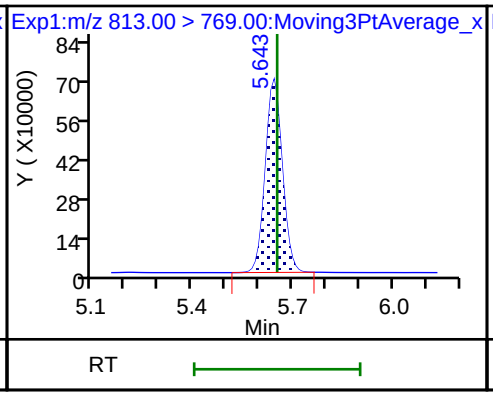

61 Perfluorotetradecanoic acid



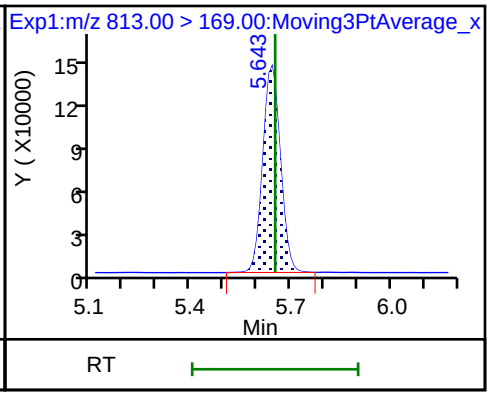

61 Perfluorotetradecanoic acid



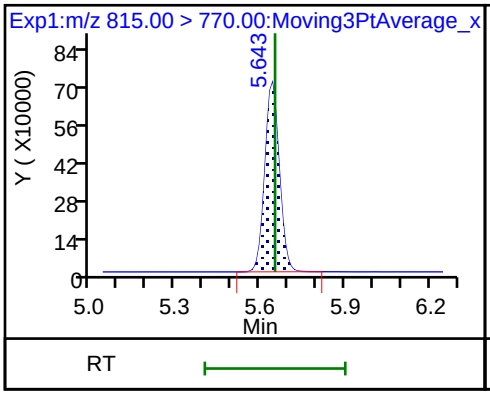

64 Perfluorohexadecanoic acid



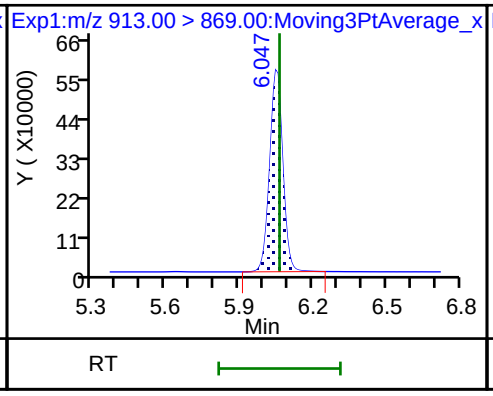

64 Perfluorohexadecanoic acid



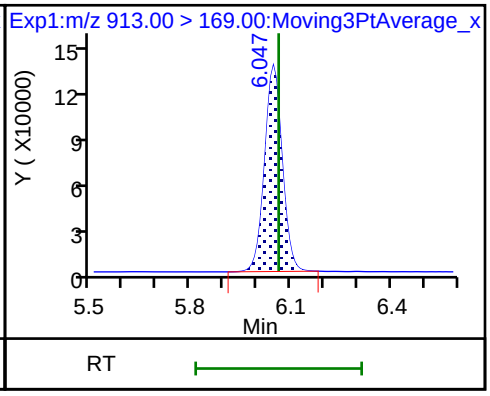

D 63 13C2 PFHxDA




65 Perfluorooctadecanoic acid




65 Perfluorooctadecanoic acid



Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

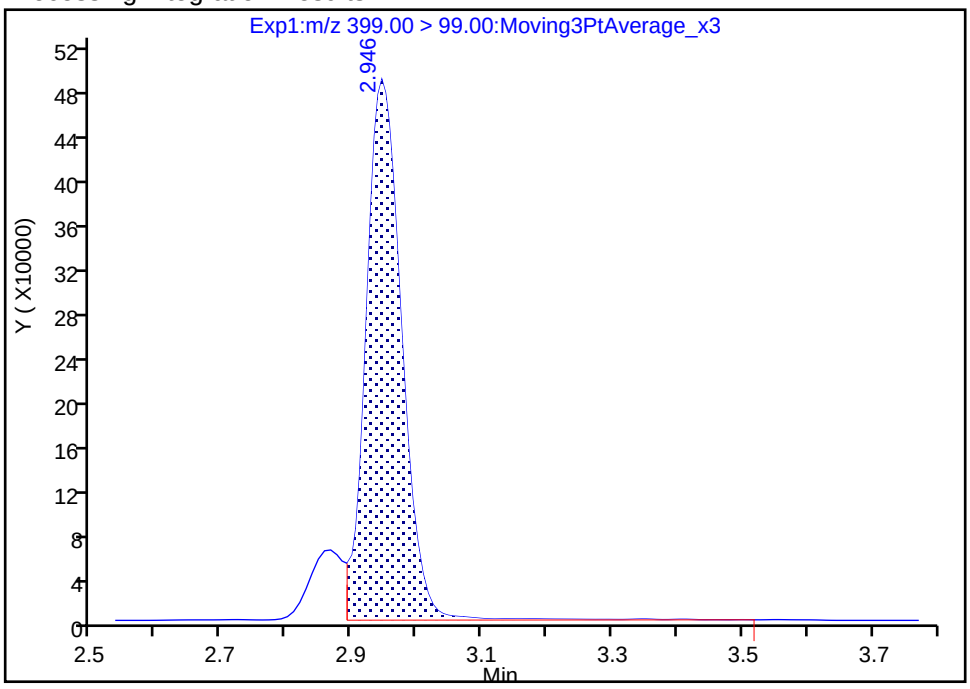
Data File: \\chromfs\Sacramento\ChromData\A9\20200911-103120.b\2020.09.11_A9_PFC_AA_036.d
Injection Date: 11-Sep-2020 14:57:52 Instrument ID: A9
Lims ID: CCV L5
Client ID:
Operator ID: SACINSTRLCMS02 ALS Bottle#: 44 Worklist Smp#: 13
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFAS_A9 Limit Group: LC PFC ICAL
Column: Detector EXP1

## 16 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 2

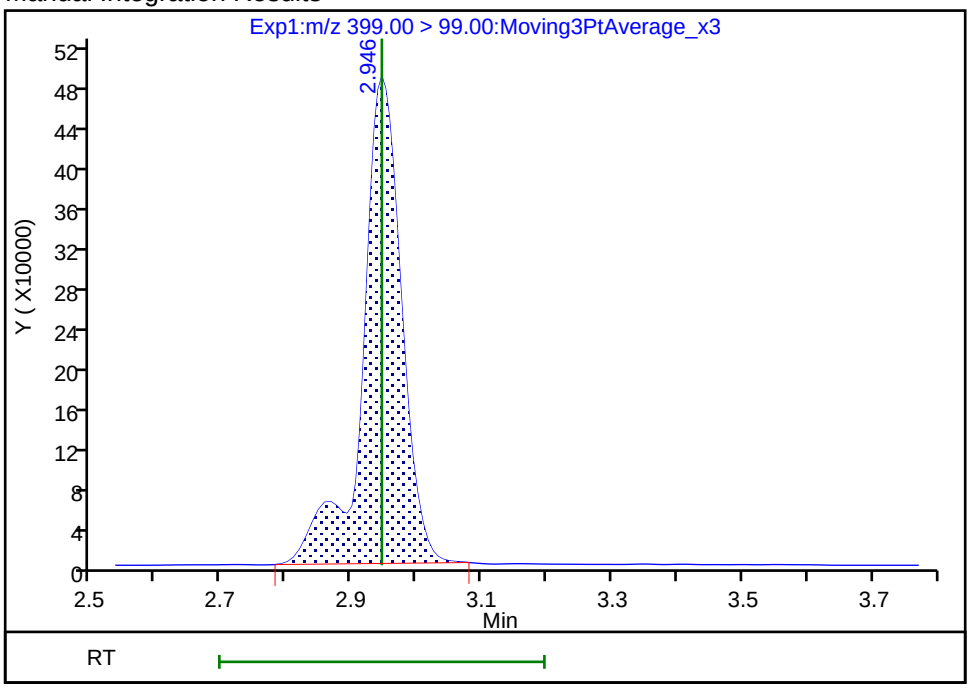
Processing Integration Results

RT: 2.95
Area: 1860297
Amount: 2.277301
Amount Units: ng/ml




Manual Integration Results

RT: 2.95
Area: 2046439
Amount: 2.277301
Amount Units: ng/ml




Reviewer: zibaa, 11-Sep-2020 16:55:24
Audit Action: Manually Integrated Audit Reason: Isomers

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

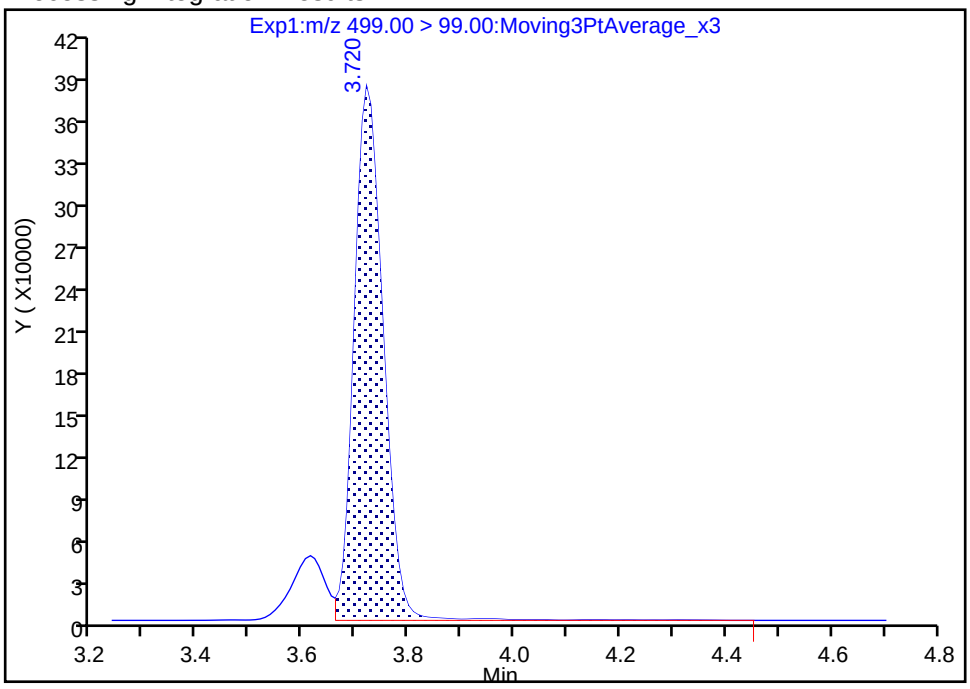
| | | | | | |
|---|---|---|---|---|---|
| Data File: | \\chromfs\Sacramento\ChromData\A9\20200911-103120.b\2020.09.11_A9_PFC_AA_036.d | | | | |
| Injection Date: | 11-Sep-2020 14:57:52 | Instrument ID: | A9 | | |
| Lims ID: | CCV L5 | | | | |
| Client ID: | | | | | |
| Operator ID: | SACINSTRLCMS02 | ALS Bottle#: | 44 | Worklist Smp#: | 13 |
| Injection Vol: | 20.0 ul | Dil. Factor: | 1.0000 | | |
| Method: | PFAS_A9 | Limit Group: | LC PFC ICAL | | |
| Column: | | Detector | EXP1 | | |

## 28 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 2

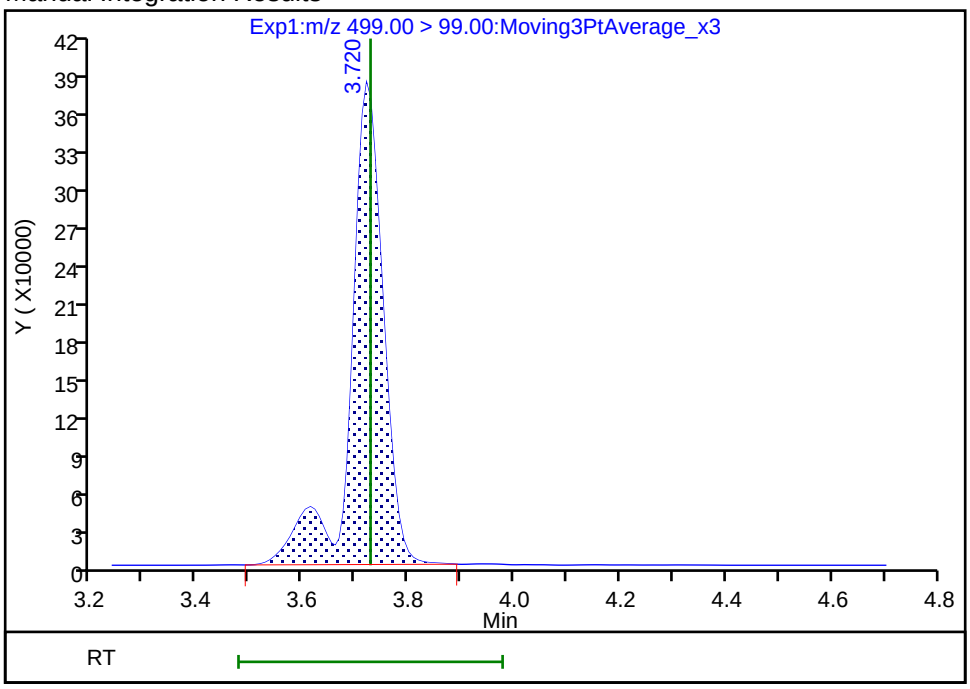
Processing Integration Results

RT: 3.72
Area: 1437768
Amount: 2.402471
Amount Units: ng/ml




Manual Integration Results

RT: 3.72
Area: 1615927
Amount: 2.402471
Amount Units: ng/ml




Reviewer: zibaa, 11-Sep-2020 16:55:51

Audit Action: Manually Integrated Audit Reason: Isomers

FORM VII
LCMS CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Sacramento  Job No.: 460-217547-1

SDG No.:

Lab Sample ID: CCV 320-411454/18  Calibration Date: 09/11/2020 15:44

Instrument ID: A9  Calib Start Date: 09/10/2020 10:18

GC Column: Acquity  ID: 2.10(mm)  Calib End Date: 09/10/2020 12:29

Lab File ID: 2020.09.11_A9_PFC_AA_041.d  Conc. Units: ng/mL

| ANALYTE | CURVE TYPE | AVE RRF | RRF | MIN RRF | CALC AMOUNT | SPIKE AMOUNT | %D | MAX %D |
|---|---|---|---|---|---|---|---|---|
| Perfluorobutanoic acid (PFBA) | AveID | 0.8734 | 0.997 | | 1.14 | 1.00 | 14.2 | 40.0 |
| Perfluoropentanoic acid (PFPeA) | AveID | 1.018 | 1.076 | | 1.06 | 1.00 | 5.7 | 40.0 |
| Perfluorobutanesulfonic acid (PFBS) | AveID | 0.998 | 1.160 | | 1.03 | 0.884 | 16.3 | 50.0 |
| 4:2 FTS | AveID | 1.978 | 2.123 | | 1.00 | 0.934 | 7.3 | 50.0 |
| Perfluorohexanoic acid (PFHxA) | AveID | 0.8343 | 0.9407 | | 1.13 | 1.00 | 12.8 | 40.0 |
| Perfluoropentanesulfonic acid (PFPeS) | AveID | 0.4016 | 0.4437 | | 1.04 | 0.938 | 10.5 | 50.0 |
| HFPO-DA (GenX) | AveID | 0.3959 | 0.4265 | | 1.08 | 1.00 | 7.7 | 40.0 |
| Perfluoroheptanoic acid (PFHpA) | AveID | 1.109 | 1.175 | | 1.06 | 1.00 | 5.9 | 40.0 |
| Perfluorohexanesulfonic acid (PFHxS) | AveID | 1.180 | 1.160 | | 0.895 | 0.910 | -1.7 | 40.0 |
| 4,8-Dioxa-3H-perfluorononanoic acid (ADONA) | AveID | 1.813 | 2.062 | | 1.07 | 0.942 | 13.7 | 50.0 |
| 6:2 FTS | AveID | 1.542 | 1.643 | | 1.01 | 0.948 | 6.6 | 40.0 |
| Perfluoroheptanesulfonic Acid (PFHpS) | AveID | 0.9244 | 1.043 | | 1.07 | 0.952 | 12.8 | 50.0 |
| Perfluorooctanoic acid (PFOA) | AveID | 1.078 | 1.070 | | 0.993 | 1.00 | -0.8 | 40.0 |
| Perfluorooctanesulfonic acid (PFOS) | AveID | 1.040 | 1.124 | | 1.00 | 0.928 | 8.1 | 40.0 |
| Perfluorononanoic acid (PFNA) | AveID | 0.996 | 1.008 | | 1.01 | 1.00 | 1.2 | 40.0 |
| F-53B Major | AveID | 0.6274 | 0.7023 | | 1.04 | 0.932 | 11.9 | 50.0 |
| Perfluorononanesulfonic acid (PFNS) | AveID | 0.7591 | 0.8290 | | 1.05 | 0.960 | 9.2 | 50.0 |
| Perfluorooctanesulfonamide (FOSA) | AveID | 2.782 | 2.860 | | 1.03 | 1.00 | 2.8 | 40.0 |
| 8:2 FTS | AveID | 1.288 | 1.377 | | 1.02 | 0.958 | 6.9 | 40.0 |
| Perfluorodecanoic acid (PFDA) | AveID | 0.998 | 1.075 | | 1.08 | 1.00 | 7.7 | 40.0 |
| N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA) | AveID | 0.7593 | 0.8247 | | 1.09 | 1.00 | 8.6 | 40.0 |
| Perfluorodecanesulfonic acid (PFDS) | AveID | 0.8492 | 0.9113 | | 1.03 | 0.964 | 7.3 | 50.0 |
| Perfluoroundecanoic acid (PFUnA) | AveID | 0.6962 | 0.7772 | | 1.12 | 1.00 | 11.6 | 40.0 |
| N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA) | AveID | 0.8112 | 0.8627 | | 1.06 | 1.00 | 6.4 | 40.0 |
| F-53B Minor | AveID | 0.7398 | 0.9880 | | 1.26 | 0.942 | 33.5 | 50.0 |
| NMeFOSE | AveID | 1.043 | 1.056 | | 1.01 | 1.00 | 1.2 | 40.0 |
| NMeFOSA | AveID | 1.043 | 1.135 | | 1.09 | 1.00 | 8.8 | 50.0 |
| Perfluorododecanoic acid (PFDoA) | AveID | 0.9197 | 0.9857 | | 1.08 | 1.01 | 7.2 | 40.0 |
| 10:2 FTS | AveID | 0.8214 | 0.8156 | | 0.957 | 0.964 | -0.7 | 50.0 |
| NEtFOSE | AveID | 0.9939 | 0.9862 | | 0.992 | 1.00 | -0.8 | 40.0 |
| NEtFOSA | AveID | 0.995 | 1.125 | | 1.13 | 1.00 | 13.1 | 40.0 |
| Perfluorododecanesulfonic acid (PFDoS) | AveID | 0.1269 | 0.1250 | | 0.954 | 0.968 | -1.5 | 50.0 |

FORM VII
LCMS CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Sacramento  Job No.: 460-217547-1

SDG No.:

Lab Sample ID: CCV 320-411454/18  Calibration Date: 09/11/2020 15:44

Instrument ID: A9  Calib Start Date: 09/10/2020 10:18

GC Column: Acquity  ID: 2.10(mm)  Calib End Date: 09/10/2020 12:29

Lab File ID: 2020.09.11_A9_PFC_AA_041.d  Conc. Units: ng/mL

| ANALYTE | CURVE TYPE | AVE RRF | RRF | MIN RRF | CALC AMOUNT | SPIKE AMOUNT | %D | MAX %D |
|---|---|---|---|---|---|---|---|---|
| Perfluorotridecanoic acid (PFTriA) | AveID | 0.7267 | 0.7478 | | 1.03 | 1.00 | 2.9 | 50.0 |
| Perfluorotetradecanoic acid (PFTeA) | AveID | 0.1764 | 0.1817 | | 1.03 | 1.00 | 3.0 | 50.0 |
| Perfluoro-n-hexadecanoic acid (PFHxDA) | L2ID | | 0.9811 | | 1.05 | 1.00 | 5.1 | 50.0 |
| Perfluoro-n-octadecanoic acid (PFODA) | AveID | 0.7480 | 0.7748 | | 1.04 | 1.00 | 3.6 | 50.0 |
| 13C4 PFBA | Ave | 1.350 | 1.364 | | 2.53 | 2.50 | 1.1 | 50.0 |
| 13C5 PFPeA | Ave | 1.138 | 1.075 | | 2.36 | 2.50 | -5.5 | 50.0 |
| 13C3 PFBS | Ave | 2.249 | 2.294 | | 2.37 | 2.33 | 2.0 | 50.0 |
| M2-4:2 FTS | Ave | 0.2233 | 0.2117 | | 2.21 | 2.34 | -5.2 | 50.0 |
| 13C2 PFHxA | Ave | 1.058 | 1.015 | | 2.40 | 2.50 | -4.1 | 50.0 |
| 13C3 HFPO-DA | Ave | 0.7264 | 0.7404 | | 2.55 | 2.50 | 1.9 | 50.0 |
| 13C4 PFHpA | Ave | 1.030 | 1.036 | | 2.51 | 2.50 | 0.6 | 50.0 |
| 18O2 PFHxS | Ave | 1.076 | 1.131 | | 2.49 | 2.37 | 5.1 | 50.0 |
| M2-6:2 FTS | Ave | 0.1925 | 0.1763 | | 2.18 | 2.38 | -8.4 | 50.0 |
| 13C4 PFOA | Ave | 0.9654 | 0.995 | | 2.58 | 2.50 | 3.1 | 50.0 |
| 13C4 PFOS | Ave | 1.123 | 1.145 | | 2.44 | 2.39 | 2.0 | 50.0 |
| 13C5 PFNA | Ave | 0.8376 | 0.9326 | | 2.78 | 2.50 | 11.3 | 50.0 |
| 13C8 FOSA | Ave | 0.5280 | 0.5353 | | 2.54 | 2.50 | 1.4 | 50.0 |
| 13C2 PFDA | Ave | 1.063 | 1.092 | | 2.57 | 2.50 | 2.7 | 50.0 |
| M2-8:2 FTS | Ave | 0.2357 | 0.2206 | | 2.24 | 2.40 | -6.4 | 50.0 |
| d3-NMeFOSAA | Ave | 0.5286 | 0.4721 | | 2.23 | 2.50 | -10.7 | 50.0 |
| 13C2 PFUnA | Ave | 0.8198 | 0.8293 | | 2.53 | 2.50 | 1.2 | 50.0 |
| d5-NEtFOSAA | Ave | 0.3541 | 0.3292 | | 2.32 | 2.50 | -7.0 | 50.0 |
| d7-N-MeFOSE-M | Ave | 0.1700 | 0.1721 | | 12.7 | 12.5 | 1.3 | 50.0 |
| d-N-MeFOSA-M | Ave | 0.2378 | 0.2447 | | 2.57 | 2.50 | 2.9 | 50.0 |
| 13C2 PFDoA | Ave | 0.8051 | 0.8135 | | 2.53 | 2.50 | 1.0 | 50.0 |
| d9-N-EtFOSE-M | Ave | 0.1785 | 0.1899 | | 13.3 | 12.5 | 6.4 | 50.0 |
| d-N-EtFOSA-M | Ave | 0.2469 | 0.2480 | | 2.51 | 2.50 | 0.5 | 50.0 |
| 13C2 PFTeDA | Ave | 0.5615 | 0.5349 | | 2.38 | 2.50 | -4.7 | 50.0 |
| 13C2 PFHxDA | Ave | 0.4152 | 0.4039 | | 2.43 | 2.50 | -2.7 | 50.0 |
| 13C8 PFOA | Ave | 0.8088 | 0.9926 | | 3.00 | 2.45 | 22.7 | 50.0 |
| 13C8 PFOS | Ave | 0.2542 | 0.2697 | | 2.54 | 2.39 | 6.1 | 50.0 |

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\A9\20200911-103120.b\2020.09.11_A9_PFC_AA_041.d
Lims ID: CCV L4
Client ID:
Sample Type: CCV
Inject. Date: 11-Sep-2020 15:44:37 ALS Bottle#: 43 Worklist Smp#: 18
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Sample Info: CCV L4
Misc. Info.: Plate: 1 Rack: 1
Operator ID: SACINSTRLCMS02 Instrument ID: A9
Sublist: chrom-PFAS_A9*sub16

Method: \\chromfs\Sacramento\ChromData\A9\20200911-103120.b\PFAS_A9.m
Limit Group: LC PFC ICAL
Last Update: 11-Sep-2020 17:27:44 Calib Date: 10-Sep-2020 12:29:20
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\A9\20200910-102999.b\2020.09.10_A9 _PFC_ICAL_AA_022.d

Column 1 : Det: EXP1
Process Host: CTX1061

First Level Reviewer: zibaa Date: 11-Sep-2020 17:27:44
Ratio Calibration: Average of Initial Calibration

| Signal | RT | EXP RT | DLT RT | REL RT | Response | Amount ng/ml | Ratio(Limits) | %Rec | S/N | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| D 1 13C4 PFBA | | | | | | | | | | |
| 217.00 > 172.00 | 1.893 | 1.893 | 0.0 | 0.566 | 8041797 | 2.53 | | 101 | 2675 | |
| 2 Perfluorobutanoic acid | | | | | | | | | | |
| 212.90 > 169.00 | 1.893 | 1.893 | 0.0 | 1.000 | 3207882 | 1.14 | | 114 | 98.8 | |
| D 4 13C5 PFPeA | | | | | | | | | | |
| 267.90 > 223.00 | 2.198 | 2.198 | 0.0 | 0.657 | 6338966 | 2.36 | | 94.5 | 2201 | |
| 3 Perfluoropentanoic acid | | | | | | | | | | |
| 262.90 > 219.00 | 2.198 | 2.198 | 0.0 | 1.000 | 2727971 | 1.06 | | 106 | 93.4 | |
| D 6 13C3 PFBS | | | | | | | | | | |
| 301.90 > 80.00 | 2.224 | 2.224 | 0.0 | 0.665 | 12574832 | 2.37 | | 102 | 2991 | |
| 5 Perfluorobutanesulfonic acid | | | | | | | | | | |
| 298.90 > 80.00 | 2.224 | 2.224 | 0.0 | 1.000 | 5545934 | 1.03 | Target=3.10 | 116 | 436 | |
| 298.90 > 99.00 | 2.224 | 2.224 | 0.0 | 1.000 | 1706011 | | 3.25(1.55-4.65) | | 250 | |
| 9 1H,1H,2H,2H-perfluorohexanesulfo | | | | | | | | | | |
| 327.00 > 307.00 | 2.515 | 2.515 | 0.0 | 1.000 | 989983 | 1.00 | | 107 | 5241 | |
| D 8 M2-4:2 FTS | | | | | | | | | | |
| 329.00 > 81.00 | 2.515 | 2.515 | 0.0 | 0.752 | 1165641 | 2.21 | | 94.8 | 585 | |
| D 10 13C2 PFHxA | | | | | | | | | | |
| 315.00 > 270.00 | 2.547 | 2.547 | 0.0 | 0.761 | 5984468 | 2.40 | | 95.9 | 2118 | |
| 11 Perfluorohexanoic acid | | | | | | | | | | |
| 313.00 > 269.00 | 2.547 | 2.547 | 0.0 | 1.000 | 2251861 | 1.13 | Target=9.68 | 113 | 152 | |
| 313.00 > 119.00 | 2.547 | 2.547 | 0.0 | 1.000 | 226539 | | 9.94(4.84-14.52) | | 136 | |
| 12 Perfluoropentanesulfonic acid | | | | | | | | | | |
| 349.00 > 80.00 | 2.568 | 2.568 | 0.0 | 1.155 | 2251196 | 1.04 | Target=2.01 | 111 | 652 | |
| 349.00 > 99.00 | 2.568 | 2.568 | 0.0 | 1.155 | 1146590 | | 1.96(1.00-3.01) | | 494 | |
| D 13 13C3 HFPO-DA | | | | | | | | | | |
| 287.00 > 169.00 | 2.661 | 2.661 | 0.0 | 0.795 | 4364319 | 2.55 | | 102 | 2673 | |

| Signal | RT | EXP RT | DLT RT | REL RT | Response | Amount ng/ml | Ratio(Limits) | %Rec | S/N | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| 14 Perfluoro(2-propoxypropanoic) ac | | | | | | | | | | |
| 285.00 > 169.00 | 2.674 | 2.674 | 0.0 | 1.005 | 744557 | 1.08 | | 108 | 1588 | |
| D 15 13C4 PFHpA | | | | | | | | | | |
| 367.00 > 322.00 | 2.940 | 2.940 | 0.0 | 0.879 | 6106188 | 2.51 | | 101 | 2721 | |
| D 17 18O2 PFHxS | | | | | | | | | | |
| 403.00 > 84.00 | 2.940 | 2.940 | 0.0 | 0.879 | 6306344 | 2.49 | | 105 | 2872 | |
| 18 Perfluoroheptanoic acid | | | | | | | | | | |
| 363.00 > 319.00 | 2.940 | 2.940 | 0.0 | 1.000 | 2869928 | 1.06 | Target=3.74 | 106 | 278 | |
| 363.00 > 169.00 | 2.940 | 2.940 | 0.0 | 1.000 | 758770 | | 3.78(1.87-5.61) | | 468 | |
| 16 Perfluorohexanesulfonic acid | | | | | | | | | | M |
| 399.00 > 80.00 | 2.946 | 2.946 | 0.0 | 1.002 | 2813881 | 0.8946 | Target=3.29 | 98.3 | 522 | |
| 399.00 > 99.00 | 2.940 | 2.946 | -0.006 | 1.000 | 835608 | | 3.37(1.65-4.94) | | 346 | M |
| 19 DONA | | | | | | | | | | |
| 377.00 > 251.00 | 2.987 | 2.987 | 0.0 | 0.803 | 5245778 | 1.07 | Target=1.80 | 114 | 3705 | |
| 377.00 > 85.00 | 2.987 | 2.987 | 0.0 | 0.803 | 2843873 | | 1.84(0.90-2.70) | | 1780 | |
| D 20 M2-6:2 FTS | | | | | | | | | | |
| 429.00 > 81.00 | 3.324 | 3.324 | 0.0 | 0.994 | 987315 | 2.17 | | 91.6 | 818 | |
| 22 1H,1H,2H,2H-perfluorooctanesulfo | | | | | | | | | | |
| 427.00 > 407.00 | 3.324 | 3.324 | 0.0 | 1.000 | 647433 | 1.01 | | 107 | 550 | |
| $ 21 13C8 PFOA | | | | | | | | | | |
| 421.00 > 376.00 | 3.338 | 3.338 | 0.0 | 0.998 | 5728109 | 3.00 | | 123 | 7328 | |
| 23 Perfluoroheptanesulfonic acid | | | | | | | | | | |
| 449.00 > 80.00 | 3.338 | 3.338 | 0.0 | 0.897 | 2681835 | 1.07 | Target=3.65 | 113 | 814 | |
| 449.00 > 99.00 | 3.338 | 3.338 | 0.0 | 0.897 | 706872 | | 3.79(1.83-5.48) | | 839 | |
| D 26 13C4 PFOA | | | | | | | | | | |
| 417.00 > 372.00 | 3.345 | 3.345 | 0.0 | 1.000 | 5866616 | 2.58 | | 103 | 4365 | |
| 24 Perfluorooctanoic acid | | | | | | | | | | |
| 413.00 > 369.00 | 3.345 | 3.345 | 0.0 | 1.000 | 2513129 | 0.99 | Target=2.37 | 99.2 | 329 | |
| 413.00 > 169.00 | 3.345 | 3.345 | 0.0 | 1.000 | 1081067 | | 2.32(1.19-3.56) | | 705 | |
| * 25 13C2 PFOA | | | | | | | | | | |
| 415.00 > 370.00 | 3.345 | 3.345 | 0.0 | | 5894884 | 2.50 | | | 5070 | |
| $ 27 13C8 PFOS | | | | | | | | | | |
| 507.00 > 99.00 | 3.712 | 3.712 | 0.0 | 1.110 | 1520066 | 2.54 | | 106 | 1842 | |
| D 31 13C4 PFOS | | | | | | | | | | |
| 503.00 > 80.00 | 3.720 | 3.720 | 0.0 | 1.112 | 6454736 | 2.44 | | 102 | 2114 | |
| 28 Perfluorooctanesulfonic acid | | | | | | | | | | M |
| 499.00 > 80.00 | 3.720 | 3.720 | 0.0 | 1.000 | 2816671 | 1.00 | Target=4.12 | 108 | 312 | |
| 499.00 > 99.00 | 3.720 | 3.720 | 0.0 | 1.000 | 650156 | | 4.33(2.06-6.17) | | 787 | M |
| D 29 13C5 PFNA | | | | | | | | | | |
| 468.00 > 423.00 | 3.735 | 3.735 | 0.0 | 1.117 | 5497606 | 2.78 | | 111 | 5007 | |
| 30 Perfluorononanoic acid | | | | | | | | | | |
| 463.00 > 419.00 | 3.735 | 3.735 | 0.0 | 1.000 | 2220351 | 1.01 | Target=4.21 | 101 | 1116 | |
| 463.00 > 169.00 | 3.727 | 3.735 | -0.008 | 0.998 | 525521 | | 4.23(2.11-6.32) | | 527 | |
| 32 9-Chlorohexadecafluoro-3-oxanona | | | | | | | | | | |
| 531.00 > 351.00 | 3.918 | 3.918 | 0.0 | 1.053 | 1767727 | 1.04 | | 112 | 3314 | |

| Signal | RT | EXP RT | DLT RT | REL RT | Response | Amount ng/ml | Ratio(Limits) | %Rec | S/N | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| 35 Perfluorononanesulfonic acid | | | | | | | | | | |
| 549.00 > 80.00 | 4.065 | 4.065 | 0.0 | 1.093 | 2149376 | 1.05 | Target=5.56 | 109 | 1202 | |
| 549.00 > 99.00 | 4.065 | 4.065 | 0.0 | 1.093 | 387376 | | 5.55(2.78-8.34) | | 1864 | |
| D 36 13C8 FOSA | | | | | | | | | | |
| 506.00 > 78.00 | 4.074 | 4.074 | 0.0 | 1.218 | 3155452 | 2.53 | | 101 | 2612 | |
| 34 Perfluorooctanesulfonamide | | | | | | | | | | |
| 498.00 > 78.00 | 4.074 | 4.074 | 0.0 | 1.000 | 3609985 | 1.03 | | 103 | 3177 | |
| D 33 13C2 PFDA | | | | | | | | | | |
| 515.00 > 470.00 | 4.092 | 4.092 | 0.0 | 1.223 | 6435633 | 2.57 | | 103 | 5970 | |
| 38 Perfluorodecanoic acid | | | | | | | | | | |
| 513.00 > 469.00 | 4.092 | 4.092 | 0.0 | 1.000 | 2766140 | 1.08 | Target=14.33 | 108 | 904 | |
| 513.00 > 169.00 | 4.092 | 4.092 | 0.0 | 1.000 | 177522 | | 15.58(7.16-21.49) | | 205 | |
| 39 1H,1H,2H,2H-perfluorodecanesulfo | | | | | | | | | | |
| 527.00 > 507.00 | 4.092 | 4.092 | 0.0 | 1.000 | 686219 | 1.02 | | 107 | 2439 | |
| D 37 M2-8:2 FTS | | | | | | | | | | |
| 529.00 > 81.00 | 4.092 | 4.092 | 0.0 | 1.223 | 1245764 | 2.24 | | 93.6 | 789 | |
| D 41 d3-NMeFOSAA | | | | | | | | | | |
| 573.00 > 419.00 | 4.253 | 4.253 | 0.0 | 1.271 | 2782759 | 2.23 | | 89.3 | 2238 | |
| 40 N-methylperfluorooctanesulfonami | | | | | | | | | | |
| 570.00 > 419.00 | 4.262 | 4.262 | 0.0 | 1.002 | 917947 | 1.09 | | 109 | 155 | |
| 42 Perfluorodecanesulfonic acid | | | | | | | | | | |
| 599.00 > 80.00 | 4.384 | 4.384 | 0.0 | 1.178 | 2372557 | 1.03 | Target=4.29 | 107 | 882 | |
| 599.00 > 99.00 | 4.384 | 4.384 | 0.0 | 1.178 | 532247 | | 4.46(2.15-6.44) | | 1234 | |
| D 46 13C2 PFUnA | | | | | | | | | | |
| 565.00 > 520.00 | 4.409 | 4.409 | 0.0 | 1.318 | 4888463 | 2.53 | | 101 | 4814 | |
| 43 Perfluoroundecanoic acid | | | | | | | | | | |
| 563.00 > 519.00 | 4.409 | 4.409 | 0.0 | 1.000 | 1521299 | 1.12 | Target=6.74 | 112 | 1558 | |
| 563.00 > 169.00 | 4.409 | 4.409 | 0.0 | 1.000 | 217331 | | 7.00(3.37-10.11) | | 583 | |
| D 45 d5-NEtFOSAA | | | | | | | | | | |
| 589.00 > 419.00 | 4.418 | 4.418 | 0.0 | 1.321 | 1940623 | 2.32 | | 93.0 | 2212 | |
| 44 N-ethylperfluorooctanesulfonamid | | | | | | | | | | |
| 584.00 > 419.00 | 4.426 | 4.426 | 0.0 | 1.002 | 669667 | 1.06 | | 106 | 2188 | |
| D 47 d7-N-MeFOSE-M | | | | | | | | | | |
| 623.00 > 59.00 | 4.538 | 4.538 | 0.0 | 1.356 | 5073963 | 12.7 | | 101 | 2609 | |
| 51 11-Chloroeicosafluoro-3-oxaundec | | | | | | | | | | |
| 631.00 > 451.00 | 4.546 | 4.546 | 0.0 | 1.222 | 2513633 | 1.26 | | 134 | 5469 | |
| 48 2-(N-methylperfluoro-1-octanesul | | | | | | | | | | |
| 616.00 > 59.00 | 4.546 | 4.546 | 0.0 | 1.002 | 428650 | 1.01 | | 101 | 643 | |
| D 49 d-N-MeFOSA-M | | | | | | | | | | |
| 515.00 > 169.00 | 4.555 | 4.555 | 0.0 | 1.362 | 1442602 | 2.57 | | 103 | 247 | |
| 50 NMeFOSA | | | | | | | | | | |
| 512.00 > 169.00 | 4.564 | 4.564 | 0.0 | 1.002 | 655020 | 1.09 | | 109 | 1062 | |
| D 56 13C2 PFDoA | | | | | | | | | | |
| 615.00 > 570.00 | 4.704 | 4.704 | 0.0 | 1.406 | 4795511 | 2.53 | | 101 | 7796 | |
| 52 Perfluorododecanoic acid | | | | | | | | | | |
| 613.00 > 569.00 | 4.704 | 4.704 | 0.0 | 1.000 | 1902100 | 1.08 | Target=6.67 | 107 | 1625 | |
| 613.00 > 169.00 | 4.704 | 4.704 | 0.0 | 1.000 | 265039 | | 7.18(3.34-10.01) | | 807 | |

| Signal | RT | EXP RT | DLT RT | REL RT | Response | Amount ng/ml | Ratio(Limits) | %Rec | S/N | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| D 53 d9-N-EtFOSE-M | | | | | | | | | | |
| 639.00 > 59.00 | 4.713 | 4.713 | 0.0 | 1.409 | 5597833 | 13.3 | | 106 | 1476 | |
| 54 2-(N-ethylperfluoro-1-octanesulf | | | | | | | | | | |
| 630.00 > 59.00 | 4.722 | 4.722 | 0.0 | 1.002 | 441642 | 0.99 | | 99.2 | 654 | |
| 55 1H,1H,2H,2H-perfluorododecanesul | | | | | | | | | | |
| 627.00 > 607.00 | 4.722 | 4.722 | 0.0 | 1.154 | 408986 | 0.9572 | | 99.3 | 2521 | |
| D 58 d-N-EtFOSA-M | | | | | | | | | | |
| 531.00 > 169.00 | 4.731 | 4.731 | 0.0 | 1.414 | 1462184 | 2.51 | | 100 | 899 | |
| 57 N-ethylperfluoro-1-octanesulfona | | | | | | | | | | |
| 526.00 > 169.00 | 4.740 | 4.740 | 0.0 | 1.002 | 658071 | 1.13 | | 113 | 619 | |
| 59 Perfluorododecanesulfonic acid ( | | | | | | | | | | |
| 699.00 > 80.00 | 4.935 | 4.935 | 0.0 | 1.327 | 326676 | 0.9535 | Target=1.02 | 98.5 | 539 | |
| 699.00 > 99.00 | 4.935 | 4.935 | 0.0 | 1.327 | 329766 | | 0.99(0.51-1.53) | | 1268 | |
| 60 Perfluorotridecanoic acid | | | | | | | | | | |
| 663.00 > 619.00 | 4.969 | 4.969 | 0.0 | 1.056 | 1434367 | 1.03 | Target=4.80 | 103 | 1920 | |
| 663.00 > 169.00 | 4.969 | 4.969 | 0.0 | 1.056 | 302745 | | 4.74(2.40-7.20) | | 1600 | |
| D 62 13C2 PFTeDA | | | | | | | | | | |
| 715.00 > 670.00 | 5.211 | 5.211 | 0.0 | 1.558 | 3153422 | 2.38 | | 95.3 | 5966 | |
| 61 Perfluorotetradecanoic acid | | | | | | | | | | |
| 713.00 > 169.00 | 5.211 | 5.211 | 0.0 | 1.000 | 229380 | 1.03 | Target=1.37 | 103 | 1102 | |
| 713.00 > 219.00 | 5.203 | 5.211 | -0.008 | 0.998 | 161876 | | 1.42(0.69-2.06) | | 995 | |
| D 63 13C2 PFHxDA | | | | | | | | | | |
| 815.00 > 770.00 | 5.634 | 5.634 | 0.0 | 1.684 | 2380688 | 2.43 | | 97.3 | 6149 | |
| 64 Perfluorohexadecanoic acid | | | | | | | | | | |
| 813.00 > 769.00 | 5.643 | 5.643 | 0.0 | 1.002 | 934279 | 1.05 | Target=4.63 | 105 | 1948 | |
| 813.00 > 169.00 | 5.634 | 5.643 | -0.009 | 1.000 | 198316 | | 4.71(2.32-6.95) | | 1109 | |
| 65 Perfluorooctadecanoic acid | | | | | | | | | | |
| 913.00 > 869.00 | 6.047 | 6.047 | 0.0 | 1.073 | 737797 | 1.04 | Target=4.01 | 104 | 1342 | |
| 913.00 > 169.00 | 6.047 | 6.047 | 0.0 | 1.073 | 178315 | | 4.14(2.01-6.02) | | 953 | |

## QC Flag Legend

Review Flags

M - Manually Integrated

## Reagents:

LCPFC_LL4_00030 Amount Added: 1.00 Units: mL

Report Date: 11-Sep-2020 17:27:46 Chrom Revision: 2.3 09-Sep-2020 15:12:58

Eurofins TestAmerica, Sacramento

Data File: \\chromfs\Sacramento\ChromData\A9\20200911-103120.b\2020.09.11_A9_PFC_AA_041.d

Injection Date: 11-Sep-2020 15:44:37 Instrument ID: A9

Lims ID: CCV L4

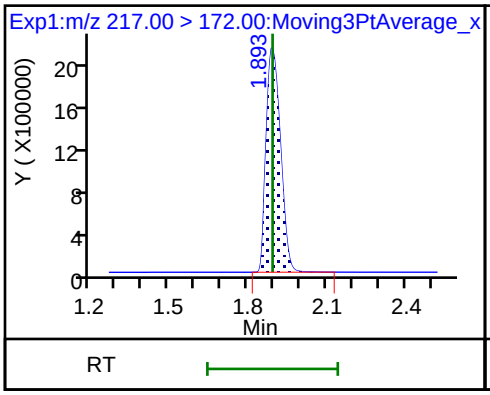
Client ID:

Operator ID: SACINSTRLCMS02 ALS Bottle#: 43 Worklist Smp#: 18

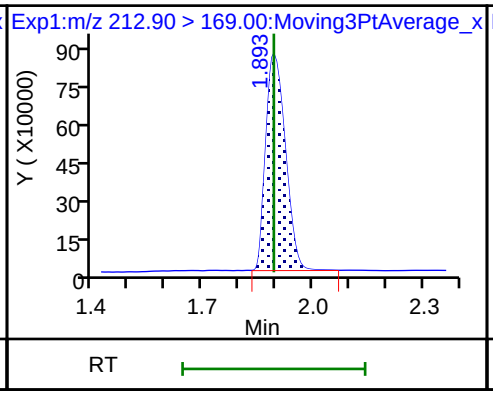
Injection Vol: 20.0 ul Dil. Factor: 1.0000

Method: PFAS_A9 Limit Group: LC PFC ICAL

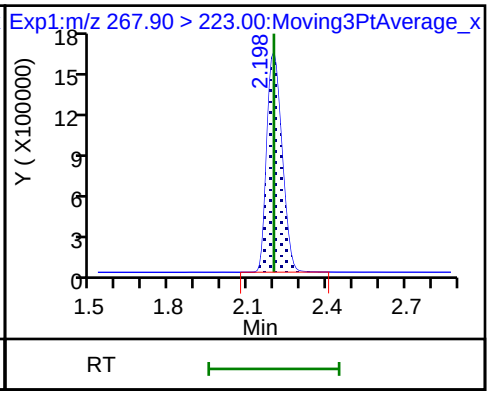
D 1 13C4 PFBA



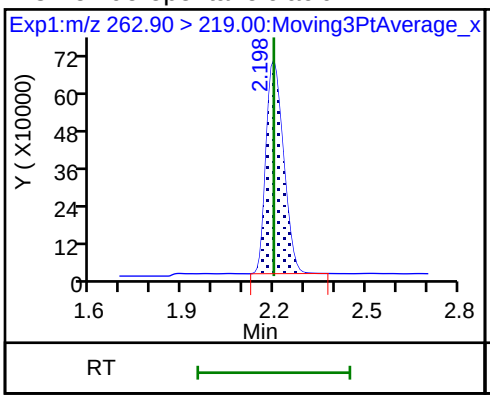

2 Perfluorobutanoic acid



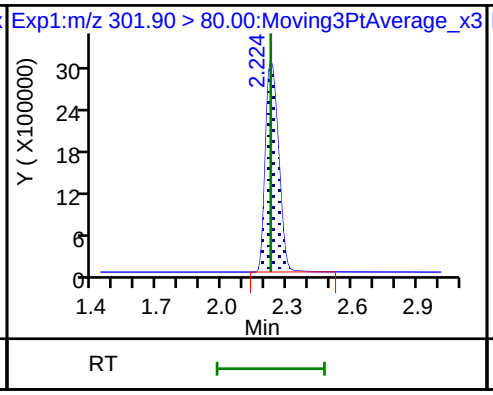

D 4 13C5 PFPeA



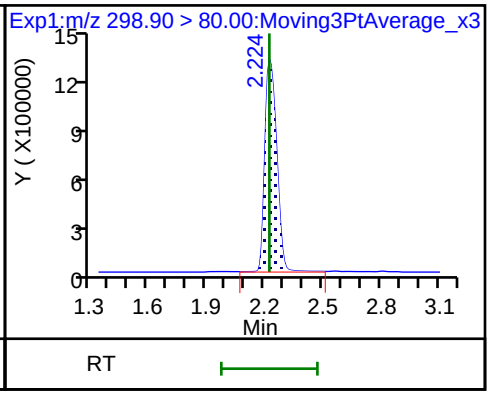

3 Perfluoropentanoic acid



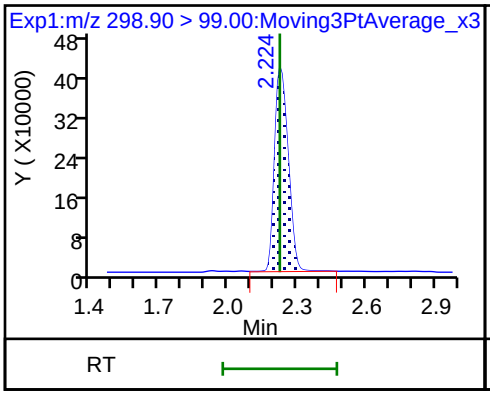

D 6 13C3 PFBS



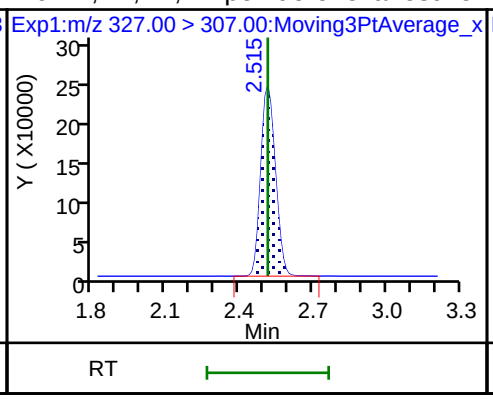

5 Perfluorobutanesulfonic acid



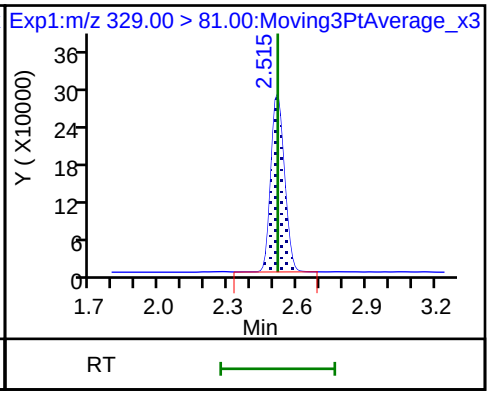

5 Perfluorobutanesulfonic acid



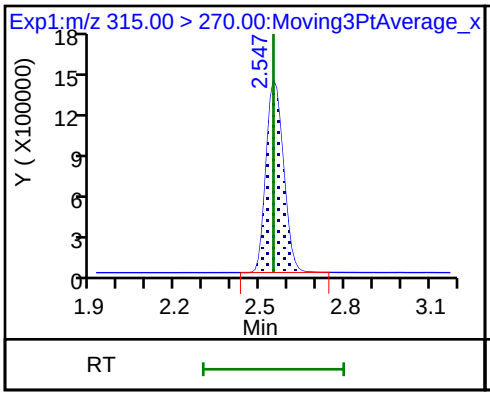

9 1H,1H,2H,2H-perfluorohexanesulfo



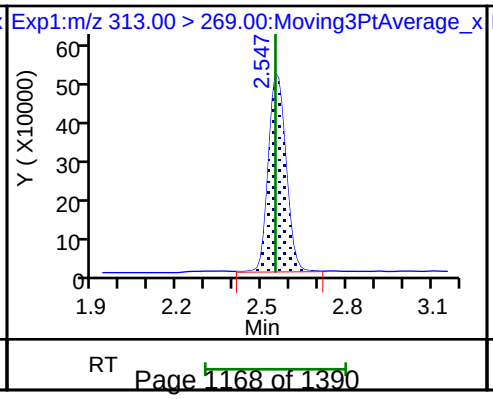

D 8 M2-4:2 FTS



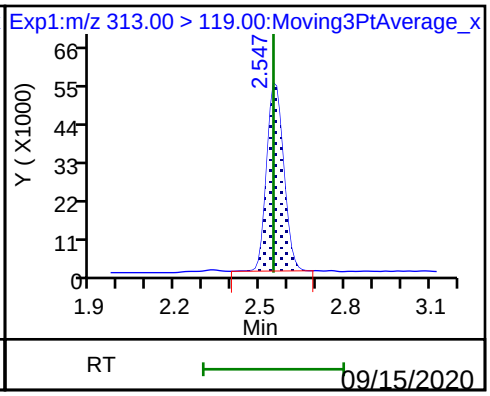

D 10 13C2 PFHxA



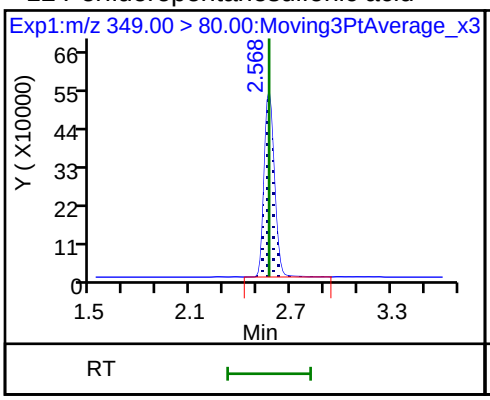

11 Perfluorohexanoic acid



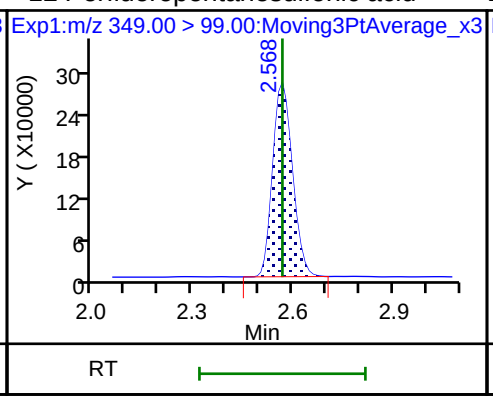

11 Perfluorohexanoic acid



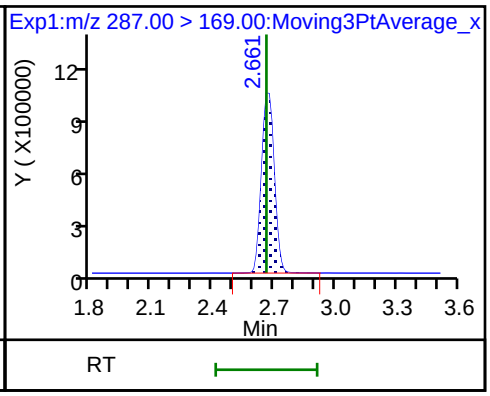
12 Perfluoropentanesulfonic acid



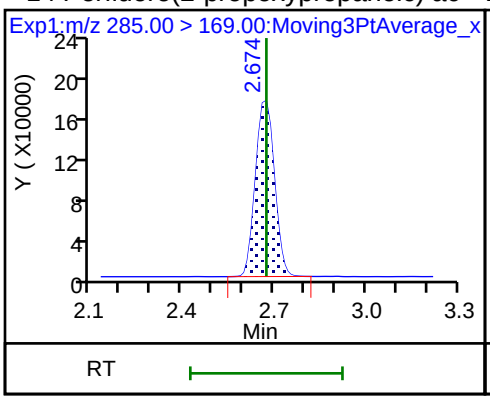

12 Perfluoropentanesulfonic acid



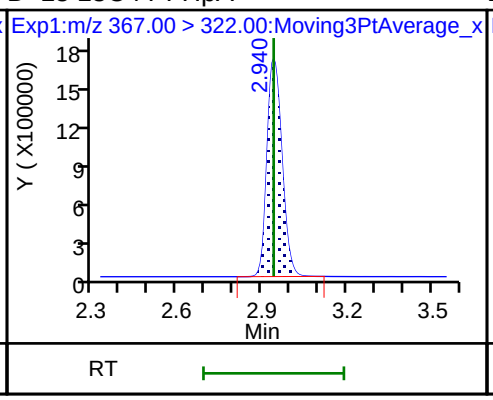

D 13 13C3 HFPO-DA



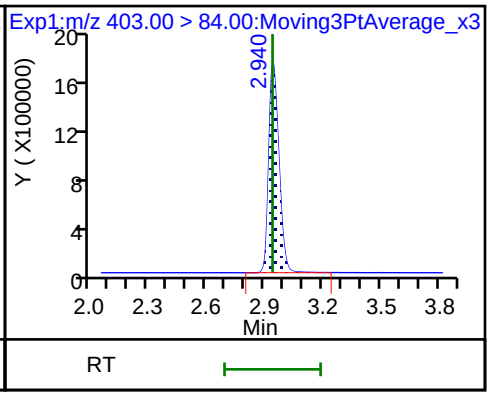

14 Perfluoro(2-propoxypropanoic) ac



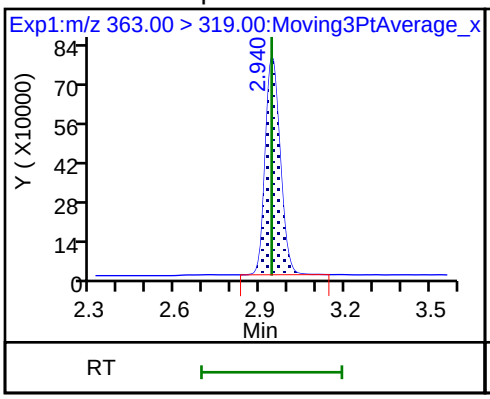

D 15 13C4 PFHpA



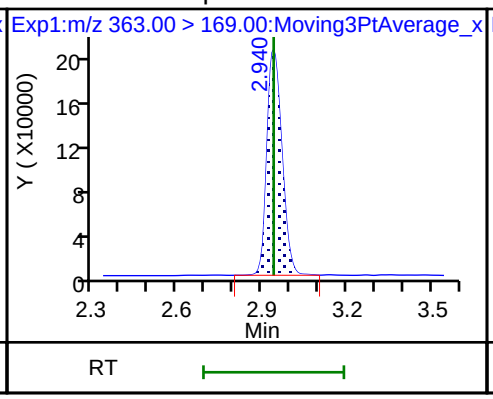

D 17 18O2 PFHxS



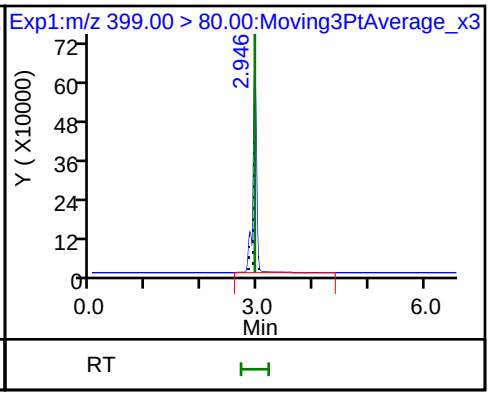

18 Perfluoroheptanoic acid



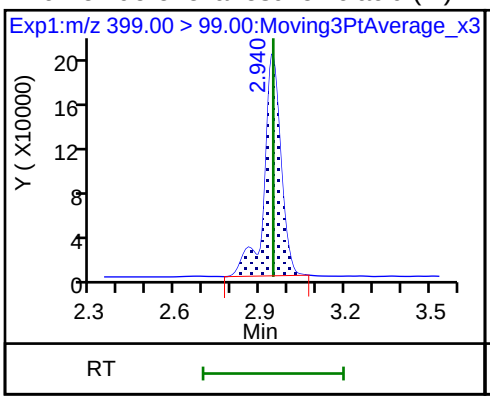

18 Perfluoroheptanoic acid



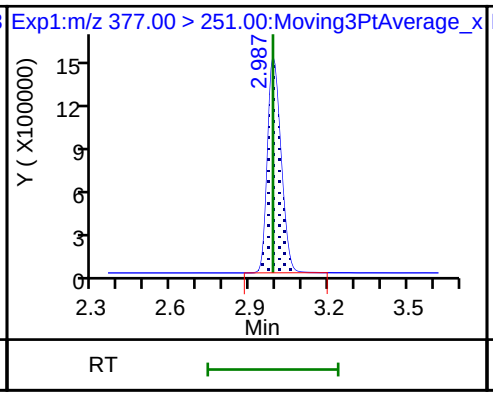

16 Perfluorohexanesulfonic acid



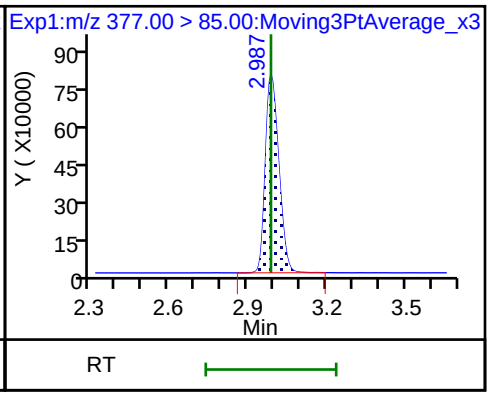

16 Perfluorohexanesulfonic acid (M)



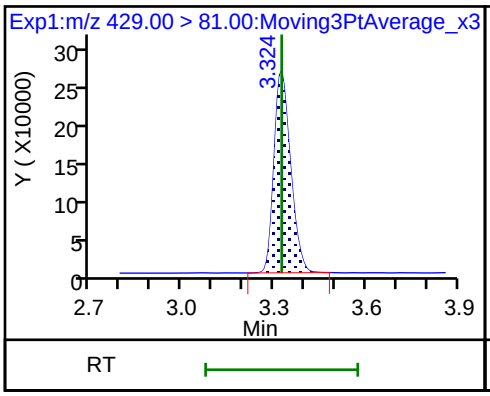

19 DONA



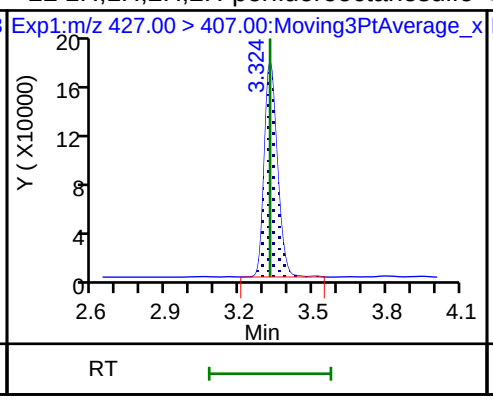

19 DONA



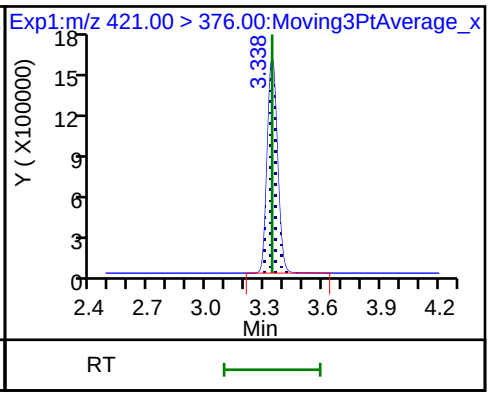
D 20 M2-6:2 FTS



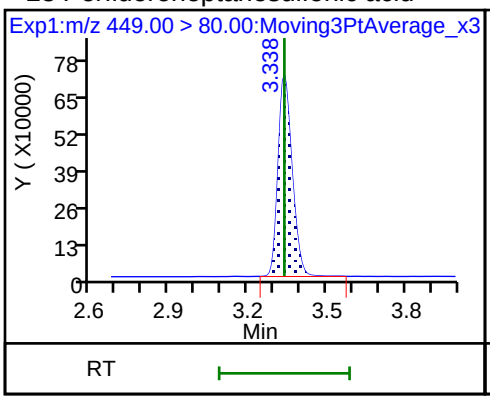

22 1H,1H,2H,2H-perfluorooctanesulfo



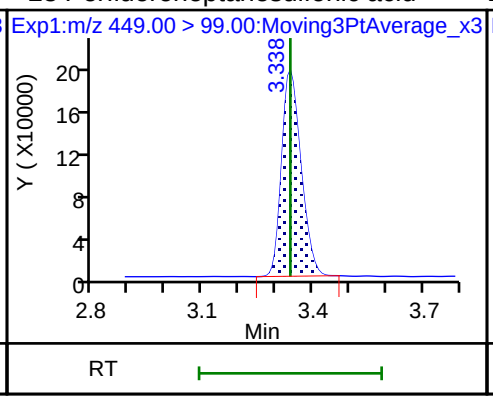

$ 21 13C8 PFOA



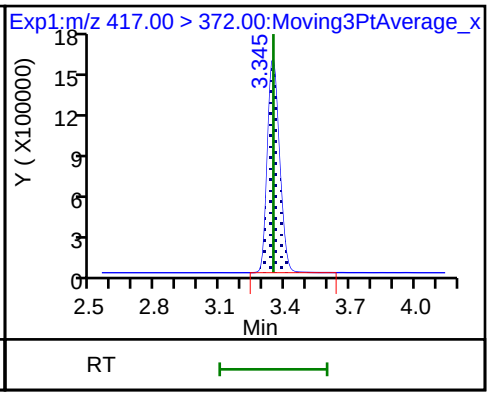

23 Perfluoroheptanesulfonic acid



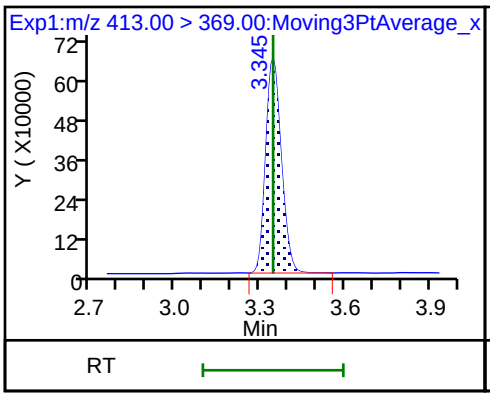

23 Perfluoroheptanesulfonic acid



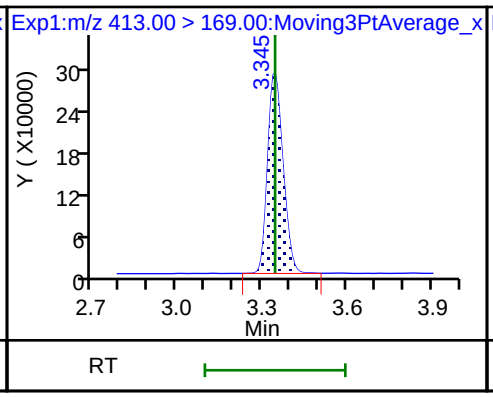

D 26 13C4 PFOA



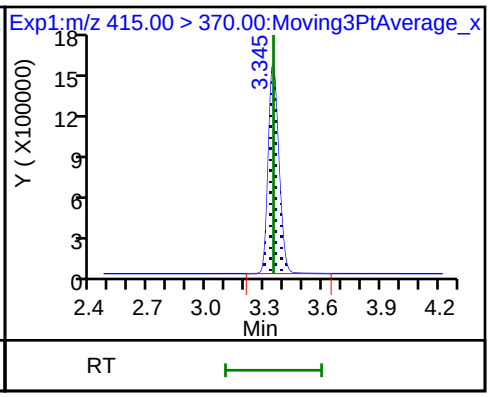

24 Perfluorooctanoic acid



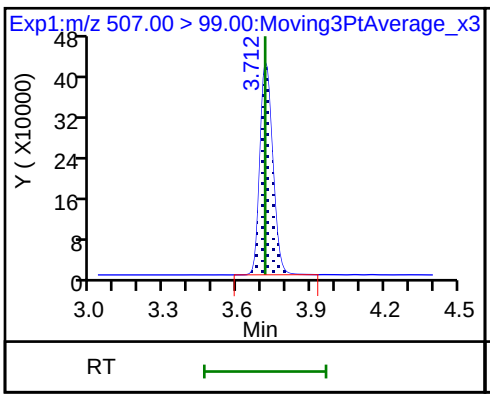

24 Perfluorooctanoic acid



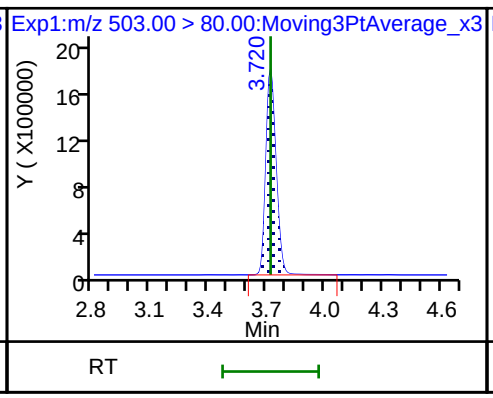

* 25 13C2 PFOA



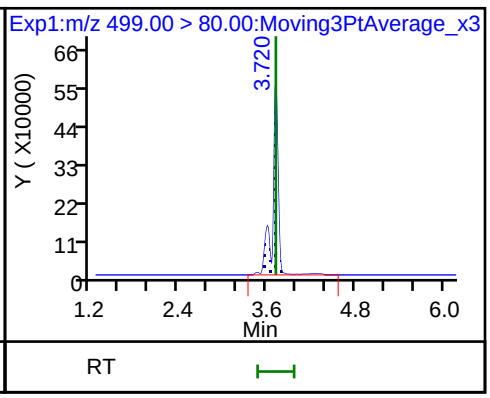

$ 27 13C8 PFOS



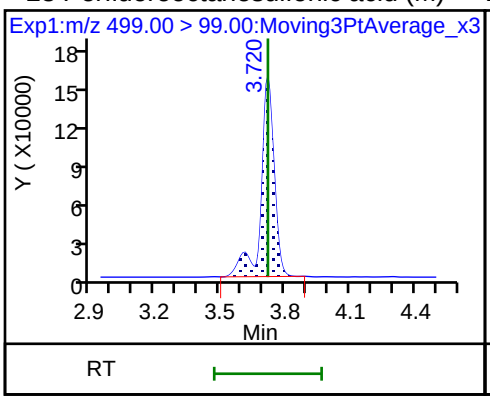

D 31 13C4 PFOS



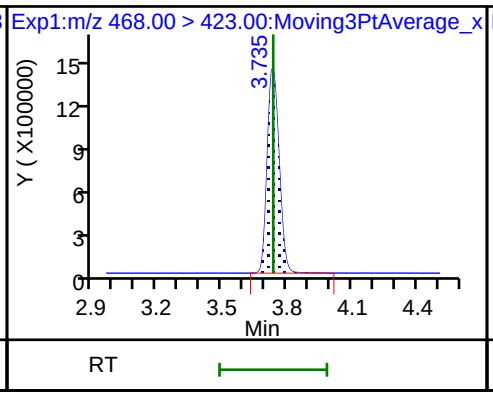

28 Perfluorooctanesulfonic acid



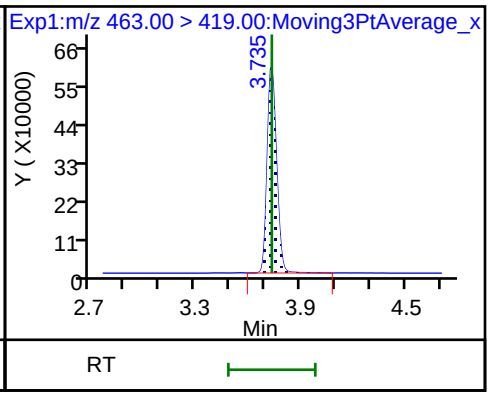
28 Perfluorooctanesulfonic acid (M)



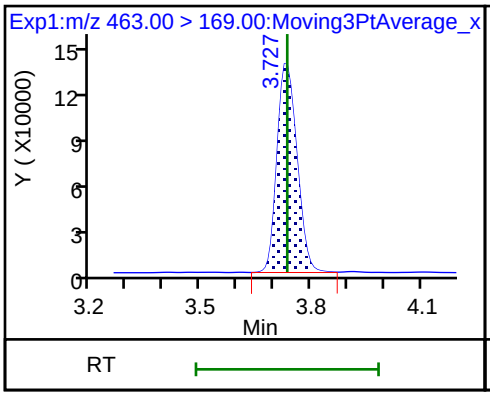

D 29 13C5 PFNA



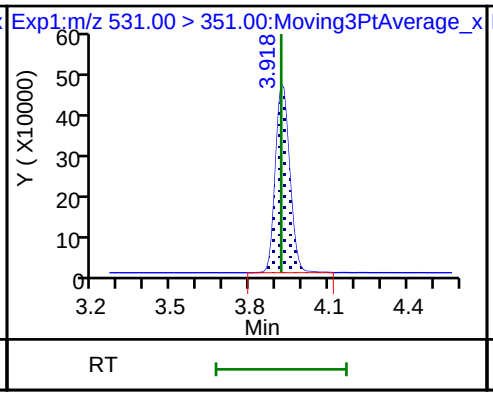

30 Perfluorononanoic acid



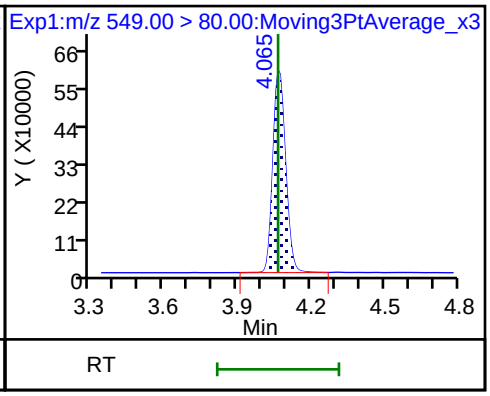

30 Perfluorononanoic acid



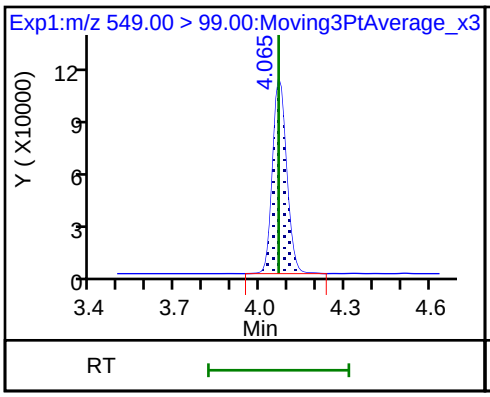

32 9-Chlorohexadecafluoro-3-oxanona



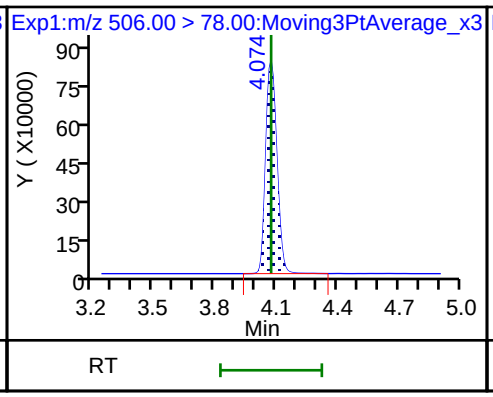

35 Perfluorononanesulfonic acid



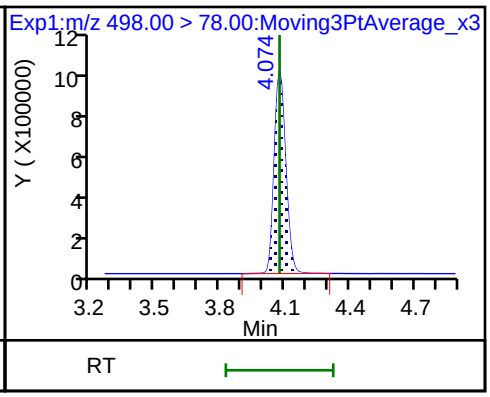

35 Perfluorononanesulfonic acid



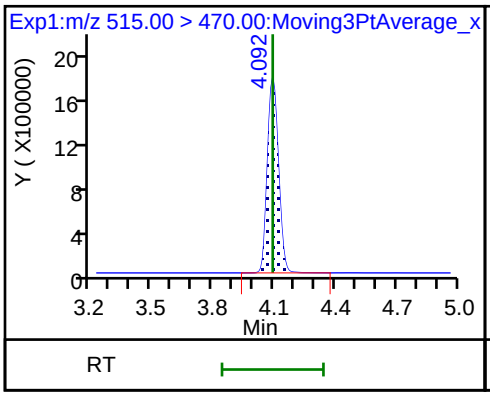

D 36 13C8 FOSA



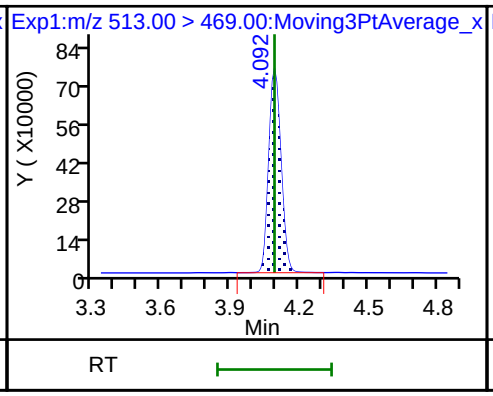

34 Perfluorooctanesulfonamide



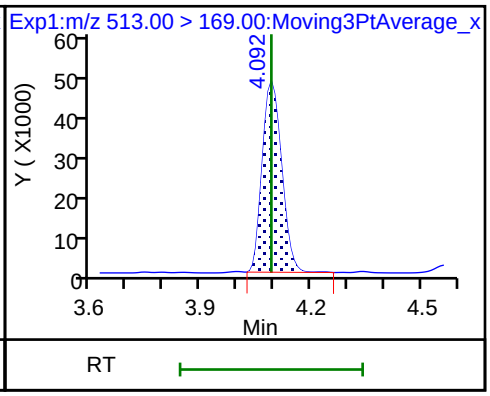

D 33 13C2 PFDA



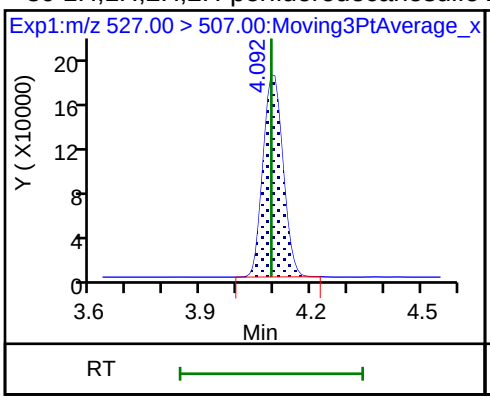

38 Perfluorodecanoic acid



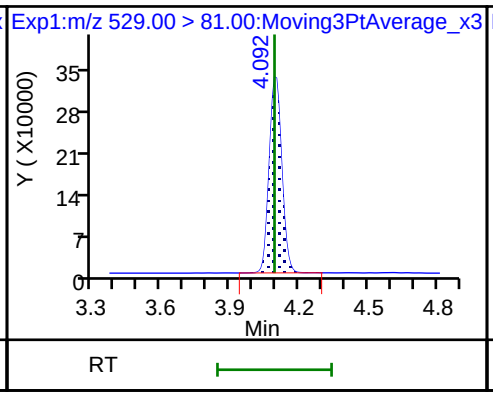

38 Perfluorodecanoic acid



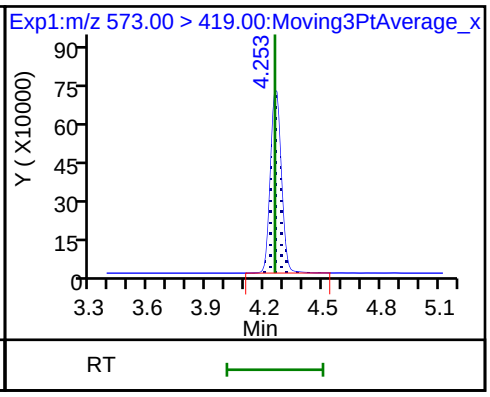
39 1H,1H,2H,2H-perfluorodecanesulfo



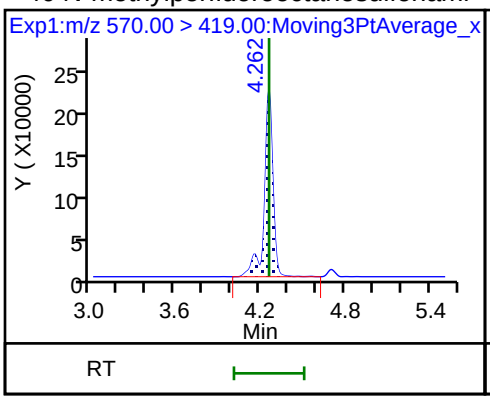

D 37 M2-8:2 FTS



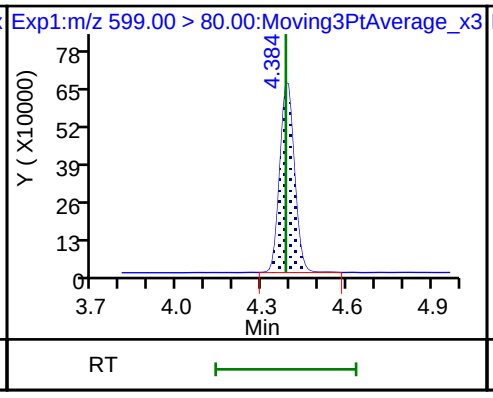

D 41 d3-NMeFOSAA



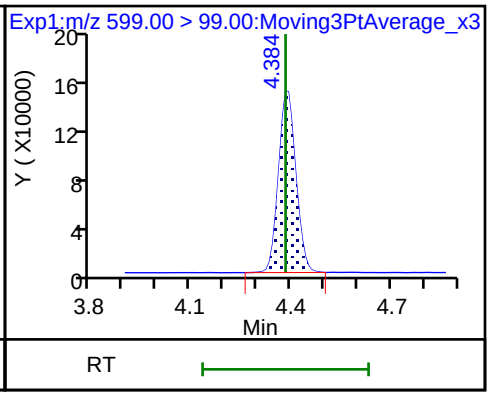

40 N-methylperfluorooctanesulfonami



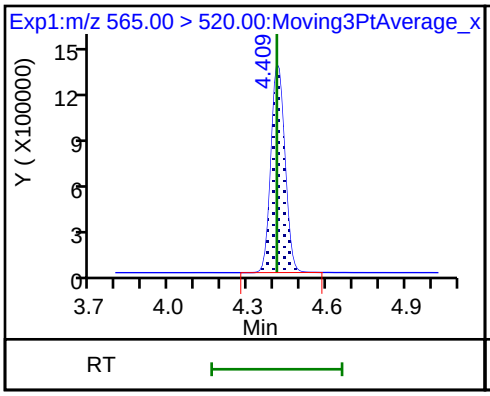

42 Perfluorodecanesulfonic acid



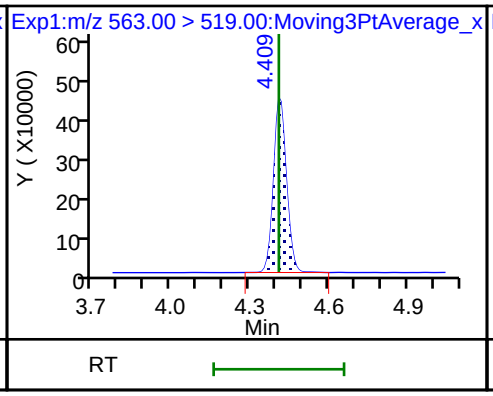

42 Perfluorodecanesulfonic acid



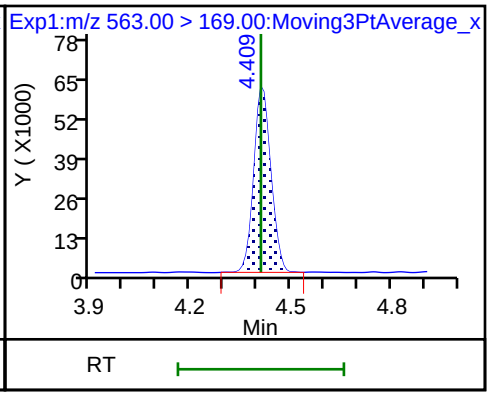

D 46 13C2 PFUnA



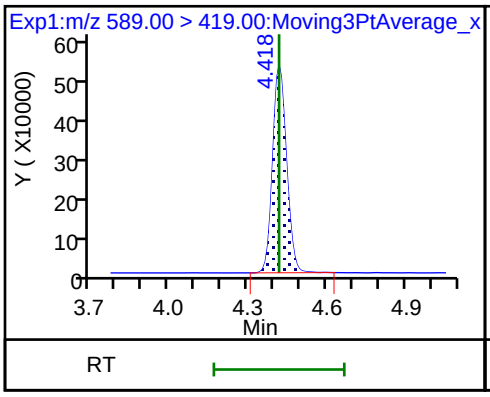

43 Perfluoroundecanoic acid



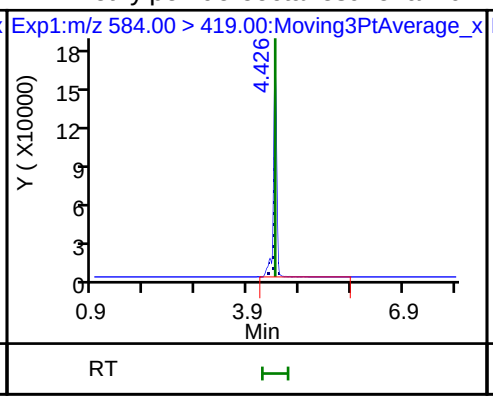

43 Perfluoroundecanoic acid



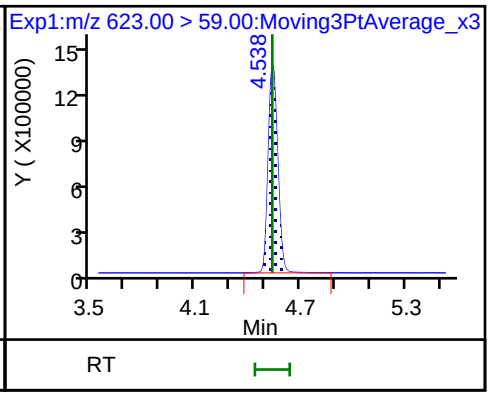

D 45 d5-NEtFOSAA



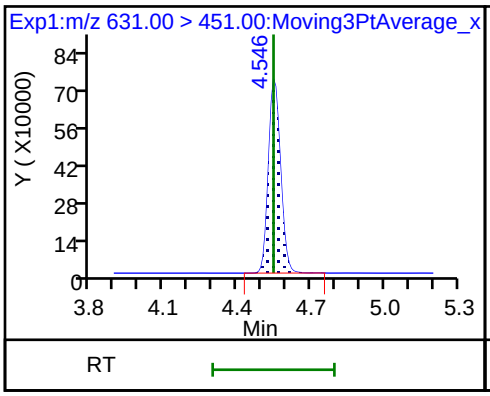

44 N-ethylperfluorooctanesulfonamid



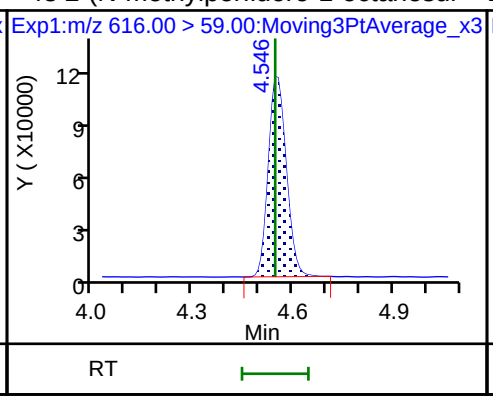

D 47 d7-N-MeFOSE-M



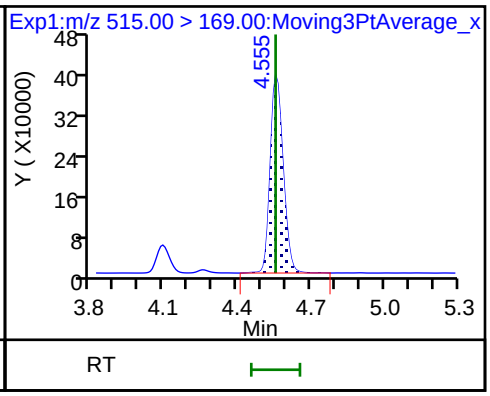
51 11-Chloroeicosafluoro-3-oxaundec



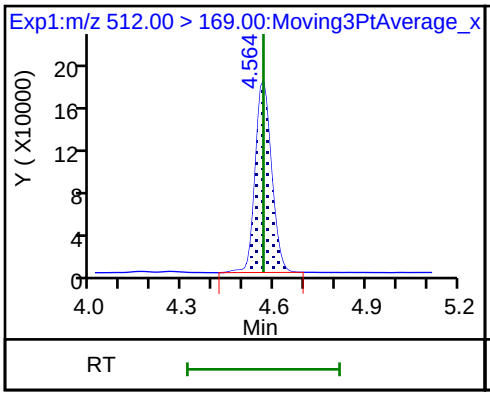

48 2-(N-methylperfluoro-1-octanesul



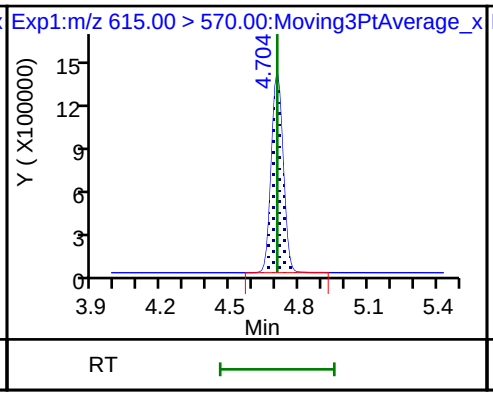

D 49 d-N-MeFOSA-M



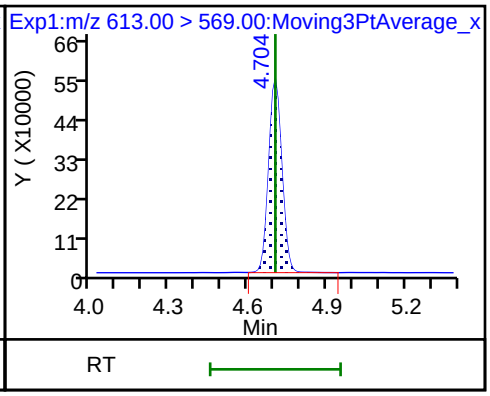

50 NMeFOSA



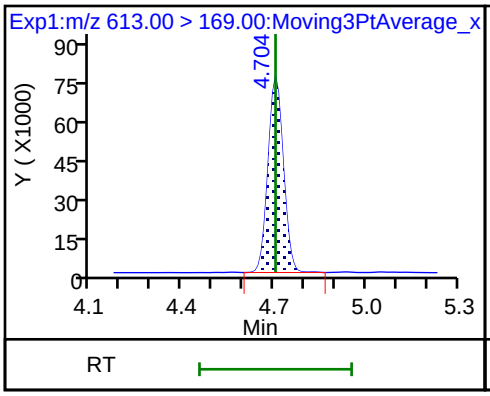

D 56 13C2 PFDoA



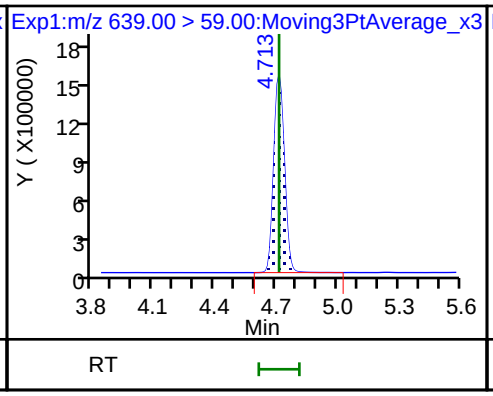

52 Perfluorododecanoic acid



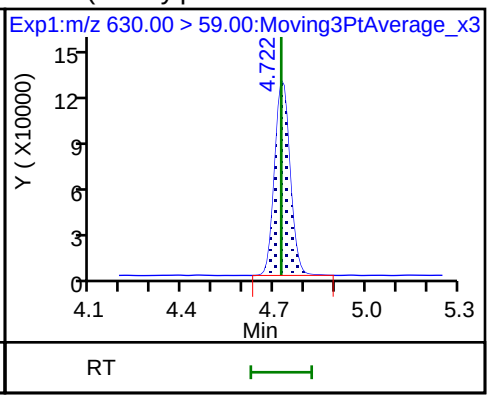

52 Perfluorododecanoic acid



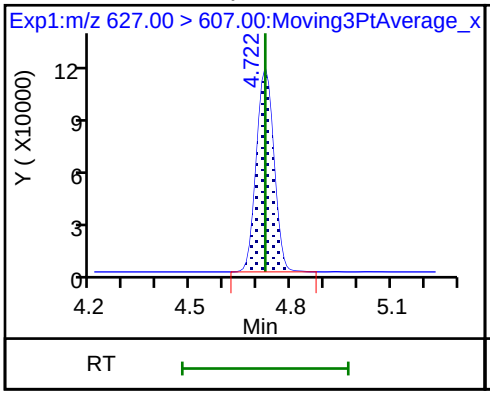

D 53 d9-N-EtFOSE-M



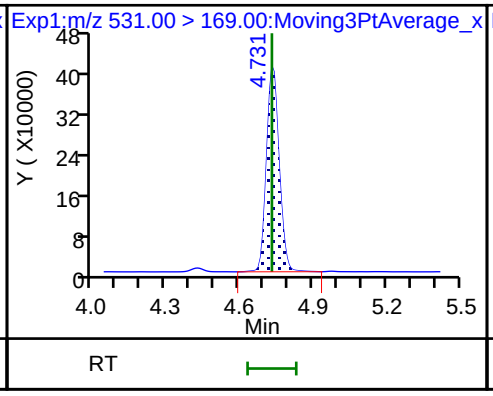

54 2-(N-ethylperfluoro-1-octanesulf



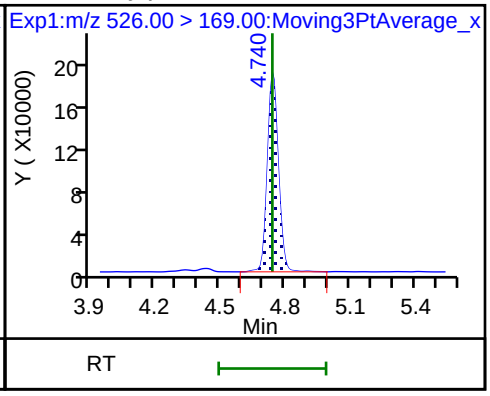

55 1H,1H,2H,2H-perfluorododecanesul



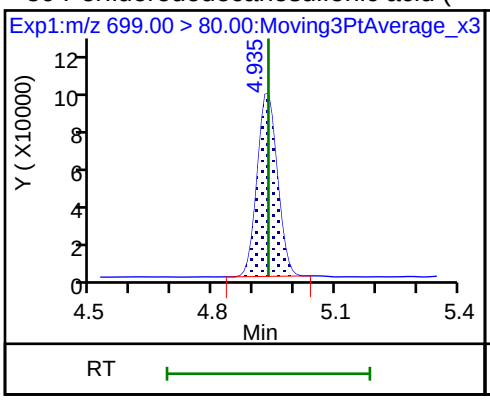

D 58 d-N-EtFOSA-M



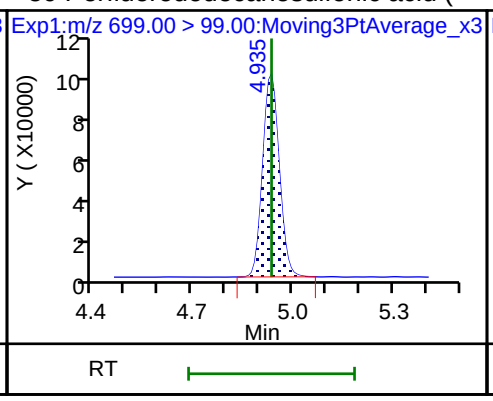

57 N-ethylperfluoro-1-octanesulfona



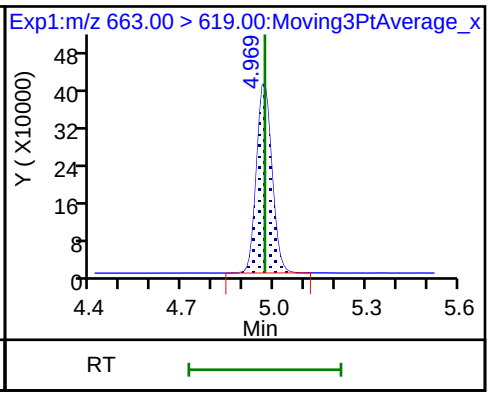
59 Perfluorododecanesulfonic acid (



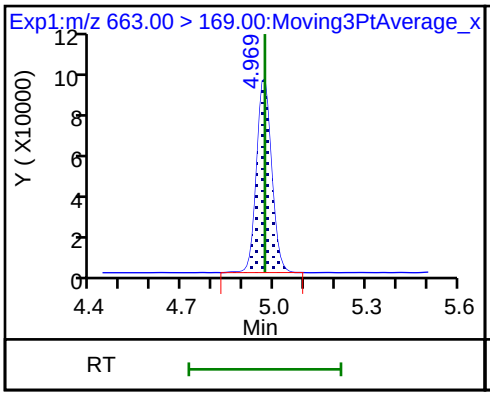

59 Perfluorododecanesulfonic acid (



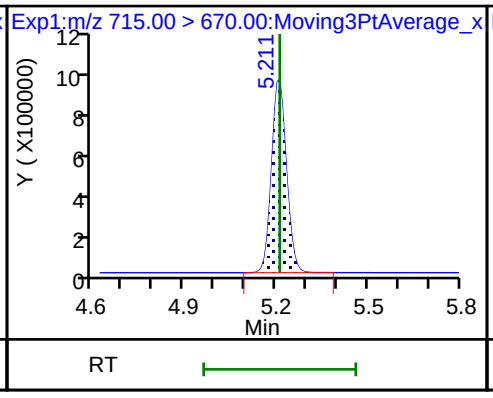

60 Perfluorotridecanoic acid



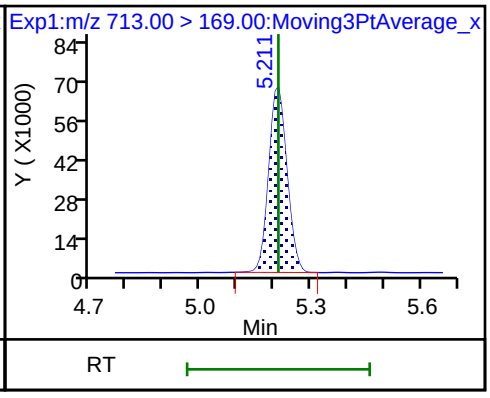

60 Perfluorotridecanoic acid



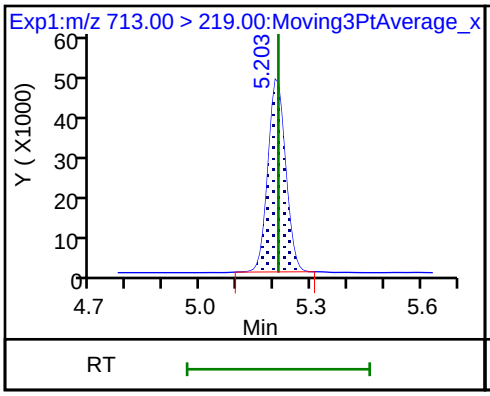

D 62 13C2 PFTeDA



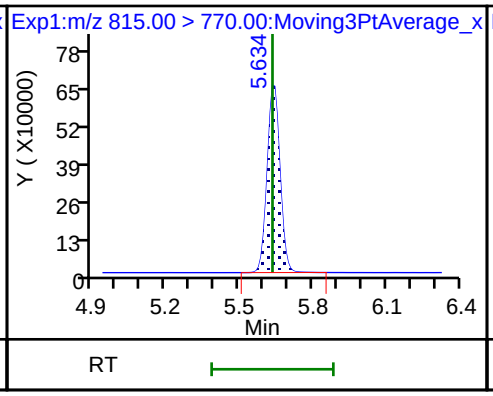

61 Perfluorotetradecanoic acid



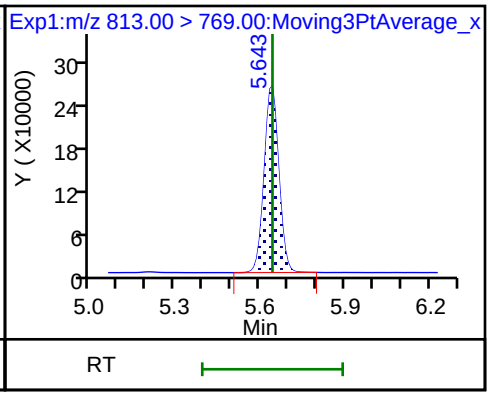

61 Perfluorotetradecanoic acid



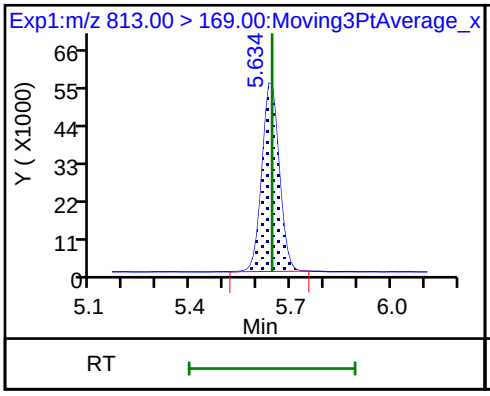

D 63 13C2 PFHxDA



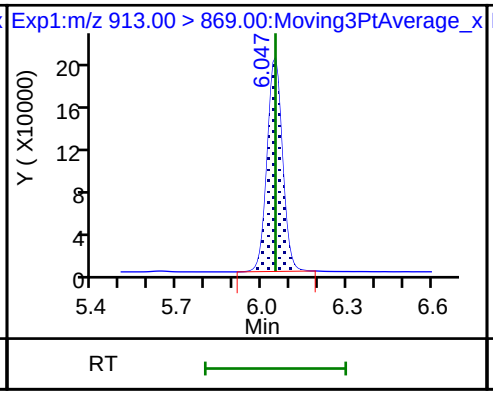

64 Perfluorohexadecanoic acid



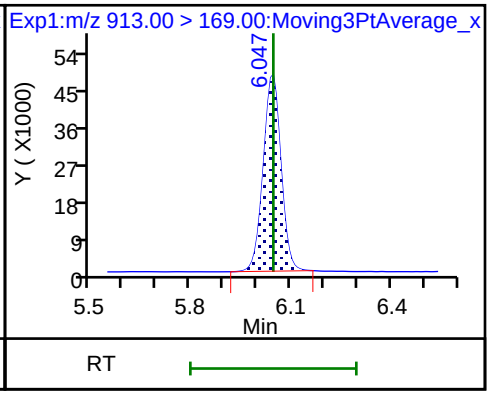

64 Perfluorohexadecanoic acid




65 Perfluorooctadecanoic acid




65 Perfluorooctadecanoic acid



Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

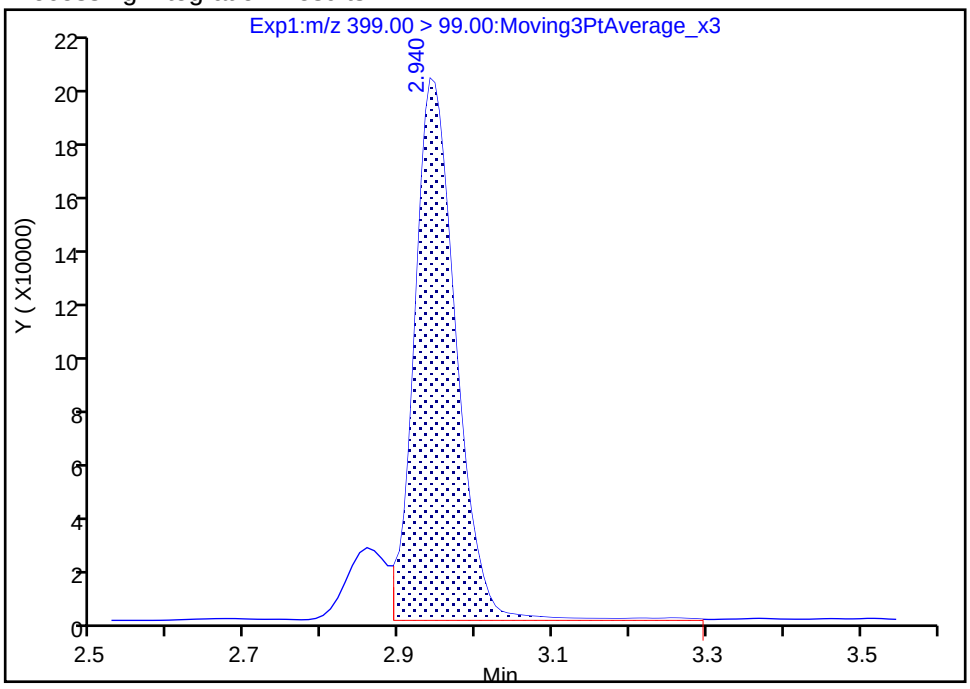
| | | | | | |
|---|---|---|---|---|---|
| Data File: | \\chromfs\Sacramento\ChromData\A9\20200911-103120.b\2020.09.11_A9_PFC_AA_041.d | | | | |
| Injection Date: | 11-Sep-2020 15:44:37 | Instrument ID: | A9 | | |
| Lims ID: | CCV L4 | | | | |
| Client ID: | | | | | |
| Operator ID: | SACINSTRLCMS02 | ALS Bottle#: | 43 | Worklist Smp#: | 18 |
| Injection Vol: | 20.0 ul | Dil. Factor: | 1.0000 | | |
| Method: | PFAS_A9 | Limit Group: | LC PFC ICAL | | |
| Column: | | Detector | EXP1 | | |

## 16 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 2

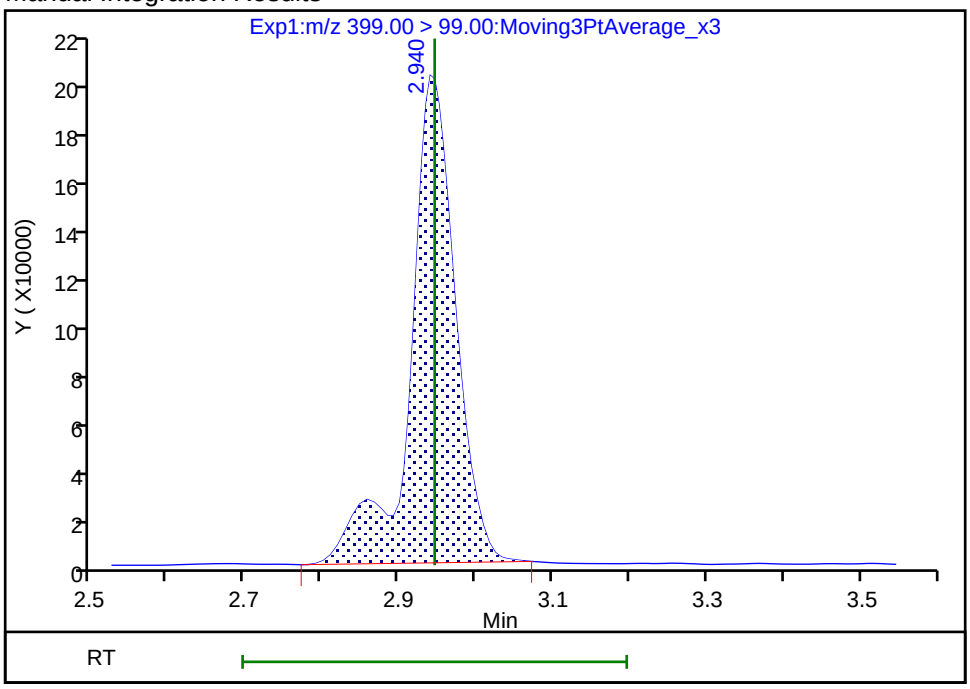
Processing Integration Results

RT: 2.94
Area: 761714
Amount: 0.894636
Amount Units: ng/ml




Manual Integration Results

RT: 2.94
Area: 835608
Amount: 0.894636
Amount Units: ng/ml




Reviewer: zibaa, 11-Sep-2020 17:26:50

Audit Action: Manually Integrated Audit Reason: Isomers

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

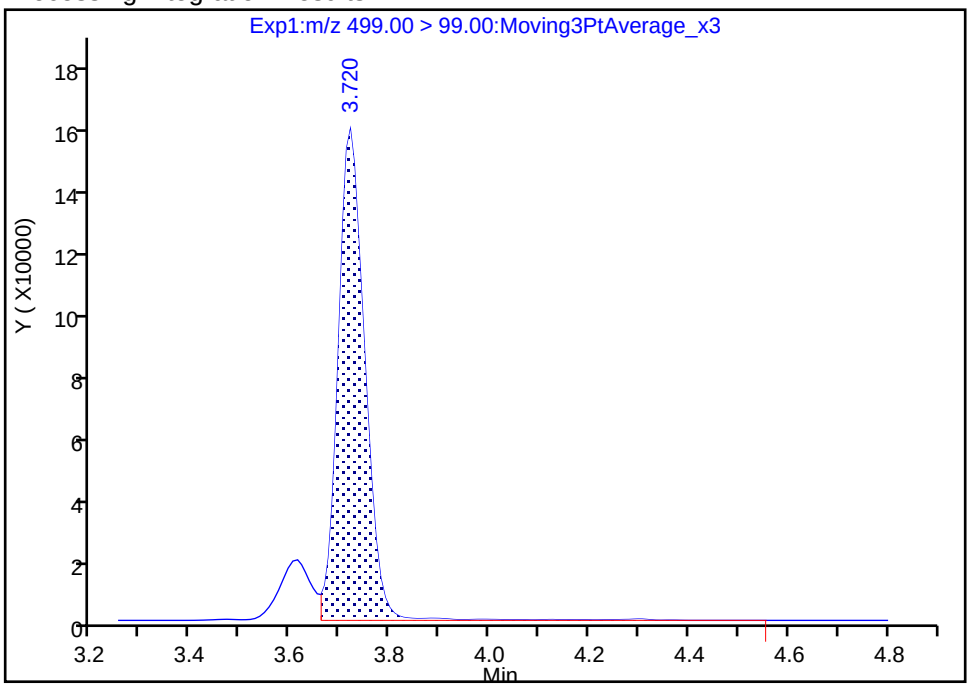
| | | | | | |
|---|---|---|---|---|---|
| Data File: | \\chromfs\Sacramento\ChromData\A9\20200911-103120.b\2020.09.11_A9_PFC_AA_041.d | | | | |
| Injection Date: | 11-Sep-2020 15:44:37 | Instrument ID: | A9 | | |
| Lims ID: | CCV L4 | | | | |
| Client ID: | | | | | |
| Operator ID: | SACINSTRLCMS02 | ALS Bottle#: | 43 | Worklist Smp#: | 18 |
| Injection Vol: | 20.0 ul | Dil. Factor: | 1.0000 | | |
| Method: | PFAS_A9 | Limit Group: | LC PFC ICAL | | |
| Column: | | Detector | EXP1 | | |

## 28 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 2

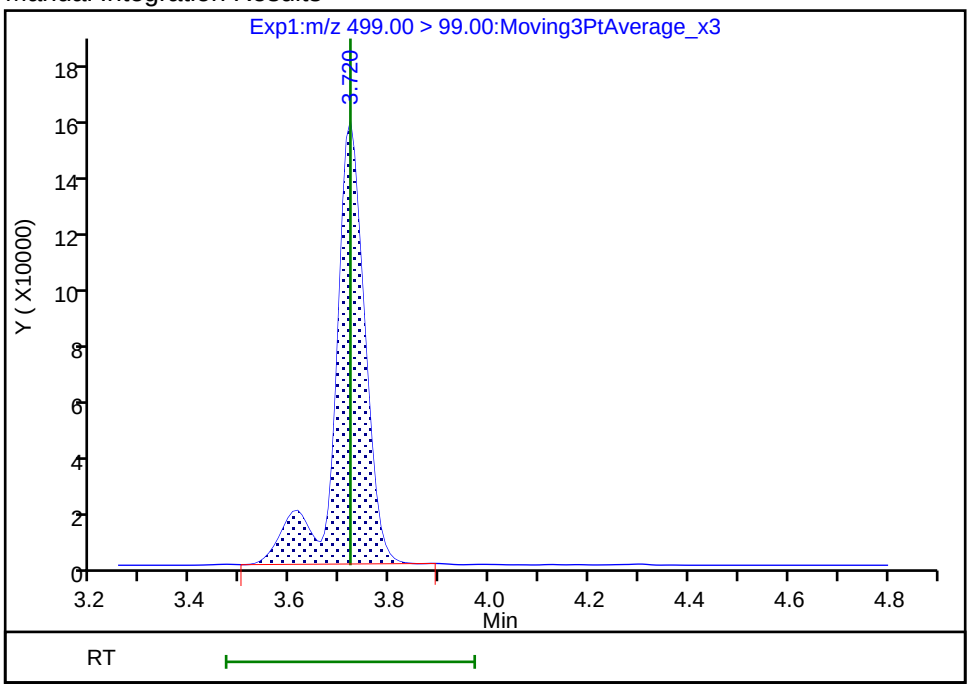
Processing Integration Results

RT: 3.72
Area: 581242
Amount: 1.003128
Amount Units: ng/ml




Manual Integration Results

RT: 3.72
Area: 650156
Amount: 1.003128
Amount Units: ng/ml




Reviewer: zibaa, 11-Sep-2020 17:27:02

Audit Action: Manually Integrated Audit Reason: Isomers

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento  Job No.: 460-217547-1

SDG No.:

Client Sample ID:  Lab Sample ID: MB 320-410910/1-A

Matrix: Water  Lab File ID: 2020.09.10_A18_PFC_A_074.d

Analysis Method: 537 (modified)  Date Collected:

Extraction Method: 3535  Date Extracted: 09/09/2020 18:52

Sample wt/vol: 250(mL)  Date Analyzed: 09/10/2020 15:11

Con. Extract Vol.: 10.00(mL)  Dilution Factor: 1

Injection Volume: 20(uL)  GC Column: Gemini C18 3x50 ID: 3(mm)

% Moisture:  GPC Cleanup:(Y/N) N

Analysis Batch No.: 411087  Units: ng/L

| CAS NO. | COMPOUND NAME | RESULT | Q | RL | MDL |
|---|---|---|---|---|---|
| 375-22-4 | Perfluorobutanoic acid (PFBA) | 0.354 | J | 2.00 | 0.35 |
| 2706-90-3 | Perfluoropentanoic acid (PFPeA) | 0.49 | U | 2.00 | 0.49 |
| 307-24-4 | Perfluorohexanoic acid (PFHxA) | 0.58 | U | 2.00 | 0.58 |
| 375-85-9 | Perfluoroheptanoic acid (PFHpA) | 0.25 | U | 2.00 | 0.25 |
| 335-67-1 | Perfluorooctanoic acid (PFOA) | 0.85 | U | 2.00 | 0.85 |
| 375-95-1 | Perfluorononanoic acid (PFNA) | 0.27 | U | 2.00 | 0.27 |
| 335-76-2 | Perfluorodecanoic acid (PFDA) | 0.31 | U | 2.00 | 0.31 |
| 2058-94-8 | Perfluoroundecanoic acid (PFUnA) | 1.10 | U | 2.00 | 1.10 |
| 307-55-1 | Perfluorododecanoic acid (PFDoA) | 0.55 | U | 2.00 | 0.55 |
| 72629-94-8 | Perfluorotridecanoic acid (PFTriA) | 1.30 | U | 2.00 | 1.30 |
| 376-06-7 | Perfluorotetradecanoic acid (PFTeA) | 0.29 | U | 2.00 | 0.29 |
| 375-73-5 | Perfluorobutanesulfonic acid (PFBS) | 0.20 | U | 2.00 | 0.20 |
| 355-46-4 | Perfluorohexanesulfonic acid (PFHxS) | 0.273 | J | 2.00 | 0.17 |
| 375-92-8 | Perfluoroheptanesulfonic Acid (PFHpS) | 0.19 | U | 2.00 | 0.19 |
| 1763-23-1 | Perfluorooctanesulfonic acid (PFOS) | 0.54 | U | 2.00 | 0.54 |
| 335-77-3 | Perfluorodecanesulfonic acid (PFDS) | 0.32 | U | 2.00 | 0.32 |
| 754-91-6 | Perfluorooctanesulfonamide (FOSA) | 0.357 | J | 2.00 | 0.35 |
| 2355-31-9 | N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA) | 3.10 | U | 20.0 | 3.10 |
| 2991-50-6 | N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA) | 1.90 | U | 20.0 | 1.90 |
| 27619-97-2 | 6:2 FTS | 2.00 | U | 20.0 | 2.00 |
| 39108-34-4 | 8:2 FTS | 2.00 | U | 20.0 | 2.00 |

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento  Job No.: 460-217547-1

SDG No.:

Client Sample ID:  Lab Sample ID: MB 320-410910/1-A

Matrix: Water  Lab File ID: 2020.09.10_A18_PFC_A_074.d

Analysis Method: 537 (modified)  Date Collected:

Extraction Method: 3535  Date Extracted: 09/09/2020 18:52

Sample wt/vol: 250(mL)  Date Analyzed: 09/10/2020 15:11

Con. Extract Vol.: 10.00(mL)  Dilution Factor: 1

Injection Volume: 20(uL)  GC Column: Gemini C18 3x50 ID: 3(mm)

% Moisture:  GPC Cleanup:(Y/N) N

Analysis Batch No.: 411087  Units: ng/L

| CAS NO. | ISOTOPE DILUTION | %REC | Q | LIMITS |
|---|---|---|---|---|
| STL00992 | 13C4 PFBA | 84 | | 25-150 |
| STL01893 | 13C5 PFPeA | 86 | | 25-150 |
| STL00993 | 13C2 PFHxA | 95 | | 25-150 |
| STL01892 | 13C4 PFHpA | 92 | | 25-150 |
| STL00990 | 13C4 PFOA | 93 | | 25-150 |
| STL00995 | 13C5 PFNA | 95 | | 25-150 |
| STL00996 | 13C2 PFDA | 101 | | 25-150 |
| STL00997 | 13C2 PFUnA | 99 | | 25-150 |
| STL00998 | 13C2 PFDoA | 94 | | 25-150 |
| STL02116 | 13C2 PFTeDA | 93 | | 25-150 |
| STL02337 | 13C3 PFBS | 103 | | 25-150 |
| STL00994 | 18O2 PFHxS | 106 | | 25-150 |
| STL00991 | 13C4 PFOS | 104 | | 25-150 |
| STL01056 | 13C8 FOSA | 90 | | 25-150 |
| STL02118 | d3-NMeFOSAA | 86 | | 25-150 |
| STL02117 | d5-NEtFOSAA | 89 | | 25-150 |
| STL02279 | M2-6:2 FTS | 103 | | 25-150 |
| STL02280 | M2-8:2 FTS | 115 | | 25-150 |

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\A18\20200910-103041.b\2020.09.10_A18_PFC_A_074.d
Lims ID: MB 320-410910/1-A
Client ID:
Sample Type: MB
Inject. Date: 10-Sep-2020 15:11:20 ALS Bottle#: 38 Worklist Smp#: 2
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Sample Info: mb 320-410910/1-a DUE 9/22 (WATER)
Misc. Info.: Plate: 4 Rack: 1
Operator ID: TAISACA18-PC\A-18 Instrument ID: A18

Method: \\chromfs\Sacramento\ChromData\A18\20200910-103041.b\PFAS_A18V2.m
Limit Group: LC PFC ICAL
Last Update: 11-Sep-2020 08:18:59 Calib Date: 25-Aug-2020 17:37:57
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\A18\20200825-102078.b\2020.08.25_A18_ICAL_A_017.d

Column 1 : Gemini C18 3um 3mm x 50 mm ( 3.00 mm) Det: EXP1
Process Host: CTX1040

First Level Reviewer: sanjumnair Date: 11-Sep-2020 08:18:59
Ratio Calibration: CCV Sample: \\chromfs\Sacramento\ChromData\A18\20200910-103041.b\2020.09.10_A18_PFC_A_073.d

| Signal | RT | EXP RT | DLT RT | REL RT | Response | Amount ng/ml | Ratio(Limits) | %Rec | S/N | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| D 1 13C4 PFBA | | | | | | | | | | |
| 217.00 > 172.00 | 2.549 | 2.557 | -0.008 | 0.626 | 15131767 | 2.09 | | 83.5 | 8220 | |
| 2 Perfluorobutanoic acid | | | | | | | | | | M |
| 212.90 > 169.00 | 2.549 | 2.557 | -0.008 | 1.000 | 46543 | 0.008860 | | | 2.1 | M |
| D 4 13C5 PFPeA | | | | | | | | | | |
| 267.90 > 223.00 | 2.899 | 2.909 | -0.010 | 0.712 | 12132401 | 2.15 | | 86.1 | 4483 | |
| 5 Perfluoropentanoic acid | | | | | | | | | | |
| 262.90 > 219.00 | 2.899 | 2.909 | -0.010 | 1.000 | 44004 | 0.009095 | | | 1.9 | |
| 6 Perfluorobutanesulfonic acid | | | | | | | | | | |
| 298.90 > 80.00 | 2.940 | 2.940 | 0.0 | 1.004 | 7688 | 0.001674 | Target=2.30 | | 1.8 | |
| 298.90 > 99.00 | 2.930 | 2.940 | -0.010 | 1.000 | 2328 | | 3.30(1.15-3.45) | | 0.8 | |
| D 9 13C3 PFBS | | | | | | | | | | |
| 301.90 > 80.00 | 2.930 | 2.940 | -0.010 | 0.719 | 10572474 | 2.39 | | 103 | 5303 | |
| D 7 M2-4:2 FTS | | | | | | | | | | |
| 329.00 > 81.00 | 3.230 | 3.238 | -0.008 | 0.793 | 2525800 | 2.37 | | 101 | 1165 | |
| 8 4:2 FTS | | | | | | | | | | |
| 327.00 > 307.00 | 3.223 | 3.238 | -0.015 | 0.998 | 1559 | 0.000634 | | | 13.9 | |
| D 11 13C2 PFHxA | | | | | | | | | | |
| 315.00 > 270.00 | 3.278 | 3.278 | 0.0 | 0.805 | 13413780 | 2.38 | | 95.4 | 5376 | |
| 10 Perfluorohexanoic acid | | | | | | | | | | |
| 313.00 > 269.00 | 3.278 | 3.288 | -0.010 | 1.000 | 17767 | 0.003436 | Target=13.35 | | 1.1 | |
| 313.00 > 119.00 | 3.268 | 3.288 | -0.020 | 0.997 | 1518 | | 11.70(6.67-20.02) | | 1.1 | |
| D 14 13C3 HFPO-DA | | | | | | | | | | |
| 287.00 > 169.00 | 3.405 | 3.405 | 0.0 | 0.836 | 2443659 | 2.12 | | 84.9 | 5397 | |
| 15 Perfluorohexanesulfonic acid | | | | | | | | | | M |
| 399.00 > 80.00 | 3.681 | 3.691 | -0.010 | 1.000 | 19969 | 0.006814 | Target=3.35 | | 8.3 | M |
| 399.00 > 99.00 | 3.681 | 3.691 | -0.010 | 1.000 | 6502 | | 3.07(1.67-5.02) | | 4.7 | M |

| Signal | RT | EXP RT | DLT RT | REL RT | Response | Amount ng/ml | Ratio(Limits) | %Rec | S/N | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| D 17 18O2 PFHxS | | | | | | | | | | |
| 403.00 > 84.00 | 3.681 | 3.691 | -0.010 | 0.904 | 5866411 | 2.51 | | 106 | 6358 | |
| D 18 13C4 PFHpA | | | | | | | | | | |
| 367.00 > 322.00 | 3.681 | 3.691 | -0.010 | 0.904 | 11045922 | 2.30 | | 92.0 | 7110 | |
| 21 6:2 FTS | | | | | | | | | | |
| 427.00 > 407.00 | 4.058 | 4.058 | 0.0 | 1.000 | 22842 | 0.0107 | | | 34.9 | |
| D 20 M2-6:2 FTS | | | | | | | | | | |
| 429.00 > 81.00 | 4.058 | 4.058 | 0.0 | 0.996 | 2196971 | 2.45 | | 103 | 1625 | |
| 22 Perfluorooctanoic acid | | | | | | | | | | M |
| 413.00 > 369.00 | 4.082 | 4.082 | 0.0 | 1.002 | 34853 | 0.008039 | Target=3.01 | | 4.8 | M |
| 413.00 > 169.00 | 4.082 | 4.082 | 0.0 | 1.002 | 11898 | | 2.93(1.50-4.51) | | 11.1 | M |
| * 23 13C2 PFOA | | | | | | | | | | |
| 415.00 > 370.00 | 4.074 | 4.082 | -0.008 | | 11427575 | 2.50 | | | 5453 | |
| D 25 13C4 PFOA | | | | | | | | | | |
| 417.00 > 372.00 | 4.074 | 4.082 | -0.008 | 1.000 | 10621661 | 2.32 | | 92.9 | 8318 | |
| D 27 13C4 PFOS | | | | | | | | | | |
| 503.00 > 80.00 | 4.438 | 4.446 | -0.008 | 1.089 | 3940732 | 2.49 | | 104 | 1983 | |
| 29 Perfluorooctanesulfonic acid | | | | | | | | | | M |
| 499.00 > 80.00 | 4.438 | 4.446 | -0.008 | 1.000 | 8656 | 0.005072 | Target=4.54 | | 4.7 | M |
| 499.00 > 99.00 | 4.454 | 4.446 | 0.008 | 1.004 | 3556 | | 2.43(2.27-6.82) | | 3.7 | |
| D 30 13C5 PFNA | | | | | | | | | | |
| 468.00 > 423.00 | 4.454 | 4.462 | -0.008 | 1.093 | 8758651 | 2.38 | | 95.1 | 8086 | |
| D 33 13C8 FOSA | | | | | | | | | | |
| 506.00 > 78.00 | 4.777 | 4.786 | -0.009 | 1.173 | 5738418 | 2.25 | | 89.8 | 5449 | |
| 34 Perfluorooctanesulfonamide | | | | | | | | | | |
| 498.00 > 78.00 | 4.786 | 4.786 | 0.0 | 1.002 | 19087 | 0.008937 | | | 77.9 | |
| D 39 13C2 PFDA | | | | | | | | | | |
| 515.00 > 470.00 | 4.811 | 4.820 | -0.009 | 1.181 | 9004767 | 2.52 | | 101 | 11997 | |
| 36 8:2 FTS | | | | | | | | | | |
| 527.00 > 507.00 | 4.811 | 4.820 | -0.009 | 1.000 | 2532 | 0.000961 | | | 39.0 | |
| D 38 M2-8:2 FTS | | | | | | | | | | |
| 529.00 > 81.00 | 4.811 | 4.820 | -0.009 | 1.181 | 3556785 | 2.76 | | 115 | 2201 | |
| D 40 d3-NMeFOSAA | | | | | | | | | | |
| 573.00 > 419.00 | 4.977 | 4.978 | -0.001 | 1.222 | 5164535 | 2.15 | | 86.0 | 2286 | |
| D 43 13C2 PFUnA | | | | | | | | | | |
| 565.00 > 520.00 | 5.138 | 5.139 | -0.001 | 1.261 | 8750810 | 2.47 | | 98.7 | 7847 | |
| D 44 d5-NEtFOSAA | | | | | | | | | | |
| 589.00 > 419.00 | 5.138 | 5.148 | -0.010 | 1.261 | 5664421 | 2.23 | | 89.2 | 3268 | |
| 46 NEtFOSA | | | | | | | | | | |
| 584.00 > 419.00 | 5.157 | 5.157 | 0.0 | 1.004 | 9547 | 0.006235 | | | 30.5 | |
| D 47 d7-N-MeFOSE-M | | | | | | | | | | |
| 623.00 > 59.00 | 5.238 | 5.240 | -0.002 | 1.286 | 2430234 | 3.84 | | 30.7 | 1141 | |
| D 49 d-N-MeFOSA-M | | | | | | | | | | |
| 515.00 > 169.00 | 5.258 | 5.259 | -0.001 | 1.291 | 1578658 | 1.76 | | 70.3 | 36.8 | |
| 50 NMeFOSA | | | | | | | | | | |
| 512.00 > 169.00 | 5.279 | 5.270 | 0.009 | 1.004 | 1735 | 0.002860 | | | 4.8 | |

| Signal | RT | EXP RT | DLT RT | REL RT | Response | Amount ng/ml | Ratio(Limits) | %Rec | S/N | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| 51 11ClFOS | | | | | | | | | | |
| 631.00 > 451.00 | 5.268 | 5.280 | -0.012 | 1.187 | 4666 | 0.000690 | | | 17.6 | |
| D 52 d9-N-EtFOSE-M | | | | | | | | | | |
| 639.00 > 59.00 | 5.415 | 5.416 | -0.001 | 1.329 | 2132061 | 2.74 | | 22.0 | 1087 | |
| D 56 13C2 PFDoA | | | | | | | | | | |
| 615.00 > 570.00 | 5.426 | 5.437 | -0.011 | 1.332 | 8232818 | 2.35 | | 94.2 | 6972 | |
| 57 Perfluorododecanoic acid | | | | | | | | | | |
| 613.00 > 569.00 | 5.426 | 5.437 | -0.011 | 1.000 | 9667 | 0.002871 | Target=8.28 | | 3.8 | |
| 613.00 > 169.00 | 5.437 | 5.437 | 0.0 | 1.002 | 1151 | | 8.40(4.14-12.41) | | 3.9 | |
| D 54 d-N-EtFOSA-M | | | | | | | | | | |
| 531.00 > 169.00 | 5.437 | 5.437 | 0.0 | 1.334 | 1058181 | 1.15 | | 46.0 | 184 | |
| 58 10:2 FTS | | | | | | | | | | |
| 627.00 > 607.00 | 5.447 | 5.459 | -0.012 | 1.132 | 1620 | 0.000542 | | | 10.8 | |
| D 61 13C2 PFTeDA | | | | | | | | | | |
| 715.00 > 670.00 | 5.948 | 5.948 | 0.0 | 1.460 | 6692824 | 2.32 | | 92.8 | 6336 | |
| D 64 13C2 PFHxDA | | | | | | | | | | |
| 815.00 > 770.00 | 6.376 | 6.377 | -0.001 | 1.565 | 4642443 | 2.20 | | 88.0 | 6150 | |
| 63 Perfluorohexadecanoic acid | | | | | | | | | | |
| 813.00 > 769.00 | 6.376 | 6.386 | -0.010 | 1.000 | 40537 | 0.001024 | Target=9.97 | | 39.4 | |
| 813.00 > 169.00 | 6.376 | 6.386 | -0.010 | 1.000 | 4000 | | 10.13(4.98-14.95) | | 34.8 | |

## QC Flag Legend

Review Flags

M - Manually Integrated

Report Date: 11-Sep-2020 08:18:59 Chrom Revision: 2.3 09-Sep-2020 15:12:58

Eurofins TestAmerica, Sacramento

Data File: \\chromfs\Sacramento\ChromData\A18\20200910-103041.b\2020.09.10_A18_PFC_A_074.d

Injection Date: 10-Sep-2020 15:11:20 Instrument ID: A18

Lims ID: MB 320-410910/1-A

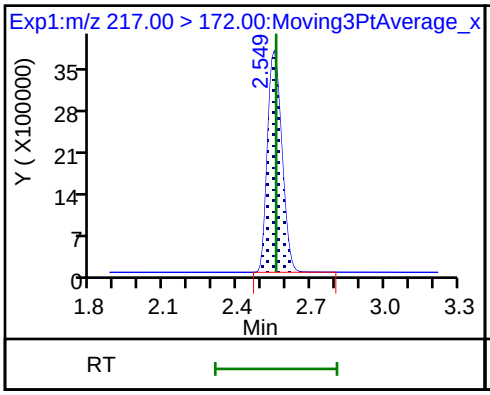
Client ID:

Operator ID: TAISACA18-PC\A-18 ALS Bottle#: 38 Worklist Smp#: 2

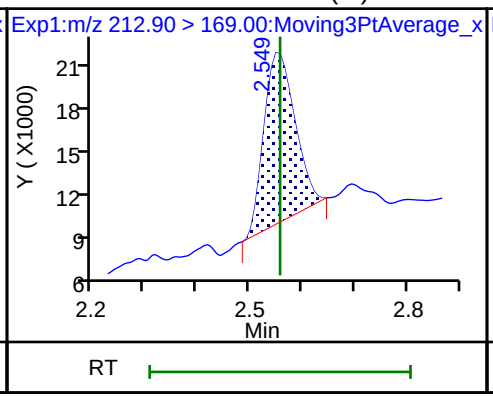
Injection Vol: 20.0 ul Dil. Factor: 1.0000

Method: PFAS_A18V2 Limit Group: LC PFC ICAL

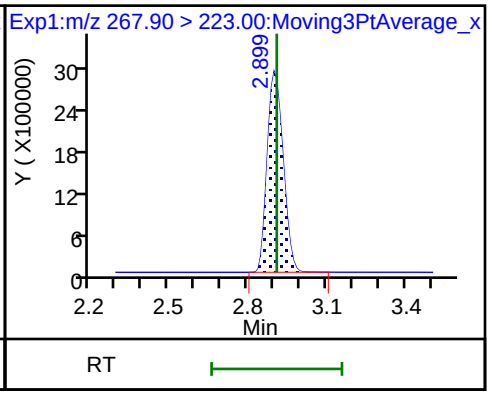
D 1 13C4 PFBA



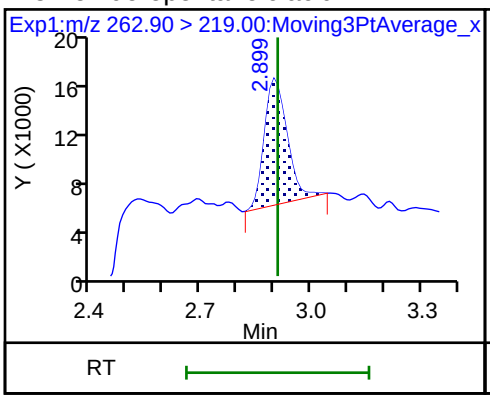

2 Perfluorobutanoic acid (M)



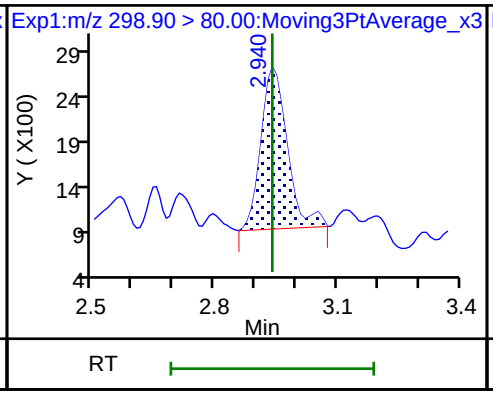

D 4 13C5 PFPeA



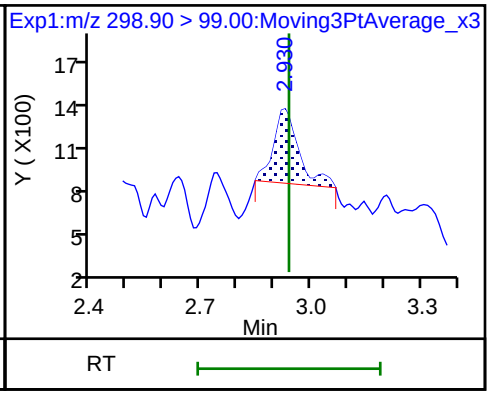

5 Perfluoropentanoic acid



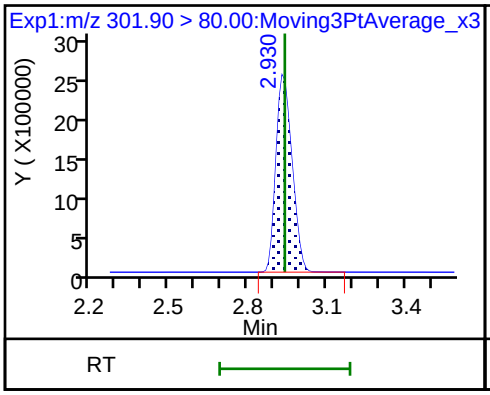

6 Perfluorobutanesulfonic acid



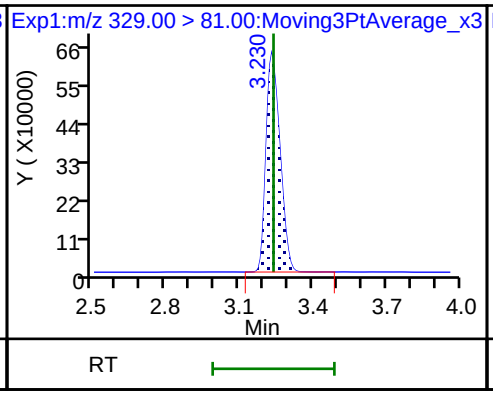

6 Perfluorobutanesulfonic acid



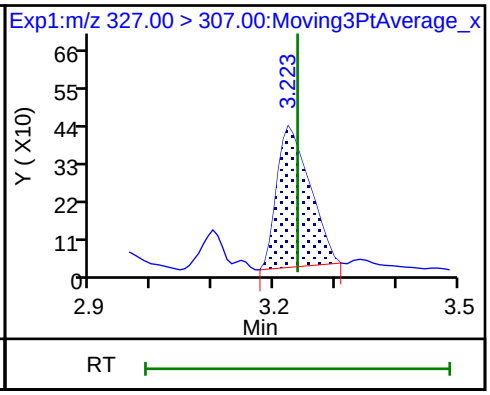

D 9 13C3 PFBS



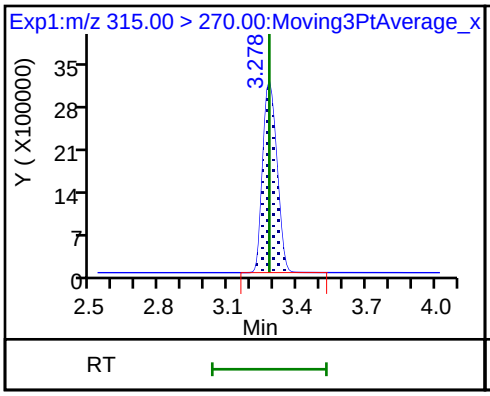

D 7 M2-4:2 FTS



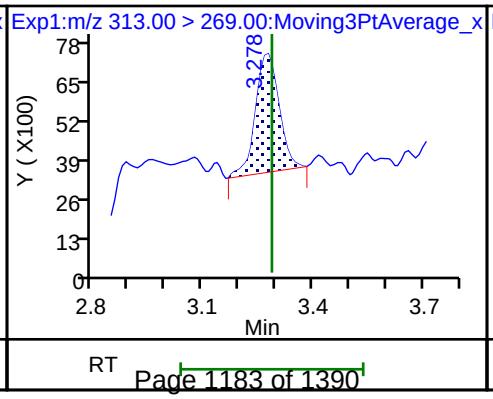

8 4:2 FTS



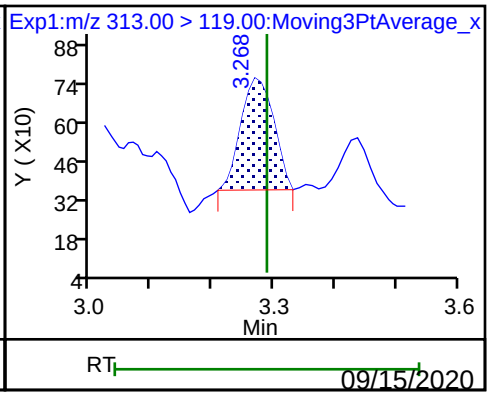

D 11 13C2 PFHxA



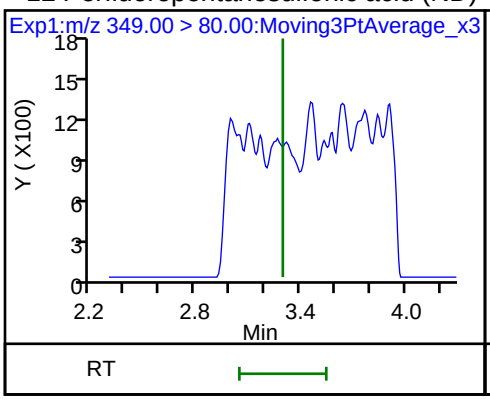

10 Perfluorohexanoic acid



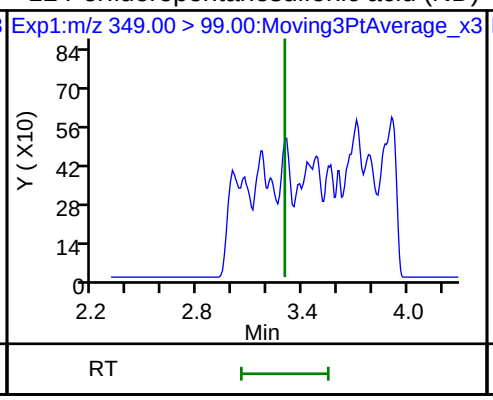

10 Perfluorohexanoic acid



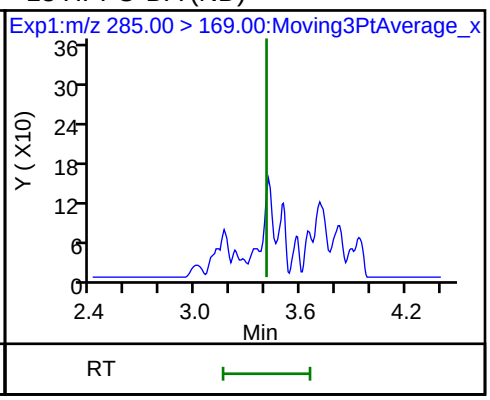
12 Perfluoropentanesulfonic acid (ND)



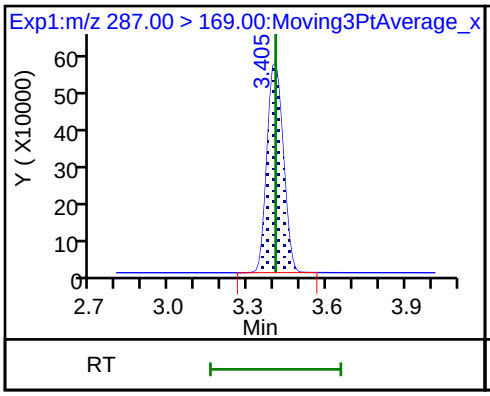

12 Perfluoropentanesulfonic acid (ND)



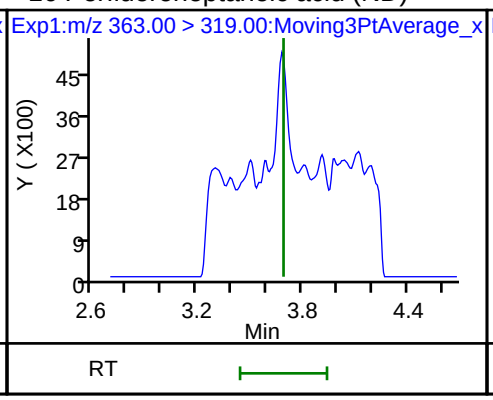

13 HPFO-DA (ND)



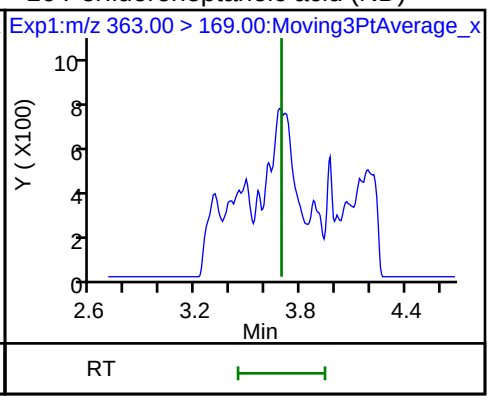

D 14 13C3 HFPO-DA



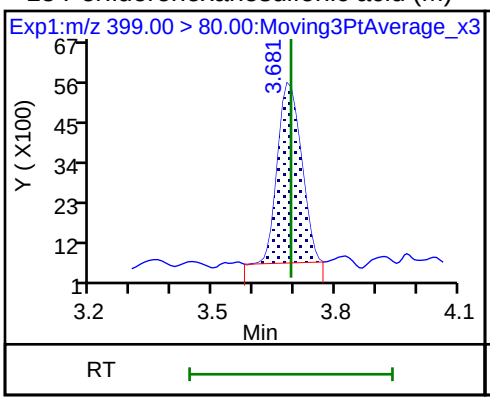

16 Perfluoroheptanoic acid (ND)



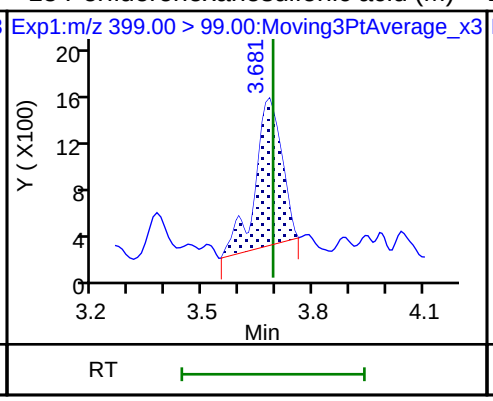

16 Perfluoroheptanoic acid (ND)



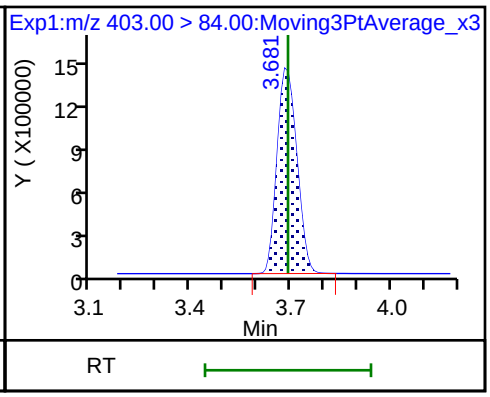

15 Perfluorohexanesulfonic acid (M)



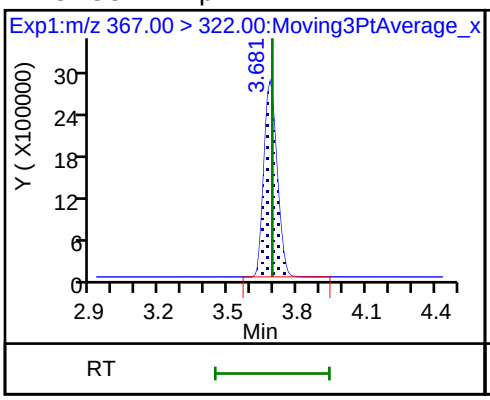

15 Perfluorohexanesulfonic acid (M)



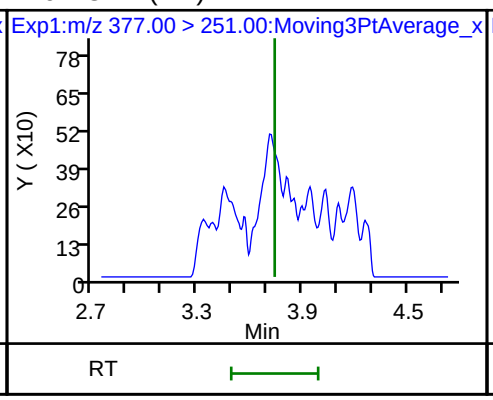

D 17 18O2 PFHxS



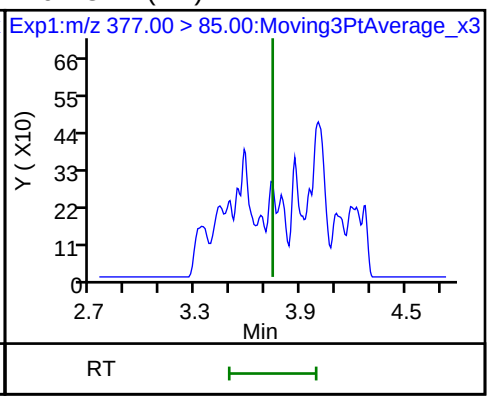

D 18 13C4 PFHpA



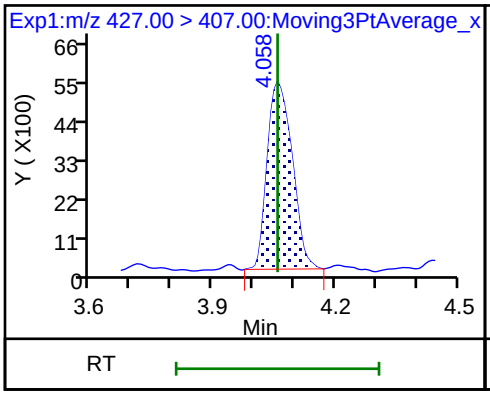

19 DONA (ND)



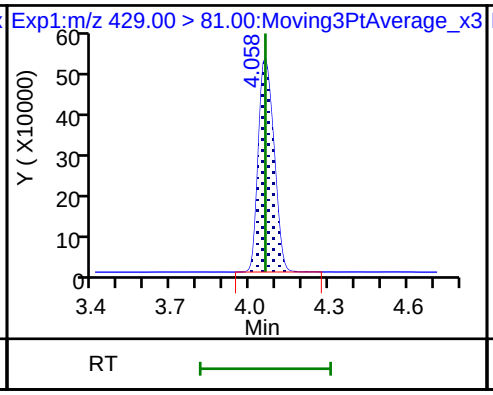

19 DONA (ND)



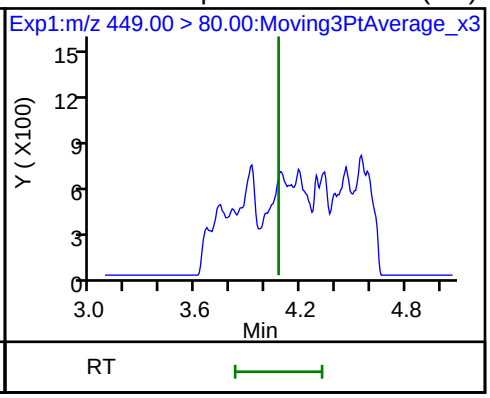
21 6:2 FTS



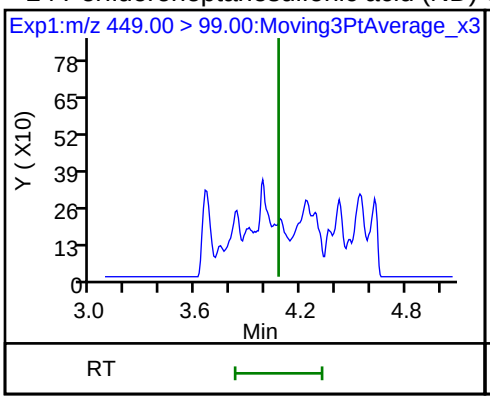

D 20 M2-6:2 FTS



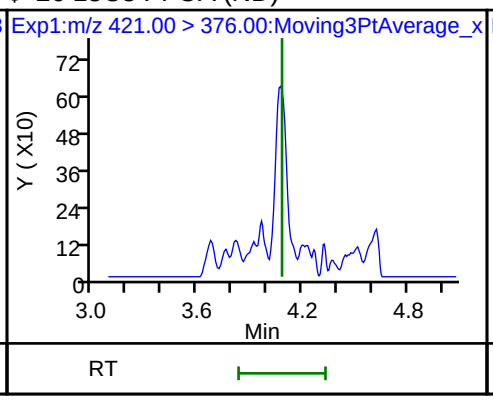

24 Perfluoroheptanesulfonic acid (ND)



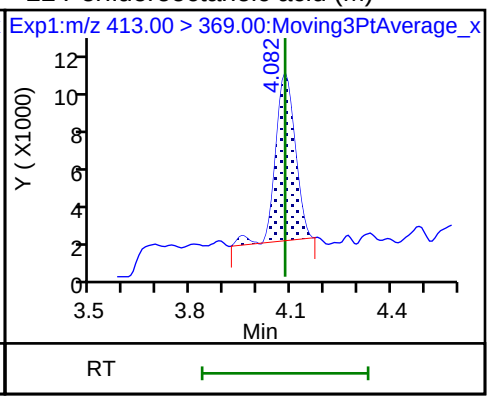

24 Perfluoroheptanesulfonic acid (ND)



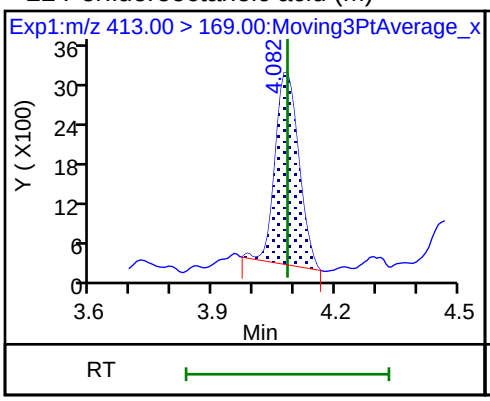

$ 26 13C8 PFOA (ND)



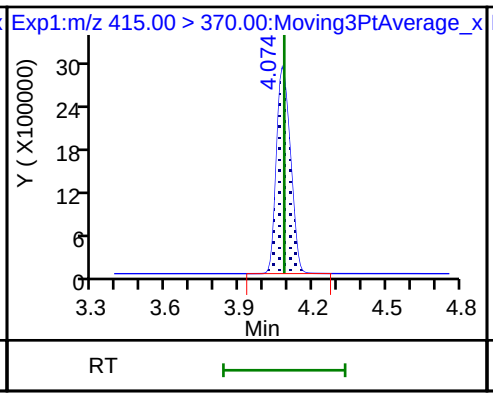

22 Perfluorooctanoic acid (M)



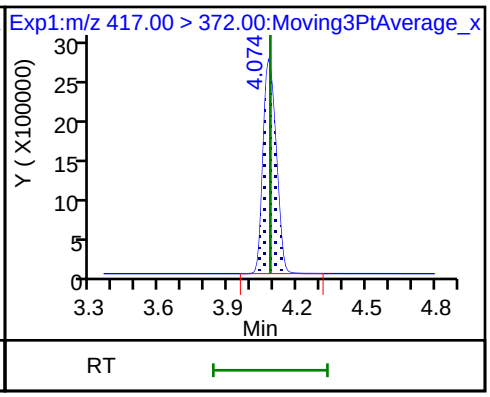

22 Perfluorooctanoic acid (M)



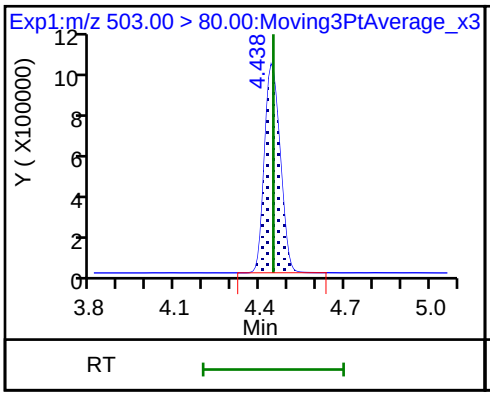

* 23 13C2 PFOA



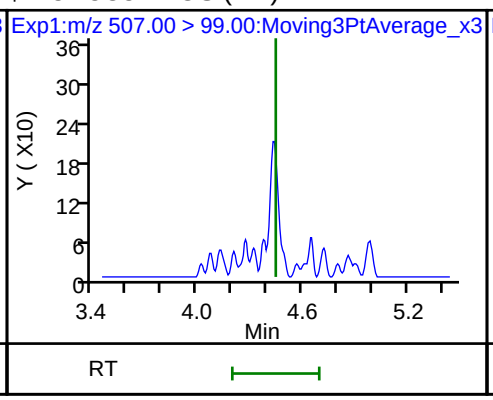

D 25 13C4 PFOA



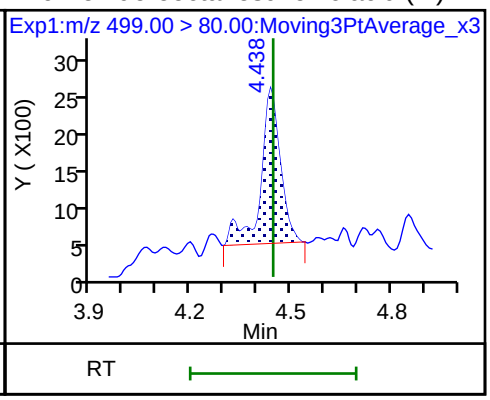

D 27 13C4 PFOS



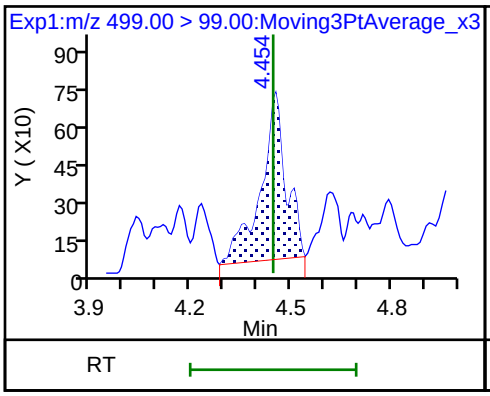

$ 28 13C8 PFOS (ND)



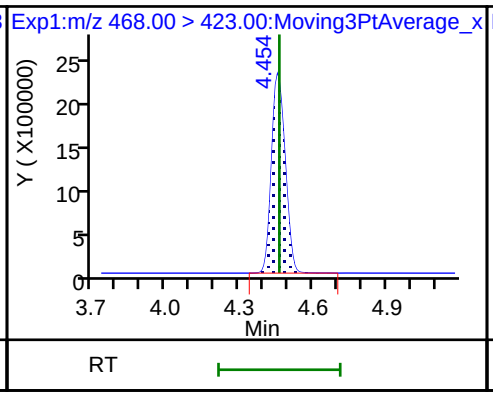

29 Perfluorooctanesulfonic acid (M)



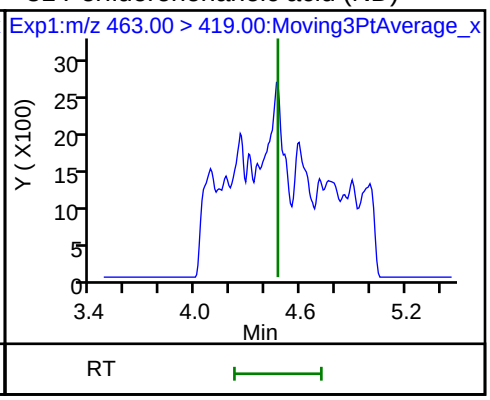
29 Perfluorooctanesulfonic acid



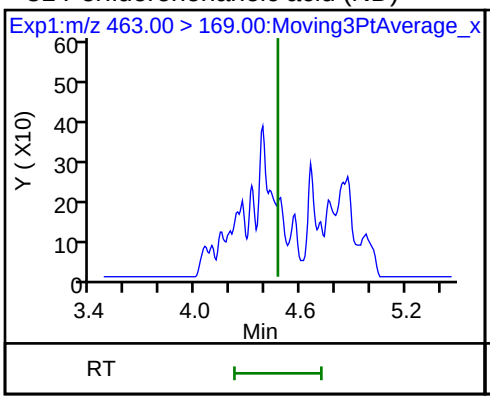

D 30 13C5 PFNA



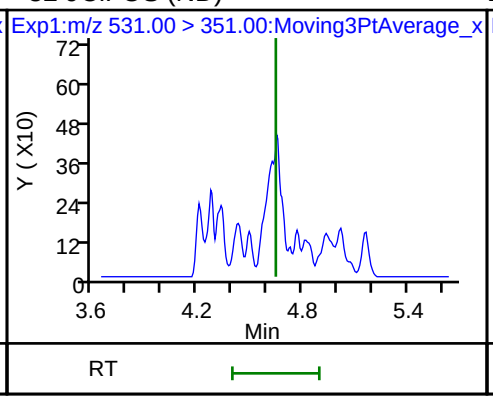

31 Perfluorononanoic acid (ND)



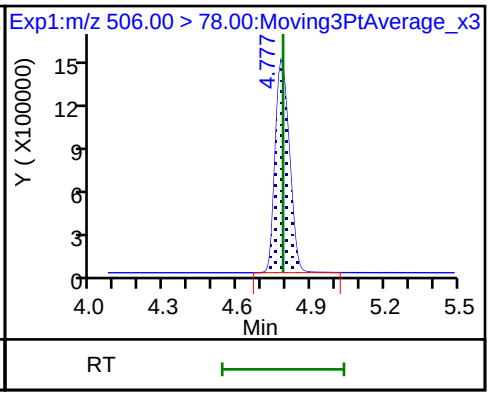

31 Perfluorononanoic acid (ND)



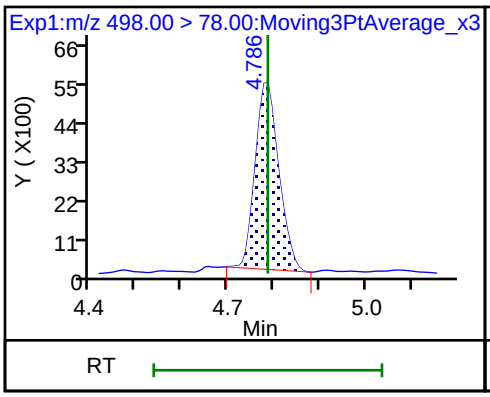

32 9ClFOS (ND)



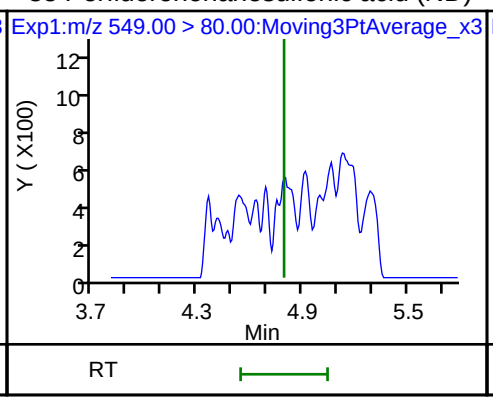

D 33 13C8 FOSA



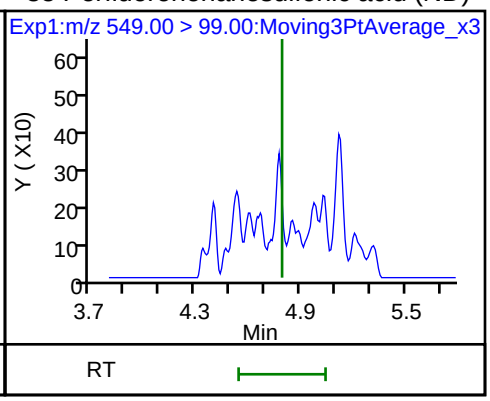

34 Perfluorooctanesulfonamide



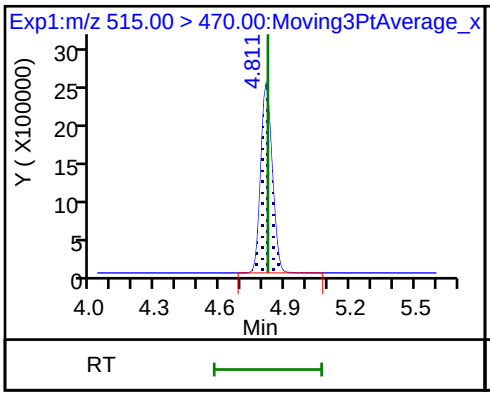

35 Perfluorononanesulfonic acid (ND)



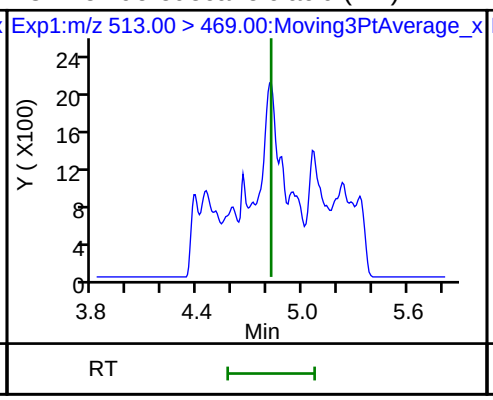

35 Perfluorononanesulfonic acid (ND)



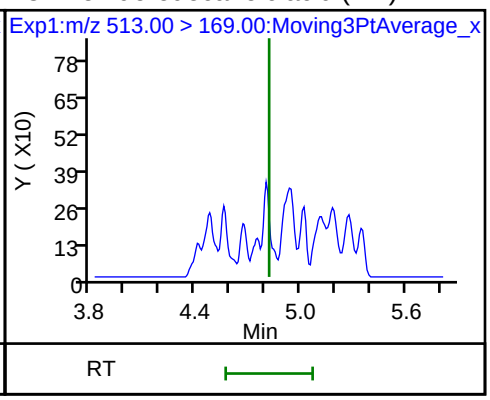

D 39 13C2 PFDA



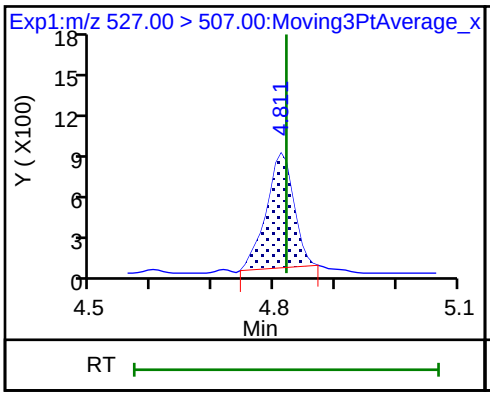

37 Perfluorodecanoic acid (ND)



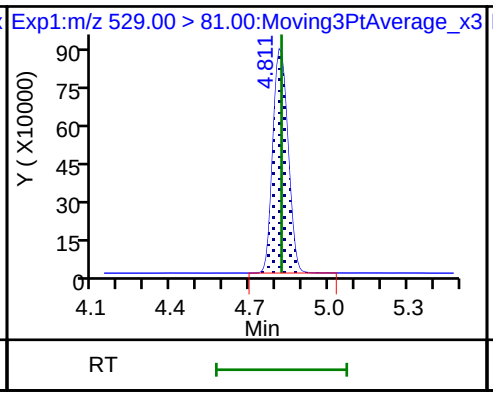

37 Perfluorodecanoic acid (ND)



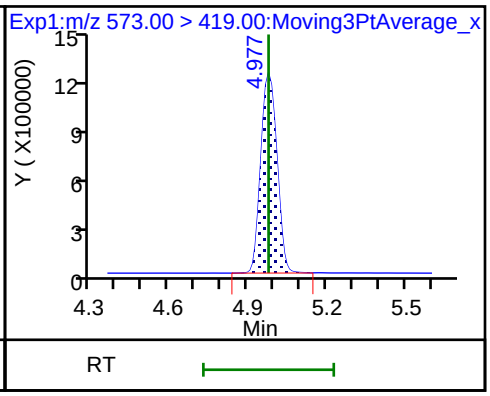
36 8:2 FTS



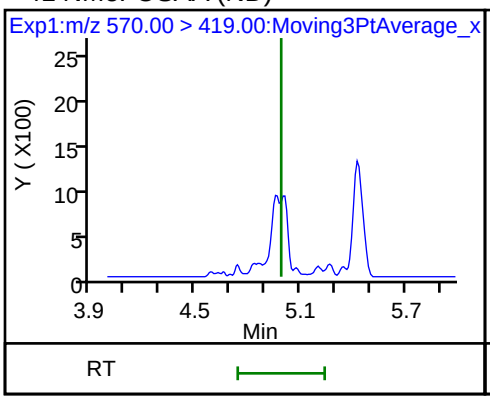

D 38 M2-8:2 FTS



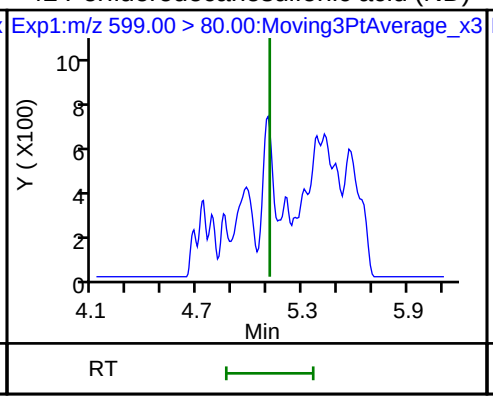

D 40 d3-NMeFOSAA



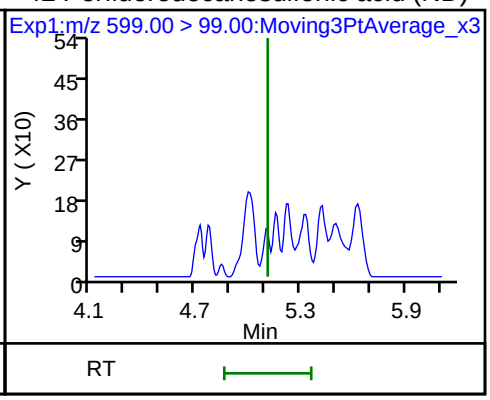

41 NMeFOSAA (ND)



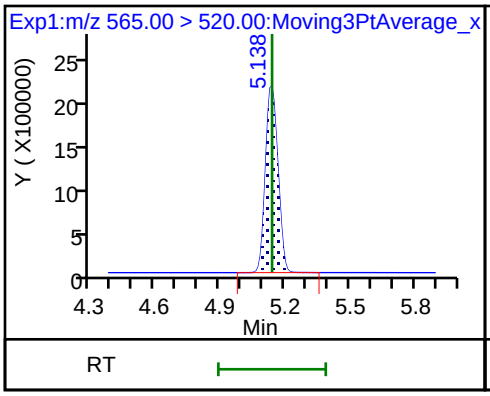

42 Perfluorodecanesulfonic acid (ND)



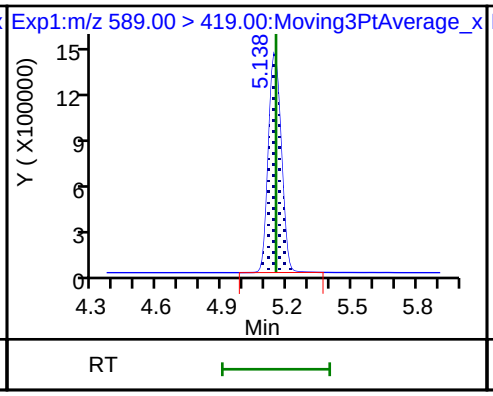

42 Perfluorodecanesulfonic acid (ND)



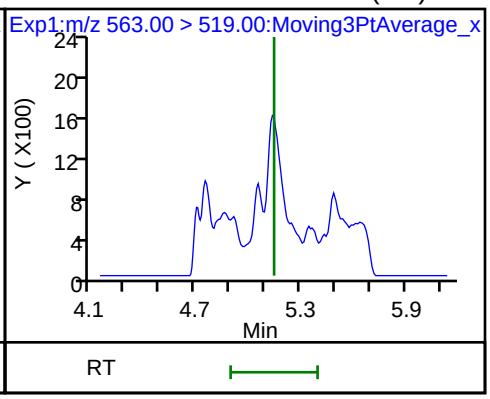

D 43 13C2 PFUnA



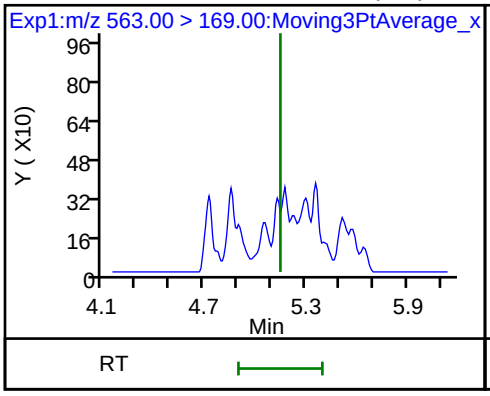

D 44 d5-NEtFOSAA



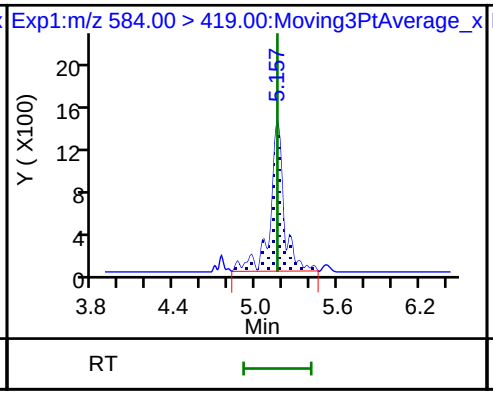

45 Perfluoroundecanoic acid (ND)



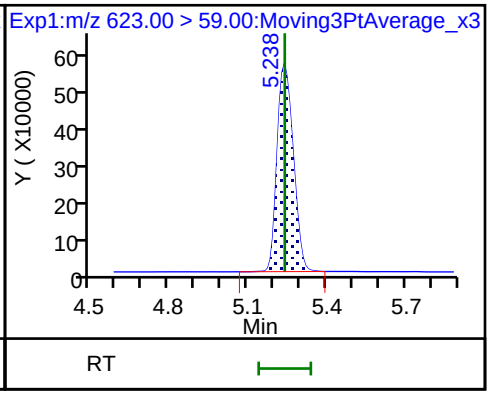

45 Perfluoroundecanoic acid (ND)



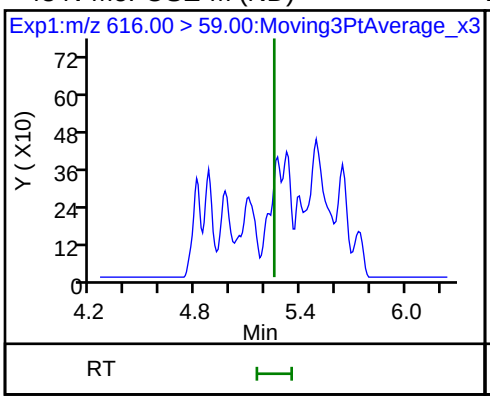

46 NEtFOSA



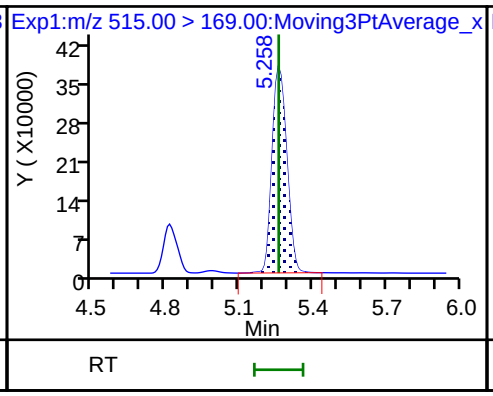

D 47 d7-N-MeFOSE-M



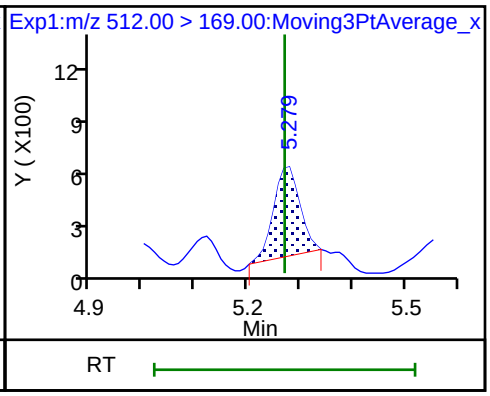
48 N-MeFOSE-M (ND)



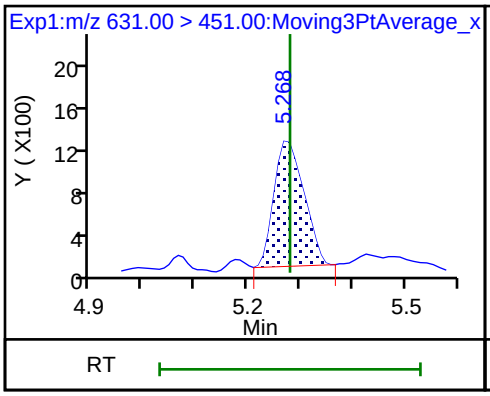

D 49 d-N-MeFOSA-M



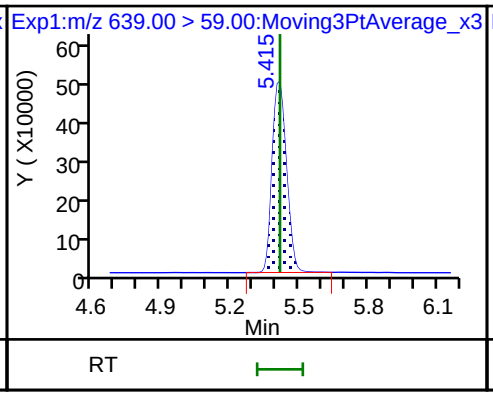

50 NMeFOSA



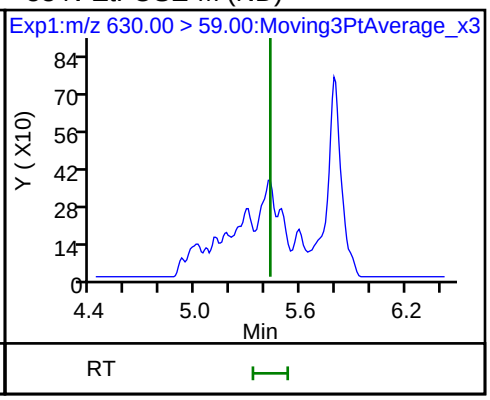

51 11ClFOS



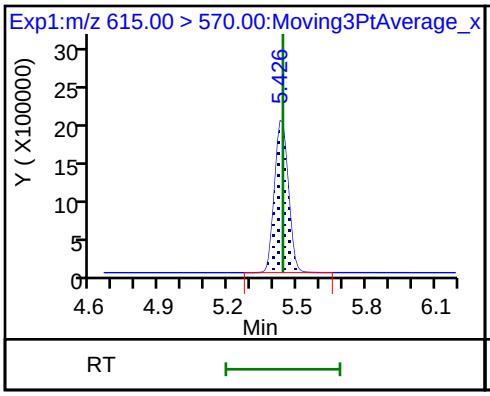

D 52 d9-N-EtFOSE-M



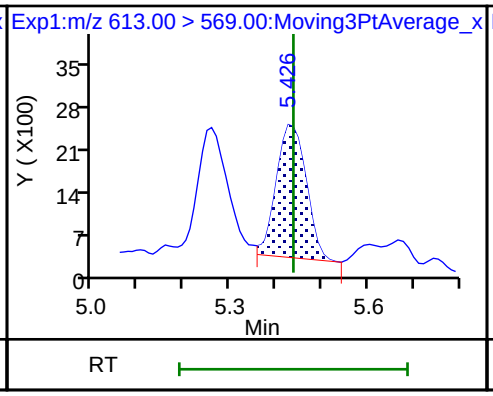

53 N-EtFOSE-M (ND)



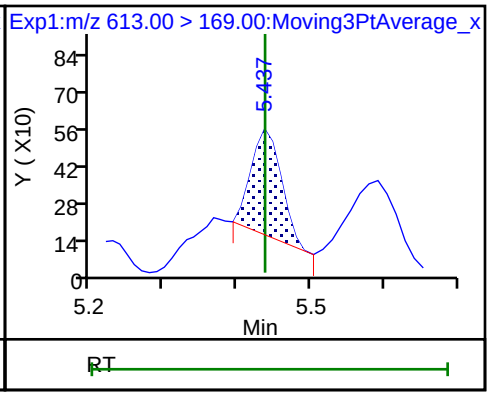

D 56 13C2 PFDoA



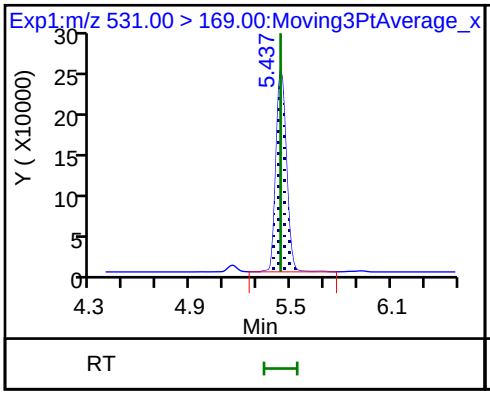

57 Perfluorododecanoic acid



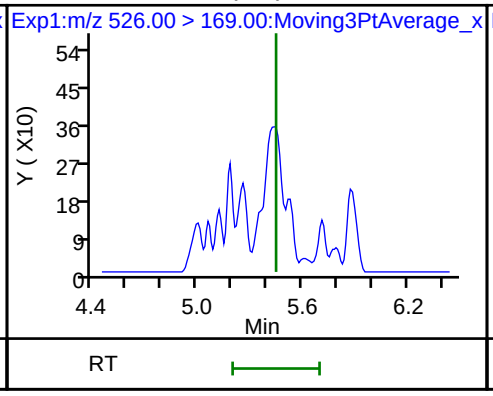

57 Perfluorododecanoic acid



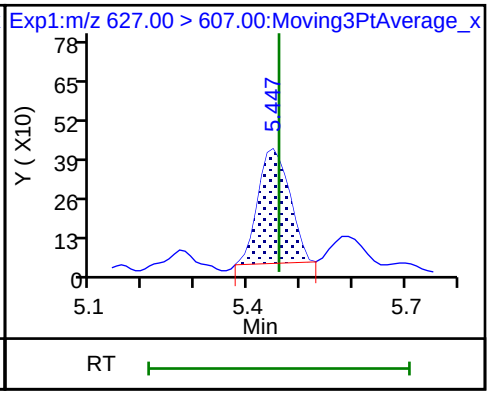

D 54 d-N-EtFOSA-M



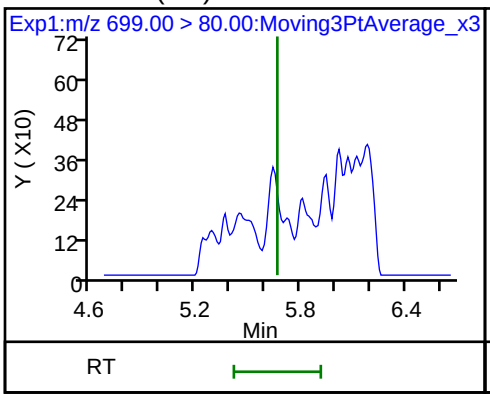

55 N-EtFOSA-M (ND)



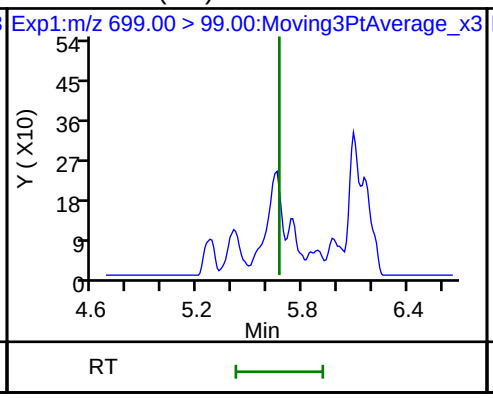

58 10:2 FTS



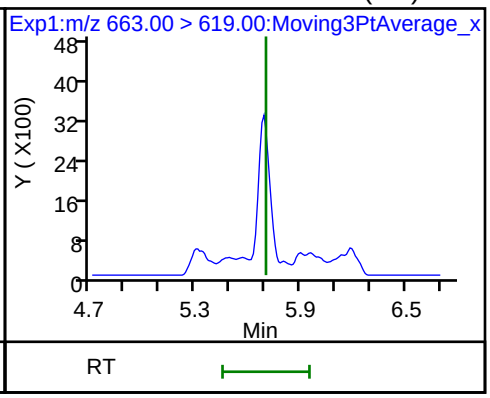
59 PFDoS (ND)



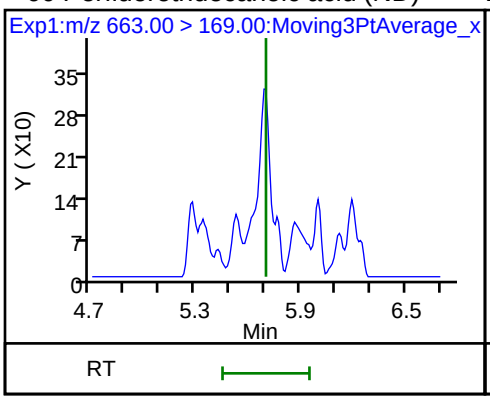

59 PFDoS (ND)



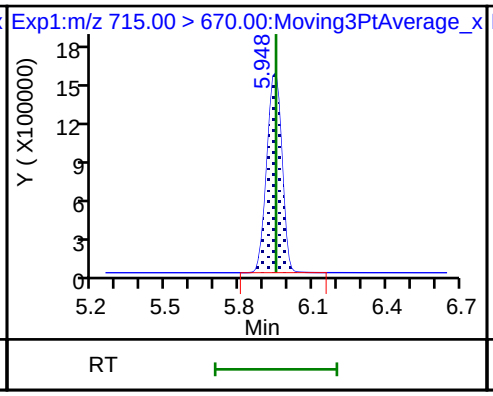

60 Perfluorotridecanoic acid (ND)



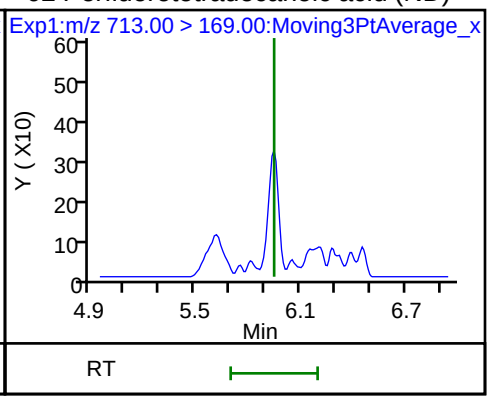

60 Perfluorotridecanoic acid (ND)



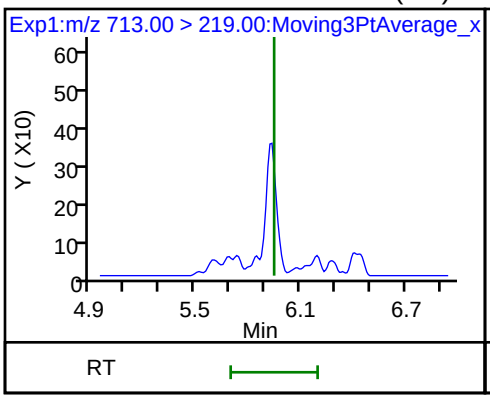

D 61 13C2 PFTeDA



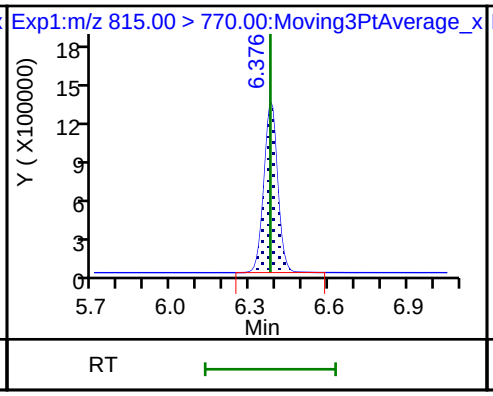

62 Perfluorotetradecanoic acid (ND)



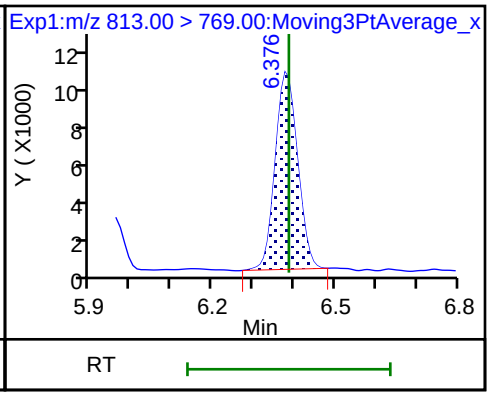

62 Perfluorotetradecanoic acid (ND)



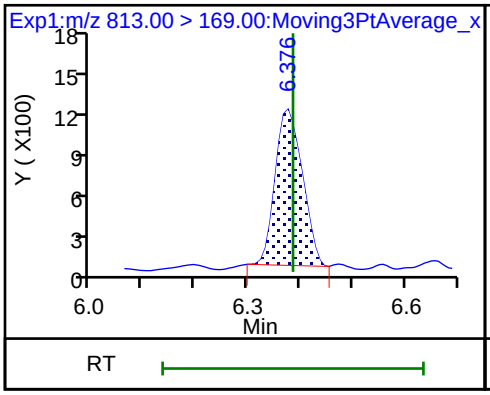

D 64 13C2 PFHxDA



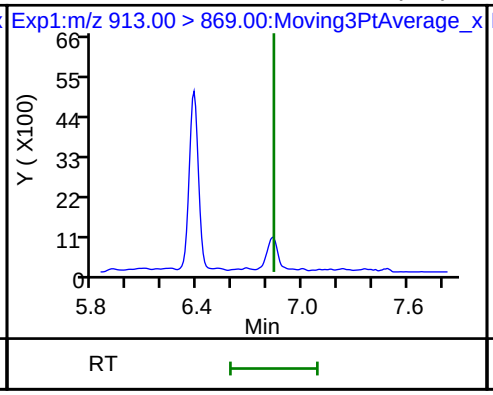

63 Perfluorohexadecanoic acid



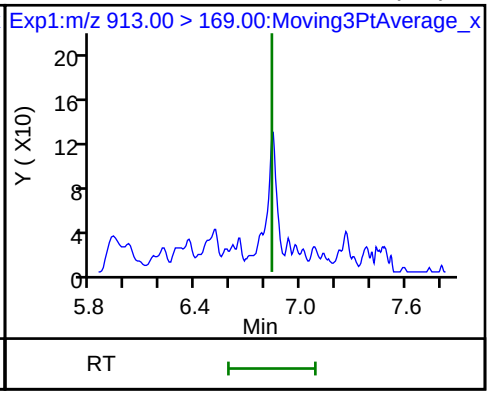

63 Perfluorohexadecanoic acid




65 Perfluorooctadecanoic acid (ND)




65 Perfluorooctadecanoic acid (ND)



Eurofins TestAmerica, Sacramento

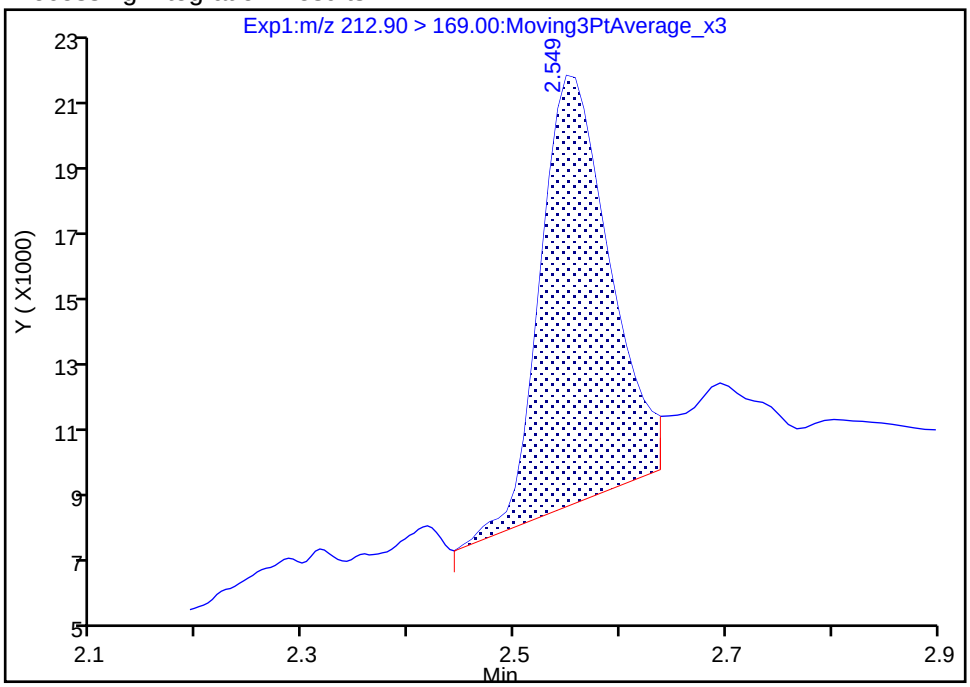
Data File: \\chromfs\Sacramento\ChromData\A18\20200910-103041.b\2020.09.10_A18_PFC_A_074.d
Injection Date: 10-Sep-2020 15:11:20 Instrument ID: A18
Lims ID: MB 320-410910/1-A
Client ID:
Operator ID: TAISACA18-PC\A-18 ALS Bottle#: 38 Worklist Smp#: 2
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFAS_A18V2 Limit Group: LC PFC ICAL
Column: Gemini C18 3um 3mm x 50 mm ( 3.00mm) Detector EXP1

## 2 Perfluorobutanoic acid, CAS: 375-22-4

Signal: 1

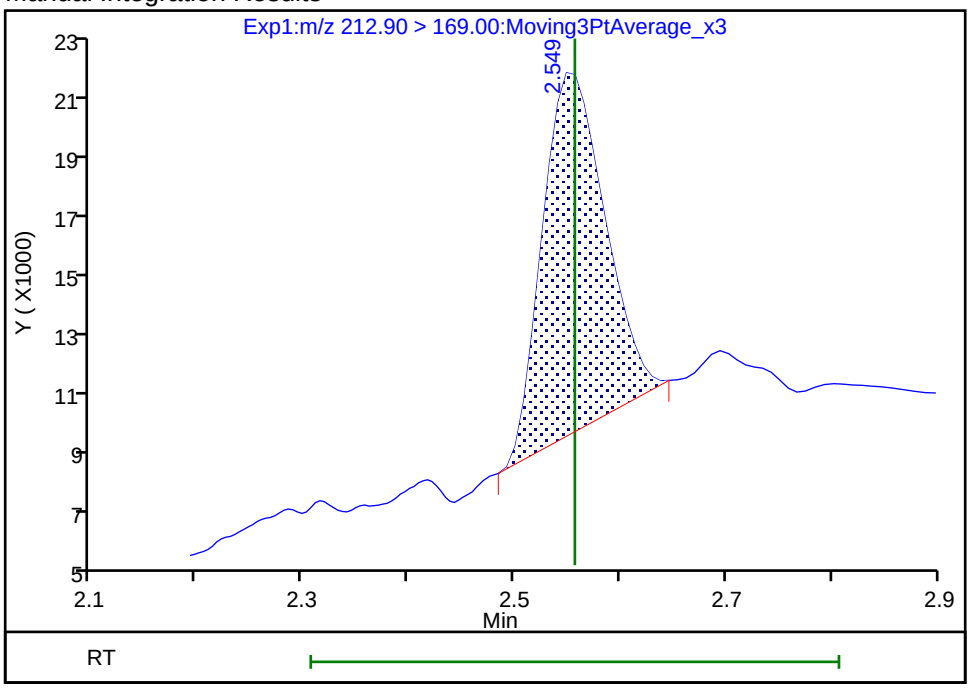
Processing Integration Results

RT: 2.55
Area: 55352
Amount: 0.010537
Amount Units: ng/ml




Manual Integration Results

RT: 2.55
Area: 46543
Amount: 0.008860
Amount Units: ng/ml




Reviewer: sanjumnair, 11-Sep-2020 08:06:45
Audit Action: Manually Integrated Audit Reason: Baseline

Eurofins TestAmerica, Sacramento

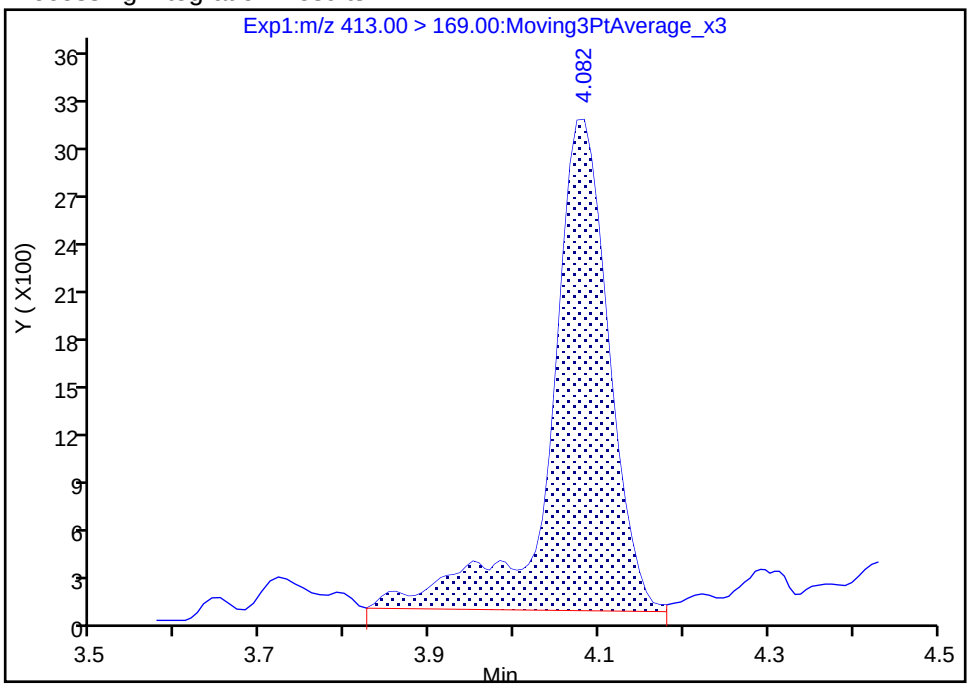
Data File: \\chromfs\Sacramento\ChromData\A18\20200910-103041.b\2020.09.10_A18_PFC_A_074.d
Injection Date: 10-Sep-2020 15:11:20 Instrument ID: A18
Lims ID: MB 320-410910/1-A
Client ID:
Operator ID: TAISACA18-PC\A-18 ALS Bottle#: 38 Worklist Smp#: 2
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFAS_A18V2 Limit Group: LC PFC ICAL
Column: Gemini C18 3um 3mm x 50 mm ( 3.00mm) Detector EXP1

## 22 Perfluorooctanoic acid, CAS: 335-67-1

Signal: 2

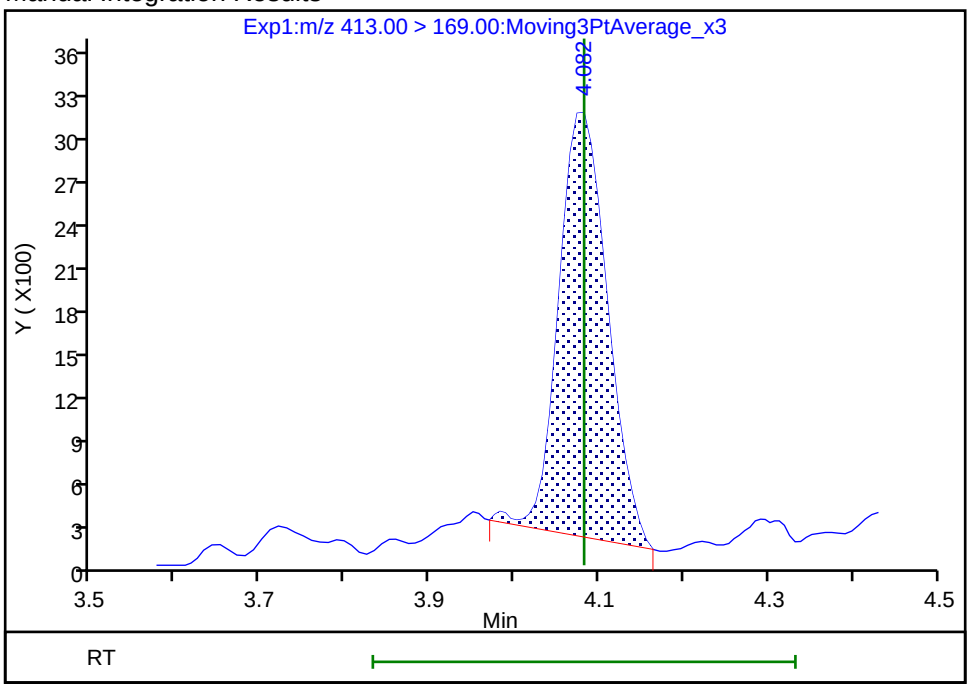
Processing Integration Results

RT: 4.08
Area: 15054
Amount: 0.013015
Amount Units: ng/ml




Manual Integration Results

RT: 4.08
Area: 11898
Amount: 0.008039
Amount Units: ng/ml




Reviewer: sanjumnair, 11-Sep-2020 08:07:46
Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

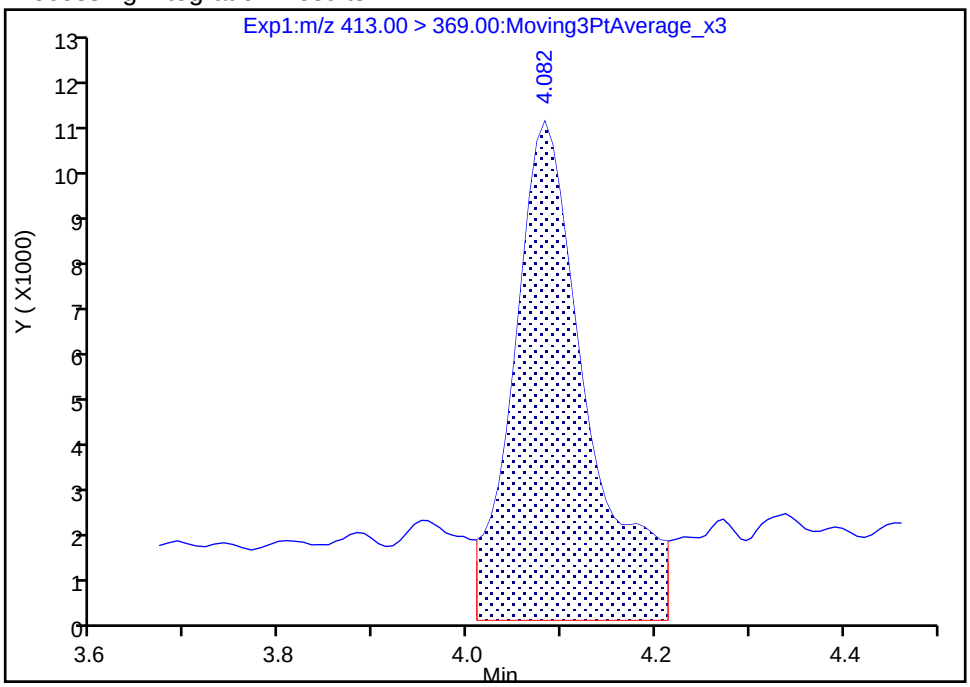
Data File: \\chromfs\Sacramento\ChromData\A18\20200910-103041.b\2020.09.10_A18_PFC_A_074.d
Injection Date: 10-Sep-2020 15:11:20 Instrument ID: A18
Lims ID: MB 320-410910/1-A
Client ID:
Operator ID: TAISACA18-PC\A-18 ALS Bottle#: 38 Worklist Smp#: 2
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFAS_A18V2 Limit Group: LC PFC ICAL
Column: Gemini C18 3um 3mm x 50 mm ( 3.00mm) Detector EXP1

## 22 Perfluorooctanoic acid, CAS: 335-67-1

Signal: 1

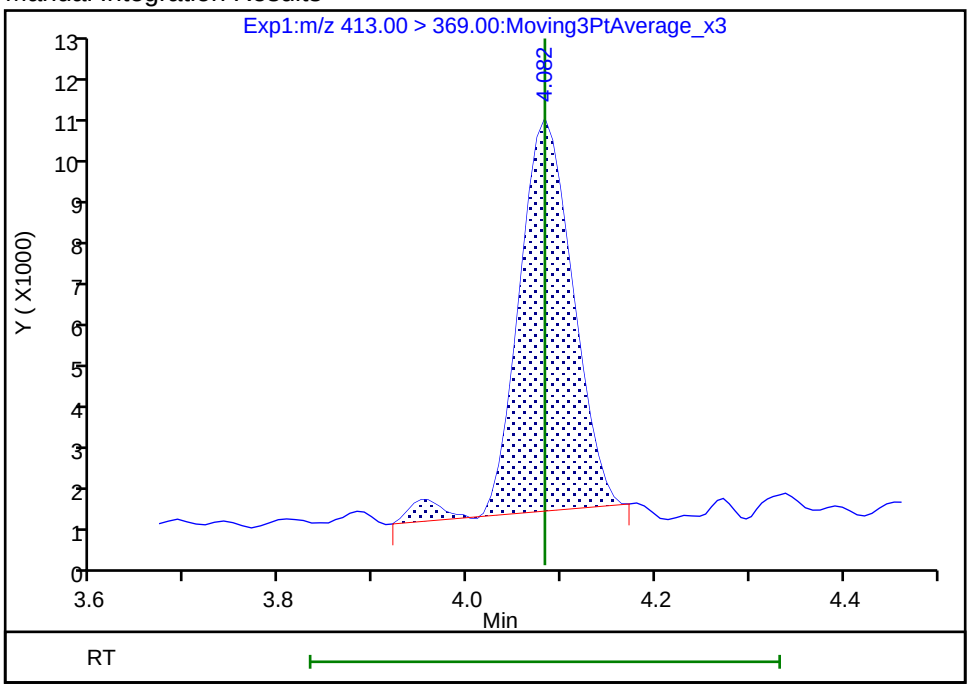
Processing Integration Results

RT: 4.08
Area: 56426
Amount: 0.013015
Amount Units: ng/ml




Manual Integration Results

RT: 4.08
Area: 34853
Amount: 0.008039
Amount Units: ng/ml




Reviewer: sanjumnair, 11-Sep-2020 08:07:52
Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

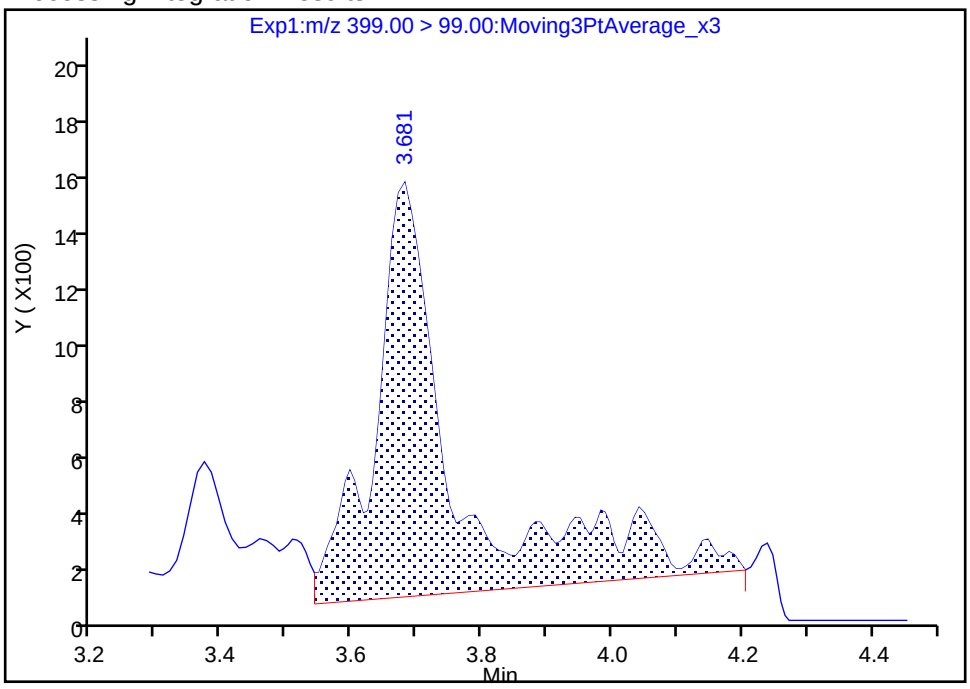
Data File: \\chromfs\Sacramento\ChromData\A18\20200910-103041.b\2020.09.10_A18_PFC_A_074.d
Injection Date: 10-Sep-2020 15:11:20 Instrument ID: A18
Lims ID: MB 320-410910/1-A
Client ID:
Operator ID: TAISACA18-PC\A-18 ALS Bottle#: 38 Worklist Smp#: 2
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFAS_A18V2 Limit Group: LC PFC ICAL
Column: Gemini C18 3um 3mm x 50 mm ( 3.00mm) Detector EXP1

## 15 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 2

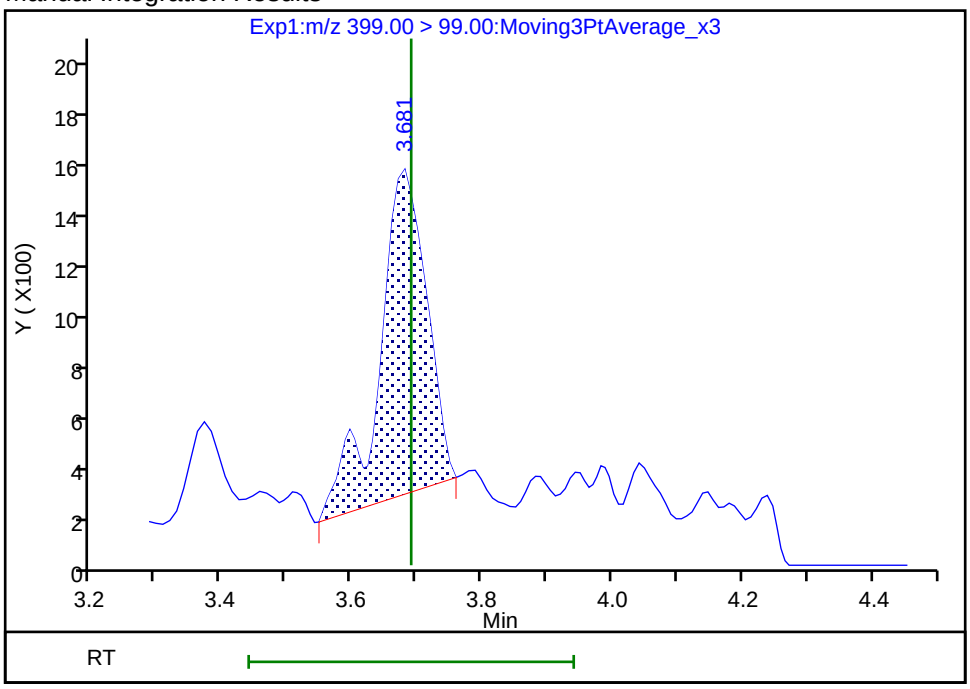
Processing Integration Results

RT: 3.68
Area: 12944
Amount: 0.008909
Amount Units: ng/ml




Manual Integration Results

RT: 3.68
Area: 6502
Amount: 0.006814
Amount Units: ng/ml




Reviewer: sanjumnair, 11-Sep-2020 08:07:12
Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

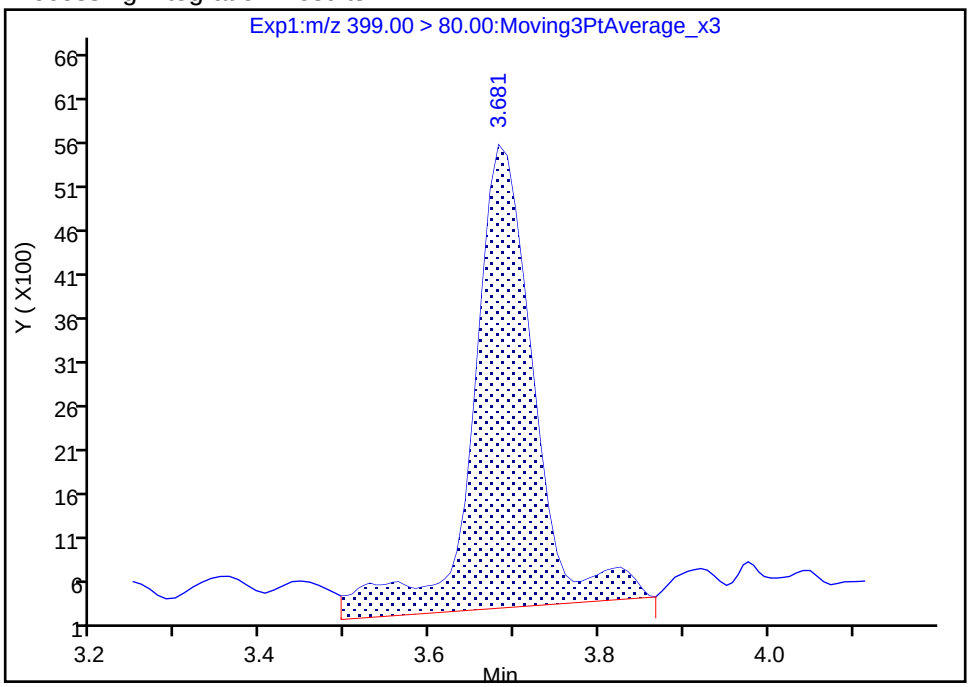
Data File: \\chromfs\Sacramento\ChromData\A18\20200910-103041.b\2020.09.10_A18_PFC_A_074.d
Injection Date: 10-Sep-2020 15:11:20 Instrument ID: A18
Lims ID: MB 320-410910/1-A
Client ID:
Operator ID: TAISACA18-PC\A-18 ALS Bottle#: 38 Worklist Smp#: 2
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFAS_A18V2 Limit Group: LC PFC ICAL
Column: Gemini C18 3um 3mm x 50 mm ( 3.00mm) Detector EXP1

## 15 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 1

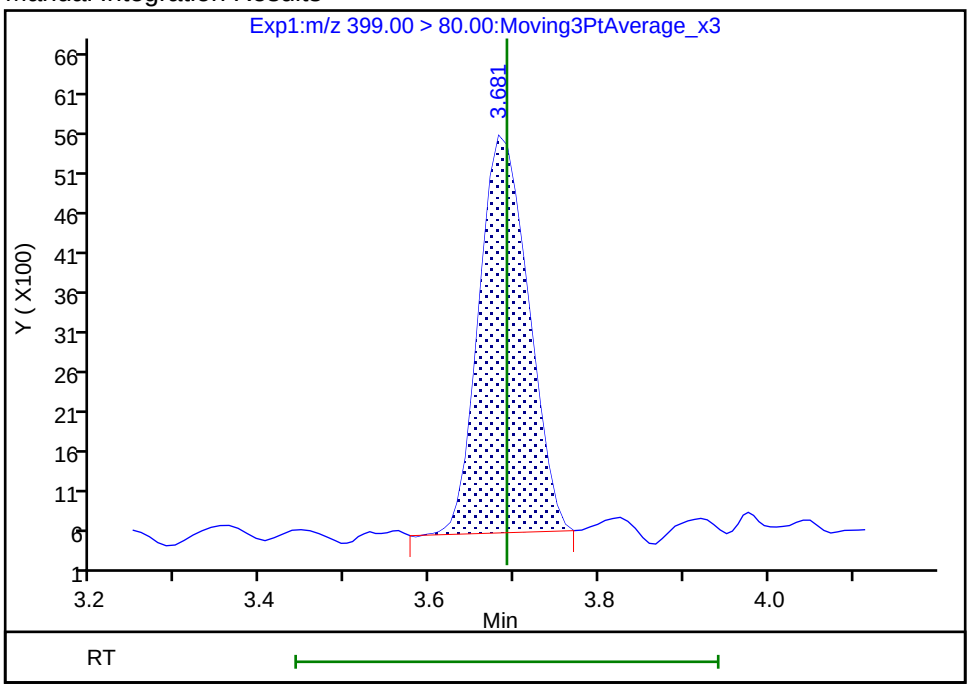
Processing Integration Results

RT: 3.68
Area: 26109
Amount: 0.008909
Amount Units: ng/ml




Manual Integration Results

RT: 3.68
Area: 19969
Amount: 0.006814
Amount Units: ng/ml




Reviewer: sanjumnair, 11-Sep-2020 08:07:27
Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

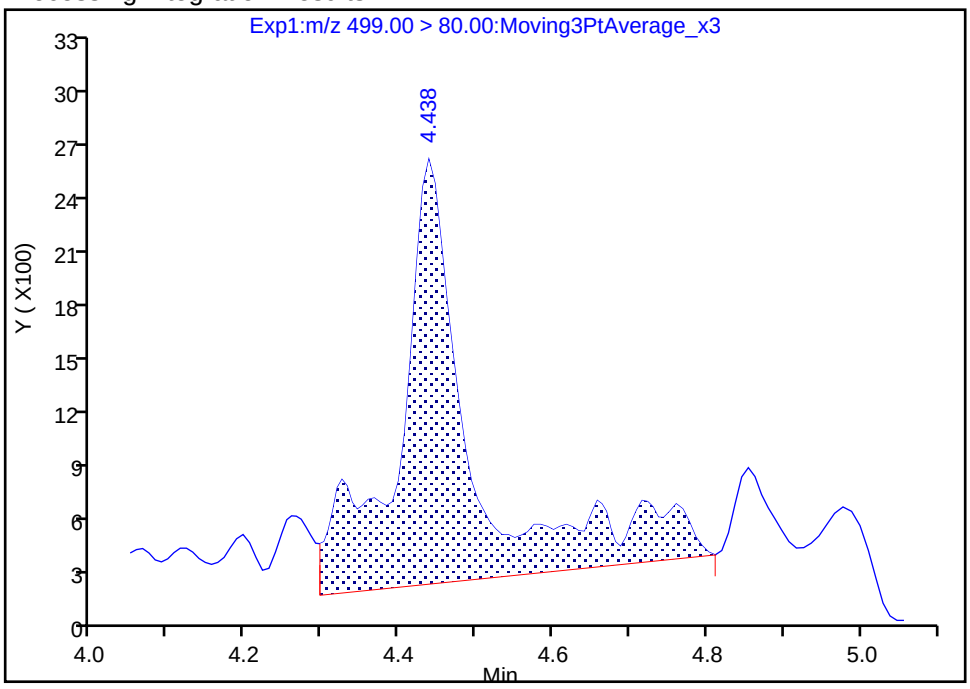
Data File: \\chromfs\Sacramento\ChromData\A18\20200910-103041.b\2020.09.10_A18_PFC_A_074.d
Injection Date: 10-Sep-2020 15:11:20 Instrument ID: A18
Lims ID: MB 320-410910/1-A
Client ID:
Operator ID: TAISACA18-PC\A-18 ALS Bottle#: 38 Worklist Smp#: 2
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFAS_A18V2 Limit Group: LC PFC ICAL
Column: Gemini C18 3um 3mm x 50 mm ( 3.00mm) Detector EXP1

## 29 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 1

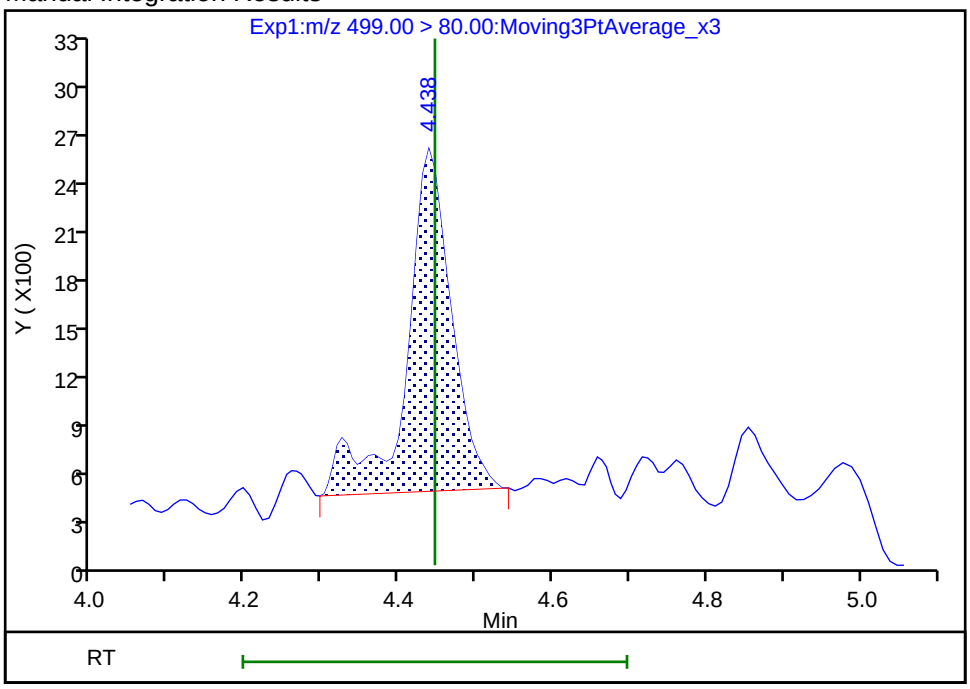
Processing Integration Results

RT: 4.44
Area: 16225
Amount: 0.009507
Amount Units: ng/ml




Manual Integration Results

RT: 4.44
Area: 8656
Amount: 0.005072
Amount Units: ng/ml




Reviewer: sanjumnair, 11-Sep-2020 08:08:02
Audit Action: Manually Integrated Audit Reason: Baseline

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento  Job No.: 460-217547-1

SDG No.:

Client Sample ID:  Lab Sample ID: MB 320-411226/1-A

Matrix: Water  Lab File ID: 2020.09.11_A9_PFC_AA_025.d

Analysis Method: 537 (modified)  Date Collected:

Extraction Method: 3535  Date Extracted: 09/10/2020 18:32

Sample wt/vol: 250(mL)  Date Analyzed: 09/11/2020 13:14

Con. Extract Vol.: 10.00(mL)  Dilution Factor: 1

Injection Volume: 20(uL)  GC Column: Acquity  ID: 2.1(mm)

% Moisture:  GPC Cleanup:(Y/N) N

Analysis Batch No.: 411454  Units: ng/L

| CAS NO. | COMPOUND NAME | RESULT | Q | RL | MDL |
|---|---|---|---|---|---|
| 375-22-4 | Perfluorobutanoic acid (PFBA) | 0.35 | U | 2.00 | 0.35 |
| 2706-90-3 | Perfluoropentanoic acid (PFPeA) | 0.49 | U | 2.00 | 0.49 |
| 307-24-4 | Perfluorohexanoic acid (PFHxA) | 0.58 | U | 2.00 | 0.58 |
| 375-85-9 | Perfluoroheptanoic acid (PFHpA) | 0.25 | U | 2.00 | 0.25 |
| 335-67-1 | Perfluorooctanoic acid (PFOA) | 0.85 | U | 2.00 | 0.85 |
| 375-95-1 | Perfluorononanoic acid (PFNA) | 0.27 | U | 2.00 | 0.27 |
| 335-76-2 | Perfluorodecanoic acid (PFDA) | 0.31 | U | 2.00 | 0.31 |
| 2058-94-8 | Perfluoroundecanoic acid (PFUnA) | 1.10 | U | 2.00 | 1.10 |
| 307-55-1 | Perfluorododecanoic acid (PFDoA) | 0.55 | U | 2.00 | 0.55 |
| 72629-94-8 | Perfluorotridecanoic acid (PFTriA) | 1.30 | U | 2.00 | 1.30 |
| 376-06-7 | Perfluorotetradecanoic acid (PFTeA) | 0.29 | U | 2.00 | 0.29 |
| 375-73-5 | Perfluorobutanesulfonic acid (PFBS) | 0.20 | U | 2.00 | 0.20 |
| 355-46-4 | Perfluorohexanesulfonic acid (PFHxS) | 0.261 | J | 2.00 | 0.17 |
| 375-92-8 | Perfluoroheptanesulfonic Acid (PFHpS) | 0.19 | U | 2.00 | 0.19 |
| 1763-23-1 | Perfluorooctanesulfonic acid (PFOS) | 0.54 | U | 2.00 | 0.54 |
| 335-77-3 | Perfluorodecanesulfonic acid (PFDS) | 0.32 | U | 2.00 | 0.32 |
| 754-91-6 | Perfluorooctanesulfonamide (FOSA) | 0.35 | U | 2.00 | 0.35 |
| 2355-31-9 | N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA) | 3.10 | U | 20.0 | 3.10 |
| 2991-50-6 | N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA) | 1.90 | U | 20.0 | 1.90 |
| 27619-97-2 | 6:2 FTS | 2.00 | U | 20.0 | 2.00 |
| 39108-34-4 | 8:2 FTS | 2.00 | U | 20.0 | 2.00 |

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento  Job No.: 460-217547-1

SDG No.:

Client Sample ID:  Lab Sample ID: MB 320-411226/1-A

Matrix: Water  Lab File ID: 2020.09.11_A9_PFC_AA_025.d

Analysis Method: 537 (modified)  Date Collected:

Extraction Method: 3535  Date Extracted: 09/10/2020 18:32

Sample wt/vol: 250(mL)  Date Analyzed: 09/11/2020 13:14

Con. Extract Vol.: 10.00(mL)  Dilution Factor: 1

Injection Volume: 20(uL)  GC Column: Acquity  ID: 2.1(mm)

% Moisture:  GPC Cleanup:(Y/N) N

Analysis Batch No.: 411454  Units: ng/L

| CAS NO. | ISOTOPE DILUTION | %REC | Q | LIMITS |
|---|---|---|---|---|
| STL00992 | 13C4 PFBA | 73 | | 25-150 |
| STL01893 | 13C5 PFPeA | 90 | | 25-150 |
| STL00993 | 13C2 PFHxA | 89 | | 25-150 |
| STL01892 | 13C4 PFHpA | 92 | | 25-150 |
| STL00990 | 13C4 PFOA | 92 | | 25-150 |
| STL00995 | 13C5 PFNA | 97 | | 25-150 |
| STL00996 | 13C2 PFDA | 100 | | 25-150 |
| STL00997 | 13C2 PFUnA | 98 | | 25-150 |
| STL00998 | 13C2 PFDoA | 97 | | 25-150 |
| STL02116 | 13C2 PFTeDA | 92 | | 25-150 |
| STL02337 | 13C3 PFBS | 94 | | 25-150 |
| STL00994 | 18O2 PFHxS | 100 | | 25-150 |
| STL00991 | 13C4 PFOS | 101 | | 25-150 |
| STL01056 | 13C8 FOSA | 89 | | 25-150 |
| STL02118 | d3-NMeFOSAA | 78 | | 25-150 |
| STL02117 | d5-NEtFOSAA | 84 | | 25-150 |
| STL02279 | M2-6:2 FTS | 94 | | 25-150 |
| STL02280 | M2-8:2 FTS | 102 | | 25-150 |

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\A9\20200911-103120.b\2020.09.11_A9_PFC_AA_025.d
Lims ID: MB 320-411226/1-A
Client ID:
Sample Type: MB
Inject. Date: 11-Sep-2020 13:14:59 ALS Bottle#: 13 Worklist Smp#: 2
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Sample Info: mb 320-411226/1-a (DUE:9/14) PFC WATERS
Misc. Info.: Plate: 1 Rack: 3
Operator ID: SACINSTRLCMS02 Instrument ID: A9

Method: \\chromfs\Sacramento\ChromData\A9\20200911-103120.b\PFAS_A9.m
Limit Group: LC PFC ICAL
Last Update: 11-Sep-2020 18:06:02 Calib Date: 10-Sep-2020 12:29:20
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\A9\20200910-102999.b\2020.09.10_A9 _PFC_ICAL_AA_022.d

Column 1 : Det: EXP1
Process Host: CTX1061

First Level Reviewer: zibaa Date: 11-Sep-2020 14:32:04
Ratio Calibration: CCV Sample: \\chromfs\Sacramento\ChromData\A9\20200911-103120.b\2020.09.11_A9_PFC_AA_024.d

| Signal | RT | EXP RT | DLT RT | REL RT | Response | Amount ng/ml | Ratio(Limits) | %Rec | S/N | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| D 1 13C4 PFBA | | | | | | | | | | |
| 217.00 > 172.00 | 1.889 | 1.893 | -0.004 | 0.565 | 6039851 | 1.84 | | 73.4 | 2298 | |
| 2 Perfluorobutanoic acid | | | | | | | | | | |
| 212.90 > 169.00 | 1.873 | 1.893 | -0.020 | 0.992 | 2492 | 0.001181 | | | 0.2 | |
| D 4 13C5 PFPeA | | | | | | | | | | |
| 267.90 > 223.00 | 2.199 | 2.198 | 0.001 | 0.657 | 6259215 | 2.26 | | 90.3 | 2940 | |
| 3 Perfluoropentanoic acid | | | | | | | | | | M |
| 262.90 > 219.00 | 2.199 | 2.198 | 0.001 | 1.000 | 17069 | 0.006699 | | | 0.8 | M |
| D 6 13C3 PFBS | | | | | | | | | | |
| 301.90 > 80.00 | 2.225 | 2.224 | 0.001 | 0.665 | 12037823 | 2.20 | | 94.5 | 4654 | |
| 5 Perfluorobutanesulfonic acid | | | | | | | | | | |
| 298.90 > 80.00 | 2.244 | 2.224 | 0.020 | 1.009 | 21555 | 0.004173 | Target=3.28 | | 1.7 | |
| 298.90 > 99.00 | 2.225 | 2.224 | 0.001 | 1.000 | 7889 | | 2.73(1.64-4.92) | | 1.0 | |
| D 8 M2-4:2 FTS | | | | | | | | | | |
| 329.00 > 81.00 | 2.516 | 2.515 | 0.001 | 0.752 | 1201831 | 2.21 | | 94.6 | 674 | |
| D 10 13C2 PFHxA | | | | | | | | | | |
| 315.00 > 270.00 | 2.548 | 2.547 | 0.001 | 0.762 | 5766465 | 2.24 | | 89.4 | 3313 | |
| D 13 13C3 HFPO-DA | | | | | | | | | | |
| 287.00 > 169.00 | 2.677 | 2.661 | 0.016 | 0.800 | 4062783 | 2.30 | | 91.8 | 3004 | |
| D 15 13C4 PFHpA | | | | | | | | | | |
| 367.00 > 322.00 | 2.946 | 2.940 | 0.006 | 0.881 | 5797885 | 2.31 | | 92.4 | 3909 | |
| D 17 18O2 PFHxS | | | | | | | | | | |
| 403.00 > 84.00 | 2.946 | 2.940 | 0.006 | 0.881 | 6206970 | 2.37 | | 100 | 5470 | |
| 16 Perfluorohexanesulfonic acid | | | | | | | | | | M |
| 399.00 > 80.00 | 2.952 | 2.946 | 0.006 | 1.002 | 20187 | 0.006521 | Target=3.49 | | 7.2 | M |
| 399.00 > 99.00 | 2.940 | 2.946 | -0.006 | 0.998 | 4334 | | 4.66(1.75-5.24) | | 3.1 | M |
| D 20 M2-6:2 FTS | | | | | | | | | | |
| 429.00 > 81.00 | 3.331 | 3.324 | 0.007 | 0.996 | 1046213 | 2.23 | | 93.9 | 1133 | |

| Signal | RT | EXP RT | DLT RT | REL RT | Response | Amount ng/ml | Ratio(Limits) | %Rec | S/N | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| 22 1H,1H,2H,2H-perfluorooctanesulfo | | | | | | | | | | |
| 427.00 > 407.00 | 3.338 | 3.324 | 0.014 | 1.002 | 724 | 0.001066 | | | 1.7 | |
| D 26 13C4 PFOA | | | | | | | | | | |
| 417.00 > 372.00 | 3.345 | 3.345 | 0.0 | 1.000 | 5384754 | 2.29 | | 91.6 | 5646 | |
| 24 Perfluorooctanoic acid | | | | | | | | | | M |
| 413.00 > 369.00 | 3.353 | 3.345 | 0.008 | 1.002 | 20794 | 0.008951 | Target=2.44 | | 2.9 | M |
| 413.00 > 169.00 | 3.353 | 3.345 | 0.008 | 1.002 | 5933 | | 3.50(1.22-3.66) | | 5.2 | M |
| * 25 13C2 PFOA | | | | | | | | | | |
| 415.00 > 370.00 | 3.345 | 3.345 | 0.0 | | 6092365 | 2.50 | | | 6710 | |
| D 31 13C4 PFOS | | | | | | | | | | |
| 503.00 > 80.00 | 3.729 | 3.720 | 0.009 | 1.115 | 6619347 | 2.42 | | 101 | 2390 | |
| 28 Perfluorooctanesulfonic acid | | | | | | | | | | M |
| 499.00 > 80.00 | 3.729 | 3.720 | 0.009 | 1.000 | 11873 | 0.004123 | Target=4.47 | | 2.1 | M |
| 499.00 > 99.00 | 3.713 | 3.720 | -0.007 | 0.996 | 2570 | | 4.62(2.24-6.71) | | 3.7 | M |
| D 29 13C5 PFNA | | | | | | | | | | |
| 468.00 > 423.00 | 3.737 | 3.735 | 0.002 | 1.117 | 4966800 | 2.43 | | 97.3 | 6818 | |
| 30 Perfluorononanoic acid | | | | | | | | | | |
| 463.00 > 419.00 | 3.746 | 3.735 | 0.011 | 1.002 | 3946 | 0.001995 | Target=4.27 | | 1.3 | |
| 463.00 > 169.00 | 3.764 | 3.735 | 0.029 | 1.007 | 770 | | 5.12(2.13-6.40) | | 2.2 | |
| D 36 13C8 FOSA | | | | | | | | | | |
| 506.00 > 78.00 | 4.076 | 4.074 | 0.002 | 1.218 | 2866457 | 2.23 | | 89.1 | 2908 | |
| 34 Perfluorooctanesulfonamide | | | | | | | | | | |
| 498.00 > 78.00 | 4.085 | 4.074 | 0.011 | 1.002 | 20049 | 0.006286 | | | 45.5 | |
| D 33 13C2 PFDA | | | | | | | | | | |
| 515.00 > 470.00 | 4.102 | 4.092 | 0.010 | 1.226 | 6453115 | 2.49 | | 99.6 | 5911 | |
| D 37 M2-8:2 FTS | | | | | | | | | | |
| 529.00 > 81.00 | 4.102 | 4.092 | 0.010 | 1.226 | 1404424 | 2.44 | | 102 | 705 | |
| D 41 d3-NMeFOSAA | | | | | | | | | | |
| 573.00 > 419.00 | 4.264 | 4.253 | 0.011 | 1.275 | 2525155 | 1.96 | | 78.4 | 1351 | |
| D 46 13C2 PFUnA | | | | | | | | | | |
| 565.00 > 520.00 | 4.420 | 4.409 | 0.011 | 1.321 | 4880553 | 2.44 | | 97.7 | 4787 | |
| D 45 d5-NEtFOSAA | | | | | | | | | | |
| 589.00 > 419.00 | 4.429 | 4.418 | 0.011 | 1.324 | 1810126 | 2.10 | | 83.9 | 1533 | |
| 44 N-ethylperfluorooctanesulfonamid | | | | | | | | | | |
| 584.00 > 419.00 | 4.429 | 4.426 | 0.003 | 1.000 | 5389 | 0.009175 | | | 11.0 | |
| D 47 d7-N-MeFOSE-M | | | | | | | | | | |
| 623.00 > 59.00 | 4.549 | 4.538 | 0.010 | 1.360 | 1412605 | 3.41 | | 27.3 | 1108 | |
| D 49 d-N-MeFOSA-M | | | | | | | | | | |
| 515.00 > 169.00 | 4.566 | 4.555 | 0.011 | 1.365 | 1102450 | 1.90 | | 76.1 | 197 | |
| D 56 13C2 PFDoA | | | | | | | | | | |
| 615.00 > 570.00 | 4.715 | 4.704 | 0.011 | 1.409 | 4778043 | 2.44 | | 97.4 | 8335 | |
| 52 Perfluorododecanoic acid | | | | | | | | | | R |
| 613.00 > 569.00 | 4.715 | 4.704 | 0.011 | 1.000 | 3751 | 0.002134 | Target=7.23 | | 4.8 | R |
| 613.00 > 169.00 | 4.715 | 4.704 | 0.011 | 1.000 | 1146 | | 3.27(3.61-10.84) | | 8.0 | |
| D 53 d9-N-EtFOSE-M | | | | | | | | | | |
| 639.00 > 59.00 | 4.715 | 4.713 | 0.002 | 1.409 | 1217492 | 2.80 | | 22.4 | 1088 | |

| Signal | RT | EXP RT | DLT RT | REL RT | Response | Amount ng/ml | Ratio(Limits) | %Rec | S/N | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| D 58 d-N-EtFOSA-M | | | | | | | | | | |
| 531.00 > 169.00 | 4.743 | 4.731 | 0.012 | | 870075 | 1.45 | | 57.8 | 553 | |
| D 62 13C2 PFTeDA | | | | | | | | | | |
| 715.00 > 670.00 | 5.221 | 5.211 | 0.010 | 1.561 | 3152344 | 2.30 | | 92.2 | 10112 | |
| D 63 13C2 PFHxDA | | | | | | | | | | |
| 815.00 > 770.00 | 5.655 | 5.634 | 0.021 | 1.690 | 2147671 | 2.12 | | 84.9 | 4336 | |
| 64 Perfluorohexadecanoic acid | | | | | | | | | | |
| 813.00 > 769.00 | 5.655 | 5.643 | 0.012 | 1.000 | 19976 | 0.003531 | Target=4.58 | | 64.3 | |
| 813.00 > 169.00 | 5.655 | 5.643 | 0.012 | 1.000 | 4125 | | 4.84(2.29-6.88) | | 25.1 | |

## QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Review Flags
M - Manually Integrated

Report Date: 11-Sep-2020 18:06:02 Chrom Revision: 2.3 09-Sep-2020 15:12:58

Eurofins TestAmerica, Sacramento

Data File: \\chromfs\Sacramento\ChromData\A9\20200911-103120.b\2020.09.11_A9_PFC_AA_025.d

Injection Date: 11-Sep-2020 13:14:59 Instrument ID: A9

Lims ID: MB 320-411226/1-A

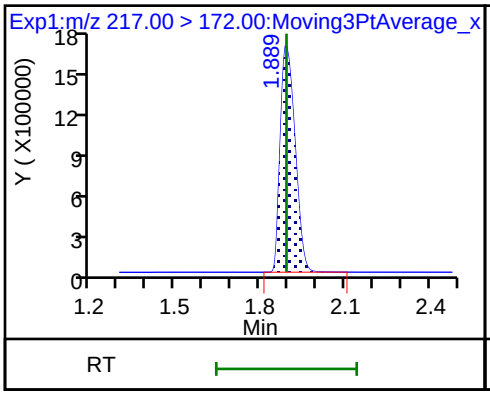
Client ID:

Operator ID: SACINSTRLCMS02 ALS Bottle#: 13 Worklist Smp#: 2

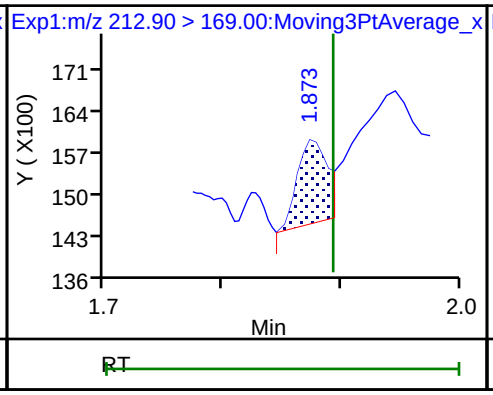
Injection Vol: 20.0 ul Dil. Factor: 1.0000

Method: PFAS_A9 Limit Group: LC PFC ICAL

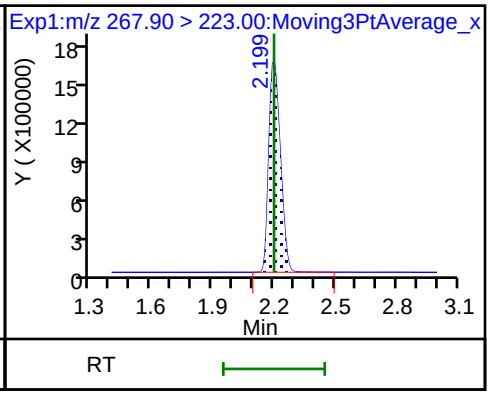
D 1 13C4 PFBA



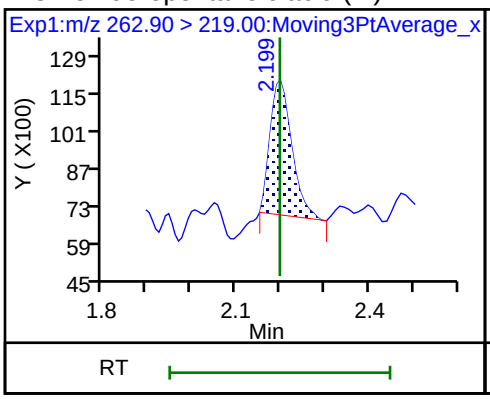

2 Perfluorobutanoic acid



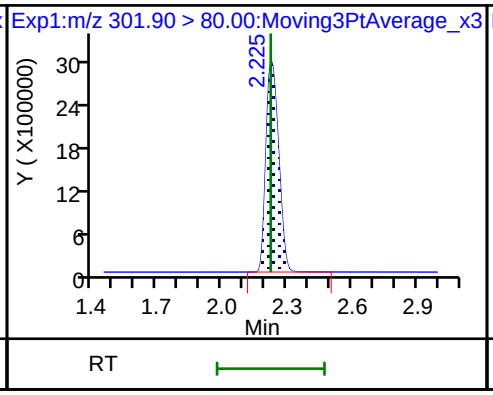

D 4 13C5 PFPeA



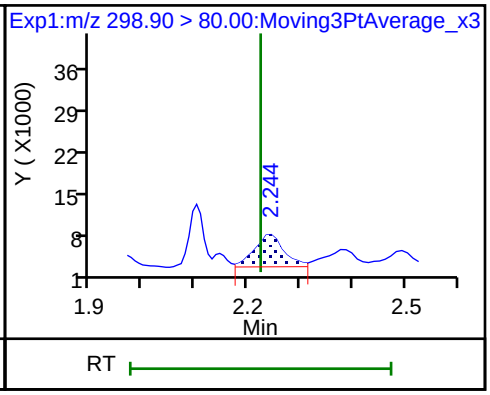

3 Perfluoropentanoic acid (M)



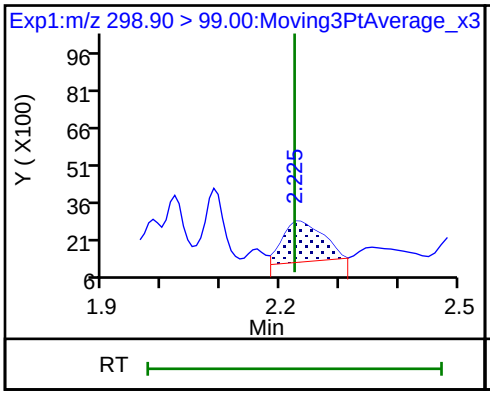

D 6 13C3 PFBS



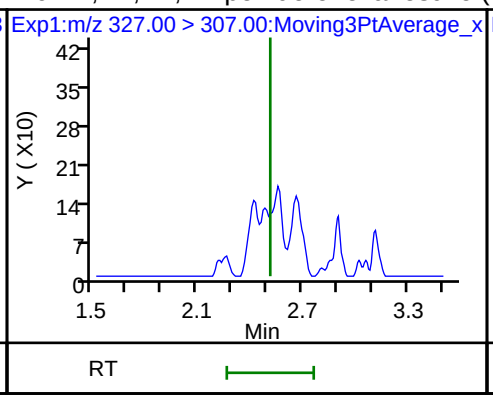

5 Perfluorobutanesulfonic acid



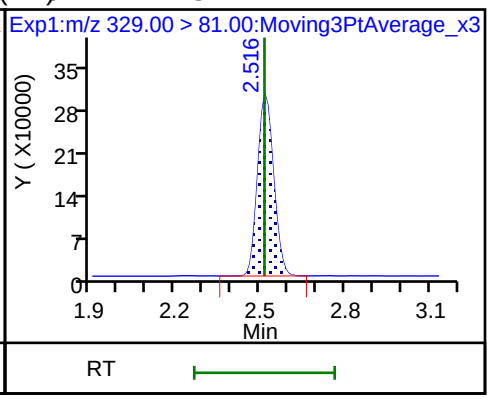

5 Perfluorobutanesulfonic acid



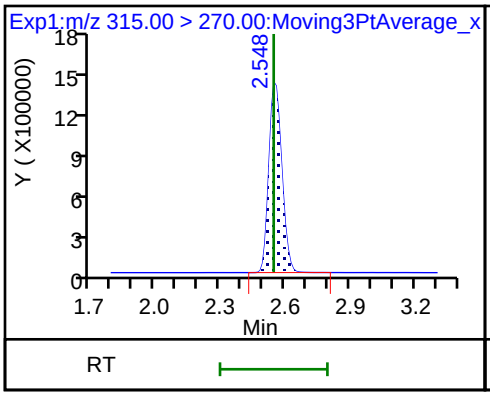

9 1H,1H,2H,2H-perfluorohexanesulfo (ND)



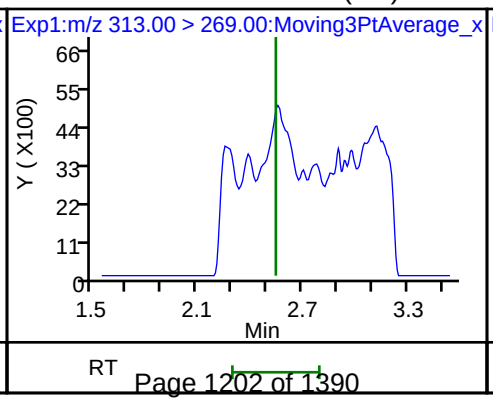

13 M2-4:2 FTS



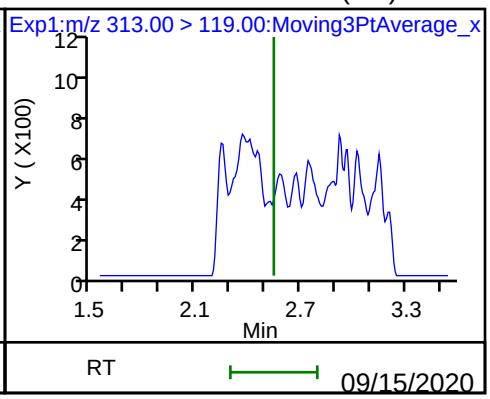

D 10 13C2 PFHxA



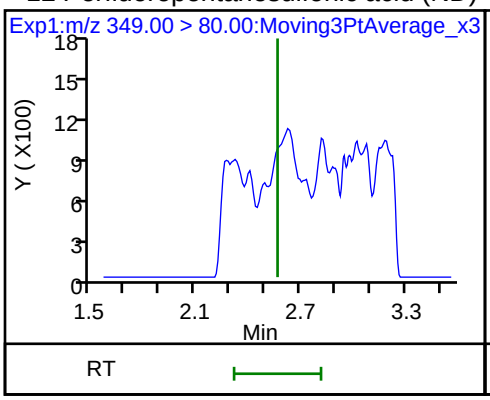

11 Perfluorohexanoic acid (ND)



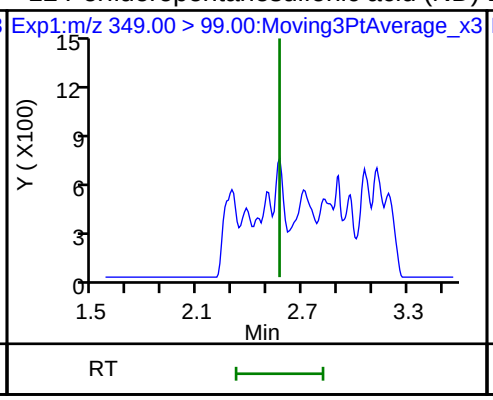

11 Perfluorohexanoic acid (ND)



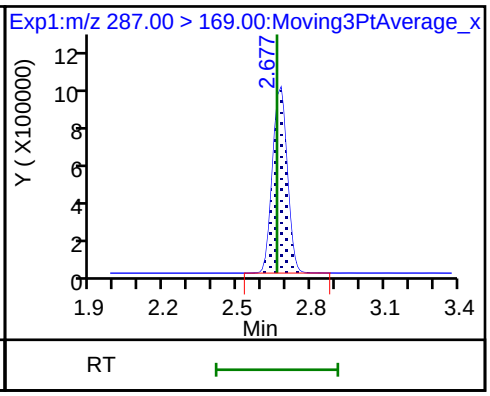
12 Perfluoropentanesulfonic acid (ND)



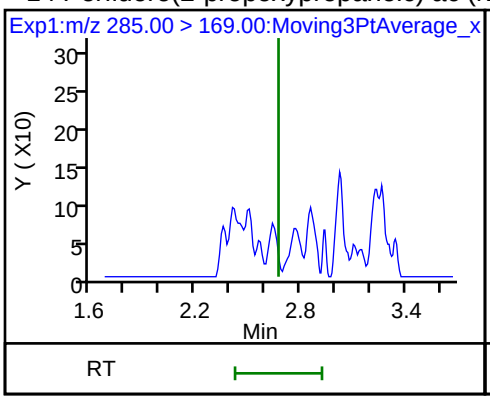

12 Perfluoropentanesulfonic acid (ND) D



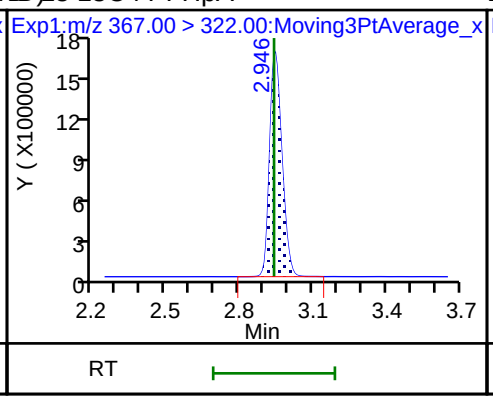

13 13C3 HFPO-DA



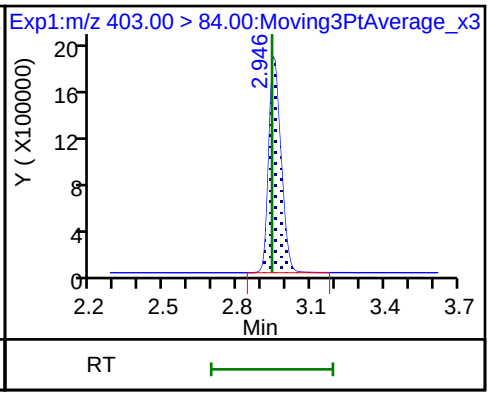

14 Perfluoro(2-propoxypropanoic) ac (ND)



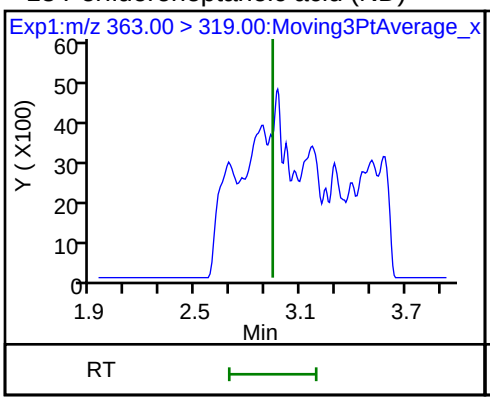

15 13C4 PFHpA D



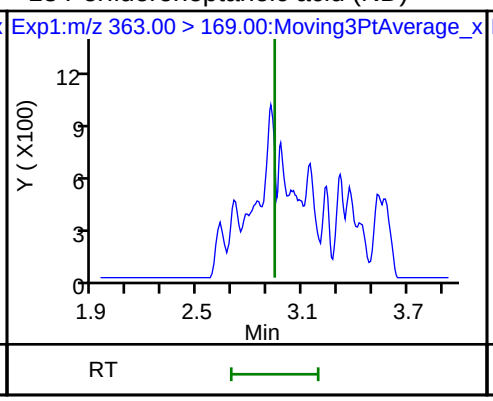

17 18O2 PFHxS



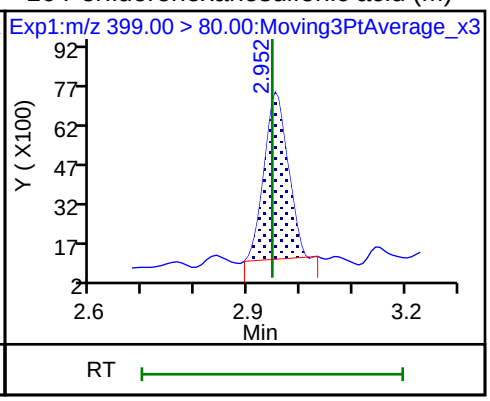

18 Perfluoroheptanoic acid (ND)



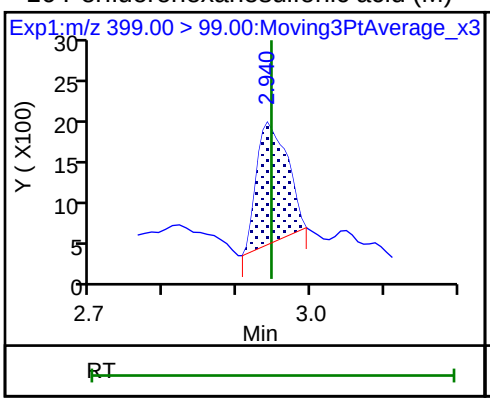

18 Perfluoroheptanoic acid (ND)



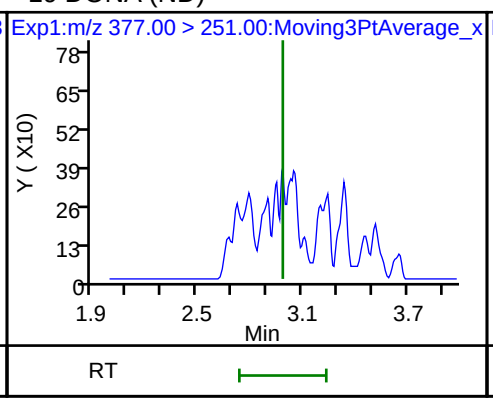

16 Perfluorohexanesulfonic acid (M)



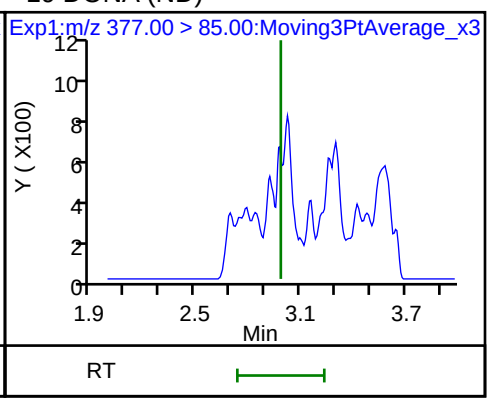

16 Perfluorohexanesulfonic acid (M)



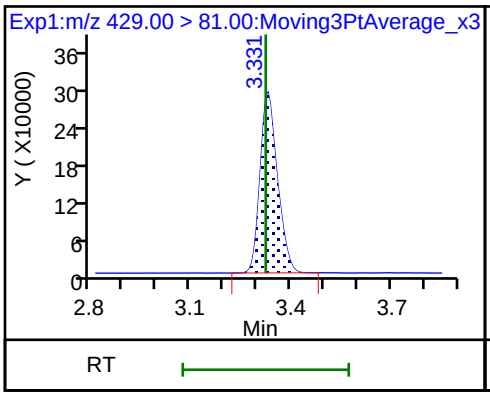

19 DONA (ND)



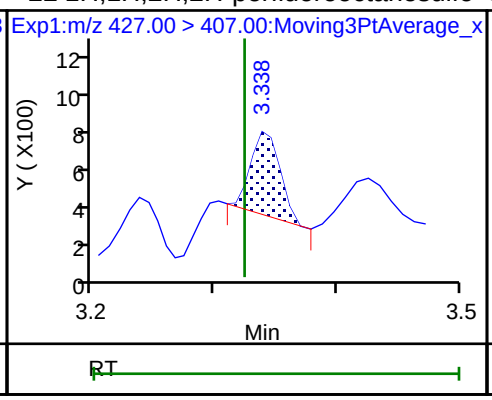

19 DONA (ND)



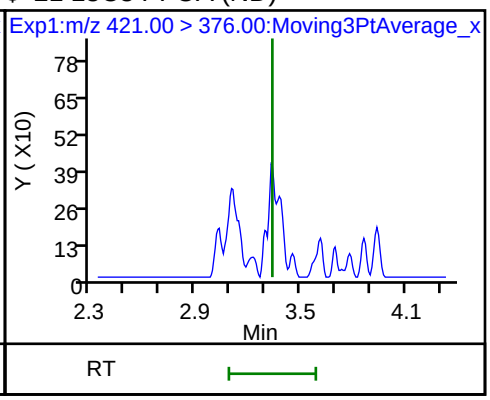
D 20 M2-6:2 FTS



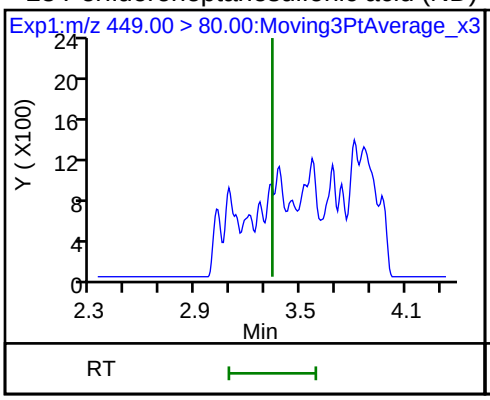

22 1H,1H,2H,2H-perfluorooctanesulfo



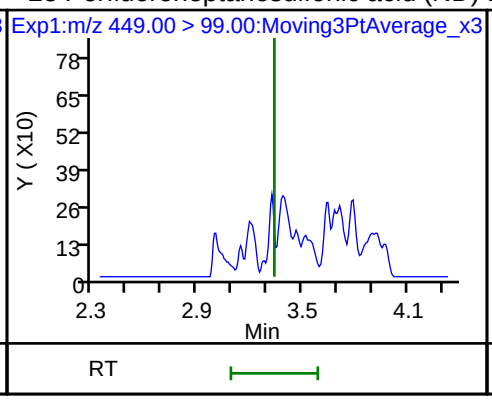

$ 21 13C8 PFOA (ND)



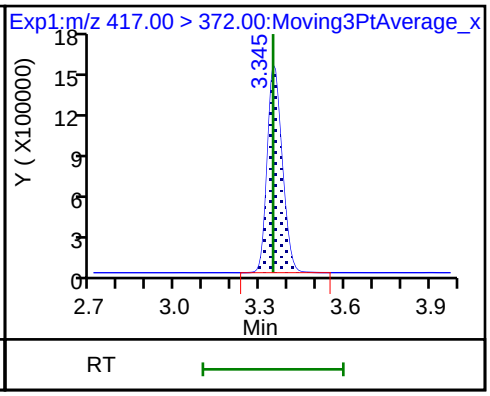

23 Perfluoroheptanesulfonic acid (ND)



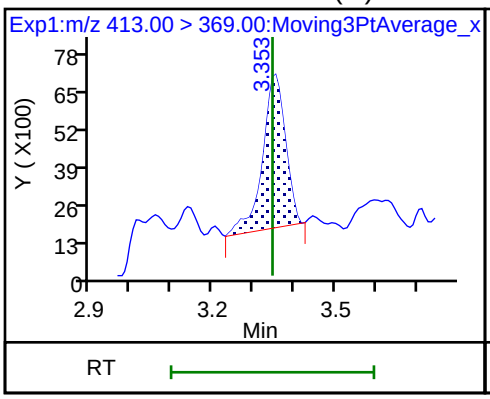

23 Perfluoroheptanesulfonic acid (ND)



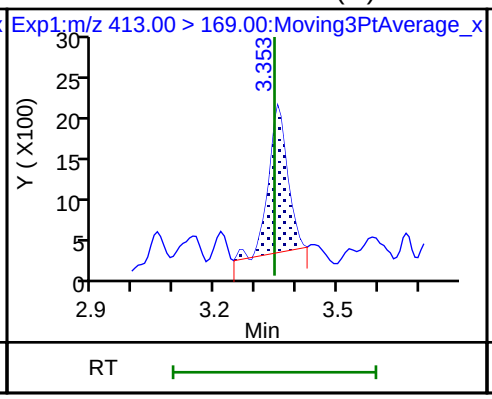

D 26 13C4 PFOA



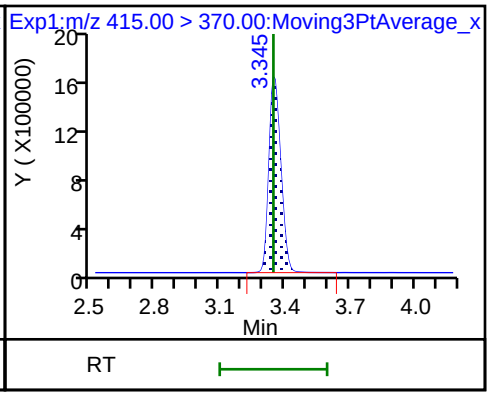

24 Perfluorooctanoic acid (M)



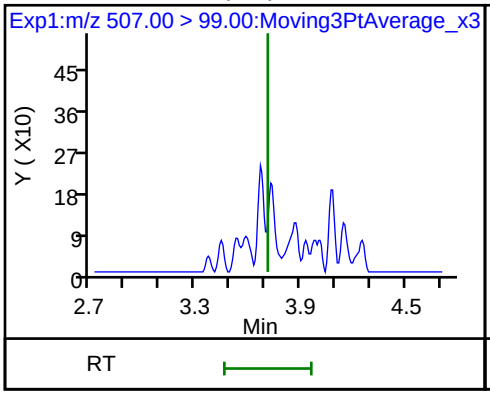

24 Perfluorooctanoic acid (M)



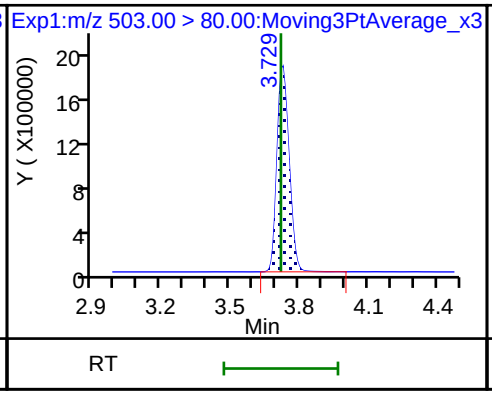

* 25 13C2 PFOA



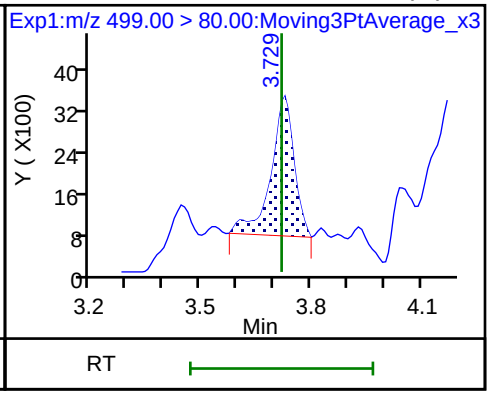

$ 27 13C8 PFOS (ND)



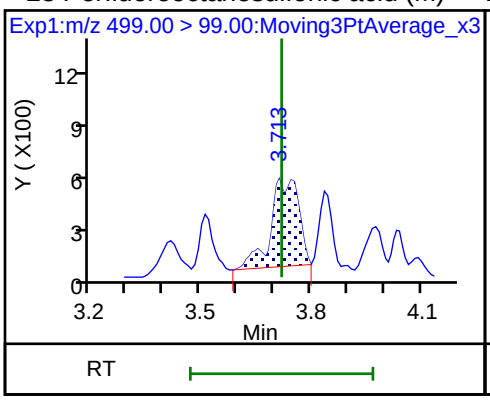

D 31 13C4 PFOS



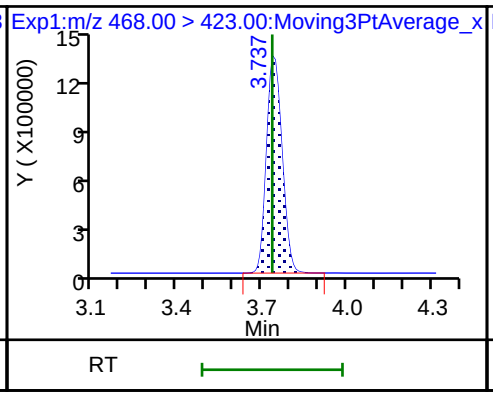

28 Perfluorooctanesulfonic acid (M)



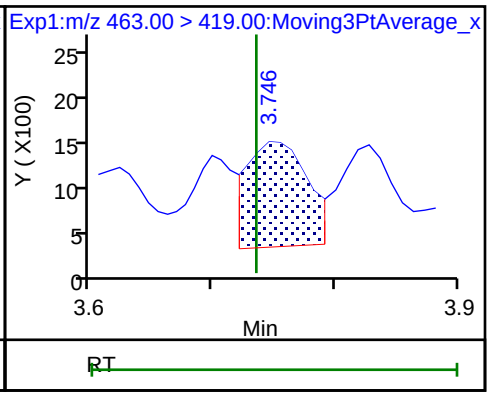
28 Perfluorooctanesulfonic acid (M)



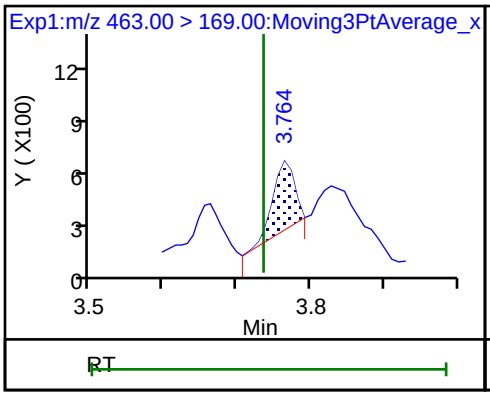

D 29 13C5 PFNA



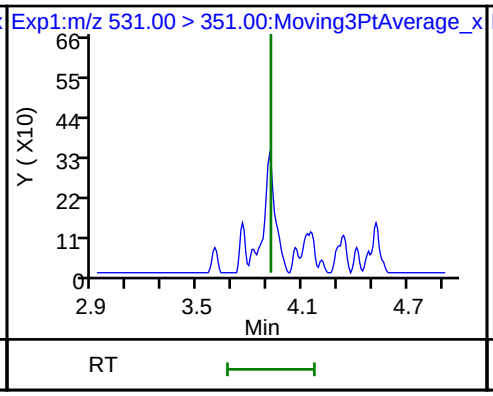

30 Perfluorononanoic acid



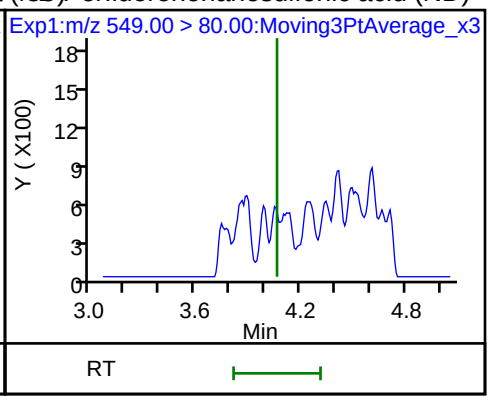

30 Perfluorononanoic acid



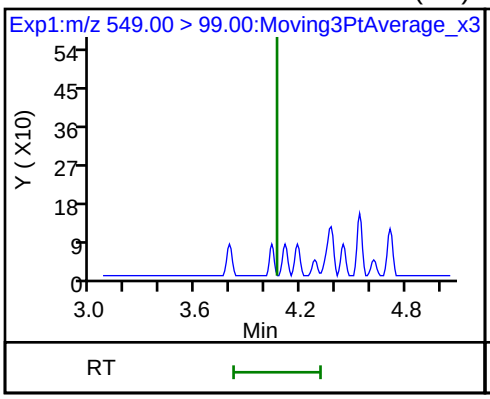

32 9-Chlorohexadecafluoro-3-oxanona (ND)



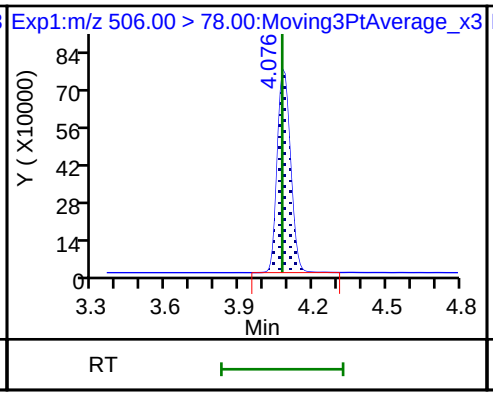

35 Perfluorononanesulfonic acid (ND)



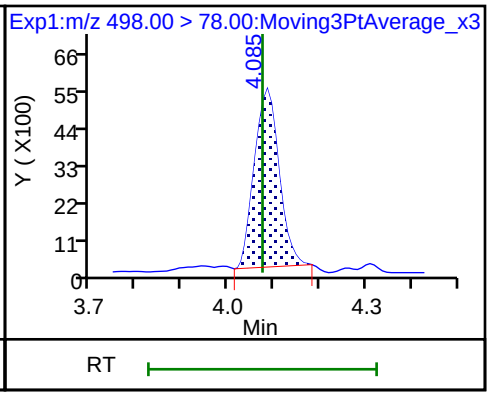

35 Perfluorononanesulfonic acid (ND)



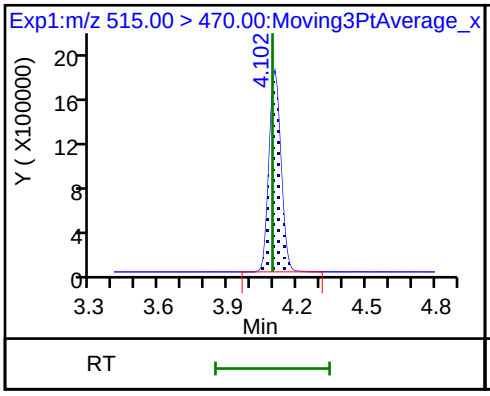

D 36 13C8 FOSA



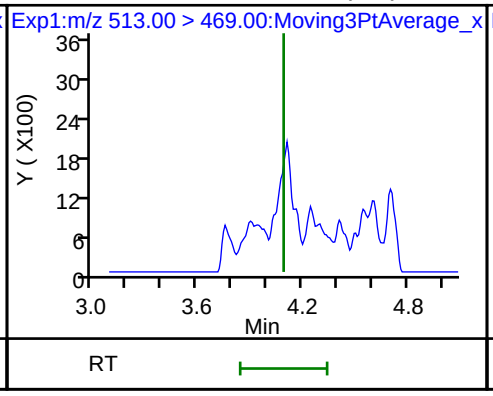

34 Perfluorooctanesulfonamide



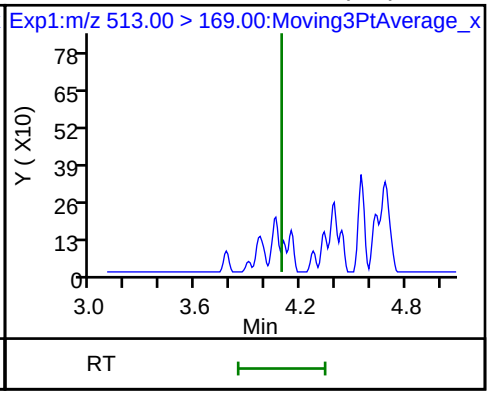

D 33 13C2 PFDA



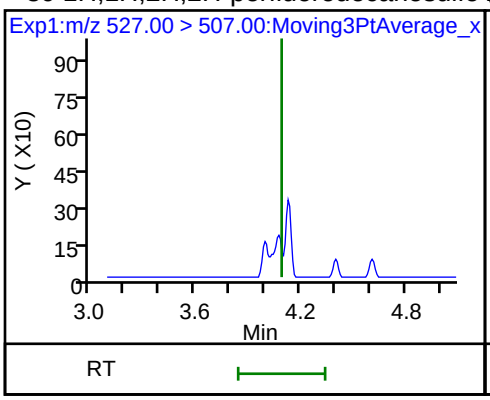

38 Perfluorodecanoic acid (ND)



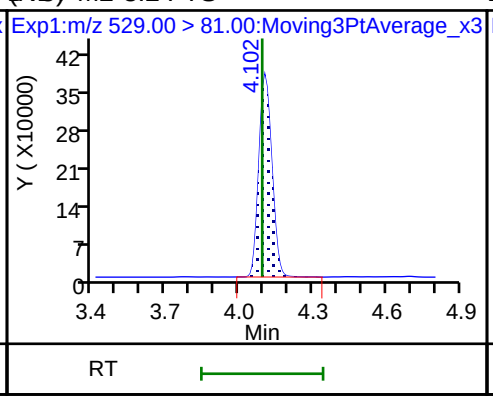

38 Perfluorodecanoic acid (ND)



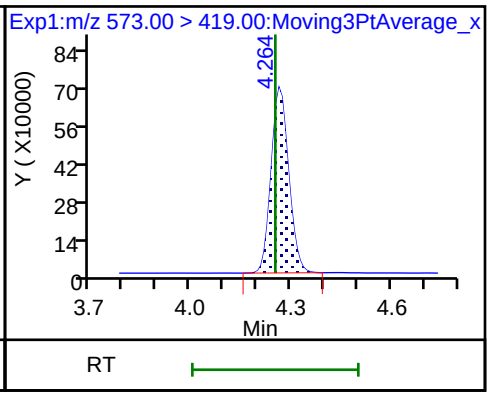
39 1H,1H,2H,2H-perfluorodecanesulfo (ND)



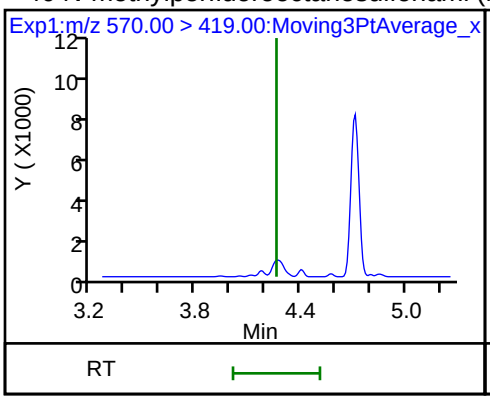

D 37 M2-8:2 FTS



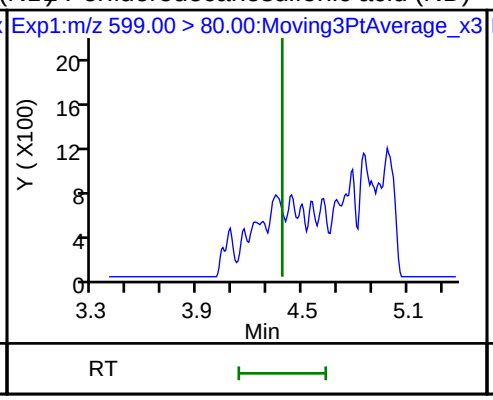

D 41 d3-NMeFOSAA



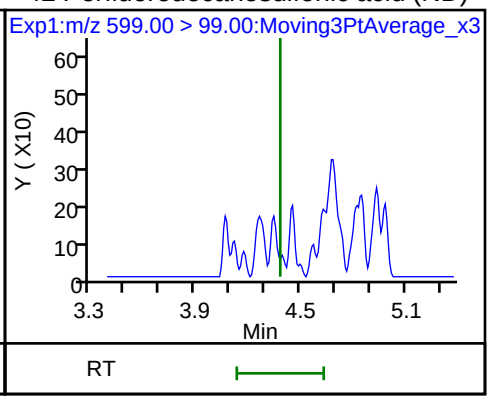

40 N-methylperfluorooctanesulfonami (ND)



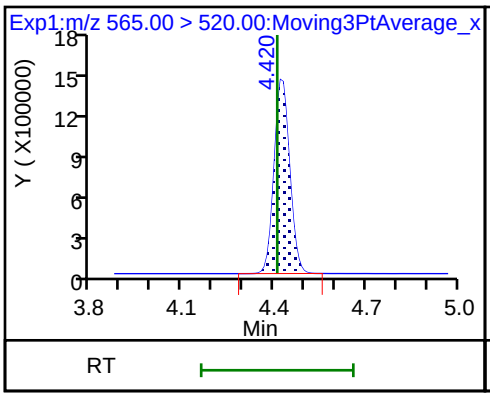

42 Perfluorodecanesulfonic acid (ND)



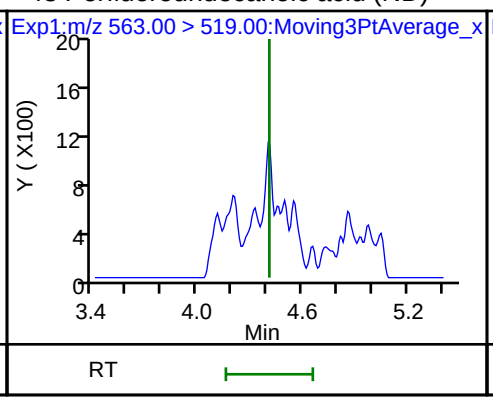

42 Perfluorodecanesulfonic acid (ND)



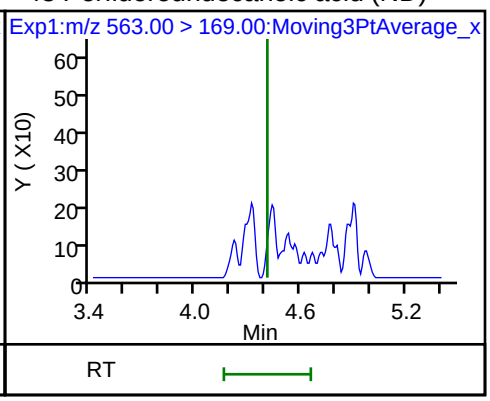

D 46 13C2 PFUnA



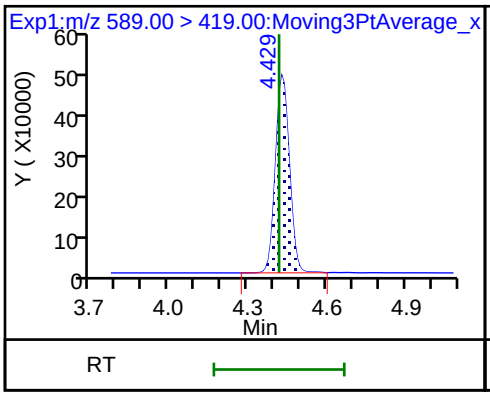

43 Perfluoroundecanoic acid (ND)



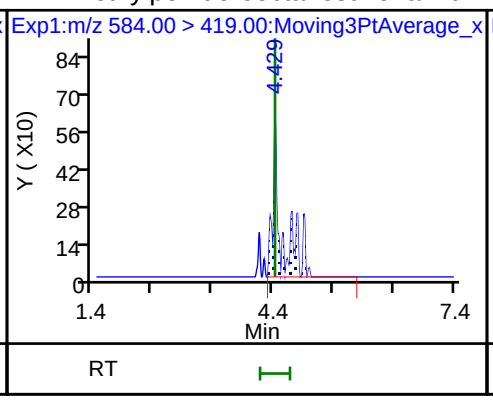

43 Perfluoroundecanoic acid (ND)



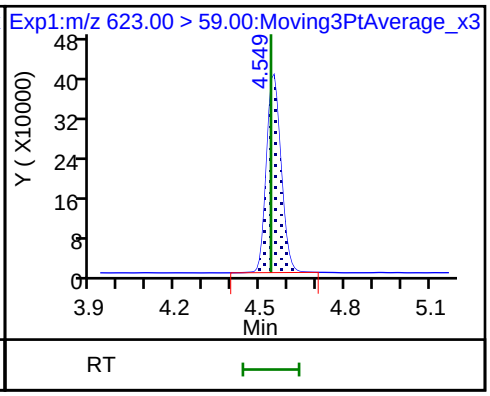

D 45 d5-NEtFOSAA



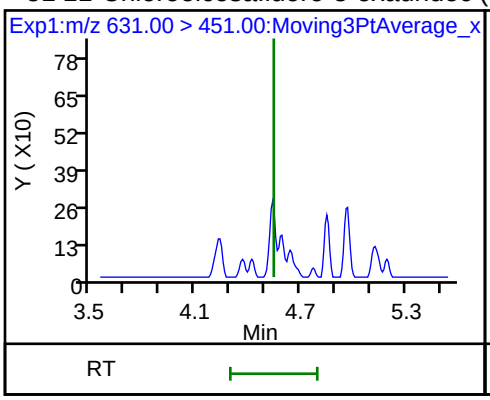

44 N-ethylperfluorooctanesulfonamid



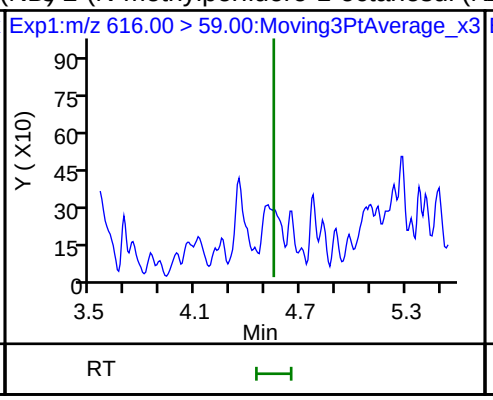

D 47 d7-N-MeFOSE-M



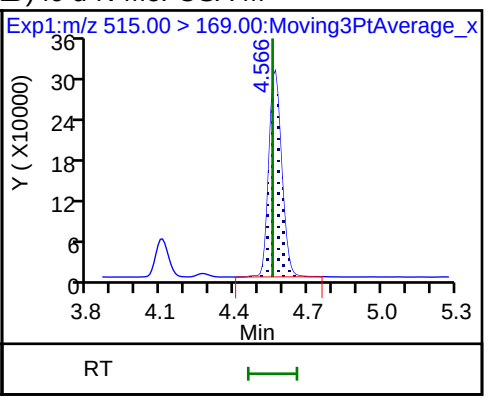
51 11-Chloroeicosafluoro-3-oxaundec (ND)



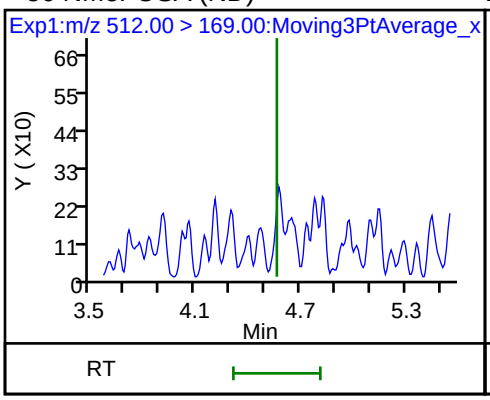

49 2-(N-methylperfluoro-1-octanesul (ND)



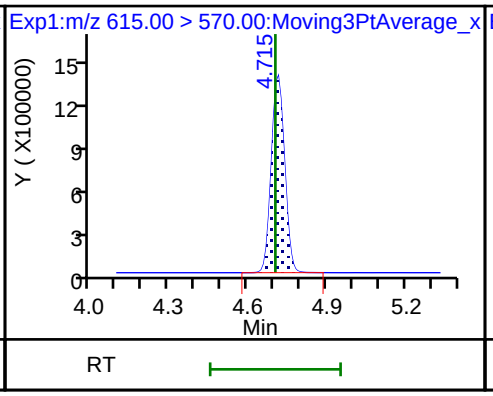

D 49 d-N-MeFOSA-M



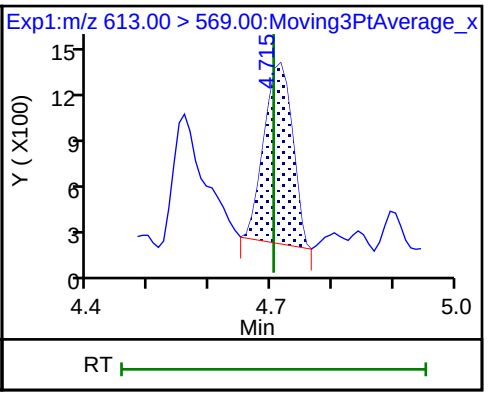

50 NMeFOSA (ND)



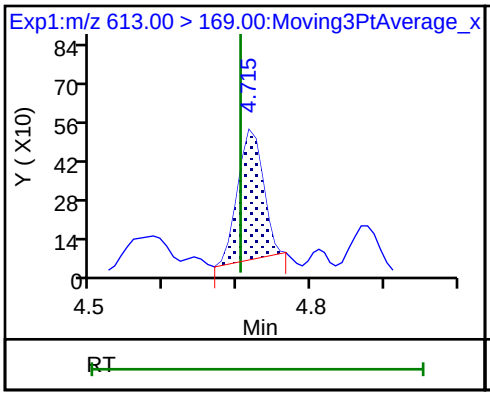

D 56 13C2 PFDoA



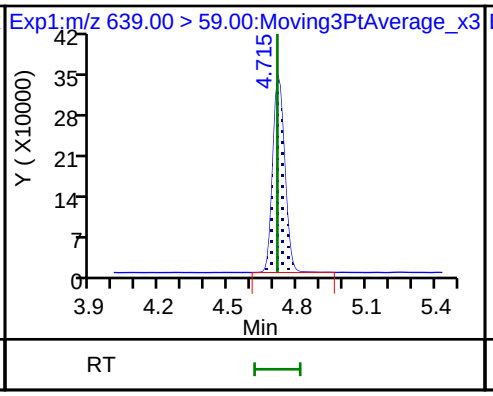

52 Perfluorododecanoic acid



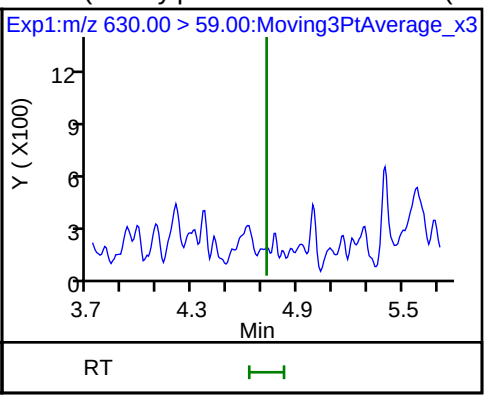

52 Perfluorododecanoic acid



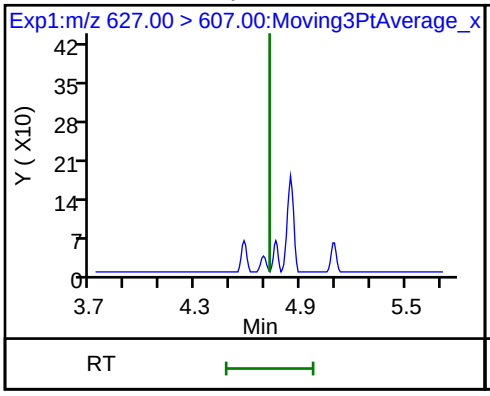

D 53 d9-N-EtFOSE-M



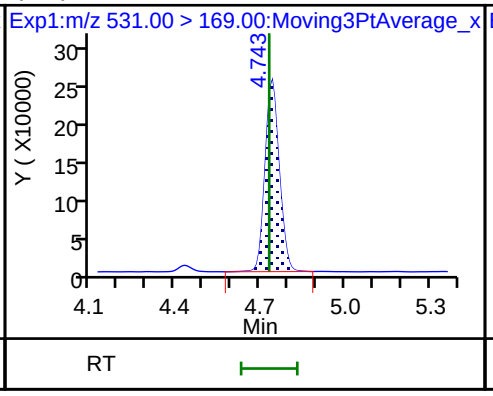

54 2-(N-ethylperfluoro-1-octanesulf (ND)



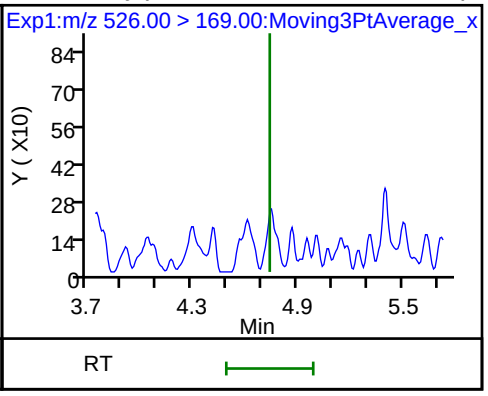

55 1H,1H,2H,2H-perfluorododecanesulfo (ND)



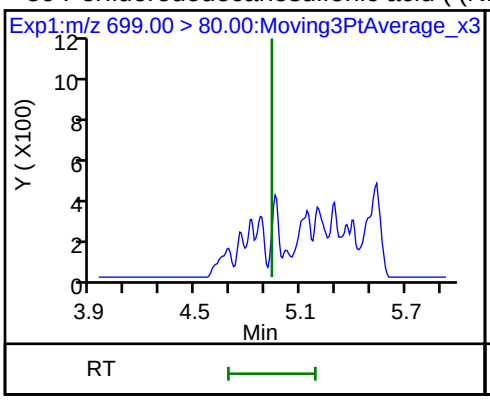

D 58 d-N-EtFOSA-M



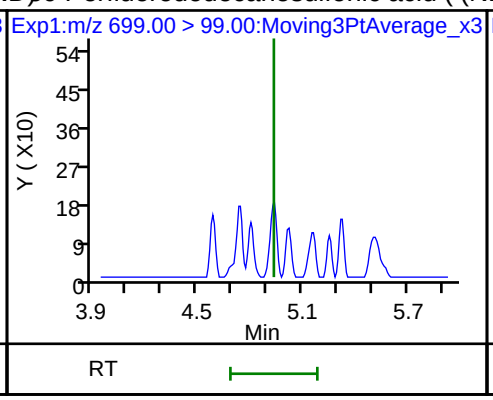

57 N-ethylperfluoro-1-octanesulfona (ND)



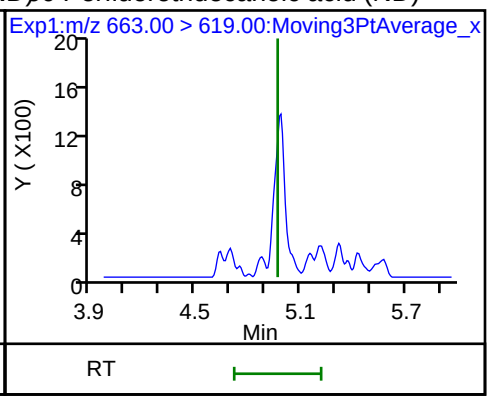
59 Perfluorododecanesulfonic acid ( (ND)



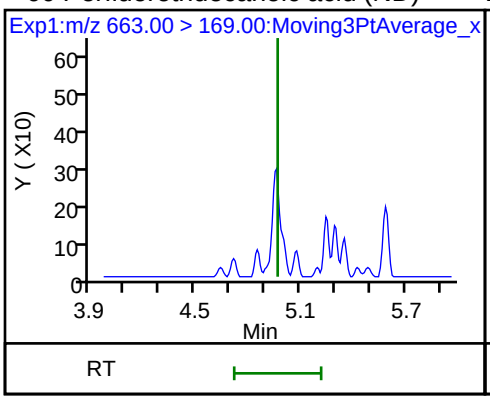

59 Perfluorododecanesulfonic acid ( (ND)



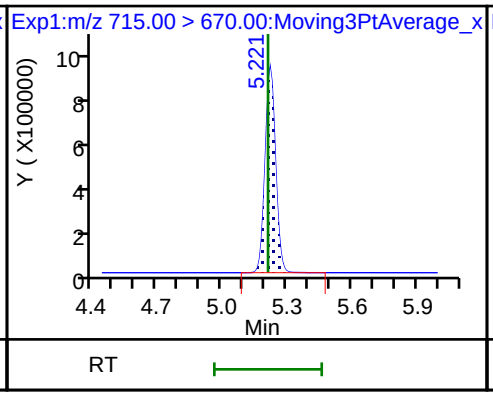

60 Perfluorotridecanoic acid (ND)



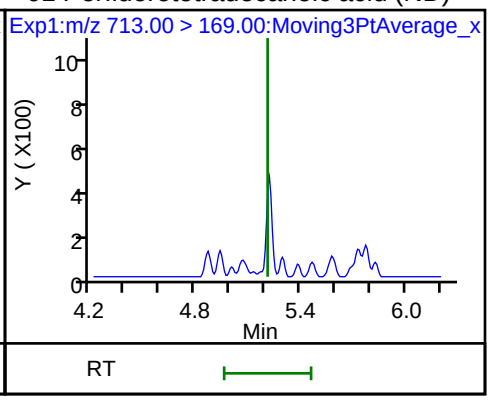

60 Perfluorotridecanoic acid (ND)



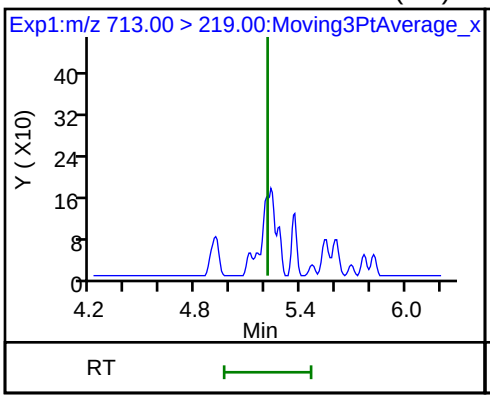

D 62 13C2 PFTeDA



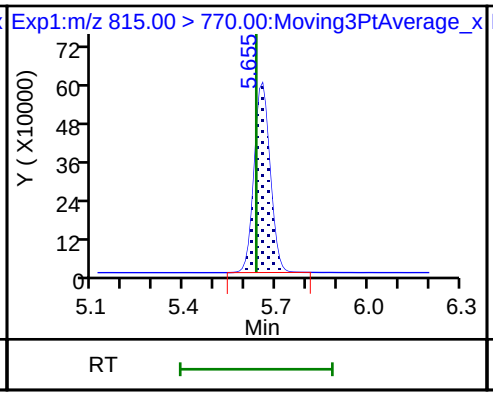

61 Perfluorotetradecanoic acid (ND)



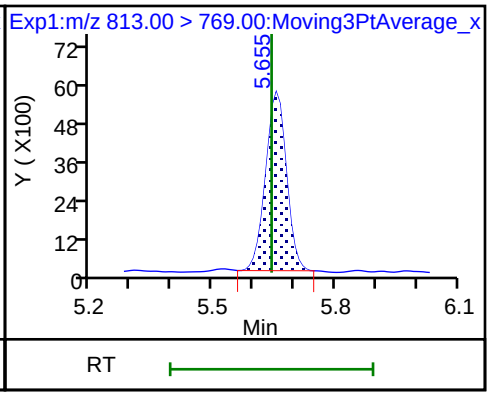

61 Perfluorotetradecanoic acid (ND)



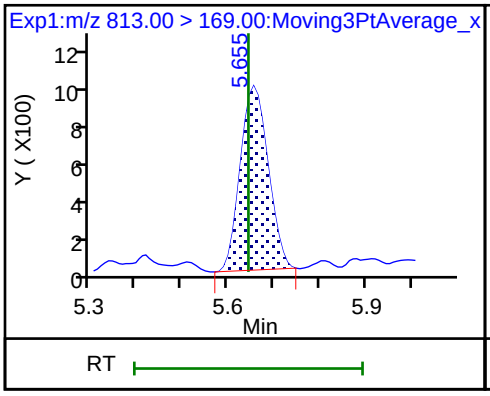

D 63 13C2 PFHxDA



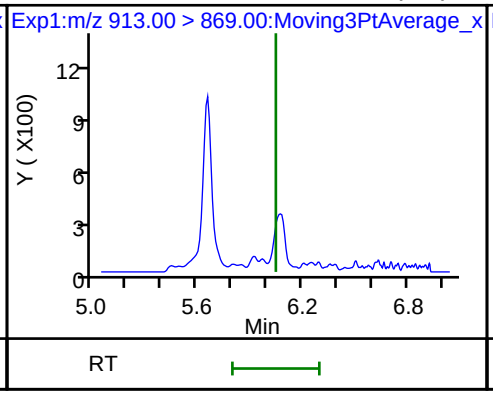

64 Perfluorohexadecanoic acid



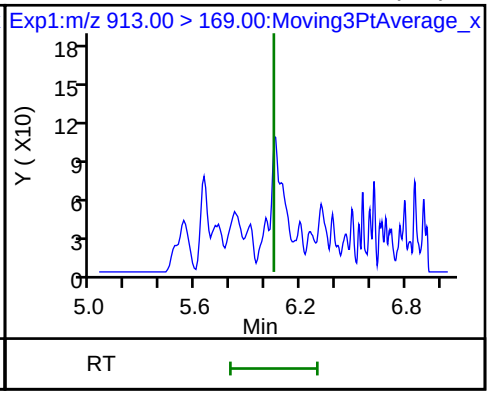

64 Perfluorohexadecanoic acid




65 Perfluorooctadecanoic acid (ND)




65 Perfluorooctadecanoic acid (ND)



Eurofins TestAmerica, Sacramento

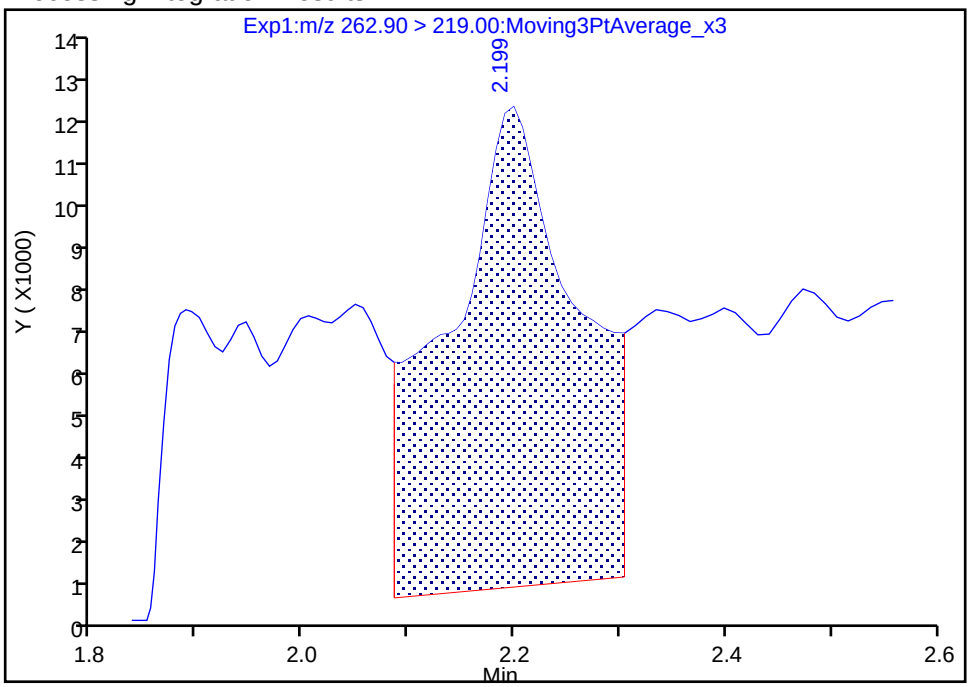
Data File: \\chromfs\Sacramento\ChromData\A9\20200911-103120.b\2020.09.11_A9_PFC_AA_025.d
Injection Date: 11-Sep-2020 13:14:59 Instrument ID: A9
Lims ID: MB 320-411226/1-A
Client ID:
Operator ID: SACINSTRLCMS02 ALS Bottle#: 13 Worklist Smp#: 2
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFAS_A9 Limit Group: LC PFC ICAL
Column: Detector EXP1

## 3 Perfluoropentanoic acid, CAS: 2706-90-3

Signal: 1

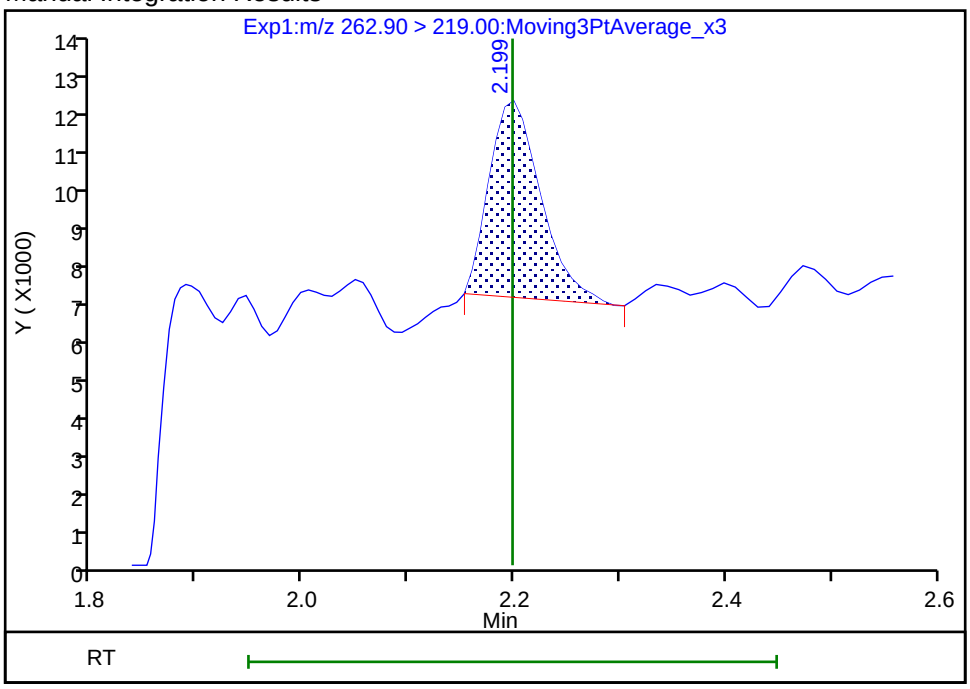
Processing Integration Results

RT: 2.20
Area: 94644
Amount: 0.037147
Amount Units: ng/ml




Manual Integration Results

RT: 2.20
Area: 17069
Amount: 0.006699
Amount Units: ng/ml




Reviewer: zibaa, 11-Sep-2020 14:27:55
Audit Action: Manually Integrated Audit Reason: Baseline

Eurofins TestAmerica, Sacramento

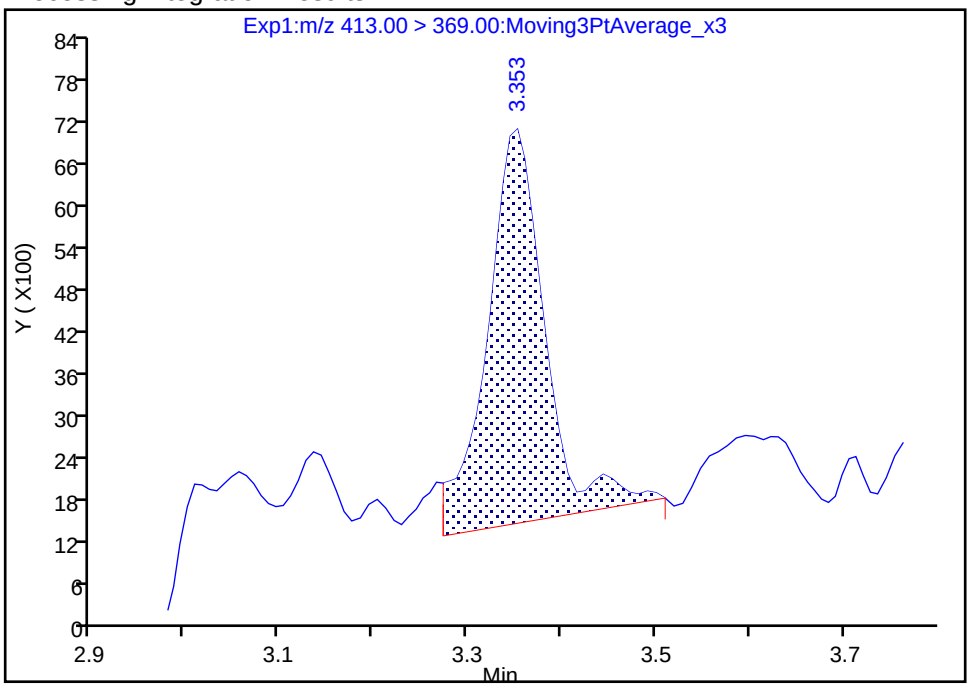
| | | | | | |
|---|---|---|---|---|---|
| Data File: | \\chromfs\Sacramento\ChromData\A9\20200911-103120.b\2020.09.11_A9_PFC_AA_025.d | | | | |
| Injection Date: | 11-Sep-2020 13:14:59 | Instrument ID: | A9 | | |
| Lims ID: | MB 320-411226/1-A | | | | |
| Client ID: | | | | | |
| Operator ID: | SACINSTRLCMS02 | ALS Bottle#: | 13 | Worklist Smp#: | 2 |
| Injection Vol: | 20.0 ul | Dil. Factor: | 1.0000 | | |
| Method: | PFAS_A9 | Limit Group: | LC PFC ICAL | | |
| Column: | | Detector | EXP1 | | |

## 24 Perfluorooctanoic acid, CAS: 335-67-1

Signal: 1

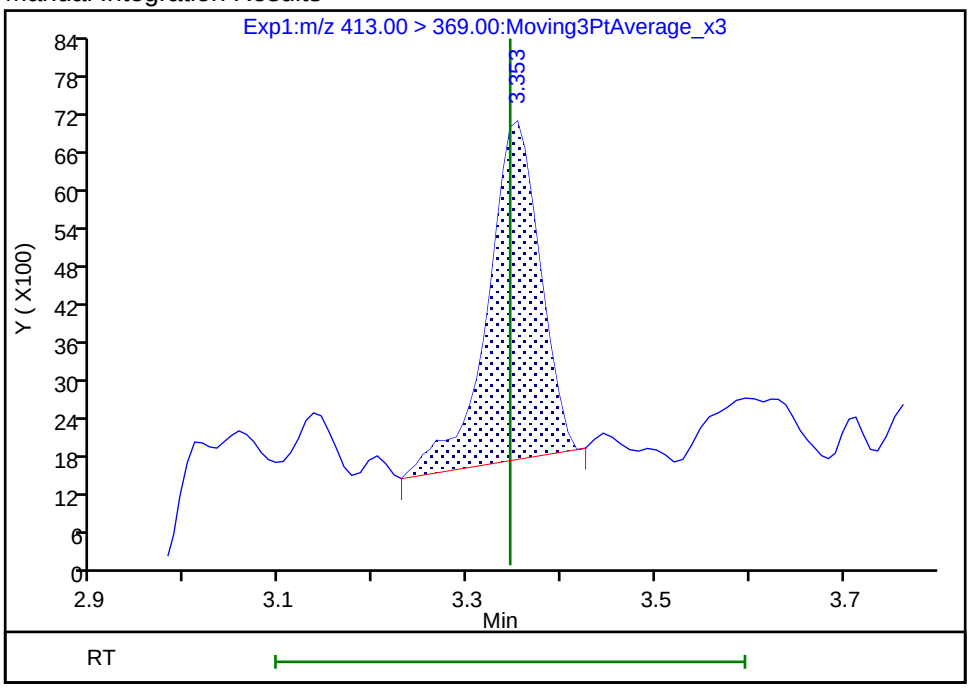
Processing Integration Results

RT: 3.35
Area: 23899
Amount: 0.010288
Amount Units: ng/ml




Manual Integration Results

RT: 3.35
Area: 20794
Amount: 0.008951
Amount Units: ng/ml




Reviewer: zibaa, 11-Sep-2020 14:29:53
Audit Action: Manually Integrated Audit Reason: Isomers

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

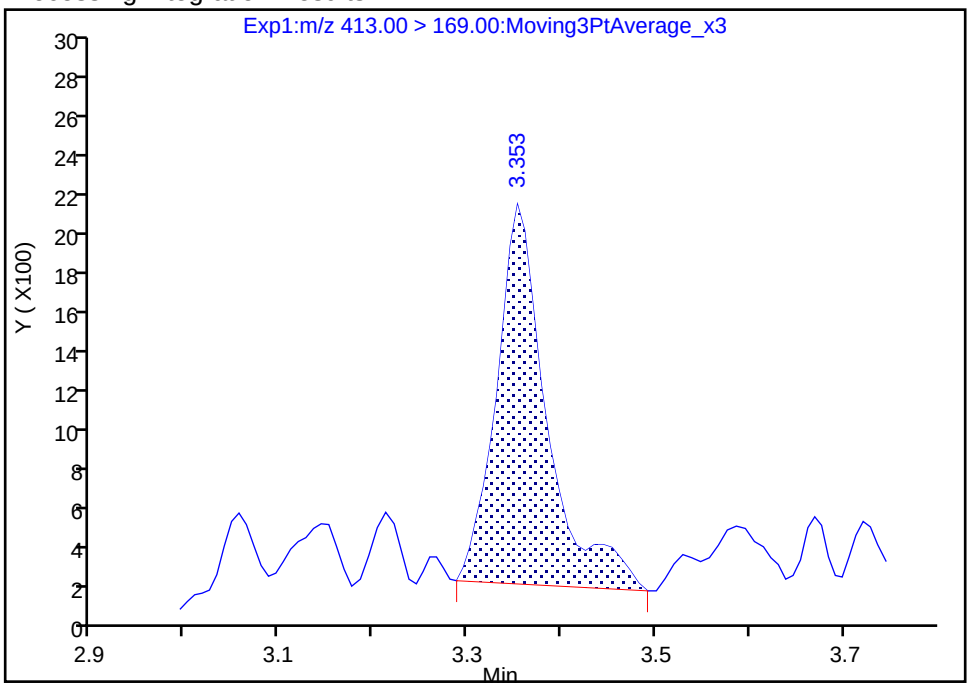
| | | | | | |
|---|---|---|---|---|---|
| Data File: | \\chromfs\Sacramento\ChromData\A9\20200911-103120.b\2020.09.11_A9_PFC_AA_025.d | | | | |
| Injection Date: | 11-Sep-2020 13:14:59 | Instrument ID: | A9 | | |
| Lims ID: | MB 320-411226/1-A | | | | |
| Client ID: | | | | | |
| Operator ID: | SACINSTRLCMS02 | ALS Bottle#: | 13 | Worklist Smp#: | 2 |
| Injection Vol: | 20.0 ul | Dil. Factor: | 1.0000 | | |
| Method: | PFAS_A9 | Limit Group: | LC PFC ICAL | | |
| Column: | | Detector | EXP1 | | |

## 24 Perfluorooctanoic acid, CAS: 335-67-1

Signal: 2

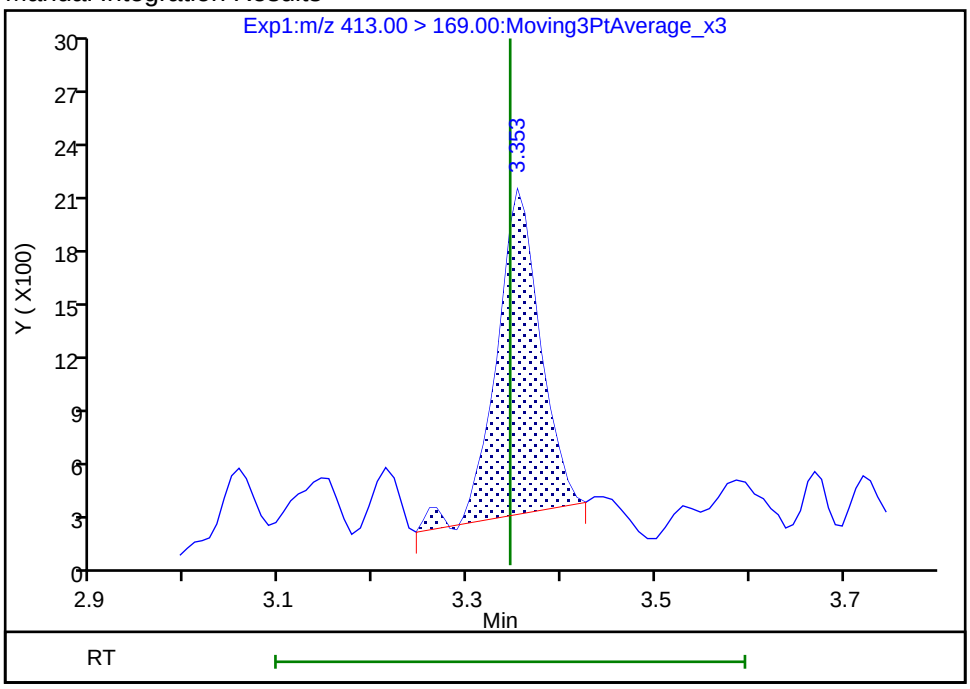
Processing Integration Results

RT: 3.35
Area: 7260
Amount: 0.010288
Amount Units: ng/ml




Manual Integration Results

RT: 3.35
Area: 5933
Amount: 0.008951
Amount Units: ng/ml




Reviewer: zibaa, 11-Sep-2020 14:30:00
Audit Action: Manually Integrated Audit Reason: Isomers

Eurofins TestAmerica, Sacramento

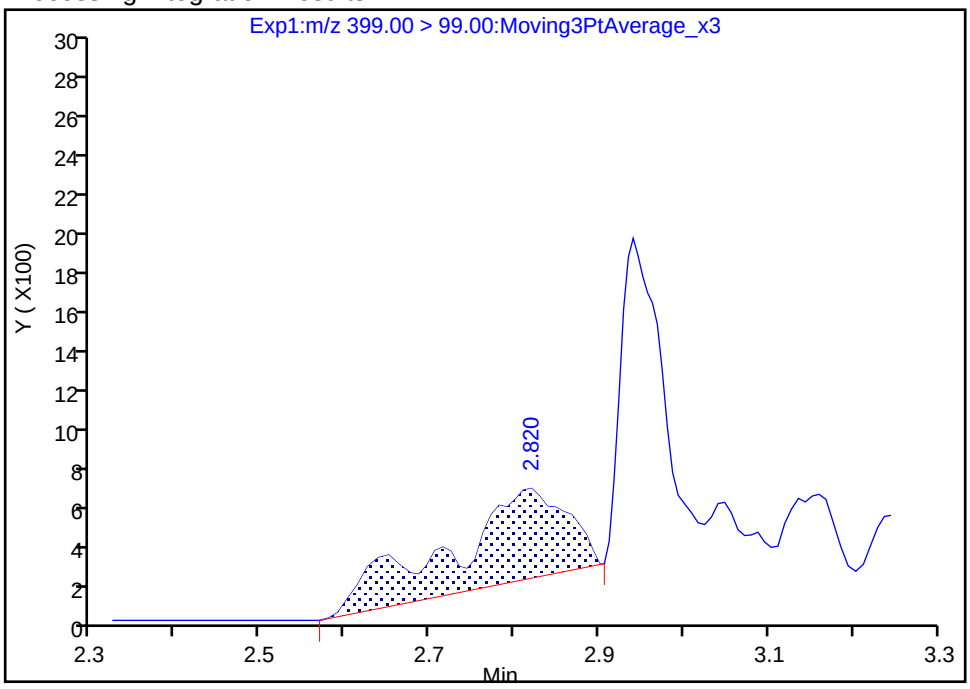
Data File: \\chromfs\Sacramento\ChromData\A9\20200911-103120.b\2020.09.11_A9_PFC_AA_025.d
Injection Date: 11-Sep-2020 13:14:59 Instrument ID: A9
Lims ID: MB 320-411226/1-A
Client ID:
Operator ID: SACINSTRLCMS02 ALS Bottle#: 13 Worklist Smp#: 2
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFAS_A9 Limit Group: LC PFC ICAL
Column: Detector EXP1

## 16 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 2

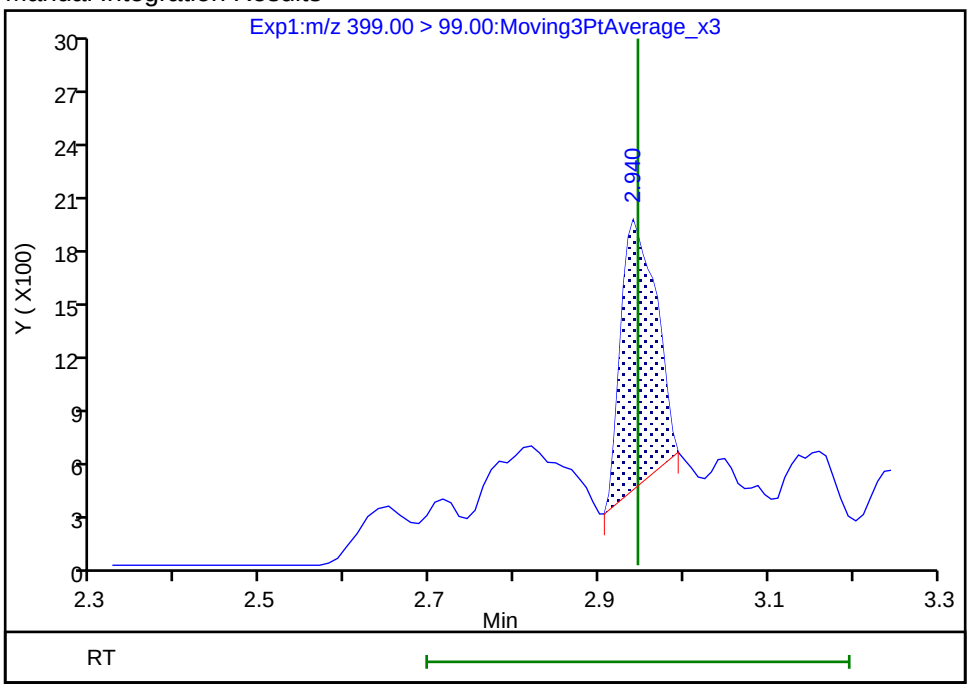
Processing Integration Results

RT: 2.82
Area: 4573
Amount: 0.014562
Amount Units: ng/ml




Manual Integration Results

RT: 2.94
Area: 4334
Amount: 0.006521
Amount Units: ng/ml




Reviewer: zibaa, 11-Sep-2020 14:28:53
Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

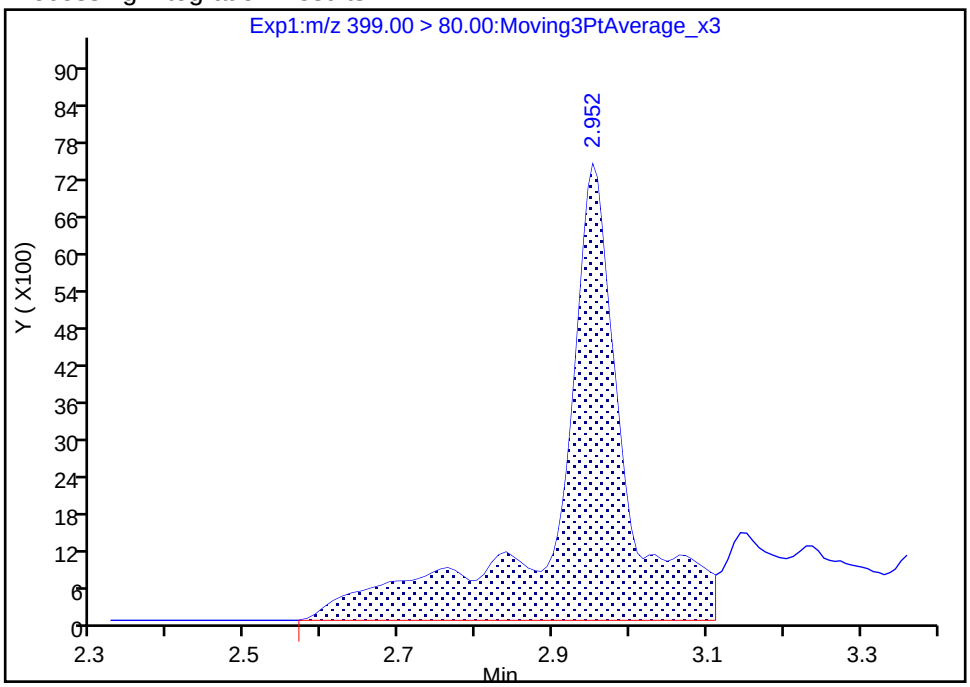
| | | | | | |
|---|---|---|---|---|---|
| Data File: | \\chromfs\Sacramento\ChromData\A9\20200911-103120.b\2020.09.11_A9_PFC_AA_025.d | | | | |
| Injection Date: | 11-Sep-2020 13:14:59 | Instrument ID: | A9 | | |
| Lims ID: | MB 320-411226/1-A | | | | |
| Client ID: | | | | | |
| Operator ID: | SACINSTRLCMS02 | ALS Bottle#: | 13 | Worklist Smp#: | 2 |
| Injection Vol: | 20.0 ul | Dil. Factor: | 1.0000 | | |
| Method: | PFAS_A9 | Limit Group: | LC PFC ICAL | | |
| Column: | | Detector | EXP1 | | |

## 16 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 1

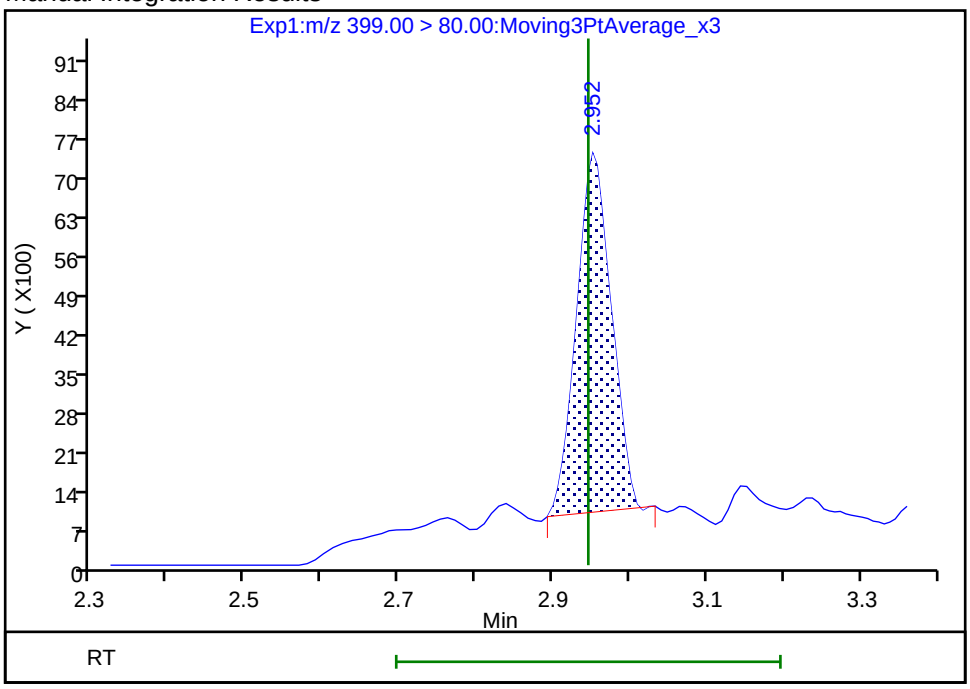
Processing Integration Results

RT: 2.95
Area: 45080
Amount: 0.014562
Amount Units: ng/ml




Manual Integration Results

RT: 2.95
Area: 20187
Amount: 0.006521
Amount Units: ng/ml




Reviewer: zibaa, 11-Sep-2020 14:29:08
Audit Action: Manually Integrated Audit Reason: Baseline

Eurofins TestAmerica, Sacramento

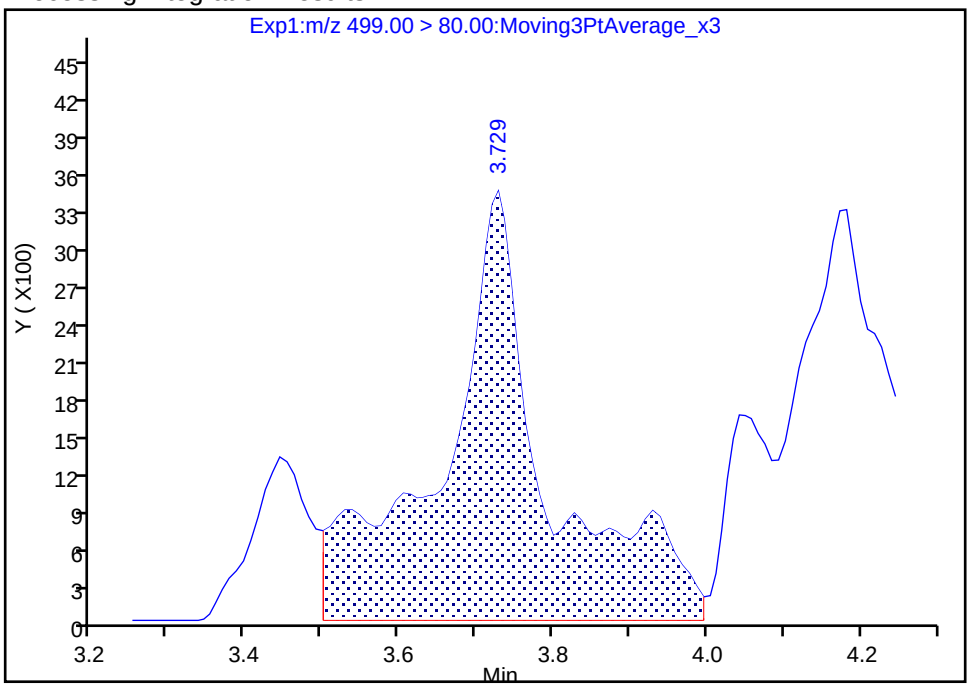
| | | | | | |
|---|---|---|---|---|---|
| Data File: | \\chromfs\Sacramento\ChromData\A9\20200911-103120.b\2020.09.11_A9_PFC_AA_025.d | | | | |
| Injection Date: | 11-Sep-2020 13:14:59 | Instrument ID: | A9 | | |
| Lims ID: | MB 320-411226/1-A | | | | |
| Client ID: | | | | | |
| Operator ID: | SACINSTRLCMS02 | ALS Bottle#: | 13 | Worklist Smp#: | 2 |
| Injection Vol: | 20.0 ul | Dil. Factor: | 1.0000 | | |
| Method: | PFAS_A9 | Limit Group: | LC PFC ICAL | | |
| Column: | | Detector | EXP1 | | |

## 28 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 1

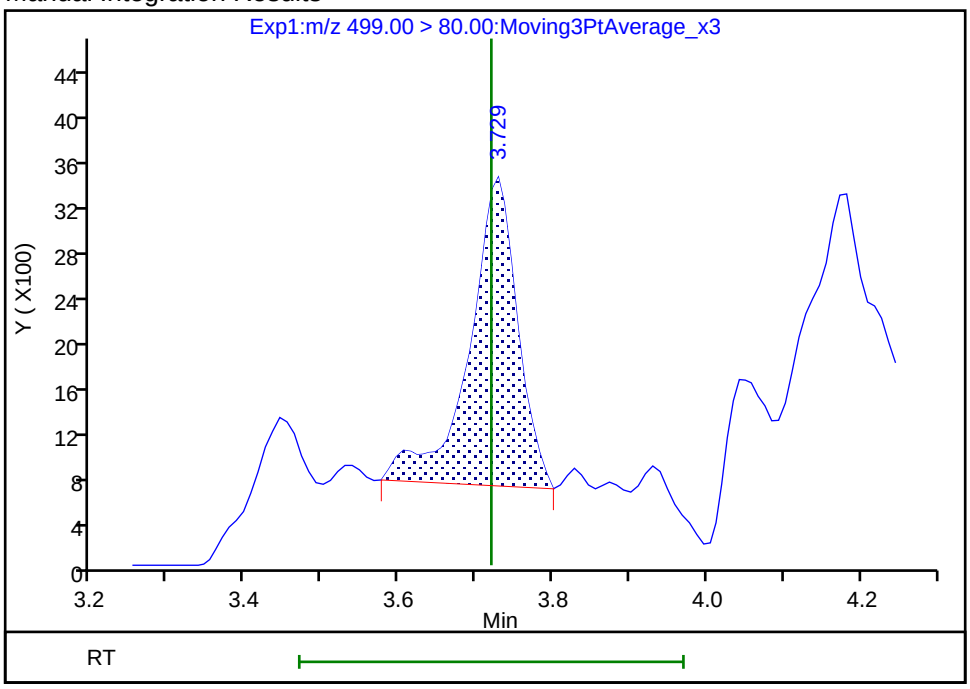
Processing Integration Results

RT: 3.73
Area: 32849
Amount: 0.011408
Amount Units: ng/ml




Manual Integration Results

RT: 3.73
Area: 11873
Amount: 0.004123
Amount Units: ng/ml




Reviewer: zibaa, 11-Sep-2020 14:30:33
Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

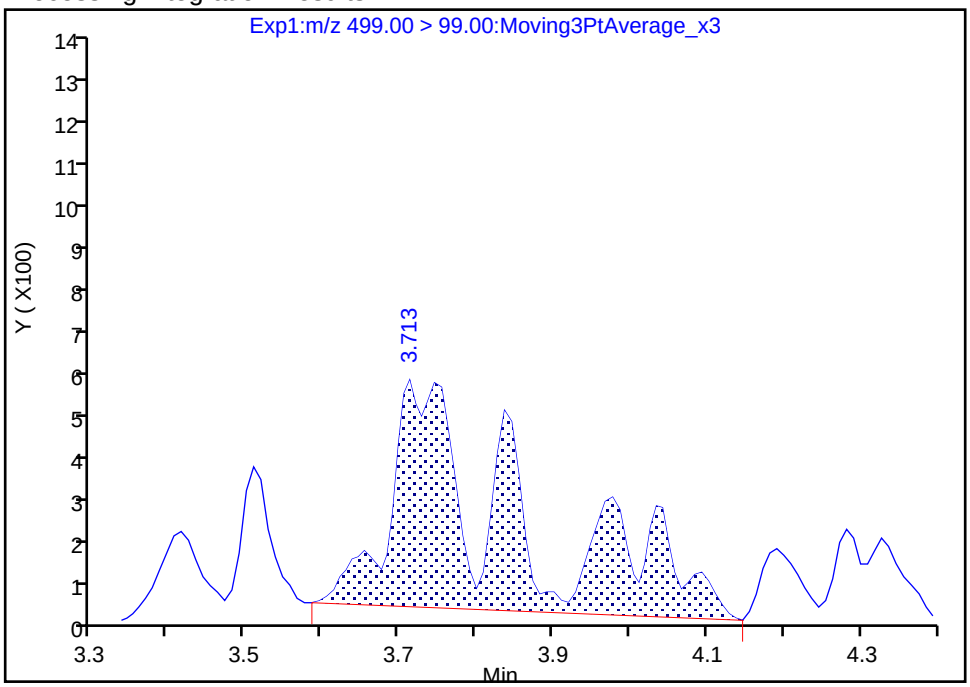
| | | | | | |
|---|---|---|---|---|---|
| Data File: | \\chromfs\Sacramento\ChromData\A9\20200911-103120.b\2020.09.11_A9_PFC_AA_025.d | | | | |
| Injection Date: | 11-Sep-2020 13:14:59 | Instrument ID: | A9 | | |
| Lims ID: | MB 320-411226/1-A | | | | |
| Client ID: | | | | | |
| Operator ID: | SACINSTRLCMS02 | ALS Bottle#: | 13 | Worklist Smp#: | 2 |
| Injection Vol: | 20.0 ul | Dil. Factor: | 1.0000 | | |
| Method: | PFAS_A9 | Limit Group: | LC PFC ICAL | | |
| Column: | | Detector | EXP1 | | |

## 28 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 2

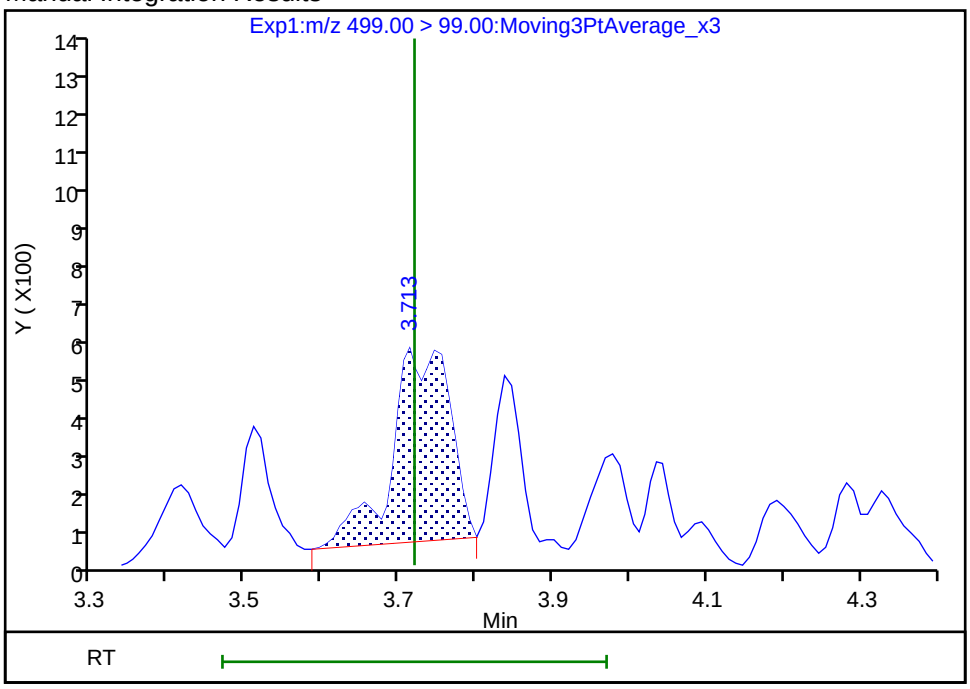
Processing Integration Results

RT: 3.71
Area: 5808
Amount: 0.011408
Amount Units: ng/ml




Manual Integration Results

RT: 3.71
Area: 2570
Amount: 0.004123
Amount Units: ng/ml




Reviewer: zibaa, 11-Sep-2020 14:30:49
Audit Action: Manually Integrated Audit Reason: Baseline

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento  Job No.: 460-217547-1

SDG No.:

Client Sample ID:  Lab Sample ID: CCB 320-410948/1

Matrix: Water  Lab File ID: 2020.09.10_A18_PFC_AAA_016.d

Analysis Method: 537 (modified)  Date Collected:

Extraction Method:  Date Extracted:

Sample wt/vol: 1(mL)  Date Analyzed: 09/10/2020 12:35

Con. Extract Vol.:  Dilution Factor: 1

Injection Volume: 20(uL)  GC Column: Gemini C18 3x50 ID: 3(mm)

% Moisture:  GPC Cleanup:(Y/N) N

Analysis Batch No.: 410948  Units: ng/mL

| CAS NO. | COMPOUND NAME | RESULT | Q | RL | MDL |
|---|---|---|---|---|---|
| 375-22-4 | Perfluorobutanoic acid (PFBA) | 0.0088 | U | 0.050 | 0.0088 |
| 2706-90-3 | Perfluoropentanoic acid (PFPeA) | 0.012 | U | 0.050 | 0.012 |
| 307-24-4 | Perfluorohexanoic acid (PFHxA) | 0.015 | U | 0.050 | 0.015 |
| 375-85-9 | Perfluoroheptanoic acid (PFHpA) | 0.0063 | U | 0.050 | 0.0063 |
| 335-67-1 | Perfluorooctanoic acid (PFOA) | 0.021 | U | 0.050 | 0.021 |
| 375-95-1 | Perfluorononanoic acid (PFNA) | 0.0068 | U | 0.050 | 0.0068 |
| 335-76-2 | Perfluorodecanoic acid (PFDA) | 0.0078 | U | 0.050 | 0.0078 |
| 2058-94-8 | Perfluoroundecanoic acid (PFUnA) | 0.028 | U | 0.050 | 0.028 |
| 307-55-1 | Perfluorododecanoic acid (PFDoA) | 0.014 | U | 0.050 | 0.014 |
| 72629-94-8 | Perfluorotridecanoic acid (PFTriA) | 0.033 | U | 0.050 | 0.033 |
| 376-06-7 | Perfluorotetradecanoic acid (PFTeA) | 0.0073 | U | 0.050 | 0.0073 |
| 375-73-5 | Perfluorobutanesulfonic acid (PFBS) | 0.0050 | U | 0.050 | 0.0050 |
| 355-46-4 | Perfluorohexanesulfonic acid (PFHxS) | 0.00700 | J | 0.050 | 0.0043 |
| 375-92-8 | Perfluoroheptanesulfonic Acid (PFHpS) | 0.0048 | U | 0.050 | 0.0048 |
| 1763-23-1 | Perfluorooctanesulfonic acid (PFOS) | 0.014 | U | 0.050 | 0.014 |
| 335-77-3 | Perfluorodecanesulfonic acid (PFDS) | 0.0080 | U | 0.050 | 0.0080 |
| 754-91-6 | Perfluorooctanesulfonamide (FOSA) | 0.0088 | U | 0.050 | 0.0088 |
| 2355-31-9 | N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA) | 0.078 | U | 0.50 | 0.078 |
| 2991-50-6 | N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA) | 0.048 | U | 0.50 | 0.048 |
| 27619-97-2 | 6:2 FTS | 0.050 | U | 0.50 | 0.050 |
| 39108-34-4 | 8:2 FTS | 0.050 | U | 0.50 | 0.050 |

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento  Job No.: 460-217547-1

SDG No.:

Client Sample ID:  Lab Sample ID: CCB 320-410948/1

Matrix: Water  Lab File ID: 2020.09.10_A18_PFC_AAA_016.d

Analysis Method: 537 (modified)  Date Collected:

Extraction Method:  Date Extracted:

Sample wt/vol: 1(mL)  Date Analyzed: 09/10/2020 12:35

Con. Extract Vol.:  Dilution Factor: 1

Injection Volume: 20(uL)  GC Column: Gemini C18 3x50 ID: 3(mm)

% Moisture:  GPC Cleanup:(Y/N) N

Analysis Batch No.: 410948  Units: ng/mL

| CAS NO. | ISOTOPE DILUTION | %REC | Q | LIMITS |
|---|---|---|---|---|
| STL00992 | 13C4 PFBA | 89 | | 25-150 |
| STL01893 | 13C5 PFPeA | 88 | | 25-150 |
| STL00993 | 13C2 PFHxA | 102 | | 25-150 |
| STL01892 | 13C4 PFHpA | 99 | | 25-150 |
| STL00990 | 13C4 PFOA | 100 | | 25-150 |
| STL00995 | 13C5 PFNA | 106 | | 25-150 |
| STL00996 | 13C2 PFDA | 115 | | 25-150 |
| STL00997 | 13C2 PFUnA | 109 | | 25-150 |
| STL00998 | 13C2 PFDoA | 107 | | 25-150 |
| STL02116 | 13C2 PFTeDA | 92 | | 25-150 |
| STL02337 | 13C3 PFBS | 103 | | 25-150 |
| STL00994 | 18O2 PFHxS | 103 | | 25-150 |
| STL00991 | 13C4 PFOS | 99 | | 25-150 |
| STL01056 | 13C8 FOSA | 102 | | 25-150 |
| STL02118 | d3-NMeFOSAA | 96 | | 25-150 |
| STL02117 | d5-NEtFOSAA | 105 | | 25-150 |
| STL02279 | M2-6:2 FTS | 100 | | 25-150 |
| STL02280 | M2-8:2 FTS | 93 | | 25-150 |

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\A18\20200910-103001.b\2020.09.10_A18_PFC_AAA_016.d
Lims ID: CCB
Client ID:
Sample Type: CCB
Inject. Date: 10-Sep-2020 12:35:56 ALS Bottle#: 50 Worklist Smp#: 1
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Sample Info: CCB (53)
Misc. Info.: Plate: 4 Rack: 1
Operator ID: TAISACA18-PC\A-18 Instrument ID: A18

Method: \\chromfs\Sacramento\ChromData\A18\20200910-103001.b\PFAS_A18V2.m
Limit Group: LC PFC ICAL
Last Update: 10-Sep-2020 13:19:46 Calib Date: 25-Aug-2020 17:37:57
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\A18\20200825-102078.b\2020.08.25_A18_ICAL_A_017.d

Column 1 : Gemini C18 3um 3mm x 50 mm ( 3.00 mm) Det: EXP1
Process Host: CTX1002

First Level Reviewer: vangm Date: 10-Sep-2020 13:19:46
Ratio Calibration: CCV Sample: \\chromfs\Sacramento\ChromData\A18\20200910-103000.b\2020.09.10_A18_PFC_A_063.d

| Signal | RT | EXP RT | DLT RT | REL RT | Response | Amount ng/ml | Ratio(Limits) | %Rec | S/N | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| D 1 13C4 PFBA | | | | | | | | | | |
| 217.00 > 172.00 | 2.565 | 2.555 | 0.010 | 0.625 | 17187040 | 2.24 | | 89.4 | 7081 | |
| D 4 13C5 PFPeA | | | | | | | | | | |
| 267.90 > 223.00 | 2.919 | 2.907 | 0.012 | 0.711 | 13195981 | 2.21 | | 88.3 | 4000 | |
| 5 Perfluoropentanoic acid | | | | | | | | | | |
| 262.90 > 219.00 | 2.919 | 2.907 | 0.012 | 1.000 | 16133 | 0.003066 | | | 1.0 | |
| D 9 13C3 PFBS | | | | | | | | | | |
| 301.90 > 80.00 | 2.950 | 2.938 | 0.012 | 0.718 | 11196892 | 2.38 | | 103 | 5734 | |
| D 7 M2-4:2 FTS | | | | | | | | | | |
| 329.00 > 81.00 | 3.248 | 3.236 | 0.012 | 0.791 | 2549000 | 2.25 | | 96.5 | 1154 | |
| D 11 13C2 PFHxA | | | | | | | | | | |
| 315.00 > 270.00 | 3.298 | 3.286 | 0.012 | 0.803 | 15236733 | 2.55 | | 102 | 6830 | |
| D 14 13C3 HFPO-DA | | | | | | | | | | |
| 287.00 > 169.00 | 3.415 | 3.413 | 0.002 | 0.832 | 2814585 | 2.30 | | 92.2 | 6379 | |
| D 17 18O2 PFHxS | | | | | | | | | | |
| 403.00 > 84.00 | 3.701 | 3.696 | 0.005 | 0.901 | 6073610 | 2.45 | | 103 | 6526 | |
| D 18 13C4 PFHpA | | | | | | | | | | |
| 367.00 > 322.00 | 3.701 | 3.696 | 0.005 | 0.901 | 12636341 | 2.48 | | 99.2 | 6624 | |
| 15 Perfluorohexanesulfonic acid | | | | | | | | | | M |
| 399.00 > 80.00 | 3.711 | 3.696 | 0.015 | 1.003 | 21244 | 0.007002 | Target=3.48 | | 8.3 | M |
| 399.00 > 99.00 | 3.711 | 3.696 | 0.015 | 1.003 | 6718 | | 3.16(1.74-5.21) | | 5.8 | M |
| 16 Perfluoroheptanoic acid | | | | | | | | | | |
| 363.00 > 319.00 | 3.701 | 3.696 | 0.005 | 1.000 | 13922 | 0.002717 | Target=3.70 | | 1.6 | |
| 363.00 > 169.00 | 3.701 | 3.696 | 0.005 | 1.000 | 2969 | | 4.69(1.85-5.56) | | 3.2 | |
| D 20 M2-6:2 FTS | | | | | | | | | | |
| 429.00 > 81.00 | 4.074 | 4.072 | 0.002 | 0.992 | 2259607 | 2.38 | | 100 | 1700 | |
| 21 6:2 FTS | | | | | | | | | | |
| 427.00 > 407.00 | 4.074 | 4.072 | 0.002 | 1.000 | 18508 | 0.008462 | | | 36.0 | |

| Signal | RT | EXP RT | DLT RT | REL RT | Response | Amount ng/ml | Ratio(Limits) | %Rec | S/N | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| $ 26 13C8 PFOA | | | | | | | | | | |
| 421.00 > 376.00 | 4.090 | 4.080 | 0.010 | 0.996 | 8020753 | 2.45 | | 100 | 6281 | |
| 22 Perfluorooctanoic acid | | | | | | | | | | M |
| 413.00 > 369.00 | 4.107 | 4.096 | 0.011 | 1.002 | 41784 | 0.008474 | Target=3.12 | | 6.6 | M |
| 413.00 > 169.00 | 4.099 | 4.096 | 0.003 | 1.000 | 14611 | | 2.86(1.56-4.68) | | 13.4 | M |
| D 25 13C4 PFOA | | | | | | | | | | |
| 417.00 > 372.00 | 4.099 | 4.096 | 0.003 | 0.998 | 12081246 | 2.49 | | 99.5 | 6164 | |
| * 23 13C2 PFOA | | | | | | | | | | |
| 415.00 > 370.00 | 4.107 | 4.096 | 0.011 | | 12124580 | 2.50 | | | 8332 | |
| $ 28 13C8 PFOS | | | | | | | | | | |
| 507.00 > 99.00 | 4.462 | 4.451 | 0.011 | 1.087 | 1274656 | 2.43 | | 102 | 3219 | |
| D 27 13C4 PFOS | | | | | | | | | | |
| 503.00 > 80.00 | 4.462 | 4.451 | 0.011 | 1.087 | 3981555 | 2.37 | | 99.1 | 1921 | |
| D 30 13C5 PFNA | | | | | | | | | | |
| 468.00 > 423.00 | 4.478 | 4.467 | 0.011 | 1.090 | 10401435 | 2.66 | | 106 | 8043 | |
| D 33 13C8 FOSA | | | | | | | | | | |
| 506.00 > 78.00 | 4.794 | 4.791 | 0.003 | 1.167 | 6914801 | 2.55 | | 102 | 5560 | |
| 34 Perfluorooctanesulfonamide | | | | | | | | | | |
| 498.00 > 78.00 | 4.794 | 4.791 | 0.003 | 1.000 | 730 | 0.000284 | | | 4.8 | |
| D 39 13C2 PFDA | | | | | | | | | | |
| 515.00 > 470.00 | 4.837 | 4.826 | 0.011 | 1.178 | 10906261 | 2.87 | | 115 | 11482 | |
| D 38 M2-8:2 FTS | | | | | | | | | | |
| 529.00 > 81.00 | 4.837 | 4.834 | 0.003 | 1.178 | 3042406 | 2.22 | | 92.8 | 1936 | |
| 36 8:2 FTS | | | | | | | | | | |
| 527.00 > 507.00 | 4.837 | 4.834 | 0.003 | 1.000 | 450 | 0.000200 | | | 4.7 | |
| D 40 d3-NMeFOSAA | | | | | | | | | | |
| 573.00 > 419.00 | 5.010 | 4.997 | 0.013 | 1.220 | 6135512 | 2.41 | | 96.3 | 6163 | |
| D 43 13C2 PFUnA | | | | | | | | | | |
| 565.00 > 520.00 | 5.166 | 5.155 | 0.011 | 1.258 | 10225942 | 2.72 | | 109 | 9839 | |
| D 44 d5-NEtFOSAA | | | | | | | | | | |
| 589.00 > 419.00 | 5.175 | 5.164 | 0.011 | 1.260 | 7105664 | 2.64 | | 105 | 5079 | |
| D 47 d7-N-MeFOSE-M | | | | | | | | | | |
| 623.00 > 59.00 | 5.248 | 5.256 | -0.008 | 1.278 | 8368217 | 12.5 | | 99.7 | 3436 | |
| D 49 d-N-MeFOSA-M | | | | | | | | | | |
| 515.00 > 169.00 | 5.279 | 5.267 | 0.012 | 1.285 | 2531428 | 2.66 | | 106 | 47.1 | |
| D 52 d9-N-EtFOSE-M | | | | | | | | | | |
| 639.00 > 59.00 | 5.426 | 5.424 | 0.002 | 1.321 | 10235461 | 12.4 | | 99.3 | 5119 | |
| D 54 d-N-EtFOSA-M | | | | | | | | | | |
| 531.00 > 169.00 | 5.448 | 5.446 | 0.002 | 1.327 | 2483414 | 2.55 | | 102 | 393 | |
| 57 Perfluorododecanoic acid | | | | | | | | | | |
| 613.00 > 569.00 | 5.458 | 5.446 | 0.012 | 1.000 | 8362 | 0.002059 | Target=8.97 | | 4.2 | |
| 613.00 > 169.00 | 5.448 | 5.446 | 0.002 | 0.998 | 1257 | | 6.65(4.48-13.45) | | 3.7 | |
| D 56 13C2 PFDoA | | | | | | | | | | |
| 615.00 > 570.00 | 5.458 | 5.457 | 0.001 | 1.329 | 9930353 | 2.68 | | 107 | 7699 | |
| D 61 13C2 PFTeDA | | | | | | | | | | |
| 715.00 > 670.00 | 5.970 | 5.970 | 0.0 | 1.454 | 7011721 | 2.29 | | 91.6 | 5612 | |

| Signal | RT | EXP RT | DLT RT | REL RT | Response | Amount ng/ml | Ratio(Limits) | %Rec | S/N | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| D 64 13C2 PFHxDA | | | | | | | | | | |
| 815.00 > 770.00 | 6.420 | 6.403 | 0.017 | 1.563 | 5457395 | 2.44 | | 97.5 | 6713 | |
| 63 Perfluorohexadecanoic acid | | | | | | | | | | |
| 813.00 > 769.00 | 6.429 | 6.412 | 0.017 | 1.001 | 41429 | -0.002225 | Target=8.21 | | 34.5 | |
| 813.00 > 169.00 | 6.420 | 6.412 | 0.008 | 1.000 | 4728 | | 8.76(4.10-12.31) | | 41.3 | |

## QC Flag Legend

Review Flags

M - Manually Integrated

## Reagents:

LCPFC_LL0_00053 Amount Added: 1.00 Units: mL

Report Date: 10-Sep-2020 13:19:46 Chrom Revision: 2.3 09-Sep-2020 15:12:58

Eurofins TestAmerica, Sacramento

Data File: \\chromfs\Sacramento\ChromData\A18\20200910-103001.b\2020.09.10_A18_PFC_AAA_016.d

Injection Date: 10-Sep-2020 12:35:56 Instrument ID: A18

Lims ID: CCB

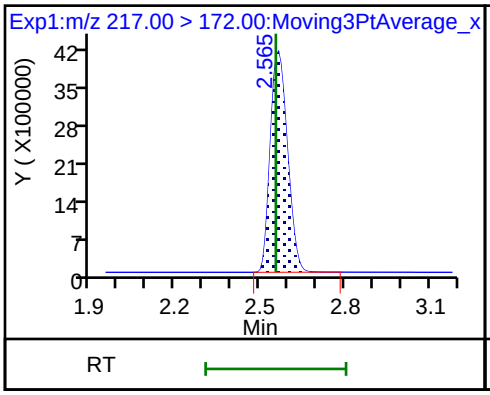
Client ID:

Operator ID: TAISACA18-PC\A-18 ALS Bottle#: 50 Worklist Smp#: 1

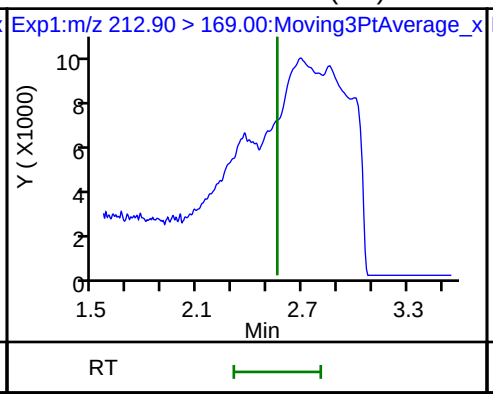
Injection Vol: 20.0 ul Dil. Factor: 1.0000

Method: PFAS_A18V2 Limit Group: LC PFC ICAL

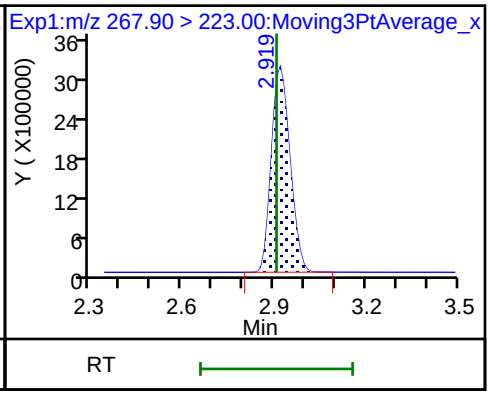
D 1 13C4 PFBA



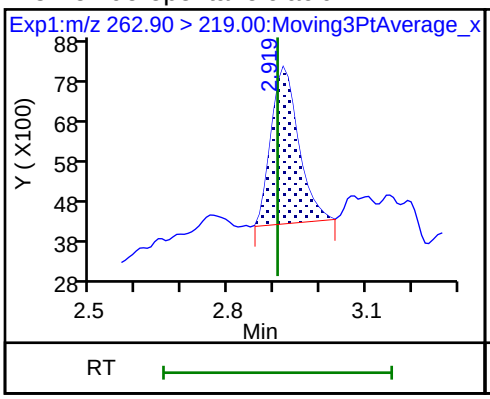

2 Perfluorobutanoic acid (ND)



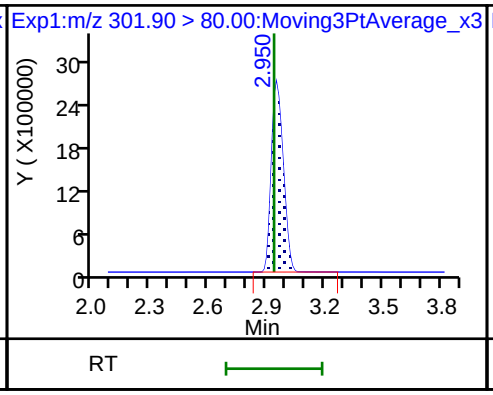

D 4 13C5 PFPeA



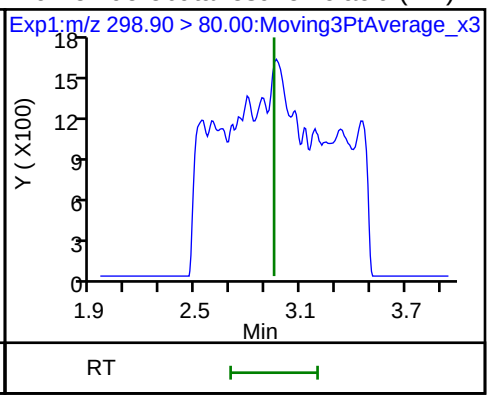

5 Perfluoropentanoic acid



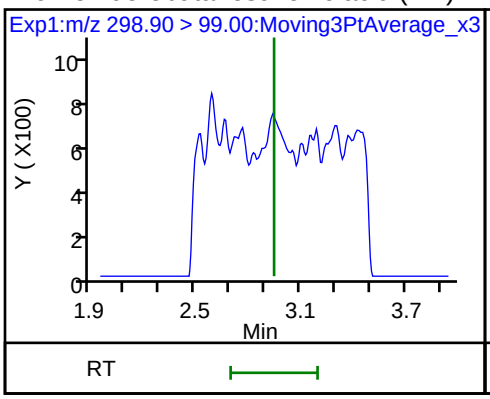

D 9 13C3 PFBS



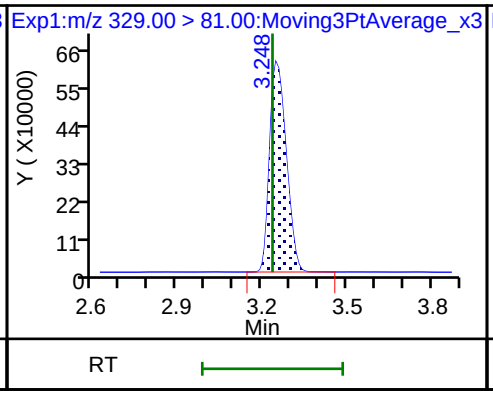

6 Perfluorobutanesulfonic acid (ND)



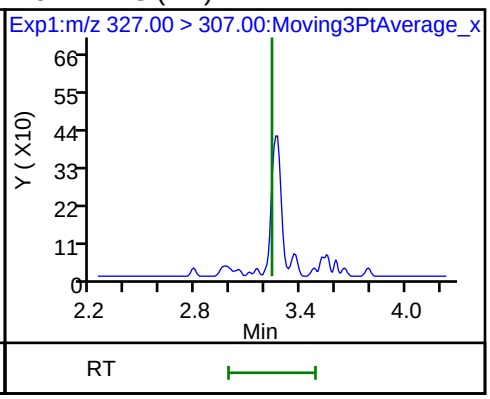

6 Perfluorobutanesulfonic acid (ND)



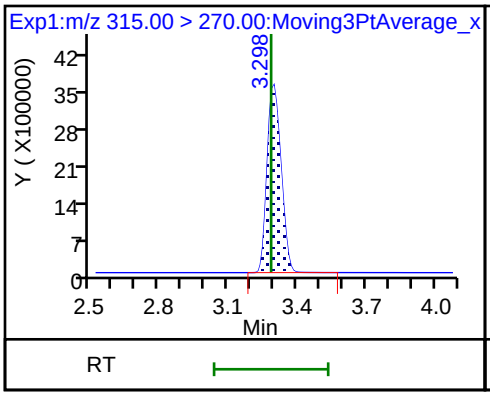

D 7 M2-4:2 FTS



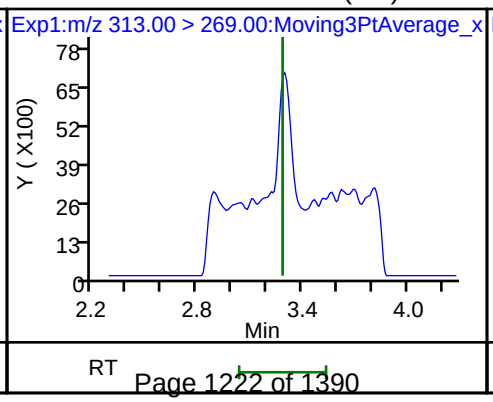

8 4:2 FTS (ND)



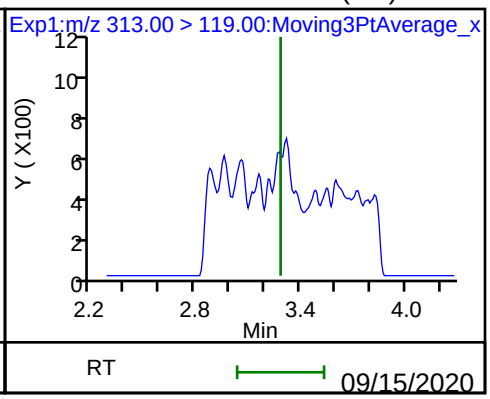

D 11 13C2 PFHxA



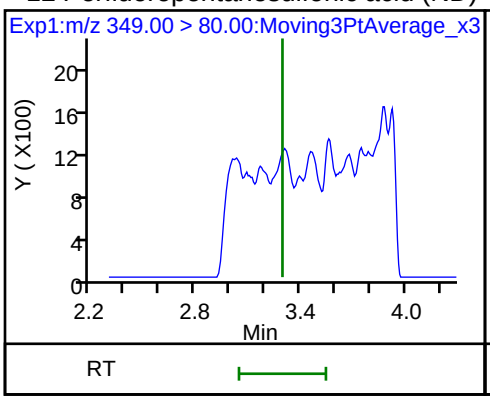

10 Perfluorohexanoic acid (ND)



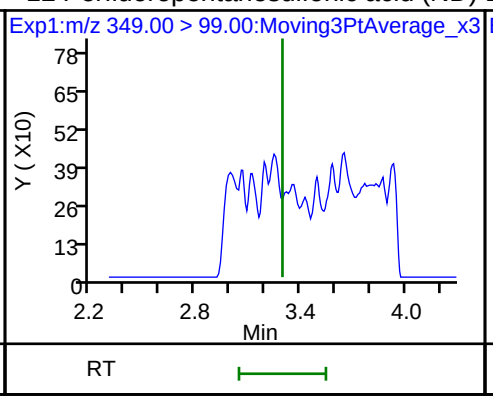

10 Perfluorohexanoic acid (ND)



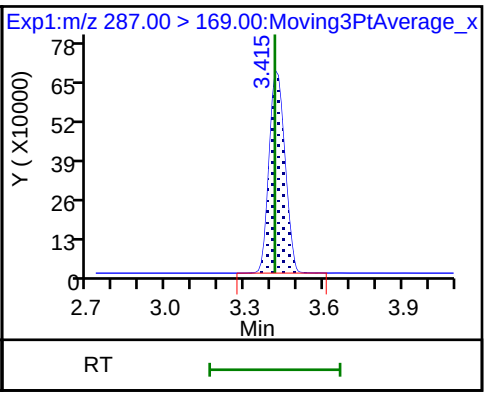
12 Perfluoropentanesulfonic acid (ND)



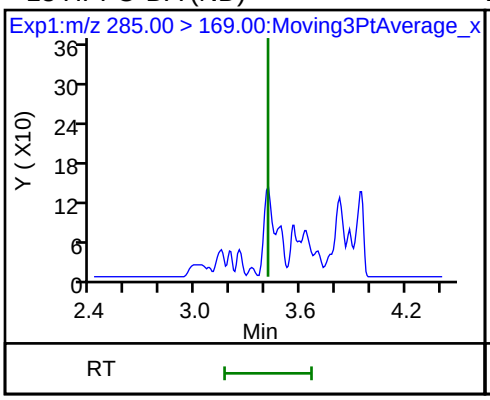

12 Perfluoropentanesulfonic acid (ND)



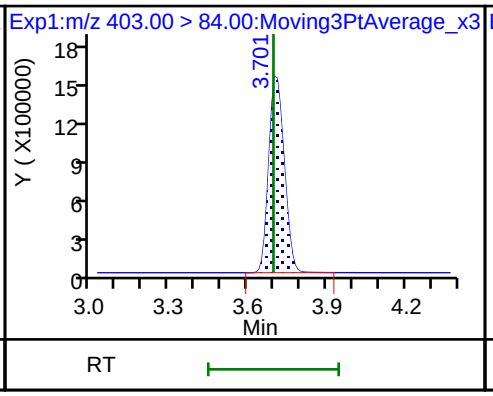

D 14 13C3 HFPO-DA



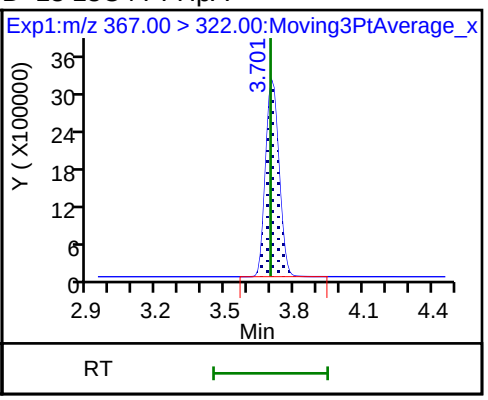

13 HPFO-DA (ND)



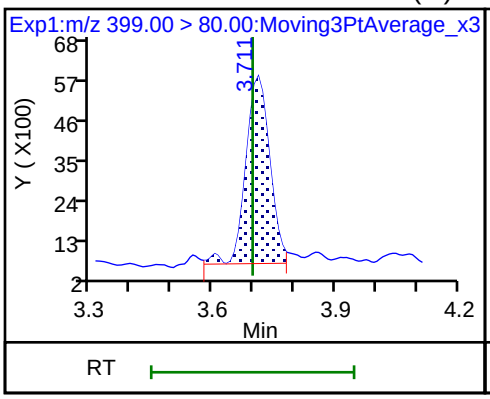

D 17 18O2 PFHxS



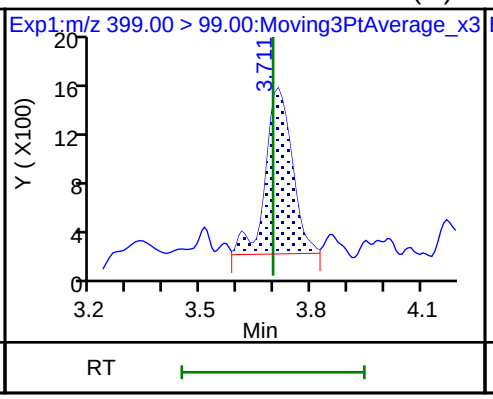

D 18 13C4 PFHpA



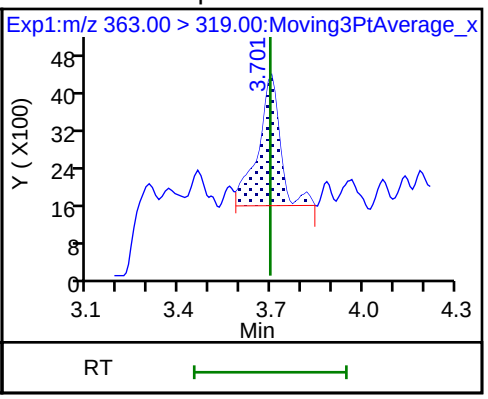

15 Perfluorohexanesulfonic acid (M)



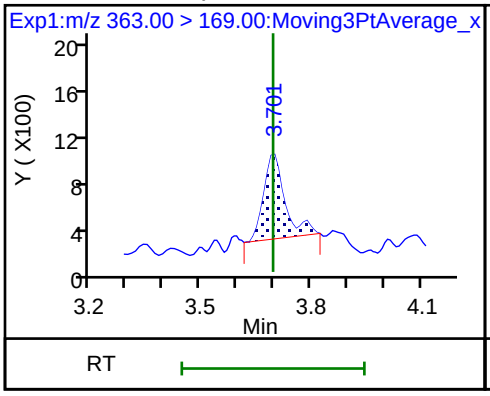

15 Perfluorohexanesulfonic acid (M)



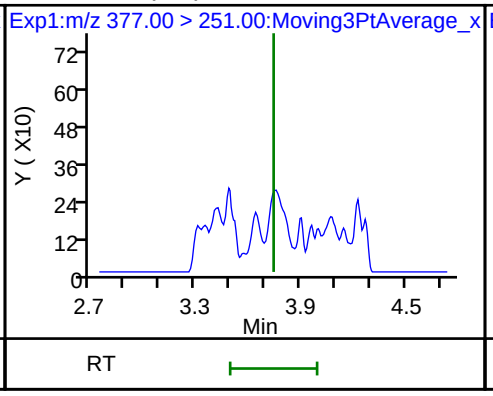

16 Perfluoroheptanoic acid



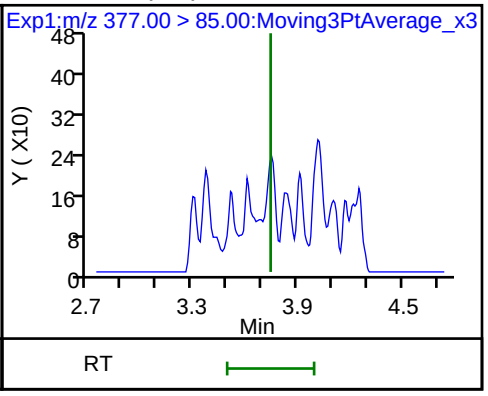

16 Perfluoroheptanoic acid



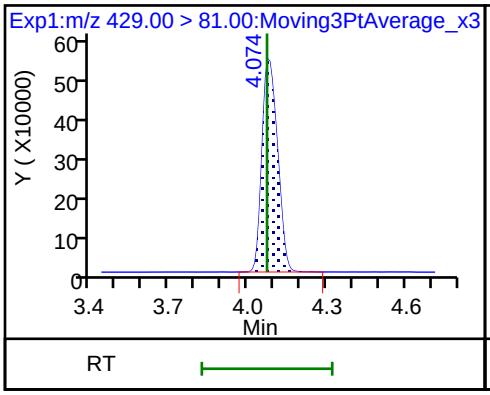

19 DONA (ND)



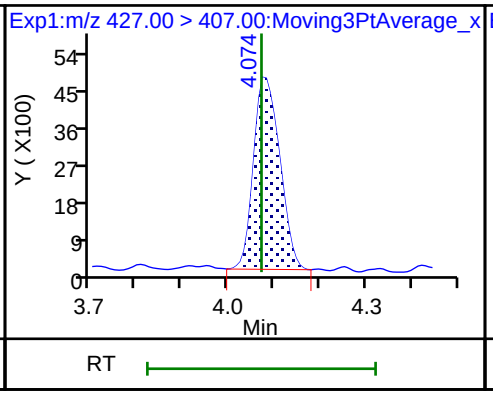

19 DONA (ND)



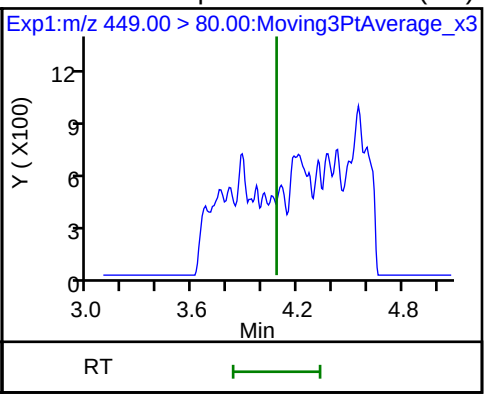
D 20 M2-6:2 FTS



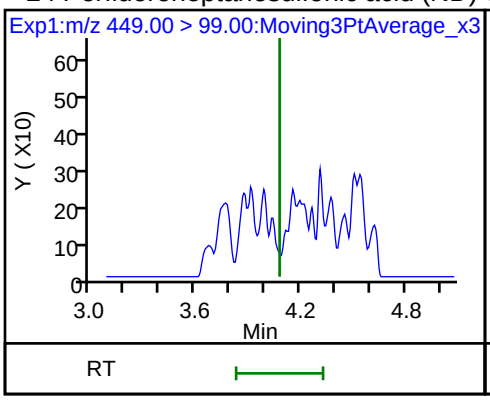

21 6:2 FTS



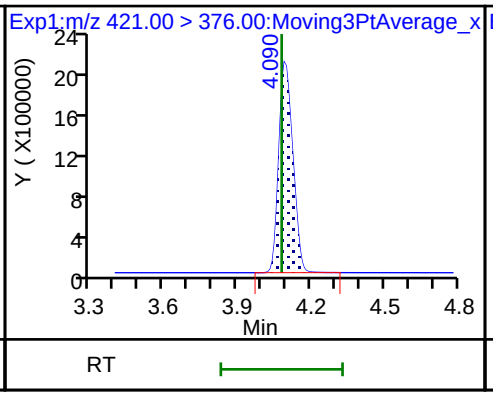

24 Perfluoroheptanesulfonic acid (ND)



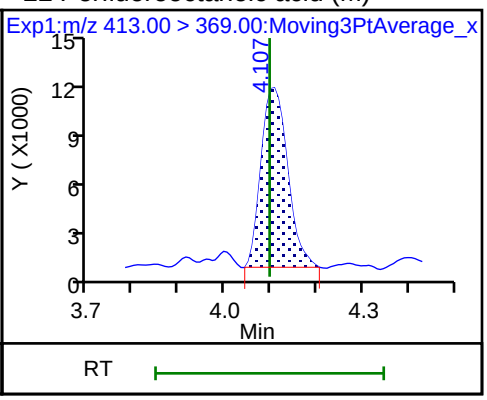

24 Perfluoroheptanesulfonic acid (ND)



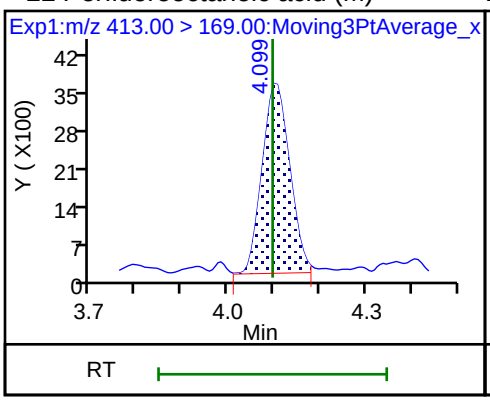

$ 26 13C8 PFOA



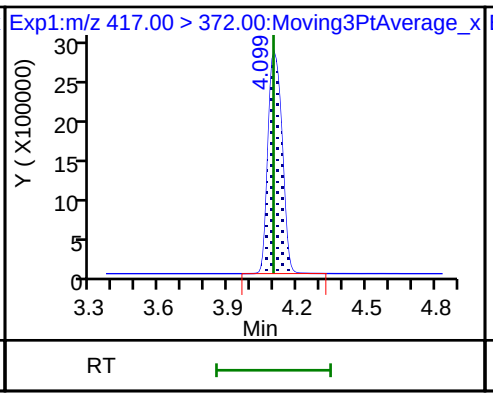

22 Perfluorooctanoic acid (M)



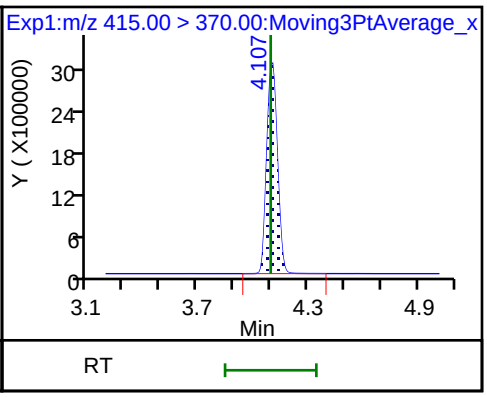

22 Perfluorooctanoic acid (M)



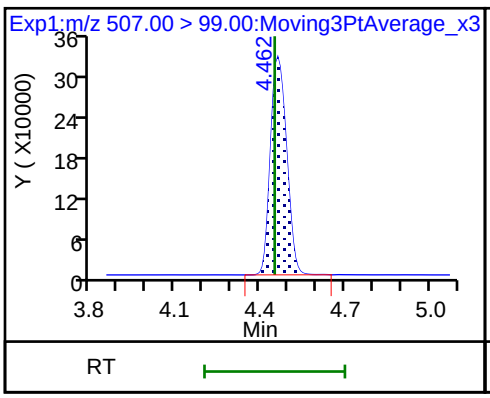

D 25 13C4 PFOA




* 23 13C2 PFOA




$ 28 13C8 PFOS

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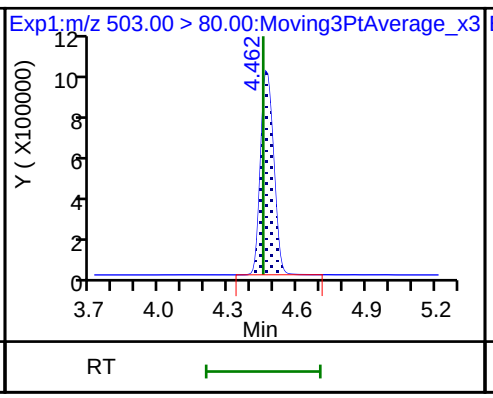
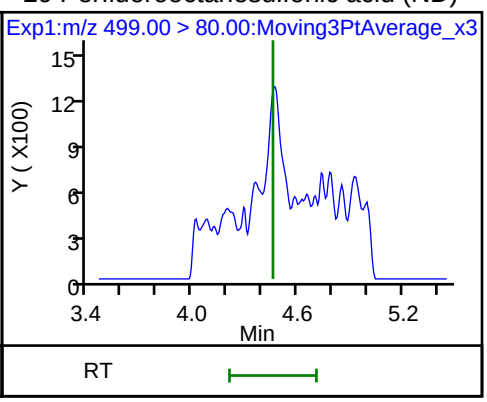
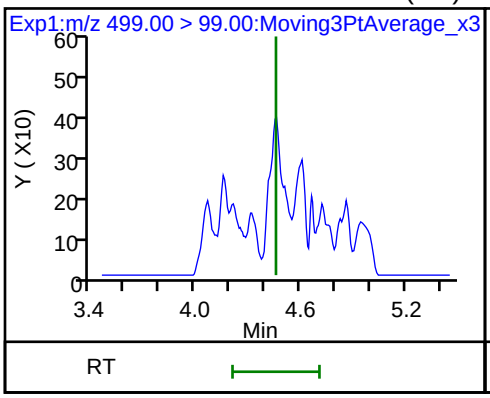


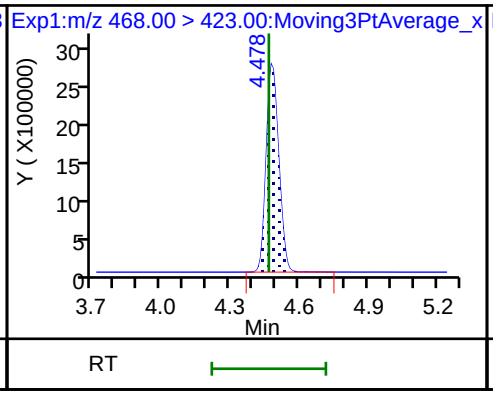

29 Perfluorooctanesulfonic acid (ND)



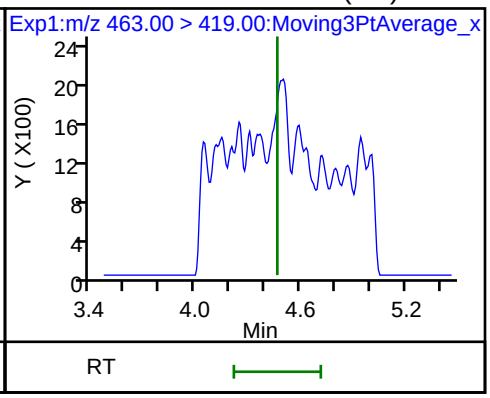
29 Perfluorooctanesulfonic acid (ND)



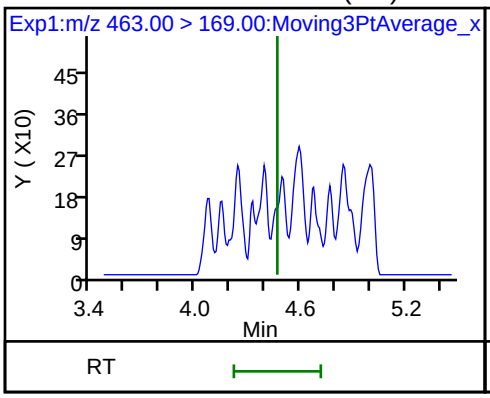

D 30 13C5 PFNA



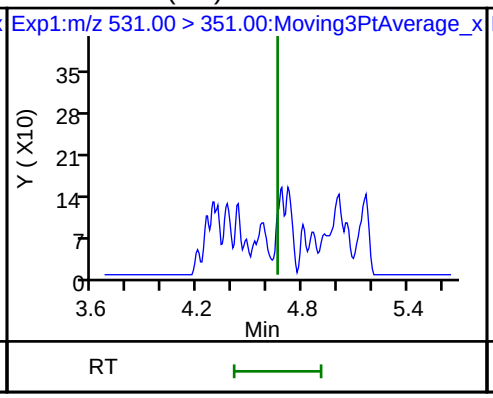

31 Perfluorononanoic acid (ND)



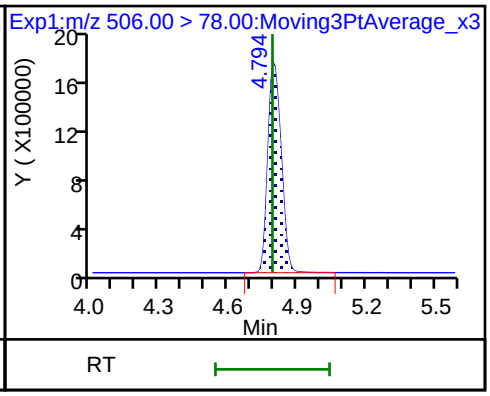

31 Perfluorononanoic acid (ND)



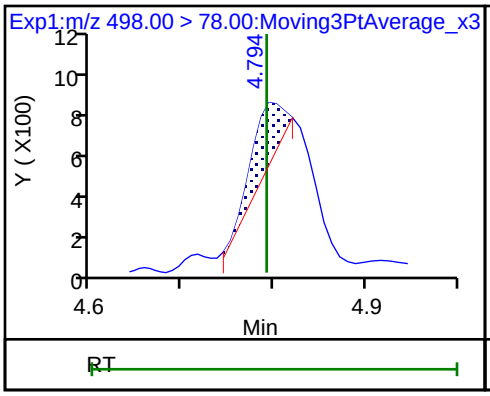

32 9ClFOS (ND)



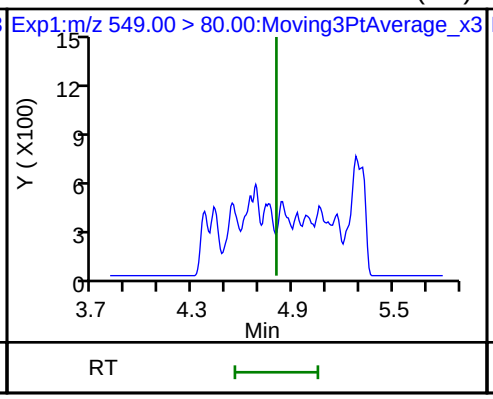

D 33 13C8 FOSA



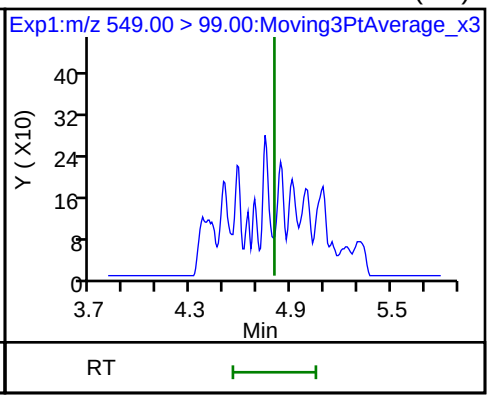

34 Perfluorooctanesulfonamide



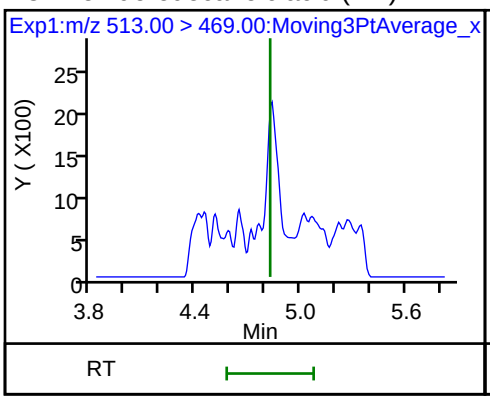

35 Perfluorononanesulfonic acid (ND)



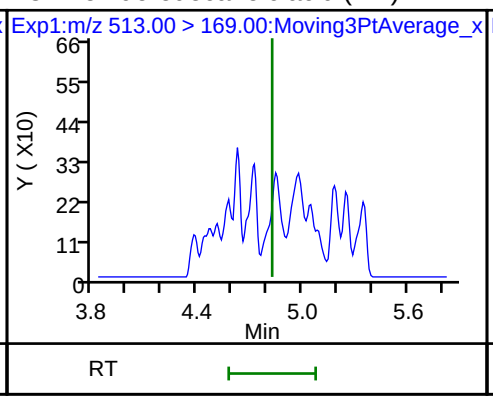

35 Perfluorononanesulfonic acid (ND)



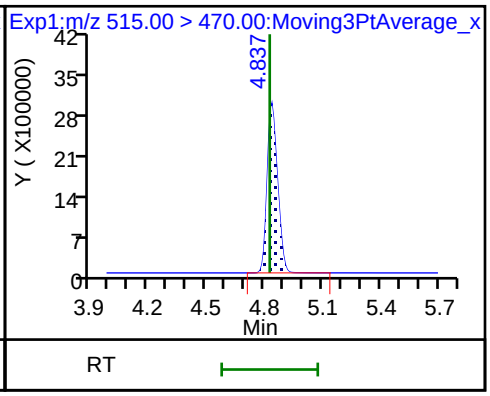

37 Perfluorodecanoic acid (ND)



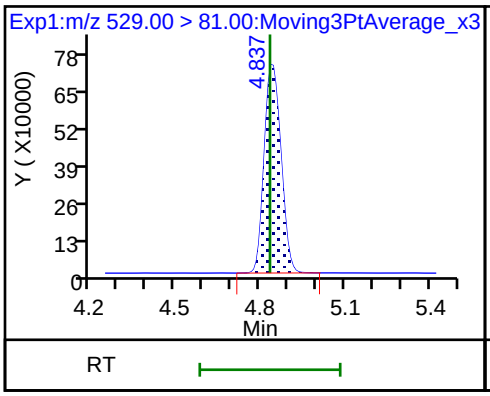

37 Perfluorodecanoic acid (ND)



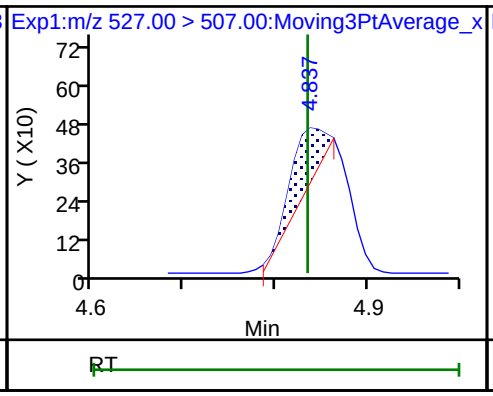

D 39 13C2 PFDA



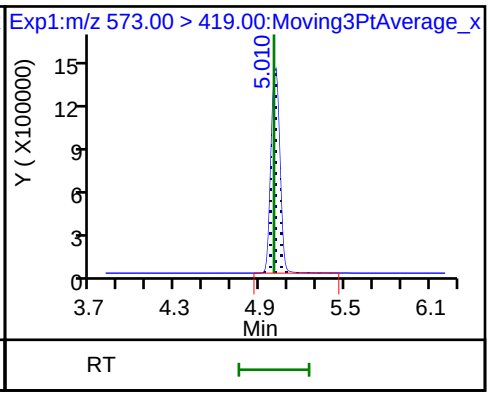
D 38 M2-8:2 FTS



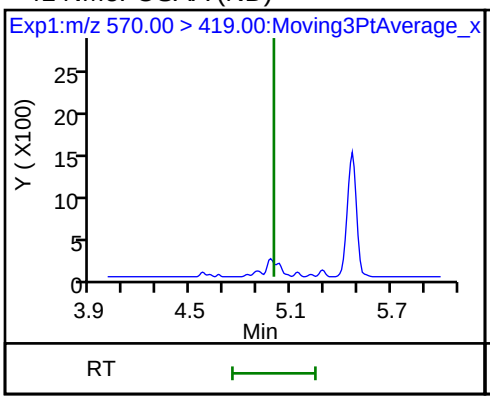

36 8:2 FTS



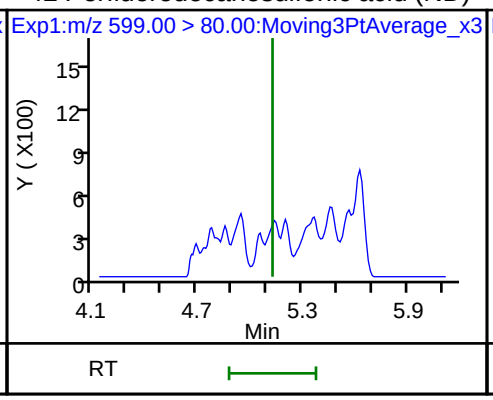

D 40 d3-NMeFOSAA



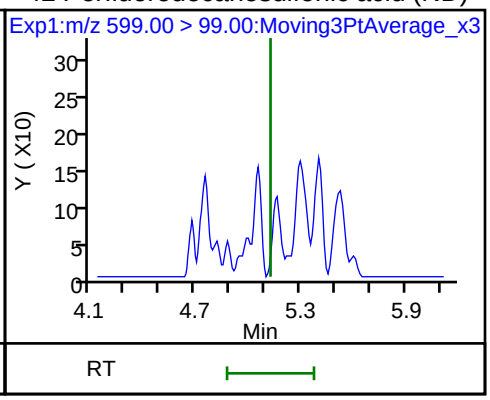

41 NMeFOSAA (ND)



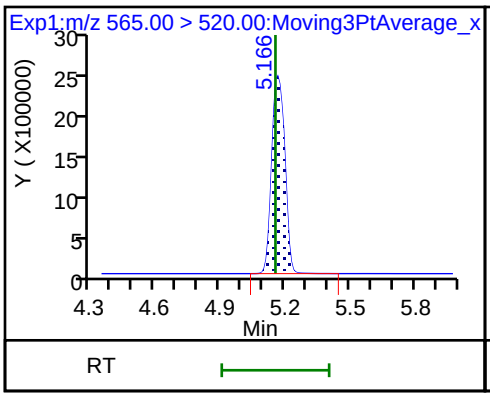

42 Perfluorodecanesulfonic acid (ND)



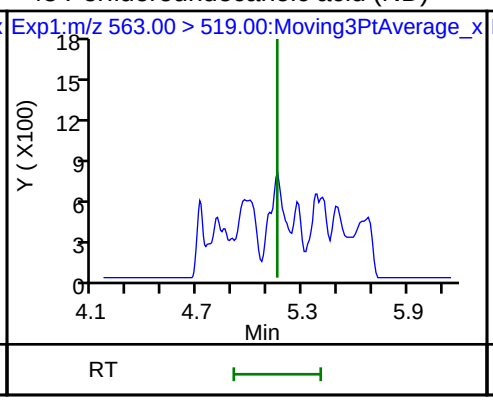

42 Perfluorodecanesulfonic acid (ND)



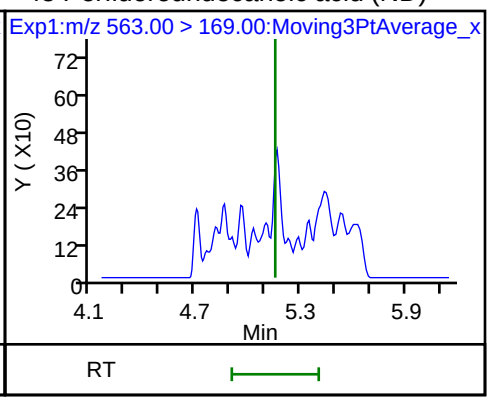

D 43 13C2 PFUnA



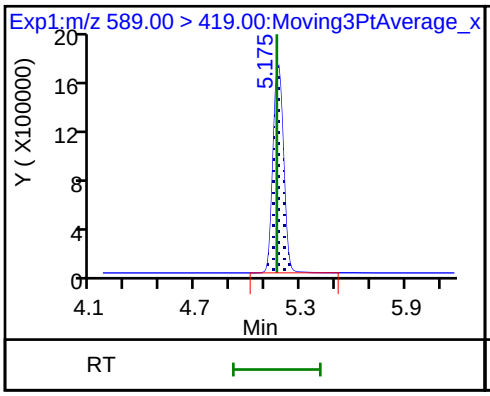

45 Perfluoroundecanoic acid (ND)



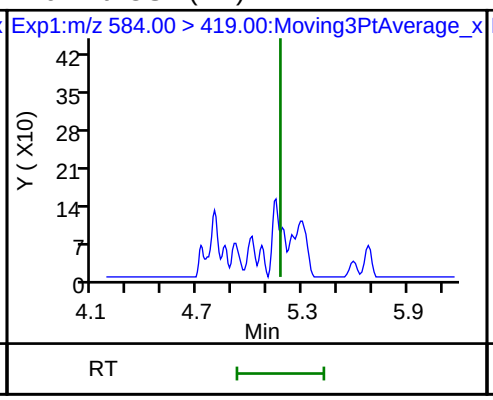

45 Perfluoroundecanoic acid (ND)



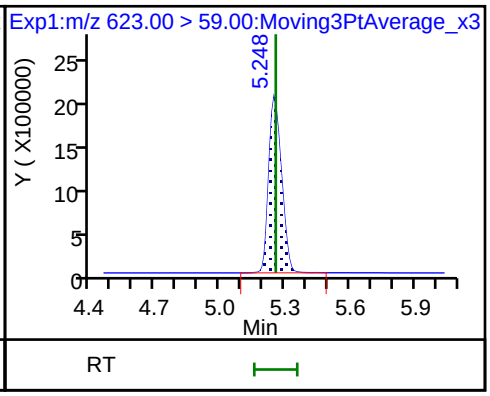

D 44 d5-NEtFOSAA



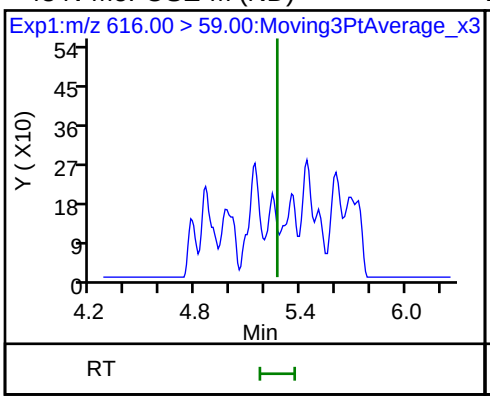

46 NEtFOSA (ND)



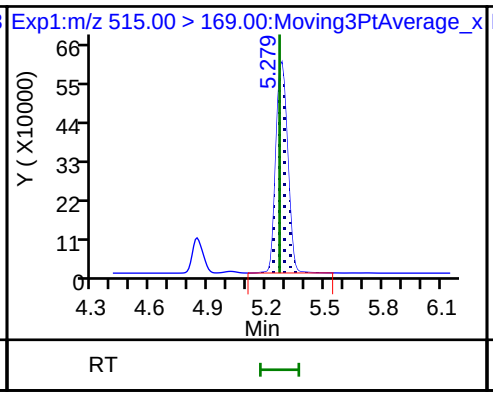

D 47 d7-N-MeFOSE-M



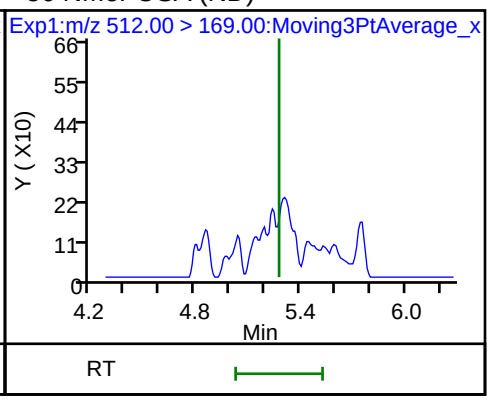
48 N-MeFOSE-M (ND)



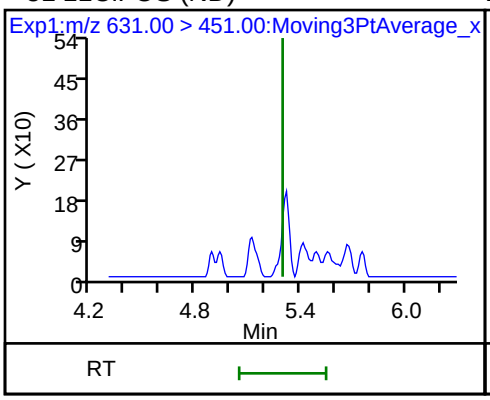

D 49 d-N-MeFOSA-M



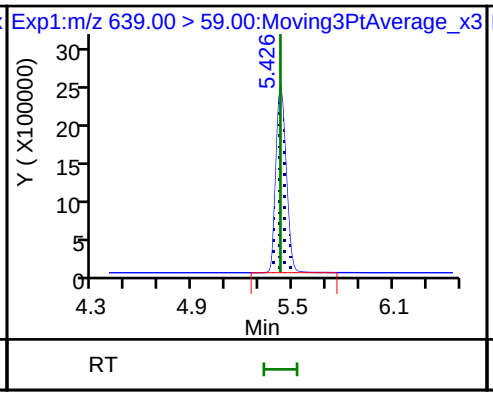

50 NMeFOSA (ND)



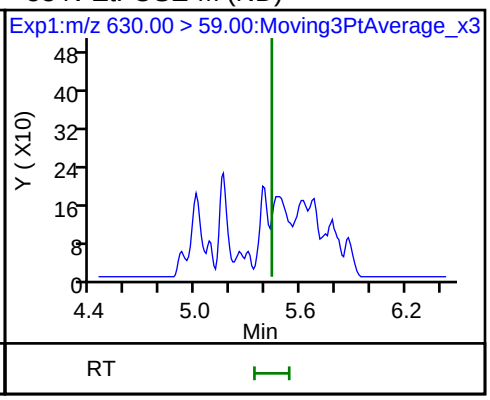

51 11ClFOS (ND)



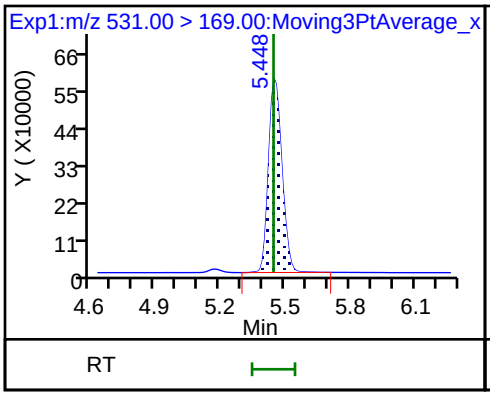

D 52 d9-N-EtFOSE-M



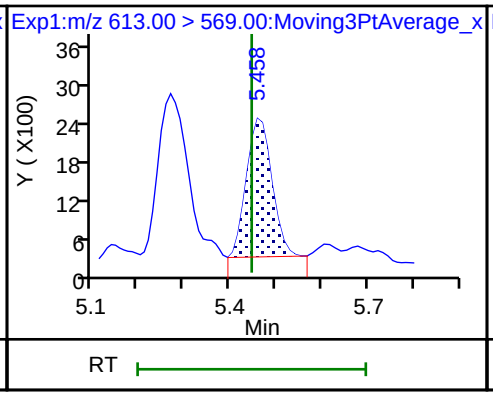

53 N-EtFOSE-M (ND)



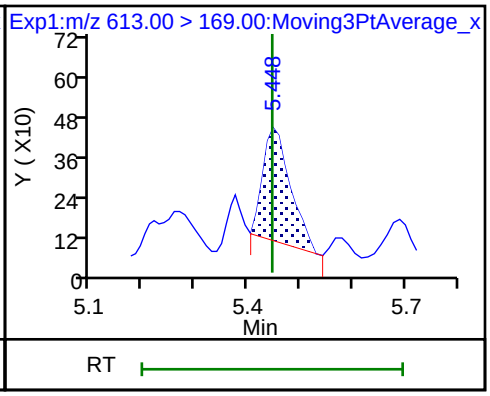

D 54 d-N-EtFOSA-M



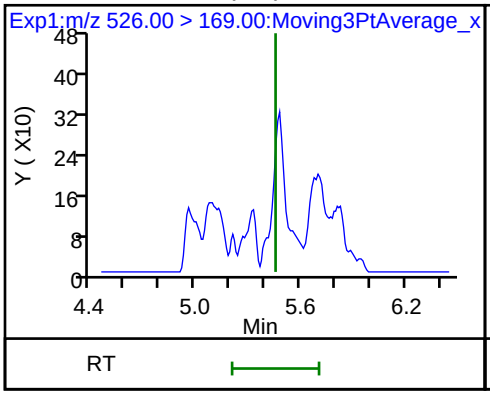

57 Perfluorododecanoic acid



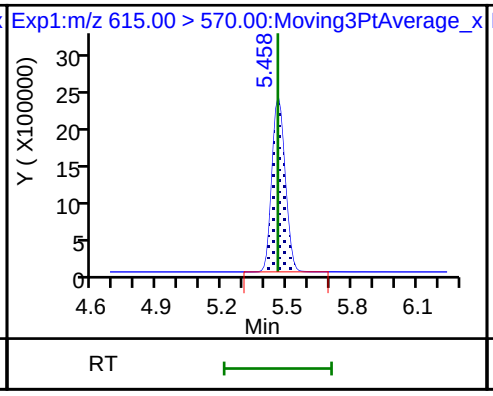

57 Perfluorododecanoic acid



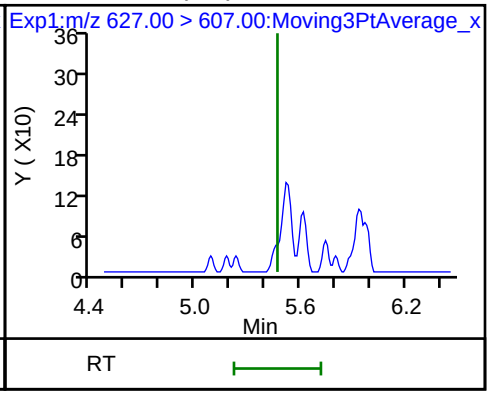

55 N-EtFOSA-M (ND)



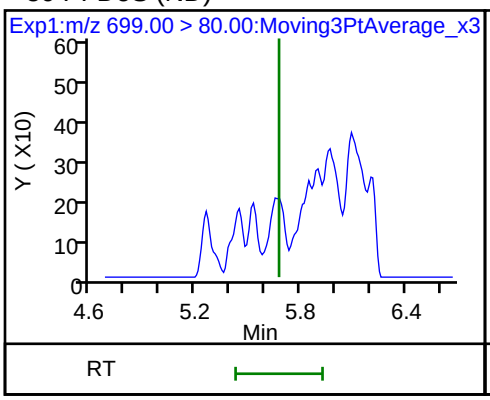

D 56 13C2 PFDoA



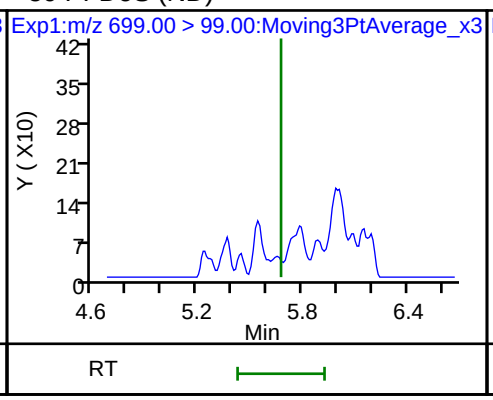

58 10:2 FTS (ND)



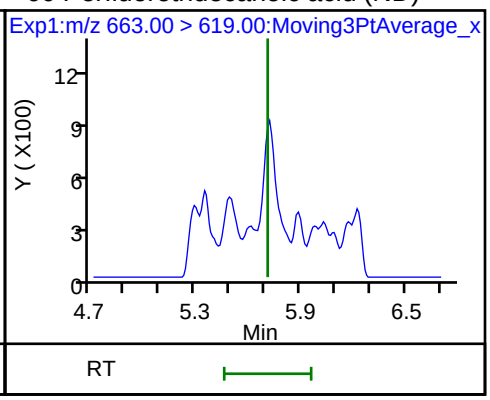
59 PFDoS (ND)



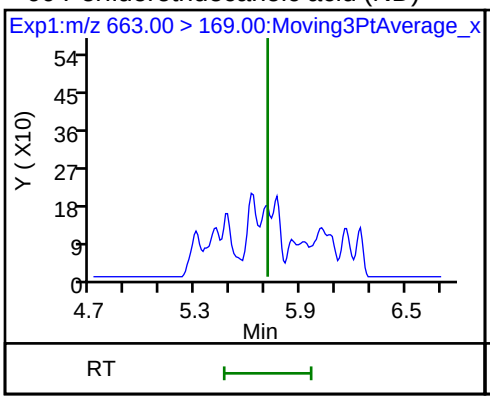

59 PFDoS (ND)



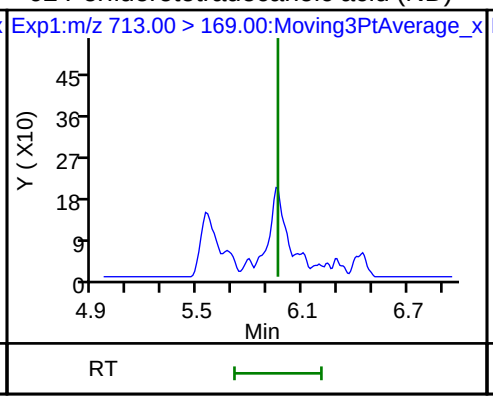

60 Perfluorotridecanoic acid (ND)



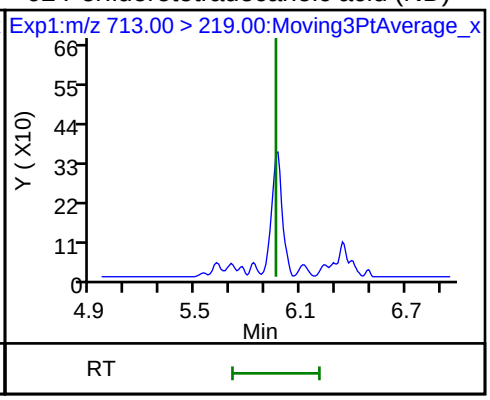

60 Perfluorotridecanoic acid (ND)



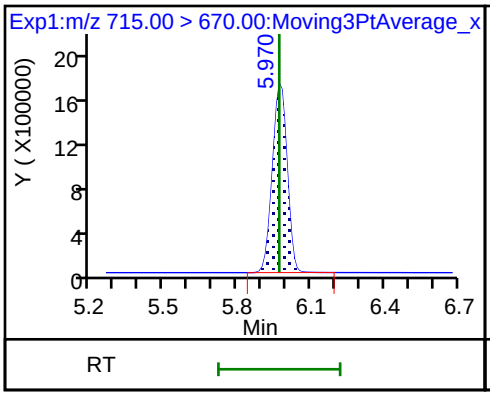

62 Perfluorotetradecanoic acid (ND)



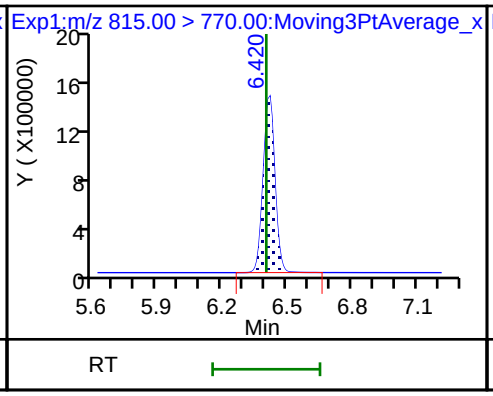

62 Perfluorotetradecanoic acid (ND)



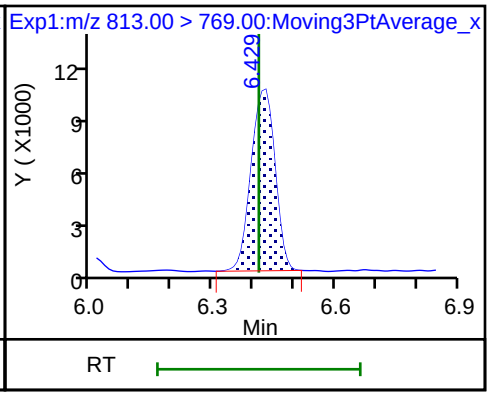

D 61 13C2 PFTeDA



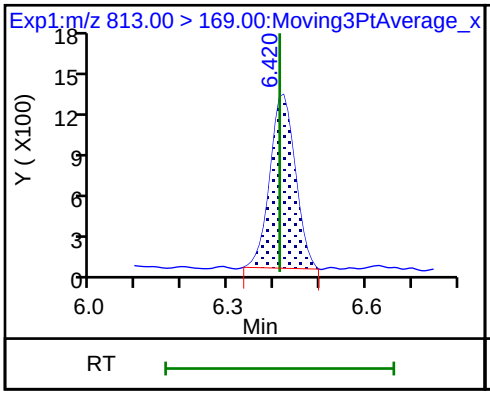

D 64 13C2 PFHxDA



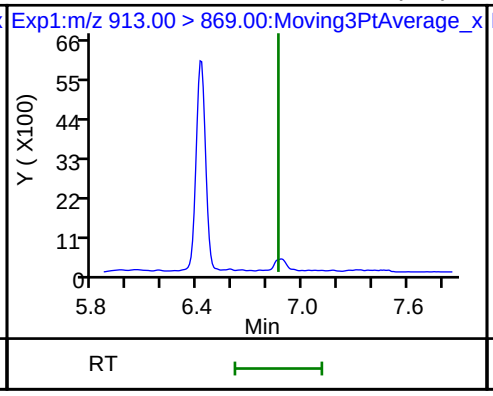

63 Perfluorohexadecanoic acid



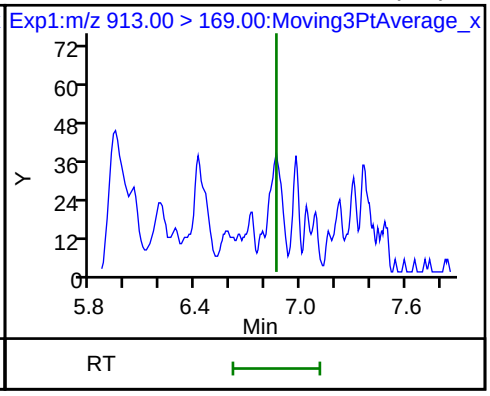

63 Perfluorohexadecanoic acid




65 Perfluorooctadecanoic acid (ND)




65 Perfluorooctadecanoic acid (ND)



Eurofins TestAmerica, Sacramento

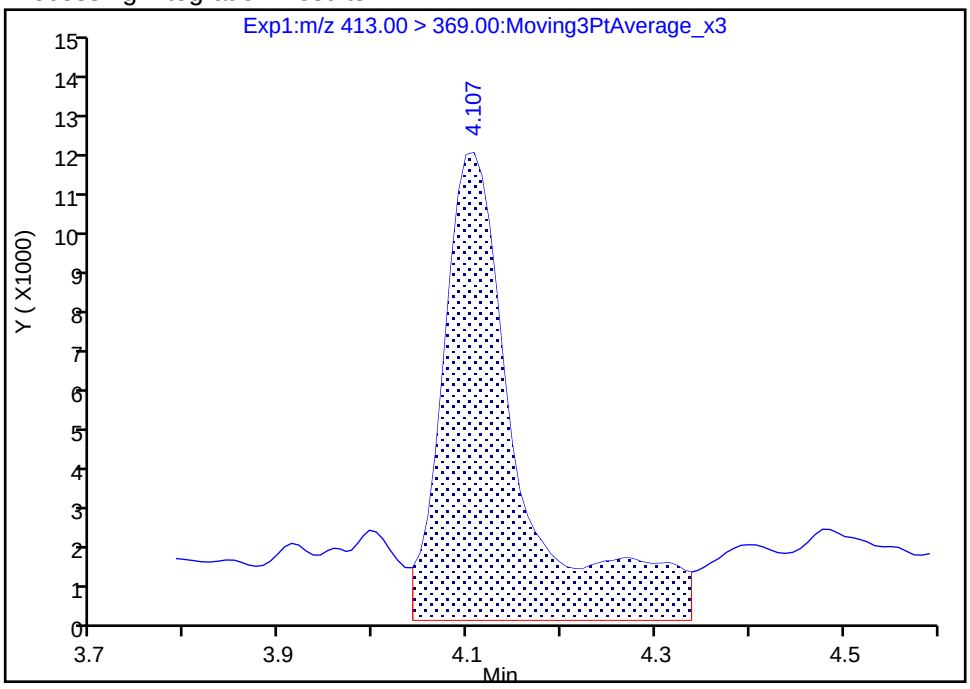
Data File: \\chromfs\Sacramento\ChromData\A18\20200910-103001.b\2020.09.10_A18_PFC_AAA_016.d
Injection Date: 10-Sep-2020 12:35:56 Instrument ID: A18
Lims ID: CCB
Client ID:
Operator ID: TAISACA18-PC\A-18 ALS Bottle#: 50 Worklist Smp#: 1
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFAS_A18V2 Limit Group: LC PFC ICAL
Column: Gemini C18 3um 3mm x 50 mm ( 3.00mm) Detector EXP1

## 22 Perfluorooctanoic acid, CAS: 335-67-1

Signal: 1

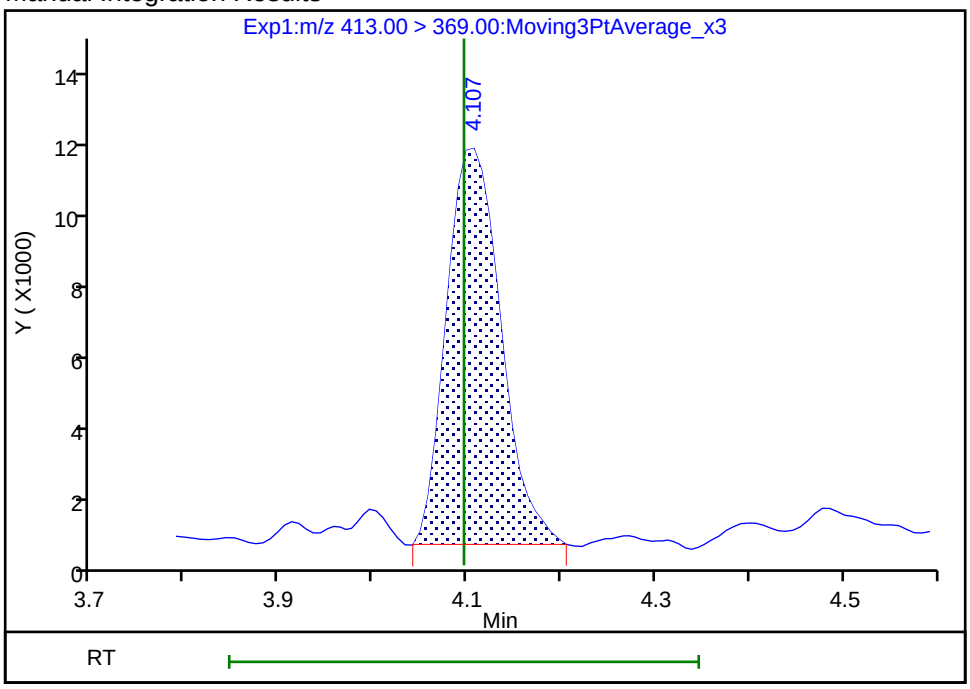
RT: 4.11
Area: 66218
Amount: 0.013429
Amount Units: ng/ml

Processing Integration Results




RT: 4.11
Area: 41784
Amount: 0.008474
Amount Units: ng/ml

Manual Integration Results




Reviewer: vangm, 10-Sep-2020 13:19:27
Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

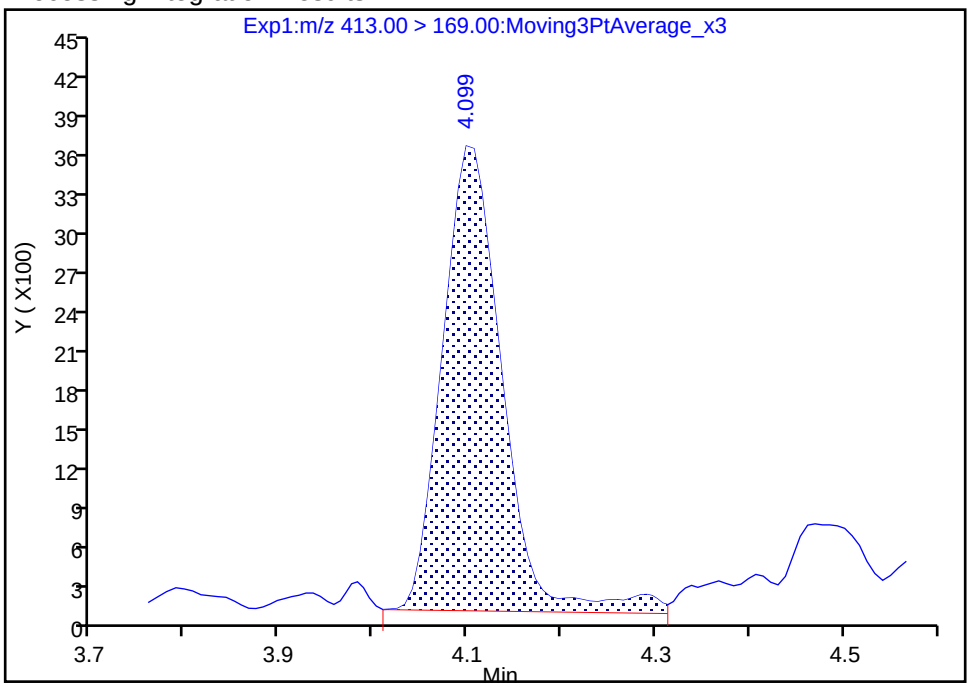
Data File: \\chromfs\Sacramento\ChromData\A18\20200910-103001.b\2020.09.10_A18_PFC_AAA_016.d
Injection Date: 10-Sep-2020 12:35:56 Instrument ID: A18
Lims ID: CCB
Client ID:
Operator ID: TAISACA18-PC\A-18 ALS Bottle#: 50 Worklist Smp#: 1
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFAS_A18V2 Limit Group: LC PFC ICAL
Column: Gemini C18 3um 3mm x 50 mm ( 3.00mm) Detector EXP1

## 22 Perfluorooctanoic acid, CAS: 335-67-1

Signal: 2

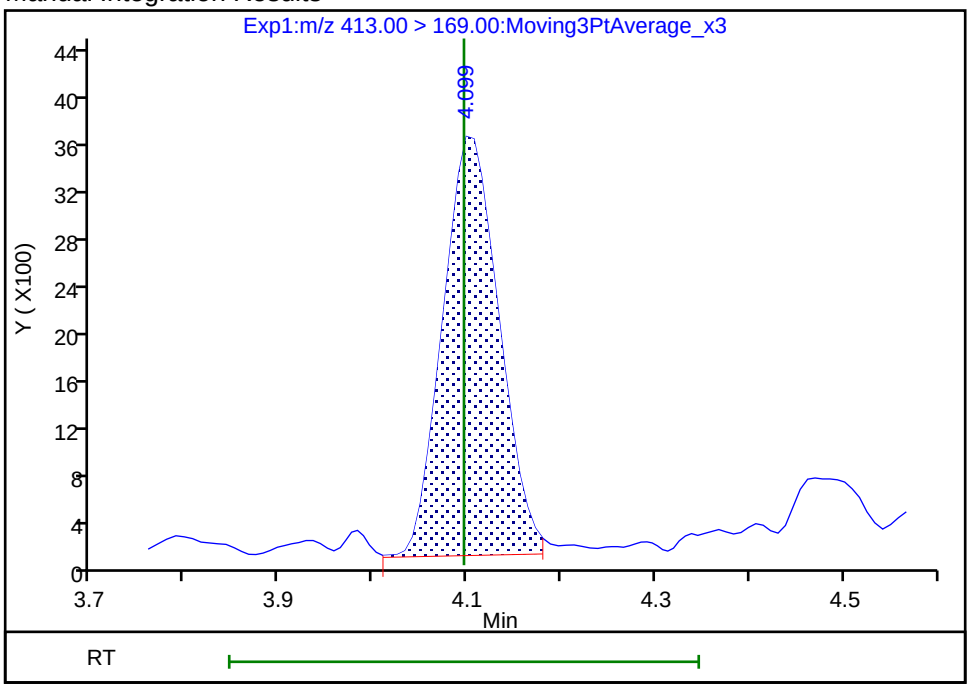
Processing Integration Results

RT: 4.10
Area: 15528
Amount: 0.013429
Amount Units: ng/ml




Manual Integration Results

RT: 4.10
Area: 14611
Amount: 0.008474
Amount Units: ng/ml




Reviewer: vangm, 10-Sep-2020 13:19:32
Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

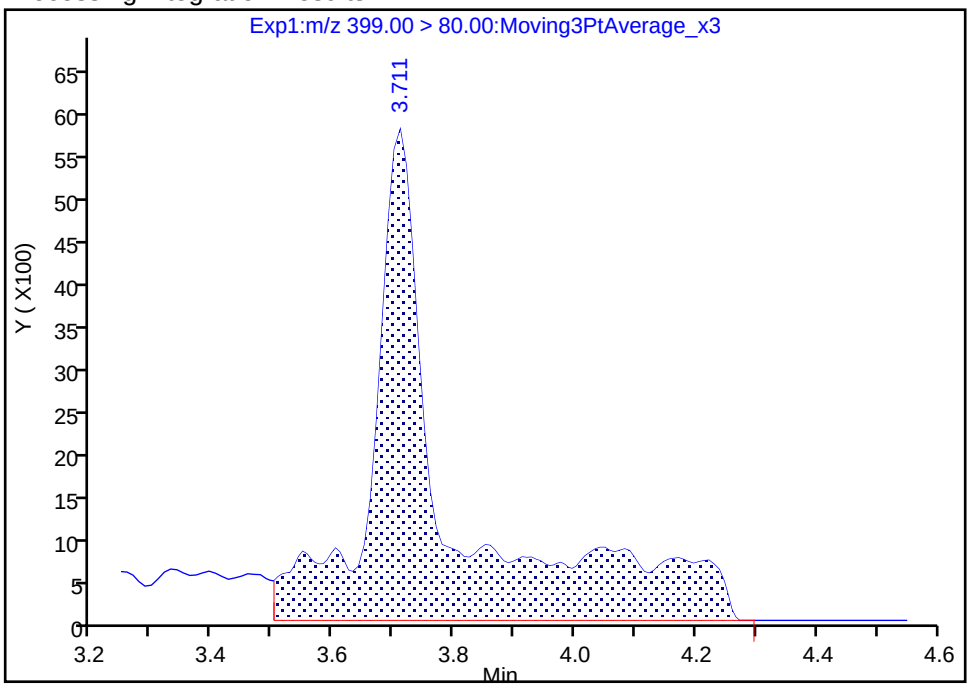
Data File: \\chromfs\Sacramento\ChromData\A18\20200910-103001.b\2020.09.10_A18_PFC_AAA_016.d
Injection Date: 10-Sep-2020 12:35:56 Instrument ID: A18
Lims ID: CCB
Client ID:
Operator ID: TAISACA18-PC\A-18 ALS Bottle#: 50 Worklist Smp#: 1
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFAS_A18V2 Limit Group: LC PFC ICAL
Column: Gemini C18 3um 3mm x 50 mm ( 3.00mm) Detector EXP1

## 15 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 1

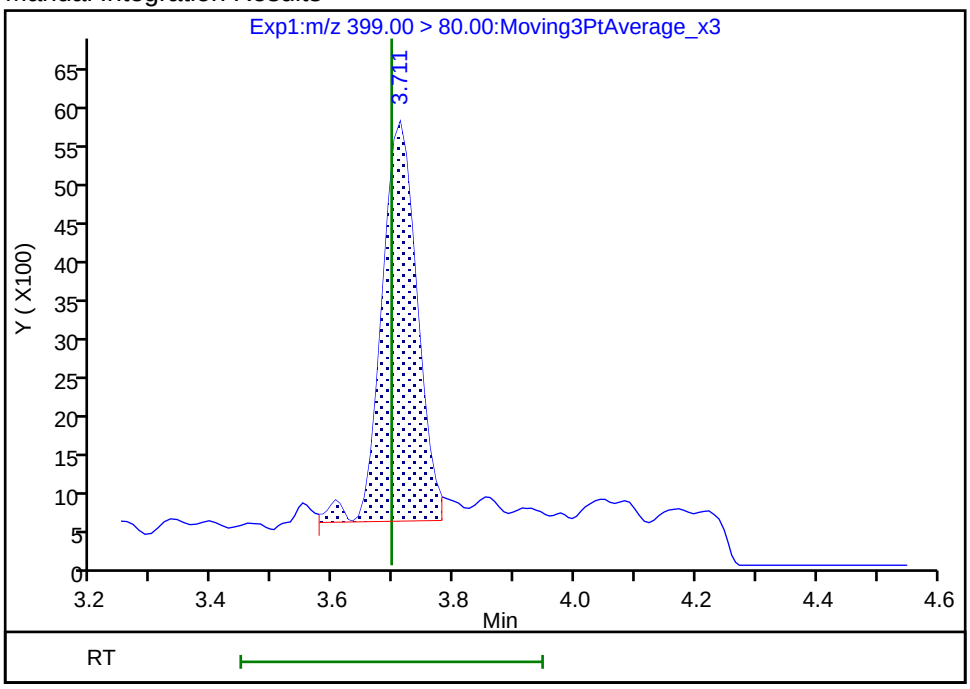
Processing Integration Results

RT: 3.71
Area: 51993
Amount: 0.017136
Amount Units: ng/ml




Manual Integration Results

RT: 3.71
Area: 21244
Amount: 0.007002
Amount Units: ng/ml




Reviewer: vangm, 10-Sep-2020 13:19:02
Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

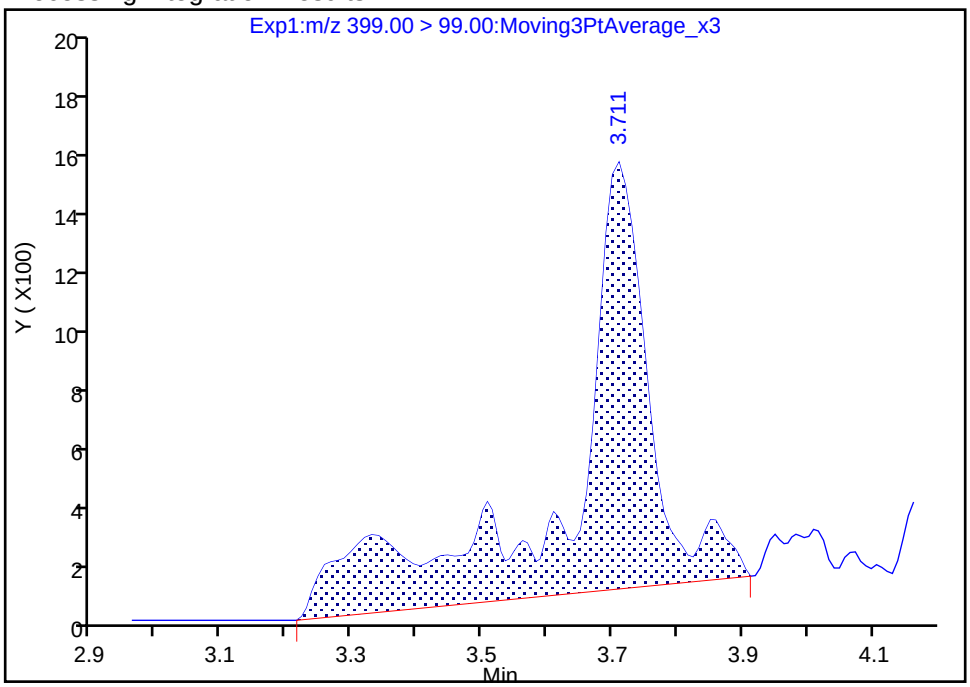
Data File: \\chromfs\Sacramento\ChromData\A18\20200910-103001.b\2020.09.10_A18_PFC_AAA_016.d
Injection Date: 10-Sep-2020 12:35:56 Instrument ID: A18
Lims ID: CCB
Client ID:
Operator ID: TAISACA18-PC\A-18 ALS Bottle#: 50 Worklist Smp#: 1
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFAS_A18V2 Limit Group: LC PFC ICAL
Column: Gemini C18 3um 3mm x 50 mm ( 3.00mm) Detector EXP1

## 15 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 2

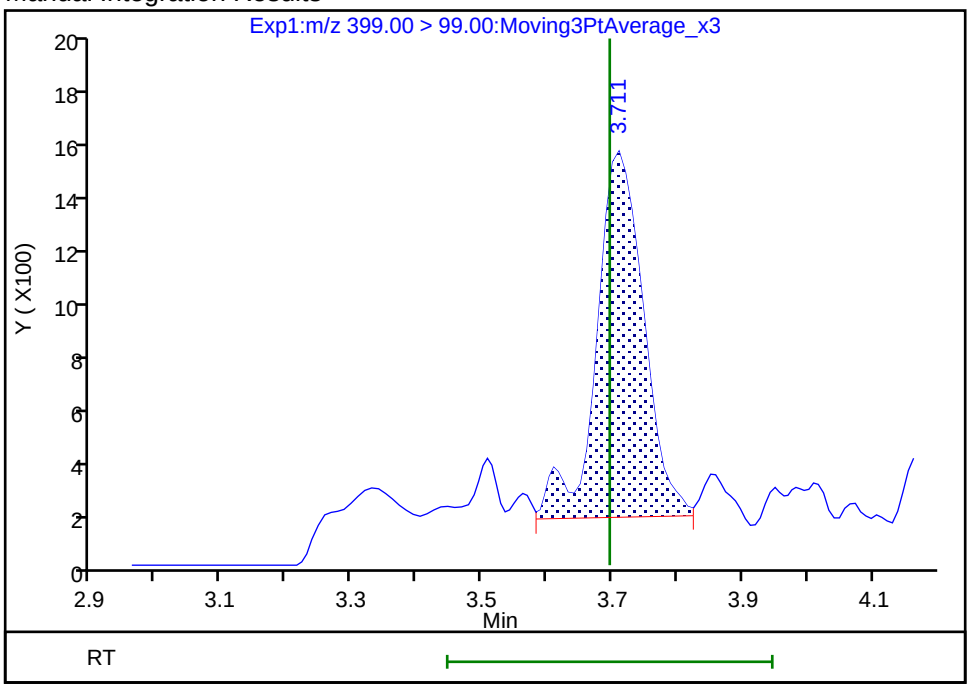
Processing Integration Results

RT: 3.71
Area: 12346
Amount: 0.017136
Amount Units: ng/ml




Manual Integration Results

RT: 3.71
Area: 6718
Amount: 0.007002
Amount Units: ng/ml




Reviewer: vangm, 10-Sep-2020 13:19:07
Audit Action: Manually Integrated Audit Reason: Baseline

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento  Job No.: 460-217547-1

SDG No.:

Client Sample ID:  Lab Sample ID: CCB 320-411300/1

Matrix: Water  Lab File ID: 2020.09.11_A9_PFC_AA_004.d

Analysis Method: 537 (modified)  Date Collected:

Extraction Method:  Date Extracted:

Sample wt/vol: 1(mL)  Date Analyzed: 09/11/2020 09:30

Con. Extract Vol.:  Dilution Factor: 1

Injection Volume: 20(uL)  GC Column: Acquity ID: 2.1(mm)

% Moisture:  GPC Cleanup:(Y/N) N

Analysis Batch No.: 411300  Units: ng/mL

| CAS NO. | COMPOUND NAME | RESULT | Q | RL | MDL |
|---|---|---|---|---|---|
| 375-22-4 | Perfluorobutanoic acid (PFBA) | 0.0088 | U | 0.050 | 0.0088 |
| 2706-90-3 | Perfluoropentanoic acid (PFPeA) | 0.012 | U | 0.050 | 0.012 |
| 307-24-4 | Perfluorohexanoic acid (PFHxA) | 0.015 | U | 0.050 | 0.015 |
| 375-85-9 | Perfluoroheptanoic acid (PFHpA) | 0.0063 | U | 0.050 | 0.0063 |
| 335-67-1 | Perfluorooctanoic acid (PFOA) | 0.021 | U | 0.050 | 0.021 |
| 375-95-1 | Perfluorononanoic acid (PFNA) | 0.0068 | U | 0.050 | 0.0068 |
| 335-76-2 | Perfluorodecanoic acid (PFDA) | 0.0078 | U | 0.050 | 0.0078 |
| 2058-94-8 | Perfluoroundecanoic acid (PFUnA) | 0.028 | U | 0.050 | 0.028 |
| 307-55-1 | Perfluorododecanoic acid (PFDoA) | 0.014 | U | 0.050 | 0.014 |
| 72629-94-8 | Perfluorotridecanoic acid (PFTriA) | 0.033 | U | 0.050 | 0.033 |
| 376-06-7 | Perfluorotetradecanoic acid (PFTeA) | 0.0073 | U | 0.050 | 0.0073 |
| 375-73-5 | Perfluorobutanesulfonic acid (PFBS) | 0.0050 | U | 0.050 | 0.0050 |
| 355-46-4 | Perfluorohexanesulfonic acid (PFHxS) | 0.00840 | J | 0.050 | 0.0043 |
| 375-92-8 | Perfluoroheptanesulfonic Acid (PFHpS) | 0.0048 | U | 0.050 | 0.0048 |
| 1763-23-1 | Perfluorooctanesulfonic acid (PFOS) | 0.014 | U | 0.050 | 0.014 |
| 335-77-3 | Perfluorodecanesulfonic acid (PFDS) | 0.0080 | U | 0.050 | 0.0080 |
| 754-91-6 | Perfluorooctanesulfonamide (FOSA) | 0.0088 | U | 0.050 | 0.0088 |
| 2355-31-9 | N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA) | 0.078 | U | 0.50 | 0.078 |
| 2991-50-6 | N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA) | 0.048 | U | 0.50 | 0.048 |
| 27619-97-2 | 6:2 FTS | 0.050 | U | 0.50 | 0.050 |
| 39108-34-4 | 8:2 FTS | 0.050 | U | 0.50 | 0.050 |

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento  Job No.: 460-217547-1

SDG No.:

Client Sample ID:  Lab Sample ID: CCB 320-411300/1

Matrix: Water  Lab File ID: 2020.09.11_A9_PFC_AA_004.d

Analysis Method: 537 (modified)  Date Collected:

Extraction Method:  Date Extracted:

Sample wt/vol: 1(mL)  Date Analyzed: 09/11/2020 09:30

Con. Extract Vol.:  Dilution Factor: 1

Injection Volume: 20(uL)  GC Column: Acquity ID: 2.1(mm)

% Moisture:  GPC Cleanup:(Y/N) N

Analysis Batch No.: 411300  Units: ng/mL

| CAS NO. | ISOTOPE DILUTION | %REC | Q | LIMITS |
|---|---|---|---|---|
| STL00992 | 13C4 PFBA | 101 | | 25-150 |
| STL01893 | 13C5 PFPeA | 96 | | 25-150 |
| STL00993 | 13C2 PFHxA | 97 | | 25-150 |
| STL01892 | 13C4 PFHpA | 103 | | 25-150 |
| STL00990 | 13C4 PFOA | 101 | | 25-150 |
| STL00995 | 13C5 PFNA | 100 | | 25-150 |
| STL00996 | 13C2 PFDA | 96 | | 25-150 |
| STL00997 | 13C2 PFUnA | 103 | | 25-150 |
| STL00998 | 13C2 PFDoA | 99 | | 25-150 |
| STL02116 | 13C2 PFTeDA | 96 | | 25-150 |
| STL02337 | 13C3 PFBS | 104 | | 25-150 |
| STL00994 | 18O2 PFHxS | 104 | | 25-150 |
| STL00991 | 13C4 PFOS | 104 | | 25-150 |
| STL01056 | 13C8 FOSA | 106 | | 25-150 |
| STL02118 | d3-NMeFOSAA | 88 | | 25-150 |
| STL02117 | d5-NEtFOSAA | 94 | | 25-150 |
| STL02279 | M2-6:2 FTS | 94 | | 25-150 |
| STL02280 | M2-8:2 FTS | 87 | | 25-150 |

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\A9\20200911-103077.b\2020.09.11_A9_PFC_AA_004.d
Lims ID: CCB
Client ID:
Sample Type: CCB
Inject. Date: 11-Sep-2020 09:30:40 ALS Bottle#: 41 Worklist Smp#: 1
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Sample Info: CCB (53)
Misc. Info.: Plate: 1 Rack: 1
Operator ID: SACINSTRLCMS02 Instrument ID: A9

Method: \\chromfs\Sacramento\ChromData\A9\20200911-103077.b\PFAS_A9.m
Limit Group: LC PFC ICAL
Last Update: 11-Sep-2020 10:27:18 Calib Date: 10-Sep-2020 12:29:20
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\A9\20200910-102999.b\2020.09.10_A9 _PFC_ICAL_AA_022.d

Column 1 : Det: EXP1
Process Host: CTX1061

First Level Reviewer: zibaa Date: 11-Sep-2020 10:20:42
Ratio Calibration: CCV Sample: \\chromfs\Sacramento\ChromData\A9\20200911-103075.b\2020.09.10_A9_PFC_A_030.d

| Signal | RT | EXP RT | DLT RT | REL RT | Response | Amount ng/ml | Ratio(Limits) | %Rec | S/N | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| D 1 13C4 PFBA | | | | | | | | | | |
| 217.00 > 172.00 | 1.907 | 1.900 | 0.007 | 0.565 | 8613596 | 2.52 | | 101 | 3065 | |
| D 4 13C5 PFPeA | | | | | | | | | | |
| 267.90 > 223.00 | 2.214 | 2.206 | 0.008 | 0.656 | 6903031 | 2.40 | | 95.8 | 2718 | |
| 3 Perfluoropentanoic acid | | | | | | | | | | M |
| 262.90 > 219.00 | 2.214 | 2.206 | 0.008 | 1.000 | 6517 | 0.002319 | | | 0.5 | M |
| D 6 13C3 PFBS | | | | | | | | | | |
| 301.90 > 80.00 | 2.243 | 2.233 | 0.010 | 0.664 | 13739534 | 2.41 | | 104 | 4424 | |
| D 8 M2-4:2 FTS | | | | | | | | | | |
| 329.00 > 81.00 | 2.536 | 2.525 | 0.011 | 0.751 | 1113786 | 1.97 | | 84.4 | 712 | |
| D 10 13C2 PFHxA | | | | | | | | | | |
| 315.00 > 270.00 | 2.568 | 2.568 | 0.0 | 0.760 | 6509734 | 2.43 | | 97.2 | 2596 | |
| D 13 13C3 HFPO-DA | | | | | | | | | | |
| 287.00 > 169.00 | 2.696 | 2.686 | 0.010 | 0.798 | 4628402 | 2.52 | | 101 | 3915 | |
| D 15 13C4 PFHpA | | | | | | | | | | |
| 367.00 > 322.00 | 2.968 | 2.957 | 0.011 | 0.879 | 6712047 | 2.57 | | 103 | 3930 | |
| 16 Perfluorohexanesulfonic acid | | | | | | | | | | M |
| 399.00 > 80.00 | 2.980 | 2.963 | 0.017 | 1.004 | 28116 | 0.008400 | Target=3.30 | | 9.8 | M |
| 399.00 > 99.00 | 2.980 | 2.963 | 0.017 | 1.004 | 8558 | | 3.29(1.65-4.95) | | 7.5 | M |
| D 17 18O2 PFHxS | | | | | | | | | | |
| 403.00 > 84.00 | 2.968 | 2.963 | 0.005 | 0.879 | 6711183 | 2.46 | | 104 | 3820 | |
| D 20 M2-6:2 FTS | | | | | | | | | | |
| 429.00 > 81.00 | 3.353 | 3.345 | 0.008 | 0.993 | 1091617 | 2.24 | | 94.3 | 1400 | |
| 22 1H,1H,2H,2H-perfluorooctanesulfo | | | | | | | | | | M |
| 427.00 > 407.00 | 3.353 | 3.345 | 0.008 | 1.000 | 3145 | 0.004438 | | | 7.0 | M |
| $ 21 13C8 PFOA | | | | | | | | | | |
| 421.00 > 376.00 | 3.368 | 3.361 | 0.007 | 0.997 | 5111314 | 2.50 | | 102 | 5518 | |

| Signal | RT | EXP RT | DLT RT | REL RT | Response | Amount ng/ml | Ratio(Limits) | %Rec | S/N | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| 24 Perfluorooctanoic acid | | | | | | | | | | M |
| 413.00 > 369.00 | 3.377 | 3.368 | 0.009 | 1.000 | 26237 | 0.009851 | Target=2.45 | | 5.5 | M |
| 413.00 > 169.00 | 3.377 | 3.368 | 0.009 | 1.000 | 9723 | | 2.70(1.23-3.68) | | 10.7 | |
| * 25 13C2 PFOA | | | | | | | | | | |
| 415.00 > 370.00 | 3.377 | 3.368 | 0.009 | | 6327562 | 2.50 | | | 4998 | |
| D 26 13C4 PFOA | | | | | | | | | | |
| 417.00 > 372.00 | 3.377 | 3.368 | 0.009 | 1.000 | 6173624 | 2.53 | | 101 | 4052 | |
| 28 Perfluorooctanesulfonic acid | | | | | | | | | | M |
| 499.00 > 80.00 | 3.753 | 3.744 | 0.009 | 1.000 | 11834 | 0.003852 | Target=4.31 | | 2.8 | M |
| 499.00 > 99.00 | 3.753 | 3.744 | 0.009 | 1.000 | 4773 | | 2.48(2.16-6.47) | | 12.8 | M |
| D 31 13C4 PFOS | | | | | | | | | | |
| 503.00 > 80.00 | 3.753 | 3.744 | 0.009 | 1.111 | 7062363 | 2.49 | | 104 | 1809 | |
| $ 27 13C8 PFOS | | | | | | | | | | |
| 507.00 > 99.00 | 3.753 | 3.744 | 0.009 | 1.111 | 1556012 | 2.42 | | 101 | 1838 | |
| D 29 13C5 PFNA | | | | | | | | | | |
| 468.00 > 423.00 | 3.772 | 3.754 | 0.018 | 1.117 | 5286309 | 2.49 | | 99.7 | 3992 | |
| D 36 13C8 FOSA | | | | | | | | | | |
| 506.00 > 78.00 | 4.092 | 4.083 | 0.009 | 1.212 | 3529616 | 2.64 | | 106 | 2870 | |
| 34 Perfluorooctanesulfonamide | | | | | | | | | | |
| 498.00 > 78.00 | 4.100 | 4.083 | 0.017 | 1.002 | 7449 | 0.001897 | | | 33.8 | |
| D 33 13C2 PFDA | | | | | | | | | | |
| 515.00 > 470.00 | 4.127 | 4.118 | 0.009 | 1.222 | 6448349 | 2.40 | | 95.9 | 5731 | |
| D 37 M2-8:2 FTS | | | | | | | | | | |
| 529.00 > 81.00 | 4.136 | 4.127 | 0.009 | 1.225 | 1241719 | 2.08 | | 86.9 | 996 | |
| D 41 d3-NMeFOSAA | | | | | | | | | | |
| 573.00 > 419.00 | 4.298 | 4.280 | 0.018 | 1.273 | 2933240 | 2.19 | | 87.7 | 2583 | |
| D 46 13C2 PFUnA | | | | | | | | | | |
| 565.00 > 520.00 | 4.452 | 4.444 | 0.008 | 1.318 | 5322405 | 2.57 | | 103 | 4391 | |
| D 45 d5-NEtFOSAA | | | | | | | | | | |
| 589.00 > 419.00 | 4.461 | 4.452 | 0.009 | 1.321 | 2098854 | 2.34 | | 93.7 | 2240 | |
| D 47 d7-N-MeFOSE-M | | | | | | | | | | |
| 623.00 > 59.00 | 4.546 | 4.538 | 0.008 | 1.346 | 5459256 | 12.7 | | 102 | 4728 | |
| D 49 d-N-MeFOSA-M | | | | | | | | | | |
| 515.00 > 169.00 | 4.573 | 4.564 | 0.009 | 1.354 | 1576513 | 2.62 | | 105 | 242 | |
| D 53 d9-N-EtFOSE-M | | | | | | | | | | |
| 639.00 > 59.00 | 4.722 | 4.713 | 0.009 | 1.398 | 5909854 | 13.1 | | 105 | 5302 | |
| D 56 13C2 PFDoA | | | | | | | | | | |
| 615.00 > 570.00 | 4.748 | 4.732 | 0.016 | 1.406 | 5018786 | 2.46 | | 98.5 | 8962 | |
| D 58 d-N-EtFOSA-M | | | | | | | | | | |
| 531.00 > 169.00 | 4.748 | 4.741 | 0.007 | 1.406 | 1571731 | 2.52 | | 101 | 1128 | |
| D 62 13C2 PFTeDA | | | | | | | | | | |
| 715.00 > 670.00 | 5.260 | 5.253 | 0.007 | 1.558 | 3396158 | 2.39 | | 95.6 | 7673 | |
| 64 Perfluorohexadecanoic acid | | | | | | | | | | |
| 813.00 > 769.00 | 5.708 | 5.690 | 0.018 | 1.002 | 22306 | 0.004081 | Target=4.61 | | 66.4 | |
| 813.00 > 169.00 | 5.698 | 5.690 | 0.008 | 1.000 | 4128 | | 5.40(2.31-6.92) | | 52.2 | |
| D 63 13C2 PFHxDA | | | | | | | | | | |
| 815.00 > 770.00 | 5.698 | 5.690 | 0.008 | 1.687 | 2347377 | 2.23 | | 89.3 | 4427 | |

## QC Flag Legend

Review Flags

M - Manually Integrated

## Reagents:

LCPFC_LL0_00053 Amount Added: 1.00 Units: mL

Report Date: 11-Sep-2020 10:27:19 Chrom Revision: 2.3 09-Sep-2020 15:12:58

Eurofins TestAmerica, Sacramento

Data File: \\chromfs\Sacramento\ChromData\A9\20200911-103077.b\2020.09.11_A9_PFC_AA_004.d

Injection Date: 11-Sep-2020 09:30:40 Instrument ID: A9

Lims ID: CCB

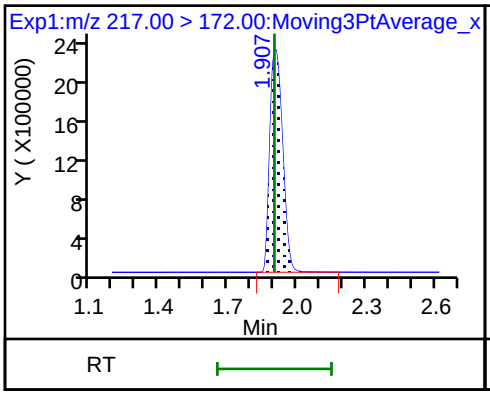
Client ID:

Operator ID: SACINSTRLCMS02 ALS Bottle#: 41 Worklist Smp#: 1

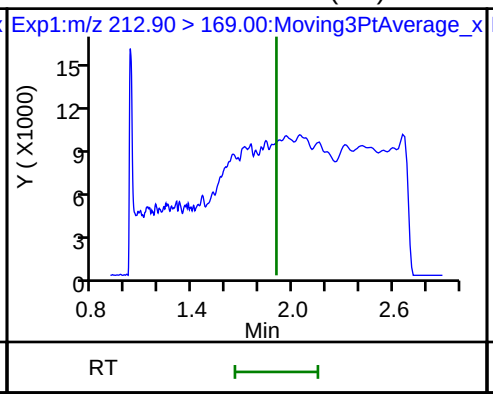
Injection Vol: 20.0 ul Dil. Factor: 1.0000

Method: PFAS_A9 Limit Group: LC PFC ICAL

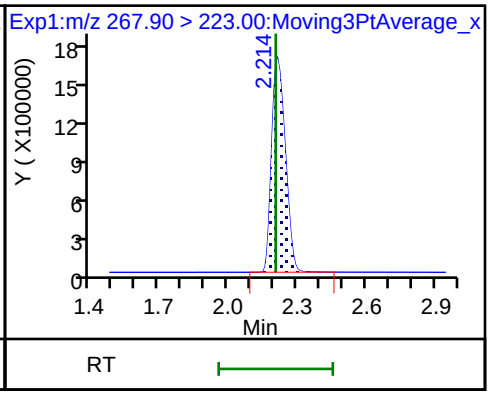
D 1 13C4 PFBA



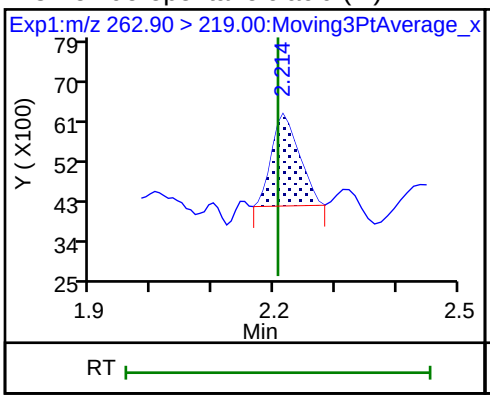

2 Perfluorobutanoic acid (ND)



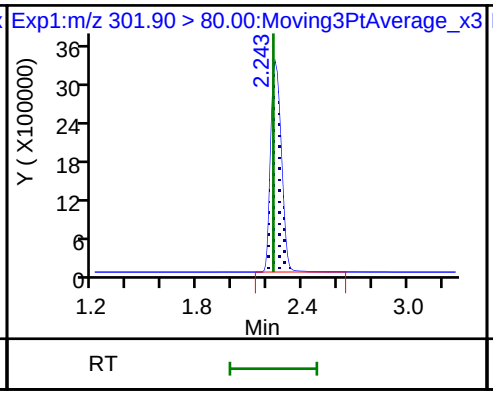

D 4 13C5 PFPeA



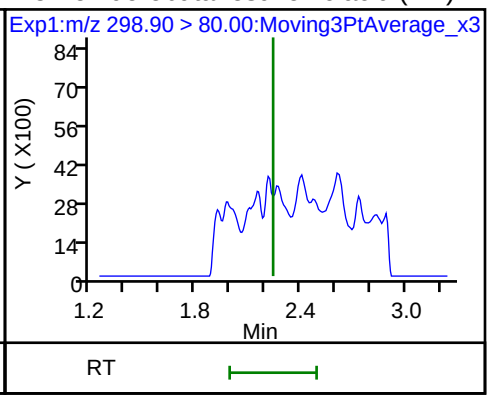

3 Perfluoropentanoic acid (M)



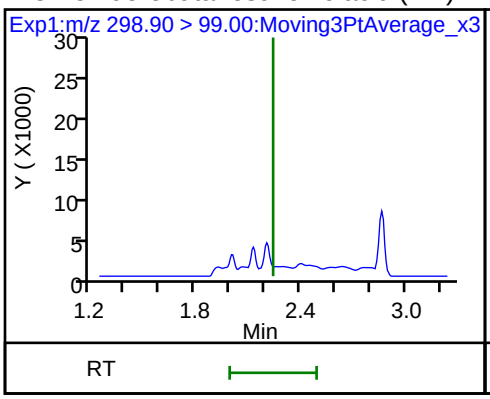

D 6 13C3 PFBS



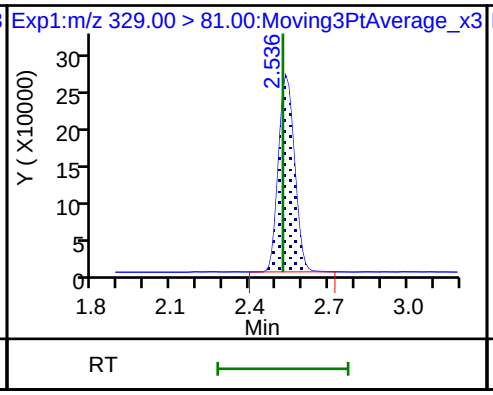

5 Perfluorobutanesulfonic acid (ND)



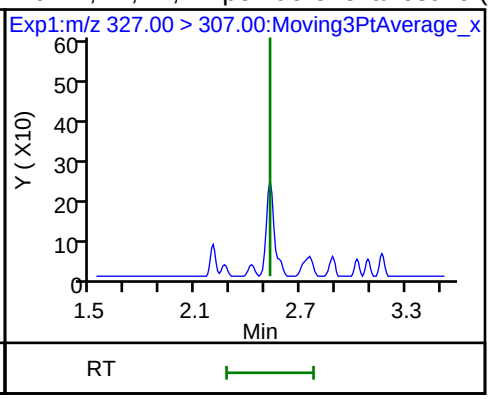

5 Perfluorobutanesulfonic acid (ND)



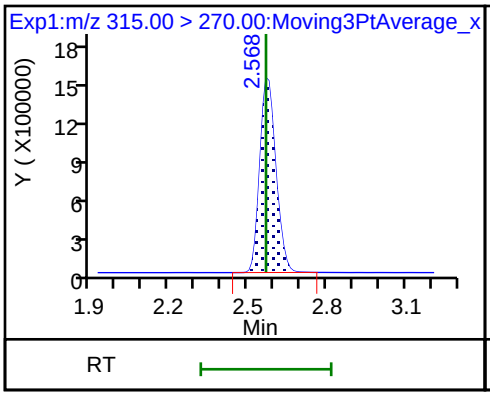

D 8 M2-4:2 FTS



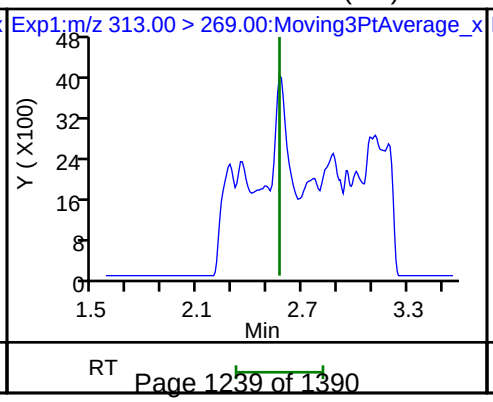

9 1H,1H,2H,2H-perfluorohexanesulfo (ND)



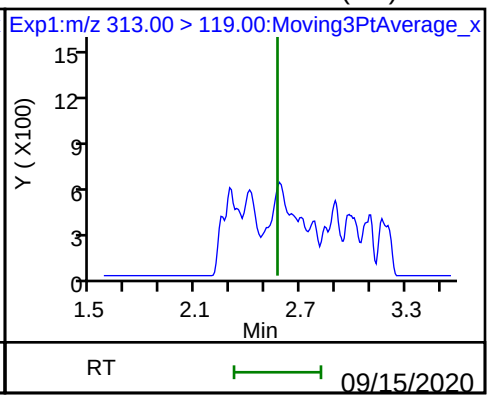

D 10 13C2 PFHxA



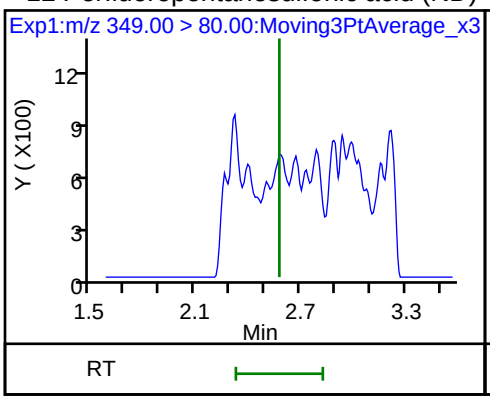

11 Perfluorohexanoic acid (ND)



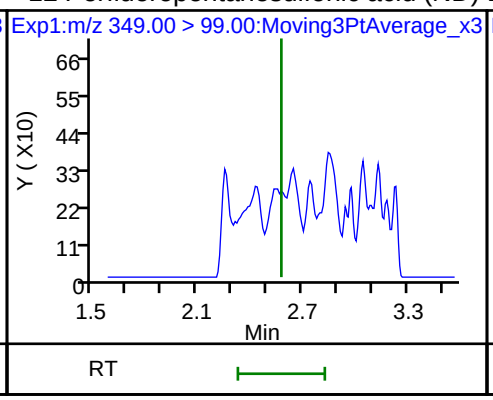

11 Perfluorohexanoic acid (ND)



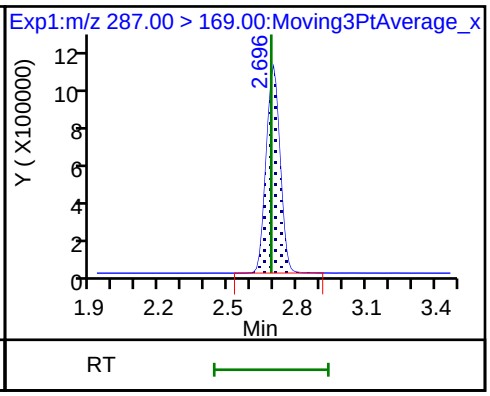
12 Perfluoropentanesulfonic acid (ND)



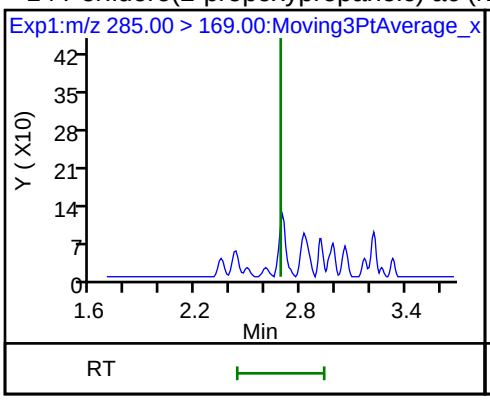

12 Perfluoropentanesulfonic acid (ND) D



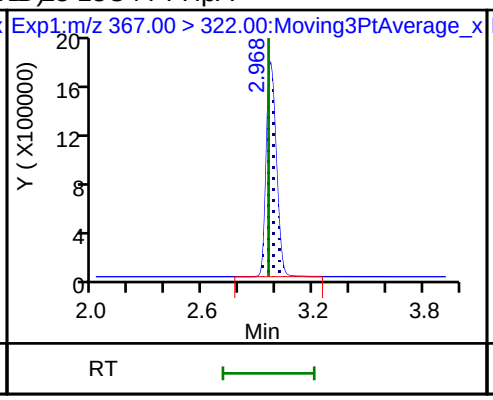

13 13C3 HFPO-DA



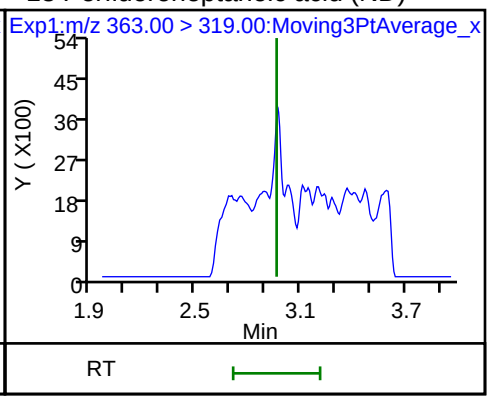

14 Perfluoro(2-propoxypropanoic) ac (ND)



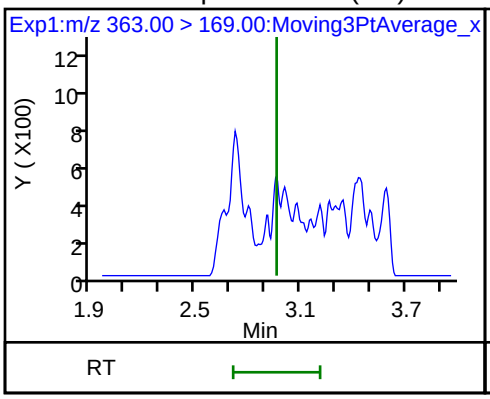

15 13C4 PFHpA



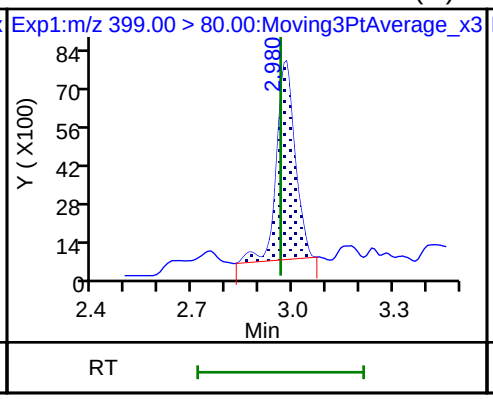

18 Perfluoroheptanoic acid (ND)



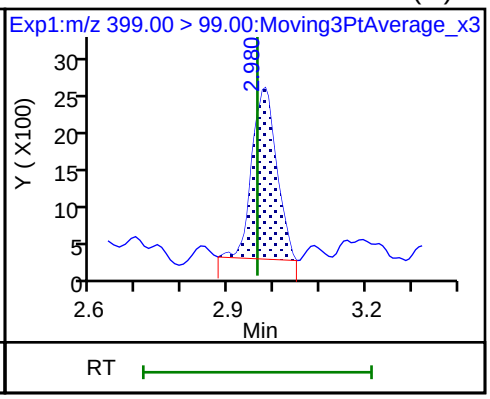

18 Perfluoroheptanoic acid (ND)



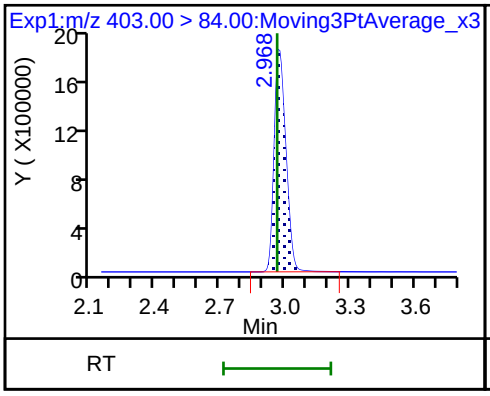

16 Perfluorohexanesulfonic acid (M)



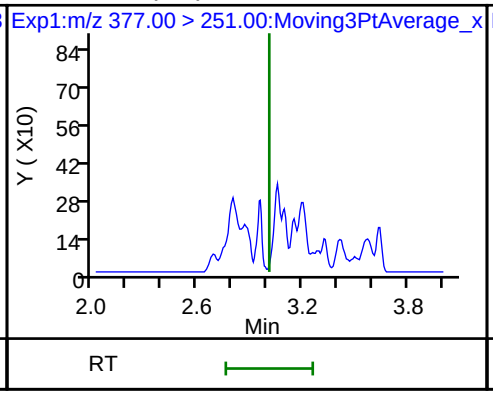

16 Perfluorohexanesulfonic acid (M)



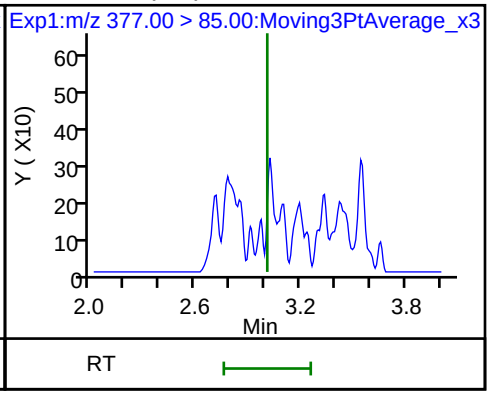

D 17 18O2 PFHxS



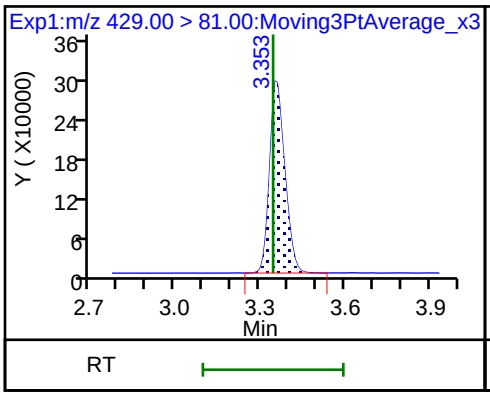

19 DONA (ND)



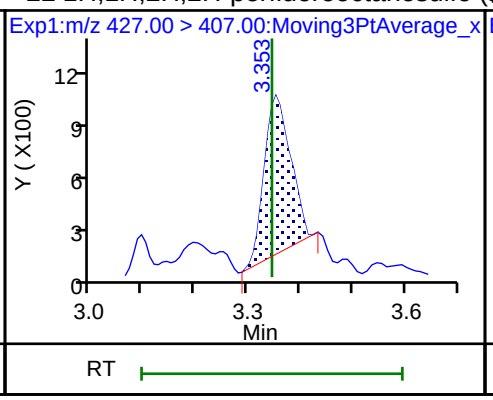

19 DONA (ND)



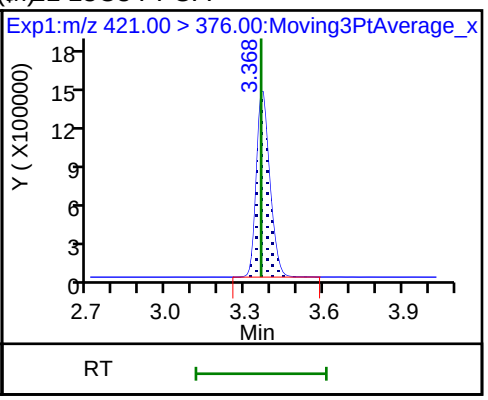
D 20 M2-6:2 FTS



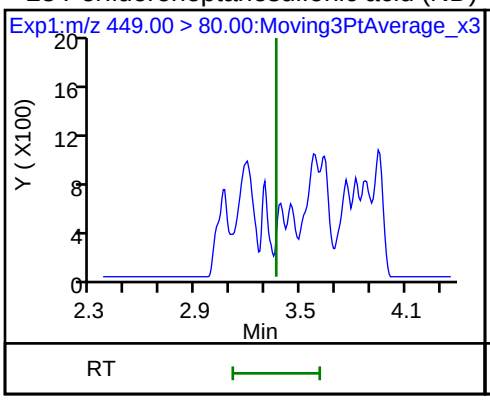

22 1H,1H,2H,2H-perfluorooctanesulfo (M)



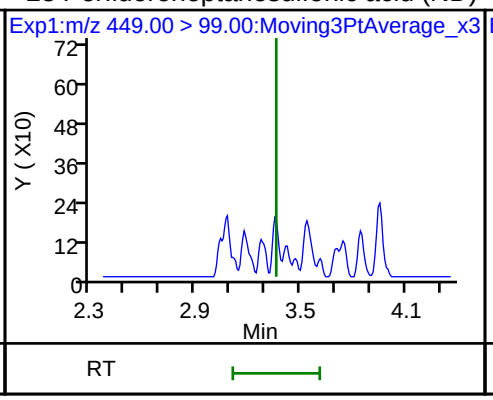

$ 21 13C8 PFOA



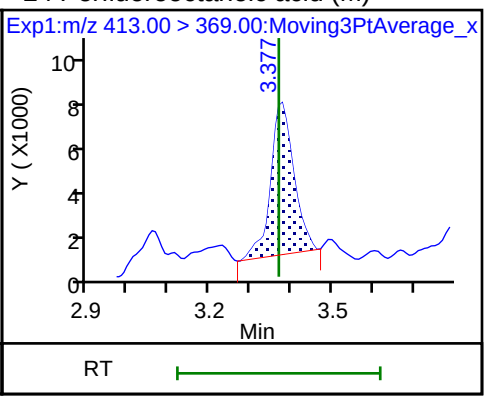

23 Perfluoroheptanesulfonic acid (ND)



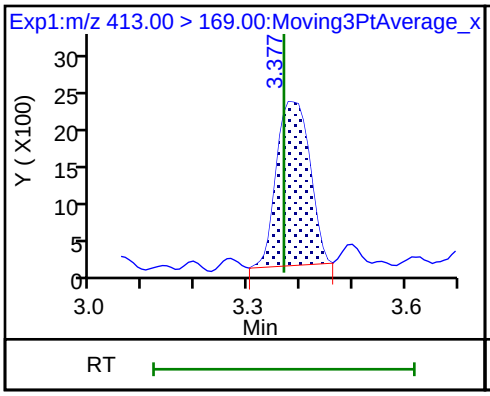

23 Perfluoroheptanesulfonic acid (ND)



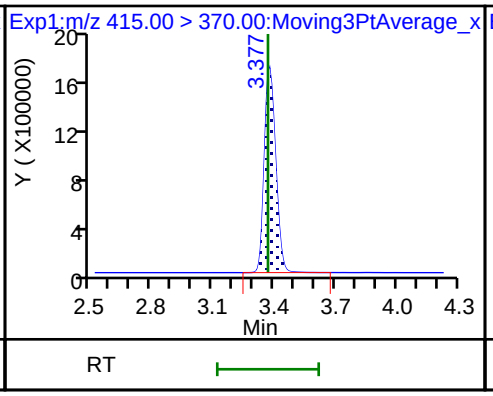

24 Perfluorooctanoic acid (M)



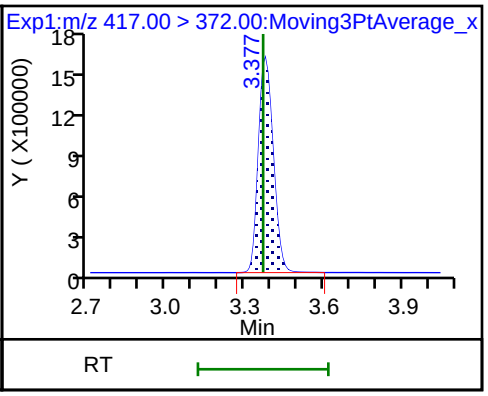

24 Perfluorooctanoic acid



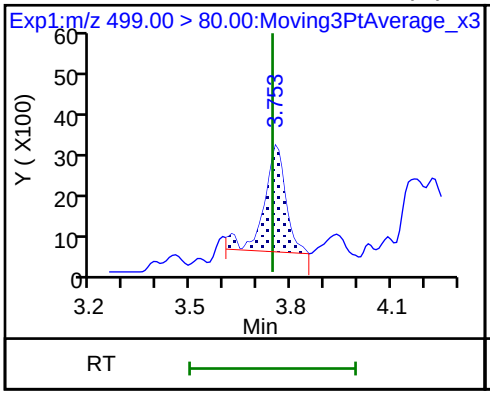

* 25 13C2 PFOA



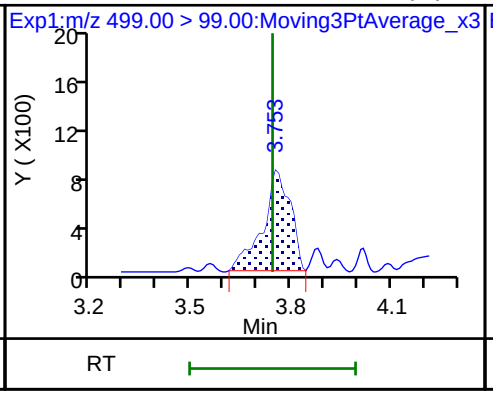

D 26 13C4 PFOA



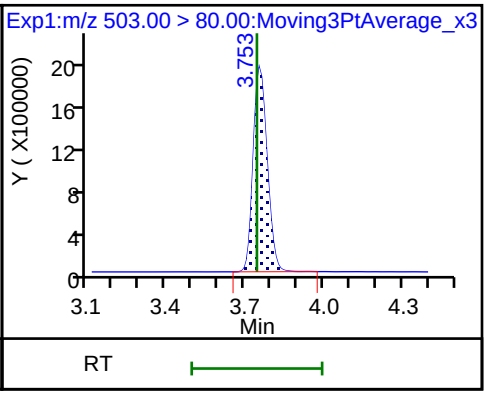

28 Perfluorooctanesulfonic acid (M)



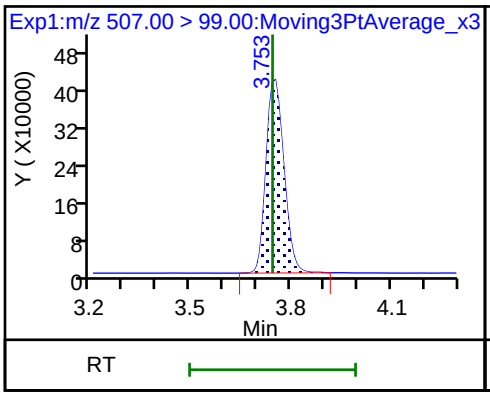

28 Perfluorooctanesulfonic acid (M)



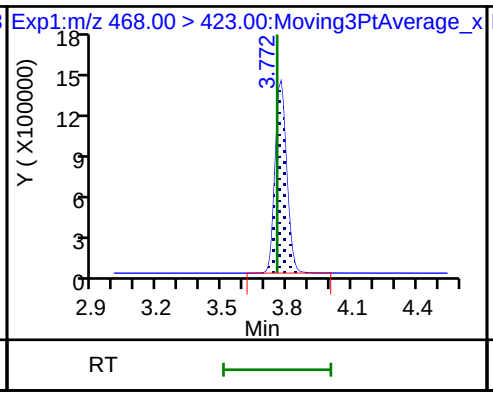

D 31 13C4 PFOS



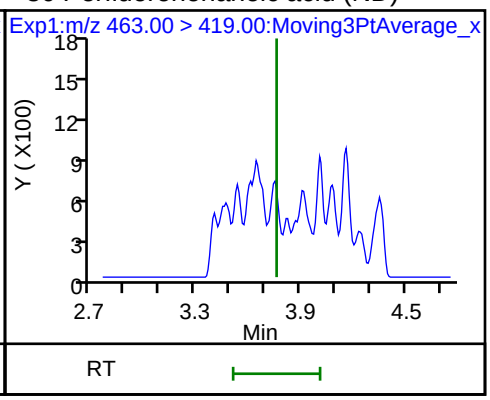
$ 27 13C8 PFOS



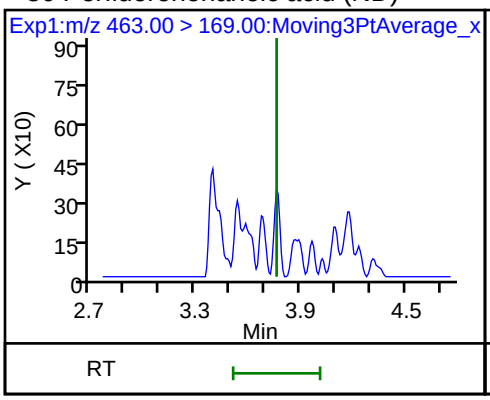

D 29 13C5 PFNA



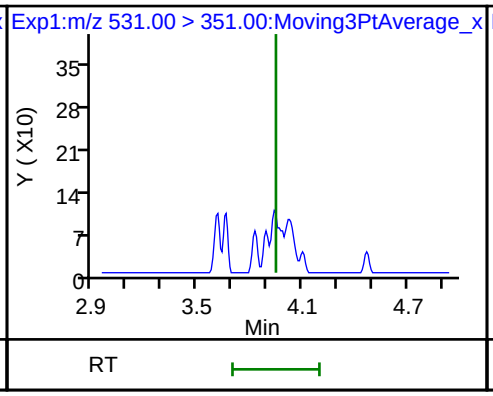

30 Perfluorononanoic acid (ND)



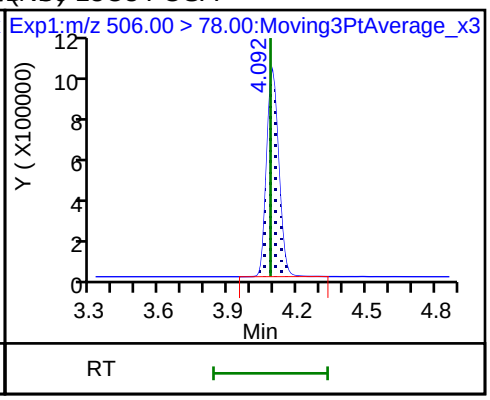

30 Perfluorononanoic acid (ND)



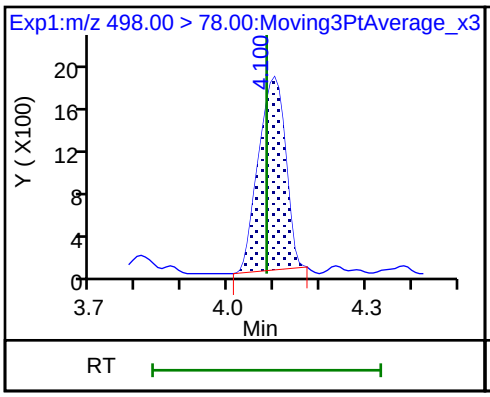

32 9-Chlorohexadecafluoro-3-oxanona(ND)



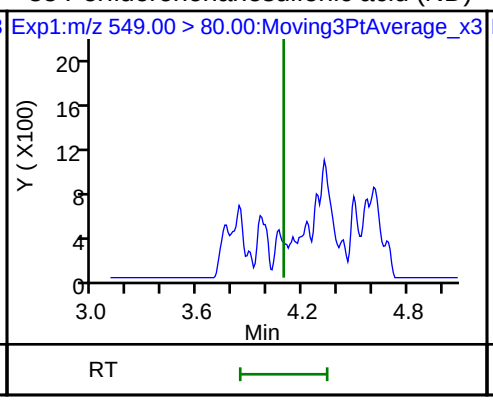

D 36 13C8 FOSA



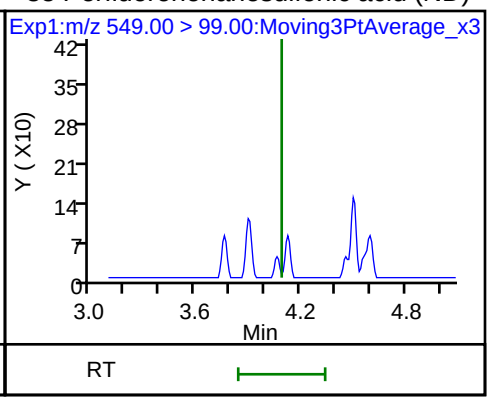

34 Perfluorooctanesulfonamide



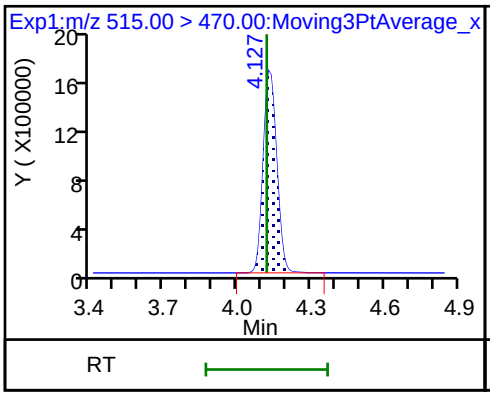

35 Perfluorononanesulfonic acid (ND)



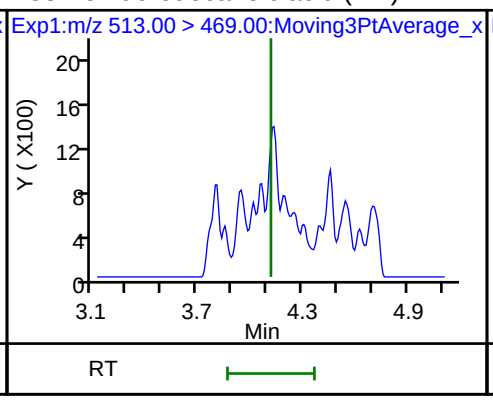

35 Perfluorononanesulfonic acid (ND)



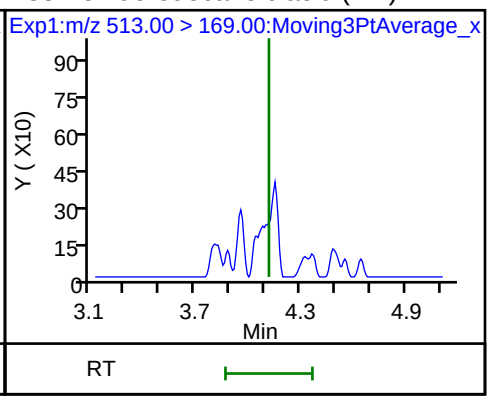

D 33 13C2 PFDA



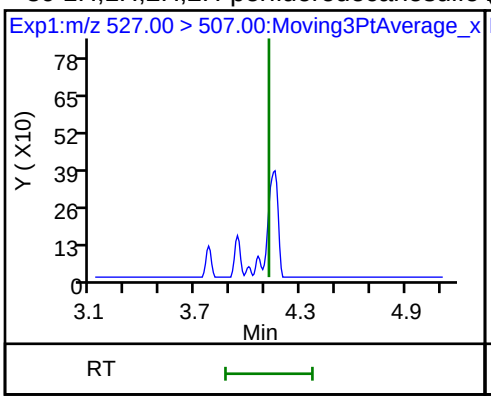

38 Perfluorodecanoic acid (ND)



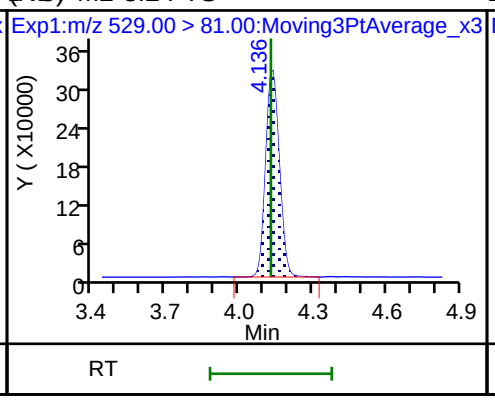

38 Perfluorodecanoic acid (ND)



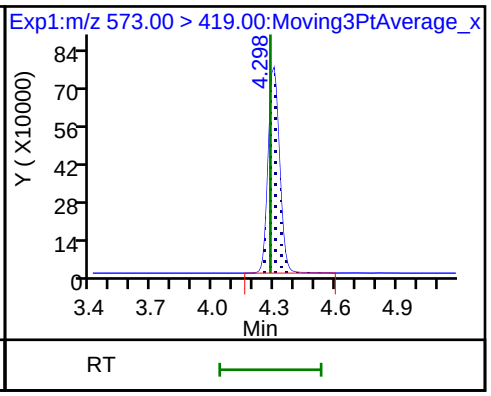
39 1H,1H,2H,2H-perfluorodecanesulfo (ND)



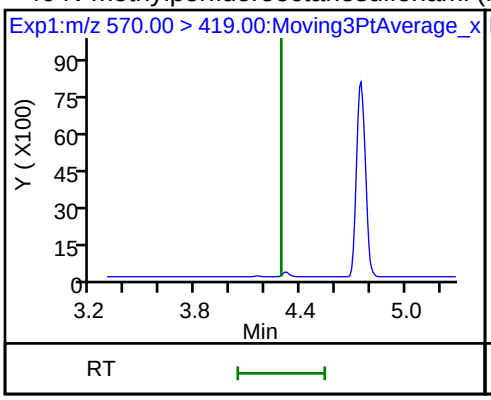

D 37 M2-8:2 FTS



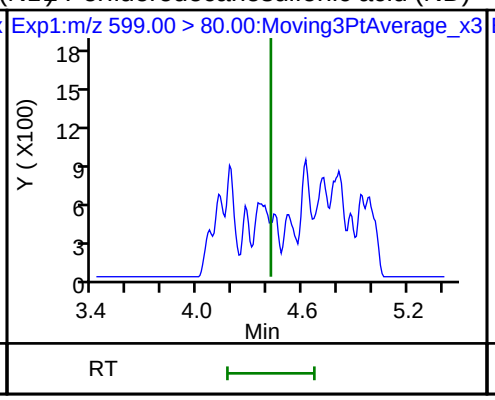

D 41 d3-NMeFOSAA



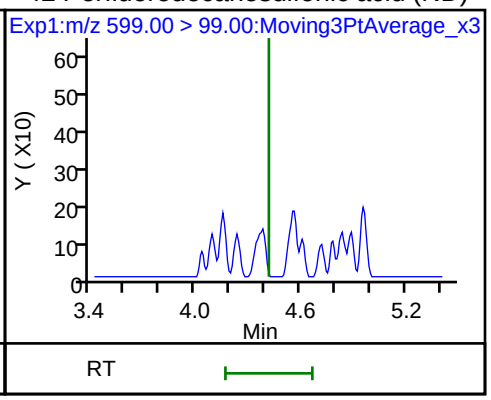

40 N-methylperfluorooctanesulfonami (ND)



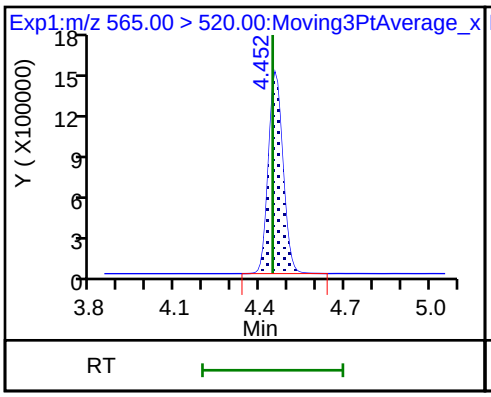

42 Perfluorodecanesulfonic acid (ND)



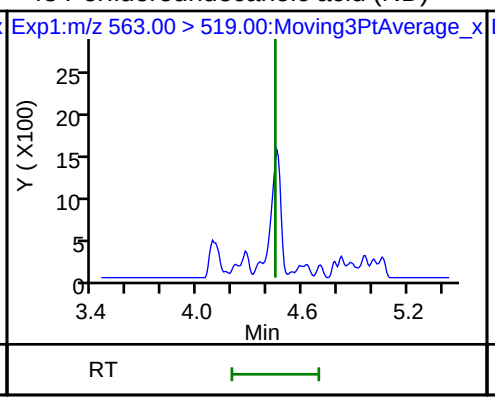

42 Perfluorodecanesulfonic acid (ND)



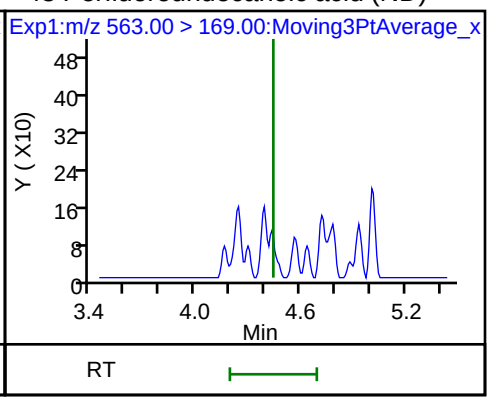

D 46 13C2 PFUnA



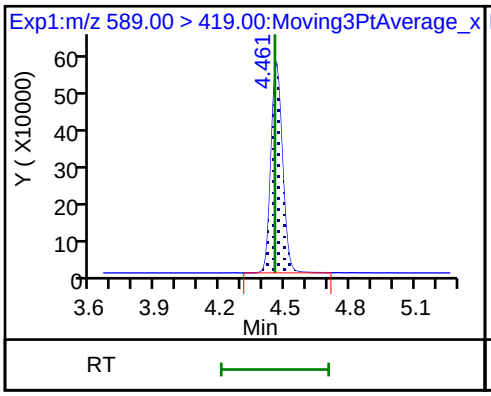

43 Perfluoroundecanoic acid (ND)



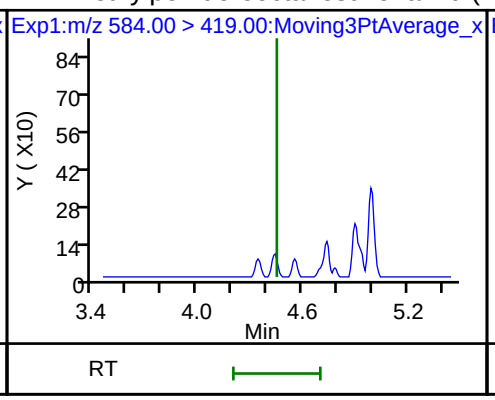

43 Perfluoroundecanoic acid (ND)



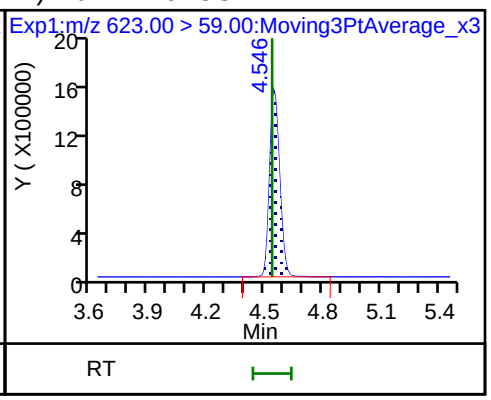

D 45 d5-NEtFOSAA



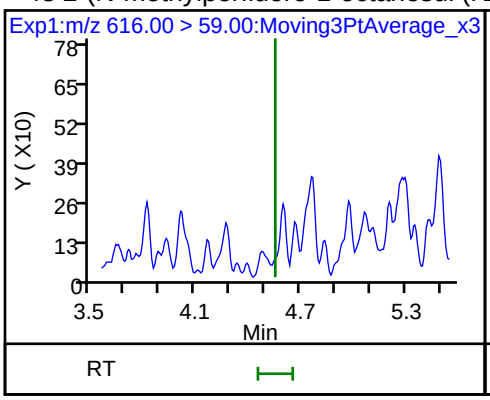

44 N-ethylperfluorooctanesulfonamid (ND)



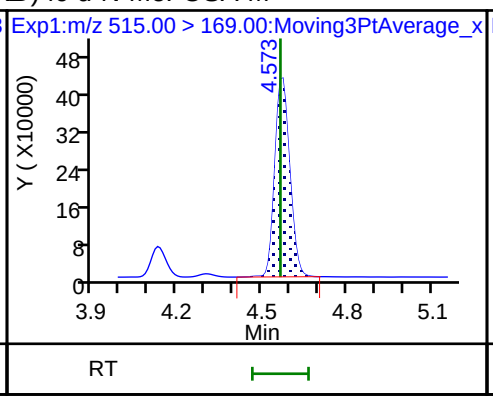

D 47 d7-N-MeFOSE-M



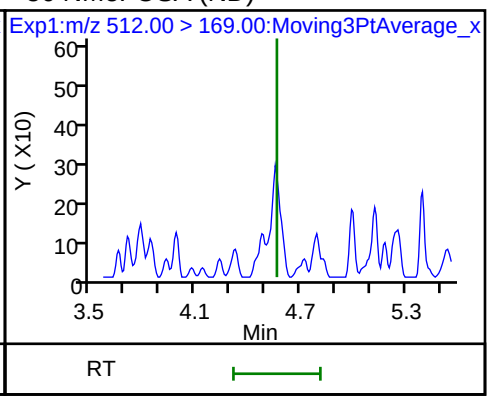
48 2-(N-methylperfluoro-1-octanesul (ND)



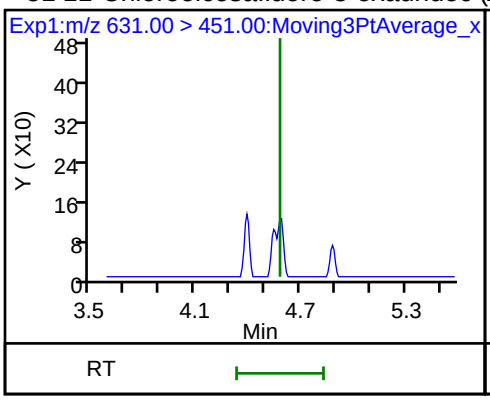

D 49 d-N-MeFOSA-M



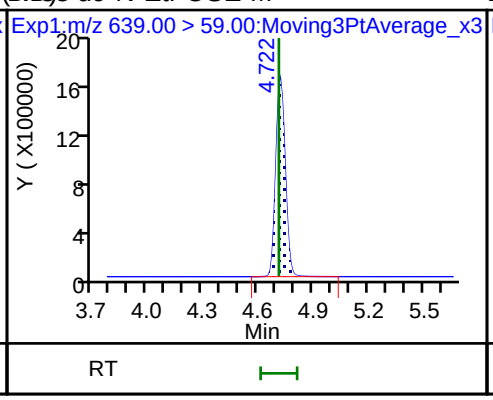

50 NMeFOSA (ND)



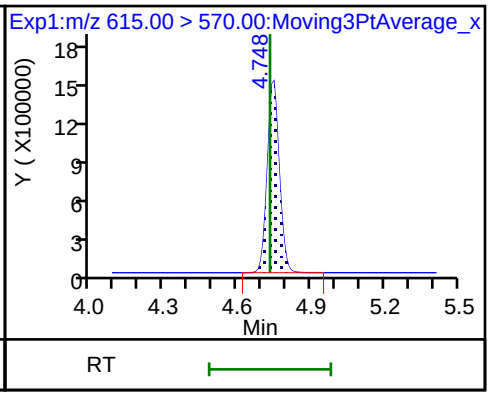

51 11-Chloroeicosafluoro-3-oxaundec (ND)



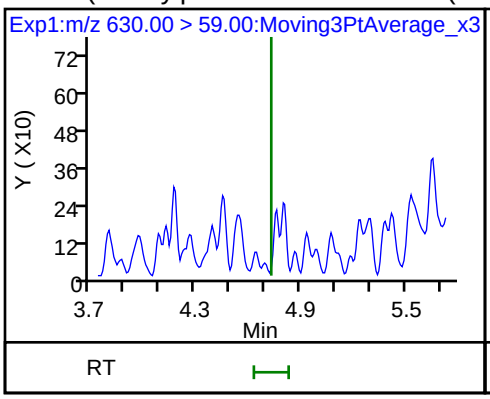

D 53 d9-N-EtFOSE-M



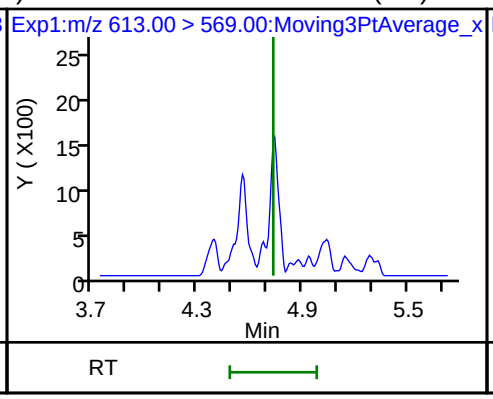

D 56 13C2 PFDoA



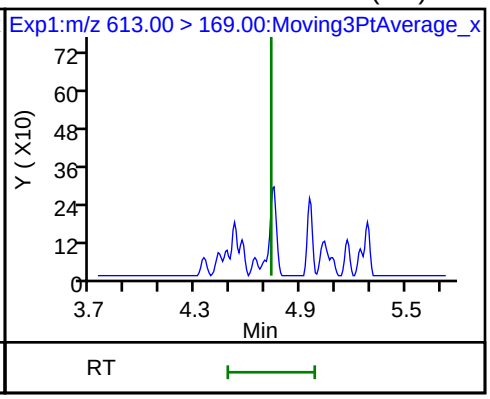

54 2-(N-ethylperfluoro-1-octanesulf (ND)



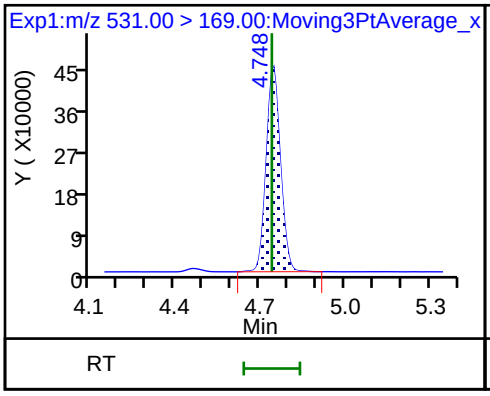

52 Perfluorododecanoic acid (ND)



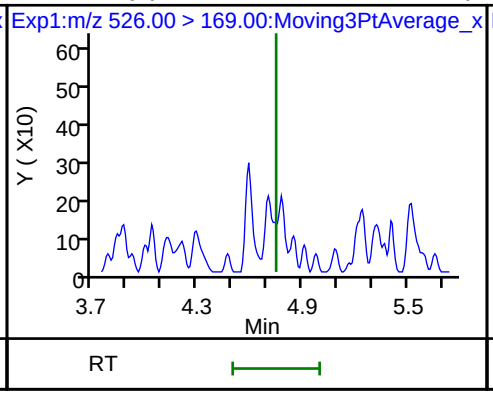

52 Perfluorododecanoic acid (ND)



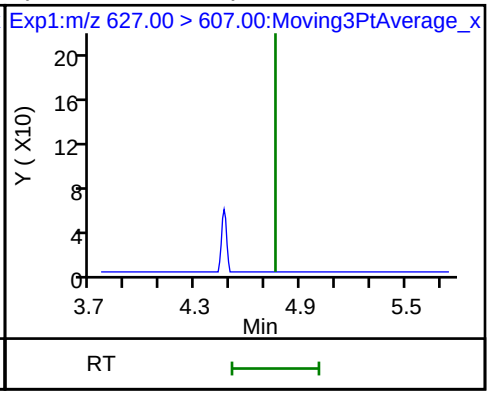

D 58 d-N-EtFOSA-M



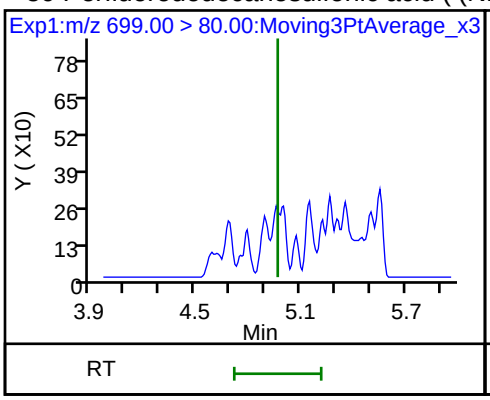

57 N-ethylperfluoro-1-octanesulfona (ND)



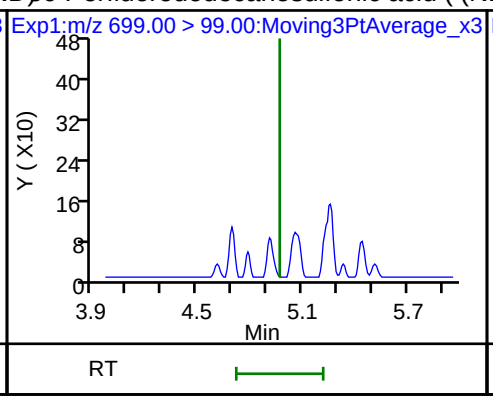

55 1H,1H,2H,2H-perfluorododecanesul (ND)



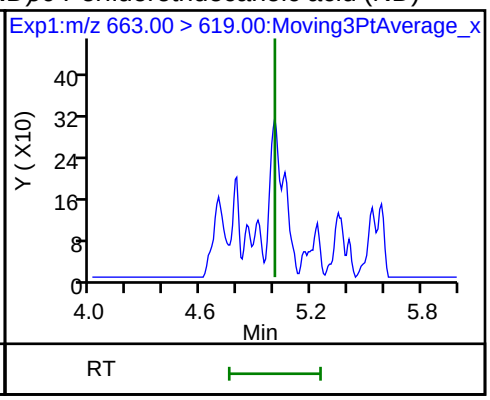
59 Perfluorododecanesulfonic acid ( (ND)



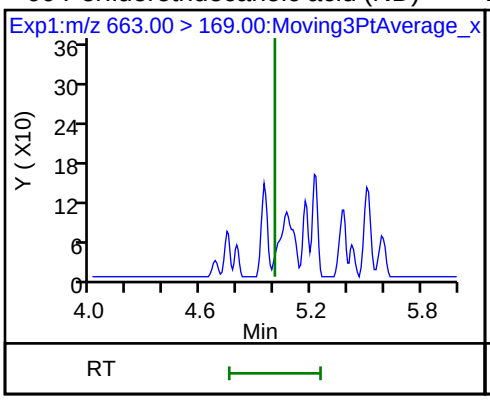

59 Perfluorododecanesulfonic acid ( (ND)



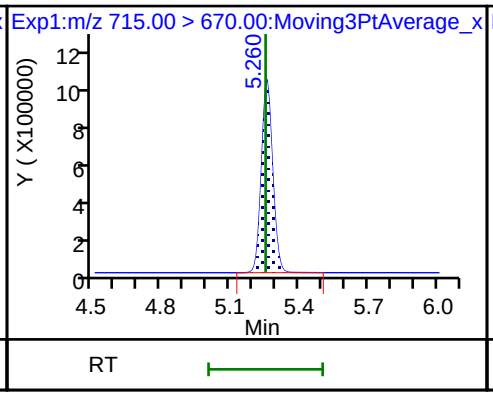

60 Perfluorotridecanoic acid (ND)



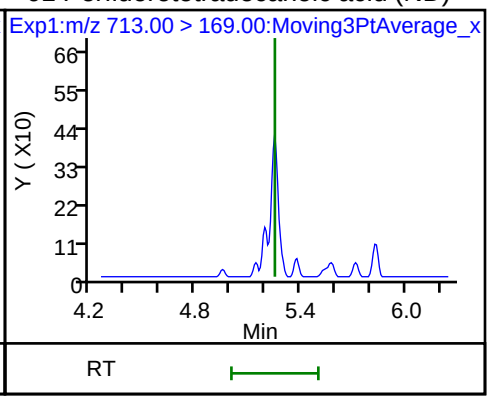

60 Perfluorotridecanoic acid (ND)



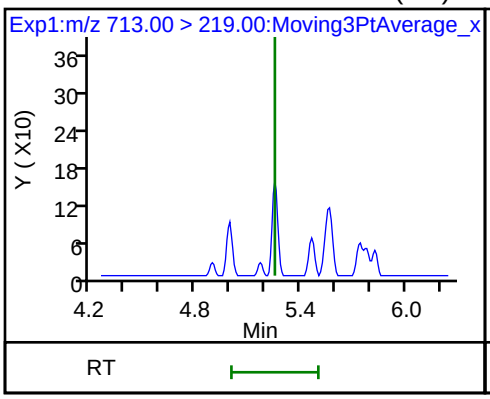

D 62 13C2 PFTeDA



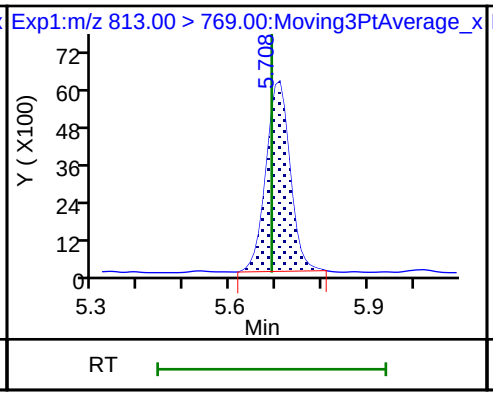

61 Perfluorotetradecanoic acid (ND)



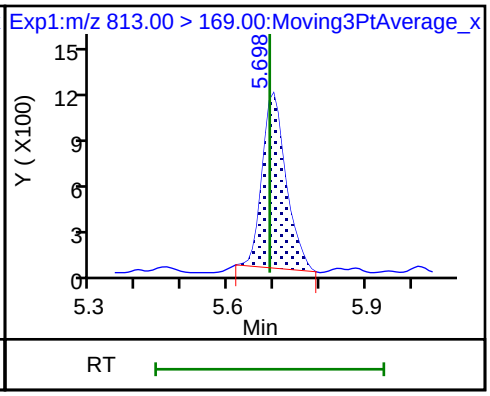

61 Perfluorotetradecanoic acid (ND)



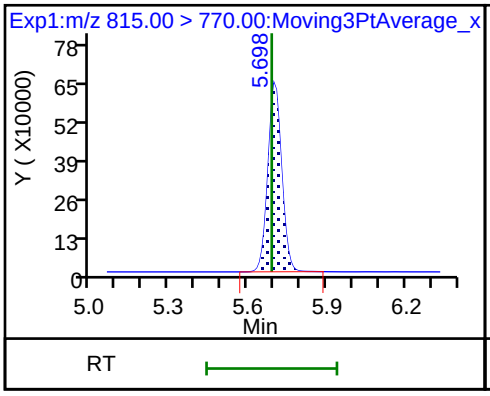

64 Perfluorohexadecanoic acid



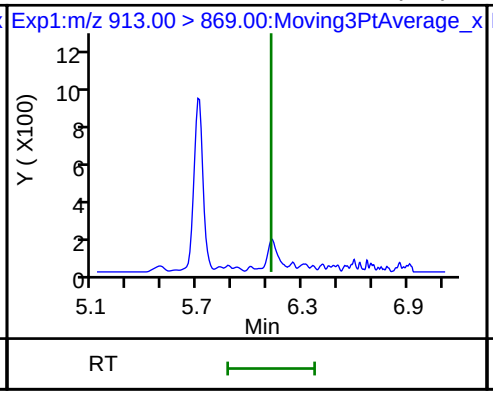

64 Perfluorohexadecanoic acid



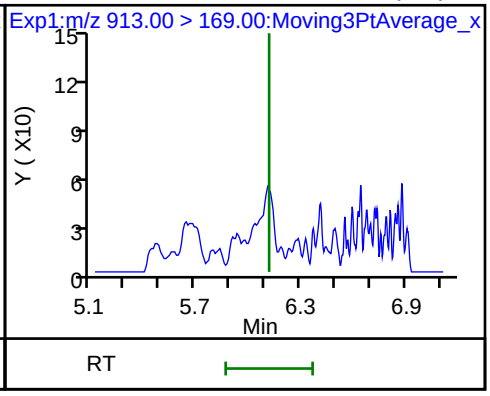

D 63 13C2 PFHxDA




65 Perfluorooctadecanoic acid (ND)




65 Perfluorooctadecanoic acid (ND)



Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

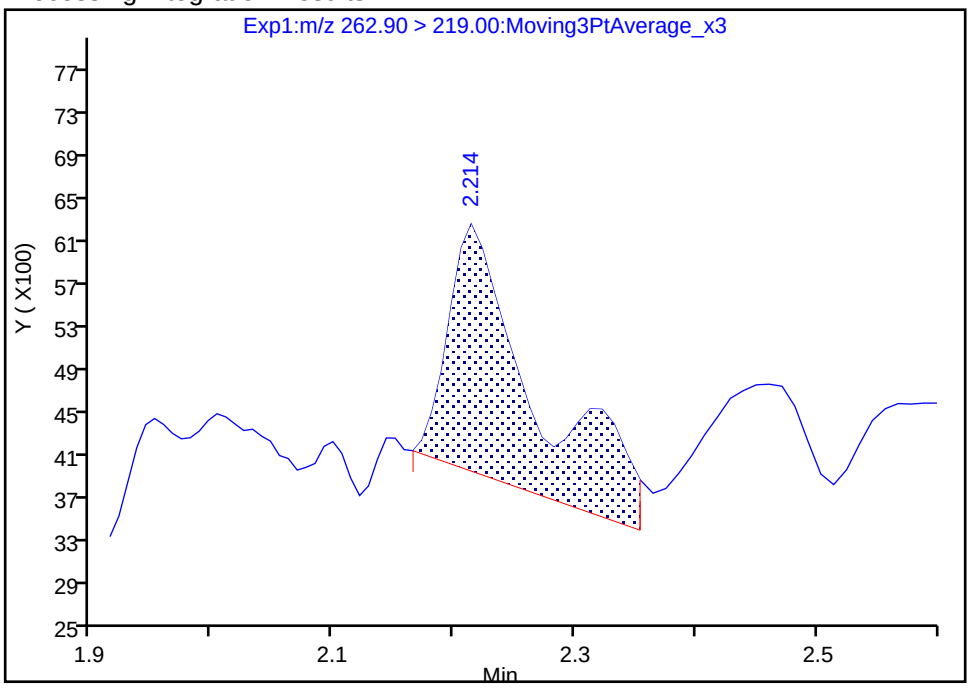
| | | | | | |
|---|---|---|---|---|---|
| Data File: | \\chromfs\Sacramento\ChromData\A9\20200911-103077.b\2020.09.11_A9_PFC_AA_004.d | | | | |
| Injection Date: | 11-Sep-2020 09:30:40 | Instrument ID: | A9 | | |
| Lims ID: | CCB | | | | |
| Client ID: | | | | | |
| Operator ID: | SACINSTRLCMS02 | ALS Bottle#: | 41 | Worklist Smp#: | 1 |
| Injection Vol: | 20.0 ul | Dil. Factor: | 1.0000 | | |
| Method: | PFAS_A9 | Limit Group: | LC PFC ICAL | | |
| Column: | | Detector | EXP1 | | |

## 3 Perfluoropentanoic acid, CAS: 2706-90-3

Signal: 1

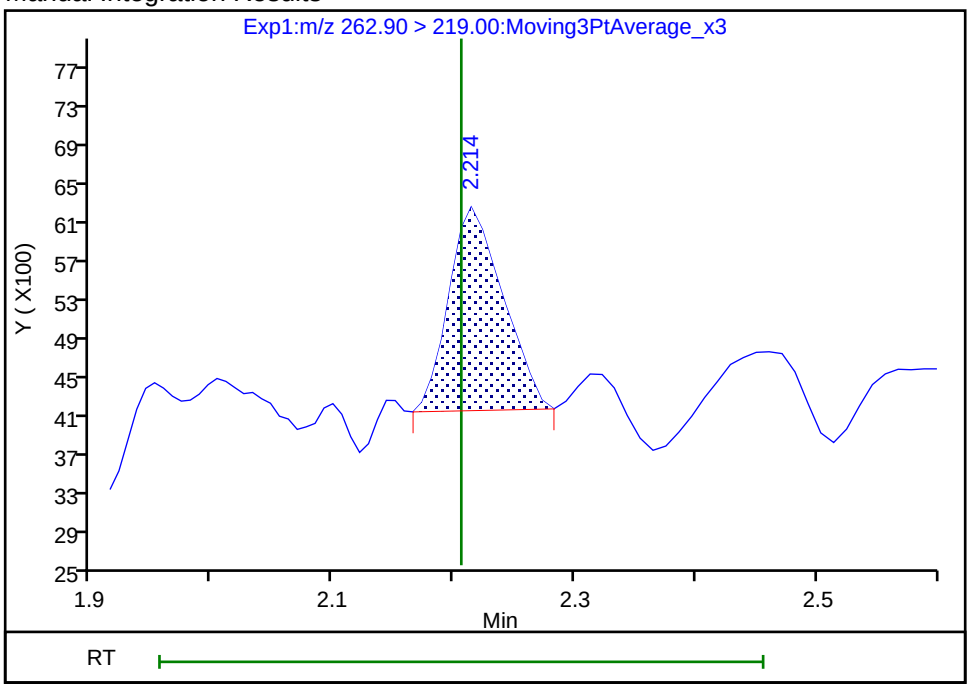
Processing Integration Results

RT: 2.21
Area: 11536
Amount: 0.004106
Amount Units: ng/ml




Manual Integration Results

RT: 2.21
Area: 6517
Amount: 0.002319
Amount Units: ng/ml




Reviewer: zibaa, 11-Sep-2020 10:16:53

Audit Action: Manually Integrated Audit Reason: Baseline

Eurofins TestAmerica, Sacramento

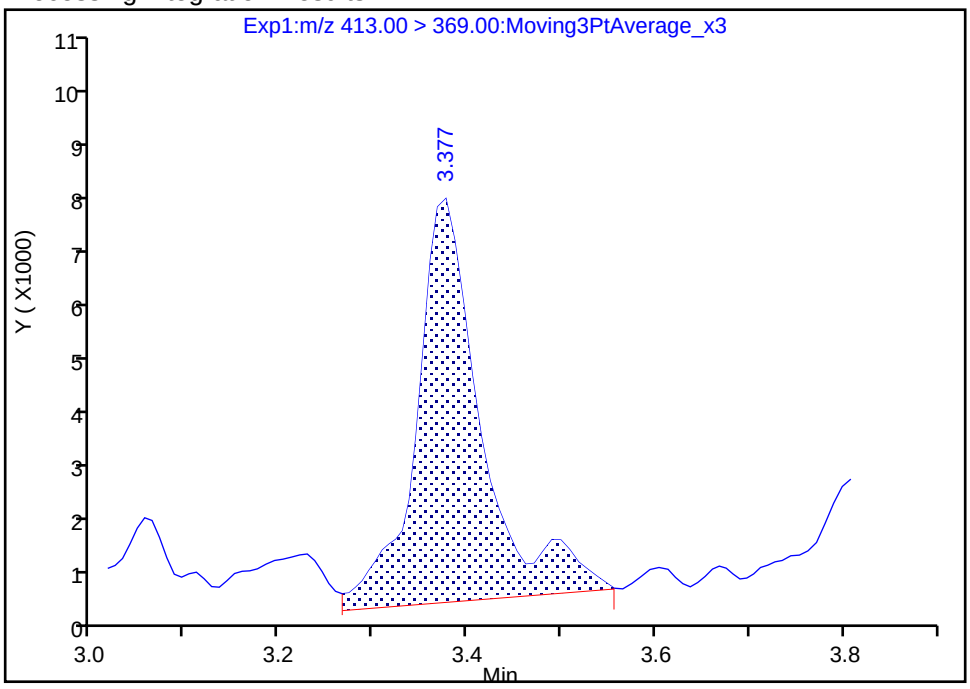
| | | | | | |
|---|---|---|---|---|---|
| Data File: | \\chromfs\Sacramento\ChromData\A9\20200911-103077.b\2020.09.11_A9_PFC_AA_004.d | | | | |
| Injection Date: | 11-Sep-2020 09:30:40 | Instrument ID: | A9 | | |
| Lims ID: | CCB | | | | |
| Client ID: | | | | | |
| Operator ID: | SACINSTRLCMS02 | ALS Bottle#: | 41 | Worklist Smp#: | 1 |
| Injection Vol: | 20.0 ul | Dil. Factor: | 1.0000 | | |
| Method: | PFAS_A9 | Limit Group: | LC PFC ICAL | | |
| Column: | | Detector | EXP1 | | |

## 24 Perfluorooctanoic acid, CAS: 335-67-1

Signal: 1

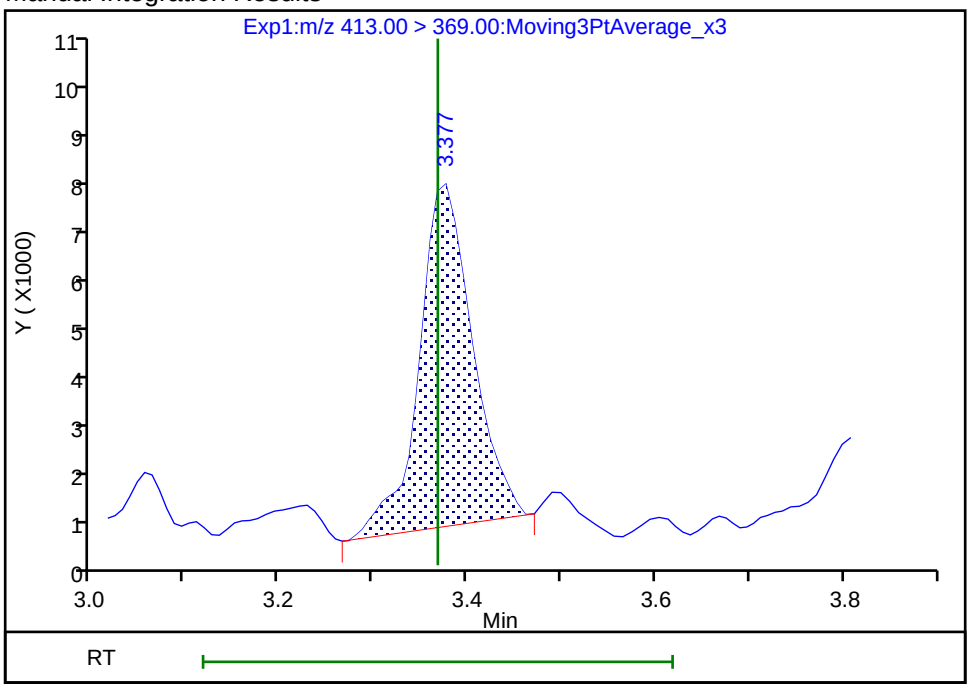
Processing Integration Results

RT: 3.38
Area: 34331
Amount: 0.012890
Amount Units: ng/ml




Manual Integration Results

RT: 3.38
Area: 26237
Amount: 0.009851
Amount Units: ng/ml




Reviewer: zibaa, 11-Sep-2020 10:19:03
Audit Action: Manually Integrated Audit Reason: Baseline

Eurofins TestAmerica, Sacramento

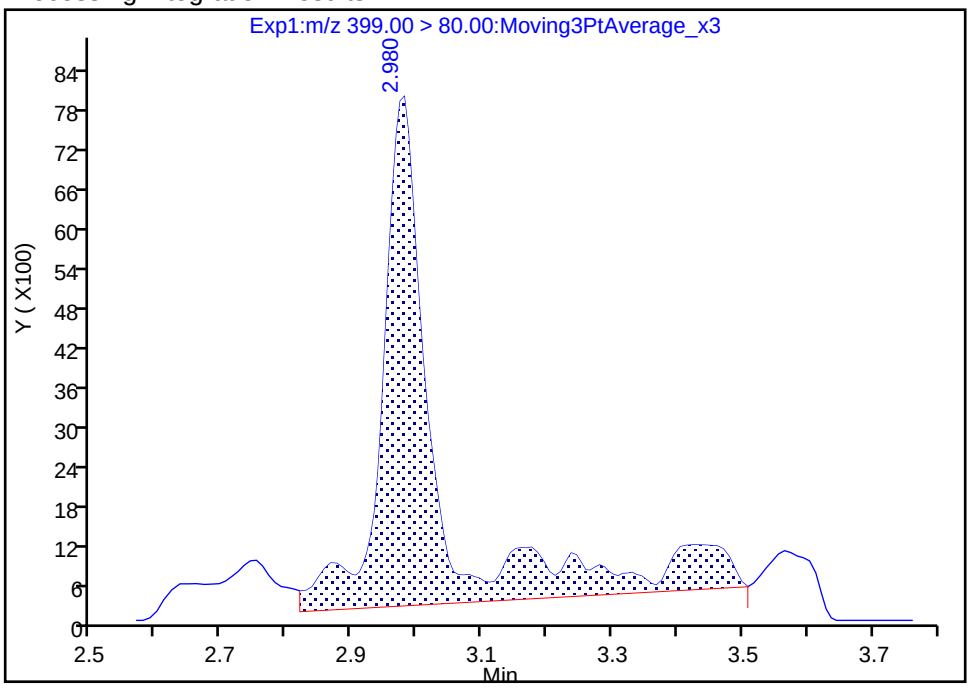
Data File: \\chromfs\Sacramento\ChromData\A9\20200911-103077.b\2020.09.11_A9_PFC_AA_004.d
Injection Date: 11-Sep-2020 09:30:40 Instrument ID: A9
Lims ID: CCB
Client ID:
Operator ID: SACINSTRLCMS02 ALS Bottle#: 41 Worklist Smp#: 1
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFAS_A9 Limit Group: LC PFC ICAL
Column: Detector EXP1

## 16 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 1

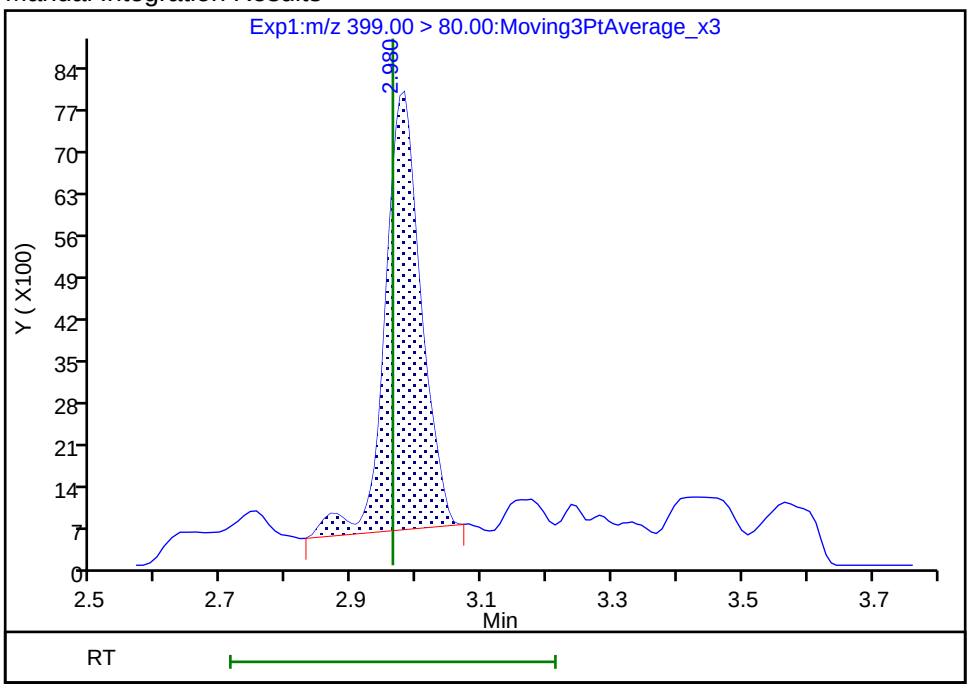
Processing Integration Results

RT: 2.98
Area: 45491
Amount: 0.013591
Amount Units: ng/ml




Manual Integration Results

RT: 2.98
Area: 28116
Amount: 0.008400
Amount Units: ng/ml




Reviewer: zibaa, 11-Sep-2020 10:17:55
Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

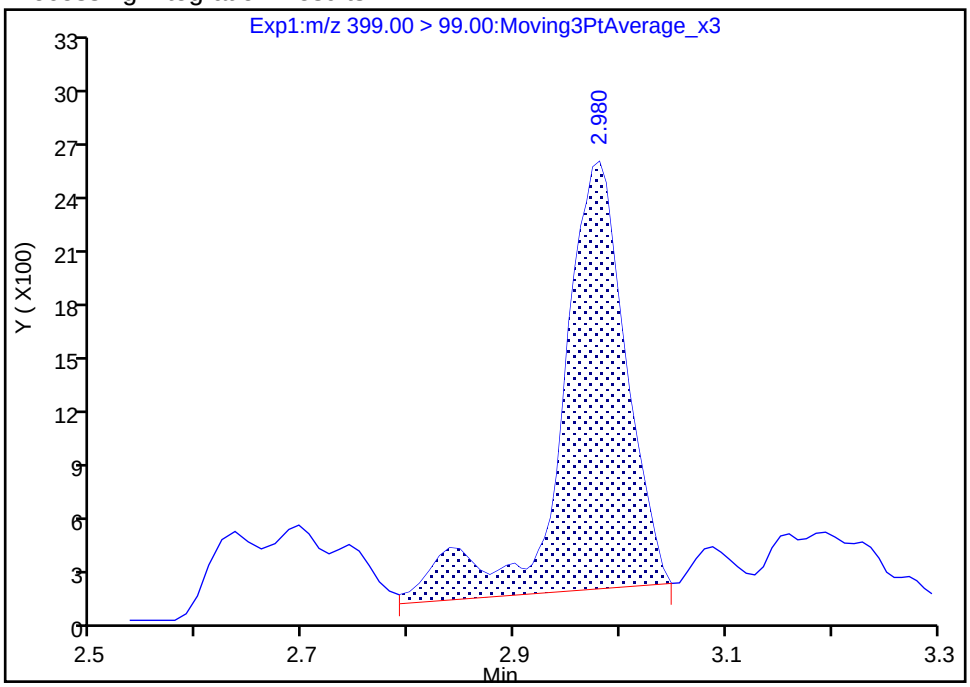
| | | | | | |
|---|---|---|---|---|---|
| Data File: | \\chromfs\Sacramento\ChromData\A9\20200911-103077.b\2020.09.11_A9_PFC_AA_004.d | | | | |
| Injection Date: | 11-Sep-2020 09:30:40 | Instrument ID: | A9 | | |
| Lims ID: | CCB | | | | |
| Client ID: | | | | | |
| Operator ID: | SACINSTRLCMS02 | ALS Bottle#: | 41 | Worklist Smp#: | 1 |
| Injection Vol: | 20.0 ul | Dil. Factor: | 1.0000 | | |
| Method: | PFAS_A9 | Limit Group: | LC PFC ICAL | | |
| Column: | | Detector | EXP1 | | |

## 16 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 2

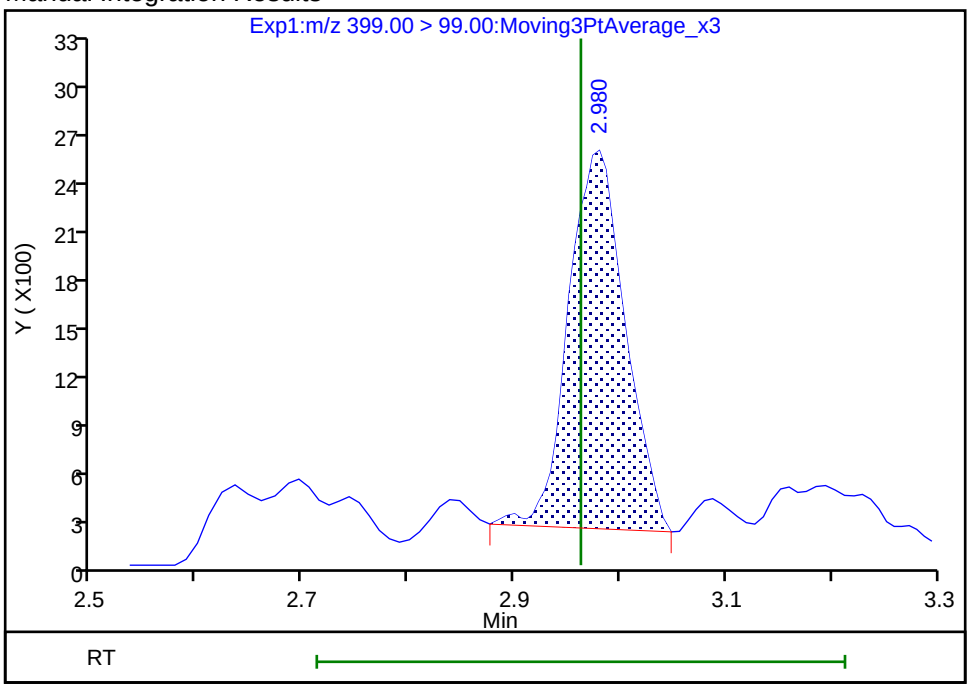
Processing Integration Results

RT: 2.98
Area: 10097
Amount: 0.013591
Amount Units: ng/ml




Manual Integration Results

RT: 2.98
Area: 8558
Amount: 0.008400
Amount Units: ng/ml




Reviewer: zibaa, 11-Sep-2020 10:18:30
Audit Action: Manually Integrated Audit Reason: Baseline

Eurofins TestAmerica, Sacramento

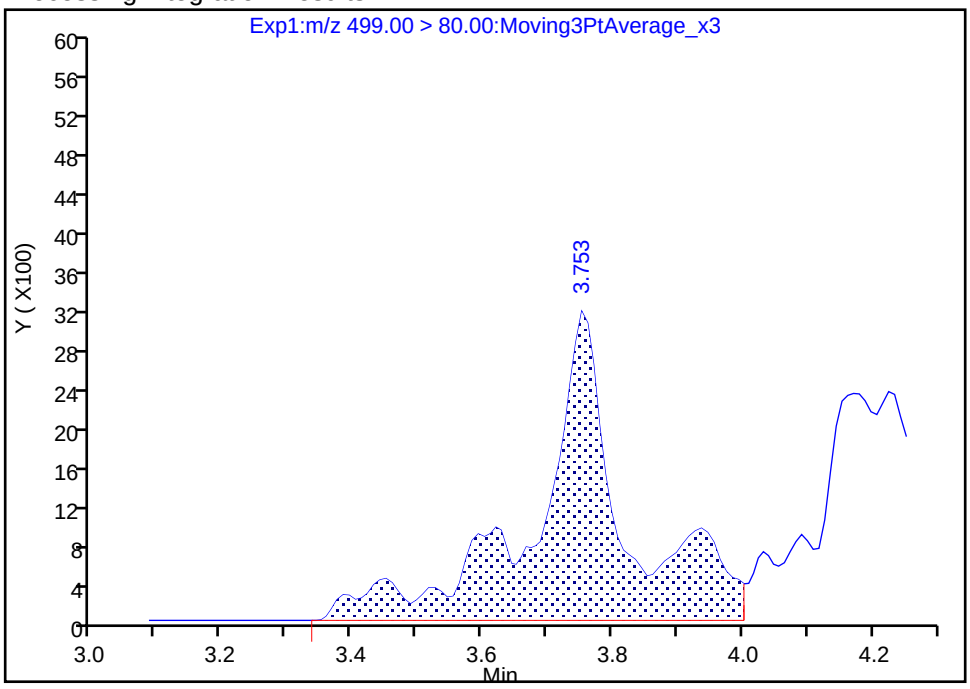
| | | | | | |
|---|---|---|---|---|---|
| Data File: | \\chromfs\Sacramento\ChromData\A9\20200911-103077.b\2020.09.11_A9_PFC_AA_004.d | | | | |
| Injection Date: | 11-Sep-2020 09:30:40 | Instrument ID: | A9 | | |
| Lims ID: | CCB | | | | |
| Client ID: | | | | | |
| Operator ID: | SACINSTRLCMS02 | ALS Bottle#: | 41 | Worklist Smp#: | 1 |
| Injection Vol: | 20.0 ul | Dil. Factor: | 1.0000 | | |
| Method: | PFAS_A9 | Limit Group: | LC PFC ICAL | | |
| Column: | | Detector | EXP1 | | |

## 28 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 1

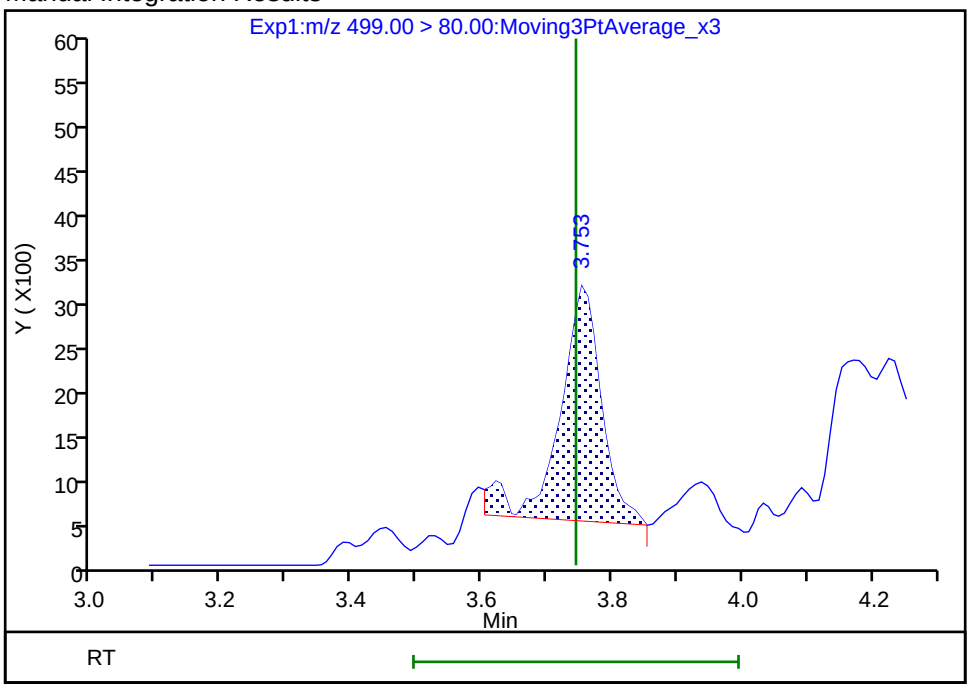
Processing Integration Results

RT: 3.75
Area: 30493
Amount: 0.009925
Amount Units: ng/ml




Manual Integration Results

RT: 3.75
Area: 11834
Amount: 0.003852
Amount Units: ng/ml




Reviewer: zibaa, 11-Sep-2020 10:19:44
Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

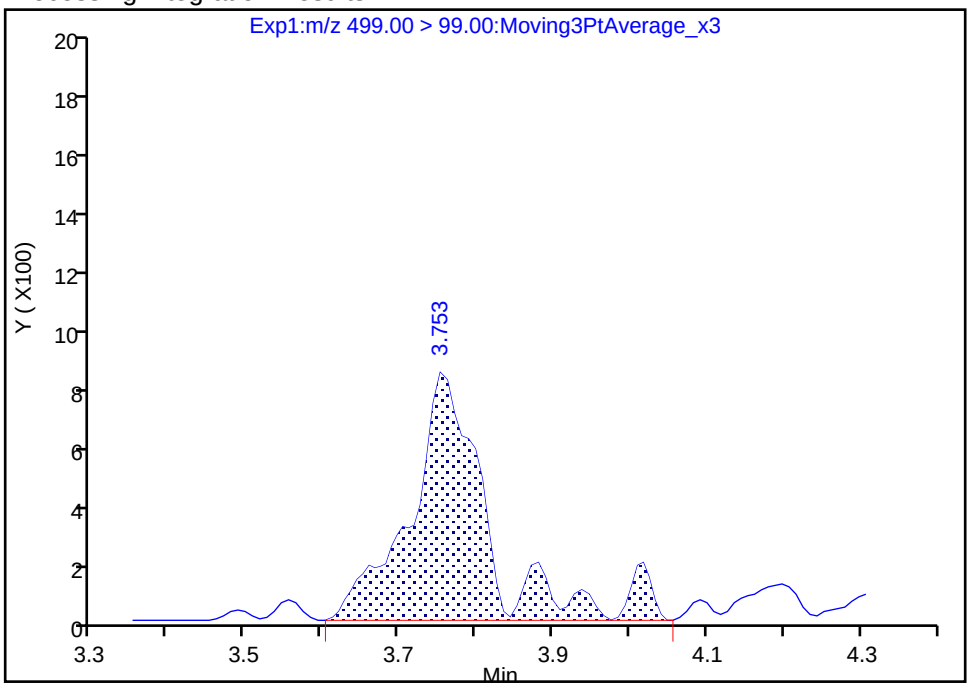
| | | | | | |
|---|---|---|---|---|---|
| Data File: | \\chromfs\Sacramento\ChromData\A9\20200911-103077.b\2020.09.11_A9_PFC_AA_004.d | | | | |
| Injection Date: | 11-Sep-2020 09:30:40 | Instrument ID: | A9 | | |
| Lims ID: | CCB | | | | |
| Client ID: | | | | | |
| Operator ID: | SACINSTRLCMS02 | ALS Bottle#: | 41 | Worklist Smp#: | 1 |
| Injection Vol: | 20.0 ul | Dil. Factor: | 1.0000 | | |
| Method: | PFAS_A9 | Limit Group: | LC PFC ICAL | | |
| Column: | | Detector | EXP1 | | |

## 28 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 2

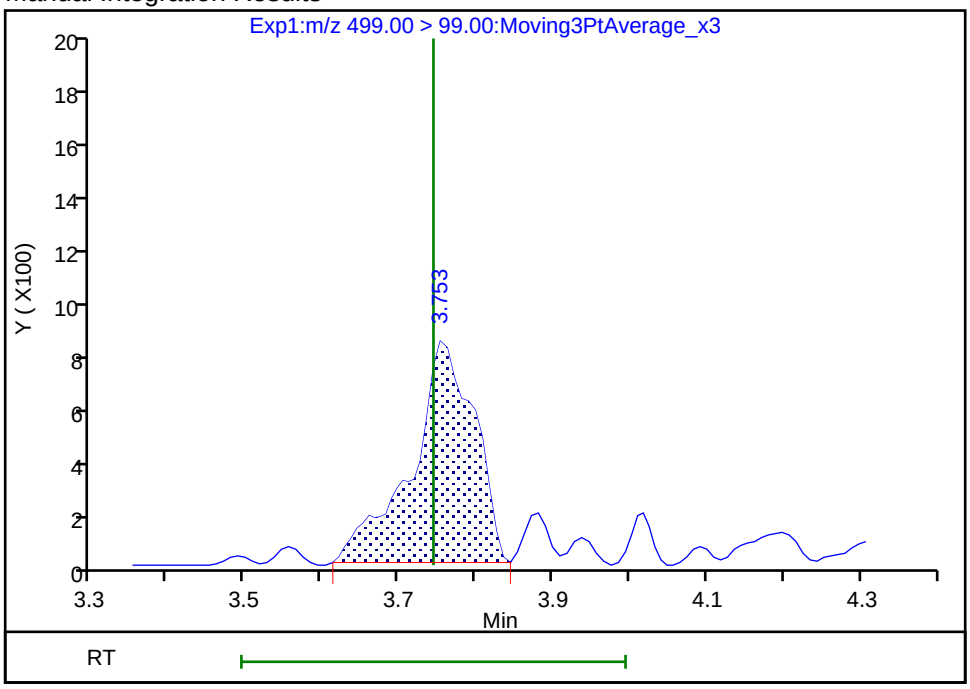
Processing Integration Results

RT: 3.75
Area: 5949
Amount: 0.009925
Amount Units: ng/ml




Manual Integration Results

RT: 3.75
Area: 4773
Amount: 0.003852
Amount Units: ng/ml




Reviewer: zibaa, 11-Sep-2020 10:19:59
Audit Action: Manually Integrated Audit Reason: Baseline

Eurofins TestAmerica, Sacramento

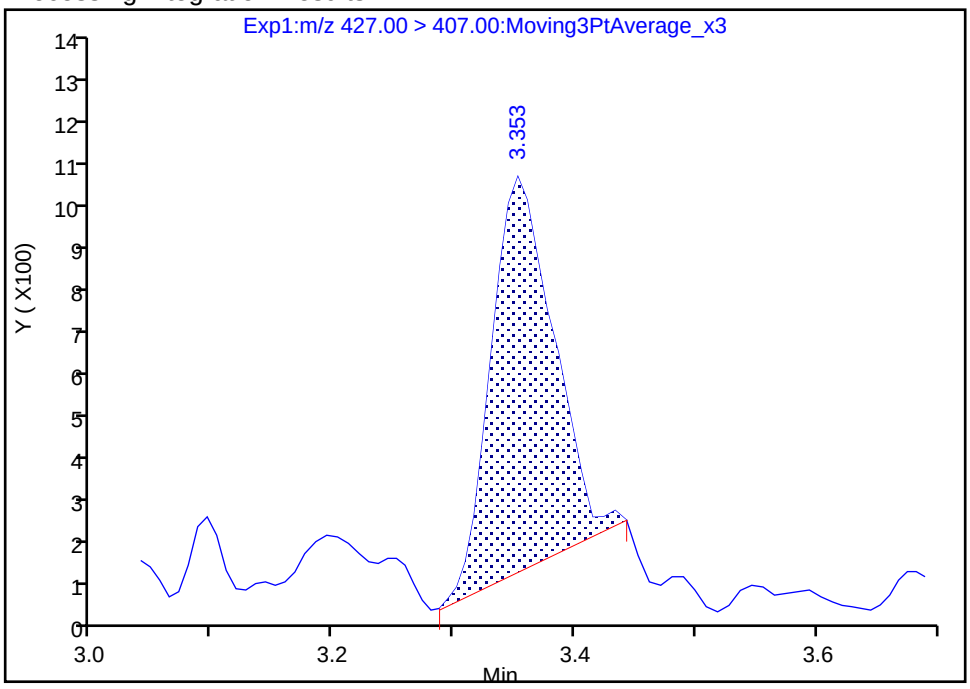
| | | | | | |
|---|---|---|---|---|---|
| Data File: | \\chromfs\Sacramento\ChromData\A9\20200911-103077.b\2020.09.11_A9_PFC_AA_004.d | | | | |
| Injection Date: | 11-Sep-2020 09:30:40 | Instrument ID: | A9 | | |
| Lims ID: | CCB | | | | |
| Client ID: | | | | | |
| Operator ID: | SACINSTRLCMS02 | ALS Bottle#: | 41 | Worklist Smp#: | 1 |
| Injection Vol: | 20.0 ul | Dil. Factor: | 1.0000 | | |
| Method: | PFAS_A9 | Limit Group: | LC PFC ICAL | | |
| Column: | | Detector | EXP1 | | |

## 22 1H,1H,2H,2H-perfluorooctanesulfo, CAS: 27619-97-2

Signal: 1

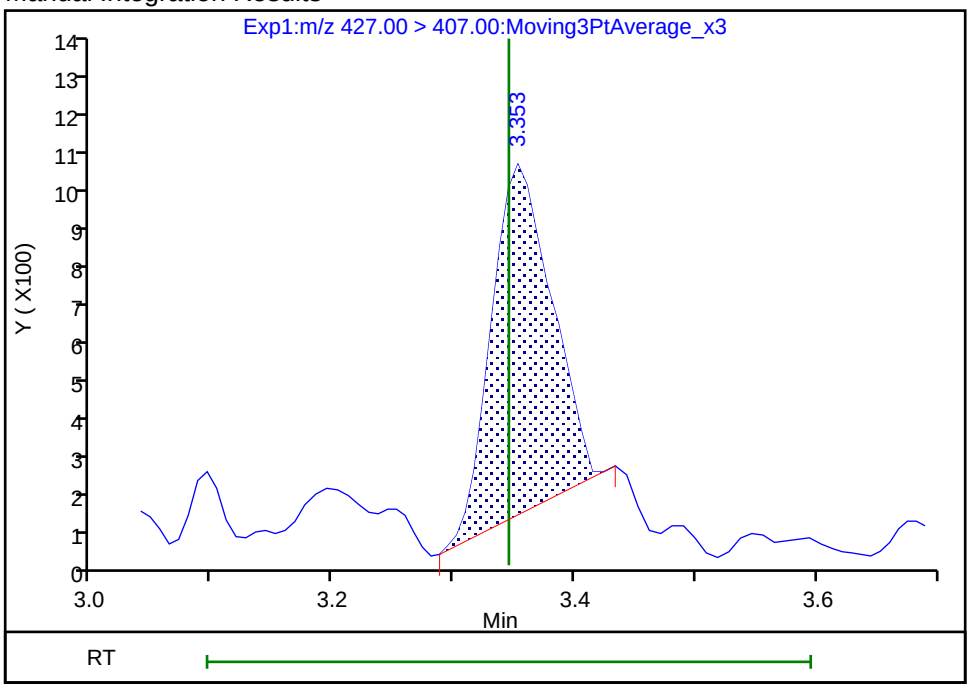
Processing Integration Results

RT: 3.35
Area: 3329
Amount: 0.004698
Amount Units: ng/ml




Manual Integration Results

RT: 3.35
Area: 3145
Amount: 0.004438
Amount Units: ng/ml




Reviewer: zibaa, 11-Sep-2020 10:18:49
Audit Action: Manually Integrated Audit Reason: Baseline

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento  Job No.: 460-217547-1

SDG No.:

Client Sample ID:  Lab Sample ID: CCB 320-411371/1

Matrix: Water  Lab File ID: 2020.09.11_A18_PFC_A_004.d

Analysis Method: 537 (modified)  Date Collected:

Extraction Method:  Date Extracted:

Sample wt/vol: 1(mL)  Date Analyzed: 09/11/2020 10:52

Con. Extract Vol.:  Dilution Factor: 1

Injection Volume: 20(uL)  GC Column: Gemini C18 3x50 ID: 3(mm)

% Moisture:  GPC Cleanup:(Y/N) N

Analysis Batch No.: 411371  Units: ng/mL

| CAS NO. | COMPOUND NAME | RESULT | Q | RL | MDL |
|---|---|---|---|---|---|
| 375-22-4 | Perfluorobutanoic acid (PFBA) | 0.0088 | U | 0.050 | 0.0088 |
| 2706-90-3 | Perfluoropentanoic acid (PFPeA) | 0.012 | U | 0.050 | 0.012 |
| 307-24-4 | Perfluorohexanoic acid (PFHxA) | 0.015 | U | 0.050 | 0.015 |
| 375-85-9 | Perfluoroheptanoic acid (PFHpA) | 0.0063 | U | 0.050 | 0.0063 |
| 335-67-1 | Perfluorooctanoic acid (PFOA) | 0.021 | U | 0.050 | 0.021 |
| 375-95-1 | Perfluorononanoic acid (PFNA) | 0.0068 | U | 0.050 | 0.0068 |
| 335-76-2 | Perfluorodecanoic acid (PFDA) | 0.0078 | U | 0.050 | 0.0078 |
| 2058-94-8 | Perfluoroundecanoic acid (PFUnA) | 0.028 | U | 0.050 | 0.028 |
| 307-55-1 | Perfluorododecanoic acid (PFDoA) | 0.014 | U | 0.050 | 0.014 |
| 72629-94-8 | Perfluorotridecanoic acid (PFTriA) | 0.033 | U | 0.050 | 0.033 |
| 376-06-7 | Perfluorotetradecanoic acid (PFTeA) | 0.0073 | U | 0.050 | 0.0073 |
| 375-73-5 | Perfluorobutanesulfonic acid (PFBS) | 0.0050 | U | 0.050 | 0.0050 |
| 355-46-4 | Perfluorohexanesulfonic acid (PFHxS) | 0.00760 | J | 0.050 | 0.0043 |
| 375-92-8 | Perfluoroheptanesulfonic Acid (PFHpS) | 0.0048 | U | 0.050 | 0.0048 |
| 1763-23-1 | Perfluorooctanesulfonic acid (PFOS) | 0.014 | U | 0.050 | 0.014 |
| 335-77-3 | Perfluorodecanesulfonic acid (PFDS) | 0.0080 | U | 0.050 | 0.0080 |
| 754-91-6 | Perfluorooctanesulfonamide (FOSA) | 0.0088 | U | 0.050 | 0.0088 |
| 2355-31-9 | N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA) | 0.078 | U | 0.50 | 0.078 |
| 2991-50-6 | N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA) | 0.048 | U | 0.50 | 0.048 |
| 27619-97-2 | 6:2 FTS | 0.050 | U | 0.50 | 0.050 |
| 39108-34-4 | 8:2 FTS | 0.050 | U | 0.50 | 0.050 |

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento  Job No.: 460-217547-1

SDG No.:

Client Sample ID:  Lab Sample ID: CCB 320-411371/1

Matrix: Water  Lab File ID: 2020.09.11_A18_PFC_A_004.d

Analysis Method: 537 (modified)  Date Collected:

Extraction Method:  Date Extracted:

Sample wt/vol: 1(mL)  Date Analyzed: 09/11/2020 10:52

Con. Extract Vol.:  Dilution Factor: 1

Injection Volume: 20(uL)  GC Column: Gemini C18 3x50 ID: 3(mm)

% Moisture:  GPC Cleanup:(Y/N) N

Analysis Batch No.: 411371  Units: ng/mL

| CAS NO. | ISOTOPE DILUTION | %REC | Q | LIMITS |
|---|---|---|---|---|
| STL00992 | 13C4 PFBA | 81 | | 25-150 |
| STL01893 | 13C5 PFPeA | 83 | | 25-150 |
| STL00993 | 13C2 PFHxA | 92 | | 25-150 |
| STL01892 | 13C4 PFHpA | 96 | | 25-150 |
| STL00990 | 13C4 PFOA | 95 | | 25-150 |
| STL00995 | 13C5 PFNA | 103 | | 25-150 |
| STL00996 | 13C2 PFDA | 108 | | 25-150 |
| STL00997 | 13C2 PFUnA | 112 | | 25-150 |
| STL00998 | 13C2 PFDoA | 97 | | 25-150 |
| STL02116 | 13C2 PFTeDA | 95 | | 25-150 |
| STL02337 | 13C3 PFBS | 88 | | 25-150 |
| STL00994 | 18O2 PFHxS | 94 | | 25-150 |
| STL00991 | 13C4 PFOS | 88 | | 25-150 |
| STL01056 | 13C8 FOSA | 90 | | 25-150 |
| STL02118 | d3-NMeFOSAA | 83 | | 25-150 |
| STL02117 | d5-NEtFOSAA | 92 | | 25-150 |
| STL02279 | M2-6:2 FTS | 82 | | 25-150 |
| STL02280 | M2-8:2 FTS | 84 | | 25-150 |

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\A18\20200911-103099.b\2020.09.11_A18_PFC_A_004.d
Lims ID: CCB
Client ID:
Sample Type: CCB
Inject. Date: 11-Sep-2020 10:52:12 ALS Bottle#: 50 Worklist Smp#: 1
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Sample Info: CCB (53)
Misc. Info.: Plate: 1 Rack: 1
Operator ID: TAISACA18-PC\A-18 Instrument ID: A18

Method: \\chromfs\Sacramento\ChromData\A18\20200911-103099.b\PFAS_A18V2.m
Limit Group: LC PFC ICAL
Last Update: 14-Sep-2020 09:58:43 Calib Date: 25-Aug-2020 17:37:57
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\A18\20200825-102078.b\2020.08.25_A18_ICAL_A_017.d

Column 1 : Gemini C18 3um 3mm x 50 mm ( 3.00 mm) Det: EXP1
Process Host: CTX1038

First Level Reviewer: sanjumnair Date: 14-Sep-2020 09:58:53
Ratio Calibration: CCV Sample: \\chromfs\Sacramento\ChromData\A18\20200910-103060.b\2020.09.10_A18_PFC_B_009.d

| Signal | RT | EXP RT | DLT RT | REL RT | Response | Amount ng/ml | Ratio(Limits) | %Rec | S/N | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| D 1 13C4 PFBA | | | | | | | | | | |
| 217.00 > 172.00 | 2.557 | 2.566 | -0.009 | 0.624 | 17452098 | 2.03 | | 81.2 | 10516 | |
| D 4 13C5 PFPeA | | | | | | | | | | |
| 267.90 > 223.00 | 2.909 | 2.920 | -0.011 | 0.710 | 13792744 | 2.06 | | 82.5 | 4535 | |
| 5 Perfluoropentanoic acid | | | | | | | | | | M |
| 262.90 > 219.00 | 2.919 | 2.920 | -0.001 | 1.004 | 14873 | 0.002704 | | | 0.7 | M |
| D 9 13C3 PFBS | | | | | | | | | | |
| 301.90 > 80.00 | 2.950 | 2.951 | -0.001 | 0.720 | 10782925 | 2.05 | | 88.3 | 4378 | |
| D 7 M2-4:2 FTS | | | | | | | | | | |
| 329.00 > 81.00 | 3.248 | 3.251 | -0.003 | 0.792 | 2329098 | 1.84 | | 78.9 | 1067 | |
| D 11 13C2 PFHxA | | | | | | | | | | |
| 315.00 > 270.00 | 3.287 | 3.301 | -0.014 | 0.802 | 15402220 | 2.31 | | 92.3 | 8717 | |
| 10 Perfluorohexanoic acid | | | | | | | | | | |
| 313.00 > 269.00 | 3.298 | 3.301 | -0.003 | 1.003 | 21574 | 0.003633 | Target=13.46 | | 1.4 | |
| 313.00 > 119.00 | 3.298 | 3.301 | -0.003 | 1.003 | 1713 | | 12.59(6.73-20.18) | | 0.8 | |
| D 14 13C3 HFPO-DA | | | | | | | | | | |
| 287.00 > 169.00 | 3.415 | 3.418 | -0.003 | 0.833 | 2817889 | 2.06 | | 82.6 | 4602 | |
| D 18 13C4 PFHpA | | | | | | | | | | |
| 367.00 > 322.00 | 3.701 | 3.702 | -0.001 | 0.903 | 13655042 | 2.40 | | 95.9 | 6618 | |
| 15 Perfluorohexanesulfonic acid | | | | | | | | | | M |
| 399.00 > 80.00 | 3.701 | 3.702 | -0.001 | 1.000 | 23354 | 0.007600 | Target=3.45 | | 8.9 | M |
| 399.00 > 99.00 | 3.701 | 3.702 | -0.001 | 1.000 | 8140 | | 2.87(1.72-5.17) | | 4.9 | M |
| D 17 18O2 PFHxS | | | | | | | | | | |
| 403.00 > 84.00 | 3.701 | 3.702 | -0.001 | 0.903 | 6150983 | 2.22 | | 93.7 | 6523 | |
| D 20 M2-6:2 FTS | | | | | | | | | | |
| 429.00 > 81.00 | 4.074 | 4.076 | -0.002 | 0.994 | 2064791 | 1.94 | | 81.9 | 1427 | |
| 21 6:2 FTS | | | | | | | | | | |
| 427.00 > 407.00 | 4.074 | 4.076 | -0.002 | 1.000 | 12804 | 0.006407 | | | 30.1 | |

| Signal | RT | EXP RT | DLT RT | REL RT | Response | Amount ng/ml | Ratio(Limits) | %Rec | S/N | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| $ 26 13C8 PFOA | | | | | | | | | | |
| 421.00 > 376.00 | 4.090 | 4.092 | -0.002 | 0.998 | 9368712 | 2.56 | | 104 | 6013 | |
| * 23 13C2 PFOA | | | | | | | | | | |
| 415.00 > 370.00 | 4.098 | 4.092 | 0.006 | | 13554288 | 2.50 | | | 7624 | |
| 22 Perfluorooctanoic acid | | | | | | | | | | M |
| 413.00 > 369.00 | 4.098 | 4.092 | 0.006 | 1.000 | 44876 | 0.008500 | Target=2.90 | | 5.9 | M |
| 413.00 > 169.00 | 4.107 | 4.092 | 0.015 | 1.002 | 16258 | | 2.76(1.45-4.35) | | 15.3 | M |
| D 25 13C4 PFOA | | | | | | | | | | |
| 417.00 > 372.00 | 4.098 | 4.092 | 0.006 | 1.000 | 12934346 | 2.38 | | 95.3 | 6478 | |
| $ 28 13C8 PFOS | | | | | | | | | | |
| 507.00 > 99.00 | 4.454 | 4.454 | 0.0 | 1.087 | 1275112 | 2.17 | | 90.9 | 4130 | |
| D 27 13C4 PFOS | | | | | | | | | | |
| 503.00 > 80.00 | 4.462 | 4.454 | 0.008 | 1.089 | 3949878 | 2.10 | | 88.0 | 1852 | |
| D 30 13C5 PFNA | | | | | | | | | | |
| 468.00 > 423.00 | 4.478 | 4.478 | 0.0 | 1.093 | 11309284 | 2.59 | | 103 | 6817 | |
| D 33 13C8 FOSA | | | | | | | | | | |
| 506.00 > 78.00 | 4.786 | 4.794 | -0.008 | 1.168 | 6814718 | 2.25 | | 89.9 | 4653 | |
| 34 Perfluorooctanesulfonamide | | | | | | | | | | M |
| 498.00 > 78.00 | 4.786 | 4.794 | -0.008 | 1.000 | 3425 | 0.001350 | | | 17.1 | M |
| D 39 13C2 PFDA | | | | | | | | | | |
| 515.00 > 470.00 | 4.837 | 4.828 | 0.009 | 1.180 | 11455650 | 2.70 | | 108 | 9801 | |
| 36 8:2 FTS | | | | | | | | | | |
| 527.00 > 507.00 | 4.829 | 4.837 | -0.008 | 0.998 | 1854 | 0.000817 | | | 12.6 | |
| D 38 M2-8:2 FTS | | | | | | | | | | |
| 529.00 > 81.00 | 4.837 | 4.837 | 0.0 | 1.180 | 3062653 | 2.00 | | 83.5 | 2299 | |
| D 40 d3-NMeFOSAA | | | | | | | | | | |
| 573.00 > 419.00 | 5.000 | 5.000 | 0.0 | 1.220 | 5942566 | 2.09 | | 83.4 | 3292 | |
| D 43 13C2 PFUnA | | | | | | | | | | |
| 565.00 > 520.00 | 5.166 | 5.157 | 0.009 | 1.260 | 11759453 | 2.80 | | 112 | 18477 | |
| D 44 d5-NEtFOSAA | | | | | | | | | | |
| 589.00 > 419.00 | 5.166 | 5.166 | 0.0 | 1.260 | 6954664 | 2.31 | | 92.3 | 3451 | |
| D 47 d7-N-MeFOSE-M | | | | | | | | | | |
| 623.00 > 59.00 | 5.239 | 5.248 | -0.009 | 1.278 | 9586295 | 12.8 | | 102 | 3641 | |
| D 49 d-N-MeFOSA-M | | | | | | | | | | |
| 515.00 > 169.00 | 5.269 | 5.269 | 0.0 | 1.286 | 2455583 | 2.30 | | 92.2 | 46.8 | |
| D 52 d9-N-EtFOSE-M | | | | | | | | | | |
| 639.00 > 59.00 | 5.416 | 5.426 | -0.010 | 1.321 | 12229235 | 13.3 | | 106 | 4488 | |
| D 54 d-N-EtFOSA-M | | | | | | | | | | |
| 531.00 > 169.00 | 5.448 | 5.447 | 0.001 | 1.329 | 2353252 | 2.16 | | 86.3 | 452 | |
| 57 Perfluorododecanoic acid | | | | | | | | | | M |
| 613.00 > 569.00 | 5.459 | 5.447 | 0.012 | 1.000 | 9989 | 0.002440 | Target=9.17 | | 4.1 | M |
| 613.00 > 169.00 | 5.459 | 5.447 | 0.012 | 1.000 | 1172 | | 8.52(4.58-13.75) | | 5.8 | |
| D 56 13C2 PFDoA | | | | | | | | | | |
| 615.00 > 570.00 | 5.459 | 5.458 | 0.001 | 1.332 | 10010498 | 2.41 | | 96.5 | 10341 | |
| D 61 13C2 PFTeDA | | | | | | | | | | |
| 715.00 > 670.00 | 5.971 | 5.959 | 0.012 | 1.457 | 8113550 | 2.37 | | 94.8 | 7630 | |

| Signal | RT | EXP RT | DLT RT | REL RT | Response | Amount ng/ml | Ratio(Limits) | %Rec | S/N | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| D 64 13C2 PFHxDA | | | | | | | | | | |
| 815.00 > 770.00 | 6.421 | 6.402 | 0.019 | 1.567 | 6076679 | 2.43 | | 97.1 | 7035 | |
| 63 Perfluorohexadecanoic acid | | | | | | | | | | |
| 813.00 > 769.00 | 6.421 | 6.411 | 0.010 | 1.000 | 50827 | -0.00002292 | Target=11.60 | | 47.4 | |
| 813.00 > 169.00 | 6.421 | 6.411 | 0.010 | 1.000 | 5664 | | 8.97(5.80-17.40) | | 60.8 | |

## QC Flag Legend

Processing Flags

Review Flags

M - Manually Integrated

## Reagents:

LCPFC_LL0_00053 Amount Added: 1.00 Units: mL

Report Date: 14-Sep-2020 09:58:54 Chrom Revision: 2.3 11-Sep-2020 20:57:08

Eurofins TestAmerica, Sacramento

Data File: \\chromfs\Sacramento\ChromData\A18\20200911-103099.b\2020.09.11_A18_PFC_A_004.d

Injection Date: 11-Sep-2020 10:52:12 Instrument ID: A18

Lims ID: CCB

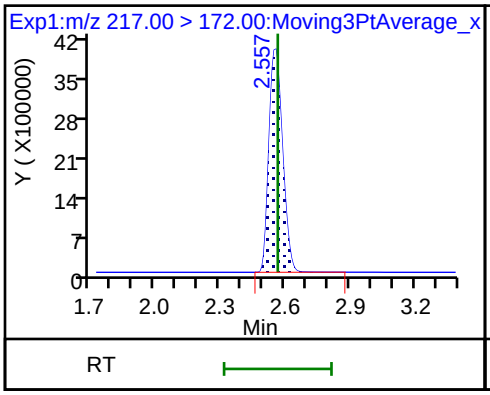
Client ID:

Operator ID: TAISACA18-PC\A-18 ALS Bottle#: 50 Worklist Smp#: 1

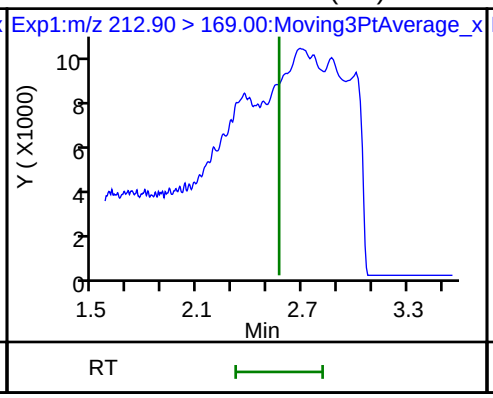
Injection Vol: 20.0 ul Dil. Factor: 1.0000

Method: PFAS_A18V2 Limit Group: LC PFC ICAL

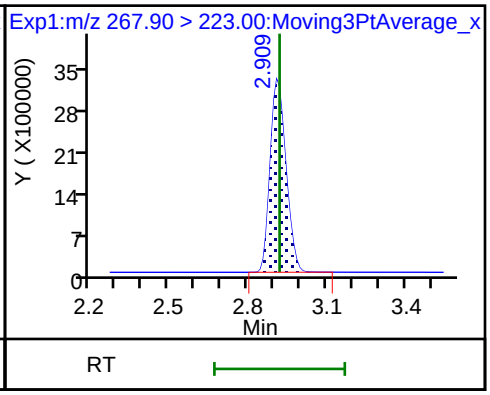
D 1 13C4 PFBA



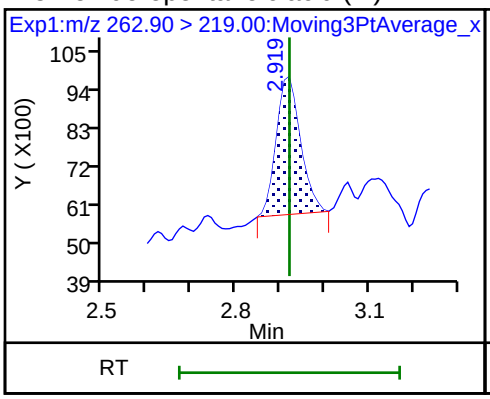

2 Perfluorobutanoic acid (ND)



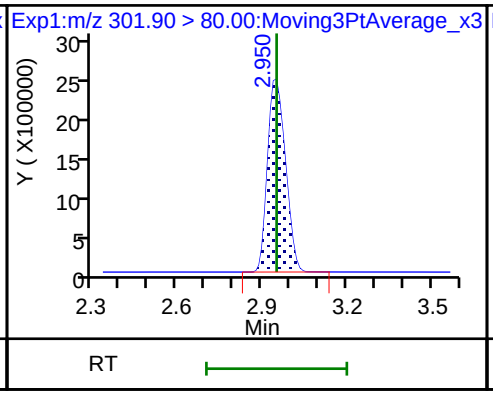

D 4 13C5 PFPeA



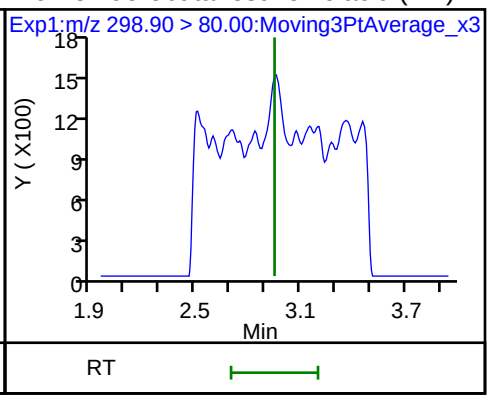

5 Perfluoropentanoic acid (M)



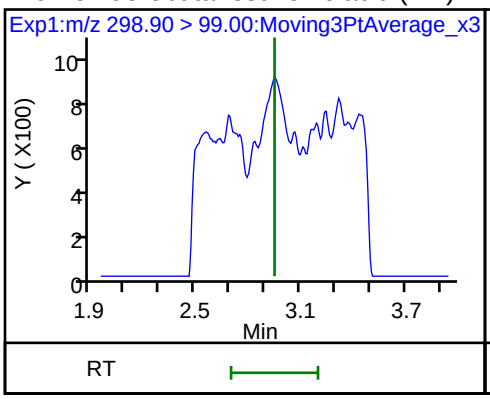

D 9 13C3 PFBS



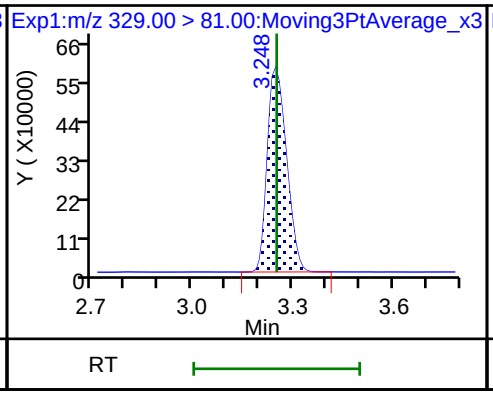

6 Perfluorobutanesulfonic acid (ND)



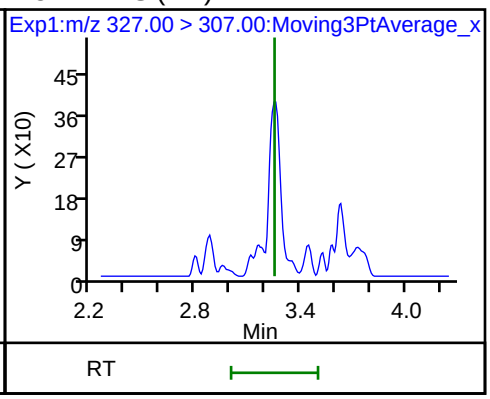

6 Perfluorobutanesulfonic acid (ND)



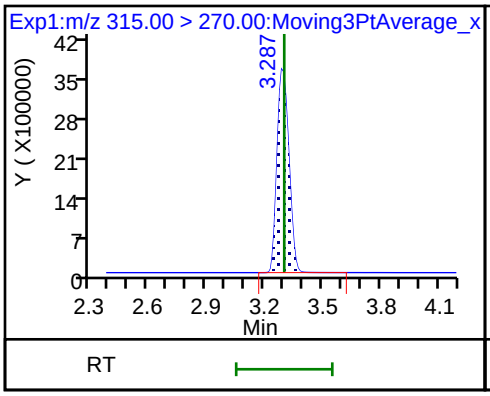

D 7 M2-4:2 FTS



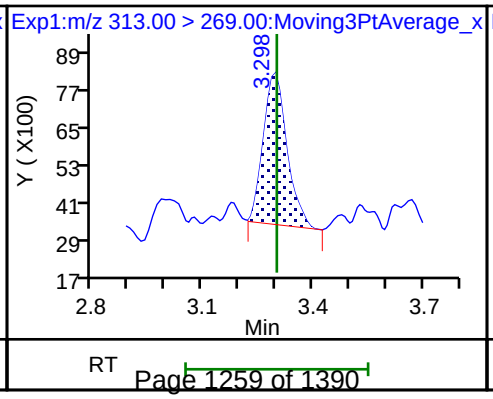

8 4:2 FTS (ND)



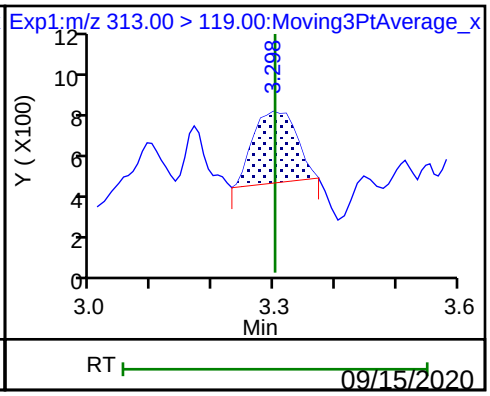

D 11 13C2 PFHxA



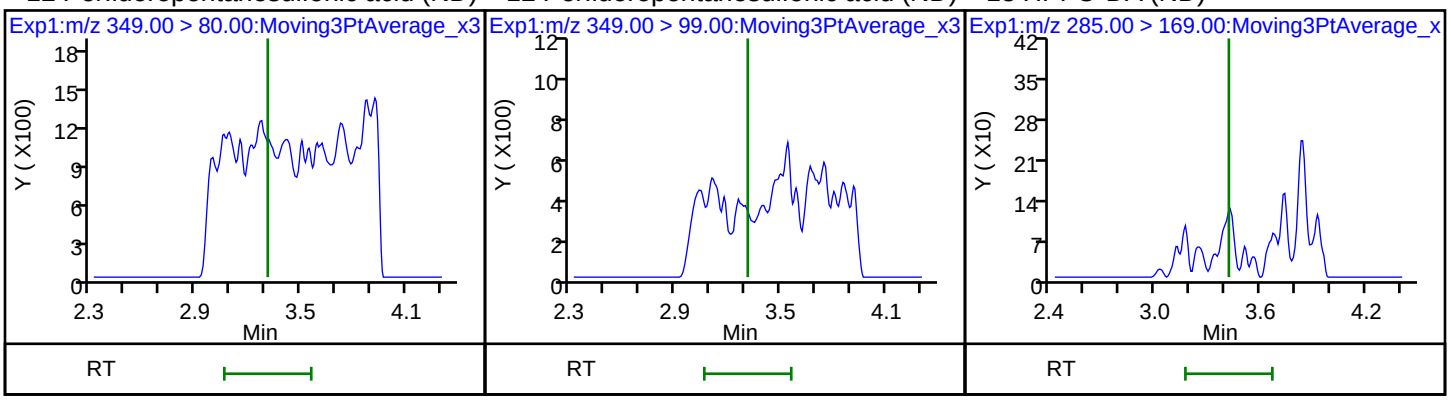

10 Perfluorohexanoic acid



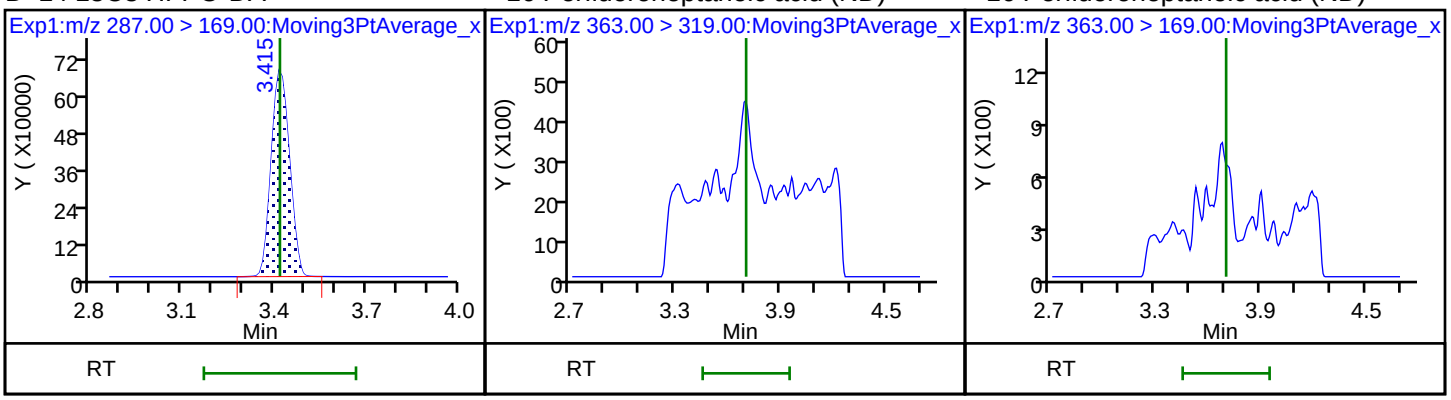

10 Perfluorohexanoic acid



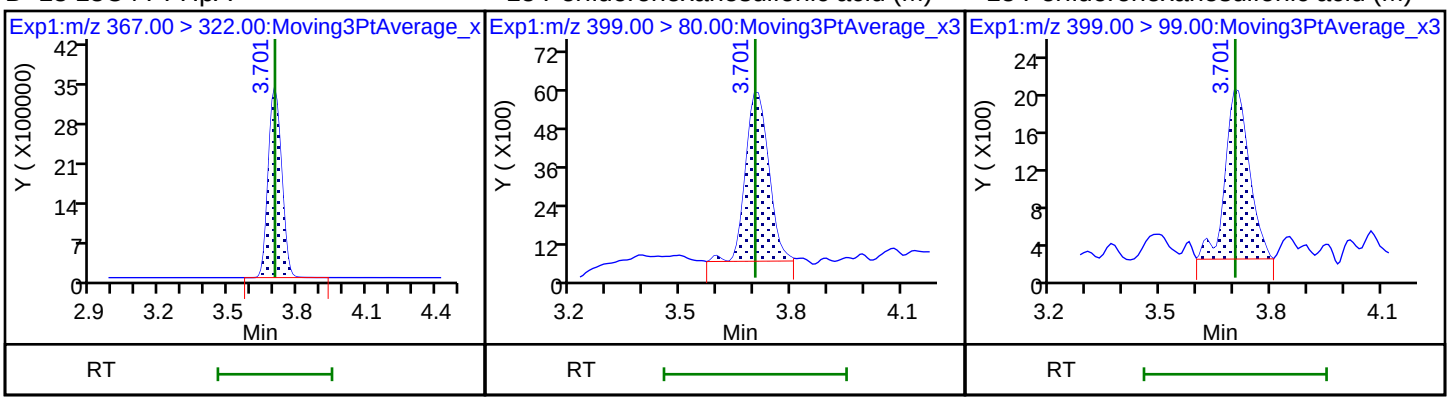
12 Perfluoropentanesulfonic acid (ND) 12 Perfluoropentanesulfonic acid (ND) 13 HPFO-DA (ND)



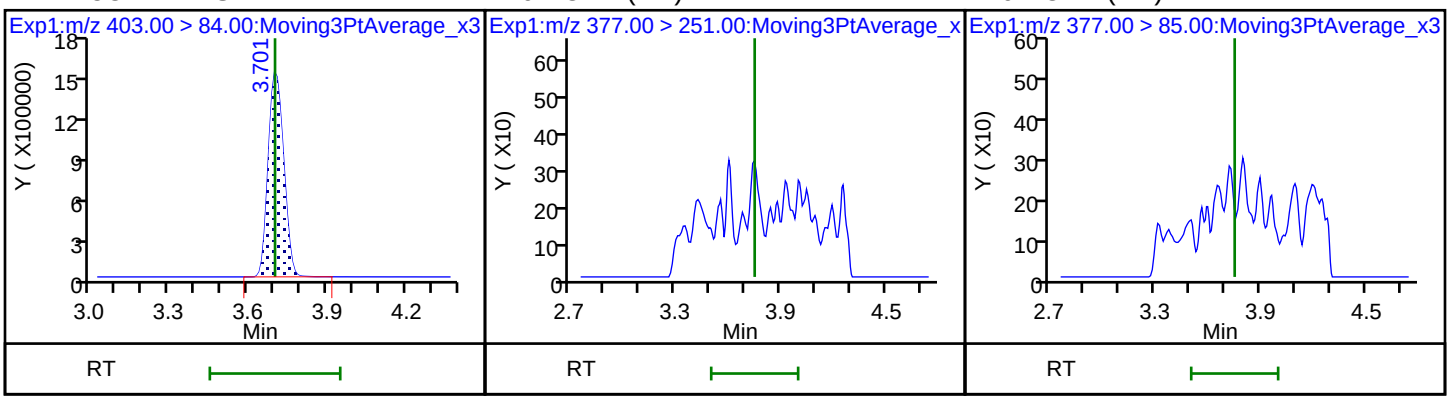

D 14 13C3 HFPO-DA 16 Perfluoroheptanoic acid (ND) 16 Perfluoroheptanoic acid (ND)



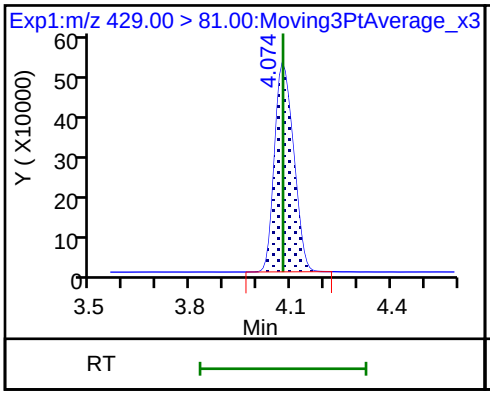

D 18 13C4 PFHpA 15 Perfluorohexanesulfonic acid (M) 15 Perfluorohexanesulfonic acid (M)



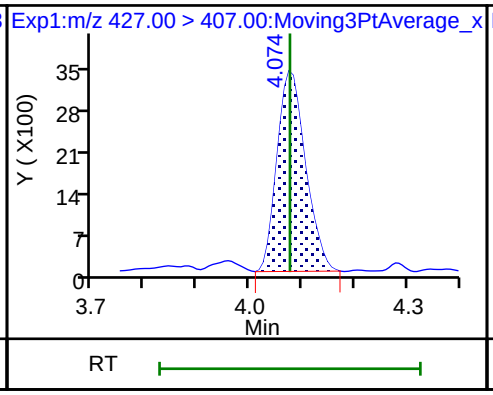

D 17 18O2 PFHxS 19 DONA (ND) 19 DONA (ND)



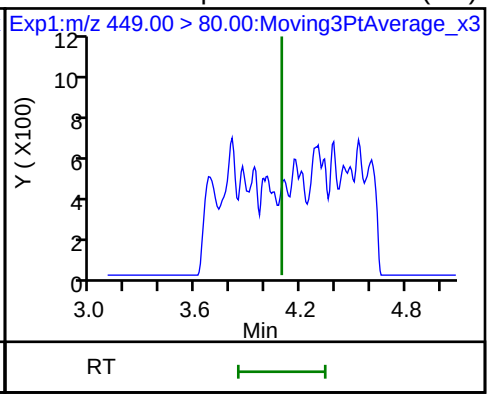
D 20 M2-6:2 FTS



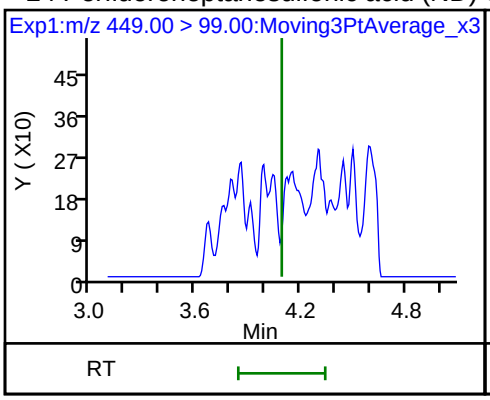

21 6:2 FTS



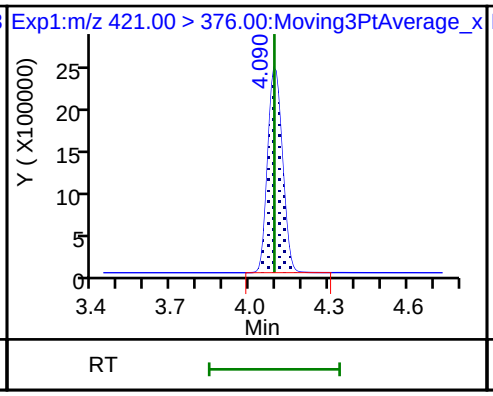

24 Perfluoroheptanesulfonic acid (ND)



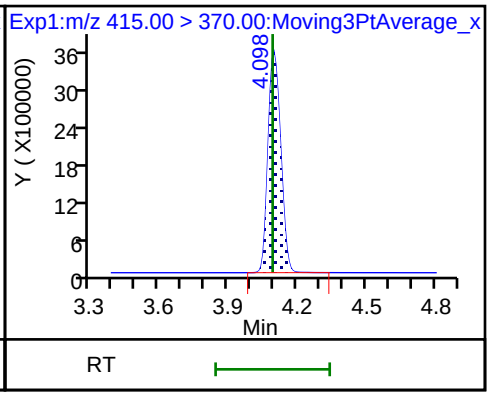

24 Perfluoroheptanesulfonic acid (ND)



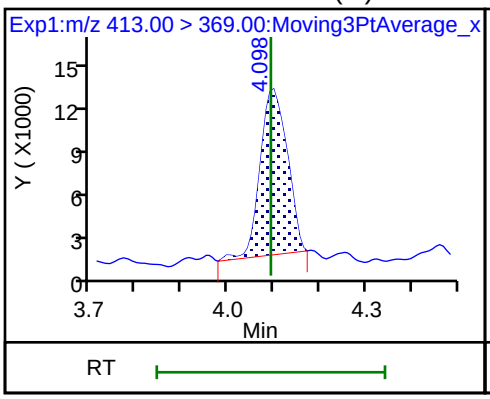

$ 26 13C8 PFOA



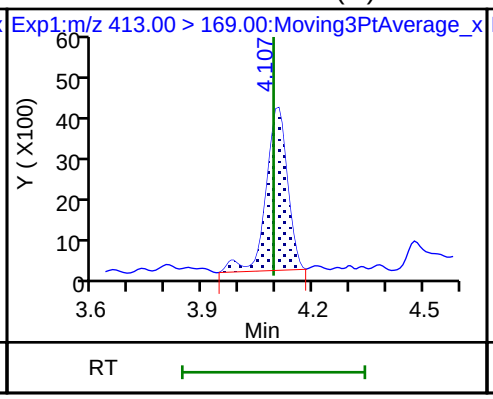

* 23 13C2 PFOA



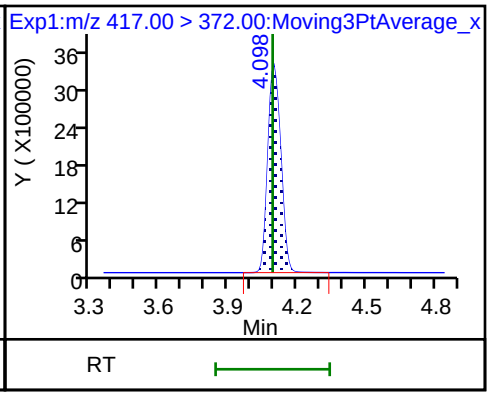

22 Perfluorooctanoic acid (M)



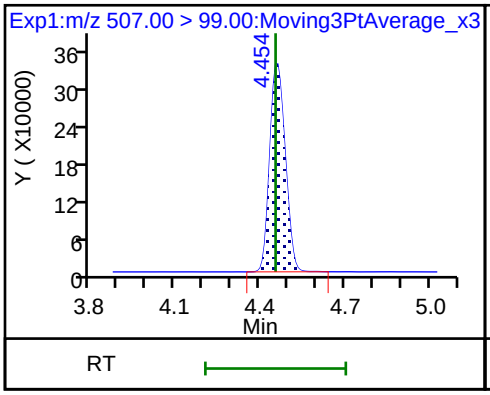

22 Perfluorooctanoic acid (M)



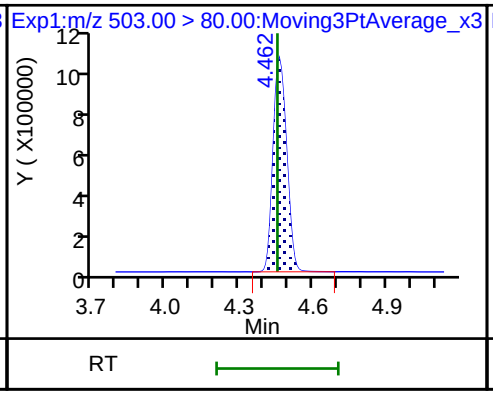

D 25 13C4 PFOA



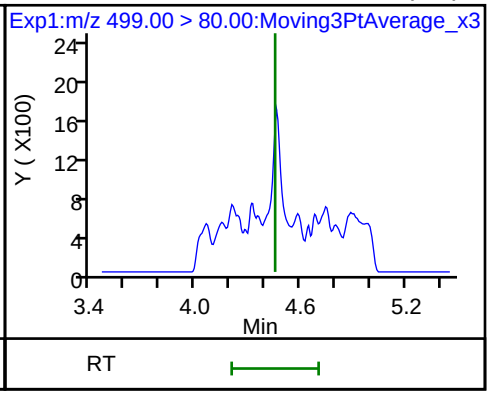

$ 28 13C8 PFOS



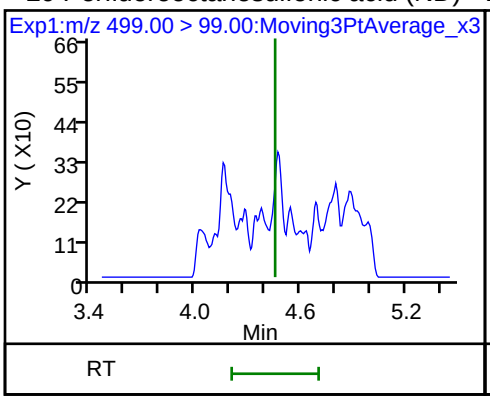

D 27 13C4 PFOS



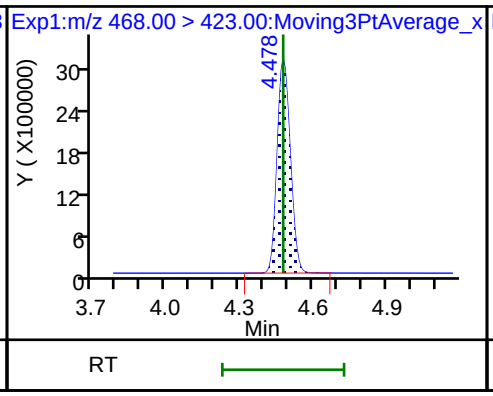

29 Perfluorooctanesulfonic acid (ND)



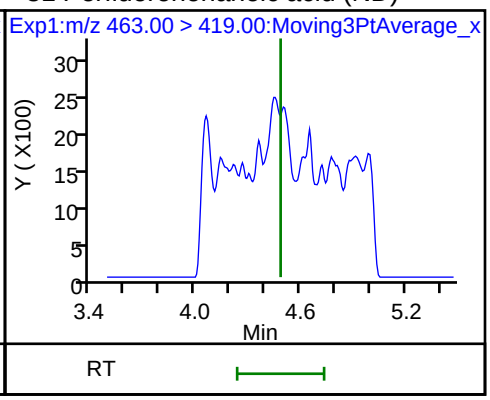
29 Perfluorooctanesulfonic acid (ND)



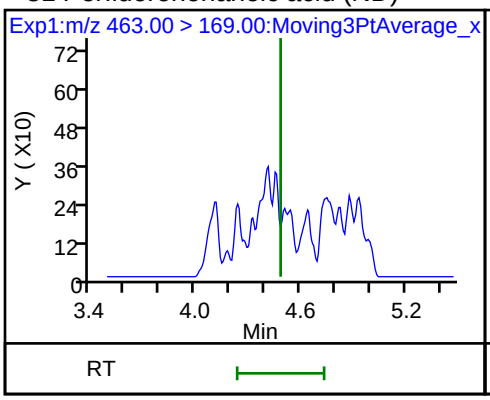

D 30 13C5 PFNA



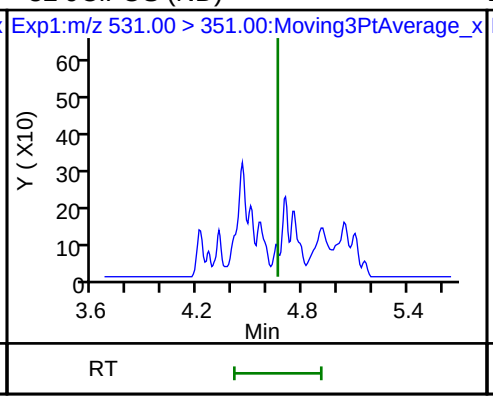

31 Perfluorononanoic acid (ND)



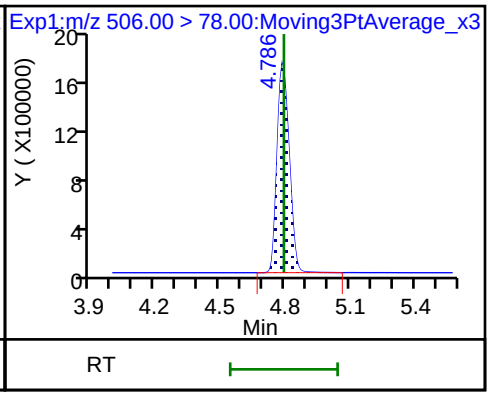

31 Perfluorononanoic acid (ND)



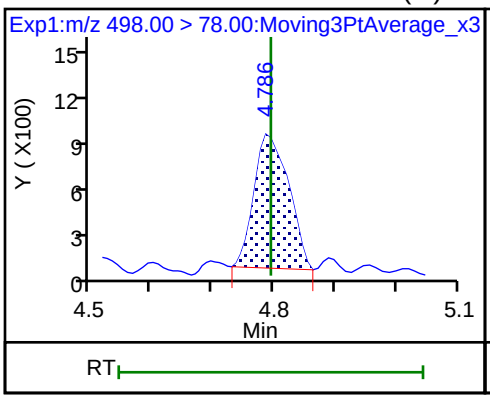

32 9ClFOS (ND)



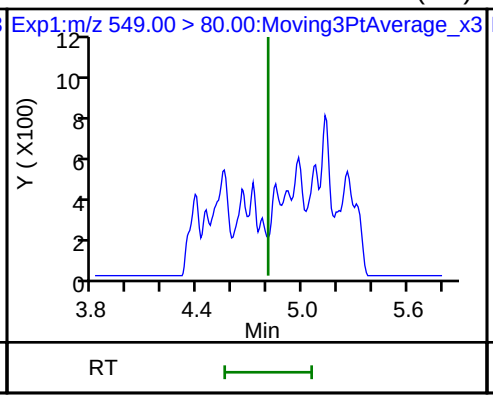

D 33 13C8 FOSA



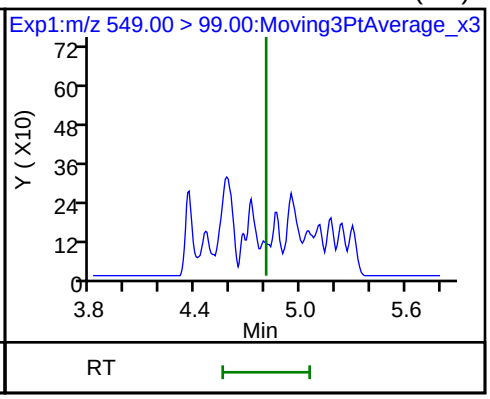

34 Perfluorooctanesulfonamide (M)



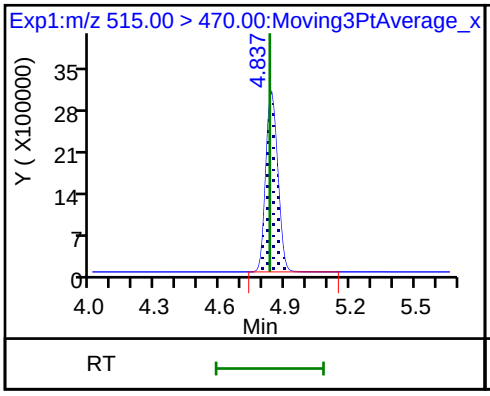

35 Perfluorononanesulfonic acid (ND)



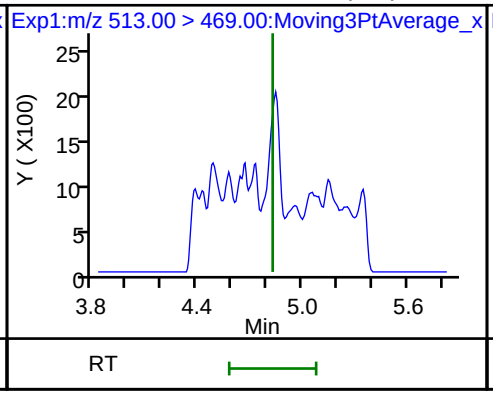

35 Perfluorononanesulfonic acid (ND)



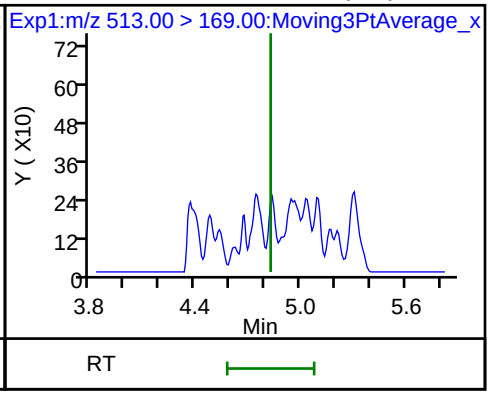

D 39 13C2 PFDA



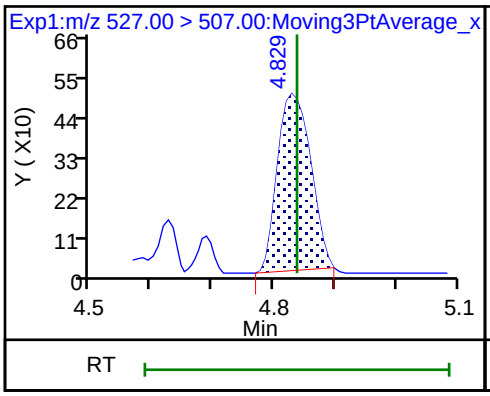

37 Perfluorodecanoic acid (ND)



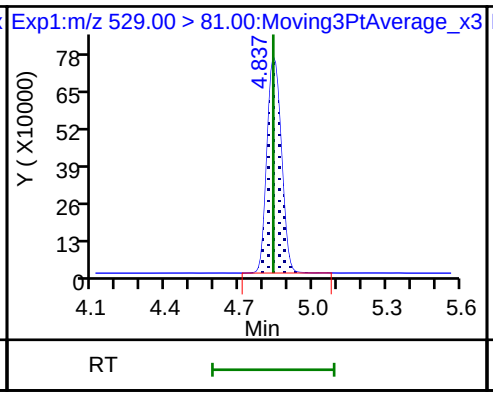

37 Perfluorodecanoic acid (ND)



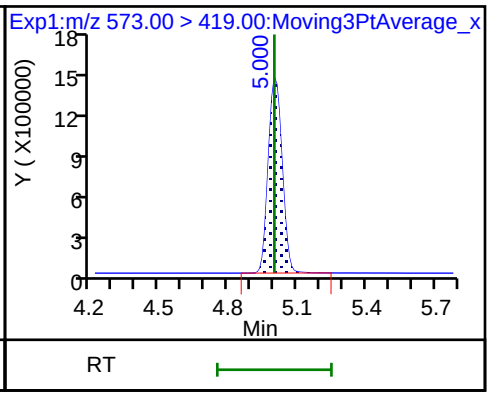
36 8:2 FTS



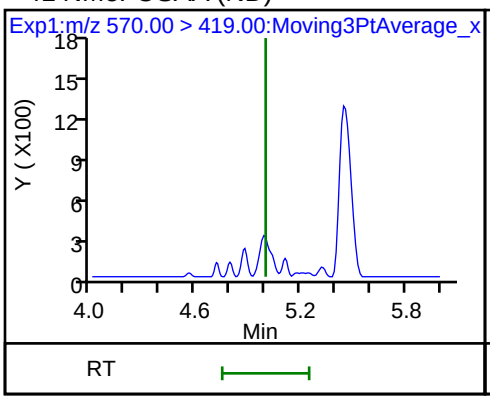

D 38 M2-8:2 FTS



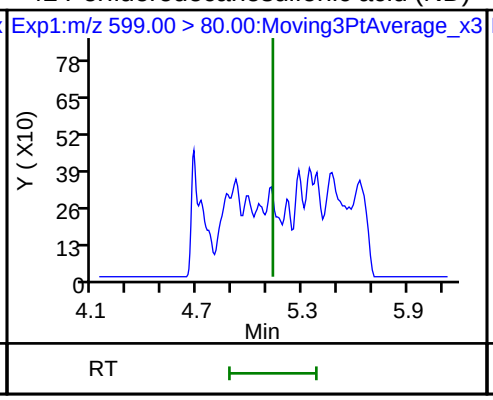

D 40 d3-NMeFOSAA



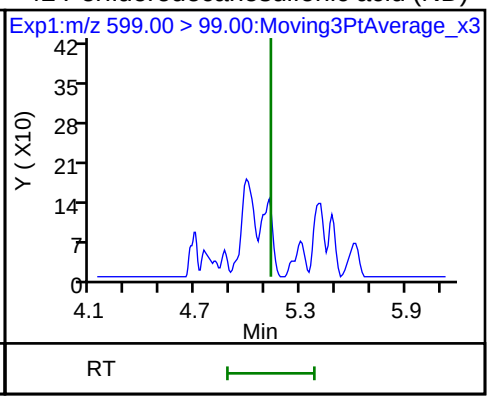

41 NMeFOSAA (ND)



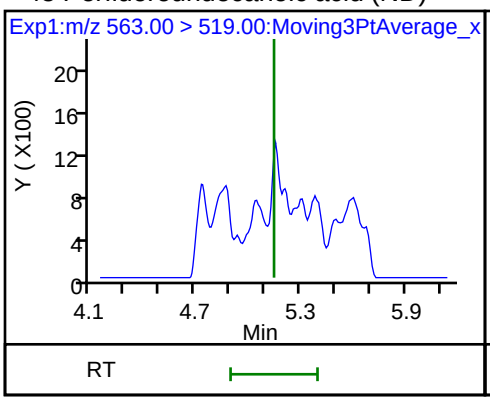

42 Perfluorodecanesulfonic acid (ND)



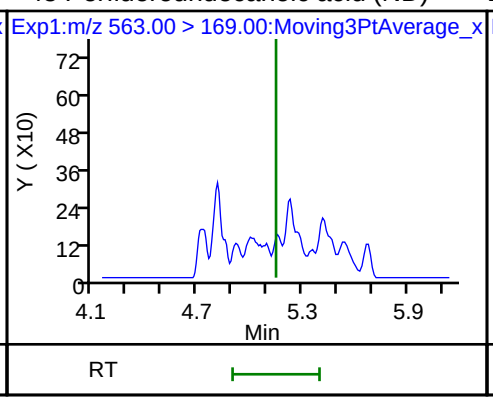

42 Perfluorodecanesulfonic acid (ND)



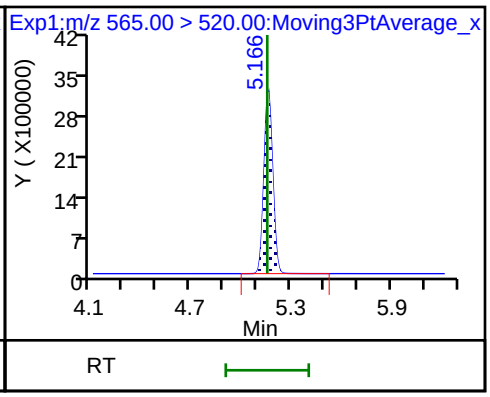

45 Perfluoroundecanoic acid (ND)



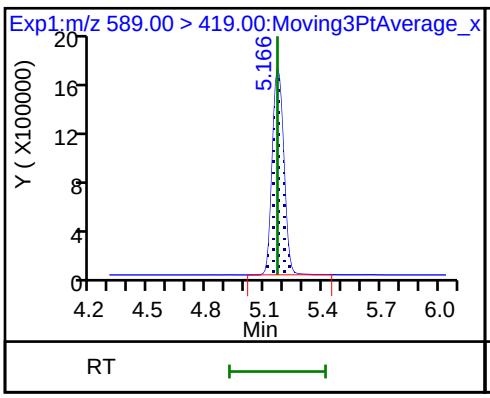

45 Perfluoroundecanoic acid (ND)



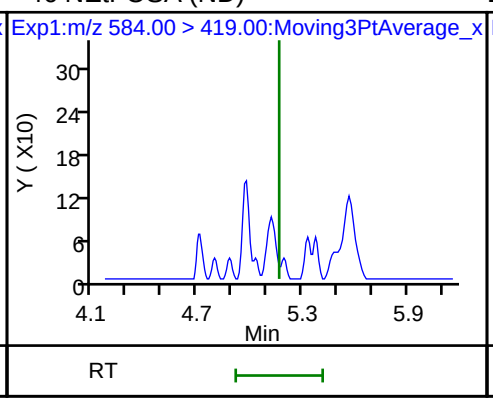

D 43 13C2 PFUnA



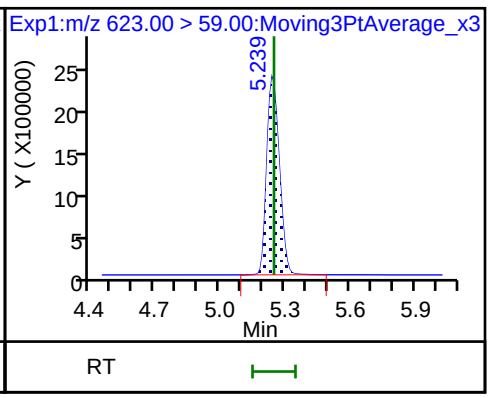

D 44 d5-NEtFOSAA



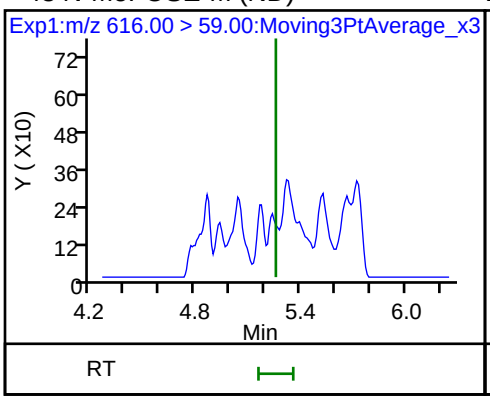

46 NEtFOSA (ND)



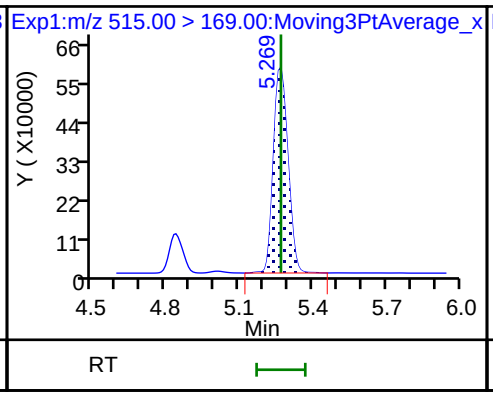

D 47 d7-N-MeFOSE-M



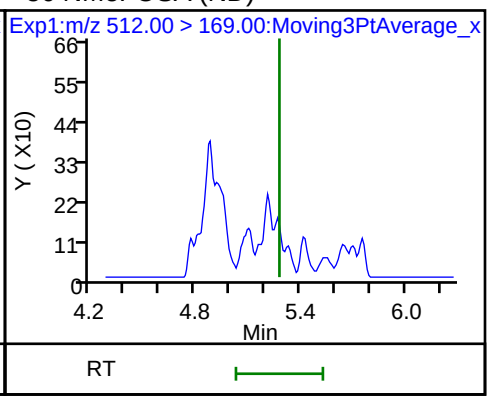
48 N-MeFOSE-M (ND)



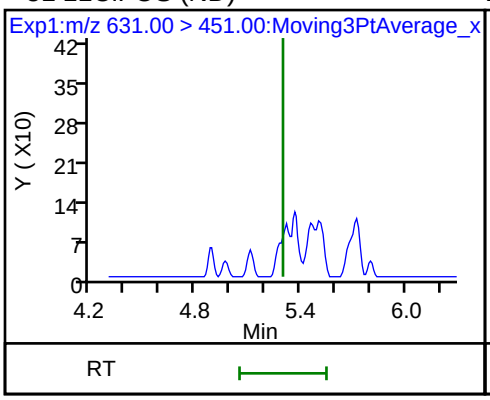

D 49 d-N-MeFOSA-M



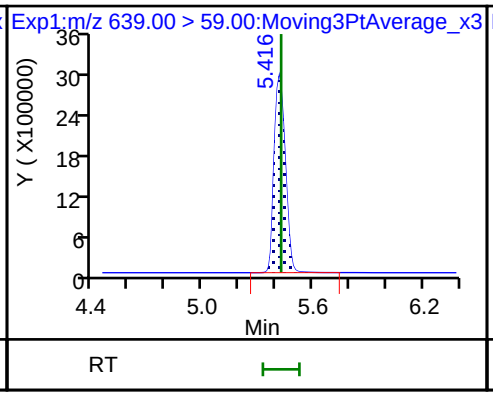

50 NMeFOSA (ND)



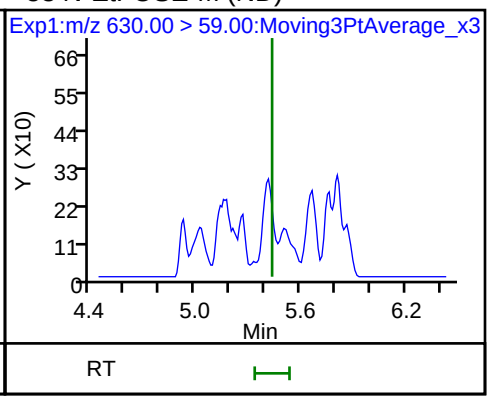

51 11ClFOS (ND)



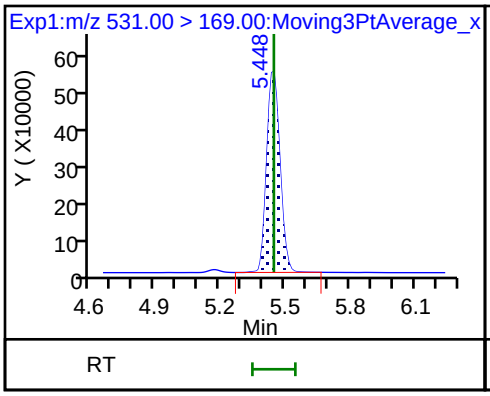

D 52 d9-N-EtFOSE-M



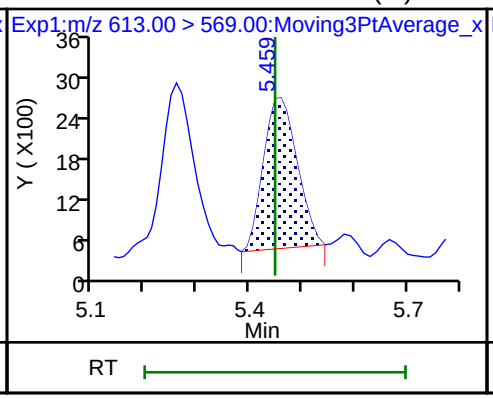

53 N-EtFOSE-M (ND)



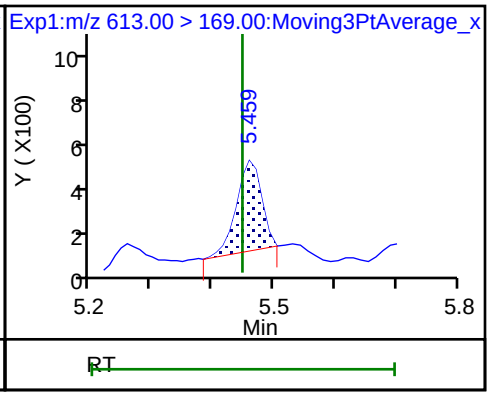

D 54 d-N-EtFOSA-M



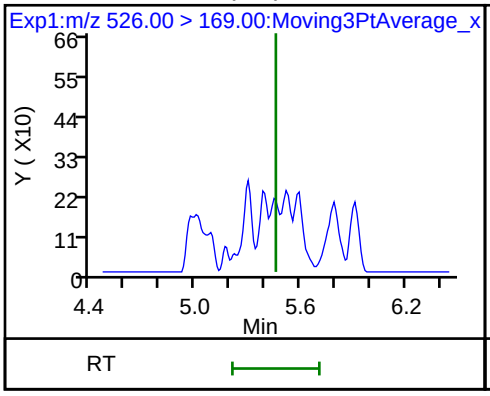

57 Perfluorododecanoic acid (M)



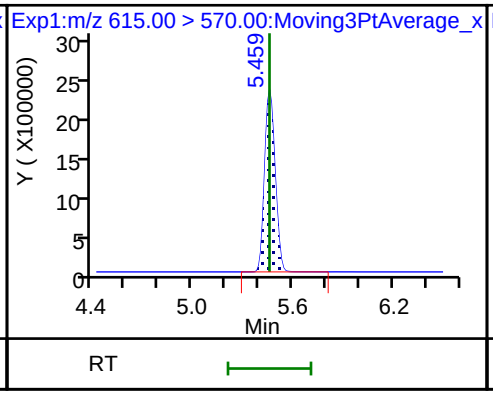

57 Perfluorododecanoic acid



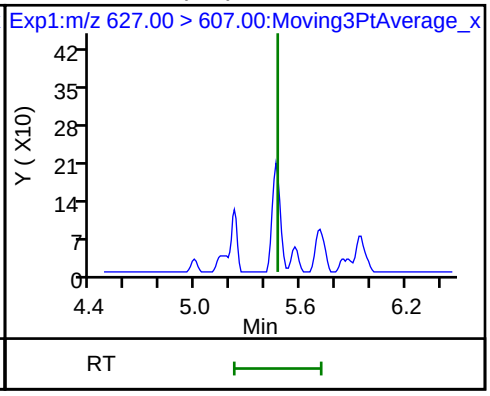

55 N-EtFOSA-M (ND)



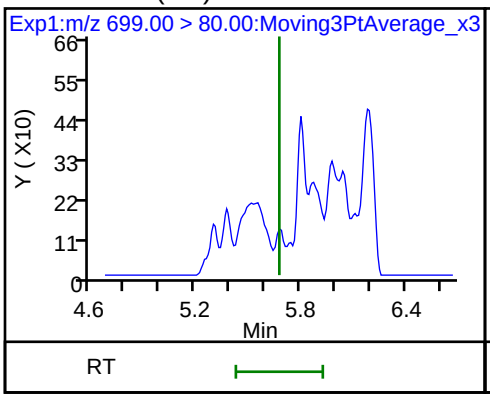

D 56 13C2 PFDoA



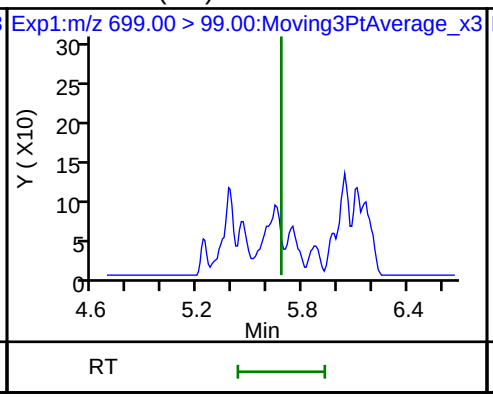

58 10:2 FTS (ND)



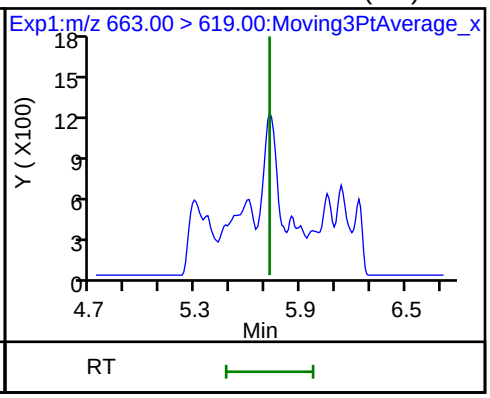
59 PFDoS (ND)



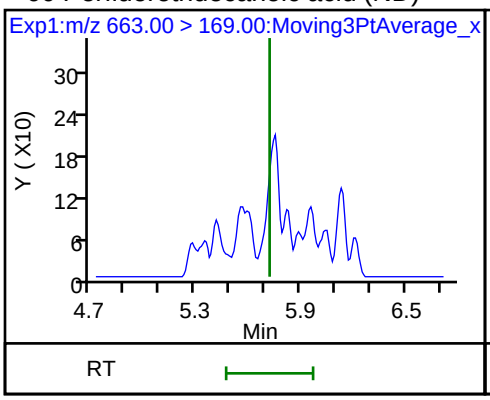

59 PFDoS (ND)



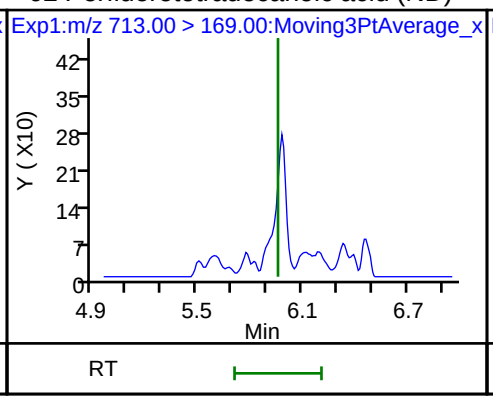

60 Perfluorotridecanoic acid (ND)



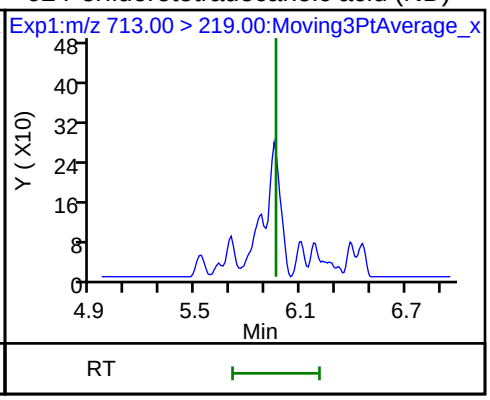

60 Perfluorotridecanoic acid (ND)



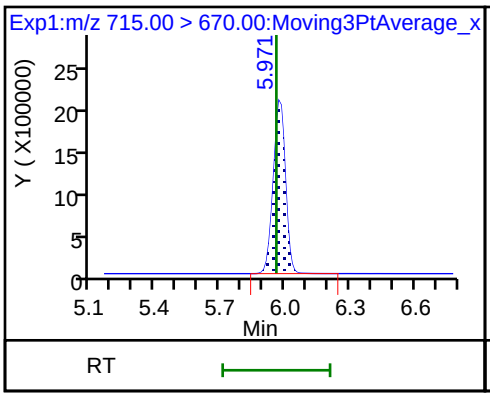

62 Perfluorotetradecanoic acid (ND)



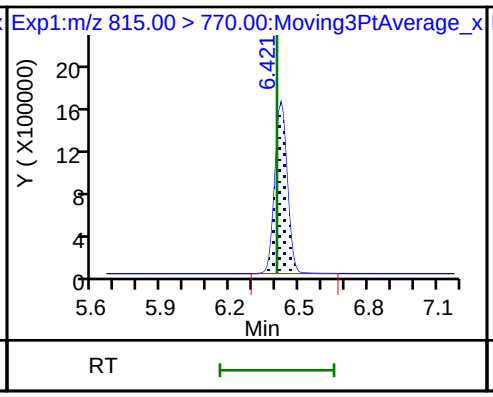

62 Perfluorotetradecanoic acid (ND)



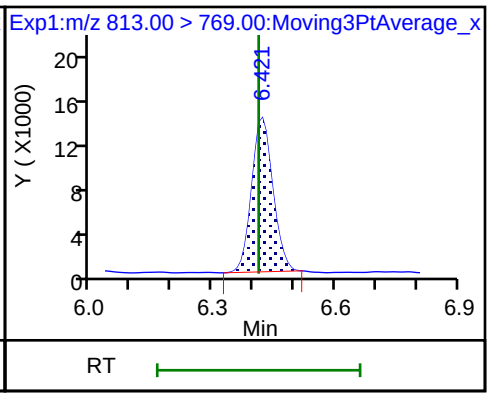

D 61 13C2 PFTeDA



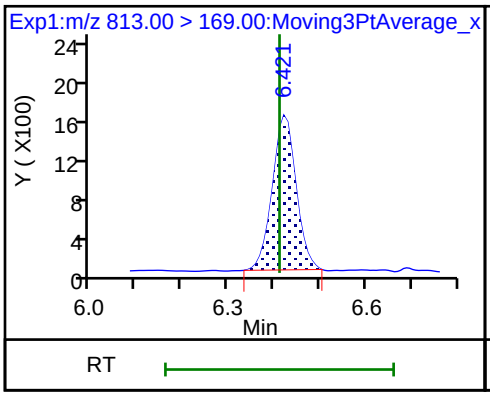

D 64 13C2 PFHxDA



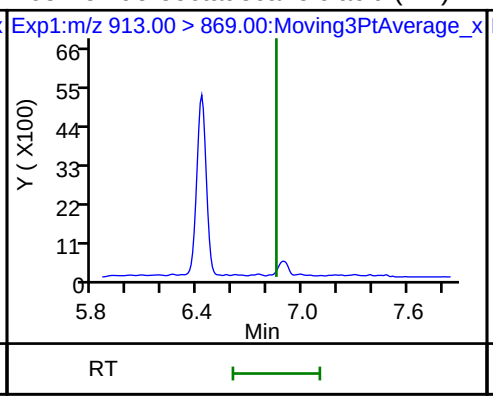

63 Perfluorohexadecanoic acid



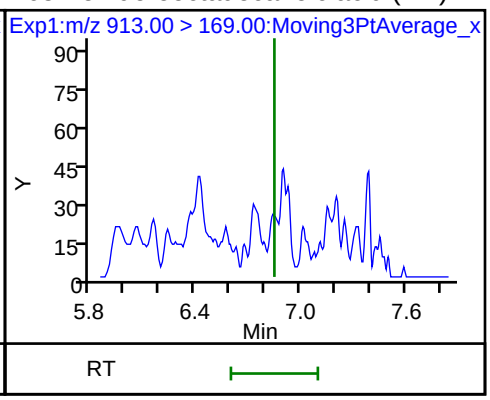

63 Perfluorohexadecanoic acid




65 Perfluorooctadecanoic acid (ND)




65 Perfluorooctadecanoic acid (ND)



Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

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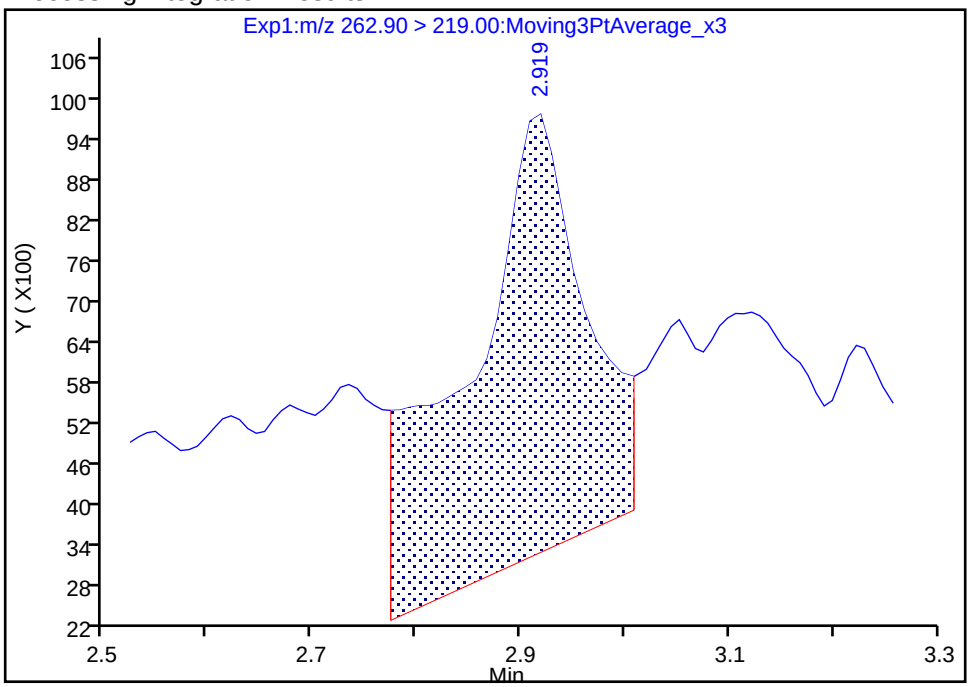
| Injection Date: | 11-Sep-2020 10:52:12 | Instrument ID: | A18 | | |
| Lims ID: | CCB | | | | |
| Client ID: | | | | | |
| Operator ID: | TAISACA18-PC\A-18 | ALS Bottle#: | 50 | Worklist Smp#: | 1 |
| Injection Vol: | 20.0 ul | Dil. Factor: | 1.0000 | | |
| Method: | PFAS_A18V2 | Limit Group: | LC PFC ICAL | | |
| Column: | Gemini C18 3um 3mm x 50 mm ( 3.00mm) | Detector | EXP1 | | |

## 5 Perfluoropentanoic acid, CAS: 2706-90-3

Signal: 1

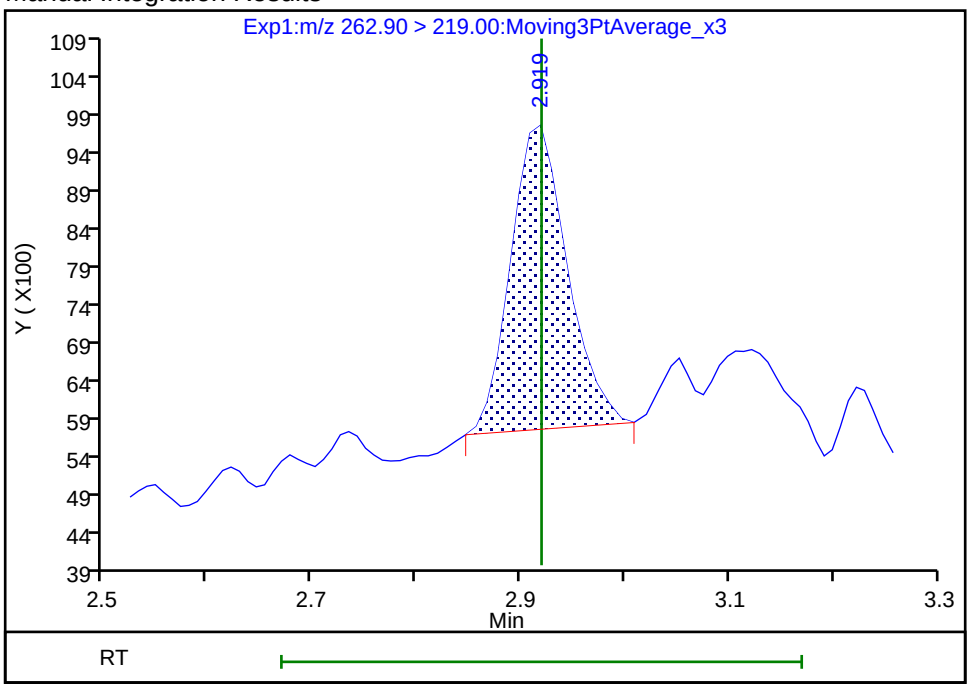
Processing Integration Results

RT: 2.92
Area: 51346
Amount: 0.009335
Amount Units: ng/ml




Manual Integration Results

RT: 2.92
Area: 14873
Amount: 0.002704
Amount Units: ng/ml




Reviewer: fariasa, 11-Sep-2020 11:34:15

Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

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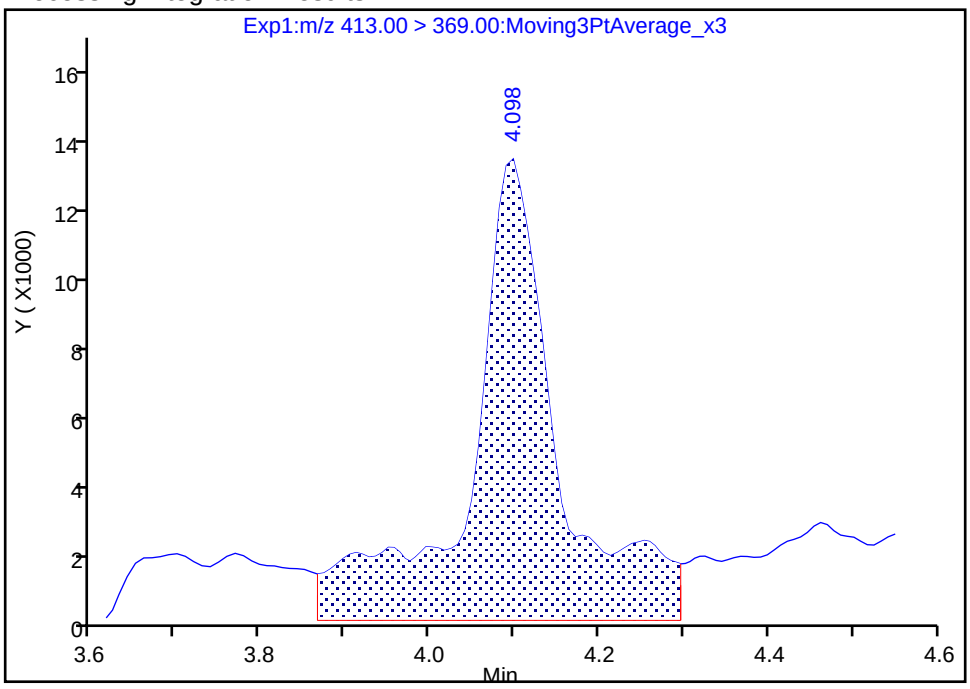
| Injection Date: | 11-Sep-2020 10:52:12 | Instrument ID: | A18 | | |
| Lims ID: | CCB | | | | |
| Client ID: | | | | | |
| Operator ID: | TAISACA18-PC\A-18 | ALS Bottle#: | 50 | Worklist Smp#: | 1 |
| Injection Vol: | 20.0 ul | Dil. Factor: | 1.0000 | | |
| Method: | PFAS_A18V2 | Limit Group: | LC PFC ICAL | | |
| Column: | Gemini C18 3um 3mm x 50 mm ( 3.00mm) | Detector | EXP1 | | |

## 22 Perfluorooctanoic acid, CAS: 335-67-1

Signal: 1

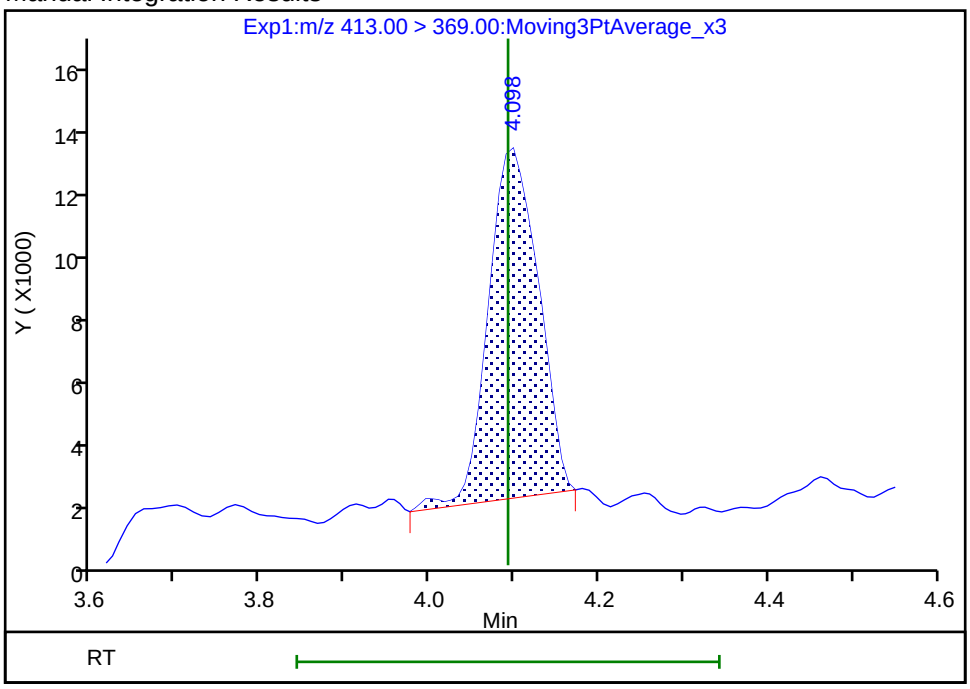
Processing Integration Results

RT: 4.10
Area: 95543
Amount: 0.018098
Amount Units: ng/ml




Manual Integration Results

RT: 4.10
Area: 44876
Amount: 0.008500
Amount Units: ng/ml




Reviewer: fariasa, 11-Sep-2020 11:35:31

Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

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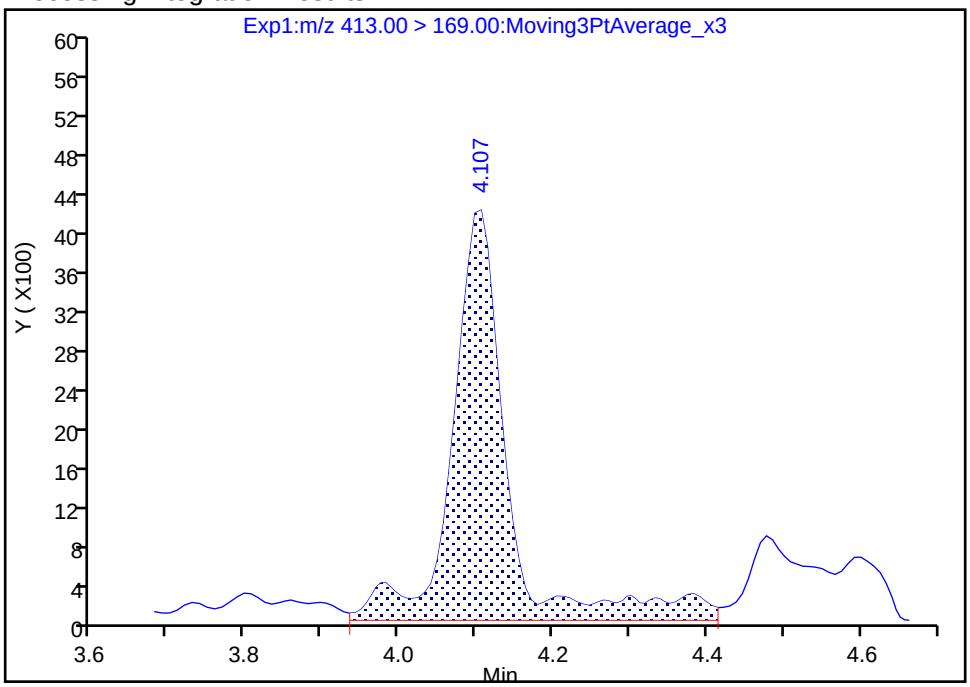
| Injection Date: | 11-Sep-2020 10:52:12 | Instrument ID: | A18 | | |
| Lims ID: | CCB | | | | |
| Client ID: | | | | | |
| Operator ID: | TAISACA18-PC\A-18 | ALS Bottle#: | 50 | Worklist Smp#: | 1 |
| Injection Vol: | 20.0 ul | Dil. Factor: | 1.0000 | | |
| Method: | PFAS_A18V2 | Limit Group: | LC PFC ICAL | | |
| Column: | Gemini C18 3um 3mm x 50 mm ( 3.00mm) | Detector | EXP1 | | |

## 22 Perfluorooctanoic acid, CAS: 335-67-1

Signal: 2

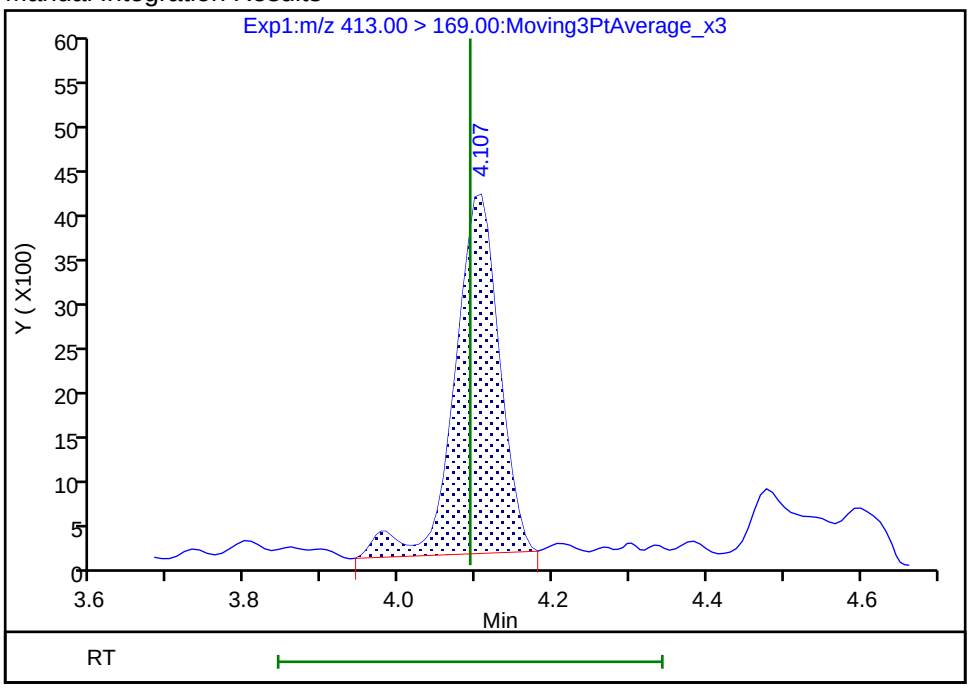
Processing Integration Results

RT: 4.11
Area: 20788
Amount: 0.018098
Amount Units: ng/ml




Manual Integration Results

RT: 4.11
Area: 16258
Amount: 0.008500
Amount Units: ng/ml




Reviewer: fariasa, 11-Sep-2020 11:35:36
Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

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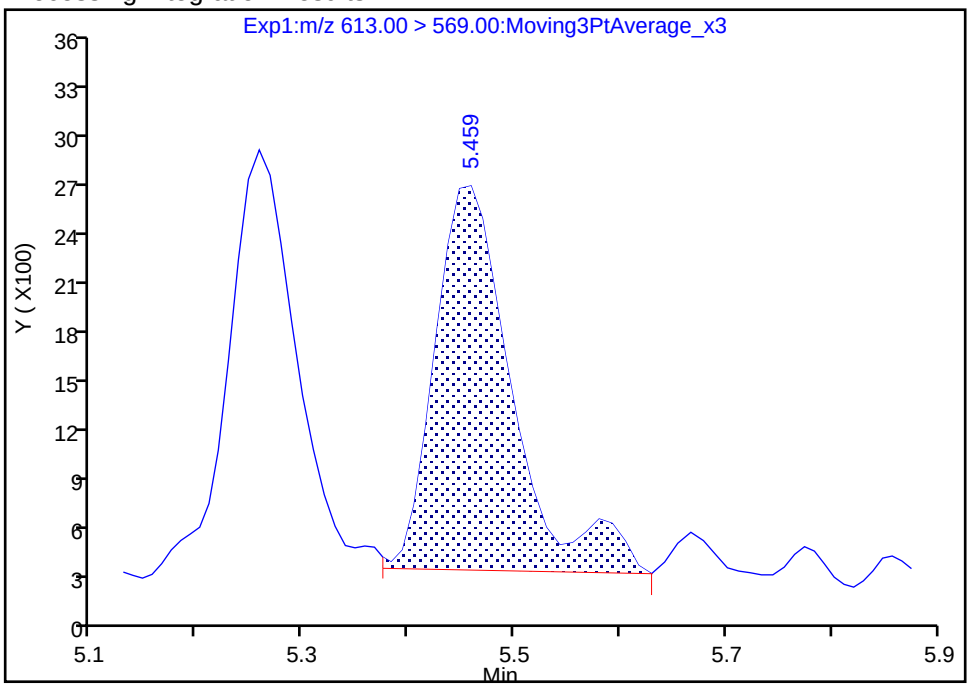
| Data File: | \\chromfs\Sacramento\ChromData\A18\20200911-103099.b\2020.09.11_A18_PFC_A_004.d | | | | |
| Injection Date: | 11-Sep-2020 10:52:12 | Instrument ID: | A18 | | |
| Lims ID: | CCB | | | | |
| Client ID: | | | | | |
| Operator ID: | TAISACA18-PC\A-18 | ALS Bottle#: | 50 | Worklist Smp#: | 1 |
| Injection Vol: | 20.0 ul | Dil. Factor: | 1.0000 | | |
| Method: | PFAS_A18V2 | Limit Group: | LC PFC ICAL | | |
| Column: | Gemini C18 3um 3mm x 50 mm ( 3.00mm) | Detector | EXP1 | | |

## 57 Perfluorododecanoic acid, CAS: 307-55-1

Signal: 1

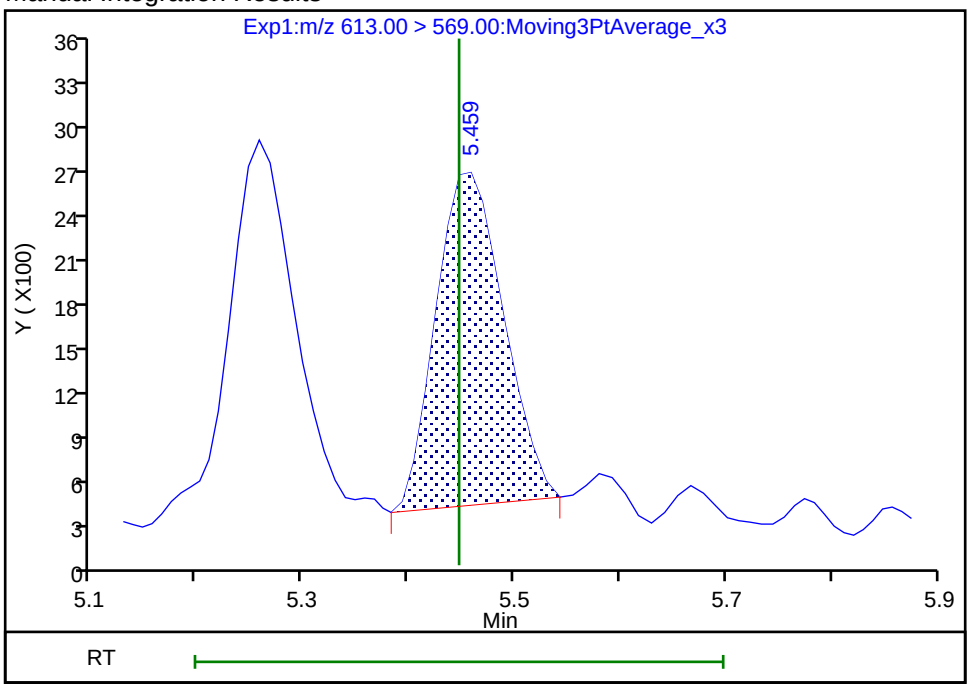
Processing Integration Results

RT: 5.46
Area: 12014
Amount: 0.002934
Amount Units: ng/ml




Manual Integration Results

RT: 5.46
Area: 9989
Amount: 0.002440
Amount Units: ng/ml




Reviewer: fariasa, 11-Sep-2020 11:36:37

Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

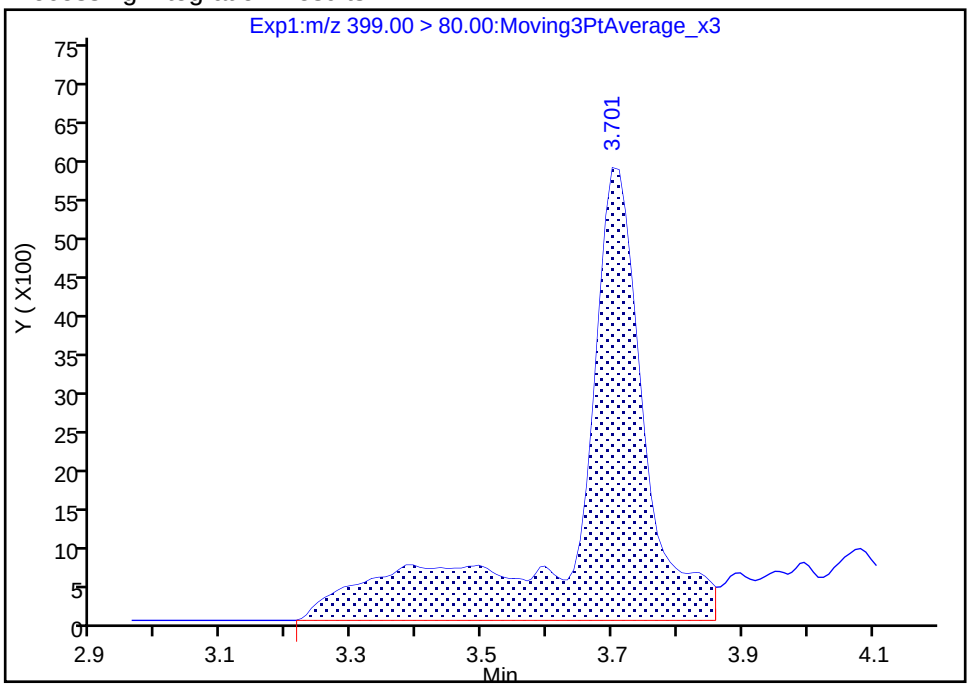
Data File: \\chromfs\Sacramento\ChromData\A18\20200911-103099.b\2020.09.11_A18_PFC_A_004.d
Injection Date: 11-Sep-2020 10:52:12 Instrument ID: A18
Lims ID: CCB
Client ID:
Operator ID: TAISACA18-PC\A-18 ALS Bottle#: 50 Worklist Smp#: 1
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFAS_A18V2 Limit Group: LC PFC ICAL
Column: Gemini C18 3um 3mm x 50 mm ( 3.00mm) Detector EXP1

## 15 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 1

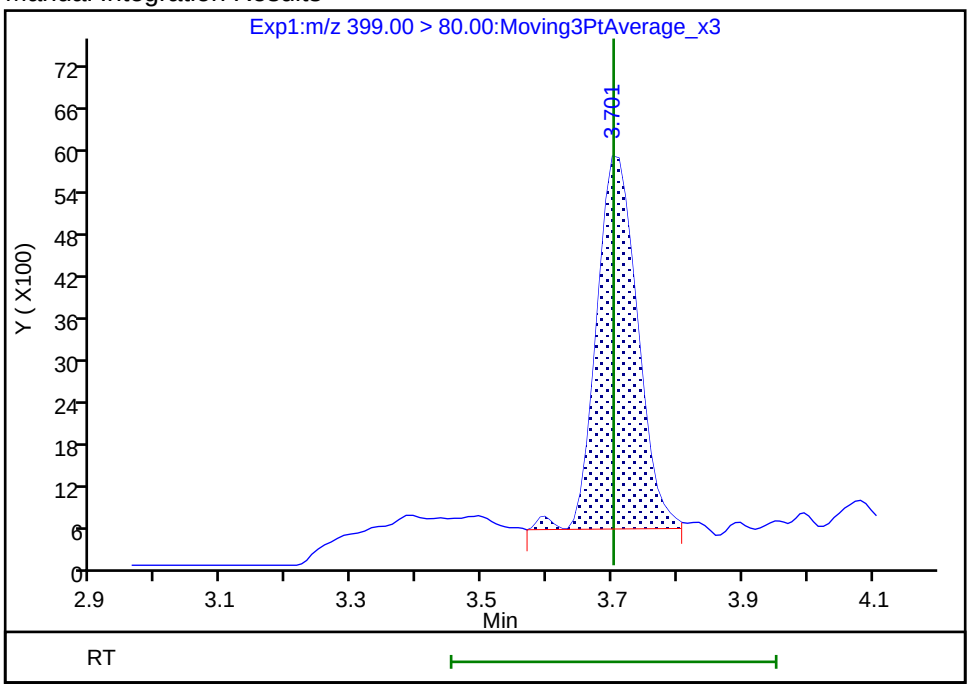
RT: 3.70
Area: 43826
Amount: 0.014263
Amount Units: ng/ml

Processing Integration Results




RT: 3.70
Area: 23354
Amount: 0.007600
Amount Units: ng/ml

Manual Integration Results




Reviewer: sanjumnair, 14-Sep-2020 09:58:20
Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

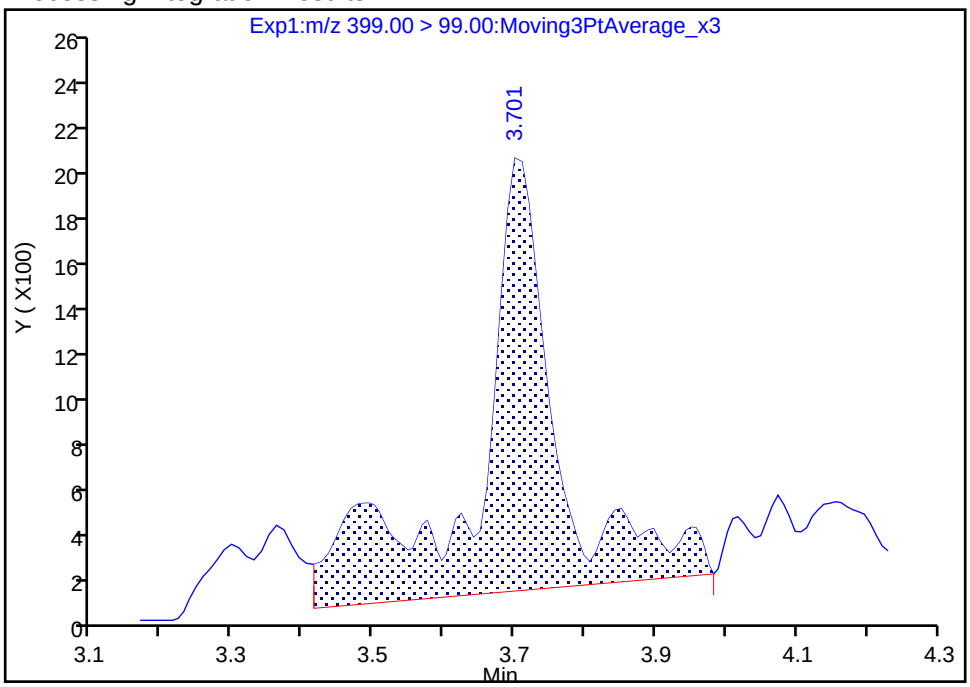
| | | | | | |
|---|---|---|---|---|---|
| Data File: | \\chromfs\Sacramento\ChromData\A18\20200911-103099.b\2020.09.11_A18_PFC_A_004.d | | | | |
| Injection Date: | 11-Sep-2020 10:52:12 | Instrument ID: | A18 | | |
| Lims ID: | CCB | | | | |
| Client ID: | | | | | |
| Operator ID: | TAISACA18-PC\A-18 | ALS Bottle#: | 50 | Worklist Smp#: | 1 |
| Injection Vol: | 20.0 ul | Dil. Factor: | 1.0000 | | |
| Method: | PFAS_A18V2 | Limit Group: | LC PFC ICAL | | |
| Column: | Gemini C18 3um 3mm x 50 mm ( 3.00mm) | Detector | EXP1 | | |

## 15 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 2

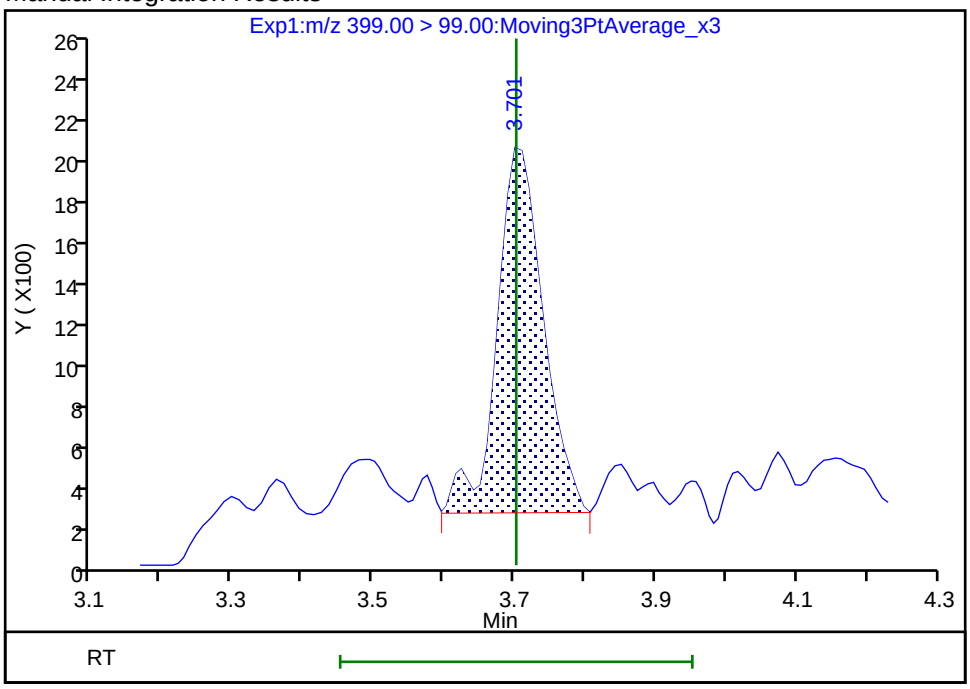
Processing Integration Results

RT: 3.70
Area: 15187
Amount: 0.014263
Amount Units: ng/ml




Manual Integration Results

RT: 3.70
Area: 8140
Amount: 0.007600
Amount Units: ng/ml




Reviewer: sanjumnair, 14-Sep-2020 09:58:26

Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

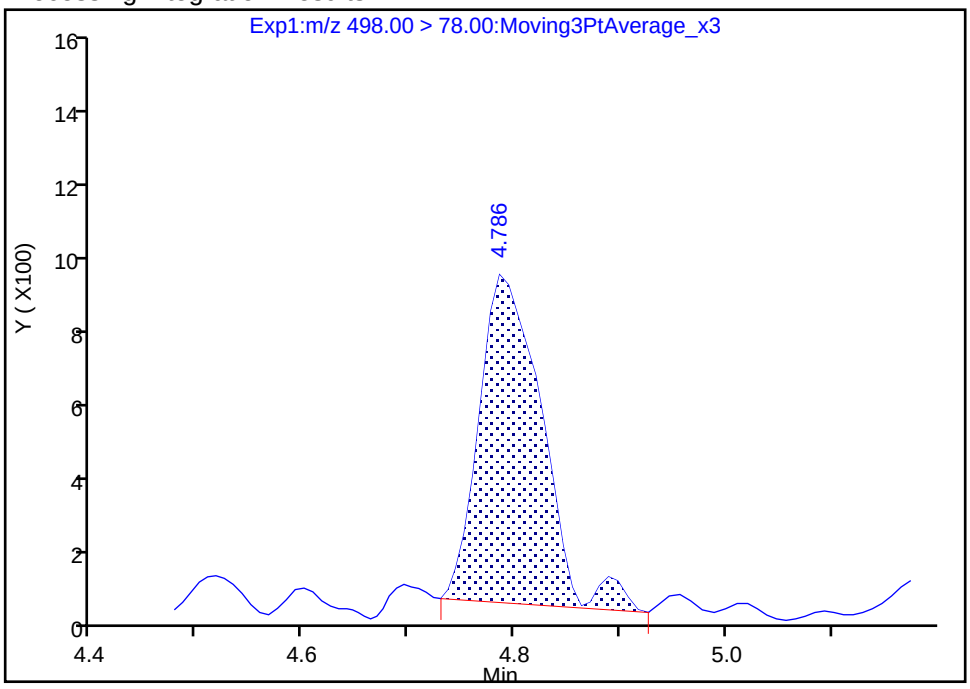
Data File: \\chromfs\Sacramento\ChromData\A18\20200911-103099.b\2020.09.11_A18_PFC_A_004.d
Injection Date: 11-Sep-2020 10:52:12 Instrument ID: A18
Lims ID: CCB
Client ID:
Operator ID: TAISACA18-PC\A-18 ALS Bottle#: 50 Worklist Smp#: 1
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFAS_A18V2 Limit Group: LC PFC ICAL
Column: Gemini C18 3um 3mm x 50 mm ( 3.00mm) Detector EXP1

## 34 Perfluorooctanesulfonamide, CAS: 754-91-6

Signal: 1

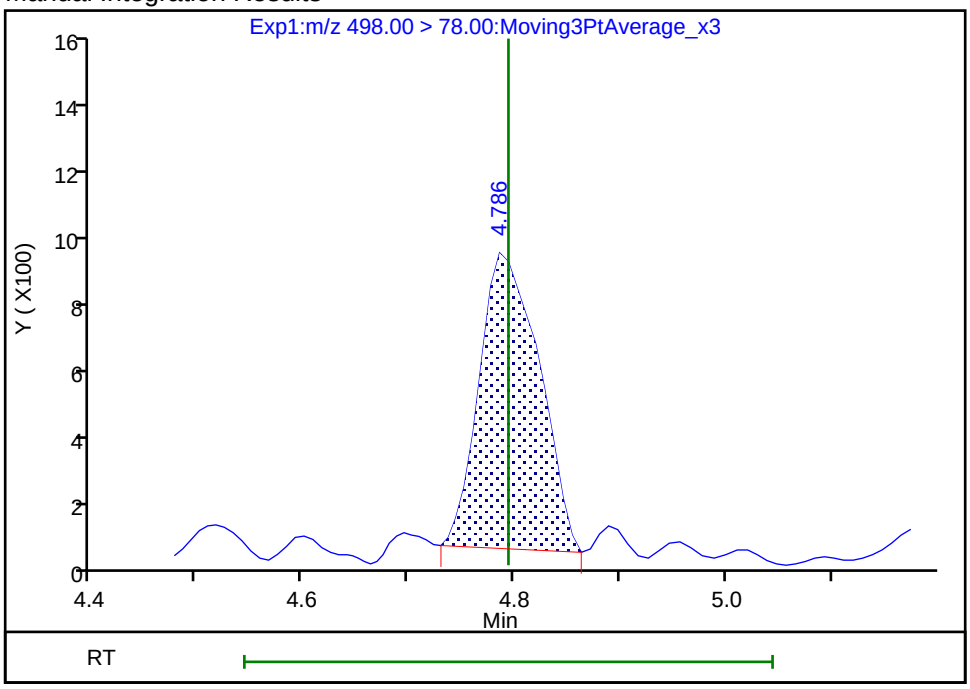
Processing Integration Results

RT: 4.79
Area: 3601
Amount: 0.001420
Amount Units: ng/ml




Manual Integration Results

RT: 4.79
Area: 3425
Amount: 0.001350
Amount Units: ng/ml




Reviewer: fariasa, 11-Sep-2020 11:36:11
Audit Action: Manually Integrated Audit Reason: Baseline

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento  Job No.: 460-217547-1

SDG No.:

Client Sample ID:  Lab Sample ID: ICB 320-406555/9

Matrix: Water  Lab File ID: 2020.08.25_A18_ICAL_A_018.d

Analysis Method: 537 (modified)  Date Collected:

Extraction Method:  Date Extracted:

Sample wt/vol: 1(mL)  Date Analyzed: 08/25/2020 17:47

Con. Extract Vol.:  Dilution Factor: 1

Injection Volume: 20(uL)  GC Column: Gemini C18 3x50 ID: 3(mm)

% Moisture:  GPC Cleanup:(Y/N) N

Analysis Batch No.: 406555  Units: ng/mL

| CAS NO. | COMPOUND NAME | RESULT | Q | RL | MDL |
|---|---|---|---|---|---|
| 375-22-4 | Perfluorobutanoic acid (PFBA) | 0.0088 | U | 0.050 | 0.0088 |
| 2706-90-3 | Perfluoropentanoic acid (PFPeA) | 0.012 | U | 0.050 | 0.012 |
| 307-24-4 | Perfluorohexanoic acid (PFHxA) | 0.015 | U | 0.050 | 0.015 |
| 375-85-9 | Perfluoroheptanoic acid (PFHpA) | 0.0063 | U | 0.050 | 0.0063 |
| 335-67-1 | Perfluorooctanoic acid (PFOA) | 0.021 | U | 0.050 | 0.021 |
| 375-95-1 | Perfluorononanoic acid (PFNA) | 0.0068 | U | 0.050 | 0.0068 |
| 335-76-2 | Perfluorodecanoic acid (PFDA) | 0.0078 | U | 0.050 | 0.0078 |
| 2058-94-8 | Perfluoroundecanoic acid (PFUnA) | 0.028 | U | 0.050 | 0.028 |
| 307-55-1 | Perfluorododecanoic acid (PFDoA) | 0.014 | U | 0.050 | 0.014 |
| 72629-94-8 | Perfluorotridecanoic acid (PFTriA) | 0.033 | U | 0.050 | 0.033 |
| 376-06-7 | Perfluorotetradecanoic acid (PFTeA) | 0.0073 | U | 0.050 | 0.0073 |
| 375-73-5 | Perfluorobutanesulfonic acid (PFBS) | 0.0050 | U | 0.050 | 0.0050 |
| 355-46-4 | Perfluorohexanesulfonic acid (PFHxS) | 0.00808 | J | 0.050 | 0.0043 |
| 375-92-8 | Perfluoroheptanesulfonic Acid (PFHpS) | 0.0048 | U | 0.050 | 0.0048 |
| 1763-23-1 | Perfluorooctanesulfonic acid (PFOS) | 0.014 | U | 0.050 | 0.014 |
| 335-77-3 | Perfluorodecanesulfonic acid (PFDS) | 0.0080 | U | 0.050 | 0.0080 |
| 754-91-6 | Perfluorooctanesulfonamide (FOSA) | 0.0088 | U | 0.050 | 0.0088 |
| 2355-31-9 | N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA) | 0.078 | U | 0.50 | 0.078 |
| 2991-50-6 | N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA) | 0.048 | U | 0.50 | 0.048 |
| 27619-97-2 | 6:2 FTS | 0.050 | U | 0.50 | 0.050 |
| 39108-34-4 | 8:2 FTS | 0.050 | U | 0.50 | 0.050 |

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento  Job No.: 460-217547-1

SDG No.:

Client Sample ID:  Lab Sample ID: ICB 320-406555/9

Matrix: Water  Lab File ID: 2020.08.25_A18_ICAL_A_018.d

Analysis Method: 537 (modified)  Date Collected:

Extraction Method:  Date Extracted:

Sample wt/vol: 1(mL)  Date Analyzed: 08/25/2020 17:47

Con. Extract Vol.:  Dilution Factor: 1

Injection Volume: 20(uL)  GC Column: Gemini C18 3x50 ID: 3(mm)

% Moisture:  GPC Cleanup:(Y/N) N

Analysis Batch No.: 406555  Units: ng/mL

| CAS NO. | ISOTOPE DILUTION | %REC | Q | LIMITS |
|---|---|---|---|---|
| STL00992 | 13C4 PFBA | 102 | | 25-150 |
| STL01893 | 13C5 PFPeA | 100 | | 25-150 |
| STL00993 | 13C2 PFHxA | 107 | | 25-150 |
| STL01892 | 13C4 PFHpA | 112 | | 25-150 |
| STL00990 | 13C4 PFOA | 103 | | 25-150 |
| STL00995 | 13C5 PFNA | 102 | | 25-150 |
| STL00996 | 13C2 PFDA | 121 | | 25-150 |
| STL00997 | 13C2 PFUnA | 94 | | 25-150 |
| STL00998 | 13C2 PFDoA | 120 | | 25-150 |
| STL02116 | 13C2 PFTeDA | 101 | | 25-150 |
| STL02337 | 13C3 PFBS | 105 | | 25-150 |
| STL00994 | 18O2 PFHxS | 106 | | 25-150 |
| STL00991 | 13C4 PFOS | 104 | | 25-150 |
| STL01056 | 13C8 FOSA | 102 | | 25-150 |
| STL02118 | d3-NMeFOSAA | 103 | | 25-150 |
| STL02117 | d5-NEtFOSAA | 107 | | 25-150 |
| STL02279 | M2-6:2 FTS | 109 | | 25-150 |
| STL02280 | M2-8:2 FTS | 108 | | 25-150 |

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\A18\20200825-102078.b\2020.08.25_A18_ICAL_A_018.d
Lims ID: ICB
Client ID:
Sample Type: ICB
Inject. Date: 25-Aug-2020 17:47:07 ALS Bottle#: 13 Worklist Smp#: 9
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Sample Info: ICB (53)
Misc. Info.: Plate: 1 Rack: 1
Operator ID: TAISACA18-PC\A-18 Instrument ID: A18

Method: \\chromfs\Sacramento\ChromData\A18\20200825-102078.b\PFAS_A18V2.m
Limit Group: LC PFC ICAL
Last Update: 26-Aug-2020 10:43:41 Calib Date: 25-Aug-2020 17:37:57
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\A18\20200825-102078.b\2020.08.25_A18_ICAL_A_017.d

Column 1 : Gemini C18 3um 3mm x 50 mm ( 3.00 mm) Det: EXP1
Process Host: CTX1029

First Level Reviewer: fariasa Date: 26-Aug-2020 06:07:53
Ratio Calibration: Average of Initial Calibration

| Signal | RT | EXP RT | DLT RT | REL RT | Response | Amount ng/ml | Ratio(Limits) | %Rec | S/N | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| D 1 13C4 PFBA | | | | | | | | | | |
| 217.00 > 172.00 | 2.579 | 2.576 | 0.003 | 0.623 | 17613934 | 2.54 | | 102 | 8379 | |
| 5 Perfluoropentanoic acid | | | | | | | | | | |
| 262.90 > 219.00 | 2.938 | 2.944 | -0.006 | 1.000 | 14114 | 0.002628 | | | 0.6 | |
| D 4 13C5 PFPeA | | | | | | | | | | |
| 267.90 > 223.00 | 2.938 | 2.944 | -0.006 | 0.710 | 13469361 | 2.50 | | 100 | 5360 | |
| D 9 13C3 PFBS | | | | | | | | | | |
| 301.90 > 80.00 | 2.971 | 2.979 | -0.008 | 0.718 | 10300864 | 2.44 | | 105 | 4746 | |
| 6 Perfluorobutanesulfonic acid | | | | | | | | | | R |
| 298.90 > 80.00 | 2.971 | 2.979 | -0.008 | 1.000 | 1709 | 0.000382 | Target=2.30 | | 0.4 | R |
| 298.90 > 99.00 | 2.959 | 2.979 | -0.020 | 0.996 | 1637 | | 1.04(1.15-3.45) | | 0.7 | |
| 8 4:2 FTS | | | | | | | | | | |
| 327.00 > 307.00 | 3.276 | 3.297 | -0.021 | 0.997 | 1060 | 0.000451 | | | 9.2 | |
| D 7 M2-4:2 FTS | | | | | | | | | | |
| 329.00 > 81.00 | 3.285 | 3.297 | -0.012 | 0.794 | 2415401 | 2.37 | | 101 | 1040 | |
| D 11 13C2 PFHxA | | | | | | | | | | |
| 315.00 > 270.00 | 3.328 | 3.339 | -0.011 | 0.804 | 14362010 | 2.67 | | 107 | 7448 | |
| D 14 13C3 HFPO-DA | | | | | | | | | | |
| 287.00 > 169.00 | 3.456 | 3.467 | -0.011 | 0.835 | 2752139 | 2.50 | | 100 | 6883 | |
| 16 Perfluoroheptanoic acid | | | | | | | | | | M |
| 363.00 > 319.00 | 3.745 | 3.756 | -0.011 | 1.003 | 10098 | 0.001941 | Target=3.84 | | 1.2 | M |
| 363.00 > 169.00 | 3.736 | 3.756 | -0.020 | 1.000 | 2109 | | 4.79(1.92-5.76) | | 1.7 | M |
| D 18 13C4 PFHpA | | | | | | | | | | |
| 367.00 > 322.00 | 3.736 | 3.756 | -0.020 | 0.903 | 12831639 | 2.80 | | 112 | 5801 | |
| D 17 18O2 PFHxS | | | | | | | | | | |
| 403.00 > 84.00 | 3.745 | 3.756 | -0.011 | 0.905 | 5584890 | 2.50 | | 106 | 6048 | |

| Signal | RT | EXP RT | DLT RT | REL RT | Response | Amount ng/ml | Ratio(Limits) | %Rec | S/N | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| 15 Perfluorohexanesulfonic acid | | | | | | | | | | M |
| 399.00 > 80.00 | 3.745 | 3.756 | -0.011 | 1.000 | 22544 | 0.008080 | Target=3.50 | | 8.3 | M |
| 399.00 > 99.00 | 3.745 | 3.756 | -0.011 | 1.000 | 5895 | | 3.82(1.75-5.25) | | 5.4 | M |
| D 20 M2-6:2 FTS | | | | | | | | | | |
| 429.00 > 81.00 | 4.121 | 4.137 | -0.016 | 0.996 | 2204245 | 2.58 | | 109 | 1425 | |
| 21 6:2 FTS | | | | | | | | | | |
| 427.00 > 407.00 | 4.121 | 4.137 | -0.016 | 1.000 | 9938 | 0.004658 | | | 15.1 | |
| 22 Perfluorooctanoic acid | | | | | | | | | | M |
| 413.00 > 369.00 | 4.137 | 4.154 | -0.017 | 1.000 | 45281 | 0.009864 | Target=2.94 | | 6.8 | M |
| 413.00 > 169.00 | 4.137 | 4.154 | -0.017 | 1.000 | 12915 | | 3.51(1.47-4.41) | | 11.2 | M |
| $ 26 13C8 PFOA | | | | | | | | | | |
| 421.00 > 376.00 | 4.137 | 4.154 | -0.017 | 1.000 | 7515036 | 2.55 | | 104 | 6189 | |
| D 25 13C4 PFOA | | | | | | | | | | |
| 417.00 > 372.00 | 4.137 | 4.162 | -0.025 | 1.000 | 11247101 | 2.57 | | 103 | 7540 | |
| * 23 13C2 PFOA | | | | | | | | | | |
| 415.00 > 370.00 | 4.137 | 4.162 | -0.025 | | 10921372 | 2.50 | | | 8440 | |
| $ 28 13C8 PFOS | | | | | | | | | | |
| 507.00 > 99.00 | 4.507 | 4.523 | -0.016 | 1.089 | 1129926 | 2.39 | | 100 | 6038 | |
| D 27 13C4 PFOS | | | | | | | | | | |
| 503.00 > 80.00 | 4.507 | 4.523 | -0.016 | 1.089 | 3758763 | 2.48 | | 104 | 1772 | |
| D 30 13C5 PFNA | | | | | | | | | | |
| 468.00 > 423.00 | 4.523 | 4.540 | -0.018 | 1.093 | 8943983 | 2.54 | | 102 | 9948 | |
| 32 9ClFOS | | | | | | | | | | |
| 531.00 > 351.00 | 4.701 | 4.730 | -0.029 | 1.043 | 3658 | 0.000719 | | | 5.5 | |
| 34 Perfluorooctanesulfonamide | | | | | | | | | | |
| 498.00 > 78.00 | 4.826 | 4.828 | -0.002 | 1.000 | 6137 | 0.002659 | | | 20.9 | |
| D 33 13C8 FOSA | | | | | | | | | | |
| 506.00 > 78.00 | 4.826 | 4.828 | -0.002 | 1.167 | 6200213 | 2.54 | | 102 | 4944 | |
| D 39 13C2 PFDA | | | | | | | | | | |
| 515.00 > 470.00 | 4.887 | 4.897 | -0.010 | 1.181 | 10354087 | 3.03 | | 121 | 10153 | |
| D 38 M2-8:2 FTS | | | | | | | | | | |
| 529.00 > 81.00 | 4.887 | 4.907 | -0.020 | 1.181 | 3176101 | 2.58 | | 108 | 1710 | |
| 36 8:2 FTS | | | | | | | | | | |
| 527.00 > 507.00 | 4.895 | 4.907 | -0.012 | 1.002 | 3068 | 0.001303 | | | 16.0 | |
| D 40 d3-NMeFOSAA | | | | | | | | | | |
| 573.00 > 419.00 | 5.046 | 5.075 | -0.029 | 1.220 | 5897576 | 2.57 | | 103 | 3443 | |
| 41 NMeFOSAA | | | | | | | | | | M |
| 570.00 > 419.00 | 5.065 | 5.075 | -0.010 | 1.004 | 27396 | 0.0157 | | | 24.7 | M |
| D 43 13C2 PFUnA | | | | | | | | | | |
| 565.00 > 520.00 | 5.200 | 5.229 | -0.029 | 1.257 | 7961463 | 2.35 | | 94.0 | 7968 | |
| D 44 d5-NEtFOSAA | | | | | | | | | | |
| 589.00 > 419.00 | 5.218 | 5.238 | -0.020 | 1.261 | 6491421 | 2.67 | | 107 | 4410 | |
| 46 NEtFOSA | | | | | | | | | | M |
| 584.00 > 419.00 | 5.227 | 5.248 | -0.021 | 1.002 | 32585 | 0.0186 | | | 34.7 | M |
| D 47 d7-N-MeFOSE-M | | | | | | | | | | |
| 623.00 > 59.00 | 5.267 | 5.279 | -0.012 | 1.273 | 8642745 | 14.3 | | 114 | 3389 | |

| Signal | RT | EXP RT | DLT RT | REL RT | Response | Amount ng/ml | Ratio(Limits) | %Rec | S/N | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| D 49 d-N-MeFOSA-M | | | | | | | | | | |
| 515.00 > 169.00 | 5.287 | 5.299 | -0.012 | 1.278 | 2263875 | 2.64 | | 105 | 54.6 | |
| 51 11ClFOS | | | | | | | | | | |
| 631.00 > 451.00 | 5.357 | 5.375 | -0.018 | 1.189 | 10896 | 0.001689 | | | 19.5 | |
| D 52 d9-N-EtFOSE-M | | | | | | | | | | |
| 639.00 > 59.00 | 5.446 | 5.448 | -0.002 | 1.317 | 9242300 | 12.4 | | 99.6 | 2375 | |
| D 54 d-N-EtFOSA-M | | | | | | | | | | |
| 531.00 > 169.00 | 5.468 | 5.469 | -0.001 | 1.322 | 2195925 | 2.50 | | 100.0 | 488 | |
| 55 N-EtFOSA-M | | | | | | | | | | |
| 526.00 > 169.00 | 5.503 | 5.480 | 0.022 | 1.006 | 2013 | 0.002165 | | | 3.2 | |
| D 56 13C2 PFDoA | | | | | | | | | | |
| 615.00 > 570.00 | 5.503 | 5.530 | -0.028 | 1.330 | 10009210 | 2.99 | | 120 | 8347 | |
| 58 10:2 FTS | | | | | | | | | | |
| 627.00 > 607.00 | 5.541 | 5.555 | -0.014 | 1.134 | 3605 | 0.001350 | | | 17.8 | |
| D 61 13C2 PFTeDA | | | | | | | | | | |
| 715.00 > 670.00 | 6.022 | 6.053 | -0.031 | 1.456 | 6955741 | 2.52 | | 101 | 11424 | |
| D 64 13C2 PFHxDA | | | | | | | | | | |
| 815.00 > 770.00 | 6.481 | 6.530 | -0.049 | 1.567 | 4723443 | 2.34 | | 93.6 | 4275 | |
| 63 Perfluorohexadecanoic acid | | | | | | | | | | |
| 813.00 > 769.00 | 6.490 | 6.530 | -0.040 | 1.001 | 53434 | 0.008378 | Target=10.21 | | 38.9 | |
| 813.00 > 169.00 | 6.481 | 6.530 | -0.049 | 1.000 | 5610 | | 9.52(5.11-15.32) | | 43.9 | |

## QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Review Flags

M - Manually Integrated

## Reagents:

LCPFC_LL0_00053 Amount Added: 1.00 Units: mL

Report Date: 26-Aug-2020 10:43:58 Chrom Revision: 2.3 20-Aug-2020 13:57:12

Eurofins TestAmerica, Sacramento

Data File: \\chromfs\Sacramento\ChromData\A18\20200825-102078.b\2020.08.25_A18_ICAL_A_018.d

Injection Date: 25-Aug-2020 17:47:07 Instrument ID: A18

Lims ID: ICB

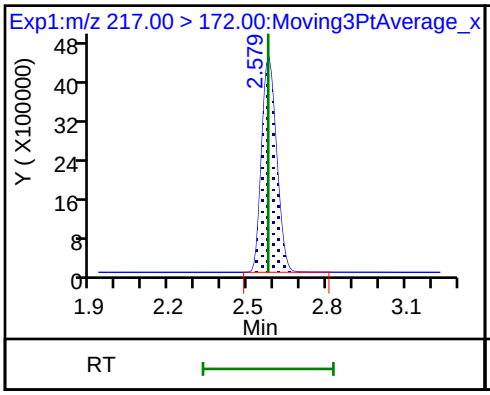
Client ID:

Operator ID: TAISACA18-PC\A-18 ALS Bottle#: 13 Worklist Smp#: 9

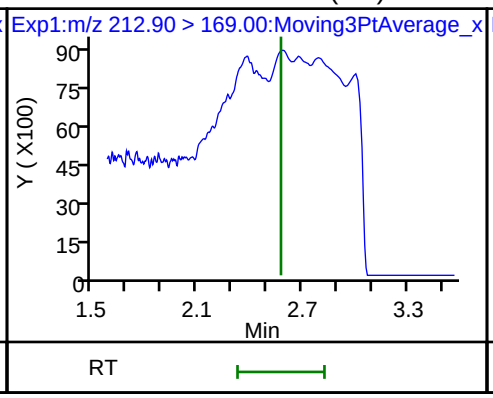
Injection Vol: 20.0 ul Dil. Factor: 1.0000

Method: PFAS_A18V2 Limit Group: LC PFC ICAL

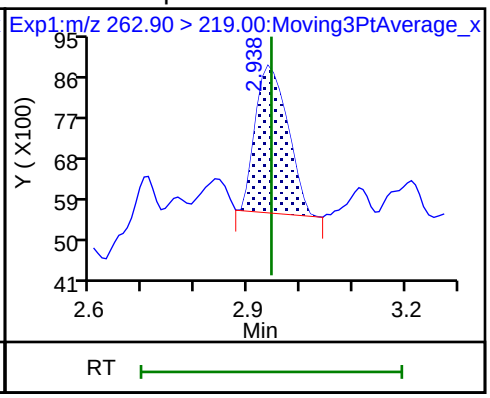
D 1 13C4 PFBA



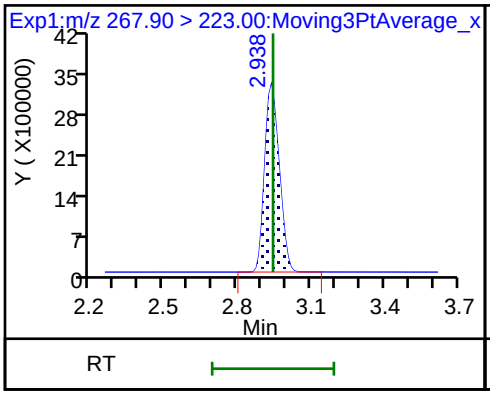

2 Perfluorobutanoic acid (ND)



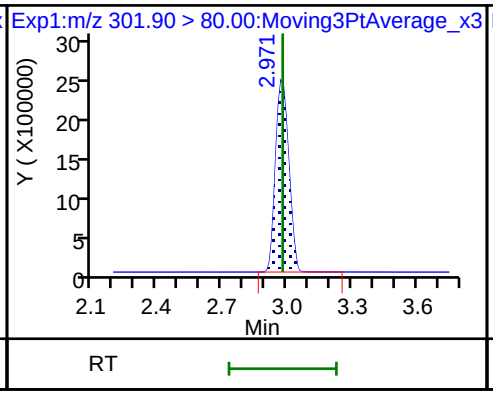

5 Perfluoropentanoic acid



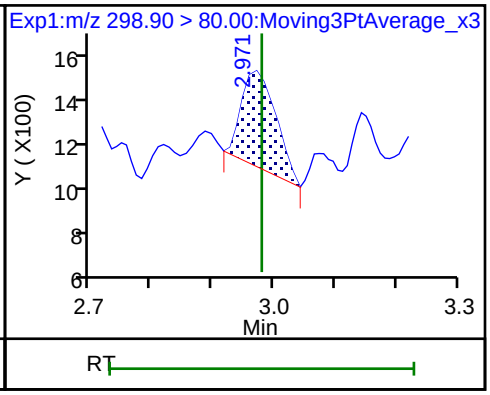

D 4 13C5 PFPeA



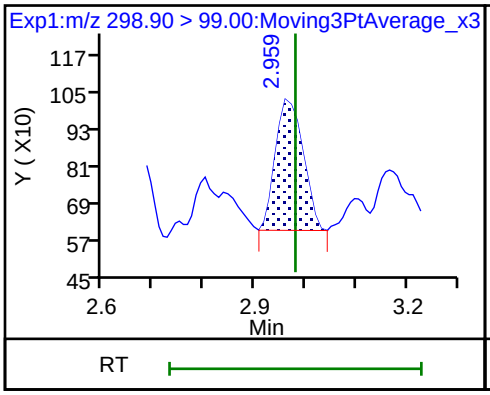

D 9 13C3 PFBS



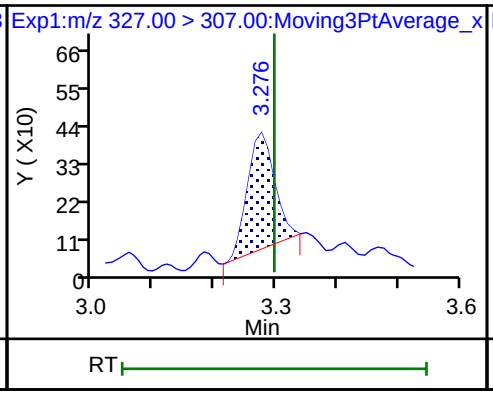

6 Perfluorobutanesulfonic acid



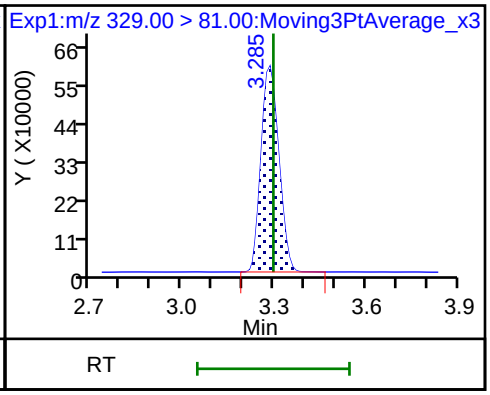

6 Perfluorobutanesulfonic acid



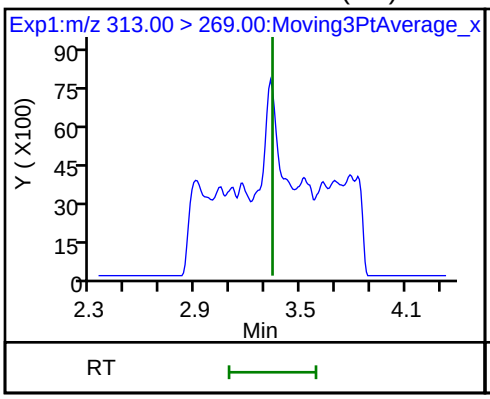

8 4:2 FTS




D 7 M2-4:2 FTS




10 Perfluorohexanoic acid (ND)

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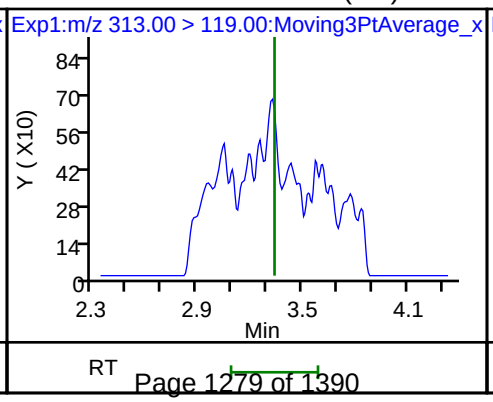
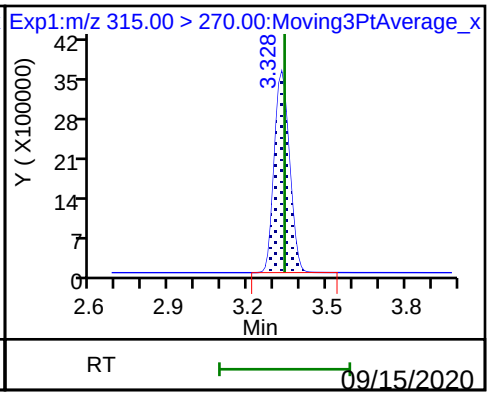
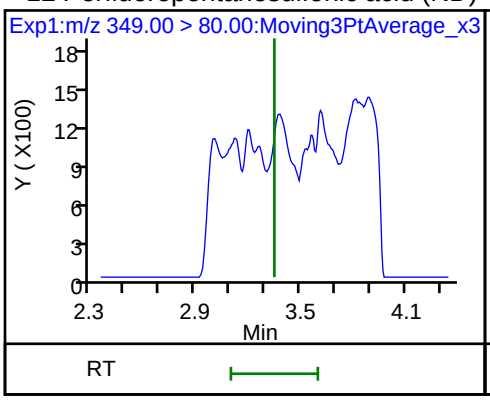



D 11 13C2 PFHxA



12 Perfluoropentanesulfonic acid (ND)

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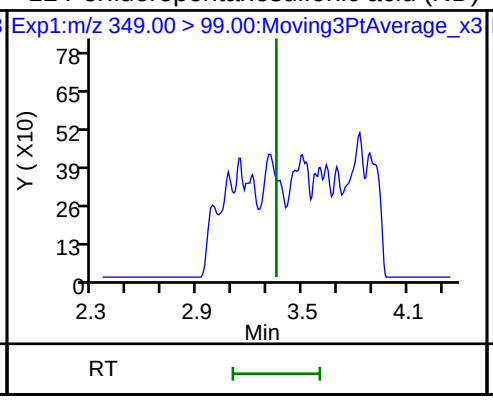
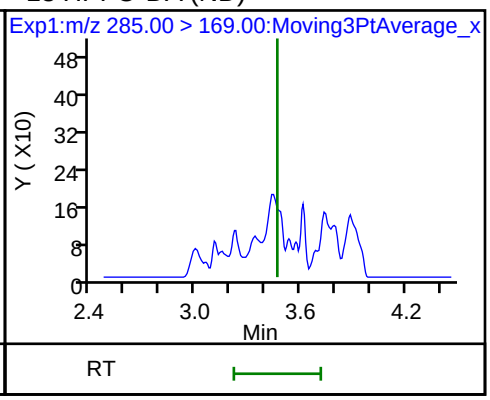
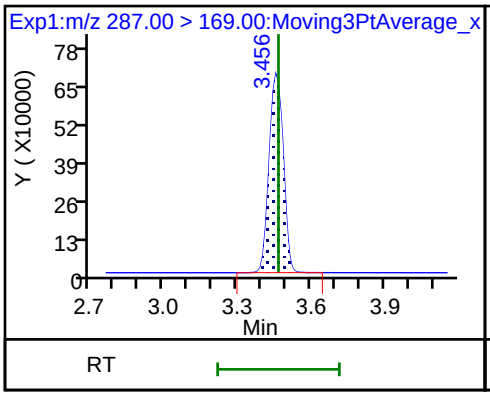


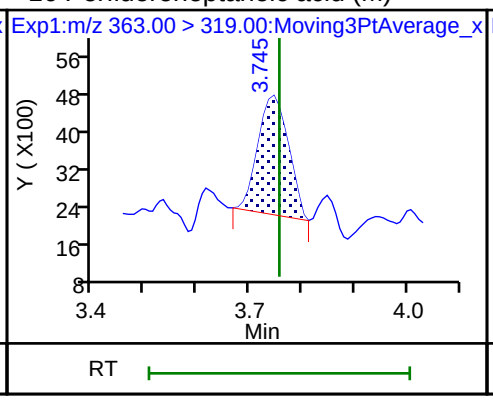

13 HPFO-DA (ND)



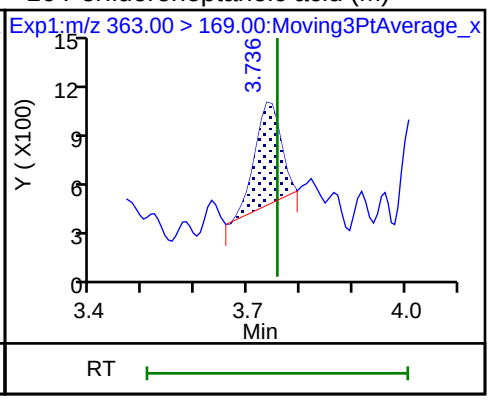

D 14 13C3 HFPO-DA



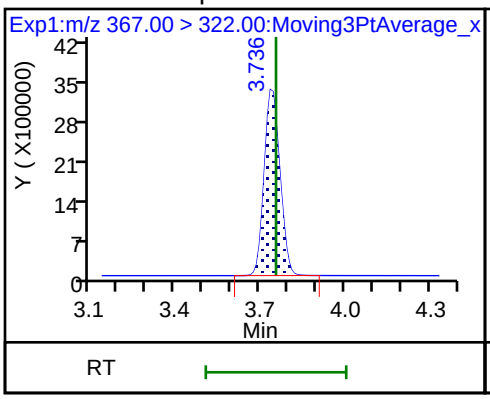

16 Perfluoroheptanoic acid (M)




16 Perfluoroheptanoic acid (M)




D 18 13C4 PFHpA

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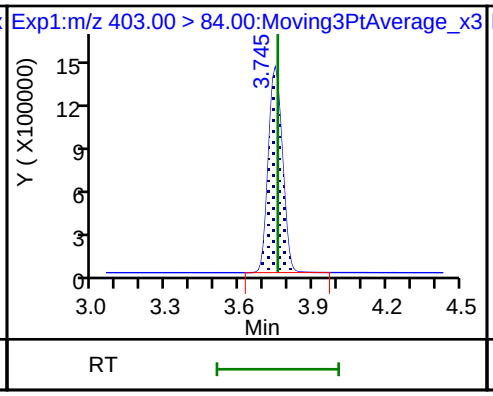


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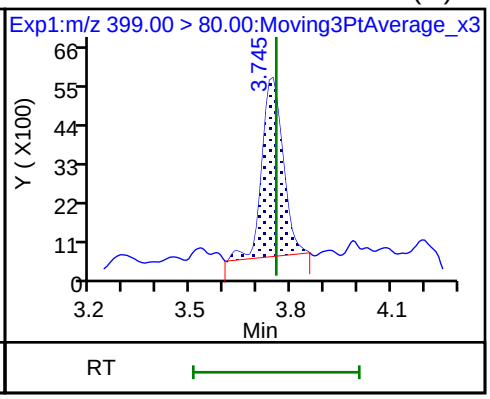


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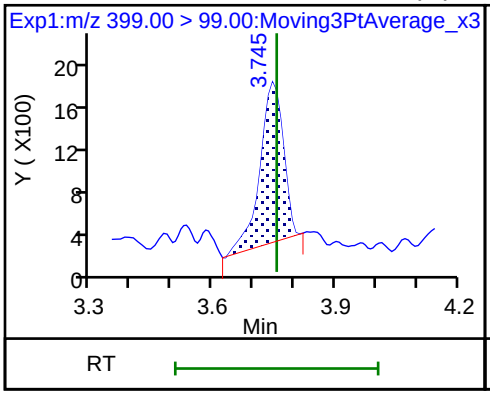
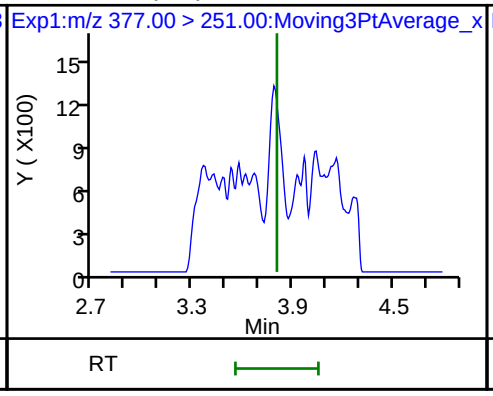



19 DONA (ND)

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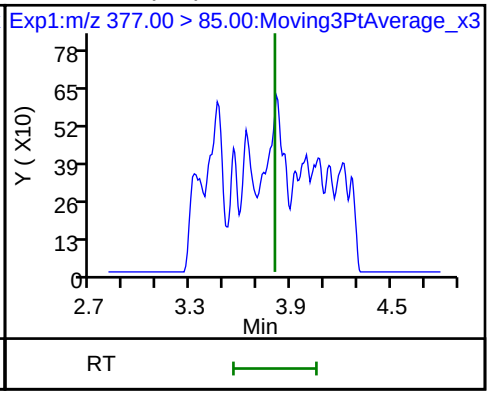
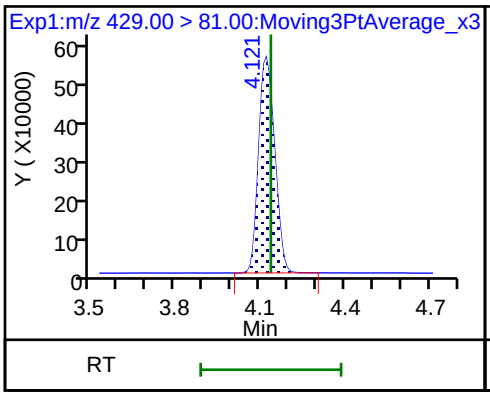
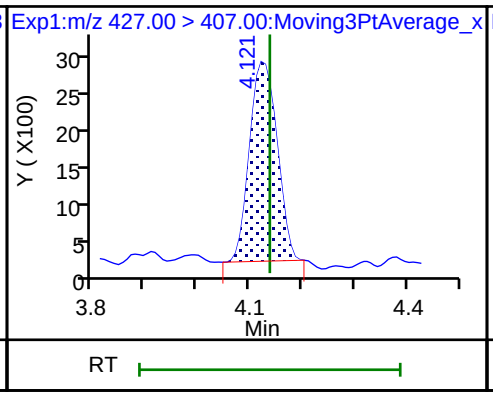


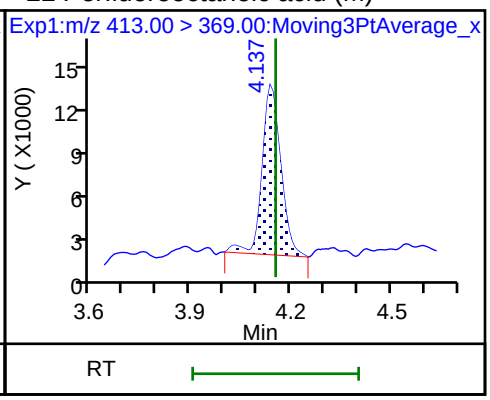
D 20 M2-6:2 FTS




21 6:2 FTS




22 Perfluorooctanoic acid (M)

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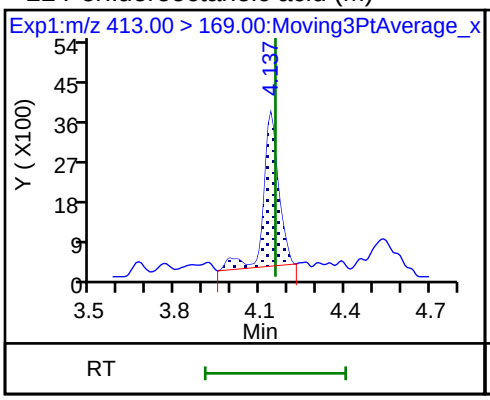
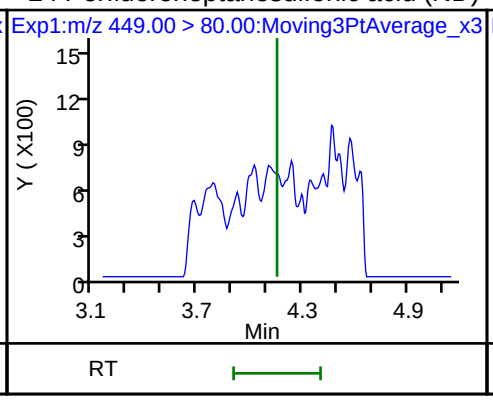



24 Perfluoroheptanesulfonic acid (ND)

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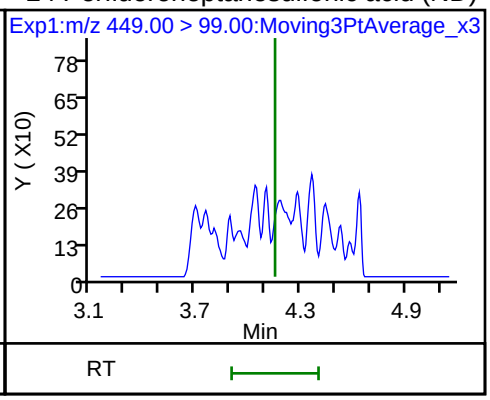
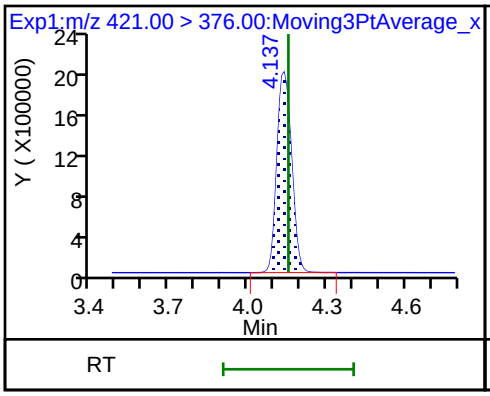
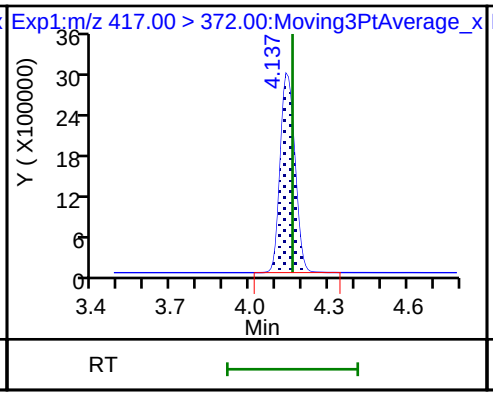


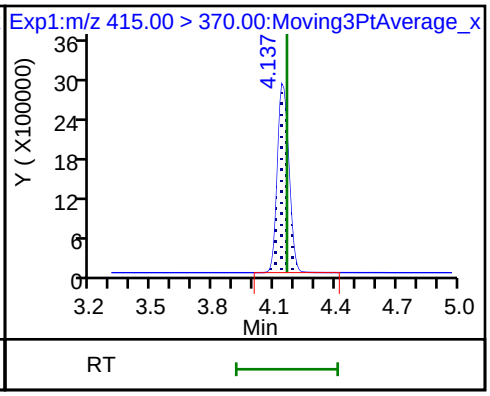

$ 26 13C8 PFOA




D 25 13C4 PFOA




* 23 13C2 PFOA

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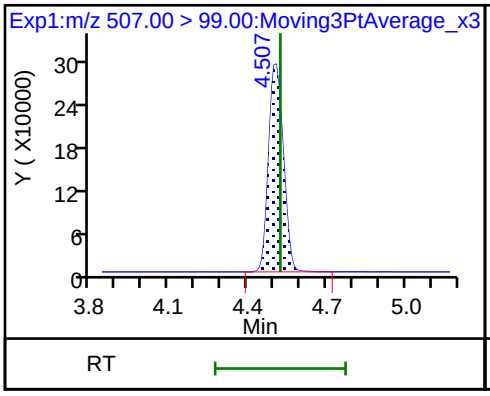


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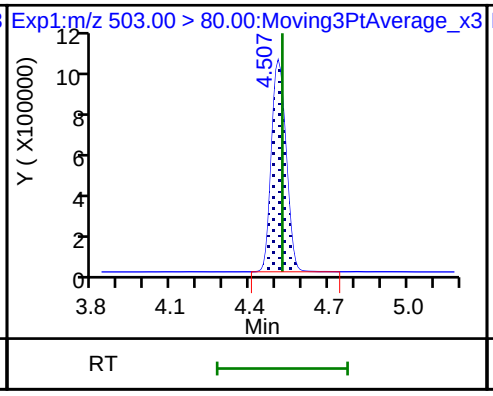
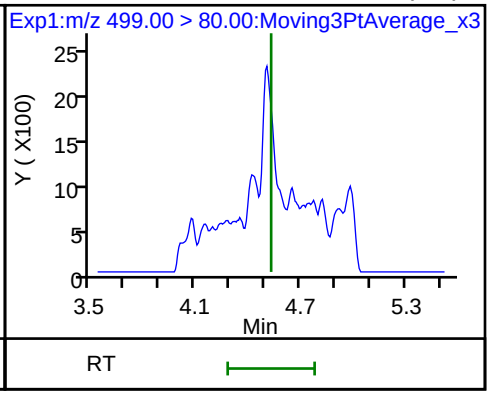



29 Perfluorooctanesulfonic acid (ND)



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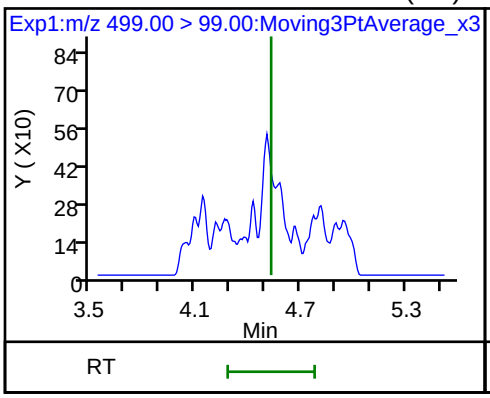
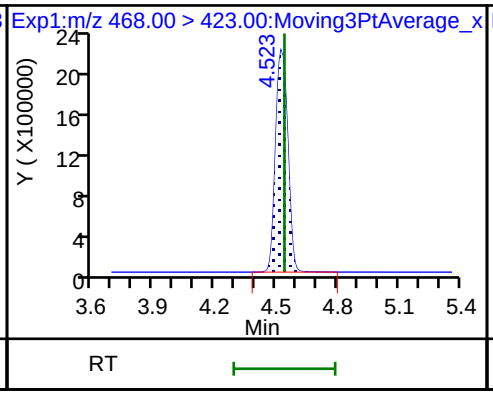
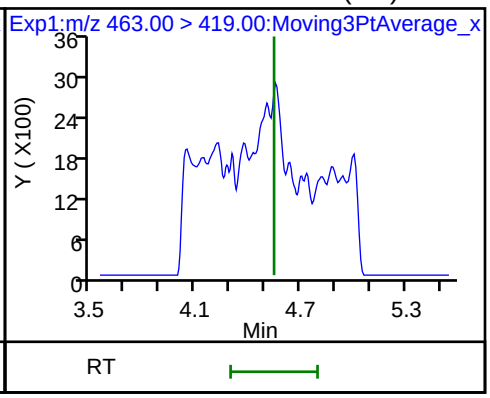



D 30 13C5 PFNA




31 Perfluorononanoic acid (ND)

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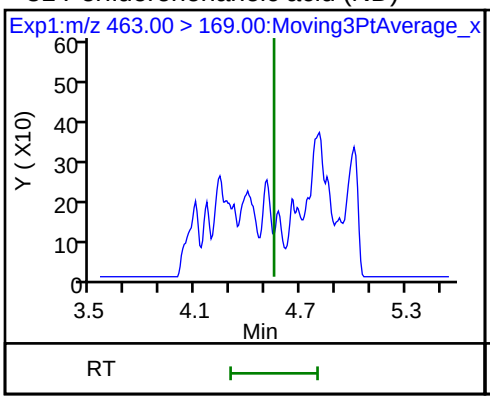
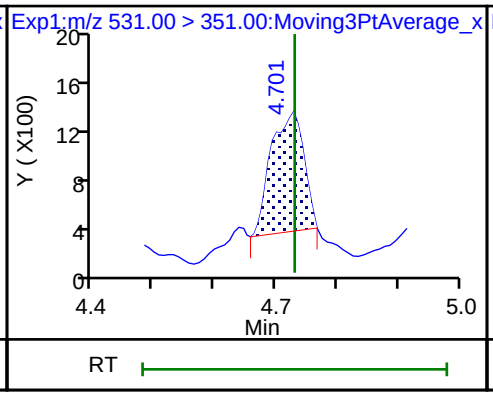
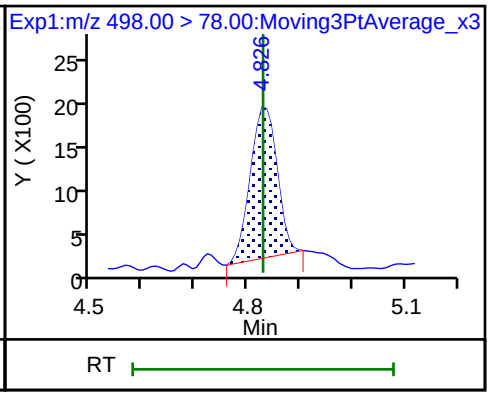


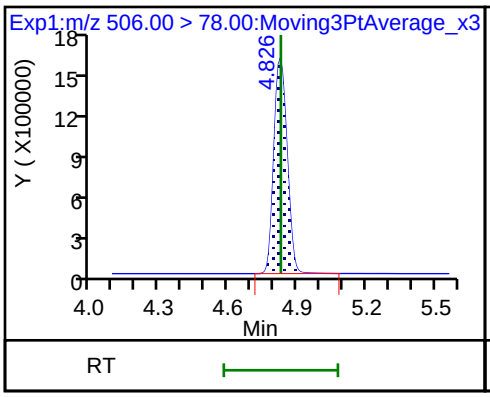

32 9ClFOS




34 Perfluorooctanesulfonamide




D 33 13C8 FOSA

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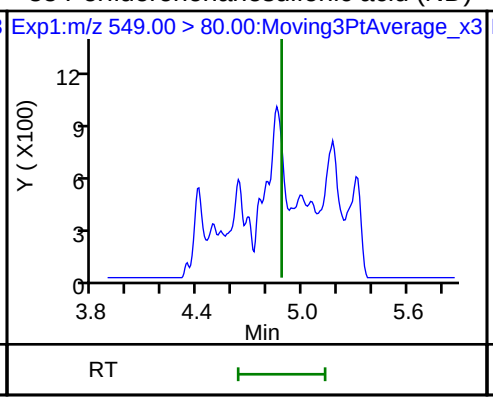
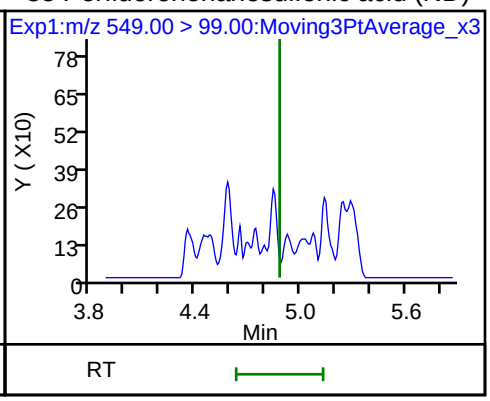
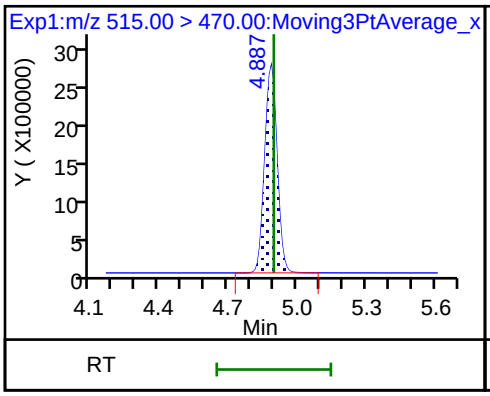


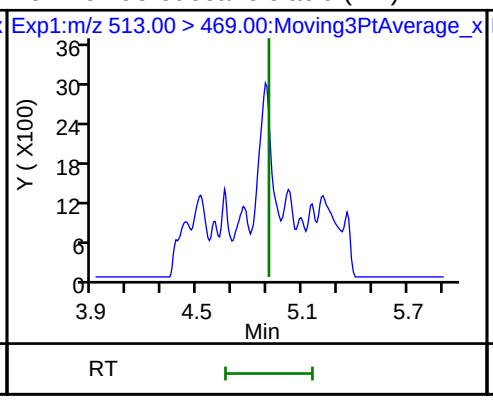

35 Perfluorononanesulfonic acid (ND)




D 39 13C2 PFDA




37 Perfluorodecanoic acid (ND)

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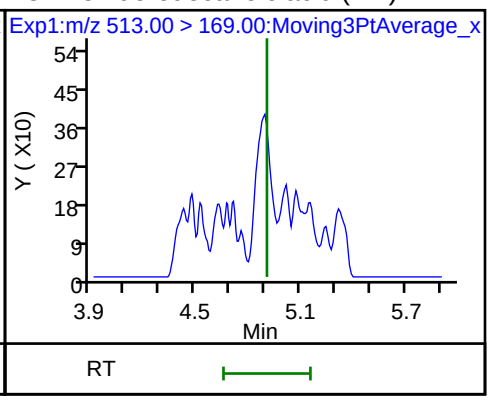
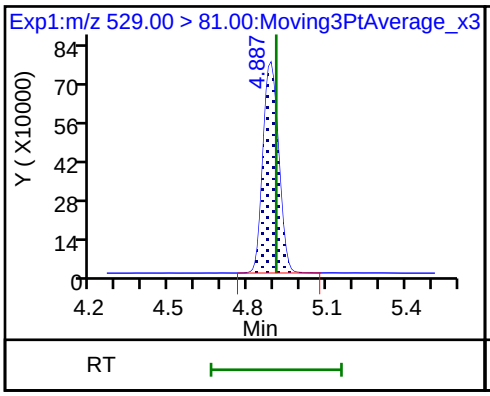
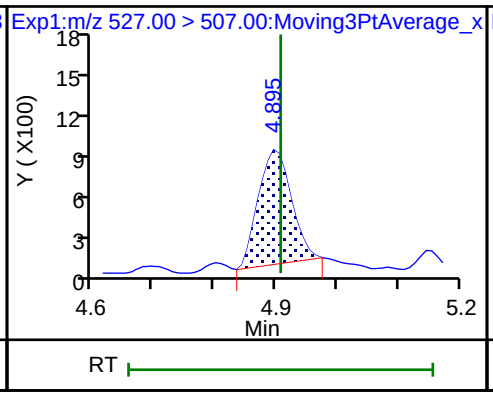


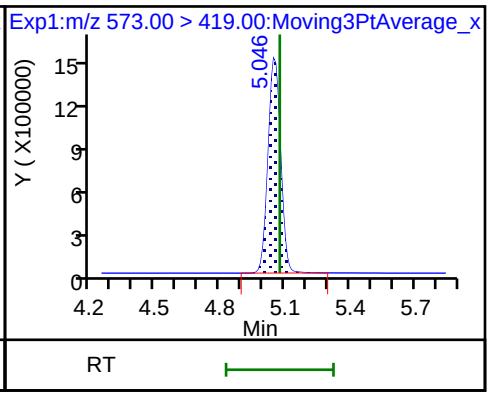
D 38 M2-8:2 FTS



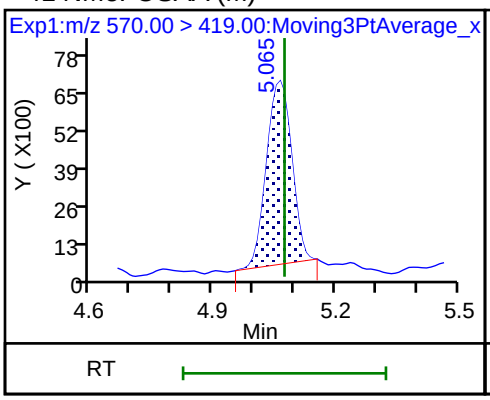

36 8:2 FTS



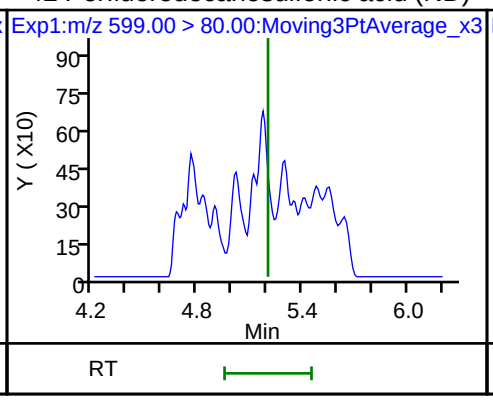

D 40 d3-NMeFOSAA



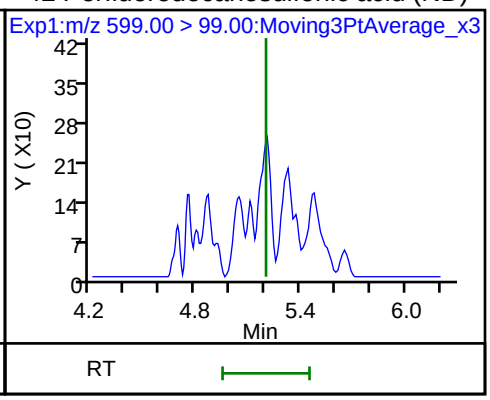

41 NMeFOSAA (M)



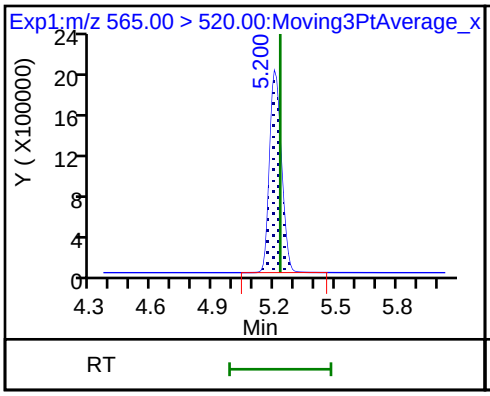

42 Perfluorodecanesulfonic acid (ND)



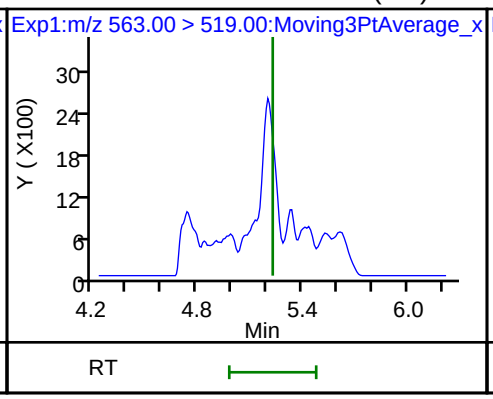

42 Perfluorodecanesulfonic acid (ND)



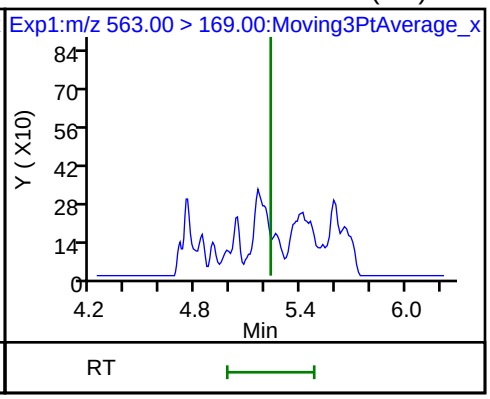

D 43 13C2 PFUnA



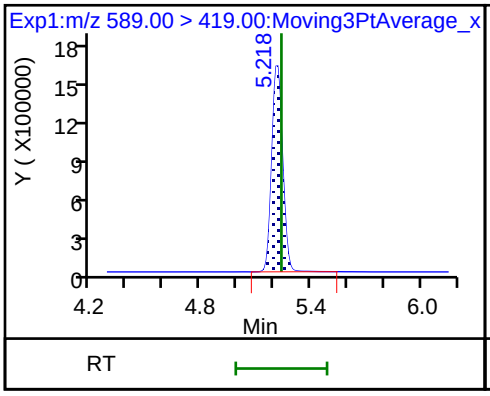

45 Perfluoroundecanoic acid (ND)



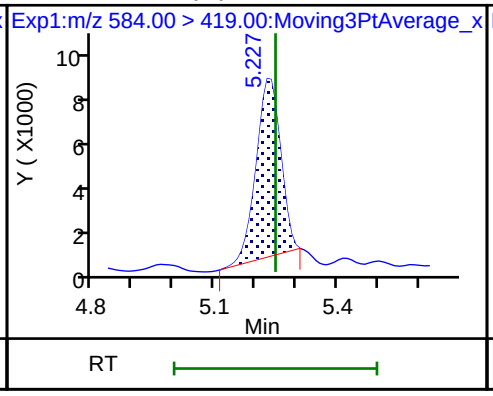

45 Perfluoroundecanoic acid (ND)



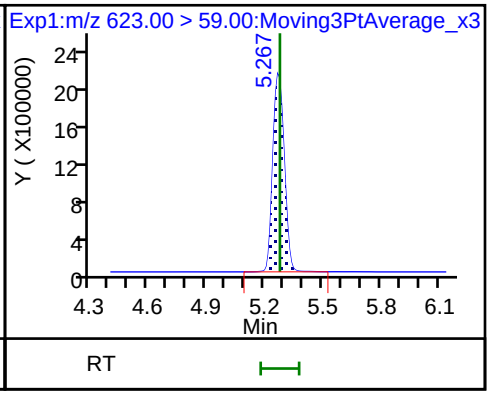

D 44 d5-NEtFOSAA



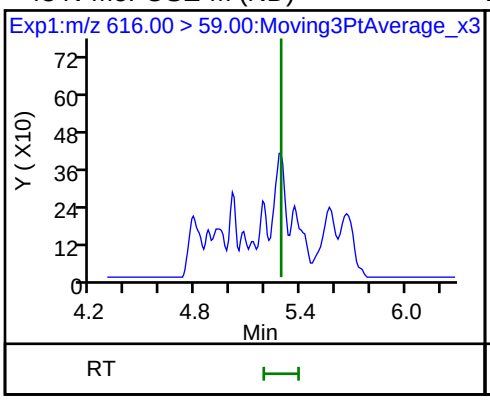

46 NEtFOSA (M)



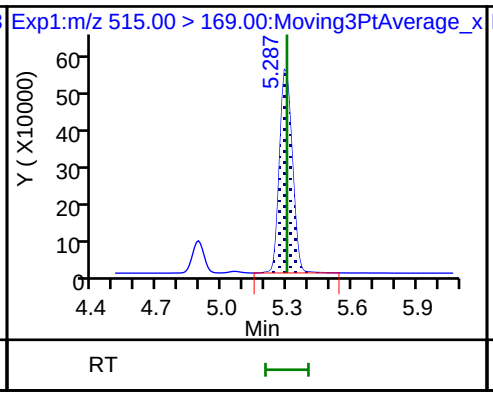

D 47 d7-N-MeFOSE-M



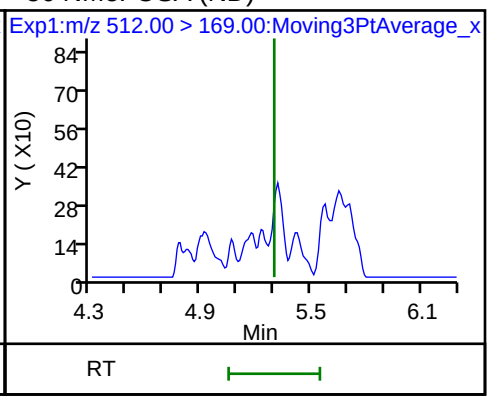
48 N-MeFOSE-M (ND)



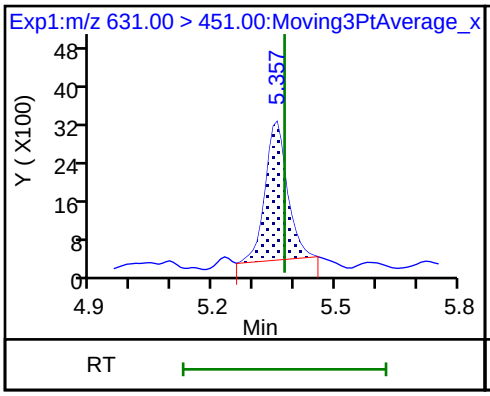

D 49 d-N-MeFOSA-M



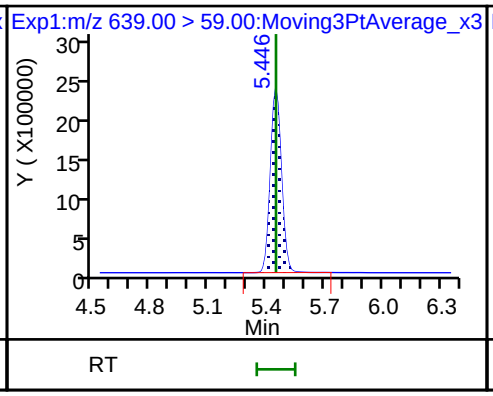

50 NMeFOSA (ND)



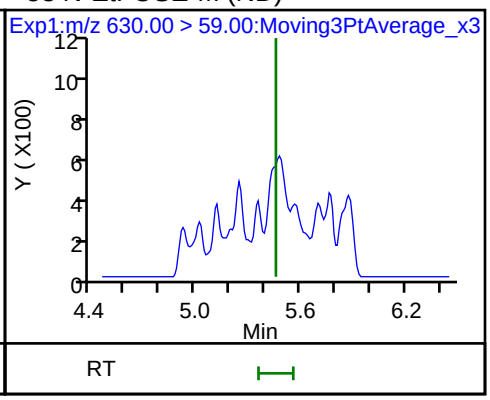

51 11ClFOS



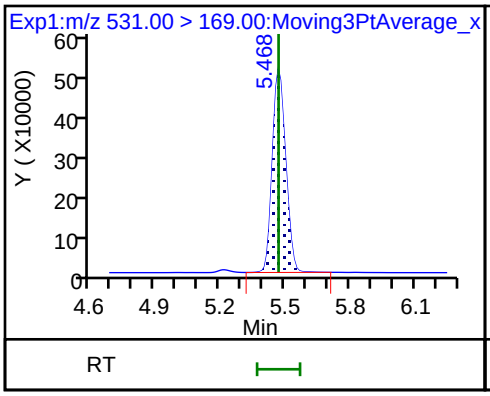

D 52 d9-N-EtFOSE-M



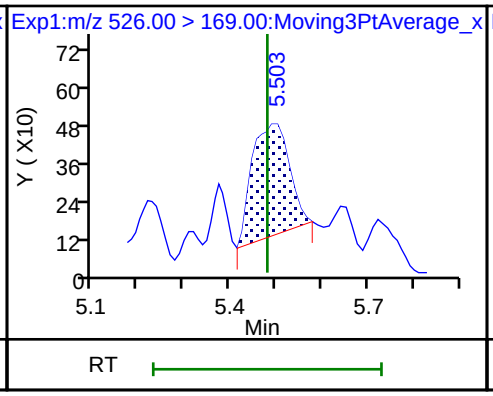

53 N-EtFOSE-M (ND)



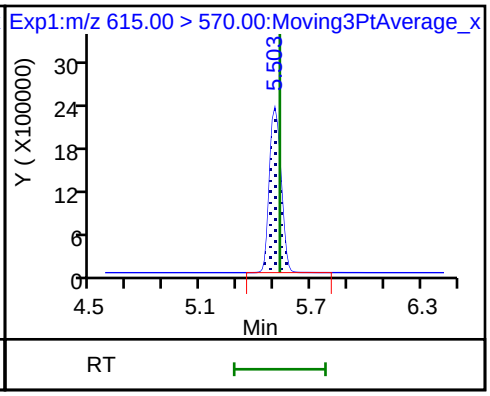

D 54 d-N-EtFOSA-M



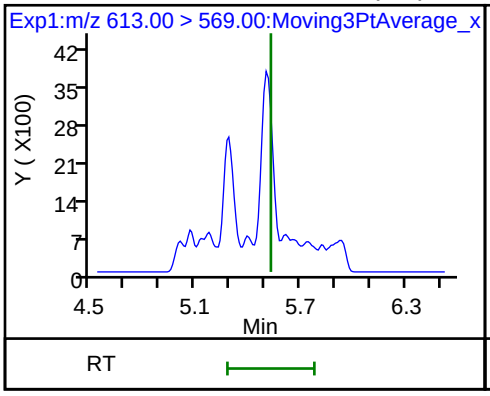

55 N-EtFOSA-M



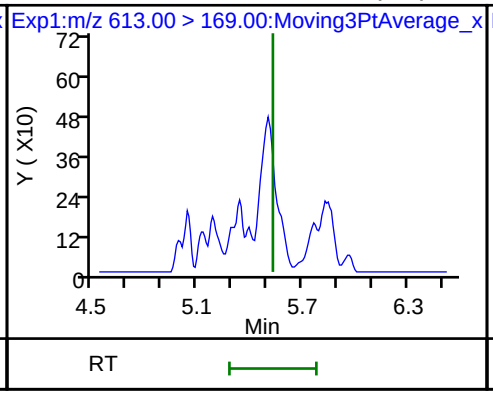

D 56 13C2 PFDoA



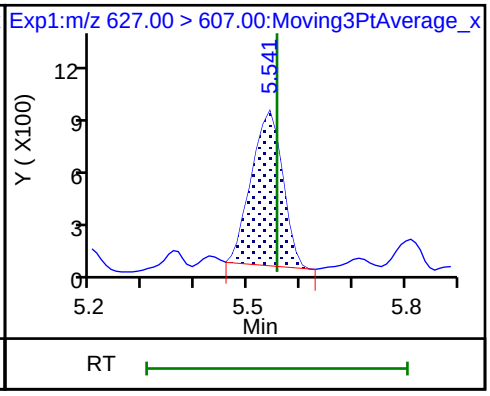

57 Perfluorododecanoic acid (ND)



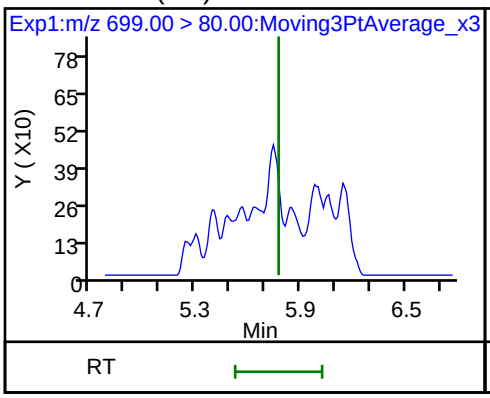

57 Perfluorododecanoic acid (ND)



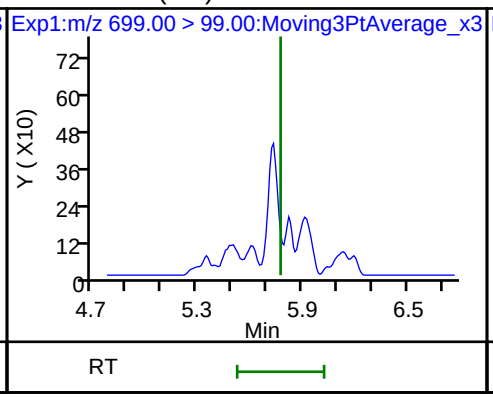

58 10:2 FTS



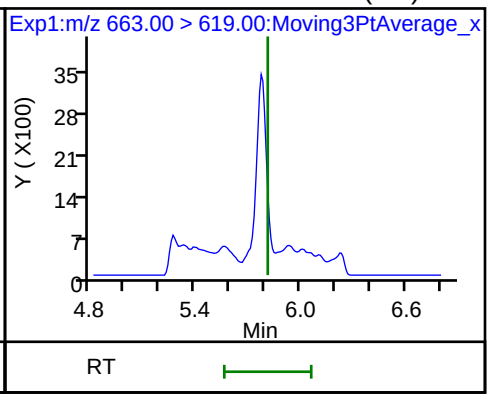
59 PFDoS (ND)



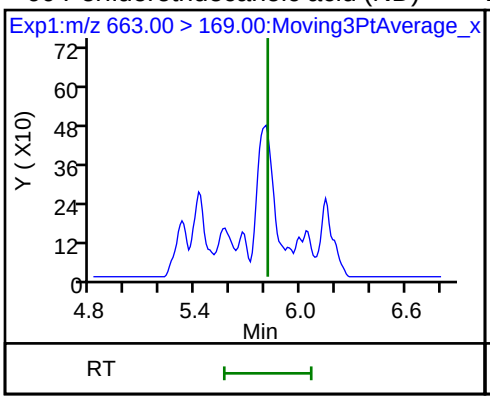

59 PFDoS (ND)



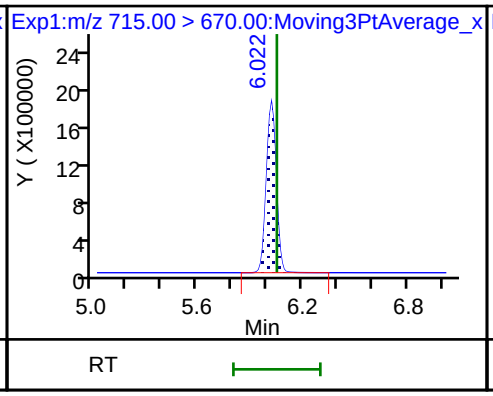

60 Perfluorotridecanoic acid (ND)



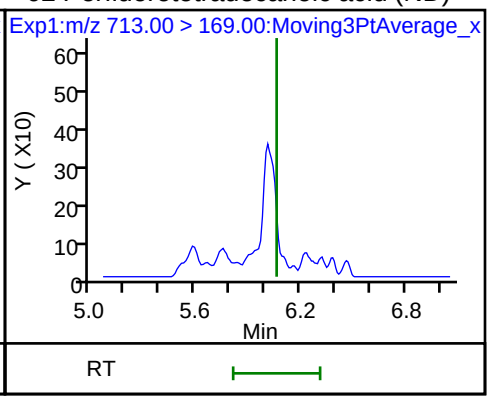

60 Perfluorotridecanoic acid (ND)



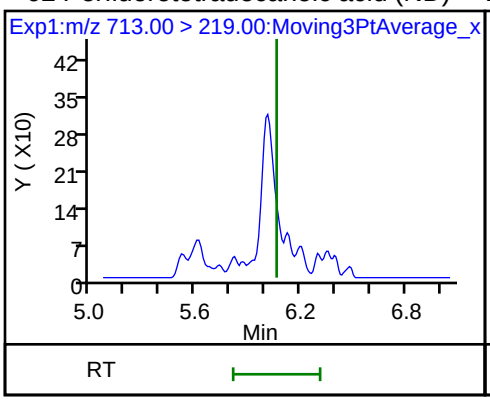

D 61 13C2 PFTeDA



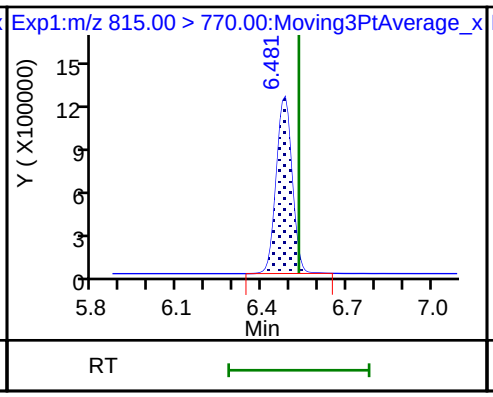

62 Perfluorotetradecanoic acid (ND)



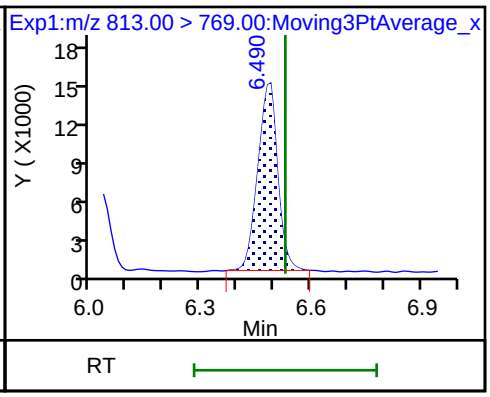

62 Perfluorotetradecanoic acid (ND)



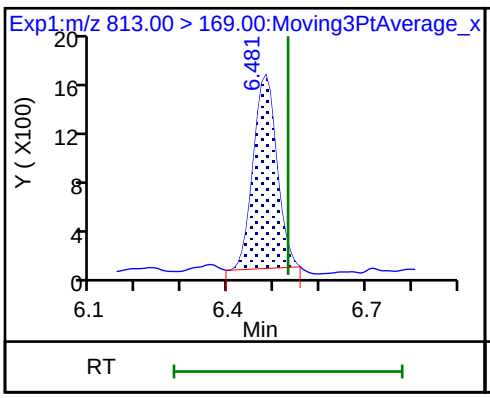

D 64 13C2 PFHxDA



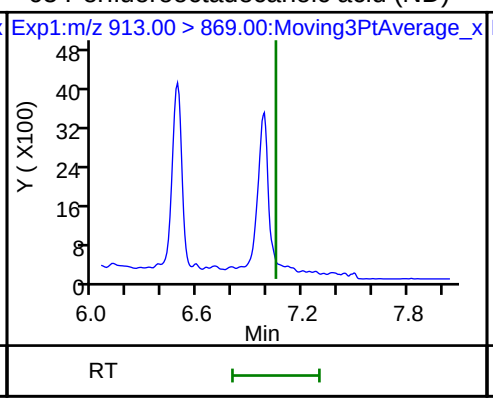

63 Perfluorohexadecanoic acid



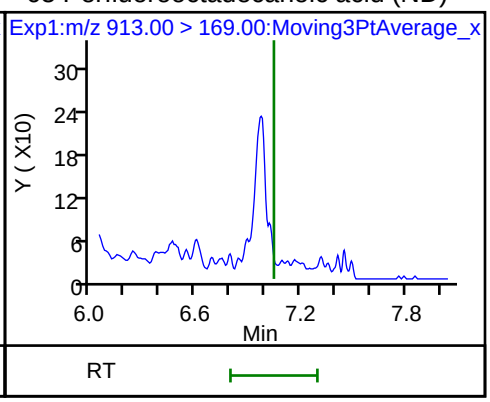

63 Perfluorohexadecanoic acid




65 Perfluorooctadecanoic acid (ND)




65 Perfluorooctadecanoic acid (ND)



Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

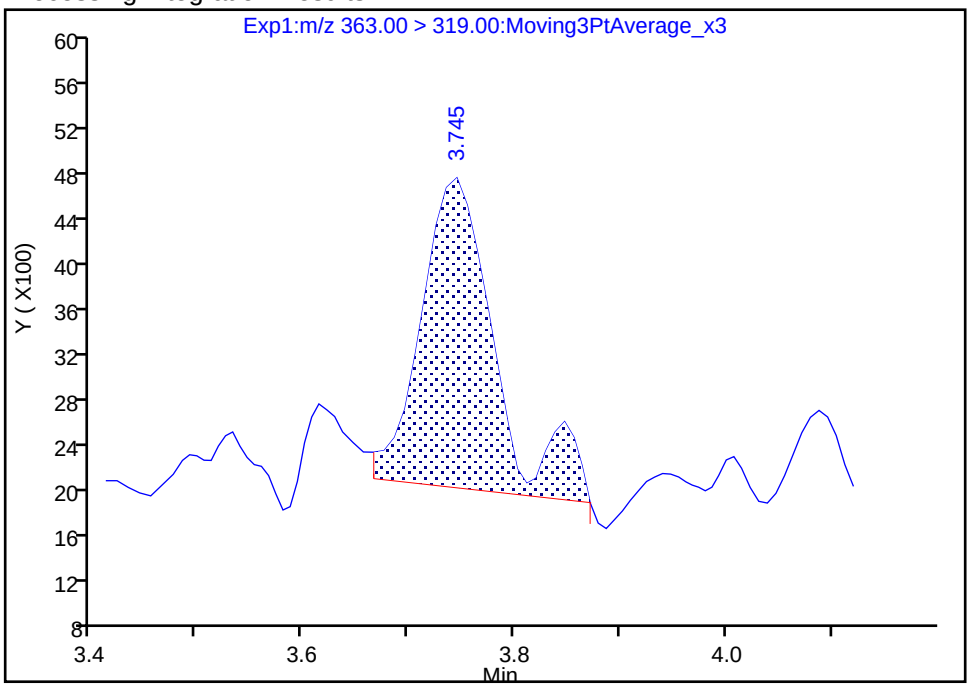
Data File: \\chromfs\Sacramento\ChromData\A18\20200825-102078.b\2020.08.25_A18_ICAL_A_018.d
Injection Date: 25-Aug-2020 17:47:07 Instrument ID: A18
Lims ID: ICB
Client ID:
Operator ID: TAISACA18-PC\A-18 ALS Bottle#: 13 Worklist Smp#: 9
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFAS_A18V2 Limit Group: LC PFC ICAL
Column: Gemini C18 3um 3mm x 50 mm ( 3.00 mm) Detector EXP1

## 16 Perfluoroheptanoic acid, CAS: 375-85-9

Signal: 1

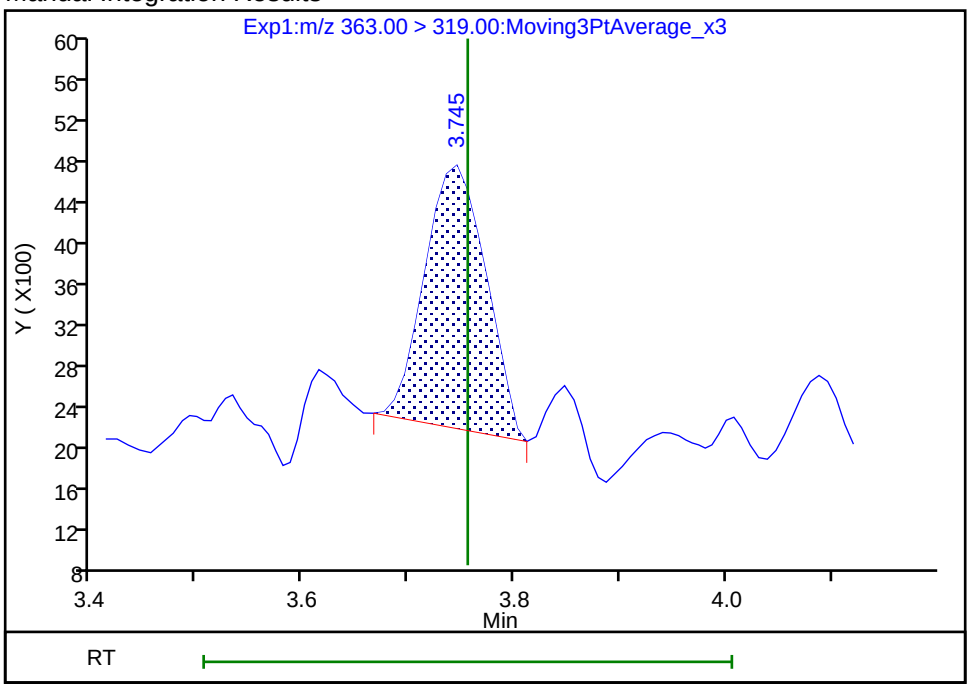
Processing Integration Results

RT: 3.75
Area: 12956
Amount: 0.002490
Amount Units: ng/ml




Manual Integration Results

RT: 3.75
Area: 10098
Amount: 0.001941
Amount Units: ng/ml




Reviewer: fariasa, 26-Aug-2020 06:06:12
Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

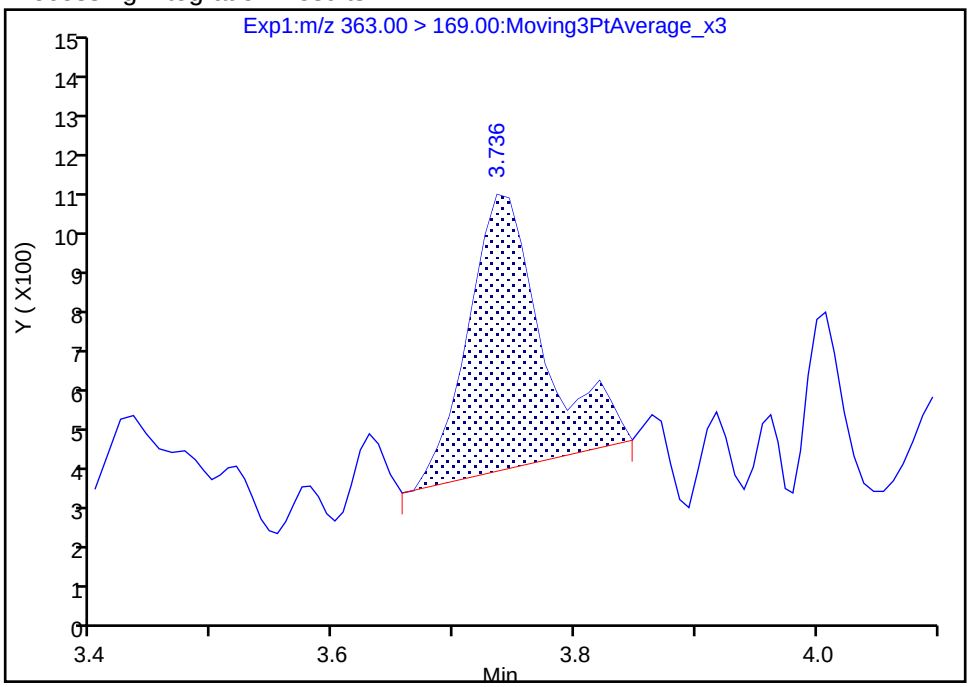
Data File: \\chromfs\Sacramento\ChromData\A18\20200825-102078.b\2020.08.25_A18_ICAL_A_018.d
Injection Date: 25-Aug-2020 17:47:07 Instrument ID: A18
Lims ID: ICB
Client ID:
Operator ID: TAISACA18-PC\A-18 ALS Bottle#: 13 Worklist Smp#: 9
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFAS_A18V2 Limit Group: LC PFC ICAL
Column: Gemini C18 3um 3mm x 50 mm ( 3.00 mm) Detector EXP1

## 16 Perfluoroheptanoic acid, CAS: 375-85-9

Signal: 2

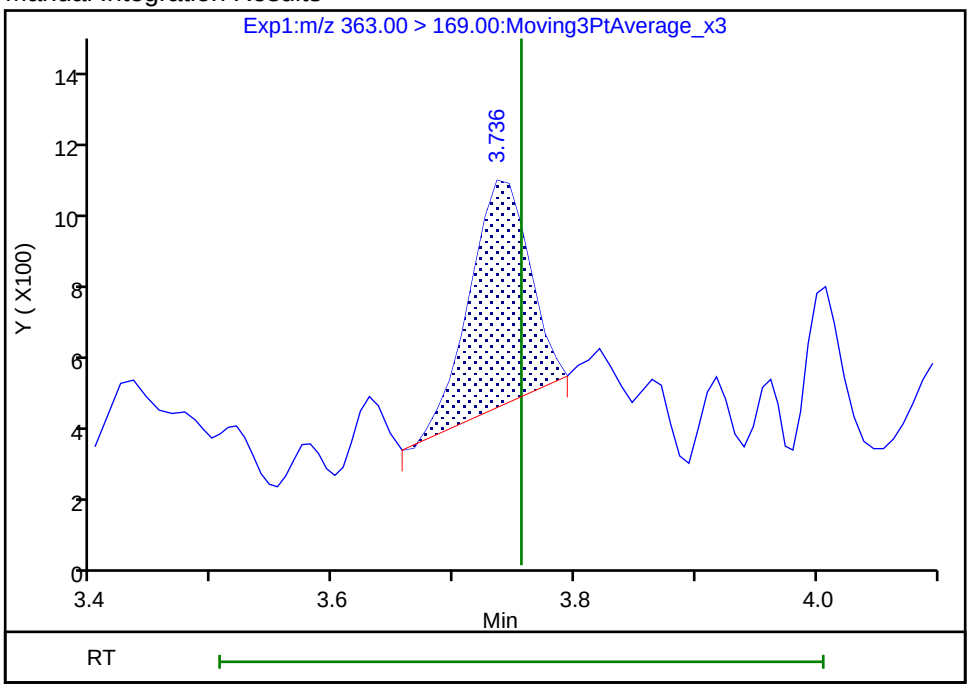
Processing Integration Results

RT: 3.74
Area: 2906
Amount: 0.002490
Amount Units: ng/ml




Manual Integration Results

RT: 3.74
Area: 2109
Amount: 0.001941
Amount Units: ng/ml




Reviewer: fariasa, 26-Aug-2020 06:06:18
Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

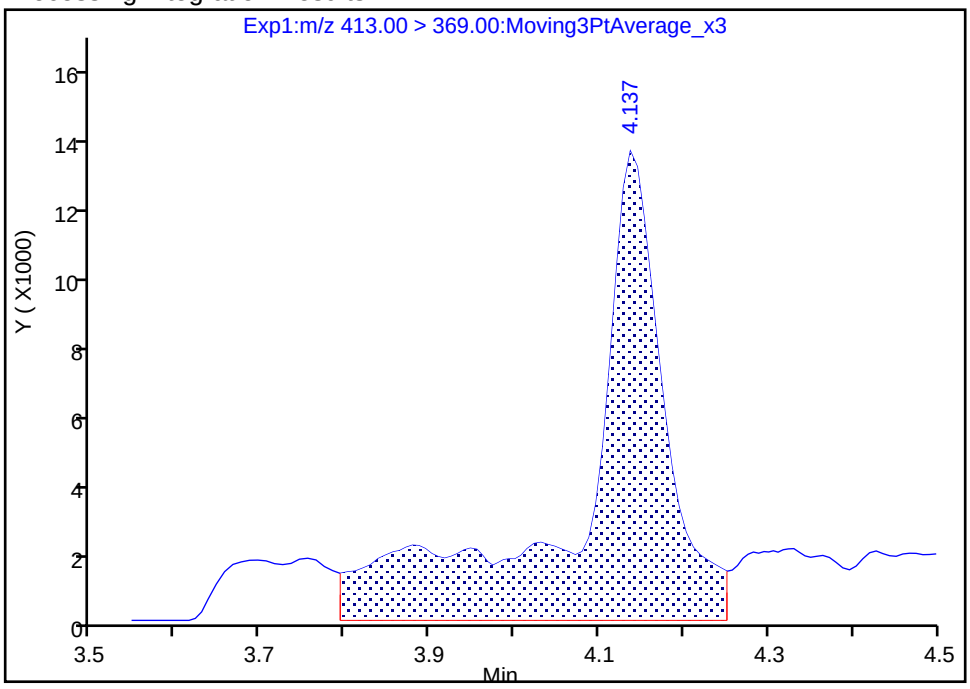
Data File: \\chromfs\Sacramento\ChromData\A18\20200825-102078.b\2020.08.25_A18_ICAL_A_018.d
Injection Date: 25-Aug-2020 17:47:07 Instrument ID: A18
Lims ID: ICB
Client ID:
Operator ID: TAISACA18-PC\A-18 ALS Bottle#: 13 Worklist Smp#: 9
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFAS_A18V2 Limit Group: LC PFC ICAL
Column: Gemini C18 3um 3mm x 50 mm ( 3.00mm) Detector EXP1

## 22 Perfluorooctanoic acid, CAS: 335-67-1

Signal: 1

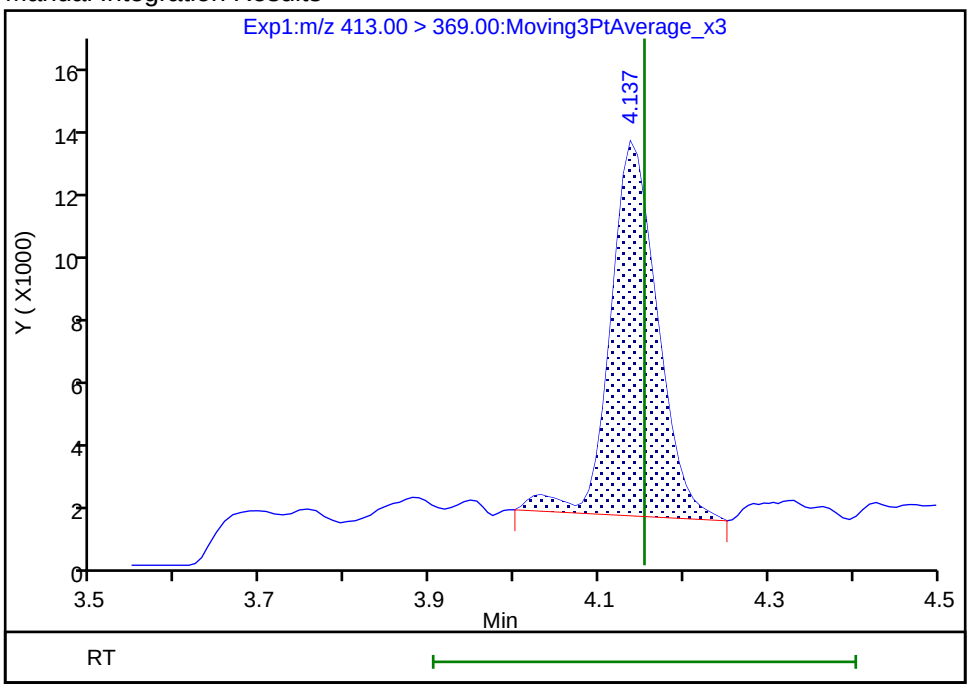
Processing Integration Results

RT: 4.14
Area: 90842
Amount: 0.019789
Amount Units: ng/ml




Manual Integration Results

RT: 4.14
Area: 45281
Amount: 0.009864
Amount Units: ng/ml




Reviewer: fariasa, 26-Aug-2020 06:06:57
Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

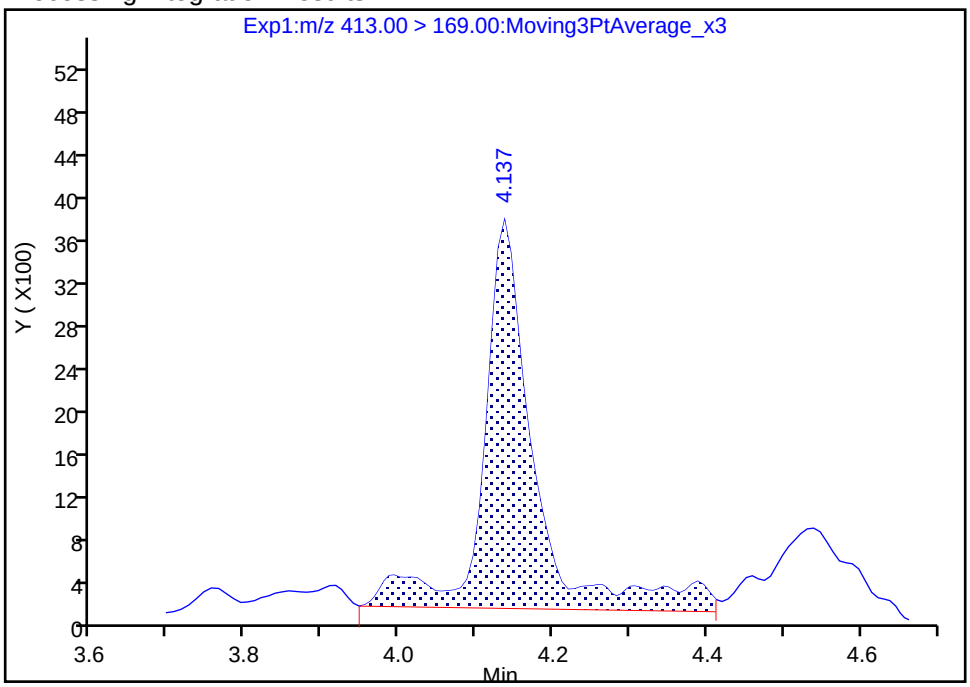
Data File: \\chromfs\Sacramento\ChromData\A18\20200825-102078.b\2020.08.25_A18_ICAL_A_018.d
Injection Date: 25-Aug-2020 17:47:07 Instrument ID: A18
Lims ID: ICB
Client ID:
Operator ID: TAISACA18-PC\A-18 ALS Bottle#: 13 Worklist Smp#: 9
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFAS_A18V2 Limit Group: LC PFC ICAL
Column: Gemini C18 3um 3mm x 50 mm ( 3.00mm) Detector EXP1

## 22 Perfluorooctanoic acid, CAS: 335-67-1

Signal: 2

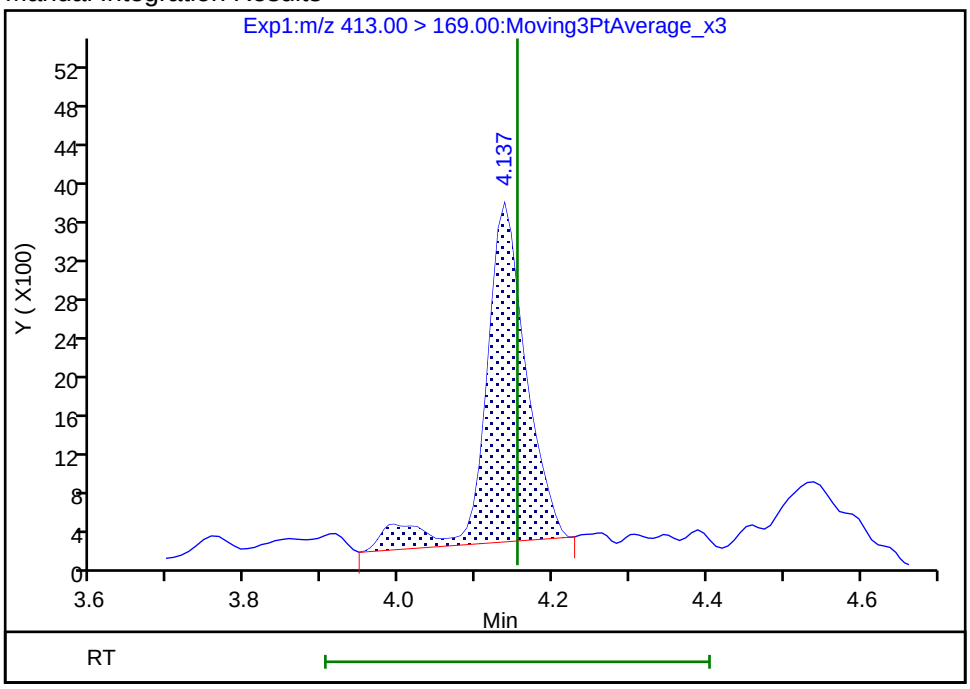
Processing Integration Results

RT: 4.14
Area: 16812
Amount: 0.019789
Amount Units: ng/ml




Manual Integration Results

RT: 4.14
Area: 12915
Amount: 0.009864
Amount Units: ng/ml




Reviewer: fariasa, 26-Aug-2020 06:07:07
Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

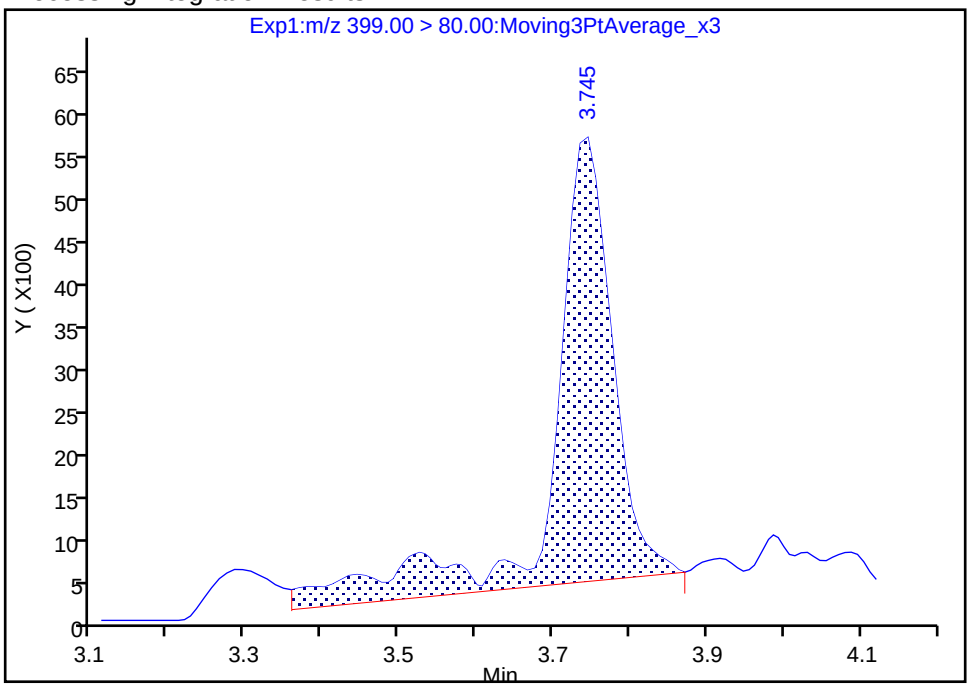
Data File: \\chromfs\Sacramento\ChromData\A18\20200825-102078.b\2020.08.25_A18_ICAL_A_018.d
Injection Date: 25-Aug-2020 17:47:07 Instrument ID: A18
Lims ID: ICB
Client ID:
Operator ID: TAISACA18-PC\A-18 ALS Bottle#: 13 Worklist Smp#: 9
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFAS_A18V2 Limit Group: LC PFC ICAL
Column: Gemini C18 3um 3mm x 50 mm ( 3.00mm) Detector EXP1

## 15 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 1

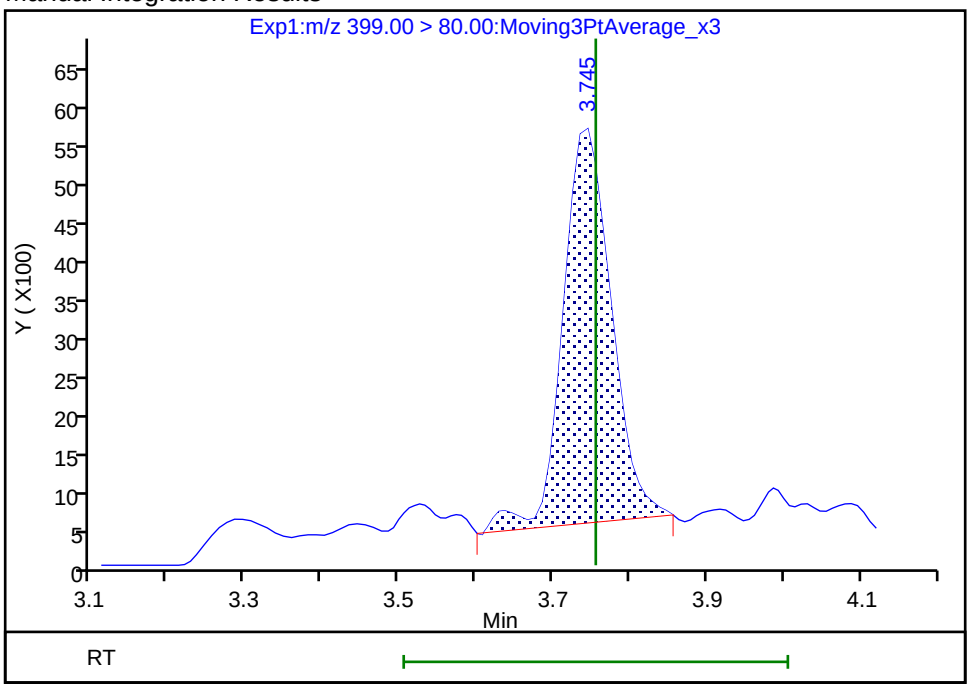
Processing Integration Results

RT: 3.75
Area: 28539
Amount: 0.010229
Amount Units: ng/ml




Manual Integration Results

RT: 3.75
Area: 22544
Amount: 0.008080
Amount Units: ng/ml




Reviewer: fariasa, 26-Aug-2020 06:06:35
Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

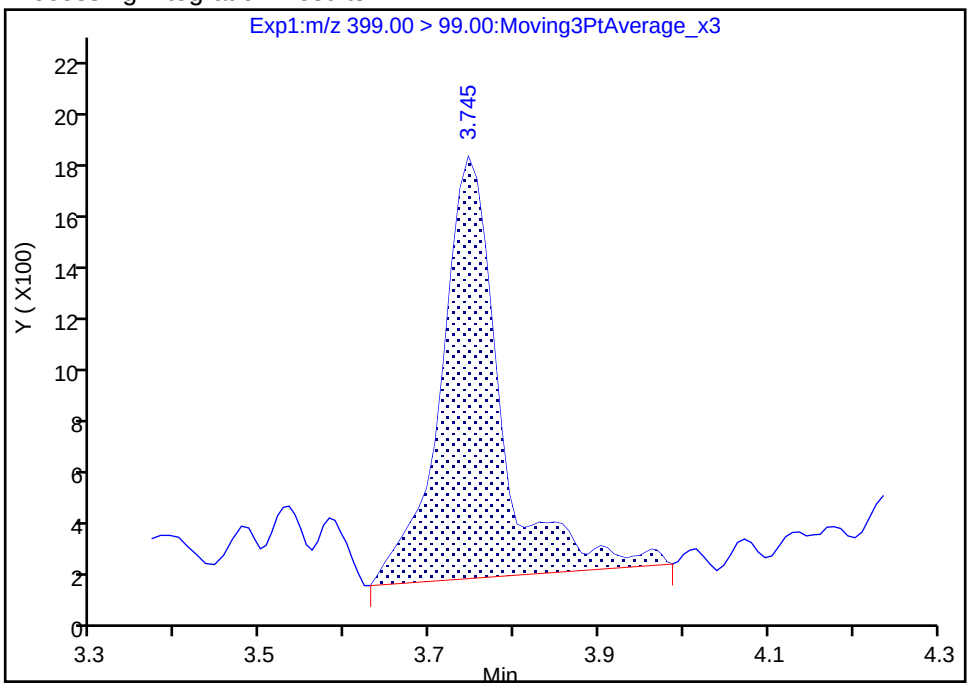
| | | | | | |
|---|---|---|---|---|---|
| Data File: | \\chromfs\Sacramento\ChromData\A18\20200825-102078.b\2020.08.25_A18_ICAL_A_018.d | | | | |
| Injection Date: | 25-Aug-2020 17:47:07 | Instrument ID: | A18 | | |
| Lims ID: | ICB | | | | |
| Client ID: | | | | | |
| Operator ID: | TAISACA18-PC\A-18 | ALS Bottle#: | 13 | Worklist Smp#: | 9 |
| Injection Vol: | 20.0 ul | Dil. Factor: | 1.0000 | | |
| Method: | PFAS_A18V2 | Limit Group: | LC PFC ICAL | | |
| Column: | Gemini C18 3um 3mm x 50 mm ( 3.00mm) | Detector | EXP1 | | |

## 15 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 2

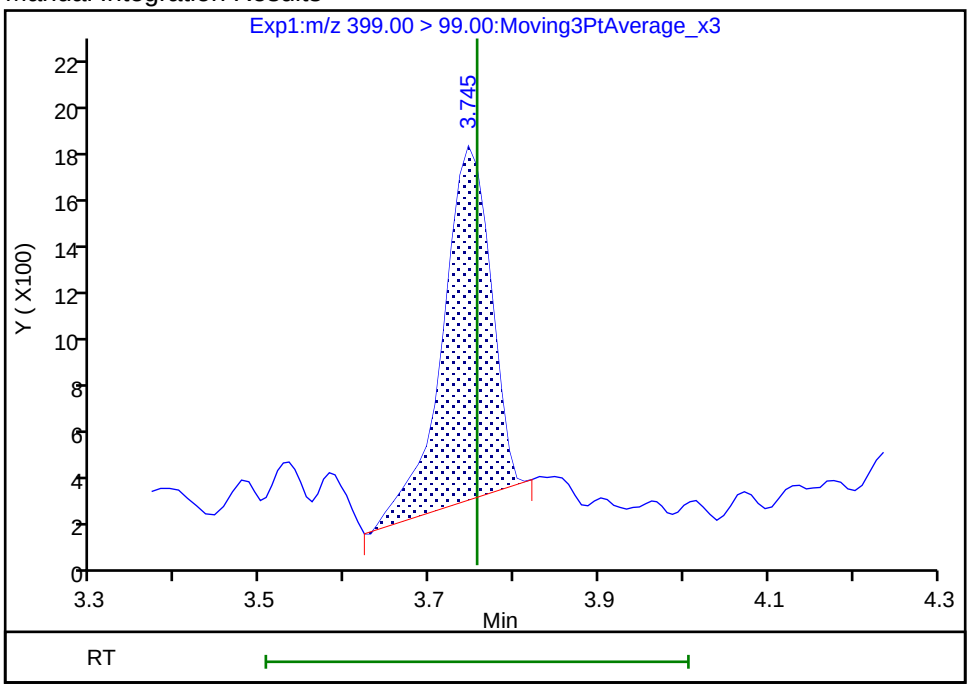
Processing Integration Results

RT: 3.75
Area: 7919
Amount: 0.010229
Amount Units: ng/ml




Manual Integration Results

RT: 3.75
Area: 5895
Amount: 0.008080
Amount Units: ng/ml




Reviewer: fariasa, 26-Aug-2020 06:06:44
Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

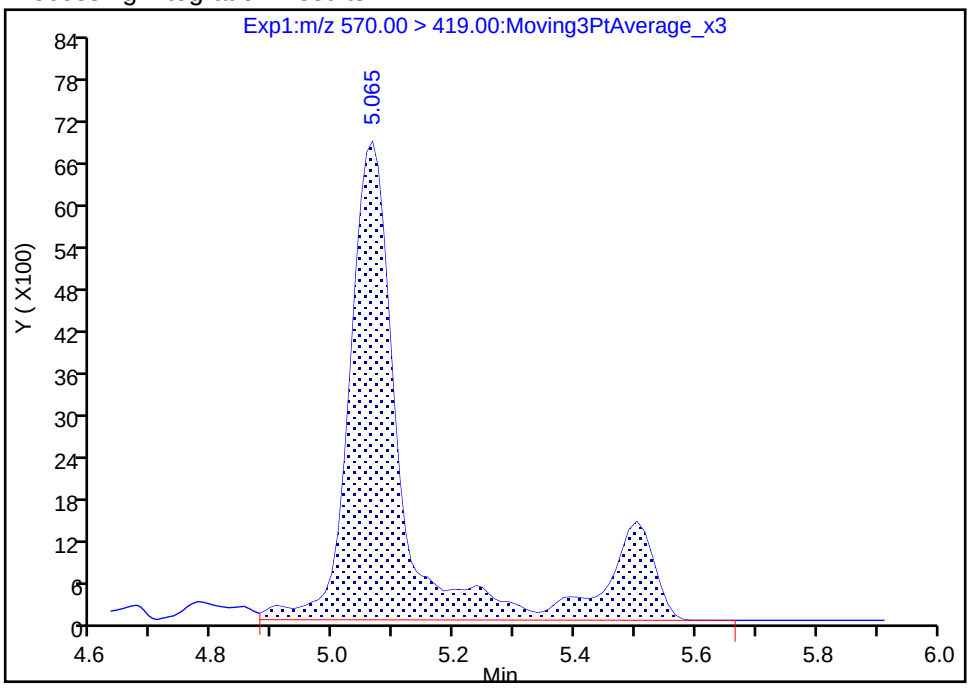
Data File: \\chromfs\Sacramento\ChromData\A18\20200825-102078.b\2020.08.25_A18_ICAL_A_018.d
Injection Date: 25-Aug-2020 17:47:07 Instrument ID: A18
Lims ID: ICB
Client ID:
Operator ID: TAISACA18-PC\A-18 ALS Bottle#: 13 Worklist Smp#: 9
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFAS_A18V2 Limit Group: LC PFC ICAL
Column: Gemini C18 3um 3mm x 50 mm ( 3.00mm) Detector EXP1

## 41 NMeFOSAA, CAS: 2355-31-9

Signal: 1

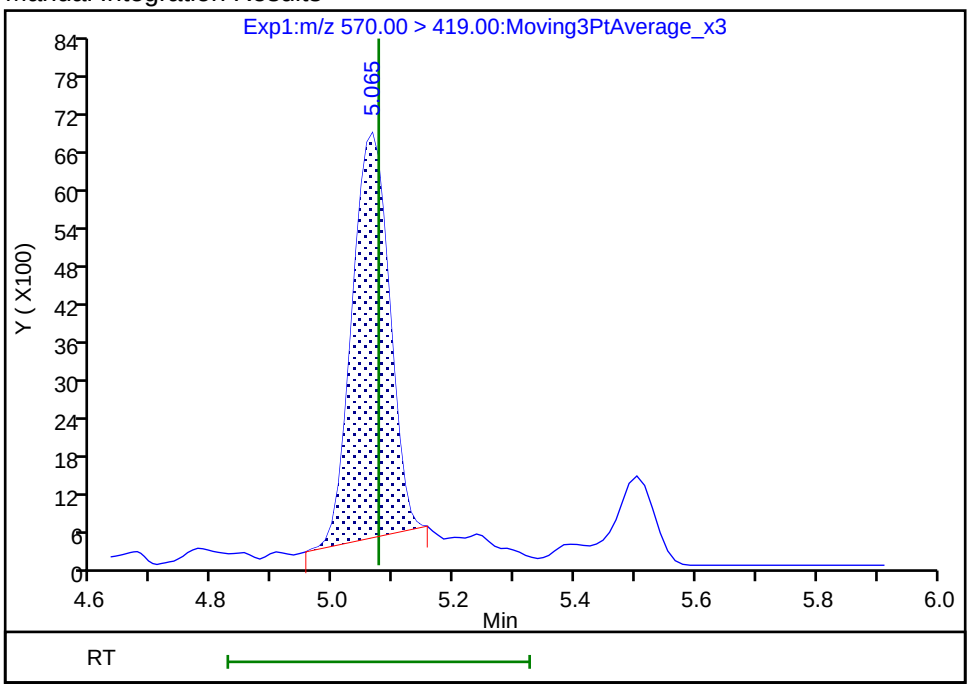
Processing Integration Results

RT: 5.06
Area: 44539
Amount: 0.025457
Amount Units: ng/ml




Manual Integration Results

RT: 5.06
Area: 27396
Amount: 0.015658
Amount Units: ng/ml




Reviewer: fariasa, 26-Aug-2020 06:07:29
Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

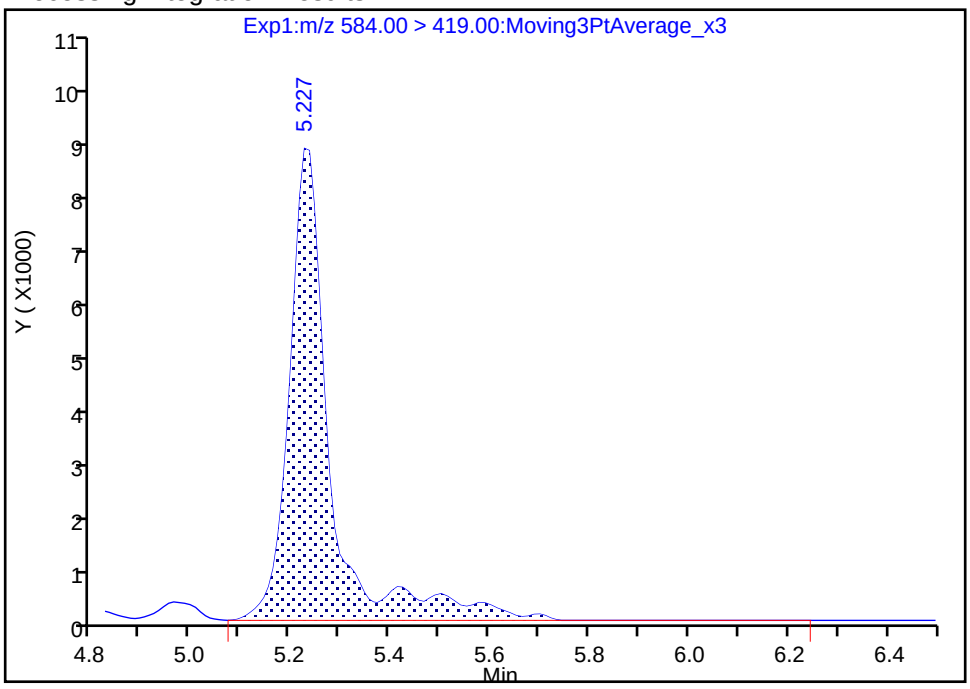
Data File: \\chromfs\Sacramento\ChromData\A18\20200825-102078.b\2020.08.25_A18_ICAL_A_018.d
Injection Date: 25-Aug-2020 17:47:07 Instrument ID: A18
Lims ID: ICB
Client ID:
Operator ID: TAISACA18-PC\A-18 ALS Bottle#: 13 Worklist Smp#: 9
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFAS_A18V2 Limit Group: LC PFC ICAL
Column: Gemini C18 3um 3mm x 50 mm ( 3.00 mm) Detector EXP1

## 46 NEtFOSA, CAS: 2991-50-6

Signal: 1

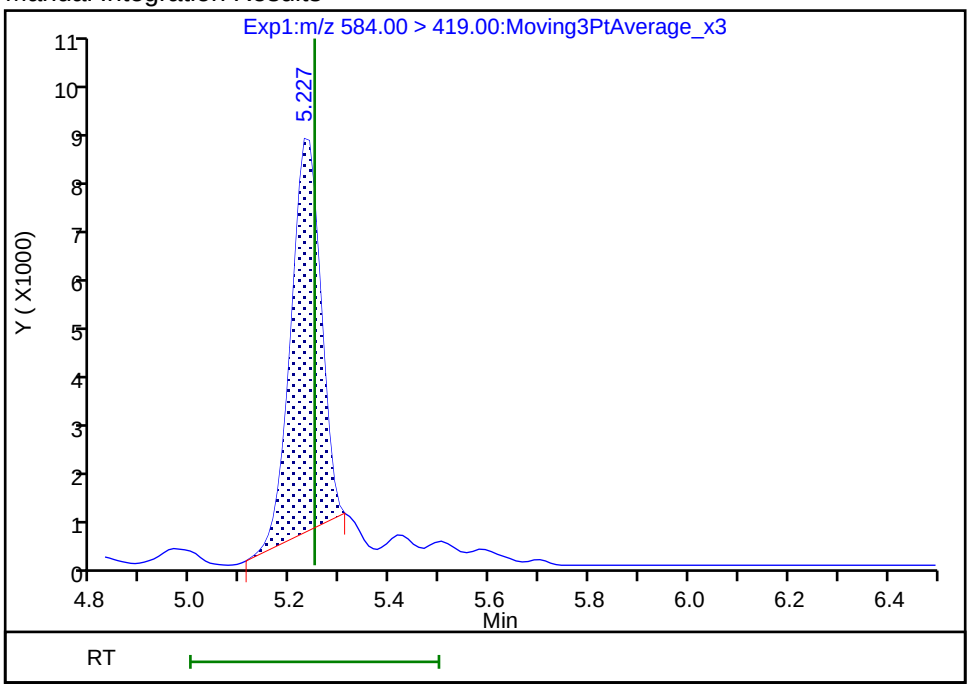
Processing Integration Results

RT: 5.23
Area: 48197
Amount: 0.027466
Amount Units: ng/ml




Manual Integration Results

RT: 5.23
Area: 32585
Amount: 0.018569
Amount Units: ng/ml




Reviewer: fariasa, 26-Aug-2020 06:07:36
Audit Action: Manually Integrated Audit Reason: Baseline

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento  Job No.: 460-217547-1

SDG No.:

Client Sample ID:  Lab Sample ID: ICB 320-410935/14

Matrix: Water  Lab File ID: 2020.09.10_A9 _PFC_ICAL_AA_023

Analysis Method: 537 (modified)  Date Collected:

Extraction Method:  Date Extracted:

Sample wt/vol: 1(mL)  Date Analyzed: 09/10/2020 12:38

Con. Extract Vol.:  Dilution Factor: 1

Injection Volume: 20(uL)  GC Column: Acquity  ID: 2.1(mm)

% Moisture:  GPC Cleanup:(Y/N) N

Analysis Batch No.: 410935  Units: ng/mL

| CAS NO. | COMPOUND NAME | RESULT | Q | RL | MDL |
|---|---|---|---|---|---|
| 375-22-4 | Perfluorobutanoic acid (PFBA) | 0.0088 | U | 0.050 | 0.0088 |
| 2706-90-3 | Perfluoropentanoic acid (PFPeA) | 0.012 | U | 0.050 | 0.012 |
| 307-24-4 | Perfluorohexanoic acid (PFHxA) | 0.015 | U | 0.050 | 0.015 |
| 375-85-9 | Perfluoroheptanoic acid (PFHpA) | 0.0063 | U | 0.050 | 0.0063 |
| 335-67-1 | Perfluorooctanoic acid (PFOA) | 0.021 | U | 0.050 | 0.021 |
| 375-95-1 | Perfluorononanoic acid (PFNA) | 0.0068 | U | 0.050 | 0.0068 |
| 335-76-2 | Perfluorodecanoic acid (PFDA) | 0.0078 | U | 0.050 | 0.0078 |
| 2058-94-8 | Perfluoroundecanoic acid (PFUnA) | 0.028 | U | 0.050 | 0.028 |
| 307-55-1 | Perfluorododecanoic acid (PFDoA) | 0.014 | U | 0.050 | 0.014 |
| 72629-94-8 | Perfluorotridecanoic acid (PFTriA) | 0.033 | U | 0.050 | 0.033 |
| 376-06-7 | Perfluorotetradecanoic acid (PFTeA) | 0.0073 | U | 0.050 | 0.0073 |
| 375-73-5 | Perfluorobutanesulfonic acid (PFBS) | 0.0050 | U | 0.050 | 0.0050 |
| 355-46-4 | Perfluorohexanesulfonic acid (PFHxS) | 0.00777 | J | 0.050 | 0.0043 |
| 375-92-8 | Perfluoroheptanesulfonic Acid (PFHpS) | 0.0048 | U | 0.050 | 0.0048 |
| 1763-23-1 | Perfluorooctanesulfonic acid (PFOS) | 0.014 | U | 0.050 | 0.014 |
| 335-77-3 | Perfluorodecanesulfonic acid (PFDS) | 0.0080 | U | 0.050 | 0.0080 |
| 754-91-6 | Perfluorooctanesulfonamide (FOSA) | 0.0088 | U | 0.050 | 0.0088 |
| 2355-31-9 | N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA) | 0.078 | U | 0.50 | 0.078 |
| 2991-50-6 | N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA) | 0.048 | U | 0.50 | 0.048 |
| 27619-97-2 | 6:2 FTS | 0.050 | U | 0.50 | 0.050 |
| 39108-34-4 | 8:2 FTS | 0.050 | U | 0.50 | 0.050 |

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento  Job No.: 460-217547-1

SDG No.:

Client Sample ID:  Lab Sample ID: ICB 320-410935/14

Matrix: Water  Lab File ID: 2020.09.10_A9 _PFC_ICAL_AA_023

Analysis Method: 537 (modified)  Date Collected:

Extraction Method:  Date Extracted:

Sample wt/vol: 1(mL)  Date Analyzed: 09/10/2020 12:38

Con. Extract Vol.:  Dilution Factor: 1

Injection Volume: 20(uL)  GC Column: Acquity  ID: 2.1(mm)

% Moisture:  GPC Cleanup:(Y/N) N

Analysis Batch No.: 410935  Units: ng/mL

| CAS NO. | ISOTOPE DILUTION | %REC | Q | LIMITS |
|---|---|---|---|---|
| STL00992 | 13C4 PFBA | 101 | | 25-150 |
| STL01893 | 13C5 PFPeA | 97 | | 25-150 |
| STL00993 | 13C2 PFHxA | 100 | | 25-150 |
| STL01892 | 13C4 PFHpA | 103 | | 25-150 |
| STL00990 | 13C4 PFOA | 101 | | 25-150 |
| STL00995 | 13C5 PFNA | 105 | | 25-150 |
| STL00996 | 13C2 PFDA | 101 | | 25-150 |
| STL00997 | 13C2 PFUnA | 102 | | 25-150 |
| STL00998 | 13C2 PFDoA | 98 | | 25-150 |
| STL02116 | 13C2 PFTeDA | 101 | | 25-150 |
| STL02337 | 13C3 PFBS | 104 | | 25-150 |
| STL00994 | 18O2 PFHxS | 106 | | 25-150 |
| STL00991 | 13C4 PFOS | 106 | | 25-150 |
| STL01056 | 13C8 FOSA | 101 | | 25-150 |
| STL02118 | d3-NMeFOSAA | 101 | | 25-150 |
| STL02117 | d5-NEtFOSAA | 108 | | 25-150 |
| STL02279 | M2-6:2 FTS | 104 | | 25-150 |
| STL02280 | M2-8:2 FTS | 108 | | 25-150 |

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\A9\20200910-102999.b\2020.09.10_A9 _PFC_ICAL_AA_023.d
Lims ID: ICB
Client ID:
Sample Type: ICB
Inject. Date: 10-Sep-2020 12:38:41 ALS Bottle#: 17 Worklist Smp#: 14
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Sample Info: ICB_53
Misc. Info.: Plate: 1 Rack: 1
Operator ID: SACINSTRLCMS02 Instrument ID: A9

Method: \\chromfs\Sacramento\ChromData\A9\20200910-102999.b\PFAS_A9.m
Limit Group: LC PFC ICAL
Last Update: 10-Sep-2020 16:31:40 Calib Date: 10-Sep-2020 12:29:20
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\A9\20200910-102999.b\2020.09.10_A9 _PFC_ICAL_AA_022.d

Column 1 : Det: EXP1
Process Host: CTX1016

First Level Reviewer: zibaa Date: 10-Sep-2020 13:24:49
Ratio Calibration: Average of Initial Calibration

| Signal | RT | EXP RT | DLT RT | REL RT | Response | Amount ng/ml | Ratio(Limits) | %Rec | S/N | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| D 1 13C4 PFBA | | | | | | | | | | |
| 217.00 > 172.00 | 1.900 | 1.893 | 0.007 | 0.565 | 8529232 | 2.52 | | 101 | 3065 | |
| 2 Perfluorobutanoic acid | | | | | | | | | | |
| 212.90 > 169.00 | 1.922 | 1.893 | 0.029 | 1.012 | 3143 | 0.001055 | | | 0.2 | |
| D 4 13C5 PFPeA | | | | | | | | | | |
| 267.90 > 223.00 | 2.206 | 2.198 | 0.008 | 0.656 | 6907542 | 2.42 | | 96.7 | 3300 | |
| 3 Perfluoropentanoic acid | | | | | | | | | | |
| 262.90 > 219.00 | 2.206 | 2.198 | 0.008 | 1.000 | 9258 | 0.003293 | | | 0.8 | |
| D 6 13C3 PFBS | | | | | | | | | | |
| 301.90 > 80.00 | 2.232 | 2.233 | -0.001 | 0.664 | 13600384 | 2.41 | | 104 | 3217 | |
| D 8 M2-4:2 FTS | | | | | | | | | | |
| 329.00 > 81.00 | 2.525 | 2.515 | 0.010 | 0.751 | 1281969 | 2.29 | | 98.0 | 702 | |
| D 10 13C2 PFHxA | | | | | | | | | | |
| 315.00 > 270.00 | 2.557 | 2.558 | -0.001 | 0.760 | 6617197 | 2.49 | | 99.6 | 3265 | |
| 11 Perfluorohexanoic acid | | | | | | | | | | R |
| 313.00 > 269.00 | 2.557 | 2.558 | -0.001 | 1.000 | 15018 | 0.006801 | Target=9.68 | | 1.4 | R |
| 313.00 > 119.00 | 2.535 | 2.558 | -0.023 | 0.992 | 621 | | 24.18(4.84-14.52) | | 0.8 | |
| D 13 13C3 HFPO-DA | | | | | | | | | | |
| 287.00 > 169.00 | 2.686 | 2.674 | 0.012 | 0.799 | 4649771 | 2.55 | | 102 | 4494 | |
| D 15 13C4 PFHpA | | | | | | | | | | |
| 367.00 > 322.00 | 2.953 | 2.952 | 0.001 | 0.878 | 6679040 | 2.58 | | 103 | 3599 | |
| 18 Perfluoroheptanoic acid | | | | | | | | | | |
| 363.00 > 319.00 | 2.959 | 2.952 | 0.007 | 1.002 | 12586 | 0.004248 | Target=3.74 | | 2.0 | |
| 363.00 > 169.00 | 2.953 | 2.952 | 0.001 | 1.000 | 2963 | | 4.25(1.87-5.61) | | 3.9 | |
| D 17 18O2 PFHxS | | | | | | | | | | |
| 403.00 > 84.00 | 2.959 | 2.957 | 0.002 | 0.880 | 6775652 | 2.51 | | 106 | 2630 | |

| Signal | RT | EXP RT | DLT RT | REL RT | Response | Amount ng/ml | Ratio(Limits) | %Rec | S/N | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| 16 Perfluorohexanesulfonic acid | | | | | | | | | | M |
| 399.00 > 80.00 | 2.959 | 2.957 | 0.002 | 1.000 | 26241 | 0.007765 | Target=3.29 | | 8.2 | M |
| 399.00 > 99.00 | 2.953 | 2.957 | -0.004 | 0.998 | 7053 | | 3.72(1.65-4.94) | | 8.3 | M |
| 19 DONA | | | | | | | | | | R |
| 377.00 > 251.00 | 3.011 | 3.002 | 0.009 | 0.805 | 6124 | 0.001133 | Target=1.80 | | 5.3 | R |
| 377.00 > 85.00 | 2.995 | 3.002 | -0.007 | 0.801 | 571 | | 10.73(0.90-2.70) | | 1.2 | |
| D 20 M2-6:2 FTS | | | | | | | | | | |
| 429.00 > 81.00 | 3.340 | 3.331 | 0.009 | 0.993 | 1196399 | 2.48 | | 104 | 1462 | |
| 22 1H,1H,2H,2H-perfluorooctanesulfo | | | | | | | | | | |
| 427.00 > 407.00 | 3.333 | 3.331 | 0.002 | 0.998 | 5379 | 0.006926 | | | 8.3 | |
| $ 21 13C8 PFOA | | | | | | | | | | |
| 421.00 > 376.00 | 3.347 | 3.346 | 0.001 | 0.995 | 5347708 | 2.63 | | 108 | 8757 | |
| 23 Perfluoroheptanesulfonic acid | | | | | | | | | | |
| 449.00 > 80.00 | 3.347 | 3.353 | -0.006 | 0.895 | 3175 | 0.001152 | Target=3.65 | | 1.6 | |
| 449.00 > 99.00 | 3.381 | 3.353 | 0.028 | 0.904 | 674 | | 4.71(1.83-5.48) | | 2.7 | |
| 24 Perfluorooctanoic acid | | | | | | | | | | |
| 413.00 > 369.00 | 3.371 | 3.353 | 0.018 | 1.003 | 24699 | 0.009365 | Target=2.37 | | 5.2 | |
| 413.00 > 169.00 | 3.362 | 3.353 | 0.009 | 1.000 | 14065 | | 1.76(1.19-3.56) | | 22.2 | |
| * 25 13C2 PFOA | | | | | | | | | | |
| 415.00 > 370.00 | 3.362 | 3.353 | 0.009 | | 6274513 | 2.50 | | | 3780 | |
| D 26 13C4 PFOA | | | | | | | | | | |
| 417.00 > 372.00 | 3.362 | 3.353 | 0.009 | 1.000 | 6113363 | 2.52 | | 101 | 5195 | |
| $ 27 13C8 PFOS | | | | | | | | | | |
| 507.00 > 99.00 | 3.731 | 3.729 | 0.002 | 1.110 | 1527471 | 2.39 | | 100 | 2169 | |
| 28 Perfluorooctanesulfonic acid | | | | | | | | | | M |
| 499.00 > 80.00 | 3.740 | 3.737 | 0.003 | 1.000 | 17385 | 0.005610 | Target=4.12 | | 2.3 | M |
| 499.00 > 99.00 | 3.740 | 3.737 | 0.003 | 1.000 | 5768 | | 3.01(2.06-6.17) | | 10.5 | |
| D 31 13C4 PFOS | | | | | | | | | | |
| 503.00 > 80.00 | 3.740 | 3.737 | 0.003 | 1.112 | 7123929 | 2.53 | | 106 | 1597 | |
| D 29 13C5 PFNA | | | | | | | | | | |
| 468.00 > 423.00 | 3.749 | 3.746 | 0.003 | 1.115 | 5526928 | 2.63 | | 105 | 3377 | |
| 30 Perfluorononanoic acid | | | | | | | | | | R |
| 463.00 > 419.00 | 3.767 | 3.746 | 0.021 | 1.005 | 6324 | 0.002873 | Target=4.21 | | 4.0 | R |
| 463.00 > 169.00 | 3.758 | 3.746 | 0.012 | 1.002 | 746 | | 8.48(2.11-6.32) | | 2.0 | |
| D 36 13C8 FOSA | | | | | | | | | | |
| 506.00 > 78.00 | 4.080 | 4.079 | 0.002 | 1.213 | 3347938 | 2.53 | | 101 | 2905 | |
| 34 Perfluorooctanesulfonamide | | | | | | | | | | |
| 498.00 > 78.00 | 4.080 | 4.079 | 0.002 | 1.000 | 15326 | 0.004114 | | | 14.3 | |
| D 33 13C2 PFDA | | | | | | | | | | |
| 515.00 > 470.00 | 4.116 | 4.114 | 0.002 | 1.224 | 6769452 | 2.54 | | 101 | 4009 | |
| D 37 M2-8:2 FTS | | | | | | | | | | |
| 529.00 > 81.00 | 4.116 | 4.114 | 0.002 | 1.224 | 1528000 | 2.58 | | 108 | 1787 | |
| 39 1H,1H,2H,2H-perfluorodecanesulfo | | | | | | | | | | |
| 527.00 > 507.00 | 4.116 | 4.114 | 0.002 | 1.000 | 2778 | 0.003379 | | | 21.2 | |
| D 41 d3-NMeFOSAA | | | | | | | | | | |
| 573.00 > 419.00 | 4.277 | 4.276 | 0.001 | 1.272 | 3342297 | 2.52 | | 101 | 2673 | |

| Signal | RT | EXP RT | DLT RT | REL RT | Response | Amount ng/ml | Ratio(Limits) | %Rec | S/N | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| 40 N-methylperfluorooctanesulfonami | | | | | | | | | | M |
| 570.00 > 419.00 | 4.286 | 4.276 | 0.010 | 1.002 | 35709 | 0.0352 | | | 8.2 | M |
| D 46 13C2 PFUnA | | | | | | | | | | |
| 565.00 > 520.00 | 4.432 | 4.431 | 0.001 | 1.318 | 5263490 | 2.56 | | 102 | 8018 | |
| 43 Perfluoroundecanoic acid | | | | | | | | | | |
| 563.00 > 519.00 | 4.432 | 4.431 | 0.001 | 1.000 | 3115 | 0.002125 | Target=6.74 | | 4.5 | |
| 563.00 > 169.00 | 4.407 | 4.431 | -0.024 | 0.994 | 360 | | 8.65(3.37-10.11) | | 2.4 | |
| D 45 d5-NEtFOSAA | | | | | | | | | | |
| 589.00 > 419.00 | 4.441 | 4.440 | 0.001 | 1.321 | 2394063 | 2.69 | | 108 | 1584 | |
| 44 N-ethylperfluorooctanesulfonamid | | | | | | | | | | M |
| 584.00 > 419.00 | 4.449 | 4.448 | 0.001 | 1.002 | 18629 | 0.0240 | | | 40.6 | M |
| D 47 d7-N-MeFOSE-M | | | | | | | | | | |
| 623.00 > 59.00 | 4.544 | 4.542 | 0.002 | 1.351 | 5597493 | 13.1 | | 105 | 5979 | |
| D 49 d-N-MeFOSA-M | | | | | | | | | | |
| 515.00 > 169.00 | 4.561 | 4.560 | 0.001 | 1.357 | 1557787 | 2.61 | | 104 | 233 | |
| D 53 d9-N-EtFOSE-M | | | | | | | | | | |
| 639.00 > 59.00 | 4.719 | 4.709 | 0.010 | 1.404 | 5930615 | 13.2 | | 106 | 6473 | |
| 52 Perfluorododecanoic acid | | | | | | | | | | |
| 613.00 > 569.00 | 4.746 | 4.728 | 0.018 | 1.004 | 7330 | 0.004024 | Target=6.67 | | 9.1 | |
| 613.00 > 169.00 | 4.728 | 4.728 | 0.0 | 1.000 | 2148 | | 3.41(3.34-10.01) | | 16.7 | |
| D 56 13C2 PFDoA | | | | | | | | | | |
| 615.00 > 570.00 | 4.728 | 4.728 | 0.0 | 1.406 | 4951198 | 2.45 | | 98.0 | 5517 | |
| D 58 d-N-EtFOSA-M | | | | | | | | | | |
| 531.00 > 169.00 | 4.737 | 4.737 | 0.0 | 1.409 | 1612474 | 2.60 | | 104 | 1019 | |
| D 62 13C2 PFTeDA | | | | | | | | | | |
| 715.00 > 670.00 | 5.233 | 5.232 | 0.001 | 1.556 | 3541046 | 2.51 | | 101 | 5232 | |
| D 63 13C2 PFHxDA | | | | | | | | | | |
| 815.00 > 770.00 | 5.678 | 5.668 | 0.010 | 1.689 | 2704231 | 2.59 | | 104 | 5111 | |
| 64 Perfluorohexadecanoic acid | | | | | | | | | | |
| 813.00 > 769.00 | 5.678 | 5.668 | 0.010 | 1.000 | 26179 | 0.004569 | Target=4.63 | | 66.3 | |
| 813.00 > 169.00 | 5.678 | 5.668 | 0.010 | 1.000 | 5270 | | 4.97(2.32-6.95) | | 46.2 | |

## QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Review Flags

M - Manually Integrated

## Reagents:

LCPFC_LL0_00053 Amount Added: 1.00 Units: mL

Report Date: 10-Sep-2020 16:31:43 Chrom Revision: 2.3 09-Sep-2020 15:12:58

Eurofins TestAmerica, Sacramento

Data File: \\chromfs\Sacramento\ChromData\A9\20200910-102999.b\2020.09.10_A9 _PFC_ICAL_AA_023.d

Injection Date: 10-Sep-2020 12:38:41 Instrument ID: A9

Lims ID: ICB

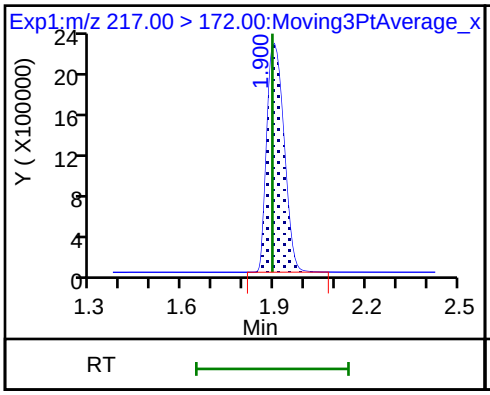
Client ID:

Operator ID: SACINSTRLCMS02 ALS Bottle#: 17 Worklist Smp#: 14

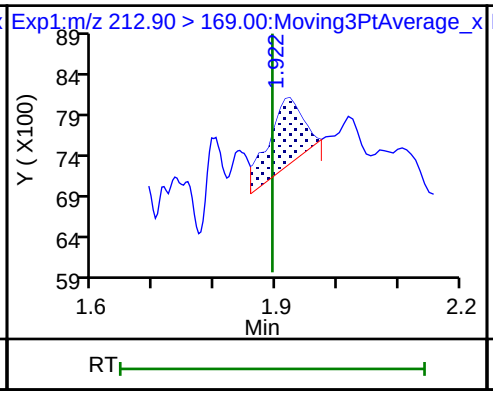
Injection Vol: 20.0 ul Dil. Factor: 1.0000

Method: PFAS_A9 Limit Group: LC PFC ICAL

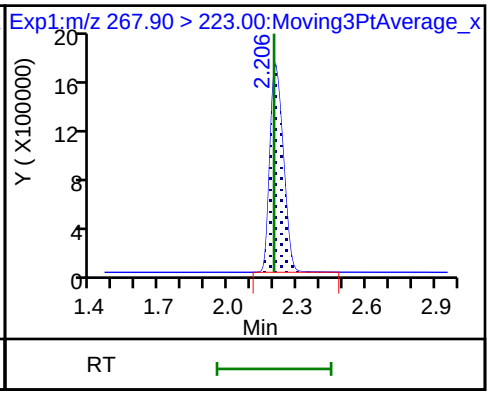
D 1 13C4 PFBA



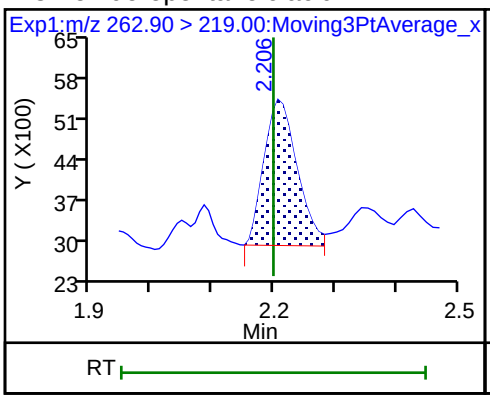

2 Perfluorobutanoic acid



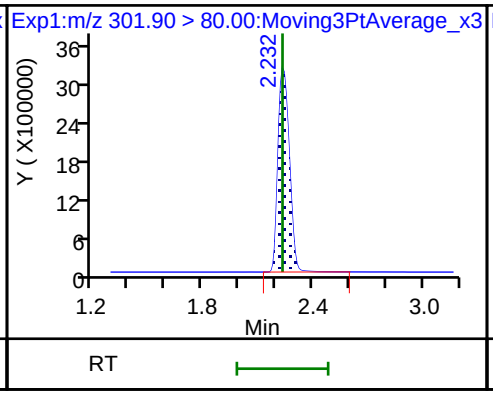

D 4 13C5 PFPeA



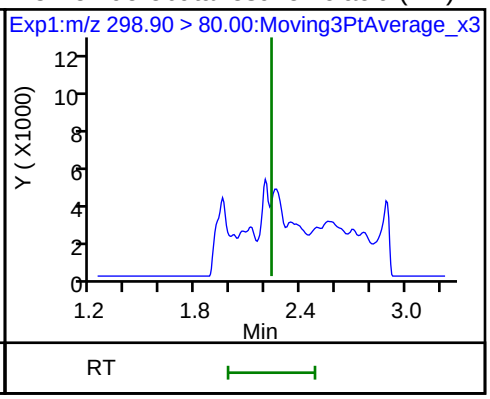

3 Perfluoropentanoic acid



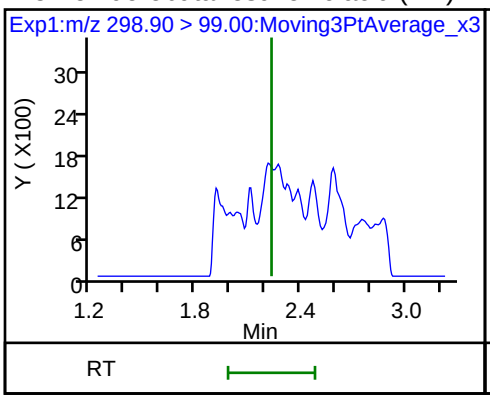

D 6 13C3 PFBS



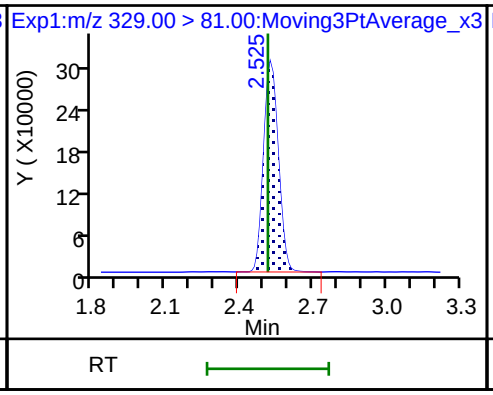

5 Perfluorobutanesulfonic acid (ND)



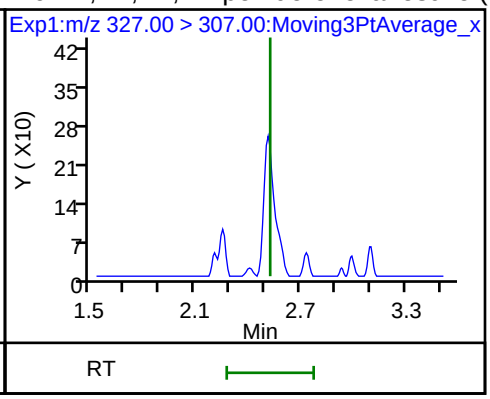

5 Perfluorobutanesulfonic acid (ND)



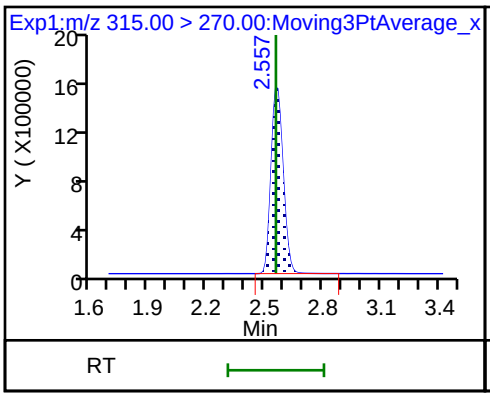

D 8 M2-4:2 FTS



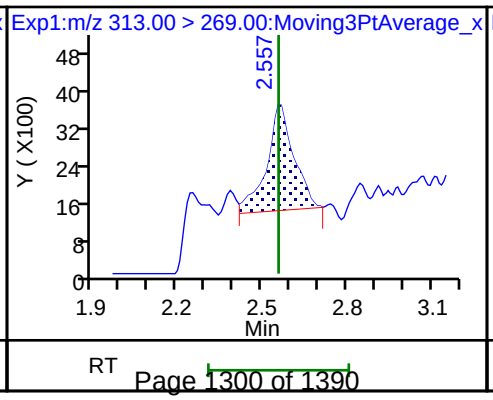

9 1H,1H,2H,2H-perfluorohexanesulfo (ND)



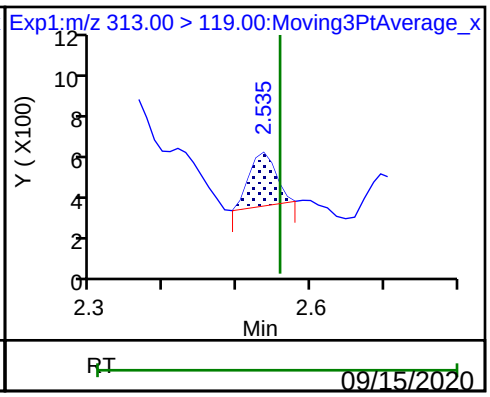

D 10 13C2 PFHxA



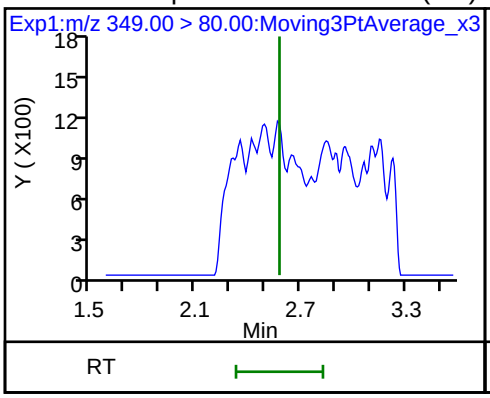

11 Perfluorohexanoic acid



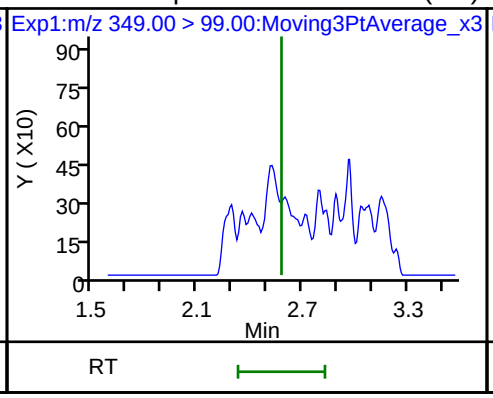

11 Perfluorohexanoic acid



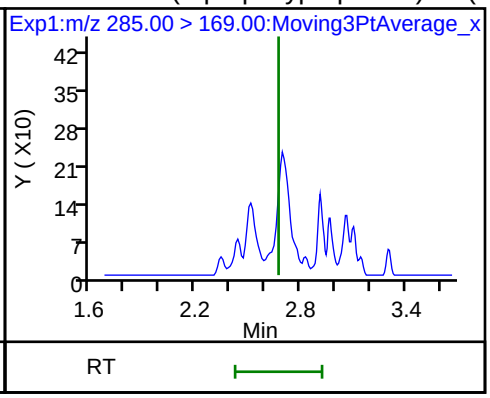
12 Perfluoropentanesulfonic acid (ND)



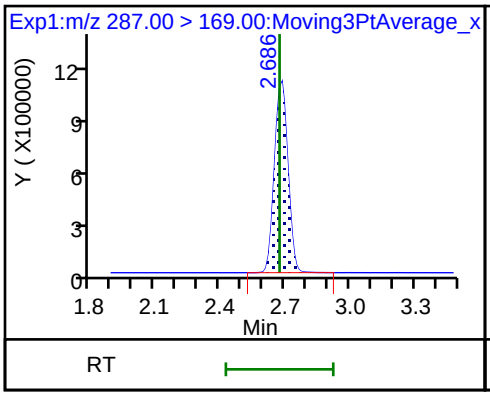

12 Perfluoropentanesulfonic acid (ND)



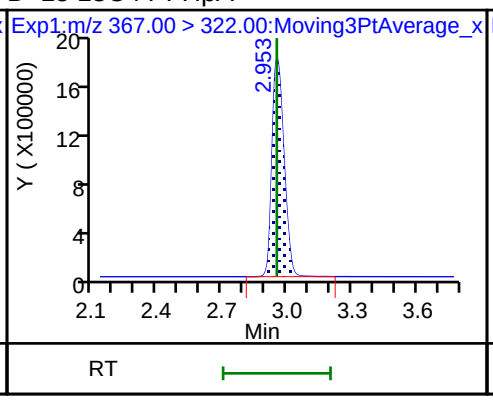

14 Perfluoro(2-propoxypropanoic) ac (ND)



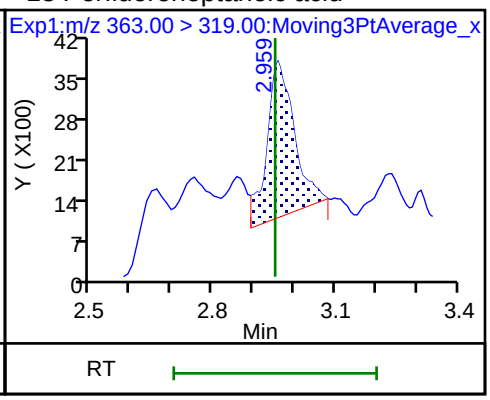

D 13 13C3 HFPO-DA



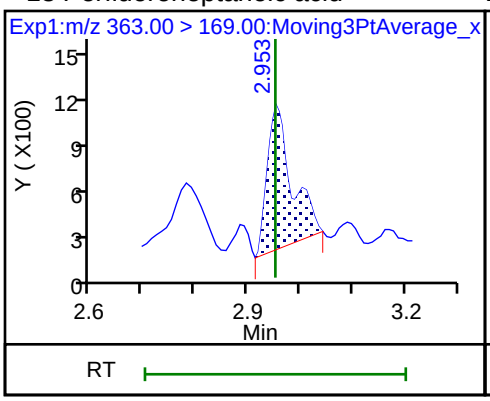

D 15 13C4 PFHpA



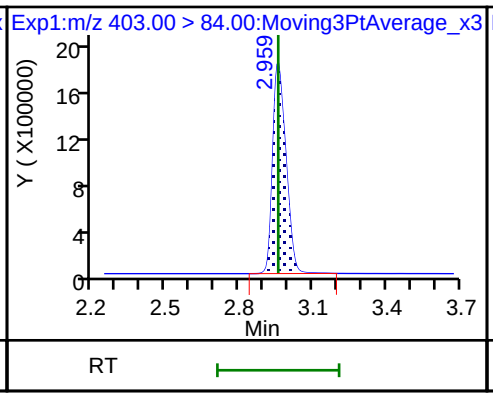

18 Perfluoroheptanoic acid



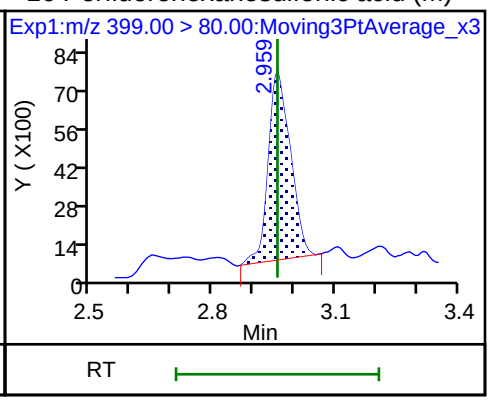

18 Perfluoroheptanoic acid



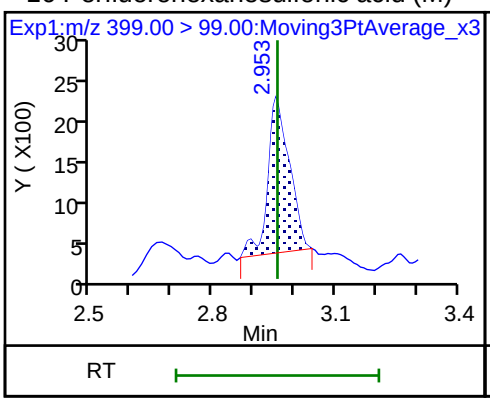

D 17 18O2 PFHxS



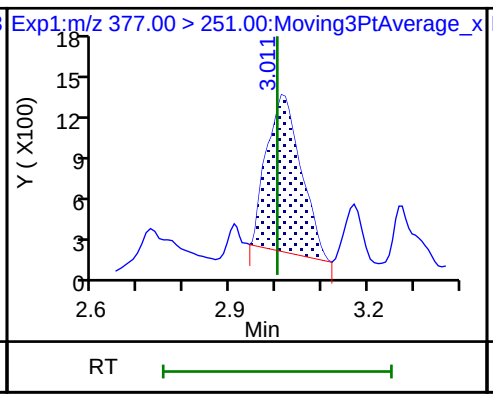

16 Perfluorohexanesulfonic acid (M)



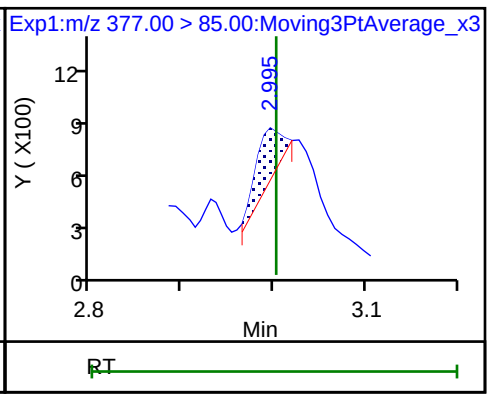

16 Perfluorohexanesulfonic acid (M)



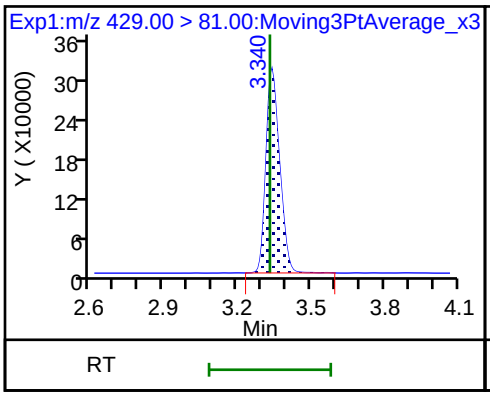

19 DONA



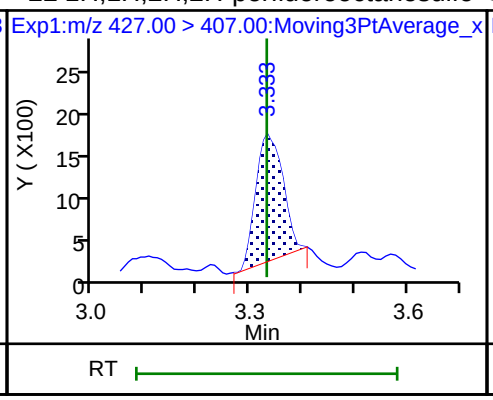

19 DONA



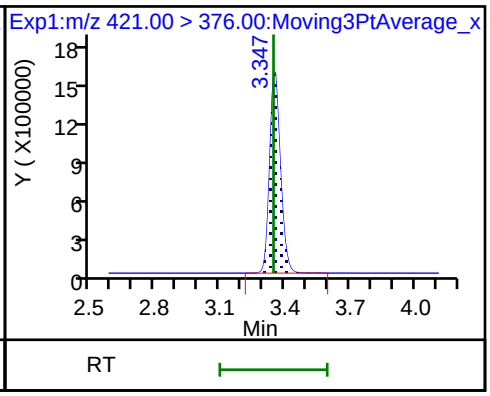
D 20 M2-6:2 FTS



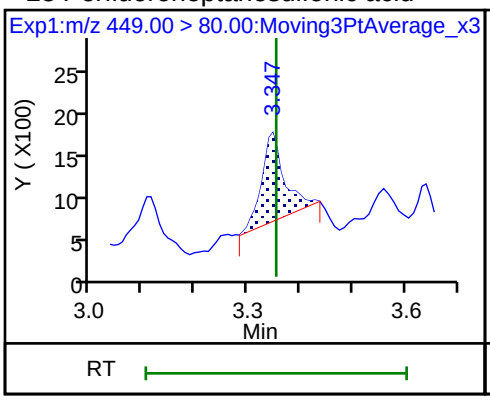

22 1H,1H,2H,2H-perfluorooctanesulfo



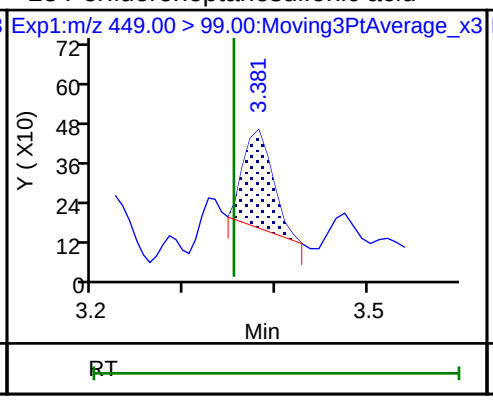

$ 21 13C8 PFOA



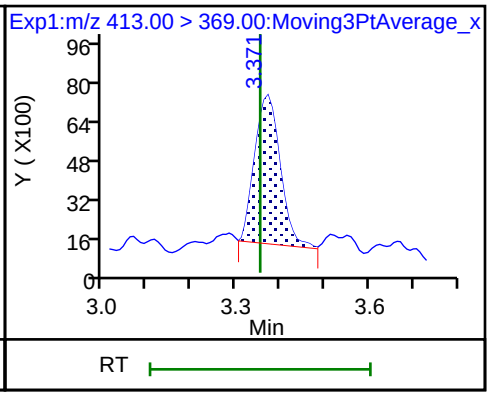

23 Perfluoroheptanesulfonic acid



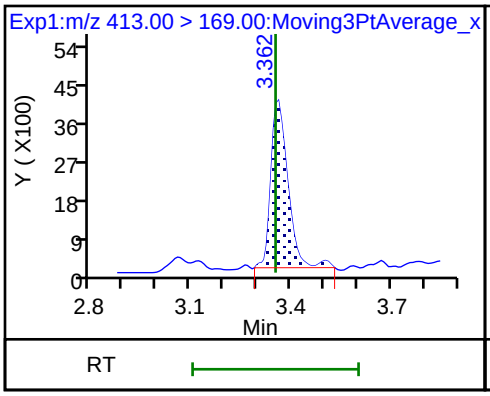

23 Perfluoroheptanesulfonic acid



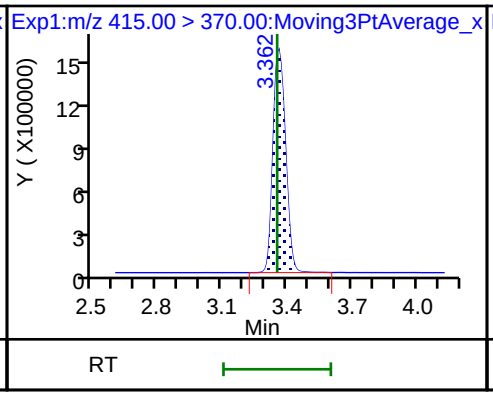

24 Perfluorooctanoic acid



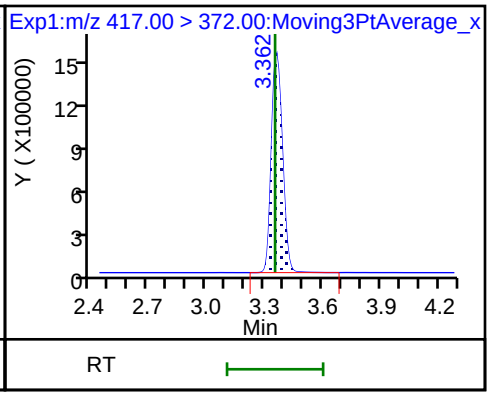

24 Perfluorooctanoic acid



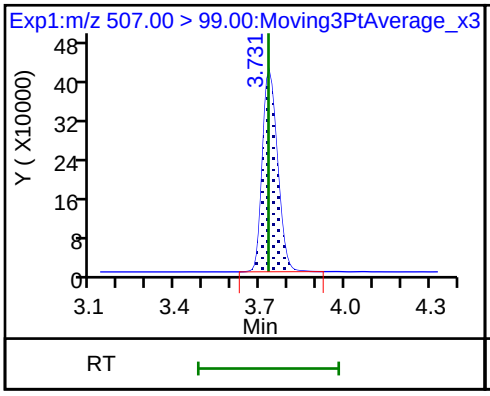

* 25 13C2 PFOA



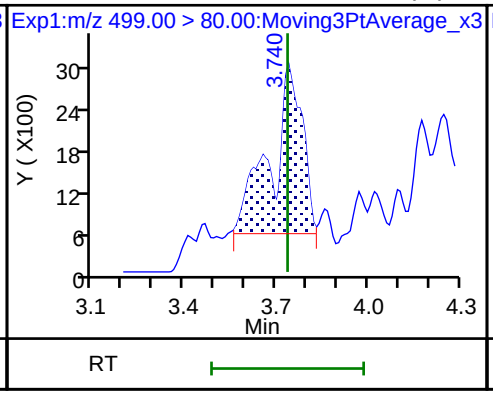

D 26 13C4 PFOA



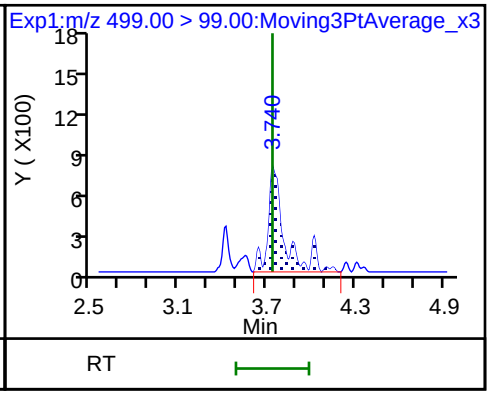

$ 27 13C8 PFOS



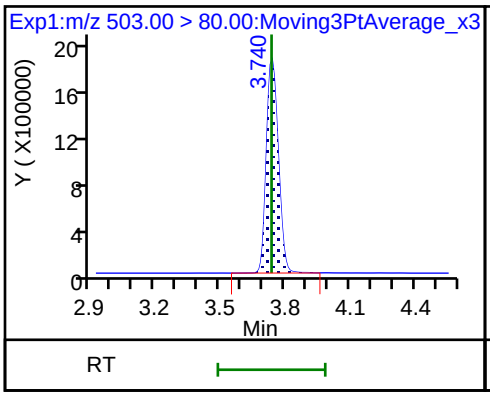

28 Perfluorooctanesulfonic acid (M)



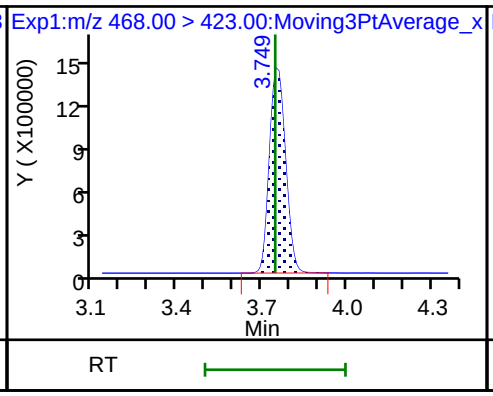

28 Perfluorooctanesulfonic acid



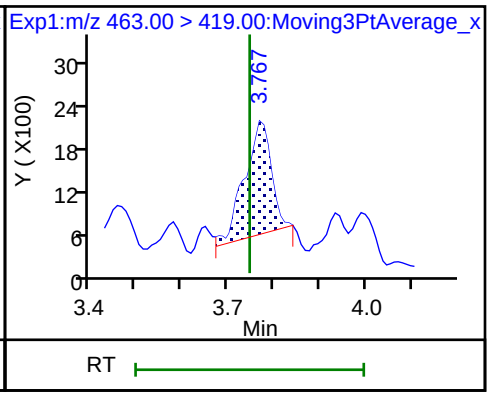
D 31 13C4 PFOS



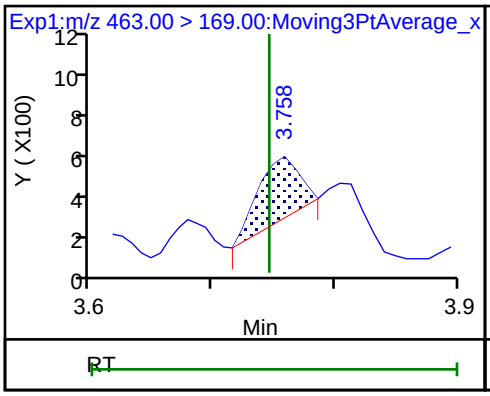

D 29 13C5 PFNA



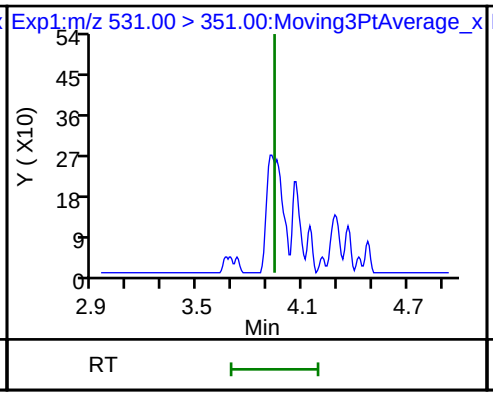

30 Perfluorononanoic acid



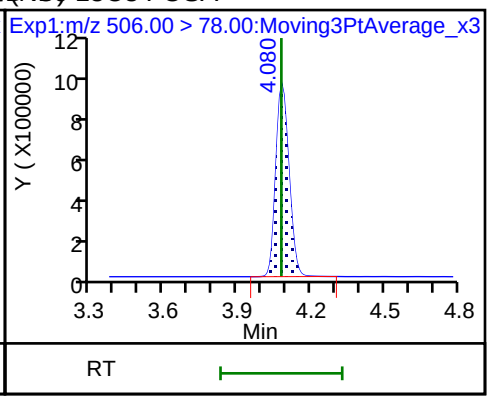

30 Perfluorononanoic acid



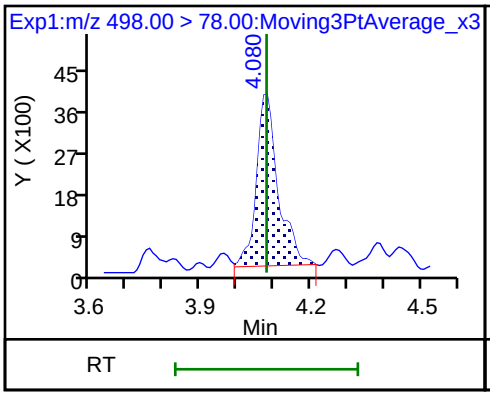

32 9-Chlorohexadecafluoro-3-oxanona(NB)



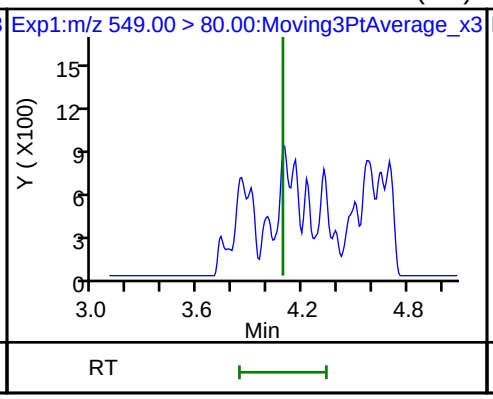

D 36 13C8 FOSA



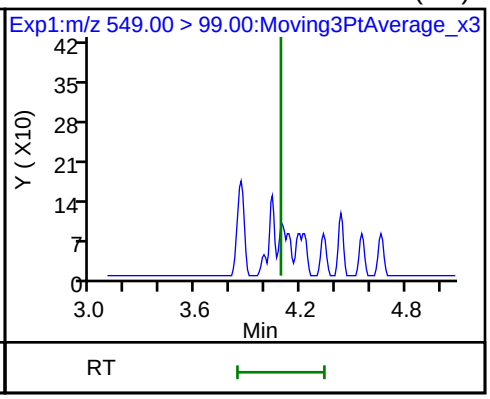

34 Perfluorooctanesulfonamide



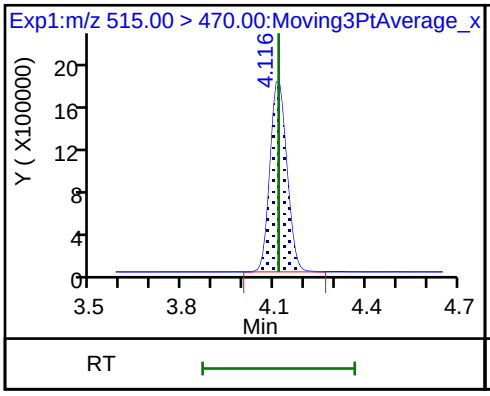

35 Perfluorononanesulfonic acid (ND)



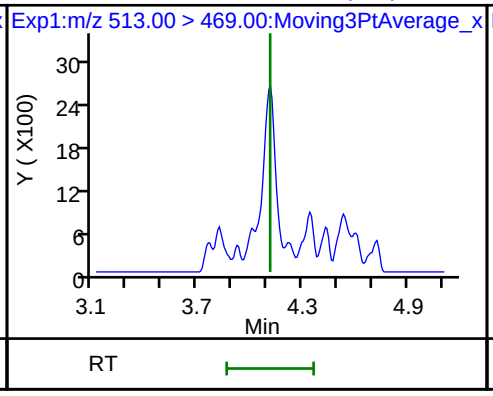

35 Perfluorononanesulfonic acid (ND)



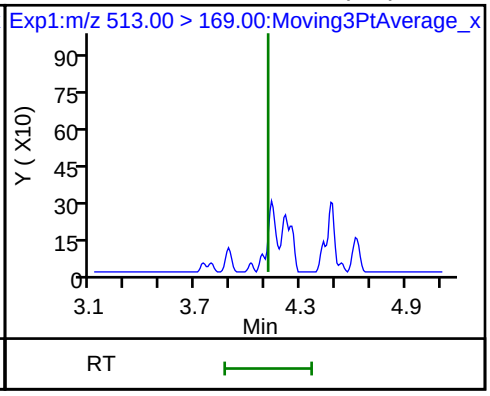

D 33 13C2 PFDA



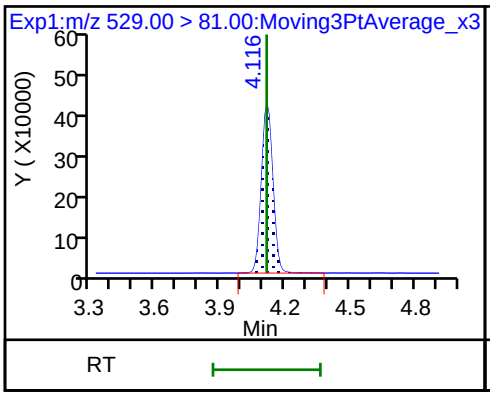

38 Perfluorodecanoic acid (ND)



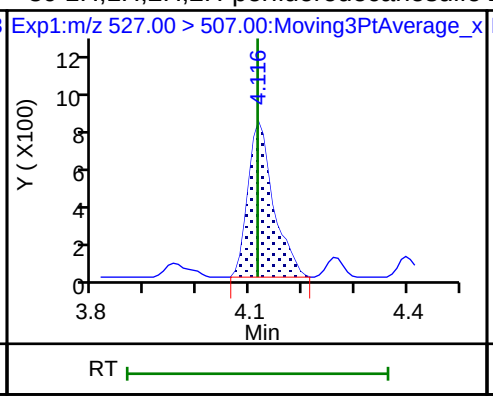

38 Perfluorodecanoic acid (ND)



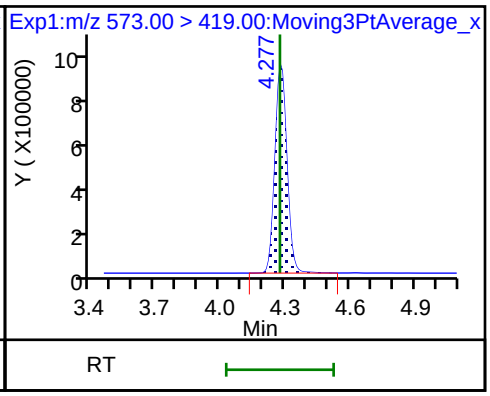
D 37 M2-8:2 FTS



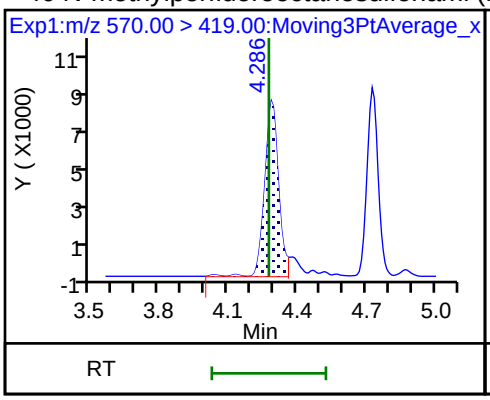

39 1H,1H,2H,2H-perfluorodecanesulfo



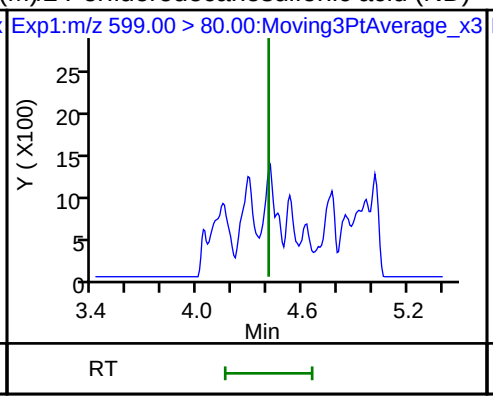

D 41 d3-NMeFOSAA



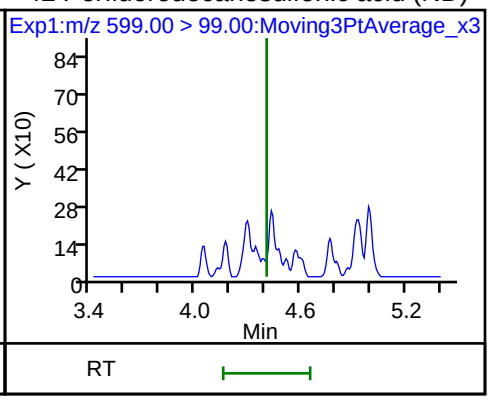

40 N-methylperfluorooctanesulfonami (M)



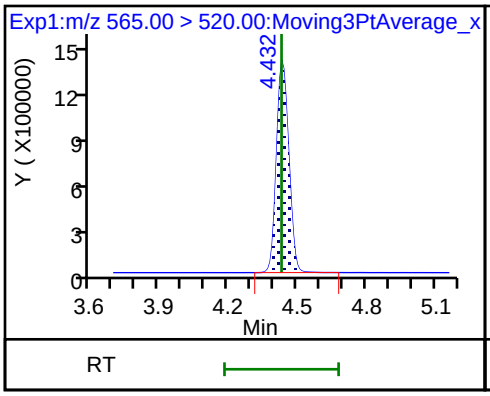

42 Perfluorodecanesulfonic acid (ND)



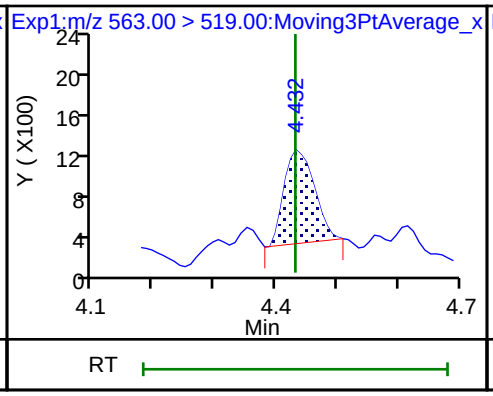

42 Perfluorodecanesulfonic acid (ND)



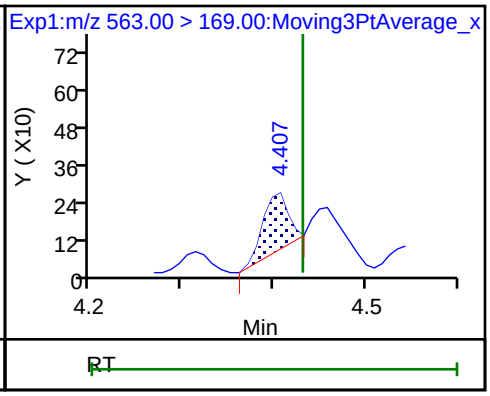

D 46 13C2 PFUnA



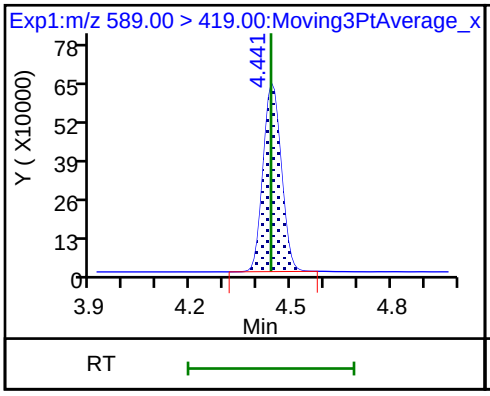

43 Perfluoroundecanoic acid



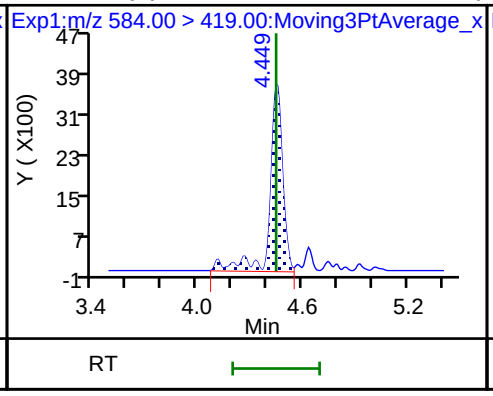

43 Perfluoroundecanoic acid



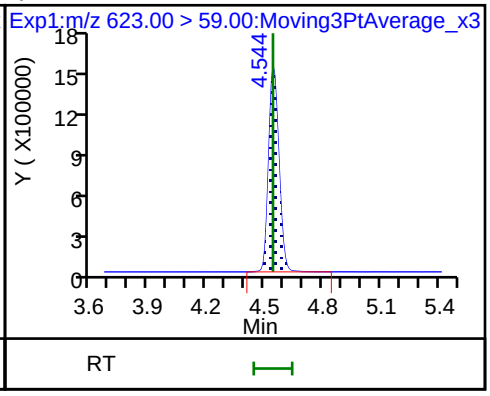

D 45 d5-NEtFOSAA



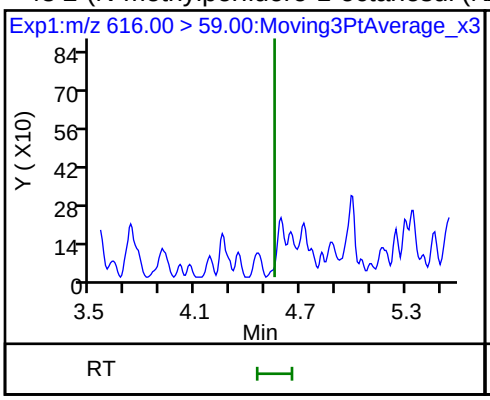

44 N-ethylperfluorooctanesulfonamid (M)



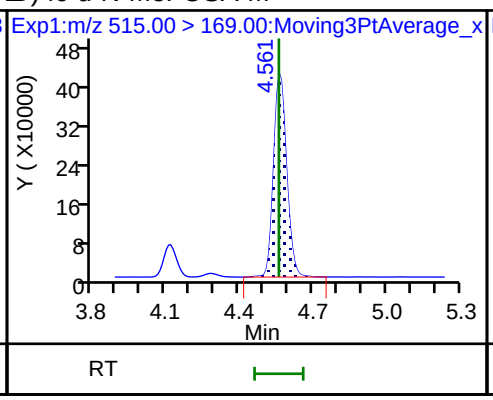

D 47 d7-N-MeFOSE-M



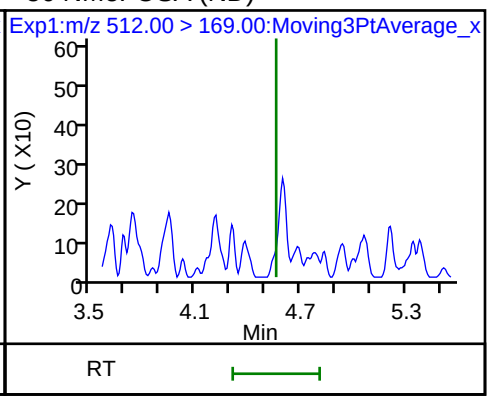
48 2-(N-methylperfluoro-1-octanesul (ND)



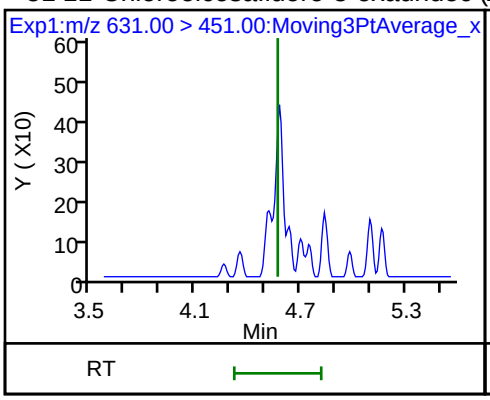

D 49 d-N-MeFOSA-M



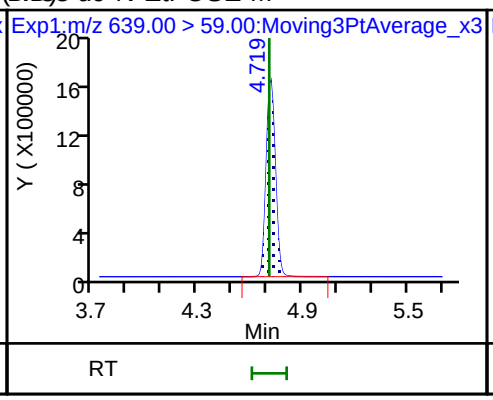

50 NMeFOSA (ND)



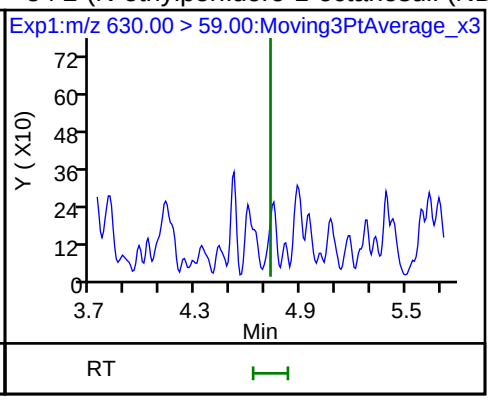

51 11-Chloroeicosafluoro-3-oxaundec (ND)



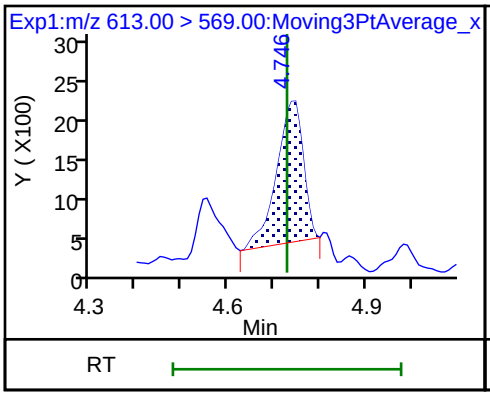

D 53 d9-N-EtFOSE-M



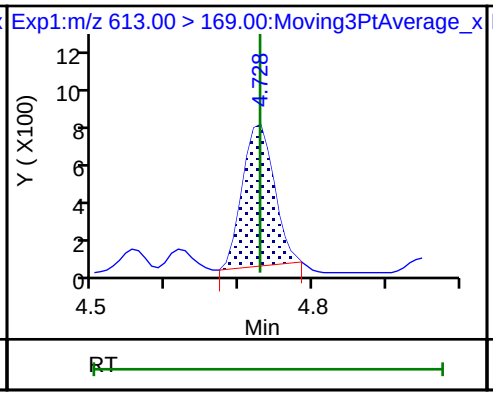

54 2-(N-ethylperfluoro-1-octanesulf (ND)



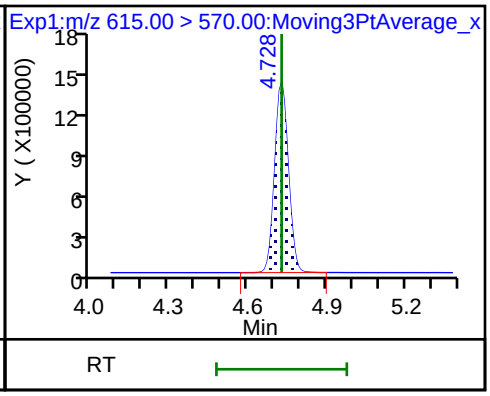

52 Perfluorododecanoic acid



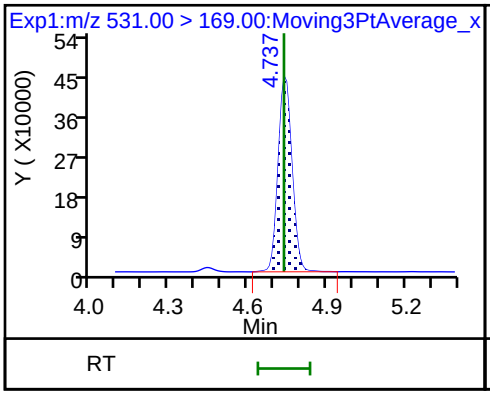

52 Perfluorododecanoic acid



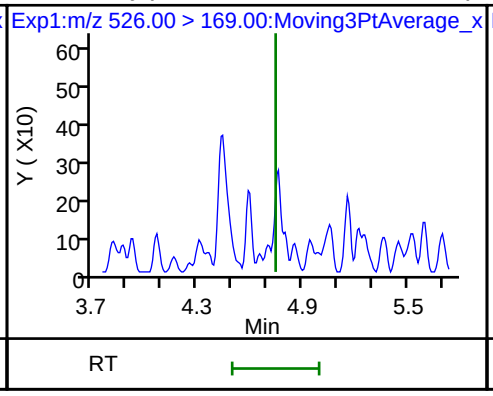

D 56 13C2 PFDoA



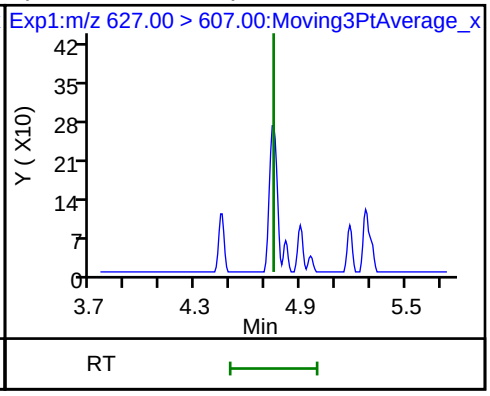

D 58 d-N-EtFOSA-M



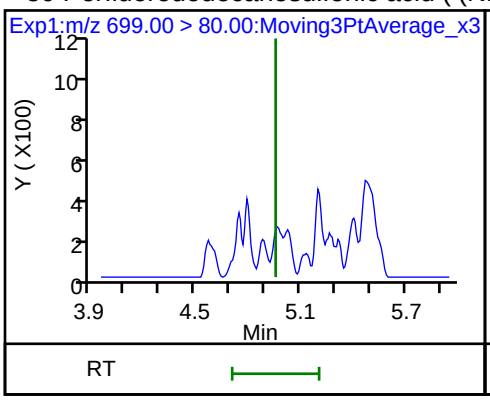

57 N-ethylperfluoro-1-octanesulfona (ND)



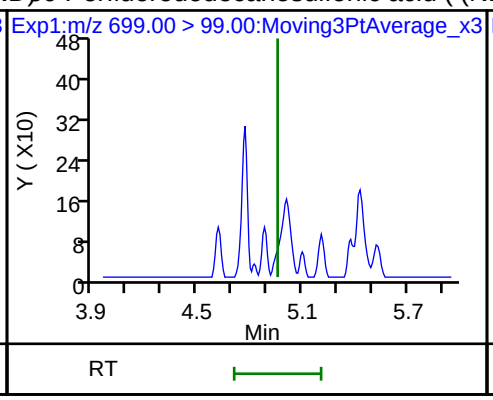

55 1H,1H,2H,2H-perfluorododecanesul (ND)



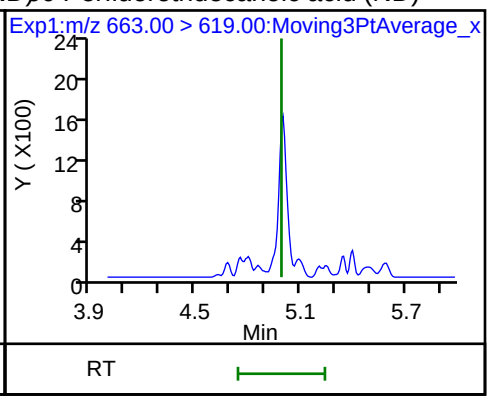
59 Perfluorododecanesulfonic acid ( (ND)



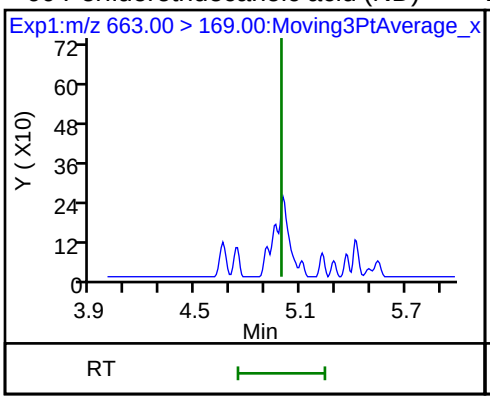

59 Perfluorododecanesulfonic acid ( (ND)



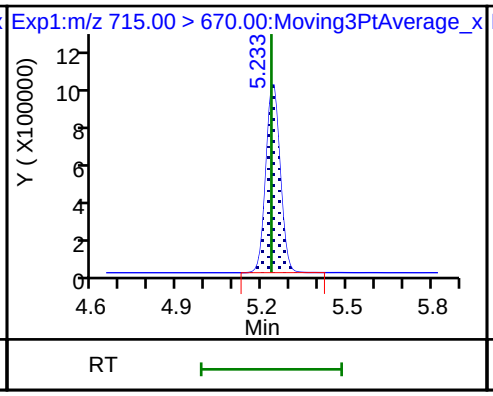

60 Perfluorotridecanoic acid (ND)



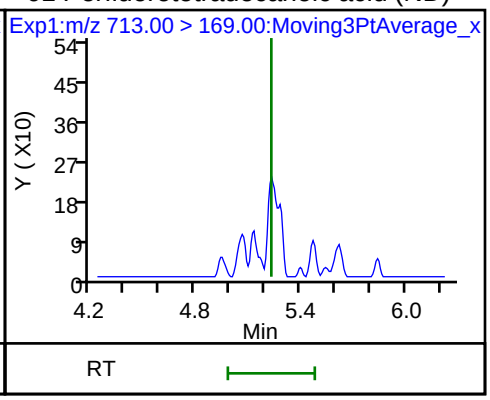

60 Perfluorotridecanoic acid (ND)



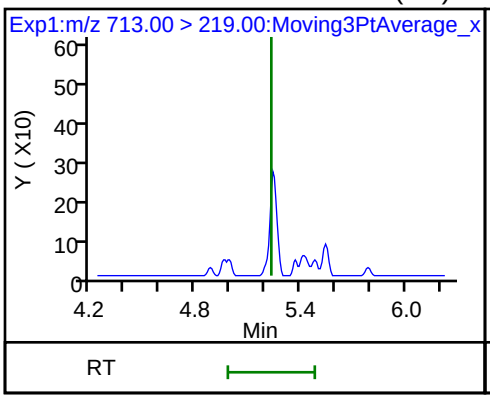

D 62 13C2 PFTeDA



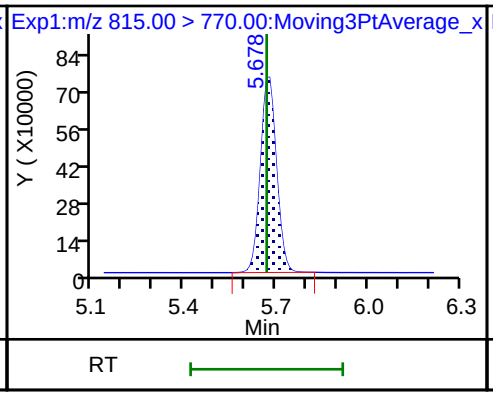

61 Perfluorotetradecanoic acid (ND)



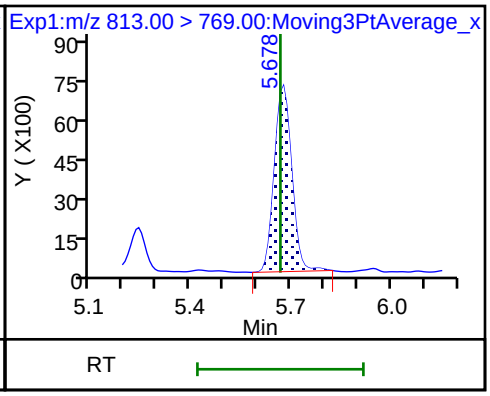

61 Perfluorotetradecanoic acid (ND)



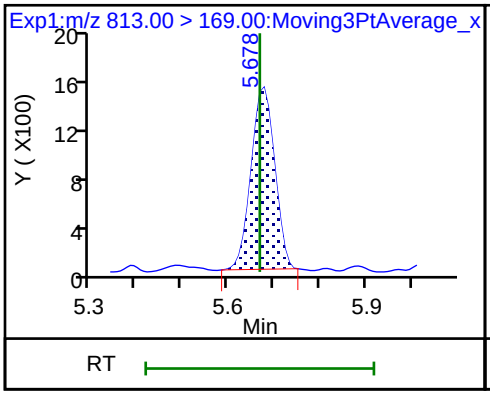

D 63 13C2 PFHxDA



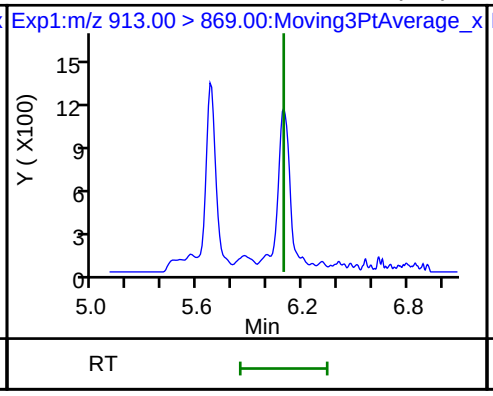

64 Perfluorohexadecanoic acid



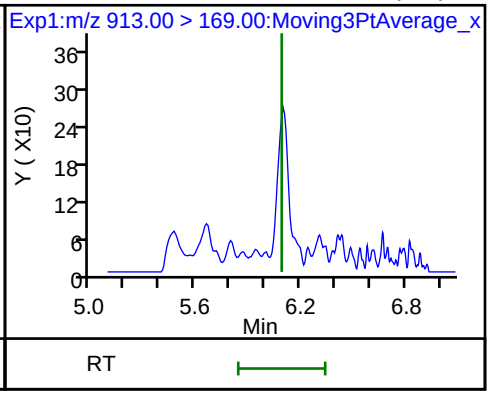

64 Perfluorohexadecanoic acid




65 Perfluorooctadecanoic acid (ND)




65 Perfluorooctadecanoic acid (ND)



Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

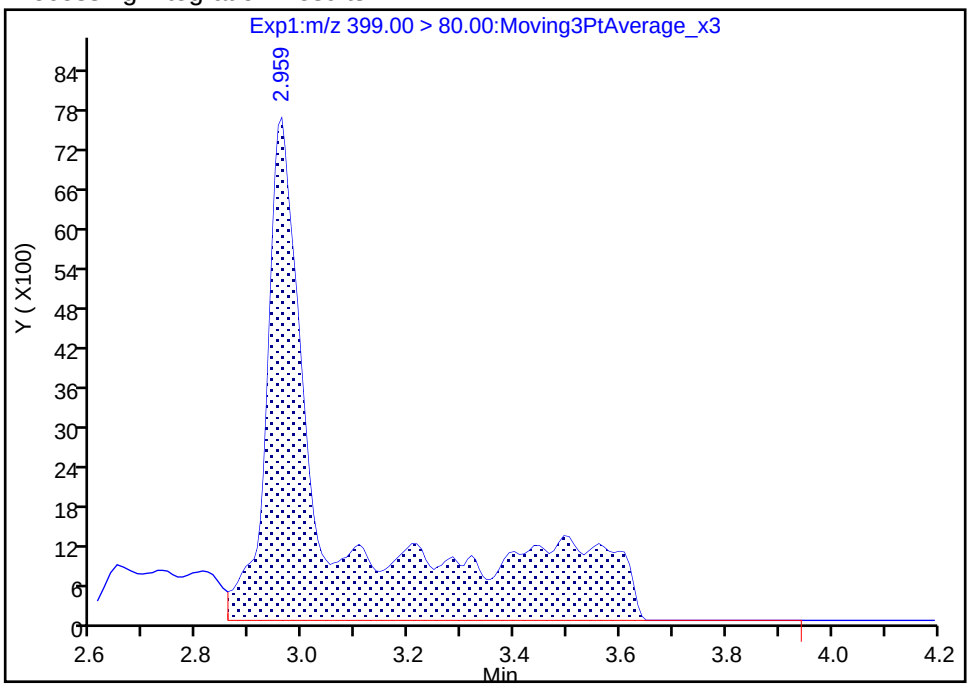
Data File: \\chromfs\Sacramento\ChromData\A9\20200910-102999.b\2020.09.10_A9 _PFC_ICAL_AA_023.d
Injection Date: 10-Sep-2020 12:38:41 Instrument ID: A9
Lims ID: ICB
Client ID:
Operator ID: SACINSTRLCMS02 ALS Bottle#: 17 Worklist Smp#: 14
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFAS_A9 Limit Group: LC PFC ICAL
Column: Detector EXP1

## 16 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 1

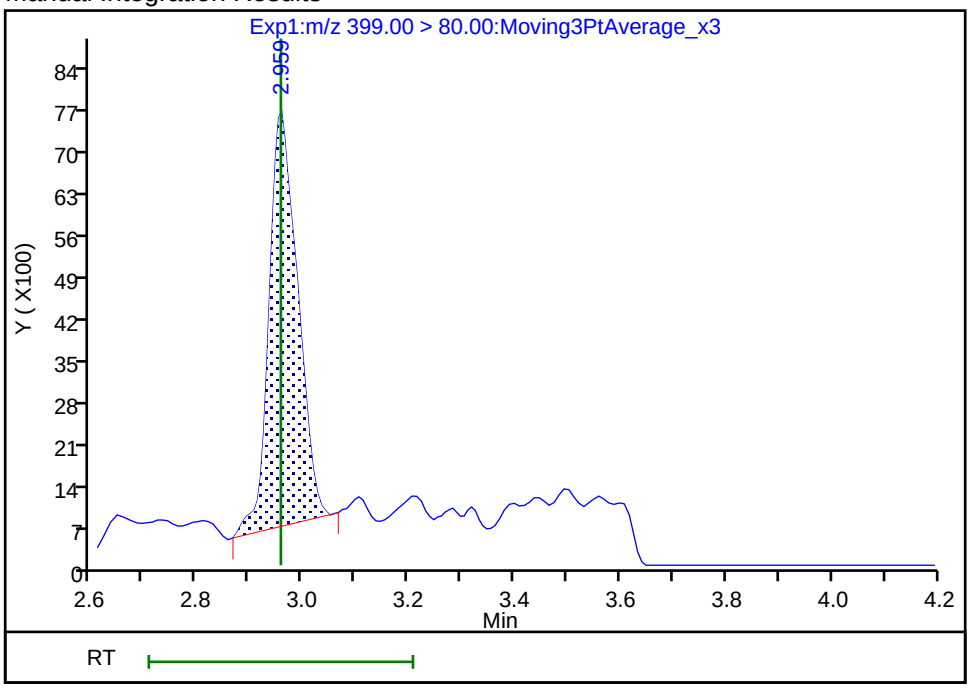
Processing Integration Results

RT: 2.96
Area: 67542
Amount: 0.019987
Amount Units: ng/ml




Manual Integration Results

RT: 2.96
Area: 26241
Amount: 0.007765
Amount Units: ng/ml




Reviewer: zibaa, 10-Sep-2020 13:21:44
Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

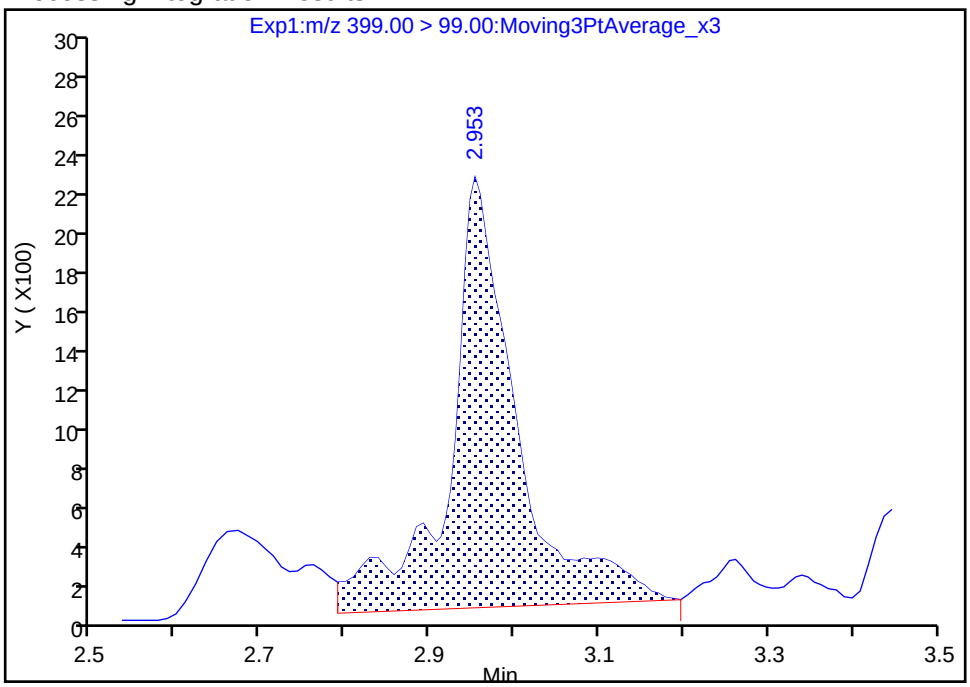
Data File: \\chromfs\Sacramento\ChromData\A9\20200910-102999.b\2020.09.10_A9 _PFC_ICAL_AA_023.d
Injection Date: 10-Sep-2020 12:38:41 Instrument ID: A9
Lims ID: ICB
Client ID:
Operator ID: SACINSTRLCMS02 ALS Bottle#: 17 Worklist Smp#: 14
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFAS_A9 Limit Group: LC PFC ICAL
Column: Detector EXP1

## 16 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 2

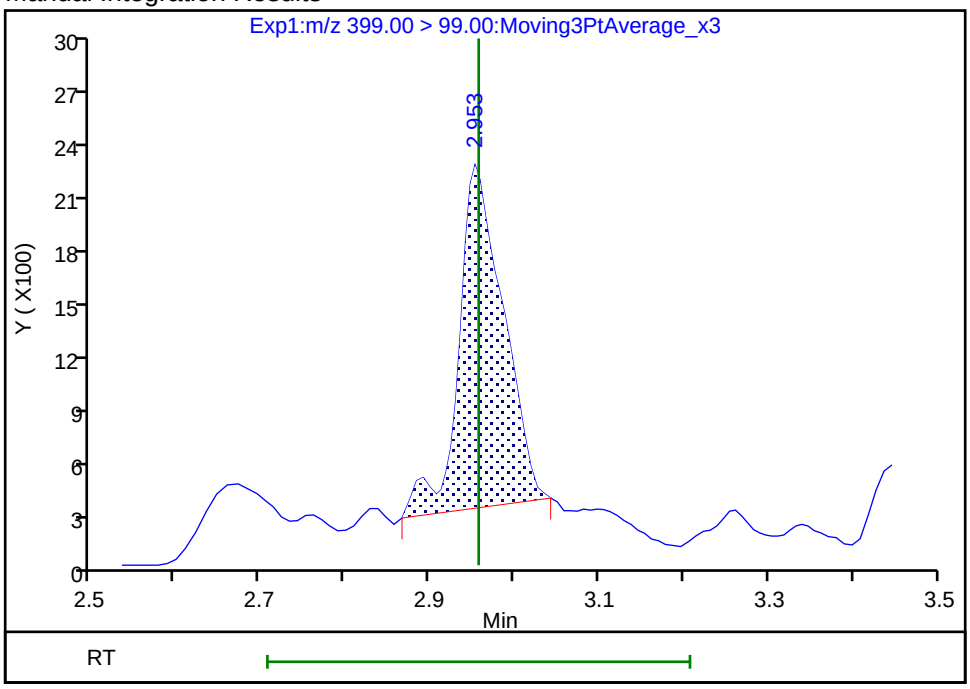
Processing Integration Results

RT: 2.95
Area: 12179
Amount: 0.019987
Amount Units: ng/ml




Manual Integration Results

RT: 2.95
Area: 7053
Amount: 0.007765
Amount Units: ng/ml




Reviewer: zibaa, 10-Sep-2020 13:21:51
Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

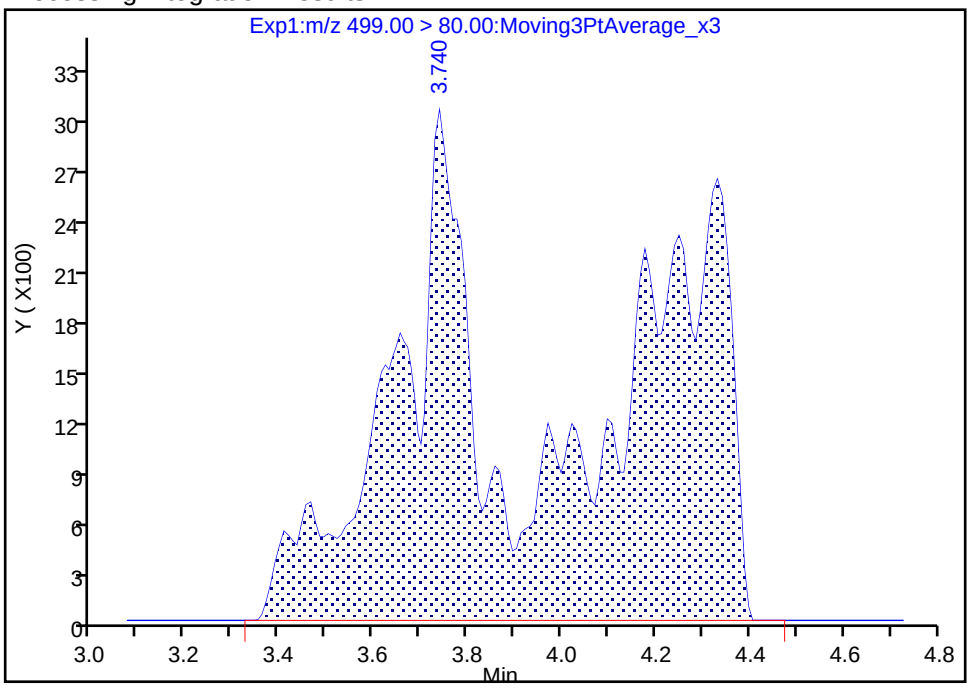
| | | | | | |
|---|---|---|---|---|---|
| Data File: | \\chromfs\Sacramento\ChromData\A9\20200910-102999.b\2020.09.10_A9 _PFC_ICAL_AA_023.d | | | | |
| Injection Date: | 10-Sep-2020 12:38:41 | Instrument ID: | A9 | | |
| Lims ID: | ICB | | | | |
| Client ID: | | | | | |
| Operator ID: | SACINSTRLCMS02 | ALS Bottle#: | 17 | Worklist Smp#: | 14 |
| Injection Vol: | 20.0 ul | Dil. Factor: | 1.0000 | | |
| Method: | PFAS_A9 | Limit Group: | LC PFC ICAL | | |
| Column: | | Detector | EXP1 | | |

## 28 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 1

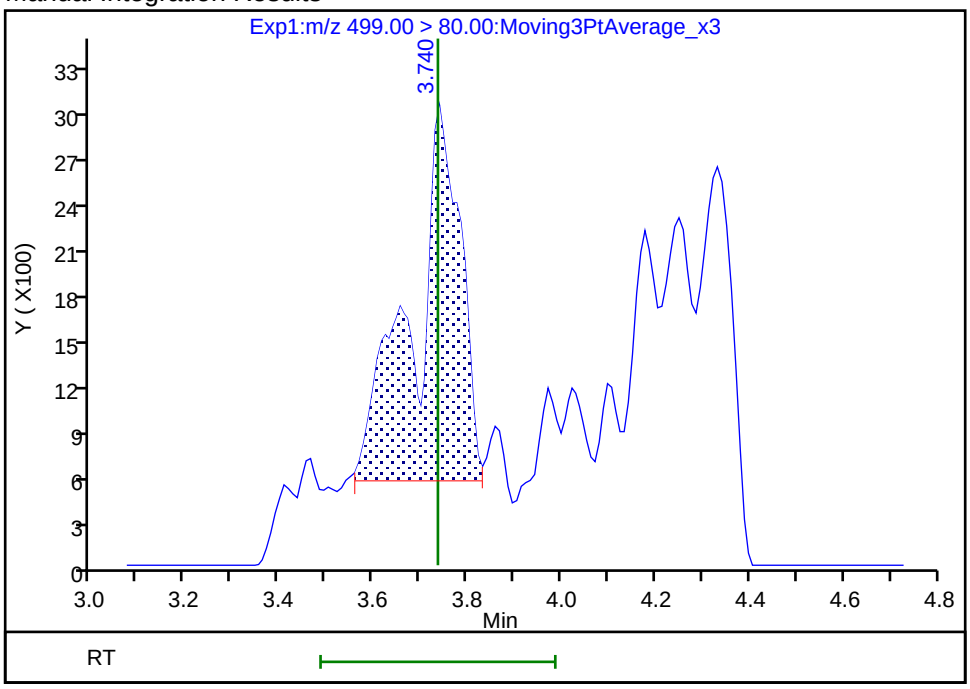
Processing Integration Results

RT: 3.74
Area: 76063
Amount: 0.024544
Amount Units: ng/ml




Manual Integration Results

RT: 3.74
Area: 17385
Amount: 0.005610
Amount Units: ng/ml




Reviewer: zibaa, 10-Sep-2020 13:22:55

Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

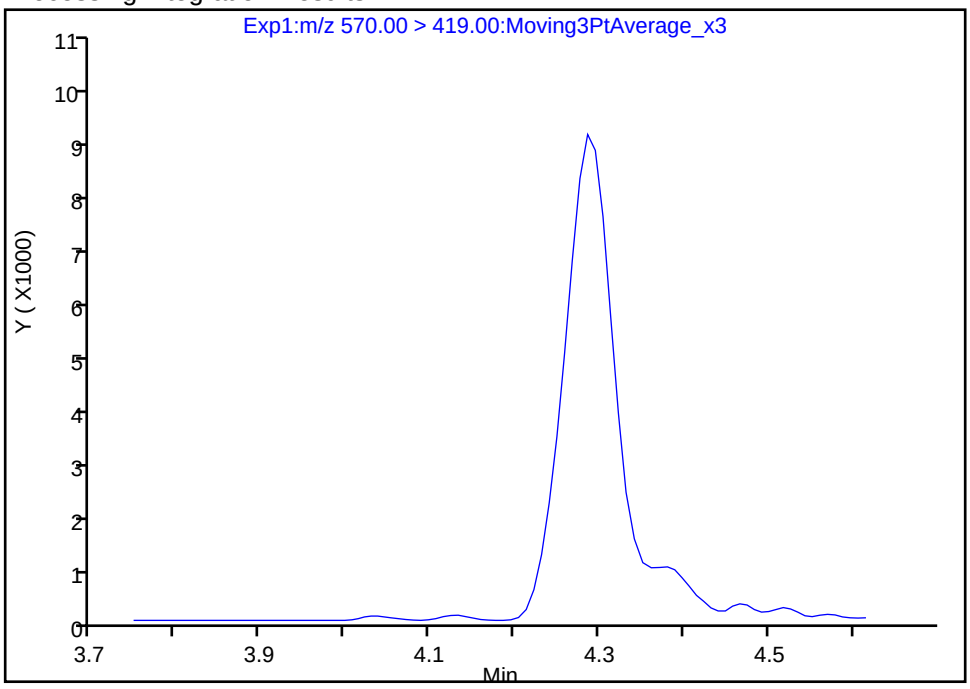
| | | | | | |
|---|---|---|---|---|---|
| Data File: | \\chromfs\Sacramento\ChromData\A9\20200910-102999.b\2020.09.10_A9 _PFC_ICAL_AA_023.d | | | | |
| Injection Date: | 10-Sep-2020 12:38:41 | Instrument ID: | A9 | | |
| Lims ID: | ICB | | | | |
| Client ID: | | | | | |
| Operator ID: | SACINSTRLCMS02 | ALS Bottle#: | 17 | Worklist Smp#: | 14 |
| Injection Vol: | 20.0 ul | Dil. Factor: | 1.0000 | | |
| Method: | PFAS_A9 | Limit Group: | LC PFC ICAL | | |
| Column: | | Detector | EXP1 | | |

## 40 N-methylperfluorooctanesulfonami, CAS: 2355-31-9

Signal: 1

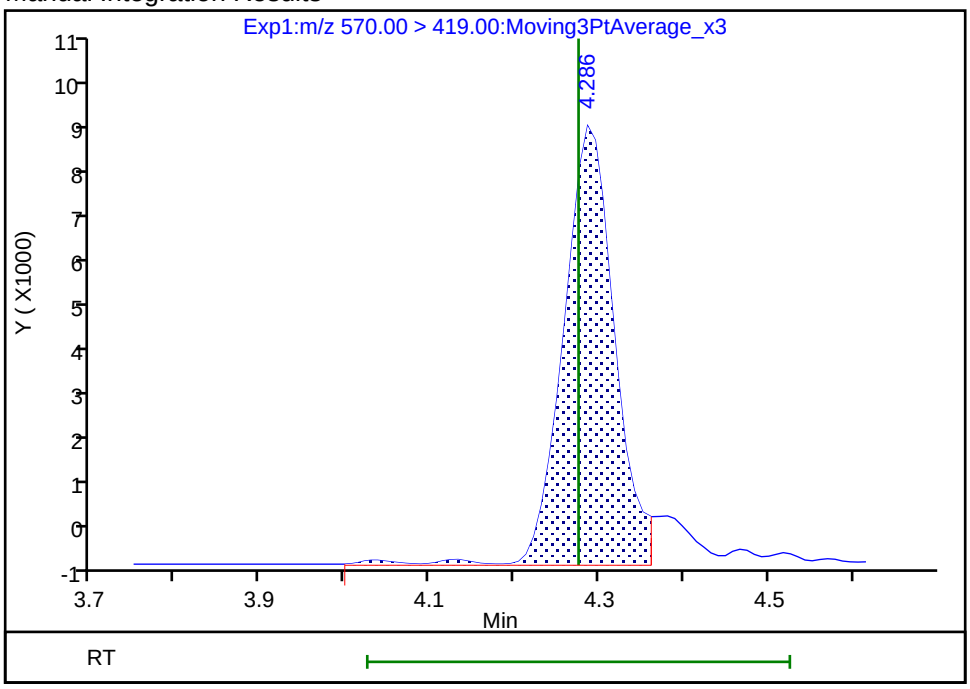
Not Detected
Expected RT: 4.28

Processing Integration Results




Manual Integration Results

RT: 4.29
Area: 35709
Amount: 0.035179
Amount Units: ng/ml




Reviewer: zibaa, 10-Sep-2020 16:27:56
Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

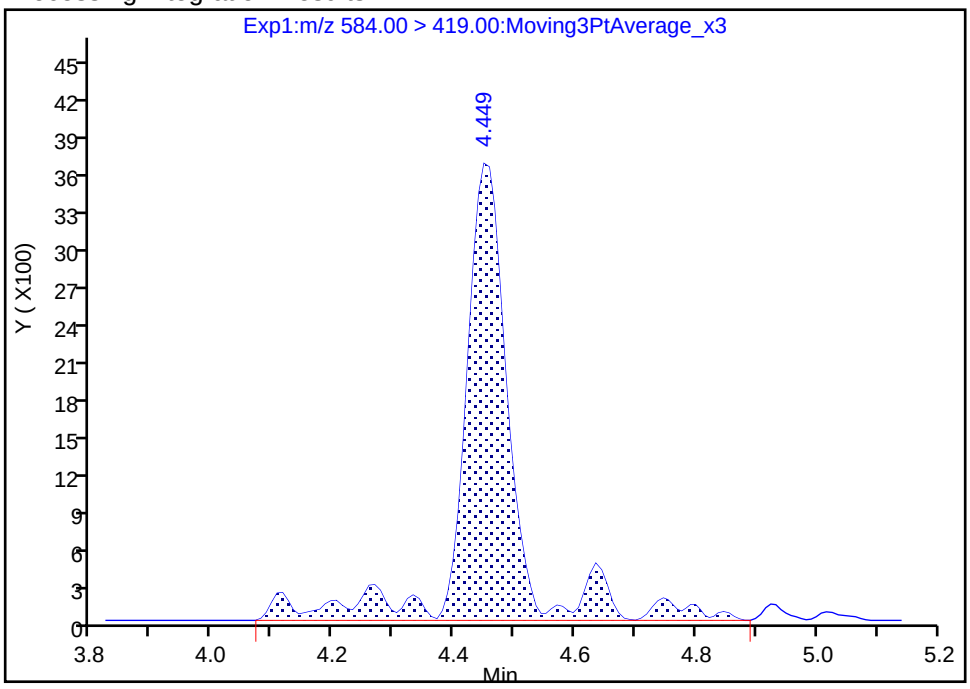
| | | | | | |
|---|---|---|---|---|---|
| Data File: | \\chromfs\Sacramento\ChromData\A9\20200910-102999.b\2020.09.10_A9 _PFC_ICAL_AA_023.d | | | | |
| Injection Date: | 10-Sep-2020 12:38:41 | Instrument ID: | A9 | | |
| Lims ID: | ICB | | | | |
| Client ID: | | | | | |
| Operator ID: | SACINSTRLCMS02 | ALS Bottle#: | 17 | Worklist Smp#: | 14 |
| Injection Vol: | 20.0 ul | Dil. Factor: | 1.0000 | | |
| Method: | PFAS_A9 | Limit Group: | LC PFC ICAL | | |
| Column: | | Detector | EXP1 | | |

## 44 N-ethylperfluorooctanesulfonamid, CAS: 2991-50-6

Signal: 1

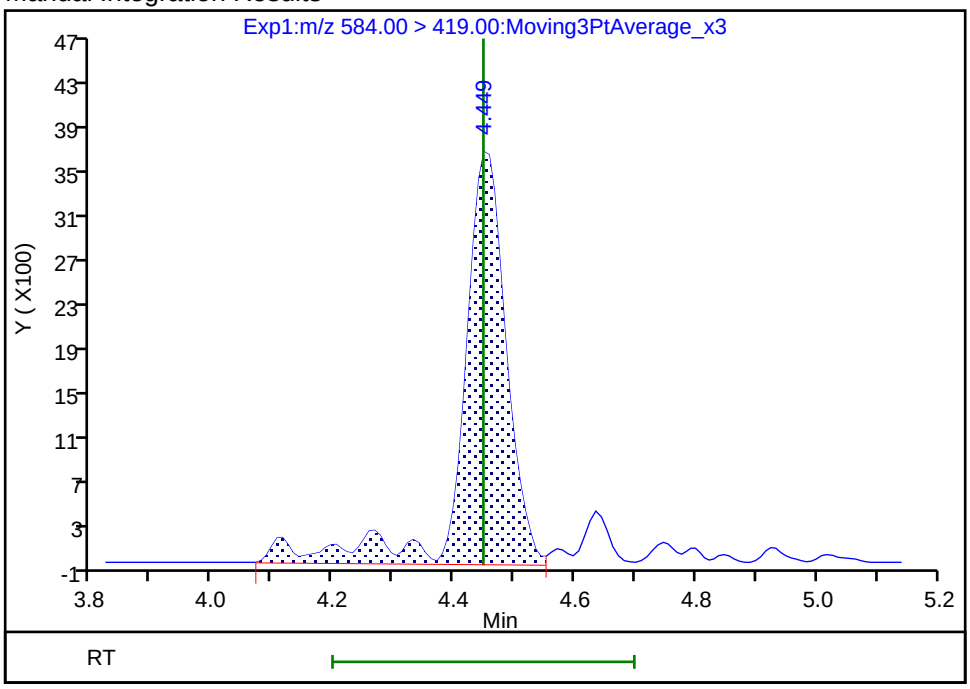
Processing Integration Results

RT: 4.45
Area: 20420
Amount: 0.026287
Amount Units: ng/ml




Manual Integration Results

RT: 4.45
Area: 18629
Amount: 0.023982
Amount Units: ng/ml




Reviewer: zibaa, 10-Sep-2020 13:23:44

Audit Action: Manually Integrated Audit Reason: Baseline

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento  Job No.: 460-217547-1

SDG No.:

Client Sample ID:  Lab Sample ID: LCS 320-410910/2-A

Matrix: Water  Lab File ID: 2020.09.10_A18_PFC_A_075.d

Analysis Method: 537 (modified)  Date Collected:

Extraction Method: 3535  Date Extracted: 09/09/2020 18:52

Sample wt/vol: 250(mL)  Date Analyzed: 09/10/2020 15:20

Con. Extract Vol.: 10.00(mL)  Dilution Factor: 1

Injection Volume: 20(uL)  GC Column: Gemini C18 3x50 ID: 3(mm)

% Moisture:  GPC Cleanup:(Y/N) N

Analysis Batch No.: 411087  Units: ng/L

| CAS NO. | COMPOUND NAME | RESULT | Q | RL | MDL |
|---|---|---|---|---|---|
| 375-22-4 | Perfluorobutanoic acid (PFBA) | 39.79 | | 2.00 | 0.35 |
| 2706-90-3 | Perfluoropentanoic acid (PFPeA) | 37.53 | | 2.00 | 0.49 |
| 307-24-4 | Perfluorohexanoic acid (PFHxA) | 36.61 | | 2.00 | 0.58 |
| 375-85-9 | Perfluoroheptanoic acid (PFHpA) | 34.02 | | 2.00 | 0.25 |
| 335-67-1 | Perfluorooctanoic acid (PFOA) | 39.17 | | 2.00 | 0.85 |
| 375-95-1 | Perfluorononanoic acid (PFNA) | 37.61 | | 2.00 | 0.27 |
| 335-76-2 | Perfluorodecanoic acid (PFDA) | 34.20 | | 2.00 | 0.31 |
| 2058-94-8 | Perfluoroundecanoic acid (PFUnA) | 42.31 | | 2.00 | 1.10 |
| 307-55-1 | Perfluorododecanoic acid (PFDoA) | 31.77 | | 2.00 | 0.55 |
| 72629-94-8 | Perfluorotridecanoic acid (PFTriA) | 31.90 | | 2.00 | 1.30 |
| 376-06-7 | Perfluorotetradecanoic acid (PFTeA) | 45.97 | | 2.00 | 0.29 |
| 375-73-5 | Perfluorobutanesulfonic acid (PFBS) | 32.55 | | 2.00 | 0.20 |
| 355-46-4 | Perfluorohexanesulfonic acid (PFHxS) | 32.14 | | 2.00 | 0.17 |
| 375-92-8 | Perfluoroheptanesulfonic Acid (PFHpS) | 36.25 | | 2.00 | 0.19 |
| 1763-23-1 | Perfluorooctanesulfonic acid (PFOS) | 35.50 | | 2.00 | 0.54 |
| 335-77-3 | Perfluorodecanesulfonic acid (PFDS) | 34.21 | | 2.00 | 0.32 |
| 754-91-6 | Perfluorooctanesulfonamide (FOSA) | 39.32 | | 2.00 | 0.35 |
| 2355-31-9 | N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA) | 40.79 | | 20.0 | 3.10 |
| 2991-50-6 | N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA) | 36.89 | | 20.0 | 1.90 |
| 27619-97-2 | 6:2 FTS | 35.12 | | 20.0 | 2.00 |
| 39108-34-4 | 8:2 FTS | 36.14 | | 20.0 | 2.00 |

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento  Job No.: 460-217547-1

SDG No.:

Client Sample ID:  Lab Sample ID: LCS 320-410910/2-A

Matrix: Water  Lab File ID: 2020.09.10_A18_PFC_A_075.d

Analysis Method: 537 (modified)  Date Collected:

Extraction Method: 3535  Date Extracted: 09/09/2020 18:52

Sample wt/vol: 250(mL)  Date Analyzed: 09/10/2020 15:20

Con. Extract Vol.: 10.00(mL)  Dilution Factor: 1

Injection Volume: 20(uL)  GC Column: Gemini C18 3x50 ID: 3(mm)

% Moisture:  GPC Cleanup:(Y/N) N

Analysis Batch No.: 411087  Units: ng/L

| CAS NO. | ISOTOPE DILUTION | %REC | Q | LIMITS |
|---|---|---|---|---|
| STL00992 | 13C4 PFBA | 55 | | 25-150 |
| STL01893 | 13C5 PFPeA | 56 | | 25-150 |
| STL00993 | 13C2 PFHxA | 64 | | 25-150 |
| STL01892 | 13C4 PFHpA | 66 | | 25-150 |
| STL00990 | 13C4 PFOA | 58 | | 25-150 |
| STL00995 | 13C5 PFNA | 64 | | 25-150 |
| STL00996 | 13C2 PFDA | 66 | | 25-150 |
| STL00997 | 13C2 PFUnA | 69 | | 25-150 |
| STL00998 | 13C2 PFDoA | 65 | | 25-150 |
| STL02116 | 13C2 PFTeDA | 57 | | 25-150 |
| STL02337 | 13C3 PFBS | 72 | | 25-150 |
| STL00994 | 18O2 PFHxS | 76 | | 25-150 |
| STL00991 | 13C4 PFOS | 72 | | 25-150 |
| STL01056 | 13C8 FOSA | 58 | | 25-150 |
| STL02118 | d3-NMeFOSAA | 58 | | 25-150 |
| STL02117 | d5-NEtFOSAA | 62 | | 25-150 |
| STL02279 | M2-6:2 FTS | 68 | | 25-150 |
| STL02280 | M2-8:2 FTS | 76 | | 25-150 |

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\A18\20200910-103041.b\2020.09.10_A18_PFC_A_075.d
Lims ID: LCS 320-410910/2-A
Client ID:
Sample Type: LCS
Inject. Date: 10-Sep-2020 15:20:29 ALS Bottle#: 39 Worklist Smp#: 3
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Sample Info: lcs 320-410910/2-a
Misc. Info.: Plate: 4 Rack: 1
Operator ID: TAISACA18-PC\A-18 Instrument ID: A18

Method: \\chromfs\Sacramento\ChromData\A18\20200910-103041.b\PFAS_A18V2.m
Limit Group: LC PFC ICAL
Last Update: 11-Sep-2020 08:28:55 Calib Date: 25-Aug-2020 17:37:57
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\A18\20200825-102078.b\2020.08.25_A18_ICAL_A_017.d

Column 1 : Gemini C18 3um 3mm x 50 mm ( 3.00 mm) Det: EXP1
Process Host: CTX1040

First Level Reviewer: sanjumnair Date: 11-Sep-2020 08:28:55
Ratio Calibration: CCV Sample: \\chromfs\Sacramento\ChromData\A18\20200910-103041.b\2020.09.10_A18_PFC_A_073.d

| Signal | RT | EXP RT | DLT RT | REL RT | Response | Amount ng/ml | Ratio(Limits) | %Rec | S/N | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| D 1 13C4 PFBA | | | | | | | | | | |
| 217.00 > 172.00 | 2.541 | 2.557 | -0.016 | 0.624 | 10514756 | 1.37 | | 54.9 | 6738 | |
| 2 Perfluorobutanoic acid | | | | | | | | | | |
| 212.90 > 169.00 | 2.541 | 2.557 | -0.016 | 1.000 | 3631054 | 0.99 | | 99.5 | 157 | |
| D 4 13C5 PFPeA | | | | | | | | | | |
| 267.90 > 223.00 | 2.888 | 2.909 | -0.021 | 0.709 | 8349728 | 1.40 | | 56.0 | 3890 | |
| 5 Perfluoropentanoic acid | | | | | | | | | | |
| 262.90 > 219.00 | 2.888 | 2.909 | -0.021 | 1.000 | 3124461 | 0.9384 | | 93.8 | 138 | |
| 6 Perfluorobutanesulfonic acid | | | | | | | | | | |
| 298.90 > 80.00 | 2.929 | 2.940 | -0.011 | 1.000 | 2757188 | 0.8137 | Target=2.30 | 92.1 | 607 | |
| 298.90 > 99.00 | 2.929 | 2.940 | -0.011 | 1.000 | 1190416 | | 2.32(1.15-3.45) | | 404 | |
| D 9 13C3 PFBS | | | | | | | | | | |
| 301.90 > 80.00 | 2.929 | 2.940 | -0.011 | 0.719 | 7801550 | 1.67 | | 71.7 | 3609 | |
| D 7 M2-4:2 FTS | | | | | | | | | | |
| 329.00 > 81.00 | 3.223 | 3.238 | -0.015 | 0.791 | 1715863 | 1.52 | | 65.2 | 797 | |
| 8 4:2 FTS | | | | | | | | | | |
| 327.00 > 307.00 | 3.223 | 3.238 | -0.015 | 1.000 | 1447603 | 0.8667 | | 92.8 | 5704 | |
| D 11 13C2 PFHxA | | | | | | | | | | |
| 315.00 > 270.00 | 3.268 | 3.278 | -0.010 | 0.802 | 9516908 | 1.60 | | 64.0 | 5734 | |
| 10 Perfluorohexanoic acid | | | | | | | | | | |
| 313.00 > 269.00 | 3.268 | 3.288 | -0.020 | 1.000 | 3358297 | 0.9153 | Target=13.35 | 91.5 | 225 | |
| 313.00 > 119.00 | 3.268 | 3.288 | -0.020 | 1.000 | 246272 | | 13.64(6.67-20.02) | | 158 | |
| 12 Perfluoropentanesulfonic acid | | | | | | | | | | |
| 349.00 > 80.00 | 3.288 | 3.298 | -0.010 | 1.122 | 2452209 | 0.9221 | Target=2.97 | 98.3 | 529 | |
| 349.00 > 99.00 | 3.288 | 3.298 | -0.010 | 1.122 | 823654 | | 2.98(1.48-4.45) | | 540 | |
| 13 HPFO-DA | | | | | | | | | | |
| 285.00 > 169.00 | 3.394 | 3.405 | -0.011 | 1.000 | 647379 | 1.01 | | 101 | 2641 | |

| Signal | RT | EXP RT | DLT RT | REL RT | Response | Amount ng/ml | Ratio(Limits) | %Rec | S/N | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| D 14 13C3 HFPO-DA | | | | | | | | | | |
| 287.00 > 169.00 | 3.394 | 3.405 | -0.011 | 0.833 | 1638857 | 1.35 | | 53.9 | 4641 | |
| 16 Perfluoroheptanoic acid | | | | | | | | | | |
| 363.00 > 319.00 | 3.671 | 3.691 | -0.020 | 0.997 | 2899377 | 0.8504 | Target=4.05 | 85.0 | 304 | |
| 363.00 > 169.00 | 3.671 | 3.691 | -0.020 | 0.997 | 768834 | | 3.77(2.03-6.08) | | 540 | |
| 15 Perfluorohexanesulfonic acid | | | | | | | | | | |
| 399.00 > 80.00 | 3.681 | 3.691 | -0.010 | 1.000 | 1777389 | 0.8034 | Target=3.35 | 88.3 | 13254 | |
| 399.00 > 99.00 | 3.681 | 3.691 | -0.010 | 1.000 | 519096 | | 3.42(1.67-5.02) | | 449 | |
| D 17 18O2 PFHxS | | | | | | | | | | |
| 403.00 > 84.00 | 3.681 | 3.691 | -0.010 | 0.904 | 4428716 | 1.79 | | 75.7 | 13343 | |
| D 18 13C4 PFHpA | | | | | | | | | | |
| 367.00 > 322.00 | 3.681 | 3.691 | -0.010 | 0.904 | 8408081 | 1.66 | | 66.2 | 6778 | |
| 19 DONA | | | | | | | | | | |
| 377.00 > 251.00 | 3.720 | 3.740 | -0.020 | 0.838 | 8689250 | 0.7549 | Target=2.39 | 80.1 | 4997 | |
| 377.00 > 85.00 | 3.720 | 3.740 | -0.020 | 0.838 | 3543922 | | 2.45(1.20-3.59) | | 2900 | |
| 21 6:2 FTS | | | | | | | | | | |
| 427.00 > 407.00 | 4.050 | 4.058 | -0.008 | 1.000 | 1296062 | 0.8779 | | 92.6 | 1668 | |
| D 20 M2-6:2 FTS | | | | | | | | | | |
| 429.00 > 81.00 | 4.050 | 4.058 | -0.008 | 0.994 | 1525275 | 1.61 | | 67.9 | 1028 | |
| 24 Perfluoroheptanesulfonic acid | | | | | | | | | | |
| 449.00 > 80.00 | 4.066 | 4.074 | -0.008 | 0.916 | 1216713 | 0.9063 | Target=4.24 | 95.2 | 555 | |
| 449.00 > 99.00 | 4.066 | 4.074 | -0.008 | 0.916 | 286296 | | 4.25(2.12-6.36) | | 356 | |
| * 23 13C2 PFOA | | | | | | | | | | |
| 415.00 > 370.00 | 4.074 | 4.082 | -0.008 | | 12085104 | 2.50 | | | 7381 | |
| 22 Perfluorooctanoic acid | | | | | | | | | | |
| 413.00 > 369.00 | 4.074 | 4.082 | -0.008 | 1.000 | 2810991 | 0.9792 | Target=3.01 | 97.9 | 371 | |
| 413.00 > 169.00 | 4.074 | 4.082 | -0.008 | 1.000 | 1009257 | | 2.79(1.50-4.51) | | 649 | |
| D 25 13C4 PFOA | | | | | | | | | | |
| 417.00 > 372.00 | 4.074 | 4.082 | -0.008 | 1.000 | 7033084 | 1.45 | | 58.1 | 5448 | |
| D 27 13C4 PFOS | | | | | | | | | | |
| 503.00 > 80.00 | 4.438 | 4.446 | -0.008 | 1.089 | 2871085 | 1.71 | | 71.7 | 1416 | |
| 29 Perfluorooctanesulfonic acid | | | | | | | | | | M |
| 499.00 > 80.00 | 4.438 | 4.446 | -0.008 | 1.000 | 1103591 | 0.8876 | Target=4.54 | 95.6 | 433 | M |
| 499.00 > 99.00 | 4.438 | 4.446 | -0.008 | 1.000 | 231062 | | 4.78(2.27-6.82) | | 286 | M |
| D 30 13C5 PFNA | | | | | | | | | | |
| 468.00 > 423.00 | 4.446 | 4.462 | -0.016 | 1.091 | 6252889 | 1.60 | | 64.2 | 7114 | |
| 31 Perfluorononanoic acid | | | | | | | | | | |
| 463.00 > 419.00 | 4.454 | 4.470 | -0.016 | 1.002 | 2255266 | 0.9402 | Target=8.44 | 94.0 | 428 | |
| 463.00 > 169.00 | 4.454 | 4.470 | -0.016 | 1.002 | 266465 | | 8.46(4.22-12.67) | | 456 | |
| 32 9ClFOS | | | | | | | | | | |
| 531.00 > 351.00 | 4.641 | 4.647 | -0.006 | 1.046 | 3224822 | 0.8296 | | 89.0 | 5937 | |
| D 33 13C8 FOSA | | | | | | | | | | |
| 506.00 > 78.00 | 4.777 | 4.786 | -0.009 | 1.173 | 3940647 | 1.46 | | 58.3 | 4651 | |
| 34 Perfluorooctanesulfonamide | | | | | | | | | | |
| 498.00 > 78.00 | 4.777 | 4.786 | -0.009 | 1.000 | 1441646 | 0.9829 | | 98.3 | 2553 | |

| Signal | RT | EXP RT | DLT RT | REL RT | Response | Amount ng/ml | Ratio(Limits) | %Rec | S/N | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| 35 Perfluorononanesulfonic acid | | | | | | | | | | |
| 549.00 > 80.00 | 4.786 | 4.794 | -0.008 | 1.078 | 974803 | 0.8662 | Target=2.79 | 90.2 | 569 | |
| 549.00 > 99.00 | 4.786 | 4.794 | -0.008 | 1.078 | 332009 | | 2.94(1.39-4.18) | | 495 | |
| D 39 13C2 PFDA | | | | | | | | | | |
| 515.00 > 470.00 | 4.811 | 4.820 | -0.009 | 1.181 | 6208825 | 1.64 | | 65.6 | 9311 | |
| 37 Perfluorodecanoic acid | | | | | | | | | | |
| 513.00 > 469.00 | 4.811 | 4.820 | -0.009 | 1.000 | 2046800 | 0.8550 | Target=8.83 | 85.5 | 624 | |
| 513.00 > 169.00 | 4.811 | 4.820 | -0.009 | 1.000 | 227450 | | 9.00(4.42-13.25) | | 211 | |
| 36 8:2 FTS | | | | | | | | | | |
| 527.00 > 507.00 | 4.811 | 4.820 | -0.009 | 1.000 | 1655792 | 0.9035 | | 94.3 | 5976 | |
| D 38 M2-8:2 FTS | | | | | | | | | | |
| 529.00 > 81.00 | 4.811 | 4.820 | -0.009 | 1.181 | 2472813 | 1.81 | | 75.7 | 1536 | |
| D 40 d3-NMeFOSAA | | | | | | | | | | |
| 573.00 > 419.00 | 4.977 | 4.978 | -0.001 | 1.222 | 3672134 | 1.45 | | 57.8 | 3865 | |
| 41 NMeFOSAA | | | | | | | | | | |
| 570.00 > 419.00 | 4.977 | 4.989 | -0.012 | 1.000 | 1111017 | 1.02 | | 102 | 1415 | |
| 42 Perfluorodecanesulfonic acid | | | | | | | | | | |
| 599.00 > 80.00 | 5.102 | 5.112 | -0.010 | 1.150 | 857964 | 0.8553 | Target=2.85 | 88.7 | 806 | |
| 599.00 > 99.00 | 5.102 | 5.112 | -0.010 | 1.150 | 304437 | | 2.82(1.43-4.28) | | 719 | |
| D 43 13C2 PFUnA | | | | | | | | | | |
| 565.00 > 520.00 | 5.129 | 5.139 | -0.010 | 1.259 | 6473566 | 1.73 | | 69.0 | 14880 | |
| D 44 d5-NEtFOSAA | | | | | | | | | | |
| 589.00 > 419.00 | 5.138 | 5.148 | -0.010 | 1.261 | 4147905 | 1.54 | | 61.8 | 3667 | |
| 45 Perfluoroundecanoic acid | | | | | | | | | | |
| 563.00 > 519.00 | 5.138 | 5.148 | -0.010 | 1.002 | 1986568 | 1.06 | Target=8.45 | 106 | 1019 | |
| 563.00 > 169.00 | 5.129 | 5.148 | -0.019 | 1.000 | 205423 | | 9.67(4.22-12.67) | | 475 | |
| 46 NEtFOSA | | | | | | | | | | |
| 584.00 > 419.00 | 5.138 | 5.157 | -0.019 | 1.000 | 1034229 | 0.9224 | | 92.2 | 2128 | |
| D 47 d7-N-MeFOSE-M | | | | | | | | | | |
| 623.00 > 59.00 | 5.238 | 5.240 | -0.002 | 1.286 | 1723266 | 2.58 | | 20.6 | 1152 | |
| 48 N-MeFOSE-M | | | | | | | | | | |
| 616.00 > 59.00 | 5.248 | 5.249 | -0.001 | 1.002 | 161791 | 1.09 | | 109 | 255 | |
| D 49 d-N-MeFOSA-M | | | | | | | | | | |
| 515.00 > 169.00 | 5.258 | 5.259 | -0.001 | 1.291 | 1030719 | 1.09 | | 43.4 | 36.9 | |
| 50 NMeFOSA | | | | | | | | | | |
| 512.00 > 169.00 | 5.258 | 5.270 | -0.012 | 1.000 | 413249 | 1.04 | | 104 | 354 | |
| 51 11ClFOS | | | | | | | | | | |
| 631.00 > 451.00 | 5.268 | 5.280 | -0.012 | 1.187 | 3810573 | 0.7734 | | 82.1 | 8807 | |
| D 52 d9-N-EtFOSE-M | | | | | | | | | | |
| 639.00 > 59.00 | 5.405 | 5.416 | -0.011 | 1.327 | 1677417 | 2.04 | | 16.3 | 933 | |
| 53 N-EtFOSE-M | | | | | | | | | | |
| 630.00 > 59.00 | 5.426 | 5.426 | 0.0 | 1.004 | 128757 | 0.8943 | | 89.4 | 159 | |
| D 56 13C2 PFDoA | | | | | | | | | | |
| 615.00 > 570.00 | 5.426 | 5.437 | -0.011 | 1.332 | 5988774 | 1.62 | | 64.8 | 7840 | |
| 57 Perfluorododecanoic acid | | | | | | | | | | |
| 613.00 > 569.00 | 5.426 | 5.437 | -0.011 | 1.000 | 1945322 | 0.7942 | Target=8.28 | 79.4 | 988 | |
| 613.00 > 169.00 | 5.426 | 5.437 | -0.011 | 1.000 | 232093 | | 8.38(4.14-12.41) | | 570 | |

| Signal | RT | EXP RT | DLT RT | REL RT | Response | Amount ng/ml | Ratio(Limits) | %Rec | S/N | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| D 54 d-N-EtFOSA-M | | | | | | | | | | |
| 531.00 > 169.00 | 5.437 | 5.437 | 0.0 | 1.335 | 749622 | 0.7711 | | 30.8 | 152 | |
| 55 N-EtFOSA-M | | | | | | | | | | |
| 526.00 > 169.00 | 5.448 | 5.448 | 0.0 | 1.002 | 311283 | 0.9808 | | 98.1 | 183 | |
| 58 10:2 FTS | | | | | | | | | | |
| 627.00 > 607.00 | 5.437 | 5.459 | -0.022 | 1.130 | 1678867 | 0.8074 | | 83.8 | 5138 | |
| 59 PFDoS | | | | | | | | | | |
| 699.00 > 80.00 | 5.654 | 5.667 | -0.013 | 1.274 | 353761 | 0.8846 | Target=0.71 | 91.4 | 341 | |
| 699.00 > 99.00 | 5.654 | 5.667 | -0.013 | 1.274 | 495089 | | 0.71(0.36-1.07) | | 1378 | |
| 60 Perfluorotridecanoic acid | | | | | | | | | | |
| 663.00 > 619.00 | 5.691 | 5.701 | -0.011 | 1.049 | 1797744 | 0.7976 | Target=7.29 | 79.8 | 1175 | |
| 663.00 > 169.00 | 5.701 | 5.701 | 0.0 | 1.051 | 284243 | | 6.32(3.65-10.94) | | 1015 | |
| D 61 13C2 PFTeDA | | | | | | | | | | |
| 715.00 > 670.00 | 5.936 | 5.948 | -0.012 | 1.457 | 4384603 | 1.44 | | 57.5 | 7209 | |
| 62 Perfluorotetradecanoic acid | | | | | | | | | | |
| 713.00 > 169.00 | 5.936 | 5.948 | -0.012 | 1.000 | 170099 | 1.15 | Target=1.00 | 115 | 897 | |
| 713.00 > 219.00 | 5.925 | 5.948 | -0.023 | 0.998 | 203975 | | 0.83(0.50-1.50) | | 1104 | |
| D 64 13C2 PFHxDA | | | | | | | | | | |
| 815.00 > 770.00 | 6.377 | 6.377 | 0.0 | 1.565 | 3623865 | 1.62 | | 64.9 | 7078 | |
| 63 Perfluorohexadecanoic acid | | | | | | | | | | |
| 813.00 > 769.00 | 6.377 | 6.386 | -0.009 | 1.000 | 1316331 | 1.01 | Target=9.97 | 101 | 1275 | |
| 813.00 > 169.00 | 6.368 | 6.386 | -0.018 | 0.999 | 138047 | | 9.54(4.98-14.95) | | 1073 | |
| 65 Perfluorooctadecanoic acid | | | | | | | | | | |
| 913.00 > 869.00 | 6.808 | 6.835 | -0.027 | 1.068 | 1037847 | 1.08 | Target=12.11 | 108 | 1218 | |
| 913.00 > 169.00 | 6.822 | 6.835 | -0.013 | 1.070 | 80057 | | 12.96(6.05-18.16) | | 875 | |

## QC Flag Legend

Review Flags

M - Manually Integrated

Report Date: 11-Sep-2020 08:28:56 Chrom Revision: 2.3 09-Sep-2020 15:12:58

Eurofins TestAmerica, Sacramento

Data File: \\chromfs\Sacramento\ChromData\A18\20200910-103041.b\2020.09.10_A18_PFC_A_075.d

Injection Date: 10-Sep-2020 15:20:29 Instrument ID: A18

Lims ID: LCS 320-410910/2-A

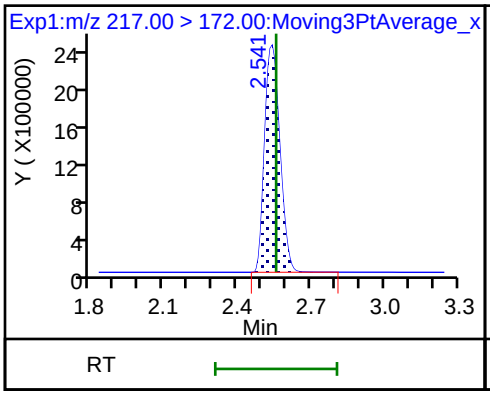
Client ID:

Operator ID: TAISACA18-PC\A-18 ALS Bottle#: 39 Worklist Smp#: 3

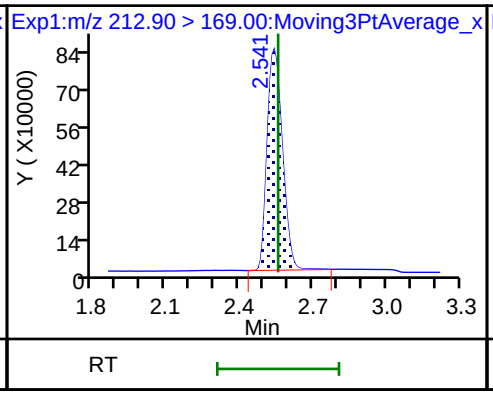
Injection Vol: 20.0 ul Dil. Factor: 1.0000

Method: PFAS_A18V2 Limit Group: LC PFC ICAL

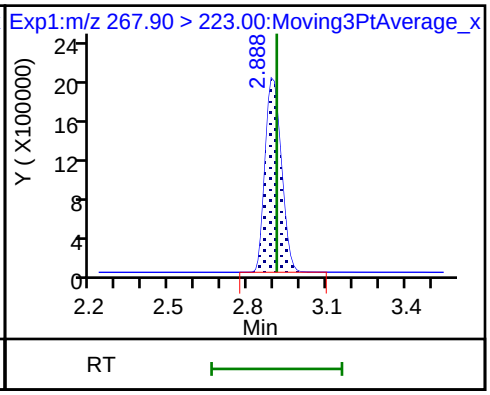
D 1 13C4 PFBA



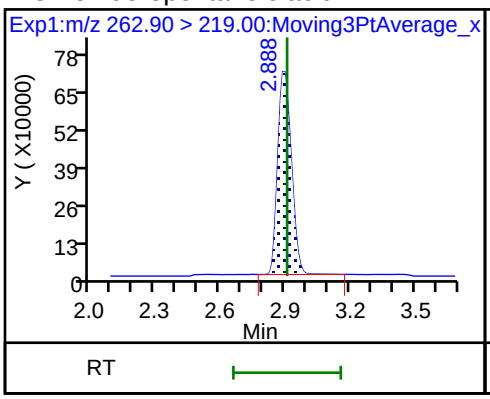

2 Perfluorobutanoic acid



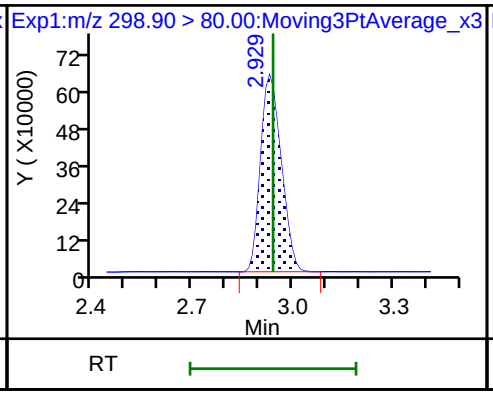

D 4 13C5 PFPeA



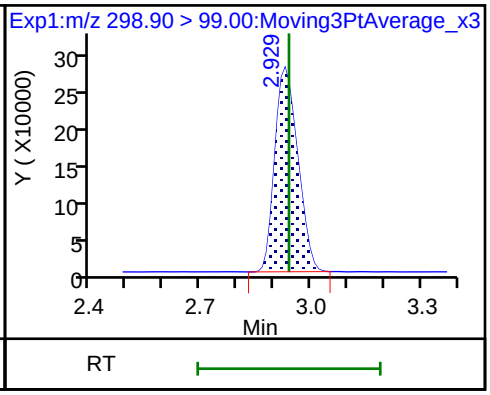

5 Perfluoropentanoic acid



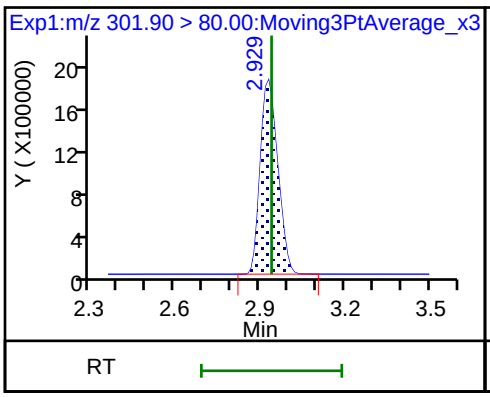

6 Perfluorobutanesulfonic acid



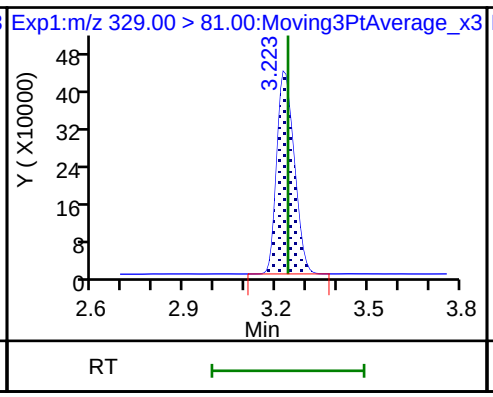

6 Perfluorobutanesulfonic acid



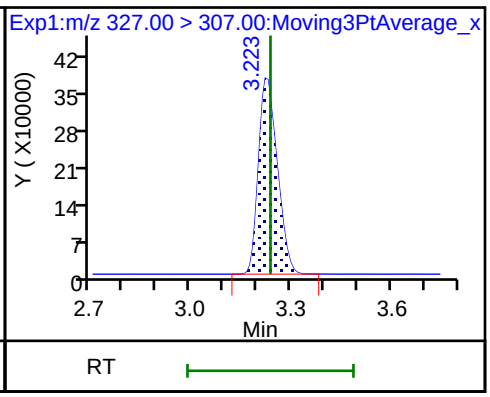

D 9 13C3 PFBS



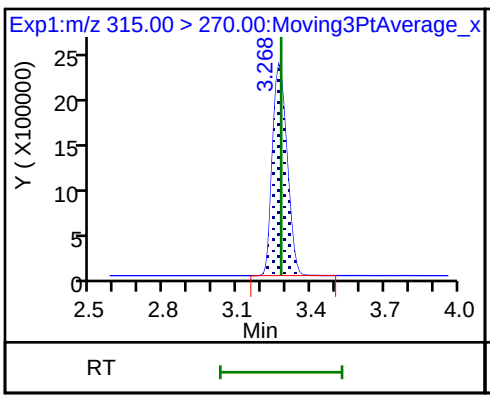

D 7 M2-4:2 FTS



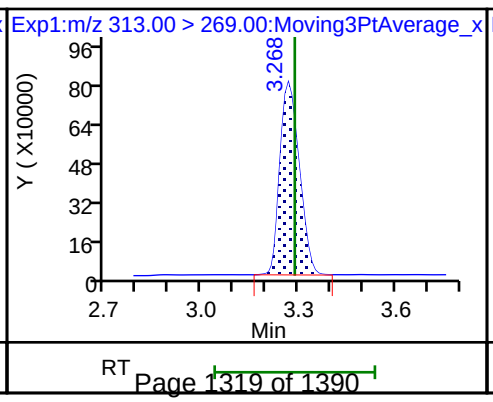

8 4:2 FTS



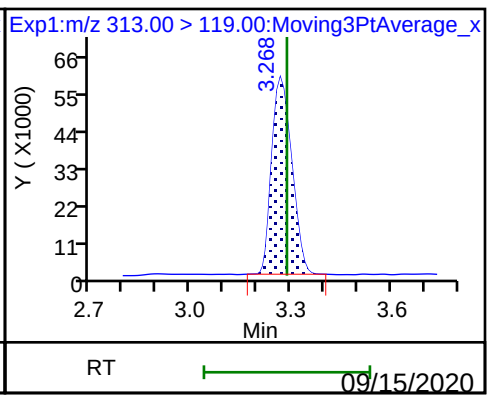

D 11 13C2 PFHxA



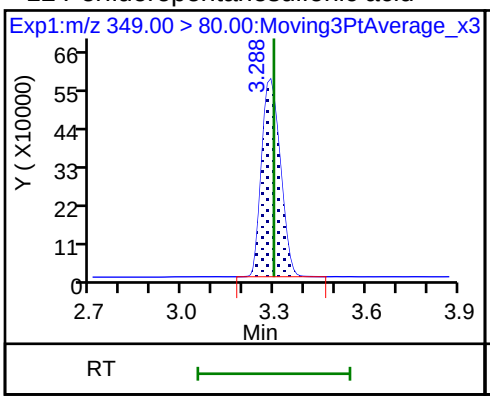

10 Perfluorohexanoic acid



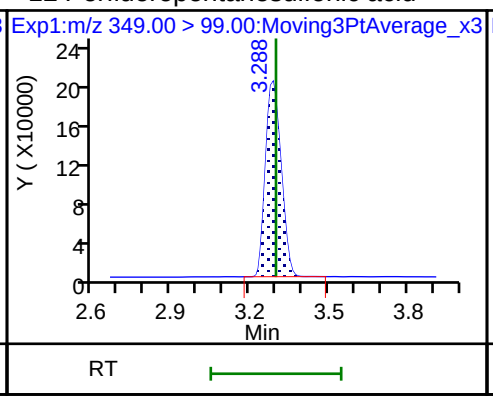

10 Perfluorohexanoic acid



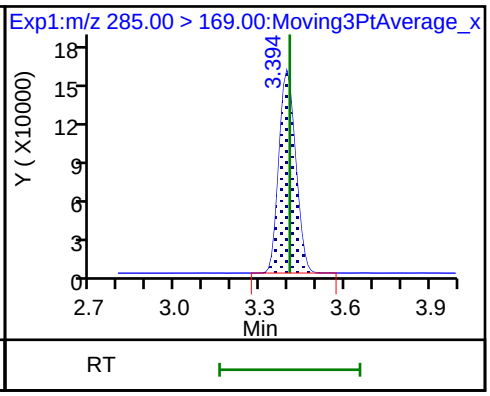
12 Perfluoropentanesulfonic acid



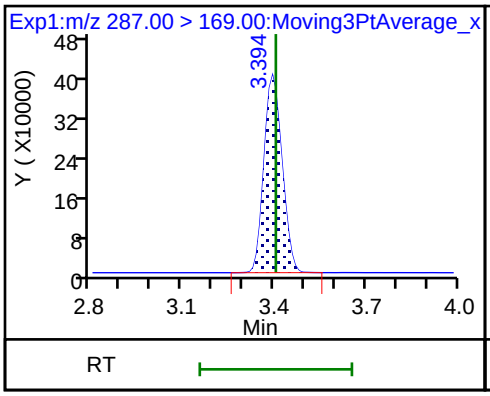

12 Perfluoropentanesulfonic acid



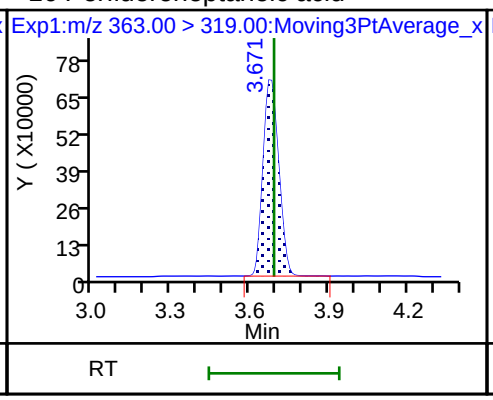

13 HPFO-DA



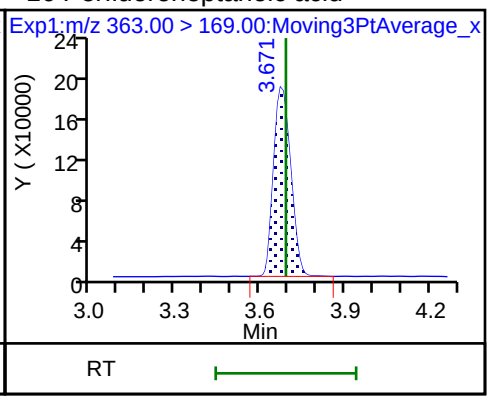

D 14 13C3 HFPO-DA



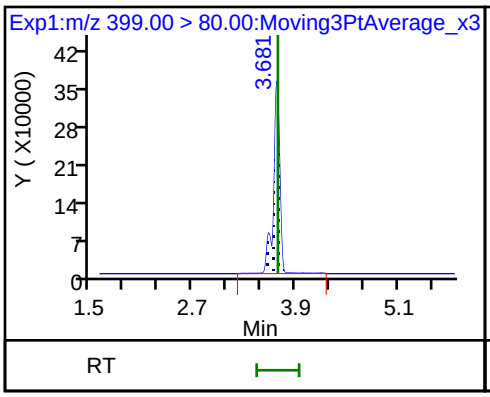

16 Perfluoroheptanoic acid



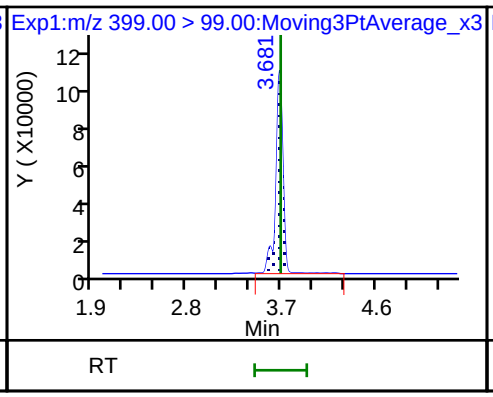

16 Perfluoroheptanoic acid



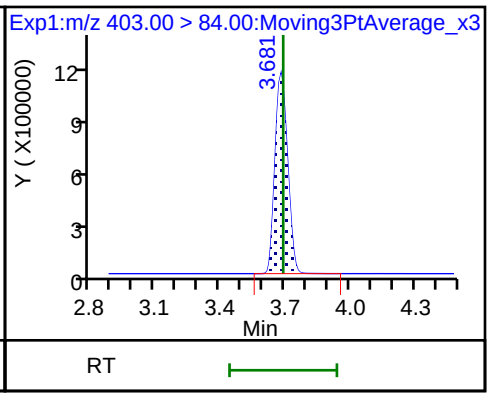

15 Perfluorohexanesulfonic acid



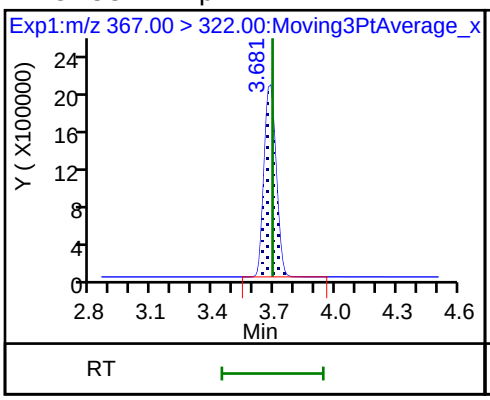

15 Perfluorohexanesulfonic acid



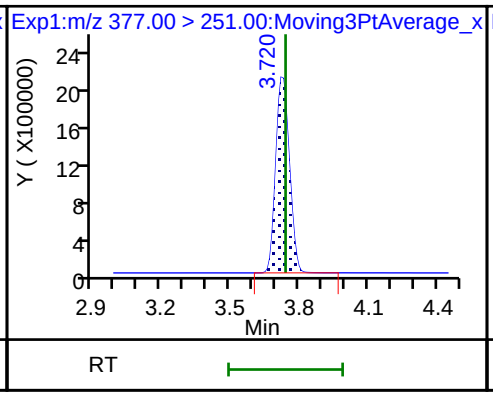

D 17 18O2 PFHxS



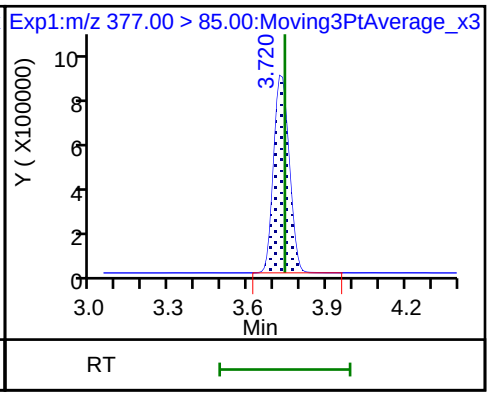

D 18 13C4 PFHpA



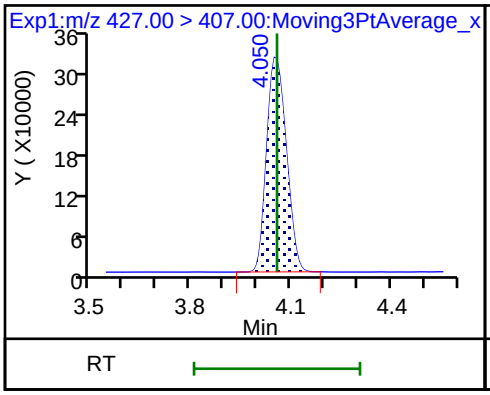

19 DONA



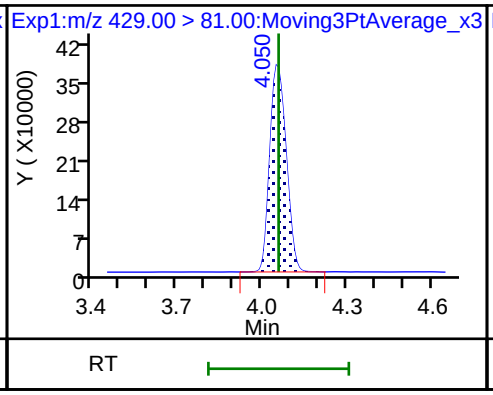

19 DONA



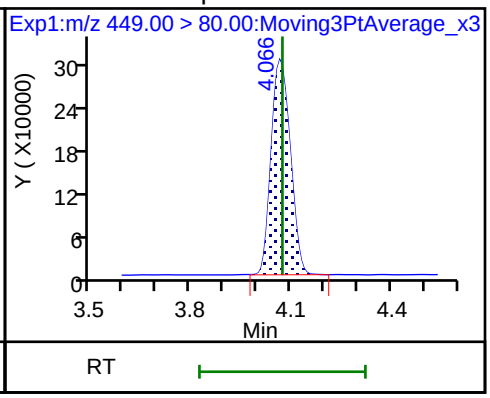
21 6:2 FTS



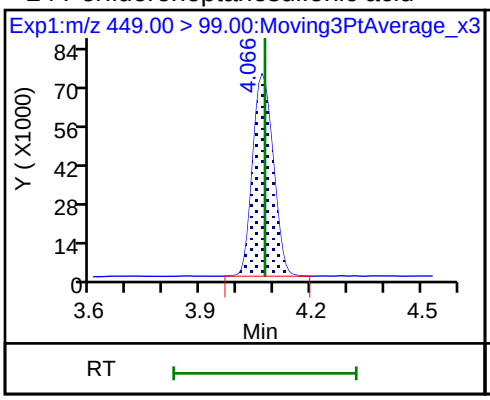

D 20 M2-6:2 FTS



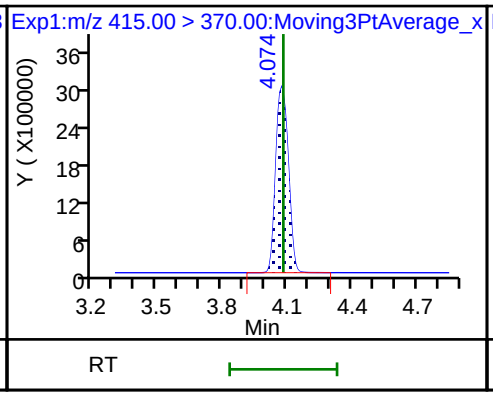

24 Perfluoroheptanesulfonic acid



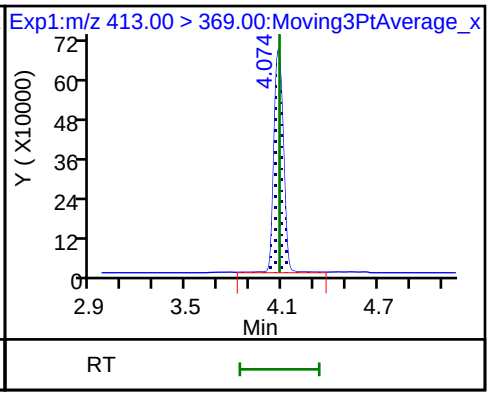

24 Perfluoroheptanesulfonic acid



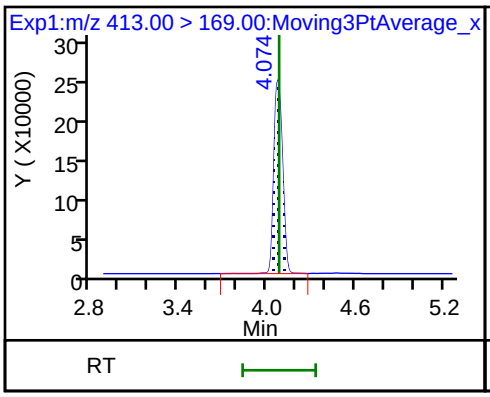

* 23 13C2 PFOA



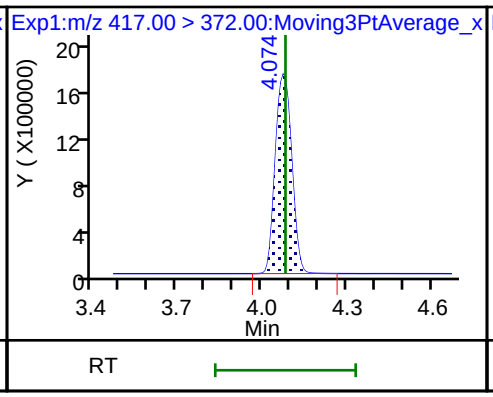

22 Perfluorooctanoic acid




22 Perfluorooctanoic acid




D 25 13C4 PFOA

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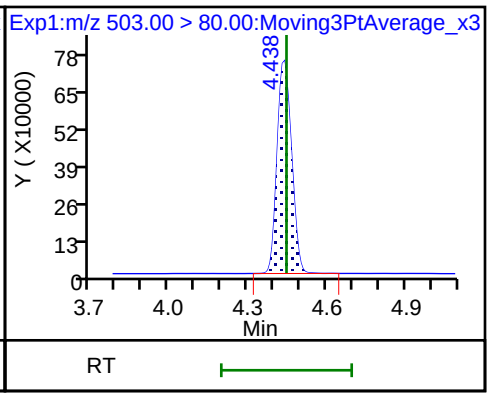
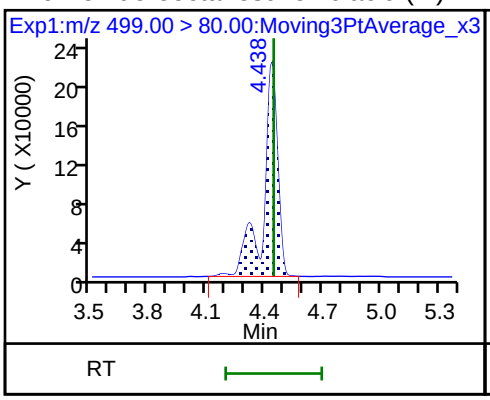
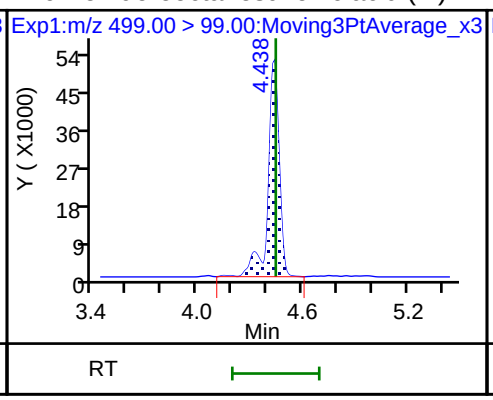


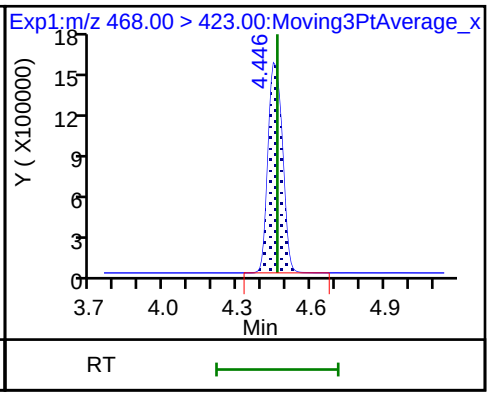

29 Perfluorooctanesulfonic acid (M)



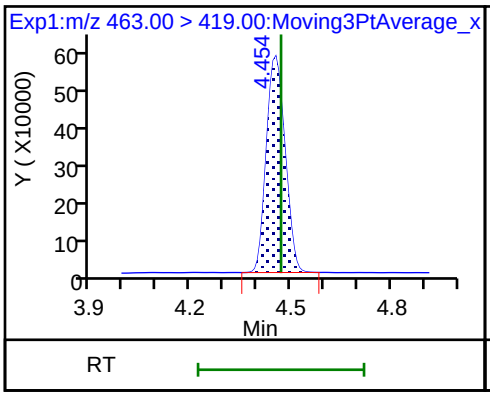

29 Perfluorooctanesulfonic acid (M)



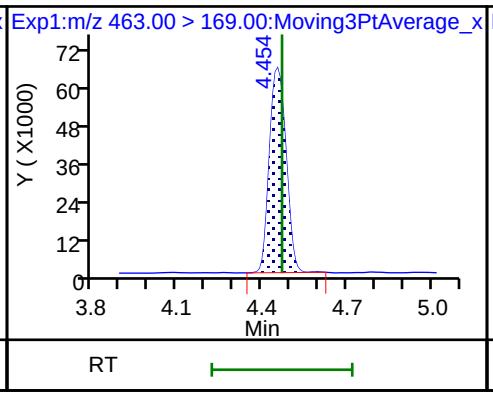

D 30 13C5 PFNA



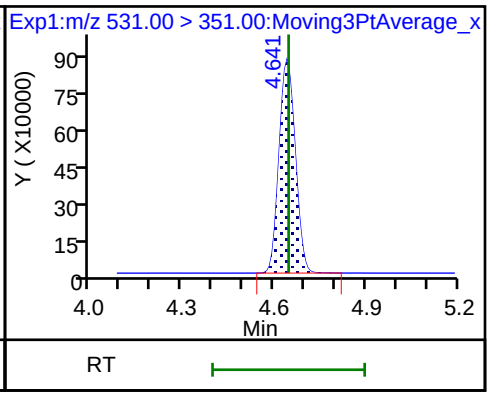
31 Perfluorononanoic acid



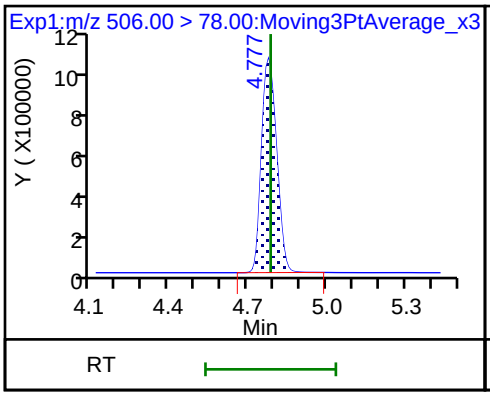

31 Perfluorononanoic acid



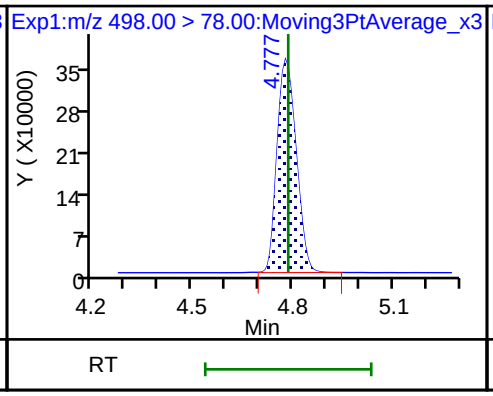

32 9ClFOS



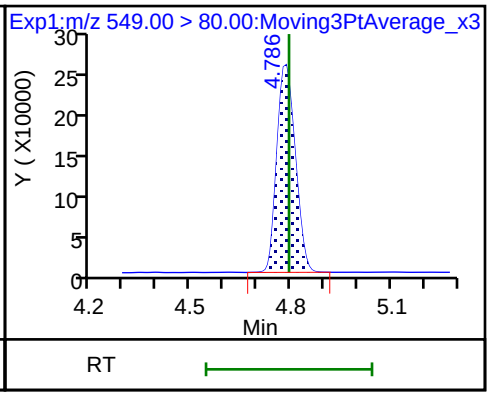

D 33 13C8 FOSA



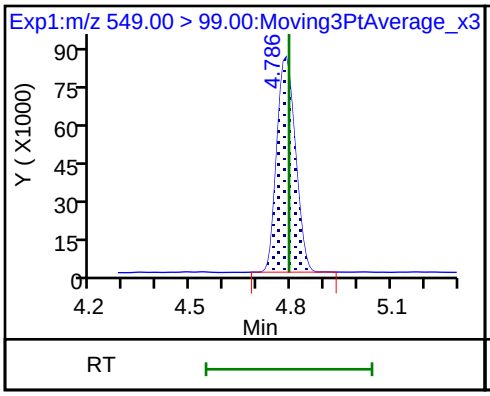

34 Perfluorooctanesulfonamide



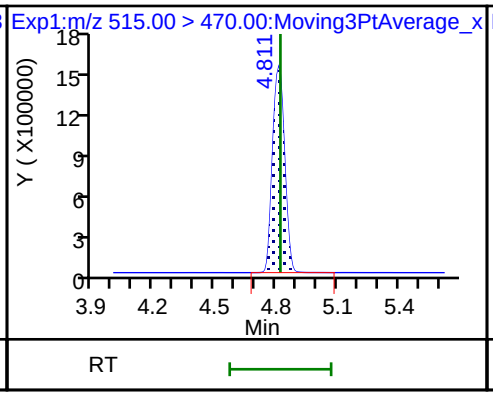

35 Perfluorononanesulfonic acid



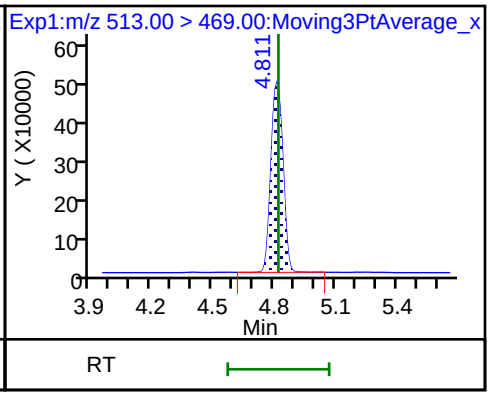

35 Perfluorononanesulfonic acid



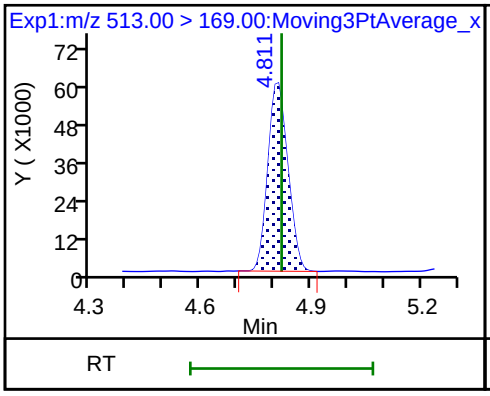

D 39 13C2 PFDA



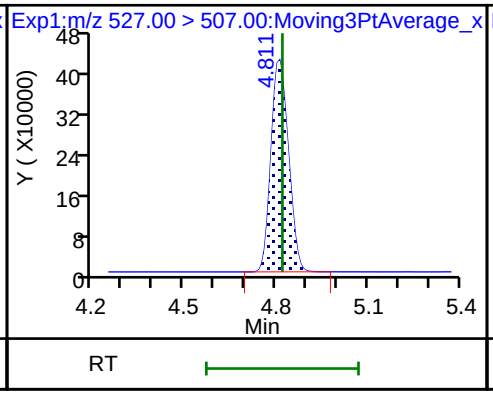

37 Perfluorodecanoic acid



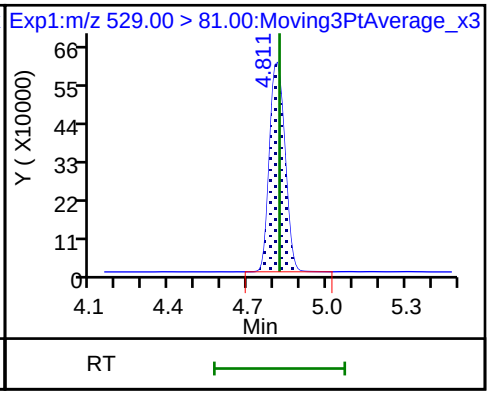

37 Perfluorodecanoic acid



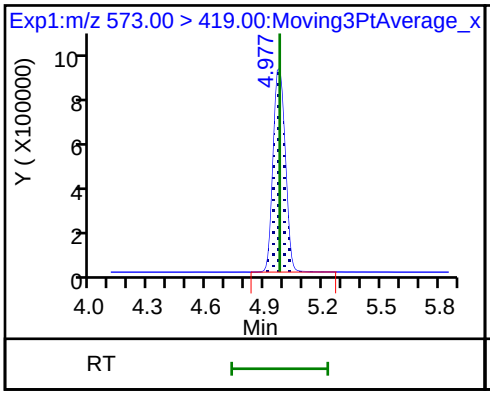

36 8:2 FTS



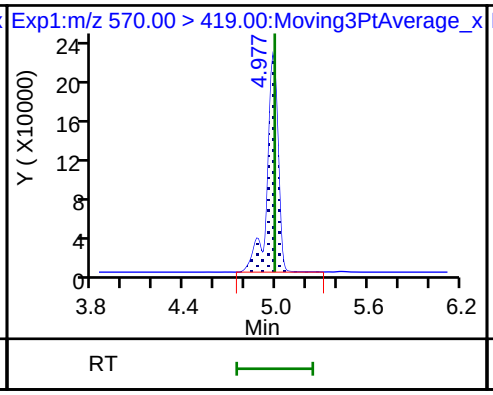

D 38 M2-8:2 FTS



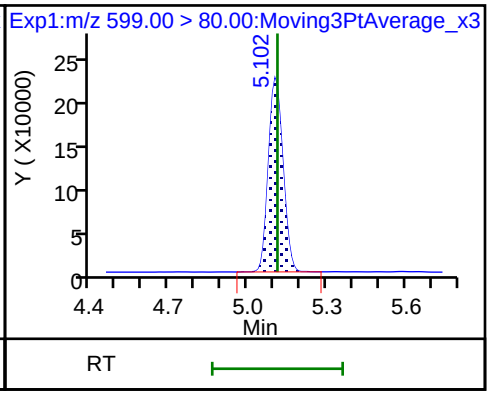
D 40 d3-NMeFOSAA



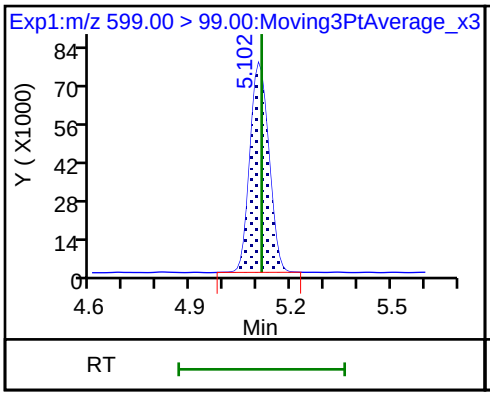

41 NMeFOSAA



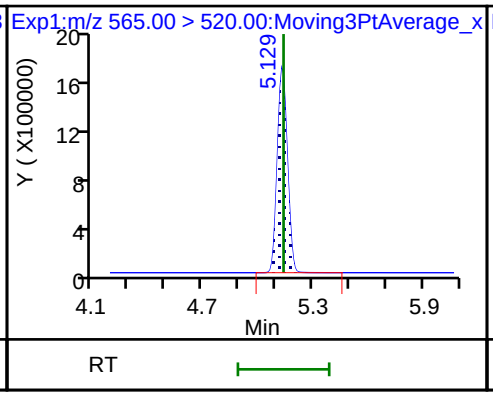

42 Perfluorodecanesulfonic acid



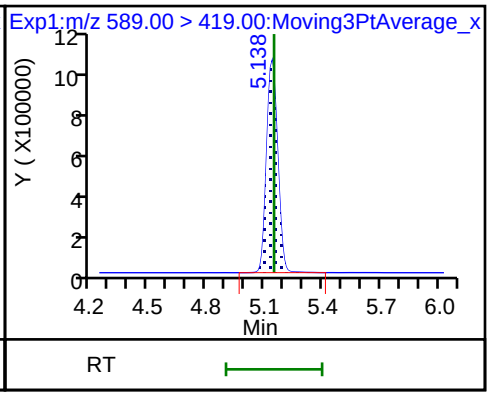

42 Perfluorodecanesulfonic acid



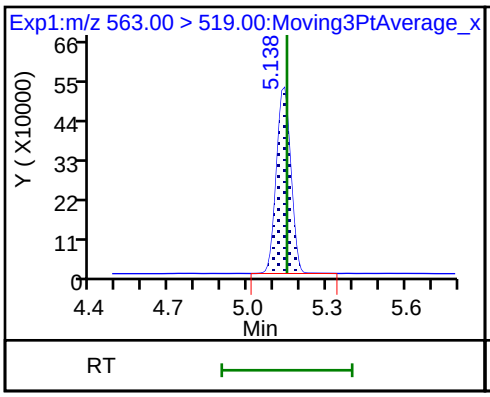

D 43 13C2 PFUnA



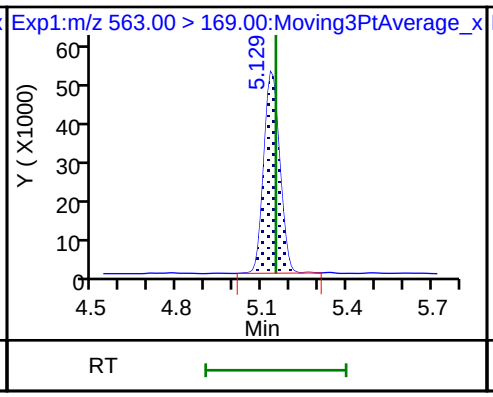

D 44 d5-NEtFOSAA



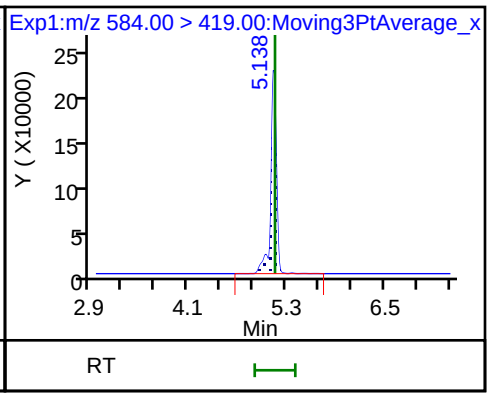

45 Perfluoroundecanoic acid



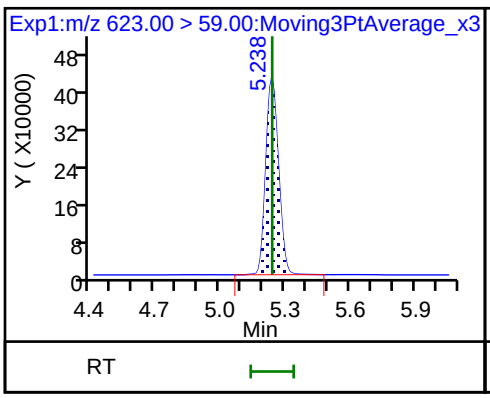

45 Perfluoroundecanoic acid



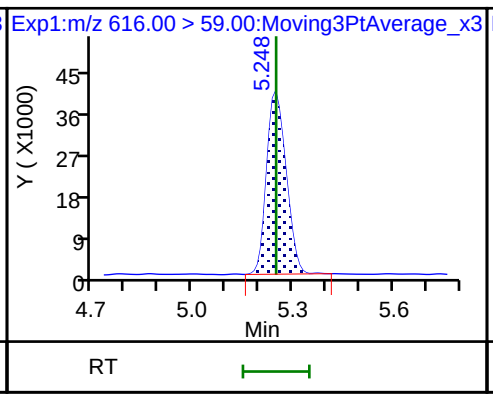

46 NEtFOSA



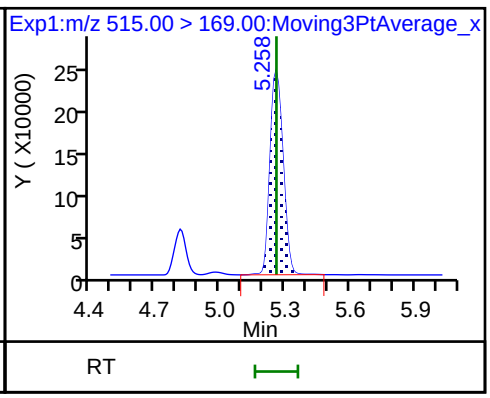

D 47 d7-N-MeFOSE-M



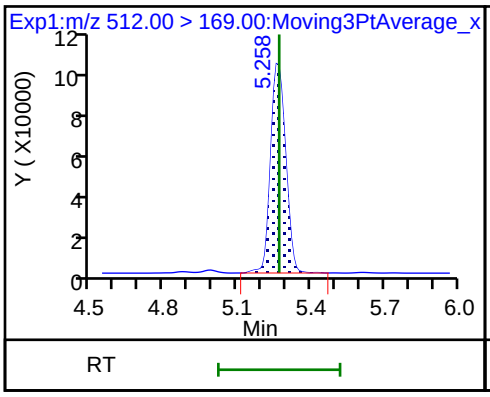

48 N-MeFOSE-M



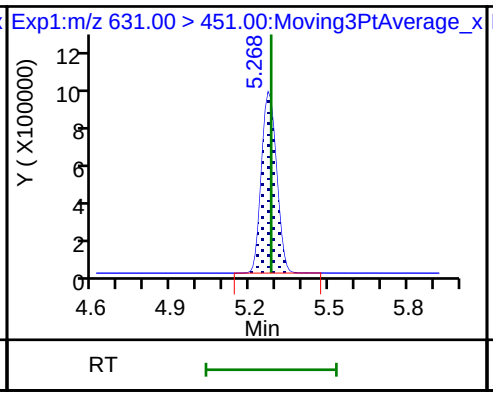

D 49 d-N-MeFOSA-M



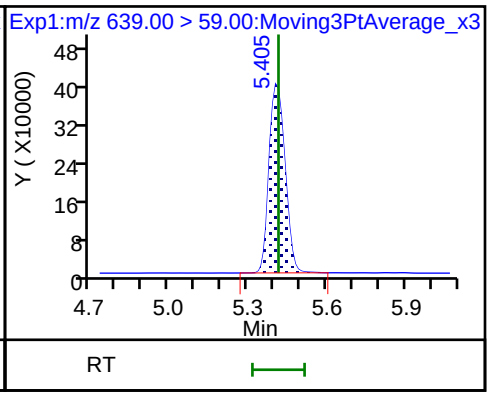
50 NMeFOSA



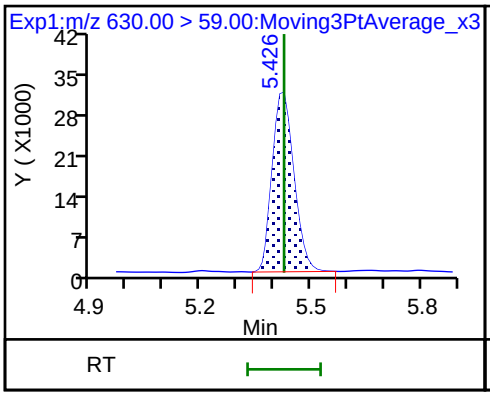

51 11ClFOS



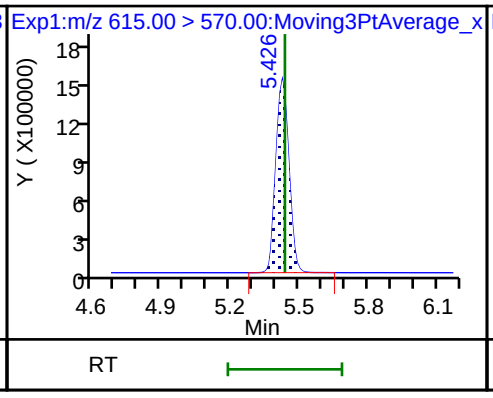

D 52 d9-N-EtFOSE-M



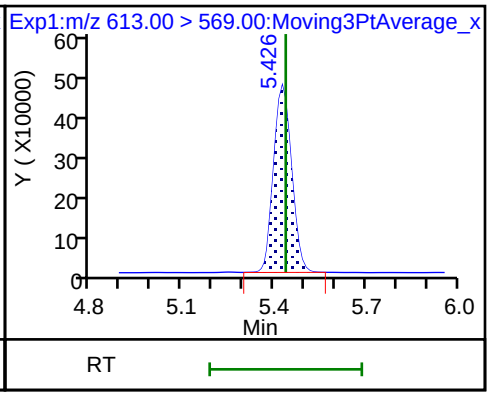

53 N-EtFOSE-M



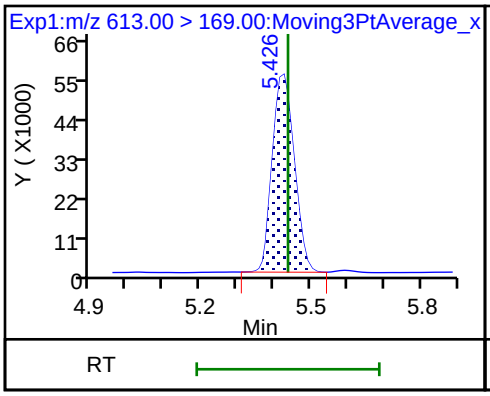

D 56 13C2 PFDoA



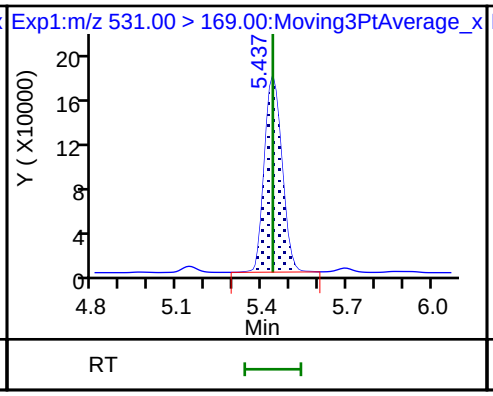

57 Perfluorododecanoic acid



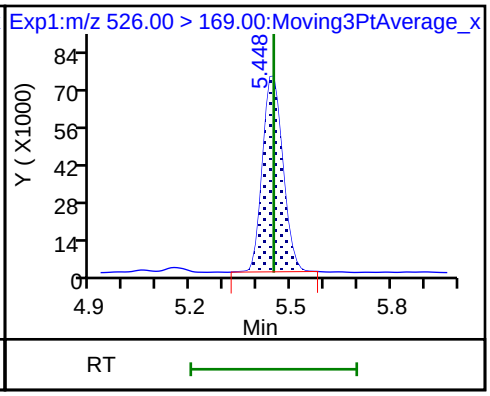

57 Perfluorododecanoic acid



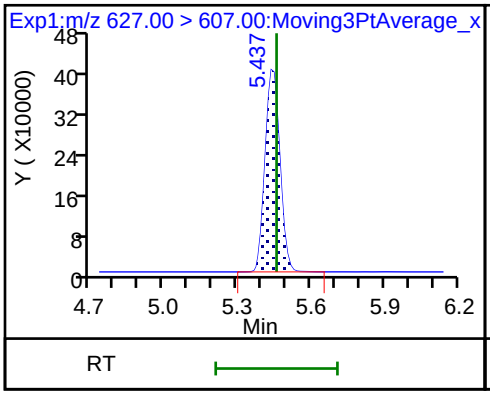

D 54 d-N-EtFOSA-M



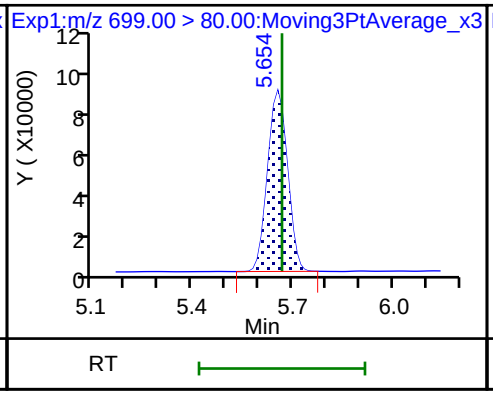

55 N-EtFOSA-M



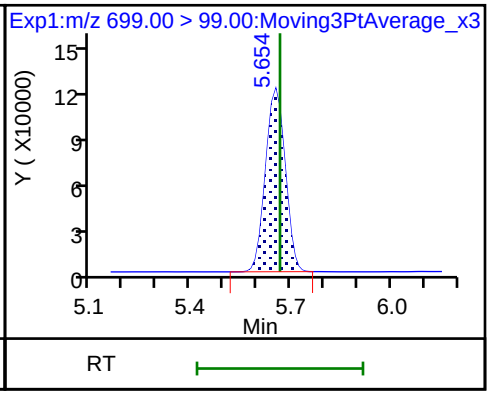

58 10:2 FTS



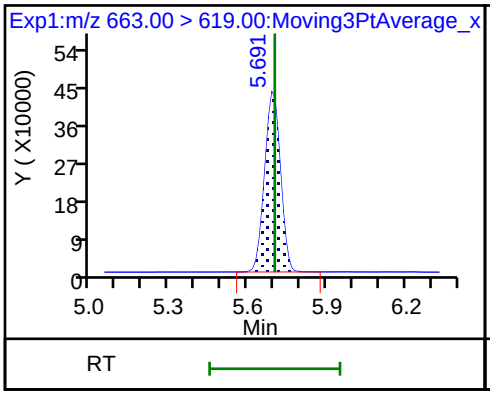

59 PFDoS



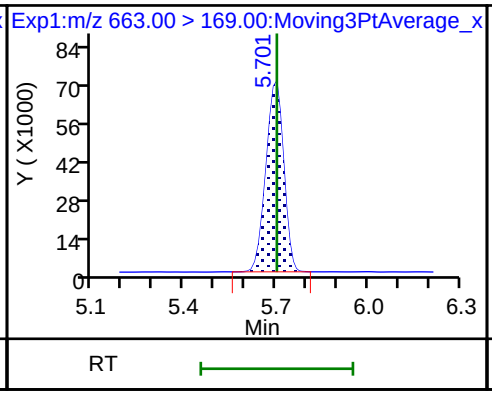

59 PFDoS



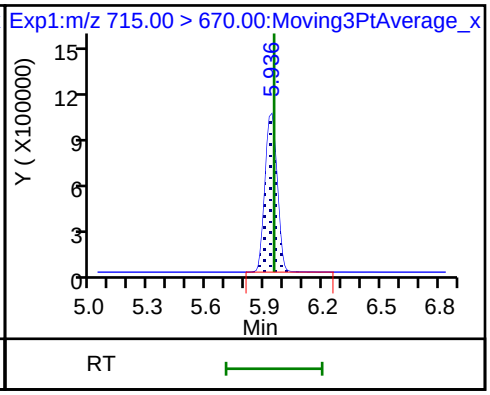
60 Perfluorotridecanoic acid



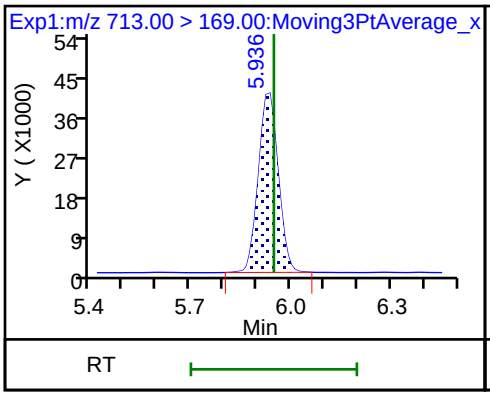

60 Perfluorotridecanoic acid



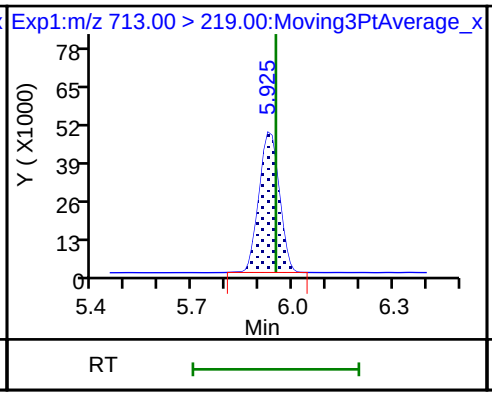

D 61 13C2 PFTeDA



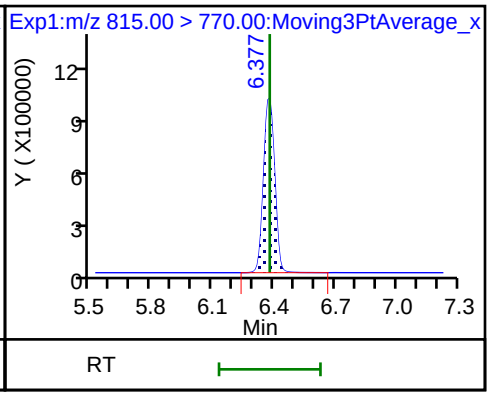

62 Perfluorotetradecanoic acid



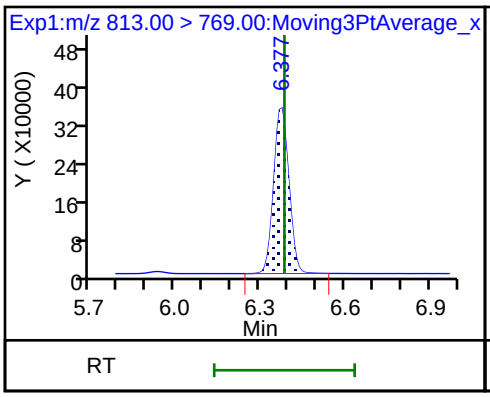

62 Perfluorotetradecanoic acid



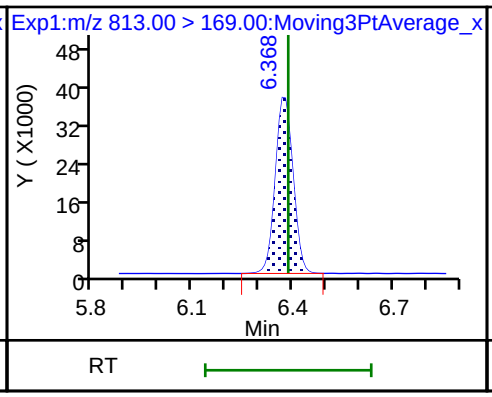

D 64 13C2 PFHxDA



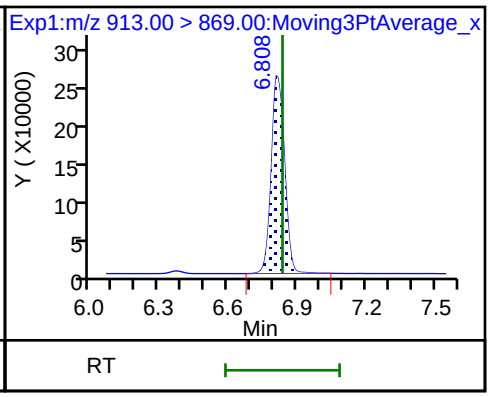

63 Perfluorohexadecanoic acid



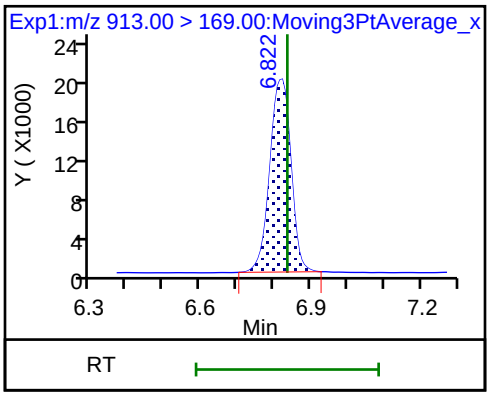

63 Perfluorohexadecanoic acid




65 Perfluorooctadecanoic acid




65 Perfluorooctadecanoic acid



Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

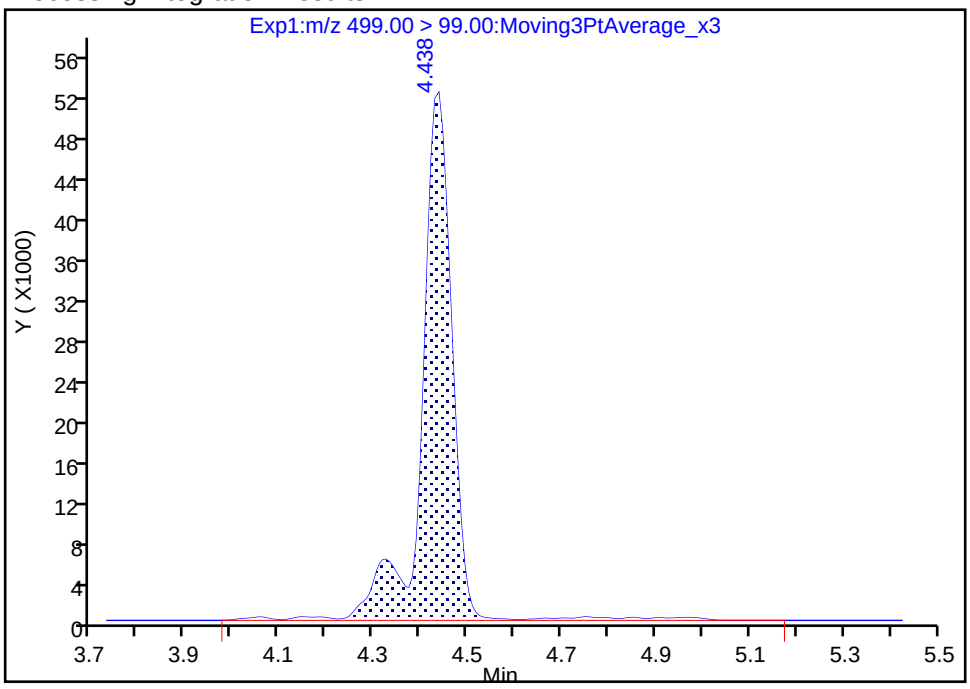
Data File: \\chromfs\Sacramento\ChromData\A18\20200910-103041.b\2020.09.10_A18_PFC_A_075.d
Injection Date: 10-Sep-2020 15:20:29 Instrument ID: A18
Lims ID: LCS 320-410910/2-A
Client ID:
Operator ID: TAISACA18-PC\A-18 ALS Bottle#: 39 Worklist Smp#: 3
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFAS_A18V2 Limit Group: LC PFC ICAL
Column: Gemini C18 3um 3mm x 50 mm ( 3.00mm) Detector EXP1

## 29 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 2

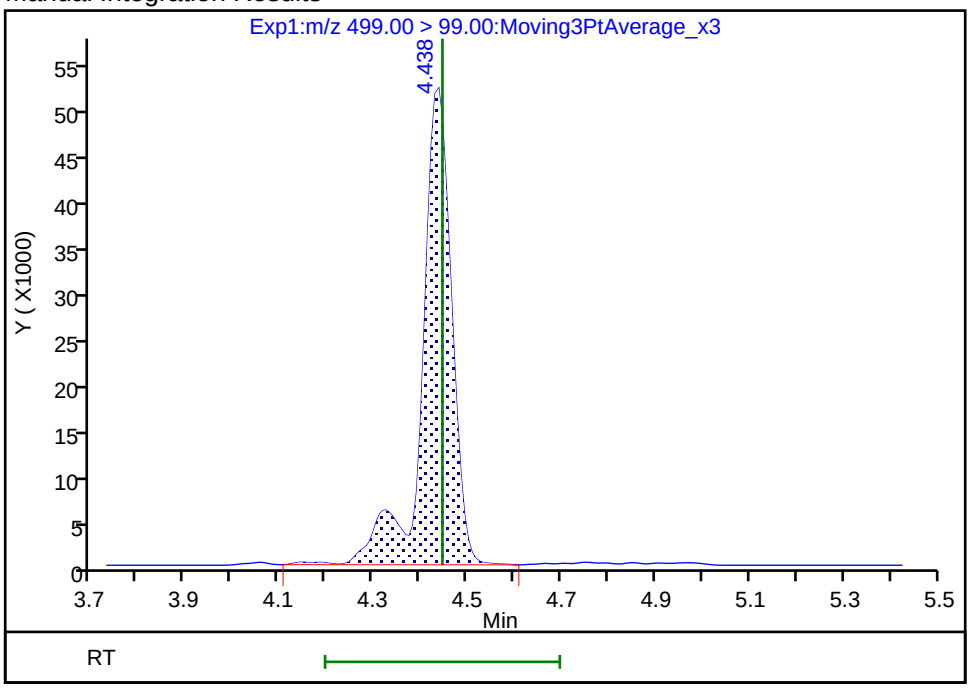
Processing Integration Results

RT: 4.44
Area: 238881
Amount: 0.679353
Amount Units: ng/ml




Manual Integration Results

RT: 4.44
Area: 231062
Amount: 0.887574
Amount Units: ng/ml




Reviewer: sanjumnair, 11-Sep-2020 08:28:25
Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

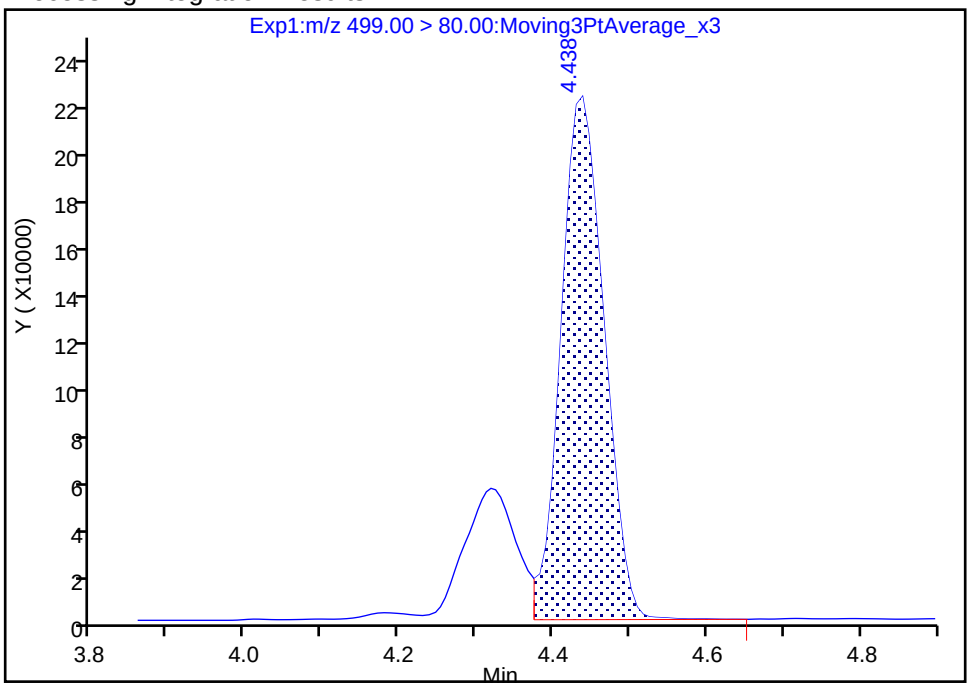
Data File: \\chromfs\Sacramento\ChromData\A18\20200910-103041.b\2020.09.10_A18_PFC_A_075.d
Injection Date: 10-Sep-2020 15:20:29 Instrument ID: A18
Lims ID: LCS 320-410910/2-A
Client ID:
Operator ID: TAISACA18-PC\A-18 ALS Bottle#: 39 Worklist Smp#: 3
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFAS_A18V2 Limit Group: LC PFC ICAL
Column: Gemini C18 3um 3mm x 50 mm ( 3.00mm) Detector EXP1

## 29 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 1

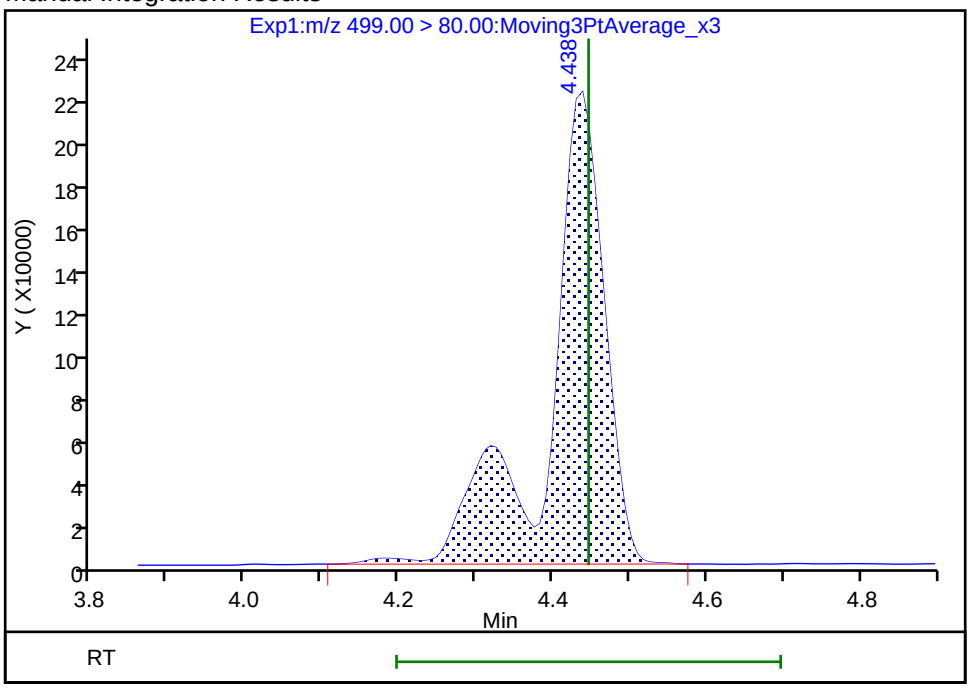
Processing Integration Results

RT: 4.44
Area: 844694
Amount: 0.679353
Amount Units: ng/ml




Manual Integration Results

RT: 4.44
Area: 1103591
Amount: 0.887574
Amount Units: ng/ml




Reviewer: sanjumnair, 11-Sep-2020 08:28:31
Audit Action: Manually Integrated Audit Reason: Baseline

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento  Job No.: 460-217547-1

SDG No.:

Client Sample ID:  Lab Sample ID: LCS 320-411226/2-A

Matrix: Water  Lab File ID: 2020.09.11_A9_PFC_AA_026.d

Analysis Method: 537 (modified)  Date Collected:

Extraction Method: 3535  Date Extracted: 09/10/2020 18:32

Sample wt/vol: 250(mL)  Date Analyzed: 09/11/2020 13:24

Con. Extract Vol.: 10.00(mL)  Dilution Factor: 1

Injection Volume: 20(uL)  GC Column: Acquity  ID: 2.1(mm)

% Moisture:  GPC Cleanup:(Y/N) N

Analysis Batch No.: 411454  Units: ng/L

| CAS NO. | COMPOUND NAME | RESULT | Q | RL | MDL |
|---|---|---|---|---|---|
| 375-22-4 | Perfluorobutanoic acid (PFBA) | 43.69 | | 2.00 | 0.35 |
| 2706-90-3 | Perfluoropentanoic acid (PFPeA) | 39.79 | | 2.00 | 0.49 |
| 307-24-4 | Perfluorohexanoic acid (PFHxA) | 42.56 | | 2.00 | 0.58 |
| 375-85-9 | Perfluoroheptanoic acid (PFHpA) | 42.66 | | 2.00 | 0.25 |
| 335-67-1 | Perfluorooctanoic acid (PFOA) | 41.65 | | 2.00 | 0.85 |
| 375-95-1 | Perfluorononanoic acid (PFNA) | 42.80 | | 2.00 | 0.27 |
| 335-76-2 | Perfluorodecanoic acid (PFDA) | 43.22 | | 2.00 | 0.31 |
| 2058-94-8 | Perfluoroundecanoic acid (PFUnA) | 42.76 | | 2.00 | 1.10 |
| 307-55-1 | Perfluorododecanoic acid (PFDoA) | 39.08 | | 2.00 | 0.55 |
| 72629-94-8 | Perfluorotridecanoic acid (PFTriA) | 37.81 | | 2.00 | 1.30 |
| 376-06-7 | Perfluorotetradecanoic acid (PFTeA) | 38.52 | | 2.00 | 0.29 |
| 375-73-5 | Perfluorobutanesulfonic acid (PFBS) | 38.07 | | 2.00 | 0.20 |
| 355-46-4 | Perfluorohexanesulfonic acid (PFHxS) | 34.33 | | 2.00 | 0.17 |
| 375-92-8 | Perfluoroheptanesulfonic Acid (PFHpS) | 40.41 | | 2.00 | 0.19 |
| 1763-23-1 | Perfluorooctanesulfonic acid (PFOS) | 38.35 | | 2.00 | 0.54 |
| 335-77-3 | Perfluorodecanesulfonic acid (PFDS) | 38.33 | | 2.00 | 0.32 |
| 754-91-6 | Perfluorooctanesulfonamide (FOSA) | 42.22 | | 2.00 | 0.35 |
| 2355-31-9 | N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA) | 45.82 | | 20.0 | 3.10 |
| 2991-50-6 | N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA) | 41.81 | | 20.0 | 1.90 |
| 27619-97-2 | 6:2 FTS | 37.34 | | 20.0 | 2.00 |
| 39108-34-4 | 8:2 FTS | 39.15 | | 20.0 | 2.00 |

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento  Job No.: 460-217547-1

SDG No.:

Client Sample ID:  Lab Sample ID: LCS 320-411226/2-A

Matrix: Water  Lab File ID: 2020.09.11_A9_PFC_AA_026.d

Analysis Method: 537 (modified)  Date Collected:

Extraction Method: 3535  Date Extracted: 09/10/2020 18:32

Sample wt/vol: 250(mL)  Date Analyzed: 09/11/2020 13:24

Con. Extract Vol.: 10.00(mL)  Dilution Factor: 1

Injection Volume: 20(uL)  GC Column: Acquity  ID: 2.1(mm)

% Moisture:  GPC Cleanup:(Y/N) N

Analysis Batch No.: 411454  Units: ng/L

| CAS NO. | ISOTOPE DILUTION | %REC | Q | LIMITS |
|---|---|---|---|---|
| STL00992 | 13C4 PFBA | 90 | | 25-150 |
| STL01893 | 13C5 PFPeA | 94 | | 25-150 |
| STL00993 | 13C2 PFHxA | 90 | | 25-150 |
| STL01892 | 13C4 PFHpA | 96 | | 25-150 |
| STL00990 | 13C4 PFOA | 93 | | 25-150 |
| STL00995 | 13C5 PFNA | 100 | | 25-150 |
| STL00996 | 13C2 PFDA | 99 | | 25-150 |
| STL00997 | 13C2 PFUnA | 100 | | 25-150 |
| STL00998 | 13C2 PFDoA | 95 | | 25-150 |
| STL02116 | 13C2 PFTeDA | 92 | | 25-150 |
| STL02337 | 13C3 PFBS | 96 | | 25-150 |
| STL00994 | 18O2 PFHxS | 98 | | 25-150 |
| STL00991 | 13C4 PFOS | 99 | | 25-150 |
| STL01056 | 13C8 FOSA | 88 | | 25-150 |
| STL02118 | d3-NMeFOSAA | 76 | | 25-150 |
| STL02117 | d5-NEtFOSAA | 84 | | 25-150 |
| STL02279 | M2-6:2 FTS | 101 | | 25-150 |
| STL02280 | M2-8:2 FTS | 96 | | 25-150 |

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\A9\20200911-103120.b\2020.09.11_A9_PFC_AA_026.d
Lims ID: LCS 320-411226/2-A
Client ID:
Sample Type: LCS
Inject. Date: 11-Sep-2020 13:24:21 ALS Bottle#: 14 Worklist Smp#: 3
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Sample Info: lcs 320-411226/2-a
Misc. Info.: Plate: 1 Rack: 3
Operator ID: SACINSTRLCMS02 Instrument ID: A9

Method: \\chromfs\Sacramento\ChromData\A9\20200911-103120.b\PFAS_A9.m
Limit Group: LC PFC ICAL
Last Update: 11-Sep-2020 16:02:25 Calib Date: 10-Sep-2020 12:29:20
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\A9\20200910-102999.b\2020.09.10_A9 _PFC_ICAL_AA_022.d

Column 1 : Det: EXP1
Process Host: CTX1061

First Level Reviewer: zibaa Date: 11-Sep-2020 16:02:25
Ratio Calibration: CCV Sample: \\chromfs\Sacramento\ChromData\A9\20200911-103120.b\2020.09.11_A9_PFC_AA_024.d

| Signal | RT | EXP RT | DLT RT | REL RT | Response | Amount ng/ml | Ratio(Limits) | %Rec | S/N | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| D 1 13C4 PFBA | | | | | | | | | | |
| 217.00 > 172.00 | 1.882 | 1.893 | -0.011 | 0.564 | 7299665 | 2.25 | | 89.9 | 2705 | |
| 2 Perfluorobutanoic acid | | | | | | | | | | |
| 212.90 > 169.00 | 1.887 | 1.893 | -0.006 | 1.003 | 2785815 | 1.09 | | 109 | 78.8 | |
| D 4 13C5 PFPeA | | | | | | | | | | |
| 267.90 > 223.00 | 2.190 | 2.198 | -0.008 | 0.656 | 6407325 | 2.34 | | 93.6 | 2504 | |
| 3 Perfluoropentanoic acid | | | | | | | | | | |
| 262.90 > 219.00 | 2.190 | 2.198 | -0.008 | 1.000 | 2594232 | 0.99 | | 99.5 | 104 | |
| D 6 13C3 PFBS | | | | | | | | | | |
| 301.90 > 80.00 | 2.214 | 2.223 | -0.009 | 0.663 | 12114457 | 2.24 | | 96.3 | 5446 | |
| 5 Perfluorobutanesulfonic acid | | | | | | | | | | |
| 298.90 > 80.00 | 2.214 | 2.233 | -0.019 | 1.000 | 4947145 | 0.9517 | Target=3.28 | 108 | 291 | |
| 298.90 > 99.00 | 2.223 | 2.233 | -0.010 | 1.004 | 1468658 | | 3.37(1.64-4.92) | | 224 | |
| 9 1H,1H,2H,2H-perfluorohexanesulfo | | | | | | | | | | |
| 327.00 > 307.00 | 2.504 | 2.514 | -0.010 | 1.000 | 1032914 | 0.99 | | 106 | 4271 | |
| D 8 M2-4:2 FTS | | | | | | | | | | |
| 329.00 > 81.00 | 2.504 | 2.514 | -0.010 | 0.750 | 1227814 | 2.29 | | 97.9 | 643 | |
| D 10 13C2 PFHxA | | | | | | | | | | |
| 315.00 > 270.00 | 2.546 | 2.557 | -0.011 | 0.763 | 5704182 | 2.24 | | 89.6 | 3008 | |
| 11 Perfluorohexanoic acid | | | | | | | | | | |
| 313.00 > 269.00 | 2.546 | 2.557 | -0.011 | 1.000 | 2025571 | 1.06 | Target=10.43 | 106 | 153 | |
| 313.00 > 119.00 | 2.546 | 2.557 | -0.011 | 1.000 | 198499 | | 10.20(5.21-15.64) | | 126 | |
| 12 Perfluoropentanesulfonic acid | | | | | | | | | | |
| 349.00 > 80.00 | 2.557 | 2.568 | -0.011 | 1.155 | 2153143 | 1.03 | Target=2.07 | 110 | 621 | |
| 349.00 > 99.00 | 2.557 | 2.568 | -0.011 | 1.155 | 1004327 | | 2.14(1.04-3.11) | | 590 | |
| D 13 13C3 HFPO-DA | | | | | | | | | | |
| 287.00 > 169.00 | 2.660 | 2.673 | -0.013 | 0.797 | 3888511 | 2.23 | | 89.0 | 3089 | |

| Signal | RT | EXP RT | DLT RT | REL RT | Response | Amount ng/ml | Ratio(Limits) | %Rec | S/N | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| 14 Perfluoro(2-propoxypropanoic) ac | | | | | | | | | | |
| 285.00 > 169.00 | 2.660 | 2.673 | -0.013 | 1.000 | 652663 | 1.06 | | 106 | 2066 | |
| D 15 13C4 PFHpA | | | | | | | | | | |
| 367.00 > 322.00 | 2.934 | 2.940 | -0.006 | 0.879 | 5927676 | 2.39 | | 95.7 | 4082 | |
| D 17 18O2 PFHxS | | | | | | | | | | |
| 403.00 > 84.00 | 2.940 | 2.946 | -0.006 | 0.881 | 5983510 | 2.31 | | 97.8 | 4857 | |
| 16 Perfluorohexanesulfonic acid | | | | | | | | | | M |
| 399.00 > 80.00 | 2.940 | 2.946 | -0.006 | 1.000 | 2561356 | 0.8583 | Target=3.49 | 94.3 | 644 | |
| 399.00 > 99.00 | 2.940 | 2.946 | -0.006 | 1.000 | 787809 | | 3.25(1.75-5.24) | | 417 | M |
| 18 Perfluoroheptanoic acid | | | | | | | | | | |
| 363.00 > 319.00 | 2.934 | 2.946 | -0.012 | 1.000 | 2804811 | 1.07 | Target=3.74 | 107 | 324 | |
| 363.00 > 169.00 | 2.934 | 2.946 | -0.012 | 1.000 | 714703 | | 3.92(1.87-5.61) | | 664 | |
| 19 DONA | | | | | | | | | | |
| 377.00 > 251.00 | 2.980 | 2.993 | -0.013 | 0.801 | 4659521 | 0.9579 | Target=1.88 | 102 | 3536 | |
| 377.00 > 85.00 | 2.980 | 2.993 | -0.013 | 0.801 | 2543387 | | 1.83(0.94-2.82) | | 2377 | |
| D 20 M2-6:2 FTS | | | | | | | | | | |
| 429.00 > 81.00 | 3.324 | 3.324 | 0.0 | 0.996 | 1107121 | 2.39 | | 101 | 970 | |
| 22 1H,1H,2H,2H-perfluorooctanesulfo | | | | | | | | | | |
| 427.00 > 407.00 | 3.324 | 3.331 | -0.007 | 1.000 | 670798 | 0.9334 | | 98.5 | 586 | |
| D 26 13C4 PFOA | | | | | | | | | | |
| 417.00 > 372.00 | 3.338 | 3.345 | -0.007 | 1.000 | 5413100 | 2.33 | | 93.2 | 3446 | |
| 24 Perfluorooctanoic acid | | | | | | | | | | |
| 413.00 > 369.00 | 3.338 | 3.345 | -0.007 | 1.000 | 2431693 | 1.04 | Target=2.44 | 104 | 330 | |
| 413.00 > 169.00 | 3.338 | 3.345 | -0.007 | 1.000 | 982063 | | 2.48(1.22-3.66) | | 902 | |
| * 25 13C2 PFOA | | | | | | | | | | |
| 415.00 > 370.00 | 3.338 | 3.345 | -0.007 | | 6014667 | 2.50 | | | 5815 | |
| 23 Perfluoroheptanesulfonic acid | | | | | | | | | | |
| 449.00 > 80.00 | 3.338 | 3.345 | -0.007 | 0.897 | 2505586 | 1.01 | Target=3.67 | 106 | 871 | |
| 449.00 > 99.00 | 3.338 | 3.345 | -0.007 | 0.897 | 708503 | | 3.54(1.84-5.51) | | 1269 | |
| D 31 13C4 PFOS | | | | | | | | | | |
| 503.00 > 80.00 | 3.720 | 3.720 | 0.0 | 1.114 | 6411677 | 2.37 | | 99.3 | 1898 | |
| 28 Perfluorooctanesulfonic acid | | | | | | | | | | M |
| 499.00 > 80.00 | 3.720 | 3.727 | -0.007 | 1.000 | 2674156 | 0.9588 | Target=4.47 | 103 | 287 | |
| 499.00 > 99.00 | 3.720 | 3.727 | -0.007 | 1.000 | 623118 | | 4.29(2.24-6.71) | | 958 | M |
| D 29 13C5 PFNA | | | | | | | | | | |
| 468.00 > 423.00 | 3.727 | 3.735 | -0.008 | 1.117 | 5034826 | 2.50 | | 99.9 | 6636 | |
| 30 Perfluorononanoic acid | | | | | | | | | | |
| 463.00 > 419.00 | 3.735 | 3.735 | 0.0 | 1.002 | 2145277 | 1.07 | Target=4.27 | 107 | 876 | |
| 463.00 > 169.00 | 3.735 | 3.735 | 0.0 | 1.002 | 489552 | | 4.38(2.13-6.40) | | 834 | |
| 32 9-Chlorohexadecafluoro-3-oxanona | | | | | | | | | | |
| 531.00 > 351.00 | 3.918 | 3.928 | -0.010 | 1.053 | 1588922 | 0.9440 | | 101 | 3328 | |
| 35 Perfluorononanesulfonic acid | | | | | | | | | | |
| 549.00 > 80.00 | 4.065 | 4.074 | -0.009 | 1.093 | 1989582 | 0.9770 | Target=5.58 | 102 | 1163 | |
| 549.00 > 99.00 | 4.065 | 4.074 | -0.009 | 1.093 | 325960 | | 6.10(2.79-8.37) | | 1439 | |
| D 36 13C8 FOSA | | | | | | | | | | |
| 506.00 > 78.00 | 4.065 | 4.074 | -0.009 | 1.218 | 2798523 | 2.20 | | 88.1 | 2843 | |
| 34 Perfluorooctanesulfonamide | | | | | | | | | | |
| 498.00 > 78.00 | 4.074 | 4.074 | 0.0 | 1.002 | 3286940 | 1.06 | | 106 | 2643 | |

| Signal | RT | EXP RT | DLT RT | REL RT | Response | Amount ng/ml | Ratio(Limits) | %Rec | S/N | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| D 33 13C2 PFDA | | | | | | | | | | |
| 515.00 > 470.00 | 4.092 | 4.100 | -0.008 | 1.226 | 6341989 | 2.48 | | 99.2 | 6118 | |
| 38 Perfluorodecanoic acid | | | | | | | | | | |
| 513.00 > 469.00 | 4.092 | 4.100 | -0.008 | 1.000 | 2735858 | 1.08 | Target=14.43 | 108 | 991 | |
| 513.00 > 169.00 | 4.092 | 4.100 | -0.008 | 1.000 | 194168 | | 14.09(7.21-21.64) | | 332 | |
| 39 1H,1H,2H,2H-perfluorodecanesulfo | | | | | | | | | | |
| 527.00 > 507.00 | 4.092 | 4.100 | -0.008 | 1.000 | 684985 | 0.9786 | | 102 | 2063 | |
| D 37 M2-8:2 FTS | | | | | | | | | | |
| 529.00 > 81.00 | 4.092 | 4.100 | -0.008 | 1.226 | 1301074 | 2.29 | | 95.8 | 792 | |
| D 41 d3-NMeFOSAA | | | | | | | | | | |
| 573.00 > 419.00 | 4.262 | 4.262 | 0.0 | 1.277 | 2421139 | 1.90 | | 76.2 | 1821 | |
| 40 N-methylperfluorooctanesulfonami | | | | | | | | | | |
| 570.00 > 419.00 | 4.262 | 4.271 | -0.009 | 1.000 | 842362 | 1.15 | | 115 | 164 | |
| 42 Perfluorodecanesulfonic acid | | | | | | | | | | |
| 599.00 > 80.00 | 4.392 | 4.392 | 0.0 | 1.181 | 2183333 | 0.9584 | Target=4.40 | 99.4 | 726 | |
| 599.00 > 99.00 | 4.392 | 4.392 | 0.0 | 1.181 | 489073 | | 4.46(2.20-6.59) | | 1414 | |
| D 46 13C2 PFUnA | | | | | | | | | | |
| 565.00 > 520.00 | 4.418 | 4.418 | 0.0 | 1.324 | 4947905 | 2.51 | | 100 | 8633 | |
| 43 Perfluoroundecanoic acid | | | | | | | | | | |
| 563.00 > 519.00 | 4.418 | 4.418 | 0.0 | 1.000 | 1473052 | 1.07 | Target=6.35 | 107 | 1308 | |
| 563.00 > 169.00 | 4.418 | 4.418 | 0.0 | 1.000 | 210979 | | 6.98(3.17-9.52) | | 413 | |
| D 45 d5-NEtFOSAA | | | | | | | | | | |
| 589.00 > 419.00 | 4.418 | 4.426 | -0.008 | 1.324 | 1779384 | 2.09 | | 83.5 | 2251 | |
| 44 N-ethylperfluorooctanesulfonamid | | | | | | | | | | |
| 584.00 > 419.00 | 4.427 | 4.435 | -0.008 | 1.002 | 603543 | 1.05 | | 105 | 1265 | |
| D 47 d7-N-MeFOSE-M | | | | | | | | | | |
| 623.00 > 59.00 | 4.538 | 4.538 | 0.0 | 1.359 | 1490490 | 3.64 | | 29.2 | 1267 | |
| 48 2-(N-methylperfluoro-1-octanesul | | | | | | | | | | |
| 616.00 > 59.00 | 4.546 | 4.546 | 0.0 | 1.002 | 127796 | 1.03 | | 103 | 171 | |
| D 49 d-N-MeFOSA-M | | | | | | | | | | |
| 515.00 > 169.00 | 4.555 | 4.555 | 0.0 | 1.365 | 1008870 | 1.76 | | 70.5 | 174 | |
| 51 11-Chloroeicosafluoro-3-oxaundec | | | | | | | | | | |
| 631.00 > 451.00 | 4.546 | 4.555 | -0.009 | 1.222 | 2081898 | 1.05 | | 111 | 5692 | |
| 50 NMeFOSA | | | | | | | | | | |
| 512.00 > 169.00 | 4.564 | 4.564 | 0.0 | 1.002 | 443168 | 1.05 | | 105 | 719 | |
| D 53 d9-N-EtFOSE-M | | | | | | | | | | |
| 639.00 > 59.00 | 4.713 | 4.713 | 0.0 | 1.412 | 1257659 | 2.93 | | 23.4 | 996 | |
| D 56 13C2 PFDoA | | | | | | | | | | |
| 615.00 > 570.00 | 4.704 | 4.713 | -0.009 | 1.409 | 4615965 | 2.38 | | 95.3 | 6668 | |
| 52 Perfluorododecanoic acid | | | | | | | | | | |
| 613.00 > 569.00 | 4.704 | 4.713 | -0.009 | 1.000 | 1658876 | 0.9769 | Target=7.23 | 97.7 | 1325 | |
| 613.00 > 169.00 | 4.704 | 4.713 | -0.009 | 1.000 | 239499 | | 6.93(3.61-10.84) | | 787 | |
| 54 2-(N-ethylperfluoro-1-octanesulf | | | | | | | | | | |
| 630.00 > 59.00 | 4.723 | 4.722 | 0.001 | 1.002 | 103515 | 1.04 | | 104 | 140 | |
| 55 1H,1H,2H,2H-perfluorododecanesul | | | | | | | | | | |
| 627.00 > 607.00 | 4.723 | 4.731 | -0.008 | 1.154 | 441588 | 0.9896 | | 103 | 3344 | |

| Signal | RT | EXP RT | DLT RT | REL RT | Response | Amount ng/ml | Ratio(Limits) | %Rec | S/N | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| D 58 d-N-EtFOSA-M | | | | | | | | | | |
| 531.00 > 169.00 | 4.732 | 4.731 | 0.001 | | 770379 | 1.30 | | 51.9 | 509 | |
| 57 N-ethylperfluoro-1-octanesulfona | | | | | | | | | | |
| 526.00 > 169.00 | 4.741 | 4.740 | 0.001 | 1.002 | 323000 | 1.05 | | 105 | 389 | |
| 59 Perfluorododecanesulfonic acid ( | | | | | | | | | | |
| 699.00 > 80.00 | 4.935 | 4.944 | -0.009 | 1.327 | 298736 | 0.8778 | Target=0.98 | 90.7 | 511 | |
| 699.00 > 99.00 | 4.935 | 4.944 | -0.009 | 1.327 | 298500 | | 1.00(0.49-1.47) | | 1277 | |
| 60 Perfluorotridecanoic acid | | | | | | | | | | |
| 663.00 > 619.00 | 4.969 | 4.977 | -0.008 | 1.056 | 1268235 | 0.9452 | Target=5.11 | 94.5 | 2526 | |
| 663.00 > 169.00 | 4.969 | 4.977 | -0.008 | 1.056 | 270333 | | 4.69(2.56-7.67) | | 1248 | |
| D 62 13C2 PFTeDA | | | | | | | | | | |
| 715.00 > 670.00 | 5.211 | 5.219 | -0.008 | 1.561 | 3113524 | 2.30 | | 92.2 | 8599 | |
| 61 Perfluorotetradecanoic acid | | | | | | | | | | |
| 713.00 > 169.00 | 5.211 | 5.219 | -0.008 | 1.000 | 211566 | 0.9629 | Target=1.26 | 96.3 | 1128 | |
| 713.00 > 219.00 | 5.203 | 5.219 | -0.016 | 0.998 | 160297 | | 1.32(0.63-1.89) | | 1196 | |
| 64 Perfluorohexadecanoic acid | | | | | | | | | | |
| 813.00 > 769.00 | 5.643 | 5.652 | -0.009 | 1.000 | 870473 | 1.02 | Target=4.58 | 102 | 2095 | |
| 813.00 > 169.00 | 5.643 | 5.652 | -0.009 | 1.000 | 190713 | | 4.56(2.29-6.88) | | 1180 | |
| D 63 13C2 PFHxDA | | | | | | | | | | |
| 815.00 > 770.00 | 5.643 | 5.652 | -0.009 | 1.691 | 2291630 | 2.29 | | 91.8 | 5797 | |
| 65 Perfluorooctadecanoic acid | | | | | | | | | | |
| 913.00 > 869.00 | 6.047 | 6.063 | -0.016 | 1.072 | 779600 | 1.14 | Target=4.25 | 114 | 1412 | |
| 913.00 > 169.00 | 6.047 | 6.063 | -0.016 | 1.072 | 186361 | | 4.18(2.12-6.37) | | 1063 | |

## QC Flag Legend

Review Flags

M - Manually Integrated

Report Date: 11-Sep-2020 16:02:25 Chrom Revision: 2.3 09-Sep-2020 15:12:58

Eurofins TestAmerica, Sacramento

Data File: \\chromfs\Sacramento\ChromData\A9\20200911-103120.b\2020.09.11_A9_PFC_AA_026.d

Injection Date: 11-Sep-2020 13:24:21 Instrument ID: A9

Lims ID: LCS 320-411226/2-A

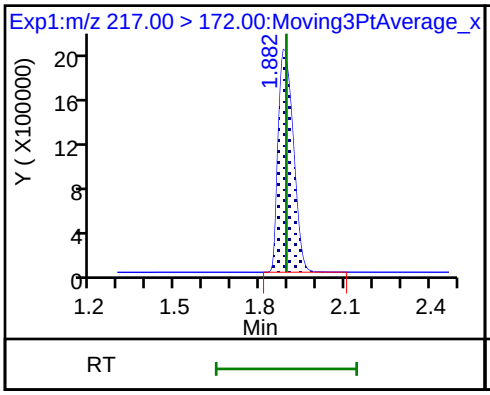
Client ID:

Operator ID: SACINSTRLCMS02 ALS Bottle#: 14 Worklist Smp#: 3

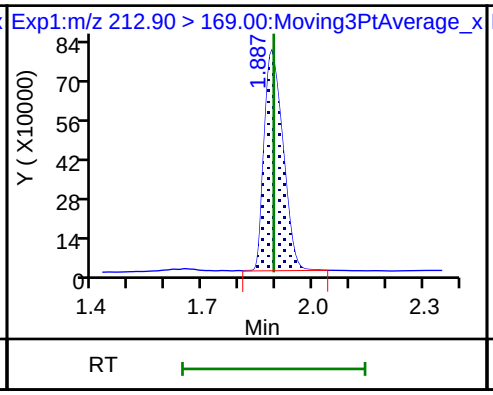
Injection Vol: 20.0 ul Dil. Factor: 1.0000

Method: PFAS_A9 Limit Group: LC PFC ICAL

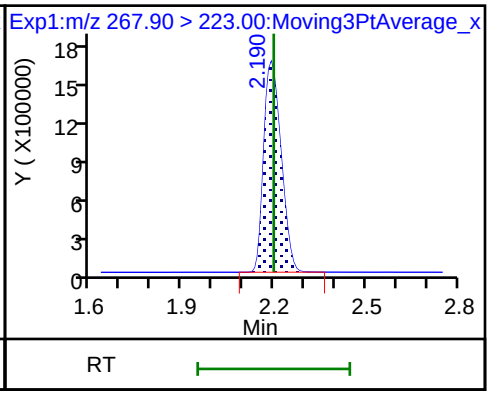
D 1 13C4 PFBA



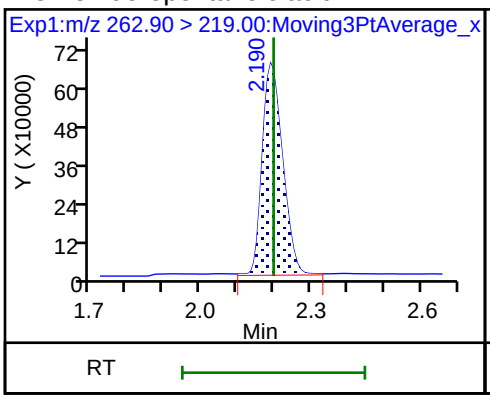

2 Perfluorobutanoic acid



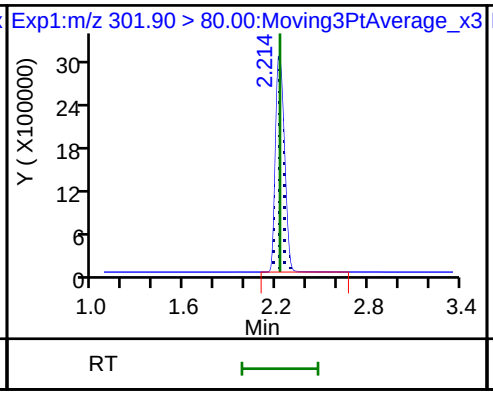

D 4 13C5 PFPeA



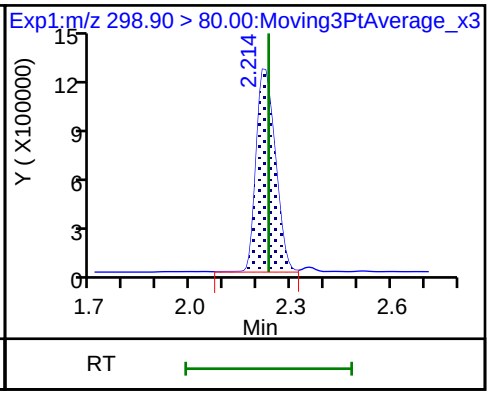

3 Perfluoropentanoic acid



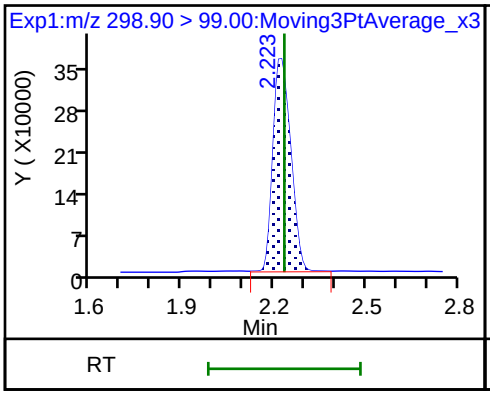

D 6 13C3 PFBS



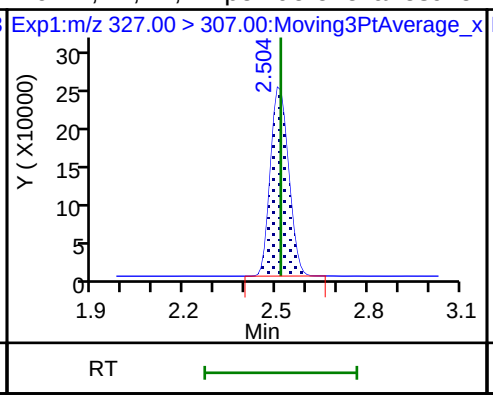

5 Perfluorobutanesulfonic acid



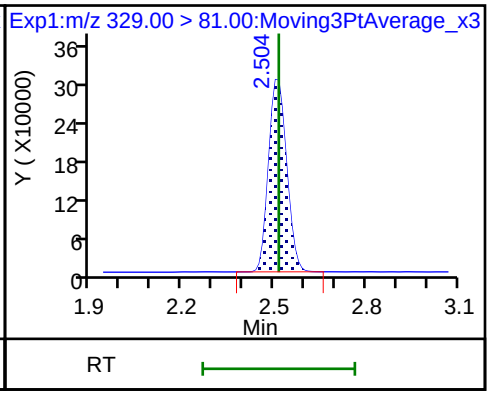

5 Perfluorobutanesulfonic acid



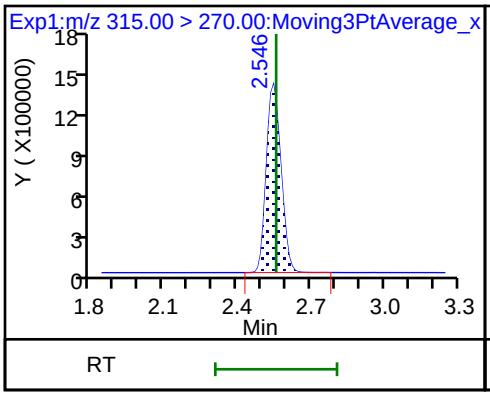

9 1H,1H,2H,2H-perfluorohexanesulfo



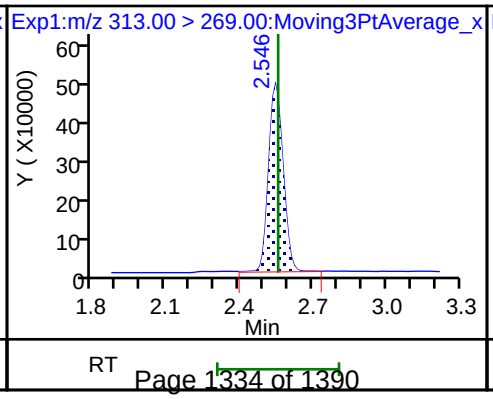

D 8 M2-4:2 FTS



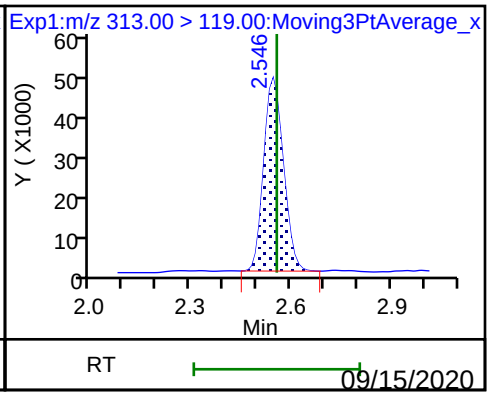

D 10 13C2 PFHxA



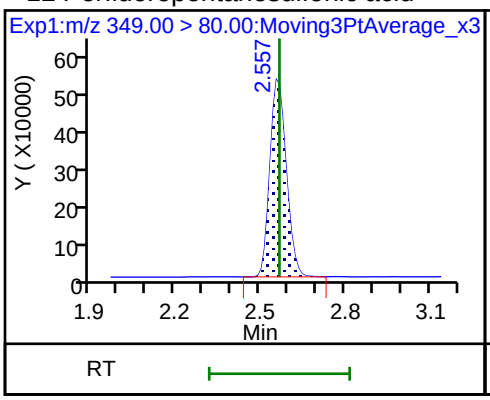

11 Perfluorohexanoic acid



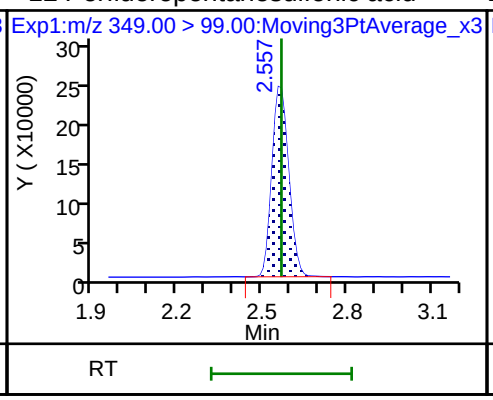

11 Perfluorohexanoic acid



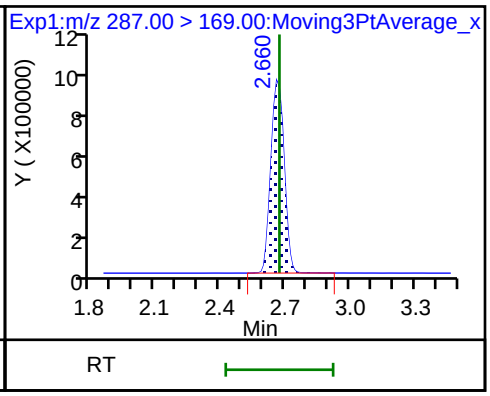
12 Perfluoropentanesulfonic acid



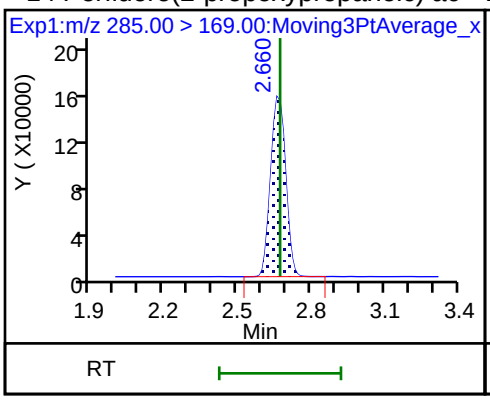

12 Perfluoropentanesulfonic acid



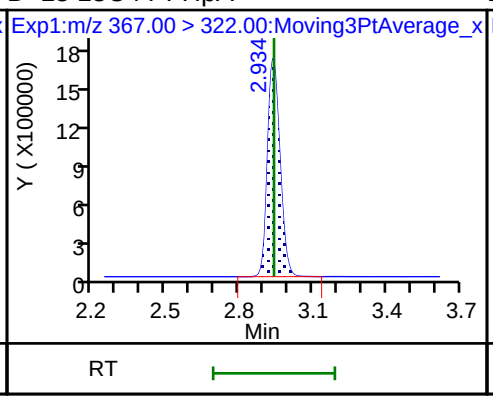

D 13 13C3 HFPO-DA



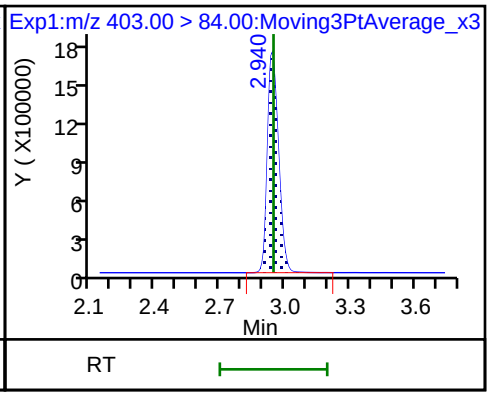

14 Perfluoro(2-propoxypropanoic) ac



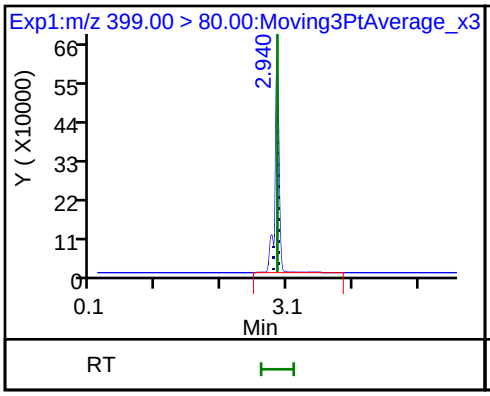

D 15 13C4 PFHpA



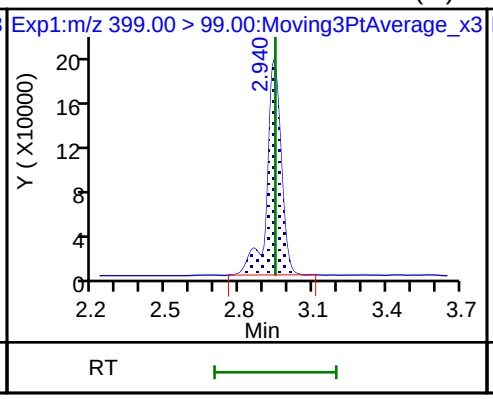

D 17 18O2 PFHxS



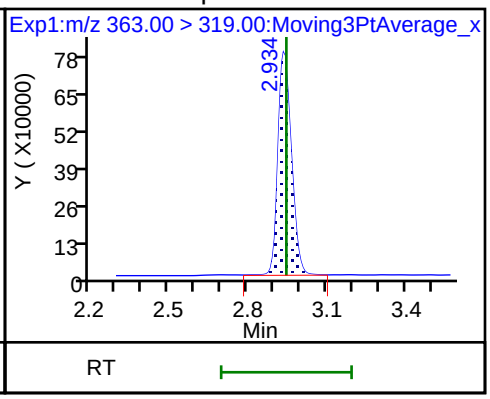

16 Perfluorohexanesulfonic acid



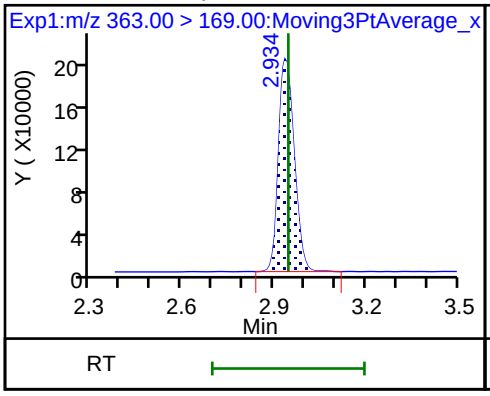

16 Perfluorohexanesulfonic acid (M)



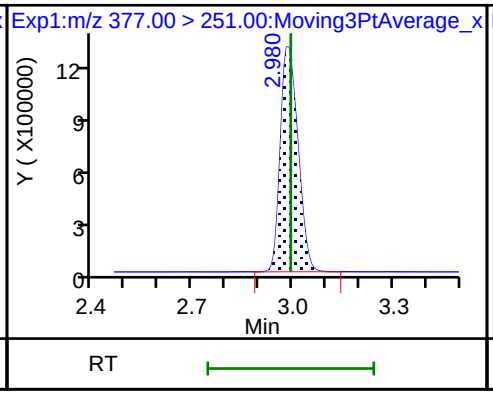

18 Perfluoroheptanoic acid



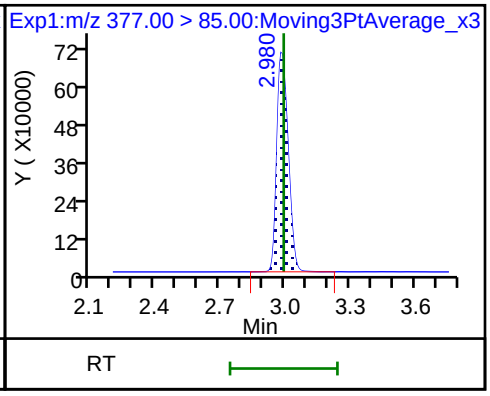

18 Perfluoroheptanoic acid



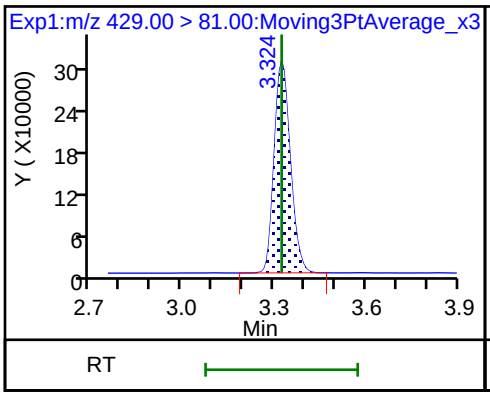

19 DONA



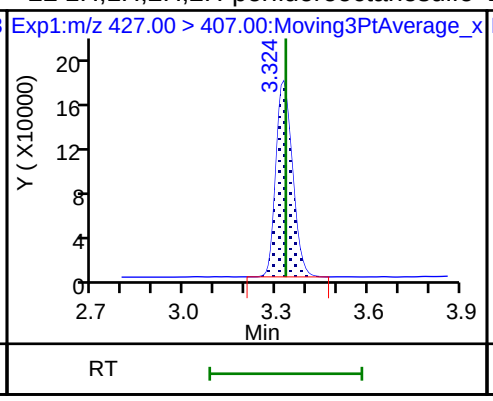

19 DONA



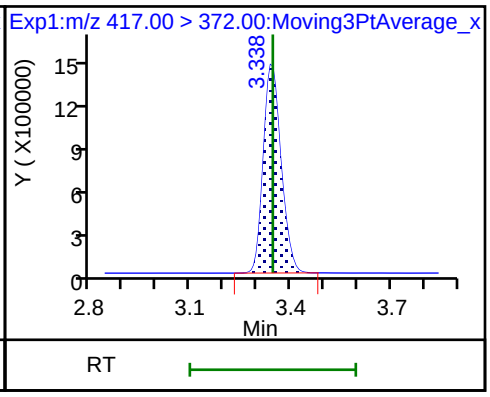
D 20 M2-6:2 FTS



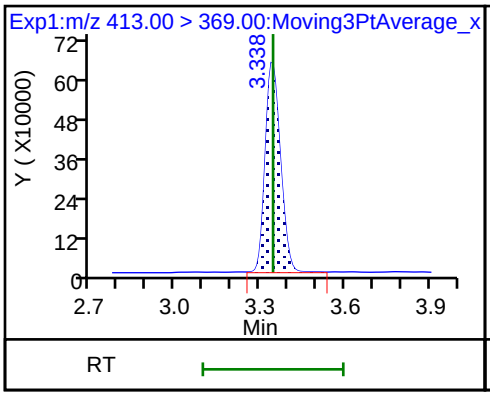

22 1H,1H,2H,2H-perfluorooctanesulfo



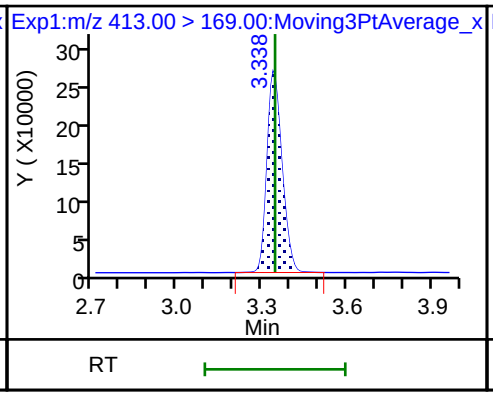

D 26 13C4 PFOA



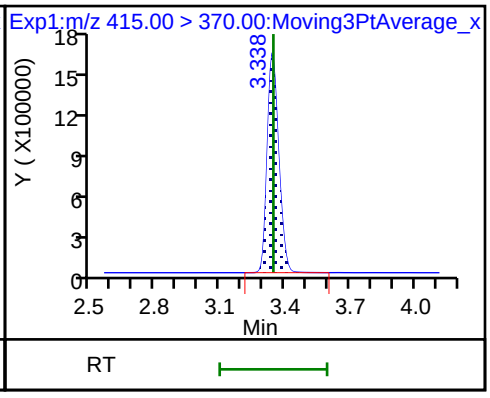

24 Perfluorooctanoic acid



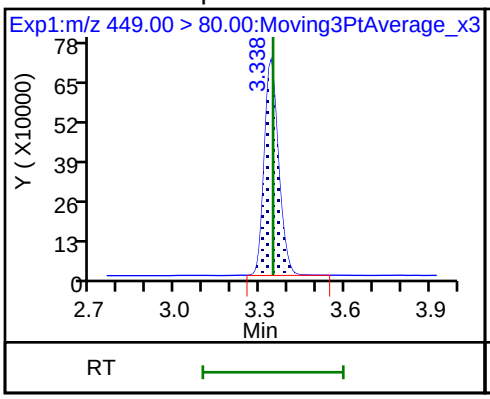

24 Perfluorooctanoic acid



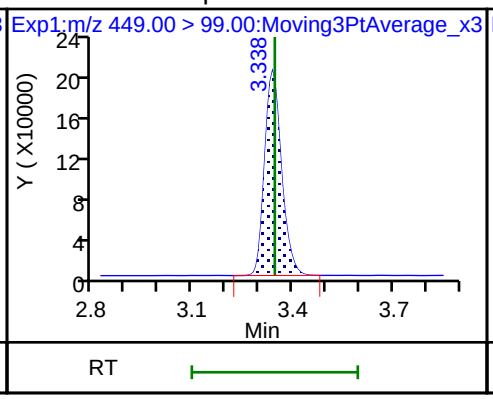

* 25 13C2 PFOA



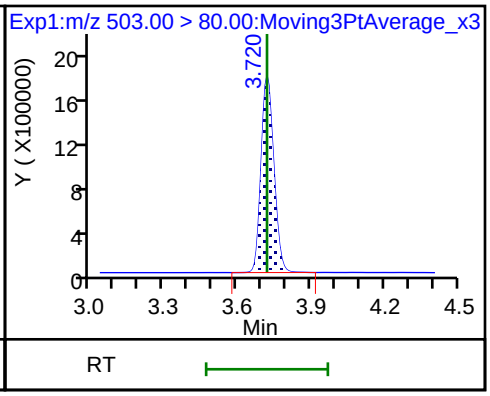

23 Perfluoroheptanesulfonic acid



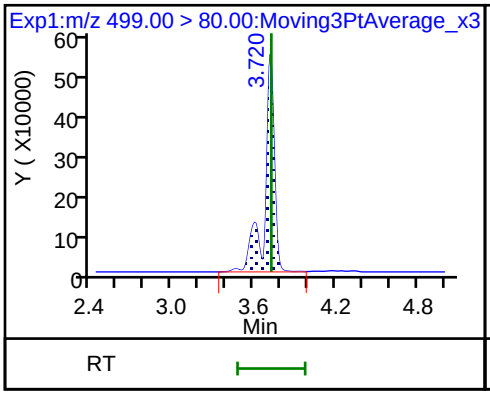

23 Perfluoroheptanesulfonic acid



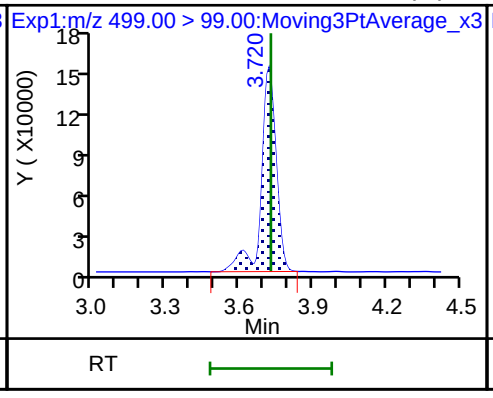

D 31 13C4 PFOS



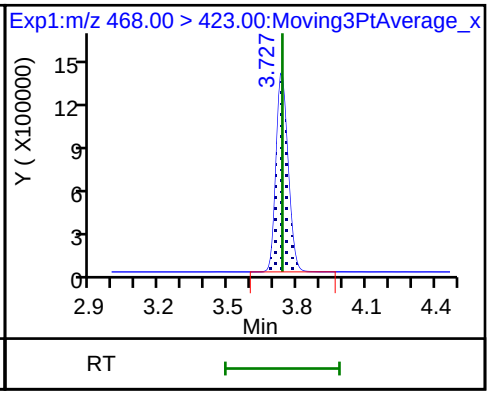

28 Perfluorooctanesulfonic acid



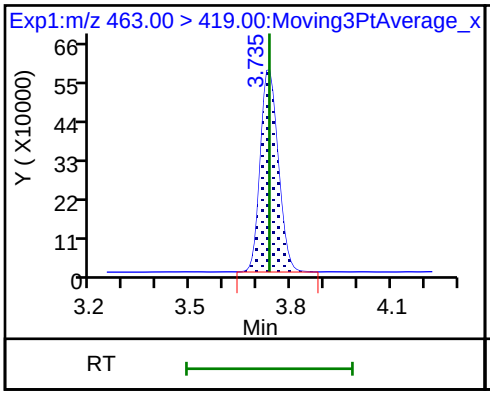

28 Perfluorooctanesulfonic acid (M)



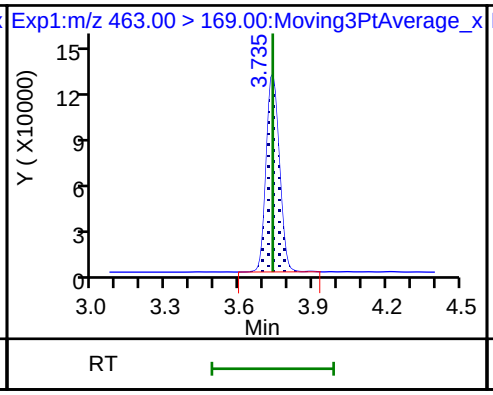

D 29 13C5 PFNA



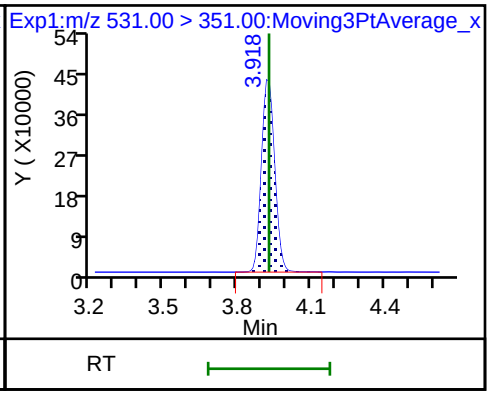
30 Perfluorononanoic acid



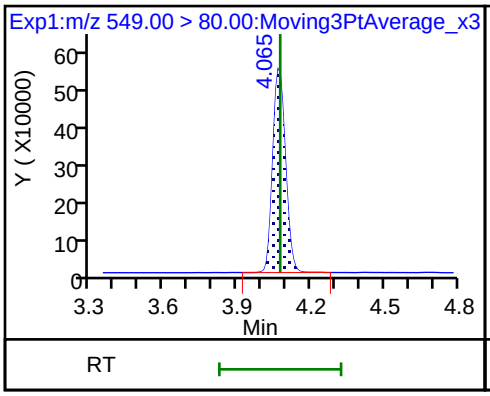

30 Perfluorononanoic acid



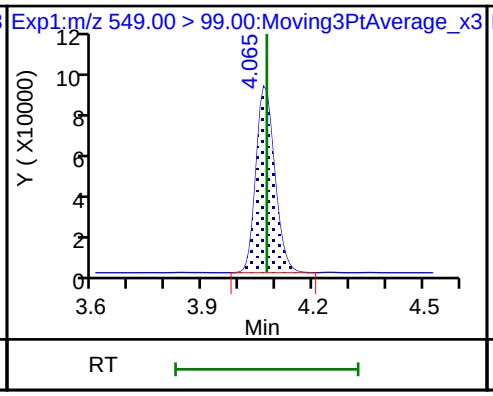

32 9-Chlorohexadecafluoro-3-oxanona



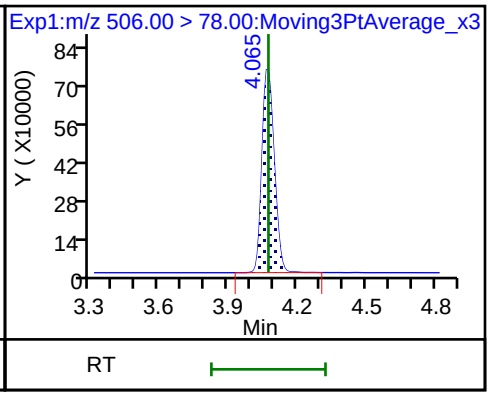

35 Perfluorononanesulfonic acid



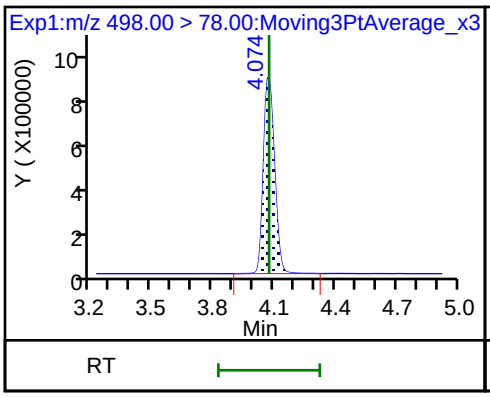

35 Perfluorononanesulfonic acid



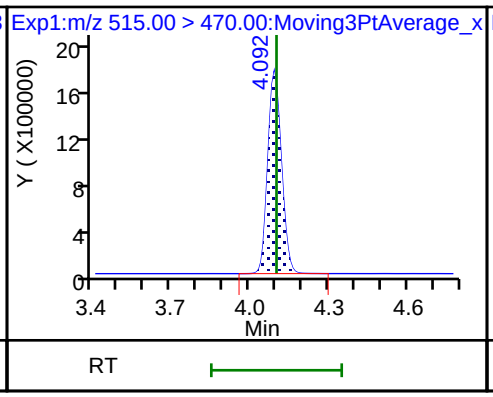

D 36 13C8 FOSA



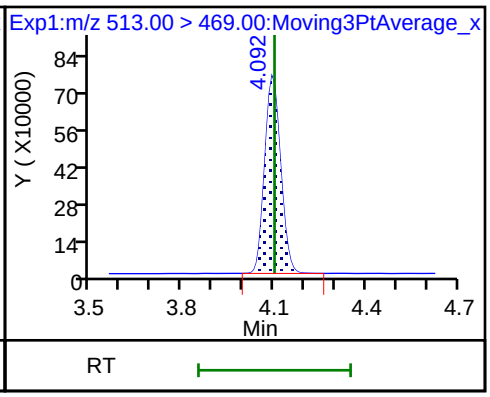

34 Perfluorooctanesulfonamide



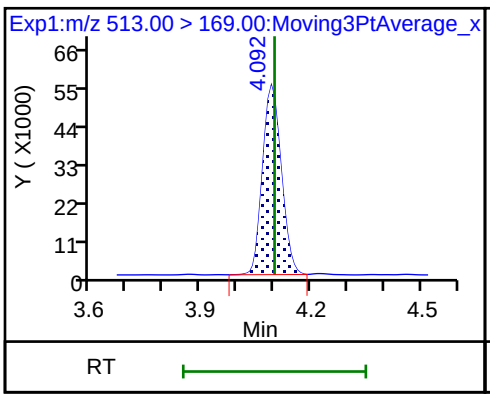

D 33 13C2 PFDA



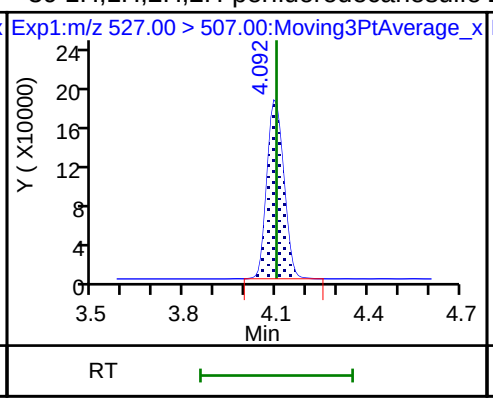

38 Perfluorodecanoic acid



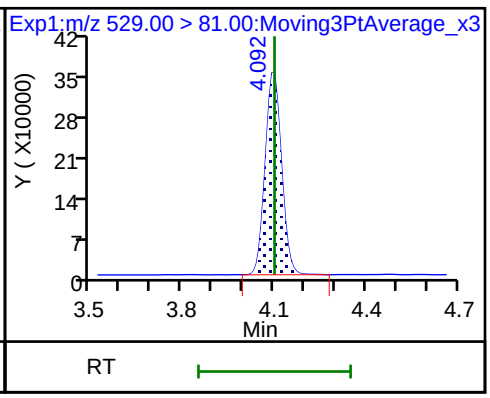

38 Perfluorodecanoic acid



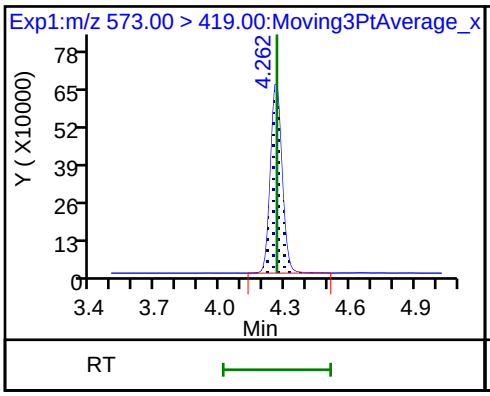

39 1H,1H,2H,2H-perfluorodecanesulfo



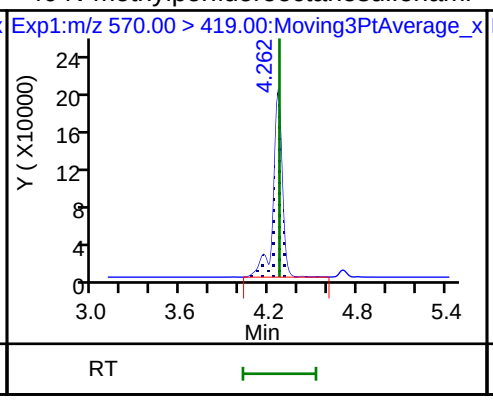

D 37 M2-8:2 FTS



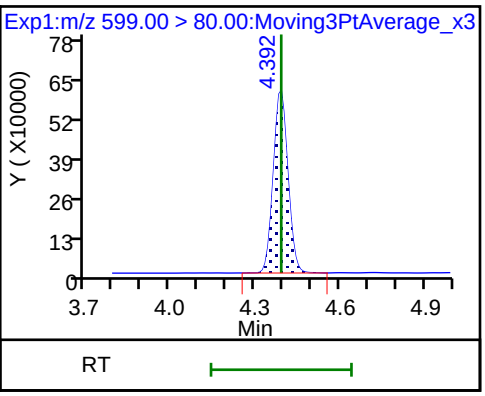
D 41 d3-NMeFOSAA



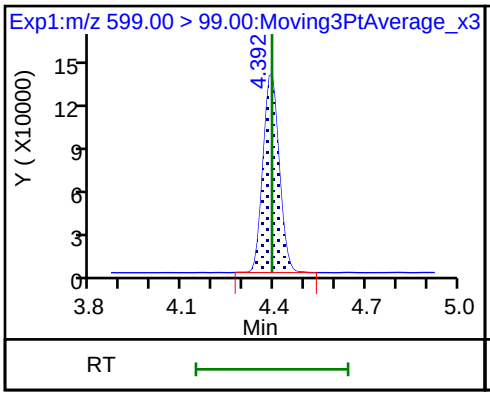

40 N-methylperfluorooctanesulfonami



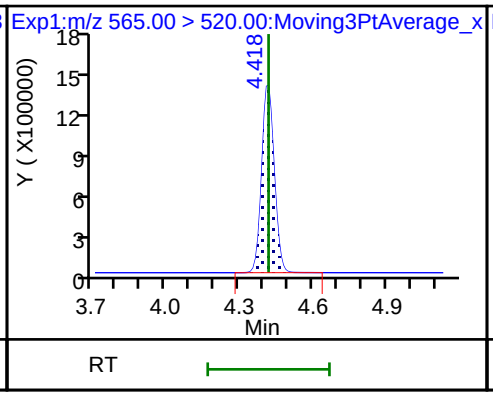

42 Perfluorodecanesulfonic acid



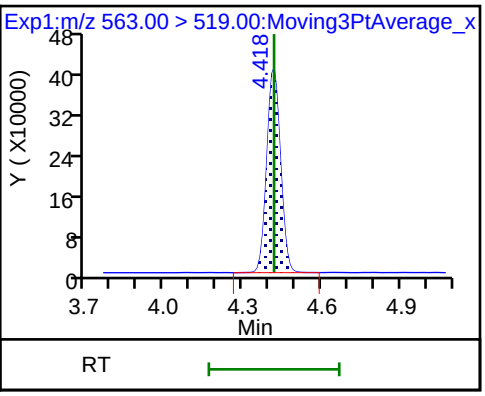

42 Perfluorodecanesulfonic acid



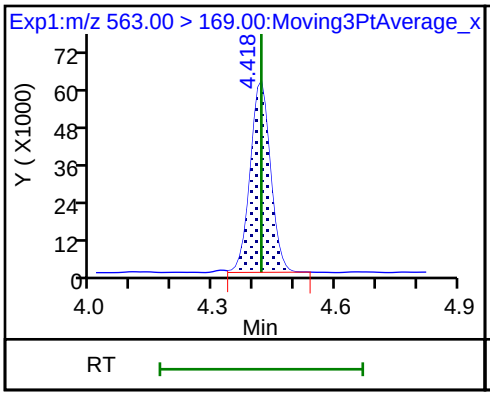

D 46 13C2 PFUnA



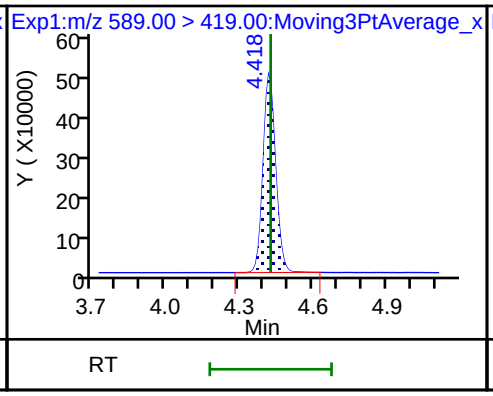

43 Perfluoroundecanoic acid



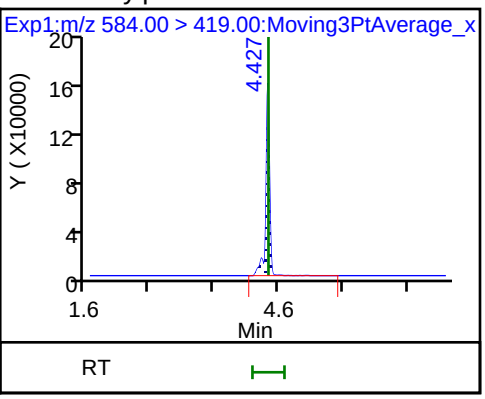

43 Perfluoroundecanoic acid



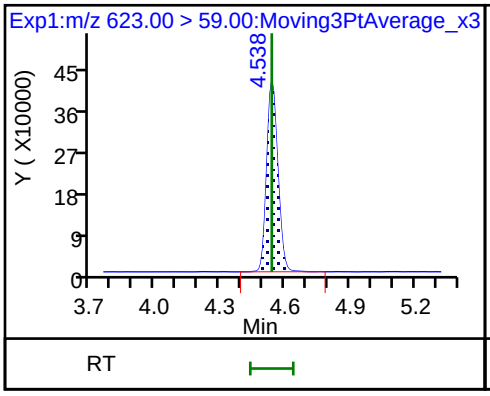

D 45 d5-NEtFOSAA



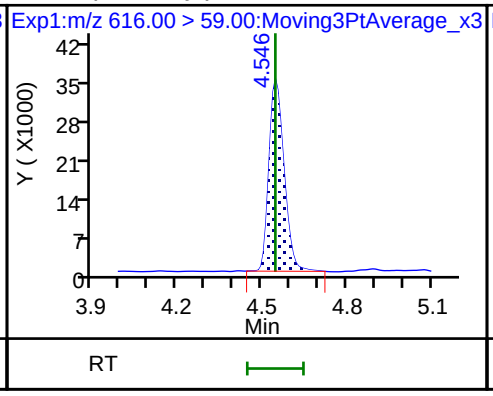

44 N-ethylperfluorooctanesulfonamid



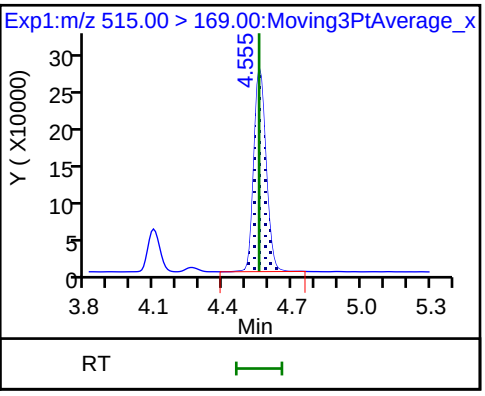

D 47 d7-N-MeFOSE-M



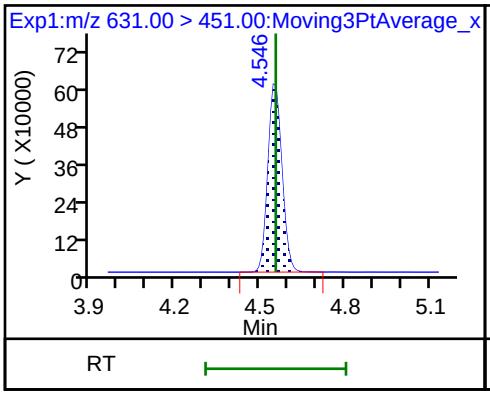

48 2-(N-methylperfluoro-1-octanesul



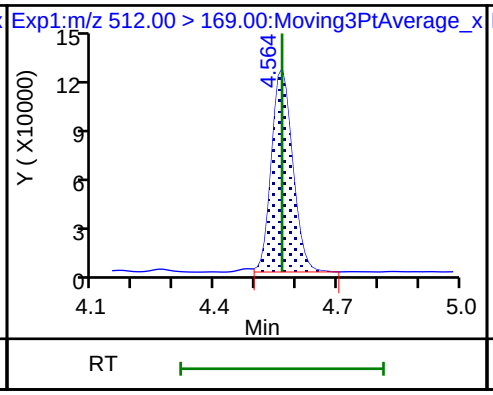

D 49 d-N-MeFOSA-M



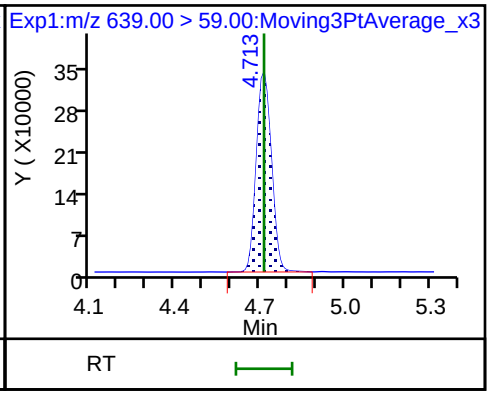
51 11-Chloroeicosafluoro-3-oxaundec



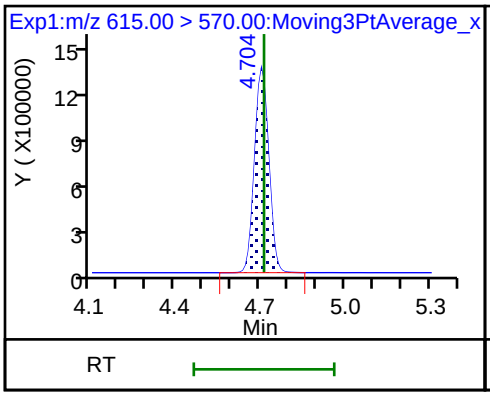

50 NMeFOSA



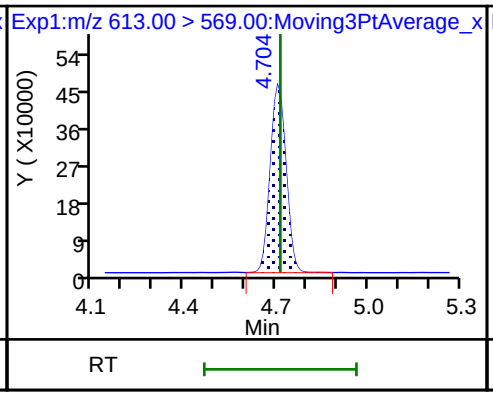

D 53 d9-N-EtFOSE-M



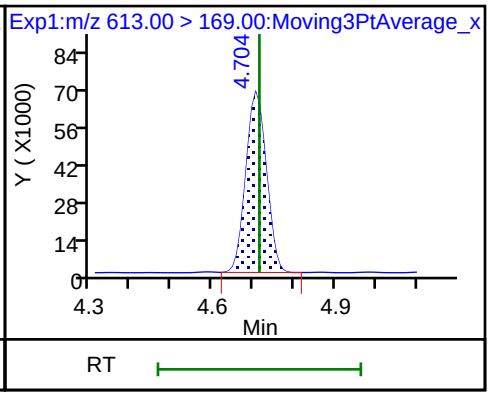

D 56 13C2 PFDoA



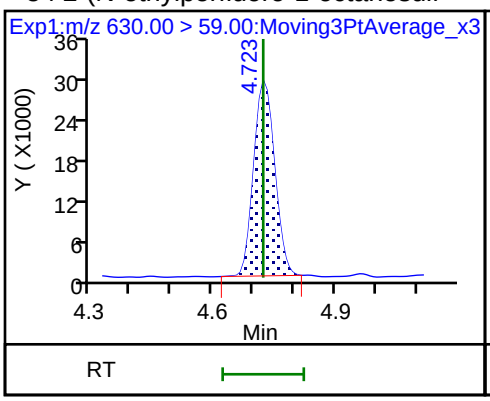

52 Perfluorododecanoic acid



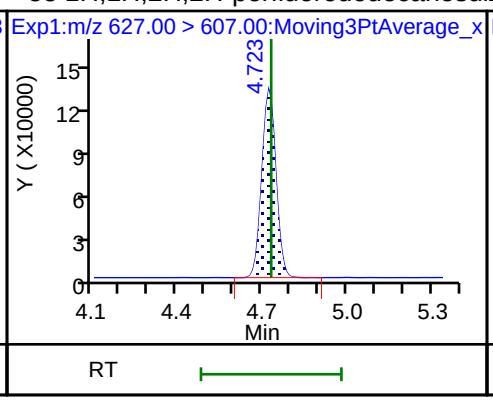

52 Perfluorododecanoic acid



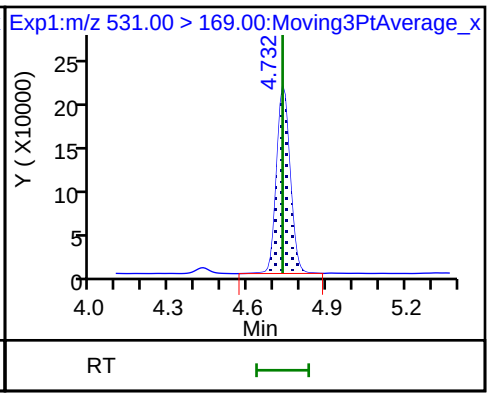

54 2-(N-ethylperfluoro-1-octanesulf



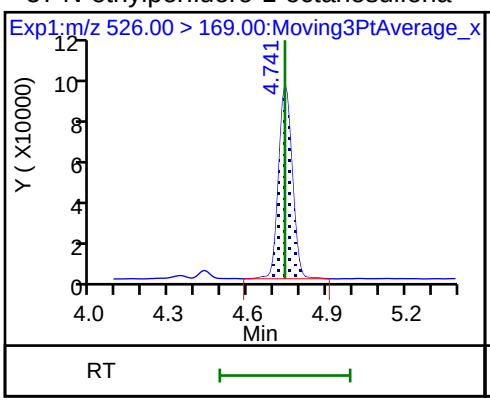

55 1H,1H,2H,2H-perfluorododecanesul



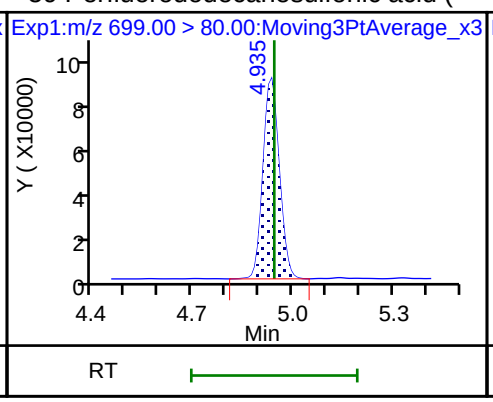

D 58 d-N-EtFOSA-M



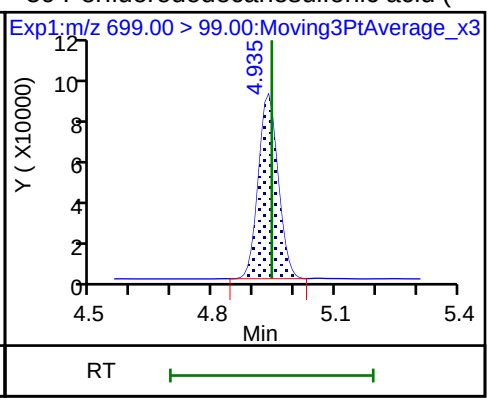

57 N-ethylperfluoro-1-octanesulfona



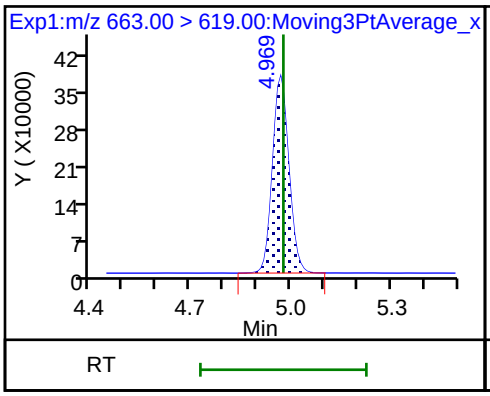

59 Perfluorododecanesulfonic acid (



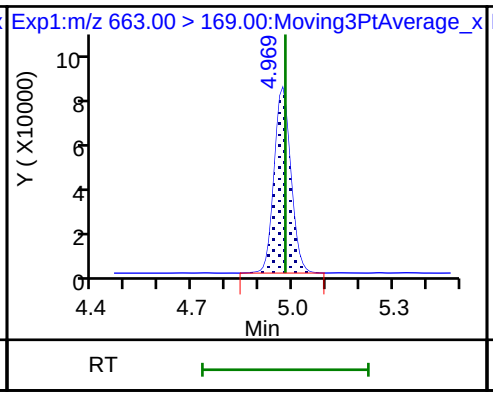

59 Perfluorododecanesulfonic acid (



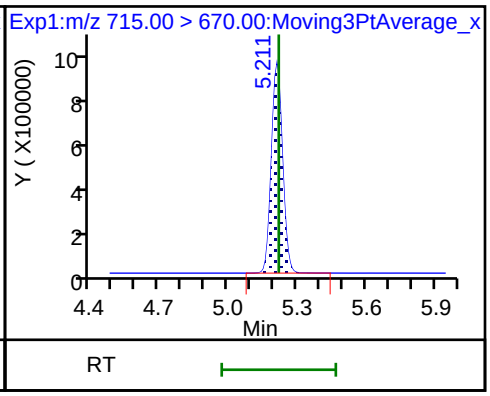
60 Perfluorotridecanoic acid



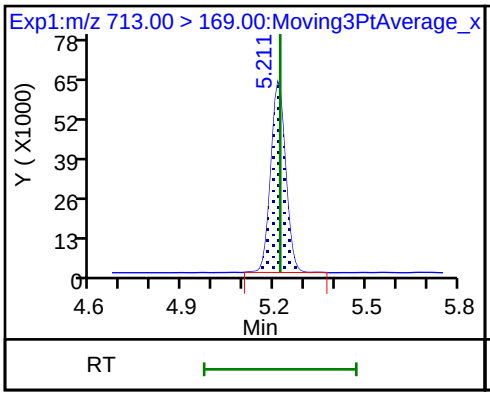

60 Perfluorotridecanoic acid



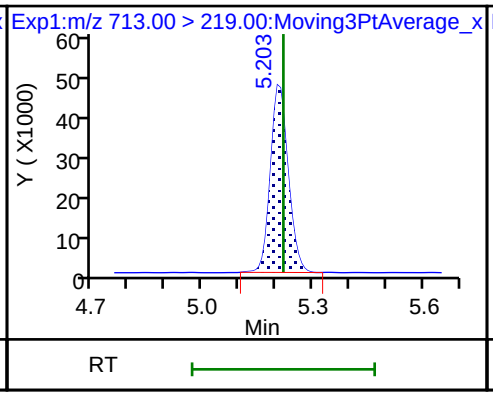

D 62 13C2 PFTeDA



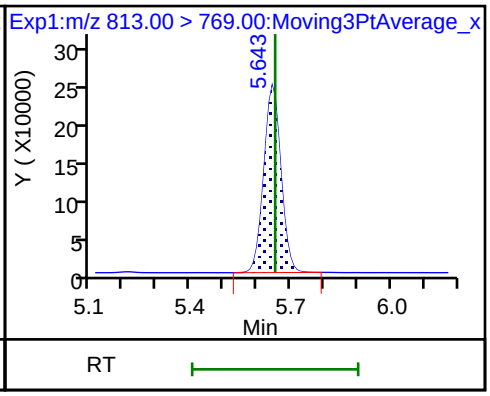

61 Perfluorotetradecanoic acid



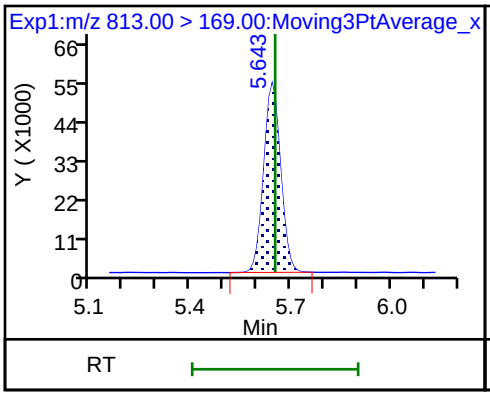

61 Perfluorotetradecanoic acid



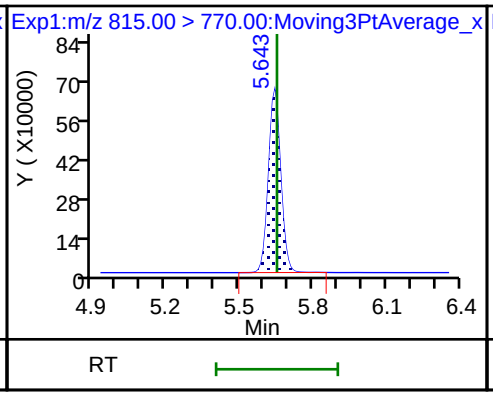

64 Perfluorohexadecanoic acid



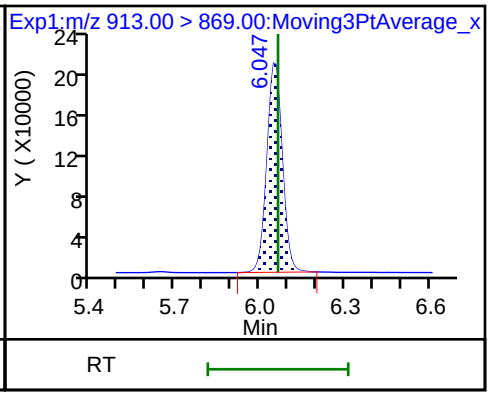

64 Perfluorohexadecanoic acid



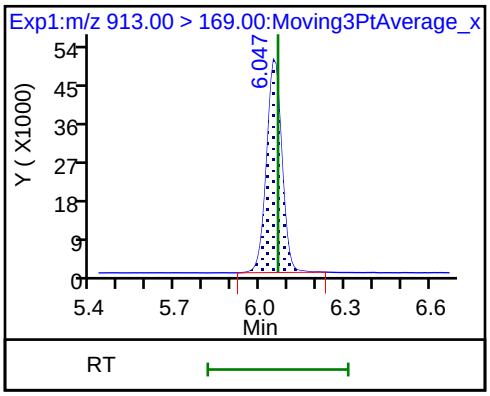

D 63 13C2 PFHxDA




65 Perfluorooctadecanoic acid




65 Perfluorooctadecanoic acid



Eurofins TestAmerica, Sacramento

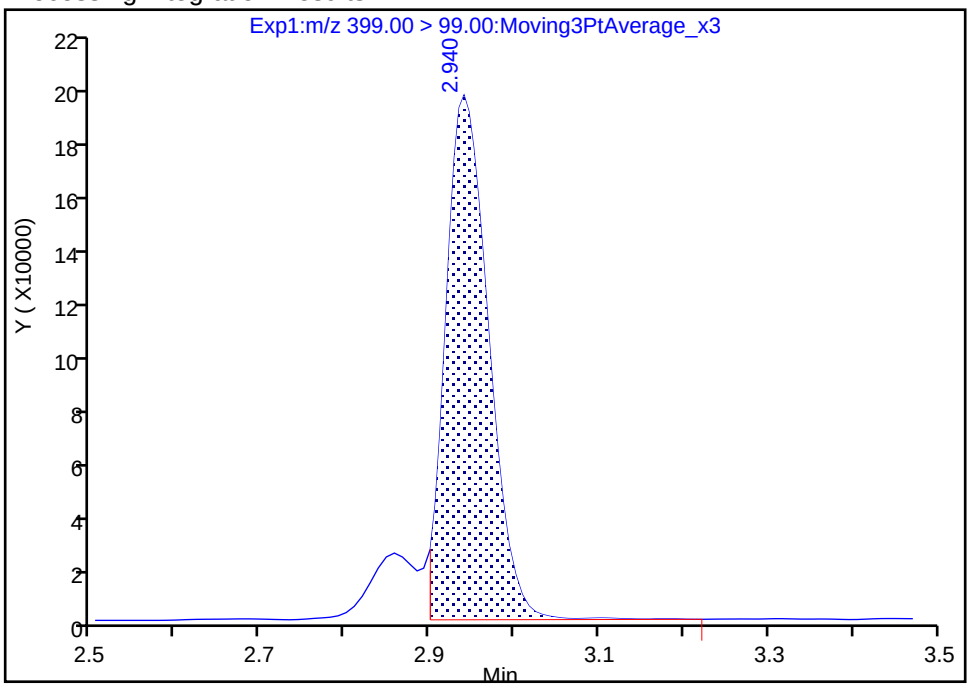
| | | | | | |
|---|---|---|---|---|---|
| Data File: | \\chromfs\Sacramento\ChromData\A9\20200911-103120.b\2020.09.11_A9_PFC_AA_026.d | | | | |
| Injection Date: | 11-Sep-2020 13:24:21 | Instrument ID: | A9 | | |
| Lims ID: | LCS 320-411226/2-A | | | | |
| Client ID: | | | | | |
| Operator ID: | SACINSTRLCMS02 | ALS Bottle#: | 14 | Worklist Smp#: | 3 |
| Injection Vol: | 20.0 ul | Dil. Factor: | 1.0000 | | |
| Method: | PFAS_A9 | Limit Group: | LC PFC ICAL | | |
| Column: | | Detector | EXP1 | | |

## 16 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 2

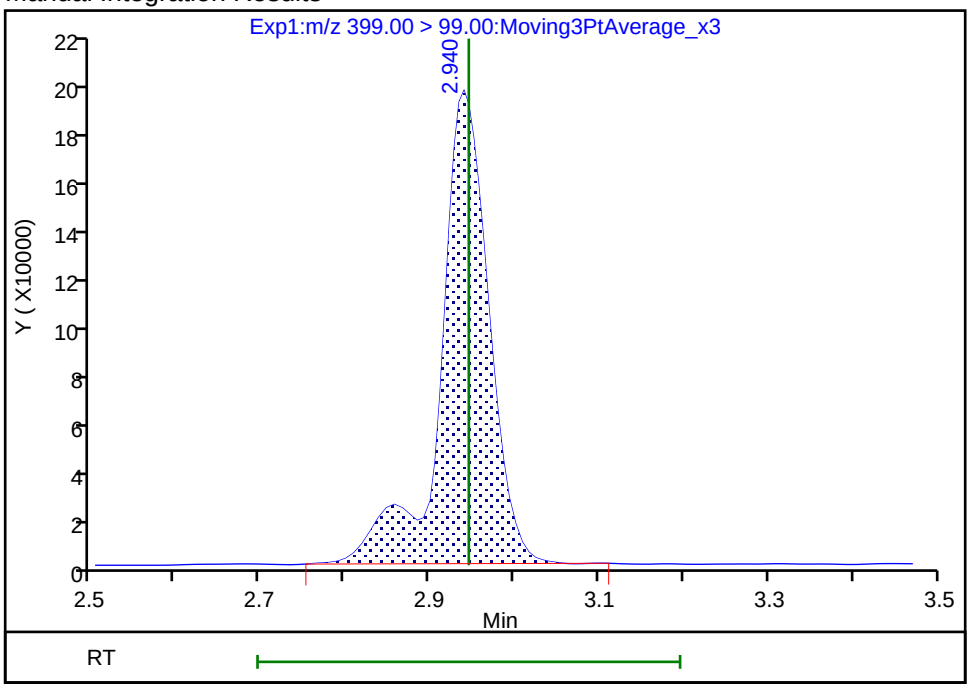
Processing Integration Results

RT: 2.94
Area: 691785
Amount: 0.858286
Amount Units: ng/ml




Manual Integration Results

RT: 2.94
Area: 787809
Amount: 0.858286
Amount Units: ng/ml




Reviewer: zibaa, 11-Sep-2020 15:58:23
Audit Action: Manually Integrated Audit Reason: Isomers

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

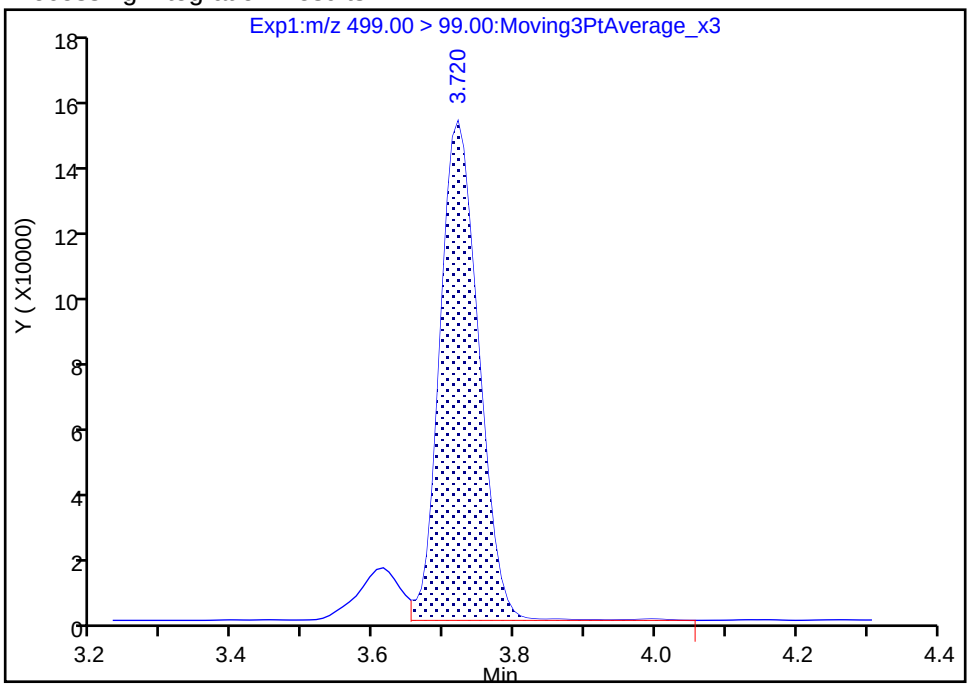
| | | | | | |
|---|---|---|---|---|---|
| Data File: | \\chromfs\Sacramento\ChromData\A9\20200911-103120.b\2020.09.11_A9_PFC_AA_026.d | | | | |
| Injection Date: | 11-Sep-2020 13:24:21 | Instrument ID: | A9 | | |
| Lims ID: | LCS 320-411226/2-A | | | | |
| Client ID: | | | | | |
| Operator ID: | SACINSTRLCMS02 | ALS Bottle#: | 14 | Worklist Smp#: | 3 |
| Injection Vol: | 20.0 ul | Dil. Factor: | 1.0000 | | |
| Method: | PFAS_A9 | Limit Group: | LC PFC ICAL | | |
| Column: | | Detector | EXP1 | | |

## 28 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 2

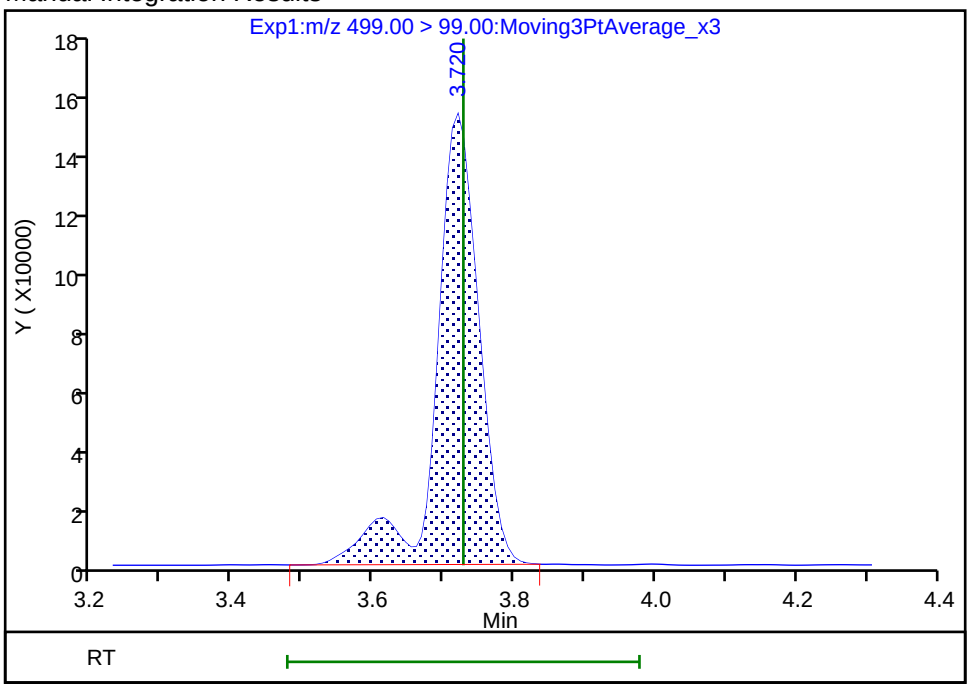
Processing Integration Results

RT: 3.72
Area: 565287
Amount: 0.958768
Amount Units: ng/ml




Manual Integration Results

RT: 3.72
Area: 623118
Amount: 0.958768
Amount Units: ng/ml




Reviewer: zibaa, 11-Sep-2020 15:59:26

Audit Action: Manually Integrated Audit Reason: Isomers

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento  Job No.: 460-217547-1

SDG No.:

Client Sample ID:  Lab Sample ID: LCSD 320-410910/3-A

Matrix: Water  Lab File ID: 2020.09.10_A18_PFC_A_076.d

Analysis Method: 537 (modified)  Date Collected:

Extraction Method: 3535  Date Extracted: 09/09/2020 18:52

Sample wt/vol: 250(mL)  Date Analyzed: 09/10/2020 15:29

Con. Extract Vol.: 10.00(mL)  Dilution Factor: 1

Injection Volume: 20(uL)  GC Column: Gemini C18 3x50 ID: 3(mm)

% Moisture:  GPC Cleanup:(Y/N) N

Analysis Batch No.: 411087  Units: ng/L

| CAS NO. | COMPOUND NAME | RESULT | Q | RL | MDL |
|---|---|---|---|---|---|
| 375-22-4 | Perfluorobutanoic acid (PFBA) | 39.95 | | 2.00 | 0.35 |
| 2706-90-3 | Perfluoropentanoic acid (PFPeA) | 39.21 | | 2.00 | 0.49 |
| 307-24-4 | Perfluorohexanoic acid (PFHxA) | 39.20 | | 2.00 | 0.58 |
| 375-85-9 | Perfluoroheptanoic acid (PFHpA) | 36.55 | | 2.00 | 0.25 |
| 335-67-1 | Perfluorooctanoic acid (PFOA) | 39.44 | | 2.00 | 0.85 |
| 375-95-1 | Perfluorononanoic acid (PFNA) | 44.28 | | 2.00 | 0.27 |
| 335-76-2 | Perfluorodecanoic acid (PFDA) | 32.38 | | 2.00 | 0.31 |
| 2058-94-8 | Perfluoroundecanoic acid (PFUnA) | 42.82 | | 2.00 | 1.10 |
| 307-55-1 | Perfluorododecanoic acid (PFDoA) | 32.50 | | 2.00 | 0.55 |
| 72629-94-8 | Perfluorotridecanoic acid (PFTriA) | 33.88 | | 2.00 | 1.30 |
| 376-06-7 | Perfluorotetradecanoic acid (PFTeA) | 42.61 | | 2.00 | 0.29 |
| 375-73-5 | Perfluorobutanesulfonic acid (PFBS) | 32.20 | | 2.00 | 0.20 |
| 355-46-4 | Perfluorohexanesulfonic acid (PFHxS) | 32.49 | | 2.00 | 0.17 |
| 375-92-8 | Perfluoroheptanesulfonic Acid (PFHpS) | 37.83 | | 2.00 | 0.19 |
| 1763-23-1 | Perfluorooctanesulfonic acid (PFOS) | 35.53 | | 2.00 | 0.54 |
| 335-77-3 | Perfluorodecanesulfonic acid (PFDS) | 33.52 | | 2.00 | 0.32 |
| 754-91-6 | Perfluorooctanesulfonamide (FOSA) | 38.85 | | 2.00 | 0.35 |
| 2355-31-9 | N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA) | 39.80 | | 20.0 | 3.10 |
| 2991-50-6 | N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA) | 37.29 | | 20.0 | 1.90 |
| 27619-97-2 | 6:2 FTS | 34.57 | | 20.0 | 2.00 |
| 39108-34-4 | 8:2 FTS | 37.33 | | 20.0 | 2.00 |

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento  Job No.: 460-217547-1

SDG No.:

Client Sample ID:  Lab Sample ID: LCSD 320-410910/3-A

Matrix: Water  Lab File ID: 2020.09.10_A18_PFC_A_076.d

Analysis Method: 537 (modified)  Date Collected:

Extraction Method: 3535  Date Extracted: 09/09/2020 18:52

Sample wt/vol: 250(mL)  Date Analyzed: 09/10/2020 15:29

Con. Extract Vol.: 10.00(mL)  Dilution Factor: 1

Injection Volume: 20(uL)  GC Column: Gemini C18 3x50 ID: 3(mm)

% Moisture:  GPC Cleanup:(Y/N) N

Analysis Batch No.: 411087  Units: ng/L

| CAS NO. | ISOTOPE DILUTION | %REC | Q | LIMITS |
|---|---|---|---|---|
| STL00992 | 13C4 PFBA | 63 | | 25-150 |
| STL01893 | 13C5 PFPeA | 65 | | 25-150 |
| STL00993 | 13C2 PFHxA | 70 | | 25-150 |
| STL01892 | 13C4 PFHpA | 76 | | 25-150 |
| STL00990 | 13C4 PFOA | 70 | | 25-150 |
| STL00995 | 13C5 PFNA | 70 | | 25-150 |
| STL00996 | 13C2 PFDA | 75 | | 25-150 |
| STL00997 | 13C2 PFUnA | 71 | | 25-150 |
| STL00998 | 13C2 PFDoA | 73 | | 25-150 |
| STL02116 | 13C2 PFTeDA | 88 | | 25-150 |
| STL02337 | 13C3 PFBS | 83 | | 25-150 |
| STL00994 | 18O2 PFHxS | 84 | | 25-150 |
| STL00991 | 13C4 PFOS | 81 | | 25-150 |
| STL01056 | 13C8 FOSA | 69 | | 25-150 |
| STL02118 | d3-NMeFOSAA | 66 | | 25-150 |
| STL02117 | d5-NEtFOSAA | 73 | | 25-150 |
| STL02279 | M2-6:2 FTS | 78 | | 25-150 |
| STL02280 | M2-8:2 FTS | 79 | | 25-150 |

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\A18\20200910-103041.b\2020.09.10_A18_PFC_A_076.d
Lims ID: LCSD 320-410910/3-A
Client ID:
Sample Type: LCSD
Inject. Date: 10-Sep-2020 15:29:35 ALS Bottle#: 40 Worklist Smp#: 4
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Sample Info: lcsd 320-410910/3-a
Misc. Info.: Plate: 4 Rack: 1
Operator ID: TAISACA18-PC\A-18 Instrument ID: A18

Method: \\chromfs\Sacramento\ChromData\A18\20200910-103041.b\PFAS_A18V2.m
Limit Group: LC PFC ICAL
Last Update: 11-Sep-2020 08:29:35 Calib Date: 25-Aug-2020 17:37:57
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\A18\20200825-102078.b\2020.08.25_A18_ICAL_A_017.d

Column 1 : Gemini C18 3um 3mm x 50 mm ( 3.00 mm) Det: EXP1
Process Host: CTX1040

First Level Reviewer: sanjumnair Date: 11-Sep-2020 08:29:35
Ratio Calibration: CCV Sample: \\chromfs\Sacramento\ChromData\A18\20200910-103041.b\2020.09.10_A18_PFC_A_073.d

| Signal | RT | EXP RT | DLT RT | REL RT | Response | Amount ng/ml | Ratio(Limits) | %Rec | S/N | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| D 1 13C4 PFBA | | | | | | | | | | |
| 217.00 > 172.00 | 2.530 | 2.557 | -0.027 | 0.621 | 11894176 | 1.58 | | 63.3 | 5925 | |
| 2 Perfluorobutanoic acid | | | | | | | | | | |
| 212.90 > 169.00 | 2.530 | 2.557 | -0.027 | 1.000 | 4123625 | 1.00 | | 99.9 | 172 | |
| D 4 13C5 PFPeA | | | | | | | | | | |
| 267.90 > 223.00 | 2.896 | 2.909 | -0.013 | 0.711 | 9478832 | 1.62 | | 64.8 | 4351 | |
| 5 Perfluoropentanoic acid | | | | | | | | | | |
| 262.90 > 219.00 | 2.896 | 2.909 | -0.013 | 1.000 | 3704842 | 0.9801 | | 98.0 | 159 | |
| 6 Perfluorobutanesulfonic acid | | | | | | | | | | |
| 298.90 > 80.00 | 2.927 | 2.940 | -0.013 | 1.000 | 3093857 | 0.8051 | Target=2.30 | 91.1 | 680 | |
| 298.90 > 99.00 | 2.927 | 2.940 | -0.013 | 1.000 | 1316580 | | 2.35(1.15-3.45) | | 427 | |
| D 9 13C3 PFBS | | | | | | | | | | |
| 301.90 > 80.00 | 2.927 | 2.940 | -0.013 | 0.719 | 8847967 | 1.93 | | 82.9 | 4123 | |
| D 7 M2-4:2 FTS | | | | | | | | | | |
| 329.00 > 81.00 | 3.227 | 3.238 | -0.011 | 0.793 | 1945107 | 1.76 | | 75.3 | 868 | |
| 8 4:2 FTS | | | | | | | | | | |
| 327.00 > 307.00 | 3.227 | 3.238 | -0.011 | 1.000 | 1644641 | 0.8686 | | 93.0 | 6622 | |
| D 11 13C2 PFHxA | | | | | | | | | | |
| 315.00 > 270.00 | 3.265 | 3.278 | -0.013 | 0.802 | 10201412 | 1.75 | | 69.9 | 5822 | |
| 10 Perfluorohexanoic acid | | | | | | | | | | |
| 313.00 > 269.00 | 3.275 | 3.288 | -0.013 | 1.003 | 3854722 | 0.9801 | Target=13.35 | 98.0 | 255 | |
| 313.00 > 119.00 | 3.265 | 3.288 | -0.023 | 1.000 | 285059 | | 13.52(6.67-20.02) | | 211 | |
| 12 Perfluoropentanesulfonic acid | | | | | | | | | | |
| 349.00 > 80.00 | 3.285 | 3.298 | -0.013 | 1.122 | 2726542 | 0.9040 | Target=2.97 | 96.4 | 631 | |
| 349.00 > 99.00 | 3.285 | 3.298 | -0.013 | 1.122 | 914997 | | 2.98(1.48-4.45) | | 561 | |
| 13 HPFO-DA | | | | | | | | | | |
| 285.00 > 169.00 | 3.391 | 3.405 | -0.014 | 1.000 | 704696 | 0.9563 | | 95.6 | 2125 | |

| Signal | RT | EXP RT | DLT RT | REL RT | Response | Amount ng/ml | Ratio(Limits) | %Rec | S/N | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| D 14 13C3 HFPO-DA | | | | | | | | | | |
| 287.00 > 169.00 | 3.391 | 3.405 | -0.014 | 0.833 | 1891088 | 1.58 | | 63.4 | 4405 | |
| 16 Perfluoroheptanoic acid | | | | | | | | | | |
| 363.00 > 319.00 | 3.676 | 3.691 | -0.015 | 1.000 | 3528065 | 0.9137 | Target=4.05 | 91.4 | 389 | |
| 363.00 > 169.00 | 3.676 | 3.691 | -0.015 | 1.000 | 974512 | | 3.62(2.03-6.08) | | 662 | |
| 15 Perfluorohexanesulfonic acid | | | | | | | | | | |
| 399.00 > 80.00 | 3.676 | 3.691 | -0.015 | 1.000 | 1962092 | 0.8121 | Target=3.35 | 89.2 | 820 | |
| 399.00 > 99.00 | 3.676 | 3.691 | -0.015 | 1.000 | 569640 | | 3.44(1.67-5.02) | | 8220 | |
| D 17 18O2 PFHxS | | | | | | | | | | |
| 403.00 > 84.00 | 3.676 | 3.691 | -0.015 | 0.903 | 4836252 | 1.99 | | 84.3 | 10296 | |
| D 18 13C4 PFHpA | | | | | | | | | | |
| 367.00 > 322.00 | 3.676 | 3.691 | -0.015 | 0.903 | 9521864 | 1.91 | | 76.4 | 7304 | |
| 19 DONA | | | | | | | | | | |
| 377.00 > 251.00 | 3.725 | 3.740 | -0.015 | 0.840 | 9871576 | 0.7738 | Target=2.39 | 82.1 | 4558 | |
| 377.00 > 85.00 | 3.725 | 3.740 | -0.015 | 0.840 | 3991968 | | 2.47(1.20-3.59) | | 2636 | |
| 21 6:2 FTS | | | | | | | | | | |
| 427.00 > 407.00 | 4.055 | 4.058 | -0.003 | 1.000 | 1443907 | 0.8643 | | 91.2 | 2350 | |
| D 20 M2-6:2 FTS | | | | | | | | | | |
| 429.00 > 81.00 | 4.055 | 4.058 | -0.003 | 0.996 | 1726055 | 1.86 | | 78.3 | 1247 | |
| 24 Perfluoroheptanesulfonic acid | | | | | | | | | | |
| 449.00 > 80.00 | 4.063 | 4.074 | -0.011 | 0.916 | 1407276 | 0.9458 | Target=4.24 | 99.3 | 687 | |
| 449.00 > 99.00 | 4.063 | 4.074 | -0.011 | 0.916 | 318443 | | 4.42(2.12-6.36) | | 402 | |
| 22 Perfluorooctanoic acid | | | | | | | | | | |
| 413.00 > 369.00 | 4.071 | 4.082 | -0.011 | 1.000 | 3359697 | 0.9861 | Target=3.01 | 98.6 | 414 | |
| 413.00 > 169.00 | 4.071 | 4.082 | -0.011 | 1.000 | 1117144 | | 3.01(1.50-4.51) | | 1950 | |
| * 23 13C2 PFOA | | | | | | | | | | |
| 415.00 > 370.00 | 4.071 | 4.082 | -0.011 | | 11853441 | 2.50 | | | 7257 | |
| D 25 13C4 PFOA | | | | | | | | | | |
| 417.00 > 372.00 | 4.071 | 4.082 | -0.011 | 1.000 | 8347216 | 1.76 | | 70.4 | 6448 | |
| D 27 13C4 PFOS | | | | | | | | | | |
| 503.00 > 80.00 | 4.434 | 4.446 | -0.012 | 1.089 | 3181908 | 1.94 | | 81.0 | 1451 | |
| 29 Perfluorooctanesulfonic acid | | | | | | | | | | M |
| 499.00 > 80.00 | 4.434 | 4.446 | -0.012 | 1.000 | 1224087 | 0.8883 | Target=4.54 | 95.7 | 433 | M |
| 499.00 > 99.00 | 4.434 | 4.446 | -0.012 | 1.000 | 256468 | | 4.77(2.27-6.82) | | 355 | M |
| D 30 13C5 PFNA | | | | | | | | | | |
| 468.00 > 423.00 | 4.442 | 4.462 | -0.020 | 1.091 | 6687219 | 1.75 | | 70.0 | 8471 | |
| 31 Perfluorononanoic acid | | | | | | | | | | |
| 463.00 > 419.00 | 4.450 | 4.470 | -0.020 | 1.002 | 2839418 | 1.11 | Target=8.44 | 111 | 542 | |
| 463.00 > 169.00 | 4.450 | 4.470 | -0.020 | 1.002 | 326621 | | 8.69(4.22-12.67) | | 554 | |
| 32 9ClFOS | | | | | | | | | | |
| 531.00 > 351.00 | 4.637 | 4.647 | -0.010 | 1.046 | 3566493 | 0.8279 | | 88.8 | 6453 | |
| D 33 13C8 FOSA | | | | | | | | | | |
| 506.00 > 78.00 | 4.772 | 4.786 | -0.014 | 1.172 | 4545314 | 1.71 | | 68.6 | 5079 | |
| 34 Perfluorooctanesulfonamide | | | | | | | | | | |
| 498.00 > 78.00 | 4.772 | 4.786 | -0.014 | 1.000 | 1643115 | 0.9712 | | 97.1 | 2805 | |

| Signal | RT | EXP RT | DLT RT | REL RT | Response | Amount ng/ml | Ratio(Limits) | %Rec | S/N | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| 35 Perfluorononanesulfonic acid | | | | | | | | | | |
| 549.00 > 80.00 | 4.781 | 4.794 | -0.013 | 1.078 | 1087316 | 0.8718 | Target=2.79 | 90.8 | 730 | |
| 549.00 > 99.00 | 4.781 | 4.794 | -0.013 | 1.078 | 381260 | | 2.85(1.39-4.18) | | 765 | |
| D 39 13C2 PFDA | | | | | | | | | | |
| 515.00 > 470.00 | 4.806 | 4.820 | -0.014 | 1.181 | 6992110 | 1.88 | | 75.3 | 8698 | |
| 37 Perfluorodecanoic acid | | | | | | | | | | |
| 513.00 > 469.00 | 4.806 | 4.820 | -0.014 | 1.000 | 2182574 | 0.8096 | Target=8.83 | 81.0 | 717 | |
| 513.00 > 169.00 | 4.806 | 4.820 | -0.014 | 1.000 | 234835 | | 9.29(4.42-13.25) | | 184 | |
| 36 8:2 FTS | | | | | | | | | | |
| 527.00 > 507.00 | 4.806 | 4.820 | -0.014 | 1.000 | 1757660 | 0.9332 | | 97.4 | 5528 | |
| D 38 M2-8:2 FTS | | | | | | | | | | |
| 529.00 > 81.00 | 4.806 | 4.820 | -0.014 | 1.181 | 2541351 | 1.90 | | 79.3 | 2013 | |
| D 40 d3-NMeFOSAA | | | | | | | | | | |
| 573.00 > 419.00 | 4.972 | 4.978 | -0.006 | 1.221 | 4141165 | 1.66 | | 66.5 | 2909 | |
| 41 NMeFOSAA | | | | | | | | | | |
| 570.00 > 419.00 | 4.972 | 4.989 | -0.017 | 1.000 | 1222329 | 0.99 | | 99.5 | 1264 | |
| 42 Perfluorodecanesulfonic acid | | | | | | | | | | |
| 599.00 > 80.00 | 5.098 | 5.112 | -0.014 | 1.150 | 931698 | 0.8381 | Target=2.85 | 86.9 | 790 | |
| 599.00 > 99.00 | 5.098 | 5.112 | -0.014 | 1.150 | 336246 | | 2.77(1.43-4.28) | | 1057 | |
| D 43 13C2 PFUnA | | | | | | | | | | |
| 565.00 > 520.00 | 5.125 | 5.139 | -0.014 | 1.259 | 6553423 | 1.78 | | 71.3 | 15404 | |
| D 44 d5-NEtFOSAA | | | | | | | | | | |
| 589.00 > 419.00 | 5.134 | 5.148 | -0.014 | 1.261 | 4790762 | 1.82 | | 72.7 | 3465 | |
| 45 Perfluoroundecanoic acid | | | | | | | | | | |
| 563.00 > 519.00 | 5.134 | 5.148 | -0.014 | 1.002 | 2035312 | 1.07 | Target=8.45 | 107 | 969 | |
| 563.00 > 169.00 | 5.125 | 5.148 | -0.023 | 1.000 | 219908 | | 9.26(4.22-12.67) | | 451 | |
| 46 NEtFOSA | | | | | | | | | | |
| 584.00 > 419.00 | 5.143 | 5.157 | -0.014 | 1.002 | 1207154 | 0.9321 | | 93.2 | 1928 | |
| D 47 d7-N-MeFOSE-M | | | | | | | | | | |
| 623.00 > 59.00 | 5.235 | 5.240 | -0.005 | 1.286 | 2005789 | 3.06 | | 24.5 | 1311 | |
| 48 N-MeFOSE-M | | | | | | | | | | |
| 616.00 > 59.00 | 5.244 | 5.249 | -0.005 | 1.002 | 149540 | 0.8633 | | 86.3 | 233 | |
| D 49 d-N-MeFOSA-M | | | | | | | | | | |
| 515.00 > 169.00 | 5.254 | 5.259 | -0.005 | 1.291 | 1256873 | 1.35 | | 54.0 | 34.5 | |
| 50 NMeFOSA | | | | | | | | | | |
| 512.00 > 169.00 | 5.265 | 5.270 | -0.005 | 1.002 | 482724 | 1.00 | | 100.0 | 354 | |
| 51 11ClFOS | | | | | | | | | | |
| 631.00 > 451.00 | 5.265 | 5.280 | -0.015 | 1.187 | 4225097 | 0.7737 | | 82.1 | 9286 | |
| D 52 d9-N-EtFOSE-M | | | | | | | | | | |
| 639.00 > 59.00 | 5.409 | 5.416 | -0.007 | 1.329 | 1811394 | 2.25 | | 18.0 | 1106 | |
| 53 N-EtFOSE-M | | | | | | | | | | |
| 630.00 > 59.00 | 5.420 | 5.426 | -0.006 | 1.002 | 152423 | 0.9804 | | 98.0 | 172 | |
| D 56 13C2 PFDoA | | | | | | | | | | |
| 615.00 > 570.00 | 5.430 | 5.437 | -0.007 | 1.334 | 6595057 | 1.82 | | 72.7 | 7947 | |
| 57 Perfluorododecanoic acid | | | | | | | | | | |
| 613.00 > 569.00 | 5.420 | 5.437 | -0.017 | 0.998 | 2191979 | 0.8126 | Target=8.28 | 81.3 | 843 | |
| 613.00 > 169.00 | 5.420 | 5.437 | -0.017 | 0.998 | 265020 | | 8.27(4.14-12.41) | | 599 | |

| Signal | RT | EXP RT | DLT RT | REL RT | Response | Amount ng/ml | Ratio(Limits) | %Rec | S/N | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| D 54 d-N-EtFOSA-M | | | | | | | | | | |
| 531.00 > 169.00 | 5.430 | 5.437 | -0.007 | 1.334 | 910429 | 0.9548 | | 38.2 | 186 | |
| 55 N-EtFOSA-M | | | | | | | | | | |
| 526.00 > 169.00 | 5.441 | 5.448 | -0.007 | 1.002 | 357380 | 0.9272 | | 92.7 | 204 | |
| 58 10:2 FTS | | | | | | | | | | |
| 627.00 > 607.00 | 5.441 | 5.459 | -0.018 | 1.132 | 2005959 | 0.9386 | | 97.4 | 9154 | |
| 59 PFDoS | | | | | | | | | | |
| 699.00 > 80.00 | 5.648 | 5.667 | -0.019 | 1.274 | 379487 | 0.8563 | Target=0.71 | 88.5 | 369 | |
| 699.00 > 99.00 | 5.648 | 5.667 | -0.019 | 1.274 | 527379 | | 0.72(0.36-1.07) | | 1247 | |
| 60 Perfluorotridecanoic acid | | | | | | | | | | |
| 663.00 > 619.00 | 5.684 | 5.701 | -0.017 | 1.047 | 2102417 | 0.8470 | Target=7.29 | 84.7 | 1357 | |
| 663.00 > 169.00 | 5.684 | 5.701 | -0.017 | 1.047 | 349966 | | 6.01(3.65-10.94) | | 1090 | |
| D 61 13C2 PFTeDA | | | | | | | | | | |
| 715.00 > 670.00 | 5.921 | 5.948 | -0.027 | 1.455 | 6569375 | 2.20 | | 87.8 | 7866 | |
| 62 Perfluorotetradecanoic acid | | | | | | | | | | |
| 713.00 > 169.00 | 5.933 | 5.948 | -0.015 | 1.002 | 236208 | 1.07 | Target=1.00 | 107 | 1271 | |
| 713.00 > 219.00 | 5.933 | 5.948 | -0.015 | 1.002 | 242672 | | 0.97(0.50-1.50) | | 1415 | |
| D 64 13C2 PFHxDA | | | | | | | | | | |
| 815.00 > 770.00 | 6.366 | 6.377 | -0.011 | 1.564 | 3709058 | 1.69 | | 67.8 | 5874 | |
| 63 Perfluorohexadecanoic acid | | | | | | | | | | |
| 813.00 > 769.00 | 6.366 | 6.386 | -0.020 | 1.000 | 1421872 | 1.07 | Target=9.97 | 107 | 1187 | |
| 813.00 > 169.00 | 6.366 | 6.386 | -0.020 | 1.000 | 132330 | | 10.74(4.98-14.95) | | 956 | |
| 65 Perfluorooctadecanoic acid | | | | | | | | | | |
| 913.00 > 869.00 | 6.815 | 6.835 | -0.020 | 1.071 | 1037547 | 1.06 | Target=12.11 | 106 | 1149 | |
| 913.00 > 169.00 | 6.808 | 6.835 | -0.027 | 1.070 | 85472 | | 12.14(6.05-18.16) | | 802 | |

## QC Flag Legend

Review Flags

M - Manually Integrated

Report Date: 11-Sep-2020 08:29:36 Chrom Revision: 2.3 09-Sep-2020 15:12:58

Eurofins TestAmerica, Sacramento

Data File: \\chromfs\Sacramento\ChromData\A18\20200910-103041.b\2020.09.10_A18_PFC_A_076.d

Injection Date: 10-Sep-2020 15:29:35 Instrument ID: A18

Lims ID: LCSD 320-410910/3-A

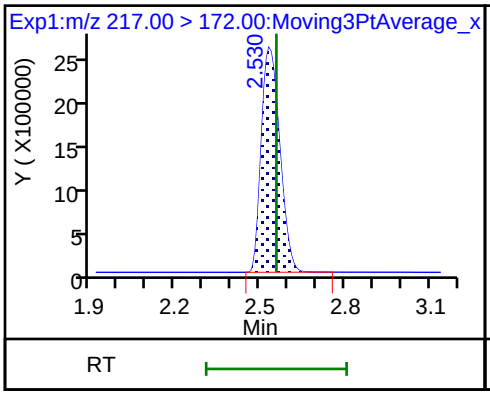
Client ID:

Operator ID: TAISACA18-PC\A-18 ALS Bottle#: 40 Worklist Smp#: 4

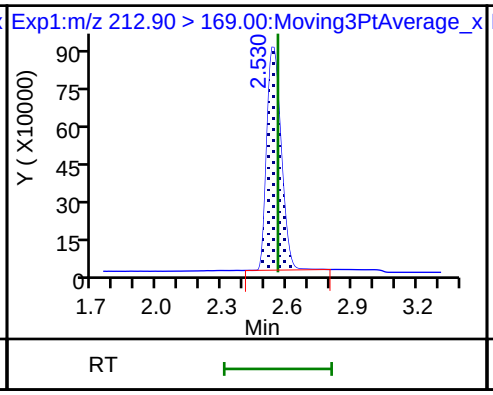
Injection Vol: 20.0 ul Dil. Factor: 1.0000

Method: PFAS_A18V2 Limit Group: LC PFC ICAL

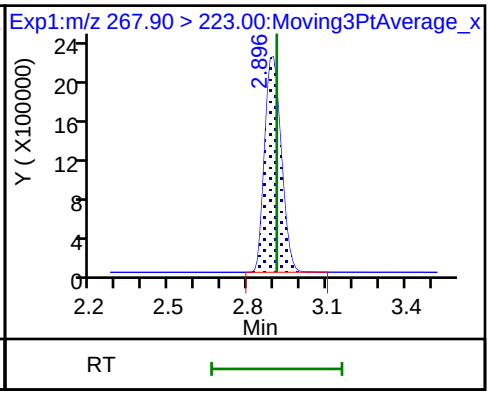
D 1 13C4 PFBA



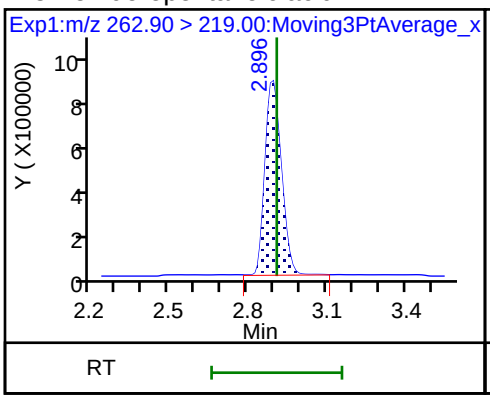

2 Perfluorobutanoic acid



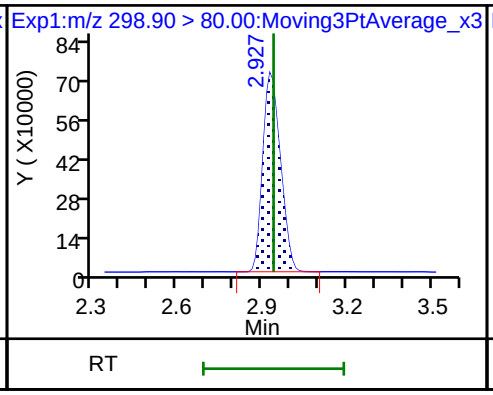

D 4 13C5 PFPeA



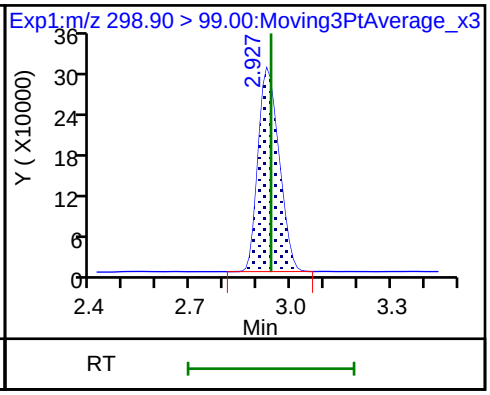

5 Perfluoropentanoic acid



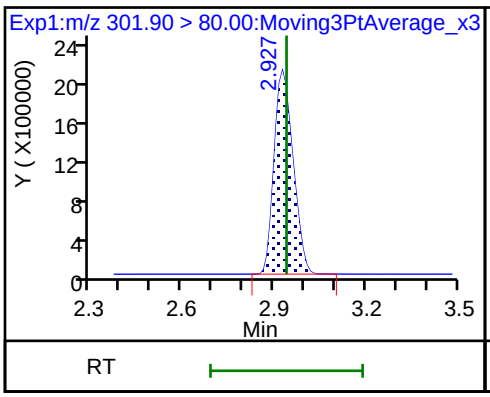

6 Perfluorobutanesulfonic acid



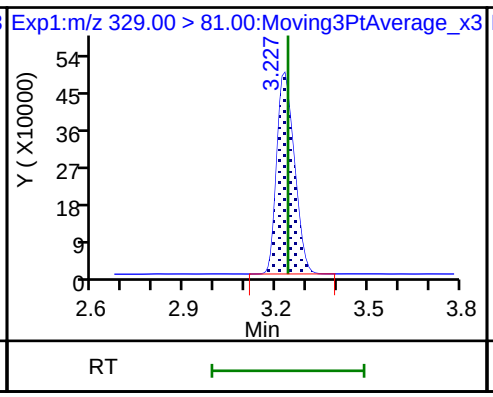

6 Perfluorobutanesulfonic acid



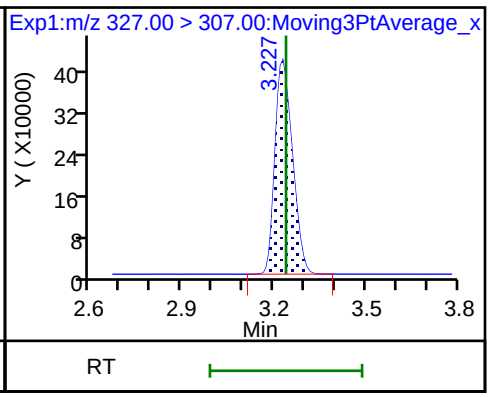

D 9 13C3 PFBS



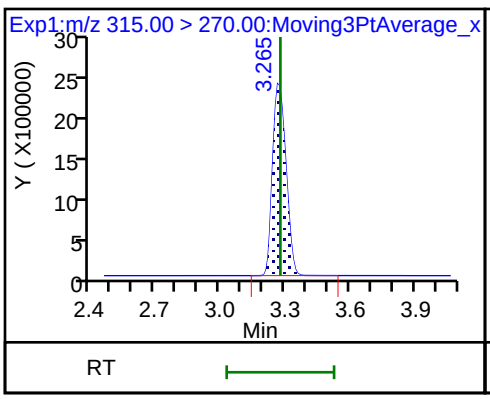

D 7 M2-4:2 FTS



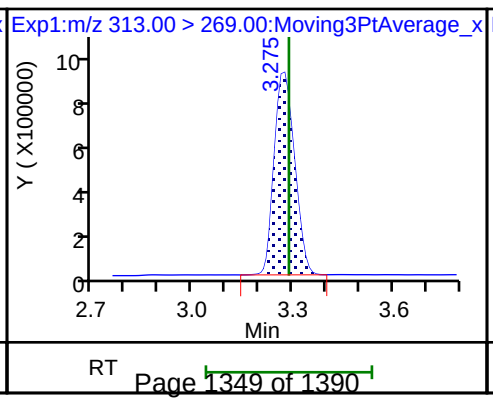

8 4:2 FTS



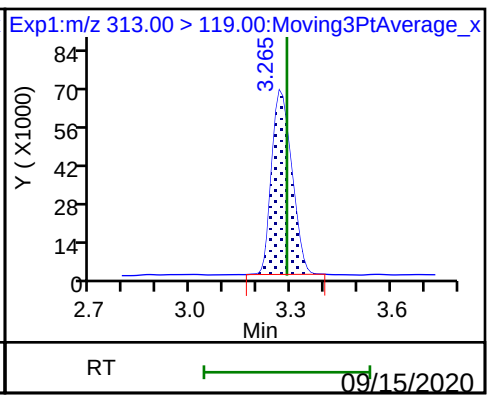

D 11 13C2 PFHxA



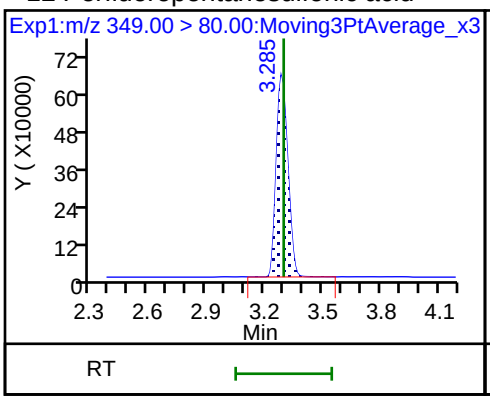

10 Perfluorohexanoic acid



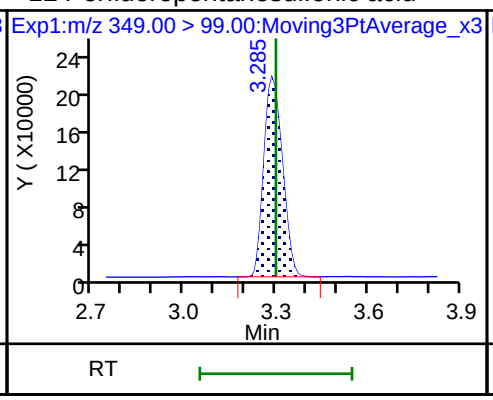

10 Perfluorohexanoic acid



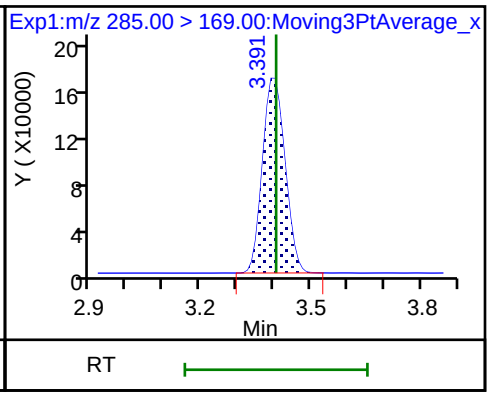
12 Perfluoropentanesulfonic acid



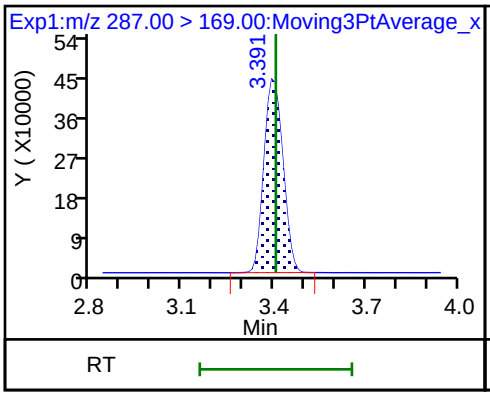

12 Perfluoropentanesulfonic acid



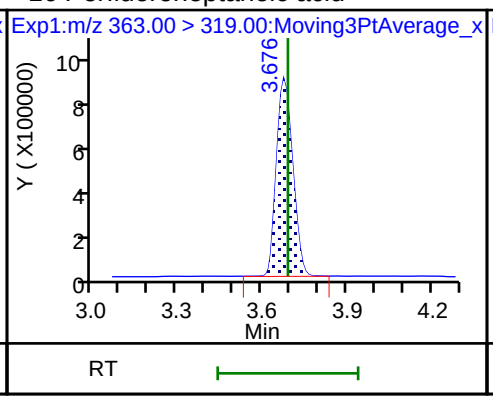

13 HPFO-DA



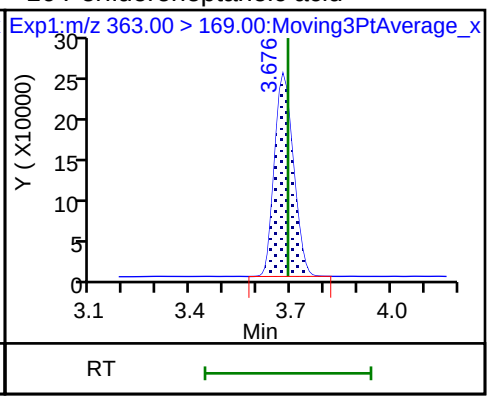

D 14 13C3 HFPO-DA



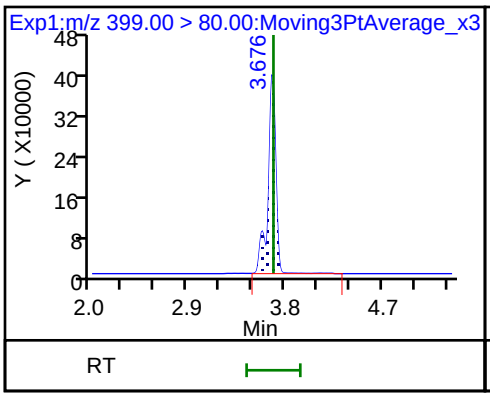

16 Perfluoroheptanoic acid



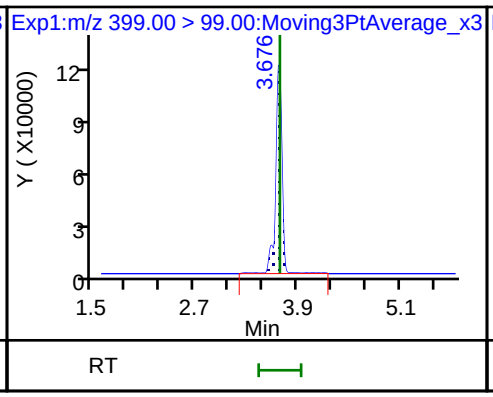

16 Perfluoroheptanoic acid



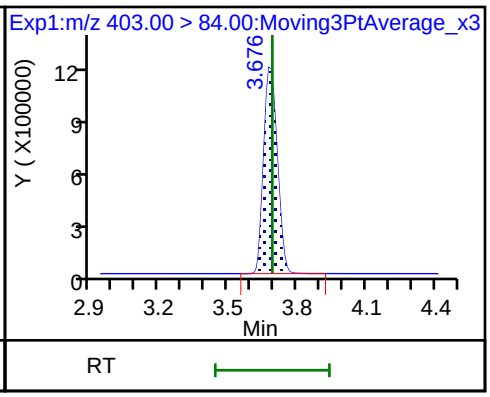

15 Perfluorohexanesulfonic acid



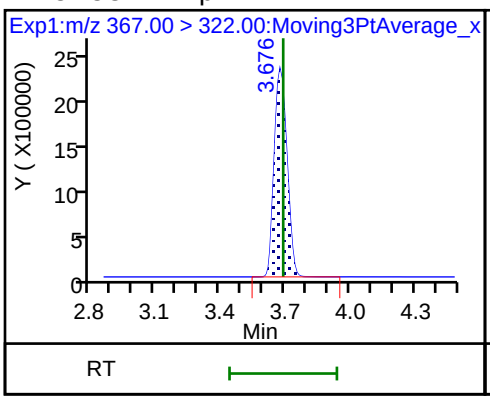

15 Perfluorohexanesulfonic acid



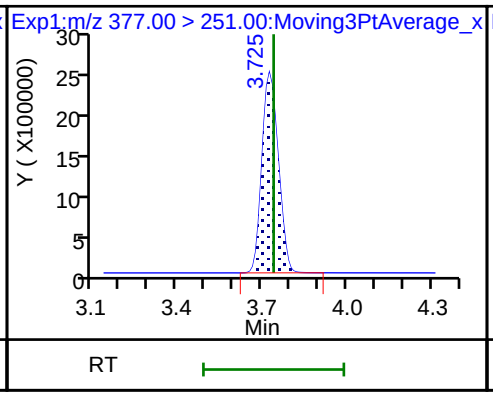

D 17 18O2 PFHxS




D 18 13C4 PFHpA




19 DONA

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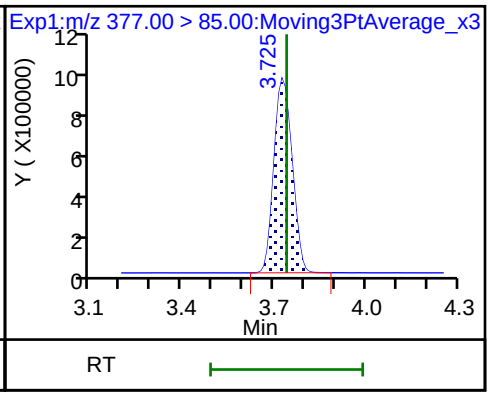
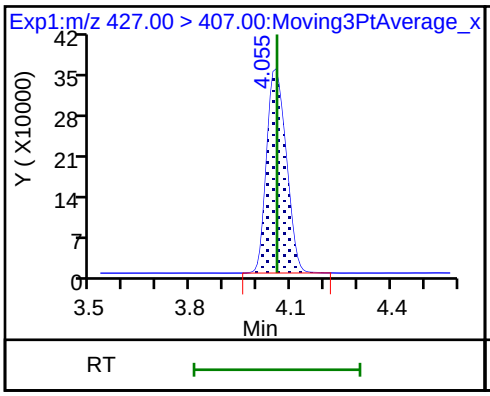
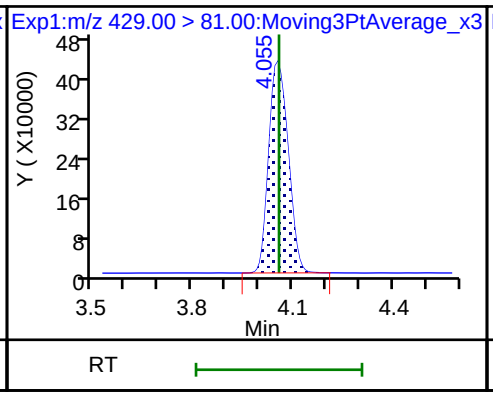


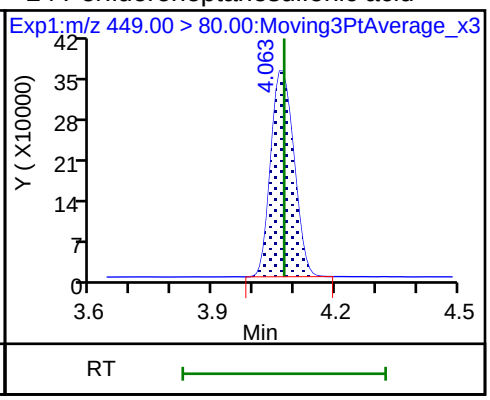
21 6:2 FTS



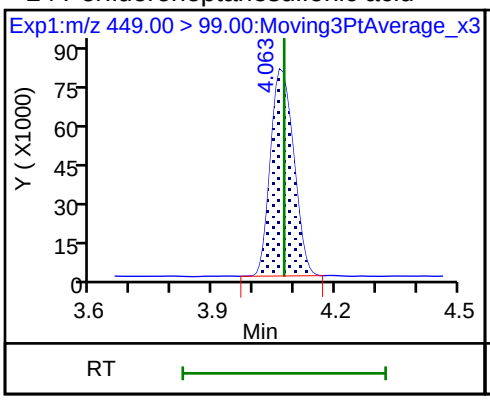

D 20 M2-6:2 FTS



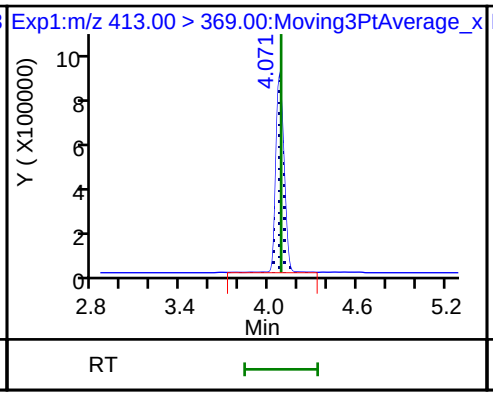

24 Perfluoroheptanesulfonic acid



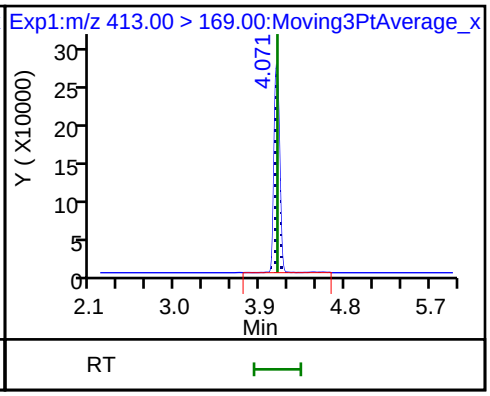

24 Perfluoroheptanesulfonic acid



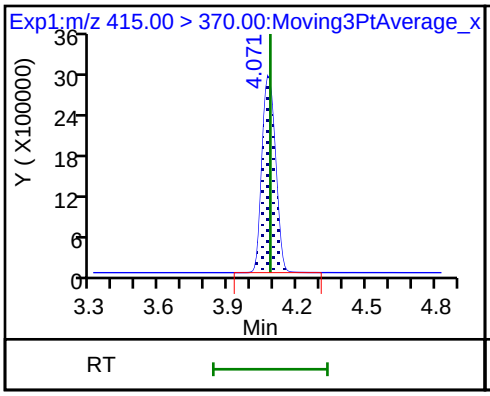

22 Perfluorooctanoic acid



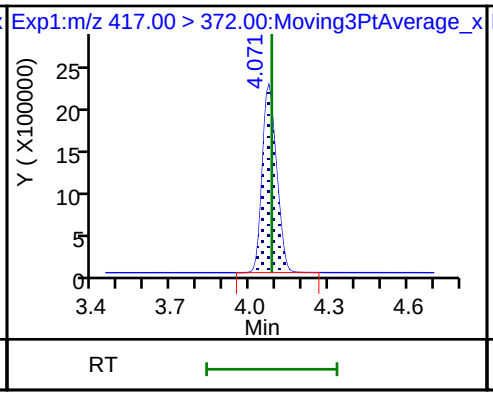

22 Perfluorooctanoic acid



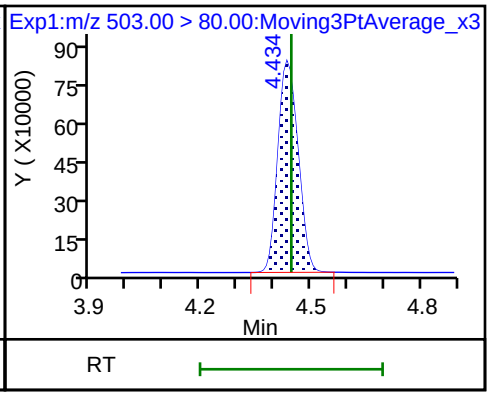

* 23 13C2 PFOA



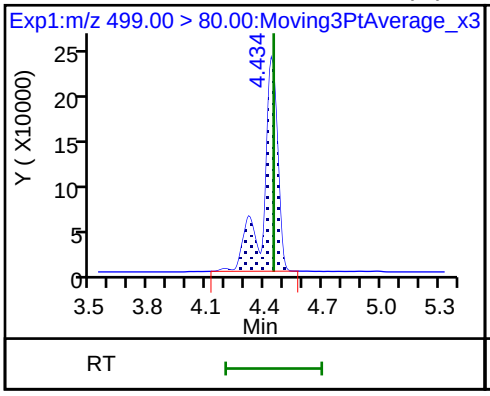

D 25 13C4 PFOA



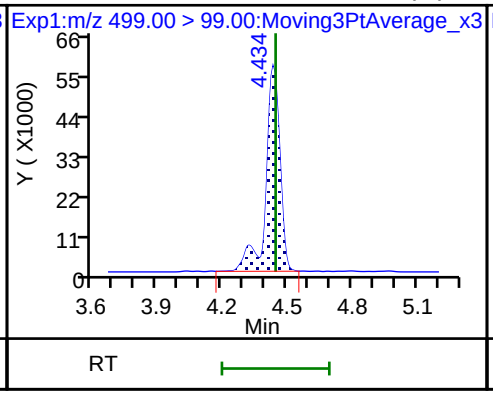

D 27 13C4 PFOS



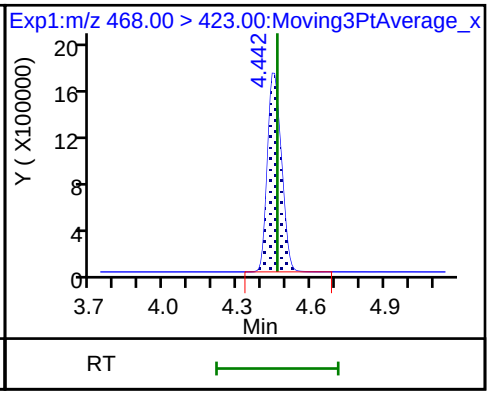

29 Perfluorooctanesulfonic acid (M)



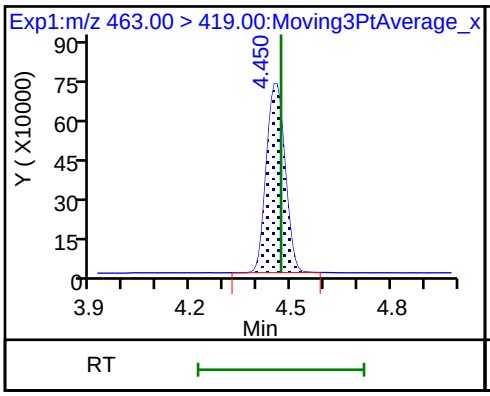

29 Perfluorooctanesulfonic acid (M)



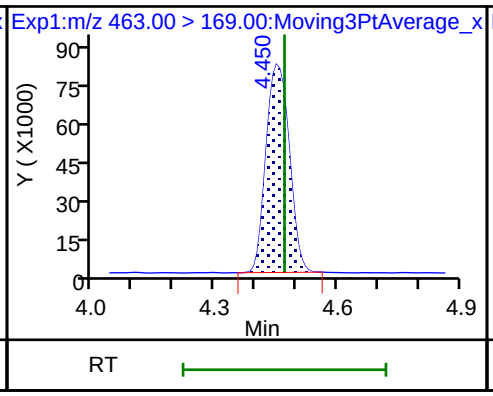

D 30 13C5 PFNA



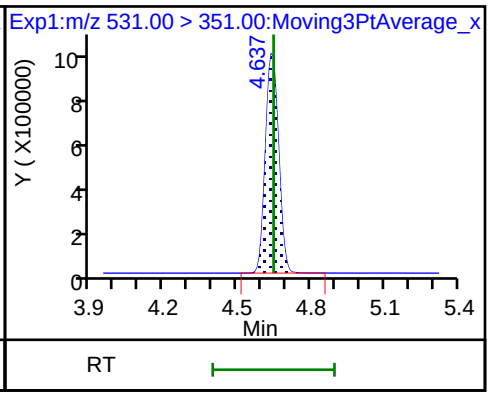
31 Perfluorononanoic acid



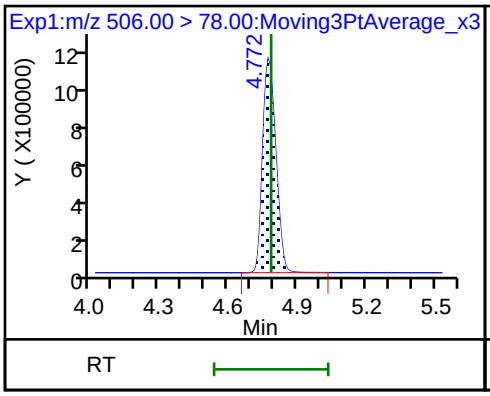

31 Perfluorononanoic acid



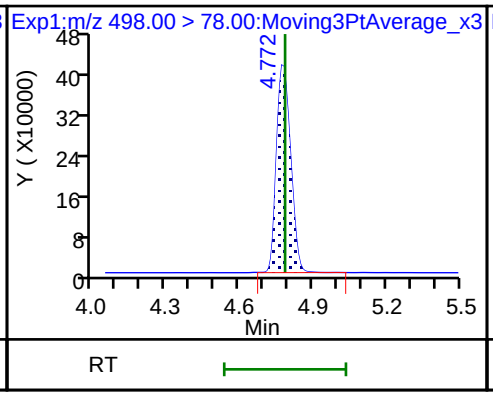

32 9ClFOS



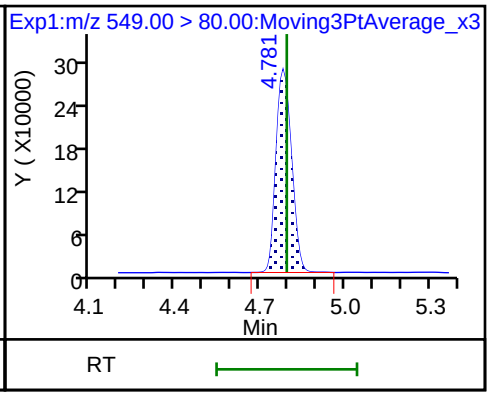

D 33 13C8 FOSA



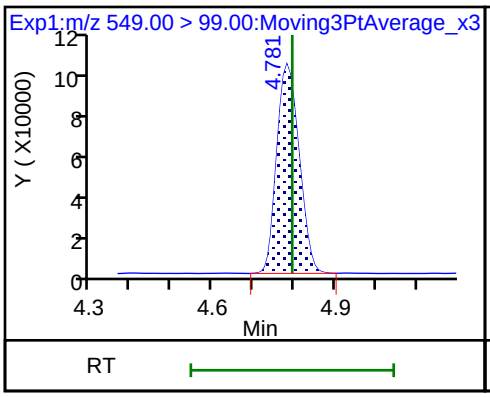

34 Perfluorooctanesulfonamide



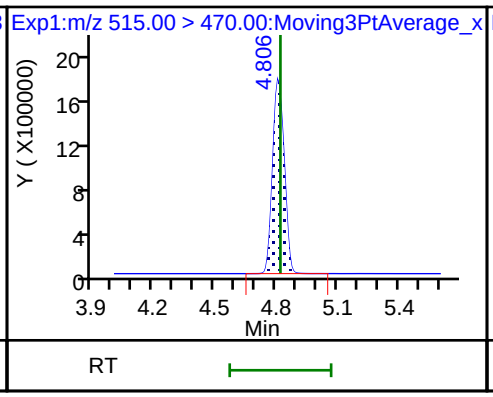

35 Perfluorononanesulfonic acid



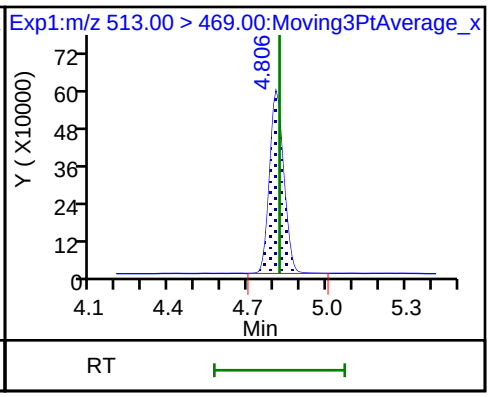

35 Perfluorononanesulfonic acid



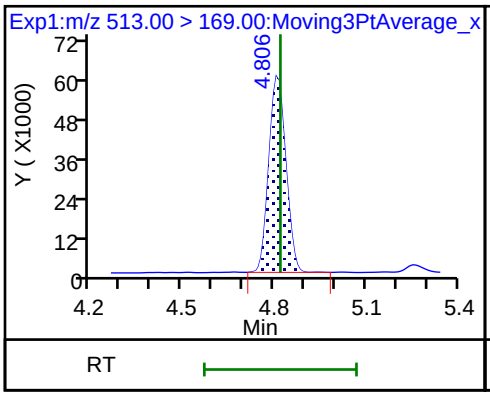

D 39 13C2 PFDA



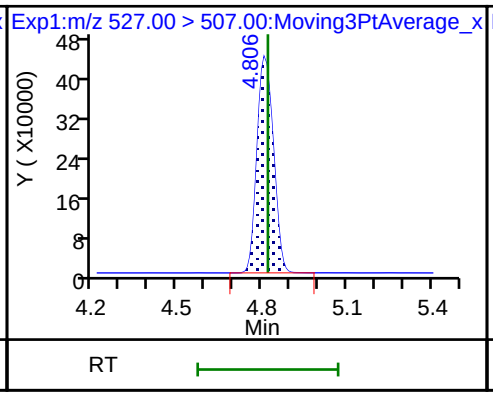

37 Perfluorodecanoic acid



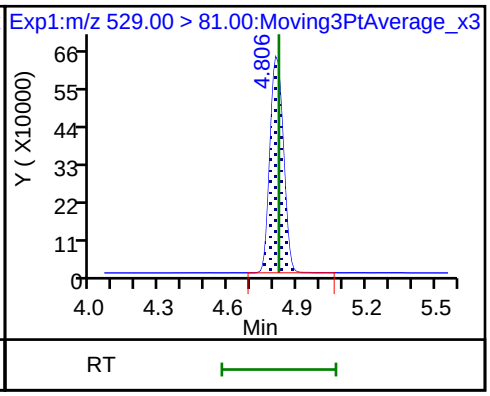

37 Perfluorodecanoic acid



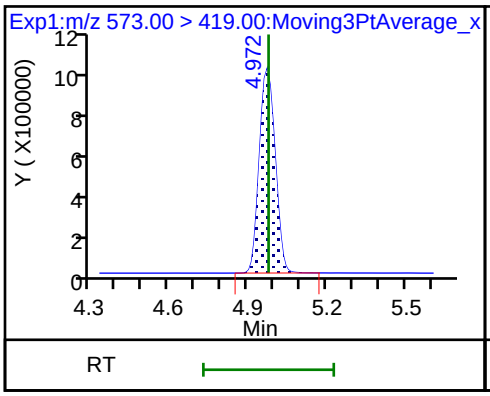

36 8:2 FTS



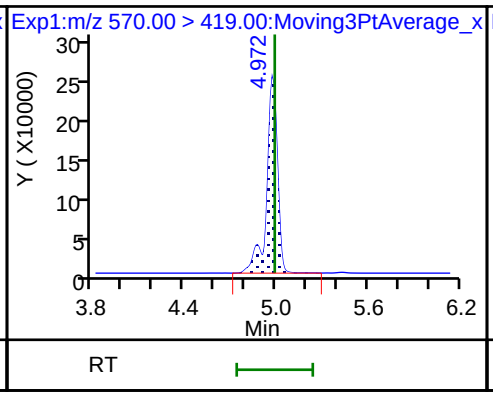

D 38 M2-8:2 FTS



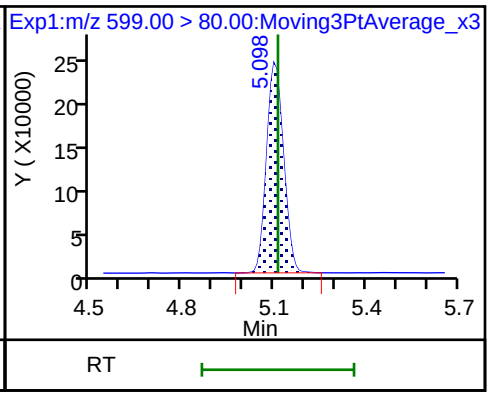
D 40 d3-NMeFOSAA



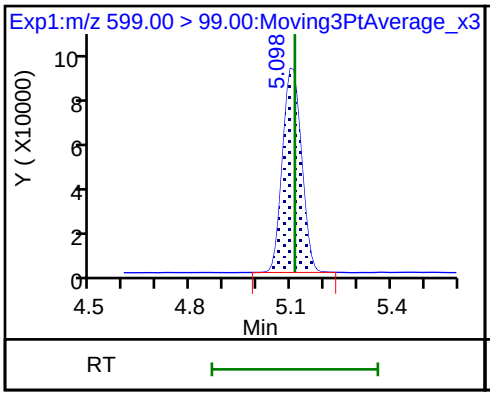

41 NMeFOSAA



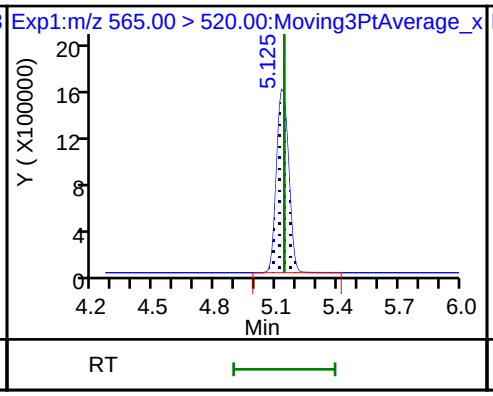

42 Perfluorodecanesulfonic acid



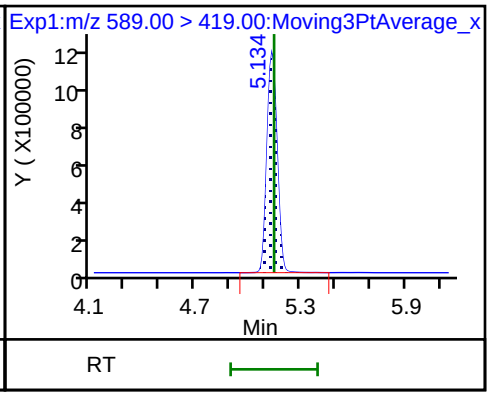

42 Perfluorodecanesulfonic acid



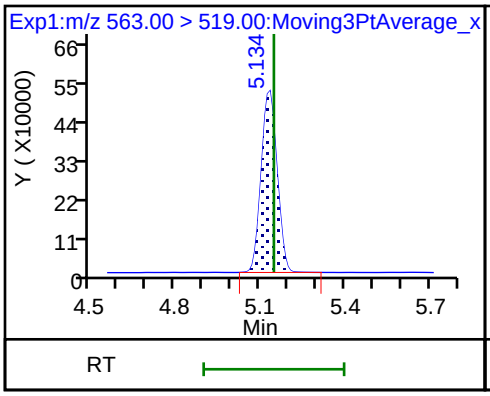

D 43 13C2 PFUnA



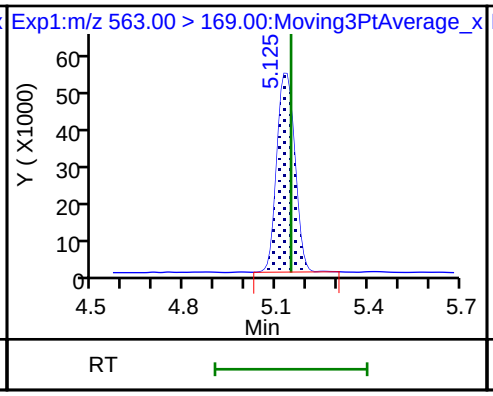

D 44 d5-NEtFOSAA



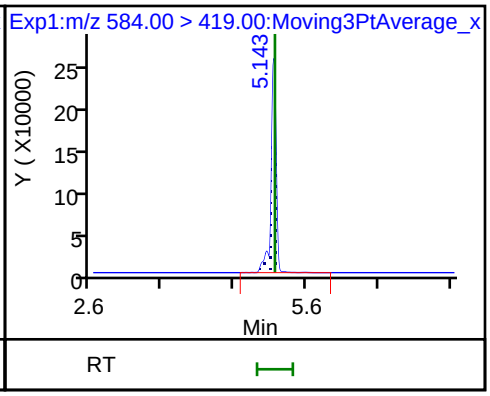

45 Perfluoroundecanoic acid



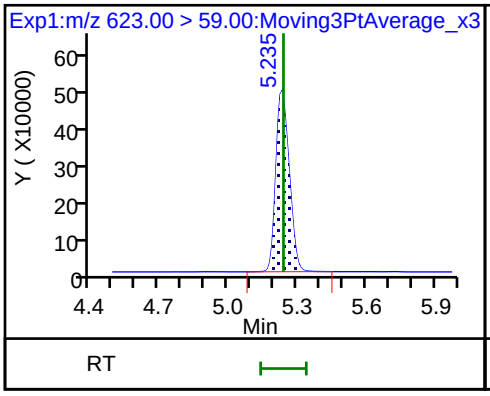

45 Perfluoroundecanoic acid



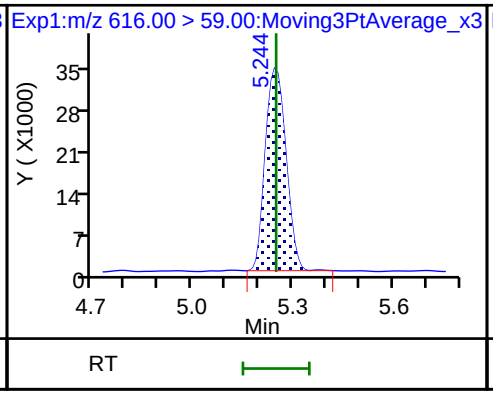

46 NEtFOSA



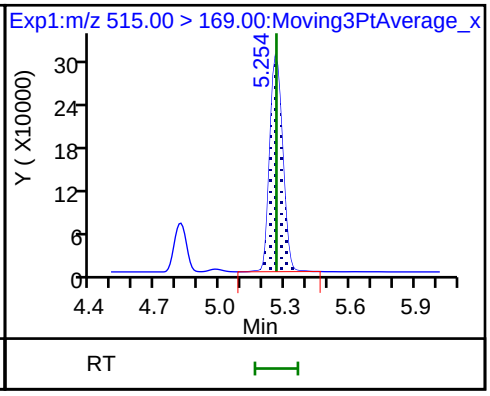

D 47 d7-N-MeFOSE-M



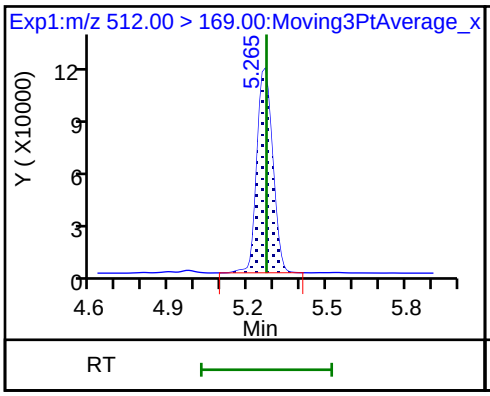

48 N-MeFOSE-M



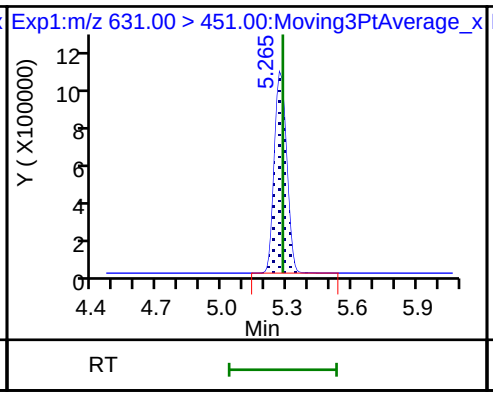

D 49 d-N-MeFOSA-M



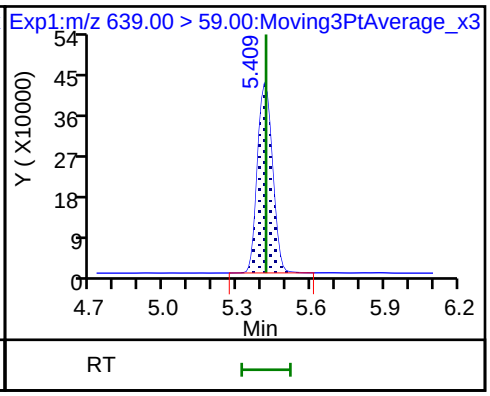
50 NMeFOSA



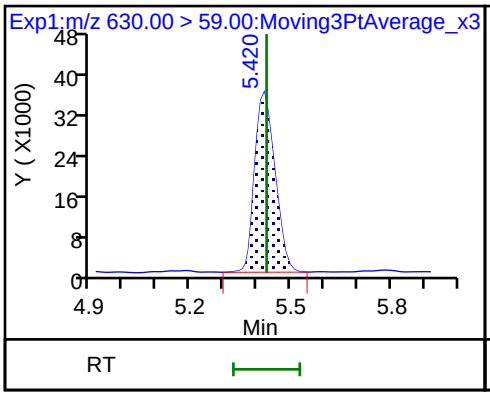

51 11ClFOS



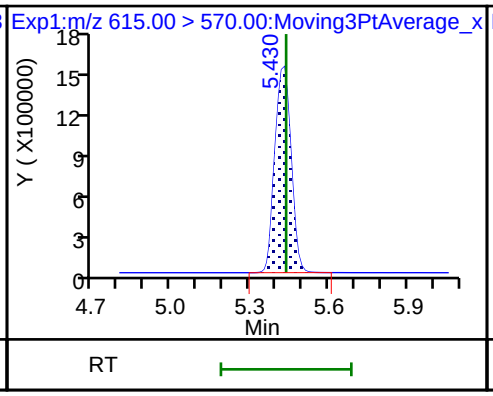

D 52 d9-N-EtFOSE-M



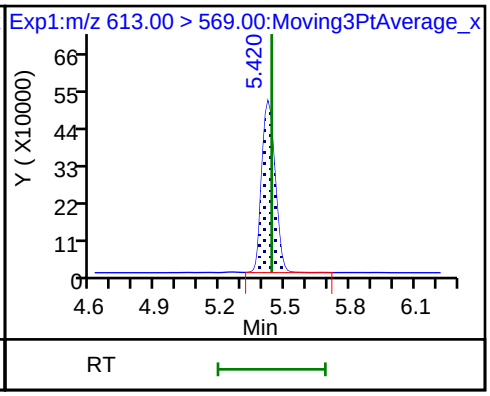

53 N-EtFOSE-M



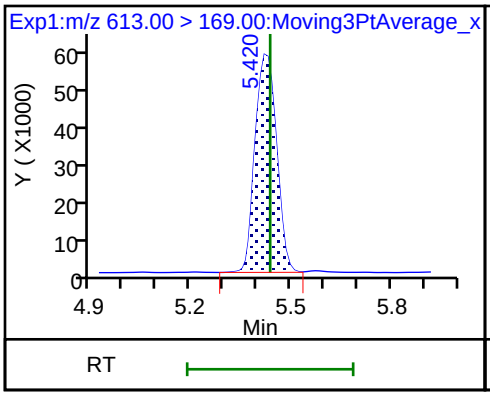

D 56 13C2 PFDoA



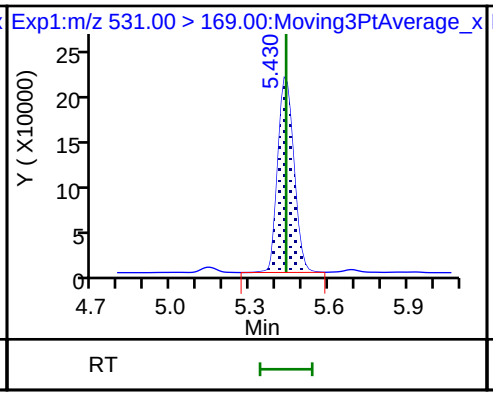

57 Perfluorododecanoic acid



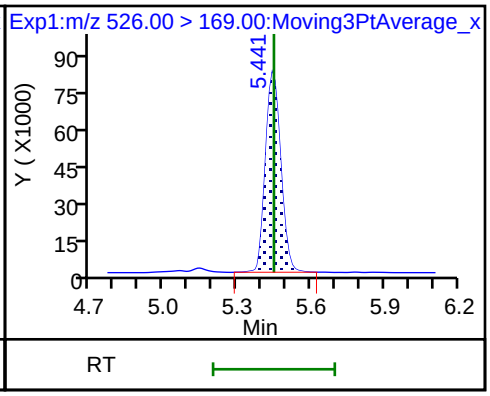

57 Perfluorododecanoic acid



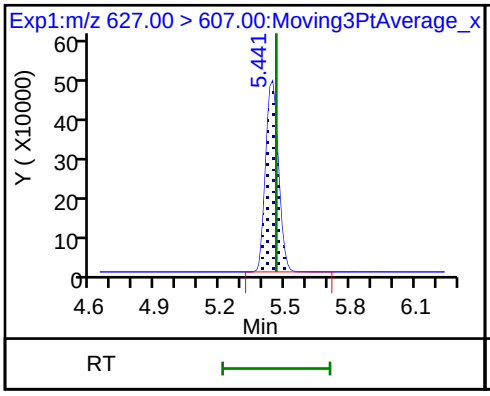

D 54 d-N-EtFOSA-M



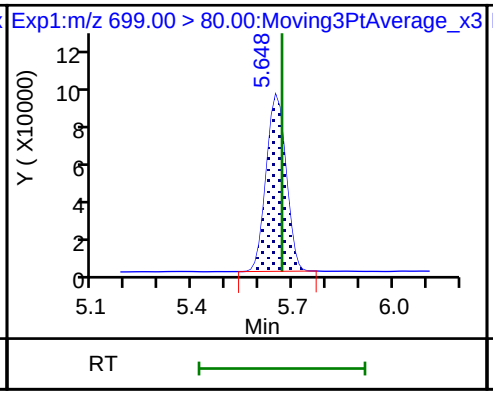

55 N-EtFOSA-M



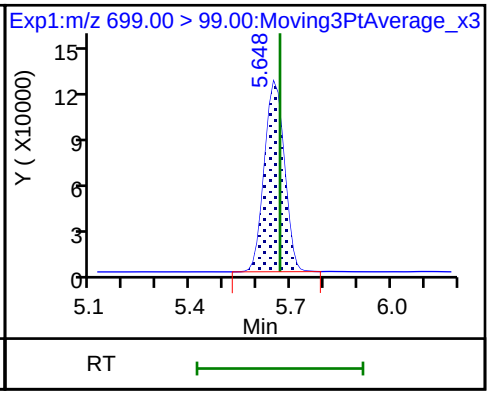

58 10:2 FTS



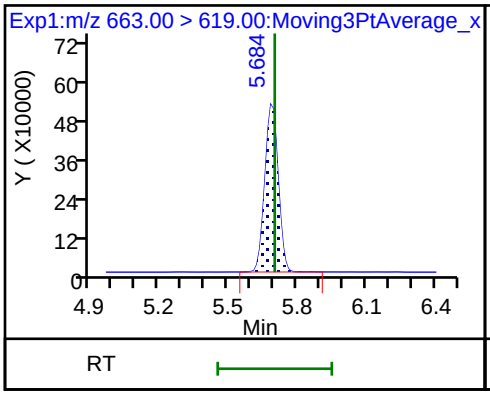

59 PFDoS



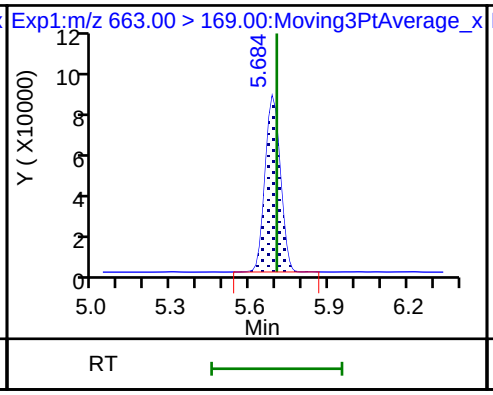

59 PFDoS



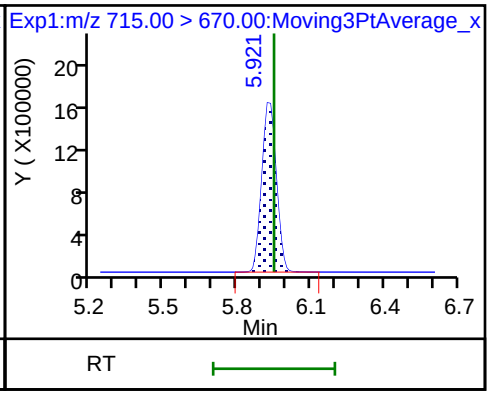
60 Perfluorotridecanoic acid



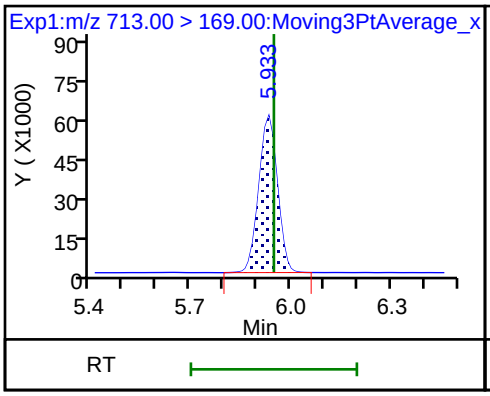

60 Perfluorotridecanoic acid



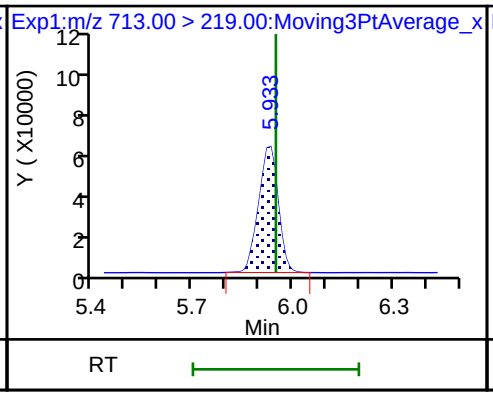

D 61 13C2 PFTeDA



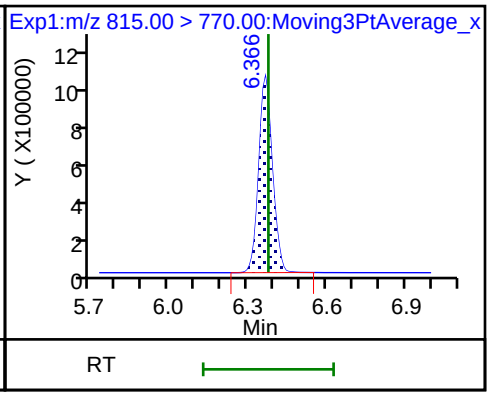

62 Perfluorotetradecanoic acid



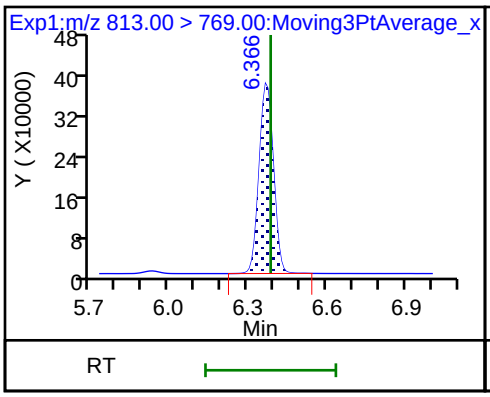

62 Perfluorotetradecanoic acid



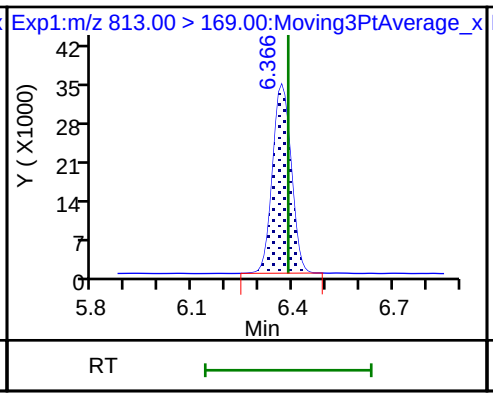

D 64 13C2 PFHxDA



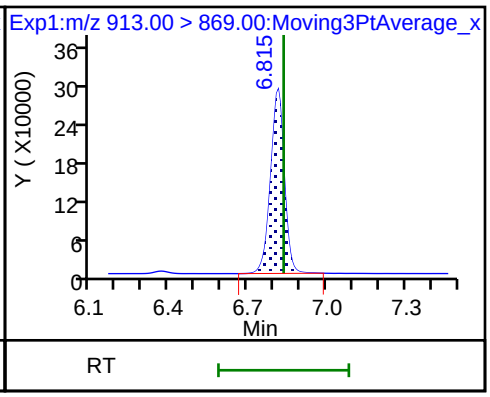

63 Perfluorohexadecanoic acid



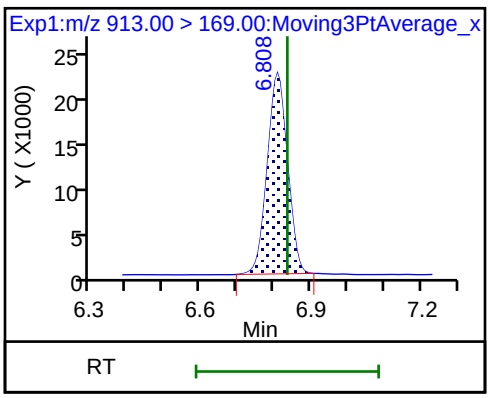

63 Perfluorohexadecanoic acid




65 Perfluorooctadecanoic acid




65 Perfluorooctadecanoic acid



Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

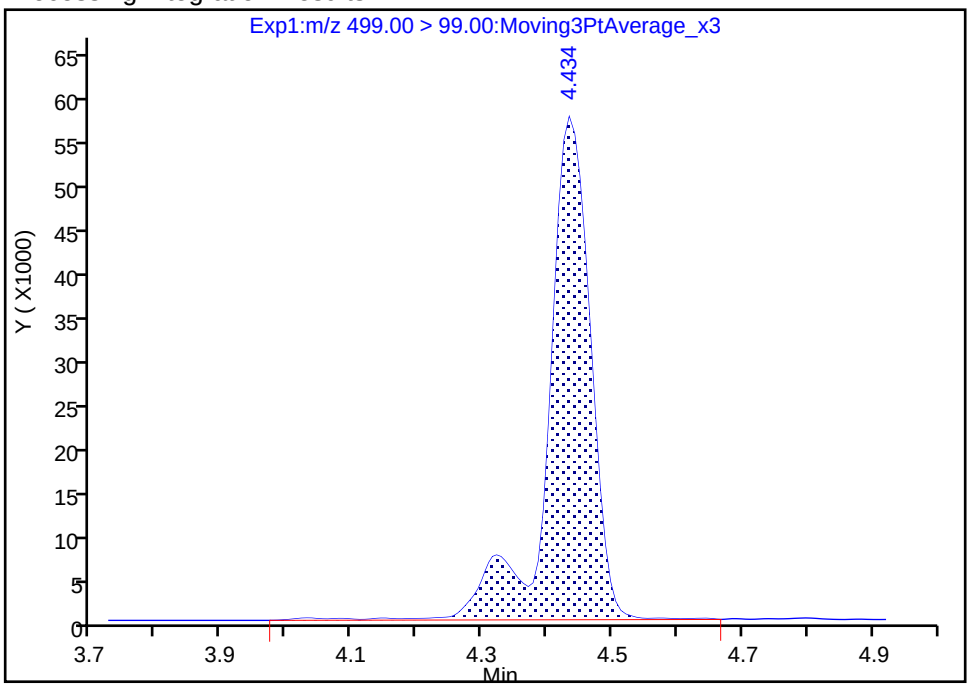
Data File: \\chromfs\Sacramento\ChromData\A18\20200910-103041.b\2020.09.10_A18_PFC_A_076.d
Injection Date: 10-Sep-2020 15:29:35 Instrument ID: A18
Lims ID: LCSD 320-410910/3-A
Client ID:
Operator ID: TAISACA18-PC\A-18 ALS Bottle#: 40 Worklist Smp#: 4
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFAS_A18V2 Limit Group: LC PFC ICAL
Column: Gemini C18 3um 3mm x 50 mm ( 3.00 mm) Detector EXP1

## 29 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 2

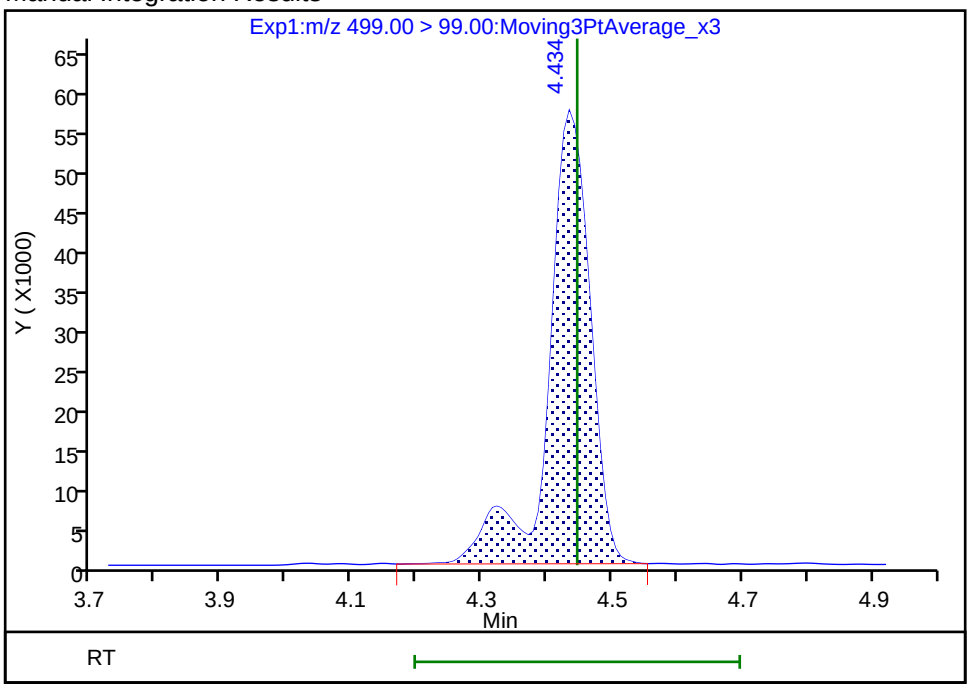
Processing Integration Results

RT: 4.43
Area: 261394
Amount: 0.682397
Amount Units: ng/ml




Manual Integration Results

RT: 4.43
Area: 256468
Amount: 0.888315
Amount Units: ng/ml




Reviewer: sanjumnair, 11-Sep-2020 08:29:18
Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

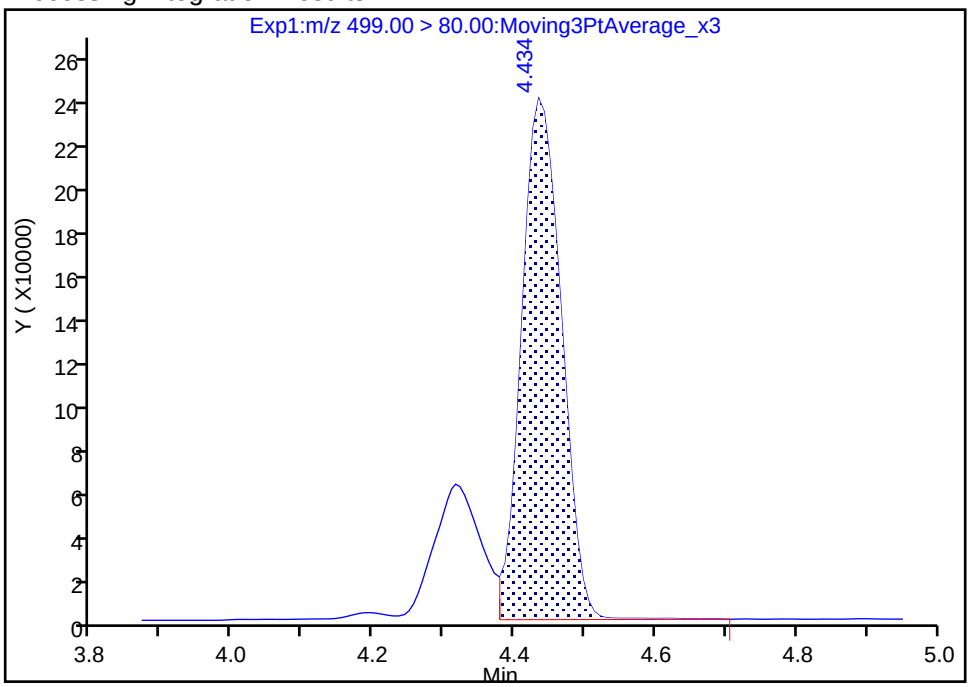
Data File: \\chromfs\Sacramento\ChromData\A18\20200910-103041.b\2020.09.10_A18_PFC_A_076.d
Injection Date: 10-Sep-2020 15:29:35 Instrument ID: A18
Lims ID: LCSD 320-410910/3-A
Client ID:
Operator ID: TAISACA18-PC\A-18 ALS Bottle#: 40 Worklist Smp#: 4
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFAS_A18V2 Limit Group: LC PFC ICAL
Column: Gemini C18 3um 3mm x 50 mm ( 3.00mm) Detector EXP1

## 29 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 1

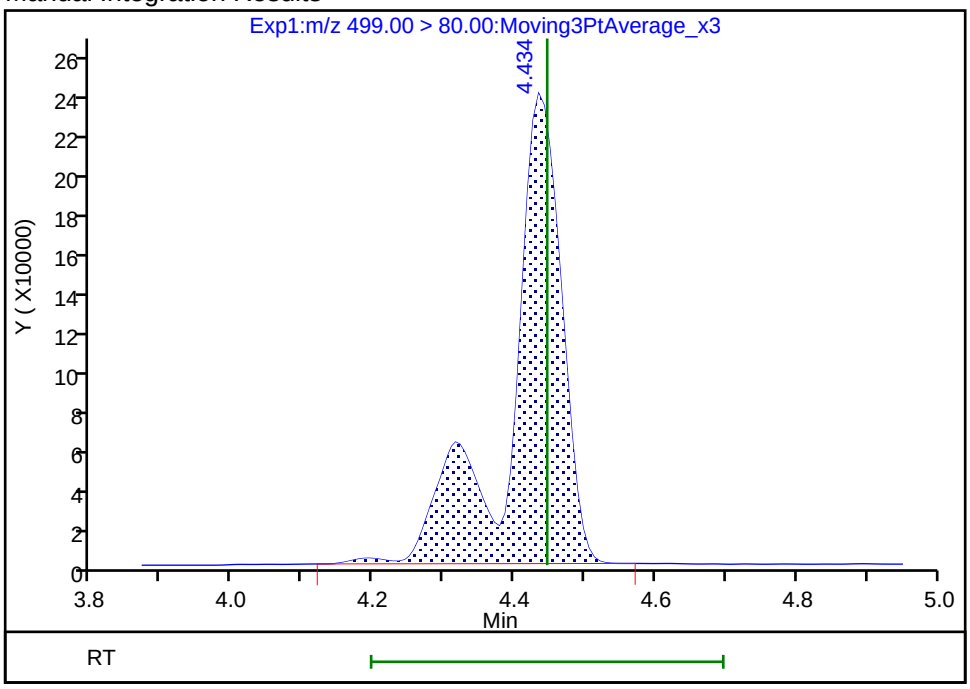
Processing Integration Results

RT: 4.43
Area: 940334
Amount: 0.682397
Amount Units: ng/ml




Manual Integration Results

RT: 4.43
Area: 1224087
Amount: 0.888315
Amount Units: ng/ml




Reviewer: sanjumnair, 11-Sep-2020 08:29:25
Audit Action: Manually Integrated Audit Reason: Baseline

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento  Job No.: 460-217547-1

SDG No.:

Client Sample ID:  Lab Sample ID: LCSD 320-411226/3-A

Matrix: Water  Lab File ID: 2020.09.11_A9_PFC_AA_027.d

Analysis Method: 537 (modified)  Date Collected:

Extraction Method: 3535  Date Extracted: 09/10/2020 18:32

Sample wt/vol: 250(mL)  Date Analyzed: 09/11/2020 13:33

Con. Extract Vol.: 10.00(mL)  Dilution Factor: 1

Injection Volume: 20(uL)  GC Column: Acquity  ID: 2.1(mm)

% Moisture:  GPC Cleanup:(Y/N) N

Analysis Batch No.: 411454  Units: ng/L

| CAS NO. | COMPOUND NAME | RESULT | Q | RL | MDL |
|---|---|---|---|---|---|
| 375-22-4 | Perfluorobutanoic acid (PFBA) | 43.48 | | 2.00 | 0.35 |
| 2706-90-3 | Perfluoropentanoic acid (PFPeA) | 39.01 | | 2.00 | 0.49 |
| 307-24-4 | Perfluorohexanoic acid (PFHxA) | 41.96 | | 2.00 | 0.58 |
| 375-85-9 | Perfluoroheptanoic acid (PFHpA) | 42.11 | | 2.00 | 0.25 |
| 335-67-1 | Perfluorooctanoic acid (PFOA) | 41.33 | | 2.00 | 0.85 |
| 375-95-1 | Perfluorononanoic acid (PFNA) | 45.26 | | 2.00 | 0.27 |
| 335-76-2 | Perfluorodecanoic acid (PFDA) | 41.84 | | 2.00 | 0.31 |
| 2058-94-8 | Perfluoroundecanoic acid (PFUnA) | 45.15 | | 2.00 | 1.10 |
| 307-55-1 | Perfluorododecanoic acid (PFDoA) | 45.36 | | 2.00 | 0.55 |
| 72629-94-8 | Perfluorotridecanoic acid (PFTriA) | 40.17 | | 2.00 | 1.30 |
| 376-06-7 | Perfluorotetradecanoic acid (PFTeA) | 39.04 | | 2.00 | 0.29 |
| 375-73-5 | Perfluorobutanesulfonic acid (PFBS) | 37.40 | | 2.00 | 0.20 |
| 355-46-4 | Perfluorohexanesulfonic acid (PFHxS) | 34.52 | | 2.00 | 0.17 |
| 375-92-8 | Perfluoroheptanesulfonic Acid (PFHpS) | 40.88 | | 2.00 | 0.19 |
| 1763-23-1 | Perfluorooctanesulfonic acid (PFOS) | 37.79 | | 2.00 | 0.54 |
| 335-77-3 | Perfluorodecanesulfonic acid (PFDS) | 38.93 | | 2.00 | 0.32 |
| 754-91-6 | Perfluorooctanesulfonamide (FOSA) | 45.31 | | 2.00 | 0.35 |
| 2355-31-9 | N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA) | 43.86 | | 20.0 | 3.10 |
| 2991-50-6 | N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA) | 42.04 | | 20.0 | 1.90 |
| 27619-97-2 | 6:2 FTS | 35.19 | | 20.0 | 2.00 |
| 39108-34-4 | 8:2 FTS | 40.25 | | 20.0 | 2.00 |

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento  Job No.: 460-217547-1

SDG No.:

Client Sample ID:  Lab Sample ID: LCSD 320-411226/3-A

Matrix: Water  Lab File ID: 2020.09.11_A9_PFC_AA_027.d

Analysis Method: 537 (modified)  Date Collected:

Extraction Method: 3535  Date Extracted: 09/10/2020 18:32

Sample wt/vol: 250(mL)  Date Analyzed: 09/11/2020 13:33

Con. Extract Vol.: 10.00(mL)  Dilution Factor: 1

Injection Volume: 20(uL)  GC Column: Acquity  ID: 2.1(mm)

% Moisture:  GPC Cleanup:(Y/N) N

Analysis Batch No.: 411454  Units: ng/L

| CAS NO. | ISOTOPE DILUTION | %REC | Q | LIMITS |
|---|---|---|---|---|
| STL00992 | 13C4 PFBA | 86 | | 25-150 |
| STL01893 | 13C5 PFPeA | 89 | | 25-150 |
| STL00993 | 13C2 PFHxA | 90 | | 25-150 |
| STL01892 | 13C4 PFHpA | 91 | | 25-150 |
| STL00990 | 13C4 PFOA | 89 | | 25-150 |
| STL00995 | 13C5 PFNA | 94 | | 25-150 |
| STL00996 | 13C2 PFDA | 95 | | 25-150 |
| STL00997 | 13C2 PFUnA | 96 | | 25-150 |
| STL00998 | 13C2 PFDoA | 88 | | 25-150 |
| STL02116 | 13C2 PFTeDA | 89 | | 25-150 |
| STL02337 | 13C3 PFBS | 94 | | 25-150 |
| STL00994 | 18O2 PFHxS | 94 | | 25-150 |
| STL00991 | 13C4 PFOS | 97 | | 25-150 |
| STL01056 | 13C8 FOSA | 81 | | 25-150 |
| STL02118 | d3-NMeFOSAA | 79 | | 25-150 |
| STL02117 | d5-NEtFOSAA | 79 | | 25-150 |
| STL02279 | M2-6:2 FTS | 95 | | 25-150 |
| STL02280 | M2-8:2 FTS | 92 | | 25-150 |

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\A9\20200911-103120.b\2020.09.11_A9_PFC_AA_027.d
Lims ID: LCSD 320-411226/3-A
Client ID:
Sample Type: LCSD
Inject. Date: 11-Sep-2020 13:33:42 ALS Bottle#: 15 Worklist Smp#: 4
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Sample Info: lcsd 320-411226/3-a
Misc. Info.: Plate: 1 Rack: 3
Operator ID: SACINSTRLCMS02 Instrument ID: A9

Method: \\chromfs\Sacramento\ChromData\A9\20200911-103120.b\PFAS_A9.m
Limit Group: LC PFC ICAL
Last Update: 11-Sep-2020 16:04:46 Calib Date: 10-Sep-2020 12:29:20
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\A9\20200910-102999.b\2020.09.10_A9 _PFC_ICAL_AA_022.d

Column 1 : Det: EXP1
Process Host: CTX1061

First Level Reviewer: zibaa Date: 11-Sep-2020 16:04:46
Ratio Calibration: CCV Sample: \\chromfs\Sacramento\ChromData\A9\20200911-103120.b\2020.09.11_A9_PFC_AA_024.d

| Signal | RT | EXP RT | DLT RT | REL RT | Response | Amount ng/ml | Ratio(Limits) | %Rec | S/N | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| D 1 13C4 PFBA | | | | | | | | | | |
| 217.00 > 172.00 | 1.888 | 1.893 | -0.005 | 0.564 | 7249713 | 2.16 | | 86.2 | 2622 | |
| 2 Perfluorobutanoic acid | | | | | | | | | | |
| 212.90 > 169.00 | 1.893 | 1.893 | 0.0 | 1.003 | 2753445 | 1.09 | | 109 | 89.4 | |
| D 4 13C5 PFPeA | | | | | | | | | | |
| 267.90 > 223.00 | 2.190 | 2.198 | -0.008 | 0.655 | 6337829 | 2.23 | | 89.4 | 2638 | |
| 3 Perfluoropentanoic acid | | | | | | | | | | |
| 262.90 > 219.00 | 2.190 | 2.198 | -0.008 | 1.000 | 2515766 | 0.9752 | | 97.5 | 96.9 | |
| D 6 13C3 PFBS | | | | | | | | | | |
| 301.90 > 80.00 | 2.224 | 2.223 | 0.001 | 0.665 | 12200357 | 2.18 | | 93.6 | 4288 | |
| 5 Perfluorobutanesulfonic acid | | | | | | | | | | |
| 298.90 > 80.00 | 2.224 | 2.233 | -0.009 | 1.000 | 4895148 | 0.9351 | Target=3.28 | 106 | 387 | |
| 298.90 > 99.00 | 2.224 | 2.233 | -0.009 | 1.000 | 1447940 | | 3.38(1.64-4.92) | | 200 | |
| 9 1H,1H,2H,2H-perfluorohexanesulfo | | | | | | | | | | |
| 327.00 > 307.00 | 2.515 | 2.514 | 0.001 | 1.000 | 926581 | 0.9634 | | 103 | 3646 | |
| D 8 M2-4:2 FTS | | | | | | | | | | |
| 329.00 > 81.00 | 2.515 | 2.514 | 0.001 | 0.752 | 1135391 | 2.04 | | 87.4 | 521 | |
| D 10 13C2 PFHxA | | | | | | | | | | |
| 315.00 > 270.00 | 2.547 | 2.557 | -0.010 | 0.761 | 5912571 | 2.24 | | 89.7 | 3572 | |
| 11 Perfluorohexanoic acid | | | | | | | | | | |
| 313.00 > 269.00 | 2.547 | 2.557 | -0.010 | 1.000 | 2070099 | 1.05 | Target=10.43 | 105 | 154 | |
| 313.00 > 119.00 | 2.547 | 2.557 | -0.010 | 1.000 | 199780 | | 10.36(5.21-15.64) | | 124 | |
| 12 Perfluoropentanesulfonic acid | | | | | | | | | | |
| 349.00 > 80.00 | 2.568 | 2.568 | 0.0 | 1.155 | 2040545 | 0.9684 | Target=2.07 | 103 | 608 | |
| 349.00 > 99.00 | 2.568 | 2.568 | 0.0 | 1.155 | 1026174 | | 1.99(1.04-3.11) | | 550 | |
| D 13 13C3 HFPO-DA | | | | | | | | | | |
| 287.00 > 169.00 | 2.661 | 2.673 | -0.012 | 0.795 | 4061910 | 2.24 | | 89.8 | 3053 | |

| Signal | RT | EXP RT | DLT RT | REL RT | Response | Amount ng/ml | Ratio(Limits) | %Rec | S/N | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| 14 Perfluoro(2-propoxypropanoic) ac | | | | | | | | | | |
| 285.00 > 169.00 | 2.674 | 2.673 | 0.001 | 1.005 | 659404 | 1.03 | | 103 | 2173 | |
| D 15 13C4 PFHpA | | | | | | | | | | |
| 367.00 > 322.00 | 2.940 | 2.940 | 0.0 | 0.879 | 5857704 | 2.28 | | 91.3 | 4412 | |
| D 17 18O2 PFHxS | | | | | | | | | | |
| 403.00 > 84.00 | 2.946 | 2.946 | 0.0 | 0.881 | 5985777 | 2.23 | | 94.4 | 5596 | |
| 16 Perfluorohexanesulfonic acid | | | | | | | | | | M |
| 399.00 > 80.00 | 2.946 | 2.946 | 0.0 | 1.000 | 2576449 | 0.8630 | Target=3.49 | 94.8 | 576 | |
| 399.00 > 99.00 | 2.946 | 2.946 | 0.0 | 1.000 | 790034 | | 3.26(1.75-5.24) | | 396 | M |
| 18 Perfluoroheptanoic acid | | | | | | | | | | |
| 363.00 > 319.00 | 2.940 | 2.946 | -0.006 | 1.000 | 2735656 | 1.05 | Target=3.74 | 105 | 310 | |
| 363.00 > 169.00 | 2.940 | 2.946 | -0.006 | 1.000 | 700242 | | 3.91(1.87-5.61) | | 514 | |
| 19 DONA | | | | | | | | | | |
| 377.00 > 251.00 | 2.987 | 2.993 | -0.006 | 0.803 | 4718494 | 0.9572 | Target=1.88 | 102 | 4018 | |
| 377.00 > 85.00 | 2.987 | 2.993 | -0.006 | 0.803 | 2621337 | | 1.80(0.94-2.82) | | 1795 | |
| D 20 M2-6:2 FTS | | | | | | | | | | |
| 429.00 > 81.00 | 3.324 | 3.324 | 0.0 | 0.994 | 1082914 | 2.26 | | 95.0 | 1005 | |
| 22 1H,1H,2H,2H-perfluorooctanesulfo | | | | | | | | | | |
| 427.00 > 407.00 | 3.324 | 3.331 | -0.007 | 1.000 | 618456 | 0.8798 | | 92.8 | 489 | |
| D 26 13C4 PFOA | | | | | | | | | | |
| 417.00 > 372.00 | 3.345 | 3.345 | 0.0 | 1.000 | 5333292 | 2.22 | | 88.7 | 4083 | |
| 24 Perfluorooctanoic acid | | | | | | | | | | |
| 413.00 > 369.00 | 3.345 | 3.345 | 0.0 | 1.000 | 2377344 | 1.03 | Target=2.44 | 103 | 347 | |
| 413.00 > 169.00 | 3.345 | 3.345 | 0.0 | 1.000 | 1012845 | | 2.35(1.22-3.66) | | 881 | |
| * 25 13C2 PFOA | | | | | | | | | | |
| 415.00 > 370.00 | 3.345 | 3.345 | 0.0 | | 6230408 | 2.50 | | | 4816 | |
| 23 Perfluoroheptanesulfonic acid | | | | | | | | | | |
| 449.00 > 80.00 | 3.338 | 3.345 | -0.007 | 0.897 | 2568271 | 1.02 | Target=3.67 | 107 | 911 | |
| 449.00 > 99.00 | 3.338 | 3.345 | -0.007 | 0.897 | 679045 | | 3.78(1.84-5.51) | | 1061 | |
| D 31 13C4 PFOS | | | | | | | | | | |
| 503.00 > 80.00 | 3.720 | 3.720 | 0.0 | 1.112 | 6497664 | 2.32 | | 97.2 | 2066 | |
| 28 Perfluorooctanesulfonic acid | | | | | | | | | | M |
| 499.00 > 80.00 | 3.720 | 3.727 | -0.007 | 1.000 | 2670066 | 0.9446 | Target=4.47 | 102 | 339 | |
| 499.00 > 99.00 | 3.720 | 3.727 | -0.007 | 1.000 | 608953 | | 4.38(2.24-6.71) | | 677 | M |
| D 29 13C5 PFNA | | | | | | | | | | |
| 468.00 > 423.00 | 3.735 | 3.735 | 0.0 | 1.117 | 4905207 | 2.35 | | 94.0 | 4290 | |
| 30 Perfluorononanoic acid | | | | | | | | | | |
| 463.00 > 419.00 | 3.735 | 3.735 | 0.0 | 1.000 | 2210440 | 1.13 | Target=4.27 | 113 | 788 | |
| 463.00 > 169.00 | 3.735 | 3.735 | 0.0 | 1.000 | 511866 | | 4.32(2.13-6.40) | | 1010 | |
| 32 9-Chlorohexadecafluoro-3-oxanona | | | | | | | | | | |
| 531.00 > 351.00 | 3.928 | 3.928 | 0.0 | 1.056 | 1624859 | 0.9525 | | 102 | 2323 | |
| 34 Perfluorooctanesulfonamide | | | | | | | | | | |
| 498.00 > 78.00 | 4.074 | 4.074 | 0.0 | 1.000 | 3369271 | 1.13 | | 113 | 1373 | |
| 35 Perfluorononanesulfonic acid | | | | | | | | | | |
| 549.00 > 80.00 | 4.074 | 4.074 | 0.0 | 1.095 | 1980982 | 0.9599 | Target=5.58 | 100 | 882 | |
| 549.00 > 99.00 | 4.074 | 4.074 | 0.0 | 1.095 | 325094 | | 6.09(2.79-8.37) | | 1396 | |
| D 36 13C8 FOSA | | | | | | | | | | |
| 506.00 > 78.00 | 4.074 | 4.074 | 0.0 | 1.218 | 2673393 | 2.03 | | 81.3 | 2544 | |

| Signal | RT | EXP RT | DLT RT | REL RT | Response | Amount ng/ml | Ratio(Limits) | %Rec | S/N | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| D 33 13C2 PFDA | | | | | | | | | | |
| 515.00 > 470.00 | 4.092 | 4.100 | -0.008 | 1.223 | 6260662 | 2.36 | | 94.5 | 6436 | |
| 38 Perfluorodecanoic acid | | | | | | | | | | |
| 513.00 > 469.00 | 4.092 | 4.100 | -0.008 | 1.000 | 2614187 | 1.05 | Target=14.43 | 105 | 793 | |
| 513.00 > 169.00 | 4.092 | 4.100 | -0.008 | 1.000 | 180749 | | 14.46(7.21-21.64) | | 258 | |
| 39 1H,1H,2H,2H-perfluorodecanesulfo | | | | | | | | | | |
| 527.00 > 507.00 | 4.101 | 4.100 | 0.001 | 1.000 | 700635 | 1.01 | | 105 | 3378 | |
| D 37 M2-8:2 FTS | | | | | | | | | | |
| 529.00 > 81.00 | 4.101 | 4.100 | 0.001 | 1.226 | 1294114 | 2.20 | | 92.0 | 824 | |
| D 41 d3-NMeFOSAA | | | | | | | | | | |
| 573.00 > 419.00 | 4.262 | 4.262 | 0.0 | 1.274 | 2590308 | 1.97 | | 78.7 | 2479 | |
| 40 N-methylperfluorooctanesulfonami | | | | | | | | | | |
| 570.00 > 419.00 | 4.262 | 4.271 | -0.009 | 1.000 | 862695 | 1.10 | | 110 | 165 | |
| 42 Perfluorodecanesulfonic acid | | | | | | | | | | |
| 599.00 > 80.00 | 4.392 | 4.392 | 0.0 | 1.181 | 2246915 | 0.9732 | Target=4.40 | 101 | 804 | |
| 599.00 > 99.00 | 4.392 | 4.392 | 0.0 | 1.181 | 488680 | | 4.60(2.20-6.59) | | 1068 | |
| D 46 13C2 PFUnA | | | | | | | | | | |
| 565.00 > 520.00 | 4.418 | 4.418 | 0.0 | 1.321 | 4925416 | 2.41 | | 96.4 | 6018 | |
| 43 Perfluoroundecanoic acid | | | | | | | | | | |
| 563.00 > 519.00 | 4.418 | 4.418 | 0.0 | 1.000 | 1548368 | 1.13 | Target=6.35 | 113 | 1513 | |
| 563.00 > 169.00 | 4.418 | 4.418 | 0.0 | 1.000 | 227407 | | 6.81(3.17-9.52) | | 427 | |
| D 45 d5-NEtFOSAA | | | | | | | | | | |
| 589.00 > 419.00 | 4.418 | 4.426 | -0.008 | 1.321 | 1750504 | 1.98 | | 79.3 | 2092 | |
| 44 N-ethylperfluorooctanesulfonamid | | | | | | | | | | |
| 584.00 > 419.00 | 4.427 | 4.435 | -0.008 | 1.002 | 597020 | 1.05 | | 105 | 921 | |
| D 47 d7-N-MeFOSE-M | | | | | | | | | | |
| 623.00 > 59.00 | 4.538 | 4.538 | 0.0 | 1.357 | 1461246 | 3.45 | | 27.6 | 1111 | |
| 48 2-(N-methylperfluoro-1-octanesul | | | | | | | | | | |
| 616.00 > 59.00 | 4.555 | 4.546 | 0.009 | 1.004 | 116774 | 0.9575 | | 95.7 | 176 | |
| D 49 d-N-MeFOSA-M | | | | | | | | | | |
| 515.00 > 169.00 | 4.555 | 4.555 | 0.0 | 1.362 | 1029540 | 1.74 | | 69.5 | 170 | |
| 51 11-Chloroeicosafluoro-3-oxaundec | | | | | | | | | | |
| 631.00 > 451.00 | 4.555 | 4.555 | 0.0 | 1.225 | 2138368 | 1.06 | | 113 | 4624 | |
| 50 NMeFOSA | | | | | | | | | | |
| 512.00 > 169.00 | 4.564 | 4.564 | 0.0 | 1.002 | 432644 | 1.01 | | 101 | 761 | |
| D 53 d9-N-EtFOSE-M | | | | | | | | | | |
| 639.00 > 59.00 | 4.713 | 4.713 | 0.0 | 1.409 | 1288751 | 2.90 | | 23.2 | 958 | |
| D 56 13C2 PFDoA | | | | | | | | | | |
| 615.00 > 570.00 | 4.704 | 4.713 | -0.009 | 1.406 | 4410152 | 2.20 | | 87.9 | 6722 | |
| 52 Perfluorododecanoic acid | | | | | | | | | | |
| 613.00 > 569.00 | 4.704 | 4.713 | -0.009 | 1.000 | 1839718 | 1.13 | Target=7.23 | 113 | 1541 | |
| 613.00 > 169.00 | 4.704 | 4.713 | -0.009 | 1.000 | 244381 | | 7.53(3.61-10.84) | | 1022 | |
| 54 2-(N-ethylperfluoro-1-octanesulf | | | | | | | | | | |
| 630.00 > 59.00 | 4.732 | 4.722 | 0.010 | 1.004 | 96414 | 0.9409 | | 94.1 | 135 | |
| 55 1H,1H,2H,2H-perfluorododecanesul | | | | | | | | | | |
| 627.00 > 607.00 | 4.723 | 4.731 | -0.008 | 1.152 | 475284 | 1.07 | | 111 | 2426 | |

| Signal | RT | EXP RT | DLT RT | REL RT | Response | Amount ng/ml | Ratio(Limits) | %Rec | S/N | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| D 58 d-N-EtFOSA-M | | | | | | | | | | |
| 531.00 > 169.00 | 4.741 | 4.731 | 0.010 | | 770439 | 1.25 | | 50.1 | 475 | |
| 57 N-ethylperfluoro-1-octanesulfona | | | | | | | | | | |
| 526.00 > 169.00 | 4.748 | 4.740 | 0.008 | 1.002 | 335266 | 1.09 | | 109 | 376 | |
| 59 Perfluorododecanesulfonic acid ( | | | | | | | | | | |
| 699.00 > 80.00 | 4.935 | 4.944 | -0.009 | 1.327 | 301440 | 0.8740 | Target=0.98 | 90.3 | 475 | |
| 699.00 > 99.00 | 4.935 | 4.944 | -0.009 | 1.327 | 314624 | | 0.96(0.49-1.47) | | 1307 | |
| 60 Perfluorotridecanoic acid | | | | | | | | | | |
| 663.00 > 619.00 | 4.969 | 4.977 | -0.008 | 1.056 | 1287219 | 1.00 | Target=5.11 | 100 | 2377 | |
| 663.00 > 169.00 | 4.969 | 4.977 | -0.008 | 1.056 | 256418 | | 5.02(2.56-7.67) | | 1169 | |
| D 62 13C2 PFTeDA | | | | | | | | | | |
| 715.00 > 670.00 | 5.212 | 5.219 | -0.007 | 1.558 | 3116596 | 2.23 | | 89.1 | 6836 | |
| 61 Perfluorotetradecanoic acid | | | | | | | | | | |
| 713.00 > 169.00 | 5.212 | 5.219 | -0.007 | 1.000 | 214631 | 0.9759 | Target=1.26 | 97.6 | 952 | |
| 713.00 > 219.00 | 5.212 | 5.219 | -0.007 | 1.000 | 159085 | | 1.35(0.63-1.89) | | 1016 | |
| 64 Perfluorohexadecanoic acid | | | | | | | | | | |
| 813.00 > 769.00 | 5.645 | 5.652 | -0.007 | 1.000 | 898994 | 1.04 | Target=4.58 | 104 | 2367 | |
| 813.00 > 169.00 | 5.645 | 5.652 | -0.007 | 1.000 | 185252 | | 4.85(2.29-6.88) | | 1300 | |
| D 63 13C2 PFHxDA | | | | | | | | | | |
| 815.00 > 770.00 | 5.645 | 5.652 | -0.007 | 1.687 | 2324633 | 2.25 | | 89.9 | 5400 | |
| 65 Perfluorooctadecanoic acid | | | | | | | | | | |
| 913.00 > 869.00 | 6.048 | 6.063 | -0.015 | 1.072 | 789722 | 1.14 | Target=4.25 | 114 | 1468 | |
| 913.00 > 169.00 | 6.048 | 6.063 | -0.015 | 1.072 | 188852 | | 4.18(2.12-6.37) | | 1049 | |

## QC Flag Legend

Review Flags

M - Manually Integrated

Report Date: 11-Sep-2020 16:04:47 Chrom Revision: 2.3 09-Sep-2020 15:12:58

Eurofins TestAmerica, Sacramento

Data File: \\chromfs\Sacramento\ChromData\A9\20200911-103120.b\2020.09.11_A9_PFC_AA_027.d

Injection Date: 11-Sep-2020 13:33:42 Instrument ID: A9

Lims ID: LCSD 320-411226/3-A

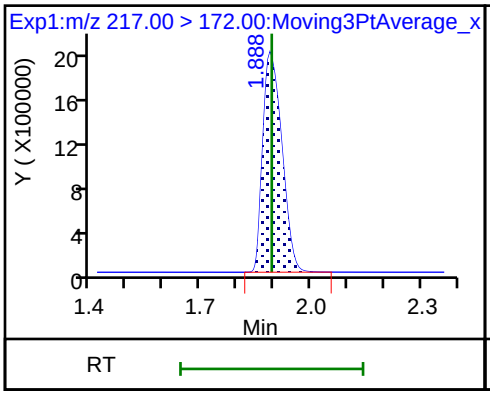
Client ID:

Operator ID: SACINSTRLCMS02 ALS Bottle#: 15 Worklist Smp#: 4

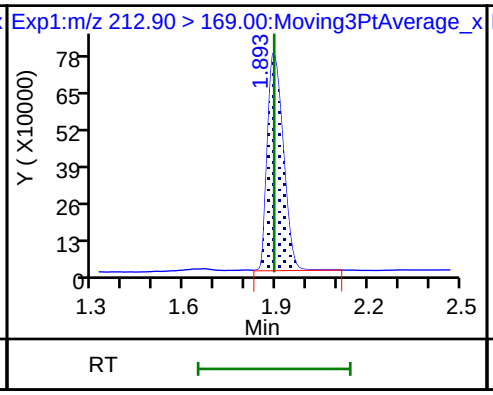
Injection Vol: 20.0 ul Dil. Factor: 1.0000

Method: PFAS_A9 Limit Group: LC PFC ICAL

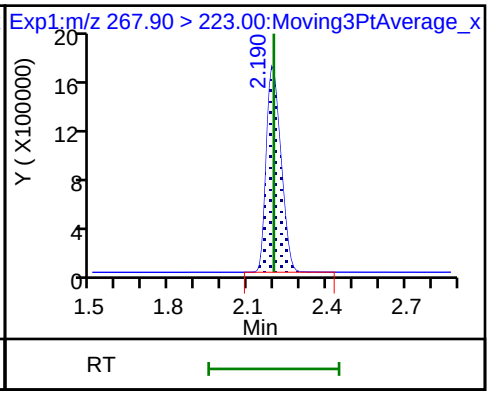
D 1 13C4 PFBA



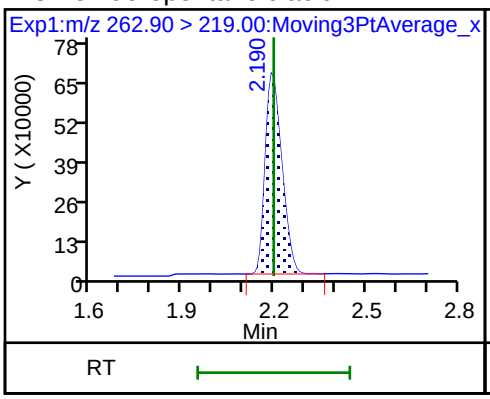

2 Perfluorobutanoic acid



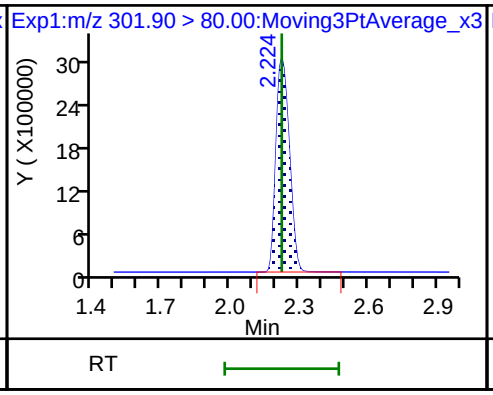

D 4 13C5 PFPeA



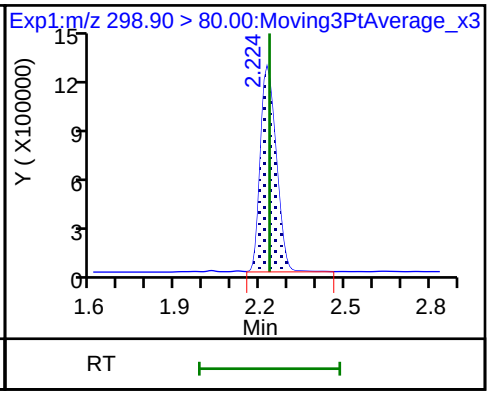

3 Perfluoropentanoic acid



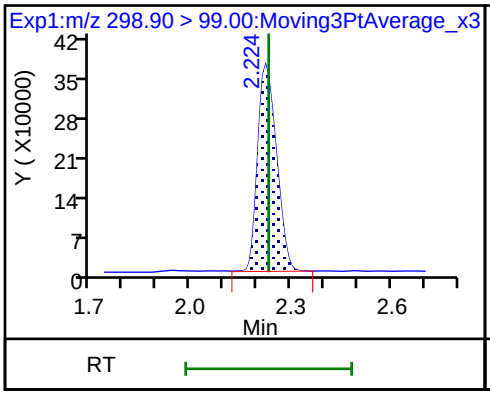

D 6 13C3 PFBS



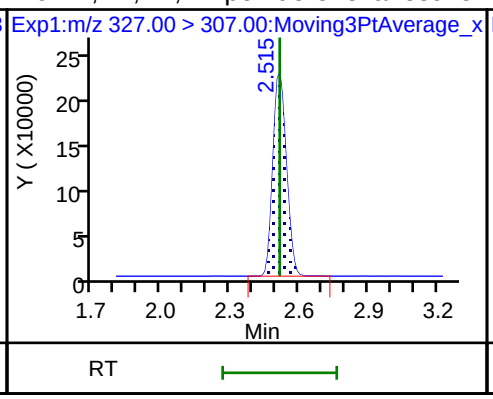

5 Perfluorobutanesulfonic acid



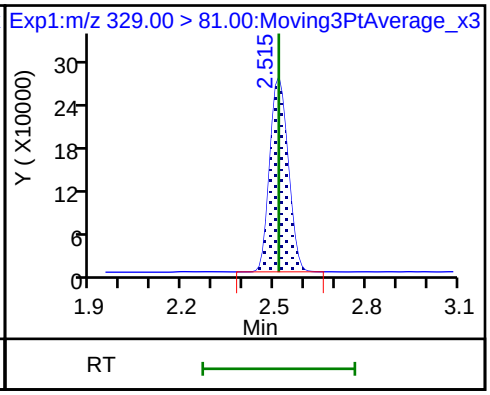

5 Perfluorobutanesulfonic acid



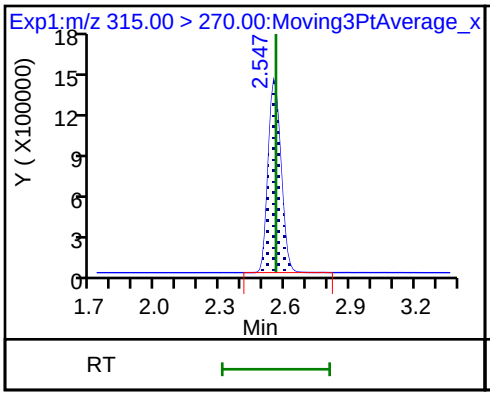

9 1H,1H,2H,2H-perfluorohexanesulfo



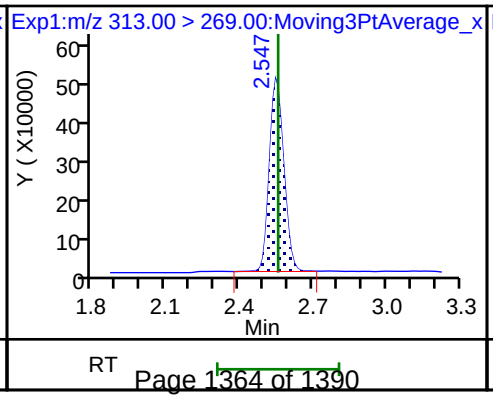

D 8 M2-4:2 FTS



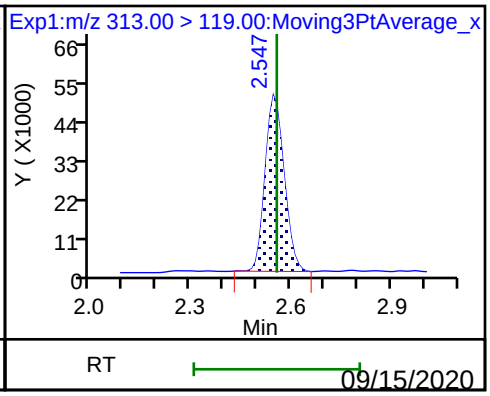

D 10 13C2 PFHxA



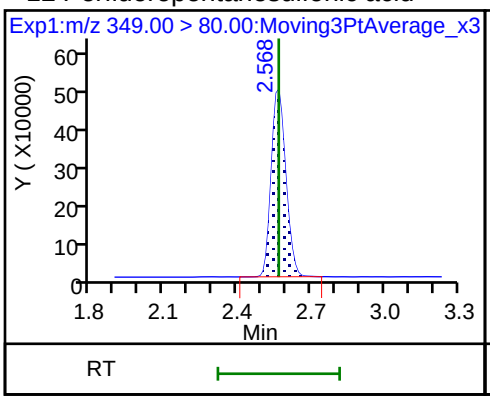

11 Perfluorohexanoic acid



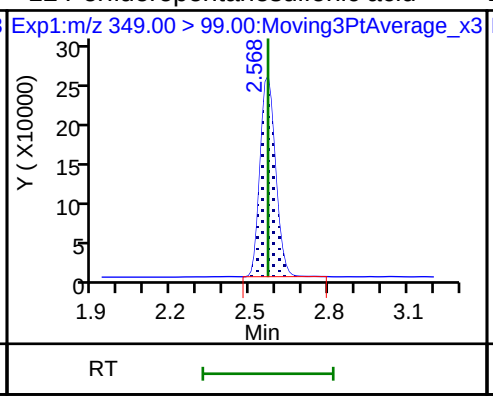

11 Perfluorohexanoic acid



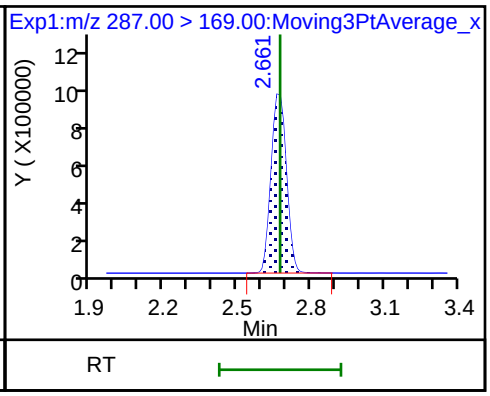
12 Perfluoropentanesulfonic acid



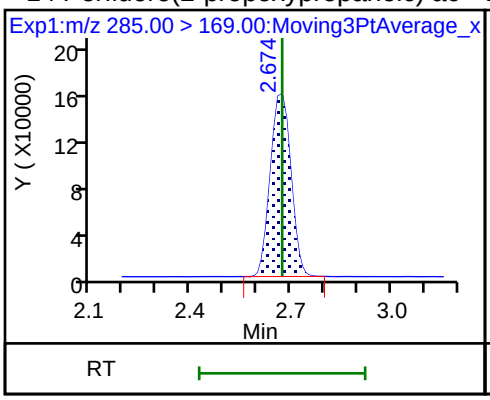

12 Perfluoropentanesulfonic acid



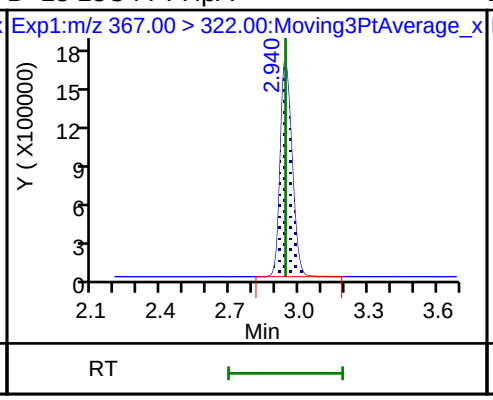

D 13 13C3 HFPO-DA



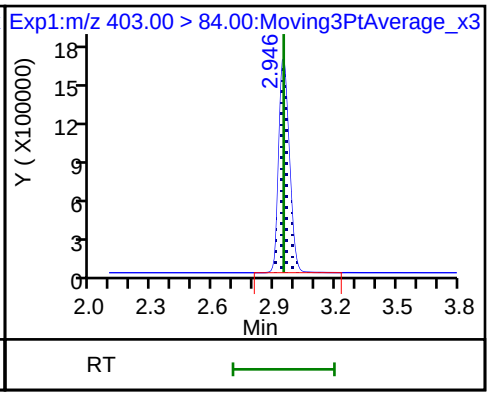

14 Perfluoro(2-propoxypropanoic) ac



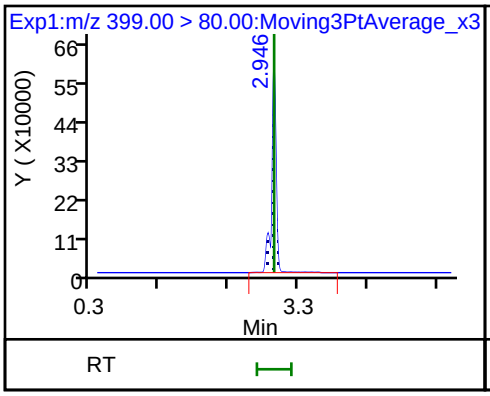

D 15 13C4 PFHpA



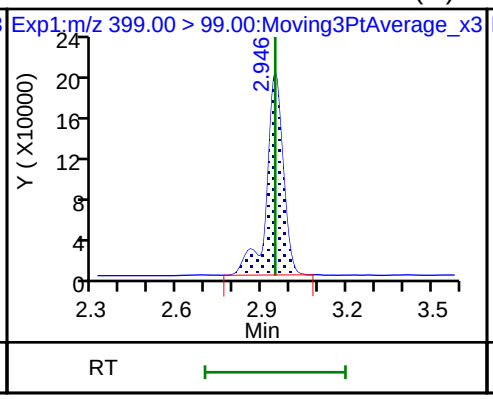

D 17 18O2 PFHxS



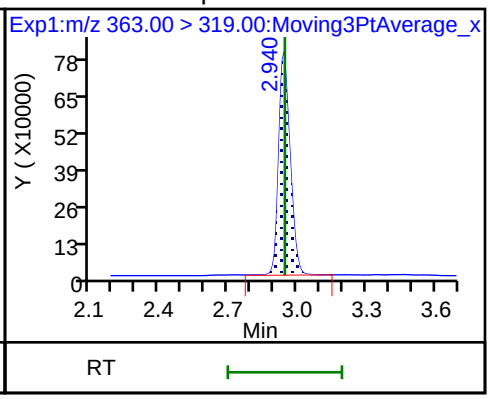

16 Perfluorohexanesulfonic acid



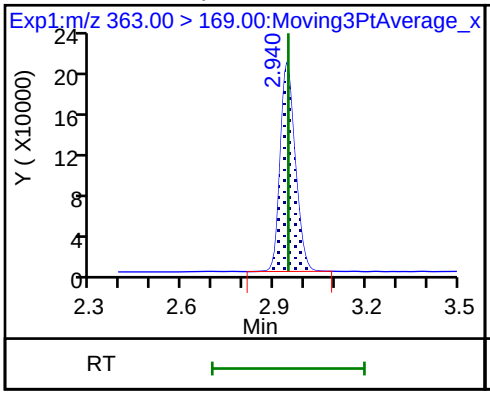

16 Perfluorohexanesulfonic acid (M)



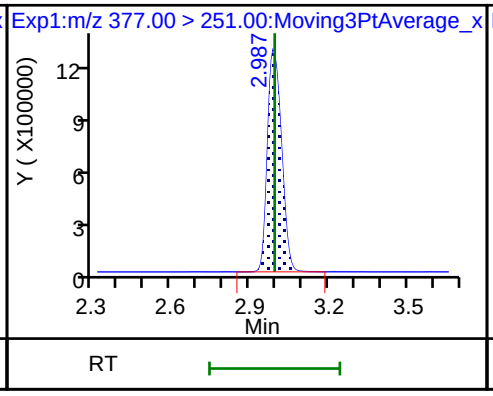

18 Perfluoroheptanoic acid



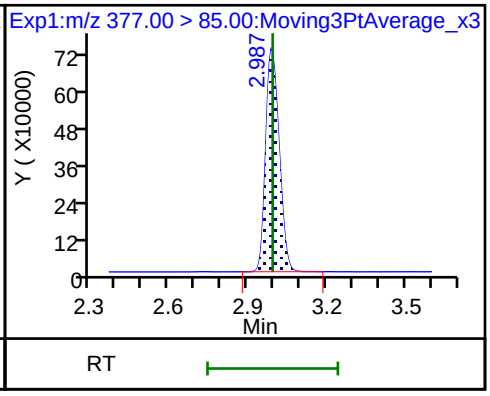

18 Perfluoroheptanoic acid



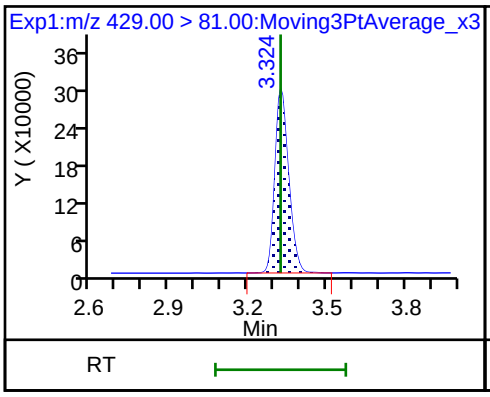

19 DONA



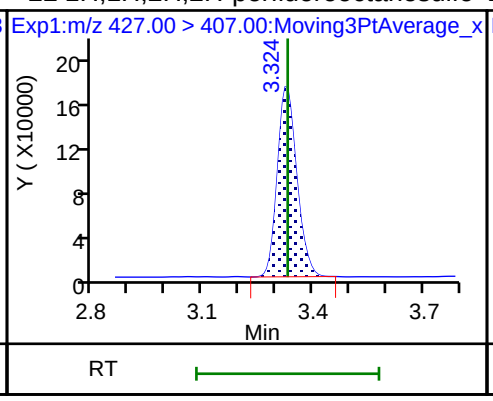

19 DONA



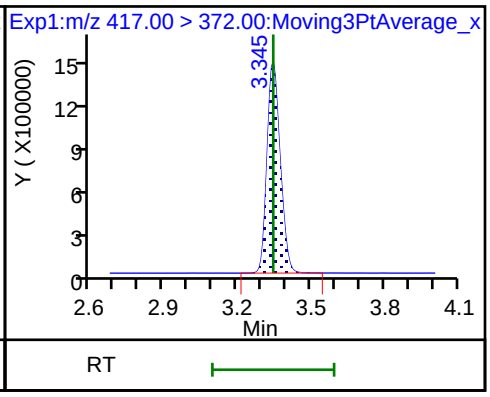
D 20 M2-6:2 FTS



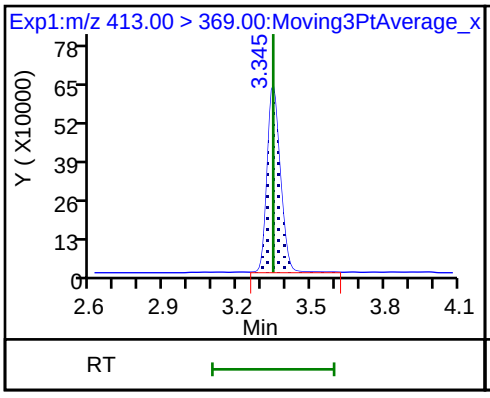

22 1H,1H,2H,2H-perfluorooctanesulfo



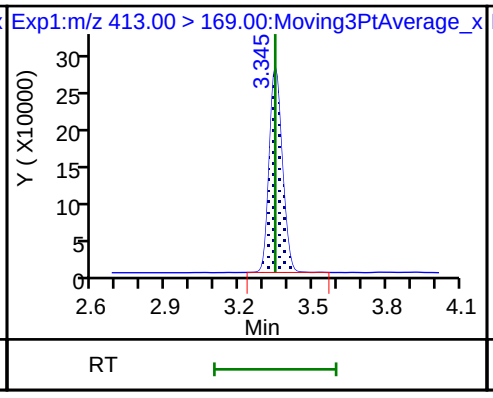

D 26 13C4 PFOA



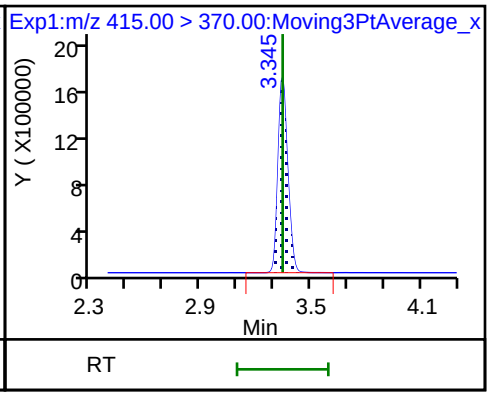

24 Perfluorooctanoic acid



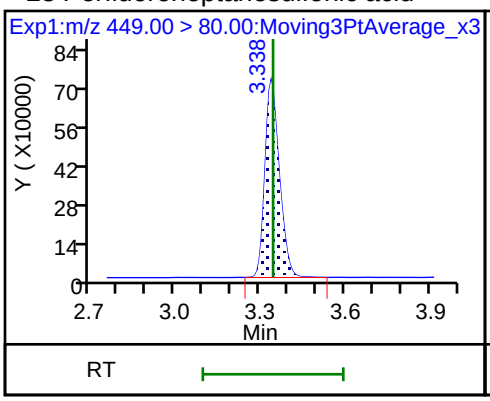

24 Perfluorooctanoic acid



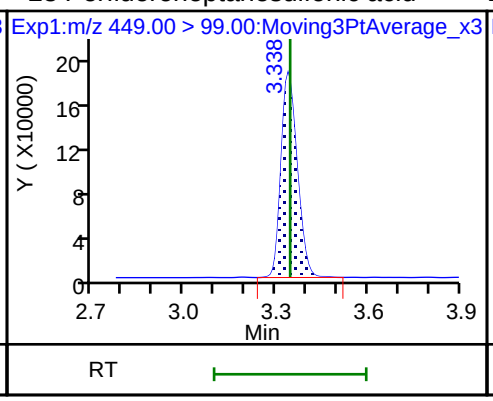

* 25 13C2 PFOA



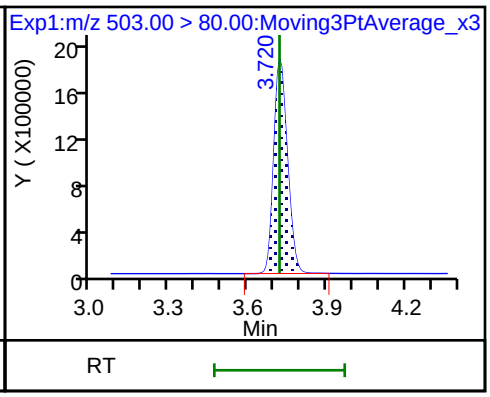

23 Perfluoroheptanesulfonic acid



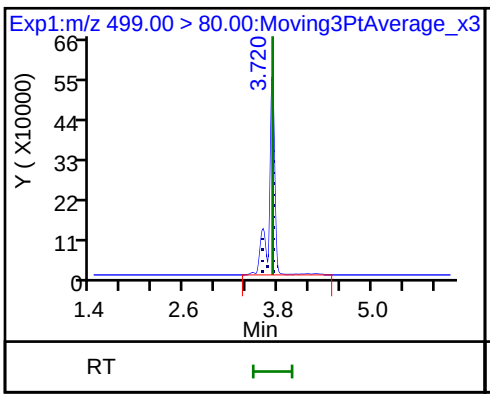

23 Perfluoroheptanesulfonic acid



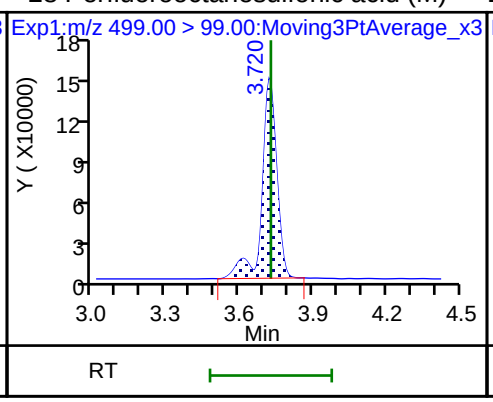

D 31 13C4 PFOS



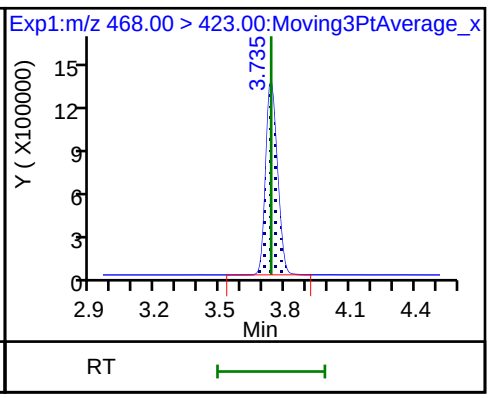

28 Perfluorooctanesulfonic acid



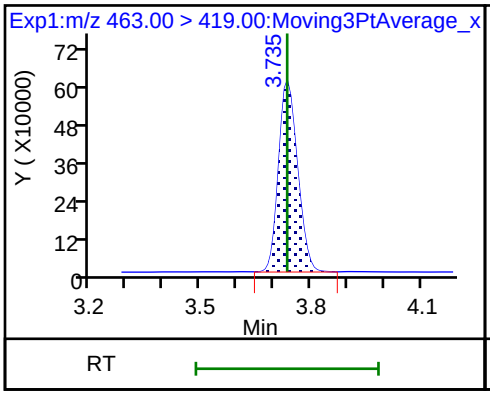

28 Perfluorooctanesulfonic acid (M)



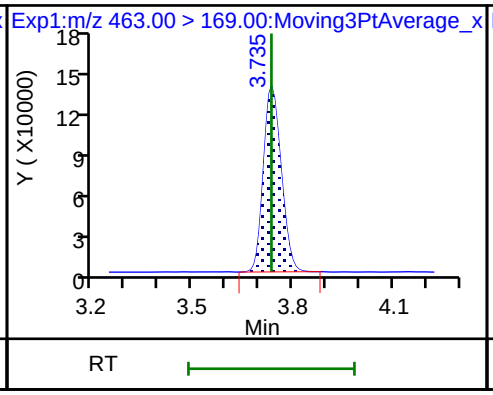

D 29 13C5 PFNA



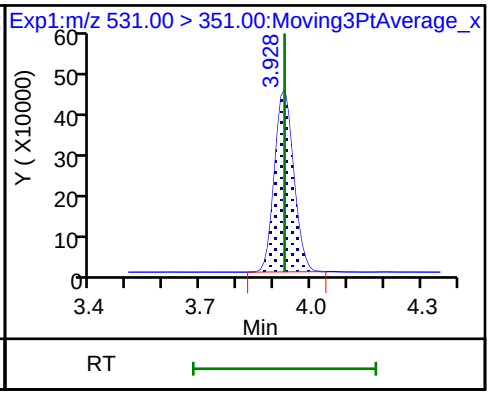
30 Perfluorononanoic acid



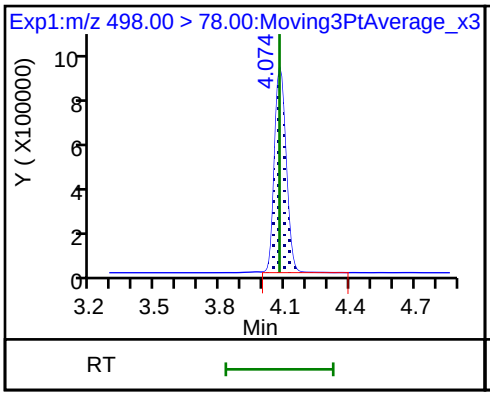

30 Perfluorononanoic acid



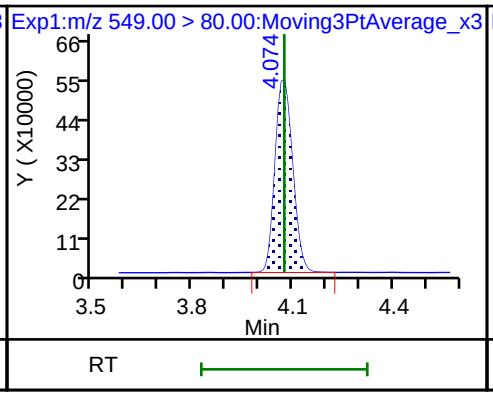

32 9-Chlorohexadecafluoro-3-oxanona



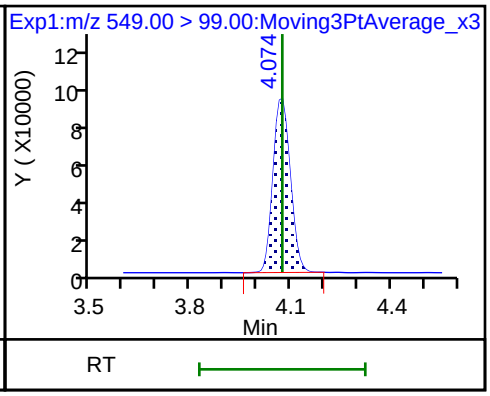

34 Perfluorooctanesulfonamide



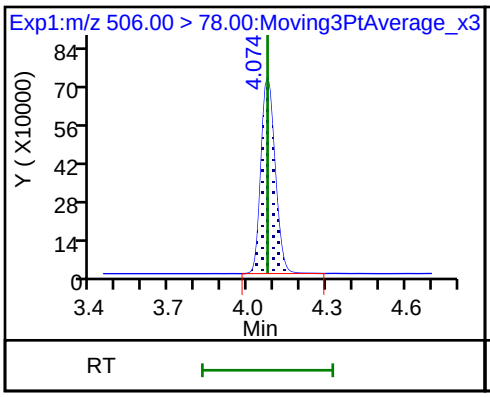

35 Perfluorononanesulfonic acid



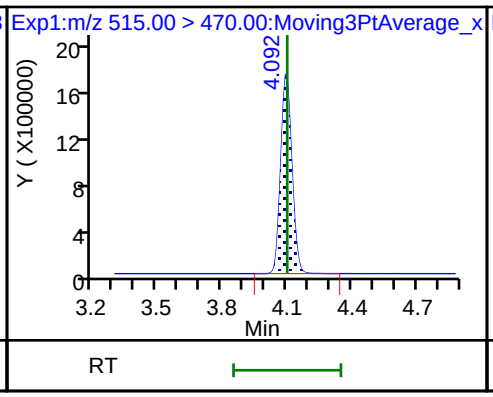

35 Perfluorononanesulfonic acid



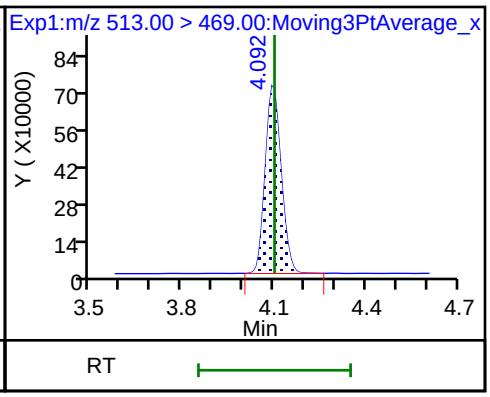

D 36 13C8 FOSA



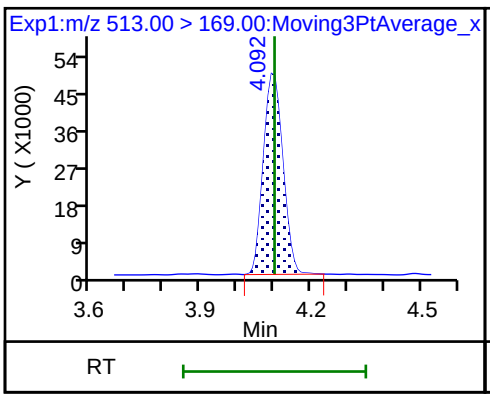

D 33 13C2 PFDA



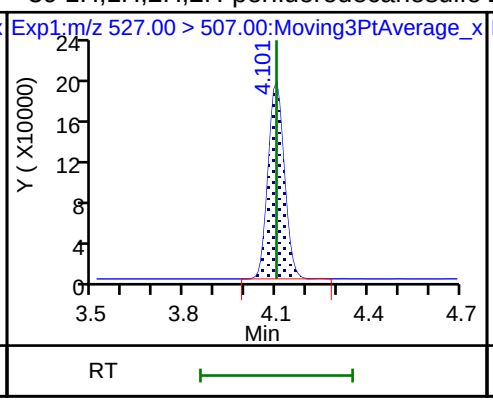

38 Perfluorodecanoic acid



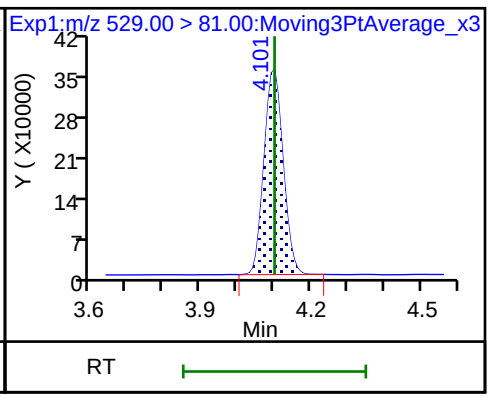

38 Perfluorodecanoic acid



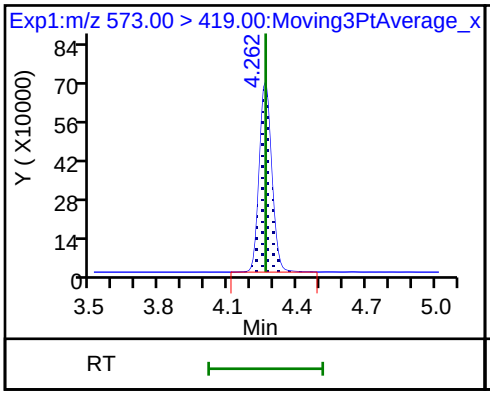

39 1H,1H,2H,2H-perfluorodecanesulfo



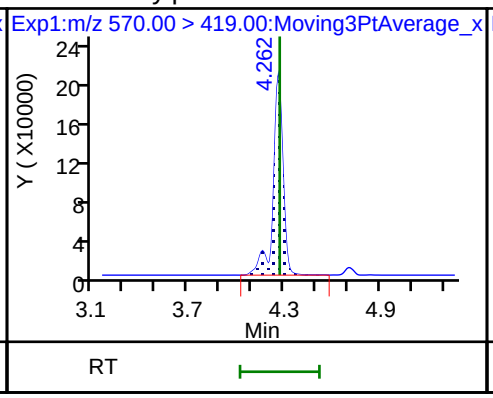

D 37 M2-8:2 FTS



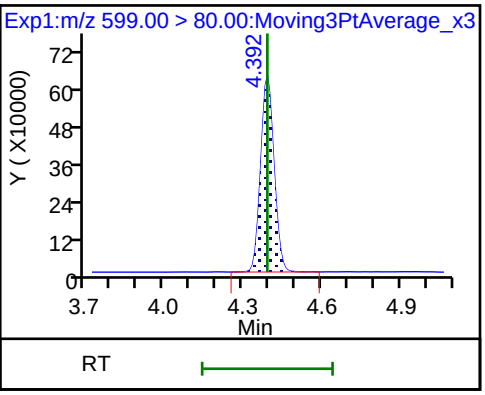
D 41 d3-NMeFOSAA



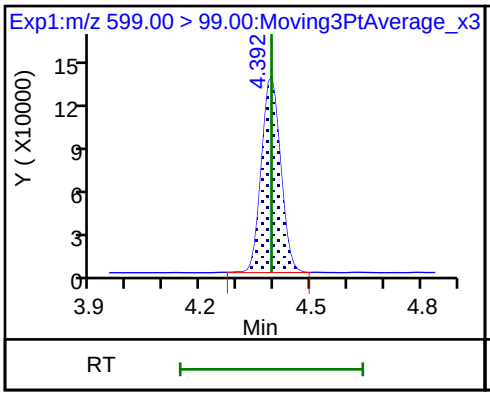

40 N-methylperfluorooctanesulfonami



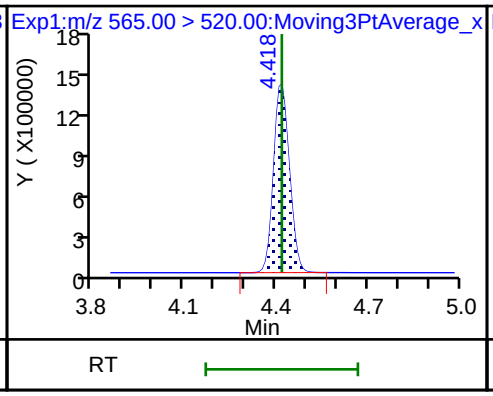

42 Perfluorodecanesulfonic acid



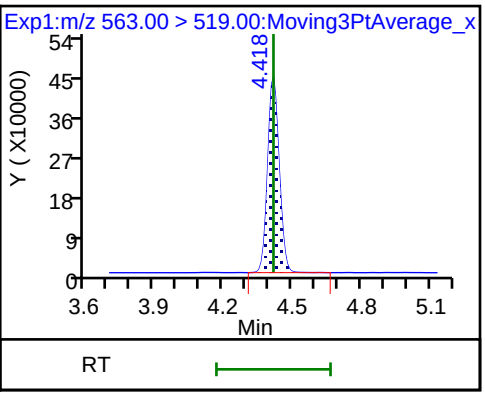

42 Perfluorodecanesulfonic acid



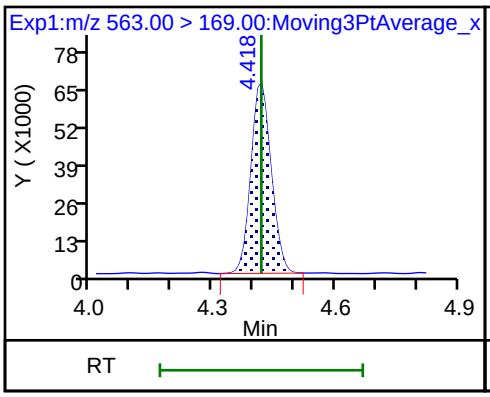

D 46 13C2 PFUnA



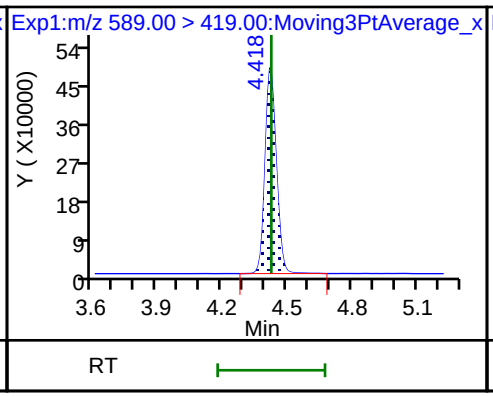

43 Perfluoroundecanoic acid



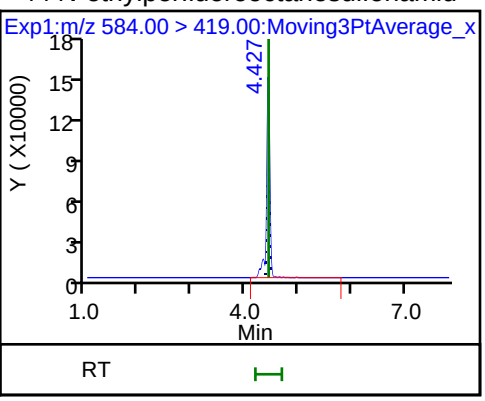

43 Perfluoroundecanoic acid



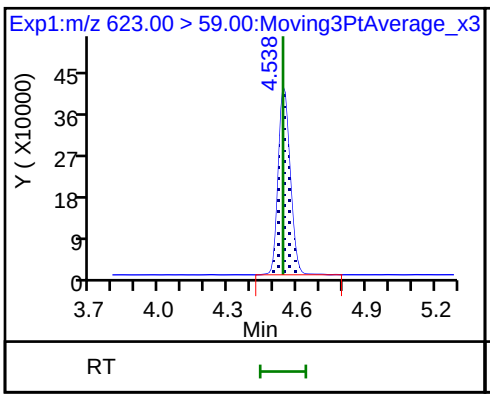

D 45 d5-NEtFOSAA



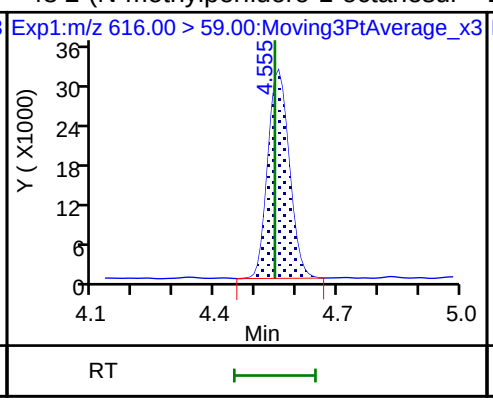

44 N-ethylperfluorooctanesulfonamid



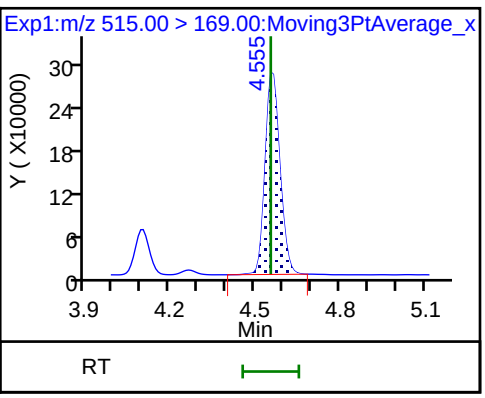

D 47 d7-N-MeFOSE-M



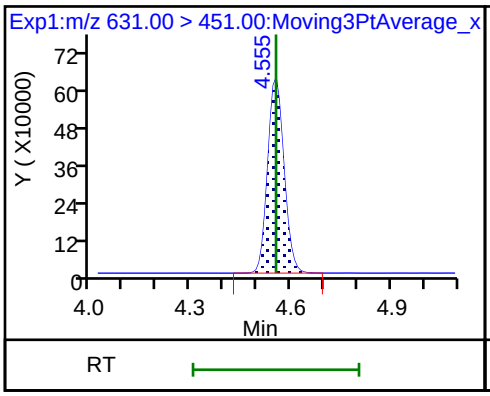

48 2-(N-methylperfluoro-1-octanesul



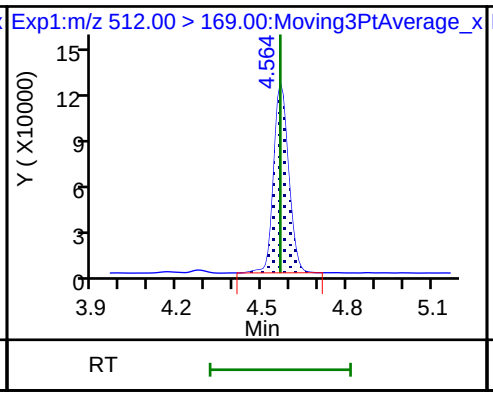

D 49 d-N-MeFOSA-M



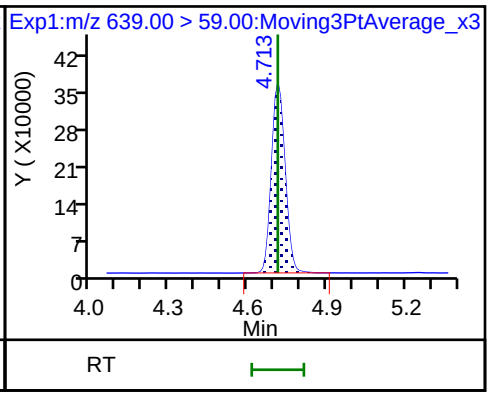
51 11-Chloroeicosafluoro-3-oxaundec



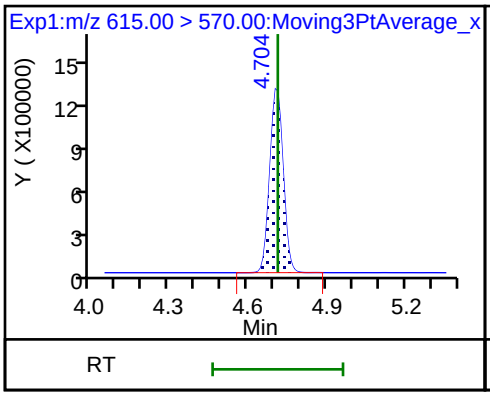

50 NMeFOSA



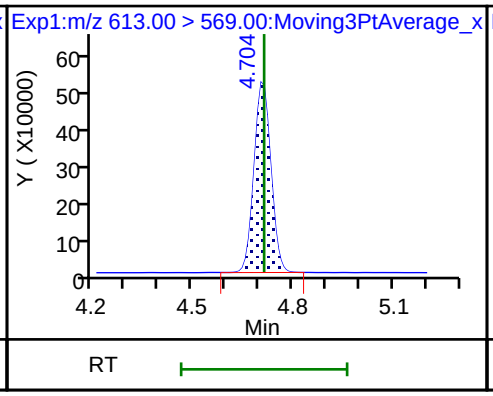

D 53 d9-N-EtFOSE-M



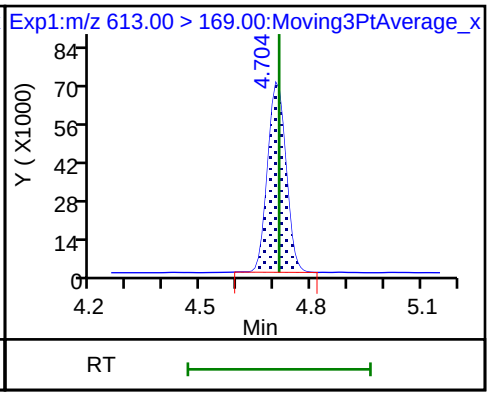

D 56 13C2 PFDoA



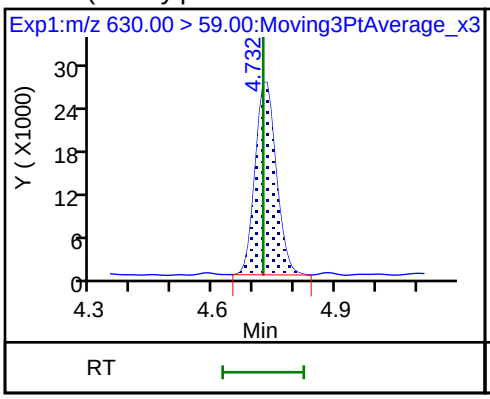

52 Perfluorododecanoic acid



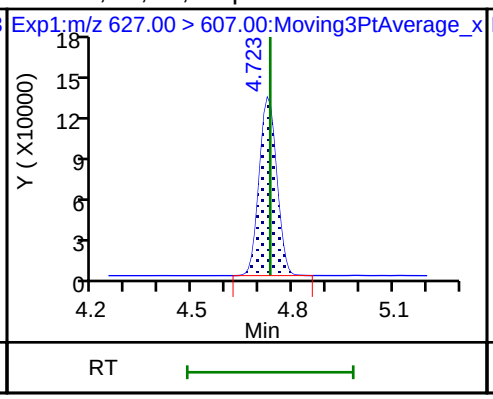

52 Perfluorododecanoic acid



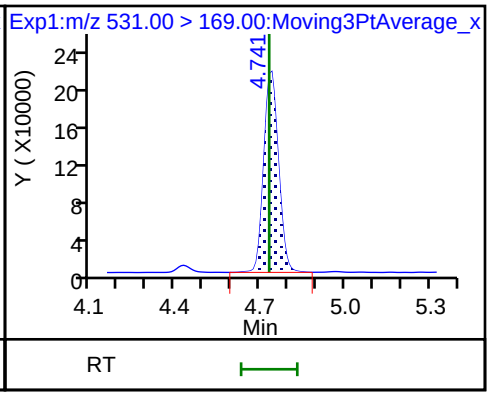

54 2-(N-ethylperfluoro-1-octanesulf



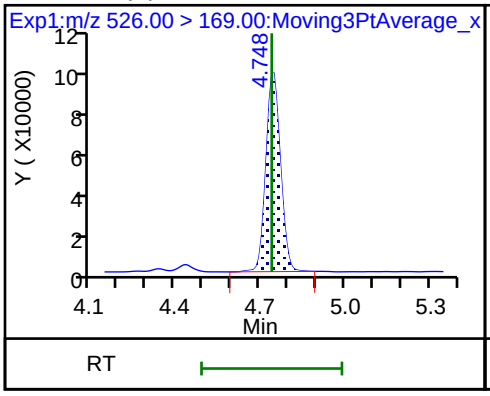

55 1H,1H,2H,2H-perfluorododecanesul



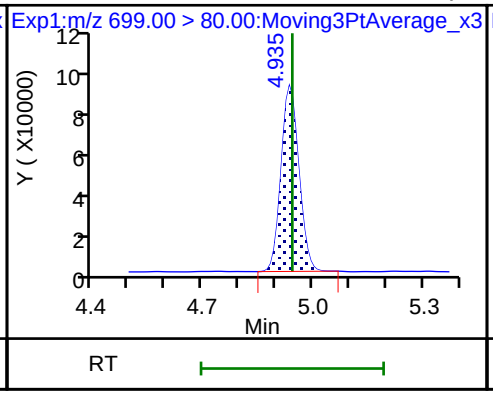

D 58 d-N-EtFOSA-M



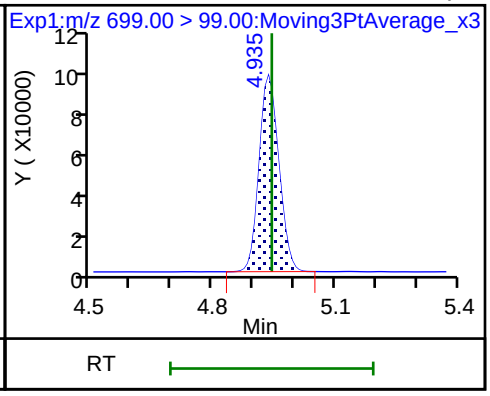

57 N-ethylperfluoro-1-octanesulfona



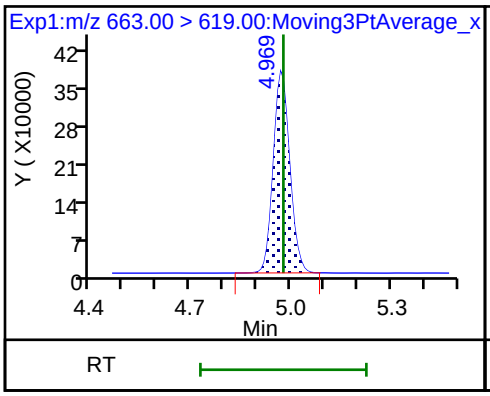

59 Perfluorododecanesulfonic acid (



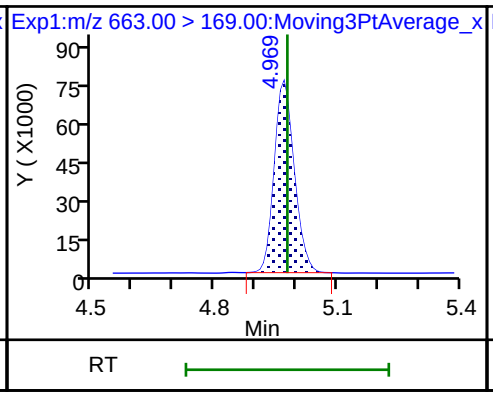

59 Perfluorododecanesulfonic acid (



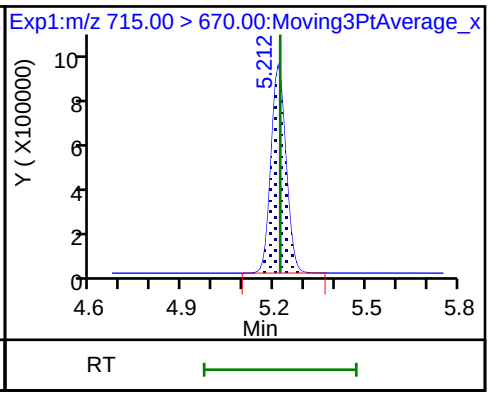
60 Perfluorotridecanoic acid



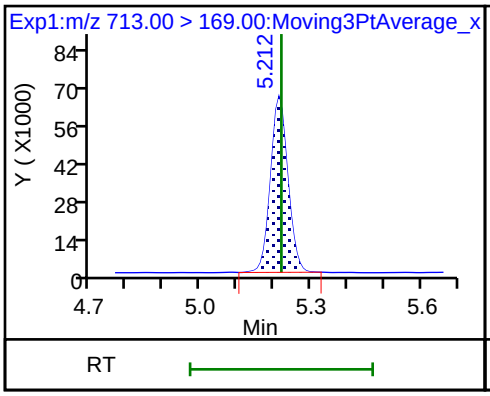

60 Perfluorotridecanoic acid



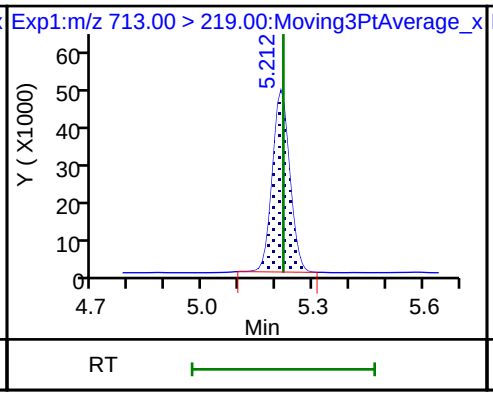

D 62 13C2 PFTeDA



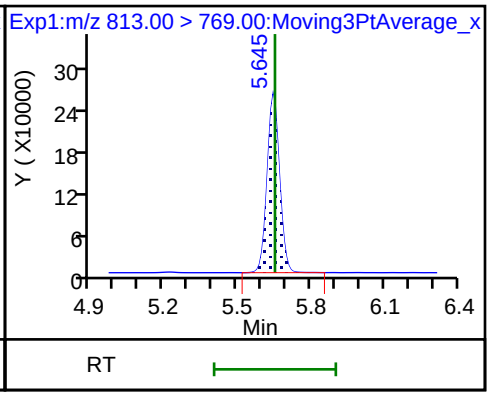

61 Perfluorotetradecanoic acid



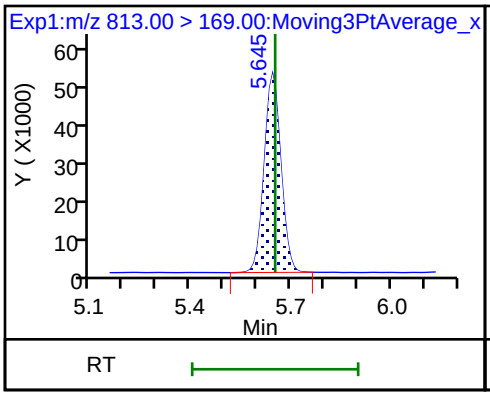

61 Perfluorotetradecanoic acid



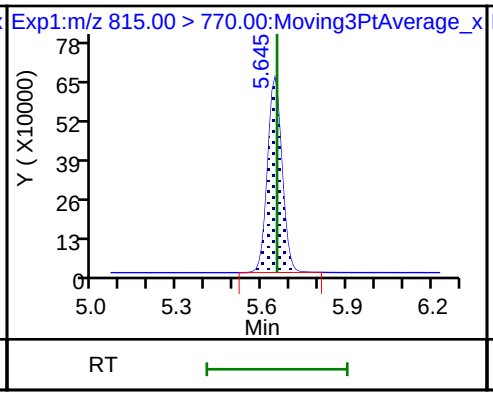

64 Perfluorohexadecanoic acid



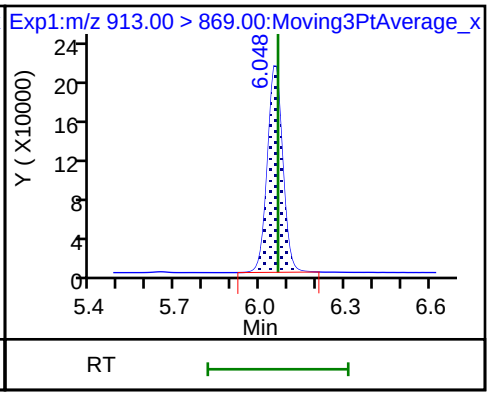

64 Perfluorohexadecanoic acid



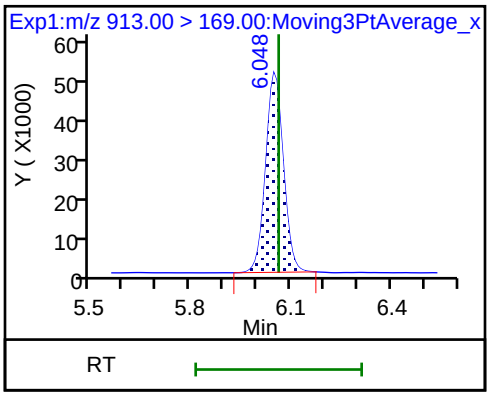

D 63 13C2 PFHxDA




65 Perfluorooctadecanoic acid




65 Perfluorooctadecanoic acid



Eurofins TestAmerica, Sacramento

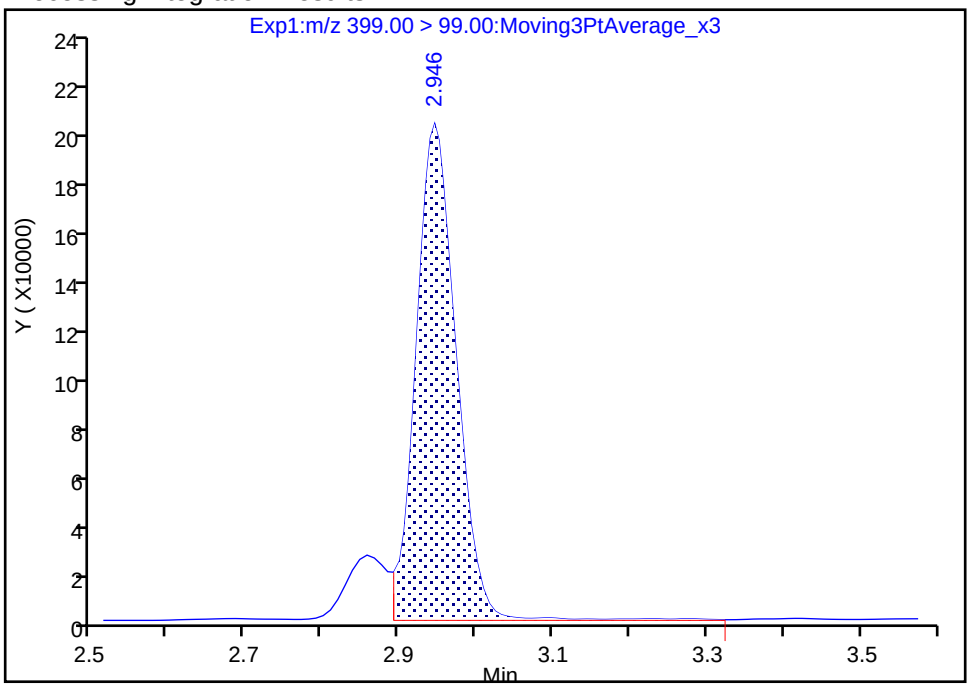
| | | | | | |
|---|---|---|---|---|---|
| Data File: | \\chromfs\Sacramento\ChromData\A9\20200911-103120.b\2020.09.11_A9_PFC_AA_027.d | | | | |
| Injection Date: | 11-Sep-2020 13:33:42 | Instrument ID: | A9 | | |
| Lims ID: | LCSD 320-411226/3-A | | | | |
| Client ID: | | | | | |
| Operator ID: | SACINSTRLCMS02 | ALS Bottle#: | 15 | Worklist Smp#: | 4 |
| Injection Vol: | 20.0 ul | Dil. Factor: | 1.0000 | | |
| Method: | PFAS_A9 | Limit Group: | LC PFC ICAL | | |
| Column: | | Detector | EXP1 | | |

## 16 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 2

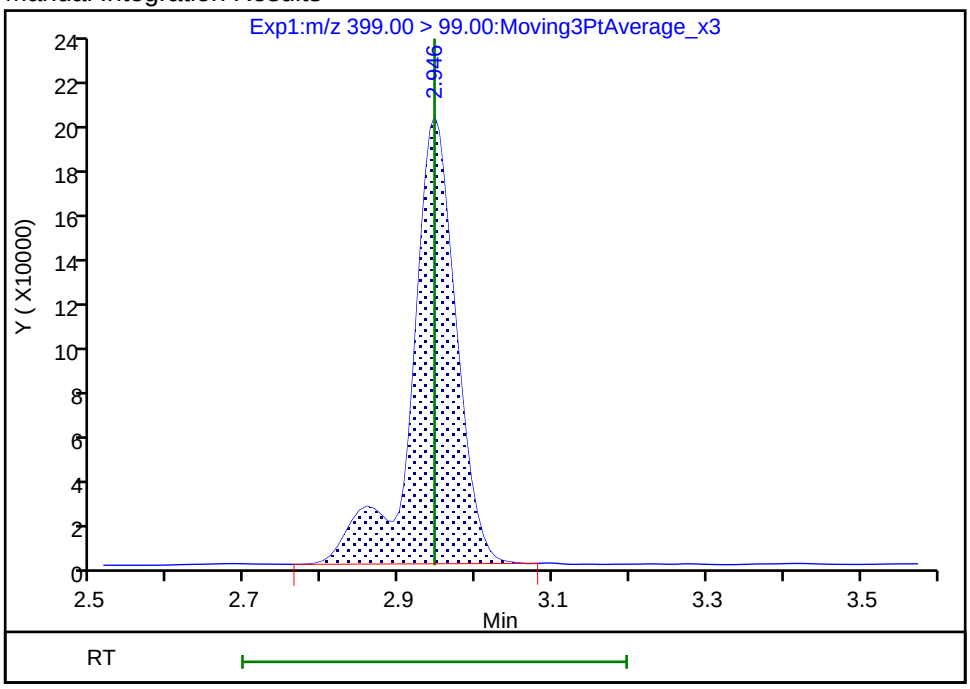
Processing Integration Results

RT: 2.95
Area: 712790
Amount: 0.863017
Amount Units: ng/ml




Manual Integration Results

RT: 2.95
Area: 790034
Amount: 0.863017
Amount Units: ng/ml




Reviewer: zibaa, 11-Sep-2020 16:03:31
Audit Action: Manually Integrated Audit Reason: Isomers

Eurofins TestAmerica, Sacramento

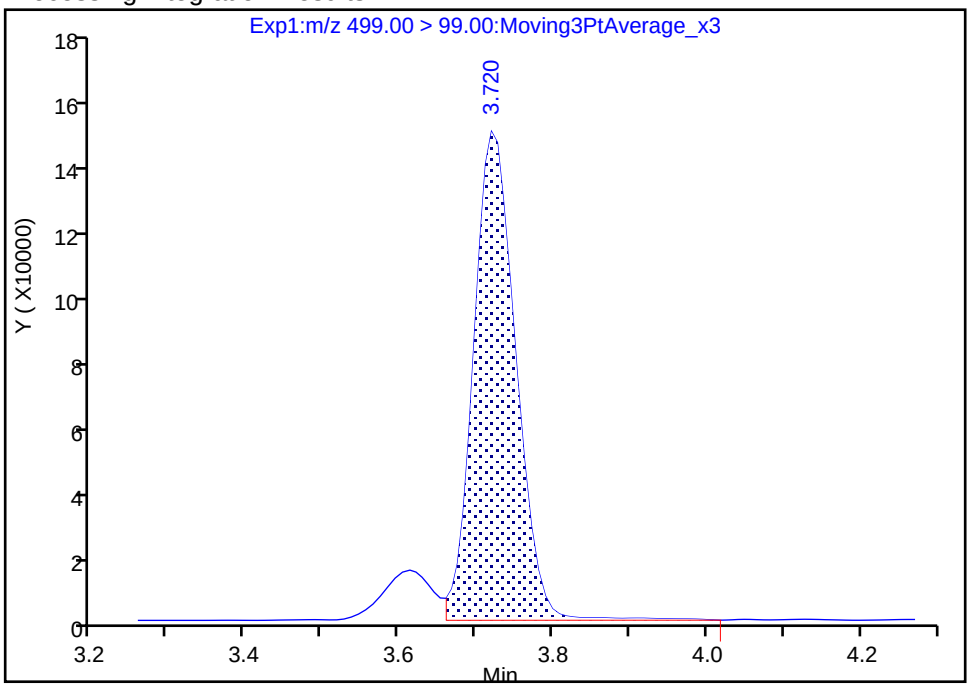
| | | | | | |
|---|---|---|---|---|---|
| Data File: | \\chromfs\Sacramento\ChromData\A9\20200911-103120.b\2020.09.11_A9_PFC_AA_027.d | | | | |
| Injection Date: | 11-Sep-2020 13:33:42 | Instrument ID: | A9 | | |
| Lims ID: | LCSD 320-411226/3-A | | | | |
| Client ID: | | | | | |
| Operator ID: | SACINSTRLCMS02 | ALS Bottle#: | 15 | Worklist Smp#: | 4 |
| Injection Vol: | 20.0 ul | Dil. Factor: | 1.0000 | | |
| Method: | PFAS_A9 | Limit Group: | LC PFC ICAL | | |
| Column: | | Detector | EXP1 | | |

## 28 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 2

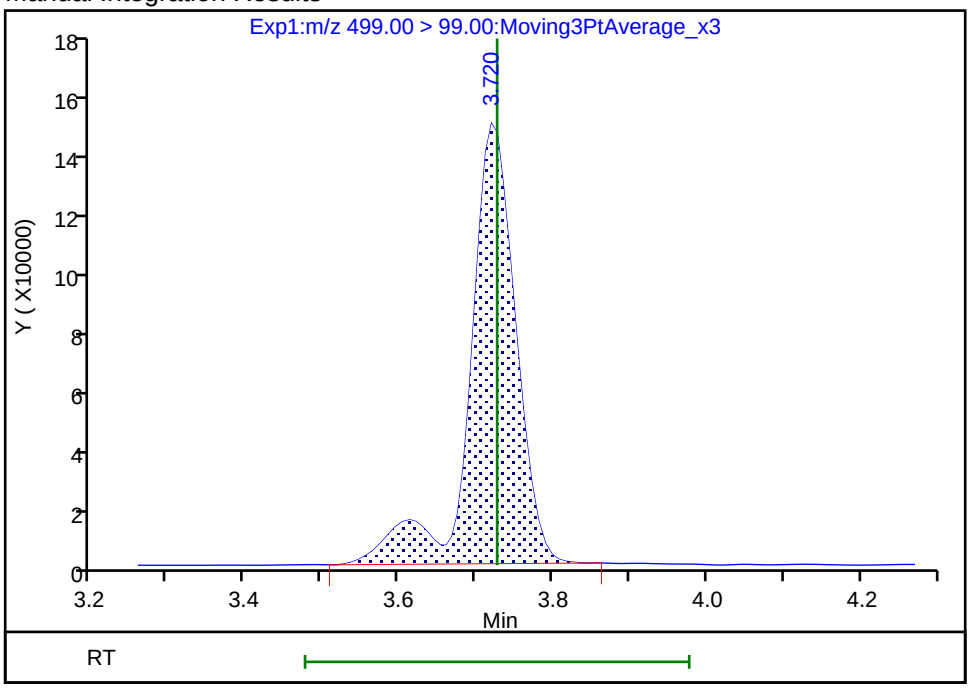
Processing Integration Results

RT: 3.72
Area: 555328
Amount: 0.944633
Amount Units: ng/ml




Manual Integration Results

RT: 3.72
Area: 608953
Amount: 0.944633
Amount Units: ng/ml




Reviewer: zibaa, 11-Sep-2020 16:03:44
Audit Action: Manually Integrated Audit Reason: Isomers

LCMS ANALYSIS RUN LOG

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 460-217547-1

SDG No.:

Instrument ID: A18 Start Date: 08/25/2020 16:43

Analysis Batch Number: 406555 End Date: 08/25/2020 18:05

| LAB SAMPLE ID | CLIENT SAMPLE ID | DATE ANALYZED | DILUTION FACTOR | LAB FILE ID | COLUMN ID |
|---|---|---|---|---|---|
| IC 320-406555/2 | | 08/25/2020 16:43 | 1 | 2020.08.25_A18_ ICAL A 011.d | Gemini C18 3x50 3(mm) |
| IC 320-406555/3 | | 08/25/2020 16:52 | 1 | 2020.08.25_A18_ ICAL A 012.d | Gemini C18 3x50 3(mm) |
| IC 320-406555/4 | | 08/25/2020 17:01 | 1 | 2020.08.25_A18_ ICAL A 013.d | Gemini C18 3x50 3(mm) |
| IC 320-406555/5 ICIS | | 08/25/2020 17:10 | 1 | 2020.08.25_A18_ ICAL A 014.d | Gemini C18 3x50 3(mm) |
| IC 320-406555/6 | | 08/25/2020 17:19 | 1 | 2020.08.25_A18_ ICAL A 015.d | Gemini C18 3x50 3(mm) |
| IC 320-406555/7 | | 08/25/2020 17:28 | 1 | 2020.08.25_A18_ ICAL A 016.d | Gemini C18 3x50 3(mm) |
| IC 320-406555/8 | | 08/25/2020 17:37 | 1 | 2020.08.25_A18_ ICAL A 017.d | Gemini C18 3x50 3(mm) |
| ICB 320-406555/9 | | 08/25/2020 17:47 | 1 | 2020.08.25_A18_ ICAL A 018.d | Gemini C18 3x50 3(mm) |
| ICV 320-406555/10 | | 08/25/2020 17:56 | 1 | 2020.08.25_A18_ ICAL A 019.d | Gemini C18 3x50 3(mm) |
| ZZZZZ | | 08/25/2020 18:05 | 1 | | Gemini C18 3x50 3(mm) |

537 (modified)

LCMS ANALYSIS RUN LOG

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 460-217547-1

SDG No.:

Instrument ID: A18 Start Date: 09/10/2020 12:35

Analysis Batch Number: 410948 End Date: 09/10/2020 13:21

| LAB SAMPLE ID | CLIENT SAMPLE ID | DATE ANALYZED | DILUTION FACTOR | LAB FILE ID | COLUMN ID |
|---|---|---|---|---|---|
| CCB 320-410948/1 | | 09/10/2020 12:35 | 1 | 2020.09.10_A18_PFC AAA 016.d | Gemini C18 3x50 3(mm) |
| CCVL 320-410948/2 | | 09/10/2020 12:45 | 1 | 2020.09.10_A18_PFC AAA 017.d | Gemini C18 3x50 3(mm) |
| CCV 320-410948/3 CCVIS | | 09/10/2020 12:54 | 1 | 2020.09.10_A18_PFC AAA 018.d | Gemini C18 3x50 3(mm) |
| ZZZZZ | | 09/10/2020 13:03 | 1 | | Gemini C18 3x50 3(mm) |
| ZZZZZ | | 09/10/2020 13:12 | 1 | | Gemini C18 3x50 3(mm) |
| CCV 320-410948/6 | | 09/10/2020 13:21 | 1 | | Gemini C18 3x50 3(mm) |

537 (modified)

LCMS ANALYSIS RUN LOG

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 460-217547-1

SDG No.:

Instrument ID: A18 Start Date: 09/10/2020 15:02

Analysis Batch Number: 411087 End Date: 09/10/2020 17:18

| LAB SAMPLE ID | CLIENT SAMPLE ID | DATE ANALYZED | DILUTION FACTOR | LAB FILE ID | COLUMN ID |
|---|---|---|---|---|---|
| CCV 320-411087/1 | | 09/10/2020 15:02 | 1 | 2020.09.10_A18_PFC_A_073.d | Gemini C18 3x50 3(mm) |
| MB 320-410910/1-A | | 09/10/2020 15:11 | 1 | 2020.09.10_A18_PFC_A_074.d | Gemini C18 3x50 3(mm) |
| LCS 320-410910/2-A | | 09/10/2020 15:20 | 1 | 2020.09.10_A18_PFC_A_075.d | Gemini C18 3x50 3(mm) |
| LCSD 320-410910/3-A | | 09/10/2020 15:29 | 1 | 2020.09.10_A18_PFC_A_076.d | Gemini C18 3x50 3(mm) |
| 460-217547-7 | FB | 09/10/2020 15:38 | 1 | 2020.09.10_A18_PFC_A_077.d | Gemini C18 3x50 3(mm) |
| ZZZZZ | | 09/10/2020 15:47 | 100 | | Gemini C18 3x50 3(mm) |
| ZZZZZ | | 09/10/2020 15:56 | 100 | | Gemini C18 3x50 3(mm) |
| ZZZZZ | | 09/10/2020 16:06 | 100 | | Gemini C18 3x50 3(mm) |
| ZZZZZ | | 09/10/2020 16:15 | 100 | | Gemini C18 3x50 3(mm) |
| ZZZZZ | | 09/10/2020 16:24 | 100 | | Gemini C18 3x50 3(mm) |
| ZZZZZ | | 09/10/2020 16:33 | 100 | | Gemini C18 3x50 3(mm) |
| ZZZZZ | | 09/10/2020 16:42 | 1 | | Gemini C18 3x50 3(mm) |
| CCV 320-411087/13 | | 09/10/2020 16:51 | 1 | 2020.09.10_A18_PFC_A_085.d | Gemini C18 3x50 3(mm) |
| ZZZZZ | | 09/10/2020 17:00 | 100 | | Gemini C18 3x50 3(mm) |
| ZZZZZ | | 09/10/2020 17:09 | 1 | | Gemini C18 3x50 3(mm) |
| CCV 320-411087/16 | | 09/10/2020 17:18 | 1 | | Gemini C18 3x50 3(mm) |

537 (modified)

LCMS ANALYSIS RUN LOG

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 460-217547-1

SDG No.:

Instrument ID: A18 Start Date: 09/11/2020 10:52

Analysis Batch Number: 411371 End Date: 09/11/2020 12:23

| LAB SAMPLE ID | CLIENT SAMPLE ID | DATE ANALYZED | DILUTION FACTOR | LAB FILE ID | COLUMN ID |
|---|---|---|---|---|---|
| CCB 320-411371/1 | | 09/11/2020 10:52 | 1 | 2020.09.11_A18_PFC A 004.d | Gemini C18 3x50 3(mm) |
| CCVL 320-411371/2 | | 09/11/2020 11:01 | 1 | 2020.09.11_A18_PFC A 005.d | Gemini C18 3x50 3(mm) |
| CCV 320-411371/3 CCVIS | | 09/11/2020 11:10 | 1 | 2020.09.11_A18_PFC A 006.d | Gemini C18 3x50 3(mm) |
| ZZZZZ | | 09/11/2020 11:19 | 1 | | Gemini C18 3x50 3(mm) |
| ZZZZZ | | 09/11/2020 11:28 | 50 | | Gemini C18 3x50 3(mm) |
| ZZZZZ | | 09/11/2020 11:37 | 50 | | Gemini C18 3x50 3(mm) |
| ZZZZZ | | 09/11/2020 11:47 | 50 | | Gemini C18 3x50 3(mm) |
| ZZZZZ | | 09/11/2020 11:56 | 50 | | Gemini C18 3x50 3(mm) |
| ZZZZZ | | 09/11/2020 12:05 | 100 | | Gemini C18 3x50 3(mm) |
| ZZZZZ | | 09/11/2020 12:14 | 1 | | Gemini C18 3x50 3(mm) |
| CCV 320-411371/11 | | 09/11/2020 12:23 | 1 | | Gemini C18 3x50 3(mm) |

537 (modified)

LCMS ANALYSIS RUN LOG

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 460-217547-1

SDG No.:

Instrument ID: A18 Start Date: 09/11/2020 12:32

Analysis Batch Number: 411377 End Date: 09/11/2020 13:54

| LAB SAMPLE ID | CLIENT SAMPLE ID | DATE ANALYZED | DILUTION FACTOR | LAB FILE ID | COLUMN ID |
|---|---|---|---|---|---|
| CCV 320-411377/1 | | 09/11/2020 12:32 | 1 | 2020.09.11_A18_PFC A 015.d | Gemini C18 3x50 3(mm) |
| 460-217547-1 | MW-203 | 09/11/2020 12:41 | 1 | 2020.09.11_A18_PFC A 016.d | Gemini C18 3x50 3(mm) |
| 460-217547-2 | MW-204 | 09/11/2020 12:50 | 1 | 2020.09.11_A18_PFC A 017.d | Gemini C18 3x50 3(mm) |
| 460-217547-3 | MW-205 | 09/11/2020 13:00 | 1 | 2020.09.11_A18_PFC A 018.d | Gemini C18 3x50 3(mm) |
| 460-217547-5 | MW-213 | 09/11/2020 13:09 | 1 | 2020.09.11_A18_PFC A 019.d | Gemini C18 3x50 3(mm) |
| 460-217547-6 | DUP | 09/11/2020 13:18 | 1 | 2020.09.11_A18_PFC A 020.d | Gemini C18 3x50 3(mm) |
| ZZZZZ | | 09/11/2020 13:27 | 1 | | Gemini C18 3x50 3(mm) |
| ZZZZZ | | 09/11/2020 13:36 | 1 | | Gemini C18 3x50 3(mm) |
| ZZZZZ | | 09/11/2020 13:45 | 1 | | Gemini C18 3x50 3(mm) |
| CCV 320-411377/10 | | 09/11/2020 13:54 | 1 | 2020.09.11_A18_PFC A 024.d | Gemini C18 3x50 3(mm) |

537 (modified)

LCMS ANALYSIS RUN LOG

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 460-217547-1

SDG No.:

Instrument ID: A9 Start Date: 09/10/2020 10:18

Analysis Batch Number: 410935 End Date: 09/10/2020 12:48

| LAB SAMPLE ID | CLIENT SAMPLE ID | DATE ANALYZED | DILUTION FACTOR | LAB FILE ID | COLUMN ID |
|---|---|---|---|---|---|
| IC 320-410935/2 | | 09/10/2020 10:18 | 1 | 2020.09.10_A9_PFC_ICAL_A_016.d | Acquity 2.1(mm) |
| IC 320-410935/3 | | 09/10/2020 10:27 | 1 | 2020.09.10_A9_PFC_ICAL_A_017.d | Acquity 2.1(mm) |
| IC 320-410935/4 | | 09/10/2020 10:37 | 1 | 2020.09.10_A9_PFC_ICAL_A_018.d | Acquity 2.1(mm) |
| IC 320-410935/5 ICIS | | 09/10/2020 10:46 | 1 | 2020.09.10_A9_PFC_ICAL_A_019.d | Acquity 2.1(mm) |
| IC 320-410935/6 | | 09/10/2020 10:55 | 1 | 2020.09.10_A9_PFC_ICAL_A_020.d | Acquity 2.1(mm) |
| IC 320-410935/7 | | 09/10/2020 11:05 | 1 | 2020.09.10_A9_PFC_ICAL_A_021.d | Acquity 2.1(mm) |
| ZZZZZ | | 09/10/2020 11:14 | 1 | | Acquity 2.1(mm) |
| ZZZZZ | | 09/10/2020 11:42 | 1 | | Acquity 2.1(mm) |
| IC 320-410935/13 | | 09/10/2020 12:29 | 1 | 2020.09.10_A9_PFC_ICAL_AA_022.d | Acquity 2.1(mm) |
| ICB 320-410935/14 | | 09/10/2020 12:38 | 1 | 2020.09.10_A9_PFC_ICAL_AA_023.d | Acquity 2.1(mm) |
| ICV 320-410935/15 | | 09/10/2020 12:48 | 1 | 2020.09.10_A9_PFC_ICAL_AA_024.d | Acquity 2.1(mm) |

537 (modified)

LCMS ANALYSIS RUN LOG

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 460-217547-1

SDG No.:

Instrument ID: A9 Start Date: 09/11/2020 09:30

Analysis Batch Number: 411300 End Date: 09/11/2020 10:54

| LAB SAMPLE ID | CLIENT SAMPLE ID | DATE ANALYZED | DILUTION FACTOR | LAB FILE ID | COLUMN ID |
|---|---|---|---|---|---|
| CCB 320-411300/1 | | 09/11/2020 09:30 | 1 | 2020.09.11_A9_PFC_AA_004.d | Acquity 2.1(mm) |
| CCVL 320-411300/2 | | 09/11/2020 09:40 | 1 | 2020.09.11_A9_PFC_AA_005.d | Acquity 2.1(mm) |
| CCV 320-411300/3 CCVIS | | 09/11/2020 09:49 | 1 | 2020.09.11_A9_PFC_AA_006.d | Acquity 2.1(mm) |
| ZZZZZ | | 09/11/2020 10:36 | 1 | | Acquity 2.1(mm) |
| CCV 320-411300/9 | | 09/11/2020 10:54 | 1 | | Acquity 2.1(mm) |

537 (modified)

LCMS ANALYSIS RUN LOG

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 460-217547-1

SDG No.:

Instrument ID: A9 Start Date: 09/11/2020 13:05

Analysis Batch Number: 411454 End Date: 09/11/2020 15:44

| LAB SAMPLE ID | CLIENT SAMPLE ID | DATE ANALYZED | DILUTION FACTOR | LAB FILE ID | COLUMN ID |
|---|---|---|---|---|---|
| CCV 320-411454/1 | | 09/11/2020 13:05 | 1 | 2020.09.11_A9_PFC_AA_024.d | Acquity 2.1(mm) |
| MB 320-411226/1-A | | 09/11/2020 13:14 | 1 | 2020.09.11_A9_PFC_AA_025.d | Acquity 2.1(mm) |
| LCS 320-411226/2-A | | 09/11/2020 13:24 | 1 | 2020.09.11_A9_PFC_AA_026.d | Acquity 2.1(mm) |
| LCSD 320-411226/3-A | | 09/11/2020 13:33 | 1 | 2020.09.11_A9_PFC_AA_027.d | Acquity 2.1(mm) |
| ZZZZZ | | 09/11/2020 13:43 | 1 | | Acquity 2.1(mm) |
| ZZZZZ | | 09/11/2020 13:52 | 1 | | Acquity 2.1(mm) |
| ZZZZZ | | 09/11/2020 14:01 | 1 | | Acquity 2.1(mm) |
| ZZZZZ | | 09/11/2020 14:11 | 1 | | Acquity 2.1(mm) |
| ZZZZZ | | 09/11/2020 14:20 | 1 | | Acquity 2.1(mm) |
| ZZZZZ | | 09/11/2020 14:29 | 1 | | Acquity 2.1(mm) |
| ZZZZZ | | 09/11/2020 14:39 | 1 | | Acquity 2.1(mm) |
| ZZZZZ | | 09/11/2020 14:48 | 1 | | Acquity 2.1(mm) |
| CCV 320-411454/13 | | 09/11/2020 14:57 | 1 | 2020.09.11_A9_PFC_AA_036.d | Acquity 2.1(mm) |
| ZZZZZ | | 09/11/2020 15:07 | 1 | | Acquity 2.1(mm) |
| ZZZZZ | | 09/11/2020 15:16 | 1 | | Acquity 2.1(mm) |
| 460-217547-4 | MW-206 | 09/11/2020 15:25 | 1 | 2020.09.11_A9_PFC_AA_039.d | Acquity 2.1(mm) |
| ZZZZZ | | 09/11/2020 15:35 | 1 | | Acquity 2.1(mm) |
| CCV 320-411454/18 | | 09/11/2020 15:44 | 1 | 2020.09.11_A9_PFC_AA_041.d | Acquity 2.1(mm) |

537 (modified)

# LCMS BATCH WORKSHEET

Lab Name: Eurofins TestAmerica, Sacramen  Job No.: 460-217547-1

SDG No.:

Batch Number: 410910  Batch Start Date: 09/09/20 18:52  Batch Analyst: Pham, Vince

Batch Method: 3535  Batch End Date: 09/10/20 01:50

| Lab Sample ID | Client Sample ID | Method Chain | Basis | GrossWeight | TareWeight | InitialAmount | FinalAmount | LCMPFC_IDA 00243 | LCPFC-IS 00481 |
|---|---|---|---|---|---|---|---|---|---|
| MB 320-410910/1 | | 3535, 537 (modified) | | | | 250 mL | 10.00 mL | 500 uL | 500 uL |
| LCS 320-410910/2 | | 3535, 537 (modified) | | | | 250 mL | 10.00 mL | 500 uL | 500 uL |
| LCSD 320-410910/3 | | 3535, 537 (modified) | | | | 250 mL | 10.00 mL | 500 uL | 500 uL |
| 460-217547-E-1 | MW-203 | 3535, 537 (modified) | T | 276.45 g | 26.72 g | 249.7 mL | 10.00 mL | 500 uL | 500 uL |
| 460-217547-E-2 | MW-204 | 3535, 537 (modified) | T | 282.89 g | 27.16 g | 255.7 mL | 10.00 mL | 500 uL | 500 uL |
| 460-217547-E-3 | MW-205 | 3535, 537 (modified) | T | 278.57 g | 26.99 g | 251.6 mL | 10.00 mL | 500 uL | 500 uL |
| 460-217547-E-5 | MW-213 | 3535, 537 (modified) | T | 293.01 g | 27.32 g | 265.7 mL | 10.00 mL | 500 uL | 500 uL |
| 460-217547-E-6 | DUP | 3535, 537 (modified) | T | 277.28 g | 26.44 g | 250.8 mL | 10.00 mL | 500 uL | 500 uL |
| 460-217547-D-7 | FB | 3535, 537 (modified) | T | 281.38 g | 26.91 g | 254.5 mL | 10.00 mL | 500 uL | 500 uL |

| Lab Sample ID | Client Sample ID | Method Chain | Basis | LCPFCSP 00328 | AnalysisComment | | | | |
|---|---|---|---|---|---|---|---|---|---|
| MB 320-410910/1 | | 3535, 537 (modified) | | | | | | | |
| LCS 320-410910/2 | | 3535, 537 (modified) | | 500 uL | | | | | |
| LCSD 320-410910/3 | | 3535, 537 (modified) | | 500 uL | | | | | |
| 460-217547-E-1 | MW-203 | 3535, 537 (modified) | T | | | | | | |
| 460-217547-E-2 | MW-204 | 3535, 537 (modified) | T | | | | | | |
| 460-217547-E-3 | MW-205 | 3535, 537 (modified) | T | | | | | | |
| 460-217547-E-5 | MW-213 | 3535, 537 (modified) | T | | Cloudy at FV. | | | | |
| 460-217547-E-6 | DUP | 3535, 537 (modified) | T | | Cloudy at FV. | | | | |
| 460-217547-D-7 | FB | 3535, 537 (modified) | T | | | | | | |

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

Lab Name: Eurofins TestAmerica, Sacramen  Job No.: 460-217547-1

SDG No.:

Batch Number: 410910  Batch Start Date: 09/09/20 18:52  Batch Analyst: Pham, Vince

Batch Method: 3535  Batch End Date: 09/10/20 01:50

| Batch Notes | |
|---|---|
| Balance ID | QA-081 |
| Batch Comment | Eurofins label ID matches client label. VP 9/09/20. Centrifuge tube #18720040 |
| First End time | 09/10/2020 01:50 |
| H2O ID | 9/08/20 |
| Hexane ID | 2122754 |
| Manifold ID | BQ, BS |
| Methanol ID | 2138290 |
| Sodium Hydroxide ID | 2141971 |
| Pipette/Syringe/Dispenser ID | R10872I |
| Analyst ID - Reagent Drop | VP |
| Analyst ID - IS Reagent Drop | VP |
| Analyst ID - IS Reagent Drop Witness | JER |
| Solvent Lot # | 2140105 |
| Solvent Name | 0.3% NH4OH/MeOH |
| SPE Cartridge Lot ID | 005730044a |
| SPE Cartridge Type | Oasis WAX 500mg |
| First Start time | 09/09/2020 18:52 |

| Basis | Basis Description |
|---|---|
| T | Total/NA |

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

# LCMS BATCH WORKSHEET

Lab Name: Eurofins TestAmerica, Sacramen  Job No.: 460-217547-1

SDG No.:

Batch Number: 411226  Batch Start Date: 09/10/20 18:32  Batch Analyst: Vue, Pheng

Batch Method: 3535  Batch End Date: 09/10/20 23:59

| Lab Sample ID | Client Sample ID | Method Chain | Basis | GrossWeight | TareWeight | InitialAmount | FinalAmount | LCMPFC_IDA 00244 | LCPFC-IS 00475 |
|---|---|---|---|---|---|---|---|---|---|
| MB 320-411226/1 | | 3535, 537 (modified) | | | | 250 mL | 10.00 mL | 500 uL | 500 uL |
| LCS 320-411226/2 | | 3535, 537 (modified) | | | | 250 mL | 10.00 mL | 500 uL | 500 uL |
| LCSD 320-411226/3 | | 3535, 537 (modified) | | | | 250 mL | 10.00 mL | 500 uL | 500 uL |
| 460-217547-D-4 | MW-206 | 3535, 537 (modified) | T | 309.80 g | 26.1 g | 283.7 mL | 10.00 mL | 500 uL | 500 uL |

| Lab Sample ID | Client Sample ID | Method Chain | Basis | LCPFCSP 00328 | AnalysisComment | | | | |
|---|---|---|---|---|---|---|---|---|---|
| MB 320-411226/1 | | 3535, 537 (modified) | | | | | | | |
| LCS 320-411226/2 | | 3535, 537 (modified) | | 500 uL | | | | | |
| LCSD 320-411226/3 | | 3535, 537 (modified) | | 500 uL | | | | | |
| 460-217547-D-4 | MW-206 | 3535, 537 (modified) | T | | Clogged. Remaining sample + bottle = 83.04 g | | | | |

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

# LCMS BATCH WORKSHEET

Lab Name: Eurofins TestAmerica, Sacramen  Job No.: 460-217547-1

SDG No.:

Batch Number: 411226  Batch Start Date: 09/10/20 18:32  Batch Analyst: Vue, Pheng

Batch Method: 3535  Batch End Date: 09/10/20 23:59

| Batch Notes | |
|---|---|
| Balance ID | QA-078 |
| Batch Comment | Client labels match Eurofins/TA labels. PV 09/10/20. Centrifuge tube # 191203058 |
| First End time | 09/10/2020 23:59 |
| H2O ID | 9/09/20 |
| Hexane ID | 2140960 |
| Manifold ID | BQ |
| Methanol ID | 2147931 |
| Sodium Hydroxide ID | 2141970 |
| Pipette/Syringe/Dispenser ID | J38488I |
| Analyst ID - Reagent Drop | PV |
| Analyst ID - IS Reagent Drop | PV |
| Analyst ID - IS Reagent Drop Witness | FX |
| Solvent Lot # | 2140105 |
| Solvent Name | 0.3% NH4OH/MeOH |
| SPE Cartridge Lot ID | 005730044a |
| SPE Cartridge Type | Oasis WAX 500mg |
| First Start time | 09/10/2020 18:32 |

| Basis | Basis Description |
|---|---|
| T | Total/NA |

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

# Shipping and Receiving Documents

# Chain of Custody Record 449256

eurofins | Environment Testing TestAmerica

Address: 5 Grossinger Dr, Liberty, NY

Regulatory Program: ☐ DW ☐ NPDES ☐ RCRA ☒ Other: NY Cat B

TAL-8210

| Client Contact | Project Manager: Fred Dahan | Site Contact: Jon Stuan | Date: | COC No: |
|---|---|---|---|---|
| Company Name: SESI | Tel/Email: fd@sesi.org | Lab Contact: Omayra Ponce | Carrier: | 1 of 1 COCs |
| Address: 12a Maple Ave | Analysis Turnaround Time | | | Sampler: |
| City/State/Zip: Pine Brook, NJ | ☐ CALENDAR DAYS ☐ WORKING DAYS | | | For Lab Use Only: |
| Phone: 973 808 9050 | TAT if different from Below | | | Walk-in Client: |
| Fax: | ☐ 2 weeks ☒ 1 week Standard ☐ 2 days ☐ 1 day | | | Lab Sampling: |
| Project Name: Grossingers | | | | Job / SDG No.: 21754 |
| Site: | | | | |
| PO# 9313 Phase 10 | | | | |

| Sample Identification | Sample Date | Sample Time | Sample Type (C=Comp, G=Grab) | Matrix | # of Cont. | Filtered Sample (Y/N) | Perform MS / MSD (Y/N) | TCL VOCs | PFAS (537.1) | Sample Specific Notes: |
|---|---|---|---|---|---|---|---|---|---|---|
| MW-203 | 9/2/20 | 1300 | Grab | GW | 5 | N | N | X | X | 1 |
| MW-204 | | 1130 | | | | | | | | 2 |
| MW-205 | | 1240 | | | | | | | | 3 |
| MW-206 | | 1040 | | | | | | | | 4 |
| MW-213 | | 940 | | | | | | | | 5 |
| Dup | | | | | | | | | | 6 |
| FB | | 1430 | | DI | 4 | | | | | 7 |
| TB | 9/1/20 | | | | 2 | N | N | X | | 8 |

SUB WORK

5-Day RUSH

460-217547 Chain of Custody

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other _____

**Possible Hazard Identification:**
Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.

☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

**Sample Disposal ( A fee may be assessed if samples are retained longer than 1 month)**

☐ Return to Client ☒ Disposal by Lab ☐ Archive for _____ Months

**Special Instructions/QC Requirements & Comments:**

| Custody Seals Intact: ☐ Yes ☐ No | Custody Seal No.: | Cooler Temp. (°C): Obs'd: _____ Corr'd: _____ | Therm ID No.: _____ |
|---|---|---|---|

| | Company | Date/Time | Received by | Company | Date/Time |
|---|---|---|---|---|---|
| Relinquished by: | SESI | 9/3/20 | | ETA | 9/3/20 1035 |
| Relinquished by: | ETA | 9/3/20 1645 | | TAL | 9/3/20 1645 |
| Relinquished by: | Company: | Date/Time: | Received in Laboratory by: | Company: | Date/Time: |

WO LS Fred 1-3,4

Page 1386 of 1390

09/15/2020

# Eurofins TestAmerica Edison
## Receipt Temperature and pH Log

Job Number: 217847

Number of Coolers: 1 IR Gun # 11

## Cooler Temperatures

| | RAW | CORRECTED | | RAW | CORRECTED | | RAW | CORRECTED |
|---|---|---|---|---|---|---|---|---|
| Cooler #1: | 3.4 °C | 3.4 °C | Cooler #4: | °C | °C | Cooler #7: | °C | °C |
| Cooler #2: | °C | °C | Cooler #5: | °C | °C | Cooler #8: | °C | °C |
| Cooler #3: | °C | °C | Cooler #6: | °C | °C | Cooler #9: | °C | °C |

| TALS Sample Number | Ammonia (pH<2) | COD (pH<2) | Nitrate Nitrite (pH<2) | Metals* (pH<2) | Hardness (pH<2) | Pest (pH 5-9) | EPH or QAM (pH<2) | Phenols (pH<2) | Sulfide (pH>9) | TKN (pH<2) | TOC (pH<2) | Total Cyanide (pH>12) | Total Phos (pH<2) | Other | Other |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | | | | |
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If pH adjustments are required record the information below:

Sample No(s). adjusted: _____

Preservative Name/Conc.: _____ Volume of Preservative used (ml): _____

Lot # of Preservative(s): _____ Expiration Date: _____

*The appropriate Project Manager and Department Manager should be notified about the samples which were pH adjusted.*

** Samples for Metal analysis which are out of compliance must be acidified at least 24 hours prior to analysis.*

Initials: M Date: 9-3-2020

**Eurofins TestAmerica, Edison**
777 New Durham Road
Edison, NJ 08817
Phone: 732-549-3900 Fax: 732-549-3679

# Chain of Custody Record

eurofins | Environment Testing America

| Client Information (Sub Contract Lab) | Sampler: | Lab PM: Penas, Omayra | Carrier Tracking No(s): | COC No: 460-59373.1 |
|---|---|---|---|---|
| Client Contact: Shipping/Receiving | Phone: | E-Mail: Omayra.Penas@Eurofinset.com | State of Origin: New York | Page: Page 1 of 1 |
| Company: TestAmerica Laboratories, Inc. | | Accreditations Required (See note): NELAP - New York | | Job #: 460-217547-1 |
| Address: 880 Riverside Parkway, , | Due Date Requested: 9/10/2020 | | | |
| City: West Sacramento | TAT Requested (days): | | | |
| State, Zip: CA, 95605 | | | | |
| Phone: 916-373-5600(Tel) 916-372-1059(Fax) | PO #: | | | |
| Email: | WO #: | | | |
| Project Name: Grossingers | Project #: 46021703 | | | |
| Site: | SSOW#: | | | |

**Analysis Requested**

**Preservation Codes:**

| | |
|---|---|
| A - HCL | M - Hexane |
| B - NaOH | N - None |
| C - Zn Acetate | O - AsNaO2 |
| D - Nitric Acid | P - Na2O4S |
| E - NaHSO4 | Q - Na2SO3 |
| F - MeOH | R - Na2S2O3 |
| G - Amchlor | S - H2SO4 |
| H - Ascorbic Acid | T - TSP Dodecahydrate |
| I - Ice | U - Acetone |
| J - DI Water | V - MCAA |
| K - EDTA | W - pH 4-5 |
| L - EDA | Z - other (specify) |

Other:

| Sample Identification - Client ID (Lab ID) | Sample Date | Sample Time | Sample Type (C=comp, G=grab) | Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air) | Field Filtered Sample (Yes or No) | Perform MS/MSD (Yes or No) | PFC_IDA/3535_PFC PFAS, Standard List (21 Analytes) SAC | Total Number of containers | Special Instructions/Note: |
|---|---|---|---|---|---|---|---|---|---|
| | | | Preservation Code: | | | | | | |
| MW-203 (460-217547-1) | 9/2/20 | 13:00 Eastern | | Water | | | X | 2 | |
| MW-204 (460-217547-2) | 9/2/20 | 11:30 Eastern | | Water | | | X | 2 | |
| MW-205 (460-217547-3) | 9/2/20 | 12:40 Eastern | | Water | | | X | 2 | |
| MW-206 (460-217547-4) | 9/2/20 | 10:40 Eastern | | Water | | | X | 2 | |
| MW-213 (460-217547-5) | 9/2/20 | 09:40 Eastern | | Water | | | X | 2 | |
| DUP (460-217547-6) | 9/2/20 | Eastern | | Water | | | X | 2 | |
| FB (460-217547-7) | 9/2/20 | 14:30 Eastern | | Water | | | X | 2 | |
| | | | | | | | | | |
| | | | | | | | | | |

Note: Since laboratory accreditations are subject to change, Eurofins TestAmerica places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins TestAmerica attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said complicance to Eurofins TestAmerica.

| Possible Hazard Identification | Sample Disposal ( A fee may be assessed if samples are retained longer than 1 month) |
|---|---|
| Unconfirmed | ☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months |
| Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 1 | Special Instructions/QC Requirements: |

| Empty Kit Relinquished by: | Date: | Time: | Method of Shipment: |
|---|---|---|---|

| | Relinquished by: | Date/Time: | Company | Received by: | Date/Time: | Company |
|---|---|---|---|---|---|---|
| 1 | | 9/8/20 1900 | EAEI | | 09/09/20 10:40 | ETA-SAC |
| 2 | | | | | | |
| 3 | | | | | | |

| Custody Seals Intact: Δ Yes Δ No | Custody Seal No.: | Cooler Temperature(s) °C and Other Remarks: DB: 1.0 CORR: 0.5 |
|---|---|---|

Ver: 01/16/2019

•(2/2)-RED DISCOLORATION-dB 09/09/20

# Login Sample Receipt Checklist

Client: SESI Consulting Engineers

Job Number: 460-217547-1

**Login Number: 217547**
**List Number: 1**
**Creator: Rivera, Kenneth**

**List Source: Eurofins TestAmerica, Edison**

| Question | Answer | Comment |
|---|---|---|
| Radioactivity wasn't checked or is </= background as measured by a survey meter. | N/A | |
| The cooler's custody seal, if present, is intact. | True | |
| Sample custody seals, if present, are intact. | True | |
| The cooler or samples do not appear to have been compromised or tampered with. | True | |
| Samples were received on ice. | True | |
| Cooler Temperature is acceptable. | True | |
| Cooler Temperature is recorded. | True | |
| COC is present. | True | |
| COC is filled out in ink and legible. | True | |
| COC is filled out with all pertinent information. | True | |
| Is the Field Sampler's name present on COC? | True | |
| There are no discrepancies between the containers received and the COC. | True | |
| Samples are received within Holding Time (excluding tests with immediate HTs) | True | |
| Sample containers have legible labels. | True | |
| Containers are not broken or leaking. | True | |
| Sample collection date/times are provided. | True | |
| Appropriate sample containers are used. | True | |
| Sample bottles are completely filled. | True | |
| Sample Preservation Verified. | True | |
| There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs | True | |
| Containers requiring zero headspace have no headspace or bubble is <6mm (1/4"). | True | |
| Multiphasic samples are not present. | True | |
| Samples do not require splitting or compositing. | True | |
| Residual Chlorine Checked. | N/A | |

# Login Sample Receipt Checklist

Client: SESI Consulting Engineers

Job Number: 460-217547-1

**Login Number: 217547**
**List Number: 2**
**Creator: Saephan, Kae C**

**List Source: Eurofins TestAmerica, Sacramento**
**List Creation: 09/09/20 01:30 PM**

| Question | Answer | Comment |
|---|---|---|
| Radioactivity wasn't checked or is </= background as measured by a survey meter. | True | |
| The cooler's custody seal, if present, is intact. | N/A | |
| Sample custody seals, if present, are intact. | N/A | |
| The cooler or samples do not appear to have been compromised or tampered with. | True | |
| Samples were received on ice. | True | |
| Cooler Temperature is acceptable. | True | |
| Cooler Temperature is recorded. | True | ob: 1.0c corr: 0.5c |
| COC is present. | True | |
| COC is filled out in ink and legible. | True | |
| COC is filled out with all pertinent information. | True | |
| Is the Field Sampler's name present on COC? | False | Received project as a subcontract. |
| There are no discrepancies between the containers received and the COC. | True | |
| Samples are received within Holding Time (excluding tests with immediate HTs) | True | |
| Sample containers have legible labels. | True | |
| Containers are not broken or leaking. | True | |
| Sample collection date/times are provided. | True | |
| Appropriate sample containers are used. | True | |
| Sample bottles are completely filled. | True | |
| Sample Preservation Verified. | N/A | |
| There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs | True | |
| Containers requiring zero headspace have no headspace or bubble is <6mm (1/4"). | True | |
| Multiphasic samples are not present. | True | |
| Samples do not require splitting or compositing. | True | |
| Residual Chlorine Checked. | N/A | |

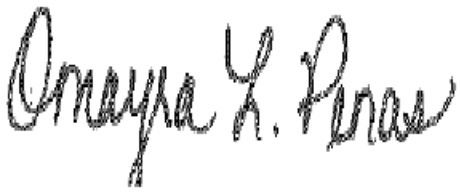
# ANALYTICAL REPORT

Job Number: 460-217659-1

Job Description: Grossingers

For:
SESI Consulting Engineers
12 A Maple Avenue
Building B
Pine Brook, NJ 07058

Attention: Fuad Dahan



Approved for release.
Omayra Penas
Senior Project Manager
9/11/2020 1:11 PM

Omayra Penas, Senior Project Manager
777 New Durham Road, Edison, NJ, 08817
(732)593-2538
Omayra.Penas@Eurofinset.com
09/11/2020

The test results in this report meet all NELAP requirements unless specified within the case narrative. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory. All questions regarding this report should be directed to the TestAmerica Edison Project Manager.

TestAmerica Edison Certifications and Approvals: Connecticut: CTDOH #PH-0200, New Jersey: NJDEP (NELAP) #12028, New York: NYDOH (NELAP) #11452, NYDOH (ELAP) #11452, Pennsylvania: PADEP (NELAP) 68-00522 and Rhode Island: RIDOH LAO00132

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins TestAmerica Project Manager.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

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# CASE NARRATIVE

## Client: SESI Consulting Engineers

## Project: Grossingers

## Report Number: 460-217659-1

This case narrative is in the form of an exception report, where only the anomalies related to this report, method specific performance and/or QA/QC issues are discussed. If there are no issues to report, this narrative will include a statement that documents that there are no relevant data issues.

It should be noted that samples with elevated Reporting Limits (RLs) as a result of a dilution may not be able to satisfy customer reporting limits in some cases. Such increases in the RLs are unavoidable but acceptable consequence of sample dilution that enables quantification of target analytes or interferences which exceed the calibration range of the instrument.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

**RECEIPT**

The samples were received on 09/04/2020; the samples arrived in good condition, properly preserved and on ice. The temperature of the coolers at receipt was 4.4 C.

Per laboratory policy, the Trip Blank (460-217659-9) sample date/time was changed to reflect the latest sample date/time of the sampling event.

Note: All samples which require thermal preservation are considered acceptable if the arrival temperature is within 2C of the required temperature or method specified range. For samples with a specified temperature of 4C, samples with a temperature ranging from just above freezing temperature of water to 6C shall be acceptable. Samples that are hand delivered immediately following collection may not meet these criteria, however they will be deemed acceptable according to NELAC standards, if there is evidence that the chilling process has begun, such as arrival on ice, etc.

**VOLATILE ORGANIC COMPOUNDS (GC-MS)**

Samples MW-201 (460-217659-1), MW-207 (460-217659-2), MW-210 (460-217659-3), MW-211 (460-217659-4), MW-214 (460-217659-5), MW-216 (460-217659-6), MW-217 (460-217659-7), FB (460-217659-8) and TB (460-217659-9) were analyzed for Volatile organic compounds (GC-MS) in accordance with EPA SW-846 Methods 8260C. The samples were analyzed on 09/08/2020 and 09/09/2020.

Four surrogates are used for this analysis. The laboratory's SOP allows one of these surrogates to be outside acceptance criteria without performing re-analysis. The following samples contained an allowable number of surrogate compounds outside limits: FB (460-217659-8), (LCS 460-722587/4) and (MB 460-722587/8). These results have been reported and qualified.

The continuing calibration verification (CCV) analyzed in batch 460-722587 was outside the method criteria for 1,2-Dichloroethane. A CCV standard at or below the reporting limit (RL) was analyzed with the affected samples and found to be acceptable. As indicated in the reference method, sample analysis may proceed; however, any detection for the affected analyte is considered estimated.

The laboratory control sample (LCS) for analytical batch 460-722587 recovered outside the lower control limit for 1,2-Dichloroethane. The associated sample data have been flagged and reported.

The continuing calibration verification (CCV) analyzed in batch 460-722587 was outside the method criteria for 1,2-Dichloroethane-d4 (Surr) (bias low).

Refer to the QC report for details.

No other difficulties were encountered during the volatiles analysis.

All other quality control parameters were within the acceptance limits.

**PER- AND POLYFLUOROALKYL SUBSTANCES (PFAS)**

Samples MW-201 (460-217659-1), MW-207 (460-217659-2), MW-210 (460-217659-3), MW-211 (460-217659-4), MW-214 (460-217659-5), MW-216 (460-217659-6), MW-217 (460-217659-7) and FB (460-217659-8) were analyzed for Per- and Polyfluoroalkyl Substances (PFAS) in accordance with PFC. The samples were prepared on 09/09/2020 and analyzed on 09/10/2020.

The transition mass ratio for the indicated analyte was outside of the established ratio limits. The qualitative identification of the analyte

has some degree of uncertainty. However, analyst judgment was used to positively identify the analytes.
MW-210 (460-217659-3).

Perfluorobutanoic acid (PFBA) and Perfluorohexanesulfonic acid (PFHxS) were detected in method blank MB 320-410906/1-A at levels that were above the method detection limit but below the reporting limit. The values should be considered estimates, and have been flagged. If the associated sample reported a result above the MDL and/or RL, the result has been flagged.

Refer to the QC report for details.

No other difficulties were encountered during the PFAS analysis.

All other quality control parameters were within the acceptance limits.

# Sample Summary

Client: SESI Consulting Engineers
Job ID: 460-217659-1
Project/Site: Grossingers

| Lab Sample ID | Client Sample ID | Matrix | Collected | Received | Asset ID |
|---|---|---|---|---|---|
| 460-217659-1 | MW-201 | Water | 09/03/20 09:10 | 09/04/20 16:25 | |
| 460-217659-2 | MW-207 | Water | 09/03/20 11:10 | 09/04/20 16:25 | |
| 460-217659-3 | MW-210 | Water | 09/03/20 10:35 | 09/04/20 16:25 | |
| 460-217659-4 | MW-211 | Water | 09/03/20 14:00 | 09/04/20 16:25 | |
| 460-217659-5 | MW-214 | Water | 09/03/20 09:30 | 09/04/20 16:25 | |
| 460-217659-6 | MW-216 | Water | 09/03/20 13:30 | 09/04/20 16:25 | |
| 460-217659-7 | MW-217 | Water | 09/03/20 12:35 | 09/04/20 16:25 | |
| 460-217659-8 | FB | Water | 09/03/20 15:00 | 09/04/20 16:25 | |
| 460-217659-9 | TB | Water | 09/03/20 15:00 | 09/04/20 16:25 | |

# Detection Summary

Client: SESI Consulting Engineers
Project/Site: Grossingers

Job ID: 460-217659-1

## Client Sample ID: MW-201 — Lab Sample ID: 460-217659-1

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Chloromethane | 0.44 | J | 1.0 | 0.40 | ug/L | 1 | | 8260C | Total/NA |
| Perfluorobutanoic acid (PFBA) | 0.51 | J B | 1.88 | 0.33 | ng/L | 1 | | 537 (modified) | Total/NA |
| Perfluorohexanesulfonic acid (PFHxS) | 0.33 | J B | 1.88 | 0.16 | ng/L | 1 | | 537 (modified) | Total/NA |
| Perfluorooctanesulfonic acid (PFOS) | 0.57 | J | 1.88 | 0.51 | ng/L | 1 | | 537 (modified) | Total/NA |
| 6:2 FTS | 11.0 | J | 18.8 | 1.88 | ng/L | 1 | | 537 (modified) | Total/NA |

## Client Sample ID: MW-207 — Lab Sample ID: 460-217659-2

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Chloromethane | 0.41 | J | 1.0 | 0.40 | ug/L | 1 | | 8260C | Total/NA |
| Perfluorobutanoic acid (PFBA) | 1.93 | B | 1.87 | 0.33 | ng/L | 1 | | 537 (modified) | Total/NA |
| Perfluoropentanoic acid (PFPeA) | 0.79 | J | 1.87 | 0.46 | ng/L | 1 | | 537 (modified) | Total/NA |
| Perfluorohexanoic acid (PFHxA) | 0.91 | J | 1.87 | 0.54 | ng/L | 1 | | 537 (modified) | Total/NA |
| Perfluoroheptanoic acid (PFHpA) | 0.94 | J | 1.87 | 0.23 | ng/L | 1 | | 537 (modified) | Total/NA |
| Perfluorooctanoic acid (PFOA) | 5.46 | | 1.87 | 0.80 | ng/L | 1 | | 537 (modified) | Total/NA |
| Perfluorononanoic acid (PFNA) | 0.61 | J | 1.87 | 0.25 | ng/L | 1 | | 537 (modified) | Total/NA |
| Perfluorodecanoic acid (PFDA) | 0.39 | J | 1.87 | 0.29 | ng/L | 1 | | 537 (modified) | Total/NA |
| Perfluorobutanesulfonic acid (PFBS) | 0.76 | J | 1.87 | 0.19 | ng/L | 1 | | 537 (modified) | Total/NA |
| Perfluorohexanesulfonic acid (PFHxS) | 1.92 | B | 1.87 | 0.16 | ng/L | 1 | | 537 (modified) | Total/NA |
| Perfluoroheptanesulfonic Acid (PFHpS) | 0.37 | J | 1.87 | 0.18 | ng/L | 1 | | 537 (modified) | Total/NA |
| Perfluorooctanesulfonic acid (PFOS) | 22.1 | | 1.87 | 0.51 | ng/L | 1 | | 537 (modified) | Total/NA |

## Client Sample ID: MW-210 — Lab Sample ID: 460-217659-3

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Perfluorobutanoic acid (PFBA) | 1.54 | J B | 2.01 | 0.35 | ng/L | 1 | | 537 (modified) | Total/NA |
| Perfluoropentanoic acid (PFPeA) | 0.60 | J | 2.01 | 0.49 | ng/L | 1 | | 537 (modified) | Total/NA |
| Perfluoroheptanoic acid (PFHpA) | 0.73 | J | 2.01 | 0.25 | ng/L | 1 | | 537 (modified) | Total/NA |
| Perfluorooctanoic acid (PFOA) | 2.32 | | 2.01 | 0.85 | ng/L | 1 | | 537 (modified) | Total/NA |
| Perfluorobutanesulfonic acid (PFBS) | 1.10 | J | 2.01 | 0.20 | ng/L | 1 | | 537 (modified) | Total/NA |
| Perfluorohexanesulfonic acid (PFHxS) | 1.02 | J B | 2.01 | 0.17 | ng/L | 1 | | 537 (modified) | Total/NA |
| Perfluorooctanesulfonic acid (PFOS) | 3.56 | cn | 2.01 | 0.54 | ng/L | 1 | | 537 (modified) | Total/NA |
| Perfluorooctanesulfonamide (FOSA) | 0.36 | J | 2.01 | 0.35 | ng/L | 1 | | 537 (modified) | Total/NA |

## Client Sample ID: MW-211 — Lab Sample ID: 460-217659-4

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Perfluorobutanoic acid (PFBA) | 0.72 | J B | 1.99 | 0.35 | ng/L | 1 | | 537 (modified) | Total/NA |
| Perfluorooctanoic acid (PFOA) | 0.87 | J | 1.99 | 0.85 | ng/L | 1 | | 537 (modified) | Total/NA |
| Perfluorotetradecanoic acid (PFTeA) | 0.41 | J | 1.99 | 0.29 | ng/L | 1 | | 537 (modified) | Total/NA |
| Perfluorohexanesulfonic acid (PFHxS) | 0.56 | J B | 1.99 | 0.17 | ng/L | 1 | | 537 (modified) | Total/NA |
| Perfluorooctanesulfonic acid (PFOS) | 1.75 | J | 1.99 | 0.54 | ng/L | 1 | | 537 (modified) | Total/NA |
| Perfluorooctanesulfonamide (FOSA) | 0.35 | J | 1.99 | 0.35 | ng/L | 1 | | 537 (modified) | Total/NA |
| 6:2 FTS | 5.28 | J | 19.9 | 1.99 | ng/L | 1 | | 537 (modified) | Total/NA |

## Client Sample ID: MW-214 — Lab Sample ID: 460-217659-5

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Dichlorodifluoromethane | 16 | | 1.0 | 0.31 | ug/L | 1 | | 8260C | Total/NA |
| Trichlorofluoromethane | 5.1 | | 1.0 | 0.32 | ug/L | 1 | | 8260C | Total/NA |
| Perfluorobutanoic acid (PFBA) | 9.76 | B | 2.07 | 0.36 | ng/L | 1 | | 537 (modified) | Total/NA |
| Perfluoropentanoic acid (PFPeA) | 4.50 | | 2.07 | 0.51 | ng/L | 1 | | 537 (modified) | Total/NA |

This Detection Summary does not include radiochemical test results.

## Client Sample ID: MW-214 (Continued) — Lab Sample ID: 460-217659-5

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Perfluorohexanoic acid (PFHxA) | 6.65 | | 2.07 | 0.60 | ng/L | 1 | | 537 (modified) | Total/NA |
| Perfluoroheptanoic acid (PFHpA) | 5.08 | | 2.07 | 0.26 | ng/L | 1 | | 537 (modified) | Total/NA |
| Perfluorooctanoic acid (PFOA) | 25.8 | | 2.07 | 0.88 | ng/L | 1 | | 537 (modified) | Total/NA |
| Perfluorononanoic acid (PFNA) | 1.41 | J | 2.07 | 0.28 | ng/L | 1 | | 537 (modified) | Total/NA |
| Perfluorodecanoic acid (PFDA) | 1.42 | J | 2.07 | 0.32 | ng/L | 1 | | 537 (modified) | Total/NA |
| Perfluorobutanesulfonic acid (PFBS) | 3.32 | | 2.07 | 0.21 | ng/L | 1 | | 537 (modified) | Total/NA |
| Perfluorohexanesulfonic acid (PFHxS) | 5.44 | B | 2.07 | 0.18 | ng/L | 1 | | 537 (modified) | Total/NA |
| Perfluoroheptanesulfonic Acid (PFHpS) | 0.75 | J | 2.07 | 0.20 | ng/L | 1 | | 537 (modified) | Total/NA |
| Perfluorooctanesulfonic acid (PFOS) | 46.6 | | 2.07 | 0.56 | ng/L | 1 | | 537 (modified) | Total/NA |
| Perfluorooctanesulfonamide (FOSA) | 2.04 | J | 2.07 | 0.36 | ng/L | 1 | | 537 (modified) | Total/NA |

## Client Sample ID: MW-216 — Lab Sample ID: 460-217659-6

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Dichlorodifluoromethane | 3.9 | | 1.0 | 0.31 | ug/L | 1 | | 8260C | Total/NA |
| Trichlorofluoromethane | 6.9 | | 1.0 | 0.32 | ug/L | 1 | | 8260C | Total/NA |
| Perfluorobutanoic acid (PFBA) | 4.37 | B | 1.83 | 0.32 | ng/L | 1 | | 537 (modified) | Total/NA |
| Perfluoropentanoic acid (PFPeA) | 2.52 | | 1.83 | 0.45 | ng/L | 1 | | 537 (modified) | Total/NA |
| Perfluorohexanoic acid (PFHxA) | 2.62 | | 1.83 | 0.53 | ng/L | 1 | | 537 (modified) | Total/NA |
| Perfluoroheptanoic acid (PFHpA) | 1.88 | | 1.83 | 0.23 | ng/L | 1 | | 537 (modified) | Total/NA |
| Perfluorooctanoic acid (PFOA) | 9.39 | | 1.83 | 0.78 | ng/L | 1 | | 537 (modified) | Total/NA |
| Perfluorononanoic acid (PFNA) | 0.73 | J | 1.83 | 0.25 | ng/L | 1 | | 537 (modified) | Total/NA |
| Perfluorodecanoic acid (PFDA) | 0.34 | J | 1.83 | 0.28 | ng/L | 1 | | 537 (modified) | Total/NA |
| Perfluorobutanesulfonic acid (PFBS) | 1.19 | J | 1.83 | 0.18 | ng/L | 1 | | 537 (modified) | Total/NA |
| Perfluorohexanesulfonic acid (PFHxS) | 2.96 | B | 1.83 | 0.16 | ng/L | 1 | | 537 (modified) | Total/NA |
| Perfluorooctanesulfonic acid (PFOS) | 24.8 | | 1.83 | 0.49 | ng/L | 1 | | 537 (modified) | Total/NA |
| Perfluorooctanesulfonamide (FOSA) | 1.06 | J | 1.83 | 0.32 | ng/L | 1 | | 537 (modified) | Total/NA |

## Client Sample ID: MW-217 — Lab Sample ID: 460-217659-7

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Trichlorofluoromethane | 5.6 | | 1.0 | 0.32 | ug/L | 1 | | 8260C | Total/NA |
| Perfluorobutanoic acid (PFBA) | 3.68 | B | 1.88 | 0.33 | ng/L | 1 | | 537 (modified) | Total/NA |
| Perfluoropentanoic acid (PFPeA) | 1.57 | J | 1.88 | 0.46 | ng/L | 1 | | 537 (modified) | Total/NA |
| Perfluorohexanoic acid (PFHxA) | 2.59 | | 1.88 | 0.54 | ng/L | 1 | | 537 (modified) | Total/NA |
| Perfluoroheptanoic acid (PFHpA) | 2.07 | | 1.88 | 0.23 | ng/L | 1 | | 537 (modified) | Total/NA |
| Perfluorooctanoic acid (PFOA) | 13.8 | | 1.88 | 0.80 | ng/L | 1 | | 537 (modified) | Total/NA |
| Perfluorononanoic acid (PFNA) | 1.51 | J | 1.88 | 0.25 | ng/L | 1 | | 537 (modified) | Total/NA |
| Perfluorodecanoic acid (PFDA) | 0.71 | J | 1.88 | 0.29 | ng/L | 1 | | 537 (modified) | Total/NA |
| Perfluorobutanesulfonic acid (PFBS) | 2.13 | | 1.88 | 0.19 | ng/L | 1 | | 537 (modified) | Total/NA |
| Perfluorohexanesulfonic acid (PFHxS) | 4.48 | B | 1.88 | 0.16 | ng/L | 1 | | 537 (modified) | Total/NA |
| Perfluoroheptanesulfonic Acid (PFHpS) | 0.61 | J | 1.88 | 0.18 | ng/L | 1 | | 537 (modified) | Total/NA |
| Perfluorooctanesulfonic acid (PFOS) | 42.1 | | 1.88 | 0.51 | ng/L | 1 | | 537 (modified) | Total/NA |
| Perfluorooctanesulfonamide (FOSA) | 1.21 | J | 1.88 | 0.33 | ng/L | 1 | | 537 (modified) | Total/NA |
| 6:2 FTS | 4.04 | J | 18.8 | 1.88 | ng/L | 1 | | 537 (modified) | Total/NA |

## Client Sample ID: FB — Lab Sample ID: 460-217659-8

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Methylene Chloride | 1.0 | | 1.0 | 0.32 | ug/L | 1 | | 8260C | Total/NA |
| Perfluorohexanesulfonic acid (PFHxS) | 0.28 | J B | 1.82 | 0.15 | ng/L | 1 | | 537 (modified) | Total/NA |

This Detection Summary does not include radiochemical test results.

# Detection Summary

Client: SESI Consulting Engineers
Job ID: 460-217659-1
Project/Site: Grossingers

## Client Sample ID: TB
## Lab Sample ID: 460-217659-9

No Detections.

This Detection Summary does not include radiochemical test results.

# Method Summary

Client: SESI Consulting Engineers
Project/Site: Grossingers

Job ID: 460-217659-1

| Method | Method Description | Protocol | Laboratory |
|---|---|---|---|
| 8260C | Volatile Organic Compounds by GC/MS | SW846 | TAL EDI |
| 537 (modified) | Fluorinated Alkyl Substances | EPA | TAL SAC |
| 3535 | Solid-Phase Extraction (SPE) | SW846 | TAL SAC |
| 5030C | Purge and Trap | SW846 | TAL EDI |

**Protocol References:**

EPA = US Environmental Protection Agency

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

**Laboratory References:**

TAL EDI = Eurofins TestAmerica, Edison, 777 New Durham Road, Edison, NJ 08817, TEL (732)549-3900

TAL SAC = Eurofins TestAmerica, Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

Client: SESI Consulting Engineers
Project/Site: Grossingers

Job ID: 460-217659-1

## Client Sample ID: MW-201

**Date Collected: 09/03/20 09:10**
**Date Received: 09/04/20 16:25**

## Lab Sample ID: 460-217659-1

**Matrix: Water**

### Method: 8260C - Volatile Organic Compounds by GC/MS

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1-Trichloroethane | 0.24 | U | 1.0 | 0.24 | ug/L | | | 09/09/20 02:05 | 1 |
| 1,1,2,2-Tetrachloroethane | 0.37 | U | 1.0 | 0.37 | ug/L | | | 09/09/20 02:05 | 1 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 0.31 | U | 1.0 | 0.31 | ug/L | | | 09/09/20 02:05 | 1 |
| 1,1,2-Trichloroethane | 0.43 | U | 1.0 | 0.43 | ug/L | | | 09/09/20 02:05 | 1 |
| 1,1-Dichloroethane | 0.26 | U | 1.0 | 0.26 | ug/L | | | 09/09/20 02:05 | 1 |
| 1,1-Dichloroethene | 0.26 | U | 1.0 | 0.26 | ug/L | | | 09/09/20 02:05 | 1 |
| 1,2,3-Trichlorobenzene | 0.36 | U | 1.0 | 0.36 | ug/L | | | 09/09/20 02:05 | 1 |
| 1,2,4-Trichlorobenzene | 0.37 | U | 1.0 | 0.37 | ug/L | | | 09/09/20 02:05 | 1 |
| 1,2-Dichloropropane | 0.35 | U | 1.0 | 0.35 | ug/L | | | 09/09/20 02:05 | 1 |
| 1,3-Dichlorobenzene | 0.34 | U | 1.0 | 0.34 | ug/L | | | 09/09/20 02:05 | 1 |
| 1,4-Dichlorobenzene | 0.33 | U | 1.0 | 0.33 | ug/L | | | 09/09/20 02:05 | 1 |
| 1,4-Dioxane | 28 | U | 50 | 28 | ug/L | | | 09/09/20 02:05 | 1 |
| 2-Butanone (MEK) | 1.9 | U | 5.0 | 1.9 | ug/L | | | 09/09/20 02:05 | 1 |
| 2-Hexanone | 1.1 | U | 5.0 | 1.1 | ug/L | | | 09/09/20 02:05 | 1 |
| 4-Methyl-2-pentanone (MIBK) | 1.3 | U | 5.0 | 1.3 | ug/L | | | 09/09/20 02:05 | 1 |
| Acetone | 4.4 | U | 5.0 | 4.4 | ug/L | | | 09/09/20 02:05 | 1 |
| Benzene | 0.20 | U | 1.0 | 0.20 | ug/L | | | 09/09/20 02:05 | 1 |
| Bromoform | 0.54 | U | 1.0 | 0.54 | ug/L | | | 09/09/20 02:05 | 1 |
| Bromomethane | 0.55 | U | 1.0 | 0.55 | ug/L | | | 09/09/20 02:05 | 1 |
| Carbon disulfide | 0.82 | U | 1.0 | 0.82 | ug/L | | | 09/09/20 02:05 | 1 |
| Carbon tetrachloride | 0.21 | U | 1.0 | 0.21 | ug/L | | | 09/09/20 02:05 | 1 |
| Chlorobenzene | 0.38 | U | 1.0 | 0.38 | ug/L | | | 09/09/20 02:05 | 1 |
| Chlorobromomethane | 0.41 | U | 1.0 | 0.41 | ug/L | | | 09/09/20 02:05 | 1 |
| Chlorodibromomethane | 0.28 | U | 1.0 | 0.28 | ug/L | | | 09/09/20 02:05 | 1 |
| Chloroethane | 0.32 | U | 1.0 | 0.32 | ug/L | | | 09/09/20 02:05 | 1 |
| Chloroform | 0.33 | U | 1.0 | 0.33 | ug/L | | | 09/09/20 02:05 | 1 |
| **Chloromethane** | **0.44** | **J** | 1.0 | 0.40 | ug/L | | | 09/09/20 02:05 | 1 |
| cis-1,2-Dichloroethene | 0.22 | U | 1.0 | 0.22 | ug/L | | | 09/09/20 02:05 | 1 |
| cis-1,3-Dichloropropene | 0.22 | U | 1.0 | 0.22 | ug/L | | | 09/09/20 02:05 | 1 |
| Cyclohexane | 0.32 | U | 1.0 | 0.32 | ug/L | | | 09/09/20 02:05 | 1 |
| Dichlorobromomethane | 0.34 | U | 1.0 | 0.34 | ug/L | | | 09/09/20 02:05 | 1 |
| Dichlorodifluoromethane | 0.31 | U | 1.0 | 0.31 | ug/L | | | 09/09/20 02:05 | 1 |
| Ethylbenzene | 0.30 | U | 1.0 | 0.30 | ug/L | | | 09/09/20 02:05 | 1 |
| Ethylene Dibromide | 0.50 | U | 1.0 | 0.50 | ug/L | | | 09/09/20 02:05 | 1 |
| Isopropylbenzene | 0.34 | U | 1.0 | 0.34 | ug/L | | | 09/09/20 02:05 | 1 |
| Methyl acetate | 0.79 | U | 5.0 | 0.79 | ug/L | | | 09/09/20 02:05 | 1 |
| Methyl tert-butyl ether | 0.47 | U | 1.0 | 0.47 | ug/L | | | 09/09/20 02:05 | 1 |
| Methylcyclohexane | 0.26 | U | 1.0 | 0.26 | ug/L | | | 09/09/20 02:05 | 1 |
| Methylene Chloride | 0.32 | U | 1.0 | 0.32 | ug/L | | | 09/09/20 02:05 | 1 |
| m-Xylene & p-Xylene | 0.30 | U | 1.0 | 0.30 | ug/L | | | 09/09/20 02:05 | 1 |
| o-Xylene | 0.36 | U | 1.0 | 0.36 | ug/L | | | 09/09/20 02:05 | 1 |
| Styrene | 0.42 | U | 1.0 | 0.42 | ug/L | | | 09/09/20 02:05 | 1 |
| Tetrachloroethene | 0.25 | U | 1.0 | 0.25 | ug/L | | | 09/09/20 02:05 | 1 |
| Toluene | 0.38 | U | 1.0 | 0.38 | ug/L | | | 09/09/20 02:05 | 1 |
| trans-1,2-Dichloroethene | 0.24 | U | 1.0 | 0.24 | ug/L | | | 09/09/20 02:05 | 1 |
| trans-1,3-Dichloropropene | 0.49 | U | 1.0 | 0.49 | ug/L | | | 09/09/20 02:05 | 1 |
| Trichloroethene | 0.31 | U | 1.0 | 0.31 | ug/L | | | 09/09/20 02:05 | 1 |
| Trichlorofluoromethane | 0.32 | U | 1.0 | 0.32 | ug/L | | | 09/09/20 02:05 | 1 |
| Vinyl chloride | 0.17 | U | 1.0 | 0.17 | ug/L | | | 09/09/20 02:05 | 1 |

## Client Sample ID: MW-201

**Date Collected: 09/03/20 09:10**
**Date Received: 09/04/20 16:25**

## Lab Sample ID: 460-217659-1

**Matrix: Water**

### Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,2-Dichloroethane | 0.43 | U * | 1.0 | 0.43 | ug/L | | | 09/09/20 02:05 | 1 |
| 1,2-Dichlorobenzene | 0.43 | U | 1.0 | 0.43 | ug/L | | | 09/09/20 02:05 | 1 |
| 1,2-Dibromo-3-Chloropropane | 0.38 | U | 1.0 | 0.38 | ug/L | | | 09/09/20 02:05 | 1 |

| *Tentatively Identified Compound* | *Est. Result* | *Qualifier* | *Unit* | *D* | *RT* | *CAS No.* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|---|---|---|
| *Tentatively Identified Compound* | *None* | | *ug/L* | | | | | *09/09/20 02:05* | *1* |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1,2-Dichloroethane-d4 (Surr)* | *76* | | *75 - 123* | | *09/09/20 02:05* | *1* |
| *4-Bromofluorobenzene* | *83* | | *76 - 120* | | *09/09/20 02:05* | *1* |
| *Dibromofluoromethane (Surr)* | *92* | | *77 - 124* | | *09/09/20 02:05* | *1* |
| *Toluene-d8 (Surr)* | *93* | | *80 - 120* | | *09/09/20 02:05* | *1* |

### Method: 537 (modified) - Fluorinated Alkyl Substances

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Perfluorobutanoic acid (PFBA)** | **0.51** | **J B** | 1.88 | 0.33 | ng/L | | 09/09/20 18:39 | 09/10/20 18:36 | 1 |
| Perfluoropentanoic acid (PFPeA) | 0.46 | U | 1.88 | 0.46 | ng/L | | 09/09/20 18:39 | 09/10/20 18:36 | 1 |
| Perfluorohexanoic acid (PFHxA) | 0.55 | U | 1.88 | 0.55 | ng/L | | 09/09/20 18:39 | 09/10/20 18:36 | 1 |
| Perfluoroheptanoic acid (PFHpA) | 0.24 | U | 1.88 | 0.24 | ng/L | | 09/09/20 18:39 | 09/10/20 18:36 | 1 |
| Perfluorooctanoic acid (PFOA) | 0.80 | U | 1.88 | 0.80 | ng/L | | 09/09/20 18:39 | 09/10/20 18:36 | 1 |
| Perfluorononanoic acid (PFNA) | 0.25 | U | 1.88 | 0.25 | ng/L | | 09/09/20 18:39 | 09/10/20 18:36 | 1 |
| Perfluorodecanoic acid (PFDA) | 0.29 | U | 1.88 | 0.29 | ng/L | | 09/09/20 18:39 | 09/10/20 18:36 | 1 |
| Perfluoroundecanoic acid (PFUnA) | 1.04 | U | 1.88 | 1.04 | ng/L | | 09/09/20 18:39 | 09/10/20 18:36 | 1 |
| Perfluorododecanoic acid (PFDoA) | 0.52 | U | 1.88 | 0.52 | ng/L | | 09/09/20 18:39 | 09/10/20 18:36 | 1 |
| Perfluorotridecanoic acid (PFTriA) | 1.22 | U | 1.88 | 1.22 | ng/L | | 09/09/20 18:39 | 09/10/20 18:36 | 1 |
| Perfluorotetradecanoic acid (PFTeA) | 0.27 | U | 1.88 | 0.27 | ng/L | | 09/09/20 18:39 | 09/10/20 18:36 | 1 |
| Perfluorobutanesulfonic acid (PFBS) | 0.19 | U | 1.88 | 0.19 | ng/L | | 09/09/20 18:39 | 09/10/20 18:36 | 1 |
| **Perfluorohexanesulfonic acid (PFHxS)** | **0.33** | **J B** | 1.88 | 0.16 | ng/L | | 09/09/20 18:39 | 09/10/20 18:36 | 1 |
| Perfluoroheptanesulfonic Acid (PFHpS) | 0.18 | U | 1.88 | 0.18 | ng/L | | 09/09/20 18:39 | 09/10/20 18:36 | 1 |
| **Perfluorooctanesulfonic acid (PFOS)** | **0.57** | **J** | 1.88 | 0.51 | ng/L | | 09/09/20 18:39 | 09/10/20 18:36 | 1 |
| Perfluorodecanesulfonic acid (PFDS) | 0.30 | U | 1.88 | 0.30 | ng/L | | 09/09/20 18:39 | 09/10/20 18:36 | 1 |
| Perfluorooctanesulfonamide (FOSA) | 0.33 | U | 1.88 | 0.33 | ng/L | | 09/09/20 18:39 | 09/10/20 18:36 | 1 |
| N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA) | 2.92 | U | 18.8 | 2.92 | ng/L | | 09/09/20 18:39 | 09/10/20 18:36 | 1 |
| N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA) | 1.79 | U | 18.8 | 1.79 | ng/L | | 09/09/20 18:39 | 09/10/20 18:36 | 1 |
| **6:2 FTS** | **11.0** | **J** | 18.8 | 1.88 | ng/L | | 09/09/20 18:39 | 09/10/20 18:36 | 1 |
| 8:2 FTS | 1.88 | U | 18.8 | 1.88 | ng/L | | 09/09/20 18:39 | 09/10/20 18:36 | 1 |

| *Isotope Dilution* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *13C4 PFBA* | *84* | | *25 - 150* | *09/09/20 18:39* | *09/10/20 18:36* | *1* |
| *13C5 PFPeA* | *90* | | *25 - 150* | *09/09/20 18:39* | *09/10/20 18:36* | *1* |
| *13C2 PFHxA* | *95* | | *25 - 150* | *09/09/20 18:39* | *09/10/20 18:36* | *1* |
| *13C4 PFHpA* | *99* | | *25 - 150* | *09/09/20 18:39* | *09/10/20 18:36* | *1* |
| *13C4 PFOA* | *95* | | *25 - 150* | *09/09/20 18:39* | *09/10/20 18:36* | *1* |
| *13C5 PFNA* | *99* | | *25 - 150* | *09/09/20 18:39* | *09/10/20 18:36* | *1* |
| *13C2 PFDA* | *90* | | *25 - 150* | *09/09/20 18:39* | *09/10/20 18:36* | *1* |
| *13C2 PFUnA* | *91* | | *25 - 150* | *09/09/20 18:39* | *09/10/20 18:36* | *1* |
| *13C2 PFDoA* | *77* | | *25 - 150* | *09/09/20 18:39* | *09/10/20 18:36* | *1* |

## Client Sample ID: MW-201

**Date Collected: 09/03/20 09:10**
**Date Received: 09/04/20 16:25**

## Lab Sample ID: 460-217659-1

**Matrix: Water**

### Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

| *Isotope Dilution* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *13C2 PFTeDA* | *88* | | *25 - 150* | *09/09/20 18:39* | *09/10/20 18:36* | *1* |
| *13C3 PFBS* | *100* | | *25 - 150* | *09/09/20 18:39* | *09/10/20 18:36* | *1* |
| *18O2 PFHxS* | *106* | | *25 - 150* | *09/09/20 18:39* | *09/10/20 18:36* | *1* |
| *13C4 PFOS* | *106* | | *25 - 150* | *09/09/20 18:39* | *09/10/20 18:36* | *1* |
| *13C8 FOSA* | *93* | | *25 - 150* | *09/09/20 18:39* | *09/10/20 18:36* | *1* |
| *d3-NMeFOSAA* | *91* | | *25 - 150* | *09/09/20 18:39* | *09/10/20 18:36* | *1* |
| *d5-NEtFOSAA* | *96* | | *25 - 150* | *09/09/20 18:39* | *09/10/20 18:36* | *1* |
| *M2-6:2 FTS* | *107* | | *25 - 150* | *09/09/20 18:39* | *09/10/20 18:36* | *1* |
| *M2-8:2 FTS* | *115* | | *25 - 150* | *09/09/20 18:39* | *09/10/20 18:36* | *1* |

## Client Sample ID: MW-207

**Date Collected: 09/03/20 11:10**
**Date Received: 09/04/20 16:25**

## Lab Sample ID: 460-217659-2

**Matrix: Water**

### Method: 8260C - Volatile Organic Compounds by GC/MS

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1-Trichloroethane | 0.24 | U | 1.0 | 0.24 | ug/L | | | 09/09/20 02:29 | 1 |
| 1,1,2,2-Tetrachloroethane | 0.37 | U | 1.0 | 0.37 | ug/L | | | 09/09/20 02:29 | 1 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 0.31 | U | 1.0 | 0.31 | ug/L | | | 09/09/20 02:29 | 1 |
| 1,1,2-Trichloroethane | 0.43 | U | 1.0 | 0.43 | ug/L | | | 09/09/20 02:29 | 1 |
| 1,1-Dichloroethane | 0.26 | U | 1.0 | 0.26 | ug/L | | | 09/09/20 02:29 | 1 |
| 1,1-Dichloroethene | 0.26 | U | 1.0 | 0.26 | ug/L | | | 09/09/20 02:29 | 1 |
| 1,2,3-Trichlorobenzene | 0.36 | U | 1.0 | 0.36 | ug/L | | | 09/09/20 02:29 | 1 |
| 1,2,4-Trichlorobenzene | 0.37 | U | 1.0 | 0.37 | ug/L | | | 09/09/20 02:29 | 1 |
| 1,2-Dichloropropane | 0.35 | U | 1.0 | 0.35 | ug/L | | | 09/09/20 02:29 | 1 |
| 1,3-Dichlorobenzene | 0.34 | U | 1.0 | 0.34 | ug/L | | | 09/09/20 02:29 | 1 |
| 1,4-Dichlorobenzene | 0.33 | U | 1.0 | 0.33 | ug/L | | | 09/09/20 02:29 | 1 |
| 1,4-Dioxane | 28 | U | 50 | 28 | ug/L | | | 09/09/20 02:29 | 1 |
| 2-Butanone (MEK) | 1.9 | U | 5.0 | 1.9 | ug/L | | | 09/09/20 02:29 | 1 |
| 2-Hexanone | 1.1 | U | 5.0 | 1.1 | ug/L | | | 09/09/20 02:29 | 1 |
| 4-Methyl-2-pentanone (MIBK) | 1.3 | U | 5.0 | 1.3 | ug/L | | | 09/09/20 02:29 | 1 |
| Acetone | 4.4 | U | 5.0 | 4.4 | ug/L | | | 09/09/20 02:29 | 1 |
| Benzene | 0.20 | U | 1.0 | 0.20 | ug/L | | | 09/09/20 02:29 | 1 |
| Bromoform | 0.54 | U | 1.0 | 0.54 | ug/L | | | 09/09/20 02:29 | 1 |
| Bromomethane | 0.55 | U | 1.0 | 0.55 | ug/L | | | 09/09/20 02:29 | 1 |
| Carbon disulfide | 0.82 | U | 1.0 | 0.82 | ug/L | | | 09/09/20 02:29 | 1 |
| Carbon tetrachloride | 0.21 | U | 1.0 | 0.21 | ug/L | | | 09/09/20 02:29 | 1 |
| Chlorobenzene | 0.38 | U | 1.0 | 0.38 | ug/L | | | 09/09/20 02:29 | 1 |
| Chlorobromomethane | 0.41 | U | 1.0 | 0.41 | ug/L | | | 09/09/20 02:29 | 1 |
| Chlorodibromomethane | 0.28 | U | 1.0 | 0.28 | ug/L | | | 09/09/20 02:29 | 1 |
| Chloroethane | 0.32 | U | 1.0 | 0.32 | ug/L | | | 09/09/20 02:29 | 1 |
| Chloroform | 0.33 | U | 1.0 | 0.33 | ug/L | | | 09/09/20 02:29 | 1 |
| **Chloromethane** | **0.41** | **J** | 1.0 | 0.40 | ug/L | | | 09/09/20 02:29 | 1 |
| cis-1,2-Dichloroethene | 0.22 | U | 1.0 | 0.22 | ug/L | | | 09/09/20 02:29 | 1 |
| cis-1,3-Dichloropropene | 0.22 | U | 1.0 | 0.22 | ug/L | | | 09/09/20 02:29 | 1 |
| Cyclohexane | 0.32 | U | 1.0 | 0.32 | ug/L | | | 09/09/20 02:29 | 1 |
| Dichlorobromomethane | 0.34 | U | 1.0 | 0.34 | ug/L | | | 09/09/20 02:29 | 1 |
| Dichlorodifluoromethane | 0.31 | U | 1.0 | 0.31 | ug/L | | | 09/09/20 02:29 | 1 |
| Ethylbenzene | 0.30 | U | 1.0 | 0.30 | ug/L | | | 09/09/20 02:29 | 1 |
| Ethylene Dibromide | 0.50 | U | 1.0 | 0.50 | ug/L | | | 09/09/20 02:29 | 1 |

## Client Sample ID: MW-207

**Date Collected: 09/03/20 11:10**
**Date Received: 09/04/20 16:25**

## Lab Sample ID: 460-217659-2

**Matrix: Water**

### Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Isopropylbenzene | 0.34 | U | 1.0 | 0.34 | ug/L | | | 09/09/20 02:29 | 1 |
| Methyl acetate | 0.79 | U | 5.0 | 0.79 | ug/L | | | 09/09/20 02:29 | 1 |
| Methyl tert-butyl ether | 0.47 | U | 1.0 | 0.47 | ug/L | | | 09/09/20 02:29 | 1 |
| Methylcyclohexane | 0.26 | U | 1.0 | 0.26 | ug/L | | | 09/09/20 02:29 | 1 |
| Methylene Chloride | 0.32 | U | 1.0 | 0.32 | ug/L | | | 09/09/20 02:29 | 1 |
| m-Xylene & p-Xylene | 0.30 | U | 1.0 | 0.30 | ug/L | | | 09/09/20 02:29 | 1 |
| o-Xylene | 0.36 | U | 1.0 | 0.36 | ug/L | | | 09/09/20 02:29 | 1 |
| Styrene | 0.42 | U | 1.0 | 0.42 | ug/L | | | 09/09/20 02:29 | 1 |
| Tetrachloroethene | 0.25 | U | 1.0 | 0.25 | ug/L | | | 09/09/20 02:29 | 1 |
| Toluene | 0.38 | U | 1.0 | 0.38 | ug/L | | | 09/09/20 02:29 | 1 |
| trans-1,2-Dichloroethene | 0.24 | U | 1.0 | 0.24 | ug/L | | | 09/09/20 02:29 | 1 |
| trans-1,3-Dichloropropene | 0.49 | U | 1.0 | 0.49 | ug/L | | | 09/09/20 02:29 | 1 |
| Trichloroethene | 0.31 | U | 1.0 | 0.31 | ug/L | | | 09/09/20 02:29 | 1 |
| Trichlorofluoromethane | 0.32 | U | 1.0 | 0.32 | ug/L | | | 09/09/20 02:29 | 1 |
| Vinyl chloride | 0.17 | U | 1.0 | 0.17 | ug/L | | | 09/09/20 02:29 | 1 |
| 1,2-Dichloroethane | 0.43 | U * | 1.0 | 0.43 | ug/L | | | 09/09/20 02:29 | 1 |
| 1,2-Dichlorobenzene | 0.43 | U | 1.0 | 0.43 | ug/L | | | 09/09/20 02:29 | 1 |
| 1,2-Dibromo-3-Chloropropane | 0.38 | U | 1.0 | 0.38 | ug/L | | | 09/09/20 02:29 | 1 |

| *Tentatively Identified Compound* | *Est. Result* | *Qualifier* | *Unit* | *D* | *RT* | *CAS No.* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|---|---|---|
| *Tentatively Identified Compound* | *None* | | *ug/L* | | | | | *09/09/20 02:29* | *1* |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1,2-Dichloroethane-d4 (Surr)* | *75* | | *75 - 123* | | *09/09/20 02:29* | *1* |
| *4-Bromofluorobenzene* | *84* | | *76 - 120* | | *09/09/20 02:29* | *1* |
| *Dibromofluoromethane (Surr)* | *88* | | *77 - 124* | | *09/09/20 02:29* | *1* |
| *Toluene-d8 (Surr)* | *95* | | *80 - 120* | | *09/09/20 02:29* | *1* |

### Method: 537 (modified) - Fluorinated Alkyl Substances

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Perfluorobutanoic acid (PFBA)** | **1.93** | **B** | 1.87 | 0.33 | ng/L | | 09/09/20 18:39 | 09/10/20 18:45 | 1 |
| **Perfluoropentanoic acid (PFPeA)** | **0.79** | **J** | 1.87 | 0.46 | ng/L | | 09/09/20 18:39 | 09/10/20 18:45 | 1 |
| **Perfluorohexanoic acid (PFHxA)** | **0.91** | **J** | 1.87 | 0.54 | ng/L | | 09/09/20 18:39 | 09/10/20 18:45 | 1 |
| **Perfluoroheptanoic acid (PFHpA)** | **0.94** | **J** | 1.87 | 0.23 | ng/L | | 09/09/20 18:39 | 09/10/20 18:45 | 1 |
| **Perfluorooctanoic acid (PFOA)** | **5.46** | | 1.87 | 0.80 | ng/L | | 09/09/20 18:39 | 09/10/20 18:45 | 1 |
| **Perfluorononanoic acid (PFNA)** | **0.61** | **J** | 1.87 | 0.25 | ng/L | | 09/09/20 18:39 | 09/10/20 18:45 | 1 |
| **Perfluorodecanoic acid (PFDA)** | **0.39** | **J** | 1.87 | 0.29 | ng/L | | 09/09/20 18:39 | 09/10/20 18:45 | 1 |
| Perfluoroundecanoic acid (PFUnA) | 1.03 | U | 1.87 | 1.03 | ng/L | | 09/09/20 18:39 | 09/10/20 18:45 | 1 |
| Perfluorododecanoic acid (PFDoA) | 0.52 | U | 1.87 | 0.52 | ng/L | | 09/09/20 18:39 | 09/10/20 18:45 | 1 |
| Perfluorotridecanoic acid (PFTriA) | 1.22 | U | 1.87 | 1.22 | ng/L | | 09/09/20 18:39 | 09/10/20 18:45 | 1 |
| Perfluorotetradecanoic acid (PFTeA) | 0.27 | U | 1.87 | 0.27 | ng/L | | 09/09/20 18:39 | 09/10/20 18:45 | 1 |
| **Perfluorobutanesulfonic acid (PFBS)** | **0.76** | **J** | 1.87 | 0.19 | ng/L | | 09/09/20 18:39 | 09/10/20 18:45 | 1 |
| **Perfluorohexanesulfonic acid (PFHxS)** | **1.92** | **B** | 1.87 | 0.16 | ng/L | | 09/09/20 18:39 | 09/10/20 18:45 | 1 |
| **Perfluoroheptanesulfonic Acid (PFHpS)** | **0.37** | **J** | 1.87 | 0.18 | ng/L | | 09/09/20 18:39 | 09/10/20 18:45 | 1 |
| **Perfluorooctanesulfonic acid (PFOS)** | **22.1** | | 1.87 | 0.51 | ng/L | | 09/09/20 18:39 | 09/10/20 18:45 | 1 |
| Perfluorodecanesulfonic acid (PFDS) | 0.30 | U | 1.87 | 0.30 | ng/L | | 09/09/20 18:39 | 09/10/20 18:45 | 1 |
| Perfluorooctanesulfonamide (FOSA) | 0.33 | U | 1.87 | 0.33 | ng/L | | 09/09/20 18:39 | 09/10/20 18:45 | 1 |

## Client Sample ID: MW-207

**Date Collected: 09/03/20 11:10**
**Date Received: 09/04/20 16:25**

## Lab Sample ID: 460-217659-2

**Matrix: Water**

### Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA) | 2.91 | U | 18.7 | 2.91 | ng/L | | 09/09/20 18:39 | 09/10/20 18:45 | 1 |
| N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA) | 1.78 | U | 18.7 | 1.78 | ng/L | | 09/09/20 18:39 | 09/10/20 18:45 | 1 |
| 6:2 FTS | 1.87 | U | 18.7 | 1.87 | ng/L | | 09/09/20 18:39 | 09/10/20 18:45 | 1 |
| 8:2 FTS | 1.87 | U | 18.7 | 1.87 | ng/L | | 09/09/20 18:39 | 09/10/20 18:45 | 1 |

| *Isotope Dilution* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *13C4 PFBA* | *51* | | *25 - 150* | *09/09/20 18:39* | *09/10/20 18:45* | *1* |
| *13C5 PFPeA* | *55* | | *25 - 150* | *09/09/20 18:39* | *09/10/20 18:45* | *1* |
| *13C2 PFHxA* | *70* | | *25 - 150* | *09/09/20 18:39* | *09/10/20 18:45* | *1* |
| *13C4 PFHpA* | *70* | | *25 - 150* | *09/09/20 18:39* | *09/10/20 18:45* | *1* |
| *13C4 PFOA* | *69* | | *25 - 150* | *09/09/20 18:39* | *09/10/20 18:45* | *1* |
| *13C5 PFNA* | *67* | | *25 - 150* | *09/09/20 18:39* | *09/10/20 18:45* | *1* |
| *13C2 PFDA* | *64* | | *25 - 150* | *09/09/20 18:39* | *09/10/20 18:45* | *1* |
| *13C2 PFUnA* | *56* | | *25 - 150* | *09/09/20 18:39* | *09/10/20 18:45* | *1* |
| *13C2 PFDoA* | *49* | | *25 - 150* | *09/09/20 18:39* | *09/10/20 18:45* | *1* |
| *13C2 PFTeDA* | *48* | | *25 - 150* | *09/09/20 18:39* | *09/10/20 18:45* | *1* |
| *13C3 PFBS* | *75* | | *25 - 150* | *09/09/20 18:39* | *09/10/20 18:45* | *1* |
| *18O2 PFHxS* | *77* | | *25 - 150* | *09/09/20 18:39* | *09/10/20 18:45* | *1* |
| *13C4 PFOS* | *74* | | *25 - 150* | *09/09/20 18:39* | *09/10/20 18:45* | *1* |
| *13C8 FOSA* | *59* | | *25 - 150* | *09/09/20 18:39* | *09/10/20 18:45* | *1* |
| *d3-NMeFOSAA* | *52* | | *25 - 150* | *09/09/20 18:39* | *09/10/20 18:45* | *1* |
| *d5-NEtFOSAA* | *56* | | *25 - 150* | *09/09/20 18:39* | *09/10/20 18:45* | *1* |
| *M2-6:2 FTS* | *109* | | *25 - 150* | *09/09/20 18:39* | *09/10/20 18:45* | *1* |
| *M2-8:2 FTS* | *83* | | *25 - 150* | *09/09/20 18:39* | *09/10/20 18:45* | *1* |

## Client Sample ID: MW-210

**Date Collected: 09/03/20 10:35**
**Date Received: 09/04/20 16:25**

## Lab Sample ID: 460-217659-3

**Matrix: Water**

### Method: 8260C - Volatile Organic Compounds by GC/MS

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1-Trichloroethane | 0.24 | U | 1.0 | 0.24 | ug/L | | | 09/09/20 02:53 | 1 |
| 1,1,2,2-Tetrachloroethane | 0.37 | U | 1.0 | 0.37 | ug/L | | | 09/09/20 02:53 | 1 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 0.31 | U | 1.0 | 0.31 | ug/L | | | 09/09/20 02:53 | 1 |
| 1,1,2-Trichloroethane | 0.43 | U | 1.0 | 0.43 | ug/L | | | 09/09/20 02:53 | 1 |
| 1,1-Dichloroethane | 0.26 | U | 1.0 | 0.26 | ug/L | | | 09/09/20 02:53 | 1 |
| 1,1-Dichloroethene | 0.26 | U | 1.0 | 0.26 | ug/L | | | 09/09/20 02:53 | 1 |
| 1,2,3-Trichlorobenzene | 0.36 | U | 1.0 | 0.36 | ug/L | | | 09/09/20 02:53 | 1 |
| 1,2,4-Trichlorobenzene | 0.37 | U | 1.0 | 0.37 | ug/L | | | 09/09/20 02:53 | 1 |
| 1,2-Dichloropropane | 0.35 | U | 1.0 | 0.35 | ug/L | | | 09/09/20 02:53 | 1 |
| 1,3-Dichlorobenzene | 0.34 | U | 1.0 | 0.34 | ug/L | | | 09/09/20 02:53 | 1 |
| 1,4-Dichlorobenzene | 0.33 | U | 1.0 | 0.33 | ug/L | | | 09/09/20 02:53 | 1 |
| 1,4-Dioxane | 28 | U | 50 | 28 | ug/L | | | 09/09/20 02:53 | 1 |
| 2-Butanone (MEK) | 1.9 | U | 5.0 | 1.9 | ug/L | | | 09/09/20 02:53 | 1 |
| 2-Hexanone | 1.1 | U | 5.0 | 1.1 | ug/L | | | 09/09/20 02:53 | 1 |
| 4-Methyl-2-pentanone (MIBK) | 1.3 | U | 5.0 | 1.3 | ug/L | | | 09/09/20 02:53 | 1 |
| Acetone | 4.4 | U | 5.0 | 4.4 | ug/L | | | 09/09/20 02:53 | 1 |
| Benzene | 0.20 | U | 1.0 | 0.20 | ug/L | | | 09/09/20 02:53 | 1 |
| Bromoform | 0.54 | U | 1.0 | 0.54 | ug/L | | | 09/09/20 02:53 | 1 |

## Client Sample ID: MW-210

**Date Collected: 09/03/20 10:35**
**Date Received: 09/04/20 16:25**

## Lab Sample ID: 460-217659-3

**Matrix: Water**

### Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Bromomethane | 0.55 | U | 1.0 | 0.55 | ug/L | | | 09/09/20 02:53 | 1 |
| Carbon disulfide | 0.82 | U | 1.0 | 0.82 | ug/L | | | 09/09/20 02:53 | 1 |
| Carbon tetrachloride | 0.21 | U | 1.0 | 0.21 | ug/L | | | 09/09/20 02:53 | 1 |
| Chlorobenzene | 0.38 | U | 1.0 | 0.38 | ug/L | | | 09/09/20 02:53 | 1 |
| Chlorobromomethane | 0.41 | U | 1.0 | 0.41 | ug/L | | | 09/09/20 02:53 | 1 |
| Chlorodibromomethane | 0.28 | U | 1.0 | 0.28 | ug/L | | | 09/09/20 02:53 | 1 |
| Chloroethane | 0.32 | U | 1.0 | 0.32 | ug/L | | | 09/09/20 02:53 | 1 |
| Chloroform | 0.33 | U | 1.0 | 0.33 | ug/L | | | 09/09/20 02:53 | 1 |
| Chloromethane | 0.40 | U | 1.0 | 0.40 | ug/L | | | 09/09/20 02:53 | 1 |
| cis-1,2-Dichloroethene | 0.22 | U | 1.0 | 0.22 | ug/L | | | 09/09/20 02:53 | 1 |
| cis-1,3-Dichloropropene | 0.22 | U | 1.0 | 0.22 | ug/L | | | 09/09/20 02:53 | 1 |
| Cyclohexane | 0.32 | U | 1.0 | 0.32 | ug/L | | | 09/09/20 02:53 | 1 |
| Dichlorobromomethane | 0.34 | U | 1.0 | 0.34 | ug/L | | | 09/09/20 02:53 | 1 |
| Dichlorodifluoromethane | 0.31 | U | 1.0 | 0.31 | ug/L | | | 09/09/20 02:53 | 1 |
| Ethylbenzene | 0.30 | U | 1.0 | 0.30 | ug/L | | | 09/09/20 02:53 | 1 |
| Ethylene Dibromide | 0.50 | U | 1.0 | 0.50 | ug/L | | | 09/09/20 02:53 | 1 |
| Isopropylbenzene | 0.34 | U | 1.0 | 0.34 | ug/L | | | 09/09/20 02:53 | 1 |
| Methyl acetate | 0.79 | U | 5.0 | 0.79 | ug/L | | | 09/09/20 02:53 | 1 |
| Methyl tert-butyl ether | 0.47 | U | 1.0 | 0.47 | ug/L | | | 09/09/20 02:53 | 1 |
| Methylcyclohexane | 0.26 | U | 1.0 | 0.26 | ug/L | | | 09/09/20 02:53 | 1 |
| Methylene Chloride | 0.32 | U | 1.0 | 0.32 | ug/L | | | 09/09/20 02:53 | 1 |
| m-Xylene & p-Xylene | 0.30 | U | 1.0 | 0.30 | ug/L | | | 09/09/20 02:53 | 1 |
| o-Xylene | 0.36 | U | 1.0 | 0.36 | ug/L | | | 09/09/20 02:53 | 1 |
| Styrene | 0.42 | U | 1.0 | 0.42 | ug/L | | | 09/09/20 02:53 | 1 |
| Tetrachloroethene | 0.25 | U | 1.0 | 0.25 | ug/L | | | 09/09/20 02:53 | 1 |
| Toluene | 0.38 | U | 1.0 | 0.38 | ug/L | | | 09/09/20 02:53 | 1 |
| trans-1,2-Dichloroethene | 0.24 | U | 1.0 | 0.24 | ug/L | | | 09/09/20 02:53 | 1 |
| trans-1,3-Dichloropropene | 0.49 | U | 1.0 | 0.49 | ug/L | | | 09/09/20 02:53 | 1 |
| Trichloroethene | 0.31 | U | 1.0 | 0.31 | ug/L | | | 09/09/20 02:53 | 1 |
| Trichlorofluoromethane | 0.32 | U | 1.0 | 0.32 | ug/L | | | 09/09/20 02:53 | 1 |
| Vinyl chloride | 0.17 | U | 1.0 | 0.17 | ug/L | | | 09/09/20 02:53 | 1 |
| 1,2-Dichloroethane | 0.43 | U * | 1.0 | 0.43 | ug/L | | | 09/09/20 02:53 | 1 |
| 1,2-Dichlorobenzene | 0.43 | U | 1.0 | 0.43 | ug/L | | | 09/09/20 02:53 | 1 |
| 1,2-Dibromo-3-Chloropropane | 0.38 | U | 1.0 | 0.38 | ug/L | | | 09/09/20 02:53 | 1 |

| *Tentatively Identified Compound* | *Est. Result* | *Qualifier* | *Unit* | *D* | *RT* | *CAS No.* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|---|---|---|
| *Tentatively Identified Compound* | *None* | | *ug/L* | | | | | *09/09/20 02:53* | *1* |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1,2-Dichloroethane-d4 (Surr)* | *77* | | *75 - 123* | | *09/09/20 02:53* | *1* |
| *4-Bromofluorobenzene* | *86* | | *76 - 120* | | *09/09/20 02:53* | *1* |
| *Dibromofluoromethane (Surr)* | *92* | | *77 - 124* | | *09/09/20 02:53* | *1* |
| *Toluene-d8 (Surr)* | *102* | | *80 - 120* | | *09/09/20 02:53* | *1* |

### Method: 537 (modified) - Fluorinated Alkyl Substances

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Perfluorobutanoic acid (PFBA)** | **1.54** | **J B** | 2.01 | 0.35 | ng/L | | 09/09/20 18:39 | 09/10/20 18:54 | 1 |
| **Perfluoropentanoic acid (PFPeA)** | **0.60** | **J** | 2.01 | 0.49 | ng/L | | 09/09/20 18:39 | 09/10/20 18:54 | 1 |
| Perfluorohexanoic acid (PFHxA) | 0.58 | U | 2.01 | 0.58 | ng/L | | 09/09/20 18:39 | 09/10/20 18:54 | 1 |
| **Perfluoroheptanoic acid (PFHpA)** | **0.73** | **J** | 2.01 | 0.25 | ng/L | | 09/09/20 18:39 | 09/10/20 18:54 | 1 |

## Client Sample ID: MW-210

**Date Collected: 09/03/20 10:35**
**Date Received: 09/04/20 16:25**

## Lab Sample ID: 460-217659-3

**Matrix: Water**

### Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Perfluorooctanoic acid (PFOA)** | **2.32** | | 2.01 | 0.85 | ng/L | | 09/09/20 18:39 | 09/10/20 18:54 | 1 |
| Perfluorononanoic acid (PFNA) | 0.27 | U | 2.01 | 0.27 | ng/L | | 09/09/20 18:39 | 09/10/20 18:54 | 1 |
| Perfluorodecanoic acid (PFDA) | 0.31 | U | 2.01 | 0.31 | ng/L | | 09/09/20 18:39 | 09/10/20 18:54 | 1 |
| Perfluoroundecanoic acid (PFUnA) | 1.11 | U | 2.01 | 1.11 | ng/L | | 09/09/20 18:39 | 09/10/20 18:54 | 1 |
| Perfluorododecanoic acid (PFDoA) | 0.55 | U | 2.01 | 0.55 | ng/L | | 09/09/20 18:39 | 09/10/20 18:54 | 1 |
| Perfluorotridecanoic acid (PFTriA) | 1.31 | U | 2.01 | 1.31 | ng/L | | 09/09/20 18:39 | 09/10/20 18:54 | 1 |
| Perfluorotetradecanoic acid (PFTeA) | 0.29 | U | 2.01 | 0.29 | ng/L | | 09/09/20 18:39 | 09/10/20 18:54 | 1 |
| **Perfluorobutanesulfonic acid (PFBS)** | **1.10** | **J** | 2.01 | 0.20 | ng/L | | 09/09/20 18:39 | 09/10/20 18:54 | 1 |
| **Perfluorohexanesulfonic acid (PFHxS)** | **1.02** | **J B** | 2.01 | 0.17 | ng/L | | 09/09/20 18:39 | 09/10/20 18:54 | 1 |
| Perfluoroheptanesulfonic Acid (PFHpS) | 0.19 | U | 2.01 | 0.19 | ng/L | | 09/09/20 18:39 | 09/10/20 18:54 | 1 |
| **Perfluorooctanesulfonic acid (PFOS)** | **3.56** | **cn** | 2.01 | 0.54 | ng/L | | 09/09/20 18:39 | 09/10/20 18:54 | 1 |
| Perfluorodecanesulfonic acid (PFDS) | 0.32 | U | 2.01 | 0.32 | ng/L | | 09/09/20 18:39 | 09/10/20 18:54 | 1 |
| **Perfluorooctanesulfonamide (FOSA)** | **0.36** | **J** | 2.01 | 0.35 | ng/L | | 09/09/20 18:39 | 09/10/20 18:54 | 1 |
| N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA) | 3.11 | U | 20.1 | 3.11 | ng/L | | 09/09/20 18:39 | 09/10/20 18:54 | 1 |
| N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA) | 1.91 | U | 20.1 | 1.91 | ng/L | | 09/09/20 18:39 | 09/10/20 18:54 | 1 |
| 6:2 FTS | 2.01 | U | 20.1 | 2.01 | ng/L | | 09/09/20 18:39 | 09/10/20 18:54 | 1 |
| 8:2 FTS | 2.01 | U | 20.1 | 2.01 | ng/L | | 09/09/20 18:39 | 09/10/20 18:54 | 1 |

| *Isotope Dilution* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *13C4 PFBA* | *56* | | *25 - 150* | *09/09/20 18:39* | *09/10/20 18:54* | *1* |
| *13C5 PFPeA* | *63* | | *25 - 150* | *09/09/20 18:39* | *09/10/20 18:54* | *1* |
| *13C2 PFHxA* | *71* | | *25 - 150* | *09/09/20 18:39* | *09/10/20 18:54* | *1* |
| *13C4 PFHpA* | *71* | | *25 - 150* | *09/09/20 18:39* | *09/10/20 18:54* | *1* |
| *13C4 PFOA* | *66* | | *25 - 150* | *09/09/20 18:39* | *09/10/20 18:54* | *1* |
| *13C5 PFNA* | *69* | | *25 - 150* | *09/09/20 18:39* | *09/10/20 18:54* | *1* |
| *13C2 PFDA* | *70* | | *25 - 150* | *09/09/20 18:39* | *09/10/20 18:54* | *1* |
| *13C2 PFUnA* | *65* | | *25 - 150* | *09/09/20 18:39* | *09/10/20 18:54* | *1* |
| *13C2 PFDoA* | *58* | | *25 - 150* | *09/09/20 18:39* | *09/10/20 18:54* | *1* |
| *13C2 PFTeDA* | *60* | | *25 - 150* | *09/09/20 18:39* | *09/10/20 18:54* | *1* |
| *13C3 PFBS* | *84* | | *25 - 150* | *09/09/20 18:39* | *09/10/20 18:54* | *1* |
| *18O2 PFHxS* | *86* | | *25 - 150* | *09/09/20 18:39* | *09/10/20 18:54* | *1* |
| *13C4 PFOS* | *81* | | *25 - 150* | *09/09/20 18:39* | *09/10/20 18:54* | *1* |
| *13C8 FOSA* | *68* | | *25 - 150* | *09/09/20 18:39* | *09/10/20 18:54* | *1* |
| *d3-NMeFOSAA* | *62* | | *25 - 150* | *09/09/20 18:39* | *09/10/20 18:54* | *1* |
| *d5-NEtFOSAA* | *66* | | *25 - 150* | *09/09/20 18:39* | *09/10/20 18:54* | *1* |
| *M2-6:2 FTS* | *85* | | *25 - 150* | *09/09/20 18:39* | *09/10/20 18:54* | *1* |
| *M2-8:2 FTS* | *89* | | *25 - 150* | *09/09/20 18:39* | *09/10/20 18:54* | *1* |

## Client Sample ID: MW-211

**Date Collected: 09/03/20 14:00**
**Date Received: 09/04/20 16:25**

## Lab Sample ID: 460-217659-4

**Matrix: Water**

### Method: 8260C - Volatile Organic Compounds by GC/MS

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1-Trichloroethane | 0.24 | U | 1.0 | 0.24 | ug/L | | | 09/09/20 03:17 | 1 |

Client: SESI Consulting Engineers
Project/Site: Grossingers

Job ID: 460-217659-1

## Client Sample ID: MW-211

**Date Collected: 09/03/20 14:00**
**Date Received: 09/04/20 16:25**

## Lab Sample ID: 460-217659-4

**Matrix: Water**

### Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,2,2-Tetrachloroethane | 0.37 | U | 1.0 | 0.37 | ug/L | | | 09/09/20 03:17 | 1 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 0.31 | U | 1.0 | 0.31 | ug/L | | | 09/09/20 03:17 | 1 |
| 1,1,2-Trichloroethane | 0.43 | U | 1.0 | 0.43 | ug/L | | | 09/09/20 03:17 | 1 |
| 1,1-Dichloroethane | 0.26 | U | 1.0 | 0.26 | ug/L | | | 09/09/20 03:17 | 1 |
| 1,1-Dichloroethene | 0.26 | U | 1.0 | 0.26 | ug/L | | | 09/09/20 03:17 | 1 |
| 1,2,3-Trichlorobenzene | 0.36 | U | 1.0 | 0.36 | ug/L | | | 09/09/20 03:17 | 1 |
| 1,2,4-Trichlorobenzene | 0.37 | U | 1.0 | 0.37 | ug/L | | | 09/09/20 03:17 | 1 |
| 1,2-Dichloropropane | 0.35 | U | 1.0 | 0.35 | ug/L | | | 09/09/20 03:17 | 1 |
| 1,3-Dichlorobenzene | 0.34 | U | 1.0 | 0.34 | ug/L | | | 09/09/20 03:17 | 1 |
| 1,4-Dichlorobenzene | 0.33 | U | 1.0 | 0.33 | ug/L | | | 09/09/20 03:17 | 1 |
| 1,4-Dioxane | 28 | U | 50 | 28 | ug/L | | | 09/09/20 03:17 | 1 |
| 2-Butanone (MEK) | 1.9 | U | 5.0 | 1.9 | ug/L | | | 09/09/20 03:17 | 1 |
| 2-Hexanone | 1.1 | U | 5.0 | 1.1 | ug/L | | | 09/09/20 03:17 | 1 |
| 4-Methyl-2-pentanone (MIBK) | 1.3 | U | 5.0 | 1.3 | ug/L | | | 09/09/20 03:17 | 1 |
| Acetone | 4.4 | U | 5.0 | 4.4 | ug/L | | | 09/09/20 03:17 | 1 |
| Benzene | 0.20 | U | 1.0 | 0.20 | ug/L | | | 09/09/20 03:17 | 1 |
| Bromoform | 0.54 | U | 1.0 | 0.54 | ug/L | | | 09/09/20 03:17 | 1 |
| Bromomethane | 0.55 | U | 1.0 | 0.55 | ug/L | | | 09/09/20 03:17 | 1 |
| Carbon disulfide | 0.82 | U | 1.0 | 0.82 | ug/L | | | 09/09/20 03:17 | 1 |
| Carbon tetrachloride | 0.21 | U | 1.0 | 0.21 | ug/L | | | 09/09/20 03:17 | 1 |
| Chlorobenzene | 0.38 | U | 1.0 | 0.38 | ug/L | | | 09/09/20 03:17 | 1 |
| Chlorobromomethane | 0.41 | U | 1.0 | 0.41 | ug/L | | | 09/09/20 03:17 | 1 |
| Chlorodibromomethane | 0.28 | U | 1.0 | 0.28 | ug/L | | | 09/09/20 03:17 | 1 |
| Chloroethane | 0.32 | U | 1.0 | 0.32 | ug/L | | | 09/09/20 03:17 | 1 |
| Chloroform | 0.33 | U | 1.0 | 0.33 | ug/L | | | 09/09/20 03:17 | 1 |
| Chloromethane | 0.40 | U | 1.0 | 0.40 | ug/L | | | 09/09/20 03:17 | 1 |
| cis-1,2-Dichloroethene | 0.22 | U | 1.0 | 0.22 | ug/L | | | 09/09/20 03:17 | 1 |
| cis-1,3-Dichloropropene | 0.22 | U | 1.0 | 0.22 | ug/L | | | 09/09/20 03:17 | 1 |
| Cyclohexane | 0.32 | U | 1.0 | 0.32 | ug/L | | | 09/09/20 03:17 | 1 |
| Dichlorobromomethane | 0.34 | U | 1.0 | 0.34 | ug/L | | | 09/09/20 03:17 | 1 |
| Dichlorodifluoromethane | 0.31 | U | 1.0 | 0.31 | ug/L | | | 09/09/20 03:17 | 1 |
| Ethylbenzene | 0.30 | U | 1.0 | 0.30 | ug/L | | | 09/09/20 03:17 | 1 |
| Ethylene Dibromide | 0.50 | U | 1.0 | 0.50 | ug/L | | | 09/09/20 03:17 | 1 |
| Isopropylbenzene | 0.34 | U | 1.0 | 0.34 | ug/L | | | 09/09/20 03:17 | 1 |
| Methyl acetate | 0.79 | U | 5.0 | 0.79 | ug/L | | | 09/09/20 03:17 | 1 |
| Methyl tert-butyl ether | 0.47 | U | 1.0 | 0.47 | ug/L | | | 09/09/20 03:17 | 1 |
| Methylcyclohexane | 0.26 | U | 1.0 | 0.26 | ug/L | | | 09/09/20 03:17 | 1 |
| Methylene Chloride | 0.32 | U | 1.0 | 0.32 | ug/L | | | 09/09/20 03:17 | 1 |
| m-Xylene & p-Xylene | 0.30 | U | 1.0 | 0.30 | ug/L | | | 09/09/20 03:17 | 1 |
| o-Xylene | 0.36 | U | 1.0 | 0.36 | ug/L | | | 09/09/20 03:17 | 1 |
| Styrene | 0.42 | U | 1.0 | 0.42 | ug/L | | | 09/09/20 03:17 | 1 |
| Tetrachloroethene | 0.25 | U | 1.0 | 0.25 | ug/L | | | 09/09/20 03:17 | 1 |
| Toluene | 0.38 | U | 1.0 | 0.38 | ug/L | | | 09/09/20 03:17 | 1 |
| trans-1,2-Dichloroethene | 0.24 | U | 1.0 | 0.24 | ug/L | | | 09/09/20 03:17 | 1 |
| trans-1,3-Dichloropropene | 0.49 | U | 1.0 | 0.49 | ug/L | | | 09/09/20 03:17 | 1 |
| Trichloroethene | 0.31 | U | 1.0 | 0.31 | ug/L | | | 09/09/20 03:17 | 1 |
| Trichlorofluoromethane | 0.32 | U | 1.0 | 0.32 | ug/L | | | 09/09/20 03:17 | 1 |
| Vinyl chloride | 0.17 | U | 1.0 | 0.17 | ug/L | | | 09/09/20 03:17 | 1 |
| 1,2-Dichloroethane | 0.43 | U * | 1.0 | 0.43 | ug/L | | | 09/09/20 03:17 | 1 |

## Client Sample ID: MW-211

**Date Collected: 09/03/20 14:00**
**Date Received: 09/04/20 16:25**

## Lab Sample ID: 460-217659-4

**Matrix: Water**

### Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,2-Dichlorobenzene | 0.43 | U | 1.0 | 0.43 | ug/L | | | 09/09/20 03:17 | 1 |
| 1,2-Dibromo-3-Chloropropane | 0.38 | U | 1.0 | 0.38 | ug/L | | | 09/09/20 03:17 | 1 |

| *Tentatively Identified Compound* | *Est. Result* | *Qualifier* | *Unit* | *D* | *RT* | *CAS No.* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|---|---|---|
| *Tentatively Identified Compound* | *None* | | *ug/L* | | | | | *09/09/20 03:17* | *1* |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1,2-Dichloroethane-d4 (Surr)* | *77* | | *75 - 123* | | *09/09/20 03:17* | *1* |
| *4-Bromofluorobenzene* | *90* | | *76 - 120* | | *09/09/20 03:17* | *1* |
| *Dibromofluoromethane (Surr)* | *89* | | *77 - 124* | | *09/09/20 03:17* | *1* |
| *Toluene-d8 (Surr)* | *104* | | *80 - 120* | | *09/09/20 03:17* | *1* |

### Method: 537 (modified) - Fluorinated Alkyl Substances

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Perfluorobutanoic acid (PFBA)** | **0.72** | **J B** | 1.99 | 0.35 | ng/L | | 09/09/20 18:39 | 09/10/20 19:04 | 1 |
| Perfluoropentanoic acid (PFPeA) | 0.49 | U | 1.99 | 0.49 | ng/L | | 09/09/20 18:39 | 09/10/20 19:04 | 1 |
| Perfluorohexanoic acid (PFHxA) | 0.58 | U | 1.99 | 0.58 | ng/L | | 09/09/20 18:39 | 09/10/20 19:04 | 1 |
| Perfluoroheptanoic acid (PFHpA) | 0.25 | U | 1.99 | 0.25 | ng/L | | 09/09/20 18:39 | 09/10/20 19:04 | 1 |
| **Perfluorooctanoic acid (PFOA)** | **0.87** | **J** | 1.99 | 0.85 | ng/L | | 09/09/20 18:39 | 09/10/20 19:04 | 1 |
| Perfluorononanoic acid (PFNA) | 0.27 | U | 1.99 | 0.27 | ng/L | | 09/09/20 18:39 | 09/10/20 19:04 | 1 |
| Perfluorodecanoic acid (PFDA) | 0.31 | U | 1.99 | 0.31 | ng/L | | 09/09/20 18:39 | 09/10/20 19:04 | 1 |
| Perfluoroundecanoic acid (PFUnA) | 1.10 | U | 1.99 | 1.10 | ng/L | | 09/09/20 18:39 | 09/10/20 19:04 | 1 |
| Perfluorododecanoic acid (PFDoA) | 0.55 | U | 1.99 | 0.55 | ng/L | | 09/09/20 18:39 | 09/10/20 19:04 | 1 |
| Perfluorotridecanoic acid (PFTriA) | 1.30 | U | 1.99 | 1.30 | ng/L | | 09/09/20 18:39 | 09/10/20 19:04 | 1 |
| **Perfluorotetradecanoic acid (PFTeA)** | **0.41** | **J** | 1.99 | 0.29 | ng/L | | 09/09/20 18:39 | 09/10/20 19:04 | 1 |
| Perfluorobutanesulfonic acid (PFBS) | 0.20 | U | 1.99 | 0.20 | ng/L | | 09/09/20 18:39 | 09/10/20 19:04 | 1 |
| **Perfluorohexanesulfonic acid (PFHxS)** | **0.56** | **J B** | 1.99 | 0.17 | ng/L | | 09/09/20 18:39 | 09/10/20 19:04 | 1 |
| Perfluoroheptanesulfonic Acid (PFHpS) | 0.19 | U | 1.99 | 0.19 | ng/L | | 09/09/20 18:39 | 09/10/20 19:04 | 1 |
| **Perfluorooctanesulfonic acid (PFOS)** | **1.75** | **J** | 1.99 | 0.54 | ng/L | | 09/09/20 18:39 | 09/10/20 19:04 | 1 |
| Perfluorodecanesulfonic acid (PFDS) | 0.32 | U | 1.99 | 0.32 | ng/L | | 09/09/20 18:39 | 09/10/20 19:04 | 1 |
| **Perfluorooctanesulfonamide (FOSA)** | **0.35** | **J** | 1.99 | 0.35 | ng/L | | 09/09/20 18:39 | 09/10/20 19:04 | 1 |
| N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA) | 3.09 | U | 19.9 | 3.09 | ng/L | | 09/09/20 18:39 | 09/10/20 19:04 | 1 |
| N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA) | 1.89 | U | 19.9 | 1.89 | ng/L | | 09/09/20 18:39 | 09/10/20 19:04 | 1 |
| **6:2 FTS** | **5.28** | **J** | 19.9 | 1.99 | ng/L | | 09/09/20 18:39 | 09/10/20 19:04 | 1 |
| 8:2 FTS | 1.99 | U | 19.9 | 1.99 | ng/L | | 09/09/20 18:39 | 09/10/20 19:04 | 1 |

| *Isotope Dilution* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *13C4 PFBA* | *78* | | *25 - 150* | *09/09/20 18:39* | *09/10/20 19:04* | *1* |
| *13C5 PFPeA* | *84* | | *25 - 150* | *09/09/20 18:39* | *09/10/20 19:04* | *1* |
| *13C2 PFHxA* | *92* | | *25 - 150* | *09/09/20 18:39* | *09/10/20 19:04* | *1* |
| *13C4 PFHpA* | *93* | | *25 - 150* | *09/09/20 18:39* | *09/10/20 19:04* | *1* |
| *13C4 PFOA* | *87* | | *25 - 150* | *09/09/20 18:39* | *09/10/20 19:04* | *1* |
| *13C5 PFNA* | *93* | | *25 - 150* | *09/09/20 18:39* | *09/10/20 19:04* | *1* |
| *13C2 PFDA* | *88* | | *25 - 150* | *09/09/20 18:39* | *09/10/20 19:04* | *1* |
| *13C2 PFUnA* | *85* | | *25 - 150* | *09/09/20 18:39* | *09/10/20 19:04* | *1* |
| *13C2 PFDoA* | *72* | | *25 - 150* | *09/09/20 18:39* | *09/10/20 19:04* | *1* |

## Client Sample ID: MW-211

**Lab Sample ID: 460-217659-4**

**Date Collected: 09/03/20 14:00**
**Matrix: Water**
**Date Received: 09/04/20 16:25**

### Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

| *Isotope Dilution* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *13C2 PFTeDA* | *76* | | *25 - 150* | *09/09/20 18:39* | *09/10/20 19:04* | *1* |
| *13C3 PFBS* | *99* | | *25 - 150* | *09/09/20 18:39* | *09/10/20 19:04* | *1* |
| *18O2 PFHxS* | *99* | | *25 - 150* | *09/09/20 18:39* | *09/10/20 19:04* | *1* |
| *13C4 PFOS* | *95* | | *25 - 150* | *09/09/20 18:39* | *09/10/20 19:04* | *1* |
| *13C8 FOSA* | *79* | | *25 - 150* | *09/09/20 18:39* | *09/10/20 19:04* | *1* |
| *d3-NMeFOSAA* | *76* | | *25 - 150* | *09/09/20 18:39* | *09/10/20 19:04* | *1* |
| *d5-NEtFOSAA* | *87* | | *25 - 150* | *09/09/20 18:39* | *09/10/20 19:04* | *1* |
| *M2-6:2 FTS* | *104* | | *25 - 150* | *09/09/20 18:39* | *09/10/20 19:04* | *1* |
| *M2-8:2 FTS* | *110* | | *25 - 150* | *09/09/20 18:39* | *09/10/20 19:04* | *1* |

## Client Sample ID: MW-214

**Lab Sample ID: 460-217659-5**

**Date Collected: 09/03/20 09:30**
**Matrix: Water**
**Date Received: 09/04/20 16:25**

### Method: 8260C - Volatile Organic Compounds by GC/MS

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1-Trichloroethane | 0.24 | U | 1.0 | 0.24 | ug/L | | | 09/09/20 03:41 | 1 |
| 1,1,2,2-Tetrachloroethane | 0.37 | U | 1.0 | 0.37 | ug/L | | | 09/09/20 03:41 | 1 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 0.31 | U | 1.0 | 0.31 | ug/L | | | 09/09/20 03:41 | 1 |
| 1,1,2-Trichloroethane | 0.43 | U | 1.0 | 0.43 | ug/L | | | 09/09/20 03:41 | 1 |
| 1,1-Dichloroethane | 0.26 | U | 1.0 | 0.26 | ug/L | | | 09/09/20 03:41 | 1 |
| 1,1-Dichloroethene | 0.26 | U | 1.0 | 0.26 | ug/L | | | 09/09/20 03:41 | 1 |
| 1,2,3-Trichlorobenzene | 0.36 | U | 1.0 | 0.36 | ug/L | | | 09/09/20 03:41 | 1 |
| 1,2,4-Trichlorobenzene | 0.37 | U | 1.0 | 0.37 | ug/L | | | 09/09/20 03:41 | 1 |
| 1,2-Dichloropropane | 0.35 | U | 1.0 | 0.35 | ug/L | | | 09/09/20 03:41 | 1 |
| 1,3-Dichlorobenzene | 0.34 | U | 1.0 | 0.34 | ug/L | | | 09/09/20 03:41 | 1 |
| 1,4-Dichlorobenzene | 0.33 | U | 1.0 | 0.33 | ug/L | | | 09/09/20 03:41 | 1 |
| 1,4-Dioxane | 28 | U | 50 | 28 | ug/L | | | 09/09/20 03:41 | 1 |
| 2-Butanone (MEK) | 1.9 | U | 5.0 | 1.9 | ug/L | | | 09/09/20 03:41 | 1 |
| 2-Hexanone | 1.1 | U | 5.0 | 1.1 | ug/L | | | 09/09/20 03:41 | 1 |
| 4-Methyl-2-pentanone (MIBK) | 1.3 | U | 5.0 | 1.3 | ug/L | | | 09/09/20 03:41 | 1 |
| Acetone | 4.4 | U | 5.0 | 4.4 | ug/L | | | 09/09/20 03:41 | 1 |
| Benzene | 0.20 | U | 1.0 | 0.20 | ug/L | | | 09/09/20 03:41 | 1 |
| Bromoform | 0.54 | U | 1.0 | 0.54 | ug/L | | | 09/09/20 03:41 | 1 |
| Bromomethane | 0.55 | U | 1.0 | 0.55 | ug/L | | | 09/09/20 03:41 | 1 |
| Carbon disulfide | 0.82 | U | 1.0 | 0.82 | ug/L | | | 09/09/20 03:41 | 1 |
| Carbon tetrachloride | 0.21 | U | 1.0 | 0.21 | ug/L | | | 09/09/20 03:41 | 1 |
| Chlorobenzene | 0.38 | U | 1.0 | 0.38 | ug/L | | | 09/09/20 03:41 | 1 |
| Chlorobromomethane | 0.41 | U | 1.0 | 0.41 | ug/L | | | 09/09/20 03:41 | 1 |
| Chlorodibromomethane | 0.28 | U | 1.0 | 0.28 | ug/L | | | 09/09/20 03:41 | 1 |
| Chloroethane | 0.32 | U | 1.0 | 0.32 | ug/L | | | 09/09/20 03:41 | 1 |
| Chloroform | 0.33 | U | 1.0 | 0.33 | ug/L | | | 09/09/20 03:41 | 1 |
| Chloromethane | 0.40 | U | 1.0 | 0.40 | ug/L | | | 09/09/20 03:41 | 1 |
| cis-1,2-Dichloroethene | 0.22 | U | 1.0 | 0.22 | ug/L | | | 09/09/20 03:41 | 1 |
| cis-1,3-Dichloropropene | 0.22 | U | 1.0 | 0.22 | ug/L | | | 09/09/20 03:41 | 1 |
| Cyclohexane | 0.32 | U | 1.0 | 0.32 | ug/L | | | 09/09/20 03:41 | 1 |
| Dichlorobromomethane | 0.34 | U | 1.0 | 0.34 | ug/L | | | 09/09/20 03:41 | 1 |
| **Dichlorodifluoromethane** | **16** | | 1.0 | 0.31 | ug/L | | | 09/09/20 03:41 | 1 |
| Ethylbenzene | 0.30 | U | 1.0 | 0.30 | ug/L | | | 09/09/20 03:41 | 1 |
| Ethylene Dibromide | 0.50 | U | 1.0 | 0.50 | ug/L | | | 09/09/20 03:41 | 1 |

## Client Sample ID: MW-214

**Date Collected: 09/03/20 09:30**
**Date Received: 09/04/20 16:25**

## Lab Sample ID: 460-217659-5

**Matrix: Water**

### Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Isopropylbenzene | 0.34 | U | 1.0 | 0.34 | ug/L | | | 09/09/20 03:41 | 1 |
| Methyl acetate | 0.79 | U | 5.0 | 0.79 | ug/L | | | 09/09/20 03:41 | 1 |
| Methyl tert-butyl ether | 0.47 | U | 1.0 | 0.47 | ug/L | | | 09/09/20 03:41 | 1 |
| Methylcyclohexane | 0.26 | U | 1.0 | 0.26 | ug/L | | | 09/09/20 03:41 | 1 |
| Methylene Chloride | 0.32 | U | 1.0 | 0.32 | ug/L | | | 09/09/20 03:41 | 1 |
| m-Xylene & p-Xylene | 0.30 | U | 1.0 | 0.30 | ug/L | | | 09/09/20 03:41 | 1 |
| o-Xylene | 0.36 | U | 1.0 | 0.36 | ug/L | | | 09/09/20 03:41 | 1 |
| Styrene | 0.42 | U | 1.0 | 0.42 | ug/L | | | 09/09/20 03:41 | 1 |
| Tetrachloroethene | 0.25 | U | 1.0 | 0.25 | ug/L | | | 09/09/20 03:41 | 1 |
| Toluene | 0.38 | U | 1.0 | 0.38 | ug/L | | | 09/09/20 03:41 | 1 |
| trans-1,2-Dichloroethene | 0.24 | U | 1.0 | 0.24 | ug/L | | | 09/09/20 03:41 | 1 |
| trans-1,3-Dichloropropene | 0.49 | U | 1.0 | 0.49 | ug/L | | | 09/09/20 03:41 | 1 |
| Trichloroethene | 0.31 | U | 1.0 | 0.31 | ug/L | | | 09/09/20 03:41 | 1 |
| **Trichlorofluoromethane** | **5.1** | | 1.0 | 0.32 | ug/L | | | 09/09/20 03:41 | 1 |
| Vinyl chloride | 0.17 | U | 1.0 | 0.17 | ug/L | | | 09/09/20 03:41 | 1 |
| 1,2-Dichloroethane | 0.43 | U * | 1.0 | 0.43 | ug/L | | | 09/09/20 03:41 | 1 |
| 1,2-Dichlorobenzene | 0.43 | U | 1.0 | 0.43 | ug/L | | | 09/09/20 03:41 | 1 |
| 1,2-Dibromo-3-Chloropropane | 0.38 | U | 1.0 | 0.38 | ug/L | | | 09/09/20 03:41 | 1 |

| *Tentatively Identified Compound* | *Est. Result* | *Qualifier* | *Unit* | *D* | *RT* | *CAS No.* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|---|---|---|
| *Fluorodichloromethane* | *8.4* | *J N* | *ug/L* | | *1.04* | *75-43-4* | | *09/09/20 03:41* | *1* |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1,2-Dichloroethane-d4 (Surr)* | *75* | | *75 - 123* | | *09/09/20 03:41* | *1* |
| *4-Bromofluorobenzene* | *87* | | *76 - 120* | | *09/09/20 03:41* | *1* |
| *Dibromofluoromethane (Surr)* | *89* | | *77 - 124* | | *09/09/20 03:41* | *1* |
| *Toluene-d8 (Surr)* | *98* | | *80 - 120* | | *09/09/20 03:41* | *1* |

### Method: 537 (modified) - Fluorinated Alkyl Substances

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Perfluorobutanoic acid (PFBA)** | **9.76** | **B** | 2.07 | 0.36 | ng/L | | 09/09/20 18:39 | 09/10/20 19:13 | 1 |
| **Perfluoropentanoic acid (PFPeA)** | **4.50** | | 2.07 | 0.51 | ng/L | | 09/09/20 18:39 | 09/10/20 19:13 | 1 |
| **Perfluorohexanoic acid (PFHxA)** | **6.65** | | 2.07 | 0.60 | ng/L | | 09/09/20 18:39 | 09/10/20 19:13 | 1 |
| **Perfluoroheptanoic acid (PFHpA)** | **5.08** | | 2.07 | 0.26 | ng/L | | 09/09/20 18:39 | 09/10/20 19:13 | 1 |
| **Perfluorooctanoic acid (PFOA)** | **25.8** | | 2.07 | 0.88 | ng/L | | 09/09/20 18:39 | 09/10/20 19:13 | 1 |
| **Perfluorononanoic acid (PFNA)** | **1.41** | **J** | 2.07 | 0.28 | ng/L | | 09/09/20 18:39 | 09/10/20 19:13 | 1 |
| **Perfluorodecanoic acid (PFDA)** | **1.42** | **J** | 2.07 | 0.32 | ng/L | | 09/09/20 18:39 | 09/10/20 19:13 | 1 |
| Perfluoroundecanoic acid (PFUnA) | 1.14 | U | 2.07 | 1.14 | ng/L | | 09/09/20 18:39 | 09/10/20 19:13 | 1 |
| Perfluorododecanoic acid (PFDoA) | 0.57 | U | 2.07 | 0.57 | ng/L | | 09/09/20 18:39 | 09/10/20 19:13 | 1 |
| Perfluorotridecanoic acid (PFTriA) | 1.35 | U | 2.07 | 1.35 | ng/L | | 09/09/20 18:39 | 09/10/20 19:13 | 1 |
| Perfluorotetradecanoic acid (PFTeA) | 0.30 | U | 2.07 | 0.30 | ng/L | | 09/09/20 18:39 | 09/10/20 19:13 | 1 |
| **Perfluorobutanesulfonic acid (PFBS)** | **3.32** | | 2.07 | 0.21 | ng/L | | 09/09/20 18:39 | 09/10/20 19:13 | 1 |
| **Perfluorohexanesulfonic acid (PFHxS)** | **5.44** | **B** | 2.07 | 0.18 | ng/L | | 09/09/20 18:39 | 09/10/20 19:13 | 1 |
| **Perfluoroheptanesulfonic Acid (PFHpS)** | **0.75** | **J** | 2.07 | 0.20 | ng/L | | 09/09/20 18:39 | 09/10/20 19:13 | 1 |
| **Perfluorooctanesulfonic acid (PFOS)** | **46.6** | | 2.07 | 0.56 | ng/L | | 09/09/20 18:39 | 09/10/20 19:13 | 1 |
| Perfluorodecanesulfonic acid (PFDS) | 0.33 | U | 2.07 | 0.33 | ng/L | | 09/09/20 18:39 | 09/10/20 19:13 | 1 |

## Client Sample ID: MW-214

**Date Collected: 09/03/20 09:30**
**Date Received: 09/04/20 16:25**

## Lab Sample ID: 460-217659-5

**Matrix: Water**

### Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Perfluorooctanesulfonamide (FOSA)** | **2.04** | **J** | 2.07 | 0.36 | ng/L | | 09/09/20 18:39 | 09/10/20 19:13 | 1 |
| N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA) | 3.21 | U | 20.7 | 3.21 | ng/L | | 09/09/20 18:39 | 09/10/20 19:13 | 1 |
| N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA) | 1.97 | U | 20.7 | 1.97 | ng/L | | 09/09/20 18:39 | 09/10/20 19:13 | 1 |
| 6:2 FTS | 2.07 | U | 20.7 | 2.07 | ng/L | | 09/09/20 18:39 | 09/10/20 19:13 | 1 |
| 8:2 FTS | 2.07 | U | 20.7 | 2.07 | ng/L | | 09/09/20 18:39 | 09/10/20 19:13 | 1 |

| *Isotope Dilution* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *13C4 PFBA* | *56* | | *25 - 150* | *09/09/20 18:39* | *09/10/20 19:13* | *1* |
| *13C5 PFPeA* | *62* | | *25 - 150* | *09/09/20 18:39* | *09/10/20 19:13* | *1* |
| *13C2 PFHxA* | *79* | | *25 - 150* | *09/09/20 18:39* | *09/10/20 19:13* | *1* |
| *13C4 PFHpA* | *79* | | *25 - 150* | *09/09/20 18:39* | *09/10/20 19:13* | *1* |
| *13C4 PFOA* | *76* | | *25 - 150* | *09/09/20 18:39* | *09/10/20 19:13* | *1* |
| *13C5 PFNA* | *80* | | *25 - 150* | *09/09/20 18:39* | *09/10/20 19:13* | *1* |
| *13C2 PFDA* | *79* | | *25 - 150* | *09/09/20 18:39* | *09/10/20 19:13* | *1* |
| *13C2 PFUnA* | *80* | | *25 - 150* | *09/09/20 18:39* | *09/10/20 19:13* | *1* |
| *13C2 PFDoA* | *70* | | *25 - 150* | *09/09/20 18:39* | *09/10/20 19:13* | *1* |
| *13C2 PFTeDA* | *74* | | *25 - 150* | *09/09/20 18:39* | *09/10/20 19:13* | *1* |
| *13C3 PFBS* | *87* | | *25 - 150* | *09/09/20 18:39* | *09/10/20 19:13* | *1* |
| *18O2 PFHxS* | *92* | | *25 - 150* | *09/09/20 18:39* | *09/10/20 19:13* | *1* |
| *13C4 PFOS* | *86* | | *25 - 150* | *09/09/20 18:39* | *09/10/20 19:13* | *1* |
| *13C8 FOSA* | *75* | | *25 - 150* | *09/09/20 18:39* | *09/10/20 19:13* | *1* |
| *d3-NMeFOSAA* | *67* | | *25 - 150* | *09/09/20 18:39* | *09/10/20 19:13* | *1* |
| *d5-NEtFOSAA* | *77* | | *25 - 150* | *09/09/20 18:39* | *09/10/20 19:13* | *1* |
| *M2-6:2 FTS* | *120* | | *25 - 150* | *09/09/20 18:39* | *09/10/20 19:13* | *1* |
| *M2-8:2 FTS* | *96* | | *25 - 150* | *09/09/20 18:39* | *09/10/20 19:13* | *1* |

## Client Sample ID: MW-216

**Date Collected: 09/03/20 13:30**
**Date Received: 09/04/20 16:25**

## Lab Sample ID: 460-217659-6

**Matrix: Water**

### Method: 8260C - Volatile Organic Compounds by GC/MS

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1-Trichloroethane | 0.24 | U | 1.0 | 0.24 | ug/L | | | 09/09/20 04:05 | 1 |
| 1,1,2,2-Tetrachloroethane | 0.37 | U | 1.0 | 0.37 | ug/L | | | 09/09/20 04:05 | 1 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 0.31 | U | 1.0 | 0.31 | ug/L | | | 09/09/20 04:05 | 1 |
| 1,1,2-Trichloroethane | 0.43 | U | 1.0 | 0.43 | ug/L | | | 09/09/20 04:05 | 1 |
| 1,1-Dichloroethane | 0.26 | U | 1.0 | 0.26 | ug/L | | | 09/09/20 04:05 | 1 |
| 1,1-Dichloroethene | 0.26 | U | 1.0 | 0.26 | ug/L | | | 09/09/20 04:05 | 1 |
| 1,2,3-Trichlorobenzene | 0.36 | U | 1.0 | 0.36 | ug/L | | | 09/09/20 04:05 | 1 |
| 1,2,4-Trichlorobenzene | 0.37 | U | 1.0 | 0.37 | ug/L | | | 09/09/20 04:05 | 1 |
| 1,2-Dichloropropane | 0.35 | U | 1.0 | 0.35 | ug/L | | | 09/09/20 04:05 | 1 |
| 1,3-Dichlorobenzene | 0.34 | U | 1.0 | 0.34 | ug/L | | | 09/09/20 04:05 | 1 |
| 1,4-Dichlorobenzene | 0.33 | U | 1.0 | 0.33 | ug/L | | | 09/09/20 04:05 | 1 |
| 1,4-Dioxane | 28 | U | 50 | 28 | ug/L | | | 09/09/20 04:05 | 1 |
| 2-Butanone (MEK) | 1.9 | U | 5.0 | 1.9 | ug/L | | | 09/09/20 04:05 | 1 |
| 2-Hexanone | 1.1 | U | 5.0 | 1.1 | ug/L | | | 09/09/20 04:05 | 1 |
| 4-Methyl-2-pentanone (MIBK) | 1.3 | U | 5.0 | 1.3 | ug/L | | | 09/09/20 04:05 | 1 |
| Acetone | 4.4 | U | 5.0 | 4.4 | ug/L | | | 09/09/20 04:05 | 1 |

## Client Sample ID: MW-216

**Date Collected: 09/03/20 13:30**
**Date Received: 09/04/20 16:25**

## Lab Sample ID: 460-217659-6

**Matrix: Water**

### Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Benzene | 0.20 | U | 1.0 | 0.20 | ug/L | | | 09/09/20 04:05 | 1 |
| Bromoform | 0.54 | U | 1.0 | 0.54 | ug/L | | | 09/09/20 04:05 | 1 |
| Bromomethane | 0.55 | U | 1.0 | 0.55 | ug/L | | | 09/09/20 04:05 | 1 |
| Carbon disulfide | 0.82 | U | 1.0 | 0.82 | ug/L | | | 09/09/20 04:05 | 1 |
| Carbon tetrachloride | 0.21 | U | 1.0 | 0.21 | ug/L | | | 09/09/20 04:05 | 1 |
| Chlorobenzene | 0.38 | U | 1.0 | 0.38 | ug/L | | | 09/09/20 04:05 | 1 |
| Chlorobromomethane | 0.41 | U | 1.0 | 0.41 | ug/L | | | 09/09/20 04:05 | 1 |
| Chlorodibromomethane | 0.28 | U | 1.0 | 0.28 | ug/L | | | 09/09/20 04:05 | 1 |
| Chloroethane | 0.32 | U | 1.0 | 0.32 | ug/L | | | 09/09/20 04:05 | 1 |
| Chloroform | 0.33 | U | 1.0 | 0.33 | ug/L | | | 09/09/20 04:05 | 1 |
| Chloromethane | 0.40 | U | 1.0 | 0.40 | ug/L | | | 09/09/20 04:05 | 1 |
| cis-1,2-Dichloroethene | 0.22 | U | 1.0 | 0.22 | ug/L | | | 09/09/20 04:05 | 1 |
| cis-1,3-Dichloropropene | 0.22 | U | 1.0 | 0.22 | ug/L | | | 09/09/20 04:05 | 1 |
| Cyclohexane | 0.32 | U | 1.0 | 0.32 | ug/L | | | 09/09/20 04:05 | 1 |
| Dichlorobromomethane | 0.34 | U | 1.0 | 0.34 | ug/L | | | 09/09/20 04:05 | 1 |
| **Dichlorodifluoromethane** | **3.9** | | 1.0 | 0.31 | ug/L | | | 09/09/20 04:05 | 1 |
| Ethylbenzene | 0.30 | U | 1.0 | 0.30 | ug/L | | | 09/09/20 04:05 | 1 |
| Ethylene Dibromide | 0.50 | U | 1.0 | 0.50 | ug/L | | | 09/09/20 04:05 | 1 |
| Isopropylbenzene | 0.34 | U | 1.0 | 0.34 | ug/L | | | 09/09/20 04:05 | 1 |
| Methyl acetate | 0.79 | U | 5.0 | 0.79 | ug/L | | | 09/09/20 04:05 | 1 |
| Methyl tert-butyl ether | 0.47 | U | 1.0 | 0.47 | ug/L | | | 09/09/20 04:05 | 1 |
| Methylcyclohexane | 0.26 | U | 1.0 | 0.26 | ug/L | | | 09/09/20 04:05 | 1 |
| Methylene Chloride | 0.32 | U | 1.0 | 0.32 | ug/L | | | 09/09/20 04:05 | 1 |
| m-Xylene & p-Xylene | 0.30 | U | 1.0 | 0.30 | ug/L | | | 09/09/20 04:05 | 1 |
| o-Xylene | 0.36 | U | 1.0 | 0.36 | ug/L | | | 09/09/20 04:05 | 1 |
| Styrene | 0.42 | U | 1.0 | 0.42 | ug/L | | | 09/09/20 04:05 | 1 |
| Tetrachloroethene | 0.25 | U | 1.0 | 0.25 | ug/L | | | 09/09/20 04:05 | 1 |
| Toluene | 0.38 | U | 1.0 | 0.38 | ug/L | | | 09/09/20 04:05 | 1 |
| trans-1,2-Dichloroethene | 0.24 | U | 1.0 | 0.24 | ug/L | | | 09/09/20 04:05 | 1 |
| trans-1,3-Dichloropropene | 0.49 | U | 1.0 | 0.49 | ug/L | | | 09/09/20 04:05 | 1 |
| Trichloroethene | 0.31 | U | 1.0 | 0.31 | ug/L | | | 09/09/20 04:05 | 1 |
| **Trichlorofluoromethane** | **6.9** | | 1.0 | 0.32 | ug/L | | | 09/09/20 04:05 | 1 |
| Vinyl chloride | 0.17 | U | 1.0 | 0.17 | ug/L | | | 09/09/20 04:05 | 1 |
| 1,2-Dichloroethane | 0.43 | U * | 1.0 | 0.43 | ug/L | | | 09/09/20 04:05 | 1 |
| 1,2-Dichlorobenzene | 0.43 | U | 1.0 | 0.43 | ug/L | | | 09/09/20 04:05 | 1 |
| 1,2-Dibromo-3-Chloropropane | 0.38 | U | 1.0 | 0.38 | ug/L | | | 09/09/20 04:05 | 1 |

| *Tentatively Identified Compound* | *Est. Result* | *Qualifier* | *Unit* | *D* | *RT* | *CAS No.* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|---|---|---|
| *Tentatively Identified Compound* | *None* | | *ug/L* | | | | | *09/09/20 04:05* | *1* |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1,2-Dichloroethane-d4 (Surr)* | *80* | | *75 - 123* | | *09/09/20 04:05* | *1* |
| *4-Bromofluorobenzene* | *83* | | *76 - 120* | | *09/09/20 04:05* | *1* |
| *Dibromofluoromethane (Surr)* | *86* | | *77 - 124* | | *09/09/20 04:05* | *1* |
| *Toluene-d8 (Surr)* | *90* | | *80 - 120* | | *09/09/20 04:05* | *1* |

### Method: 537 (modified) - Fluorinated Alkyl Substances

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Perfluorobutanoic acid (PFBA)** | **4.37** | **B** | 1.83 | 0.32 | ng/L | | 09/09/20 18:39 | 09/10/20 19:23 | 1 |
| **Perfluoropentanoic acid (PFPeA)** | **2.52** | | 1.83 | 0.45 | ng/L | | 09/09/20 18:39 | 09/10/20 19:23 | 1 |

## Client Sample ID: MW-216

**Date Collected: 09/03/20 13:30**
**Date Received: 09/04/20 16:25**

## Lab Sample ID: 460-217659-6

**Matrix: Water**

### Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Perfluorohexanoic acid (PFHxA)** | **2.62** | | 1.83 | 0.53 | ng/L | | 09/09/20 18:39 | 09/10/20 19:23 | 1 |
| **Perfluoroheptanoic acid (PFHpA)** | **1.88** | | 1.83 | 0.23 | ng/L | | 09/09/20 18:39 | 09/10/20 19:23 | 1 |
| **Perfluorooctanoic acid (PFOA)** | **9.39** | | 1.83 | 0.78 | ng/L | | 09/09/20 18:39 | 09/10/20 19:23 | 1 |
| **Perfluorononanoic acid (PFNA)** | **0.73** | **J** | 1.83 | 0.25 | ng/L | | 09/09/20 18:39 | 09/10/20 19:23 | 1 |
| **Perfluorodecanoic acid (PFDA)** | **0.34** | **J** | 1.83 | 0.28 | ng/L | | 09/09/20 18:39 | 09/10/20 19:23 | 1 |
| Perfluoroundecanoic acid (PFUnA) | 1.01 | U | 1.83 | 1.01 | ng/L | | 09/09/20 18:39 | 09/10/20 19:23 | 1 |
| Perfluorododecanoic acid (PFDoA) | 0.50 | U | 1.83 | 0.50 | ng/L | | 09/09/20 18:39 | 09/10/20 19:23 | 1 |
| Perfluorotridecanoic acid (PFTriA) | 1.19 | U | 1.83 | 1.19 | ng/L | | 09/09/20 18:39 | 09/10/20 19:23 | 1 |
| Perfluorotetradecanoic acid (PFTeA) | 0.27 | U | 1.83 | 0.27 | ng/L | | 09/09/20 18:39 | 09/10/20 19:23 | 1 |
| **Perfluorobutanesulfonic acid (PFBS)** | **1.19** | **J** | 1.83 | 0.18 | ng/L | | 09/09/20 18:39 | 09/10/20 19:23 | 1 |
| **Perfluorohexanesulfonic acid (PFHxS)** | **2.96** | **B** | 1.83 | 0.16 | ng/L | | 09/09/20 18:39 | 09/10/20 19:23 | 1 |
| Perfluoroheptanesulfonic Acid (PFHpS) | 0.17 | U | 1.83 | 0.17 | ng/L | | 09/09/20 18:39 | 09/10/20 19:23 | 1 |
| **Perfluorooctanesulfonic acid (PFOS)** | **24.8** | | 1.83 | 0.49 | ng/L | | 09/09/20 18:39 | 09/10/20 19:23 | 1 |
| Perfluorodecanesulfonic acid (PFDS) | 0.29 | U | 1.83 | 0.29 | ng/L | | 09/09/20 18:39 | 09/10/20 19:23 | 1 |
| **Perfluorooctanesulfonamide (FOSA)** | **1.06** | **J** | 1.83 | 0.32 | ng/L | | 09/09/20 18:39 | 09/10/20 19:23 | 1 |
| N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA) | 2.84 | U | 18.3 | 2.84 | ng/L | | 09/09/20 18:39 | 09/10/20 19:23 | 1 |
| N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA) | 1.74 | U | 18.3 | 1.74 | ng/L | | 09/09/20 18:39 | 09/10/20 19:23 | 1 |
| 6:2 FTS | 1.83 | U | 18.3 | 1.83 | ng/L | | 09/09/20 18:39 | 09/10/20 19:23 | 1 |
| 8:2 FTS | 1.83 | U | 18.3 | 1.83 | ng/L | | 09/09/20 18:39 | 09/10/20 19:23 | 1 |

| *Isotope Dilution* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *13C4 PFBA* | *34* | | *25 - 150* | *09/09/20 18:39* | *09/10/20 19:23* | *1* |
| *13C5 PFPeA* | *37* | | *25 - 150* | *09/09/20 18:39* | *09/10/20 19:23* | *1* |
| *13C2 PFHxA* | *43* | | *25 - 150* | *09/09/20 18:39* | *09/10/20 19:23* | *1* |
| *13C4 PFHpA* | *43* | | *25 - 150* | *09/09/20 18:39* | *09/10/20 19:23* | *1* |
| *13C4 PFOA* | *41* | | *25 - 150* | *09/09/20 18:39* | *09/10/20 19:23* | *1* |
| *13C5 PFNA* | *44* | | *25 - 150* | *09/09/20 18:39* | *09/10/20 19:23* | *1* |
| *13C2 PFDA* | *42* | | *25 - 150* | *09/09/20 18:39* | *09/10/20 19:23* | *1* |
| *13C2 PFUnA* | *35* | | *25 - 150* | *09/09/20 18:39* | *09/10/20 19:23* | *1* |
| *13C2 PFDoA* | *31* | | *25 - 150* | *09/09/20 18:39* | *09/10/20 19:23* | *1* |
| *13C2 PFTeDA* | *28* | | *25 - 150* | *09/09/20 18:39* | *09/10/20 19:23* | *1* |
| *13C3 PFBS* | *44* | | *25 - 150* | *09/09/20 18:39* | *09/10/20 19:23* | *1* |
| *18O2 PFHxS* | *48* | | *25 - 150* | *09/09/20 18:39* | *09/10/20 19:23* | *1* |
| *13C4 PFOS* | *43* | | *25 - 150* | *09/09/20 18:39* | *09/10/20 19:23* | *1* |
| *13C8 FOSA* | *39* | | *25 - 150* | *09/09/20 18:39* | *09/10/20 19:23* | *1* |
| *d3-NMeFOSAA* | *35* | | *25 - 150* | *09/09/20 18:39* | *09/10/20 19:23* | *1* |
| *d5-NEtFOSAA* | *38* | | *25 - 150* | *09/09/20 18:39* | *09/10/20 19:23* | *1* |
| *M2-6:2 FTS* | *59* | | *25 - 150* | *09/09/20 18:39* | *09/10/20 19:23* | *1* |
| *M2-8:2 FTS* | *55* | | *25 - 150* | *09/09/20 18:39* | *09/10/20 19:23* | *1* |

Client: SESI Consulting Engineers
Project/Site: Grossingers

Job ID: 460-217659-1

## Client Sample ID: MW-217

**Date Collected: 09/03/20 12:35**
**Date Received: 09/04/20 16:25**

## Lab Sample ID: 460-217659-7

**Matrix: Water**

### Method: 8260C - Volatile Organic Compounds by GC/MS

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1-Trichloroethane | 0.24 | U | 1.0 | 0.24 | ug/L | | | 09/09/20 04:29 | 1 |
| 1,1,2,2-Tetrachloroethane | 0.37 | U | 1.0 | 0.37 | ug/L | | | 09/09/20 04:29 | 1 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 0.31 | U | 1.0 | 0.31 | ug/L | | | 09/09/20 04:29 | 1 |
| 1,1,2-Trichloroethane | 0.43 | U | 1.0 | 0.43 | ug/L | | | 09/09/20 04:29 | 1 |
| 1,1-Dichloroethane | 0.26 | U | 1.0 | 0.26 | ug/L | | | 09/09/20 04:29 | 1 |
| 1,1-Dichloroethene | 0.26 | U | 1.0 | 0.26 | ug/L | | | 09/09/20 04:29 | 1 |
| 1,2,3-Trichlorobenzene | 0.36 | U | 1.0 | 0.36 | ug/L | | | 09/09/20 04:29 | 1 |
| 1,2,4-Trichlorobenzene | 0.37 | U | 1.0 | 0.37 | ug/L | | | 09/09/20 04:29 | 1 |
| 1,2-Dichloropropane | 0.35 | U | 1.0 | 0.35 | ug/L | | | 09/09/20 04:29 | 1 |
| 1,3-Dichlorobenzene | 0.34 | U | 1.0 | 0.34 | ug/L | | | 09/09/20 04:29 | 1 |
| 1,4-Dichlorobenzene | 0.33 | U | 1.0 | 0.33 | ug/L | | | 09/09/20 04:29 | 1 |
| 1,4-Dioxane | 28 | U | 50 | 28 | ug/L | | | 09/09/20 04:29 | 1 |
| 2-Butanone (MEK) | 1.9 | U | 5.0 | 1.9 | ug/L | | | 09/09/20 04:29 | 1 |
| 2-Hexanone | 1.1 | U | 5.0 | 1.1 | ug/L | | | 09/09/20 04:29 | 1 |
| 4-Methyl-2-pentanone (MIBK) | 1.3 | U | 5.0 | 1.3 | ug/L | | | 09/09/20 04:29 | 1 |
| Acetone | 4.4 | U | 5.0 | 4.4 | ug/L | | | 09/09/20 04:29 | 1 |
| Benzene | 0.20 | U | 1.0 | 0.20 | ug/L | | | 09/09/20 04:29 | 1 |
| Bromoform | 0.54 | U | 1.0 | 0.54 | ug/L | | | 09/09/20 04:29 | 1 |
| Bromomethane | 0.55 | U | 1.0 | 0.55 | ug/L | | | 09/09/20 04:29 | 1 |
| Carbon disulfide | 0.82 | U | 1.0 | 0.82 | ug/L | | | 09/09/20 04:29 | 1 |
| Carbon tetrachloride | 0.21 | U | 1.0 | 0.21 | ug/L | | | 09/09/20 04:29 | 1 |
| Chlorobenzene | 0.38 | U | 1.0 | 0.38 | ug/L | | | 09/09/20 04:29 | 1 |
| Chlorobromomethane | 0.41 | U | 1.0 | 0.41 | ug/L | | | 09/09/20 04:29 | 1 |
| Chlorodibromomethane | 0.28 | U | 1.0 | 0.28 | ug/L | | | 09/09/20 04:29 | 1 |
| Chloroethane | 0.32 | U | 1.0 | 0.32 | ug/L | | | 09/09/20 04:29 | 1 |
| Chloroform | 0.33 | U | 1.0 | 0.33 | ug/L | | | 09/09/20 04:29 | 1 |
| Chloromethane | 0.40 | U | 1.0 | 0.40 | ug/L | | | 09/09/20 04:29 | 1 |
| cis-1,2-Dichloroethene | 0.22 | U | 1.0 | 0.22 | ug/L | | | 09/09/20 04:29 | 1 |
| cis-1,3-Dichloropropene | 0.22 | U | 1.0 | 0.22 | ug/L | | | 09/09/20 04:29 | 1 |
| Cyclohexane | 0.32 | U | 1.0 | 0.32 | ug/L | | | 09/09/20 04:29 | 1 |
| Dichlorobromomethane | 0.34 | U | 1.0 | 0.34 | ug/L | | | 09/09/20 04:29 | 1 |
| Dichlorodifluoromethane | 0.31 | U | 1.0 | 0.31 | ug/L | | | 09/09/20 04:29 | 1 |
| Ethylbenzene | 0.30 | U | 1.0 | 0.30 | ug/L | | | 09/09/20 04:29 | 1 |
| Ethylene Dibromide | 0.50 | U | 1.0 | 0.50 | ug/L | | | 09/09/20 04:29 | 1 |
| Isopropylbenzene | 0.34 | U | 1.0 | 0.34 | ug/L | | | 09/09/20 04:29 | 1 |
| Methyl acetate | 0.79 | U | 5.0 | 0.79 | ug/L | | | 09/09/20 04:29 | 1 |
| Methyl tert-butyl ether | 0.47 | U | 1.0 | 0.47 | ug/L | | | 09/09/20 04:29 | 1 |
| Methylcyclohexane | 0.26 | U | 1.0 | 0.26 | ug/L | | | 09/09/20 04:29 | 1 |
| Methylene Chloride | 0.32 | U | 1.0 | 0.32 | ug/L | | | 09/09/20 04:29 | 1 |
| m-Xylene & p-Xylene | 0.30 | U | 1.0 | 0.30 | ug/L | | | 09/09/20 04:29 | 1 |
| o-Xylene | 0.36 | U | 1.0 | 0.36 | ug/L | | | 09/09/20 04:29 | 1 |
| Styrene | 0.42 | U | 1.0 | 0.42 | ug/L | | | 09/09/20 04:29 | 1 |
| Tetrachloroethene | 0.25 | U | 1.0 | 0.25 | ug/L | | | 09/09/20 04:29 | 1 |
| Toluene | 0.38 | U | 1.0 | 0.38 | ug/L | | | 09/09/20 04:29 | 1 |
| trans-1,2-Dichloroethene | 0.24 | U | 1.0 | 0.24 | ug/L | | | 09/09/20 04:29 | 1 |
| trans-1,3-Dichloropropene | 0.49 | U | 1.0 | 0.49 | ug/L | | | 09/09/20 04:29 | 1 |
| Trichloroethene | 0.31 | U | 1.0 | 0.31 | ug/L | | | 09/09/20 04:29 | 1 |
| **Trichlorofluoromethane** | **5.6** | | 1.0 | 0.32 | ug/L | | | 09/09/20 04:29 | 1 |
| Vinyl chloride | 0.17 | U | 1.0 | 0.17 | ug/L | | | 09/09/20 04:29 | 1 |

## Client Sample ID: MW-217

**Date Collected: 09/03/20 12:35**
**Date Received: 09/04/20 16:25**

## Lab Sample ID: 460-217659-7

**Matrix: Water**

### Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,2-Dichloroethane | 0.43 | U * | 1.0 | 0.43 | ug/L | | | 09/09/20 04:29 | 1 |
| 1,2-Dichlorobenzene | 0.43 | U | 1.0 | 0.43 | ug/L | | | 09/09/20 04:29 | 1 |
| 1,2-Dibromo-3-Chloropropane | 0.38 | U | 1.0 | 0.38 | ug/L | | | 09/09/20 04:29 | 1 |

| *Tentatively Identified Compound* | *Est. Result* | *Qualifier* | *Unit* | *D* | *RT* | *CAS No.* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|---|---|---|
| *Tentatively Identified Compound* | *None* | | *ug/L* | | | | | *09/09/20 04:29* | *1* |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1,2-Dichloroethane-d4 (Surr)* | *76* | | *75 - 123* | | *09/09/20 04:29* | *1* |
| *4-Bromofluorobenzene* | *84* | | *76 - 120* | | *09/09/20 04:29* | *1* |
| *Dibromofluoromethane (Surr)* | *83* | | *77 - 124* | | *09/09/20 04:29* | *1* |
| *Toluene-d8 (Surr)* | *89* | | *80 - 120* | | *09/09/20 04:29* | *1* |

### Method: 537 (modified) - Fluorinated Alkyl Substances

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Perfluorobutanoic acid (PFBA)** | **3.68** | **B** | 1.88 | 0.33 | ng/L | | 09/09/20 18:39 | 09/10/20 19:32 | 1 |
| **Perfluoropentanoic acid (PFPeA)** | **1.57** | **J** | 1.88 | 0.46 | ng/L | | 09/09/20 18:39 | 09/10/20 19:32 | 1 |
| **Perfluorohexanoic acid (PFHxA)** | **2.59** | | 1.88 | 0.54 | ng/L | | 09/09/20 18:39 | 09/10/20 19:32 | 1 |
| **Perfluoroheptanoic acid (PFHpA)** | **2.07** | | 1.88 | 0.23 | ng/L | | 09/09/20 18:39 | 09/10/20 19:32 | 1 |
| **Perfluorooctanoic acid (PFOA)** | **13.8** | | 1.88 | 0.80 | ng/L | | 09/09/20 18:39 | 09/10/20 19:32 | 1 |
| **Perfluorononanoic acid (PFNA)** | **1.51** | **J** | 1.88 | 0.25 | ng/L | | 09/09/20 18:39 | 09/10/20 19:32 | 1 |
| **Perfluorodecanoic acid (PFDA)** | **0.71** | **J** | 1.88 | 0.29 | ng/L | | 09/09/20 18:39 | 09/10/20 19:32 | 1 |
| Perfluoroundecanoic acid (PFUnA) | 1.03 | U | 1.88 | 1.03 | ng/L | | 09/09/20 18:39 | 09/10/20 19:32 | 1 |
| Perfluorododecanoic acid (PFDoA) | 0.52 | U | 1.88 | 0.52 | ng/L | | 09/09/20 18:39 | 09/10/20 19:32 | 1 |
| Perfluorotridecanoic acid (PFTriA) | 1.22 | U | 1.88 | 1.22 | ng/L | | 09/09/20 18:39 | 09/10/20 19:32 | 1 |
| Perfluorotetradecanoic acid (PFTeA) | 0.27 | U | 1.88 | 0.27 | ng/L | | 09/09/20 18:39 | 09/10/20 19:32 | 1 |
| **Perfluorobutanesulfonic acid (PFBS)** | **2.13** | | 1.88 | 0.19 | ng/L | | 09/09/20 18:39 | 09/10/20 19:32 | 1 |
| **Perfluorohexanesulfonic acid (PFHxS)** | **4.48** | **B** | 1.88 | 0.16 | ng/L | | 09/09/20 18:39 | 09/10/20 19:32 | 1 |
| **Perfluoroheptanesulfonic Acid (PFHpS)** | **0.61** | **J** | 1.88 | 0.18 | ng/L | | 09/09/20 18:39 | 09/10/20 19:32 | 1 |
| **Perfluorooctanesulfonic acid (PFOS)** | **42.1** | | 1.88 | 0.51 | ng/L | | 09/09/20 18:39 | 09/10/20 19:32 | 1 |
| Perfluorodecanesulfonic acid (PFDS) | 0.30 | U | 1.88 | 0.30 | ng/L | | 09/09/20 18:39 | 09/10/20 19:32 | 1 |
| **Perfluorooctanesulfonamide (FOSA)** | **1.21** | **J** | 1.88 | 0.33 | ng/L | | 09/09/20 18:39 | 09/10/20 19:32 | 1 |
| N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA) | 2.91 | U | 18.8 | 2.91 | ng/L | | 09/09/20 18:39 | 09/10/20 19:32 | 1 |
| N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA) | 1.79 | U | 18.8 | 1.79 | ng/L | | 09/09/20 18:39 | 09/10/20 19:32 | 1 |
| **6:2 FTS** | **4.04** | **J** | 18.8 | 1.88 | ng/L | | 09/09/20 18:39 | 09/10/20 19:32 | 1 |
| 8:2 FTS | 1.88 | U | 18.8 | 1.88 | ng/L | | 09/09/20 18:39 | 09/10/20 19:32 | 1 |

| *Isotope Dilution* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *13C4 PFBA* | *43* | | *25 - 150* | *09/09/20 18:39* | *09/10/20 19:32* | *1* |
| *13C5 PFPeA* | *50* | | *25 - 150* | *09/09/20 18:39* | *09/10/20 19:32* | *1* |
| *13C2 PFHxA* | *63* | | *25 - 150* | *09/09/20 18:39* | *09/10/20 19:32* | *1* |
| *13C4 PFHpA* | *64* | | *25 - 150* | *09/09/20 18:39* | *09/10/20 19:32* | *1* |
| *13C4 PFOA* | *63* | | *25 - 150* | *09/09/20 18:39* | *09/10/20 19:32* | *1* |
| *13C5 PFNA* | *68* | | *25 - 150* | *09/09/20 18:39* | *09/10/20 19:32* | *1* |
| *13C2 PFDA* | *65* | | *25 - 150* | *09/09/20 18:39* | *09/10/20 19:32* | *1* |
| *13C2 PFUnA* | *63* | | *25 - 150* | *09/09/20 18:39* | *09/10/20 19:32* | *1* |

## Client Sample ID: MW-217

**Lab Sample ID: 460-217659-7**

**Date Collected: 09/03/20 12:35**
**Matrix: Water**
**Date Received: 09/04/20 16:25**

### Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

| *Isotope Dilution* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *13C2 PFDoA* | *58* | | *25 - 150* | *09/09/20 18:39* | *09/10/20 19:32* | *1* |
| *13C2 PFTeDA* | *52* | | *25 - 150* | *09/09/20 18:39* | *09/10/20 19:32* | *1* |
| *13C3 PFBS* | *79* | | *25 - 150* | *09/09/20 18:39* | *09/10/20 19:32* | *1* |
| *18O2 PFHxS* | *85* | | *25 - 150* | *09/09/20 18:39* | *09/10/20 19:32* | *1* |
| *13C4 PFOS* | *82* | | *25 - 150* | *09/09/20 18:39* | *09/10/20 19:32* | *1* |
| *13C8 FOSA* | *67* | | *25 - 150* | *09/09/20 18:39* | *09/10/20 19:32* | *1* |
| *d3-NMeFOSAA* | *62* | | *25 - 150* | *09/09/20 18:39* | *09/10/20 19:32* | *1* |
| *d5-NEtFOSAA* | *69* | | *25 - 150* | *09/09/20 18:39* | *09/10/20 19:32* | *1* |
| *M2-6:2 FTS* | *106* | | *25 - 150* | *09/09/20 18:39* | *09/10/20 19:32* | *1* |
| *M2-8:2 FTS* | *100* | | *25 - 150* | *09/09/20 18:39* | *09/10/20 19:32* | *1* |

## Client Sample ID: FB

**Lab Sample ID: 460-217659-8**

**Date Collected: 09/03/20 15:00**
**Matrix: Water**
**Date Received: 09/04/20 16:25**

### Method: 8260C - Volatile Organic Compounds by GC/MS

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1-Trichloroethane | 0.24 | U | 1.0 | 0.24 | ug/L | | | 09/08/20 23:18 | 1 |
| 1,1,2,2-Tetrachloroethane | 0.37 | U | 1.0 | 0.37 | ug/L | | | 09/08/20 23:18 | 1 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 0.31 | U | 1.0 | 0.31 | ug/L | | | 09/08/20 23:18 | 1 |
| 1,1,2-Trichloroethane | 0.43 | U | 1.0 | 0.43 | ug/L | | | 09/08/20 23:18 | 1 |
| 1,1-Dichloroethane | 0.26 | U | 1.0 | 0.26 | ug/L | | | 09/08/20 23:18 | 1 |
| 1,1-Dichloroethene | 0.26 | U | 1.0 | 0.26 | ug/L | | | 09/08/20 23:18 | 1 |
| 1,2,3-Trichlorobenzene | 0.36 | U | 1.0 | 0.36 | ug/L | | | 09/08/20 23:18 | 1 |
| 1,2,4-Trichlorobenzene | 0.37 | U | 1.0 | 0.37 | ug/L | | | 09/08/20 23:18 | 1 |
| 1,2-Dichloropropane | 0.35 | U | 1.0 | 0.35 | ug/L | | | 09/08/20 23:18 | 1 |
| 1,3-Dichlorobenzene | 0.34 | U | 1.0 | 0.34 | ug/L | | | 09/08/20 23:18 | 1 |
| 1,4-Dichlorobenzene | 0.33 | U | 1.0 | 0.33 | ug/L | | | 09/08/20 23:18 | 1 |
| 1,4-Dioxane | 28 | U | 50 | 28 | ug/L | | | 09/08/20 23:18 | 1 |
| 2-Butanone (MEK) | 1.9 | U | 5.0 | 1.9 | ug/L | | | 09/08/20 23:18 | 1 |
| 2-Hexanone | 1.1 | U | 5.0 | 1.1 | ug/L | | | 09/08/20 23:18 | 1 |
| 4-Methyl-2-pentanone (MIBK) | 1.3 | U | 5.0 | 1.3 | ug/L | | | 09/08/20 23:18 | 1 |
| Acetone | 4.4 | U | 5.0 | 4.4 | ug/L | | | 09/08/20 23:18 | 1 |
| Benzene | 0.20 | U | 1.0 | 0.20 | ug/L | | | 09/08/20 23:18 | 1 |
| Bromoform | 0.54 | U | 1.0 | 0.54 | ug/L | | | 09/08/20 23:18 | 1 |
| Bromomethane | 0.55 | U | 1.0 | 0.55 | ug/L | | | 09/08/20 23:18 | 1 |
| Carbon disulfide | 0.82 | U | 1.0 | 0.82 | ug/L | | | 09/08/20 23:18 | 1 |
| Carbon tetrachloride | 0.21 | U | 1.0 | 0.21 | ug/L | | | 09/08/20 23:18 | 1 |
| Chlorobenzene | 0.38 | U | 1.0 | 0.38 | ug/L | | | 09/08/20 23:18 | 1 |
| Chlorobromomethane | 0.41 | U | 1.0 | 0.41 | ug/L | | | 09/08/20 23:18 | 1 |
| Chlorodibromomethane | 0.28 | U | 1.0 | 0.28 | ug/L | | | 09/08/20 23:18 | 1 |
| Chloroethane | 0.32 | U | 1.0 | 0.32 | ug/L | | | 09/08/20 23:18 | 1 |
| Chloroform | 0.33 | U | 1.0 | 0.33 | ug/L | | | 09/08/20 23:18 | 1 |
| Chloromethane | 0.40 | U | 1.0 | 0.40 | ug/L | | | 09/08/20 23:18 | 1 |
| cis-1,2-Dichloroethene | 0.22 | U | 1.0 | 0.22 | ug/L | | | 09/08/20 23:18 | 1 |
| cis-1,3-Dichloropropene | 0.22 | U | 1.0 | 0.22 | ug/L | | | 09/08/20 23:18 | 1 |
| Cyclohexane | 0.32 | U | 1.0 | 0.32 | ug/L | | | 09/08/20 23:18 | 1 |
| Dichlorobromomethane | 0.34 | U | 1.0 | 0.34 | ug/L | | | 09/08/20 23:18 | 1 |
| Dichlorodifluoromethane | 0.31 | U | 1.0 | 0.31 | ug/L | | | 09/08/20 23:18 | 1 |
| Ethylbenzene | 0.30 | U | 1.0 | 0.30 | ug/L | | | 09/08/20 23:18 | 1 |

## Client Sample ID: FB

**Date Collected: 09/03/20 15:00**
**Date Received: 09/04/20 16:25**

## Lab Sample ID: 460-217659-8

**Matrix: Water**

### Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Ethylene Dibromide | 0.50 | U | 1.0 | 0.50 | ug/L | | | 09/08/20 23:18 | 1 |
| Isopropylbenzene | 0.34 | U | 1.0 | 0.34 | ug/L | | | 09/08/20 23:18 | 1 |
| Methyl acetate | 0.79 | U | 5.0 | 0.79 | ug/L | | | 09/08/20 23:18 | 1 |
| Methyl tert-butyl ether | 0.47 | U | 1.0 | 0.47 | ug/L | | | 09/08/20 23:18 | 1 |
| Methylcyclohexane | 0.26 | U | 1.0 | 0.26 | ug/L | | | 09/08/20 23:18 | 1 |
| **Methylene Chloride** | **1.0** | | 1.0 | 0.32 | ug/L | | | 09/08/20 23:18 | 1 |
| m-Xylene & p-Xylene | 0.30 | U | 1.0 | 0.30 | ug/L | | | 09/08/20 23:18 | 1 |
| o-Xylene | 0.36 | U | 1.0 | 0.36 | ug/L | | | 09/08/20 23:18 | 1 |
| Styrene | 0.42 | U | 1.0 | 0.42 | ug/L | | | 09/08/20 23:18 | 1 |
| Tetrachloroethene | 0.25 | U | 1.0 | 0.25 | ug/L | | | 09/08/20 23:18 | 1 |
| Toluene | 0.38 | U | 1.0 | 0.38 | ug/L | | | 09/08/20 23:18 | 1 |
| trans-1,2-Dichloroethene | 0.24 | U | 1.0 | 0.24 | ug/L | | | 09/08/20 23:18 | 1 |
| trans-1,3-Dichloropropene | 0.49 | U | 1.0 | 0.49 | ug/L | | | 09/08/20 23:18 | 1 |
| Trichloroethene | 0.31 | U | 1.0 | 0.31 | ug/L | | | 09/08/20 23:18 | 1 |
| Trichlorofluoromethane | 0.32 | U | 1.0 | 0.32 | ug/L | | | 09/08/20 23:18 | 1 |
| Vinyl chloride | 0.17 | U | 1.0 | 0.17 | ug/L | | | 09/08/20 23:18 | 1 |
| 1,2-Dichloroethane | 0.43 | U * | 1.0 | 0.43 | ug/L | | | 09/08/20 23:18 | 1 |
| 1,2-Dichlorobenzene | 0.43 | U | 1.0 | 0.43 | ug/L | | | 09/08/20 23:18 | 1 |
| 1,2-Dibromo-3-Chloropropane | 0.38 | U | 1.0 | 0.38 | ug/L | | | 09/08/20 23:18 | 1 |

| *Tentatively Identified Compound* | *Est. Result* | *Qualifier* | *Unit* | *D* | *RT* | *CAS No.* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|---|---|---|
| *Tentatively Identified Compound* | *None* | | *ug/L* | | | | | *09/08/20 23:18* | *1* |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1,2-Dichloroethane-d4 (Surr)* | *72* | *X* | *75 - 123* | | *09/08/20 23:18* | *1* |
| *4-Bromofluorobenzene* | *93* | | *76 - 120* | | *09/08/20 23:18* | *1* |
| *Dibromofluoromethane (Surr)* | *85* | | *77 - 124* | | *09/08/20 23:18* | *1* |
| *Toluene-d8 (Surr)* | *98* | | *80 - 120* | | *09/08/20 23:18* | *1* |

### Method: 537 (modified) - Fluorinated Alkyl Substances

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Perfluorobutanoic acid (PFBA) | 0.32 | U | 1.82 | 0.32 | ng/L | | 09/09/20 18:39 | 09/10/20 20:00 | 1 |
| Perfluoropentanoic acid (PFPeA) | 0.45 | U | 1.82 | 0.45 | ng/L | | 09/09/20 18:39 | 09/10/20 20:00 | 1 |
| Perfluorohexanoic acid (PFHxA) | 0.53 | U | 1.82 | 0.53 | ng/L | | 09/09/20 18:39 | 09/10/20 20:00 | 1 |
| Perfluoroheptanoic acid (PFHpA) | 0.23 | U | 1.82 | 0.23 | ng/L | | 09/09/20 18:39 | 09/10/20 20:00 | 1 |
| Perfluorooctanoic acid (PFOA) | 0.77 | U | 1.82 | 0.77 | ng/L | | 09/09/20 18:39 | 09/10/20 20:00 | 1 |
| Perfluorononanoic acid (PFNA) | 0.25 | U | 1.82 | 0.25 | ng/L | | 09/09/20 18:39 | 09/10/20 20:00 | 1 |
| Perfluorodecanoic acid (PFDA) | 0.28 | U | 1.82 | 0.28 | ng/L | | 09/09/20 18:39 | 09/10/20 20:00 | 1 |
| Perfluoroundecanoic acid (PFUnA) | 1.0 | U | 1.82 | 1.0 | ng/L | | 09/09/20 18:39 | 09/10/20 20:00 | 1 |
| Perfluorododecanoic acid (PFDoA) | 0.50 | U | 1.82 | 0.50 | ng/L | | 09/09/20 18:39 | 09/10/20 20:00 | 1 |
| Perfluorotridecanoic acid (PFTriA) | 1.18 | U | 1.82 | 1.18 | ng/L | | 09/09/20 18:39 | 09/10/20 20:00 | 1 |
| Perfluorotetradecanoic acid (PFTeA) | 0.26 | U | 1.82 | 0.26 | ng/L | | 09/09/20 18:39 | 09/10/20 20:00 | 1 |
| Perfluorobutanesulfonic acid (PFBS) | 0.18 | U | 1.82 | 0.18 | ng/L | | 09/09/20 18:39 | 09/10/20 20:00 | 1 |
| **Perfluorohexanesulfonic acid (PFHxS)** | **0.28** | **J B** | 1.82 | 0.15 | ng/L | | 09/09/20 18:39 | 09/10/20 20:00 | 1 |
| Perfluoroheptanesulfonic Acid (PFHpS) | 0.17 | U | 1.82 | 0.17 | ng/L | | 09/09/20 18:39 | 09/10/20 20:00 | 1 |
| Perfluorooctanesulfonic acid (PFOS) | 0.49 | U | 1.82 | 0.49 | ng/L | | 09/09/20 18:39 | 09/10/20 20:00 | 1 |
| Perfluorodecanesulfonic acid (PFDS) | 0.29 | U | 1.82 | 0.29 | ng/L | | 09/09/20 18:39 | 09/10/20 20:00 | 1 |
| Perfluorooctanesulfonamide (FOSA) | 0.32 | U | 1.82 | 0.32 | ng/L | | 09/09/20 18:39 | 09/10/20 20:00 | 1 |

## Client Sample ID: FB

**Date Collected: 09/03/20 15:00**
**Date Received: 09/04/20 16:25**

**Lab Sample ID: 460-217659-8**
**Matrix: Water**

### Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA) | 2.82 | U | 18.2 | 2.82 | ng/L | | 09/09/20 18:39 | 09/10/20 20:00 | 1 |
| N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA) | 1.73 | U | 18.2 | 1.73 | ng/L | | 09/09/20 18:39 | 09/10/20 20:00 | 1 |
| 6:2 FTS | 1.82 | U | 18.2 | 1.82 | ng/L | | 09/09/20 18:39 | 09/10/20 20:00 | 1 |
| 8:2 FTS | 1.82 | U | 18.2 | 1.82 | ng/L | | 09/09/20 18:39 | 09/10/20 20:00 | 1 |

| *Isotope Dilution* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *13C4 PFBA* | *83* | | *25 - 150* | *09/09/20 18:39* | *09/10/20 20:00* | *1* |
| *13C5 PFPeA* | *87* | | *25 - 150* | *09/09/20 18:39* | *09/10/20 20:00* | *1* |
| *13C2 PFHxA* | *88* | | *25 - 150* | *09/09/20 18:39* | *09/10/20 20:00* | *1* |
| *13C4 PFHpA* | *86* | | *25 - 150* | *09/09/20 18:39* | *09/10/20 20:00* | *1* |
| *13C4 PFOA* | *81* | | *25 - 150* | *09/09/20 18:39* | *09/10/20 20:00* | *1* |
| *13C5 PFNA* | *86* | | *25 - 150* | *09/09/20 18:39* | *09/10/20 20:00* | *1* |
| *13C2 PFDA* | *82* | | *25 - 150* | *09/09/20 18:39* | *09/10/20 20:00* | *1* |
| *13C2 PFUnA* | *77* | | *25 - 150* | *09/09/20 18:39* | *09/10/20 20:00* | *1* |
| *13C2 PFDoA* | *77* | | *25 - 150* | *09/09/20 18:39* | *09/10/20 20:00* | *1* |
| *13C2 PFTeDA* | *68* | | *25 - 150* | *09/09/20 18:39* | *09/10/20 20:00* | *1* |
| *13C3 PFBS* | *98* | | *25 - 150* | *09/09/20 18:39* | *09/10/20 20:00* | *1* |
| *18O2 PFHxS* | *93* | | *25 - 150* | *09/09/20 18:39* | *09/10/20 20:00* | *1* |
| *13C4 PFOS* | *92* | | *25 - 150* | *09/09/20 18:39* | *09/10/20 20:00* | *1* |
| *13C8 FOSA* | *80* | | *25 - 150* | *09/09/20 18:39* | *09/10/20 20:00* | *1* |
| *d3-NMeFOSAA* | *77* | | *25 - 150* | *09/09/20 18:39* | *09/10/20 20:00* | *1* |
| *d5-NEtFOSAA* | *82* | | *25 - 150* | *09/09/20 18:39* | *09/10/20 20:00* | *1* |
| *M2-6:2 FTS* | *93* | | *25 - 150* | *09/09/20 18:39* | *09/10/20 20:00* | *1* |
| *M2-8:2 FTS* | *93* | | *25 - 150* | *09/09/20 18:39* | *09/10/20 20:00* | *1* |

## Client Sample ID: TB

**Date Collected: 09/03/20 15:00**
**Date Received: 09/04/20 16:25**

**Lab Sample ID: 460-217659-9**
**Matrix: Water**

### Method: 8260C - Volatile Organic Compounds by GC/MS

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1-Trichloroethane | 0.24 | U | 1.0 | 0.24 | ug/L | | | 09/08/20 23:42 | 1 |
| 1,1,2,2-Tetrachloroethane | 0.37 | U | 1.0 | 0.37 | ug/L | | | 09/08/20 23:42 | 1 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 0.31 | U | 1.0 | 0.31 | ug/L | | | 09/08/20 23:42 | 1 |
| 1,1,2-Trichloroethane | 0.43 | U | 1.0 | 0.43 | ug/L | | | 09/08/20 23:42 | 1 |
| 1,1-Dichloroethane | 0.26 | U | 1.0 | 0.26 | ug/L | | | 09/08/20 23:42 | 1 |
| 1,1-Dichloroethene | 0.26 | U | 1.0 | 0.26 | ug/L | | | 09/08/20 23:42 | 1 |
| 1,2,3-Trichlorobenzene | 0.36 | U | 1.0 | 0.36 | ug/L | | | 09/08/20 23:42 | 1 |
| 1,2,4-Trichlorobenzene | 0.37 | U | 1.0 | 0.37 | ug/L | | | 09/08/20 23:42 | 1 |
| 1,2-Dichloropropane | 0.35 | U | 1.0 | 0.35 | ug/L | | | 09/08/20 23:42 | 1 |
| 1,3-Dichlorobenzene | 0.34 | U | 1.0 | 0.34 | ug/L | | | 09/08/20 23:42 | 1 |
| 1,4-Dichlorobenzene | 0.33 | U | 1.0 | 0.33 | ug/L | | | 09/08/20 23:42 | 1 |
| 1,4-Dioxane | 28 | U | 50 | 28 | ug/L | | | 09/08/20 23:42 | 1 |
| 2-Butanone (MEK) | 1.9 | U | 5.0 | 1.9 | ug/L | | | 09/08/20 23:42 | 1 |
| 2-Hexanone | 1.1 | U | 5.0 | 1.1 | ug/L | | | 09/08/20 23:42 | 1 |
| 4-Methyl-2-pentanone (MIBK) | 1.3 | U | 5.0 | 1.3 | ug/L | | | 09/08/20 23:42 | 1 |
| Acetone | 4.4 | U | 5.0 | 4.4 | ug/L | | | 09/08/20 23:42 | 1 |
| Benzene | 0.20 | U | 1.0 | 0.20 | ug/L | | | 09/08/20 23:42 | 1 |
| Bromoform | 0.54 | U | 1.0 | 0.54 | ug/L | | | 09/08/20 23:42 | 1 |

## Client Sample ID: TB

**Date Collected: 09/03/20 15:00**
**Date Received: 09/04/20 16:25**

## Lab Sample ID: 460-217659-9

**Matrix: Water**

### Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Bromomethane | 0.55 | U | 1.0 | 0.55 | ug/L | | | 09/08/20 23:42 | 1 |
| Carbon disulfide | 0.82 | U | 1.0 | 0.82 | ug/L | | | 09/08/20 23:42 | 1 |
| Carbon tetrachloride | 0.21 | U | 1.0 | 0.21 | ug/L | | | 09/08/20 23:42 | 1 |
| Chlorobenzene | 0.38 | U | 1.0 | 0.38 | ug/L | | | 09/08/20 23:42 | 1 |
| Chlorobromomethane | 0.41 | U | 1.0 | 0.41 | ug/L | | | 09/08/20 23:42 | 1 |
| Chlorodibromomethane | 0.28 | U | 1.0 | 0.28 | ug/L | | | 09/08/20 23:42 | 1 |
| Chloroethane | 0.32 | U | 1.0 | 0.32 | ug/L | | | 09/08/20 23:42 | 1 |
| Chloroform | 0.33 | U | 1.0 | 0.33 | ug/L | | | 09/08/20 23:42 | 1 |
| Chloromethane | 0.40 | U | 1.0 | 0.40 | ug/L | | | 09/08/20 23:42 | 1 |
| cis-1,2-Dichloroethene | 0.22 | U | 1.0 | 0.22 | ug/L | | | 09/08/20 23:42 | 1 |
| cis-1,3-Dichloropropene | 0.22 | U | 1.0 | 0.22 | ug/L | | | 09/08/20 23:42 | 1 |
| Cyclohexane | 0.32 | U | 1.0 | 0.32 | ug/L | | | 09/08/20 23:42 | 1 |
| Dichlorobromomethane | 0.34 | U | 1.0 | 0.34 | ug/L | | | 09/08/20 23:42 | 1 |
| Dichlorodifluoromethane | 0.31 | U | 1.0 | 0.31 | ug/L | | | 09/08/20 23:42 | 1 |
| Ethylbenzene | 0.30 | U | 1.0 | 0.30 | ug/L | | | 09/08/20 23:42 | 1 |
| Ethylene Dibromide | 0.50 | U | 1.0 | 0.50 | ug/L | | | 09/08/20 23:42 | 1 |
| Isopropylbenzene | 0.34 | U | 1.0 | 0.34 | ug/L | | | 09/08/20 23:42 | 1 |
| Methyl acetate | 0.79 | U | 5.0 | 0.79 | ug/L | | | 09/08/20 23:42 | 1 |
| Methyl tert-butyl ether | 0.47 | U | 1.0 | 0.47 | ug/L | | | 09/08/20 23:42 | 1 |
| Methylcyclohexane | 0.26 | U | 1.0 | 0.26 | ug/L | | | 09/08/20 23:42 | 1 |
| Methylene Chloride | 0.32 | U | 1.0 | 0.32 | ug/L | | | 09/08/20 23:42 | 1 |
| m-Xylene & p-Xylene | 0.30 | U | 1.0 | 0.30 | ug/L | | | 09/08/20 23:42 | 1 |
| o-Xylene | 0.36 | U | 1.0 | 0.36 | ug/L | | | 09/08/20 23:42 | 1 |
| Styrene | 0.42 | U | 1.0 | 0.42 | ug/L | | | 09/08/20 23:42 | 1 |
| Tetrachloroethene | 0.25 | U | 1.0 | 0.25 | ug/L | | | 09/08/20 23:42 | 1 |
| Toluene | 0.38 | U | 1.0 | 0.38 | ug/L | | | 09/08/20 23:42 | 1 |
| trans-1,2-Dichloroethene | 0.24 | U | 1.0 | 0.24 | ug/L | | | 09/08/20 23:42 | 1 |
| trans-1,3-Dichloropropene | 0.49 | U | 1.0 | 0.49 | ug/L | | | 09/08/20 23:42 | 1 |
| Trichloroethene | 0.31 | U | 1.0 | 0.31 | ug/L | | | 09/08/20 23:42 | 1 |
| Trichlorofluoromethane | 0.32 | U | 1.0 | 0.32 | ug/L | | | 09/08/20 23:42 | 1 |
| Vinyl chloride | 0.17 | U | 1.0 | 0.17 | ug/L | | | 09/08/20 23:42 | 1 |
| 1,2-Dichloroethane | 0.43 | U * | 1.0 | 0.43 | ug/L | | | 09/08/20 23:42 | 1 |
| 1,2-Dichlorobenzene | 0.43 | U | 1.0 | 0.43 | ug/L | | | 09/08/20 23:42 | 1 |
| 1,2-Dibromo-3-Chloropropane | 0.38 | U | 1.0 | 0.38 | ug/L | | | 09/08/20 23:42 | 1 |

| *Tentatively Identified Compound* | *Est. Result* | *Qualifier* | *Unit* | *D* | *RT* | *CAS No.* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|---|---|---|
| *Tentatively Identified Compound* | *None* | | *ug/L* | | | | | *09/08/20 23:42* | *1* |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1,2-Dichloroethane-d4 (Surr)* | *79* | | *75 - 123* | | *09/08/20 23:42* | *1* |
| *4-Bromofluorobenzene* | *87* | | *76 - 120* | | *09/08/20 23:42* | *1* |
| *Dibromofluoromethane (Surr)* | *94* | | *77 - 124* | | *09/08/20 23:42* | *1* |
| *Toluene-d8 (Surr)* | *94* | | *80 - 120* | | *09/08/20 23:42* | *1* |

# Surrogate Summary

Client: SESI Consulting Engineers
Project/Site: Grossingers

Job ID: 460-217659-1

## Method: 8260C - Volatile Organic Compounds by GC/MS

**Matrix: Water**

**Prep Type: Total/NA**

| | | Percent Surrogate Recovery (Acceptance Limits) | | | |
|---|---|---|---|---|---|
| | | DCA | BFB | DBFM | TOL |
| Lab Sample ID | Client Sample ID | (75-123) | (76-120) | (77-124) | (80-120) |
| 460-217659-1 | MW-201 | 76 | 83 | 92 | 93 |
| 460-217659-2 | MW-207 | 75 | 84 | 88 | 95 |
| 460-217659-3 | MW-210 | 77 | 86 | 92 | 102 |
| 460-217659-4 | MW-211 | 77 | 90 | 89 | 104 |
| 460-217659-5 | MW-214 | 75 | 87 | 89 | 98 |
| 460-217659-6 | MW-216 | 80 | 83 | 86 | 90 |
| 460-217659-7 | MW-217 | 76 | 84 | 83 | 89 |
| 460-217659-8 | FB | 72 X | 93 | 85 | 98 |
| 460-217659-9 | TB | 79 | 87 | 94 | 94 |
| LCS 460-722587/4 | Lab Control Sample | 74 X | 85 | 86 | 96 |
| LCSD 460-722587/5 | Lab Control Sample Dup | 76 | 86 | 86 | 92 |
| MB 460-722587/8 | Method Blank | 61 X | 84 | 81 | 91 |

**Surrogate Legend**

DCA = 1,2-Dichloroethane-d4 (Surr)
BFB = 4-Bromofluorobenzene
DBFM = Dibromofluoromethane (Surr)
TOL = Toluene-d8 (Surr)

# Isotope Dilution Summary

Client: SESI Consulting Engineers
Project/Site: Grossingers

Job ID: 460-217659-1

## Method: 537 (modified) - Fluorinated Alkyl Substances

**Matrix: Water**

**Prep Type: Total/NA**

| | | Percent Isotope Dilution Recovery (Acceptance Limits) | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Lab Sample ID | Client Sample ID | PFBA (25-150) | PFPeA (25-150) | PFHxA (25-150) | C4PFHA (25-150) | PFOA (25-150) | PFNA (25-150) | PFDA (25-150) | PFUnA (25-150) |
| 460-217659-1 | MW-201 | 84 | 90 | 95 | 99 | 95 | 99 | 90 | 91 |
| 460-217659-2 | MW-207 | 51 | 55 | 70 | 70 | 69 | 67 | 64 | 56 |
| 460-217659-3 | MW-210 | 56 | 63 | 71 | 71 | 66 | 69 | 70 | 65 |
| 460-217659-4 | MW-211 | 78 | 84 | 92 | 93 | 87 | 93 | 88 | 85 |
| 460-217659-5 | MW-214 | 56 | 62 | 79 | 79 | 76 | 80 | 79 | 80 |
| 460-217659-6 | MW-216 | 34 | 37 | 43 | 43 | 41 | 44 | 42 | 35 |
| 460-217659-7 | MW-217 | 43 | 50 | 63 | 64 | 63 | 68 | 65 | 63 |
| 460-217659-8 | FB | 83 | 87 | 88 | 86 | 81 | 86 | 82 | 77 |
| LCS 320-410906/2-A | Lab Control Sample | 90 | 89 | 93 | 89 | 84 | 88 | 87 | 82 |
| LCSD 320-410906/3-A | Lab Control Sample Dup | 88 | 91 | 88 | 87 | 85 | 87 | 82 | 85 |
| MB 320-410906/1-A | Method Blank | 90 | 94 | 93 | 91 | 90 | 91 | 90 | 91 |

| | | Percent Isotope Dilution Recovery (Acceptance Limits) | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Lab Sample ID | Client Sample ID | PFDoA (25-150) | PFTDA (25-150) | C3PFBS (25-150) | PFHxS (25-150) | PFOS (25-150) | PFOSA (25-150) | d3NMFOS (25-150) | d5NEFOS (25-150) |
| 460-217659-1 | MW-201 | 77 | 88 | 100 | 106 | 106 | 93 | 91 | 96 |
| 460-217659-2 | MW-207 | 49 | 48 | 75 | 77 | 74 | 59 | 52 | 56 |
| 460-217659-3 | MW-210 | 58 | 60 | 84 | 86 | 81 | 68 | 62 | 66 |
| 460-217659-4 | MW-211 | 72 | 76 | 99 | 99 | 95 | 79 | 76 | 87 |
| 460-217659-5 | MW-214 | 70 | 74 | 87 | 92 | 86 | 75 | 67 | 77 |
| 460-217659-6 | MW-216 | 31 | 28 | 44 | 48 | 43 | 39 | 35 | 38 |
| 460-217659-7 | MW-217 | 58 | 52 | 79 | 85 | 82 | 67 | 62 | 69 |
| 460-217659-8 | FB | 77 | 68 | 98 | 93 | 92 | 80 | 77 | 82 |
| LCS 320-410906/2-A | Lab Control Sample | 75 | 73 | 101 | 99 | 94 | 85 | 82 | 84 |
| LCSD 320-410906/3-A | Lab Control Sample Dup | 75 | 69 | 96 | 97 | 94 | 83 | 82 | 86 |
| MB 320-410906/1-A | Method Blank | 79 | 79 | 98 | 100 | 97 | 83 | 87 | 90 |

| | | Percent Isotope Dilution Recovery (Acceptance Limits) | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Lab Sample ID | Client Sample ID | M262FTS (25-150) | M282FTS (25-150) | | | | | | |
| 460-217659-1 | MW-201 | 107 | 115 | | | | | | |
| 460-217659-2 | MW-207 | 109 | 83 | | | | | | |
| 460-217659-3 | MW-210 | 85 | 89 | | | | | | |
| 460-217659-4 | MW-211 | 104 | 110 | | | | | | |
| 460-217659-5 | MW-214 | 120 | 96 | | | | | | |
| 460-217659-6 | MW-216 | 59 | 55 | | | | | | |
| 460-217659-7 | MW-217 | 106 | 100 | | | | | | |
| 460-217659-8 | FB | 93 | 93 | | | | | | |
| LCS 320-410906/2-A | Lab Control Sample | 93 | 105 | | | | | | |
| LCSD 320-410906/3-A | Lab Control Sample Dup | 98 | 99 | | | | | | |
| MB 320-410906/1-A | Method Blank | 99 | 106 | | | | | | |

**Surrogate Legend**

PFBA = 13C4 PFBA
PFPeA = 13C5 PFPeA
PFHxA = 13C2 PFHxA
C4PFHA = 13C4 PFHpA
PFOA = 13C4 PFOA
PFNA = 13C5 PFNA
PFDA = 13C2 PFDA
PFUnA = 13C2 PFUnA

# Isotope Dilution Summary

Client: SESI Consulting Engineers
Job ID: 460-217659-1
Project/Site: Grossingers

PFDoA = 13C2 PFDoA
PFTDA = 13C2 PFTeDA
C3PFBS = 13C3 PFBS
PFHxS = 18O2 PFHxS
PFOS = 13C4 PFOS
PFOSA = 13C8 FOSA
d3NMFOS = d3-NMeFOSAA
d5NEFOS = d5-NEtFOSAA
M262FTS = M2-6:2 FTS
M282FTS = M2-8:2 FTS

## Method: 8260C - Volatile Organic Compounds by GC/MS

**Lab Sample ID: MB 460-722587/8**
**Matrix: Water**
**Analysis Batch: 722587**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1-Trichloroethane | 0.24 | U | 1.0 | 0.24 | ug/L | | | 09/08/20 22:54 | 1 |
| 1,1,2,2-Tetrachloroethane | 0.37 | U | 1.0 | 0.37 | ug/L | | | 09/08/20 22:54 | 1 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 0.31 | U | 1.0 | 0.31 | ug/L | | | 09/08/20 22:54 | 1 |
| 1,1,2-Trichloroethane | 0.43 | U | 1.0 | 0.43 | ug/L | | | 09/08/20 22:54 | 1 |
| 1,1-Dichloroethane | 0.26 | U | 1.0 | 0.26 | ug/L | | | 09/08/20 22:54 | 1 |
| 1,1-Dichloroethene | 0.26 | U | 1.0 | 0.26 | ug/L | | | 09/08/20 22:54 | 1 |
| 1,2,3-Trichlorobenzene | 0.36 | U | 1.0 | 0.36 | ug/L | | | 09/08/20 22:54 | 1 |
| 1,2,4-Trichlorobenzene | 0.37 | U | 1.0 | 0.37 | ug/L | | | 09/08/20 22:54 | 1 |
| 1,2-Dichloropropane | 0.35 | U | 1.0 | 0.35 | ug/L | | | 09/08/20 22:54 | 1 |
| 1,3-Dichlorobenzene | 0.34 | U | 1.0 | 0.34 | ug/L | | | 09/08/20 22:54 | 1 |
| 1,4-Dichlorobenzene | 0.33 | U | 1.0 | 0.33 | ug/L | | | 09/08/20 22:54 | 1 |
| 1,4-Dioxane | 28 | U | 50 | 28 | ug/L | | | 09/08/20 22:54 | 1 |
| 2-Butanone (MEK) | 1.9 | U | 5.0 | 1.9 | ug/L | | | 09/08/20 22:54 | 1 |
| 2-Hexanone | 1.1 | U | 5.0 | 1.1 | ug/L | | | 09/08/20 22:54 | 1 |
| 4-Methyl-2-pentanone (MIBK) | 1.3 | U | 5.0 | 1.3 | ug/L | | | 09/08/20 22:54 | 1 |
| Acetone | 4.4 | U | 5.0 | 4.4 | ug/L | | | 09/08/20 22:54 | 1 |
| Benzene | 0.20 | U | 1.0 | 0.20 | ug/L | | | 09/08/20 22:54 | 1 |
| Bromoform | 0.54 | U | 1.0 | 0.54 | ug/L | | | 09/08/20 22:54 | 1 |
| Bromomethane | 0.55 | U | 1.0 | 0.55 | ug/L | | | 09/08/20 22:54 | 1 |
| Carbon disulfide | 0.82 | U | 1.0 | 0.82 | ug/L | | | 09/08/20 22:54 | 1 |
| Carbon tetrachloride | 0.21 | U | 1.0 | 0.21 | ug/L | | | 09/08/20 22:54 | 1 |
| Chlorobenzene | 0.38 | U | 1.0 | 0.38 | ug/L | | | 09/08/20 22:54 | 1 |
| Chlorobromomethane | 0.41 | U | 1.0 | 0.41 | ug/L | | | 09/08/20 22:54 | 1 |
| Chlorodibromomethane | 0.28 | U | 1.0 | 0.28 | ug/L | | | 09/08/20 22:54 | 1 |
| Chloroethane | 0.32 | U | 1.0 | 0.32 | ug/L | | | 09/08/20 22:54 | 1 |
| Chloroform | 0.33 | U | 1.0 | 0.33 | ug/L | | | 09/08/20 22:54 | 1 |
| Chloromethane | 0.40 | U | 1.0 | 0.40 | ug/L | | | 09/08/20 22:54 | 1 |
| cis-1,2-Dichloroethene | 0.22 | U | 1.0 | 0.22 | ug/L | | | 09/08/20 22:54 | 1 |
| cis-1,3-Dichloropropene | 0.22 | U | 1.0 | 0.22 | ug/L | | | 09/08/20 22:54 | 1 |
| Cyclohexane | 0.32 | U | 1.0 | 0.32 | ug/L | | | 09/08/20 22:54 | 1 |
| Dichlorobromomethane | 0.34 | U | 1.0 | 0.34 | ug/L | | | 09/08/20 22:54 | 1 |
| Dichlorodifluoromethane | 0.31 | U | 1.0 | 0.31 | ug/L | | | 09/08/20 22:54 | 1 |
| Ethylbenzene | 0.30 | U | 1.0 | 0.30 | ug/L | | | 09/08/20 22:54 | 1 |
| Ethylene Dibromide | 0.50 | U | 1.0 | 0.50 | ug/L | | | 09/08/20 22:54 | 1 |
| Isopropylbenzene | 0.34 | U | 1.0 | 0.34 | ug/L | | | 09/08/20 22:54 | 1 |
| Methyl acetate | 0.79 | U | 5.0 | 0.79 | ug/L | | | 09/08/20 22:54 | 1 |
| Methyl tert-butyl ether | 0.47 | U | 1.0 | 0.47 | ug/L | | | 09/08/20 22:54 | 1 |
| Methylcyclohexane | 0.26 | U | 1.0 | 0.26 | ug/L | | | 09/08/20 22:54 | 1 |
| Methylene Chloride | 0.32 | U | 1.0 | 0.32 | ug/L | | | 09/08/20 22:54 | 1 |
| m-Xylene & p-Xylene | 0.30 | U | 1.0 | 0.30 | ug/L | | | 09/08/20 22:54 | 1 |
| o-Xylene | 0.36 | U | 1.0 | 0.36 | ug/L | | | 09/08/20 22:54 | 1 |
| Styrene | 0.42 | U | 1.0 | 0.42 | ug/L | | | 09/08/20 22:54 | 1 |
| Tetrachloroethene | 0.25 | U | 1.0 | 0.25 | ug/L | | | 09/08/20 22:54 | 1 |
| Toluene | 0.38 | U | 1.0 | 0.38 | ug/L | | | 09/08/20 22:54 | 1 |
| trans-1,2-Dichloroethene | 0.24 | U | 1.0 | 0.24 | ug/L | | | 09/08/20 22:54 | 1 |
| trans-1,3-Dichloropropene | 0.49 | U | 1.0 | 0.49 | ug/L | | | 09/08/20 22:54 | 1 |
| Trichloroethene | 0.31 | U | 1.0 | 0.31 | ug/L | | | 09/08/20 22:54 | 1 |
| Trichlorofluoromethane | 0.32 | U | 1.0 | 0.32 | ug/L | | | 09/08/20 22:54 | 1 |

## Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

**Lab Sample ID: MB 460-722587/8**
**Matrix: Water**
**Analysis Batch: 722587**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Vinyl chloride | 0.17 | U | 1.0 | 0.17 | ug/L | | | 09/08/20 22:54 | 1 |
| 1,2-Dichloroethane | 0.43 | U | 1.0 | 0.43 | ug/L | | | 09/08/20 22:54 | 1 |
| 1,2-Dichlorobenzene | 0.43 | U | 1.0 | 0.43 | ug/L | | | 09/08/20 22:54 | 1 |
| 1,2-Dibromo-3-Chloropropane | 0.38 | U | 1.0 | 0.38 | ug/L | | | 09/08/20 22:54 | 1 |

| *Tentatively Identified Compound* | *MB Est. Result* | *MB Qualifier* | *Unit* | *D* | *RT* | *CAS No.* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|---|---|---|
| *Tentatively Identified Compound* | *None* | | *ug/L* | | | | | *09/08/20 22:54* | *1* |

| *Surrogate* | *MB %Recovery* | *MB Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1,2-Dichloroethane-d4 (Surr)* | *61* | *X* | *75 - 123* | | *09/08/20 22:54* | *1* |
| *4-Bromofluorobenzene* | *84* | | *76 - 120* | | *09/08/20 22:54* | *1* |
| *Dibromofluoromethane (Surr)* | *81* | | *77 - 124* | | *09/08/20 22:54* | *1* |
| *Toluene-d8 (Surr)* | *91* | | *80 - 120* | | *09/08/20 22:54* | *1* |

**Lab Sample ID: LCS 460-722587/4**
**Matrix: Water**
**Analysis Batch: 722587**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| 1,1,1-Trichloroethane | 20.0 | 15.3 | | ug/L | | 77 | 68 - 128 |
| 1,1,2,2-Tetrachloroethane | 20.0 | 24.2 | | ug/L | | 121 | 63 - 139 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 20.0 | 18.9 | | ug/L | | 94 | 59 - 142 |
| 1,1,2-Trichloroethane | 20.0 | 20.9 | | ug/L | | 105 | 74 - 125 |
| 1,1-Dichloroethane | 20.0 | 16.3 | | ug/L | | 82 | 73 - 130 |
| 1,1-Dichloroethene | 20.0 | 19.6 | | ug/L | | 98 | 68 - 133 |
| 1,2,3-Trichlorobenzene | 20.0 | 21.4 | | ug/L | | 107 | 53 - 144 |
| 1,2,4-Trichlorobenzene | 20.0 | 18.0 | | ug/L | | 90 | 64 - 132 |
| 1,2-Dichloropropane | 20.0 | 18.9 | | ug/L | | 95 | 76 - 126 |
| 1,3-Dichlorobenzene | 20.0 | 20.4 | | ug/L | | 102 | 80 - 121 |
| 1,4-Dichlorobenzene | 20.0 | 20.2 | | ug/L | | 101 | 80 - 118 |
| 1,4-Dioxane | 400 | 487 | | ug/L | | 122 | 70 - 142 |
| 2-Butanone (MEK) | 100 | 98.0 | | ug/L | | 98 | 69 - 128 |
| 2-Hexanone | 100 | 99.9 | | ug/L | | 100 | 74 - 127 |
| 4-Methyl-2-pentanone (MIBK) | 100 | 98.1 | | ug/L | | 98 | 78 - 125 |
| Acetone | 100 | 94.2 | | ug/L | | 94 | 61 - 134 |
| Benzene | 20.0 | 17.9 | | ug/L | | 89 | 78 - 126 |
| Bromoform | 20.0 | 18.0 | | ug/L | | 90 | 38 - 144 |
| Bromomethane | 20.0 | 18.1 | | ug/L | | 90 | 10 - 150 |
| Carbon disulfide | 20.0 | 20.2 | | ug/L | | 101 | 64 - 138 |
| Carbon tetrachloride | 20.0 | 14.9 | | ug/L | | 75 | 56 - 131 |
| Chlorobenzene | 20.0 | 20.7 | | ug/L | | 103 | 80 - 119 |
| Chlorobromomethane | 20.0 | 20.9 | | ug/L | | 105 | 73 - 126 |
| Chlorodibromomethane | 20.0 | 19.2 | | ug/L | | 96 | 58 - 130 |
| Chloroethane | 20.0 | 21.2 | | ug/L | | 106 | 29 - 150 |
| Chloroform | 20.0 | 17.0 | | ug/L | | 85 | 78 - 125 |
| Chloromethane | 20.0 | 20.9 | | ug/L | | 105 | 38 - 150 |
| cis-1,2-Dichloroethene | 20.0 | 19.4 | | ug/L | | 97 | 78 - 121 |

## Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

**Lab Sample ID: LCS 460-722587/4**
**Matrix: Water**
**Analysis Batch: 722587**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| cis-1,3-Dichloropropene | 20.0 | 19.1 | | ug/L | | 96 | 74 - 125 |
| Cyclohexane | 20.0 | 17.5 | | ug/L | | 88 | 67 - 133 |
| Dichlorobromomethane | 20.0 | 16.3 | | ug/L | | 81 | 72 - 121 |
| Dichlorodifluoromethane | 20.0 | 14.4 | | ug/L | | 72 | 31 - 150 |
| Ethylbenzene | 20.0 | 20.2 | | ug/L | | 101 | 78 - 120 |
| Ethylene Dibromide | 20.0 | 20.2 | | ug/L | | 101 | 69 - 126 |
| Isopropylbenzene | 20.0 | 19.5 | | ug/L | | 97 | 79 - 125 |
| Methyl acetate | 40.0 | 38.2 | | ug/L | | 96 | 70 - 127 |
| Methyl tert-butyl ether | 20.0 | 17.5 | | ug/L | | 87 | 65 - 131 |
| Methylcyclohexane | 20.0 | 18.7 | | ug/L | | 93 | 60 - 139 |
| Methylene Chloride | 20.0 | 21.2 | | ug/L | | 106 | 74 - 127 |
| m-Xylene & p-Xylene | 20.0 | 19.7 | | ug/L | | 99 | 78 - 123 |
| o-Xylene | 20.0 | 20.1 | | ug/L | | 101 | 78 - 122 |
| Styrene | 20.0 | 21.0 | | ug/L | | 105 | 75 - 127 |
| Tetrachloroethene | 20.0 | 17.0 | | ug/L | | 85 | 70 - 127 |
| Toluene | 20.0 | 18.1 | | ug/L | | 90 | 78 - 119 |
| trans-1,2-Dichloroethene | 20.0 | 20.0 | | ug/L | | 100 | 74 - 126 |
| trans-1,3-Dichloropropene | 20.0 | 18.5 | | ug/L | | 93 | 66 - 127 |
| Trichloroethene | 20.0 | 18.4 | | ug/L | | 92 | 71 - 121 |
| Trichlorofluoromethane | 20.0 | 14.8 | | ug/L | | 74 | 61 - 140 |
| Vinyl chloride | 20.0 | 19.9 | | ug/L | | 100 | 61 - 144 |
| 1,2-Dichloroethane | 20.0 | 13.3 | * | ug/L | | 67 | 75 - 121 |
| 1,2-Dichlorobenzene | 20.0 | 20.9 | | ug/L | | 105 | 79 - 122 |
| 1,2-Dibromo-3-Chloropropane | 20.0 | 18.5 | | ug/L | | 93 | 41 - 143 |

| *Surrogate* | *LCS %Recovery* | *LCS Qualifier* | *Limits* |
|---|---|---|---|
| *1,2-Dichloroethane-d4 (Surr)* | *74* | *X* | *75 - 123* |
| *4-Bromofluorobenzene* | *85* | | *76 - 120* |
| *Dibromofluoromethane (Surr)* | *86* | | *77 - 124* |
| *Toluene-d8 (Surr)* | *96* | | *80 - 120* |

**Lab Sample ID: LCSD 460-722587/5**
**Matrix: Water**
**Analysis Batch: 722587**

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

| Analyte | Spike Added | LCSD Result | LCSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1-Trichloroethane | 20.0 | 16.4 | | ug/L | | 82 | 68 - 128 | 7 | 30 |
| 1,1,2,2-Tetrachloroethane | 20.0 | 22.5 | | ug/L | | 113 | 63 - 139 | 7 | 30 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 20.0 | 19.5 | | ug/L | | 97 | 59 - 142 | 3 | 30 |
| 1,1,2-Trichloroethane | 20.0 | 22.3 | | ug/L | | 112 | 74 - 125 | 6 | 30 |
| 1,1-Dichloroethane | 20.0 | 17.8 | | ug/L | | 89 | 73 - 130 | 9 | 30 |
| 1,1-Dichloroethene | 20.0 | 20.2 | | ug/L | | 101 | 68 - 133 | 3 | 30 |
| 1,2,3-Trichlorobenzene | 20.0 | 19.6 | | ug/L | | 98 | 53 - 144 | 9 | 30 |
| 1,2,4-Trichlorobenzene | 20.0 | 19.1 | | ug/L | | 96 | 64 - 132 | 6 | 30 |
| 1,2-Dichloropropane | 20.0 | 23.7 | | ug/L | | 118 | 76 - 126 | 22 | 30 |
| 1,3-Dichlorobenzene | 20.0 | 20.5 | | ug/L | | 102 | 80 - 121 | 0 | 30 |
| 1,4-Dichlorobenzene | 20.0 | 20.6 | | ug/L | | 103 | 80 - 118 | 2 | 30 |
| 1,4-Dioxane | 400 | 422 | | ug/L | | 105 | 70 - 142 | 14 | 30 |

## Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

**Lab Sample ID: LCSD 460-722587/5**
**Matrix: Water**
**Analysis Batch: 722587**

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

| Analyte | | | Spike Added | LCSD Result | LCSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 2-Butanone (MEK) | | | 100 | 95.8 | | ug/L | | 96 | 69 - 128 | 2 | 30 |
| 2-Hexanone | | | 100 | 97.3 | | ug/L | | 97 | 74 - 127 | 3 | 30 |
| 4-Methyl-2-pentanone (MIBK) | | | 100 | 94.4 | | ug/L | | 94 | 78 - 125 | 4 | 30 |
| Acetone | | | 100 | 84.2 | | ug/L | | 84 | 61 - 134 | 11 | 30 |
| Benzene | | | 20.0 | 21.4 | | ug/L | | 107 | 78 - 126 | 18 | 30 |
| Bromoform | | | 20.0 | 18.2 | | ug/L | | 91 | 38 - 144 | 1 | 30 |
| Bromomethane | | | 20.0 | 19.7 | | ug/L | | 99 | 10 - 150 | 9 | 30 |
| Carbon disulfide | | | 20.0 | 20.1 | | ug/L | | 101 | 64 - 138 | 1 | 30 |
| Carbon tetrachloride | | | 20.0 | 16.7 | | ug/L | | 84 | 56 - 131 | 11 | 30 |
| Chlorobenzene | | | 20.0 | 20.4 | | ug/L | | 102 | 80 - 119 | 1 | 30 |
| Chlorobromomethane | | | 20.0 | 21.2 | | ug/L | | 106 | 73 - 126 | 1 | 30 |
| Chlorodibromomethane | | | 20.0 | 19.4 | | ug/L | | 97 | 58 - 130 | 2 | 30 |
| Chloroethane | | | 20.0 | 20.5 | | ug/L | | 103 | 29 - 150 | 3 | 30 |
| Chloroform | | | 20.0 | 20.2 | | ug/L | | 101 | 78 - 125 | 18 | 30 |
| Chloromethane | | | 20.0 | 22.6 | | ug/L | | 113 | 38 - 150 | 8 | 30 |
| cis-1,2-Dichloroethene | | | 20.0 | 20.4 | | ug/L | | 102 | 78 - 121 | 5 | 30 |
| cis-1,3-Dichloropropene | | | 20.0 | 19.8 | | ug/L | | 99 | 74 - 125 | 3 | 30 |
| Cyclohexane | | | 20.0 | 19.3 | | ug/L | | 97 | 67 - 133 | 10 | 30 |
| Dichlorobromomethane | | | 20.0 | 18.0 | | ug/L | | 90 | 72 - 121 | 10 | 30 |
| Dichlorodifluoromethane | | | 20.0 | 16.0 | | ug/L | | 80 | 31 - 150 | 10 | 30 |
| Ethylbenzene | | | 20.0 | 20.4 | | ug/L | | 102 | 78 - 120 | 1 | 30 |
| Ethylene Dibromide | | | 20.0 | 18.4 | | ug/L | | 92 | 69 - 126 | 9 | 30 |
| Isopropylbenzene | | | 20.0 | 20.2 | | ug/L | | 101 | 79 - 125 | 3 | 30 |
| Methyl acetate | | | 40.0 | 33.6 | | ug/L | | 84 | 70 - 127 | 13 | 30 |
| Methyl tert-butyl ether | | | 20.0 | 18.2 | | ug/L | | 91 | 65 - 131 | 4 | 30 |
| Methylcyclohexane | | | 20.0 | 20.6 | | ug/L | | 103 | 60 - 139 | 10 | 30 |
| Methylene Chloride | | | 20.0 | 20.9 | | ug/L | | 105 | 74 - 127 | 1 | 30 |
| m-Xylene & p-Xylene | | | 20.0 | 20.2 | | ug/L | | 101 | 78 - 123 | 2 | 30 |
| o-Xylene | | | 20.0 | 18.6 | | ug/L | | 93 | 78 - 122 | 8 | 30 |
| Styrene | | | 20.0 | 20.7 | | ug/L | | 103 | 75 - 127 | 2 | 30 |
| Tetrachloroethene | | | 20.0 | 18.9 | | ug/L | | 94 | 70 - 127 | 11 | 30 |
| Toluene | | | 20.0 | 18.9 | | ug/L | | 94 | 78 - 119 | 4 | 30 |
| trans-1,2-Dichloroethene | | | 20.0 | 21.2 | | ug/L | | 106 | 74 - 126 | 6 | 30 |
| trans-1,3-Dichloropropene | | | 20.0 | 19.4 | | ug/L | | 97 | 66 - 127 | 5 | 30 |
| Trichloroethene | | | 20.0 | 19.5 | | ug/L | | 98 | 71 - 121 | 6 | 30 |
| Trichlorofluoromethane | | | 20.0 | 15.3 | | ug/L | | 76 | 61 - 140 | 3 | 30 |
| Vinyl chloride | | | 20.0 | 23.4 | | ug/L | | 117 | 61 - 144 | 16 | 30 |
| 1,2-Dichloroethane | | | 20.0 | 16.2 | | ug/L | | 81 | 75 - 121 | 19 | 30 |
| 1,2-Dichlorobenzene | | | 20.0 | 21.3 | | ug/L | | 106 | 79 - 122 | 2 | 30 |
| 1,2-Dibromo-3-Chloropropane | | | 20.0 | 17.9 | | ug/L | | 90 | 41 - 143 | 3 | 30 |

| *Surrogate* | *LCSD %Recovery* | *LCSD Qualifier* | *Limits* |
|---|---|---|---|
| *1,2-Dichloroethane-d4 (Surr)* | *76* | | *75 - 123* |
| *4-Bromofluorobenzene* | *86* | | *76 - 120* |
| *Dibromofluoromethane (Surr)* | *86* | | *77 - 124* |
| *Toluene-d8 (Surr)* | *92* | | *80 - 120* |

## Method: 537 (modified) - Fluorinated Alkyl Substances

**Lab Sample ID: MB 320-410906/1-A**
**Matrix: Water**
**Analysis Batch: 411143**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 410906**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Perfluorobutanoic acid (PFBA) | 0.541 | J | 2.00 | 0.35 | ng/L | | 09/09/20 18:39 | 09/10/20 18:07 | 1 |
| Perfluoropentanoic acid (PFPeA) | 0.49 | U | 2.00 | 0.49 | ng/L | | 09/09/20 18:39 | 09/10/20 18:07 | 1 |
| Perfluorohexanoic acid (PFHxA) | 0.58 | U | 2.00 | 0.58 | ng/L | | 09/09/20 18:39 | 09/10/20 18:07 | 1 |
| Perfluoroheptanoic acid (PFHpA) | 0.25 | U | 2.00 | 0.25 | ng/L | | 09/09/20 18:39 | 09/10/20 18:07 | 1 |
| Perfluorooctanoic acid (PFOA) | 0.85 | U | 2.00 | 0.85 | ng/L | | 09/09/20 18:39 | 09/10/20 18:07 | 1 |
| Perfluorononanoic acid (PFNA) | 0.27 | U | 2.00 | 0.27 | ng/L | | 09/09/20 18:39 | 09/10/20 18:07 | 1 |
| Perfluorodecanoic acid (PFDA) | 0.31 | U | 2.00 | 0.31 | ng/L | | 09/09/20 18:39 | 09/10/20 18:07 | 1 |
| Perfluoroundecanoic acid (PFUnA) | 1.10 | U | 2.00 | 1.10 | ng/L | | 09/09/20 18:39 | 09/10/20 18:07 | 1 |
| Perfluorododecanoic acid (PFDoA) | 0.55 | U | 2.00 | 0.55 | ng/L | | 09/09/20 18:39 | 09/10/20 18:07 | 1 |
| Perfluorotridecanoic acid (PFTriA) | 1.30 | U | 2.00 | 1.30 | ng/L | | 09/09/20 18:39 | 09/10/20 18:07 | 1 |
| Perfluorotetradecanoic acid (PFTeA) | 0.29 | U | 2.00 | 0.29 | ng/L | | 09/09/20 18:39 | 09/10/20 18:07 | 1 |
| Perfluorobutanesulfonic acid (PFBS) | 0.20 | U | 2.00 | 0.20 | ng/L | | 09/09/20 18:39 | 09/10/20 18:07 | 1 |
| Perfluorohexanesulfonic acid (PFHxS) | 0.339 | J | 2.00 | 0.17 | ng/L | | 09/09/20 18:39 | 09/10/20 18:07 | 1 |
| Perfluoroheptanesulfonic Acid (PFHpS) | 0.19 | U | 2.00 | 0.19 | ng/L | | 09/09/20 18:39 | 09/10/20 18:07 | 1 |
| Perfluorooctanesulfonic acid (PFOS) | 0.54 | U | 2.00 | 0.54 | ng/L | | 09/09/20 18:39 | 09/10/20 18:07 | 1 |
| Perfluorodecanesulfonic acid (PFDS) | 0.32 | U | 2.00 | 0.32 | ng/L | | 09/09/20 18:39 | 09/10/20 18:07 | 1 |
| Perfluorooctanesulfonamide (FOSA) | 0.35 | U | 2.00 | 0.35 | ng/L | | 09/09/20 18:39 | 09/10/20 18:07 | 1 |
| N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA) | 3.10 | U | 20.0 | 3.10 | ng/L | | 09/09/20 18:39 | 09/10/20 18:07 | 1 |
| N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA) | 1.90 | U | 20.0 | 1.90 | ng/L | | 09/09/20 18:39 | 09/10/20 18:07 | 1 |
| 6:2 FTS | 2.00 | U | 20.0 | 2.00 | ng/L | | 09/09/20 18:39 | 09/10/20 18:07 | 1 |
| 8:2 FTS | 2.00 | U | 20.0 | 2.00 | ng/L | | 09/09/20 18:39 | 09/10/20 18:07 | 1 |

| *Isotope Dilution* | *MB %Recovery* | *MB Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *13C4 PFBA* | *90* | | *25 - 150* | *09/09/20 18:39* | *09/10/20 18:07* | *1* |
| *13C5 PFPeA* | *94* | | *25 - 150* | *09/09/20 18:39* | *09/10/20 18:07* | *1* |
| *13C2 PFHxA* | *93* | | *25 - 150* | *09/09/20 18:39* | *09/10/20 18:07* | *1* |
| *13C4 PFHpA* | *91* | | *25 - 150* | *09/09/20 18:39* | *09/10/20 18:07* | *1* |
| *13C4 PFOA* | *90* | | *25 - 150* | *09/09/20 18:39* | *09/10/20 18:07* | *1* |
| *13C5 PFNA* | *91* | | *25 - 150* | *09/09/20 18:39* | *09/10/20 18:07* | *1* |
| *13C2 PFDA* | *90* | | *25 - 150* | *09/09/20 18:39* | *09/10/20 18:07* | *1* |
| *13C2 PFUnA* | *91* | | *25 - 150* | *09/09/20 18:39* | *09/10/20 18:07* | *1* |
| *13C2 PFDoA* | *79* | | *25 - 150* | *09/09/20 18:39* | *09/10/20 18:07* | *1* |
| *13C2 PFTeDA* | *79* | | *25 - 150* | *09/09/20 18:39* | *09/10/20 18:07* | *1* |
| *13C3 PFBS* | *98* | | *25 - 150* | *09/09/20 18:39* | *09/10/20 18:07* | *1* |
| *18O2 PFHxS* | *100* | | *25 - 150* | *09/09/20 18:39* | *09/10/20 18:07* | *1* |
| *13C4 PFOS* | *97* | | *25 - 150* | *09/09/20 18:39* | *09/10/20 18:07* | *1* |
| *13C8 FOSA* | *83* | | *25 - 150* | *09/09/20 18:39* | *09/10/20 18:07* | *1* |
| *d3-NMeFOSAA* | *87* | | *25 - 150* | *09/09/20 18:39* | *09/10/20 18:07* | *1* |
| *d5-NEtFOSAA* | *90* | | *25 - 150* | *09/09/20 18:39* | *09/10/20 18:07* | *1* |
| *M2-6:2 FTS* | *99* | | *25 - 150* | *09/09/20 18:39* | *09/10/20 18:07* | *1* |
| *M2-8:2 FTS* | *106* | | *25 - 150* | *09/09/20 18:39* | *09/10/20 18:07* | *1* |

## Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

**Lab Sample ID: LCS 320-410906/2-A**
**Matrix: Water**
**Analysis Batch: 411143**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 410906**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Perfluorobutanoic acid (PFBA) | 40.0 | 41.57 | | ng/L | | 104 | 76 - 136 |
| Perfluoropentanoic acid (PFPeA) | 40.0 | 39.75 | | ng/L | | 99 | 71 - 131 |
| Perfluorohexanoic acid (PFHxA) | 40.0 | 41.17 | | ng/L | | 103 | 73 - 133 |
| Perfluoroheptanoic acid (PFHpA) | 40.0 | 41.33 | | ng/L | | 103 | 72 - 132 |
| Perfluorooctanoic acid (PFOA) | 40.0 | 40.45 | | ng/L | | 101 | 70 - 130 |
| Perfluorononanoic acid (PFNA) | 40.0 | 42.87 | | ng/L | | 107 | 75 - 135 |
| Perfluorodecanoic acid (PFDA) | 40.0 | 39.95 | | ng/L | | 100 | 76 - 136 |
| Perfluoroundecanoic acid (PFUnA) | 40.0 | 40.85 | | ng/L | | 102 | 68 - 128 |
| Perfluorododecanoic acid (PFDoA) | 40.0 | 42.34 | | ng/L | | 106 | 71 - 131 |
| Perfluorotridecanoic acid (PFTriA) | 40.0 | 42.64 | | ng/L | | 107 | 71 - 131 |
| Perfluorotetradecanoic acid (PFTeA) | 40.0 | 39.43 | | ng/L | | 99 | 70 - 130 |
| Perfluorobutanesulfonic acid (PFBS) | 35.4 | 34.17 | | ng/L | | 97 | 67 - 127 |
| Perfluorohexanesulfonic acid (PFHxS) | 36.4 | 33.74 | | ng/L | | 93 | 59 - 119 |
| Perfluoroheptanesulfonic Acid (PFHpS) | 38.1 | 39.47 | | ng/L | | 104 | 76 - 136 |
| Perfluorooctanesulfonic acid (PFOS) | 37.1 | 38.86 | | ng/L | | 105 | 70 - 130 |
| Perfluorodecanesulfonic acid (PFDS) | 38.6 | 37.63 | | ng/L | | 98 | 71 - 131 |
| Perfluorooctanesulfonamide (FOSA) | 40.0 | 40.01 | | ng/L | | 100 | 73 - 133 |
| N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA) | 40.0 | 42.21 | | ng/L | | 106 | 76 - 136 |
| N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA) | 40.0 | 38.74 | | ng/L | | 97 | 76 - 136 |
| 6:2 FTS | 37.9 | 37.38 | | ng/L | | 99 | 59 - 175 |
| 8:2 FTS | 38.3 | 36.84 | | ng/L | | 96 | 75 - 135 |

| *Isotope Dilution* | *LCS %Recovery* | *LCS Qualifier* | *Limits* |
|---|---|---|---|
| *13C4 PFBA* | *90* | | *25 - 150* |
| *13C5 PFPeA* | *89* | | *25 - 150* |
| *13C2 PFHxA* | *93* | | *25 - 150* |
| *13C4 PFHpA* | *89* | | *25 - 150* |
| *13C4 PFOA* | *84* | | *25 - 150* |
| *13C5 PFNA* | *88* | | *25 - 150* |
| *13C2 PFDA* | *87* | | *25 - 150* |
| *13C2 PFUnA* | *82* | | *25 - 150* |
| *13C2 PFDoA* | *75* | | *25 - 150* |
| *13C2 PFTeDA* | *73* | | *25 - 150* |
| *13C3 PFBS* | *101* | | *25 - 150* |
| *18O2 PFHxS* | *99* | | *25 - 150* |
| *13C4 PFOS* | *94* | | *25 - 150* |
| *13C8 FOSA* | *85* | | *25 - 150* |
| *d3-NMeFOSAA* | *82* | | *25 - 150* |
| *d5-NEtFOSAA* | *84* | | *25 - 150* |

## Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

**Lab Sample ID: LCS 320-410906/2-A**
**Matrix: Water**
**Analysis Batch: 411143**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 410906**

| Isotope Dilution | LCS %Recovery | LCS Qualifier | Limits |
|---|---|---|---|
| M2-6:2 FTS | 93 | | 25 - 150 |
| M2-8:2 FTS | 105 | | 25 - 150 |

**Lab Sample ID: LCSD 320-410906/3-A**
**Matrix: Water**
**Analysis Batch: 411143**

**Client Sample ID: Lab Control Sample Dup**
**Prep Type: Total/NA**
**Prep Batch: 410906**

| Analyte | | | Spike Added | LCSD Result | LCSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Perfluorobutanoic acid (PFBA) | | | 40.0 | 40.94 | | ng/L | | 102 | 76 - 136 | 2 | 30 |
| Perfluoropentanoic acid (PFPeA) | | | 40.0 | 37.79 | | ng/L | | 94 | 71 - 131 | 5 | 30 |
| Perfluorohexanoic acid (PFHxA) | | | 40.0 | 38.69 | | ng/L | | 97 | 73 - 133 | 6 | 30 |
| Perfluoroheptanoic acid (PFHpA) | | | 40.0 | 39.70 | | ng/L | | 99 | 72 - 132 | 4 | 30 |
| Perfluorooctanoic acid (PFOA) | | | 40.0 | 39.54 | | ng/L | | 99 | 70 - 130 | 2 | 30 |
| Perfluorononanoic acid (PFNA) | | | 40.0 | 39.84 | | ng/L | | 100 | 75 - 135 | 7 | 30 |
| Perfluorodecanoic acid (PFDA) | | | 40.0 | 39.91 | | ng/L | | 100 | 76 - 136 | 0 | 30 |
| Perfluoroundecanoic acid (PFUnA) | | | 40.0 | 38.05 | | ng/L | | 95 | 68 - 128 | 7 | 30 |
| Perfluorododecanoic acid (PFDoA) | | | 40.0 | 42.61 | | ng/L | | 107 | 71 - 131 | 1 | 30 |
| Perfluorotridecanoic acid (PFTriA) | | | 40.0 | 38.43 | | ng/L | | 96 | 71 - 131 | 10 | 30 |
| Perfluorotetradecanoic acid (PFTeA) | | | 40.0 | 41.06 | | ng/L | | 103 | 70 - 130 | 4 | 30 |
| Perfluorobutanesulfonic acid (PFBS) | | | 35.4 | 34.86 | | ng/L | | 99 | 67 - 127 | 2 | 30 |
| Perfluorohexanesulfonic acid (PFHxS) | | | 36.4 | 32.49 | | ng/L | | 89 | 59 - 119 | 4 | 30 |
| Perfluoroheptanesulfonic Acid (PFHpS) | | | 38.1 | 38.52 | | ng/L | | 101 | 76 - 136 | 2 | 30 |
| Perfluorooctanesulfonic acid (PFOS) | | | 37.1 | 36.48 | | ng/L | | 98 | 70 - 130 | 6 | 30 |
| Perfluorodecanesulfonic acid (PFDS) | | | 38.6 | 36.88 | | ng/L | | 96 | 71 - 131 | 2 | 30 |
| Perfluorooctanesulfonamide (FOSA) | | | 40.0 | 40.35 | | ng/L | | 101 | 73 - 133 | 1 | 30 |
| N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA) | | | 40.0 | 41.43 | | ng/L | | 104 | 76 - 136 | 2 | 30 |
| N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA) | | | 40.0 | 38.81 | | ng/L | | 97 | 76 - 136 | 0 | 30 |
| 6:2 FTS | | | 37.9 | 37.38 | | ng/L | | 99 | 59 - 175 | 0 | 30 |
| 8:2 FTS | | | 38.3 | 36.01 | | ng/L | | 94 | 75 - 135 | 2 | 30 |

| Isotope Dilution | LCSD %Recovery | LCSD Qualifier | Limits |
|---|---|---|---|
| 13C4 PFBA | 88 | | 25 - 150 |
| 13C5 PFPeA | 91 | | 25 - 150 |
| 13C2 PFHxA | 88 | | 25 - 150 |
| 13C4 PFHpA | 87 | | 25 - 150 |
| 13C4 PFOA | 85 | | 25 - 150 |
| 13C5 PFNA | 87 | | 25 - 150 |
| 13C2 PFDA | 82 | | 25 - 150 |
| 13C2 PFUnA | 85 | | 25 - 150 |
| 13C2 PFDoA | 75 | | 25 - 150 |

## Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

**Lab Sample ID: LCSD 320-410906/3-A**
**Matrix: Water**
**Analysis Batch: 411143**

**Client Sample ID: Lab Control Sample Dup**
**Prep Type: Total/NA**
**Prep Batch: 410906**

| Isotope Dilution | LCSD %Recovery | LCSD Qualifier | Limits |
|---|---|---|---|
| 13C2 PFTeDA | 69 | | 25 - 150 |
| 13C3 PFBS | 96 | | 25 - 150 |
| 18O2 PFHxS | 97 | | 25 - 150 |
| 13C4 PFOS | 94 | | 25 - 150 |
| 13C8 FOSA | 83 | | 25 - 150 |
| d3-NMeFOSAA | 82 | | 25 - 150 |
| d5-NEtFOSAA | 86 | | 25 - 150 |
| M2-6:2 FTS | 98 | | 25 - 150 |
| M2-8:2 FTS | 99 | | 25 - 150 |

## Qualifiers

### GC/MS VOA

| Qualifier | Qualifier Description |
|---|---|
| * | LCS or LCSD is outside acceptance limits. |
| J | Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value. |
| U | Indicates the analyte was analyzed for but not detected. |
| X | Surrogate recovery exceeds control limits |

### GC/MS VOA TICs

| Qualifier | Qualifier Description |
|---|---|
| J | Indicates an Estimated Value for TICs |
| N | This flag indicates the presumptive evidence of a compound. |

### LCMS

| Qualifier | Qualifier Description |
|---|---|
| B | Compound was found in the blank and sample. |
| cn | Refer to Case Narrative for further detail |
| J | Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value. |
| U | Indicates the analyte was analyzed for but not detected. |

## Glossary

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

## GC/MS VOA

### Analysis Batch: 722587

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 460-217659-1 | MW-201 | Total/NA | Water | 8260C | |
| 460-217659-2 | MW-207 | Total/NA | Water | 8260C | |
| 460-217659-3 | MW-210 | Total/NA | Water | 8260C | |
| 460-217659-4 | MW-211 | Total/NA | Water | 8260C | |
| 460-217659-5 | MW-214 | Total/NA | Water | 8260C | |
| 460-217659-6 | MW-216 | Total/NA | Water | 8260C | |
| 460-217659-7 | MW-217 | Total/NA | Water | 8260C | |
| 460-217659-8 | FB | Total/NA | Water | 8260C | |
| 460-217659-9 | TB | Total/NA | Water | 8260C | |
| MB 460-722587/8 | Method Blank | Total/NA | Water | 8260C | |
| LCS 460-722587/4 | Lab Control Sample | Total/NA | Water | 8260C | |
| LCSD 460-722587/5 | Lab Control Sample Dup | Total/NA | Water | 8260C | |

## LCMS

### Prep Batch: 410906

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 460-217659-1 | MW-201 | Total/NA | Water | 3535 | |
| 460-217659-2 | MW-207 | Total/NA | Water | 3535 | |
| 460-217659-3 | MW-210 | Total/NA | Water | 3535 | |
| 460-217659-4 | MW-211 | Total/NA | Water | 3535 | |
| 460-217659-5 | MW-214 | Total/NA | Water | 3535 | |
| 460-217659-6 | MW-216 | Total/NA | Water | 3535 | |
| 460-217659-7 | MW-217 | Total/NA | Water | 3535 | |
| 460-217659-8 | FB | Total/NA | Water | 3535 | |
| MB 320-410906/1-A | Method Blank | Total/NA | Water | 3535 | |
| LCS 320-410906/2-A | Lab Control Sample | Total/NA | Water | 3535 | |
| LCSD 320-410906/3-A | Lab Control Sample Dup | Total/NA | Water | 3535 | |

### Analysis Batch: 411143

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 460-217659-1 | MW-201 | Total/NA | Water | 537 (modified) | 410906 |
| 460-217659-2 | MW-207 | Total/NA | Water | 537 (modified) | 410906 |
| 460-217659-3 | MW-210 | Total/NA | Water | 537 (modified) | 410906 |
| 460-217659-4 | MW-211 | Total/NA | Water | 537 (modified) | 410906 |
| 460-217659-5 | MW-214 | Total/NA | Water | 537 (modified) | 410906 |
| 460-217659-6 | MW-216 | Total/NA | Water | 537 (modified) | 410906 |
| 460-217659-7 | MW-217 | Total/NA | Water | 537 (modified) | 410906 |
| 460-217659-8 | FB | Total/NA | Water | 537 (modified) | 410906 |
| MB 320-410906/1-A | Method Blank | Total/NA | Water | 537 (modified) | 410906 |
| LCS 320-410906/2-A | Lab Control Sample | Total/NA | Water | 537 (modified) | 410906 |
| LCSD 320-410906/3-A | Lab Control Sample Dup | Total/NA | Water | 537 (modified) | 410906 |

## Client Sample ID: MW-201
**Date Collected: 09/03/20 09:10**
**Date Received: 09/04/20 16:25**

## Lab Sample ID: 460-217659-1
**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 8260C | | 1 | 722587 | 09/09/20 02:05 | VBP | TAL EDI |
| Total/NA | Prep | 3535 | | | 410906 | 09/09/20 18:39 | VP | TAL SAC |
| Total/NA | Analysis | 537 (modified) | | 1 | 411143 | 09/10/20 18:36 | S1M | TAL SAC |

## Client Sample ID: MW-207
**Date Collected: 09/03/20 11:10**
**Date Received: 09/04/20 16:25**

## Lab Sample ID: 460-217659-2
**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 8260C | | 1 | 722587 | 09/09/20 02:29 | VBP | TAL EDI |
| Total/NA | Prep | 3535 | | | 410906 | 09/09/20 18:39 | VP | TAL SAC |
| Total/NA | Analysis | 537 (modified) | | 1 | 411143 | 09/10/20 18:45 | S1M | TAL SAC |

## Client Sample ID: MW-210
**Date Collected: 09/03/20 10:35**
**Date Received: 09/04/20 16:25**

## Lab Sample ID: 460-217659-3
**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 8260C | | 1 | 722587 | 09/09/20 02:53 | VBP | TAL EDI |
| Total/NA | Prep | 3535 | | | 410906 | 09/09/20 18:39 | VP | TAL SAC |
| Total/NA | Analysis | 537 (modified) | | 1 | 411143 | 09/10/20 18:54 | S1M | TAL SAC |

## Client Sample ID: MW-211
**Date Collected: 09/03/20 14:00**
**Date Received: 09/04/20 16:25**

## Lab Sample ID: 460-217659-4
**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 8260C | | 1 | 722587 | 09/09/20 03:17 | VBP | TAL EDI |
| Total/NA | Prep | 3535 | | | 410906 | 09/09/20 18:39 | VP | TAL SAC |
| Total/NA | Analysis | 537 (modified) | | 1 | 411143 | 09/10/20 19:04 | S1M | TAL SAC |

## Client Sample ID: MW-214
**Date Collected: 09/03/20 09:30**
**Date Received: 09/04/20 16:25**

## Lab Sample ID: 460-217659-5
**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 8260C | | 1 | 722587 | 09/09/20 03:41 | VBP | TAL EDI |
| Total/NA | Prep | 3535 | | | 410906 | 09/09/20 18:39 | VP | TAL SAC |
| Total/NA | Analysis | 537 (modified) | | 1 | 411143 | 09/10/20 19:13 | S1M | TAL SAC |

## Client Sample ID: MW-216
**Date Collected: 09/03/20 13:30**
**Date Received: 09/04/20 16:25**

## Lab Sample ID: 460-217659-6
**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 8260C | | 1 | 722587 | 09/09/20 04:05 | VBP | TAL EDI |

# Lab Chronicle

Client: SESI Consulting Engineers
Project/Site: Grossingers

Job ID: 460-217659-1

## Client Sample ID: MW-216
**Date Collected: 09/03/20 13:30**
**Date Received: 09/04/20 16:25**

## Lab Sample ID: 460-217659-6
**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | 3535 | | | 410906 | 09/09/20 18:39 | VP | TAL SAC |
| Total/NA | Analysis | 537 (modified) | | 1 | 411143 | 09/10/20 19:23 | S1M | TAL SAC |

## Client Sample ID: MW-217
**Date Collected: 09/03/20 12:35**
**Date Received: 09/04/20 16:25**

## Lab Sample ID: 460-217659-7
**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 8260C | | 1 | 722587 | 09/09/20 04:29 | VBP | TAL EDI |
| Total/NA | Prep | 3535 | | | 410906 | 09/09/20 18:39 | VP | TAL SAC |
| Total/NA | Analysis | 537 (modified) | | 1 | 411143 | 09/10/20 19:32 | S1M | TAL SAC |

## Client Sample ID: FB
**Date Collected: 09/03/20 15:00**
**Date Received: 09/04/20 16:25**

## Lab Sample ID: 460-217659-8
**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 8260C | | 1 | 722587 | 09/08/20 23:18 | VBP | TAL EDI |
| Total/NA | Prep | 3535 | | | 410906 | 09/09/20 18:39 | VP | TAL SAC |
| Total/NA | Analysis | 537 (modified) | | 1 | 411143 | 09/10/20 20:00 | S1M | TAL SAC |

## Client Sample ID: TB
**Date Collected: 09/03/20 15:00**
**Date Received: 09/04/20 16:25**

## Lab Sample ID: 460-217659-9
**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 8260C | | 1 | 722587 | 09/08/20 23:42 | VBP | TAL EDI |

**Laboratory References:**

TAL EDI = Eurofins TestAmerica, Edison, 777 New Durham Road, Edison, NJ 08817, TEL (732)549-3900

TAL SAC = Eurofins TestAmerica, Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

# Accreditation/Certification Summary

Client: SESI Consulting Engineers
Job ID: 460-217659-1
Project/Site: Grossingers

## Laboratory: Eurofins TestAmerica, Edison

The accreditations/certifications listed below are applicable to this report.

| Authority | Program | Identification Number | Expiration Date |
|---|---|---|---|
| New York | NELAP | 11452 | 04-01-21 |

## Laboratory: Eurofins TestAmerica, Sacramento

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

| Authority | Program | Identification Number | Expiration Date |
|---|---|---|---|
| Alaska (UST) | State | 17-020 | 01-20-21 |
| ANAB | Dept. of Defense ELAP | L2468 | 01-20-21 |
| ANAB | Dept. of Energy | L2468.01 | 01-20-21 |
| ANAB | ISO/IEC 17025 | L2468 | 01-20-21 |
| Arizona | State | AZ0708 | 08-11-21 |
| Arkansas DEQ | State | 88-0691 | 06-17-21 |
| California | State | 2897 | 01-31-22 |
| Colorado | State | CA0004 | 08-31-21 |
| Connecticut | State | PH-0691 | 06-30-21 |
| Florida | NELAP | E87570 | 06-30-21 |
| Georgia | State | 4040 | 01-30-21 |
| Hawaii | State | <cert No.> | 01-29-21 |
| Illinois | NELAP | 200060 | 03-17-21 |
| Kansas | NELAP | E-10375 | 10-31-20 |
| Louisiana | NELAP | 01944 | 06-30-21 |
| Maine | State | CA00004 | 04-14-22 |
| Michigan | State | 9947 | 08-03-23 |
| Nevada | State | CA000442021-1 | 07-31-21 |
| New Hampshire | NELAP | 2997 | 04-18-21 |
| New Jersey | NELAP | CA005 | 06-30-21 |
| New York | NELAP | 11666 | 04-01-21 |
| Oregon | NELAP | 4040 | 01-29-21 |
| Pennsylvania | NELAP | 68-01272 | 03-31-21 |
| Texas | NELAP | T104704399-19-13 | 06-01-21 |
| US Fish & Wildlife | US Federal Programs | 58448 | 07-31-21 |
| USDA | US Federal Programs | P330-18-00239 | 07-31-21 |
| Utah | NELAP | CA000442019-01 | 02-28-21 |
| Vermont | State | VT-4040 | 04-16-21 |
| Virginia | NELAP | 460278 | 03-14-21 |
| Washington | State | C581 | 05-05-21 |
| West Virginia (DW) | State | 9930C | 12-31-20 |
| Wisconsin | State | 998204680 | 08-31-21 |
| Wyoming | State Program | 8TMS-L | 01-28-19 * |

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

# 8260C

## Volatile Organic Compounds by GC/MS

FORM II
GC/MS VOA SURROGATE RECOVERY

Lab Name: Eurofins TestAmerica, Edison  Job No.: 460-217659-1

SDG No.:

Matrix: Water  Level: Low

GC Column (1): DB-624  ID: 0.18(mm)

| Client Sample ID | Lab Sample ID | DBFM # | DCA # | TOL # | BFB # |
|---|---|---|---|---|---|
| MW-201 | 460-217659-1 | 92 | 76 | 93 | 83 |
| MW-207 | 460-217659-2 | 88 | 75 | 95 | 84 |
| MW-210 | 460-217659-3 | 92 | 77 | 102 | 86 |
| MW-211 | 460-217659-4 | 89 | 77 | 104 | 90 |
| MW-214 | 460-217659-5 | 89 | 75 | 98 | 87 |
| MW-216 | 460-217659-6 | 86 | 80 | 90 | 83 |
| MW-217 | 460-217659-7 | 83 | 76 | 89 | 84 |
| FB | 460-217659-8 | 85 | 72 X | 98 | 93 |
| TB | 460-217659-9 | 94 | 79 | 94 | 87 |
| | MB 460-722587/8 | 81 | 61 X | 91 | 84 |
| | LCS 460-722587/4 | 86 | 74 X | 96 | 85 |
| | LCSD 460-722587/5 | 86 | 76 | 92 | 86 |

| | QC LIMITS |
|---|---|
| DBFM = Dibromofluoromethane (Surr) | 77-124 |
| DCA = 1,2-Dichloroethane-d4 (Surr) | 75-123 |
| TOL = Toluene-d8 (Surr) | 80-120 |
| BFB = 4-Bromofluorobenzene | 76-120 |

# Column to be used to flag recovery values

FORM II 8260C

FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: Eurofins TestAmerica, Edison Job No.: 460-217659-1

SDG No.:

Matrix: Water Level: Low Lab File ID: T38865.D

Lab ID: LCS 460-722587/4 Client ID:

| COMPOUND | SPIKE ADDED (ug/L) | LCS CONCENTRATION (ug/L) | LCS % REC | QC LIMITS REC | # |
|---|---|---|---|---|---|
| 1,1,1-Trichloroethane | 20.0 | 15.3 | 77 | 68-128 | |
| 1,1,2,2-Tetrachloroethane | 20.0 | 24.2 | 121 | 63-139 | |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 20.0 | 18.9 | 94 | 59-142 | |
| 1,1,2-Trichloroethane | 20.0 | 20.9 | 105 | 74-125 | |
| 1,1-Dichloroethane | 20.0 | 16.3 | 82 | 73-130 | |
| 1,1-Dichloroethene | 20.0 | 19.6 | 98 | 68-133 | |
| 1,2,3-Trichlorobenzene | 20.0 | 21.4 | 107 | 53-144 | |
| 1,2,4-Trichlorobenzene | 20.0 | 18.0 | 90 | 64-132 | |
| 1,2-Dichloropropane | 20.0 | 18.9 | 95 | 76-126 | |
| 1,3-Dichlorobenzene | 20.0 | 20.4 | 102 | 80-121 | |
| 1,4-Dichlorobenzene | 20.0 | 20.2 | 101 | 80-118 | |
| 1,4-Dioxane | 400 | 487 | 122 | 70-142 | |
| 2-Butanone (MEK) | 100 | 98.0 | 98 | 69-128 | |
| 2-Hexanone | 100 | 99.9 | 100 | 74-127 | |
| 4-Methyl-2-pentanone (MIBK) | 100 | 98.1 | 98 | 78-125 | |
| Acetone | 100 | 94.2 | 94 | 61-134 | |
| Benzene | 20.0 | 17.9 | 89 | 78-126 | |
| Bromoform | 20.0 | 18.0 | 90 | 38-144 | |
| Bromomethane | 20.0 | 18.1 | 90 | 10-150 | |
| Carbon disulfide | 20.0 | 20.2 | 101 | 64-138 | |
| Carbon tetrachloride | 20.0 | 14.9 | 75 | 56-131 | |
| Chlorobenzene | 20.0 | 20.7 | 103 | 80-119 | |
| Chlorobromomethane | 20.0 | 20.9 | 105 | 73-126 | |
| Chlorodibromomethane | 20.0 | 19.2 | 96 | 58-130 | |
| Chloroethane | 20.0 | 21.2 | 106 | 29-150 | |
| Chloroform | 20.0 | 17.0 | 85 | 78-125 | |
| Chloromethane | 20.0 | 20.9 | 105 | 38-150 | |
| cis-1,2-Dichloroethene | 20.0 | 19.4 | 97 | 78-121 | |
| cis-1,3-Dichloropropene | 20.0 | 19.1 | 96 | 74-125 | |
| Cyclohexane | 20.0 | 17.5 | 88 | 67-133 | |
| Dichlorobromomethane | 20.0 | 16.3 | 81 | 72-121 | |
| Dichlorodifluoromethane | 20.0 | 14.4 | 72 | 31-150 | |
| Ethylbenzene | 20.0 | 20.2 | 101 | 78-120 | |
| Ethylene Dibromide | 20.0 | 20.2 | 101 | 69-126 | |
| Isopropylbenzene | 20.0 | 19.5 | 97 | 79-125 | |
| Methyl acetate | 40.0 | 38.2 | 96 | 70-127 | |
| Methyl tert-butyl ether | 20.0 | 17.5 | 87 | 65-131 | |
| Methylcyclohexane | 20.0 | 18.7 | 93 | 60-139 | |
| Methylene Chloride | 20.0 | 21.2 | 106 | 74-127 | |
| m-Xylene & p-Xylene | 20.0 | 19.7 | 99 | 78-123 | |
| o-Xylene | 20.0 | 20.1 | 101 | 78-122 | |

# Column to be used to flag recovery and RPD values

FORM III 8260C

FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: Eurofins TestAmerica, Edison Job No.: 460-217659-1

SDG No.:

Matrix: Water Level: Low Lab File ID: T38865.D

Lab ID: LCS 460-722587/4 Client ID:

| COMPOUND | SPIKE ADDED (ug/L) | LCS CONCENTRATION (ug/L) | LCS % REC | QC LIMITS REC | # |
|---|---|---|---|---|---|
| Styrene | 20.0 | 21.0 | 105 | 75-127 | |
| Tetrachloroethene | 20.0 | 17.0 | 85 | 70-127 | |
| Toluene | 20.0 | 18.1 | 90 | 78-119 | |
| trans-1,2-Dichloroethene | 20.0 | 20.0 | 100 | 74-126 | |
| trans-1,3-Dichloropropene | 20.0 | 18.5 | 93 | 66-127 | |
| Trichloroethene | 20.0 | 18.4 | 92 | 71-121 | |
| Trichlorofluoromethane | 20.0 | 14.8 | 74 | 61-140 | |
| Vinyl chloride | 20.0 | 19.9 | 100 | 61-144 | |
| 1,2-Dichloroethane | 20.0 | 13.3 | 67 | 75-121 | * |
| 1,2-Dichlorobenzene | 20.0 | 20.9 | 105 | 79-122 | |
| 1,2-Dibromo-3-Chloropropane | 20.0 | 18.5 | 93 | 41-143 | |

# Column to be used to flag recovery and RPD values

FORM III 8260C

FORM III
GC/MS VOA LAB CONTROL SAMPLE DUPLICATE RECOVERY

Lab Name: Eurofins TestAmerica, Edison Job No.: 460-217659-1

SDG No.:

Matrix: Water Level: Low Lab File ID: T38866.D

Lab ID: LCSD 460-722587/5 Client ID:

| COMPOUND | SPIKE ADDED (ug/L) | LCSD CONCENTRATION (ug/L) | LCSD % REC | % RPD | QC LIMITS RPD | QC LIMITS REC | # |
|---|---|---|---|---|---|---|---|
| 1,1,1-Trichloroethane | 20.0 | 16.4 | 82 | 7 | 30 | 68-128 | |
| 1,1,2,2-Tetrachloroethane | 20.0 | 22.5 | 113 | 7 | 30 | 63-139 | |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 20.0 | 19.5 | 97 | 3 | 30 | 59-142 | |
| 1,1,2-Trichloroethane | 20.0 | 22.3 | 112 | 6 | 30 | 74-125 | |
| 1,1-Dichloroethane | 20.0 | 17.8 | 89 | 9 | 30 | 73-130 | |
| 1,1-Dichloroethene | 20.0 | 20.2 | 101 | 3 | 30 | 68-133 | |
| 1,2,3-Trichlorobenzene | 20.0 | 19.6 | 98 | 9 | 30 | 53-144 | |
| 1,2,4-Trichlorobenzene | 20.0 | 19.1 | 96 | 6 | 30 | 64-132 | |
| 1,2-Dichloropropane | 20.0 | 23.7 | 118 | 22 | 30 | 76-126 | |
| 1,3-Dichlorobenzene | 20.0 | 20.5 | 102 | 0 | 30 | 80-121 | |
| 1,4-Dichlorobenzene | 20.0 | 20.6 | 103 | 2 | 30 | 80-118 | |
| 1,4-Dioxane | 400 | 422 | 105 | 14 | 30 | 70-142 | |
| 2-Butanone (MEK) | 100 | 95.8 | 96 | 2 | 30 | 69-128 | |
| 2-Hexanone | 100 | 97.3 | 97 | 3 | 30 | 74-127 | |
| 4-Methyl-2-pentanone (MIBK) | 100 | 94.4 | 94 | 4 | 30 | 78-125 | |
| Acetone | 100 | 84.2 | 84 | 11 | 30 | 61-134 | |
| Benzene | 20.0 | 21.4 | 107 | 18 | 30 | 78-126 | |
| Bromoform | 20.0 | 18.2 | 91 | 1 | 30 | 38-144 | |
| Bromomethane | 20.0 | 19.7 | 99 | 9 | 30 | 10-150 | |
| Carbon disulfide | 20.0 | 20.1 | 101 | 1 | 30 | 64-138 | |
| Carbon tetrachloride | 20.0 | 16.7 | 84 | 11 | 30 | 56-131 | |
| Chlorobenzene | 20.0 | 20.4 | 102 | 1 | 30 | 80-119 | |
| Chlorobromomethane | 20.0 | 21.2 | 106 | 1 | 30 | 73-126 | |
| Chlorodibromomethane | 20.0 | 19.4 | 97 | 2 | 30 | 58-130 | |
| Chloroethane | 20.0 | 20.5 | 103 | 3 | 30 | 29-150 | |
| Chloroform | 20.0 | 20.2 | 101 | 18 | 30 | 78-125 | |
| Chloromethane | 20.0 | 22.6 | 113 | 8 | 30 | 38-150 | |
| cis-1,2-Dichloroethene | 20.0 | 20.4 | 102 | 5 | 30 | 78-121 | |
| cis-1,3-Dichloropropene | 20.0 | 19.8 | 99 | 3 | 30 | 74-125 | |
| Cyclohexane | 20.0 | 19.3 | 97 | 10 | 30 | 67-133 | |
| Dichlorobromomethane | 20.0 | 18.0 | 90 | 10 | 30 | 72-121 | |
| Dichlorodifluoromethane | 20.0 | 16.0 | 80 | 10 | 30 | 31-150 | |
| Ethylbenzene | 20.0 | 20.4 | 102 | 1 | 30 | 78-120 | |
| Ethylene Dibromide | 20.0 | 18.4 | 92 | 9 | 30 | 69-126 | |
| Isopropylbenzene | 20.0 | 20.2 | 101 | 3 | 30 | 79-125 | |
| Methyl acetate | 40.0 | 33.6 | 84 | 13 | 30 | 70-127 | |
| Methyl tert-butyl ether | 20.0 | 18.2 | 91 | 4 | 30 | 65-131 | |
| Methylcyclohexane | 20.0 | 20.6 | 103 | 10 | 30 | 60-139 | |
| Methylene Chloride | 20.0 | 20.9 | 105 | 1 | 30 | 74-127 | |
| m-Xylene & p-Xylene | 20.0 | 20.2 | 101 | 2 | 30 | 78-123 | |
| o-Xylene | 20.0 | 18.6 | 93 | 8 | 30 | 78-122 | |

# Column to be used to flag recovery and RPD values

FORM III 8260C

FORM III
GC/MS VOA LAB CONTROL SAMPLE DUPLICATE RECOVERY

Lab Name: Eurofins TestAmerica, Edison Job No.: 460-217659-1

SDG No.:

Matrix: Water Level: Low Lab File ID: T38866.D

Lab ID: LCSD 460-722587/5 Client ID:

| COMPOUND | SPIKE ADDED (ug/L) | LCSD CONCENTRATION (ug/L) | LCSD % REC | % RPD | QC LIMITS RPD | QC LIMITS REC | # |
|---|---|---|---|---|---|---|---|
| Styrene | 20.0 | 20.7 | 103 | 2 | 30 | 75-127 | |
| Tetrachloroethene | 20.0 | 18.9 | 94 | 11 | 30 | 70-127 | |
| Toluene | 20.0 | 18.9 | 94 | 4 | 30 | 78-119 | |
| trans-1,2-Dichloroethene | 20.0 | 21.2 | 106 | 6 | 30 | 74-126 | |
| trans-1,3-Dichloropropene | 20.0 | 19.4 | 97 | 5 | 30 | 66-127 | |
| Trichloroethene | 20.0 | 19.5 | 98 | 6 | 30 | 71-121 | |
| Trichlorofluoromethane | 20.0 | 15.3 | 76 | 3 | 30 | 61-140 | |
| Vinyl chloride | 20.0 | 23.4 | 117 | 16 | 30 | 61-144 | |
| 1,2-Dichloroethane | 20.0 | 16.2 | 81 | 19 | 30 | 75-121 | |
| 1,2-Dichlorobenzene | 20.0 | 21.3 | 106 | 2 | 30 | 79-122 | |
| 1,2-Dibromo-3-Chloropropane | 20.0 | 17.9 | 90 | 3 | 30 | 41-143 | |

# Column to be used to flag recovery and RPD values

FORM III 8260C

FORM IV
GC/MS VOA METHOD BLANK SUMMARY

Lab Name: Eurofins TestAmerica, Edison  Job No.: 460-217659-1

SDG No.:

Lab File ID: T38869.D  Lab Sample ID: MB 460-722587/8

Matrix: Water  Heated Purge:(Y/N) N

Instrument ID: CVOAMS15  Date Analyzed: 09/08/2020 22:54

GC Column: DB-624  ID: 0.18(mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

| CLIENT SAMPLE ID | LAB SAMPLE ID | LAB FILE ID | DATE ANALYZED |
|---|---|---|---|
| | LCS 460-722587/4 | T38865.D | 09/08/2020 21:08 |
| | LCSD 460-722587/5 | T38866.D | 09/08/2020 21:42 |
| FB | 460-217659-8 | T38870.D | 09/08/2020 23:18 |
| TB | 460-217659-9 | T38871.D | 09/08/2020 23:42 |
| MW-201 | 460-217659-1 | T38877.D | 09/09/2020 02:05 |
| MW-207 | 460-217659-2 | T38878.D | 09/09/2020 02:29 |
| MW-210 | 460-217659-3 | T38879.D | 09/09/2020 02:53 |
| MW-211 | 460-217659-4 | T38880.D | 09/09/2020 03:17 |
| MW-214 | 460-217659-5 | T38881.D | 09/09/2020 03:41 |
| MW-216 | 460-217659-6 | T38882.D | 09/09/2020 04:05 |
| MW-217 | 460-217659-7 | T38883.D | 09/09/2020 04:29 |

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Eurofins TestAmerica, Edison  Job No.: 460-217659-1

SDG No.:

Lab File ID: T38692.D  BFB Injection Date: 09/04/2020

Instrument ID: CVOAMS15  BFB Injection Time: 11:28

Analysis Batch No.: 721958

| M/E | ION ABUNDANCE CRITERIA | % RELATIVE ABUNDANCE | |
|---|---|---|---|
| 50 | 15.0 - 40.0 % of mass 95 | 15.3 | |
| 75 | 30.0 - 60.0 % of mass 95 | 46.1 | |
| 95 | Base Peak, 100% relative abundance | 100.0 | |
| 96 | 5.0 - 9.0 % of mass 95 | 5.7 | |
| 173 | Less than 2.0 % of mass 174 | 0.0 | (0.0) 1 |
| 174 | Greater than 50% of mass 95 | 92.2 | |
| 175 | 5.0 - 9.0 % of mass 174 | 7.6 | (8.2) 1 |
| 176 | 95.0 - 101.0 % of mass 174 | 87.8 | (95.2) 1 |
| 177 | 5.0 - 9.0 % of mass 176 | 6.5 | (7.4) 2 |

1-Value is % mass 174  2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

| CLIENT SAMPLE ID | LAB SAMPLE ID | LAB FILE ID | DATE ANALYZED | TIME ANALYZED |
|---|---|---|---|---|
| | STD8 460-721958/3 | T38694.D | 09/04/2020 | 12:13 |
| | STD05 460-721958/4 | T38695.D | 09/04/2020 | 12:37 |
| | STD1 460-721958/5 | T38696.D | 09/04/2020 | 13:01 |
| | STD5 460-721958/6 | T38697.D | 09/04/2020 | 13:25 |
| | STD20 460-721958/7 | T38698.D | 09/04/2020 | 13:49 |
| | STD50 460-721958/8 | T38699.D | 09/04/2020 | 14:13 |
| | STD200 460-721958/9 | T38700.D | 09/04/2020 | 14:37 |
| | STD500 460-721958/10 | T38701.D | 09/04/2020 | 15:01 |
| | ICV 460-721958/17 | T38708.D | 09/04/2020 | 19:36 |

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Eurofins TestAmerica, Edison  Job No.: 460-217659-1

SDG No.:

Lab File ID: T38862.D  BFB Injection Date: 09/08/2020

Instrument ID: CVOAMS15  BFB Injection Time: 20:05

Analysis Batch No.: 722587

| M/E | ION ABUNDANCE CRITERIA | % RELATIVE ABUNDANCE | |
|---|---|---|---|
| 50 | 15.0 - 40.0 % of mass 95 | 15.3 | |
| 75 | 30.0 - 60.0 % of mass 95 | 48.4 | |
| 95 | Base Peak, 100% relative abundance | 100.0 | |
| 96 | 5.0 - 9.0 % of mass 95 | 6.5 | |
| 173 | Less than 2.0 % of mass 174 | 0.0 | (0.0) 1 |
| 174 | Greater than 50% of mass 95 | 67.9 | |
| 175 | 5.0 - 9.0 % of mass 174 | 5.7 | (8.4) 1 |
| 176 | 95.0 - 101.0 % of mass 174 | 66.2 | (97.5) 1 |
| 177 | 5.0 - 9.0 % of mass 176 | 4.4 | (6.7) 2 |

1-Value is % mass 174  2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

| CLIENT SAMPLE ID | LAB SAMPLE ID | LAB FILE ID | DATE ANALYZED | TIME ANALYZED |
|---|---|---|---|---|
| | CCVIS 460-722587/2 | T38863.D | 09/08/2020 | 20:20 |
| | LCS 460-722587/4 | T38865.D | 09/08/2020 | 21:08 |
| | LCSD 460-722587/5 | T38866.D | 09/08/2020 | 21:42 |
| | MB 460-722587/8 | T38869.D | 09/08/2020 | 22:54 |
| FB | 460-217659-8 | T38870.D | 09/08/2020 | 23:18 |
| TB | 460-217659-9 | T38871.D | 09/08/2020 | 23:42 |
| MW-201 | 460-217659-1 | T38877.D | 09/09/2020 | 2:05 |
| MW-207 | 460-217659-2 | T38878.D | 09/09/2020 | 2:29 |
| MW-210 | 460-217659-3 | T38879.D | 09/09/2020 | 2:53 |
| MW-211 | 460-217659-4 | T38880.D | 09/09/2020 | 3:17 |
| MW-214 | 460-217659-5 | T38881.D | 09/09/2020 | 3:41 |
| MW-216 | 460-217659-6 | T38882.D | 09/09/2020 | 4:05 |
| MW-217 | 460-217659-7 | T38883.D | 09/09/2020 | 4:29 |

FORM VIII
GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: Eurofins TestAmerica, Edison  Job No.: 460-217659-1

SDG No.:

Sample No.: STD20 460-721958/7  Date Analyzed: 09/04/2020 13:49

Instrument ID: CVOAMS15  GC Column: DB-624  ID: 0.18(mm)

Lab File ID (Standard): T38698.D  Heated Purge: (Y/N) N

Calibration ID: 81787

| | | TBAd9 | | BUT | | FB | |
|---|---|---|---|---|---|---|---|
| | | AREA # | RT # | AREA # | RT # | AREA # | RT # |
| INITIAL CALIBRATION MID-POINT | | 32797 | 1.60 | 207905 | 2.34 | 472367 | 3.28 |
| UPPER LIMIT | | 65594 | 2.10 | 415810 | 2.84 | 944734 | 3.78 |
| LOWER LIMIT | | 16399 | 1.10 | 103953 | 1.84 | 236184 | 2.78 |
| LAB SAMPLE ID | CLIENT SAMPLE ID | | | | | | |
| ICV 460-721958/17 | | 31479 | 1.60 | 196887 | 2.34 | 500217 | 3.27 |

TBAd9 = TBA-d9 (IS)
BUT = 2-Butanone-d5
FB = Fluorobenzene

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

# Column used to flag values outside QC limits

FORM VIII 8260C

FORM VIII
GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: Eurofins TestAmerica, Edison  Job No.: 460-217659-1

SDG No.:

Sample No.: STD20 460-721958/7  Date Analyzed: 09/04/2020 13:49

Instrument ID: CVOAMS15  GC Column: DB-624  ID: 0.18(mm)

Lab File ID (Standard): T38698.D  Heated Purge: (Y/N) N

Calibration ID: 81787

| | | DXE | | CBNZd5 | | DCBd4 | |
|---|---|---|---|---|---|---|---|
| | | AREA # | RT # | AREA # | RT # | AREA # | RT # |
| INITIAL CALIBRATION MID-POINT | | 23961 | 3.94 | 348723 | 6.74 | 166530 | 10.38 |
| UPPER LIMIT | | 47922 | 4.44 | 697446 | 7.24 | 333060 | 10.88 |
| LOWER LIMIT | | 11981 | 3.44 | 174362 | 6.24 | 83265 | 9.88 |
| LAB SAMPLE ID | CLIENT SAMPLE ID | | | | | | |
| ICV 460-721958/17 | | 23270 | 3.94 | 377825 | 6.74 | 175970 | 10.38 |

DXE = 1,4-Dioxane-d8
CBNZd5 = Chlorobenzene-d5
DCBd4 = 1,4-Dichlorobenzene-d4

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

# Column used to flag values outside QC limits

FORM VIII 8260C

FORM VIII
GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: Eurofins TestAmerica, Edison  Job No.: 460-217659-1

SDG No.:

Sample No.: CCVIS 460-722587/2  Date Analyzed: 09/08/2020 20:20

Instrument ID: CVOAMS15  GC Column: DB-624  ID: 0.18(mm)

Lab File ID (Standard): T38863.D  Heated Purge: (Y/N) N

Calibration ID: 81787

| | | TBAd9 | | BUT | | FB | |
|---|---|---|---|---|---|---|---|
| | | AREA # | RT # | AREA # | RT # | AREA # | RT # |
| 12/24 HOUR STD | | 39302 | 1.60 | 258328 | 2.34 | 696633 | 3.28 |
| UPPER LIMIT | | 78604 | 2.10 | 516656 | 2.84 | 1393266 | 3.78 |
| LOWER LIMIT | | 19651 | 1.10 | 129164 | 1.84 | 348317 | 2.78 |
| LAB SAMPLE ID | CLIENT SAMPLE ID | | | | | | |
| LCS 460-722587/4 | | 45780 | 1.60 | 251099 | 2.34 | 710514 | 3.28 |
| LCSD 460-722587/5 | | 42898 | 1.60 | 261439 | 2.34 | 716601 | 3.28 |
| MB 460-722587/8 | | 40127 | 1.60 | 169842 | 2.34 | 730146 | 3.27 |
| 460-217659-8 | FB | 41004 | 1.60 | 234795 | 2.34 | 747690 | 3.27 |
| 460-217659-9 | TB | 39187 | 1.60 | 252511 | 2.34 | 667370 | 3.28 |
| 460-217659-1 | MW-201 | 37264 | 1.60 | 265039 | 2.34 | 705404 | 3.27 |
| 460-217659-2 | MW-207 | 38101 | 1.60 | 276627 | 2.34 | 695700 | 3.27 |
| 460-217659-3 | MW-210 | 37055 | 1.60 | 269993 | 2.34 | 664415 | 3.27 |
| 460-217659-4 | MW-211 | 40743 | 1.60 | 255633 | 2.34 | 695814 | 3.27 |
| 460-217659-5 | MW-214 | 36981 | 1.60 | 245452 | 2.34 | 697813 | 3.27 |
| 460-217659-6 | MW-216 | 38178 | 1.60 | 253082 | 2.34 | 736460 | 3.28 |
| 460-217659-7 | MW-217 | 39488 | 1.60 | 229328 | 2.34 | 743476 | 3.27 |

TBAd9 = TBA-d9 (IS)
BUT = 2-Butanone-d5
FB = Fluorobenzene

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

# Column used to flag values outside QC limits

FORM VIII 8260C

FORM VIII
GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: Eurofins TestAmerica, Edison  Job No.: 460-217659-1

SDG No.:

Sample No.: CCVIS 460-722587/2  Date Analyzed: 09/08/2020 20:20

Instrument ID: CVOAMS15  GC Column: DB-624  ID: 0.18(mm)

Lab File ID (Standard): T38863.D  Heated Purge: (Y/N) N

Calibration ID: 81787

| | | DXE | | CBNZd5 | | DCBd4 | |
|---|---|---|---|---|---|---|---|
| | | AREA # | RT # | AREA # | RT # | AREA # | RT # |
| 12/24 HOUR STD | | 34312 | 3.94 | 476410 | 6.74 | 219902 | 10.38 |
| UPPER LIMIT | | 68624 | 4.44 | 952820 | 7.24 | 439804 | 10.88 |
| LOWER LIMIT | | 17156 | 3.44 | 238205 | 6.24 | 109951 | 9.88 |
| LAB SAMPLE ID | CLIENT SAMPLE ID | | | | | | |
| LCS 460-722587/4 | | 32945 | 3.94 | 510085 | 6.74 | 222481 | 10.38 |
| LCSD 460-722587/5 | | 35214 | 3.93 | 511427 | 6.74 | 229917 | 10.38 |
| MB 460-722587/8 | | 33890 | 3.93 | 523106 | 6.74 | 219259 | 10.38 |
| 460-217659-8 | FB | 33142 | 3.93 | 486532 | 6.74 | 223435 | 10.38 |
| 460-217659-9 | TB | 34035 | 3.93 | 504785 | 6.74 | 217840 | 10.38 |
| 460-217659-1 | MW-201 | 33491 | 3.93 | 512952 | 6.74 | 222980 | 10.38 |
| 460-217659-2 | MW-207 | 29580 | 3.93 | 508198 | 6.74 | 215192 | 10.38 |
| 460-217659-3 | MW-210 | 33579 | 3.93 | 491622 | 6.74 | 208889 | 10.38 |
| 460-217659-4 | MW-211 | 33082 | 3.93 | 479338 | 6.74 | 222261 | 10.38 |
| 460-217659-5 | MW-214 | 31304 | 3.93 | 487204 | 6.74 | 219276 | 10.38 |
| 460-217659-6 | MW-216 | 30494 | 3.93 | 511086 | 6.74 | 218586 | 10.38 |
| 460-217659-7 | MW-217 | 33444 | 3.93 | 508602 | 6.74 | 213039 | 10.38 |

DXE = 1,4-Dioxane-d8
CBNZd5 = Chlorobenzene-d5
DCBd4 = 1,4-Dichlorobenzene-d4

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

# Column used to flag values outside QC limits

FORM VIII 8260C

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Edison  Job No.: 460-217659-1

SDG No.:

Client Sample ID: MW-201  Lab Sample ID: 460-217659-1

Matrix: Water  Lab File ID: T38877.D

Analysis Method: 8260C  Date Collected: 09/03/2020 09:10

Sample wt/vol: 5(mL)  Date Analyzed: 09/09/2020 02:05

Soil Aliquot Vol:  Dilution Factor: 1

Soil Extract Vol.:  GC Column: DB-624  ID: 0.18(mm)

% Moisture:  Level: (low/med) Low

Analysis Batch No.: 722587  Units: ug/L

| CAS NO. | COMPOUND NAME | RESULT | Q | RL | MDL |
|---|---|---|---|---|---|
| 71-55-6 | 1,1,1-Trichloroethane | 0.24 | U | 1.0 | 0.24 |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 0.37 | U | 1.0 | 0.37 |
| 76-13-1 | 1,1,2-Trichloro-1,2,2-trifluoroethane | 0.31 | U | 1.0 | 0.31 |
| 79-00-5 | 1,1,2-Trichloroethane | 0.43 | U | 1.0 | 0.43 |
| 75-34-3 | 1,1-Dichloroethane | 0.26 | U | 1.0 | 0.26 |
| 75-35-4 | 1,1-Dichloroethene | 0.26 | U | 1.0 | 0.26 |
| 87-61-6 | 1,2,3-Trichlorobenzene | 0.36 | U | 1.0 | 0.36 |
| 120-82-1 | 1,2,4-Trichlorobenzene | 0.37 | U | 1.0 | 0.37 |
| 78-87-5 | 1,2-Dichloropropane | 0.35 | U | 1.0 | 0.35 |
| 541-73-1 | 1,3-Dichlorobenzene | 0.34 | U | 1.0 | 0.34 |
| 106-46-7 | 1,4-Dichlorobenzene | 0.33 | U | 1.0 | 0.33 |
| 123-91-1 | 1,4-Dioxane | 28 | U | 50 | 28 |
| 78-93-3 | 2-Butanone (MEK) | 1.9 | U | 5.0 | 1.9 |
| 591-78-6 | 2-Hexanone | 1.1 | U | 5.0 | 1.1 |
| 108-10-1 | 4-Methyl-2-pentanone (MIBK) | 1.3 | U | 5.0 | 1.3 |
| 67-64-1 | Acetone | 4.4 | U | 5.0 | 4.4 |
| 71-43-2 | Benzene | 0.20 | U | 1.0 | 0.20 |
| 75-25-2 | Bromoform | 0.54 | U | 1.0 | 0.54 |
| 74-83-9 | Bromomethane | 0.55 | U | 1.0 | 0.55 |
| 75-15-0 | Carbon disulfide | 0.82 | U | 1.0 | 0.82 |
| 56-23-5 | Carbon tetrachloride | 0.21 | U | 1.0 | 0.21 |
| 108-90-7 | Chlorobenzene | 0.38 | U | 1.0 | 0.38 |
| 74-97-5 | Chlorobromomethane | 0.41 | U | 1.0 | 0.41 |
| 124-48-1 | Chlorodibromomethane | 0.28 | U | 1.0 | 0.28 |
| 75-00-3 | Chloroethane | 0.32 | U | 1.0 | 0.32 |
| 67-66-3 | Chloroform | 0.33 | U | 1.0 | 0.33 |
| 74-87-3 | Chloromethane | 0.44 | J | 1.0 | 0.40 |
| 156-59-2 | cis-1,2-Dichloroethene | 0.22 | U | 1.0 | 0.22 |
| 10061-01-5 | cis-1,3-Dichloropropene | 0.22 | U | 1.0 | 0.22 |
| 110-82-7 | Cyclohexane | 0.32 | U | 1.0 | 0.32 |
| 75-27-4 | Dichlorobromomethane | 0.34 | U | 1.0 | 0.34 |
| 75-71-8 | Dichlorodifluoromethane | 0.31 | U | 1.0 | 0.31 |
| 100-41-4 | Ethylbenzene | 0.30 | U | 1.0 | 0.30 |
| 106-93-4 | Ethylene Dibromide | 0.50 | U | 1.0 | 0.50 |
| 98-82-8 | Isopropylbenzene | 0.34 | U | 1.0 | 0.34 |

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Edison  Job No.: 460-217659-1

SDG No.:

Client Sample ID: MW-201  Lab Sample ID: 460-217659-1

Matrix: Water  Lab File ID: T38877.D

Analysis Method: 8260C  Date Collected: 09/03/2020 09:10

Sample wt/vol: 5(mL)  Date Analyzed: 09/09/2020 02:05

Soil Aliquot Vol:  Dilution Factor: 1

Soil Extract Vol.:  GC Column: DB-624  ID: 0.18(mm)

% Moisture:  Level: (low/med) Low

Analysis Batch No.: 722587  Units: ug/L

| CAS NO. | COMPOUND NAME | RESULT | Q | RL | MDL |
|---|---|---|---|---|---|
| 79-20-9 | Methyl acetate | 0.79 | U | 5.0 | 0.79 |
| 1634-04-4 | Methyl tert-butyl ether | 0.47 | U | 1.0 | 0.47 |
| 108-87-2 | Methylcyclohexane | 0.26 | U | 1.0 | 0.26 |
| 75-09-2 | Methylene Chloride | 0.32 | U | 1.0 | 0.32 |
| 179601-23-1 | m-Xylene & p-Xylene | 0.30 | U | 1.0 | 0.30 |
| 95-47-6 | o-Xylene | 0.36 | U | 1.0 | 0.36 |
| 100-42-5 | Styrene | 0.42 | U | 1.0 | 0.42 |
| 127-18-4 | Tetrachloroethene | 0.25 | U | 1.0 | 0.25 |
| 108-88-3 | Toluene | 0.38 | U | 1.0 | 0.38 |
| 156-60-5 | trans-1,2-Dichloroethene | 0.24 | U | 1.0 | 0.24 |
| 10061-02-6 | trans-1,3-Dichloropropene | 0.49 | U | 1.0 | 0.49 |
| 79-01-6 | Trichloroethene | 0.31 | U | 1.0 | 0.31 |
| 75-69-4 | Trichlorofluoromethane | 0.32 | U | 1.0 | 0.32 |
| 75-01-4 | Vinyl chloride | 0.17 | U | 1.0 | 0.17 |
| 107-06-2 | 1,2-Dichloroethane | 0.43 | U * | 1.0 | 0.43 |
| 95-50-1 | 1,2-Dichlorobenzene | 0.43 | U | 1.0 | 0.43 |
| 96-12-8 | 1,2-Dibromo-3-Chloropropane | 0.38 | U | 1.0 | 0.38 |

| CAS NO. | SURROGATE | %REC | Q | LIMITS |
|---|---|---|---|---|
| 17060-07-0 | 1,2-Dichloroethane-d4 (Surr) | 76 | | 75-123 |
| 460-00-4 | 4-Bromofluorobenzene | 83 | | 76-120 |
| 1868-53-7 | Dibromofluoromethane (Surr) | 92 | | 77-124 |
| 2037-26-5 | Toluene-d8 (Surr) | 93 | | 80-120 |

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: Eurofins TestAmerica, Edison  Job No.: 460-217659-1

SDG No.:

Client Sample ID: MW-201  Lab Sample ID: 460-217659-1

Matrix: Water  Lab File ID: T38877.D

Analysis Method: 8260C  Date Collected: 09/03/2020 09:10

Sample wt/vol: 5(mL)  Date Analyzed: 09/09/2020 02:05

Soil Aliquot Vol:  Dilution Factor: 1

Soil Extract Vol.:  GC Column: DB-624 ID: 0.18(mm)

% Moisture:  Level: (low/med) Low

Analysis Batch No.: 722587  Units: ug/L

Number TICs Found: 0  TIC Result Total: 0

| CAS NO. | COMPOUND NAME | RT | RESULT | Q | MATCH QUALITY |
|---|---|---|---|---|---|
| | Tentatively Identified Compound | | None | | |

Eurofins TestAmerica, Edison
Target Compound Quantitation Report

Data File: \\chromfs\Edison\ChromData\CVOAMS15\20200908-116442.b\T38877.D
Lims ID: 460-217659-A-1
Client ID: MW-201
Sample Type: Client
Inject. Date: 09-Sep-2020 02:05:47 ALS Bottle#: 0 Worklist Smp#: 16
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: 460-217659-A-1
Misc. Info.: 460-0116442-016
Operator ID: Instrument ID: CVOAMS15

Method: \\chromfs\Edison\ChromData\CVOAMS15\20200908-116442.b\8260W_15.m
Limit Group: VOA - 8260C Water and Solid
Last Update: 09-Sep-2020 11:20:41 Calib Date: 04-Sep-2020 15:01:54
Integrator: RTE ID Type: RT Order ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Edison\ChromData\CVOAMS15\20200904-116301.b\T38701.D

Column 1 : DB-624 ( 0.18 mm) Det: MS Quad
Process Host: CTX1022

First Level Reviewer: desais Date: 09-Sep-2020 07:08:24

| Compound | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q | Response | OnCol Amt ug/l | Flags |
|---|---|---|---|---|---|---|---|---|
| 6 Chloromethane | 50 | 0.726 | 0.726 | 0.000 | 38 | 1239 | 0.4378 | |
| * 31 TBA-d9 (IS) | 66 | 1.598 | 1.598 | 0.000 | 92 | 37264 | 1000.0 | |
| * 42 2-Butanone-d5 | 46 | 2.336 | 2.336 | 0.000 | 47 | 265039 | 250.0 | |
| $ 53 Dibromofluoromethane (Surr) | 113 | 2.720 | 2.720 | 0.000 | 96 | 189996 | 46.2 | |
| $ 58 1,2-Dichloroethane-d4 (Surr) | 65 | 2.982 | 2.982 | 0.000 | 96 | 157469 | 37.9 | |
| * 65 Fluorobenzene | 96 | 3.274 | 3.275 | -0.001 | 100 | 705404 | 50.0 | |
| * 73 1,4-Dioxane-d8 | 96 | 3.933 | 3.939 | -0.006 | 1 | 33491 | 1000.0 | |
| $ 83 Toluene-d8 (Surr) | 98 | 4.902 | 4.902 | 0.000 | 98 | 609625 | 46.5 | |
| * 94 Chlorobenzene-d5 | 117 | 6.743 | 6.743 | 0.000 | 84 | 512952 | 50.0 | |
| $ 105 4-Bromofluorobenzene | 174 | 8.530 | 8.530 | 0.000 | 91 | 176209 | 41.7 | |
| * 120 1,4-Dichlorobenzene-d4 | 152 | 10.377 | 10.377 | 0.000 | 95 | 222980 | 50.0 | |

## Reagents:

VOA6IS/SURR_00038 Amount Added: 5.00 Units: uL Run Reagent

Report Date: 09-Sep-2020 11:25:43 Chrom Revision: 2.3 20-Aug-2020 13:57:12

Eurofins TestAmerica, Edison

Data File: \\chromfs\Edison\ChromData\CVOAMS15\20200908-116442.b\T38877.D

Injection Date: 09-Sep-2020 02:05:47 Instrument ID: CVOAMS15

Lims ID: 460-217659-A-1 Lab Sample ID: 460-217659-1

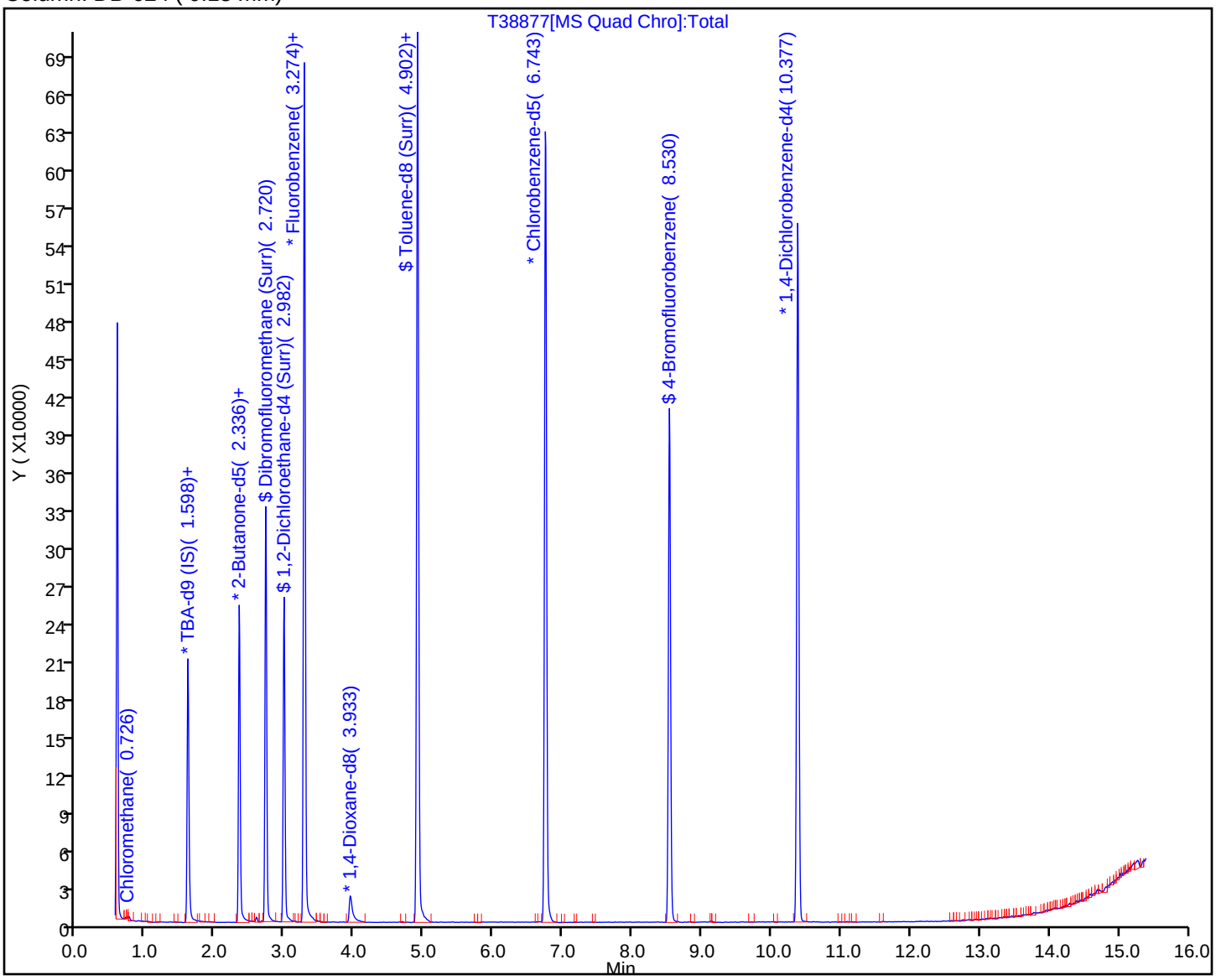
Client ID: MW-201

Operator ID: ALS Bottle#: 0 Worklist Smp#: 16

Purge Vol: 5.000 mL Dil. Factor: 1.0000

Method: 8260W_15 Limit Group: VOA - 8260C Water and Solid

Column: DB-624 ( 0.18 mm)

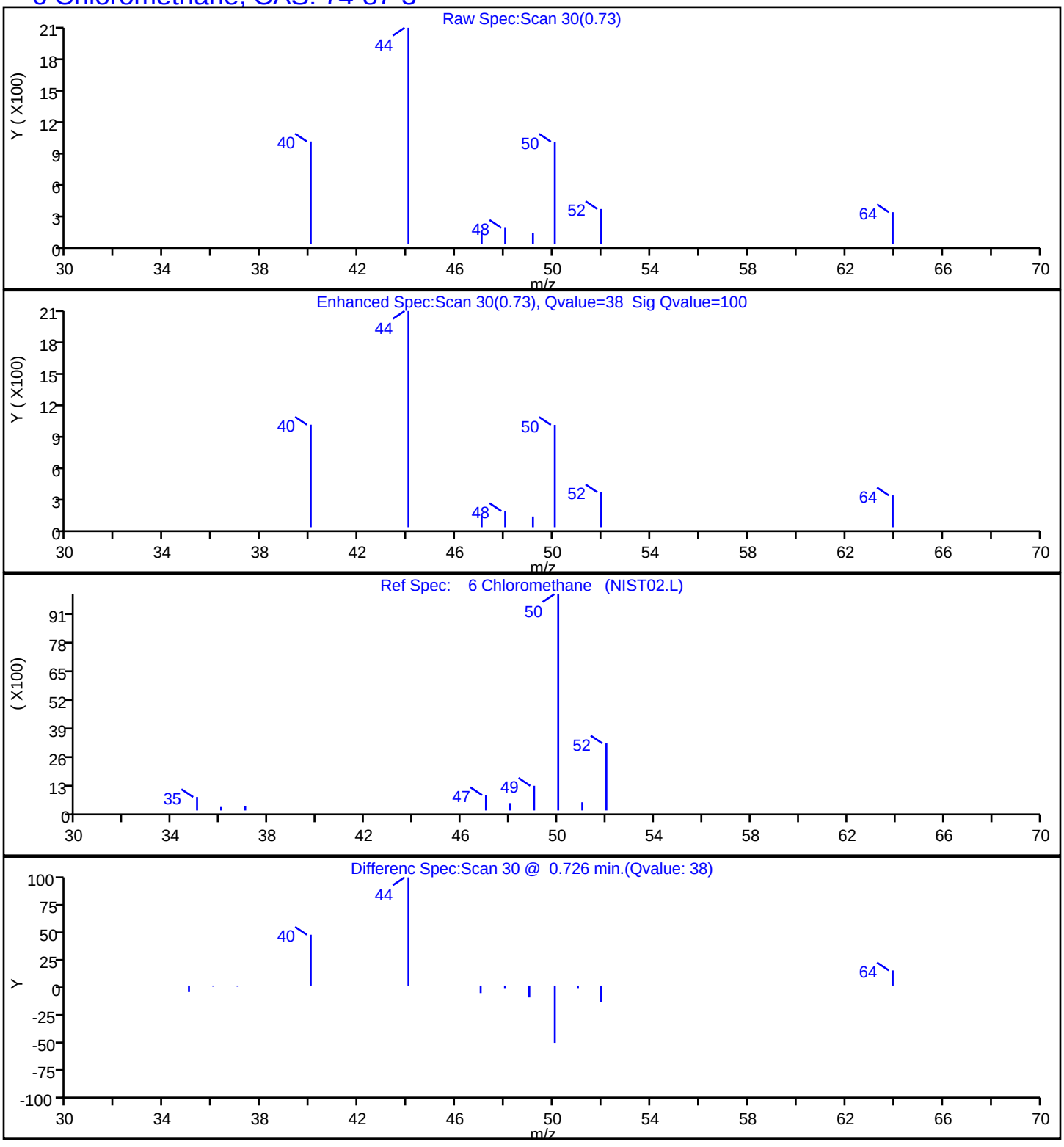


Eurofins TestAmerica, Edison

Data File: \\chromfs\Edison\ChromData\CVOAMS15\20200908-116442.b\T38877.D

| | | | | | |
|---|---|---|---|---|---|
| Injection Date: | 09-Sep-2020 02:05:47 | Instrument ID: | CVOAMS15 | | |
| Lims ID: | 460-217659-A-1 | Lab Sample ID: | 460-217659-1 | | |
| Client ID: | MW-201 | | | | |
| Operator ID: | | ALS Bottle#: | 0 | Worklist Smp#: | 16 |
| Purge Vol: | 5.000 mL | Dil. Factor: | 1.0000 | | |
| Method: | 8260W_15 | Limit Group: | VOA - 8260C Water and Solid | | |
| Column: | DB-624 ( 0.18 mm) | Detector | MS Quad | | |

## 6 Chloromethane, CAS: 74-87-3



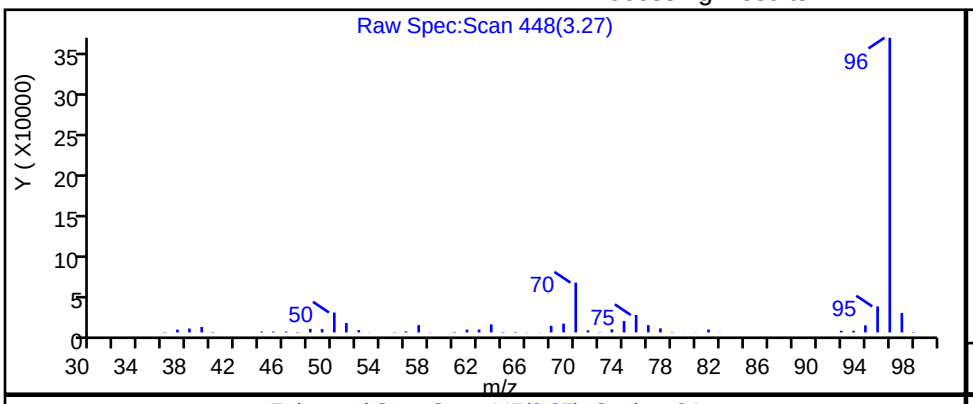
User Disabled Compound Report

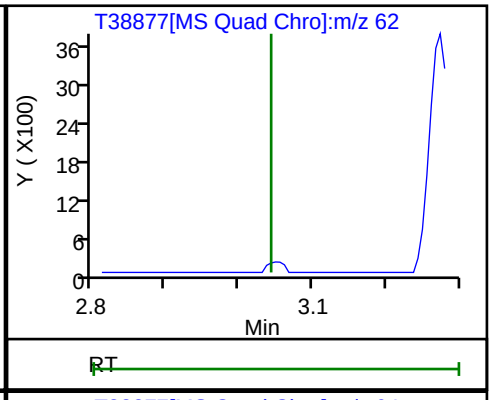
Eurofins TestAmerica, Edison

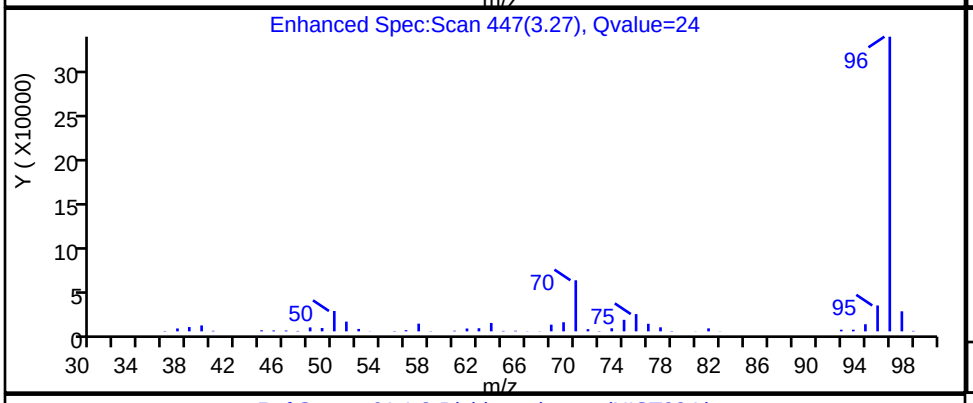
| | | | | | |
|---|---|---|---|---|---|
| Data File: | \\chromfs\Edison\ChromData\CVOAMS15\20200908-116442.b\T38877.D | | | | |
| Injection Date: | 09-Sep-2020 02:05:47 | Instrument ID: | CVOAMS15 | | |
| Lims ID: | 460-217659-A-1 | Lab Sample ID: | 460-217659-1 | | |
| Client ID: | MW-201 | | | | |
| Operator ID: | | ALS Bottle#: | 0 | Worklist Smp#: | 16 |
| Purge Vol: | 5.000 mL | Dil. Factor: | 1.0000 | | |
| Method: | 8260W_15 | Limit Group: | VOA - 8260C Water and Solid | | |
| Column: | DB-624 ( 0.18 mm) | Detector | MS Quad | | |

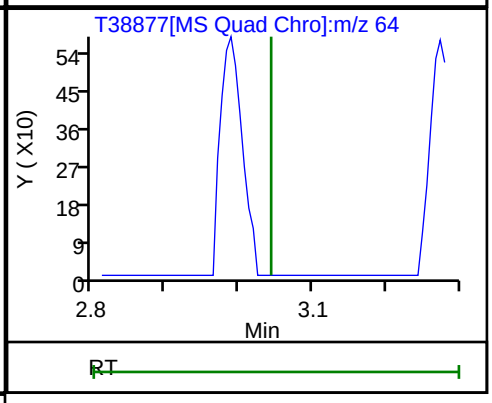
## 61 1,2-Dichloroethane, CAS: 107-06-2

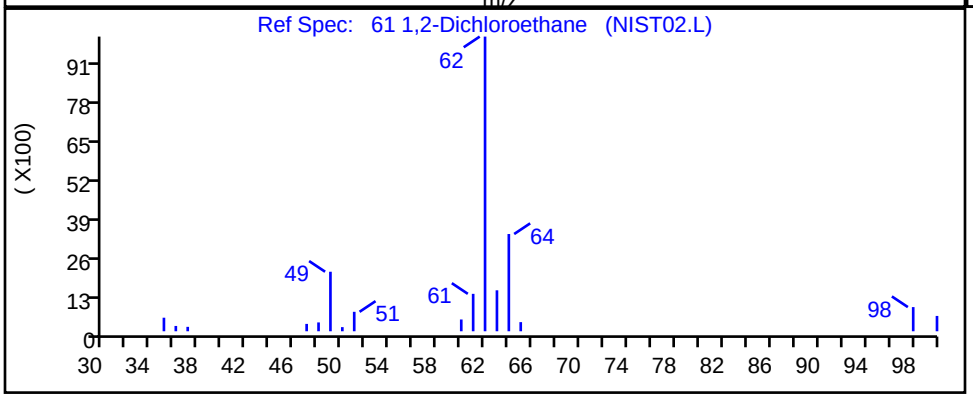
Processing Results




| RT | Mass | Response | Amount |
|---|---|---|---|
| 3.27 | 62.00 | 7157 | 1.529131 |
| 3.27 | 64.00 | 1131 | |

Reviewer: desais, 09-Sep-2020 07:08:19

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Edison  Job No.: 460-217659-1

SDG No.:

Client Sample ID: MW-207  Lab Sample ID: 460-217659-2

Matrix: Water  Lab File ID: T38878.D

Analysis Method: 8260C  Date Collected: 09/03/2020 11:10

Sample wt/vol: 5(mL)  Date Analyzed: 09/09/2020 02:29

Soil Aliquot Vol:  Dilution Factor: 1

Soil Extract Vol.:  GC Column: DB-624  ID: 0.18(mm)

% Moisture:  Level: (low/med) Low

Analysis Batch No.: 722587  Units: ug/L

| CAS NO. | COMPOUND NAME | RESULT | Q | RL | MDL |
|---|---|---|---|---|---|
| 71-55-6 | 1,1,1-Trichloroethane | 0.24 | U | 1.0 | 0.24 |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 0.37 | U | 1.0 | 0.37 |
| 76-13-1 | 1,1,2-Trichloro-1,2,2-trifluoroethane | 0.31 | U | 1.0 | 0.31 |
| 79-00-5 | 1,1,2-Trichloroethane | 0.43 | U | 1.0 | 0.43 |
| 75-34-3 | 1,1-Dichloroethane | 0.26 | U | 1.0 | 0.26 |
| 75-35-4 | 1,1-Dichloroethene | 0.26 | U | 1.0 | 0.26 |
| 87-61-6 | 1,2,3-Trichlorobenzene | 0.36 | U | 1.0 | 0.36 |
| 120-82-1 | 1,2,4-Trichlorobenzene | 0.37 | U | 1.0 | 0.37 |
| 78-87-5 | 1,2-Dichloropropane | 0.35 | U | 1.0 | 0.35 |
| 541-73-1 | 1,3-Dichlorobenzene | 0.34 | U | 1.0 | 0.34 |
| 106-46-7 | 1,4-Dichlorobenzene | 0.33 | U | 1.0 | 0.33 |
| 123-91-1 | 1,4-Dioxane | 28 | U | 50 | 28 |
| 78-93-3 | 2-Butanone (MEK) | 1.9 | U | 5.0 | 1.9 |
| 591-78-6 | 2-Hexanone | 1.1 | U | 5.0 | 1.1 |
| 108-10-1 | 4-Methyl-2-pentanone (MIBK) | 1.3 | U | 5.0 | 1.3 |
| 67-64-1 | Acetone | 4.4 | U | 5.0 | 4.4 |
| 71-43-2 | Benzene | 0.20 | U | 1.0 | 0.20 |
| 75-25-2 | Bromoform | 0.54 | U | 1.0 | 0.54 |
| 74-83-9 | Bromomethane | 0.55 | U | 1.0 | 0.55 |
| 75-15-0 | Carbon disulfide | 0.82 | U | 1.0 | 0.82 |
| 56-23-5 | Carbon tetrachloride | 0.21 | U | 1.0 | 0.21 |
| 108-90-7 | Chlorobenzene | 0.38 | U | 1.0 | 0.38 |
| 74-97-5 | Chlorobromomethane | 0.41 | U | 1.0 | 0.41 |
| 124-48-1 | Chlorodibromomethane | 0.28 | U | 1.0 | 0.28 |
| 75-00-3 | Chloroethane | 0.32 | U | 1.0 | 0.32 |
| 67-66-3 | Chloroform | 0.33 | U | 1.0 | 0.33 |
| 74-87-3 | Chloromethane | 0.41 | J | 1.0 | 0.40 |
| 156-59-2 | cis-1,2-Dichloroethene | 0.22 | U | 1.0 | 0.22 |
| 10061-01-5 | cis-1,3-Dichloropropene | 0.22 | U | 1.0 | 0.22 |
| 110-82-7 | Cyclohexane | 0.32 | U | 1.0 | 0.32 |
| 75-27-4 | Dichlorobromomethane | 0.34 | U | 1.0 | 0.34 |
| 75-71-8 | Dichlorodifluoromethane | 0.31 | U | 1.0 | 0.31 |
| 100-41-4 | Ethylbenzene | 0.30 | U | 1.0 | 0.30 |
| 106-93-4 | Ethylene Dibromide | 0.50 | U | 1.0 | 0.50 |
| 98-82-8 | Isopropylbenzene | 0.34 | U | 1.0 | 0.34 |

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Edison  Job No.: 460-217659-1

SDG No.:

Client Sample ID: MW-207  Lab Sample ID: 460-217659-2

Matrix: Water  Lab File ID: T38878.D

Analysis Method: 8260C  Date Collected: 09/03/2020 11:10

Sample wt/vol: 5(mL)  Date Analyzed: 09/09/2020 02:29

Soil Aliquot Vol:  Dilution Factor: 1

Soil Extract Vol.:  GC Column: DB-624  ID: 0.18(mm)

% Moisture:  Level: (low/med) Low

Analysis Batch No.: 722587  Units: ug/L

| CAS NO. | COMPOUND NAME | RESULT | Q | RL | MDL |
|---|---|---|---|---|---|
| 79-20-9 | Methyl acetate | 0.79 | U | 5.0 | 0.79 |
| 1634-04-4 | Methyl tert-butyl ether | 0.47 | U | 1.0 | 0.47 |
| 108-87-2 | Methylcyclohexane | 0.26 | U | 1.0 | 0.26 |
| 75-09-2 | Methylene Chloride | 0.32 | U | 1.0 | 0.32 |
| 179601-23-1 | m-Xylene & p-Xylene | 0.30 | U | 1.0 | 0.30 |
| 95-47-6 | o-Xylene | 0.36 | U | 1.0 | 0.36 |
| 100-42-5 | Styrene | 0.42 | U | 1.0 | 0.42 |
| 127-18-4 | Tetrachloroethene | 0.25 | U | 1.0 | 0.25 |
| 108-88-3 | Toluene | 0.38 | U | 1.0 | 0.38 |
| 156-60-5 | trans-1,2-Dichloroethene | 0.24 | U | 1.0 | 0.24 |
| 10061-02-6 | trans-1,3-Dichloropropene | 0.49 | U | 1.0 | 0.49 |
| 79-01-6 | Trichloroethene | 0.31 | U | 1.0 | 0.31 |
| 75-69-4 | Trichlorofluoromethane | 0.32 | U | 1.0 | 0.32 |
| 75-01-4 | Vinyl chloride | 0.17 | U | 1.0 | 0.17 |
| 107-06-2 | 1,2-Dichloroethane | 0.43 | U * | 1.0 | 0.43 |
| 95-50-1 | 1,2-Dichlorobenzene | 0.43 | U | 1.0 | 0.43 |
| 96-12-8 | 1,2-Dibromo-3-Chloropropane | 0.38 | U | 1.0 | 0.38 |

| CAS NO. | SURROGATE | %REC | Q | LIMITS |
|---|---|---|---|---|
| 17060-07-0 | 1,2-Dichloroethane-d4 (Surr) | 75 | | 75-123 |
| 460-00-4 | 4-Bromofluorobenzene | 84 | | 76-120 |
| 1868-53-7 | Dibromofluoromethane (Surr) | 88 | | 77-124 |
| 2037-26-5 | Toluene-d8 (Surr) | 95 | | 80-120 |

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: Eurofins TestAmerica, Edison  Job No.: 460-217659-1

SDG No.:

Client Sample ID: MW-207  Lab Sample ID: 460-217659-2

Matrix: Water  Lab File ID: T38878.D

Analysis Method: 8260C  Date Collected: 09/03/2020 11:10

Sample wt/vol: 5(mL)  Date Analyzed: 09/09/2020 02:29

Soil Aliquot Vol:  Dilution Factor: 1

Soil Extract Vol.:  GC Column: DB-624  ID: 0.18(mm)

% Moisture:  Level: (low/med) Low

Analysis Batch No.: 722587  Units: ug/L

Number TICs Found: 0  TIC Result Total: 0

| CAS NO. | COMPOUND NAME | RT | RESULT | Q | MATCH QUALITY |
|---|---|---|---|---|---|
| | Tentatively Identified Compound | | None | | |

Eurofins TestAmerica, Edison
Target Compound Quantitation Report

Data File: \\chromfs\Edison\ChromData\CVOAMS15\20200908-116442.b\T38878.D
Lims ID: 460-217659-A-2
Client ID: MW-207
Sample Type: Client
Inject. Date: 09-Sep-2020 02:29:44 ALS Bottle#: 0 Worklist Smp#: 17
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: 460-217659-A-2
Misc. Info.: 460-0116442-017
Operator ID: Instrument ID: CVOAMS15

Method: \\chromfs\Edison\ChromData\CVOAMS15\20200908-116442.b\8260W_15.m
Limit Group: VOA - 8260C Water and Solid
Last Update: 09-Sep-2020 11:20:41 Calib Date: 04-Sep-2020 15:01:54
Integrator: RTE ID Type: RT Order ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Edison\ChromData\CVOAMS15\20200904-116301.b\T38701.D

Column 1 : DB-624 ( 0.18 mm) Det: MS Quad
Process Host: CTX1022

First Level Reviewer: desais Date: 09-Sep-2020 07:08:46

| Compound | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q | Response | OnCol Amt ug/l | Flags |
|---|---|---|---|---|---|---|---|---|
| 4 Dichlorodifluoromethane | 85 | 0.653 | 0.647 | 0.006 | 26 | 1432 | 0.2822 | |
| 6 Chloromethane | 50 | 0.726 | 0.726 | 0.000 | 1 | 1156 | 0.4142 | |
| 12 Trichlorofluoromethane | 101 | 1.074 | 1.068 | 0.006 | 26 | 1127 | 0.1886 | |
| * 31 TBA-d9 (IS) | 66 | 1.598 | 1.598 | 0.000 | 92 | 38101 | 1000.0 | |
| * 42 2-Butanone-d5 | 46 | 2.336 | 2.336 | 0.000 | 47 | 276627 | 250.0 | |
| $ 53 Dibromofluoromethane (Surr) | 113 | 2.720 | 2.720 | 0.000 | 96 | 179243 | 44.2 | |
| $ 58 1,2-Dichloroethane-d4 (Surr) | 65 | 2.982 | 2.982 | 0.000 | 96 | 154790 | 37.7 | |
| * 65 Fluorobenzene | 96 | 3.274 | 3.275 | -0.001 | 100 | 695700 | 50.0 | |
| * 73 1,4-Dioxane-d8 | 96 | 3.933 | 3.939 | -0.006 | 1 | 29580 | 1000.0 | |
| $ 83 Toluene-d8 (Surr) | 98 | 4.902 | 4.902 | 0.000 | 98 | 615957 | 47.5 | |
| * 94 Chlorobenzene-d5 | 117 | 6.743 | 6.743 | 0.000 | 84 | 508198 | 50.0 | |
| $ 105 4-Bromofluorobenzene | 174 | 8.530 | 8.530 | 0.000 | 91 | 176829 | 42.2 | |
| * 120 1,4-Dichlorobenzene-d4 | 152 | 10.377 | 10.377 | 0.000 | 94 | 215192 | 50.0 | |

## Reagents:

VOA6IS/SURR_00038 Amount Added: 5.00 Units: uL Run Reagent

Report Date: 09-Sep-2020 11:26:16 Chrom Revision: 2.3 20-Aug-2020 13:57:12

Eurofins TestAmerica, Edison

Data File: \\chromfs\Edison\ChromData\CVOAMS15\20200908-116442.b\T38878.D

Injection Date: 09-Sep-2020 02:29:44 Instrument ID: CVOAMS15

Lims ID: 460-217659-A-2 Lab Sample ID: 460-217659-2

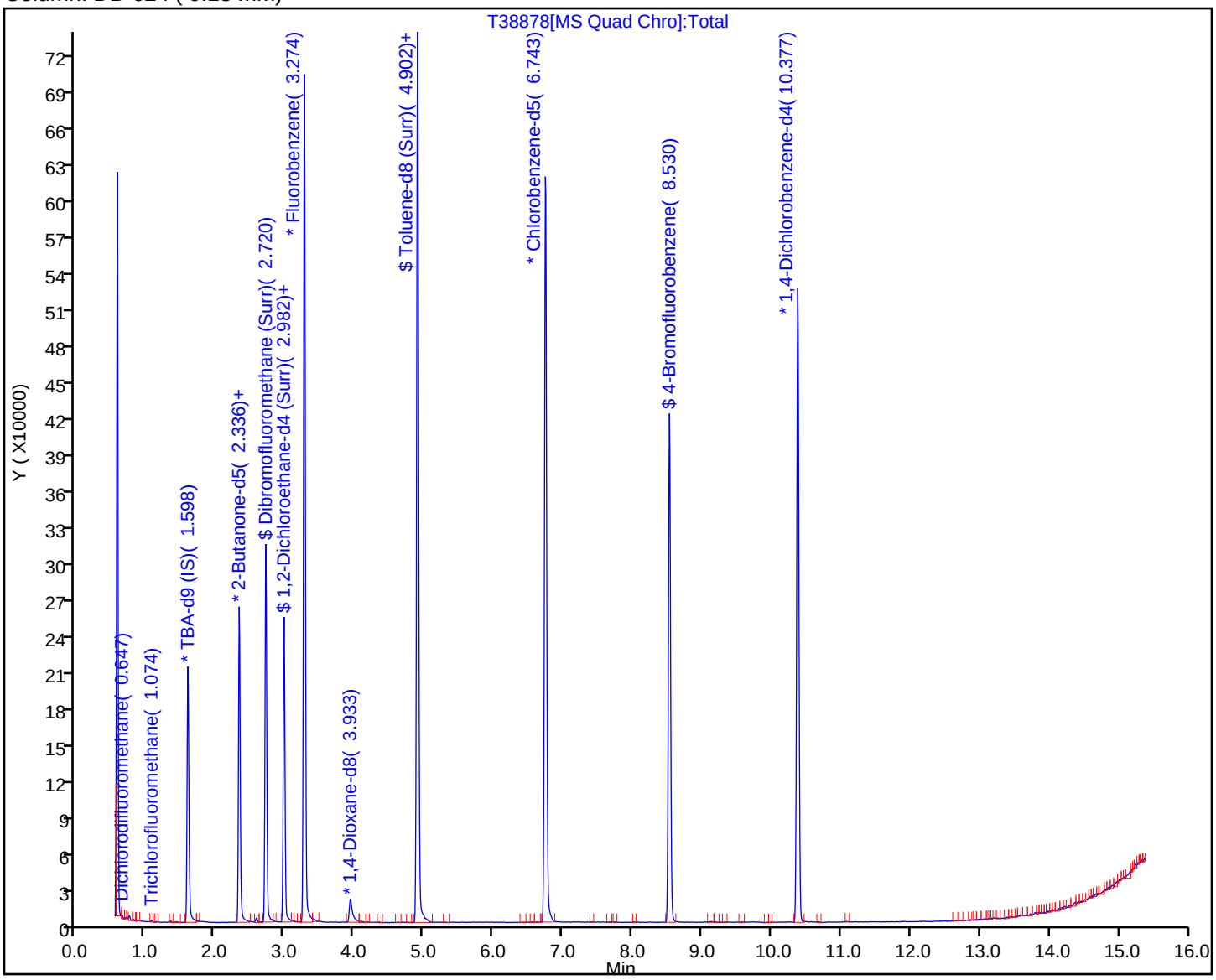
Client ID: MW-207

Operator ID: ALS Bottle#: 0 Worklist Smp#: 17

Purge Vol: 5.000 mL Dil. Factor: 1.0000

Method: 8260W_15 Limit Group: VOA - 8260C Water and Solid

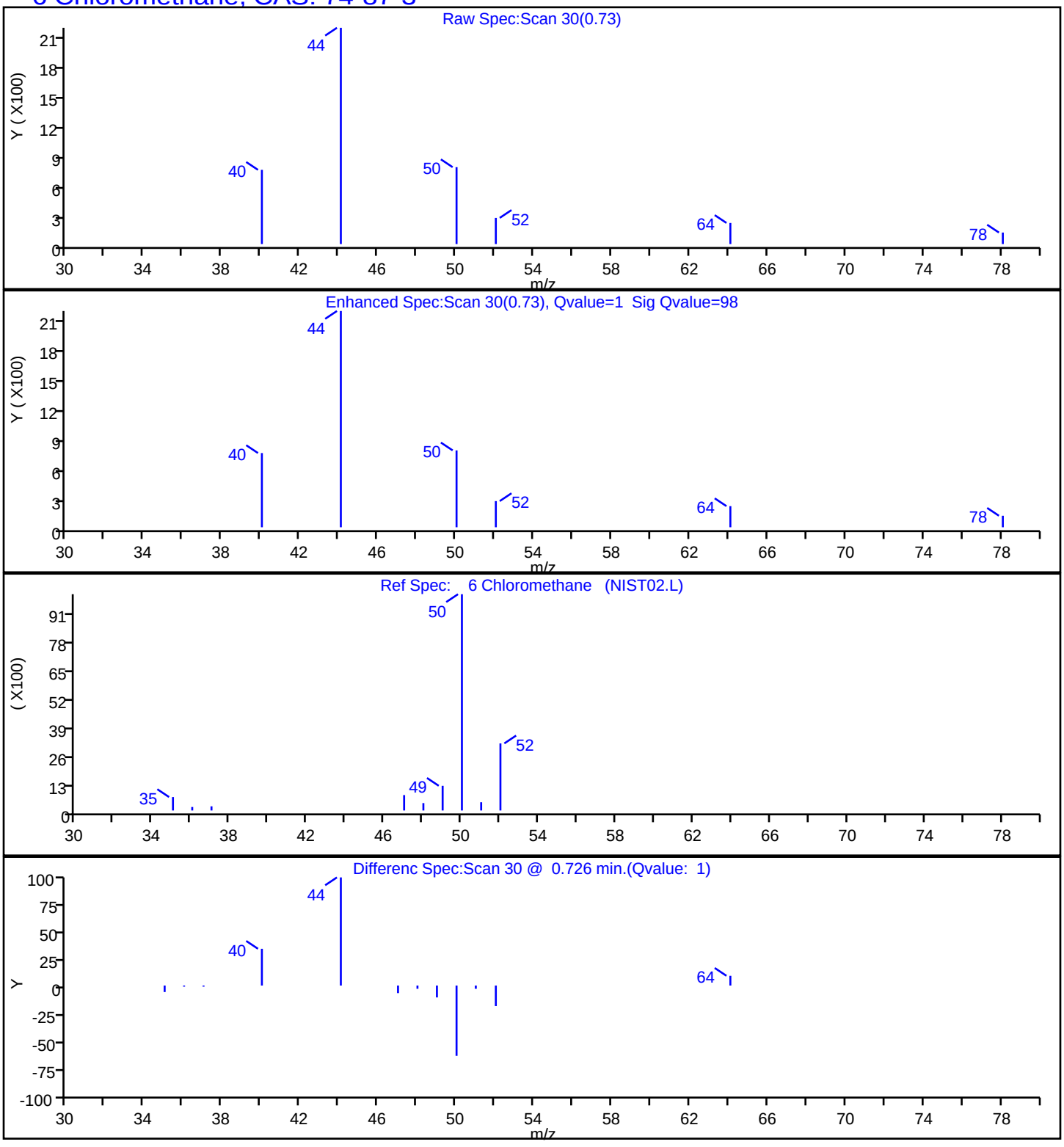
Column: DB-624 ( 0.18 mm)



Eurofins TestAmerica, Edison

| | | | | | |
|---|---|---|---|---|---|
| Data File: | \\chromfs\Edison\ChromData\CVOAMS15\20200908-116442.b\T38878.D | | | | |
| Injection Date: | 09-Sep-2020 02:29:44 | Instrument ID: | CVOAMS15 | | |
| Lims ID: | 460-217659-A-2 | Lab Sample ID: | 460-217659-2 | | |
| Client ID: | MW-207 | | | | |
| Operator ID: | | ALS Bottle#: | 0 | Worklist Smp#: | 17 |
| Purge Vol: | 5.000 mL | Dil. Factor: | 1.0000 | | |
| Method: | 8260W_15 | Limit Group: | VOA - 8260C Water and Solid | | |
| Column: | DB-624 ( 0.18 mm) | Detector | MS Quad | | |

## 6 Chloromethane, CAS: 74-87-3



Eurofins TestAmerica, Edison

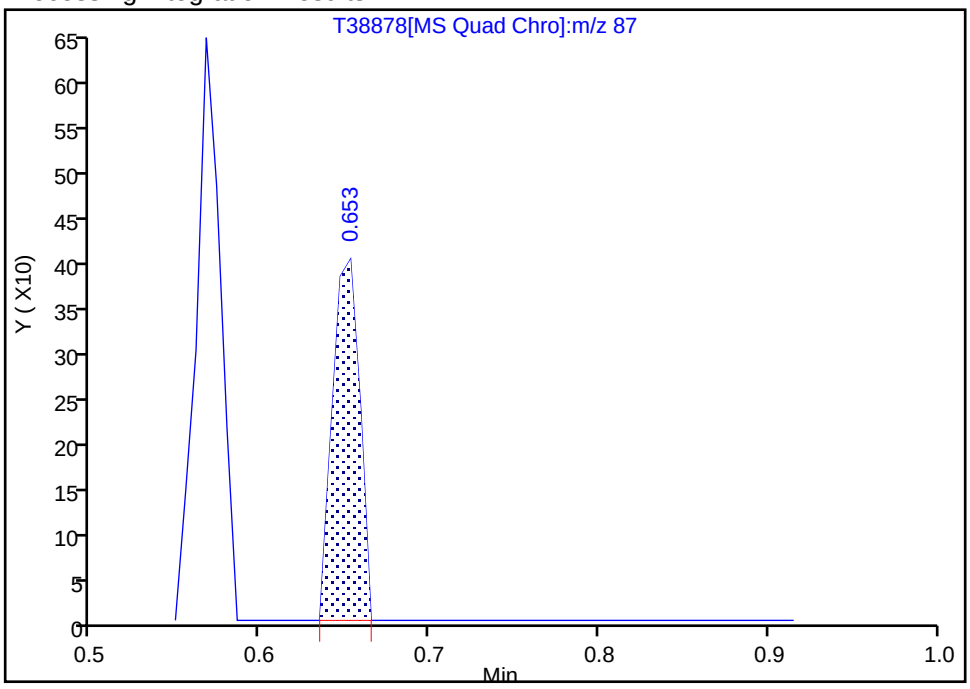
| | | | |
|---|---|---|---|
| Data File: | \\chromfs\Edison\ChromData\CVOAMS15\20200908-116442.b\T38878.D | | |
| Injection Date: | 09-Sep-2020 02:29:44 | Instrument ID: | CVOAMS15 |
| Lims ID: | 460-217659-A-2 | Lab Sample ID: | 460-217659-2 |
| Client ID: | MW-207 | | |
| Operator ID: | | ALS Bottle#: | 0 Worklist Smp#: 17 |
| Purge Vol: | 5.000 mL | Dil. Factor: | 1.0000 |
| Method: | 8260W_15 | Limit Group: | VOA - 8260C Water and Solid |
| Column: | DB-624 ( 0.18 mm) | Detector | MS Quad |

## 4 Dichlorodifluoromethane, CAS: 75-71-8

Signal: 2

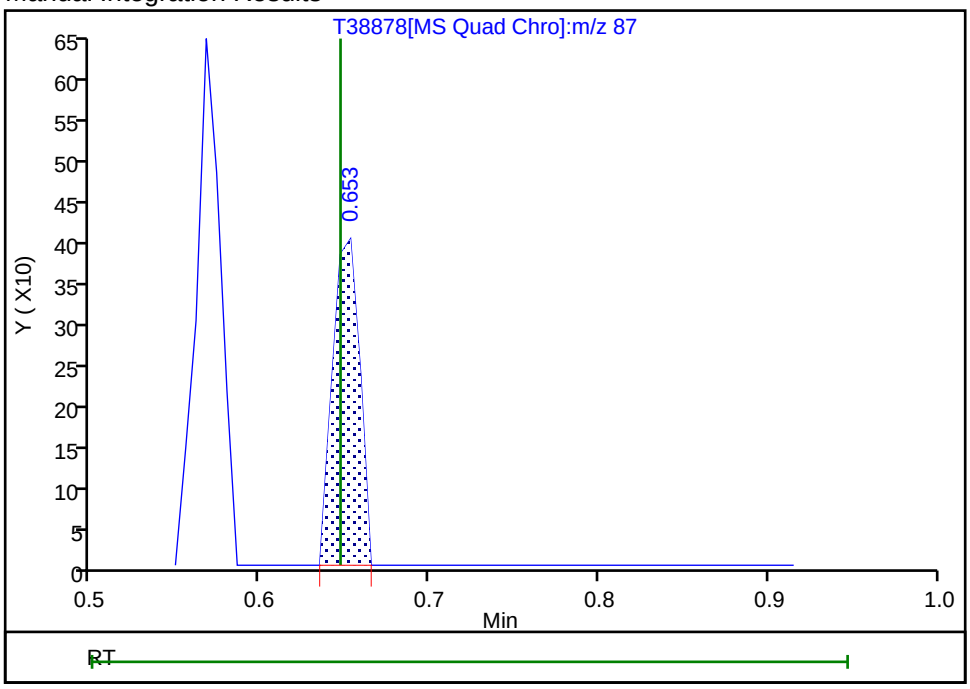
Processing Integration Results

RT: 0.65
Area: 439
Amount: 0.282153
Amount Units: ug/l




Manual Integration Results

RT: 0.65
Area: 439
Amount: 0.282153
Amount Units: ug/l




Reviewer: desais, 09-Sep-2020 07:08:31
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

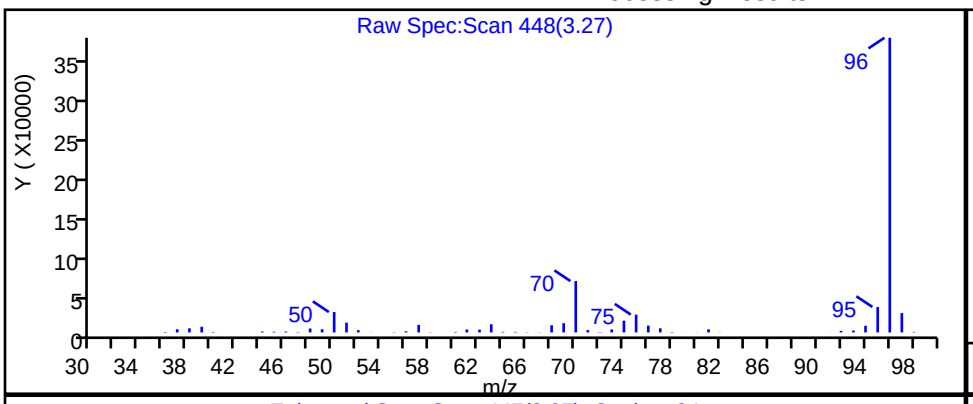
User Disabled Compound Report

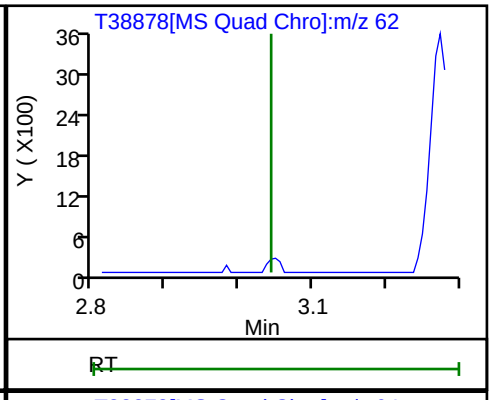
Eurofins TestAmerica, Edison

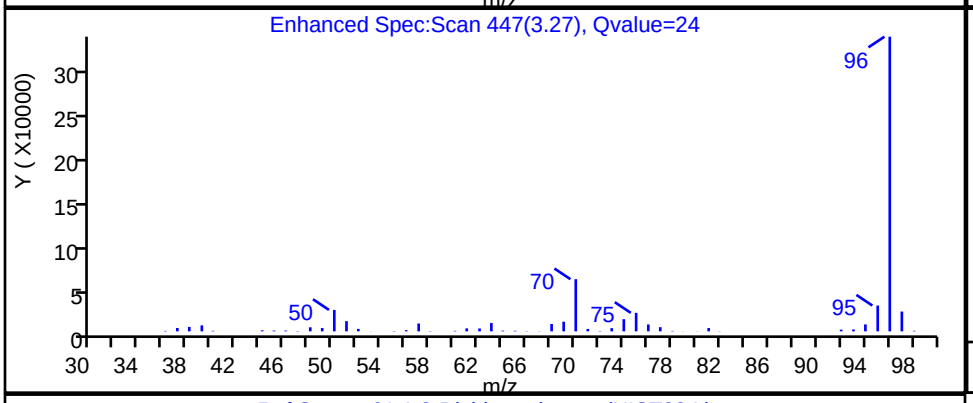
| | | | | | |
|---|---|---|---|---|---|
| Data File: | \\chromfs\Edison\ChromData\CVOAMS15\20200908-116442.b\T38878.D | | | | |
| Injection Date: | 09-Sep-2020 02:29:44 | Instrument ID: | CVOAMS15 | | |
| Lims ID: | 460-217659-A-2 | Lab Sample ID: | 460-217659-2 | | |
| Client ID: | MW-207 | | | | |
| Operator ID: | | ALS Bottle#: | 0 | Worklist Smp#: | 17 |
| Purge Vol: | 5.000 mL | Dil. Factor: | 1.0000 | | |
| Method: | 8260W_15 | Limit Group: | VOA - 8260C Water and Solid | | |
| Column: | DB-624 ( 0.18 mm) | Detector | MS Quad | | |

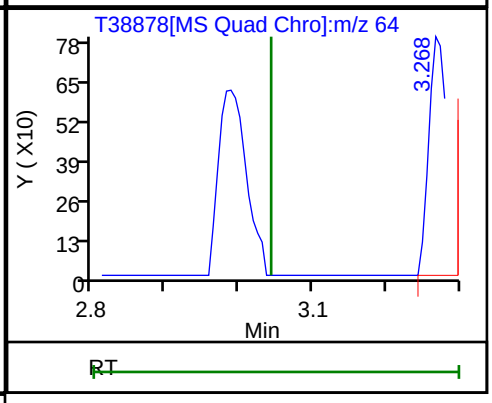
## 61 1,2-Dichloroethane, CAS: 107-06-2

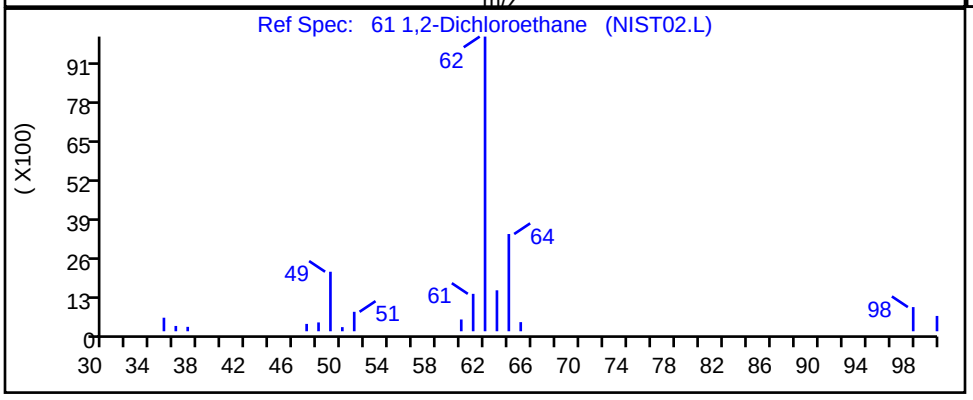
Processing Results




| RT | Mass | Response | Amount |
|---|---|---|---|
| 3.27 | 62.00 | 6604 | 1.430660 |
| 3.27 | 64.00 | 1387 | |

Reviewer: desais, 09-Sep-2020 07:08:40

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Edison  Job No.: 460-217659-1

SDG No.:

Client Sample ID: MW-210  Lab Sample ID: 460-217659-3

Matrix: Water  Lab File ID: T38879.D

Analysis Method: 8260C  Date Collected: 09/03/2020 10:35

Sample wt/vol: 5(mL)  Date Analyzed: 09/09/2020 02:53

Soil Aliquot Vol:  Dilution Factor: 1

Soil Extract Vol.:  GC Column: DB-624  ID: 0.18(mm)

% Moisture:  Level: (low/med) Low

Analysis Batch No.: 722587  Units: ug/L

| CAS NO. | COMPOUND NAME | RESULT | Q | RL | MDL |
|---|---|---|---|---|---|
| 71-55-6 | 1,1,1-Trichloroethane | 0.24 | U | 1.0 | 0.24 |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 0.37 | U | 1.0 | 0.37 |
| 76-13-1 | 1,1,2-Trichloro-1,2,2-trifluoroethane | 0.31 | U | 1.0 | 0.31 |
| 79-00-5 | 1,1,2-Trichloroethane | 0.43 | U | 1.0 | 0.43 |
| 75-34-3 | 1,1-Dichloroethane | 0.26 | U | 1.0 | 0.26 |
| 75-35-4 | 1,1-Dichloroethene | 0.26 | U | 1.0 | 0.26 |
| 87-61-6 | 1,2,3-Trichlorobenzene | 0.36 | U | 1.0 | 0.36 |
| 120-82-1 | 1,2,4-Trichlorobenzene | 0.37 | U | 1.0 | 0.37 |
| 78-87-5 | 1,2-Dichloropropane | 0.35 | U | 1.0 | 0.35 |
| 541-73-1 | 1,3-Dichlorobenzene | 0.34 | U | 1.0 | 0.34 |
| 106-46-7 | 1,4-Dichlorobenzene | 0.33 | U | 1.0 | 0.33 |
| 123-91-1 | 1,4-Dioxane | 28 | U | 50 | 28 |
| 78-93-3 | 2-Butanone (MEK) | 1.9 | U | 5.0 | 1.9 |
| 591-78-6 | 2-Hexanone | 1.1 | U | 5.0 | 1.1 |
| 108-10-1 | 4-Methyl-2-pentanone (MIBK) | 1.3 | U | 5.0 | 1.3 |
| 67-64-1 | Acetone | 4.4 | U | 5.0 | 4.4 |
| 71-43-2 | Benzene | 0.20 | U | 1.0 | 0.20 |
| 75-25-2 | Bromoform | 0.54 | U | 1.0 | 0.54 |
| 74-83-9 | Bromomethane | 0.55 | U | 1.0 | 0.55 |
| 75-15-0 | Carbon disulfide | 0.82 | U | 1.0 | 0.82 |
| 56-23-5 | Carbon tetrachloride | 0.21 | U | 1.0 | 0.21 |
| 108-90-7 | Chlorobenzene | 0.38 | U | 1.0 | 0.38 |
| 74-97-5 | Chlorobromomethane | 0.41 | U | 1.0 | 0.41 |
| 124-48-1 | Chlorodibromomethane | 0.28 | U | 1.0 | 0.28 |
| 75-00-3 | Chloroethane | 0.32 | U | 1.0 | 0.32 |
| 67-66-3 | Chloroform | 0.33 | U | 1.0 | 0.33 |
| 74-87-3 | Chloromethane | 0.40 | U | 1.0 | 0.40 |
| 156-59-2 | cis-1,2-Dichloroethene | 0.22 | U | 1.0 | 0.22 |
| 10061-01-5 | cis-1,3-Dichloropropene | 0.22 | U | 1.0 | 0.22 |
| 110-82-7 | Cyclohexane | 0.32 | U | 1.0 | 0.32 |
| 75-27-4 | Dichlorobromomethane | 0.34 | U | 1.0 | 0.34 |
| 75-71-8 | Dichlorodifluoromethane | 0.31 | U | 1.0 | 0.31 |
| 100-41-4 | Ethylbenzene | 0.30 | U | 1.0 | 0.30 |
| 106-93-4 | Ethylene Dibromide | 0.50 | U | 1.0 | 0.50 |
| 98-82-8 | Isopropylbenzene | 0.34 | U | 1.0 | 0.34 |

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Edison  Job No.: 460-217659-1

SDG No.:

Client Sample ID: MW-210  Lab Sample ID: 460-217659-3

Matrix: Water  Lab File ID: T38879.D

Analysis Method: 8260C  Date Collected: 09/03/2020 10:35

Sample wt/vol: 5(mL)  Date Analyzed: 09/09/2020 02:53

Soil Aliquot Vol:  Dilution Factor: 1

Soil Extract Vol.:  GC Column: DB-624  ID: 0.18(mm)

% Moisture:  Level: (low/med) Low

Analysis Batch No.: 722587  Units: ug/L

| CAS NO. | COMPOUND NAME | RESULT | Q | RL | MDL |
|---|---|---|---|---|---|
| 79-20-9 | Methyl acetate | 0.79 | U | 5.0 | 0.79 |
| 1634-04-4 | Methyl tert-butyl ether | 0.47 | U | 1.0 | 0.47 |
| 108-87-2 | Methylcyclohexane | 0.26 | U | 1.0 | 0.26 |
| 75-09-2 | Methylene Chloride | 0.32 | U | 1.0 | 0.32 |
| 179601-23-1 | m-Xylene & p-Xylene | 0.30 | U | 1.0 | 0.30 |
| 95-47-6 | o-Xylene | 0.36 | U | 1.0 | 0.36 |
| 100-42-5 | Styrene | 0.42 | U | 1.0 | 0.42 |
| 127-18-4 | Tetrachloroethene | 0.25 | U | 1.0 | 0.25 |
| 108-88-3 | Toluene | 0.38 | U | 1.0 | 0.38 |
| 156-60-5 | trans-1,2-Dichloroethene | 0.24 | U | 1.0 | 0.24 |
| 10061-02-6 | trans-1,3-Dichloropropene | 0.49 | U | 1.0 | 0.49 |
| 79-01-6 | Trichloroethene | 0.31 | U | 1.0 | 0.31 |
| 75-69-4 | Trichlorofluoromethane | 0.32 | U | 1.0 | 0.32 |
| 75-01-4 | Vinyl chloride | 0.17 | U | 1.0 | 0.17 |
| 107-06-2 | 1,2-Dichloroethane | 0.43 | U * | 1.0 | 0.43 |
| 95-50-1 | 1,2-Dichlorobenzene | 0.43 | U | 1.0 | 0.43 |
| 96-12-8 | 1,2-Dibromo-3-Chloropropane | 0.38 | U | 1.0 | 0.38 |

| CAS NO. | SURROGATE | %REC | Q | LIMITS |
|---|---|---|---|---|
| 17060-07-0 | 1,2-Dichloroethane-d4 (Surr) | 77 | | 75-123 |
| 460-00-4 | 4-Bromofluorobenzene | 86 | | 76-120 |
| 1868-53-7 | Dibromofluoromethane (Surr) | 92 | | 77-124 |
| 2037-26-5 | Toluene-d8 (Surr) | 102 | | 80-120 |

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: Eurofins TestAmerica, Edison  Job No.: 460-217659-1

SDG No.:

Client Sample ID: MW-210  Lab Sample ID: 460-217659-3

Matrix: Water  Lab File ID: T38879.D

Analysis Method: 8260C  Date Collected: 09/03/2020 10:35

Sample wt/vol: 5(mL)  Date Analyzed: 09/09/2020 02:53

Soil Aliquot Vol:  Dilution Factor: 1

Soil Extract Vol.:  GC Column: DB-624  ID: 0.18(mm)

% Moisture:  Level: (low/med) Low

Analysis Batch No.: 722587  Units: ug/L

Number TICs Found: 0  TIC Result Total: 0

| CAS NO. | COMPOUND NAME | RT | RESULT | Q | MATCH QUALITY |
|---|---|---|---|---|---|
| | Tentatively Identified Compound | | None | | |

Eurofins TestAmerica, Edison
Target Compound Quantitation Report

Data File: \\chromfs\Edison\ChromData\CVOAMS15\20200908-116442.b\T38879.D
Lims ID: 460-217659-A-3
Client ID: MW-210
Sample Type: Client
Inject. Date: 09-Sep-2020 02:53:40 ALS Bottle#: 0 Worklist Smp#: 18
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: 460-217659-A-3
Misc. Info.: 460-0116442-018
Operator ID: Instrument ID: CVOAMS15

Method: \\chromfs\Edison\ChromData\CVOAMS15\20200908-116442.b\8260W_15.m
Limit Group: VOA - 8260C Water and Solid
Last Update: 09-Sep-2020 11:20:41 Calib Date: 04-Sep-2020 15:01:54
Integrator: RTE ID Type: RT Order ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Edison\ChromData\CVOAMS15\20200904-116301.b\T38701.D

Column 1 : DB-624 ( 0.18 mm) Det: MS Quad
Process Host: CTX1022

First Level Reviewer: desais Date: 09-Sep-2020 07:08:56

| Compound | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q | Response | OnCol Amt ug/l | Flags |
|---|---|---|---|---|---|---|---|---|
| * 31 TBA-d9 (IS) | 66 | 1.598 | 1.598 | 0.000 | 92 | 37055 | 1000.0 | |
| * 42 2-Butanone-d5 | 46 | 2.336 | 2.336 | 0.000 | 46 | 269993 | 250.0 | |
| $ 53 Dibromofluoromethane (Surr) | 113 | 2.720 | 2.720 | 0.000 | 97 | 179164 | 46.2 | |
| $ 58 1,2-Dichloroethane-d4 (Surr) | 65 | 2.982 | 2.982 | 0.000 | 96 | 150914 | 38.5 | |
| * 65 Fluorobenzene | 96 | 3.274 | 3.275 | -0.001 | 100 | 664415 | 50.0 | |
| * 73 1,4-Dioxane-d8 | 96 | 3.933 | 3.939 | -0.006 | 1 | 33579 | 1000.0 | |
| $ 83 Toluene-d8 (Surr) | 98 | 4.902 | 4.902 | 0.000 | 99 | 638473 | 50.9 | |
| * 94 Chlorobenzene-d5 | 117 | 6.743 | 6.743 | 0.000 | 83 | 491622 | 50.0 | |
| $ 105 4-Bromofluorobenzene | 174 | 8.530 | 8.530 | 0.000 | 93 | 175007 | 43.2 | |
| * 120 1,4-Dichlorobenzene-d4 | 152 | 10.377 | 10.377 | 0.000 | 93 | 208889 | 50.0 | |

## Reagents:

VOA6IS/SURR_00038 Amount Added: 5.00 Units: uL Run Reagent

Report Date: 09-Sep-2020 11:26:52 Chrom Revision: 2.3 20-Aug-2020 13:57:12

Eurofins TestAmerica, Edison

Data File: \\chromfs\Edison\ChromData\CVOAMS15\20200908-116442.b\T38879.D

Injection Date: 09-Sep-2020 02:53:40 Instrument ID: CVOAMS15

Lims ID: 460-217659-A-3 Lab Sample ID: 460-217659-3

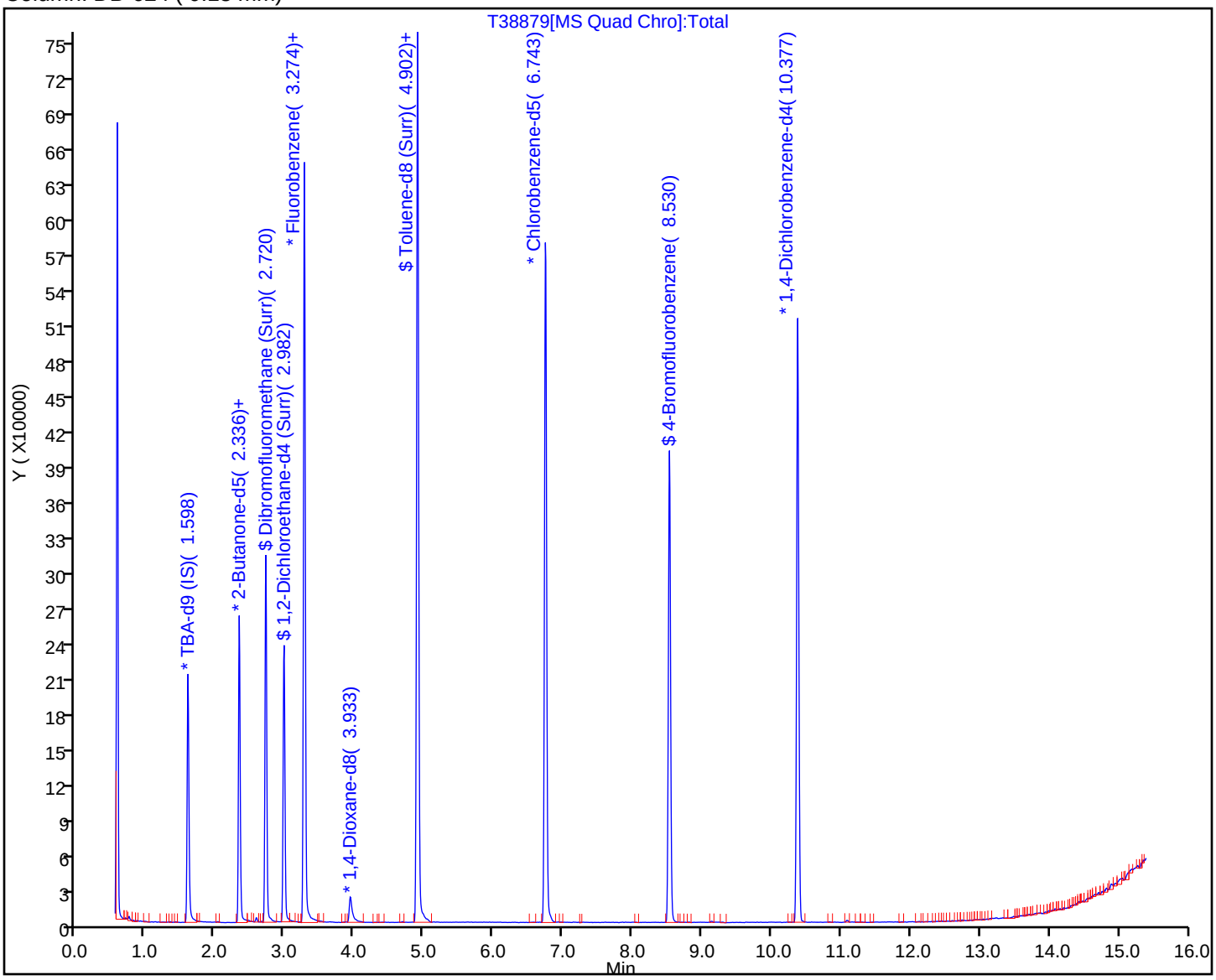
Client ID: MW-210

Operator ID: ALS Bottle#: 0 Worklist Smp#: 18

Purge Vol: 5.000 mL Dil. Factor: 1.0000

Method: 8260W_15 Limit Group: VOA - 8260C Water and Solid

Column: DB-624 ( 0.18 mm)



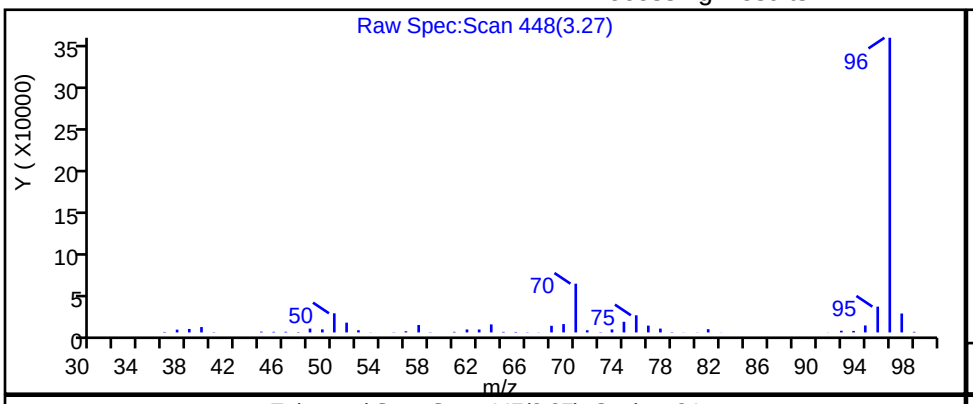
User Disabled Compound Report

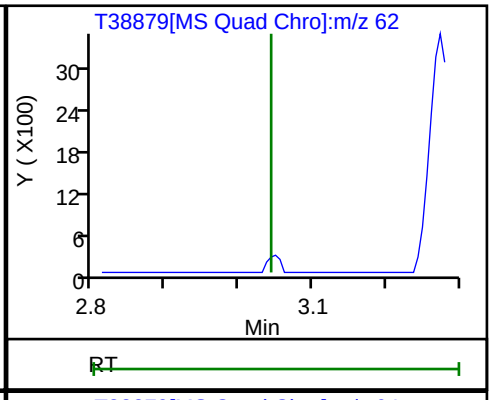
Eurofins TestAmerica, Edison

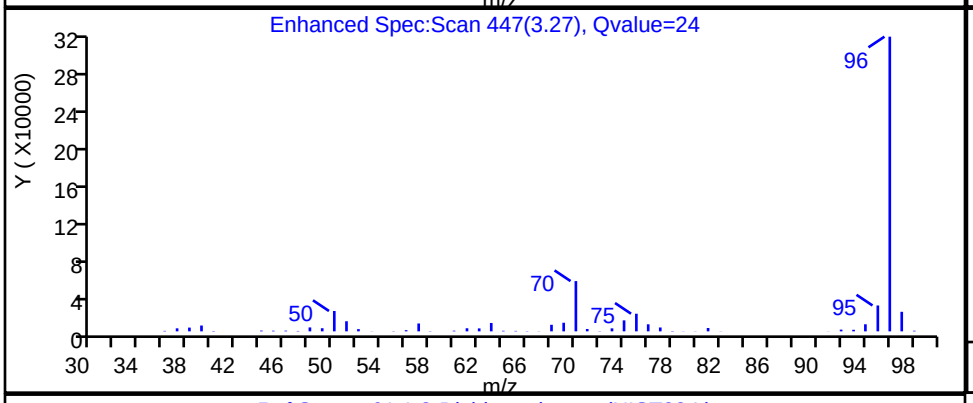
| | | | | | |
|---|---|---|---|---|---|
| Data File: | \\chromfs\Edison\ChromData\CVOAMS15\20200908-116442.b\T38879.D | | | | |
| Injection Date: | 09-Sep-2020 02:53:40 | Instrument ID: | CVOAMS15 | | |
| Lims ID: | 460-217659-A-3 | Lab Sample ID: | 460-217659-3 | | |
| Client ID: | MW-210 | | | | |
| Operator ID: | | ALS Bottle#: | 0 | Worklist Smp#: | 18 |
| Purge Vol: | 5.000 mL | Dil. Factor: | 1.0000 | | |
| Method: | 8260W_15 | Limit Group: | VOA - 8260C Water and Solid | | |
| Column: | DB-624 ( 0.18 mm) | Detector | MS Quad | | |

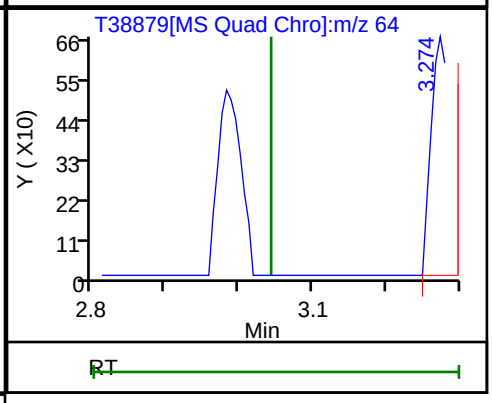
## 61 1,2-Dichloroethane, CAS: 107-06-2

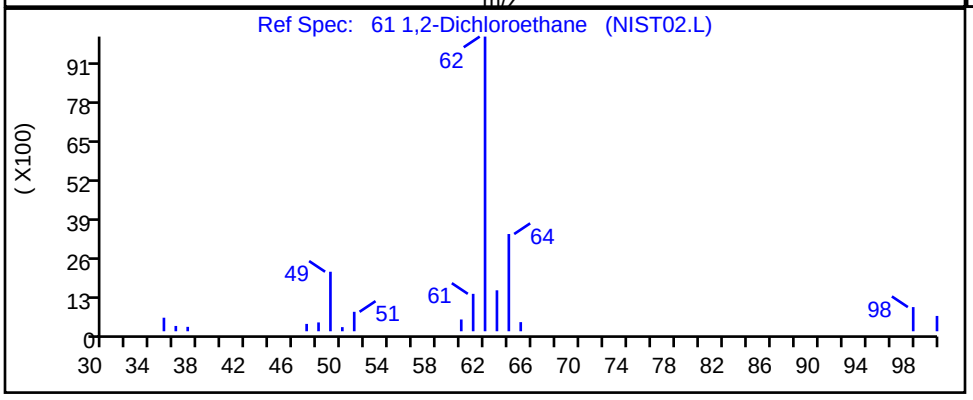
Processing Results




| RT | Mass | Response | Amount |
|---|---|---|---|
| 3.27 | 62.00 | 6608 | 1.498933 |
| 3.27 | 64.00 | 1136 | |

Reviewer: desais, 09-Sep-2020 07:08:52

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Edison  Job No.: 460-217659-1

SDG No.:

Client Sample ID: MW-211  Lab Sample ID: 460-217659-4

Matrix: Water  Lab File ID: T38880.D

Analysis Method: 8260C  Date Collected: 09/03/2020 14:00

Sample wt/vol: 5(mL)  Date Analyzed: 09/09/2020 03:17

Soil Aliquot Vol:  Dilution Factor: 1

Soil Extract Vol.:  GC Column: DB-624  ID: 0.18(mm)

% Moisture:  Level: (low/med) Low

Analysis Batch No.: 722587  Units: ug/L

| CAS NO. | COMPOUND NAME | RESULT | Q | RL | MDL |
|---|---|---|---|---|---|
| 71-55-6 | 1,1,1-Trichloroethane | 0.24 | U | 1.0 | 0.24 |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 0.37 | U | 1.0 | 0.37 |
| 76-13-1 | 1,1,2-Trichloro-1,2,2-trifluoroethane | 0.31 | U | 1.0 | 0.31 |
| 79-00-5 | 1,1,2-Trichloroethane | 0.43 | U | 1.0 | 0.43 |
| 75-34-3 | 1,1-Dichloroethane | 0.26 | U | 1.0 | 0.26 |
| 75-35-4 | 1,1-Dichloroethene | 0.26 | U | 1.0 | 0.26 |
| 87-61-6 | 1,2,3-Trichlorobenzene | 0.36 | U | 1.0 | 0.36 |
| 120-82-1 | 1,2,4-Trichlorobenzene | 0.37 | U | 1.0 | 0.37 |
| 78-87-5 | 1,2-Dichloropropane | 0.35 | U | 1.0 | 0.35 |
| 541-73-1 | 1,3-Dichlorobenzene | 0.34 | U | 1.0 | 0.34 |
| 106-46-7 | 1,4-Dichlorobenzene | 0.33 | U | 1.0 | 0.33 |
| 123-91-1 | 1,4-Dioxane | 28 | U | 50 | 28 |
| 78-93-3 | 2-Butanone (MEK) | 1.9 | U | 5.0 | 1.9 |
| 591-78-6 | 2-Hexanone | 1.1 | U | 5.0 | 1.1 |
| 108-10-1 | 4-Methyl-2-pentanone (MIBK) | 1.3 | U | 5.0 | 1.3 |
| 67-64-1 | Acetone | 4.4 | U | 5.0 | 4.4 |
| 71-43-2 | Benzene | 0.20 | U | 1.0 | 0.20 |
| 75-25-2 | Bromoform | 0.54 | U | 1.0 | 0.54 |
| 74-83-9 | Bromomethane | 0.55 | U | 1.0 | 0.55 |
| 75-15-0 | Carbon disulfide | 0.82 | U | 1.0 | 0.82 |
| 56-23-5 | Carbon tetrachloride | 0.21 | U | 1.0 | 0.21 |
| 108-90-7 | Chlorobenzene | 0.38 | U | 1.0 | 0.38 |
| 74-97-5 | Chlorobromomethane | 0.41 | U | 1.0 | 0.41 |
| 124-48-1 | Chlorodibromomethane | 0.28 | U | 1.0 | 0.28 |
| 75-00-3 | Chloroethane | 0.32 | U | 1.0 | 0.32 |
| 67-66-3 | Chloroform | 0.33 | U | 1.0 | 0.33 |
| 74-87-3 | Chloromethane | 0.40 | U | 1.0 | 0.40 |
| 156-59-2 | cis-1,2-Dichloroethene | 0.22 | U | 1.0 | 0.22 |
| 10061-01-5 | cis-1,3-Dichloropropene | 0.22 | U | 1.0 | 0.22 |
| 110-82-7 | Cyclohexane | 0.32 | U | 1.0 | 0.32 |
| 75-27-4 | Dichlorobromomethane | 0.34 | U | 1.0 | 0.34 |
| 75-71-8 | Dichlorodifluoromethane | 0.31 | U | 1.0 | 0.31 |
| 100-41-4 | Ethylbenzene | 0.30 | U | 1.0 | 0.30 |
| 106-93-4 | Ethylene Dibromide | 0.50 | U | 1.0 | 0.50 |
| 98-82-8 | Isopropylbenzene | 0.34 | U | 1.0 | 0.34 |

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Edison  Job No.: 460-217659-1

SDG No.:

Client Sample ID: MW-211  Lab Sample ID: 460-217659-4

Matrix: Water  Lab File ID: T38880.D

Analysis Method: 8260C  Date Collected: 09/03/2020 14:00

Sample wt/vol: 5(mL)  Date Analyzed: 09/09/2020 03:17

Soil Aliquot Vol:  Dilution Factor: 1

Soil Extract Vol.:  GC Column: DB-624  ID: 0.18(mm)

% Moisture:  Level: (low/med) Low

Analysis Batch No.: 722587  Units: ug/L

| CAS NO. | COMPOUND NAME | RESULT | Q | RL | MDL |
|---|---|---|---|---|---|
| 79-20-9 | Methyl acetate | 0.79 | U | 5.0 | 0.79 |
| 1634-04-4 | Methyl tert-butyl ether | 0.47 | U | 1.0 | 0.47 |
| 108-87-2 | Methylcyclohexane | 0.26 | U | 1.0 | 0.26 |
| 75-09-2 | Methylene Chloride | 0.32 | U | 1.0 | 0.32 |
| 179601-23-1 | m-Xylene & p-Xylene | 0.30 | U | 1.0 | 0.30 |
| 95-47-6 | o-Xylene | 0.36 | U | 1.0 | 0.36 |
| 100-42-5 | Styrene | 0.42 | U | 1.0 | 0.42 |
| 127-18-4 | Tetrachloroethene | 0.25 | U | 1.0 | 0.25 |
| 108-88-3 | Toluene | 0.38 | U | 1.0 | 0.38 |
| 156-60-5 | trans-1,2-Dichloroethene | 0.24 | U | 1.0 | 0.24 |
| 10061-02-6 | trans-1,3-Dichloropropene | 0.49 | U | 1.0 | 0.49 |
| 79-01-6 | Trichloroethene | 0.31 | U | 1.0 | 0.31 |
| 75-69-4 | Trichlorofluoromethane | 0.32 | U | 1.0 | 0.32 |
| 75-01-4 | Vinyl chloride | 0.17 | U | 1.0 | 0.17 |
| 107-06-2 | 1,2-Dichloroethane | 0.43 | U * | 1.0 | 0.43 |
| 95-50-1 | 1,2-Dichlorobenzene | 0.43 | U | 1.0 | 0.43 |
| 96-12-8 | 1,2-Dibromo-3-Chloropropane | 0.38 | U | 1.0 | 0.38 |

| CAS NO. | SURROGATE | %REC | Q | LIMITS |
|---|---|---|---|---|
| 17060-07-0 | 1,2-Dichloroethane-d4 (Surr) | 77 | | 75-123 |
| 460-00-4 | 4-Bromofluorobenzene | 90 | | 76-120 |
| 1868-53-7 | Dibromofluoromethane (Surr) | 89 | | 77-124 |
| 2037-26-5 | Toluene-d8 (Surr) | 104 | | 80-120 |

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: Eurofins TestAmerica, Edison  Job No.: 460-217659-1

SDG No.:

Client Sample ID: MW-211  Lab Sample ID: 460-217659-4

Matrix: Water  Lab File ID: T38880.D

Analysis Method: 8260C  Date Collected: 09/03/2020 14:00

Sample wt/vol: 5(mL)  Date Analyzed: 09/09/2020 03:17

Soil Aliquot Vol:  Dilution Factor: 1

Soil Extract Vol.:  GC Column: DB-624  ID: 0.18(mm)

% Moisture:  Level: (low/med) Low

Analysis Batch No.: 722587  Units: ug/L

Number TICs Found: 0  TIC Result Total: 0

| CAS NO. | COMPOUND NAME | RT | RESULT | Q | MATCH QUALITY |
|---|---|---|---|---|---|
| | Tentatively Identified Compound | | None | | |

Eurofins TestAmerica, Edison
Target Compound Quantitation Report

Data File: \\chromfs\Edison\ChromData\CVOAMS15\20200908-116442.b\T38880.D
Lims ID: 460-217659-A-4
Client ID: MW-211
Sample Type: Client
Inject. Date: 09-Sep-2020 03:17:40 ALS Bottle#: 0 Worklist Smp#: 19
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: 460-217659-A-4
Misc. Info.: 460-0116442-019
Operator ID: Instrument ID: CVOAMS15

Method: \\chromfs\Edison\ChromData\CVOAMS15\20200908-116442.b\8260W_15.m
Limit Group: VOA - 8260C Water and Solid
Last Update: 09-Sep-2020 11:20:41 Calib Date: 04-Sep-2020 15:01:54
Integrator: RTE ID Type: RT Order ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Edison\ChromData\CVOAMS15\20200904-116301.b\T38701.D

Column 1 : DB-624 ( 0.18 mm) Det: MS Quad
Process Host: CTX1022

First Level Reviewer: desais Date: 09-Sep-2020 07:09:10

| Compound | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q | Response | OnCol Amt ug/l | Flags |
|---|---|---|---|---|---|---|---|---|
| 6 Chloromethane | 50 | 0.726 | 0.726 | 0.000 | 1 | 741 | 0.2654 | |
| * 31 TBA-d9 (IS) | 66 | 1.598 | 1.598 | 0.000 | 92 | 40743 | 1000.0 | |
| * 42 2-Butanone-d5 | 46 | 2.336 | 2.336 | 0.000 | 48 | 255633 | 250.0 | |
| $ 53 Dibromofluoromethane (Surr) | 113 | 2.720 | 2.720 | 0.000 | 96 | 181031 | 44.6 | |
| $ 58 1,2-Dichloroethane-d4 (Surr) | 65 | 2.982 | 2.982 | 0.000 | 96 | 158476 | 38.6 | |
| * 65 Fluorobenzene | 96 | 3.274 | 3.275 | -0.001 | 100 | 695814 | 50.0 | |
| * 73 1,4-Dioxane-d8 | 96 | 3.933 | 3.939 | -0.006 | 1 | 33082 | 1000.0 | |
| $ 83 Toluene-d8 (Surr) | 98 | 4.902 | 4.902 | 0.000 | 98 | 637606 | 52.1 | |
| 84 Toluene | 91 | 4.981 | 4.982 | -0.001 | 21 | 3895 | 0.2745 | |
| * 94 Chlorobenzene-d5 | 117 | 6.743 | 6.743 | 0.000 | 82 | 479338 | 50.0 | |
| $ 105 4-Bromofluorobenzene | 174 | 8.530 | 8.530 | 0.000 | 89 | 178310 | 45.1 | |
| * 120 1,4-Dichlorobenzene-d4 | 152 | 10.377 | 10.377 | 0.000 | 95 | 222261 | 50.0 | |

## Reagents:

VOA6IS/SURR_00038 Amount Added: 5.00 Units: uL Run Reagent

Report Date: 09-Sep-2020 11:27:23 Chrom Revision: 2.3 20-Aug-2020 13:57:12

Eurofins TestAmerica, Edison

Data File: \\chromfs\Edison\ChromData\CVOAMS15\20200908-116442.b\T38880.D

Injection Date: 09-Sep-2020 03:17:40 Instrument ID: CVOAMS15

Lims ID: 460-217659-A-4 Lab Sample ID: 460-217659-4

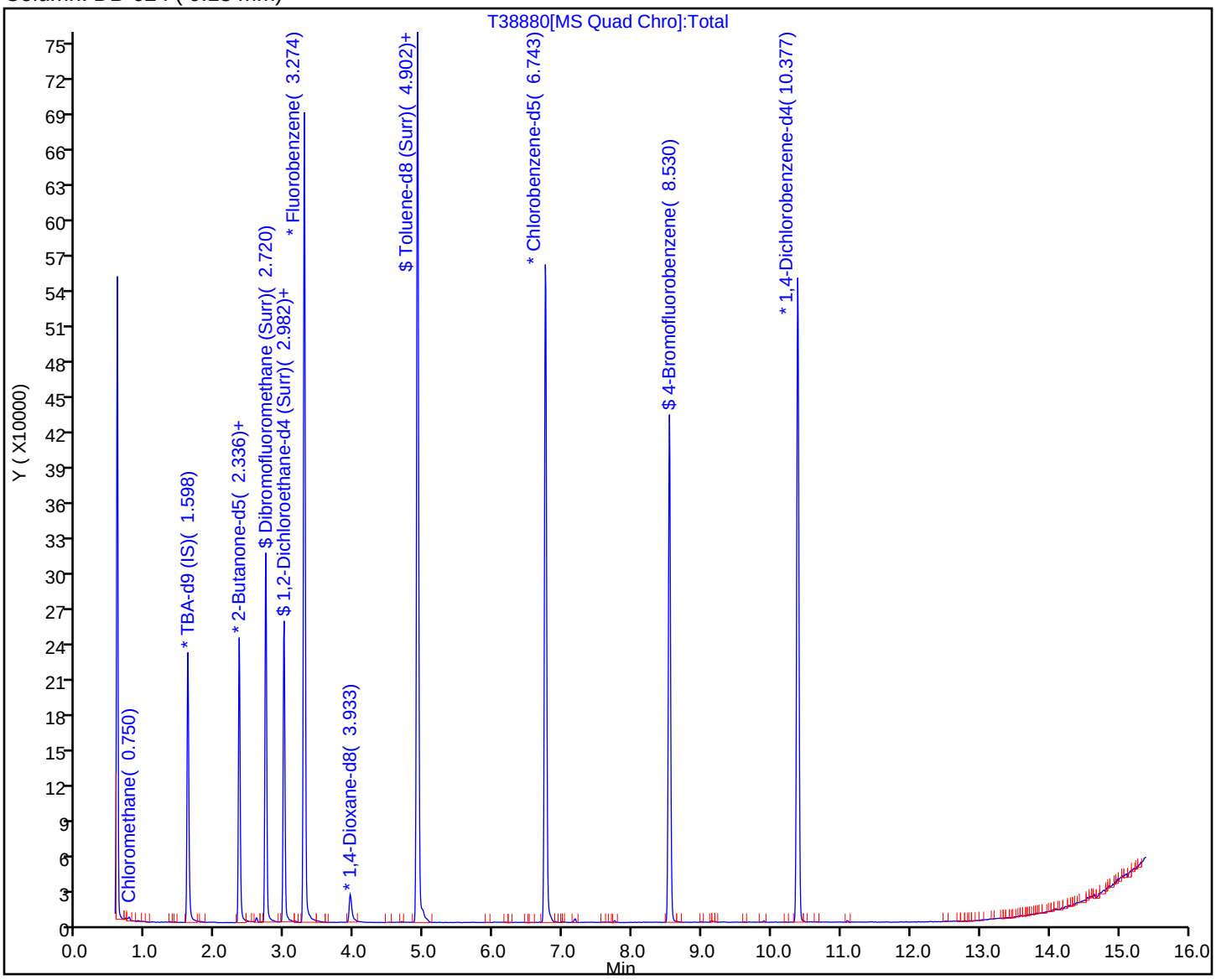
Client ID: MW-211

Operator ID: ALS Bottle#: 0 Worklist Smp#: 19

Purge Vol: 5.000 mL Dil. Factor: 1.0000

Method: 8260W_15 Limit Group: VOA - 8260C Water and Solid

Column: DB-624 ( 0.18 mm)



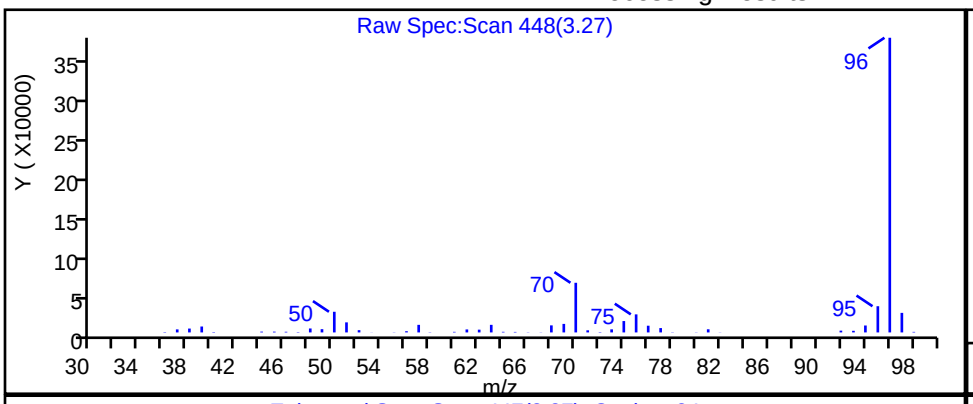
User Disabled Compound Report

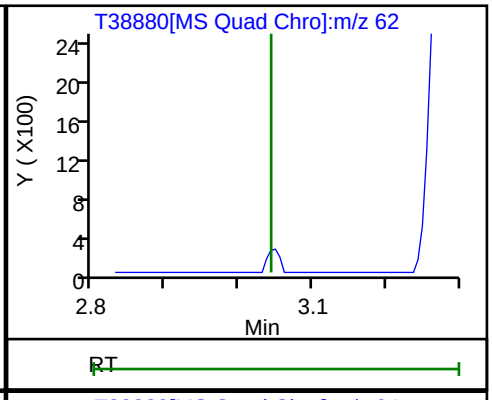
Eurofins TestAmerica, Edison

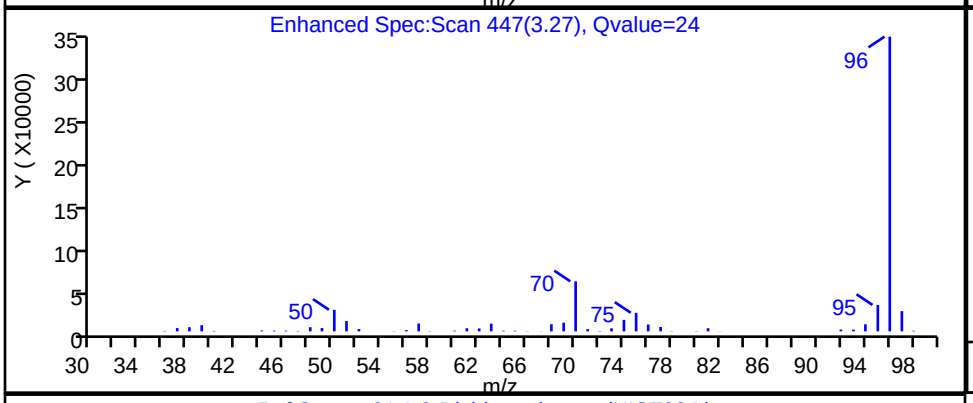
| | | | | | |
|---|---|---|---|---|---|
| Data File: | \\chromfs\Edison\ChromData\CVOAMS15\20200908-116442.b\T38880.D | | | | |
| Injection Date: | 09-Sep-2020 03:17:40 | Instrument ID: | CVOAMS15 | | |
| Lims ID: | 460-217659-A-4 | Lab Sample ID: | 460-217659-4 | | |
| Client ID: | MW-211 | | | | |
| Operator ID: | | ALS Bottle#: | 0 | Worklist Smp#: | 19 |
| Purge Vol: | 5.000 mL | Dil. Factor: | 1.0000 | | |
| Method: | 8260W_15 | Limit Group: | VOA - 8260C Water and Solid | | |
| Column: | DB-624 ( 0.18 mm) | Detector | MS Quad | | |

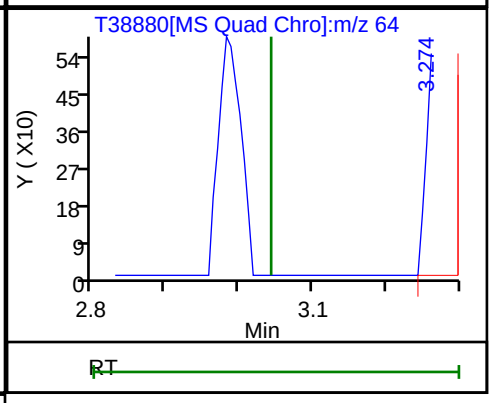
## 61 1,2-Dichloroethane, CAS: 107-06-2

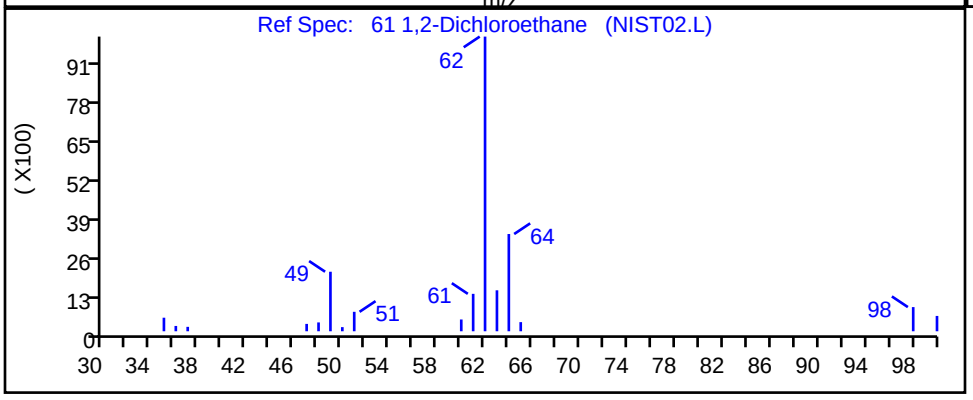
Processing Results




| RT | Mass | Response | Amount |
|---|---|---|---|
| 3.27 | 62.00 | 6161 | 1.334472 |
| 3.27 | 64.00 | 1327 | |

Reviewer: desais, 09-Sep-2020 07:09:04

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Edison  Job No.: 460-217659-1

SDG No.:

Client Sample ID: MW-214  Lab Sample ID: 460-217659-5

Matrix: Water  Lab File ID: T38881.D

Analysis Method: 8260C  Date Collected: 09/03/2020 09:30

Sample wt/vol: 5(mL)  Date Analyzed: 09/09/2020 03:41

Soil Aliquot Vol:  Dilution Factor: 1

Soil Extract Vol.:  GC Column: DB-624  ID: 0.18(mm)

% Moisture:  Level: (low/med) Low

Analysis Batch No.: 722587  Units: ug/L

| CAS NO. | COMPOUND NAME | RESULT | Q | RL | MDL |
|---|---|---|---|---|---|
| 71-55-6 | 1,1,1-Trichloroethane | 0.24 | U | 1.0 | 0.24 |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 0.37 | U | 1.0 | 0.37 |
| 76-13-1 | 1,1,2-Trichloro-1,2,2-trifluoroethane | 0.31 | U | 1.0 | 0.31 |
| 79-00-5 | 1,1,2-Trichloroethane | 0.43 | U | 1.0 | 0.43 |
| 75-34-3 | 1,1-Dichloroethane | 0.26 | U | 1.0 | 0.26 |
| 75-35-4 | 1,1-Dichloroethene | 0.26 | U | 1.0 | 0.26 |
| 87-61-6 | 1,2,3-Trichlorobenzene | 0.36 | U | 1.0 | 0.36 |
| 120-82-1 | 1,2,4-Trichlorobenzene | 0.37 | U | 1.0 | 0.37 |
| 78-87-5 | 1,2-Dichloropropane | 0.35 | U | 1.0 | 0.35 |
| 541-73-1 | 1,3-Dichlorobenzene | 0.34 | U | 1.0 | 0.34 |
| 106-46-7 | 1,4-Dichlorobenzene | 0.33 | U | 1.0 | 0.33 |
| 123-91-1 | 1,4-Dioxane | 28 | U | 50 | 28 |
| 78-93-3 | 2-Butanone (MEK) | 1.9 | U | 5.0 | 1.9 |
| 591-78-6 | 2-Hexanone | 1.1 | U | 5.0 | 1.1 |
| 108-10-1 | 4-Methyl-2-pentanone (MIBK) | 1.3 | U | 5.0 | 1.3 |
| 67-64-1 | Acetone | 4.4 | U | 5.0 | 4.4 |
| 71-43-2 | Benzene | 0.20 | U | 1.0 | 0.20 |
| 75-25-2 | Bromoform | 0.54 | U | 1.0 | 0.54 |
| 74-83-9 | Bromomethane | 0.55 | U | 1.0 | 0.55 |
| 75-15-0 | Carbon disulfide | 0.82 | U | 1.0 | 0.82 |
| 56-23-5 | Carbon tetrachloride | 0.21 | U | 1.0 | 0.21 |
| 108-90-7 | Chlorobenzene | 0.38 | U | 1.0 | 0.38 |
| 74-97-5 | Chlorobromomethane | 0.41 | U | 1.0 | 0.41 |
| 124-48-1 | Chlorodibromomethane | 0.28 | U | 1.0 | 0.28 |
| 75-00-3 | Chloroethane | 0.32 | U | 1.0 | 0.32 |
| 67-66-3 | Chloroform | 0.33 | U | 1.0 | 0.33 |
| 74-87-3 | Chloromethane | 0.40 | U | 1.0 | 0.40 |
| 156-59-2 | cis-1,2-Dichloroethene | 0.22 | U | 1.0 | 0.22 |
| 10061-01-5 | cis-1,3-Dichloropropene | 0.22 | U | 1.0 | 0.22 |
| 110-82-7 | Cyclohexane | 0.32 | U | 1.0 | 0.32 |
| 75-27-4 | Dichlorobromomethane | 0.34 | U | 1.0 | 0.34 |
| 75-71-8 | Dichlorodifluoromethane | 16 |  | 1.0 | 0.31 |
| 100-41-4 | Ethylbenzene | 0.30 | U | 1.0 | 0.30 |
| 106-93-4 | Ethylene Dibromide | 0.50 | U | 1.0 | 0.50 |
| 98-82-8 | Isopropylbenzene | 0.34 | U | 1.0 | 0.34 |

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Edison  Job No.: 460-217659-1

SDG No.:

Client Sample ID: MW-214  Lab Sample ID: 460-217659-5

Matrix: Water  Lab File ID: T38881.D

Analysis Method: 8260C  Date Collected: 09/03/2020 09:30

Sample wt/vol: 5(mL)  Date Analyzed: 09/09/2020 03:41

Soil Aliquot Vol:  Dilution Factor: 1

Soil Extract Vol.:  GC Column: DB-624  ID: 0.18(mm)

% Moisture:  Level: (low/med) Low

Analysis Batch No.: 722587  Units: ug/L

| CAS NO. | COMPOUND NAME | RESULT | Q | RL | MDL |
|---|---|---|---|---|---|
| 79-20-9 | Methyl acetate | 0.79 | U | 5.0 | 0.79 |
| 1634-04-4 | Methyl tert-butyl ether | 0.47 | U | 1.0 | 0.47 |
| 108-87-2 | Methylcyclohexane | 0.26 | U | 1.0 | 0.26 |
| 75-09-2 | Methylene Chloride | 0.32 | U | 1.0 | 0.32 |
| 179601-23-1 | m-Xylene & p-Xylene | 0.30 | U | 1.0 | 0.30 |
| 95-47-6 | o-Xylene | 0.36 | U | 1.0 | 0.36 |
| 100-42-5 | Styrene | 0.42 | U | 1.0 | 0.42 |
| 127-18-4 | Tetrachloroethene | 0.25 | U | 1.0 | 0.25 |
| 108-88-3 | Toluene | 0.38 | U | 1.0 | 0.38 |
| 156-60-5 | trans-1,2-Dichloroethene | 0.24 | U | 1.0 | 0.24 |
| 10061-02-6 | trans-1,3-Dichloropropene | 0.49 | U | 1.0 | 0.49 |
| 79-01-6 | Trichloroethene | 0.31 | U | 1.0 | 0.31 |
| 75-69-4 | Trichlorofluoromethane | 5.1 |  | 1.0 | 0.32 |
| 75-01-4 | Vinyl chloride | 0.17 | U | 1.0 | 0.17 |
| 107-06-2 | 1,2-Dichloroethane | 0.43 | U * | 1.0 | 0.43 |
| 95-50-1 | 1,2-Dichlorobenzene | 0.43 | U | 1.0 | 0.43 |
| 96-12-8 | 1,2-Dibromo-3-Chloropropane | 0.38 | U | 1.0 | 0.38 |

| CAS NO. | SURROGATE | %REC | Q | LIMITS |
|---|---|---|---|---|
| 17060-07-0 | 1,2-Dichloroethane-d4 (Surr) | 75 |  | 75-123 |
| 460-00-4 | 4-Bromofluorobenzene | 87 |  | 76-120 |
| 1868-53-7 | Dibromofluoromethane (Surr) | 89 |  | 77-124 |
| 2037-26-5 | Toluene-d8 (Surr) | 98 |  | 80-120 |

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: Eurofins TestAmerica, Edison  Job No.: 460-217659-1

SDG No.:

Client Sample ID: MW-214  Lab Sample ID: 460-217659-5

Matrix: Water  Lab File ID: T38881.D

Analysis Method: 8260C  Date Collected: 09/03/2020 09:30

Sample wt/vol: 5(mL)  Date Analyzed: 09/09/2020 03:41

Soil Aliquot Vol:  Dilution Factor: 1

Soil Extract Vol.:  GC Column: DB-624  ID: 0.18(mm)

% Moisture:  Level: (low/med) Low

Analysis Batch No.: 722587  Units: ug/L

Number TICs Found: 1  TIC Result Total: 8.4

| CAS NO. | COMPOUND NAME | RT | RESULT | Q | MATCH QUALITY |
|---|---|---|---|---|---|
| 75-43-4 | Fluorodichloromethane | 1.04 | 8.4 | J N | 91% |

Eurofins TestAmerica, Edison
Target Compound Quantitation Report

Data File: \\chromfs\Edison\ChromData\CVOAMS15\20200908-116442.b\T38881.D
Lims ID: 460-217659-A-5
Client ID: MW-214
Sample Type: Client
Inject. Date: 09-Sep-2020 03:41:42 ALS Bottle#: 0 Worklist Smp#: 20
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: 460-217659-A-5
Misc. Info.: 460-0116442-020
Operator ID: Instrument ID: CVOAMS15

Method: \\chromfs\Edison\ChromData\CVOAMS15\20200908-116442.b\8260W_15.m
Limit Group: VOA - 8260C Water and Solid
Last Update: 09-Sep-2020 11:20:41 Calib Date: 04-Sep-2020 15:01:54
Integrator: RTE ID Type: RT Order ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Edison\ChromData\CVOAMS15\20200904-116301.b\T38701.D

Column 1 : DB-624 ( 0.18 mm) Det: MS Quad
Process Host: CTX1022

First Level Reviewer: desais Date: 09-Sep-2020 07:09:29

| Compound | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q | Response | OnCol Amt ug/l | Flags |
|---|---|---|---|---|---|---|---|---|
| 4 Dichlorodifluoromethane | 85 | 0.647 | 0.647 | 0.000 | 99 | 79517 | 15.6 | |
| 6 Chloromethane | 50 | 0.726 | 0.726 | 0.000 | 11 | 942 | 0.3365 | |
| 12 Trichlorofluoromethane | 101 | 1.067 | 1.068 | -0.001 | 95 | 30349 | 5.06 | |
| * 31 TBA-d9 (IS) | 66 | 1.598 | 1.598 | 0.000 | 93 | 36981 | 1000.0 | |
| * 42 2-Butanone-d5 | 46 | 2.336 | 2.336 | 0.000 | 47 | 245452 | 250.0 | |
| $ 53 Dibromofluoromethane (Surr) | 113 | 2.720 | 2.720 | 0.000 | 96 | 180772 | 44.4 | |
| $ 58 1,2-Dichloroethane-d4 (Surr) | 65 | 2.982 | 2.982 | 0.000 | 97 | 155042 | 37.7 | |
| * 65 Fluorobenzene | 96 | 3.274 | 3.275 | -0.001 | 100 | 697813 | 50.0 | |
| * 73 1,4-Dioxane-d8 | 96 | 3.933 | 3.939 | -0.006 | 1 | 31304 | 1000.0 | |
| $ 83 Toluene-d8 (Surr) | 98 | 4.902 | 4.902 | 0.000 | 99 | 606996 | 48.8 | |
| * 94 Chlorobenzene-d5 | 117 | 6.743 | 6.743 | 0.000 | 81 | 487204 | 50.0 | |
| $ 105 4-Bromofluorobenzene | 174 | 8.529 | 8.530 | -0.001 | 93 | 174860 | 43.6 | |
| * 120 1,4-Dichlorobenzene-d4 | 152 | 10.377 | 10.377 | 0.000 | 94 | 219276 | 50.0 | |

## Reagents:

VOA6IS/SURR_00038 Amount Added: 5.00 Units: uL Run Reagent

Eurofins TestAmerica, Edison
Tentatively Identified Quantitation Report

| | | | | | |
|---|---|---|---|---|---|
| Data File: | \\chromfs\Edison\ChromData\CVOAMS15\20200908-116442.b\T38881.D | | | | |
| Lims ID: | 460-217659-A-5 | | | | |
| Client ID: | MW-214 | | | | |
| Sample Type: | Client | | | | |
| Inject. Date: | 09-Sep-2020 03:41:42 | ALS Bottle#: | 0 | Worklist Smp#: | 20 |
| Purge Vol: | 5.000 mL | Dil. Factor: | 1.0000 | | |
| Sample Info: | 460-217659-A-5 | | | | |
| Misc. Info.: | 460-0116442-020 | | | | |
| Operator ID: | | Instrument ID: | CVOAMS15 | | |
| Method: | \\chromfs\Edison\ChromData\CVOAMS15\20200908-116442.b\8260W_15.m | | | | |
| Limit Group: | VOA - 8260C Water and Solid | | | | |
| Last Update: | 09-Sep-2020 11:20:41 | Calib Date: | 04-Sep-2020 15:01:54 | | |
| Tic RT Window: | 0.000 -0.000 | Response: | area | | |
| Quant By: | Nearest ISTD | Quant LOD: | 10.00000 | | |
| MS Library: | \\chromfs\Edison\Database\NIST02.L | | | | |
| Min. Match: | 70 | | | | |
| Column 1 : | DB-624 ( 0.18 mm) | | Det: MS Quad | | |
| Process Host: | CTX1022 | | | | |
| First Level Reviewer: desais | | Date: | 09-Sep-2020 07:09:29 | | |

Tentative Identified Compound Results

| RT | Area | Amount ug/l | Quant Cpnd | Qual | Lib Entry | Molecular Formula | Mol. Weight | Flags |
|---|---|---|---|---|---|---|---|---|
| 75-43-4 | Fluorodichloromethane | | | | | | | |
| 1.043 | 216814 | 8.40 | 65 | 91 | 4399 | CHCl2F | 102 | |

Quantitation Compounds

| Compound | RT | Area | Amount ug/l |
|---|---|---|---|
| * 65 Fluorobenzene | 3.274 | 1290335 | 50.0 |

## QC Flag Legend

Processing Flags

## Reagents:

VOA6IS/SURR_00038 Amount Added: 5.00 Units: uL Run Reagent

Report Date: 09-Sep-2020 11:28:02 Chrom Revision: 2.3 20-Aug-2020 13:57:12

Eurofins TestAmerica, Edison

Data File: \\chromfs\Edison\ChromData\CVOAMS15\20200908-116442.b\T38881.D

Injection Date: 09-Sep-2020 03:41:42 Instrument ID: CVOAMS15

Lims ID: 460-217659-A-5 Lab Sample ID: 460-217659-5

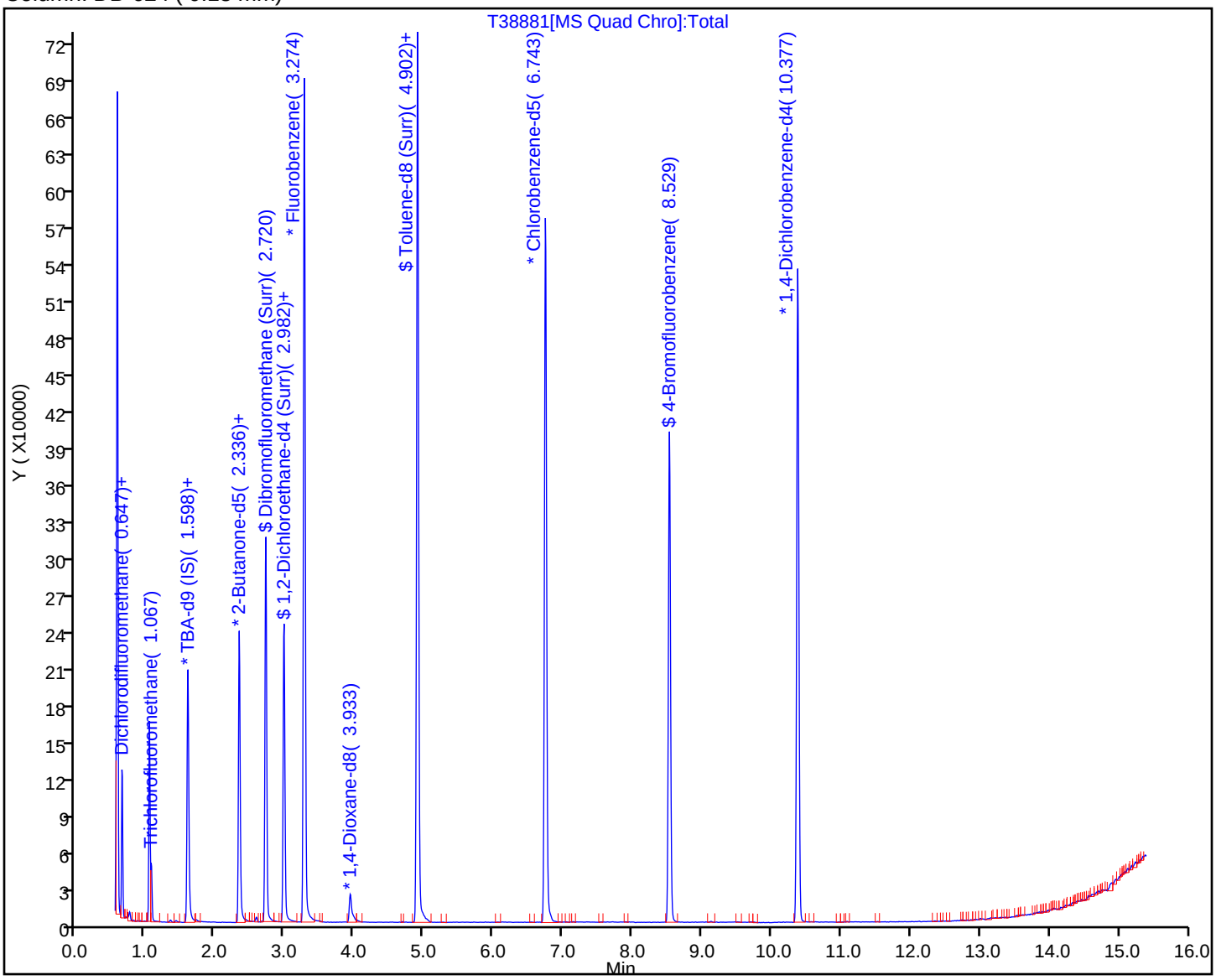
Client ID: MW-214

Operator ID: ALS Bottle#: 0 Worklist Smp#: 20

Purge Vol: 5.000 mL Dil. Factor: 1.0000

Method: 8260W_15 Limit Group: VOA - 8260C Water and Solid

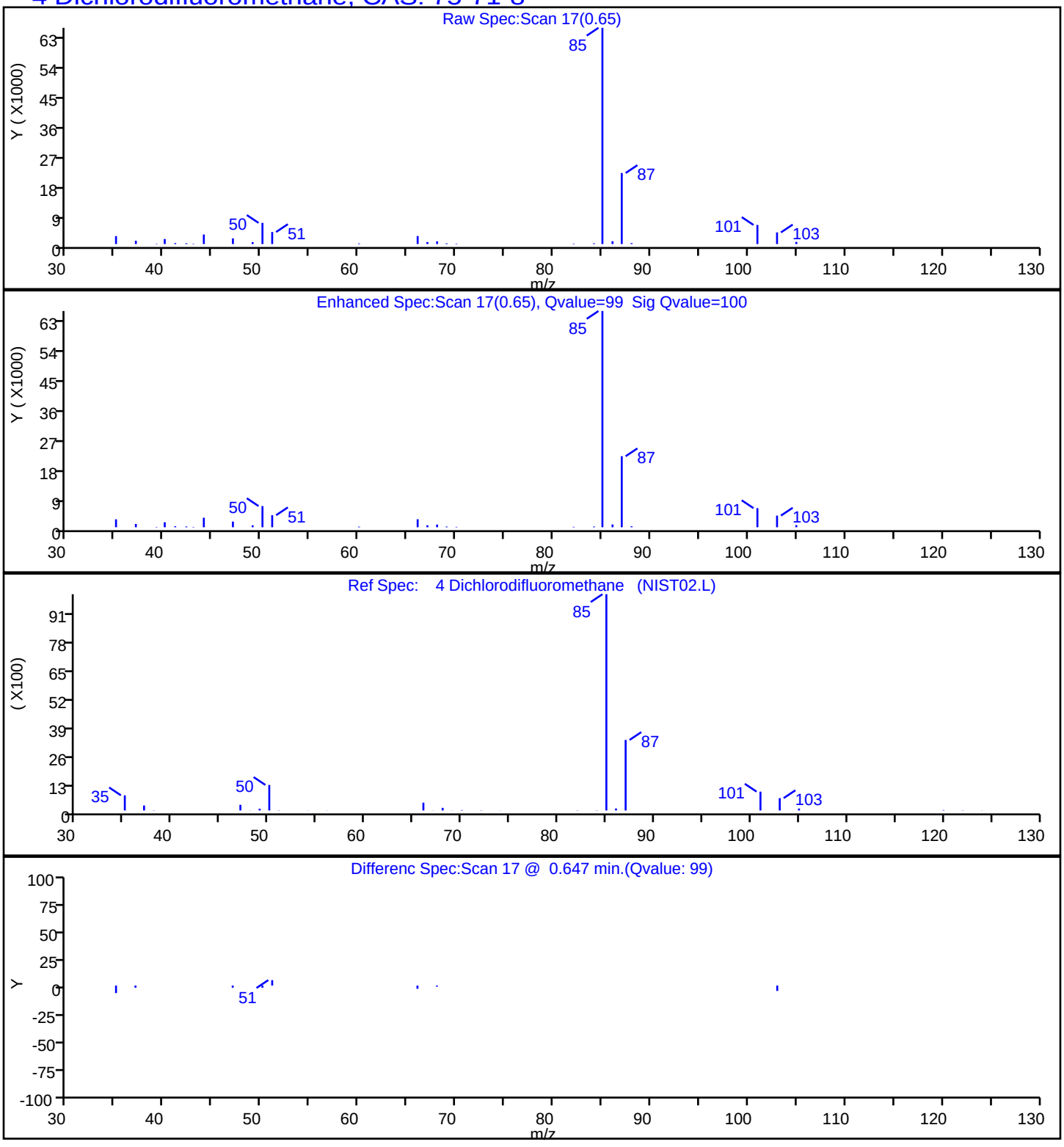
Column: DB-624 ( 0.18 mm)



Eurofins TestAmerica, Edison

| | | | | | |
|---|---|---|---|---|---|
| Data File: | \\chromfs\Edison\ChromData\CVOAMS15\20200908-116442.b\T38881.D | | | | |
| Injection Date: | 09-Sep-2020 03:41:42 | Instrument ID: | CVOAMS15 | | |
| Lims ID: | 460-217659-A-5 | Lab Sample ID: | 460-217659-5 | | |
| Client ID: | MW-214 | | | | |
| Operator ID: | | ALS Bottle#: | 0 | Worklist Smp#: | 20 |
| Purge Vol: | 5.000 mL | Dil. Factor: | 1.0000 | | |
| Method: | 8260W_15 | Limit Group: | VOA - 8260C Water and Solid | | |
| Column: | DB-624 ( 0.18 mm) | Detector | MS Quad | | |

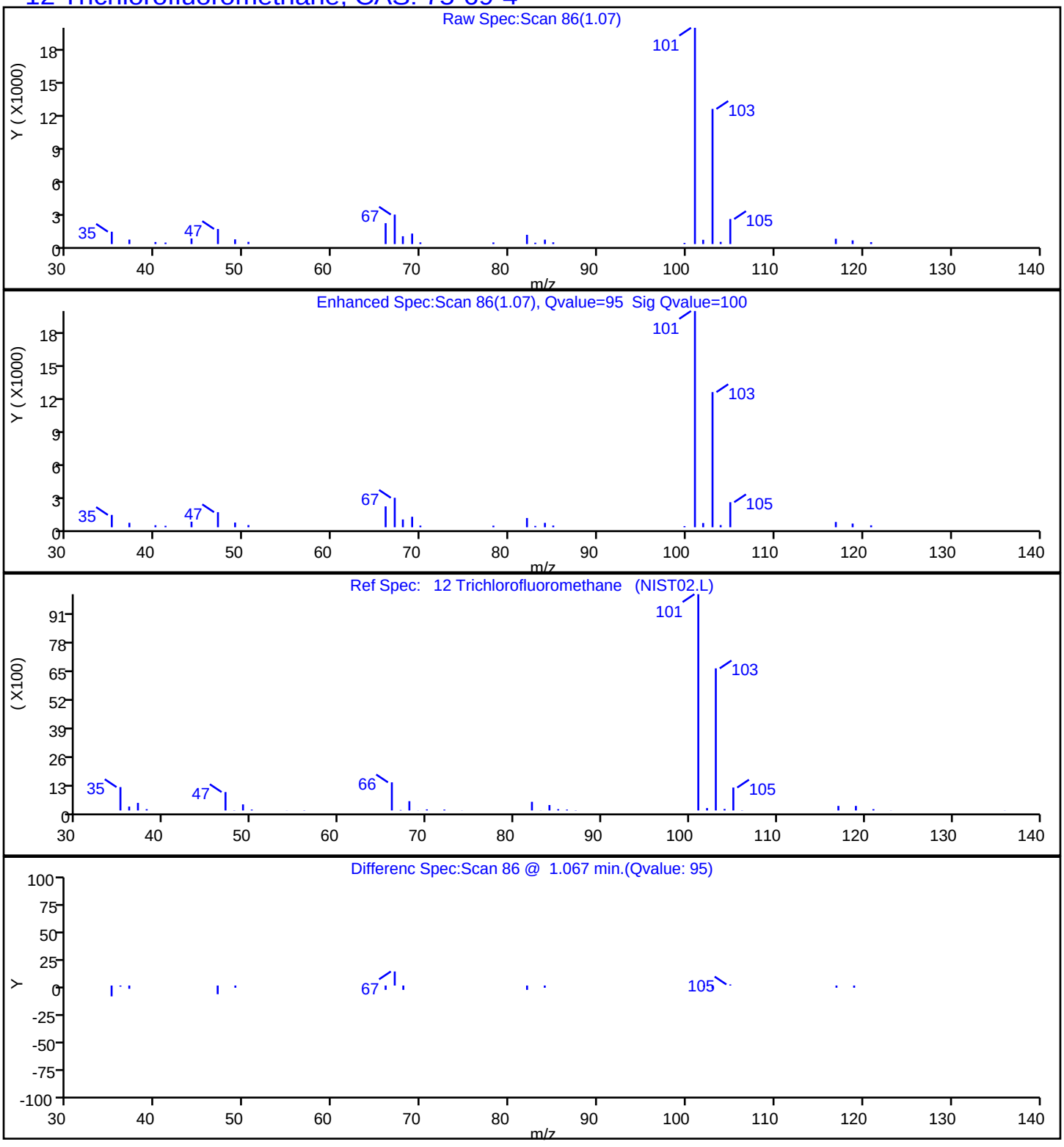
## 4 Dichlorodifluoromethane, CAS: 75-71-8



Eurofins TestAmerica, Edison

| | | | |
|---|---|---|---|
| Data File: | \\chromfs\Edison\ChromData\CVOAMS15\20200908-116442.b\T38881.D | | |
| Injection Date: | 09-Sep-2020 03:41:42 | Instrument ID: | CVOAMS15 |
| Lims ID: | 460-217659-A-5 | Lab Sample ID: | 460-217659-5 |
| Client ID: | MW-214 | | |
| Operator ID: | | ALS Bottle#: | 0 Worklist Smp#: 20 |
| Purge Vol: | 5.000 mL | Dil. Factor: | 1.0000 |
| Method: | 8260W_15 | Limit Group: | VOA - 8260C Water and Solid |
| Column: | DB-624 ( 0.18 mm) | Detector | MS Quad |

## 12 Trichlorofluoromethane, CAS: 75-69-4



Eurofins TestAmerica, Edison

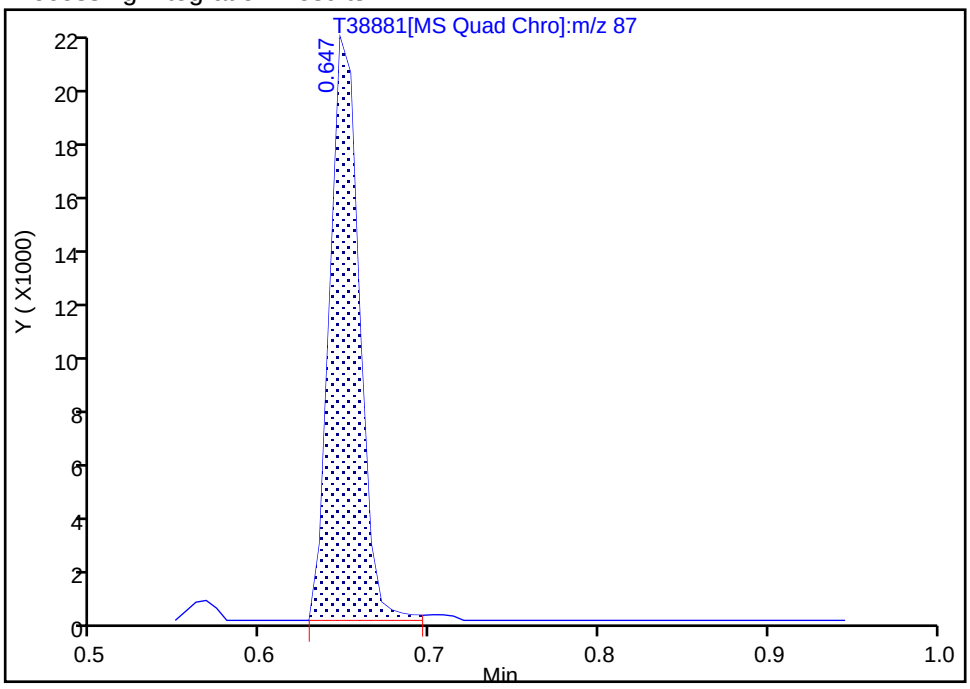
| | | | | | |
|---|---|---|---|---|---|
| Data File: | \\chromfs\Edison\ChromData\CVOAMS15\20200908-116442.b\T38881.D | | | | |
| Injection Date: | 09-Sep-2020 03:41:42 | Instrument ID: | CVOAMS15 | | |
| Lims ID: | 460-217659-A-5 | Lab Sample ID: | 460-217659-5 | | |
| Client ID: | MW-214 | | | | |
| Operator ID: | | ALS Bottle#: | 0 | Worklist Smp#: | 20 |
| Purge Vol: | 5.000 mL | Dil. Factor: | 1.0000 | | |
| Method: | 8260W_15 | Limit Group: | VOA - 8260C Water and Solid | | |
| Column: | DB-624 ( 0.18 mm) | Detector | MS Quad | | |

## 4 Dichlorodifluoromethane, CAS: 75-71-8

Signal: 2

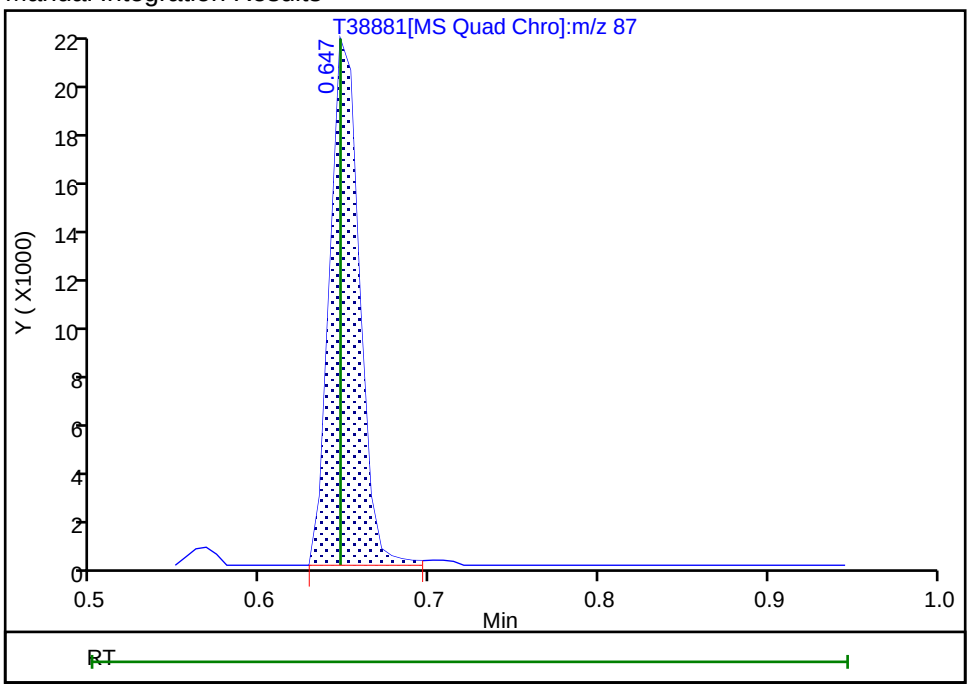
Processing Integration Results

RT: 0.65
Area: 26181
Amount: 15.620131
Amount Units: ug/l




Manual Integration Results

RT: 0.65
Area: 26181
Amount: 15.620131
Amount Units: ug/l




Reviewer: desais, 09-Sep-2020 07:09:14
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

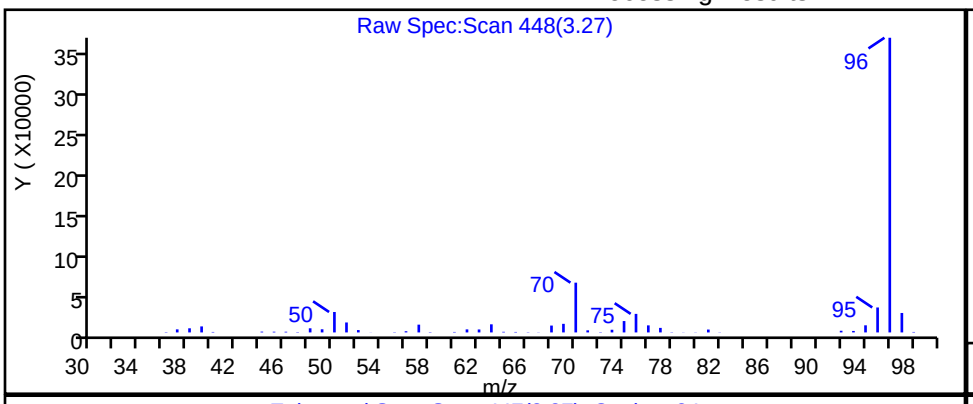
User Disabled Compound Report

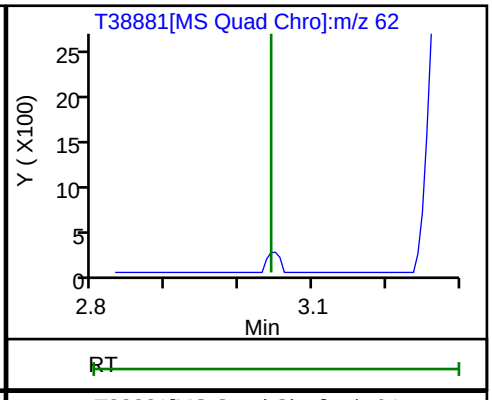
Eurofins TestAmerica, Edison

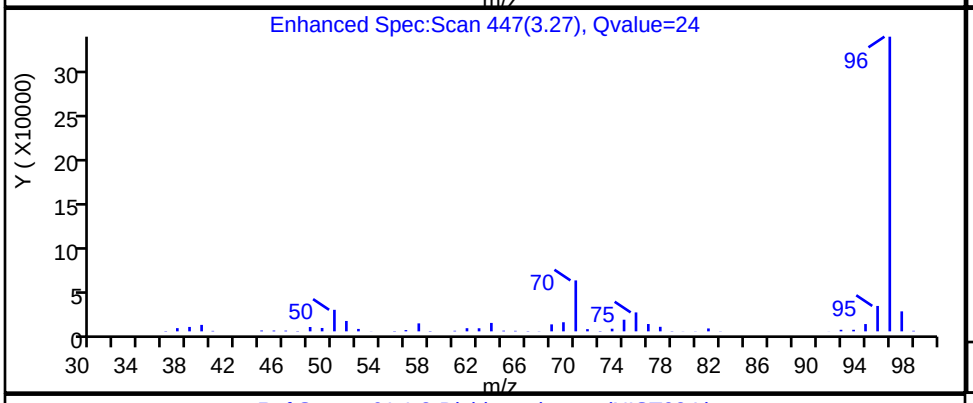
| | | | | | |
|---|---|---|---|---|---|
| Data File: | \\chromfs\Edison\ChromData\CVOAMS15\20200908-116442.b\T38881.D | | | | |
| Injection Date: | 09-Sep-2020 03:41:42 | Instrument ID: | CVOAMS15 | | |
| Lims ID: | 460-217659-A-5 | Lab Sample ID: | 460-217659-5 | | |
| Client ID: | MW-214 | | | | |
| Operator ID: | | ALS Bottle#: | 0 | Worklist Smp#: | 20 |
| Purge Vol: | 5.000 mL | Dil. Factor: | 1.0000 | | |
| Method: | 8260W_15 | Limit Group: | VOA - 8260C Water and Solid | | |
| Column: | DB-624 ( 0.18 mm) | Detector | MS Quad | | |

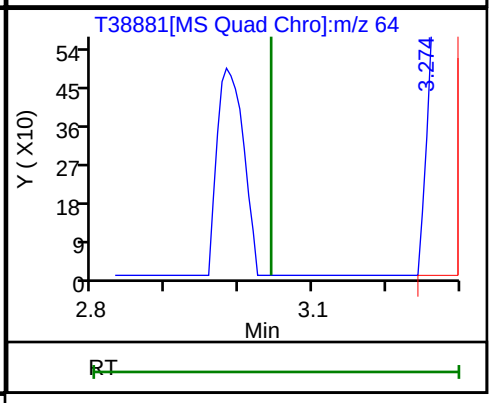
## 61 1,2-Dichloroethane, CAS: 107-06-2

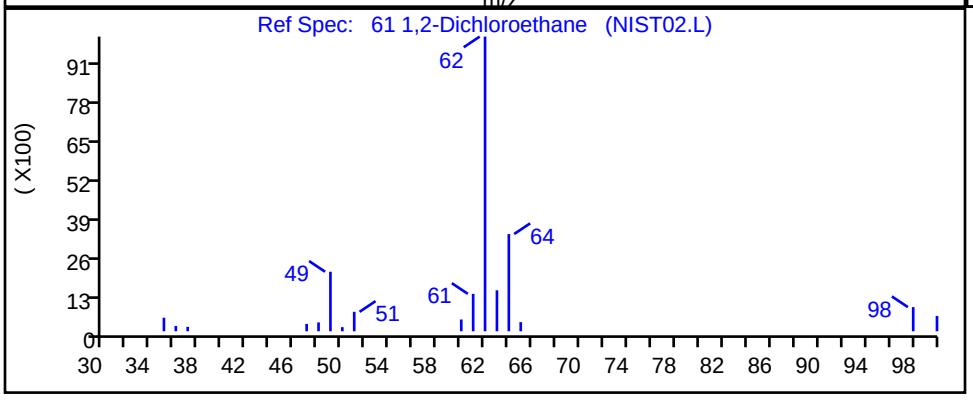
Processing Results




| RT | Mass | Response | Amount |
|---|---|---|---|
| 3.27 | 62.00 | 6812 | 1.471252 |
| 3.27 | 64.00 | 1367 | |

Reviewer: desais, 09-Sep-2020 07:09:23

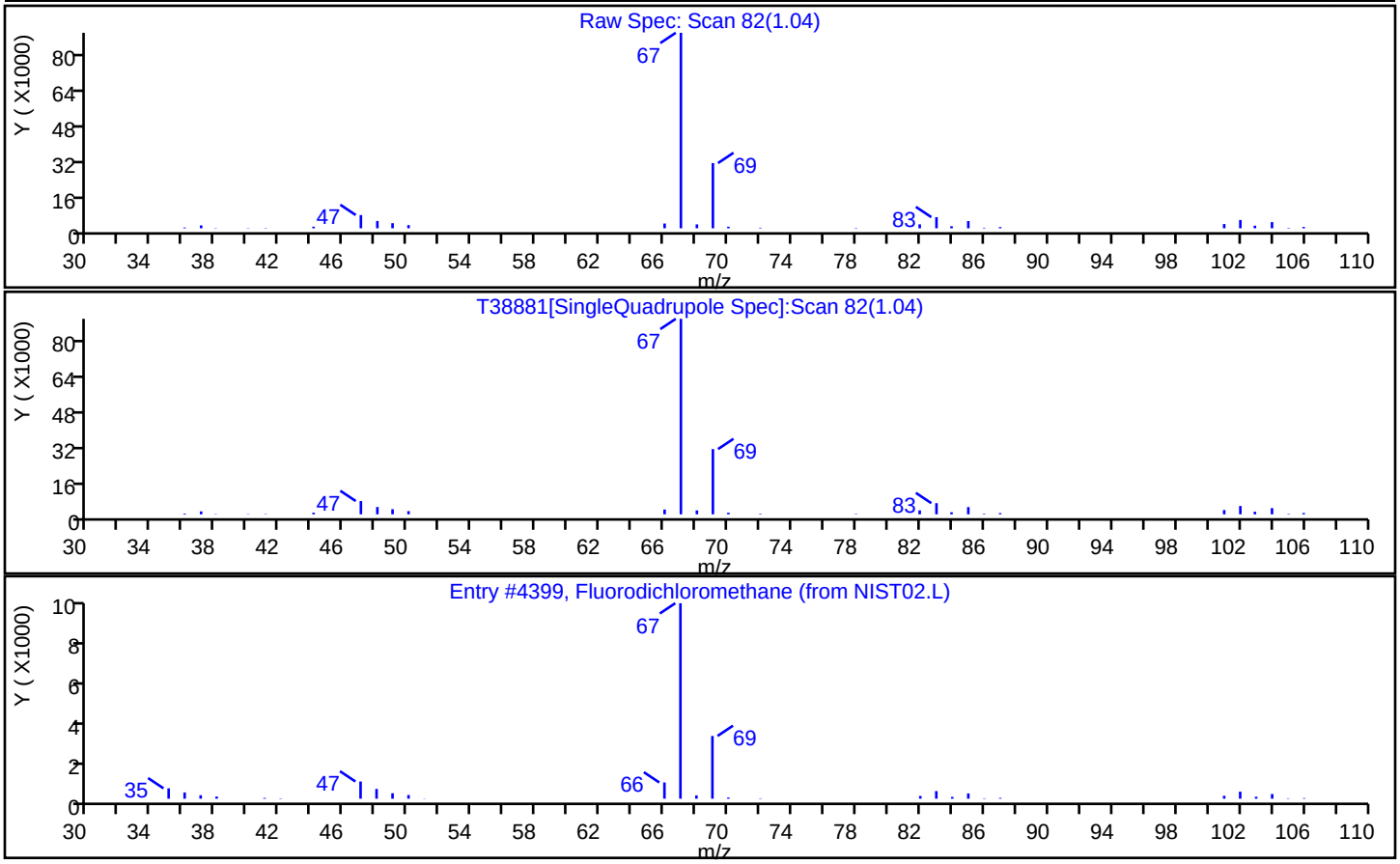
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

Eurofins TestAmerica, Edison

Data File: \\chromfs\Edison\ChromData\CVOAMS15\20200908-116442.b\T38881.D

| | | | | | |
|---|---|---|---|---|---|
| Injection Date: | 09-Sep-2020 03:41:42 | Instrument ID: | CVOAMS15 | | |
| Lims ID: | 460-217659-A-5 | Lab Sample ID: | 460-217659-5 | | |
| Client ID: | MW-214 | | | | |
| Operator ID: | | ALS Bottle#: | 0 | Worklist Smp#: | 20 |
| Purge Vol: | 5.000 mL | Dil. Factor: | 1.0000 | | |
| Method: | 8260W_15 | Limit Group: | VOA - 8260C Water and Solid | | |
| Column: | | Detector | MS Quad | | |

| Library Search Compound Match | CAS# | Library | Entry | Formula | Weight | Q |
|---|---|---|---|---|---|---|
| Fluorodichloromethane | 75-43-4 | NIST02.L | 4399 | CHCl2F | 102 | 91 |



FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Edison Job No.: 460-217659-1

SDG No.:

Client Sample ID: MW-216 Lab Sample ID: 460-217659-6

Matrix: Water Lab File ID: T38882.D

Analysis Method: 8260C Date Collected: 09/03/2020 13:30

Sample wt/vol: 5(mL) Date Analyzed: 09/09/2020 04:05

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 722587 Units: ug/L

| CAS NO. | COMPOUND NAME | RESULT | Q | RL | MDL |
|---|---|---|---|---|---|
| 71-55-6 | 1,1,1-Trichloroethane | 0.24 | U | 1.0 | 0.24 |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 0.37 | U | 1.0 | 0.37 |
| 76-13-1 | 1,1,2-Trichloro-1,2,2-trifluoroethane | 0.31 | U | 1.0 | 0.31 |
| 79-00-5 | 1,1,2-Trichloroethane | 0.43 | U | 1.0 | 0.43 |
| 75-34-3 | 1,1-Dichloroethane | 0.26 | U | 1.0 | 0.26 |
| 75-35-4 | 1,1-Dichloroethene | 0.26 | U | 1.0 | 0.26 |
| 87-61-6 | 1,2,3-Trichlorobenzene | 0.36 | U | 1.0 | 0.36 |
| 120-82-1 | 1,2,4-Trichlorobenzene | 0.37 | U | 1.0 | 0.37 |
| 78-87-5 | 1,2-Dichloropropane | 0.35 | U | 1.0 | 0.35 |
| 541-73-1 | 1,3-Dichlorobenzene | 0.34 | U | 1.0 | 0.34 |
| 106-46-7 | 1,4-Dichlorobenzene | 0.33 | U | 1.0 | 0.33 |
| 123-91-1 | 1,4-Dioxane | 28 | U | 50 | 28 |
| 78-93-3 | 2-Butanone (MEK) | 1.9 | U | 5.0 | 1.9 |
| 591-78-6 | 2-Hexanone | 1.1 | U | 5.0 | 1.1 |
| 108-10-1 | 4-Methyl-2-pentanone (MIBK) | 1.3 | U | 5.0 | 1.3 |
| 67-64-1 | Acetone | 4.4 | U | 5.0 | 4.4 |
| 71-43-2 | Benzene | 0.20 | U | 1.0 | 0.20 |
| 75-25-2 | Bromoform | 0.54 | U | 1.0 | 0.54 |
| 74-83-9 | Bromomethane | 0.55 | U | 1.0 | 0.55 |
| 75-15-0 | Carbon disulfide | 0.82 | U | 1.0 | 0.82 |
| 56-23-5 | Carbon tetrachloride | 0.21 | U | 1.0 | 0.21 |
| 108-90-7 | Chlorobenzene | 0.38 | U | 1.0 | 0.38 |
| 74-97-5 | Chlorobromomethane | 0.41 | U | 1.0 | 0.41 |
| 124-48-1 | Chlorodibromomethane | 0.28 | U | 1.0 | 0.28 |
| 75-00-3 | Chloroethane | 0.32 | U | 1.0 | 0.32 |
| 67-66-3 | Chloroform | 0.33 | U | 1.0 | 0.33 |
| 74-87-3 | Chloromethane | 0.40 | U | 1.0 | 0.40 |
| 156-59-2 | cis-1,2-Dichloroethene | 0.22 | U | 1.0 | 0.22 |
| 10061-01-5 | cis-1,3-Dichloropropene | 0.22 | U | 1.0 | 0.22 |
| 110-82-7 | Cyclohexane | 0.32 | U | 1.0 | 0.32 |
| 75-27-4 | Dichlorobromomethane | 0.34 | U | 1.0 | 0.34 |
| 75-71-8 | Dichlorodifluoromethane | 3.9 | | 1.0 | 0.31 |
| 100-41-4 | Ethylbenzene | 0.30 | U | 1.0 | 0.30 |
| 106-93-4 | Ethylene Dibromide | 0.50 | U | 1.0 | 0.50 |
| 98-82-8 | Isopropylbenzene | 0.34 | U | 1.0 | 0.34 |

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Edison  Job No.: 460-217659-1

SDG No.:

Client Sample ID: MW-216  Lab Sample ID: 460-217659-6

Matrix: Water  Lab File ID: T38882.D

Analysis Method: 8260C  Date Collected: 09/03/2020 13:30

Sample wt/vol: 5(mL)  Date Analyzed: 09/09/2020 04:05

Soil Aliquot Vol:  Dilution Factor: 1

Soil Extract Vol.:  GC Column: DB-624  ID: 0.18(mm)

% Moisture:  Level: (low/med) Low

Analysis Batch No.: 722587  Units: ug/L

| CAS NO. | COMPOUND NAME | RESULT | Q | RL | MDL |
|---|---|---|---|---|---|
| 79-20-9 | Methyl acetate | 0.79 | U | 5.0 | 0.79 |
| 1634-04-4 | Methyl tert-butyl ether | 0.47 | U | 1.0 | 0.47 |
| 108-87-2 | Methylcyclohexane | 0.26 | U | 1.0 | 0.26 |
| 75-09-2 | Methylene Chloride | 0.32 | U | 1.0 | 0.32 |
| 179601-23-1 | m-Xylene & p-Xylene | 0.30 | U | 1.0 | 0.30 |
| 95-47-6 | o-Xylene | 0.36 | U | 1.0 | 0.36 |
| 100-42-5 | Styrene | 0.42 | U | 1.0 | 0.42 |
| 127-18-4 | Tetrachloroethene | 0.25 | U | 1.0 | 0.25 |
| 108-88-3 | Toluene | 0.38 | U | 1.0 | 0.38 |
| 156-60-5 | trans-1,2-Dichloroethene | 0.24 | U | 1.0 | 0.24 |
| 10061-02-6 | trans-1,3-Dichloropropene | 0.49 | U | 1.0 | 0.49 |
| 79-01-6 | Trichloroethene | 0.31 | U | 1.0 | 0.31 |
| 75-69-4 | Trichlorofluoromethane | 6.9 |  | 1.0 | 0.32 |
| 75-01-4 | Vinyl chloride | 0.17 | U | 1.0 | 0.17 |
| 107-06-2 | 1,2-Dichloroethane | 0.43 | U * | 1.0 | 0.43 |
| 95-50-1 | 1,2-Dichlorobenzene | 0.43 | U | 1.0 | 0.43 |
| 96-12-8 | 1,2-Dibromo-3-Chloropropane | 0.38 | U | 1.0 | 0.38 |

| CAS NO. | SURROGATE | %REC | Q | LIMITS |
|---|---|---|---|---|
| 17060-07-0 | 1,2-Dichloroethane-d4 (Surr) | 80 |  | 75-123 |
| 460-00-4 | 4-Bromofluorobenzene | 83 |  | 76-120 |
| 1868-53-7 | Dibromofluoromethane (Surr) | 86 |  | 77-124 |
| 2037-26-5 | Toluene-d8 (Surr) | 90 |  | 80-120 |

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: Eurofins TestAmerica, Edison  Job No.: 460-217659-1

SDG No.:

Client Sample ID: MW-216  Lab Sample ID: 460-217659-6

Matrix: Water  Lab File ID: T38882.D

Analysis Method: 8260C  Date Collected: 09/03/2020 13:30

Sample wt/vol: 5(mL)  Date Analyzed: 09/09/2020 04:05

Soil Aliquot Vol:  Dilution Factor: 1

Soil Extract Vol.:  GC Column: DB-624  ID: 0.18(mm)

% Moisture:  Level: (low/med) Low

Analysis Batch No.: 722587  Units: ug/L

Number TICs Found: 0  TIC Result Total: 0

| CAS NO. | COMPOUND NAME | RT | RESULT | Q | MATCH QUALITY |
|---|---|---|---|---|---|
| | Tentatively Identified Compound | | None | | |

Eurofins TestAmerica, Edison
Target Compound Quantitation Report

Data File: \\chromfs\Edison\ChromData\CVOAMS15\20200908-116442.b\T38882.D
Lims ID: 460-217659-B-6
Client ID: MW-216
Sample Type: Client
Inject. Date: 09-Sep-2020 04:05:50 ALS Bottle#: 0 Worklist Smp#: 21
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: 460-217659-B-6
Misc. Info.: 460-0116442-021
Operator ID: Instrument ID: CVOAMS15

Method: \\chromfs\Edison\ChromData\CVOAMS15\20200908-116442.b\8260W_15.m
Limit Group: VOA - 8260C Water and Solid
Last Update: 09-Sep-2020 11:20:41 Calib Date: 04-Sep-2020 15:01:54
Integrator: RTE ID Type: RT Order ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Edison\ChromData\CVOAMS15\20200904-116301.b\T38701.D

Column 1 : DB-624 ( 0.18 mm) Det: MS Quad
Process Host: CTX1022

First Level Reviewer: desais Date: 09-Sep-2020 07:31:31

| Compound | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q | Response | OnCol Amt ug/l | Flags |
|---|---|---|---|---|---|---|---|---|
| 4 Dichlorodifluoromethane | 85 | 0.647 | 0.647 | 0.000 | 99 | 20856 | 3.88 | |
| 12 Trichlorofluoromethane | 101 | 1.068 | 1.068 | 0.000 | 96 | 43700 | 6.91 | |
| * 31 TBA-d9 (IS) | 66 | 1.598 | 1.598 | 0.000 | 92 | 38178 | 1000.0 | |
| * 42 2-Butanone-d5 | 46 | 2.336 | 2.336 | 0.000 | 47 | 253082 | 250.0 | |
| $ 53 Dibromofluoromethane (Surr) | 113 | 2.720 | 2.720 | 0.000 | 96 | 183889 | 42.8 | |
| $ 58 1,2-Dichloroethane-d4 (Surr) | 65 | 2.982 | 2.982 | 0.000 | 90 | 172886 | 39.8 | |
| * 65 Fluorobenzene | 96 | 3.275 | 3.275 | 0.000 | 100 | 736460 | 50.0 | |
| * 73 1,4-Dioxane-d8 | 96 | 3.933 | 3.939 | -0.006 | 1 | 30494 | 1000.0 | |
| $ 83 Toluene-d8 (Surr) | 98 | 4.902 | 4.902 | 0.000 | 98 | 590467 | 45.2 | |
| * 94 Chlorobenzene-d5 | 117 | 6.743 | 6.743 | 0.000 | 84 | 511086 | 50.0 | |
| $ 105 4-Bromofluorobenzene | 174 | 8.530 | 8.530 | 0.000 | 93 | 175476 | 41.7 | |
| * 120 1,4-Dichlorobenzene-d4 | 152 | 10.377 | 10.377 | 0.000 | 94 | 218586 | 50.0 | |

## Reagents:

VOA6IS/SURR_00038 Amount Added: 5.00 Units: uL Run Reagent

Report Date: 09-Sep-2020 11:28:43 Chrom Revision: 2.3 20-Aug-2020 13:57:12

Eurofins TestAmerica, Edison

Data File: \\chromfs\Edison\ChromData\CVOAMS15\20200908-116442.b\T38882.D

Injection Date: 09-Sep-2020 04:05:50 Instrument ID: CVOAMS15

Lims ID: 460-217659-B-6 Lab Sample ID: 460-217659-6

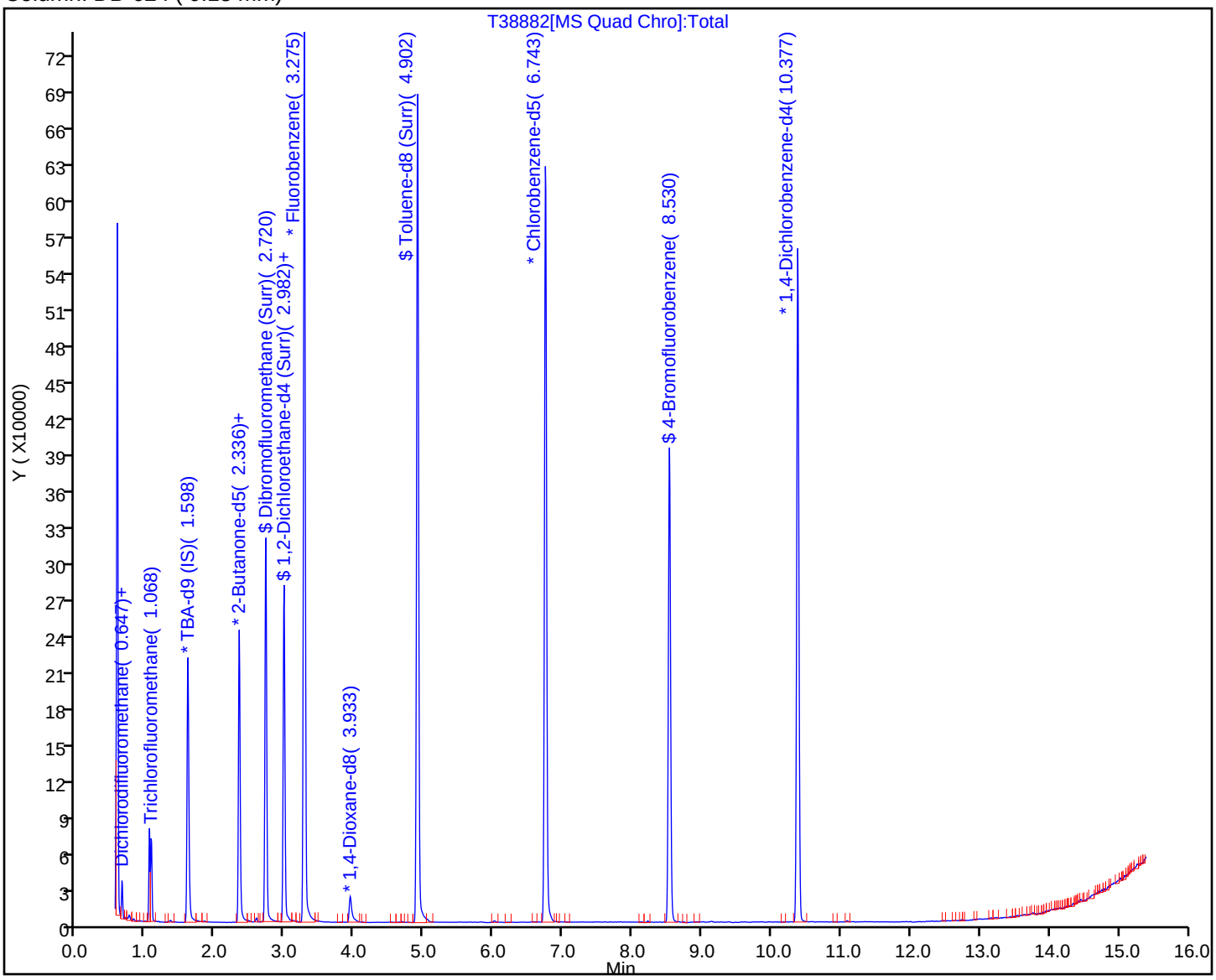
Client ID: MW-216

Operator ID: ALS Bottle#: 0 Worklist Smp#: 21

Purge Vol: 5.000 mL Dil. Factor: 1.0000

Method: 8260W_15 Limit Group: VOA - 8260C Water and Solid

Column: DB-624 ( 0.18 mm)

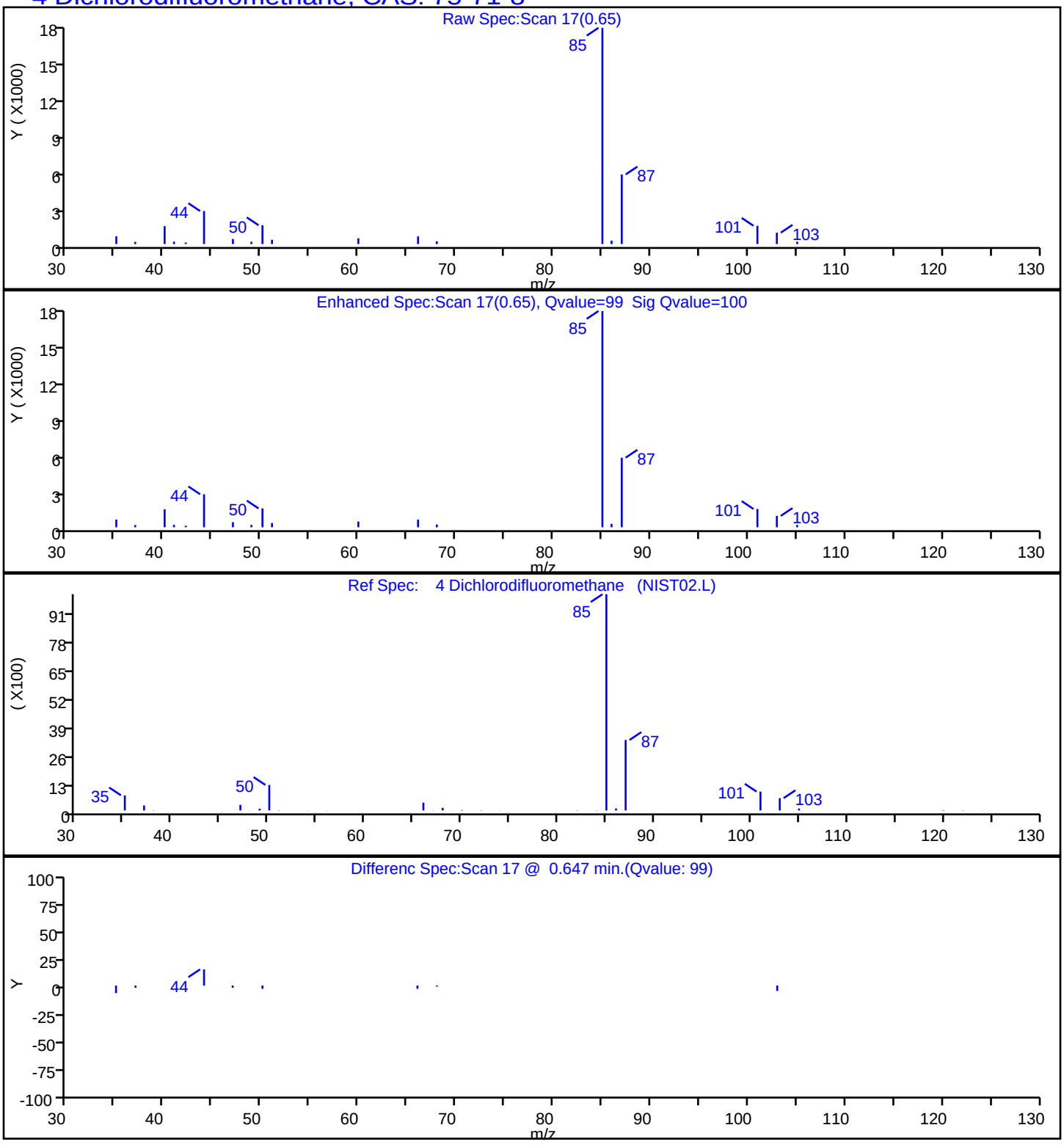


Report Date: 09-Sep-2020 11:28:43 Chrom Revision: 2.3 20-Aug-2020 13:57:12

Eurofins TestAmerica, Edison

| | | | | | |
|---|---|---|---|---|---|
| Data File: | \\chromfs\Edison\ChromData\CVOAMS15\20200908-116442.b\T38882.D | | | | |
| Injection Date: | 09-Sep-2020 04:05:50 | Instrument ID: | CVOAMS15 | | |
| Lims ID: | 460-217659-B-6 | Lab Sample ID: | 460-217659-6 | | |
| Client ID: | MW-216 | | | | |
| Operator ID: | | ALS Bottle#: | 0 | Worklist Smp#: | 21 |
| Purge Vol: | 5.000 mL | Dil. Factor: | 1.0000 | | |
| Method: | 8260W_15 | Limit Group: | VOA - 8260C Water and Solid | | |
| Column: | DB-624 ( 0.18 mm) | Detector | MS Quad | | |

## 4 Dichlorodifluoromethane, CAS: 75-71-8

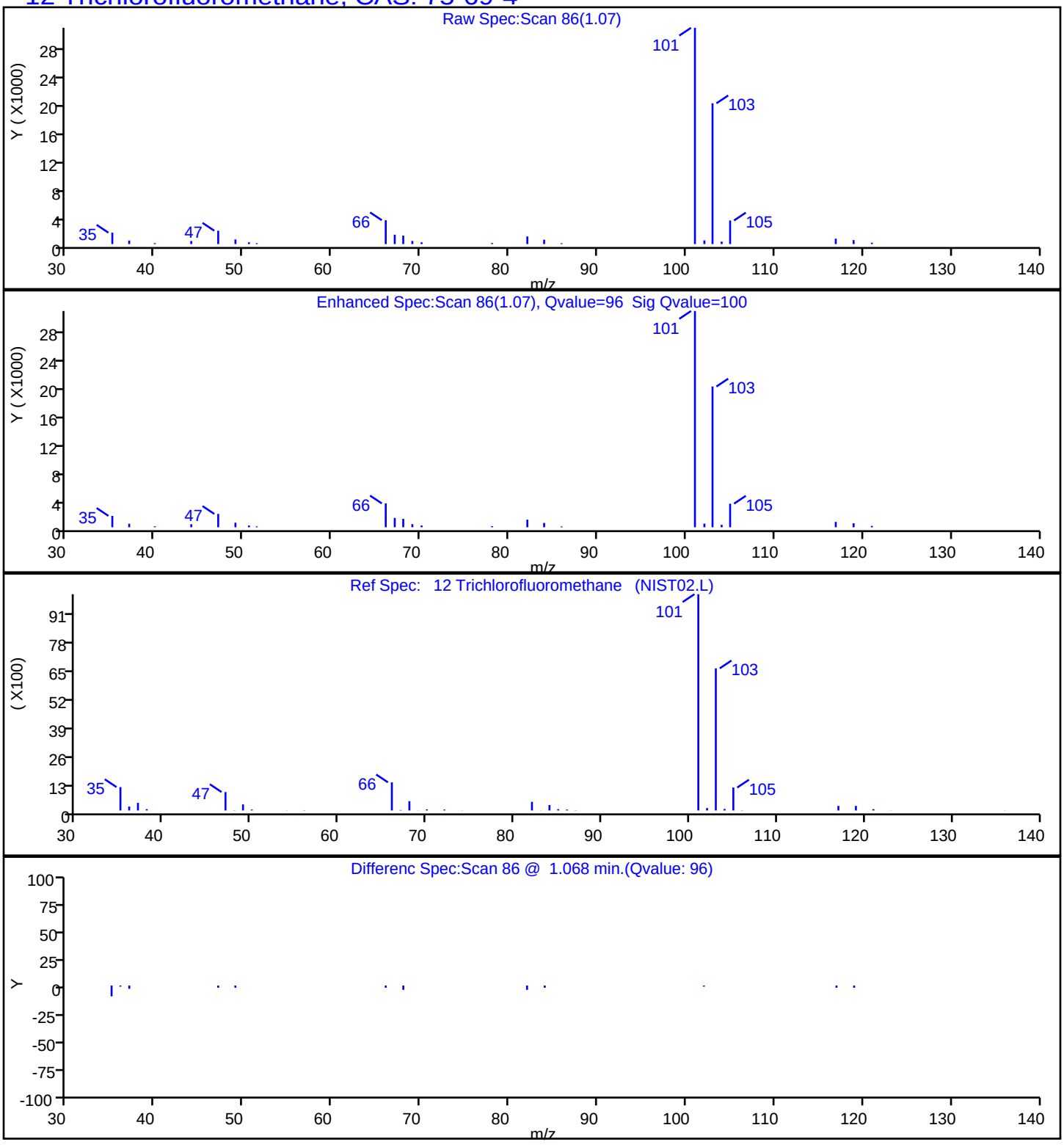


Report Date: 09-Sep-2020 11:28:43 Chrom Revision: 2.3 20-Aug-2020 13:57:12

Eurofins TestAmerica, Edison

| | | | | | |
|---|---|---|---|---|---|
| Data File: | \\chromfs\Edison\ChromData\CVOAMS15\20200908-116442.b\T38882.D | | | | |
| Injection Date: | 09-Sep-2020 04:05:50 | Instrument ID: | CVOAMS15 | | |
| Lims ID: | 460-217659-B-6 | Lab Sample ID: | 460-217659-6 | | |
| Client ID: | MW-216 | | | | |
| Operator ID: | | ALS Bottle#: | 0 | Worklist Smp#: | 21 |
| Purge Vol: | 5.000 mL | Dil. Factor: | 1.0000 | | |
| Method: | 8260W_15 | Limit Group: | VOA - 8260C Water and Solid | | |
| Column: | DB-624 ( 0.18 mm) | Detector | MS Quad | | |

## 12 Trichlorofluoromethane, CAS: 75-69-4



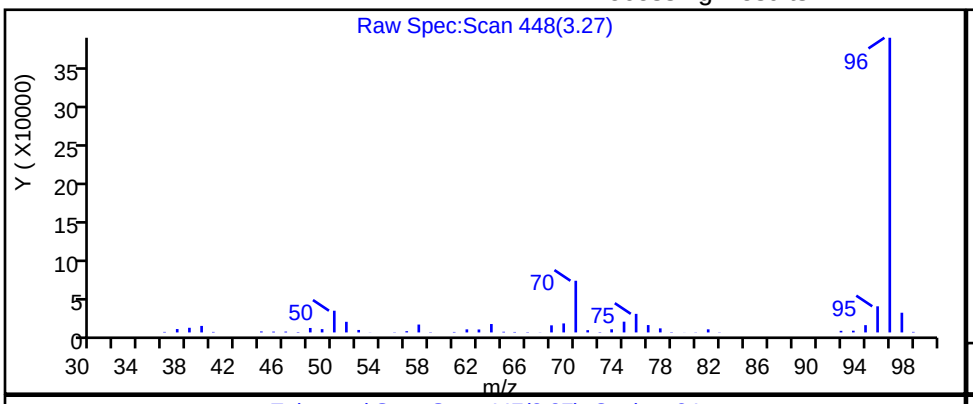
User Disabled Compound Report

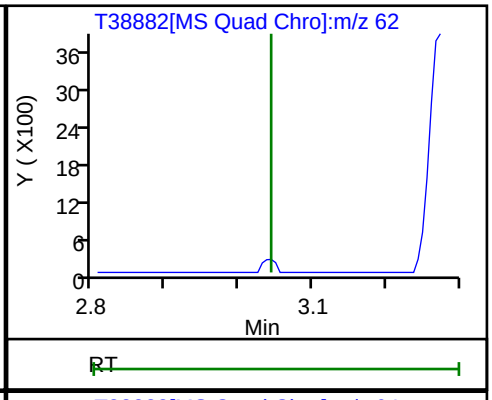
Eurofins TestAmerica, Edison

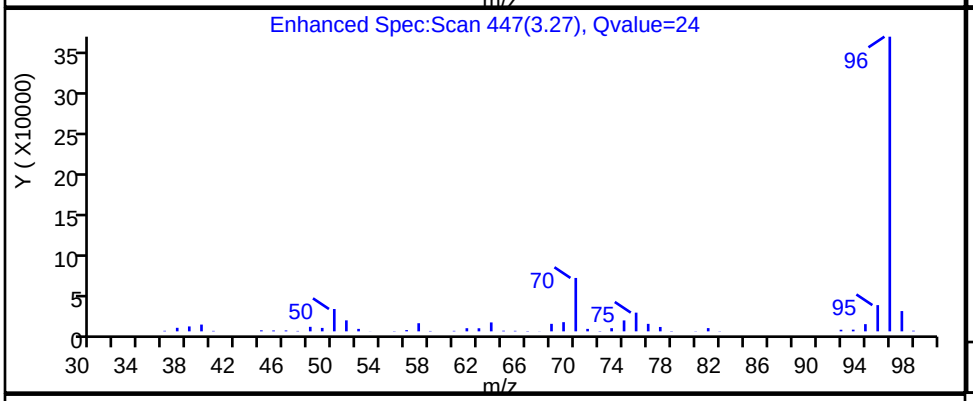
| | | | | | |
|---|---|---|---|---|---|
| Data File: | \\chromfs\Edison\ChromData\CVOAMS15\20200908-116442.b\T38882.D | | | | |
| Injection Date: | 09-Sep-2020 04:05:50 | Instrument ID: | CVOAMS15 | | |
| Lims ID: | 460-217659-B-6 | Lab Sample ID: | 460-217659-6 | | |
| Client ID: | MW-216 | | | | |
| Operator ID: | | ALS Bottle#: | 0 | Worklist Smp#: | 21 |
| Purge Vol: | 5.000 mL | Dil. Factor: | 1.0000 | | |
| Method: | 8260W_15 | Limit Group: | VOA - 8260C Water and Solid | | |
| Column: | DB-624 ( 0.18 mm) | Detector | MS Quad | | |

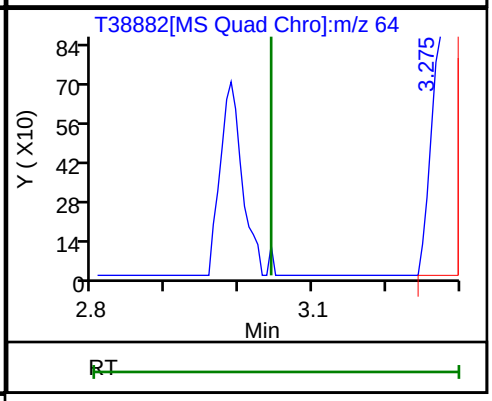
## 61 1,2-Dichloroethane, CAS: 107-06-2

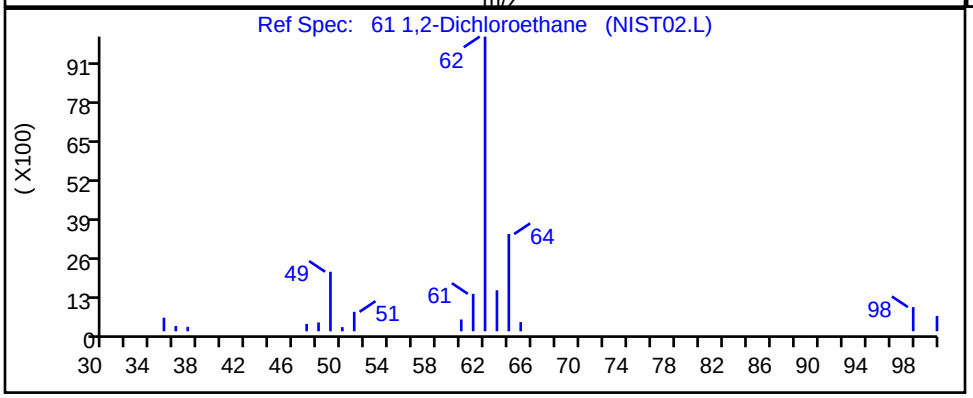
Processing Results




| RT | Mass | Response | Amount |
|---|---|---|---|
| 3.27 | 62.00 | 7140 | 1.461169 |
| 3.27 | 64.00 | 1463 | |

Reviewer: desais, 09-Sep-2020 07:31:24

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Edison  Job No.: 460-217659-1

SDG No.:

Client Sample ID: MW-217  Lab Sample ID: 460-217659-7

Matrix: Water  Lab File ID: T38883.D

Analysis Method: 8260C  Date Collected: 09/03/2020 12:35

Sample wt/vol: 5(mL)  Date Analyzed: 09/09/2020 04:29

Soil Aliquot Vol:  Dilution Factor: 1

Soil Extract Vol.:  GC Column: DB-624  ID: 0.18(mm)

% Moisture:  Level: (low/med) Low

Analysis Batch No.: 722587  Units: ug/L

| CAS NO. | COMPOUND NAME | RESULT | Q | RL | MDL |
|---|---|---|---|---|---|
| 71-55-6 | 1,1,1-Trichloroethane | 0.24 | U | 1.0 | 0.24 |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 0.37 | U | 1.0 | 0.37 |
| 76-13-1 | 1,1,2-Trichloro-1,2,2-trifluoroethane | 0.31 | U | 1.0 | 0.31 |
| 79-00-5 | 1,1,2-Trichloroethane | 0.43 | U | 1.0 | 0.43 |
| 75-34-3 | 1,1-Dichloroethane | 0.26 | U | 1.0 | 0.26 |
| 75-35-4 | 1,1-Dichloroethene | 0.26 | U | 1.0 | 0.26 |
| 87-61-6 | 1,2,3-Trichlorobenzene | 0.36 | U | 1.0 | 0.36 |
| 120-82-1 | 1,2,4-Trichlorobenzene | 0.37 | U | 1.0 | 0.37 |
| 78-87-5 | 1,2-Dichloropropane | 0.35 | U | 1.0 | 0.35 |
| 541-73-1 | 1,3-Dichlorobenzene | 0.34 | U | 1.0 | 0.34 |
| 106-46-7 | 1,4-Dichlorobenzene | 0.33 | U | 1.0 | 0.33 |
| 123-91-1 | 1,4-Dioxane | 28 | U | 50 | 28 |
| 78-93-3 | 2-Butanone (MEK) | 1.9 | U | 5.0 | 1.9 |
| 591-78-6 | 2-Hexanone | 1.1 | U | 5.0 | 1.1 |
| 108-10-1 | 4-Methyl-2-pentanone (MIBK) | 1.3 | U | 5.0 | 1.3 |
| 67-64-1 | Acetone | 4.4 | U | 5.0 | 4.4 |
| 71-43-2 | Benzene | 0.20 | U | 1.0 | 0.20 |
| 75-25-2 | Bromoform | 0.54 | U | 1.0 | 0.54 |
| 74-83-9 | Bromomethane | 0.55 | U | 1.0 | 0.55 |
| 75-15-0 | Carbon disulfide | 0.82 | U | 1.0 | 0.82 |
| 56-23-5 | Carbon tetrachloride | 0.21 | U | 1.0 | 0.21 |
| 108-90-7 | Chlorobenzene | 0.38 | U | 1.0 | 0.38 |
| 74-97-5 | Chlorobromomethane | 0.41 | U | 1.0 | 0.41 |
| 124-48-1 | Chlorodibromomethane | 0.28 | U | 1.0 | 0.28 |
| 75-00-3 | Chloroethane | 0.32 | U | 1.0 | 0.32 |
| 67-66-3 | Chloroform | 0.33 | U | 1.0 | 0.33 |
| 74-87-3 | Chloromethane | 0.40 | U | 1.0 | 0.40 |
| 156-59-2 | cis-1,2-Dichloroethene | 0.22 | U | 1.0 | 0.22 |
| 10061-01-5 | cis-1,3-Dichloropropene | 0.22 | U | 1.0 | 0.22 |
| 110-82-7 | Cyclohexane | 0.32 | U | 1.0 | 0.32 |
| 75-27-4 | Dichlorobromomethane | 0.34 | U | 1.0 | 0.34 |
| 75-71-8 | Dichlorodifluoromethane | 0.31 | U | 1.0 | 0.31 |
| 100-41-4 | Ethylbenzene | 0.30 | U | 1.0 | 0.30 |
| 106-93-4 | Ethylene Dibromide | 0.50 | U | 1.0 | 0.50 |
| 98-82-8 | Isopropylbenzene | 0.34 | U | 1.0 | 0.34 |

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Edison  Job No.: 460-217659-1

SDG No.:

Client Sample ID: MW-217  Lab Sample ID: 460-217659-7

Matrix: Water  Lab File ID: T38883.D

Analysis Method: 8260C  Date Collected: 09/03/2020 12:35

Sample wt/vol: 5(mL)  Date Analyzed: 09/09/2020 04:29

Soil Aliquot Vol:  Dilution Factor: 1

Soil Extract Vol.:  GC Column: DB-624  ID: 0.18(mm)

% Moisture:  Level: (low/med) Low

Analysis Batch No.: 722587  Units: ug/L

| CAS NO. | COMPOUND NAME | RESULT | Q | RL | MDL |
|---|---|---|---|---|---|
| 79-20-9 | Methyl acetate | 0.79 | U | 5.0 | 0.79 |
| 1634-04-4 | Methyl tert-butyl ether | 0.47 | U | 1.0 | 0.47 |
| 108-87-2 | Methylcyclohexane | 0.26 | U | 1.0 | 0.26 |
| 75-09-2 | Methylene Chloride | 0.32 | U | 1.0 | 0.32 |
| 179601-23-1 | m-Xylene & p-Xylene | 0.30 | U | 1.0 | 0.30 |
| 95-47-6 | o-Xylene | 0.36 | U | 1.0 | 0.36 |
| 100-42-5 | Styrene | 0.42 | U | 1.0 | 0.42 |
| 127-18-4 | Tetrachloroethene | 0.25 | U | 1.0 | 0.25 |
| 108-88-3 | Toluene | 0.38 | U | 1.0 | 0.38 |
| 156-60-5 | trans-1,2-Dichloroethene | 0.24 | U | 1.0 | 0.24 |
| 10061-02-6 | trans-1,3-Dichloropropene | 0.49 | U | 1.0 | 0.49 |
| 79-01-6 | Trichloroethene | 0.31 | U | 1.0 | 0.31 |
| 75-69-4 | Trichlorofluoromethane | 5.6 | | 1.0 | 0.32 |
| 75-01-4 | Vinyl chloride | 0.17 | U | 1.0 | 0.17 |
| 107-06-2 | 1,2-Dichloroethane | 0.43 | U * | 1.0 | 0.43 |
| 95-50-1 | 1,2-Dichlorobenzene | 0.43 | U | 1.0 | 0.43 |
| 96-12-8 | 1,2-Dibromo-3-Chloropropane | 0.38 | U | 1.0 | 0.38 |

| CAS NO. | SURROGATE | %REC | Q | LIMITS |
|---|---|---|---|---|
| 17060-07-0 | 1,2-Dichloroethane-d4 (Surr) | 76 | | 75-123 |
| 460-00-4 | 4-Bromofluorobenzene | 84 | | 76-120 |
| 1868-53-7 | Dibromofluoromethane (Surr) | 83 | | 77-124 |
| 2037-26-5 | Toluene-d8 (Surr) | 89 | | 80-120 |

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: Eurofins TestAmerica, Edison  Job No.: 460-217659-1

SDG No.:

Client Sample ID: MW-217  Lab Sample ID: 460-217659-7

Matrix: Water  Lab File ID: T38883.D

Analysis Method: 8260C  Date Collected: 09/03/2020 12:35

Sample wt/vol: 5(mL)  Date Analyzed: 09/09/2020 04:29

Soil Aliquot Vol:  Dilution Factor: 1

Soil Extract Vol.:  GC Column: DB-624  ID: 0.18(mm)

% Moisture:  Level: (low/med) Low

Analysis Batch No.: 722587  Units: ug/L

Number TICs Found: 0  TIC Result Total: 0

| CAS NO. | COMPOUND NAME | RT | RESULT | Q | MATCH QUALITY |
|---|---|---|---|---|---|
| | Tentatively Identified Compound | | None | | |

Eurofins TestAmerica, Edison
Target Compound Quantitation Report

Data File: \\chromfs\Edison\ChromData\CVOAMS15\20200908-116442.b\T38883.D
Lims ID: 460-217659-B-7
Client ID: MW-217
Sample Type: Client
Inject. Date: 09-Sep-2020 04:29:45 ALS Bottle#: 0 Worklist Smp#: 22
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: 460-217659-B-7
Misc. Info.: 460-0116442-022
Operator ID: Instrument ID: CVOAMS15

Method: \\chromfs\Edison\ChromData\CVOAMS15\20200908-116442.b\8260W_15.m
Limit Group: VOA - 8260C Water and Solid
Last Update: 09-Sep-2020 11:20:41 Calib Date: 04-Sep-2020 15:01:54
Integrator: RTE ID Type: RT Order ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Edison\ChromData\CVOAMS15\20200904-116301.b\T38701.D

Column 1 : DB-624 ( 0.18 mm) Det: MS Quad
Process Host: CTX1022

First Level Reviewer: desais Date: 09-Sep-2020 07:33:34

| Compound | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q | Response | OnCol Amt ug/l | Flags |
|---|---|---|---|---|---|---|---|---|
| 4 Dichlorodifluoromethane | 85 | 0.647 | 0.647 | 0.000 | 1 | 807 | 0.1488 | |
| 12 Trichlorofluoromethane | 101 | 1.067 | 1.068 | -0.001 | 95 | 35653 | 5.58 | |
| * 31 TBA-d9 (IS) | 66 | 1.598 | 1.598 | 0.000 | 92 | 39488 | 1000.0 | |
| * 42 2-Butanone-d5 | 46 | 2.335 | 2.336 | -0.001 | 47 | 229328 | 250.0 | |
| $ 53 Dibromofluoromethane (Surr) | 113 | 2.719 | 2.720 | -0.001 | 96 | 179161 | 41.3 | |
| $ 58 1,2-Dichloroethane-d4 (Surr) | 65 | 2.981 | 2.982 | -0.001 | 89 | 167619 | 38.2 | |
| * 65 Fluorobenzene | 96 | 3.274 | 3.275 | -0.001 | 100 | 743476 | 50.0 | |
| * 73 1,4-Dioxane-d8 | 96 | 3.933 | 3.939 | -0.007 | 1 | 33444 | 1000.0 | |
| $ 83 Toluene-d8 (Surr) | 98 | 4.902 | 4.902 | 0.000 | 98 | 576698 | 44.4 | |
| * 94 Chlorobenzene-d5 | 117 | 6.743 | 6.743 | 0.000 | 84 | 508602 | 50.0 | |
| $ 105 4-Bromofluorobenzene | 174 | 8.529 | 8.530 | -0.001 | 90 | 175611 | 41.9 | |
| * 120 1,4-Dichlorobenzene-d4 | 152 | 10.376 | 10.377 | -0.001 | 93 | 213039 | 50.0 | |

## Reagents:

VOA6IS/SURR_00038 Amount Added: 5.00 Units: uL Run Reagent

Report Date: 09-Sep-2020 11:29:11 Chrom Revision: 2.3 20-Aug-2020 13:57:12

Eurofins TestAmerica, Edison

Data File: \\chromfs\Edison\ChromData\CVOAMS15\20200908-116442.b\T38883.D

Injection Date: 09-Sep-2020 04:29:45 Instrument ID: CVOAMS15

Lims ID: 460-217659-B-7 Lab Sample ID: 460-217659-7

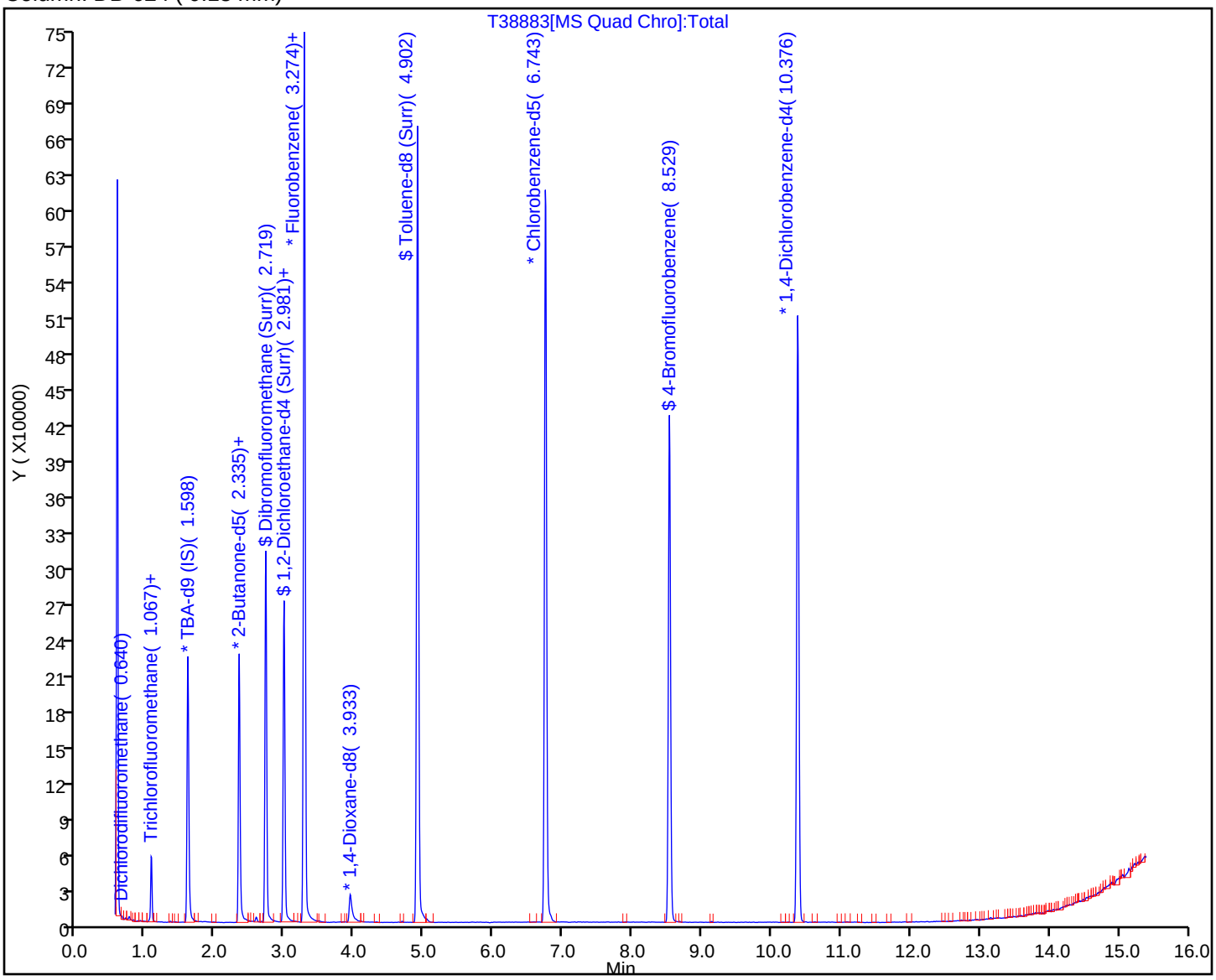
Client ID: MW-217

Operator ID: ALS Bottle#: 0 Worklist Smp#: 22

Purge Vol: 5.000 mL Dil. Factor: 1.0000

Method: 8260W_15 Limit Group: VOA - 8260C Water and Solid

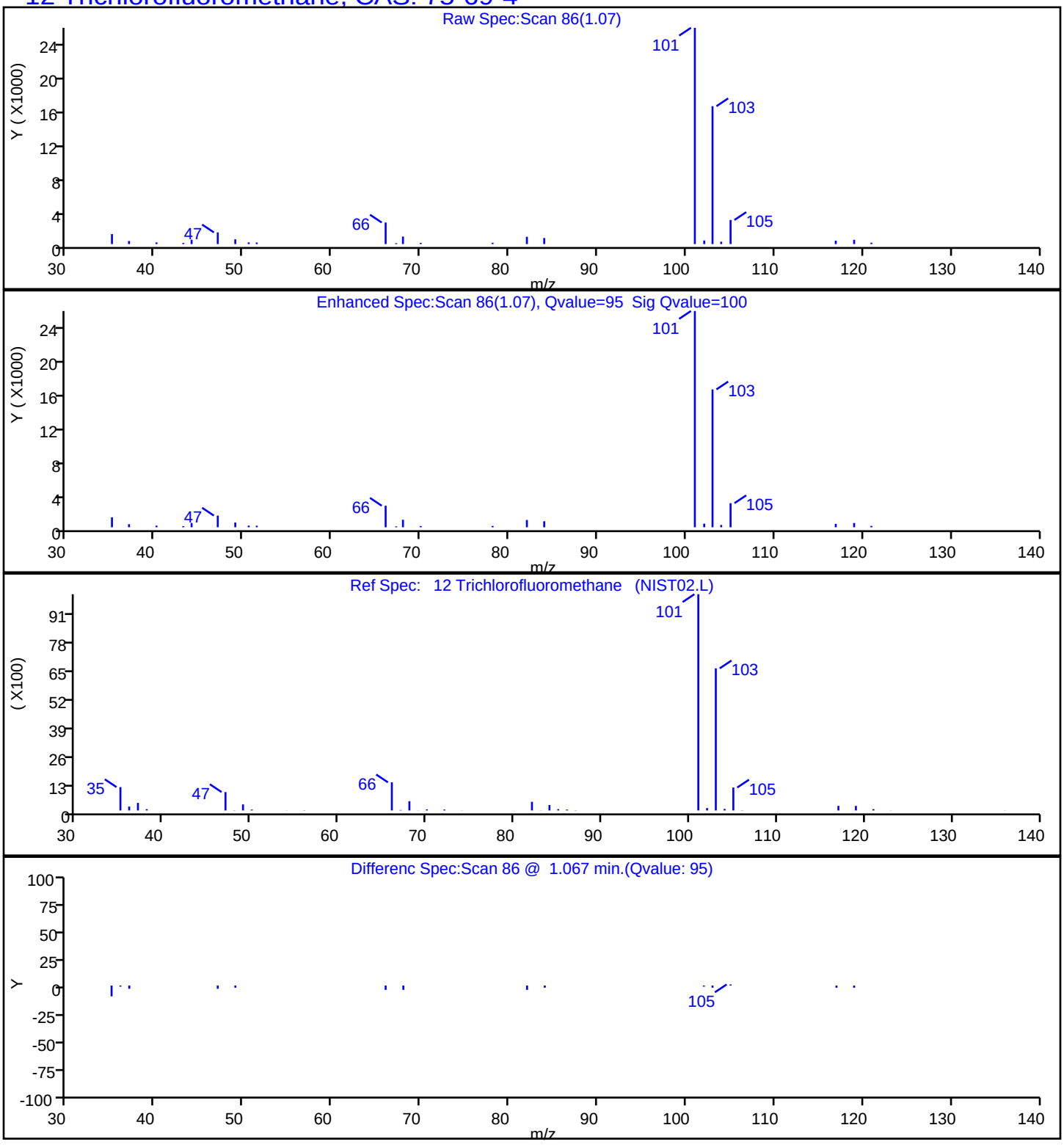
Column: DB-624 ( 0.18 mm)



Eurofins TestAmerica, Edison

| | | | | | |
|---|---|---|---|---|---|
| Data File: | \\chromfs\Edison\ChromData\CVOAMS15\20200908-116442.b\T38883.D | | | | |
| Injection Date: | 09-Sep-2020 04:29:45 | Instrument ID: | CVOAMS15 | | |
| Lims ID: | 460-217659-B-7 | Lab Sample ID: | 460-217659-7 | | |
| Client ID: | MW-217 | | | | |
| Operator ID: | | ALS Bottle#: | 0 | Worklist Smp#: | 22 |
| Purge Vol: | 5.000 mL | Dil. Factor: | 1.0000 | | |
| Method: | 8260W_15 | Limit Group: | VOA - 8260C Water and Solid | | |
| Column: | DB-624 ( 0.18 mm) | Detector | MS Quad | | |

## 12 Trichlorofluoromethane, CAS: 75-69-4



Eurofins TestAmerica, Edison

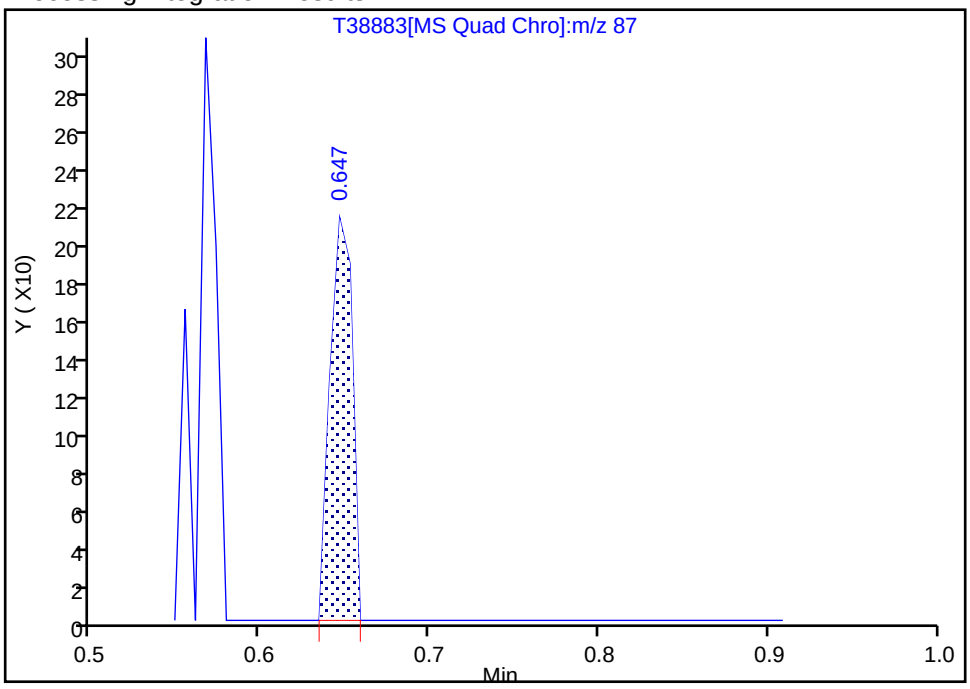
| | | | | | |
|---|---|---|---|---|---|
| Data File: | \\chromfs\Edison\ChromData\CVOAMS15\20200908-116442.b\T38883.D | | | | |
| Injection Date: | 09-Sep-2020 04:29:45 | Instrument ID: | CVOAMS15 | | |
| Lims ID: | 460-217659-B-7 | Lab Sample ID: | 460-217659-7 | | |
| Client ID: | MW-217 | | | | |
| Operator ID: | | ALS Bottle#: | 0 | Worklist Smp#: | 22 |
| Purge Vol: | 5.000 mL | Dil. Factor: | 1.0000 | | |
| Method: | 8260W_15 | Limit Group: | VOA - 8260C Water and Solid | | |
| Column: | DB-624 ( 0.18 mm) | Detector | MS Quad | | |

## 4 Dichlorodifluoromethane, CAS: 75-71-8

Signal: 2

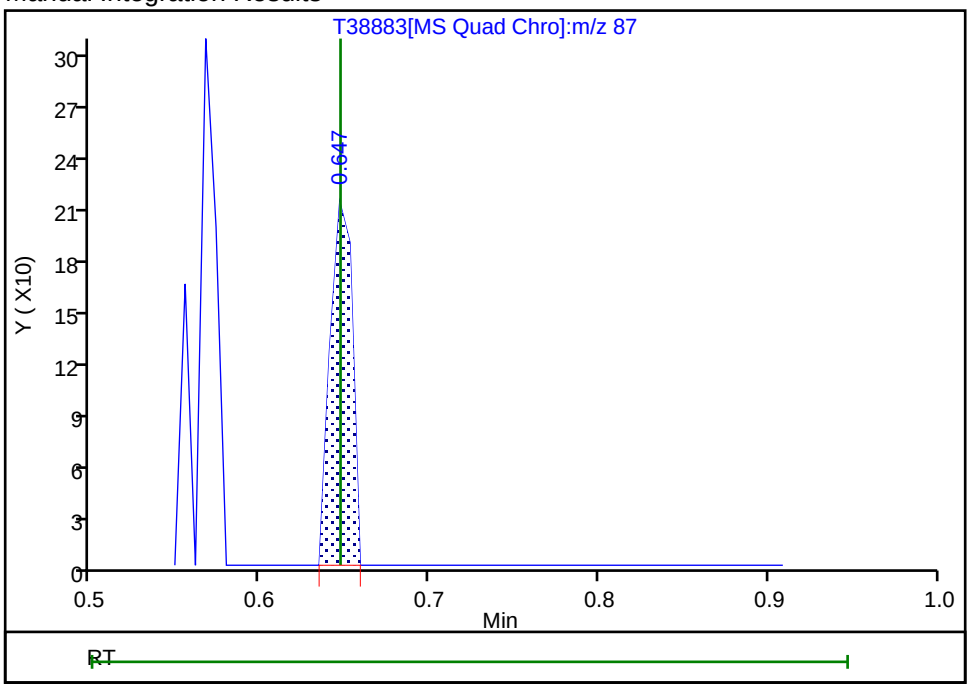
Processing Integration Results

RT: 0.65
Area: 192
Amount: 0.148789
Amount Units: ug/l




Manual Integration Results

RT: 0.65
Area: 192
Amount: 0.148789
Amount Units: ug/l




Reviewer: desais, 09-Sep-2020 07:33:20
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Edison  Job No.: 460-217659-1

SDG No.:

Client Sample ID: FB  Lab Sample ID: 460-217659-8

Matrix: Water  Lab File ID: T38870.D

Analysis Method: 8260C  Date Collected: 09/03/2020 15:00

Sample wt/vol: 5(mL)  Date Analyzed: 09/08/2020 23:18

Soil Aliquot Vol:  Dilution Factor: 1

Soil Extract Vol.:  GC Column: DB-624  ID: 0.18(mm)

% Moisture:  Level: (low/med) Low

Analysis Batch No.: 722587  Units: ug/L

| CAS NO. | COMPOUND NAME | RESULT | Q | RL | MDL |
|---|---|---|---|---|---|
| 71-55-6 | 1,1,1-Trichloroethane | 0.24 | U | 1.0 | 0.24 |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 0.37 | U | 1.0 | 0.37 |
| 76-13-1 | 1,1,2-Trichloro-1,2,2-trifluoroethane | 0.31 | U | 1.0 | 0.31 |
| 79-00-5 | 1,1,2-Trichloroethane | 0.43 | U | 1.0 | 0.43 |
| 75-34-3 | 1,1-Dichloroethane | 0.26 | U | 1.0 | 0.26 |
| 75-35-4 | 1,1-Dichloroethene | 0.26 | U | 1.0 | 0.26 |
| 87-61-6 | 1,2,3-Trichlorobenzene | 0.36 | U | 1.0 | 0.36 |
| 120-82-1 | 1,2,4-Trichlorobenzene | 0.37 | U | 1.0 | 0.37 |
| 78-87-5 | 1,2-Dichloropropane | 0.35 | U | 1.0 | 0.35 |
| 541-73-1 | 1,3-Dichlorobenzene | 0.34 | U | 1.0 | 0.34 |
| 106-46-7 | 1,4-Dichlorobenzene | 0.33 | U | 1.0 | 0.33 |
| 123-91-1 | 1,4-Dioxane | 28 | U | 50 | 28 |
| 78-93-3 | 2-Butanone (MEK) | 1.9 | U | 5.0 | 1.9 |
| 591-78-6 | 2-Hexanone | 1.1 | U | 5.0 | 1.1 |
| 108-10-1 | 4-Methyl-2-pentanone (MIBK) | 1.3 | U | 5.0 | 1.3 |
| 67-64-1 | Acetone | 4.4 | U | 5.0 | 4.4 |
| 71-43-2 | Benzene | 0.20 | U | 1.0 | 0.20 |
| 75-25-2 | Bromoform | 0.54 | U | 1.0 | 0.54 |
| 74-83-9 | Bromomethane | 0.55 | U | 1.0 | 0.55 |
| 75-15-0 | Carbon disulfide | 0.82 | U | 1.0 | 0.82 |
| 56-23-5 | Carbon tetrachloride | 0.21 | U | 1.0 | 0.21 |
| 108-90-7 | Chlorobenzene | 0.38 | U | 1.0 | 0.38 |
| 74-97-5 | Chlorobromomethane | 0.41 | U | 1.0 | 0.41 |
| 124-48-1 | Chlorodibromomethane | 0.28 | U | 1.0 | 0.28 |
| 75-00-3 | Chloroethane | 0.32 | U | 1.0 | 0.32 |
| 67-66-3 | Chloroform | 0.33 | U | 1.0 | 0.33 |
| 74-87-3 | Chloromethane | 0.40 | U | 1.0 | 0.40 |
| 156-59-2 | cis-1,2-Dichloroethene | 0.22 | U | 1.0 | 0.22 |
| 10061-01-5 | cis-1,3-Dichloropropene | 0.22 | U | 1.0 | 0.22 |
| 110-82-7 | Cyclohexane | 0.32 | U | 1.0 | 0.32 |
| 75-27-4 | Dichlorobromomethane | 0.34 | U | 1.0 | 0.34 |
| 75-71-8 | Dichlorodifluoromethane | 0.31 | U | 1.0 | 0.31 |
| 100-41-4 | Ethylbenzene | 0.30 | U | 1.0 | 0.30 |
| 106-93-4 | Ethylene Dibromide | 0.50 | U | 1.0 | 0.50 |
| 98-82-8 | Isopropylbenzene | 0.34 | U | 1.0 | 0.34 |

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Edison  Job No.: 460-217659-1

SDG No.:

Client Sample ID: FB  Lab Sample ID: 460-217659-8

Matrix: Water  Lab File ID: T38870.D

Analysis Method: 8260C  Date Collected: 09/03/2020 15:00

Sample wt/vol: 5(mL)  Date Analyzed: 09/08/2020 23:18

Soil Aliquot Vol:  Dilution Factor: 1

Soil Extract Vol.:  GC Column: DB-624  ID: 0.18(mm)

% Moisture:  Level: (low/med) Low

Analysis Batch No.: 722587  Units: ug/L

| CAS NO. | COMPOUND NAME | RESULT | Q | RL | MDL |
|---|---|---|---|---|---|
| 79-20-9 | Methyl acetate | 0.79 | U | 5.0 | 0.79 |
| 1634-04-4 | Methyl tert-butyl ether | 0.47 | U | 1.0 | 0.47 |
| 108-87-2 | Methylcyclohexane | 0.26 | U | 1.0 | 0.26 |
| 75-09-2 | Methylene Chloride | 1.0 | | 1.0 | 0.32 |
| 179601-23-1 | m-Xylene & p-Xylene | 0.30 | U | 1.0 | 0.30 |
| 95-47-6 | o-Xylene | 0.36 | U | 1.0 | 0.36 |
| 100-42-5 | Styrene | 0.42 | U | 1.0 | 0.42 |
| 127-18-4 | Tetrachloroethene | 0.25 | U | 1.0 | 0.25 |
| 108-88-3 | Toluene | 0.38 | U | 1.0 | 0.38 |
| 156-60-5 | trans-1,2-Dichloroethene | 0.24 | U | 1.0 | 0.24 |
| 10061-02-6 | trans-1,3-Dichloropropene | 0.49 | U | 1.0 | 0.49 |
| 79-01-6 | Trichloroethene | 0.31 | U | 1.0 | 0.31 |
| 75-69-4 | Trichlorofluoromethane | 0.32 | U | 1.0 | 0.32 |
| 75-01-4 | Vinyl chloride | 0.17 | U | 1.0 | 0.17 |
| 107-06-2 | 1,2-Dichloroethane | 0.43 | U * | 1.0 | 0.43 |
| 95-50-1 | 1,2-Dichlorobenzene | 0.43 | U | 1.0 | 0.43 |
| 96-12-8 | 1,2-Dibromo-3-Chloropropane | 0.38 | U | 1.0 | 0.38 |

| CAS NO. | SURROGATE | %REC | Q | LIMITS |
|---|---|---|---|---|
| 17060-07-0 | 1,2-Dichloroethane-d4 (Surr) | 72 | X | 75-123 |
| 460-00-4 | 4-Bromofluorobenzene | 93 | | 76-120 |
| 1868-53-7 | Dibromofluoromethane (Surr) | 85 | | 77-124 |
| 2037-26-5 | Toluene-d8 (Surr) | 98 | | 80-120 |

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: Eurofins TestAmerica, Edison  Job No.: 460-217659-1

SDG No.:

Client Sample ID: FB  Lab Sample ID: 460-217659-8

Matrix: Water  Lab File ID: T38870.D

Analysis Method: 8260C  Date Collected: 09/03/2020 15:00

Sample wt/vol: 5(mL)  Date Analyzed: 09/08/2020 23:18

Soil Aliquot Vol:  Dilution Factor: 1

Soil Extract Vol.:  GC Column: DB-624  ID: 0.18(mm)

% Moisture:  Level: (low/med) Low

Analysis Batch No.: 722587  Units: ug/L

Number TICs Found: 0  TIC Result Total: 0

| CAS NO. | COMPOUND NAME | RT | RESULT | Q | MATCH QUALITY |
|---|---|---|---|---|---|
| | Tentatively Identified Compound | | None | | |

Eurofins TestAmerica, Edison
Target Compound Quantitation Report

Data File: \\chromfs\Edison\ChromData\CVOAMS15\20200908-116442.b\T38870.D
Lims ID: 460-217659-B-8
Client ID: FB
Sample Type: Client
Inject. Date: 08-Sep-2020 23:18:23 ALS Bottle#: 0 Worklist Smp#: 9
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: 460-217659-B-8
Misc. Info.: 460-0116442-009
Operator ID: Instrument ID: CVOAMS15

Method: \\chromfs\Edison\ChromData\CVOAMS15\20200908-116442.b\8260W_15.m
Limit Group: VOA - 8260C Water and Solid
Last Update: 09-Sep-2020 11:20:41 Calib Date: 04-Sep-2020 15:01:54
Integrator: RTE ID Type: RT Order ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Edison\ChromData\CVOAMS15\20200904-116301.b\T38701.D

Column 1 : DB-624 ( 0.18 mm) Det: MS Quad
Process Host: CTX1022

First Level Reviewer: parekhv Date: 08-Sep-2020 23:42:16

| Compound | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q | Response | OnCol Amt ug/l | Flags |
|---|---|---|---|---|---|---|---|---|
| 30 Methylene Chloride | 84 | 1.567 | 1.568 | -0.001 | 64 | 4035 | 1.02 | |
| * 31 TBA-d9 (IS) | 66 | 1.598 | 1.598 | 0.000 | 92 | 41004 | 1000.0 | |
| * 42 2-Butanone-d5 | 46 | 2.336 | 2.336 | 0.000 | 44 | 234795 | 250.0 | |
| $ 53 Dibromofluoromethane (Surr) | 113 | 2.720 | 2.720 | 0.000 | 96 | 186193 | 42.7 | |
| $ 58 1,2-Dichloroethane-d4 (Surr) | 65 | 2.982 | 2.982 | 0.000 | 97 | 159240 | 36.1 | |
| * 65 Fluorobenzene | 96 | 3.274 | 3.275 | -0.001 | 100 | 747690 | 50.0 | |
| * 73 1,4-Dioxane-d8 | 96 | 3.933 | 3.939 | -0.006 | 1 | 33142 | 1000.0 | |
| $ 83 Toluene-d8 (Surr) | 98 | 4.902 | 4.902 | 0.000 | 98 | 606415 | 48.8 | |
| * 94 Chlorobenzene-d5 | 117 | 6.743 | 6.743 | 0.000 | 81 | 486532 | 50.0 | |
| $ 105 4-Bromofluorobenzene | 174 | 8.530 | 8.530 | 0.000 | 92 | 185498 | 46.3 | |
| * 120 1,4-Dichlorobenzene-d4 | 152 | 10.377 | 10.377 | 0.000 | 94 | 223435 | 50.0 | |

## Reagents:

VOA6IS/SURR_00038 Amount Added: 5.00 Units: uL Run Reagent

Report Date: 09-Sep-2020 11:23:54 Chrom Revision: 2.3 20-Aug-2020 13:57:12

Eurofins TestAmerica, Edison

Data File: \\chromfs\Edison\ChromData\CVOAMS15\20200908-116442.b\T38870.D

Injection Date: 08-Sep-2020 23:18:23 Instrument ID: CVOAMS15

Lims ID: 460-217659-B-8 Lab Sample ID: 460-217659-8

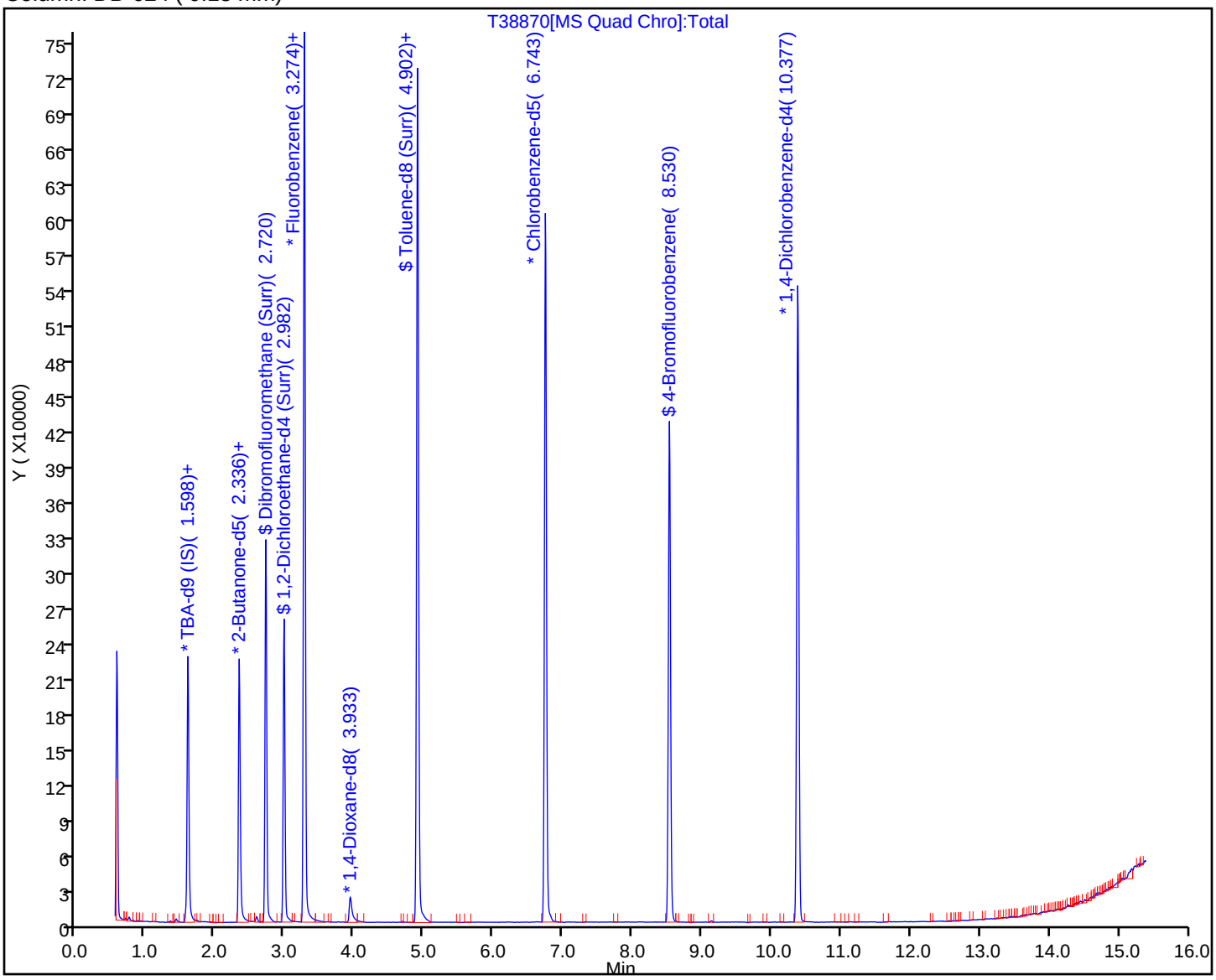
Client ID: FB

Operator ID: ALS Bottle#: 0 Worklist Smp#: 9

Purge Vol: 5.000 mL Dil. Factor: 1.0000

Method: 8260W_15 Limit Group: VOA - 8260C Water and Solid

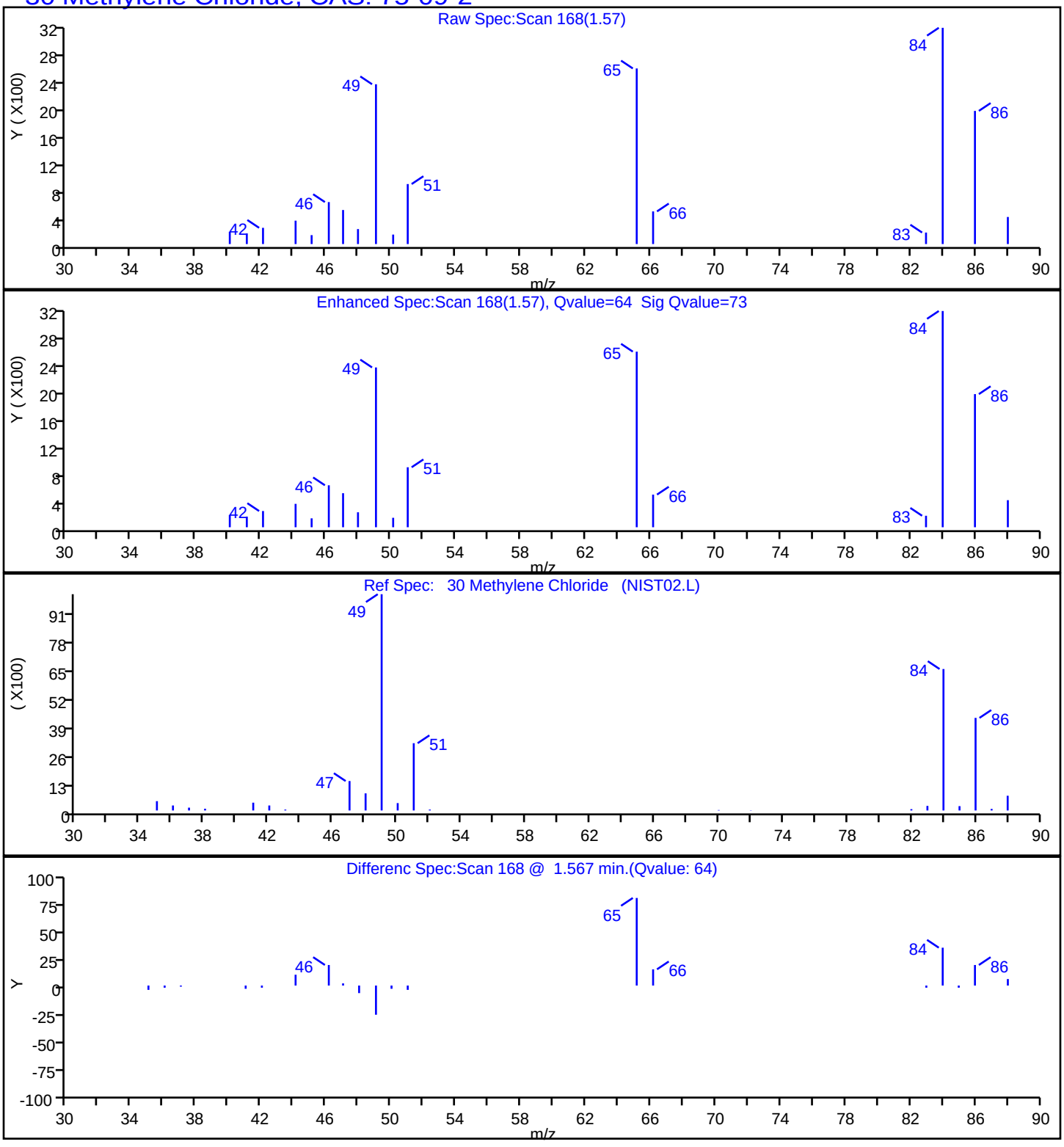
Column: DB-624 ( 0.18 mm)



Eurofins TestAmerica, Edison

| | | | |
|---|---|---|---|
| Data File: | \\chromfs\Edison\ChromData\CVOAMS15\20200908-116442.b\T38870.D | | |
| Injection Date: | 08-Sep-2020 23:18:23 | Instrument ID: | CVOAMS15 |
| Lims ID: | 460-217659-B-8 | Lab Sample ID: | 460-217659-8 |
| Client ID: | FB | | |
| Operator ID: | | ALS Bottle#: | 0 Worklist Smp#: 9 |
| Purge Vol: | 5.000 mL | Dil. Factor: | 1.0000 |
| Method: | 8260W_15 | Limit Group: | VOA - 8260C Water and Solid |
| Column: | DB-624 ( 0.18 mm) | Detector | MS Quad |

## 30 Methylene Chloride, CAS: 75-09-2



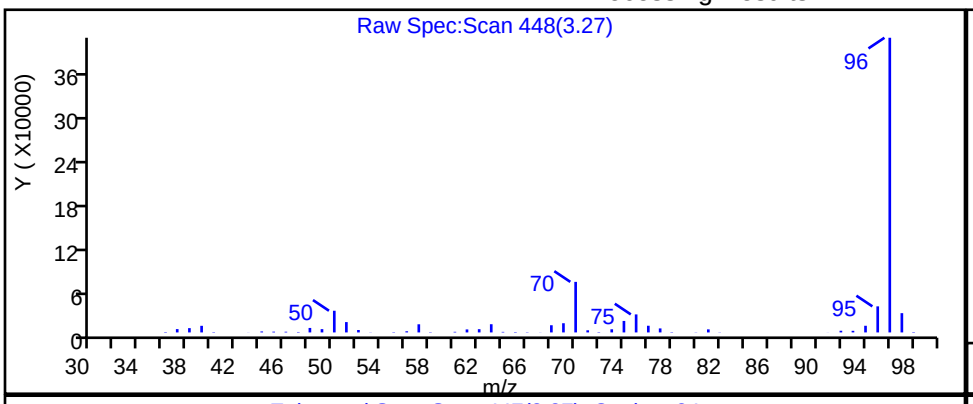
User Disabled Compound Report

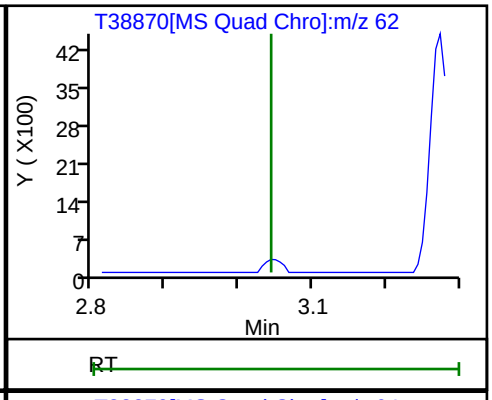
Eurofins TestAmerica, Edison

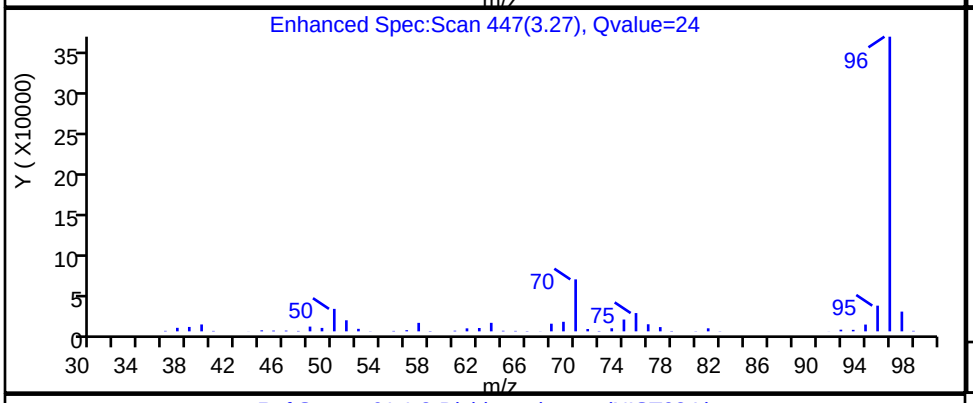
| | | | | | |
|---|---|---|---|---|---|
| Data File: | \\chromfs\Edison\ChromData\CVOAMS15\20200908-116442.b\T38870.D | | | | |
| Injection Date: | 08-Sep-2020 23:18:23 | Instrument ID: | CVOAMS15 | | |
| Lims ID: | 460-217659-B-8 | Lab Sample ID: | 460-217659-8 | | |
| Client ID: | FB | | | | |
| Operator ID: | | ALS Bottle#: | 0 | Worklist Smp#: | 9 |
| Purge Vol: | 5.000 mL | Dil. Factor: | 1.0000 | | |
| Method: | 8260W_15 | Limit Group: | VOA - 8260C Water and Solid | | |
| Column: | DB-624 ( 0.18 mm) | Detector | MS Quad | | |

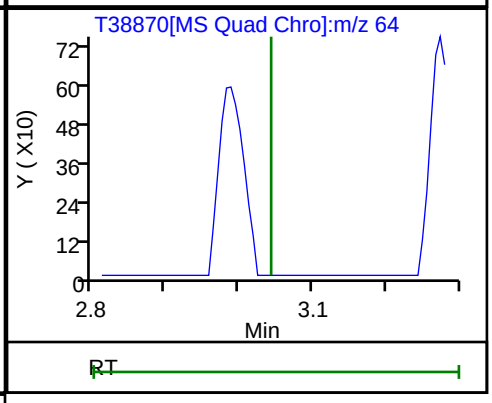
## 61 1,2-Dichloroethane, CAS: 107-06-2

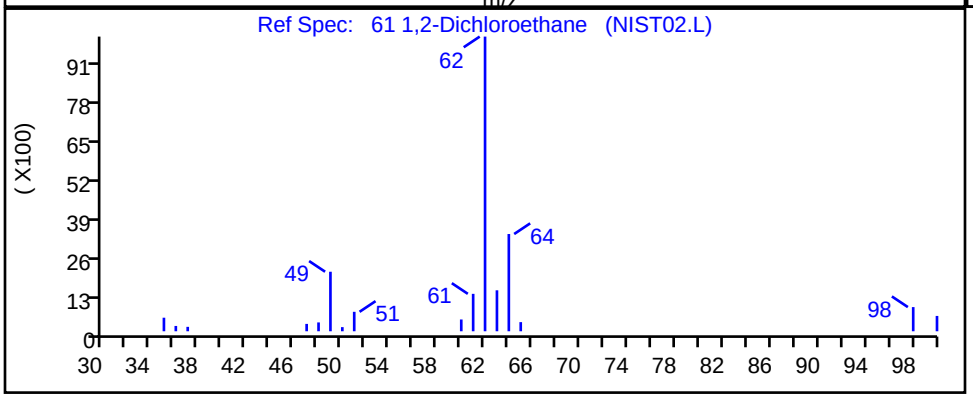
Processing Results




| RT | Mass | Response | Amount |
|---|---|---|---|
| 3.27 | 62.00 | 8001 | 1.612777 |
| 3.27 | 64.00 | 1416 | |

Reviewer: parekhv, 08-Sep-2020 23:42:02

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Edison  Job No.: 460-217659-1

SDG No.:

Client Sample ID: TB  Lab Sample ID: 460-217659-9

Matrix: Water  Lab File ID: T38871.D

Analysis Method: 8260C  Date Collected: 09/03/2020 15:00

Sample wt/vol: 5(mL)  Date Analyzed: 09/08/2020 23:42

Soil Aliquot Vol:  Dilution Factor: 1

Soil Extract Vol.:  GC Column: DB-624  ID: 0.18(mm)

% Moisture:  Level: (low/med) Low

Analysis Batch No.: 722587  Units: ug/L

| CAS NO. | COMPOUND NAME | RESULT | Q | RL | MDL |
|---|---|---|---|---|---|
| 71-55-6 | 1,1,1-Trichloroethane | 0.24 | U | 1.0 | 0.24 |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 0.37 | U | 1.0 | 0.37 |
| 76-13-1 | 1,1,2-Trichloro-1,2,2-trifluoroethane | 0.31 | U | 1.0 | 0.31 |
| 79-00-5 | 1,1,2-Trichloroethane | 0.43 | U | 1.0 | 0.43 |
| 75-34-3 | 1,1-Dichloroethane | 0.26 | U | 1.0 | 0.26 |
| 75-35-4 | 1,1-Dichloroethene | 0.26 | U | 1.0 | 0.26 |
| 87-61-6 | 1,2,3-Trichlorobenzene | 0.36 | U | 1.0 | 0.36 |
| 120-82-1 | 1,2,4-Trichlorobenzene | 0.37 | U | 1.0 | 0.37 |
| 78-87-5 | 1,2-Dichloropropane | 0.35 | U | 1.0 | 0.35 |
| 541-73-1 | 1,3-Dichlorobenzene | 0.34 | U | 1.0 | 0.34 |
| 106-46-7 | 1,4-Dichlorobenzene | 0.33 | U | 1.0 | 0.33 |
| 123-91-1 | 1,4-Dioxane | 28 | U | 50 | 28 |
| 78-93-3 | 2-Butanone (MEK) | 1.9 | U | 5.0 | 1.9 |
| 591-78-6 | 2-Hexanone | 1.1 | U | 5.0 | 1.1 |
| 108-10-1 | 4-Methyl-2-pentanone (MIBK) | 1.3 | U | 5.0 | 1.3 |
| 67-64-1 | Acetone | 4.4 | U | 5.0 | 4.4 |
| 71-43-2 | Benzene | 0.20 | U | 1.0 | 0.20 |
| 75-25-2 | Bromoform | 0.54 | U | 1.0 | 0.54 |
| 74-83-9 | Bromomethane | 0.55 | U | 1.0 | 0.55 |
| 75-15-0 | Carbon disulfide | 0.82 | U | 1.0 | 0.82 |
| 56-23-5 | Carbon tetrachloride | 0.21 | U | 1.0 | 0.21 |
| 108-90-7 | Chlorobenzene | 0.38 | U | 1.0 | 0.38 |
| 74-97-5 | Chlorobromomethane | 0.41 | U | 1.0 | 0.41 |
| 124-48-1 | Chlorodibromomethane | 0.28 | U | 1.0 | 0.28 |
| 75-00-3 | Chloroethane | 0.32 | U | 1.0 | 0.32 |
| 67-66-3 | Chloroform | 0.33 | U | 1.0 | 0.33 |
| 74-87-3 | Chloromethane | 0.40 | U | 1.0 | 0.40 |
| 156-59-2 | cis-1,2-Dichloroethene | 0.22 | U | 1.0 | 0.22 |
| 10061-01-5 | cis-1,3-Dichloropropene | 0.22 | U | 1.0 | 0.22 |
| 110-82-7 | Cyclohexane | 0.32 | U | 1.0 | 0.32 |
| 75-27-4 | Dichlorobromomethane | 0.34 | U | 1.0 | 0.34 |
| 75-71-8 | Dichlorodifluoromethane | 0.31 | U | 1.0 | 0.31 |
| 100-41-4 | Ethylbenzene | 0.30 | U | 1.0 | 0.30 |
| 106-93-4 | Ethylene Dibromide | 0.50 | U | 1.0 | 0.50 |
| 98-82-8 | Isopropylbenzene | 0.34 | U | 1.0 | 0.34 |

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Edison  Job No.: 460-217659-1

SDG No.:

Client Sample ID: TB  Lab Sample ID: 460-217659-9

Matrix: Water  Lab File ID: T38871.D

Analysis Method: 8260C  Date Collected: 09/03/2020 15:00

Sample wt/vol: 5(mL)  Date Analyzed: 09/08/2020 23:42

Soil Aliquot Vol:  Dilution Factor: 1

Soil Extract Vol.:  GC Column: DB-624  ID: 0.18(mm)

% Moisture:  Level: (low/med) Low

Analysis Batch No.: 722587  Units: ug/L

| CAS NO. | COMPOUND NAME | RESULT | Q | RL | MDL |
|---|---|---|---|---|---|
| 79-20-9 | Methyl acetate | 0.79 | U | 5.0 | 0.79 |
| 1634-04-4 | Methyl tert-butyl ether | 0.47 | U | 1.0 | 0.47 |
| 108-87-2 | Methylcyclohexane | 0.26 | U | 1.0 | 0.26 |
| 75-09-2 | Methylene Chloride | 0.32 | U | 1.0 | 0.32 |
| 179601-23-1 | m-Xylene & p-Xylene | 0.30 | U | 1.0 | 0.30 |
| 95-47-6 | o-Xylene | 0.36 | U | 1.0 | 0.36 |
| 100-42-5 | Styrene | 0.42 | U | 1.0 | 0.42 |
| 127-18-4 | Tetrachloroethene | 0.25 | U | 1.0 | 0.25 |
| 108-88-3 | Toluene | 0.38 | U | 1.0 | 0.38 |
| 156-60-5 | trans-1,2-Dichloroethene | 0.24 | U | 1.0 | 0.24 |
| 10061-02-6 | trans-1,3-Dichloropropene | 0.49 | U | 1.0 | 0.49 |
| 79-01-6 | Trichloroethene | 0.31 | U | 1.0 | 0.31 |
| 75-69-4 | Trichlorofluoromethane | 0.32 | U | 1.0 | 0.32 |
| 75-01-4 | Vinyl chloride | 0.17 | U | 1.0 | 0.17 |
| 107-06-2 | 1,2-Dichloroethane | 0.43 | U * | 1.0 | 0.43 |
| 95-50-1 | 1,2-Dichlorobenzene | 0.43 | U | 1.0 | 0.43 |
| 96-12-8 | 1,2-Dibromo-3-Chloropropane | 0.38 | U | 1.0 | 0.38 |

| CAS NO. | SURROGATE | %REC | Q | LIMITS |
|---|---|---|---|---|
| 17060-07-0 | 1,2-Dichloroethane-d4 (Surr) | 79 | | 75-123 |
| 460-00-4 | 4-Bromofluorobenzene | 87 | | 76-120 |
| 1868-53-7 | Dibromofluoromethane (Surr) | 94 | | 77-124 |
| 2037-26-5 | Toluene-d8 (Surr) | 94 | | 80-120 |

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: Eurofins TestAmerica, Edison  Job No.: 460-217659-1

SDG No.:

Client Sample ID: TB  Lab Sample ID: 460-217659-9

Matrix: Water  Lab File ID: T38871.D

Analysis Method: 8260C  Date Collected: 09/03/2020 15:00

Sample wt/vol: 5(mL)  Date Analyzed: 09/08/2020 23:42

Soil Aliquot Vol:  Dilution Factor: 1

Soil Extract Vol.:  GC Column: DB-624  ID: 0.18(mm)

% Moisture:  Level: (low/med) Low

Analysis Batch No.: 722587  Units: ug/L

Number TICs Found: 0  TIC Result Total: 0

| CAS NO. | COMPOUND NAME | RT | RESULT | Q | MATCH QUALITY |
|---|---|---|---|---|---|
| | Tentatively Identified Compound | | None | | |

Eurofins TestAmerica, Edison
Target Compound Quantitation Report

Data File: \\chromfs\Edison\ChromData\CVOAMS15\20200908-116442.b\T38871.D
Lims ID: 460-217659-A-9
Client ID: TB
Sample Type: Client
Inject. Date: 08-Sep-2020 23:42:26 ALS Bottle#: 0 Worklist Smp#: 10
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: 460-217659-A-9
Misc. Info.: 460-0116442-010
Operator ID: Instrument ID: CVOAMS15

Method: \\chromfs\Edison\ChromData\CVOAMS15\20200908-116442.b\8260W_15.m
Limit Group: VOA - 8260C Water and Solid
Last Update: 09-Sep-2020 11:20:41 Calib Date: 04-Sep-2020 15:01:54
Integrator: RTE ID Type: RT Order ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Edison\ChromData\CVOAMS15\20200904-116301.b\T38701.D

Column 1 : DB-624 ( 0.18 mm) Det: MS Quad
Process Host: CTX1022

First Level Reviewer: parekhv Date: 09-Sep-2020 00:35:44

| Compound | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q | Response | OnCol Amt ug/l | Flags |
|---|---|---|---|---|---|---|---|---|
| 9 Bromomethane | 94 | 0.909 | 0.909 | 0.000 | 1 | 358 | 0.2207 | |
| * 31 TBA-d9 (IS) | 66 | 1.598 | 1.598 | 0.000 | 92 | 39187 | 1000.0 | |
| * 42 2-Butanone-d5 | 46 | 2.336 | 2.336 | 0.000 | 47 | 252511 | 250.0 | |
| $ 53 Dibromofluoromethane (Surr) | 113 | 2.720 | 2.720 | 0.000 | 96 | 182332 | 46.8 | |
| $ 58 1,2-Dichloroethane-d4 (Surr) | 65 | 2.982 | 2.982 | 0.000 | 96 | 155296 | 39.5 | |
| * 65 Fluorobenzene | 96 | 3.275 | 3.275 | -0.001 | 100 | 667370 | 50.0 | |
| * 73 1,4-Dioxane-d8 | 96 | 3.933 | 3.939 | -0.006 | 1 | 34035 | 1000.0 | |
| $ 83 Toluene-d8 (Surr) | 98 | 4.902 | 4.902 | 0.000 | 98 | 608318 | 47.2 | |
| * 94 Chlorobenzene-d5 | 117 | 6.743 | 6.743 | 0.000 | 82 | 504785 | 50.0 | |
| $ 105 4-Bromofluorobenzene | 174 | 8.530 | 8.530 | 0.000 | 90 | 181336 | 43.6 | |
| * 120 1,4-Dichlorobenzene-d4 | 152 | 10.377 | 10.377 | 0.000 | 94 | 217840 | 50.0 | |

## Reagents:

VOA6IS/SURR_00038 Amount Added: 5.00 Units: uL Run Reagent

Report Date: 09-Sep-2020 11:24:17 Chrom Revision: 2.3 20-Aug-2020 13:57:12

Eurofins TestAmerica, Edison

Data File: \\chromfs\Edison\ChromData\CVOAMS15\20200908-116442.b\T38871.D

Injection Date: 08-Sep-2020 23:42:26 Instrument ID: CVOAMS15

Lims ID: 460-217659-A-9 Lab Sample ID: 460-217659-9

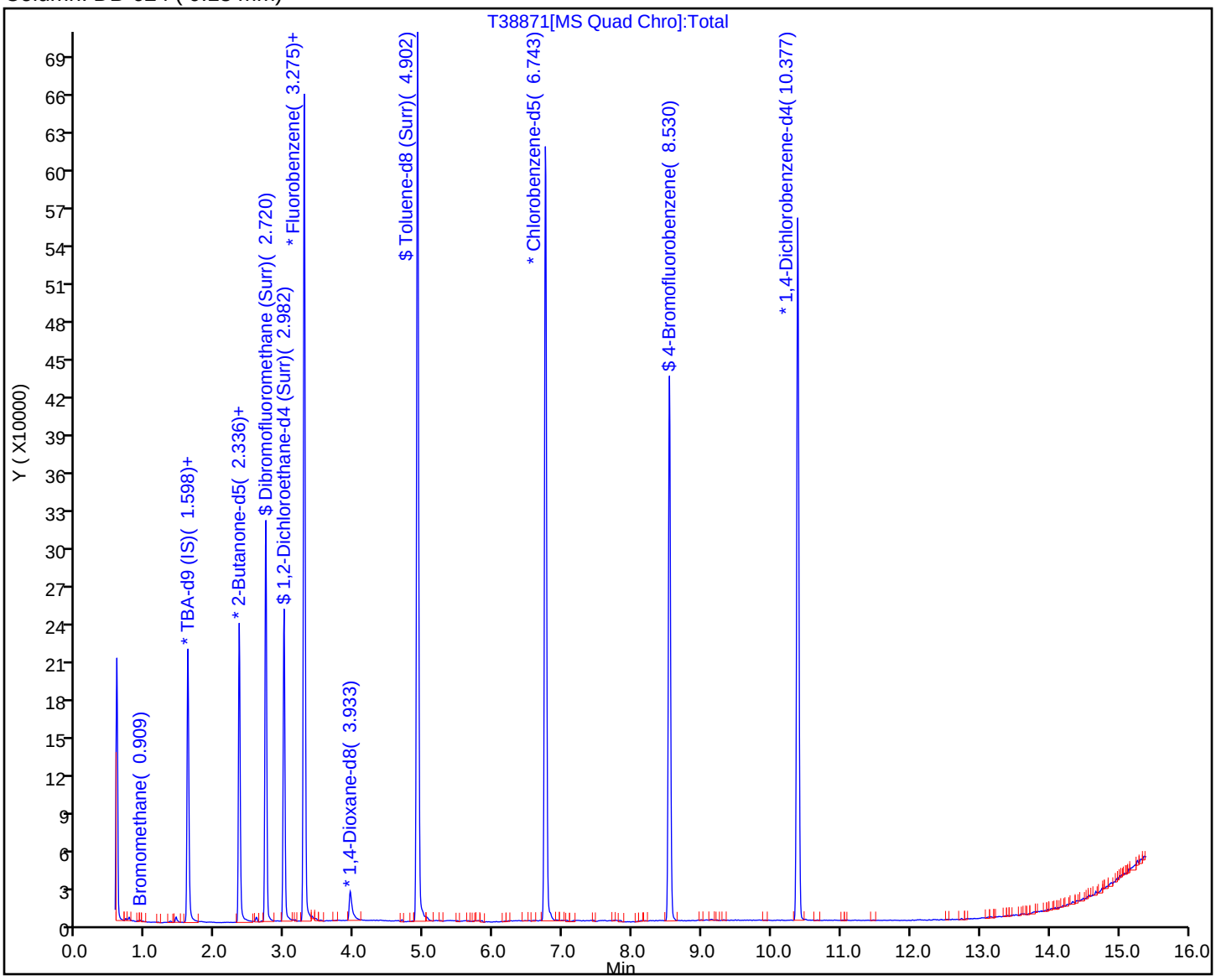
Client ID: TB

Operator ID: ALS Bottle#: 0 Worklist Smp#: 10

Purge Vol: 5.000 mL Dil. Factor: 1.0000

Method: 8260W_15 Limit Group: VOA - 8260C Water and Solid

Column: DB-624 ( 0.18 mm)



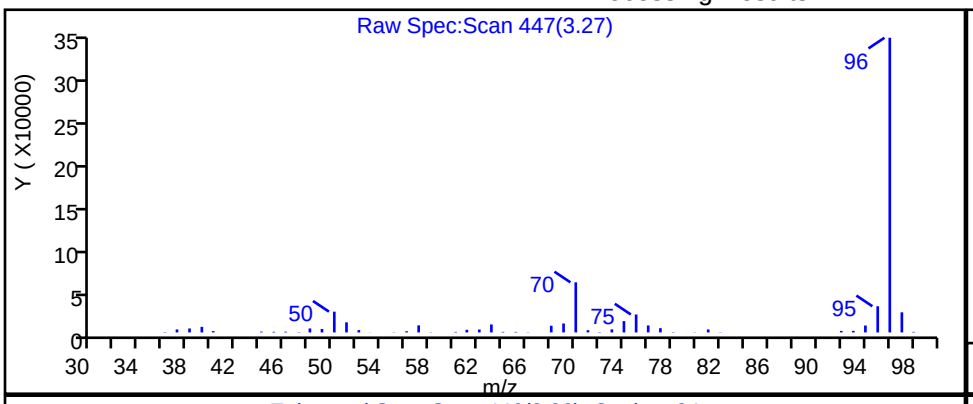
User Disabled Compound Report

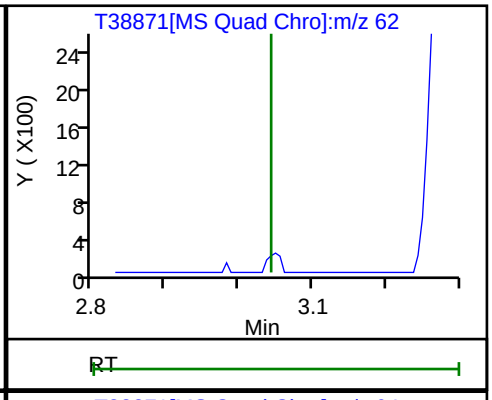
Eurofins TestAmerica, Edison

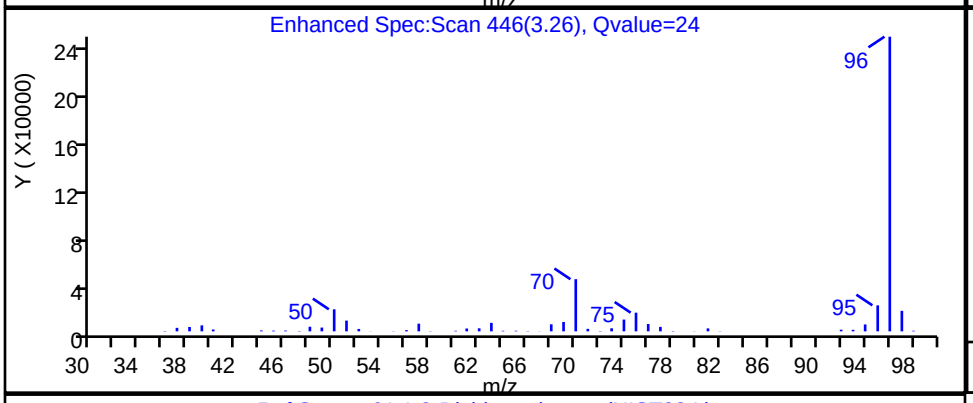
| | | | | | |
|---|---|---|---|---|---|
| Data File: | \\chromfs\Edison\ChromData\CVOAMS15\20200908-116442.b\T38871.D | | | | |
| Injection Date: | 08-Sep-2020 23:42:26 | Instrument ID: | CVOAMS15 | | |
| Lims ID: | 460-217659-A-9 | Lab Sample ID: | 460-217659-9 | | |
| Client ID: | TB | | | | |
| Operator ID: | | ALS Bottle#: | 0 | Worklist Smp#: | 10 |
| Purge Vol: | 5.000 mL | Dil. Factor: | 1.0000 | | |
| Method: | 8260W_15 | Limit Group: | VOA - 8260C Water and Solid | | |
| Column: | DB-624 ( 0.18 mm) | Detector | MS Quad | | |

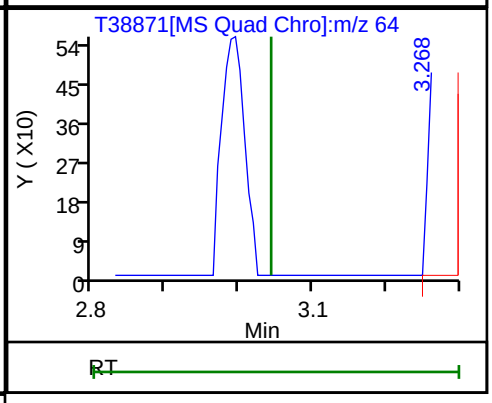
## 61 1,2-Dichloroethane, CAS: 107-06-2

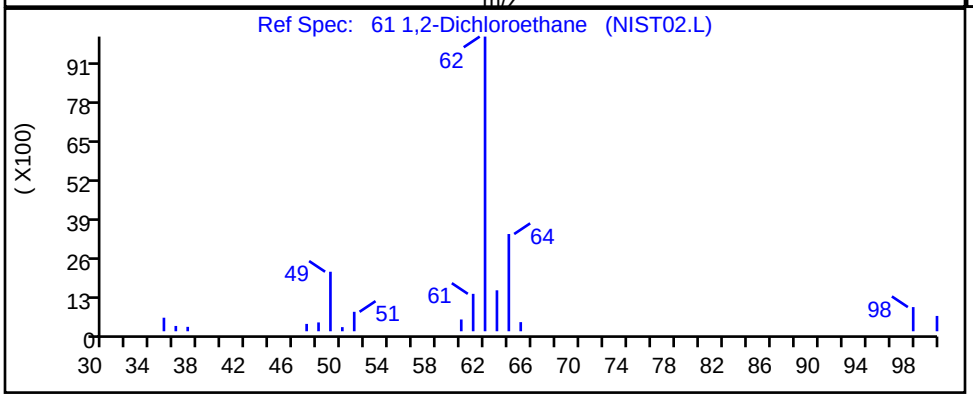
Processing Results




| RT | Mass | Response | Amount |
|---|---|---|---|
| 3.27 | 62.00 | 6006 | 1.356345 |
| 3.27 | 64.00 | 1090 | |

Reviewer: parekhv, 09-Sep-2020 00:35:37

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins TestAmerica, Edison Job No.: 460-217659-1 Analy Batch No.: 721958

SDG No.:

Instrument ID: CVOAMS15 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 09/04/2020 12:13 Calibration End Date: 09/04/2020 15:01 Calibration ID: 81787

Calibration Files:

| LEVEL: | LAB SAMPLE ID: | LAB FILE ID: |
|---|---|---|
| Level 1 | STD8 460-721958/3 | T38694.D |
| Level 2 | STD05 460-721958/4 | T38695.D |
| Level 3 | STD1 460-721958/5 | T38696.D |
| Level 4 | STD5 460-721958/6 | T38697.D |
| Level 5 | STD20 460-721958/7 | T38698.D |
| Level 6 | STD50 460-721958/8 | T38699.D |
| Level 7 | STD200 460-721958/9 | T38700.D |
| Level 8 | STD500 460-721958/10 | T38701.D |

| ANALYTE | RRF | | | | | CURVE TYPE | COEFFICIENT | | | # | MIN RRF | %RSD | # | MAX %RSD | R^2 OR COD | # | MIN R^2 OR COD |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | LVL 1<br>LVL 6 | LVL 2<br>LVL 7 | LVL 3<br>LVL 8 | LVL 4 | LVL 5 | | B | M1 | M2 | | | | | | | | |
| Monochloropentafluoroethane | +++++<br>0.0385 | +++++<br>0.0457 | 0.0552<br>0.0509 | 0.0400 | 0.0428 | Ave | | 0.0455 | | | | 14.2 | | 20.0 | | | |
| Chlorotrifluoroethene | +++++<br>0.0988 | 0.0542<br>0.1137 | 0.0932<br>0.1299 | 0.0868 | 0.0967 | Qua2 | -0.018 | 0.0974 | 0.0000669 | | | | | | 0.9950 | | 0.9900 |
| 1,1-Difluoroethane | +++++<br>0.1220 | 0.1083<br>0.1253 | 0.1139<br>0.1314 | 0.1081 | 0.1196 | Ave | | 0.1184 | | | | 7.4 | | 20.0 | | | |
| Dichlorodifluoromethane | +++++<br>0.3802 | 0.2962<br>0.4132 | 0.3416<br>0.4201 | 0.3253 | 0.3767 | Ave | | 0.3648 | | | 0.1000 | 12.6 | | 20.0 | | | |
| Chlorodifluoromethane | +++++<br>0.0512 | 0.0497<br>0.0524 | 0.0416<br>0.0541 | 0.0397 | 0.0486 | Ave | | 0.0482 | | | | 11.3 | | 20.0 | | | |
| Chloromethane | +++++<br>0.2060 | 0.2009<br>0.1960 | 0.1924<br>0.2395 | 0.1820 | 0.1873 | Ave | | 0.2006 | | | 0.1000 | 9.4 | | 20.0 | | | |
| Vinyl chloride | +++++<br>0.2878 | 0.2541<br>0.2822 | 0.2497<br>0.2946 | 0.2531 | 0.2698 | Ave | | 0.2702 | | | 0.1000 | 6.8 | | 20.0 | | | |
| Butadiene | 0.1982<br>0.2468 | 0.2132<br>0.2521 | 0.2307<br>0.2564 | 0.1936 | 0.2264 | Ave | | 0.2272 | | | | 10.6 | | 20.0 | | | |
| Bromomethane | +++++<br>1.5934 | 1.4337<br>2.0540 | 1.6007<br>+++++ | 1.4771 | 1.4763 | Ave | | 1.6059 | | | 0.1000 | 14.3 | | 20.0 | | | |
| Chloroethane | +++++<br>2.0247 | 1.9537<br>1.9424 | 1.8552<br>1.9923 | 1.6655 | 1.8103 | Ave | | 1.8920 | | | 0.1000 | 6.6 | | 20.0 | | | |
| Dichlorofluoromethane | +++++<br>0.4431 | 0.4354<br>0.4228 | 0.4362<br>0.4271 | 0.3929 | 0.4109 | Ave | | 0.4241 | | | | 4.1 | | 20.0 | | | |
| Trichlorofluoromethane | +++++<br>0.4773 | 0.3820<br>0.4707 | 0.3646<br>0.4706 | 0.3777 | 0.4632 | Ave | | 0.4294 | | | 0.1000 | 12.0 | | 20.0 | | | |
| Pentane | +++++<br>0.0401 | 0.0241<br>0.0416 | 0.0404<br>0.0430 | 0.0360 | 0.0396 | Ave | | 0.0378 | | | | 17.0 | | 20.0 | | | |
| Ethanol | +++++<br>0.2562 | 0.7089<br>0.2400 | 0.5084<br>0.1588 | 0.3570 | 0.3122 | QuaF | | 0.2915 | -0.000007 | | | | | | 1.0000 | | 0.9900 |

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins TestAmerica, Edison Job No.: 460-217659-1 Analy Batch No.: 721958

SDG No.:

Instrument ID: CVOAMS15 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 09/04/2020 12:13 Calibration End Date: 09/04/2020 15:01 Calibration ID: 81787

| ANALYTE | RRF | | | | | CURVE TYPE | COEFFICIENT | | | # | MIN RRF | %RSD | # | MAX %RSD | R^2 OR COD | # | MIN R^2 OR COD |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | LVL 1<br>LVL 6 | LVL 2<br>LVL 7 | LVL 3<br>LVL 8 | LVL 4 | LVL 5 | | B | M1 | M2 | | | | | | | | |
| Ethyl ether | +++++<br>0.1748 | 0.1576<br>0.1723 | 0.1891<br>0.1756 | 0.1605 | 0.1615 | Ave | | 0.1702 | | | | 6.5 | | 20.0 | | | |
| 1,2-Dichloro-1,1,2-trifluoroethane | +++++<br>0.2562 | 0.2202<br>0.2580 | 0.2611<br>0.2582 | 0.2312 | 0.2576 | Ave | | 0.2489 | | | | 6.5 | | 20.0 | | | |
| 2-Methyl-1,3-butadiene | +++++<br>0.1986 | 0.1619<br>0.2020 | 0.1794<br>0.2094 | 0.1899 | 0.1984 | Ave | | 0.1914 | | | | 8.4 | | 20.0 | | | |
| 1,1,1-Trifluoro-2,2-dichloroethane | +++++<br>0.3818 | 0.3250<br>0.3847 | 0.4136<br>0.3799 | 0.3317 | 0.3819 | Ave | | 0.3712 | | | | 8.5 | | 20.0 | | | |
| Acrolein | +++++<br>7.5130 | 5.7536<br>7.5191 | 7.4938<br>7.3593 | 5.6541 | 7.5677 | Ave | | 6.9801 | | | | 12.5 | | 20.0 | | | |
| 1,1-Dichloroethene | +++++<br>0.2465 | 0.2439<br>0.2459 | 0.2395<br>0.2380 | 0.2309 | 0.2338 | Ave | | 0.2398 | | | 0.1000 | 2.5 | | 20.0 | | | |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | +++++<br>0.2702 | 0.2112<br>0.2887 | 0.2294<br>0.2814 | 0.2473 | 0.2841 | Ave | | 0.2589 | | | 0.1000 | 11.6 | | 20.0 | | | |
| Acetone | +++++<br>0.6155 | 0.7175<br>0.6583 | 0.8322<br>0.6832 | 0.6522 | 0.6085 | Ave | | 0.6811 | | | 0.0500 | 11.2 | | 20.0 | | | |
| Iodomethane | +++++<br>0.1973 | 0.0294<br>0.2784 | 0.0201<br>0.2477 | 0.0397 | 0.1147 | Ave | | 0.1325 | | | | 82.1 | * | 20.0 | | | |
| Carbon disulfide | +++++<br>0.7705 | 0.7913<br>0.7573 | 0.8703<br>0.7294 | 0.7252 | 0.7562 | Ave | | 0.7715 | | | 0.1000 | 6.4 | | 20.0 | | | |
| Isopropyl alcohol | +++++<br>3.3490 | 2.9842<br>3.0291 | 2.7830<br>2.9952 | 3.0458 | 2.8885 | Ave | | 3.0107 | | | | 5.8 | | 20.0 | | | |
| Acetonitrile | +++++<br>0.1487 | 0.1951<br>0.1387 | 0.1264<br>0.1372 | 0.1521 | 0.1383 | Ave | | 0.1481 | | | | 15.1 | | 20.0 | | | |
| Allyl chloride | +++++<br>0.1599 | 0.1443<br>0.1560 | 0.1534<br>0.1396 | 0.1686 | 0.1577 | Ave | | 0.1542 | | | | 6.3 | | 20.0 | | | |
| Methyl acetate | +++++<br>0.1278 | 0.1440<br>0.1239 | 0.1481<br>0.1298 | 0.1226 | 0.1245 | Ave | | 0.1315 | | | 0.1000 | 7.8 | | 20.0 | | | |
| Cyclopentene | +++++<br>0.5554 | 0.4569<br>0.5707 | 0.5401<br>0.5653 | 0.5253 | 0.5842 | Ave | | 0.5426 | | | | 7.8 | | 20.0 | | | |
| Methylene Chloride | +++++<br>0.2648 | 0.2723<br>0.2558 | 0.2992<br>0.2492 | 0.2509 | 0.2551 | Ave | | 0.2639 | | | 0.1000 | 6.6 | | 20.0 | | | |
| 2-Methyl-2-propanol | +++++<br>5.7820 | 6.9539<br>5.7671 | 7.3306<br>5.2347 | 6.2342 | 6.0502 | Ave | | 6.1933 | | | | 11.7 | | 20.0 | | | |
| Acrylonitrile | 0.0725<br>0.0716 | 0.0672<br>0.0690 | 0.0682<br>0.0696 | 0.0689 | 0.0719 | Ave | | 0.0699 | | | | 2.8 | | 20.0 | | | |
| trans-1,2-Dichloroethene | +++++<br>0.2830 | 0.2369<br>0.2745 | 0.2582<br>0.2699 | 0.2773 | 0.2719 | Ave | | 0.2674 | | | 0.1000 | 5.8 | | 20.0 | | | |
| Methyl tert-butyl ether | +++++<br>0.6947 | 0.6388<br>0.6696 | 0.6866<br>0.6590 | 0.6485 | 0.6710 | Ave | | 0.6669 | | | 0.1000 | 3.0 | | 20.0 | | | |

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins TestAmerica, Edison Job No.: 460-217659-1 Analy Batch No.: 721958

SDG No.:

Instrument ID: CVOAMS15 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 09/04/2020 12:13 Calibration End Date: 09/04/2020 15:01 Calibration ID: 81787

| ANALYTE | RRF | | | | | CURVE TYPE | COEFFICIENT | | | # | MIN RRF | %RSD | # | MAX %RSD | R^2 OR COD | # | MIN R^2 OR COD |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | LVL 1<br>LVL 6 | LVL 2<br>LVL 7 | LVL 3<br>LVL 8 | LVL 4 | LVL 5 | | B | M1 | M2 | | | | | | | | |
| Hexane | +++++<br>0.2797 | 0.1924<br>0.2941 | 0.2731<br>0.2901 | 0.2723 | 0.2994 | Ave | | 0.2716 | | | | 13.4 | | 20.0 | | | |
| 1,1-Dichloroethane | +++++<br>0.4465 | 0.4376<br>0.4271 | 0.4303<br>0.4033 | 0.4428 | 0.4447 | Ave | | 0.4332 | | | 0.2000 | 3.5 | | 20.0 | | | |
| Vinyl acetate | +++++<br>0.5798 | 0.3871<br>0.6497 | 0.4035<br>0.5902 | 0.5504 | 0.5286 | Ave | | 0.5270 | | | | 18.5 | | 20.0 | | | |
| 2-Chloro-1,3-butadiene | +++++<br>0.2537 | 0.2375<br>0.2574 | 0.2369<br>0.2585 | 0.2434 | 0.2500 | Ave | | 0.2482 | | | | 3.6 | | 20.0 | | | |
| Isopropyl ether | +++++<br>0.6574 | 0.6020<br>0.6089 | 0.6119<br>0.6088 | 0.6105 | 0.6253 | Ave | | 0.6178 | | | | 3.0 | | 20.0 | | | |
| Tert-butyl ethyl ether | +++++<br>0.6831 | 0.6087<br>0.6530 | 0.6061<br>0.6545 | 0.6878 | 0.6600 | Ave | | 0.6505 | | | | 5.0 | | 20.0 | | | |
| 2,2-Dichloropropane | +++++<br>0.0985 | 0.0834<br>0.0977 | 0.0879<br>0.0905 | 0.0936 | 0.0994 | Ave | | 0.0930 | | | | 6.5 | | 20.0 | | | |
| cis-1,2-Dichloroethene | +++++<br>0.3074 | 0.3013<br>0.3018 | 0.2974<br>0.2896 | 0.3029 | 0.2978 | Ave | | 0.2997 | | | 0.1000 | 1.9 | | 20.0 | | | |
| 2-Butanone (MEK) | +++++<br>0.9534 | 1.1925<br>0.9615 | 1.0852<br>0.9346 | 1.0072 | 0.9039 | Ave | | 1.0055 | | | 0.0500 | 10.1 | | 20.0 | | | |
| Propionitrile | +++++<br>7.7756 | 7.7137<br>7.4792 | 7.4273<br>6.8668 | 8.1555 | 7.7957 | Ave | | 7.6020 | | | | 5.3 | | 20.0 | | | |
| Ethyl acetate | +++++<br>0.2650 | 0.0889<br>0.2604 | 0.2187<br>0.2573 | 0.2443 | 0.2508 | QuaF | | 0.2626 | -0.000005 | | | | | | 1.0000 | | 0.9900 |
| Methyl acrylate | +++++<br>0.2079 | 0.1560<br>0.1947 | 0.1727<br>0.2320 | 0.2026 | 0.2044 | Ave | | 0.1958 | | | | 12.7 | | 20.0 | | | |
| Chlorobromomethane | +++++<br>0.1478 | 0.1408<br>0.1418 | 0.1468<br>0.1383 | 0.1455 | 0.1445 | Ave | | 0.1436 | | | | 2.4 | | 20.0 | | | |
| Methacrylonitrile | +++++<br>0.0945 | 0.0845<br>0.0907 | 0.0855<br>0.0914 | 0.0935 | 0.0930 | Ave | | 0.0904 | | | | 4.4 | | 20.0 | | | |
| Tetrahydrofuran | +++++<br>0.3735 | 0.2588<br>0.3465 | 0.3011<br>0.3361 | 0.3139 | 0.3350 | Ave | | 0.3236 | | | | 11.4 | | 20.0 | | | |
| Chloroform | +++++<br>0.4949 | 0.4248<br>0.4769 | 0.5213<br>0.4585 | 0.4843 | 0.4821 | Ave | | 0.4775 | | | 0.2000 | 6.3 | | 20.0 | | | |
| 1,1,1-Trichloroethane | +++++<br>0.4629 | 0.4309<br>0.4540 | 0.4246<br>0.4355 | 0.4452 | 0.4642 | Ave | | 0.4453 | | | 0.1000 | 3.5 | | 20.0 | | | |
| Cyclohexane | +++++<br>0.3581 | 0.2917<br>0.3826 | 0.3448<br>0.3787 | 0.3474 | 0.3826 | Ave | | 0.3551 | | | 0.1000 | 9.1 | | 20.0 | | | |
| Carbon tetrachloride | +++++<br>0.4033 | 0.3091<br>0.4189 | 0.3363<br>0.3917 | 0.3708 | 0.3982 | Ave | | 0.3755 | | | 0.1000 | 10.5 | | 20.0 | | | |
| 1,1-Dichloropropene | +++++<br>0.3770 | 0.3179<br>0.3825 | 0.4097<br>0.3675 | 0.3723 | 0.3810 | Ave | | 0.3726 | | | | 7.4 | | 20.0 | | | |

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins TestAmerica, Edison Job No.: 460-217659-1 Analy Batch No.: 721958

SDG No.:

Instrument ID: CVOAMS15 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 09/04/2020 12:13 Calibration End Date: 09/04/2020 15:01 Calibration ID: 81787

| ANALYTE | RRF | | | | | CURVE TYPE | COEFFICIENT | | | # | MIN RRF | %RSD | # | MAX %RSD | R^2 OR COD | # | MIN R^2 OR COD |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | LVL 1<br>LVL 6 | LVL 2<br>LVL 7 | LVL 3<br>LVL 8 | LVL 4 | LVL 5 | | B | M1 | M2 | | | | | | | | |
| Isobutyl alcohol | +++++<br>1.9178 | 1.2025<br>2.0174 | 2.0572<br>1.8890 | 1.9987 | 1.9305 | Ave | | 1.8590 | | | | 15.9 | | 20.0 | | | |
| Benzene | +++++<br>1.3507 | 1.4171<br>1.3511 | 1.2944<br>1.3545 | 1.3295 | 1.3592 | Ave | | 1.3509 | | | 0.5000 | 2.7 | | 20.0 | | | |
| 1,2-Dichloroethane | +++++<br>0.3328 | 0.3260<br>0.3265 | 0.3528<br>0.3151 | 0.3387 | 0.3303 | Ave | | 0.3318 | | | 0.1000 | 3.6 | | 20.0 | | | |
| 2,2,4-Trimethylpentane | +++++<br>0.4908 | 0.3806<br>0.5182 | 0.4199<br>0.5154 | 0.4868 | 0.5101 | Ave | | 0.4745 | | | | 11.2 | | 20.0 | | | |
| Isopropyl acetate | +++++<br>0.0801 | 0.0572<br>0.0811 | 0.0641<br>0.0806 | 0.0769 | 0.0775 | Ave | | 0.0740 | | | | 12.7 | | 20.0 | | | |
| Tert-amyl methyl ether | +++++<br>0.6983 | 0.6108<br>0.6755 | 0.6130<br>0.6600 | 0.6978 | 0.6763 | Ave | | 0.6617 | | | | 5.5 | | 20.0 | | | |
| n-Heptane | +++++<br>0.2015 | 0.1590<br>0.2095 | 0.1907<br>0.2001 | 0.1947 | 0.2093 | Ave | | 0.1950 | | | | 8.9 | | 20.0 | | | |
| Trichloroethene | +++++<br>0.2952 | 0.2991<br>0.2954 | 0.2946<br>0.2832 | 0.2802 | 0.2963 | Ave | | 0.2920 | | | 0.2000 | 2.5 | | 20.0 | | | |
| n-Butanol | +++++<br>1.4026 | +++++<br>1.4997 | 0.9101<br>1.4252 | 1.0817 | 1.2690 | Ave | | 1.2647 | | | | 18.0 | | 20.0 | | | |
| Ethyl acrylate | +++++<br>0.5219 | 0.3910<br>0.5346 | 0.5230<br>0.5183 | 0.4846 | 0.5196 | Ave | | 0.4990 | | | | 10.0 | | 20.0 | | | |
| Methylcyclohexane | +++++<br>0.3804 | 0.2856<br>0.4035 | 0.3348<br>0.3858 | 0.3448 | 0.3838 | Ave | | 0.3598 | | | 0.1000 | 11.3 | | 20.0 | | | |
| 1,2-Dichloropropane | +++++<br>0.2439 | 0.2222<br>0.2406 | 0.1962<br>0.2269 | 0.2388 | 0.2494 | Ave | | 0.2312 | | | 0.1000 | 7.8 | | 20.0 | | | |
| Dibromomethane | +++++<br>0.1708 | 0.1368<br>0.1677 | 0.1668<br>0.1555 | 0.1664 | 0.1735 | Ave | | 0.1625 | | | | 7.8 | | 20.0 | | | |
| 1,4-Dioxane | +++++<br>1.0672 | 0.7542<br>0.9194 | 0.8482<br>0.8574 | 1.0466 | 1.0244 | Ave | | 0.9311 | | | | 12.7 | | 20.0 | | | |
| Methyl methacrylate | +++++<br>0.0674 | 0.0380<br>0.0664 | 0.0622<br>0.0661 | 0.0604 | 0.0585 | Ave | | 0.0599 | | | | 17.0 | | 20.0 | | | |
| n-Propyl acetate | +++++<br>0.2564 | 0.2467<br>0.2549 | 0.1939<br>0.2559 | 0.2472 | 0.2546 | Ave | | 0.2442 | | | | 9.2 | | 20.0 | | | |
| Dichlorobromomethane | +++++<br>0.3721 | 0.3297<br>0.3707 | 0.3466<br>0.3512 | 0.3541 | 0.3654 | Ave | | 0.3557 | | | 0.2000 | 4.2 | | 20.0 | | | |
| 2-Nitropropane | +++++<br>0.0476 | 0.0437<br>0.0499 | 0.0439<br>0.0499 | 0.0454 | 0.0473 | Ave | | 0.0468 | | | | 5.5 | | 20.0 | | | |
| 2-Chloroethyl vinyl ether | +++++<br>0.1015 | +++++<br>0.1021 | 0.0510<br>0.1047 | 0.0722 | 0.0937 | Qua2 | -0.045 | 0.0937 | 0.0000261 | | | | | | 0.9940 | | 0.9900 |
| Epichlorohydrin | 0.1878<br>0.2429 | 0.2138<br>0.2470 | 0.2262<br>0.2328 | 0.2343 | 0.2369 | Ave | | 0.2277 | | | | 8.4 | | 20.0 | | | |

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins TestAmerica, Edison Job No.: 460-217659-1 Analy Batch No.: 721958

SDG No.:

Instrument ID: CVOAMS15 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 09/04/2020 12:13 Calibration End Date: 09/04/2020 15:01 Calibration ID: 81787

| ANALYTE | RRF | | | | | CURVE TYPE | COEFFICIENT | | | # | MIN RRF | %RSD | # | MAX %RSD | R^2 OR COD | # | MIN R^2 OR COD |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | LVL 1 LVL 6 | LVL 2 LVL 7 | LVL 3 LVL 8 | LVL 4 | LVL 5 | | B | M1 | M2 | | | | | | | | |
| cis-1,3-Dichloropropene | +++++ 0.5736 | 0.4965 0.5630 | 0.5937 0.5542 | 0.5601 | 0.5710 | Ave | | 0.5589 | | | 0.2000 | 5.4 | | 20.0 | | | |
| 4-Methyl-2-pentanone (MIBK) | +++++ 1.9864 | 1.6705 2.0056 | 1.7638 1.9043 | 1.9180 | 1.8720 | Ave | | 1.8744 | | | 0.0500 | 6.4 | | 20.0 | | | |
| Toluene | +++++ 1.4829 | 1.4731 1.4680 | 1.4927 1.4263 | 1.4937 | 1.5238 | Ave | | 1.4801 | | | 0.4000 | 2.0 | | 20.0 | | | |
| trans-1,3-Dichloropropene | +++++ 0.5391 | 0.4871 0.5182 | 0.4457 0.5098 | 0.4940 | 0.5183 | Ave | | 0.5017 | | | 0.1000 | 6.0 | | 20.0 | | | |
| Ethyl methacrylate | +++++ 0.3758 | 0.2880 0.3815 | 0.3614 0.3855 | 0.3439 | 0.3654 | Ave | | 0.3574 | | | | 9.4 | | 20.0 | | | |
| 1,1,2-Trichloroethane | +++++ 0.2631 | 0.2538 0.2459 | 0.2430 0.2433 | 0.2529 | 0.2601 | Ave | | 0.2517 | | | 0.1000 | 3.2 | | 20.0 | | | |
| Tetrachloroethene | +++++ 0.4207 | 0.3195 0.4189 | 0.3955 0.4116 | 0.4000 | 0.4254 | Ave | | 0.3988 | | | 0.2000 | 9.2 | | 20.0 | | | |
| 1,3-Dichloropropane | +++++ 0.5087 | 0.4383 0.4968 | 0.4491 0.4707 | 0.5216 | 0.5085 | Ave | | 0.4848 | | | | 6.7 | | 20.0 | | | |
| 2-Hexanone | +++++ 1.3723 | 1.0556 1.3844 | 1.2166 1.3255 | 1.2597 | 1.3074 | Ave | | 1.2745 | | | 0.0500 | 8.9 | | 20.0 | | | |
| Chlorodibromomethane | +++++ 0.3987 | 0.3211 0.3959 | 0.3305 0.3832 | 0.3810 | 0.3877 | Ave | | 0.3712 | | | 0.1000 | 8.5 | | 20.0 | | | |
| Ethylene Dibromide | +++++ 0.3430 | 0.2740 0.3289 | 0.3448 0.3269 | 0.3479 | 0.3442 | Ave | | 0.3300 | | | 0.1000 | 7.9 | | 20.0 | | | |
| n-Butyl acetate | +++++ 0.3636 | 0.3448 0.3475 | 0.3183 0.3529 | 0.3522 | 0.3680 | Ave | | 0.3496 | | | | 4.6 | | 20.0 | | | |
| Chlorobenzene | +++++ 0.9570 | 0.9682 0.9412 | 0.8956 0.9063 | 0.9514 | 0.9823 | Ave | | 0.9432 | | | 0.5000 | 3.4 | | 20.0 | | | |
| 1,1,1,2-Tetrachloroethane | +++++ 0.3797 | 0.3198 0.3597 | 0.3632 0.3371 | 0.3682 | 0.3741 | Ave | | 0.3574 | | | | 6.0 | | 20.0 | | | |
| Ethylbenzene | +++++ 0.5085 | 0.4504 0.4894 | 0.5233 0.4717 | 0.5082 | 0.5204 | Ave | | 0.4960 | | | 0.1000 | 5.4 | | 20.0 | | | |
| m-Xylene & p-Xylene | +++++ 0.6204 | 0.5846 0.5911 | 0.6751 0.5690 | 0.6298 | 0.6280 | Ave | | 0.6140 | | | 0.1000 | 5.8 | | 20.0 | | | |
| o-Xylene | +++++ 0.5839 | 0.5458 0.5545 | 0.6031 0.5473 | 0.5772 | 0.5905 | Ave | | 0.5718 | | | 0.3000 | 4.0 | | 20.0 | | | |
| Styrene | +++++ 0.9860 | 0.8276 0.9199 | 0.8504 0.9155 | 0.9337 | 0.9739 | Ave | | 0.9153 | | | 0.3000 | 6.4 | | 20.0 | | | |
| n-Butyl acrylate | +++++ 0.2154 | 0.1668 0.2125 | 0.1473 0.2179 | 0.1820 | 0.2272 | Ave | | 0.1956 | | | | 15.5 | | 20.0 | | | |
| Bromoform | +++++ 0.2588 | 0.2285 0.2516 | 0.2174 0.2566 | 0.2432 | 0.2518 | Ave | | 0.2440 | | | 0.1000 | 6.4 | | 20.0 | | | |

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins TestAmerica, Edison Job No.: 460-217659-1 Analy Batch No.: 721958

SDG No.:

Instrument ID: CVOAMS15 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 09/04/2020 12:13 Calibration End Date: 09/04/2020 15:01 Calibration ID: 81787

| ANALYTE | RRF | | | | | CURVE TYPE | COEFFICIENT | | | # | MIN RRF | %RSD | # | MAX %RSD | R^2 OR COD | # | MIN R^2 OR COD |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | LVL 1 LVL 6 | LVL 2 LVL 7 | LVL 3 LVL 8 | LVL 4 | LVL 5 | | B | M1 | M2 | | | | | | | | |
| Amyl acetate (mixed isomers) | +++++ 0.8617 | 0.7944 0.8693 | 0.7092 0.7944 | 0.8479 | 0.8372 | Ave | | 0.8163 | | | | 6.8 | | 20.0 | | | |
| Isopropylbenzene | +++++ 1.5160 | 1.2433 1.4163 | 1.4158 1.3822 | 1.4493 | 1.5437 | Ave | | 1.4238 | | | 0.1000 | 6.9 | | 20.0 | | | |
| Bromobenzene | +++++ 0.8460 | 0.7209 0.8461 | 0.8308 0.7695 | 0.8243 | 0.8489 | Ave | | 0.8124 | | | | 6.0 | | 20.0 | | | |
| 1,1,2,2-Tetrachloroethane | +++++ 0.7654 | 0.6968 0.7944 | 0.7196 0.7232 | 0.7895 | 0.7981 | Ave | | 0.7553 | | | 0.3000 | 5.5 | | 20.0 | | | |
| 1,2,3-Trichloropropane | +++++ 0.2413 | 0.2252 0.2401 | 0.1763 0.2264 | 0.2449 | 0.2436 | Ave | | 0.2283 | | | | 10.6 | | 20.0 | | | |
| trans-1,4-Dichloro-2-butene | +++++ 0.2057 | 0.1076 0.2136 | 0.1544 0.2020 | 0.1914 | 0.1995 | Lin2 | -0.049 | 0.2051 | | | | | | | 0.9990 | | 0.9900 |
| N-Propylbenzene | +++++ 3.6338 | 3.5073 3.6713 | 3.5931 3.3202 | 3.5531 | 3.7052 | Ave | | 3.5691 | | | | 3.6 | | 20.0 | | | |
| 2-Chlorotoluene | +++++ 2.1772 | 1.8551 2.0777 | 2.1842 1.8291 | 2.1326 | 2.1959 | Ave | | 2.0645 | | | | 7.6 | | 20.0 | | | |
| 4-Ethyltoluene | +++++ 2.8712 | 2.7964 2.8321 | 2.7780 2.6609 | 2.6938 | 2.8178 | Ave | | 2.7786 | | | | 2.7 | | 20.0 | | | |
| 4-Chlorotoluene | +++++ 2.2675 | 2.3137 2.1360 | 2.2700 2.1934 | 2.2116 | 2.1861 | Ave | | 2.2255 | | | | 2.7 | | 20.0 | | | |
| 1,3,5-Trimethylbenzene | +++++ 2.2911 | 2.2579 2.2878 | 2.2703 2.0717 | 2.2468 | 2.3032 | Ave | | 2.2470 | | | | 3.5 | | 20.0 | | | |
| Butyl Methacrylate | +++++ 0.8364 | 0.7168 0.8240 | 0.6968 0.8121 | 0.7154 | 0.7482 | Ave | | 0.7642 | | | | 7.7 | | 20.0 | | | |
| tert-Butylbenzene | +++++ 2.0085 | 1.8651 1.9605 | 1.9602 1.8199 | 1.9827 | 2.0177 | Ave | | 1.9449 | | | | 3.8 | | 20.0 | | | |
| 1,2,4-Trimethylbenzene | +++++ 2.3134 | 2.1967 2.2967 | 2.1197 2.1283 | 2.1717 | 2.3050 | Ave | | 2.2188 | | | | 3.8 | | 20.0 | | | |
| sec-Butylbenzene | +++++ 2.7557 | 2.4584 2.7763 | 2.6365 2.5782 | 2.6397 | 2.7705 | Ave | | 2.6593 | | | | 4.4 | | 20.0 | | | |
| 1,3-Dichlorobenzene | +++++ 1.3675 | 1.2112 1.3653 | 1.4098 1.2860 | 1.3723 | 1.3730 | Ave | | 1.3407 | | | 0.6000 | 5.1 | | 20.0 | | | |
| 1,4-Dichlorobenzene | +++++ 1.3689 | 1.4958 1.3881 | 1.4116 1.3031 | 1.3266 | 1.3488 | Ave | | 1.3776 | | | 0.5000 | 4.6 | | 20.0 | | | |
| 4-Isopropyltoluene | +++++ 2.2884 | 1.9415 2.3191 | 2.3392 2.1852 | 2.2335 | 2.2902 | Ave | | 2.2281 | | | | 6.1 | | 20.0 | | | |
| 1,2,3-Trimethylbenzene | +++++ 2.2719 | 2.0185 2.2579 | 2.1078 2.1267 | 2.1399 | 2.2439 | Ave | | 2.1667 | | | | 4.3 | | 20.0 | | | |
| Benzyl chloride | +++++ 1.3652 | 1.3906 1.4230 | 1.2971 1.3715 | 1.3025 | 1.3386 | Ave | | 1.3555 | | | | 3.4 | | 20.0 | | | |

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins TestAmerica, Edison Job No.: 460-217659-1 Analy Batch No.: 721958

SDG No.:

Instrument ID: CVOAMS15 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 09/04/2020 12:13 Calibration End Date: 09/04/2020 15:01 Calibration ID: 81787

| ANALYTE | RRF | | | | | CURVE TYPE | COEFFICIENT | | | # | MIN RRF | %RSD | # | MAX %RSD | R^2 OR COD | # | MIN R^2 OR COD |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | LVL 1<br>LVL 6 | LVL 2<br>LVL 7 | LVL 3<br>LVL 8 | LVL 4 | LVL 5 | | B | M1 | M2 | | | | | | | | |
| Indan | +++++<br>2.2608 | 2.1173<br>2.2697 | 1.9735<br>2.1533 | 2.0960 | 2.1719 | Ave | | 2.1489 | | | | 4.7 | | 20.0 | | | |
| 1,2-Dichlorobenzene | +++++<br>1.2660 | 1.0978<br>1.3210 | 1.1595<br>1.2330 | 1.1719 | 1.2180 | Ave | | 1.2096 | | | 0.4000 | 6.1 | | 20.0 | | | |
| p-Diethylbenzene | +++++<br>1.1246 | 0.8961<br>1.1604 | 1.0302<br>1.0985 | 0.9989 | 1.1002 | Ave | | 1.0584 | | | | 8.5 | | 20.0 | | | |
| n-Butylbenzene | +++++<br>1.1043 | 0.9114<br>1.1188 | 1.0045<br>1.0439 | 1.0112 | 1.0555 | Ave | | 1.0357 | | | | 6.7 | | 20.0 | | | |
| 1,2-Dibromo-3-Chloropropane | +++++<br>0.1493 | 0.0506<br>0.1624 | 0.1169<br>0.1655 | 0.1538 | 0.1515 | Qua2 | -0.051 | 0.1579 | 0.0000150 | | 0.0500 | | | | 0.9980 | | 0.9900 |
| 1,2,4,5-Tetramethylbenzene | +++++<br>1.7305 | 1.5429<br>1.8391 | 1.5457<br>1.7997 | 1.4955 | 1.6610 | Ave | | 1.6592 | | | | 8.2 | | 20.0 | | | |
| 1,3,5-Trichlorobenzene | +++++<br>0.7040 | 0.6262<br>0.7316 | 0.7131<br>0.7170 | 0.6285 | 0.6870 | Ave | | 0.6868 | | | | 6.2 | | 20.0 | | | |
| 1,2,4-Trichlorobenzene | +++++<br>0.5757 | 0.5745<br>0.6349 | 0.4962<br>0.6229 | 0.5225 | 0.5686 | Ave | | 0.5708 | | | 0.2000 | 8.7 | | 20.0 | | | |
| Hexachlorobutadiene | +++++<br>0.2413 | 0.4198<br>0.2662 | 0.3000<br>0.2547 | 0.2359 | 0.2449 | Lin2 | 0.0818 | 0.2421 | | | | | | | 0.9930 | | 0.9900 |
| Naphthalene | +++++<br>1.4505 | 1.5323<br>1.6121 | 1.3439<br>1.5945 | 1.3513 | 1.3688 | Ave | | 1.4648 | | | | 7.9 | | 20.0 | | | |
| 1,2,3-Trichlorobenzene | +++++<br>0.4540 | 0.4392<br>0.5078 | 0.3320<br>0.4996 | 0.4185 | 0.4337 | Ave | | 0.4407 | | | | 13.3 | | 20.0 | | | |
| Dibromofluoromethane (Surr) | 0.3009<br>0.2884 | 0.2934<br>0.2872 | 0.2949<br>0.2871 | 0.2961 | 0.2857 | Ave | | 0.2917 | | | | 1.9 | | 20.0 | | | |
| 1,2-Dichloroethane-d4 (Surr) | 0.3058<br>0.2903 | 0.2999<br>0.2853 | 0.2983<br>0.2912 | 0.2977 | 0.2895 | Ave | | 0.2947 | | | | 2.3 | | 20.0 | | | |
| Toluene-d8 (Surr) | 1.2986<br>1.2659 | 1.2660<br>1.2673 | 1.2756<br>1.2751 | 1.2658 | 1.3003 | Ave | | 1.2768 | | | | 1.1 | | 20.0 | | | |
| 4-Bromofluorobenzene | 0.4226<br>0.4135 | 0.4088<br>0.3970 | 0.4117<br>0.4067 | 0.4138 | 0.4216 | Ave | | 0.4120 | | | | 2.0 | | 20.0 | | | |

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins TestAmerica, Edison Job No.: 460-217659-1 Analy Batch No.: 721958

SDG No.:

Instrument ID: CVOAMS15 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 09/04/2020 12:13 Calibration End Date: 09/04/2020 15:01 Calibration ID: 81787

Calibration Files:

| LEVEL: | LAB SAMPLE ID: | LAB FILE ID: |
|---|---|---|
| Level 1 | STD8 460-721958/3 | T38694.D |
| Level 2 | STD05 460-721958/4 | T38695.D |
| Level 3 | STD1 460-721958/5 | T38696.D |
| Level 4 | STD5 460-721958/6 | T38697.D |
| Level 5 | STD20 460-721958/7 | T38698.D |
| Level 6 | STD50 460-721958/8 | T38699.D |
| Level 7 | STD200 460-721958/9 | T38700.D |
| Level 8 | STD500 460-721958/10 | T38701.D |

| ANALYTE | IS REF | CURVE TYPE | RESPONSE | | | | | CONCENTRATION (UG/L) | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | LVL 1 LVL 6 | LVL 2 LVL 7 | LVL 3 LVL 8 | LVL 4 | LVL 5 | LVL 1 LVL 6 | LVL 2 LVL 7 | LVL 3 LVL 8 | LVL 4 | LVL 5 |
| Monochloropentafluoroethane | FB | Ave | +++++ 18324 | +++++ 85345 | 534 234583 | 1942 | 8095 | +++++ 50.0 | +++++ 200 | 1.00 500 | 5.00 | 20.0 |
| Chlorotrifluoroethene | FB | Qua2 | +++++ 47078 | 265 212369 | 902 598342 | 4212 | 18264 | +++++ 50.0 | 0.500 200 | 1.00 500 | 5.00 | 20.0 |
| 1,1-Difluoroethane | FB | Ave | +++++ 58101 | 530 234122 | 1103 605257 | 5243 | 22596 | +++++ 50.0 | 0.500 200 | 1.00 500 | 5.00 | 20.0 |
| Dichlorodifluoromethane | FB | Ave | +++++ 181094 | 1449 771925 | 3307 1935652 | 15785 | 71184 | +++++ 50.0 | 0.500 200 | 1.00 500 | 5.00 | 20.0 |
| Chlorodifluoromethane | FB | Ave | +++++ 24406 | 243 97821 | 403 249110 | 1928 | 9180 | +++++ 50.0 | 0.500 200 | 1.00 500 | 5.00 | 20.0 |
| Chloromethane | FB | Ave | +++++ 98107 | 983 366219 | 1863 1103505 | 8833 | 35384 | +++++ 50.0 | 0.500 200 | 1.00 500 | 5.00 | 20.0 |
| Vinyl chloride | FB | Ave | +++++ 137086 | 1243 527233 | 2417 1357477 | 12280 | 50984 | +++++ 50.0 | 0.500 200 | 1.00 500 | 5.00 | 20.0 |
| Butadiene | FB | Ave | 481 117568 | 1043 470885 | 2234 1181606 | 9395 | 42777 | 0.250 50.0 | 0.500 200 | 1.00 500 | 5.00 | 20.0 |
| Bromomethane | BUT | Ave | +++++ 64136 | 637 322292 | 1321 +++++ | 6195 | 24554 | +++++ 50.0 | 0.500 200 | 1.00 +++++ | 5.00 | 20.0 |
| Chloroethane | BUT | Ave | +++++ 81493 | 868 304774 | 1531 782000 | 6985 | 30110 | +++++ 50.0 | 0.500 200 | 1.00 500 | 5.00 | 20.0 |
| Dichlorofluoromethane | FB | Ave | +++++ 211030 | 2130 789905 | 4223 1968166 | 19064 | 77629 | +++++ 50.0 | 0.500 200 | 1.00 500 | 5.00 | 20.0 |
| Trichlorofluoromethane | FB | Ave | +++++ 227334 | 1869 879376 | 3530 2168538 | 18325 | 87520 | +++++ 50.0 | 0.500 200 | 1.00 500 | 5.00 | 20.0 |
| Pentane | FB | Ave | +++++ 38229 | 236 155402 | 782 395854 | 3492 | 14973 | +++++ 100 | 1.00 400 | 2.00 1000 | 10.0 | 40.0 |
| Ethanol | TBAd 9 | QuaF | +++++ 17166 | 515 61953 | 673 112468 | 2362 | 8191 | +++++ 2000 | 20.0 8000 | 40.0 20000 | 200 | 800 |
| Ethyl ether | FB | Ave | +++++ 83236 | 771 321824 | 1831 809240 | 7787 | 30515 | +++++ 50.0 | 0.500 200 | 1.00 500 | 5.00 | 20.0 |

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins TestAmerica, Edison Job No.: 460-217659-1 Analy Batch No.: 721958

SDG No.:

Instrument ID: CVOAMS15 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 09/04/2020 12:13 Calibration End Date: 09/04/2020 15:01 Calibration ID: 81787

| ANALYTE | IS REF | CURVE TYPE | RESPONSE | | | | | CONCENTRATION (UG/L) | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | LVL 1<br>LVL 6 | LVL 2<br>LVL 7 | LVL 3<br>LVL 8 | LVL 4 | LVL 5 | LVL 1<br>LVL 6 | LVL 2<br>LVL 7 | LVL 3<br>LVL 8 | LVL 4 | LVL 5 |
| 1,2-Dichloro-1,1,2-trifluoroethane | FB | Ave | +++++<br>122013 | 1077<br>481958 | 2528<br>1189643 | 11218 | 48670 | +++++<br>50.0 | 0.500<br>200 | 1.00<br>500 | 5.00 | 20.0 |
| 2-Methyl-1,3-butadiene | FB | Ave | +++++<br>94587 | 792<br>377345 | 1737<br>964931 | 9216 | 37491 | +++++<br>50.0 | 0.500<br>200 | 1.00<br>500 | 5.00 | 20.0 |
| 1,1,1-Trifluoro-2,2-dichloroethane | FB | Ave | +++++<br>181837 | 1590<br>718684 | 4004<br>1750396 | 16094 | 72162 | +++++<br>50.0 | 0.500<br>200 | 1.00<br>500 | 5.00 | 20.0 |
| Acrolein | TBAd9 | Ave | +++++<br>25168 | 418<br>48524 | 992<br>104267 | 3741 | 9928 | +++++<br>100 | 2.00<br>200 | 4.00<br>400 | 20.0 | 40.0 |
| 1,1-Dichloroethene | FB | Ave | +++++<br>117416 | 1193<br>459465 | 2319<br>1096741 | 11205 | 44169 | +++++<br>50.0 | 0.500<br>200 | 1.00<br>500 | 5.00 | 20.0 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | FB | Ave | +++++<br>128696 | 1033<br>539298 | 2221<br>1296793 | 12000 | 53685 | +++++<br>50.0 | 0.500<br>200 | 1.00<br>500 | 5.00 | 20.0 |
| Acetone | BUT | Ave | +++++<br>123872 | 1594<br>516437 | 3434<br>1340870 | 13676 | 50604 | +++++<br>250 | 2.50<br>1000 | 5.00<br>2500 | 25.0 | 100 |
| Iodomethane | FB | Ave | +++++<br>93953 | 144<br>520046 | 195<br>1141499 | 1928 | 21673 | +++++<br>50.0 | 0.500<br>200 | 1.00<br>500 | 5.00 | 20.0 |
| Carbon disulfide | FB | Ave | +++++<br>366981 | 3871<br>1414775 | 8426<br>3361012 | 35190 | 142890 | +++++<br>50.0 | 0.500<br>200 | 1.00<br>500 | 5.00 | 20.0 |
| Isopropyl alcohol | TBAd9 | Ave | +++++<br>56094 | 542<br>195478 | 921<br>530450 | 5038 | 18947 | +++++<br>500 | 5.00<br>2000 | 10.0<br>5000 | 50.0 | 200 |
| Acetonitrile | BUT | Ave | +++++<br>59859 | 867<br>217685 | 1043<br>538353 | 6379 | 22995 | +++++<br>500 | 5.00<br>2000 | 10.0<br>5000 | 50.0 | 200 |
| Allyl chloride | FB | Ave | +++++<br>76166 | 706<br>291370 | 1485<br>643273 | 8180 | 29788 | +++++<br>50.0 | 0.500<br>200 | 1.00<br>500 | 5.00 | 20.0 |
| Methyl acetate | FB | Ave | +++++<br>121708 | 1409<br>462854 | 2867<br>1196436 | 11898 | 47038 | +++++<br>100 | 1.00<br>400 | 2.00<br>1000 | 10.0 | 40.0 |
| Cyclopentene | FB | Ave | +++++<br>264563 | 2235<br>1066208 | 5229<br>2604712 | 25486 | 110385 | +++++<br>50.0 | 0.500<br>200 | 1.00<br>500 | 5.00 | 20.0 |
| Methylene Chloride | FB | Ave | +++++<br>126123 | 1332<br>477834 | 2897<br>1148212 | 12175 | 48203 | +++++<br>50.0 | 0.500<br>200 | 1.00<br>500 | 5.00 | 20.0 |
| 2-Methyl-2-propanol | TBAd9 | Ave | +++++<br>96846 | 1263<br>372176 | 2426<br>927064 | 10312 | 39686 | +++++<br>500 | 5.00<br>2000 | 10.0<br>5000 | 50.0 | 200 |
| Acrylonitrile | FB | Ave | 1408<br>341271 | 3287<br>1289394 | 6607<br>3208340 | 33442 | 135877 | 2.00<br>500 | 5.00<br>2000 | 10.0<br>5000 | 50.0 | 200 |
| trans-1,2-Dichloroethene | FB | Ave | +++++<br>134809 | 1159<br>512816 | 2500<br>1243634 | 13453 | 51381 | +++++<br>50.0 | 0.500<br>200 | 1.00<br>500 | 5.00 | 20.0 |
| Methyl tert-butyl ether | FB | Ave | +++++<br>330891 | 3125<br>1250878 | 6647<br>3036522 | 31467 | 126781 | +++++<br>50.0 | 0.500<br>200 | 1.00<br>500 | 5.00 | 20.0 |
| Hexane | FB | Ave | +++++<br>133224 | 941<br>549455 | 2644<br>1336922 | 13211 | 56563 | +++++<br>50.0 | 0.500<br>200 | 1.00<br>500 | 5.00 | 20.0 |
| 1,1-Dichloroethane | FB | Ave | +++++<br>212694 | 2141<br>797913 | 4166<br>1858164 | 21487 | 84022 | +++++<br>50.0 | 0.500<br>200 | 1.00<br>500 | 5.00 | 20.0 |

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins TestAmerica, Edison Job No.: 460-217659-1 Analy Batch No.: 721958

SDG No.:

Instrument ID: CVOAMS15 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 09/04/2020 12:13 Calibration End Date: 09/04/2020 15:01 Calibration ID: 81787

| ANALYTE | IS REF | CURVE TYPE | RESPONSE | | | | | CONCENTRATION (UG/L) | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | LVL 1<br>LVL 6 | LVL 2<br>LVL 7 | LVL 3<br>LVL 8 | LVL 4 | LVL 5 | LVL 1<br>LVL 6 | LVL 2<br>LVL 7 | LVL 3<br>LVL 8 | LVL 4 | LVL 5 |
| Vinyl acetate | BUT | Ave | +++++<br>46670 | 344<br>203897 | 666<br>463305 | 4617 | 17583 | +++++<br>100 | 1.00<br>400 | 2.00<br>1000 | 10.0 | 40.0 |
| 2-Chloro-1,3-butadiene | FB | Ave | +++++<br>120832 | 1162<br>480793 | 2294<br>1191332 | 11810 | 47231 | +++++<br>50.0 | 0.500<br>200 | 1.00<br>500 | 5.00 | 20.0 |
| Isopropyl ether | FB | Ave | +++++<br>313131 | 2945<br>1137455 | 5924<br>2805021 | 29621 | 118149 | +++++<br>50.0 | 0.500<br>200 | 1.00<br>500 | 5.00 | 20.0 |
| Tert-butyl ethyl ether | FB | Ave | +++++<br>325384 | 2978<br>1219843 | 5868<br>3015632 | 33375 | 124709 | +++++<br>50.0 | 0.500<br>200 | 1.00<br>500 | 5.00 | 20.0 |
| 2,2-Dichloropropane | FB | Ave | +++++<br>46915 | 408<br>182584 | 851<br>417002 | 4542 | 18777 | +++++<br>50.0 | 0.500<br>200 | 1.00<br>500 | 5.00 | 20.0 |
| cis-1,2-Dichloroethene | FB | Ave | +++++<br>146435 | 1474<br>563758 | 2879<br>1334354 | 14695 | 56276 | +++++<br>50.0 | 0.500<br>200 | 1.00<br>500 | 5.00 | 20.0 |
| 2-Butanone (MEK) | BUT | Ave | +++++<br>191880 | 2649<br>754351 | 4478<br>1834163 | 21122 | 75173 | +++++<br>250 | 2.50<br>1000 | 5.00<br>2500 | 25.0 | 100 |
| Propionitrile | TBAd9 | Ave | +++++<br>130237 | 1401<br>482660 | 2458<br>1216112 | 13490 | 51135 | +++++<br>500 | 5.00<br>2000 | 10.0<br>5000 | 50.0 | 200 |
| Ethyl acetate | BUT | QuaF | +++++<br>21331 | 79<br>81719 | 361<br>202010 | 2049 | 8344 | +++++<br>100 | 1.00<br>400 | 2.00<br>1000 | 10.0 | 40.0 |
| Methyl acrylate | FB | Ave | +++++<br>99002 | 763<br>363781 | 1672<br>1069212 | 9831 | 38622 | +++++<br>50.0 | 0.500<br>200 | 1.00<br>500 | 5.00 | 20.0 |
| Chlorobromomethane | FB | Ave | +++++<br>70399 | 689<br>264929 | 1421<br>637084 | 7058 | 27303 | +++++<br>50.0 | 0.500<br>200 | 1.00<br>500 | 5.00 | 20.0 |
| Methacrylonitrile | FB | Ave | +++++<br>450178 | 4134<br>1693932 | 8273<br>4210590 | 45367 | 175670 | +++++<br>500 | 5.00<br>2000 | 10.0<br>5000 | 50.0 | 200 |
| Tetrahydrofuran | BUT | Ave | +++++<br>30069 | 230<br>108728 | 497<br>263878 | 2633 | 11145 | +++++<br>100 | 1.00<br>400 | 2.00<br>1000 | 10.0 | 40.0 |
| Chloroform | FB | Ave | +++++<br>235737 | 2078<br>890928 | 5047<br>2112555 | 23497 | 91090 | +++++<br>50.0 | 0.500<br>200 | 1.00<br>500 | 5.00 | 20.0 |
| 1,1,1-Trichloroethane | FB | Ave | +++++<br>220470 | 2108<br>848245 | 4111<br>2006798 | 21601 | 87714 | +++++<br>50.0 | 0.500<br>200 | 1.00<br>500 | 5.00 | 20.0 |
| Cyclohexane | FB | Ave | +++++<br>170569 | 1427<br>714797 | 3338<br>1744998 | 16856 | 72294 | +++++<br>50.0 | 0.500<br>200 | 1.00<br>500 | 5.00 | 20.0 |
| Carbon tetrachloride | FB | Ave | +++++<br>192094 | 1512<br>782505 | 3256<br>1804842 | 17994 | 75247 | +++++<br>50.0 | 0.500<br>200 | 1.00<br>500 | 5.00 | 20.0 |
| 1,1-Dichloropropene | FB | Ave | +++++<br>179562 | 1555<br>714655 | 3967<br>1693561 | 18066 | 71986 | +++++<br>50.0 | 0.500<br>200 | 1.00<br>500 | 5.00 | 20.0 |
| Isobutyl alcohol | TBAd9 | Ave | +++++<br>80307 | 546<br>325479 | 1702<br>836342 | 8265 | 31658 | +++++<br>1250 | 12.5<br>5000 | 25.0<br>12500 | 125 | 500 |
| Benzene | CBNZ d5 | Ave | +++++<br>484677 | 5260<br>1892747 | 9508<br>4546661 | 47439 | 189587 | +++++<br>50.0 | 0.500<br>200 | 1.00<br>500 | 5.00 | 20.0 |
| 1,2-Dichloroethane | FB | Ave | +++++<br>158518 | 1595<br>609868 | 3416<br>1452143 | 16435 | 62408 | +++++<br>50.0 | 0.500<br>200 | 1.00<br>500 | 5.00 | 20.0 |

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins TestAmerica, Edison Job No.: 460-217659-1 Analy Batch No.: 721958

SDG No.:

Instrument ID: CVOAMS15 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 09/04/2020 12:13 Calibration End Date: 09/04/2020 15:01 Calibration ID: 81787

| ANALYTE | IS REF | CURVE TYPE | RESPONSE | | | | | CONCENTRATION (UG/L) | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | LVL 1<br>LVL 6 | LVL 2<br>LVL 7 | LVL 3<br>LVL 8 | LVL 4 | LVL 5 | LVL 1<br>LVL 6 | LVL 2<br>LVL 7 | LVL 3<br>LVL 8 | LVL 4 | LVL 5 |
| 2,2,4-Trimethylpentane | FB | Ave | +++++<br>233775 | 1862<br>968146 | 4065<br>2374930 | 23620 | 96377 | +++++<br>50.0 | 0.500<br>200 | 1.00<br>500 | 5.00 | 20.0 |
| Isopropyl acetate | FB | Ave | +++++<br>38172 | 280<br>151465 | 621<br>371536 | 3731 | 14649 | +++++<br>50.0 | 0.500<br>200 | 1.00<br>500 | 5.00 | 20.0 |
| Tert-amyl methyl ether | FB | Ave | +++++<br>332598 | 2988<br>1261937 | 5935<br>3041111 | 33856 | 127777 | +++++<br>50.0 | 0.500<br>200 | 1.00<br>500 | 5.00 | 20.0 |
| n-Heptane | FB | Ave | +++++<br>95976 | 778<br>391332 | 1846<br>922019 | 9445 | 39542 | +++++<br>50.0 | 0.500<br>200 | 1.00<br>500 | 5.00 | 20.0 |
| Trichloroethene | FB | Ave | +++++<br>140596 | 1463<br>551877 | 2852<br>1304788 | 13597 | 55977 | +++++<br>50.0 | 0.500<br>200 | 1.00<br>500 | 5.00 | 20.0 |
| n-Butanol | TBAd9 | Ave | +++++<br>58732 | +++++<br>241952 | 753<br>631005 | 4473 | 20810 | +++++<br>1250 | +++++<br>5000 | 25.0<br>12500 | 125 | 500 |
| Ethyl acrylate | FB | Ave | +++++<br>248588 | 1913<br>998711 | 5063<br>2388271 | 23512 | 98185 | +++++<br>50.0 | 0.500<br>200 | 1.00<br>500 | 5.00 | 20.0 |
| Methylcyclohexane | FB | Ave | +++++<br>181190 | 1397<br>753832 | 3241<br>1777620 | 16729 | 72518 | +++++<br>50.0 | 0.500<br>200 | 1.00<br>500 | 5.00 | 20.0 |
| 1,2-Dichloropropane | FB | Ave | +++++<br>116194 | 1087<br>449519 | 1900<br>1045500 | 11587 | 47117 | +++++<br>50.0 | 0.500<br>200 | 1.00<br>500 | 5.00 | 20.0 |
| Dibromomethane | FB | Ave | +++++<br>81349 | 669<br>313223 | 1615<br>716353 | 8072 | 32784 | +++++<br>50.0 | 0.500<br>200 | 1.00<br>500 | 5.00 | 20.0 |
| 1,4-Dioxane | DXE | Ave | +++++<br>25404 | 462<br>99056 | 956<br>252127 | 2379 | 9818 | +++++<br>1000 | 25.0<br>4000 | 50.0<br>10000 | 100 | 400 |
| Methyl methacrylate | FB | Ave | +++++<br>64235 | 372<br>248218 | 1204<br>609144 | 5860 | 22116 | +++++<br>100 | 1.00<br>400 | 2.00<br>1000 | 10.0 | 40.0 |
| n-Propyl acetate | FB | Ave | +++++<br>122143 | 1207<br>476273 | 1877<br>1178918 | 11993 | 48115 | +++++<br>50.0 | 0.500<br>200 | 1.00<br>500 | 5.00 | 20.0 |
| Dichlorobromomethane | FB | Ave | +++++<br>177256 | 1613<br>692440 | 3356<br>1618126 | 17179 | 69040 | +++++<br>50.0 | 0.500<br>200 | 1.00<br>500 | 5.00 | 20.0 |
| 2-Nitropropane | FB | Ave | +++++<br>45340 | 428<br>186422 | 850<br>459432 | 4405 | 17869 | +++++<br>100 | 1.00<br>400 | 2.00<br>1000 | 10.0 | 40.0 |
| 2-Chloroethyl vinyl ether | FB | Qua2 | +++++<br>48476 | +++++<br>191176 | 495<br>483492 | 3511 | 17739 | +++++<br>50.1 | +++++<br>200 | 1.00<br>501 | 5.01 | 20.0 |
| Epichlorohydrin | BUT | Ave | 804<br>195544 | 1900<br>775153 | 3734<br>1827552 | 19650 | 78803 | 5.00<br>1000 | 10.0<br>4000 | 20.0<br>10000 | 100 | 400 |
| cis-1,3-Dichloropropene | CBNZ d5 | Ave | +++++<br>205825 | 1843<br>788654 | 4361<br>1860391 | 19985 | 79655 | +++++<br>50.0 | 0.500<br>200 | 1.00<br>500 | 5.00 | 20.0 |
| 4-Methyl-2-pentanone (MIBK) | BUT | Ave | +++++<br>399769 | 3711<br>1573507 | 7278<br>3737292 | 40221 | 155679 | +++++<br>250 | 2.50<br>1000 | 5.00<br>2500 | 25.0 | 100 |
| Toluene | CBNZ d5 | Ave | +++++<br>532104 | 5468<br>2056475 | 10965<br>4787752 | 53298 | 212549 | +++++<br>50.0 | 0.500<br>200 | 1.00<br>500 | 5.00 | 20.0 |
| trans-1,3-Dichloropropene | CBNZ d5 | Ave | +++++<br>193445 | 1808<br>725911 | 3274<br>1711158 | 17625 | 72302 | +++++<br>50.0 | 0.500<br>200 | 1.00<br>500 | 5.00 | 20.0 |

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins TestAmerica, Edison Job No.: 460-217659-1 Analy Batch No.: 721958

SDG No.:

Instrument ID: CVOAMS15 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 09/04/2020 12:13 Calibration End Date: 09/04/2020 15:01 Calibration ID: 81787

| ANALYTE | IS REF | CURVE TYPE | RESPONSE | | | | | CONCENTRATION (UG/L) | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | LVL 1<br>LVL 6 | LVL 2<br>LVL 7 | LVL 3<br>LVL 8 | LVL 4 | LVL 5 | LVL 1<br>LVL 6 | LVL 2<br>LVL 7 | LVL 3<br>LVL 8 | LVL 4 | LVL 5 |
| Ethyl methacrylate | CBNZ d5 | Ave | +++++<br>134838 | 1069<br>534485 | 2655<br>1294075 | 12272 | 50976 | +++++<br>50.0 | 0.500<br>200 | 1.00<br>500 | 5.00 | 20.0 |
| 1,1,2-Trichloroethane | CBNZ d5 | Ave | +++++<br>94409 | 942<br>344435 | 1785<br>816679 | 9023 | 36285 | +++++<br>50.0 | 0.500<br>200 | 1.00<br>500 | 5.00 | 20.0 |
| Tetrachloroethene | CBNZ d5 | Ave | +++++<br>150963 | 1186<br>586860 | 2905<br>1381532 | 14274 | 59338 | +++++<br>50.0 | 0.500<br>200 | 1.00<br>500 | 5.00 | 20.0 |
| 1,3-Dichloropropane | CBNZ d5 | Ave | +++++<br>182529 | 1627<br>696008 | 3299<br>1580104 | 18610 | 70932 | +++++<br>50.0 | 0.500<br>200 | 1.00<br>500 | 5.00 | 20.0 |
| 2-Hexanone | BUT | Ave | +++++<br>276172 | 2345<br>1086115 | 5020<br>2601241 | 26416 | 108729 | +++++<br>250 | 2.50<br>1000 | 5.00<br>2500 | 25.0 | 100 |
| Chlorodibromomethane | CBNZ d5 | Ave | +++++<br>143070 | 1192<br>554582 | 2428<br>1286230 | 13595 | 54077 | +++++<br>50.0 | 0.500<br>200 | 1.00<br>500 | 5.00 | 20.0 |
| Ethylene Dibromide | CBNZ d5 | Ave | +++++<br>123081 | 1017<br>460707 | 2533<br>1097442 | 12415 | 48015 | +++++<br>50.0 | 0.500<br>200 | 1.00<br>500 | 5.00 | 20.0 |
| n-Butyl acetate | CBNZ d5 | Ave | +++++<br>130474 | 1280<br>486790 | 2338<br>1184736 | 12568 | 51334 | +++++<br>50.0 | 0.500<br>200 | 1.00<br>500 | 5.00 | 20.0 |
| Chlorobenzene | CBNZ d5 | Ave | +++++<br>343416 | 3594<br>1318475 | 6579<br>3042390 | 33946 | 137025 | +++++<br>50.0 | 0.500<br>200 | 1.00<br>500 | 5.00 | 20.0 |
| 1,1,1,2-Tetrachloroethane | CBNZ d5 | Ave | +++++<br>136262 | 1187<br>503909 | 2668<br>1131580 | 13137 | 52187 | +++++<br>50.0 | 0.500<br>200 | 1.00<br>500 | 5.00 | 20.0 |
| Ethylbenzene | CBNZ d5 | Ave | +++++<br>182480 | 1672<br>685577 | 3844<br>1583492 | 18134 | 72594 | +++++<br>50.0 | 0.500<br>200 | 1.00<br>500 | 5.00 | 20.0 |
| m-Xylene & p-Xylene | CBNZ d5 | Ave | +++++<br>222599 | 2170<br>828039 | 4959<br>1910159 | 22473 | 87605 | +++++<br>50.0 | 0.500<br>200 | 1.00<br>500 | 5.00 | 20.0 |
| o-Xylene | CBNZ d5 | Ave | +++++<br>209528 | 2026<br>776857 | 4430<br>1837068 | 20594 | 82369 | +++++<br>50.0 | 0.500<br>200 | 1.00<br>500 | 5.00 | 20.0 |
| Styrene | CBNZ d5 | Ave | +++++<br>353816 | 3072<br>1288755 | 6247<br>3072989 | 33317 | 135843 | +++++<br>50.0 | 0.500<br>200 | 1.00<br>500 | 5.00 | 20.0 |
| n-Butyl acrylate | CBNZ d5 | Ave | +++++<br>77287 | 619<br>297739 | 1082<br>731515 | 6495 | 31690 | +++++<br>50.0 | 0.500<br>200 | 1.00<br>500 | 5.00 | 20.0 |
| Bromoform | CBNZ d5 | Ave | +++++<br>92851 | 848<br>352412 | 1597<br>861204 | 8679 | 35128 | +++++<br>50.0 | 0.500<br>200 | 1.00<br>500 | 5.00 | 20.0 |
| Amyl acetate (mixed isomers) | DCBd 4 | Ave | +++++<br>145402 | 1351<br>543967 | 2397<br>1326439 | 14370 | 55766 | +++++<br>50.0 | 0.500<br>200 | 1.00<br>500 | 5.00 | 20.0 |
| Isopropylbenzene | CBNZ d5 | Ave | +++++<br>543980 | 4615<br>1984132 | 10400<br>4639864 | 51714 | 215333 | +++++<br>50.0 | 0.500<br>200 | 1.00<br>500 | 5.00 | 20.0 |
| Bromobenzene | DCBd 4 | Ave | +++++<br>142752 | 1226<br>529463 | 2808<br>1284756 | 13970 | 56548 | +++++<br>50.0 | 0.500<br>200 | 1.00<br>500 | 5.00 | 20.0 |
| 1,1,2,2-Tetrachloroethane | DCBd 4 | Ave | +++++<br>129147 | 1185<br>497130 | 2432<br>1207452 | 13381 | 53165 | +++++<br>50.0 | 0.500<br>200 | 1.00<br>500 | 5.00 | 20.0 |
| 1,2,3-Trichloropropane | DCBd 4 | Ave | +++++<br>40708 | 383<br>150267 | 596<br>378042 | 4151 | 16228 | +++++<br>50.0 | 0.500<br>200 | 1.00<br>500 | 5.00 | 20.0 |

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins TestAmerica, Edison Job No.: 460-217659-1 Analy Batch No.: 721958

SDG No.:

Instrument ID: CVOAMS15 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 09/04/2020 12:13 Calibration End Date: 09/04/2020 15:01 Calibration ID: 81787

| ANALYTE | IS REF | CURVE TYPE | RESPONSE | | | | | CONCENTRATION (UG/L) | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | LVL 1<br>LVL 6 | LVL 2<br>LVL 7 | LVL 3<br>LVL 8 | LVL 4 | LVL 5 | LVL 1<br>LVL 6 | LVL 2<br>LVL 7 | LVL 3<br>LVL 8 | LVL 4 | LVL 5 |
| trans-1,4-Dichloro-2-butene | DCBd 4 | Lin2 | +++++<br>34706 | 183<br>133645 | 522<br>337260 | 3243 | 13289 | +++++<br>50.0 | 0.500<br>200 | 1.00<br>500 | 5.00 | 20.0 |
| N-Propylbenzene | DCBd 4 | Ave | +++++<br>613132 | 5965<br>2297388 | 12144<br>5543741 | 60218 | 246809 | +++++<br>50.0 | 0.500<br>200 | 1.00<br>500 | 5.00 | 20.0 |
| 2-Chlorotoluene | DCBd 4 | Ave | +++++<br>367358 | 3155<br>1300188 | 7382<br>3053965 | 36143 | 146276 | +++++<br>50.0 | 0.500<br>200 | 1.00<br>500 | 5.00 | 20.0 |
| 4-Ethyltoluene | DCBd 4 | Ave | +++++<br>484464 | 4756<br>1772276 | 9389<br>4442949 | 45654 | 187697 | +++++<br>50.0 | 0.500<br>200 | 1.00<br>500 | 5.00 | 20.0 |
| 4-Chlorotoluene | DCBd 4 | Ave | +++++<br>382605 | 3935<br>1336684 | 7672<br>3662362 | 37483 | 145619 | +++++<br>50.0 | 0.500<br>200 | 1.00<br>500 | 5.00 | 20.0 |
| 1,3,5-Trimethylbenzene | DCBd 4 | Ave | +++++<br>386589 | 3840<br>1431680 | 7673<br>3459100 | 38079 | 153420 | +++++<br>50.0 | 0.500<br>200 | 1.00<br>500 | 5.00 | 20.0 |
| Butyl Methacrylate | DCBd 4 | Ave | +++++<br>141128 | 1219<br>515623 | 2355<br>1355997 | 12124 | 49842 | +++++<br>50.0 | 0.500<br>200 | 1.00<br>500 | 5.00 | 20.0 |
| tert-Butylbenzene | DCBd 4 | Ave | +++++<br>338899 | 3172<br>1226829 | 6625<br>3038694 | 33602 | 134405 | +++++<br>50.0 | 0.500<br>200 | 1.00<br>500 | 5.00 | 20.0 |
| 1,2,4-Trimethylbenzene | DCBd 4 | Ave | +++++<br>390346 | 3736<br>1437197 | 7164<br>3553591 | 36806 | 153542 | +++++<br>50.0 | 0.500<br>200 | 1.00<br>500 | 5.00 | 20.0 |
| sec-Butylbenzene | DCBd 4 | Ave | +++++<br>464982 | 4181<br>1737373 | 8911<br>4304765 | 44738 | 184551 | +++++<br>50.0 | 0.500<br>200 | 1.00<br>500 | 5.00 | 20.0 |
| 1,3-Dichlorobenzene | DCBd 4 | Ave | +++++<br>230743 | 2060<br>854373 | 4765<br>2147245 | 23258 | 91455 | +++++<br>50.0 | 0.500<br>200 | 1.00<br>500 | 5.00 | 20.0 |
| 1,4-Dichlorobenzene | DCBd 4 | Ave | +++++<br>230974 | 2544<br>868667 | 4771<br>2175817 | 22484 | 89849 | +++++<br>50.0 | 0.500<br>200 | 1.00<br>500 | 5.00 | 20.0 |
| 4-Isopropyltoluene | DCBd 4 | Ave | +++++<br>386118 | 3302<br>1451207 | 7906<br>3648625 | 37853 | 152555 | +++++<br>50.0 | 0.500<br>200 | 1.00<br>500 | 5.00 | 20.0 |
| 1,2,3-Trimethylbenzene | DCBd 4 | Ave | +++++<br>383349 | 3433<br>1412940 | 7124<br>3550936 | 36267 | 149473 | +++++<br>50.0 | 0.500<br>200 | 1.00<br>500 | 5.00 | 20.0 |
| Benzyl chloride | DCBd 4 | Ave | +++++<br>230347 | 2365<br>890482 | 4384<br>2289900 | 22075 | 89168 | +++++<br>50.0 | 0.500<br>200 | 1.00<br>500 | 5.00 | 20.0 |
| Indan | DCBd 4 | Ave | +++++<br>381465 | 3601<br>1420352 | 6670<br>3595273 | 35523 | 144677 | +++++<br>50.0 | 0.500<br>200 | 1.00<br>500 | 5.00 | 20.0 |
| 1,2-Dichlorobenzene | DCBd 4 | Ave | +++++<br>213614 | 1867<br>826674 | 3919<br>2058799 | 19862 | 81134 | +++++<br>50.0 | 0.500<br>200 | 1.00<br>500 | 5.00 | 20.0 |
| p-Diethylbenzene | DCBd 4 | Ave | +++++<br>189760 | 1524<br>726180 | 3482<br>1834204 | 16929 | 73287 | +++++<br>50.0 | 0.500<br>200 | 1.00<br>500 | 5.00 | 20.0 |
| n-Butylbenzene | DCBd 4 | Ave | +++++<br>186339 | 1550<br>700118 | 3395<br>1743055 | 17138 | 70312 | +++++<br>50.0 | 0.500<br>200 | 1.00<br>500 | 5.00 | 20.0 |
| 1,2-Dibromo-3-Chloropropane | DCBd 4 | Qua2 | +++++<br>25184 | 86<br>101654 | 395<br>276306 | 2606 | 10089 | +++++<br>50.0 | 0.500<br>200 | 1.00<br>500 | 5.00 | 20.0 |
| 1,2,4,5-Tetramethylbenzene | DCBd 4 | Ave | +++++<br>291990 | 2624<br>1150853 | 5224<br>3004971 | 25345 | 110641 | +++++<br>50.0 | 0.500<br>200 | 1.00<br>500 | 5.00 | 20.0 |

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins TestAmerica, Edison Job No.: 460-217659-1 Analy Batch No.: 721958

SDG No.:

Instrument ID: CVOAMS15 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 09/04/2020 12:13 Calibration End Date: 09/04/2020 15:01 Calibration ID: 81787

| ANALYTE | IS REF | CURVE TYPE | RESPONSE | | | | | CONCENTRATION (UG/L) | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | LVL 1<br>LVL 6 | LVL 2<br>LVL 7 | LVL 3<br>LVL 8 | LVL 4 | LVL 5 | LVL 1<br>LVL 6 | LVL 2<br>LVL 7 | LVL 3<br>LVL 8 | LVL 4 | LVL 5 |
| 1,3,5-Trichlorobenzene | DCBd 4 | Ave | +++++<br>118793 | 1065<br>457811 | 2410<br>1197238 | 10651 | 45760 | +++++<br>50.0 | 0.500<br>200 | 1.00<br>500 | 5.00 | 20.0 |
| 1,2,4-Trichlorobenzene | DCBd 4 | Ave | +++++<br>97146 | 977<br>397316 | 1677<br>1040011 | 8856 | 37876 | +++++<br>50.0 | 0.500<br>200 | 1.00<br>500 | 5.00 | 20.0 |
| Hexachlorobutadiene | DCBd 4 | Lin2 | +++++<br>40717 | 714<br>166568 | 1014<br>425255 | 3998 | 16315 | +++++<br>50.0 | 0.500<br>200 | 1.00<br>500 | 5.00 | 20.0 |
| Naphthalene | DCBd 4 | Ave | +++++<br>244743 | 2606<br>1008833 | 4542<br>2662331 | 22901 | 91178 | +++++<br>50.0 | 0.500<br>200 | 1.00<br>500 | 5.00 | 20.0 |
| 1,2,3-Trichlorobenzene | DCBd 4 | Ave | +++++<br>76607 | 747<br>317747 | 1122<br>834229 | 7092 | 28891 | +++++<br>50.0 | 0.500<br>200 | 1.00<br>500 | 5.00 | 20.0 |
| Dibromofluoromethane (Surr) | FB | Ave | 146021<br>137373 | 143526<br>134143 | 142767<br>132307 | 143685 | 134954 | 50.0<br>50.0 | 50.0<br>50.0 | 50.0<br>50.0 | 50.0 | 50.0 |
| 1,2-Dichloroethane-d4 (Surr) | FB | Ave | 148409<br>138293 | 146689<br>133248 | 144381<br>134157 | 144449 | 136753 | 50.0<br>50.0 | 50.0<br>50.0 | 50.0<br>50.0 | 50.0 | 50.0 |
| Toluene-d8 (Surr) | CBNZ d5 | Ave | 477634<br>454255 | 469904<br>443860 | 468513<br>428004 | 451652 | 453441 | 50.0<br>50.0 | 50.0<br>50.0 | 50.0<br>50.0 | 50.0 | 50.0 |
| 4-Bromofluorobenzene | CBNZ d5 | Ave | 155445<br>148390 | 151743<br>139025 | 151227<br>136512 | 147665 | 147032 | 50.0<br>50.0 | 50.0<br>50.0 | 50.0<br>50.0 | 50.0 | 50.0 |

Curve Type Legend:

Ave = Average ISTD
Lin2 = Linear 1/conc^2 ISTD
Qua2 = Quadratic 1/conc^2 ISTD
QuaF = Quadratic ISTD forced zero

Eurofins TestAmerica, Edison
Target Compound Quantitation Report

Data File: \\chromfs\Edison\ChromData\CVOAMS15\20200904-116301.b\T38694.D
Lims ID: STD8
Client ID:
Sample Type: IC Calib Level: 8
Inject. Date: 04-Sep-2020 12:13:58 ALS Bottle#: 0 Worklist Smp#: 3
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: STD8
Misc. Info.: 460-0116301-003
Operator ID: Instrument ID: CVOAMS15
Sublist: chrom-8260W_15*sub18

Method: \\chromfs\Edison\ChromData\CVOAMS15\20200904-116301.b\8260W_15.m
Limit Group: VOA - 8260C Water and Solid
Last Update: 05-Sep-2020 11:27:22 Calib Date: 04-Sep-2020 15:01:54
Integrator: RTE ID Type: RT Order ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Edison\ChromData\CVOAMS15\20200904-116301.b\T38701.D

Column 1 : DB-624 ( 0.18 mm) Det: MS Quad
Process Host: CTX1014

First Level Reviewer: starzecm Date: 04-Sep-2020 13:05:27

| Compound | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q | Response | Cal Amt ug/l | OnCol Amt ug/l | Flags |
|---|---|---|---|---|---|---|---|---|---|
| 8 Butadiene | 54 | 0.787 | 0.787 | 0.000 | 42 | 481 | 0.2500 | 0.2181 | |
| * 31 TBA-d9 (IS) | 66 | 1.598 | 1.598 | 0.000 | 93 | 32669 | 1000.0 | 1000.0 | |
| 33 Acrylonitrile | 53 | 1.708 | 1.708 | 0.000 | 74 | 1408 | 2.00 | 2.08 | |
| * 42 2-Butanone-d5 | 46 | 2.336 | 2.336 | 0.000 | 39 | 214006 | 250.0 | 250.0 | |
| $ 53 Dibromofluoromethane (Surr) | 113 | 2.720 | 2.720 | 0.000 | 95 | 146021 | 50.0 | 51.6 | |
| $ 58 1,2-Dichloroethane-d4 (Surr) | 65 | 2.982 | 2.982 | 0.000 | 98 | 148409 | 50.0 | 51.9 | |
| * 65 Fluorobenzene | 96 | 3.275 | 3.275 | 0.000 | 99 | 485322 | 50.0 | 50.0 | |
| * 73 1,4-Dioxane-d8 | 96 | 3.933 | 3.939 | -0.006 | 1 | 24182 | 1000.0 | 1000.0 | |
| 80 Epichlorohydrin | 57 | 4.524 | 4.524 | 0.000 | 1 | 804 | 5.00 | 4.12 | a |
| $ 83 Toluene-d8 (Surr) | 98 | 4.902 | 4.902 | 0.000 | 98 | 477634 | 50.0 | 50.9 | |
| * 94 Chlorobenzene-d5 | 117 | 6.744 | 6.743 | 0.001 | 84 | 367793 | 50.0 | 50.0 | |
| $ 105 4-Bromofluorobenzene | 174 | 8.530 | 8.530 | 0.000 | 90 | 155445 | 50.0 | 51.3 | |
| * 120 1,4-Dichlorobenzene-d4 | 152 | 10.377 | 10.377 | 0.000 | 95 | 170344 | 50.0 | 50.0 | |

## QC Flag Legend

Review Flags
a - User Assigned ID

## Reagents:

| | | | | |
|---|---|---|---|---|
| 8260MIX1COMB_00125 | Amount Added: | 0.00 | Units: uL | |
| ACROLEIN W_00112 | Amount Added: | 0.00 | Units: uL | |
| GASES Li_00384 | Amount Added: | 2.50 | Units: uL | |
| 524freon_00027 | Amount Added: | 0.00 | Units: uL | |
| 14DIOXINTER_00118 | Amount Added: | 0.00 | Units: uL | |
| GAS Hi_00370 | Amount Added: | 0.00 | Units: uL | |
| ACRY/EPIH MIX_00077 | Amount Added: | 20.00 | Units: uL | |
| Ethanol mix_00043 | Amount Added: | 0.00 | Units: uL | |
| MIX 2 Hi_00102 | Amount Added: | 0.00 | Units: uL | |
| MIX I Hi_00129 | Amount Added: | 0.00 | Units: uL | |
| 8FreonHi_00023 | Amount Added: | 0.00 | Units: uL | |
| VOA6IS/SURR_00038 | Amount Added: | 5.00 | Units: uL | Run Reagent |

Report Date: 05-Sep-2020 11:27:22 Chrom Revision: 2.3 20-Aug-2020 13:57:12

Eurofins TestAmerica, Edison

Data File: \\chromfs\Edison\ChromData\CVOAMS15\20200904-116301.b\T38694.D

Injection Date: 04-Sep-2020 12:13:58 Instrument ID: CVOAMS15

Lims ID: STD8

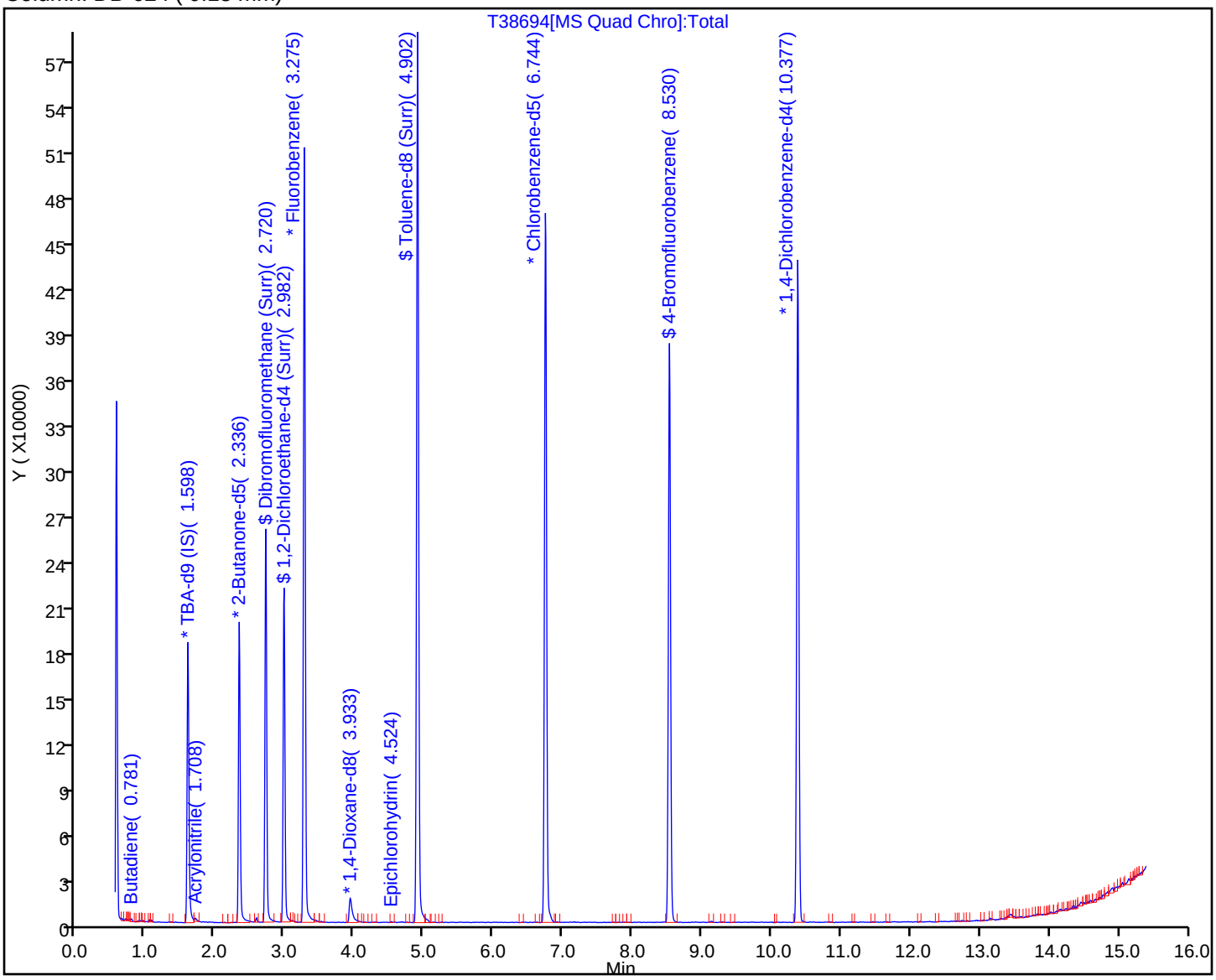
Client ID:

Operator ID: ALS Bottle#: 0 Worklist Smp#: 3

Purge Vol: 5.000 mL Dil. Factor: 1.0000

Method: 8260W_15 Limit Group: VOA - 8260C Water and Solid

Column: DB-624 ( 0.18 mm)



Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Edison

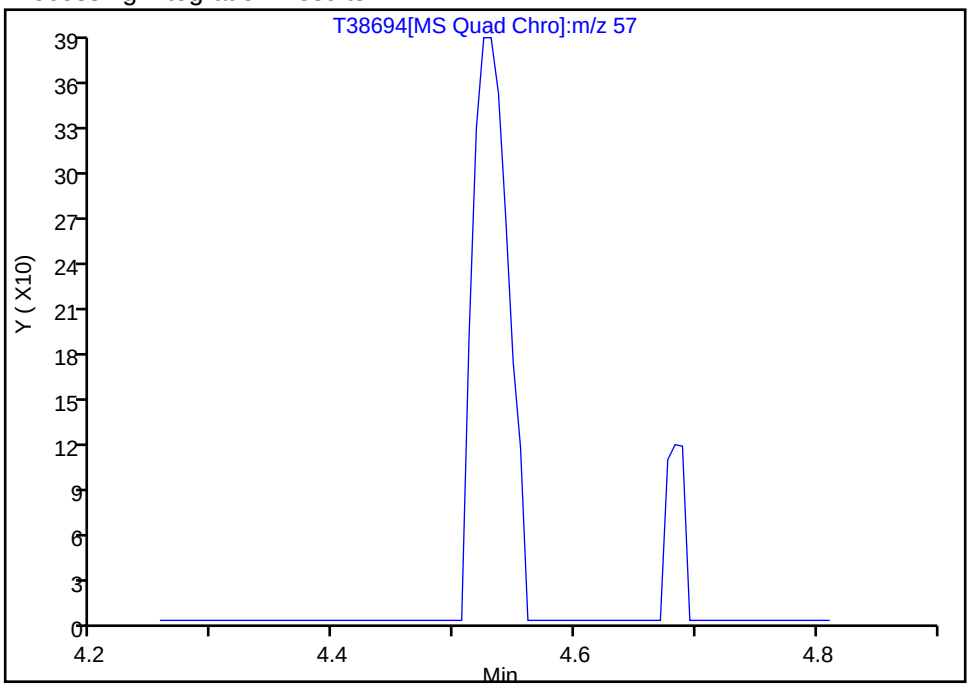
Data File: \\chromfs\Edison\ChromData\CVOAMS15\20200904-116301.b\T38694.D
Injection Date: 04-Sep-2020 12:13:58 Instrument ID: CVOAMS15
Lims ID: STD8
Client ID:
Operator ID: ALS Bottle#: 0 Worklist Smp#: 3
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: 8260W_15 Limit Group: VOA - 8260C Water and Solid
Column: DB-624 ( 0.18 mm) Detector MS Quad

## 80 Epichlorohydrin, CAS: 106-89-8

Signal: 1

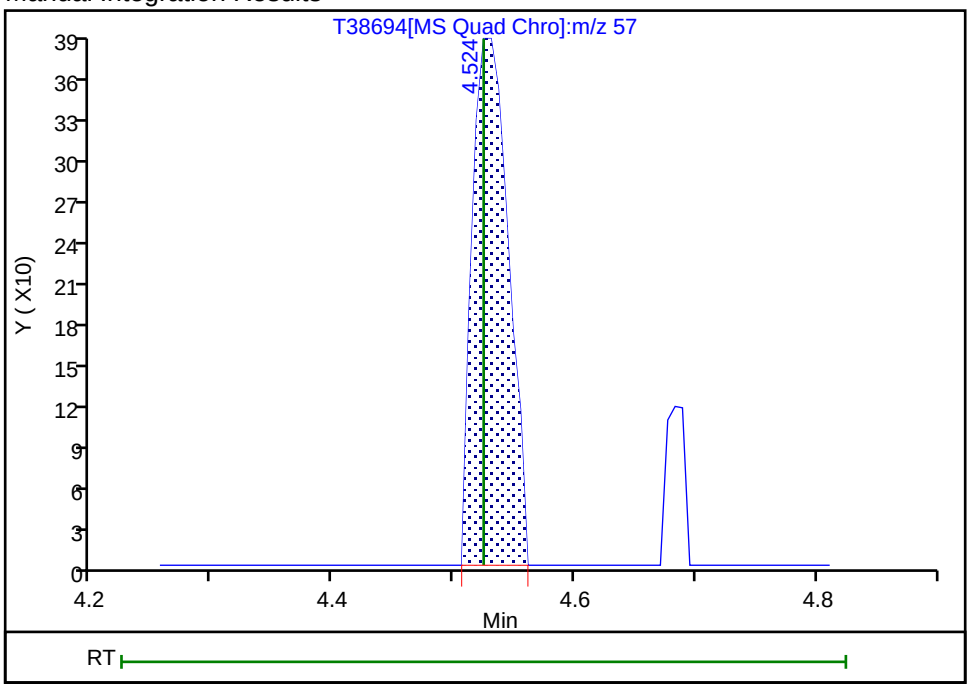
Not Detected
Expected RT: 4.52

Processing Integration Results




Manual Integration Results

RT: 4.52
Area: 804
Amount: 4.124419
Amount Units: ug/l




Reviewer: delpolitov, 04-Sep-2020 16:53:07
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

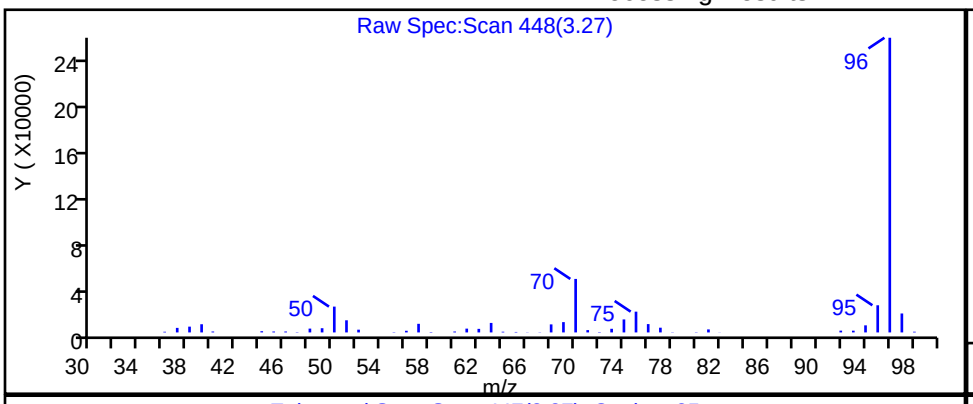
User Disabled Compound Report

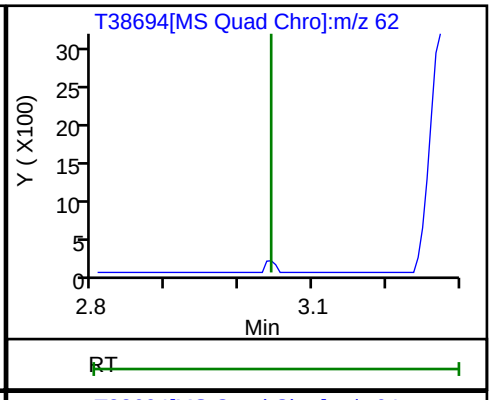
Eurofins TestAmerica, Edison

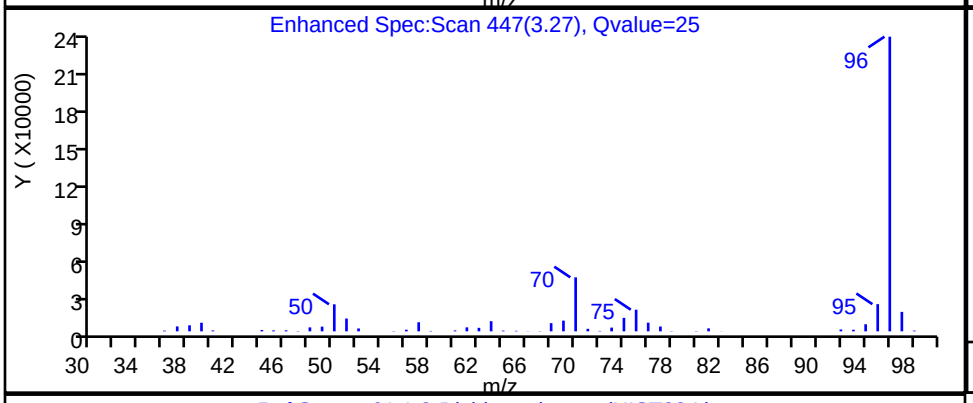
Data File: \\chromfs\Edison\ChromData\CVOAMS15\20200904-116301.b\T38694.D
Injection Date: 04-Sep-2020 12:13:58 Instrument ID: CVOAMS15
Lims ID: STD8
Client ID:
Operator ID: ALS Bottle#: 0 Worklist Smp#: 3
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: 8260W_15 Limit Group: VOA - 8260C Water and Solid
Column: DB-624 ( 0.18 mm) Detector MS Quad

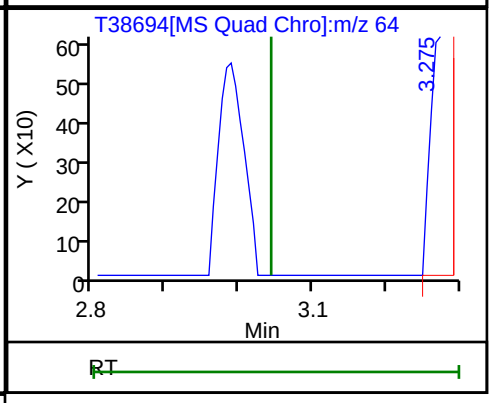
## 61 1,2-Dichloroethane, CAS: 107-06-2

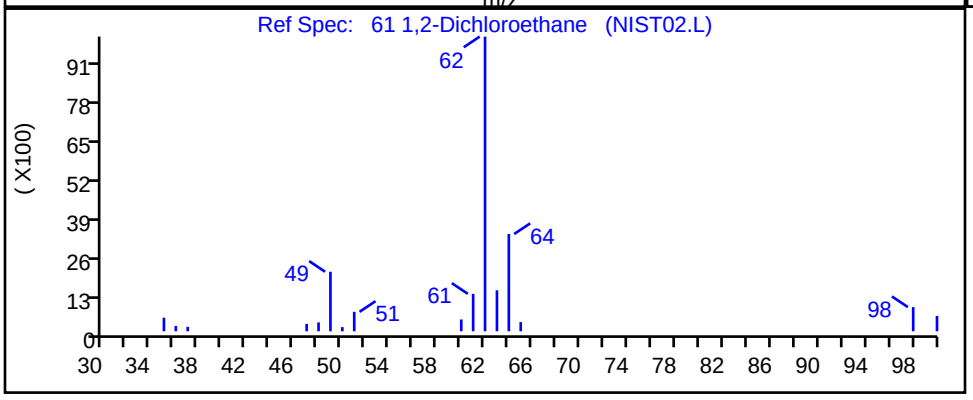
Processing Results




| RT | Mass | Response | Amount |
|---|---|---|---|
| 3.27 | 62.00 | 5756 | 1.787485 |
| 3.27 | 64.00 | 936 | |

Reviewer: delpolitov, 04-Sep-2020 16:52:48
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

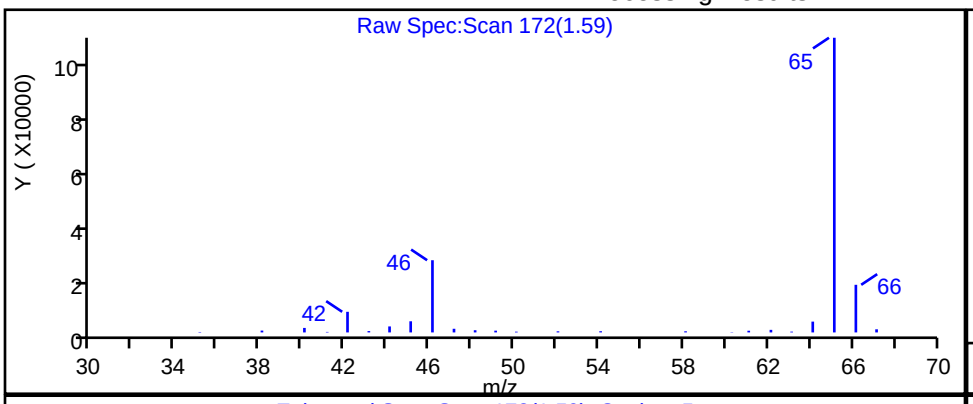
User Disabled Compound Report

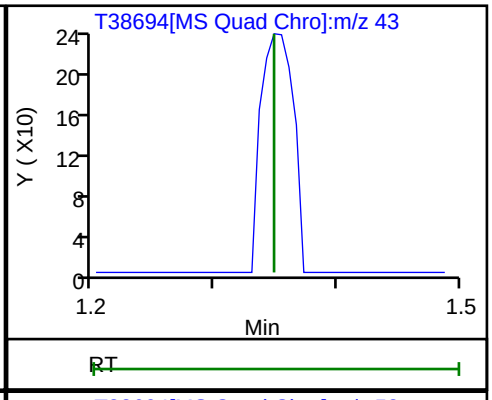
Eurofins TestAmerica, Edison

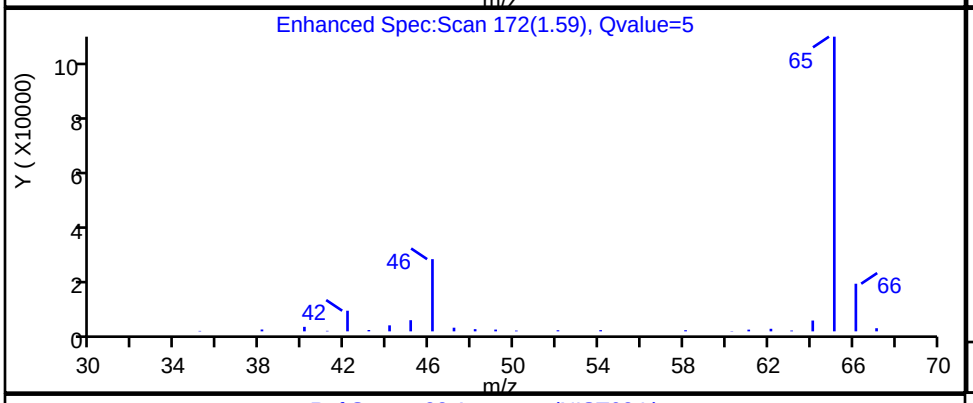
Data File: \\chromfs\Edison\ChromData\CVOAMS15\20200904-116301.b\T38694.D
Injection Date: 04-Sep-2020 12:13:58 Instrument ID: CVOAMS15
Lims ID: STD8
Client ID:
Operator ID: ALS Bottle#: 0 Worklist Smp#: 3
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: 8260W_15 Limit Group: VOA - 8260C Water and Solid
Column: DB-624 ( 0.18 mm) Detector MS Quad

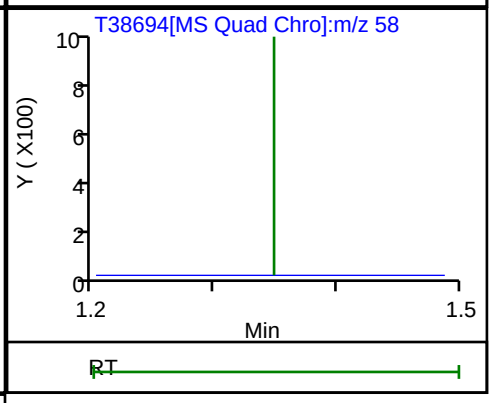
## 22 Acetone, CAS: 67-64-1

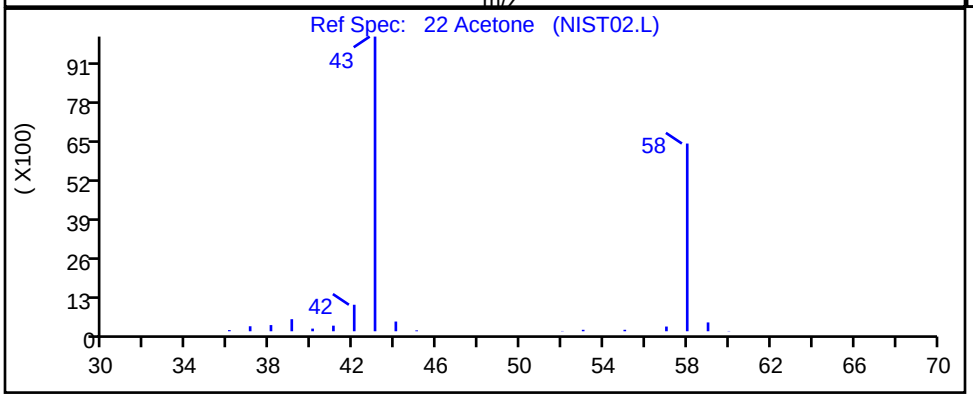
Processing Results




| RT | Mass | Response | Amount |
|---|---|---|---|
| 1.59 | 43.00 | 788 | 1.351608 |
| 1.59 | 58.00 | 654 | |

Reviewer: delpolitov, 04-Sep-2020 16:52:40
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

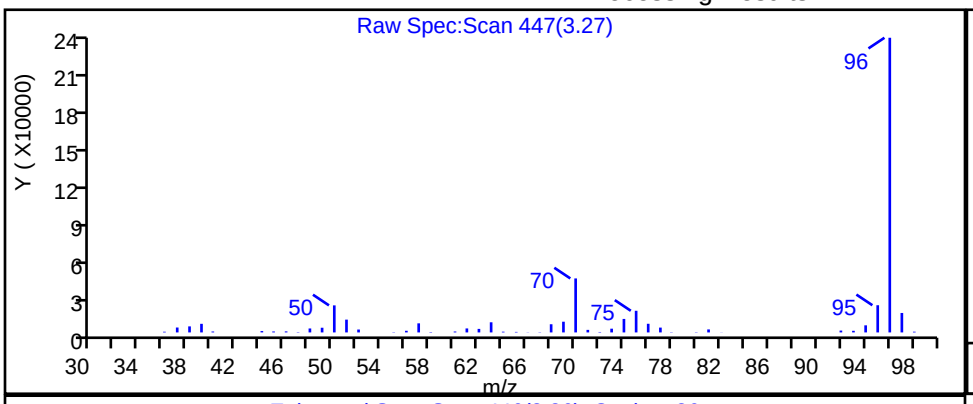
User Disabled Compound Report

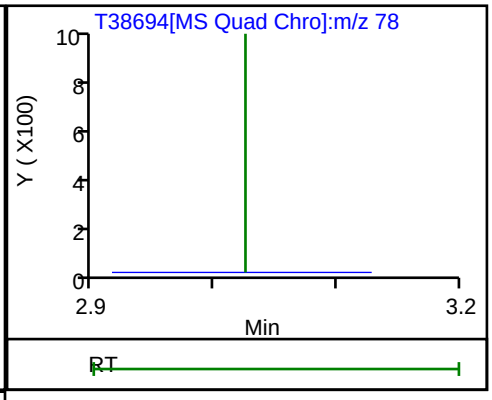
Eurofins TestAmerica, Edison

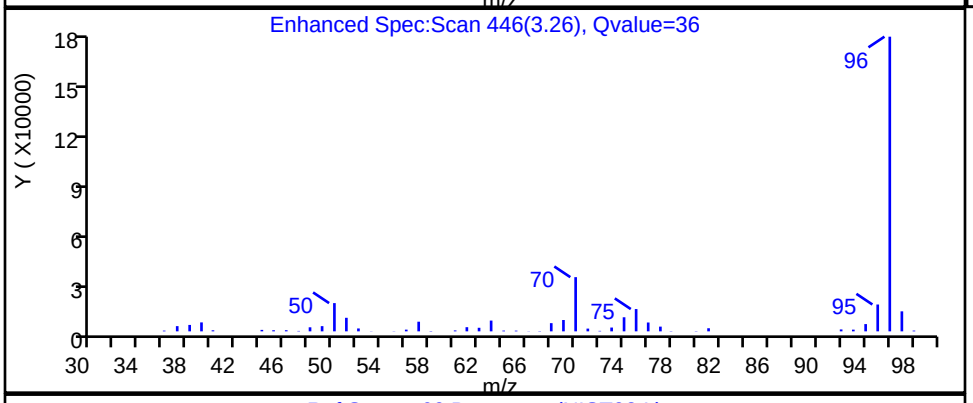
Data File: \\chromfs\Edison\ChromData\CVOAMS15\20200904-116301.b\T38694.D
Injection Date: 04-Sep-2020 12:13:58 Instrument ID: CVOAMS15
Lims ID: STD8
Client ID:
Operator ID: ALS Bottle#: 0 Worklist Smp#: 3
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: 8260W_15 Limit Group: VOA - 8260C Water and Solid
Column: DB-624 ( 0.18 mm) Detector MS Quad

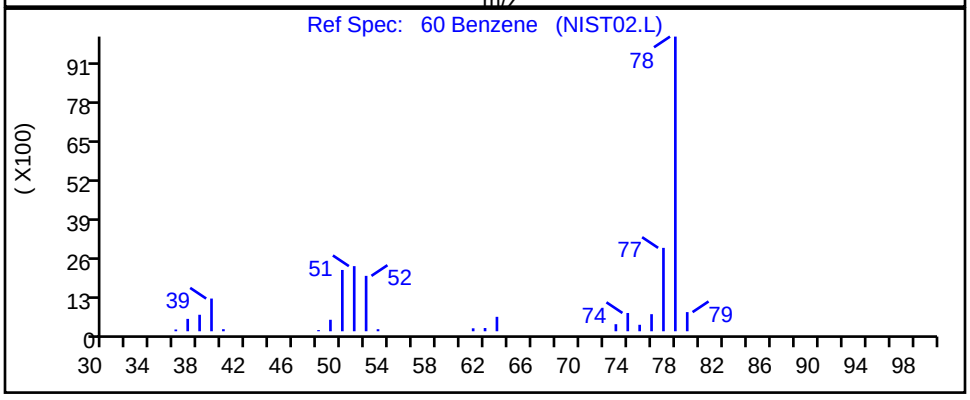
## 60 Benzene, CAS: 71-43-2

Processing Results




| RT | Mass | Response | Amount |
|---|---|---|---|
| 3.27 | 78.00 | 313 | 0.031498 |

Reviewer: delpolitov, 04-Sep-2020 16:52:47
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

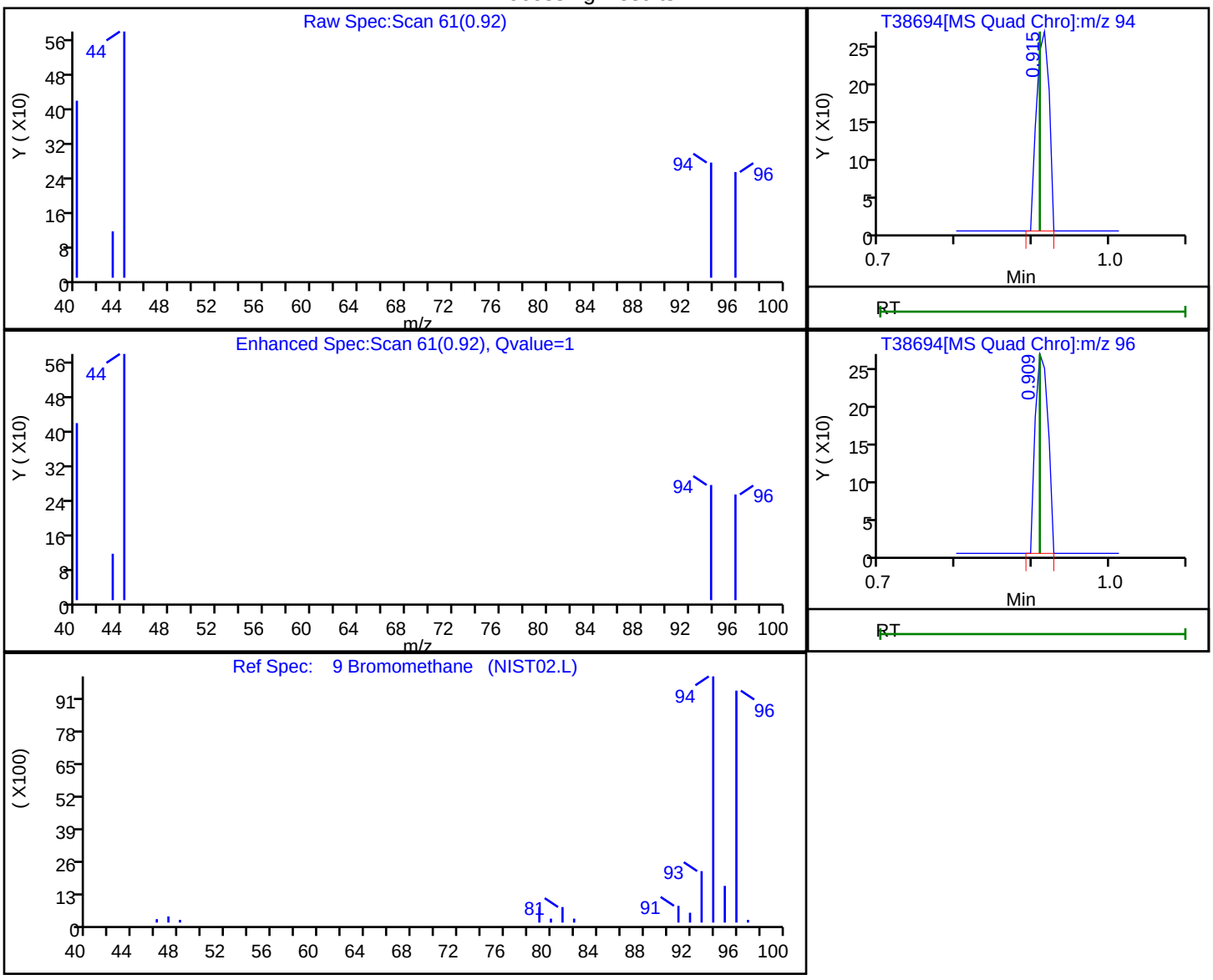
User Disabled Compound Report

Eurofins TestAmerica, Edison

Data File: \\chromfs\Edison\ChromData\CVOAMS15\20200904-116301.b\T38694.D
Injection Date: 04-Sep-2020 12:13:58 Instrument ID: CVOAMS15
Lims ID: STD8
Client ID:
Operator ID: ALS Bottle#: 0 Worklist Smp#: 3
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: 8260W_15 Limit Group: VOA - 8260C Water and Solid
Column: DB-624 ( 0.18 mm) Detector MS Quad

## 9 Bromomethane, CAS: 74-83-9

Processing Results




| RT | Mass | Response | Amount |
|---|---|---|---|
| 0.92 | 94.00 | 306 | 0.212820 |
| 0.91 | 96.00 | 308 | |

Reviewer: delpolitov, 04-Sep-2020 16:52:37
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

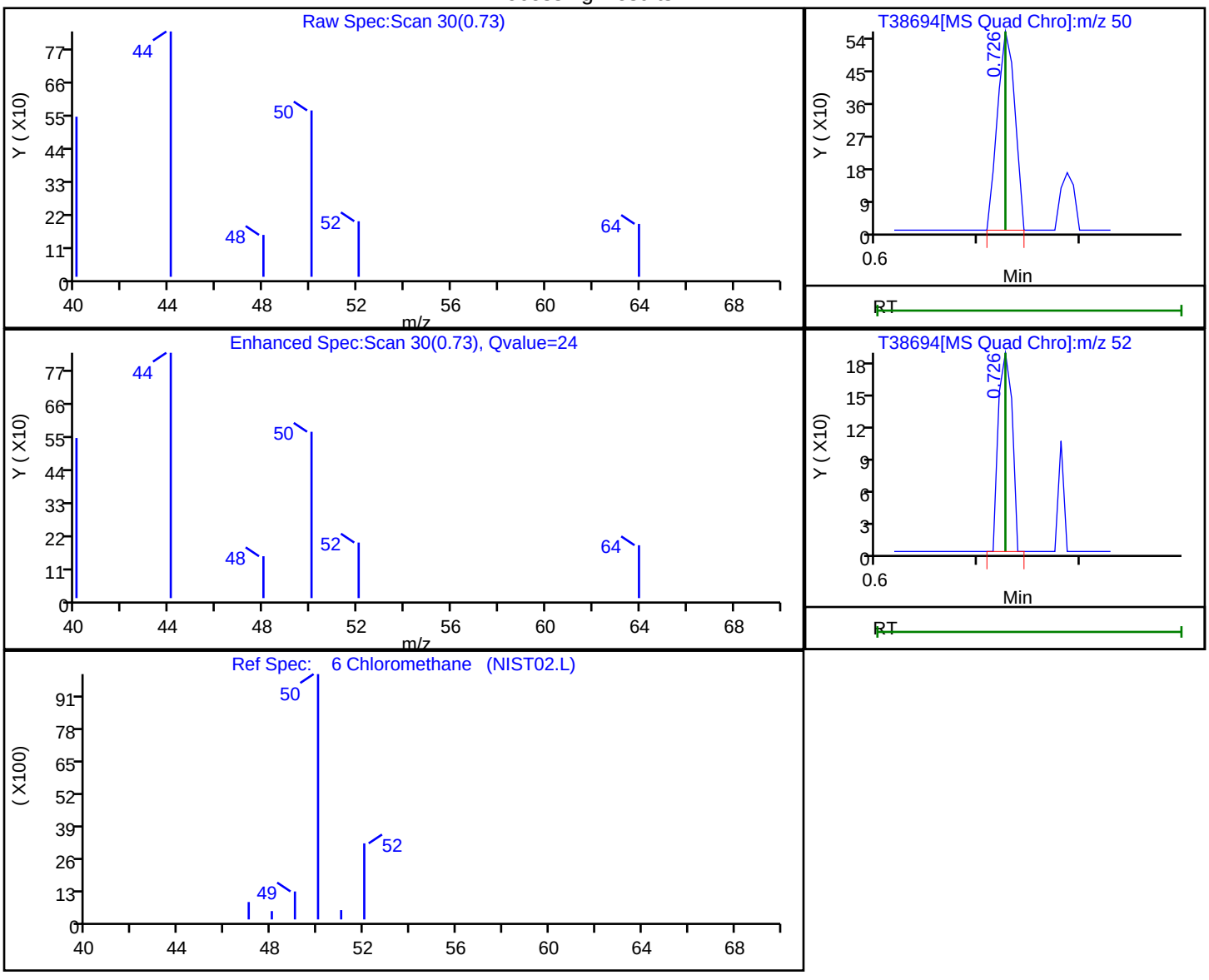
User Disabled Compound Report

Eurofins TestAmerica, Edison

Data File: \\chromfs\Edison\ChromData\CVOAMS15\20200904-116301.b\T38694.D
Injection Date: 04-Sep-2020 12:13:58 Instrument ID: CVOAMS15
Lims ID: STD8
Client ID:
Operator ID: ALS Bottle#: 0 Worklist Smp#: 3
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: 8260W_15 Limit Group: VOA - 8260C Water and Solid
Column: DB-624 ( 0.18 mm) Detector MS Quad

## 6 Chloromethane, CAS: 74-87-3

Processing Results




| RT | Mass | Response | Amount |
|---|---|---|---|
| 0.73 | 50.00 | 667 | 0.327413 |
| 0.73 | 52.00 | 176 | |

Reviewer: delpolitov, 04-Sep-2020 16:52:37
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

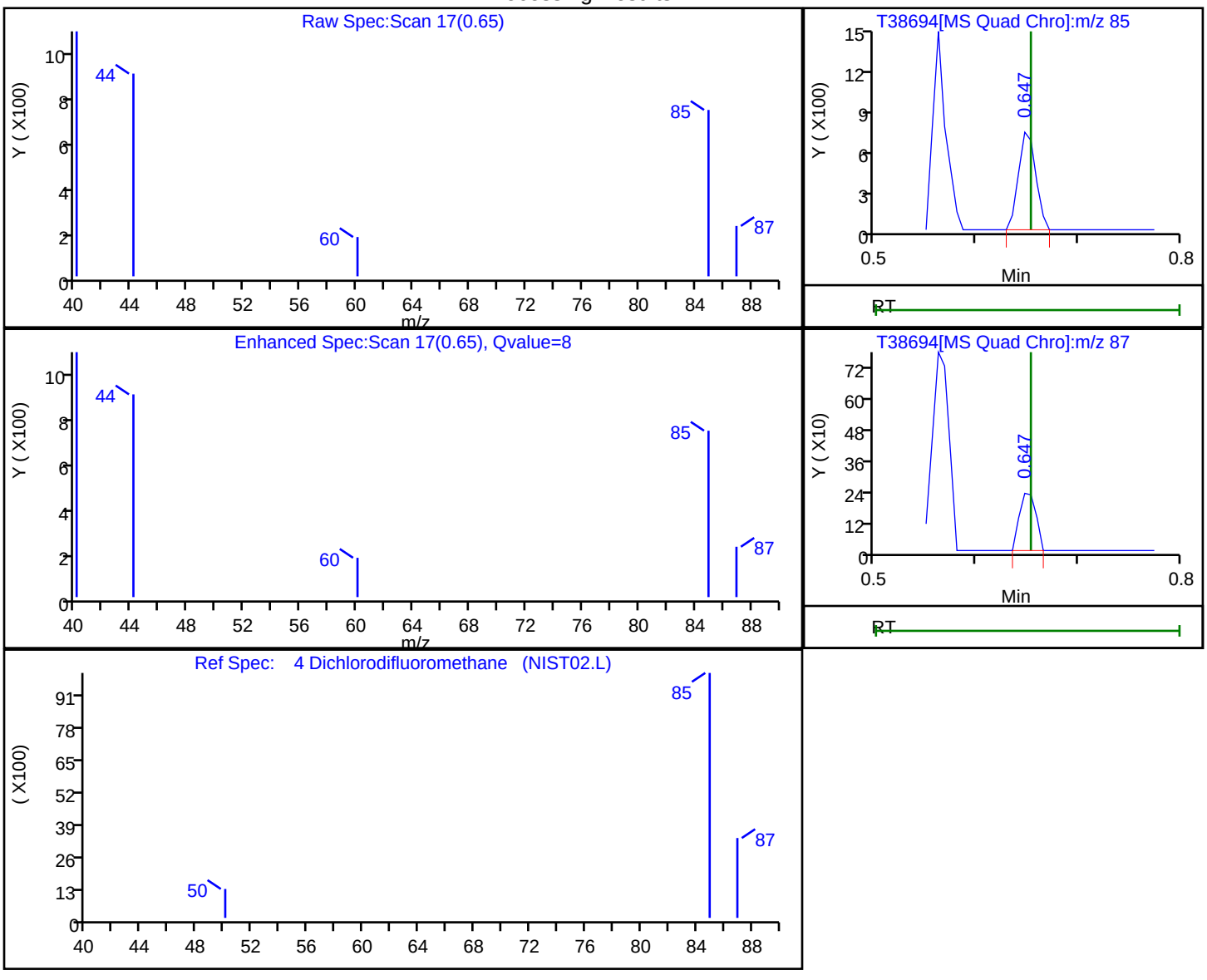
User Disabled Compound Report

Eurofins TestAmerica, Edison

Data File: \\chromfs\Edison\ChromData\CVOAMS15\20200904-116301.b\T38694.D
Injection Date: 04-Sep-2020 12:13:58 Instrument ID: CVOAMS15
Lims ID: STD8
Client ID:
Operator ID: ALS Bottle#: 0 Worklist Smp#: 3
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: 8260W_15 Limit Group: VOA - 8260C Water and Solid
Column: DB-624 ( 0.18 mm) Detector MS Quad

## 4 Dichlorodifluoromethane, CAS: 75-71-8

Processing Results




| RT | Mass | Response | Amount |
|---|---|---|---|
| 0.65 | 85.00 | 880 | 0.248732 |
| 0.65 | 87.00 | 254 | |

Reviewer: delpolitov, 04-Sep-2020 16:52:37
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

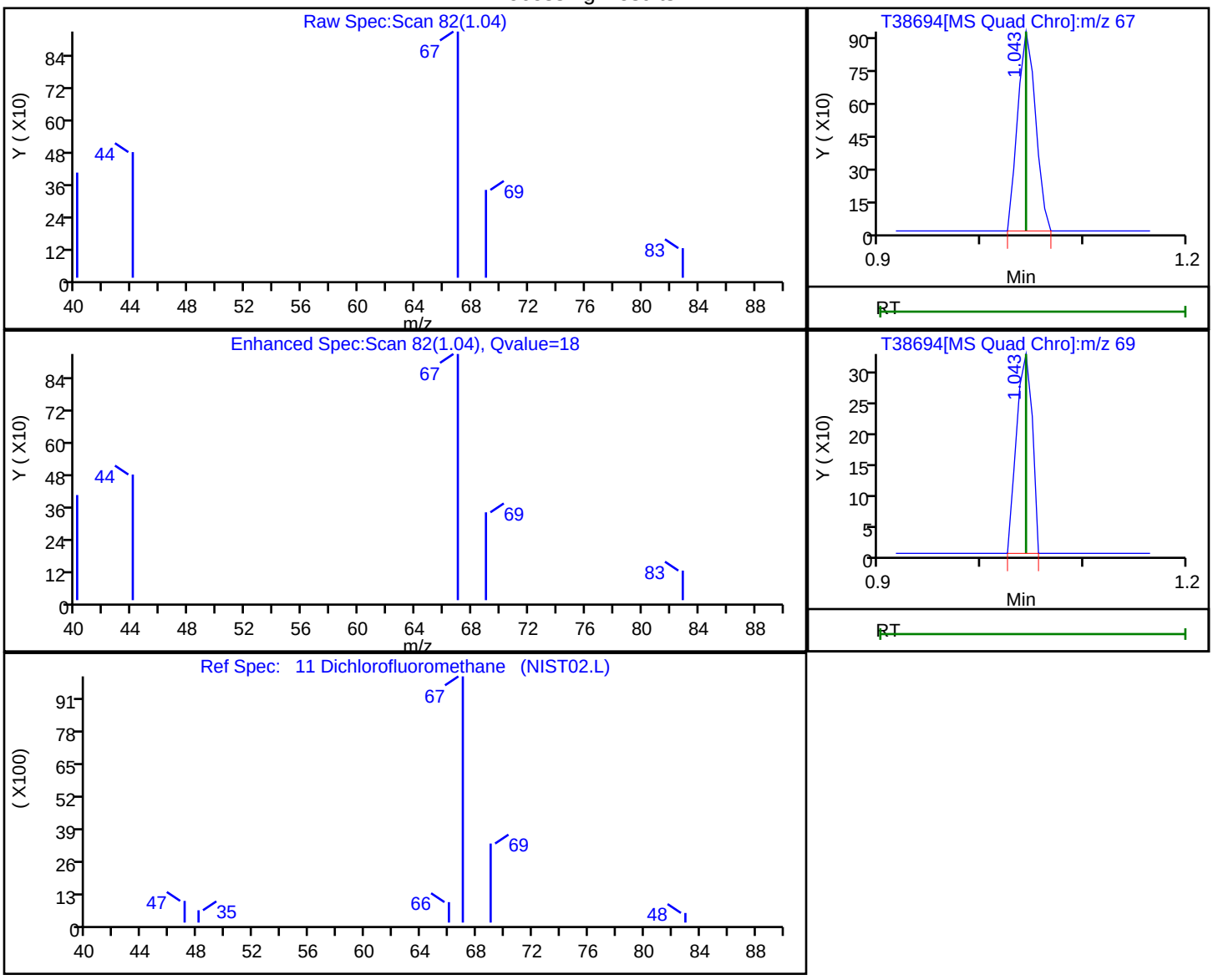
User Disabled Compound Report

Eurofins TestAmerica, Edison

Data File: \\chromfs\Edison\ChromData\CVOAMS15\20200904-116301.b\T38694.D
Injection Date: 04-Sep-2020 12:13:58 Instrument ID: CVOAMS15
Lims ID: STD8
Client ID:
Operator ID: ALS Bottle#: 0 Worklist Smp#: 3
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: 8260W_15 Limit Group: VOA - 8260C Water and Solid
Column: DB-624 ( 0.18 mm) Detector MS Quad

## 11 Dichlorofluoromethane, CAS: 75-43-4

Processing Results




| RT | Mass | Response | Amount |
|---|---|---|---|
| 1.04 | 67.00 | 1130 | 0.271210 |
| 1.04 | 69.00 | 354 | |

Reviewer: delpolitov, 04-Sep-2020 16:52:37
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

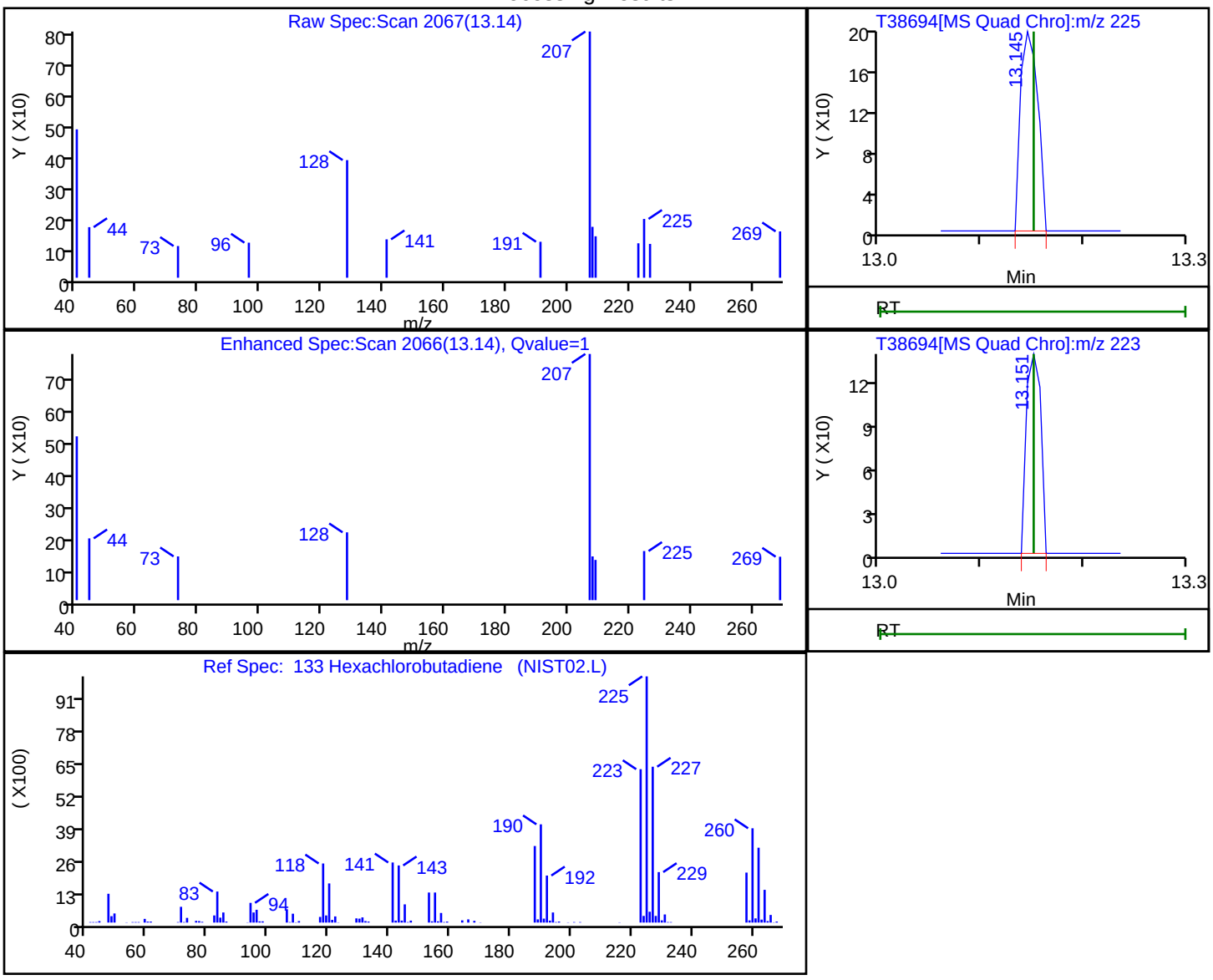
User Disabled Compound Report

Eurofins TestAmerica, Edison

Data File: \\chromfs\Edison\ChromData\CVOAMS15\20200904-116301.b\T38694.D
Injection Date: 04-Sep-2020 12:13:58 Instrument ID: CVOAMS15
Lims ID: STD8
Client ID:
Operator ID: ALS Bottle#: 0 Worklist Smp#: 3
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: 8260W_15 Limit Group: VOA - 8260C Water and Solid
Column: DB-624 ( 0.18 mm) Detector MS Quad

## 133 Hexachlorobutadiene, CAS: 87-68-3

Processing Results




| RT | Mass | Response | Amount |
|---|---|---|---|
| 13.14 | 225.00 | 227 | 0.247741 |
| 13.15 | 223.00 | 130 | |

Reviewer: delpolitov, 04-Sep-2020 16:52:56
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

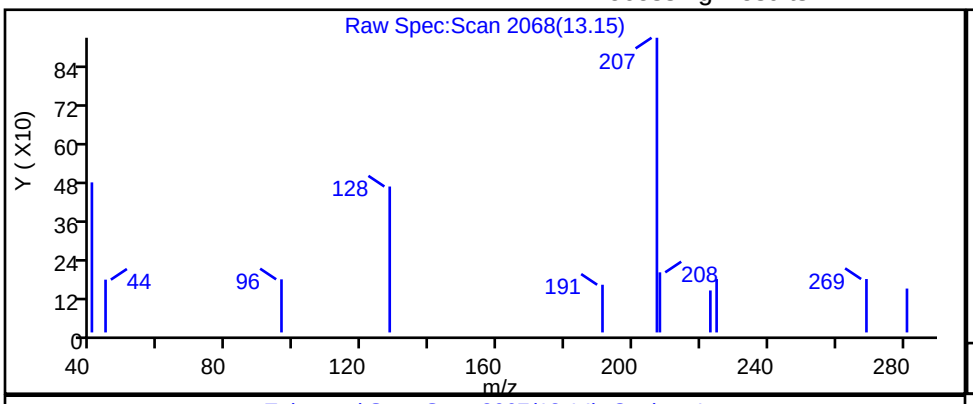
User Disabled Compound Report

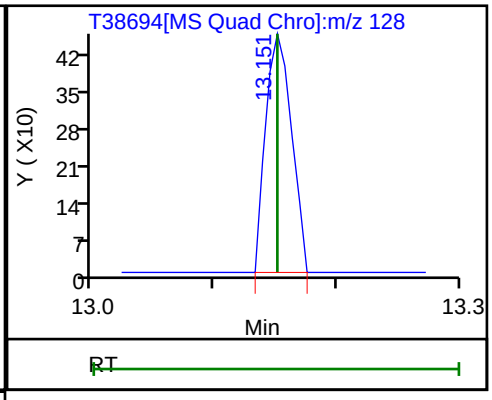
Eurofins TestAmerica, Edison

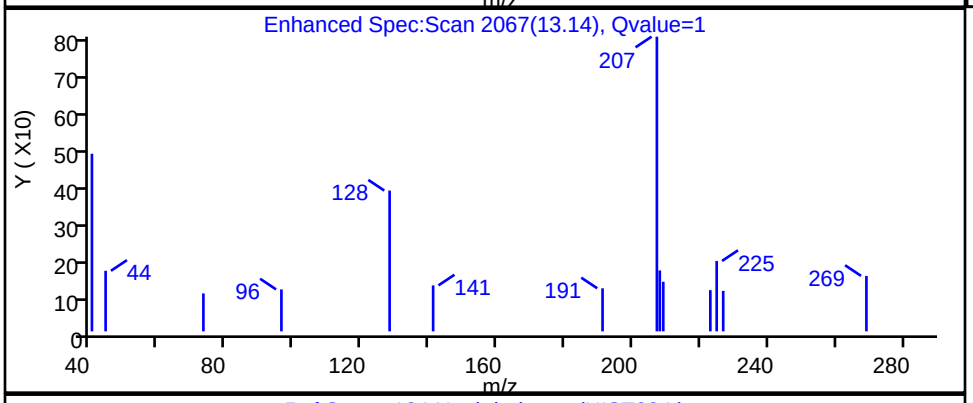
Data File: \\chromfs\Edison\ChromData\CVOAMS15\20200904-116301.b\T38694.D
Injection Date: 04-Sep-2020 12:13:58 Instrument ID: CVOAMS15
Lims ID: STD8
Client ID:
Operator ID: ALS Bottle#: 0 Worklist Smp#: 3
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: 8260W_15 Limit Group: VOA - 8260C Water and Solid
Column: DB-624 ( 0.18 mm) Detector MS Quad

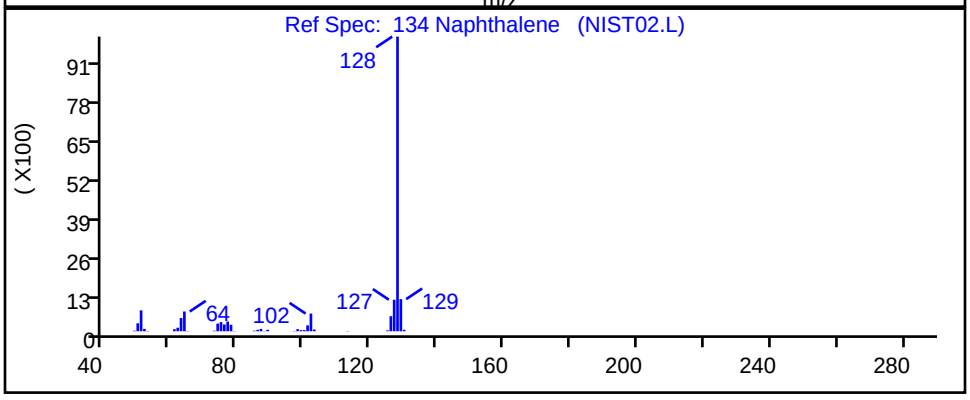
## 134 Naphthalene, CAS: 91-20-3

Processing Results




| RT | Mass | Response | Amount |
|---|---|---|---|
| 13.15 | 128.00 | 677 | 0.135664 |

Reviewer: delpolitov, 04-Sep-2020 16:52:57
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

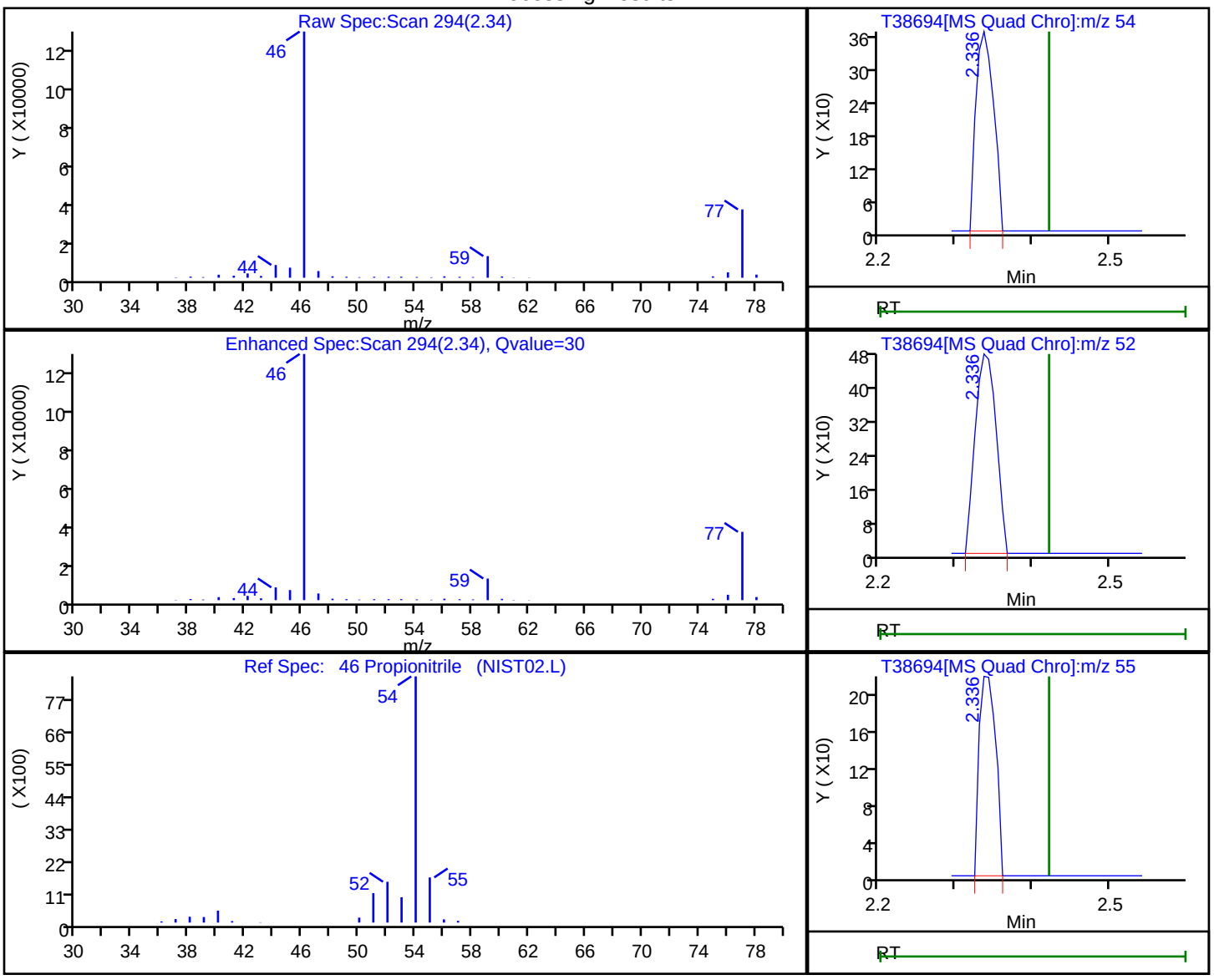
User Disabled Compound Report

Eurofins TestAmerica, Edison

Data File: \\chromfs\Edison\ChromData\CVOAMS15\20200904-116301.b\T38694.D
Injection Date: 04-Sep-2020 12:13:58 Instrument ID: CVOAMS15
Lims ID: STD8
Client ID:
Operator ID: ALS Bottle#: 0 Worklist Smp#: 3
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: 8260W_15 Limit Group: VOA - 8260C Water and Solid
Column: DB-624 ( 0.18 mm) Detector MS Quad

## 46 Propionitrile, CAS: 107-12-0

Processing Results




| RT | Mass | Response | Amount |
|---|---|---|---|
| 2.34 | 54.00 | 580 | 2.916037 |
| 2.34 | 52.00 | 913 | |
| 2.34 | 55.00 | 318 | |

Reviewer: delpolitov, 04-Sep-2020 16:52:45
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

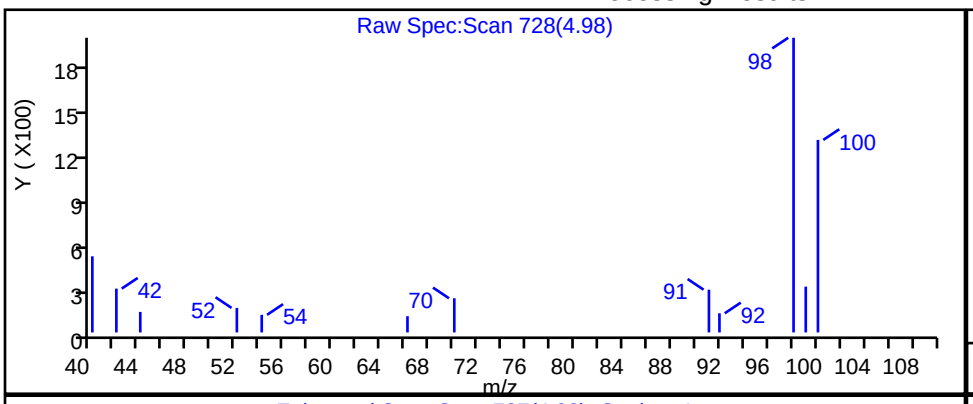
User Disabled Compound Report

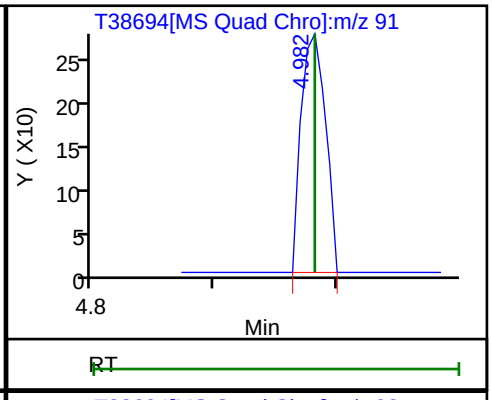
Eurofins TestAmerica, Edison

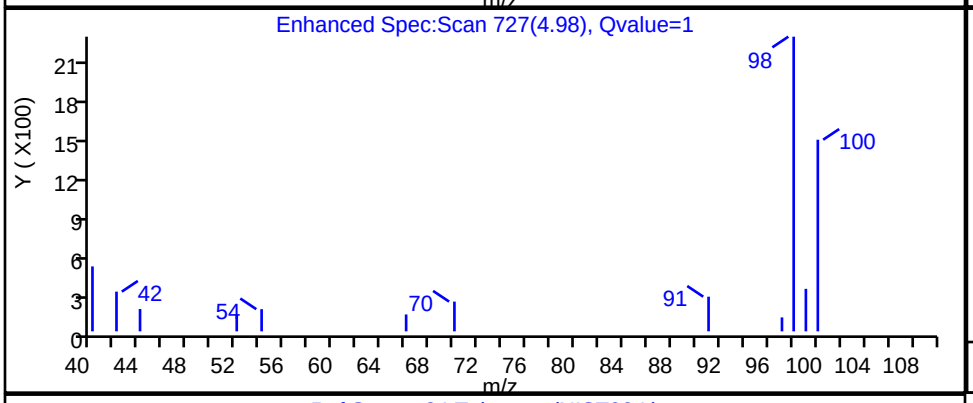
Data File: \\chromfs\Edison\ChromData\CVOAMS15\20200904-116301.b\T38694.D
Injection Date: 04-Sep-2020 12:13:58 Instrument ID: CVOAMS15
Lims ID: STD8
Client ID:
Operator ID: ALS Bottle#: 0 Worklist Smp#: 3
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: 8260W_15 Limit Group: VOA - 8260C Water and Solid
Column: DB-624 ( 0.18 mm) Detector MS Quad

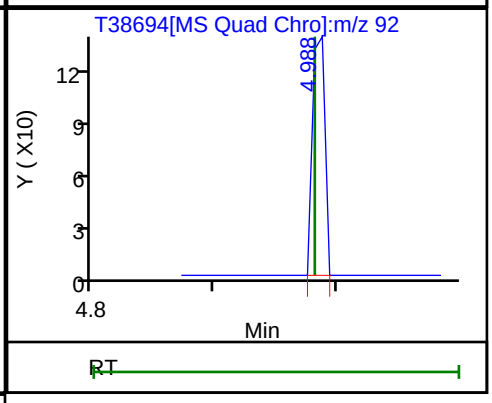
## 84 Toluene, CAS: 108-88-3

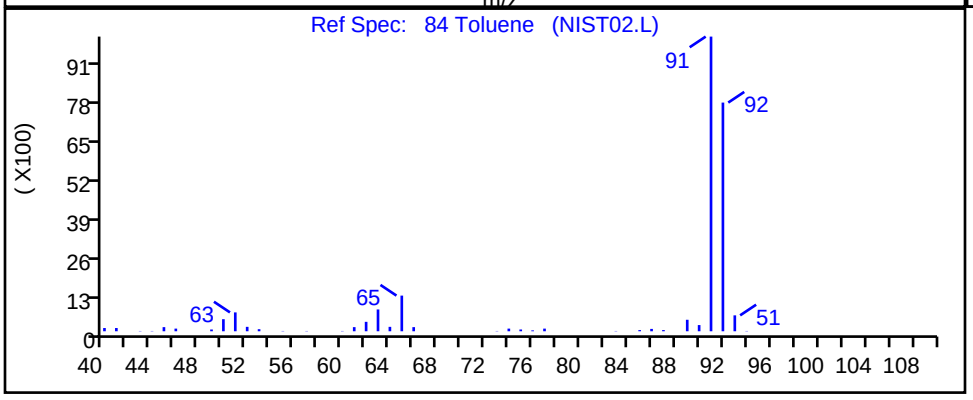
Processing Results




| RT | Mass | Response | Amount |
|---|---|---|---|
| 4.98 | 91.00 | 387 | 0.035546 |
| 4.99 | 92.00 | 94 | |

Reviewer: delpolitov, 04-Sep-2020 16:52:49
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

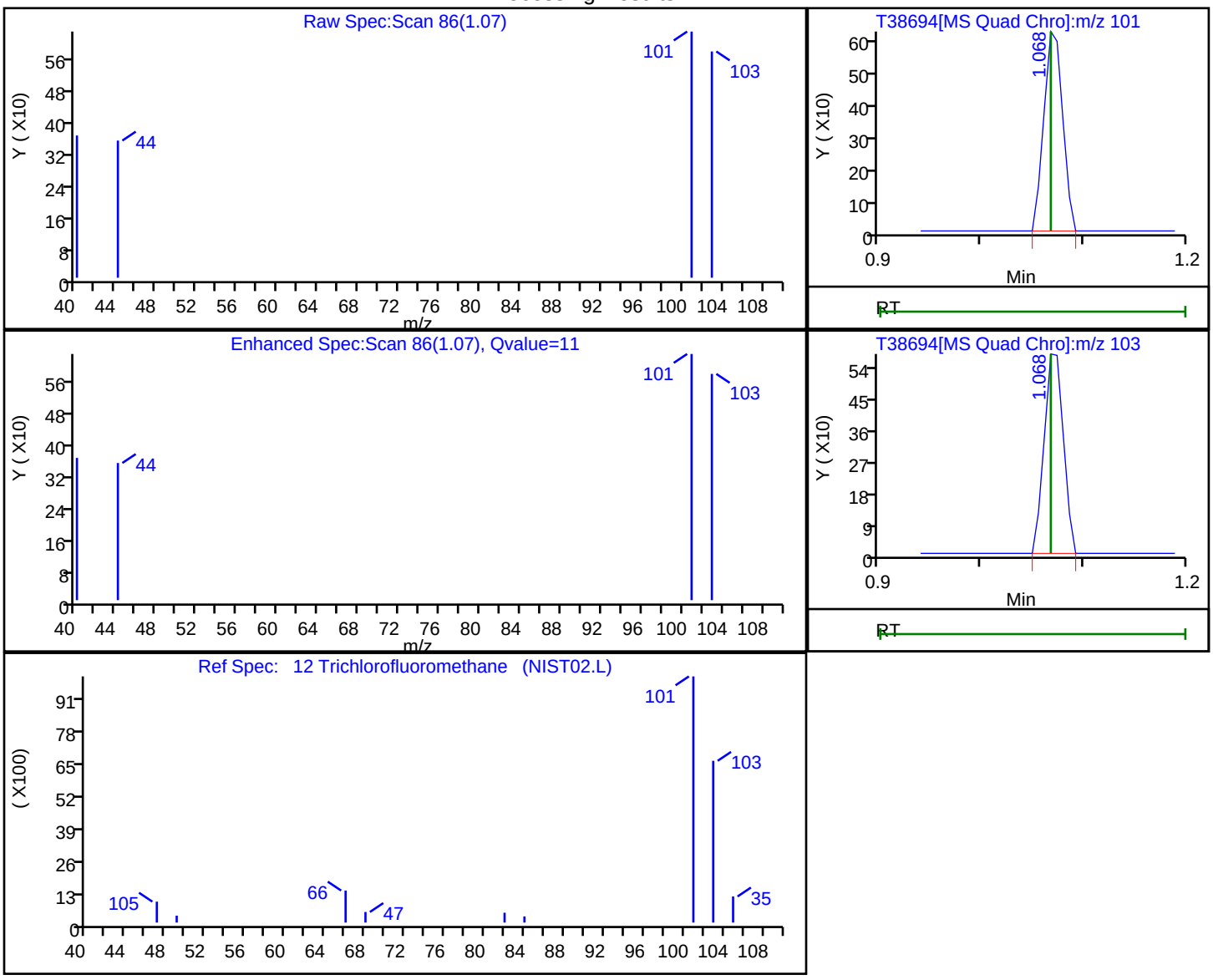
User Disabled Compound Report

Eurofins TestAmerica, Edison

Data File: \\chromfs\Edison\ChromData\CVOAMS15\20200904-116301.b\T38694.D
Injection Date: 04-Sep-2020 12:13:58 Instrument ID: CVOAMS15
Lims ID: STD8
Client ID:
Operator ID: ALS Bottle#: 0 Worklist Smp#: 3
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: 8260W_15 Limit Group: VOA - 8260C Water and Solid
Column: DB-624 ( 0.18 mm) Detector MS Quad

## 12 Trichlorofluoromethane, CAS: 75-69-4

Processing Results




| RT | Mass | Response | Amount |
|---|---|---|---|
| 1.07 | 101.00 | 810 | 0.199883 |
| 1.07 | 103.00 | 761 | |

Reviewer: delpolitov, 04-Sep-2020 16:52:37
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

Eurofins TestAmerica, Edison
Target Compound Quantitation Report

Data File: \\chromfs\Edison\ChromData\CVOAMS15\20200904-116301.b\T38695.D
Lims ID: STD05
Client ID:
Sample Type: IC Calib Level: 1
Inject. Date: 04-Sep-2020 12:37:54 ALS Bottle#: 0 Worklist Smp#: 4
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: STD05
Misc. Info.: 460-0116301-004
Operator ID: Instrument ID: CVOAMS15
Sublist: chrom-8260W_15*sub18

Method: \\chromfs\Edison\ChromData\CVOAMS15\20200904-116301.b\8260W_15.m
Limit Group: VOA - 8260C Water and Solid
Last Update: 05-Sep-2020 11:27:27 Calib Date: 04-Sep-2020 15:01:54
Integrator: RTE ID Type: RT Order ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Edison\ChromData\CVOAMS15\20200904-116301.b\T38701.D

Column 1 : DB-624 ( 0.18 mm) Det: MS Quad
Process Host: CTX1014

First Level Reviewer: starzecm Date: 04-Sep-2020 13:04:22

| Compound | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q | Response | Cal Amt ug/l | OnCol Amt ug/l | Flags |
|---|---|---|---|---|---|---|---|---|---|
| 2 1,1-Difluoroethane | 65 | 0.641 | 0.635 | 0.006 | 63 | 530 | 0.5000 | 0.4576 | |
| 3 Chlorotrifluoroethene | 116 | 0.635 | 0.635 | 0.000 | 1 | 265 | 0.5000 | 0.4675 | a |
| 4 Dichlorodifluoromethane | 85 | 0.647 | 0.653 | -0.006 | 73 | 1449 | 0.5000 | 0.4060 | |
| 5 Chlorodifluoromethane | 67 | 0.653 | 0.659 | -0.006 | 54 | 243 | 0.5000 | 0.5155 | |
| 6 Chloromethane | 50 | 0.726 | 0.726 | 0.000 | 38 | 983 | 0.5000 | 0.5009 | |
| 7 Vinyl chloride | 62 | 0.769 | 0.769 | 0.000 | 31 | 1243 | 0.5000 | 0.4702 | |
| 8 Butadiene | 54 | 0.787 | 0.787 | 0.000 | 74 | 1043 | 0.5000 | 0.4692 | |
| 9 Bromomethane | 94 | 0.909 | 0.909 | 0.000 | 54 | 637 | 0.5000 | 0.4464 | |
| 10 Chloroethane | 64 | 0.958 | 0.952 | 0.006 | 41 | 868 | 0.5000 | 0.5163 | |
| 11 Dichlorofluoromethane | 67 | 1.043 | 1.043 | 0.000 | 40 | 2130 | 0.5000 | 0.5134 | |
| 12 Trichlorofluoromethane | 101 | 1.068 | 1.068 | 0.000 | 70 | 1869 | 0.5000 | 0.4448 | |
| 13 Pentane | 72 | 1.104 | 1.110 | -0.006 | 83 | 236 | 1.00 | 0.6377 | |
| 14 Ethanol | 45 | 1.177 | 1.171 | 0.006 | 12 | 515 | 20.0 | 48.7 | a |
| 15 Ethyl ether | 59 | 1.208 | 1.208 | 0.000 | 43 | 771 | 0.5000 | 0.4630 | |
| 16 1,2-Dichloro-1,1,2-trifluoroetha | 117 | 1.214 | 1.214 | 0.000 | 27 | 1077 | 0.5000 | 0.4422 | |
| 17 2-Methyl-1,3-butadiene | 53 | 1.214 | 1.214 | 0.000 | 40 | 792 | 0.5000 | 0.4230 | |
| 18 1,1,1-Trifluoro-2,2-dichloroetha | 83 | 1.244 | 1.244 | 0.000 | 24 | 1590 | 0.5000 | 0.4378 | |
| 19 Acrolein | 56 | 1.269 | 1.269 | 0.000 | 10 | 418 | 2.00 | 1.65 | |
| 20 1,1-Dichloroethene | 96 | 1.318 | 1.318 | 0.000 | 56 | 1193 | 0.5000 | 0.5085 | |
| 21 1,1,2-Trichloro-1,2,2-trifluoroe | 101 | 1.324 | 1.318 | 0.006 | 48 | 1033 | 0.5000 | 0.4078 | |
| 22 Acetone | 43 | 1.348 | 1.348 | 0.000 | 65 | 1594 | 2.50 | 2.63 | |
| 23 Iodomethane | 142 | 1.391 | 1.391 | 0.000 | 1 | 144 | 0.5000 | 0.1111 | a |
| 24 Carbon disulfide | 76 | 1.421 | 1.421 | 0.000 | 92 | 3871 | 0.5000 | 0.5128 | |
| 25 Isopropyl alcohol | 45 | 1.427 | 1.427 | 0.000 | 1 | 542 | 5.00 | 4.96 | a |
| 26 Acetonitrile | 40 | 1.494 | 1.494 | 0.000 | 85 | 867 | 5.00 | 6.59 | |
| 27 3-Chloro-1-propene | 76 | 1.500 | 1.501 | -0.001 | 57 | 706 | 0.5000 | 0.4679 | |
| 28 Methyl acetate | 43 | 1.519 | 1.519 | 0.000 | 67 | 1409 | 1.00 | 1.09 | |
| 29 Cyclopentene | 67 | 1.543 | 1.543 | 0.000 | 71 | 2235 | 0.5000 | 0.4210 | |
| 30 Methylene Chloride | 84 | 1.568 | 1.568 | 0.000 | 47 | 1332 | 0.5000 | 0.5159 | |
| * 31 TBA-d9 (IS) | 66 | 1.598 | 1.598 | 0.000 | 93 | 36325 | 1000.0 | 1000.0 | |

| Compound | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q | Response | Cal Amt ug/l | OnCol Amt ug/l | Flags |
|---|---|---|---|---|---|---|---|---|---|
| 32 2-Methyl-2-propanol | 59 | 1.647 | 1.647 | 0.000 | 1 | 1263 | 5.00 | 5.61 | a |
| 33 Acrylonitrile | 53 | 1.708 | 1.708 | 0.000 | 88 | 3287 | 5.00 | 4.81 | |
| 34 trans-1,2-Dichloroethene | 96 | 1.720 | 1.720 | 0.000 | 45 | 1159 | 0.5000 | 0.4430 | |
| 35 Methyl tert-butyl ether | 73 | 1.726 | 1.732 | -0.006 | 77 | 3125 | 0.5000 | 0.4789 | |
| 36 Hexane | 57 | 1.891 | 1.891 | 0.000 | 74 | 941 | 0.5000 | 0.3541 | |
| 37 1,1-Dichloroethane | 63 | 1.970 | 1.970 | 0.000 | 47 | 2141 | 0.5000 | 0.5051 | |
| 38 Vinyl acetate | 86 | 2.019 | 2.019 | 0.000 | 98 | 344 | 1.00 | 0.7345 | |
| 39 2-Chloro-1,3-butadiene | 88 | 2.031 | 2.031 | 0.000 | 22 | 1162 | 0.5000 | 0.4785 | |
| 40 Isopropyl ether | 45 | 2.031 | 2.031 | 0.000 | 65 | 2945 | 0.5000 | 0.4872 | |
| 41 Tert-butyl ethyl ether | 59 | 2.275 | 2.275 | 0.000 | 61 | 2978 | 0.5000 | 0.4679 | |
| * 42 2-Butanone-d5 | 46 | 2.336 | 2.336 | 0.000 | 47 | 222146 | 250.0 | 250.0 | |
| 44 2,2-Dichloropropane | 97 | 2.360 | 2.354 | 0.006 | 39 | 408 | 0.5000 | 0.4484 | a |
| 43 cis-1,2-Dichloroethene | 96 | 2.360 | 2.360 | 0.000 | 20 | 1474 | 0.5000 | 0.5026 | |
| 45 2-Butanone (MEK) | 43 | 2.378 | 2.378 | 0.000 | 22 | 2649 | 2.50 | 2.96 | a |
| 46 Propionitrile | 54 | 2.427 | 2.421 | 0.006 | 16 | 1401 | 5.00 | 5.07 | a |
| 47 Ethyl acetate | 70 | 2.439 | 2.439 | 0.000 | 63 | 79 | 1.00 | 0.3386 | |
| 48 Methyl acrylate | 55 | 2.458 | 2.458 | 0.000 | 1 | 763 | 0.5000 | 0.3984 | a |
| 49 Chlorobromomethane | 128 | 2.525 | 2.531 | -0.006 | 34 | 689 | 0.5000 | 0.4903 | |
| 50 Methacrylonitrile | 67 | 2.531 | 2.531 | 0.000 | 78 | 4134 | 5.00 | 4.67 | |
| 51 Tetrahydrofuran | 72 | 2.573 | 2.574 | -0.001 | 35 | 230 | 1.00 | 0.7999 | a |
| 52 Chloroform | 83 | 2.598 | 2.598 | 0.000 | 70 | 2078 | 0.5000 | 0.4448 | |
| $ 53 Dibromofluoromethane (Surr) | 113 | 2.720 | 2.720 | 0.000 | 95 | 143526 | 50.0 | 50.3 | |
| 54 1,1,1-Trichloroethane | 97 | 2.726 | 2.726 | 0.000 | 2 | 2108 | 0.5000 | 0.4838 | |
| 55 Cyclohexane | 84 | 2.769 | 2.769 | 0.000 | 37 | 1427 | 0.5000 | 0.4107 | |
| 56 Carbon tetrachloride | 117 | 2.854 | 2.860 | -0.006 | 80 | 1512 | 0.5000 | 0.4116 | |
| 57 1,1-Dichloropropene | 75 | 2.860 | 2.860 | 0.000 | 42 | 1555 | 0.5000 | 0.4266 | |
| $ 58 1,2-Dichloroethane-d4 (Surr) | 65 | 2.982 | 2.982 | 0.000 | 91 | 146689 | 50.0 | 50.9 | |
| 59 Isobutyl alcohol | 43 | 3.025 | 3.019 | 0.006 | 4 | 546 | 12.5 | 8.09 | |
| 60 Benzene | 78 | 3.025 | 3.025 | 0.000 | 76 | 5260 | 0.5000 | 0.5245 | |
| 61 1,2-Dichloroethane | 62 | 3.043 | 3.043 | 0.000 | 19 | 1595 | 0.5000 | 0.4914 | |
| 62 Isooctane | 57 | 3.116 | 3.116 | 0.000 | 68 | 1862 | 0.5000 | 0.4010 | a |
| 63 Isopropyl acetate | 61 | 3.147 | 3.147 | 0.000 | 63 | 280 | 0.5000 | 0.3870 | |
| 64 Tert-amyl methyl ether | 73 | 3.153 | 3.153 | 0.000 | 66 | 2988 | 0.5000 | 0.4616 | |
| * 65 Fluorobenzene | 96 | 3.275 | 3.275 | 0.000 | 99 | 489206 | 50.0 | 50.0 | |
| 66 n-Heptane | 43 | 3.299 | 3.299 | 0.000 | 12 | 778 | 0.5000 | 0.4079 | a |
| 67 Trichloroethene | 95 | 3.610 | 3.610 | 0.000 | 49 | 1463 | 0.5000 | 0.5121 | |
| 69 Ethyl acrylate | 55 | 3.787 | 3.775 | 0.013 | 0 | 1913 | 0.5000 | 0.3918 | |
| 70 Methylcyclohexane | 83 | 3.787 | 3.787 | 0.000 | 33 | 1397 | 0.5000 | 0.3968 | |
| 71 1,2-Dichloropropane | 63 | 3.817 | 3.817 | 0.000 | 28 | 1087 | 0.5000 | 0.4806 | |
| 72 Dibromomethane | 93 | 3.933 | 3.933 | 0.000 | 4 | 669 | 0.5000 | 0.4208 | |
| * 73 1,4-Dioxane-d8 | 96 | 3.939 | 3.939 | 0.000 | 1 | 24503 | 1000.0 | 1000.0 | M |
| 74 1,4-Dioxane | 88 | 3.988 | 3.988 | 0.000 | 1 | 462 | 25.0 | 20.3 | |
| 75 Methyl methacrylate | 100 | 4.000 | 4.000 | 0.000 | 30 | 372 | 1.00 | 0.6351 | |
| 76 n-Propyl acetate | 43 | 4.085 | 4.085 | 0.000 | 29 | 1207 | 0.5000 | 0.5051 | |
| 77 Dichlorobromomethane | 83 | 4.116 | 4.116 | 0.000 | 26 | 1613 | 0.5000 | 0.4635 | |
| 78 2-Nitropropane | 41 | 4.366 | 4.366 | 0.000 | 16 | 428 | 1.00 | 0.9345 | |
| 80 Epichlorohydrin | 57 | 4.524 | 4.524 | 0.000 | 7 | 1900 | 10.0 | 9.39 | a |
| 81 cis-1,3-Dichloropropene | 75 | 4.610 | 4.610 | 0.000 | 40 | 1843 | 0.5000 | 0.4442 | |
| 82 4-Methyl-2-pentanone (MIBK) | 43 | 4.829 | 4.829 | 0.000 | 81 | 3711 | 2.50 | 2.23 | |
| $ 83 Toluene-d8 (Surr) | 98 | 4.902 | 4.902 | 0.000 | 99 | 469904 | 50.0 | 49.6 | |
| 84 Toluene | 91 | 4.982 | 4.982 | 0.000 | 79 | 5468 | 0.5000 | 0.4977 | |
| 85 trans-1,3-Dichloropropene | 75 | 5.292 | 5.286 | 0.006 | 35 | 1808 | 0.5000 | 0.4854 | |

| Compound | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q | Response | Cal Amt ug/l | OnCol Amt ug/l | Flags |
|---|---|---|---|---|---|---|---|---|---|
| 86 Ethyl methacrylate | 69 | 5.475 | 5.475 | 0.000 | 9 | 1069 | 0.5000 | 0.4029 | M |
| 87 1,1,2-Trichloroethane | 83 | 5.500 | 5.500 | 0.000 | 30 | 942 | 0.5000 | 0.5041 | |
| 88 Tetrachloroethene | 166 | 5.634 | 5.640 | -0.006 | 36 | 1186 | 0.5000 | 0.4006 | |
| 89 1,3-Dichloropropane | 76 | 5.695 | 5.695 | 0.000 | 20 | 1627 | 0.5000 | 0.4520 | |
| 90 2-Hexanone | 43 | 5.896 | 5.884 | 0.012 | 52 | 2345 | 2.50 | 2.07 | |
| 91 Chlorodibromomethane | 129 | 5.969 | 5.975 | -0.006 | 3 | 1192 | 0.5000 | 0.4326 | |
| 92 Ethylene Dibromide | 107 | 6.085 | 6.085 | 0.000 | 33 | 1017 | 0.5000 | 0.4152 | |
| 93 n-Butyl acetate | 43 | 6.122 | 6.116 | 0.006 | 14 | 1280 | 0.5000 | 0.4932 | a |
| * 94 Chlorobenzene-d5 | 117 | 6.743 | 6.743 | 0.000 | 83 | 371186 | 50.0 | 50.0 | |
| 95 Chlorobenzene | 112 | 6.786 | 6.786 | 0.000 | 29 | 3594 | 0.5000 | 0.5133 | |
| 96 1,1,1,2-Tetrachloroethane | 131 | 6.926 | 6.932 | -0.006 | 47 | 1187 | 0.5000 | 0.4474 | |
| 97 Ethylbenzene | 106 | 6.993 | 6.993 | 0.000 | 62 | 1672 | 0.5000 | 0.4541 | |
| 98 m-Xylene & p-Xylene | 106 | 7.182 | 7.176 | 0.006 | 0 | 2170 | 0.5000 | 0.4761 | |
| 99 o-Xylene | 106 | 7.737 | 7.743 | -0.006 | 40 | 2026 | 0.5000 | 0.4773 | |
| 100 Styrene | 104 | 7.780 | 7.774 | 0.006 | 53 | 3072 | 0.5000 | 0.4521 | |
| 101 n-Butyl acrylate | 73 | 7.865 | 7.865 | 0.000 | 42 | 619 | 0.5000 | 0.4263 | |
| 102 Bromoform | 173 | 7.987 | 7.987 | 0.000 | 1 | 848 | 0.5000 | 0.4682 | |
| 103 Amyl acetate (mixed isomers) | 43 | 8.255 | 8.255 | 0.000 | 36 | 1351 | 0.5000 | 0.4866 | |
| 104 Isopropylbenzene | 105 | 8.341 | 8.341 | 0.000 | 42 | 4615 | 0.5000 | 0.4366 | |
| $ 105 4-Bromofluorobenzene | 174 | 8.530 | 8.530 | 0.000 | 90 | 151743 | 50.0 | 49.6 | |
| 106 Bromobenzene | 156 | 8.700 | 8.700 | 0.000 | 50 | 1226 | 0.5000 | 0.4437 | |
| 107 1,1,2,2-Tetrachloroethane | 83 | 8.865 | 8.859 | 0.006 | 1 | 1185 | 0.5000 | 0.4613 | |
| 108 1,2,3-Trichloropropane | 110 | 8.859 | 8.865 | -0.006 | 1 | 383 | 0.5000 | 0.4933 | |
| 109 trans-1,4-Dichloro-2-butene | 53 | 8.950 | 8.956 | -0.006 | 1 | 183 | 0.5000 | 0.5027 | |
| 110 N-Propylbenzene | 91 | 8.993 | 8.993 | 0.000 | 63 | 5965 | 0.5000 | 0.4913 | |
| 111 2-Chlorotoluene | 91 | 9.054 | 9.048 | 0.006 | 1 | 3155 | 0.5000 | 0.4493 | |
| 112 4-Ethyltoluene | 105 | 9.194 | 9.194 | 0.000 | 45 | 4756 | 0.5000 | 0.5032 | |
| 113 4-Chlorotoluene | 91 | 9.237 | 9.237 | 0.000 | 2 | 3935 | 0.5000 | 0.5198 | |
| 114 1,3,5-Trimethylbenzene | 105 | 9.310 | 9.310 | 0.000 | 48 | 3840 | 0.5000 | 0.5024 | |
| 115 Butyl Methacrylate | 87 | 9.621 | 9.621 | 0.000 | 28 | 1219 | 0.5000 | 0.4689 | |
| 116 tert-Butylbenzene | 119 | 9.810 | 9.810 | 0.000 | 32 | 3172 | 0.5000 | 0.4795 | |
| 117 1,2,4-Trimethylbenzene | 105 | 9.895 | 9.895 | 0.000 | 13 | 3736 | 0.5000 | 0.4950 | |
| 118 sec-Butylbenzene | 105 | 10.176 | 10.176 | 0.000 | 55 | 4181 | 0.5000 | 0.4622 | |
| 119 1,3-Dichlorobenzene | 146 | 10.261 | 10.255 | 0.006 | 37 | 2060 | 0.5000 | 0.4517 | |
| * 120 1,4-Dichlorobenzene-d4 | 152 | 10.377 | 10.377 | 0.000 | 94 | 170073 | 50.0 | 50.0 | |
| 121 1,4-Dichlorobenzene | 146 | 10.413 | 10.414 | -0.001 | 18 | 2544 | 0.5000 | 0.5429 | a |
| 122 4-Isopropyltoluene | 119 | 10.456 | 10.456 | 0.000 | 8 | 3302 | 0.5000 | 0.4357 | |
| 123 1,2,3-Trimethylbenzene | 105 | 10.554 | 10.560 | -0.006 | 13 | 3433 | 0.5000 | 0.4658 | |
| 124 Benzyl chloride | 91 | 10.682 | 10.682 | 0.000 | 1 | 2365 | 0.5000 | 0.5129 | |
| 125 2,3-Dihydroindene | 117 | 10.834 | 10.834 | 0.000 | 32 | 3601 | 0.5000 | 0.4926 | a |
| 126 1,2-Dichlorobenzene | 146 | 10.999 | 10.999 | 0.000 | 33 | 1867 | 0.5000 | 0.4538 | |
| 127 p-Diethylbenzene | 119 | 11.108 | 11.109 | -0.001 | 13 | 1524 | 0.5000 | 0.4233 | a |
| 128 n-Butylbenzene | 92 | 11.139 | 11.139 | 0.000 | 52 | 1550 | 0.5000 | 0.4400 | |
| 129 1,2-Dibromo-3-Chloropropane | 157 | 12.090 | 12.090 | 0.000 | 1 | 86 | 0.5000 | 0.4830 | |
| 130 1,2,4,5-Tetramethylbenzene | 119 | 12.133 | 12.133 | 0.000 | 21 | 2624 | 0.5000 | 0.4649 | |
| 131 1,3,5-Trichlorobenzene | 180 | 12.334 | 12.334 | 0.000 | 23 | 1065 | 0.5000 | 0.4559 | |
| 132 1,2,4-Trichlorobenzene | 180 | 12.950 | 12.950 | 0.000 | 7 | 977 | 0.5000 | 0.5032 | |
| 133 Hexachlorobutadiene | 225 | 13.145 | 13.151 | -0.006 | 1 | 714 | 0.5000 | 0.5293 | |
| 134 Naphthalene | 128 | 13.151 | 13.151 | 0.000 | 19 | 2606 | 0.5000 | 0.5230 | |
| 135 1,2,3-Trichlorobenzene | 180 | 13.370 | 13.370 | 0.000 | 1 | 747 | 0.5000 | 0.4983 | a |
| S 136 1,2-Dichloroethene, Total | 100 | | | | 0 | | 1.00 | 0.9456 | |
| S 137 Xylenes, Total | 100 | | | | 0 | | 1.00 | 0.9534 | |

| Compound | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q | Response | Cal Amt ug/l | OnCol Amt ug/l | Flags |
|---|---|---|---|---|---|---|---|---|---|
| S 140 Total BTEX | 1 | | | | 0 | | 2.50 | 2.43 | |
| S 139 1,3-Dichloropropene, Total | 1 | | | | 0 | | 1.00 | 0.9296 | |
| S 138 Total 1,2-dichloroethene | 1 | | | | 0 | | | 0.9456 | |

## QC Flag Legend

Review Flags

M - Manually Integrated

a - User Assigned ID

## Reagents:

| | | | | |
|---|---|---|---|---|
| 8260MIX1COMB_00125 | Amount Added: | 5.00 | Units: uL | |
| ACROLEIN W_00112 | Amount Added: | 2.00 | Units: uL | |
| GASES Li_00384 | Amount Added: | 5.00 | Units: uL | |
| 524freon_00027 | Amount Added: | 5.00 | Units: uL | |
| 14DIOXINTER_00118 | Amount Added: | 15.00 | Units: uL | |
| VOA6IS/SURR_00038 | Amount Added: | 5.00 | Units: uL | Run Reagent |

Report Date: 05-Sep-2020 11:27:28 Chrom Revision: 2.3 20-Aug-2020 13:57:12

Eurofins TestAmerica, Edison

Data File: \\chromfs\Edison\ChromData\CVOAMS15\20200904-116301.b\T38695.D

Injection Date: 04-Sep-2020 12:37:54 Instrument ID: CVOAMS15

Lims ID: STD05

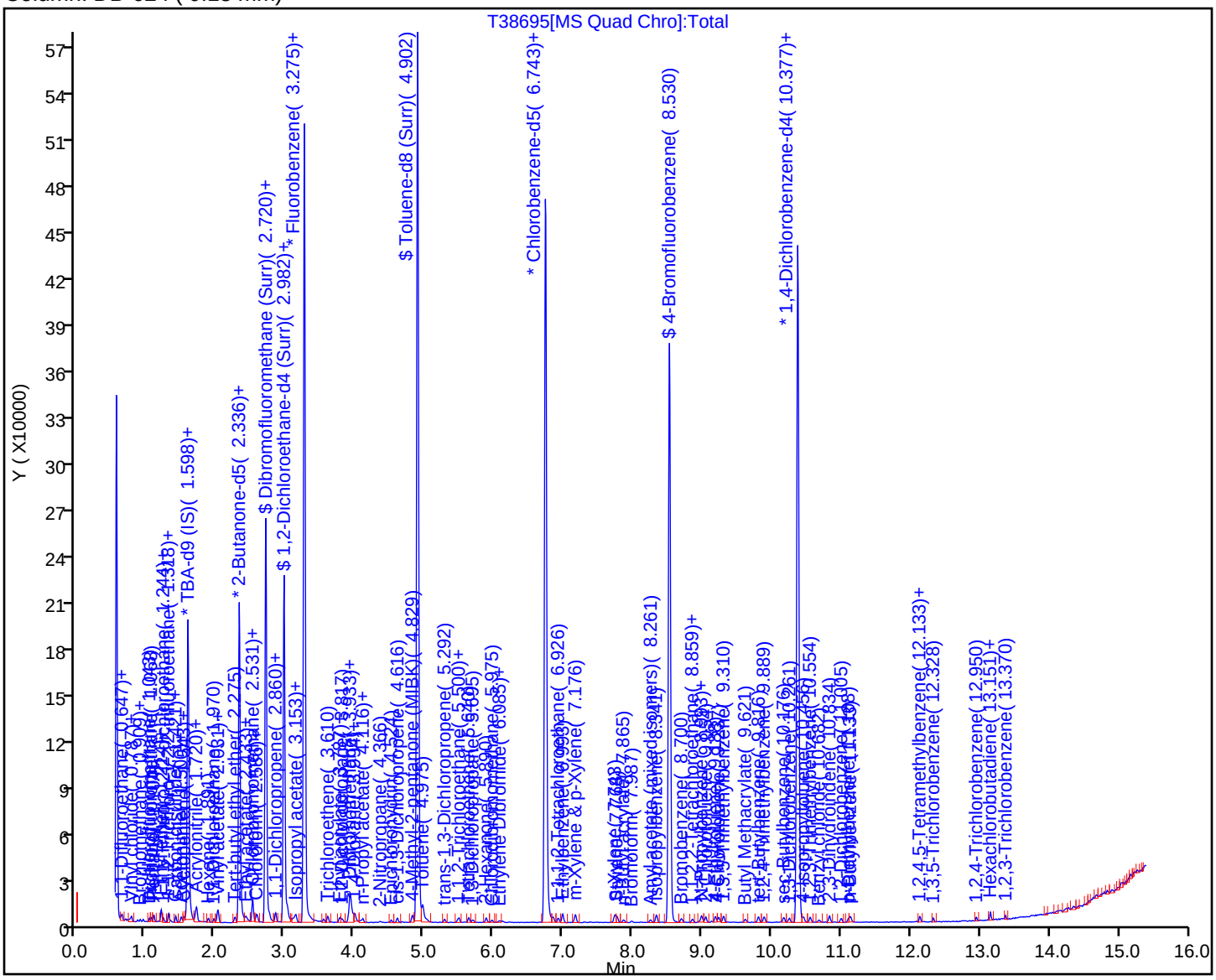
Client ID:

Operator ID: ALS Bottle#: 0 Worklist Smp#: 4

Purge Vol: 5.000 mL Dil. Factor: 1.0000

Method: 8260W_15 Limit Group: VOA - 8260C Water and Solid

Column: DB-624 ( 0.18 mm)



Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Edison

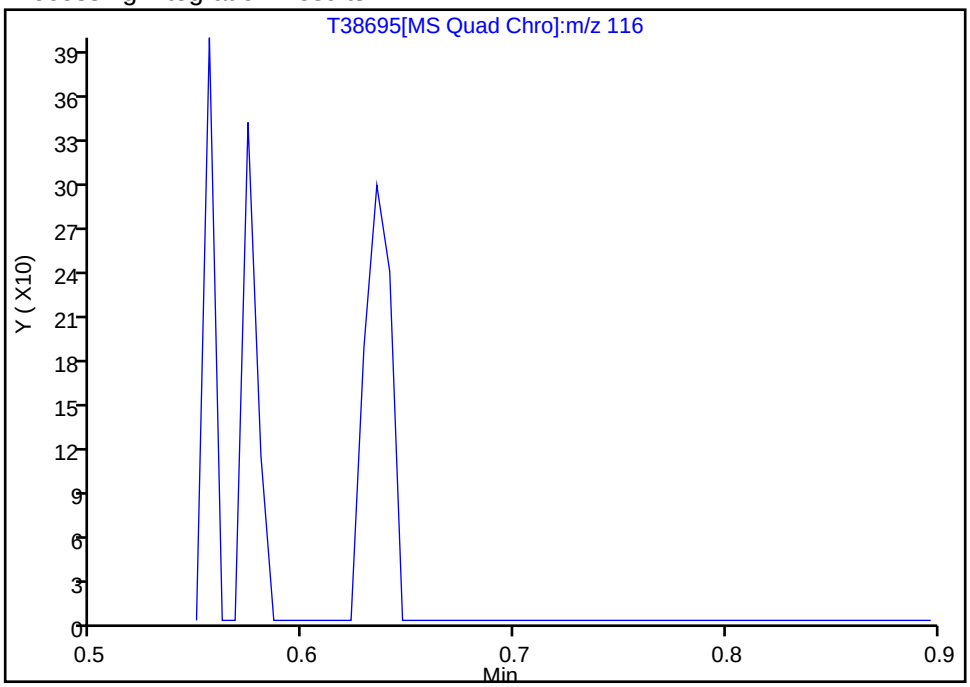
Data File: \\chromfs\Edison\ChromData\CVOAMS15\20200904-116301.b\T38695.D
Injection Date: 04-Sep-2020 12:37:54 Instrument ID: CVOAMS15
Lims ID: STD05
Client ID:
Operator ID: ALS Bottle#: 0 Worklist Smp#: 4
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: 8260W_15 Limit Group: VOA - 8260C Water and Solid
Column: DB-624 ( 0.18 mm) Detector MS Quad

## 3 Chlorotrifluoroethene, CAS: 79-38-9

Signal: 1

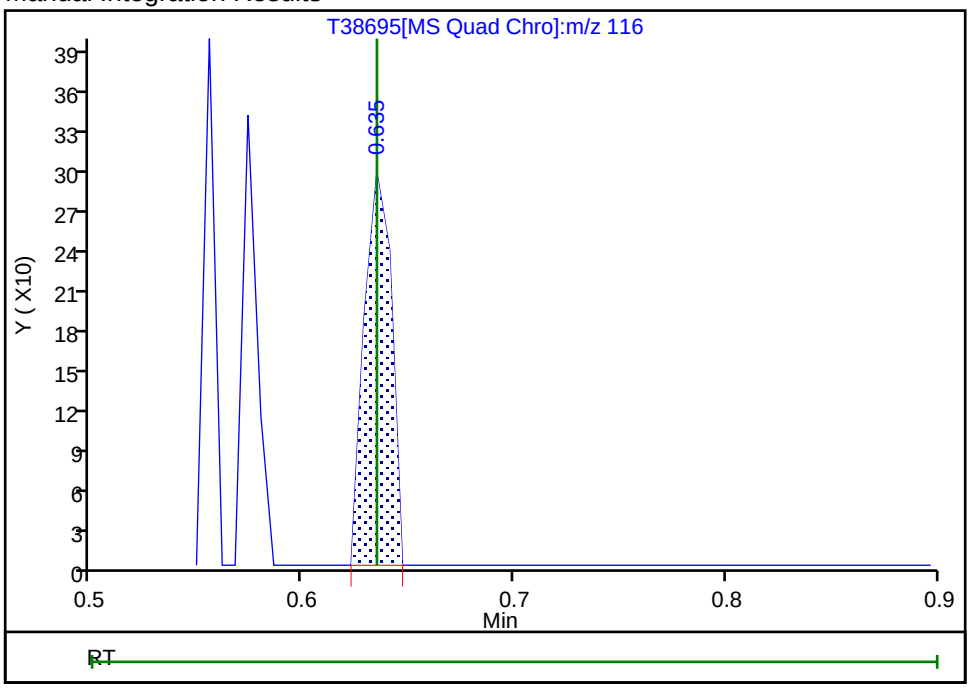
Not Detected
Expected RT: 0.63

Processing Integration Results




Manual Integration Results

RT: 0.63
Area: 265
Amount: 0.467539
Amount Units: ug/l




Reviewer: delpolitov, 04-Sep-2020 16:53:57
Audit Action: Assigned Compound ID Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Edison

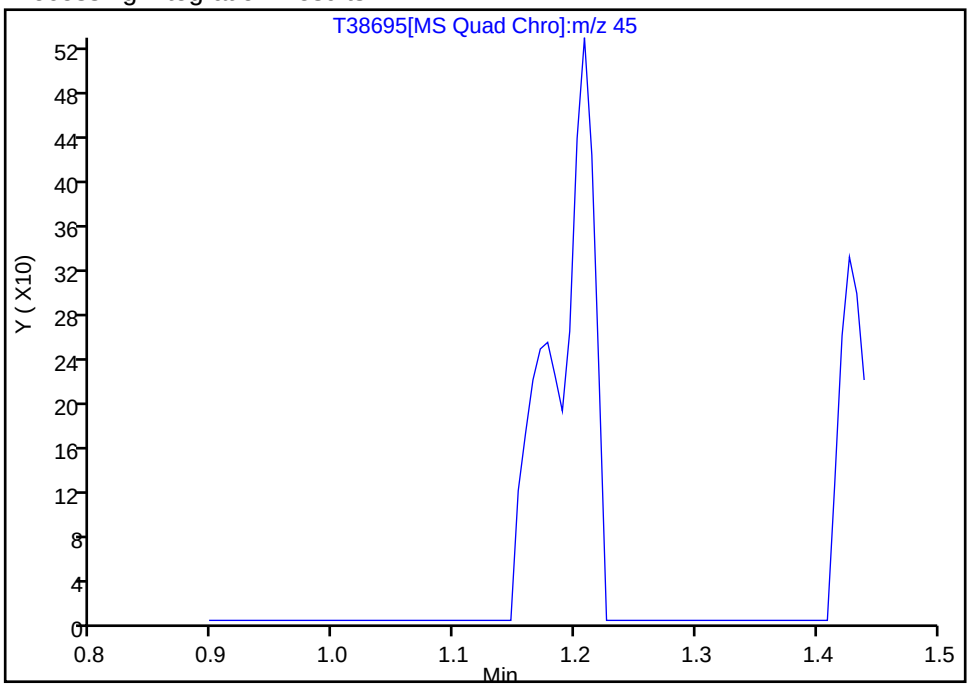
Data File: \\chromfs\Edison\ChromData\CVOAMS15\20200904-116301.b\T38695.D
Injection Date: 04-Sep-2020 12:37:54 Instrument ID: CVOAMS15
Lims ID: STD05
Client ID:
Operator ID: ALS Bottle#: 0 Worklist Smp#: 4
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: 8260W_15 Limit Group: VOA - 8260C Water and Solid
Column: DB-624 ( 0.18 mm) Detector MS Quad

## 14 Ethanol, CAS: 64-17-5

Signal: 1

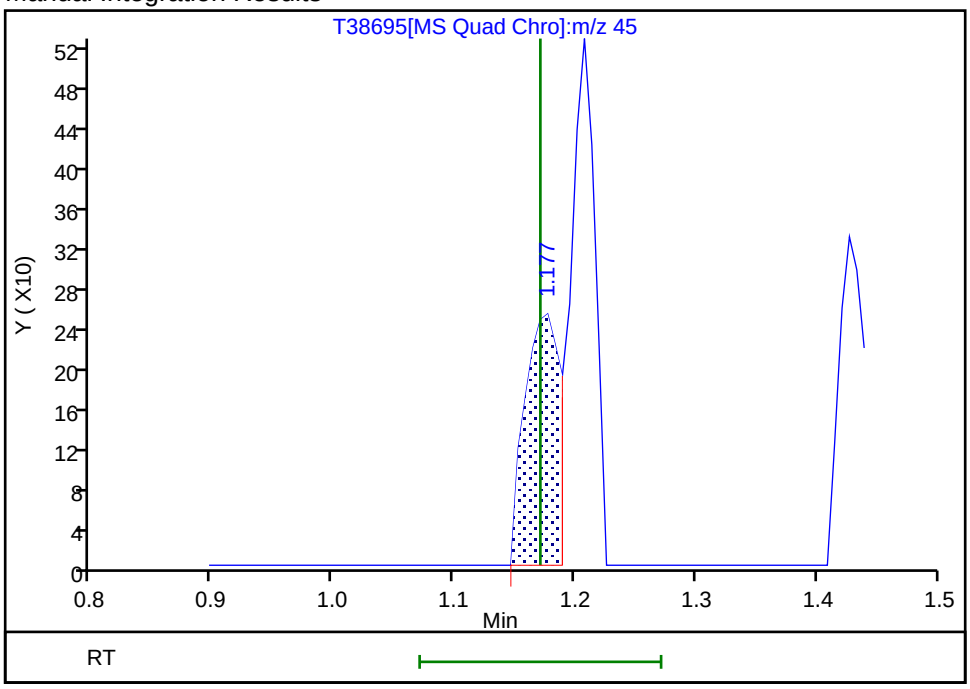
Not Detected
Expected RT: 1.17

Processing Integration Results




Manual Integration Results

RT: 1.18
Area: 515
Amount: 48.690992
Amount Units: ug/l




Reviewer: delpolitov, 04-Sep-2020 16:54:06
Audit Action: Assigned Compound ID Audit Reason: Incomplete Integration

Eurofins TestAmerica, Edison

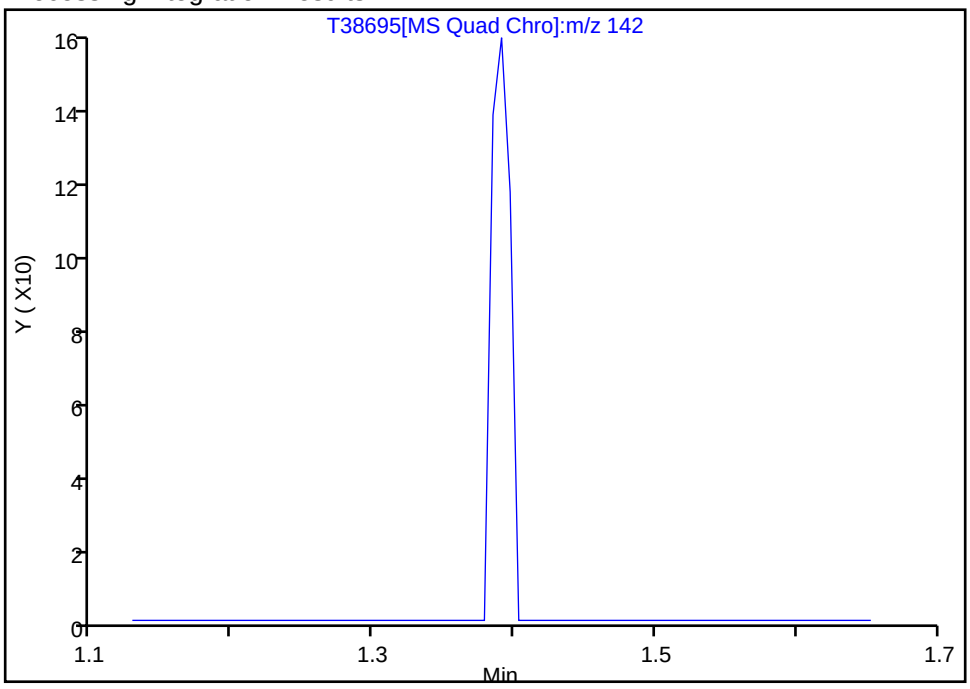
Data File: \\chromfs\Edison\ChromData\CVOAMS15\20200904-116301.b\T38695.D
Injection Date: 04-Sep-2020 12:37:54 Instrument ID: CVOAMS15
Lims ID: STD05
Client ID:
Operator ID: ALS Bottle#: 0 Worklist Smp#: 4
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: 8260W_15 Limit Group: VOA - 8260C Water and Solid
Column: DB-624 ( 0.18 mm) Detector MS Quad

## 23 Iodomethane, CAS: 74-88-4

Signal: 1

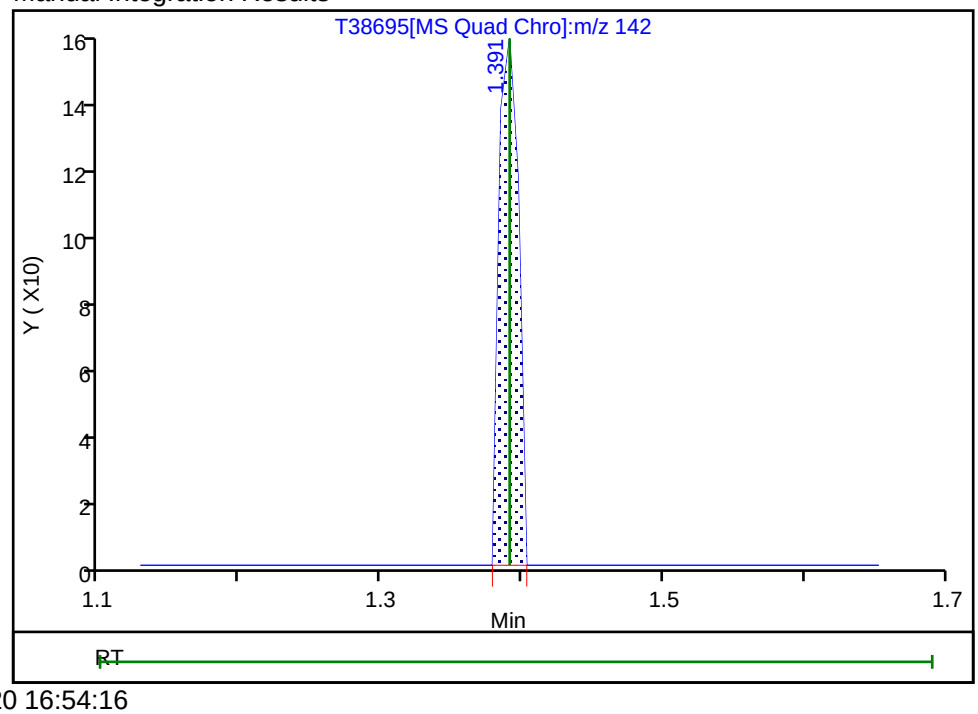
Processing Integration Results

Not Detected
Expected RT: 1.39




Manual Integration Results

RT: 1.39
Area: 144
Amount: 0.111093
Amount Units: ug/l




Reviewer: delpolitov, 04-Sep-2020 16:54:16
Audit Action: Assigned Compound ID Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Edison

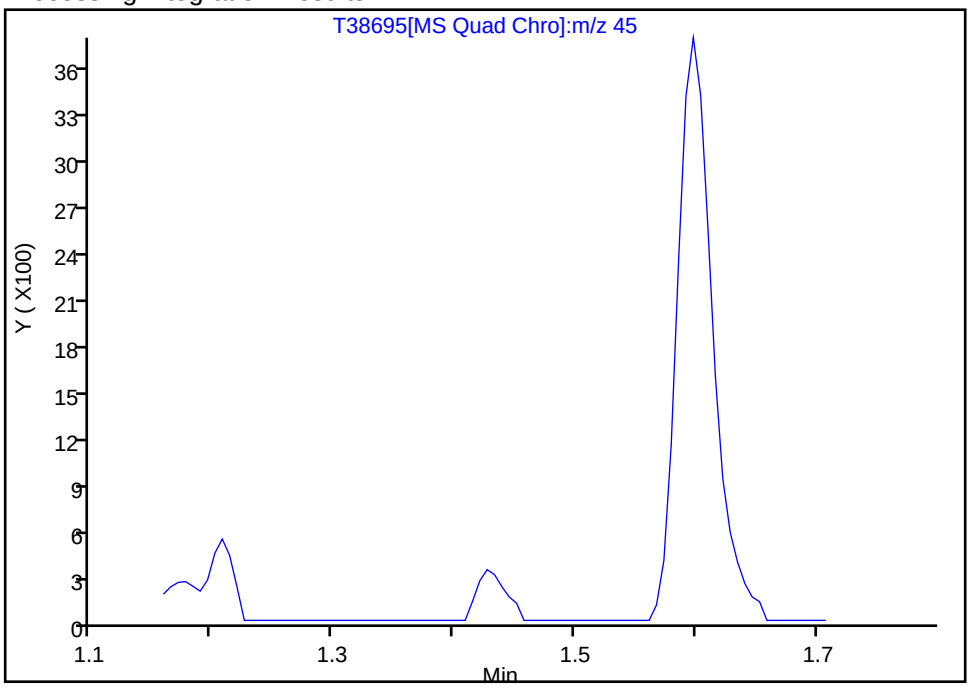
Data File: \\chromfs\Edison\ChromData\CVOAMS15\20200904-116301.b\T38695.D
Injection Date: 04-Sep-2020 12:37:54 Instrument ID: CVOAMS15
Lims ID: STD05
Client ID:
Operator ID: ALS Bottle#: 0 Worklist Smp#: 4
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: 8260W_15 Limit Group: VOA - 8260C Water and Solid
Column: DB-624 ( 0.18 mm) Detector MS Quad

## 25 Isopropyl alcohol, CAS: 67-63-0

Signal: 1

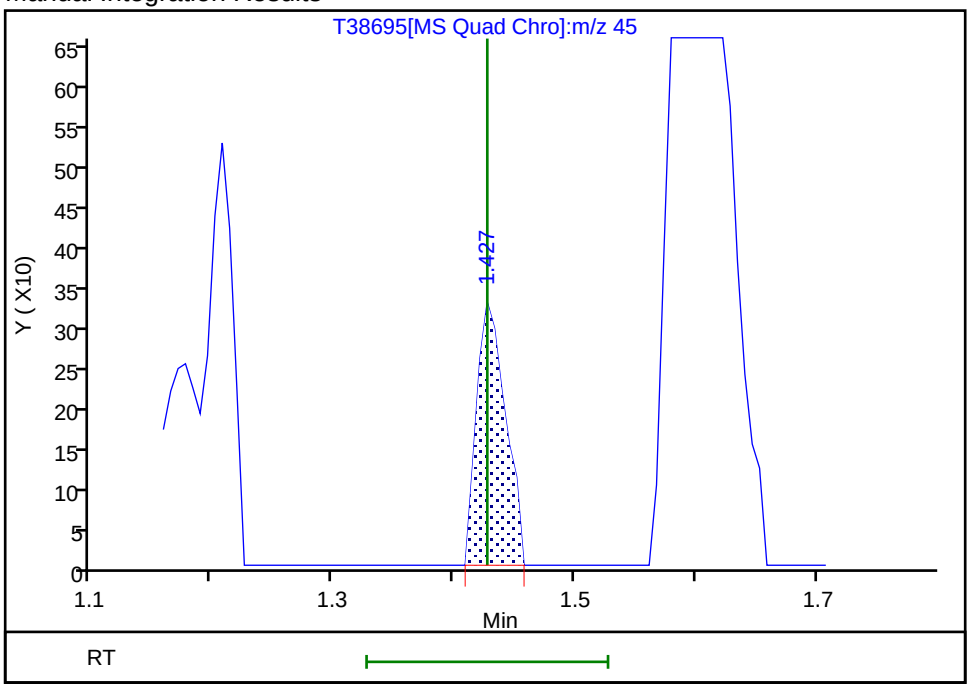
Not Detected
Expected RT: 1.43

Processing Integration Results




Manual Integration Results

RT: 1.43
Area: 542
Amount: 4.955986
Amount Units: ug/l




Reviewer: delpolitov, 04-Sep-2020 16:54:20
Audit Action: Assigned Compound ID Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Edison

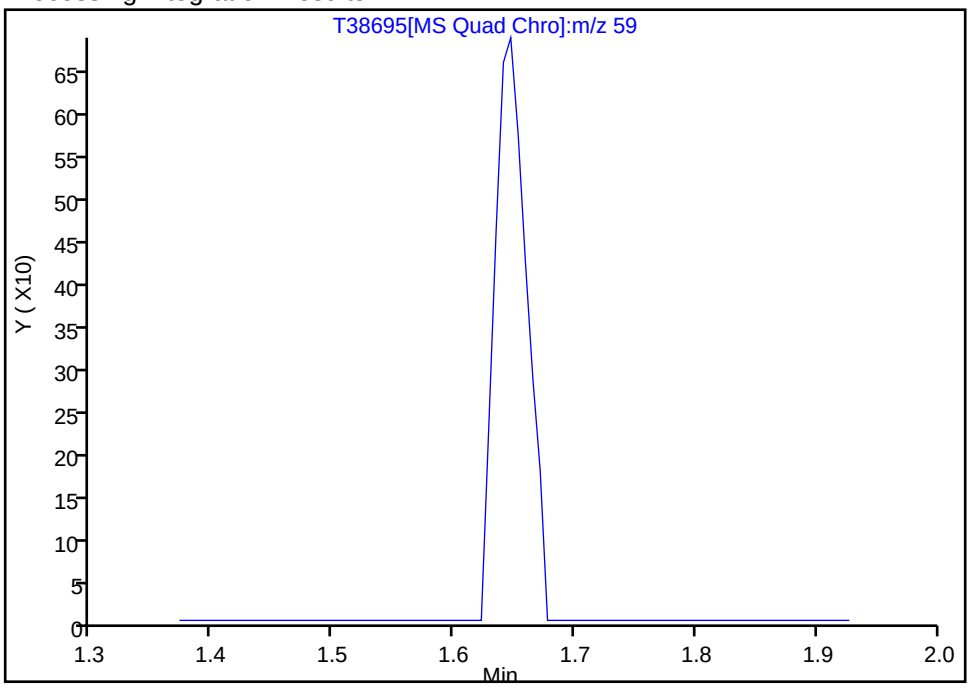
Data File: \\chromfs\Edison\ChromData\CVOAMS15\20200904-116301.b\T38695.D
Injection Date: 04-Sep-2020 12:37:54 Instrument ID: CVOAMS15
Lims ID: STD05
Client ID:
Operator ID: ALS Bottle#: 0 Worklist Smp#: 4
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: 8260W_15 Limit Group: VOA - 8260C Water and Solid
Column: DB-624 ( 0.18 mm) Detector MS Quad

## 32 2-Methyl-2-propanol, CAS: 75-65-0

Signal: 1

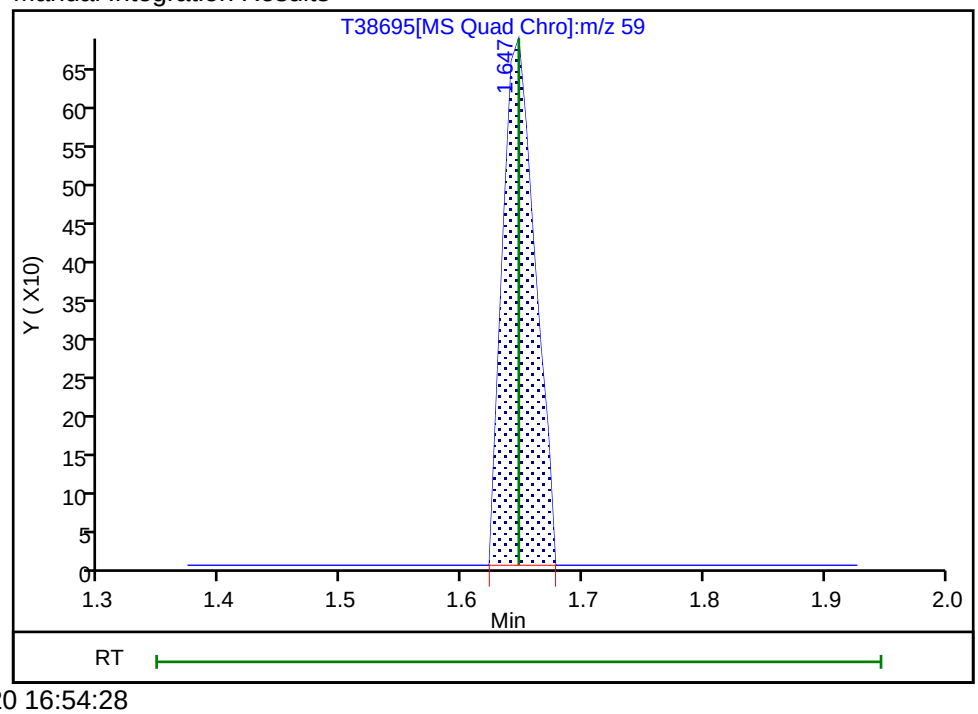
Not Detected
Expected RT: 1.65

Processing Integration Results




Manual Integration Results

RT: 1.65
Area: 1263
Amount: 5.614077
Amount Units: ug/l




Reviewer: delpolitov, 04-Sep-2020 16:54:28
Audit Action: Assigned Compound ID Audit Reason: Incomplete Integration

Eurofins TestAmerica, Edison

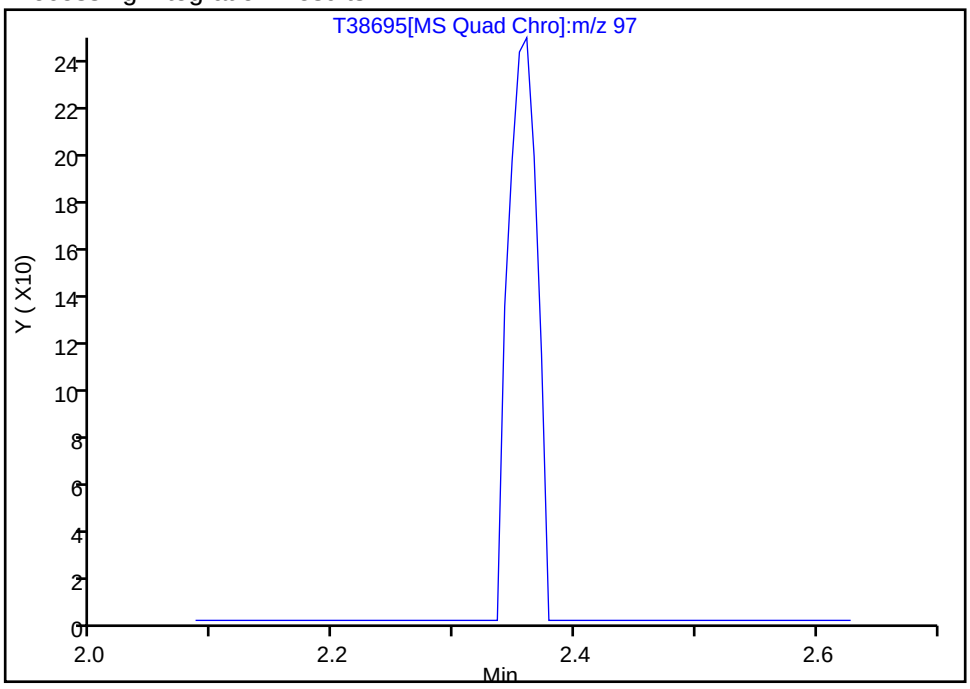
Data File: \\chromfs\Edison\ChromData\CVOAMS15\20200904-116301.b\T38695.D
Injection Date: 04-Sep-2020 12:37:54 Instrument ID: CVOAMS15
Lims ID: STD05
Client ID:
Operator ID: ALS Bottle#: 0 Worklist Smp#: 4
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: 8260W_15 Limit Group: VOA - 8260C Water and Solid
Column: DB-624 ( 0.18 mm) Detector MS Quad

## 44 2,2-Dichloropropane, CAS: 594-20-7

Signal: 1

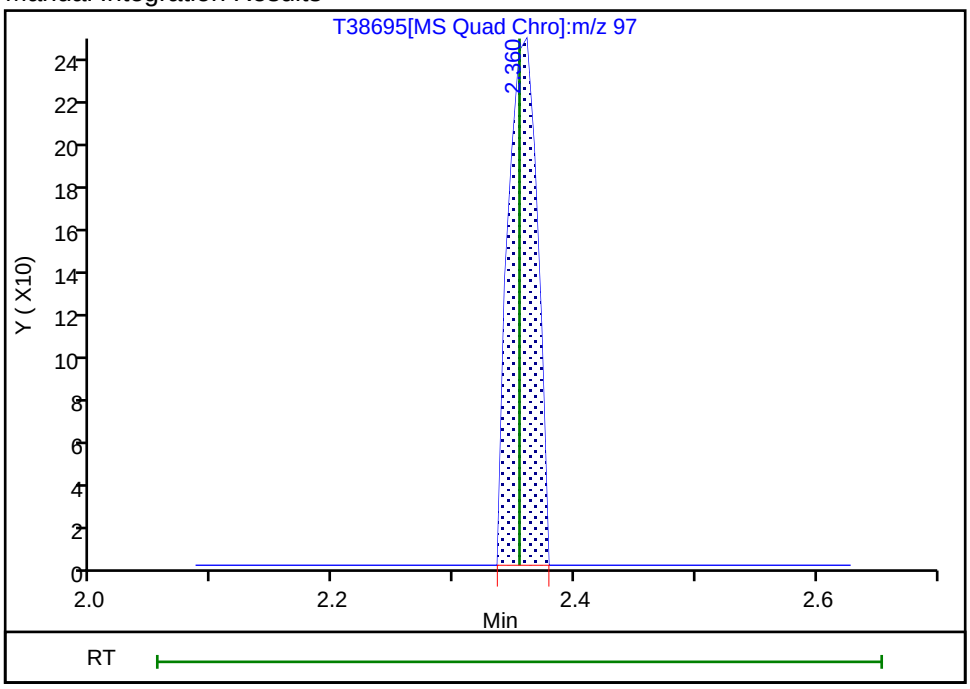
Not Detected
Expected RT: 2.35

Processing Integration Results




Manual Integration Results

RT: 2.36
Area: 408
Amount: 0.448379
Amount Units: ug/l




Reviewer: delpolitov, 04-Sep-2020 16:54:36
Audit Action: Assigned Compound ID Audit Reason: Incomplete Integration

Eurofins TestAmerica, Edison

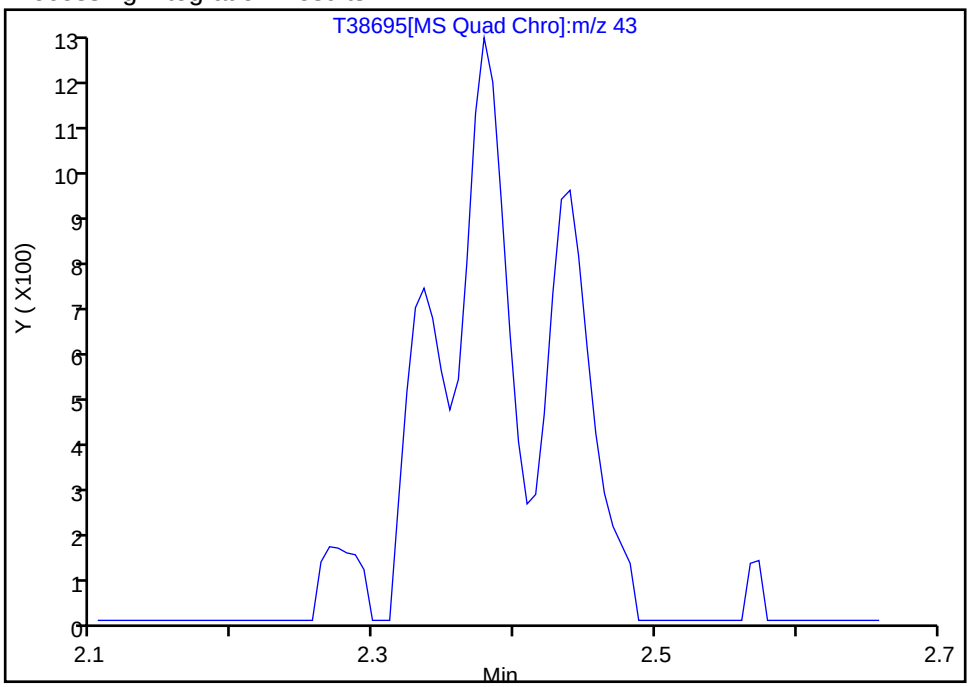
Data File: \\chromfs\Edison\ChromData\CVOAMS15\20200904-116301.b\T38695.D
Injection Date: 04-Sep-2020 12:37:54 Instrument ID: CVOAMS15
Lims ID: STD05
Client ID:
Operator ID: ALS Bottle#: 0 Worklist Smp#: 4
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: 8260W_15 Limit Group: VOA - 8260C Water and Solid
Column: DB-624 ( 0.18 mm) Detector MS Quad

## 45 2-Butanone (MEK), CAS: 78-93-3

Signal: 1

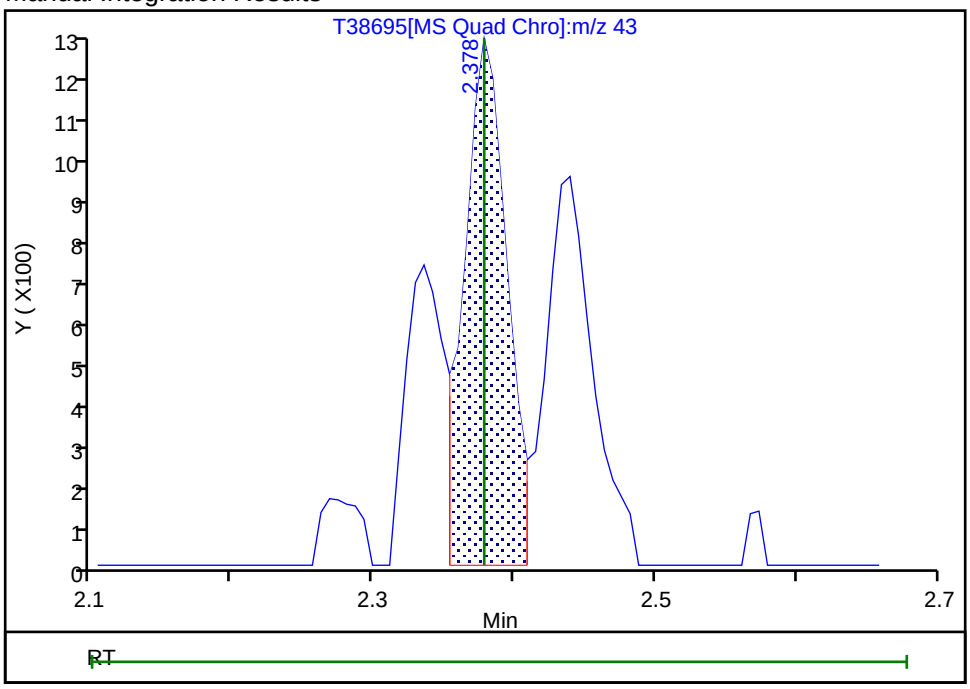
Not Detected
Expected RT: 2.38

Processing Integration Results




Manual Integration Results

RT: 2.38
Area: 2649
Amount: 2.964865
Amount Units: ug/l




Reviewer: delpolitov, 04-Sep-2020 16:54:41
Audit Action: Assigned Compound ID Audit Reason: Incomplete Integration

Eurofins TestAmerica, Edison

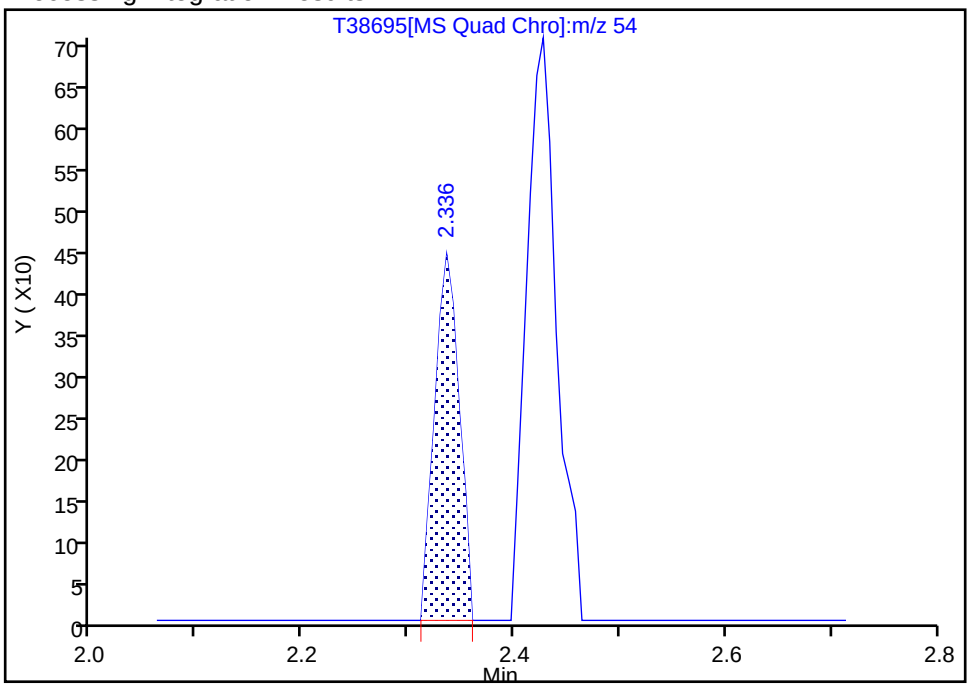
Data File: \\chromfs\Edison\ChromData\CVOAMS15\20200904-116301.b\T38695.D
Injection Date: 04-Sep-2020 12:37:54 Instrument ID: CVOAMS15
Lims ID: STD05
Client ID:
Operator ID: ALS Bottle#: 0 Worklist Smp#: 4
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: 8260W_15 Limit Group: VOA - 8260C Water and Solid
Column: DB-624 ( 0.18 mm) Detector MS Quad

## 46 Propionitrile, CAS: 107-12-0

Signal: 1

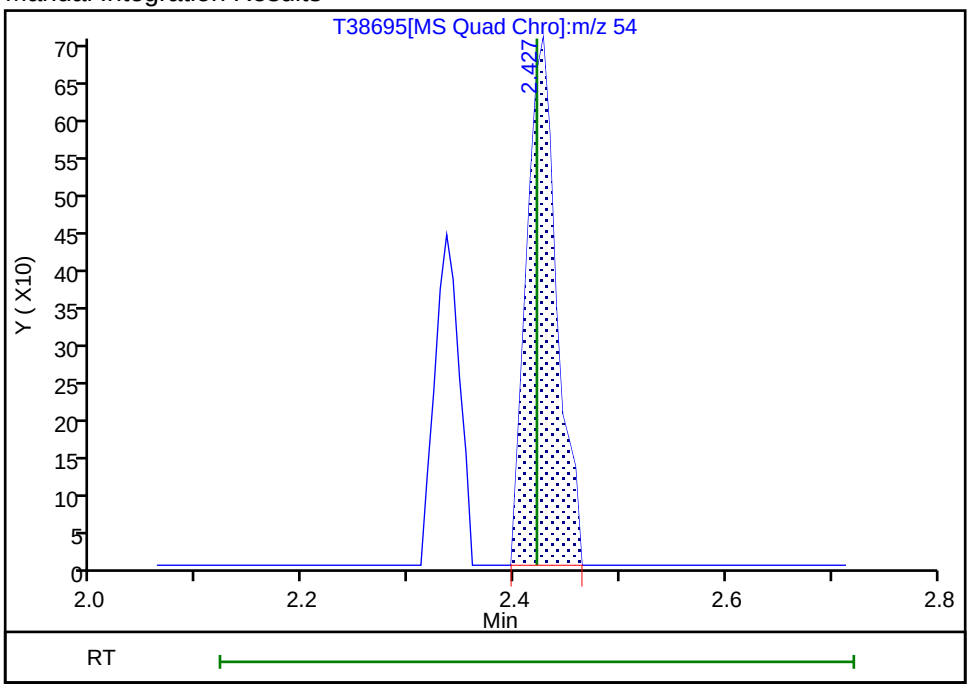
Processing Integration Results

RT: 2.34
Area: 718
Amount: 3.246532
Amount Units: ug/l




Manual Integration Results

RT: 2.43
Area: 1401
Amount: 5.073489
Amount Units: ug/l




Reviewer: delpolitov, 04-Sep-2020 16:54:45
Audit Action: Assigned Compound ID Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Edison

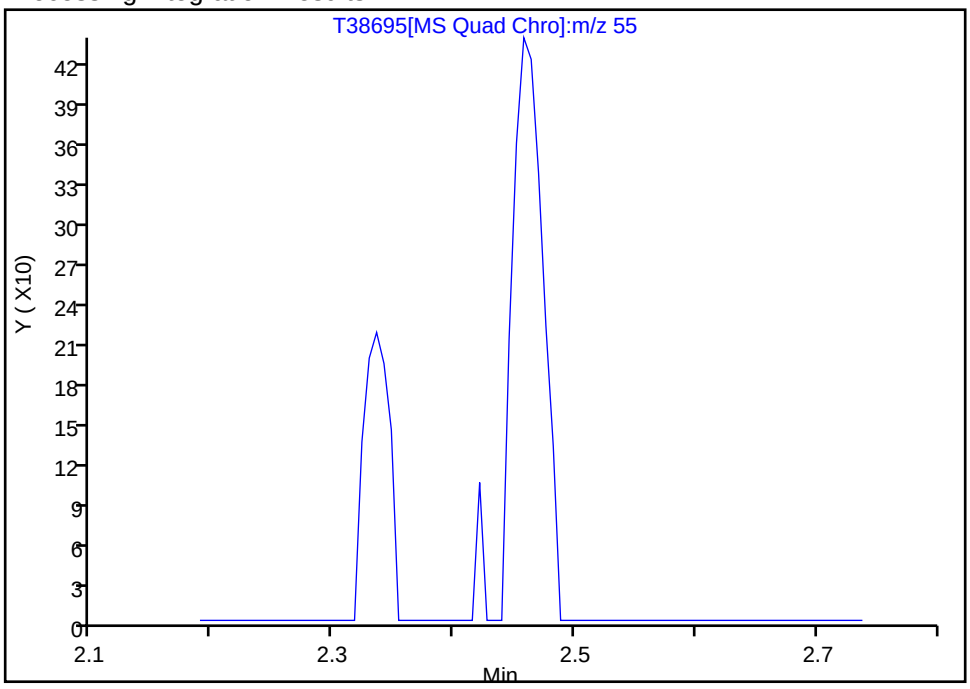
Data File: \\chromfs\Edison\ChromData\CVOAMS15\20200904-116301.b\T38695.D
Injection Date: 04-Sep-2020 12:37:54 Instrument ID: CVOAMS15
Lims ID: STD05
Client ID:
Operator ID: ALS Bottle#: 0 Worklist Smp#: 4
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: 8260W_15 Limit Group: VOA - 8260C Water and Solid
Column: DB-624 ( 0.18 mm) Detector MS Quad

## 48 Methyl acrylate, CAS: 96-33-3

Signal: 1

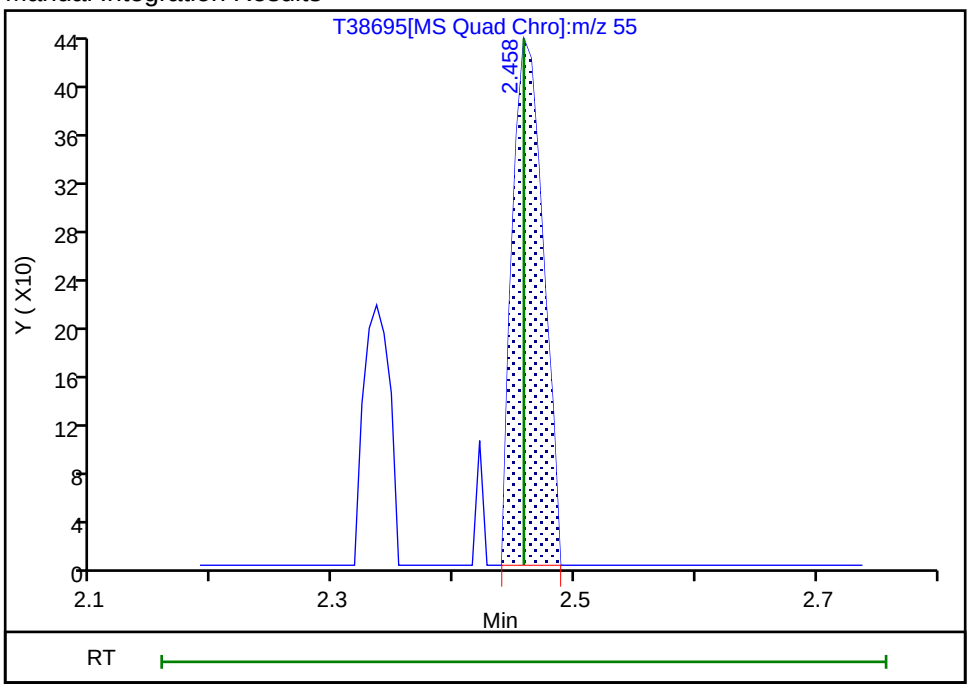
Not Detected
Expected RT: 2.46

Processing Integration Results




Manual Integration Results

RT: 2.46
Area: 763
Amount: 0.398367
Amount Units: ug/l




Reviewer: delpolitov, 04-Sep-2020 16:54:50
Audit Action: Assigned Compound ID Audit Reason: Incomplete Integration

Eurofins TestAmerica, Edison

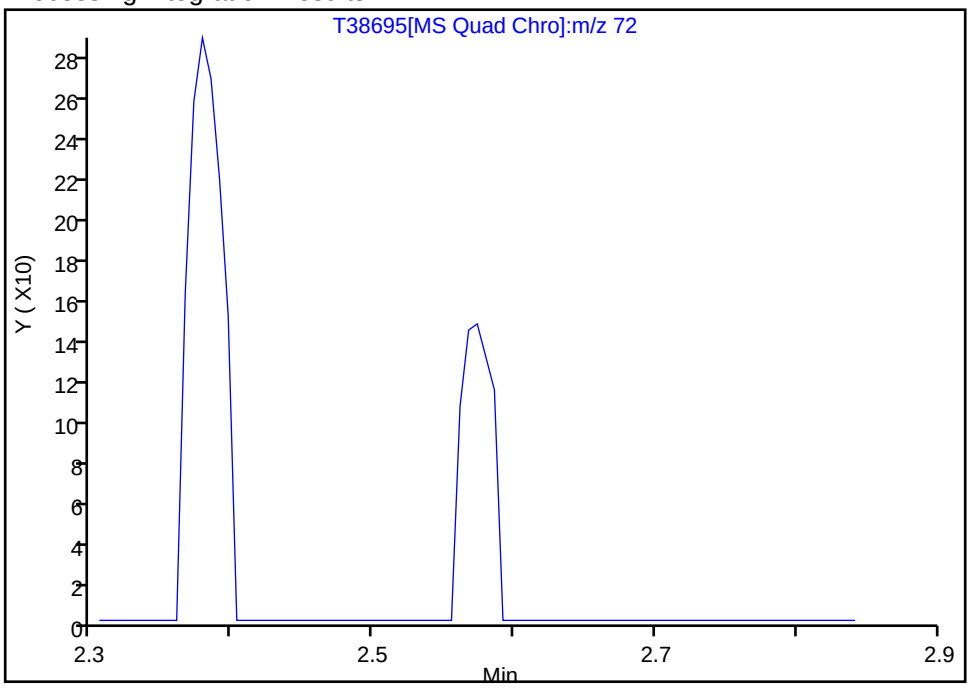
Data File: \\chromfs\Edison\ChromData\CVOAMS15\20200904-116301.b\T38695.D
Injection Date: 04-Sep-2020 12:37:54 Instrument ID: CVOAMS15
Lims ID: STD05
Client ID:
Operator ID: ALS Bottle#: 0 Worklist Smp#: 4
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: 8260W_15 Limit Group: VOA - 8260C Water and Solid
Column: DB-624 ( 0.18 mm) Detector MS Quad

## 51 Tetrahydrofuran, CAS: 109-99-9

Signal: 1

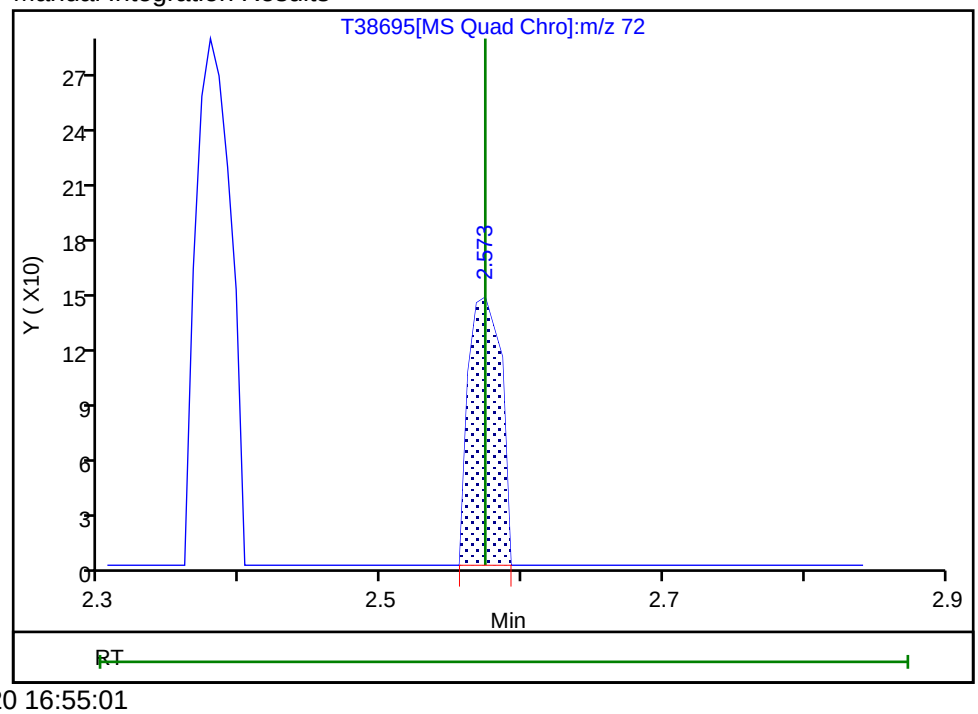
Processing Integration Results

Not Detected
Expected RT: 2.57




Manual Integration Results

RT: 2.57
Area: 230
Amount: 0.799928
Amount Units: ug/l




Reviewer: delpolitov, 04-Sep-2020 16:55:01
Audit Action: Assigned Compound ID Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Edison

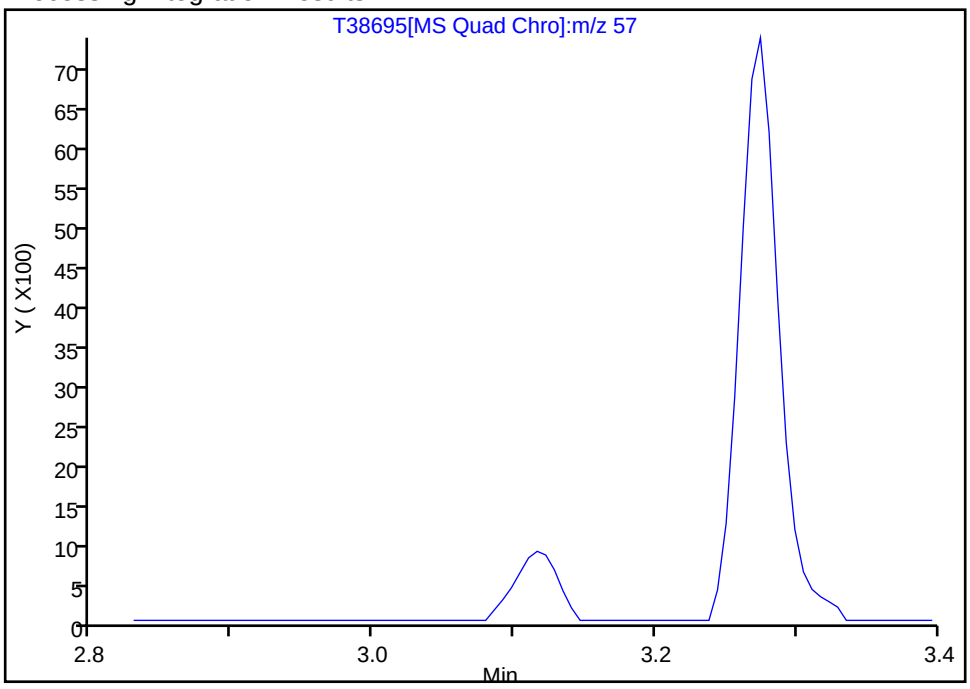
Data File: \\chromfs\Edison\ChromData\CVOAMS15\20200904-116301.b\T38695.D
Injection Date: 04-Sep-2020 12:37:54 Instrument ID: CVOAMS15
Lims ID: STD05
Client ID:
Operator ID: ALS Bottle#: 0 Worklist Smp#: 4
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: 8260W_15 Limit Group: VOA - 8260C Water and Solid
Column: DB-624 ( 0.18 mm) Detector MS Quad

## 62 Isooctane, CAS: 540-84-1

Signal: 1

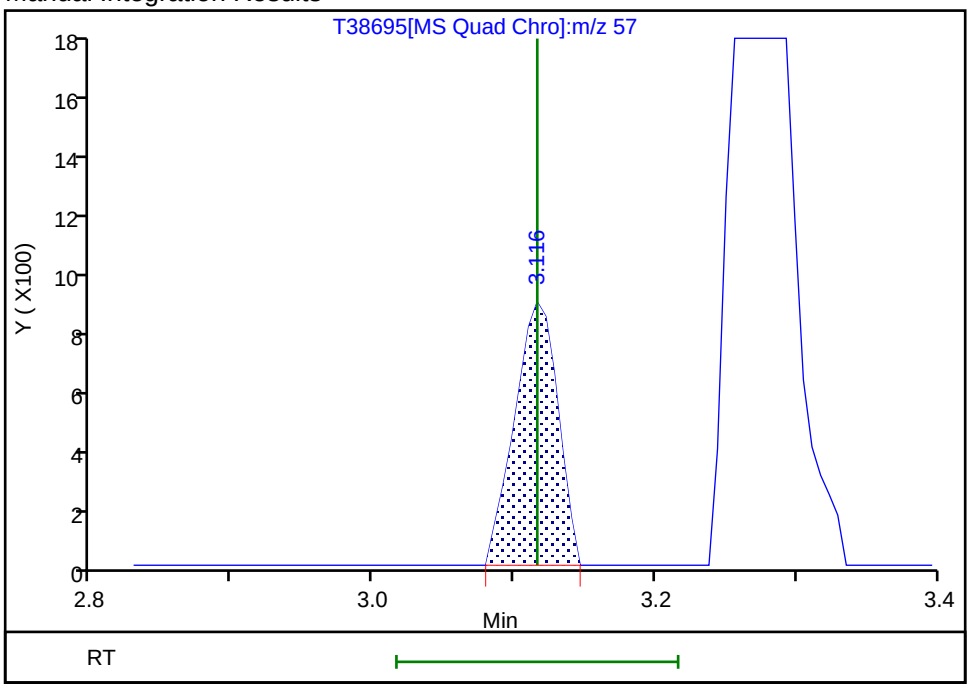
Not Detected
Expected RT: 3.12

Processing Integration Results




Manual Integration Results

RT: 3.12
Area: 1862
Amount: 0.401034
Amount Units: ug/l




Reviewer: delpolitov, 04-Sep-2020 16:55:11
Audit Action: Assigned Compound ID Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Edison

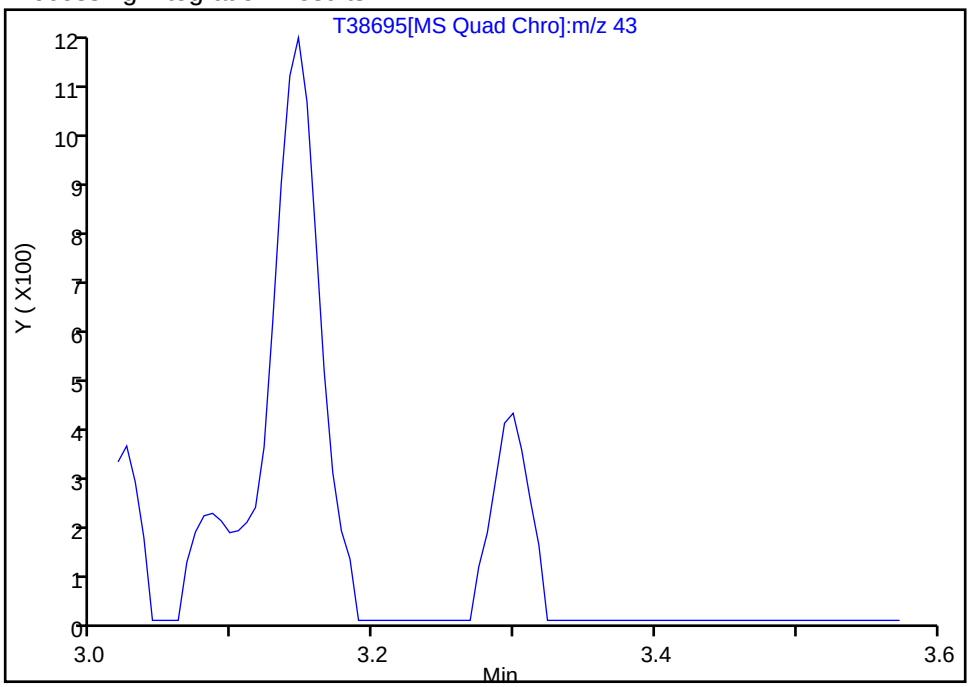
Data File: \\chromfs\Edison\ChromData\CVOAMS15\20200904-116301.b\T38695.D
Injection Date: 04-Sep-2020 12:37:54 Instrument ID: CVOAMS15
Lims ID: STD05
Client ID:
Operator ID: ALS Bottle#: 0 Worklist Smp#: 4
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: 8260W_15 Limit Group: VOA - 8260C Water and Solid
Column: DB-624 ( 0.18 mm) Detector MS Quad

## 66 n-Heptane, CAS: 142-82-5

Signal: 1

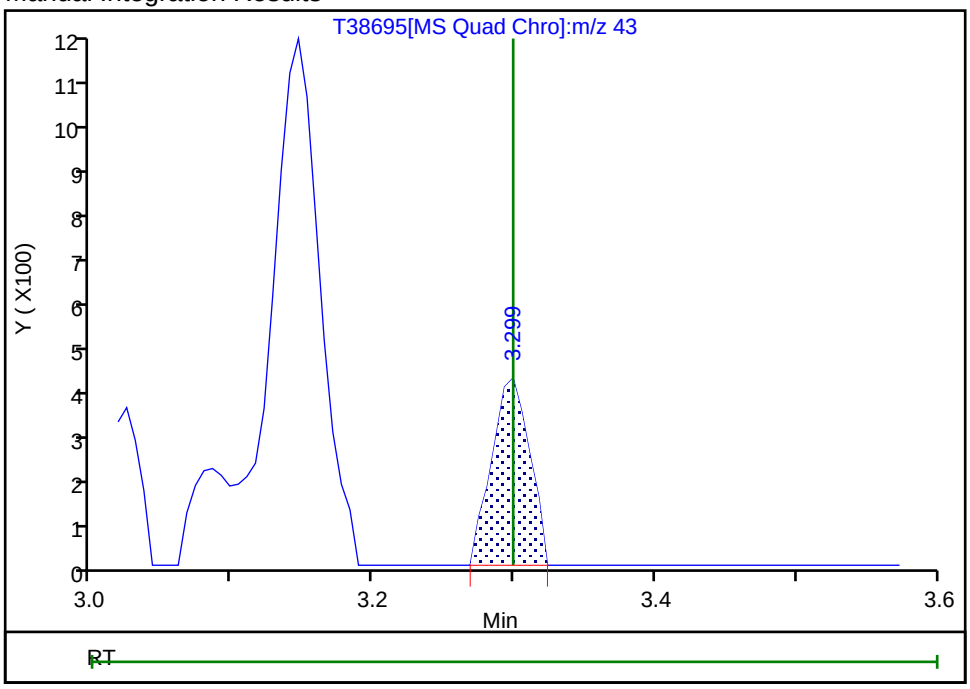
Not Detected
Expected RT: 3.30

Processing Integration Results




Manual Integration Results

RT: 3.30
Area: 778
Amount: 0.407864
Amount Units: ug/l




Reviewer: delpolitov, 04-Sep-2020 16:55:16
Audit Action: Assigned Compound ID Audit Reason: Incomplete Integration

Eurofins TestAmerica, Edison

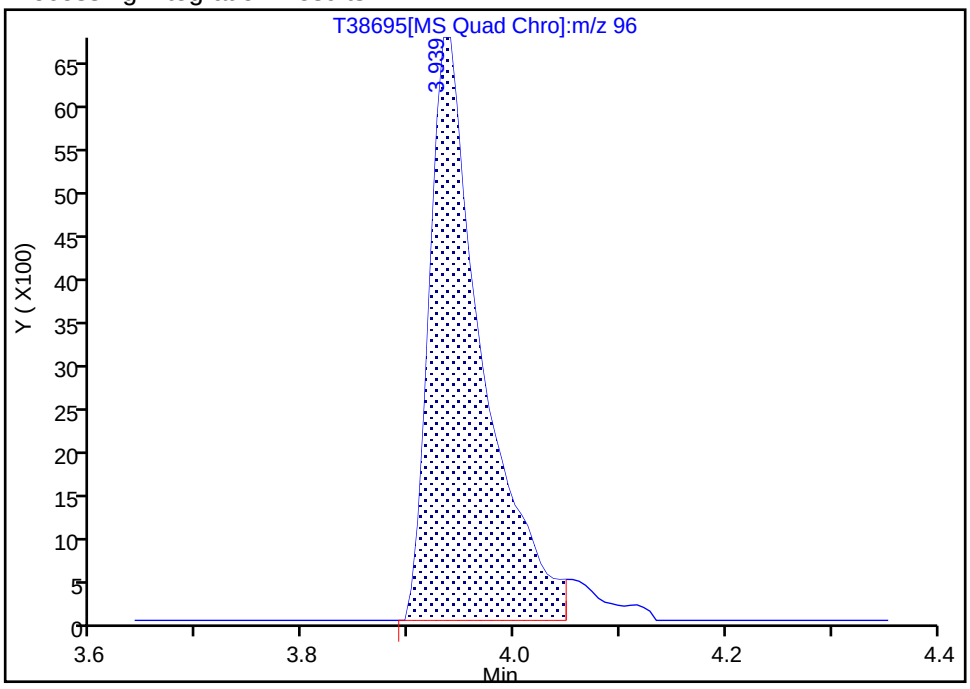
Data File: \\chromfs\Edison\ChromData\CVOAMS15\20200904-116301.b\T38695.D
Injection Date: 04-Sep-2020 12:37:54 Instrument ID: CVOAMS15
Lims ID: STD05
Client ID:
Operator ID: ALS Bottle#: 0 Worklist Smp#: 4
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: 8260W_15 Limit Group: VOA - 8260C Water and Solid
Column: DB-624 ( 0.18 mm) Detector MS Quad

## * 73 1,4-Dioxane-d8, CAS: 17647-74-4

Signal: 1

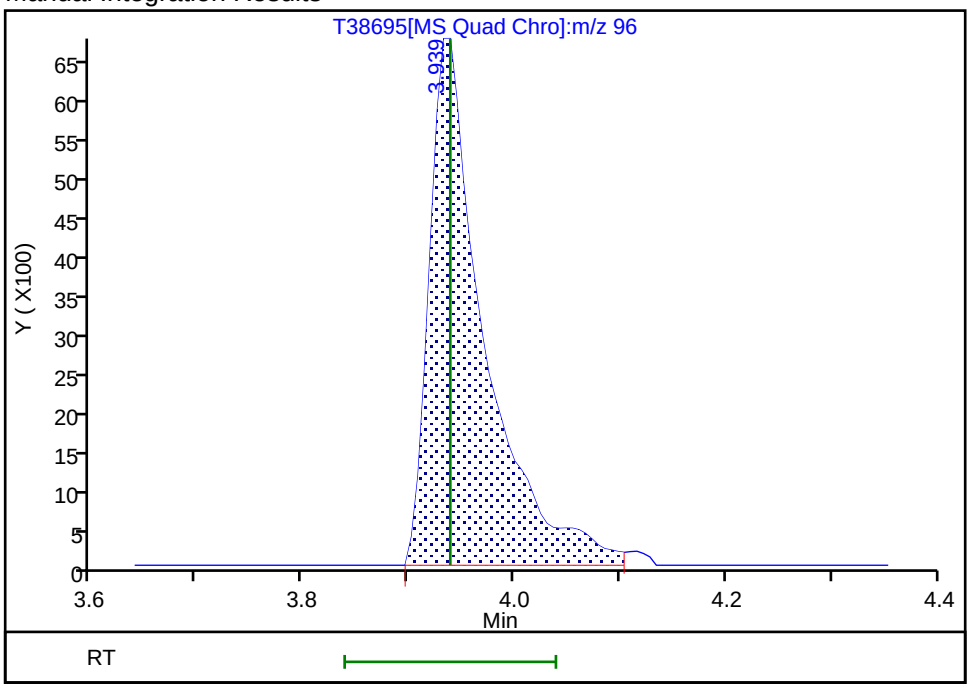
Processing Integration Results

RT: 3.94
Area: 23524
Amount: 1000.0000
Amount Units: ug/l




Manual Integration Results

RT: 3.94
Area: 24503
Amount: 1000.0000
Amount Units: ug/l




Reviewer: delpolitov, 04-Sep-2020 16:53:45
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Eurofins TestAmerica, Edison

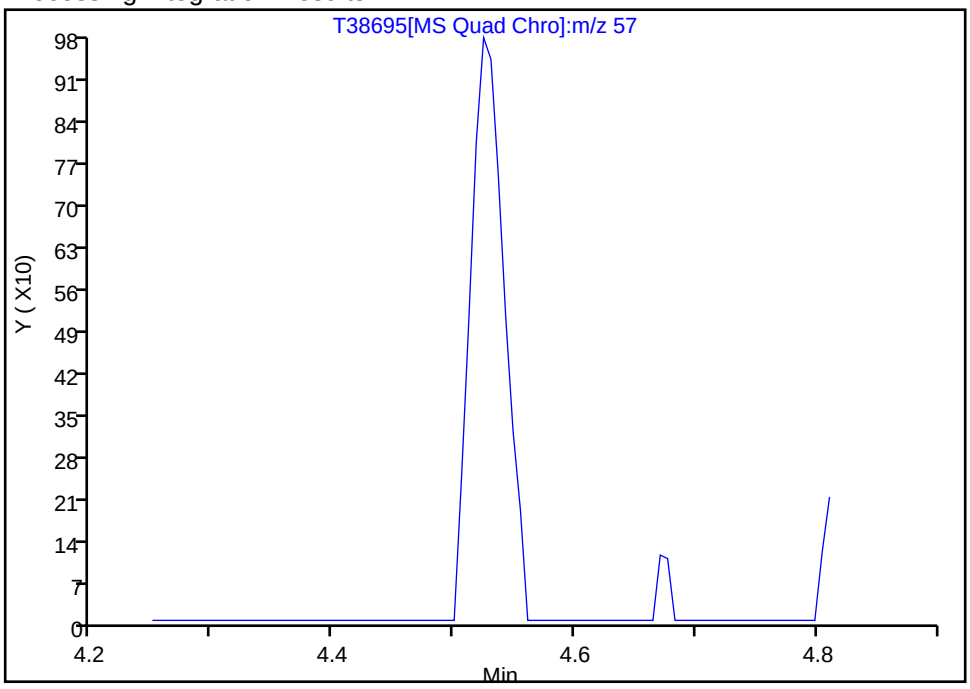
Data File: \\chromfs\Edison\ChromData\CVOAMS15\20200904-116301.b\T38695.D
Injection Date: 04-Sep-2020 12:37:54 Instrument ID: CVOAMS15
Lims ID: STD05
Client ID:
Operator ID: ALS Bottle#: 0 Worklist Smp#: 4
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: 8260W_15 Limit Group: VOA - 8260C Water and Solid
Column: DB-624 ( 0.18 mm) Detector MS Quad

## 80 Epichlorohydrin, CAS: 106-89-8

Signal: 1

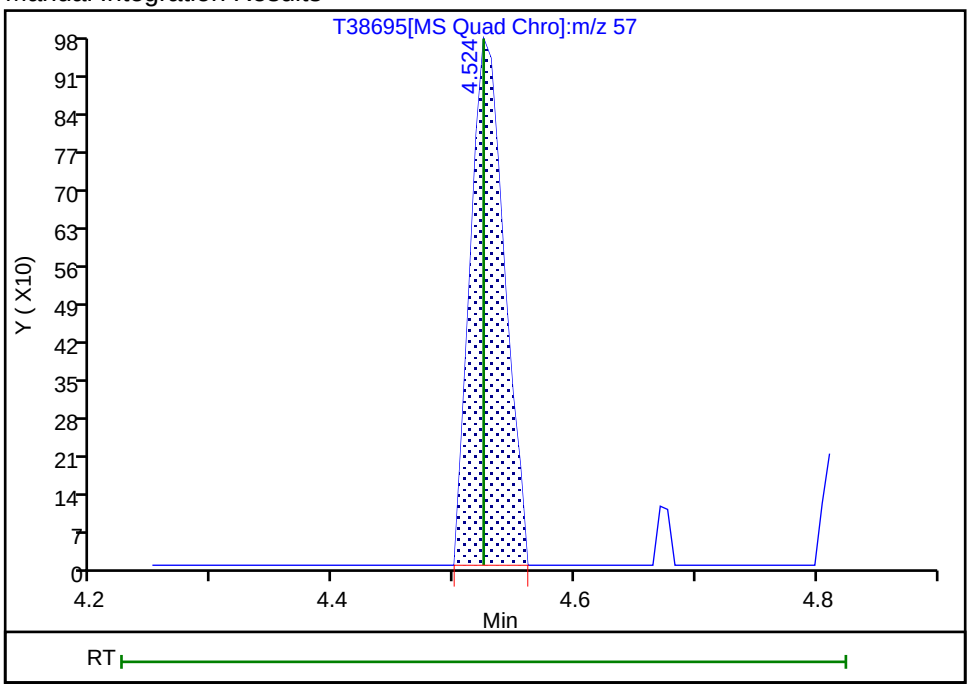
Processing Integration Results

Not Detected
Expected RT: 4.52




Manual Integration Results

RT: 4.52
Area: 1900
Amount: 9.389614
Amount Units: ug/l




Reviewer: delpolitov, 04-Sep-2020 16:53:21
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Eurofins TestAmerica, Edison

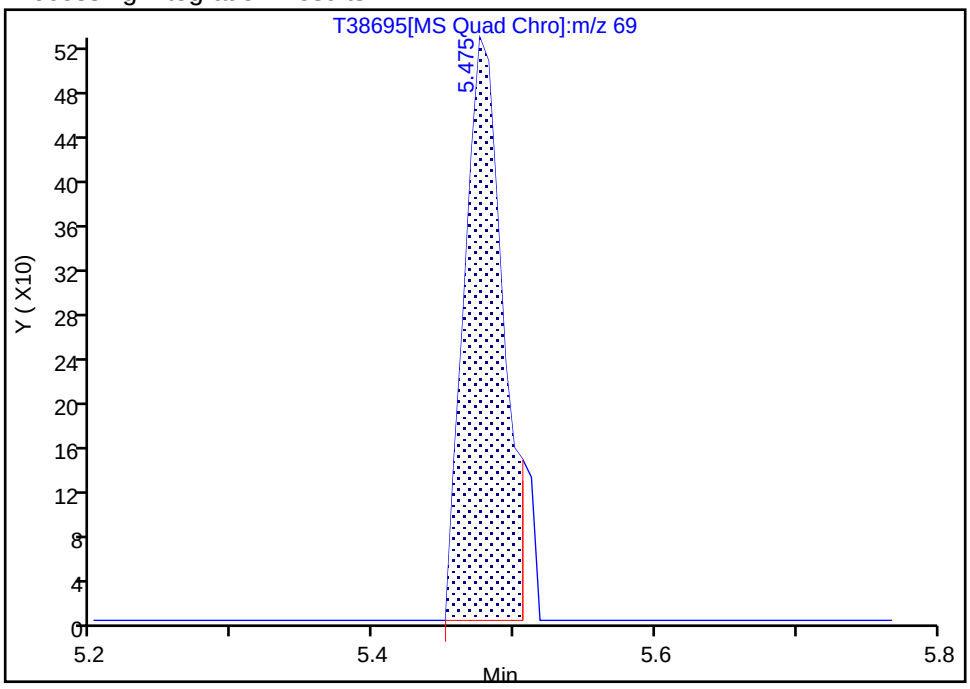
Data File: \\chromfs\Edison\ChromData\CVOAMS15\20200904-116301.b\T38695.D
Injection Date: 04-Sep-2020 12:37:54 Instrument ID: CVOAMS15
Lims ID: STD05
Client ID:
Operator ID: ALS Bottle#: 0 Worklist Smp#: 4
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: 8260W_15 Limit Group: VOA - 8260C Water and Solid
Column: DB-624 ( 0.18 mm) Detector MS Quad

## 86 Ethyl methacrylate, CAS: 97-63-2

Signal: 1

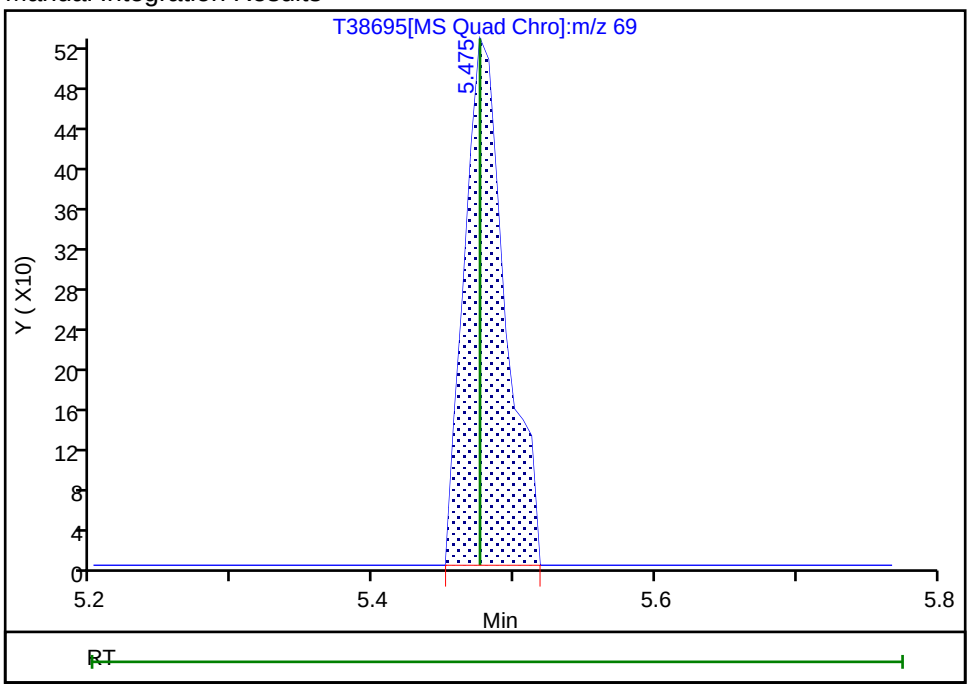
Processing Integration Results

RT: 5.48
Area: 1022
Amount: 0.387176
Amount Units: ug/l




Manual Integration Results

RT: 5.48
Area: 1069
Amount: 0.402931
Amount Units: ug/l




Reviewer: delpolitov, 04-Sep-2020 16:55:40
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Edison

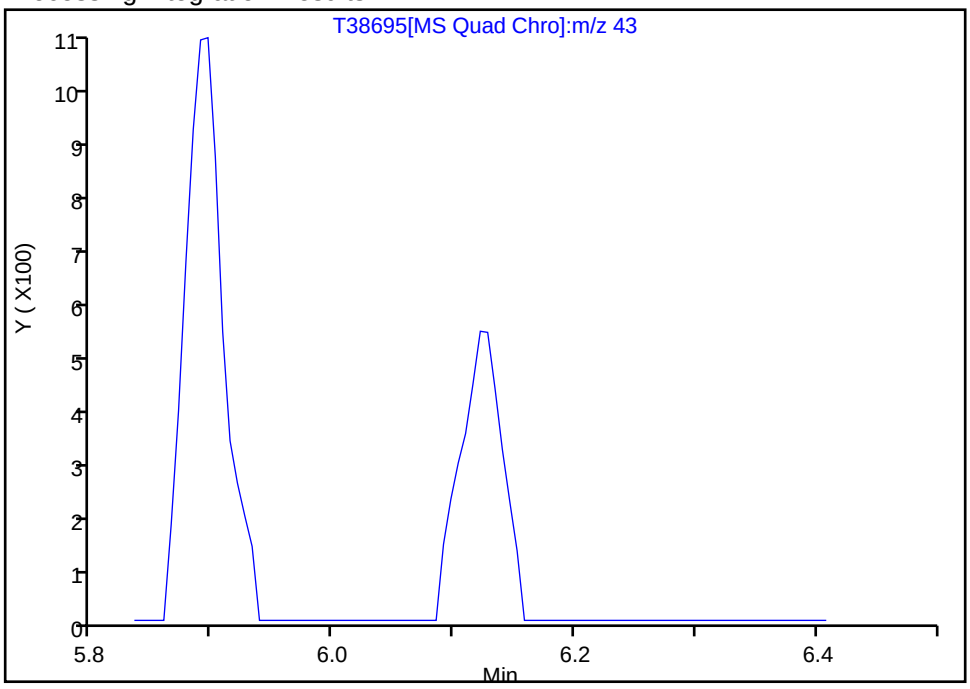
Data File: \\chromfs\Edison\ChromData\CVOAMS15\20200904-116301.b\T38695.D
Injection Date: 04-Sep-2020 12:37:54 Instrument ID: CVOAMS15
Lims ID: STD05
Client ID:
Operator ID: ALS Bottle#: 0 Worklist Smp#: 4
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: 8260W_15 Limit Group: VOA - 8260C Water and Solid
Column: DB-624 ( 0.18 mm) Detector MS Quad

## 93 n-Butyl acetate, CAS: 123-86-4

Signal: 1

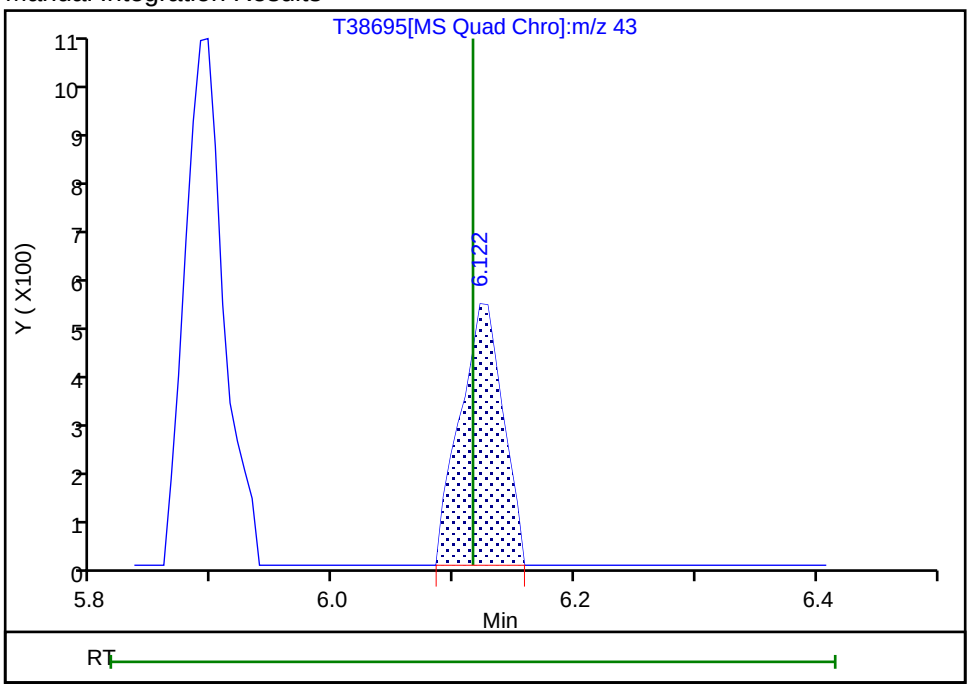
Not Detected
Expected RT: 6.12

Processing Integration Results




Manual Integration Results

RT: 6.12
Area: 1280
Amount: 0.493152
Amount Units: ug/l




Reviewer: delpolitov, 04-Sep-2020 16:55:47
Audit Action: Assigned Compound ID Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Edison

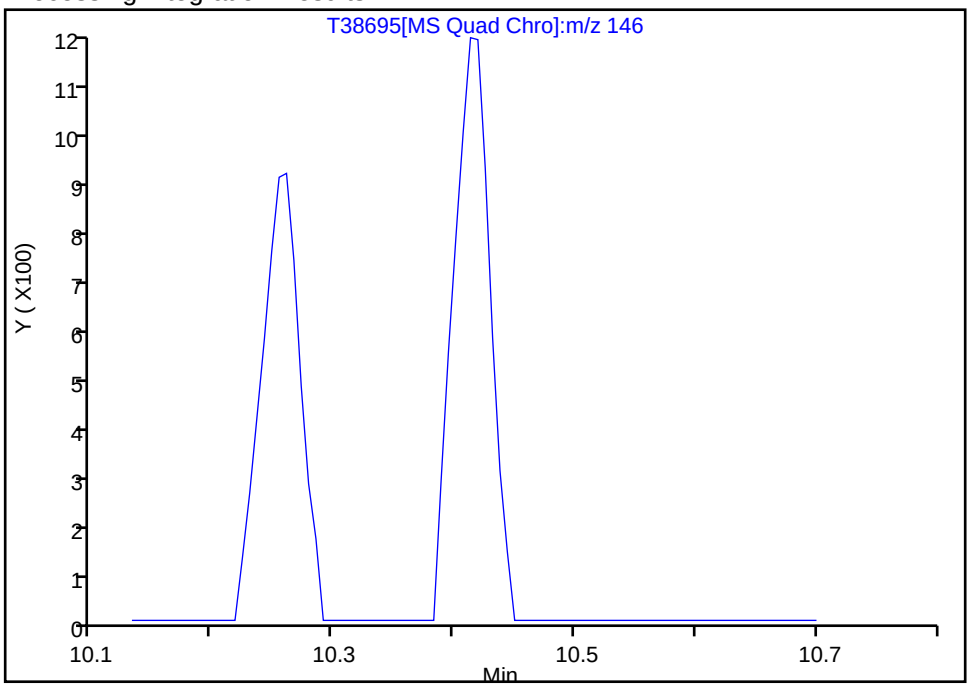
| | | | | | |
|---|---|---|---|---|---|
| Data File: | \\chromfs\Edison\ChromData\CVOAMS15\20200904-116301.b\T38695.D | | | | |
| Injection Date: | 04-Sep-2020 12:37:54 | Instrument ID: | CVOAMS15 | | |
| Lims ID: | STD05 | | | | |
| Client ID: | | | | | |
| Operator ID: | | ALS Bottle#: | 0 | Worklist Smp#: | 4 |
| Purge Vol: | 5.000 mL | Dil. Factor: | 1.0000 | | |
| Method: | 8260W_15 | Limit Group: | VOA - 8260C Water and Solid | | |
| Column: | DB-624 ( 0.18 mm) | Detector | MS Quad | | |

## 121 1,4-Dichlorobenzene, CAS: 106-46-7

Signal: 1

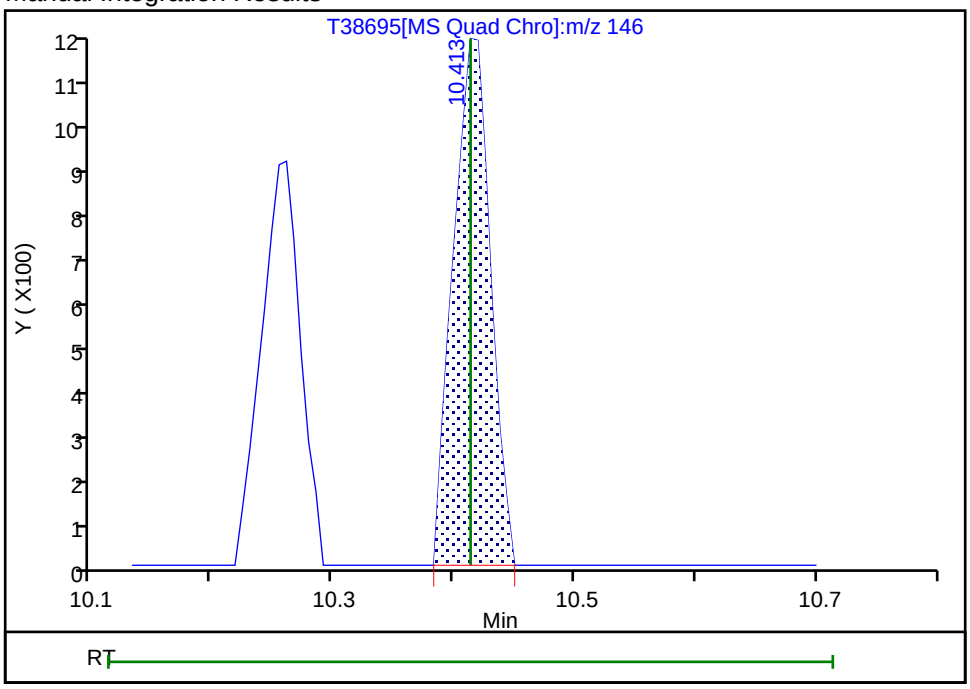
Not Detected
Expected RT: 10.41

Processing Integration Results




Manual Integration Results

RT: 10.41
Area: 2544
Amount: 0.542917
Amount Units: ug/l




Reviewer: delpolitov, 04-Sep-2020 16:56:03
Audit Action: Assigned Compound ID Audit Reason: Incomplete Integration

Eurofins TestAmerica, Edison

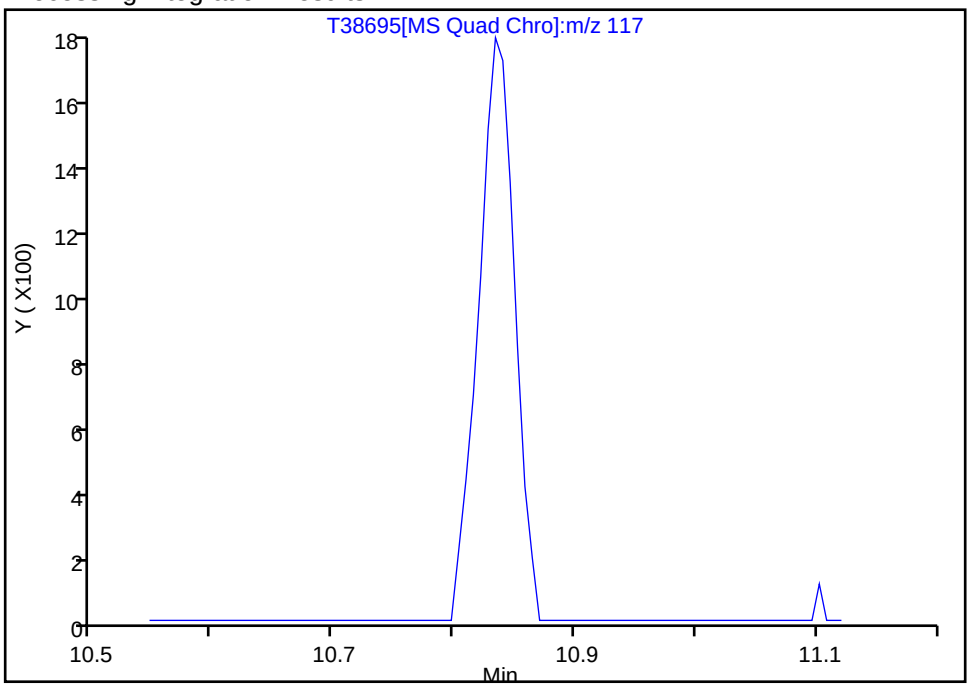
Data File: \\chromfs\Edison\ChromData\CVOAMS15\20200904-116301.b\T38695.D
Injection Date: 04-Sep-2020 12:37:54 Instrument ID: CVOAMS15
Lims ID: STD05
Client ID:
Operator ID: ALS Bottle#: 0 Worklist Smp#: 4
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: 8260W_15 Limit Group: VOA - 8260C Water and Solid
Column: DB-624 ( 0.18 mm) Detector MS Quad

## 125 2,3-Dihydroindene, CAS: 496-11-7

Signal: 1

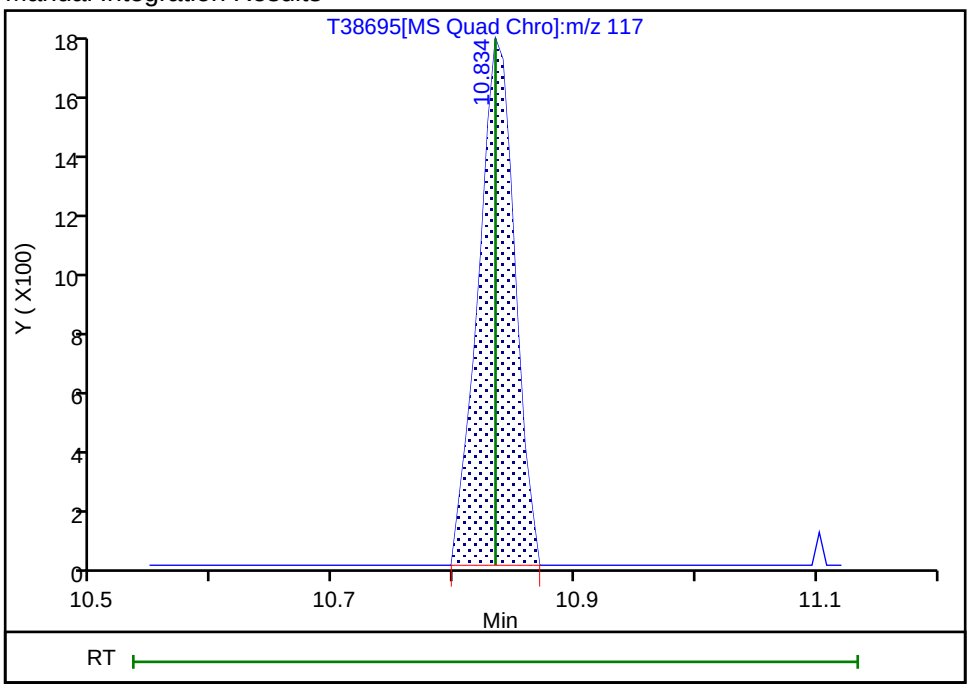
Processing Integration Results

Not Detected
Expected RT: 10.83




Manual Integration Results

RT: 10.83
Area: 3601
Amount: 0.492646
Amount Units: ug/l




Reviewer: delpolitov, 04-Sep-2020 16:56:10
Audit Action: Assigned Compound ID Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Edison

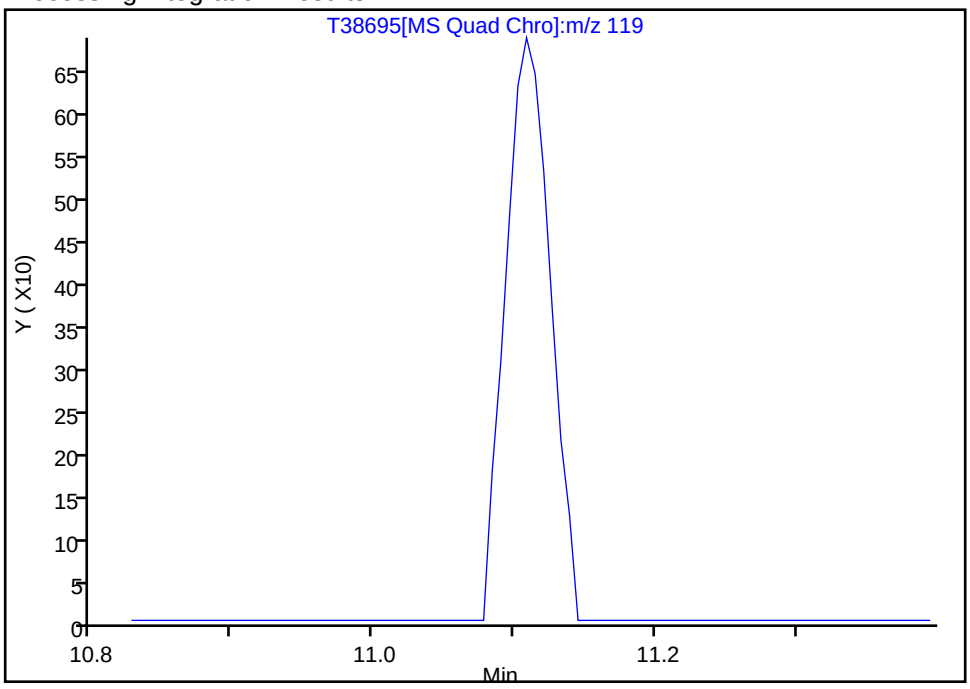
Data File: \\chromfs\Edison\ChromData\CVOAMS15\20200904-116301.b\T38695.D
Injection Date: 04-Sep-2020 12:37:54 Instrument ID: CVOAMS15
Lims ID: STD05
Client ID:
Operator ID: ALS Bottle#: 0 Worklist Smp#: 4
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: 8260W_15 Limit Group: VOA - 8260C Water and Solid
Column: DB-624 ( 0.18 mm) Detector MS Quad

## 127 p-Diethylbenzene, CAS: 105-05-5

Signal: 1

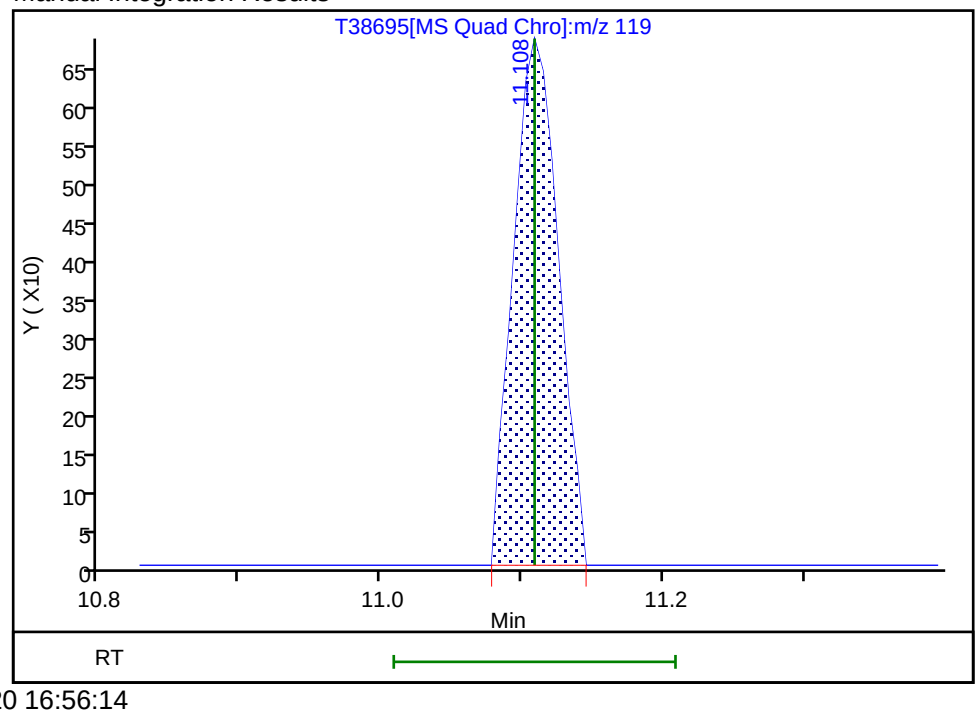
Not Detected
Expected RT: 11.11

Processing Integration Results




Manual Integration Results

RT: 11.11
Area: 1524
Amount: 0.423309
Amount Units: ug/l




Reviewer: delpolitov, 04-Sep-2020 16:56:14
Audit Action: Assigned Compound ID Audit Reason: Incomplete Integration

Eurofins TestAmerica, Edison

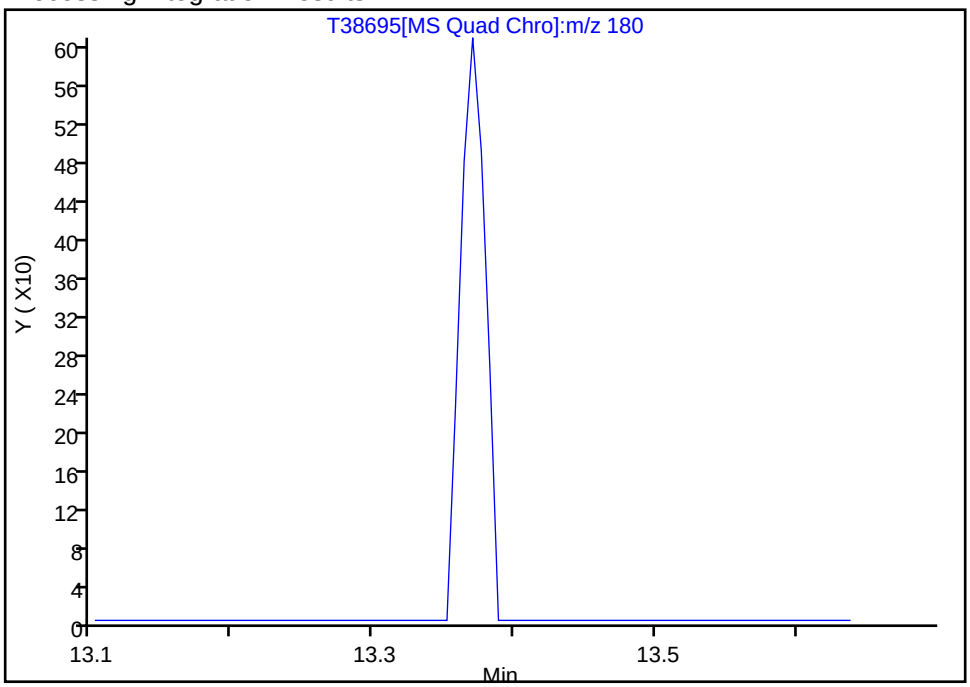
Data File: \\chromfs\Edison\ChromData\CVOAMS15\20200904-116301.b\T38695.D
Injection Date: 04-Sep-2020 12:37:54 Instrument ID: CVOAMS15
Lims ID: STD05
Client ID:
Operator ID: ALS Bottle#: 0 Worklist Smp#: 4
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: 8260W_15 Limit Group: VOA - 8260C Water and Solid
Column: DB-624 ( 0.18 mm) Detector MS Quad

## 135 1,2,3-Trichlorobenzene, CAS: 87-61-6

Signal: 1

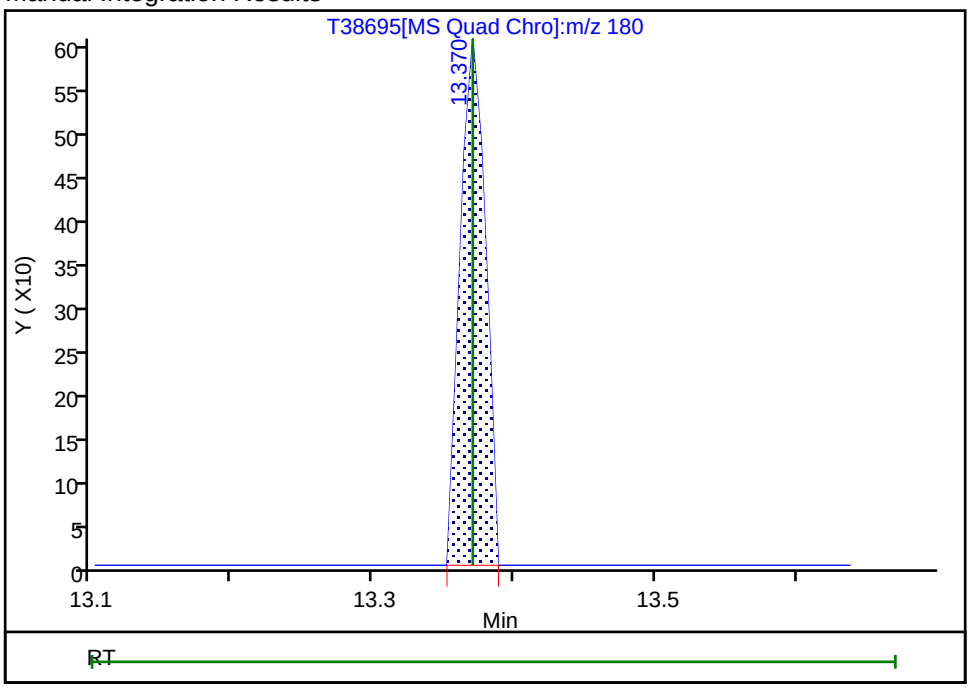
Not Detected
Expected RT: 13.37

Processing Integration Results




Manual Integration Results

RT: 13.37
Area: 747
Amount: 0.498343
Amount Units: ug/l




Reviewer: delpolitov, 04-Sep-2020 16:56:20
Audit Action: Assigned Compound ID Audit Reason: Incomplete Integration

Eurofins TestAmerica, Edison
Target Compound Quantitation Report

Data File: \\chromfs\Edison\ChromData\CVOAMS15\20200904-116301.b\T38696.D
Lims ID: STD1
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 04-Sep-2020 13:01:51 ALS Bottle#: 0 Worklist Smp#: 5
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: STD1
Misc. Info.: 460-0116301-005
Operator ID: Instrument ID: CVOAMS15
Sublist: chrom-8260W_15*sub18

Method: \\chromfs\Edison\ChromData\CVOAMS15\20200904-116301.b\8260W_15.m
Limit Group: VOA - 8260C Water and Solid
Last Update: 05-Sep-2020 11:27:39 Calib Date: 04-Sep-2020 15:01:54
Integrator: RTE ID Type: RT Order ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Edison\ChromData\CVOAMS15\20200904-116301.b\T38701.D

Column 1 : DB-624 ( 0.18 mm) Det: MS Quad
Process Host: CTX1014

First Level Reviewer: delpolitov Date: 04-Sep-2020 16:58:28

| Compound | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q | Response | Cal Amt ug/l | OnCol Amt ug/l | Flags |
|---|---|---|---|---|---|---|---|---|---|
| 1 Monochloropentafluoroethane | 119 | 0.580 | 0.586 | -0.006 | 27 | 534 | 1.00 | 1.21 | Ma |
| 2 1,1-Difluoroethane | 65 | 0.641 | 0.635 | 0.006 | 86 | 1103 | 1.00 | 0.9625 | |
| 3 Chlorotrifluoroethene | 116 | 0.635 | 0.635 | 0.000 | 7 | 902 | 1.00 | 1.15 | |
| 4 Dichlorodifluoromethane | 85 | 0.653 | 0.653 | 0.000 | 79 | 3307 | 1.00 | 0.9364 | |
| 5 Chlorodifluoromethane | 67 | 0.659 | 0.659 | 0.000 | 59 | 403 | 1.00 | 0.8639 | |
| 6 Chloromethane | 50 | 0.726 | 0.726 | 0.000 | 73 | 1863 | 1.00 | 0.9593 | |
| 7 Vinyl chloride | 62 | 0.769 | 0.769 | 0.000 | 59 | 2417 | 1.00 | 0.9240 | |
| 8 Butadiene | 54 | 0.787 | 0.787 | 0.000 | 87 | 2234 | 1.00 | 1.02 | |
| 9 Bromomethane | 94 | 0.909 | 0.909 | 0.000 | 70 | 1321 | 1.00 | 1.00 | |
| 10 Chloroethane | 64 | 0.958 | 0.952 | 0.006 | 59 | 1531 | 1.00 | 0.9805 | |
| 11 Dichlorofluoromethane | 67 | 1.043 | 1.043 | 0.000 | 74 | 4223 | 1.00 | 1.03 | |
| 12 Trichlorofluoromethane | 101 | 1.074 | 1.068 | 0.006 | 56 | 3530 | 1.00 | 0.8490 | |
| 13 Pentane | 72 | 1.110 | 1.110 | 0.000 | 91 | 782 | 2.00 | 2.14 | |
| 14 Ethanol | 45 | 1.165 | 1.171 | -0.006 | 36 | 673 | 40.0 | 69.9 | a |
| 15 Ethyl ether | 59 | 1.208 | 1.208 | 0.000 | 49 | 1831 | 1.00 | 1.11 | |
| 17 2-Methyl-1,3-butadiene | 53 | 1.214 | 1.214 | 0.000 | 67 | 1737 | 1.00 | 0.9375 | |
| 16 1,2-Dichloro-1,1,2-trifluoroetha | 117 | 1.214 | 1.214 | 0.000 | 65 | 2528 | 1.00 | 1.05 | |
| 18 1,1,1-Trifluoro-2,2-dichloroetha | 83 | 1.244 | 1.244 | 0.000 | 68 | 4004 | 1.00 | 1.11 | |
| 19 Acrolein | 56 | 1.269 | 1.269 | 0.000 | 18 | 992 | 4.00 | 4.29 | |
| 20 1,1-Dichloroethene | 96 | 1.318 | 1.318 | 0.000 | 75 | 2319 | 1.00 | 1.00 | |
| 21 1,1,2-Trichloro-1,2,2-trifluoroe | 101 | 1.318 | 1.318 | 0.000 | 54 | 2221 | 1.00 | 0.8861 | |
| 22 Acetone | 43 | 1.348 | 1.348 | 0.000 | 62 | 3434 | 5.00 | 6.11 | |
| 23 Iodomethane | 142 | 1.391 | 1.391 | 0.000 | 1 | 195 | 1.00 | 0.1520 | a |
| 24 Carbon disulfide | 76 | 1.421 | 1.421 | 0.000 | 97 | 8426 | 1.00 | 1.13 | |
| 25 Isopropyl alcohol | 45 | 1.427 | 1.427 | 0.000 | 1 | 921 | 10.0 | 9.24 | |
| 26 Acetonitrile | 40 | 1.494 | 1.494 | 0.000 | 83 | 1043 | 10.0 | 8.54 | |
| 27 3-Chloro-1-propene | 76 | 1.501 | 1.501 | 0.000 | 82 | 1485 | 1.00 | 0.99 | |
| 28 Methyl acetate | 43 | 1.519 | 1.519 | 0.000 | 80 | 2867 | 2.00 | 2.25 | |
| 29 Cyclopentene | 67 | 1.543 | 1.543 | 0.000 | 80 | 5229 | 1.00 | 1.00 | |
| 30 Methylene Chloride | 84 | 1.568 | 1.568 | 0.000 | 68 | 2897 | 1.00 | 1.13 | |

| Compound | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q | Response | Cal Amt ug/l | OnCol Amt ug/l | Flags |
|---|---|---|---|---|---|---|---|---|---|
| * 31 TBA-d9 (IS) | 66 | 1.598 | 1.598 | 0.000 | 95 | 33094 | 1000.0 | 1000.0 | |
| 32 2-Methyl-2-propanol | 59 | 1.647 | 1.647 | 0.000 | 10 | 2426 | 10.0 | 11.8 | a |
| 33 Acrylonitrile | 53 | 1.708 | 1.708 | 0.000 | 94 | 6607 | 10.0 | 9.76 | |
| 34 trans-1,2-Dichloroethene | 96 | 1.720 | 1.720 | 0.000 | 64 | 2500 | 1.00 | 0.9657 | |
| 35 Methyl tert-butyl ether | 73 | 1.732 | 1.732 | 0.000 | 92 | 6647 | 1.00 | 1.03 | |
| 36 Hexane | 57 | 1.891 | 1.891 | 0.000 | 80 | 2644 | 1.00 | 1.01 | |
| 37 1,1-Dichloroethane | 63 | 1.970 | 1.970 | 0.000 | 69 | 4166 | 1.00 | 0.99 | |
| 38 Vinyl acetate | 86 | 2.019 | 2.019 | 0.000 | 99 | 666 | 2.00 | 1.53 | |
| 39 2-Chloro-1,3-butadiene | 88 | 2.031 | 2.031 | 0.000 | 50 | 2294 | 1.00 | 0.9546 | |
| 40 Isopropyl ether | 45 | 2.031 | 2.031 | 0.000 | 71 | 5924 | 1.00 | 0.99 | |
| 41 Tert-butyl ethyl ether | 59 | 2.275 | 2.275 | 0.000 | 81 | 5868 | 1.00 | 0.9318 | |
| * 42 2-Butanone-d5 | 46 | 2.336 | 2.336 | 0.000 | 56 | 206313 | 250.0 | 250.0 | |
| 44 2,2-Dichloropropane | 97 | 2.354 | 2.354 | 0.000 | 44 | 851 | 1.00 | 0.9451 | a |
| 43 cis-1,2-Dichloroethene | 96 | 2.360 | 2.360 | 0.000 | 26 | 2879 | 1.00 | 0.99 | a |
| 45 2-Butanone (MEK) | 43 | 2.385 | 2.378 | 0.006 | 78 | 4478 | 5.00 | 5.40 | |
| 46 Propionitrile | 54 | 2.421 | 2.421 | 0.000 | 78 | 2458 | 10.0 | 9.77 | |
| 47 Ethyl acetate | 70 | 2.439 | 2.439 | 0.000 | 72 | 361 | 2.00 | 1.67 | |
| 48 Methyl acrylate | 55 | 2.458 | 2.458 | 0.000 | 63 | 1672 | 1.00 | 0.8822 | |
| 49 Chlorobromomethane | 128 | 2.531 | 2.531 | 0.000 | 41 | 1421 | 1.00 | 1.02 | |
| 50 Methacrylonitrile | 67 | 2.531 | 2.531 | 0.000 | 85 | 8273 | 10.0 | 9.45 | |
| 51 Tetrahydrofuran | 72 | 2.580 | 2.574 | 0.006 | 51 | 497 | 2.00 | 1.86 | |
| 52 Chloroform | 83 | 2.598 | 2.598 | 0.000 | 86 | 5047 | 1.00 | 1.09 | |
| $ 53 Dibromofluoromethane (Surr) | 113 | 2.720 | 2.720 | 0.000 | 95 | 142767 | 50.0 | 50.5 | |
| 54 1,1,1-Trichloroethane | 97 | 2.726 | 2.726 | 0.000 | 14 | 4111 | 1.00 | 0.9535 | |
| 55 Cyclohexane | 84 | 2.769 | 2.769 | 0.000 | 65 | 3338 | 1.00 | 0.9709 | |
| 56 Carbon tetrachloride | 117 | 2.860 | 2.860 | 0.000 | 67 | 3256 | 1.00 | 0.8957 | |
| 57 1,1-Dichloropropene | 75 | 2.860 | 2.860 | 0.000 | 73 | 3967 | 1.00 | 1.10 | |
| $ 58 1,2-Dichloroethane-d4 (Surr) | 65 | 2.982 | 2.982 | 0.000 | 98 | 144381 | 50.0 | 50.6 | |
| 59 Isobutyl alcohol | 43 | 3.025 | 3.019 | 0.006 | 6 | 1702 | 25.0 | 27.7 | |
| 60 Benzene | 78 | 3.025 | 3.025 | 0.000 | 92 | 9508 | 1.00 | 0.9581 | |
| 61 1,2-Dichloroethane | 62 | 3.049 | 3.043 | 0.006 | 62 | 3416 | 1.00 | 1.06 | |
| 62 Isooctane | 57 | 3.116 | 3.116 | 0.000 | 81 | 4065 | 1.00 | 0.8848 | |
| 63 Isopropyl acetate | 61 | 3.140 | 3.147 | -0.007 | 82 | 621 | 1.00 | 0.8674 | |
| 64 Tert-amyl methyl ether | 73 | 3.153 | 3.153 | 0.000 | 77 | 5935 | 1.00 | 0.9265 | |
| * 65 Fluorobenzene | 96 | 3.275 | 3.275 | 0.000 | 99 | 484077 | 50.0 | 50.0 | |
| 66 n-Heptane | 43 | 3.299 | 3.299 | 0.000 | 30 | 1846 | 1.00 | 0.9780 | a |
| 67 Trichloroethene | 95 | 3.610 | 3.610 | 0.000 | 72 | 2852 | 1.00 | 1.01 | |
| 68 n-Butanol | 56 | 3.640 | 3.628 | 0.012 | 18 | 753 | 25.0 | 18.0 | |
| 69 Ethyl acrylate | 55 | 3.781 | 3.775 | 0.007 | 44 | 5063 | 1.00 | 1.05 | |
| 70 Methylcyclohexane | 83 | 3.787 | 3.787 | 0.000 | 60 | 3241 | 1.00 | 0.9304 | |
| 71 1,2-Dichloropropane | 63 | 3.817 | 3.817 | 0.000 | 44 | 1900 | 1.00 | 0.8490 | |
| 72 Dibromomethane | 93 | 3.933 | 3.933 | 0.000 | 25 | 1615 | 1.00 | 1.03 | |
| * 73 1,4-Dioxane-d8 | 96 | 3.933 | 3.939 | -0.006 | 14 | 22541 | 1000.0 | 1000.0 | |
| 74 1,4-Dioxane | 88 | 3.988 | 3.988 | 0.000 | 13 | 956 | 50.0 | 45.6 | |
| 75 Methyl methacrylate | 100 | 4.006 | 4.000 | 0.006 | 51 | 1204 | 2.00 | 2.08 | |
| 76 n-Propyl acetate | 43 | 4.085 | 4.085 | 0.000 | 71 | 1877 | 1.00 | 0.7938 | |
| 77 Dichlorobromomethane | 83 | 4.116 | 4.116 | 0.000 | 58 | 3356 | 1.00 | 0.9746 | |
| 78 2-Nitropropane | 41 | 4.372 | 4.366 | 0.006 | 76 | 850 | 2.00 | 1.88 | |
| 79 2-Chloroethyl vinyl ether | 63 | 4.494 | 4.488 | 0.006 | 1 | 495 | 1.00 | 1.03 | a |
| 80 Epichlorohydrin | 57 | 4.524 | 4.524 | 0.000 | 36 | 3734 | 20.0 | 19.9 | |
| 81 cis-1,3-Dichloropropene | 75 | 4.616 | 4.610 | 0.006 | 58 | 4361 | 1.00 | 1.06 | |
| 82 4-Methyl-2-pentanone (MIBK) | 43 | 4.829 | 4.829 | 0.000 | 80 | 7278 | 5.00 | 4.71 | |

| Compound | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q | Response | Cal Amt ug/l | OnCol Amt ug/l | Flags |
|---|---|---|---|---|---|---|---|---|---|
| $ 83 Toluene-d8 (Surr) | 98 | 4.902 | 4.902 | 0.000 | 99 | 468513 | 50.0 | 50.0 | |
| 84 Toluene | 91 | 4.982 | 4.982 | 0.000 | 82 | 10965 | 1.00 | 1.01 | |
| 85 trans-1,3-Dichloropropene | 75 | 5.293 | 5.286 | 0.006 | 57 | 3274 | 1.00 | 0.8883 | |
| 86 Ethyl methacrylate | 69 | 5.475 | 5.475 | 0.000 | 31 | 2655 | 1.00 | 1.01 | |
| 87 1,1,2-Trichloroethane | 83 | 5.500 | 5.500 | 0.000 | 55 | 1785 | 1.00 | 0.9654 | |
| 88 Tetrachloroethene | 166 | 5.640 | 5.640 | 0.000 | 74 | 2905 | 1.00 | 0.99 | |
| 89 1,3-Dichloropropane | 76 | 5.701 | 5.695 | 0.006 | 49 | 3299 | 1.00 | 0.9263 | |
| 90 2-Hexanone | 43 | 5.890 | 5.884 | 0.006 | 81 | 5020 | 5.00 | 4.77 | |
| 91 Chlorodibromomethane | 129 | 5.975 | 5.975 | 0.000 | 48 | 2428 | 1.00 | 0.8905 | |
| 92 Ethylene Dibromide | 107 | 6.085 | 6.085 | 0.000 | 42 | 2533 | 1.00 | 1.05 | |
| 93 n-Butyl acetate | 43 | 6.122 | 6.116 | 0.006 | 74 | 2338 | 1.00 | 0.9103 | |
| * 94 Chlorobenzene-d5 | 117 | 6.743 | 6.743 | 0.000 | 85 | 367283 | 50.0 | 50.0 | |
| 95 Chlorobenzene | 112 | 6.780 | 6.786 | -0.006 | 39 | 6579 | 1.00 | 0.9496 | |
| 96 1,1,1,2-Tetrachloroethane | 131 | 6.932 | 6.932 | 0.000 | 59 | 2668 | 1.00 | 1.02 | |
| 97 Ethylbenzene | 106 | 6.993 | 6.993 | 0.000 | 74 | 3844 | 1.00 | 1.06 | |
| 98 m-Xylene & p-Xylene | 106 | 7.176 | 7.176 | 0.000 | 0 | 4959 | 1.00 | 1.10 | |
| 99 o-Xylene | 106 | 7.743 | 7.743 | 0.000 | 76 | 4430 | 1.00 | 1.05 | |
| 100 Styrene | 104 | 7.774 | 7.774 | 0.000 | 73 | 6247 | 1.00 | 0.9291 | |
| 101 n-Butyl acrylate | 73 | 7.865 | 7.865 | 0.000 | 63 | 1082 | 1.00 | 0.7531 | |
| 102 Bromoform | 173 | 7.987 | 7.987 | 0.000 | 49 | 1597 | 1.00 | 0.8911 | |
| 103 Amyl acetate (mixed isomers) | 43 | 8.255 | 8.255 | 0.000 | 66 | 2397 | 1.00 | 0.8688 | |
| 104 Isopropylbenzene | 105 | 8.341 | 8.341 | 0.000 | 54 | 10400 | 1.00 | 0.99 | |
| $ 105 4-Bromofluorobenzene | 174 | 8.530 | 8.530 | 0.000 | 90 | 151227 | 50.0 | 50.0 | |
| 106 Bromobenzene | 156 | 8.700 | 8.700 | 0.000 | 77 | 2808 | 1.00 | 1.02 | |
| 107 1,1,2,2-Tetrachloroethane | 83 | 8.859 | 8.859 | 0.000 | 30 | 2432 | 1.00 | 0.9527 | |
| 108 1,2,3-Trichloropropane | 110 | 8.871 | 8.865 | 0.006 | 42 | 596 | 1.00 | 0.7725 | |
| 109 trans-1,4-Dichloro-2-butene | 53 | 8.956 | 8.956 | 0.000 | 1 | 522 | 1.00 | 0.99 | M |
| 110 N-Propylbenzene | 91 | 8.993 | 8.993 | 0.000 | 90 | 12144 | 1.00 | 1.01 | |
| 111 2-Chlorotoluene | 91 | 9.054 | 9.048 | 0.006 | 51 | 7382 | 1.00 | 1.06 | |
| 112 4-Ethyltoluene | 105 | 9.194 | 9.194 | 0.000 | 62 | 9389 | 1.00 | 1.00 | |
| 113 4-Chlorotoluene | 91 | 9.243 | 9.237 | 0.006 | 51 | 7672 | 1.00 | 1.02 | |
| 114 1,3,5-Trimethylbenzene | 105 | 9.310 | 9.310 | 0.000 | 66 | 7673 | 1.00 | 1.01 | |
| 115 Butyl Methacrylate | 87 | 9.621 | 9.621 | 0.000 | 51 | 2355 | 1.00 | 0.9117 | |
| 116 tert-Butylbenzene | 119 | 9.810 | 9.810 | 0.000 | 57 | 6625 | 1.00 | 1.01 | |
| 117 1,2,4-Trimethylbenzene | 105 | 9.895 | 9.895 | 0.000 | 66 | 7164 | 1.00 | 0.9553 | |
| 118 sec-Butylbenzene | 105 | 10.176 | 10.176 | 0.000 | 64 | 8911 | 1.00 | 0.99 | |
| 119 1,3-Dichlorobenzene | 146 | 10.255 | 10.255 | 0.000 | 61 | 4765 | 1.00 | 1.05 | |
| * 120 1,4-Dichlorobenzene-d4 | 152 | 10.377 | 10.377 | 0.000 | 95 | 168990 | 50.0 | 50.0 | |
| 121 1,4-Dichlorobenzene | 146 | 10.414 | 10.414 | 0.000 | 29 | 4771 | 1.00 | 1.02 | |
| 122 4-Isopropyltoluene | 119 | 10.456 | 10.456 | 0.000 | 45 | 7906 | 1.00 | 1.05 | |
| 123 1,2,3-Trimethylbenzene | 105 | 10.560 | 10.560 | 0.000 | 66 | 7124 | 1.00 | 0.9728 | |
| 124 Benzyl chloride | 91 | 10.688 | 10.682 | 0.006 | 50 | 4384 | 1.00 | 0.9569 | |
| 125 2,3-Dihydroindene | 117 | 10.834 | 10.834 | 0.000 | 73 | 6670 | 1.00 | 0.9184 | |
| 126 1,2-Dichlorobenzene | 146 | 11.005 | 10.999 | 0.006 | 50 | 3919 | 1.00 | 0.9586 | |
| 127 p-Diethylbenzene | 119 | 11.109 | 11.109 | -0.001 | 62 | 3482 | 1.00 | 0.9734 | |
| 128 n-Butylbenzene | 92 | 11.133 | 11.139 | -0.006 | 68 | 3395 | 1.00 | 0.9699 | |
| 129 1,2-Dibromo-3-Chloropropane | 157 | 12.096 | 12.090 | 0.006 | 1 | 395 | 1.00 | 1.06 | |
| 130 1,2,4,5-Tetramethylbenzene | 119 | 12.133 | 12.133 | 0.000 | 35 | 5224 | 1.00 | 0.9316 | |
| 131 1,3,5-Trichlorobenzene | 180 | 12.334 | 12.334 | 0.000 | 43 | 2410 | 1.00 | 1.04 | |
| 132 1,2,4-Trichlorobenzene | 180 | 12.950 | 12.950 | 0.000 | 33 | 1677 | 1.00 | 0.8693 | |
| 133 Hexachlorobutadiene | 225 | 13.145 | 13.151 | -0.006 | 1 | 1014 | 1.00 | 0.9014 | |
| 134 Naphthalene | 128 | 13.151 | 13.151 | 0.000 | 77 | 4542 | 1.00 | 0.9175 | |

| Compound | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q | Response | Cal Amt ug/l | OnCol Amt ug/l | Flags |
|---|---|---|---|---|---|---|---|---|---|
| 135 1,2,3-Trichlorobenzene | 180 | 13.376 | 13.370 | 0.006 | 21 | 1122 | 1.00 | 0.7533 | |
| S 136 1,2-Dichloroethene, Total | 100 | | | | 0 | | 2.00 | 1.96 | |
| S 137 Xylenes, Total | 100 | | | | 0 | | 2.00 | 2.15 | |
| S 140 Total BTEX | 1 | | | | 0 | | 5.00 | 5.18 | |
| S 139 1,3-Dichloropropene, Total | 1 | | | | 0 | | 2.00 | 1.95 | |
| S 138 Total 1,2-dichloroethene | 1 | | | | 0 | | | 1.96 | |

## QC Flag Legend

Review Flags

M - Manually Integrated

a - User Assigned ID

## Reagents:

| | | | | |
|---|---|---|---|---|
| 8260MIX1COMB_00125 | Amount Added: | 10.00 | Units: uL | |
| GASES Li_00384 | Amount Added: | 10.00 | Units: uL | |
| 524freon_00027 | Amount Added: | 10.00 | Units: uL | |
| ACROLEIN W_00112 | Amount Added: | 4.00 | Units: uL | |
| 14DIOXINTER_00118 | Amount Added: | 30.00 | Units: uL | |
| VOA6IS/SURR_00038 | Amount Added: | 5.00 | Units: uL | Run Reagent |

Report Date: 05-Sep-2020 11:27:40 Chrom Revision: 2.3 20-Aug-2020 13:57:12

Eurofins TestAmerica, Edison

Data File: \\chromfs\Edison\ChromData\CVOAMS15\20200904-116301.b\T38696.D

Injection Date: 04-Sep-2020 13:01:51 Instrument ID: CVOAMS15

Lims ID: STD1

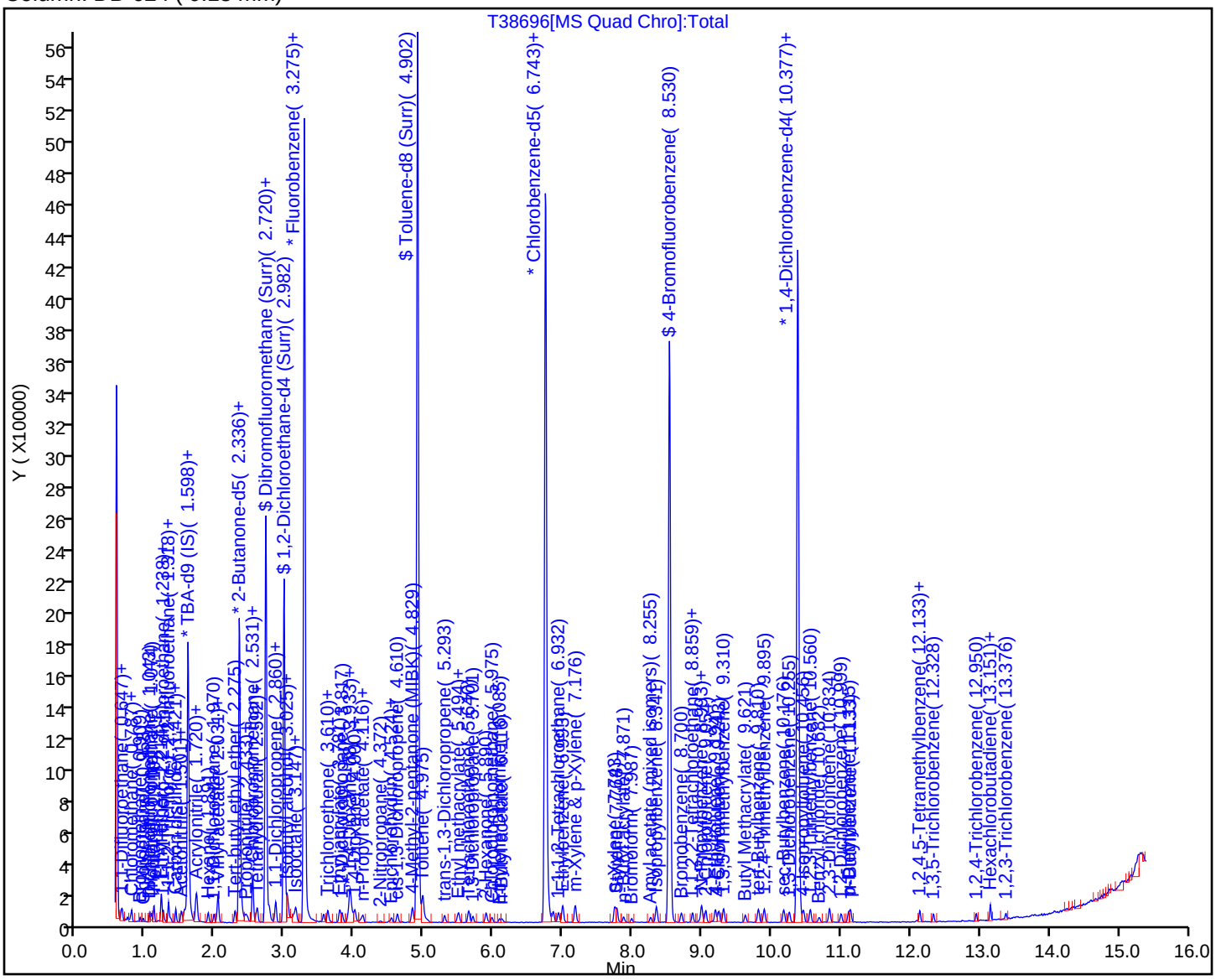
Client ID:

Operator ID: ALS Bottle#: 0 Worklist Smp#: 5

Purge Vol: 5.000 mL Dil. Factor: 1.0000

Method: 8260W_15 Limit Group: VOA - 8260C Water and Solid

Column: DB-624 ( 0.18 mm)



Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Edison

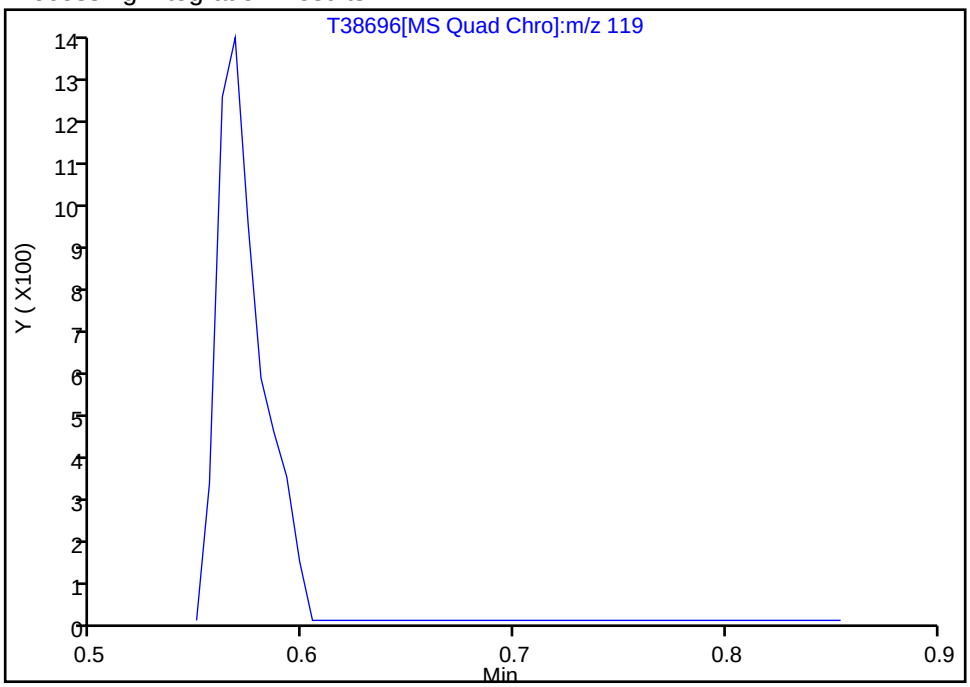
Data File: \\chromfs\Edison\ChromData\CVOAMS15\20200904-116301.b\T38696.D
Injection Date: 04-Sep-2020 13:01:51 Instrument ID: CVOAMS15
Lims ID: STD1
Client ID:
Operator ID: ALS Bottle#: 0 Worklist Smp#: 5
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: 8260W_15 Limit Group: VOA - 8260C Water and Solid
Column: DB-624 ( 0.18 mm) Detector MS Quad

## 1 Monochloropentafluoroethane, CAS: 76-15-3

Signal: 1

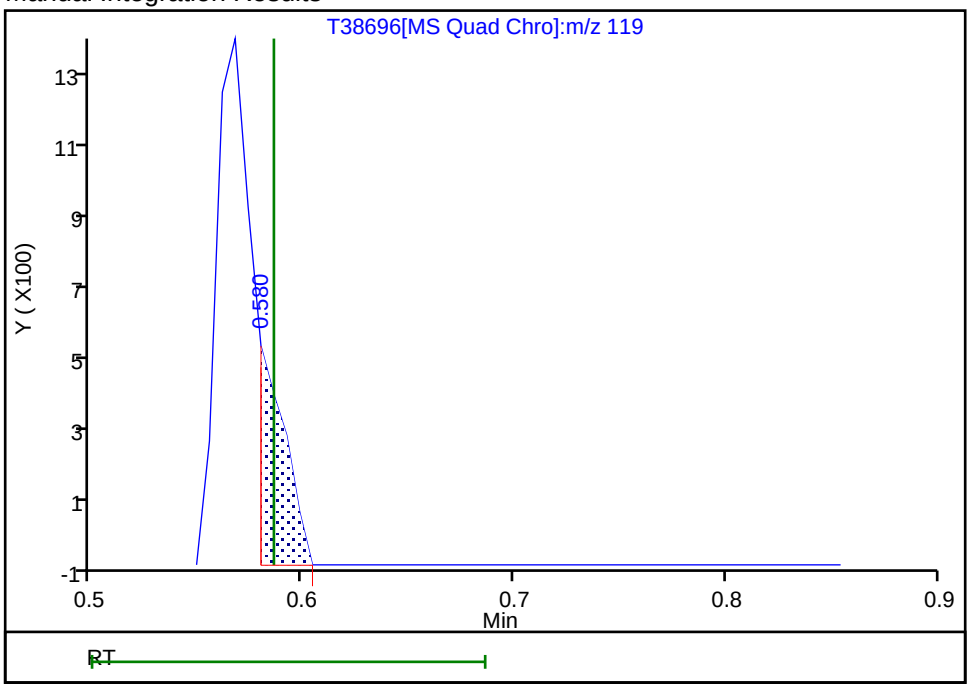
Not Detected
Expected RT: 0.59

Processing Integration Results




Manual Integration Results

RT: 0.58
Area: 534
Amount: 1.211844
Amount Units: ug/l




Reviewer: delpolitov, 04-Sep-2020 16:57:04
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Edison

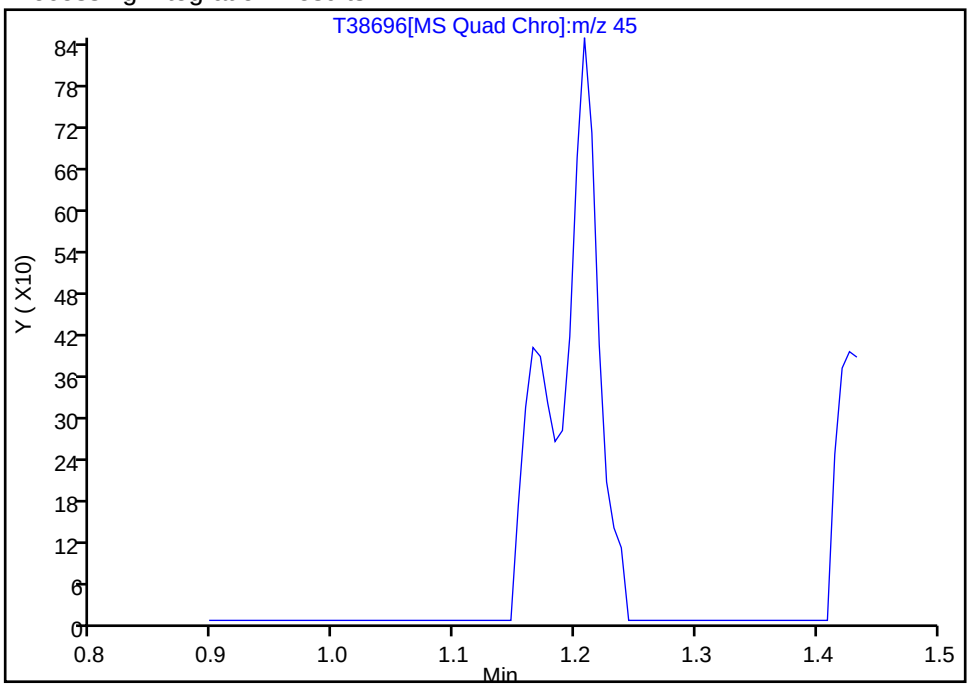
Data File: \\chromfs\Edison\ChromData\CVOAMS15\20200904-116301.b\T38696.D
Injection Date: 04-Sep-2020 13:01:51 Instrument ID: CVOAMS15
Lims ID: STD1
Client ID:
Operator ID: ALS Bottle#: 0 Worklist Smp#: 5
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: 8260W_15 Limit Group: VOA - 8260C Water and Solid
Column: DB-624 ( 0.18 mm) Detector MS Quad

## 14 Ethanol, CAS: 64-17-5

Signal: 1

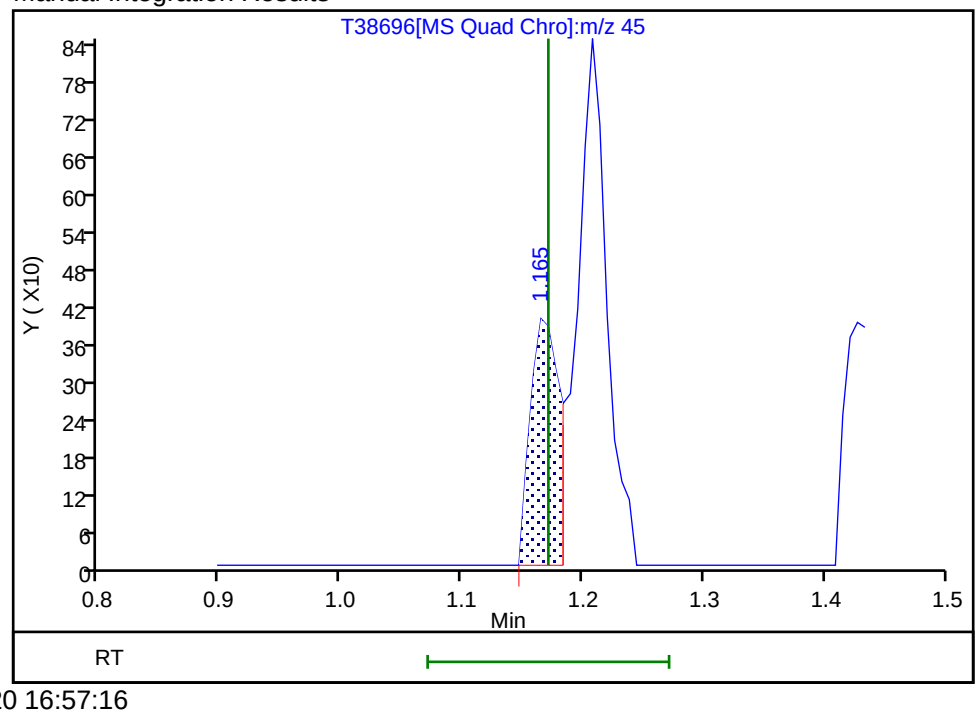
Not Detected
Expected RT: 1.17

Processing Integration Results




Manual Integration Results

RT: 1.17
Area: 673
Amount: 69.875099
Amount Units: ug/l




Reviewer: delpolitov, 04-Sep-2020 16:57:16
Audit Action: Assigned Compound ID Audit Reason: Incomplete Integration

Eurofins TestAmerica, Edison

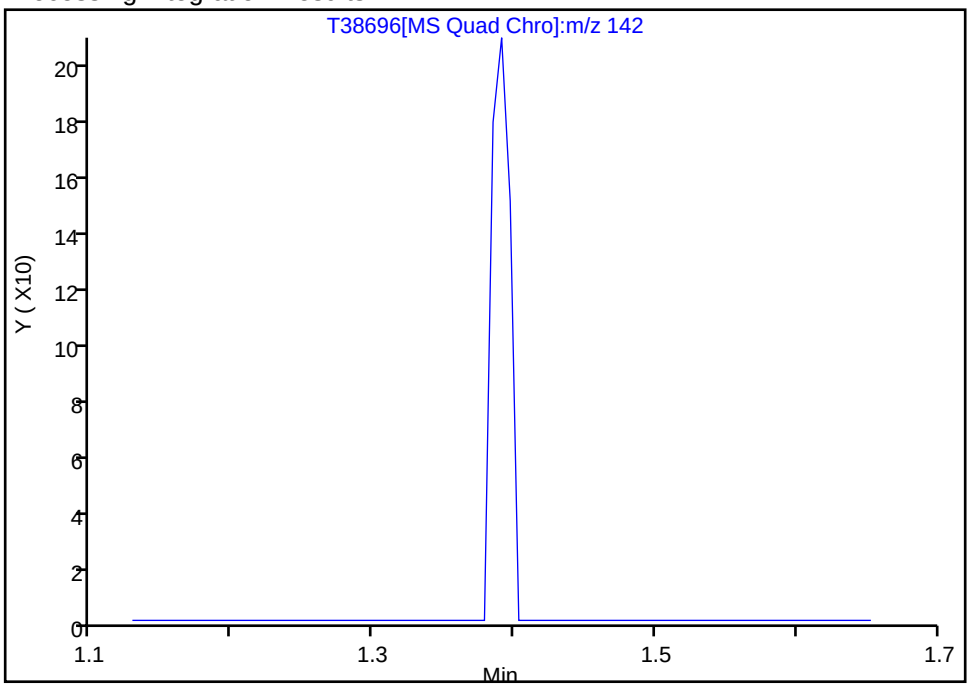
Data File: \\chromfs\Edison\ChromData\CVOAMS15\20200904-116301.b\T38696.D
Injection Date: 04-Sep-2020 13:01:51 Instrument ID: CVOAMS15
Lims ID: STD1
Client ID:
Operator ID: ALS Bottle#: 0 Worklist Smp#: 5
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: 8260W_15 Limit Group: VOA - 8260C Water and Solid
Column: DB-624 ( 0.18 mm) Detector MS Quad

## 23 Iodomethane, CAS: 74-88-4

Signal: 1

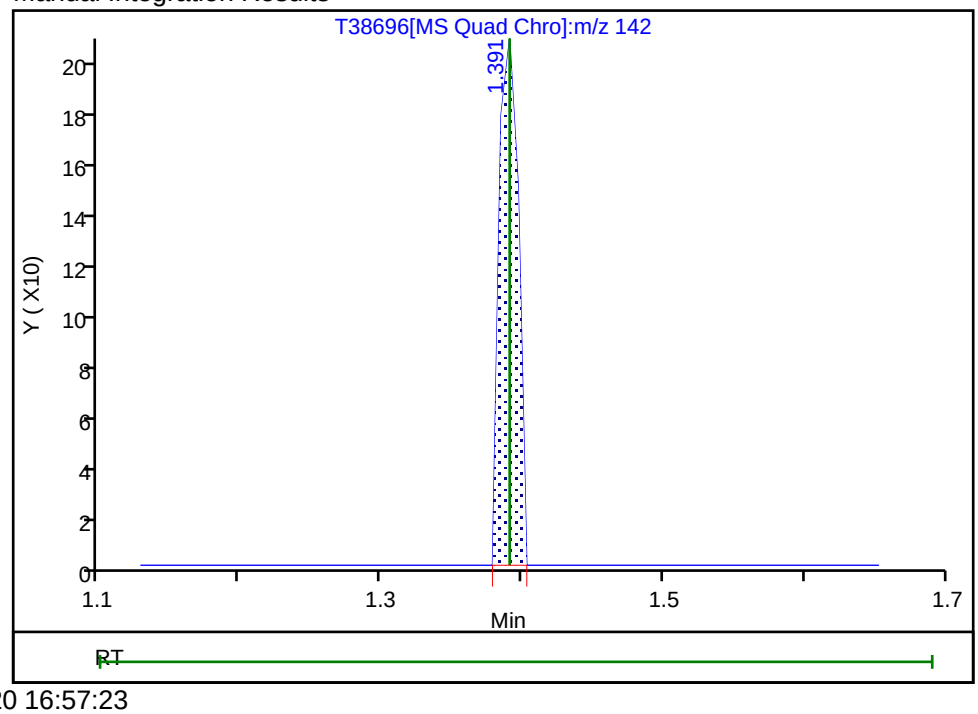
Not Detected
Expected RT: 1.39

Processing Integration Results




Manual Integration Results

RT: 1.39
Area: 195
Amount: 0.152032
Amount Units: ug/l




Reviewer: delpolitov, 04-Sep-2020 16:57:23
Audit Action: Assigned Compound ID Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Edison

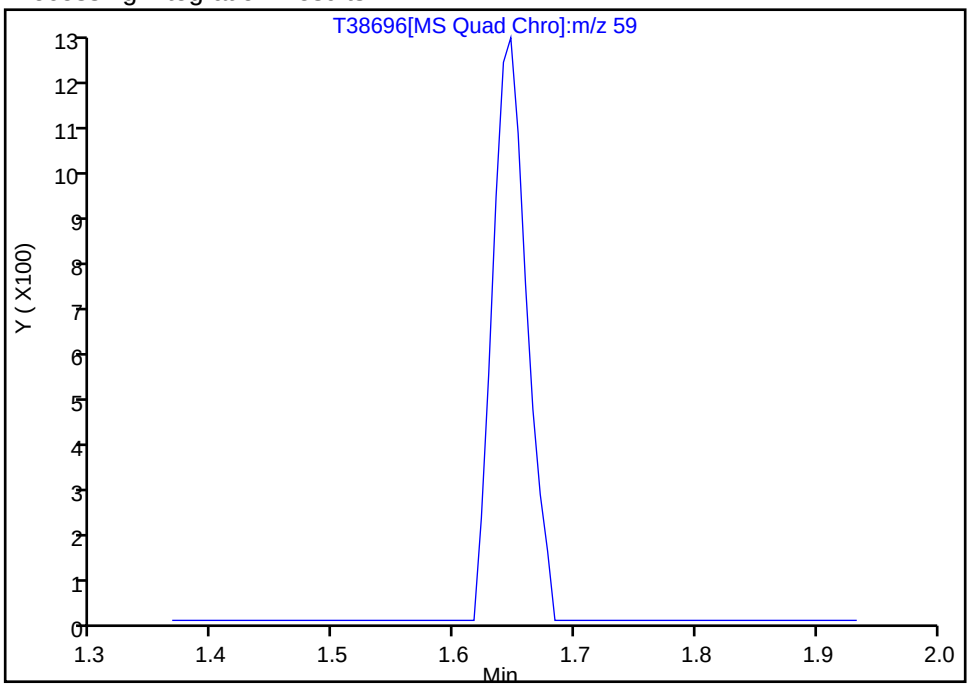
Data File: \\chromfs\Edison\ChromData\CVOAMS15\20200904-116301.b\T38696.D
Injection Date: 04-Sep-2020 13:01:51 Instrument ID: CVOAMS15
Lims ID: STD1
Client ID:
Operator ID: ALS Bottle#: 0 Worklist Smp#: 5
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: 8260W_15 Limit Group: VOA - 8260C Water and Solid
Column: DB-624 ( 0.18 mm) Detector MS Quad

## 32 2-Methyl-2-propanol, CAS: 75-65-0

Signal: 1

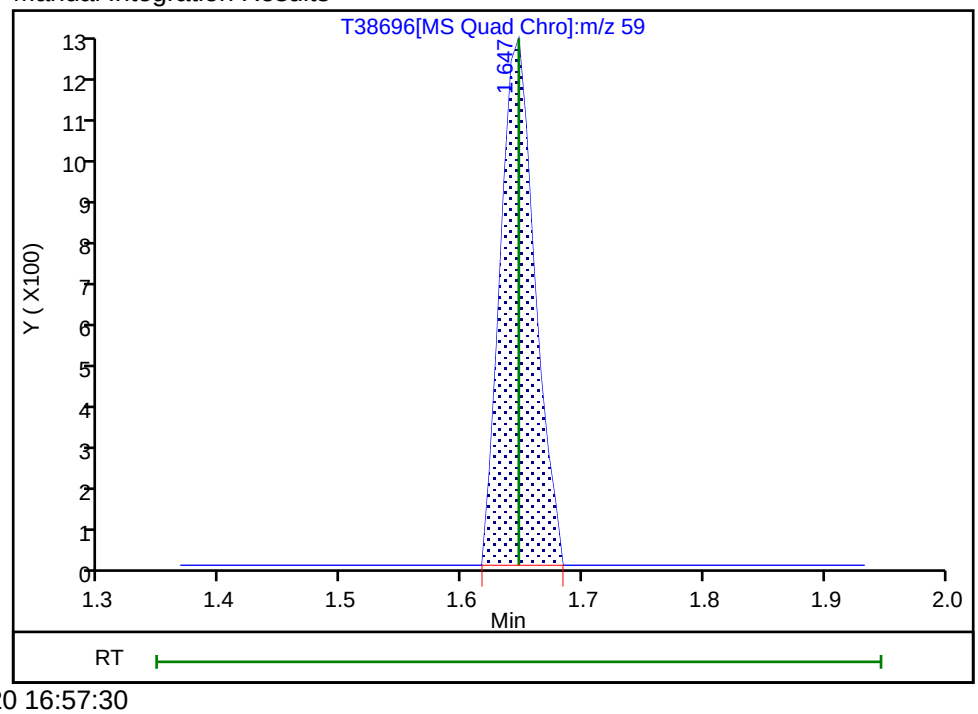
Not Detected
Expected RT: 1.65

Processing Integration Results




Manual Integration Results

RT: 1.65
Area: 2426
Amount: 11.836470
Amount Units: ug/l




Reviewer: delpolitov, 04-Sep-2020 16:57:30
Audit Action: Assigned Compound ID Audit Reason: Incomplete Integration

Eurofins TestAmerica, Edison

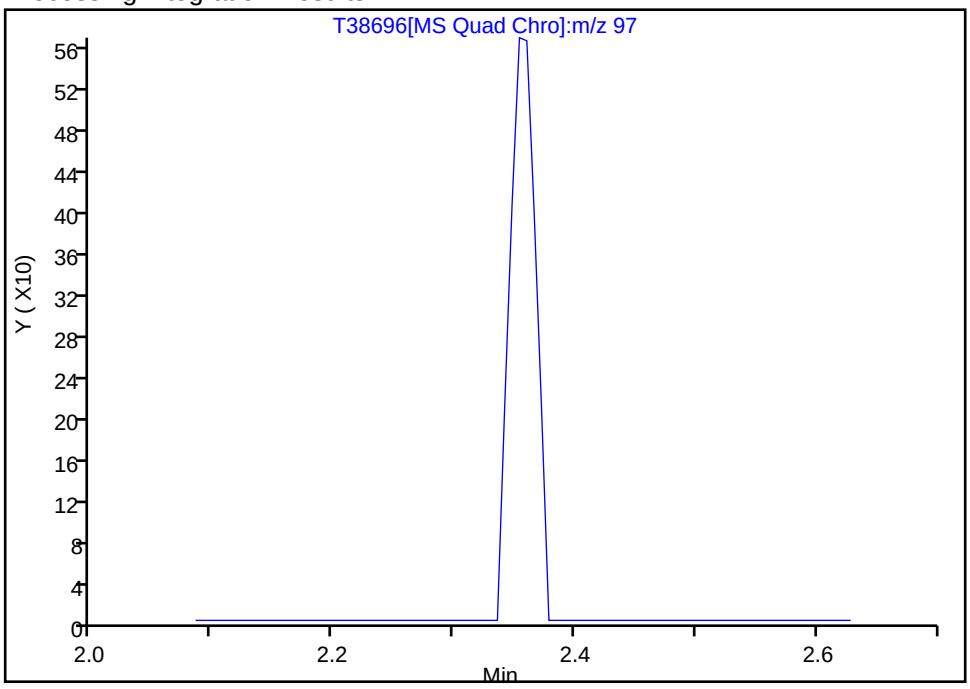
Data File: \\chromfs\Edison\ChromData\CVOAMS15\20200904-116301.b\T38696.D
Injection Date: 04-Sep-2020 13:01:51 Instrument ID: CVOAMS15
Lims ID: STD1
Client ID:
Operator ID: ALS Bottle#: 0 Worklist Smp#: 5
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: 8260W_15 Limit Group: VOA - 8260C Water and Solid
Column: DB-624 ( 0.18 mm) Detector MS Quad

## 44 2,2-Dichloropropane, CAS: 594-20-7

Signal: 1

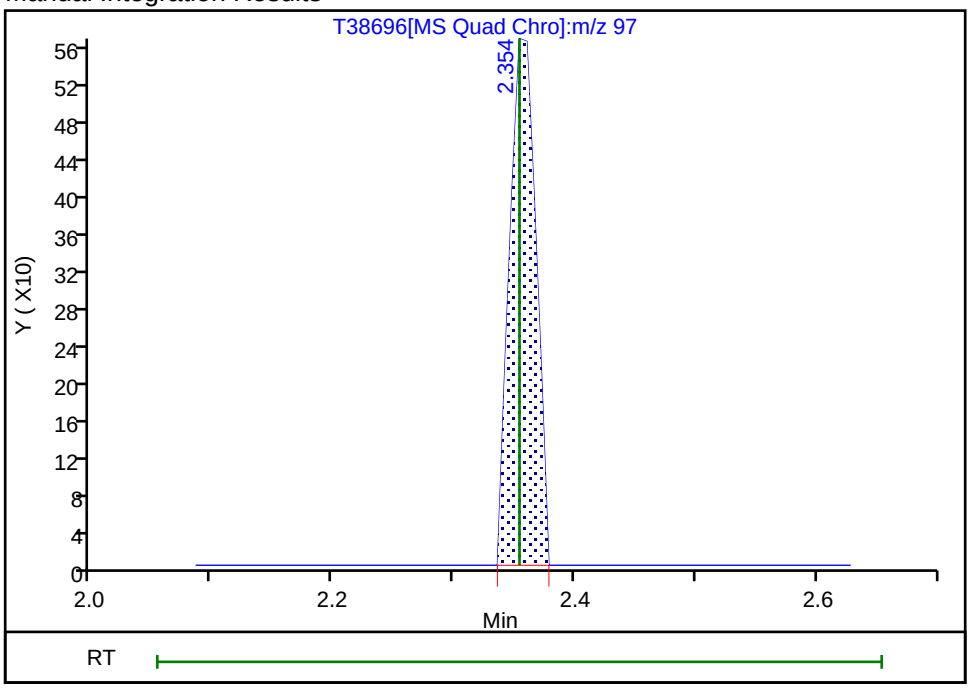
Not Detected
Expected RT: 2.35

Processing Integration Results




Manual Integration Results

RT: 2.35
Area: 851
Amount: 0.945131
Amount Units: ug/l




Reviewer: delpolitov, 04-Sep-2020 16:57:37
Audit Action: Assigned Compound ID Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Edison

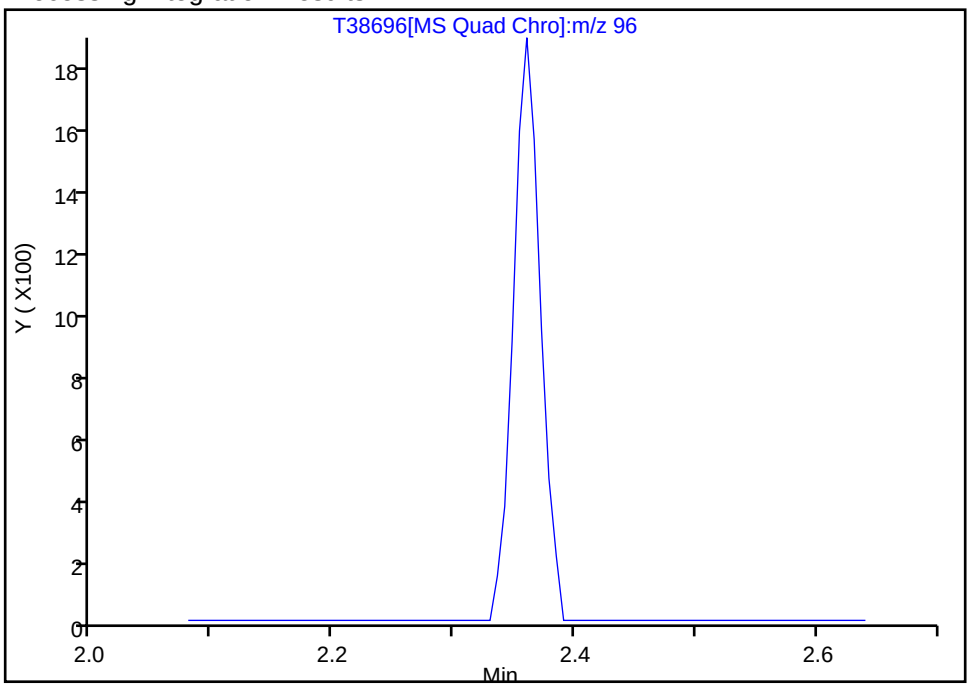
Data File: \\chromfs\Edison\ChromData\CVOAMS15\20200904-116301.b\T38696.D
Injection Date: 04-Sep-2020 13:01:51 Instrument ID: CVOAMS15
Lims ID: STD1
Client ID:
Operator ID: ALS Bottle#: 0 Worklist Smp#: 5
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: 8260W_15 Limit Group: VOA - 8260C Water and Solid
Column: DB-624 ( 0.18 mm) Detector MS Quad

## 43 cis-1,2-Dichloroethene, CAS: 156-59-2

Signal: 1

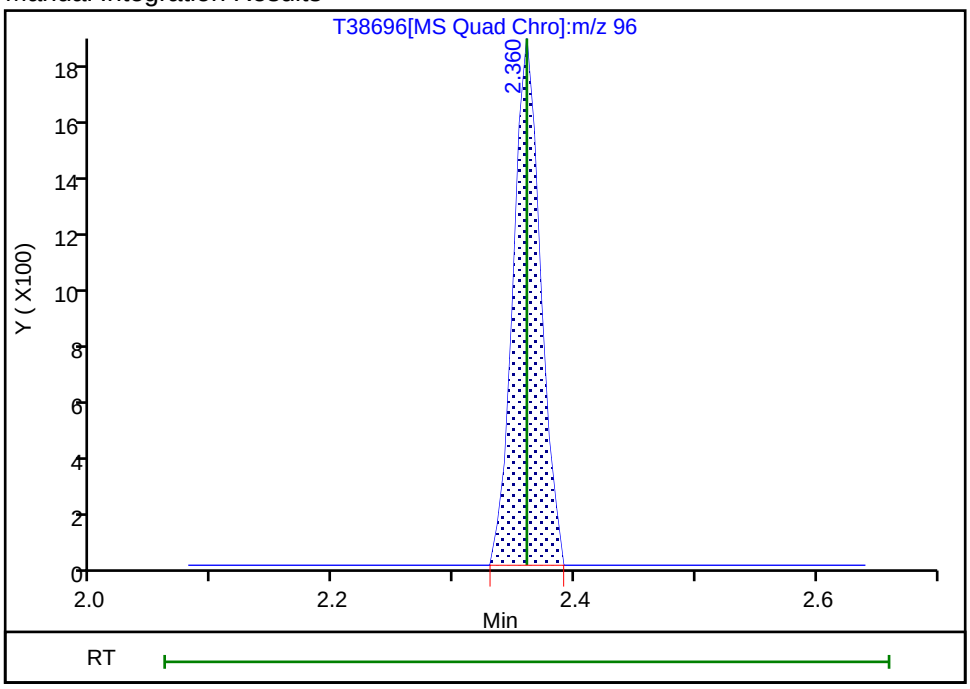
Not Detected
Expected RT: 2.36

Processing Integration Results




Manual Integration Results

RT: 2.36
Area: 2879
Amount: 0.992101
Amount Units: ug/l




Reviewer: delpolitov, 04-Sep-2020 16:57:40
Audit Action: Assigned Compound ID Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Edison

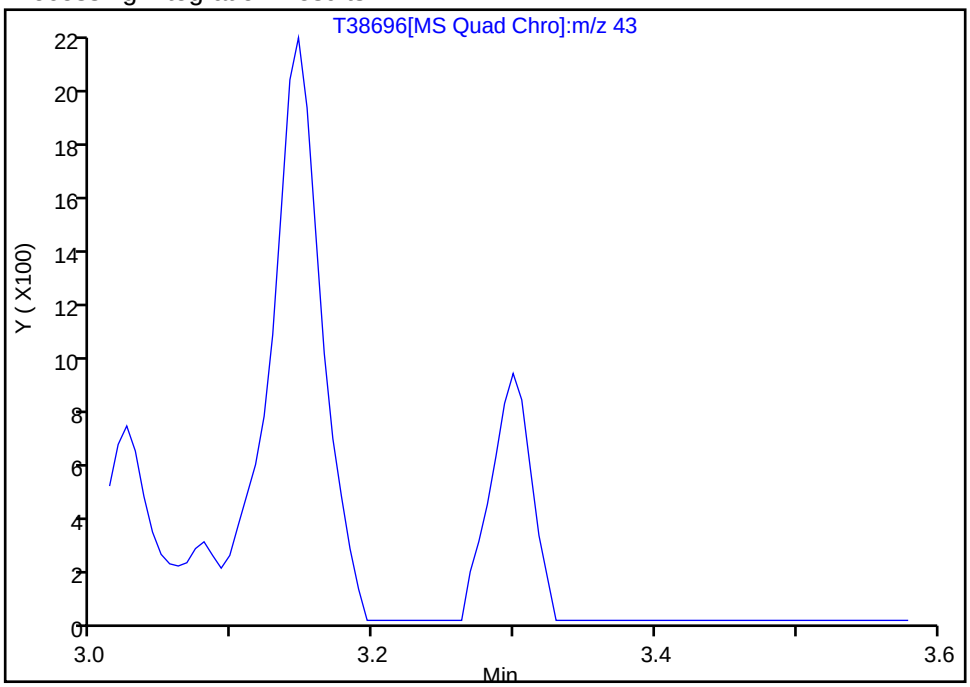
Data File: \\chromfs\Edison\ChromData\CVOAMS15\20200904-116301.b\T38696.D
Injection Date: 04-Sep-2020 13:01:51 Instrument ID: CVOAMS15
Lims ID: STD1
Client ID:
Operator ID: ALS Bottle#: 0 Worklist Smp#: 5
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: 8260W_15 Limit Group: VOA - 8260C Water and Solid
Column: DB-624 ( 0.18 mm) Detector MS Quad

## 66 n-Heptane, CAS: 142-82-5

Signal: 1

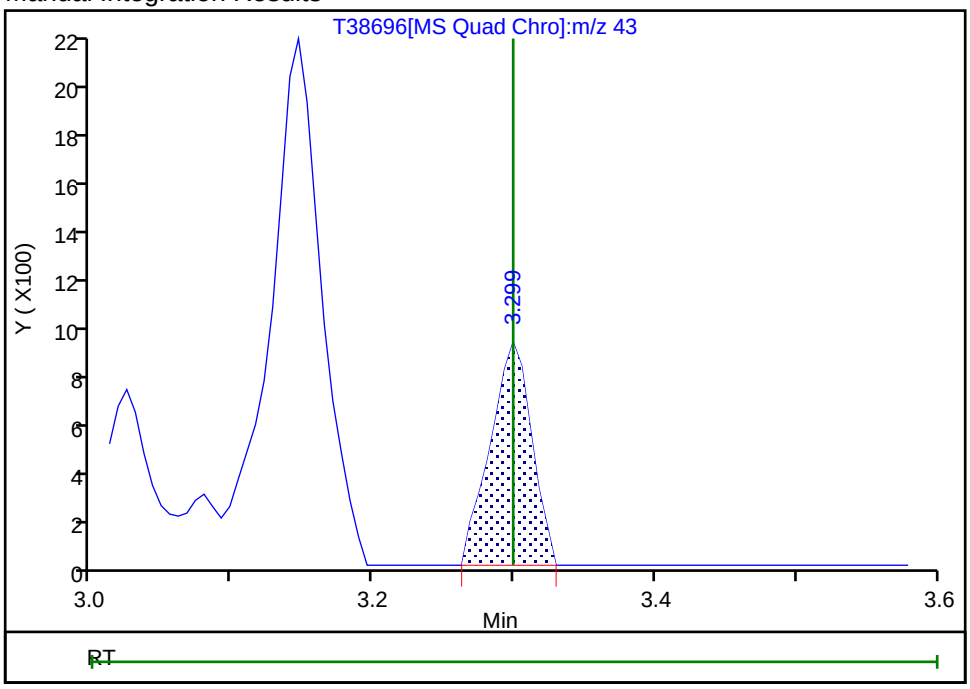
Not Detected
Expected RT: 3.30

Processing Integration Results




Manual Integration Results

RT: 3.30
Area: 1846
Amount: 0.978014
Amount Units: ug/l




Reviewer: delpolitov, 04-Sep-2020 16:57:49
Audit Action: Assigned Compound ID Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Edison

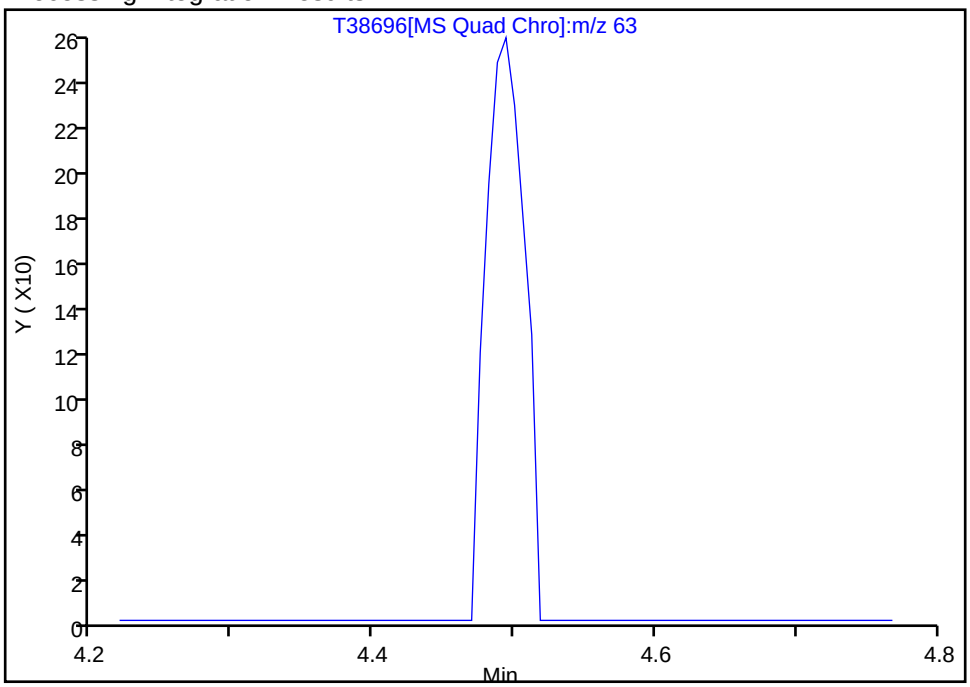
Data File: \\chromfs\Edison\ChromData\CVOAMS15\20200904-116301.b\T38696.D
Injection Date: 04-Sep-2020 13:01:51 Instrument ID: CVOAMS15
Lims ID: STD1
Client ID:
Operator ID: ALS Bottle#: 0 Worklist Smp#: 5
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: 8260W_15 Limit Group: VOA - 8260C Water and Solid
Column: DB-624 ( 0.18 mm) Detector MS Quad

## 79 2-Chloroethyl vinyl ether, CAS: 110-75-8

Signal: 1

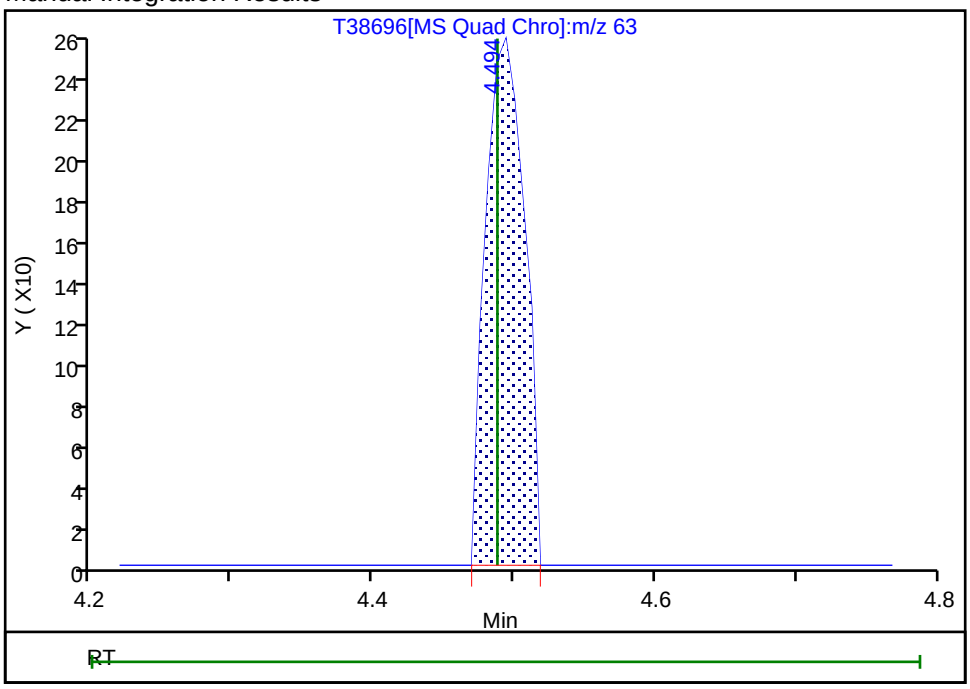
Not Detected
Expected RT: 4.49

Processing Integration Results




Manual Integration Results

RT: 4.49
Area: 495
Amount: 1.026879
Amount Units: ug/l




Reviewer: delpolitov, 04-Sep-2020 16:57:56
Audit Action: Assigned Compound ID Audit Reason: Incomplete Integration

Eurofins TestAmerica, Edison

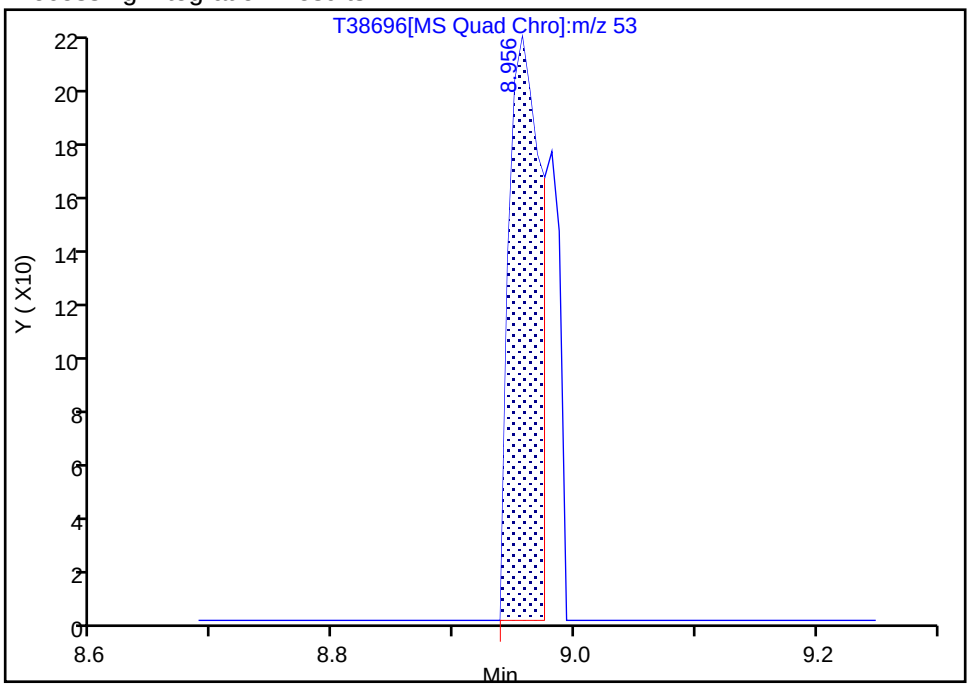
Data File: \\chromfs\Edison\ChromData\CVOAMS15\20200904-116301.b\T38696.D
Injection Date: 04-Sep-2020 13:01:51 Instrument ID: CVOAMS15
Lims ID: STD1
Client ID:
Operator ID: ALS Bottle#: 0 Worklist Smp#: 5
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: 8260W_15 Limit Group: VOA - 8260C Water and Solid
Column: DB-624 ( 0.18 mm) Detector MS Quad

## 109 trans-1,4-Dichloro-2-butene, CAS: 110-57-6

Signal: 1

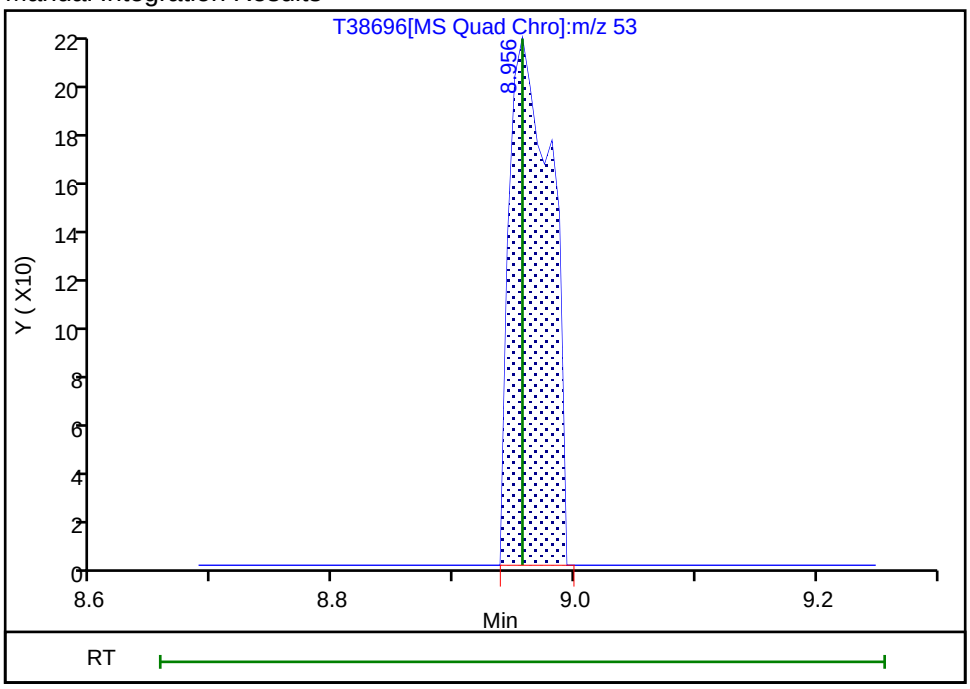
Processing Integration Results

RT: 8.96
Area: 404
Amount: 0.546161
Amount Units: ug/l




Manual Integration Results

RT: 8.96
Area: 522
Amount: 0.993417
Amount Units: ug/l




Reviewer: delpolitov, 04-Sep-2020 16:58:17
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Eurofins TestAmerica, Edison
Target Compound Quantitation Report

Data File: \\chromfs\Edison\ChromData\CVOAMS15\20200904-116301.b\T38697.D
Lims ID: STD5
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 04-Sep-2020 13:25:50 ALS Bottle#: 0 Worklist Smp#: 6
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: STD5
Misc. Info.: 460-0116301-006
Operator ID: Instrument ID: CVOAMS15
Sublist: chrom-8260W_15*sub18

Method: \\chromfs\Edison\ChromData\CVOAMS15\20200904-116301.b\8260W_15.m
Limit Group: VOA - 8260C Water and Solid
Last Update: 05-Sep-2020 11:27:51 Calib Date: 04-Sep-2020 15:01:54
Integrator: RTE ID Type: RT Order ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Edison\ChromData\CVOAMS15\20200904-116301.b\T38701.D

Column 1 : DB-624 ( 0.18 mm) Det: MS Quad
Process Host: CTX1014

First Level Reviewer: baronm Date: 05-Sep-2020 10:24:30

| Compound | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q | Response | Cal Amt ug/l | OnCol Amt ug/l | Flags |
|---|---|---|---|---|---|---|---|---|---|
| 1 Monochloropentafluoroethane | 119 | 0.586 | 0.586 | 0.000 | 24 | 1942 | 5.00 | 4.40 | |
| 2 1,1-Difluoroethane | 65 | 0.635 | 0.635 | 0.000 | 86 | 5243 | 5.00 | 4.56 | |
| 3 Chlorotrifluoroethene | 116 | 0.635 | 0.635 | 0.000 | 49 | 4212 | 5.00 | 4.63 | |
| 4 Dichlorodifluoromethane | 85 | 0.647 | 0.653 | -0.006 | 99 | 15785 | 5.00 | 4.46 | |
| 5 Chlorodifluoromethane | 67 | 0.653 | 0.659 | -0.006 | 82 | 1928 | 5.00 | 4.12 | |
| 6 Chloromethane | 50 | 0.726 | 0.726 | 0.000 | 86 | 8833 | 5.00 | 4.54 | |
| 7 Vinyl chloride | 62 | 0.769 | 0.769 | 0.000 | 93 | 12280 | 5.00 | 4.68 | |
| 8 Butadiene | 54 | 0.787 | 0.787 | 0.000 | 92 | 9395 | 5.00 | 4.26 | Ma |
| 9 Bromomethane | 94 | 0.909 | 0.909 | 0.000 | 89 | 6195 | 5.00 | 4.60 | |
| 10 Chloroethane | 64 | 0.952 | 0.952 | 0.000 | 92 | 6985 | 5.00 | 4.40 | |
| 11 Dichlorofluoromethane | 67 | 1.043 | 1.043 | 0.000 | 88 | 19064 | 5.00 | 4.63 | |
| 12 Trichlorofluoromethane | 101 | 1.067 | 1.068 | -0.001 | 94 | 18325 | 5.00 | 4.40 | |
| 13 Pentane | 72 | 1.110 | 1.110 | 0.000 | 94 | 3492 | 10.0 | 9.51 | |
| 14 Ethanol | 45 | 1.165 | 1.171 | -0.006 | 89 | 2362 | 200.0 | 246.3 | |
| 15 Ethyl ether | 59 | 1.208 | 1.208 | 0.000 | 54 | 7787 | 5.00 | 4.71 | |
| 16 1,2-Dichloro-1,1,2-trifluoroetha | 117 | 1.214 | 1.214 | 0.000 | 79 | 11218 | 5.00 | 4.64 | |
| 17 2-Methyl-1,3-butadiene | 53 | 1.214 | 1.214 | 0.000 | 80 | 9216 | 5.00 | 4.96 | |
| 18 1,1,1-Trifluoro-2,2-dichloroetha | 83 | 1.244 | 1.244 | 0.000 | 85 | 16094 | 5.00 | 4.47 | |
| 19 Acrolein | 56 | 1.269 | 1.269 | 0.000 | 78 | 3741 | 20.0 | 16.2 | |
| 20 1,1-Dichloroethene | 96 | 1.317 | 1.318 | -0.001 | 88 | 11205 | 5.00 | 4.82 | |
| 21 1,1,2-Trichloro-1,2,2-trifluoroe | 101 | 1.317 | 1.318 | -0.001 | 73 | 12000 | 5.00 | 4.78 | |
| 22 Acetone | 43 | 1.348 | 1.348 | 0.000 | 84 | 13676 | 25.0 | 23.9 | |
| 23 Iodomethane | 142 | 1.391 | 1.391 | 0.000 | 73 | 1928 | 5.00 | 1.50 | |
| 24 Carbon disulfide | 76 | 1.421 | 1.421 | 0.000 | 98 | 35190 | 5.00 | 4.70 | |
| 25 Isopropyl alcohol | 45 | 1.427 | 1.427 | 0.000 | 23 | 5038 | 50.0 | 50.6 | |
| 26 Acetonitrile | 40 | 1.494 | 1.494 | 0.000 | 83 | 6379 | 50.0 | 51.4 | |
| 27 3-Chloro-1-propene | 76 | 1.500 | 1.501 | -0.001 | 91 | 8180 | 5.00 | 5.47 | |
| 28 Methyl acetate | 43 | 1.519 | 1.519 | 0.000 | 97 | 11898 | 10.0 | 9.32 | |
| 29 Cyclopentene | 67 | 1.543 | 1.543 | 0.000 | 93 | 25486 | 5.00 | 4.84 | |
| 30 Methylene Chloride | 84 | 1.567 | 1.568 | -0.001 | 78 | 12175 | 5.00 | 4.75 | |

| Compound | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q | Response | Cal Amt ug/l | OnCol Amt ug/l | Flags |
|---|---|---|---|---|---|---|---|---|---|
| * 31 TBA-d9 (IS) | 66 | 1.598 | 1.598 | 0.000 | 97 | 33082 | 1000.0 | 1000.0 | |
| 32 2-Methyl-2-propanol | 59 | 1.647 | 1.647 | 0.000 | 91 | 10312 | 50.0 | 50.3 | |
| 33 Acrylonitrile | 53 | 1.708 | 1.708 | 0.000 | 95 | 33442 | 50.0 | 49.3 | |
| 34 trans-1,2-Dichloroethene | 96 | 1.720 | 1.720 | 0.000 | 80 | 13453 | 5.00 | 5.18 | |
| 35 Methyl tert-butyl ether | 73 | 1.726 | 1.732 | -0.006 | 96 | 31467 | 5.00 | 4.86 | |
| 36 Hexane | 57 | 1.890 | 1.891 | -0.001 | 89 | 13211 | 5.00 | 5.01 | |
| 37 1,1-Dichloroethane | 63 | 1.970 | 1.970 | 0.000 | 90 | 21487 | 5.00 | 5.11 | |
| 38 Vinyl acetate | 86 | 2.018 | 2.019 | -0.001 | 99 | 4617 | 10.0 | 10.4 | |
| 39 2-Chloro-1,3-butadiene | 88 | 2.031 | 2.031 | 0.000 | 72 | 11810 | 5.00 | 4.90 | |
| 40 Isopropyl ether | 45 | 2.031 | 2.031 | 0.000 | 74 | 29621 | 5.00 | 4.94 | |
| 41 Tert-butyl ethyl ether | 59 | 2.275 | 2.275 | 0.000 | 88 | 33375 | 5.00 | 5.29 | |
| * 42 2-Butanone-d5 | 46 | 2.335 | 2.336 | -0.001 | 64 | 209700 | 250.0 | 250.0 | |
| 44 2,2-Dichloropropane | 97 | 2.354 | 2.354 | 0.000 | 61 | 4542 | 5.00 | 5.03 | a |
| 43 cis-1,2-Dichloroethene | 96 | 2.360 | 2.360 | 0.000 | 69 | 14695 | 5.00 | 5.05 | |
| 45 2-Butanone (MEK) | 43 | 2.378 | 2.378 | 0.000 | 98 | 21122 | 25.0 | 25.0 | |
| 46 Propionitrile | 54 | 2.421 | 2.421 | 0.000 | 94 | 13490 | 50.0 | 53.6 | |
| 47 Ethyl acetate | 70 | 2.433 | 2.439 | -0.006 | 97 | 2049 | 10.0 | 9.31 | |
| 48 Methyl acrylate | 55 | 2.457 | 2.458 | -0.001 | 90 | 9831 | 5.00 | 5.18 | |
| 49 Chlorobromomethane | 128 | 2.531 | 2.531 | 0.000 | 48 | 7058 | 5.00 | 5.06 | |
| 50 Methacrylonitrile | 67 | 2.531 | 2.531 | 0.000 | 87 | 45367 | 50.0 | 51.7 | |
| 51 Tetrahydrofuran | 72 | 2.573 | 2.574 | -0.001 | 71 | 2633 | 10.0 | 9.70 | |
| 52 Chloroform | 83 | 2.598 | 2.598 | 0.000 | 97 | 23497 | 5.00 | 5.07 | |
| $ 53 Dibromofluoromethane (Surr) | 113 | 2.720 | 2.720 | 0.000 | 95 | 143685 | 50.0 | 50.8 | |
| 54 1,1,1-Trichloroethane | 97 | 2.726 | 2.726 | 0.000 | 40 | 21601 | 5.00 | 5.00 | |
| 55 Cyclohexane | 84 | 2.768 | 2.769 | -0.001 | 87 | 16856 | 5.00 | 4.89 | |
| 56 Carbon tetrachloride | 117 | 2.860 | 2.860 | 0.000 | 92 | 17994 | 5.00 | 4.94 | |
| 57 1,1-Dichloropropene | 75 | 2.860 | 2.860 | 0.000 | 94 | 18066 | 5.00 | 5.00 | |
| $ 58 1,2-Dichloroethane-d4 (Surr) | 65 | 2.982 | 2.982 | 0.000 | 90 | 144449 | 50.0 | 50.5 | |
| 59 Isobutyl alcohol | 43 | 3.018 | 3.019 | -0.001 | 43 | 8265 | 125.0 | 134.4 | |
| 60 Benzene | 78 | 3.024 | 3.025 | -0.001 | 96 | 47439 | 5.00 | 4.92 | |
| 61 1,2-Dichloroethane | 62 | 3.043 | 3.043 | 0.000 | 58 | 16435 | 5.00 | 5.10 | |
| 62 Isooctane | 57 | 3.116 | 3.116 | 0.000 | 97 | 23620 | 5.00 | 5.13 | |
| 63 Isopropyl acetate | 61 | 3.140 | 3.147 | -0.007 | 91 | 3731 | 5.00 | 5.20 | |
| 64 Tert-amyl methyl ether | 73 | 3.152 | 3.153 | -0.001 | 84 | 33856 | 5.00 | 5.27 | |
| * 65 Fluorobenzene | 96 | 3.274 | 3.275 | -0.001 | 99 | 485212 | 50.0 | 50.0 | |
| 66 n-Heptane | 43 | 3.299 | 3.299 | 0.000 | 46 | 9445 | 5.00 | 4.99 | a |
| 67 Trichloroethene | 95 | 3.610 | 3.610 | 0.000 | 93 | 13597 | 5.00 | 4.80 | |
| 68 n-Butanol | 56 | 3.634 | 3.628 | 0.006 | 49 | 4473 | 125.0 | 106.9 | |
| 69 Ethyl acrylate | 55 | 3.780 | 3.775 | 0.006 | 91 | 23512 | 5.00 | 4.86 | |
| 70 Methylcyclohexane | 83 | 3.786 | 3.787 | -0.001 | 83 | 16729 | 5.00 | 4.79 | |
| 71 1,2-Dichloropropane | 63 | 3.817 | 3.817 | 0.000 | 83 | 11587 | 5.00 | 5.17 | |
| 72 Dibromomethane | 93 | 3.933 | 3.933 | 0.000 | 81 | 8072 | 5.00 | 5.12 | |
| * 73 1,4-Dioxane-d8 | 96 | 3.939 | 3.939 | 0.000 | 73 | 22731 | 1000.0 | 1000.0 | |
| 74 1,4-Dioxane | 88 | 3.988 | 3.988 | 0.000 | 24 | 2379 | 100.0 | 112.4 | |
| 75 Methyl methacrylate | 100 | 4.000 | 4.000 | 0.000 | 81 | 5860 | 10.0 | 10.1 | |
| 76 n-Propyl acetate | 43 | 4.085 | 4.085 | 0.000 | 92 | 11993 | 5.00 | 5.06 | |
| 77 Dichlorobromomethane | 83 | 4.116 | 4.116 | 0.000 | 92 | 17179 | 5.00 | 4.98 | |
| 78 2-Nitropropane | 41 | 4.366 | 4.366 | 0.000 | 87 | 4405 | 10.0 | 9.70 | |
| 79 2-Chloroethyl vinyl ether | 63 | 4.488 | 4.488 | 0.000 | 73 | 3511 | 5.01 | 4.34 | |
| 80 Epichlorohydrin | 57 | 4.524 | 4.524 | 0.000 | 96 | 19650 | 100.0 | 102.9 | |
| 81 cis-1,3-Dichloropropene | 75 | 4.609 | 4.610 | -0.001 | 88 | 19985 | 5.00 | 5.01 | |
| 82 4-Methyl-2-pentanone (MIBK) | 43 | 4.829 | 4.829 | 0.000 | 93 | 40221 | 25.0 | 25.6 | |

| Compound | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q | Response | Cal Amt ug/l | OnCol Amt ug/l | Flags |
|---|---|---|---|---|---|---|---|---|---|
| $ 83 Toluene-d8 (Surr) | 98 | 4.902 | 4.902 | 0.000 | 98 | 451652 | 50.0 | 49.6 | |
| 84 Toluene | 91 | 4.981 | 4.982 | -0.001 | 93 | 53298 | 5.00 | 5.05 | |
| 85 trans-1,3-Dichloropropene | 75 | 5.292 | 5.286 | 0.006 | 88 | 17625 | 5.00 | 4.92 | |
| 86 Ethyl methacrylate | 69 | 5.475 | 5.475 | 0.000 | 78 | 12272 | 5.00 | 4.81 | |
| 87 1,1,2-Trichloroethane | 83 | 5.500 | 5.500 | 0.000 | 90 | 9023 | 5.00 | 5.02 | |
| 88 Tetrachloroethene | 166 | 5.640 | 5.640 | 0.000 | 95 | 14274 | 5.00 | 5.02 | |
| 89 1,3-Dichloropropane | 76 | 5.695 | 5.695 | 0.000 | 79 | 18610 | 5.00 | 5.38 | |
| 90 2-Hexanone | 43 | 5.884 | 5.884 | 0.000 | 91 | 26416 | 25.0 | 24.7 | |
| 91 Chlorodibromomethane | 129 | 5.975 | 5.975 | 0.000 | 89 | 13595 | 5.00 | 5.13 | |
| 92 Ethylene Dibromide | 107 | 6.085 | 6.085 | 0.000 | 84 | 12415 | 5.00 | 5.27 | |
| 93 n-Butyl acetate | 43 | 6.115 | 6.116 | -0.001 | 92 | 12568 | 5.00 | 5.04 | |
| * 94 Chlorobenzene-d5 | 117 | 6.743 | 6.743 | 0.000 | 83 | 356810 | 50.0 | 50.0 | |
| 95 Chlorobenzene | 112 | 6.786 | 6.786 | 0.000 | 93 | 33946 | 5.00 | 5.04 | |
| 96 1,1,1,2-Tetrachloroethane | 131 | 6.932 | 6.932 | 0.000 | 86 | 13137 | 5.00 | 5.15 | |
| 97 Ethylbenzene | 106 | 6.993 | 6.993 | 0.000 | 97 | 18134 | 5.00 | 5.12 | |
| 98 m-Xylene & p-Xylene | 106 | 7.176 | 7.176 | 0.000 | 0 | 22473 | 5.00 | 5.13 | |
| 99 o-Xylene | 106 | 7.743 | 7.743 | 0.000 | 92 | 20594 | 5.00 | 5.05 | |
| 100 Styrene | 104 | 7.774 | 7.774 | 0.000 | 93 | 33317 | 5.00 | 5.10 | |
| 101 n-Butyl acrylate | 73 | 7.871 | 7.865 | 0.006 | 89 | 6495 | 5.00 | 4.65 | |
| 102 Bromoform | 173 | 7.987 | 7.987 | 0.000 | 84 | 8679 | 5.00 | 4.98 | |
| 103 Amyl acetate (mixed isomers) | 43 | 8.261 | 8.255 | 0.006 | 82 | 14370 | 5.00 | 5.19 | |
| 104 Isopropylbenzene | 105 | 8.340 | 8.341 | -0.001 | 94 | 51714 | 5.00 | 5.09 | |
| $ 105 4-Bromofluorobenzene | 174 | 8.529 | 8.530 | -0.001 | 90 | 147665 | 50.0 | 50.2 | |
| 106 Bromobenzene | 156 | 8.700 | 8.700 | 0.000 | 89 | 13970 | 5.00 | 5.07 | |
| 107 1,1,2,2-Tetrachloroethane | 83 | 8.859 | 8.859 | 0.000 | 82 | 13381 | 5.00 | 5.23 | |
| 108 1,2,3-Trichloropropane | 110 | 8.865 | 8.865 | 0.000 | 75 | 4151 | 5.00 | 5.36 | |
| 109 trans-1,4-Dichloro-2-butene | 53 | 8.956 | 8.956 | 0.000 | 67 | 3243 | 5.00 | 4.91 | |
| 110 N-Propylbenzene | 91 | 8.993 | 8.993 | 0.000 | 98 | 60218 | 5.00 | 4.98 | |
| 111 2-Chlorotoluene | 91 | 9.054 | 9.048 | 0.006 | 91 | 36143 | 5.00 | 5.16 | |
| 112 4-Ethyltoluene | 105 | 9.194 | 9.194 | 0.000 | 93 | 45654 | 5.00 | 4.85 | |
| 113 4-Chlorotoluene | 91 | 9.237 | 9.237 | 0.000 | 94 | 37483 | 5.00 | 4.97 | |
| 114 1,3,5-Trimethylbenzene | 105 | 9.310 | 9.310 | 0.000 | 90 | 38079 | 5.00 | 5.00 | |
| 115 Butyl Methacrylate | 87 | 9.621 | 9.621 | 0.000 | 76 | 12124 | 5.00 | 4.68 | |
| 116 tert-Butylbenzene | 119 | 9.810 | 9.810 | 0.000 | 84 | 33602 | 5.00 | 5.10 | |
| 117 1,2,4-Trimethylbenzene | 105 | 9.895 | 9.895 | 0.000 | 93 | 36806 | 5.00 | 4.89 | |
| 118 sec-Butylbenzene | 105 | 10.176 | 10.176 | 0.000 | 95 | 44738 | 5.00 | 4.96 | |
| 119 1,3-Dichlorobenzene | 146 | 10.255 | 10.255 | 0.000 | 91 | 23258 | 5.00 | 5.12 | |
| * 120 1,4-Dichlorobenzene-d4 | 152 | 10.377 | 10.377 | 0.000 | 95 | 169480 | 50.0 | 50.0 | |
| 121 1,4-Dichlorobenzene | 146 | 10.413 | 10.414 | -0.001 | 66 | 22484 | 5.00 | 4.82 | |
| 122 4-Isopropyltoluene | 119 | 10.456 | 10.456 | 0.000 | 81 | 37853 | 5.00 | 5.01 | |
| 123 1,2,3-Trimethylbenzene | 105 | 10.560 | 10.560 | 0.000 | 95 | 36267 | 5.00 | 4.94 | |
| 124 Benzyl chloride | 91 | 10.688 | 10.682 | 0.006 | 95 | 22075 | 5.00 | 4.80 | |
| 125 2,3-Dihydroindene | 117 | 10.834 | 10.834 | 0.000 | 88 | 35523 | 5.00 | 4.88 | |
| 126 1,2-Dichlorobenzene | 146 | 11.005 | 10.999 | 0.006 | 90 | 19862 | 5.00 | 4.84 | |
| 127 p-Diethylbenzene | 119 | 11.108 | 11.109 | -0.001 | 87 | 16929 | 5.00 | 4.72 | |
| 128 n-Butylbenzene | 92 | 11.139 | 11.139 | 0.000 | 94 | 17138 | 5.00 | 4.88 | |
| 129 1,2-Dibromo-3-Chloropropane | 157 | 12.090 | 12.090 | 0.000 | 59 | 2606 | 5.00 | 5.19 | |
| 130 1,2,4,5-Tetramethylbenzene | 119 | 12.132 | 12.133 | -0.001 | 90 | 25345 | 5.00 | 4.51 | |
| 131 1,3,5-Trichlorobenzene | 180 | 12.334 | 12.334 | 0.000 | 90 | 10651 | 5.00 | 4.58 | |
| 132 1,2,4-Trichlorobenzene | 180 | 12.949 | 12.950 | -0.001 | 78 | 8856 | 5.00 | 4.58 | |
| 133 Hexachlorobutadiene | 225 | 13.151 | 13.151 | 0.000 | 43 | 3998 | 5.00 | 4.53 | |
| 134 Naphthalene | 128 | 13.151 | 13.151 | 0.000 | 95 | 22901 | 5.00 | 4.61 | |

| Compound | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q | Response | Cal Amt ug/l | OnCol Amt ug/l | Flags |
|---|---|---|---|---|---|---|---|---|---|
| 135 1,2,3-Trichlorobenzene | 180 | 13.370 | 13.370 | 0.000 | 76 | 7092 | 5.00 | 4.75 | |
| S 136 1,2-Dichloroethene, Total | 100 | | | | 0 | | 10.0 | 10.2 | |
| S 137 Xylenes, Total | 100 | | | | 0 | | 10.0 | 10.2 | |
| S 140 Total BTEX | 1 | | | | 0 | | 25.0 | 25.3 | |
| S 139 1,3-Dichloropropene, Total | 1 | | | | 0 | | 10.0 | 9.93 | |
| S 138 Total 1,2-dichloroethene | 1 | | | | 0 | | | 10.2 | |

## QC Flag Legend

Review Flags

M - Manually Integrated

a - User Assigned ID

## Reagents:

| | | | | |
|---|---|---|---|---|
| 8260MIX1COMB_00125 | Amount Added: | 10.00 | Units: uL | |
| GASES Li_00384 | Amount Added: | 10.00 | Units: uL | |
| 524freon_00027 | Amount Added: | 10.00 | Units: uL | |
| ACROLEIN W_00112 | Amount Added: | 4.00 | Units: uL | |
| VOA6IS/SURR_00038 | Amount Added: | 5.00 | Units: uL | Run Reagent |

Report Date: 05-Sep-2020 11:27:52 Chrom Revision: 2.3 20-Aug-2020 13:57:12

Eurofins TestAmerica, Edison

Data File: \\chromfs\Edison\ChromData\CVOAMS15\20200904-116301.b\T38697.D

Injection Date: 04-Sep-2020 13:25:50 Instrument ID: CVOAMS15

Lims ID: STD5

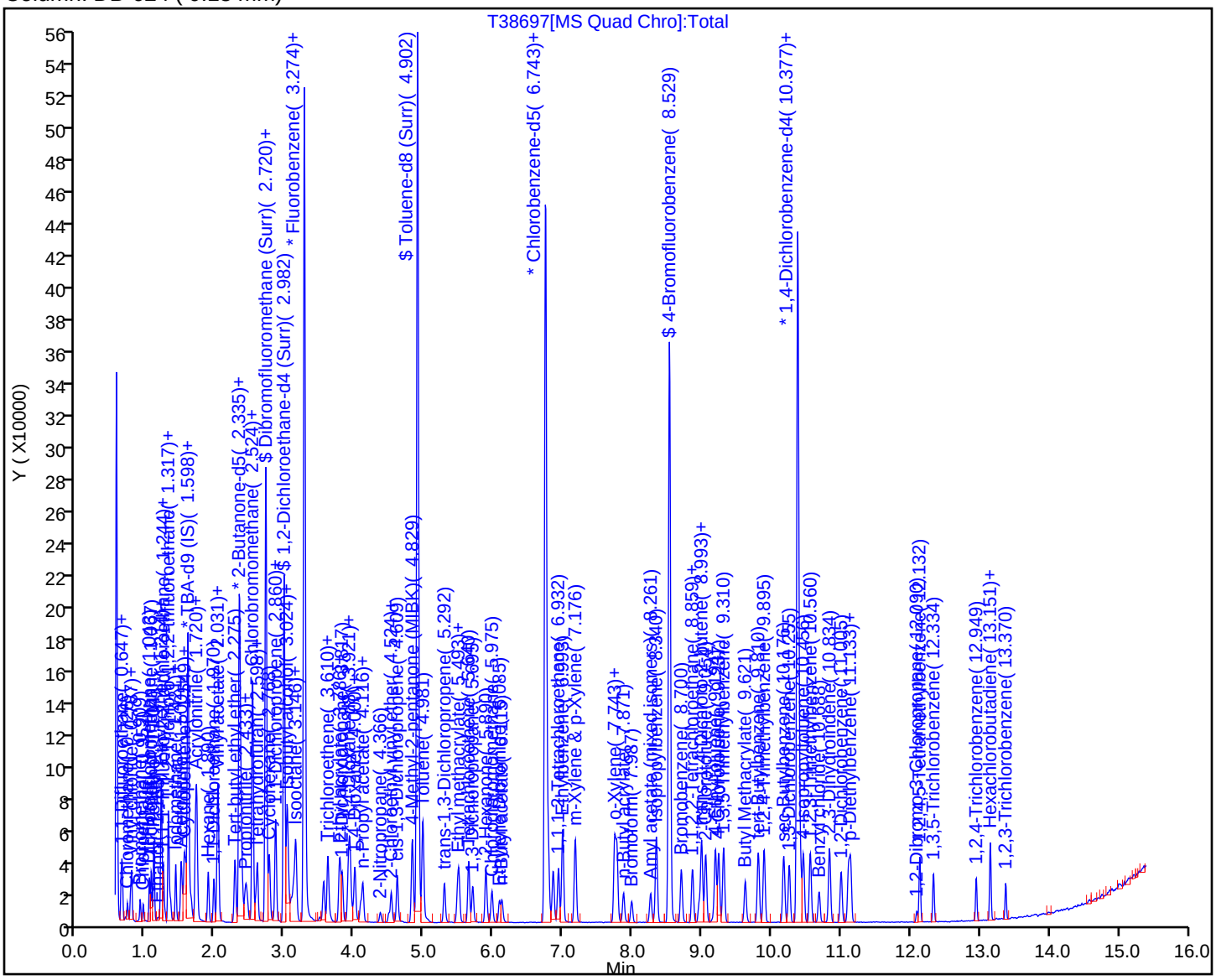
Client ID:

Operator ID: ALS Bottle#: 0 Worklist Smp#: 6

Purge Vol: 5.000 mL Dil. Factor: 1.0000

Method: 8260W_15 Limit Group: VOA - 8260C Water and Solid

Column: DB-624 ( 0.18 mm)



Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Edison

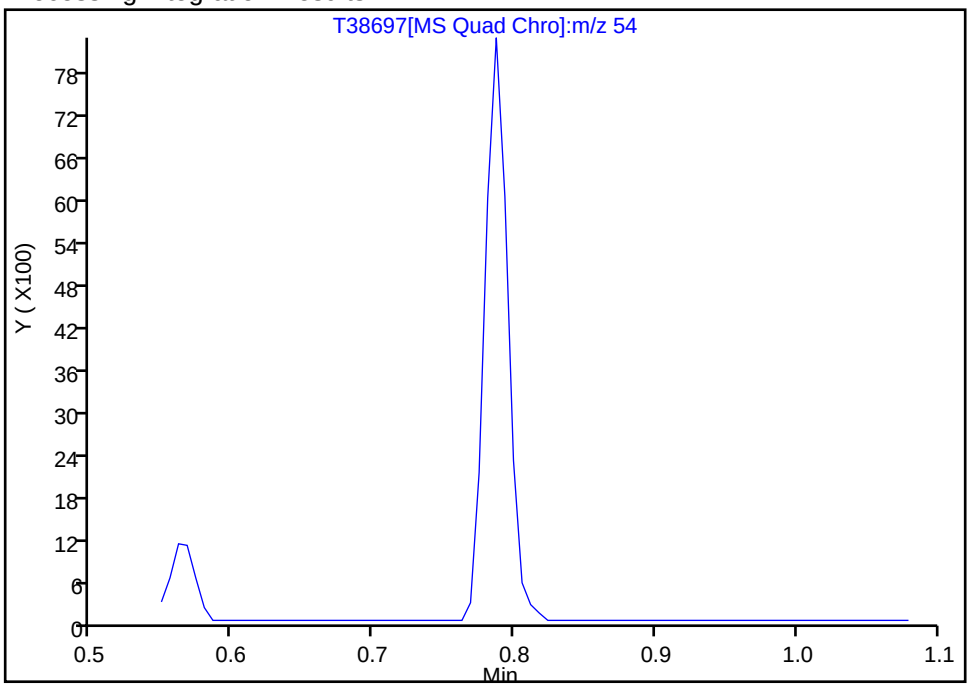
Data File: \\chromfs\Edison\ChromData\CVOAMS15\20200904-116301.b\T38697.D
Injection Date: 04-Sep-2020 13:25:50 Instrument ID: CVOAMS15
Lims ID: STD5
Client ID:
Operator ID: ALS Bottle#: 0 Worklist Smp#: 6
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: 8260W_15 Limit Group: VOA - 8260C Water and Solid
Column: DB-624 ( 0.18 mm) Detector MS Quad

## 8 Butadiene, CAS: 106-99-0

Signal: 1

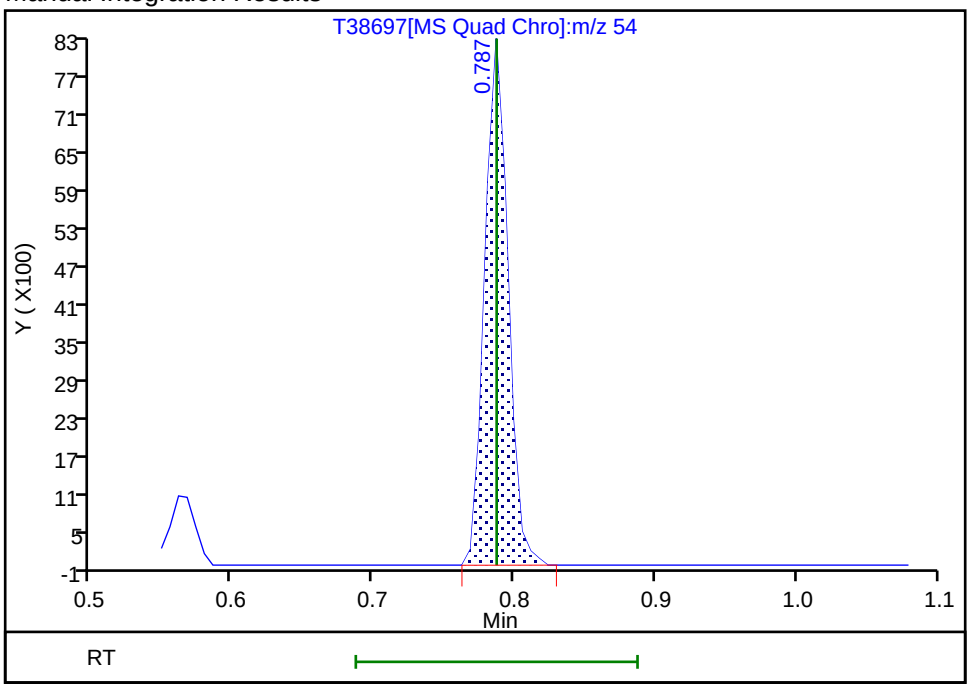
Not Detected
Expected RT: 0.79

Processing Integration Results




Manual Integration Results

RT: 0.79
Area: 9395
Amount: 4.261348
Amount Units: ug/l




Reviewer: baronm, 05-Sep-2020 10:23:45
Audit Action: Manually Integrated Audit Reason: Missed Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Edison

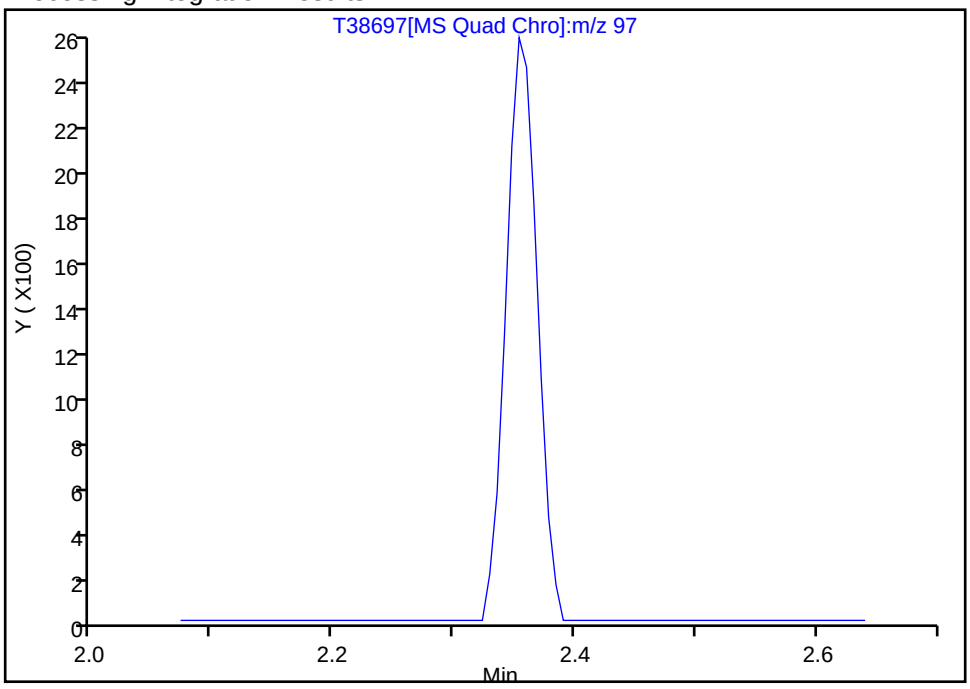
Data File: \\chromfs\Edison\ChromData\CVOAMS15\20200904-116301.b\T38697.D
Injection Date: 04-Sep-2020 13:25:50 Instrument ID: CVOAMS15
Lims ID: STD5
Client ID:
Operator ID: ALS Bottle#: 0 Worklist Smp#: 6
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: 8260W_15 Limit Group: VOA - 8260C Water and Solid
Column: DB-624 ( 0.18 mm) Detector MS Quad

## 44 2,2-Dichloropropane, CAS: 594-20-7

Signal: 1

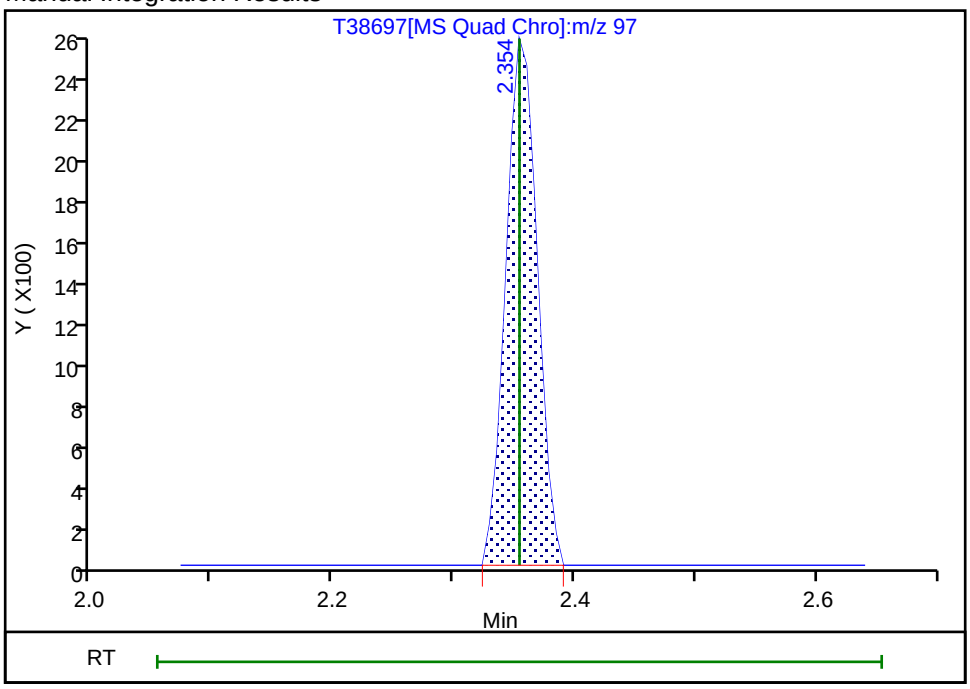
Not Detected
Expected RT: 2.35

Processing Integration Results




Manual Integration Results

RT: 2.35
Area: 4542
Amount: 5.032603
Amount Units: ug/l




Reviewer: baronm, 05-Sep-2020 10:23:59
Audit Action: Assigned Compound ID Audit Reason: Missed Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Edison

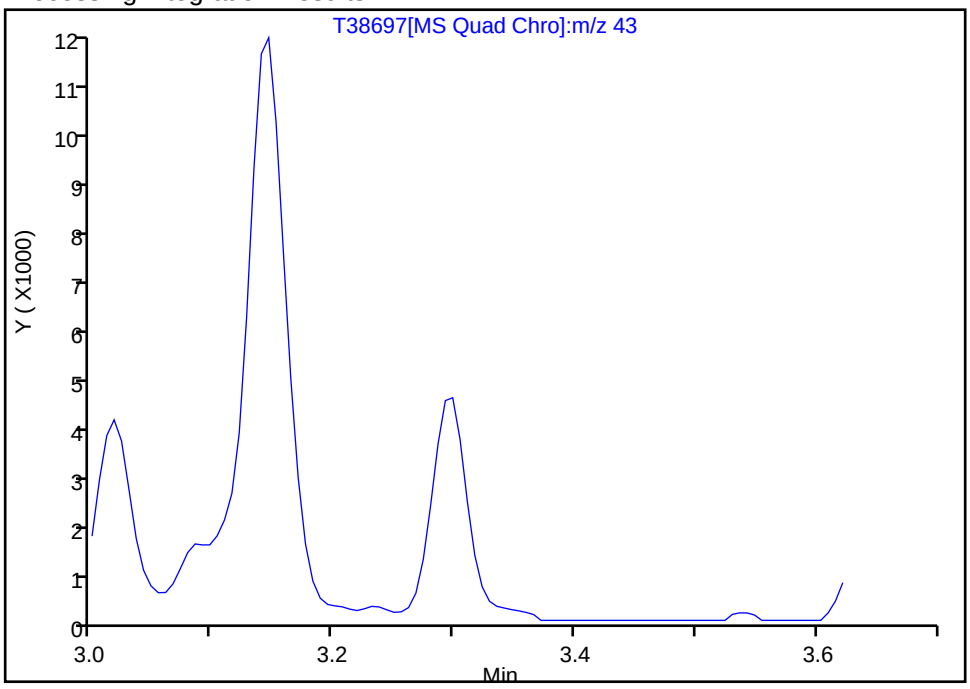
Data File: \\chromfs\Edison\ChromData\CVOAMS15\20200904-116301.b\T38697.D
Injection Date: 04-Sep-2020 13:25:50 Instrument ID: CVOAMS15
Lims ID: STD5
Client ID:
Operator ID: ALS Bottle#: 0 Worklist Smp#: 6
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: 8260W_15 Limit Group: VOA - 8260C Water and Solid
Column: DB-624 ( 0.18 mm) Detector MS Quad

## 66 n-Heptane, CAS: 142-82-5

Signal: 1

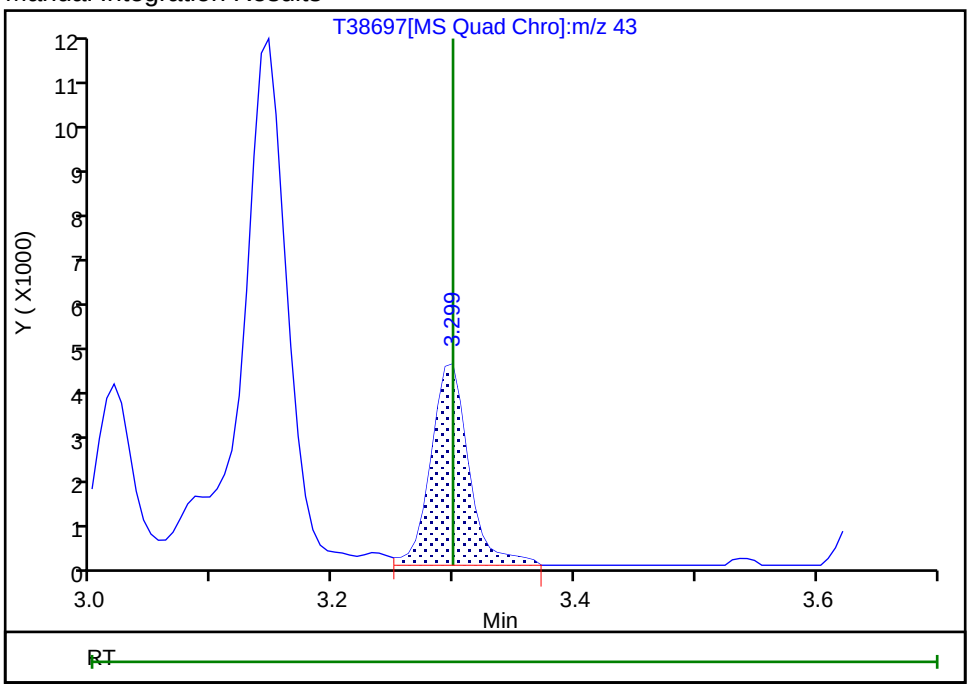
Not Detected
Expected RT: 3.30

Processing Integration Results




Manual Integration Results

RT: 3.30
Area: 9445
Amount: 4.992273
Amount Units: ug/l




Reviewer: baronm, 05-Sep-2020 10:24:11
Audit Action: Assigned Compound ID Audit Reason: Missed Peak

Eurofins TestAmerica, Edison
Target Compound Quantitation Report

Data File: \\chromfs\Edison\ChromData\CVOAMS15\20200904-116301.b\T38698.D
Lims ID: STD20
Client ID:
Sample Type: ICIS Calib Level: 4
Inject. Date: 04-Sep-2020 13:49:48 ALS Bottle#: 0 Worklist Smp#: 7
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: STD20
Misc. Info.: 460-0116301-007
Operator ID: Instrument ID: CVOAMS15
Sublist: chrom-8260W_15*sub18

Method: \\chromfs\Edison\ChromData\CVOAMS15\20200904-116301.b\8260W_15.m
Limit Group: VOA - 8260C Water and Solid
Last Update: 05-Sep-2020 11:28:05 Calib Date: 04-Sep-2020 15:01:54
Integrator: RTE ID Type: RT Order ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Edison\ChromData\CVOAMS15\20200904-116301.b\T38701.D

Column 1 : DB-624 ( 0.18 mm) Det: MS Quad
Process Host: CTX1014

First Level Reviewer: starzecm Date: 04-Sep-2020 14:22:30

| Compound | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q | Response | Cal Amt ug/l | OnCol Amt ug/l | Flags |
|---|---|---|---|---|---|---|---|---|---|
| 1 Monochloropentafluoroethane | 119 | 0.586 | 0.586 | 0.000 | 36 | 8095 | 20.0 | 18.8 | |
| 2 1,1-Difluoroethane | 65 | 0.635 | 0.635 | 0.000 | 92 | 22596 | 20.0 | 20.2 | |
| 3 Chlorotrifluoroethene | 116 | 0.635 | 0.635 | 0.000 | 72 | 18264 | 20.0 | 19.8 | |
| 4 Dichlorodifluoromethane | 85 | 0.653 | 0.653 | 0.000 | 99 | 71184 | 20.0 | 20.7 | |
| 5 Chlorodifluoromethane | 67 | 0.659 | 0.659 | 0.000 | 95 | 9180 | 20.0 | 20.2 | |
| 6 Chloromethane | 50 | 0.726 | 0.726 | 0.000 | 99 | 35384 | 20.0 | 18.7 | |
| 7 Vinyl chloride | 62 | 0.769 | 0.769 | 0.000 | 98 | 50984 | 20.0 | 20.0 | |
| 8 Butadiene | 54 | 0.787 | 0.787 | 0.000 | 92 | 42777 | 20.0 | 19.9 | |
| 9 Bromomethane | 94 | 0.909 | 0.909 | 0.000 | 95 | 24554 | 20.0 | 18.4 | |
| 10 Chloroethane | 64 | 0.952 | 0.952 | 0.000 | 99 | 30110 | 20.0 | 19.1 | |
| 11 Dichlorofluoromethane | 67 | 1.043 | 1.043 | 0.000 | 90 | 77629 | 20.0 | 19.4 | |
| 12 Trichlorofluoromethane | 101 | 1.068 | 1.068 | 0.000 | 99 | 87520 | 20.0 | 21.6 | |
| 13 Pentane | 72 | 1.110 | 1.110 | 0.000 | 95 | 14973 | 40.0 | 41.9 | |
| 14 Ethanol | 45 | 1.171 | 1.171 | 0.000 | 92 | 8191 | 800.0 | 874.2 | |
| 15 Ethyl ether | 59 | 1.208 | 1.208 | 0.000 | 55 | 30515 | 20.0 | 19.0 | |
| 17 2-Methyl-1,3-butadiene | 53 | 1.214 | 1.214 | 0.000 | 80 | 37491 | 20.0 | 20.7 | |
| 16 1,2-Dichloro-1,1,2-trifluoroetha | 117 | 1.214 | 1.214 | 0.000 | 88 | 48670 | 20.0 | 20.7 | |
| 18 1,1,1-Trifluoro-2,2-dichloroetha | 83 | 1.244 | 1.244 | 0.000 | 96 | 72162 | 20.0 | 20.6 | |
| 19 Acrolein | 56 | 1.269 | 1.269 | 0.000 | 91 | 9928 | 40.0 | 43.4 | |
| 20 1,1-Dichloroethene | 96 | 1.318 | 1.318 | 0.000 | 96 | 44169 | 20.0 | 19.5 | |
| 21 1,1,2-Trichloro-1,2,2-trifluoroe | 101 | 1.318 | 1.318 | 0.000 | 78 | 53685 | 20.0 | 21.9 | |
| 22 Acetone | 43 | 1.348 | 1.348 | 0.000 | 87 | 50604 | 100.0 | 89.3 | |
| 23 Iodomethane | 142 | 1.391 | 1.391 | 0.000 | 100 | 21673 | 20.0 | 17.3 | |
| 24 Carbon disulfide | 76 | 1.421 | 1.421 | 0.000 | 99 | 142890 | 20.0 | 19.6 | |
| 25 Isopropyl alcohol | 45 | 1.427 | 1.427 | 0.000 | 30 | 18947 | 200.0 | 191.9 | |
| 26 Acetonitrile | 40 | 1.494 | 1.494 | 0.000 | 82 | 22995 | 200.0 | 186.7 | |
| 27 3-Chloro-1-propene | 76 | 1.501 | 1.501 | 0.000 | 93 | 29788 | 20.0 | 20.4 | |
| 28 Methyl acetate | 43 | 1.519 | 1.519 | 0.000 | 96 | 47038 | 40.0 | 37.9 | |
| 29 Cyclopentene | 67 | 1.543 | 1.543 | 0.000 | 93 | 110385 | 20.0 | 21.5 | |
| 30 Methylene Chloride | 84 | 1.568 | 1.568 | 0.000 | 83 | 48203 | 20.0 | 19.3 | |

| Compound | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q | Response | Cal Amt ug/l | OnCol Amt ug/l | Flags |
|---|---|---|---|---|---|---|---|---|---|
| * 31 TBA-d9 (IS) | 66 | 1.598 | 1.598 | 0.000 | 98 | 32797 | 1000.0 | 1000.0 | |
| 32 2-Methyl-2-propanol | 59 | 1.647 | 1.647 | 0.000 | 98 | 39686 | 200.0 | 195.4 | |
| 33 Acrylonitrile | 53 | 1.708 | 1.708 | 0.000 | 95 | 135877 | 200.0 | 205.8 | |
| 34 trans-1,2-Dichloroethene | 96 | 1.720 | 1.720 | 0.000 | 91 | 51381 | 20.0 | 20.3 | |
| 35 Methyl tert-butyl ether | 73 | 1.732 | 1.732 | 0.000 | 95 | 126781 | 20.0 | 20.1 | |
| 36 Hexane | 57 | 1.891 | 1.891 | 0.000 | 89 | 56563 | 20.0 | 22.0 | |
| 37 1,1-Dichloroethane | 63 | 1.970 | 1.970 | 0.000 | 99 | 84022 | 20.0 | 20.5 | |
| 38 Vinyl acetate | 86 | 2.019 | 2.019 | 0.000 | 99 | 17583 | 40.0 | 40.1 | |
| 39 2-Chloro-1,3-butadiene | 88 | 2.031 | 2.031 | 0.000 | 77 | 47231 | 20.0 | 20.1 | |
| 40 Isopropyl ether | 45 | 2.031 | 2.031 | 0.000 | 78 | 118149 | 20.0 | 20.2 | |
| 41 Tert-butyl ethyl ether | 59 | 2.275 | 2.275 | 0.000 | 90 | 124709 | 20.0 | 20.3 | |
| * 42 2-Butanone-d5 | 46 | 2.336 | 2.336 | 0.000 | 86 | 207905 | 250.0 | 250.0 | |
| 44 2,2-Dichloropropane | 97 | 2.354 | 2.354 | 0.000 | 83 | 18777 | 20.0 | 21.4 | |
| 43 cis-1,2-Dichloroethene | 96 | 2.360 | 2.360 | 0.000 | 93 | 56276 | 20.0 | 19.9 | |
| 45 2-Butanone (MEK) | 43 | 2.378 | 2.378 | 0.000 | 97 | 75173 | 100.0 | 89.9 | |
| 46 Propionitrile | 54 | 2.421 | 2.421 | 0.000 | 98 | 51135 | 200.0 | 205.1 | |
| 47 Ethyl acetate | 70 | 2.439 | 2.439 | 0.000 | 98 | 8344 | 40.0 | 38.2 | |
| 48 Methyl acrylate | 55 | 2.458 | 2.458 | 0.000 | 96 | 38622 | 20.0 | 20.9 | |
| 49 Chlorobromomethane | 128 | 2.531 | 2.531 | 0.000 | 52 | 27303 | 20.0 | 20.1 | |
| 50 Methacrylonitrile | 67 | 2.531 | 2.531 | 0.000 | 87 | 175670 | 200.0 | 205.6 | |
| 51 Tetrahydrofuran | 72 | 2.574 | 2.574 | 0.000 | 77 | 11145 | 40.0 | 41.4 | |
| 52 Chloroform | 83 | 2.598 | 2.598 | 0.000 | 94 | 91090 | 20.0 | 20.2 | |
| $ 53 Dibromofluoromethane (Surr) | 113 | 2.720 | 2.720 | 0.000 | 96 | 134954 | 50.0 | 49.0 | |
| 54 1,1,1-Trichloroethane | 97 | 2.726 | 2.726 | 0.000 | 75 | 87714 | 20.0 | 20.8 | |
| 55 Cyclohexane | 84 | 2.769 | 2.769 | 0.000 | 86 | 72294 | 20.0 | 21.5 | |
| 56 Carbon tetrachloride | 117 | 2.860 | 2.860 | 0.000 | 89 | 75247 | 20.0 | 21.2 | |
| 57 1,1-Dichloropropene | 75 | 2.860 | 2.860 | 0.000 | 94 | 71986 | 20.0 | 20.5 | |
| $ 58 1,2-Dichloroethane-d4 (Surr) | 65 | 2.982 | 2.982 | 0.000 | 90 | 136753 | 50.0 | 49.1 | |
| 59 Isobutyl alcohol | 43 | 3.019 | 3.019 | 0.000 | 42 | 31658 | 500.0 | 519.2 | |
| 60 Benzene | 78 | 3.025 | 3.025 | 0.000 | 96 | 189587 | 20.0 | 20.1 | |
| 61 1,2-Dichloroethane | 62 | 3.043 | 3.043 | 0.000 | 63 | 62408 | 20.0 | 19.9 | |
| 62 Isooctane | 57 | 3.116 | 3.116 | 0.000 | 97 | 96377 | 20.0 | 21.5 | |
| 63 Isopropyl acetate | 61 | 3.147 | 3.147 | 0.000 | 91 | 14649 | 20.0 | 21.0 | |
| 64 Tert-amyl methyl ether | 73 | 3.153 | 3.153 | 0.000 | 82 | 127777 | 20.0 | 20.4 | |
| * 65 Fluorobenzene | 96 | 3.275 | 3.275 | 0.000 | 99 | 472367 | 50.0 | 50.0 | |
| 66 n-Heptane | 43 | 3.299 | 3.299 | 0.000 | 77 | 39542 | 20.0 | 21.5 | |
| 67 Trichloroethene | 95 | 3.610 | 3.610 | 0.000 | 95 | 55977 | 20.0 | 20.3 | |
| 68 n-Butanol | 56 | 3.628 | 3.628 | 0.000 | 43 | 20810 | 500.0 | 501.7 | |
| 69 Ethyl acrylate | 55 | 3.775 | 3.775 | 0.000 | 97 | 98185 | 20.0 | 20.8 | |
| 70 Methylcyclohexane | 83 | 3.787 | 3.787 | 0.000 | 85 | 72518 | 20.0 | 21.3 | |
| 71 1,2-Dichloropropane | 63 | 3.817 | 3.817 | 0.000 | 88 | 47117 | 20.0 | 21.6 | |
| 72 Dibromomethane | 93 | 3.933 | 3.933 | 0.000 | 76 | 32784 | 20.0 | 21.4 | |
| * 73 1,4-Dioxane-d8 | 96 | 3.939 | 3.939 | 0.000 | 87 | 23961 | 1000.0 | 1000.0 | |
| 74 1,4-Dioxane | 88 | 3.988 | 3.988 | 0.000 | 31 | 9818 | 400.0 | 440.1 | |
| 75 Methyl methacrylate | 100 | 4.000 | 4.000 | 0.000 | 82 | 22116 | 40.0 | 39.1 | |
| 76 n-Propyl acetate | 43 | 4.085 | 4.085 | 0.000 | 96 | 48115 | 20.0 | 20.9 | |
| 77 Dichlorobromomethane | 83 | 4.116 | 4.116 | 0.000 | 94 | 69040 | 20.0 | 20.5 | |
| 78 2-Nitropropane | 41 | 4.366 | 4.366 | 0.000 | 98 | 17869 | 40.0 | 40.4 | |
| 79 2-Chloroethyl vinyl ether | 63 | 4.488 | 4.488 | 0.000 | 88 | 17739 | 20.0 | 20.4 | |
| 80 Epichlorohydrin | 57 | 4.524 | 4.524 | 0.000 | 99 | 78803 | 400.0 | 416.1 | |
| 81 cis-1,3-Dichloropropene | 75 | 4.610 | 4.610 | 0.000 | 90 | 79655 | 20.0 | 20.4 | |
| 82 4-Methyl-2-pentanone (MIBK) | 43 | 4.829 | 4.829 | 0.000 | 94 | 155679 | 100.0 | 99.9 | |

| Compound | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q | Response | Cal Amt ug/l | OnCol Amt ug/l | Flags |
|---|---|---|---|---|---|---|---|---|---|
| $ 83 Toluene-d8 (Surr) | 98 | 4.902 | 4.902 | 0.000 | 99 | 453441 | 50.0 | 50.9 | |
| 84 Toluene | 91 | 4.982 | 4.982 | 0.000 | 93 | 212549 | 20.0 | 20.6 | |
| 85 trans-1,3-Dichloropropene | 75 | 5.286 | 5.286 | 0.000 | 95 | 72302 | 20.0 | 20.7 | |
| 86 Ethyl methacrylate | 69 | 5.475 | 5.475 | 0.000 | 85 | 50976 | 20.0 | 20.5 | |
| 87 1,1,2-Trichloroethane | 83 | 5.500 | 5.500 | 0.000 | 94 | 36285 | 20.0 | 20.7 | |
| 88 Tetrachloroethene | 166 | 5.640 | 5.640 | 0.000 | 91 | 59338 | 20.0 | 21.3 | |
| 89 1,3-Dichloropropane | 76 | 5.695 | 5.695 | 0.000 | 88 | 70932 | 20.0 | 21.0 | |
| 90 2-Hexanone | 43 | 5.884 | 5.884 | 0.000 | 93 | 108729 | 100.0 | 102.6 | |
| 91 Chlorodibromomethane | 129 | 5.975 | 5.975 | 0.000 | 94 | 54077 | 20.0 | 20.9 | |
| 92 Ethylene Dibromide | 107 | 6.085 | 6.085 | 0.000 | 96 | 48015 | 20.0 | 20.9 | |
| 93 n-Butyl acetate | 43 | 6.116 | 6.116 | 0.000 | 97 | 51334 | 20.0 | 21.1 | |
| * 94 Chlorobenzene-d5 | 117 | 6.743 | 6.743 | 0.000 | 83 | 348723 | 50.0 | 50.0 | |
| 95 Chlorobenzene | 112 | 6.786 | 6.786 | 0.000 | 96 | 137025 | 20.0 | 20.8 | |
| 96 1,1,1,2-Tetrachloroethane | 131 | 6.932 | 6.932 | 0.000 | 91 | 52187 | 20.0 | 20.9 | |
| 97 Ethylbenzene | 106 | 6.993 | 6.993 | 0.000 | 98 | 72594 | 20.0 | 21.0 | |
| 98 m-Xylene & p-Xylene | 106 | 7.176 | 7.176 | 0.000 | 0 | 87605 | 20.0 | 20.5 | |
| 99 o-Xylene | 106 | 7.743 | 7.743 | 0.000 | 93 | 82369 | 20.0 | 20.7 | |
| 100 Styrene | 104 | 7.774 | 7.774 | 0.000 | 94 | 135843 | 20.0 | 21.3 | |
| 101 n-Butyl acrylate | 73 | 7.865 | 7.865 | 0.000 | 97 | 31690 | 20.0 | 23.2 | |
| 102 Bromoform | 173 | 7.987 | 7.987 | 0.000 | 96 | 35128 | 20.0 | 20.6 | |
| 103 Amyl acetate (mixed isomers) | 43 | 8.255 | 8.255 | 0.000 | 90 | 55766 | 20.0 | 20.5 | |
| 104 Isopropylbenzene | 105 | 8.341 | 8.341 | 0.000 | 95 | 215333 | 20.0 | 21.7 | |
| $ 105 4-Bromofluorobenzene | 174 | 8.530 | 8.530 | 0.000 | 91 | 147032 | 50.0 | 51.2 | |
| 106 Bromobenzene | 156 | 8.700 | 8.700 | 0.000 | 94 | 56548 | 20.0 | 20.9 | |
| 107 1,1,2,2-Tetrachloroethane | 83 | 8.859 | 8.859 | 0.000 | 89 | 53165 | 20.0 | 21.1 | |
| 108 1,2,3-Trichloropropane | 110 | 8.865 | 8.865 | 0.000 | 82 | 16228 | 20.0 | 21.3 | |
| 109 trans-1,4-Dichloro-2-butene | 53 | 8.956 | 8.956 | 0.000 | 92 | 13289 | 20.0 | 19.7 | |
| 110 N-Propylbenzene | 91 | 8.993 | 8.993 | 0.000 | 99 | 246809 | 20.0 | 20.8 | |
| 111 2-Chlorotoluene | 91 | 9.048 | 9.048 | 0.000 | 95 | 146276 | 20.0 | 21.3 | |
| 112 4-Ethyltoluene | 105 | 9.194 | 9.194 | 0.000 | 98 | 187697 | 20.0 | 20.3 | |
| 113 4-Chlorotoluene | 91 | 9.237 | 9.237 | 0.000 | 97 | 145619 | 20.0 | 19.6 | |
| 114 1,3,5-Trimethylbenzene | 105 | 9.310 | 9.310 | 0.000 | 92 | 153420 | 20.0 | 20.5 | |
| 115 Butyl Methacrylate | 87 | 9.621 | 9.621 | 0.000 | 87 | 49842 | 20.0 | 19.6 | |
| 116 tert-Butylbenzene | 119 | 9.810 | 9.810 | 0.000 | 89 | 134405 | 20.0 | 20.7 | |
| 117 1,2,4-Trimethylbenzene | 105 | 9.895 | 9.895 | 0.000 | 97 | 153542 | 20.0 | 20.8 | |
| 118 sec-Butylbenzene | 105 | 10.176 | 10.176 | 0.000 | 98 | 184551 | 20.0 | 20.8 | |
| 119 1,3-Dichlorobenzene | 146 | 10.255 | 10.255 | 0.000 | 97 | 91455 | 20.0 | 20.5 | |
| * 120 1,4-Dichlorobenzene-d4 | 152 | 10.377 | 10.377 | 0.000 | 94 | 166530 | 50.0 | 50.0 | |
| 121 1,4-Dichlorobenzene | 146 | 10.414 | 10.414 | 0.000 | 91 | 89849 | 20.0 | 19.6 | |
| 122 4-Isopropyltoluene | 119 | 10.456 | 10.456 | 0.000 | 89 | 152555 | 20.0 | 20.6 | |
| 123 1,2,3-Trimethylbenzene | 105 | 10.560 | 10.560 | 0.000 | 98 | 149473 | 20.0 | 20.7 | |
| 124 Benzyl chloride | 91 | 10.682 | 10.682 | 0.000 | 98 | 89168 | 20.0 | 19.8 | |
| 125 2,3-Dihydroindene | 117 | 10.834 | 10.834 | 0.000 | 92 | 144677 | 20.0 | 20.2 | |
| 126 1,2-Dichlorobenzene | 146 | 10.999 | 10.999 | 0.000 | 95 | 81134 | 20.0 | 20.1 | |
| 127 p-Diethylbenzene | 119 | 11.109 | 11.109 | 0.000 | 91 | 73287 | 20.0 | 20.8 | a |
| 128 n-Butylbenzene | 92 | 11.139 | 11.139 | 0.000 | 96 | 70312 | 20.0 | 20.4 | |
| 129 1,2-Dibromo-3-Chloropropane | 157 | 12.090 | 12.090 | 0.000 | 86 | 10089 | 20.0 | 19.5 | |
| 130 1,2,4,5-Tetramethylbenzene | 119 | 12.133 | 12.133 | 0.000 | 96 | 110641 | 20.0 | 20.0 | |
| 131 1,3,5-Trichlorobenzene | 180 | 12.334 | 12.334 | 0.000 | 96 | 45760 | 20.0 | 20.0 | |
| 132 1,2,4-Trichlorobenzene | 180 | 12.950 | 12.950 | 0.000 | 93 | 37876 | 20.0 | 19.9 | |
| 133 Hexachlorobutadiene | 225 | 13.151 | 13.151 | 0.000 | 54 | 16315 | 20.0 | 19.9 | |
| 134 Naphthalene | 128 | 13.151 | 13.151 | 0.000 | 99 | 91178 | 20.0 | 18.7 | |

| Compound | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q | Response | Cal Amt ug/l | OnCol Amt ug/l | Flags |
|---|---|---|---|---|---|---|---|---|---|
| 135 1,2,3-Trichlorobenzene | 180 | 13.370 | 13.370 | 0.000 | 92 | 28891 | 20.0 | 19.7 | |
| S 136 1,2-Dichloroethene, Total | 100 | | | | 0 | | 40.0 | 40.2 | |
| S 137 Xylenes, Total | 100 | | | | 0 | | 40.0 | 41.1 | |
| S 140 Total BTEX | 1 | | | | 0 | | 100.0 | 102.8 | |
| S 139 1,3-Dichloropropene, Total | 1 | | | | 0 | | 40.0 | 41.1 | |

## QC Flag Legend

Review Flags

a - User Assigned ID

## Reagents:

| | | | | |
|---|---|---|---|---|
| 8260MIX1COMB_00125 | Amount Added: | 20.00 | Units: uL | |
| GASES Li_00384 | Amount Added: | 20.00 | Units: uL | |
| 524freon_00027 | Amount Added: | 20.00 | Units: uL | |
| ACROLEIN W_00112 | Amount Added: | 4.00 | Units: uL | |
| VOA6IS/SURR_00038 | Amount Added: | 5.00 | Units: uL | Run Reagent |

Report Date: 05-Sep-2020 11:28:08 Chrom Revision: 2.3 20-Aug-2020 13:57:12

Eurofins TestAmerica, Edison

Data File: \\chromfs\Edison\ChromData\CVOAMS15\20200904-116301.b\T38698.D

Injection Date: 04-Sep-2020 13:49:48 Instrument ID: CVOAMS15

Lims ID: STD20

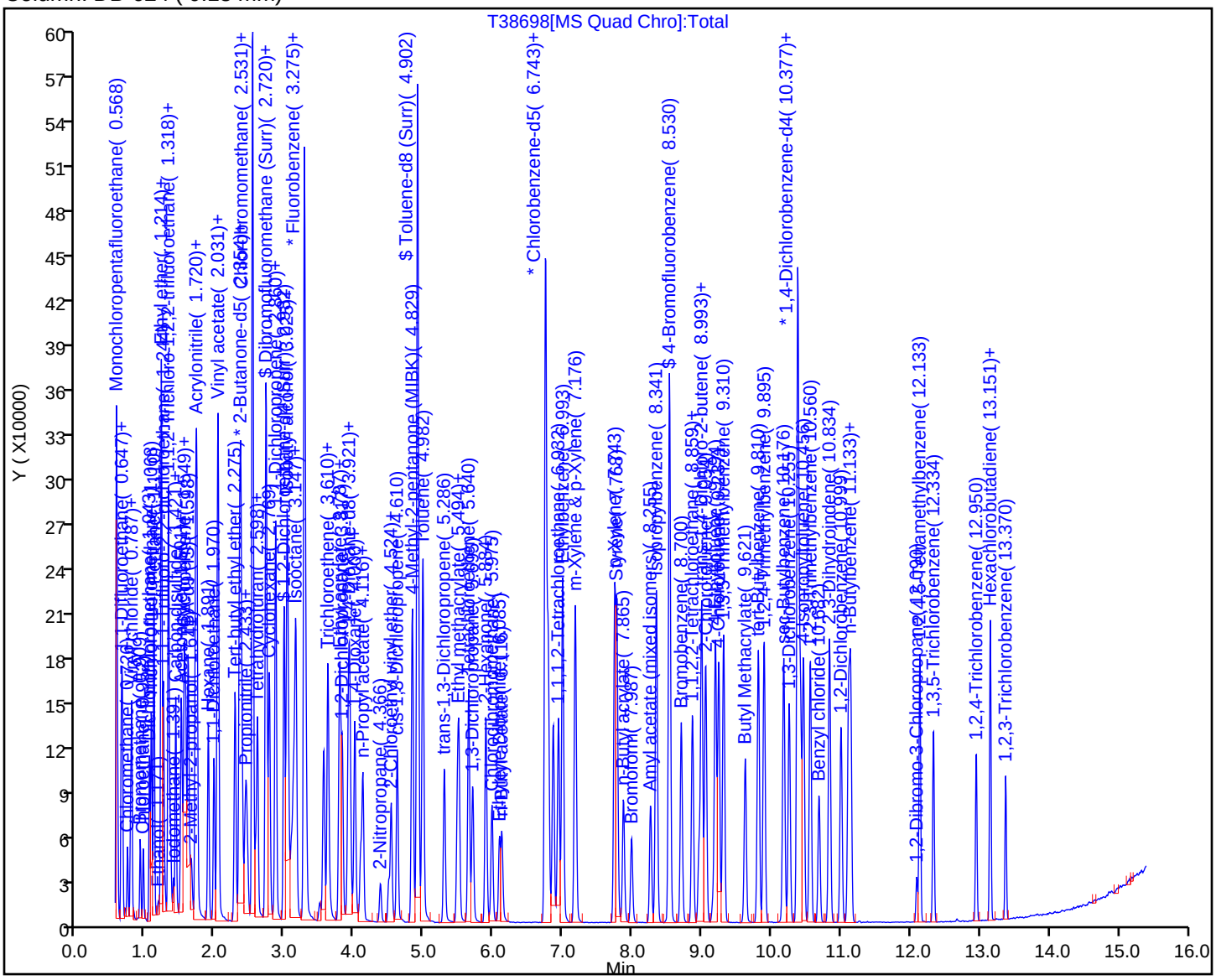
Client ID:

Operator ID: ALS Bottle#: 0 Worklist Smp#: 7

Purge Vol: 5.000 mL Dil. Factor: 1.0000

Method: 8260W_15 Limit Group: VOA - 8260C Water and Solid

Column: DB-624 ( 0.18 mm)



Eurofins TestAmerica, Edison

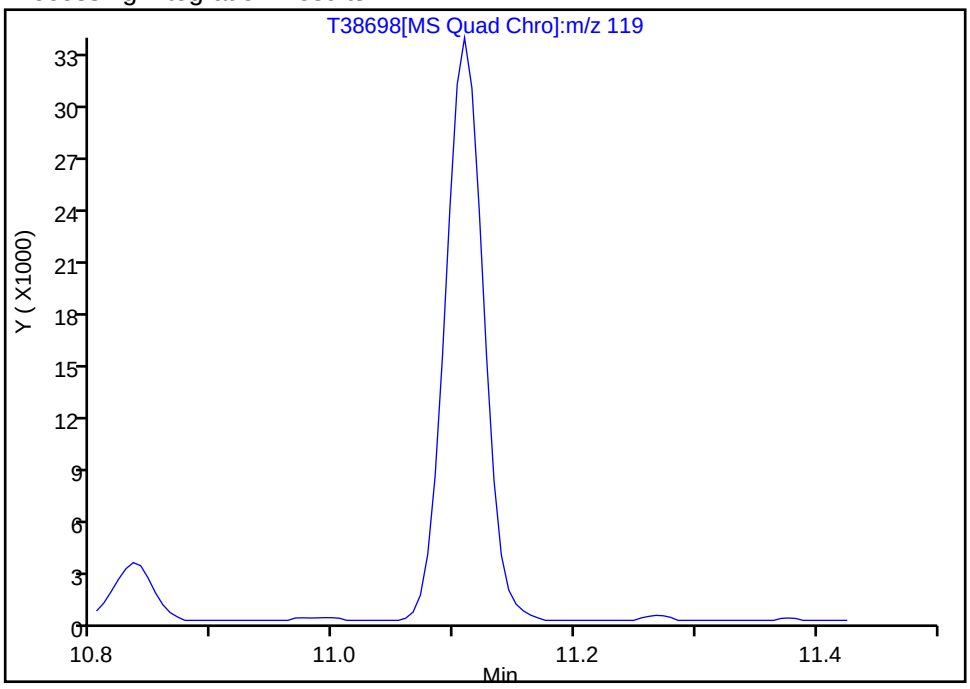
Data File: \\chromfs\Edison\ChromData\CVOAMS15\20200904-116301.b\T38698.D
Injection Date: 04-Sep-2020 13:49:48 Instrument ID: CVOAMS15
Lims ID: STD20
Client ID:
Operator ID: ALS Bottle#: 0 Worklist Smp#: 7
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: 8260W_15 Limit Group: VOA - 8260C Water and Solid
Column: DB-624 ( 0.18 mm) Detector MS Quad

## 127 p-Diethylbenzene, CAS: 105-05-5

Signal: 1

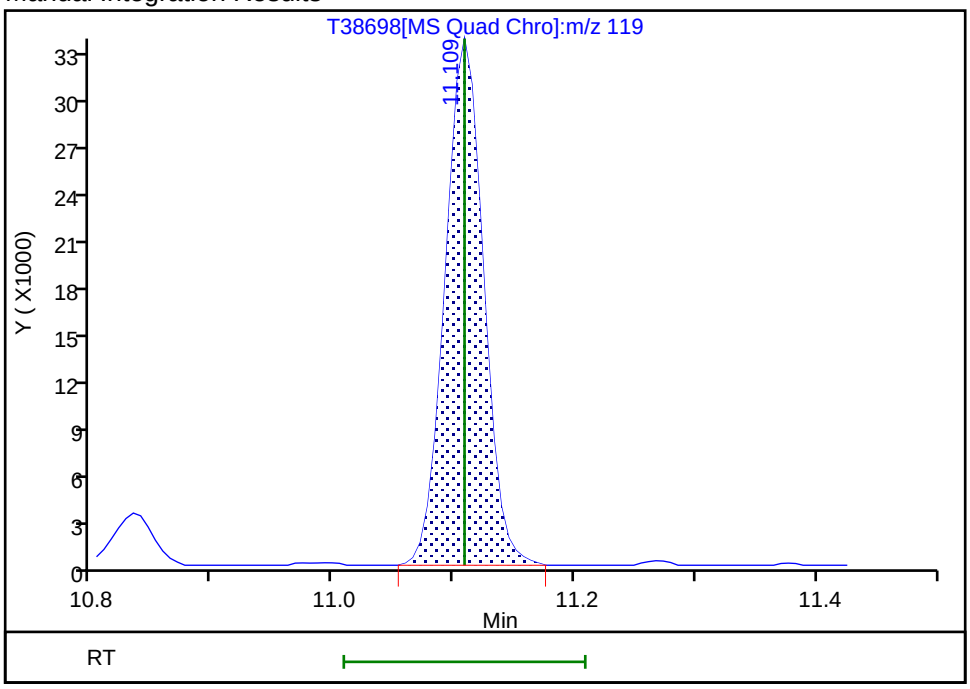
Not Detected
Expected RT: 11.11

Processing Integration Results




Manual Integration Results

RT: 11.11
Area: 73287
Amount: 20.789415
Amount Units: ug/l




Reviewer: delpolitov, 04-Sep-2020 16:46:47
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Eurofins TestAmerica, Edison
Target Compound Quantitation Report

Data File: \\chromfs\Edison\ChromData\CVOAMS15\20200904-116301.b\T38699.D
Lims ID: STD50
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 04-Sep-2020 14:13:47 ALS Bottle#: 0 Worklist Smp#: 8
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: STD50
Misc. Info.: 460-0116301-008
Operator ID: Instrument ID: CVOAMS15
Sublist: chrom-8260W_15*sub18

Method: \\chromfs\Edison\ChromData\CVOAMS15\20200904-116301.b\8260W_15.m
Limit Group: VOA - 8260C Water and Solid
Last Update: 05-Sep-2020 11:28:20 Calib Date: 04-Sep-2020 15:01:54
Integrator: RTE ID Type: RT Order ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Edison\ChromData\CVOAMS15\20200904-116301.b\T38701.D

Column 1 : DB-624 ( 0.18 mm) Det: MS Quad
Process Host: CTX1014

First Level Reviewer: baronm Date: 05-Sep-2020 10:26:31

| Compound | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q | Response | Cal Amt ug/l | OnCol Amt ug/l | Flags |
|---|---|---|---|---|---|---|---|---|---|
| 1 Monochloropentafluoroethane | 119 | 0.586 | 0.586 | 0.000 | 51 | 18324 | 50.0 | 42.3 | |
| 2 1,1-Difluoroethane | 65 | 0.635 | 0.635 | 0.000 | 92 | 58101 | 50.0 | 51.5 | |
| 3 Chlorotrifluoroethene | 116 | 0.635 | 0.635 | 0.000 | 69 | 47078 | 50.0 | 49.3 | |
| 4 Dichlorodifluoromethane | 85 | 0.653 | 0.653 | 0.000 | 99 | 181094 | 50.0 | 52.1 | |
| 5 Chlorodifluoromethane | 67 | 0.659 | 0.659 | 0.000 | 95 | 24406 | 50.0 | 53.2 | |
| 6 Chloromethane | 50 | 0.726 | 0.726 | 0.000 | 99 | 98107 | 50.0 | 51.3 | |
| 7 Vinyl chloride | 62 | 0.769 | 0.769 | 0.000 | 99 | 137086 | 50.0 | 53.3 | |
| 8 Butadiene | 54 | 0.787 | 0.787 | 0.000 | 93 | 117568 | 50.0 | 54.3 | |
| 9 Bromomethane | 94 | 0.909 | 0.909 | 0.000 | 99 | 64136 | 50.0 | 49.6 | |
| 10 Chloroethane | 64 | 0.952 | 0.952 | 0.000 | 99 | 81493 | 50.0 | 53.5 | |
| 11 Dichlorofluoromethane | 67 | 1.043 | 1.043 | 0.000 | 99 | 211030 | 50.0 | 52.2 | |
| 12 Trichlorofluoromethane | 101 | 1.068 | 1.068 | 0.000 | 98 | 227334 | 50.0 | 55.6 | |
| 13 Pentane | 72 | 1.104 | 1.110 | -0.006 | 96 | 38229 | 100.0 | 106.1 | |
| 14 Ethanol | 45 | 1.171 | 1.171 | 0.000 | 95 | 17166 | 2000.0 | 1834.5 | |
| 15 Ethyl ether | 59 | 1.208 | 1.208 | 0.000 | 55 | 83236 | 50.0 | 51.3 | |
| 16 1,2-Dichloro-1,1,2-trifluoroetha | 117 | 1.214 | 1.214 | 0.000 | 81 | 122013 | 50.0 | 51.5 | |
| 17 2-Methyl-1,3-butadiene | 53 | 1.214 | 1.214 | 0.000 | 80 | 94587 | 50.0 | 51.9 | |
| 18 1,1,1-Trifluoro-2,2-dichloroetha | 83 | 1.244 | 1.244 | 0.000 | 96 | 181837 | 50.0 | 51.4 | |
| 19 Acrolein | 56 | 1.269 | 1.269 | 0.000 | 96 | 25168 | 100.0 | 107.6 | |
| 20 1,1-Dichloroethene | 96 | 1.318 | 1.318 | 0.000 | 97 | 117416 | 50.0 | 51.4 | |
| 21 1,1,2-Trichloro-1,2,2-trifluoroe | 101 | 1.318 | 1.318 | 0.000 | 77 | 128696 | 50.0 | 52.2 | |
| 22 Acetone | 43 | 1.348 | 1.348 | 0.000 | 87 | 123872 | 250.0 | 225.9 | |
| 23 Iodomethane | 142 | 1.391 | 1.391 | 0.000 | 98 | 93953 | 50.0 | 74.4 | |
| 24 Carbon disulfide | 76 | 1.421 | 1.421 | 0.000 | 98 | 366981 | 50.0 | 49.9 | |
| 25 Isopropyl alcohol | 45 | 1.433 | 1.427 | 0.006 | 39 | 56094 | 500.0 | 556.2 | |
| 26 Acetonitrile | 40 | 1.494 | 1.494 | 0.000 | 82 | 59859 | 500.0 | 502.2 | |
| 27 3-Chloro-1-propene | 76 | 1.501 | 1.501 | -0.001 | 93 | 76166 | 50.0 | 51.9 | |
| 28 Methyl acetate | 43 | 1.519 | 1.519 | 0.000 | 96 | 121708 | 100.0 | 97.1 | |
| 29 Cyclopentene | 67 | 1.543 | 1.543 | 0.000 | 95 | 264563 | 50.0 | 51.2 | |
| 30 Methylene Chloride | 84 | 1.568 | 1.568 | 0.000 | 84 | 126123 | 50.0 | 50.2 | |

| Compound | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q | Response | Cal Amt ug/l | OnCol Amt ug/l | Flags |
|---|---|---|---|---|---|---|---|---|---|
| * 31 TBA-d9 (IS) | 66 | 1.604 | 1.598 | 0.006 | 98 | 33499 | 1000.0 | 1000.0 | |
| 32 2-Methyl-2-propanol | 59 | 1.647 | 1.647 | 0.000 | 98 | 96846 | 500.0 | 466.8 | |
| 33 Acrylonitrile | 53 | 1.708 | 1.708 | 0.000 | 94 | 341271 | 500.0 | 512.6 | |
| 34 trans-1,2-Dichloroethene | 96 | 1.720 | 1.720 | 0.000 | 90 | 134809 | 50.0 | 52.9 | |
| 35 Methyl tert-butyl ether | 73 | 1.732 | 1.732 | 0.000 | 95 | 330891 | 50.0 | 52.1 | |
| 36 Hexane | 57 | 1.891 | 1.891 | 0.000 | 90 | 133224 | 50.0 | 51.5 | |
| 37 1,1-Dichloroethane | 63 | 1.970 | 1.970 | 0.000 | 100 | 212694 | 50.0 | 51.5 | |
| 38 Vinyl acetate | 86 | 2.019 | 2.019 | 0.000 | 99 | 46670 | 100.0 | 110.0 | |
| 39 2-Chloro-1,3-butadiene | 88 | 2.031 | 2.031 | 0.000 | 76 | 120832 | 50.0 | 51.1 | |
| 40 Isopropyl ether | 45 | 2.031 | 2.031 | 0.000 | 77 | 313131 | 50.0 | 53.2 | |
| 41 Tert-butyl ethyl ether | 59 | 2.275 | 2.275 | 0.000 | 90 | 325384 | 50.0 | 52.5 | |
| * 42 2-Butanone-d5 | 46 | 2.336 | 2.336 | 0.000 | 93 | 201249 | 250.0 | 250.0 | |
| 44 2,2-Dichloropropane | 97 | 2.360 | 2.354 | 0.006 | 80 | 46915 | 50.0 | 53.0 | |
| 43 cis-1,2-Dichloroethene | 96 | 2.360 | 2.360 | 0.000 | 98 | 146435 | 50.0 | 51.3 | |
| 45 2-Butanone (MEK) | 43 | 2.378 | 2.378 | 0.000 | 98 | 191880 | 250.0 | 237.1 | |
| 46 Propionitrile | 54 | 2.421 | 2.421 | 0.000 | 98 | 130237 | 500.0 | 511.4 | |
| 47 Ethyl acetate | 70 | 2.439 | 2.439 | 0.000 | 99 | 21331 | 100.0 | 101.1 | |
| 48 Methyl acrylate | 55 | 2.458 | 2.458 | 0.000 | 97 | 99002 | 50.0 | 53.1 | |
| 49 Chlorobromomethane | 128 | 2.531 | 2.531 | 0.000 | 52 | 70399 | 50.0 | 51.4 | |
| 50 Methacrylonitrile | 67 | 2.531 | 2.531 | 0.000 | 87 | 450178 | 500.0 | 522.6 | |
| 51 Tetrahydrofuran | 72 | 2.573 | 2.574 | -0.001 | 78 | 30069 | 100.0 | 115.4 | |
| 52 Chloroform | 83 | 2.598 | 2.598 | 0.000 | 100 | 235737 | 50.0 | 51.8 | |
| $ 53 Dibromofluoromethane (Surr) | 113 | 2.720 | 2.720 | 0.000 | 88 | 137373 | 50.0 | 49.4 | |
| 54 1,1,1-Trichloroethane | 97 | 2.726 | 2.726 | 0.000 | 91 | 220470 | 50.0 | 52.0 | |
| 55 Cyclohexane | 84 | 2.769 | 2.769 | 0.000 | 87 | 170569 | 50.0 | 50.4 | |
| 56 Carbon tetrachloride | 117 | 2.860 | 2.860 | 0.000 | 97 | 192094 | 50.0 | 53.7 | |
| 57 1,1-Dichloropropene | 75 | 2.860 | 2.860 | 0.000 | 96 | 179562 | 50.0 | 50.6 | |
| $ 58 1,2-Dichloroethane-d4 (Surr) | 65 | 2.982 | 2.982 | 0.000 | 91 | 138293 | 50.0 | 49.3 | |
| 59 Isobutyl alcohol | 43 | 3.019 | 3.019 | 0.000 | 42 | 80307 | 1250.0 | 1289.6 | |
| 60 Benzene | 78 | 3.025 | 3.025 | 0.000 | 96 | 484677 | 50.0 | 50.0 | |
| 61 1,2-Dichloroethane | 62 | 3.043 | 3.043 | 0.000 | 63 | 158518 | 50.0 | 50.2 | |
| 62 Isooctane | 57 | 3.116 | 3.116 | 0.000 | 98 | 233775 | 50.0 | 51.7 | a |
| 63 Isopropyl acetate | 61 | 3.147 | 3.147 | 0.000 | 92 | 38172 | 50.0 | 54.2 | |
| 64 Tert-amyl methyl ether | 73 | 3.153 | 3.153 | 0.000 | 81 | 332598 | 50.0 | 52.8 | |
| * 65 Fluorobenzene | 96 | 3.275 | 3.275 | 0.000 | 99 | 476309 | 50.0 | 50.0 | |
| 66 n-Heptane | 43 | 3.299 | 3.299 | 0.000 | 84 | 95976 | 50.0 | 51.7 | |
| 67 Trichloroethene | 95 | 3.610 | 3.610 | 0.000 | 94 | 140596 | 50.0 | 50.5 | |
| 68 n-Butanol | 56 | 3.628 | 3.628 | 0.000 | 44 | 58732 | 1250.0 | 1386.3 | |
| 69 Ethyl acrylate | 55 | 3.774 | 3.775 | 0.000 | 97 | 248588 | 50.0 | 52.3 | |
| 70 Methylcyclohexane | 83 | 3.787 | 3.787 | 0.000 | 84 | 181190 | 50.0 | 52.9 | |
| 71 1,2-Dichloropropane | 63 | 3.817 | 3.817 | 0.000 | 87 | 116194 | 50.0 | 52.8 | |
| 72 Dibromomethane | 93 | 3.933 | 3.933 | 0.000 | 76 | 81349 | 50.0 | 52.6 | |
| * 73 1,4-Dioxane-d8 | 96 | 3.939 | 3.939 | 0.000 | 89 | 23805 | 1000.0 | 1000.0 | |
| 74 1,4-Dioxane | 88 | 3.988 | 3.988 | 0.000 | 35 | 25404 | 1000.0 | 1146.2 | |
| 75 Methyl methacrylate | 100 | 4.000 | 4.000 | 0.000 | 81 | 64235 | 100.0 | 112.6 | |
| 76 n-Propyl acetate | 43 | 4.085 | 4.085 | 0.000 | 96 | 122143 | 50.0 | 52.5 | |
| 77 Dichlorobromomethane | 83 | 4.116 | 4.116 | 0.000 | 98 | 177256 | 50.0 | 52.3 | |
| 78 2-Nitropropane | 41 | 4.366 | 4.366 | 0.000 | 97 | 45340 | 100.0 | 101.7 | |
| 79 2-Chloroethyl vinyl ether | 63 | 4.488 | 4.488 | 0.000 | 92 | 48476 | 50.1 | 54.0 | |
| 80 Epichlorohydrin | 57 | 4.524 | 4.524 | 0.000 | 99 | 195544 | 1000.0 | 1066.7 | |
| 81 cis-1,3-Dichloropropene | 75 | 4.610 | 4.610 | 0.000 | 85 | 205825 | 50.0 | 51.3 | |
| 82 4-Methyl-2-pentanone (MIBK) | 43 | 4.829 | 4.829 | 0.000 | 94 | 399769 | 250.0 | 264.9 | |

| Compound | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q | Response | Cal Amt ug/l | OnCol Amt ug/l | Flags |
|---|---|---|---|---|---|---|---|---|---|
| $ 83 Toluene-d8 (Surr) | 98 | 4.902 | 4.902 | 0.000 | 99 | 454255 | 50.0 | 49.6 | |
| 84 Toluene | 91 | 4.982 | 4.982 | 0.000 | 93 | 532104 | 50.0 | 50.1 | |
| 85 trans-1,3-Dichloropropene | 75 | 5.286 | 5.286 | 0.000 | 91 | 193445 | 50.0 | 53.7 | |
| 86 Ethyl methacrylate | 69 | 5.475 | 5.475 | 0.000 | 86 | 134838 | 50.0 | 52.6 | |
| 87 1,1,2-Trichloroethane | 83 | 5.500 | 5.500 | 0.000 | 94 | 94409 | 50.0 | 52.3 | |
| 88 Tetrachloroethene | 166 | 5.640 | 5.640 | 0.000 | 91 | 150963 | 50.0 | 52.7 | |
| 89 1,3-Dichloropropane | 76 | 5.695 | 5.695 | 0.000 | 90 | 182529 | 50.0 | 52.5 | |
| 90 2-Hexanone | 43 | 5.884 | 5.884 | 0.000 | 93 | 276172 | 250.0 | 269.2 | |
| 91 Chlorodibromomethane | 129 | 5.975 | 5.975 | 0.000 | 96 | 143070 | 50.0 | 53.7 | |
| 92 Ethylene Dibromide | 107 | 6.079 | 6.085 | -0.006 | 97 | 123081 | 50.0 | 52.0 | |
| 93 n-Butyl acetate | 43 | 6.116 | 6.116 | 0.000 | 97 | 130474 | 50.0 | 52.0 | |
| * 94 Chlorobenzene-d5 | 117 | 6.750 | 6.743 | 0.007 | 83 | 358828 | 50.0 | 50.0 | |
| 95 Chlorobenzene | 112 | 6.786 | 6.786 | 0.000 | 96 | 343416 | 50.0 | 50.7 | |
| 96 1,1,1,2-Tetrachloroethane | 131 | 6.932 | 6.932 | 0.000 | 96 | 136262 | 50.0 | 53.1 | |
| 97 Ethylbenzene | 106 | 6.993 | 6.993 | 0.000 | 98 | 182480 | 50.0 | 51.3 | |
| 98 m-Xylene & p-Xylene | 106 | 7.176 | 7.176 | 0.000 | 0 | 222599 | 50.0 | 50.5 | |
| 99 o-Xylene | 106 | 7.743 | 7.743 | 0.000 | 94 | 209528 | 50.0 | 51.1 | |
| 100 Styrene | 104 | 7.774 | 7.774 | 0.000 | 93 | 353816 | 50.0 | 53.9 | |
| 101 n-Butyl acrylate | 73 | 7.871 | 7.865 | 0.006 | 97 | 77287 | 50.0 | 55.1 | |
| 102 Bromoform | 173 | 7.987 | 7.987 | 0.000 | 95 | 92851 | 50.0 | 53.0 | |
| 103 Amyl acetate (mixed isomers) | 43 | 8.255 | 8.255 | 0.000 | 92 | 145402 | 50.0 | 52.8 | |
| 104 Isopropylbenzene | 105 | 8.341 | 8.341 | 0.000 | 96 | 543980 | 50.0 | 53.2 | |
| $ 105 4-Bromofluorobenzene | 174 | 8.530 | 8.530 | 0.000 | 89 | 148390 | 50.0 | 50.2 | |
| 106 Bromobenzene | 156 | 8.700 | 8.700 | 0.000 | 95 | 142752 | 50.0 | 52.1 | |
| 107 1,1,2,2-Tetrachloroethane | 83 | 8.859 | 8.859 | 0.000 | 90 | 129147 | 50.0 | 50.7 | |
| 108 1,2,3-Trichloropropane | 110 | 8.865 | 8.865 | 0.000 | 84 | 40708 | 50.0 | 52.8 | |
| 109 trans-1,4-Dichloro-2-butene | 53 | 8.956 | 8.956 | 0.000 | 95 | 34706 | 50.0 | 50.4 | |
| 110 N-Propylbenzene | 91 | 8.993 | 8.993 | 0.000 | 99 | 613132 | 50.0 | 50.9 | |
| 111 2-Chlorotoluene | 91 | 9.054 | 9.048 | 0.006 | 96 | 367358 | 50.0 | 52.7 | |
| 112 4-Ethyltoluene | 105 | 9.194 | 9.194 | 0.000 | 98 | 484464 | 50.0 | 51.7 | |
| 113 4-Chlorotoluene | 91 | 9.237 | 9.237 | 0.000 | 98 | 382605 | 50.0 | 50.9 | |
| 114 1,3,5-Trimethylbenzene | 105 | 9.310 | 9.310 | 0.000 | 93 | 386589 | 50.0 | 51.0 | |
| 115 Butyl Methacrylate | 87 | 9.621 | 9.621 | 0.000 | 85 | 141128 | 50.0 | 54.7 | |
| 116 tert-Butylbenzene | 119 | 9.810 | 9.810 | 0.000 | 91 | 338899 | 50.0 | 51.6 | |
| 117 1,2,4-Trimethylbenzene | 105 | 9.895 | 9.895 | 0.000 | 97 | 390346 | 50.0 | 52.1 | |
| 118 sec-Butylbenzene | 105 | 10.176 | 10.176 | 0.000 | 99 | 464982 | 50.0 | 51.8 | |
| 119 1,3-Dichlorobenzene | 146 | 10.255 | 10.255 | 0.000 | 96 | 230743 | 50.0 | 51.0 | |
| * 120 1,4-Dichlorobenzene-d4 | 152 | 10.377 | 10.377 | 0.000 | 94 | 168732 | 50.0 | 50.0 | |
| 121 1,4-Dichlorobenzene | 146 | 10.414 | 10.414 | 0.000 | 93 | 230974 | 50.0 | 49.7 | |
| 122 4-Isopropyltoluene | 119 | 10.462 | 10.456 | 0.006 | 90 | 386118 | 50.0 | 51.4 | |
| 123 1,2,3-Trimethylbenzene | 105 | 10.560 | 10.560 | 0.000 | 98 | 383349 | 50.0 | 52.4 | |
| 124 Benzyl chloride | 91 | 10.682 | 10.682 | 0.000 | 98 | 230347 | 50.0 | 50.4 | |
| 125 2,3-Dihydroindene | 117 | 10.834 | 10.834 | 0.000 | 90 | 381465 | 50.0 | 52.6 | |
| 126 1,2-Dichlorobenzene | 146 | 11.005 | 10.999 | 0.006 | 96 | 213614 | 50.0 | 52.3 | |
| 127 p-Diethylbenzene | 119 | 11.109 | 11.109 | -0.001 | 92 | 189760 | 50.0 | 53.1 | |
| 128 n-Butylbenzene | 92 | 11.139 | 11.139 | 0.000 | 97 | 186339 | 50.0 | 53.3 | |
| 129 1,2-Dibromo-3-Chloropropane | 157 | 12.090 | 12.090 | 0.000 | 94 | 25184 | 50.0 | 47.4 | |
| 130 1,2,4,5-Tetramethylbenzene | 119 | 12.133 | 12.133 | 0.000 | 97 | 291990 | 50.0 | 52.1 | |
| 131 1,3,5-Trichlorobenzene | 180 | 12.334 | 12.334 | 0.000 | 96 | 118793 | 50.0 | 51.3 | |
| 132 1,2,4-Trichlorobenzene | 180 | 12.950 | 12.950 | 0.000 | 93 | 97146 | 50.0 | 50.4 | |
| 133 Hexachlorobutadiene | 225 | 13.151 | 13.151 | 0.000 | 57 | 40717 | 50.0 | 49.5 | |
| 134 Naphthalene | 128 | 13.151 | 13.151 | 0.000 | 99 | 244743 | 50.0 | 49.5 | |

| Compound | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q | Response | Cal Amt ug/l | OnCol Amt ug/l | Flags |
|---|---|---|---|---|---|---|---|---|---|
| 135 1,2,3-Trichlorobenzene | 180 | 13.370 | 13.370 | 0.000 | 95 | 76607 | 50.0 | 51.5 | |
| S 136 1,2-Dichloroethene, Total | 100 | | | | 0 | | 100.0 | 104.2 | |
| S 137 Xylenes, Total | 100 | | | | 0 | | 100.0 | 101.6 | |
| S 140 Total BTEX | 1 | | | | 0 | | 250.0 | 252.9 | |
| S 139 1,3-Dichloropropene, Total | 1 | | | | 0 | | 100.0 | 105.0 | |
| S 138 Total 1,2-dichloroethene | 1 | | | | 0 | | | 104.2 | |

## QC Flag Legend

Review Flags

a - User Assigned ID

## Reagents:

| | | | | |
|---|---|---|---|---|
| 8260MIX1COMB_00125 | Amount Added: | 50.00 | Units: uL | |
| GASES Li_00384 | Amount Added: | 50.00 | Units: uL | |
| 524freon_00027 | Amount Added: | 50.00 | Units: uL | |
| ACROLEIN W_00112 | Amount Added: | 10.00 | Units: uL | |
| VOA6IS/SURR_00038 | Amount Added: | 5.00 | Units: uL | Run Reagent |

Report Date: 05-Sep-2020 11:28:23 Chrom Revision: 2.3 20-Aug-2020 13:57:12

Eurofins TestAmerica, Edison

Data File: \\chromfs\Edison\ChromData\CVOAMS15\20200904-116301.b\T38699.D

Injection Date: 04-Sep-2020 14:13:47 Instrument ID: CVOAMS15

Lims ID: STD50

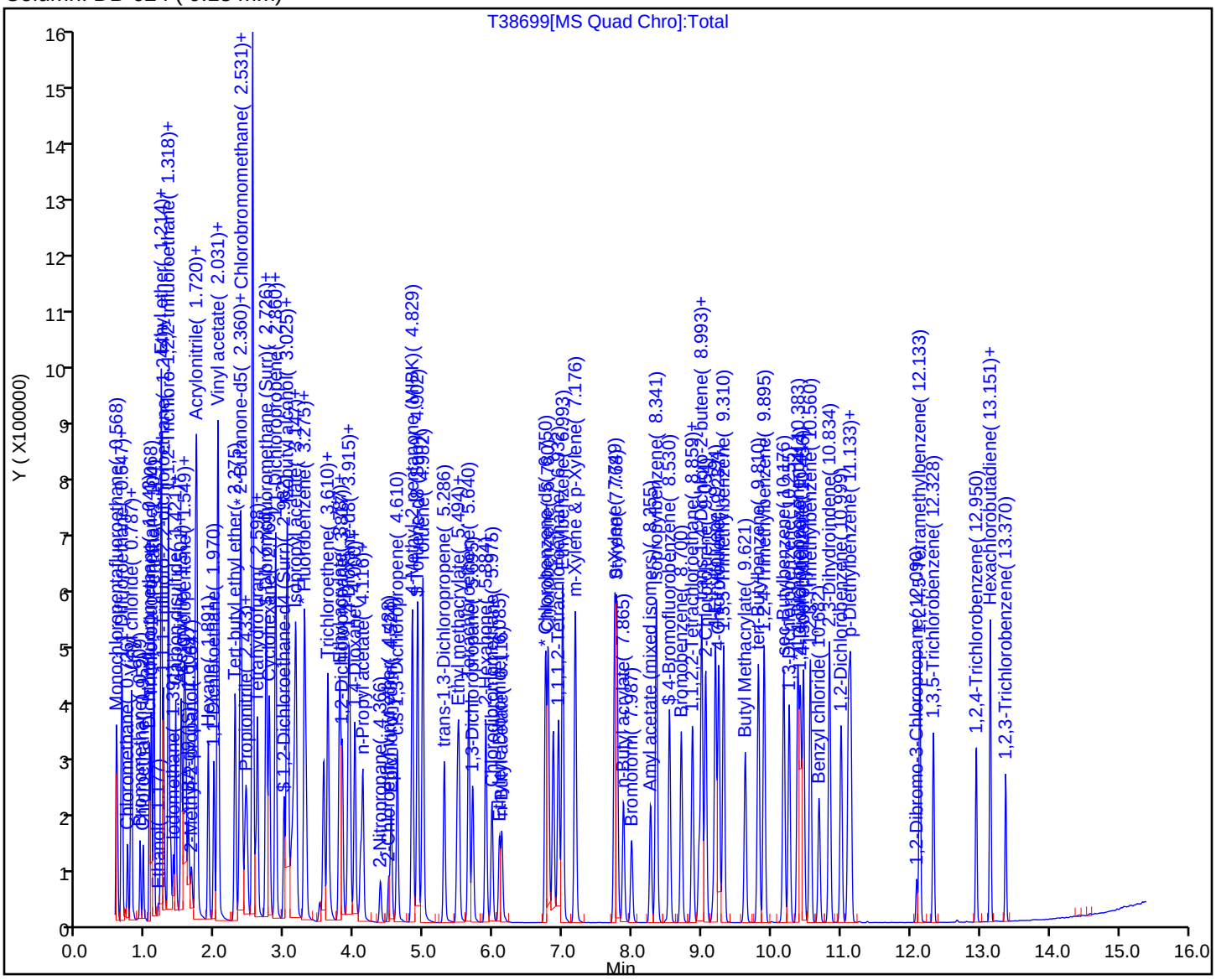
Client ID:

Operator ID: ALS Bottle#: 0 Worklist Smp#: 8

Purge Vol: 5.000 mL Dil. Factor: 1.0000

Method: 8260W_15 Limit Group: VOA - 8260C Water and Solid

Column: DB-624 ( 0.18 mm)



Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Edison

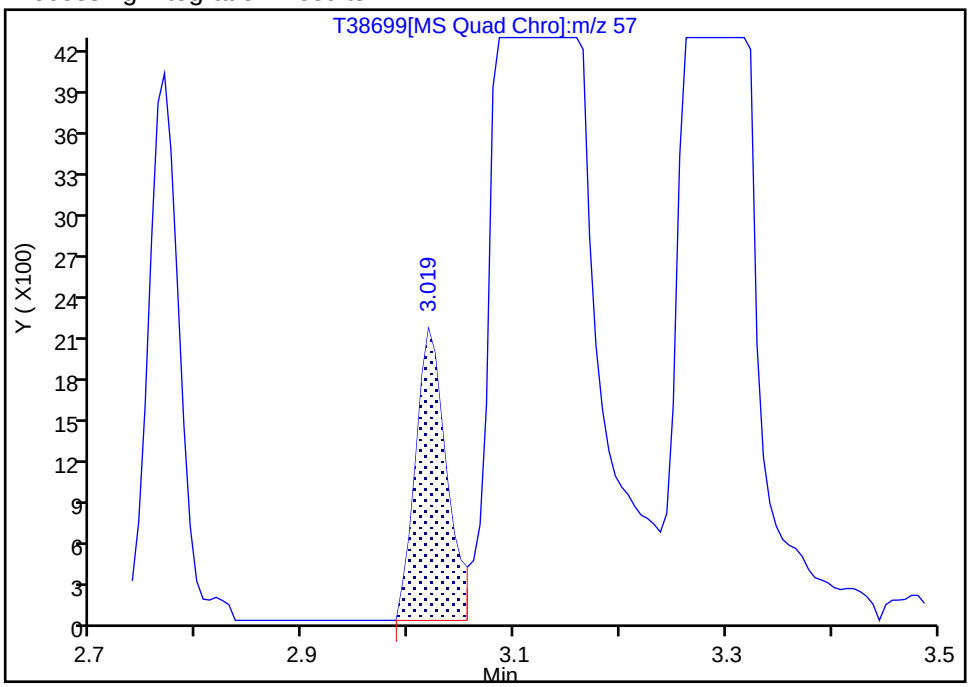
Data File: \\chromfs\Edison\ChromData\CVOAMS15\20200904-116301.b\T38699.D
Injection Date: 04-Sep-2020 14:13:47 Instrument ID: CVOAMS15
Lims ID: STD50
Client ID:
Operator ID: ALS Bottle#: 0 Worklist Smp#: 8
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: 8260W_15 Limit Group: VOA - 8260C Water and Solid
Column: DB-624 ( 0.18 mm) Detector MS Quad

## 62 Isooctane, CAS: 540-84-1

Signal: 1

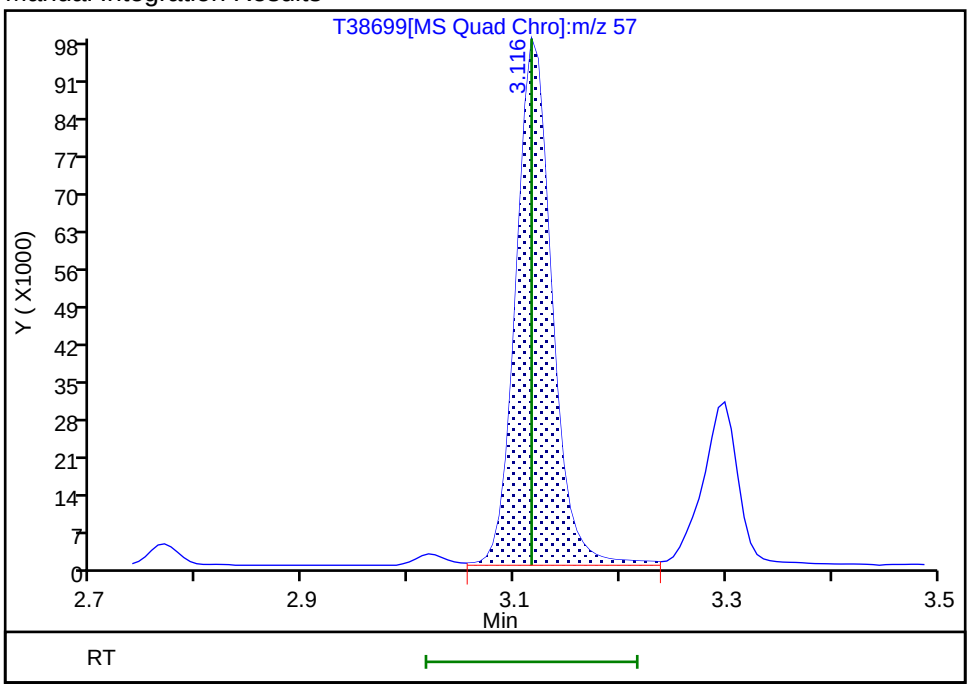
Processing Integration Results

RT: 3.02
Area: 4354
Amount: 1.126490
Amount Units: ug/l




Manual Integration Results

RT: 3.12
Area: 233775
Amount: 51.713346
Amount Units: ug/l




Reviewer: baronm, 05-Sep-2020 10:26:07
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Eurofins TestAmerica, Edison
Target Compound Quantitation Report

Data File: \\chromfs\Edison\ChromData\CVOAMS15\20200904-116301.b\T38700.D
Lims ID: STD200
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 04-Sep-2020 14:37:49 ALS Bottle#: 0 Worklist Smp#: 9
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: STD200
Misc. Info.: 460-0116301-009
Operator ID: Instrument ID: CVOAMS15
Sublist: chrom-8260W_15*sub18

Method: \\chromfs\Edison\ChromData\CVOAMS15\20200904-116301.b\8260W_15.m
Limit Group: VOA - 8260C Water and Solid
Last Update: 05-Sep-2020 11:28:37 Calib Date: 04-Sep-2020 15:01:54
Integrator: RTE ID Type: RT Order ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Edison\ChromData\CVOAMS15\20200904-116301.b\T38701.D

Column 1 : DB-624 ( 0.18 mm) Det: MS Quad
Process Host: CTX1014

First Level Reviewer: baronm Date: 05-Sep-2020 10:43:49

| Compound | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q | Response | Cal Amt ug/l | OnCol Amt ug/l | Flags |
|---|---|---|---|---|---|---|---|---|---|
| 1 Monochloropentafluoroethane | 119 | 0.586 | 0.586 | 0.000 | 95 | 85345 | 200.0 | 200.7 | |
| 2 1,1-Difluoroethane | 65 | 0.635 | 0.635 | 0.000 | 93 | 234122 | 200.0 | 211.8 | |
| 3 Chlorotrifluoroethene | 116 | 0.635 | 0.635 | 0.000 | 78 | 212369 | 200.0 | 204.8 | |
| 4 Dichlorodifluoromethane | 85 | 0.653 | 0.653 | 0.000 | 99 | 771925 | 200.0 | 226.6 | |
| 5 Chlorodifluoromethane | 67 | 0.659 | 0.659 | 0.000 | 95 | 97821 | 200.0 | 217.3 | |
| 6 Chloromethane | 50 | 0.726 | 0.726 | 0.000 | 99 | 366219 | 200.0 | 195.4 | |
| 7 Vinyl chloride | 62 | 0.769 | 0.769 | 0.000 | 99 | 527233 | 200.0 | 208.9 | |
| 8 Butadiene | 54 | 0.787 | 0.787 | 0.000 | 93 | 470885 | 200.0 | 221.9 | |
| 9 Bromomethane | 94 | 0.909 | 0.909 | 0.000 | 99 | 322292 | 200.0 | 255.8 | |
| 10 Chloroethane | 64 | 0.952 | 0.952 | 0.000 | 99 | 304774 | 200.0 | 205.3 | |
| 11 Dichlorofluoromethane | 67 | 1.043 | 1.043 | 0.000 | 99 | 789905 | 200.0 | 199.4 | |
| 12 Trichlorofluoromethane | 101 | 1.074 | 1.068 | 0.006 | 99 | 879376 | 200.0 | 219.2 | |
| 13 Pentane | 72 | 1.110 | 1.110 | 0.000 | 95 | 155402 | 400.0 | 439.8 | |
| 14 Ethanol | 45 | 1.171 | 1.171 | 0.000 | 94 | 61953 | 8000.0 | 8067.7 | |
| 15 Ethyl ether | 59 | 1.208 | 1.208 | 0.000 | 56 | 321824 | 200.0 | 202.4 | |
| 17 2-Methyl-1,3-butadiene | 53 | 1.214 | 1.214 | 0.000 | 80 | 377345 | 200.0 | 211.1 | |
| 16 1,2-Dichloro-1,1,2-trifluoroetha | 117 | 1.214 | 1.214 | 0.000 | 89 | 481958 | 200.0 | 207.3 | |
| 18 1,1,1-Trifluoro-2,2-dichloroetha | 83 | 1.244 | 1.244 | 0.000 | 96 | 718684 | 200.0 | 207.3 | |
| 19 Acrolein | 56 | 1.269 | 1.269 | 0.000 | 94 | 48524 | 200.0 | 215.4 | |
| 20 1,1-Dichloroethene | 96 | 1.317 | 1.318 | -0.001 | 96 | 459465 | 200.0 | 205.1 | |
| 21 1,1,2-Trichloro-1,2,2-trifluoroe | 101 | 1.317 | 1.318 | -0.001 | 81 | 539298 | 200.0 | 223.0 | |
| 22 Acetone | 43 | 1.348 | 1.348 | 0.000 | 88 | 516437 | 1000.0 | 966.5 | |
| 23 Iodomethane | 142 | 1.391 | 1.391 | 0.000 | 99 | 520046 | 200.0 | 420.2 | |
| 24 Carbon disulfide | 76 | 1.421 | 1.421 | 0.000 | 98 | 1414775 | 200.0 | 196.3 | |
| 25 Isopropyl alcohol | 45 | 1.433 | 1.427 | 0.006 | 36 | 195478 | 2000.0 | 2012.2 | |
| 26 Acetonitrile | 40 | 1.494 | 1.494 | 0.000 | 82 | 217685 | 2000.0 | 1873.9 | |
| 27 3-Chloro-1-propene | 76 | 1.500 | 1.501 | -0.001 | 94 | 291370 | 200.0 | 202.3 | |
| 28 Methyl acetate | 43 | 1.519 | 1.519 | 0.000 | 96 | 462854 | 400.0 | 376.8 | |
| 29 Cyclopentene | 67 | 1.543 | 1.543 | 0.000 | 95 | 1066208 | 200.0 | 210.4 | |
| 30 Methylene Chloride | 84 | 1.567 | 1.568 | -0.001 | 83 | 477834 | 200.0 | 193.8 | |

| Compound | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q | Response | Cal Amt ug/l | OnCol Amt ug/l | Flags |
|---|---|---|---|---|---|---|---|---|---|
| * 31 TBA-d9 (IS) | 66 | 1.604 | 1.598 | 0.006 | 98 | 32267 | 1000.0 | 1000.0 | |
| 32 2-Methyl-2-propanol | 59 | 1.653 | 1.647 | 0.006 | 98 | 372176 | 2000.0 | 1862.4 | |
| 33 Acrylonitrile | 53 | 1.708 | 1.708 | 0.000 | 94 | 1289394 | 2000.0 | 1975.2 | |
| 34 trans-1,2-Dichloroethene | 96 | 1.720 | 1.720 | 0.000 | 91 | 512816 | 200.0 | 205.3 | |
| 35 Methyl tert-butyl ether | 73 | 1.732 | 1.732 | 0.000 | 95 | 1250878 | 200.0 | 200.8 | |
| 36 Hexane | 57 | 1.890 | 1.891 | -0.001 | 89 | 549455 | 200.0 | 216.6 | |
| 37 1,1-Dichloroethane | 63 | 1.970 | 1.970 | 0.000 | 100 | 797913 | 200.0 | 197.2 | |
| 38 Vinyl acetate | 86 | 2.018 | 2.019 | -0.001 | 99 | 203897 | 400.0 | 493.1 | |
| 39 2-Chloro-1,3-butadiene | 88 | 2.031 | 2.031 | 0.000 | 75 | 480793 | 200.0 | 207.4 | |
| 40 Isopropyl ether | 45 | 2.037 | 2.031 | 0.006 | 84 | 1137455 | 200.0 | 197.1 | |
| 41 Tert-butyl ethyl ether | 59 | 2.275 | 2.275 | 0.000 | 89 | 1219843 | 200.0 | 200.8 | |
| * 42 2-Butanone-d5 | 46 | 2.342 | 2.336 | 0.006 | 77 | 196136 | 250.0 | 250.0 | |
| 44 2,2-Dichloropropane | 97 | 2.360 | 2.354 | 0.006 | 79 | 182584 | 200.0 | 210.2 | |
| 43 cis-1,2-Dichloroethene | 96 | 2.360 | 2.360 | 0.000 | 98 | 563758 | 200.0 | 201.4 | |
| 45 2-Butanone (MEK) | 43 | 2.384 | 2.378 | 0.006 | 97 | 754351 | 1000.0 | 956.3 | |
| 46 Propionitrile | 54 | 2.421 | 2.421 | 0.000 | 98 | 482660 | 2000.0 | 1967.7 | |
| 47 Ethyl acetate | 70 | 2.439 | 2.439 | 0.000 | 99 | 81719 | 400.0 | 399.9 | |
| 48 Methyl acrylate | 55 | 2.457 | 2.458 | -0.001 | 96 | 363781 | 200.0 | 198.9 | |
| 49 Chlorobromomethane | 128 | 2.531 | 2.531 | 0.000 | 52 | 264929 | 200.0 | 197.5 | |
| 50 Methacrylonitrile | 67 | 2.537 | 2.531 | 0.006 | 87 | 1693932 | 2000.0 | 2005.4 | |
| 51 Tetrahydrofuran | 72 | 2.573 | 2.574 | -0.001 | 80 | 108728 | 400.0 | 428.3 | |
| 52 Chloroform | 83 | 2.598 | 2.598 | 0.000 | 100 | 890928 | 200.0 | 199.7 | |
| $ 53 Dibromofluoromethane (Surr) | 113 | 2.720 | 2.720 | 0.000 | 50 | 134143 | 50.0 | 49.2 | |
| 54 1,1,1-Trichloroethane | 97 | 2.732 | 2.726 | 0.006 | 95 | 848245 | 200.0 | 203.9 | |
| 55 Cyclohexane | 84 | 2.768 | 2.769 | -0.001 | 86 | 714797 | 200.0 | 215.5 | |
| 56 Carbon tetrachloride | 117 | 2.860 | 2.860 | 0.000 | 98 | 782505 | 200.0 | 223.1 | |
| 57 1,1-Dichloropropene | 75 | 2.860 | 2.860 | 0.000 | 96 | 714655 | 200.0 | 205.4 | |
| $ 58 1,2-Dichloroethane-d4 (Surr) | 65 | 2.982 | 2.982 | 0.000 | 98 | 133248 | 50.0 | 48.4 | |
| 59 Isobutyl alcohol | 43 | 3.018 | 3.019 | -0.001 | 50 | 325479 | 5000.0 | 5426.0 | |
| 60 Benzene | 78 | 3.031 | 3.025 | 0.005 | 96 | 1892747 | 200.0 | 200.0 | |
| 61 1,2-Dichloroethane | 62 | 3.049 | 3.043 | 0.006 | 83 | 609868 | 200.0 | 196.8 | |
| 62 Isooctane | 57 | 3.122 | 3.116 | 0.006 | 98 | 968146 | 200.0 | 218.4 | |
| 63 Isopropyl acetate | 61 | 3.146 | 3.147 | -0.001 | 92 | 151465 | 200.0 | 219.3 | |
| 64 Tert-amyl methyl ether | 73 | 3.152 | 3.153 | -0.001 | 79 | 1261937 | 200.0 | 204.2 | |
| * 65 Fluorobenzene | 96 | 3.274 | 3.275 | -0.001 | 99 | 467044 | 50.0 | 50.0 | |
| 66 n-Heptane | 43 | 3.299 | 3.299 | 0.000 | 85 | 391332 | 200.0 | 214.9 | |
| 67 Trichloroethene | 95 | 3.610 | 3.610 | 0.000 | 99 | 551877 | 200.0 | 202.3 | |
| 68 n-Butanol | 56 | 3.634 | 3.628 | 0.006 | 67 | 241952 | 5000.0 | 5928.9 | |
| 69 Ethyl acrylate | 55 | 3.780 | 3.775 | 0.006 | 96 | 998711 | 200.0 | 214.3 | |
| 70 Methylcyclohexane | 83 | 3.786 | 3.787 | -0.001 | 82 | 753832 | 200.0 | 224.3 | |
| 71 1,2-Dichloropropane | 63 | 3.823 | 3.817 | 0.006 | 89 | 449519 | 200.0 | 208.2 | |
| 72 Dibromomethane | 93 | 3.933 | 3.933 | 0.000 | 65 | 313223 | 200.0 | 206.4 | |
| * 73 1,4-Dioxane-d8 | 96 | 3.939 | 3.939 | 0.000 | 86 | 26934 | 1000.0 | 1000.0 | |
| 74 1,4-Dioxane | 88 | 3.994 | 3.988 | 0.006 | 33 | 99056 | 4000.0 | 3950.0 | |
| 75 Methyl methacrylate | 100 | 4.006 | 4.000 | 0.006 | 81 | 248218 | 400.0 | 443.9 | |
| 76 n-Propyl acetate | 43 | 4.085 | 4.085 | 0.000 | 96 | 476273 | 200.0 | 208.8 | |
| 77 Dichlorobromomethane | 83 | 4.116 | 4.116 | 0.000 | 99 | 692440 | 200.0 | 208.4 | |
| 78 2-Nitropropane | 41 | 4.372 | 4.366 | 0.006 | 97 | 186422 | 400.0 | 426.4 | |
| 79 2-Chloroethyl vinyl ether | 63 | 4.488 | 4.488 | 0.000 | 94 | 191176 | 200.5 | 206.9 | |
| 80 Epichlorohydrin | 57 | 4.524 | 4.524 | 0.000 | 99 | 775153 | 4000.0 | 4338.7 | |
| 81 cis-1,3-Dichloropropene | 75 | 4.616 | 4.610 | 0.006 | 90 | 788654 | 200.0 | 201.5 | |
| 82 4-Methyl-2-pentanone (MIBK) | 43 | 4.829 | 4.829 | 0.000 | 94 | 1573507 | 1000.0 | 1070.0 | |

| Compound | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q | Response | Cal Amt ug/l | OnCol Amt ug/l | Flags |
|---|---|---|---|---|---|---|---|---|---|
| $ 83 Toluene-d8 (Surr) | 98 | 4.908 | 4.902 | 0.006 | 99 | 443860 | 50.0 | 49.6 | |
| 84 Toluene | 91 | 4.981 | 4.982 | -0.001 | 93 | 2056475 | 200.0 | 198.4 | |
| 85 trans-1,3-Dichloropropene | 75 | 5.292 | 5.286 | 0.006 | 95 | 725911 | 200.0 | 206.6 | |
| 86 Ethyl methacrylate | 69 | 5.481 | 5.475 | 0.006 | 85 | 534485 | 200.0 | 213.5 | |
| 87 1,1,2-Trichloroethane | 83 | 5.500 | 5.500 | 0.000 | 93 | 344435 | 200.0 | 195.3 | |
| 88 Tetrachloroethene | 166 | 5.640 | 5.640 | 0.000 | 97 | 586860 | 200.0 | 210.1 | |
| 89 1,3-Dichloropropane | 76 | 5.701 | 5.695 | 0.006 | 90 | 696008 | 200.0 | 205.0 | |
| 90 2-Hexanone | 43 | 5.890 | 5.884 | 0.006 | 92 | 1086115 | 1000.0 | 1086.2 | |
| 91 Chlorodibromomethane | 129 | 5.975 | 5.975 | 0.000 | 96 | 554582 | 200.0 | 213.3 | |
| 92 Ethylene Dibromide | 107 | 6.085 | 6.085 | 0.000 | 99 | 460707 | 200.0 | 199.3 | |
| 93 n-Butyl acetate | 43 | 6.115 | 6.116 | -0.001 | 98 | 486790 | 200.0 | 198.8 | |
| * 94 Chlorobenzene-d5 | 117 | 6.749 | 6.743 | 0.006 | 83 | 350229 | 50.0 | 50.0 | |
| 95 Chlorobenzene | 112 | 6.786 | 6.786 | 0.000 | 96 | 1318475 | 200.0 | 199.6 | |
| 96 1,1,1,2-Tetrachloroethane | 131 | 6.932 | 6.932 | 0.000 | 96 | 503909 | 200.0 | 201.3 | |
| 97 Ethylbenzene | 106 | 6.993 | 6.993 | 0.000 | 98 | 685577 | 200.0 | 197.3 | |
| 98 m-Xylene & p-Xylene | 106 | 7.176 | 7.176 | 0.000 | 0 | 828039 | 200.0 | 192.5 | |
| 99 o-Xylene | 106 | 7.743 | 7.743 | 0.000 | 94 | 776857 | 200.0 | 194.0 | |
| 100 Styrene | 104 | 7.774 | 7.774 | 0.000 | 92 | 1288755 | 200.0 | 201.0 | |
| 101 n-Butyl acrylate | 73 | 7.871 | 7.865 | 0.006 | 98 | 297739 | 200.0 | 217.3 | |
| 102 Bromoform | 173 | 7.987 | 7.987 | 0.000 | 96 | 352412 | 200.0 | 206.2 | |
| 103 Amyl acetate (mixed isomers) | 43 | 8.261 | 8.255 | 0.006 | 91 | 543967 | 200.0 | 213.0 | |
| 104 Isopropylbenzene | 105 | 8.347 | 8.341 | 0.006 | 96 | 1984132 | 200.0 | 198.9 | |
| $ 105 4-Bromofluorobenzene | 174 | 8.529 | 8.530 | -0.001 | 90 | 139025 | 50.0 | 48.2 | |
| 106 Bromobenzene | 156 | 8.706 | 8.700 | 0.006 | 93 | 529463 | 200.0 | 208.3 | |
| 107 1,1,2,2-Tetrachloroethane | 83 | 8.865 | 8.859 | 0.006 | 95 | 497130 | 200.0 | 210.4 | |
| 108 1,2,3-Trichloropropane | 110 | 8.865 | 8.865 | 0.000 | 83 | 150267 | 200.0 | 210.4 | |
| 109 trans-1,4-Dichloro-2-butene | 53 | 8.956 | 8.956 | 0.000 | 97 | 133645 | 200.0 | 208.5 | |
| 110 N-Propylbenzene | 91 | 8.999 | 8.993 | 0.006 | 99 | 2297388 | 200.0 | 205.7 | |
| 111 2-Chlorotoluene | 91 | 9.054 | 9.048 | 0.006 | 96 | 1300188 | 200.0 | 201.3 | |
| 112 4-Ethyltoluene | 105 | 9.194 | 9.194 | 0.000 | 98 | 1772276 | 200.0 | 203.9 | |
| 113 4-Chlorotoluene | 91 | 9.243 | 9.237 | 0.006 | 97 | 1336684 | 200.0 | 192.0 | |
| 114 1,3,5-Trimethylbenzene | 105 | 9.316 | 9.310 | 0.006 | 93 | 1431680 | 200.0 | 203.6 | |
| 115 Butyl Methacrylate | 87 | 9.627 | 9.621 | 0.006 | 85 | 515623 | 200.0 | 215.6 | |
| 116 tert-Butylbenzene | 119 | 9.816 | 9.810 | 0.006 | 91 | 1226829 | 200.0 | 201.6 | |
| 117 1,2,4-Trimethylbenzene | 105 | 9.895 | 9.895 | 0.000 | 97 | 1437197 | 200.0 | 207.0 | |
| 118 sec-Butylbenzene | 105 | 10.176 | 10.176 | 0.000 | 99 | 1737373 | 200.0 | 208.8 | |
| 119 1,3-Dichlorobenzene | 146 | 10.255 | 10.255 | 0.000 | 96 | 854373 | 200.0 | 203.7 | |
| * 120 1,4-Dichlorobenzene-d4 | 152 | 10.383 | 10.377 | 0.006 | 95 | 156444 | 50.0 | 50.0 | |
| 121 1,4-Dichlorobenzene | 146 | 10.419 | 10.414 | 0.005 | 95 | 868667 | 200.0 | 201.5 | |
| 122 4-Isopropyltoluene | 119 | 10.462 | 10.456 | 0.006 | 94 | 1451207 | 200.0 | 208.2 | |
| 123 1,2,3-Trimethylbenzene | 105 | 10.560 | 10.560 | 0.000 | 98 | 1412940 | 200.0 | 208.4 | |
| 124 Benzyl chloride | 91 | 10.688 | 10.682 | 0.006 | 99 | 890482 | 200.0 | 210.0 | |
| 125 2,3-Dihydroindene | 117 | 10.840 | 10.834 | 0.006 | 90 | 1420352 | 200.0 | 211.2 | |
| 126 1,2-Dichlorobenzene | 146 | 11.005 | 10.999 | 0.006 | 96 | 826674 | 200.0 | 218.4 | |
| 127 p-Diethylbenzene | 119 | 11.108 | 11.109 | -0.001 | 93 | 726180 | 200.0 | 219.3 | |
| 128 n-Butylbenzene | 92 | 11.139 | 11.139 | 0.000 | 95 | 700118 | 200.0 | 216.1 | |
| 129 1,2-Dibromo-3-Chloropropane | 157 | 12.090 | 12.090 | 0.000 | 94 | 101654 | 200.0 | 202.2 | |
| 130 1,2,4,5-Tetramethylbenzene | 119 | 12.139 | 12.133 | 0.006 | 97 | 1150853 | 200.0 | 221.7 | |
| 131 1,3,5-Trichlorobenzene | 180 | 12.334 | 12.334 | 0.000 | 94 | 457811 | 200.0 | 213.1 | |
| 132 1,2,4-Trichlorobenzene | 180 | 12.949 | 12.950 | -0.001 | 94 | 397316 | 200.0 | 222.5 | |
| 133 Hexachlorobutadiene | 225 | 13.151 | 13.151 | 0.000 | 57 | 166568 | 200.0 | 219.5 | |
| 134 Naphthalene | 128 | 13.151 | 13.151 | 0.000 | 99 | 1008833 | 200.0 | 220.1 | |

| Compound | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q | Response | Cal Amt ug/l | OnCol Amt ug/l | Flags |
|---|---|---|---|---|---|---|---|---|---|
| 135 1,2,3-Trichlorobenzene | 180 | 13.370 | 13.370 | 0.000 | 96 | 317747 | 200.0 | 230.4 | |
| S 136 1,2-Dichloroethene, Total | 100 | | | | 0 | | 400.0 | 406.7 | |
| S 137 Xylenes, Total | 100 | | | | 0 | | 400.0 | 386.5 | |
| S 140 Total BTEX | 1 | | | | 0 | | 1000.0 | 982.2 | |
| S 139 1,3-Dichloropropene, Total | 1 | | | | 0 | | 400.0 | 408.0 | |
| S 138 Total 1,2-dichloroethene | 1 | | | | 0 | | | 406.7 | |

## Reagents:

| | | | | |
|---|---|---|---|---|
| ACROLEIN W_00112 | Amount Added: | 20.00 | Units: uL | |
| GAS Hi_00370 | Amount Added: | 20.00 | Units: uL | |
| MIX 2 Hi_00102 | Amount Added: | 20.00 | Units: uL | |
| MIX I Hi_00129 | Amount Added: | 20.00 | Units: uL | |
| Ethanol mix_00043 | Amount Added: | 20.00 | Units: uL | |
| 8FreonHi_00023 | Amount Added: | 20.00 | Units: uL | |
| VOA6IS/SURR_00038 | Amount Added: | 5.00 | Units: uL | Run Reagent |

Report Date: 05-Sep-2020 11:28:41 Chrom Revision: 2.3 20-Aug-2020 13:57:12

Eurofins TestAmerica, Edison

Data File: \\chromfs\Edison\ChromData\CVOAMS15\20200904-116301.b\T38700.D

Injection Date: 04-Sep-2020 14:37:49 Instrument ID: CVOAMS15

Lims ID: STD200

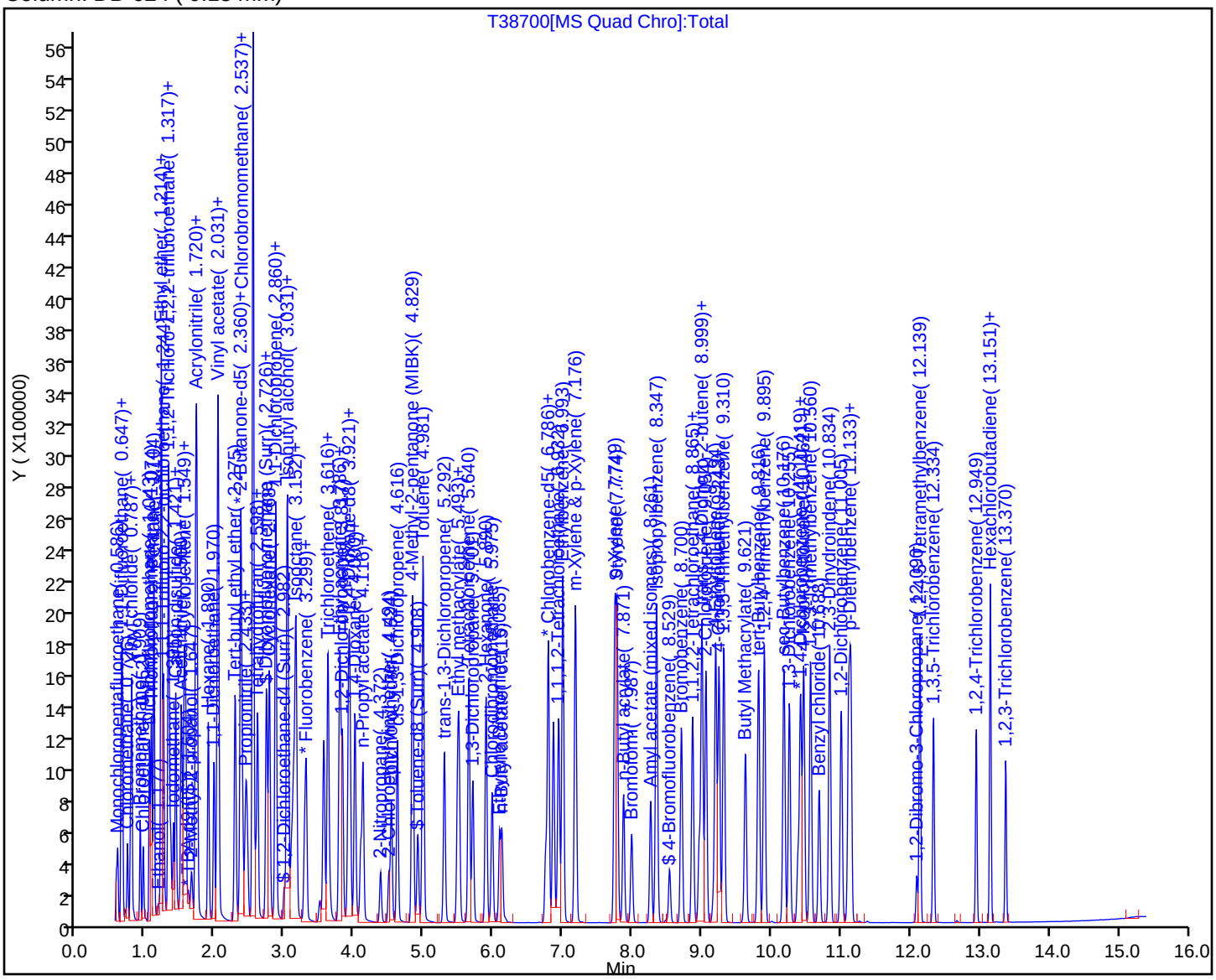
Client ID:

Operator ID: ALS Bottle#: 0 Worklist Smp#: 9

Purge Vol: 5.000 mL Dil. Factor: 1.0000

Method: 8260W_15 Limit Group: VOA - 8260C Water and Solid

Column: DB-624 ( 0.18 mm)



Eurofins TestAmerica, Edison
Target Compound Quantitation Report

Data File: \\chromfs\Edison\ChromData\CVOAMS15\20200904-116301.b\T38701.D
Lims ID: STD500
Client ID:
Sample Type: IC Calib Level: 7
Inject. Date: 04-Sep-2020 15:01:54 ALS Bottle#: 0 Worklist Smp#: 10
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: STD500
Misc. Info.: 460-0116301-010
Operator ID: Instrument ID: CVOAMS15
Sublist: chrom-8260W_15*sub18

Method: \\chromfs\Edison\ChromData\CVOAMS15\20200904-116301.b\8260W_15.m
Limit Group: VOA - 8260C Water and Solid
Last Update: 05-Sep-2020 11:28:53 Calib Date: 04-Sep-2020 15:01:54
Integrator: RTE ID Type: RT Order ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Edison\ChromData\CVOAMS15\20200904-116301.b\T38701.D

Column 1 : DB-624 ( 0.18 mm) Det: MS Quad
Process Host: CTX1014

First Level Reviewer: starzecm Date: 04-Sep-2020 15:36:38

| Compound | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q | Response | Cal Amt ug/l | OnCol Amt ug/l | Flags |
|---|---|---|---|---|---|---|---|---|---|
| 1 Monochloropentafluoroethane | 119 | 0.586 | 0.586 | 0.000 | 94 | 234583 | 500.0 | 559.3 | |
| 2 1,1-Difluoroethane | 65 | 0.635 | 0.635 | 0.000 | 92 | 605257 | 500.0 | 554.9 | |
| 3 Chlorotrifluoroethene | 116 | 0.635 | 0.635 | 0.000 | 78 | 598342 | 500.0 | 497.1 | |
| 4 Dichlorodifluoromethane | 85 | 0.647 | 0.653 | -0.006 | 99 | 1935652 | 500.0 | 575.8 | |
| 5 Chlorodifluoromethane | 67 | 0.653 | 0.659 | -0.006 | 84 | 249110 | 500.0 | 561.0 | |
| 6 Chloromethane | 50 | 0.726 | 0.726 | 0.000 | 99 | 1103505 | 500.0 | 596.9 | |
| 7 Vinyl chloride | 62 | 0.769 | 0.769 | 0.000 | 99 | 1357477 | 500.0 | 545.2 | |
| 8 Butadiene | 54 | 0.787 | 0.787 | 0.000 | 93 | 1181606 | 500.0 | 564.4 | |
| 9 Bromomethane | 94 | 0.909 | 0.909 | 0.000 | 99 | 931075 | 500.0 | 738.6 | |
| 10 Chloroethane | 64 | 0.952 | 0.952 | 0.000 | 99 | 782000 | 500.0 | 526.5 | |
| 11 Dichlorofluoromethane | 67 | 1.043 | 1.043 | 0.000 | 99 | 1968166 | 500.0 | 503.6 | |
| 12 Trichlorofluoromethane | 101 | 1.068 | 1.068 | 0.000 | 99 | 2168538 | 500.0 | 547.9 | |
| 13 Pentane | 72 | 1.104 | 1.110 | -0.006 | 94 | 395854 | 1000.0 | 1135.5 | |
| 14 Ethanol | 45 | 1.177 | 1.171 | 0.006 | 94 | 112468 | 20000 | 19940 | M |
| 15 Ethyl ether | 59 | 1.208 | 1.208 | 0.000 | 54 | 809240 | 500.0 | 516.0 | |
| 16 1,2-Dichloro-1,1,2-trifluoroetha | 117 | 1.214 | 1.214 | 0.000 | 87 | 1189643 | 500.0 | 518.6 | |
| 17 2-Methyl-1,3-butadiene | 53 | 1.214 | 1.214 | 0.000 | 81 | 964931 | 500.0 | 547.1 | |
| 18 1,1,1-Trifluoro-2,2-dichloroetha | 83 | 1.244 | 1.244 | 0.000 | 95 | 1750396 | 500.0 | 511.7 | |
| 19 Acrolein | 56 | 1.269 | 1.269 | 0.000 | 76 | 104267 | 400.0 | 421.7 | |
| 20 1,1-Dichloroethene | 96 | 1.318 | 1.318 | 0.000 | 96 | 1096741 | 500.0 | 496.3 | |
| 21 1,1,2-Trichloro-1,2,2-trifluoroe | 101 | 1.318 | 1.318 | 0.000 | 86 | 1296793 | 500.0 | 543.5 | |
| 22 Acetone | 43 | 1.348 | 1.348 | 0.000 | 87 | 1340870 | 2500.0 | 2508.0 | |
| 23 Iodomethane | 142 | 1.391 | 1.391 | 0.000 | 99 | 1141499 | 500.0 | 935.0 | |
| 24 Carbon disulfide | 76 | 1.421 | 1.421 | 0.000 | 98 | 3361012 | 500.0 | 472.7 | |
| 25 Isopropyl alcohol | 45 | 1.439 | 1.427 | 0.012 | 59 | 530450 | 5000.0 | 4974.3 | |
| 26 Acetonitrile | 40 | 1.494 | 1.494 | 0.000 | 82 | 538353 | 5000.0 | 4631.5 | |
| 27 3-Chloro-1-propene | 76 | 1.500 | 1.501 | -0.001 | 94 | 643273 | 500.0 | 452.7 | |
| 28 Methyl acetate | 43 | 1.519 | 1.519 | 0.000 | 97 | 1196436 | 1000.0 | 987.1 | |
| 29 Cyclopentene | 67 | 1.543 | 1.543 | 0.000 | 97 | 2604712 | 500.0 | 520.9 | |
| 30 Methylene Chloride | 84 | 1.567 | 1.568 | -0.001 | 83 | 1148212 | 500.0 | 472.1 | |

| Compound | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q | Response | Cal Amt ug/l | OnCol Amt ug/l | Flags |
|---|---|---|---|---|---|---|---|---|---|
| * 31 TBA-d9 (IS) | 66 | 1.610 | 1.598 | 0.012 | 96 | 35420 | 1000.0 | 1000.0 | |
| 32 2-Methyl-2-propanol | 59 | 1.659 | 1.647 | 0.012 | 98 | 927064 | 5000.0 | 4226.1 | |
| 33 Acrylonitrile | 53 | 1.714 | 1.708 | 0.006 | 94 | 3208340 | 5000.0 | 4981.5 | |
| 34 trans-1,2-Dichloroethene | 96 | 1.720 | 1.720 | 0.000 | 83 | 1243634 | 500.0 | 504.7 | |
| 35 Methyl tert-butyl ether | 73 | 1.732 | 1.732 | 0.000 | 95 | 3036522 | 500.0 | 494.1 | |
| 36 Hexane | 57 | 1.891 | 1.891 | 0.000 | 89 | 1336922 | 500.0 | 534.2 | |
| 37 1,1-Dichloroethane | 63 | 1.976 | 1.970 | 0.006 | 99 | 1858164 | 500.0 | 465.4 | |
| 38 Vinyl acetate | 86 | 2.019 | 2.019 | 0.000 | 99 | 463305 | 1000.0 | 1119.8 | |
| 39 2-Chloro-1,3-butadiene | 88 | 2.037 | 2.031 | 0.006 | 77 | 1191332 | 500.0 | 520.8 | |
| 40 Isopropyl ether | 45 | 2.037 | 2.031 | 0.006 | 82 | 2805021 | 500.0 | 492.7 | |
| 41 Tert-butyl ethyl ether | 59 | 2.281 | 2.275 | 0.006 | 90 | 3015632 | 500.0 | 503.1 | |
| * 42 2-Butanone-d5 | 46 | 2.348 | 2.336 | 0.012 | 39 | 196252 | 250.0 | 250.0 | |
| 44 2,2-Dichloropropane | 97 | 2.360 | 2.354 | 0.006 | 78 | 417002 | 500.0 | 486.5 | |
| 43 cis-1,2-Dichloroethene | 96 | 2.360 | 2.360 | 0.000 | 97 | 1334354 | 500.0 | 483.1 | |
| 45 2-Butanone (MEK) | 43 | 2.384 | 2.378 | 0.006 | 98 | 1834163 | 2500.0 | 2323.7 | |
| 46 Propionitrile | 54 | 2.433 | 2.421 | 0.012 | 93 | 1216112 | 5000.0 | 4516.5 | a |
| 47 Ethyl acetate | 70 | 2.445 | 2.439 | 0.006 | 99 | 202010 | 1000.0 | 1000.0 | |
| 48 Methyl acrylate | 55 | 2.464 | 2.458 | 0.006 | 97 | 1069212 | 500.0 | 592.7 | |
| 49 Chlorobromomethane | 128 | 2.537 | 2.531 | 0.006 | 55 | 637084 | 500.0 | 481.3 | |
| 50 Methacrylonitrile | 67 | 2.549 | 2.531 | 0.018 | 87 | 4210590 | 5000.0 | 5052.6 | |
| 51 Tetrahydrofuran | 72 | 2.579 | 2.574 | 0.005 | 82 | 263878 | 1000.0 | 1038.8 | |
| 52 Chloroform | 83 | 2.604 | 2.598 | 0.006 | 100 | 2112555 | 500.0 | 480.0 | |
| $ 53 Dibromofluoromethane (Surr) | 113 | 2.726 | 2.720 | 0.006 | 32 | 132307 | 50.0 | 49.2 | |
| 54 1,1,1-Trichloroethane | 97 | 2.732 | 2.726 | 0.006 | 97 | 2006798 | 500.0 | 489.0 | |
| 55 Cyclohexane | 84 | 2.768 | 2.769 | -0.001 | 86 | 1744998 | 500.0 | 533.2 | |
| 56 Carbon tetrachloride | 117 | 2.860 | 2.860 | 0.000 | 98 | 1804842 | 500.0 | 521.6 | |
| 57 1,1-Dichloropropene | 75 | 2.866 | 2.860 | 0.006 | 96 | 1693561 | 500.0 | 493.2 | |
| $ 58 1,2-Dichloroethane-d4 (Surr) | 65 | 2.982 | 2.982 | 0.000 | 97 | 134157 | 50.0 | 49.4 | |
| 59 Isobutyl alcohol | 43 | 3.031 | 3.019 | 0.012 | 39 | 836342 | 12500 | 12701 | |
| 60 Benzene | 78 | 3.031 | 3.025 | 0.006 | 96 | 4546661 | 500.0 | 501.3 | |
| 61 1,2-Dichloroethane | 62 | 3.049 | 3.043 | 0.006 | 71 | 1452143 | 500.0 | 475.0 | |
| 62 Isooctane | 57 | 3.122 | 3.116 | 0.006 | 97 | 2374930 | 500.0 | 543.1 | |
| 63 Isopropyl acetate | 61 | 3.153 | 3.147 | 0.006 | 92 | 371536 | 500.0 | 545.2 | |
| 64 Tert-amyl methyl ether | 73 | 3.159 | 3.153 | 0.006 | 81 | 3041111 | 500.0 | 498.7 | |
| * 65 Fluorobenzene | 96 | 3.274 | 3.275 | -0.001 | 98 | 460782 | 50.0 | 50.0 | |
| 66 n-Heptane | 43 | 3.299 | 3.299 | 0.000 | 85 | 922019 | 500.0 | 513.2 | |
| 67 Trichloroethene | 95 | 3.616 | 3.610 | 0.006 | 98 | 1304788 | 500.0 | 484.9 | |
| 68 n-Butanol | 56 | 3.640 | 3.628 | 0.012 | 83 | 631005 | 12500 | 14086 | |
| 69 Ethyl acrylate | 55 | 3.780 | 3.775 | 0.006 | 97 | 2388271 | 500.0 | 519.3 | |
| 70 Methylcyclohexane | 83 | 3.793 | 3.787 | 0.006 | 85 | 1777620 | 500.0 | 536.1 | |
| 71 1,2-Dichloropropane | 63 | 3.823 | 3.817 | 0.006 | 88 | 1045500 | 500.0 | 490.8 | |
| 72 Dibromomethane | 93 | 3.933 | 3.933 | 0.000 | 50 | 716353 | 500.0 | 478.4 | |
| * 73 1,4-Dioxane-d8 | 96 | 3.939 | 3.939 | 0.000 | 89 | 29405 | 1000.0 | 1000.0 | |
| 74 1,4-Dioxane | 88 | 4.000 | 3.988 | 0.012 | 32 | 252127 | 10000 | 9209.2 | |
| 75 Methyl methacrylate | 100 | 4.006 | 4.000 | 0.006 | 81 | 609144 | 1000.0 | 1104.1 | |
| 76 n-Propyl acetate | 43 | 4.091 | 4.085 | 0.006 | 96 | 1178918 | 500.0 | 523.8 | |
| 77 Dichlorobromomethane | 83 | 4.122 | 4.116 | 0.006 | 99 | 1618126 | 500.0 | 493.7 | |
| 78 2-Nitropropane | 41 | 4.378 | 4.366 | 0.012 | 96 | 459432 | 1000.0 | 1065.0 | |
| 79 2-Chloroethyl vinyl ether | 63 | 4.494 | 4.488 | 0.006 | 94 | 483492 | 501.2 | 492.7 | |
| 80 Epichlorohydrin | 57 | 4.536 | 4.524 | 0.012 | 99 | 1827552 | 10000 | 10223 | |
| 81 cis-1,3-Dichloropropene | 75 | 4.616 | 4.610 | 0.006 | 90 | 1860391 | 500.0 | 495.8 | |
| 82 4-Methyl-2-pentanone (MIBK) | 43 | 4.835 | 4.829 | 0.006 | 94 | 3737292 | 2500.0 | 2539.9 | |

| Compound | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q | Response | Cal Amt ug/l | OnCol Amt ug/l | Flags |
|---|---|---|---|---|---|---|---|---|---|
| $ 83 Toluene-d8 (Surr) | 98 | 4.908 | 4.902 | 0.006 | 99 | 428004 | 50.0 | 49.9 | |
| 84 Toluene | 91 | 4.988 | 4.982 | 0.006 | 94 | 4787752 | 500.0 | 481.8 | |
| 85 trans-1,3-Dichloropropene | 75 | 5.292 | 5.286 | 0.006 | 95 | 1711158 | 500.0 | 508.0 | |
| 86 Ethyl methacrylate | 69 | 5.481 | 5.475 | 0.006 | 86 | 1294075 | 500.0 | 539.4 | |
| 87 1,1,2-Trichloroethane | 83 | 5.506 | 5.500 | 0.006 | 93 | 816679 | 500.0 | 483.3 | |
| 88 Tetrachloroethene | 166 | 5.646 | 5.640 | 0.006 | 98 | 1381532 | 500.0 | 516.0 | |
| 89 1,3-Dichloropropane | 76 | 5.701 | 5.695 | 0.006 | 90 | 1580104 | 500.0 | 485.5 | |
| 90 2-Hexanone | 43 | 5.896 | 5.884 | 0.012 | 93 | 2601241 | 2500.0 | 2600.0 | |
| 91 Chlorodibromomethane | 129 | 5.981 | 5.975 | 0.006 | 97 | 1286230 | 500.0 | 516.2 | |
| 92 Ethylene Dibromide | 107 | 6.091 | 6.085 | 0.006 | 99 | 1097442 | 500.0 | 495.4 | |
| 93 n-Butyl acetate | 43 | 6.122 | 6.116 | 0.006 | 97 | 1184736 | 500.0 | 504.7 | |
| * 94 Chlorobenzene-d5 | 117 | 6.749 | 6.743 | 0.006 | 83 | 335676 | 50.0 | 50.0 | |
| 95 Chlorobenzene | 112 | 6.792 | 6.786 | 0.006 | 96 | 3042390 | 500.0 | 480.5 | |
| 96 1,1,1,2-Tetrachloroethane | 131 | 6.938 | 6.932 | 0.006 | 96 | 1131580 | 500.0 | 471.6 | |
| 97 Ethylbenzene | 106 | 6.999 | 6.993 | 0.006 | 98 | 1583492 | 500.0 | 475.5 | |
| 98 m-Xylene & p-Xylene | 106 | 7.182 | 7.176 | 0.006 | 0 | 1910159 | 500.0 | 463.4 | |
| 99 o-Xylene | 106 | 7.749 | 7.743 | 0.006 | 94 | 1837068 | 500.0 | 478.6 | |
| 100 Styrene | 104 | 7.780 | 7.774 | 0.006 | 93 | 3072989 | 500.0 | 500.1 | |
| 101 n-Butyl acrylate | 73 | 7.871 | 7.865 | 0.006 | 98 | 731515 | 500.0 | 557.1 | |
| 102 Bromoform | 173 | 7.987 | 7.987 | 0.000 | 96 | 861204 | 500.0 | 525.8 | |
| 103 Amyl acetate (mixed isomers) | 43 | 8.261 | 8.255 | 0.006 | 92 | 1326439 | 500.0 | 486.6 | |
| 104 Isopropylbenzene | 105 | 8.347 | 8.341 | 0.006 | 96 | 4639864 | 500.0 | 485.4 | |
| $ 105 4-Bromofluorobenzene | 174 | 8.536 | 8.530 | 0.006 | 91 | 136512 | 50.0 | 49.4 | |
| 106 Bromobenzene | 156 | 8.706 | 8.700 | 0.006 | 94 | 1284756 | 500.0 | 473.6 | |
| 107 1,1,2,2-Tetrachloroethane | 83 | 8.865 | 8.859 | 0.006 | 95 | 1207452 | 500.0 | 478.7 | |
| 108 1,2,3-Trichloropropane | 110 | 8.871 | 8.865 | 0.006 | 84 | 378042 | 500.0 | 495.9 | |
| 109 trans-1,4-Dichloro-2-butene | 53 | 8.962 | 8.956 | 0.006 | 97 | 337260 | 500.0 | 492.7 | |
| 110 N-Propylbenzene | 91 | 9.005 | 8.993 | 0.012 | 99 | 5543741 | 500.0 | 465.1 | |
| 111 2-Chlorotoluene | 91 | 9.060 | 9.048 | 0.012 | 96 | 3053965 | 500.0 | 443.0 | |
| 112 4-Ethyltoluene | 105 | 9.200 | 9.194 | 0.006 | 98 | 4442949 | 500.0 | 478.8 | |
| 113 4-Chlorotoluene | 91 | 9.249 | 9.237 | 0.012 | 97 | 3662362 | 500.0 | 492.8 | |
| 114 1,3,5-Trimethylbenzene | 105 | 9.316 | 9.310 | 0.006 | 93 | 3459100 | 500.0 | 461.0 | |
| 115 Butyl Methacrylate | 87 | 9.627 | 9.621 | 0.006 | 85 | 1355997 | 500.0 | 531.3 | |
| 116 tert-Butylbenzene | 119 | 9.816 | 9.810 | 0.006 | 91 | 3038694 | 500.0 | 467.9 | |
| 117 1,2,4-Trimethylbenzene | 105 | 9.901 | 9.895 | 0.006 | 97 | 3553591 | 500.0 | 479.6 | |
| 118 sec-Butylbenzene | 105 | 10.182 | 10.176 | 0.006 | 99 | 4304765 | 500.0 | 484.7 | |
| 119 1,3-Dichlorobenzene | 146 | 10.261 | 10.255 | 0.006 | 96 | 2147245 | 500.0 | 479.6 | |
| * 120 1,4-Dichlorobenzene-d4 | 152 | 10.383 | 10.377 | 0.006 | 95 | 166969 | 50.0 | 50.0 | |
| 121 1,4-Dichlorobenzene | 146 | 10.420 | 10.414 | 0.006 | 95 | 2175817 | 500.0 | 473.0 | |
| 122 4-Isopropyltoluene | 119 | 10.468 | 10.456 | 0.012 | 93 | 3648625 | 500.0 | 490.4 | |
| 123 1,2,3-Trimethylbenzene | 105 | 10.566 | 10.560 | 0.006 | 98 | 3550936 | 500.0 | 490.8 | |
| 124 Benzyl chloride | 91 | 10.688 | 10.682 | 0.006 | 99 | 2289900 | 500.0 | 505.9 | |
| 125 2,3-Dihydroindene | 117 | 10.840 | 10.834 | 0.006 | 90 | 3595273 | 500.0 | 501.0 | |
| 126 1,2-Dichlorobenzene | 146 | 11.005 | 10.999 | 0.006 | 96 | 2058799 | 500.0 | 509.7 | |
| 127 p-Diethylbenzene | 119 | 11.114 | 11.109 | 0.005 | 91 | 1834204 | 500.0 | 518.9 | a |
| 128 n-Butylbenzene | 92 | 11.145 | 11.139 | 0.006 | 97 | 1743055 | 500.0 | 504.0 | |
| 129 1,2-Dibromo-3-Chloropropane | 157 | 12.090 | 12.090 | 0.000 | 95 | 276306 | 500.0 | 500.6 | |
| 130 1,2,4,5-Tetramethylbenzene | 119 | 12.139 | 12.133 | 0.006 | 96 | 3004971 | 500.0 | 542.4 | |
| 131 1,3,5-Trichlorobenzene | 180 | 12.334 | 12.334 | 0.000 | 97 | 1197238 | 500.0 | 522.0 | |
| 132 1,2,4-Trichlorobenzene | 180 | 12.950 | 12.950 | 0.000 | 91 | 1040011 | 500.0 | 545.7 | |
| 133 Hexachlorobutadiene | 225 | 13.151 | 13.151 | 0.000 | 57 | 425255 | 500.0 | 525.6 | |
| 134 Naphthalene | 128 | 13.151 | 13.151 | 0.000 | 99 | 2662331 | 500.0 | 544.3 | |

| Compound | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q | Response | Cal Amt ug/l | OnCol Amt ug/l | Flags |
|---|---|---|---|---|---|---|---|---|---|
| 135 1,2,3-Trichlorobenzene | 180 | 13.370 | 13.370 | 0.000 | 94 | 834229 | 500.0 | 566.9 | |
| S 136 1,2-Dichloroethene, Total | 100 | | | | 0 | | 1000.0 | 987.7 | |
| S 137 Xylenes, Total | 100 | | | | 0 | | 1000.0 | 942.0 | |
| S 140 Total BTEX | 1 | | | | 0 | | 2500.0 | 2400.7 | |
| S 139 1,3-Dichloropropene, Total | 1 | | | | 0 | | 1000.0 | 1003.8 | |
| S 138 Total 1,2-dichloroethene | 1 | | | | 0 | | | 987.7 | |

## QC Flag Legend

Review Flags

M - Manually Integrated

a - User Assigned ID

## Reagents:

| | | | | |
|---|---|---|---|---|
| Ethanol mix_00043 | Amount Added: | 50.00 | Units: uL | |
| MIX 2 Hi_00102 | Amount Added: | 50.00 | Units: uL | |
| MIX I Hi_00129 | Amount Added: | 50.00 | Units: uL | |
| GAS Hi_00370 | Amount Added: | 50.00 | Units: uL | |
| 8FreonHi_00023 | Amount Added: | 50.00 | Units: uL | |
| ACROLEIN W_00112 | Amount Added: | 40.00 | Units: uL | |
| VOA6IS/SURR_00038 | Amount Added: | 5.00 | Units: uL | Run Reagent |

Report Date: 05-Sep-2020 11:28:58 Chrom Revision: 2.3 20-Aug-2020 13:57:12

Eurofins TestAmerica, Edison

Data File: \\chromfs\Edison\ChromData\CVOAMS15\20200904-116301.b\T38701.D

Injection Date: 04-Sep-2020 15:01:54 Instrument ID: CVOAMS15

Lims ID: STD500

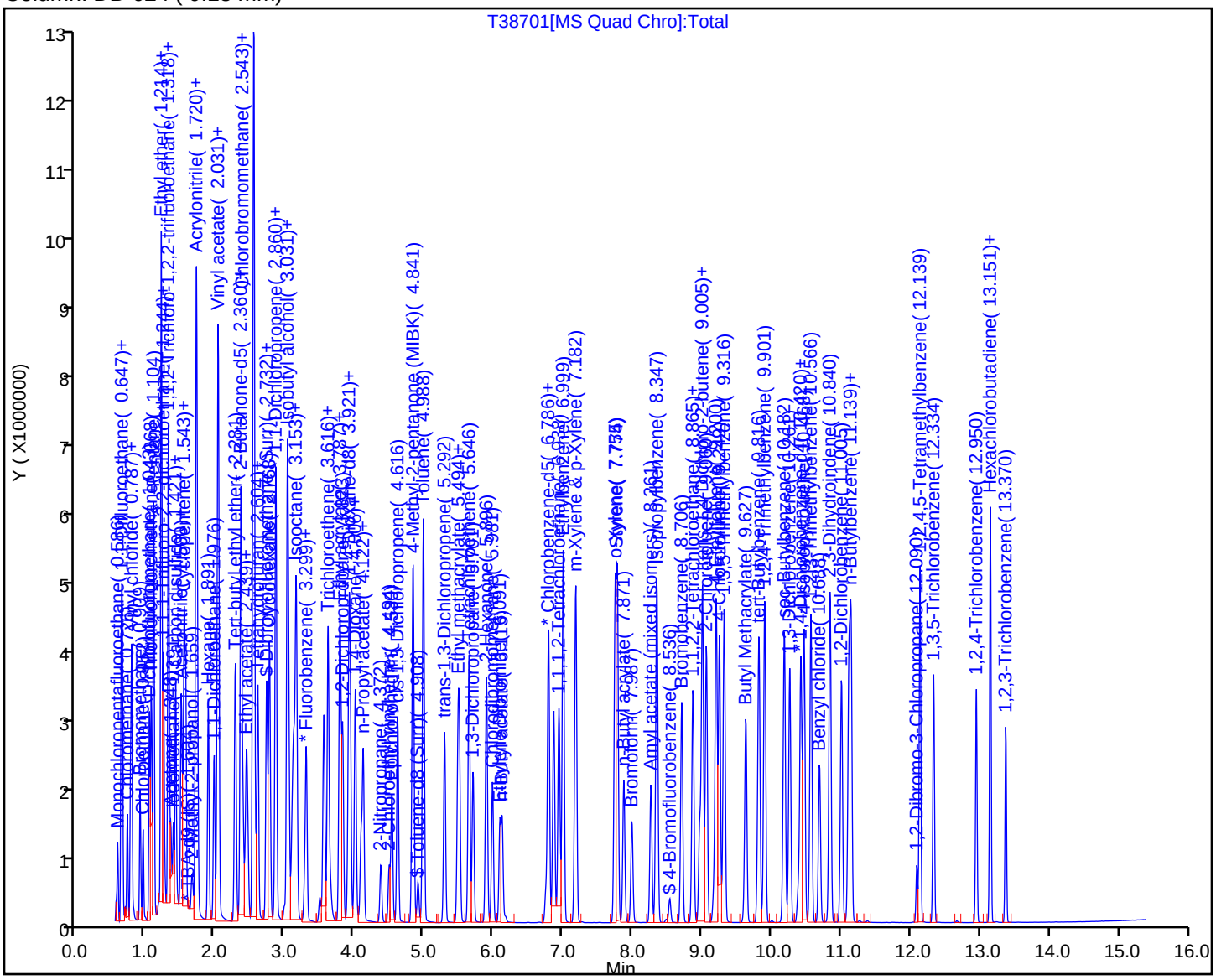
Client ID:

Operator ID: ALS Bottle#: 0 Worklist Smp#: 10

Purge Vol: 5.000 mL Dil. Factor: 1.0000

Method: 8260W_15 Limit Group: VOA - 8260C Water and Solid

Column: DB-624 ( 0.18 mm)



Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Edison

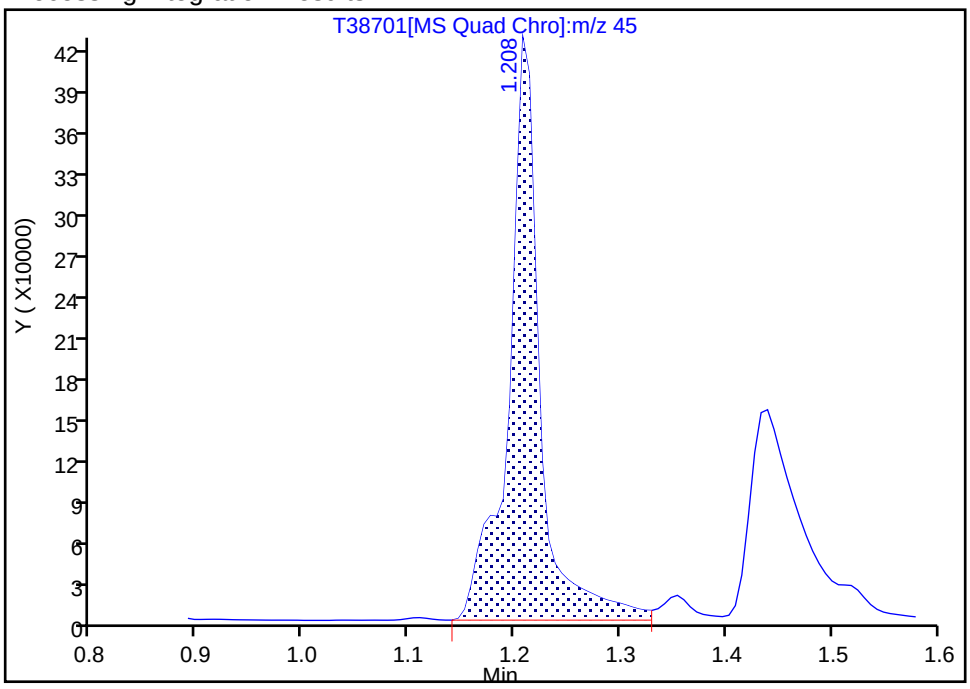
Data File: \\chromfs\Edison\ChromData\CVOAMS15\20200904-116301.b\T38701.D
Injection Date: 04-Sep-2020 15:01:54 Instrument ID: CVOAMS15
Lims ID: STD500
Client ID:
Operator ID: ALS Bottle#: 0 Worklist Smp#: 10
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: 8260W_15 Limit Group: VOA - 8260C Water and Solid
Column: DB-624 ( 0.18 mm) Detector MS Quad

## 14 Ethanol, CAS: 64-17-5

Signal: 1

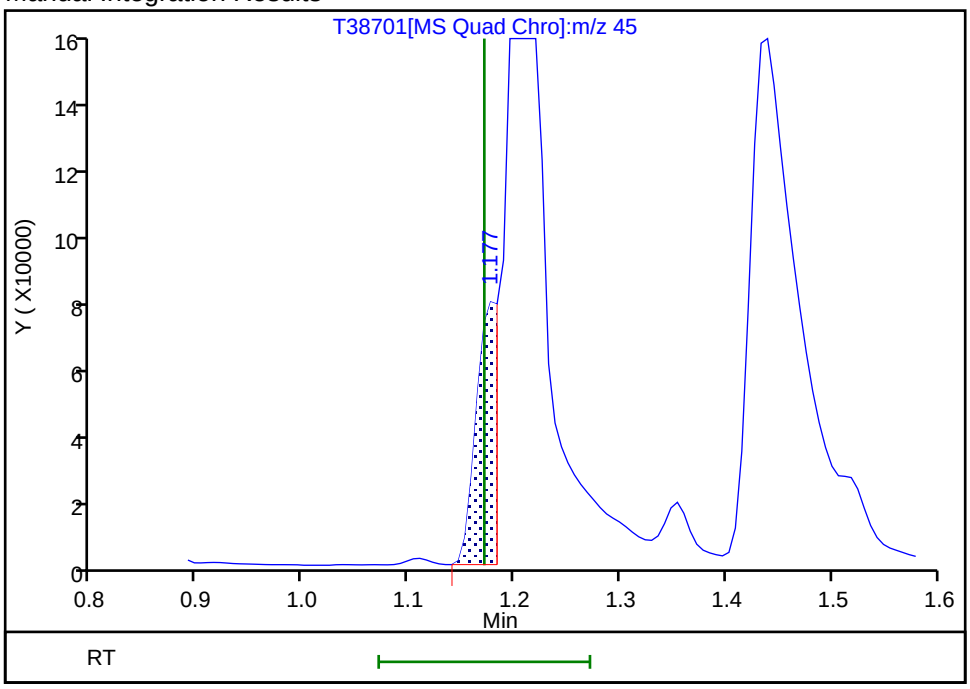
Processing Integration Results

RT: 1.21
Area: 878686
Amount: 20020
Amount Units: ug/l




Manual Integration Results

RT: 1.18
Area: 112468
Amount: 19940
Amount Units: ug/l




Reviewer: baronm, 05-Sep-2020 10:27:56
Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Eurofins TestAmerica, Edison

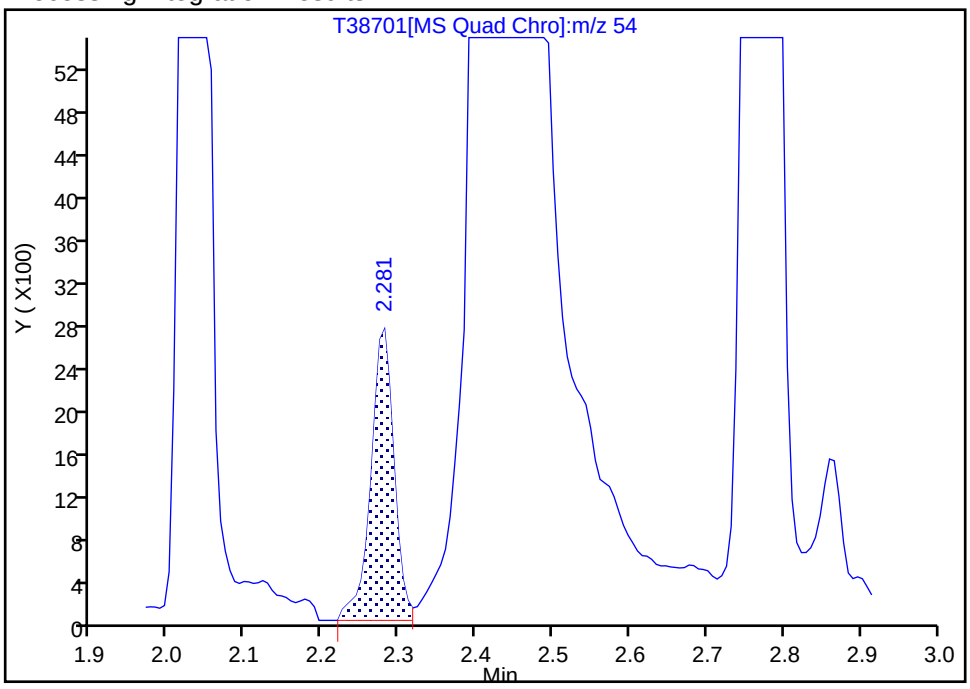
Data File: \\chromfs\Edison\ChromData\CVOAMS15\20200904-116301.b\T38701.D
Injection Date: 04-Sep-2020 15:01:54 Instrument ID: CVOAMS15
Lims ID: STD500
Client ID:
Operator ID: ALS Bottle#: 0 Worklist Smp#: 10
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: 8260W_15 Limit Group: VOA - 8260C Water and Solid
Column: DB-624 ( 0.18 mm) Detector MS Quad

## 46 Propionitrile, CAS: 107-12-0

Signal: 1

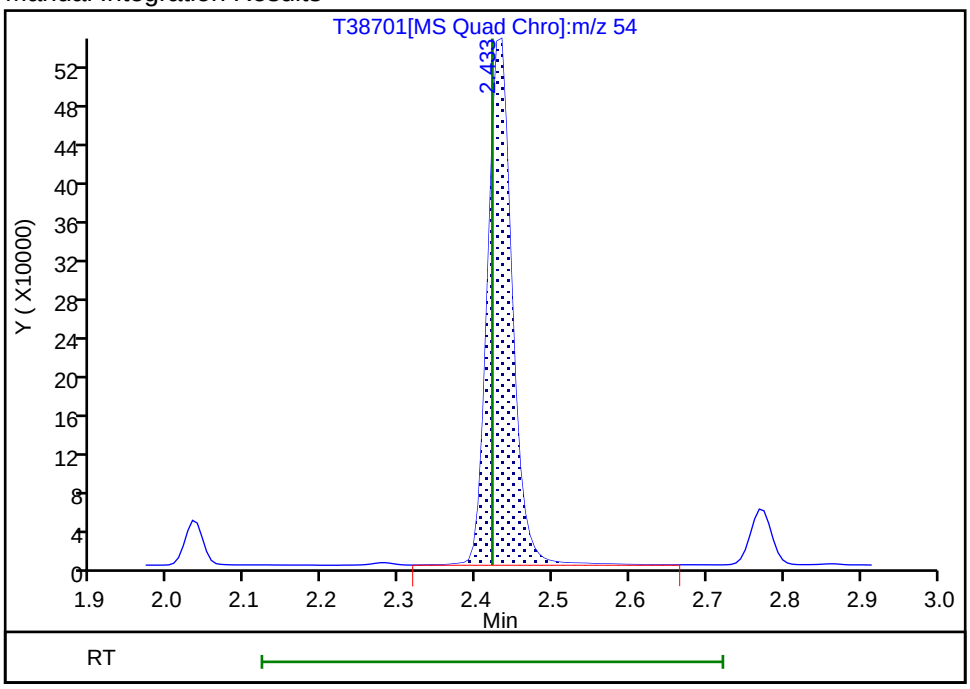
Processing Integration Results

RT: 2.28
Area: 5662
Amount: 24.126753
Amount Units: ug/l




Manual Integration Results

RT: 2.43
Area: 1216112
Amount: 4516.4713
Amount Units: ug/l




Reviewer: baronm, 05-Sep-2020 10:28:09
Audit Action: Assigned Compound ID Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Edison

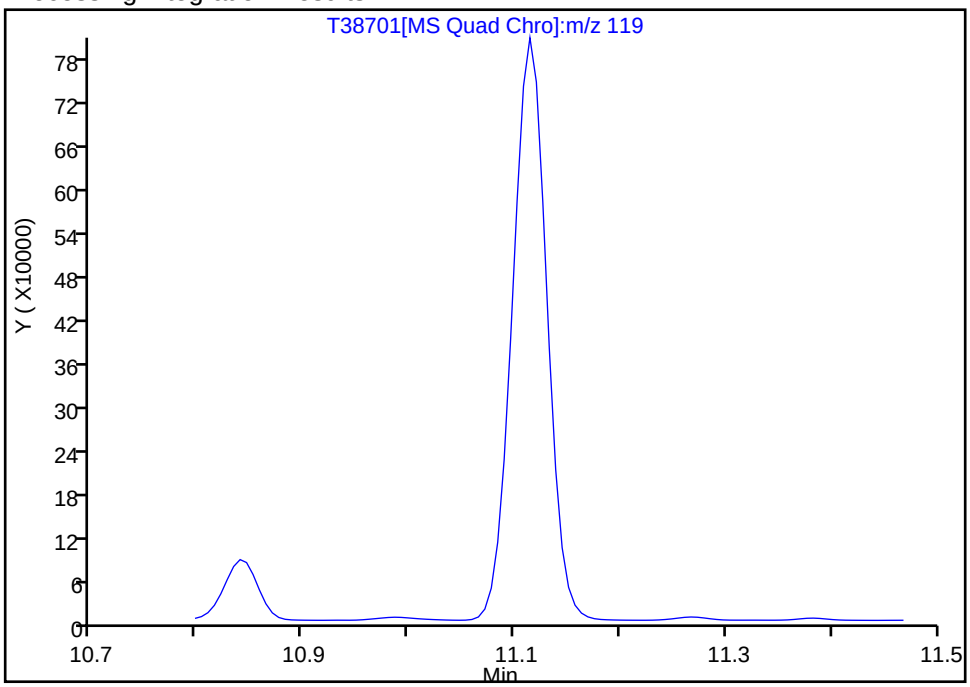
Data File: \\chromfs\Edison\ChromData\CVOAMS15\20200904-116301.b\T38701.D
Injection Date: 04-Sep-2020 15:01:54 Instrument ID: CVOAMS15
Lims ID: STD500
Client ID:
Operator ID: ALS Bottle#: 0 Worklist Smp#: 10
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: 8260W_15 Limit Group: VOA - 8260C Water and Solid
Column: DB-624 ( 0.18 mm) Detector MS Quad

## 127 p-Diethylbenzene, CAS: 105-05-5

Signal: 1

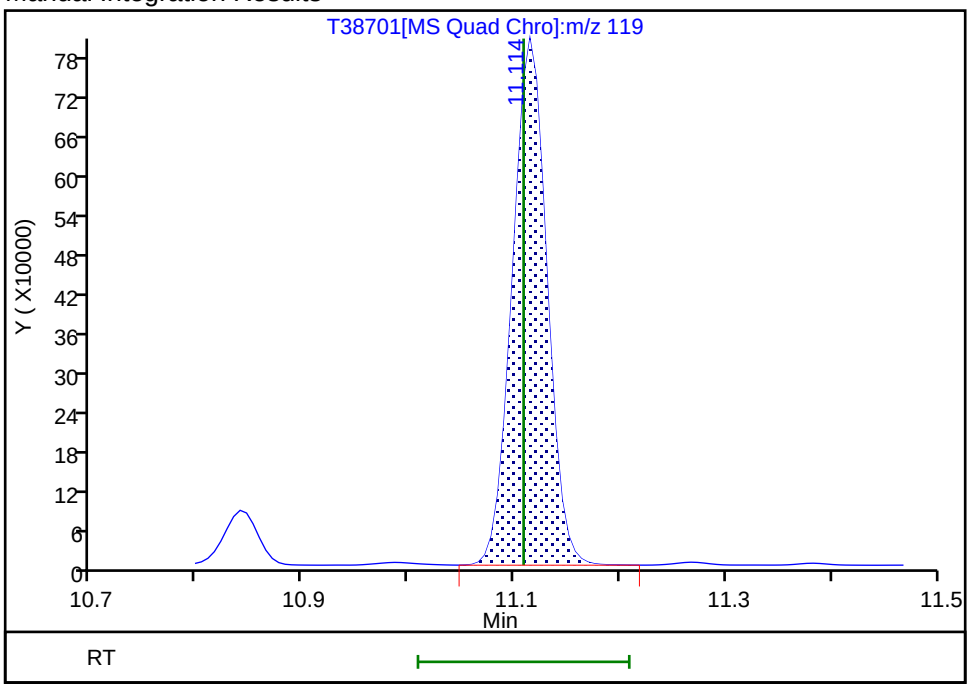
Not Detected
Expected RT: 11.11

Processing Integration Results




Manual Integration Results

RT: 11.11
Area: 1834204
Amount: 518.9429
Amount Units: ug/l




Reviewer: baronm, 05-Sep-2020 10:28:30
Audit Action: Assigned Compound ID Audit Reason: Split Peak

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Edison Job No.: 460-217659-1

SDG No.:

Lab Sample ID: ICV 460-721958/17 Calibration Date: 09/04/2020 19:36

Instrument ID: CVOAMS15 Calib Start Date: 09/04/2020 12:13

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 09/04/2020 15:01

Lab File ID: T38708.D Conc. Units: ug/L Heated Purge: (Y/N) N

| ANALYTE | CURVE TYPE | AVE RRF | RRF | MIN RRF | CALC AMOUNT | SPIKE AMOUNT | %D | MAX %D |
|---|---|---|---|---|---|---|---|---|
| Monochloropentafluoroethane | Ave | 0.0455 | 0.0186 | | 8.17 | 20.0 | -59.1* | 30.0 |
| 1,1-Difluoroethane | Ave | 0.1184 | 0.1038 | | 17.5 | 20.0 | -12.3 | 30.0 |
| Chlorotrifluoroethene | Qua2 | | 0.0787 | | 16.2 | 20.0 | -19.2 | 30.0 |
| Dichlorodifluoromethane | Ave | 0.3648 | 0.4258 | 0.1000 | 23.3 | 20.0 | 16.7 | 30.0 |
| Chlorodifluoromethane | Ave | 0.0482 | 0.0445 | | 18.5 | 20.0 | -7.6 | 30.0 |
| Chloromethane | Ave | 0.2006 | 0.2111 | 0.1000 | 21.0 | 20.0 | 5.2 | 30.0 |
| Vinyl chloride | Ave | 0.2702 | 0.2983 | 0.1000 | 22.1 | 20.0 | 10.4 | 30.0 |
| Butadiene | Ave | 0.2272 | 0.2306 | | 20.3 | 20.0 | 1.5 | 30.0 |
| Bromomethane | Ave | 1.606 | 1.881 | 0.1000 | 23.4 | 20.0 | 17.1 | 30.0 |
| Chloroethane | Ave | 1.892 | 2.084 | 0.1000 | 22.0 | 20.0 | 10.2 | 30.0 |
| Dichlorofluoromethane | Ave | 0.4241 | 0.4193 | | 19.8 | 20.0 | -1.1 | 30.0 |
| Trichlorofluoromethane | Ave | 0.4294 | 0.4858 | 0.1000 | 22.6 | 20.0 | 13.1 | 30.0 |
| Pentane | Ave | 0.0378 | 0.0440 | | 46.5 | 40.0 | 16.2 | 30.0 |
| Ethanol | QuaF | | 0.3102 | | 869 | 800 | 8.6 | 30.0 |
| Ethyl ether | Ave | 0.1702 | 0.1696 | | 19.9 | 20.0 | -0.3 | 30.0 |
| 1,2-Dichloro-1,1,2-trifluoro ethane | Ave | 0.2489 | 0.2551 | | 20.5 | 20.0 | 2.5 | 30.0 |
| 2-Methyl-1,3-butadiene | Ave | 0.1914 | 0.2223 | | 23.2 | 20.0 | 16.1 | 30.0 |
| 1,1,1-Trifluoro-2,2-dichloro ethane | Ave | 0.3712 | 0.3775 | | 20.3 | 20.0 | 1.7 | 30.0 |
| Acrolein | Ave | 6.980 | 3.986 | | 22.9 | 40.1 | -42.9* | 30.0 |
| 1,1-Dichloroethene | Ave | 0.2398 | 0.2619 | 0.1000 | 21.8 | 20.0 | 9.2 | 30.0 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | Ave | 0.2589 | 0.2929 | 0.1000 | 22.6 | 20.0 | 13.1 | 30.0 |
| Acetone | Ave | 0.6811 | 0.6610 | 0.0500 | 97.0 | 100 | -3.0 | 30.0 |
| Iodomethane | Ave | 0.1325 | 0.0297 | | 4.48 | 20.0 | -77.6* | 30.0 |
| Carbon disulfide | Ave | 0.7715 | 0.8329 | 0.1000 | 21.6 | 20.0 | 8.0 | 30.0 |
| Isopropyl alcohol | Ave | 3.011 | 3.444 | | 229 | 200 | 14.4 | 30.0 |
| Acetonitrile | Ave | 0.1481 | 0.1540 | | 208 | 200 | 4.0 | 30.0 |
| Allyl chloride | Ave | 0.1542 | 0.1691 | | 21.9 | 20.0 | 9.6 | 30.0 |
| Methyl acetate | Ave | 0.1315 | 0.1167 | 0.1000 | 35.5 | 40.0 | -11.3 | 30.0 |
| Cyclopentene | Ave | 0.5426 | 0.6139 | | 22.6 | 20.0 | 13.1 | 30.0 |
| Methylene Chloride | Ave | 0.2639 | 0.2701 | 0.1000 | 20.5 | 20.0 | 2.3 | 30.0 |
| 2-Methyl-2-propanol | Ave | 6.193 | 7.045 | | 227 | 200 | 13.7 | 30.0 |
| Acrylonitrile | Ave | 0.0699 | 0.0682 | | 195 | 200 | -2.5 | 30.0 |
| trans-1,2-Dichloroethene | Ave | 0.2674 | 0.2860 | 0.1000 | 21.4 | 20.0 | 6.9 | 30.0 |
| Methyl tert-butyl ether | Ave | 0.6669 | 0.6721 | 0.1000 | 20.2 | 20.0 | 0.8 | 30.0 |
| Hexane | Ave | 0.2716 | 0.2869 | | 21.1 | 20.0 | 5.7 | 30.0 |
| 1,1-Dichloroethane | Ave | 0.4332 | 0.4516 | 0.2000 | 20.9 | 20.0 | 4.3 | 30.0 |
| Vinyl acetate | Ave | 0.5270 | 0.5729 | | 43.5 | 40.0 | 8.7 | 30.0 |
| 2-Chloro-1,3-butadiene | Ave | 0.2482 | 0.2658 | | 21.4 | 20.0 | 7.1 | 30.0 |
| Isopropyl ether | Ave | 0.6178 | 0.6550 | | 21.2 | 20.0 | 6.0 | 30.0 |

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Edison Job No.: 460-217659-1

SDG No.:

Lab Sample ID: ICV 460-721958/17 Calibration Date: 09/04/2020 19:36

Instrument ID: CVOAMS15 Calib Start Date: 09/04/2020 12:13

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 09/04/2020 15:01

Lab File ID: T38708.D Conc. Units: ug/L Heated Purge: (Y/N) N

| ANALYTE | CURVE TYPE | AVE RRF | RRF | MIN RRF | CALC AMOUNT | SPIKE AMOUNT | %D | MAX %D |
|---|---|---|---|---|---|---|---|---|
| Tert-butyl ethyl ether | Ave | 0.6505 | 0.6651 | | 20.5 | 20.0 | 2.3 | 30.0 |
| 2,2-Dichloropropane | Ave | 0.0930 | 0.0914 | | 19.6 | 20.0 | -1.8 | 30.0 |
| cis-1,2-Dichloroethene | Ave | 0.2997 | 0.3198 | 0.1000 | 21.3 | 20.0 | 6.7 | 30.0 |
| 2-Butanone (MEK) | Ave | 1.005 | 1.001 | 0.0500 | 99.6 | 100 | -0.4 | 30.0 |
| Propionitrile | Ave | 7.602 | 8.234 | | 217 | 200 | 8.3 | 30.0 |
| Ethyl acetate | QuaF | | 0.2516 | | 38.4 | 40.0 | -4.1 | 30.0 |
| Methyl acrylate | Ave | 0.1958 | 0.1935 | | 19.8 | 20.0 | -1.2 | 30.0 |
| Chlorobromomethane | Ave | 0.1436 | 0.1537 | | 21.4 | 20.0 | 7.0 | 30.0 |
| Methacrylonitrile | Ave | 0.0904 | 0.0896 | | 198 | 200 | -0.9 | 30.0 |
| Tetrahydrofuran | Ave | 0.3236 | 0.3543 | | 43.8 | 40.0 | 9.5 | 30.0 |
| Chloroform | Ave | 0.4775 | 0.4922 | 0.2000 | 20.6 | 20.0 | 3.1 | 30.0 |
| 1,1,1-Trichloroethane | Ave | 0.4453 | 0.4843 | 0.1000 | 21.7 | 20.0 | 8.7 | 30.0 |
| Cyclohexane | Ave | 0.3551 | 0.3846 | 0.1000 | 21.7 | 20.0 | 8.3 | 30.0 |
| Carbon tetrachloride | Ave | 0.3755 | 0.4158 | 0.1000 | 22.1 | 20.0 | 10.7 | 30.0 |
| 1,1-Dichloropropene | Ave | 0.3726 | 0.3751 | | 20.1 | 20.0 | 0.7 | 30.0 |
| Isobutyl alcohol | Ave | 1.859 | 1.918 | | 516 | 500 | 3.2 | 30.0 |
| Benzene | Ave | 1.351 | 1.372 | 0.5000 | 20.3 | 20.0 | 1.6 | 30.0 |
| 1,2-Dichloroethane | Ave | 0.3318 | 0.3346 | 0.1000 | 20.2 | 20.0 | 0.9 | 30.0 |
| 2,2,4-Trimethylpentane | Ave | 0.4745 | 0.4990 | | 21.0 | 20.0 | 5.2 | 30.0 |
| Isopropyl acetate | Ave | 0.0740 | 0.0779 | | 21.1 | 20.0 | 5.3 | 30.0 |
| Tert-amyl methyl ether | Ave | 0.6617 | 0.6852 | | 20.7 | 20.0 | 3.6 | 30.0 |
| n-Heptane | Ave | 0.1950 | 0.1854 | | 19.0 | 20.0 | -4.9 | 30.0 |
| Trichloroethene | Ave | 0.2920 | 0.2989 | 0.2000 | 20.5 | 20.0 | 2.4 | 30.0 |
| n-Butanol | Ave | 1.265 | 1.412 | | 558 | 500 | 11.6 | 30.0 |
| Ethyl acrylate | Ave | 0.4990 | 0.5125 | | 20.5 | 20.0 | 2.7 | 30.0 |
| Methylcyclohexane | Ave | 0.3598 | 0.3939 | 0.1000 | 21.9 | 20.0 | 9.5 | 30.0 |
| 1,2-Dichloropropane | Ave | 0.2312 | 0.2489 | 0.1000 | 21.5 | 20.0 | 7.7 | 30.0 |
| Dibromomethane | Ave | 0.1625 | 0.1822 | | 22.4 | 20.0 | 12.1 | 30.0 |
| 1,4-Dioxane | Ave | 0.9311 | 1.098 | | 472 | 400 | 17.9 | 30.0 |
| Methyl methacrylate | Ave | 0.0599 | 0.0683 | | 45.6 | 40.0 | 14.0 | 30.0 |
| n-Propyl acetate | Ave | 0.2442 | 0.2449 | | 20.1 | 20.0 | 0.3 | 30.0 |
| Dichlorobromomethane | Ave | 0.3557 | 0.3866 | 0.2000 | 21.7 | 20.0 | 8.7 | 30.0 |
| 2-Nitropropane | Ave | 0.0468 | 0.0446 | | 38.1 | 40.0 | -4.8 | 30.0 |
| 2-Chloroethyl vinyl ether | Qua2 | | 0.0816 | | 17.8 | 20.0 | -11.0 | 30.0 |
| Epichlorohydrin | Ave | 0.2277 | 0.1871 | | 16.4 | 20.0 | -17.8 | 30.0 |
| cis-1,3-Dichloropropene | Ave | 0.5589 | 0.5524 | 0.2000 | 19.8 | 20.0 | -1.2 | 30.0 |
| 4-Methyl-2-pentanone (MIBK) | Ave | 1.874 | 1.928 | 0.0500 | 103 | 100 | 2.9 | 30.0 |
| Toluene | Ave | 1.480 | 1.445 | 0.4000 | 19.5 | 20.0 | -2.4 | 30.0 |
| trans-1,3-Dichloropropene | Ave | 0.5017 | 0.4950 | 0.1000 | 19.7 | 20.0 | -1.4 | 30.0 |
| Ethyl methacrylate | Ave | 0.3574 | 0.3603 | | 20.2 | 20.0 | 0.8 | 30.0 |
| 1,1,2-Trichloroethane | Ave | 0.2517 | 0.2523 | 0.1000 | 20.0 | 20.0 | 0.2 | 30.0 |

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Edison Job No.: 460-217659-1

SDG No.:

Lab Sample ID: ICV 460-721958/17 Calibration Date: 09/04/2020 19:36

Instrument ID: CVOAMS15 Calib Start Date: 09/04/2020 12:13

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 09/04/2020 15:01

Lab File ID: T38708.D Conc. Units: ug/L Heated Purge: (Y/N) N

| ANALYTE | CURVE TYPE | AVE RRF | RRF | MIN RRF | CALC AMOUNT | SPIKE AMOUNT | %D | MAX %D |
|---|---|---|---|---|---|---|---|---|
| Tetrachloroethene | Ave | 0.3988 | 0.4264 | 0.2000 | 21.4 | 20.0 | 6.9 | 30.0 |
| 1,3-Dichloropropane | Ave | 0.4848 | 0.4973 | | 20.5 | 20.0 | 2.6 | 30.0 |
| 2-Hexanone | Ave | 1.274 | 1.388 | 0.0500 | 109 | 100 | 8.9 | 30.0 |
| Chlorodibromomethane | Ave | 0.3712 | 0.4090 | 0.1000 | 22.0 | 20.0 | 10.2 | 30.0 |
| Ethylene Dibromide | Ave | 0.3300 | 0.3465 | 0.1000 | 21.0 | 20.0 | 5.0 | 30.0 |
| n-Butyl acetate | Ave | 0.3496 | 0.3369 | | 19.3 | 20.0 | -3.6 | 30.0 |
| Chlorobenzene | Ave | 0.9432 | 0.999 | 0.5000 | 21.2 | 20.0 | 5.9 | 30.0 |
| 1,1,1,2-Tetrachloroethane | Ave | 0.3574 | 0.3728 | | 20.9 | 20.0 | 4.3 | 30.0 |
| Ethylbenzene | Ave | 0.4960 | 0.5359 | 0.1000 | 21.6 | 20.0 | 8.1 | 30.0 |
| m-Xylene & p-Xylene | Ave | 0.6140 | 0.6328 | 0.1000 | 20.6 | 20.0 | 3.1 | 30.0 |
| o-Xylene | Ave | 0.5718 | 0.5822 | 0.3000 | 20.4 | 20.0 | 1.8 | 30.0 |
| Styrene | Ave | 0.9153 | 0.998 | 0.3000 | 21.8 | 20.0 | 9.0 | 30.0 |
| n-Butyl acrylate | Ave | 0.1956 | 0.2118 | | 21.7 | 20.0 | 8.3 | 30.0 |
| Bromoform | Ave | 0.2440 | 0.2364 | 0.1000 | 19.4 | 20.0 | -3.1 | 30.0 |
| Amyl acetate (mixed isomers) | Ave | 0.8163 | 0.7823 | | 19.2 | 20.0 | -4.2 | 30.0 |
| Isopropylbenzene | Ave | 1.424 | 1.499 | 0.1000 | 21.1 | 20.0 | 5.3 | 30.0 |
| Bromobenzene | Ave | 0.8124 | 0.8347 | | 20.6 | 20.0 | 2.8 | 30.0 |
| 1,1,2,2-Tetrachloroethane | Ave | 0.7553 | 0.7387 | 0.3000 | 19.6 | 20.0 | -2.2 | 30.0 |
| 1,2,3-Trichloropropane | Ave | 0.2283 | 0.2207 | | 19.3 | 20.0 | -3.3 | 30.0 |
| trans-1,4-Dichloro-2-butene | Lin2 | | 0.1878 | | 18.6 | 20.0 | -7.2 | 30.0 |
| N-Propylbenzene | Ave | 3.569 | 3.673 | | 20.6 | 20.0 | 2.9 | 30.0 |
| 2-Chlorotoluene | Ave | 2.065 | 2.146 | | 20.8 | 20.0 | 3.9 | 30.0 |
| 4-Ethyltoluene | Ave | 2.779 | 2.914 | | 21.0 | 20.0 | 4.9 | 30.0 |
| 4-Chlorotoluene | Ave | 2.225 | 2.253 | | 20.2 | 20.0 | 1.2 | 30.0 |
| 1,3,5-Trimethylbenzene | Ave | 2.247 | 2.369 | | 21.1 | 20.0 | 5.4 | 30.0 |
| Butyl Methacrylate | Ave | 0.7642 | 0.7698 | | 20.1 | 20.0 | 0.7 | 30.0 |
| tert-Butylbenzene | Ave | 1.945 | 2.029 | | 20.9 | 20.0 | 4.3 | 30.0 |
| 1,2,4-Trimethylbenzene | Ave | 2.219 | 2.320 | | 20.9 | 20.0 | 4.6 | 30.0 |
| sec-Butylbenzene | Ave | 2.659 | 2.819 | | 21.2 | 20.0 | 6.0 | 30.0 |
| 1,3-Dichlorobenzene | Ave | 1.341 | 1.344 | 0.6000 | 20.0 | 20.0 | 0.2 | 30.0 |
| 1,4-Dichlorobenzene | Ave | 1.378 | 1.429 | 0.5000 | 20.7 | 20.0 | 3.7 | 30.0 |
| 4-Isopropyltoluene | Ave | 2.228 | 2.318 | | 20.8 | 20.0 | 4.1 | 30.0 |
| 1,2,3-Trimethylbenzene | Ave | 2.167 | 2.255 | | 20.8 | 20.0 | 4.1 | 30.0 |
| Benzyl chloride | Ave | 1.355 | 1.152 | | 17.0 | 20.0 | -15.0 | 30.0 |
| Indan | Ave | 2.149 | 2.318 | | 21.6 | 20.0 | 7.9 | 30.0 |
| 1,2-Dichlorobenzene | Ave | 1.210 | 1.286 | 0.4000 | 21.3 | 20.0 | 6.3 | 30.0 |
| p-Diethylbenzene | Ave | 1.058 | 1.173 | | 22.2 | 20.0 | 10.8 | 30.0 |
| n-Butylbenzene | Ave | 1.036 | 1.065 | | 20.6 | 20.0 | 2.8 | 30.0 |
| 1,2-Dibromo-3-Chloropropane | Qua2 | | 0.1356 | 0.0500 | 17.5 | 20.0 | -12.7 | 30.0 |
| 1,2,4,5-Tetramethylbenzene | Ave | 1.659 | 1.688 | | 20.3 | 20.0 | 1.7 | 30.0 |
| 1,3,5-Trichlorobenzene | Ave | 0.6868 | 0.6960 | | 20.3 | 20.0 | 1.3 | 30.0 |

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Edison  Job No.: 460-217659-1

SDG No.:

Lab Sample ID: ICV 460-721958/17  Calibration Date: 09/04/2020 19:36

Instrument ID: CVOAMS15  Calib Start Date: 09/04/2020 12:13

GC Column: DB-624  ID: 0.18(mm)  Calib End Date: 09/04/2020 15:01

Lab File ID: T38708.D  Conc. Units: ug/L  Heated Purge: (Y/N) N

| ANALYTE | CURVE TYPE | AVE RRF | RRF | MIN RRF | CALC AMOUNT | SPIKE AMOUNT | %D | MAX %D |
|---|---|---|---|---|---|---|---|---|
| 1,2,4-Trichlorobenzene | Ave | 0.5708 | 0.5808 | 0.2000 | 20.4 | 20.0 | 1.8 | 30.0 |
| Hexachlorobutadiene | Lin2 | | 0.2542 | | 20.7 | 20.0 | 3.3 | 30.0 |
| Naphthalene | Ave | 1.465 | 1.350 | | 18.4 | 20.0 | -7.8 | 30.0 |
| 1,2,3-Trichlorobenzene | Ave | 0.4407 | 0.4414 | | 20.0 | 20.0 | 0.2 | 30.0 |
| Dibromofluoromethane (Surr) | Ave | 0.2917 | 0.2783 | | 47.7 | 50.0 | -4.6 | 30.0 |
| 1,2-Dichloroethane-d4 (Surr) | Ave | 0.2947 | 0.2753 | | 46.7 | 50.0 | -6.6 | 30.0 |
| Toluene-d8 (Surr) | Ave | 1.277 | 1.229 | | 48.1 | 50.0 | -3.8 | 30.0 |
| 4-Bromofluorobenzene | Ave | 0.4120 | 0.3922 | | 47.6 | 50.0 | -4.8 | 30.0 |

Eurofins TestAmerica, Edison
Target Compound Quantitation Report

Data File: \\chromfs\Edison\ChromData\CVOAMS15\20200904-116301.b\T38708.D
Lims ID: ICV
Client ID:
Sample Type: ICV
Inject. Date: 04-Sep-2020 19:36:22 ALS Bottle#: 0 Worklist Smp#: 17
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info:
Operator ID: Instrument ID: CVOAMS15
Sublist:

Method: \\chromfs\Edison\ChromData\CVOAMS15\20200904-116301.b\8260W_15.m
Limit Group: VOA - 8260C Water and Solid
Last Update: 05-Sep-2020 11:28:53 Calib Date: 04-Sep-2020 15:01:54
Integrator: RTE ID Type: RT Order ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Edison\ChromData\CVOAMS15\20200904-116301.b\T38701.D

Column 1 : DB-624 ( 0.18 mm) Det: MS Quad
Process Host: CTX1014

First Level Reviewer: baronm Date: 05-Sep-2020 11:26:26

| Compound | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q | Response | Cal Amt ug/l | OnCol Amt ug/l | Flags |
|---|---|---|---|---|---|---|---|---|---|
| 1 Monochloropentafluoroethane | 119 | 0.586 | 0.586 | 0.000 | 29 | 3721 | 20.0 | 8.17 | |
| 2 1,1-Difluoroethane | 65 | 0.635 | 0.635 | 0.000 | 92 | 20772 | 20.0 | 17.5 | |
| 3 Chlorotrifluoroethene | 116 | 0.635 | 0.635 | 0.000 | 59 | 15738 | 20.0 | 16.2 | |
| 4 Dichlorodifluoromethane | 85 | 0.647 | 0.653 | -0.006 | 100 | 85201 | 20.0 | 23.3 | |
| 5 Chlorodifluoromethane | 67 | 0.653 | 0.659 | -0.006 | 74 | 8911 | 20.0 | 18.5 | |
| 6 Chloromethane | 50 | 0.726 | 0.726 | 0.000 | 99 | 42238 | 20.0 | 21.0 | |
| 7 Vinyl chloride | 62 | 0.769 | 0.769 | 0.000 | 98 | 59682 | 20.0 | 22.1 | |
| 8 Butadiene | 54 | 0.787 | 0.787 | 0.000 | 92 | 46138 | 20.0 | 20.3 | |
| 9 Bromomethane | 94 | 0.909 | 0.909 | 0.000 | 99 | 29622 | 20.0 | 23.4 | |
| 10 Chloroethane | 64 | 0.952 | 0.952 | 0.000 | 99 | 32828 | 20.0 | 22.0 | |
| 11 Dichlorofluoromethane | 67 | 1.043 | 1.043 | 0.000 | 99 | 83903 | 20.0 | 19.8 | |
| 12 Trichlorofluoromethane | 101 | 1.068 | 1.068 | 0.000 | 96 | 97212 | 20.0 | 22.6 | |
| 13 Pentane | 72 | 1.104 | 1.110 | -0.006 | 94 | 17593 | 40.0 | 46.5 | |
| 14 Ethanol | 45 | 1.165 | 1.171 | -0.006 | 91 | 7812 | 800.0 | 868.5 | |
| 15 Ethyl ether | 59 | 1.208 | 1.208 | 0.000 | 53 | 33935 | 20.0 | 19.9 | |
| 17 2-Methyl-1,3-butadiene | 53 | 1.214 | 1.214 | 0.000 | 81 | 44473 | 20.0 | 23.2 | |
| 16 1,2-Dichloro-1,1,2-trifluoroetha | 117 | 1.214 | 1.214 | 0.000 | 88 | 51041 | 20.0 | 20.5 | |
| 18 1,1,1-Trifluoro-2,2-dichloroetha | 83 | 1.244 | 1.244 | 0.000 | 96 | 75542 | 20.0 | 20.3 | |
| 19 Acrolein | 56 | 1.269 | 1.269 | 0.000 | 95 | 5026 | 40.1 | 22.9 | |
| 20 1,1-Dichloroethene | 96 | 1.311 | 1.318 | -0.007 | 97 | 52395 | 20.0 | 21.8 | |
| 21 1,1,2-Trichloro-1,2,2-trifluoroe | 101 | 1.318 | 1.318 | 0.000 | 80 | 58612 | 20.0 | 22.6 | |
| 22 Acetone | 43 | 1.342 | 1.348 | -0.006 | 87 | 52053 | 100.0 | 97.0 | |
| 23 Iodomethane | 142 | 1.391 | 1.391 | 0.000 | 92 | 5936 | 20.0 | 4.48 | |
| 24 Carbon disulfide | 76 | 1.421 | 1.421 | 0.000 | 98 | 166645 | 20.0 | 21.6 | |
| 25 Isopropyl alcohol | 45 | 1.427 | 1.427 | 0.000 | 30 | 21682 | 200.0 | 228.8 | |
| 26 Acetonitrile | 40 | 1.494 | 1.494 | 0.000 | 80 | 24255 | 200.0 | 208.0 | |
| 27 3-Chloro-1-propene | 76 | 1.500 | 1.501 | -0.001 | 92 | 33827 | 20.0 | 21.9 | |
| 28 Methyl acetate | 43 | 1.519 | 1.519 | 0.000 | 96 | 46691 | 40.0 | 35.5 | |
| 29 Cyclopentene | 67 | 1.543 | 1.543 | 0.000 | 95 | 122824 | 20.0 | 22.6 | |
| 30 Methylene Chloride | 84 | 1.567 | 1.568 | -0.001 | 83 | 54041 | 20.0 | 20.5 | |
| * 31 TBA-d9 (IS) | 66 | 1.598 | 1.598 | 0.000 | 98 | 31479 | 1000.0 | 1000.0 | |

| Compound | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q | Response | Cal Amt ug/l | OnCol Amt ug/l | Flags |
|---|---|---|---|---|---|---|---|---|---|
| 32 2-Methyl-2-propanol | 59 | 1.641 | 1.647 | -0.006 | 98 | 44351 | 200.0 | 227.5 | |
| 33 Acrylonitrile | 53 | 1.702 | 1.708 | -0.006 | 94 | 136381 | 200.0 | 195.1 | |
| 34 trans-1,2-Dichloroethene | 96 | 1.720 | 1.720 | 0.000 | 81 | 57218 | 20.0 | 21.4 | |
| 35 Methyl tert-butyl ether | 73 | 1.726 | 1.732 | -0.006 | 96 | 134481 | 20.0 | 20.2 | |
| 36 Hexane | 57 | 1.891 | 1.891 | 0.000 | 88 | 57413 | 20.0 | 21.1 | |
| 37 1,1-Dichloroethane | 63 | 1.970 | 1.970 | 0.000 | 100 | 90363 | 20.0 | 20.9 | |
| 38 Vinyl acetate | 86 | 2.013 | 2.019 | -0.006 | 99 | 18046 | 40.0 | 43.5 | |
| 39 2-Chloro-1,3-butadiene | 88 | 2.031 | 2.031 | 0.000 | 78 | 53183 | 20.0 | 21.4 | |
| 40 Isopropyl ether | 45 | 2.031 | 2.031 | 0.000 | 83 | 131052 | 20.0 | 21.2 | |
| 41 Tert-butyl ethyl ether | 59 | 2.275 | 2.275 | 0.000 | 90 | 133079 | 20.0 | 20.5 | |
| * 42 2-Butanone-d5 | 46 | 2.336 | 2.336 | 0.000 | 86 | 196887 | 250.0 | 250.0 | |
| 44 2,2-Dichloropropane | 97 | 2.354 | 2.354 | 0.000 | 79 | 18282 | 20.0 | 19.6 | |
| 43 cis-1,2-Dichloroethene | 96 | 2.360 | 2.360 | 0.000 | 98 | 63981 | 20.0 | 21.3 | |
| 45 2-Butanone (MEK) | 43 | 2.378 | 2.378 | 0.000 | 97 | 78843 | 100.0 | 99.6 | |
| 46 Propionitrile | 54 | 2.415 | 2.421 | -0.006 | 98 | 51839 | 200.0 | 216.6 | |
| 47 Ethyl acetate | 70 | 2.433 | 2.439 | -0.006 | 98 | 7927 | 40.0 | 38.4 | |
| 48 Methyl acrylate | 55 | 2.451 | 2.458 | -0.007 | 95 | 38718 | 20.0 | 19.8 | |
| 49 Chlorobromomethane | 128 | 2.525 | 2.531 | -0.006 | 54 | 30745 | 20.0 | 21.4 | |
| 50 Methacrylonitrile | 67 | 2.525 | 2.531 | -0.006 | 87 | 179286 | 200.0 | 198.2 | |
| 51 Tetrahydrofuran | 72 | 2.567 | 2.574 | -0.007 | 76 | 11162 | 40.0 | 43.8 | |
| 52 Chloroform | 83 | 2.598 | 2.598 | 0.000 | 99 | 98487 | 20.0 | 20.6 | |
| $ 53 Dibromofluoromethane (Surr) | 113 | 2.720 | 2.720 | 0.000 | 96 | 139207 | 50.0 | 47.7 | |
| 54 1,1,1-Trichloroethane | 97 | 2.726 | 2.726 | 0.000 | 85 | 96900 | 20.0 | 21.7 | |
| 55 Cyclohexane | 84 | 2.768 | 2.769 | -0.001 | 86 | 76946 | 20.0 | 21.7 | |
| 56 Carbon tetrachloride | 117 | 2.854 | 2.860 | -0.006 | 97 | 83190 | 20.0 | 22.1 | |
| 57 1,1-Dichloropropene | 75 | 2.860 | 2.860 | 0.000 | 97 | 75045 | 20.0 | 20.1 | |
| $ 58 1,2-Dichloroethane-d4 (Surr) | 65 | 2.982 | 2.982 | 0.000 | 97 | 137727 | 50.0 | 46.7 | |
| 59 Isobutyl alcohol | 43 | 3.012 | 3.019 | -0.007 | 44 | 30188 | 500.0 | 515.9 | |
| 60 Benzene | 78 | 3.025 | 3.025 | 0.000 | 95 | 207335 | 20.0 | 20.3 | |
| 61 1,2-Dichloroethane | 62 | 3.043 | 3.043 | 0.000 | 70 | 66948 | 20.0 | 20.2 | |
| 62 Isooctane | 57 | 3.116 | 3.116 | 0.000 | 95 | 99852 | 20.0 | 21.0 | |
| 63 Isopropyl acetate | 61 | 3.140 | 3.147 | -0.007 | 91 | 15580 | 20.0 | 21.1 | |
| 64 Tert-amyl methyl ether | 73 | 3.153 | 3.153 | 0.000 | 85 | 137100 | 20.0 | 20.7 | |
| * 65 Fluorobenzene | 96 | 3.274 | 3.275 | -0.001 | 99 | 500217 | 50.0 | 50.0 | |
| 66 n-Heptane | 43 | 3.299 | 3.299 | 0.000 | 83 | 37105 | 20.0 | 19.0 | |
| 67 Trichloroethene | 95 | 3.610 | 3.610 | 0.000 | 97 | 59798 | 20.0 | 20.5 | |
| 68 n-Butanol | 56 | 3.628 | 3.628 | 0.000 | 46 | 22219 | 500.0 | 558.1 | |
| 69 Ethyl acrylate | 55 | 3.774 | 3.775 | 0.000 | 96 | 102542 | 20.0 | 20.5 | |
| 70 Methylcyclohexane | 83 | 3.787 | 3.787 | 0.000 | 87 | 78821 | 20.0 | 21.9 | |
| 71 1,2-Dichloropropane | 63 | 3.817 | 3.817 | 0.000 | 87 | 49800 | 20.0 | 21.5 | |
| 72 Dibromomethane | 93 | 3.927 | 3.933 | -0.006 | 58 | 36446 | 20.0 | 22.4 | |
| * 73 1,4-Dioxane-d8 | 96 | 3.939 | 3.939 | 0.000 | 92 | 23270 | 1000.0 | 1000.0 | M |
| 74 1,4-Dioxane | 88 | 3.988 | 3.988 | 0.000 | 29 | 10218 | 400.0 | 471.6 | |
| 75 Methyl methacrylate | 100 | 4.000 | 4.000 | 0.000 | 80 | 27318 | 40.0 | 45.6 | |
| 76 n-Propyl acetate | 43 | 4.079 | 4.085 | -0.006 | 96 | 48995 | 20.0 | 20.1 | |
| 77 Dichlorobromomethane | 83 | 4.116 | 4.116 | 0.000 | 98 | 77349 | 20.0 | 21.7 | |
| 78 2-Nitropropane | 41 | 4.366 | 4.366 | 0.000 | 97 | 17830 | 40.0 | 38.1 | |
| 79 2-Chloroethyl vinyl ether | 63 | 4.488 | 4.488 | 0.000 | 87 | 16318 | 20.0 | 17.8 | |
| 80 Epichlorohydrin | 57 | 4.488 | 4.524 | -0.036 | 26 | 2947 | 20.0 | 16.4 | |
| 81 cis-1,3-Dichloropropene | 75 | 4.610 | 4.610 | 0.000 | 85 | 83489 | 20.0 | 19.8 | |
| 82 4-Methyl-2-pentanone (MIBK) | 43 | 4.823 | 4.829 | -0.006 | 94 | 151871 | 100.0 | 102.9 | |
| $ 83 Toluene-d8 (Surr) | 98 | 4.902 | 4.902 | 0.000 | 98 | 464220 | 50.0 | 48.1 | |

| Compound | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q | Response | Cal Amt ug/l | OnCol Amt ug/l | Flags |
|---|---|---|---|---|---|---|---|---|---|
| 84 Toluene | 91 | 4.975 | 4.982 | -0.007 | 93 | 218337 | 20.0 | 19.5 | |
| 85 trans-1,3-Dichloropropene | 75 | 5.286 | 5.286 | 0.000 | 94 | 74802 | 20.0 | 19.7 | |
| 86 Ethyl methacrylate | 69 | 5.475 | 5.475 | 0.000 | 84 | 54448 | 20.0 | 20.2 | |
| 87 1,1,2-Trichloroethane | 83 | 5.494 | 5.500 | -0.006 | 90 | 38128 | 20.0 | 20.0 | |
| 88 Tetrachloroethene | 166 | 5.640 | 5.640 | 0.000 | 98 | 64436 | 20.0 | 21.4 | |
| 89 1,3-Dichloropropane | 76 | 5.695 | 5.695 | 0.000 | 87 | 75157 | 20.0 | 20.5 | |
| 90 2-Hexanone | 43 | 5.884 | 5.884 | 0.000 | 93 | 109300 | 100.0 | 108.9 | |
| 91 Chlorodibromomethane | 129 | 5.969 | 5.975 | -0.006 | 96 | 61807 | 20.0 | 22.0 | |
| 92 Ethylene Dibromide | 107 | 6.079 | 6.085 | -0.006 | 98 | 52363 | 20.0 | 21.0 | |
| 93 n-Butyl acetate | 43 | 6.115 | 6.116 | -0.001 | 97 | 50918 | 20.0 | 19.3 | |
| * 94 Chlorobenzene-d5 | 117 | 6.743 | 6.743 | 0.000 | 83 | 377825 | 50.0 | 50.0 | |
| 95 Chlorobenzene | 112 | 6.780 | 6.786 | -0.006 | 96 | 151007 | 20.0 | 21.2 | |
| 96 1,1,1,2-Tetrachloroethane | 131 | 6.932 | 6.932 | 0.000 | 95 | 56337 | 20.0 | 20.9 | |
| 97 Ethylbenzene | 106 | 6.993 | 6.993 | 0.000 | 97 | 80997 | 20.0 | 21.6 | |
| 98 m-Xylene & p-Xylene | 106 | 7.170 | 7.176 | -0.006 | 0 | 95641 | 20.0 | 20.6 | |
| 99 o-Xylene | 106 | 7.737 | 7.743 | -0.006 | 93 | 87988 | 20.0 | 20.4 | |
| 100 Styrene | 104 | 7.774 | 7.774 | 0.000 | 94 | 150757 | 20.0 | 21.8 | |
| 101 n-Butyl acrylate | 73 | 7.865 | 7.865 | 0.000 | 97 | 32014 | 20.0 | 21.7 | |
| 102 Bromoform | 173 | 7.981 | 7.987 | -0.006 | 94 | 35728 | 20.0 | 19.4 | |
| 103 Amyl acetate (mixed isomers) | 43 | 8.255 | 8.255 | 0.000 | 92 | 55065 | 20.0 | 19.2 | |
| 104 Isopropylbenzene | 105 | 8.341 | 8.341 | 0.000 | 95 | 226491 | 20.0 | 21.1 | |
| $ 105 4-Bromofluorobenzene | 174 | 8.530 | 8.530 | 0.000 | 91 | 148171 | 50.0 | 47.6 | |
| 106 Bromobenzene | 156 | 8.700 | 8.700 | 0.000 | 94 | 58756 | 20.0 | 20.6 | |
| 107 1,1,2,2-Tetrachloroethane | 83 | 8.859 | 8.859 | 0.000 | 89 | 51995 | 20.0 | 19.6 | |
| 108 1,2,3-Trichloropropane | 110 | 8.859 | 8.865 | -0.006 | 81 | 15532 | 20.0 | 19.3 | |
| 109 trans-1,4-Dichloro-2-butene | 53 | 8.950 | 8.956 | -0.006 | 87 | 13218 | 20.0 | 18.6 | |
| 110 N-Propylbenzene | 91 | 8.993 | 8.993 | 0.000 | 99 | 258536 | 20.0 | 20.6 | |
| 111 2-Chlorotoluene | 91 | 9.048 | 9.048 | 0.000 | 95 | 151020 | 20.0 | 20.8 | |
| 112 4-Ethyltoluene | 105 | 9.188 | 9.194 | -0.006 | 97 | 205132 | 20.0 | 21.0 | |
| 113 4-Chlorotoluene | 91 | 9.237 | 9.237 | 0.000 | 97 | 158557 | 20.0 | 20.2 | |
| 114 1,3,5-Trimethylbenzene | 105 | 9.310 | 9.310 | 0.000 | 93 | 166748 | 20.0 | 21.1 | |
| 115 Butyl Methacrylate | 87 | 9.621 | 9.621 | 0.000 | 85 | 54182 | 20.0 | 20.1 | |
| 116 tert-Butylbenzene | 119 | 9.810 | 9.810 | 0.000 | 91 | 142844 | 20.0 | 20.9 | |
| 117 1,2,4-Trimethylbenzene | 105 | 9.889 | 9.895 | -0.006 | 97 | 163334 | 20.0 | 20.9 | |
| 118 sec-Butylbenzene | 105 | 10.176 | 10.176 | 0.000 | 99 | 198413 | 20.0 | 21.2 | |
| 119 1,3-Dichlorobenzene | 146 | 10.249 | 10.255 | -0.006 | 96 | 94585 | 20.0 | 20.0 | |
| * 120 1,4-Dichlorobenzene-d4 | 152 | 10.377 | 10.377 | 0.000 | 94 | 175970 | 50.0 | 50.0 | |
| 121 1,4-Dichlorobenzene | 146 | 10.413 | 10.414 | -0.001 | 92 | 100578 | 20.0 | 20.7 | |
| 122 4-Isopropyltoluene | 119 | 10.456 | 10.456 | 0.000 | 87 | 163188 | 20.0 | 20.8 | |
| 123 1,2,3-Trimethylbenzene | 105 | 10.560 | 10.560 | 0.000 | 98 | 158726 | 20.0 | 20.8 | |
| 124 Benzyl chloride | 91 | 10.682 | 10.682 | 0.000 | 98 | 81110 | 20.0 | 17.0 | |
| 125 2,3-Dihydroindene | 117 | 10.834 | 10.834 | 0.000 | 89 | 163187 | 20.0 | 21.6 | |
| 126 1,2-Dichlorobenzene | 146 | 10.999 | 10.999 | 0.000 | 96 | 90512 | 20.0 | 21.3 | |
| 127 p-Diethylbenzene | 119 | 11.108 | 11.109 | -0.001 | 89 | 82533 | 20.0 | 22.2 | |
| 128 n-Butylbenzene | 92 | 11.139 | 11.139 | 0.000 | 97 | 74937 | 20.0 | 20.6 | |
| 129 1,2-Dibromo-3-Chloropropane | 157 | 12.090 | 12.090 | 0.000 | 82 | 9543 | 20.0 | 17.5 | |
| 130 1,2,4,5-Tetramethylbenzene | 119 | 12.133 | 12.133 | 0.000 | 97 | 118799 | 20.0 | 20.3 | |
| 131 1,3,5-Trichlorobenzene | 180 | 12.328 | 12.334 | -0.006 | 95 | 48990 | 20.0 | 20.3 | |
| 132 1,2,4-Trichlorobenzene | 180 | 12.950 | 12.950 | 0.000 | 93 | 40882 | 20.0 | 20.4 | |
| 133 Hexachlorobutadiene | 225 | 13.145 | 13.151 | -0.006 | 61 | 17891 | 20.0 | 20.7 | |
| 134 Naphthalene | 128 | 13.151 | 13.151 | 0.000 | 99 | 95016 | 20.0 | 18.4 | |
| 135 1,2,3-Trichlorobenzene | 180 | 13.370 | 13.370 | 0.000 | 93 | 31069 | 20.0 | 20.0 | |

| Compound | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q | Response | Cal Amt ug/l | OnCol Amt ug/l | Flags |
|---|---|---|---|---|---|---|---|---|---|
| S 136 1,2-Dichloroethene, Total | 100 | | | | 0 | | 40.0 | 42.7 | |
| S 137 Xylenes, Total | 100 | | | | 0 | | 40.0 | 41.0 | |
| S 140 Total BTEX | 1 | | | | 0 | | 100.0 | 102.4 | |
| S 139 1,3-Dichloropropene, Total | 1 | | | | 0 | | 40.0 | 39.5 | |

## QC Flag Legend

Review Flags

M - Manually Integrated

## Reagents:

| | | | | |
|---|---|---|---|---|
| 8FreonsSS_00023 | Amount Added: | 20.00 | Units: uL | |
| ACROLEIN SP_00116 | Amount Added: | 4.00 | Units: uL | |
| 8260 SP_00129 | Amount Added: | 20.00 | Units: uL | |
| GAS C SP_00372 | Amount Added: | 20.00 | Units: uL | |
| VOA6IS/SURR_00038 | Amount Added: | 5.00 | Units: uL | Run Reagent |

Report Date: 05-Sep-2020 11:29:15 Chrom Revision: 2.3 20-Aug-2020 13:57:12

Eurofins TestAmerica, Edison

Data File: \\chromfs\Edison\ChromData\CVOAMS15\20200904-116301.b\T38708.D

Injection Date: 04-Sep-2020 19:36:22 Instrument ID: CVOAMS15

Lims ID: ICV

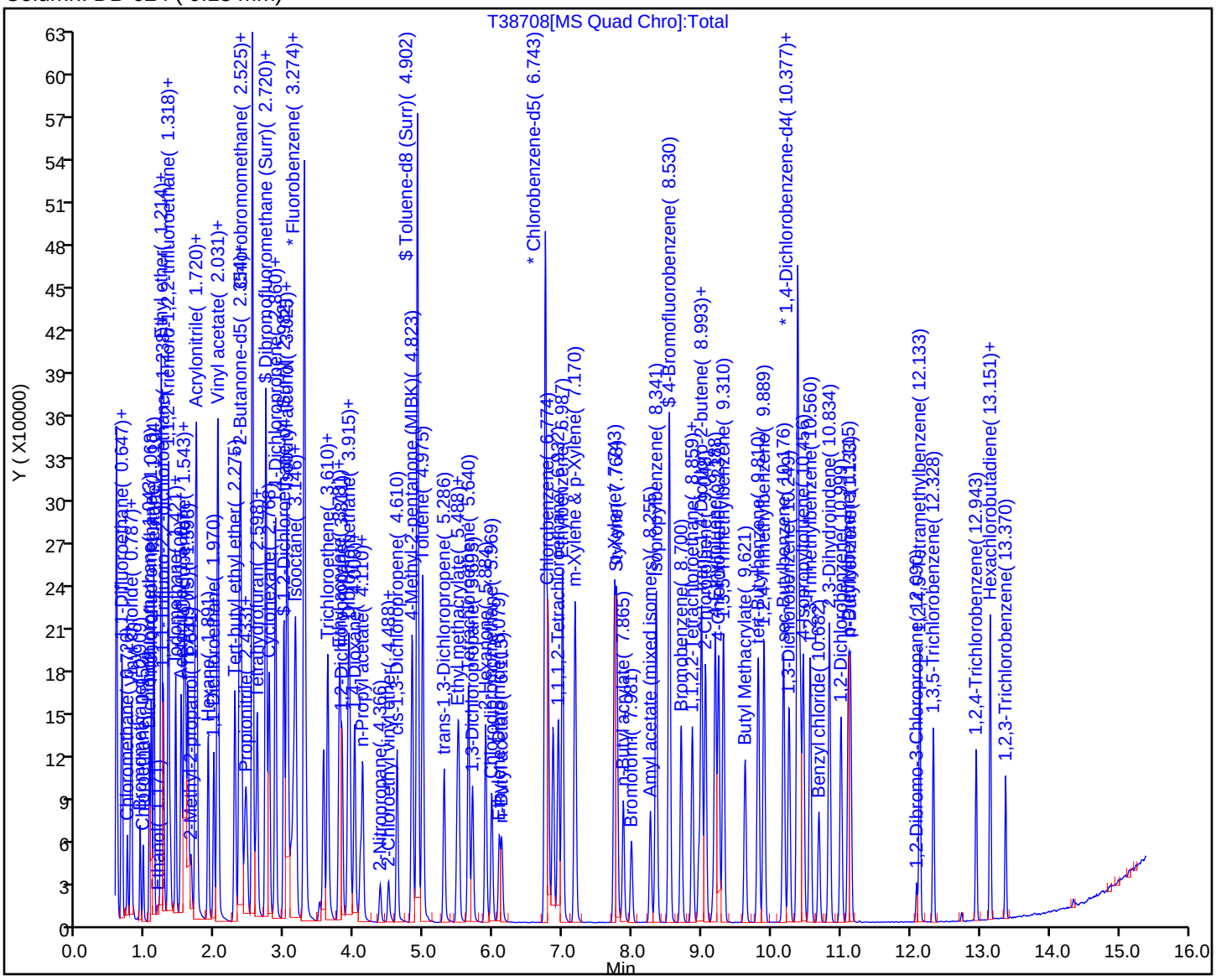
Client ID:

Operator ID: ALS Bottle#: 0 Worklist Smp#: 17

Purge Vol: 5.000 mL Dil. Factor: 1.0000

Method: 8260W_15 Limit Group: VOA - 8260C Water and Solid

Column: DB-624 ( 0.18 mm)



Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Edison

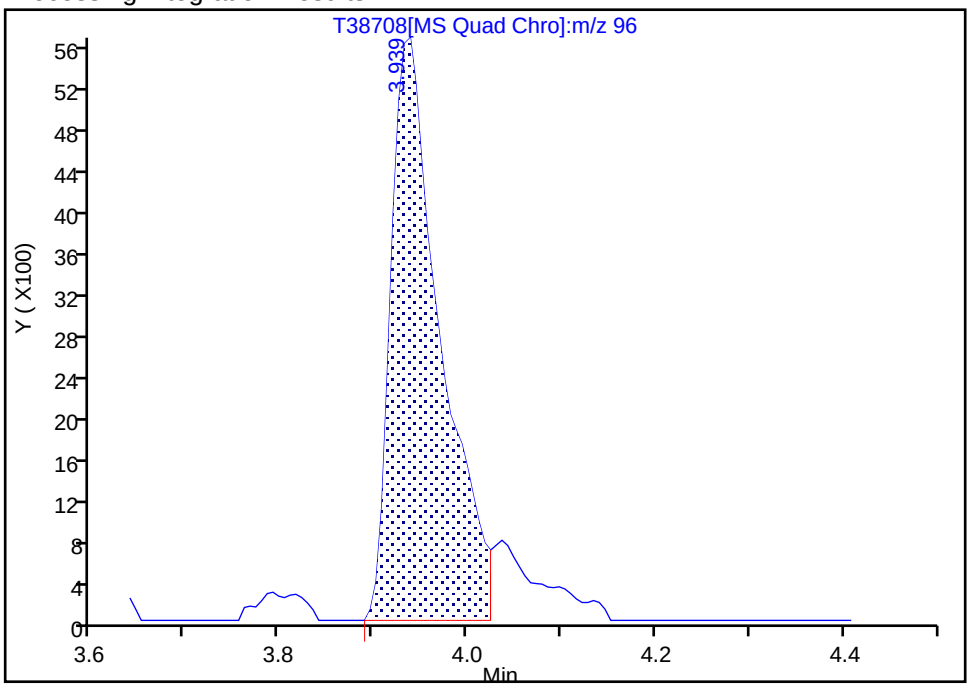
Data File: \\chromfs\Edison\ChromData\CVOAMS15\20200904-116301.b\T38708.D
Injection Date: 04-Sep-2020 19:36:22 Instrument ID: CVOAMS15
Lims ID: ICV
Client ID:
Operator ID: ALS Bottle#: 0 Worklist Smp#: 17
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: 8260W_15 Limit Group: VOA - 8260C Water and Solid
Column: DB-624 ( 0.18 mm) Detector MS Quad

## * 73 1,4-Dioxane-d8, CAS: 17647-74-4

Signal: 1

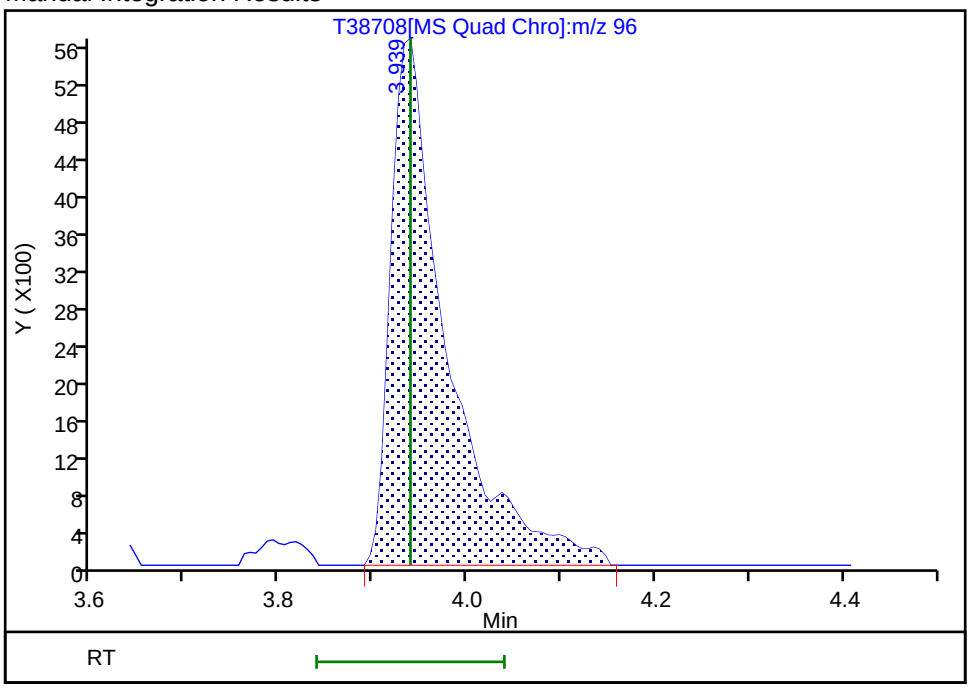
Processing Integration Results

RT: 3.94
Area: 20569
Amount: 1000.0000
Amount Units: ug/l




Manual Integration Results

RT: 3.94
Area: 23270
Amount: 1000.0000
Amount Units: ug/l




Reviewer: baronm, 05-Sep-2020 11:26:22
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Edison Job No.: 460-217659-1

SDG No.:

Lab Sample ID: CCVIS 460-722587/2 Calibration Date: 09/08/2020 20:20

Instrument ID: CVOAMS15 Calib Start Date: 09/04/2020 12:13

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 09/04/2020 15:01

Lab File ID: T38863.D Conc. Units: ug/L Heated Purge: (Y/N) N

| ANALYTE | CURVE TYPE | AVE RRF | RRF | MIN RRF | CALC AMOUNT | SPIKE AMOUNT | %D | MAX %D |
|---|---|---|---|---|---|---|---|---|
| Monochloropentafluoroethane | Ave | 0.0455 | 0.0171 | | 7.52 | 20.0 | -62.4* | 20.0 |
| 1,1-Difluoroethane | Ave | 0.1184 | 0.1300 | | 22.0 | 20.0 | 9.8 | 20.0 |
| Chlorotrifluoroethene | Qua2 | | 0.0555 | | 11.5 | 20.0 | -42.5* | 20.0 |
| Dichlorodifluoromethane | Ave | 0.3648 | 0.3082 | 0.1000 | 16.9 | 20.0 | -15.5 | 20.0 |
| Chlorodifluoromethane | Ave | 0.0482 | 0.0433 | | 18.0 | 20.0 | -10.2 | 20.0 |
| Chloromethane | Ave | 0.2006 | 0.2217 | 0.1000 | 22.1 | 20.0 | 10.5 | 20.0 |
| Vinyl chloride | Ave | 0.2702 | 0.2966 | 0.1000 | 22.0 | 20.0 | 9.8 | 20.0 |
| Butadiene | Ave | 0.2272 | 0.2328 | | 20.5 | 20.0 | 2.4 | 20.0 |
| Bromomethane | Ave | 1.606 | 1.387 | 0.1000 | 17.3 | 20.0 | -13.6 | 50.0 |
| Chloroethane | Ave | 1.892 | 2.024 | 0.1000 | 21.4 | 20.0 | 7.0 | 50.0 |
| Dichlorofluoromethane | Ave | 0.4241 | 0.3535 | | 16.7 | 20.0 | -16.6 | 20.0 |
| Trichlorofluoromethane | Ave | 0.4294 | 0.3572 | 0.1000 | 16.6 | 20.0 | -16.8 | 20.0 |
| Pentane | Ave | 0.0378 | 0.0305 | | 32.3 | 40.0 | -19.3 | 20.0 |
| Ethanol | QuaF | | 0.2898 | | 810 | 800 | 1.3 | 50.0 |
| Ethyl ether | Ave | 0.1702 | 0.1563 | | 18.4 | 20.0 | -8.2 | 20.0 |
| 1,2-Dichloro-1,1,2-trifluoro ethane | Ave | 0.2489 | 0.2554 | | 20.5 | 20.0 | 2.6 | 20.0 |
| 2-Methyl-1,3-butadiene | Ave | 0.1914 | 0.1688 | | 17.6 | 20.0 | -11.8 | 20.0 |
| 1,1,1-Trifluoro-2,2-dichloro ethane | Ave | 0.3712 | 0.4020 | | 21.7 | 20.0 | 8.3 | 20.0 |
| Acrolein | Ave | 6.980 | 7.333 | | 42.0 | 40.0 | 5.1 | 50.0 |
| 1,1-Dichloroethene | Ave | 0.2398 | 0.2577 | 0.1000 | 21.5 | 20.0 | 7.5 | 20.0 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | Ave | 0.2589 | 0.2633 | 0.1000 | 20.3 | 20.0 | 1.7 | 20.0 |
| Acetone | Ave | 0.6811 | 0.4716 | 0.0500 | 69.3 | 100 | -30.7 | 50.0 |
| Iodomethane | Ave | 0.1325 | 0.0822 | | 12.4 | 20.0 | -38.0* | 20.0 |
| Carbon disulfide | Ave | 0.7715 | 0.7972 | 0.1000 | 20.7 | 20.0 | 3.3 | 50.0 |
| Isopropyl alcohol | Ave | 3.011 | 3.135 | | 208 | 200 | 4.1 | 50.0 |
| Acetonitrile | Ave | 0.1481 | 0.1280 | | 173 | 200 | -13.5 | 20.0 |
| Allyl chloride | Ave | 0.1542 | 0.1583 | | 20.5 | 20.0 | 2.7 | 20.0 |
| Methyl acetate | Ave | 0.1315 | 0.1054 | 0.1000 | 32.1 | 40.0 | -19.9 | 20.0 |
| Cyclopentene | Ave | 0.5426 | 0.5792 | | 21.4 | 20.0 | 6.8 | 20.0 |
| Methylene Chloride | Ave | 0.2639 | 0.2732 | 0.1000 | 20.7 | 20.0 | 3.5 | 20.0 |
| 2-Methyl-2-propanol | Ave | 6.193 | 5.533 | | 179 | 200 | -10.7 | 50.0 |
| Acrylonitrile | Ave | 0.0699 | 0.0662 | | 189 | 200 | -5.3 | 20.0 |
| trans-1,2-Dichloroethene | Ave | 0.2674 | 0.2989 | 0.1000 | 22.4 | 20.0 | 11.8 | 20.0 |
| Methyl tert-butyl ether | Ave | 0.6669 | 0.6159 | 0.1000 | 18.5 | 20.0 | -7.6 | 20.0 |
| Hexane | Ave | 0.2716 | 0.2714 | | 20.0 | 20.0 | -0.0 | 20.0 |
| 1,1-Dichloroethane | Ave | 0.4332 | 0.4366 | 0.2000 | 20.2 | 20.0 | 0.8 | 20.0 |
| Vinyl acetate | Ave | 0.5270 | 0.6138 | | 46.6 | 40.0 | 16.5 | 20.0 |
| 2-Chloro-1,3-butadiene | Ave | 0.2482 | 0.2482 | | 20.0 | 20.0 | 0.0 | 20.0 |
| Isopropyl ether | Ave | 0.6178 | 0.4800 | | 15.5 | 20.0 | -22.3* | 20.0 |

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Edison  Job No.: 460-217659-1

SDG No.:

Lab Sample ID: CCVIS 460-722587/2  Calibration Date: 09/08/2020 20:20

Instrument ID: CVOAMS15  Calib Start Date: 09/04/2020 12:13

GC Column: DB-624  ID: 0.18(mm)  Calib End Date: 09/04/2020 15:01

Lab File ID: T38863.D  Conc. Units: ug/L  Heated Purge: (Y/N) N

| ANALYTE | CURVE TYPE | AVE RRF | RRF | MIN RRF | CALC AMOUNT | SPIKE AMOUNT | %D | MAX %D |
|---|---|---|---|---|---|---|---|---|
| Tert-butyl ethyl ether | Ave | 0.6505 | 0.5978 | | 18.4 | 20.0 | -8.1 | 20.0 |
| 2,2-Dichloropropane | Ave | 0.0930 | 0.0950 | | 20.4 | 20.0 | 2.1 | 20.0 |
| cis-1,2-Dichloroethene | Ave | 0.2997 | 0.3130 | 0.1000 | 20.9 | 20.0 | 4.4 | 20.0 |
| 2-Butanone (MEK) | Ave | 1.005 | 0.8939 | 0.0500 | 88.9 | 100 | -11.1 | 50.0 |
| Propionitrile | Ave | 7.602 | 8.800 | | 232 | 200 | 15.8 | 20.0 |
| Ethyl acetate | QuaF | | 0.2988 | | 45.6 | 40.0 | 13.9 | 20.0 |
| Methyl acrylate | Ave | 0.1958 | 0.1867 | | 19.1 | 20.0 | -4.6 | 20.0 |
| Chlorobromomethane | Ave | 0.1436 | 0.1512 | | 21.1 | 20.0 | 5.3 | 20.0 |
| Methacrylonitrile | Ave | 0.0904 | 0.0905 | | 200 | 200 | 0.1 | 20.0 |
| Tetrahydrofuran | Ave | 0.3236 | 0.3685 | | 45.6 | 40.0 | 13.9 | 20.0 |
| Chloroform | Ave | 0.4775 | 0.4640 | 0.2000 | 19.4 | 20.0 | -2.8 | 20.0 |
| 1,1,1-Trichloroethane | Ave | 0.4453 | 0.3907 | 0.1000 | 17.5 | 20.0 | -12.3 | 20.0 |
| Cyclohexane | Ave | 0.3551 | 0.3791 | 0.1000 | 21.4 | 20.0 | 6.8 | 50.0 |
| Carbon tetrachloride | Ave | 0.3755 | 0.3397 | 0.1000 | 18.1 | 20.0 | -9.5 | 20.0 |
| 1,1-Dichloropropene | Ave | 0.3726 | 0.3622 | | 19.4 | 20.0 | -2.8 | 20.0 |
| Isobutyl alcohol | Ave | 1.859 | 1.861 | | 500 | 500 | 0.0 | 50.0 |
| Benzene | Ave | 1.351 | 1.578 | 0.5000 | 23.4 | 20.0 | 16.8 | 20.0 |
| 1,2-Dichloroethane | Ave | 0.3318 | 0.2383 | 0.1000 | 14.4 | 20.0 | -28.2* | 20.0 |
| 2,2,4-Trimethylpentane | Ave | 0.4745 | 0.4694 | | 19.8 | 20.0 | -1.1 | 20.0 |
| Isopropyl acetate | Ave | 0.0740 | 0.0771 | | 20.8 | 20.0 | 4.2 | 20.0 |
| Tert-amyl methyl ether | Ave | 0.6617 | 0.6290 | | 19.0 | 20.0 | -4.9 | 20.0 |
| n-Heptane | Ave | 0.1950 | 0.1711 | | 17.5 | 20.0 | -12.3 | 20.0 |
| Trichloroethene | Ave | 0.2920 | 0.2855 | 0.2000 | 19.6 | 20.0 | -2.2 | 20.0 |
| n-Butanol | Ave | 1.265 | 1.283 | | 507 | 500 | 1.4 | 50.0 |
| Ethyl acrylate | Ave | 0.4990 | 0.4559 | | 18.3 | 20.0 | -8.6 | 20.0 |
| Methylcyclohexane | Ave | 0.3598 | 0.3732 | 0.1000 | 20.7 | 20.0 | 3.7 | 50.0 |
| 1,2-Dichloropropane | Ave | 0.2312 | 0.2564 | 0.1000 | 22.2 | 20.0 | 10.9 | 20.0 |
| Dibromomethane | Ave | 0.1625 | 0.1651 | | 20.3 | 20.0 | 1.6 | 20.0 |
| 1,4-Dioxane | Ave | 0.9311 | 1.004 | | 431 | 400 | 7.8 | 50.0 |
| Methyl methacrylate | Ave | 0.0599 | 0.0560 | | 37.4 | 40.0 | -6.5 | 20.0 |
| n-Propyl acetate | Ave | 0.2442 | 0.2151 | | 17.6 | 20.0 | -11.9 | 20.0 |
| Dichlorobromomethane | Ave | 0.3557 | 0.3286 | 0.2000 | 18.5 | 20.0 | -7.6 | 20.0 |
| 2-Nitropropane | Ave | 0.0468 | 0.0225 | | 19.2 | 40.0 | -52.0* | 20.0 |
| 2-Chloroethyl vinyl ether | Qua2 | | 0.0657 | | 14.5 | 20.0 | -27.8* | 20.0 |
| Epichlorohydrin | Ave | 0.2277 | 0.2311 | | 406 | 400 | 1.5 | 20.0 |
| cis-1,3-Dichloropropene | Ave | 0.5589 | 0.5967 | 0.2000 | 21.4 | 20.0 | 6.8 | 50.0 |
| 4-Methyl-2-pentanone (MIBK) | Ave | 1.874 | 1.831 | 0.0500 | 97.7 | 100 | -2.3 | 50.0 |
| Toluene | Ave | 1.480 | 1.693 | 0.4000 | 22.9 | 20.0 | 14.4 | 20.0 |
| trans-1,3-Dichloropropene | Ave | 0.5017 | 0.4587 | 0.1000 | 18.3 | 20.0 | -8.6 | 50.0 |
| Ethyl methacrylate | Ave | 0.3574 | 0.2843 | | 15.9 | 20.0 | -20.4* | 20.0 |
| 1,1,2-Trichloroethane | Ave | 0.2517 | 0.2308 | 0.1000 | 18.3 | 20.0 | -8.3 | 20.0 |

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Edison  Job No.: 460-217659-1

SDG No.:

Lab Sample ID: CCVIS 460-722587/2  Calibration Date: 09/08/2020 20:20

Instrument ID: CVOAMS15  Calib Start Date: 09/04/2020 12:13

GC Column: DB-624  ID: 0.18(mm)  Calib End Date: 09/04/2020 15:01

Lab File ID: T38863.D  Conc. Units: ug/L  Heated Purge: (Y/N) N

| ANALYTE | CURVE TYPE | AVE RRF | RRF | MIN RRF | CALC AMOUNT | SPIKE AMOUNT | %D | MAX %D |
|---|---|---|---|---|---|---|---|---|
| Tetrachloroethene | Ave | 0.3988 | 0.3974 | 0.2000 | 19.9 | 20.0 | -0.4 | 20.0 |
| 1,3-Dichloropropane | Ave | 0.4848 | 0.4151 | | 17.1 | 20.0 | -14.4 | 20.0 |
| 2-Hexanone | Ave | 1.274 | 1.031 | 0.0500 | 80.9 | 100 | -19.1 | 50.0 |
| Chlorodibromomethane | Ave | 0.3712 | 0.3246 | 0.1000 | 17.5 | 20.0 | -12.5 | 50.0 |
| Ethylene Dibromide | Ave | 0.3300 | 0.3131 | 0.1000 | 19.0 | 20.0 | -5.1 | 20.0 |
| n-Butyl acetate | Ave | 0.3496 | 0.2780 | | 15.9 | 20.0 | -20.5* | 20.0 |
| Chlorobenzene | Ave | 0.9432 | 1.037 | 0.5000 | 22.0 | 20.0 | 10.0 | 20.0 |
| 1,1,1,2-Tetrachloroethane | Ave | 0.3574 | 0.3368 | | 18.8 | 20.0 | -5.8 | 20.0 |
| Ethylbenzene | Ave | 0.4960 | 0.5404 | 0.1000 | 21.8 | 20.0 | 8.9 | 20.0 |
| m-Xylene & p-Xylene | Ave | 0.6140 | 0.6703 | 0.1000 | 21.8 | 20.0 | 9.2 | 20.0 |
| o-Xylene | Ave | 0.5718 | 0.6170 | 0.3000 | 21.6 | 20.0 | 7.9 | 20.0 |
| Styrene | Ave | 0.9153 | 1.013 | 0.3000 | 22.1 | 20.0 | 10.7 | 20.0 |
| n-Butyl acrylate | Ave | 0.1956 | 0.1619 | | 16.6 | 20.0 | -17.2 | 20.0 |
| Bromoform | Ave | 0.2440 | 0.2102 | 0.1000 | 17.2 | 20.0 | -13.9 | 20.0 |
| Amyl acetate (mixed isomers) | Ave | 0.8163 | 0.6316 | | 15.5 | 20.0 | -22.6* | 20.0 |
| Isopropylbenzene | Ave | 1.424 | 1.547 | 0.1000 | 21.7 | 20.0 | 8.6 | 20.0 |
| Bromobenzene | Ave | 0.8124 | 0.8565 | | 21.1 | 20.0 | 5.4 | 20.0 |
| 1,1,2,2-Tetrachloroethane | Ave | 0.7553 | 0.8063 | 0.3000 | 21.4 | 20.0 | 6.8 | 20.0 |
| 1,2,3-Trichloropropane | Ave | 0.2283 | 0.2342 | | 20.5 | 20.0 | 2.6 | 20.0 |
| trans-1,4-Dichloro-2-butene | Lin2 | | 0.1939 | | 19.2 | 20.0 | -4.2 | 20.0 |
| N-Propylbenzene | Ave | 3.569 | 4.057 | | 22.7 | 20.0 | 13.7 | 20.0 |
| 2-Chlorotoluene | Ave | 2.065 | 2.383 | | 23.1 | 20.0 | 15.4 | 20.0 |
| 4-Ethyltoluene | Ave | 2.779 | 3.109 | | 22.4 | 20.0 | 11.9 | 20.0 |
| 4-Chlorotoluene | Ave | 2.225 | 2.703 | | 24.3 | 20.0 | 21.5* | 20.0 |
| 1,3,5-Trimethylbenzene | Ave | 2.247 | 2.416 | | 21.5 | 20.0 | 7.5 | 20.0 |
| Butyl Methacrylate | Ave | 0.7642 | 0.8445 | | 22.1 | 20.0 | 10.5 | 20.0 |
| tert-Butylbenzene | Ave | 1.945 | 2.049 | | 21.1 | 20.0 | 5.4 | 20.0 |
| 1,2,4-Trimethylbenzene | Ave | 2.219 | 2.393 | | 21.6 | 20.0 | 7.8 | 20.0 |
| sec-Butylbenzene | Ave | 2.659 | 2.935 | | 22.1 | 20.0 | 10.4 | 20.0 |
| 1,3-Dichlorobenzene | Ave | 1.341 | 1.414 | 0.6000 | 21.1 | 20.0 | 5.5 | 20.0 |
| 1,4-Dichlorobenzene | Ave | 1.378 | 1.424 | 0.5000 | 20.7 | 20.0 | 3.4 | 20.0 |
| 4-Isopropyltoluene | Ave | 2.228 | 2.353 | | 21.1 | 20.0 | 5.6 | 20.0 |
| 1,2,3-Trimethylbenzene | Ave | 2.167 | 2.315 | | 21.4 | 20.0 | 6.8 | 20.0 |
| Benzyl chloride | Ave | 1.355 | 1.306 | | 19.3 | 20.0 | -3.7 | 50.0 |
| Indan | Ave | 2.149 | 2.345 | | 21.8 | 20.0 | 9.1 | 20.0 |
| 1,2-Dichlorobenzene | Ave | 1.210 | 1.293 | 0.4000 | 21.4 | 20.0 | 6.9 | 20.0 |
| p-Diethylbenzene | Ave | 1.058 | 1.153 | | 21.8 | 20.0 | 9.0 | 20.0 |
| n-Butylbenzene | Ave | 1.036 | 1.179 | | 22.8 | 20.0 | 13.8 | 20.0 |
| 1,2-Dibromo-3-Chloropropane | Qua2 | | 0.1365 | 0.0500 | 17.6 | 20.0 | -12.1 | 50.0 |
| 1,2,4,5-Tetramethylbenzene | Ave | 1.659 | 1.622 | | 19.6 | 20.0 | -2.2 | 20.0 |
| 1,3,5-Trichlorobenzene | Ave | 0.6868 | 0.6545 | | 19.1 | 20.0 | -4.7 | 20.0 |

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Edison Job No.: 460-217659-1

SDG No.:

Lab Sample ID: CCVIS 460-722587/2 Calibration Date: 09/08/2020 20:20

Instrument ID: CVOAMS15 Calib Start Date: 09/04/2020 12:13

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 09/04/2020 15:01

Lab File ID: T38863.D Conc. Units: ug/L Heated Purge: (Y/N) N

| ANALYTE | CURVE TYPE | AVE RRF | RRF | MIN RRF | CALC AMOUNT | SPIKE AMOUNT | %D | MAX %D |
|---|---|---|---|---|---|---|---|---|
| 1,2,4-Trichlorobenzene | Ave | 0.5708 | 0.5310 | 0.2000 | 18.6 | 20.0 | -7.0 | 20.0 |
| Hexachlorobutadiene | Lin2 | | 0.2199 | | 17.8 | 20.0 | -10.9 | 20.0 |
| Naphthalene | Ave | 1.465 | 1.288 | | 17.6 | 20.0 | -12.0 | 50.0 |
| 1,2,3-Trichlorobenzene | Ave | 0.4407 | 0.3917 | | 17.8 | 20.0 | -11.1 | 20.0 |
| Dibromofluoromethane (Surr) | Ave | 0.2917 | 0.2607 | | 44.7 | 50.0 | -10.6 | 20.0 |
| 1,2-Dichloroethane-d4 (Surr) | Ave | 0.2947 | 0.2209 | | 37.5 | 50.0 | -25.1* | 20.0 |
| Toluene-d8 (Surr) | Ave | 1.277 | 1.325 | | 51.9 | 50.0 | 3.8 | 20.0 |
| 4-Bromofluorobenzene | Ave | 0.4120 | 0.3703 | | 44.9 | 50.0 | -10.1 | 20.0 |

Eurofins TestAmerica, Edison
Target Compound Quantitation Report

Data File: \\chromfs\Edison\ChromData\CVOAMS15\20200908-116442.b\T38863.D
Lims ID: CCVIS
Client ID:
Sample Type: CCVIS
Inject. Date: 08-Sep-2020 20:20:59 ALS Bottle#: 0 Worklist Smp#: 2
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: CCVIS
Misc. Info.: 460-0116442-002
Operator ID: Instrument ID: CVOAMS15
Sublist: chrom-8260W_15*sub18

Method: \\chromfs\Edison\ChromData\CVOAMS15\20200908-116442.b\8260W_15.m
Limit Group: VOA - 8260C Water and Solid
Last Update: 09-Sep-2020 11:20:41 Calib Date: 04-Sep-2020 15:01:54
Integrator: RTE ID Type: RT Order ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Edison\ChromData\CVOAMS15\20200904-116301.b\T38701.D

Column 1 : DB-624 ( 0.18 mm) Det: MS Quad
Process Host: CTX1022

First Level Reviewer: asfawa Date: 09-Sep-2020 11:20:41

| Compound | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q | Response | Cal Amt ug/l | OnCol Amt ug/l | Flags |
|---|---|---|---|---|---|---|---|---|---|
| 1 Monochloropentafluoroethane | 119 | 0.586 | 0.586 | 0.000 | 25 | 4767 | 20.0 | 7.52 | |
| 3 Chlorotrifluoroethene | 116 | 0.635 | 0.635 | 0.000 | 55 | 15464 | 20.0 | 11.5 | |
| 2 1,1-Difluoroethane | 65 | 0.635 | 0.635 | 0.000 | 92 | 36220 | 20.0 | 22.0 | |
| 4 Dichlorodifluoromethane | 85 | 0.647 | 0.647 | 0.000 | 99 | 85875 | 20.0 | 16.9 | |
| 5 Chlorodifluoromethane | 67 | 0.653 | 0.653 | 0.000 | 95 | 12055 | 20.0 | 18.0 | |
| 6 Chloromethane | 50 | 0.726 | 0.726 | 0.000 | 99 | 61781 | 20.0 | 22.1 | |
| 7 Vinyl chloride | 62 | 0.769 | 0.769 | 0.000 | 98 | 82644 | 20.0 | 22.0 | |
| 8 Butadiene | 54 | 0.787 | 0.787 | 0.000 | 89 | 64857 | 20.0 | 20.5 | |
| 9 Bromomethane | 94 | 0.909 | 0.909 | 0.000 | 99 | 28662 | 20.0 | 17.3 | |
| 10 Chloroethane | 64 | 0.952 | 0.952 | 0.000 | 98 | 41837 | 20.0 | 21.4 | |
| 11 Dichlorofluoromethane | 67 | 1.043 | 1.043 | 0.000 | 91 | 98512 | 20.0 | 16.7 | |
| 12 Trichlorofluoromethane | 101 | 1.068 | 1.068 | 0.000 | 96 | 99542 | 20.0 | 16.6 | |
| 13 Pentane | 72 | 1.104 | 1.104 | 0.000 | 95 | 17020 | 40.0 | 32.3 | |
| 14 Ethanol | 45 | 1.165 | 1.165 | 0.000 | 93 | 9111 | 800.0 | 810.2 | |
| 15 Ethyl ether | 59 | 1.208 | 1.208 | 0.000 | 51 | 43559 | 20.0 | 18.4 | |
| 16 1,2-Dichloro-1,1,2-trifluoroetha | 117 | 1.214 | 1.214 | 0.000 | 88 | 71168 | 20.0 | 20.5 | |
| 17 2-Methyl-1,3-butadiene | 53 | 1.214 | 1.214 | 0.000 | 77 | 47028 | 20.0 | 17.6 | |
| 18 1,1,1-Trifluoro-2,2-dichloroetha | 83 | 1.244 | 1.244 | 0.000 | 96 | 112017 | 20.0 | 21.7 | |
| 19 Acrolein | 56 | 1.269 | 1.269 | 0.000 | 95 | 11528 | 40.0 | 42.0 | |
| 20 1,1-Dichloroethene | 96 | 1.312 | 1.312 | 0.000 | 93 | 71811 | 20.0 | 21.5 | |
| 21 1,1,2-Trichloro-1,2,2-trifluoroe | 101 | 1.318 | 1.318 | 0.000 | 85 | 73374 | 20.0 | 20.3 | |
| 22 Acetone | 43 | 1.342 | 1.342 | 0.000 | 91 | 48735 | 100.0 | 69.3 | |
| 23 Iodomethane | 142 | 1.391 | 1.391 | 0.000 | 97 | 22904 | 20.0 | 12.4 | |
| 24 Carbon disulfide | 76 | 1.421 | 1.421 | 0.000 | 98 | 222142 | 20.0 | 20.7 | |
| 25 Isopropyl alcohol | 45 | 1.427 | 1.427 | 0.000 | 30 | 24644 | 200.0 | 208.3 | |
| 26 Acetonitrile | 40 | 1.494 | 1.494 | 0.000 | 83 | 26462 | 200.0 | 173.0 | |
| 27 3-Chloro-1-propene | 76 | 1.501 | 1.501 | 0.000 | 94 | 44120 | 20.0 | 20.5 | |
| 28 Methyl acetate | 43 | 1.519 | 1.519 | 0.000 | 94 | 58733 | 40.0 | 32.1 | |
| 29 Cyclopentene | 67 | 1.543 | 1.543 | 0.000 | 93 | 161408 | 20.0 | 21.4 | |
| 30 Methylene Chloride | 84 | 1.568 | 1.568 | 0.000 | 81 | 76141 | 20.0 | 20.7 | |

| Compound | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q | Response | Cal Amt ug/l | OnCol Amt ug/l | Flags |
|---|---|---|---|---|---|---|---|---|---|
| * 31 TBA-d9 (IS) | 66 | 1.598 | 1.598 | 0.000 | 97 | 39302 | 1000.0 | 1000.0 | |
| 32 2-Methyl-2-propanol | 59 | 1.641 | 1.641 | 0.000 | 98 | 43493 | 200.0 | 178.7 | |
| 33 Acrylonitrile | 53 | 1.702 | 1.702 | 0.000 | 95 | 184500 | 200.0 | 189.5 | |
| 34 trans-1,2-Dichloroethene | 96 | 1.720 | 1.720 | 0.000 | 86 | 83291 | 20.0 | 22.4 | |
| 35 Methyl tert-butyl ether | 73 | 1.726 | 1.726 | 0.000 | 95 | 171619 | 20.0 | 18.5 | |
| 36 Hexane | 57 | 1.891 | 1.891 | 0.000 | 85 | 75631 | 20.0 | 20.0 | |
| 37 1,1-Dichloroethane | 63 | 1.970 | 1.970 | 0.000 | 94 | 121670 | 20.0 | 20.2 | |
| 38 Vinyl acetate | 86 | 2.019 | 2.019 | 0.000 | 99 | 25370 | 40.0 | 46.6 | |
| 39 2-Chloro-1,3-butadiene | 88 | 2.031 | 2.031 | 0.000 | 72 | 69175 | 20.0 | 20.0 | |
| 40 Isopropyl ether | 45 | 2.031 | 2.031 | 0.000 | 79 | 133762 | 20.0 | 15.5 | |
| 41 Tert-butyl ethyl ether | 59 | 2.275 | 2.275 | 0.000 | 90 | 166586 | 20.0 | 18.4 | |
| * 42 2-Butanone-d5 | 46 | 2.336 | 2.336 | 0.000 | 85 | 258328 | 250.0 | 250.0 | |
| 44 2,2-Dichloropropane | 97 | 2.354 | 2.354 | 0.000 | 77 | 26459 | 20.0 | 20.4 | |
| 43 cis-1,2-Dichloroethene | 96 | 2.360 | 2.360 | 0.000 | 97 | 87223 | 20.0 | 20.9 | |
| 45 2-Butanone (MEK) | 43 | 2.378 | 2.378 | 0.000 | 96 | 92367 | 100.0 | 88.9 | |
| 46 Propionitrile | 54 | 2.415 | 2.415 | 0.000 | 99 | 69171 | 200.0 | 231.5 | |
| 47 Ethyl acetate | 70 | 2.433 | 2.433 | 0.000 | 98 | 12352 | 40.0 | 45.6 | |
| 48 Methyl acrylate | 55 | 2.452 | 2.452 | 0.000 | 95 | 52014 | 20.0 | 19.1 | |
| 50 Methacrylonitrile | 67 | 2.525 | 2.525 | 0.000 | 80 | 252280 | 200.0 | 200.2 | |
| 49 Chlorobromomethane | 128 | 2.525 | 2.525 | 0.000 | 55 | 42135 | 20.0 | 21.1 | |
| 51 Tetrahydrofuran | 72 | 2.573 | 2.573 | 0.000 | 78 | 15233 | 40.0 | 45.6 | |
| 52 Chloroform | 83 | 2.598 | 2.598 | 0.000 | 99 | 129300 | 20.0 | 19.4 | |
| $ 53 Dibromofluoromethane (Surr) | 113 | 2.720 | 2.720 | 0.000 | 96 | 181601 | 50.0 | 44.7 | |
| 54 1,1,1-Trichloroethane | 97 | 2.726 | 2.726 | 0.000 | 73 | 108864 | 20.0 | 17.5 | |
| 55 Cyclohexane | 84 | 2.769 | 2.769 | 0.000 | 81 | 105645 | 20.0 | 21.4 | |
| 56 Carbon tetrachloride | 117 | 2.854 | 2.854 | 0.000 | 97 | 94657 | 20.0 | 18.1 | |
| 57 1,1-Dichloropropene | 75 | 2.860 | 2.860 | 0.000 | 94 | 100932 | 20.0 | 19.4 | |
| $ 58 1,2-Dichloroethane-d4 (Surr) | 65 | 2.982 | 2.982 | 0.000 | 97 | 153869 | 50.0 | 37.5 | |
| 59 Isobutyl alcohol | 43 | 3.012 | 3.012 | 0.000 | 42 | 36562 | 500.0 | 500.4 | |
| 60 Benzene | 78 | 3.025 | 3.025 | 0.000 | 94 | 300625 | 20.0 | 23.4 | |
| 61 1,2-Dichloroethane | 62 | 3.043 | 3.043 | 0.000 | 53 | 66410 | 20.0 | 14.4 | |
| 62 Isooctane | 57 | 3.116 | 3.116 | 0.000 | 99 | 130798 | 20.0 | 19.8 | |
| 63 Isopropyl acetate | 61 | 3.140 | 3.140 | 0.000 | 92 | 21474 | 20.0 | 20.8 | |
| 64 Tert-amyl methyl ether | 73 | 3.153 | 3.153 | 0.000 | 86 | 175266 | 20.0 | 19.0 | |
| * 65 Fluorobenzene | 96 | 3.275 | 3.275 | 0.000 | 100 | 696633 | 50.0 | 50.0 | |
| 66 n-Heptane | 43 | 3.299 | 3.299 | 0.000 | 76 | 47665 | 20.0 | 17.5 | |
| 67 Trichloroethene | 95 | 3.610 | 3.610 | 0.000 | 98 | 79549 | 20.0 | 19.6 | |
| 68 n-Butanol | 56 | 3.628 | 3.628 | 0.000 | 41 | 25203 | 500.0 | 507.0 | |
| 69 Ethyl acrylate | 55 | 3.774 | 3.774 | 0.000 | 97 | 127047 | 20.0 | 18.3 | |
| 70 Methylcyclohexane | 83 | 3.787 | 3.787 | 0.000 | 86 | 104004 | 20.0 | 20.7 | |
| 71 1,2-Dichloropropane | 63 | 3.817 | 3.817 | 0.000 | 94 | 71458 | 20.0 | 22.2 | |
| 72 Dibromomethane | 93 | 3.927 | 3.927 | 0.000 | 53 | 46017 | 20.0 | 20.3 | |
| * 73 1,4-Dioxane-d8 | 96 | 3.939 | 3.939 | 0.000 | 88 | 34312 | 1000.0 | 1000.0 | |
| 74 1,4-Dioxane | 88 | 3.988 | 3.988 | 0.000 | 36 | 13773 | 400.0 | 431.1 | |
| 75 Methyl methacrylate | 100 | 4.000 | 4.000 | 0.000 | 78 | 31206 | 40.0 | 37.4 | |
| 76 n-Propyl acetate | 43 | 4.085 | 4.085 | 0.000 | 94 | 59944 | 20.0 | 17.6 | |
| 77 Dichlorobromomethane | 83 | 4.116 | 4.116 | 0.000 | 95 | 91556 | 20.0 | 18.5 | |
| 78 2-Nitropropane | 41 | 4.366 | 4.366 | 0.000 | 95 | 12522 | 40.0 | 19.2 | |
| 79 2-Chloroethyl vinyl ether | 63 | 4.488 | 4.488 | 0.000 | 88 | 18349 | 20.0 | 14.5 | |
| 80 Epichlorohydrin | 57 | 4.524 | 4.524 | 0.000 | 97 | 95534 | 400.0 | 406.0 | |
| 81 cis-1,3-Dichloropropene | 75 | 4.610 | 4.610 | 0.000 | 86 | 113708 | 20.0 | 21.4 | |
| 82 4-Methyl-2-pentanone (MIBK) | 43 | 4.829 | 4.829 | 0.000 | 91 | 189236 | 100.0 | 97.7 | |

| Compound | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q | Response | Cal Amt ug/l | OnCol Amt ug/l | Flags |
|---|---|---|---|---|---|---|---|---|---|
| $ 83 Toluene-d8 (Surr) | 98 | 4.902 | 4.902 | 0.000 | 99 | 631378 | 50.0 | 51.9 | |
| 84 Toluene | 91 | 4.982 | 4.982 | 0.000 | 93 | 322637 | 20.0 | 22.9 | |
| 85 trans-1,3-Dichloropropene | 75 | 5.286 | 5.286 | 0.000 | 89 | 87413 | 20.0 | 18.3 | |
| 86 Ethyl methacrylate | 69 | 5.475 | 5.475 | 0.000 | 79 | 54176 | 20.0 | 15.9 | |
| 87 1,1,2-Trichloroethane | 83 | 5.500 | 5.500 | 0.000 | 91 | 43975 | 20.0 | 18.3 | |
| 88 Tetrachloroethene | 166 | 5.640 | 5.640 | 0.000 | 91 | 75729 | 20.0 | 19.9 | |
| 89 1,3-Dichloropropane | 76 | 5.695 | 5.695 | 0.000 | 83 | 79109 | 20.0 | 17.1 | |
| 90 2-Hexanone | 43 | 5.884 | 5.884 | 0.000 | 90 | 106552 | 100.0 | 80.9 | |
| 91 Chlorodibromomethane | 129 | 5.975 | 5.975 | 0.000 | 94 | 61854 | 20.0 | 17.5 | |
| 92 Ethylene Dibromide | 107 | 6.079 | 6.079 | 0.000 | 97 | 59670 | 20.0 | 19.0 | |
| 93 n-Butyl acetate | 43 | 6.116 | 6.116 | 0.000 | 95 | 52985 | 20.0 | 15.9 | |
| * 94 Chlorobenzene-d5 | 117 | 6.743 | 6.743 | 0.000 | 81 | 476410 | 50.0 | 50.0 | |
| 95 Chlorobenzene | 112 | 6.786 | 6.786 | 0.000 | 97 | 197700 | 20.0 | 22.0 | |
| 96 1,1,1,2-Tetrachloroethane | 131 | 6.932 | 6.932 | 0.000 | 93 | 64175 | 20.0 | 18.8 | |
| 97 Ethylbenzene | 106 | 6.993 | 6.993 | 0.000 | 97 | 102979 | 20.0 | 21.8 | |
| 98 m-Xylene & p-Xylene | 106 | 7.176 | 7.176 | 0.000 | 0 | 127733 | 20.0 | 21.8 | |
| 99 o-Xylene | 106 | 7.743 | 7.743 | 0.000 | 95 | 117585 | 20.0 | 21.6 | |
| 100 Styrene | 104 | 7.774 | 7.774 | 0.000 | 96 | 193070 | 20.0 | 22.1 | |
| 101 n-Butyl acrylate | 73 | 7.865 | 7.865 | 0.000 | 95 | 30852 | 20.0 | 16.6 | |
| 102 Bromoform | 173 | 7.981 | 7.981 | 0.000 | 96 | 40053 | 20.0 | 17.2 | |
| 103 Amyl acetate (mixed isomers) | 43 | 8.255 | 8.255 | 0.000 | 90 | 55552 | 20.0 | 15.5 | |
| 104 Isopropylbenzene | 105 | 8.341 | 8.341 | 0.000 | 95 | 294751 | 20.0 | 21.7 | |
| $ 105 4-Bromofluorobenzene | 174 | 8.530 | 8.530 | 0.000 | 94 | 176410 | 50.0 | 44.9 | |
| 106 Bromobenzene | 156 | 8.700 | 8.700 | 0.000 | 95 | 75335 | 20.0 | 21.1 | |
| 107 1,1,2,2-Tetrachloroethane | 83 | 8.859 | 8.859 | 0.000 | 89 | 70920 | 20.0 | 21.4 | |
| 108 1,2,3-Trichloropropane | 110 | 8.865 | 8.865 | 0.000 | 82 | 20598 | 20.0 | 20.5 | |
| 109 trans-1,4-Dichloro-2-butene | 53 | 8.956 | 8.956 | 0.000 | 89 | 17059 | 20.0 | 19.2 | |
| 110 N-Propylbenzene | 91 | 8.993 | 8.993 | 0.000 | 99 | 356864 | 20.0 | 22.7 | |
| 111 2-Chlorotoluene | 91 | 9.048 | 9.048 | 0.000 | 95 | 209644 | 20.0 | 23.1 | |
| 112 4-Ethyltoluene | 105 | 9.194 | 9.194 | 0.000 | 98 | 273461 | 20.0 | 22.4 | |
| 113 4-Chlorotoluene | 91 | 9.237 | 9.237 | 0.000 | 97 | 237779 | 20.0 | 24.3 | |
| 114 1,3,5-Trimethylbenzene | 105 | 9.310 | 9.310 | 0.000 | 93 | 212547 | 20.0 | 21.5 | |
| 115 Butyl Methacrylate | 87 | 9.621 | 9.621 | 0.000 | 84 | 74284 | 20.0 | 22.1 | |
| 116 tert-Butylbenzene | 119 | 9.810 | 9.810 | 0.000 | 94 | 180248 | 20.0 | 21.1 | |
| 117 1,2,4-Trimethylbenzene | 105 | 9.895 | 9.895 | 0.000 | 97 | 210468 | 20.0 | 21.6 | |
| 118 sec-Butylbenzene | 105 | 10.176 | 10.176 | 0.000 | 99 | 258164 | 20.0 | 22.1 | |
| 119 1,3-Dichlorobenzene | 146 | 10.255 | 10.255 | 0.000 | 96 | 124372 | 20.0 | 21.1 | |
| * 120 1,4-Dichlorobenzene-d4 | 152 | 10.377 | 10.377 | 0.000 | 95 | 219902 | 50.0 | 50.0 | |
| 121 1,4-Dichlorobenzene | 146 | 10.414 | 10.414 | 0.000 | 91 | 125245 | 20.0 | 20.7 | |
| 122 4-Isopropyltoluene | 119 | 10.456 | 10.456 | 0.000 | 90 | 206967 | 20.0 | 21.1 | |
| 123 1,2,3-Trimethylbenzene | 105 | 10.560 | 10.560 | 0.000 | 98 | 203601 | 20.0 | 21.4 | |
| 124 Benzyl chloride | 91 | 10.682 | 10.682 | 0.000 | 99 | 114833 | 20.0 | 19.3 | |
| 125 2,3-Dihydroindene | 117 | 10.834 | 10.834 | 0.000 | 90 | 206308 | 20.0 | 21.8 | |
| 126 1,2-Dichlorobenzene | 146 | 10.999 | 10.999 | 0.000 | 95 | 113725 | 20.0 | 21.4 | |
| 127 p-Diethylbenzene | 119 | 11.109 | 11.109 | 0.000 | 90 | 101440 | 20.0 | 21.8 | a |
| 128 n-Butylbenzene | 92 | 11.139 | 11.139 | 0.000 | 97 | 103677 | 20.0 | 22.8 | |
| 129 1,2-Dibromo-3-Chloropropane | 157 | 12.090 | 12.090 | 0.000 | 86 | 12005 | 20.0 | 17.6 | |
| 130 1,2,4,5-Tetramethylbenzene | 119 | 12.133 | 12.133 | 0.000 | 96 | 142659 | 20.0 | 19.6 | |
| 131 1,3,5-Trichlorobenzene | 180 | 12.334 | 12.334 | 0.000 | 96 | 57570 | 20.0 | 19.1 | |
| 132 1,2,4-Trichlorobenzene | 180 | 12.950 | 12.950 | 0.000 | 92 | 46704 | 20.0 | 18.6 | |
| 133 Hexachlorobutadiene | 225 | 13.145 | 13.145 | 0.000 | 58 | 19339 | 20.0 | 17.8 | |
| 134 Naphthalene | 128 | 13.151 | 13.151 | 0.000 | 99 | 113323 | 20.0 | 17.6 | |

| Compound | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q | Response | Cal Amt ug/l | OnCol Amt ug/l | Flags |
|---|---|---|---|---|---|---|---|---|---|
| 135 1,2,3-Trichlorobenzene | 180 | 13.370 | 13.370 | 0.000 | 93 | 34453 | 20.0 | 17.8 | |
| S 136 1,2-Dichloroethene, Total | 100 | | | | 0 | | 40.0 | 43.2 | |
| S 137 Xylenes, Total | 100 | | | | 0 | | 40.0 | 43.4 | |
| S 140 Total BTEX | 1 | | | | 0 | | 100.0 | 111.4 | |
| S 139 1,3-Dichloropropene, Total | 1 | | | | 0 | | 40.0 | 39.6 | |

## QC Flag Legend

Review Flags

a - User Assigned ID

## Reagents:

| | | | | |
|---|---|---|---|---|
| 8260MIX1COMB_00125 | Amount Added: | 20.00 | Units: uL | |
| GASES Li_00384 | Amount Added: | 20.00 | Units: uL | |
| ACROLEIN W_00112 | Amount Added: | 4.00 | Units: uL | |
| 524freon_00027 | Amount Added: | 20.00 | Units: uL | |
| VOA6IS/SURR_00038 | Amount Added: | 5.00 | Units: uL | Run Reagent |

Report Date: 09-Sep-2020 11:20:45 Chrom Revision: 2.3 20-Aug-2020 13:57:12

Eurofins TestAmerica, Edison

Data File: \\chromfs\Edison\ChromData\CVOAMS15\20200908-116442.b\T38863.D

Injection Date: 08-Sep-2020 20:20:59 Instrument ID: CVOAMS15

Lims ID: CCVIS

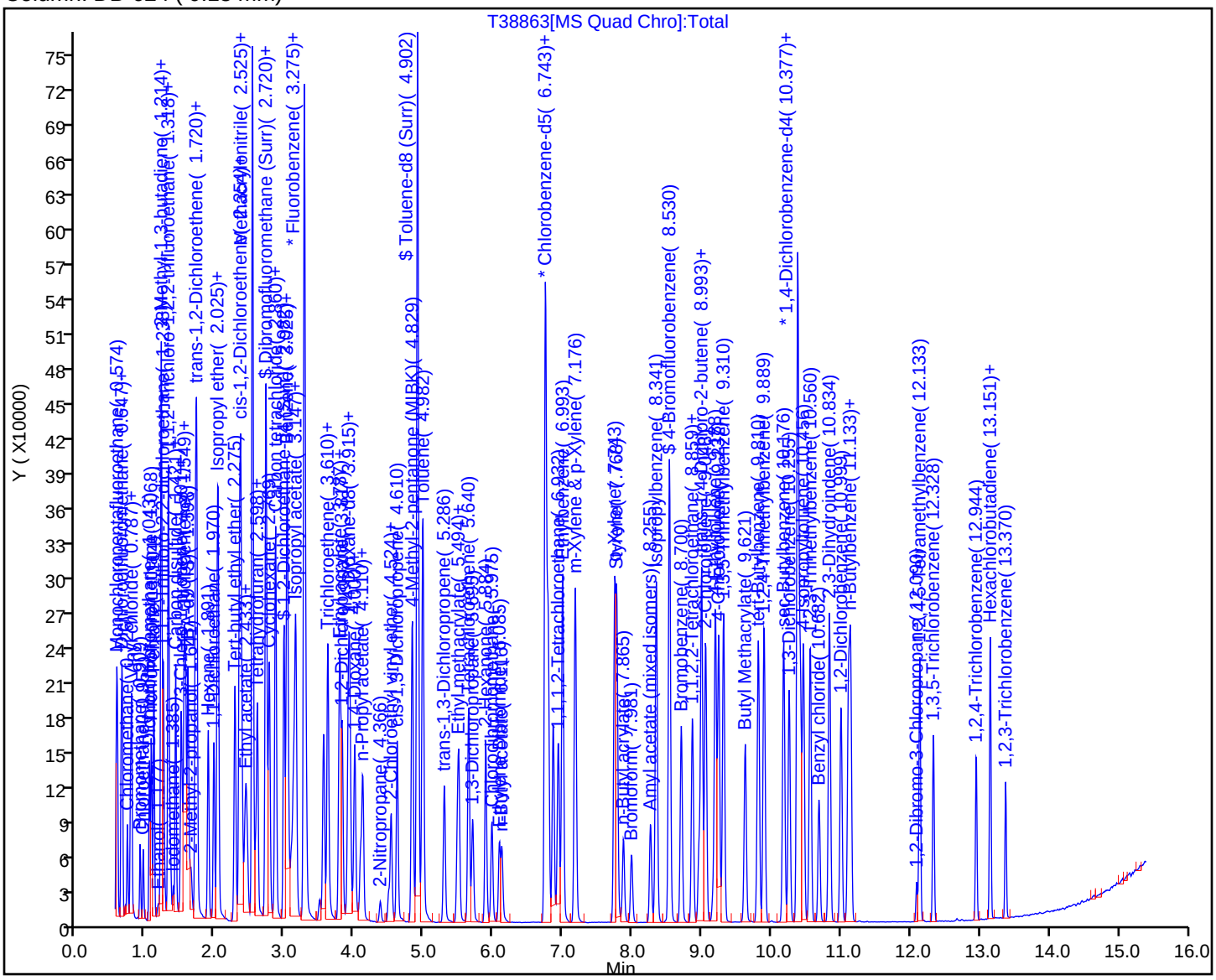
Client ID:

Operator ID: ALS Bottle#: 0 Worklist Smp#: 2

Purge Vol: 5.000 mL Dil. Factor: 1.0000

Method: 8260W_15 Limit Group: VOA - 8260C Water and Solid

Column: DB-624 ( 0.18 mm)



Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Edison

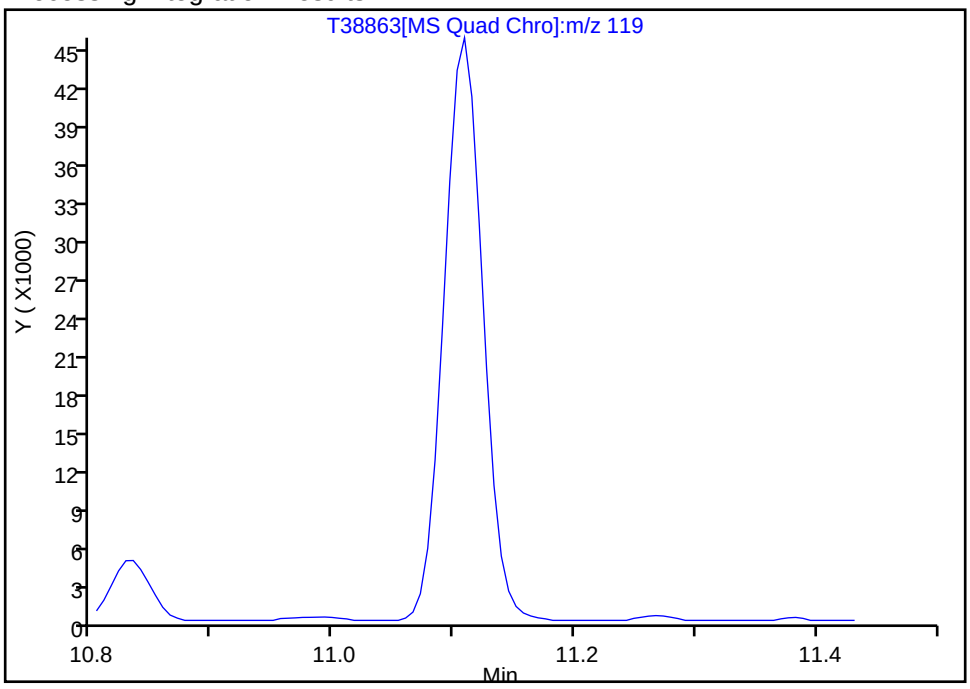
Data File: \\chromfs\Edison\ChromData\CVOAMS15\20200908-116442.b\T38863.D
Injection Date: 08-Sep-2020 20:20:59 Instrument ID: CVOAMS15
Lims ID: CCVIS
Client ID:
Operator ID: ALS Bottle#: 0 Worklist Smp#: 2
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: 8260W_15 Limit Group: VOA - 8260C Water and Solid
Column: DB-624 ( 0.18 mm) Detector MS Quad

## 127 p-Diethylbenzene, CAS: 105-05-5

Signal: 1

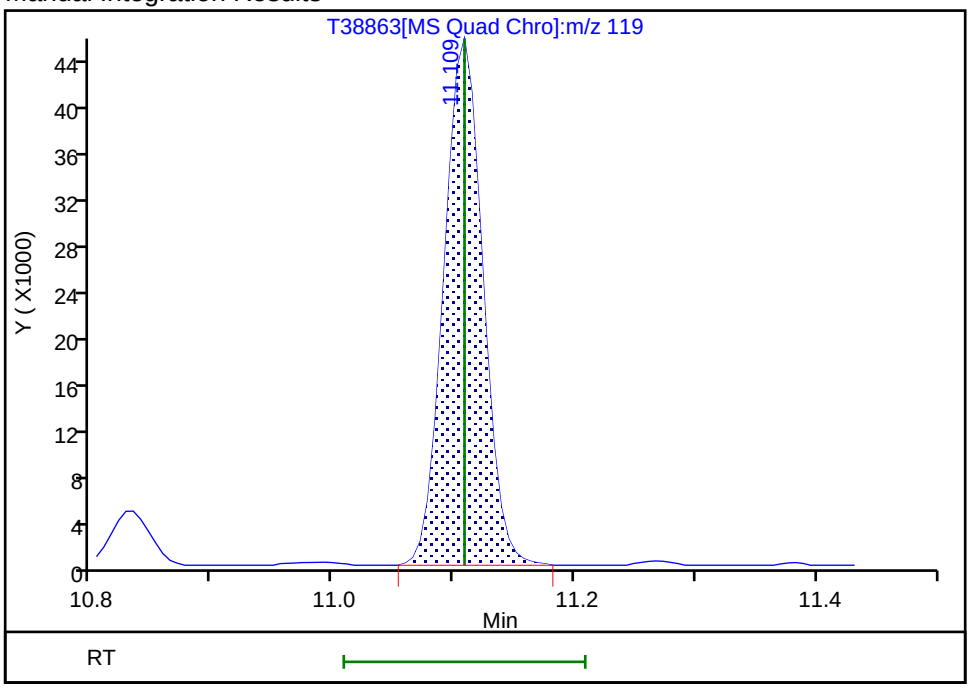
Not Detected
Expected RT: 11.11

Processing Integration Results




Manual Integration Results

RT: 11.11
Area: 101440
Amount: 21.791537
Amount Units: ug/l




Reviewer: parekhv, 08-Sep-2020 20:44:47
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Eurofins TestAmerica, Edison
Target Compound Quantitation Report

| | | | | | |
|---|---|---|---|---|---|
| Data File: | \\chromfs\Edison\ChromData\CVOAMS15\20200904-116301.b\T38692.D | | | | |
| Lims ID: | BFB | | | | |
| Client ID: | | | | | |
| Sample Type: | BFB | | | | |
| Inject. Date: | 04-Sep-2020 11:28:08 | ALS Bottle#: | 0 | Worklist Smp#: | 1 |
| Injection Vol: | 5.0 mL | Dil. Factor: | 1.0000 | | |
| Sample Info: | BFB | | | | |
| Misc. Info.: | 460-0116301-001 | | | | |
| Operator ID: | | Instrument ID: | CVOAMS15 | | |
| Method: | \\chromfs\Edison\ChromData\CVOAMS15\20200904-116301.b\8260W_15.m | | | | |
| Limit Group: | VOA - 8260C Water and Solid | | | | |
| Last Update: | 05-Sep-2020 11:27:20 | Calib Date: | 04-Sep-2020 15:01:54 | | |
| Integrator: | RTE | ID Type: | RT Order ID | | |
| Quant Method: | Internal Standard | Quant By: | Initial Calibration | | |
| Last ICal File: | \\chromfs\Edison\ChromData\CVOAMS15\20200904-116301.b\T38701.D | | | | |
| Column 1 : | DB-624 ( 0.18 mm) | | Det: MS Quad | | |
| Process Host: | CTX1014 | | | | |
| First Level Reviewer: moroneyc | | Date: | 04-Sep-2020 11:45:01 | | |

| Compound | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q | Response | Cal Amt ug/l | OnCol Amt ug/l | Flags |
|---|---|---|---|---|---|---|---|---|---|
| $ 141 BFB | 95 | 2.265 | 2.265 | 0.000 | 93 | 108405 | NR | NR | a |

## QC Flag Legend

Processing Flags
NR - Missing Quant Standard
Review Flags
a - User Assigned ID

## Reagents:

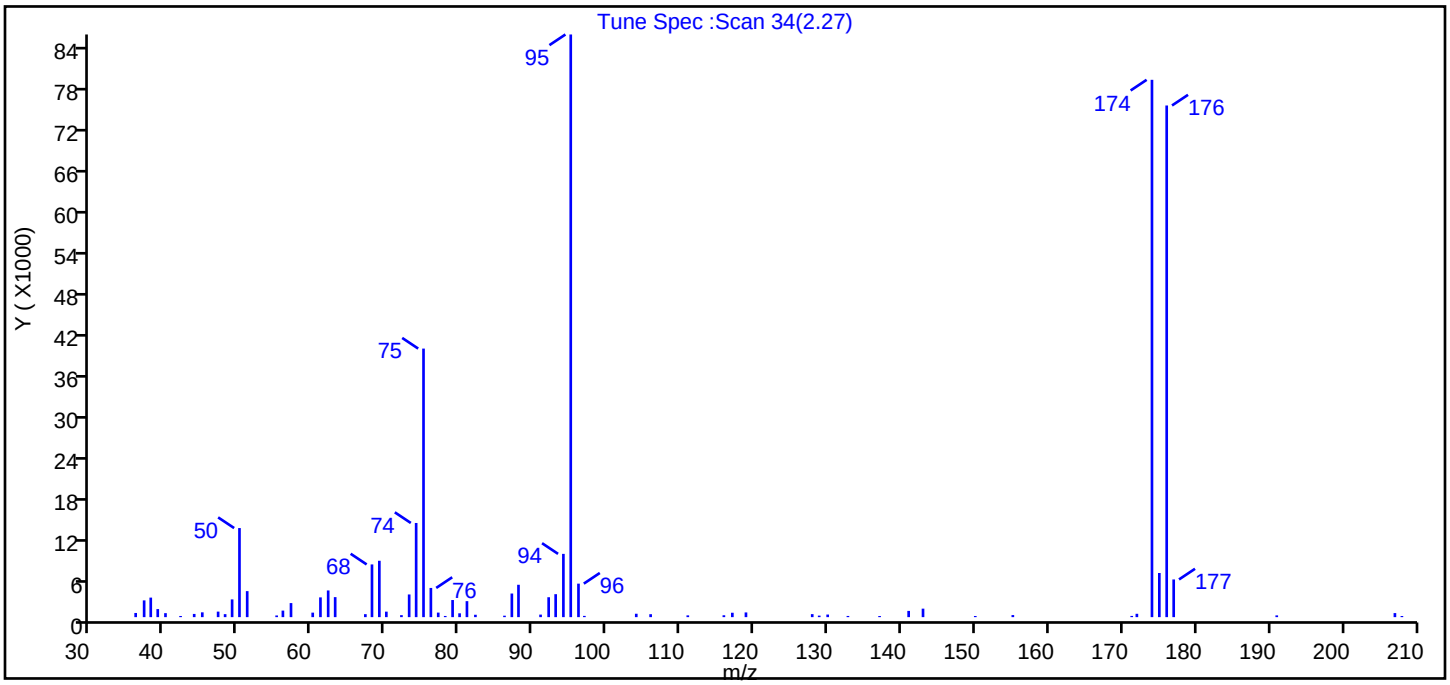
BFB_00026 Amount Added: 1.00 Units: uL

MS Tune Report

Eurofins TestAmerica, Edison

Data File: \\chromfs\Edison\ChromData\CVOAMS15\20200904-116301.b\T38692.D
Injection Date: 04-Sep-2020 11:28:08 Instrument ID: CVOAMS15
Lims ID: BFB
Client ID:
Operator ID: ALS Bottle#: 0 Worklist Smp#: 1
Injection Vol: 5.0 mL Dil. Factor: 1.0000
Method: 8260W_15 Limit Group: VOA - 8260C Water and Solid
Tune Method: BFB Method 8260

$ 141 BFB




| m/z | Ion Abundance Criteria | % Relative Abundance |
|---|---|---|
| 95 | Base peak, 100% relative abundance | 100.0 |
| 50 | 15 to 40% of m/z 95 | 15.3 |
| 75 | 30 to 60% of m/z 95 | 46.1 |
| 96 | 5 to 9% of m/z 95 | 5.7 |
| 173 | Less than 2% of m/z 174 | 0.0 (0.0) |
| 174 | 50 to 120% of m/z 95 | 92.2 |
| 175 | 5 to 9% of m/z 174 | 7.6 (8.2) |
| 176 | Greater than 95% but less than 101% of m/z 174 | 87.8 (95.2) |
| 177 | 5 to 9% of m/z 176 | 6.5 (7.4) |

Data File: \\chromfs\Edison\ChromData\CVOAMS15\20200904-116301.b\T38692.D\8260W_15.rslt\spectra.d
Injection Date: 04-Sep-2020 11:28:08
Spectrum: Tune Spec :Scan 34(2.27)
Base Peak: 95.05
Minimum % Base Peak: 0
Number of Points: 69

| m/z | Y | m/z | Y | m/z | Y | m/z | Y |
|---|---|---|---|---|---|---|---|
| 36.00 | 612 | 62.00 | 3918 | 87.00 | 3468 | 133.00 | 175 |
| 37.00 | 2460 | 63.00 | 2939 | 88.00 | 4752 | 137.00 | 164 |
| 38.00 | 2868 | 67.00 | 438 | 91.00 | 373 | 141.00 | 917 |
| 39.00 | 1182 | 68.00 | 7739 | 92.00 | 2923 | 143.00 | 1246 |
| 40.00 | 586 | 69.00 | 8276 | 93.00 | 3371 | 150.00 | 169 |
| 42.00 | 170 | 70.00 | 808 | 94.00 | 9289 | 155.00 | 305 |
| 44.00 | 472 | 72.00 | 292 | 95.00 | 85536 | 171.00 | 179 |
| 45.00 | 706 | 73.00 | 3329 | 96.00 | 4918 | 172.00 | 492 |
| 47.00 | 812 | 74.00 | 13823 | 97.00 | 184 | 174.00 | 78880 |
| 48.00 | 441 | 75.00 | 39424 | 104.00 | 500 | 175.00 | 6480 |
| 49.00 | 2604 | 76.00 | 4288 | 106.00 | 433 | 176.00 | 75112 |
| 50.00 | 13077 | 77.00 | 667 | 111.00 | 260 | 177.00 | 5533 |
| 51.00 | 3819 | 78.00 | 174 | 116.00 | 277 | 191.00 | 258 |
| 55.00 | 246 | 79.00 | 2512 | 117.00 | 646 | 207.00 | 596 |
| 56.00 | 962 | 80.00 | 563 | 119.00 | 692 | 208.00 | 166 |
| 57.00 | 2064 | 81.00 | 2349 | 128.00 | 443 | | |
| 60.00 | 663 | 82.00 | 351 | 129.00 | 224 | | |
| 61.00 | 2901 | 86.00 | 213 | 130.00 | 381 | | |

Report Date: 05-Sep-2020 11:27:21 Chrom Revision: 2.3 20-Aug-2020 13:57:12

Eurofins TestAmerica, Edison

Data File: \\chromfs\Edison\ChromData\CVOAMS15\20200904-116301.b\T38692.D

Injection Date: 04-Sep-2020 11:28:08 Instrument ID: CVOAMS15

Lims ID: BFB

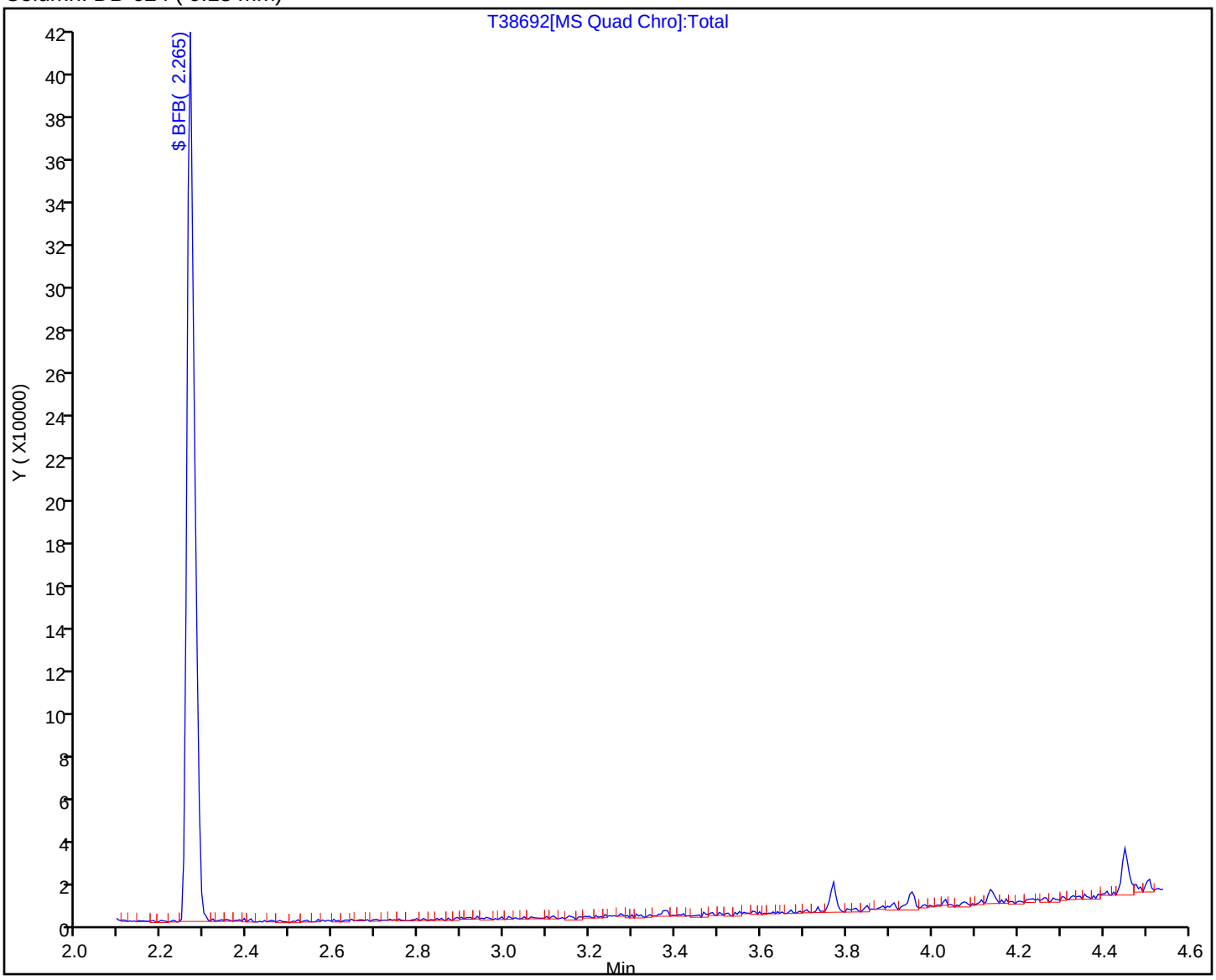
Client ID:

Operator ID: ALS Bottle#: 0 Worklist Smp#: 1

Injection Vol: 5.0 mL Dil. Factor: 1.0000

Method: 8260W_15 Limit Group: VOA - 8260C Water and Solid

Column: DB-624 ( 0.18 mm)



Eurofins TestAmerica, Edison
Target Compound Quantitation Report

Data File: \\chromfs\Edison\ChromData\CVOAMS15\20200908-116442.b\T38862.D
Lims ID: BFB
Client ID:
Sample Type: BFB
Inject. Date: 08-Sep-2020 20:05:05 ALS Bottle#: 0 Worklist Smp#: 1
Injection Vol: 5.0 mL Dil. Factor: 1.0000
Sample Info: BFB
Misc. Info.: 460-0116442-001
Operator ID: Instrument ID: CVOAMS15

Method: \\chromfs\Edison\ChromData\CVOAMS15\20200908-116442.b\8260W_15.m
Limit Group: VOA - 8260C Water and Solid
Last Update: 10-Sep-2020 13:01:10 Calib Date: 04-Sep-2020 15:01:54
Integrator: RTE ID Type: RT Order ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Edison\ChromData\CVOAMS15\20200904-116301.b\T38701.D

Column 1 : DB-624 ( 0.18 mm) Det: MS Quad
Process Host: CTX1033

First Level Reviewer: desais Date: 09-Sep-2020 07:38:19

| Compound | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q | Response | Cal Amt ug/l | OnCol Amt ug/l | Flags |
|---|---|---|---|---|---|---|---|---|---|
| $ 141 BFB | 95 | 2.265 | 2.265 | 0.000 | 92 | 238103 | NR | NR | a |

## QC Flag Legend

Processing Flags
NR - Missing Quant Standard
Review Flags
a - User Assigned ID

## Reagents:

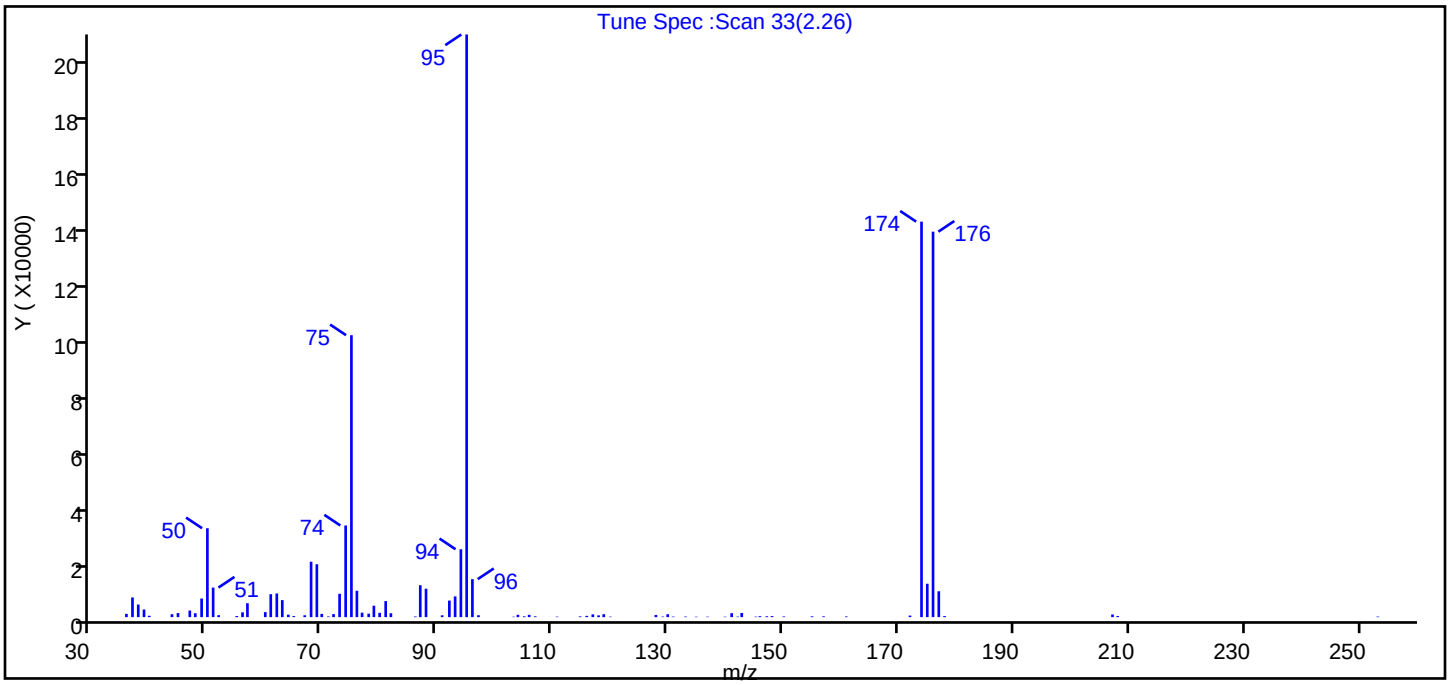
BFB_00026 Amount Added: 1.00 Units: uL

MS Tune Report

Eurofins TestAmerica, Edison

Data File: \\chromfs\Edison\ChromData\CVOAMS15\20200908-116442.b\T38862.D
Injection Date: 08-Sep-2020 20:05:05 Instrument ID: CVOAMS15
Lims ID: BFB
Client ID:
Operator ID: ALS Bottle#: 0 Worklist Smp#: 1
Injection Vol: 5.0 mL Dil. Factor: 1.0000
Method: 8260W_15 Limit Group: VOA - 8260C Water and Solid
Tune Method: BFB Method 8260

$ 141 BFB




| m/z | Ion Abundance Criteria | % Relative Abundance |
|---|---|---|
| 95 | Base peak, 100% relative abundance | 100.0 |
| 50 | 15 to 40% of m/z 95 | 15.3 |
| 75 | 30 to 60% of m/z 95 | 48.4 |
| 96 | 5 to 9% of m/z 95 | 6.5 |
| 173 | Less than 2% of m/z 174 | 0.0 (0.0) |
| 174 | 50 to 120% of m/z 95 | 67.9 |
| 175 | 5 to 9% of m/z 174 | 5.7 (8.4) |
| 176 | Greater than 95% but less than 101% of m/z 174 | 66.2 (97.5) |
| 177 | 5 to 9% of m/z 176 | 4.4 (6.7) |

Data File: \\chromfs\Edison\ChromData\CVOAMS15\20200908-116442.b\T38862.D\8260W_15.rslt\spectra.d
Injection Date: 08-Sep-2020 20:05:05
Spectrum: Tune Spec :Scan 33(2.26)
Base Peak: 95.05
Minimum % Base Peak: 0
Number of Points: 88

| m/z | Y | m/z | Y | m/z | Y | m/z | Y |
|---|---|---|---|---|---|---|---|
| 36.00 | 1143 | 67.00 | 652 | 94.00 | 23440 | 137.00 | 167 |
| 37.00 | 6796 | 68.00 | 19136 | 95.00 | 201216 | 140.00 | 154 |
| 38.00 | 4355 | 69.00 | 18272 | 96.00 | 13124 | 141.00 | 1366 |
| 39.00 | 2641 | 70.00 | 1124 | 97.00 | 662 | 142.00 | 180 |
| 40.00 | 475 | 71.00 | 224 | 103.00 | 150 | 143.00 | 1447 |
| 44.00 | 1009 | 72.00 | 1056 | 104.00 | 815 | 145.00 | 172 |
| 45.00 | 1408 | 73.00 | 8054 | 105.00 | 280 | 146.00 | 325 |
| 47.00 | 2284 | 74.00 | 31648 | 106.00 | 789 | 147.00 | 308 |
| 48.00 | 1348 | 75.00 | 97368 | 107.00 | 279 | 148.00 | 361 |
| 49.00 | 6433 | 76.00 | 9108 | 111.00 | 173 | 150.00 | 237 |
| 50.00 | 30704 | 77.00 | 1546 | 115.00 | 264 | 155.00 | 278 |
| 51.00 | 10211 | 78.00 | 1193 | 116.00 | 447 | 157.00 | 267 |
| 52.00 | 682 | 79.00 | 3942 | 117.00 | 951 | 161.00 | 244 |
| 55.00 | 391 | 80.00 | 1482 | 118.00 | 607 | 172.00 | 540 |
| 56.00 | 1667 | 81.00 | 5550 | 119.00 | 1015 | 174.00 | 136576 |
| 57.00 | 4801 | 82.00 | 1338 | 120.00 | 172 | 175.00 | 11536 |
| 60.00 | 1726 | 86.00 | 228 | 128.00 | 743 | 176.00 | 133120 |
| 61.00 | 7920 | 87.00 | 11023 | 129.00 | 192 | 177.00 | 8932 |
| 62.00 | 8174 | 88.00 | 9815 | 130.00 | 1003 | 178.00 | 368 |
| 63.00 | 5873 | 91.00 | 634 | 131.00 | 188 | 207.00 | 918 |
| 64.00 | 847 | 92.00 | 5721 | 133.00 | 207 | 208.00 | 370 |
| 65.00 | 364 | 93.00 | 7163 | 135.00 | 157 | 253.00 | 198 |

Report Date: 10-Sep-2020 13:01:11 Chrom Revision: 2.3 20-Aug-2020 13:57:12

Eurofins TestAmerica, Edison

Data File: \\chromfs\Edison\ChromData\CVOAMS15\20200908-116442.b\T38862.D

Injection Date: 08-Sep-2020 20:05:05 Instrument ID: CVOAMS15

Lims ID: BFB

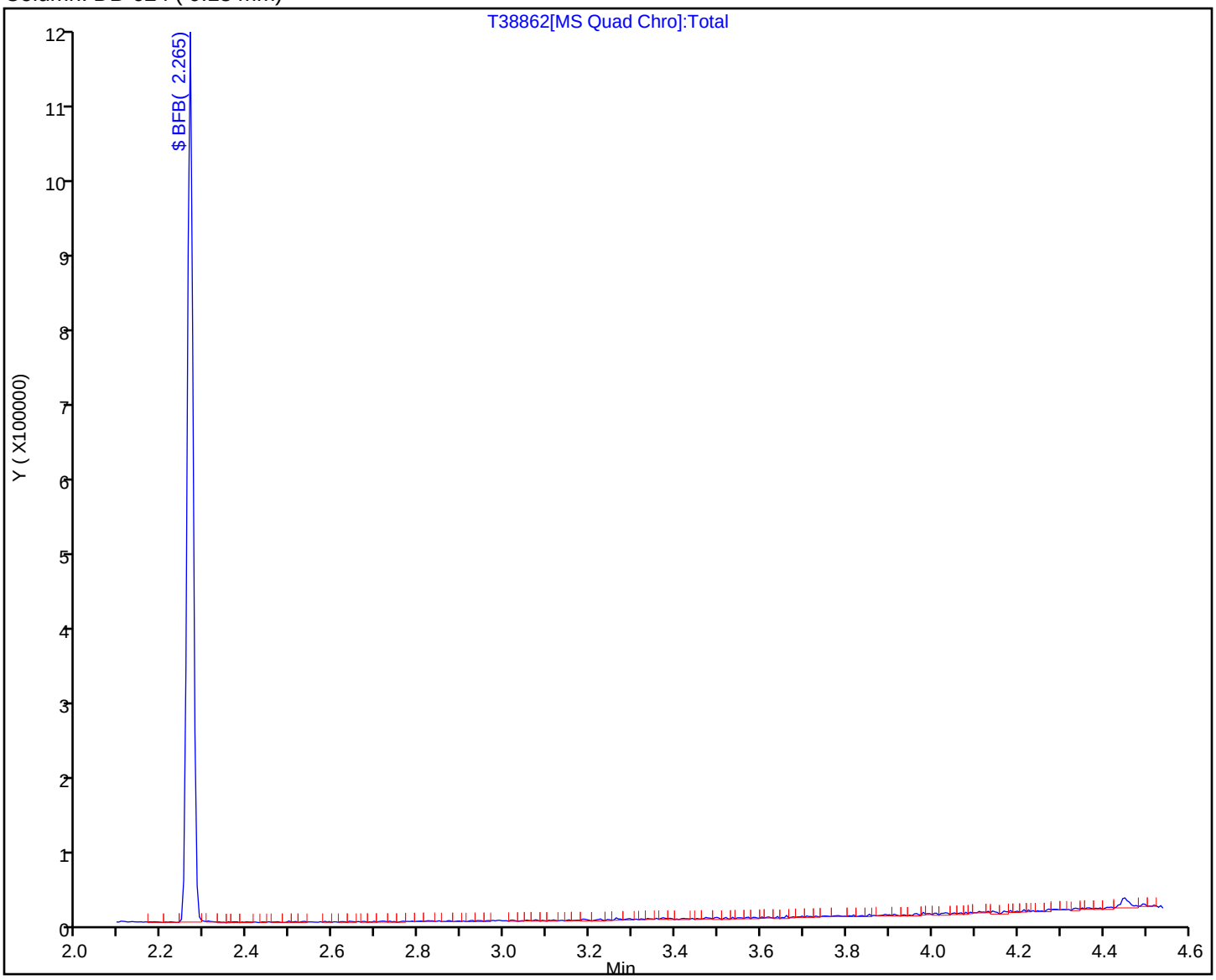
Client ID:

Operator ID: ALS Bottle#: 0 Worklist Smp#: 1

Injection Vol: 5.0 mL Dil. Factor: 1.0000

Method: 8260W_15 Limit Group: VOA - 8260C Water and Solid

Column: DB-624 ( 0.18 mm)



FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Edison  Job No.: 460-217659-1

SDG No.:

Client Sample ID:  Lab Sample ID: MB 460-722587/8

Matrix: Water  Lab File ID: T38869.D

Analysis Method: 8260C  Date Collected:

Sample wt/vol: 5(mL)  Date Analyzed: 09/08/2020 22:54

Soil Aliquot Vol:  Dilution Factor: 1

Soil Extract Vol.:  GC Column: DB-624  ID: 0.18(mm)

% Moisture:  Level: (low/med) Low

Analysis Batch No.: 722587  Units: ug/L

| CAS NO. | COMPOUND NAME | RESULT | Q | RL | MDL |
|---|---|---|---|---|---|
| 71-55-6 | 1,1,1-Trichloroethane | 0.24 | U | 1.0 | 0.24 |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 0.37 | U | 1.0 | 0.37 |
| 76-13-1 | 1,1,2-Trichloro-1,2,2-trifluoroethane | 0.31 | U | 1.0 | 0.31 |
| 79-00-5 | 1,1,2-Trichloroethane | 0.43 | U | 1.0 | 0.43 |
| 75-34-3 | 1,1-Dichloroethane | 0.26 | U | 1.0 | 0.26 |
| 75-35-4 | 1,1-Dichloroethene | 0.26 | U | 1.0 | 0.26 |
| 87-61-6 | 1,2,3-Trichlorobenzene | 0.36 | U | 1.0 | 0.36 |
| 120-82-1 | 1,2,4-Trichlorobenzene | 0.37 | U | 1.0 | 0.37 |
| 78-87-5 | 1,2-Dichloropropane | 0.35 | U | 1.0 | 0.35 |
| 541-73-1 | 1,3-Dichlorobenzene | 0.34 | U | 1.0 | 0.34 |
| 106-46-7 | 1,4-Dichlorobenzene | 0.33 | U | 1.0 | 0.33 |
| 123-91-1 | 1,4-Dioxane | 28 | U | 50 | 28 |
| 78-93-3 | 2-Butanone (MEK) | 1.9 | U | 5.0 | 1.9 |
| 591-78-6 | 2-Hexanone | 1.1 | U | 5.0 | 1.1 |
| 108-10-1 | 4-Methyl-2-pentanone (MIBK) | 1.3 | U | 5.0 | 1.3 |
| 67-64-1 | Acetone | 4.4 | U | 5.0 | 4.4 |
| 71-43-2 | Benzene | 0.20 | U | 1.0 | 0.20 |
| 75-25-2 | Bromoform | 0.54 | U | 1.0 | 0.54 |
| 74-83-9 | Bromomethane | 0.55 | U | 1.0 | 0.55 |
| 75-15-0 | Carbon disulfide | 0.82 | U | 1.0 | 0.82 |
| 56-23-5 | Carbon tetrachloride | 0.21 | U | 1.0 | 0.21 |
| 108-90-7 | Chlorobenzene | 0.38 | U | 1.0 | 0.38 |
| 74-97-5 | Chlorobromomethane | 0.41 | U | 1.0 | 0.41 |
| 124-48-1 | Chlorodibromomethane | 0.28 | U | 1.0 | 0.28 |
| 75-00-3 | Chloroethane | 0.32 | U | 1.0 | 0.32 |
| 67-66-3 | Chloroform | 0.33 | U | 1.0 | 0.33 |
| 74-87-3 | Chloromethane | 0.40 | U | 1.0 | 0.40 |
| 156-59-2 | cis-1,2-Dichloroethene | 0.22 | U | 1.0 | 0.22 |
| 10061-01-5 | cis-1,3-Dichloropropene | 0.22 | U | 1.0 | 0.22 |
| 110-82-7 | Cyclohexane | 0.32 | U | 1.0 | 0.32 |
| 75-27-4 | Dichlorobromomethane | 0.34 | U | 1.0 | 0.34 |
| 75-71-8 | Dichlorodifluoromethane | 0.31 | U | 1.0 | 0.31 |
| 100-41-4 | Ethylbenzene | 0.30 | U | 1.0 | 0.30 |
| 106-93-4 | Ethylene Dibromide | 0.50 | U | 1.0 | 0.50 |
| 98-82-8 | Isopropylbenzene | 0.34 | U | 1.0 | 0.34 |

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Edison  Job No.: 460-217659-1

SDG No.:

Client Sample ID:  Lab Sample ID: MB 460-722587/8

Matrix: Water  Lab File ID: T38869.D

Analysis Method: 8260C  Date Collected:

Sample wt/vol: 5(mL)  Date Analyzed: 09/08/2020 22:54

Soil Aliquot Vol:  Dilution Factor: 1

Soil Extract Vol.:  GC Column: DB-624  ID: 0.18(mm)

% Moisture:  Level: (low/med) Low

Analysis Batch No.: 722587  Units: ug/L

| CAS NO. | COMPOUND NAME | RESULT | Q | RL | MDL |
|---|---|---|---|---|---|
| 79-20-9 | Methyl acetate | 0.79 | U | 5.0 | 0.79 |
| 1634-04-4 | Methyl tert-butyl ether | 0.47 | U | 1.0 | 0.47 |
| 108-87-2 | Methylcyclohexane | 0.26 | U | 1.0 | 0.26 |
| 75-09-2 | Methylene Chloride | 0.32 | U | 1.0 | 0.32 |
| 179601-23-1 | m-Xylene & p-Xylene | 0.30 | U | 1.0 | 0.30 |
| 95-47-6 | o-Xylene | 0.36 | U | 1.0 | 0.36 |
| 100-42-5 | Styrene | 0.42 | U | 1.0 | 0.42 |
| 127-18-4 | Tetrachloroethene | 0.25 | U | 1.0 | 0.25 |
| 108-88-3 | Toluene | 0.38 | U | 1.0 | 0.38 |
| 156-60-5 | trans-1,2-Dichloroethene | 0.24 | U | 1.0 | 0.24 |
| 10061-02-6 | trans-1,3-Dichloropropene | 0.49 | U | 1.0 | 0.49 |
| 79-01-6 | Trichloroethene | 0.31 | U | 1.0 | 0.31 |
| 75-69-4 | Trichlorofluoromethane | 0.32 | U | 1.0 | 0.32 |
| 75-01-4 | Vinyl chloride | 0.17 | U | 1.0 | 0.17 |
| 107-06-2 | 1,2-Dichloroethane | 0.43 | U | 1.0 | 0.43 |
| 95-50-1 | 1,2-Dichlorobenzene | 0.43 | U | 1.0 | 0.43 |
| 96-12-8 | 1,2-Dibromo-3-Chloropropane | 0.38 | U | 1.0 | 0.38 |

| CAS NO. | SURROGATE | %REC | Q | LIMITS |
|---|---|---|---|---|
| 17060-07-0 | 1,2-Dichloroethane-d4 (Surr) | 61 | X | 75-123 |
| 460-00-4 | 4-Bromofluorobenzene | 84 | | 76-120 |
| 1868-53-7 | Dibromofluoromethane (Surr) | 81 | | 77-124 |
| 2037-26-5 | Toluene-d8 (Surr) | 91 | | 80-120 |

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: Eurofins TestAmerica, Edison  Job No.: 460-217659-1

SDG No.:

Client Sample ID:  Lab Sample ID: MB 460-722587/8

Matrix: Water  Lab File ID: T38869.D

Analysis Method: 8260C  Date Collected:

Sample wt/vol: 5(mL)  Date Analyzed: 09/08/2020 22:54

Soil Aliquot Vol:  Dilution Factor: 1

Soil Extract Vol.:  GC Column: DB-624 ID: 0.18(mm)

% Moisture:  Level: (low/med) Low

Analysis Batch No.: 722587  Units: ug/L

Number TICs Found: 0  TIC Result Total: 0

| CAS NO. | COMPOUND NAME | RT | RESULT | Q | MATCH QUALITY |
|---|---|---|---|---|---|
| | Tentatively Identified Compound | | None | | |

Eurofins TestAmerica, Edison
Target Compound Quantitation Report

Data File: \\chromfs\Edison\ChromData\CVOAMS15\20200908-116442.b\T38869.D
Lims ID: MB
Client ID:
Sample Type: MB
Inject. Date: 08-Sep-2020 22:54:23 ALS Bottle#: 0 Worklist Smp#: 8
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: MB
Misc. Info.: 460-0116442-008
Operator ID: Instrument ID: CVOAMS15

Method: \\chromfs\Edison\ChromData\CVOAMS15\20200908-116442.b\8260W_15.m
Limit Group: VOA - 8260C Water and Solid
Last Update: 09-Sep-2020 11:20:41 Calib Date: 04-Sep-2020 15:01:54
Integrator: RTE ID Type: RT Order ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Edison\ChromData\CVOAMS15\20200904-116301.b\T38701.D

Column 1 : DB-624 ( 0.18 mm) Det: MS Quad
Process Host: CTX1022

First Level Reviewer: asfawa Date: 09-Sep-2020 11:23:25

| Compound | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q | Response | Cal Amt ug/l | OnCol Amt ug/l | Flags |
|---|---|---|---|---|---|---|---|---|---|
| * 31 TBA-d9 (IS) | 66 | 1.598 | 1.598 | 0.000 | 92 | 40127 | 1000.0 | 1000.0 | |
| * 42 2-Butanone-d5 | 46 | 2.336 | 2.336 | 0.000 | 27 | 169842 | 250.0 | 250.0 | |
| $ 53 Dibromofluoromethane (Surr) | 113 | 2.720 | 2.720 | 0.000 | 97 | 172609 | 50.0 | 40.5 | |
| $ 58 1,2-Dichloroethane-d4 (Surr) | 65 | 2.982 | 2.982 | 0.000 | 95 | 131231 | 50.0 | 30.5 | |
| * 65 Fluorobenzene | 96 | 3.274 | 3.275 | -0.001 | 100 | 730146 | 50.0 | 50.0 | |
| * 73 1,4-Dioxane-d8 | 96 | 3.933 | 3.939 | -0.006 | 1 | 33890 | 1000.0 | 1000.0 | |
| $ 83 Toluene-d8 (Surr) | 98 | 4.902 | 4.902 | 0.000 | 98 | 608332 | 50.0 | 45.5 | |
| * 94 Chlorobenzene-d5 | 117 | 6.743 | 6.743 | 0.000 | 82 | 523106 | 50.0 | 50.0 | |
| $ 105 4-Bromofluorobenzene | 174 | 8.530 | 8.530 | 0.000 | 92 | 180121 | 50.0 | 41.8 | |
| * 120 1,4-Dichlorobenzene-d4 | 152 | 10.377 | 10.377 | 0.000 | 95 | 219259 | 50.0 | 50.0 | |

## Reagents:

VOA6IS/SURR_00038 Amount Added: 5.00 Units: uL Run Reagent

Report Date: 09-Sep-2020 11:23:26 Chrom Revision: 2.3 20-Aug-2020 13:57:12

Eurofins TestAmerica, Edison

Data File: \\chromfs\Edison\ChromData\CVOAMS15\20200908-116442.b\T38869.D

Injection Date: 08-Sep-2020 22:54:23 Instrument ID: CVOAMS15

Lims ID: MB

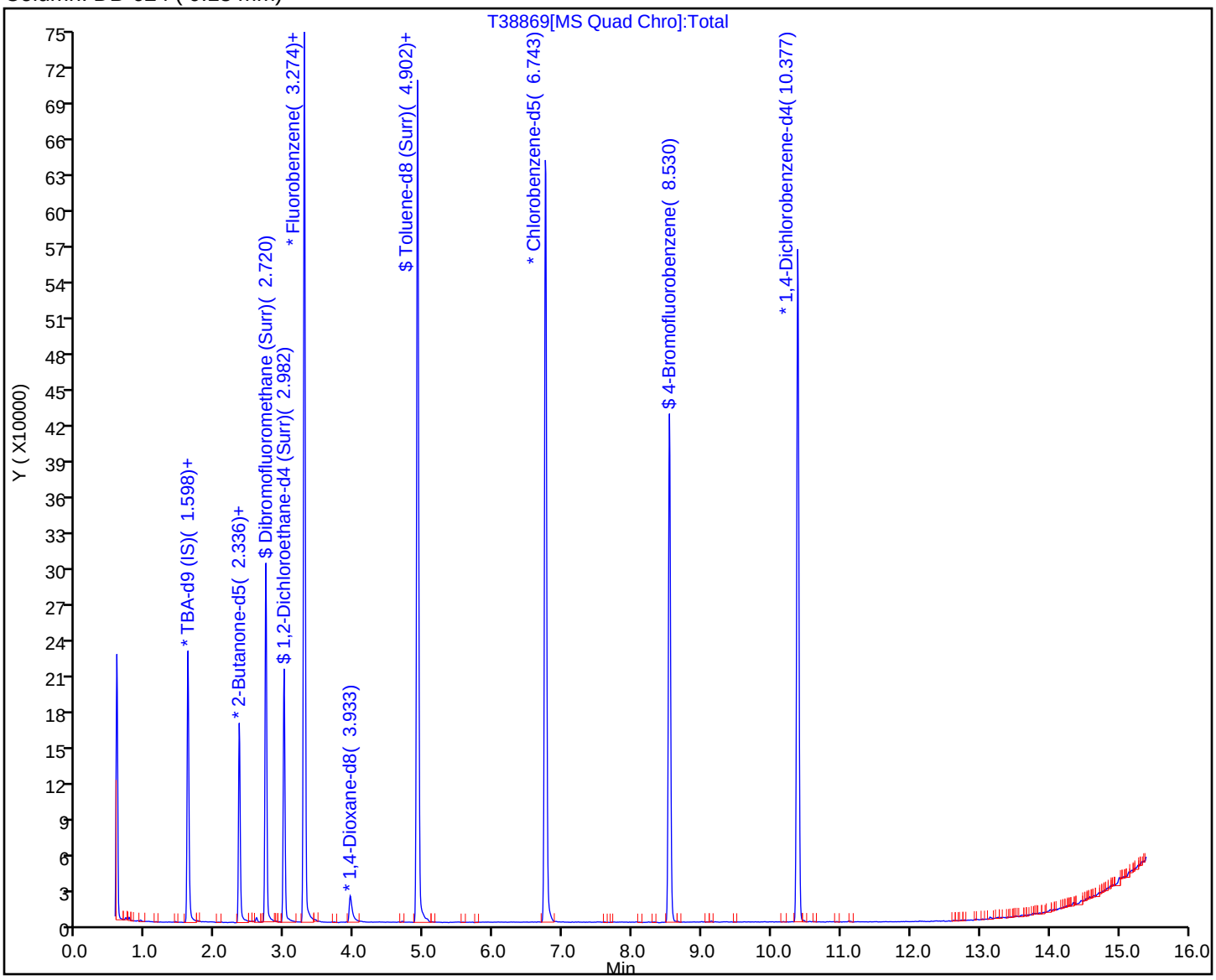
Client ID:

Operator ID: ALS Bottle#: 0 Worklist Smp#: 8

Purge Vol: 5.000 mL Dil. Factor: 1.0000

Method: 8260W_15 Limit Group: VOA - 8260C Water and Solid

Column: DB-624 ( 0.18 mm)



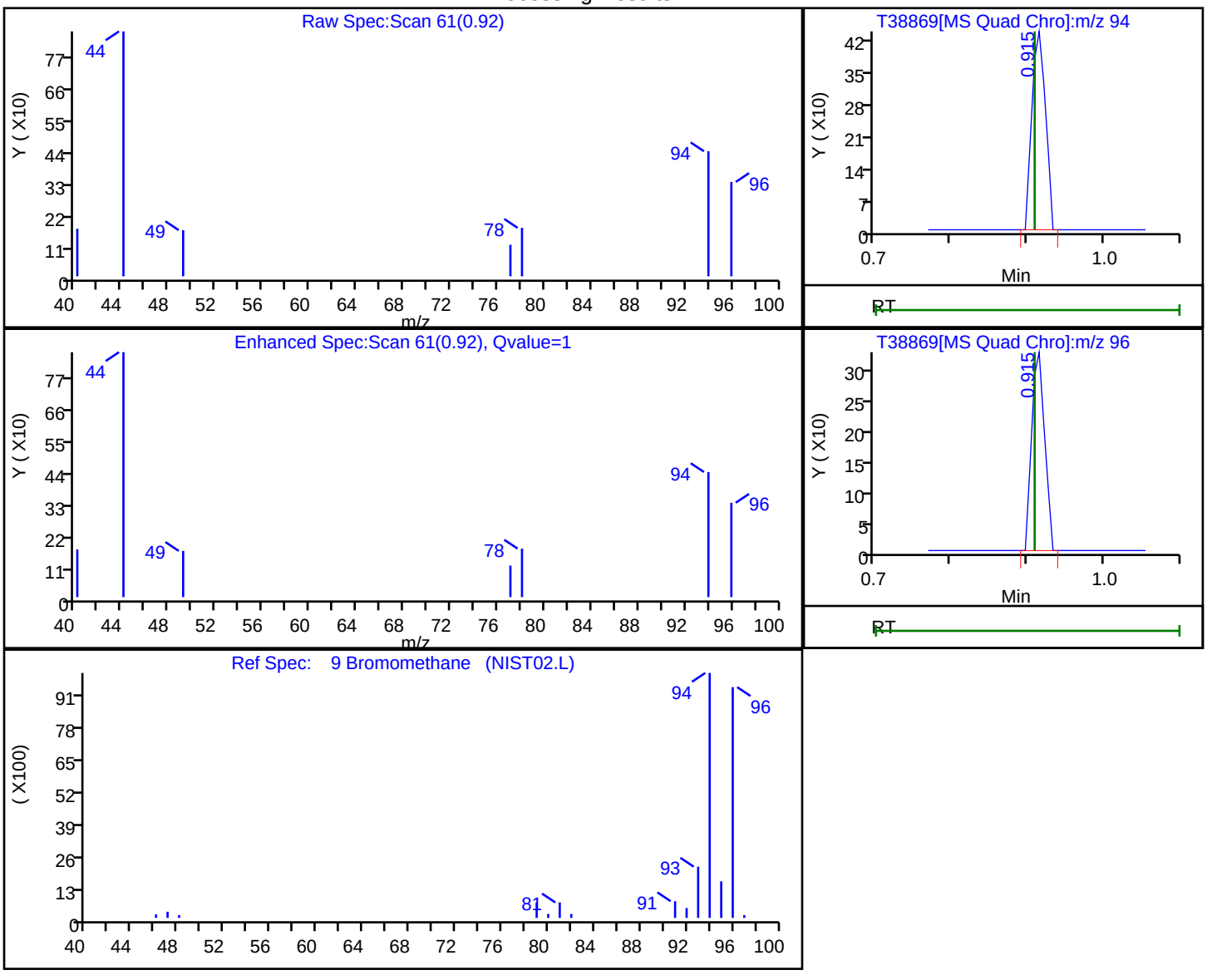
User Disabled Compound Report

Eurofins TestAmerica, Edison

Data File: \\chromfs\Edison\ChromData\CVOAMS15\20200908-116442.b\T38869.D
Injection Date: 08-Sep-2020 22:54:23 Instrument ID: CVOAMS15
Lims ID: MB
Client ID:
Operator ID: ALS Bottle#: 0 Worklist Smp#: 8
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: 8260W_15 Limit Group: VOA - 8260C Water and Solid
Column: DB-624 ( 0.18 mm) Detector MS Quad

## 9 Bromomethane, CAS: 74-83-9

Processing Results




| RT | Mass | Response | Amount |
|---|---|---|---|
| 0.92 | 94.00 | 542 | 0.496798 |
| 0.92 | 96.00 | 390 | |

Reviewer: parekhv, 08-Sep-2020 23:41:41
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

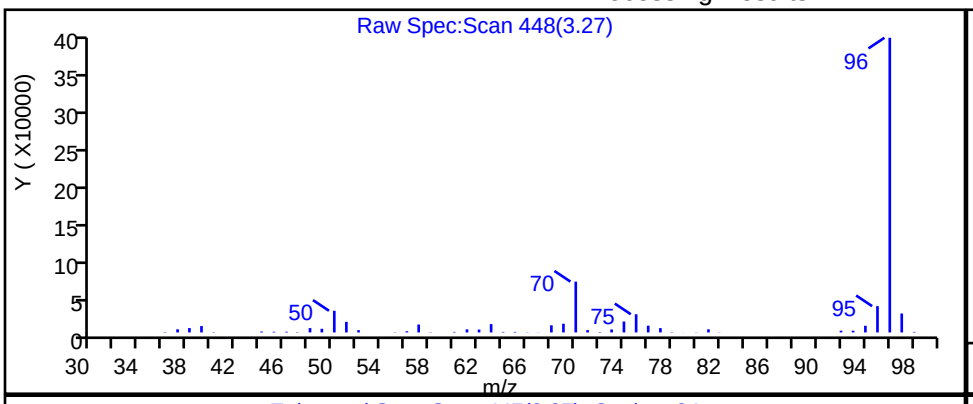
User Disabled Compound Report

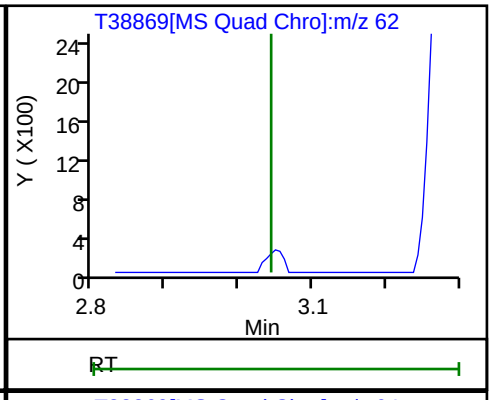
Eurofins TestAmerica, Edison

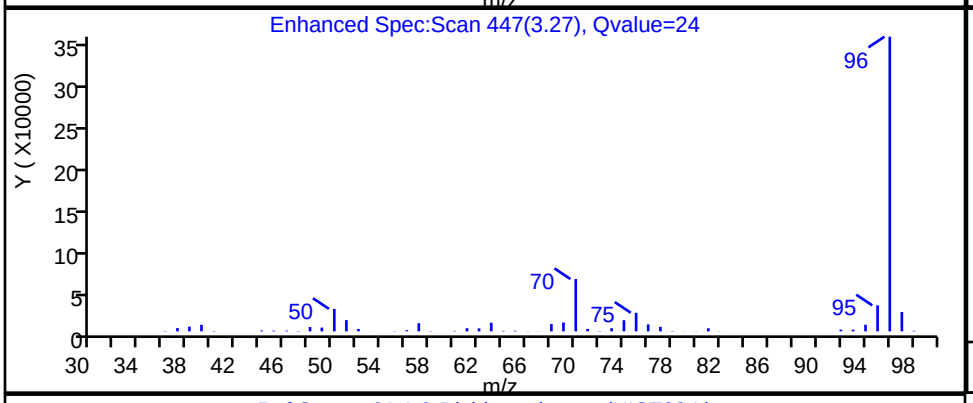
Data File: \\chromfs\Edison\ChromData\CVOAMS15\20200908-116442.b\T38869.D
Injection Date: 08-Sep-2020 22:54:23 Instrument ID: CVOAMS15
Lims ID: MB
Client ID:
Operator ID: ALS Bottle#: 0 Worklist Smp#: 8
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: 8260W_15 Limit Group: VOA - 8260C Water and Solid
Column: DB-624 ( 0.18 mm) Detector MS Quad

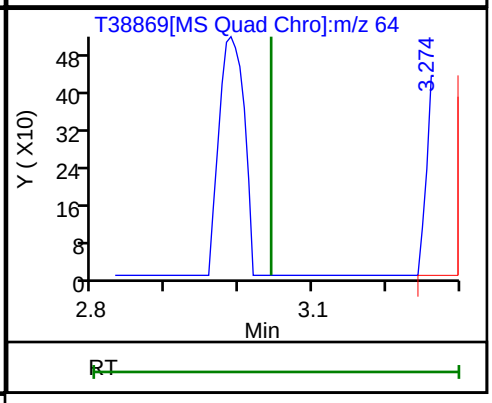
## 61 1,2-Dichloroethane, CAS: 107-06-2

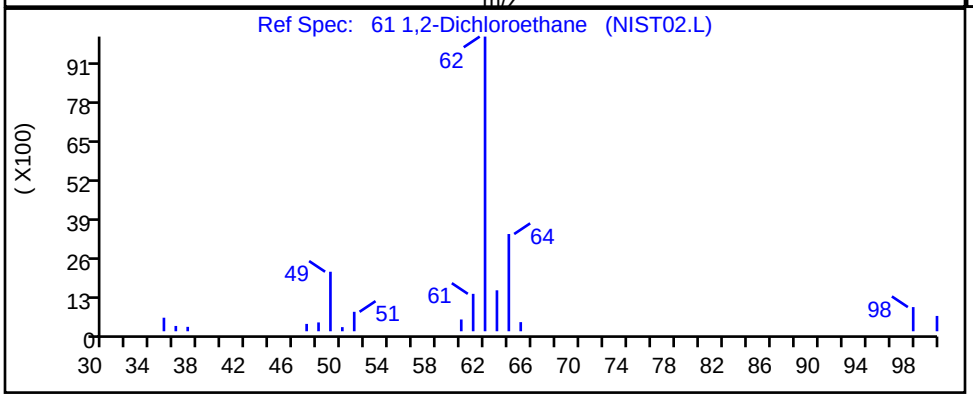
Processing Results




| RT | Mass | Response | Amount |
|---|---|---|---|
| 3.27 | 62.00 | 6938 | 1.432109 |
| 3.27 | 64.00 | 1172 | |

Reviewer: parekhv, 08-Sep-2020 23:41:49
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Edison  Job No.: 460-217659-1

SDG No.:

Client Sample ID:  Lab Sample ID: LCS 460-722587/4

Matrix: Water  Lab File ID: T38865.D

Analysis Method: 8260C  Date Collected:

Sample wt/vol: 5(mL)  Date Analyzed: 09/08/2020 21:08

Soil Aliquot Vol:  Dilution Factor: 1

Soil Extract Vol.:  GC Column: DB-624 ID: 0.18(mm)

% Moisture:  Level: (low/med) Low

Analysis Batch No.: 722587  Units: ug/L

| CAS NO. | COMPOUND NAME | RESULT | Q | RL | MDL |
|---|---|---|---|---|---|
| 71-55-6 | 1,1,1-Trichloroethane | 15.3 | | 1.0 | 0.24 |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 24.2 | | 1.0 | 0.37 |
| 76-13-1 | 1,1,2-Trichloro-1,2,2-trifluoroethane | 18.9 | | 1.0 | 0.31 |
| 79-00-5 | 1,1,2-Trichloroethane | 20.9 | | 1.0 | 0.43 |
| 75-34-3 | 1,1-Dichloroethane | 16.3 | | 1.0 | 0.26 |
| 75-35-4 | 1,1-Dichloroethene | 19.6 | | 1.0 | 0.26 |
| 87-61-6 | 1,2,3-Trichlorobenzene | 21.4 | | 1.0 | 0.36 |
| 120-82-1 | 1,2,4-Trichlorobenzene | 18.0 | | 1.0 | 0.37 |
| 78-87-5 | 1,2-Dichloropropane | 18.9 | | 1.0 | 0.35 |
| 541-73-1 | 1,3-Dichlorobenzene | 20.4 | | 1.0 | 0.34 |
| 106-46-7 | 1,4-Dichlorobenzene | 20.2 | | 1.0 | 0.33 |
| 123-91-1 | 1,4-Dioxane | 487 | | 50 | 28 |
| 78-93-3 | 2-Butanone (MEK) | 98.0 | | 5.0 | 1.9 |
| 591-78-6 | 2-Hexanone | 99.9 | | 5.0 | 1.1 |
| 108-10-1 | 4-Methyl-2-pentanone (MIBK) | 98.1 | | 5.0 | 1.3 |
| 67-64-1 | Acetone | 94.2 | | 5.0 | 4.4 |
| 71-43-2 | Benzene | 17.9 | | 1.0 | 0.20 |
| 75-25-2 | Bromoform | 18.0 | | 1.0 | 0.54 |
| 74-83-9 | Bromomethane | 18.1 | | 1.0 | 0.55 |
| 75-15-0 | Carbon disulfide | 20.2 | | 1.0 | 0.82 |
| 56-23-5 | Carbon tetrachloride | 14.9 | | 1.0 | 0.21 |
| 108-90-7 | Chlorobenzene | 20.7 | | 1.0 | 0.38 |
| 74-97-5 | Chlorobromomethane | 20.9 | | 1.0 | 0.41 |
| 124-48-1 | Chlorodibromomethane | 19.2 | | 1.0 | 0.28 |
| 75-00-3 | Chloroethane | 21.2 | | 1.0 | 0.32 |
| 67-66-3 | Chloroform | 17.0 | | 1.0 | 0.33 |
| 74-87-3 | Chloromethane | 20.9 | | 1.0 | 0.40 |
| 156-59-2 | cis-1,2-Dichloroethene | 19.4 | | 1.0 | 0.22 |
| 10061-01-5 | cis-1,3-Dichloropropene | 19.1 | | 1.0 | 0.22 |
| 110-82-7 | Cyclohexane | 17.5 | | 1.0 | 0.32 |
| 75-27-4 | Dichlorobromomethane | 16.3 | | 1.0 | 0.34 |
| 75-71-8 | Dichlorodifluoromethane | 14.4 | | 1.0 | 0.31 |
| 100-41-4 | Ethylbenzene | 20.2 | | 1.0 | 0.30 |
| 106-93-4 | Ethylene Dibromide | 20.2 | | 1.0 | 0.50 |
| 98-82-8 | Isopropylbenzene | 19.5 | | 1.0 | 0.34 |

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Edison  Job No.: 460-217659-1

SDG No.:

Client Sample ID:  Lab Sample ID: LCS 460-722587/4

Matrix: Water  Lab File ID: T38865.D

Analysis Method: 8260C  Date Collected:

Sample wt/vol: 5(mL)  Date Analyzed: 09/08/2020 21:08

Soil Aliquot Vol:  Dilution Factor: 1

Soil Extract Vol.:  GC Column: DB-624  ID: 0.18(mm)

% Moisture:  Level: (low/med) Low

Analysis Batch No.: 722587  Units: ug/L

| CAS NO. | COMPOUND NAME | RESULT | Q | RL | MDL |
|---|---|---|---|---|---|
| 79-20-9 | Methyl acetate | 38.2 | | 5.0 | 0.79 |
| 1634-04-4 | Methyl tert-butyl ether | 17.5 | | 1.0 | 0.47 |
| 108-87-2 | Methylcyclohexane | 18.7 | | 1.0 | 0.26 |
| 75-09-2 | Methylene Chloride | 21.2 | | 1.0 | 0.32 |
| 179601-23-1 | m-Xylene & p-Xylene | 19.7 | | 1.0 | 0.30 |
| 95-47-6 | o-Xylene | 20.1 | | 1.0 | 0.36 |
| 100-42-5 | Styrene | 21.0 | | 1.0 | 0.42 |
| 127-18-4 | Tetrachloroethene | 17.0 | | 1.0 | 0.25 |
| 108-88-3 | Toluene | 18.1 | | 1.0 | 0.38 |
| 156-60-5 | trans-1,2-Dichloroethene | 20.0 | | 1.0 | 0.24 |
| 10061-02-6 | trans-1,3-Dichloropropene | 18.5 | | 1.0 | 0.49 |
| 79-01-6 | Trichloroethene | 18.4 | | 1.0 | 0.31 |
| 75-69-4 | Trichlorofluoromethane | 14.8 | | 1.0 | 0.32 |
| 75-01-4 | Vinyl chloride | 19.9 | | 1.0 | 0.17 |
| 107-06-2 | 1,2-Dichloroethane | 13.3 | | 1.0 | 0.43 |
| 95-50-1 | 1,2-Dichlorobenzene | 20.9 | | 1.0 | 0.43 |
| 96-12-8 | 1,2-Dibromo-3-Chloropropane | 18.5 | | 1.0 | 0.38 |

| CAS NO. | SURROGATE | %REC | Q | LIMITS |
|---|---|---|---|---|
| 17060-07-0 | 1,2-Dichloroethane-d4 (Surr) | 74 | X | 75-123 |
| 460-00-4 | 4-Bromofluorobenzene | 85 | | 76-120 |
| 1868-53-7 | Dibromofluoromethane (Surr) | 86 | | 77-124 |
| 2037-26-5 | Toluene-d8 (Surr) | 96 | | 80-120 |

Eurofins TestAmerica, Edison
Target Compound Quantitation Report

Data File: \\chromfs\Edison\ChromData\CVOAMS15\20200908-116442.b\T38865.D
Lims ID: LCS
Client ID:
Sample Type: LCS
Inject. Date: 08-Sep-2020 21:08:48 ALS Bottle#: 0 Worklist Smp#: 4
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: LCS
Misc. Info.: 460-0116442-004
Operator ID: Instrument ID: CVOAMS15

Method: \\chromfs\Edison\ChromData\CVOAMS15\20200908-116442.b\8260W_15.m
Limit Group: VOA - 8260C Water and Solid
Last Update: 09-Sep-2020 11:20:41 Calib Date: 04-Sep-2020 15:01:54
Integrator: RTE ID Type: RT Order ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Edison\ChromData\CVOAMS15\20200904-116301.b\T38701.D

Column 1 : DB-624 ( 0.18 mm) Det: MS Quad
Process Host: CTX1022

First Level Reviewer: parekhv Date: 08-Sep-2020 23:43:00

| Compound | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q | Response | Cal Amt ug/l | OnCol Amt ug/l | Flags |
|---|---|---|---|---|---|---|---|---|---|
| 1 Monochloropentafluoroethane | 119 | 0.586 | 0.586 | 0.000 | 24 | 3734 | 20.0 | 5.77 | |
| 3 Chlorotrifluoroethene | 116 | 0.635 | 0.635 | 0.000 | 59 | 15588 | 20.0 | 11.4 | |
| 2 1,1-Difluoroethane | 65 | 0.641 | 0.635 | 0.006 | 94 | 30701 | 20.0 | 18.3 | |
| 4 Dichlorodifluoromethane | 85 | 0.653 | 0.647 | 0.006 | 100 | 74566 | 20.0 | 14.4 | |
| 5 Chlorodifluoromethane | 67 | 0.659 | 0.653 | 0.006 | 96 | 10522 | 20.0 | 15.4 | |
| 6 Chloromethane | 50 | 0.726 | 0.726 | 0.000 | 99 | 59654 | 20.0 | 20.9 | |
| 7 Vinyl chloride | 62 | 0.769 | 0.769 | 0.000 | 98 | 76443 | 20.0 | 19.9 | |
| 8 Butadiene | 54 | 0.787 | 0.787 | 0.000 | 90 | 62887 | 20.0 | 19.5 | |
| 9 Bromomethane | 94 | 0.909 | 0.909 | 0.000 | 98 | 29162 | 20.0 | 18.1 | |
| 10 Chloroethane | 64 | 0.952 | 0.952 | 0.000 | 96 | 40306 | 20.0 | 21.2 | |
| 11 Dichlorofluoromethane | 67 | 1.043 | 1.043 | 0.000 | 89 | 93978 | 20.0 | 15.6 | |
| 12 Trichlorofluoromethane | 101 | 1.068 | 1.068 | 0.000 | 95 | 90358 | 20.0 | 14.8 | |
| 13 Pentane | 72 | 1.110 | 1.104 | 0.006 | 94 | 15992 | 40.0 | 29.8 | |
| 14 Ethanol | 45 | 1.165 | 1.165 | 0.000 | 94 | 9237 | 800.0 | 703.4 | |
| 15 Ethyl ether | 59 | 1.208 | 1.208 | 0.000 | 57 | 46675 | 20.0 | 19.3 | |
| 16 1,2-Dichloro-1,1,2-trifluoroetha | 117 | 1.214 | 1.214 | 0.000 | 81 | 67662 | 20.0 | 19.1 | |
| 17 2-Methyl-1,3-butadiene | 53 | 1.214 | 1.214 | 0.000 | 76 | 44445 | 20.0 | 16.3 | |
| 18 1,1,1-Trifluoro-2,2-dichloroetha | 83 | 1.244 | 1.244 | 0.000 | 97 | 109147 | 20.0 | 20.7 | |
| 19 Acrolein | 56 | 1.269 | 1.269 | 0.000 | 95 | 14104 | 40.0 | 44.1 | |
| 20 1,1-Dichloroethene | 96 | 1.318 | 1.312 | 0.006 | 85 | 66826 | 20.0 | 19.6 | |
| 21 1,1,2-Trichloro-1,2,2-trifluoroe | 101 | 1.318 | 1.318 | 0.000 | 78 | 69457 | 20.0 | 18.9 | |
| 22 Acetone | 43 | 1.348 | 1.342 | 0.006 | 91 | 64435 | 100.0 | 94.2 | |
| 23 Iodomethane | 142 | 1.391 | 1.391 | 0.000 | 98 | 43711 | 20.0 | 23.2 | |
| 24 Carbon disulfide | 76 | 1.421 | 1.421 | 0.000 | 98 | 221702 | 20.0 | 20.2 | |
| 25 Isopropyl alcohol | 45 | 1.427 | 1.427 | 0.000 | 31 | 31082 | 200.0 | 225.5 | |
| 26 Acetonitrile | 40 | 1.494 | 1.494 | 0.000 | 84 | 33582 | 200.0 | 225.8 | |
| 27 3-Chloro-1-propene | 76 | 1.501 | 1.501 | 0.000 | 95 | 46608 | 20.0 | 21.3 | |
| 28 Methyl acetate | 43 | 1.519 | 1.519 | 0.000 | 96 | 71468 | 40.0 | 38.2 | |
| 29 Cyclopentene | 67 | 1.543 | 1.543 | 0.000 | 94 | 152006 | 20.0 | 19.7 | |
| 30 Methylene Chloride | 84 | 1.568 | 1.568 | 0.000 | 82 | 79474 | 20.0 | 21.2 | |
| * 31 TBA-d9 (IS) | 66 | 1.598 | 1.598 | 0.000 | 97 | 45780 | 1000.0 | 1000.0 | |

| Compound | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q | Response | Cal Amt ug/l | OnCol Amt ug/l | Flags |
|---|---|---|---|---|---|---|---|---|---|
| 32 2-Methyl-2-propanol | 59 | 1.647 | 1.641 | 0.006 | 98 | 48546 | 200.0 | 171.2 | |
| 33 Acrylonitrile | 53 | 1.708 | 1.702 | 0.006 | 96 | 196860 | 200.0 | 198.2 | |
| 34 trans-1,2-Dichloroethene | 96 | 1.720 | 1.720 | 0.000 | 85 | 75949 | 20.0 | 20.0 | |
| 35 Methyl tert-butyl ether | 73 | 1.726 | 1.726 | 0.000 | 95 | 165737 | 20.0 | 17.5 | |
| 36 Hexane | 57 | 1.891 | 1.891 | 0.000 | 84 | 63487 | 20.0 | 16.5 | |
| 37 1,1-Dichloroethane | 63 | 1.970 | 1.970 | 0.000 | 99 | 100532 | 20.0 | 16.3 | |
| 38 Vinyl acetate | 86 | 2.019 | 2.019 | 0.000 | 99 | 25427 | 40.0 | 48.0 | |
| 39 2-Chloro-1,3-butadiene | 88 | 2.031 | 2.031 | 0.000 | 75 | 63123 | 20.0 | 17.9 | |
| 40 Isopropyl ether | 45 | 2.031 | 2.031 | 0.000 | 77 | 138799 | 20.0 | 15.8 | |
| 41 Tert-butyl ethyl ether | 59 | 2.275 | 2.275 | 0.000 | 91 | 161771 | 20.0 | 17.5 | |
| * 42 2-Butanone-d5 | 46 | 2.336 | 2.336 | 0.000 | 84 | 251099 | 250.0 | 250.0 | |
| 44 2,2-Dichloropropane | 97 | 2.354 | 2.354 | 0.000 | 78 | 24437 | 20.0 | 18.5 | |
| 43 cis-1,2-Dichloroethene | 96 | 2.360 | 2.360 | 0.000 | 97 | 82702 | 20.0 | 19.4 | |
| 45 2-Butanone (MEK) | 43 | 2.378 | 2.378 | 0.000 | 95 | 98978 | 100.0 | 98.0 | |
| 46 Propionitrile | 54 | 2.421 | 2.415 | 0.006 | 99 | 71351 | 200.0 | 205.0 | |
| 47 Ethyl acetate | 70 | 2.433 | 2.433 | 0.000 | 98 | 10486 | 40.0 | 39.8 | |
| 48 Methyl acrylate | 55 | 2.458 | 2.452 | 0.006 | 96 | 43807 | 20.0 | 15.7 | |
| 50 Methacrylonitrile | 67 | 2.531 | 2.525 | 0.006 | 80 | 267513 | 200.0 | 208.2 | |
| 49 Chlorobromomethane | 128 | 2.531 | 2.525 | 0.006 | 52 | 42662 | 20.0 | 20.9 | |
| 51 Tetrahydrofuran | 72 | 2.573 | 2.573 | 0.000 | 75 | 16652 | 40.0 | 51.2 | |
| 52 Chloroform | 83 | 2.598 | 2.598 | 0.000 | 98 | 115234 | 20.0 | 17.0 | |
| $ 53 Dibromofluoromethane (Surr) | 113 | 2.720 | 2.720 | 0.000 | 96 | 178546 | 50.0 | 43.1 | |
| 54 1,1,1-Trichloroethane | 97 | 2.726 | 2.726 | 0.000 | 69 | 96899 | 20.0 | 15.3 | |
| 55 Cyclohexane | 84 | 2.769 | 2.769 | 0.000 | 82 | 88512 | 20.0 | 17.5 | |
| 56 Carbon tetrachloride | 117 | 2.860 | 2.854 | 0.006 | 83 | 79734 | 20.0 | 14.9 | |
| 57 1,1-Dichloropropene | 75 | 2.860 | 2.860 | 0.000 | 92 | 82354 | 20.0 | 15.6 | |
| $ 58 1,2-Dichloroethane-d4 (Surr) | 65 | 2.982 | 2.982 | 0.000 | 89 | 155717 | 50.0 | 37.2 | |
| 59 Isobutyl alcohol | 43 | 3.012 | 3.012 | 0.000 | 46 | 35768 | 500.0 | 420.3 | |
| 60 Benzene | 78 | 3.025 | 3.025 | 0.000 | 94 | 246264 | 20.0 | 17.9 | |
| 61 1,2-Dichloroethane | 62 | 3.043 | 3.043 | 0.000 | 53 | 62788 | 20.0 | 13.3 | |
| 62 Isooctane | 57 | 3.116 | 3.116 | 0.000 | 99 | 115973 | 20.0 | 17.2 | a |
| 63 Isopropyl acetate | 61 | 3.147 | 3.140 | 0.007 | 89 | 22969 | 20.0 | 21.9 | |
| 64 Tert-amyl methyl ether | 73 | 3.153 | 3.153 | 0.000 | 85 | 178436 | 20.0 | 19.0 | |
| * 65 Fluorobenzene | 96 | 3.275 | 3.275 | 0.000 | 100 | 710514 | 50.0 | 50.0 | |
| 66 n-Heptane | 43 | 3.299 | 3.299 | 0.000 | 67 | 45162 | 20.0 | 16.3 | |
| 67 Trichloroethene | 95 | 3.610 | 3.610 | 0.000 | 93 | 76371 | 20.0 | 18.4 | |
| 68 n-Butanol | 56 | 3.628 | 3.628 | 0.000 | 42 | 28026 | 500.0 | 484.1 | |
| 69 Ethyl acrylate | 55 | 3.774 | 3.774 | 0.000 | 97 | 124521 | 20.0 | 17.6 | |
| 70 Methylcyclohexane | 83 | 3.787 | 3.787 | 0.000 | 84 | 95378 | 20.0 | 18.7 | |
| 71 1,2-Dichloropropane | 63 | 3.817 | 3.817 | 0.000 | 94 | 62126 | 20.0 | 18.9 | |
| 72 Dibromomethane | 93 | 3.933 | 3.927 | 0.006 | 89 | 39832 | 20.0 | 17.3 | |
| * 73 1,4-Dioxane-d8 | 96 | 3.939 | 3.939 | 0.000 | 85 | 32945 | 1000.0 | 1000.0 | |
| 74 1,4-Dioxane | 88 | 3.988 | 3.988 | 0.000 | 37 | 14951 | 400.0 | 487.4 | |
| 75 Methyl methacrylate | 100 | 4.000 | 4.000 | 0.000 | 79 | 35532 | 40.0 | 41.8 | |
| 76 n-Propyl acetate | 43 | 4.085 | 4.085 | 0.000 | 94 | 60867 | 20.0 | 17.5 | |
| 77 Dichlorobromomethane | 83 | 4.116 | 4.116 | 0.000 | 94 | 82183 | 20.0 | 16.3 | |
| 78 2-Nitropropane | 41 | 4.366 | 4.366 | 0.000 | 94 | 16545 | 40.0 | 24.9 | |
| 79 2-Chloroethyl vinyl ether | 63 | 4.488 | 4.488 | 0.000 | 88 | 23017 | 20.0 | 17.7 | |
| 80 Epichlorohydrin | 57 | 4.524 | 4.524 | 0.000 | 98 | 98610 | 400.0 | 431.1 | |
| 81 cis-1,3-Dichloropropene | 75 | 4.610 | 4.610 | 0.000 | 85 | 109084 | 20.0 | 19.1 | |
| 82 4-Methyl-2-pentanone (MIBK) | 43 | 4.829 | 4.829 | 0.000 | 90 | 184602 | 100.0 | 98.1 | |
| $ 83 Toluene-d8 (Surr) | 98 | 4.902 | 4.902 | 0.000 | 99 | 625564 | 50.0 | 48.0 | |

| Compound | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q | Response | Cal Amt ug/l | OnCol Amt ug/l | Flags |
|---|---|---|---|---|---|---|---|---|---|
| 84 Toluene | 91 | 4.982 | 4.982 | 0.000 | 93 | 273230 | 20.0 | 18.1 | |
| 85 trans-1,3-Dichloropropene | 75 | 5.286 | 5.286 | 0.000 | 92 | 94772 | 20.0 | 18.5 | |
| 86 Ethyl methacrylate | 69 | 5.475 | 5.475 | 0.000 | 83 | 70284 | 20.0 | 19.3 | |
| 87 1,1,2-Trichloroethane | 83 | 5.500 | 5.500 | 0.000 | 95 | 53760 | 20.0 | 20.9 | |
| 88 Tetrachloroethene | 166 | 5.640 | 5.640 | 0.000 | 91 | 68988 | 20.0 | 17.0 | |
| 89 1,3-Dichloropropane | 76 | 5.695 | 5.695 | 0.000 | 83 | 88740 | 20.0 | 17.9 | |
| 90 2-Hexanone | 43 | 5.884 | 5.884 | 0.000 | 91 | 127862 | 100.0 | 99.9 | |
| 91 Chlorodibromomethane | 129 | 5.975 | 5.975 | 0.000 | 95 | 72534 | 20.0 | 19.2 | |
| 92 Ethylene Dibromide | 107 | 6.079 | 6.079 | 0.000 | 97 | 67868 | 20.0 | 20.2 | |
| 93 n-Butyl acetate | 43 | 6.116 | 6.116 | 0.000 | 95 | 65711 | 20.0 | 18.4 | |
| * 94 Chlorobenzene-d5 | 117 | 6.743 | 6.743 | 0.000 | 84 | 510085 | 50.0 | 50.0 | |
| 95 Chlorobenzene | 112 | 6.786 | 6.786 | 0.000 | 97 | 198878 | 20.0 | 20.7 | |
| 96 1,1,1,2-Tetrachloroethane | 131 | 6.932 | 6.932 | 0.000 | 96 | 70510 | 20.0 | 19.3 | |
| 97 Ethylbenzene | 106 | 6.993 | 6.993 | 0.000 | 97 | 102268 | 20.0 | 20.2 | |
| 98 m-Xylene & p-Xylene | 106 | 7.176 | 7.176 | 0.000 | 0 | 123582 | 20.0 | 19.7 | |
| 99 o-Xylene | 106 | 7.743 | 7.743 | 0.000 | 94 | 117423 | 20.0 | 20.1 | |
| 100 Styrene | 104 | 7.774 | 7.774 | 0.000 | 95 | 196456 | 20.0 | 21.0 | |
| 101 n-Butyl acrylate | 73 | 7.865 | 7.865 | 0.000 | 98 | 47490 | 20.0 | 23.8 | |
| 102 Bromoform | 173 | 7.987 | 7.981 | 0.006 | 95 | 44878 | 20.0 | 18.0 | |
| 103 Amyl acetate (mixed isomers) | 43 | 8.255 | 8.255 | 0.000 | 92 | 83596 | 20.0 | 23.0 | |
| 104 Isopropylbenzene | 105 | 8.341 | 8.341 | 0.000 | 95 | 282777 | 20.0 | 19.5 | |
| $ 105 4-Bromofluorobenzene | 174 | 8.530 | 8.530 | 0.000 | 88 | 178725 | 50.0 | 42.5 | |
| 106 Bromobenzene | 156 | 8.700 | 8.700 | 0.000 | 98 | 73271 | 20.0 | 20.3 | |
| 107 1,1,2,2-Tetrachloroethane | 83 | 8.859 | 8.859 | 0.000 | 92 | 81275 | 20.0 | 24.2 | |
| 108 1,2,3-Trichloropropane | 110 | 8.865 | 8.865 | 0.000 | 82 | 21916 | 20.0 | 21.6 | |
| 109 trans-1,4-Dichloro-2-butene | 53 | 8.956 | 8.956 | 0.000 | 90 | 17451 | 20.0 | 19.4 | |
| 110 N-Propylbenzene | 91 | 8.993 | 8.993 | 0.000 | 99 | 338436 | 20.0 | 21.3 | |
| 111 2-Chlorotoluene | 91 | 9.048 | 9.048 | 0.000 | 95 | 204791 | 20.0 | 22.3 | |
| 112 4-Ethyltoluene | 105 | 9.194 | 9.194 | 0.000 | 99 | 262778 | 20.0 | 21.3 | |
| 113 4-Chlorotoluene | 91 | 9.237 | 9.237 | 0.000 | 98 | 210349 | 20.0 | 21.2 | |
| 114 1,3,5-Trimethylbenzene | 105 | 9.310 | 9.310 | 0.000 | 92 | 210541 | 20.0 | 21.1 | |
| 115 Butyl Methacrylate | 87 | 9.621 | 9.621 | 0.000 | 84 | 77062 | 20.0 | 22.7 | |
| 116 tert-Butylbenzene | 119 | 9.810 | 9.810 | 0.000 | 91 | 174035 | 20.0 | 20.1 | |
| 117 1,2,4-Trimethylbenzene | 105 | 9.895 | 9.895 | 0.000 | 97 | 208892 | 20.0 | 21.2 | |
| 118 sec-Butylbenzene | 105 | 10.176 | 10.176 | 0.000 | 99 | 248809 | 20.0 | 21.0 | |
| 119 1,3-Dichlorobenzene | 146 | 10.255 | 10.255 | 0.000 | 96 | 121929 | 20.0 | 20.4 | |
| * 120 1,4-Dichlorobenzene-d4 | 152 | 10.377 | 10.377 | 0.000 | 95 | 222481 | 50.0 | 50.0 | |
| 121 1,4-Dichlorobenzene | 146 | 10.414 | 10.414 | 0.000 | 90 | 123931 | 20.0 | 20.2 | |
| 122 4-Isopropyltoluene | 119 | 10.456 | 10.456 | 0.000 | 88 | 200350 | 20.0 | 20.2 | |
| 123 1,2,3-Trimethylbenzene | 105 | 10.560 | 10.560 | 0.000 | 97 | 203197 | 20.0 | 21.1 | |
| 124 Benzyl chloride | 91 | 10.682 | 10.682 | 0.000 | 98 | 118330 | 20.0 | 19.6 | |
| 125 2,3-Dihydroindene | 117 | 10.834 | 10.834 | 0.000 | 90 | 211282 | 20.0 | 22.1 | |
| 126 1,2-Dichlorobenzene | 146 | 10.999 | 10.999 | 0.000 | 95 | 112593 | 20.0 | 20.9 | |
| 127 p-Diethylbenzene | 119 | 11.109 | 11.109 | 0.000 | 90 | 97423 | 20.0 | 20.7 | |
| 128 n-Butylbenzene | 92 | 11.139 | 11.139 | 0.000 | 97 | 100766 | 20.0 | 21.9 | |
| 129 1,2-Dibromo-3-Chloropropane | 157 | 12.090 | 12.090 | 0.000 | 82 | 12819 | 20.0 | 18.5 | |
| 130 1,2,4,5-Tetramethylbenzene | 119 | 12.133 | 12.133 | 0.000 | 96 | 144595 | 20.0 | 19.6 | |
| 131 1,3,5-Trichlorobenzene | 180 | 12.334 | 12.334 | 0.000 | 96 | 58380 | 20.0 | 19.1 | |
| 132 1,2,4-Trichlorobenzene | 180 | 12.950 | 12.950 | 0.000 | 92 | 45605 | 20.0 | 18.0 | |
| 133 Hexachlorobutadiene | 225 | 13.145 | 13.145 | 0.000 | 56 | 19516 | 20.0 | 17.8 | |
| 134 Naphthalene | 128 | 13.151 | 13.151 | 0.000 | 99 | 125877 | 20.0 | 19.3 | |
| 135 1,2,3-Trichlorobenzene | 180 | 13.370 | 13.370 | 0.000 | 95 | 41874 | 20.0 | 21.4 | |

| Compound | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q | Response | Cal Amt ug/l | OnCol Amt ug/l | Flags |
|---|---|---|---|---|---|---|---|---|---|
| S 136 1,2-Dichloroethene, Total | 100 | | | | 0 | | 40.0 | 39.4 | |
| S 137 Xylenes, Total | 100 | | | | 0 | | 40.0 | 39.9 | |
| S 140 Total BTEX | 1 | | | | 0 | | 100.0 | 96.0 | |
| S 139 1,3-Dichloropropene, Total | 1 | | | | 0 | | 40.0 | 37.6 | |

## QC Flag Legend

Review Flags

a - User Assigned ID

## Reagents:

| | | | | |
|---|---|---|---|---|
| 8260MIX1COMB_00125 | Amount Added: | 20.00 | Units: uL | |
| ACROLEIN W_00112 | Amount Added: | 4.00 | Units: uL | |
| GASES Li_00384 | Amount Added: | 20.00 | Units: uL | |
| 524freon_00027 | Amount Added: | 20.00 | Units: uL | |
| VOA6IS/SURR_00038 | Amount Added: | 5.00 | Units: uL | Run Reagent |

Report Date: 09-Sep-2020 11:21:50 Chrom Revision: 2.3 20-Aug-2020 13:57:12

Eurofins TestAmerica, Edison

Data File: \\chromfs\Edison\ChromData\CVOAMS15\20200908-116442.b\T38865.D

Injection Date: 08-Sep-2020 21:08:48 Instrument ID: CVOAMS15

Lims ID: LCS

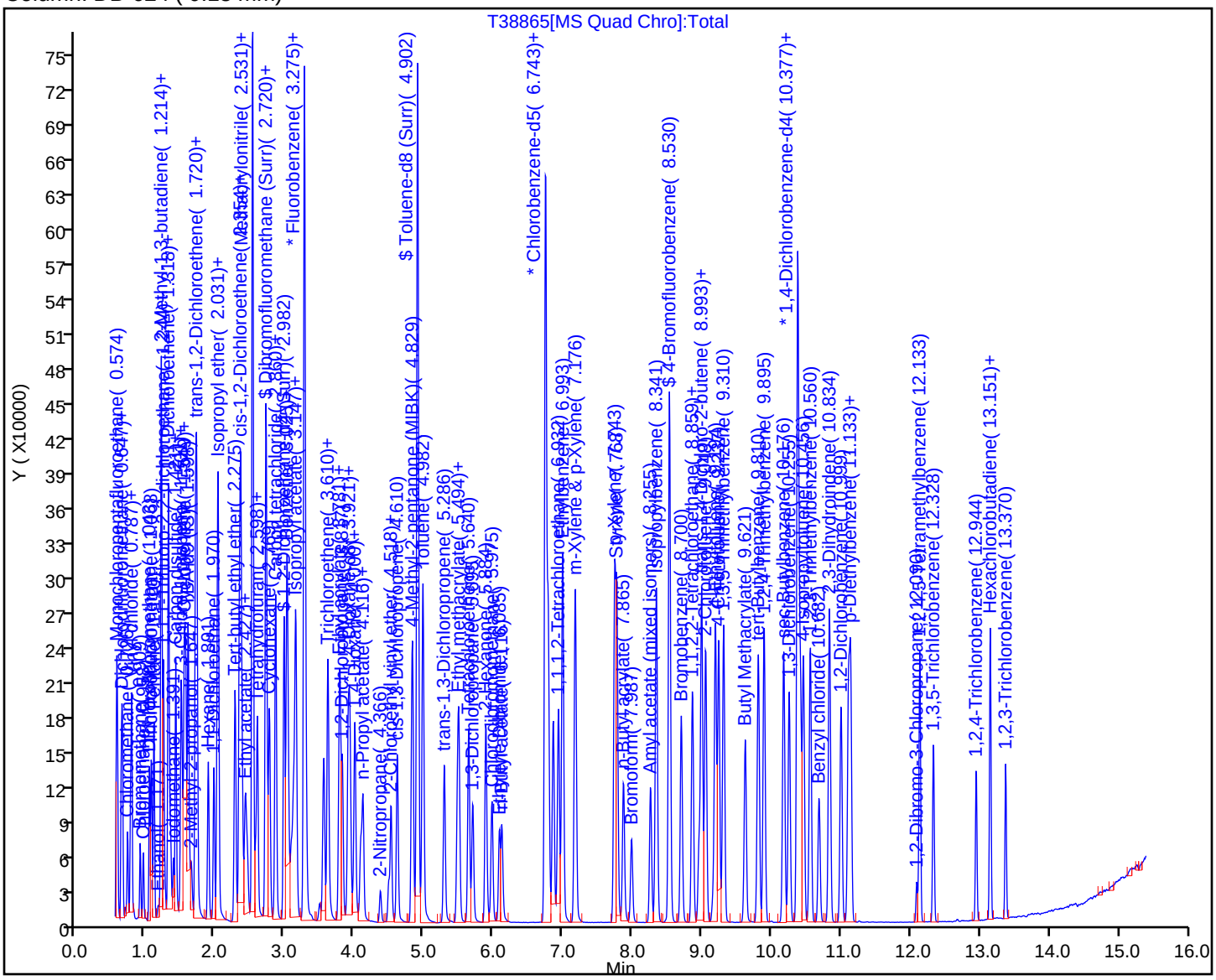
Client ID:

Operator ID: ALS Bottle#: 0 Worklist Smp#: 4

Purge Vol: 5.000 mL Dil. Factor: 1.0000

Method: 8260W_15 Limit Group: VOA - 8260C Water and Solid

Column: DB-624 ( 0.18 mm)



FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Edison  Job No.: 460-217659-1

SDG No.:

Client Sample ID:  Lab Sample ID: LCSD 460-722587/5

Matrix: Water  Lab File ID: T38866.D

Analysis Method: 8260C  Date Collected:

Sample wt/vol: 5(mL)  Date Analyzed: 09/08/2020 21:42

Soil Aliquot Vol:  Dilution Factor: 1

Soil Extract Vol.:  GC Column: DB-624 ID: 0.18(mm)

% Moisture:  Level: (low/med) Low

Analysis Batch No.: 722587  Units: ug/L

| CAS NO. | COMPOUND NAME | RESULT | Q | RL | MDL |
|---|---|---|---|---|---|
| 71-55-6 | 1,1,1-Trichloroethane | 16.4 | | 1.0 | 0.24 |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 22.5 | | 1.0 | 0.37 |
| 76-13-1 | 1,1,2-Trichloro-1,2,2-trifluoroethane | 19.5 | | 1.0 | 0.31 |
| 79-00-5 | 1,1,2-Trichloroethane | 22.3 | | 1.0 | 0.43 |
| 75-34-3 | 1,1-Dichloroethane | 17.8 | | 1.0 | 0.26 |
| 75-35-4 | 1,1-Dichloroethene | 20.2 | | 1.0 | 0.26 |
| 87-61-6 | 1,2,3-Trichlorobenzene | 19.6 | | 1.0 | 0.36 |
| 120-82-1 | 1,2,4-Trichlorobenzene | 19.1 | | 1.0 | 0.37 |
| 78-87-5 | 1,2-Dichloropropane | 23.7 | | 1.0 | 0.35 |
| 541-73-1 | 1,3-Dichlorobenzene | 20.5 | | 1.0 | 0.34 |
| 106-46-7 | 1,4-Dichlorobenzene | 20.6 | | 1.0 | 0.33 |
| 123-91-1 | 1,4-Dioxane | 422 | | 50 | 28 |
| 78-93-3 | 2-Butanone (MEK) | 95.8 | | 5.0 | 1.9 |
| 591-78-6 | 2-Hexanone | 97.3 | | 5.0 | 1.1 |
| 108-10-1 | 4-Methyl-2-pentanone (MIBK) | 94.4 | | 5.0 | 1.3 |
| 67-64-1 | Acetone | 84.2 | | 5.0 | 4.4 |
| 71-43-2 | Benzene | 21.4 | | 1.0 | 0.20 |
| 75-25-2 | Bromoform | 18.2 | | 1.0 | 0.54 |
| 74-83-9 | Bromomethane | 19.7 | | 1.0 | 0.55 |
| 75-15-0 | Carbon disulfide | 20.1 | | 1.0 | 0.82 |
| 56-23-5 | Carbon tetrachloride | 16.7 | | 1.0 | 0.21 |
| 108-90-7 | Chlorobenzene | 20.4 | | 1.0 | 0.38 |
| 74-97-5 | Chlorobromomethane | 21.2 | | 1.0 | 0.41 |
| 124-48-1 | Chlorodibromomethane | 19.4 | | 1.0 | 0.28 |
| 75-00-3 | Chloroethane | 20.5 | | 1.0 | 0.32 |
| 67-66-3 | Chloroform | 20.2 | | 1.0 | 0.33 |
| 74-87-3 | Chloromethane | 22.6 | | 1.0 | 0.40 |
| 156-59-2 | cis-1,2-Dichloroethene | 20.4 | | 1.0 | 0.22 |
| 10061-01-5 | cis-1,3-Dichloropropene | 19.8 | | 1.0 | 0.22 |
| 110-82-7 | Cyclohexane | 19.3 | | 1.0 | 0.32 |
| 75-27-4 | Dichlorobromomethane | 18.0 | | 1.0 | 0.34 |
| 75-71-8 | Dichlorodifluoromethane | 16.0 | | 1.0 | 0.31 |
| 100-41-4 | Ethylbenzene | 20.4 | | 1.0 | 0.30 |
| 106-93-4 | Ethylene Dibromide | 18.4 | | 1.0 | 0.50 |
| 98-82-8 | Isopropylbenzene | 20.2 | | 1.0 | 0.34 |

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Edison  Job No.: 460-217659-1

SDG No.:

Client Sample ID:  Lab Sample ID: LCSD 460-722587/5

Matrix: Water  Lab File ID: T38866.D

Analysis Method: 8260C  Date Collected:

Sample wt/vol: 5(mL)  Date Analyzed: 09/08/2020 21:42

Soil Aliquot Vol:  Dilution Factor: 1

Soil Extract Vol.:  GC Column: DB-624  ID: 0.18(mm)

% Moisture:  Level: (low/med) Low

Analysis Batch No.: 722587  Units: ug/L

| CAS NO. | COMPOUND NAME | RESULT | Q | RL | MDL |
|---|---|---|---|---|---|
| 79-20-9 | Methyl acetate | 33.6 | | 5.0 | 0.79 |
| 1634-04-4 | Methyl tert-butyl ether | 18.2 | | 1.0 | 0.47 |
| 108-87-2 | Methylcyclohexane | 20.6 | | 1.0 | 0.26 |
| 75-09-2 | Methylene Chloride | 20.9 | | 1.0 | 0.32 |
| 179601-23-1 | m-Xylene & p-Xylene | 20.2 | | 1.0 | 0.30 |
| 95-47-6 | o-Xylene | 18.6 | | 1.0 | 0.36 |
| 100-42-5 | Styrene | 20.7 | | 1.0 | 0.42 |
| 127-18-4 | Tetrachloroethene | 18.9 | | 1.0 | 0.25 |
| 108-88-3 | Toluene | 18.9 | | 1.0 | 0.38 |
| 156-60-5 | trans-1,2-Dichloroethene | 21.2 | | 1.0 | 0.24 |
| 10061-02-6 | trans-1,3-Dichloropropene | 19.4 | | 1.0 | 0.49 |
| 79-01-6 | Trichloroethene | 19.5 | | 1.0 | 0.31 |
| 75-69-4 | Trichlorofluoromethane | 15.3 | | 1.0 | 0.32 |
| 75-01-4 | Vinyl chloride | 23.4 | | 1.0 | 0.17 |
| 107-06-2 | 1,2-Dichloroethane | 16.2 | | 1.0 | 0.43 |
| 95-50-1 | 1,2-Dichlorobenzene | 21.3 | | 1.0 | 0.43 |
| 96-12-8 | 1,2-Dibromo-3-Chloropropane | 17.9 | | 1.0 | 0.38 |

| CAS NO. | SURROGATE | %REC | Q | LIMITS |
|---|---|---|---|---|
| 17060-07-0 | 1,2-Dichloroethane-d4 (Surr) | 76 | | 75-123 |
| 460-00-4 | 4-Bromofluorobenzene | 86 | | 76-120 |
| 1868-53-7 | Dibromofluoromethane (Surr) | 86 | | 77-124 |
| 2037-26-5 | Toluene-d8 (Surr) | 92 | | 80-120 |

Eurofins TestAmerica, Edison
Target Compound Quantitation Report

Data File: \\chromfs\Edison\ChromData\CVOAMS15\20200908-116442.b\T38866.D
Lims ID: LCSD
Client ID:
Sample Type: LCSD
Inject. Date: 08-Sep-2020 21:42:33 ALS Bottle#: 0 Worklist Smp#: 5
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: LCSD
Misc. Info.: 460-0116442-005
Operator ID: Instrument ID: CVOAMS15

Method: \\chromfs\Edison\ChromData\CVOAMS15\20200908-116442.b\8260W_15.m
Limit Group: VOA - 8260C Water and Solid
Last Update: 09-Sep-2020 11:20:41 Calib Date: 04-Sep-2020 15:01:54
Integrator: RTE ID Type: RT Order ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Edison\ChromData\CVOAMS15\20200904-116301.b\T38701.D

Column 1 : DB-624 ( 0.18 mm) Det: MS Quad
Process Host: CTX1022

First Level Reviewer: parekhv Date: 08-Sep-2020 23:43:46

| Compound | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q | Response | Cal Amt ug/l | OnCol Amt ug/l | Flags |
|---|---|---|---|---|---|---|---|---|---|
| 1 Monochloropentafluoroethane | 119 | 0.586 | 0.586 | 0.000 | 24 | 4431 | 20.0 | 6.79 | |
| 3 Chlorotrifluoroethene | 116 | 0.635 | 0.635 | 0.000 | 58 | 17218 | 20.0 | 12.4 | |
| 2 1,1-Difluoroethane | 65 | 0.635 | 0.635 | 0.000 | 93 | 34066 | 20.0 | 20.1 | |
| 4 Dichlorodifluoromethane | 85 | 0.653 | 0.647 | 0.006 | 100 | 83393 | 20.0 | 16.0 | |
| 5 Chlorodifluoromethane | 67 | 0.659 | 0.653 | 0.006 | 96 | 10987 | 20.0 | 15.9 | |
| 6 Chloromethane | 50 | 0.726 | 0.726 | 0.000 | 98 | 65093 | 20.0 | 22.6 | |
| 7 Vinyl chloride | 62 | 0.769 | 0.769 | 0.000 | 98 | 90563 | 20.0 | 23.4 | |
| 8 Butadiene | 54 | 0.787 | 0.787 | 0.000 | 90 | 71093 | 20.0 | 21.8 | |
| 9 Bromomethane | 94 | 0.909 | 0.909 | 0.000 | 98 | 33152 | 20.0 | 19.7 | |
| 10 Chloroethane | 64 | 0.952 | 0.952 | 0.000 | 98 | 40633 | 20.0 | 20.5 | |
| 11 Dichlorofluoromethane | 67 | 1.043 | 1.043 | 0.000 | 98 | 98778 | 20.0 | 16.3 | |
| 12 Trichlorofluoromethane | 101 | 1.074 | 1.068 | 0.006 | 96 | 93992 | 20.0 | 15.3 | |
| 13 Pentane | 72 | 1.110 | 1.104 | 0.006 | 96 | 19049 | 40.0 | 35.1 | |
| 14 Ethanol | 45 | 1.165 | 1.165 | 0.000 | 96 | 8905 | 800.0 | 724.1 | |
| 15 Ethyl ether | 59 | 1.208 | 1.208 | 0.000 | 55 | 48282 | 20.0 | 19.8 | |
| 16 1,2-Dichloro-1,1,2-trifluoroetha | 117 | 1.214 | 1.214 | 0.000 | 80 | 70522 | 20.0 | 19.8 | |
| 17 2-Methyl-1,3-butadiene | 53 | 1.214 | 1.214 | 0.000 | 76 | 48648 | 20.0 | 17.7 | |
| 18 1,1,1-Trifluoro-2,2-dichloroetha | 83 | 1.244 | 1.244 | 0.000 | 95 | 104144 | 20.0 | 19.6 | |
| 19 Acrolein | 56 | 1.269 | 1.269 | 0.000 | 96 | 13545 | 40.0 | 45.2 | |
| 20 1,1-Dichloroethene | 96 | 1.318 | 1.312 | 0.006 | 92 | 69412 | 20.0 | 20.2 | |
| 21 1,1,2-Trichloro-1,2,2-trifluoroe | 101 | 1.318 | 1.318 | 0.000 | 80 | 72187 | 20.0 | 19.5 | |
| 22 Acetone | 43 | 1.348 | 1.342 | 0.006 | 91 | 59965 | 100.0 | 84.2 | |
| 23 Iodomethane | 142 | 1.391 | 1.391 | 0.000 | 96 | 43643 | 20.0 | 23.0 | |
| 24 Carbon disulfide | 76 | 1.421 | 1.421 | 0.000 | 97 | 222356 | 20.0 | 20.1 | |
| 25 Isopropyl alcohol | 45 | 1.427 | 1.427 | 0.000 | 30 | 25442 | 200.0 | 197.0 | |
| 26 Acetonitrile | 40 | 1.494 | 1.494 | 0.000 | 83 | 29370 | 200.0 | 189.7 | |
| 27 3-Chloro-1-propene | 76 | 1.500 | 1.501 | 0.000 | 94 | 45365 | 20.0 | 20.5 | |
| 28 Methyl acetate | 43 | 1.519 | 1.519 | 0.000 | 94 | 63248 | 40.0 | 33.6 | |
| 29 Cyclopentene | 67 | 1.543 | 1.543 | 0.000 | 93 | 153613 | 20.0 | 19.8 | |
| 30 Methylene Chloride | 84 | 1.568 | 1.568 | 0.000 | 81 | 79206 | 20.0 | 20.9 | |
| * 31 TBA-d9 (IS) | 66 | 1.598 | 1.598 | 0.000 | 97 | 42898 | 1000.0 | 1000.0 | |

| Compound | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q | Response | Cal Amt ug/l | OnCol Amt ug/l | Flags |
|---|---|---|---|---|---|---|---|---|---|
| 32 2-Methyl-2-propanol | 59 | 1.647 | 1.641 | 0.006 | 98 | 49384 | 200.0 | 185.9 | |
| 33 Acrylonitrile | 53 | 1.702 | 1.702 | 0.000 | 96 | 193360 | 200.0 | 193.0 | |
| 34 trans-1,2-Dichloroethene | 96 | 1.720 | 1.720 | 0.000 | 87 | 81087 | 20.0 | 21.2 | |
| 35 Methyl tert-butyl ether | 73 | 1.726 | 1.726 | 0.000 | 95 | 174289 | 20.0 | 18.2 | |
| 36 Hexane | 57 | 1.891 | 1.891 | 0.000 | 86 | 65349 | 20.0 | 16.8 | |
| 37 1,1-Dichloroethane | 63 | 1.970 | 1.970 | 0.000 | 99 | 110632 | 20.0 | 17.8 | |
| 38 Vinyl acetate | 86 | 2.019 | 2.019 | 0.000 | 99 | 27666 | 40.0 | 50.2 | |
| 39 2-Chloro-1,3-butadiene | 88 | 2.031 | 2.031 | 0.000 | 74 | 69792 | 20.0 | 19.6 | |
| 40 Isopropyl ether | 45 | 2.031 | 2.031 | 0.000 | 80 | 159151 | 20.0 | 18.0 | |
| 41 Tert-butyl ethyl ether | 59 | 2.275 | 2.275 | 0.000 | 91 | 168919 | 20.0 | 18.1 | |
| * 42 2-Butanone-d5 | 46 | 2.336 | 2.336 | 0.000 | 87 | 261439 | 250.0 | 250.0 | |
| 44 2,2-Dichloropropane | 97 | 2.360 | 2.354 | 0.006 | 74 | 25747 | 20.0 | 19.3 | |
| 43 cis-1,2-Dichloroethene | 96 | 2.360 | 2.360 | 0.000 | 97 | 87813 | 20.0 | 20.4 | |
| 45 2-Butanone (MEK) | 43 | 2.378 | 2.378 | 0.000 | 96 | 100774 | 100.0 | 95.8 | |
| 46 Propionitrile | 54 | 2.415 | 2.415 | 0.000 | 99 | 70266 | 200.0 | 215.5 | |
| 47 Ethyl acetate | 70 | 2.439 | 2.433 | 0.006 | 98 | 12373 | 40.0 | 45.1 | |
| 48 Methyl acrylate | 55 | 2.458 | 2.452 | 0.006 | 97 | 53812 | 20.0 | 19.2 | |
| 50 Methacrylonitrile | 67 | 2.525 | 2.525 | 0.000 | 80 | 270512 | 200.0 | 208.7 | |
| 49 Chlorobromomethane | 128 | 2.531 | 2.525 | 0.006 | 54 | 43568 | 20.0 | 21.2 | |
| 51 Tetrahydrofuran | 72 | 2.573 | 2.573 | 0.000 | 78 | 17831 | 40.0 | 52.7 | |
| 52 Chloroform | 83 | 2.598 | 2.598 | 0.000 | 99 | 138536 | 20.0 | 20.2 | |
| $ 53 Dibromofluoromethane (Surr) | 113 | 2.720 | 2.720 | 0.000 | 97 | 180795 | 50.0 | 43.2 | |
| 54 1,1,1-Trichloroethane | 97 | 2.726 | 2.726 | 0.000 | 70 | 104930 | 20.0 | 16.4 | |
| 55 Cyclohexane | 84 | 2.769 | 2.769 | 0.000 | 81 | 98246 | 20.0 | 19.3 | |
| 56 Carbon tetrachloride | 117 | 2.860 | 2.854 | 0.006 | 86 | 90111 | 20.0 | 16.7 | |
| 57 1,1-Dichloropropene | 75 | 2.860 | 2.860 | 0.000 | 94 | 99511 | 20.0 | 18.6 | |
| $ 58 1,2-Dichloroethane-d4 (Surr) | 65 | 2.982 | 2.982 | 0.000 | 97 | 159580 | 50.0 | 37.8 | |
| 59 Isobutyl alcohol | 43 | 3.012 | 3.012 | 0.000 | 44 | 40793 | 500.0 | 511.5 | |
| 60 Benzene | 78 | 3.025 | 3.025 | 0.000 | 94 | 295674 | 20.0 | 21.4 | |
| 61 1,2-Dichloroethane | 62 | 3.043 | 3.043 | 0.000 | 60 | 76816 | 20.0 | 16.2 | |
| 62 Isooctane | 57 | 3.116 | 3.116 | 0.000 | 99 | 125669 | 20.0 | 18.5 | a |
| 63 Isopropyl acetate | 61 | 3.140 | 3.140 | 0.000 | 92 | 23025 | 20.0 | 21.7 | |
| 64 Tert-amyl methyl ether | 73 | 3.153 | 3.153 | 0.000 | 85 | 179687 | 20.0 | 18.9 | |
| * 65 Fluorobenzene | 96 | 3.275 | 3.275 | 0.000 | 100 | 716601 | 50.0 | 50.0 | |
| 66 n-Heptane | 43 | 3.299 | 3.299 | 0.000 | 71 | 43591 | 20.0 | 15.6 | |
| 67 Trichloroethene | 95 | 3.610 | 3.610 | 0.000 | 95 | 81676 | 20.0 | 19.5 | |
| 68 n-Butanol | 56 | 3.628 | 3.628 | 0.000 | 43 | 32183 | 500.0 | 593.2 | |
| 69 Ethyl acrylate | 55 | 3.774 | 3.774 | 0.000 | 97 | 140602 | 20.0 | 19.7 | |
| 70 Methylcyclohexane | 83 | 3.787 | 3.787 | 0.000 | 85 | 106005 | 20.0 | 20.6 | |
| 71 1,2-Dichloropropane | 63 | 3.817 | 3.817 | 0.000 | 94 | 78480 | 20.0 | 23.7 | |
| 72 Dibromomethane | 93 | 3.927 | 3.927 | 0.000 | 53 | 46690 | 20.0 | 20.1 | |
| * 73 1,4-Dioxane-d8 | 96 | 3.933 | 3.939 | -0.006 | 92 | 35214 | 1000.0 | 1000.0 | |
| 74 1,4-Dioxane | 88 | 3.988 | 3.988 | 0.000 | 36 | 13834 | 400.0 | 421.9 | |
| 75 Methyl methacrylate | 100 | 4.000 | 4.000 | 0.000 | 79 | 34971 | 40.0 | 40.8 | |
| 76 n-Propyl acetate | 43 | 4.085 | 4.085 | 0.000 | 93 | 49377 | 20.0 | 14.1 | |
| 77 Dichlorobromomethane | 83 | 4.116 | 4.116 | 0.000 | 95 | 91695 | 20.0 | 18.0 | |
| 78 2-Nitropropane | 41 | 4.366 | 4.366 | 0.000 | 96 | 18921 | 40.0 | 28.2 | |
| 79 2-Chloroethyl vinyl ether | 63 | 4.488 | 4.488 | 0.000 | 81 | 13496 | 20.0 | 10.5 | |
| 80 Epichlorohydrin | 57 | 4.524 | 4.524 | 0.000 | 97 | 88012 | 400.0 | 369.6 | |
| 81 cis-1,3-Dichloropropene | 75 | 4.610 | 4.610 | 0.000 | 81 | 112950 | 20.0 | 19.8 | |
| 82 4-Methyl-2-pentanone (MIBK) | 43 | 4.829 | 4.829 | 0.000 | 90 | 185050 | 100.0 | 94.4 | |
| $ 83 Toluene-d8 (Surr) | 98 | 4.902 | 4.902 | 0.000 | 99 | 603388 | 50.0 | 46.2 | |

| Compound | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q | Response | Cal Amt ug/l | OnCol Amt ug/l | Flags |
|---|---|---|---|---|---|---|---|---|---|
| 84 Toluene | 91 | 4.982 | 4.982 | 0.000 | 92 | 285518 | 20.0 | 18.9 | |
| 85 trans-1,3-Dichloropropene | 75 | 5.286 | 5.286 | 0.000 | 92 | 99664 | 20.0 | 19.4 | |
| 86 Ethyl methacrylate | 69 | 5.475 | 5.475 | 0.000 | 82 | 79836 | 20.0 | 21.8 | |
| 87 1,1,2-Trichloroethane | 83 | 5.500 | 5.500 | 0.000 | 94 | 57430 | 20.0 | 22.3 | |
| 88 Tetrachloroethene | 166 | 5.640 | 5.640 | 0.000 | 91 | 77033 | 20.0 | 18.9 | |
| 89 1,3-Dichloropropane | 76 | 5.695 | 5.695 | 0.000 | 86 | 112527 | 20.0 | 22.7 | |
| 90 2-Hexanone | 43 | 5.884 | 5.884 | 0.000 | 89 | 129671 | 100.0 | 97.3 | |
| 91 Chlorodibromomethane | 129 | 5.975 | 5.975 | 0.000 | 96 | 73828 | 20.0 | 19.4 | |
| 92 Ethylene Dibromide | 107 | 6.079 | 6.079 | 0.000 | 98 | 62080 | 20.0 | 18.4 | |
| 93 n-Butyl acetate | 43 | 6.115 | 6.116 | -0.001 | 92 | 41733 | 20.0 | 11.7 | |
| * 94 Chlorobenzene-d5 | 117 | 6.743 | 6.743 | 0.000 | 83 | 511427 | 50.0 | 50.0 | |
| 95 Chlorobenzene | 112 | 6.780 | 6.786 | -0.006 | 97 | 197157 | 20.0 | 20.4 | |
| 96 1,1,1,2-Tetrachloroethane | 131 | 6.932 | 6.932 | 0.000 | 93 | 68262 | 20.0 | 18.7 | |
| 97 Ethylbenzene | 106 | 6.993 | 6.993 | 0.000 | 97 | 103372 | 20.0 | 20.4 | |
| 98 m-Xylene & p-Xylene | 106 | 7.176 | 7.176 | 0.000 | 0 | 126680 | 20.0 | 20.2 | |
| 99 o-Xylene | 106 | 7.743 | 7.743 | 0.000 | 93 | 108825 | 20.0 | 18.6 | |
| 100 Styrene | 104 | 7.774 | 7.774 | 0.000 | 97 | 193364 | 20.0 | 20.7 | |
| 101 n-Butyl acrylate | 73 | 7.865 | 7.865 | 0.000 | 97 | 42487 | 20.0 | 21.2 | |
| 102 Bromoform | 173 | 7.981 | 7.981 | 0.000 | 95 | 45507 | 20.0 | 18.2 | |
| 103 Amyl acetate (mixed isomers) | 43 | 8.255 | 8.255 | 0.000 | 92 | 68920 | 20.0 | 18.4 | |
| 104 Isopropylbenzene | 105 | 8.341 | 8.341 | 0.000 | 95 | 293479 | 20.0 | 20.2 | |
| $ 105 4-Bromofluorobenzene | 174 | 8.530 | 8.530 | 0.000 | 91 | 181109 | 50.0 | 43.0 | |
| 106 Bromobenzene | 156 | 8.700 | 8.700 | 0.000 | 95 | 76677 | 20.0 | 20.5 | |
| 107 1,1,2,2-Tetrachloroethane | 83 | 8.859 | 8.859 | 0.000 | 93 | 78218 | 20.0 | 22.5 | |
| 108 1,2,3-Trichloropropane | 110 | 8.865 | 8.865 | 0.000 | 82 | 20106 | 20.0 | 19.2 | |
| 109 trans-1,4-Dichloro-2-butene | 53 | 8.956 | 8.956 | 0.000 | 92 | 16740 | 20.0 | 18.0 | |
| 110 N-Propylbenzene | 91 | 8.993 | 8.993 | 0.000 | 99 | 329340 | 20.0 | 20.1 | |
| 111 2-Chlorotoluene | 91 | 9.048 | 9.048 | 0.000 | 95 | 204223 | 20.0 | 21.5 | |
| 112 4-Ethyltoluene | 105 | 9.194 | 9.194 | 0.000 | 98 | 232477 | 20.0 | 18.2 | |
| 113 4-Chlorotoluene | 91 | 9.237 | 9.237 | 0.000 | 96 | 220185 | 20.0 | 21.5 | |
| 114 1,3,5-Trimethylbenzene | 105 | 9.310 | 9.310 | 0.000 | 93 | 210458 | 20.0 | 20.4 | |
| 115 Butyl Methacrylate | 87 | 9.621 | 9.621 | 0.000 | 81 | 75135 | 20.0 | 21.4 | |
| 116 tert-Butylbenzene | 119 | 9.810 | 9.810 | 0.000 | 91 | 178088 | 20.0 | 19.9 | |
| 117 1,2,4-Trimethylbenzene | 105 | 9.895 | 9.895 | 0.000 | 96 | 203061 | 20.0 | 19.9 | |
| 118 sec-Butylbenzene | 105 | 10.176 | 10.176 | 0.000 | 99 | 263988 | 20.0 | 21.6 | |
| 119 1,3-Dichlorobenzene | 146 | 10.255 | 10.255 | 0.000 | 96 | 126330 | 20.0 | 20.5 | |
| * 120 1,4-Dichlorobenzene-d4 | 152 | 10.377 | 10.377 | 0.000 | 95 | 229917 | 50.0 | 50.0 | |
| 121 1,4-Dichlorobenzene | 146 | 10.413 | 10.414 | -0.001 | 91 | 130238 | 20.0 | 20.6 | |
| 122 4-Isopropyltoluene | 119 | 10.456 | 10.456 | 0.000 | 88 | 207069 | 20.0 | 20.2 | |
| 123 1,2,3-Trimethylbenzene | 105 | 10.560 | 10.560 | 0.000 | 98 | 212555 | 20.0 | 21.3 | |
| 124 Benzyl chloride | 91 | 10.682 | 10.682 | 0.000 | 98 | 117526 | 20.0 | 18.9 | |
| 125 2,3-Dihydroindene | 117 | 10.834 | 10.834 | 0.000 | 89 | 214065 | 20.0 | 21.7 | |
| 126 1,2-Dichlorobenzene | 146 | 10.999 | 10.999 | 0.000 | 95 | 118421 | 20.0 | 21.3 | |
| 127 p-Diethylbenzene | 119 | 11.108 | 11.109 | 0.000 | 88 | 101471 | 20.0 | 20.8 | |
| 128 n-Butylbenzene | 92 | 11.139 | 11.139 | 0.000 | 97 | 106008 | 20.0 | 22.3 | |
| 129 1,2-Dibromo-3-Chloropropane | 157 | 12.090 | 12.090 | 0.000 | 88 | 12791 | 20.0 | 17.9 | |
| 130 1,2,4,5-Tetramethylbenzene | 119 | 12.133 | 12.133 | 0.000 | 97 | 149825 | 20.0 | 19.6 | |
| 131 1,3,5-Trichlorobenzene | 180 | 12.334 | 12.334 | 0.000 | 96 | 58877 | 20.0 | 18.6 | |
| 132 1,2,4-Trichlorobenzene | 180 | 12.950 | 12.950 | 0.000 | 93 | 50174 | 20.0 | 19.1 | |
| 133 Hexachlorobutadiene | 225 | 13.151 | 13.145 | 0.006 | 55 | 20407 | 20.0 | 18.0 | |
| 134 Naphthalene | 128 | 13.151 | 13.151 | 0.000 | 99 | 131294 | 20.0 | 19.5 | |
| 135 1,2,3-Trichlorobenzene | 180 | 13.370 | 13.370 | 0.000 | 92 | 39649 | 20.0 | 19.6 | |

| Compound | Sig | RT (min.) | Exp RT (min.) | Dlt RT (min.) | Q | Response | Cal Amt ug/l | OnCol Amt ug/l | Flags |
|---|---|---|---|---|---|---|---|---|---|
| S 136 1,2-Dichloroethene, Total | 100 | | | | 0 | | 40.0 | 41.6 | |
| S 137 Xylenes, Total | 100 | | | | 0 | | 40.0 | 38.8 | |
| S 140 Total BTEX | 1 | | | | 0 | | 100.0 | 99.4 | |
| S 139 1,3-Dichloropropene, Total | 1 | | | | 0 | | 40.0 | 39.2 | |

## QC Flag Legend

Review Flags

a - User Assigned ID

## Reagents:

| | | | | |
|---|---|---|---|---|
| 8260MIX1COMB_00125 | Amount Added: | 20.00 | Units: uL | |
| ACROLEIN W_00112 | Amount Added: | 4.00 | Units: uL | |
| GASES Li_00384 | Amount Added: | 20.00 | Units: uL | |
| 524freon_00027 | Amount Added: | 20.00 | Units: uL | |
| VOA6IS/SURR_00038 | Amount Added: | 5.00 | Units: uL | Run Reagent |

Report Date: 09-Sep-2020 11:22:39 Chrom Revision: 2.3 20-Aug-2020 13:57:12

Eurofins TestAmerica, Edison

Data File: \\chromfs\Edison\ChromData\CVOAMS15\20200908-116442.b\T38866.D

Injection Date: 08-Sep-2020 21:42:33 Instrument ID: CVOAMS15

Lims ID: LCSD

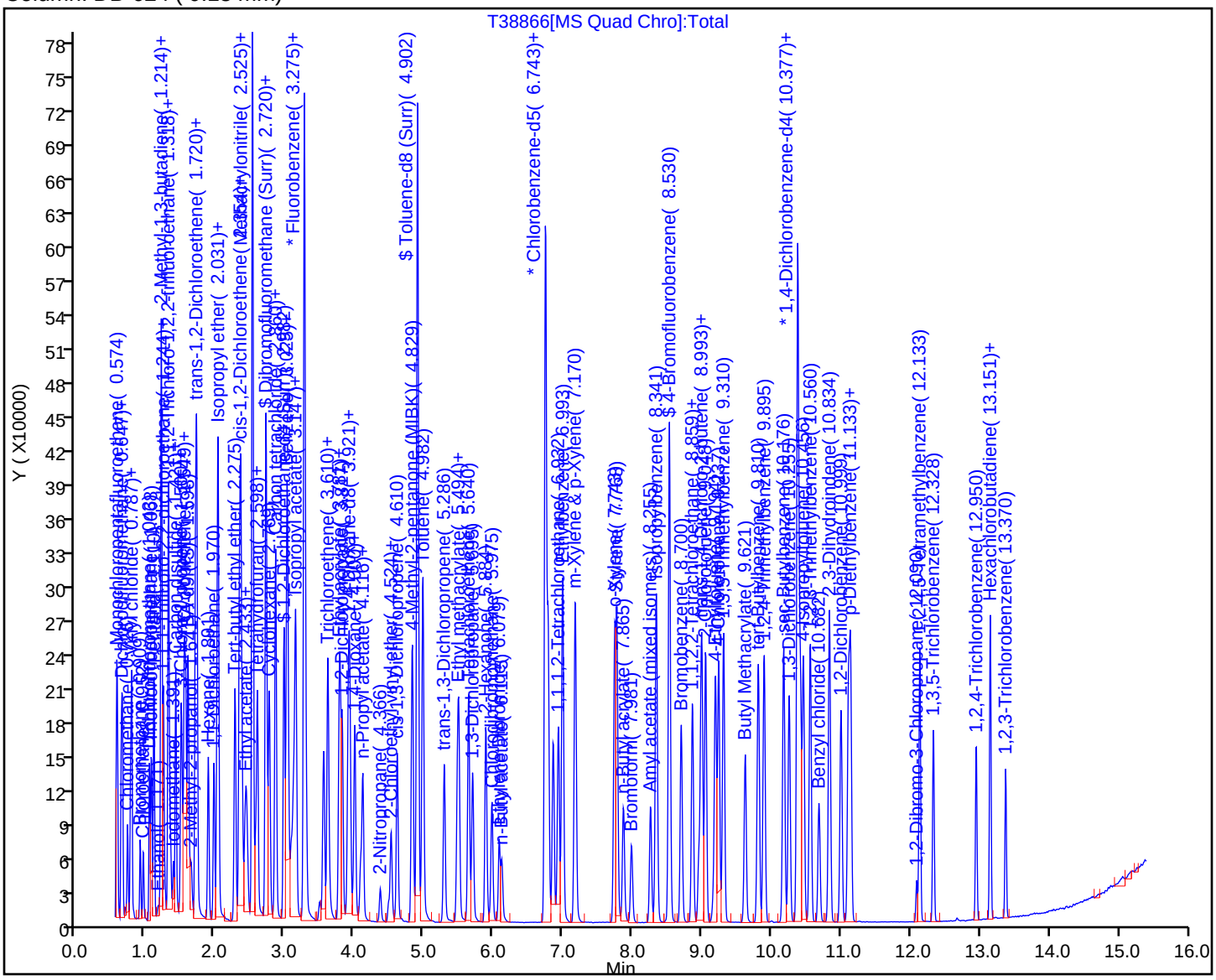
Client ID:

Operator ID: ALS Bottle#: 0 Worklist Smp#: 5

Purge Vol: 5.000 mL Dil. Factor: 1.0000

Method: 8260W_15 Limit Group: VOA - 8260C Water and Solid

Column: DB-624 ( 0.18 mm)



GC/MS VOA ANALYSIS RUN LOG

Lab Name: Eurofins TestAmerica, Edison Job No.: 460-217659-1

SDG No.:

Instrument ID: CVOAMS15 Start Date: 09/04/2020 11:28

Analysis Batch Number: 721958 End Date: 09/04/2020 19:36

| LAB SAMPLE ID | CLIENT SAMPLE ID | DATE ANALYZED | DILUTION FACTOR | LAB FILE ID | COLUMN ID |
|---|---|---|---|---|---|
| BFB 460-721958/1 | | 09/04/2020 11:28 | 1 | T38692.D | DB-624 0.18(mm) |
| STD8 460-721958/3 IC | | 09/04/2020 12:13 | 1 | T38694.D | DB-624 0.18(mm) |
| STD05 460-721958/4 IC | | 09/04/2020 12:37 | 1 | T38695.D | DB-624 0.18(mm) |
| STD1 460-721958/5 IC | | 09/04/2020 13:01 | 1 | T38696.D | DB-624 0.18(mm) |
| STD5 460-721958/6 IC | | 09/04/2020 13:25 | 1 | T38697.D | DB-624 0.18(mm) |
| STD20 460-721958/7 ICIS | | 09/04/2020 13:49 | 1 | T38698.D | DB-624 0.18(mm) |
| STD50 460-721958/8 IC | | 09/04/2020 14:13 | 1 | T38699.D | DB-624 0.18(mm) |
| STD200 460-721958/9 IC | | 09/04/2020 14:37 | 1 | T38700.D | DB-624 0.18(mm) |
| STD500 460-721958/10 IC | | 09/04/2020 15:01 | 1 | T38701.D | DB-624 0.18(mm) |
| ICV 460-721958/17 | | 09/04/2020 19:36 | 1 | T38708.D | DB-624 0.18(mm) |

GC/MS VOA ANALYSIS RUN LOG

Lab Name: Eurofins TestAmerica, Edison Job No.: 460-217659-1

SDG No.:

Instrument ID: CVOAMS15 Start Date: 09/08/2020 20:05

Analysis Batch Number: 722587 End Date: 09/09/2020 05:17

| LAB SAMPLE ID | CLIENT SAMPLE ID | DATE ANALYZED | DILUTION FACTOR | LAB FILE ID | COLUMN ID |
|---|---|---|---|---|---|
| BFB 460-722587/1 | | 09/08/2020 20:05 | 1 | T38862.D | DB-624 0.18(mm) |
| CCVIS 460-722587/2 | | 09/08/2020 20:20 | 1 | T38863.D | DB-624 0.18(mm) |
| LCS 460-722587/4 | | 09/08/2020 21:08 | 1 | T38865.D | DB-624 0.18(mm) |
| LCSD 460-722587/5 | | 09/08/2020 21:42 | 1 | T38866.D | DB-624 0.18(mm) |
| MB 460-722587/8 | | 09/08/2020 22:54 | 1 | T38869.D | DB-624 0.18(mm) |
| 460-217659-8 | FB | 09/08/2020 23:18 | 1 | T38870.D | DB-624 0.18(mm) |
| 460-217659-9 | TB | 09/08/2020 23:42 | 1 | T38871.D | DB-624 0.18(mm) |
| ZZZZZ | | 09/09/2020 00:06 | 1 | | DB-624 0.18(mm) |
| ZZZZZ | | 09/09/2020 00:30 | 1 | | DB-624 0.18(mm) |
| ZZZZZ | | 09/09/2020 00:54 | 1 | | DB-624 0.18(mm) |
| ZZZZZ | | 09/09/2020 01:18 | 1 | | DB-624 0.18(mm) |
| ZZZZZ | | 09/09/2020 01:41 | 1 | | DB-624 0.18(mm) |
| 460-217659-1 | MW-201 | 09/09/2020 02:05 | 1 | T38877.D | DB-624 0.18(mm) |
| 460-217659-2 | MW-207 | 09/09/2020 02:29 | 1 | T38878.D | DB-624 0.18(mm) |
| 460-217659-3 | MW-210 | 09/09/2020 02:53 | 1 | T38879.D | DB-624 0.18(mm) |
| 460-217659-4 | MW-211 | 09/09/2020 03:17 | 1 | T38880.D | DB-624 0.18(mm) |
| 460-217659-5 | MW-214 | 09/09/2020 03:41 | 1 | T38881.D | DB-624 0.18(mm) |
| 460-217659-6 | MW-216 | 09/09/2020 04:05 | 1 | T38882.D | DB-624 0.18(mm) |
| 460-217659-7 | MW-217 | 09/09/2020 04:29 | 1 | T38883.D | DB-624 0.18(mm) |
| ZZZZZ | | 09/09/2020 04:53 | 1 | | DB-624 0.18(mm) |
| ZZZZZ | | 09/09/2020 05:17 | 1 | | DB-624 0.18(mm) |

# GC/MS VOA BATCH WORKSHEET

Lab Name: Eurofins TestAmerica, Edison  Job No.: 460-217659-1

SDG No.:

Batch Number: 721958  Batch Start Date: 09/04/20 11:28  Batch Analyst: Moroney, Christopher J

Batch Method: 8260C  Batch End Date:

| Lab Sample ID | Client Sample ID | Method Chain | Basis | InitialAmount | FinalAmount | 14DIOXINTER 00118 | 524freon 00027 | 8260 SP 00129 | 8260MIX1COMB 00125 |
|---|---|---|---|---|---|---|---|---|---|
| BFB 460-721958/1 | | 8260C | | 5 mL | 5 mL | | | | |
| STD8 460-721958/3 IC | | 8260C | | 5 mL | 5 mL | | | | |
| STD05 460-721958/4 IC | | 8260C | | 5 mL | 5 mL | 15 uL | 5 uL | | 5 uL |
| STD1 460-721958/5 IC | | 8260C | | 5 mL | 5 mL | 30 uL | 10 uL | | 10 uL |
| STD5 460-721958/6 IC | | 8260C | | 5 mL | 5 mL | | 10 uL | | 10 uL |
| STD20 460-721958/7 ICIS | | 8260C | | 5 mL | 5 mL | | 20 uL | | 20 uL |
| STD50 460-721958/8 IC | | 8260C | | 5 mL | 5 mL | | 50 uL | | 50 uL |
| STD200 460-721958/9 IC | | 8260C | | 5 mL | 5 mL | | | | |
| STD500 460-721958/10 IC | | 8260C | | 5 mL | 5 mL | | | | |
| ICV 460-721958/17 | | 8260C | | 5 mL | 5 mL | | | 20 uL | |

| Lab Sample ID | Client Sample ID | Method Chain | Basis | 8FreonHi 00023 | 8FreonsSS 00023 | ACROLEIN SP 00116 | ACROLEIN W 00112 | ACRY/EPIH MIX 00077 | BFB 00026 |
|---|---|---|---|---|---|---|---|---|---|
| BFB 460-721958/1 | | 8260C | | | | | | | 1 uL |
| STD8 460-721958/3 IC | | 8260C | | | | | | 20 uL | |
| STD05 460-721958/4 IC | | 8260C | | | | | 2 uL | | |
| STD1 460-721958/5 IC | | 8260C | | | | | 4 uL | | |
| STD5 460-721958/6 IC | | 8260C | | | | | 4 uL | | |
| STD20 460-721958/7 ICIS | | 8260C | | | | | 4 uL | | |
| STD50 460-721958/8 IC | | 8260C | | | | | 10 uL | | |
| STD200 460-721958/9 IC | | 8260C | | 20 uL | | | 20 uL | | |

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

# GC/MS VOA BATCH WORKSHEET

Lab Name: Eurofins TestAmerica, Edison  Job No.: 460-217659-1

SDG No.:

Batch Number: 721958  Batch Start Date: 09/04/20 11:28  Batch Analyst: Moroney, Christopher J

Batch Method: 8260C  Batch End Date:

| Lab Sample ID | Client Sample ID | Method Chain | Basis | 8FreonHi 00023 | 8FreonsSS 00023 | ACROLEIN SP 00116 | ACROLEIN W 00112 | ACRY/EPIH MIX 00077 | BFB 00026 |
|---|---|---|---|---|---|---|---|---|---|
| STD500 460-721958/10 IC | | 8260C | | 50 uL | | | 40 uL | | |
| ICV 460-721958/17 | | 8260C | | | 20 uL | 4 uL | | | |

| Lab Sample ID | Client Sample ID | Method Chain | Basis | Ethanol mix 00043 | GAS C SP 00372 | GAS Hi 00370 | GASES Li 00384 | MIX 2 Hi 00102 | MIX I Hi 00129 |
|---|---|---|---|---|---|---|---|---|---|
| BFB 460-721958/1 | | 8260C | | | | | | | |
| STD8 460-721958/3 IC | | 8260C | | | | | 2.5 uL | | |
| STD05 460-721958/4 IC | | 8260C | | | | | 5 uL | | |
| STD1 460-721958/5 IC | | 8260C | | | | | 10 uL | | |
| STD5 460-721958/6 IC | | 8260C | | | | | 10 uL | | |
| STD20 460-721958/7 ICIS | | 8260C | | | | | 20 uL | | |
| STD50 460-721958/8 IC | | 8260C | | | | | 50 uL | | |
| STD200 460-721958/9 IC | | 8260C | | 20 uL | | 20 uL | | 20 uL | 20 uL |
| STD500 460-721958/10 IC | | 8260C | | 50 uL | | 50 uL | | 50 uL | 50 uL |
| ICV 460-721958/17 | | 8260C | | | 20 uL | | | | |

| Lab Sample ID | Client Sample ID | Method Chain | Basis | VOA6IS/SURR 00038 | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| BFB 460-721958/1 | | 8260C | | | | | | | |
| STD8 460-721958/3 IC | | 8260C | | 5 uL | | | | | |
| STD05 460-721958/4 IC | | 8260C | | 5 uL | | | | | |
| STD1 460-721958/5 IC | | 8260C | | 5 uL | | | | | |

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

# GC/MS VOA BATCH WORKSHEET

Lab Name: Eurofins TestAmerica, Edison  Job No.: 460-217659-1

SDG No.:

Batch Number: 721958  Batch Start Date: 09/04/20 11:28  Batch Analyst: Moroney, Christopher J

Batch Method: 8260C  Batch End Date:

| Lab Sample ID | Client Sample ID | Method Chain | Basis | VOA6IS/SURR 00038 | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| STD5 460-721958/6 IC | | 8260C | | 5 uL | | | | | |
| STD20 460-721958/7 ICIS | | 8260C | | 5 uL | | | | | |
| STD50 460-721958/8 IC | | 8260C | | 5 uL | | | | | |
| STD200 460-721958/9 IC | | 8260C | | 5 uL | | | | | |
| STD500 460-721958/10 IC | | 8260C | | 5 uL | | | | | |
| ICV 460-721958/17 | | 8260C | | 5 uL | | | | | |

| Batch Notes | |
|---|---|
| | |

| Basis | Basis Description |
|---|---|
| | |

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

# GC/MS VOA BATCH WORKSHEET

Lab Name: Eurofins TestAmerica, Edison  Job No.: 460-217659-1

SDG No.:

Batch Number: 722587  Batch Start Date: 09/08/20 20:05  Batch Analyst: Parekh, Vyomesh B

Batch Method: 8260C  Batch End Date:

| Lab Sample ID | Client Sample ID | Method Chain | Basis | InitialAmount | FinalAmount | Initial pH | 524freon 00027 | 8260MIX1COMB 00125 | ACROLEIN W 00112 |
|---|---|---|---|---|---|---|---|---|---|
| BFB 460-722587/1 | | 8260C | | 5 mL | 5 mL | | | | |
| CCVIS 460-722587/2 | | 8260C | | 5 mL | 5 mL | | 20 uL | 20 uL | 4 uL |
| LCS 460-722587/4 | | 8260C | | 5 mL | 5 mL | | 20 uL | 20 uL | 4 uL |
| LCSD 460-722587/5 | | 8260C | | 5 mL | 5 mL | | 20 uL | 20 uL | 4 uL |
| MB 460-722587/8 | | 8260C | | 5 mL | 5 mL | | | | |
| 460-217659-B-8 | FB | 8260C | T | 5 mL | 5 mL | <2 SU | | | |
| 460-217659-A-9 | TB | 8260C | T | 5 mL | 5 mL | <2 SU | | | |
| 460-217659-A-1 | MW-201 | 8260C | T | 5 mL | 5 mL | <2 SU | | | |
| 460-217659-A-2 | MW-207 | 8260C | T | 5 mL | 5 mL | <2 SU | | | |
| 460-217659-A-3 | MW-210 | 8260C | T | 5 mL | 5 mL | <2 SU | | | |
| 460-217659-A-4 | MW-211 | 8260C | T | 5 mL | 5 mL | <2 SU | | | |
| 460-217659-A-5 | MW-214 | 8260C | T | 5 mL | 5 mL | <2 SU | | | |
| 460-217659-B-6 | MW-216 | 8260C | T | 5 mL | 5 mL | <2 SU | | | |
| 460-217659-B-7 | MW-217 | 8260C | T | 5 mL | 5 mL | <2 SU | | | |

| Lab Sample ID | Client Sample ID | Method Chain | Basis | BFB 00026 | GASES Li 00384 | VOA6IS/SURR 00038 | | | |
|---|---|---|---|---|---|---|---|---|---|
| BFB 460-722587/1 | | 8260C | | 1 uL | | | | | |
| CCVIS 460-722587/2 | | 8260C | | | 20 uL | 5 uL | | | |
| LCS 460-722587/4 | | 8260C | | | 20 uL | 5 uL | | | |
| LCSD 460-722587/5 | | 8260C | | | 20 uL | 5 uL | | | |
| MB 460-722587/8 | | 8260C | | | | 5 uL | | | |
| 460-217659-B-8 | FB | 8260C | T | | | 5 uL | | | |
| 460-217659-A-9 | TB | 8260C | T | | | 5 uL | | | |
| 460-217659-A-1 | MW-201 | 8260C | T | | | 5 uL | | | |
| 460-217659-A-2 | MW-207 | 8260C | T | | | 5 uL | | | |
| 460-217659-A-3 | MW-210 | 8260C | T | | | 5 uL | | | |

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

# GC/MS VOA BATCH WORKSHEET

Lab Name: Eurofins TestAmerica, Edison  Job No.: 460-217659-1

SDG No.:

Batch Number: 722587  Batch Start Date: 09/08/20 20:05  Batch Analyst: Parekh, Vyomesh B

Batch Method: 8260C  Batch End Date:

| Lab Sample ID | Client Sample ID | Method Chain | Basis | BFB 00026 | GASES Li 00384 | VOA6IS/SURR 00038 | | | |
|---|---|---|---|---|---|---|---|---|---|
| 460-217659-A-4 | MW-211 | 8260C | T | | | 5 uL | | | |
| 460-217659-A-5 | MW-214 | 8260C | T | | | 5 uL | | | |
| 460-217659-B-6 | MW-216 | 8260C | T | | | 5 uL | | | |
| 460-217659-B-7 | MW-217 | 8260C | T | | | 5 uL | | | |

| Batch Notes | |
|---|---|
| | |

| Basis | Basis Description |
|---|---|
| T | Total/NA |

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

# Method PFC IDA

## Fluorinated Hydrocarbons by Method PFAS IDA

FORM II
LCMS SURROGATE RECOVERY

Lab Name: Eurofins TestAmerica, Sacramento  Job No.: 460-217659-1

SDG No.:

Matrix: Water  Level: Low

GC Column (1): GeminiC18 3  ID: 3  (mm)

| Client Sample ID | Lab Sample ID | PFBA # | PFPeA # | C3PFBS # | PFHxA # | C4PFHA # | PFHxS # | M262FTS # | PFOA # |
|---|---|---|---|---|---|---|---|---|---|
| MW-201 | 460-217659-1 | 84 | 90 | 100 | 95 | 99 | 106 | 107 | 95 |
| MW-207 | 460-217659-2 | 51 | 55 | 75 | 70 | 70 | 77 | 109 | 69 |
| MW-210 | 460-217659-3 | 56 | 63 | 84 | 71 | 71 | 86 | 85 | 66 |
| MW-211 | 460-217659-4 | 78 | 84 | 99 | 92 | 93 | 99 | 104 | 87 |
| MW-214 | 460-217659-5 | 56 | 62 | 87 | 79 | 79 | 92 | 120 | 76 |
| MW-216 | 460-217659-6 | 34 | 37 | 44 | 43 | 43 | 48 | 59 | 41 |
| MW-217 | 460-217659-7 | 43 | 50 | 79 | 63 | 64 | 85 | 106 | 63 |
| FB | 460-217659-8 | 83 | 87 | 98 | 88 | 86 | 93 | 93 | 81 |
|  | MB 320-410906/1-A | 90 | 94 | 98 | 93 | 91 | 100 | 99 | 90 |
|  | LCS 320-410906/2-A | 90 | 89 | 101 | 93 | 89 | 99 | 93 | 84 |
|  | LCSD 320-410906/3-A | 88 | 91 | 96 | 88 | 87 | 97 | 98 | 85 |

| | QC LIMITS |
|---|---|
| PFBA = 13C4 PFBA | 25-150 |
| PFPeA = 13C5 PFPeA | 25-150 |
| C3PFBS = 13C3 PFBS | 25-150 |
| PFHxA = 13C2 PFHxA | 25-150 |
| PFHxS = 18O2 PFHxS | 25-150 |
| C4PFHA = 13C4 PFHpA | 25-150 |
| M262FTS = M2-6:2 FTS | 25-150 |
| PFOA = 13C4 PFOA | 25-150 |

# Column to be used to flag recovery values

FORM II 537 (modified)

FORM II
LCMS SURROGATE RECOVERY

Lab Name: Eurofins TestAmerica, Sacramento  Job No.: 460-217659-1

SDG No.:

Matrix: Water  Level: Low

GC Column (1): GeminiC18 3  ID: 3  (mm)

| Client Sample ID | Lab Sample ID | PFOS # | PFNA # | PFOSA # | M282FTS # | PFDA # | d3NMFOS # | d5NEFOS # | PFUnA # |
|---|---|---|---|---|---|---|---|---|---|
| MW-201 | 460-217659-1 | 106 | 99 | 93 | 115 | 90 | 91 | 96 | 91 |
| MW-207 | 460-217659-2 | 74 | 67 | 59 | 83 | 64 | 52 | 56 | 56 |
| MW-210 | 460-217659-3 | 81 | 69 | 68 | 89 | 70 | 62 | 66 | 65 |
| MW-211 | 460-217659-4 | 95 | 93 | 79 | 110 | 88 | 76 | 87 | 85 |
| MW-214 | 460-217659-5 | 86 | 80 | 75 | 96 | 79 | 67 | 77 | 80 |
| MW-216 | 460-217659-6 | 43 | 44 | 39 | 55 | 42 | 35 | 38 | 35 |
| MW-217 | 460-217659-7 | 82 | 68 | 67 | 100 | 65 | 62 | 69 | 63 |
| FB | 460-217659-8 | 92 | 86 | 80 | 93 | 82 | 77 | 82 | 77 |
|  | MB 320-410906/1-A | 97 | 91 | 83 | 106 | 90 | 87 | 90 | 91 |
|  | LCS 320-410906/2-A | 94 | 88 | 85 | 105 | 87 | 82 | 84 | 82 |
|  | LCSD 320-410906/3-A | 94 | 87 | 83 | 99 | 82 | 82 | 86 | 85 |

| | QC LIMITS |
|---|---|
| PFOS = 13C4 PFOS | 25-150 |
| PFNA = 13C5 PFNA | 25-150 |
| PFOSA = 13C8 FOSA | 25-150 |
| M282FTS = M2-8:2 FTS | 25-150 |
| PFDA = 13C2 PFDA | 25-150 |
| d3NMFOS = d3-NMeFOSAA | 25-150 |
| d5NEFOS = d5-NEtFOSAA | 25-150 |
| PFUnA = 13C2 PFUnA | 25-150 |

# Column to be used to flag recovery values

FORM II 537 (modified)

FORM II
LCMS SURROGATE RECOVERY

Lab Name: Eurofins TestAmerica, Sacramento  Job No.: 460-217659-1

SDG No.:

Matrix: Water  Level: Low

GC Column (1): GeminiC18 3  ID: 3  (mm)

| Client Sample ID | Lab Sample ID | PFDoA # | PFTDA # |
|---|---|---|---|
| MW-201 | 460-217659-1 | 77 | 88 |
| MW-207 | 460-217659-2 | 49 | 48 |
| MW-210 | 460-217659-3 | 58 | 60 |
| MW-211 | 460-217659-4 | 72 | 76 |
| MW-214 | 460-217659-5 | 70 | 74 |
| MW-216 | 460-217659-6 | 31 | 28 |
| MW-217 | 460-217659-7 | 58 | 52 |
| FB | 460-217659-8 | 77 | 68 |
| | MB 320-410906/1-A | 79 | 79 |
| | LCS 320-410906/2-A | 75 | 73 |
| | LCSD 320-410906/3-A | 75 | 69 |

| | QC LIMITS |
|---|---|
| PFDoA = 13C2 PFDoA | 25-150 |
| PFTDA = 13C2 PFTeDA | 25-150 |

# Column to be used to flag recovery values

FORM II 537 (modified)

FORM III
LCMS LAB CONTROL SAMPLE RECOVERY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 460-217659-1

SDG No.:

Matrix: Water Level: Low Lab File ID: 2020.09.10_A13_PFC_A_060.d

Lab ID: LCS 320-410906/2-A Client ID:

| COMPOUND | SPIKE ADDED (ng/L) | LCS CONCENTRATION (ng/L) | LCS % REC | QC LIMITS REC | # |
|---|---|---|---|---|---|
| Perfluorobutanoic acid (PFBA) | 40.0 | 41.57 | 104 | 76-136 | |
| Perfluoropentanoic acid (PFPeA) | 40.0 | 39.75 | 99 | 71-131 | |
| Perfluorohexanoic acid (PFHxA) | 40.0 | 41.17 | 103 | 73-133 | |
| Perfluoroheptanoic acid (PFHpA) | 40.0 | 41.33 | 103 | 72-132 | |
| Perfluorooctanoic acid (PFOA) | 40.0 | 40.45 | 101 | 70-130 | |
| Perfluorononanoic acid (PFNA) | 40.0 | 42.87 | 107 | 75-135 | |
| Perfluorodecanoic acid (PFDA) | 40.0 | 39.95 | 100 | 76-136 | |
| Perfluoroundecanoic acid (PFUnA) | 40.0 | 40.85 | 102 | 68-128 | |
| Perfluorododecanoic acid (PFDoA) | 40.0 | 42.34 | 106 | 71-131 | |
| Perfluorotridecanoic acid (PFTriA) | 40.0 | 42.64 | 107 | 71-131 | |
| Perfluorotetradecanoic acid (PFTeA) | 40.0 | 39.43 | 99 | 70-130 | |
| Perfluorobutanesulfonic acid (PFBS) | 35.4 | 34.17 | 97 | 67-127 | |
| Perfluorohexanesulfonic acid (PFHxS) | 36.4 | 33.74 | 93 | 59-119 | |
| Perfluoroheptanesulfonic Acid (PFHpS) | 38.1 | 39.47 | 104 | 76-136 | |
| Perfluorooctanesulfonic acid (PFOS) | 37.1 | 38.86 | 105 | 70-130 | |
| Perfluorodecanesulfonic acid (PFDS) | 38.6 | 37.63 | 98 | 71-131 | |
| Perfluorooctanesulfonamide (FOSA) | 40.0 | 40.01 | 100 | 73-133 | |
| N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA) | 40.0 | 42.21 | 106 | 76-136 | |
| N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA) | 40.0 | 38.74 | 97 | 76-136 | |
| 6:2 FTS | 37.9 | 37.38 | 99 | 59-175 | |
| 8:2 FTS | 38.3 | 36.84 | 96 | 75-135 | |
| 13C4 PFBA | 100 | 89.70 | 90 | 25-150 | |
| 13C5 PFPeA | 100 | 89.30 | 89 | 25-150 | |
| 13C2 PFHxA | 100 | 92.65 | 93 | 25-150 | |
| 13C4 PFHpA | 100 | 88.94 | 89 | 25-150 | |
| 13C4 PFOA | 100 | 83.84 | 84 | 25-150 | |
| 13C5 PFNA | 100 | 87.50 | 88 | 25-150 | |
| 13C2 PFDA | 100 | 87.33 | 87 | 25-150 | |
| 13C2 PFUnA | 100 | 82.30 | 82 | 25-150 | |
| 13C2 PFDoA | 100 | 74.70 | 75 | 25-150 | |
| 13C2 PFTeDA | 100 | 72.85 | 73 | 25-150 | |

# Column to be used to flag recovery and RPD values

FORM III 537 (modified)

FORM III
LCMS LAB CONTROL SAMPLE RECOVERY

Lab Name: Eurofins TestAmerica, Sacramento  Job No.: 460-217659-1

SDG No.:

Matrix: Water  Level: Low  Lab File ID: 2020.09.10_A13_PFC_A_060.d

Lab ID: LCS 320-410906/2-A  Client ID:

| COMPOUND | SPIKE ADDED (ng/L) | LCS CONCENTRATION (ng/L) | LCS % REC | QC LIMITS REC | # |
|---|---|---|---|---|---|
| 13C3 PFBS | 93.0 | 93.61 | 101 | 25-150 | |
| 18O2 PFHxS | 94.6 | 93.88 | 99 | 25-150 | |
| 13C4 PFOS | 95.6 | 89.45 | 94 | 25-150 | |
| 13C8 FOSA | 100 | 85.09 | 85 | 25-150 | |
| d3-NMeFOSAA | 100 | 82.21 | 82 | 25-150 | |
| d5-NEtFOSAA | 100 | 84.40 | 84 | 25-150 | |
| M2-6:2 FTS | 95.0 | 88.65 | 93 | 25-150 | |
| M2-8:2 FTS | 95.8 | 100.3 | 105 | 25-150 | |

# Column to be used to flag recovery and RPD values

FORM III 537 (modified)

FORM III
LCMS LAB CONTROL SAMPLE DUPLICATE RECOVERY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 460-217659-1

SDG No.:

Matrix: Water Level: Low Lab File ID: 2020.09.10_A13_PFC_A_061.d

Lab ID: LCSD 320-410906/3-A Client ID:

| COMPOUND | SPIKE ADDED (ng/L) | LCSD CONCENTRATION (ng/L) | LCSD % REC | % RPD | QC LIMITS RPD | QC LIMITS REC | # |
|---|---|---|---|---|---|---|---|
| Perfluorobutanoic acid (PFBA) | 40.0 | 40.94 | 102 | 2 | 30 | 76-136 | |
| Perfluoropentanoic acid (PFPeA) | 40.0 | 37.79 | 94 | 5 | 30 | 71-131 | |
| Perfluorohexanoic acid (PFHxA) | 40.0 | 38.69 | 97 | 6 | 30 | 73-133 | |
| Perfluoroheptanoic acid (PFHpA) | 40.0 | 39.70 | 99 | 4 | 30 | 72-132 | |
| Perfluorooctanoic acid (PFOA) | 40.0 | 39.54 | 99 | 2 | 30 | 70-130 | |
| Perfluorononanoic acid (PFNA) | 40.0 | 39.84 | 100 | 7 | 30 | 75-135 | |
| Perfluorodecanoic acid (PFDA) | 40.0 | 39.91 | 100 | 0 | 30 | 76-136 | |
| Perfluoroundecanoic acid (PFUnA) | 40.0 | 38.05 | 95 | 7 | 30 | 68-128 | |
| Perfluorododecanoic acid (PFDoA) | 40.0 | 42.61 | 107 | 1 | 30 | 71-131 | |
| Perfluorotridecanoic acid (PFTriA) | 40.0 | 38.43 | 96 | 10 | 30 | 71-131 | |
| Perfluorotetradecanoic acid (PFTeA) | 40.0 | 41.06 | 103 | 4 | 30 | 70-130 | |
| Perfluorobutanesulfonic acid (PFBS) | 35.4 | 34.86 | 99 | 2 | 30 | 67-127 | |
| Perfluorohexanesulfonic acid (PFHxS) | 36.4 | 32.49 | 89 | 4 | 30 | 59-119 | |
| Perfluoroheptanesulfonic Acid (PFHpS) | 38.1 | 38.52 | 101 | 2 | 30 | 76-136 | |
| Perfluorooctanesulfonic acid (PFOS) | 37.1 | 36.48 | 98 | 6 | 30 | 70-130 | |
| Perfluorodecanesulfonic acid (PFDS) | 38.6 | 36.88 | 96 | 2 | 30 | 71-131 | |
| Perfluorooctanesulfonamide (FOSA) | 40.0 | 40.35 | 101 | 1 | 30 | 73-133 | |
| N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA) | 40.0 | 41.43 | 104 | 2 | 30 | 76-136 | |
| N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA) | 40.0 | 38.81 | 97 | 0 | 30 | 76-136 | |
| 6:2 FTS | 37.9 | 37.38 | 99 | 0 | 30 | 59-175 | |
| 8:2 FTS | 38.3 | 36.01 | 94 | 2 | 30 | 75-135 | |
| 13C4 PFBA | 100 | 87.55 | 88 | | | 25-150 | |
| 13C5 PFPeA | 100 | 90.68 | 91 | | | 25-150 | |
| 13C2 PFHxA | 100 | 88.41 | 88 | | | 25-150 | |
| 13C4 PFHpA | 100 | 86.93 | 87 | | | 25-150 | |
| 13C4 PFOA | 100 | 84.68 | 85 | | | 25-150 | |
| 13C5 PFNA | 100 | 87.04 | 87 | | | 25-150 | |
| 13C2 PFDA | 100 | 81.83 | 82 | | | 25-150 | |
| 13C2 PFUnA | 100 | 85.38 | 85 | | | 25-150 | |
| 13C2 PFDoA | 100 | 74.73 | 75 | | | 25-150 | |
| 13C2 PFTeDA | 100 | 69.05 | 69 | | | 25-150 | |

# Column to be used to flag recovery and RPD values

FORM III 537 (modified)

FORM III
LCMS LAB CONTROL SAMPLE DUPLICATE RECOVERY

Lab Name: Eurofins TestAmerica, Sacramento  Job No.: 460-217659-1

SDG No.:

Matrix: Water  Level: Low  Lab File ID: 2020.09.10_A13_PFC_A_061.d

Lab ID: LCSD 320-410906/3-A  Client ID:

| COMPOUND | SPIKE ADDED (ng/L) | LCSD CONCENTRATION (ng/L) | LCSD % REC | % RPD | QC LIMITS RPD | QC LIMITS REC | # |
|---|---|---|---|---|---|---|---|
| 13C3 PFBS | 93.0 | 89.56 | 96 | | | 25-150 | |
| 18O2 PFHxS | 94.6 | 91.96 | 97 | | | 25-150 | |
| 13C4 PFOS | 95.6 | 89.44 | 94 | | | 25-150 | |
| 13C8 FOSA | 100 | 82.90 | 83 | | | 25-150 | |
| d3-NMeFOSAA | 100 | 81.93 | 82 | | | 25-150 | |
| d5-NEtFOSAA | 100 | 85.58 | 86 | | | 25-150 | |
| M2-6:2 FTS | 95.0 | 93.12 | 98 | | | 25-150 | |
| M2-8:2 FTS | 95.8 | 95.05 | 99 | | | 25-150 | |

# Column to be used to flag recovery and RPD values

FORM III 537 (modified)

FORM IV
LCMS METHOD BLANK SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento  Job No.: 460-217659-1

SDG No.:

Lab File ID: 2020.09.10_A13_PFC_A_059.d  Lab Sample ID: MB 320-410906/1-A

Matrix: Water  Date Extracted: 09/09/2020 18:39

Instrument ID: A13  Date Analyzed: 09/10/2020 18:07

Level:(Low/Med) Low

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

| CLIENT SAMPLE ID | LAB SAMPLE ID | LAB FILE ID | DATE ANALYZED |
|---|---|---|---|
| | LCS 320-410906/2-A | 2020.09.10_A13_PFC_A_060.d | 09/10/2020 18:17 |
| | LCSD 320-410906/3-A | 2020.09.10_A13_PFC_A_061.d | 09/10/2020 18:26 |
| MW-201 | 460-217659-1 | 2020.09.10_A13_PFC_A_062.d | 09/10/2020 18:36 |
| MW-207 | 460-217659-2 | 2020.09.10_A13_PFC_A_063.d | 09/10/2020 18:45 |
| MW-210 | 460-217659-3 | 2020.09.10_A13_PFC_A_064.d | 09/10/2020 18:54 |
| MW-211 | 460-217659-4 | 2020.09.10_A13_PFC_A_065.d | 09/10/2020 19:04 |
| MW-214 | 460-217659-5 | 2020.09.10_A13_PFC_A_066.d | 09/10/2020 19:13 |
| MW-216 | 460-217659-6 | 2020.09.10_A13_PFC_A_067.d | 09/10/2020 19:23 |
| MW-217 | 460-217659-7 | 2020.09.10_A13_PFC_A_068.d | 09/10/2020 19:32 |
| FB | 460-217659-8 | 2020.09.10_A13_PFC_A_071.d | 09/10/2020 20:00 |

FORM VIII
LCMS INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 460-217659-1

SDG No.:

Sample No.: IC 320-410486/5 Date Analyzed: 09/08/2020 18:30

Instrument ID: A13 GC Column: GeminiC18 3x100 ID: 3(mm)

Lab File ID (Standard): 2020.09.08_A13_PFC_ Heated Purge: (Y/N) N

Calibration ID: 51771

| | | 13PFOA | | | | | |
|---|---|---|---|---|---|---|---|
| | | AREA # | RT # | # | RT # | # | RT # |
| INITIAL CALIBRATION MID-POINT | | 10686922 | 4.06 | | | | |
| UPPER LIMIT | | 16030383 | 4.26 | | | | |
| LOWER LIMIT | | 5343461 | 3.86 | | | | |
| LAB SAMPLE ID | CLIENT SAMPLE ID | | | | | | |
| ICB 320-410486/9 | | 10961287 | 4.06 | | | | |
| ICV 320-410486/10 | | 11250632 | 4.06 | | | | |
| CCV 320-410989/3 CCVIS | | 10441921 | 4.07 | | | | |

13PFOA = 13C2 PFOA

Area Limit = 50%-150% of internal standard area
RT Limit = ± 0.2 minutes of internal standard RT

# Column used to flag values outside QC limits

FORM VIII 537 (MODIFIED)

FORM VIII
LCMS INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 460-217659-1

SDG No.:

Sample No.: CCV 320-410989/3 Date Analyzed: 09/10/2020 10:55

Instrument ID: A13 GC Column: GeminiC18 3x100 ID: 3(mm)

Lab File ID (Standard): 2020.09.10_A13_PFC_ Heated Purge: (Y/N) N

Calibration ID: 51771

| | | 13PFOA | | | | | |
|---|---|---|---|---|---|---|---|
| | | AREA # | RT # | # | RT # | # | RT # |
| 12/24 HOUR STD | | 10441921 | 4.07 | | | | |
| UPPER LIMIT | | 15662882 | 4.27 | | | | |
| LOWER LIMIT | | 5220961 | 3.87 | | | | |
| LAB SAMPLE ID | CLIENT SAMPLE ID | | | | | | |
| CCB 320-410989/1 | | 10666800 | 4.08 | | | | |
| CCVL 320-410989/2 | | 10307380 | 4.08 | | | | |
| CCV 320-411143/1 | | 9979910 | 4.05 | | | | |
| MB 320-410906/1-A | | 11066836 | 4.05 | | | | |
| LCS 320-410906/2-A | | 10619287 | 4.05 | | | | |
| LCSD 320-410906/3-A | | 11572344 | 4.05 | | | | |
| 460-217659-1 | MW-201 | 10461384 | 4.04 | | | | |
| 460-217659-2 | MW-207 | 10527068 | 4.05 | | | | |
| 460-217659-3 | MW-210 | 11157963 | 4.04 | | | | |
| 460-217659-4 | MW-211 | 10452536 | 4.05 | | | | |
| 460-217659-5 | MW-214 | 10775355 | 4.04 | | | | |
| 460-217659-6 | MW-216 | 9896975 | 4.05 | | | | |
| 460-217659-7 | MW-217 | 11890889 | 4.04 | | | | |
| CCV 320-411143/13 | | 10014836 | 4.05 | | | | |
| 460-217659-8 | FB | 10757736 | 4.05 | | | | |
| CCV 320-411143/22 | | 9993829 | 4.05 | | | | |

13PFOA = 13C2 PFOA

Area Limit = 50%-150% of internal standard area
RT Limit = ± 0.2 minutes of internal standard RT

# Column used to flag values outside QC limits

FORM VIII 537 (MODIFIED)

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento  Job No.: 460-217659-1

SDG No.:

Client Sample ID: MW-201  Lab Sample ID: 460-217659-1

Matrix: Water  Lab File ID: 2020.09.10_A13_PFC_A_062.d

Analysis Method: 537 (modified)  Date Collected: 09/03/2020 09:10

Extraction Method: 3535  Date Extracted: 09/09/2020 18:39

Sample wt/vol: 265.7(mL)  Date Analyzed: 09/10/2020 18:36

Con. Extract Vol.: 10.00(mL)  Dilution Factor: 1

Injection Volume: 20(uL)  GC Column: GeminiC18 3x100 ID: 3(mm)

% Moisture:  GPC Cleanup:(Y/N) N

Analysis Batch No.: 411143  Units: ng/L

| CAS NO. | COMPOUND NAME | RESULT | Q | RL | MDL |
|---|---|---|---|---|---|
| 375-22-4 | Perfluorobutanoic acid (PFBA) | 0.51 | J B | 1.88 | 0.33 |
| 2706-90-3 | Perfluoropentanoic acid (PFPeA) | 0.46 | U | 1.88 | 0.46 |
| 307-24-4 | Perfluorohexanoic acid (PFHxA) | 0.55 | U | 1.88 | 0.55 |
| 375-85-9 | Perfluoroheptanoic acid (PFHpA) | 0.24 | U | 1.88 | 0.24 |
| 335-67-1 | Perfluorooctanoic acid (PFOA) | 0.80 | U | 1.88 | 0.80 |
| 375-95-1 | Perfluorononanoic acid (PFNA) | 0.25 | U | 1.88 | 0.25 |
| 335-76-2 | Perfluorodecanoic acid (PFDA) | 0.29 | U | 1.88 | 0.29 |
| 2058-94-8 | Perfluoroundecanoic acid (PFUnA) | 1.04 | U | 1.88 | 1.04 |
| 307-55-1 | Perfluorododecanoic acid (PFDoA) | 0.52 | U | 1.88 | 0.52 |
| 72629-94-8 | Perfluorotridecanoic acid (PFTriA) | 1.22 | U | 1.88 | 1.22 |
| 376-06-7 | Perfluorotetradecanoic acid (PFTeA) | 0.27 | U | 1.88 | 0.27 |
| 375-73-5 | Perfluorobutanesulfonic acid (PFBS) | 0.19 | U | 1.88 | 0.19 |
| 355-46-4 | Perfluorohexanesulfonic acid (PFHxS) | 0.33 | J B | 1.88 | 0.16 |
| 375-92-8 | Perfluoroheptanesulfonic Acid (PFHpS) | 0.18 | U | 1.88 | 0.18 |
| 1763-23-1 | Perfluorooctanesulfonic acid (PFOS) | 0.57 | J | 1.88 | 0.51 |
| 335-77-3 | Perfluorodecanesulfonic acid (PFDS) | 0.30 | U | 1.88 | 0.30 |
| 754-91-6 | Perfluorooctanesulfonamide (FOSA) | 0.33 | U | 1.88 | 0.33 |
| 2355-31-9 | N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA) | 2.92 | U | 18.8 | 2.92 |
| 2991-50-6 | N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA) | 1.79 | U | 18.8 | 1.79 |
| 27619-97-2 | 6:2 FTS | 11.0 | J | 18.8 | 1.88 |
| 39108-34-4 | 8:2 FTS | 1.88 | U | 18.8 | 1.88 |

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento  Job No.: 460-217659-1

SDG No.:

Client Sample ID: MW-201  Lab Sample ID: 460-217659-1

Matrix: Water  Lab File ID: 2020.09.10_A13_PFC_A_062.d

Analysis Method: 537 (modified)  Date Collected: 09/03/2020 09:10

Extraction Method: 3535  Date Extracted: 09/09/2020 18:39

Sample wt/vol: 265.7(mL)  Date Analyzed: 09/10/2020 18:36

Con. Extract Vol.: 10.00(mL)  Dilution Factor: 1

Injection Volume: 20(uL)  GC Column: GeminiC18 3x100 ID: 3(mm)

% Moisture:  GPC Cleanup:(Y/N) N

Analysis Batch No.: 411143  Units: ng/L

| CAS NO. | ISOTOPE DILUTION | %REC | Q | LIMITS |
|---|---|---|---|---|
| STL00992 | 13C4 PFBA | 84 | | 25-150 |
| STL01893 | 13C5 PFPeA | 90 | | 25-150 |
| STL00993 | 13C2 PFHxA | 95 | | 25-150 |
| STL01892 | 13C4 PFHpA | 99 | | 25-150 |
| STL00990 | 13C4 PFOA | 95 | | 25-150 |
| STL00995 | 13C5 PFNA | 99 | | 25-150 |
| STL00996 | 13C2 PFDA | 90 | | 25-150 |
| STL00997 | 13C2 PFUnA | 91 | | 25-150 |
| STL00998 | 13C2 PFDoA | 77 | | 25-150 |
| STL02116 | 13C2 PFTeDA | 88 | | 25-150 |
| STL02337 | 13C3 PFBS | 100 | | 25-150 |
| STL00994 | 18O2 PFHxS | 106 | | 25-150 |
| STL00991 | 13C4 PFOS | 106 | | 25-150 |
| STL01056 | 13C8 FOSA | 93 | | 25-150 |
| STL02118 | d3-NMeFOSAA | 91 | | 25-150 |
| STL02117 | d5-NEtFOSAA | 96 | | 25-150 |
| STL02279 | M2-6:2 FTS | 107 | | 25-150 |
| STL02280 | M2-8:2 FTS | 115 | | 25-150 |

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\A13\20200910-103052.b\2020.09.10_A13_PFC_A_062.d
Lims ID: 460-217659-D-1-A
Client ID: MW-201
Sample Type: Client
Inject. Date: 10-Sep-2020 18:36:07 ALS Bottle#: 35 Worklist Smp#: 5
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Sample Info: 460-217659-d-1-a
Misc. Info.: Plate: 1 Rack: 4
Operator ID: SACINSTLCMS01 Instrument ID: A13

Method: \\chromfs\Sacramento\ChromData\A13\20200910-103052.b\PFAS_A13.m
Limit Group: LC PFC ICAL
Last Update: 11-Sep-2020 08:52:52 Calib Date: 08-Sep-2020 18:58:15
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\A13\20200908-102913.b\2020.09.08_A13_PFC_ICALX_010.d

Column 1 : Gemini C18 3um 3 x 100mm ( 3.00 mm) Det: EXP1
Process Host: CTX1053

First Level Reviewer: mongkols Date: 11-Sep-2020 08:52:52
Ratio Calibration: CCV Sample: \\chromfs\Sacramento\ChromData\A13\20200910-103052.b\2020.09.10_A13_PFC_A_058.d

| Signal | RT | EXP RT | DLT RT | REL RT | Response | Amount ng/ml | Ratio(Limits) | %Rec | S/N | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| D 1 13C4 PFBA | | | | | | | | | | |
| 217.00 > 172.00 | 2.467 | 2.475 | -0.008 | 0.610 | 7437954 | 2.09 | | 83.7 | 9241 | |
| 2 Perfluorobutanoic acid | | | | | | | | | | |
| 212.90 > 169.00 | 2.467 | 2.482 | -0.015 | 1.000 | 30218 | 0.0137 | | | 2.8 | |
| D 4 13C5 PFPeA | | | | | | | | | | |
| 267.90 > 223.00 | 2.856 | 2.867 | -0.011 | 0.706 | 6266013 | 2.26 | | 90.4 | 9801 | |
| 5 Perfluoropentanoic acid | | | | | | | | | | |
| 262.90 > 219.00 | 2.867 | 2.867 | 0.0 | 1.004 | 26819 | 0.0104 | | | 1.0 | |
| D 14 13C3 PFBS | | | | | | | | | | |
| 301.90 > 80.00 | 2.902 | 2.913 | -0.011 | 0.718 | 8102419 | 2.33 | | 100 | 3001 | |
| 6 Perfluorobutanesulfonic acid | | | | | | | | | | M |
| 298.90 > 80.00 | 2.902 | 2.913 | -0.011 | 1.000 | 8034 | 0.002358 | Target=2.29 | | 1.3 | M |
| 298.90 > 99.00 | 2.902 | 2.913 | -0.011 | 1.000 | 4821 | | 1.67(1.15-3.44) | | 0.9 | |
| 10 Perfluorohexanoic acid | | | | | | | | | | |
| 313.00 > 269.00 | 3.247 | 3.258 | -0.011 | 1.000 | 39682 | 0.0131 | Target=13.52 | | 1.6 | |
| 313.00 > 119.00 | 3.258 | 3.258 | 0.0 | 1.003 | 2969 | | 13.37(6.76-20.28) | | 1.4 | |
| D 9 13C2 PFHxA | | | | | | | | | | |
| 315.00 > 270.00 | 3.247 | 3.258 | -0.011 | 0.803 | 8161188 | 2.38 | | 95.3 | 9775 | |
| D 17 18O2 PFHxS | | | | | | | | | | |
| 403.00 > 84.00 | 3.655 | 3.665 | -0.010 | 0.904 | 5690592 | 2.50 | | 106 | 3394 | |
| 16 Perfluoroheptanoic acid | | | | | | | | | | M |
| 363.00 > 319.00 | 3.645 | 3.665 | -0.020 | 0.997 | 12101 | 0.003602 | Target=3.87 | | 0.7 | M |
| 363.00 > 169.00 | 3.655 | 3.665 | -0.010 | 1.000 | 3847 | | 3.15(1.93-5.80) | | 1.6 | |
| 18 Perfluorohexanesulfonic acid | | | | | | | | | | M |
| 399.00 > 80.00 | 3.655 | 3.665 | -0.010 | 1.000 | 23613 | 0.008822 | Target=3.08 | | 10.7 | M |
| 399.00 > 99.00 | 3.655 | 3.665 | -0.010 | 1.000 | 6608 | | 3.57(1.54-4.62) | | 3.0 | |
| D 15 13C4 PFHpA | | | | | | | | | | |
| 367.00 > 322.00 | 3.655 | 3.665 | -0.010 | 0.904 | 8308857 | 2.46 | | 98.6 | 8434 | |

| Signal | RT | EXP RT | DLT RT | REL RT | Response | Amount ng/ml | Ratio(Limits) | %Rec | S/N | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| D 20 M2-6:2 FTS | | | | | | | | | | |
| 429.00 > 81.00 | 4.034 | 4.042 | -0.008 | 0.998 | 2495815 | 2.54 | | 107 | 1172 | |
| 21 6:2 FTS | | | | | | | | | | |
| 427.00 > 407.00 | 4.026 | 4.042 | -0.016 | 0.998 | 736232 | 0.2911 | | | 365 | |
| D 24 13C4 PFOA | | | | | | | | | | |
| 417.00 > 372.00 | 4.042 | 4.059 | -0.017 | 1.000 | 9805343 | 2.38 | | 95.2 | 4964 | |
| 26 Perfluorooctanoic acid | | | | | | | | | | M |
| 413.00 > 369.00 | 4.042 | 4.059 | -0.017 | 1.000 | 50769 | 0.0127 | Target=2.99 | | 5.3 | M |
| 413.00 > 169.00 | 4.051 | 4.059 | -0.008 | 1.002 | 15446 | | 3.29(1.50-4.49) | | 11.9 | M |
| * 25 13C2 PFOA | | | | | | | | | | |
| 415.00 > 370.00 | 4.042 | 4.059 | -0.017 | | 10461384 | 2.50 | | | 6784 | |
| 28 Perfluorooctanesulfonic acid | | | | | | | | | | M |
| 499.00 > 80.00 | 4.418 | 4.425 | -0.007 | 1.002 | 27145 | 0.0152 | Target=4.13 | | 10.3 | M |
| 499.00 > 99.00 | 4.401 | 4.425 | -0.024 | 0.998 | 6756 | | 4.02(2.06-6.19) | | 4.4 | M |
| D 29 13C4 PFOS | | | | | | | | | | |
| 503.00 > 80.00 | 4.409 | 4.425 | -0.016 | 1.091 | 4117593 | 2.53 | | 106 | 2133 | |
| D 31 13C5 PFNA | | | | | | | | | | |
| 468.00 > 423.00 | 4.426 | 4.442 | -0.016 | 1.095 | 9405116 | 2.47 | | 98.8 | 15906 | |
| D 34 13C8 FOSA | | | | | | | | | | |
| 506.00 > 78.00 | 4.734 | 4.740 | -0.006 | 1.171 | 5440117 | 2.33 | | 93.1 | 9711 | |
| 33 Perfluorooctanesulfonamide | | | | | | | | | | |
| 498.00 > 78.00 | 4.734 | 4.740 | -0.006 | 1.000 | 11771 | 0.005765 | | | 44.7 | |
| D 37 13C2 PFDA | | | | | | | | | | |
| 515.00 > 470.00 | 4.786 | 4.793 | -0.007 | 1.184 | 10386343 | 2.25 | | 90.1 | 8356 | |
| D 38 M2-8:2 FTS | | | | | | | | | | |
| 529.00 > 81.00 | 4.777 | 4.802 | -0.025 | 1.182 | 3585334 | 2.76 | | 115 | 3610 | |
| 39 8:2 FTS | | | | | | | | | | |
| 527.00 > 507.00 | 4.786 | 4.802 | -0.016 | 1.002 | 6242 | 0.001687 | | | 28.1 | |
| D 40 d3-NMeFOSAA | | | | | | | | | | |
| 573.00 > 419.00 | 4.942 | 4.959 | -0.017 | 1.223 | 5387367 | 2.27 | | 90.6 | 4895 | |
| D 44 13C2 PFUnA | | | | | | | | | | |
| 565.00 > 520.00 | 5.106 | 5.113 | -0.007 | 1.263 | 10300497 | 2.28 | | 91.3 | 4556 | |
| D 46 d5-NEtFOSAA | | | | | | | | | | |
| 589.00 > 419.00 | 5.106 | 5.123 | -0.017 | 1.263 | 5515765 | 2.40 | | 95.8 | 3745 | |
| 48 NEtFOSA | | | | | | | | | | M |
| 584.00 > 419.00 | 5.106 | 5.132 | -0.026 | 1.000 | 5908 | 0.003459 | | | 15.5 | M |
| D 56 13C2 PFDoA | | | | | | | | | | |
| 615.00 > 570.00 | 5.396 | 5.409 | -0.013 | 1.335 | 9397249 | 1.94 | | 77.4 | 7489 | |
| 57 Perfluorododecanoic acid | | | | | | | | | | |
| 613.00 > 569.00 | 5.396 | 5.409 | -0.013 | 1.000 | 9601 | 0.002800 | Target=9.00 | | 6.1 | |
| 613.00 > 169.00 | 5.387 | 5.409 | -0.022 | 0.998 | 803 | | 11.96(4.50-13.49) | | 5.6 | |
| D 61 13C2 PFTeDA | | | | | | | | | | |
| 715.00 > 670.00 | 5.905 | 5.920 | -0.015 | 1.461 | 10491566 | 2.19 | | 87.5 | 13176 | |

## QC Flag Legend

Review Flags

M - Manually Integrated

Report Date: 11-Sep-2020 08:52:53 Chrom Revision: 2.3 09-Sep-2020 15:12:58

Eurofins TestAmerica, Sacramento

Data File: \\chromfs\Sacramento\ChromData\A13\20200910-103052.b\2020.09.10_A13_PFC_A_062.d

Injection Date: 10-Sep-2020 18:36:07 Instrument ID: A13

Lims ID: 460-217659-D-1-A Lab Sample ID: 320-217659-1

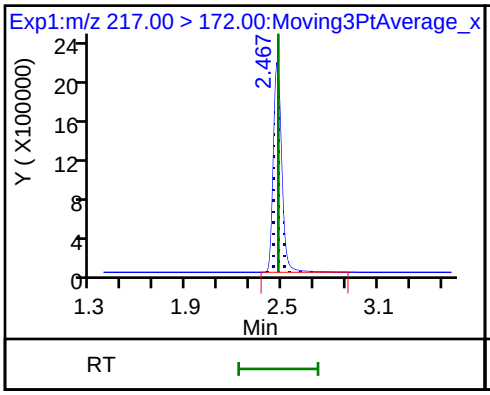
Client ID: MW-201

Operator ID: SACINSTLCMS01 ALS Bottle#: 35 Worklist Smp#: 5

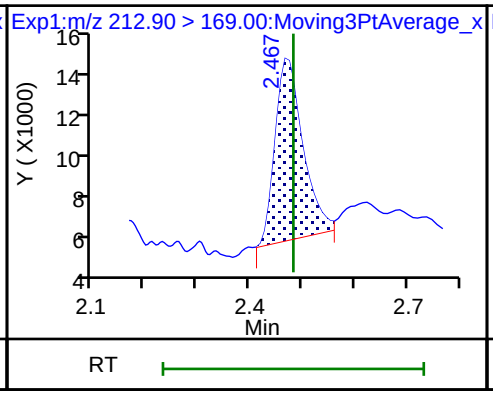
Injection Vol: 20.0 ul Dil. Factor: 1.0000

Method: PFAS_A13 Limit Group: LC PFC ICAL

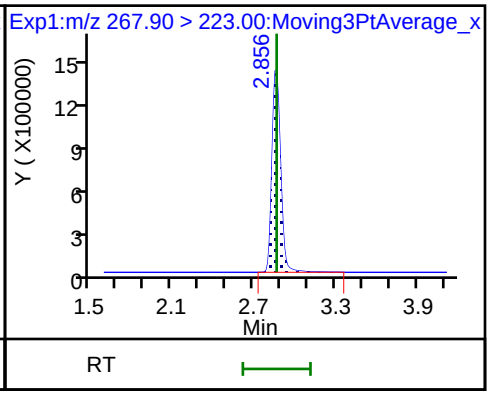
D 1 13C4 PFBA



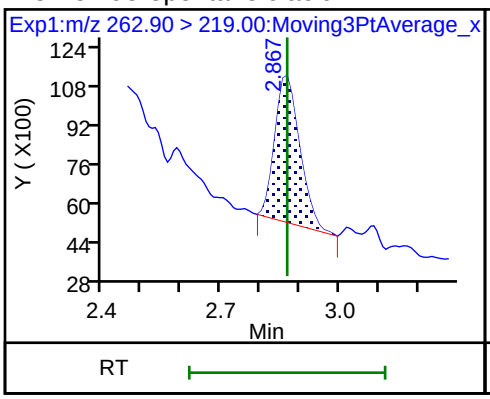

2 Perfluorobutanoic acid



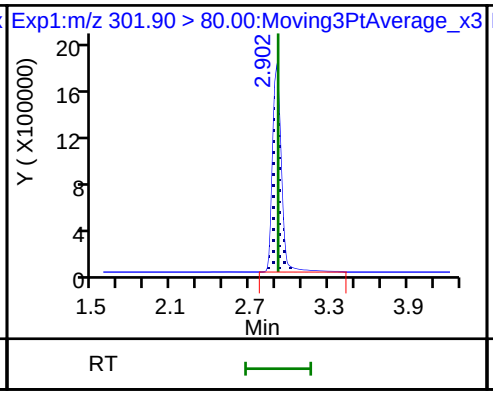

D 4 13C5 PFPeA



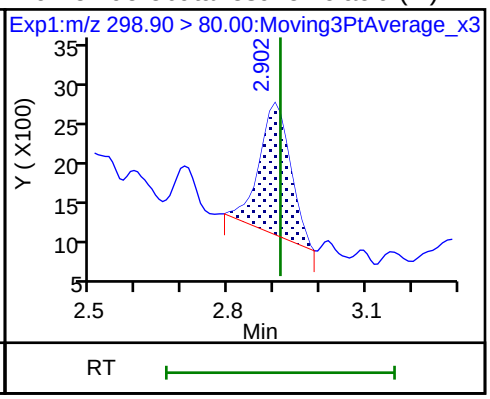

5 Perfluoropentanoic acid



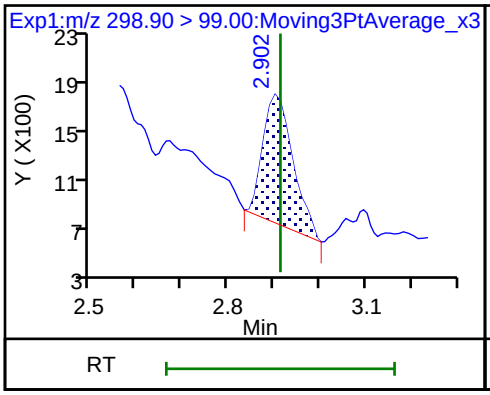

D 14 13C3 PFBS



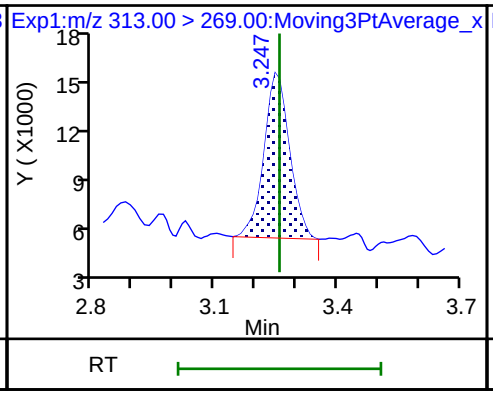

6 Perfluorobutanesulfonic acid (M)



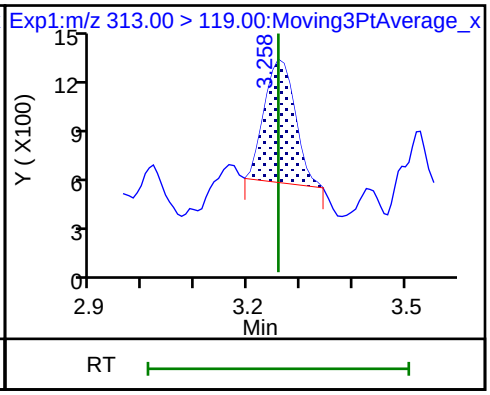

6 Perfluorobutanesulfonic acid



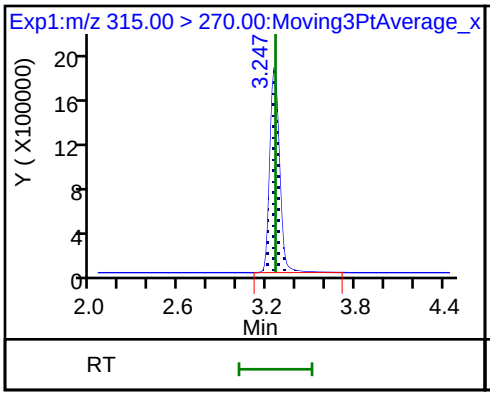

10 Perfluorohexanoic acid



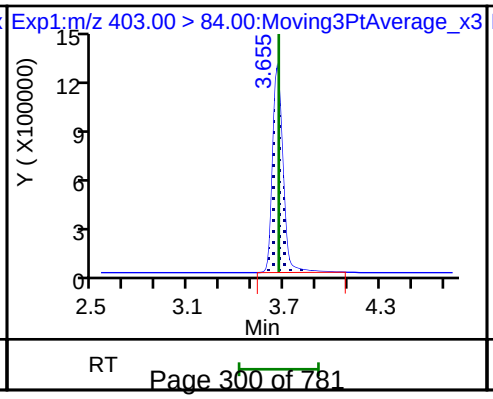

10 Perfluorohexanoic acid



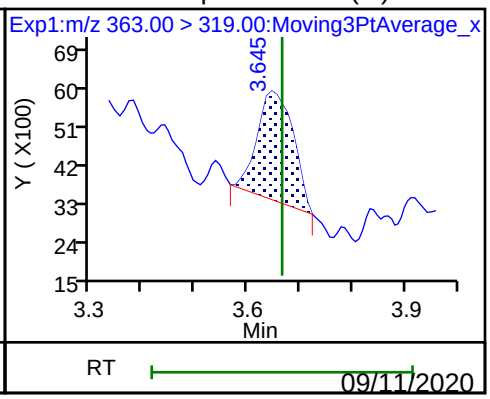

D 9 13C2 PFHxA



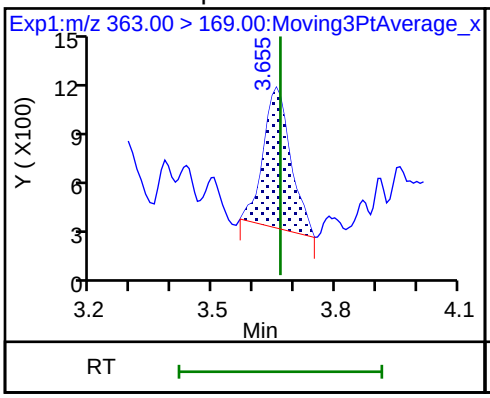

D 17 18O2 PFHxS



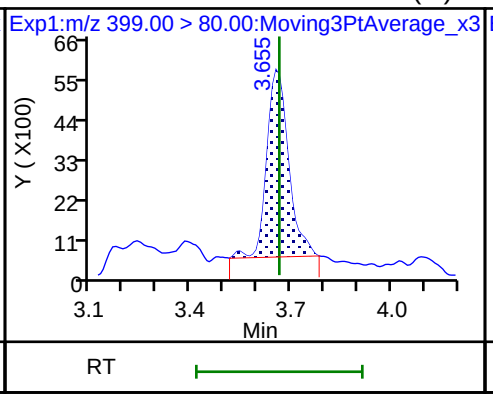

16 Perfluoroheptanoic acid (M)



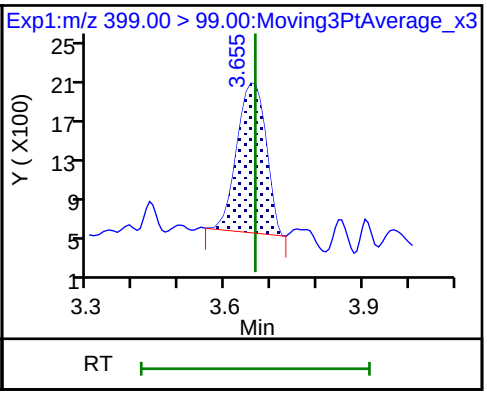
16 Perfluoroheptanoic acid



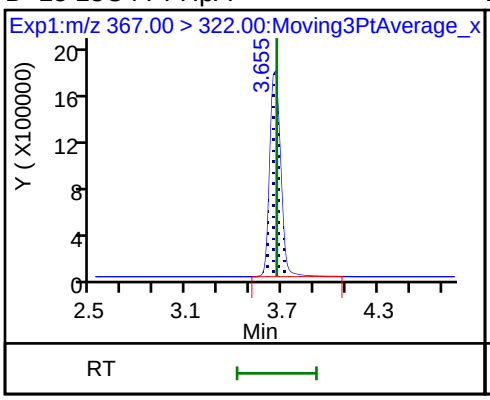

18 Perfluorohexanesulfonic acid (M)



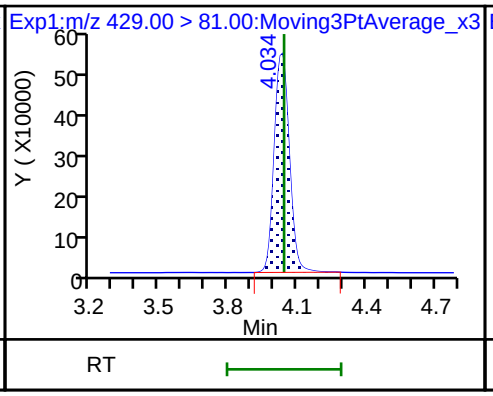

18 Perfluorohexanesulfonic acid



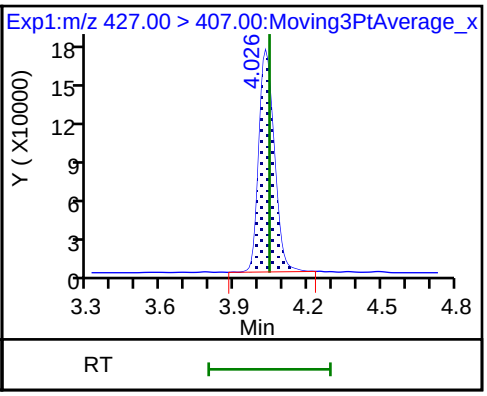

D 15 13C4 PFHpA



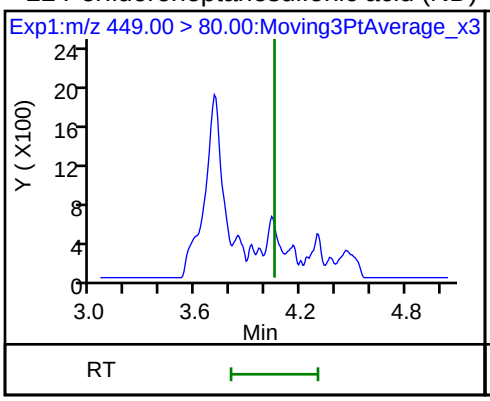

D 20 M2-6:2 FTS



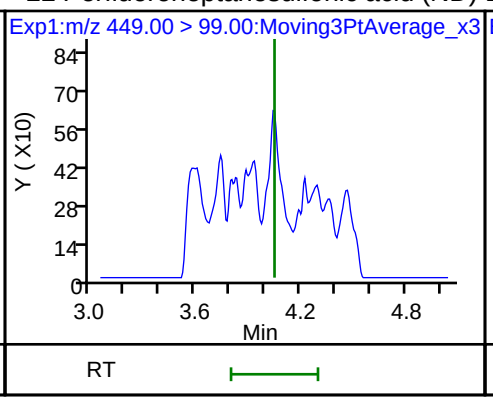

21 6:2 FTS



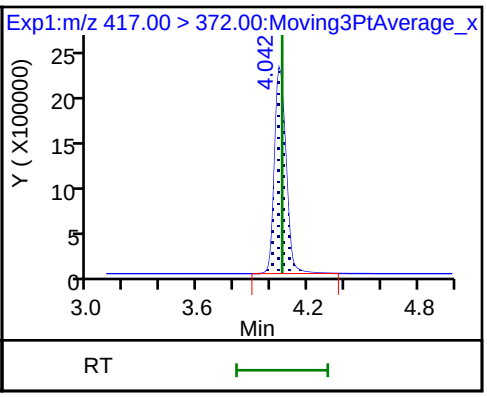

22 Perfluoroheptanesulfonic acid (ND)



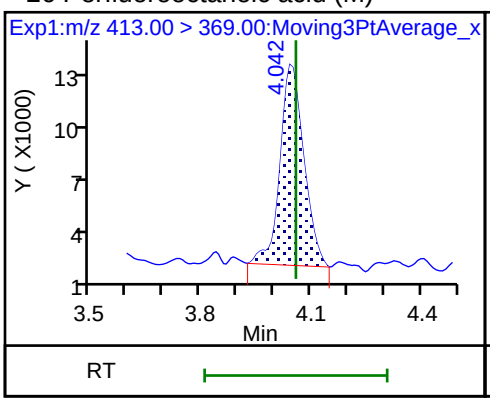

22 Perfluoroheptanesulfonic acid (ND)



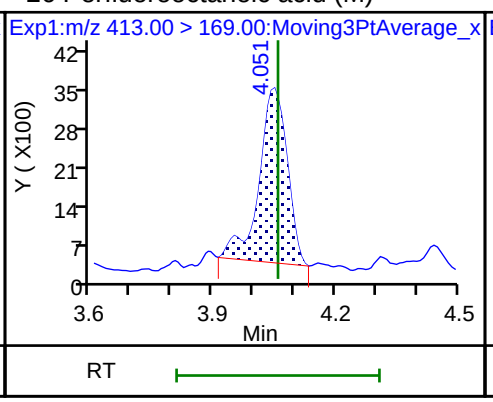

D 24 13C4 PFOA



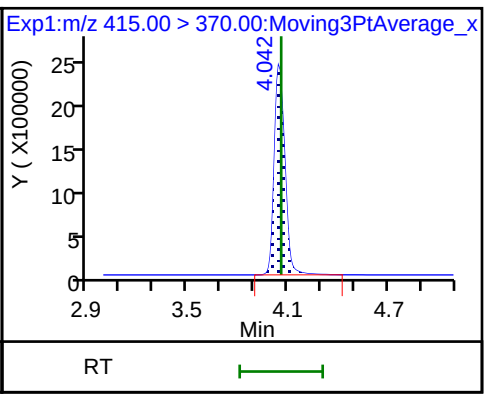

26 Perfluorooctanoic acid (M)



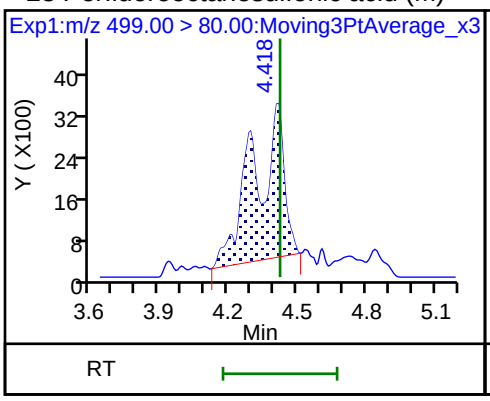

26 Perfluorooctanoic acid (M)



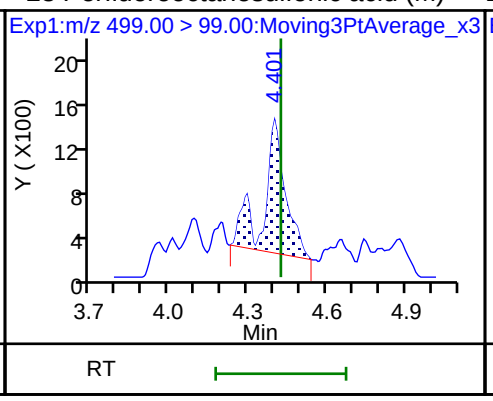

* 25 13C2 PFOA



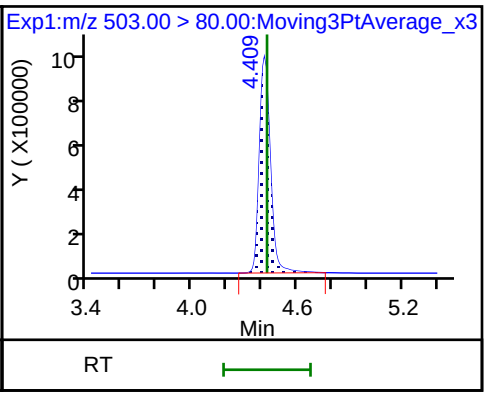
28 Perfluorooctanesulfonic acid (M)



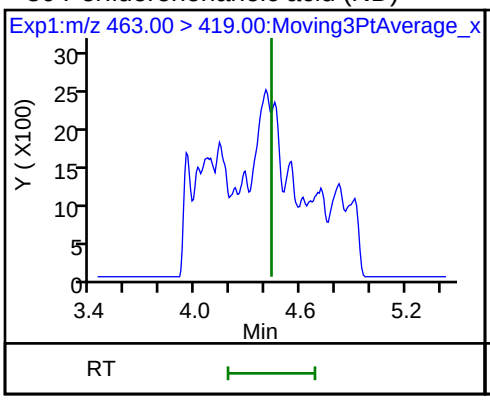

28 Perfluorooctanesulfonic acid (M)



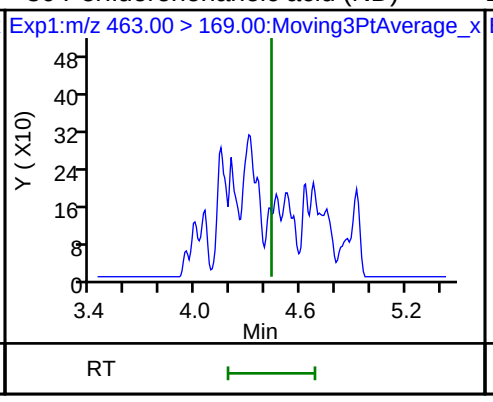

D 29 13C4 PFOS



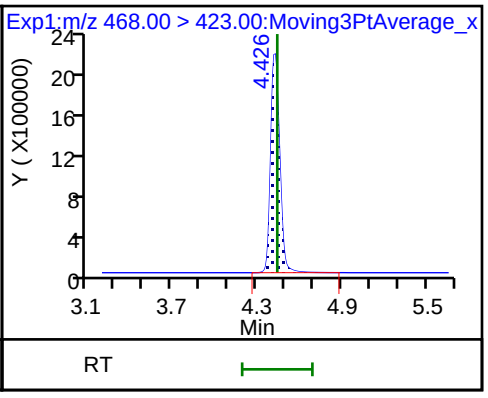

30 Perfluorononanoic acid (ND)



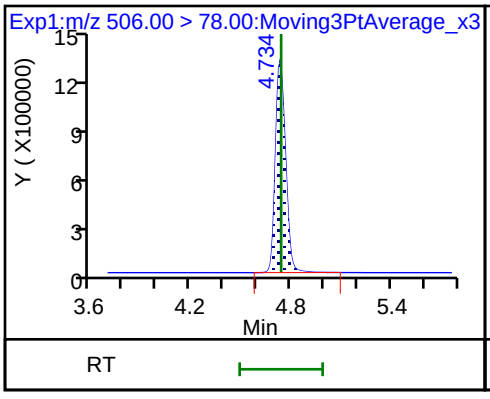

30 Perfluorononanoic acid (ND)



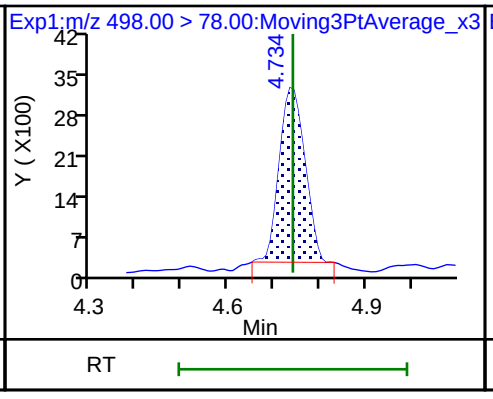

D 31 13C5 PFNA



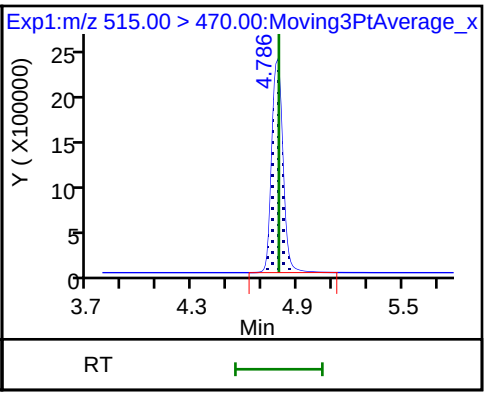

D 34 13C8 FOSA



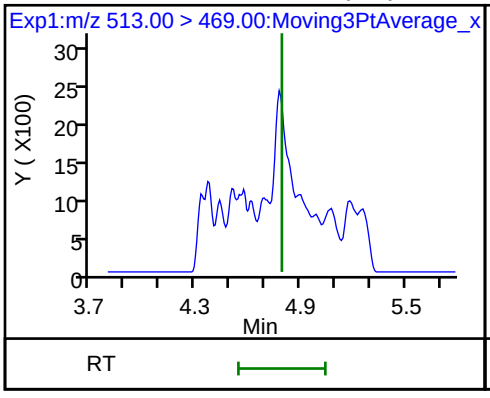

33 Perfluorooctanesulfonamide



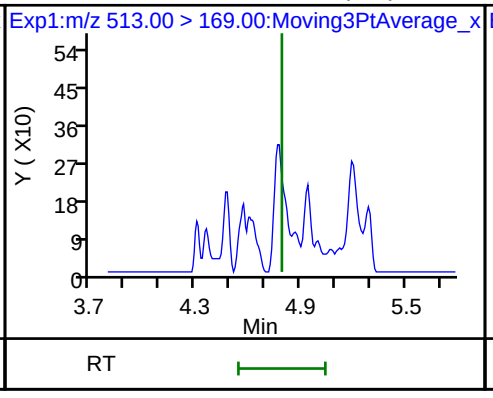

D 37 13C2 PFDA



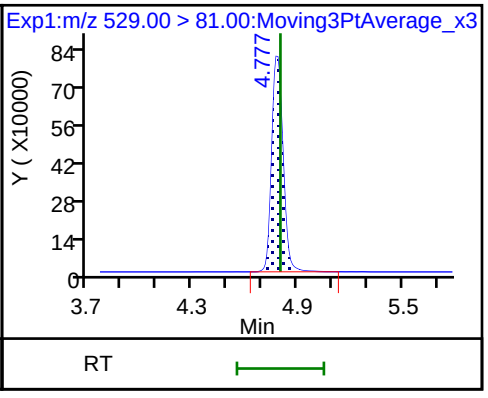

36 Perfluorodecanoic acid (ND)



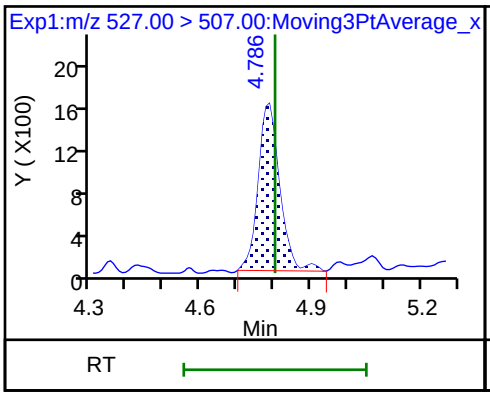

36 Perfluorodecanoic acid (ND)



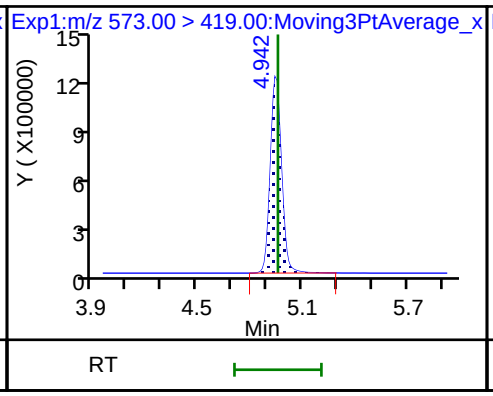

D 38 M2-8:2 FTS



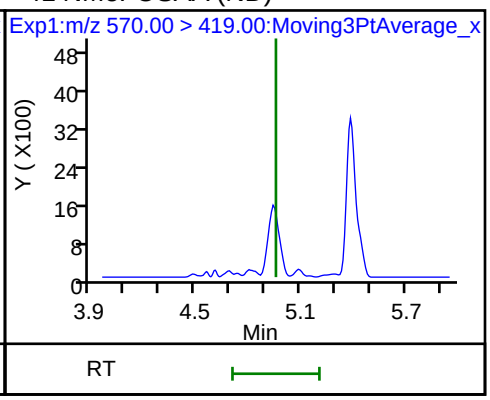
39 8:2 FTS



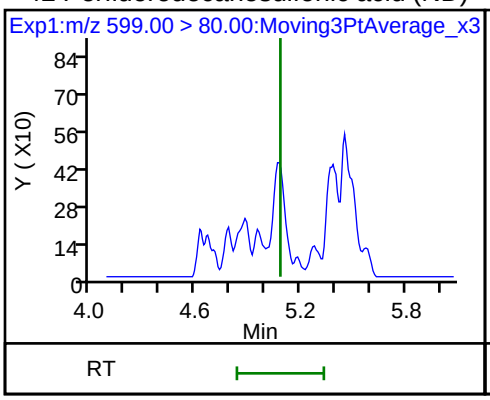

D 40 d3-NMeFOSAA



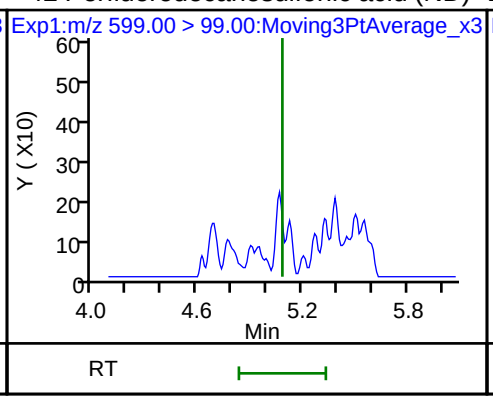

41 NMeFOSAA (ND)



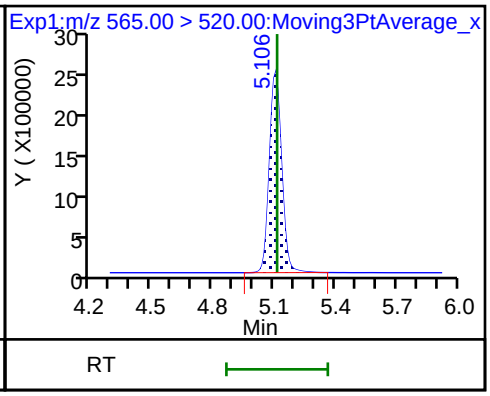

42 Perfluorodecanesulfonic acid (ND)



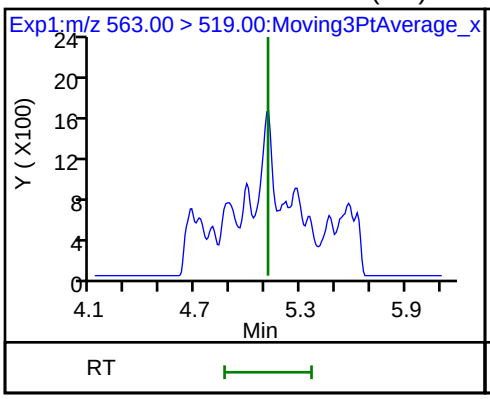

42 Perfluorodecanesulfonic acid (ND)



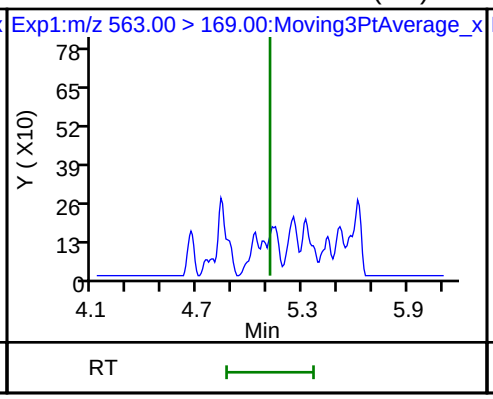

D 44 13C2 PFUnA



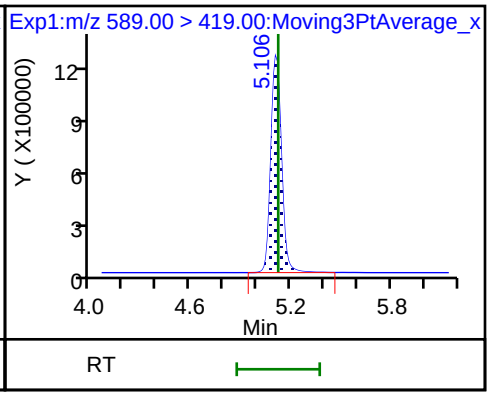

45 Perfluoroundecanoic acid (ND)



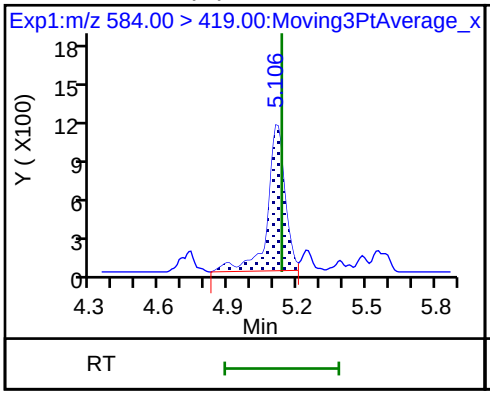

45 Perfluoroundecanoic acid (ND)



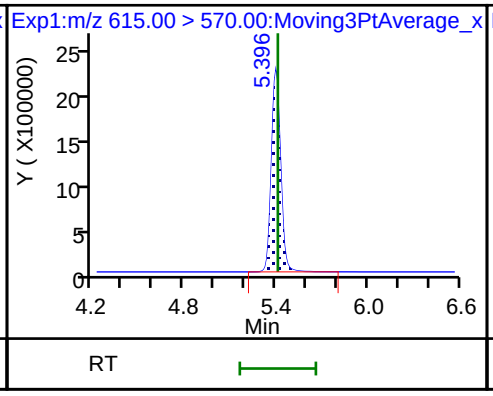

D 46 d5-NEtFOSAA



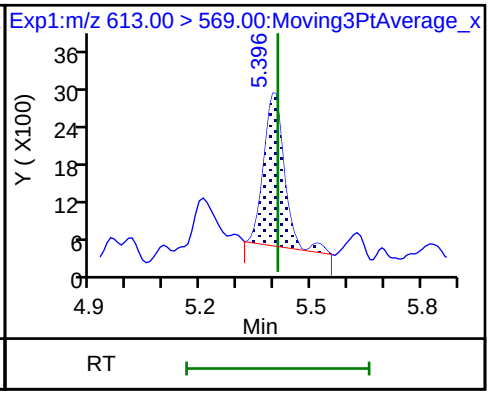

48 NEtFOSA (M)



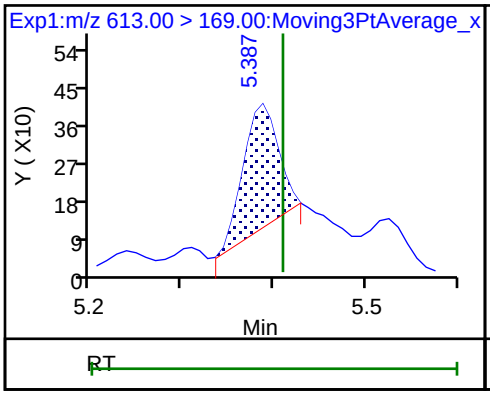

D 56 13C2 PFDoA



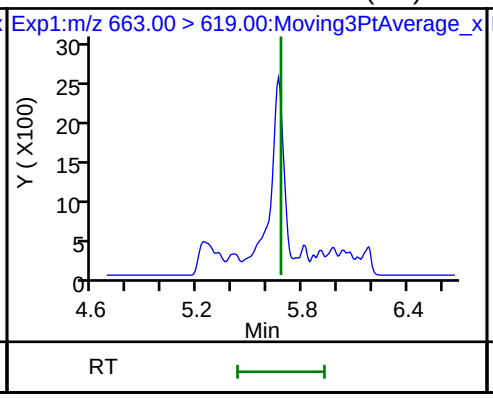

57 Perfluorododecanoic acid



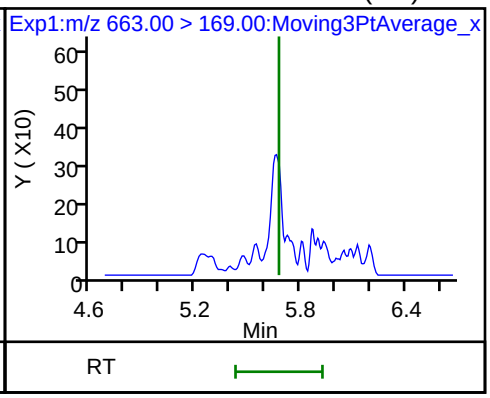
57 Perfluorododecanoic acid



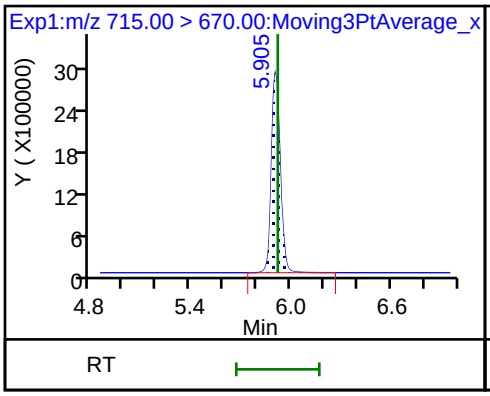

60 Perfluorotridecanoic acid (ND)



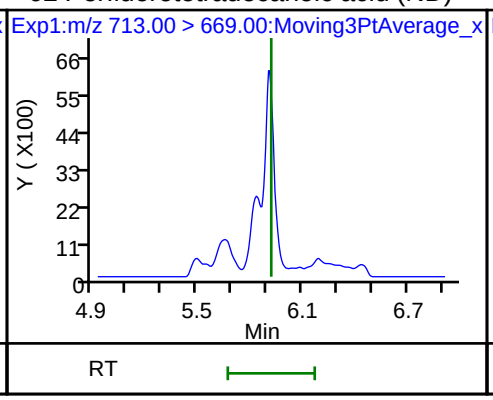

60 Perfluorotridecanoic acid (ND)



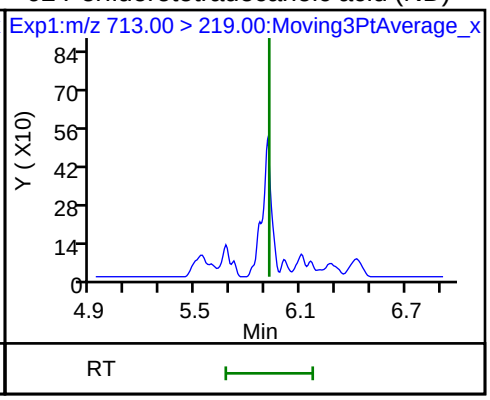

D 61 13C2 PFTeDA




62 Perfluorotetradecanoic acid (ND)




62 Perfluorotetradecanoic acid (ND)



Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

| | | | | | |
|---|---|---|---|---|---|
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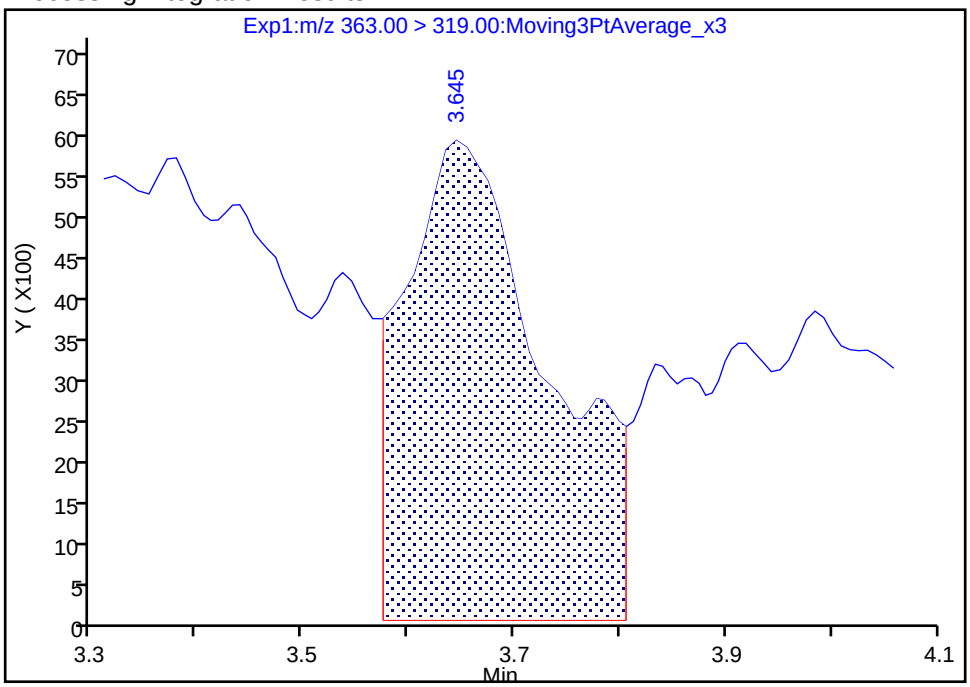
| Injection Date: | 10-Sep-2020 18:36:07 | Instrument ID: | A13 | | |
| Lims ID: | 460-217659-D-1-A | Lab Sample ID: | 320-217659-1 | | |
| Client ID: | MW-201 | | | | |
| Operator ID: | SACINSTLCMS01 | ALS Bottle#: | 35 | Worklist Smp#: | 5 |
| Injection Vol: | 20.0 ul | Dil. Factor: | 1.0000 | | |
| Method: | PFAS_A13 | Limit Group: | LC PFC ICAL | | |
| Column: | Gemini C18 3um 3 x 100mm ( 3.00 mm) | Detector | EXP1 | | |

## 16 Perfluoroheptanoic acid, CAS: 375-85-9

Signal: 1

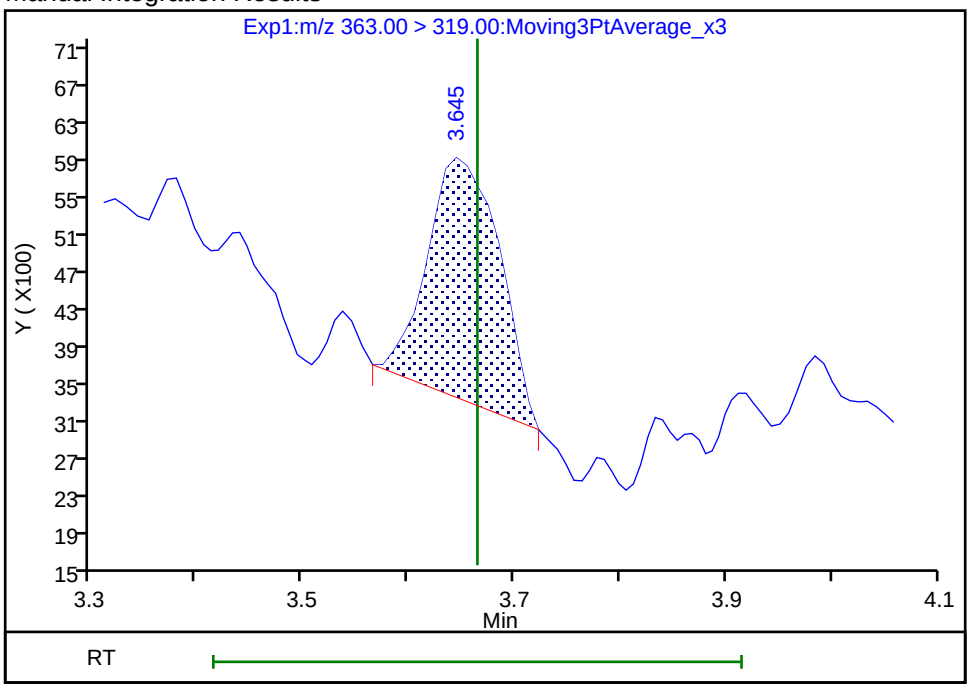
Processing Integration Results

RT: 3.64
Area: 54683
Amount: 0.016279
Amount Units: ng/ml




Manual Integration Results

RT: 3.64
Area: 12101
Amount: 0.003602
Amount Units: ng/ml




Reviewer: mongkols, 11-Sep-2020 08:52:09

Audit Action: Manually Integrated Audit Reason: Baseline

Eurofins TestAmerica, Sacramento

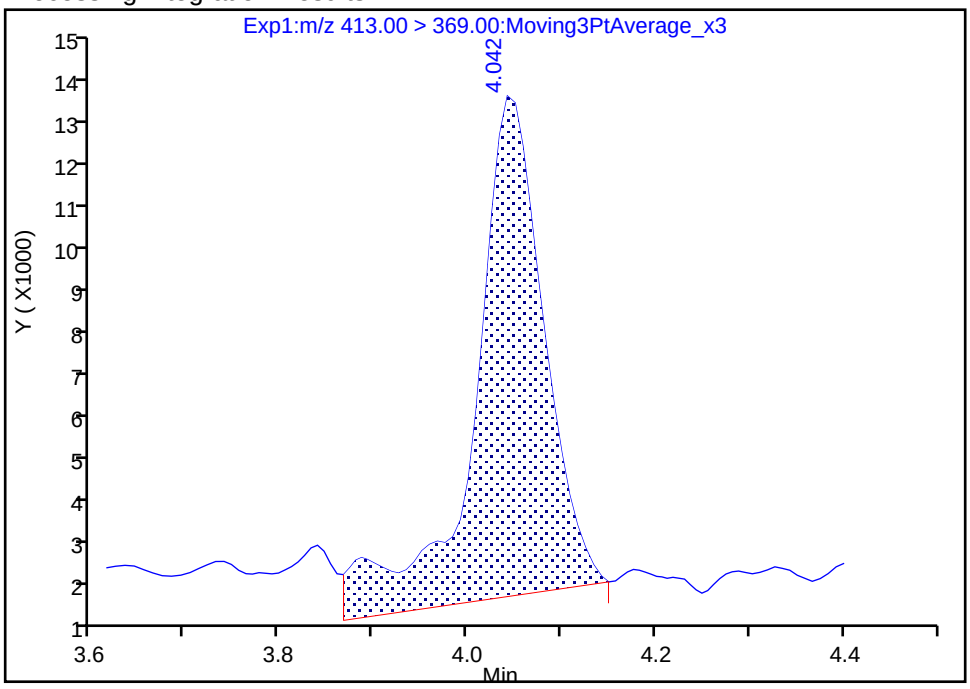
| | | | | | |
|---|---|---|---|---|---|
| Data File: | \\chromfs\Sacramento\ChromData\A13\20200910-103052.b\2020.09.10_A13_PFC_A_062.d | | | | |
| Injection Date: | 10-Sep-2020 18:36:07 | Instrument ID: | A13 | | |
| Lims ID: | 460-217659-D-1-A | Lab Sample ID: | 320-217659-1 | | |
| Client ID: | MW-201 | | | | |
| Operator ID: | SACINSTLCMS01 | ALS Bottle#: | 35 | Worklist Smp#: | 5 |
| Injection Vol: | 20.0 ul | Dil. Factor: | 1.0000 | | |
| Method: | PFAS_A13 | Limit Group: | LC PFC ICAL | | |
| Column: | Gemini C18 3um 3 x 100mm ( 3.00 mm ) | Detector | EXP1 | | |

## 26 Perfluorooctanoic acid, CAS: 335-67-1

Signal: 1

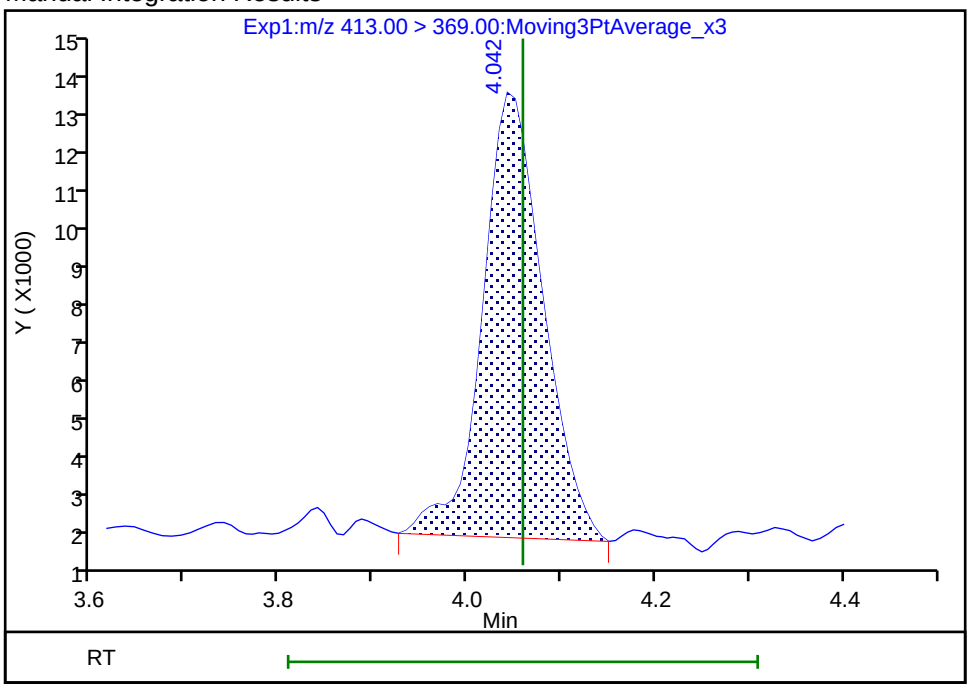
Processing Integration Results

RT: 4.04
Area: 61136
Amount: 0.015237
Amount Units: ng/ml




Manual Integration Results

RT: 4.04
Area: 50769
Amount: 0.012653
Amount Units: ng/ml




Reviewer: mongkols, 11-Sep-2020 08:52:23
Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

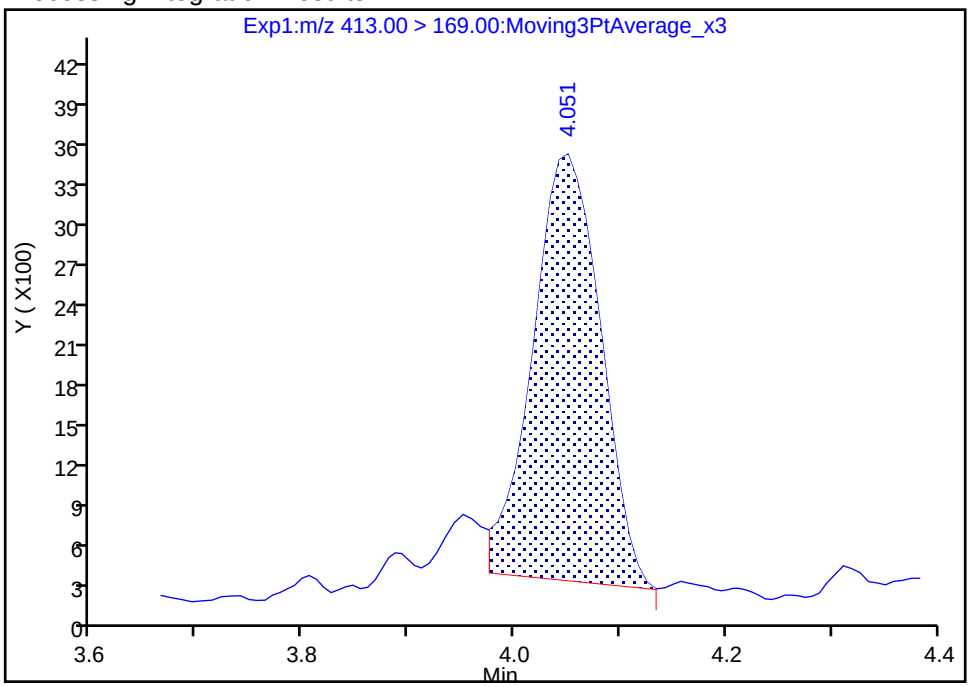
| | | | | | |
|---|---|---|---|---|---|
| Data File: | \\chromfs\Sacramento\ChromData\A13\20200910-103052.b\2020.09.10_A13_PFC_A_062.d | | | | |
| Injection Date: | 10-Sep-2020 18:36:07 | Instrument ID: | A13 | | |
| Lims ID: | 460-217659-D-1-A | Lab Sample ID: | 320-217659-1 | | |
| Client ID: | MW-201 | | | | |
| Operator ID: | SACINSTLCMS01 | ALS Bottle#: | 35 | Worklist Smp#: | 5 |
| Injection Vol: | 20.0 ul | Dil. Factor: | 1.0000 | | |
| Method: | PFAS_A13 | Limit Group: | LC PFC ICAL | | |
| Column: | Gemini C18 3um 3 x 100mm ( 3.00 mm ID) | Detector | EXP1 | | |

## 26 Perfluorooctanoic acid, CAS: 335-67-1

Signal: 2

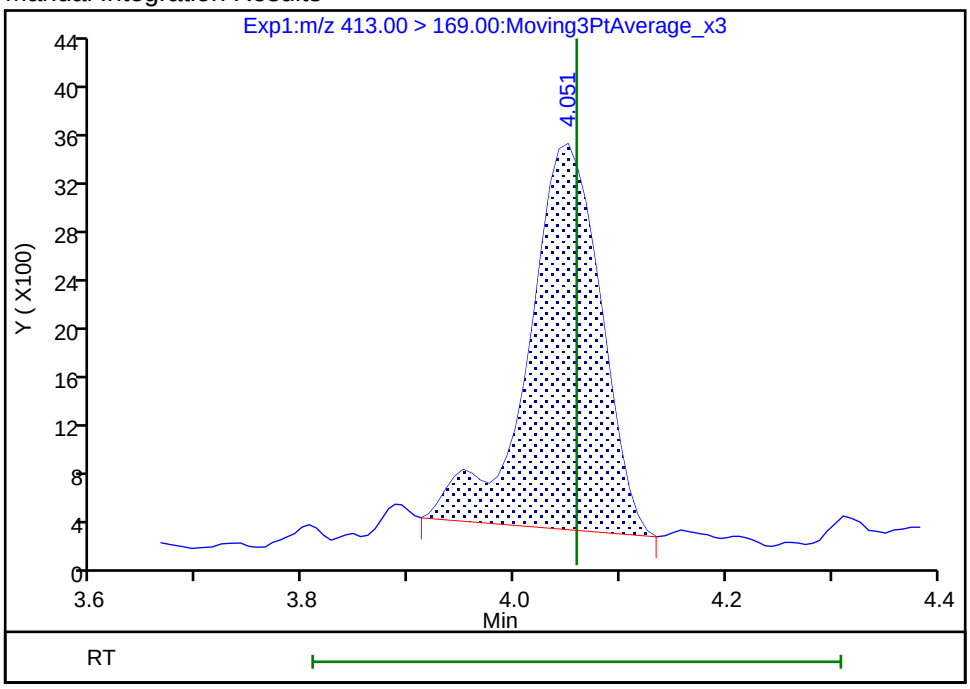
Processing Integration Results

RT: 4.05
Area: 14376
Amount: 0.015237
Amount Units: ng/ml




Manual Integration Results

RT: 4.05
Area: 15446
Amount: 0.012653
Amount Units: ng/ml




Reviewer: mongkols, 11-Sep-2020 08:52:26
Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

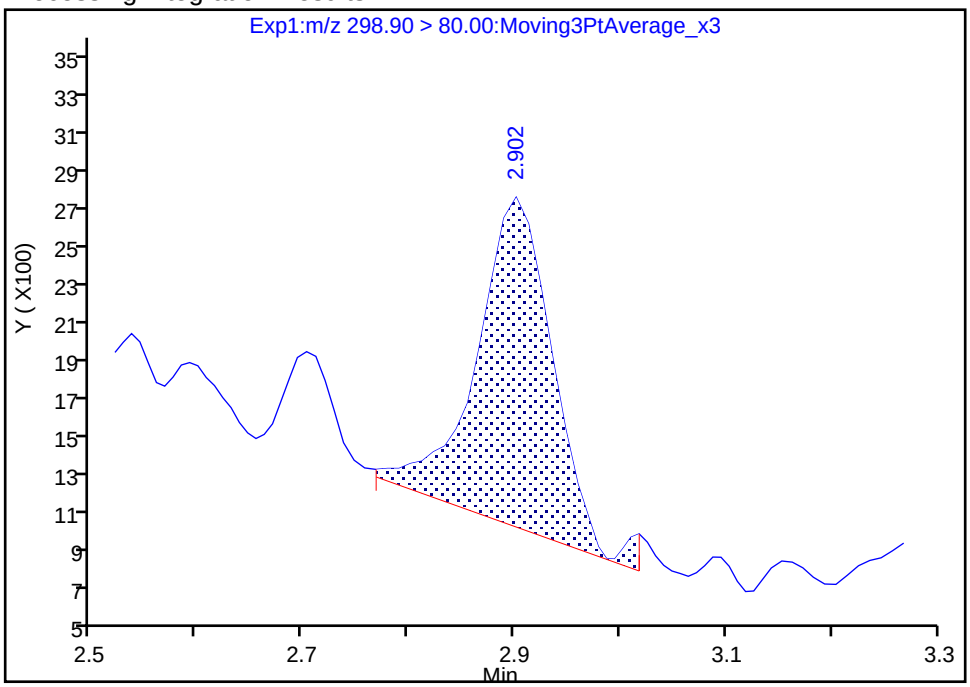
| | | | | | |
|---|---|---|---|---|---|
| Data File: | \\chromfs\Sacramento\ChromData\A13\20200910-103052.b\2020.09.10_A13_PFC_A_062.d | | | | |
| Injection Date: | 10-Sep-2020 18:36:07 | Instrument ID: | A13 | | |
| Lims ID: | 460-217659-D-1-A | Lab Sample ID: | 320-217659-1 | | |
| Client ID: | MW-201 | | | | |
| Operator ID: | SACINSTLCMS01 | ALS Bottle#: | 35 | Worklist Smp#: | 5 |
| Injection Vol: | 20.0 ul | Dil. Factor: | 1.0000 | | |
| Method: | PFAS_A13 | Limit Group: | LC PFC ICAL | | |
| Column: | Gemini C18 3um 3 x 100mm ( 3.00 mm) | Detector | EXP1 | | |

## 6 Perfluorobutanesulfonic acid, CAS: 375-73-5

Signal: 1

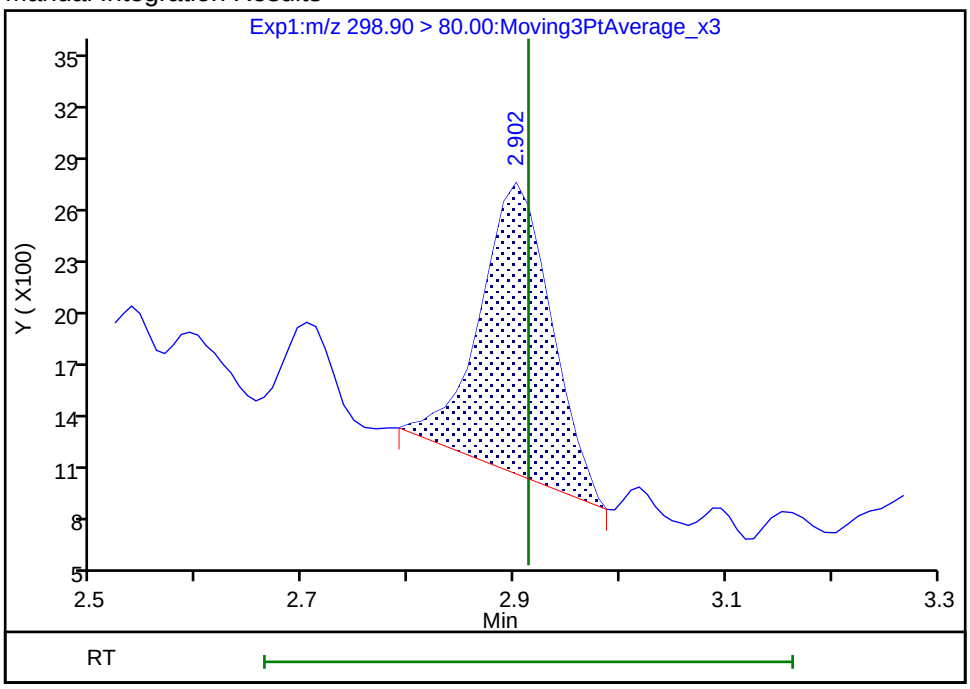
Processing Integration Results

RT: 2.90
Area: 8834
Amount: 0.002593
Amount Units: ng/ml




Manual Integration Results

RT: 2.90
Area: 8034
Amount: 0.002358
Amount Units: ng/ml




Reviewer: mongkols, 11-Sep-2020 08:52:02
Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

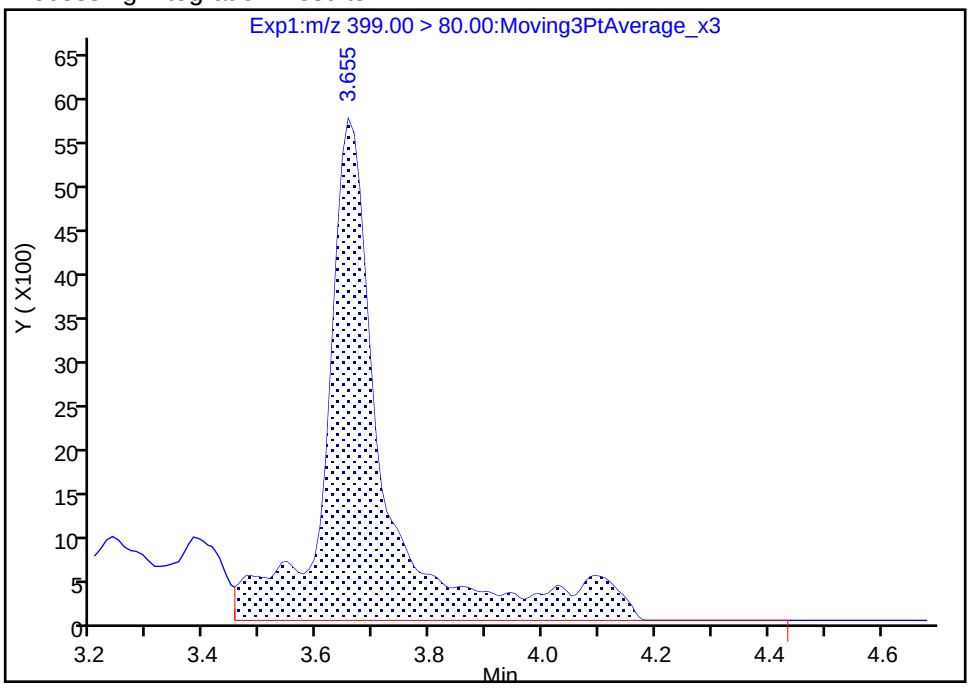
| | | | | | |
|---|---|---|---|---|---|
| Data File: | \\chromfs\Sacramento\ChromData\A13\20200910-103052.b\2020.09.10_A13_PFC_A_062.d | | | | |
| Injection Date: | 10-Sep-2020 18:36:07 | Instrument ID: | A13 | | |
| Lims ID: | 460-217659-D-1-A | Lab Sample ID: | 320-217659-1 | | |
| Client ID: | MW-201 | | | | |
| Operator ID: | SACINSTLCMS01 | ALS Bottle#: | 35 | Worklist Smp#: | 5 |
| Injection Vol: | 20.0 ul | Dil. Factor: | 1.0000 | | |
| Method: | PFAS_A13 | Limit Group: | LC PFC ICAL | | |
| Column: | Gemini C18 3um 3 x 100mm ( 3.00 mm ID) | Detector | EXP1 | | |

## 18 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 1

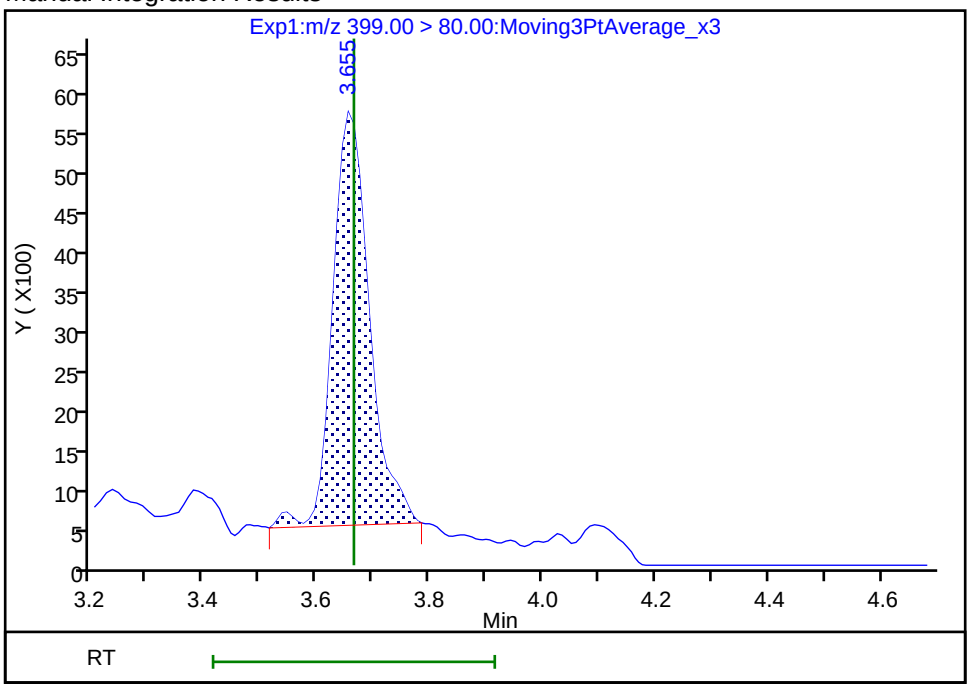
Processing Integration Results

RT: 3.65
Area: 41748
Amount: 0.015598
Amount Units: ng/ml




Manual Integration Results

RT: 3.65
Area: 23613
Amount: 0.008822
Amount Units: ng/ml




Reviewer: mongkols, 11-Sep-2020 08:52:15

Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

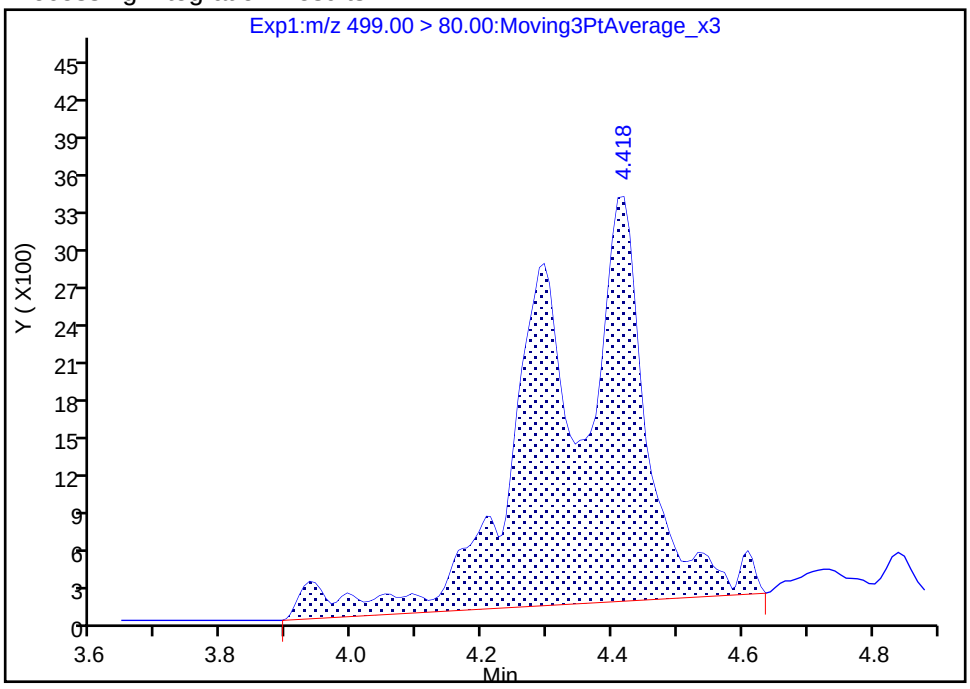
| | | | | | |
|---|---|---|---|---|---|
| Data File: | \\chromfs\Sacramento\ChromData\A13\20200910-103052.b\2020.09.10_A13_PFC_A_062.d | | | | |
| Injection Date: | 10-Sep-2020 18:36:07 | Instrument ID: | A13 | | |
| Lims ID: | 460-217659-D-1-A | Lab Sample ID: | 320-217659-1 | | |
| Client ID: | MW-201 | | | | |
| Operator ID: | SACINSTLCMS01 | ALS Bottle#: | 35 | Worklist Smp#: | 5 |
| Injection Vol: | 20.0 ul | Dil. Factor: | 1.0000 | | |
| Method: | PFAS_A13 | Limit Group: | LC PFC ICAL | | |
| Column: | Gemini C18 3um 3 x 100mm ( 3.00 mm ID) | Detector | EXP1 | | |

## 28 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 1

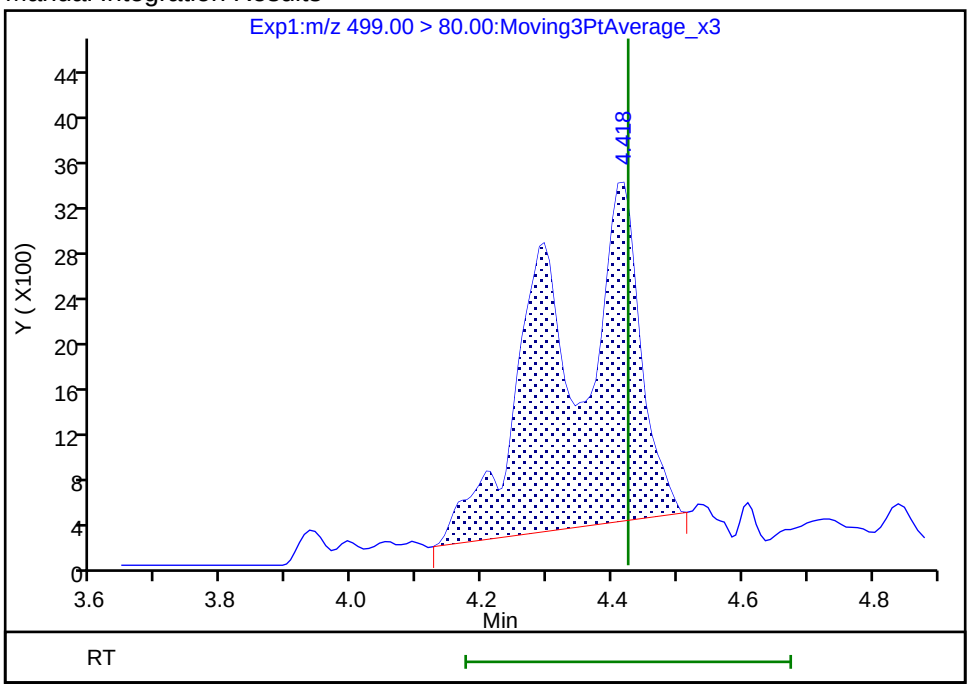
Processing Integration Results

RT: 4.42
Area: 35232
Amount: 0.019695
Amount Units: ng/ml




Manual Integration Results

RT: 4.42
Area: 27145
Amount: 0.015174
Amount Units: ng/ml




Reviewer: mongkols, 11-Sep-2020 08:52:32

Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

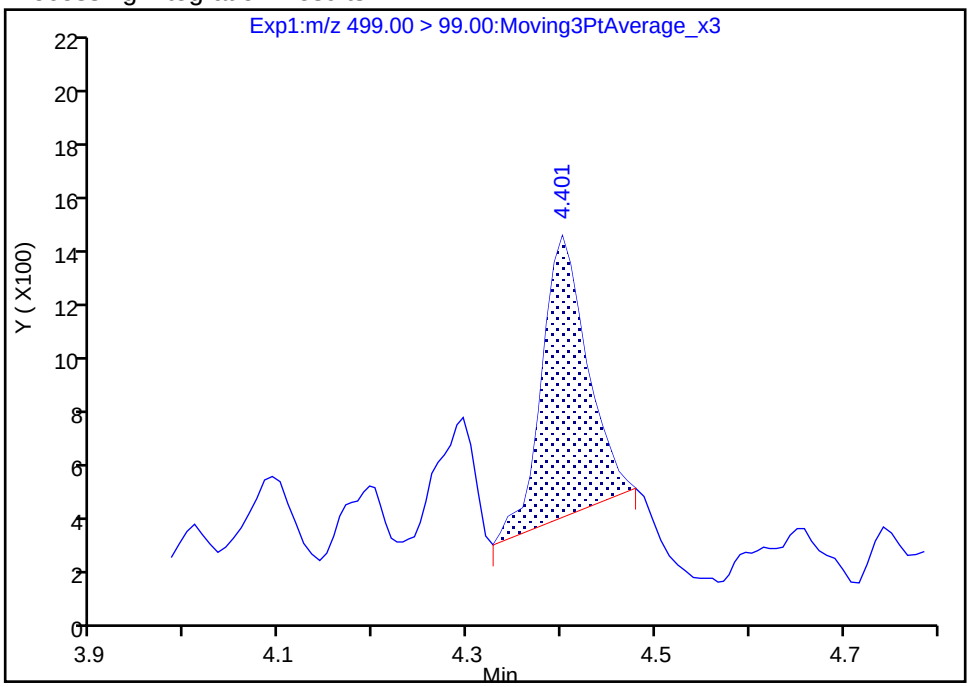
| | | | | | |
|---|---|---|---|---|---|
| Data File: | \\chromfs\Sacramento\ChromData\A13\20200910-103052.b\2020.09.10_A13_PFC_A_062.d | | | | |
| Injection Date: | 10-Sep-2020 18:36:07 | Instrument ID: | A13 | | |
| Lims ID: | 460-217659-D-1-A | Lab Sample ID: | 320-217659-1 | | |
| Client ID: | MW-201 | | | | |
| Operator ID: | SACINSTLCMS01 | ALS Bottle#: | 35 | Worklist Smp#: | 5 |
| Injection Vol: | 20.0 ul | Dil. Factor: | 1.0000 | | |
| Method: | PFAS_A13 | Limit Group: | LC PFC ICAL | | |
| Column: | Gemini C18 3um 3 x 100mm ( 3.00 mm ) | Detector | EXP1 | | |

## 28 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 2

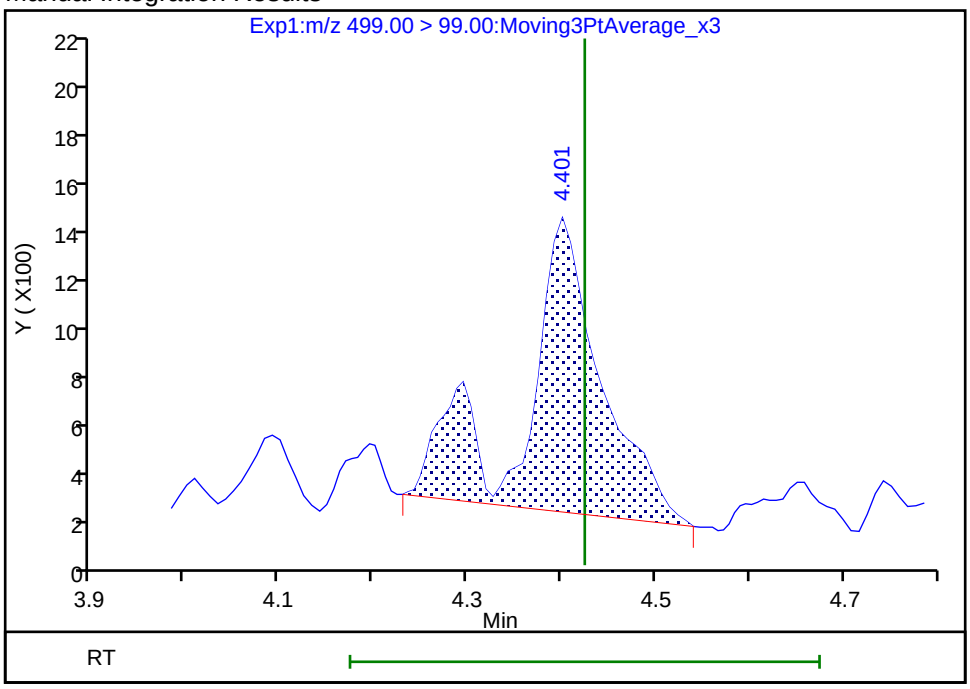
Processing Integration Results

RT: 4.40
Area: 3451
Amount: 0.019695
Amount Units: ng/ml




Manual Integration Results

RT: 4.40
Area: 6756
Amount: 0.015174
Amount Units: ng/ml




Reviewer: mongkols, 11-Sep-2020 08:52:36
Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

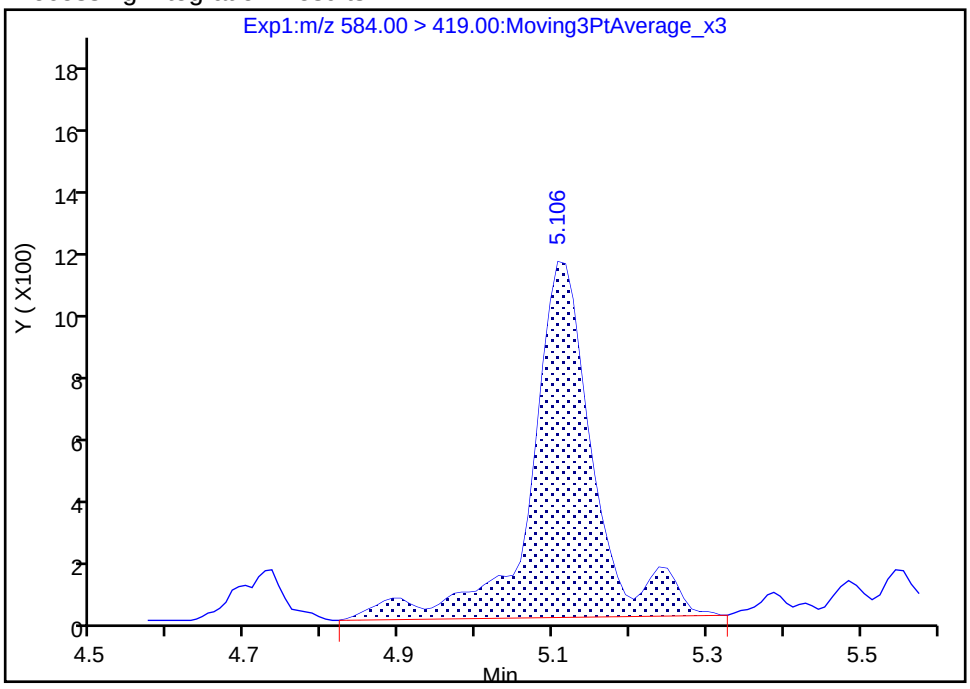
| | | | | | |
|---|---|---|---|---|---|
| Data File: | \\chromfs\Sacramento\ChromData\A13\20200910-103052.b\2020.09.10_A13_PFC_A_062.d | | | | |
| Injection Date: | 10-Sep-2020 18:36:07 | Instrument ID: | A13 | | |
| Lims ID: | 460-217659-D-1-A | Lab Sample ID: | 320-217659-1 | | |
| Client ID: | MW-201 | | | | |
| Operator ID: | SACINSTLCMS01 | ALS Bottle#: | 35 | Worklist Smp#: | 5 |
| Injection Vol: | 20.0 ul | Dil. Factor: | 1.0000 | | |
| Method: | PFAS_A13 | Limit Group: | LC PFC ICAL | | |
| Column: | Gemini C18 3um 3 x 100mm ( 3.00 mm) | Detector | EXP1 | | |

## 48 NEtFOSA, CAS: 2991-50-6

Signal: 1

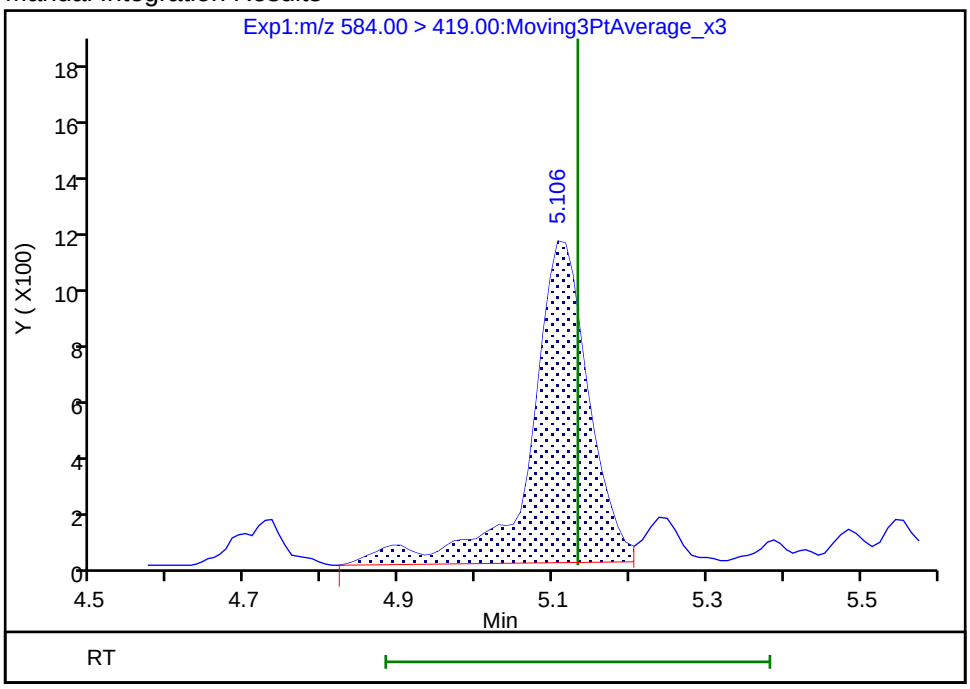
Processing Integration Results

RT: 5.11
Area: 6380
Amount: 0.003736
Amount Units: ng/ml




Manual Integration Results

RT: 5.11
Area: 5908
Amount: 0.003459
Amount Units: ng/ml




Reviewer: mongkols, 11-Sep-2020 08:52:47

Audit Action: Manually Integrated Audit Reason: Baseline

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento  Job No.: 460-217659-1

SDG No.:

Client Sample ID: MW-207  Lab Sample ID: 460-217659-2

Matrix: Water  Lab File ID: 2020.09.10_A13_PFC_A_063.d

Analysis Method: 537 (modified)  Date Collected: 09/03/2020 11:10

Extraction Method: 3535  Date Extracted: 09/09/2020 18:39

Sample wt/vol: 266.7(mL)  Date Analyzed: 09/10/2020 18:45

Con. Extract Vol.: 10.00(mL)  Dilution Factor: 1

Injection Volume: 20(uL)  GC Column: GeminiC18 3x100 ID: 3(mm)

% Moisture:  GPC Cleanup:(Y/N) N

Analysis Batch No.: 411143  Units: ng/L

| CAS NO. | COMPOUND NAME | RESULT | Q | RL | MDL |
|---|---|---|---|---|---|
| 375-22-4 | Perfluorobutanoic acid (PFBA) | 1.93 | B | 1.87 | 0.33 |
| 2706-90-3 | Perfluoropentanoic acid (PFPeA) | 0.79 | J | 1.87 | 0.46 |
| 307-24-4 | Perfluorohexanoic acid (PFHxA) | 0.91 | J | 1.87 | 0.54 |
| 375-85-9 | Perfluoroheptanoic acid (PFHpA) | 0.94 | J | 1.87 | 0.23 |
| 335-67-1 | Perfluorooctanoic acid (PFOA) | 5.46 | | 1.87 | 0.80 |
| 375-95-1 | Perfluorononanoic acid (PFNA) | 0.61 | J | 1.87 | 0.25 |
| 335-76-2 | Perfluorodecanoic acid (PFDA) | 0.39 | J | 1.87 | 0.29 |
| 2058-94-8 | Perfluoroundecanoic acid (PFUnA) | 1.03 | U | 1.87 | 1.03 |
| 307-55-1 | Perfluorododecanoic acid (PFDoA) | 0.52 | U | 1.87 | 0.52 |
| 72629-94-8 | Perfluorotridecanoic acid (PFTriA) | 1.22 | U | 1.87 | 1.22 |
| 376-06-7 | Perfluorotetradecanoic acid (PFTeA) | 0.27 | U | 1.87 | 0.27 |
| 375-73-5 | Perfluorobutanesulfonic acid (PFBS) | 0.76 | J | 1.87 | 0.19 |
| 355-46-4 | Perfluorohexanesulfonic acid (PFHxS) | 1.92 | B | 1.87 | 0.16 |
| 375-92-8 | Perfluoroheptanesulfonic Acid (PFHpS) | 0.37 | J | 1.87 | 0.18 |
| 1763-23-1 | Perfluorooctanesulfonic acid (PFOS) | 22.1 | | 1.87 | 0.51 |
| 335-77-3 | Perfluorodecanesulfonic acid (PFDS) | 0.30 | U | 1.87 | 0.30 |
| 754-91-6 | Perfluorooctanesulfonamide (FOSA) | 0.33 | U | 1.87 | 0.33 |
| 2355-31-9 | N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA) | 2.91 | U | 18.7 | 2.91 |
| 2991-50-6 | N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA) | 1.78 | U | 18.7 | 1.78 |
| 27619-97-2 | 6:2 FTS | 1.87 | U | 18.7 | 1.87 |
| 39108-34-4 | 8:2 FTS | 1.87 | U | 18.7 | 1.87 |

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento  Job No.: 460-217659-1

SDG No.:

Client Sample ID: MW-207  Lab Sample ID: 460-217659-2

Matrix: Water  Lab File ID: 2020.09.10_A13_PFC_A_063.d

Analysis Method: 537 (modified)  Date Collected: 09/03/2020 11:10

Extraction Method: 3535  Date Extracted: 09/09/2020 18:39

Sample wt/vol: 266.7(mL)  Date Analyzed: 09/10/2020 18:45

Con. Extract Vol.: 10.00(mL)  Dilution Factor: 1

Injection Volume: 20(uL)  GC Column: GeminiC18 3x100 ID: 3(mm)

% Moisture:  GPC Cleanup:(Y/N) N

Analysis Batch No.: 411143  Units: ng/L

| CAS NO. | ISOTOPE DILUTION | %REC | Q | LIMITS |
|---|---|---|---|---|
| STL00992 | 13C4 PFBA | 51 | | 25-150 |
| STL01893 | 13C5 PFPeA | 55 | | 25-150 |
| STL00993 | 13C2 PFHxA | 70 | | 25-150 |
| STL01892 | 13C4 PFHpA | 70 | | 25-150 |
| STL00990 | 13C4 PFOA | 69 | | 25-150 |
| STL00995 | 13C5 PFNA | 67 | | 25-150 |
| STL00996 | 13C2 PFDA | 64 | | 25-150 |
| STL00997 | 13C2 PFUnA | 56 | | 25-150 |
| STL00998 | 13C2 PFDoA | 49 | | 25-150 |
| STL02116 | 13C2 PFTeDA | 48 | | 25-150 |
| STL02337 | 13C3 PFBS | 75 | | 25-150 |
| STL00994 | 18O2 PFHxS | 77 | | 25-150 |
| STL00991 | 13C4 PFOS | 74 | | 25-150 |
| STL01056 | 13C8 FOSA | 59 | | 25-150 |
| STL02118 | d3-NMeFOSAA | 52 | | 25-150 |
| STL02117 | d5-NEtFOSAA | 56 | | 25-150 |
| STL02279 | M2-6:2 FTS | 109 | | 25-150 |
| STL02280 | M2-8:2 FTS | 83 | | 25-150 |

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\A13\20200910-103052.b\2020.09.10_A13_PFC_A_063.d
Lims ID: 460-217659-D-2-A
Client ID: MW-207
Sample Type: Client
Inject. Date: 10-Sep-2020 18:45:30 ALS Bottle#: 36 Worklist Smp#: 6
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Sample Info: 460-217659-d-2-a
Misc. Info.: Plate: 1 Rack: 4
Operator ID: SACINSTLCMS01 Instrument ID: A13

Method: \\chromfs\Sacramento\ChromData\A13\20200910-103052.b\PFAS_A13.m
Limit Group: LC PFC ICAL
Last Update: 11-Sep-2020 09:46:55 Calib Date: 08-Sep-2020 18:58:15
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\A13\20200908-102913.b\2020.09.08_A13_PFC_ICALX_010.d

Column 1 : Gemini C18 3um 3 x 100mm ( 3.00 mm) Det: EXP1
Process Host: CTX1053

First Level Reviewer: mongkols Date: 11-Sep-2020 09:46:55
Ratio Calibration: CCV Sample: \\chromfs\Sacramento\ChromData\A13\20200910-103052.b\2020.09.10_A13_PFC_A_058.d

| Signal | RT | EXP RT | DLT RT | REL RT | Response | Amount ng/ml | Ratio(Limits) | %Rec | S/N | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| D 1 13C4 PFBA | | | | | | | | | | |
| 217.00 > 172.00 | 2.467 | 2.475 | -0.008 | 0.609 | 4537206 | 1.27 | | 50.7 | 5252 | |
| 2 Perfluorobutanoic acid | | | | | | | | | | M |
| 212.90 > 169.00 | 2.475 | 2.482 | -0.007 | 1.003 | 69321 | 0.0514 | | | 2.2 | M |
| D 4 13C5 PFPeA | | | | | | | | | | |
| 267.90 > 223.00 | 2.866 | 2.867 | -0.001 | 0.708 | 3838047 | 1.38 | | 55.0 | 1436 | |
| 5 Perfluoropentanoic acid | | | | | | | | | | M |
| 262.90 > 219.00 | 2.866 | 2.867 | -0.001 | 1.000 | 33446 | 0.0212 | | | 0.3 | M |
| D 14 13C3 PFBS | | | | | | | | | | |
| 301.90 > 80.00 | 2.901 | 2.913 | -0.012 | 0.716 | 6090172 | 1.74 | | 74.8 | 420 | |
| 6 Perfluorobutanesulfonic acid | | | | | | | | | | M |
| 298.90 > 80.00 | 2.901 | 2.913 | -0.012 | 1.000 | 51812 | 0.0202 | Target=2.29 | | 1.3 | M |
| 298.90 > 99.00 | 2.901 | 2.913 | -0.012 | 1.000 | 26519 | | 1.95(1.15-3.44) | | 1.9 | |
| 10 Perfluorohexanoic acid | | | | | | | | | | M |
| 313.00 > 269.00 | 3.258 | 3.258 | 0.0 | 1.000 | 54848 | 0.0243 | Target=13.52 | | 0.7 | M |
| 313.00 > 119.00 | 3.247 | 3.258 | -0.011 | 0.997 | 3750 | | 14.63(6.76-20.28) | | 0.9 | M |
| D 9 13C2 PFHxA | | | | | | | | | | |
| 315.00 > 270.00 | 3.258 | 3.258 | 0.0 | 0.804 | 6061161 | 1.76 | | 70.4 | 1979 | |
| D 17 18O2 PFHxS | | | | | | | | | | |
| 403.00 > 84.00 | 3.655 | 3.665 | -0.010 | 0.902 | 4170154 | 1.82 | | 76.8 | 656 | |
| 16 Perfluoroheptanoic acid | | | | | | | | | | M |
| 363.00 > 319.00 | 3.655 | 3.665 | -0.010 | 1.000 | 60167 | 0.0252 | Target=3.87 | | 1.3 | M |
| 363.00 > 169.00 | 3.655 | 3.665 | -0.010 | 1.000 | 15998 | | 3.76(1.93-5.80) | | 7.0 | M |
| 18 Perfluorohexanesulfonic acid | | | | | | | | | | M |
| 399.00 > 80.00 | 3.655 | 3.665 | -0.010 | 1.000 | 100502 | 0.0512 | Target=3.08 | | 3.6 | M |
| 399.00 > 99.00 | 3.655 | 3.665 | -0.010 | 1.000 | 30182 | | 3.33(1.54-4.62) | | 8.1 | |
| D 15 13C4 PFHpA | | | | | | | | | | |
| 367.00 > 322.00 | 3.655 | 3.665 | -0.010 | 0.902 | 5916222 | 1.74 | | 69.7 | 2093 | |

| Signal | RT | EXP RT | DLT RT | REL RT | Response | Amount ng/ml | Ratio(Limits) | %Rec | S/N | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| D 20 M2-6:2 FTS | | | | | | | | | | |
| 429.00 > 81.00 | 4.034 | 4.042 | -0.008 | 0.996 | 2560337 | 2.59 | | 109 | 478 | |
| 21 6:2 FTS | | | | | | | | | | |
| 427.00 > 407.00 | 4.026 | 4.042 | -0.016 | 0.998 | 58265 | 0.0225 | | | 31.1 | |
| 22 Perfluoroheptanesulfonic acid | | | | | | | | | | M |
| 449.00 > 80.00 | 4.050 | 4.051 | -0.001 | 0.919 | 13512 | 0.009823 | Target=4.20 | | 3.6 | M |
| 449.00 > 99.00 | 4.034 | 4.051 | -0.017 | 0.915 | 2455 | | 5.50(2.10-6.30) | | 1.3 | |
| D 24 13C4 PFOA | | | | | | | | | | |
| 417.00 > 372.00 | 4.050 | 4.059 | -0.009 | 1.000 | 7178039 | 1.73 | | 69.2 | 6038 | |
| 26 Perfluorooctanoic acid | | | | | | | | | | M |
| 413.00 > 369.00 | 4.050 | 4.059 | -0.009 | 1.000 | 428081 | 0.1457 | Target=2.99 | | 15.2 | M |
| 413.00 > 169.00 | 4.050 | 4.059 | -0.009 | 1.000 | 164155 | | 2.61(1.50-4.49) | | 86.9 | M |
| * 25 13C2 PFOA | | | | | | | | | | |
| 415.00 > 370.00 | 4.050 | 4.059 | -0.009 | | 10527068 | 2.50 | | | 4901 | |
| 28 Perfluorooctanesulfonic acid | | | | | | | | | | M |
| 499.00 > 80.00 | 4.417 | 4.425 | -0.008 | 1.002 | 740580 | 0.5905 | Target=4.13 | | 101 | M |
| 499.00 > 99.00 | 4.408 | 4.425 | -0.017 | 1.000 | 148539 | | 4.99(2.06-6.19) | | 56.7 | M |
| D 29 13C4 PFOS | | | | | | | | | | |
| 503.00 > 80.00 | 4.408 | 4.425 | -0.017 | 1.088 | 2886637 | 1.76 | | 73.8 | 792 | |
| 30 Perfluorononanoic acid | | | | | | | | | | M |
| 463.00 > 419.00 | 4.425 | 4.433 | -0.008 | 0.998 | 39488 | 0.0163 | Target=7.70 | | 4.2 | M |
| 463.00 > 169.00 | 4.434 | 4.433 | 0.001 | 1.000 | 5319 | | 7.42(3.85-11.55) | | 10.4 | |
| D 31 13C5 PFNA | | | | | | | | | | |
| 468.00 > 423.00 | 4.434 | 4.442 | -0.008 | 1.095 | 6393501 | 1.67 | | 66.7 | 7024 | |
| D 34 13C8 FOSA | | | | | | | | | | |
| 506.00 > 78.00 | 4.734 | 4.740 | -0.006 | 1.169 | 3482427 | 1.48 | | 59.2 | 7767 | |
| 33 Perfluorooctanesulfonamide | | | | | | | | | | |
| 498.00 > 78.00 | 4.734 | 4.740 | -0.006 | 1.000 | 9450 | 0.007230 | | | 3.8 | |
| D 37 13C2 PFDA | | | | | | | | | | |
| 515.00 > 470.00 | 4.786 | 4.793 | -0.007 | 1.182 | 7406796 | 1.60 | | 63.8 | 7466 | |
| 36 Perfluorodecanoic acid | | | | | | | | | | M |
| 513.00 > 469.00 | 4.786 | 4.793 | -0.007 | 1.000 | 27705 | 0.0104 | Target=10.40 | | 4.5 | M |
| 513.00 > 169.00 | 4.786 | 4.793 | -0.007 | 1.000 | 2222 | | 12.47(5.20-15.61) | | 6.9 | |
| D 38 M2-8:2 FTS | | | | | | | | | | |
| 529.00 > 81.00 | 4.786 | 4.802 | -0.016 | 1.182 | 2616035 | 2.00 | | 83.5 | 1376 | |
| 39 8:2 FTS | | | | | | | | | | |
| 527.00 > 507.00 | 4.786 | 4.802 | -0.016 | 1.000 | 4472 | 0.001656 | | | 20.3 | |
| D 40 d3-NMeFOSAA | | | | | | | | | | |
| 573.00 > 419.00 | 4.952 | 4.959 | -0.007 | 1.223 | 3122177 | 1.30 | | 52.2 | 3203 | |
| 41 NMeFOSAA | | | | | | | | | | |
| 570.00 > 419.00 | 4.952 | 4.959 | -0.007 | 1.000 | 3545 | 0.003524 | | | 2.8 | |
| D 44 13C2 PFUnA | | | | | | | | | | |
| 565.00 > 520.00 | 5.106 | 5.113 | -0.007 | 1.261 | 6377462 | 1.40 | | 56.2 | 4215 | |
| D 46 d5-NEtFOSAA | | | | | | | | | | |
| 589.00 > 419.00 | 5.116 | 5.123 | -0.007 | 1.263 | 3217149 | 1.39 | | 55.6 | 1969 | |
| 48 NEtFOSA | | | | | | | | | | M |
| 584.00 > 419.00 | 5.135 | 5.132 | 0.003 | 1.004 | 5983 | 0.006006 | | | 16.6 | M |

| Signal | RT | EXP RT | DLT RT | REL RT | Response | Amount ng/ml | Ratio(Limits) | %Rec | S/N | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| D 56 13C2 PFDoA | | | | | | | | | | |
| 615.00 > 570.00 | 5.396 | 5.409 | -0.013 | 1.332 | 6033854 | 1.23 | | 49.4 | 6574 | |
| D 61 13C2 PFTeDA | | | | | | | | | | |
| 715.00 > 670.00 | 5.910 | 5.920 | -0.010 | 1.459 | 5789866 | 1.20 | | 48.0 | 8992 | |

## QC Flag Legend

Review Flags

M - Manually Integrated

Report Date: 11-Sep-2020 09:46:55 Chrom Revision: 2.3 09-Sep-2020 15:12:58

Eurofins TestAmerica, Sacramento

Data File: \\chromfs\Sacramento\ChromData\A13\20200910-103052.b\2020.09.10_A13_PFC_A_063.d

Injection Date: 10-Sep-2020 18:45:30 Instrument ID: A13

Lims ID: 460-217659-D-2-A Lab Sample ID: 320-217659-2

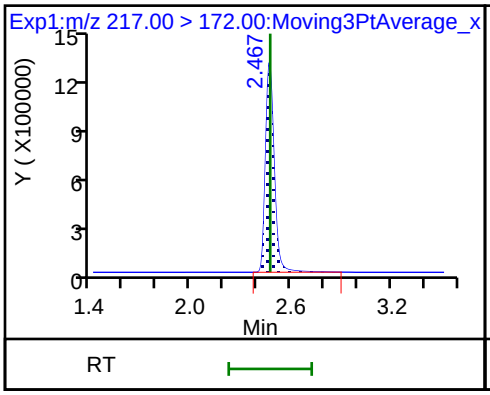
Client ID: MW-207

Operator ID: SACINSTLCMS01 ALS Bottle#: 36 Worklist Smp#: 6

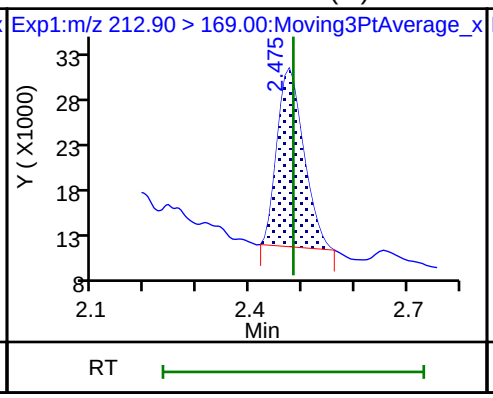
Injection Vol: 20.0 ul Dil. Factor: 1.0000

Method: PFAS_A13 Limit Group: LC PFC ICAL

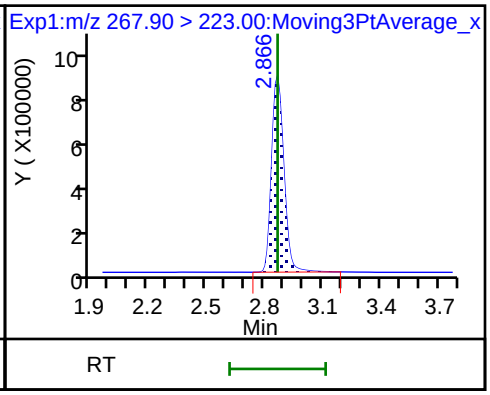
D 1 13C4 PFBA



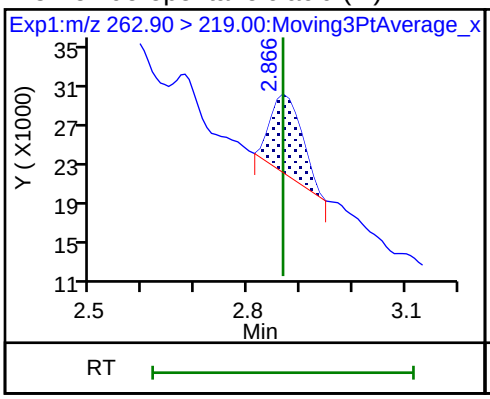

2 Perfluorobutanoic acid (M)



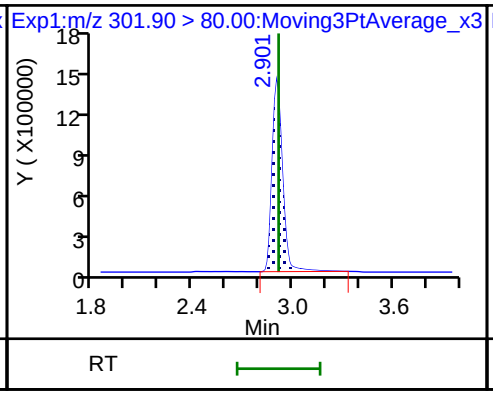

D 4 13C5 PFPeA



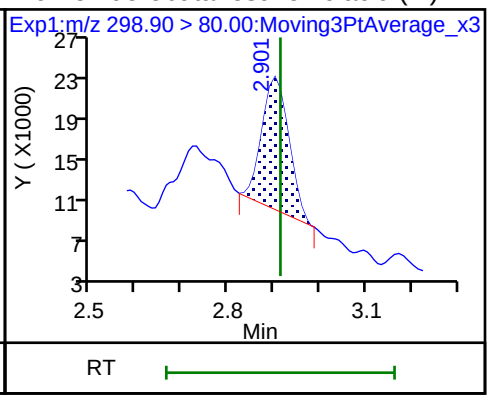

5 Perfluoropentanoic acid (M)



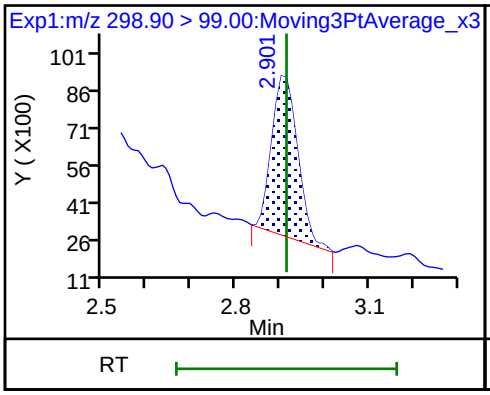

D 14 13C3 PFBS



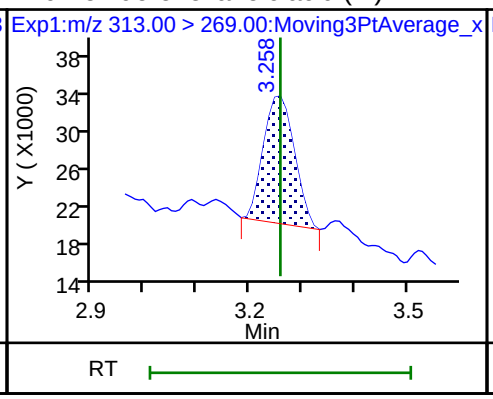

6 Perfluorobutanesulfonic acid (M)



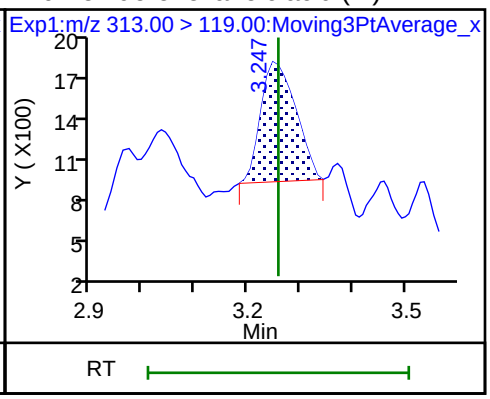

6 Perfluorobutanesulfonic acid



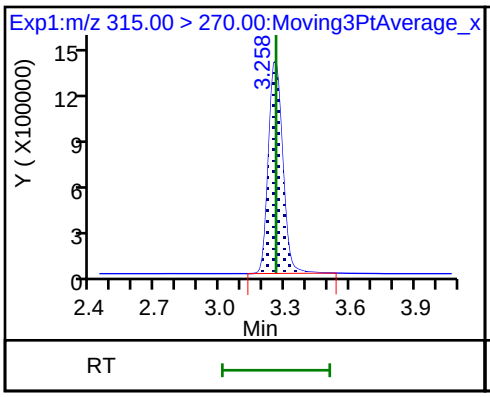

10 Perfluorohexanoic acid (M)



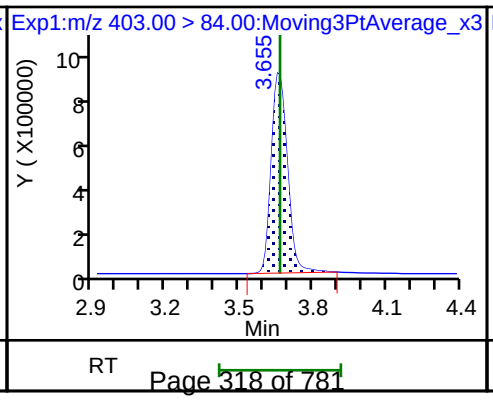

10 Perfluorohexanoic acid (M)



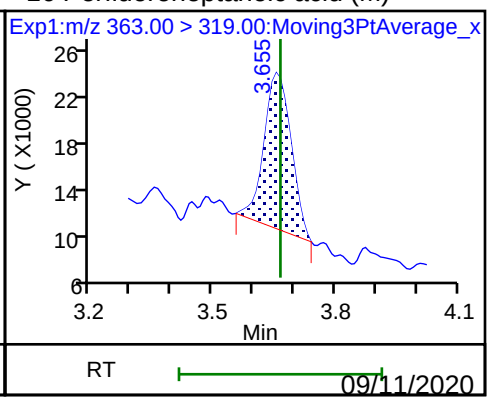

D 9 13C2 PFHxA



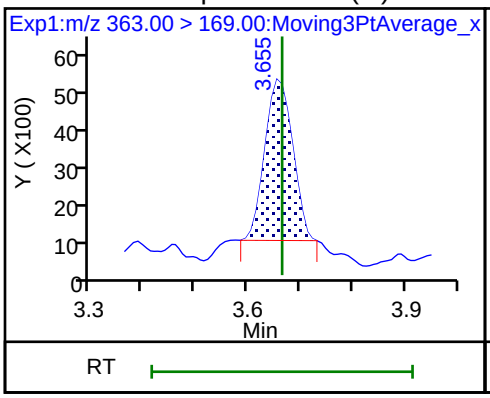

D 17 18O2 PFHxS



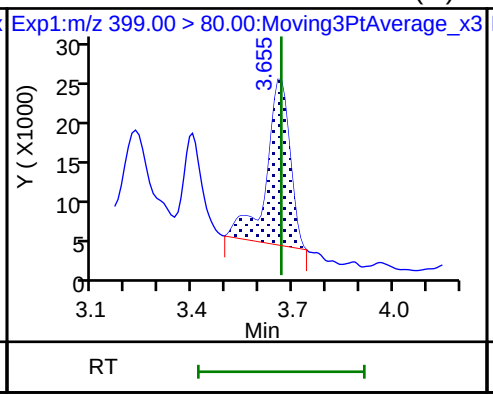

16 Perfluoroheptanoic acid (M)



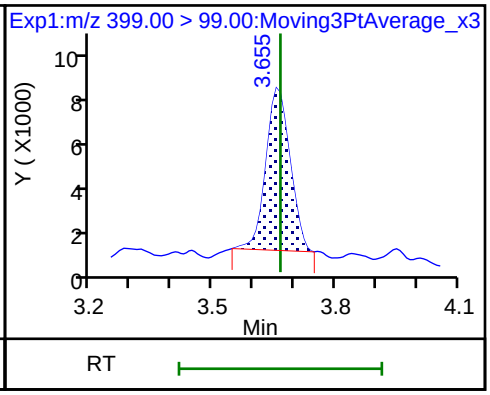
16 Perfluoroheptanoic acid (M)



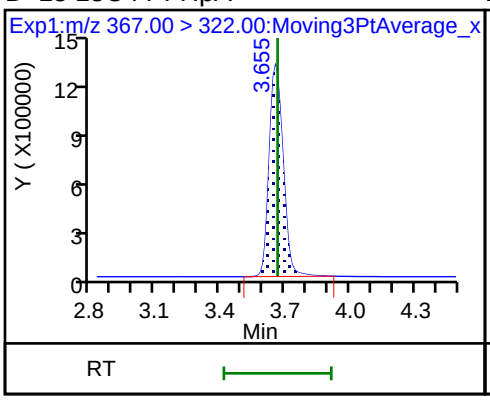

18 Perfluorohexanesulfonic acid (M)



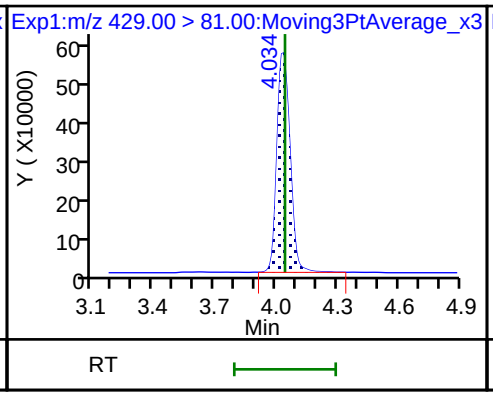

18 Perfluorohexanesulfonic acid



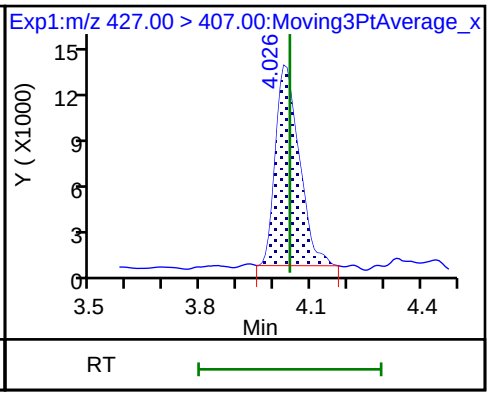

D 15 13C4 PFHpA



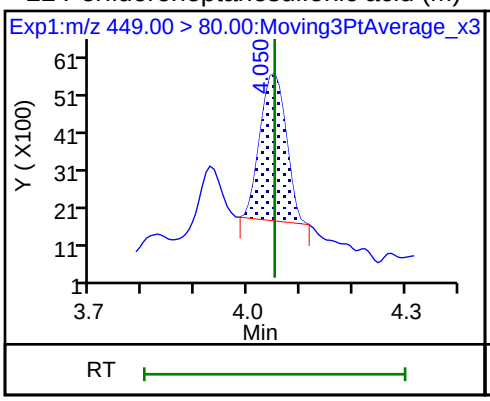

D 20 M2-6:2 FTS



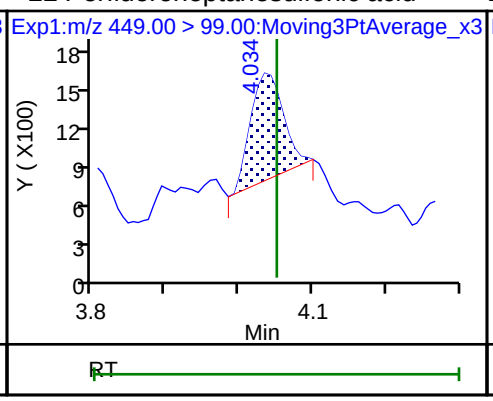

21 6:2 FTS



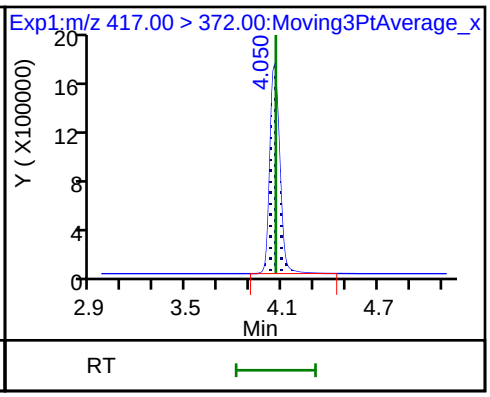

22 Perfluoroheptanesulfonic acid (M)



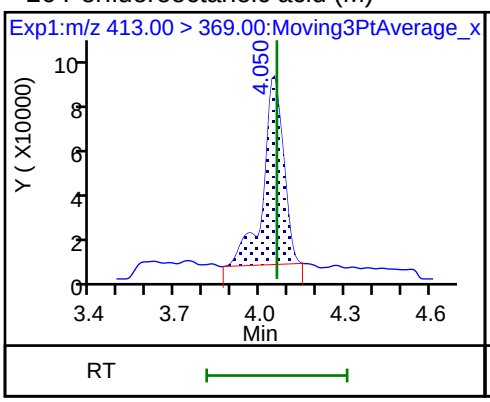

22 Perfluoroheptanesulfonic acid



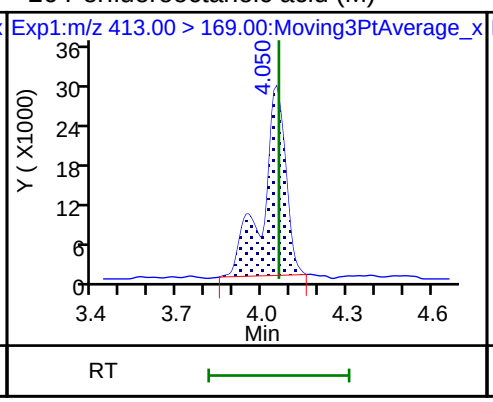

D 24 13C4 PFOA



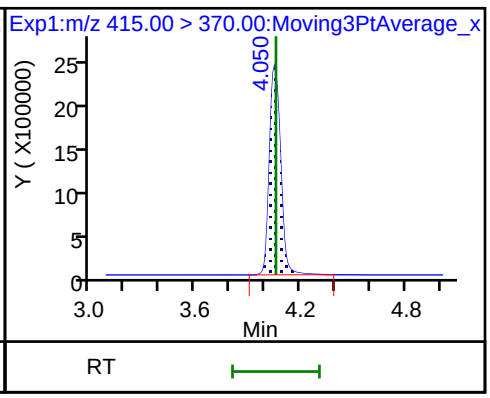

26 Perfluorooctanoic acid (M)



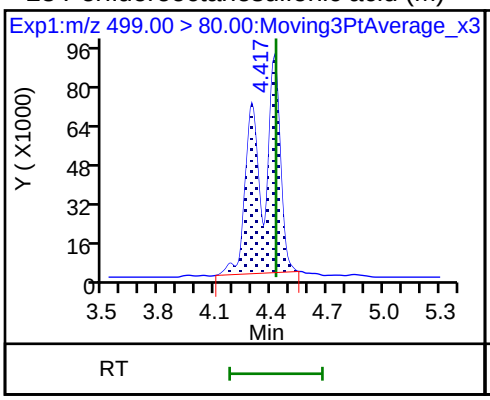

26 Perfluorooctanoic acid (M)



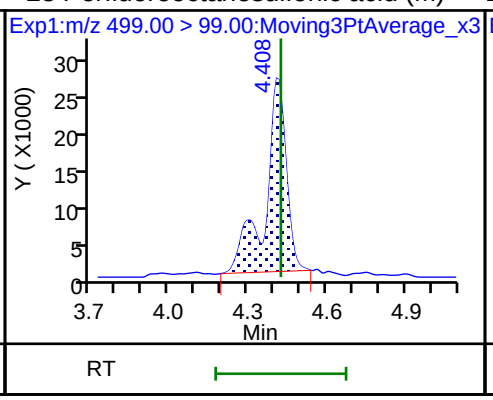

* 25 13C2 PFOA



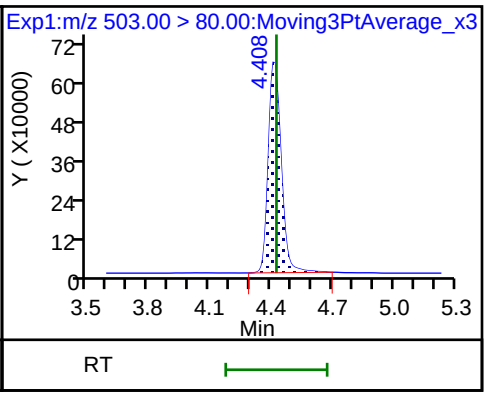
28 Perfluorooctanesulfonic acid (M)



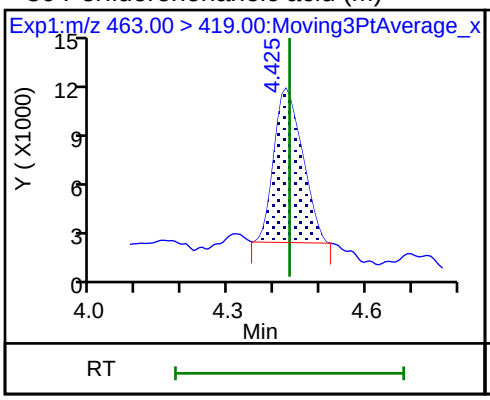

28 Perfluorooctanesulfonic acid (M)



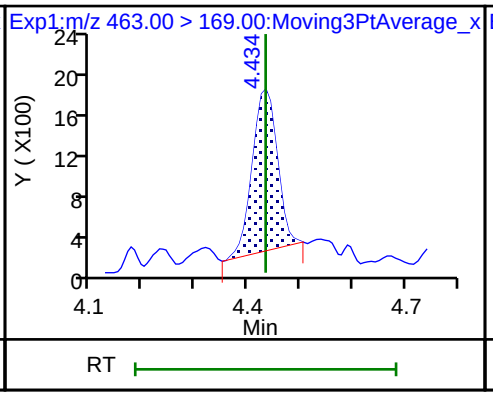

D 29 13C4 PFOS



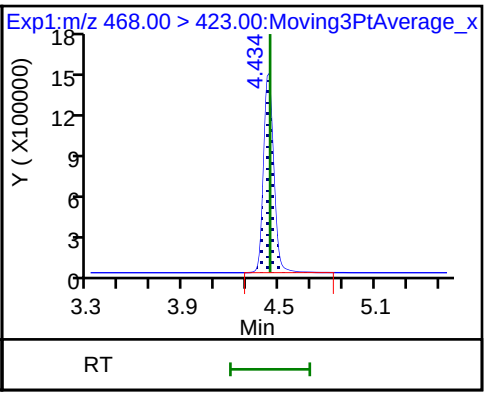

30 Perfluorononanoic acid (M)



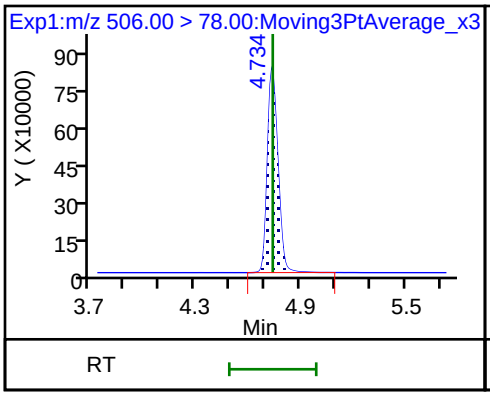

30 Perfluorononanoic acid



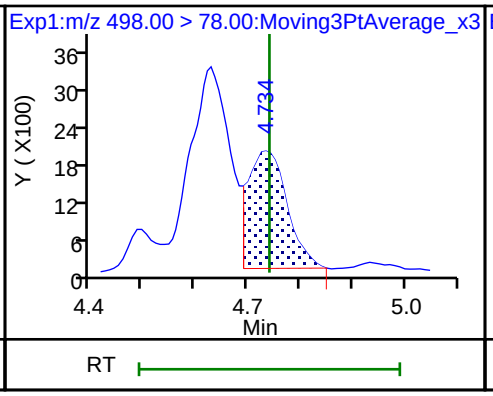

D 31 13C5 PFNA



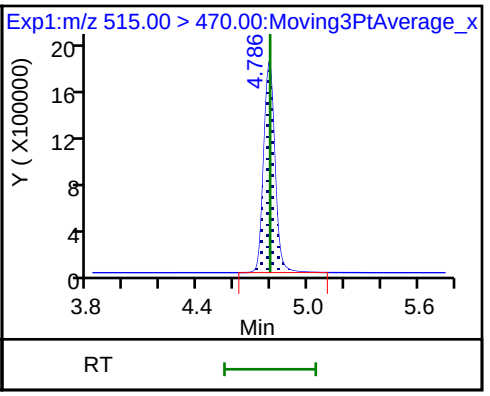

D 34 13C8 FOSA



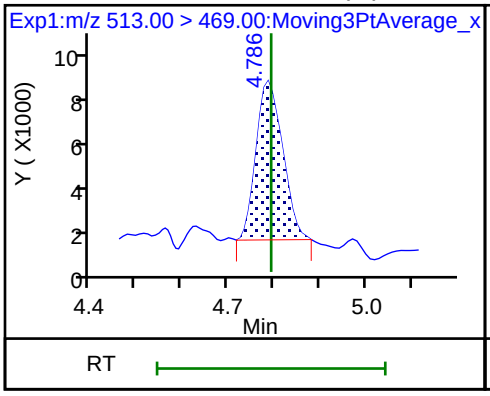

33 Perfluorooctanesulfonamide



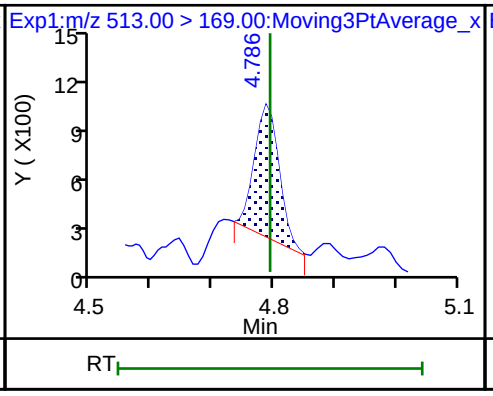

D 37 13C2 PFDA



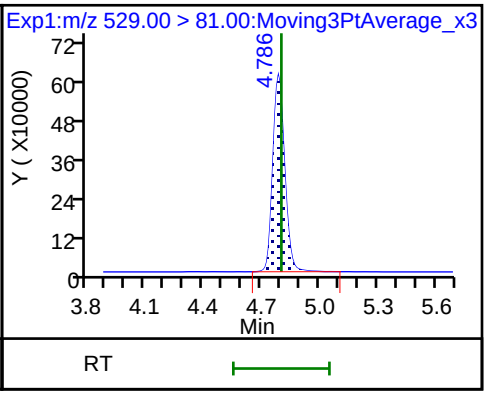

36 Perfluorodecanoic acid (M)



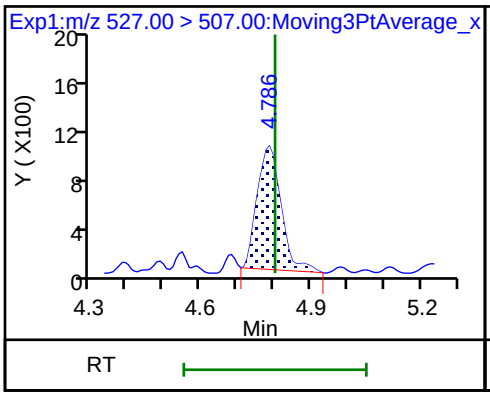

36 Perfluorodecanoic acid



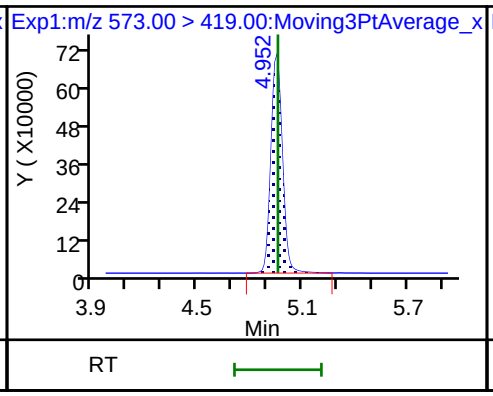

D 38 M2-8:2 FTS



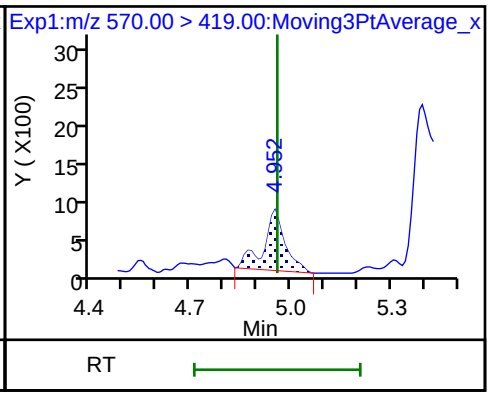
39 8:2 FTS



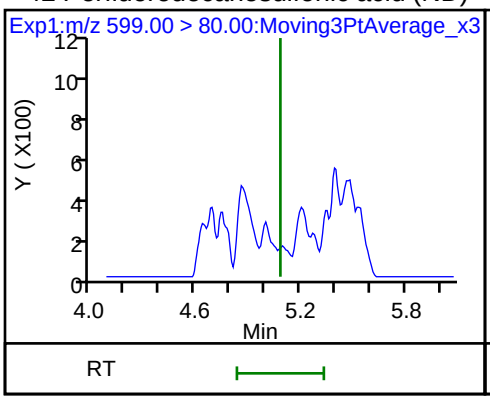

D 40 d3-NMeFOSAA



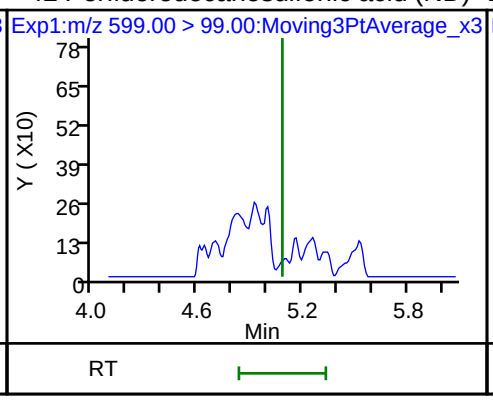

41 NMeFOSAA



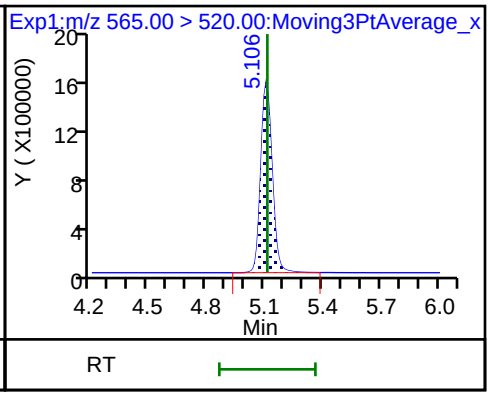

42 Perfluorodecanesulfonic acid (ND)



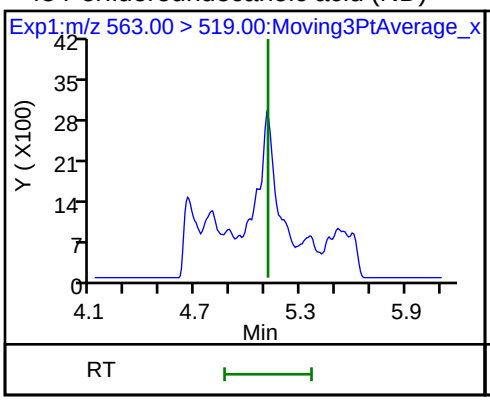

42 Perfluorodecanesulfonic acid (ND)



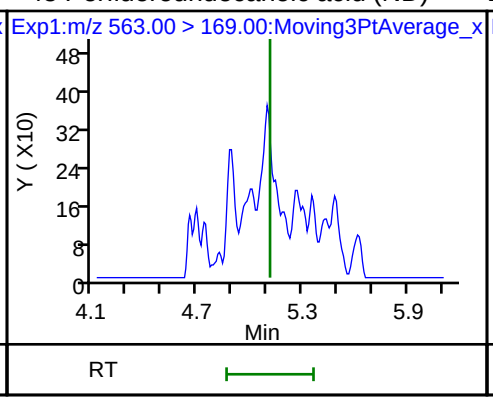

D 44 13C2 PFUnA



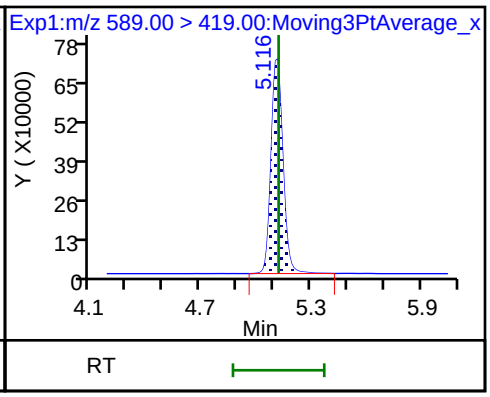

45 Perfluoroundecanoic acid (ND)



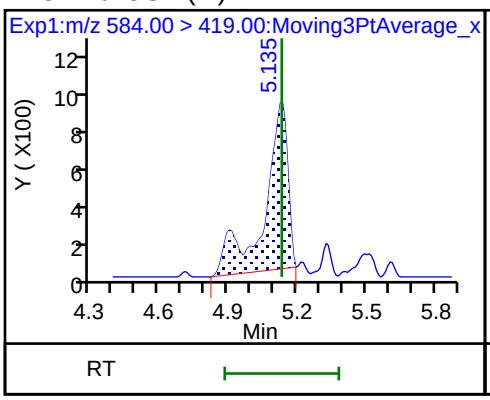

45 Perfluoroundecanoic acid (ND)



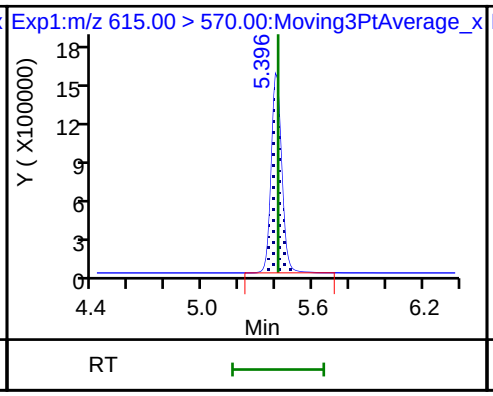

D 46 d5-NEtFOSAA



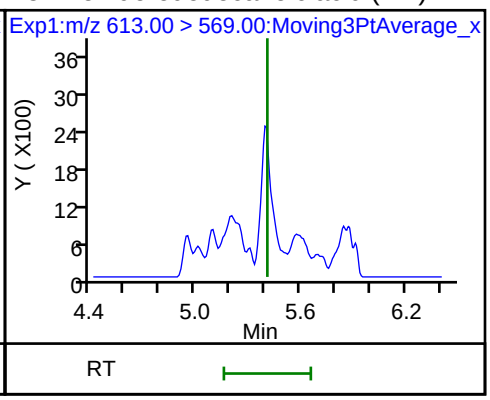

48 NEtFOSA (M)



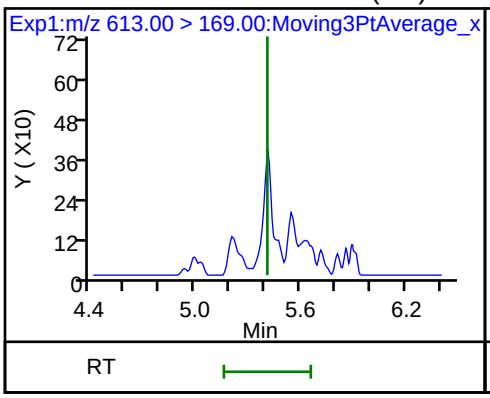

D 56 13C2 PFDoA



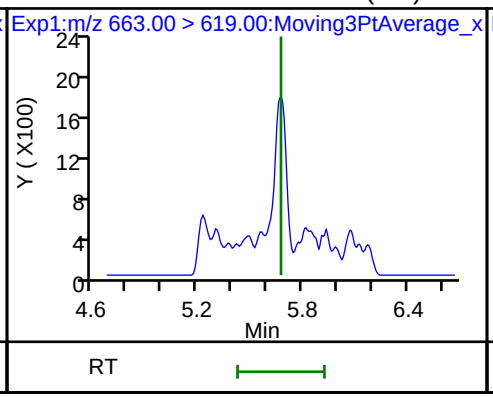

57 Perfluorododecanoic acid (ND)



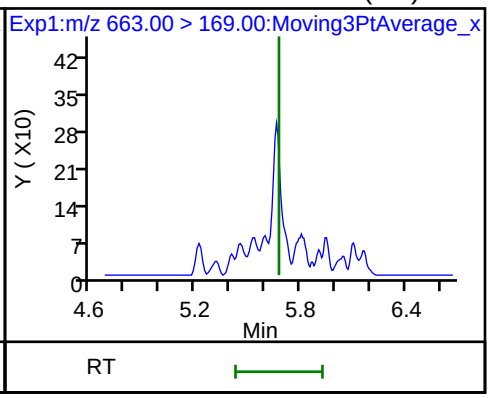
57 Perfluorododecanoic acid (ND)



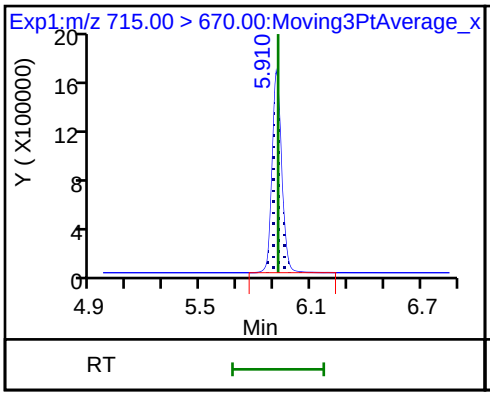

60 Perfluorotridecanoic acid (ND)



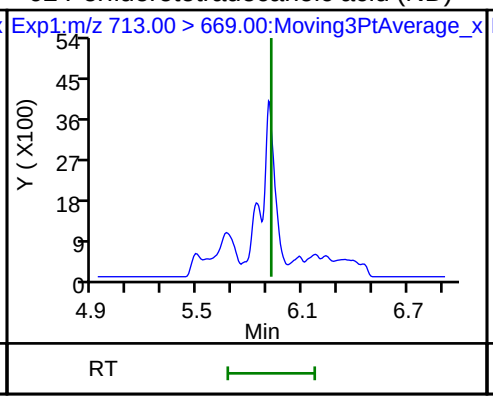

60 Perfluorotridecanoic acid (ND)



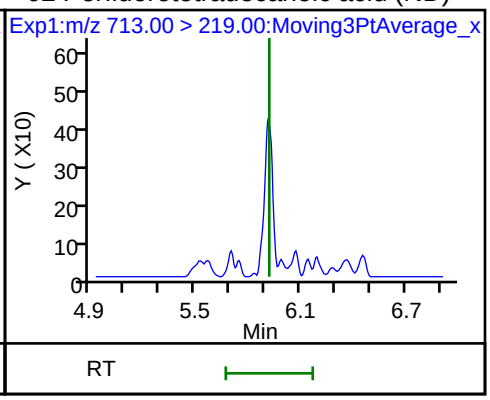

D 61 13C2 PFTeDA




62 Perfluorotetradecanoic acid (ND)




62 Perfluorotetradecanoic acid (ND)



Eurofins TestAmerica, Sacramento

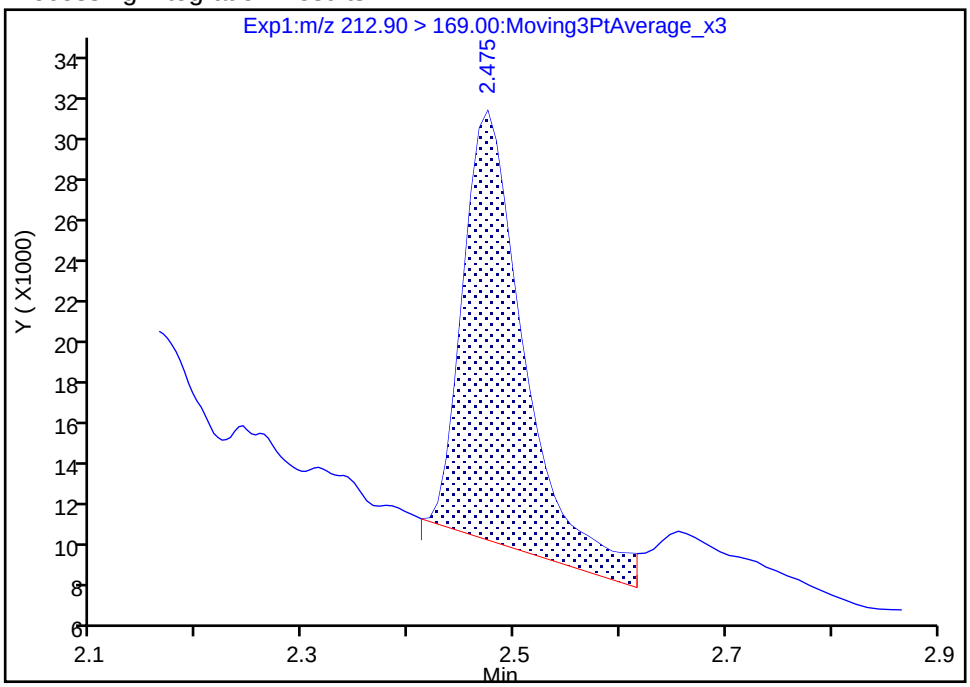
| | | | | | |
|---|---|---|---|---|---|
| Data File: | \\chromfs\Sacramento\ChromData\A13\20200910-103052.b\2020.09.10_A13_PFC_A_063.d | | | | |
| Injection Date: | 10-Sep-2020 18:45:30 | Instrument ID: | A13 | | |
| Lims ID: | 460-217659-D-2-A | Lab Sample ID: | 320-217659-2 | | |
| Client ID: | MW-207 | | | | |
| Operator ID: | SACINSTLCMS01 | ALS Bottle#: | 36 | Worklist Smp#: | 6 |
| Injection Vol: | 20.0 ul | Dil. Factor: | 1.0000 | | |
| Method: | PFAS_A13 | Limit Group: | LC PFC ICAL | | |
| Column: | Gemini C18 3um 3 x 100mm ( 3.00 mm) | Detector | EXP1 | | |

## 2 Perfluorobutanoic acid, CAS: 375-22-4

Signal: 1

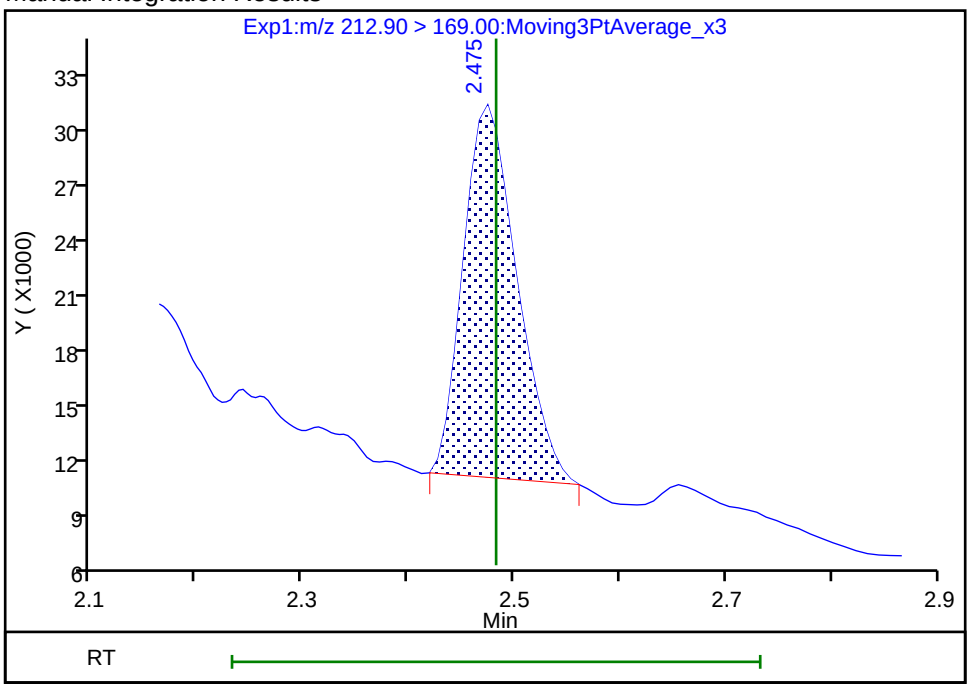
Processing Integration Results

RT: 2.47
Area: 82792
Amount: 0.061377
Amount Units: ng/ml




Manual Integration Results

RT: 2.47
Area: 69321
Amount: 0.051390
Amount Units: ng/ml




Reviewer: mongkols, 11-Sep-2020 09:45:28
Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

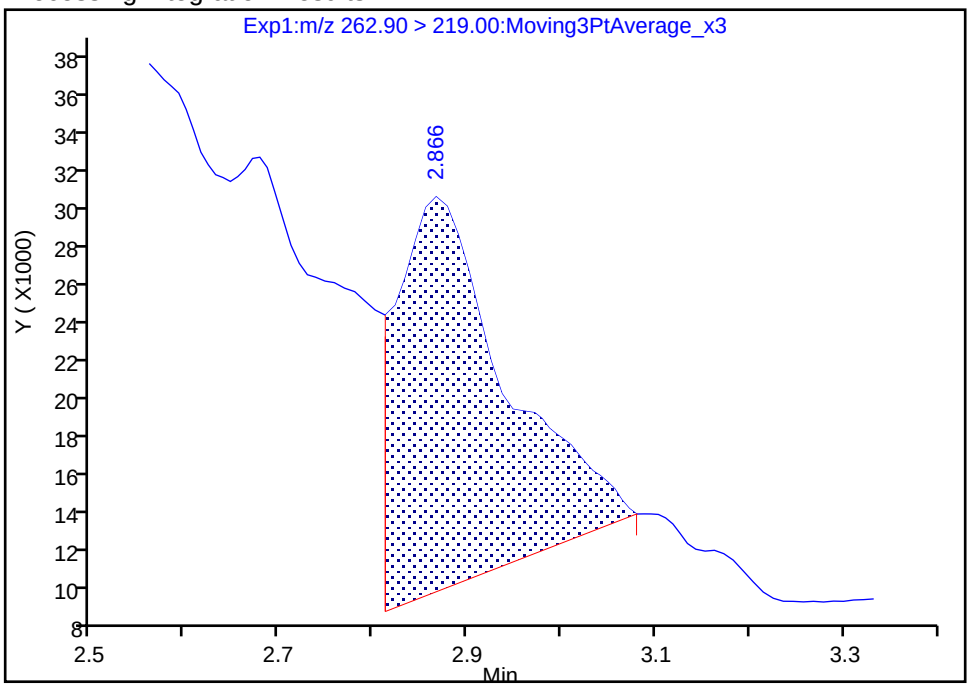
| | | | | | |
|---|---|---|---|---|---|
| Data File: | \\chromfs\Sacramento\ChromData\A13\20200910-103052.b\2020.09.10_A13_PFC_A_063.d | | | | |
| Injection Date: | 10-Sep-2020 18:45:30 | Instrument ID: | A13 | | |
| Lims ID: | 460-217659-D-2-A | Lab Sample ID: | 320-217659-2 | | |
| Client ID: | MW-207 | | | | |
| Operator ID: | SACINSTLCMS01 | ALS Bottle#: | 36 | Worklist Smp#: | 6 |
| Injection Vol: | 20.0 ul | Dil. Factor: | 1.0000 | | |
| Method: | PFAS_A13 | Limit Group: | LC PFC ICAL | | |
| Column: | Gemini C18 3um 3 x 100mm ( 3.00 mm) | Detector | EXP1 | | |

## 5 Perfluoropentanoic acid, CAS: 2706-90-3

Signal: 1

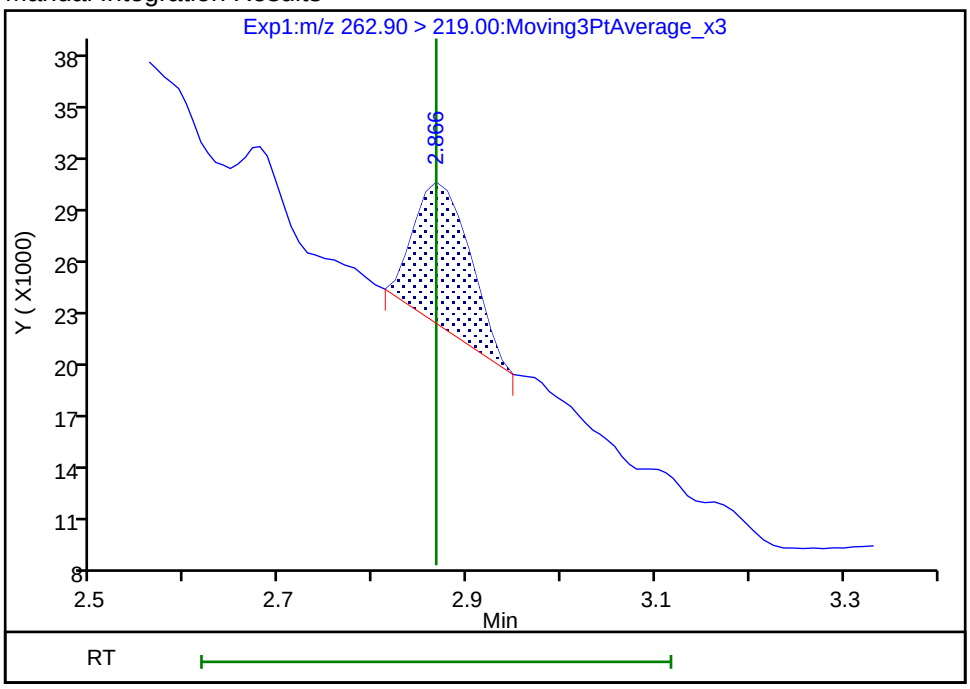
Processing Integration Results

RT: 2.87
Area: 160775
Amount: 0.101891
Amount Units: ng/ml




Manual Integration Results

RT: 2.87
Area: 33446
Amount: 0.021196
Amount Units: ng/ml




Reviewer: mongkols, 11-Sep-2020 09:45:33

Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

| | | | | | |
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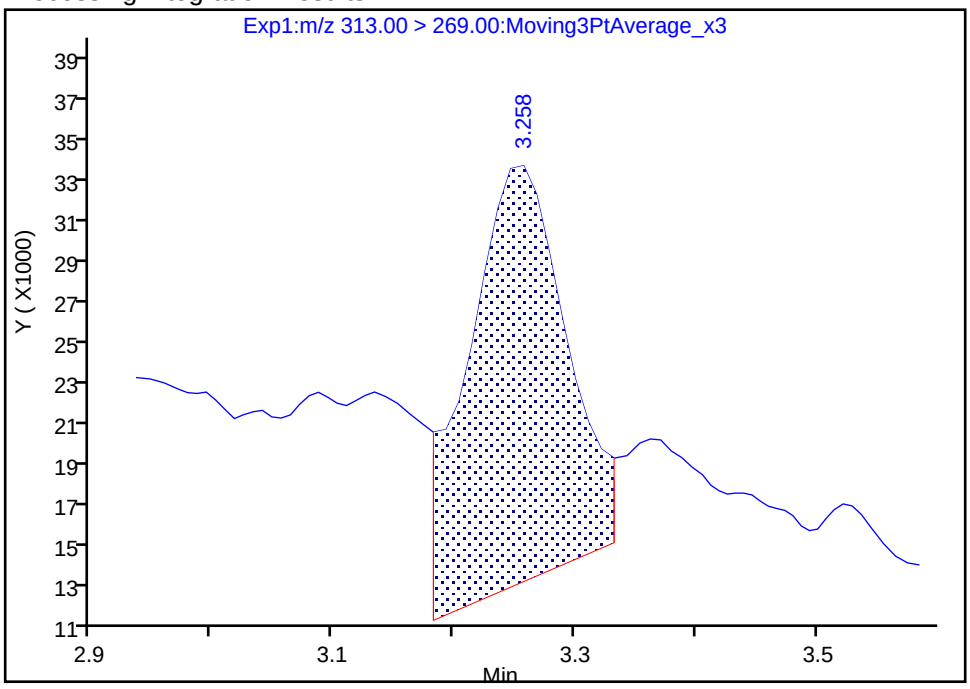
| Data File: | \\chromfs\Sacramento\ChromData\A13\20200910-103052.b\2020.09.10_A13_PFC_A_063.d | | | | |
| Injection Date: | 10-Sep-2020 18:45:30 | Instrument ID: | A13 | | |
| Lims ID: | 460-217659-D-2-A | Lab Sample ID: | 320-217659-2 | | |
| Client ID: | MW-207 | | | | |
| Operator ID: | SACINSTLCMS01 | ALS Bottle#: | 36 | Worklist Smp#: | 6 |
| Injection Vol: | 20.0 ul | Dil. Factor: | 1.0000 | | |
| Method: | PFAS_A13 | Limit Group: | LC PFC ICAL | | |
| Column: | Gemini C18 3um 3 x 100mm ( 3.00 mm) | Detector | EXP1 | | |

## 10 Perfluorohexanoic acid, CAS: 307-24-4

Signal: 1

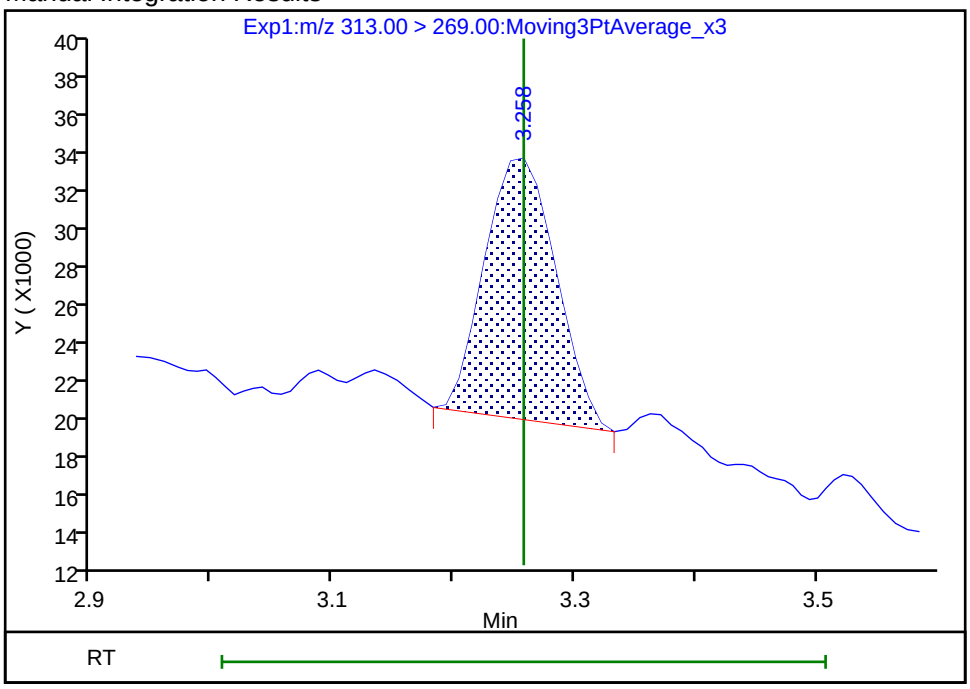
Processing Integration Results

RT: 3.26
Area: 113562
Amount: 0.050400
Amount Units: ng/ml




Manual Integration Results

RT: 3.26
Area: 54848
Amount: 0.024342
Amount Units: ng/ml




Reviewer: mongkols, 11-Sep-2020 09:45:41
Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

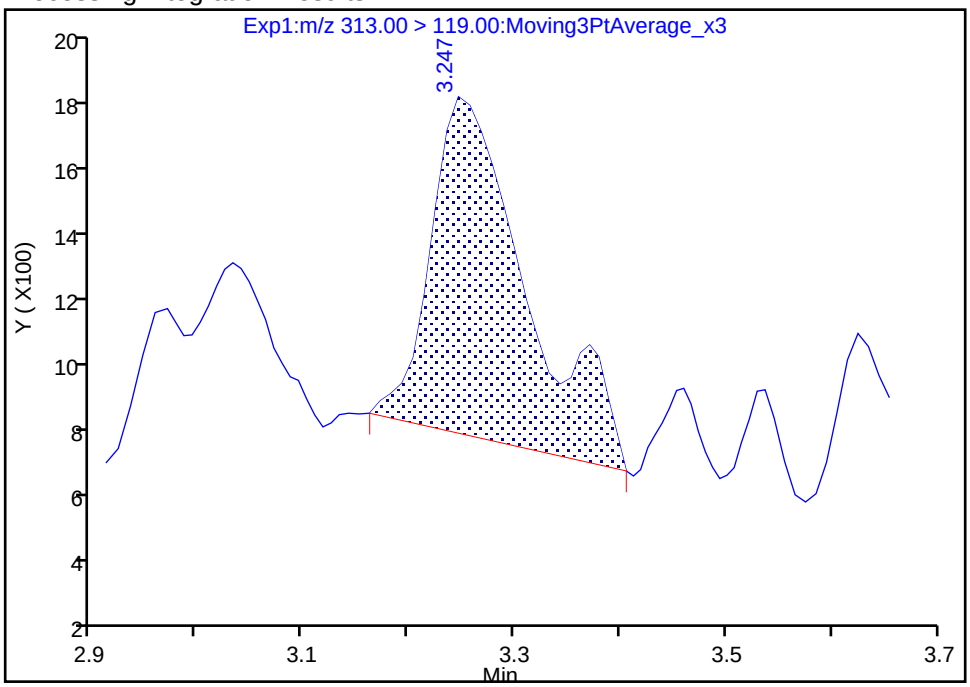
| | | | | | |
|---|---|---|---|---|---|
| Data File: | \\chromfs\Sacramento\ChromData\A13\20200910-103052.b\2020.09.10_A13_PFC_A_063.d | | | | |
| Injection Date: | 10-Sep-2020 18:45:30 | Instrument ID: | A13 | | |
| Lims ID: | 460-217659-D-2-A | Lab Sample ID: | 320-217659-2 | | |
| Client ID: | MW-207 | | | | |
| Operator ID: | SACINSTLCMS01 | ALS Bottle#: | 36 | Worklist Smp#: | 6 |
| Injection Vol: | 20.0 ul | Dil. Factor: | 1.0000 | | |
| Method: | PFAS_A13 | Limit Group: | LC PFC ICAL | | |
| Column: | Gemini C18 3um 3 x 100mm ( 3.00 mm ) | Detector | EXP1 | | |

## 10 Perfluorohexanoic acid, CAS: 307-24-4

Signal: 2

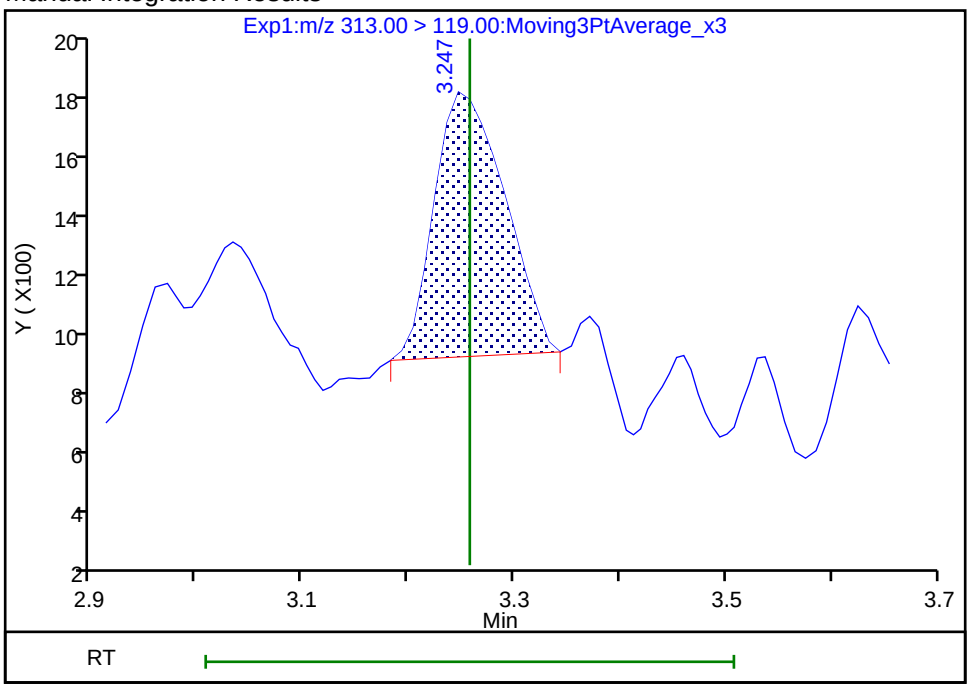
Processing Integration Results

RT: 3.25
Area: 5896
Amount: 0.050400
Amount Units: ng/ml




Manual Integration Results

RT: 3.25
Area: 3750
Amount: 0.024342
Amount Units: ng/ml




Reviewer: mongkols, 11-Sep-2020 09:45:45
Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

| | | | | | |
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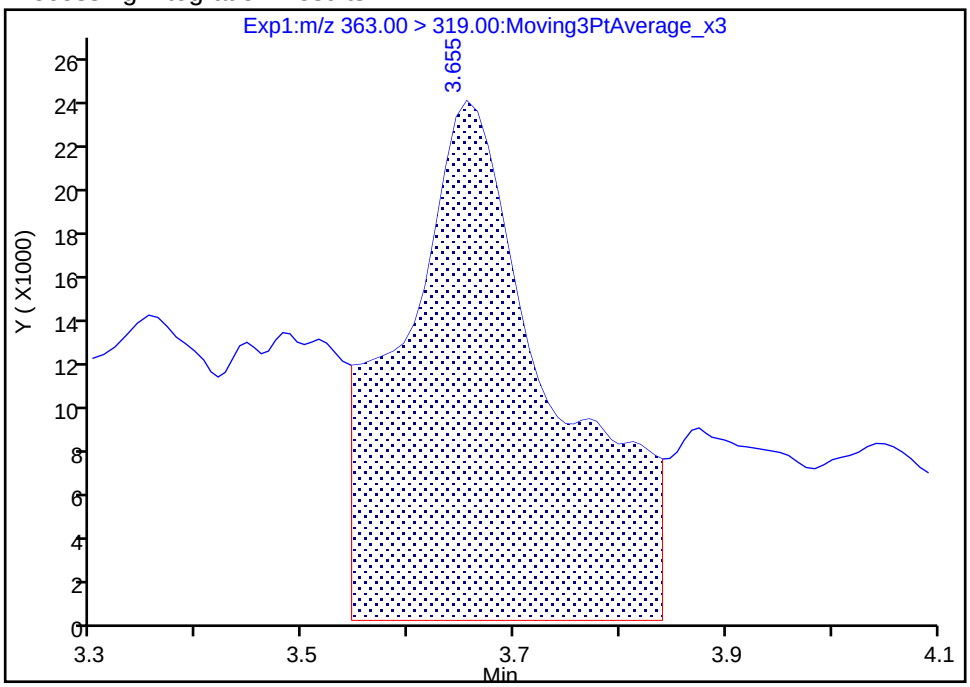
| Injection Date: | 10-Sep-2020 18:45:30 | Instrument ID: | A13 | | |
| Lims ID: | 460-217659-D-2-A | Lab Sample ID: | 320-217659-2 | | |
| Client ID: | MW-207 | | | | |
| Operator ID: | SACINSTLCMS01 | ALS Bottle#: | 36 | Worklist Smp#: | 6 |
| Injection Vol: | 20.0 ul | Dil. Factor: | 1.0000 | | |
| Method: | PFAS_A13 | Limit Group: | LC PFC ICAL | | |
| Column: | Gemini C18 3um 3 x 100mm ( 3.00 mm) | Detector | EXP1 | | |

## 16 Perfluoroheptanoic acid, CAS: 375-85-9

Signal: 1

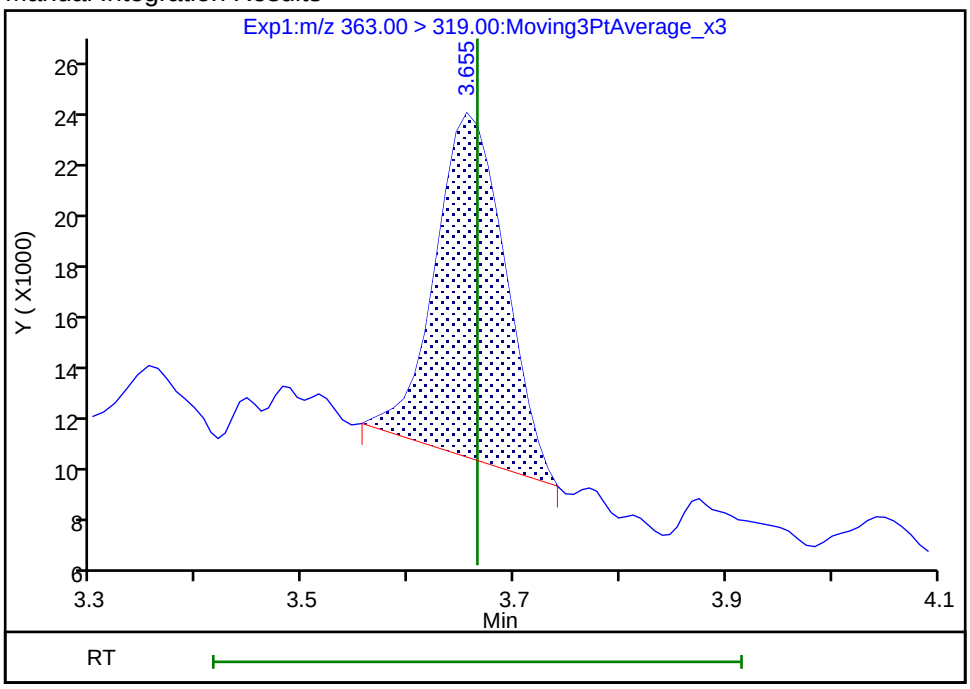
Processing Integration Results

RT: 3.65
Area: 230380
Amount: 0.096321
Amount Units: ng/ml




Manual Integration Results

RT: 3.65
Area: 60167
Amount: 0.025156
Amount Units: ng/ml




Reviewer: mongkols, 11-Sep-2020 09:45:49

Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

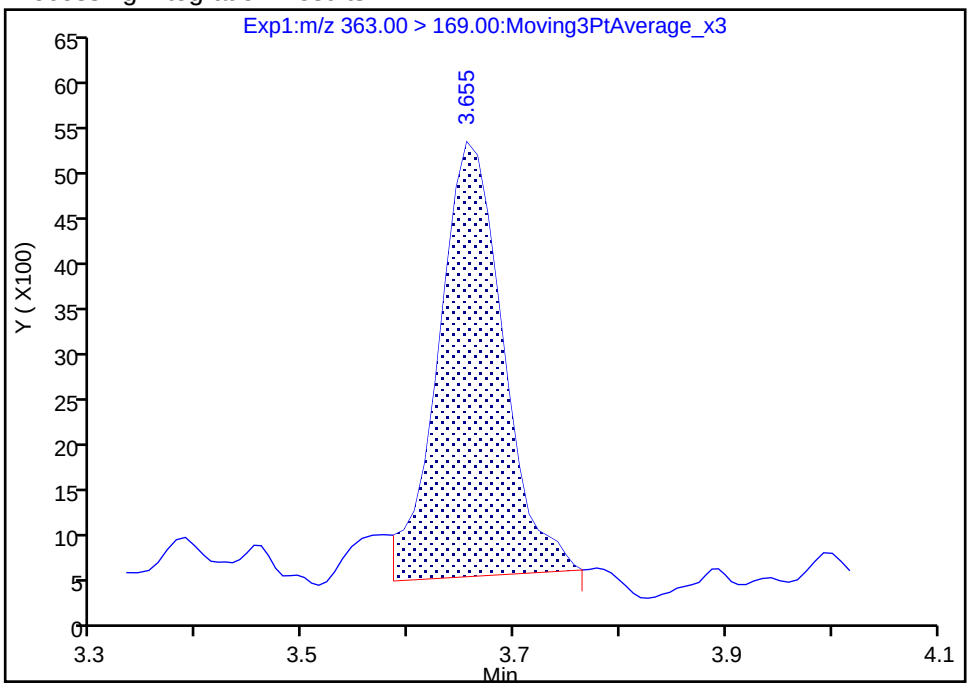
| | | | | | |
|---|---|---|---|---|---|
| Data File: | \\chromfs\Sacramento\ChromData\A13\20200910-103052.b\2020.09.10_A13_PFC_A_063.d | | | | |
| Injection Date: | 10-Sep-2020 18:45:30 | Instrument ID: | A13 | | |
| Lims ID: | 460-217659-D-2-A | Lab Sample ID: | 320-217659-2 | | |
| Client ID: | MW-207 | | | | |
| Operator ID: | SACINSTLCMS01 | ALS Bottle#: | 36 | Worklist Smp#: | 6 |
| Injection Vol: | 20.0 ul | Dil. Factor: | 1.0000 | | |
| Method: | PFAS_A13 | Limit Group: | LC PFC ICAL | | |
| Column: | Gemini C18 3um 3 x 100mm ( 3.00 mm ) | Detector | EXP1 | | |

## 16 Perfluoroheptanoic acid, CAS: 375-85-9

Signal: 2

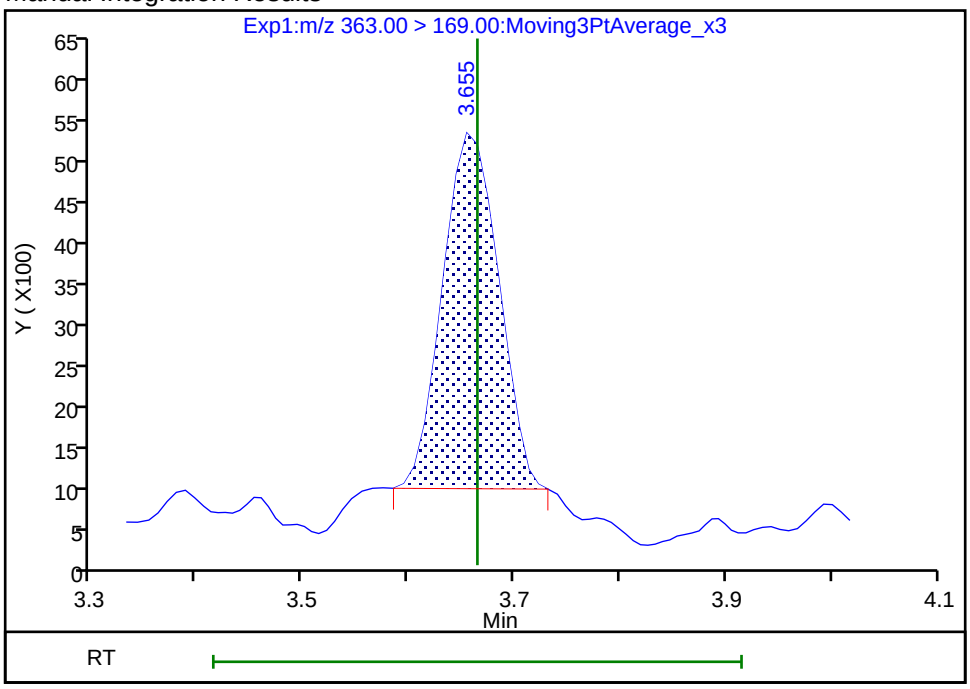
Processing Integration Results

RT: 3.65
Area: 20338
Amount: 0.096321
Amount Units: ng/ml




Manual Integration Results

RT: 3.65
Area: 15998
Amount: 0.025156
Amount Units: ng/ml




Reviewer: mongkols, 11-Sep-2020 09:45:52
Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

| | | | | | |
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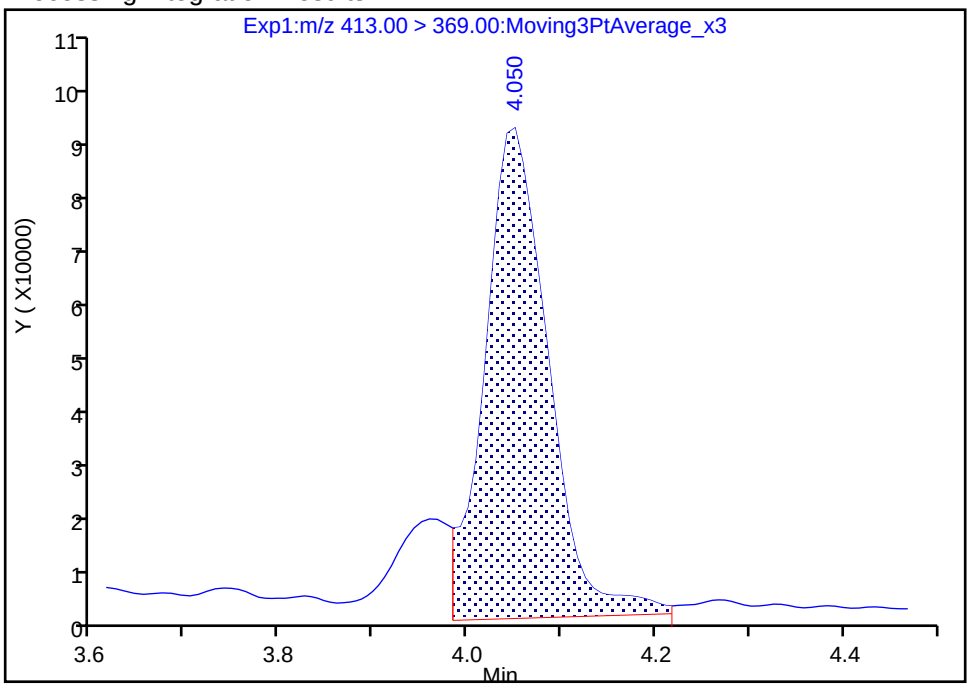
| Injection Date: | 10-Sep-2020 18:45:30 | Instrument ID: | A13 | | |
| Lims ID: | 460-217659-D-2-A | Lab Sample ID: | 320-217659-2 | | |
| Client ID: | MW-207 | | | | |
| Operator ID: | SACINSTLCMS01 | ALS Bottle#: | 36 | Worklist Smp#: | 6 |
| Injection Vol: | 20.0 ul | Dil. Factor: | 1.0000 | | |
| Method: | PFAS_A13 | Limit Group: | LC PFC ICAL | | |
| Column: | Gemini C18 3um 3 x 100mm ( 3.00 mm) | Detector | EXP1 | | |

## 26 Perfluorooctanoic acid, CAS: 335-67-1

Signal: 1

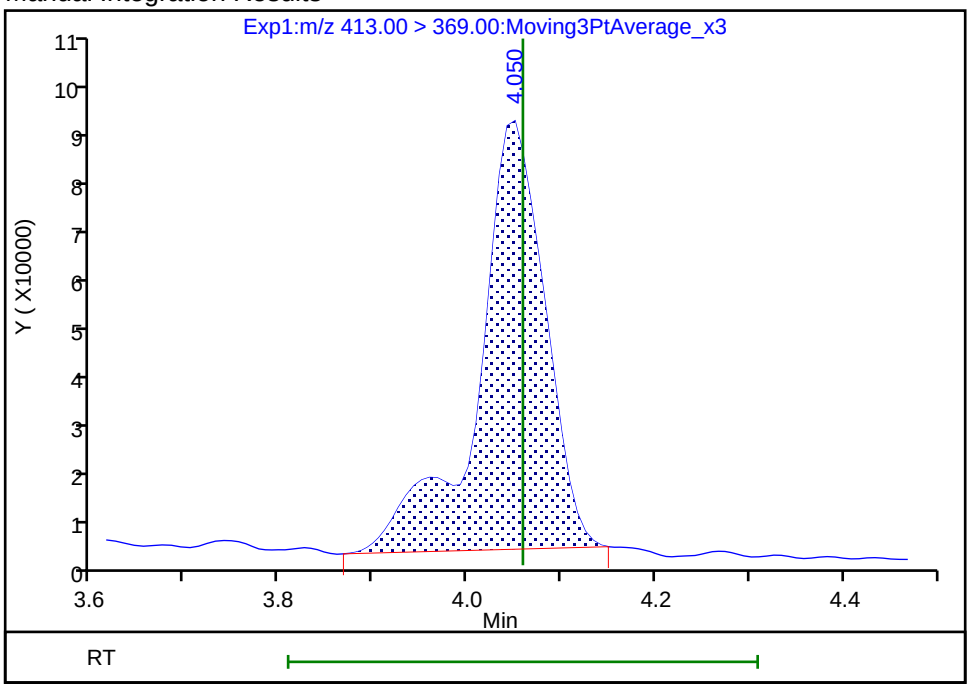
Processing Integration Results

RT: 4.05
Area: 421740
Amount: 0.143581
Amount Units: ng/ml




Manual Integration Results

RT: 4.05
Area: 428081
Amount: 0.145740
Amount Units: ng/ml




Reviewer: mongkols, 11-Sep-2020 09:46:13

Audit Action: Manually Integrated Audit Reason: Isomers

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

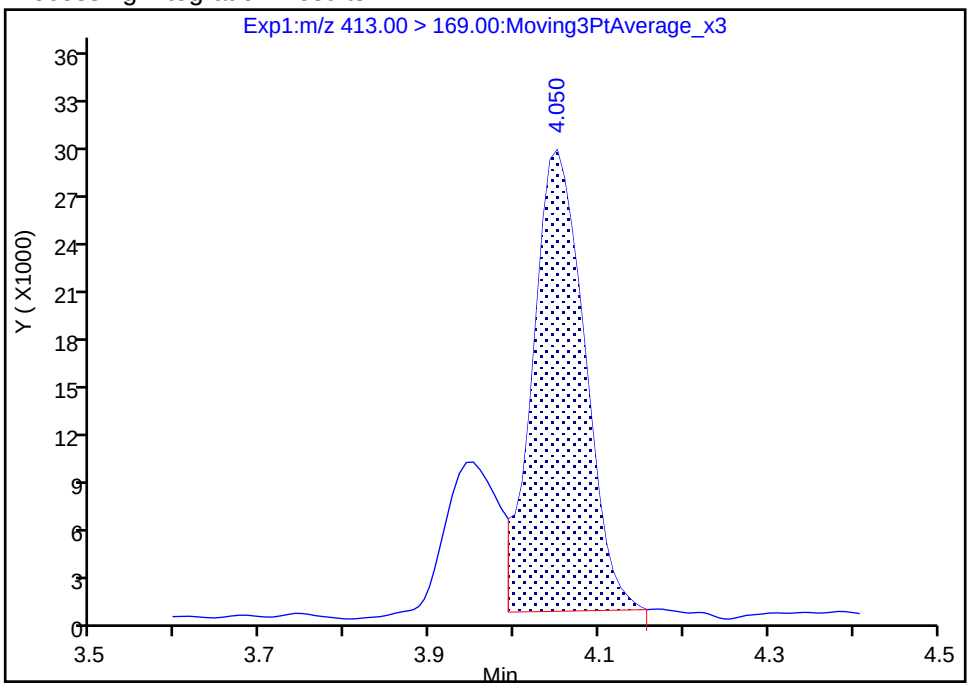
| | | | | | |
|---|---|---|---|---|---|
| Data File: | \\chromfs\Sacramento\ChromData\A13\20200910-103052.b\2020.09.10_A13_PFC_A_063.d | | | | |
| Injection Date: | 10-Sep-2020 18:45:30 | Instrument ID: | A13 | | |
| Lims ID: | 460-217659-D-2-A | Lab Sample ID: | 320-217659-2 | | |
| Client ID: | MW-207 | | | | |
| Operator ID: | SACINSTLCMS01 | ALS Bottle#: | 36 | Worklist Smp#: | 6 |
| Injection Vol: | 20.0 ul | Dil. Factor: | 1.0000 | | |
| Method: | PFAS_A13 | Limit Group: | LC PFC ICAL | | |
| Column: | Gemini C18 3um 3 x 100mm ( 3.00 mm ID) | Detector | EXP1 | | |

## 26 Perfluorooctanoic acid, CAS: 335-67-1

Signal: 2

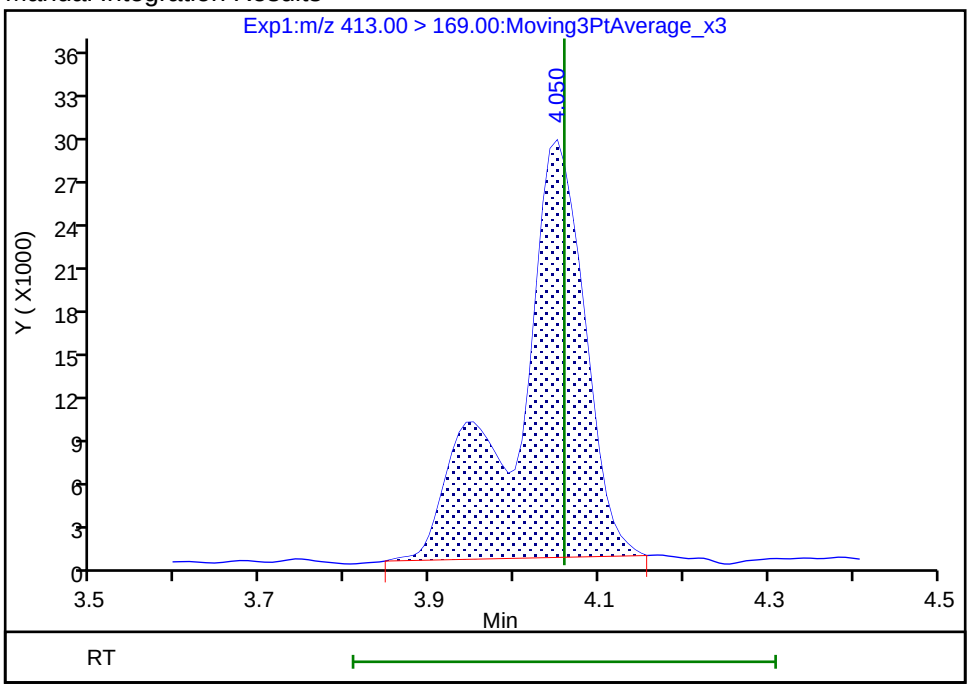
Processing Integration Results

RT: 4.05
Area: 122649
Amount: 0.143581
Amount Units: ng/ml




Manual Integration Results

RT: 4.05
Area: 164155
Amount: 0.145740
Amount Units: ng/ml




Reviewer: mongkols, 11-Sep-2020 09:46:16
Audit Action: Manually Integrated Audit Reason: Isomers

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

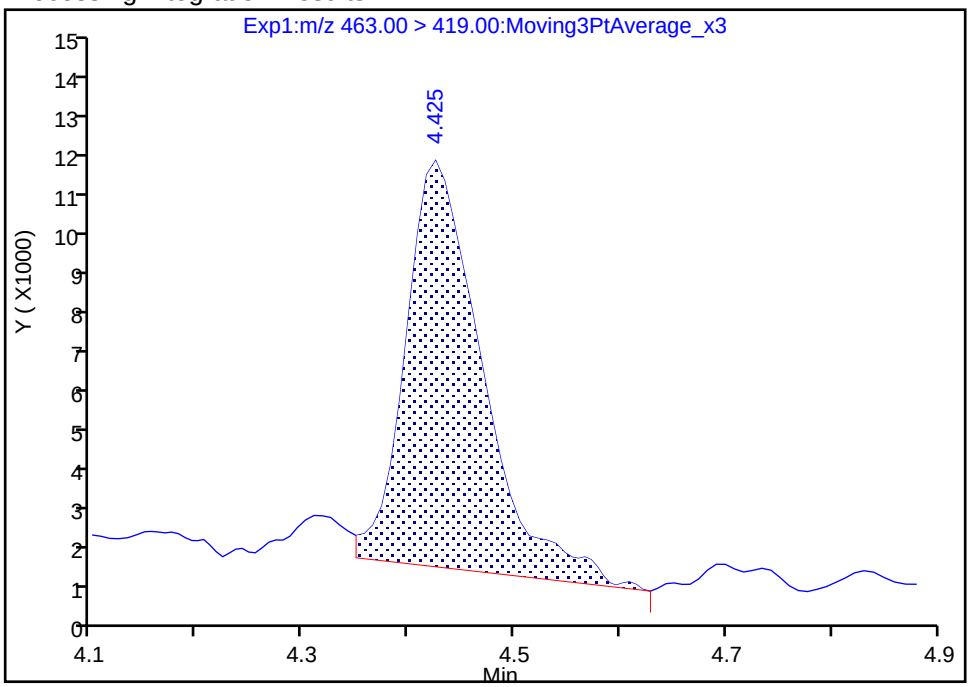
| | | | | | |
|---|---|---|---|---|---|
| Data File: | \\chromfs\Sacramento\ChromData\A13\20200910-103052.b\2020.09.10_A13_PFC_A_063.d | | | | |
| Injection Date: | 10-Sep-2020 18:45:30 | Instrument ID: | A13 | | |
| Lims ID: | 460-217659-D-2-A | Lab Sample ID: | 320-217659-2 | | |
| Client ID: | MW-207 | | | | |
| Operator ID: | SACINSTLCMS01 | ALS Bottle#: | 36 | Worklist Smp#: | 6 |
| Injection Vol: | 20.0 ul | Dil. Factor: | 1.0000 | | |
| Method: | PFAS_A13 | Limit Group: | LC PFC ICAL | | |
| Column: | Gemini C18 3um 3 x 100mm ( 3.00 mm) | Detector | EXP1 | | |

## 30 Perfluorononanoic acid, CAS: 375-95-1

Signal: 1

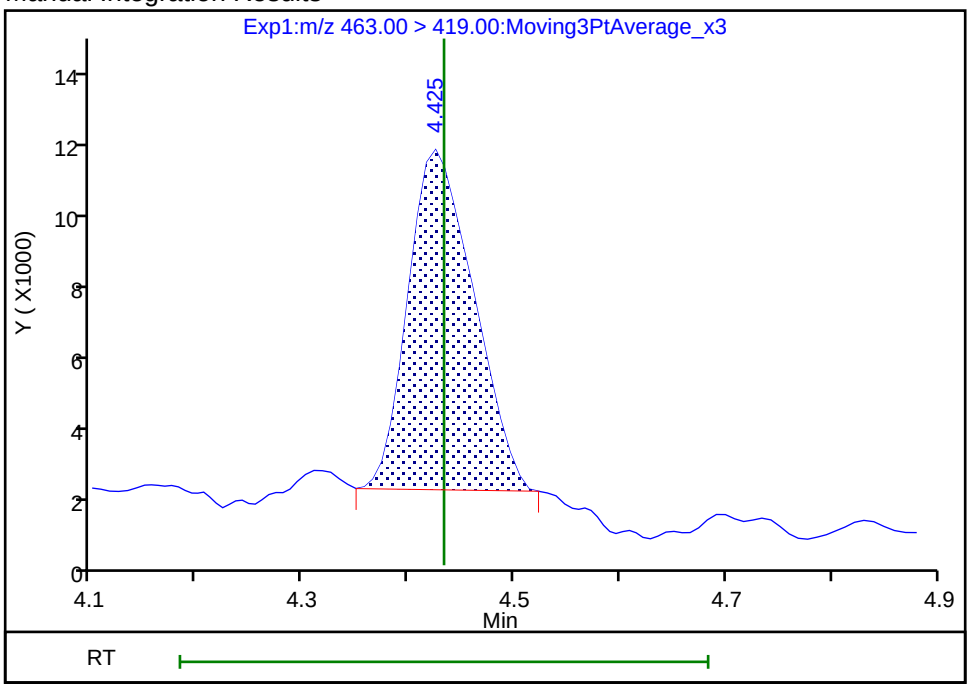
Processing Integration Results

RT: 4.43
Area: 50175
Amount: 0.020664
Amount Units: ng/ml




Manual Integration Results

RT: 4.43
Area: 39488
Amount: 0.016263
Amount Units: ng/ml




Reviewer: mongkols, 11-Sep-2020 09:46:34

Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

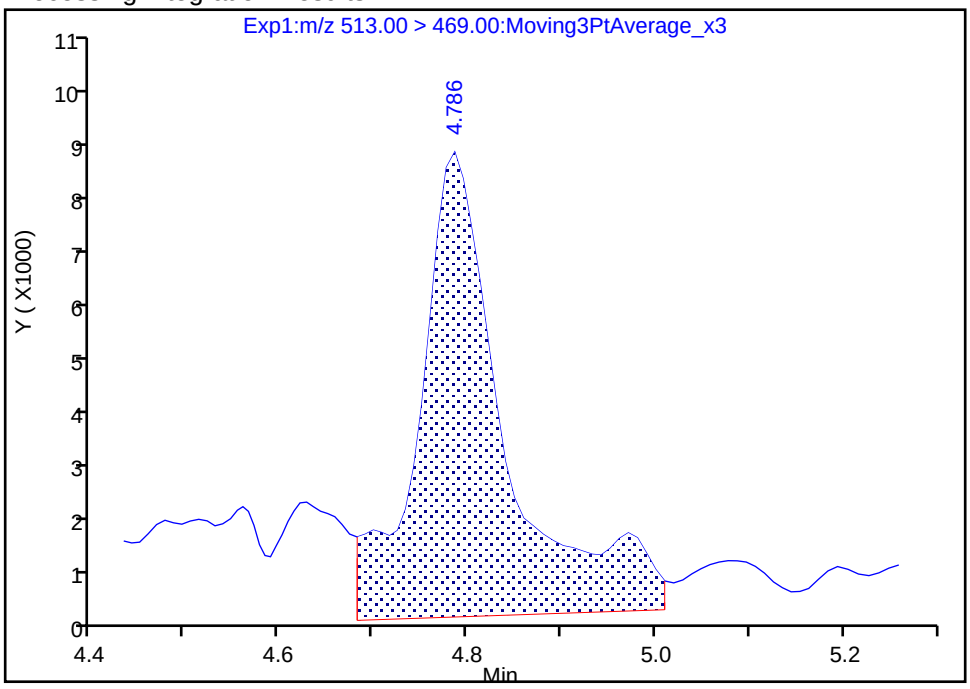
| | | | | | |
|---|---|---|---|---|---|
| Data File: | \\chromfs\Sacramento\ChromData\A13\20200910-103052.b\2020.09.10_A13_PFC_A_063.d | | | | |
| Injection Date: | 10-Sep-2020 18:45:30 | Instrument ID: | A13 | | |
| Lims ID: | 460-217659-D-2-A | Lab Sample ID: | 320-217659-2 | | |
| Client ID: | MW-207 | | | | |
| Operator ID: | SACINSTLCMS01 | ALS Bottle#: | 36 | Worklist Smp#: | 6 |
| Injection Vol: | 20.0 ul | Dil. Factor: | 1.0000 | | |
| Method: | PFAS_A13 | Limit Group: | LC PFC ICAL | | |
| Column: | Gemini C18 3um 3 x 100mm ( 3.00 mm ) | Detector | EXP1 | | |

## 36 Perfluorodecanoic acid, CAS: 335-76-2

Signal: 1

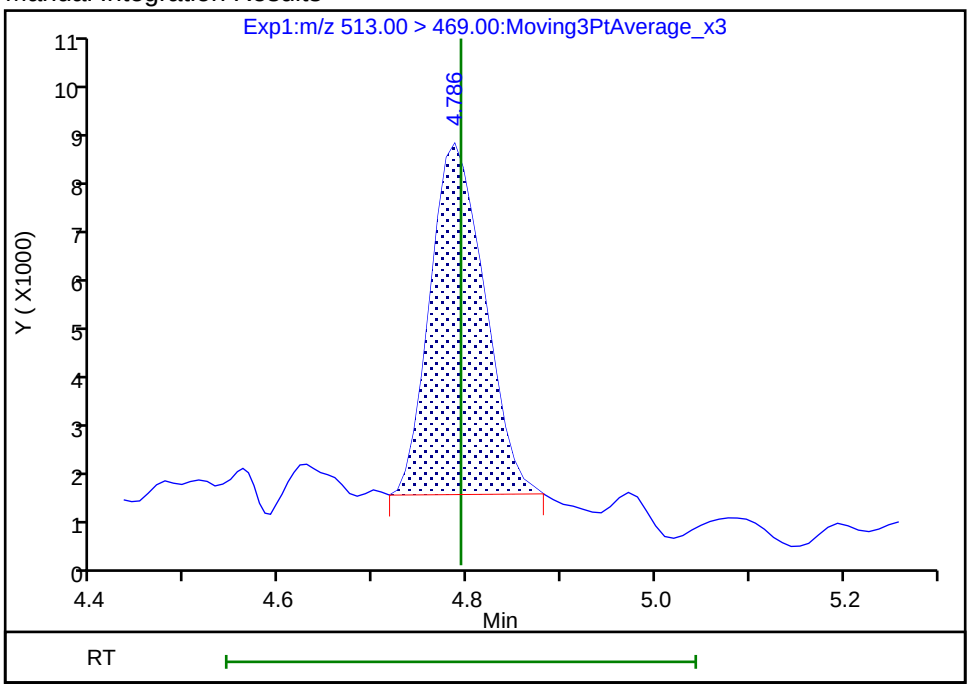
Processing Integration Results

RT: 4.79
Area: 54202
Amount: 0.020408
Amount Units: ng/ml




Manual Integration Results

RT: 4.79
Area: 27705
Amount: 0.010432
Amount Units: ng/ml




Reviewer: mongkols, 11-Sep-2020 09:46:40
Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

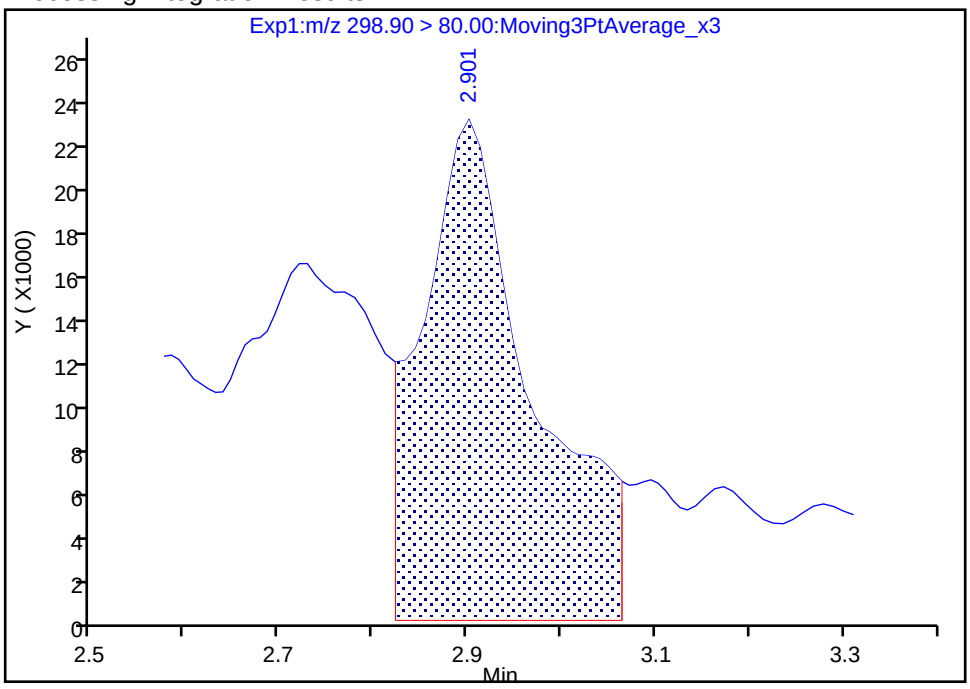
| | | | | | |
|---|---|---|---|---|---|
| Data File: | \\chromfs\Sacramento\ChromData\A13\20200910-103052.b\2020.09.10_A13_PFC_A_063.d | | | | |
| Injection Date: | 10-Sep-2020 18:45:30 | Instrument ID: | A13 | | |
| Lims ID: | 460-217659-D-2-A | Lab Sample ID: | 320-217659-2 | | |
| Client ID: | MW-207 | | | | |
| Operator ID: | SACINSTLCMS01 | ALS Bottle#: | 36 | Worklist Smp#: | 6 |
| Injection Vol: | 20.0 ul | Dil. Factor: | 1.0000 | | |
| Method: | PFAS_A13 | Limit Group: | LC PFC ICAL | | |
| Column: | Gemini C18 3um 3 x 100mm ( 3.00 mm) | Detector | EXP1 | | |

## 6 Perfluorobutanesulfonic acid, CAS: 375-73-5

Signal: 1

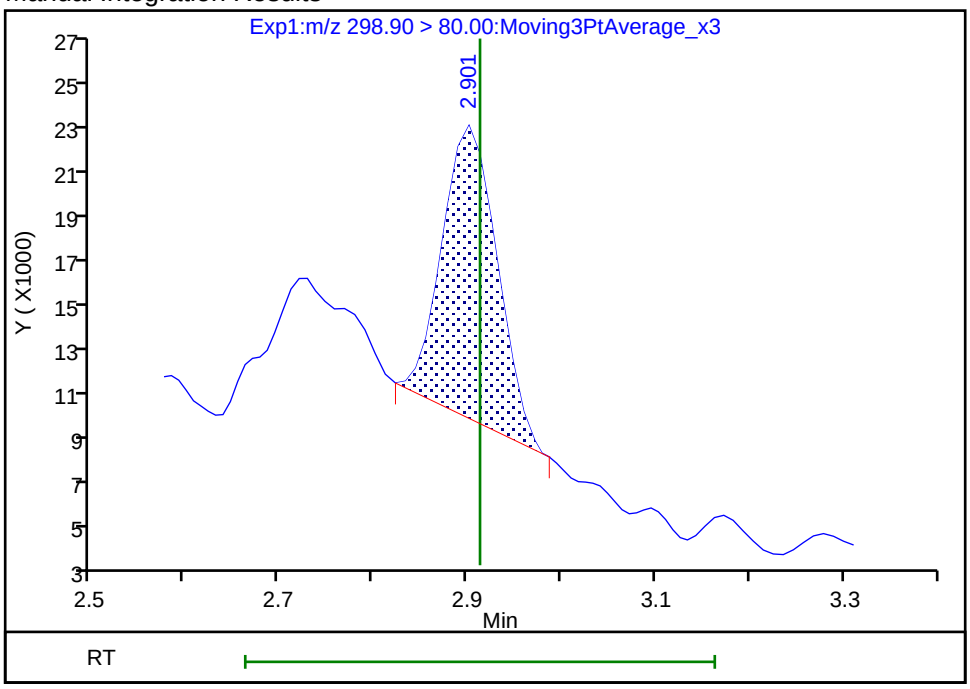
Processing Integration Results

RT: 2.90
Area: 188500
Amount: 0.073608
Amount Units: ng/ml




Manual Integration Results

RT: 2.90
Area: 51812
Amount: 0.020232
Amount Units: ng/ml




Reviewer: mongkols, 11-Sep-2020 09:45:37
Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

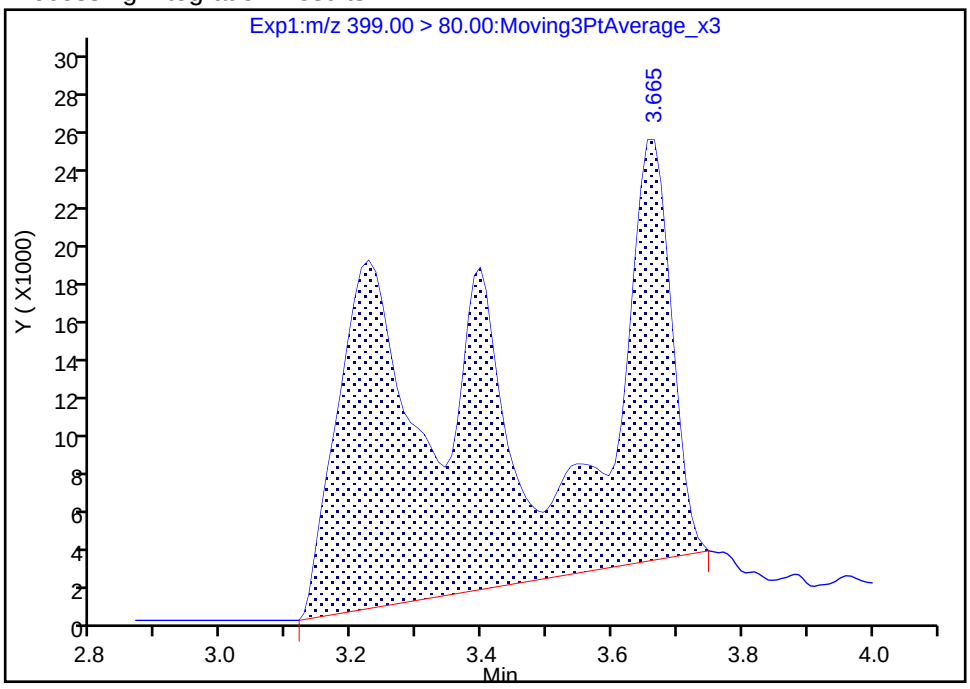
| | | | | | |
|---|---|---|---|---|---|
| Data File: | \\chromfs\Sacramento\ChromData\A13\20200910-103052.b\2020.09.10_A13_PFC_A_063.d | | | | |
| Injection Date: | 10-Sep-2020 18:45:30 | Instrument ID: | A13 | | |
| Lims ID: | 460-217659-D-2-A | Lab Sample ID: | 320-217659-2 | | |
| Client ID: | MW-207 | | | | |
| Operator ID: | SACINSTLCMS01 | ALS Bottle#: | 36 | Worklist Smp#: | 6 |
| Injection Vol: | 20.0 ul | Dil. Factor: | 1.0000 | | |
| Method: | PFAS_A13 | Limit Group: | LC PFC ICAL | | |
| Column: | Gemini C18 3um 3 x 100mm ( 3.00 mm ) | Detector | EXP1 | | |

## 18 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 1

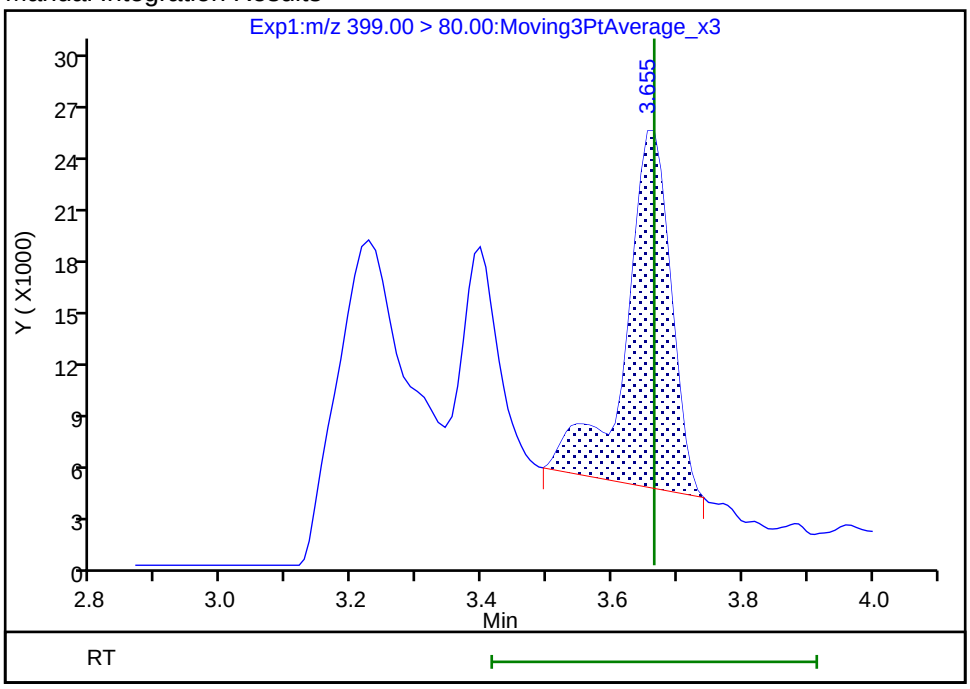
Processing Integration Results

RT: 3.66
Area: 351510
Amount: 0.179217
Amount Units: ng/ml




Manual Integration Results

RT: 3.65
Area: 100502
Amount: 0.051241
Amount Units: ng/ml




Reviewer: mongkols, 11-Sep-2020 09:45:58
Audit Action: Manually Integrated Audit Reason: Baseline

Eurofins TestAmerica, Sacramento

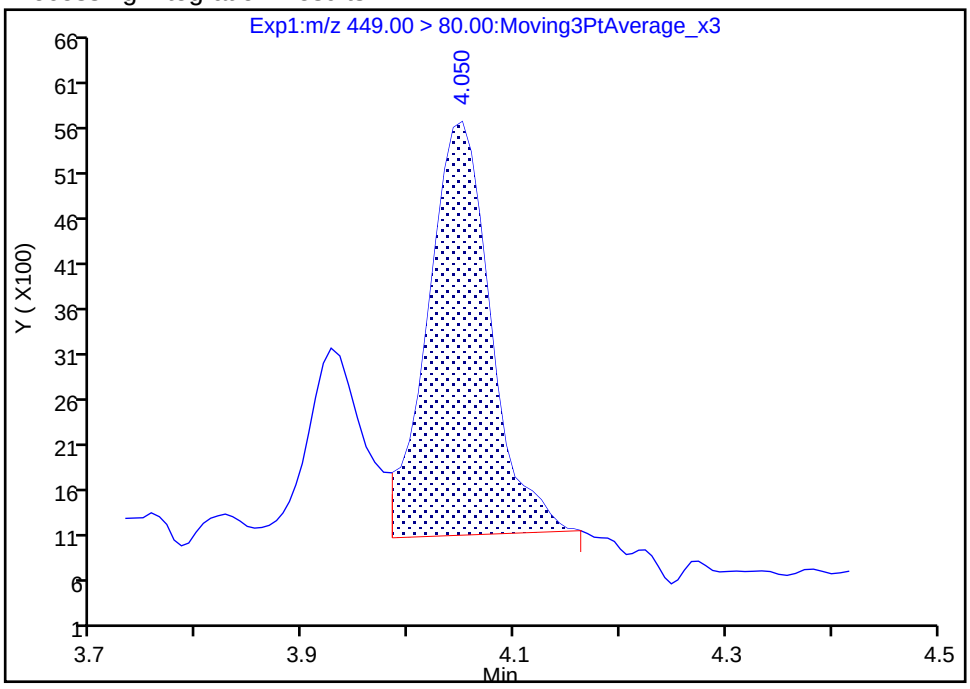
| | | | | | |
|---|---|---|---|---|---|
| Data File: | \\chromfs\Sacramento\ChromData\A13\20200910-103052.b\2020.09.10_A13_PFC_A_063.d | | | | |
| Injection Date: | 10-Sep-2020 18:45:30 | Instrument ID: | A13 | | |
| Lims ID: | 460-217659-D-2-A | Lab Sample ID: | 320-217659-2 | | |
| Client ID: | MW-207 | | | | |
| Operator ID: | SACINSTLCMS01 | ALS Bottle#: | 36 | Worklist Smp#: | 6 |
| Injection Vol: | 20.0 ul | Dil. Factor: | 1.0000 | | |
| Method: | PFAS_A13 | Limit Group: | LC PFC ICAL | | |
| Column: | Gemini C18 3um 3 x 100mm ( 3.00 mm) | Detector | EXP1 | | |

## 22 Perfluoroheptanesulfonic acid, CAS: 375-92-8

Signal: 1

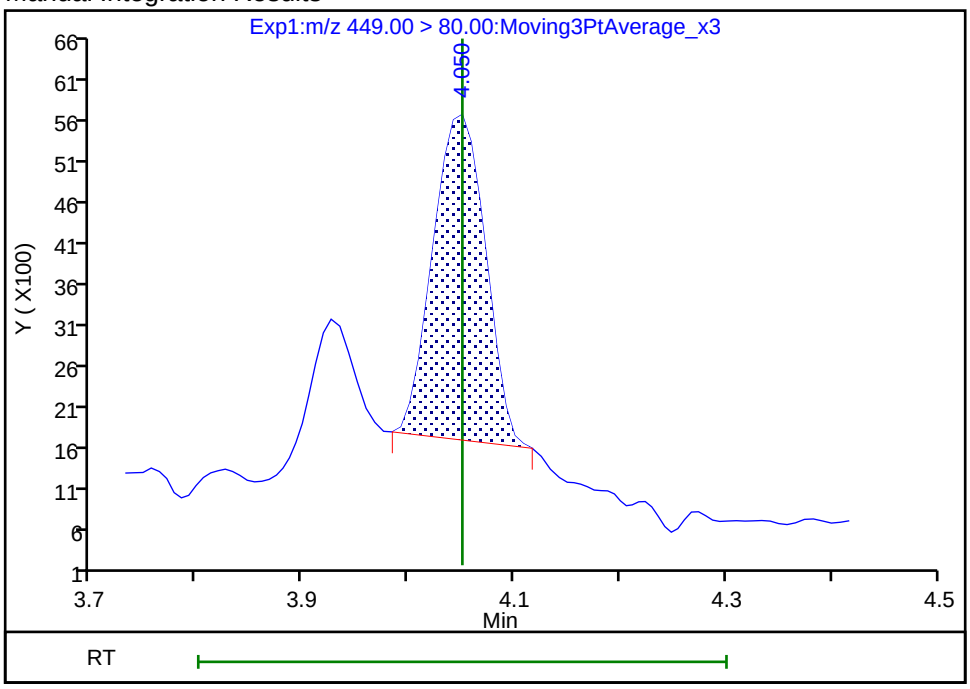
Processing Integration Results

RT: 4.05
Area: 18588
Amount: 0.013514
Amount Units: ng/ml




Manual Integration Results

RT: 4.05
Area: 13512
Amount: 0.009823
Amount Units: ng/ml




Reviewer: mongkols, 11-Sep-2020 09:46:05
Audit Action: Manually Integrated Audit Reason: Baseline

Eurofins TestAmerica, Sacramento

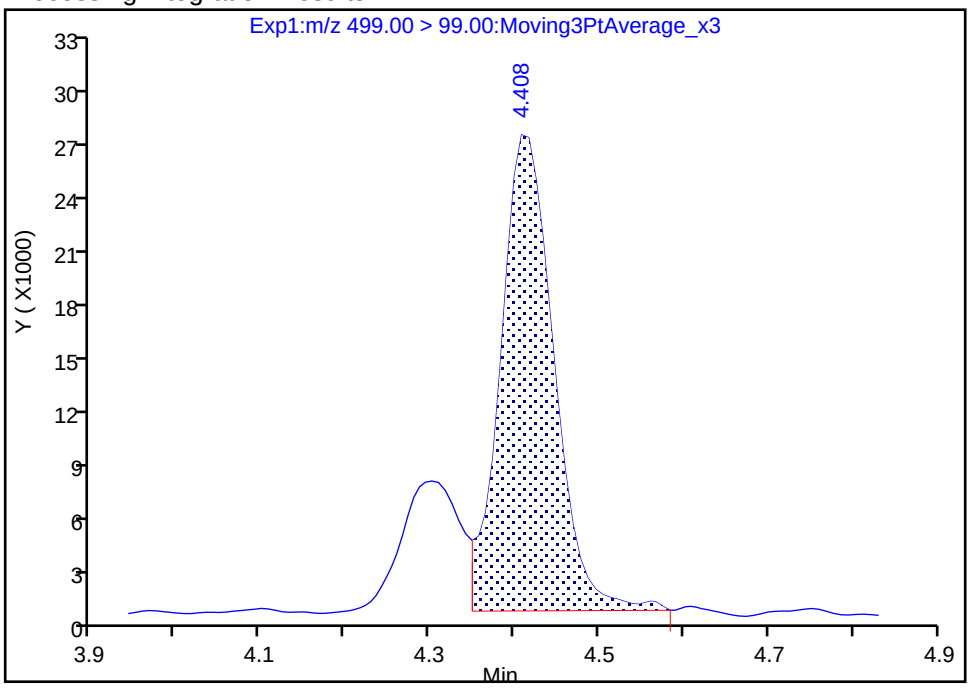
| | | | | | |
|---|---|---|---|---|---|
| Data File: | \\chromfs\Sacramento\ChromData\A13\20200910-103052.b\2020.09.10_A13_PFC_A_063.d | | | | |
| Injection Date: | 10-Sep-2020 18:45:30 | Instrument ID: | A13 | | |
| Lims ID: | 460-217659-D-2-A | Lab Sample ID: | 320-217659-2 | | |
| Client ID: | MW-207 | | | | |
| Operator ID: | SACINSTLCMS01 | ALS Bottle#: | 36 | Worklist Smp#: | 6 |
| Injection Vol: | 20.0 ul | Dil. Factor: | 1.0000 | | |
| Method: | PFAS_A13 | Limit Group: | LC PFC ICAL | | |
| Column: | Gemini C18 3um 3 x 100mm ( 3.00 mm) | Detector | EXP1 | | |

## 28 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 2

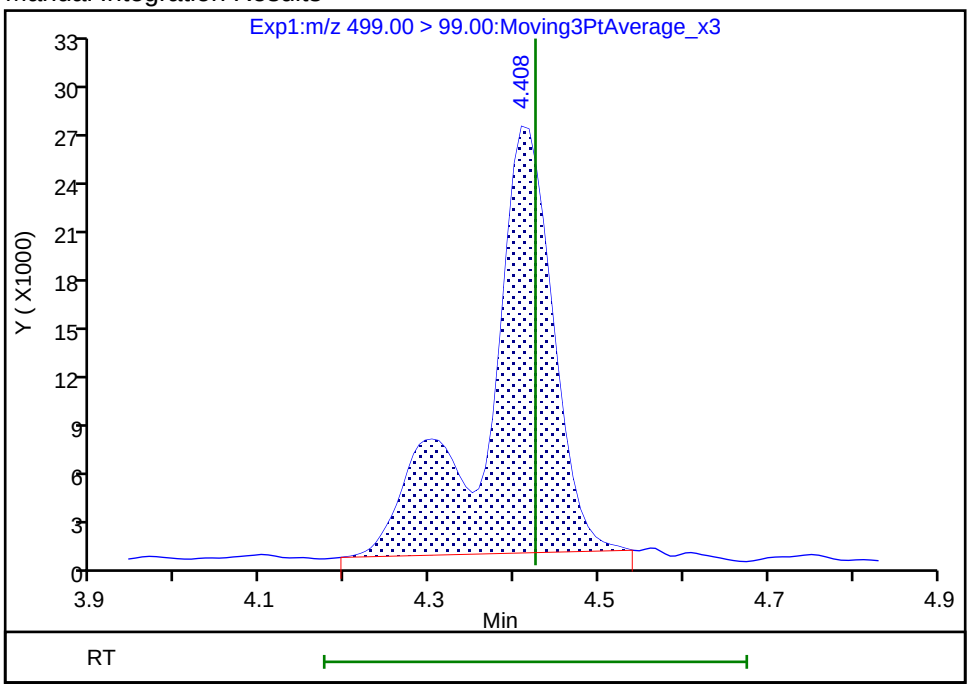
Processing Integration Results

RT: 4.41
Area: 117816
Amount: 0.622378
Amount Units: ng/ml




Manual Integration Results

RT: 4.41
Area: 148539
Amount: 0.590536
Amount Units: ng/ml




Reviewer: mongkols, 11-Sep-2020 09:46:22
Audit Action: Manually Integrated Audit Reason: Isomers

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

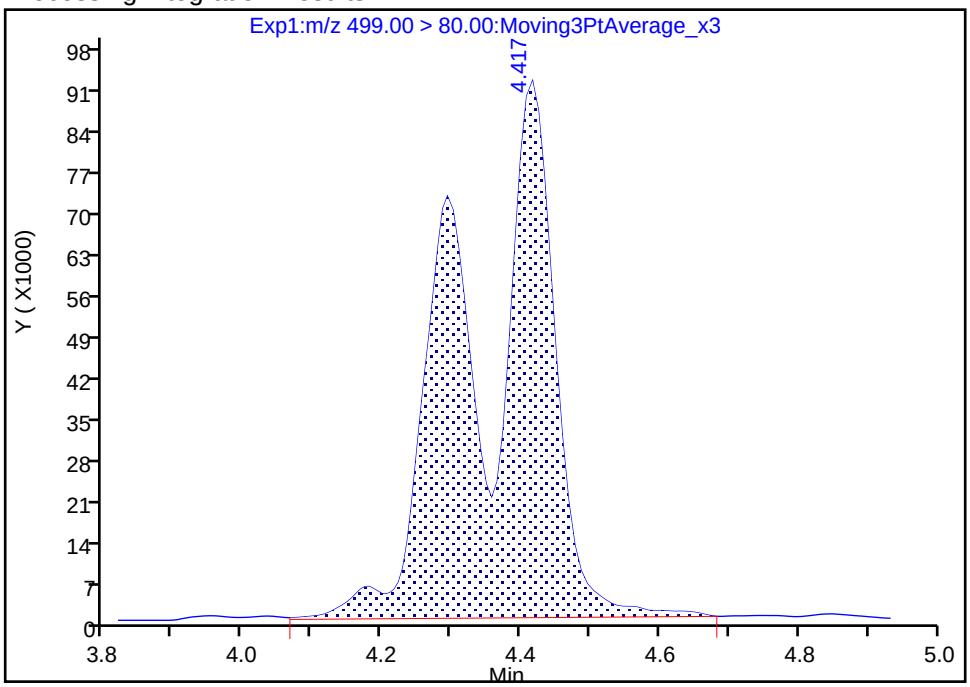
| | | | | | |
|---|---|---|---|---|---|
| Data File: | \\chromfs\Sacramento\ChromData\A13\20200910-103052.b\2020.09.10_A13_PFC_A_063.d | | | | |
| Injection Date: | 10-Sep-2020 18:45:30 | Instrument ID: | A13 | | |
| Lims ID: | 460-217659-D-2-A | Lab Sample ID: | 320-217659-2 | | |
| Client ID: | MW-207 | | | | |
| Operator ID: | SACINSTLCMS01 | ALS Bottle#: | 36 | Worklist Smp#: | 6 |
| Injection Vol: | 20.0 ul | Dil. Factor: | 1.0000 | | |
| Method: | PFAS_A13 | Limit Group: | LC PFC ICAL | | |
| Column: | Gemini C18 3um 3 x 100mm ( 3.00 mm ID) | Detector | EXP1 | | |

## 28 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 1

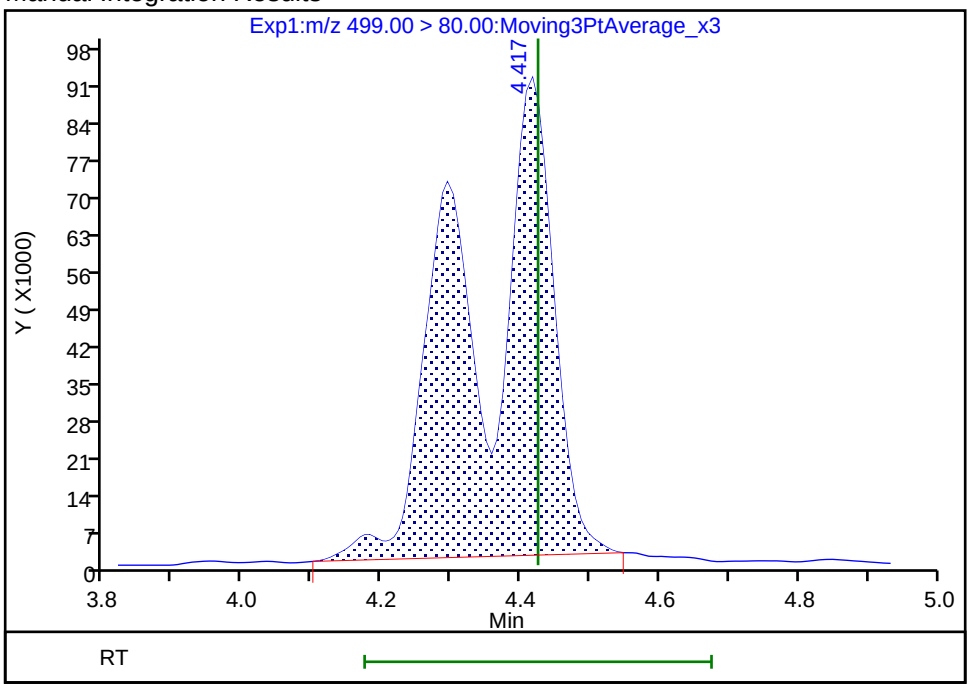
Processing Integration Results

RT: 4.42
Area: 780513
Amount: 0.622378
Amount Units: ng/ml




Manual Integration Results

RT: 4.42
Area: 740580
Amount: 0.590536
Amount Units: ng/ml




Reviewer: mongkols, 11-Sep-2020 09:46:25
Audit Action: Manually Integrated Audit Reason: Isomers

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

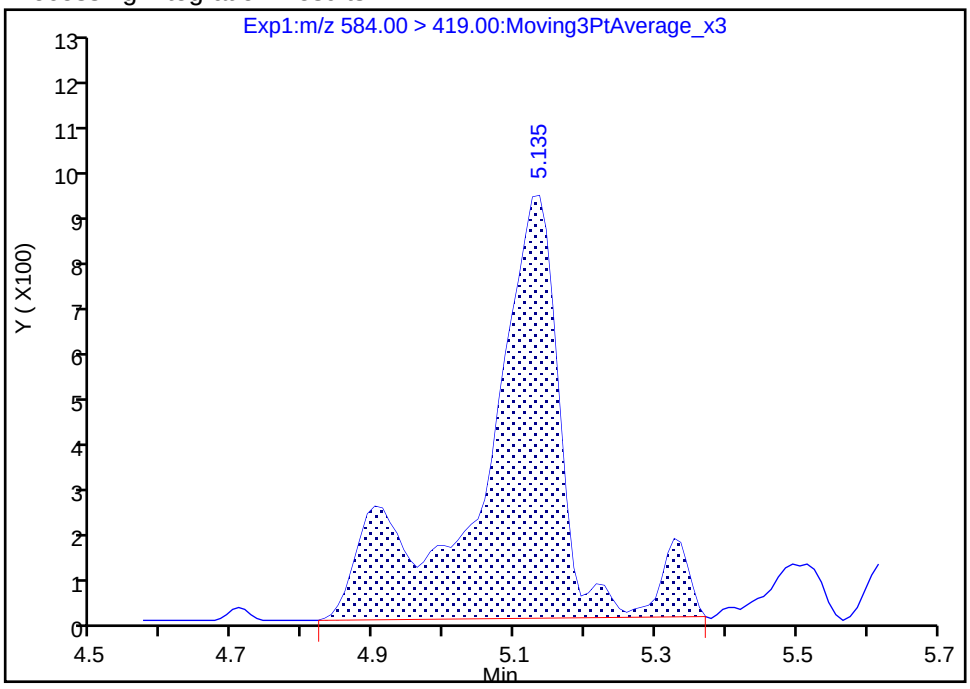
| | | | | | |
|---|---|---|---|---|---|
| Data File: | \\chromfs\Sacramento\ChromData\A13\20200910-103052.b\2020.09.10_A13_PFC_A_063.d | | | | |
| Injection Date: | 10-Sep-2020 18:45:30 | Instrument ID: | A13 | | |
| Lims ID: | 460-217659-D-2-A | Lab Sample ID: | 320-217659-2 | | |
| Client ID: | MW-207 | | | | |
| Operator ID: | SACINSTLCMS01 | ALS Bottle#: | 36 | Worklist Smp#: | 6 |
| Injection Vol: | 20.0 ul | Dil. Factor: | 1.0000 | | |
| Method: | PFAS_A13 | Limit Group: | LC PFC ICAL | | |
| Column: | Gemini C18 3um 3 x 100mm ( 3.00 mm ) | Detector | EXP1 | | |

## 48 NEtFOSA, CAS: 2991-50-6

Signal: 1

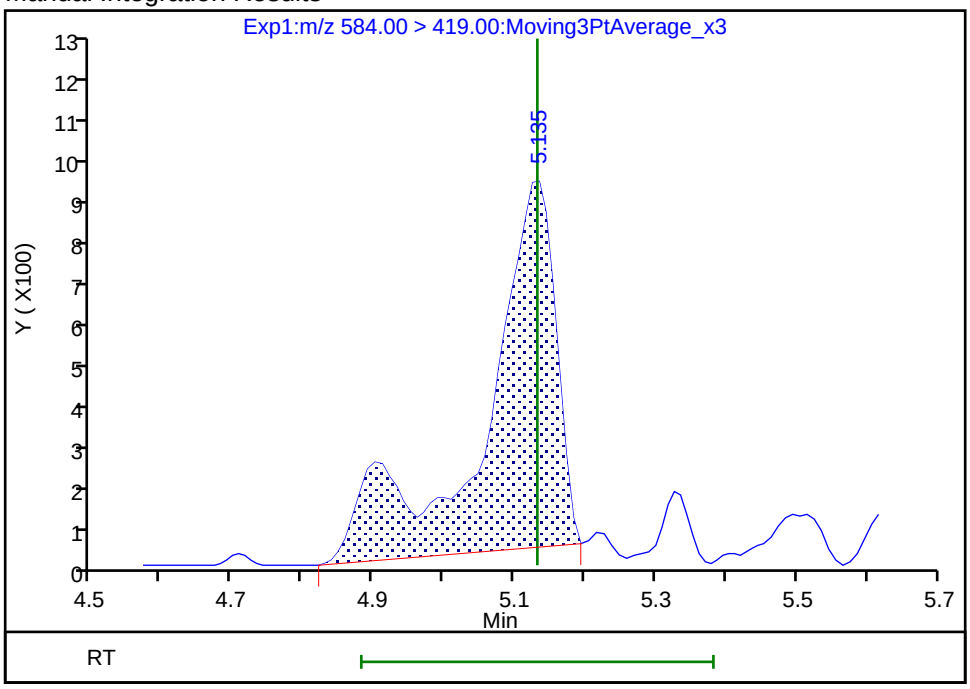
Processing Integration Results

RT: 5.14
Area: 7105
Amount: 0.007132
Amount Units: ng/ml




Manual Integration Results

RT: 5.14
Area: 5983
Amount: 0.006006
Amount Units: ng/ml




Reviewer: mongkols, 11-Sep-2020 09:46:50

Audit Action: Manually Integrated Audit Reason: Baseline

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento  Job No.: 460-217659-1

SDG No.:

Client Sample ID: MW-210  Lab Sample ID: 460-217659-3

Matrix: Water  Lab File ID: 2020.09.10_A13_PFC_A_064.d

Analysis Method: 537 (modified)  Date Collected: 09/03/2020 10:35

Extraction Method: 3535  Date Extracted: 09/09/2020 18:39

Sample wt/vol: 248.8(mL)  Date Analyzed: 09/10/2020 18:54

Con. Extract Vol.: 10.00(mL)  Dilution Factor: 1

Injection Volume: 20(uL)  GC Column: GeminiC18 3x100 ID: 3(mm)

% Moisture:  GPC Cleanup:(Y/N) N

Analysis Batch No.: 411143  Units: ng/L

| CAS NO. | COMPOUND NAME | RESULT | Q | RL | MDL |
|---|---|---|---|---|---|
| 375-22-4 | Perfluorobutanoic acid (PFBA) | 1.54 | J B | 2.01 | 0.35 |
| 2706-90-3 | Perfluoropentanoic acid (PFPeA) | 0.60 | J | 2.01 | 0.49 |
| 307-24-4 | Perfluorohexanoic acid (PFHxA) | 0.58 | U | 2.01 | 0.58 |
| 375-85-9 | Perfluoroheptanoic acid (PFHpA) | 0.73 | J | 2.01 | 0.25 |
| 335-67-1 | Perfluorooctanoic acid (PFOA) | 2.32 | | 2.01 | 0.85 |
| 375-95-1 | Perfluorononanoic acid (PFNA) | 0.27 | U | 2.01 | 0.27 |
| 335-76-2 | Perfluorodecanoic acid (PFDA) | 0.31 | U | 2.01 | 0.31 |
| 2058-94-8 | Perfluoroundecanoic acid (PFUnA) | 1.11 | U | 2.01 | 1.11 |
| 307-55-1 | Perfluorododecanoic acid (PFDoA) | 0.55 | U | 2.01 | 0.55 |
| 72629-94-8 | Perfluorotridecanoic acid (PFTriA) | 1.31 | U | 2.01 | 1.31 |
| 376-06-7 | Perfluorotetradecanoic acid (PFTeA) | 0.29 | U | 2.01 | 0.29 |
| 375-73-5 | Perfluorobutanesulfonic acid (PFBS) | 1.10 | J | 2.01 | 0.20 |
| 355-46-4 | Perfluorohexanesulfonic acid (PFHxS) | 1.02 | J B | 2.01 | 0.17 |
| 375-92-8 | Perfluoroheptanesulfonic Acid (PFHpS) | 0.19 | U | 2.01 | 0.19 |
| 1763-23-1 | Perfluorooctanesulfonic acid (PFOS) | 3.56 | cn | 2.01 | 0.54 |
| 335-77-3 | Perfluorodecanesulfonic acid (PFDS) | 0.32 | U | 2.01 | 0.32 |
| 754-91-6 | Perfluorooctanesulfonamide (FOSA) | 0.36 | J | 2.01 | 0.35 |
| 2355-31-9 | N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA) | 3.11 | U | 20.1 | 3.11 |
| 2991-50-6 | N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA) | 1.91 | U | 20.1 | 1.91 |
| 27619-97-2 | 6:2 FTS | 2.01 | U | 20.1 | 2.01 |
| 39108-34-4 | 8:2 FTS | 2.01 | U | 20.1 | 2.01 |

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento  Job No.: 460-217659-1

SDG No.:

Client Sample ID: MW-210  Lab Sample ID: 460-217659-3

Matrix: Water  Lab File ID: 2020.09.10_A13_PFC_A_064.d

Analysis Method: 537 (modified)  Date Collected: 09/03/2020 10:35

Extraction Method: 3535  Date Extracted: 09/09/2020 18:39

Sample wt/vol: 248.8(mL)  Date Analyzed: 09/10/2020 18:54

Con. Extract Vol.: 10.00(mL)  Dilution Factor: 1

Injection Volume: 20(uL)  GC Column: GeminiC18 3x100 ID: 3(mm)

% Moisture:  GPC Cleanup:(Y/N) N

Analysis Batch No.: 411143  Units: ng/L

| CAS NO. | ISOTOPE DILUTION | %REC | Q | LIMITS |
|---|---|---|---|---|
| STL00992 | 13C4 PFBA | 56 | | 25-150 |
| STL01893 | 13C5 PFPeA | 63 | | 25-150 |
| STL00993 | 13C2 PFHxA | 71 | | 25-150 |
| STL01892 | 13C4 PFHpA | 71 | | 25-150 |
| STL00990 | 13C4 PFOA | 66 | | 25-150 |
| STL00995 | 13C5 PFNA | 69 | | 25-150 |
| STL00996 | 13C2 PFDA | 70 | | 25-150 |
| STL00997 | 13C2 PFUnA | 65 | | 25-150 |
| STL00998 | 13C2 PFDoA | 58 | | 25-150 |
| STL02116 | 13C2 PFTeDA | 60 | | 25-150 |
| STL02337 | 13C3 PFBS | 84 | | 25-150 |
| STL00994 | 18O2 PFHxS | 86 | | 25-150 |
| STL00991 | 13C4 PFOS | 81 | | 25-150 |
| STL01056 | 13C8 FOSA | 68 | | 25-150 |
| STL02118 | d3-NMeFOSAA | 62 | | 25-150 |
| STL02117 | d5-NEtFOSAA | 66 | | 25-150 |
| STL02279 | M2-6:2 FTS | 85 | | 25-150 |
| STL02280 | M2-8:2 FTS | 89 | | 25-150 |

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\A13\20200910-103052.b\2020.09.10_A13_PFC_A_064.d
Lims ID: 460-217659-D-3-A
Client ID: MW-210
Sample Type: Client
Inject. Date: 10-Sep-2020 18:54:55 ALS Bottle#: 37 Worklist Smp#: 7
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Sample Info: 460-217659-d-3-a
Misc. Info.: Plate: 1 Rack: 4
Operator ID: SACINSTLCMS01 Instrument ID: A13

Method: \\chromfs\Sacramento\ChromData\A13\20200910-103052.b\PFAS_A13.m
Limit Group: LC PFC ICAL
Last Update: 11-Sep-2020 09:48:24 Calib Date: 08-Sep-2020 18:58:15
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\A13\20200908-102913.b\2020.09.08_A13_PFC_ICALX_010.d

Column 1 : Gemini C18 3um 3 x 100mm ( 3.00 mm) Det: EXP1
Process Host: CTX1053

First Level Reviewer: mongkols Date: 11-Sep-2020 09:48:24
Ratio Calibration: CCV Sample: \\chromfs\Sacramento\ChromData\A13\20200910-103052.b\2020.09.10_A13_PFC_A_058.d

| Signal | RT | EXP RT | DLT RT | REL RT | Response | Amount ng/ml | Ratio(Limits) | %Rec | S/N | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| D 1 13C4 PFBA | | | | | | | | | | |
| 217.00 > 172.00 | 2.467 | 2.475 | -0.008 | 0.610 | 5353602 | 1.41 | | 56.5 | 7208 | |
| 2 Perfluorobutanoic acid | | | | | | | | | | |
| 212.90 > 169.00 | 2.475 | 2.482 | -0.007 | 1.003 | 61151 | 0.0384 | | | 2.6 | |
| D 4 13C5 PFPeA | | | | | | | | | | |
| 267.90 > 223.00 | 2.866 | 2.867 | -0.001 | 0.709 | 4654500 | 1.57 | | 63.0 | 3693 | |
| 5 Perfluoropentanoic acid | | | | | | | | | | M |
| 262.90 > 219.00 | 2.856 | 2.867 | -0.011 | 0.996 | 28469 | 0.0149 | | | 0.6 | M |
| D 14 13C3 PFBS | | | | | | | | | | |
| 301.90 > 80.00 | 2.902 | 2.913 | -0.011 | 0.718 | 7269411 | 1.96 | | 84.2 | 585 | |
| 6 Perfluorobutanesulfonic acid | | | | | | | | | | M |
| 298.90 > 80.00 | 2.902 | 2.913 | -0.011 | 1.000 | 83313 | 0.0273 | Target=2.29 | | 3.1 | M |
| 298.90 > 99.00 | 2.902 | 2.913 | -0.011 | 1.000 | 43543 | | 1.91(1.15-3.44) | | 4.7 | |
| D 9 13C2 PFHxA | | | | | | | | | | |
| 315.00 > 270.00 | 3.247 | 3.258 | -0.011 | 0.803 | 6524797 | 1.79 | | 71.5 | 9671 | |
| D 17 18O2 PFHxS | | | | | | | | | | |
| 403.00 > 84.00 | 3.655 | 3.665 | -0.010 | 0.904 | 4954053 | 2.04 | | 86.1 | 1814 | |
| 16 Perfluoroheptanoic acid | | | | | | | | | | M |
| 363.00 > 319.00 | 3.655 | 3.665 | -0.010 | 1.000 | 46547 | 0.0181 | Target=3.87 | | 1.8 | M |
| 363.00 > 169.00 | 3.655 | 3.665 | -0.010 | 1.000 | 12234 | | 3.80(1.93-5.80) | | 4.9 | |
| 18 Perfluorohexanesulfonic acid | | | | | | | | | | M |
| 399.00 > 80.00 | 3.655 | 3.665 | -0.010 | 1.000 | 59259 | 0.0254 | Target=3.08 | | 9.8 | M |
| 399.00 > 99.00 | 3.655 | 3.665 | -0.010 | 1.000 | 16714 | | 3.55(1.54-4.62) | | 5.9 | M |
| D 15 13C4 PFHpA | | | | | | | | | | |
| 367.00 > 322.00 | 3.655 | 3.665 | -0.010 | 0.904 | 6355524 | 1.77 | | 70.7 | 5347 | |
| D 20 M2-6:2 FTS | | | | | | | | | | |
| 429.00 > 81.00 | 4.026 | 4.042 | -0.016 | 0.996 | 2110958 | 2.01 | | 84.8 | 664 | |

| Signal | RT | EXP RT | DLT RT | REL RT | Response | Amount ng/ml | Ratio(Limits) | %Rec | S/N | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| 21 6:2 FTS | | | | | | | | | | |
| 427.00 > 407.00 | 4.026 | 4.042 | -0.016 | 1.000 | 21585 | 0.0101 | | | 16.1 | |
| D 24 13C4 PFOA | | | | | | | | | | |
| 417.00 > 372.00 | 4.051 | 4.059 | -0.008 | 1.002 | 7217198 | 1.64 | | 65.7 | 6018 | |
| 26 Perfluorooctanoic acid | | | | | | | | | | M |
| 413.00 > 369.00 | 4.051 | 4.059 | -0.008 | 1.000 | 170597 | 0.0578 | Target=2.99 | | 9.1 | M |
| 413.00 > 169.00 | 4.051 | 4.059 | -0.008 | 1.000 | 67579 | | 2.52(1.50-4.49) | | 42.5 | M |
| * 25 13C2 PFOA | | | | | | | | | | |
| 415.00 > 370.00 | 4.042 | 4.059 | -0.017 | | 11157963 | 2.50 | | | 27424 | |
| 28 Perfluorooctanesulfonic acid | | | | | | | | | | RM |
| 499.00 > 80.00 | 4.288 | 4.425 | -0.137 | 0.973 | 129766 | 0.0887 | Target=4.13 | | 23.1 | RM |
| 499.00 > 99.00 | 4.302 | 4.425 | -0.123 | 0.976 | 20839 | | 6.23(2.06-6.19) | | 9.2 | M |
| D 29 13C4 PFOS | | | | | | | | | | |
| 503.00 > 80.00 | 4.408 | 4.425 | -0.017 | 1.091 | 3368725 | 1.94 | | 81.2 | 1434 | |
| D 31 13C5 PFNA | | | | | | | | | | |
| 468.00 > 423.00 | 4.425 | 4.442 | -0.017 | 1.095 | 6973239 | 1.72 | | 68.7 | 12373 | |
| D 34 13C8 FOSA | | | | | | | | | | |
| 506.00 > 78.00 | 4.734 | 4.740 | -0.006 | 1.171 | 4233962 | 1.70 | | 67.9 | 5676 | |
| 33 Perfluorooctanesulfonamide | | | | | | | | | | |
| 498.00 > 78.00 | 4.734 | 4.740 | -0.006 | 1.000 | 14322 | 0.009012 | | | 44.2 | |
| D 37 13C2 PFDA | | | | | | | | | | |
| 515.00 > 470.00 | 4.786 | 4.793 | -0.007 | 1.184 | 8661129 | 1.76 | | 70.4 | 12193 | |
| D 38 M2-8:2 FTS | | | | | | | | | | |
| 529.00 > 81.00 | 4.786 | 4.802 | -0.016 | 1.184 | 2943354 | 2.12 | | 88.6 | 1634 | |
| 39 8:2 FTS | | | | | | | | | | |
| 527.00 > 507.00 | 4.795 | 4.802 | -0.007 | 1.002 | 2578 | 0.000849 | | | 10.8 | |
| D 40 d3-NMeFOSAA | | | | | | | | | | |
| 573.00 > 419.00 | 4.942 | 4.959 | -0.017 | 1.223 | 3932248 | 1.55 | | 62.0 | 3419 | |
| D 44 13C2 PFUnA | | | | | | | | | | |
| 565.00 > 520.00 | 5.106 | 5.113 | -0.007 | 1.263 | 7800293 | 1.62 | | 64.8 | 4849 | |
| D 46 d5-NEtFOSAA | | | | | | | | | | |
| 589.00 > 419.00 | 5.106 | 5.123 | -0.017 | 1.263 | 4075650 | 1.66 | | 66.4 | 2133 | |
| 48 NEtFOSA | | | | | | | | | | |
| 584.00 > 419.00 | 5.126 | 5.132 | -0.006 | 1.004 | 4616 | 0.003658 | | | 12.4 | |
| D 56 13C2 PFDoA | | | | | | | | | | |
| 615.00 > 570.00 | 5.396 | 5.409 | -0.013 | 1.335 | 7543735 | 1.46 | | 58.3 | 5261 | |
| 57 Perfluorododecanoic acid | | | | | | | | | | |
| 613.00 > 569.00 | 5.396 | 5.409 | -0.013 | 1.000 | 7043 | 0.002559 | Target=9.00 | | 4.6 | |
| 613.00 > 169.00 | 5.387 | 5.409 | -0.022 | 0.998 | 1301 | | 5.41(4.50-13.49) | | 7.8 | |
| D 61 13C2 PFTeDA | | | | | | | | | | |
| 715.00 > 670.00 | 5.916 | 5.920 | -0.004 | 1.463 | 7646555 | 1.49 | | 59.8 | 7636 | |

## QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Review Flags
M - Manually Integrated

Report Date: 11-Sep-2020 09:48:25 Chrom Revision: 2.3 09-Sep-2020 15:12:58

Eurofins TestAmerica, Sacramento

Data File: \\chromfs\Sacramento\ChromData\A13\20200910-103052.b\2020.09.10_A13_PFC_A_064.d

Injection Date: 10-Sep-2020 18:54:55 Instrument ID: A13

Lims ID: 460-217659-D-3-A Lab Sample ID: 320-217659-3

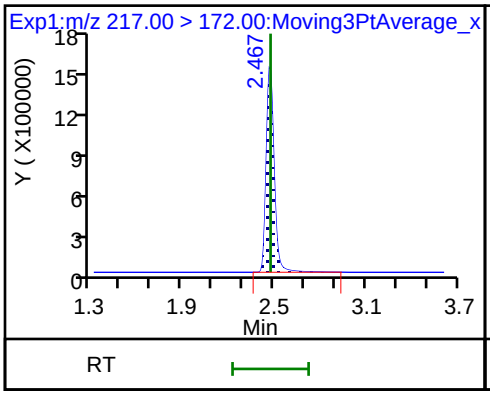
Client ID: MW-210

Operator ID: SACINSTLCMS01 ALS Bottle#: 37 Worklist Smp#: 7

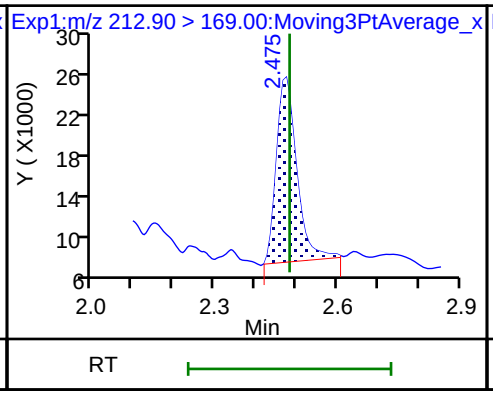
Injection Vol: 20.0 ul Dil. Factor: 1.0000

Method: PFAS_A13 Limit Group: LC PFC ICAL

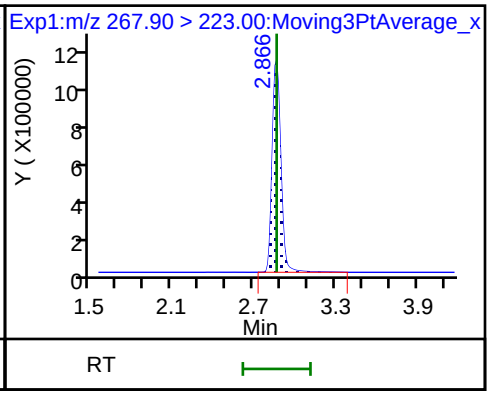
D 1 13C4 PFBA



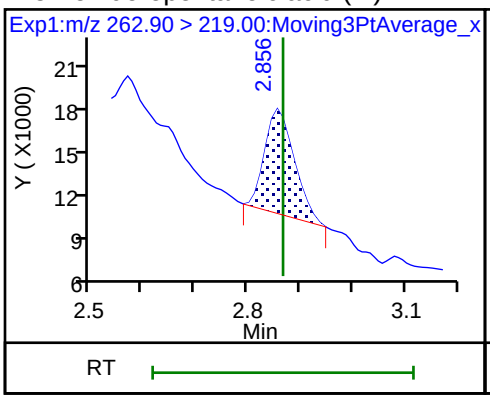

2 Perfluorobutanoic acid



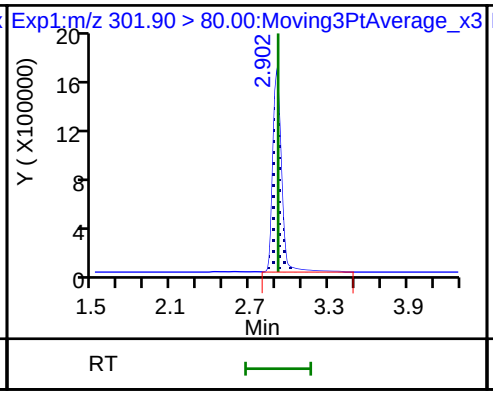

D 4 13C5 PFPeA



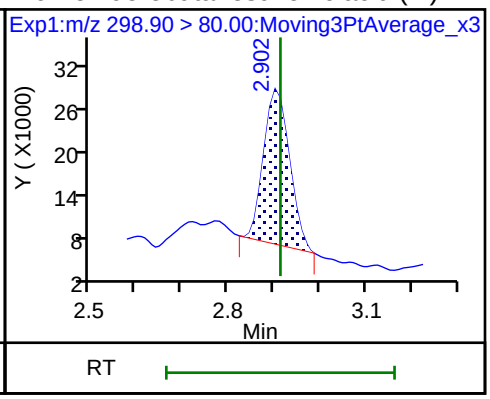

5 Perfluoropentanoic acid (M)



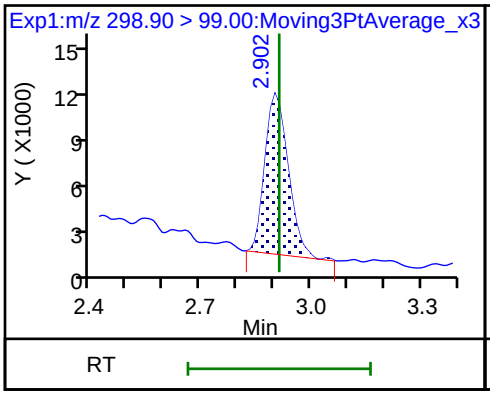

D 14 13C3 PFBS



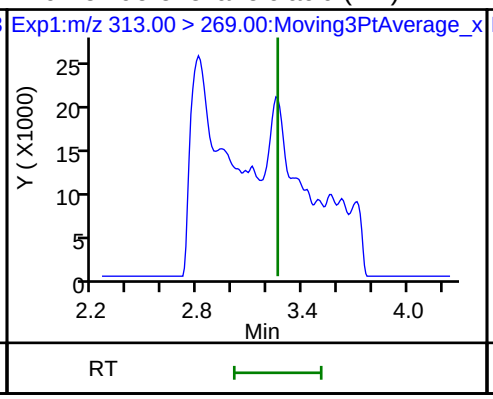

6 Perfluorobutanesulfonic acid (M)



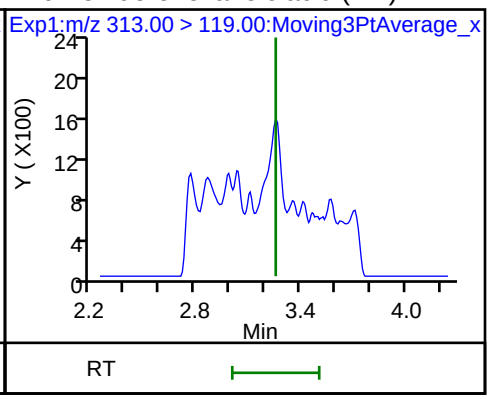

6 Perfluorobutanesulfonic acid



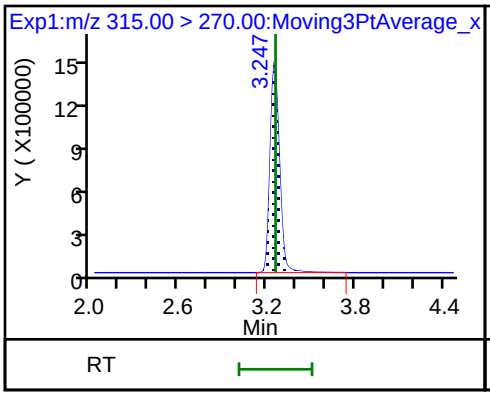

10 Perfluorohexanoic acid (ND)



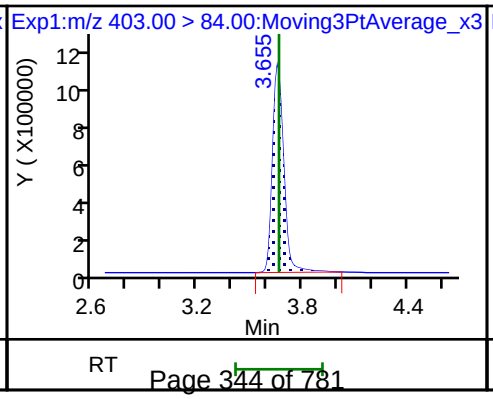

10 Perfluorohexanoic acid (ND)



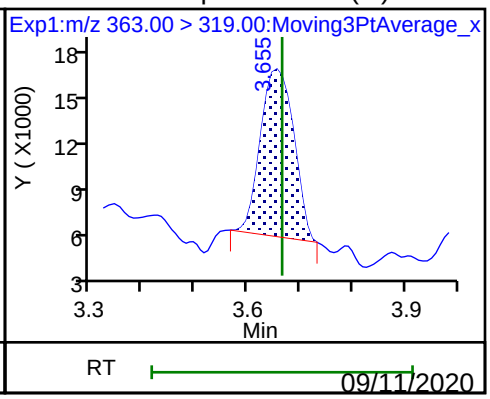

D 9 13C2 PFHxA



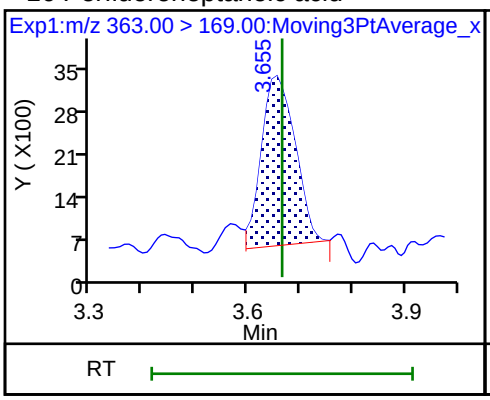

D 17 18O2 PFHxS



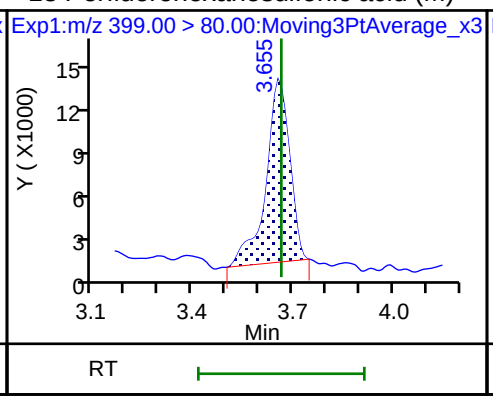

16 Perfluoroheptanoic acid (M)



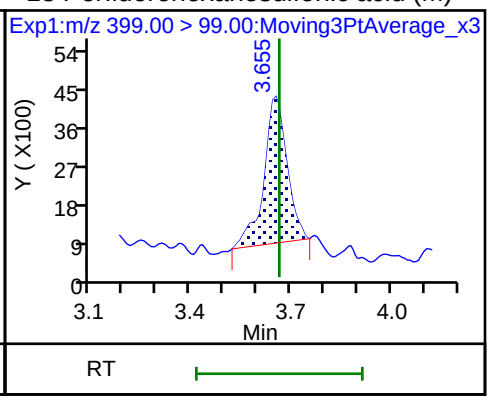
16 Perfluoroheptanoic acid



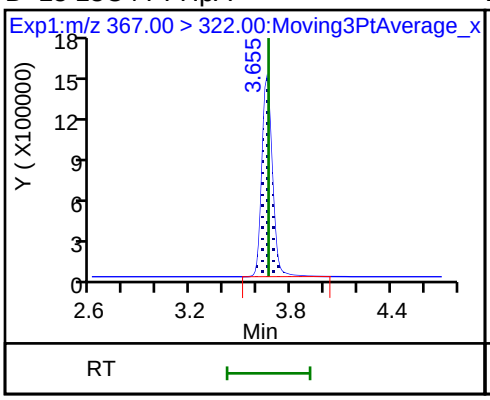

18 Perfluorohexanesulfonic acid (M)



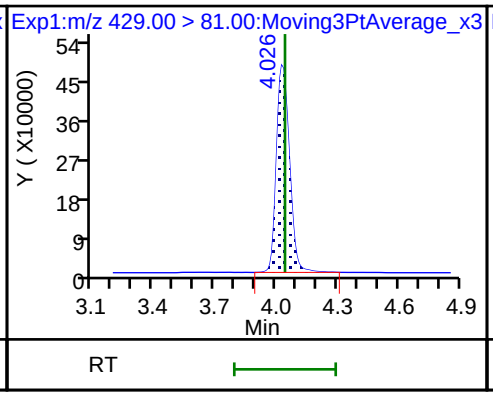

18 Perfluorohexanesulfonic acid (M)



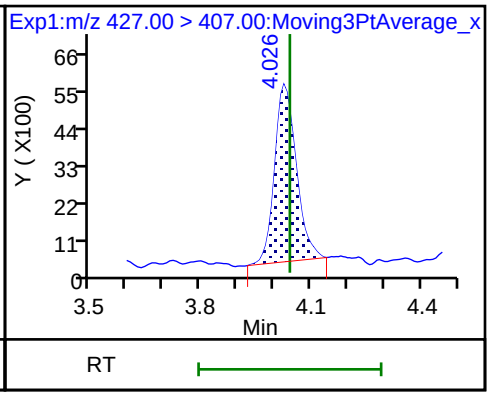

D 15 13C4 PFHpA



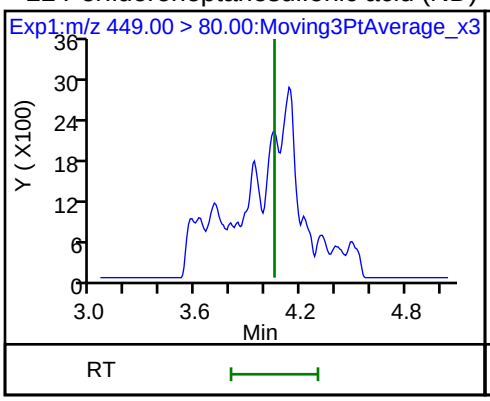

D 20 M2-6:2 FTS



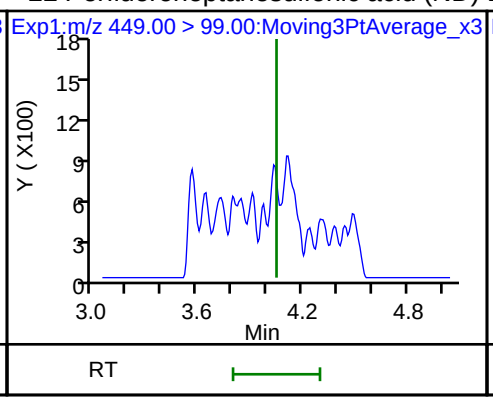

21 6:2 FTS



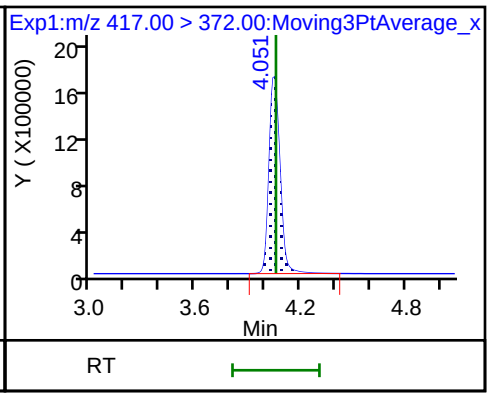

22 Perfluoroheptanesulfonic acid (ND)



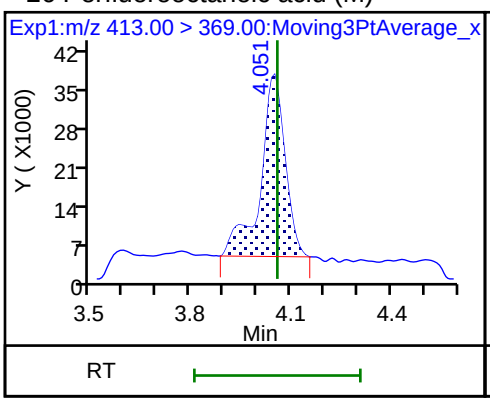

22 Perfluoroheptanesulfonic acid (ND)



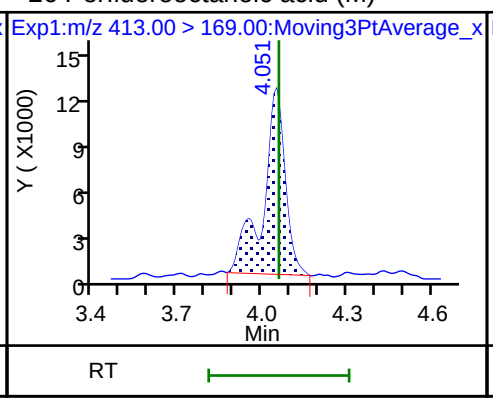

D 24 13C4 PFOA



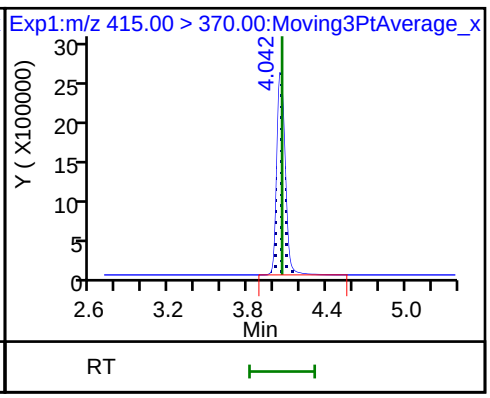

26 Perfluorooctanoic acid (M)



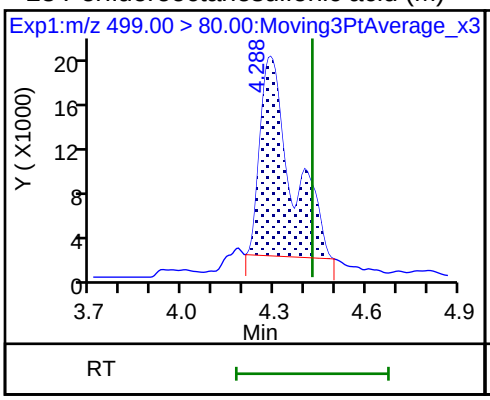

26 Perfluorooctanoic acid (M)



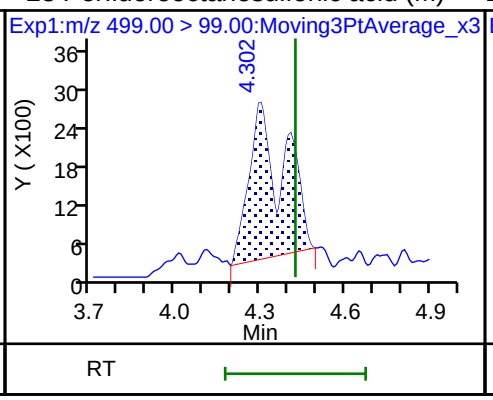

* 25 13C2 PFOA



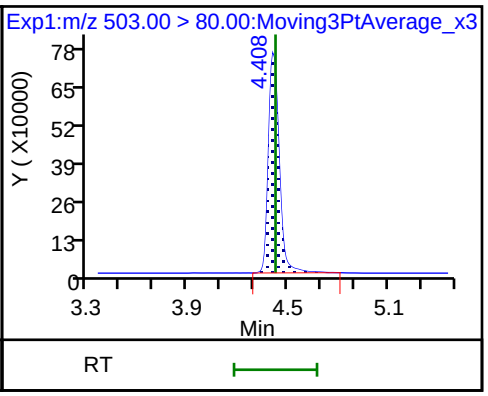
28 Perfluorooctanesulfonic acid (M)



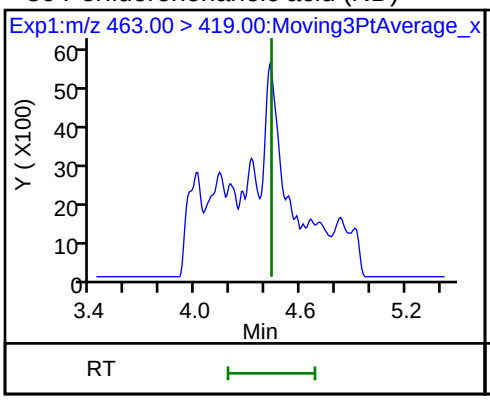

28 Perfluorooctanesulfonic acid (M)



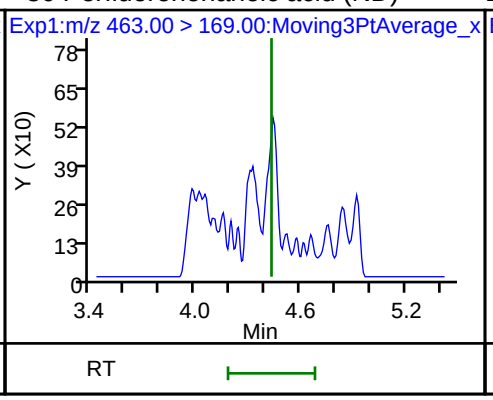

D 29 13C4 PFOS



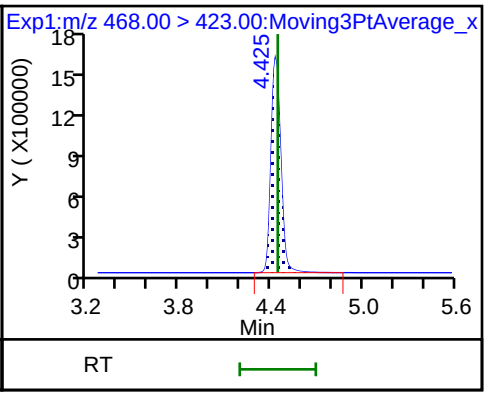

30 Perfluorononanoic acid (ND)



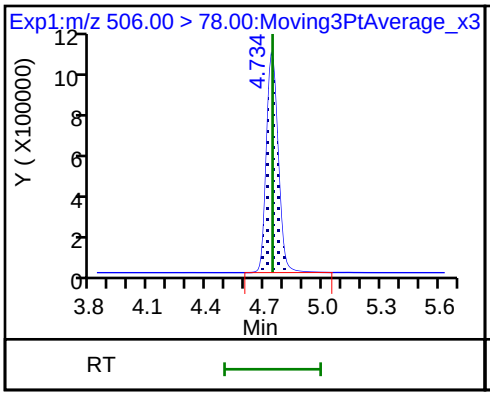

30 Perfluorononanoic acid (ND)



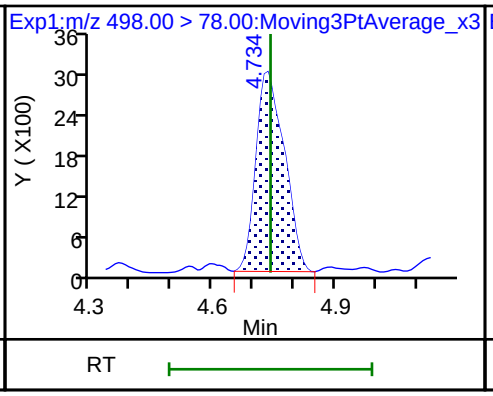

D 31 13C5 PFNA



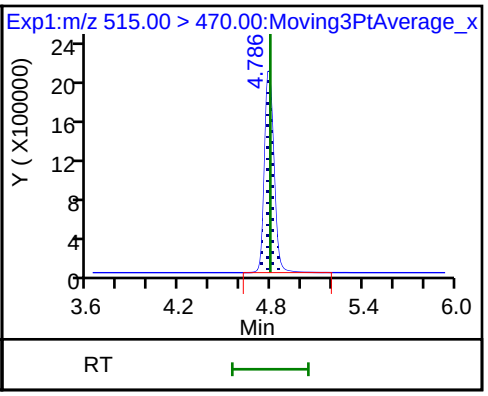

D 34 13C8 FOSA



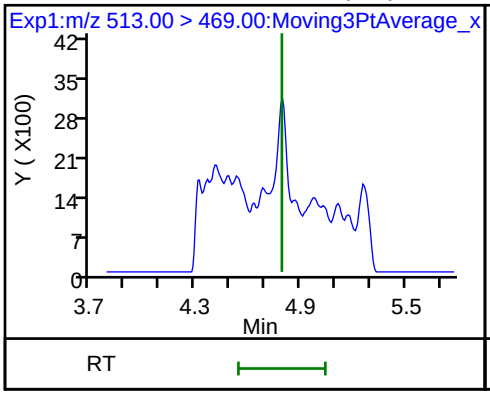

33 Perfluorooctanesulfonamide



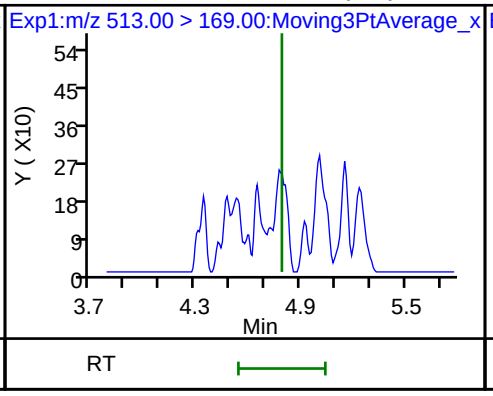

D 37 13C2 PFDA



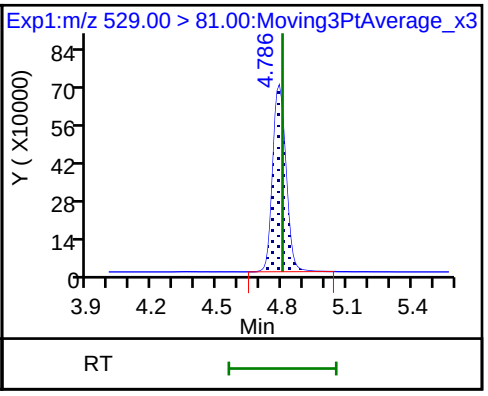

36 Perfluorodecanoic acid (ND)



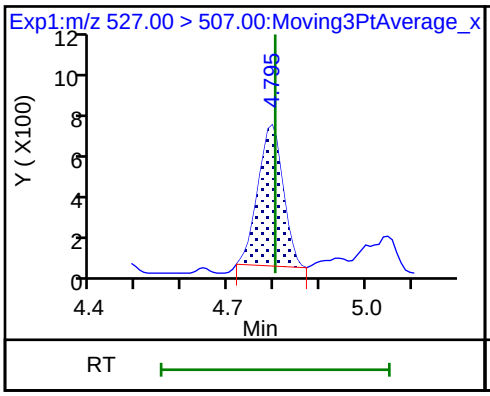

36 Perfluorodecanoic acid (ND)



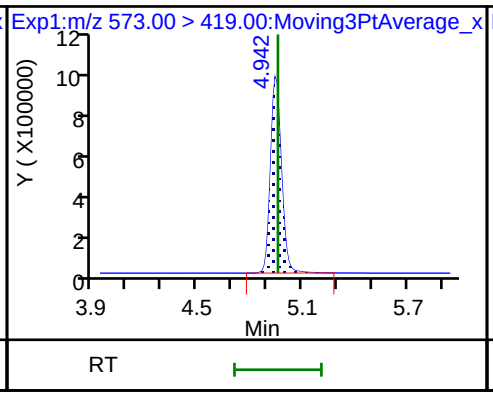

D 38 M2-8:2 FTS



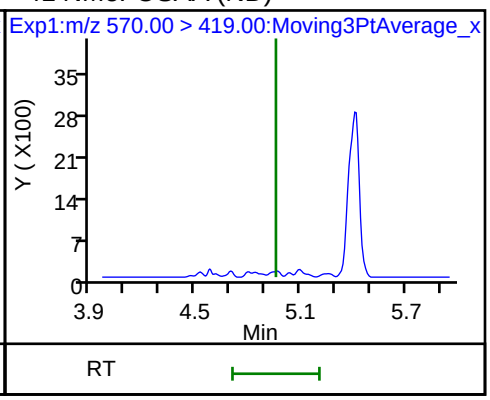
39 8:2 FTS



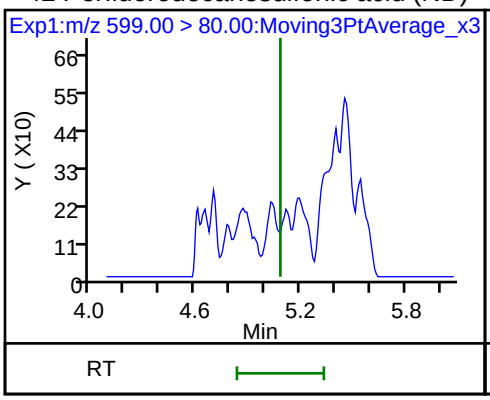

D 40 d3-NMeFOSAA



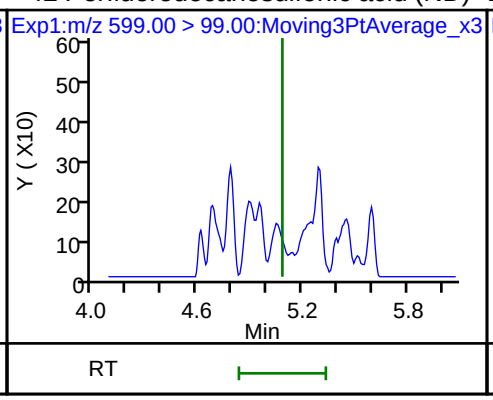

41 NMeFOSAA (ND)



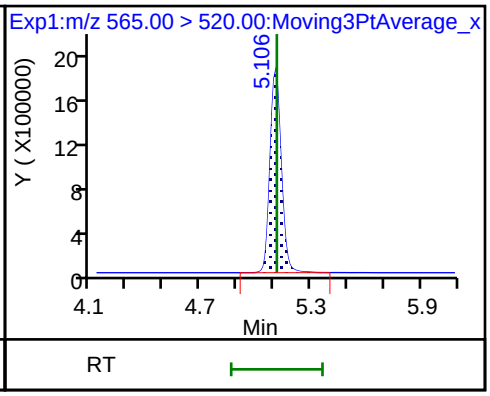

42 Perfluorodecanesulfonic acid (ND)



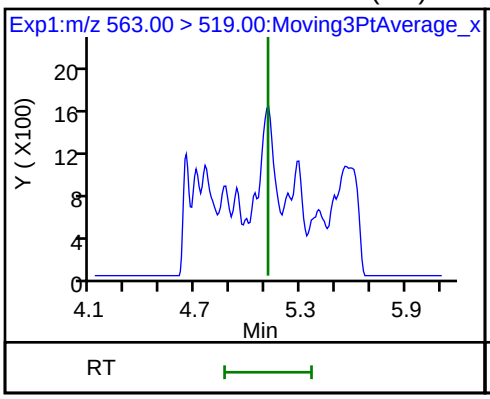

42 Perfluorodecanesulfonic acid (ND)



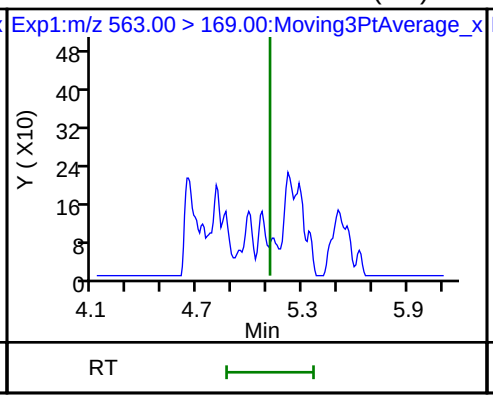

D 44 13C2 PFUnA



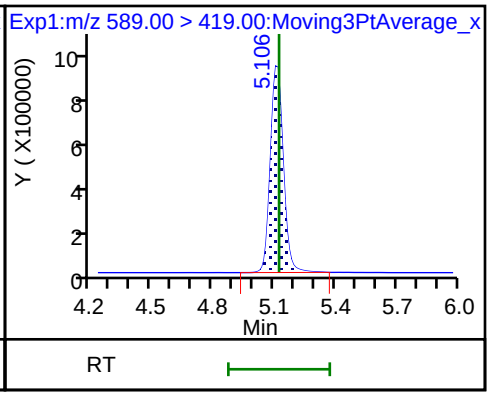

45 Perfluoroundecanoic acid (ND)



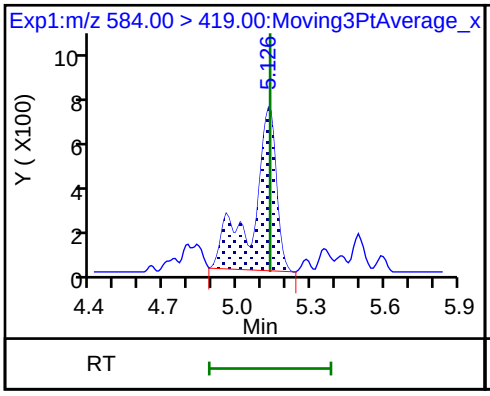

45 Perfluoroundecanoic acid (ND)



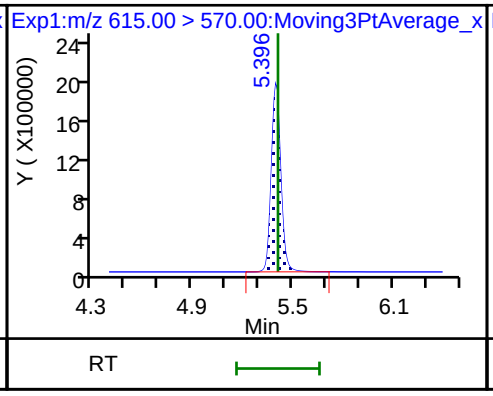

D 46 d5-NEtFOSAA



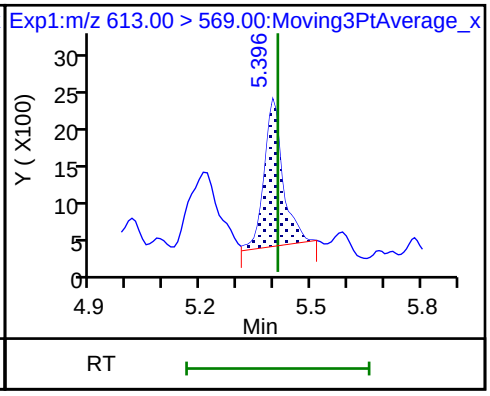

48 NEtFOSA



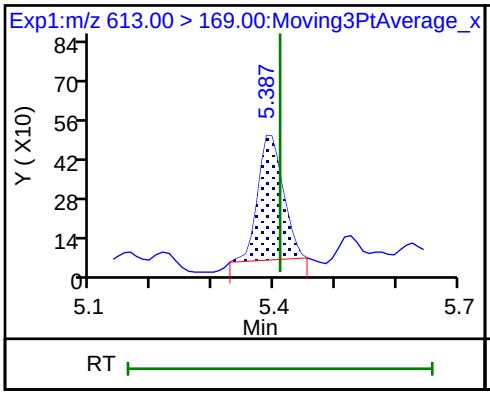

D 56 13C2 PFDoA



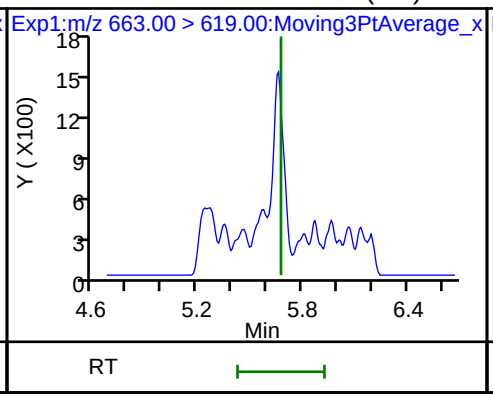

57 Perfluorododecanoic acid



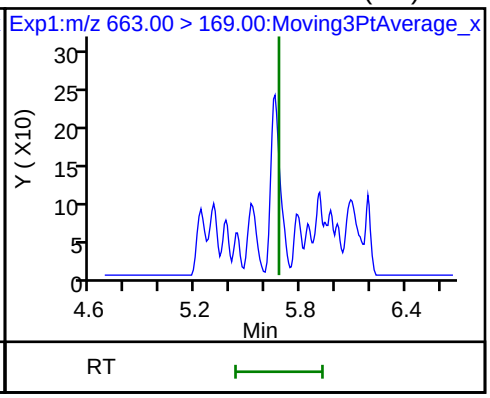
57 Perfluorododecanoic acid



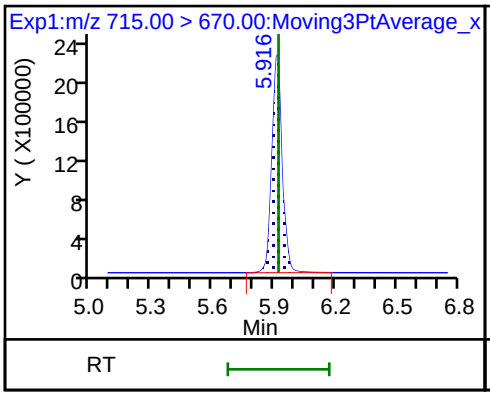

60 Perfluorotridecanoic acid (ND)



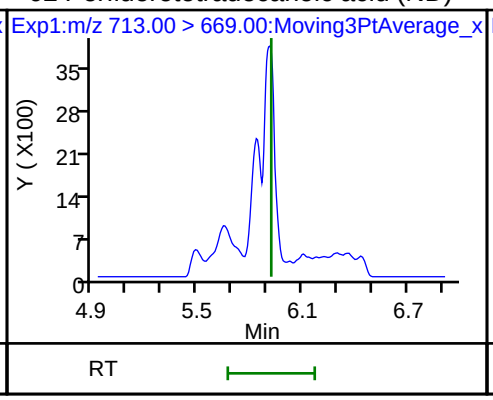

60 Perfluorotridecanoic acid (ND)



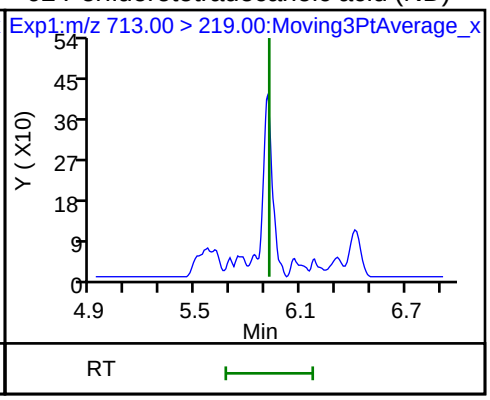

D 61 13C2 PFTeDA




62 Perfluorotetradecanoic acid (ND)




62 Perfluorotetradecanoic acid (ND)



Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

| | | | | | |
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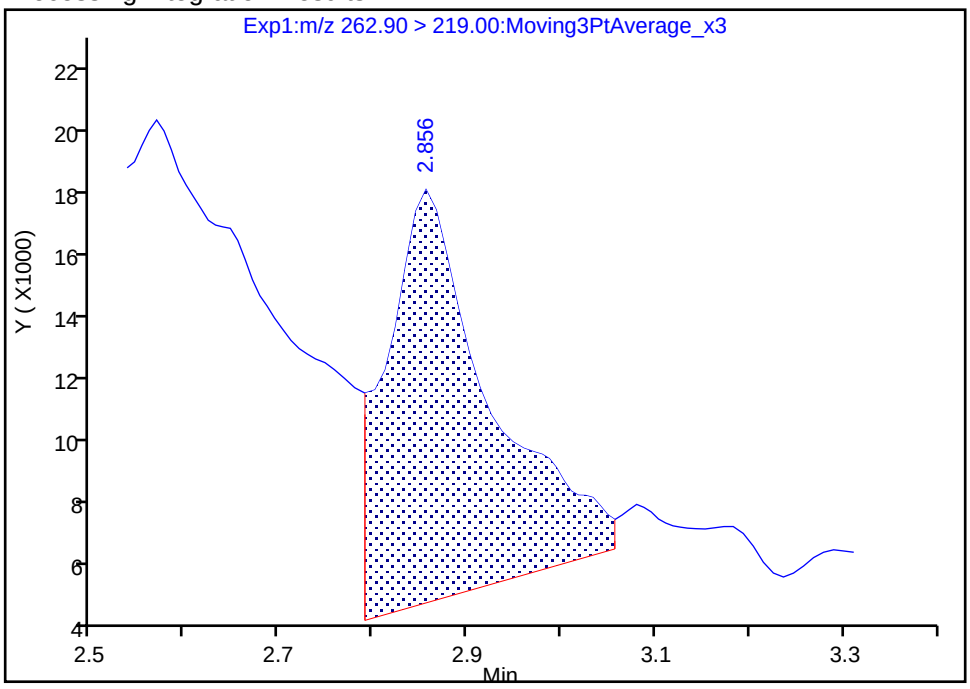
| Data File: | \\chromfs\Sacramento\ChromData\A13\20200910-103052.b\2020.09.10_A13_PFC_A_064.d | | | | |
| Injection Date: | 10-Sep-2020 18:54:55 | Instrument ID: | A13 | | |
| Lims ID: | 460-217659-D-3-A | Lab Sample ID: | 320-217659-3 | | |
| Client ID: | MW-210 | | | | |
| Operator ID: | SACINSTLCMS01 | ALS Bottle#: | 37 | Worklist Smp#: | 7 |
| Injection Vol: | 20.0 ul | Dil. Factor: | 1.0000 | | |
| Method: | PFAS_A13 | Limit Group: | LC PFC ICAL | | |
| Column: | Gemini C18 3um 3 x 100mm ( 3.00 mm) | Detector | EXP1 | | |

## 5 Perfluoropentanoic acid, CAS: 2706-90-3

Signal: 1

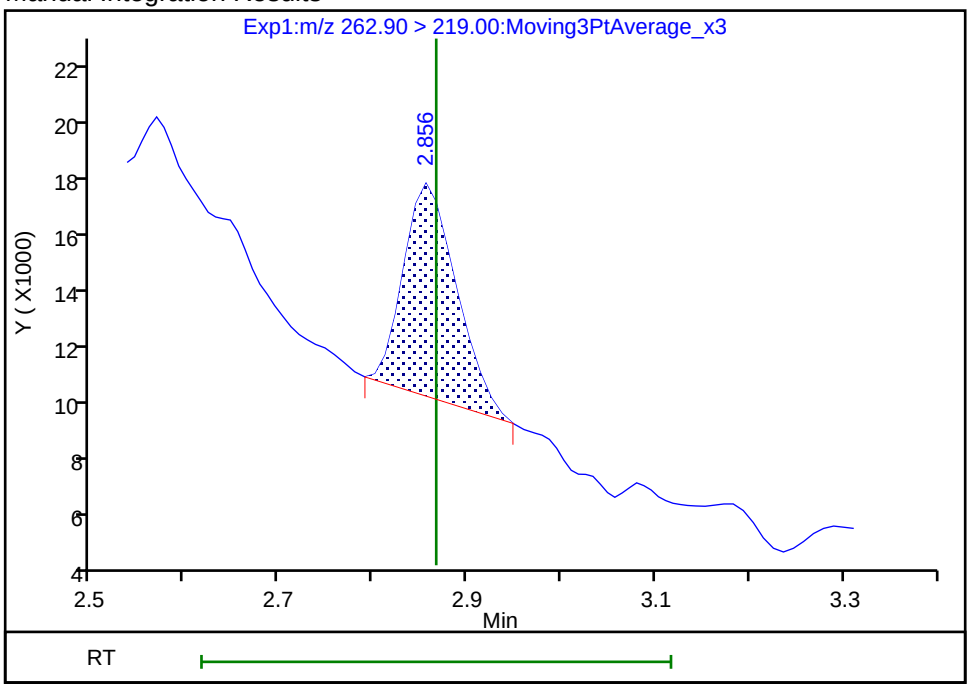
Processing Integration Results

RT: 2.86
Area: 102305
Amount: 0.053463
Amount Units: ng/ml




Manual Integration Results

RT: 2.86
Area: 28469
Amount: 0.014877
Amount Units: ng/ml




Reviewer: mongkols, 11-Sep-2020 09:47:12

Audit Action: Manually Integrated Audit Reason: Baseline

Eurofins TestAmerica, Sacramento

| | | | | | |
|---|---|---|---|---|---|
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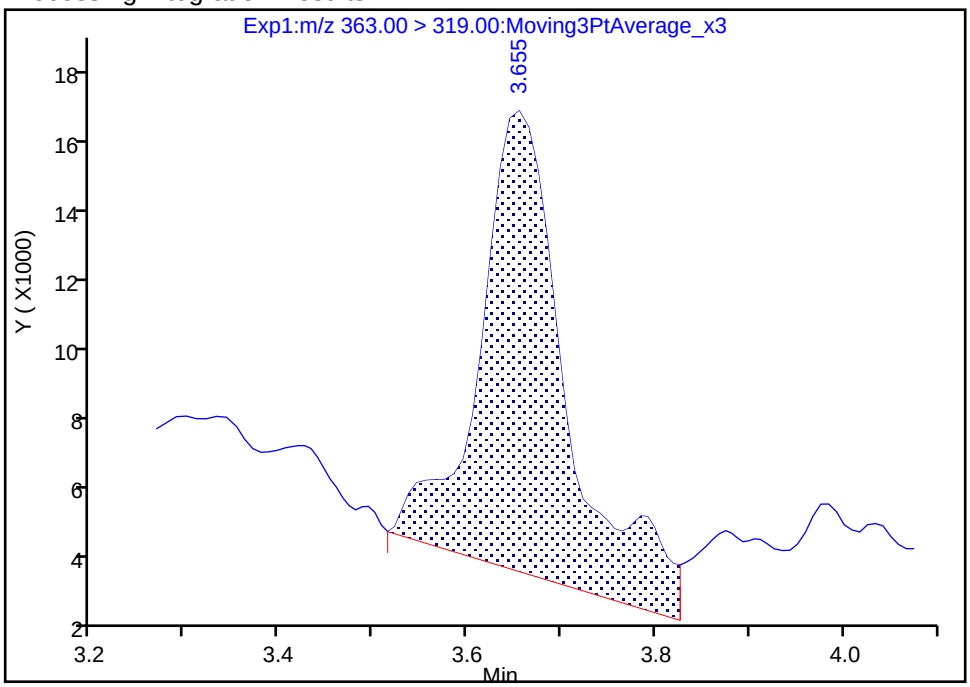
| Injection Date: | 10-Sep-2020 18:54:55 | Instrument ID: | A13 | | |
| Lims ID: | 460-217659-D-3-A | Lab Sample ID: | 320-217659-3 | | |
| Client ID: | MW-210 | | | | |
| Operator ID: | SACINSTLCMS01 | ALS Bottle#: | 37 | Worklist Smp#: | 7 |
| Injection Vol: | 20.0 ul | Dil. Factor: | 1.0000 | | |
| Method: | PFAS_A13 | Limit Group: | LC PFC ICAL | | |
| Column: | Gemini C18 3um 3 x 100mm ( 3.00 mm) | Detector | EXP1 | | |

## 16 Perfluoroheptanoic acid, CAS: 375-85-9

Signal: 1

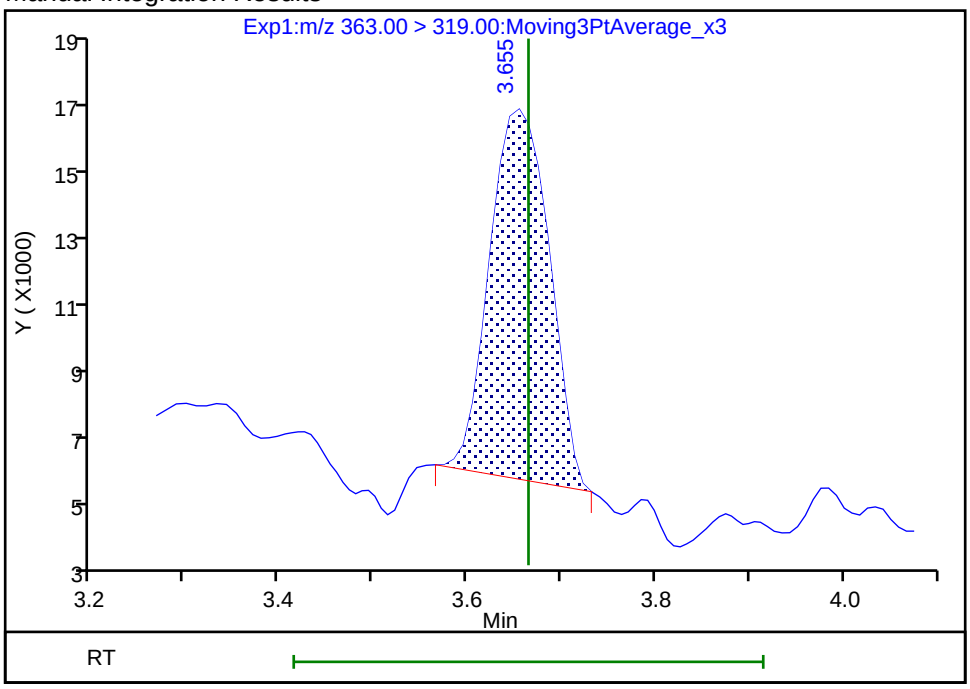
Processing Integration Results

RT: 3.65
Area: 82792
Amount: 0.032222
Amount Units: ng/ml




Manual Integration Results

RT: 3.65
Area: 46547
Amount: 0.018116
Amount Units: ng/ml




Reviewer: mongkols, 11-Sep-2020 09:47:28
Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

| | | | | | |
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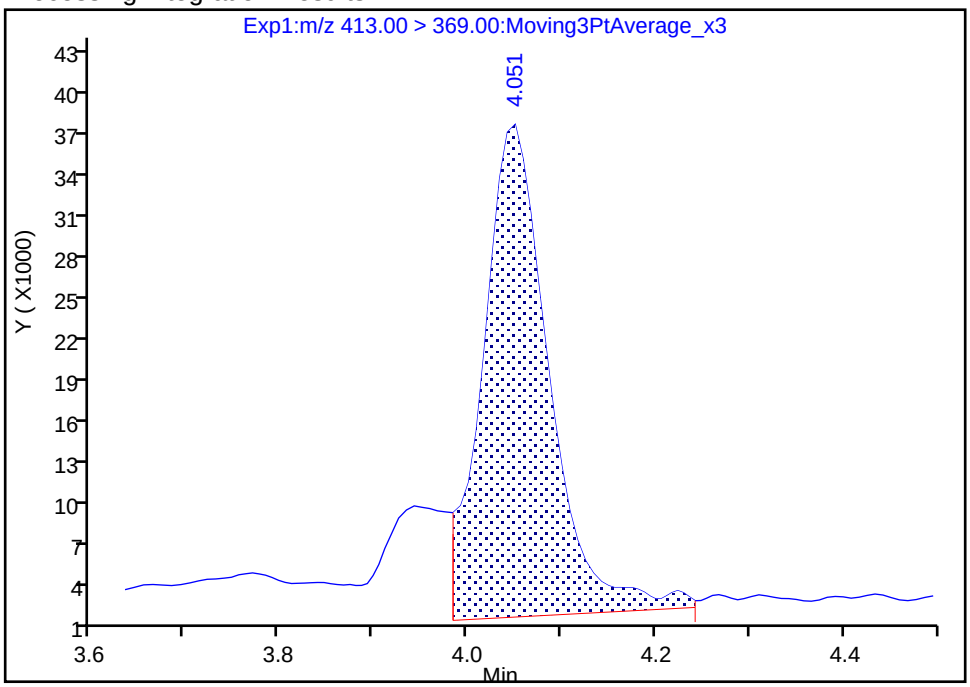
| Data File: | \\chromfs\Sacramento\ChromData\A13\20200910-103052.b\2020.09.10_A13_PFC_A_064.d | | | | |
| Injection Date: | 10-Sep-2020 18:54:55 | Instrument ID: | A13 | | |
| Lims ID: | 460-217659-D-3-A | Lab Sample ID: | 320-217659-3 | | |
| Client ID: | MW-210 | | | | |
| Operator ID: | SACINSTLCMS01 | ALS Bottle#: | 37 | Worklist Smp#: | 7 |
| Injection Vol: | 20.0 ul | Dil. Factor: | 1.0000 | | |
| Method: | PFAS_A13 | Limit Group: | LC PFC ICAL | | |
| Column: | Gemini C18 3um 3 x 100mm ( 3.00 mm) | Detector | EXP1 | | |

## 26 Perfluorooctanoic acid, CAS: 335-67-1

Signal: 1

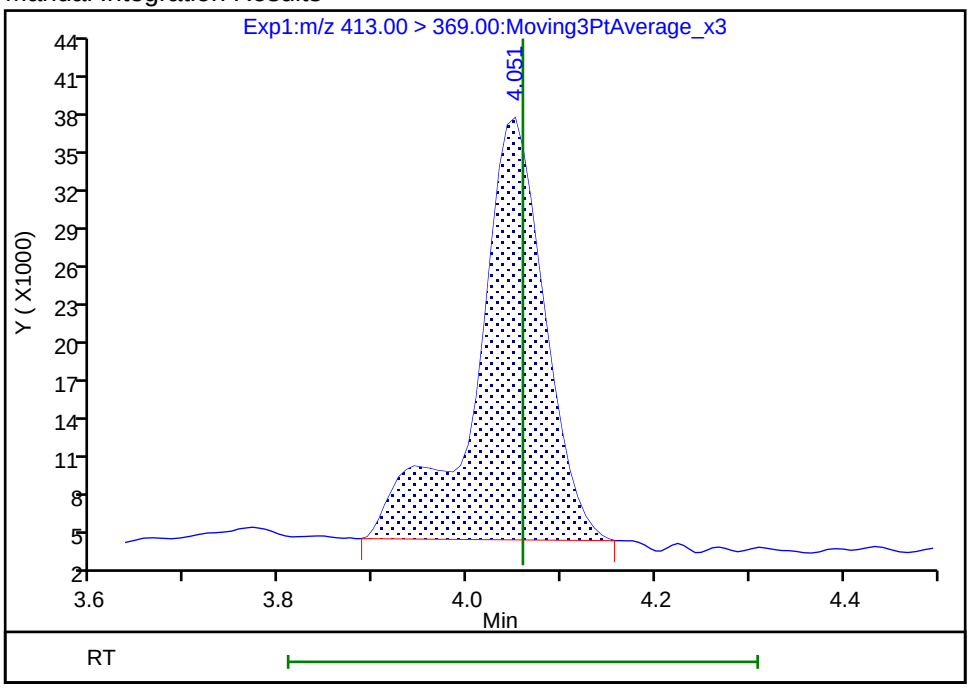
Processing Integration Results

RT: 4.05
Area: 174691
Amount: 0.059151
Amount Units: ng/ml




Manual Integration Results

RT: 4.05
Area: 170597
Amount: 0.057765
Amount Units: ng/ml




Reviewer: mongkols, 11-Sep-2020 09:47:47

Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

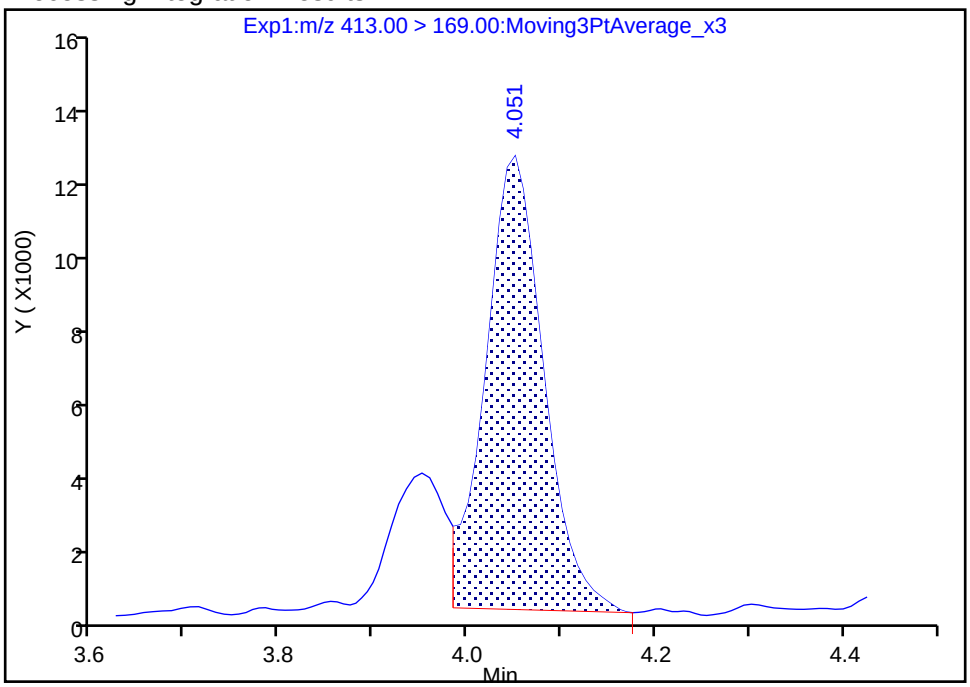
| | | | | | |
|---|---|---|---|---|---|
| Data File: | \\chromfs\Sacramento\ChromData\A13\20200910-103052.b\2020.09.10_A13_PFC_A_064.d | | | | |
| Injection Date: | 10-Sep-2020 18:54:55 | Instrument ID: | A13 | | |
| Lims ID: | 460-217659-D-3-A | Lab Sample ID: | 320-217659-3 | | |
| Client ID: | MW-210 | | | | |
| Operator ID: | SACINSTLCMS01 | ALS Bottle#: | 37 | Worklist Smp#: | 7 |
| Injection Vol: | 20.0 ul | Dil. Factor: | 1.0000 | | |
| Method: | PFAS_A13 | Limit Group: | LC PFC ICAL | | |
| Column: | Gemini C18 3um 3 x 100mm ( 3.00 mm ID) | Detector | EXP1 | | |

## 26 Perfluorooctanoic acid, CAS: 335-67-1

Signal: 2

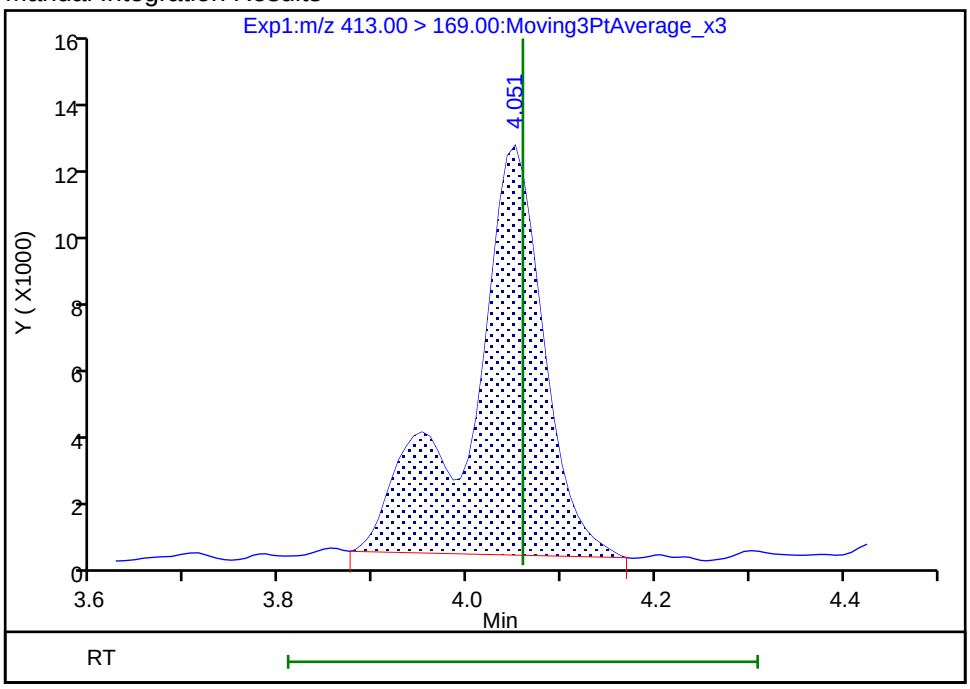
Processing Integration Results

RT: 4.05
Area: 53562
Amount: 0.059151
Amount Units: ng/ml




Manual Integration Results

RT: 4.05
Area: 67579
Amount: 0.057765
Amount Units: ng/ml




Reviewer: mongkols, 11-Sep-2020 09:47:51
Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

| | | | | | |
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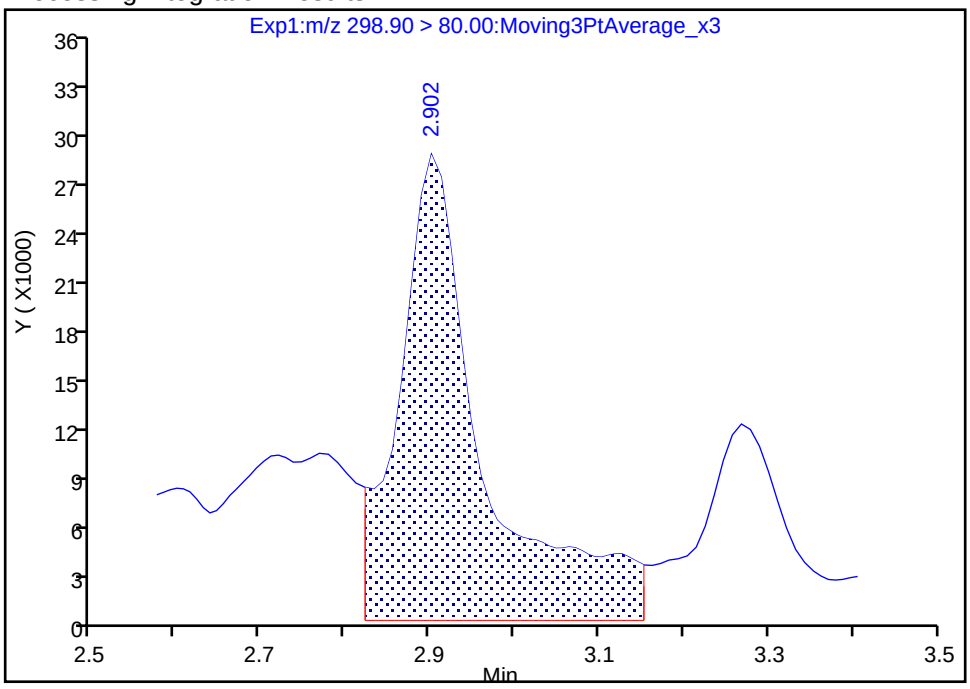
| Lims ID: | 460-217659-D-3-A | Lab Sample ID: | 320-217659-3 | | |
| Client ID: | MW-210 | | | | |
| Operator ID: | SACINSTLCMS01 | ALS Bottle#: | 37 | Worklist Smp#: | 7 |
| Injection Vol: | 20.0 ul | Dil. Factor: | 1.0000 | | |
| Method: | PFAS_A13 | Limit Group: | LC PFC ICAL | | |
| Column: | Gemini C18 3um 3 x 100mm ( 3.00 mm ) | Detector | EXP1 | | |

## 6 Perfluorobutanesulfonic acid, CAS: 375-73-5

Signal: 1

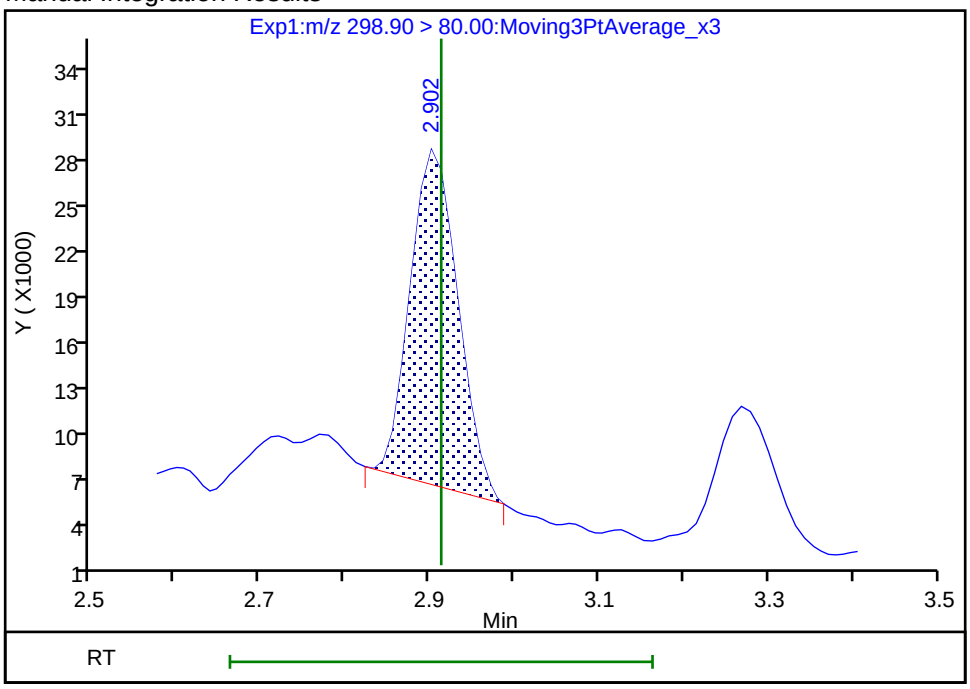
Processing Integration Results

RT: 2.90
Area: 194098
Amount: 0.063499
Amount Units: ng/ml




Manual Integration Results

RT: 2.90
Area: 83313
Amount: 0.027256
Amount Units: ng/ml




Reviewer: mongkols, 11-Sep-2020 09:47:19

Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

| | | | | | |
|---|---|---|---|---|---|
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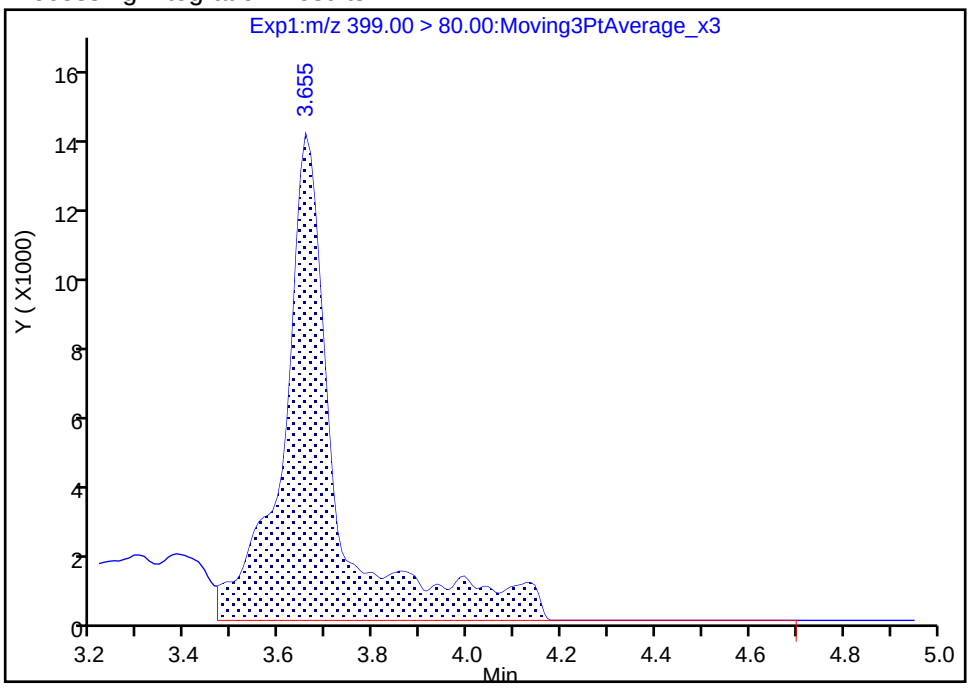
| Injection Date: | 10-Sep-2020 18:54:55 | Instrument ID: | A13 | | |
| Lims ID: | 460-217659-D-3-A | Lab Sample ID: | 320-217659-3 | | |
| Client ID: | MW-210 | | | | |
| Operator ID: | SACINSTLCMS01 | ALS Bottle#: | 37 | Worklist Smp#: | 7 |
| Injection Vol: | 20.0 ul | Dil. Factor: | 1.0000 | | |
| Method: | PFAS_A13 | Limit Group: | LC PFC ICAL | | |
| Column: | Gemini C18 3um 3 x 100mm ( 3.00 mm) | Detector | EXP1 | | |

## 18 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 1

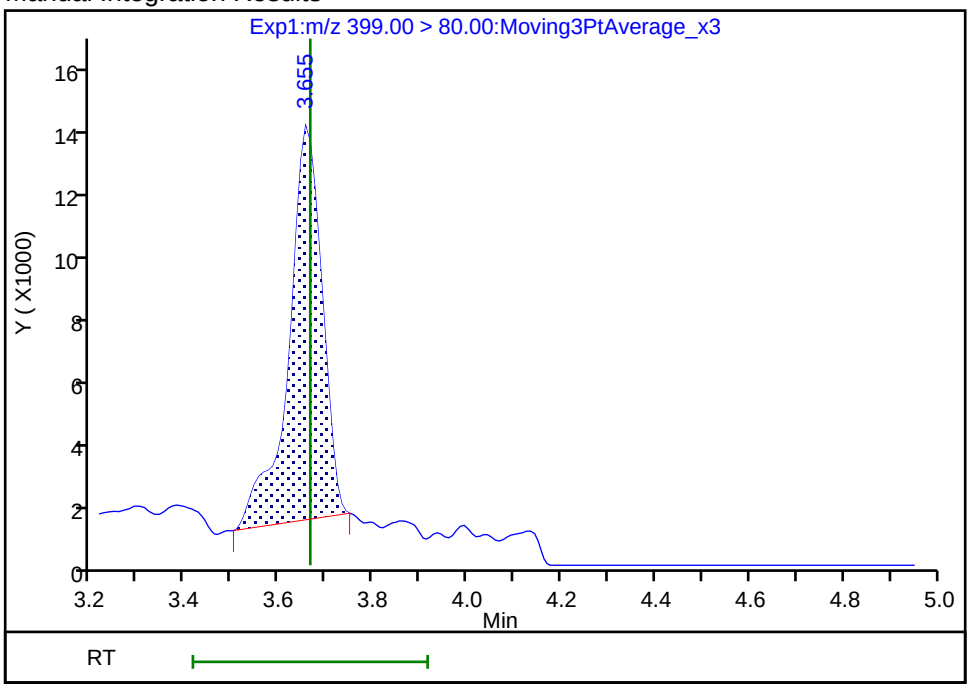
Processing Integration Results

RT: 3.65
Area: 107304
Amount: 0.046052
Amount Units: ng/ml




Manual Integration Results

RT: 3.65
Area: 59259
Amount: 0.025432
Amount Units: ng/ml




Reviewer: mongkols, 11-Sep-2020 09:47:34

Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

| | | | | | |
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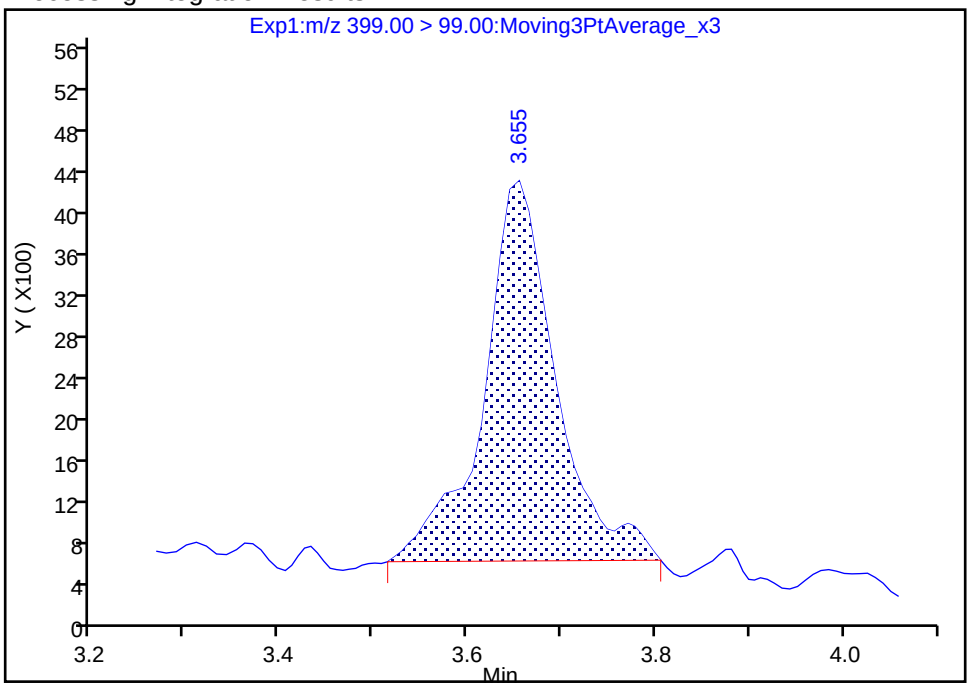
| Injection Date: | 10-Sep-2020 18:54:55 | Instrument ID: | A13 | | |
| Lims ID: | 460-217659-D-3-A | Lab Sample ID: | 320-217659-3 | | |
| Client ID: | MW-210 | | | | |
| Operator ID: | SACINSTLCMS01 | ALS Bottle#: | 37 | Worklist Smp#: | 7 |
| Injection Vol: | 20.0 ul | Dil. Factor: | 1.0000 | | |
| Method: | PFAS_A13 | Limit Group: | LC PFC ICAL | | |
| Column: | Gemini C18 3um 3 x 100mm ( 3.00 mm ID) | Detector | EXP1 | | |

## 18 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 2

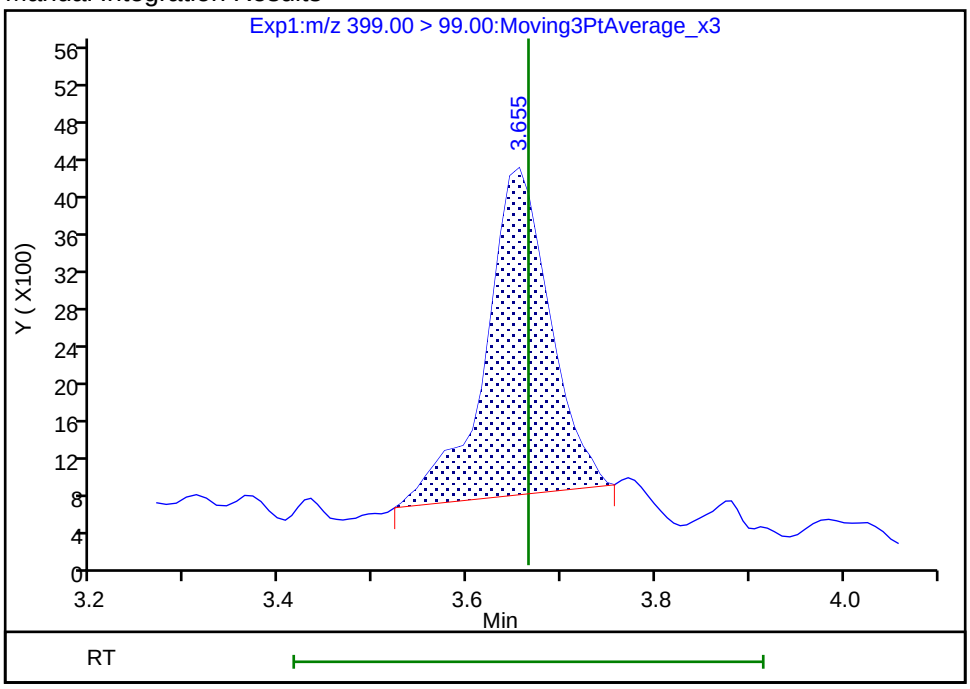
Processing Integration Results

RT: 3.65
Area: 19730
Amount: 0.046052
Amount Units: ng/ml




Manual Integration Results

RT: 3.65
Area: 16714
Amount: 0.025432
Amount Units: ng/ml




Reviewer: mongkols, 11-Sep-2020 09:47:38
Audit Action: Manually Integrated Audit Reason: Baseline

Eurofins TestAmerica, Sacramento

| | | | | | |
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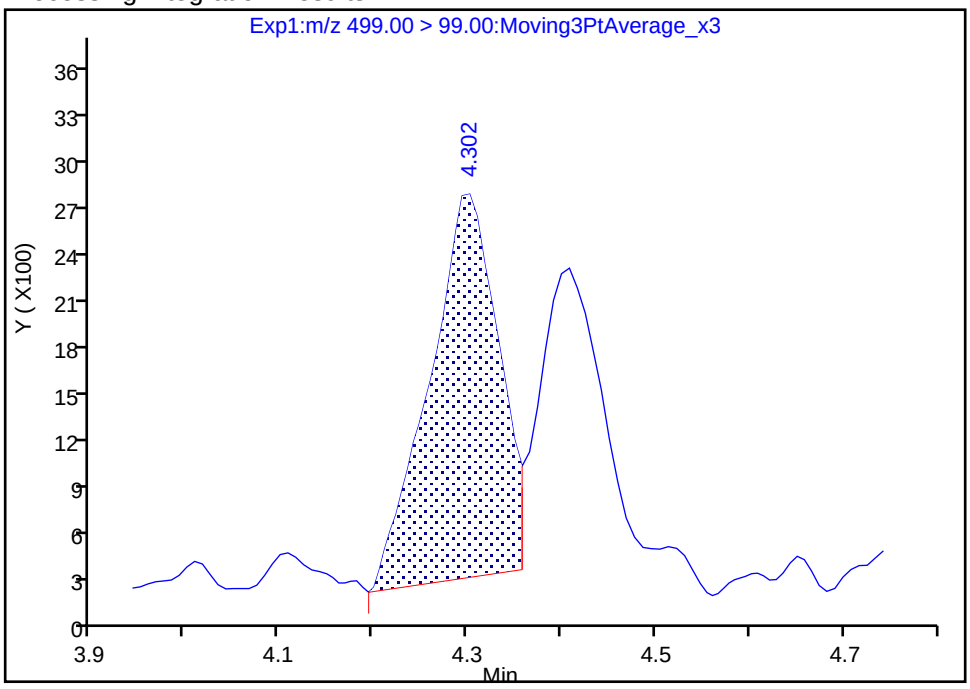
| Data File: | \\chromfs\Sacramento\ChromData\A13\20200910-103052.b\2020.09.10_A13_PFC_A_064.d | | | | |
| Injection Date: | 10-Sep-2020 18:54:55 | Instrument ID: | A13 | | |
| Lims ID: | 460-217659-D-3-A | Lab Sample ID: | 320-217659-3 | | |
| Client ID: | MW-210 | | | | |
| Operator ID: | SACINSTLCMS01 | ALS Bottle#: | 37 | Worklist Smp#: | 7 |
| Injection Vol: | 20.0 ul | Dil. Factor: | 1.0000 | | |
| Method: | PFAS_A13 | Limit Group: | LC PFC ICAL | | |
| Column: | Gemini C18 3um 3 x 100mm ( 3.00 mm) | Detector | EXP1 | | |

## 28 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 2

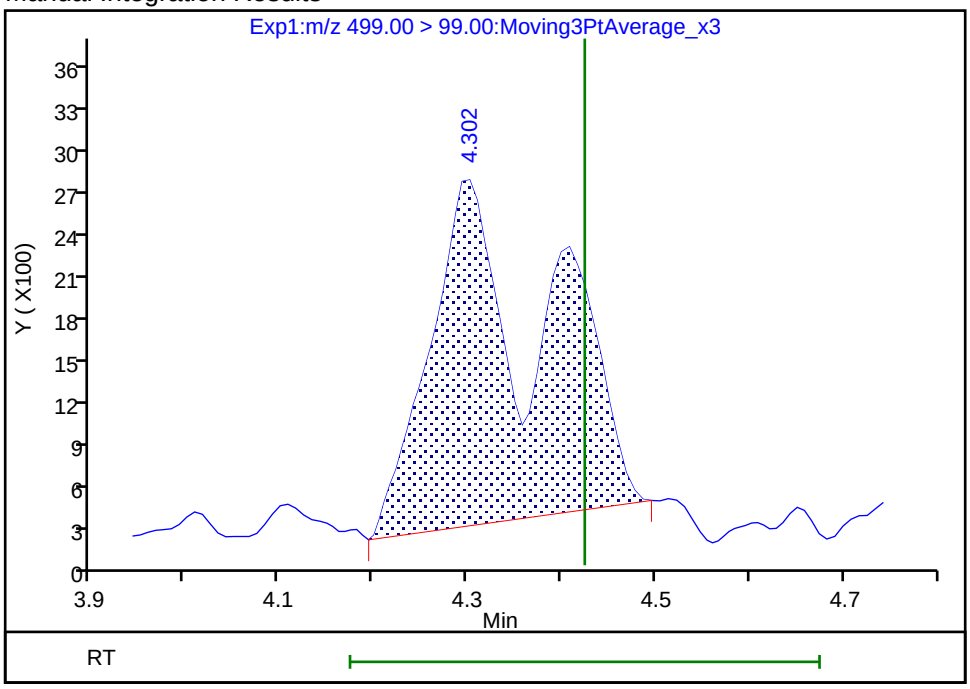
Processing Integration Results

RT: 4.30
Area: 12596
Amount: 0.130557
Amount Units: ng/ml




Manual Integration Results

RT: 4.30
Area: 20839
Amount: 0.088667
Amount Units: ng/ml




Reviewer: mongkols, 11-Sep-2020 09:48:03
Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

| | | | | | |
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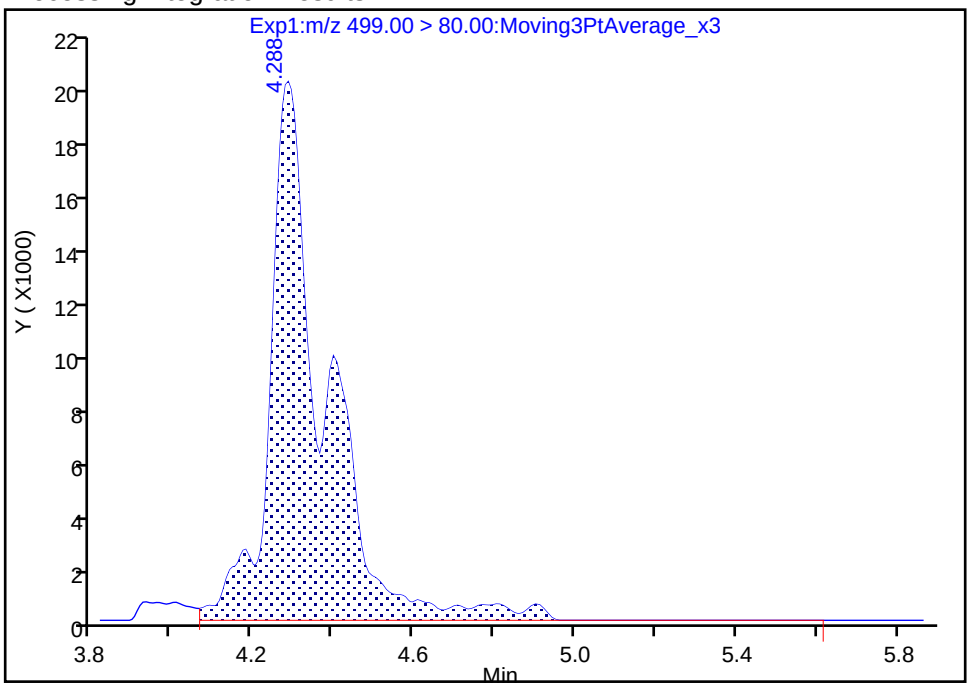
| Injection Date: | 10-Sep-2020 18:54:55 | Instrument ID: | A13 | | |
| Lims ID: | 460-217659-D-3-A | Lab Sample ID: | 320-217659-3 | | |
| Client ID: | MW-210 | | | | |
| Operator ID: | SACINSTLCMS01 | ALS Bottle#: | 37 | Worklist Smp#: | 7 |
| Injection Vol: | 20.0 ul | Dil. Factor: | 1.0000 | | |
| Method: | PFAS_A13 | Limit Group: | LC PFC ICAL | | |
| Column: | Gemini C18 3um 3 x 100mm ( 3.00 mm ID) | Detector | EXP1 | | |

## 28 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 1

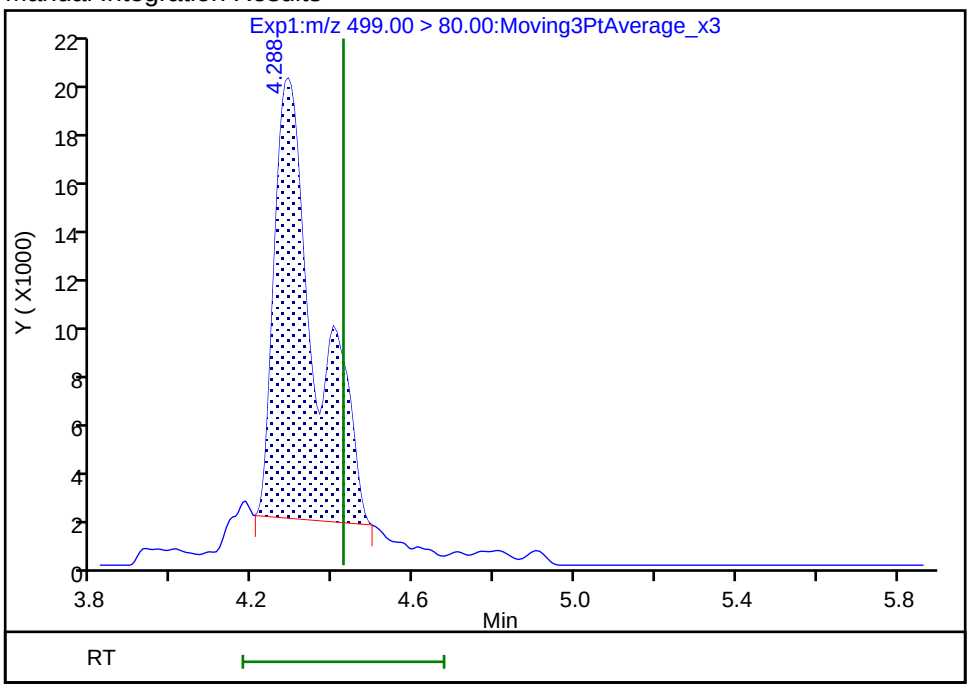
Processing Integration Results

RT: 4.29
Area: 191073
Amount: 0.130557
Amount Units: ng/ml




Manual Integration Results

RT: 4.29
Area: 129766
Amount: 0.088667
Amount Units: ng/ml




Reviewer: mongkols, 11-Sep-2020 09:48:11
Audit Action: Manually Integrated Audit Reason: Baseline

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento  Job No.: 460-217659-1

SDG No.:

Client Sample ID: MW-211  Lab Sample ID: 460-217659-4

Matrix: Water  Lab File ID: 2020.09.10_A13_PFC_A_065.d

Analysis Method: 537 (modified)  Date Collected: 09/03/2020 14:00

Extraction Method: 3535  Date Extracted: 09/09/2020 18:39

Sample wt/vol: 250.7(mL)  Date Analyzed: 09/10/2020 19:04

Con. Extract Vol.: 10.00(mL)  Dilution Factor: 1

Injection Volume: 20(uL)  GC Column: GeminiC18 3x100 ID: 3(mm)

% Moisture:  GPC Cleanup:(Y/N) N

Analysis Batch No.: 411143  Units: ng/L

| CAS NO. | COMPOUND NAME | RESULT | Q | RL | MDL |
|---|---|---|---|---|---|
| 375-22-4 | Perfluorobutanoic acid (PFBA) | 0.72 | J B | 1.99 | 0.35 |
| 2706-90-3 | Perfluoropentanoic acid (PFPeA) | 0.49 | U | 1.99 | 0.49 |
| 307-24-4 | Perfluorohexanoic acid (PFHxA) | 0.58 | U | 1.99 | 0.58 |
| 375-85-9 | Perfluoroheptanoic acid (PFHpA) | 0.25 | U | 1.99 | 0.25 |
| 335-67-1 | Perfluorooctanoic acid (PFOA) | 0.87 | J | 1.99 | 0.85 |
| 375-95-1 | Perfluorononanoic acid (PFNA) | 0.27 | U | 1.99 | 0.27 |
| 335-76-2 | Perfluorodecanoic acid (PFDA) | 0.31 | U | 1.99 | 0.31 |
| 2058-94-8 | Perfluoroundecanoic acid (PFUnA) | 1.10 | U | 1.99 | 1.10 |
| 307-55-1 | Perfluorododecanoic acid (PFDoA) | 0.55 | U | 1.99 | 0.55 |
| 72629-94-8 | Perfluorotridecanoic acid (PFTriA) | 1.30 | U | 1.99 | 1.30 |
| 376-06-7 | Perfluorotetradecanoic acid (PFTeA) | 0.41 | J | 1.99 | 0.29 |
| 375-73-5 | Perfluorobutanesulfonic acid (PFBS) | 0.20 | U | 1.99 | 0.20 |
| 355-46-4 | Perfluorohexanesulfonic acid (PFHxS) | 0.56 | J B | 1.99 | 0.17 |
| 375-92-8 | Perfluoroheptanesulfonic Acid (PFHpS) | 0.19 | U | 1.99 | 0.19 |
| 1763-23-1 | Perfluorooctanesulfonic acid (PFOS) | 1.75 | J | 1.99 | 0.54 |
| 335-77-3 | Perfluorodecanesulfonic acid (PFDS) | 0.32 | U | 1.99 | 0.32 |
| 754-91-6 | Perfluorooctanesulfonamide (FOSA) | 0.35 | J | 1.99 | 0.35 |
| 2355-31-9 | N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA) | 3.09 | U | 19.9 | 3.09 |
| 2991-50-6 | N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA) | 1.89 | U | 19.9 | 1.89 |
| 27619-97-2 | 6:2 FTS | 5.28 | J | 19.9 | 1.99 |
| 39108-34-4 | 8:2 FTS | 1.99 | U | 19.9 | 1.99 |

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento  Job No.: 460-217659-1

SDG No.:

Client Sample ID: MW-211  Lab Sample ID: 460-217659-4

Matrix: Water  Lab File ID: 2020.09.10_A13_PFC_A_065.d

Analysis Method: 537 (modified)  Date Collected: 09/03/2020 14:00

Extraction Method: 3535  Date Extracted: 09/09/2020 18:39

Sample wt/vol: 250.7(mL)  Date Analyzed: 09/10/2020 19:04

Con. Extract Vol.: 10.00(mL)  Dilution Factor: 1

Injection Volume: 20(uL)  GC Column: GeminiC18 3x100 ID: 3(mm)

% Moisture:  GPC Cleanup:(Y/N) N

Analysis Batch No.: 411143  Units: ng/L

| CAS NO. | ISOTOPE DILUTION | %REC | Q | LIMITS |
|---|---|---|---|---|
| STL00992 | 13C4 PFBA | 78 | | 25-150 |
| STL01893 | 13C5 PFPeA | 84 | | 25-150 |
| STL00993 | 13C2 PFHxA | 92 | | 25-150 |
| STL01892 | 13C4 PFHpA | 93 | | 25-150 |
| STL00990 | 13C4 PFOA | 87 | | 25-150 |
| STL00995 | 13C5 PFNA | 93 | | 25-150 |
| STL00996 | 13C2 PFDA | 88 | | 25-150 |
| STL00997 | 13C2 PFUnA | 85 | | 25-150 |
| STL00998 | 13C2 PFDoA | 72 | | 25-150 |
| STL02116 | 13C2 PFTeDA | 76 | | 25-150 |
| STL02337 | 13C3 PFBS | 99 | | 25-150 |
| STL00994 | 18O2 PFHxS | 99 | | 25-150 |
| STL00991 | 13C4 PFOS | 95 | | 25-150 |
| STL01056 | 13C8 FOSA | 79 | | 25-150 |
| STL02118 | d3-NMeFOSAA | 76 | | 25-150 |
| STL02117 | d5-NEtFOSAA | 87 | | 25-150 |
| STL02279 | M2-6:2 FTS | 104 | | 25-150 |
| STL02280 | M2-8:2 FTS | 110 | | 25-150 |

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\A13\20200910-103052.b\2020.09.10_A13_PFC_A_065.d
Lims ID: 460-217659-D-4-A
Client ID: MW-211
Sample Type: Client
Inject. Date: 10-Sep-2020 19:04:21 ALS Bottle#: 38 Worklist Smp#: 8
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Sample Info: 460-217659-d-4-a
Misc. Info.: Plate: 1 Rack: 4
Operator ID: SACINSTLCMS01 Instrument ID: A13

Method: \\chromfs\Sacramento\ChromData\A13\20200910-103052.b\PFAS_A13.m
Limit Group: LC PFC ICAL
Last Update: 11-Sep-2020 10:14:11 Calib Date: 08-Sep-2020 18:58:15
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\A13\20200908-102913.b\2020.09.08_A13_PFC_ICALX_010.d

Column 1 : Gemini C18 3um 3 x 100mm ( 3.00 mm) Det: EXP1
Process Host: CTX1053

First Level Reviewer: mongkols Date: 11-Sep-2020 10:14:11
Ratio Calibration: CCV Sample: \\chromfs\Sacramento\ChromData\A13\20200910-103052.b\2020.09.10_A13_PFC_A_058.d

| Signal | RT | EXP RT | DLT RT | REL RT | Response | Amount ng/ml | Ratio(Limits) | %Rec | S/N | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| D 1 13C4 PFBA | | | | | | | | | | |
| 217.00 > 172.00 | 2.470 | 2.475 | -0.005 | 0.610 | 6966241 | 1.96 | | 78.4 | 8753 | |
| 2 Perfluorobutanoic acid | | | | | | | | | | M |
| 212.90 > 169.00 | 2.470 | 2.482 | -0.012 | 1.000 | 37255 | 0.0180 | | | 5.1 | M |
| D 4 13C5 PFPeA | | | | | | | | | | |
| 267.90 > 223.00 | 2.861 | 2.867 | -0.006 | 0.706 | 5849683 | 2.11 | | 84.5 | 4318 | |
| 5 Perfluoropentanoic acid | | | | | | | | | | M |
| 262.90 > 219.00 | 2.861 | 2.867 | -0.006 | 1.000 | 25689 | 0.0107 | | | 1.0 | M |
| D 14 13C3 PFBS | | | | | | | | | | |
| 301.90 > 80.00 | 2.907 | 2.913 | -0.006 | 0.718 | 8019197 | 2.31 | | 99.2 | 1318 | |
| 6 Perfluorobutanesulfonic acid | | | | | | | | | | M |
| 298.90 > 80.00 | 2.907 | 2.913 | -0.006 | 1.000 | 13904 | 0.004123 | Target=2.29 | | 1.1 | M |
| 298.90 > 99.00 | 2.907 | 2.913 | -0.006 | 1.000 | 8157 | | 1.70(1.15-3.44) | | 1.6 | |
| D 9 13C2 PFHxA | | | | | | | | | | |
| 315.00 > 270.00 | 3.256 | 3.258 | -0.002 | 0.804 | 7892744 | 2.31 | | 92.3 | 6555 | |
| D 17 18O2 PFHxS | | | | | | | | | | |
| 403.00 > 84.00 | 3.663 | 3.665 | -0.002 | 0.904 | 5338808 | 2.34 | | 99.1 | 2643 | |
| 16 Perfluoroheptanoic acid | | | | | | | | | | M |
| 363.00 > 319.00 | 3.653 | 3.665 | -0.012 | 1.000 | 12900 | 0.004074 | Target=3.87 | | 0.7 | M |
| 363.00 > 169.00 | 3.663 | 3.665 | -0.002 | 1.003 | 5058 | | 2.55(1.93-5.80) | | 1.9 | |
| 18 Perfluorohexanesulfonic acid | | | | | | | | | | M |
| 399.00 > 80.00 | 3.663 | 3.665 | -0.002 | 1.000 | 34986 | 0.0139 | Target=3.08 | | 9.3 | M |
| 399.00 > 99.00 | 3.663 | 3.665 | -0.002 | 1.000 | 11525 | | 3.04(1.54-4.62) | | 4.4 | |
| D 15 13C4 PFHpA | | | | | | | | | | |
| 367.00 > 322.00 | 3.653 | 3.665 | -0.012 | 0.902 | 7831822 | 2.32 | | 93.0 | 2621 | |
| D 20 M2-6:2 FTS | | | | | | | | | | |
| 429.00 > 81.00 | 4.025 | 4.042 | -0.017 | 0.994 | 2421261 | 2.47 | | 104 | 813 | |

| Signal | RT | EXP RT | DLT RT | REL RT | Response | Amount ng/ml | Ratio(Limits) | %Rec | S/N | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| 21 6:2 FTS | | | | | | | | | | |
| 427.00 > 407.00 | 4.025 | 4.042 | -0.017 | 1.000 | 324513 | 0.1323 | | | 207 | |
| D 24 13C4 PFOA | | | | | | | | | | |
| 417.00 > 372.00 | 4.050 | 4.059 | -0.009 | 1.000 | 8966717 | 2.18 | | 87.1 | 9902 | |
| 26 Perfluorooctanoic acid | | | | | | | | | | M |
| 413.00 > 369.00 | 4.050 | 4.059 | -0.009 | 1.000 | 79594 | 0.0217 | Target=2.99 | | 6.5 | M |
| 413.00 > 169.00 | 4.050 | 4.059 | -0.009 | 1.000 | 36277 | | 2.19(1.50-4.49) | | 23.3 | M |
| * 25 13C2 PFOA | | | | | | | | | | |
| 415.00 > 370.00 | 4.050 | 4.059 | -0.009 | | 10452536 | 2.50 | | | 5005 | |
| 28 Perfluorooctanesulfonic acid | | | | | | | | | | M |
| 499.00 > 80.00 | 4.295 | 4.425 | -0.130 | 0.974 | 70445 | 0.0440 | Target=4.13 | | 18.6 | M |
| 499.00 > 99.00 | 4.426 | 4.425 | 0.001 | 1.004 | 11610 | | 6.07(2.06-6.19) | | 5.6 | M |
| D 29 13C4 PFOS | | | | | | | | | | |
| 503.00 > 80.00 | 4.409 | 4.425 | -0.016 | 1.089 | 3688652 | 2.27 | | 94.9 | 1330 | |
| D 31 13C5 PFNA | | | | | | | | | | |
| 468.00 > 423.00 | 4.426 | 4.442 | -0.016 | 1.093 | 8821164 | 2.32 | | 92.7 | 8324 | |
| D 34 13C8 FOSA | | | | | | | | | | |
| 506.00 > 78.00 | 4.735 | 4.740 | -0.005 | 1.169 | 4621718 | 1.98 | | 79.2 | 5431 | |
| 33 Perfluorooctanesulfonamide | | | | | | | | | | |
| 498.00 > 78.00 | 4.735 | 4.740 | -0.005 | 1.000 | 15192 | 0.008758 | | | 65.4 | |
| D 37 13C2 PFDA | | | | | | | | | | |
| 515.00 > 470.00 | 4.788 | 4.793 | -0.005 | 1.182 | 10194551 | 2.21 | | 88.5 | 6365 | |
| D 38 M2-8:2 FTS | | | | | | | | | | |
| 529.00 > 81.00 | 4.788 | 4.802 | -0.014 | 1.182 | 3416730 | 2.63 | | 110 | 2539 | |
| 39 8:2 FTS | | | | | | | | | | |
| 527.00 > 507.00 | 4.770 | 4.802 | -0.032 | 0.996 | 5336 | 0.001513 | | | 14.4 | |
| D 40 d3-NMeFOSAA | | | | | | | | | | |
| 573.00 > 419.00 | 4.945 | 4.959 | -0.014 | 1.221 | 4491299 | 1.89 | | 75.6 | 3643 | |
| 41 NMeFOSAA | | | | | | | | | | |
| 570.00 > 419.00 | 4.964 | 4.959 | 0.005 | 1.004 | 11046 | 0.007633 | | | 6.0 | |
| D 44 13C2 PFUnA | | | | | | | | | | |
| 565.00 > 520.00 | 5.109 | 5.113 | -0.004 | 1.261 | 9534168 | 2.12 | | 84.6 | 11122 | |
| D 46 d5-NEtFOSAA | | | | | | | | | | |
| 589.00 > 419.00 | 5.109 | 5.123 | -0.014 | 1.261 | 5011954 | 2.18 | | 87.2 | 3216 | |
| 48 NEtFOSA | | | | | | | | | | |
| 584.00 > 419.00 | 5.119 | 5.132 | -0.013 | 1.002 | 17823 | 0.0115 | | | 92.1 | |
| D 56 13C2 PFDoA | | | | | | | | | | |
| 615.00 > 570.00 | 5.398 | 5.409 | -0.011 | 1.333 | 8719186 | 1.80 | | 71.9 | 6338 | |
| 57 Perfluorododecanoic acid | | | | | | | | | | M |
| 613.00 > 569.00 | 5.398 | 5.409 | -0.011 | 1.000 | 24425 | 0.007677 | Target=9.00 | | 13.4 | |
| 613.00 > 169.00 | 5.381 | 5.409 | -0.028 | 0.997 | 2624 | | 9.31(4.50-13.49) | | 10.2 | M |
| 60 Perfluorotridecanoic acid | | | | | | | | | | |
| 663.00 > 619.00 | 5.664 | 5.676 | -0.012 | 1.049 | 25862 | 0.007911 | Target=6.96 | | 23.9 | |
| 663.00 > 169.00 | 5.672 | 5.676 | -0.004 | 1.051 | 3276 | | 7.89(3.48-10.45) | | 21.8 | |
| D 61 13C2 PFTeDA | | | | | | | | | | |
| 715.00 > 670.00 | 5.912 | 5.920 | -0.008 | 1.460 | 9136863 | 1.91 | | 76.3 | 6420 | |

| Signal | RT | EXP RT | DLT RT | REL RT | Response | Amount ng/ml | Ratio(Limits) | %Rec | S/N | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| 62 Perfluorotetradecanoic acid | | | | | | | | | | |
| 713.00 > 669.00 | 5.907 | 5.920 | -0.014 | 0.999 | 37141 | 0.0103 | Target=10.31 | | 18.5 | |
| 713.00 > 219.00 | 5.907 | 5.920 | -0.014 | 0.999 | 4156 | | 8.94(5.16-15.47) | | 38.4 | |

## QC Flag Legend

Review Flags

M - Manually Integrated

Report Date: 11-Sep-2020 10:14:11 Chrom Revision: 2.3 09-Sep-2020 15:12:58

Eurofins TestAmerica, Sacramento

Data File: \\chromfs\Sacramento\ChromData\A13\20200910-103052.b\2020.09.10_A13_PFC_A_065.d

Injection Date: 10-Sep-2020 19:04:21 Instrument ID: A13

Lims ID: 460-217659-D-4-A Lab Sample ID: 320-217659-4

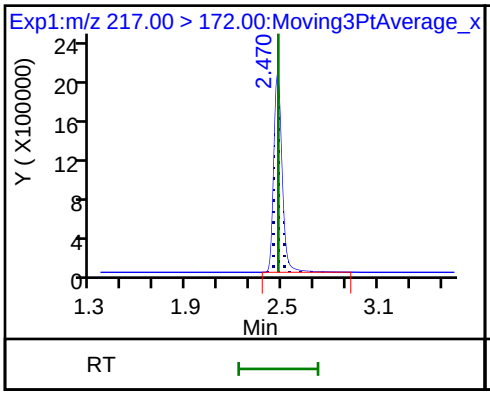
Client ID: MW-211

Operator ID: SACINSTLCMS01 ALS Bottle#: 38 Worklist Smp#: 8

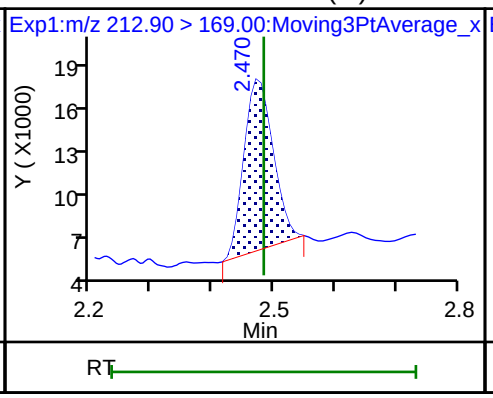
Injection Vol: 20.0 ul Dil. Factor: 1.0000

Method: PFAS_A13 Limit Group: LC PFC ICAL

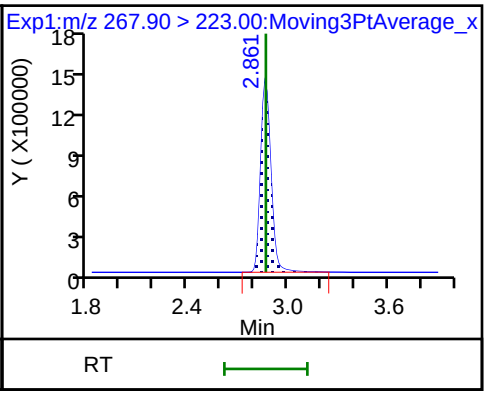
D 1 13C4 PFBA



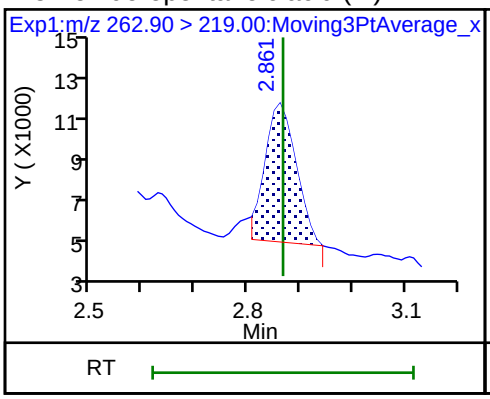

2 Perfluorobutanoic acid (M)



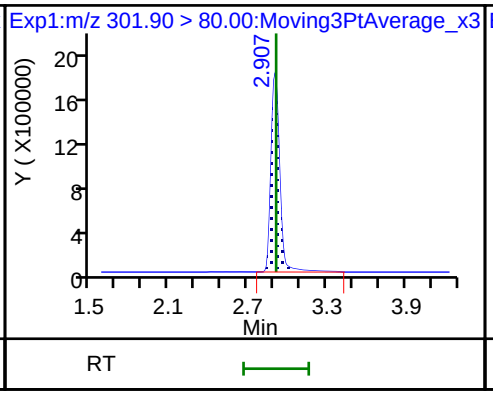

D 4 13C5 PFPeA



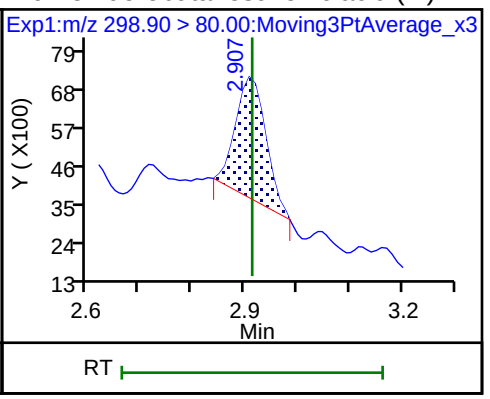

5 Perfluoropentanoic acid (M)



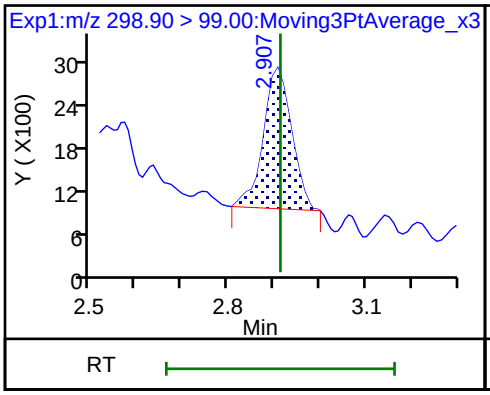

D 14 13C3 PFBS



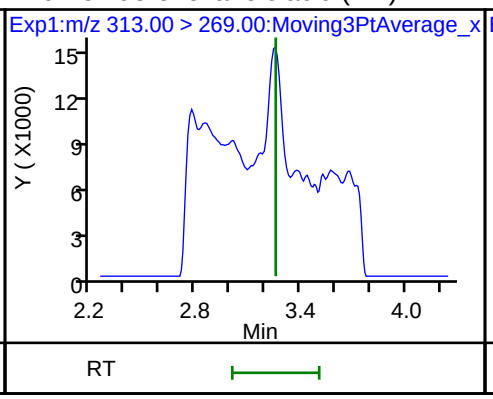

6 Perfluorobutanesulfonic acid (M)



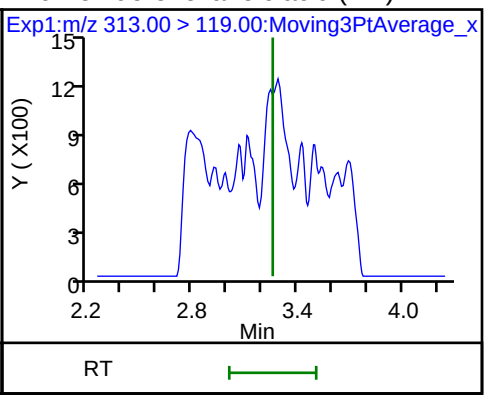

6 Perfluorobutanesulfonic acid



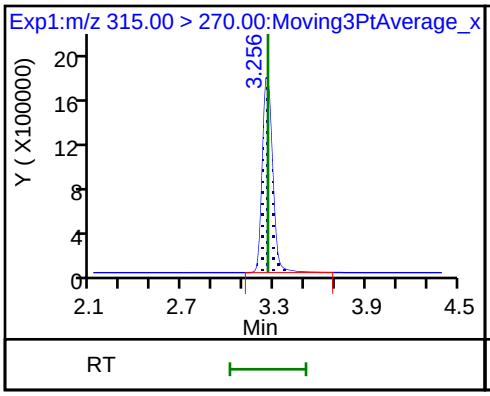

10 Perfluorohexanoic acid (ND)



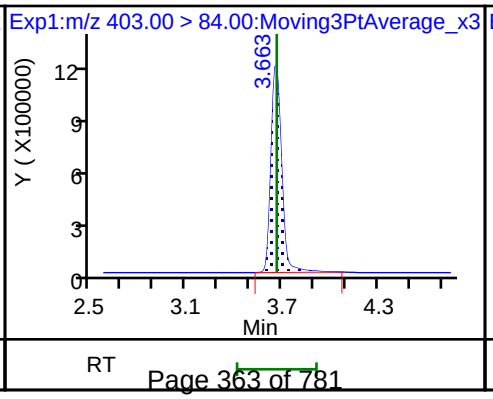

10 Perfluorohexanoic acid (ND)



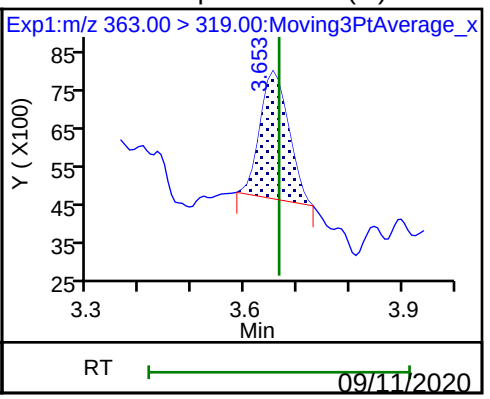

D 9 13C2 PFHxA



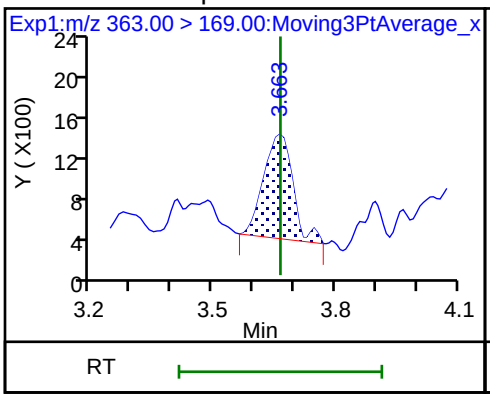

D 17 18O2 PFHxS



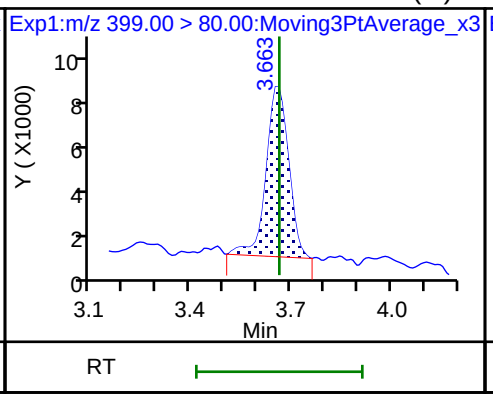

16 Perfluoroheptanoic acid (M)



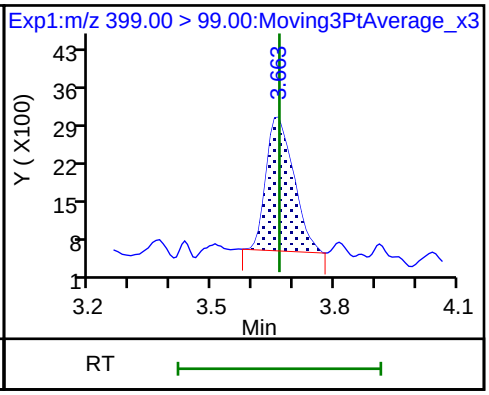
16 Perfluoroheptanoic acid



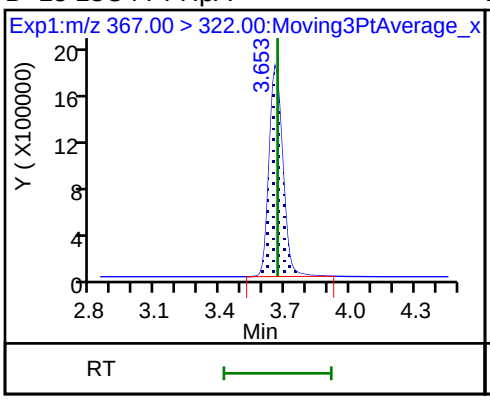

18 Perfluorohexanesulfonic acid (M)



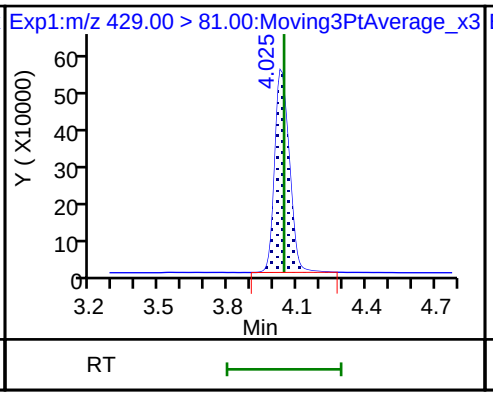

18 Perfluorohexanesulfonic acid



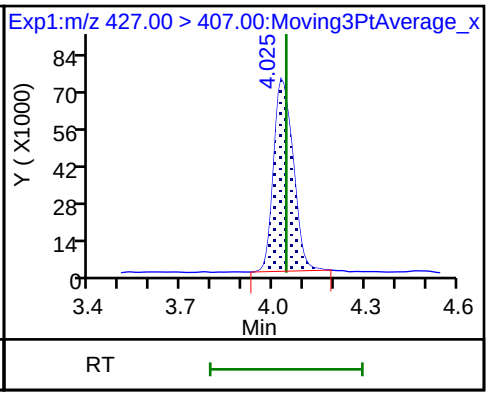

D 15 13C4 PFHpA



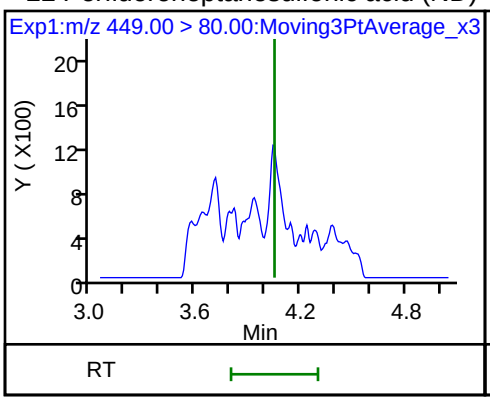

D 20 M2-6:2 FTS



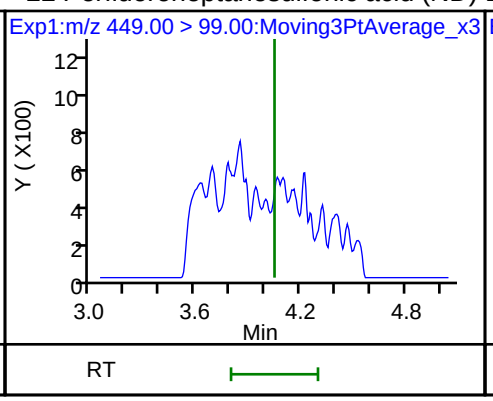

21 6:2 FTS



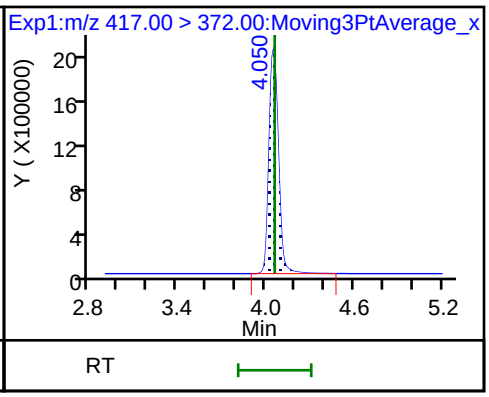

22 Perfluoroheptanesulfonic acid (ND)



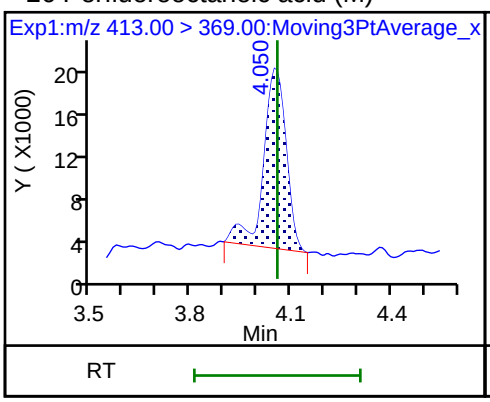

22 Perfluoroheptanesulfonic acid (ND)



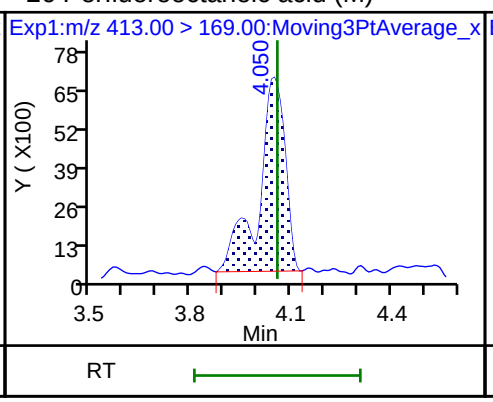

D 24 13C4 PFOA



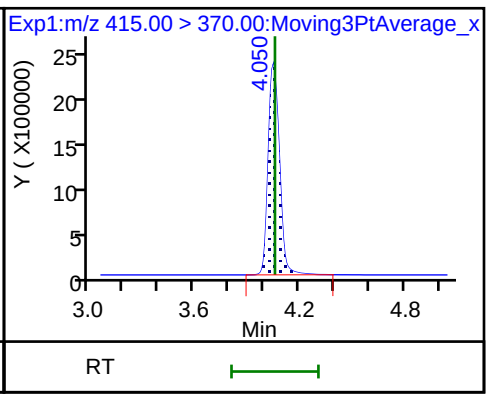

26 Perfluorooctanoic acid (M)



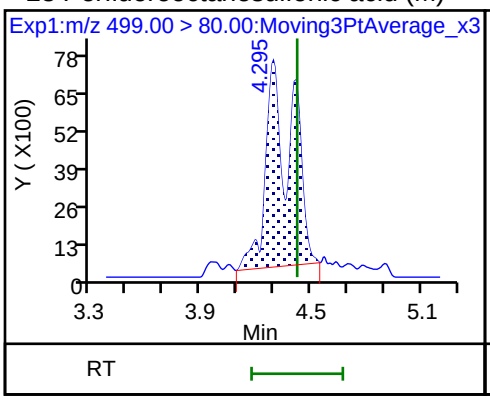

26 Perfluorooctanoic acid (M)



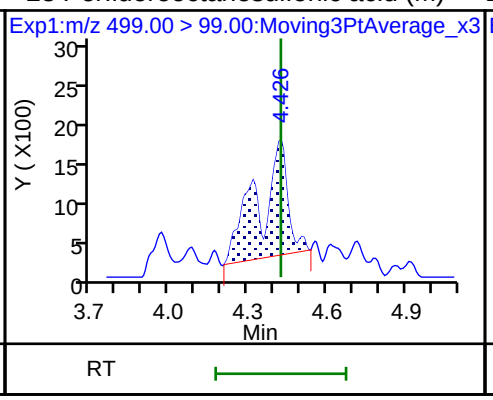

* 25 13C2 PFOA



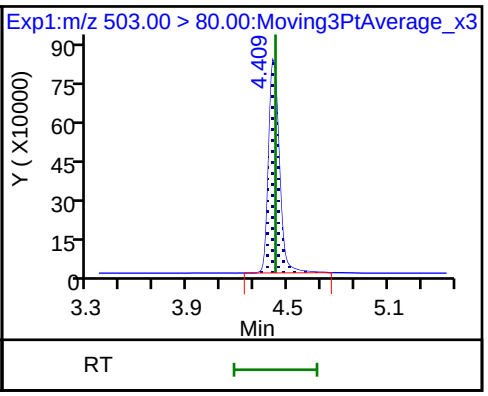
28 Perfluorooctanesulfonic acid (M)



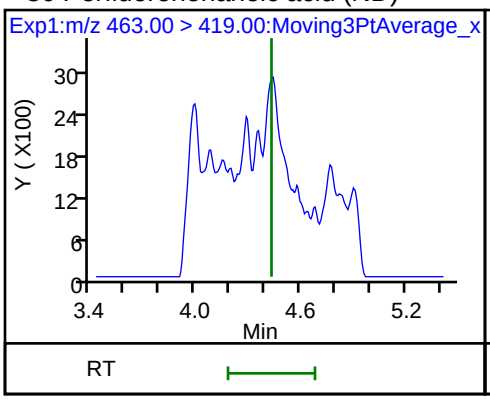

28 Perfluorooctanesulfonic acid (M)



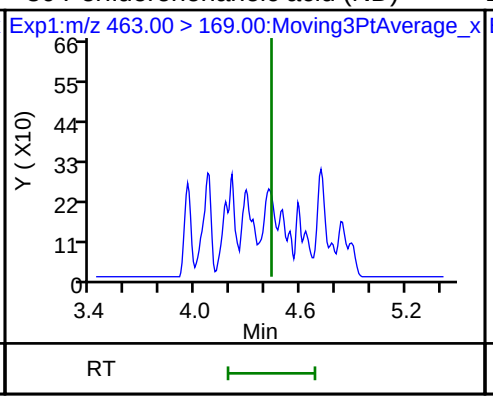

D 29 13C4 PFOS



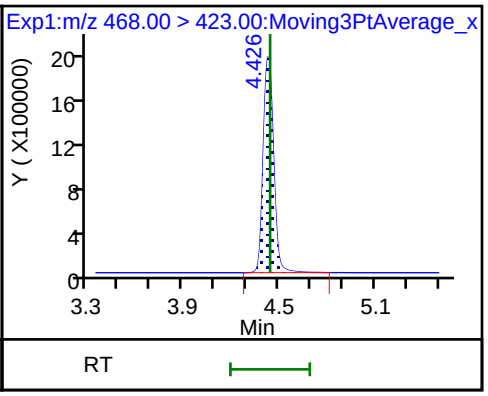

30 Perfluorononanoic acid (ND)



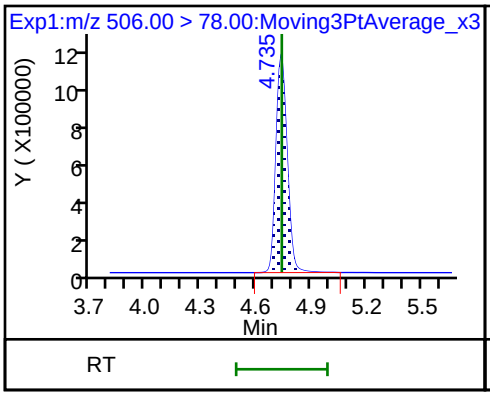

30 Perfluorononanoic acid (ND)



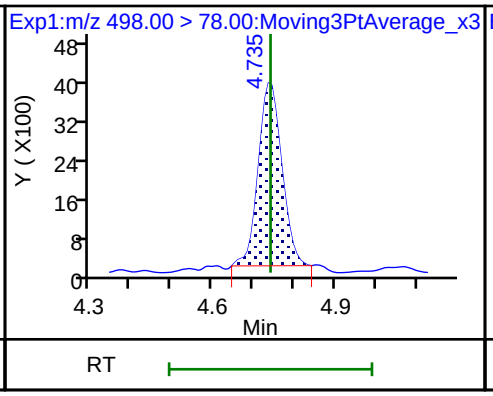

D 31 13C5 PFNA



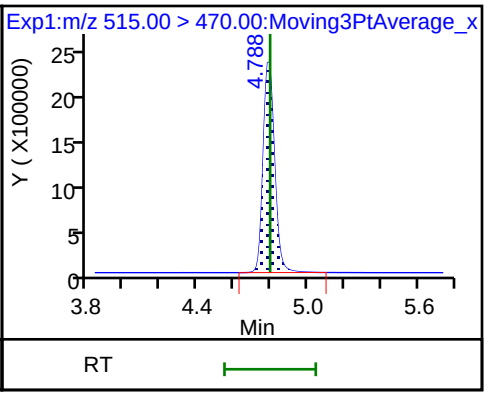

D 34 13C8 FOSA



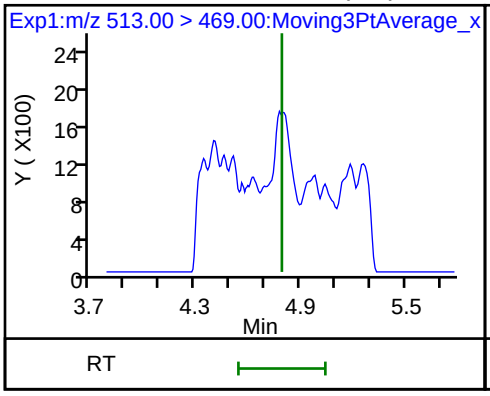

33 Perfluorooctanesulfonamide



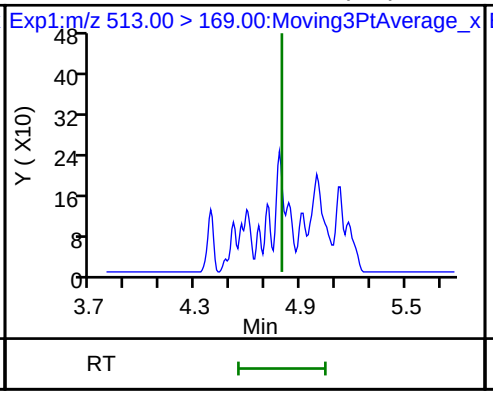

D 37 13C2 PFDA



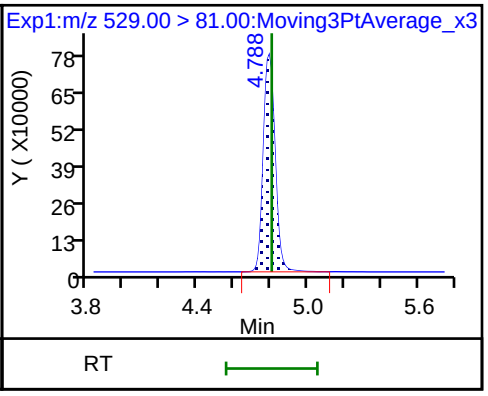

36 Perfluorodecanoic acid (ND)



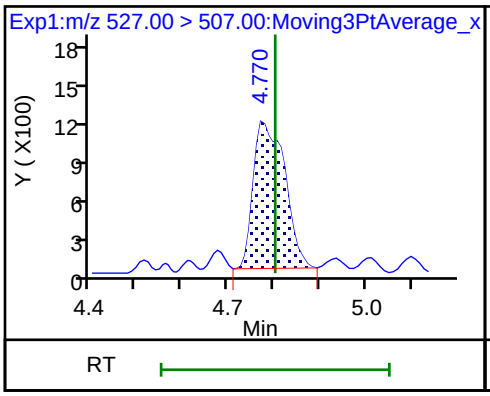

36 Perfluorodecanoic acid (ND)



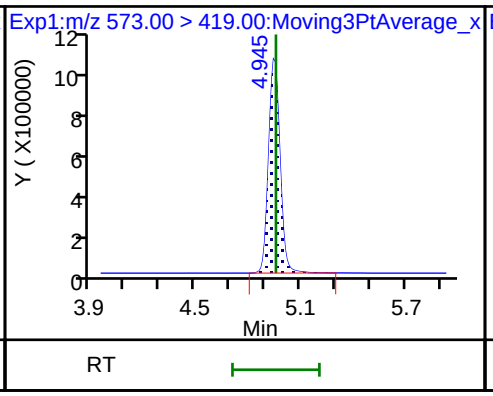

D 38 M2-8:2 FTS



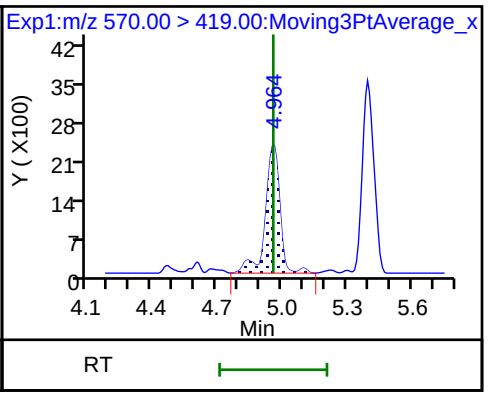
39 8:2 FTS



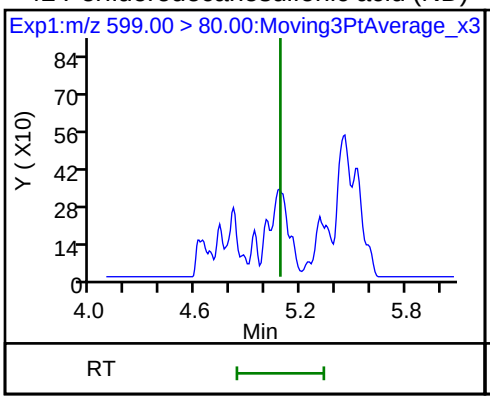

D 40 d3-NMeFOSAA



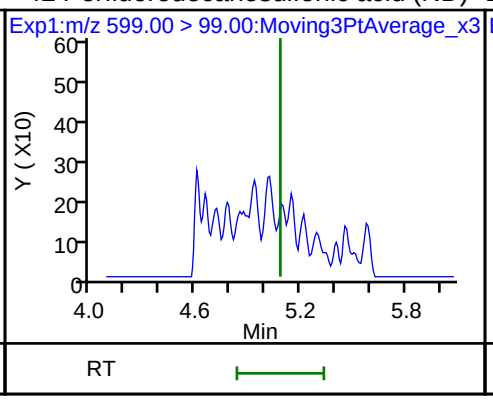

41 NMeFOSAA



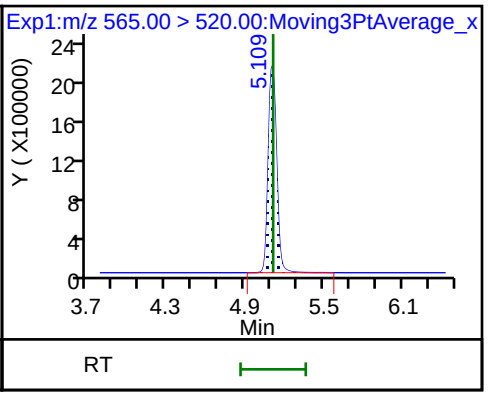

42 Perfluorodecanesulfonic acid (ND)



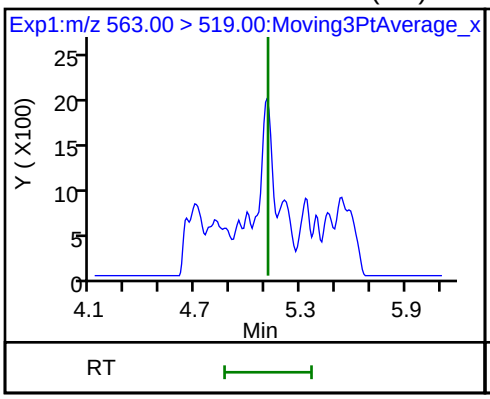

42 Perfluorodecanesulfonic acid (ND)



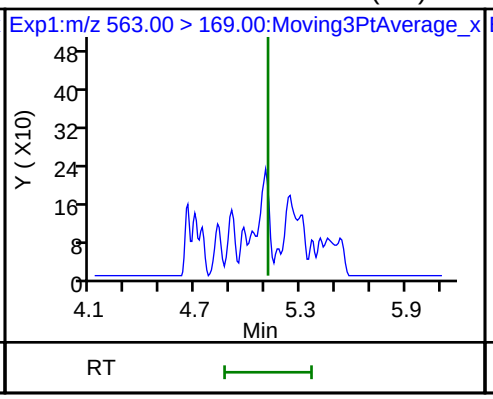

D 44 13C2 PFUnA



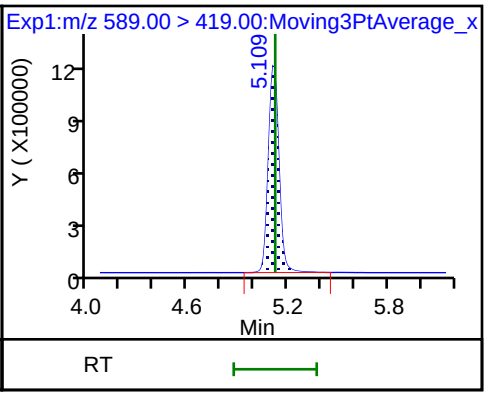

45 Perfluoroundecanoic acid (ND)



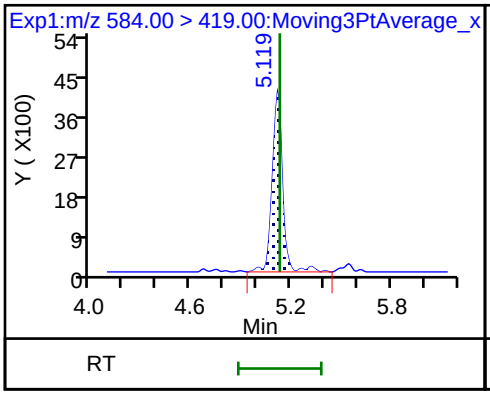

45 Perfluoroundecanoic acid (ND)



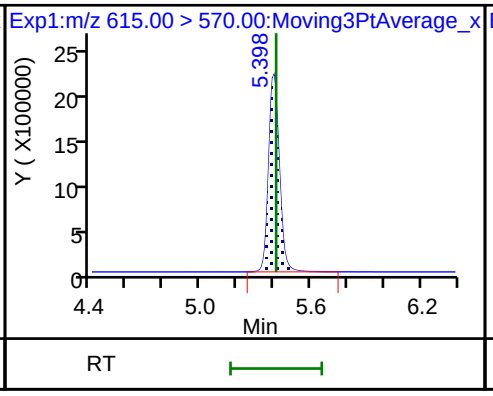

D 46 d5-NEtFOSAA



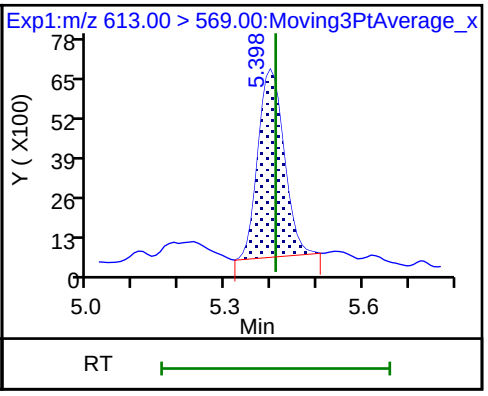

48 NEtFOSA



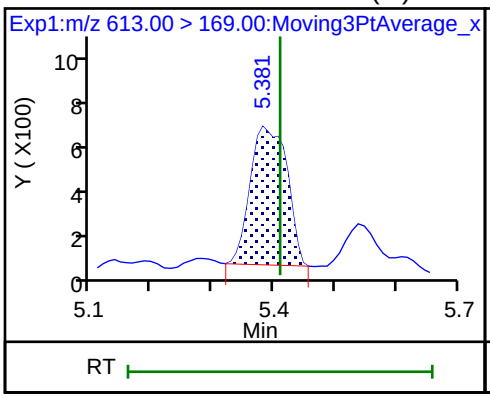

D 56 13C2 PFDoA



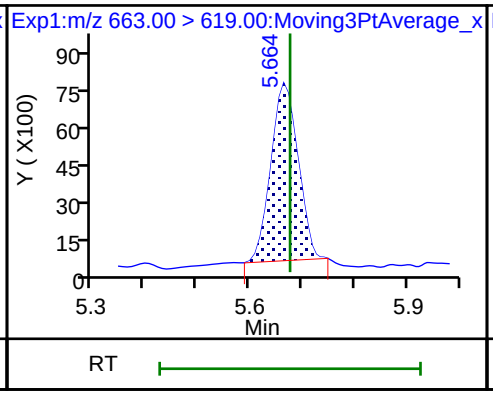

57 Perfluorododecanoic acid



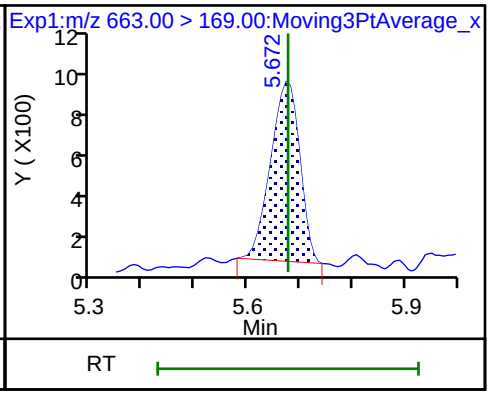
57 Perfluorododecanoic acid (M)



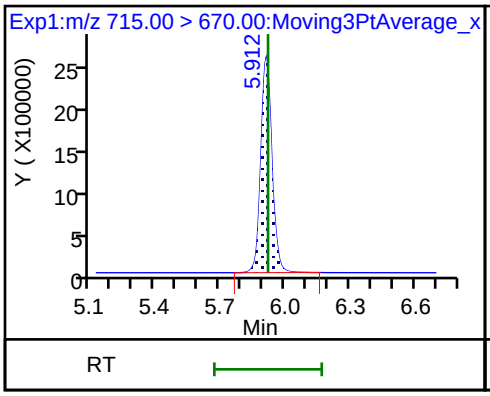

60 Perfluorotridecanoic acid



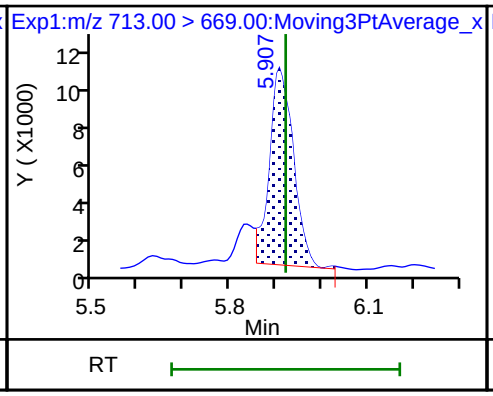

60 Perfluorotridecanoic acid



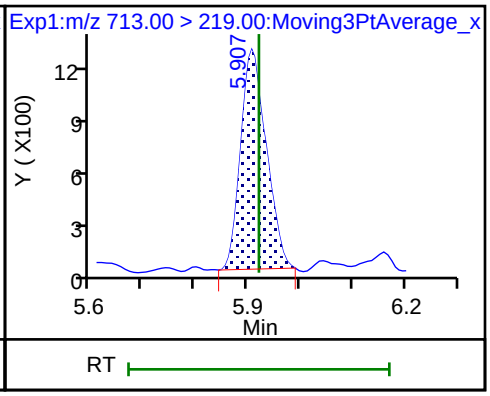

D 61 13C2 PFTeDA




62 Perfluorotetradecanoic acid




62 Perfluorotetradecanoic acid



Eurofins TestAmerica, Sacramento

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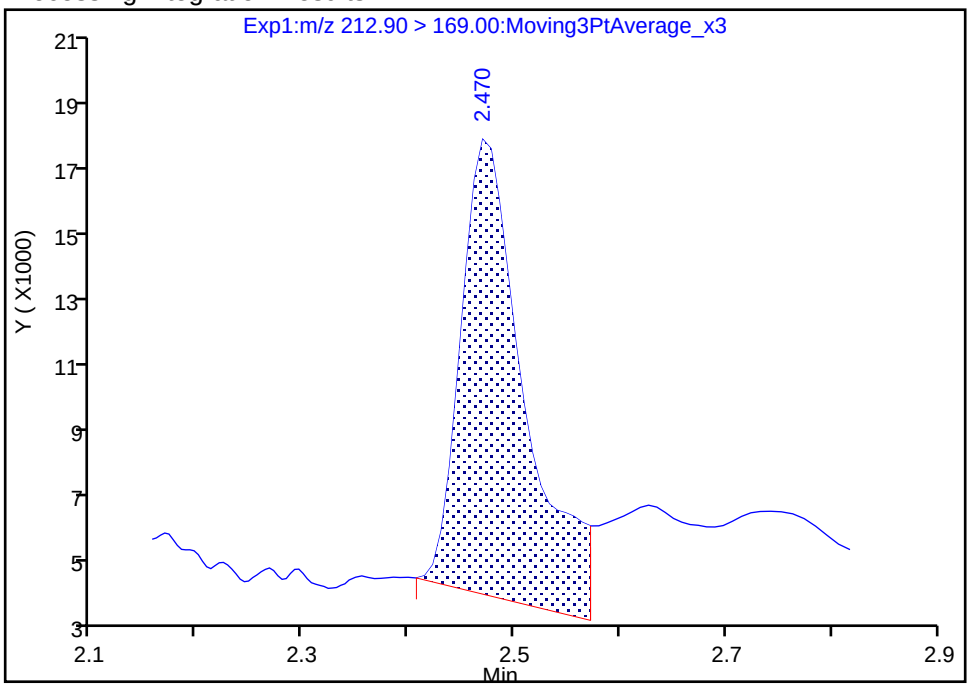
| Data File: | \\chromfs\Sacramento\ChromData\A13\20200910-103052.b\2020.09.10_A13_PFC_A_065.d | | | | |
| Injection Date: | 10-Sep-2020 19:04:21 | Instrument ID: | A13 | | |
| Lims ID: | 460-217659-D-4-A | Lab Sample ID: | 320-217659-4 | | |
| Client ID: | MW-211 | | | | |
| Operator ID: | SACINSTLCMS01 | ALS Bottle#: | 38 | Worklist Smp#: | 8 |
| Injection Vol: | 20.0 ul | Dil. Factor: | 1.0000 | | |
| Method: | PFAS_A13 | Limit Group: | LC PFC ICAL | | |
| Column: | Gemini C18 3um 3 x 100mm ( 3.00 mm ) | Detector | EXP1 | | |

## 2 Perfluorobutanoic acid, CAS: 375-22-4

Signal: 1

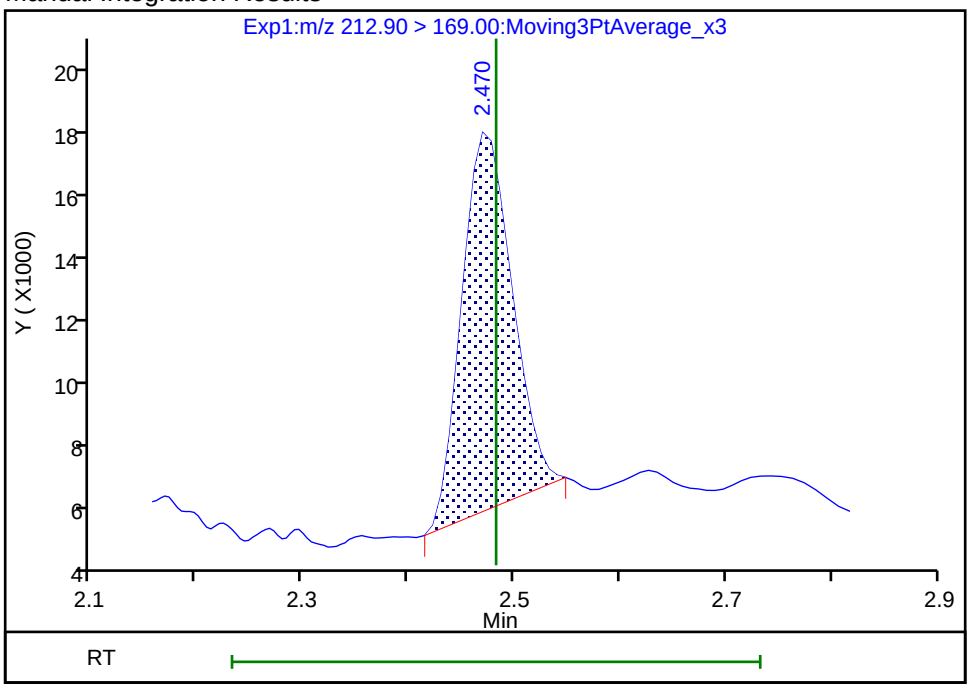
Processing Integration Results

RT: 2.47
Area: 52766
Amount: 0.025478
Amount Units: ng/ml




Manual Integration Results

RT: 2.47
Area: 37255
Amount: 0.017988
Amount Units: ng/ml




Reviewer: mongkols, 11-Sep-2020 10:12:52
Audit Action: Manually Integrated Audit Reason: Baseline

Eurofins TestAmerica, Sacramento

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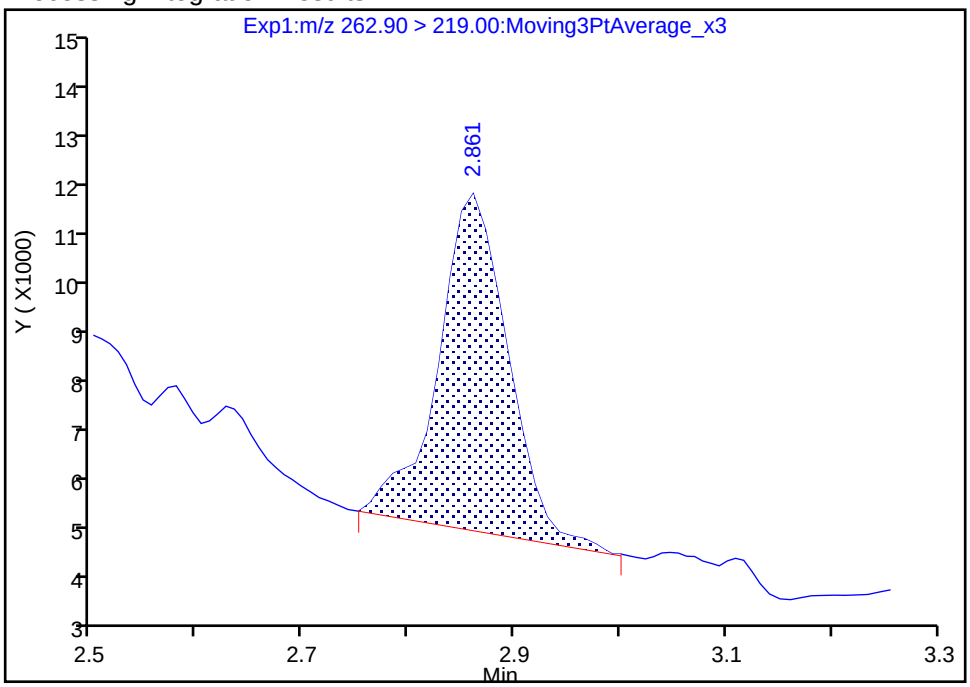
| Injection Date: | 10-Sep-2020 19:04:21 | Instrument ID: | A13 | | |
| Lims ID: | 460-217659-D-4-A | Lab Sample ID: | 320-217659-4 | | |
| Client ID: | MW-211 | | | | |
| Operator ID: | SACINSTLCMS01 | ALS Bottle#: | 38 | Worklist Smp#: | 8 |
| Injection Vol: | 20.0 ul | Dil. Factor: | 1.0000 | | |
| Method: | PFAS_A13 | Limit Group: | LC PFC ICAL | | |
| Column: | Gemini C18 3um 3 x 100mm ( 3.00 mm ) | Detector | EXP1 | | |

## 5 Perfluoropentanoic acid, CAS: 2706-90-3

Signal: 1

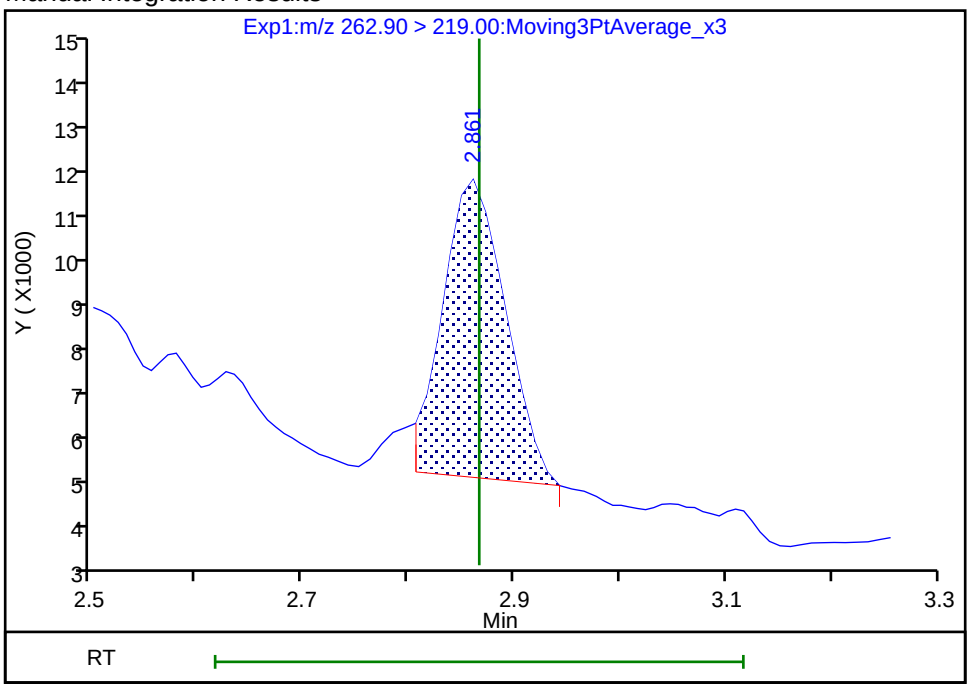
Processing Integration Results

RT: 2.86
Area: 29528
Amount: 0.012278
Amount Units: ng/ml




Manual Integration Results

RT: 2.86
Area: 25689
Amount: 0.010682
Amount Units: ng/ml




Reviewer: mongkols, 11-Sep-2020 10:13:00
Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

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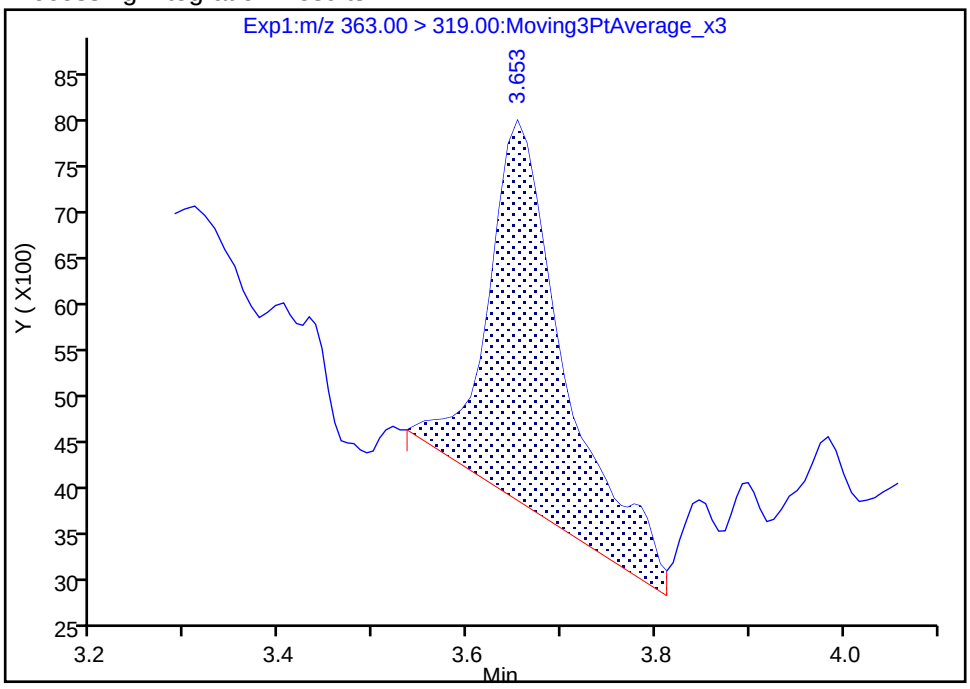
| Lims ID: | 460-217659-D-4-A | Lab Sample ID: | 320-217659-4 | | |
| Client ID: | MW-211 | | | | |
| Operator ID: | SACINSTLCMS01 | ALS Bottle#: | 38 | Worklist Smp#: | 8 |
| Injection Vol: | 20.0 ul | Dil. Factor: | 1.0000 | | |
| Method: | PFAS_A13 | Limit Group: | LC PFC ICAL | | |
| Column: | Gemini C18 3um 3 x 100mm ( 3.00 mm) | Detector | EXP1 | | |

## 16 Perfluoroheptanoic acid, CAS: 375-85-9

Signal: 1

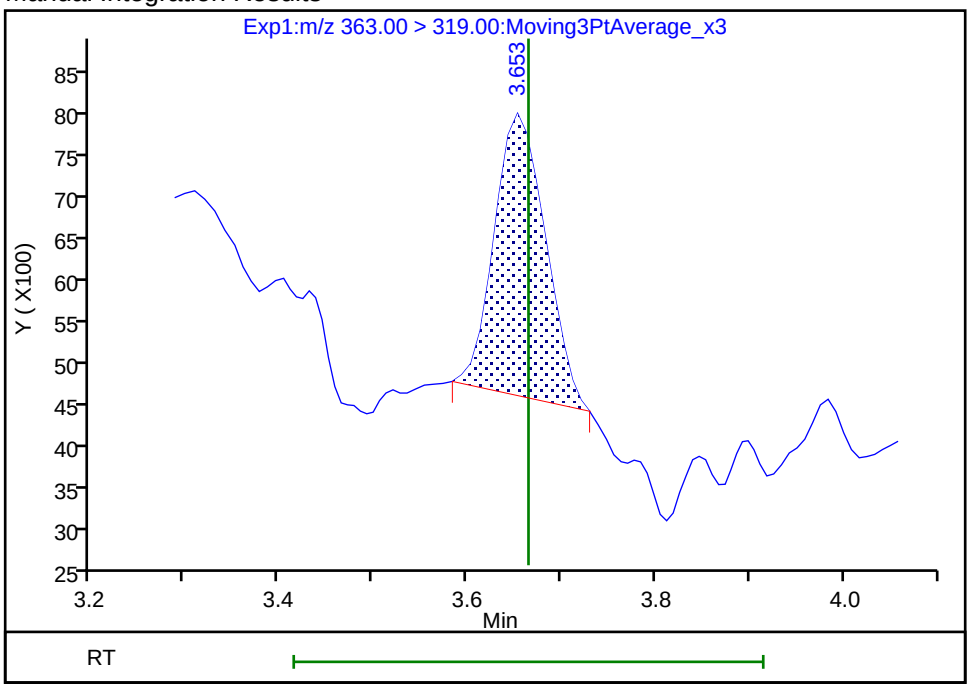
Processing Integration Results

RT: 3.65
Area: 23719
Amount: 0.007491
Amount Units: ng/ml




Manual Integration Results

RT: 3.65
Area: 12900
Amount: 0.004074
Amount Units: ng/ml




Reviewer: mongkols, 11-Sep-2020 10:13:19

Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

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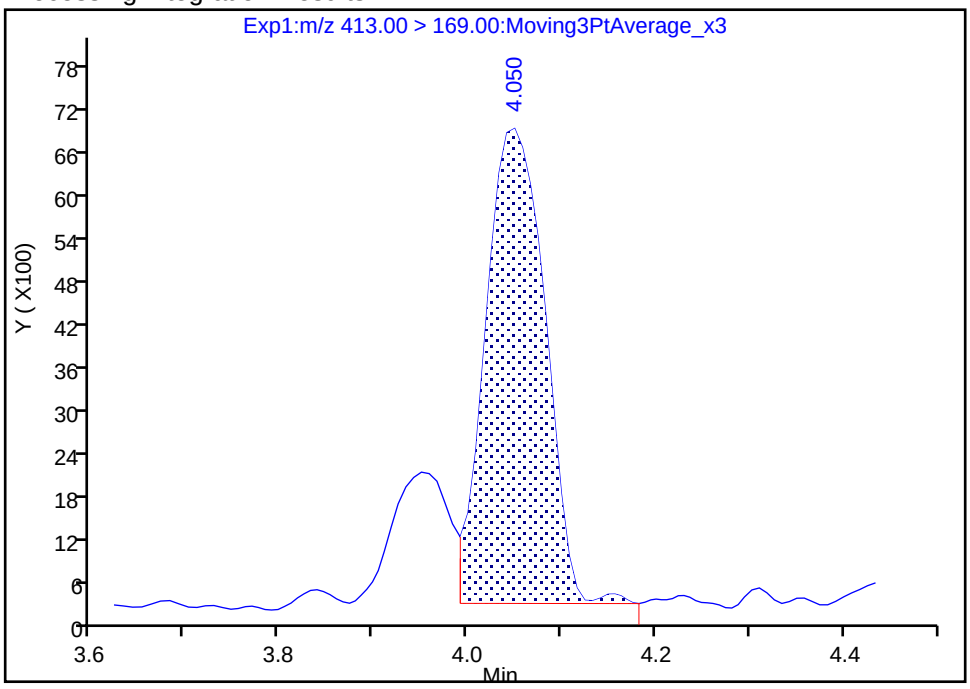
| Lims ID: | 460-217659-D-4-A | Lab Sample ID: | 320-217659-4 | | |
| Client ID: | MW-211 | | | | |
| Operator ID: | SACINSTLCMS01 | ALS Bottle#: | 38 | Worklist Smp#: | 8 |
| Injection Vol: | 20.0 ul | Dil. Factor: | 1.0000 | | |
| Method: | PFAS_A13 | Limit Group: | LC PFC ICAL | | |
| Column: | Gemini C18 3um 3 x 100mm ( 3.00 mm) | Detector | EXP1 | | |

## 26 Perfluorooctanoic acid, CAS: 335-67-1

Signal: 2

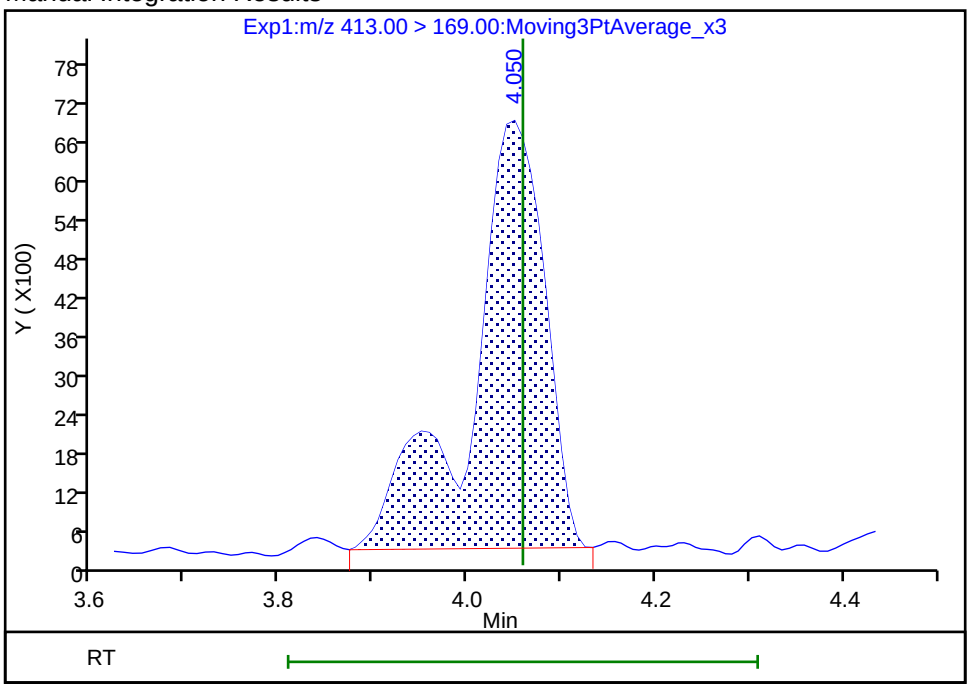
Processing Integration Results

RT: 4.05
Area: 29146
Amount: 0.020914
Amount Units: ng/ml




Manual Integration Results

RT: 4.05
Area: 36277
Amount: 0.021692
Amount Units: ng/ml




Reviewer: mongkols, 11-Sep-2020 10:13:35

Audit Action: Manually Integrated Audit Reason: Isomers

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

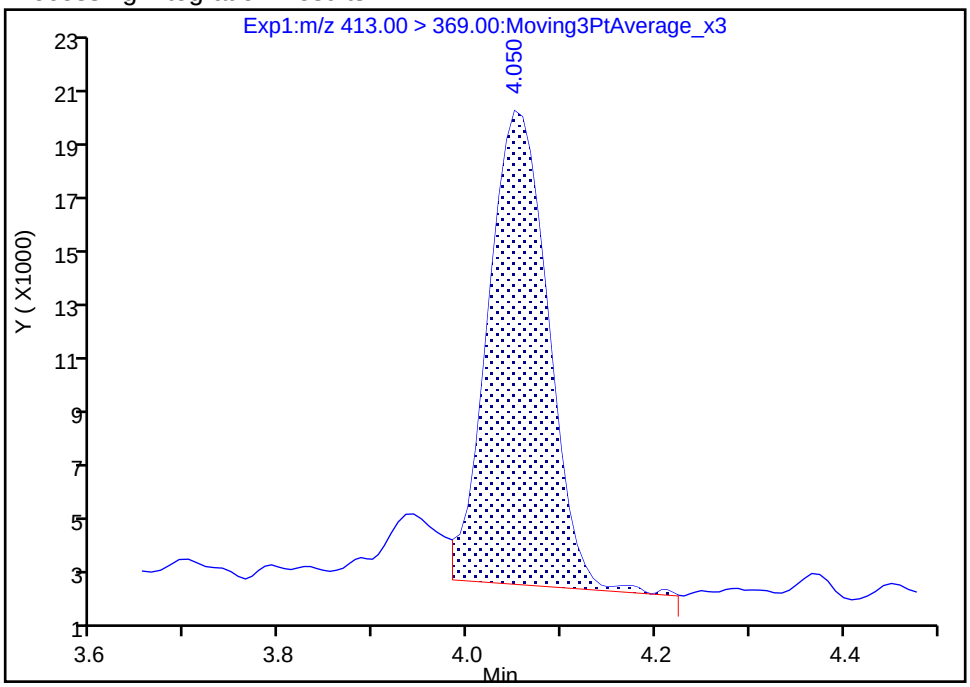
| | | | | | |
|---|---|---|---|---|---|
| Data File: | \\chromfs\Sacramento\ChromData\A13\20200910-103052.b\2020.09.10_A13_PFC_A_065.d | | | | |
| Injection Date: | 10-Sep-2020 19:04:21 | Instrument ID: | A13 | | |
| Lims ID: | 460-217659-D-4-A | Lab Sample ID: | 320-217659-4 | | |
| Client ID: | MW-211 | | | | |
| Operator ID: | SACINSTLCMS01 | ALS Bottle#: | 38 | Worklist Smp#: | 8 |
| Injection Vol: | 20.0 ul | Dil. Factor: | 1.0000 | | |
| Method: | PFAS_A13 | Limit Group: | LC PFC ICAL | | |
| Column: | Gemini C18 3um 3 x 100mm ( 3.00 mm ) | Detector | EXP1 | | |

## 26 Perfluorooctanoic acid, CAS: 335-67-1

Signal: 1

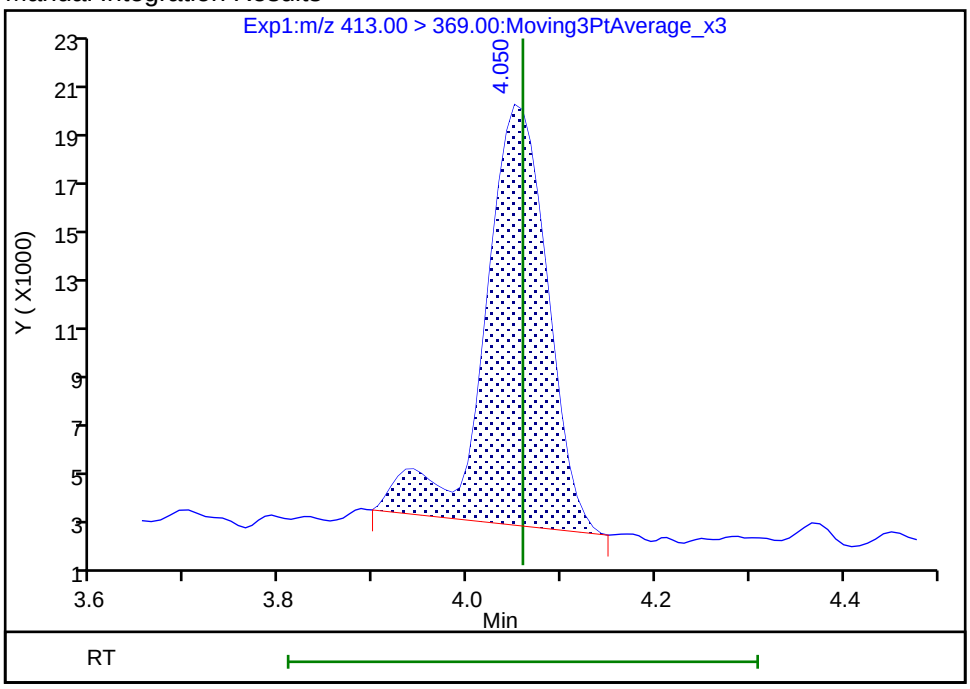
Processing Integration Results

RT: 4.05
Area: 76739
Amount: 0.020914
Amount Units: ng/ml




Manual Integration Results

RT: 4.05
Area: 79594
Amount: 0.021692
Amount Units: ng/ml




Reviewer: mongkols, 11-Sep-2020 10:13:39
Audit Action: Manually Integrated Audit Reason: Isomers

Eurofins TestAmerica, Sacramento

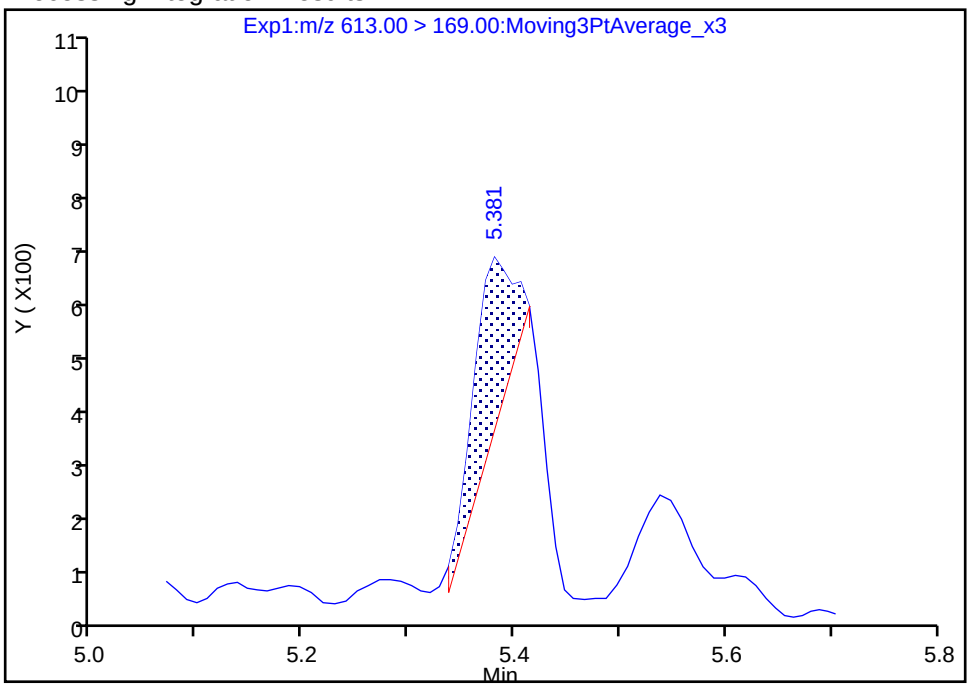
| | | | | | |
|---|---|---|---|---|---|
| Data File: | \\chromfs\Sacramento\ChromData\A13\20200910-103052.b\2020.09.10_A13_PFC_A_065.d | | | | |
| Injection Date: | 10-Sep-2020 19:04:21 | Instrument ID: | A13 | | |
| Lims ID: | 460-217659-D-4-A | Lab Sample ID: | 320-217659-4 | | |
| Client ID: | MW-211 | | | | |
| Operator ID: | SACINSTLCMS01 | ALS Bottle#: | 38 | Worklist Smp#: | 8 |
| Injection Vol: | 20.0 ul | Dil. Factor: | 1.0000 | | |
| Method: | PFAS_A13 | Limit Group: | LC PFC ICAL | | |
| Column: | Gemini C18 3um 3 x 100mm ( 3.00 mm ) | Detector | EXP1 | | |

## 57 Perfluorododecanoic acid, CAS: 307-55-1

Signal: 2

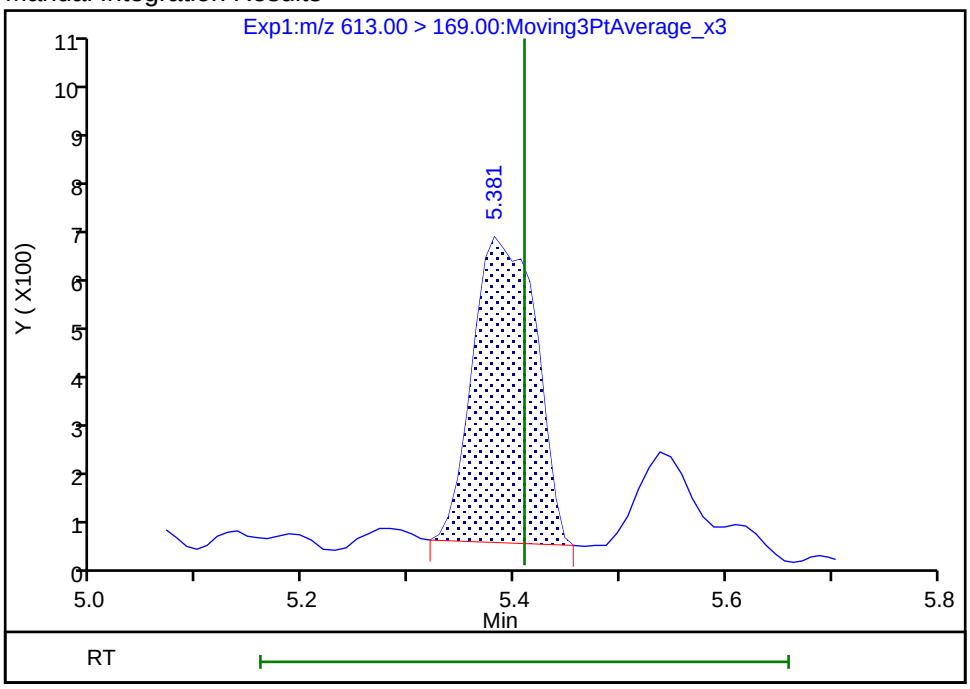
Processing Integration Results

RT: 5.38
Area: 839
Amount: 0.007677
Amount Units: ng/ml




Manual Integration Results

RT: 5.38
Area: 2624
Amount: 0.007677
Amount Units: ng/ml




Reviewer: mongkols, 11-Sep-2020 10:14:06
Audit Action: Manually Integrated Audit Reason: Baseline

Eurofins TestAmerica, Sacramento

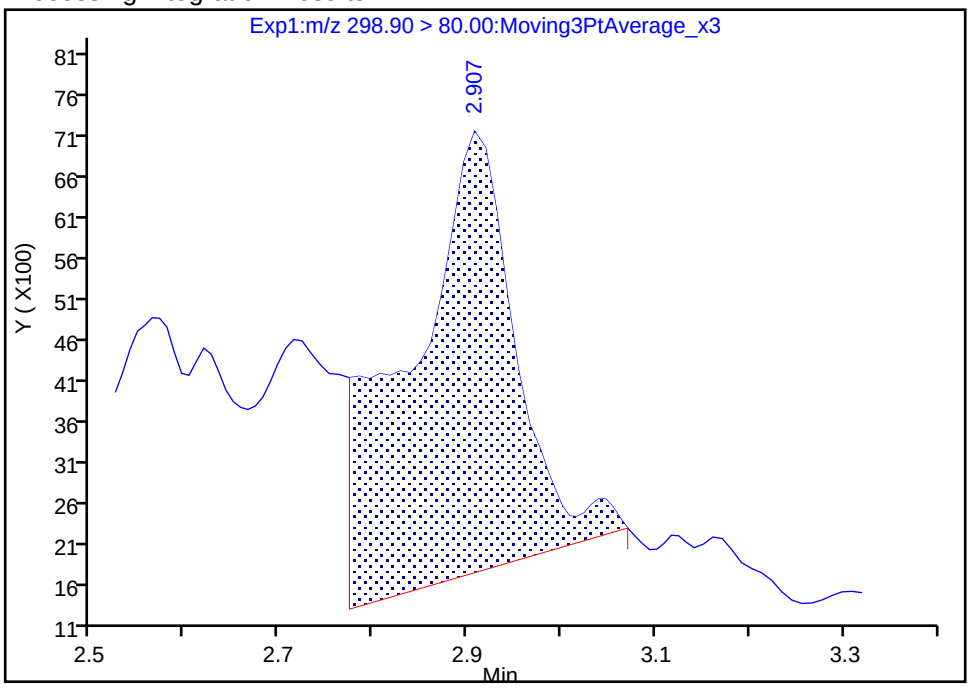
| | | | | | |
|---|---|---|---|---|---|
| Data File: | \\chromfs\Sacramento\ChromData\A13\20200910-103052.b\2020.09.10_A13_PFC_A_065.d | | | | |
| Injection Date: | 10-Sep-2020 19:04:21 | Instrument ID: | A13 | | |
| Lims ID: | 460-217659-D-4-A | Lab Sample ID: | 320-217659-4 | | |
| Client ID: | MW-211 | | | | |
| Operator ID: | SACINSTLCMS01 | ALS Bottle#: | 38 | Worklist Smp#: | 8 |
| Injection Vol: | 20.0 ul | Dil. Factor: | 1.0000 | | |
| Method: | PFAS_A13 | Limit Group: | LC PFC ICAL | | |
| Column: | Gemini C18 3um 3 x 100mm ( 3.00 mm) | Detector | EXP1 | | |

## 6 Perfluorobutanesulfonic acid, CAS: 375-73-5

Signal: 1

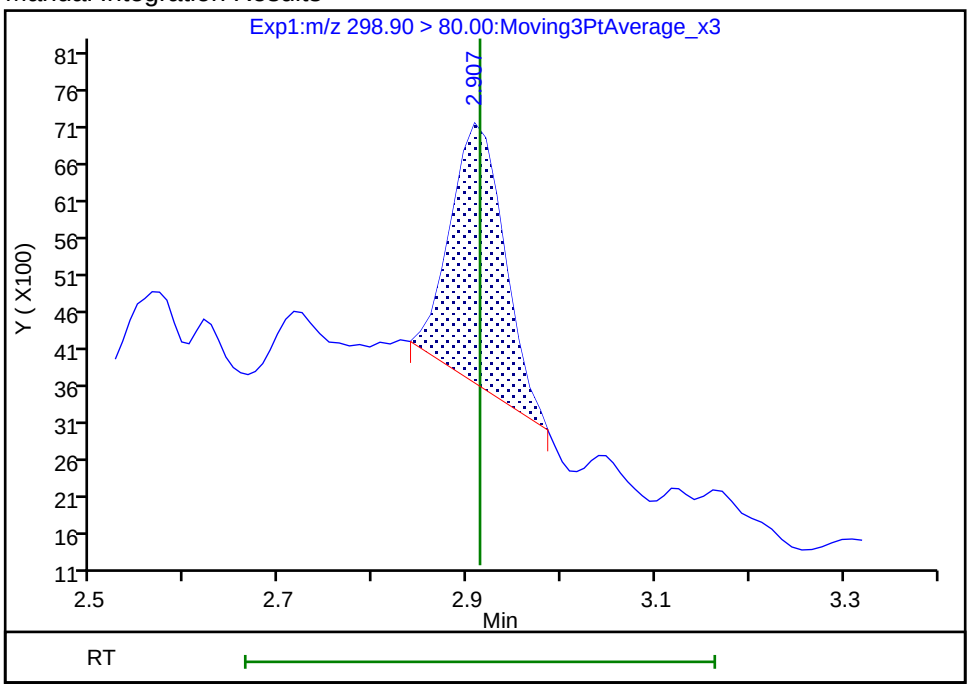
Processing Integration Results

RT: 2.91
Area: 42380
Amount: 0.012568
Amount Units: ng/ml




Manual Integration Results

RT: 2.91
Area: 13904
Amount: 0.004123
Amount Units: ng/ml




Reviewer: mongkols, 11-Sep-2020 10:13:06
Audit Action: Manually Integrated Audit Reason: Baseline

Eurofins TestAmerica, Sacramento

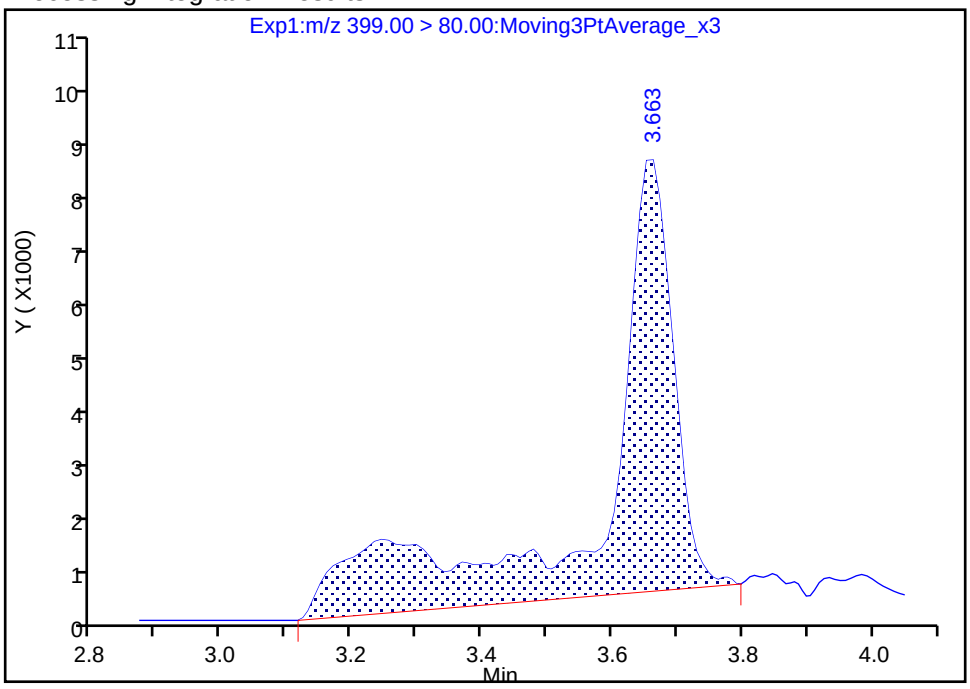
| | | | | | |
|---|---|---|---|---|---|
| Data File: | \\chromfs\Sacramento\ChromData\A13\20200910-103052.b\2020.09.10_A13_PFC_A_065.d | | | | |
| Injection Date: | 10-Sep-2020 19:04:21 | Instrument ID: | A13 | | |
| Lims ID: | 460-217659-D-4-A | Lab Sample ID: | 320-217659-4 | | |
| Client ID: | MW-211 | | | | |
| Operator ID: | SACINSTLCMS01 | ALS Bottle#: | 38 | Worklist Smp#: | 8 |
| Injection Vol: | 20.0 ul | Dil. Factor: | 1.0000 | | |
| Method: | PFAS_A13 | Limit Group: | LC PFC ICAL | | |
| Column: | Gemini C18 3um 3 x 100mm ( 3.00 mm ) | Detector | EXP1 | | |

## 18 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 1

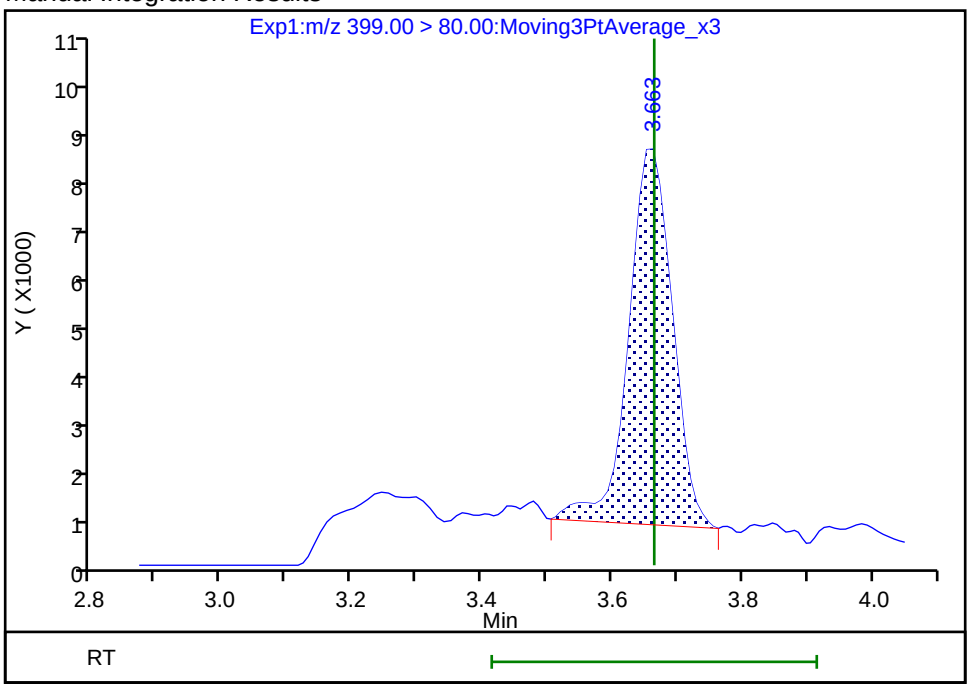
Processing Integration Results

RT: 3.66
Area: 60551
Amount: 0.024114
Amount Units: ng/ml




Manual Integration Results

RT: 3.66
Area: 34986
Amount: 0.013933
Amount Units: ng/ml




Reviewer: mongkols, 11-Sep-2020 10:13:25
Audit Action: Manually Integrated Audit Reason: Baseline

Eurofins TestAmerica, Sacramento

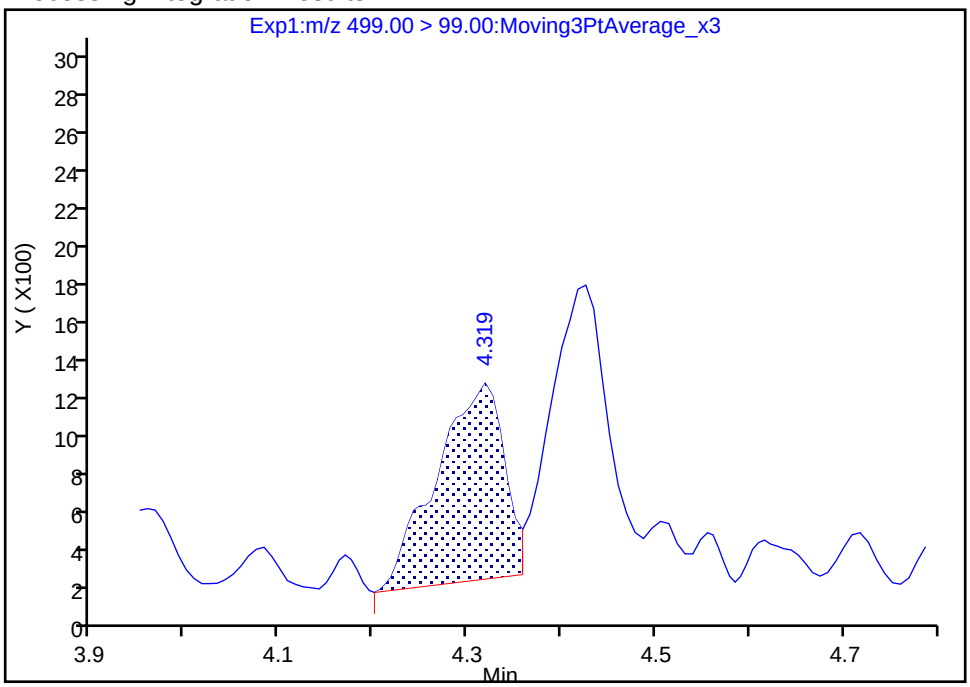
| | | | | | |
|---|---|---|---|---|---|
| Data File: | \\chromfs\Sacramento\ChromData\A13\20200910-103052.b\2020.09.10_A13_PFC_A_065.d | | | | |
| Injection Date: | 10-Sep-2020 19:04:21 | Instrument ID: | A13 | | |
| Lims ID: | 460-217659-D-4-A | Lab Sample ID: | 320-217659-4 | | |
| Client ID: | MW-211 | | | | |
| Operator ID: | SACINSTLCMS01 | ALS Bottle#: | 38 | Worklist Smp#: | 8 |
| Injection Vol: | 20.0 ul | Dil. Factor: | 1.0000 | | |
| Method: | PFAS_A13 | Limit Group: | LC PFC ICAL | | |
| Column: | Gemini C18 3um 3 x 100mm ( 3.00 mm) | Detector | EXP1 | | |

## 28 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 2

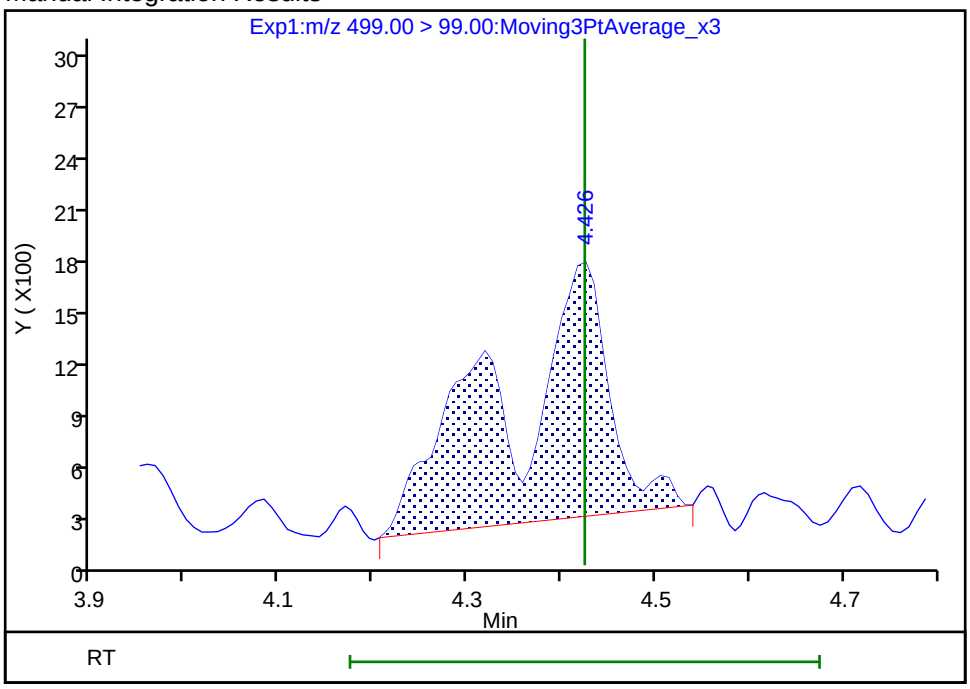
Processing Integration Results

RT: 4.32
Area: 5210
Amount: 0.049457
Amount Units: ng/ml




Manual Integration Results

RT: 4.43
Area: 11610
Amount: 0.043959
Amount Units: ng/ml




Reviewer: mongkols, 11-Sep-2020 10:13:47
Audit Action: Manually Integrated Audit Reason: Isomers

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

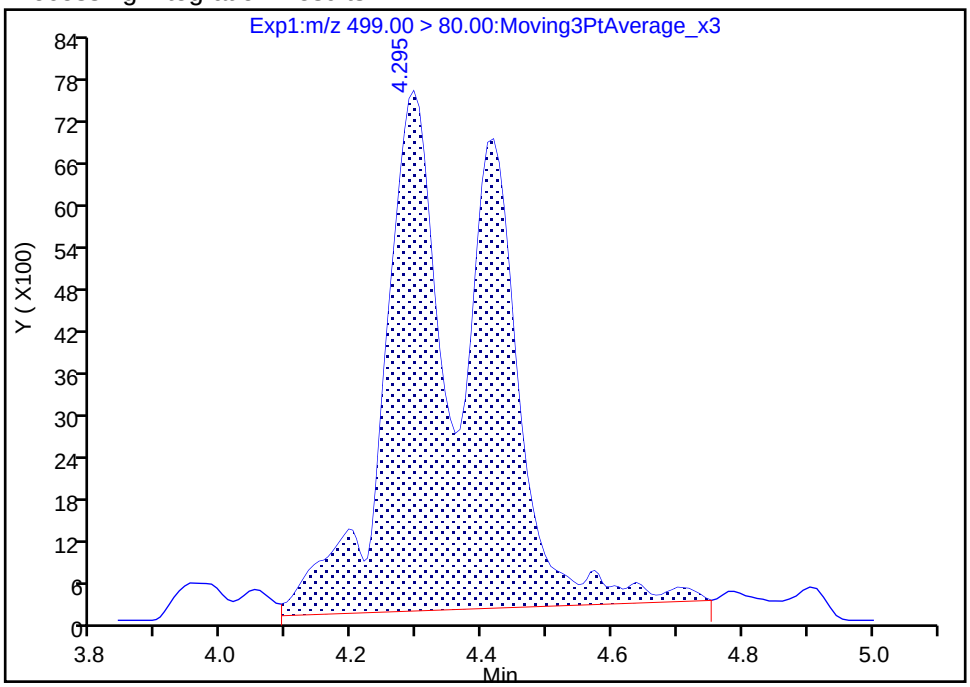
| | | | | | |
|---|---|---|---|---|---|
| Data File: | \\chromfs\Sacramento\ChromData\A13\20200910-103052.b\2020.09.10_A13_PFC_A_065.d | | | | |
| Injection Date: | 10-Sep-2020 19:04:21 | Instrument ID: | A13 | | |
| Lims ID: | 460-217659-D-4-A | Lab Sample ID: | 320-217659-4 | | |
| Client ID: | MW-211 | | | | |
| Operator ID: | SACINSTLCMS01 | ALS Bottle#: | 38 | Worklist Smp#: | 8 |
| Injection Vol: | 20.0 ul | Dil. Factor: | 1.0000 | | |
| Method: | PFAS_A13 | Limit Group: | LC PFC ICAL | | |
| Column: | Gemini C18 3um 3 x 100mm ( 3.00 mm ID) | Detector | EXP1 | | |

## 28 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 1

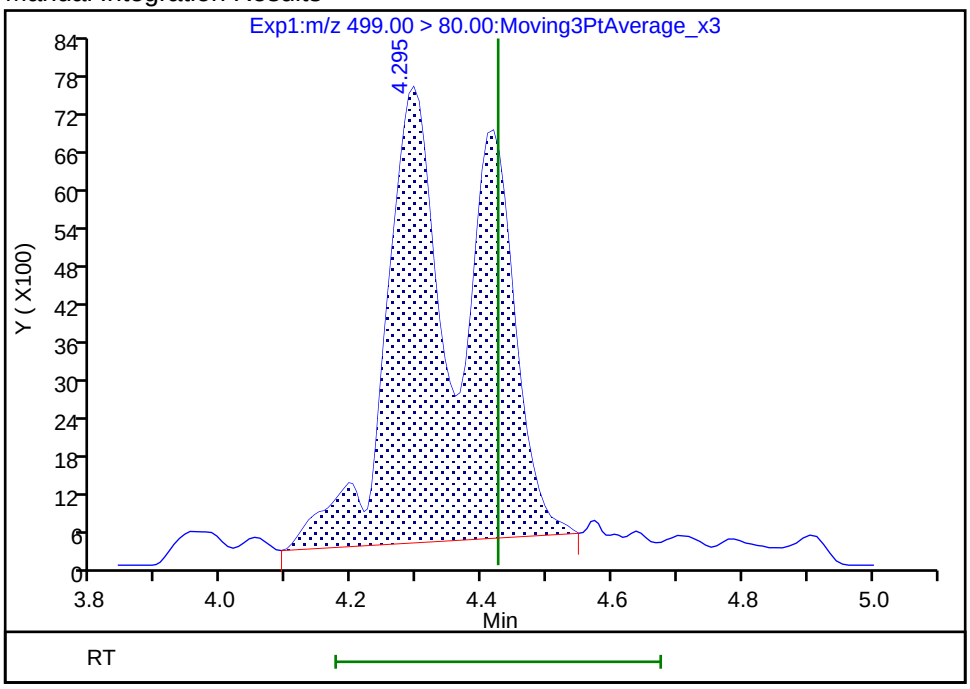
Processing Integration Results

RT: 4.29
Area: 79256
Amount: 0.049457
Amount Units: ng/ml




Manual Integration Results

RT: 4.29
Area: 70445
Amount: 0.043959
Amount Units: ng/ml




Reviewer: mongkols, 11-Sep-2020 10:13:51
Audit Action: Manually Integrated Audit Reason: Isomers

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento  Job No.: 460-217659-1

SDG No.:

Client Sample ID: MW-214  Lab Sample ID: 460-217659-5

Matrix: Water  Lab File ID: 2020.09.10_A13_PFC_A_066.d

Analysis Method: 537 (modified)  Date Collected: 09/03/2020 09:30

Extraction Method: 3535  Date Extracted: 09/09/2020 18:39

Sample wt/vol: 241.2(mL)  Date Analyzed: 09/10/2020 19:13

Con. Extract Vol.: 10.00(mL)  Dilution Factor: 1

Injection Volume: 20(uL)  GC Column: GeminiC18 3x100 ID: 3(mm)

% Moisture:  GPC Cleanup:(Y/N) N

Analysis Batch No.: 411143  Units: ng/L

| CAS NO. | COMPOUND NAME | RESULT | Q | RL | MDL |
|---|---|---|---|---|---|
| 375-22-4 | Perfluorobutanoic acid (PFBA) | 9.76 | B | 2.07 | 0.36 |
| 2706-90-3 | Perfluoropentanoic acid (PFPeA) | 4.50 | | 2.07 | 0.51 |
| 307-24-4 | Perfluorohexanoic acid (PFHxA) | 6.65 | | 2.07 | 0.60 |
| 375-85-9 | Perfluoroheptanoic acid (PFHpA) | 5.08 | | 2.07 | 0.26 |
| 335-67-1 | Perfluorooctanoic acid (PFOA) | 25.8 | | 2.07 | 0.88 |
| 375-95-1 | Perfluorononanoic acid (PFNA) | 1.41 | J | 2.07 | 0.28 |
| 335-76-2 | Perfluorodecanoic acid (PFDA) | 1.42 | J | 2.07 | 0.32 |
| 2058-94-8 | Perfluoroundecanoic acid (PFUnA) | 1.14 | U | 2.07 | 1.14 |
| 307-55-1 | Perfluorododecanoic acid (PFDoA) | 0.57 | U | 2.07 | 0.57 |
| 72629-94-8 | Perfluorotridecanoic acid (PFTriA) | 1.35 | U | 2.07 | 1.35 |
| 376-06-7 | Perfluorotetradecanoic acid (PFTeA) | 0.30 | U | 2.07 | 0.30 |
| 375-73-5 | Perfluorobutanesulfonic acid (PFBS) | 3.32 | | 2.07 | 0.21 |
| 355-46-4 | Perfluorohexanesulfonic acid (PFHxS) | 5.44 | B | 2.07 | 0.18 |
| 375-92-8 | Perfluoroheptanesulfonic Acid (PFHpS) | 0.75 | J | 2.07 | 0.20 |
| 1763-23-1 | Perfluorooctanesulfonic acid (PFOS) | 46.6 | | 2.07 | 0.56 |
| 335-77-3 | Perfluorodecanesulfonic acid (PFDS) | 0.33 | U | 2.07 | 0.33 |
| 754-91-6 | Perfluorooctanesulfonamide (FOSA) | 2.04 | J | 2.07 | 0.36 |
| 2355-31-9 | N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA) | 3.21 | U | 20.7 | 3.21 |
| 2991-50-6 | N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA) | 1.97 | U | 20.7 | 1.97 |
| 27619-97-2 | 6:2 FTS | 2.07 | U | 20.7 | 2.07 |
| 39108-34-4 | 8:2 FTS | 2.07 | U | 20.7 | 2.07 |

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento  Job No.: 460-217659-1

SDG No.:

Client Sample ID: MW-214  Lab Sample ID: 460-217659-5

Matrix: Water  Lab File ID: 2020.09.10_A13_PFC_A_066.d

Analysis Method: 537 (modified)  Date Collected: 09/03/2020 09:30

Extraction Method: 3535  Date Extracted: 09/09/2020 18:39

Sample wt/vol: 241.2(mL)  Date Analyzed: 09/10/2020 19:13

Con. Extract Vol.: 10.00(mL)  Dilution Factor: 1

Injection Volume: 20(uL)  GC Column: GeminiC18 3x100 ID: 3(mm)

% Moisture:  GPC Cleanup:(Y/N) N

Analysis Batch No.: 411143  Units: ng/L

| CAS NO. | ISOTOPE DILUTION | %REC | Q | LIMITS |
|---|---|---|---|---|
| STL00992 | 13C4 PFBA | 56 | | 25-150 |
| STL01893 | 13C5 PFPeA | 62 | | 25-150 |
| STL00993 | 13C2 PFHxA | 79 | | 25-150 |
| STL01892 | 13C4 PFHpA | 79 | | 25-150 |
| STL00990 | 13C4 PFOA | 76 | | 25-150 |
| STL00995 | 13C5 PFNA | 80 | | 25-150 |
| STL00996 | 13C2 PFDA | 79 | | 25-150 |
| STL00997 | 13C2 PFUnA | 80 | | 25-150 |
| STL00998 | 13C2 PFDoA | 70 | | 25-150 |
| STL02116 | 13C2 PFTeDA | 74 | | 25-150 |
| STL02337 | 13C3 PFBS | 87 | | 25-150 |
| STL00994 | 18O2 PFHxS | 92 | | 25-150 |
| STL00991 | 13C4 PFOS | 86 | | 25-150 |
| STL01056 | 13C8 FOSA | 75 | | 25-150 |
| STL02118 | d3-NMeFOSAA | 67 | | 25-150 |
| STL02117 | d5-NEtFOSAA | 77 | | 25-150 |
| STL02279 | M2-6:2 FTS | 120 | | 25-150 |
| STL02280 | M2-8:2 FTS | 96 | | 25-150 |

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\A13\20200910-103052.b\2020.09.10_A13_PFC_A_066.d
Lims ID: 460-217659-D-5-A
Client ID: MW-214
Sample Type: Client
Inject. Date: 10-Sep-2020 19:13:45 ALS Bottle#: 39 Worklist Smp#: 9
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Sample Info: 460-217659-d-5-a
Misc. Info.: Plate: 1 Rack: 4
Operator ID: SACINSTLCMS01 Instrument ID: A13

Method: \\chromfs\Sacramento\ChromData\A13\20200910-103052.b\PFAS_A13.m
Limit Group: LC PFC ICAL
Last Update: 11-Sep-2020 10:16:09 Calib Date: 08-Sep-2020 18:58:15
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\A13\20200908-102913.b\2020.09.08_A13_PFC_ICALX_010.d

Column 1 : Gemini C18 3um 3 x 100mm ( 3.00 mm) Det: EXP1
Process Host: CTX1053

First Level Reviewer: mongkols Date: 11-Sep-2020 10:16:09
Ratio Calibration: CCV Sample: \\chromfs\Sacramento\ChromData\A13\20200910-103052.b\2020.09.10_A13_PFC_A_058.d

| Signal | RT | EXP RT | DLT RT | REL RT | Response | Amount ng/ml | Ratio(Limits) | %Rec | S/N | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| D 1 13C4 PFBA | | | | | | | | | | |
| 217.00 > 172.00 | 2.467 | 2.475 | -0.008 | 0.610 | 5154888 | 1.41 | | 56.3 | 6376 | |
| 2 Perfluorobutanoic acid | | | | | | | | | | M |
| 212.90 > 169.00 | 2.467 | 2.482 | -0.015 | 1.000 | 360937 | 0.2355 | | | 9.9 | M |
| D 4 13C5 PFPeA | | | | | | | | | | |
| 267.90 > 223.00 | 2.856 | 2.867 | -0.011 | 0.706 | 4437442 | 1.55 | | 62.2 | 1860 | |
| 5 Perfluoropentanoic acid | | | | | | | | | | M |
| 262.90 > 219.00 | 2.856 | 2.867 | -0.011 | 1.000 | 198215 | 0.1086 | | | 1.6 | M |
| D 14 13C3 PFBS | | | | | | | | | | |
| 301.90 > 80.00 | 2.901 | 2.913 | -0.012 | 0.718 | 7246118 | 2.02 | | 86.9 | 381 | |
| 6 Perfluorobutanesulfonic acid | | | | | | | | | | M |
| 298.90 > 80.00 | 2.901 | 2.913 | -0.012 | 1.000 | 244322 | 0.0802 | Target=2.29 | | 4.2 | M |
| 298.90 > 99.00 | 2.901 | 2.913 | -0.012 | 1.000 | 115005 | | 2.12(1.15-3.44) | | 6.1 | M |
| 10 Perfluorohexanoic acid | | | | | | | | | | M |
| 313.00 > 269.00 | 3.247 | 3.258 | -0.011 | 1.000 | 416559 | 0.1603 | Target=13.52 | | 4.6 | M |
| 313.00 > 119.00 | 3.247 | 3.258 | -0.011 | 1.000 | 29243 | | 14.24(6.76-20.28) | | 6.1 | M |
| D 9 13C2 PFHxA | | | | | | | | | | |
| 315.00 > 270.00 | 3.247 | 3.258 | -0.011 | 0.803 | 6988890 | 1.98 | | 79.3 | 3248 | |
| D 17 18O2 PFHxS | | | | | | | | | | |
| 403.00 > 84.00 | 3.655 | 3.665 | -0.010 | 0.904 | 5099379 | 2.17 | | 91.8 | 13800 | |
| 16 Perfluoroheptanoic acid | | | | | | | | | | M |
| 363.00 > 319.00 | 3.655 | 3.665 | -0.010 | 1.000 | 340496 | 0.1226 | Target=3.87 | | 7.3 | M |
| 363.00 > 169.00 | 3.645 | 3.665 | -0.020 | 0.997 | 94404 | | 3.61(1.93-5.80) | | 25.0 | M |
| 18 Perfluorohexanesulfonic acid | | | | | | | | | | M |
| 399.00 > 80.00 | 3.655 | 3.665 | -0.010 | 1.000 | 314579 | 0.1312 | Target=3.08 | | 21.0 | M |
| 399.00 > 99.00 | 3.655 | 3.665 | -0.010 | 1.000 | 98726 | | 3.19(1.54-4.62) | | 18.7 | M |
| D 15 13C4 PFHpA | | | | | | | | | | |
| 367.00 > 322.00 | 3.655 | 3.665 | -0.010 | 0.904 | 6869946 | 1.98 | | 79.1 | 4154 | |

| Signal | RT | EXP RT | DLT RT | REL RT | Response | Amount ng/ml | Ratio(Limits) | %Rec | S/N | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| D 20 M2-6:2 FTS | | | | | | | | | | |
| 429.00 > 81.00 | 4.026 | 4.042 | -0.016 | 0.996 | 2887317 | 2.85 | | 120 | 521 | |
| 21 6:2 FTS | | | | | | | | | | |
| 427.00 > 407.00 | 4.026 | 4.042 | -0.016 | 1.000 | 12223 | 0.004177 | | | 10.0 | |
| 22 Perfluoroheptanesulfonic acid | | | | | | | | | | M |
| 449.00 > 80.00 | 4.034 | 4.051 | -0.017 | 0.915 | 29410 | 0.0180 | Target=4.20 | | 4.4 | M |
| 449.00 > 99.00 | 4.034 | 4.051 | -0.017 | 0.915 | 10713 | | 2.75(2.10-6.30) | | 3.7 | |
| D 24 13C4 PFOA | | | | | | | | | | |
| 417.00 > 372.00 | 4.042 | 4.059 | -0.017 | 1.000 | 8046095 | 1.90 | | 75.8 | 11395 | |
| 26 Perfluorooctanoic acid | | | | | | | | | | M |
| 413.00 > 369.00 | 4.042 | 4.059 | -0.017 | 1.000 | 2049962 | 0.6226 | Target=2.99 | | 67.4 | M |
| 413.00 > 169.00 | 4.042 | 4.059 | -0.017 | 1.000 | 790759 | | 2.59(1.50-4.49) | | 283 | M |
| * 25 13C2 PFOA | | | | | | | | | | |
| 415.00 > 370.00 | 4.042 | 4.059 | -0.017 | | 10775355 | 2.50 | | | 7590 | |
| 28 Perfluorooctanesulfonic acid | | | | | | | | | | M |
| 499.00 > 80.00 | 4.401 | 4.425 | -0.024 | 0.998 | 1673757 | 1.12 | Target=4.13 | | 279 | |
| 499.00 > 99.00 | 4.401 | 4.425 | -0.024 | 0.998 | 321763 | | 5.20(2.06-6.19) | | 96.9 | M |
| D 29 13C4 PFOS | | | | | | | | | | |
| 503.00 > 80.00 | 4.409 | 4.425 | -0.016 | 1.091 | 3425846 | 2.04 | | 85.5 | 930 | |
| 30 Perfluorononanoic acid | | | | | | | | | | |
| 463.00 > 419.00 | 4.418 | 4.433 | -0.015 | 1.000 | 101621 | 0.0341 | Target=7.70 | | 10.7 | |
| 463.00 > 169.00 | 4.418 | 4.433 | -0.015 | 1.000 | 10853 | | 9.36(3.85-11.55) | | 15.8 | |
| D 31 13C5 PFNA | | | | | | | | | | |
| 468.00 > 423.00 | 4.418 | 4.442 | -0.024 | 1.093 | 7843727 | 2.00 | | 80.0 | 7386 | |
| D 34 13C8 FOSA | | | | | | | | | | |
| 506.00 > 78.00 | 4.734 | 4.740 | -0.006 | 1.171 | 4488561 | 1.86 | | 74.6 | 4401 | |
| 33 Perfluorooctanesulfonamide | | | | | | | | | | |
| 498.00 > 78.00 | 4.734 | 4.740 | -0.006 | 1.000 | 83097 | 0.0493 | | | 10.6 | |
| D 37 13C2 PFDA | | | | | | | | | | |
| 515.00 > 470.00 | 4.777 | 4.793 | -0.016 | 1.182 | 9326339 | 1.96 | | 78.5 | 13354 | |
| 36 Perfluorodecanoic acid | | | | | | | | | | |
| 513.00 > 469.00 | 4.786 | 4.793 | -0.007 | 1.002 | 114682 | 0.0343 | Target=10.40 | | 15.1 | |
| 513.00 > 169.00 | 4.769 | 4.793 | -0.024 | 0.998 | 7625 | | 15.04(5.20-15.61) | | 16.6 | |
| D 38 M2-8:2 FTS | | | | | | | | | | |
| 529.00 > 81.00 | 4.777 | 4.802 | -0.025 | 1.182 | 3076327 | 2.30 | | 95.9 | 1573 | |
| 39 8:2 FTS | | | | | | | | | | |
| 527.00 > 507.00 | 4.786 | 4.802 | -0.016 | 1.002 | 5220 | 0.001644 | | | 36.5 | |
| D 40 d3-NMeFOSAA | | | | | | | | | | |
| 573.00 > 419.00 | 4.942 | 4.959 | -0.017 | 1.223 | 4103379 | 1.68 | | 67.0 | 2996 | |
| 41 NMeFOSAA | | | | | | | | | | |
| 570.00 > 419.00 | 4.952 | 4.959 | -0.007 | 1.002 | 30381 | 0.0230 | | | 5.5 | |
| D 44 13C2 PFUnA | | | | | | | | | | |
| 565.00 > 520.00 | 5.097 | 5.113 | -0.016 | 1.261 | 9256087 | 1.99 | | 79.7 | 6034 | |
| 45 Perfluoroundecanoic acid | | | | | | | | | | |
| 563.00 > 519.00 | 5.097 | 5.113 | -0.016 | 1.000 | 30164 | 0.0123 | Target=8.31 | | 9.2 | |
| 563.00 > 169.00 | 5.087 | 5.113 | -0.026 | 0.998 | 2941 | | 10.26(4.15-12.46) | | 12.1 | |

| Signal | RT | EXP RT | DLT RT | REL RT | Response | Amount ng/ml | Ratio(Limits) | %Rec | S/N | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| D 46 d5-NEtFOSAA | | | | | | | | | | |
| 589.00 > 419.00 | 5.106 | 5.123 | -0.017 | 1.263 | 4535701 | 1.91 | | 76.5 | 2584 | |
| 48 NEtFOSA | | | | | | | | | | M |
| 584.00 > 419.00 | 5.106 | 5.132 | -0.026 | 1.000 | 50354 | 0.0359 | | | 114 | M |
| D 56 13C2 PFDoA | | | | | | | | | | |
| 615.00 > 570.00 | 5.396 | 5.409 | -0.013 | 1.335 | 8761262 | 1.75 | | 70.1 | 7011 | |
| 57 Perfluorododecanoic acid | | | | | | | | | | |
| 613.00 > 569.00 | 5.396 | 5.409 | -0.013 | 1.000 | 15588 | 0.004876 | Target=9.00 | | 7.2 | |
| 613.00 > 169.00 | 5.387 | 5.409 | -0.022 | 0.998 | 1649 | | 9.45(4.50-13.49) | | 7.9 | |
| 60 Perfluorotridecanoic acid | | | | | | | | | | |
| 663.00 > 619.00 | 5.654 | 5.676 | -0.022 | 1.048 | 12766 | 0.003886 | Target=6.96 | | 10.1 | |
| 663.00 > 169.00 | 5.662 | 5.676 | -0.014 | 1.049 | 1615 | | 7.90(3.48-10.45) | | 10.6 | |
| D 61 13C2 PFTeDA | | | | | | | | | | |
| 715.00 > 670.00 | 5.905 | 5.920 | -0.015 | 1.461 | 9123732 | 1.85 | | 73.9 | 12413 | |
| 62 Perfluorotetradecanoic acid | | | | | | | | | | M |
| 713.00 > 669.00 | 5.910 | 5.920 | -0.010 | 1.001 | 21231 | 0.005910 | Target=10.31 | | 9.8 | |
| 713.00 > 219.00 | 5.921 | 5.920 | 0.001 | 1.003 | 2170 | | 9.78(5.16-15.47) | | 15.9 | M |

## QC Flag Legend

Review Flags

M - Manually Integrated

Report Date: 11-Sep-2020 10:16:09 Chrom Revision: 2.3 09-Sep-2020 15:12:58

Eurofins TestAmerica, Sacramento

Data File: \\chromfs\Sacramento\ChromData\A13\20200910-103052.b\2020.09.10_A13_PFC_A_066.d

Injection Date: 10-Sep-2020 19:13:45 Instrument ID: A13

Lims ID: 460-217659-D-5-A Lab Sample ID: 320-217659-5

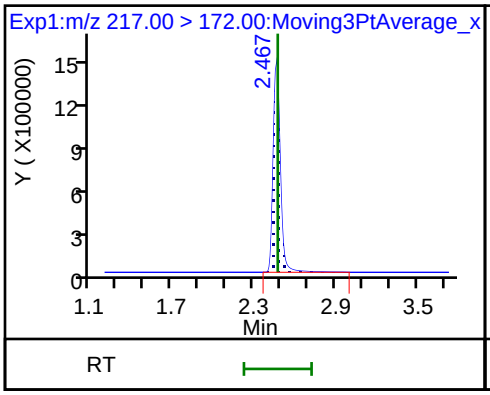
Client ID: MW-214

Operator ID: SACINSTLCMS01 ALS Bottle#: 39 Worklist Smp#: 9

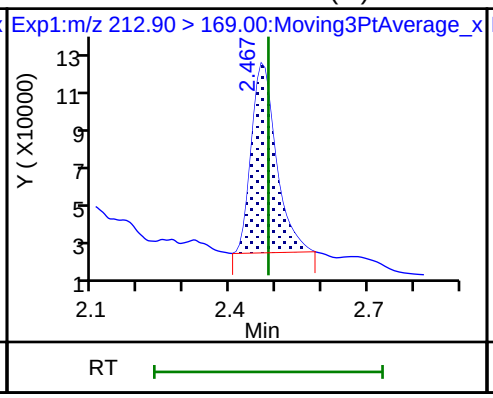
Injection Vol: 20.0 ul Dil. Factor: 1.0000

Method: PFAS_A13 Limit Group: LC PFC ICAL

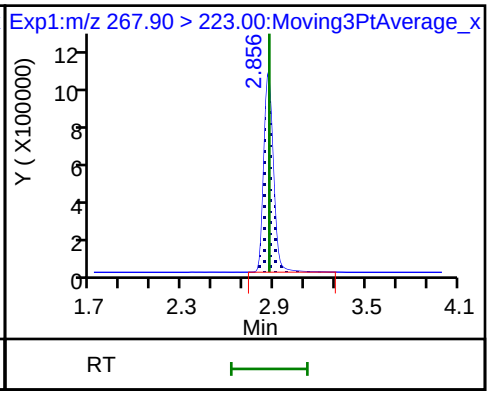
D 1 13C4 PFBA



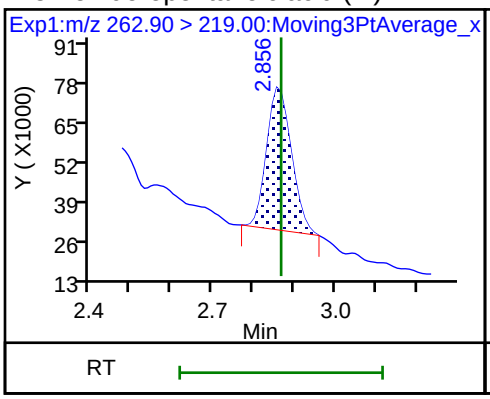

2 Perfluorobutanoic acid (M)



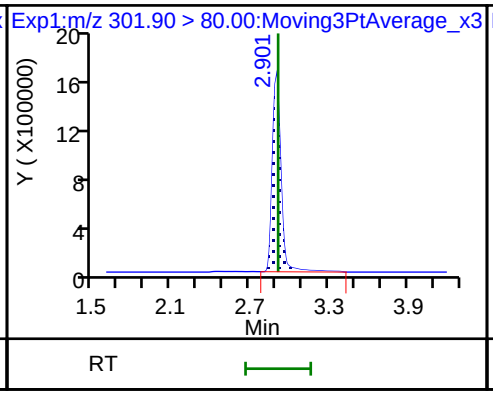

D 4 13C5 PFPeA



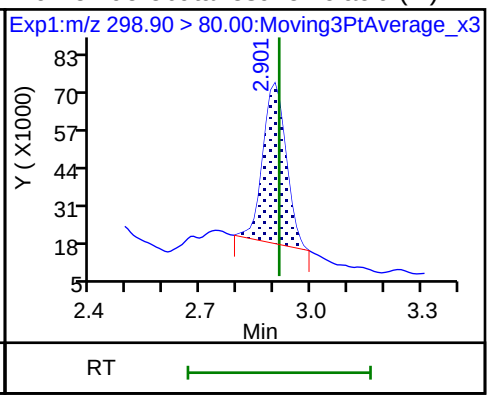

5 Perfluoropentanoic acid (M)



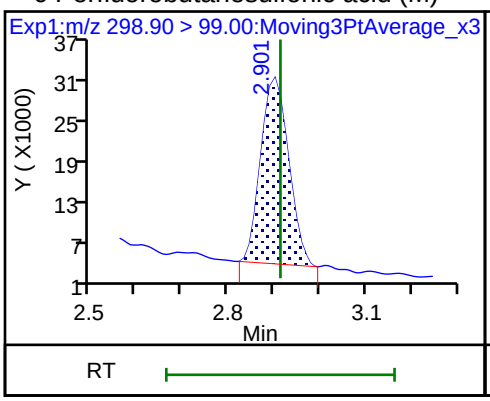

D 14 13C3 PFBS



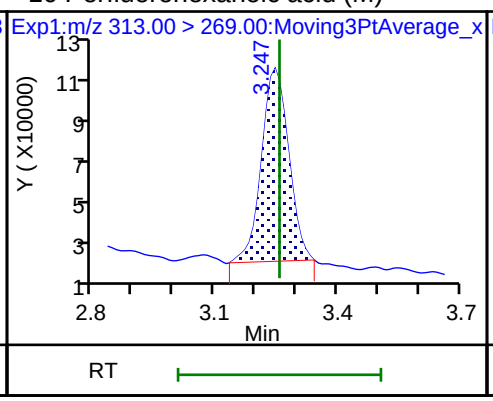

6 Perfluorobutanesulfonic acid (M)



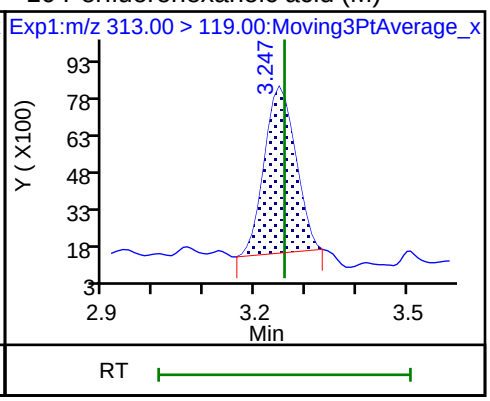

6 Perfluorobutanesulfonic acid (M)



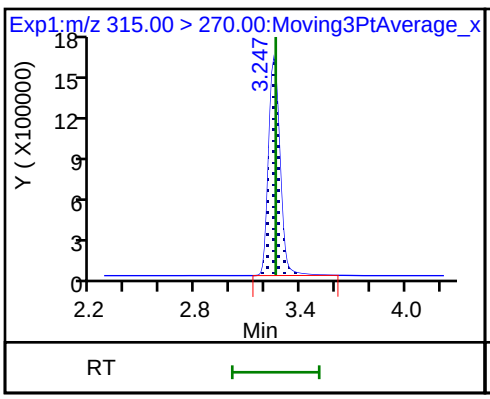

10 Perfluorohexanoic acid (M)



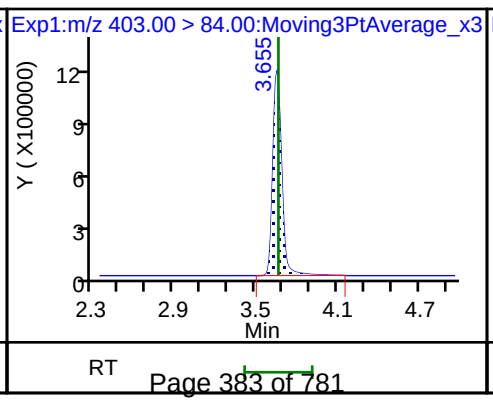

10 Perfluorohexanoic acid (M)



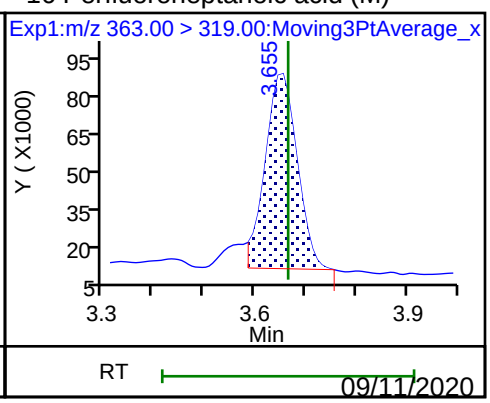

D 9 13C2 PFHxA



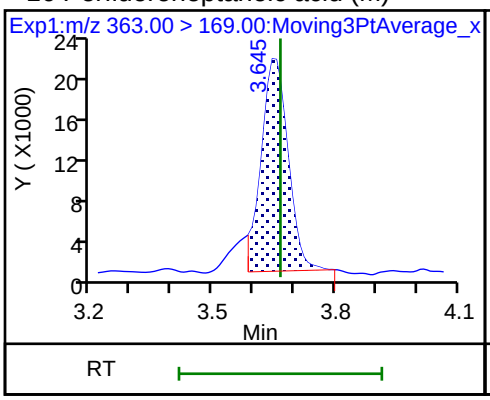

D 17 18O2 PFHxS



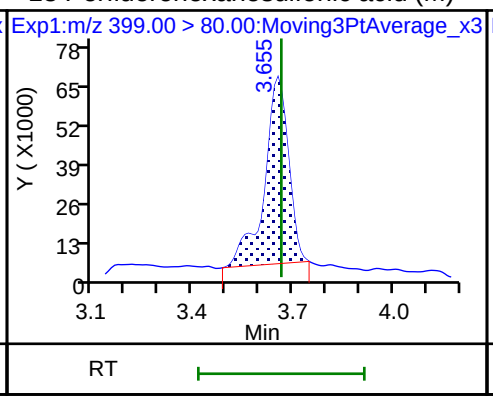

16 Perfluoroheptanoic acid (M)



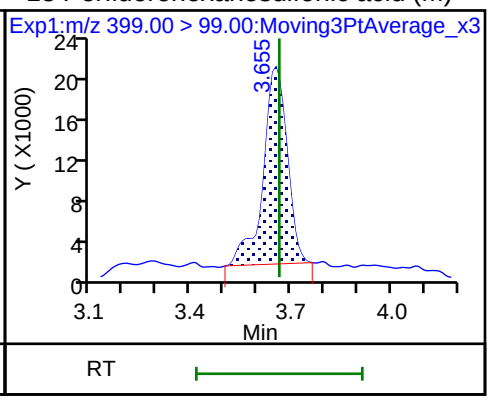
16 Perfluoroheptanoic acid (M)



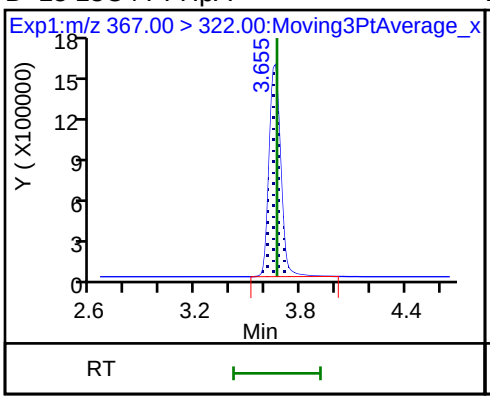

18 Perfluorohexanesulfonic acid (M)



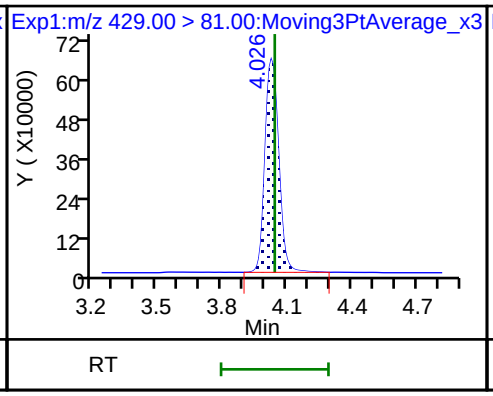

18 Perfluorohexanesulfonic acid (M)



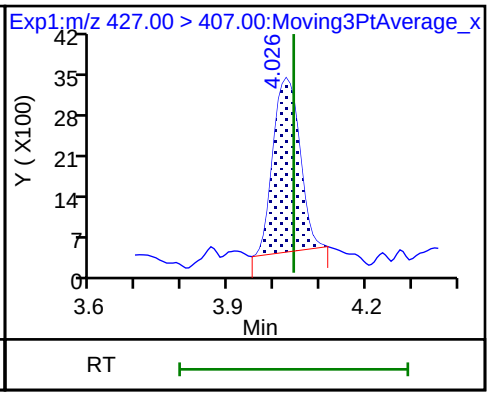

D 15 13C4 PFHpA



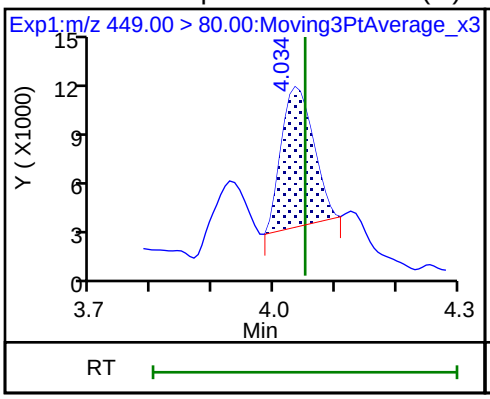

D 20 M2-6:2 FTS



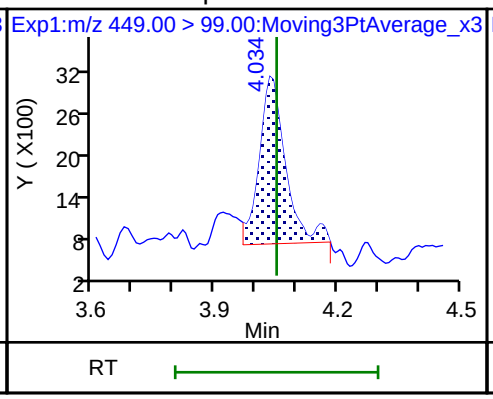

21 6:2 FTS



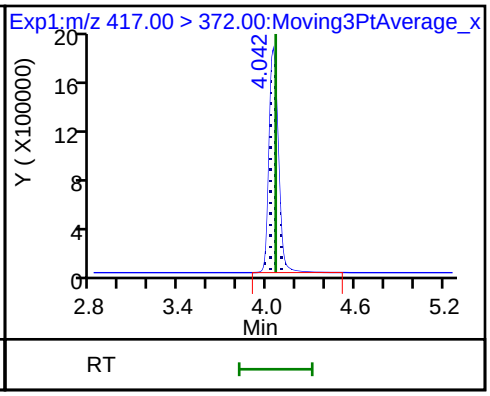

22 Perfluoroheptanesulfonic acid (M)



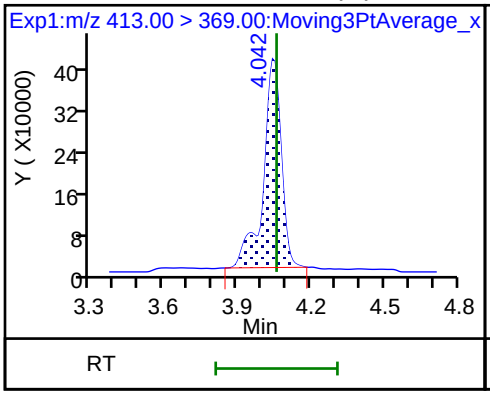

22 Perfluoroheptanesulfonic acid



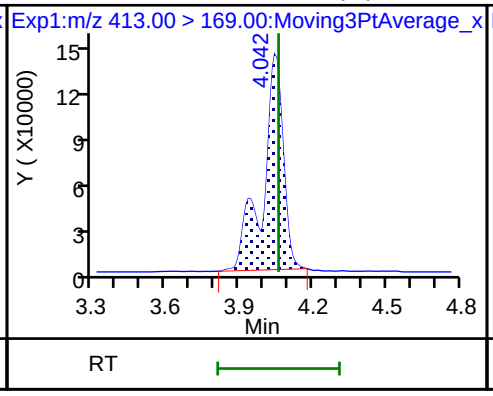

D 24 13C4 PFOA



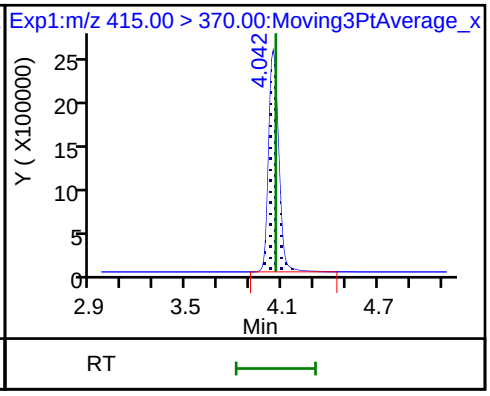

26 Perfluorooctanoic acid (M)



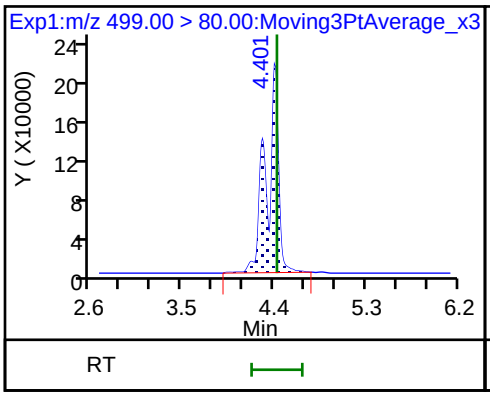

26 Perfluorooctanoic acid (M)



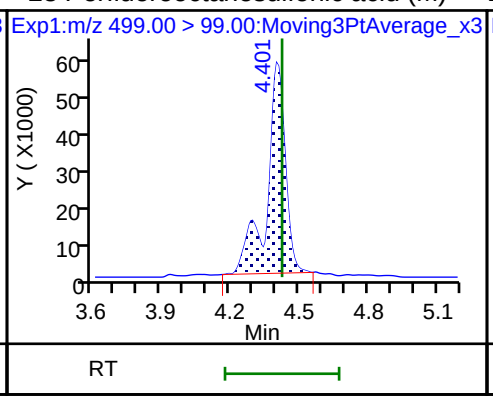

* 25 13C2 PFOA



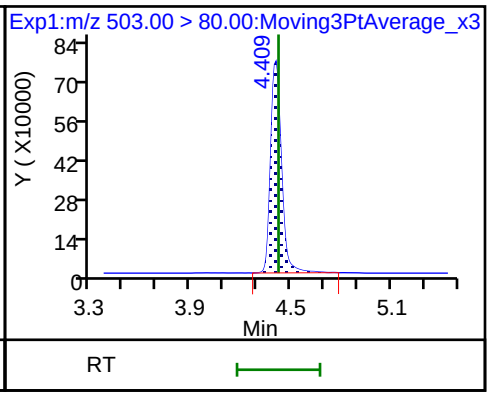
28 Perfluorooctanesulfonic acid



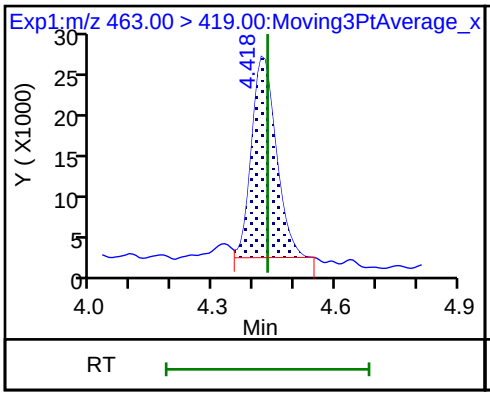

28 Perfluorooctanesulfonic acid (M)



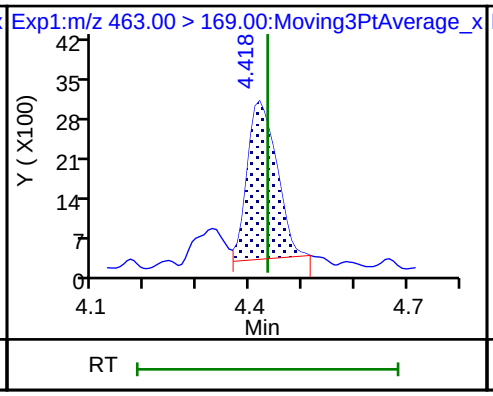

D 29 13C4 PFOS



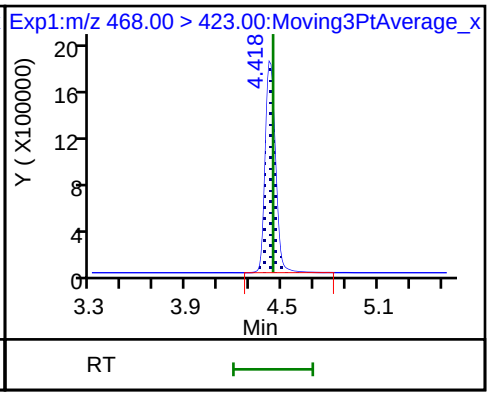

30 Perfluorononanoic acid



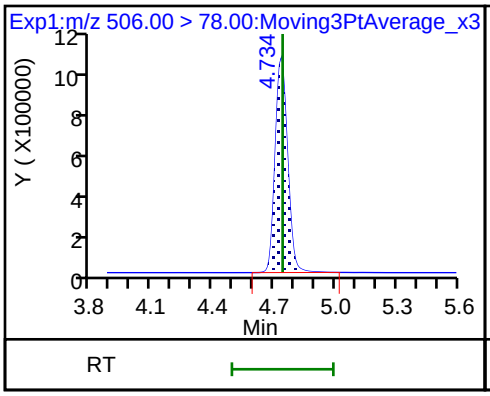

30 Perfluorononanoic acid



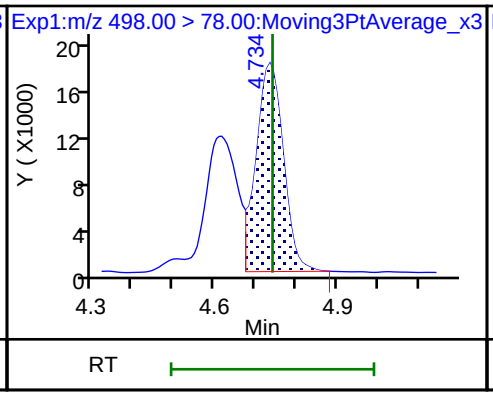

D 31 13C5 PFNA



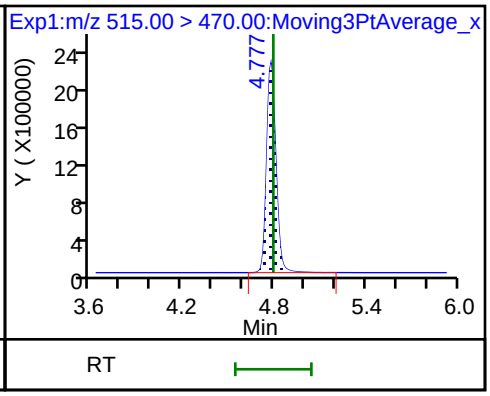

D 34 13C8 FOSA



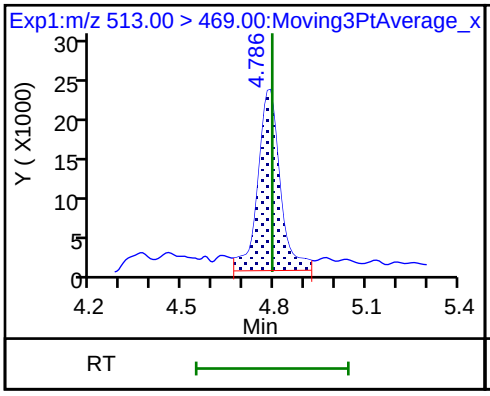

33 Perfluorooctanesulfonamide



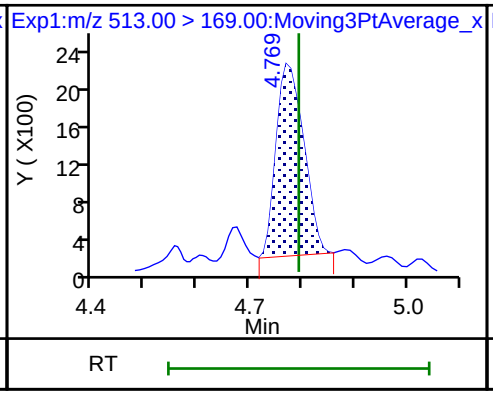

D 37 13C2 PFDA



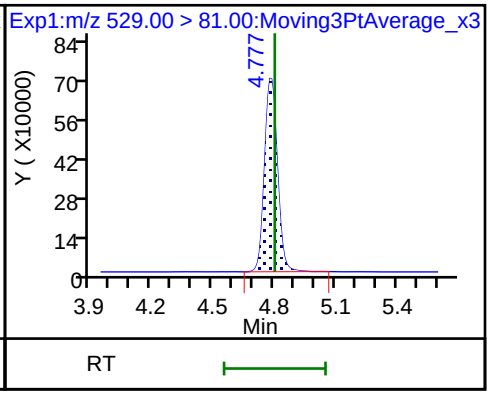

36 Perfluorodecanoic acid



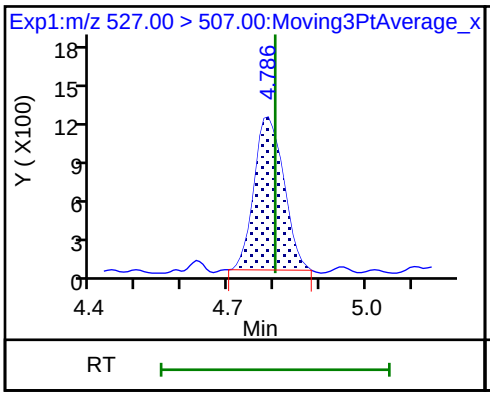

36 Perfluorodecanoic acid



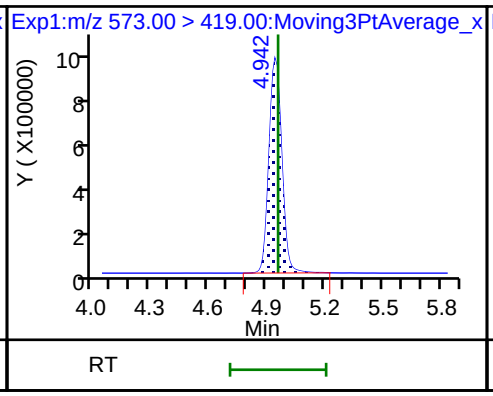

D 38 M2-8:2 FTS



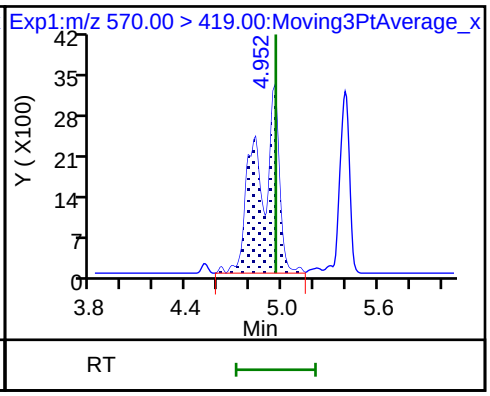
39 8:2 FTS



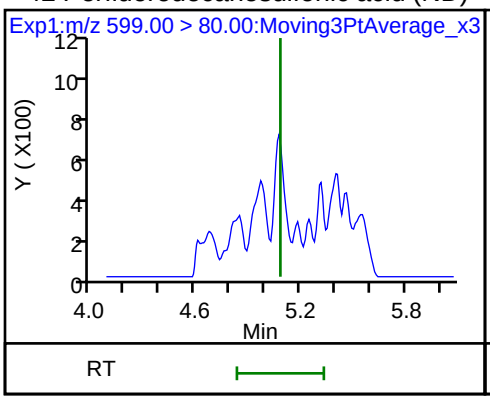

D 40 d3-NMeFOSAA



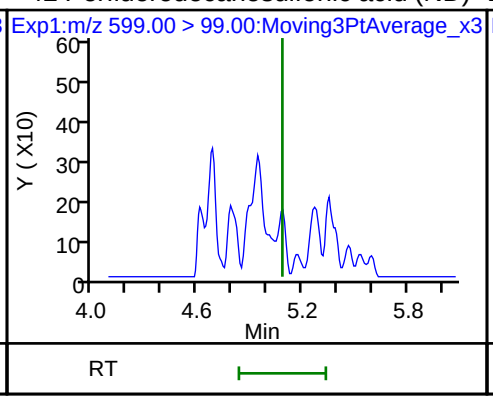

41 NMeFOSAA



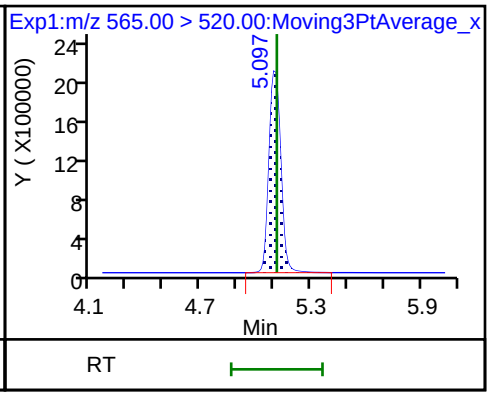

42 Perfluorodecanesulfonic acid (ND)



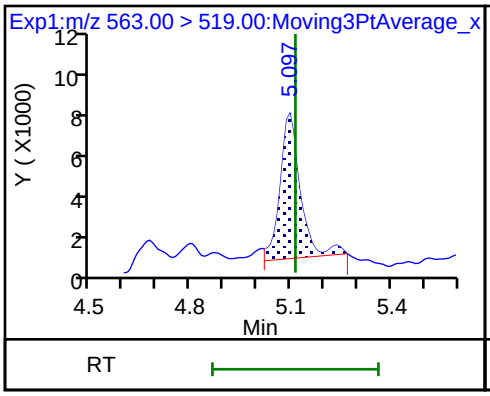

42 Perfluorodecanesulfonic acid (ND)



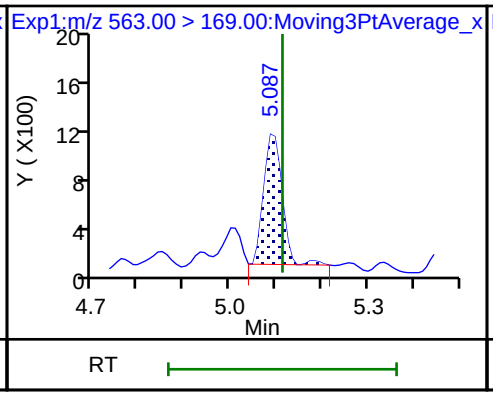

D 44 13C2 PFUnA



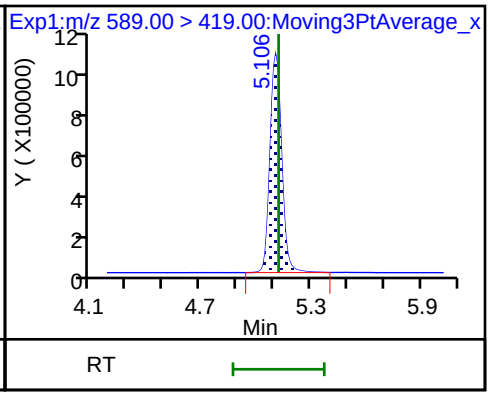

45 Perfluoroundecanoic acid



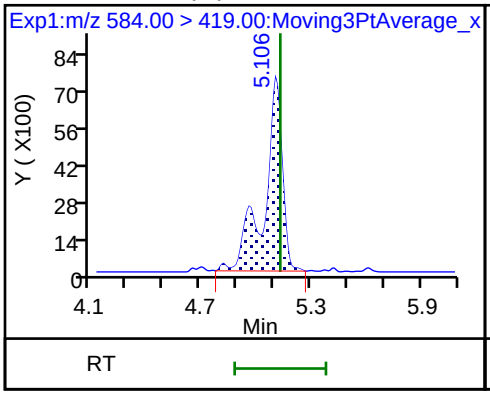

45 Perfluoroundecanoic acid



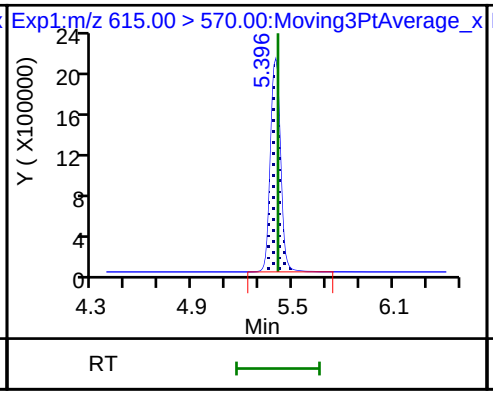

D 46 d5-NEtFOSAA



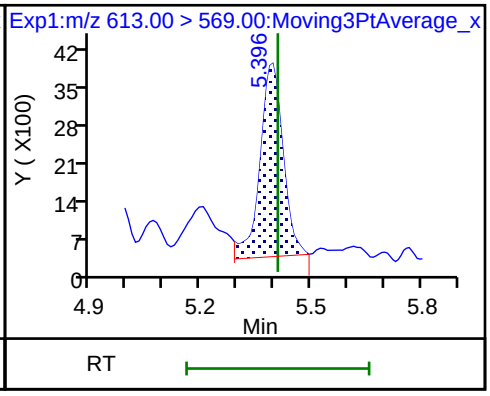

48 NEtFOSA (M)



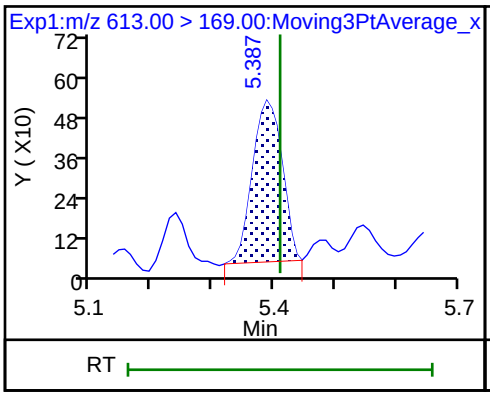

D 56 13C2 PFDoA



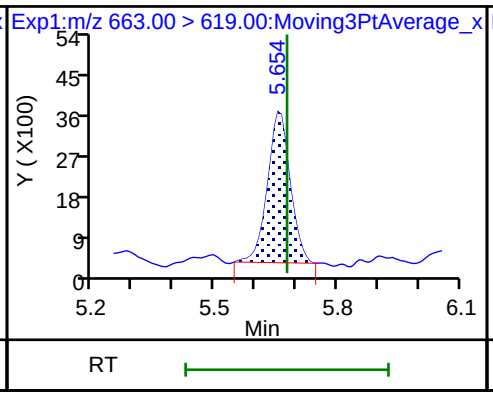

57 Perfluorododecanoic acid



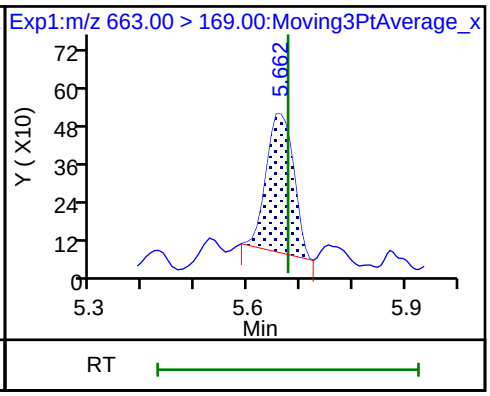
57 Perfluorododecanoic acid



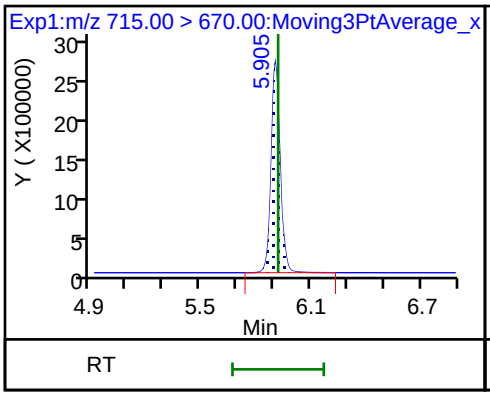

60 Perfluorotridecanoic acid



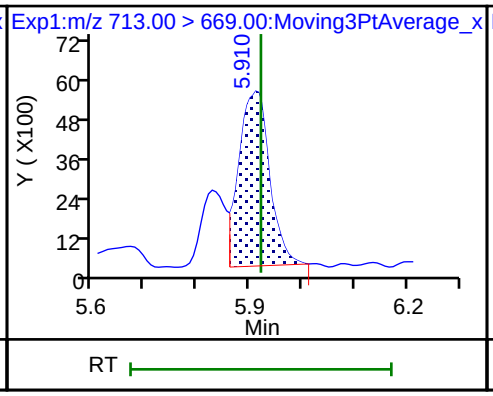

60 Perfluorotridecanoic acid



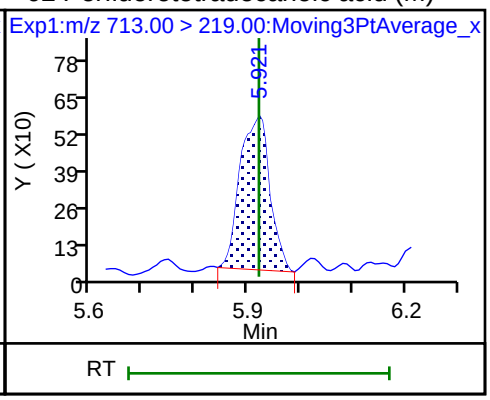

D 61 13C2 PFTeDA




62 Perfluorotetradecanoic acid




62 Perfluorotetradecanoic acid (M)



Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

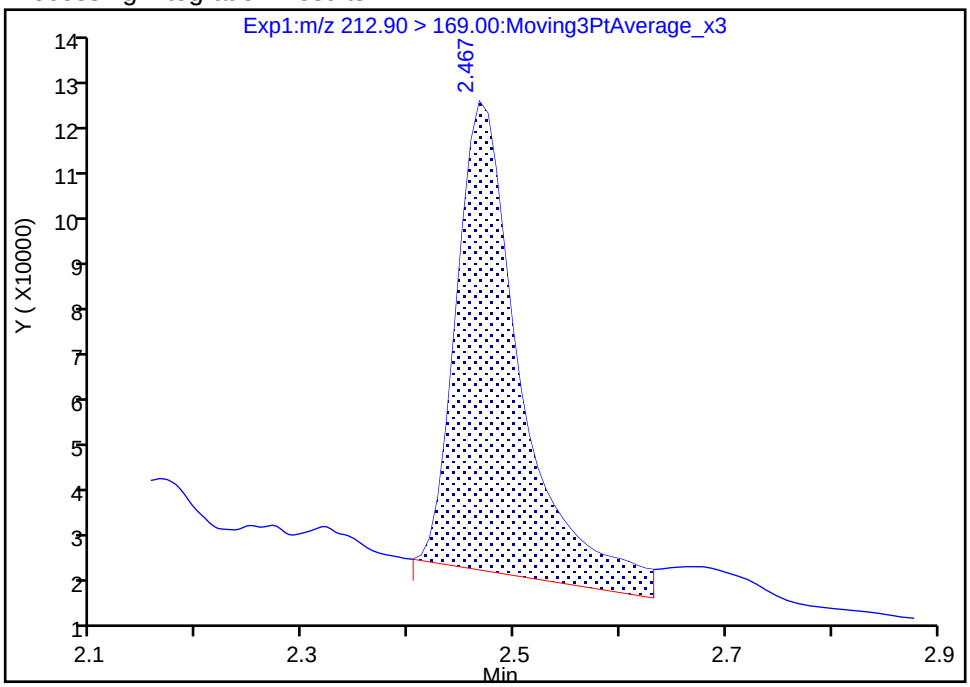
| | | | | | |
|---|---|---|---|---|---|
| Data File: | \\chromfs\Sacramento\ChromData\A13\20200910-103052.b\2020.09.10_A13_PFC_A_066.d | | | | |
| Injection Date: | 10-Sep-2020 19:13:45 | Instrument ID: | A13 | | |
| Lims ID: | 460-217659-D-5-A | Lab Sample ID: | 320-217659-5 | | |
| Client ID: | MW-214 | | | | |
| Operator ID: | SACINSTLCMS01 | ALS Bottle#: | 39 | Worklist Smp#: | 9 |
| Injection Vol: | 20.0 ul | Dil. Factor: | 1.0000 | | |
| Method: | PFAS_A13 | Limit Group: | LC PFC ICAL | | |
| Column: | Gemini C18 3um 3 x 100mm ( 3.00 mm) | Detector | EXP1 | | |

## 2 Perfluorobutanoic acid, CAS: 375-22-4

Signal: 1

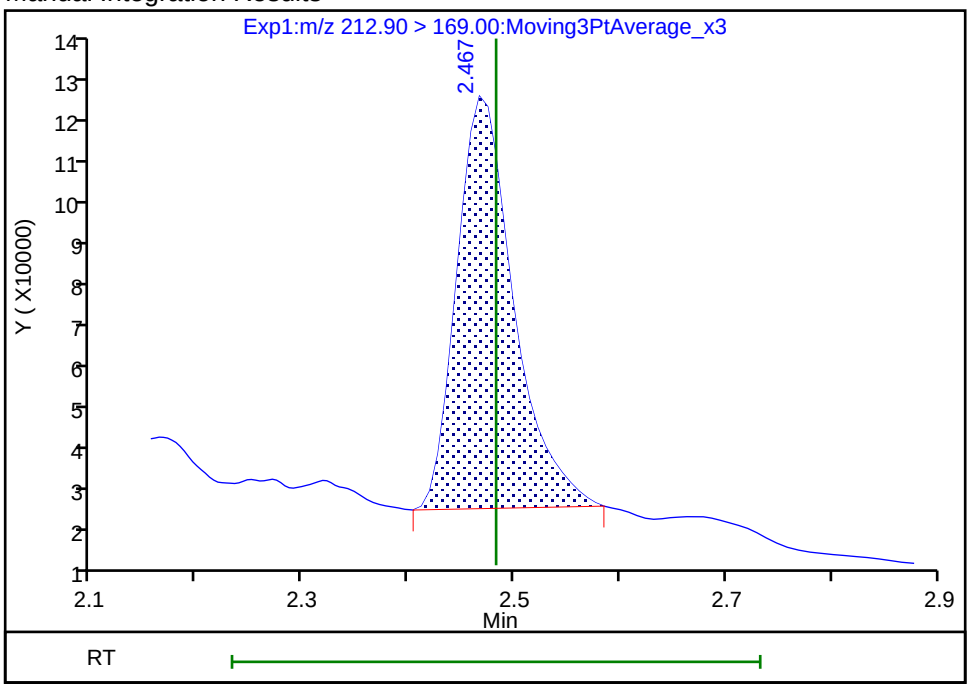
Processing Integration Results

RT: 2.47
Area: 419995
Amount: 0.274049
Amount Units: ng/ml




Manual Integration Results

RT: 2.47
Area: 360937
Amount: 0.235514
Amount Units: ng/ml




Reviewer: mongkols, 11-Sep-2020 10:14:32

Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

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|---|---|---|---|---|---|
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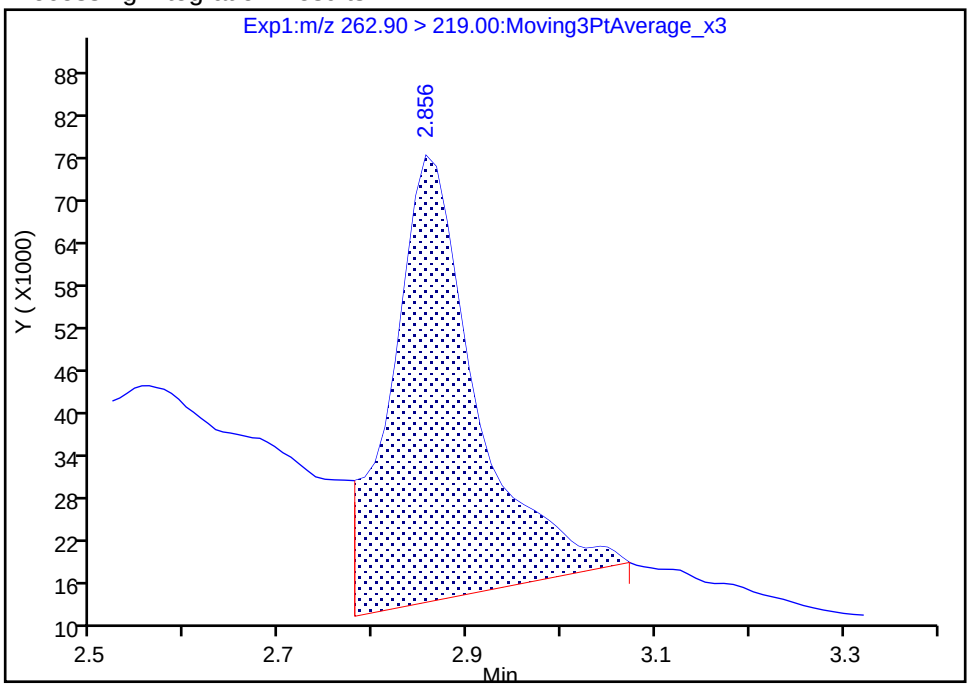
| Injection Date: | 10-Sep-2020 19:13:45 | Instrument ID: | A13 | | |
| Lims ID: | 460-217659-D-5-A | Lab Sample ID: | 320-217659-5 | | |
| Client ID: | MW-214 | | | | |
| Operator ID: | SACINSTLCMS01 | ALS Bottle#: | 39 | Worklist Smp#: | 9 |
| Injection Vol: | 20.0 ul | Dil. Factor: | 1.0000 | | |
| Method: | PFAS_A13 | Limit Group: | LC PFC ICAL | | |
| Column: | Gemini C18 3um 3 x 100mm ( 3.00 mm) | Detector | EXP1 | | |

## 5 Perfluoropentanoic acid, CAS: 2706-90-3

Signal: 1

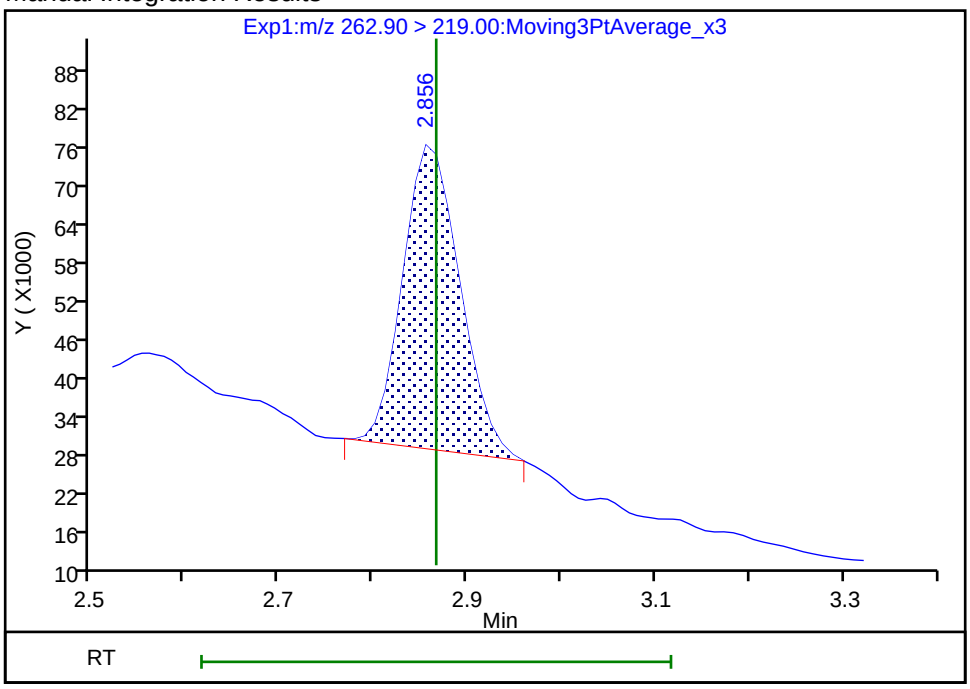
Processing Integration Results

RT: 2.86
Area: 392976
Amount: 0.215407
Amount Units: ng/ml




Manual Integration Results

RT: 2.86
Area: 198215
Amount: 0.108650
Amount Units: ng/ml




Reviewer: mongkols, 11-Sep-2020 10:14:36
Audit Action: Manually Integrated Audit Reason: Baseline

Eurofins TestAmerica, Sacramento

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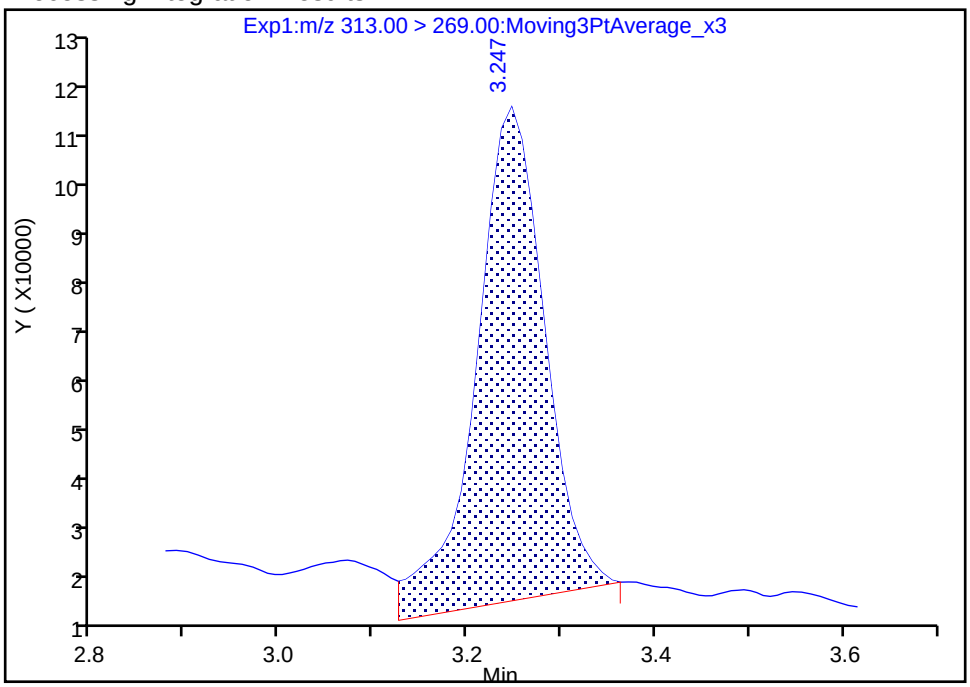
| Data File: | \\chromfs\Sacramento\ChromData\A13\20200910-103052.b\2020.09.10_A13_PFC_A_066.d | | | | |
| Injection Date: | 10-Sep-2020 19:13:45 | Instrument ID: | A13 | | |
| Lims ID: | 460-217659-D-5-A | Lab Sample ID: | 320-217659-5 | | |
| Client ID: | MW-214 | | | | |
| Operator ID: | SACINSTLCMS01 | ALS Bottle#: | 39 | Worklist Smp#: | 9 |
| Injection Vol: | 20.0 ul | Dil. Factor: | 1.0000 | | |
| Method: | PFAS_A13 | Limit Group: | LC PFC ICAL | | |
| Column: | Gemini C18 3um 3 x 100mm ( 3.00 mm ) | Detector | EXP1 | | |

## 10 Perfluorohexanoic acid, CAS: 307-24-4

Signal: 1

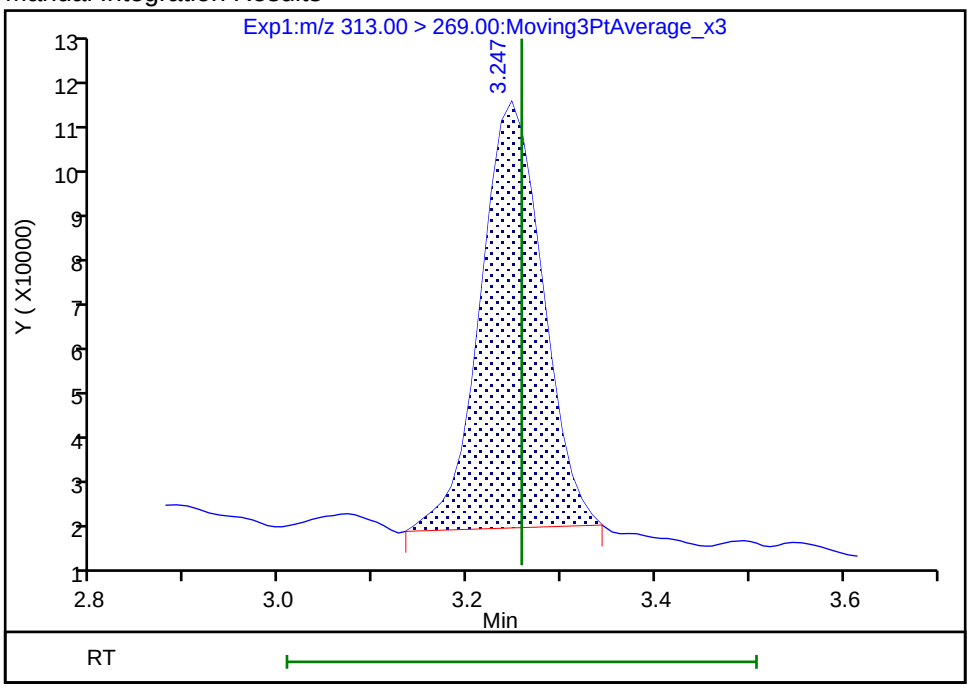
Processing Integration Results

RT: 3.25
Area: 484337
Amount: 0.186419
Amount Units: ng/ml




Manual Integration Results

RT: 3.25
Area: 416559
Amount: 0.160332
Amount Units: ng/ml




Reviewer: mongkols, 11-Sep-2020 10:14:49
Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

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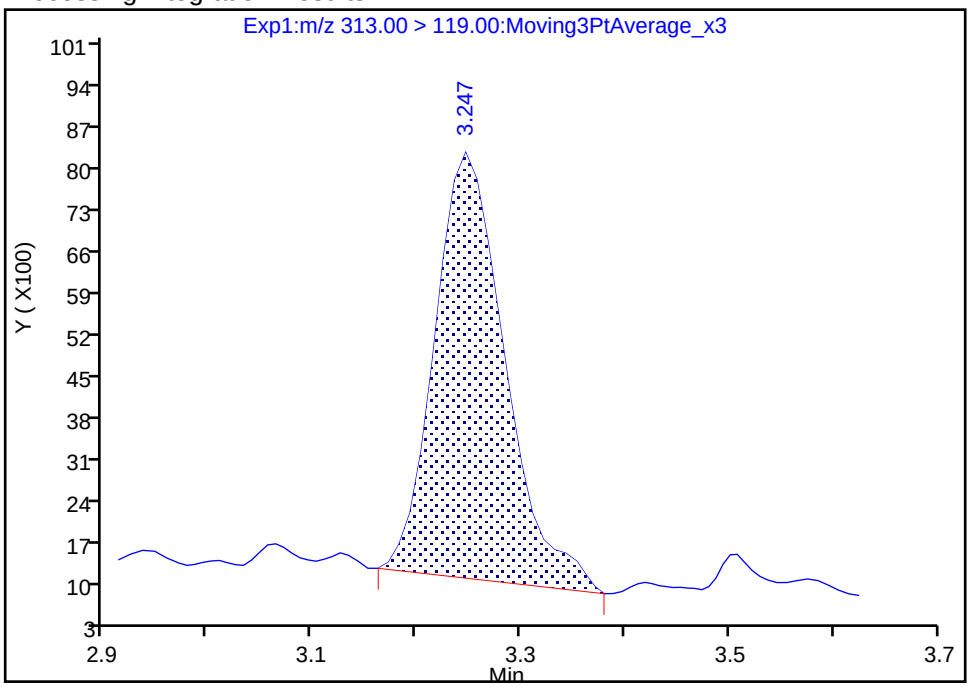
| Injection Date: | 10-Sep-2020 19:13:45 | Instrument ID: | A13 | | |
| Lims ID: | 460-217659-D-5-A | Lab Sample ID: | 320-217659-5 | | |
| Client ID: | MW-214 | | | | |
| Operator ID: | SACINSTLCMS01 | ALS Bottle#: | 39 | Worklist Smp#: | 9 |
| Injection Vol: | 20.0 ul | Dil. Factor: | 1.0000 | | |
| Method: | PFAS_A13 | Limit Group: | LC PFC ICAL | | |
| Column: | Gemini C18 3um 3 x 100mm ( 3.00 mm ID) | Detector | EXP1 | | |

## 10 Perfluorohexanoic acid, CAS: 307-24-4

Signal: 2

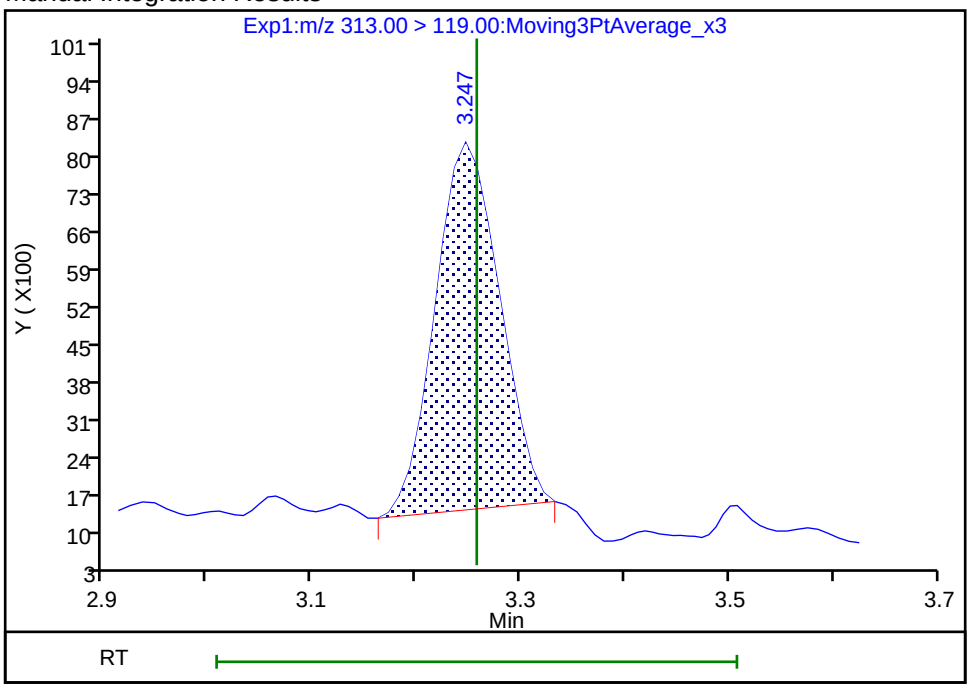
Processing Integration Results

RT: 3.25
Area: 33592
Amount: 0.186419
Amount Units: ng/ml




Manual Integration Results

RT: 3.25
Area: 29243
Amount: 0.160332
Amount Units: ng/ml




Reviewer: mongkols, 11-Sep-2020 10:14:52
Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

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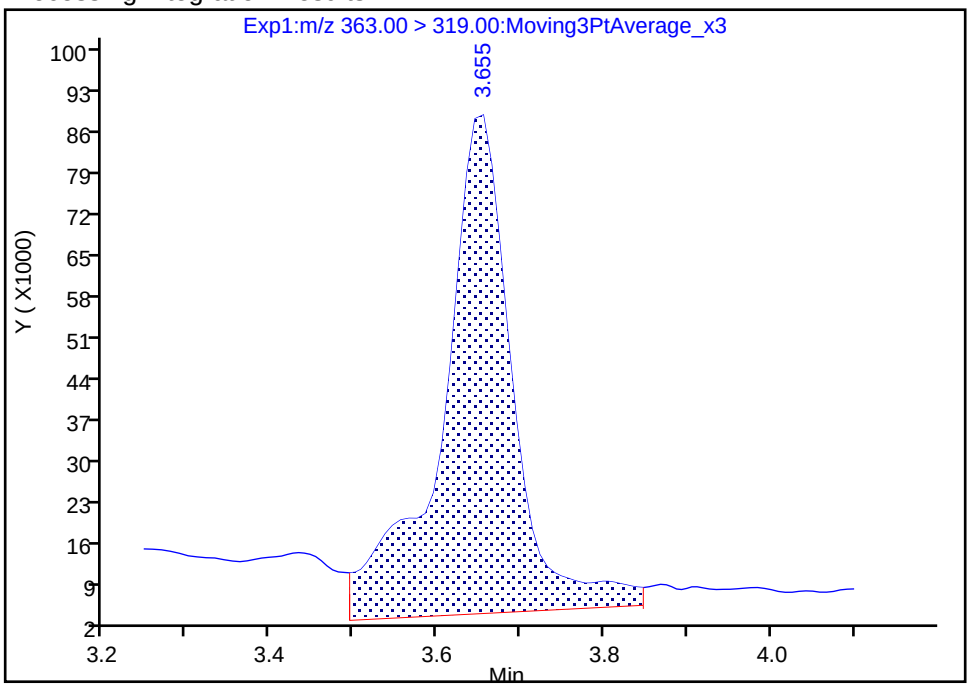
| Injection Date: | 10-Sep-2020 19:13:45 | Instrument ID: | A13 | | |
| Lims ID: | 460-217659-D-5-A | Lab Sample ID: | 320-217659-5 | | |
| Client ID: | MW-214 | | | | |
| Operator ID: | SACINSTLCMS01 | ALS Bottle#: | 39 | Worklist Smp#: | 9 |
| Injection Vol: | 20.0 ul | Dil. Factor: | 1.0000 | | |
| Method: | PFAS_A13 | Limit Group: | LC PFC ICAL | | |
| Column: | Gemini C18 3um 3 x 100mm ( 3.00 mm) | Detector | EXP1 | | |

## 16 Perfluoroheptanoic acid, CAS: 375-85-9

Signal: 1

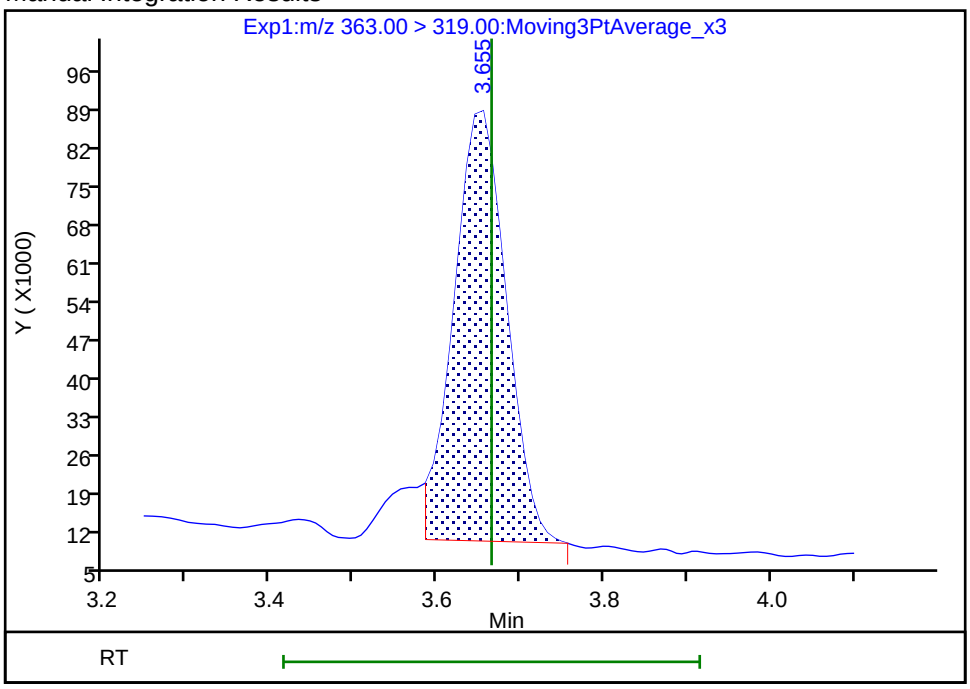
Processing Integration Results

RT: 3.65
Area: 499658
Amount: 0.179903
Amount Units: ng/ml




Manual Integration Results

RT: 3.65
Area: 340496
Amount: 0.122597
Amount Units: ng/ml




Reviewer: mongkols, 11-Sep-2020 10:15:01

Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

| | | | | | |
|---|---|---|---|---|---|
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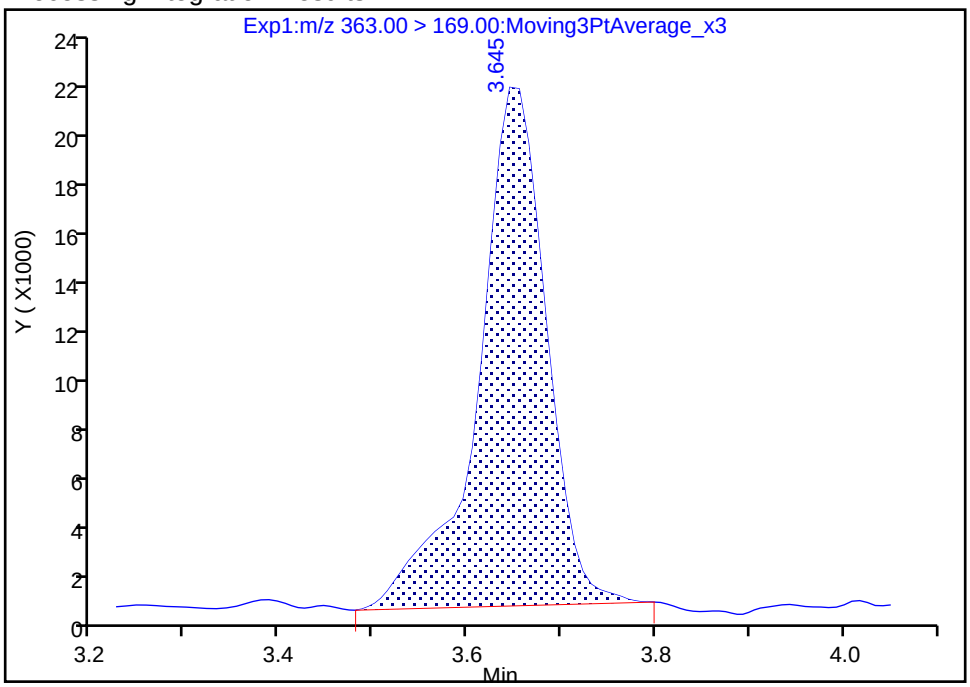
| Injection Date: | 10-Sep-2020 19:13:45 | Instrument ID: | A13 | | |
| Lims ID: | 460-217659-D-5-A | Lab Sample ID: | 320-217659-5 | | |
| Client ID: | MW-214 | | | | |
| Operator ID: | SACINSTLCMS01 | ALS Bottle#: | 39 | Worklist Smp#: | 9 |
| Injection Vol: | 20.0 ul | Dil. Factor: | 1.0000 | | |
| Method: | PFAS_A13 | Limit Group: | LC PFC ICAL | | |
| Column: | Gemini C18 3um 3 x 100mm ( 3.00 mm ) | Detector | EXP1 | | |

## 16 Perfluoroheptanoic acid, CAS: 375-85-9

Signal: 2

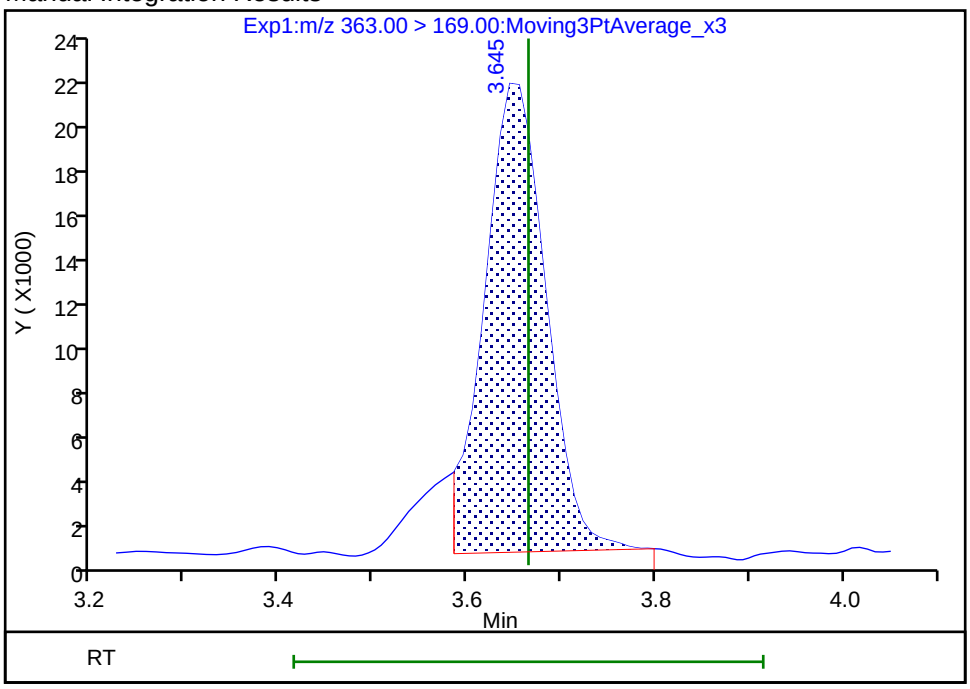
Processing Integration Results

RT: 3.64
Area: 104953
Amount: 0.179903
Amount Units: ng/ml




Manual Integration Results

RT: 3.64
Area: 94404
Amount: 0.122597
Amount Units: ng/ml




Reviewer: mongkols, 11-Sep-2020 10:15:03
Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

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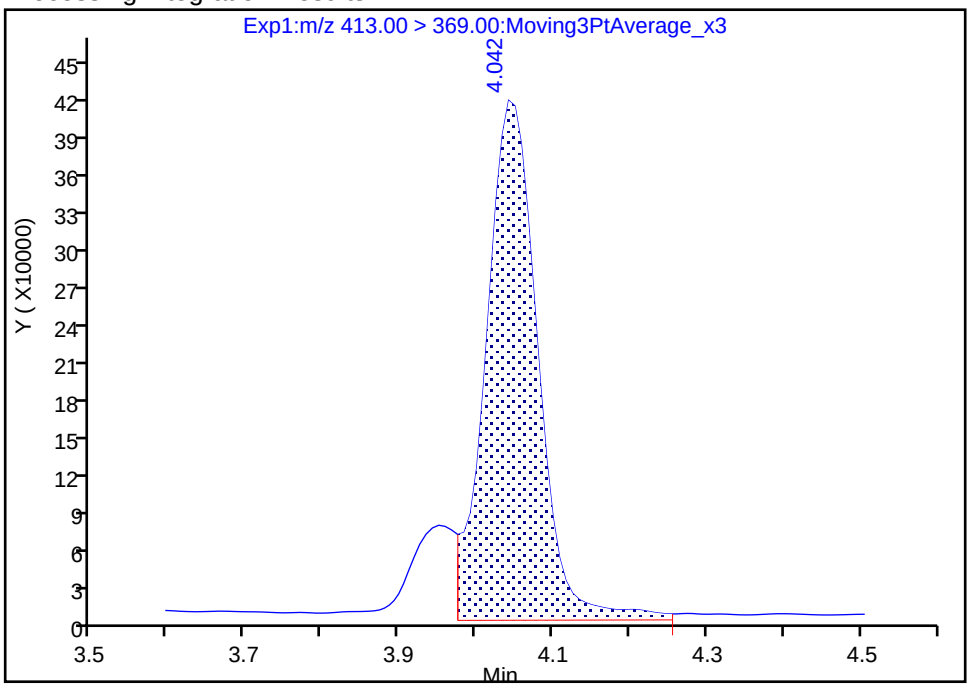
| Injection Date: | 10-Sep-2020 19:13:45 | Instrument ID: | A13 | | |
| Lims ID: | 460-217659-D-5-A | Lab Sample ID: | 320-217659-5 | | |
| Client ID: | MW-214 | | | | |
| Operator ID: | SACINSTLCMS01 | ALS Bottle#: | 39 | Worklist Smp#: | 9 |
| Injection Vol: | 20.0 ul | Dil. Factor: | 1.0000 | | |
| Method: | PFAS_A13 | Limit Group: | LC PFC ICAL | | |
| Column: | Gemini C18 3um 3 x 100mm ( 3.00 mm ) | Detector | EXP1 | | |

## 26 Perfluorooctanoic acid, CAS: 335-67-1

Signal: 1

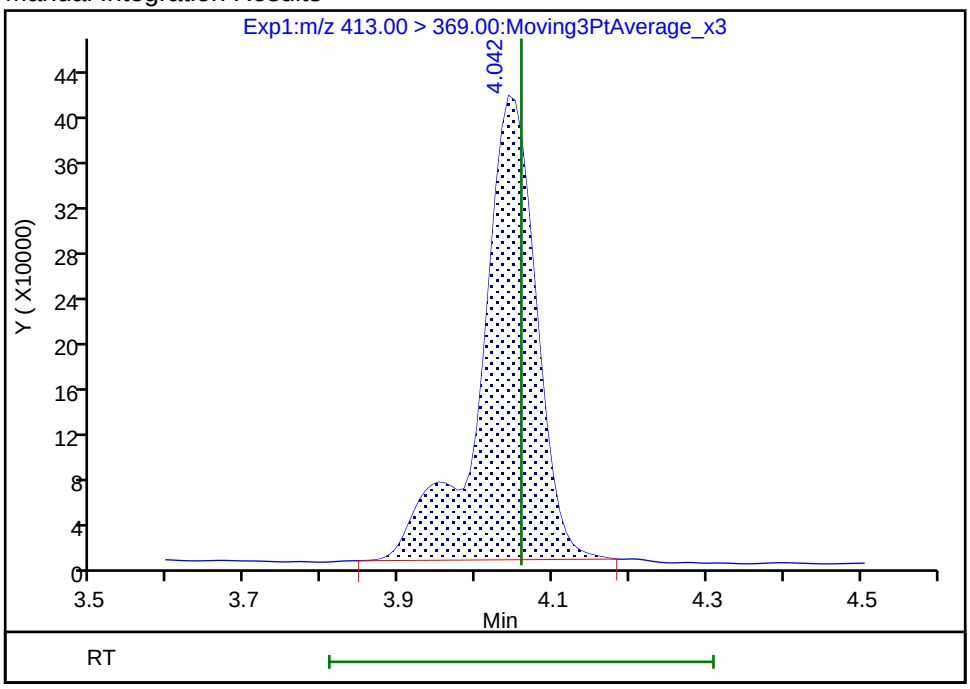
Processing Integration Results

RT: 4.04
Area: 1923914
Amount: 0.584332
Amount Units: ng/ml




Manual Integration Results

RT: 4.04
Area: 2049962
Amount: 0.622615
Amount Units: ng/ml




Reviewer: mongkols, 11-Sep-2020 10:15:27

Audit Action: Manually Integrated Audit Reason: Isomers

Eurofins TestAmerica, Sacramento

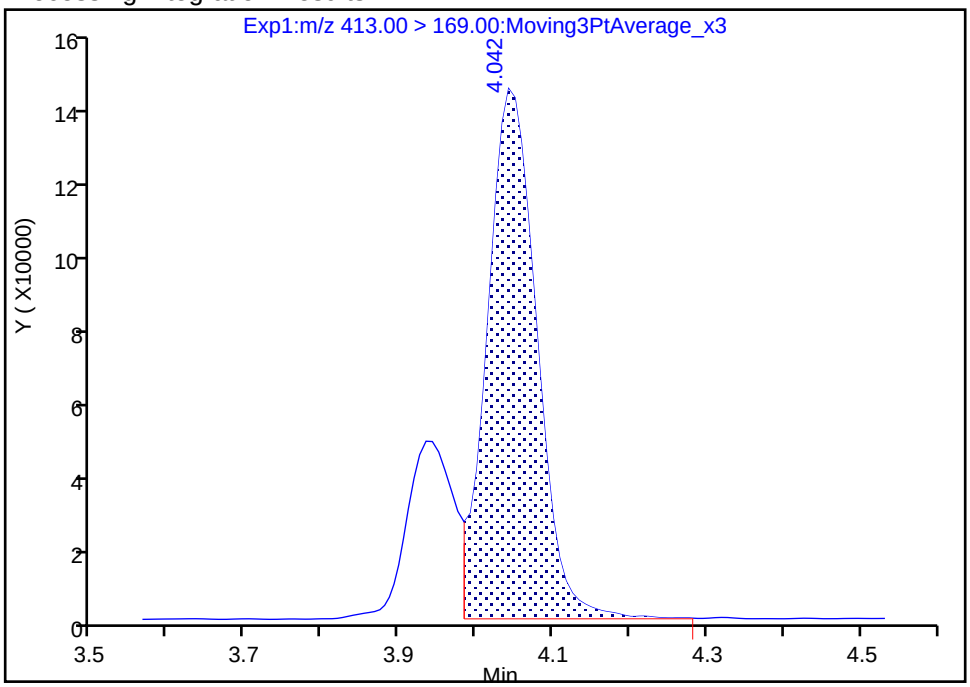
| | | | | | |
|---|---|---|---|---|---|
| Data File: | \\chromfs\Sacramento\ChromData\A13\20200910-103052.b\2020.09.10_A13_PFC_A_066.d | | | | |
| Injection Date: | 10-Sep-2020 19:13:45 | Instrument ID: | A13 | | |
| Lims ID: | 460-217659-D-5-A | Lab Sample ID: | 320-217659-5 | | |
| Client ID: | MW-214 | | | | |
| Operator ID: | SACINSTLCMS01 | ALS Bottle#: | 39 | Worklist Smp#: | 9 |
| Injection Vol: | 20.0 ul | Dil. Factor: | 1.0000 | | |
| Method: | PFAS_A13 | Limit Group: | LC PFC ICAL | | |
| Column: | Gemini C18 3um 3 x 100mm ( 3.00 mm ID) | Detector | EXP1 | | |

## 26 Perfluorooctanoic acid, CAS: 335-67-1

Signal: 2

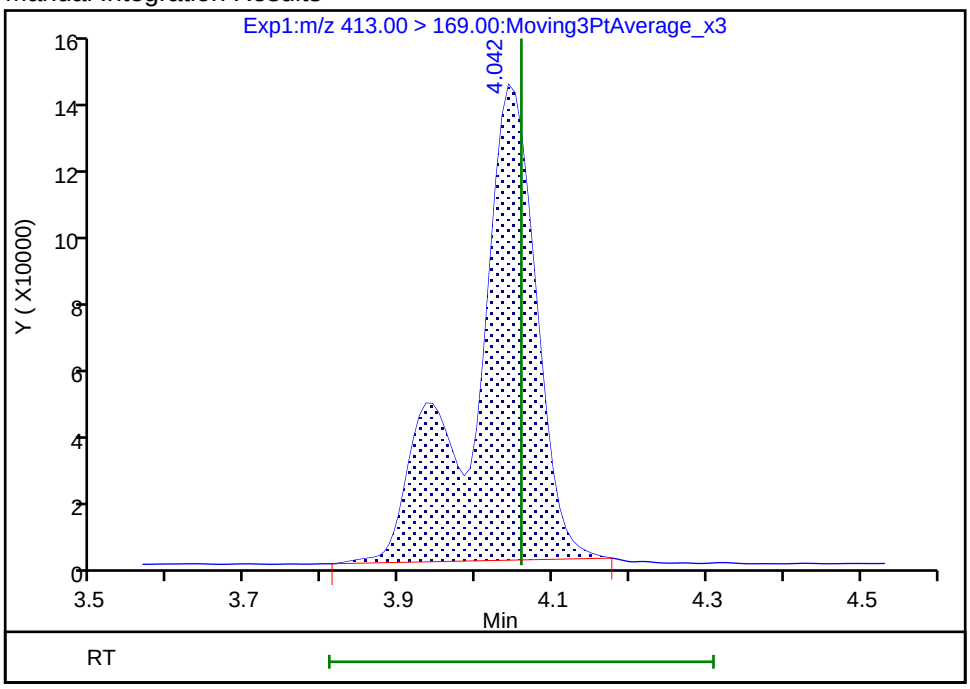
Processing Integration Results

RT: 4.04
Area: 616979
Amount: 0.584332
Amount Units: ng/ml




Manual Integration Results

RT: 4.04
Area: 790759
Amount: 0.622615
Amount Units: ng/ml




Reviewer: mongkols, 11-Sep-2020 10:15:30
Audit Action: Manually Integrated Audit Reason: Isomers

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

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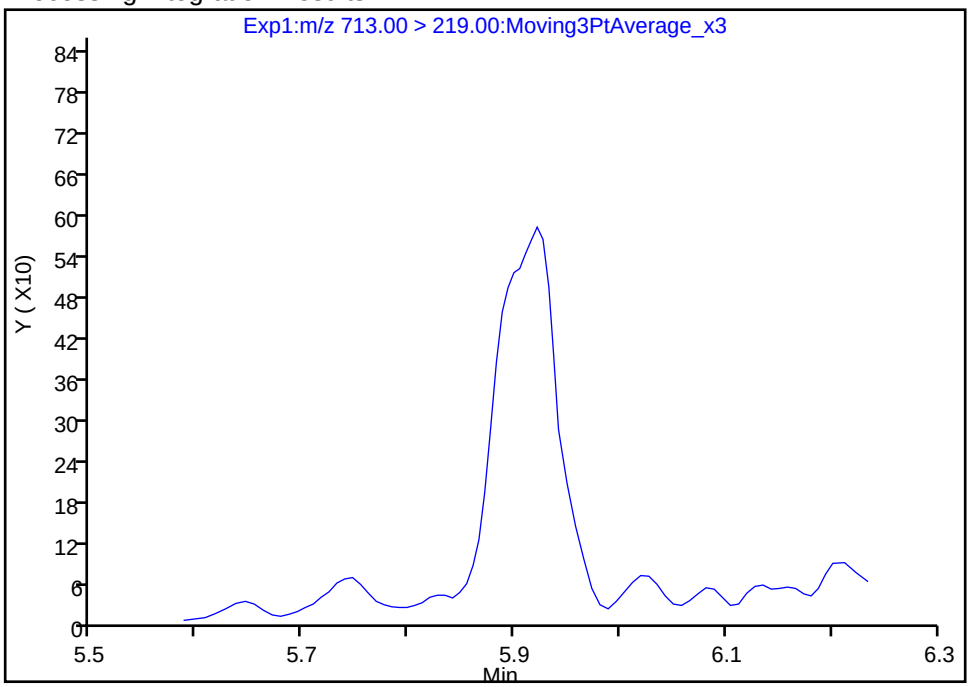
| Injection Date: | 10-Sep-2020 19:13:45 | Instrument ID: | A13 | | |
| Lims ID: | 460-217659-D-5-A | Lab Sample ID: | 320-217659-5 | | |
| Client ID: | MW-214 | | | | |
| Operator ID: | SACINSTLCMS01 | ALS Bottle#: | 39 | Worklist Smp#: | 9 |
| Injection Vol: | 20.0 ul | Dil. Factor: | 1.0000 | | |
| Method: | PFAS_A13 | Limit Group: | LC PFC ICAL | | |
| Column: | Gemini C18 3um 3 x 100mm ( 3.00 mm) | Detector | EXP1 | | |

## 62 Perfluorotetradecanoic acid, CAS: 376-06-7

Signal: 2

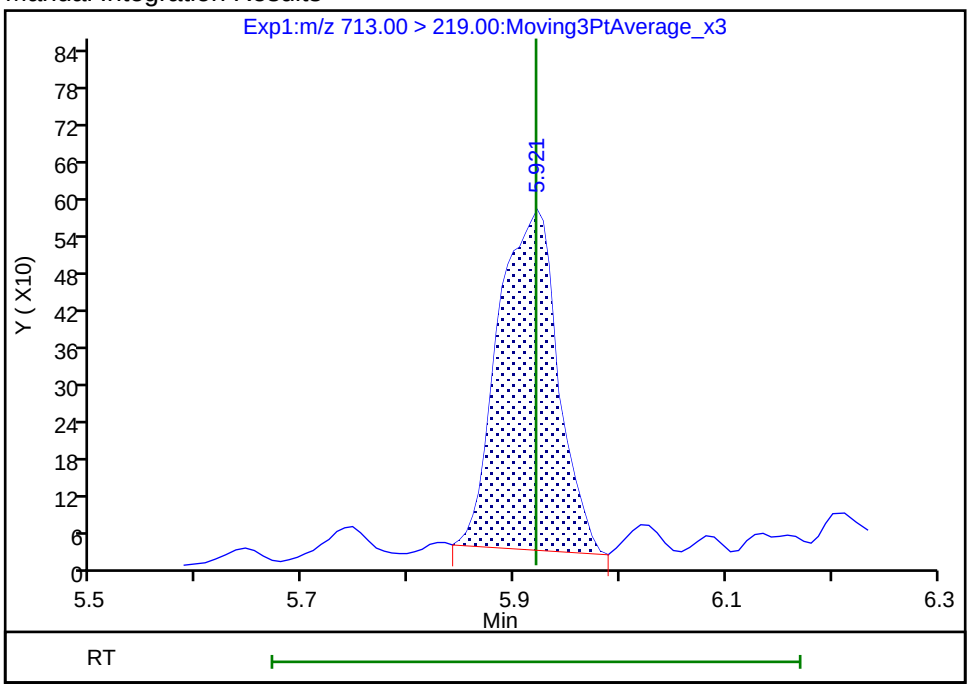
Not Detected
Expected RT: 5.92

Processing Integration Results




Manual Integration Results

RT: 5.92
Area: 2170
Amount: 0.005910
Amount Units: ng/ml




Reviewer: mongkols, 11-Sep-2020 10:16:04
Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

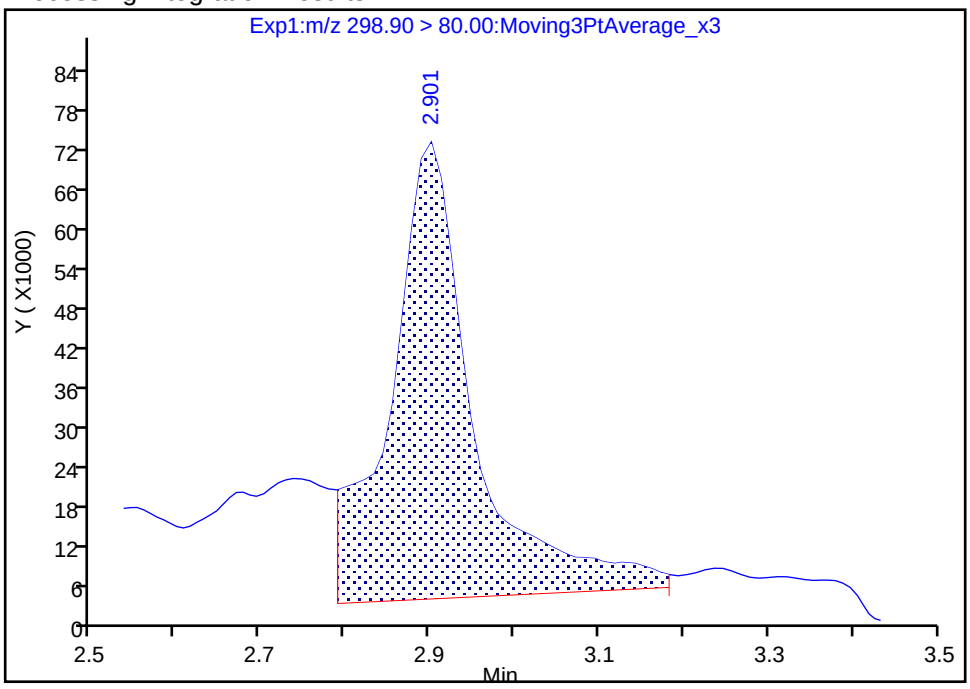
| | | | | | |
|---|---|---|---|---|---|
| Data File: | \\chromfs\Sacramento\ChromData\A13\20200910-103052.b\2020.09.10_A13_PFC_A_066.d | | | | |
| Injection Date: | 10-Sep-2020 19:13:45 | Instrument ID: | A13 | | |
| Lims ID: | 460-217659-D-5-A | Lab Sample ID: | 320-217659-5 | | |
| Client ID: | MW-214 | | | | |
| Operator ID: | SACINSTLCMS01 | ALS Bottle#: | 39 | Worklist Smp#: | 9 |
| Injection Vol: | 20.0 ul | Dil. Factor: | 1.0000 | | |
| Method: | PFAS_A13 | Limit Group: | LC PFC ICAL | | |
| Column: | Gemini C18 3um 3 x 100mm ( 3.00 mm ID) | Detector | EXP1 | | |

## 6 Perfluorobutanesulfonic acid, CAS: 375-73-5

Signal: 1

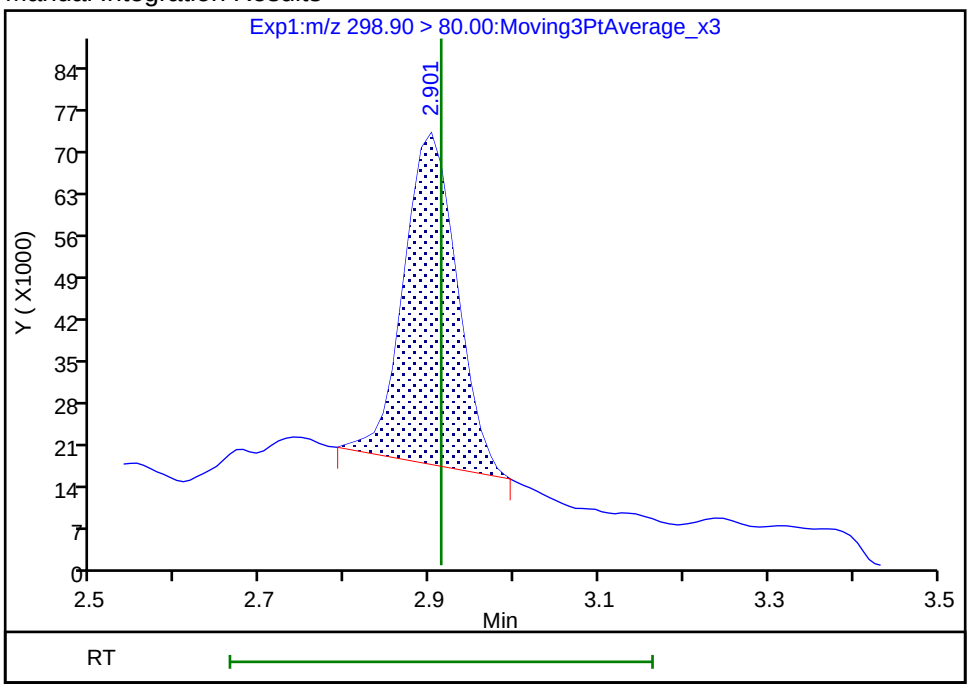
Processing Integration Results

RT: 2.90
Area: 479116
Amount: 0.157246
Amount Units: ng/ml




Manual Integration Results

RT: 2.90
Area: 244322
Amount: 0.080187
Amount Units: ng/ml




Reviewer: mongkols, 11-Sep-2020 10:14:41
Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

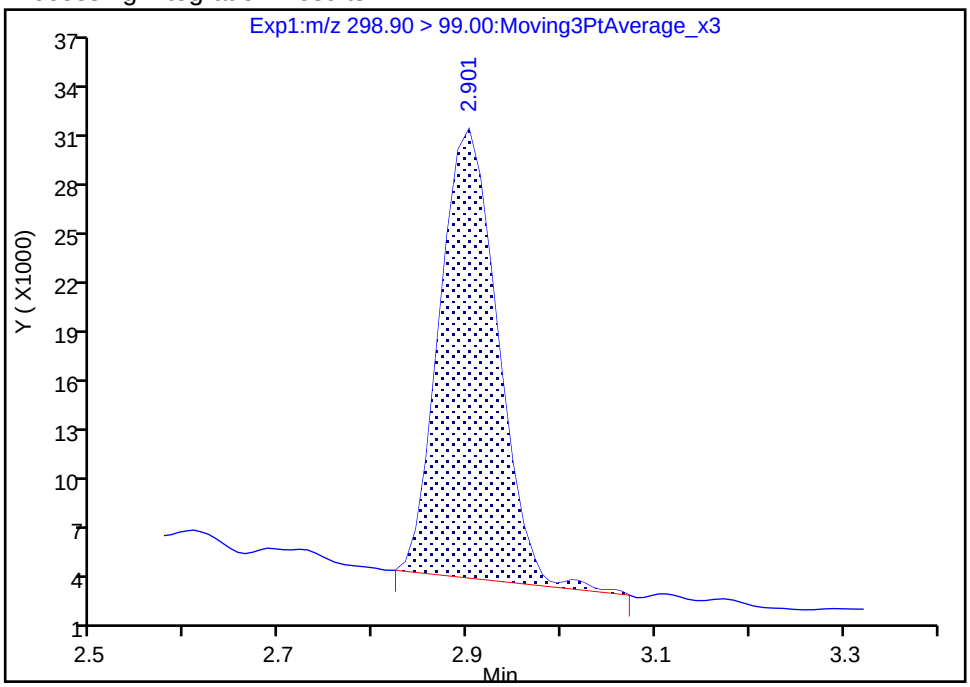
| | | | | | |
|---|---|---|---|---|---|
| Data File: | \\chromfs\Sacramento\ChromData\A13\20200910-103052.b\2020.09.10_A13_PFC_A_066.d | | | | |
| Injection Date: | 10-Sep-2020 19:13:45 | Instrument ID: | A13 | | |
| Lims ID: | 460-217659-D-5-A | Lab Sample ID: | 320-217659-5 | | |
| Client ID: | MW-214 | | | | |
| Operator ID: | SACINSTLCMS01 | ALS Bottle#: | 39 | Worklist Smp#: | 9 |
| Injection Vol: | 20.0 ul | Dil. Factor: | 1.0000 | | |
| Method: | PFAS_A13 | Limit Group: | LC PFC ICAL | | |
| Column: | Gemini C18 3um 3 x 100mm ( 3.00 mm ID) | Detector | EXP1 | | |

## 6 Perfluorobutanesulfonic acid, CAS: 375-73-5

Signal: 2

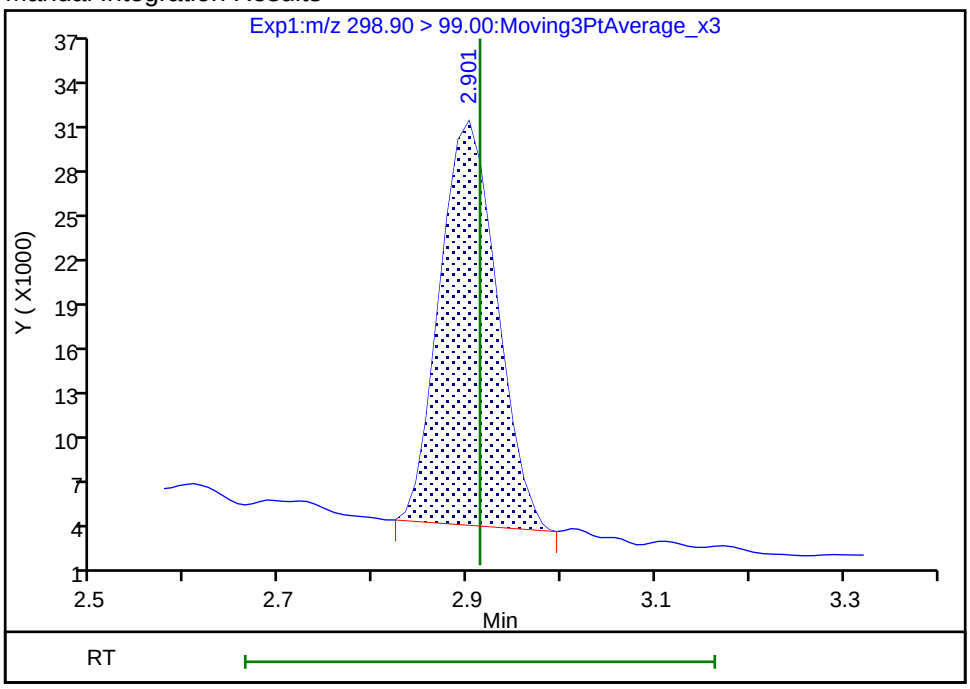
Processing Integration Results

RT: 2.90
Area: 117728
Amount: 0.157246
Amount Units: ng/ml




Manual Integration Results

RT: 2.90
Area: 115005
Amount: 0.080187
Amount Units: ng/ml




Reviewer: mongkols, 11-Sep-2020 10:14:44
Audit Action: Manually Integrated Audit Reason: Baseline

Eurofins TestAmerica, Sacramento

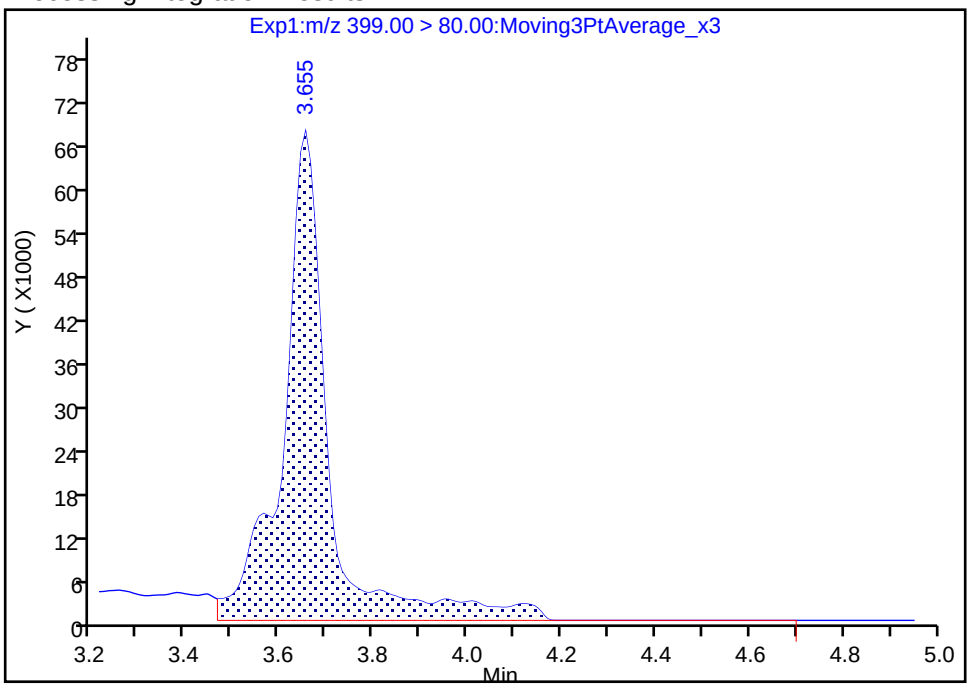
| | | | | | |
|---|---|---|---|---|---|
| Data File: | \\chromfs\Sacramento\ChromData\A13\20200910-103052.b\2020.09.10_A13_PFC_A_066.d | | | | |
| Injection Date: | 10-Sep-2020 19:13:45 | Instrument ID: | A13 | | |
| Lims ID: | 460-217659-D-5-A | Lab Sample ID: | 320-217659-5 | | |
| Client ID: | MW-214 | | | | |
| Operator ID: | SACINSTLCMS01 | ALS Bottle#: | 39 | Worklist Smp#: | 9 |
| Injection Vol: | 20.0 ul | Dil. Factor: | 1.0000 | | |
| Method: | PFAS_A13 | Limit Group: | LC PFC ICAL | | |
| Column: | Gemini C18 3um 3 x 100mm ( 3.00 mm) | Detector | EXP1 | | |

## 18 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 1

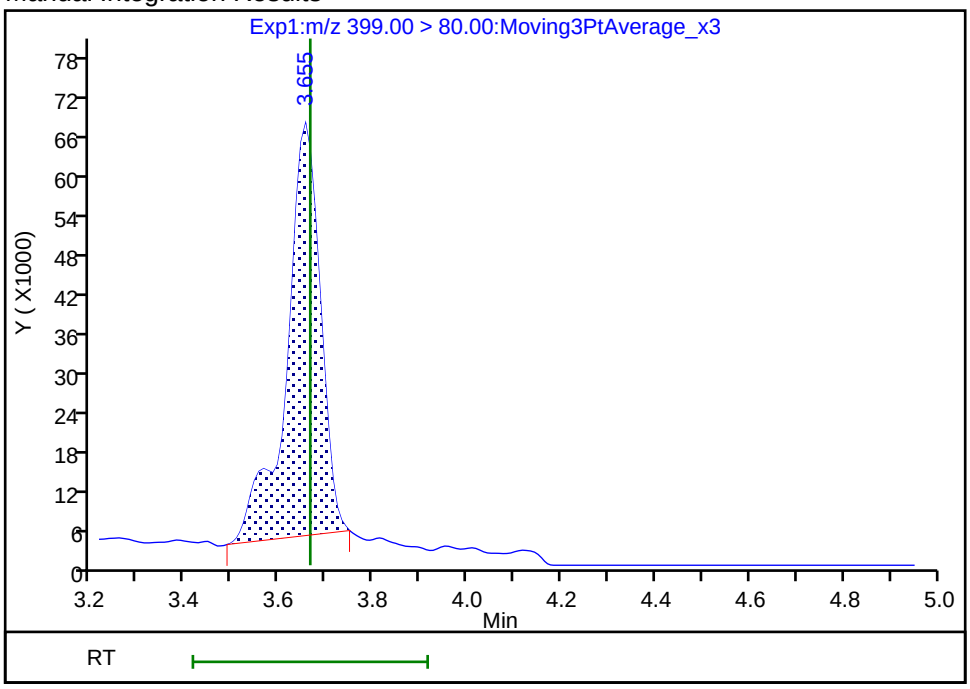
Processing Integration Results

RT: 3.65
Area: 453656
Amount: 0.189148
Amount Units: ng/ml




Manual Integration Results

RT: 3.65
Area: 314579
Amount: 0.131161
Amount Units: ng/ml




Reviewer: mongkols, 11-Sep-2020 10:15:09
Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

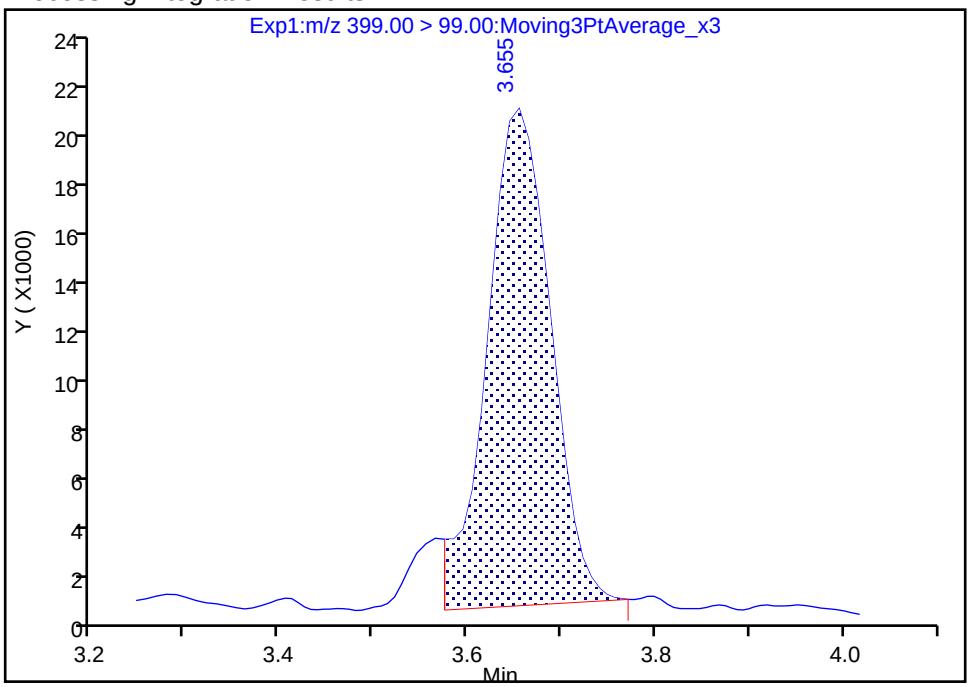
| | | | | | |
|---|---|---|---|---|---|
| Data File: | \\chromfs\Sacramento\ChromData\A13\20200910-103052.b\2020.09.10_A13_PFC_A_066.d | | | | |
| Injection Date: | 10-Sep-2020 19:13:45 | Instrument ID: | A13 | | |
| Lims ID: | 460-217659-D-5-A | Lab Sample ID: | 320-217659-5 | | |
| Client ID: | MW-214 | | | | |
| Operator ID: | SACINSTLCMS01 | ALS Bottle#: | 39 | Worklist Smp#: | 9 |
| Injection Vol: | 20.0 ul | Dil. Factor: | 1.0000 | | |
| Method: | PFAS_A13 | Limit Group: | LC PFC ICAL | | |
| Column: | Gemini C18 3um 3 x 100mm ( 3.00 mm ID) | Detector | EXP1 | | |

## 18 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 2

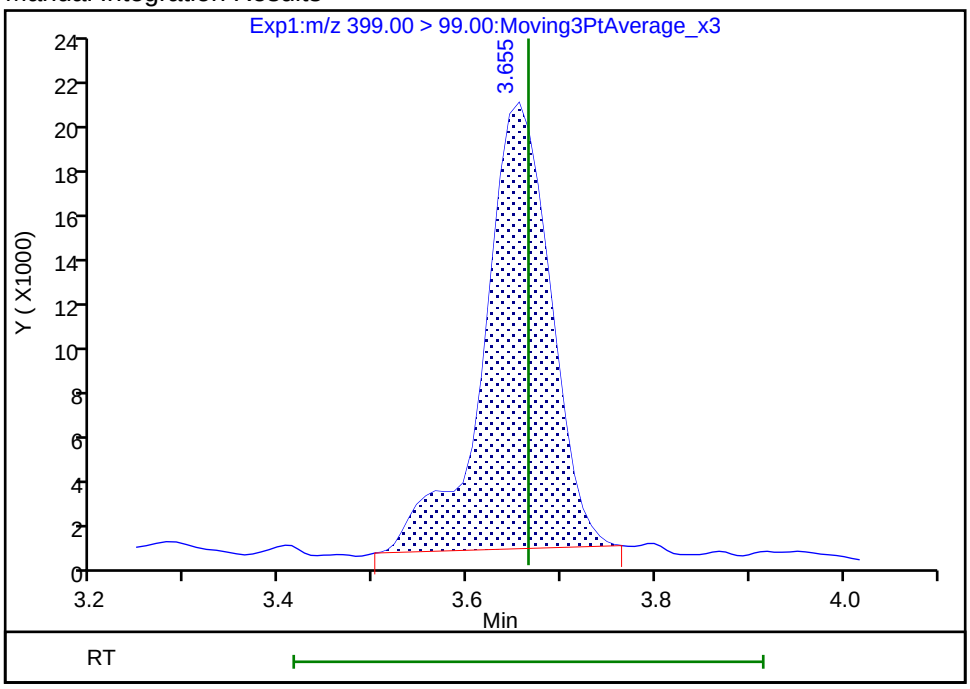
Processing Integration Results

RT: 3.65
Area: 93902
Amount: 0.189148
Amount Units: ng/ml




Manual Integration Results

RT: 3.65
Area: 98726
Amount: 0.131161
Amount Units: ng/ml




Reviewer: mongkols, 11-Sep-2020 10:15:12
Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

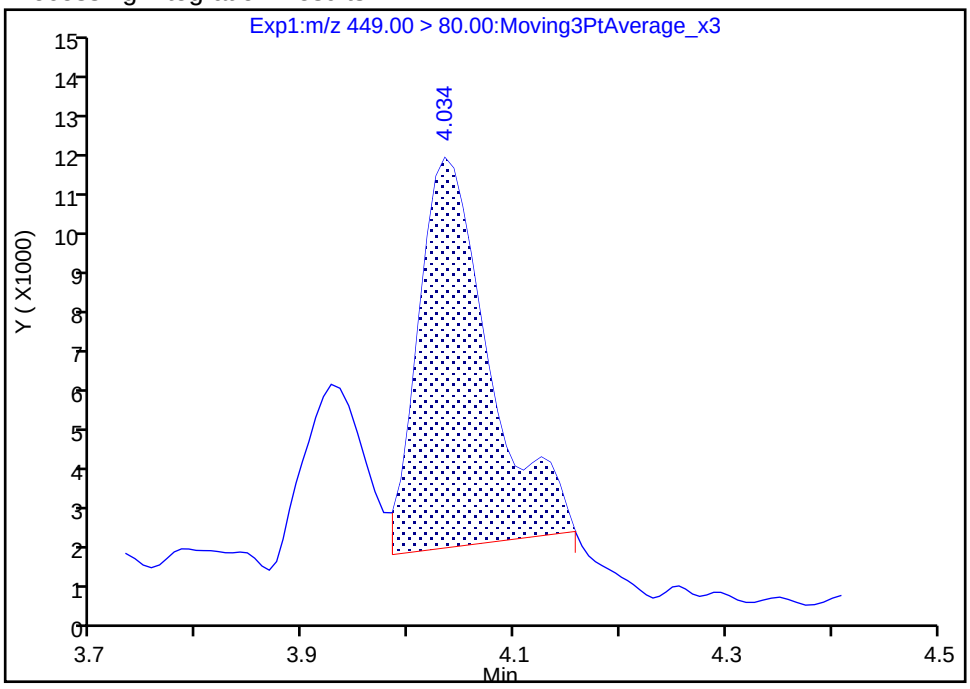
| | | | | | |
|---|---|---|---|---|---|
| Data File: | \\chromfs\Sacramento\ChromData\A13\20200910-103052.b\2020.09.10_A13_PFC_A_066.d | | | | |
| Injection Date: | 10-Sep-2020 19:13:45 | Instrument ID: | A13 | | |
| Lims ID: | 460-217659-D-5-A | Lab Sample ID: | 320-217659-5 | | |
| Client ID: | MW-214 | | | | |
| Operator ID: | SACINSTLCMS01 | ALS Bottle#: | 39 | Worklist Smp#: | 9 |
| Injection Vol: | 20.0 ul | Dil. Factor: | 1.0000 | | |
| Method: | PFAS_A13 | Limit Group: | LC PFC ICAL | | |
| Column: | Gemini C18 3um 3 x 100mm ( 3.00 mm ) | Detector | EXP1 | | |

## 22 Perfluoroheptanesulfonic acid, CAS: 375-92-8

Signal: 1

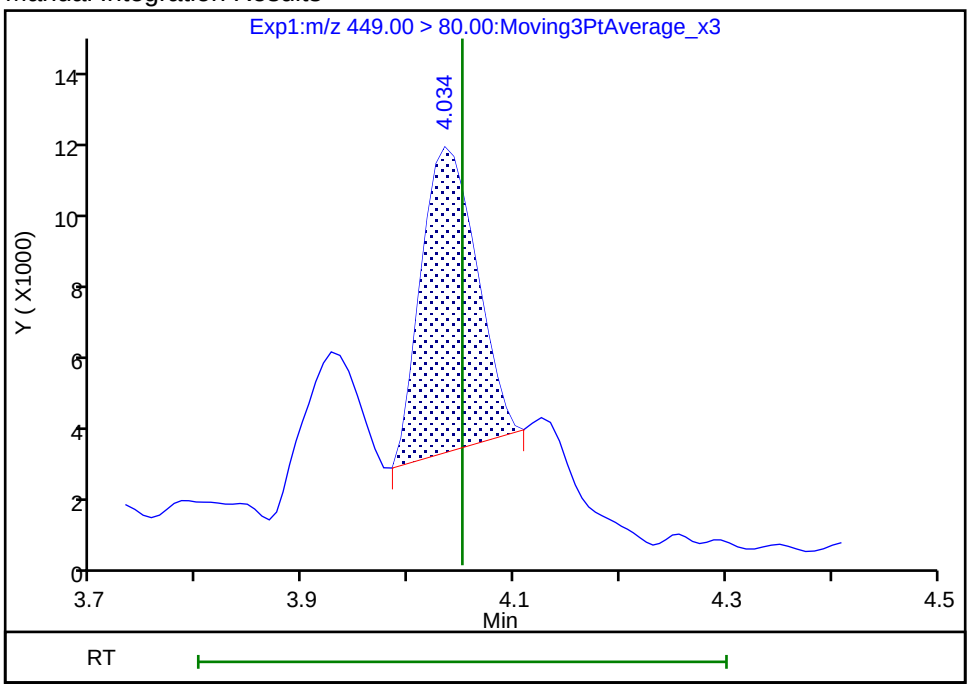
Processing Integration Results

RT: 4.03
Area: 43113
Amount: 0.026411
Amount Units: ng/ml




Manual Integration Results

RT: 4.03
Area: 29410
Amount: 0.018016
Amount Units: ng/ml




Reviewer: mongkols, 11-Sep-2020 10:15:18

Audit Action: Manually Integrated Audit Reason: Baseline

Eurofins TestAmerica, Sacramento

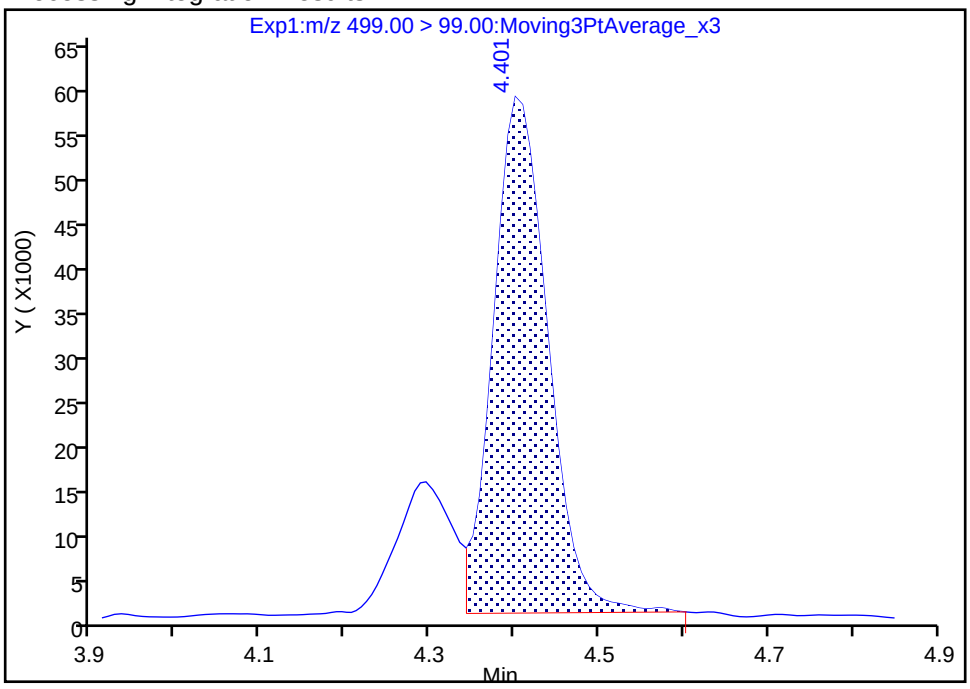
| | | | | | |
|---|---|---|---|---|---|
| Data File: | \\chromfs\Sacramento\ChromData\A13\20200910-103052.b\2020.09.10_A13_PFC_A_066.d | | | | |
| Injection Date: | 10-Sep-2020 19:13:45 | Instrument ID: | A13 | | |
| Lims ID: | 460-217659-D-5-A | Lab Sample ID: | 320-217659-5 | | |
| Client ID: | MW-214 | | | | |
| Operator ID: | SACINSTLCMS01 | ALS Bottle#: | 39 | Worklist Smp#: | 9 |
| Injection Vol: | 20.0 ul | Dil. Factor: | 1.0000 | | |
| Method: | PFAS_A13 | Limit Group: | LC PFC ICAL | | |
| Column: | Gemini C18 3um 3 x 100mm ( 3.00 mm ) | Detector | EXP1 | | |

## 28 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 2

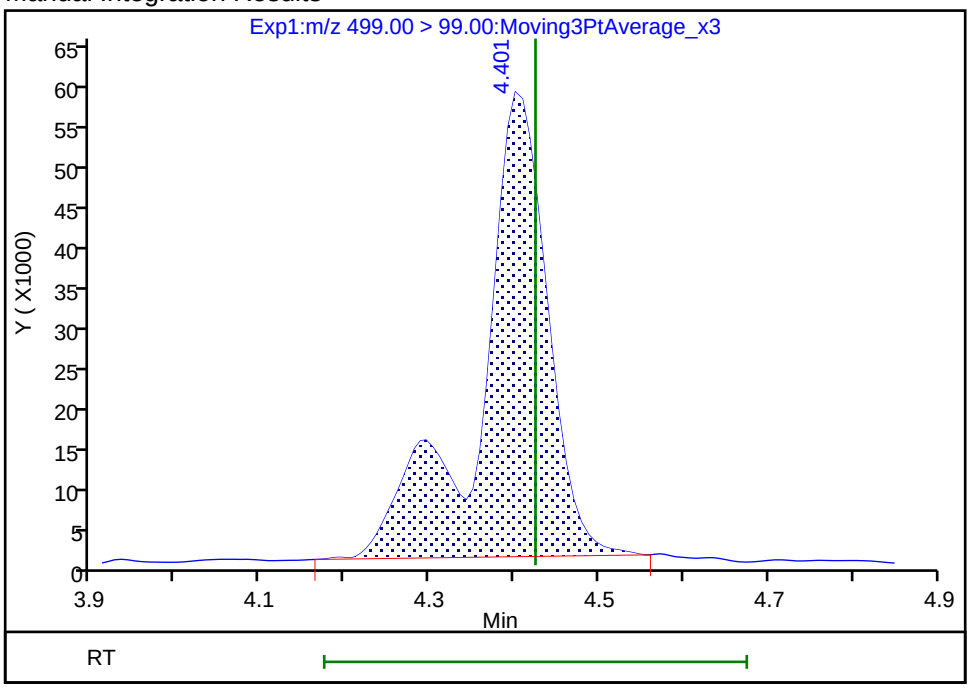
Processing Integration Results

RT: 4.40
Area: 259236
Amount: 1.124582
Amount Units: ng/ml




Manual Integration Results

RT: 4.40
Area: 321763
Amount: 1.124582
Amount Units: ng/ml




Reviewer: mongkols, 11-Sep-2020 10:15:36
Audit Action: Manually Integrated Audit Reason: Isomers

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

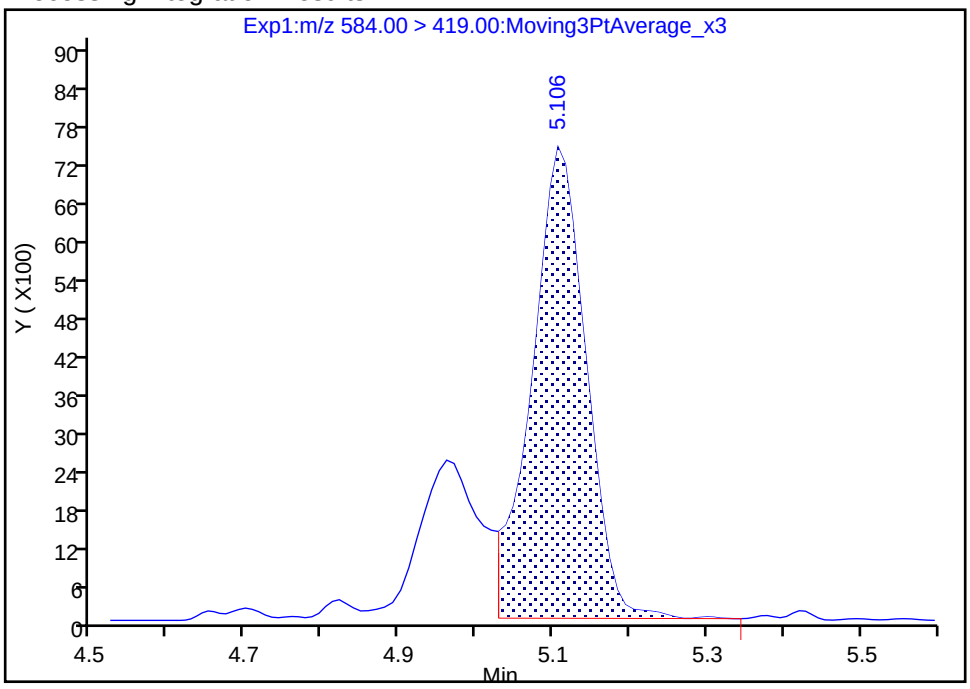
| | | | | | |
|---|---|---|---|---|---|
| Data File: | \\chromfs\Sacramento\ChromData\A13\20200910-103052.b\2020.09.10_A13_PFC_A_066.d | | | | |
| Injection Date: | 10-Sep-2020 19:13:45 | Instrument ID: | A13 | | |
| Lims ID: | 460-217659-D-5-A | Lab Sample ID: | 320-217659-5 | | |
| Client ID: | MW-214 | | | | |
| Operator ID: | SACINSTLCMS01 | ALS Bottle#: | 39 | Worklist Smp#: | 9 |
| Injection Vol: | 20.0 ul | Dil. Factor: | 1.0000 | | |
| Method: | PFAS_A13 | Limit Group: | LC PFC ICAL | | |
| Column: | Gemini C18 3um 3 x 100mm ( 3.00 mm ID) | Detector | EXP1 | | |

## 48 NEtFOSA, CAS: 2991-50-6

Signal: 1

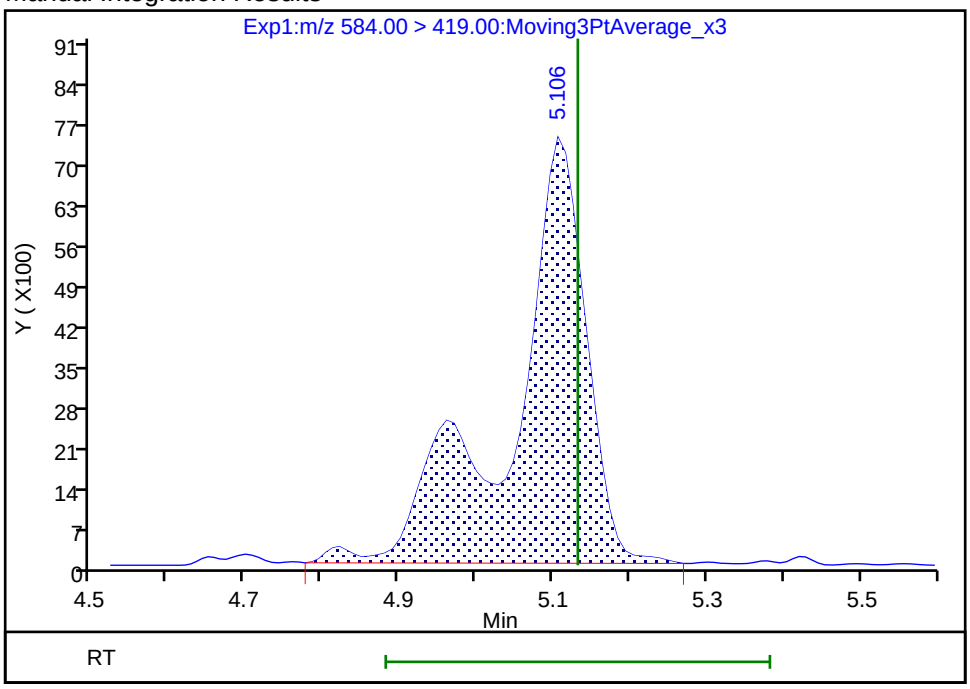
Processing Integration Results

RT: 5.11
Area: 36192
Amount: 0.025770
Amount Units: ng/ml




Manual Integration Results

RT: 5.11
Area: 50354
Amount: 0.035853
Amount Units: ng/ml




Reviewer: mongkols, 11-Sep-2020 10:15:50

Audit Action: Manually Integrated Audit Reason: Isomers

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento  Job No.: 460-217659-1

SDG No.:

Client Sample ID: MW-216  Lab Sample ID: 460-217659-6

Matrix: Water  Lab File ID: 2020.09.10_A13_PFC_A_067.d

Analysis Method: 537 (modified)  Date Collected: 09/03/2020 13:30

Extraction Method: 3535  Date Extracted: 09/09/2020 18:39

Sample wt/vol: 272.8(mL)  Date Analyzed: 09/10/2020 19:23

Con. Extract Vol.: 10.00(mL)  Dilution Factor: 1

Injection Volume: 20(uL)  GC Column: GeminiC18 3x100 ID: 3(mm)

% Moisture:  GPC Cleanup:(Y/N) N

Analysis Batch No.: 411143  Units: ng/L

| CAS NO. | COMPOUND NAME | RESULT | Q | RL | MDL |
|---|---|---|---|---|---|
| 375-22-4 | Perfluorobutanoic acid (PFBA) | 4.37 | B | 1.83 | 0.32 |
| 2706-90-3 | Perfluoropentanoic acid (PFPeA) | 2.52 | | 1.83 | 0.45 |
| 307-24-4 | Perfluorohexanoic acid (PFHxA) | 2.62 | | 1.83 | 0.53 |
| 375-85-9 | Perfluoroheptanoic acid (PFHpA) | 1.88 | | 1.83 | 0.23 |
| 335-67-1 | Perfluorooctanoic acid (PFOA) | 9.39 | | 1.83 | 0.78 |
| 375-95-1 | Perfluorononanoic acid (PFNA) | 0.73 | J | 1.83 | 0.25 |
| 335-76-2 | Perfluorodecanoic acid (PFDA) | 0.34 | J | 1.83 | 0.28 |
| 2058-94-8 | Perfluoroundecanoic acid (PFUnA) | 1.01 | U | 1.83 | 1.01 |
| 307-55-1 | Perfluorododecanoic acid (PFDoA) | 0.50 | U | 1.83 | 0.50 |
| 72629-94-8 | Perfluorotridecanoic acid (PFTriA) | 1.19 | U | 1.83 | 1.19 |
| 376-06-7 | Perfluorotetradecanoic acid (PFTeA) | 0.27 | U | 1.83 | 0.27 |
| 375-73-5 | Perfluorobutanesulfonic acid (PFBS) | 1.19 | J | 1.83 | 0.18 |
| 355-46-4 | Perfluorohexanesulfonic acid (PFHxS) | 2.96 | B | 1.83 | 0.16 |
| 375-92-8 | Perfluoroheptanesulfonic Acid (PFHpS) | 0.17 | U | 1.83 | 0.17 |
| 1763-23-1 | Perfluorooctanesulfonic acid (PFOS) | 24.8 | | 1.83 | 0.49 |
| 335-77-3 | Perfluorodecanesulfonic acid (PFDS) | 0.29 | U | 1.83 | 0.29 |
| 754-91-6 | Perfluorooctanesulfonamide (FOSA) | 1.06 | J | 1.83 | 0.32 |
| 2355-31-9 | N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA) | 2.84 | U | 18.3 | 2.84 |
| 2991-50-6 | N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA) | 1.74 | U | 18.3 | 1.74 |
| 27619-97-2 | 6:2 FTS | 1.83 | U | 18.3 | 1.83 |
| 39108-34-4 | 8:2 FTS | 1.83 | U | 18.3 | 1.83 |

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento  Job No.: 460-217659-1

SDG No.:

Client Sample ID: MW-216  Lab Sample ID: 460-217659-6

Matrix: Water  Lab File ID: 2020.09.10_A13_PFC_A_067.d

Analysis Method: 537 (modified)  Date Collected: 09/03/2020 13:30

Extraction Method: 3535  Date Extracted: 09/09/2020 18:39

Sample wt/vol: 272.8(mL)  Date Analyzed: 09/10/2020 19:23

Con. Extract Vol.: 10.00(mL)  Dilution Factor: 1

Injection Volume: 20(uL)  GC Column: GeminiC18 3x100 ID: 3(mm)

% Moisture:  GPC Cleanup:(Y/N) N

Analysis Batch No.: 411143  Units: ng/L

| CAS NO. | ISOTOPE DILUTION | %REC | Q | LIMITS |
|---|---|---|---|---|
| STL00992 | 13C4 PFBA | 34 | | 25-150 |
| STL01893 | 13C5 PFPeA | 37 | | 25-150 |
| STL00993 | 13C2 PFHxA | 43 | | 25-150 |
| STL01892 | 13C4 PFHpA | 43 | | 25-150 |
| STL00990 | 13C4 PFOA | 41 | | 25-150 |
| STL00995 | 13C5 PFNA | 44 | | 25-150 |
| STL00996 | 13C2 PFDA | 42 | | 25-150 |
| STL00997 | 13C2 PFUnA | 35 | | 25-150 |
| STL00998 | 13C2 PFDoA | 31 | | 25-150 |
| STL02116 | 13C2 PFTeDA | 28 | | 25-150 |
| STL02337 | 13C3 PFBS | 44 | | 25-150 |
| STL00994 | 18O2 PFHxS | 48 | | 25-150 |
| STL00991 | 13C4 PFOS | 43 | | 25-150 |
| STL01056 | 13C8 FOSA | 39 | | 25-150 |
| STL02118 | d3-NMeFOSAA | 35 | | 25-150 |
| STL02117 | d5-NEtFOSAA | 38 | | 25-150 |
| STL02279 | M2-6:2 FTS | 59 | | 25-150 |
| STL02280 | M2-8:2 FTS | 55 | | 25-150 |

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\A13\20200910-103052.b\2020.09.10_A13_PFC_A_067.d
Lims ID: 460-217659-D-6-A
Client ID: MW-216
Sample Type: Client
Inject. Date: 10-Sep-2020 19:23:10 ALS Bottle#: 40 Worklist Smp#: 10
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Sample Info: 460-217659-d-6-a
Misc. Info.: Plate: 1 Rack: 4
Operator ID: SACINSTLCMS01 Instrument ID: A13

Method: \\chromfs\Sacramento\ChromData\A13\20200910-103052.b\PFAS_A13.m
Limit Group: LC PFC ICAL
Last Update: 11-Sep-2020 10:23:17 Calib Date: 08-Sep-2020 18:58:15
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\A13\20200908-102913.b\2020.09.08_A13_PFC_ICALX_010.d

Column 1 : Gemini C18 3um 3 x 100mm ( 3.00 mm) Det: EXP1
Process Host: CTX1053

First Level Reviewer: mongkols Date: 11-Sep-2020 10:23:17
Ratio Calibration: CCV Sample: \\chromfs\Sacramento\ChromData\A13\20200910-103052.b\2020.09.10_A13_PFC_A_058.d

| Signal | RT | EXP RT | DLT RT | REL RT | Response | Amount ng/ml | Ratio(Limits) | %Rec | S/N | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| D 1 13C4 PFBA | | | | | | | | | | |
| 217.00 > 172.00 | 2.467 | 2.475 | -0.008 | 0.609 | 2855245 | 0.8486 | | 33.9 | 3157 | |
| 2 Perfluorobutanoic acid | | | | | | | | | | M |
| 212.90 > 169.00 | 2.475 | 2.482 | -0.007 | 1.003 | 101119 | 0.1191 | | | 4.3 | M |
| D 4 13C5 PFPeA | | | | | | | | | | |
| 267.90 > 223.00 | 2.867 | 2.867 | -0.001 | 0.708 | 2415923 | 0.9212 | | 36.8 | 1229 | |
| 5 Perfluoropentanoic acid | | | | | | | | | | M |
| 262.90 > 219.00 | 2.867 | 2.867 | -0.001 | 1.000 | 68309 | 0.0688 | | | 0.7 | M |
| D 14 13C3 PFBS | | | | | | | | | | |
| 301.90 > 80.00 | 2.901 | 2.913 | -0.012 | 0.716 | 3390603 | 1.03 | | 44.3 | 346 | |
| 6 Perfluorobutanesulfonic acid | | | | | | | | | | M |
| 298.90 > 80.00 | 2.901 | 2.913 | -0.012 | 1.000 | 46112 | 0.0323 | Target=2.29 | | 1.9 | M |
| 298.90 > 99.00 | 2.901 | 2.913 | -0.012 | 1.000 | 22933 | | 2.01(1.15-3.44) | | 1.8 | M |
| 10 Perfluorohexanoic acid | | | | | | | | | | M |
| 313.00 > 269.00 | 3.247 | 3.258 | -0.011 | 1.000 | 93123 | 0.0716 | Target=13.52 | | 1.5 | M |
| 313.00 > 119.00 | 3.258 | 3.258 | 0.0 | 1.003 | 7979 | | 11.67(6.76-20.28) | | 2.3 | |
| D 9 13C2 PFHxA | | | | | | | | | | |
| 315.00 > 270.00 | 3.247 | 3.258 | -0.011 | 0.802 | 3500131 | 1.08 | | 43.2 | 1304 | |
| D 17 18O2 PFHxS | | | | | | | | | | |
| 403.00 > 84.00 | 3.655 | 3.665 | -0.010 | 0.902 | 2437760 | 1.13 | | 47.8 | 1996 | |
| 16 Perfluoroheptanoic acid | | | | | | | | | | M |
| 363.00 > 319.00 | 3.655 | 3.665 | -0.010 | 1.000 | 70735 | 0.0514 | Target=3.87 | | 2.3 | M |
| 363.00 > 169.00 | 3.655 | 3.665 | -0.010 | 1.000 | 18894 | | 3.74(1.93-5.80) | | 6.8 | M |
| 18 Perfluorohexanesulfonic acid | | | | | | | | | | M |
| 399.00 > 80.00 | 3.655 | 3.665 | -0.010 | 1.000 | 92620 | 0.0808 | Target=3.08 | | 11.8 | M |
| 399.00 > 99.00 | 3.655 | 3.665 | -0.010 | 1.000 | 28090 | | 3.30(1.54-4.62) | | 7.9 | M |
| D 15 13C4 PFHpA | | | | | | | | | | |
| 367.00 > 322.00 | 3.655 | 3.665 | -0.010 | 0.902 | 3403337 | 1.07 | | 42.7 | 2665 | |

| Signal | RT | EXP RT | DLT RT | REL RT | Response | Amount ng/ml | Ratio(Limits) | %Rec | S/N | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| D 20 M2-6:2 FTS | | | | | | | | | | |
| 429.00 > 81.00 | 4.034 | 4.042 | -0.008 | 0.996 | 1305898 | 1.40 | | 59.1 | 366 | |
| 21 6:2 FTS | | | | | | | | | | |
| 427.00 > 407.00 | 4.034 | 4.042 | -0.008 | 1.000 | 18186 | 0.0137 | | | 11.7 | |
| D 24 13C4 PFOA | | | | | | | | | | |
| 417.00 > 372.00 | 4.051 | 4.059 | -0.008 | 1.000 | 4024643 | 1.03 | | 41.3 | 4161 | |
| 26 Perfluorooctanoic acid | | | | | | | | | | M |
| 413.00 > 369.00 | 4.051 | 4.059 | -0.008 | 1.000 | 422072 | 0.2563 | Target=2.99 | | 20.5 | M |
| 413.00 > 169.00 | 4.051 | 4.059 | -0.008 | 1.000 | 160630 | | 2.63(1.50-4.49) | | 82.3 | M |
| * 25 13C2 PFOA | | | | | | | | | | |
| 415.00 > 370.00 | 4.051 | 4.059 | -0.008 | | 9896975 | 2.50 | | | 4297 | |
| 28 Perfluorooctanesulfonic acid | | | | | | | | | | M |
| 499.00 > 80.00 | 4.409 | 4.425 | -0.016 | 1.000 | 464478 | 0.6763 | Target=4.13 | | 91.1 | M |
| 499.00 > 99.00 | 4.409 | 4.425 | -0.016 | 1.000 | 102425 | | 4.53(2.06-6.19) | | 52.3 | M |
| D 29 13C4 PFOS | | | | | | | | | | |
| 503.00 > 80.00 | 4.409 | 4.425 | -0.016 | 1.089 | 1580802 | 1.03 | | 43.0 | 522 | |
| 30 Perfluorononanoic acid | | | | | | | | | | M |
| 463.00 > 419.00 | 4.426 | 4.433 | -0.007 | 1.000 | 30104 | 0.0199 | Target=7.70 | | 4.3 | M |
| 463.00 > 169.00 | 4.418 | 4.433 | -0.015 | 0.998 | 4048 | | 7.44(3.85-11.55) | | 8.0 | |
| D 31 13C5 PFNA | | | | | | | | | | |
| 468.00 > 423.00 | 4.426 | 4.442 | -0.016 | 1.093 | 3974007 | 1.10 | | 44.1 | 3356 | |
| D 34 13C8 FOSA | | | | | | | | | | |
| 506.00 > 78.00 | 4.734 | 4.740 | -0.006 | 1.169 | 2137148 | 0.9666 | | 38.7 | 3069 | |
| 33 Perfluorooctanesulfonamide | | | | | | | | | | |
| 498.00 > 78.00 | 4.734 | 4.740 | -0.006 | 1.000 | 23205 | 0.0289 | | | 10.4 | |
| D 37 13C2 PFDA | | | | | | | | | | |
| 515.00 > 470.00 | 4.786 | 4.793 | -0.007 | 1.182 | 4550371 | 1.04 | | 41.7 | 4932 | |
| 36 Perfluorodecanoic acid | | | | | | | | | | M |
| 513.00 > 469.00 | 4.777 | 4.793 | -0.016 | 0.998 | 15014 | 0.009202 | Target=10.40 | | 2.9 | M |
| 513.00 > 169.00 | 4.777 | 4.793 | -0.016 | 0.998 | 2343 | | 6.41(5.20-15.61) | | 7.8 | |
| D 38 M2-8:2 FTS | | | | | | | | | | |
| 529.00 > 81.00 | 4.786 | 4.802 | -0.016 | 1.182 | 1609526 | 1.31 | | 54.6 | 1381 | |
| 39 8:2 FTS | | | | | | | | | | |
| 527.00 > 507.00 | 4.777 | 4.802 | -0.025 | 0.998 | 2750 | 0.001655 | | | 15.9 | |
| D 40 d3-NMeFOSAA | | | | | | | | | | |
| 573.00 > 419.00 | 4.951 | 4.959 | -0.008 | 1.222 | 1944781 | 0.8645 | | 34.6 | 3088 | |
| 41 NMeFOSAA | | | | | | | | | | |
| 570.00 > 419.00 | 4.951 | 4.959 | -0.008 | 1.000 | 14838 | 0.0237 | | | 7.6 | |
| D 44 13C2 PFUnA | | | | | | | | | | |
| 565.00 > 520.00 | 5.106 | 5.113 | -0.007 | 1.261 | 3779936 | 0.8857 | | 35.4 | 3751 | |
| D 46 d5-NEtFOSAA | | | | | | | | | | |
| 589.00 > 419.00 | 5.115 | 5.123 | -0.008 | 1.263 | 2045865 | 0.9394 | | 37.6 | 1841 | |
| 48 NEtFOSA | | | | | | | | | | |
| 584.00 > 419.00 | 5.125 | 5.132 | -0.007 | 1.002 | 13429 | 0.0212 | | | 34.8 | |
| D 56 13C2 PFDoA | | | | | | | | | | |
| 615.00 > 570.00 | 5.396 | 5.409 | -0.013 | 1.332 | 3530159 | 0.7684 | | 30.7 | 3946 | |

| Signal | RT | EXP RT | DLT RT | REL RT | Response | Amount ng/ml | Ratio(Limits) | %Rec | S/N | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| D 61 13C2 PFTeDA | | | | | | | | | | |
| 715.00 > 670.00 | 5.911 | 5.920 | -0.009 | 1.459 | 3166109 | 0.6978 | | 27.9 | 5516 | |

## QC Flag Legend

Review Flags

M - Manually Integrated

Report Date: 11-Sep-2020 10:23:18 Chrom Revision: 2.3 09-Sep-2020 15:12:58

Eurofins TestAmerica, Sacramento

Data File: \\chromfs\Sacramento\ChromData\A13\20200910-103052.b\2020.09.10_A13_PFC_A_067.d

Injection Date: 10-Sep-2020 19:23:10 Instrument ID: A13

Lims ID: 460-217659-D-6-A Lab Sample ID: 320-217659-6

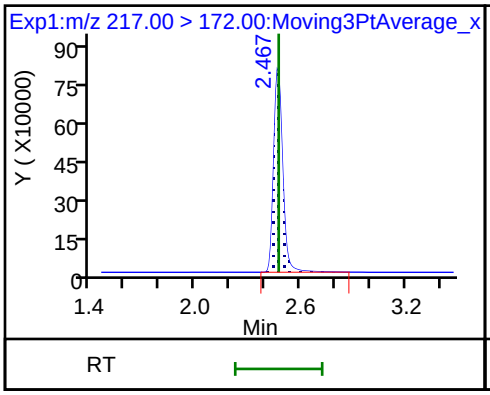
Client ID: MW-216

Operator ID: SACINSTLCMS01 ALS Bottle#: 40 Worklist Smp#: 10

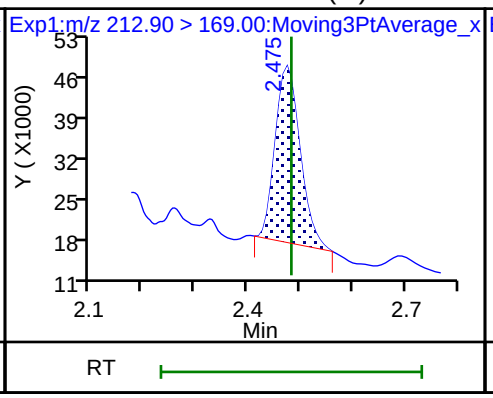
Injection Vol: 20.0 ul Dil. Factor: 1.0000

Method: PFAS_A13 Limit Group: LC PFC ICAL

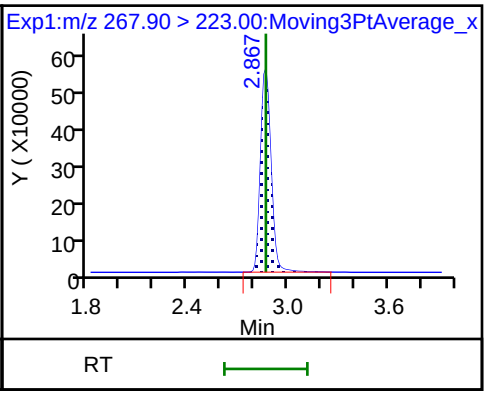
D 1 13C4 PFBA



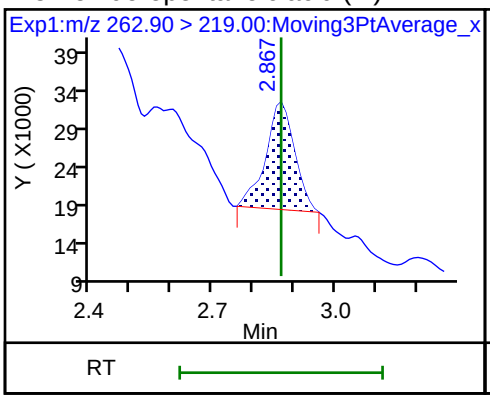

2 Perfluorobutanoic acid (M)



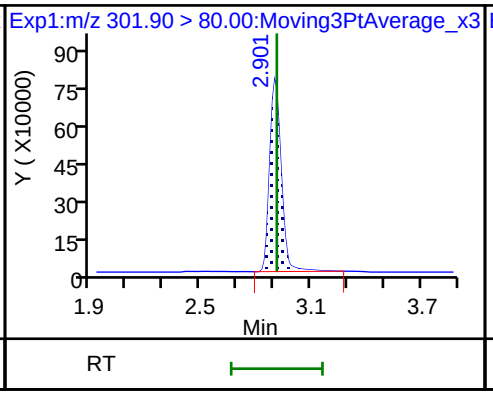

D 4 13C5 PFPeA



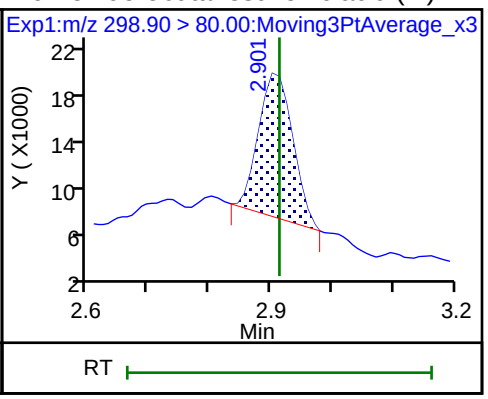

5 Perfluoropentanoic acid (M)



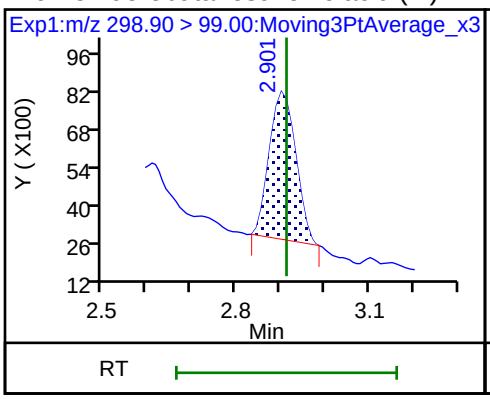

D 14 13C3 PFBS



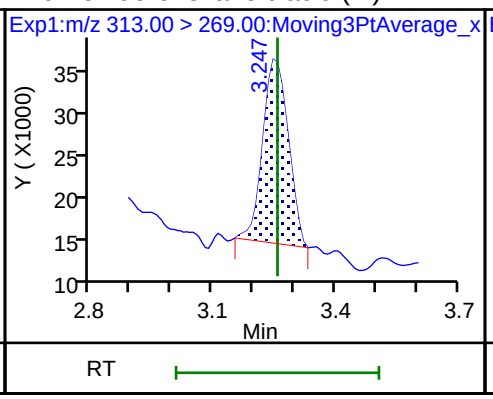

6 Perfluorobutanesulfonic acid (M)



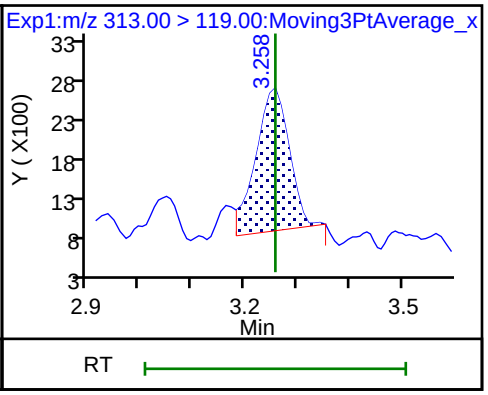

6 Perfluorobutanesulfonic acid (M)



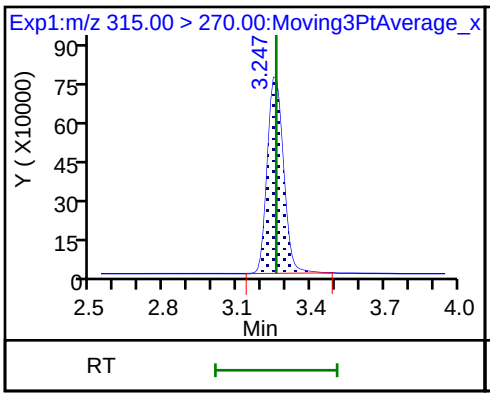

10 Perfluorohexanoic acid (M)



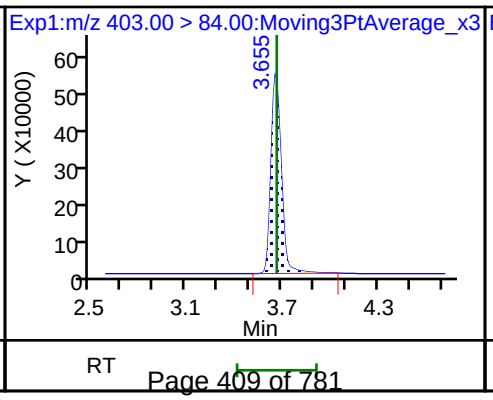

10 Perfluorohexanoic acid



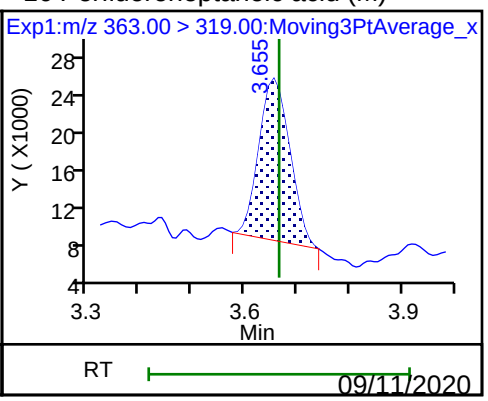

D 9 13C2 PFHxA



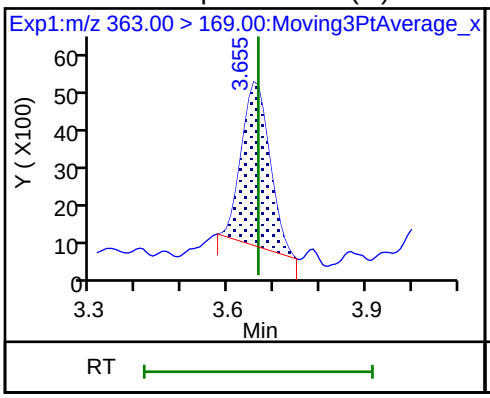

D 17 18O2 PFHxS



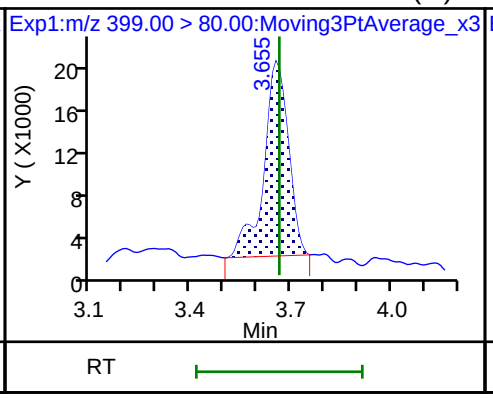

16 Perfluoroheptanoic acid (M)



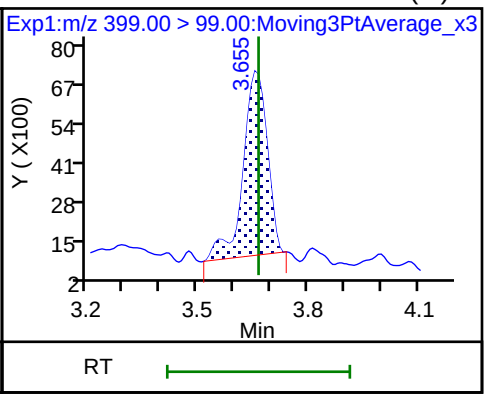
16 Perfluoroheptanoic acid (M)



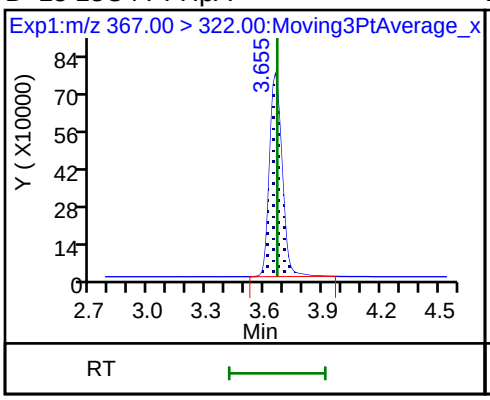

18 Perfluorohexanesulfonic acid (M)



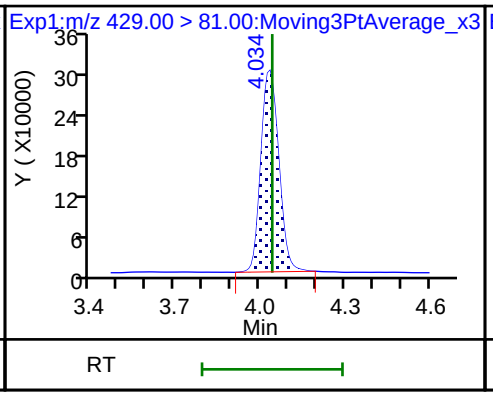

18 Perfluorohexanesulfonic acid (M)



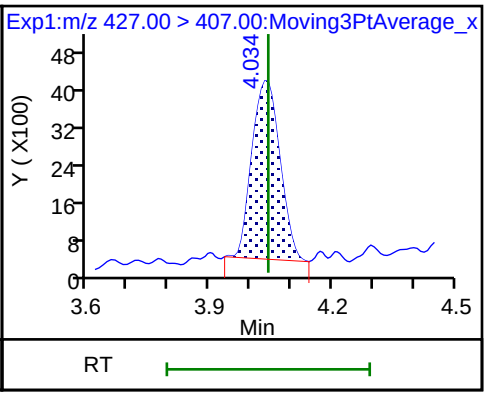

D 15 13C4 PFHpA



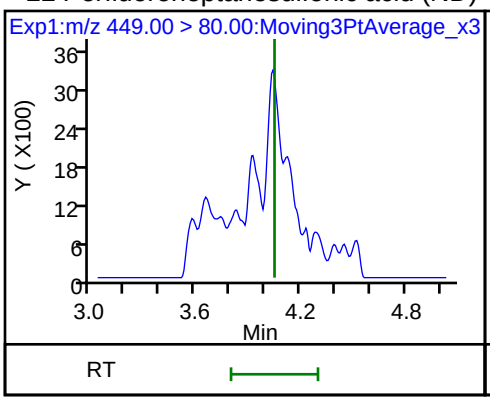

D 20 M2-6:2 FTS



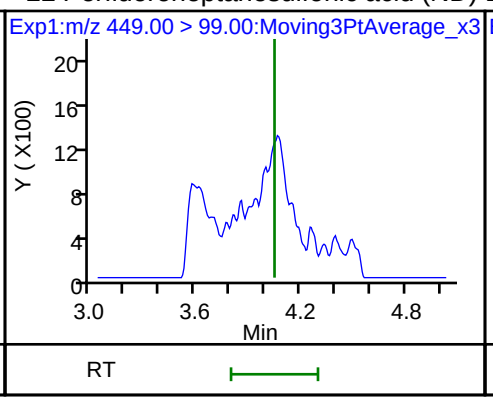

21 6:2 FTS



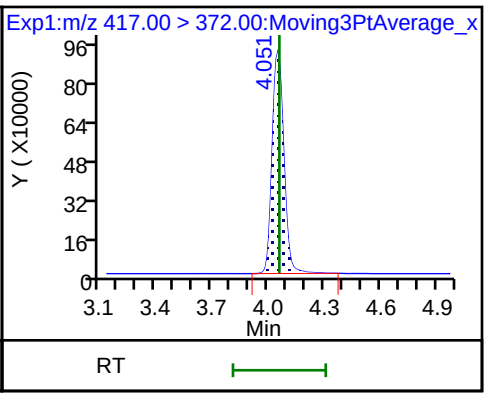

22 Perfluoroheptanesulfonic acid (ND)



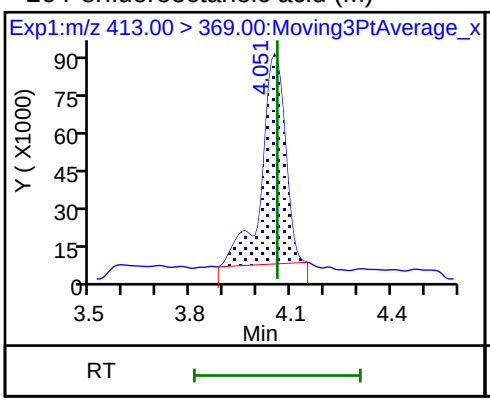

22 Perfluoroheptanesulfonic acid (ND)



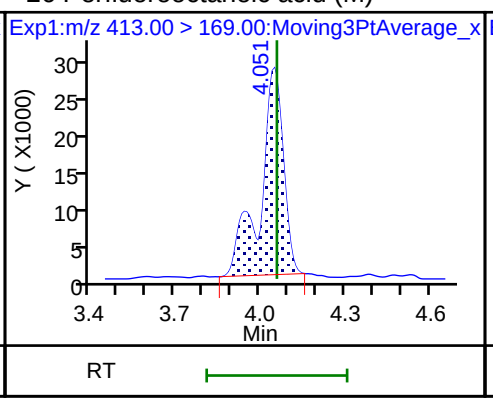

D 24 13C4 PFOA



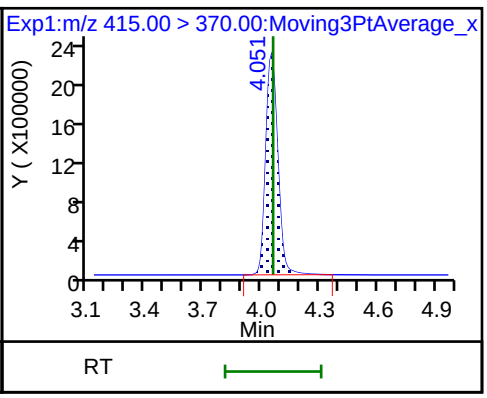

26 Perfluorooctanoic acid (M)



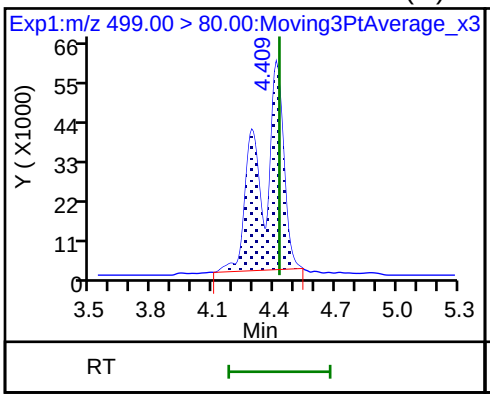

26 Perfluorooctanoic acid (M)



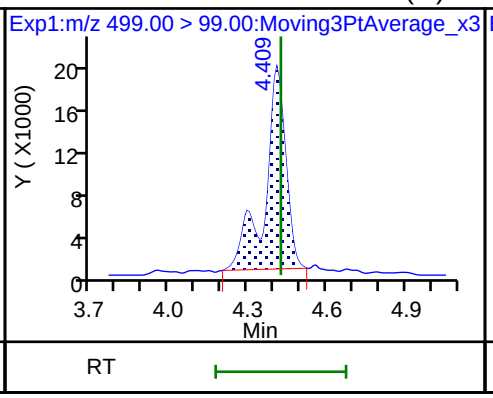

* 25 13C2 PFOA



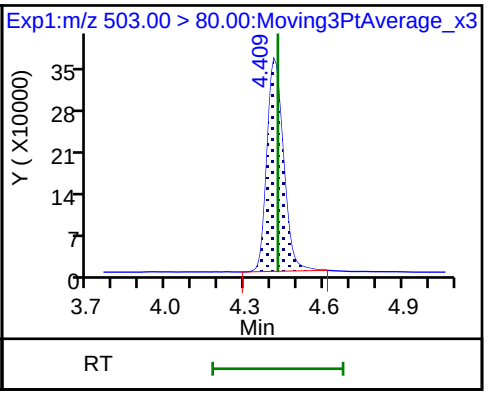
28 Perfluorooctanesulfonic acid (M)



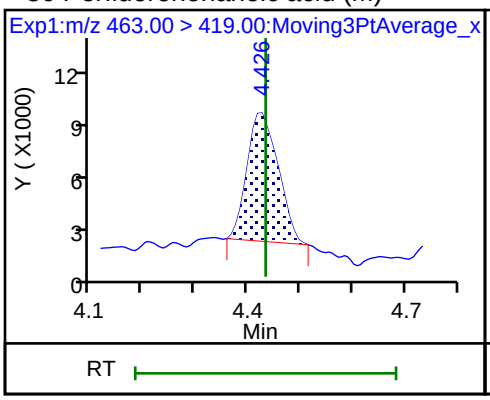

28 Perfluorooctanesulfonic acid (M)



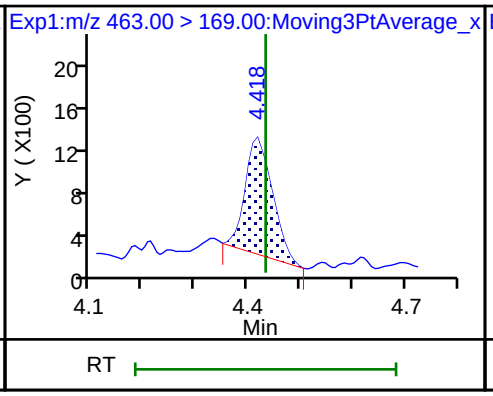

D 29 13C4 PFOS



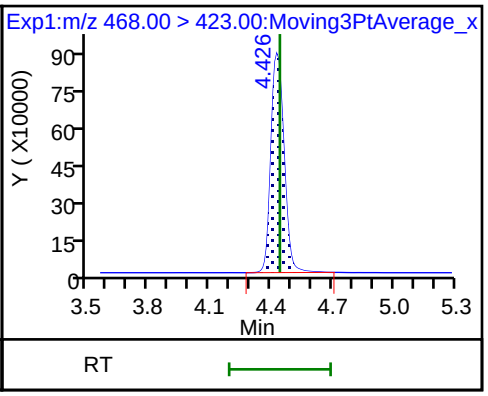

30 Perfluorononanoic acid (M)



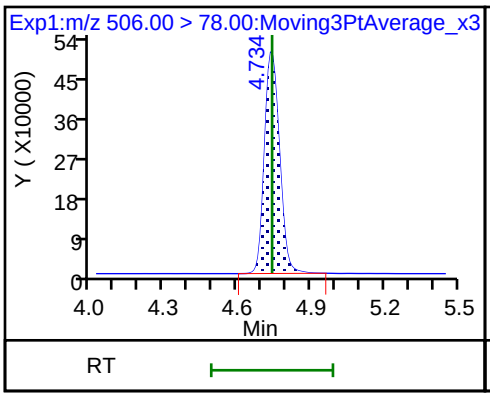

30 Perfluorononanoic acid



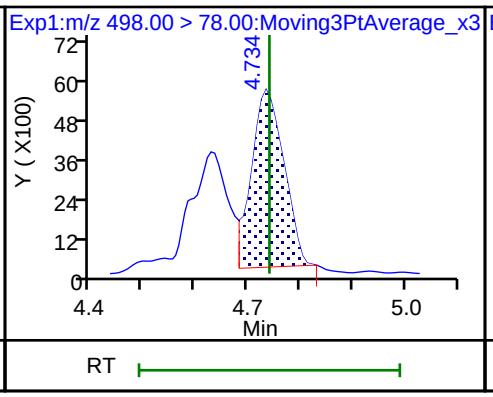

D 31 13C5 PFNA



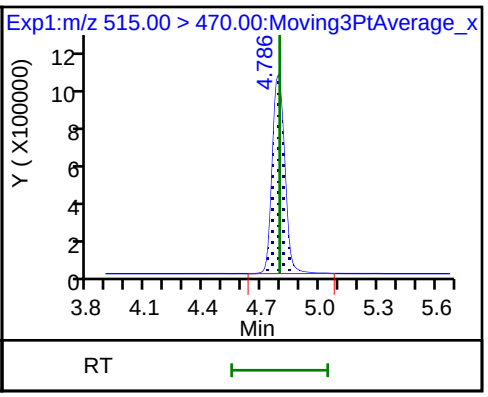

D 34 13C8 FOSA



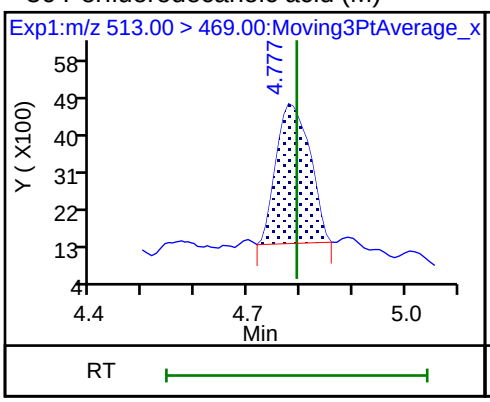

33 Perfluorooctanesulfonamide



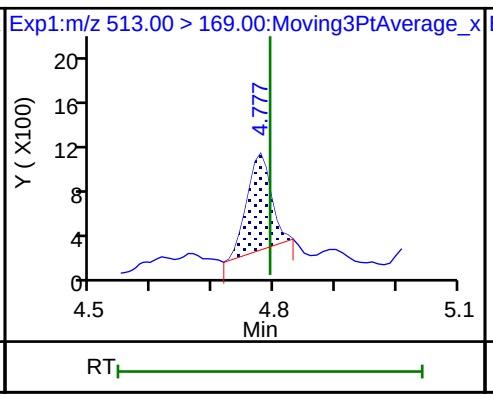

D 37 13C2 PFDA



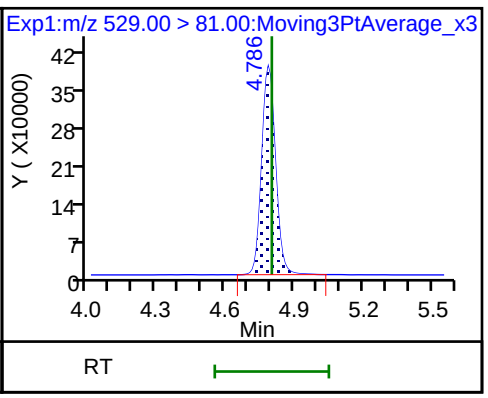

36 Perfluorodecanoic acid (M)



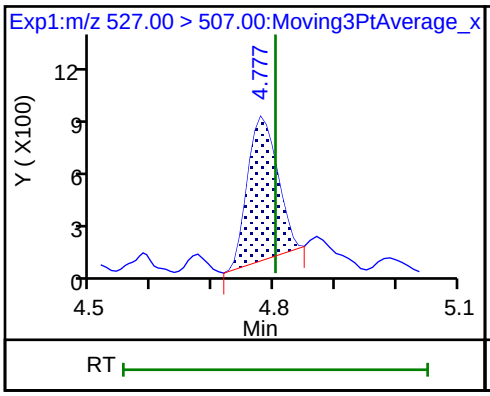

36 Perfluorodecanoic acid



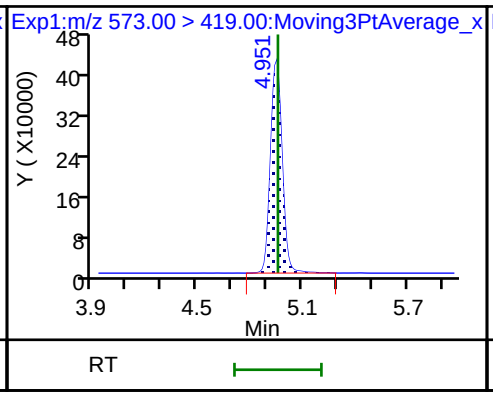

D 38 M2-8:2 FTS



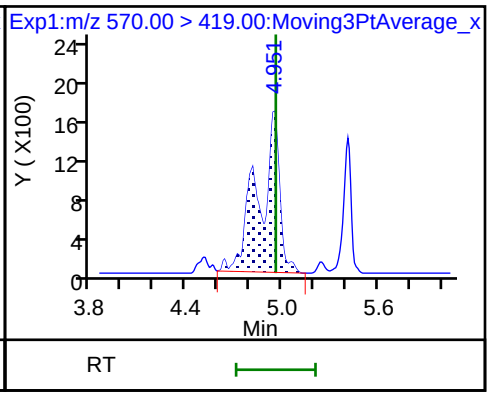
39 8:2 FTS



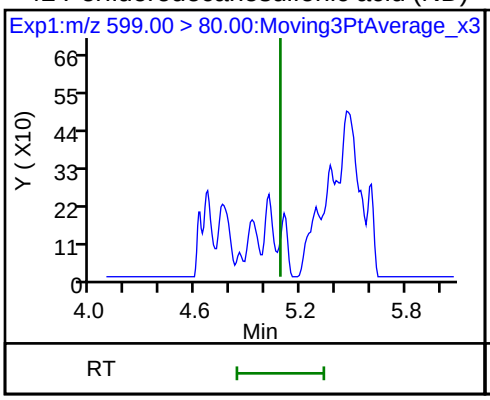

D 40 d3-NMeFOSAA



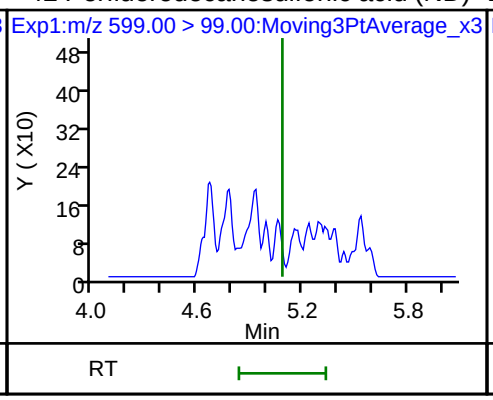

41 NMeFOSAA



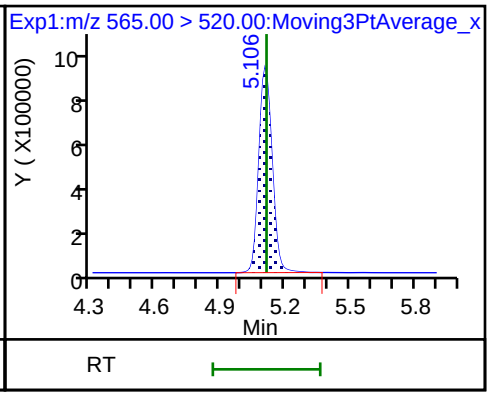

42 Perfluorodecanesulfonic acid (ND)



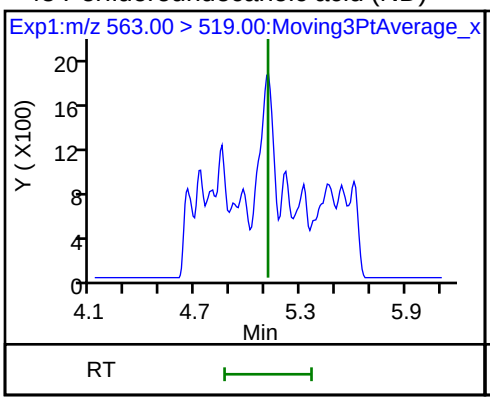

42 Perfluorodecanesulfonic acid (ND)



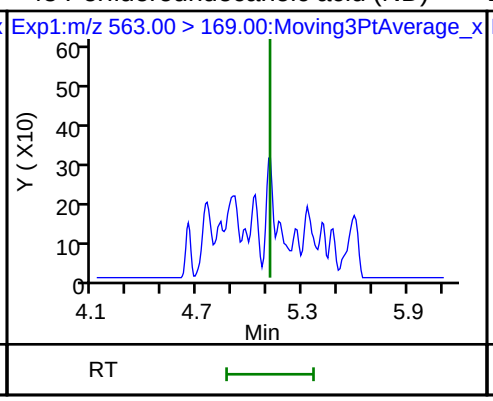

D 44 13C2 PFUnA



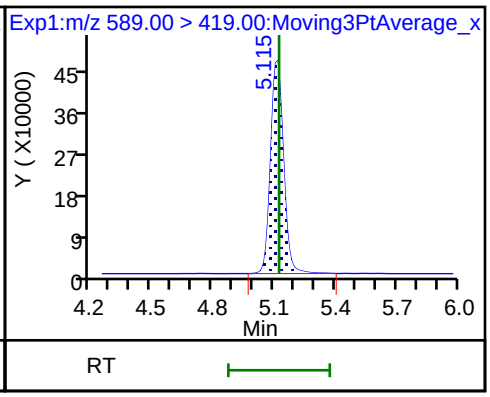

45 Perfluoroundecanoic acid (ND)



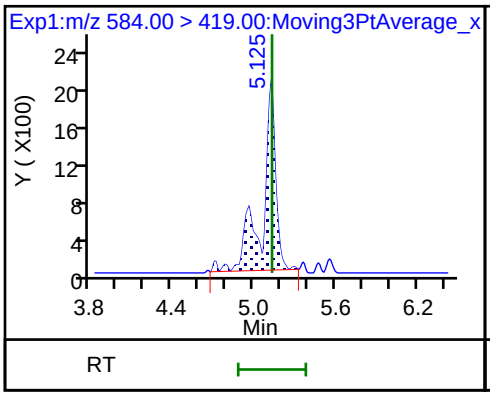

45 Perfluoroundecanoic acid (ND)



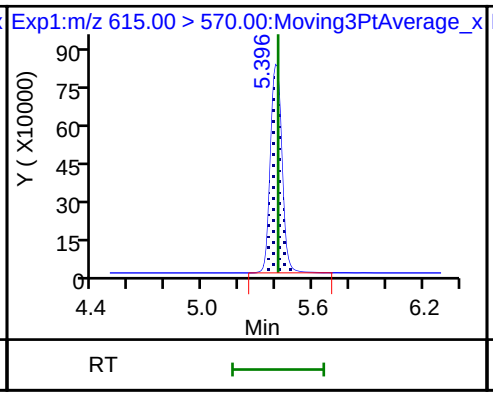

D 46 d5-NEtFOSAA



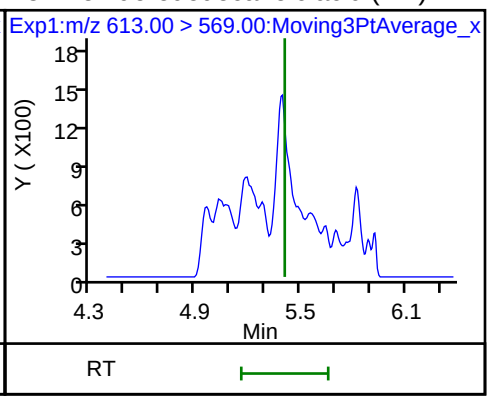

48 NEtFOSA



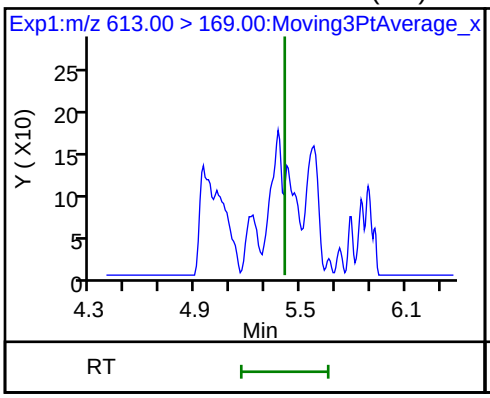

D 56 13C2 PFDoA



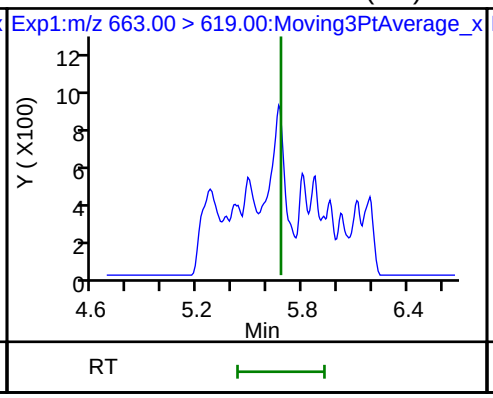

57 Perfluorododecanoic acid (ND)



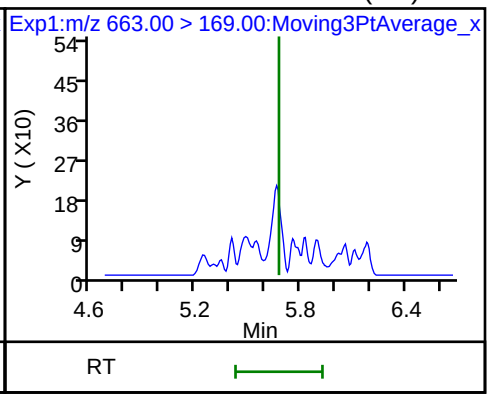
57 Perfluorododecanoic acid (ND)



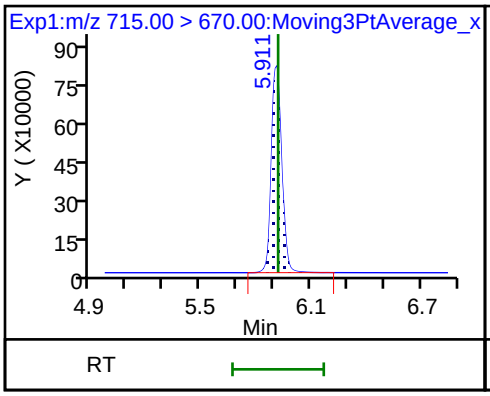

60 Perfluorotridecanoic acid (ND)



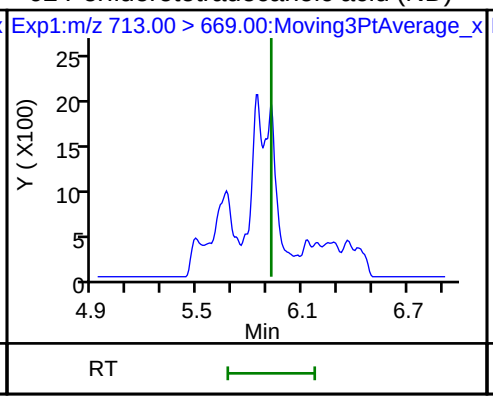

60 Perfluorotridecanoic acid (ND)



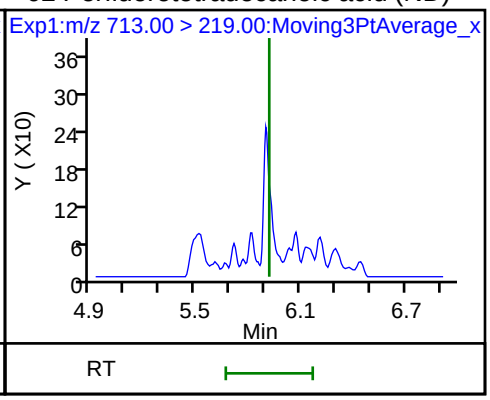

D 61 13C2 PFTeDA




62 Perfluorotetradecanoic acid (ND)




62 Perfluorotetradecanoic acid (ND)



Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

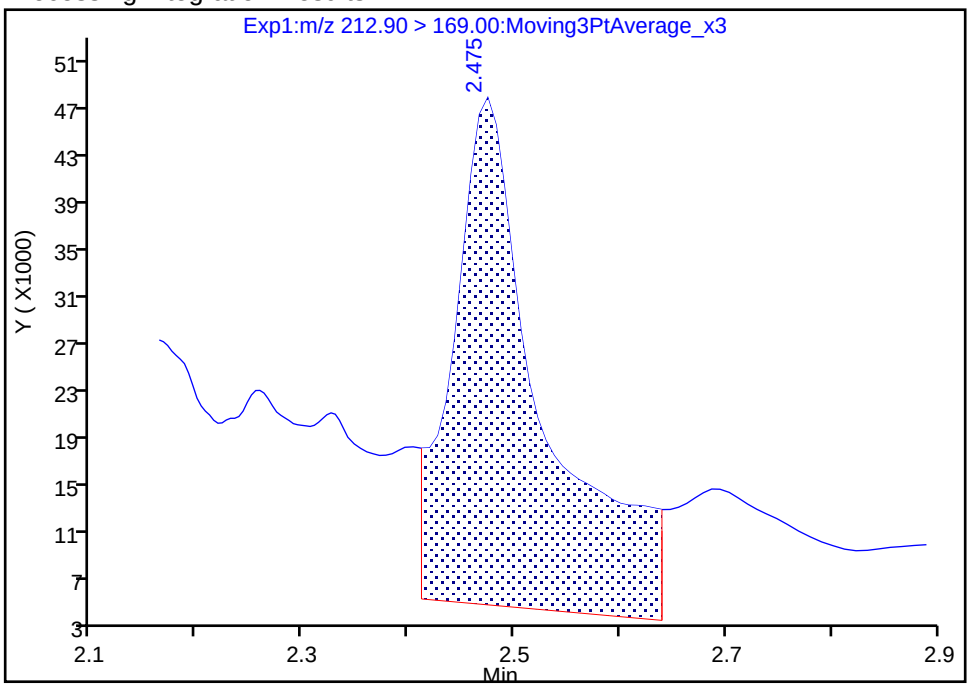
| | | | | | |
|---|---|---|---|---|---|
| Data File: | \\chromfs\Sacramento\ChromData\A13\20200910-103052.b\2020.09.10_A13_PFC_A_067.d | | | | |
| Injection Date: | 10-Sep-2020 19:23:10 | Instrument ID: | A13 | | |
| Lims ID: | 460-217659-D-6-A | Lab Sample ID: | 320-217659-6 | | |
| Client ID: | MW-216 | | | | |
| Operator ID: | SACINSTLCMS01 | ALS Bottle#: | 40 | Worklist Smp#: | 10 |
| Injection Vol: | 20.0 ul | Dil. Factor: | 1.0000 | | |
| Method: | PFAS_A13 | Limit Group: | LC PFC ICAL | | |
| Column: | Gemini C18 3um 3 x 100mm ( 3.00 mm ID) | Detector | EXP1 | | |

## 2 Perfluorobutanoic acid, CAS: 375-22-4

Signal: 1

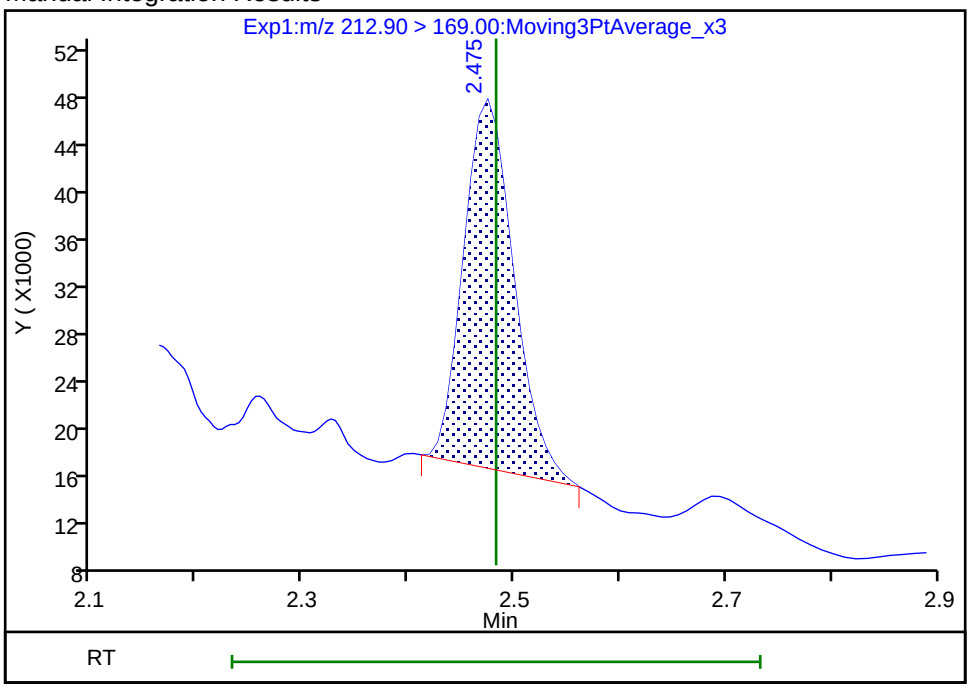
Processing Integration Results

RT: 2.47
Area: 255159
Amount: 0.300588
Amount Units: ng/ml




Manual Integration Results

RT: 2.47
Area: 101119
Amount: 0.119122
Amount Units: ng/ml




Reviewer: mongkols, 11-Sep-2020 10:21:52

Audit Action: Manually Integrated Audit Reason: Baseline

Eurofins TestAmerica, Sacramento

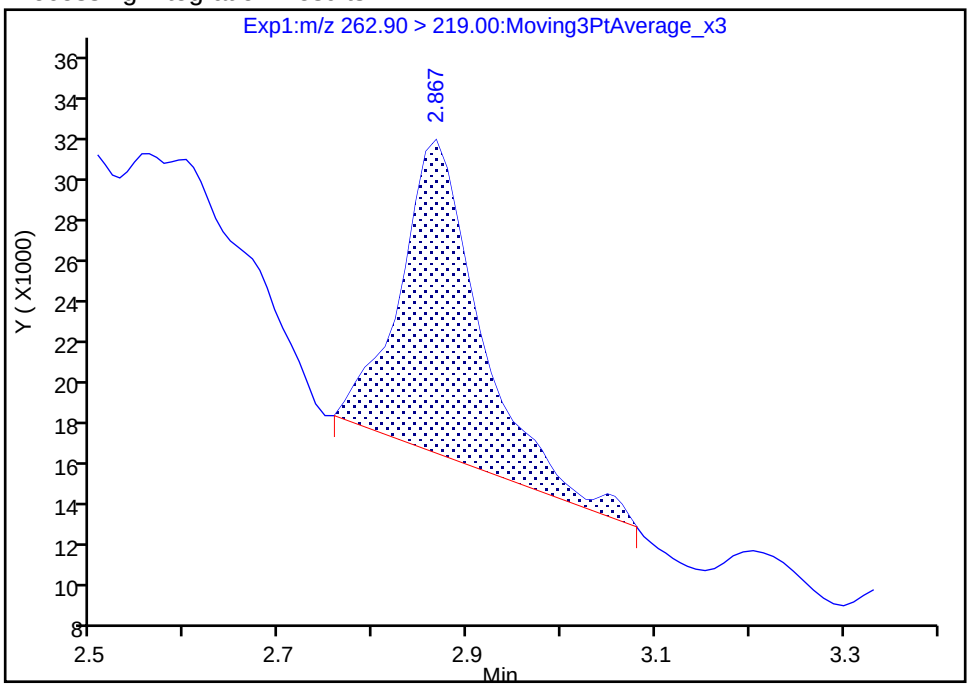
| | | | | | |
|---|---|---|---|---|---|
| Data File: | \\chromfs\Sacramento\ChromData\A13\20200910-103052.b\2020.09.10_A13_PFC_A_067.d | | | | |
| Injection Date: | 10-Sep-2020 19:23:10 | Instrument ID: | A13 | | |
| Lims ID: | 460-217659-D-6-A | Lab Sample ID: | 320-217659-6 | | |
| Client ID: | MW-216 | | | | |
| Operator ID: | SACINSTLCMS01 | ALS Bottle#: | 40 | Worklist Smp#: | 10 |
| Injection Vol: | 20.0 ul | Dil. Factor: | 1.0000 | | |
| Method: | PFAS_A13 | Limit Group: | LC PFC ICAL | | |
| Column: | Gemini C18 3um 3 x 100mm ( 3.00 mm) | Detector | EXP1 | | |

## 5 Perfluoropentanoic acid, CAS: 2706-90-3

Signal: 1

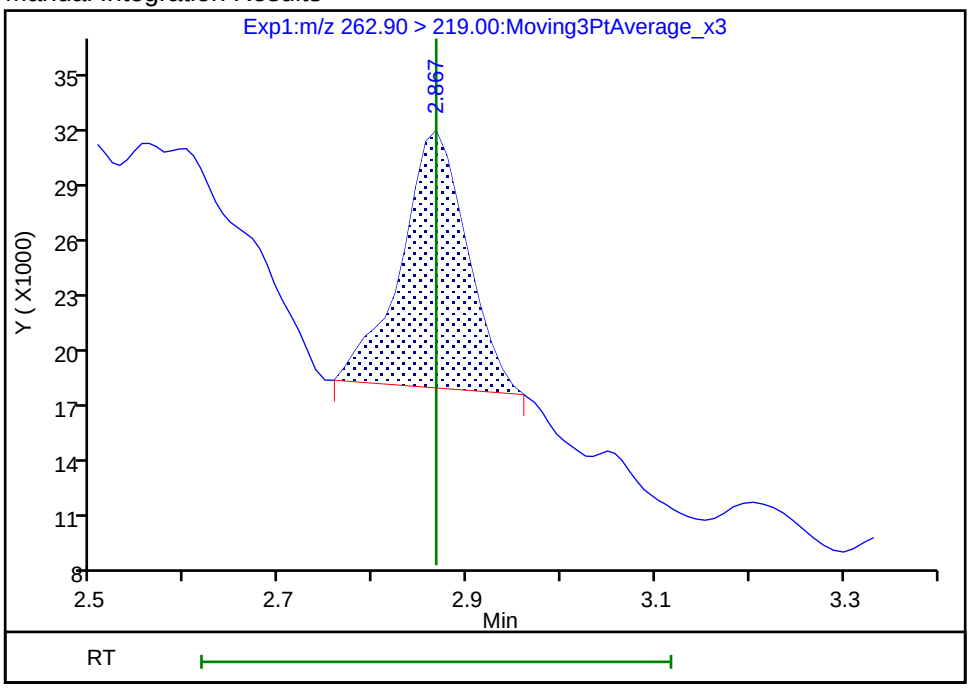
Processing Integration Results

RT: 2.87
Area: 92208
Amount: 0.092835
Amount Units: ng/ml




Manual Integration Results

RT: 2.87
Area: 68309
Amount: 0.068773
Amount Units: ng/ml




Reviewer: mongkols, 11-Sep-2020 10:21:57
Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

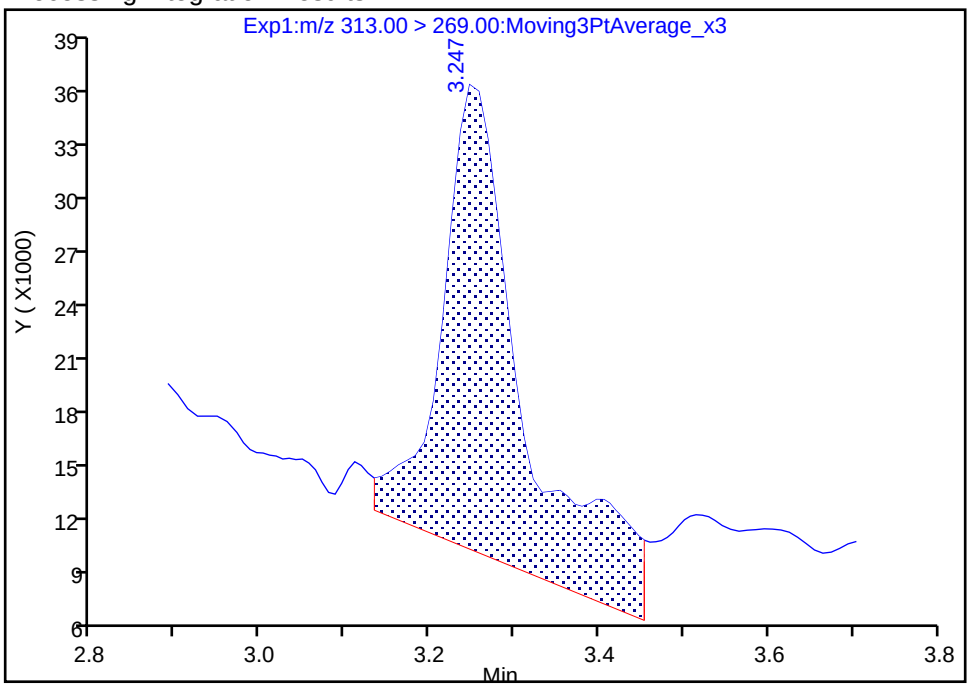
| | | | | | |
|---|---|---|---|---|---|
| Data File: | \\chromfs\Sacramento\ChromData\A13\20200910-103052.b\2020.09.10_A13_PFC_A_067.d | | | | |
| Injection Date: | 10-Sep-2020 19:23:10 | Instrument ID: | A13 | | |
| Lims ID: | 460-217659-D-6-A | Lab Sample ID: | 320-217659-6 | | |
| Client ID: | MW-216 | | | | |
| Operator ID: | SACINSTLCMS01 | ALS Bottle#: | 40 | Worklist Smp#: | 10 |
| Injection Vol: | 20.0 ul | Dil. Factor: | 1.0000 | | |
| Method: | PFAS_A13 | Limit Group: | LC PFC ICAL | | |
| Column: | Gemini C18 3um 3 x 100mm ( 3.00 mm) | Detector | EXP1 | | |

## 10 Perfluorohexanoic acid, CAS: 307-24-4

Signal: 1

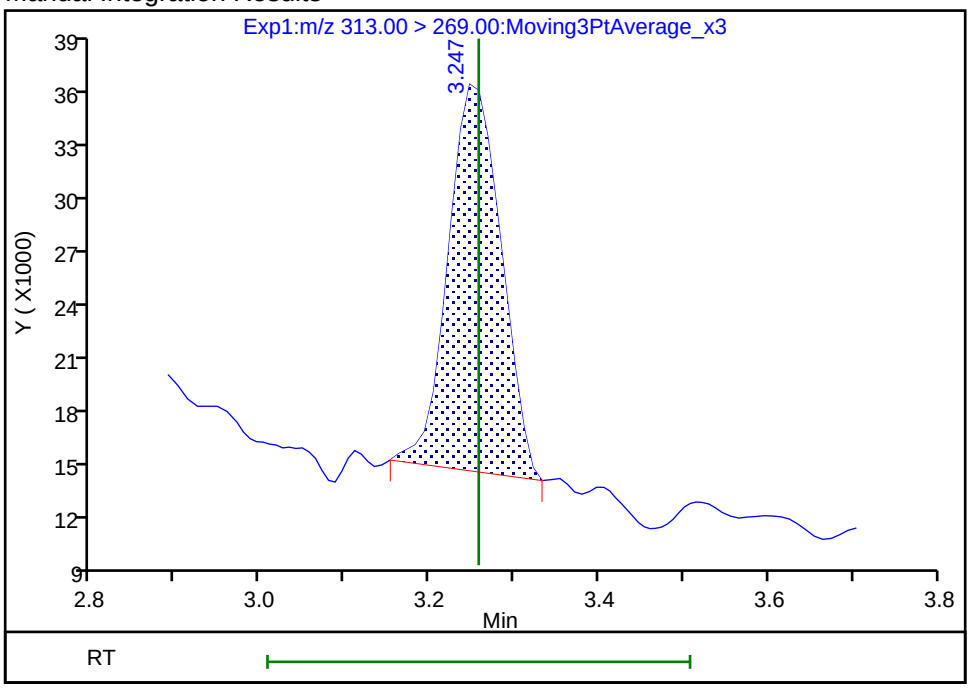
Processing Integration Results

RT: 3.25
Area: 169607
Amount: 0.130350
Amount Units: ng/ml




Manual Integration Results

RT: 3.25
Area: 93123
Amount: 0.071569
Amount Units: ng/ml




Reviewer: mongkols, 11-Sep-2020 10:22:10

Audit Action: Manually Integrated Audit Reason: Baseline

Eurofins TestAmerica, Sacramento

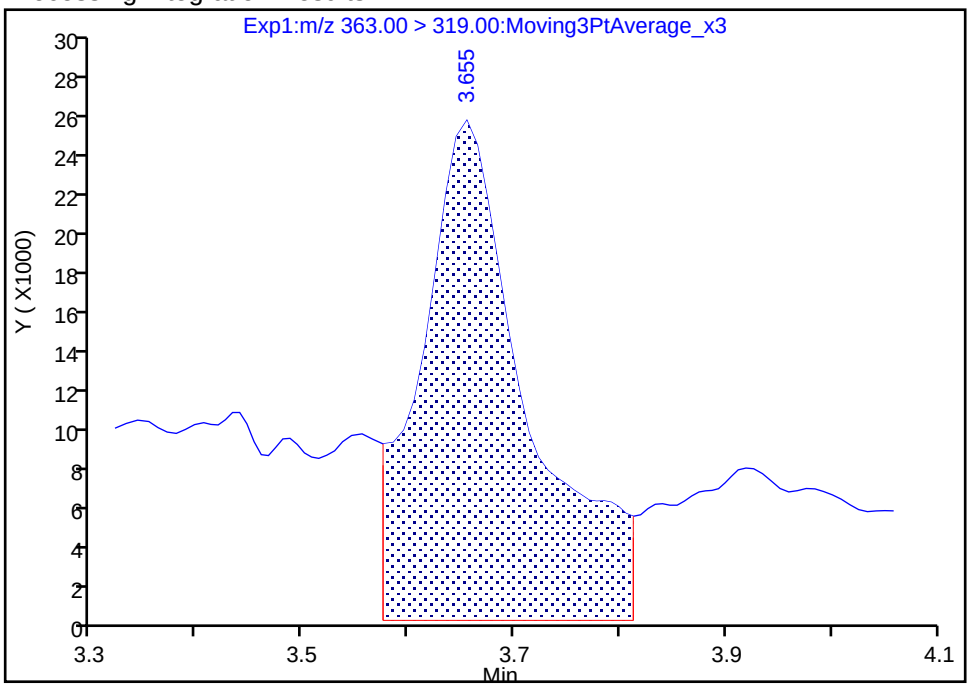
| | | | | | |
|---|---|---|---|---|---|
| Data File: | \\chromfs\Sacramento\ChromData\A13\20200910-103052.b\2020.09.10_A13_PFC_A_067.d | | | | |
| Injection Date: | 10-Sep-2020 19:23:10 | Instrument ID: | A13 | | |
| Lims ID: | 460-217659-D-6-A | Lab Sample ID: | 320-217659-6 | | |
| Client ID: | MW-216 | | | | |
| Operator ID: | SACINSTLCMS01 | ALS Bottle#: | 40 | Worklist Smp#: | 10 |
| Injection Vol: | 20.0 ul | Dil. Factor: | 1.0000 | | |
| Method: | PFAS_A13 | Limit Group: | LC PFC ICAL | | |
| Column: | Gemini C18 3um 3 x 100mm ( 3.00 mm) | Detector | EXP1 | | |

## 16 Perfluoroheptanoic acid, CAS: 375-85-9

Signal: 1

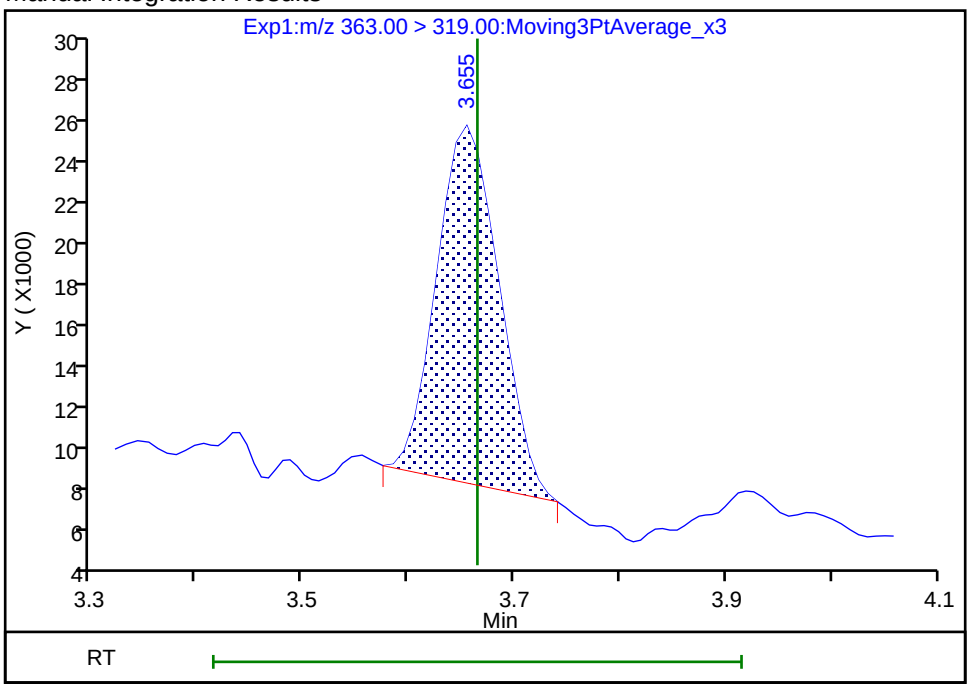
Processing Integration Results

RT: 3.65
Area: 177572
Amount: 0.129059
Amount Units: ng/ml




Manual Integration Results

RT: 3.65
Area: 70735
Amount: 0.051410
Amount Units: ng/ml




Reviewer: mongkols, 11-Sep-2020 10:22:16
Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

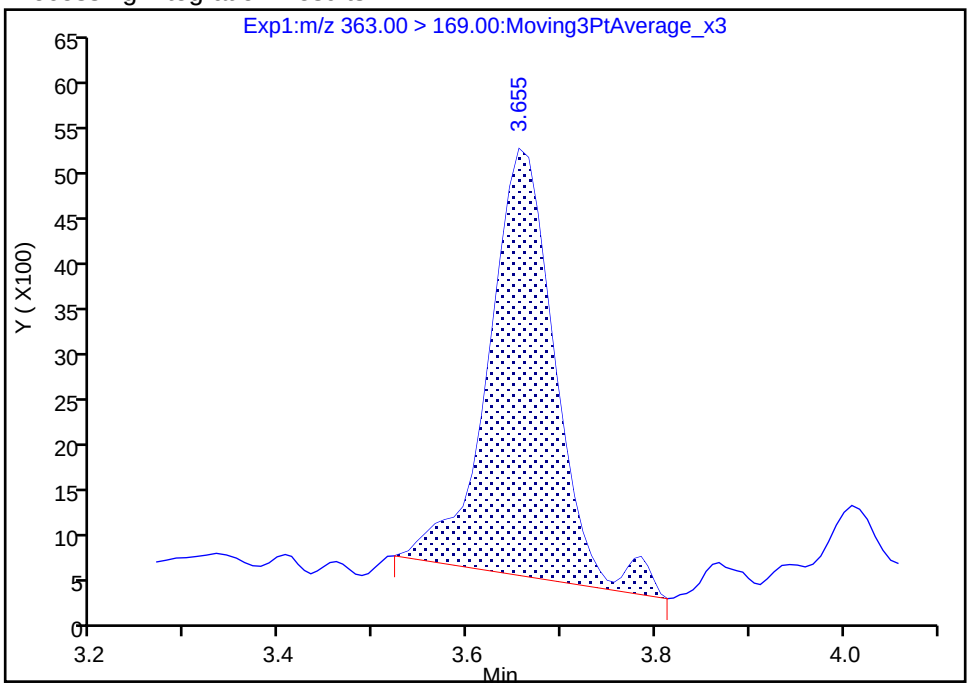
| | | | | | |
|---|---|---|---|---|---|
| Data File: | \\chromfs\Sacramento\ChromData\A13\20200910-103052.b\2020.09.10_A13_PFC_A_067.d | | | | |
| Injection Date: | 10-Sep-2020 19:23:10 | Instrument ID: | A13 | | |
| Lims ID: | 460-217659-D-6-A | Lab Sample ID: | 320-217659-6 | | |
| Client ID: | MW-216 | | | | |
| Operator ID: | SACINSTLCMS01 | ALS Bottle#: | 40 | Worklist Smp#: | 10 |
| Injection Vol: | 20.0 ul | Dil. Factor: | 1.0000 | | |
| Method: | PFAS_A13 | Limit Group: | LC PFC ICAL | | |
| Column: | Gemini C18 3um 3 x 100mm ( 3.00 mm ) | Detector | EXP1 | | |

## 16 Perfluoroheptanoic acid, CAS: 375-85-9

Signal: 2

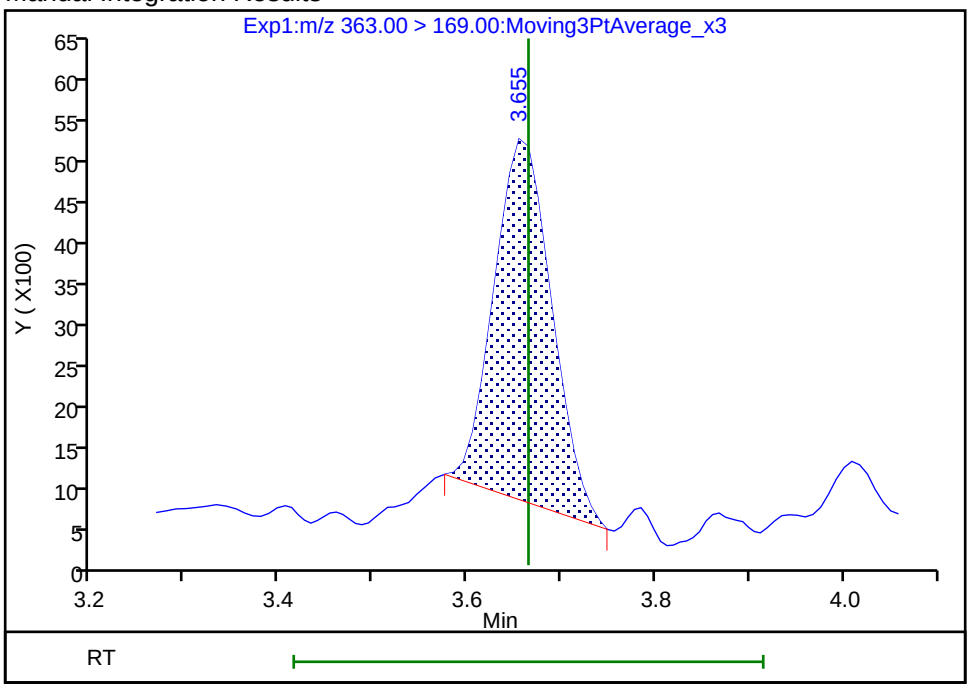
Processing Integration Results

RT: 3.65
Area: 23452
Amount: 0.129059
Amount Units: ng/ml




Manual Integration Results

RT: 3.65
Area: 18894
Amount: 0.051410
Amount Units: ng/ml




Reviewer: mongkols, 11-Sep-2020 10:22:19
Audit Action: Manually Integrated Audit Reason: Baseline

Eurofins TestAmerica, Sacramento

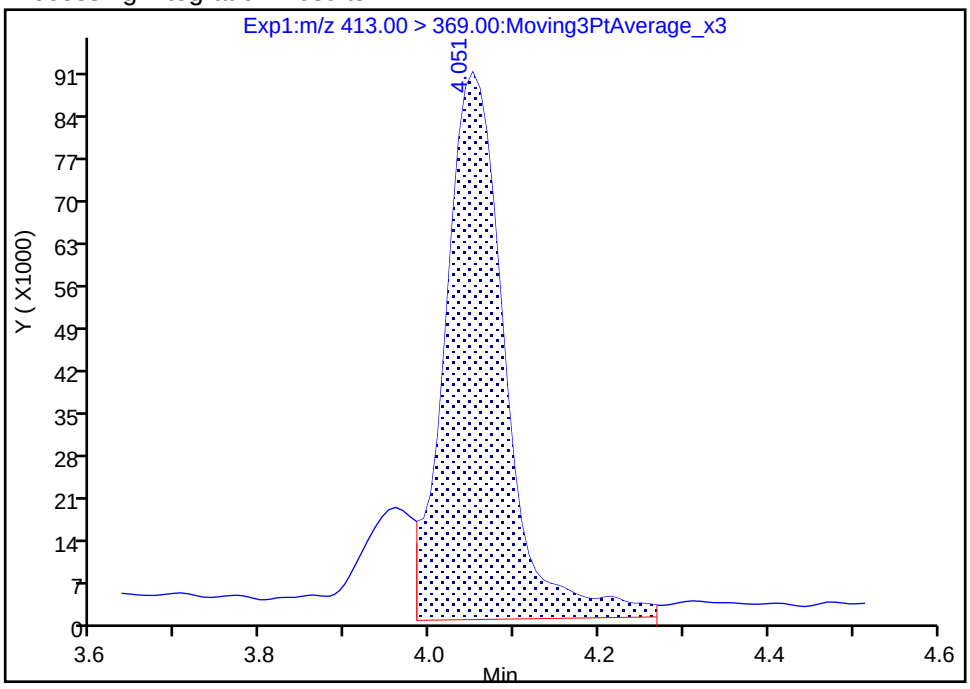
| | | | | | |
|---|---|---|---|---|---|
| Data File: | \\chromfs\Sacramento\ChromData\A13\20200910-103052.b\2020.09.10_A13_PFC_A_067.d | | | | |
| Injection Date: | 10-Sep-2020 19:23:10 | Instrument ID: | A13 | | |
| Lims ID: | 460-217659-D-6-A | Lab Sample ID: | 320-217659-6 | | |
| Client ID: | MW-216 | | | | |
| Operator ID: | SACINSTLCMS01 | ALS Bottle#: | 40 | Worklist Smp#: | 10 |
| Injection Vol: | 20.0 ul | Dil. Factor: | 1.0000 | | |
| Method: | PFAS_A13 | Limit Group: | LC PFC ICAL | | |
| Column: | Gemini C18 3um 3 x 100mm ( 3.00 mm ) | Detector | EXP1 | | |

## 26 Perfluorooctanoic acid, CAS: 335-67-1

Signal: 1

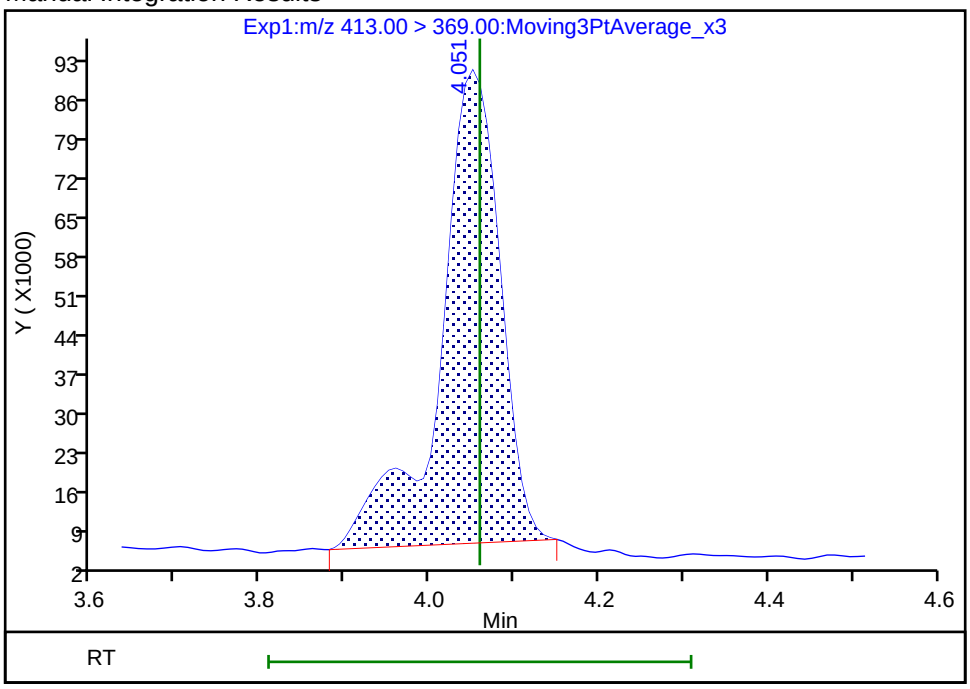
Processing Integration Results

RT: 4.05
Area: 442755
Amount: 0.268841
Amount Units: ng/ml




Manual Integration Results

RT: 4.05
Area: 422072
Amount: 0.256282
Amount Units: ng/ml




Reviewer: mongkols, 11-Sep-2020 10:22:44
Audit Action: Manually Integrated Audit Reason: Isomers

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

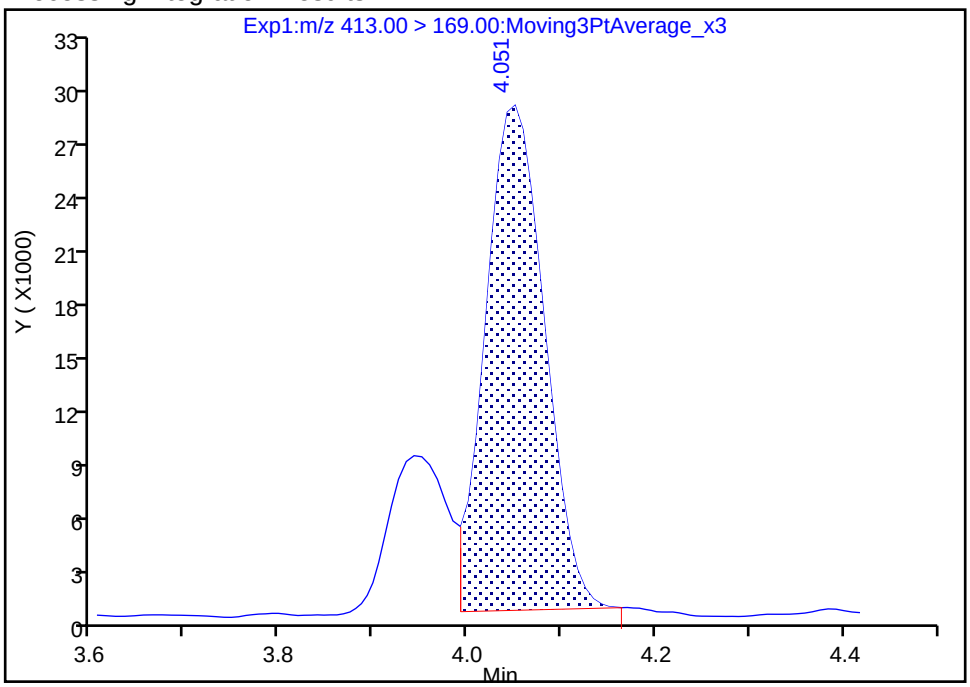
| | | | | | |
|---|---|---|---|---|---|
| Data File: | \\chromfs\Sacramento\ChromData\A13\20200910-103052.b\2020.09.10_A13_PFC_A_067.d | | | | |
| Injection Date: | 10-Sep-2020 19:23:10 | Instrument ID: | A13 | | |
| Lims ID: | 460-217659-D-6-A | Lab Sample ID: | 320-217659-6 | | |
| Client ID: | MW-216 | | | | |
| Operator ID: | SACINSTLCMS01 | ALS Bottle#: | 40 | Worklist Smp#: | 10 |
| Injection Vol: | 20.0 ul | Dil. Factor: | 1.0000 | | |
| Method: | PFAS_A13 | Limit Group: | LC PFC ICAL | | |
| Column: | Gemini C18 3um 3 x 100mm ( 3.00 mm ) | Detector | EXP1 | | |

## 26 Perfluorooctanoic acid, CAS: 335-67-1

Signal: 2

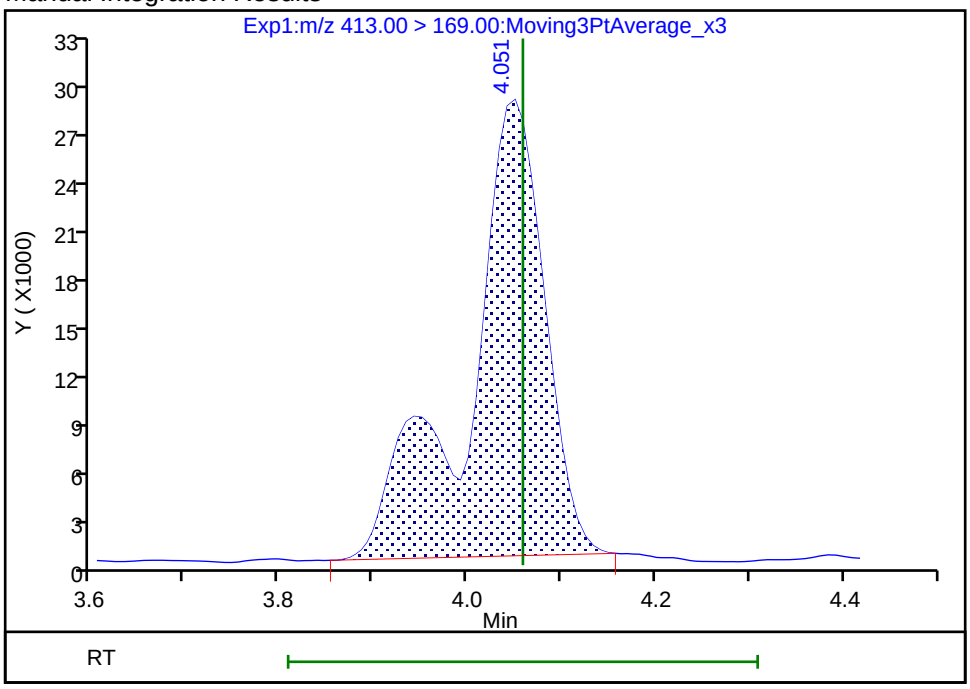
Processing Integration Results

RT: 4.05
Area: 122896
Amount: 0.268841
Amount Units: ng/ml




Manual Integration Results

RT: 4.05
Area: 160630
Amount: 0.256282
Amount Units: ng/ml




Reviewer: mongkols, 11-Sep-2020 10:22:46
Audit Action: Manually Integrated Audit Reason: Isomers

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

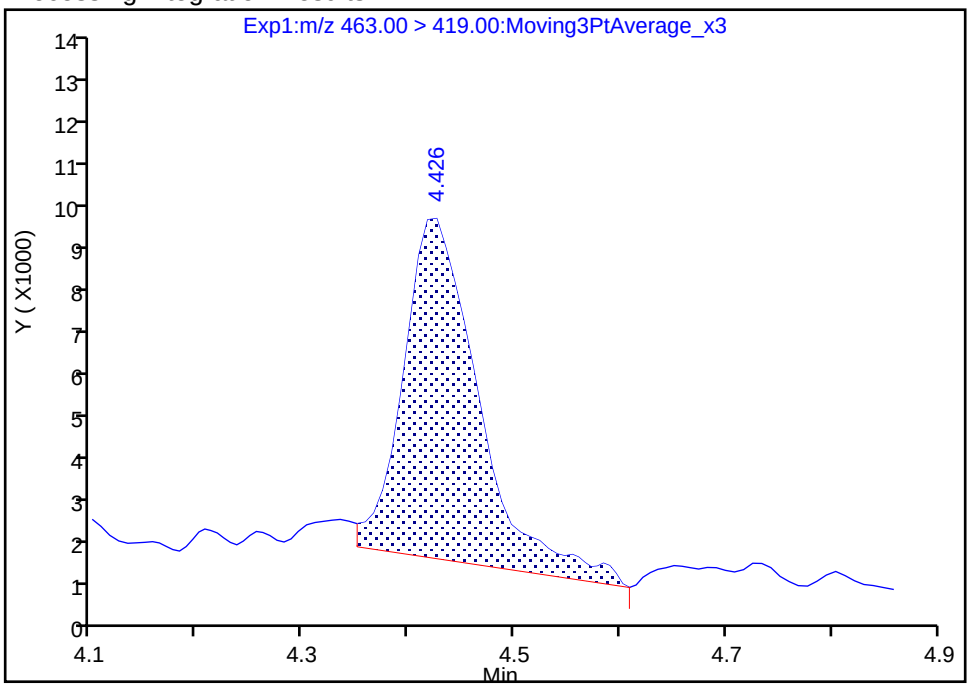
| | | | | | |
|---|---|---|---|---|---|
| Data File: | \\chromfs\Sacramento\ChromData\A13\20200910-103052.b\2020.09.10_A13_PFC_A_067.d | | | | |
| Injection Date: | 10-Sep-2020 19:23:10 | Instrument ID: | A13 | | |
| Lims ID: | 460-217659-D-6-A | Lab Sample ID: | 320-217659-6 | | |
| Client ID: | MW-216 | | | | |
| Operator ID: | SACINSTLCMS01 | ALS Bottle#: | 40 | Worklist Smp#: | 10 |
| Injection Vol: | 20.0 ul | Dil. Factor: | 1.0000 | | |
| Method: | PFAS_A13 | Limit Group: | LC PFC ICAL | | |
| Column: | Gemini C18 3um 3 x 100mm ( 3.00 mm) | Detector | EXP1 | | |

## 30 Perfluorononanoic acid, CAS: 375-95-1

Signal: 1

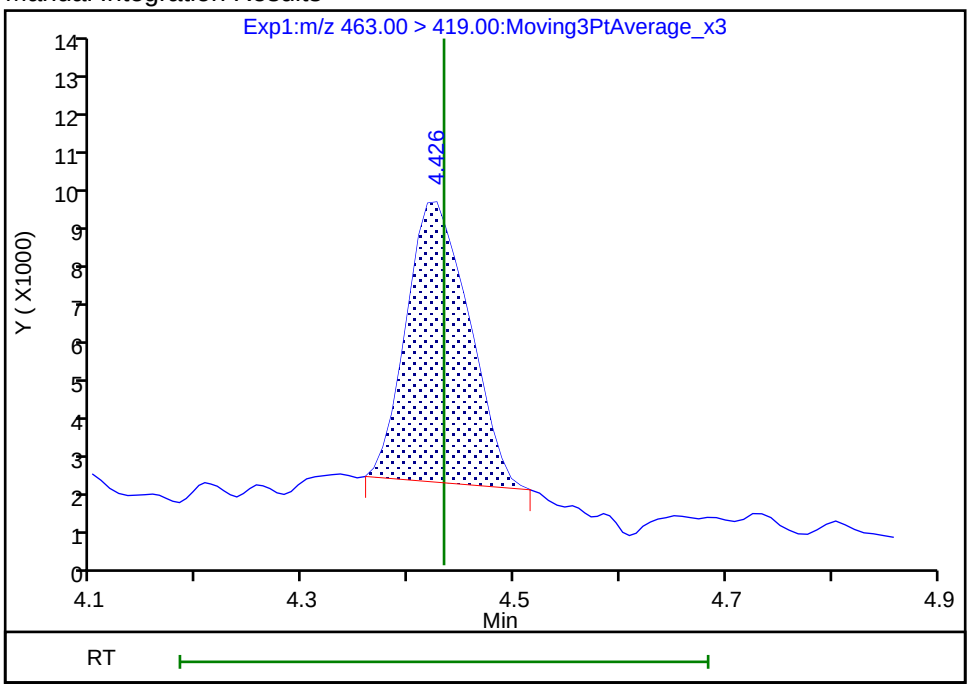
Processing Integration Results

RT: 4.43
Area: 39903
Amount: 0.026439
Amount Units: ng/ml




Manual Integration Results

RT: 4.43
Area: 30104
Amount: 0.019946
Amount Units: ng/ml




Reviewer: mongkols, 11-Sep-2020 10:23:01

Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

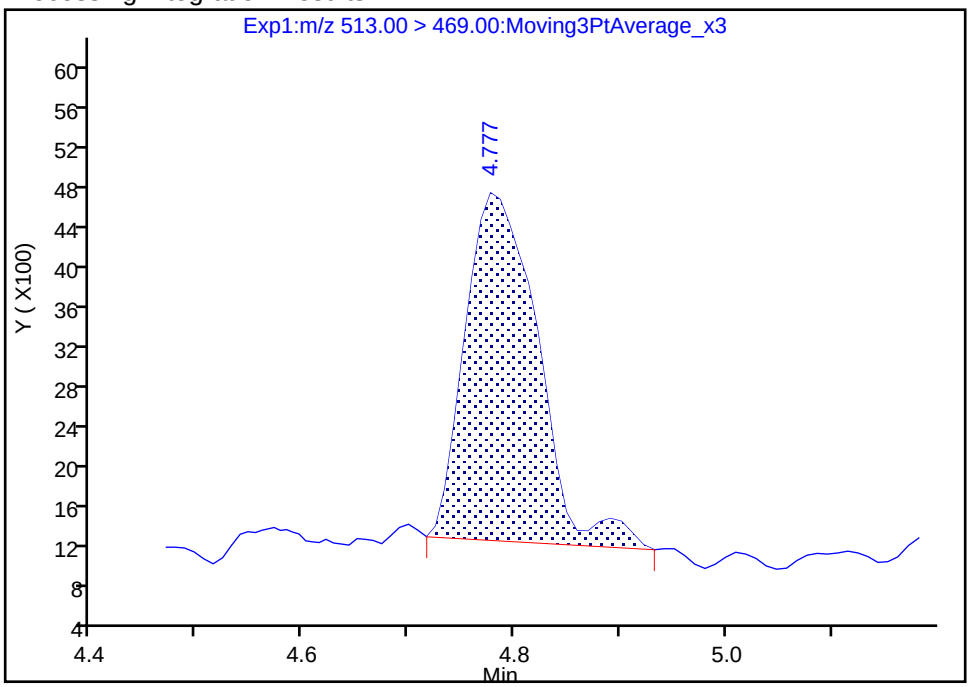
| | | | | | |
|---|---|---|---|---|---|
| Data File: | \\chromfs\Sacramento\ChromData\A13\20200910-103052.b\2020.09.10_A13_PFC_A_067.d | | | | |
| Injection Date: | 10-Sep-2020 19:23:10 | Instrument ID: | A13 | | |
| Lims ID: | 460-217659-D-6-A | Lab Sample ID: | 320-217659-6 | | |
| Client ID: | MW-216 | | | | |
| Operator ID: | SACINSTLCMS01 | ALS Bottle#: | 40 | Worklist Smp#: | 10 |
| Injection Vol: | 20.0 ul | Dil. Factor: | 1.0000 | | |
| Method: | PFAS_A13 | Limit Group: | LC PFC ICAL | | |
| Column: | Gemini C18 3um 3 x 100mm ( 3.00 mm) | Detector | EXP1 | | |

## 36 Perfluorodecanoic acid, CAS: 335-76-2

Signal: 1

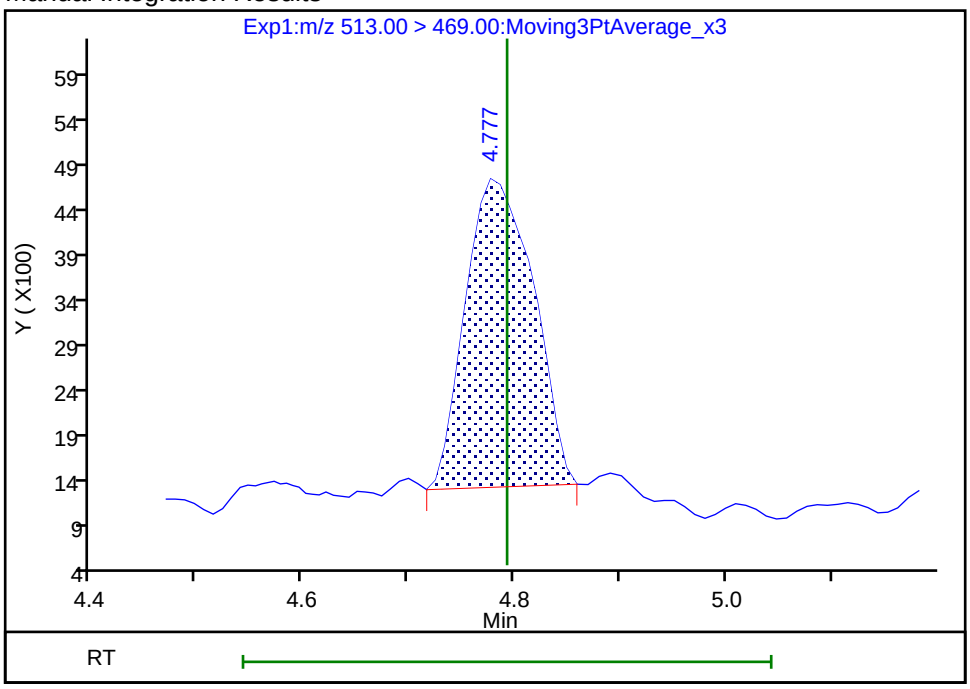
Processing Integration Results

RT: 4.78
Area: 16388
Amount: 0.010044
Amount Units: ng/ml




Manual Integration Results

RT: 4.78
Area: 15014
Amount: 0.009202
Amount Units: ng/ml




Reviewer: mongkols, 11-Sep-2020 10:23:08

Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

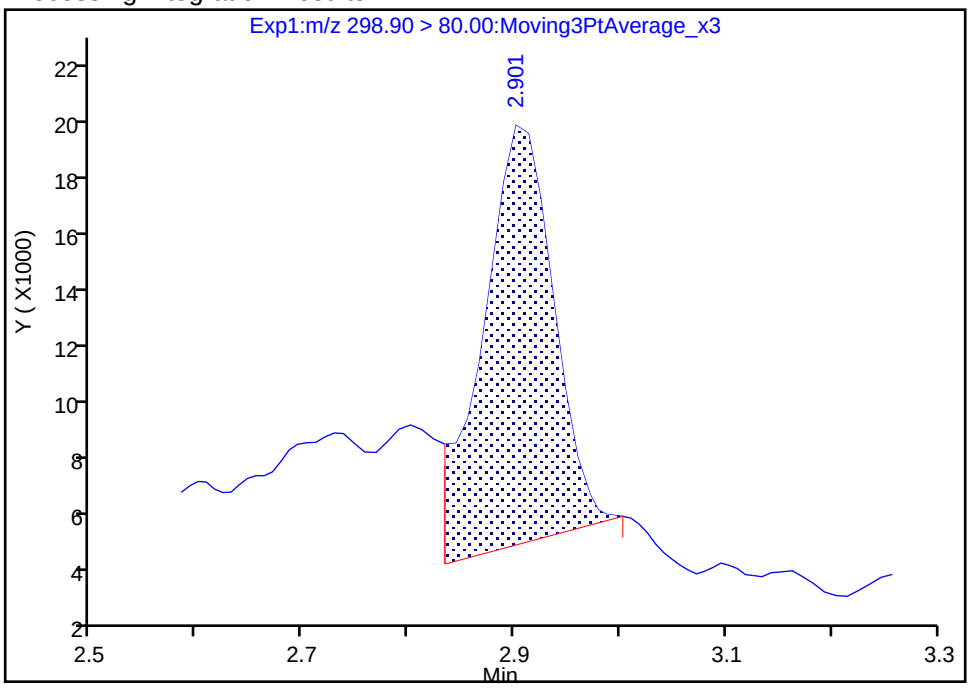
| | | | | | |
|---|---|---|---|---|---|
| Data File: | \\chromfs\Sacramento\ChromData\A13\20200910-103052.b\2020.09.10_A13_PFC_A_067.d | | | | |
| Injection Date: | 10-Sep-2020 19:23:10 | Instrument ID: | A13 | | |
| Lims ID: | 460-217659-D-6-A | Lab Sample ID: | 320-217659-6 | | |
| Client ID: | MW-216 | | | | |
| Operator ID: | SACINSTLCMS01 | ALS Bottle#: | 40 | Worklist Smp#: | 10 |
| Injection Vol: | 20.0 ul | Dil. Factor: | 1.0000 | | |
| Method: | PFAS_A13 | Limit Group: | LC PFC ICAL | | |
| Column: | Gemini C18 3um 3 x 100mm ( 3.00 mm) | Detector | EXP1 | | |

## 6 Perfluorobutanesulfonic acid, CAS: 375-73-5

Signal: 1

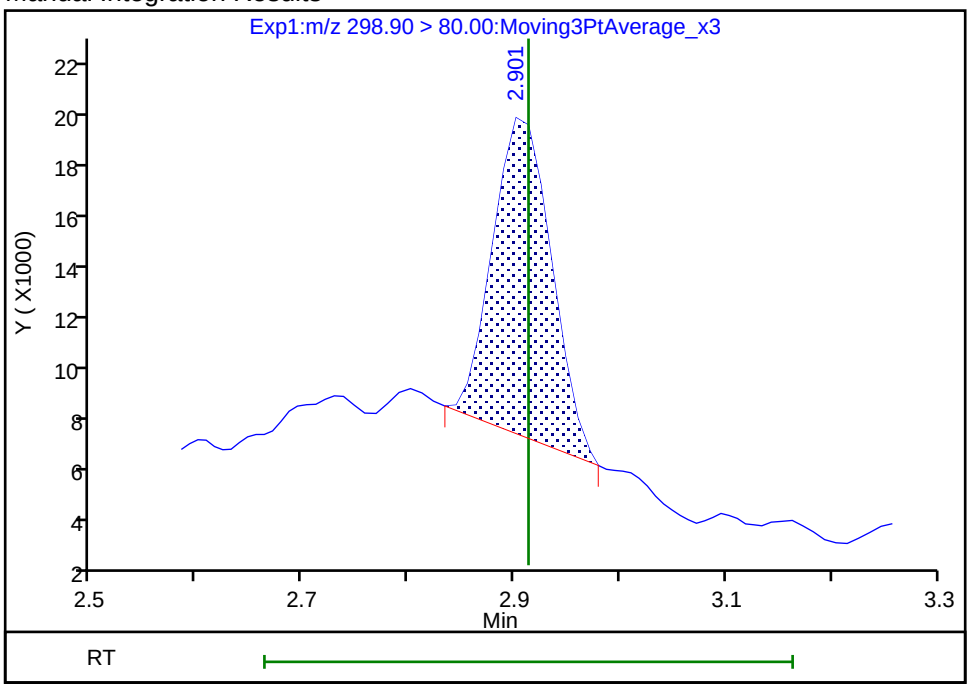
Processing Integration Results

RT: 2.90
Area: 65961
Amount: 0.046265
Amount Units: ng/ml




Manual Integration Results

RT: 2.90
Area: 46112
Amount: 0.032343
Amount Units: ng/ml




Reviewer: mongkols, 11-Sep-2020 10:22:02
Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

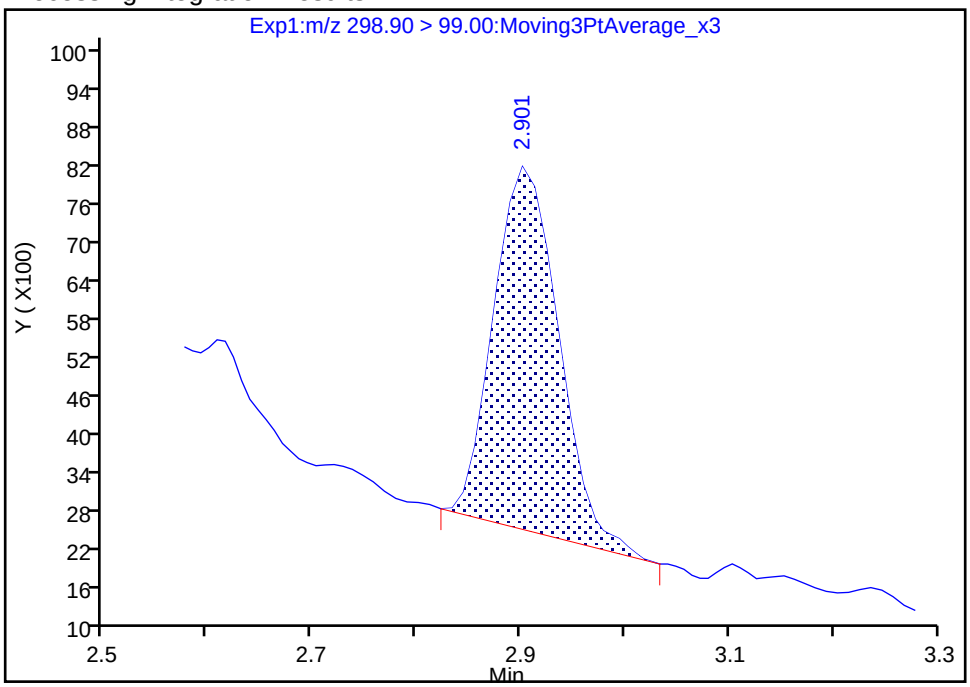
| | | | | | |
|---|---|---|---|---|---|
| Data File: | \\chromfs\Sacramento\ChromData\A13\20200910-103052.b\2020.09.10_A13_PFC_A_067.d | | | | |
| Injection Date: | 10-Sep-2020 19:23:10 | Instrument ID: | A13 | | |
| Lims ID: | 460-217659-D-6-A | Lab Sample ID: | 320-217659-6 | | |
| Client ID: | MW-216 | | | | |
| Operator ID: | SACINSTLCMS01 | ALS Bottle#: | 40 | Worklist Smp#: | 10 |
| Injection Vol: | 20.0 ul | Dil. Factor: | 1.0000 | | |
| Method: | PFAS_A13 | Limit Group: | LC PFC ICAL | | |
| Column: | Gemini C18 3um 3 x 100mm ( 3.00 mm ID) | Detector | EXP1 | | |

## 6 Perfluorobutanesulfonic acid, CAS: 375-73-5

Signal: 2

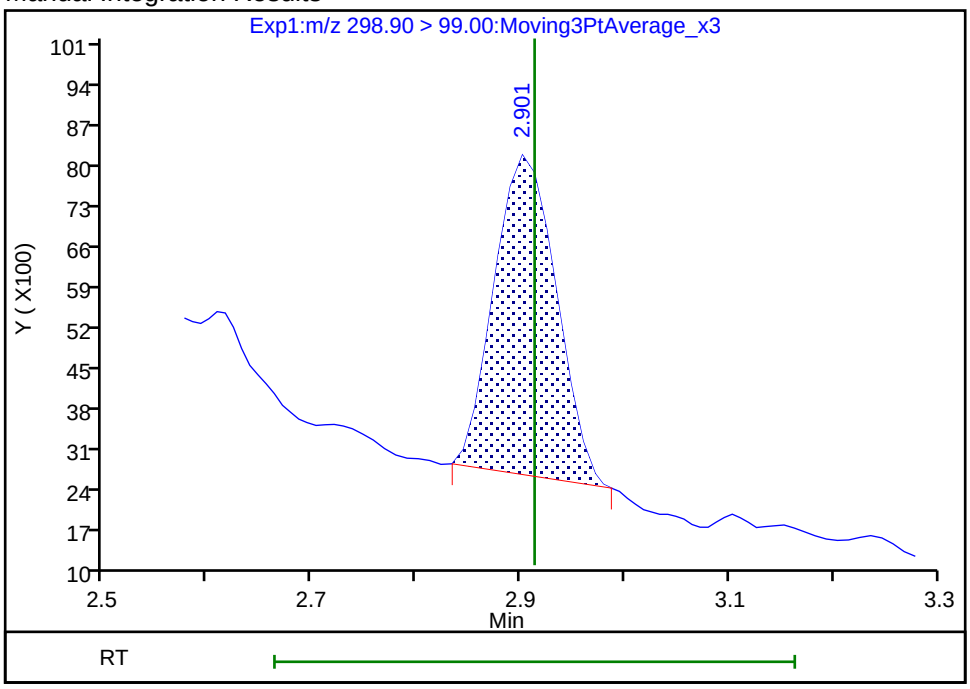
Processing Integration Results

RT: 2.90
Area: 24695
Amount: 0.046265
Amount Units: ng/ml




Manual Integration Results

RT: 2.90
Area: 22933
Amount: 0.032343
Amount Units: ng/ml




Reviewer: mongkols, 11-Sep-2020 10:22:06
Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

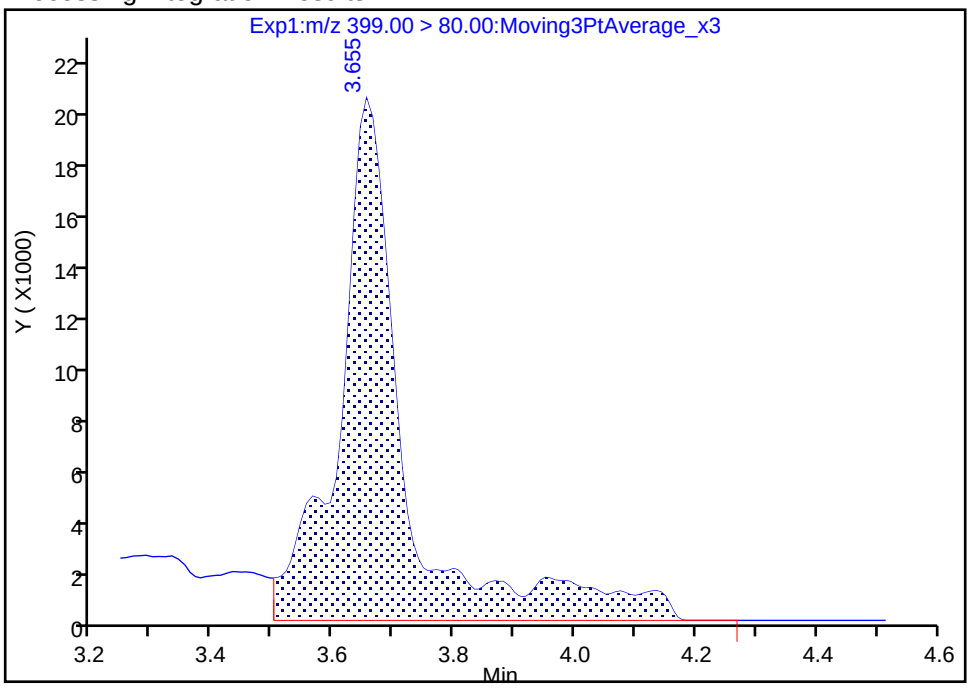
| | | | | | |
|---|---|---|---|---|---|
| Data File: | \\chromfs\Sacramento\ChromData\A13\20200910-103052.b\2020.09.10_A13_PFC_A_067.d | | | | |
| Injection Date: | 10-Sep-2020 19:23:10 | Instrument ID: | A13 | | |
| Lims ID: | 460-217659-D-6-A | Lab Sample ID: | 320-217659-6 | | |
| Client ID: | MW-216 | | | | |
| Operator ID: | SACINSTLCMS01 | ALS Bottle#: | 40 | Worklist Smp#: | 10 |
| Injection Vol: | 20.0 ul | Dil. Factor: | 1.0000 | | |
| Method: | PFAS_A13 | Limit Group: | LC PFC ICAL | | |
| Column: | Gemini C18 3um 3 x 100mm ( 3.00 mm ID) | Detector | EXP1 | | |

## 18 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 1

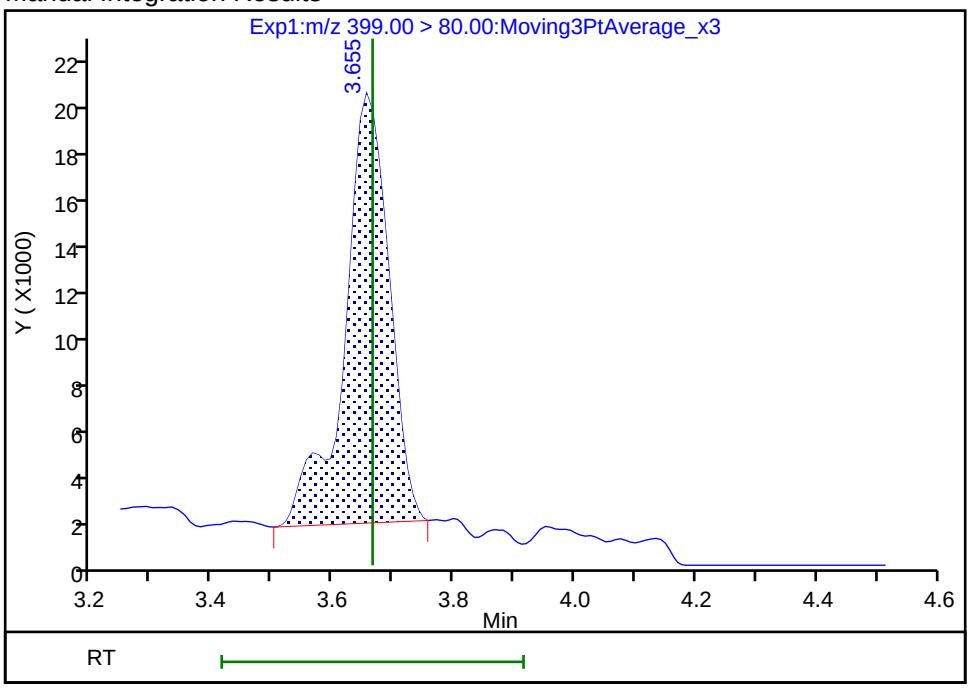
Processing Integration Results

RT: 3.65
Area: 151631
Amount: 0.132248
Amount Units: ng/ml




Manual Integration Results

RT: 3.65
Area: 92620
Amount: 0.080780
Amount Units: ng/ml




Reviewer: mongkols, 11-Sep-2020 10:22:24

Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

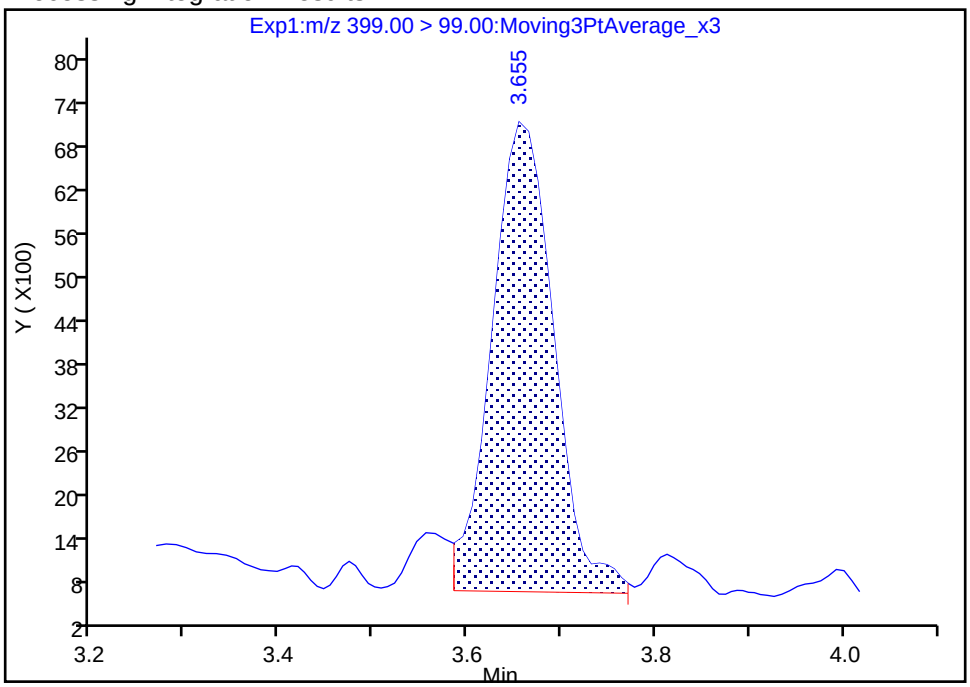
| | | | | | |
|---|---|---|---|---|---|
| Data File: | \\chromfs\Sacramento\ChromData\A13\20200910-103052.b\2020.09.10_A13_PFC_A_067.d | | | | |
| Injection Date: | 10-Sep-2020 19:23:10 | Instrument ID: | A13 | | |
| Lims ID: | 460-217659-D-6-A | Lab Sample ID: | 320-217659-6 | | |
| Client ID: | MW-216 | | | | |
| Operator ID: | SACINSTLCMS01 | ALS Bottle#: | 40 | Worklist Smp#: | 10 |
| Injection Vol: | 20.0 ul | Dil. Factor: | 1.0000 | | |
| Method: | PFAS_A13 | Limit Group: | LC PFC ICAL | | |
| Column: | Gemini C18 3um 3 x 100mm ( 3.00 mm ID) | Detector | EXP1 | | |

## 18 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 2

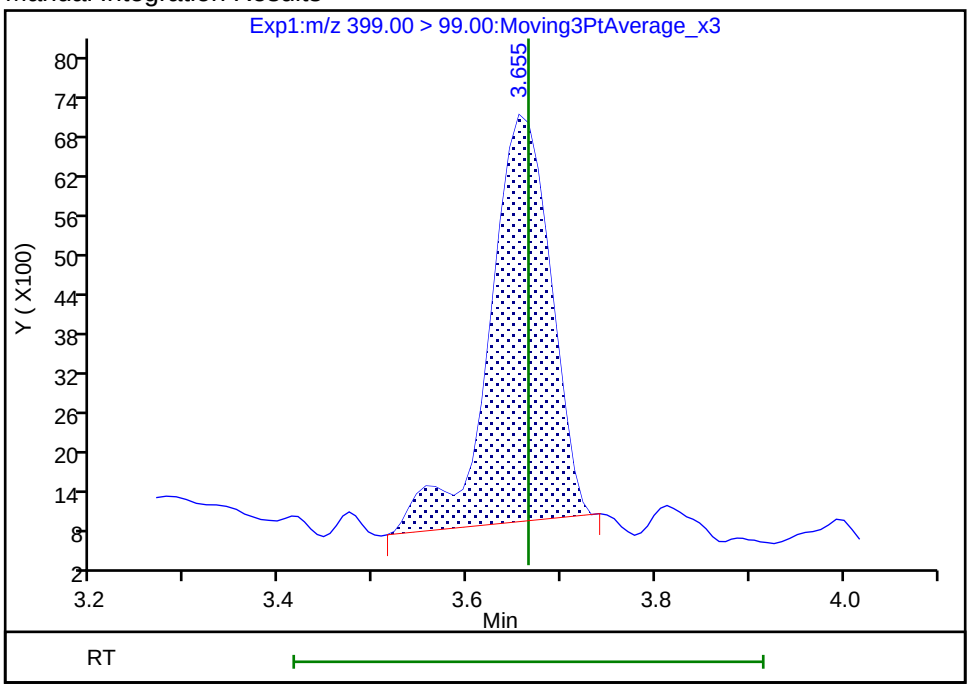
Processing Integration Results

RT: 3.65
Area: 29384
Amount: 0.132248
Amount Units: ng/ml




Manual Integration Results

RT: 3.65
Area: 28090
Amount: 0.080780
Amount Units: ng/ml




Reviewer: mongkols, 11-Sep-2020 10:22:29
Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

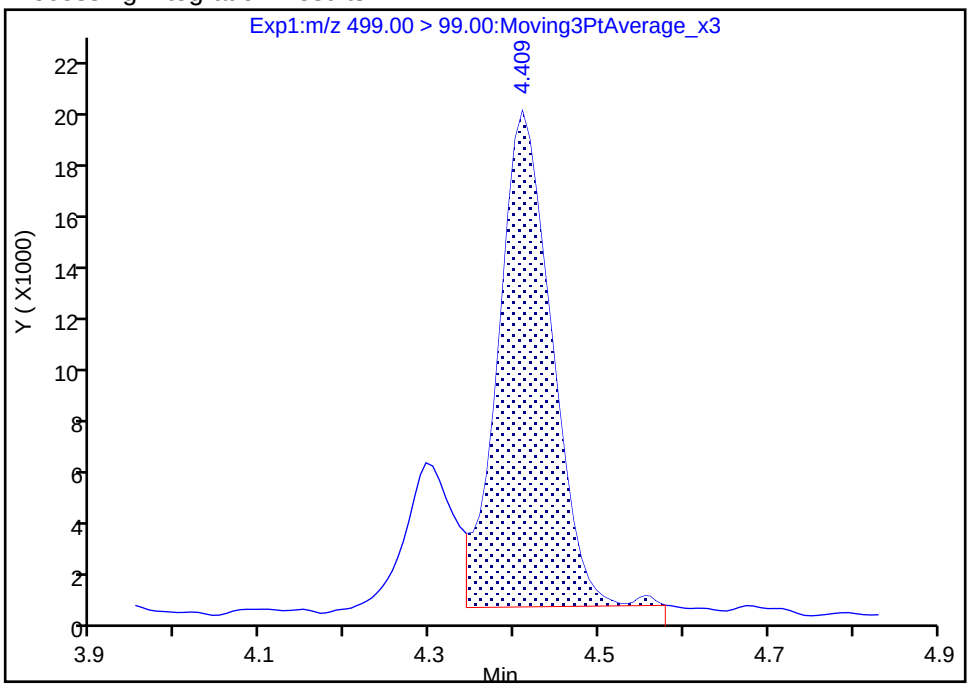
| | | | | | |
|---|---|---|---|---|---|
| Data File: | \\chromfs\Sacramento\ChromData\A13\20200910-103052.b\2020.09.10_A13_PFC_A_067.d | | | | |
| Injection Date: | 10-Sep-2020 19:23:10 | Instrument ID: | A13 | | |
| Lims ID: | 460-217659-D-6-A | Lab Sample ID: | 320-217659-6 | | |
| Client ID: | MW-216 | | | | |
| Operator ID: | SACINSTLCMS01 | ALS Bottle#: | 40 | Worklist Smp#: | 10 |
| Injection Vol: | 20.0 ul | Dil. Factor: | 1.0000 | | |
| Method: | PFAS_A13 | Limit Group: | LC PFC ICAL | | |
| Column: | Gemini C18 3um 3 x 100mm ( 3.00 mm ) | Detector | EXP1 | | |

## 28 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 2

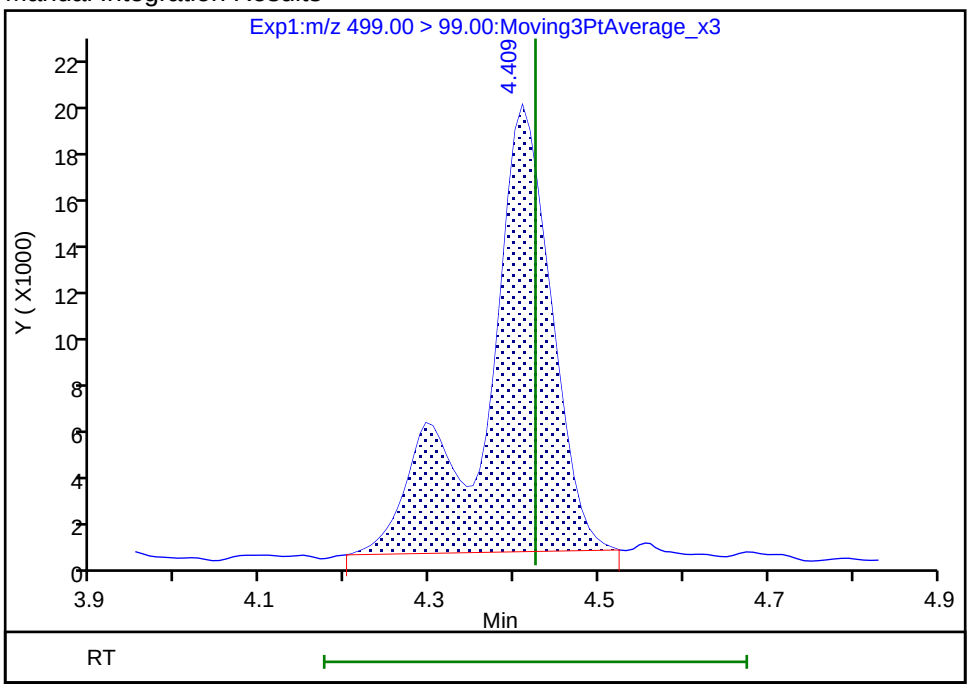
Processing Integration Results

RT: 4.41
Area: 82200
Amount: 0.724011
Amount Units: ng/ml




Manual Integration Results

RT: 4.41
Area: 102425
Amount: 0.676323
Amount Units: ng/ml




Reviewer: mongkols, 11-Sep-2020 10:22:51

Audit Action: Manually Integrated Audit Reason: Isomers

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

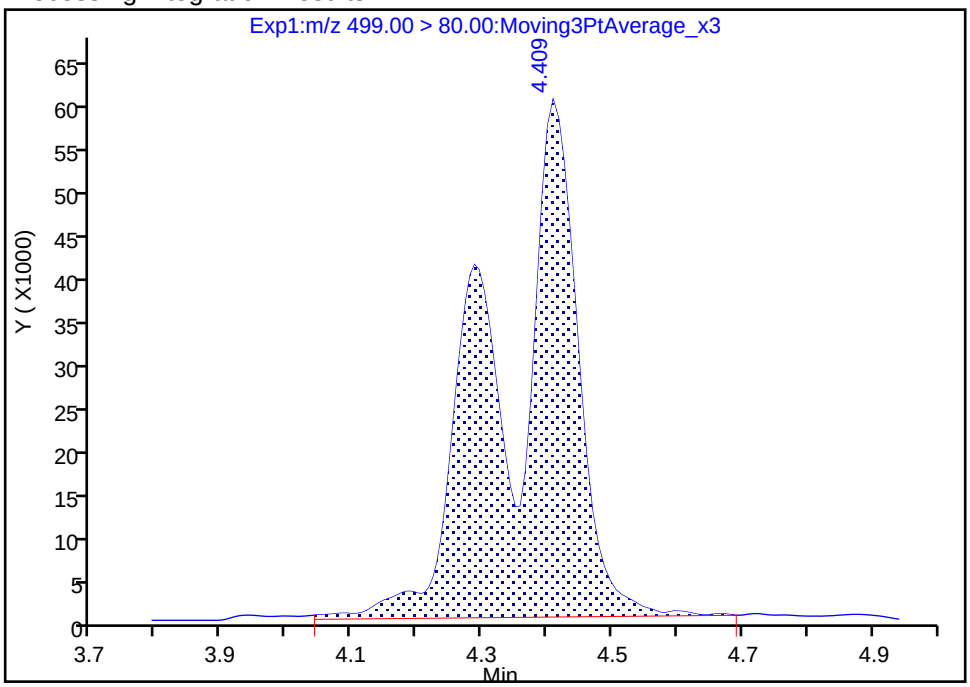
| | | | | | |
|---|---|---|---|---|---|
| Data File: | \\chromfs\Sacramento\ChromData\A13\20200910-103052.b\2020.09.10_A13_PFC_A_067.d | | | | |
| Injection Date: | 10-Sep-2020 19:23:10 | Instrument ID: | A13 | | |
| Lims ID: | 460-217659-D-6-A | Lab Sample ID: | 320-217659-6 | | |
| Client ID: | MW-216 | | | | |
| Operator ID: | SACINSTLCMS01 | ALS Bottle#: | 40 | Worklist Smp#: | 10 |
| Injection Vol: | 20.0 ul | Dil. Factor: | 1.0000 | | |
| Method: | PFAS_A13 | Limit Group: | LC PFC ICAL | | |
| Column: | Gemini C18 3um 3 x 100mm ( 3.00 mm ID) | Detector | EXP1 | | |

## 28 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 1

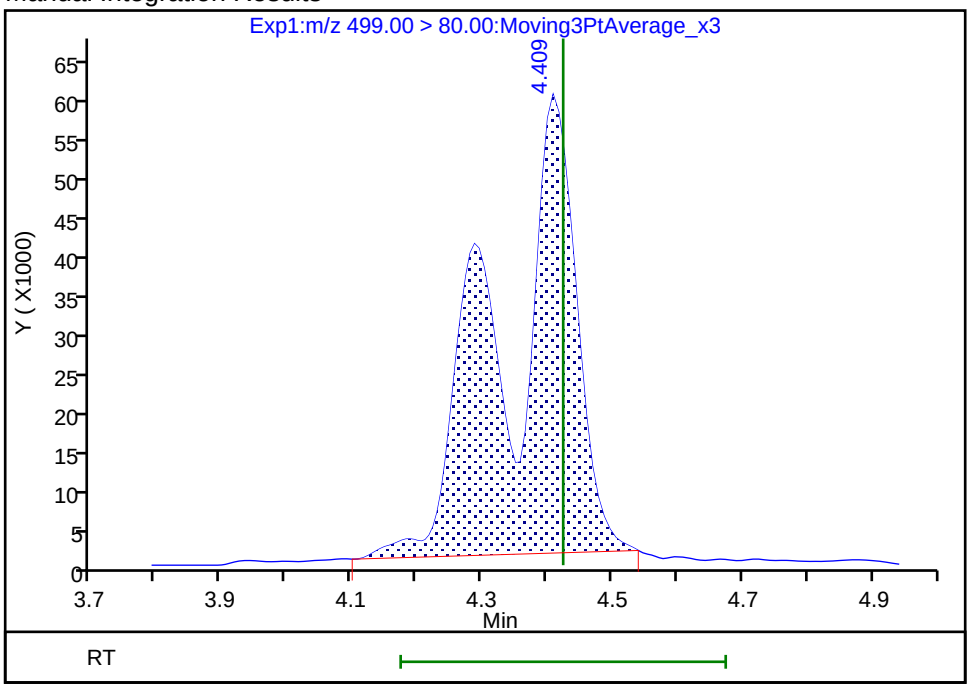
Processing Integration Results

RT: 4.41
Area: 497229
Amount: 0.724011
Amount Units: ng/ml




Manual Integration Results

RT: 4.41
Area: 464478
Amount: 0.676323
Amount Units: ng/ml




Reviewer: mongkols, 11-Sep-2020 10:22:54
Audit Action: Manually Integrated Audit Reason: Isomers

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento  Job No.: 460-217659-1

SDG No.:

Client Sample ID: MW-217  Lab Sample ID: 460-217659-7

Matrix: Water  Lab File ID: 2020.09.10_A13_PFC_A_068.d

Analysis Method: 537 (modified)  Date Collected: 09/03/2020 12:35

Extraction Method: 3535  Date Extracted: 09/09/2020 18:39

Sample wt/vol: 266.1(mL)  Date Analyzed: 09/10/2020 19:32

Con. Extract Vol.: 10.00(mL)  Dilution Factor: 1

Injection Volume: 20(uL)  GC Column: GeminiC18 3x100 ID: 3(mm)

% Moisture:  GPC Cleanup:(Y/N) N

Analysis Batch No.: 411143  Units: ng/L

| CAS NO. | COMPOUND NAME | RESULT | Q | RL | MDL |
|---|---|---|---|---|---|
| 375-22-4 | Perfluorobutanoic acid (PFBA) | 3.68 | B | 1.88 | 0.33 |
| 2706-90-3 | Perfluoropentanoic acid (PFPeA) | 1.57 | J | 1.88 | 0.46 |
| 307-24-4 | Perfluorohexanoic acid (PFHxA) | 2.59 | | 1.88 | 0.54 |
| 375-85-9 | Perfluoroheptanoic acid (PFHpA) | 2.07 | | 1.88 | 0.23 |
| 335-67-1 | Perfluorooctanoic acid (PFOA) | 13.8 | | 1.88 | 0.80 |
| 375-95-1 | Perfluorononanoic acid (PFNA) | 1.51 | J | 1.88 | 0.25 |
| 335-76-2 | Perfluorodecanoic acid (PFDA) | 0.71 | J | 1.88 | 0.29 |
| 2058-94-8 | Perfluoroundecanoic acid (PFUnA) | 1.03 | U | 1.88 | 1.03 |
| 307-55-1 | Perfluorododecanoic acid (PFDoA) | 0.52 | U | 1.88 | 0.52 |
| 72629-94-8 | Perfluorotridecanoic acid (PFTriA) | 1.22 | U | 1.88 | 1.22 |
| 376-06-7 | Perfluorotetradecanoic acid (PFTeA) | 0.27 | U | 1.88 | 0.27 |
| 375-73-5 | Perfluorobutanesulfonic acid (PFBS) | 2.13 | | 1.88 | 0.19 |
| 355-46-4 | Perfluorohexanesulfonic acid (PFHxS) | 4.48 | B | 1.88 | 0.16 |
| 375-92-8 | Perfluoroheptanesulfonic Acid (PFHpS) | 0.61 | J | 1.88 | 0.18 |
| 1763-23-1 | Perfluorooctanesulfonic acid (PFOS) | 42.1 | | 1.88 | 0.51 |
| 335-77-3 | Perfluorodecanesulfonic acid (PFDS) | 0.30 | U | 1.88 | 0.30 |
| 754-91-6 | Perfluorooctanesulfonamide (FOSA) | 1.21 | J | 1.88 | 0.33 |
| 2355-31-9 | N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA) | 2.91 | U | 18.8 | 2.91 |
| 2991-50-6 | N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA) | 1.79 | U | 18.8 | 1.79 |
| 27619-97-2 | 6:2 FTS | 4.04 | J | 18.8 | 1.88 |
| 39108-34-4 | 8:2 FTS | 1.88 | U | 18.8 | 1.88 |

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento  Job No.: 460-217659-1

SDG No.:

Client Sample ID: MW-217  Lab Sample ID: 460-217659-7

Matrix: Water  Lab File ID: 2020.09.10_A13_PFC_A_068.d

Analysis Method: 537 (modified)  Date Collected: 09/03/2020 12:35

Extraction Method: 3535  Date Extracted: 09/09/2020 18:39

Sample wt/vol: 266.1(mL)  Date Analyzed: 09/10/2020 19:32

Con. Extract Vol.: 10.00(mL)  Dilution Factor: 1

Injection Volume: 20(uL)  GC Column: GeminiC18 3x100 ID: 3(mm)

% Moisture:  GPC Cleanup:(Y/N) N

Analysis Batch No.: 411143  Units: ng/L

| CAS NO. | ISOTOPE DILUTION | %REC | Q | LIMITS |
|---|---|---|---|---|
| STL00992 | 13C4 PFBA | 43 | | 25-150 |
| STL01893 | 13C5 PFPeA | 50 | | 25-150 |
| STL00993 | 13C2 PFHxA | 63 | | 25-150 |
| STL01892 | 13C4 PFHpA | 64 | | 25-150 |
| STL00990 | 13C4 PFOA | 63 | | 25-150 |
| STL00995 | 13C5 PFNA | 68 | | 25-150 |
| STL00996 | 13C2 PFDA | 65 | | 25-150 |
| STL00997 | 13C2 PFUnA | 63 | | 25-150 |
| STL00998 | 13C2 PFDoA | 58 | | 25-150 |
| STL02116 | 13C2 PFTeDA | 52 | | 25-150 |
| STL02337 | 13C3 PFBS | 79 | | 25-150 |
| STL00994 | 18O2 PFHxS | 85 | | 25-150 |
| STL00991 | 13C4 PFOS | 82 | | 25-150 |
| STL01056 | 13C8 FOSA | 67 | | 25-150 |
| STL02118 | d3-NMeFOSAA | 62 | | 25-150 |
| STL02117 | d5-NEtFOSAA | 69 | | 25-150 |
| STL02279 | M2-6:2 FTS | 106 | | 25-150 |
| STL02280 | M2-8:2 FTS | 100 | | 25-150 |

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\A13\20200910-103052.b\2020.09.10_A13_PFC_A_068.d
Lims ID: 460-217659-D-7-A
Client ID: MW-217
Sample Type: Client
Inject. Date: 10-Sep-2020 19:32:36 ALS Bottle#: 41 Worklist Smp#: 11
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Sample Info: 460-217659-d-7-a
Misc. Info.: Plate: 1 Rack: 4
Operator ID: SACINSTLCMS01 Instrument ID: A13

Method: \\chromfs\Sacramento\ChromData\A13\20200910-103052.b\PFAS_A13.m
Limit Group: LC PFC ICAL
Last Update: 11-Sep-2020 10:31:05 Calib Date: 08-Sep-2020 18:58:15
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\A13\20200908-102913.b\2020.09.08_A13_PFC_ICALX_010.d

Column 1 : Gemini C18 3um 3 x 100mm ( 3.00 mm) Det: EXP1
Process Host: CTX1053

First Level Reviewer: mongkols Date: 11-Sep-2020 10:31:05
Ratio Calibration: CCV Sample: \\chromfs\Sacramento\ChromData\A13\20200910-103052.b\2020.09.10_A13_PFC_A_058.d

| Signal | RT | EXP RT | DLT RT | REL RT | Response | Amount ng/ml | Ratio(Limits) | %Rec | S/N | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| D 1 13C4 PFBA | | | | | | | | | | |
| 217.00 > 172.00 | 2.470 | 2.475 | -0.005 | 0.611 | 4301436 | 1.06 | | 42.6 | 4425 | |
| 2 Perfluorobutanoic acid | | | | | | | | | | M |
| 212.90 > 169.00 | 2.470 | 2.482 | -0.012 | 1.000 | 125178 | 0.0979 | | | 2.8 | M |
| D 4 13C5 PFPeA | | | | | | | | | | |
| 267.90 > 223.00 | 2.861 | 2.867 | -0.006 | 0.708 | 3959421 | 1.26 | | 50.3 | 1496 | |
| 5 Perfluoropentanoic acid | | | | | | | | | | M |
| 262.90 > 219.00 | 2.861 | 2.867 | -0.006 | 1.000 | 68078 | 0.0418 | | | 0.5 | M |
| D 14 13C3 PFBS | | | | | | | | | | |
| 301.90 > 80.00 | 2.895 | 2.913 | -0.018 | 0.717 | 7247191 | 1.83 | | 78.8 | 282 | |
| 6 Perfluorobutanesulfonic acid | | | | | | | | | | M |
| 298.90 > 80.00 | 2.895 | 2.913 | -0.018 | 1.000 | 172554 | 0.0566 | Target=2.29 | | 2.4 | M |
| 298.90 > 99.00 | 2.907 | 2.913 | -0.006 | 1.004 | 71654 | | 2.41(1.15-3.44) | | 4.0 | |
| 10 Perfluorohexanoic acid | | | | | | | | | | M |
| 313.00 > 269.00 | 3.242 | 3.258 | -0.016 | 0.997 | 155887 | 0.0689 | Target=13.52 | | 1.3 | M |
| 313.00 > 119.00 | 3.242 | 3.258 | -0.016 | 0.997 | 15488 | | 10.07(6.76-20.28) | | 2.7 | |
| D 9 13C2 PFHxA | | | | | | | | | | |
| 315.00 > 270.00 | 3.253 | 3.258 | -0.005 | 0.805 | 6087929 | 1.56 | | 62.6 | 2705 | |
| D 17 18O2 PFHxS | | | | | | | | | | |
| 403.00 > 84.00 | 3.652 | 3.665 | -0.013 | 0.904 | 5201875 | 2.01 | | 84.9 | 6056 | |
| 16 Perfluoroheptanoic acid | | | | | | | | | | M |
| 363.00 > 319.00 | 3.652 | 3.665 | -0.013 | 1.000 | 136049 | 0.0552 | Target=3.87 | | 2.4 | M |
| 363.00 > 169.00 | 3.652 | 3.665 | -0.013 | 1.000 | 38311 | | 3.55(1.93-5.80) | | 12.9 | M |
| 18 Perfluorohexanesulfonic acid | | | | | | | | | | M |
| 399.00 > 80.00 | 3.652 | 3.665 | -0.013 | 1.000 | 291786 | 0.1193 | Target=3.08 | | 13.6 | M |
| 399.00 > 99.00 | 3.652 | 3.665 | -0.013 | 1.000 | 86134 | | 3.39(1.54-4.62) | | 15.1 | M |
| D 15 13C4 PFHpA | | | | | | | | | | |
| 367.00 > 322.00 | 3.652 | 3.665 | -0.013 | 0.904 | 6099212 | 1.59 | | 63.7 | 9658 | |

| Signal | RT | EXP RT | DLT RT | REL RT | Response | Amount ng/ml | Ratio(Limits) | %Rec | S/N | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| D 20 M2-6:2 FTS | | | | | | | | | | |
| 429.00 > 81.00 | 4.024 | 4.042 | -0.018 | 0.996 | 2824773 | 2.53 | | 106 | 357 | |
| 21 6:2 FTS | | | | | | | | | | |
| 427.00 > 407.00 | 4.032 | 4.042 | -0.010 | 1.002 | 307519 | 0.1074 | | | 159 | |
| 22 Perfluoroheptanesulfonic acid | | | | | | | | | | |
| 449.00 > 80.00 | 4.040 | 4.051 | -0.011 | 0.917 | 27756 | 0.0161 | Target=4.20 | | 3.3 | |
| 449.00 > 99.00 | 4.049 | 4.051 | -0.002 | 0.919 | 9974 | | 2.78(2.10-6.30) | | 2.7 | |
| D 24 13C4 PFOA | | | | | | | | | | |
| 417.00 > 372.00 | 4.049 | 4.059 | -0.010 | 1.002 | 7431458 | 1.59 | | 63.5 | 11895 | |
| 26 Perfluorooctanoic acid | | | | | | | | | | M |
| 413.00 > 369.00 | 4.049 | 4.059 | -0.010 | 1.000 | 1119370 | 0.3681 | Target=2.99 | | 26.2 | M |
| 413.00 > 169.00 | 4.049 | 4.059 | -0.010 | 1.000 | 424737 | | 2.64(1.50-4.49) | | 139 | M |
| * 25 13C2 PFOA | | | | | | | | | | |
| 415.00 > 370.00 | 4.040 | 4.059 | -0.019 | | 11890889 | 2.50 | | | 4644 | |
| 28 Perfluorooctanesulfonic acid | | | | | | | | | | M |
| 499.00 > 80.00 | 4.406 | 4.425 | -0.019 | 1.000 | 1757578 | 1.12 | Target=4.13 | | 192 | |
| 499.00 > 99.00 | 4.406 | 4.425 | -0.019 | 1.000 | 370054 | | 4.75(2.06-6.19) | | 100 | M |
| D 29 13C4 PFOS | | | | | | | | | | |
| 503.00 > 80.00 | 4.406 | 4.425 | -0.019 | 1.091 | 3610296 | 1.95 | | 81.7 | 524 | |
| 30 Perfluorononanoic acid | | | | | | | | | | M |
| 463.00 > 419.00 | 4.423 | 4.433 | -0.010 | 1.000 | 113072 | 0.0402 | Target=7.70 | | 8.4 | M |
| 463.00 > 169.00 | 4.415 | 4.433 | -0.018 | 0.998 | 14111 | | 8.01(3.85-11.55) | | 14.0 | |
| D 31 13C5 PFNA | | | | | | | | | | |
| 468.00 > 423.00 | 4.423 | 4.442 | -0.019 | 1.095 | 7402323 | 1.71 | | 68.4 | 7527 | |
| D 34 13C8 FOSA | | | | | | | | | | |
| 506.00 > 78.00 | 4.730 | 4.740 | -0.010 | 1.171 | 4454895 | 1.68 | | 67.1 | 6340 | |
| 33 Perfluorooctanesulfonamide | | | | | | | | | | |
| 498.00 > 78.00 | 4.730 | 4.740 | -0.010 | 1.000 | 53969 | 0.0323 | | | 9.9 | |
| D 37 13C2 PFDA | | | | | | | | | | |
| 515.00 > 470.00 | 4.783 | 4.793 | -0.010 | 1.184 | 8514703 | 1.62 | | 65.0 | 10843 | |
| 36 Perfluorodecanoic acid | | | | | | | | | | |
| 513.00 > 469.00 | 4.783 | 4.793 | -0.010 | 1.000 | 57976 | 0.0190 | Target=10.40 | | 6.0 | |
| 513.00 > 169.00 | 4.765 | 4.793 | -0.028 | 0.996 | 6297 | | 9.21(5.20-15.61) | | 10.1 | |
| D 38 M2-8:2 FTS | | | | | | | | | | |
| 529.00 > 81.00 | 4.783 | 4.802 | -0.019 | 1.184 | 3523668 | 2.38 | | 99.6 | 946 | |
| 39 8:2 FTS | | | | | | | | | | |
| 527.00 > 507.00 | 4.774 | 4.802 | -0.028 | 0.998 | 4529 | 0.001245 | | | 24.6 | |
| D 40 d3-NMeFOSAA | | | | | | | | | | |
| 573.00 > 419.00 | 4.939 | 4.959 | -0.020 | 1.222 | 4214332 | 1.56 | | 62.4 | 3231 | |
| 41 NMeFOSAA | | | | | | | | | | |
| 570.00 > 419.00 | 4.818 | 4.959 | -0.141 | 0.975 | 17320 | 0.0128 | | | 3.9 | |
| D 44 13C2 PFUnA | | | | | | | | | | |
| 565.00 > 520.00 | 5.103 | 5.113 | -0.010 | 1.263 | 8079563 | 1.58 | | 63.0 | 6818 | |
| D 46 d5-NEtFOSAA | | | | | | | | | | |
| 589.00 > 419.00 | 5.113 | 5.123 | -0.010 | 1.265 | 4525028 | 1.73 | | 69.2 | 1919 | |
| 48 NEtFOSA | | | | | | | | | | |
| 584.00 > 419.00 | 5.122 | 5.132 | -0.010 | 1.002 | 11302 | 0.008066 | | | 23.2 | |

| Signal | RT | EXP RT | DLT RT | REL RT | Response | Amount ng/ml | Ratio(Limits) | %Rec | S/N | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| D 56 13C2 PFDoA | | | | | | | | | | |
| 615.00 > 570.00 | 5.392 | 5.409 | -0.017 | 1.335 | 8034507 | 1.46 | | 58.2 | 5437 | |
| 57 Perfluorododecanoic acid | | | | | | | | | | |
| 613.00 > 569.00 | 5.401 | 5.409 | -0.008 | 1.002 | 11052 | 0.003770 | Target=9.00 | | 4.4 | |
| 613.00 > 169.00 | 5.384 | 5.409 | -0.025 | 0.998 | 1261 | | 8.76(4.50-13.49) | | 7.4 | |
| D 61 13C2 PFTeDA | | | | | | | | | | |
| 715.00 > 670.00 | 5.907 | 5.920 | -0.013 | 1.462 | 7081685 | 1.30 | | 52.0 | 10471 | |

## QC Flag Legend

Review Flags

M - Manually Integrated

Report Date: 11-Sep-2020 10:31:05 Chrom Revision: 2.3 09-Sep-2020 15:12:58

Eurofins TestAmerica, Sacramento

Data File: \\chromfs\Sacramento\ChromData\A13\20200910-103052.b\2020.09.10_A13_PFC_A_068.d

Injection Date: 10-Sep-2020 19:32:36 Instrument ID: A13

Lims ID: 460-217659-D-7-A Lab Sample ID: 320-217659-7

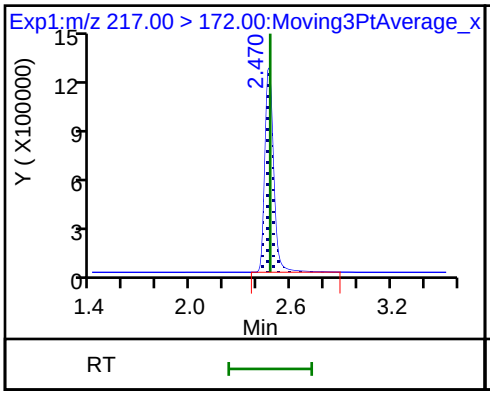
Client ID: MW-217

Operator ID: SACINSTLCMS01 ALS Bottle#: 41 Worklist Smp#: 11

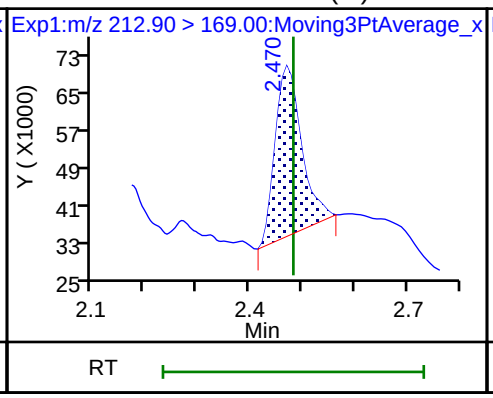
Injection Vol: 20.0 ul Dil. Factor: 1.0000

Method: PFAS_A13 Limit Group: LC PFC ICAL

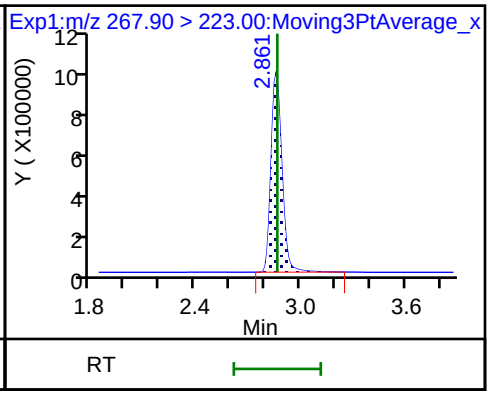
D 1 13C4 PFBA



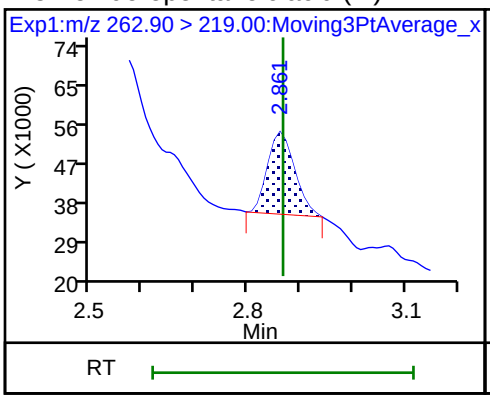

2 Perfluorobutanoic acid (M)



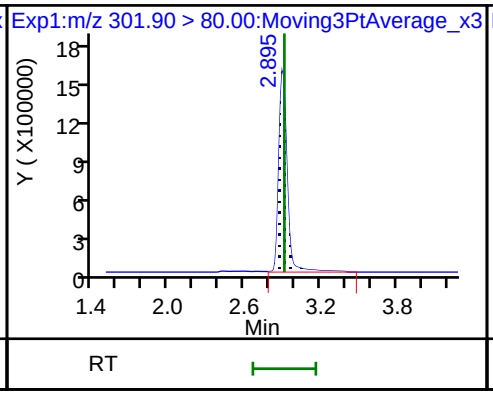

D 4 13C5 PFPeA



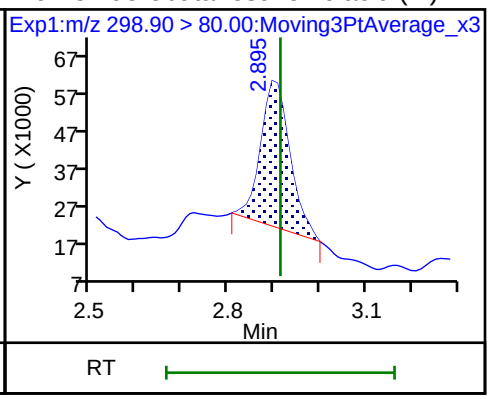

5 Perfluoropentanoic acid (M)



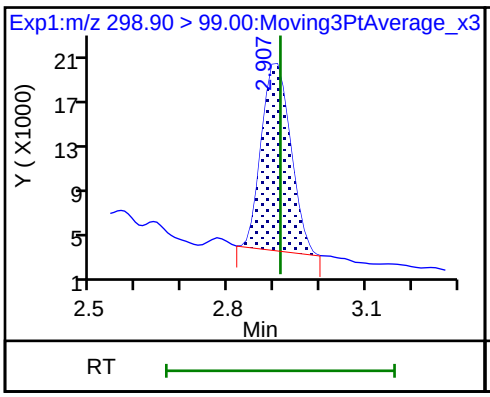

D 14 13C3 PFBS



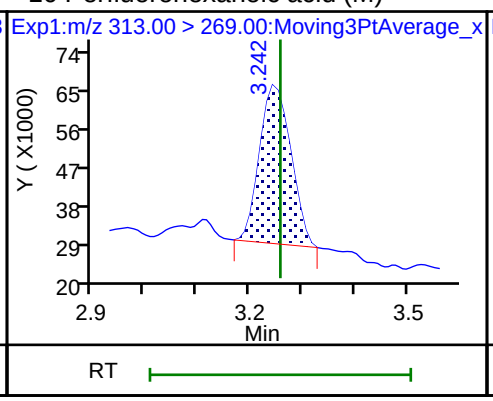

6 Perfluorobutanesulfonic acid (M)



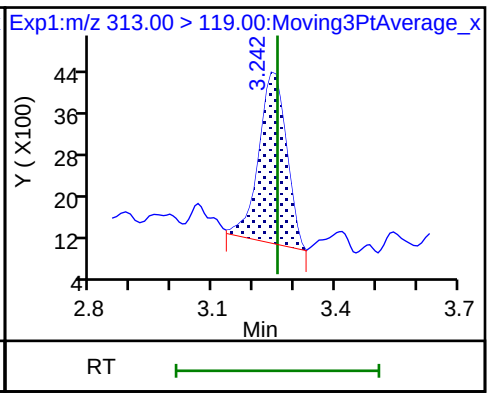

6 Perfluorobutanesulfonic acid



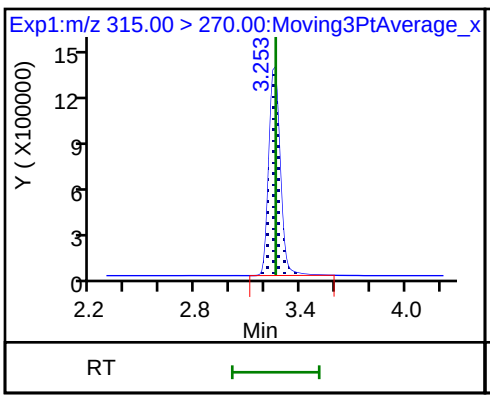

10 Perfluorohexanoic acid (M)



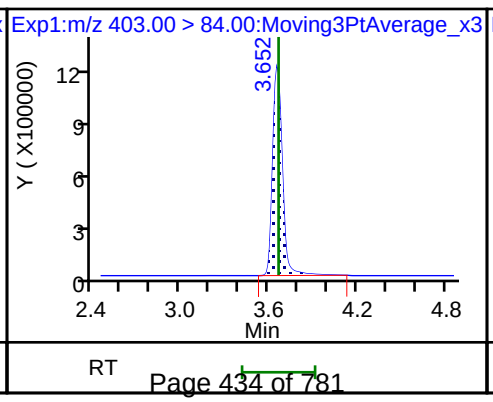

10 Perfluorohexanoic acid



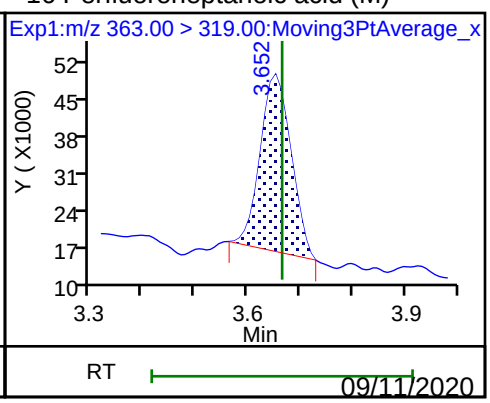

D 9 13C2 PFHxA



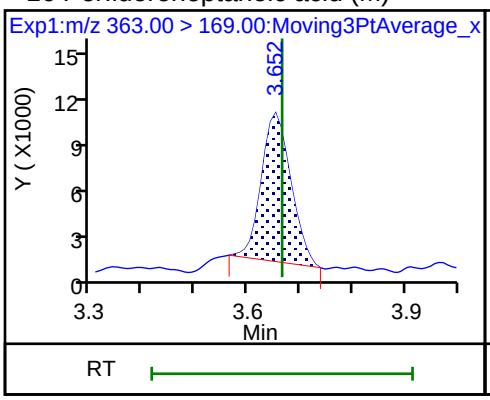

D 17 18O2 PFHxS



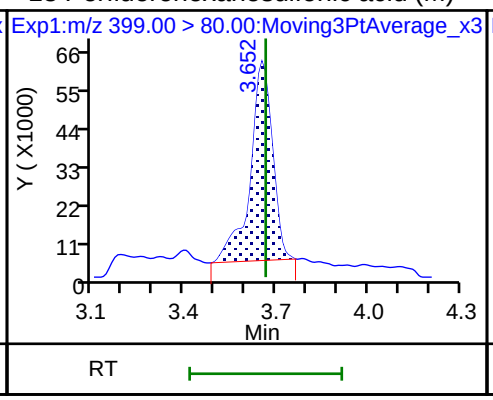

16 Perfluoroheptanoic acid (M)



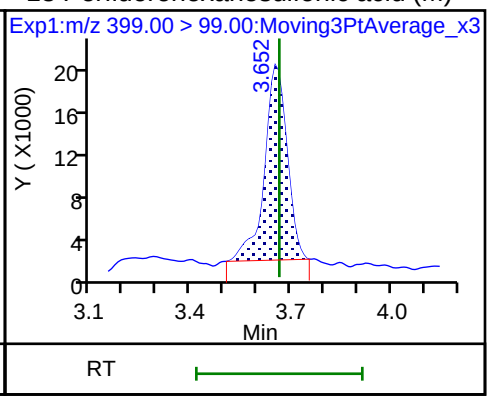
16 Perfluoroheptanoic acid (M)



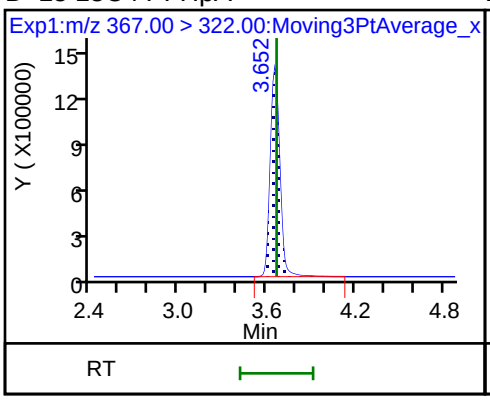

18 Perfluorohexanesulfonic acid (M)



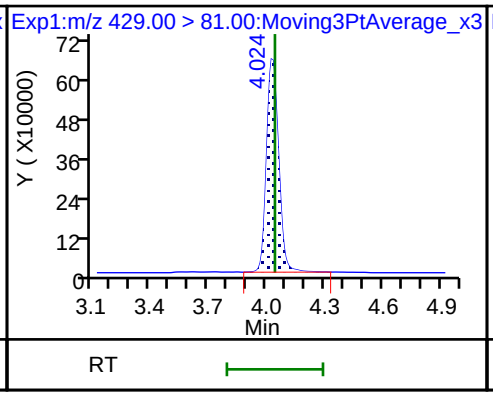

18 Perfluorohexanesulfonic acid (M)



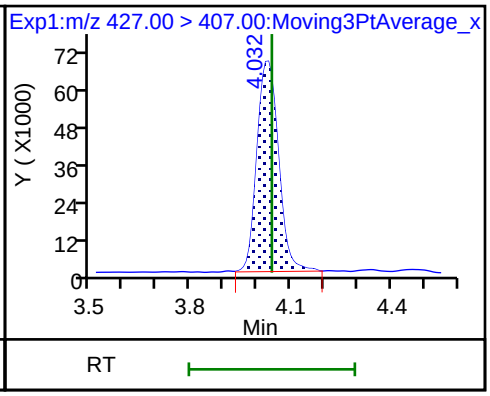

D 15 13C4 PFHpA



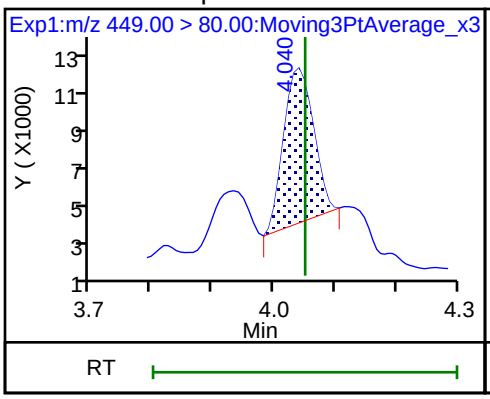

D 20 M2-6:2 FTS



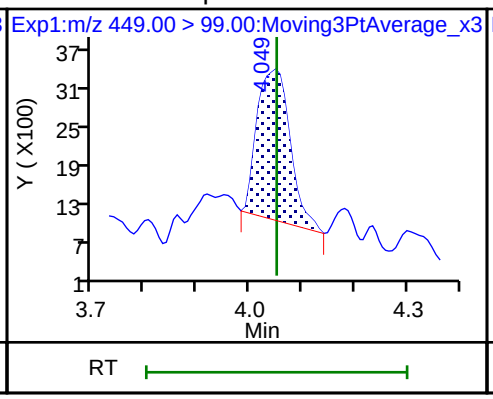

21 6:2 FTS



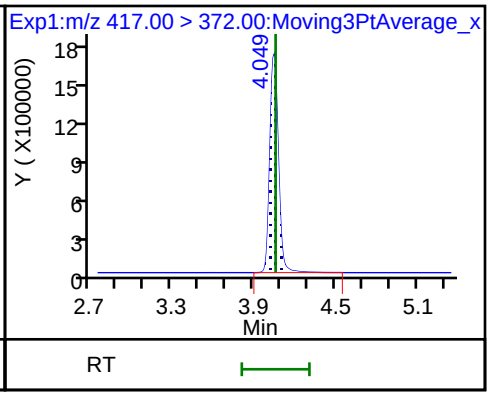

22 Perfluoroheptanesulfonic acid



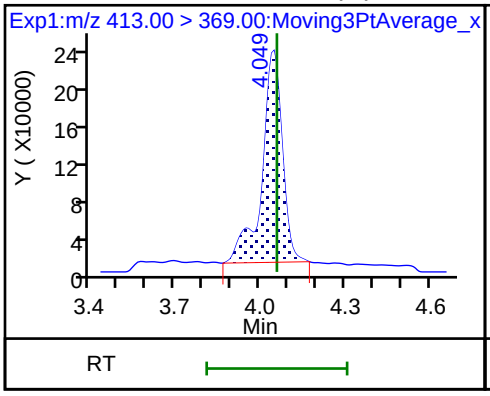

22 Perfluoroheptanesulfonic acid



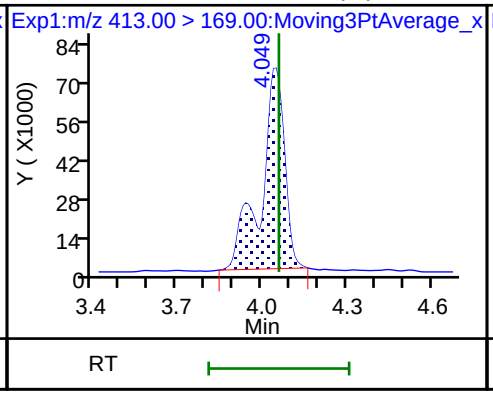

D 24 13C4 PFOA



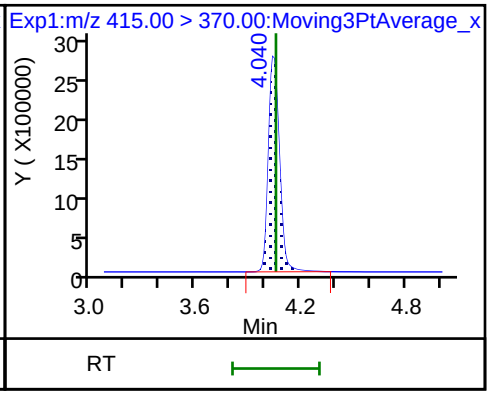

26 Perfluorooctanoic acid (M)



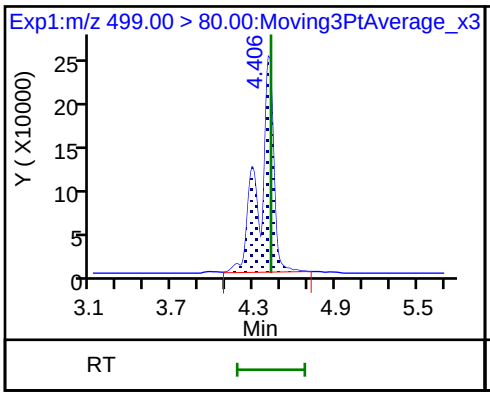

26 Perfluorooctanoic acid (M)



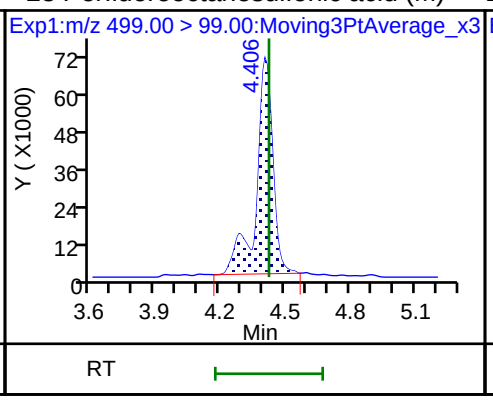

* 25 13C2 PFOA



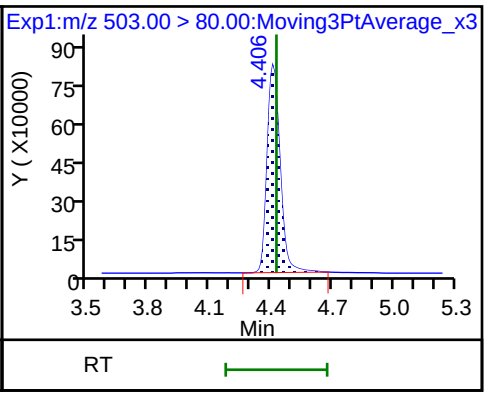
28 Perfluorooctanesulfonic acid



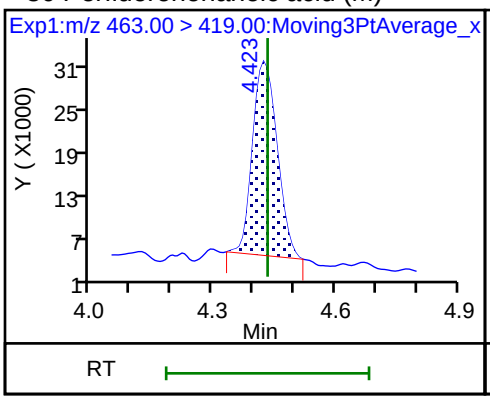

28 Perfluorooctanesulfonic acid (M)



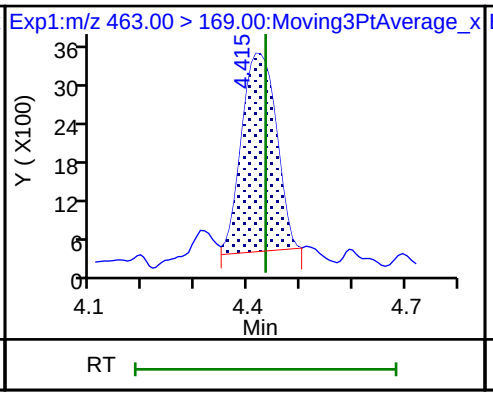

D 29 13C4 PFOS



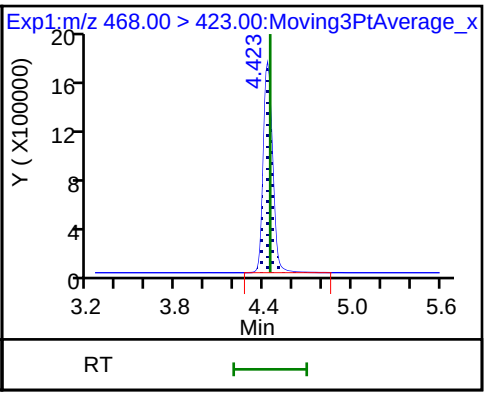

30 Perfluorononanoic acid (M)



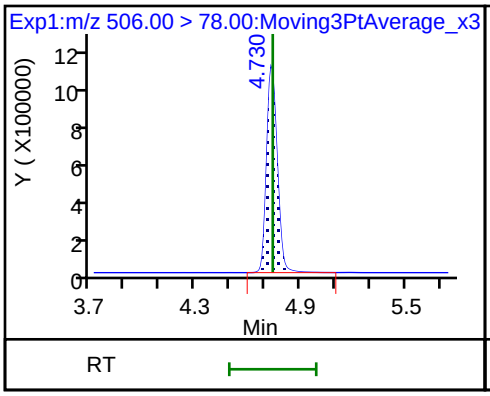

30 Perfluorononanoic acid



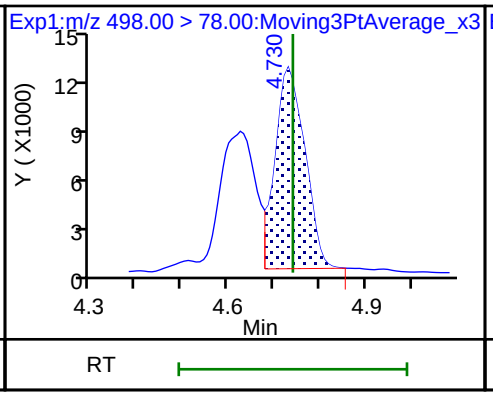

D 31 13C5 PFNA



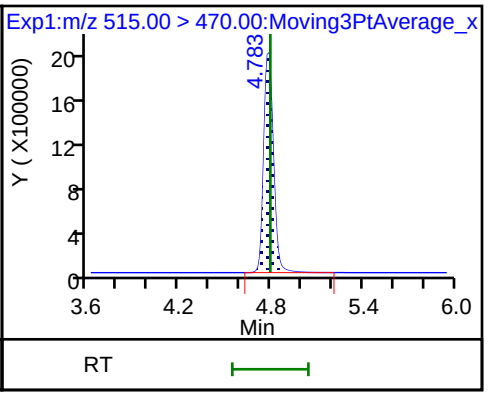

D 34 13C8 FOSA



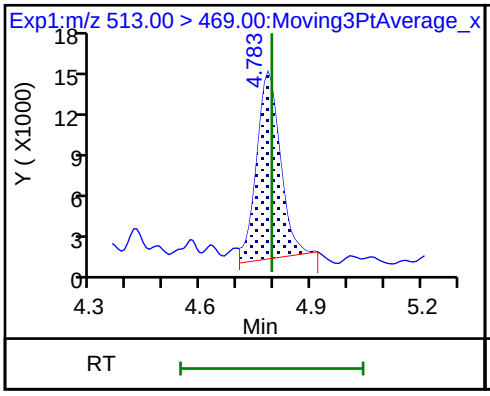

33 Perfluorooctanesulfonamide



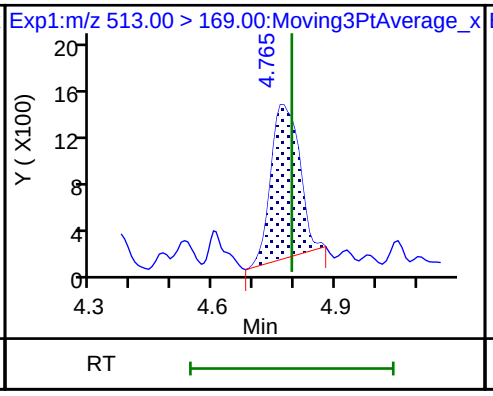

D 37 13C2 PFDA



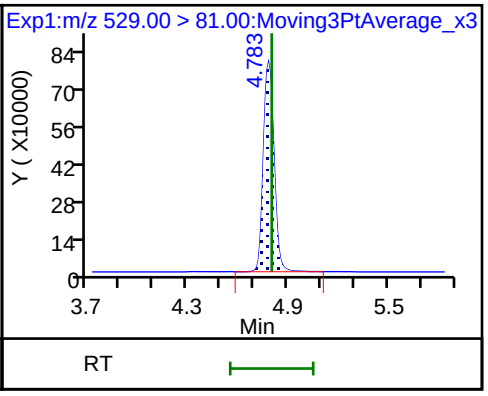

36 Perfluorodecanoic acid



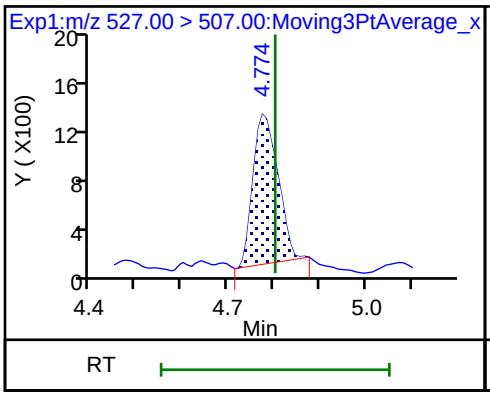

36 Perfluorodecanoic acid



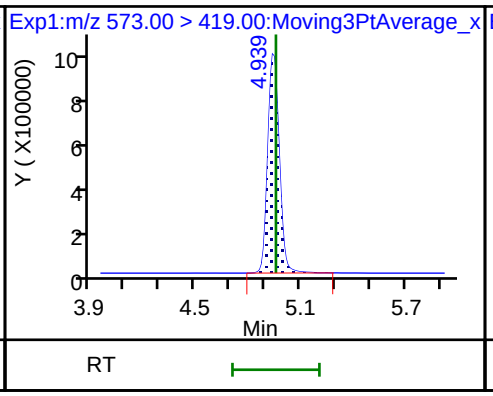

D 38 M2-8:2 FTS



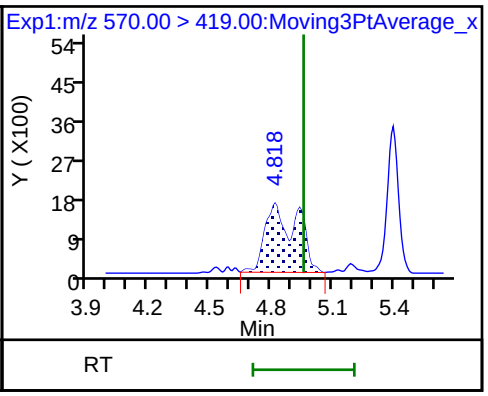
39 8:2 FTS



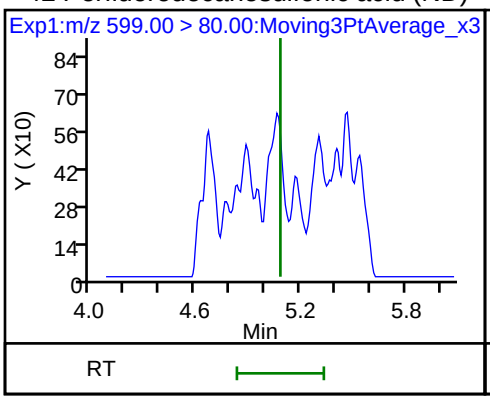

D 40 d3-NMeFOSAA



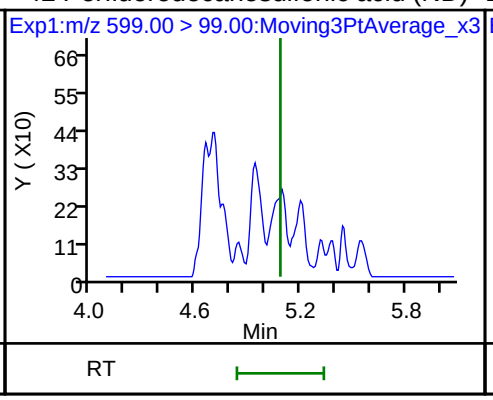

41 NMeFOSAA



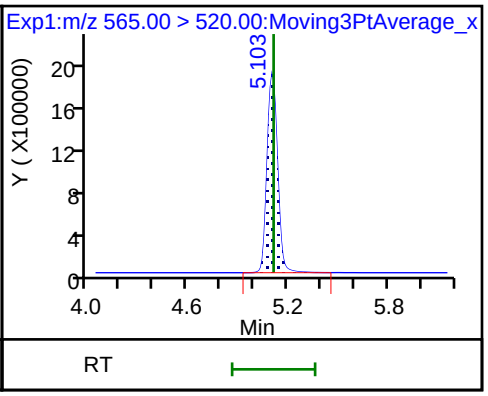

42 Perfluorodecanesulfonic acid (ND)



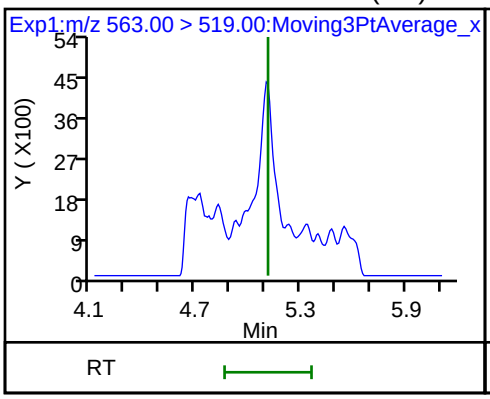

42 Perfluorodecanesulfonic acid (ND)



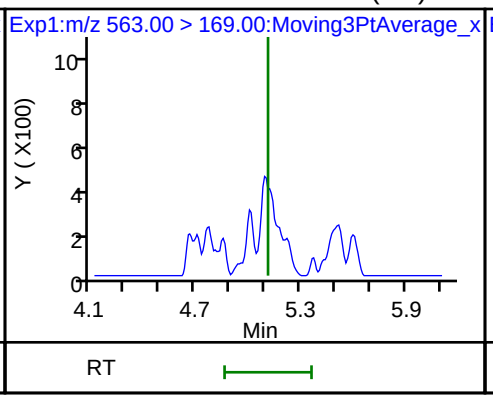

D 44 13C2 PFUnA



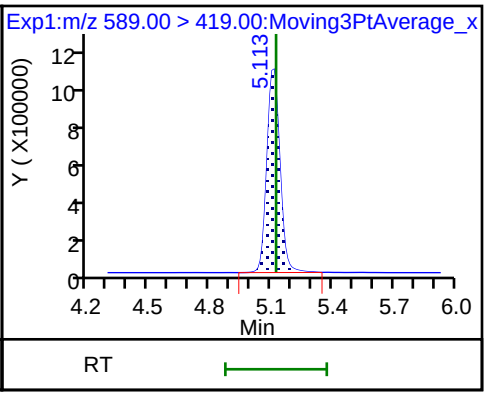

45 Perfluoroundecanoic acid (ND)



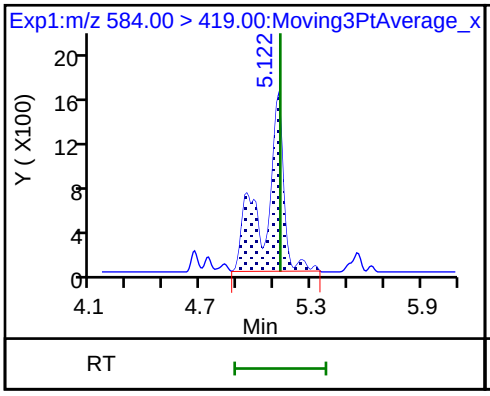

45 Perfluoroundecanoic acid (ND)



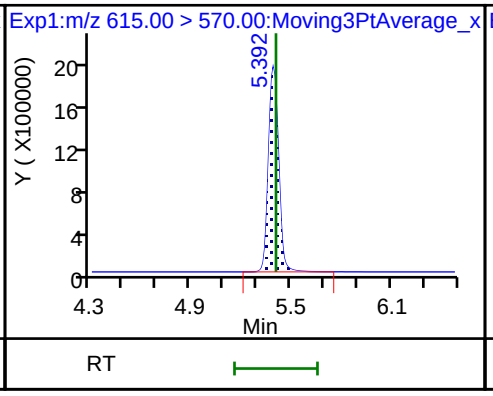

D 46 d5-NEtFOSAA



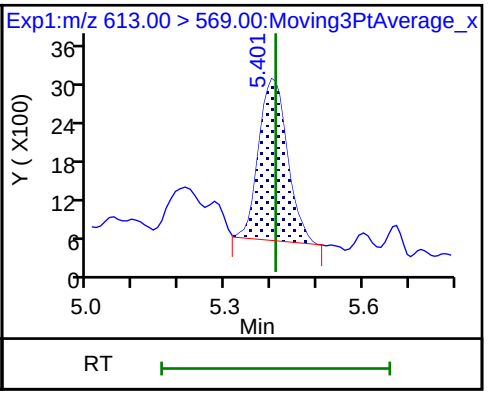

48 NEtFOSA



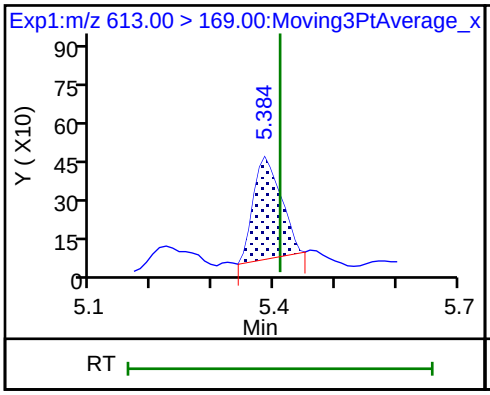

D 56 13C2 PFDoA



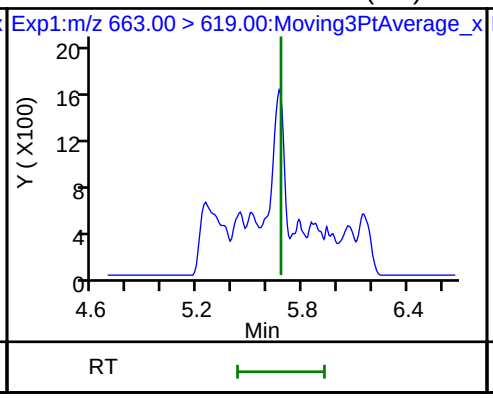

57 Perfluorododecanoic acid



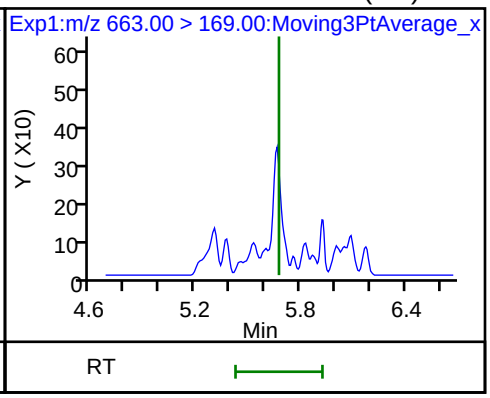
57 Perfluorododecanoic acid



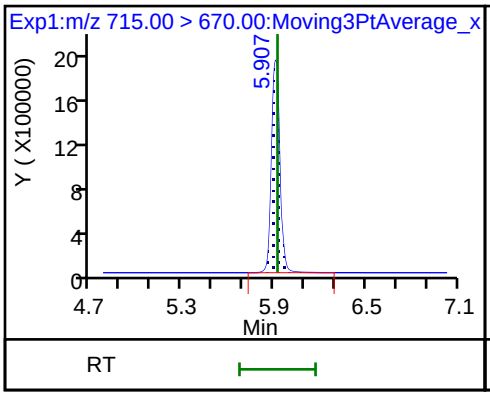

60 Perfluorotridecanoic acid (ND)



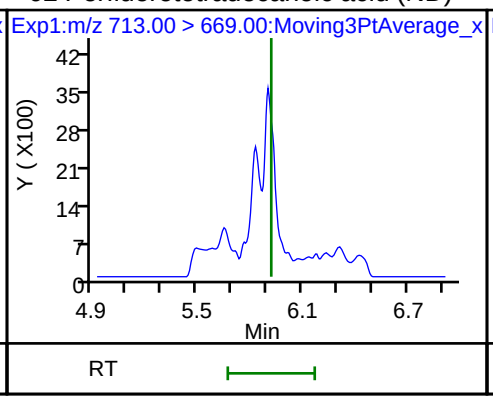

60 Perfluorotridecanoic acid (ND)



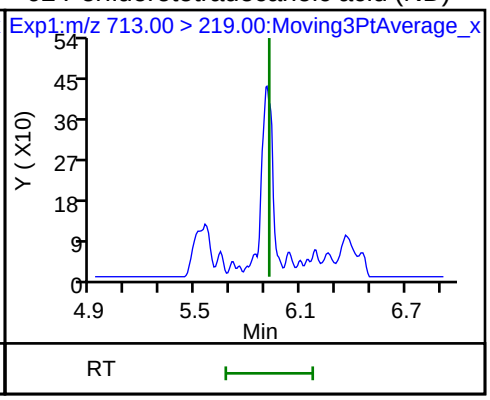

D 61 13C2 PFTeDA




62 Perfluorotetradecanoic acid (ND)




62 Perfluorotetradecanoic acid (ND)



Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

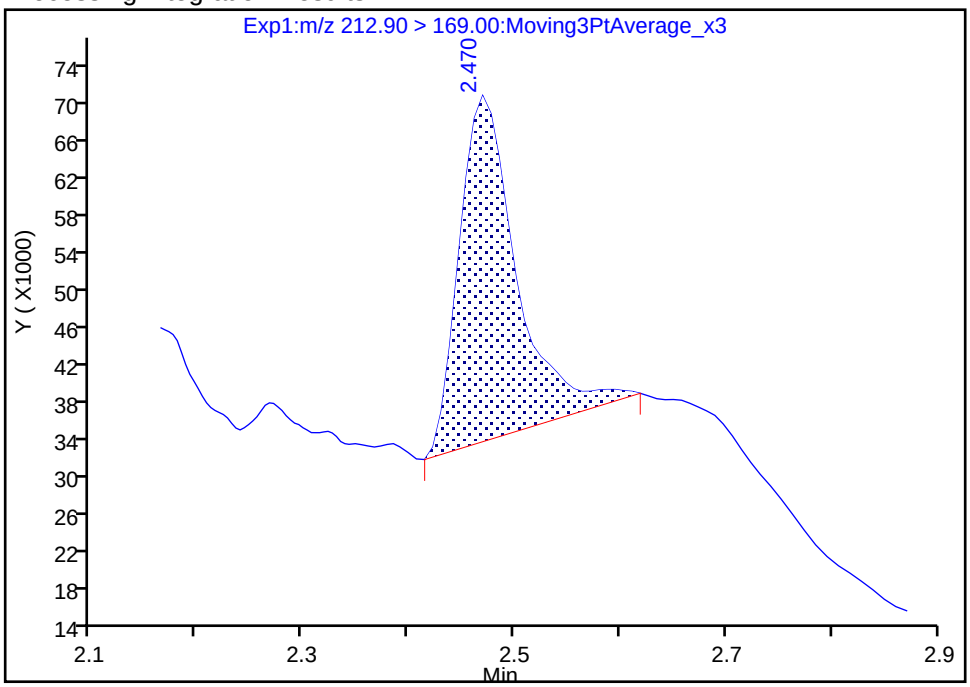
| | | | | | |
|---|---|---|---|---|---|
| Data File: | \\chromfs\Sacramento\ChromData\A13\20200910-103052.b\2020.09.10_A13_PFC_A_068.d | | | | |
| Injection Date: | 10-Sep-2020 19:32:36 | Instrument ID: | A13 | | |
| Lims ID: | 460-217659-D-7-A | Lab Sample ID: | 320-217659-7 | | |
| Client ID: | MW-217 | | | | |
| Operator ID: | SACINSTLCMS01 | ALS Bottle#: | 41 | Worklist Smp#: | 11 |
| Injection Vol: | 20.0 ul | Dil. Factor: | 1.0000 | | |
| Method: | PFAS_A13 | Limit Group: | LC PFC ICAL | | |
| Column: | Gemini C18 3um 3 x 100mm ( 3.00 mm) | Detector | EXP1 | | |

## 2 Perfluorobutanoic acid, CAS: 375-22-4

Signal: 1

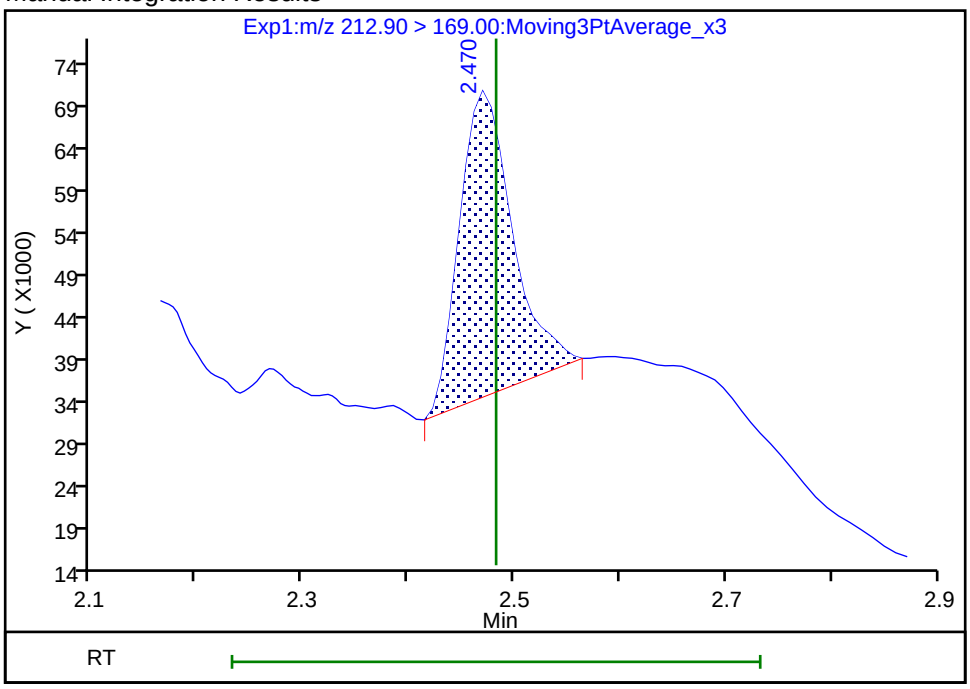
Processing Integration Results

RT: 2.47
Area: 138500
Amount: 0.108303
Amount Units: ng/ml




Manual Integration Results

RT: 2.47
Area: 125178
Amount: 0.097885
Amount Units: ng/ml




Reviewer: mongkols, 11-Sep-2020 10:29:52

Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

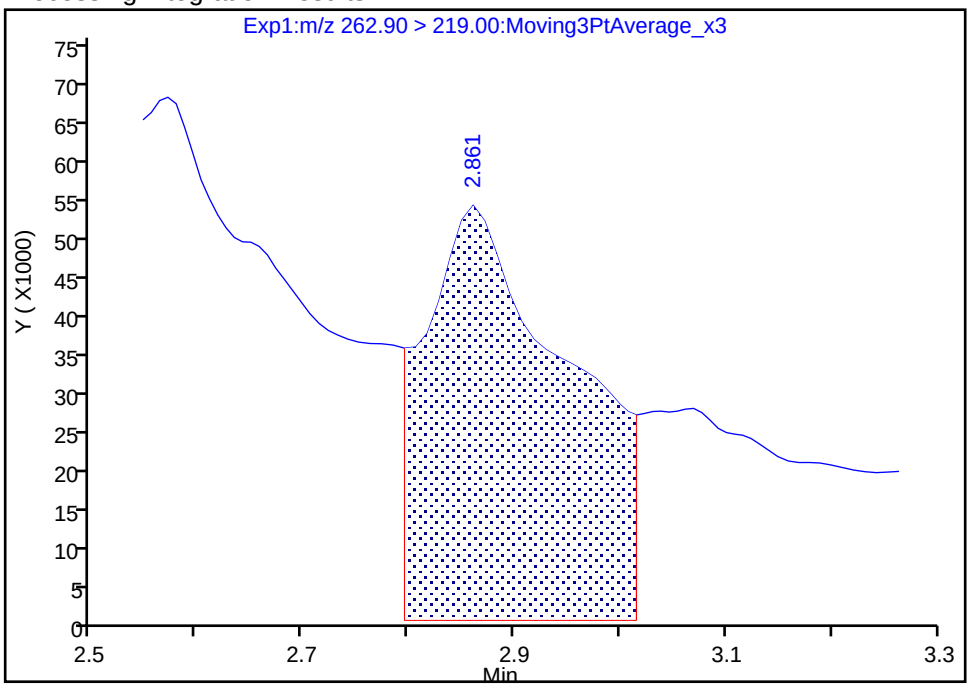
| | | | | | |
|---|---|---|---|---|---|
| Data File: | \\chromfs\Sacramento\ChromData\A13\20200910-103052.b\2020.09.10_A13_PFC_A_068.d | | | | |
| Injection Date: | 10-Sep-2020 19:32:36 | Instrument ID: | A13 | | |
| Lims ID: | 460-217659-D-7-A | Lab Sample ID: | 320-217659-7 | | |
| Client ID: | MW-217 | | | | |
| Operator ID: | SACINSTLCMS01 | ALS Bottle#: | 41 | Worklist Smp#: | 11 |
| Injection Vol: | 20.0 ul | Dil. Factor: | 1.0000 | | |
| Method: | PFAS_A13 | Limit Group: | LC PFC ICAL | | |
| Column: | Gemini C18 3um 3 x 100mm ( 3.00 mm) | Detector | EXP1 | | |

## 5 Perfluoropentanoic acid, CAS: 2706-90-3

Signal: 1

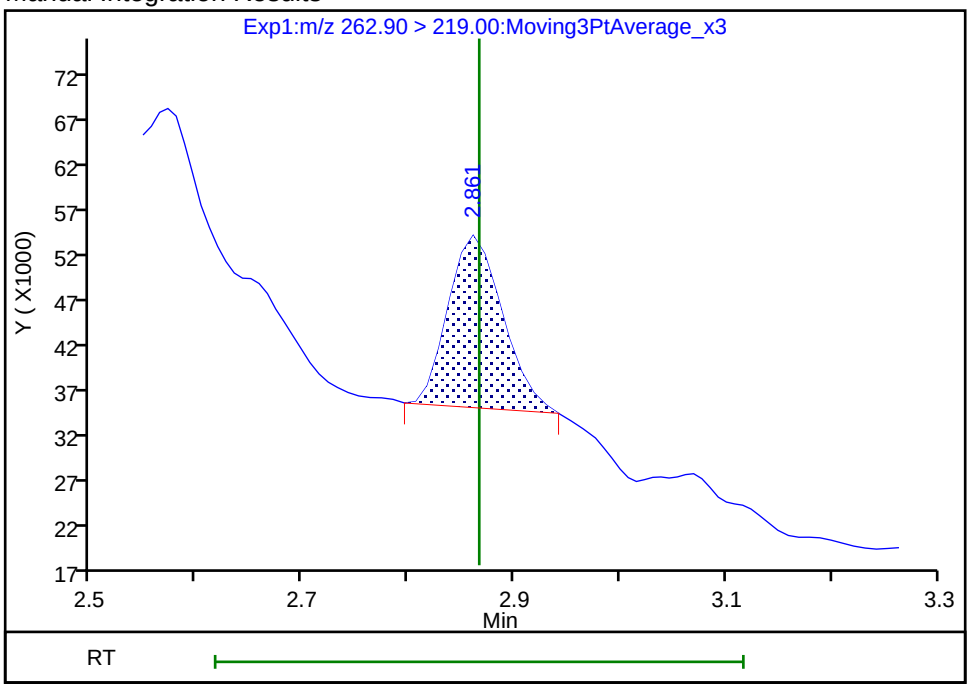
Processing Integration Results

RT: 2.86
Area: 507955
Amount: 0.312046
Amount Units: ng/ml




Manual Integration Results

RT: 2.86
Area: 68078
Amount: 0.041822
Amount Units: ng/ml




Reviewer: mongkols, 11-Sep-2020 10:29:59

Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

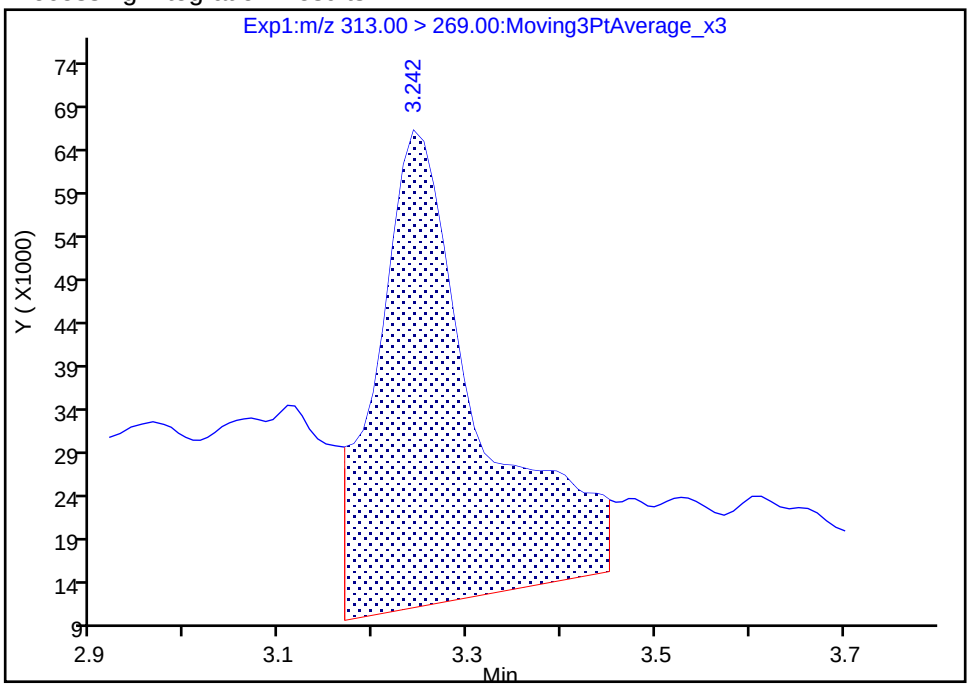
| | | | | | |
|---|---|---|---|---|---|
| Data File: | \\chromfs\Sacramento\ChromData\A13\20200910-103052.b\2020.09.10_A13_PFC_A_068.d | | | | |
| Injection Date: | 10-Sep-2020 19:32:36 | Instrument ID: | A13 | | |
| Lims ID: | 460-217659-D-7-A | Lab Sample ID: | 320-217659-7 | | |
| Client ID: | MW-217 | | | | |
| Operator ID: | SACINSTLCMS01 | ALS Bottle#: | 41 | Worklist Smp#: | 11 |
| Injection Vol: | 20.0 ul | Dil. Factor: | 1.0000 | | |
| Method: | PFAS_A13 | Limit Group: | LC PFC ICAL | | |
| Column: | Gemini C18 3um 3 x 100mm ( 3.00 mm) | Detector | EXP1 | | |

## 10 Perfluorohexanoic acid, CAS: 307-24-4

Signal: 1

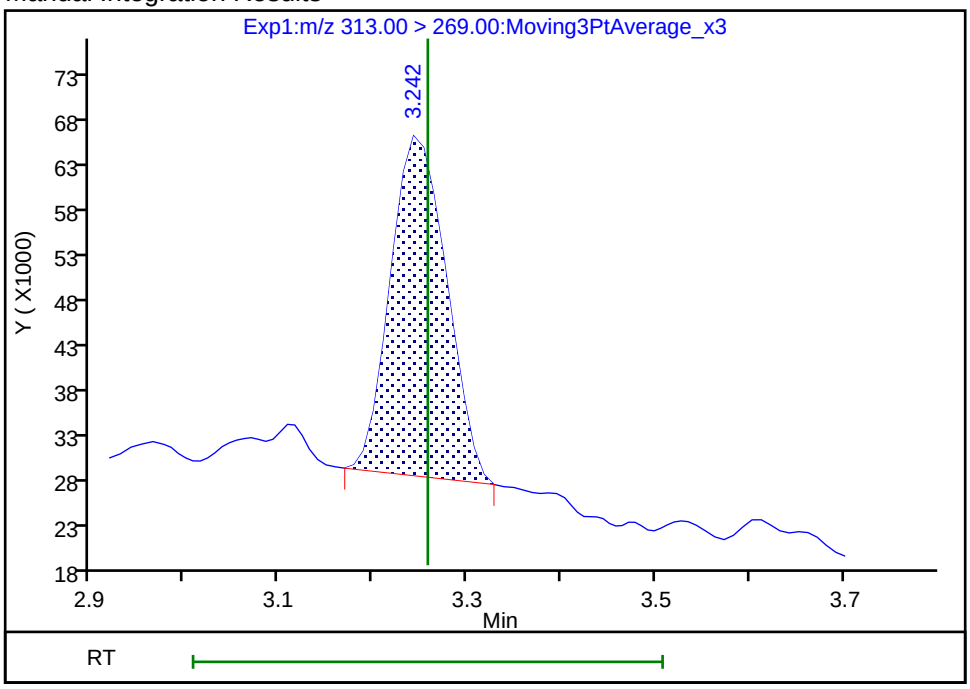
Processing Integration Results

RT: 3.24
Area: 413875
Amount: 0.182874
Amount Units: ng/ml




Manual Integration Results

RT: 3.24
Area: 155887
Amount: 0.068880
Amount Units: ng/ml




Reviewer: mongkols, 11-Sep-2020 10:30:10

Audit Action: Manually Integrated Audit Reason: Baseline

Eurofins TestAmerica, Sacramento

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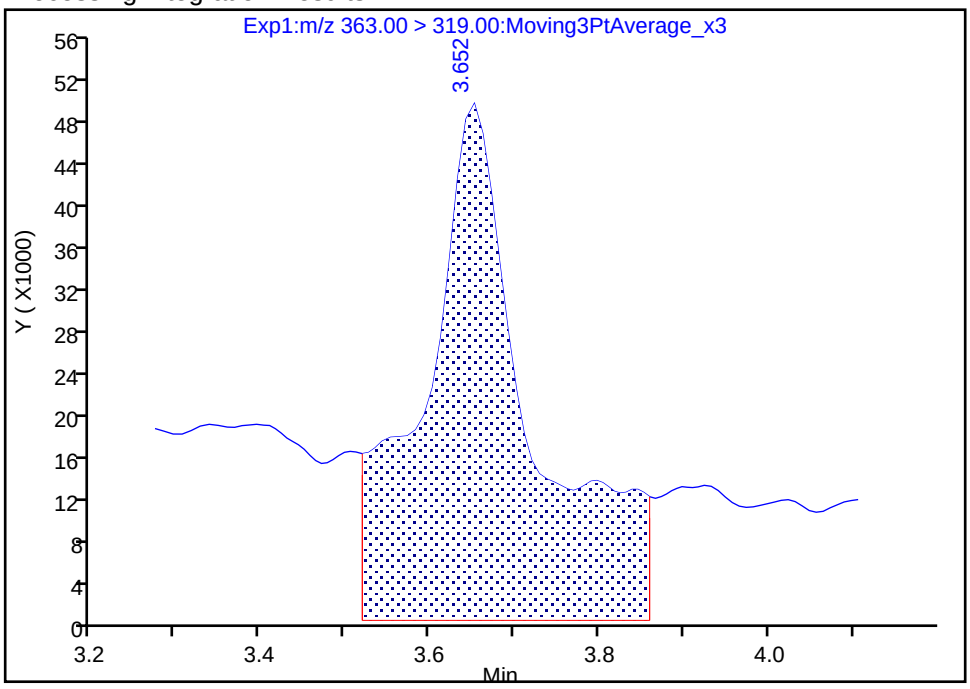
|---|---|---|---|---|---|
| Data File: | \\chromfs\Sacramento\ChromData\A13\20200910-103052.b\2020.09.10_A13_PFC_A_068.d | | | | |
| Injection Date: | 10-Sep-2020 19:32:36 | Instrument ID: | A13 | | |
| Lims ID: | 460-217659-D-7-A | Lab Sample ID: | 320-217659-7 | | |
| Client ID: | MW-217 | | | | |
| Operator ID: | SACINSTLCMS01 | ALS Bottle#: | 41 | Worklist Smp#: | 11 |
| Injection Vol: | 20.0 ul | Dil. Factor: | 1.0000 | | |
| Method: | PFAS_A13 | Limit Group: | LC PFC ICAL | | |
| Column: | Gemini C18 3um 3 x 100mm ( 3.00 mm) | Detector | EXP1 | | |

## 16 Perfluoroheptanoic acid, CAS: 375-85-9

Signal: 1

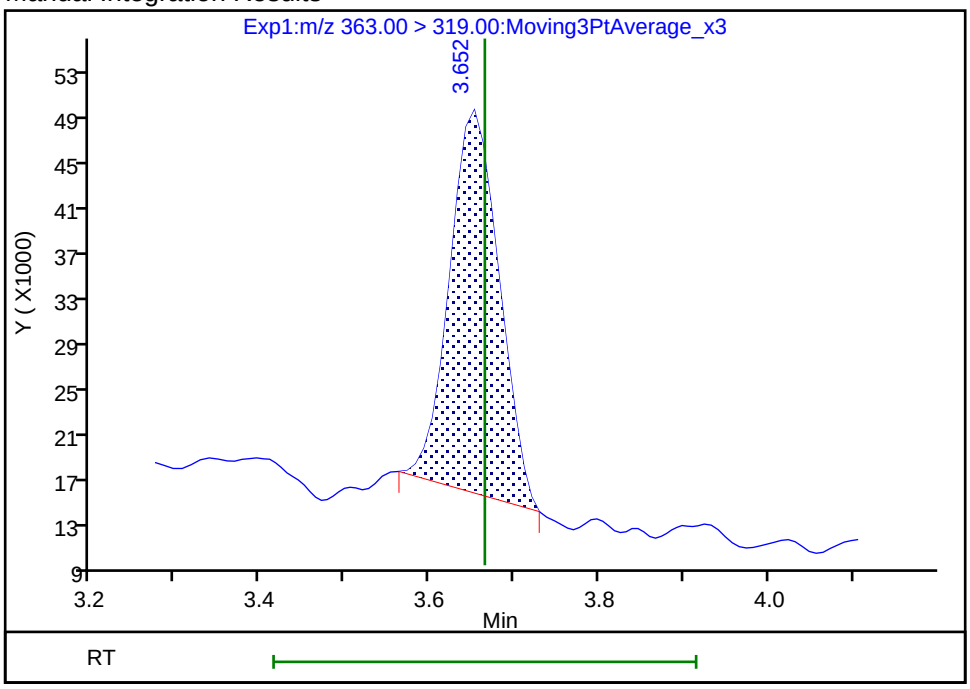
Processing Integration Results

RT: 3.65
Area: 434256
Amount: 0.176113
Amount Units: ng/ml




Manual Integration Results

RT: 3.65
Area: 136049
Amount: 0.055175
Amount Units: ng/ml




Reviewer: mongkols, 11-Sep-2020 10:30:16
Audit Action: Manually Integrated Audit Reason: Baseline

Eurofins TestAmerica, Sacramento

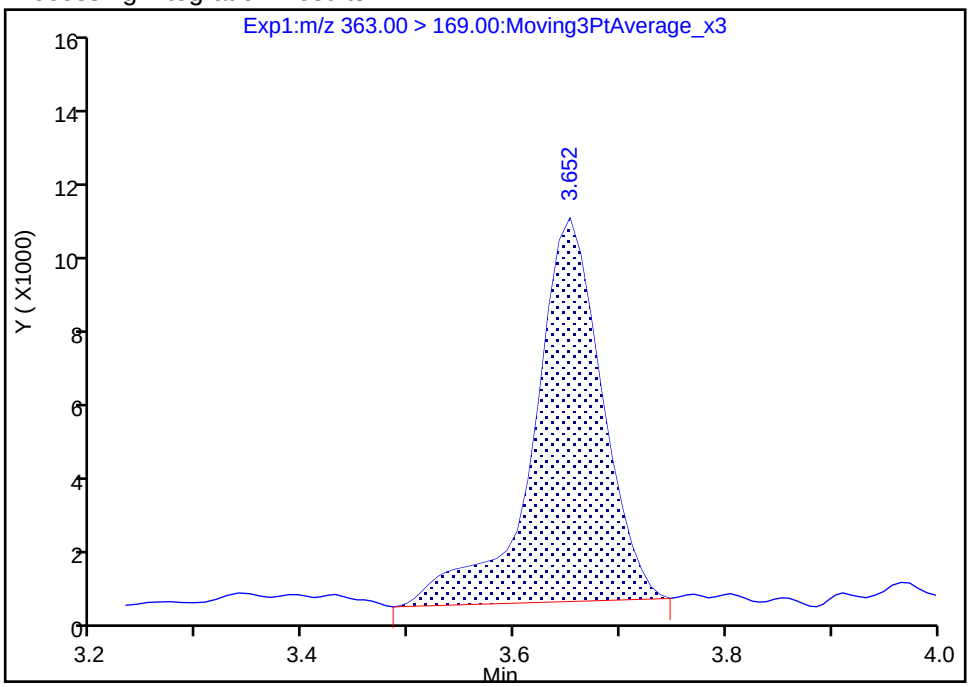
| | | | | | |
|---|---|---|---|---|---|
| Data File: | \\chromfs\Sacramento\ChromData\A13\20200910-103052.b\2020.09.10_A13_PFC_A_068.d | | | | |
| Injection Date: | 10-Sep-2020 19:32:36 | Instrument ID: | A13 | | |
| Lims ID: | 460-217659-D-7-A | Lab Sample ID: | 320-217659-7 | | |
| Client ID: | MW-217 | | | | |
| Operator ID: | SACINSTLCMS01 | ALS Bottle#: | 41 | Worklist Smp#: | 11 |
| Injection Vol: | 20.0 ul | Dil. Factor: | 1.0000 | | |
| Method: | PFAS_A13 | Limit Group: | LC PFC ICAL | | |
| Column: | Gemini C18 3um 3 x 100mm ( 3.00 mm ID) | Detector | EXP1 | | |

## 16 Perfluoroheptanoic acid, CAS: 375-85-9

Signal: 2

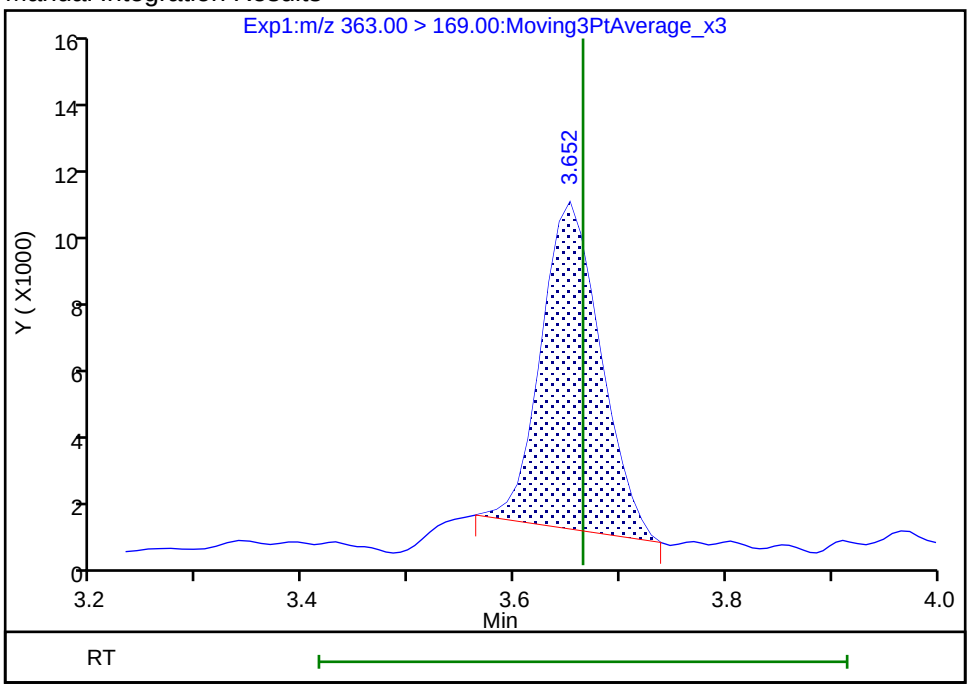
Processing Integration Results

RT: 3.65
Area: 47281
Amount: 0.176113
Amount Units: ng/ml




Manual Integration Results

RT: 3.65
Area: 38311
Amount: 0.055175
Amount Units: ng/ml




Reviewer: mongkols, 11-Sep-2020 10:30:21
Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

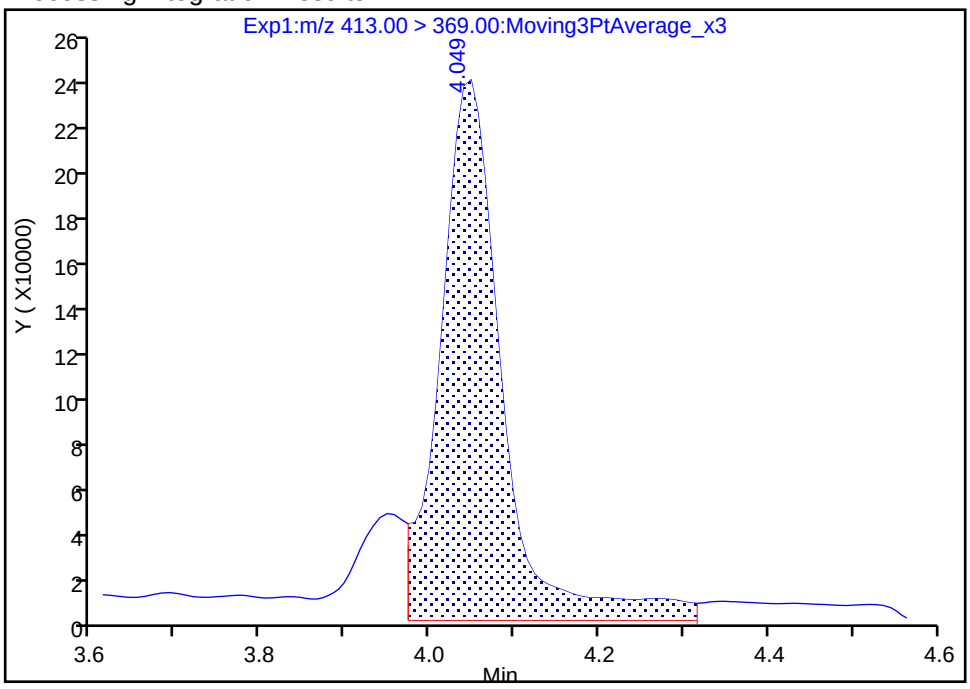
| | | | | | |
|---|---|---|---|---|---|
| Data File: | \\chromfs\Sacramento\ChromData\A13\20200910-103052.b\2020.09.10_A13_PFC_A_068.d | | | | |
| Injection Date: | 10-Sep-2020 19:32:36 | Instrument ID: | A13 | | |
| Lims ID: | 460-217659-D-7-A | Lab Sample ID: | 320-217659-7 | | |
| Client ID: | MW-217 | | | | |
| Operator ID: | SACINSTLCMS01 | ALS Bottle#: | 41 | Worklist Smp#: | 11 |
| Injection Vol: | 20.0 ul | Dil. Factor: | 1.0000 | | |
| Method: | PFAS_A13 | Limit Group: | LC PFC ICAL | | |
| Column: | Gemini C18 3um 3 x 100mm ( 3.00 mm ) | Detector | EXP1 | | |

## 26 Perfluorooctanoic acid, CAS: 335-67-1

Signal: 1

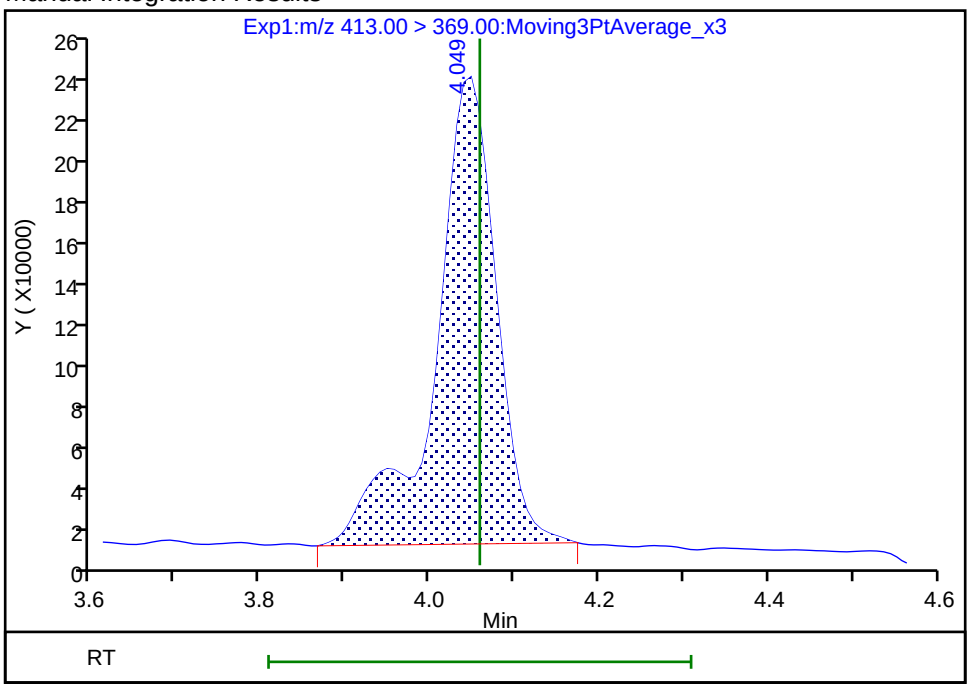
Processing Integration Results

RT: 4.05
Area: 1190313
Amount: 0.391423
Amount Units: ng/ml




Manual Integration Results

RT: 4.05
Area: 1119370
Amount: 0.368094
Amount Units: ng/ml




Reviewer: mongkols, 11-Sep-2020 10:30:38

Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

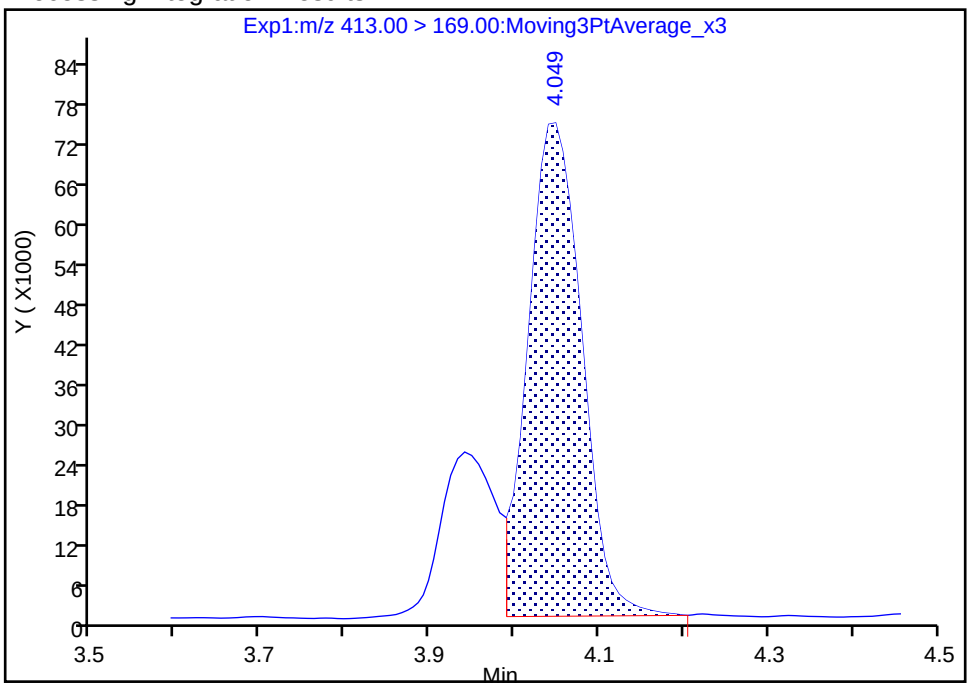
| | | | | | |
|---|---|---|---|---|---|
| Data File: | \\chromfs\Sacramento\ChromData\A13\20200910-103052.b\2020.09.10_A13_PFC_A_068.d | | | | |
| Injection Date: | 10-Sep-2020 19:32:36 | Instrument ID: | A13 | | |
| Lims ID: | 460-217659-D-7-A | Lab Sample ID: | 320-217659-7 | | |
| Client ID: | MW-217 | | | | |
| Operator ID: | SACINSTLCMS01 | ALS Bottle#: | 41 | Worklist Smp#: | 11 |
| Injection Vol: | 20.0 ul | Dil. Factor: | 1.0000 | | |
| Method: | PFAS_A13 | Limit Group: | LC PFC ICAL | | |
| Column: | Gemini C18 3um 3 x 100mm ( 3.00 mm ID) | Detector | EXP1 | | |

## 26 Perfluorooctanoic acid, CAS: 335-67-1

Signal: 2

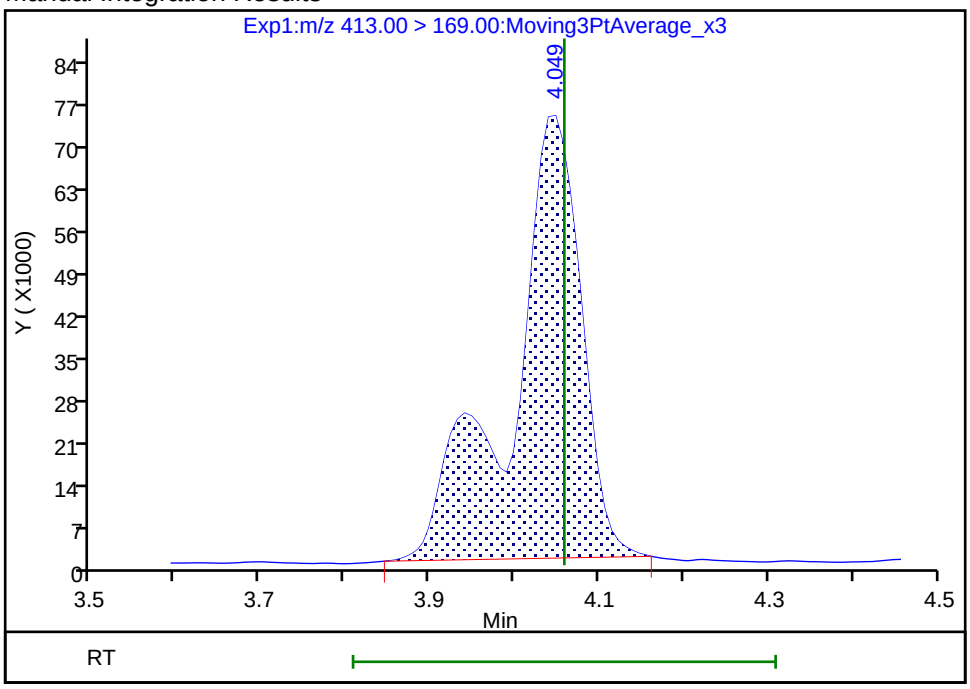
Processing Integration Results

RT: 4.05
Area: 325491
Amount: 0.391423
Amount Units: ng/ml




Manual Integration Results

RT: 4.05
Area: 424737
Amount: 0.368094
Amount Units: ng/ml




Reviewer: mongkols, 11-Sep-2020 10:30:41
Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

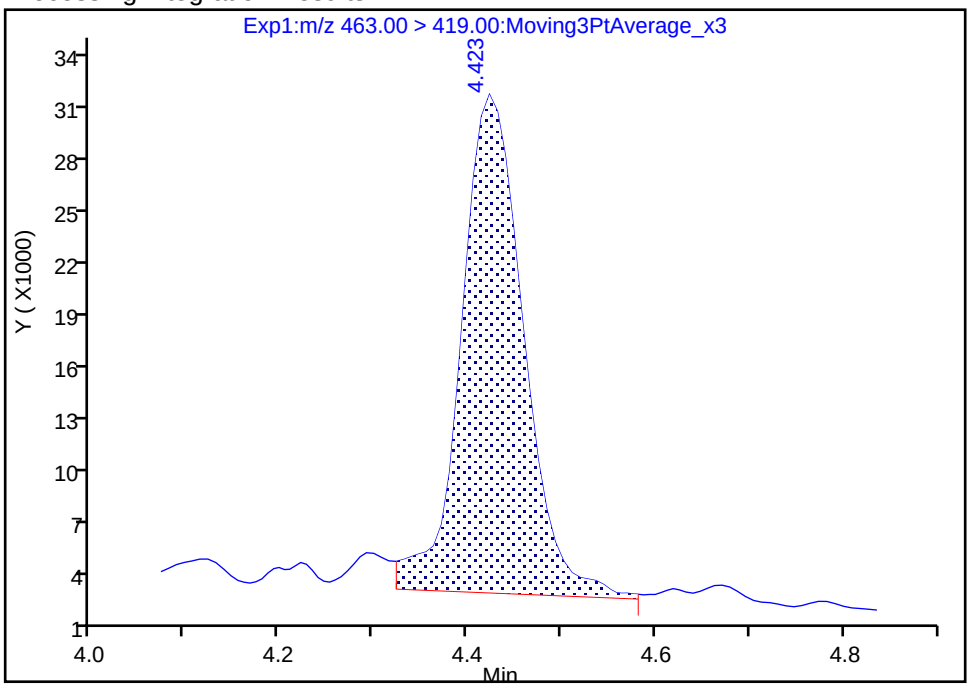
| | | | | | |
|---|---|---|---|---|---|
| Data File: | \\chromfs\Sacramento\ChromData\A13\20200910-103052.b\2020.09.10_A13_PFC_A_068.d | | | | |
| Injection Date: | 10-Sep-2020 19:32:36 | Instrument ID: | A13 | | |
| Lims ID: | 460-217659-D-7-A | Lab Sample ID: | 320-217659-7 | | |
| Client ID: | MW-217 | | | | |
| Operator ID: | SACINSTLCMS01 | ALS Bottle#: | 41 | Worklist Smp#: | 11 |
| Injection Vol: | 20.0 ul | Dil. Factor: | 1.0000 | | |
| Method: | PFAS_A13 | Limit Group: | LC PFC ICAL | | |
| Column: | Gemini C18 3um 3 x 100mm ( 3.00 mm) | Detector | EXP1 | | |

## 30 Perfluorononanoic acid, CAS: 375-95-1

Signal: 1

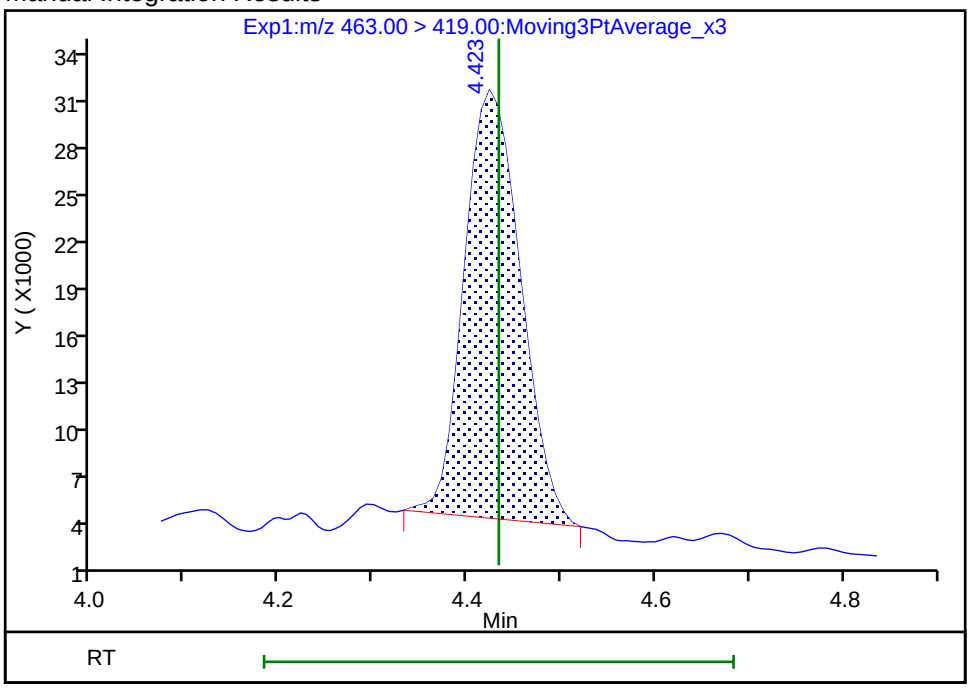
Processing Integration Results

RT: 4.42
Area: 131981
Amount: 0.046948
Amount Units: ng/ml




Manual Integration Results

RT: 4.42
Area: 113072
Amount: 0.040221
Amount Units: ng/ml




Reviewer: mongkols, 11-Sep-2020 10:30:53

Audit Action: Manually Integrated Audit Reason: Baseline

Eurofins TestAmerica, Sacramento

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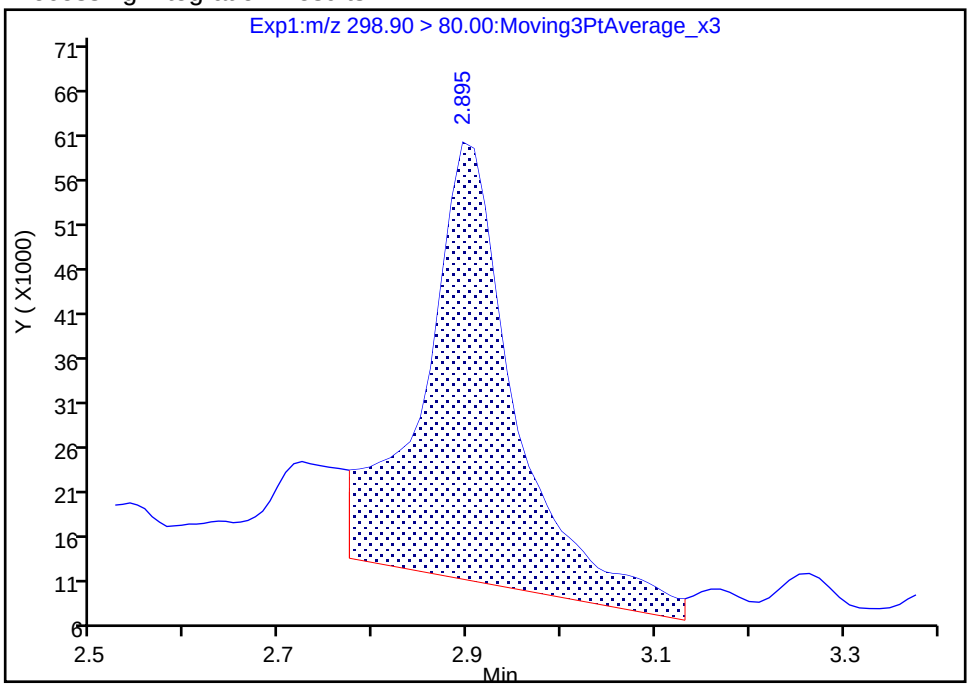
|---|---|---|---|---|---|
| Data File: | \\chromfs\Sacramento\ChromData\A13\20200910-103052.b\2020.09.10_A13_PFC_A_068.d | | | | |
| Injection Date: | 10-Sep-2020 19:32:36 | Instrument ID: | A13 | | |
| Lims ID: | 460-217659-D-7-A | Lab Sample ID: | 320-217659-7 | | |
| Client ID: | MW-217 | | | | |
| Operator ID: | SACINSTLCMS01 | ALS Bottle#: | 41 | Worklist Smp#: | 11 |
| Injection Vol: | 20.0 ul | Dil. Factor: | 1.0000 | | |
| Method: | PFAS_A13 | Limit Group: | LC PFC ICAL | | |
| Column: | Gemini C18 3um 3 x 100mm ( 3.00 mm) | Detector | EXP1 | | |

## 6 Perfluorobutanesulfonic acid, CAS: 375-73-5

Signal: 1

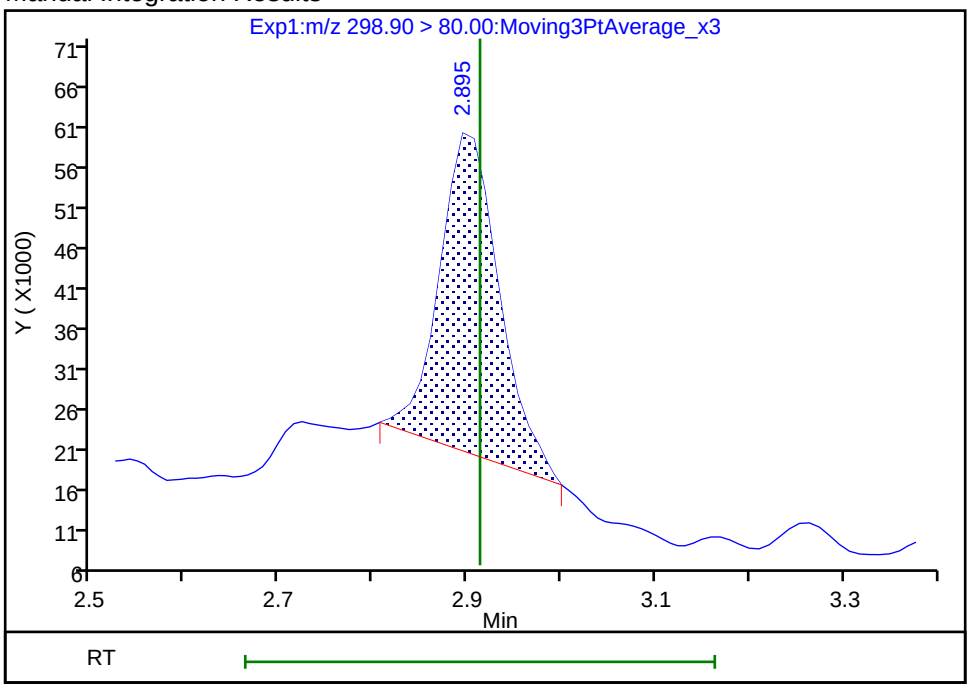
Processing Integration Results

RT: 2.89
Area: 331186
Amount: 0.108679
Amount Units: ng/ml




Manual Integration Results

RT: 2.89
Area: 172554
Amount: 0.056624
Amount Units: ng/ml




Reviewer: mongkols, 11-Sep-2020 10:30:04
Audit Action: Manually Integrated Audit Reason: Baseline

Eurofins TestAmerica, Sacramento

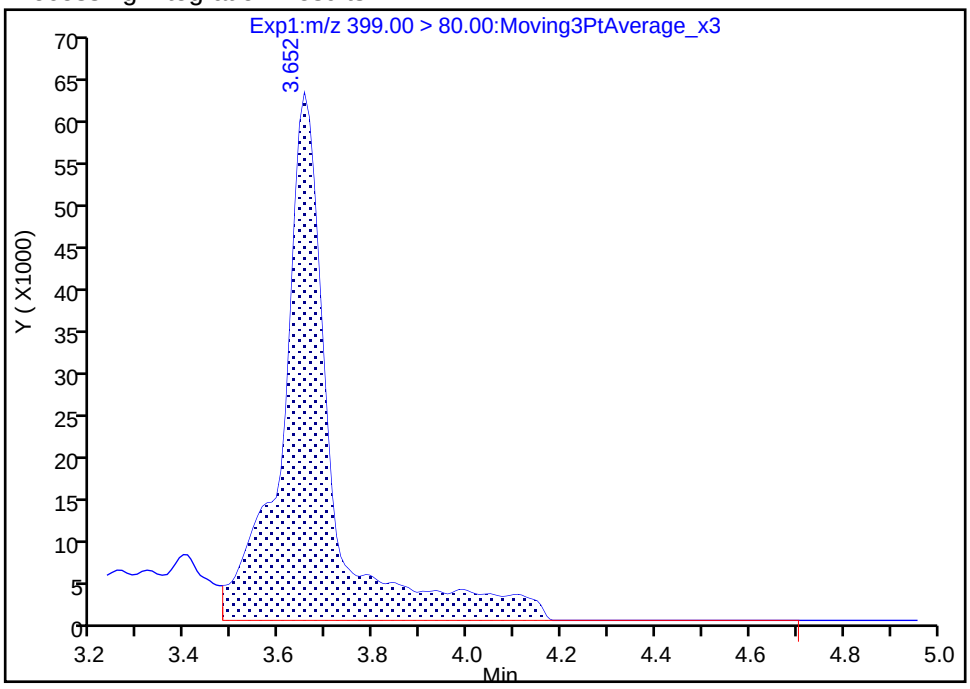
| | | | | | |
|---|---|---|---|---|---|
| Data File: | \\chromfs\Sacramento\ChromData\A13\20200910-103052.b\2020.09.10_A13_PFC_A_068.d | | | | |
| Injection Date: | 10-Sep-2020 19:32:36 | Instrument ID: | A13 | | |
| Lims ID: | 460-217659-D-7-A | Lab Sample ID: | 320-217659-7 | | |
| Client ID: | MW-217 | | | | |
| Operator ID: | SACINSTLCMS01 | ALS Bottle#: | 41 | Worklist Smp#: | 11 |
| Injection Vol: | 20.0 ul | Dil. Factor: | 1.0000 | | |
| Method: | PFAS_A13 | Limit Group: | LC PFC ICAL | | |
| Column: | Gemini C18 3um 3 x 100mm ( 3.00 mm ID) | Detector | EXP1 | | |

## 18 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 1

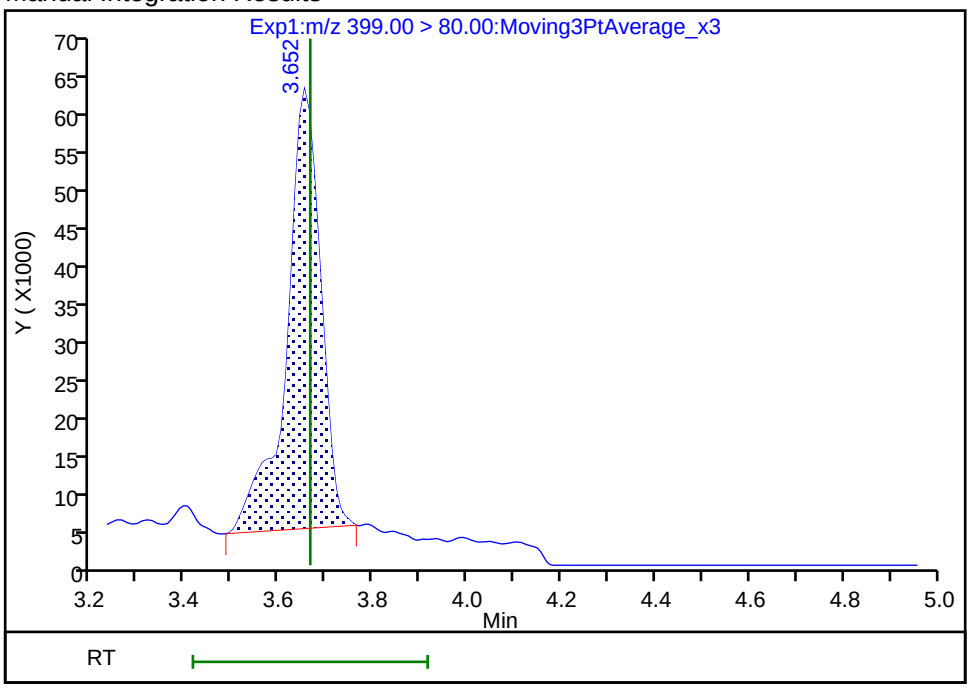
Processing Integration Results

RT: 3.65
Area: 457619
Amount: 0.187041
Amount Units: ng/ml




Manual Integration Results

RT: 3.65
Area: 291786
Amount: 0.119261
Amount Units: ng/ml




Reviewer: mongkols, 11-Sep-2020 10:30:26
Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

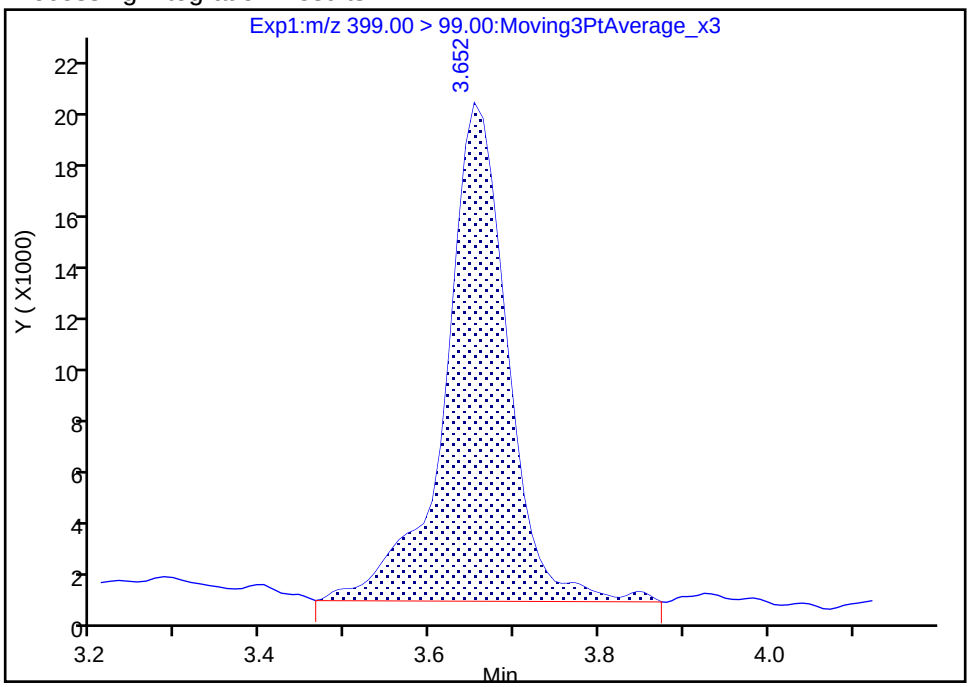
| | | | | | |
|---|---|---|---|---|---|
| Data File: | \\chromfs\Sacramento\ChromData\A13\20200910-103052.b\2020.09.10_A13_PFC_A_068.d | | | | |
| Injection Date: | 10-Sep-2020 19:32:36 | Instrument ID: | A13 | | |
| Lims ID: | 460-217659-D-7-A | Lab Sample ID: | 320-217659-7 | | |
| Client ID: | MW-217 | | | | |
| Operator ID: | SACINSTLCMS01 | ALS Bottle#: | 41 | Worklist Smp#: | 11 |
| Injection Vol: | 20.0 ul | Dil. Factor: | 1.0000 | | |
| Method: | PFAS_A13 | Limit Group: | LC PFC ICAL | | |
| Column: | Gemini C18 3um 3 x 100mm ( 3.00 mm ID) | Detector | EXP1 | | |

## 18 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 2

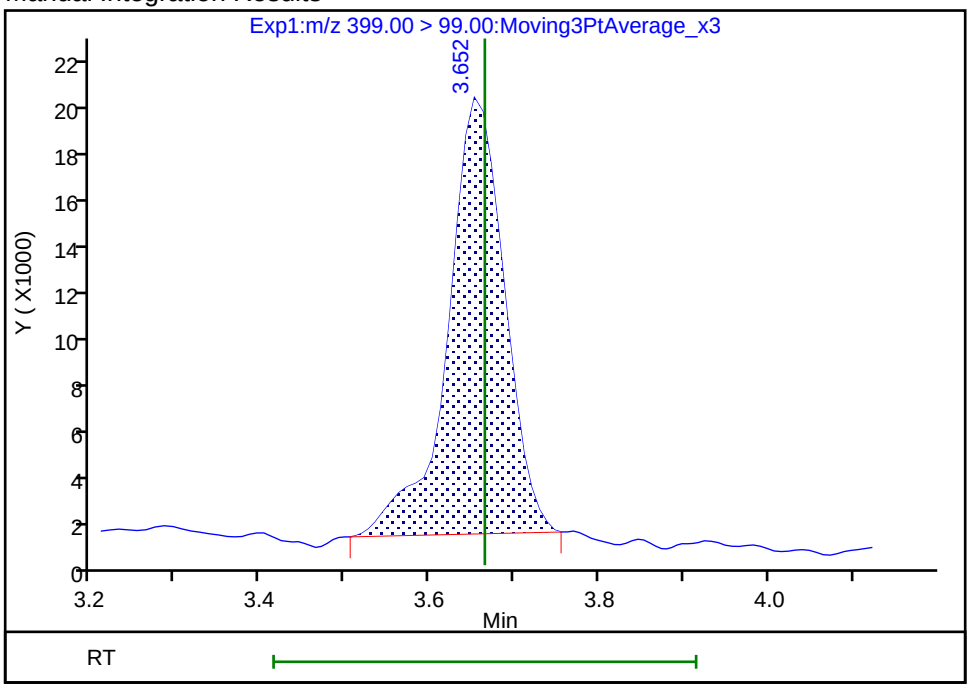
Processing Integration Results

RT: 3.65
Area: 97958
Amount: 0.187041
Amount Units: ng/ml




Manual Integration Results

RT: 3.65
Area: 86134
Amount: 0.119261
Amount Units: ng/ml




Reviewer: mongkols, 11-Sep-2020 10:30:30
Audit Action: Manually Integrated Audit Reason: Baseline

Eurofins TestAmerica, Sacramento

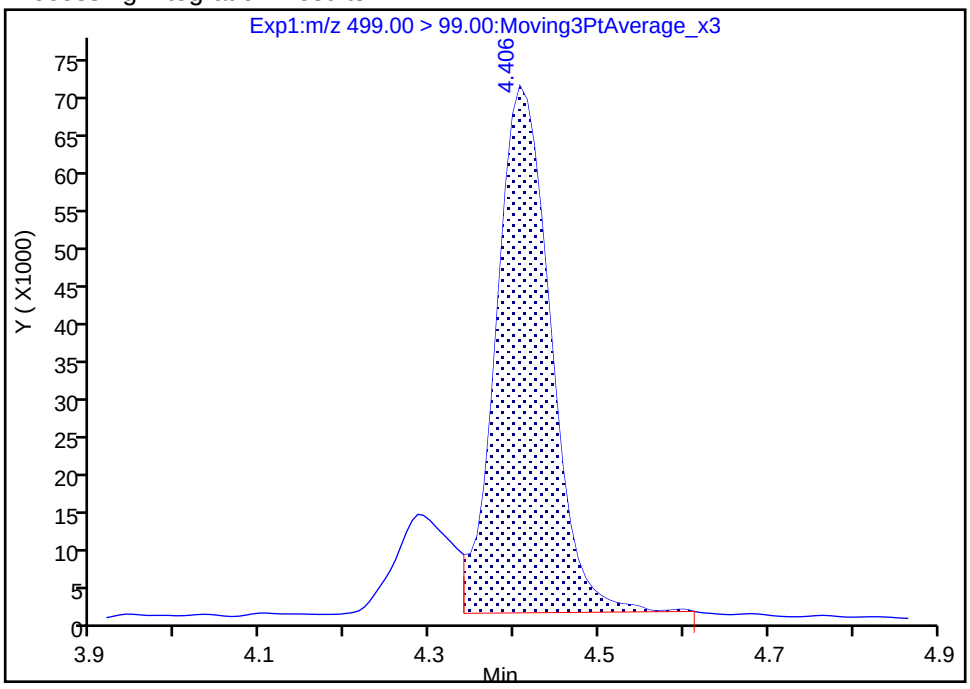
| | | | | | |
|---|---|---|---|---|---|
| Data File: | \\chromfs\Sacramento\ChromData\A13\20200910-103052.b\2020.09.10_A13_PFC_A_068.d | | | | |
| Injection Date: | 10-Sep-2020 19:32:36 | Instrument ID: | A13 | | |
| Lims ID: | 460-217659-D-7-A | Lab Sample ID: | 320-217659-7 | | |
| Client ID: | MW-217 | | | | |
| Operator ID: | SACINSTLCMS01 | ALS Bottle#: | 41 | Worklist Smp#: | 11 |
| Injection Vol: | 20.0 ul | Dil. Factor: | 1.0000 | | |
| Method: | PFAS_A13 | Limit Group: | LC PFC ICAL | | |
| Column: | Gemini C18 3um 3 x 100mm ( 3.00 mm) | Detector | EXP1 | | |

## 28 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 2

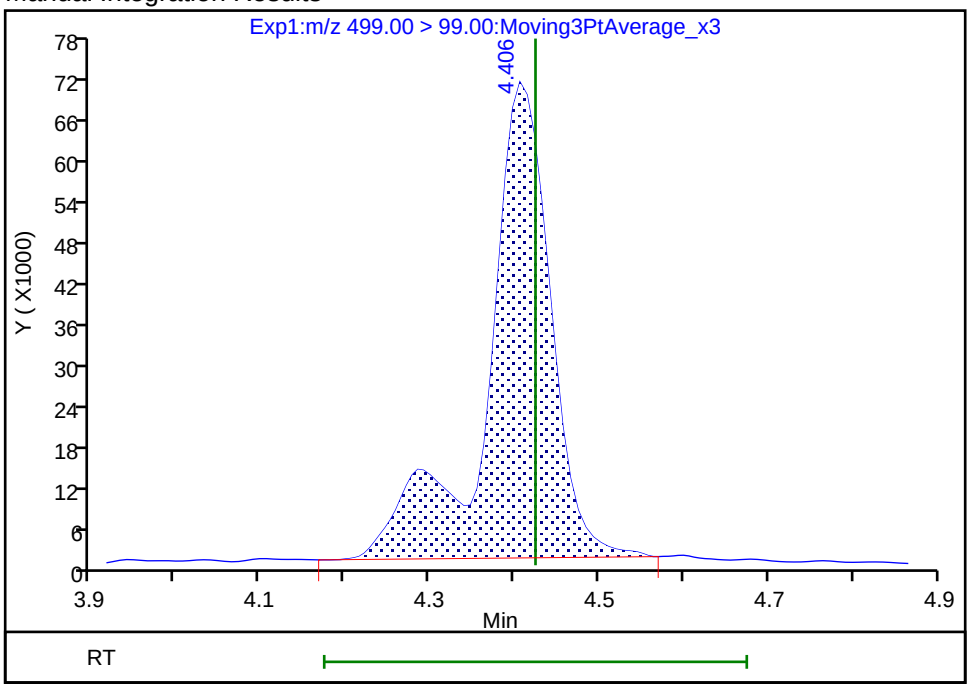
Processing Integration Results

RT: 4.41
Area: 311280
Amount: 1.120568
Amount Units: ng/ml




Manual Integration Results

RT: 4.41
Area: 370054
Amount: 1.120568
Amount Units: ng/ml




Reviewer: mongkols, 11-Sep-2020 10:30:47
Audit Action: Manually Integrated Audit Reason: Baseline

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento  Job No.: 460-217659-1

SDG No.:

Client Sample ID: FB  Lab Sample ID: 460-217659-8

Matrix: Water  Lab File ID: 2020.09.10_A13_PFC_A_071.d

Analysis Method: 537 (modified)  Date Collected: 09/03/2020 15:00

Extraction Method: 3535  Date Extracted: 09/09/2020 18:39

Sample wt/vol: 275.1(mL)  Date Analyzed: 09/10/2020 20:00

Con. Extract Vol.: 10.00(mL)  Dilution Factor: 1

Injection Volume: 20(uL)  GC Column: GeminiC18 3x100 ID: 3(mm)

% Moisture:  GPC Cleanup:(Y/N) N

Analysis Batch No.: 411143  Units: ng/L

| CAS NO. | COMPOUND NAME | RESULT | Q | RL | MDL |
|---|---|---|---|---|---|
| 375-22-4 | Perfluorobutanoic acid (PFBA) | 0.32 | U | 1.82 | 0.32 |
| 2706-90-3 | Perfluoropentanoic acid (PFPeA) | 0.45 | U | 1.82 | 0.45 |
| 307-24-4 | Perfluorohexanoic acid (PFHxA) | 0.53 | U | 1.82 | 0.53 |
| 375-85-9 | Perfluoroheptanoic acid (PFHpA) | 0.23 | U | 1.82 | 0.23 |
| 335-67-1 | Perfluorooctanoic acid (PFOA) | 0.77 | U | 1.82 | 0.77 |
| 375-95-1 | Perfluorononanoic acid (PFNA) | 0.25 | U | 1.82 | 0.25 |
| 335-76-2 | Perfluorodecanoic acid (PFDA) | 0.28 | U | 1.82 | 0.28 |
| 2058-94-8 | Perfluoroundecanoic acid (PFUnA) | 1.0 | U | 1.82 | 1.0 |
| 307-55-1 | Perfluorododecanoic acid (PFDoA) | 0.50 | U | 1.82 | 0.50 |
| 72629-94-8 | Perfluorotridecanoic acid (PFTriA) | 1.18 | U | 1.82 | 1.18 |
| 376-06-7 | Perfluorotetradecanoic acid (PFTeA) | 0.26 | U | 1.82 | 0.26 |
| 375-73-5 | Perfluorobutanesulfonic acid (PFBS) | 0.18 | U | 1.82 | 0.18 |
| 355-46-4 | Perfluorohexanesulfonic acid (PFHxS) | 0.28 | J B | 1.82 | 0.15 |
| 375-92-8 | Perfluoroheptanesulfonic Acid (PFHpS) | 0.17 | U | 1.82 | 0.17 |
| 1763-23-1 | Perfluorooctanesulfonic acid (PFOS) | 0.49 | U | 1.82 | 0.49 |
| 335-77-3 | Perfluorodecanesulfonic acid (PFDS) | 0.29 | U | 1.82 | 0.29 |
| 754-91-6 | Perfluorooctanesulfonamide (FOSA) | 0.32 | U | 1.82 | 0.32 |
| 2355-31-9 | N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA) | 2.82 | U | 18.2 | 2.82 |
| 2991-50-6 | N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA) | 1.73 | U | 18.2 | 1.73 |
| 27619-97-2 | 6:2 FTS | 1.82 | U | 18.2 | 1.82 |
| 39108-34-4 | 8:2 FTS | 1.82 | U | 18.2 | 1.82 |

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento  Job No.: 460-217659-1

SDG No.:

Client Sample ID: FB  Lab Sample ID: 460-217659-8

Matrix: Water  Lab File ID: 2020.09.10_A13_PFC_A_071.d

Analysis Method: 537 (modified)  Date Collected: 09/03/2020 15:00

Extraction Method: 3535  Date Extracted: 09/09/2020 18:39

Sample wt/vol: 275.1(mL)  Date Analyzed: 09/10/2020 20:00

Con. Extract Vol.: 10.00(mL)  Dilution Factor: 1

Injection Volume: 20(uL)  GC Column: GeminiC18 3x100 ID: 3(mm)

% Moisture:  GPC Cleanup:(Y/N) N

Analysis Batch No.: 411143  Units: ng/L

| CAS NO. | ISOTOPE DILUTION | %REC | Q | LIMITS |
|---|---|---|---|---|
| STL00992 | 13C4 PFBA | 83 | | 25-150 |
| STL01893 | 13C5 PFPeA | 87 | | 25-150 |
| STL00993 | 13C2 PFHxA | 88 | | 25-150 |
| STL01892 | 13C4 PFHpA | 86 | | 25-150 |
| STL00990 | 13C4 PFOA | 81 | | 25-150 |
| STL00995 | 13C5 PFNA | 86 | | 25-150 |
| STL00996 | 13C2 PFDA | 82 | | 25-150 |
| STL00997 | 13C2 PFUnA | 77 | | 25-150 |
| STL00998 | 13C2 PFDoA | 77 | | 25-150 |
| STL02116 | 13C2 PFTeDA | 68 | | 25-150 |
| STL02337 | 13C3 PFBS | 98 | | 25-150 |
| STL00994 | 18O2 PFHxS | 93 | | 25-150 |
| STL00991 | 13C4 PFOS | 92 | | 25-150 |
| STL01056 | 13C8 FOSA | 80 | | 25-150 |
| STL02118 | d3-NMeFOSAA | 77 | | 25-150 |
| STL02117 | d5-NEtFOSAA | 82 | | 25-150 |
| STL02279 | M2-6:2 FTS | 93 | | 25-150 |
| STL02280 | M2-8:2 FTS | 93 | | 25-150 |

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\A13\20200910-103052.b\2020.09.10_A13_PFC_A_071.d
Lims ID: 460-217659-D-8-A
Client ID: FB
Sample Type: Client
Inject. Date: 10-Sep-2020 20:00:47 ALS Bottle#: 42 Worklist Smp#: 14
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Sample Info: 460-217659-d-8-a
Misc. Info.: Plate: 1 Rack: 4
Operator ID: SACINSTLCMS01 Instrument ID: A13

Method: \\chromfs\Sacramento\ChromData\A13\20200910-103052.b\PFAS_A13.m
Limit Group: LC PFC ICAL
Last Update: 11-Sep-2020 11:11:00 Calib Date: 08-Sep-2020 18:58:15
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\A13\20200908-102913.b\2020.09.08_A13_PFC_ICALX_010.d

Column 1 : Gemini C18 3um 3 x 100mm ( 3.00 mm) Det: EXP1
Process Host: CTX1053

First Level Reviewer: mongkols Date: 11-Sep-2020 11:11:00
Ratio Calibration: CCV Sample: \\chromfs\Sacramento\ChromData\A13\20200910-103052.b\2020.09.10_A13_PFC_A_070.d

| Signal | RT | EXP RT | DLT RT | REL RT | Response | Amount ng/ml | Ratio(Limits) | %Rec | S/N | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| D 1 13C4 PFBA | | | | | | | | | | |
| 217.00 > 172.00 | 2.467 | 2.475 | -0.008 | 0.609 | 7603943 | 2.08 | | 83.2 | 9043 | |
| 2 Perfluorobutanoic acid | | | | | | | | | | M |
| 212.90 > 169.00 | 2.475 | 2.482 | -0.007 | 1.003 | 17347 | 0.007673 | | | 1.2 | M |
| D 4 13C5 PFPeA | | | | | | | | | | |
| 267.90 > 223.00 | 2.866 | 2.867 | -0.001 | 0.708 | 6208105 | 2.18 | | 87.1 | 5431 | |
| 5 Perfluoropentanoic acid | | | | | | | | | | M |
| 262.90 > 219.00 | 2.866 | 2.867 | -0.001 | 1.000 | 25554 | 0.0100 | | | 1.1 | M |
| D 14 13C3 PFBS | | | | | | | | | | |
| 301.90 > 80.00 | 2.901 | 2.913 | -0.012 | 0.716 | 8132620 | 2.27 | | 97.7 | 13588 | |
| 6 Perfluorobutanesulfonic acid | | | | | | | | | | M |
| 298.90 > 80.00 | 2.901 | 2.913 | -0.012 | 1.000 | 6683 | 0.001954 | Target=2.18 | | 5.7 | M |
| 298.90 > 99.00 | 2.913 | 2.913 | 0.0 | 1.004 | 3012 | | 2.22(1.09-3.26) | | 1.2 | |
| D 9 13C2 PFHxA | | | | | | | | | | |
| 315.00 > 270.00 | 3.247 | 3.258 | -0.011 | 0.802 | 7745532 | 2.20 | | 88.0 | 10031 | |
| D 17 18O2 PFHxS | | | | | | | | | | |
| 403.00 > 84.00 | 3.655 | 3.665 | -0.010 | 0.902 | 5170124 | 2.20 | | 93.2 | 27143 | |
| 18 Perfluorohexanesulfonic acid | | | | | | | | | | M |
| 399.00 > 80.00 | 3.665 | 3.665 | 0.0 | 1.003 | 18532 | 0.007621 | Target=2.97 | | 24.6 | M |
| 399.00 > 99.00 | 3.655 | 3.665 | -0.010 | 1.000 | 6471 | | 2.86(1.48-4.45) | | 4.2 | M |
| D 15 13C4 PFHpA | | | | | | | | | | |
| 367.00 > 322.00 | 3.655 | 3.665 | -0.010 | 0.902 | 7489795 | 2.16 | | 86.4 | 7917 | |
| D 20 M2-6:2 FTS | | | | | | | | | | |
| 429.00 > 81.00 | 4.034 | 4.042 | -0.008 | 0.996 | 2229929 | 2.21 | | 92.9 | 1465 | |
| 21 6:2 FTS | | | | | | | | | | |
| 427.00 > 407.00 | 4.026 | 4.042 | -0.016 | 0.998 | 16946 | 0.007499 | | | 16.2 | |
| D 24 13C4 PFOA | | | | | | | | | | |
| 417.00 > 372.00 | 4.051 | 4.059 | -0.008 | 1.000 | 8529322 | 2.01 | | 80.5 | 5683 | |

| Signal | RT | EXP RT | DLT RT | REL RT | Response | Amount ng/ml | Ratio(Limits) | %Rec | S/N | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| 26 Perfluorooctanoic acid | | | | | | | | | | M |
| 413.00 > 369.00 | 4.051 | 4.059 | -0.008 | 1.000 | 30859 | 0.008842 | Target=2.98 | | 3.8 | M |
| 413.00 > 169.00 | 4.051 | 4.059 | -0.008 | 1.000 | 9555 | | 3.23(1.49-4.46) | | 9.4 | M |
| * 25 13C2 PFOA | | | | | | | | | | |
| 415.00 > 370.00 | 4.051 | 4.059 | -0.008 | | 10757736 | 2.50 | | | 12379 | |
| D 29 13C4 PFOS | | | | | | | | | | |
| 503.00 > 80.00 | 4.409 | 4.425 | -0.016 | 1.089 | 3687140 | 2.20 | | 92.2 | 2712 | |
| D 31 13C5 PFNA | | | | | | | | | | |
| 468.00 > 423.00 | 4.426 | 4.442 | -0.016 | 1.093 | 8420701 | 2.15 | | 86.0 | 8593 | |
| D 34 13C8 FOSA | | | | | | | | | | |
| 506.00 > 78.00 | 4.734 | 4.740 | -0.006 | 1.169 | 4793743 | 1.99 | | 79.8 | 4955 | |
| 33 Perfluorooctanesulfonamide | | | | | | | | | | |
| 498.00 > 78.00 | 4.734 | 4.740 | -0.006 | 1.000 | 9341 | 0.005192 | | | 33.5 | |
| D 37 13C2 PFDA | | | | | | | | | | |
| 515.00 > 470.00 | 4.786 | 4.793 | -0.007 | 1.182 | 9752103 | 2.06 | | 82.2 | 5359 | |
| D 38 M2-8:2 FTS | | | | | | | | | | |
| 529.00 > 81.00 | 4.786 | 4.802 | -0.016 | 1.182 | 2967973 | 2.22 | | 92.7 | 3555 | |
| 39 8:2 FTS | | | | | | | | | | |
| 527.00 > 507.00 | 4.795 | 4.802 | -0.007 | 1.002 | 3737 | 0.001220 | | | 15.0 | |
| D 40 d3-NMeFOSAA | | | | | | | | | | |
| 573.00 > 419.00 | 4.942 | 4.959 | -0.017 | 1.220 | 4727474 | 1.93 | | 77.3 | 4272 | |
| 41 NMeFOSAA | | | | | | | | | | |
| 570.00 > 419.00 | 4.961 | 4.959 | 0.002 | 1.004 | 12226 | 0.008027 | | | 4.8 | |
| D 44 13C2 PFUnA | | | | | | | | | | |
| 565.00 > 520.00 | 5.106 | 5.113 | -0.007 | 1.261 | 8973937 | 1.93 | | 77.4 | 8013 | |
| D 46 d5-NEtFOSAA | | | | | | | | | | |
| 589.00 > 419.00 | 5.106 | 5.123 | -0.017 | 1.261 | 4871726 | 2.06 | | 82.3 | 2235 | |
| 48 NEtFOSA | | | | | | | | | | M |
| 584.00 > 419.00 | 5.115 | 5.132 | -0.017 | 1.002 | 15932 | 0.0106 | | | 29.5 | M |
| D 56 13C2 PFDoA | | | | | | | | | | |
| 615.00 > 570.00 | 5.396 | 5.409 | -0.013 | 1.332 | 9557422 | 1.91 | | 76.6 | 6070 | |
| 60 Perfluorotridecanoic acid | | | | | | | | | | |
| 663.00 > 619.00 | 5.671 | 5.676 | -0.005 | 1.051 | 10046 | 0.002804 | Target=7.64 | | 7.4 | |
| 663.00 > 169.00 | 5.663 | 5.676 | -0.013 | 1.049 | 1255 | | 8.00(3.82-11.46) | | 8.5 | |
| D 61 13C2 PFTeDA | | | | | | | | | | |
| 715.00 > 670.00 | 5.905 | 5.920 | -0.015 | 1.458 | 8334352 | 1.69 | | 67.6 | 6594 | |

## QC Flag Legend

Review Flags

M - Manually Integrated

Report Date: 11-Sep-2020 11:11:01 Chrom Revision: 2.3 09-Sep-2020 15:12:58

Eurofins TestAmerica, Sacramento

Data File: \\chromfs\Sacramento\ChromData\A13\20200910-103052.b\2020.09.10_A13_PFC_A_071.d

Injection Date: 10-Sep-2020 20:00:47 Instrument ID: A13

Lims ID: 460-217659-D-8-A Lab Sample ID: 320-217659-8

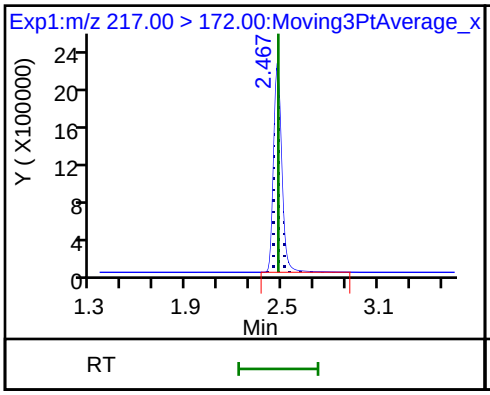
Client ID: FB

Operator ID: SACINSTLCMS01 ALS Bottle#: 42 Worklist Smp#: 14

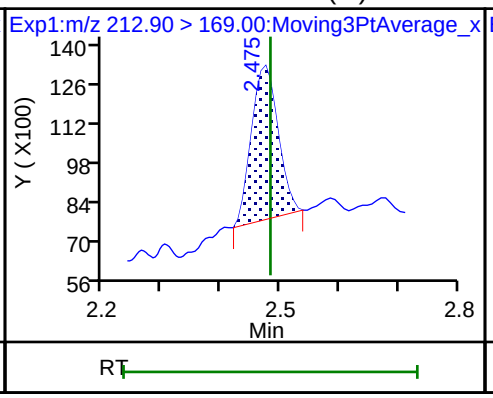
Injection Vol: 20.0 ul Dil. Factor: 1.0000

Method: PFAS_A13 Limit Group: LC PFC ICAL

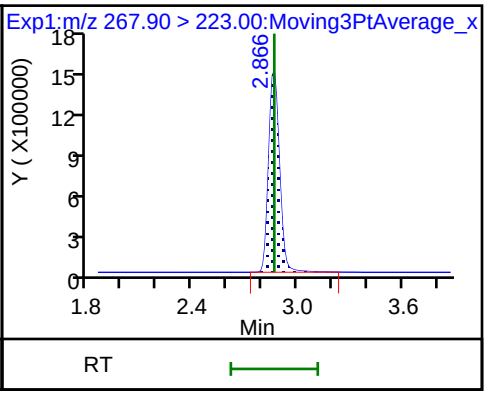
D 1 13C4 PFBA



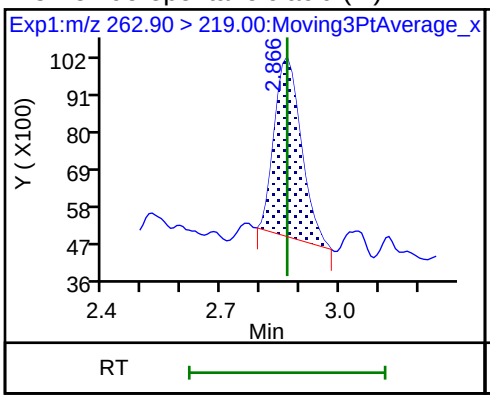

2 Perfluorobutanoic acid (M)



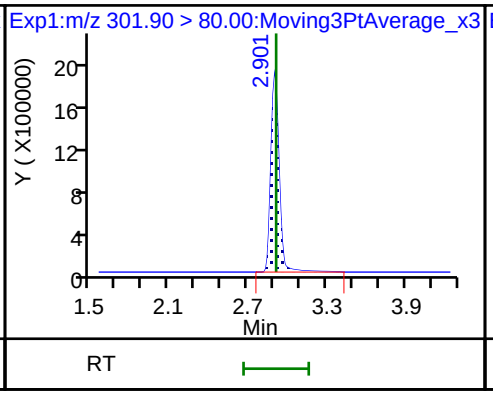

D 4 13C5 PFPeA



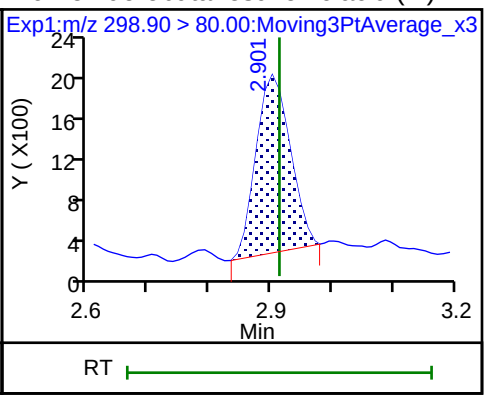

5 Perfluoropentanoic acid (M)



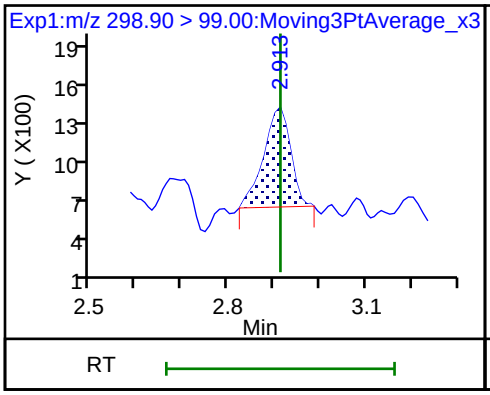

D 14 13C3 PFBS



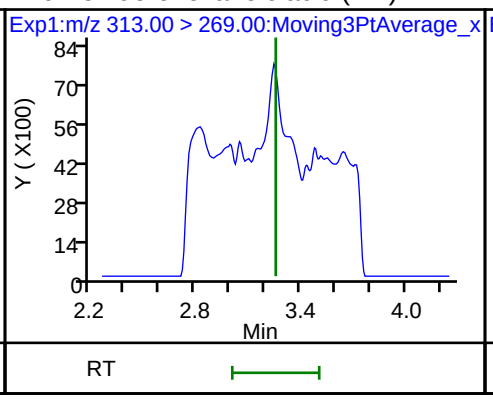

6 Perfluorobutanesulfonic acid (M)



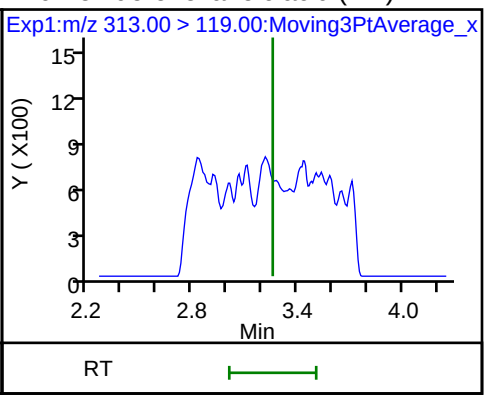

6 Perfluorobutanesulfonic acid



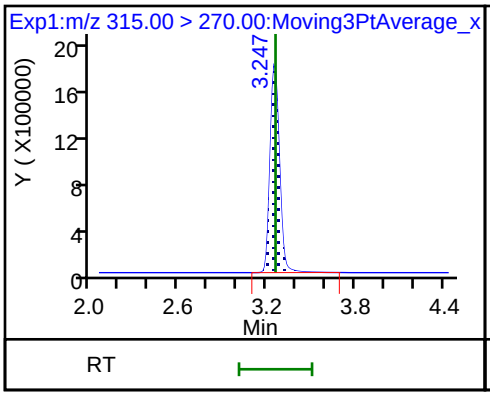

10 Perfluorohexanoic acid (ND)



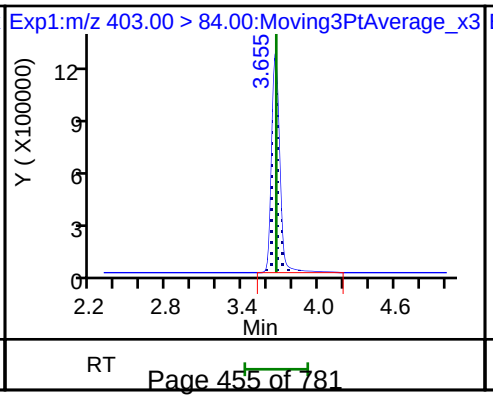

10 Perfluorohexanoic acid (ND)



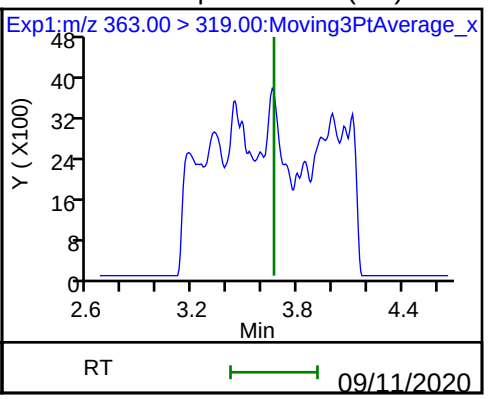

D 9 13C2 PFHxA



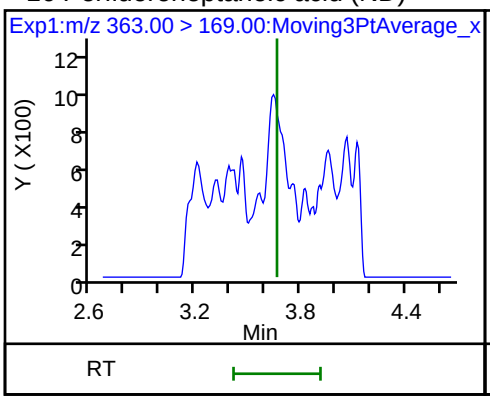

D 17 18O2 PFHxS



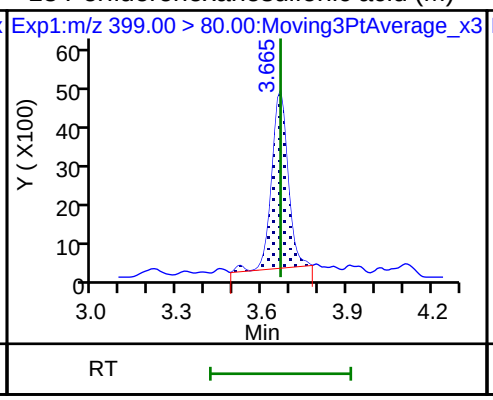

16 Perfluoroheptanoic acid (ND)



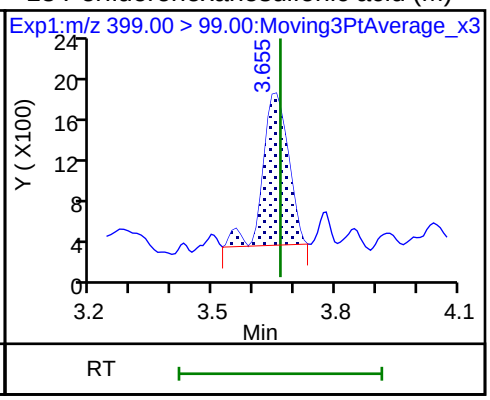
16 Perfluoroheptanoic acid (ND)



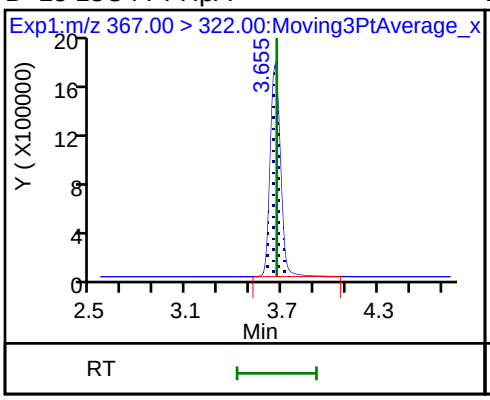

18 Perfluorohexanesulfonic acid (M)



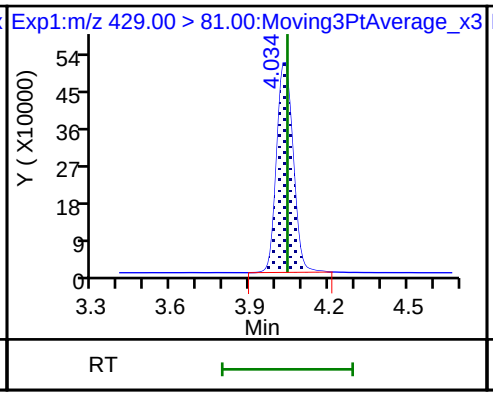

18 Perfluorohexanesulfonic acid (M)



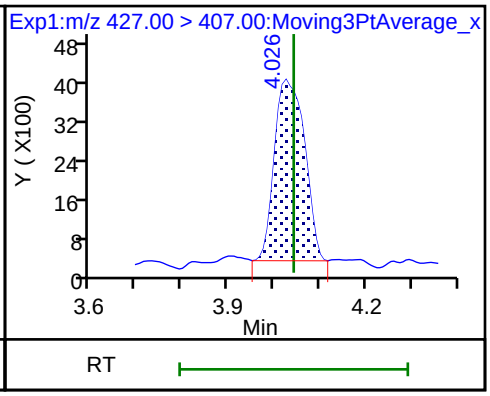

D 15 13C4 PFHpA



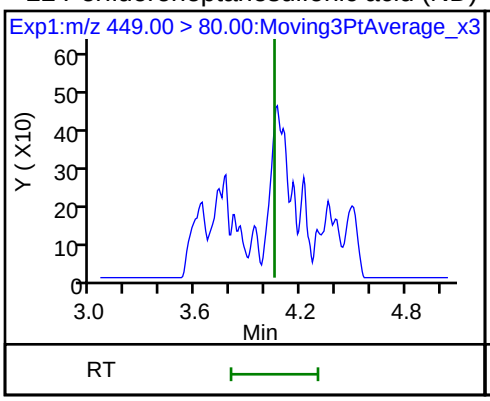

D 20 M2-6:2 FTS



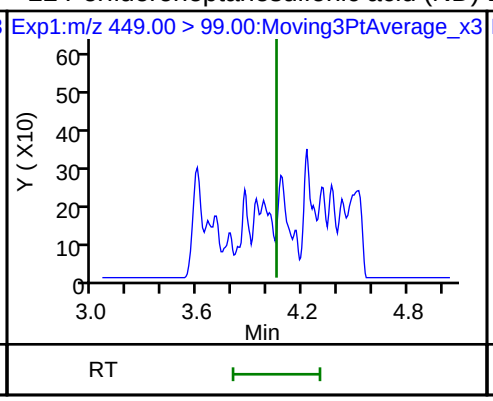

21 6:2 FTS



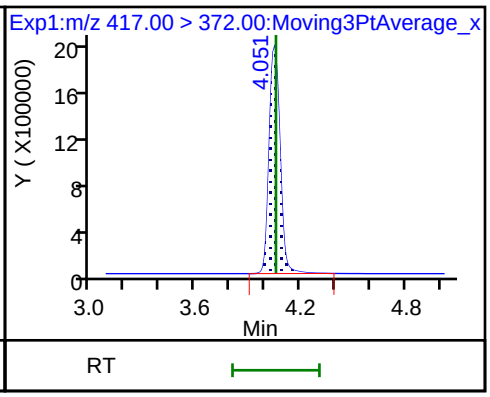

22 Perfluoroheptanesulfonic acid (ND)



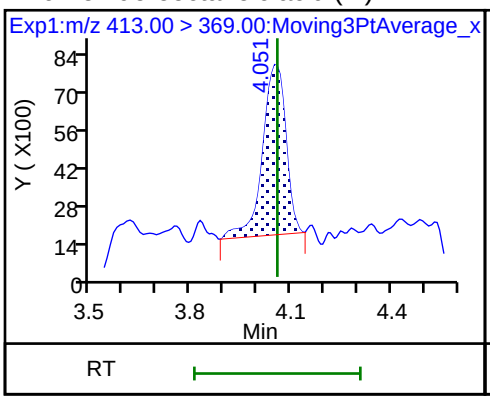

22 Perfluoroheptanesulfonic acid (ND)



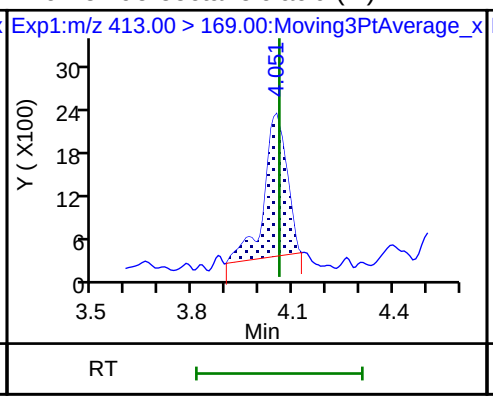

D 24 13C4 PFOA



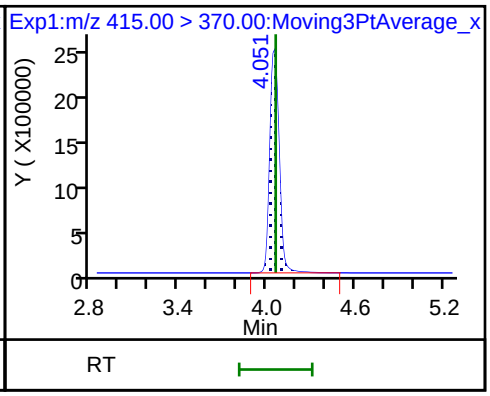

26 Perfluorooctanoic acid (M)



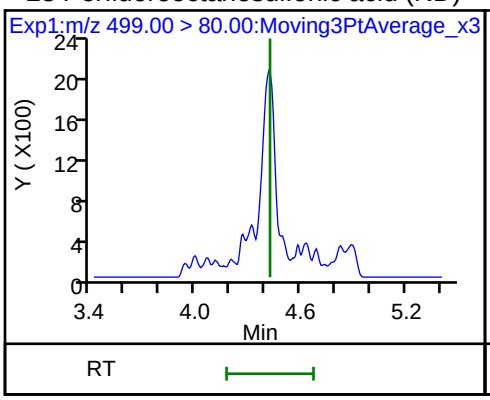

26 Perfluorooctanoic acid (M)



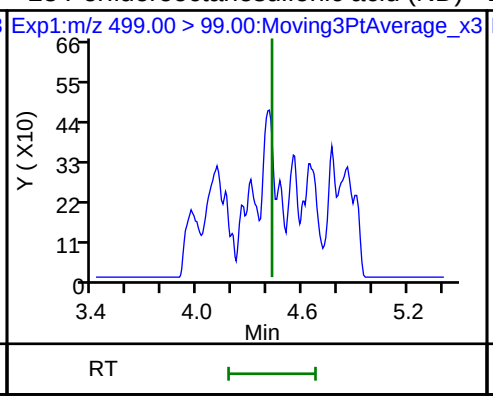

* 25 13C2 PFOA



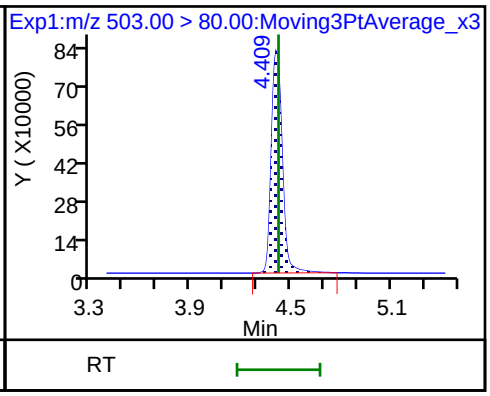
28 Perfluorooctanesulfonic acid (ND)



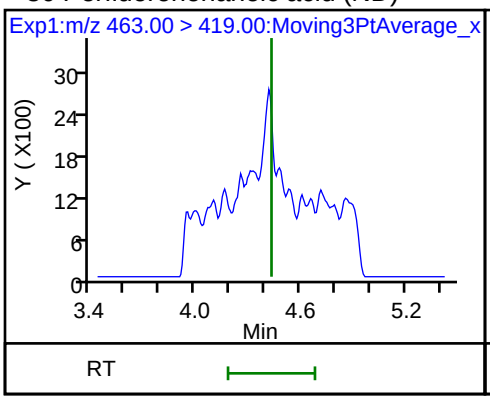

28 Perfluorooctanesulfonic acid (ND)



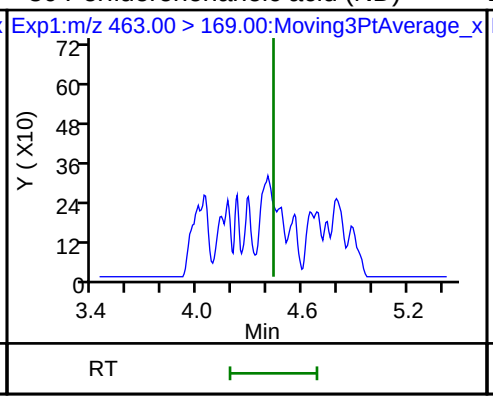

D 29 13C4 PFOS



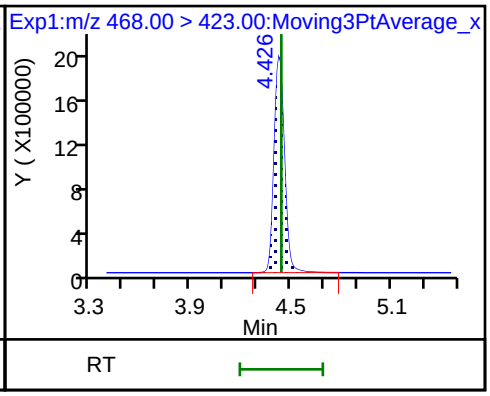

30 Perfluorononanoic acid (ND)



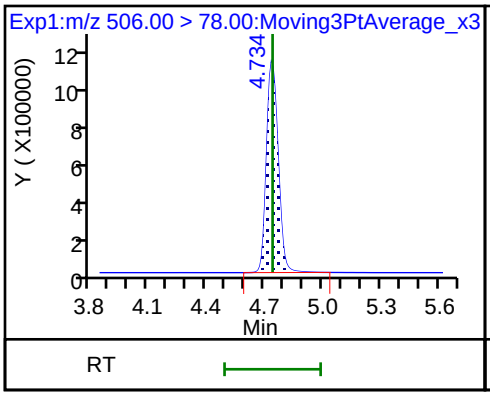

30 Perfluorononanoic acid (ND)



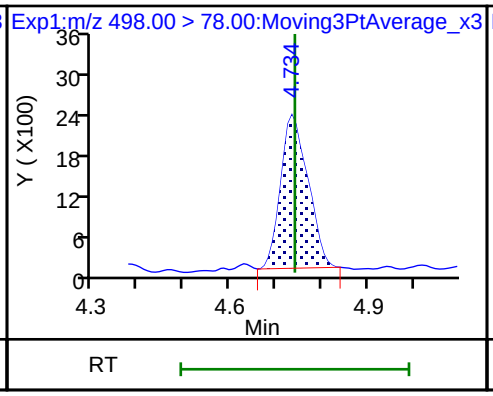

D 31 13C5 PFNA



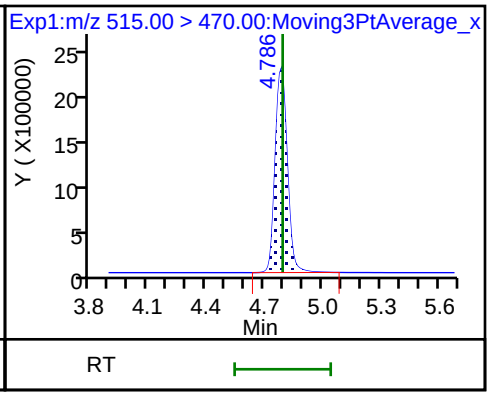

D 34 13C8 FOSA



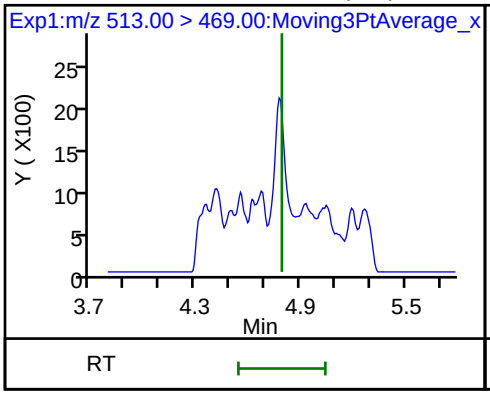

33 Perfluorooctanesulfonamide



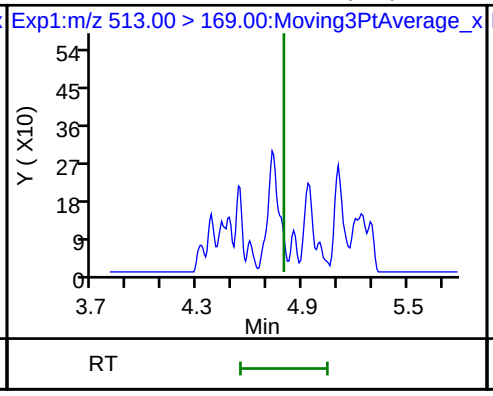

D 37 13C2 PFDA



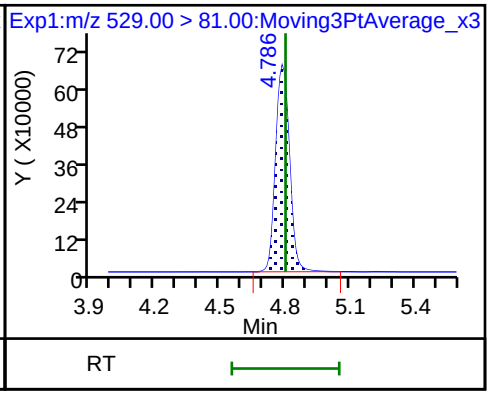

36 Perfluorodecanoic acid (ND)



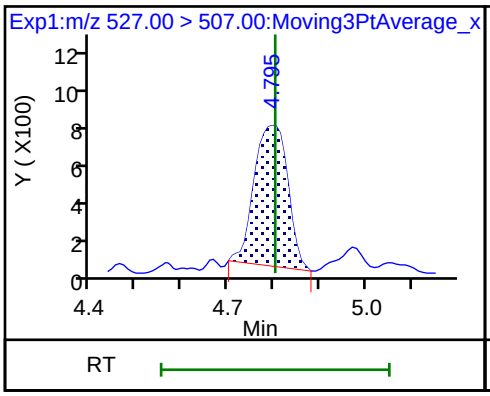

36 Perfluorodecanoic acid (ND)



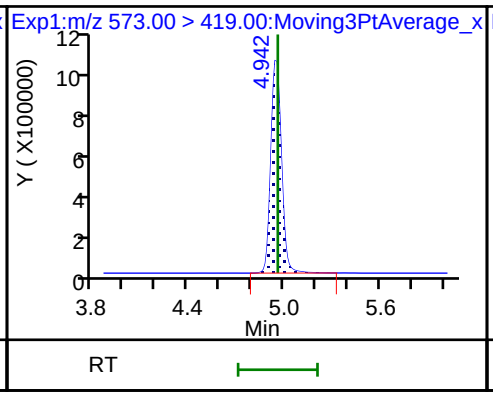

D 38 M2-8:2 FTS



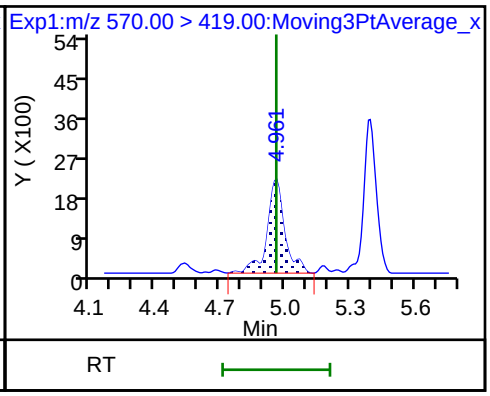
39 8:2 FTS



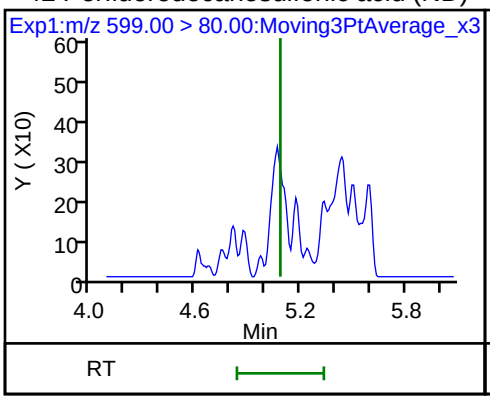

D 40 d3-NMeFOSAA



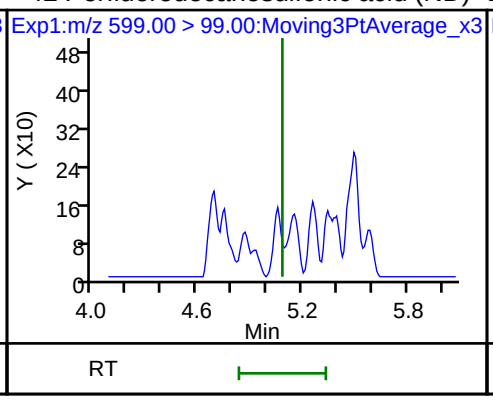

41 NMeFOSAA



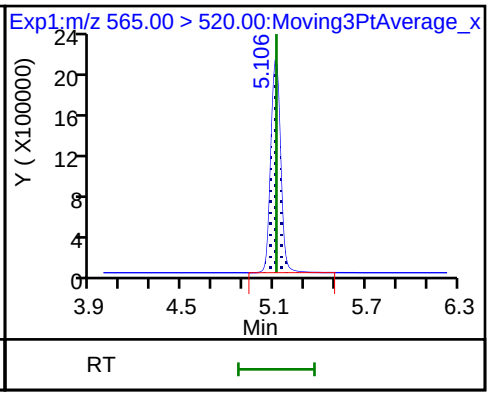

42 Perfluorodecanesulfonic acid (ND)



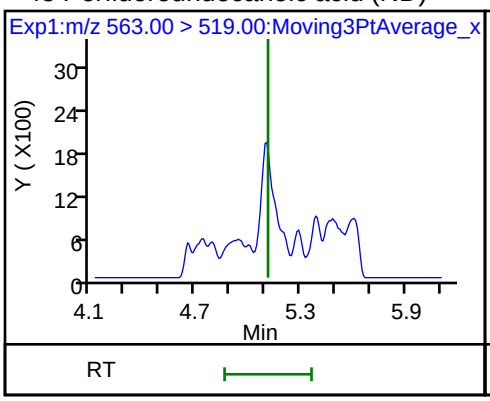

42 Perfluorodecanesulfonic acid (ND)



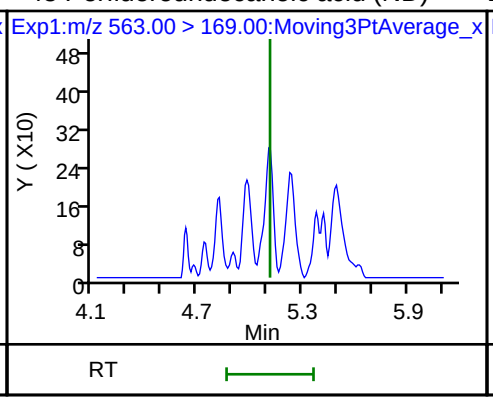

D 44 13C2 PFUnA



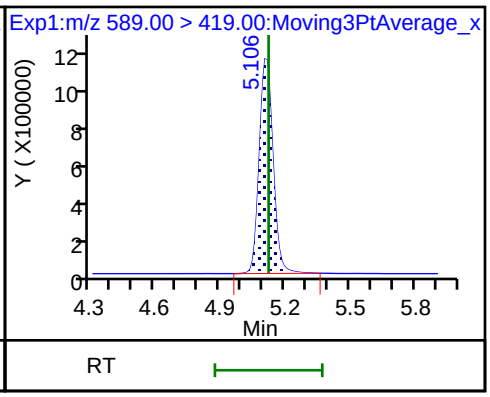

45 Perfluoroundecanoic acid (ND)



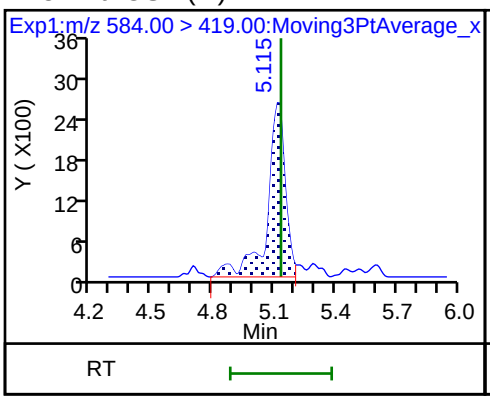

45 Perfluoroundecanoic acid (ND)



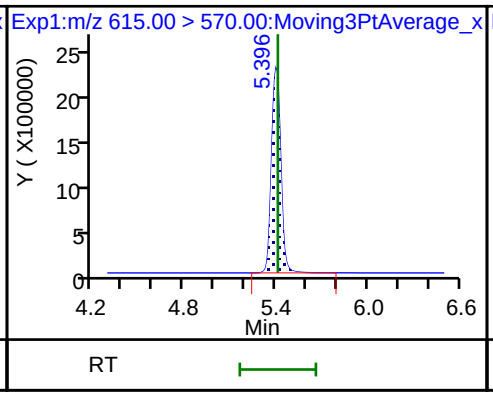

D 46 d5-NEtFOSAA



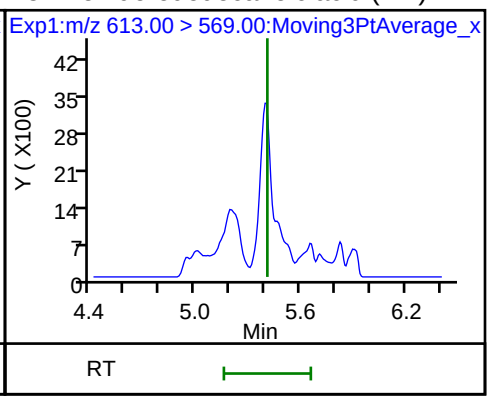

48 NEtFOSA (M)



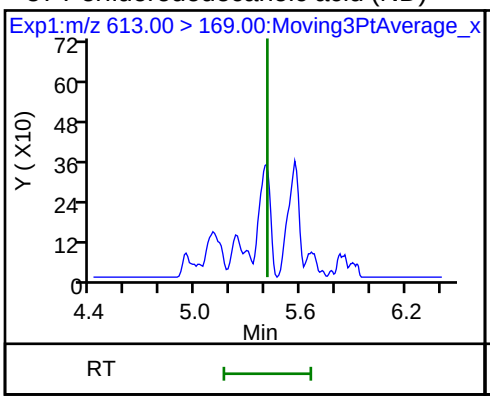

D 56 13C2 PFDoA



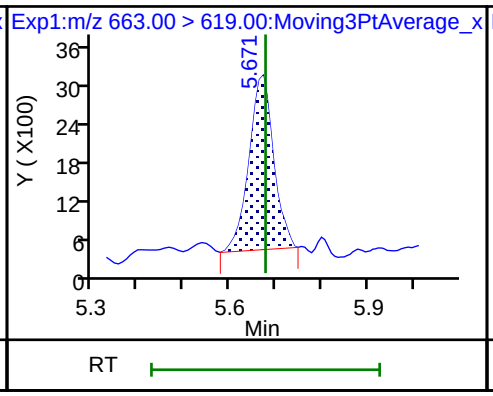

57 Perfluorododecanoic acid (ND)



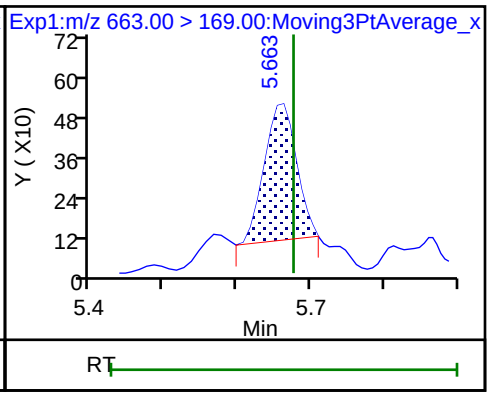
57 Perfluorododecanoic acid (ND)



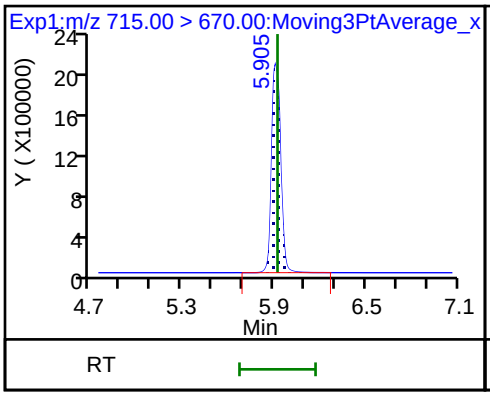

60 Perfluorotridecanoic acid



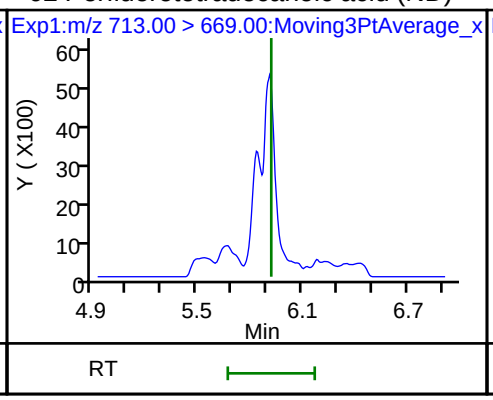

60 Perfluorotridecanoic acid



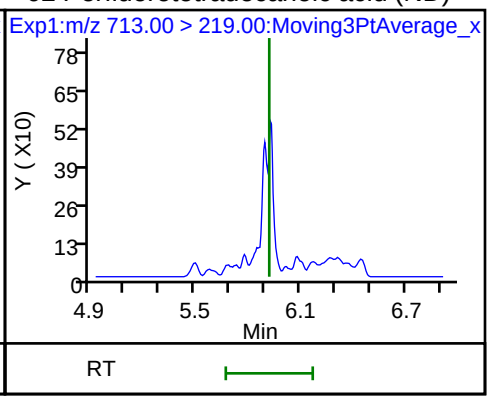

D 61 13C2 PFTeDA




62 Perfluorotetradecanoic acid (ND)




62 Perfluorotetradecanoic acid (ND)



Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

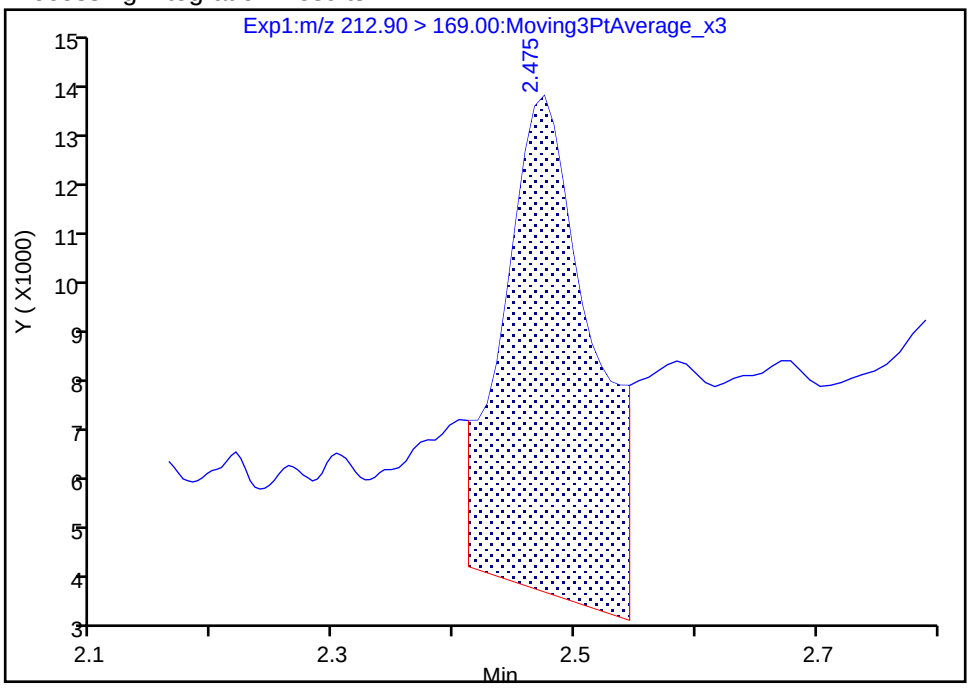
| | | | | | |
|---|---|---|---|---|---|
| Data File: | \\chromfs\Sacramento\ChromData\A13\20200910-103052.b\2020.09.10_A13_PFC_A_071.d | | | | |
| Injection Date: | 10-Sep-2020 20:00:47 | Instrument ID: | A13 | | |
| Lims ID: | 460-217659-D-8-A | Lab Sample ID: | 320-217659-8 | | |
| Client ID: | FB | | | | |
| Operator ID: | SACINSTLCMS01 | ALS Bottle#: | 42 | Worklist Smp#: | 14 |
| Injection Vol: | 20.0 ul | Dil. Factor: | 1.0000 | | |
| Method: | PFAS_A13 | Limit Group: | LC PFC ICAL | | |
| Column: | Gemini C18 3um 3 x 100mm ( 3.00 mm) | Detector | EXP1 | | |

## 2 Perfluorobutanoic acid, CAS: 375-22-4

Signal: 1

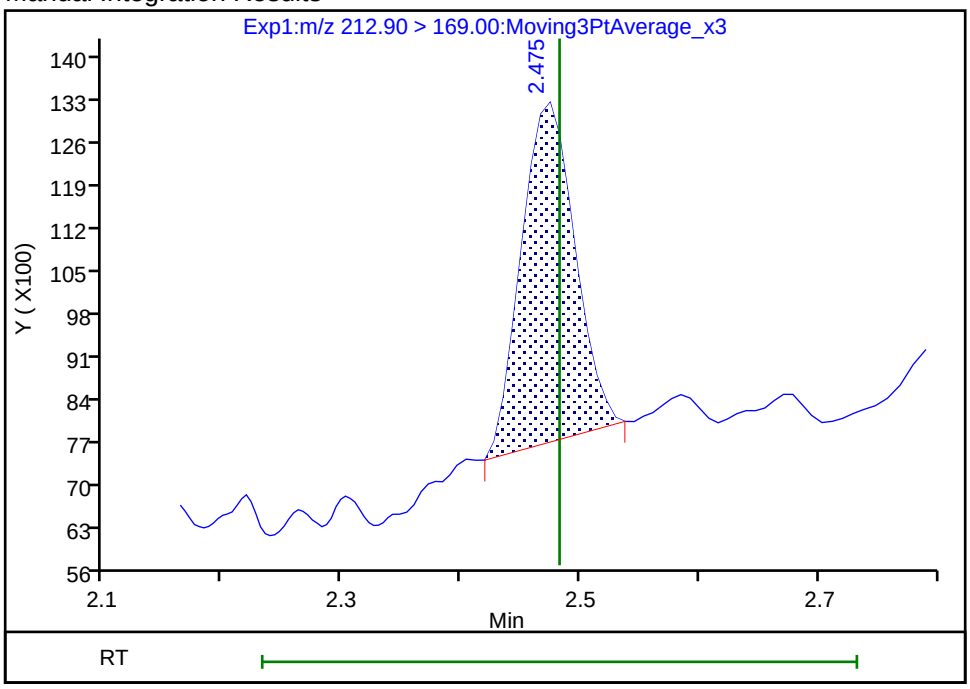
Processing Integration Results

RT: 2.47
Area: 44799
Amount: 0.019817
Amount Units: ng/ml




Manual Integration Results

RT: 2.47
Area: 17347
Amount: 0.007673
Amount Units: ng/ml




Reviewer: mongkols, 11-Sep-2020 11:10:03
Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

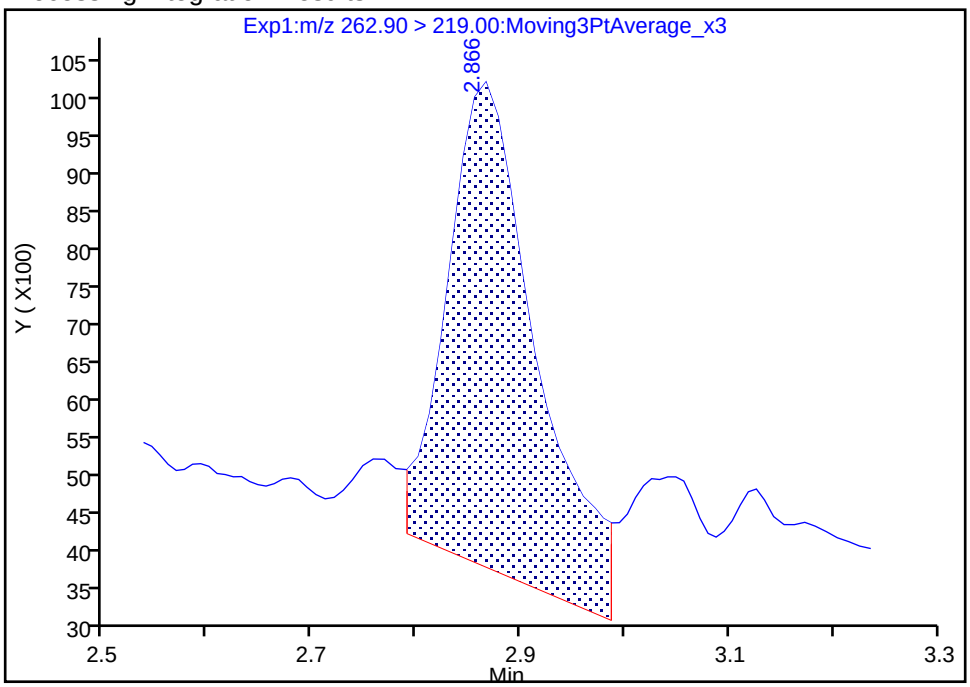
| | | | | | |
|---|---|---|---|---|---|
| Data File: | \\chromfs\Sacramento\ChromData\A13\20200910-103052.b\2020.09.10_A13_PFC_A_071.d | | | | |
| Injection Date: | 10-Sep-2020 20:00:47 | Instrument ID: | A13 | | |
| Lims ID: | 460-217659-D-8-A | Lab Sample ID: | 320-217659-8 | | |
| Client ID: | FB | | | | |
| Operator ID: | SACINSTLCMS01 | ALS Bottle#: | 42 | Worklist Smp#: | 14 |
| Injection Vol: | 20.0 ul | Dil. Factor: | 1.0000 | | |
| Method: | PFAS_A13 | Limit Group: | LC PFC ICAL | | |
| Column: | Gemini C18 3um 3 x 100mm ( 3.00 mm) | Detector | EXP1 | | |

## 5 Perfluoropentanoic acid, CAS: 2706-90-3

Signal: 1

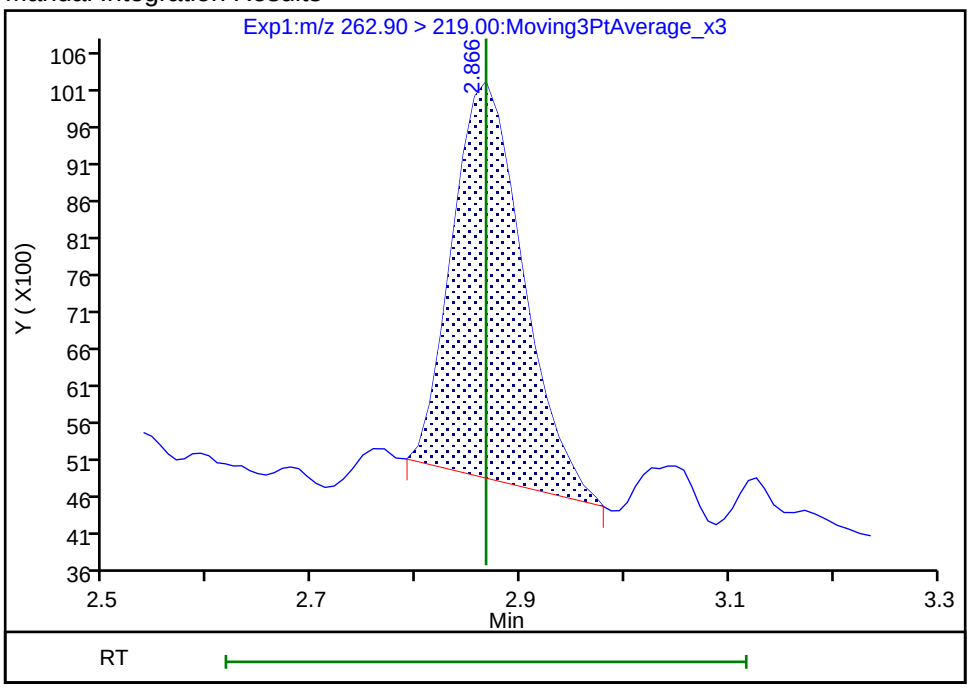
Processing Integration Results

RT: 2.87
Area: 38364
Amount: 0.015031
Amount Units: ng/ml




Manual Integration Results

RT: 2.87
Area: 25554
Amount: 0.010012
Amount Units: ng/ml




Reviewer: mongkols, 11-Sep-2020 11:10:08

Audit Action: Manually Integrated Audit Reason: Baseline

Eurofins TestAmerica, Sacramento

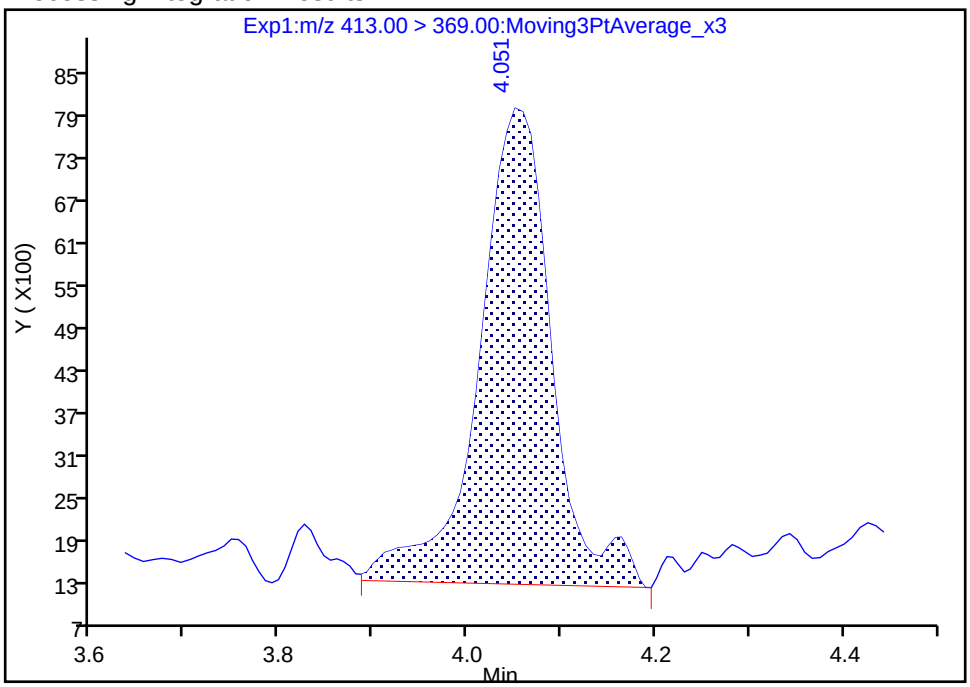
| | | | | | |
|---|---|---|---|---|---|
| Data File: | \\chromfs\Sacramento\ChromData\A13\20200910-103052.b\2020.09.10_A13_PFC_A_071.d | | | | |
| Injection Date: | 10-Sep-2020 20:00:47 | Instrument ID: | A13 | | |
| Lims ID: | 460-217659-D-8-A | Lab Sample ID: | 320-217659-8 | | |
| Client ID: | FB | | | | |
| Operator ID: | SACINSTLCMS01 | ALS Bottle#: | 42 | Worklist Smp#: | 14 |
| Injection Vol: | 20.0 ul | Dil. Factor: | 1.0000 | | |
| Method: | PFAS_A13 | Limit Group: | LC PFC ICAL | | |
| Column: | Gemini C18 3um 3 x 100mm ( 3.00 mm) | Detector | EXP1 | | |

## 26 Perfluorooctanoic acid, CAS: 335-67-1

Signal: 1

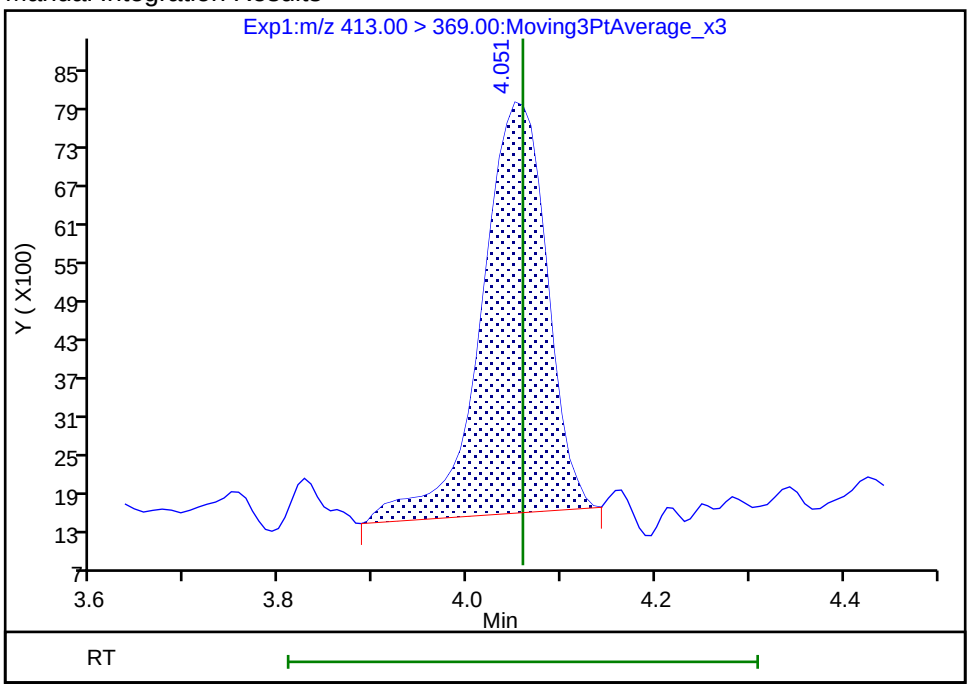
Processing Integration Results

RT: 4.05
Area: 36019
Amount: 0.010320
Amount Units: ng/ml




Manual Integration Results

RT: 4.05
Area: 30859
Amount: 0.008842
Amount Units: ng/ml




Reviewer: mongkols, 11-Sep-2020 11:10:34
Audit Action: Manually Integrated Audit Reason: Baseline

Eurofins TestAmerica, Sacramento

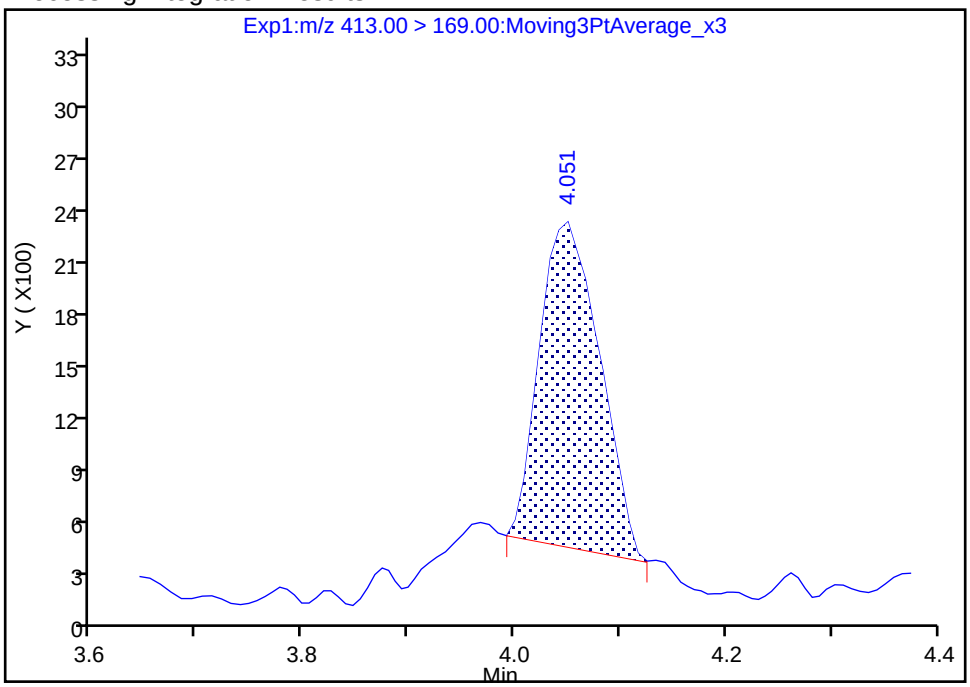
| | | | | | |
|---|---|---|---|---|---|
| Data File: | \\chromfs\Sacramento\ChromData\A13\20200910-103052.b\2020.09.10_A13_PFC_A_071.d | | | | |
| Injection Date: | 10-Sep-2020 20:00:47 | Instrument ID: | A13 | | |
| Lims ID: | 460-217659-D-8-A | Lab Sample ID: | 320-217659-8 | | |
| Client ID: | FB | | | | |
| Operator ID: | SACINSTLCMS01 | ALS Bottle#: | 42 | Worklist Smp#: | 14 |
| Injection Vol: | 20.0 ul | Dil. Factor: | 1.0000 | | |
| Method: | PFAS_A13 | Limit Group: | LC PFC ICAL | | |
| Column: | Gemini C18 3um 3 x 100mm ( 3.00 mm ID) | Detector | EXP1 | | |

## 26 Perfluorooctanoic acid, CAS: 335-67-1

Signal: 2

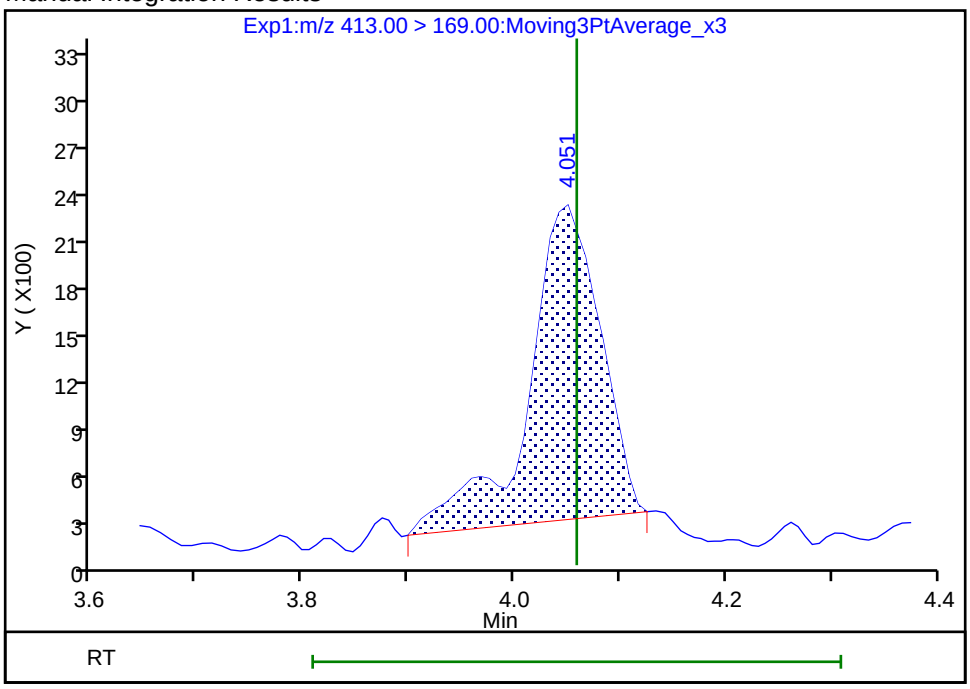
Processing Integration Results

RT: 4.05
Area: 7456
Amount: 0.010320
Amount Units: ng/ml




Manual Integration Results

RT: 4.05
Area: 9555
Amount: 0.008842
Amount Units: ng/ml




Reviewer: mongkols, 11-Sep-2020 11:10:37
Audit Action: Manually Integrated Audit Reason: Baseline

Eurofins TestAmerica, Sacramento

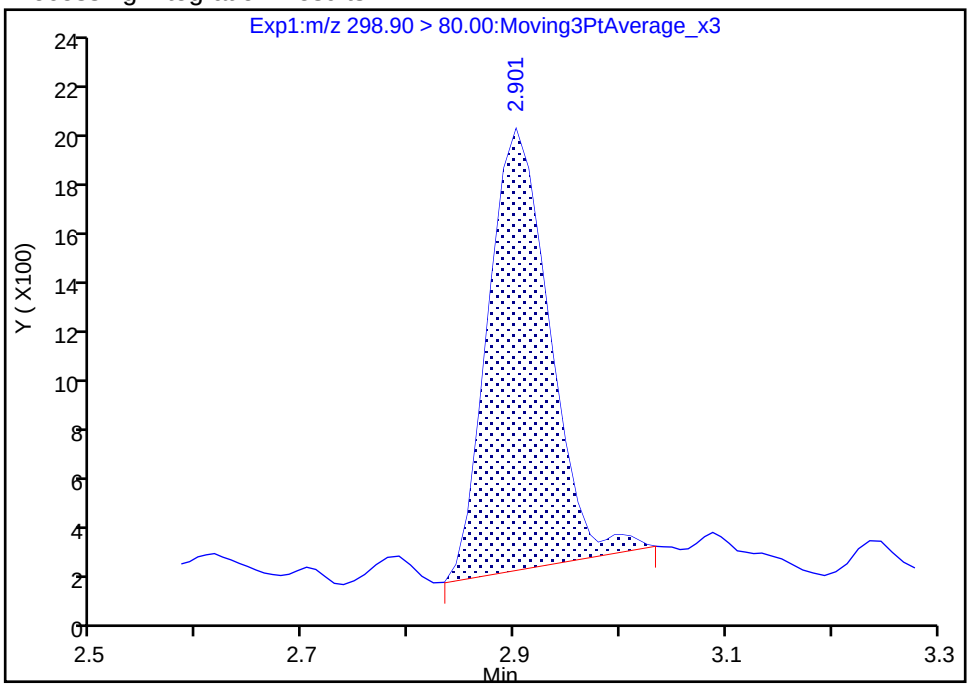
| | | | | | |
|---|---|---|---|---|---|
| Data File: | \\chromfs\Sacramento\ChromData\A13\20200910-103052.b\2020.09.10_A13_PFC_A_071.d | | | | |
| Injection Date: | 10-Sep-2020 20:00:47 | Instrument ID: | A13 | | |
| Lims ID: | 460-217659-D-8-A | Lab Sample ID: | 320-217659-8 | | |
| Client ID: | FB | | | | |
| Operator ID: | SACINSTLCMS01 | ALS Bottle#: | 42 | Worklist Smp#: | 14 |
| Injection Vol: | 20.0 ul | Dil. Factor: | 1.0000 | | |
| Method: | PFAS_A13 | Limit Group: | LC PFC ICAL | | |
| Column: | Gemini C18 3um 3 x 100mm ( 3.00 mm) | Detector | EXP1 | | |

## 6 Perfluorobutanesulfonic acid, CAS: 375-73-5

Signal: 1

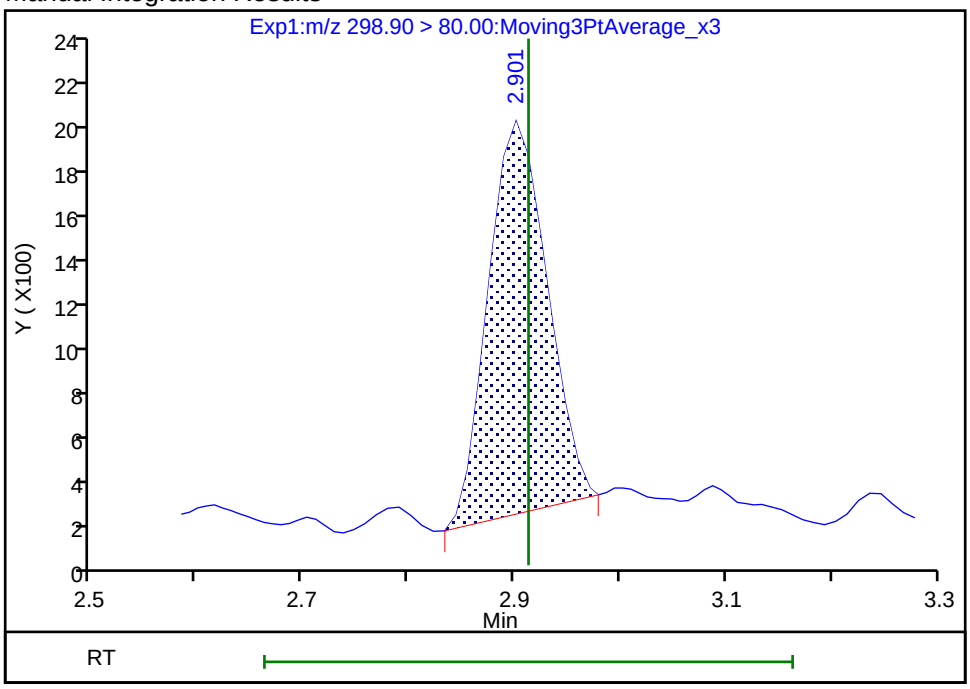
Processing Integration Results

RT: 2.90
Area: 7082
Amount: 0.002071
Amount Units: ng/ml




Manual Integration Results

RT: 2.90
Area: 6683
Amount: 0.001954
Amount Units: ng/ml




Reviewer: mongkols, 11-Sep-2020 11:10:14
Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

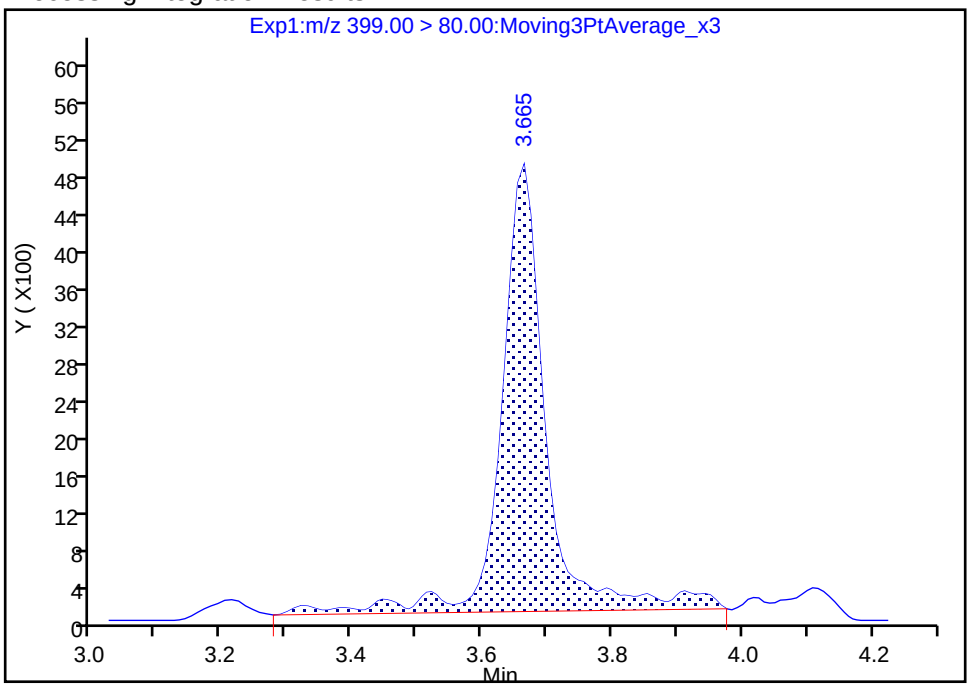
| | | | | | |
|---|---|---|---|---|---|
| Data File: | \\chromfs\Sacramento\ChromData\A13\20200910-103052.b\2020.09.10_A13_PFC_A_071.d | | | | |
| Injection Date: | 10-Sep-2020 20:00:47 | Instrument ID: | A13 | | |
| Lims ID: | 460-217659-D-8-A | Lab Sample ID: | 320-217659-8 | | |
| Client ID: | FB | | | | |
| Operator ID: | SACINSTLCMS01 | ALS Bottle#: | 42 | Worklist Smp#: | 14 |
| Injection Vol: | 20.0 ul | Dil. Factor: | 1.0000 | | |
| Method: | PFAS_A13 | Limit Group: | LC PFC ICAL | | |
| Column: | Gemini C18 3um 3 x 100mm ( 3.00 mm ) | Detector | EXP1 | | |

## 18 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 1

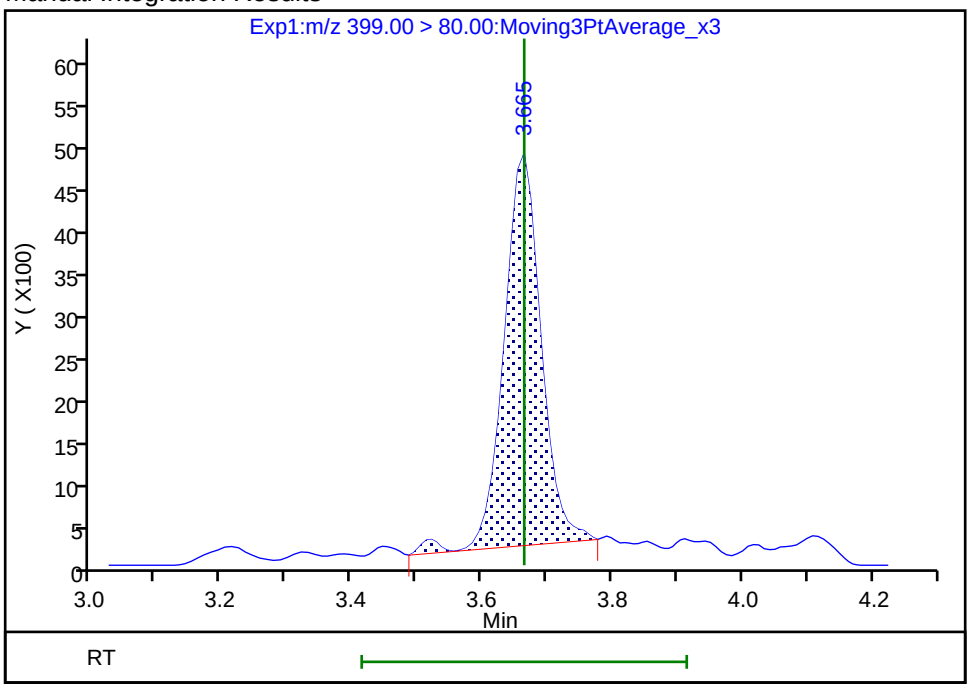
Processing Integration Results

RT: 3.66
Area: 23292
Amount: 0.009579
Amount Units: ng/ml




Manual Integration Results

RT: 3.66
Area: 18532
Amount: 0.007621
Amount Units: ng/ml




Reviewer: mongkols, 11-Sep-2020 11:10:23

Audit Action: Manually Integrated Audit Reason: Baseline

Eurofins TestAmerica, Sacramento

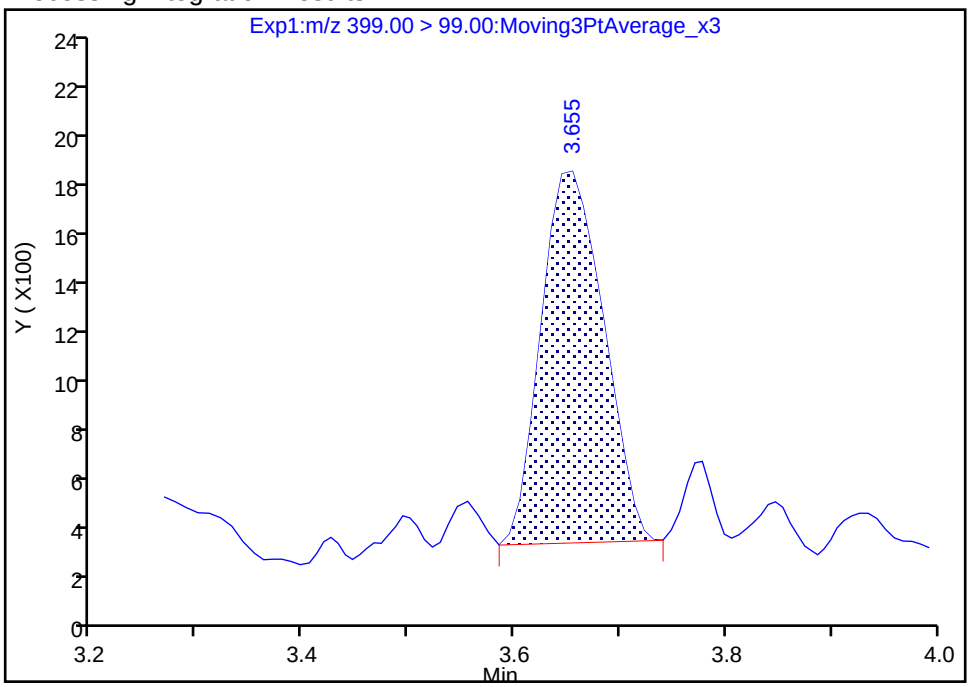
| | | | | | |
|---|---|---|---|---|---|
| Data File: | \\chromfs\Sacramento\ChromData\A13\20200910-103052.b\2020.09.10_A13_PFC_A_071.d | | | | |
| Injection Date: | 10-Sep-2020 20:00:47 | Instrument ID: | A13 | | |
| Lims ID: | 460-217659-D-8-A | Lab Sample ID: | 320-217659-8 | | |
| Client ID: | FB | | | | |
| Operator ID: | SACINSTLCMS01 | ALS Bottle#: | 42 | Worklist Smp#: | 14 |
| Injection Vol: | 20.0 ul | Dil. Factor: | 1.0000 | | |
| Method: | PFAS_A13 | Limit Group: | LC PFC ICAL | | |
| Column: | Gemini C18 3um 3 x 100mm ( 3.00 mm ID) | Detector | EXP1 | | |

## 18 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 2

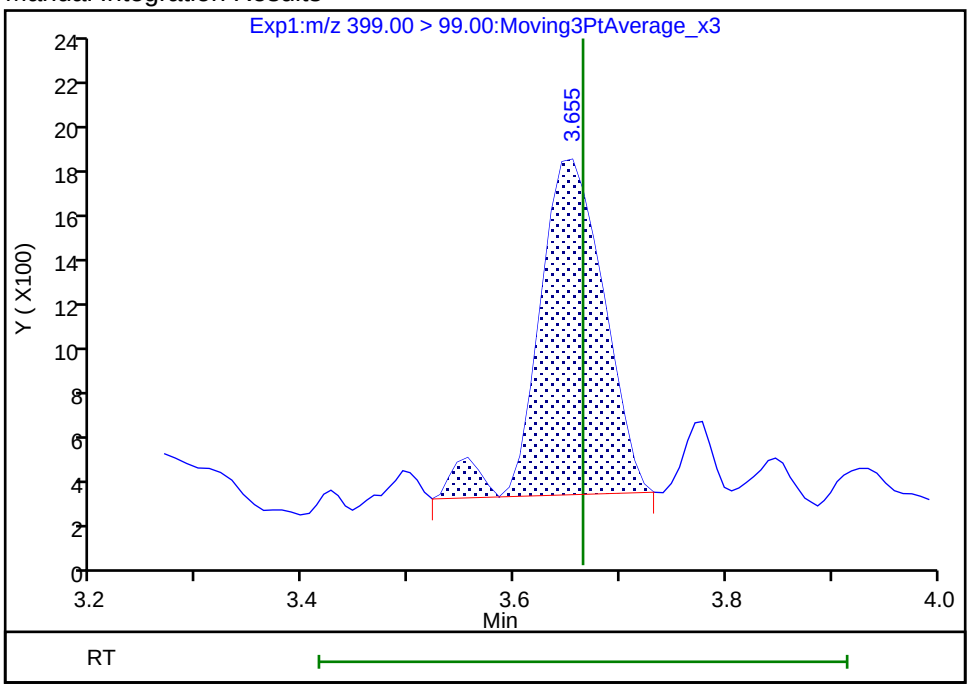
Processing Integration Results

RT: 3.65
Area: 6147
Amount: 0.009579
Amount Units: ng/ml




Manual Integration Results

RT: 3.65
Area: 6471
Amount: 0.007621
Amount Units: ng/ml




Reviewer: mongkols, 11-Sep-2020 11:10:27
Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

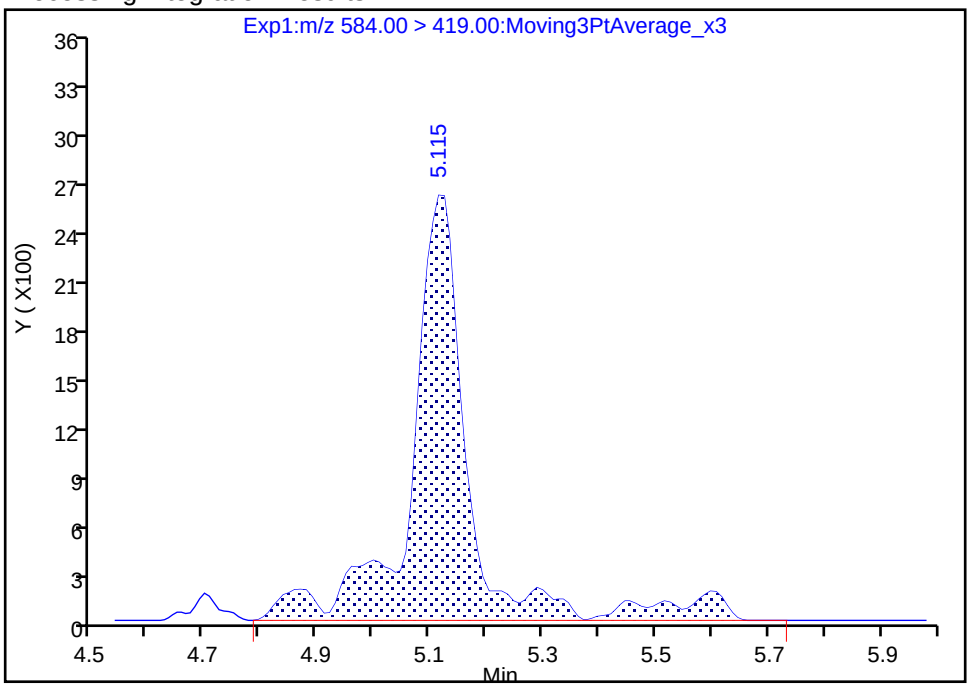
| | | | | | |
|---|---|---|---|---|---|
| Data File: | \\chromfs\Sacramento\ChromData\A13\20200910-103052.b\2020.09.10_A13_PFC_A_071.d | | | | |
| Injection Date: | 10-Sep-2020 20:00:47 | Instrument ID: | A13 | | |
| Lims ID: | 460-217659-D-8-A | Lab Sample ID: | 320-217659-8 | | |
| Client ID: | FB | | | | |
| Operator ID: | SACINSTLCMS01 | ALS Bottle#: | 42 | Worklist Smp#: | 14 |
| Injection Vol: | 20.0 ul | Dil. Factor: | 1.0000 | | |
| Method: | PFAS_A13 | Limit Group: | LC PFC ICAL | | |
| Column: | Gemini C18 3um 3 x 100mm ( 3.00 mm ) | Detector | EXP1 | | |

## 48 NEtFOSA, CAS: 2991-50-6

Signal: 1

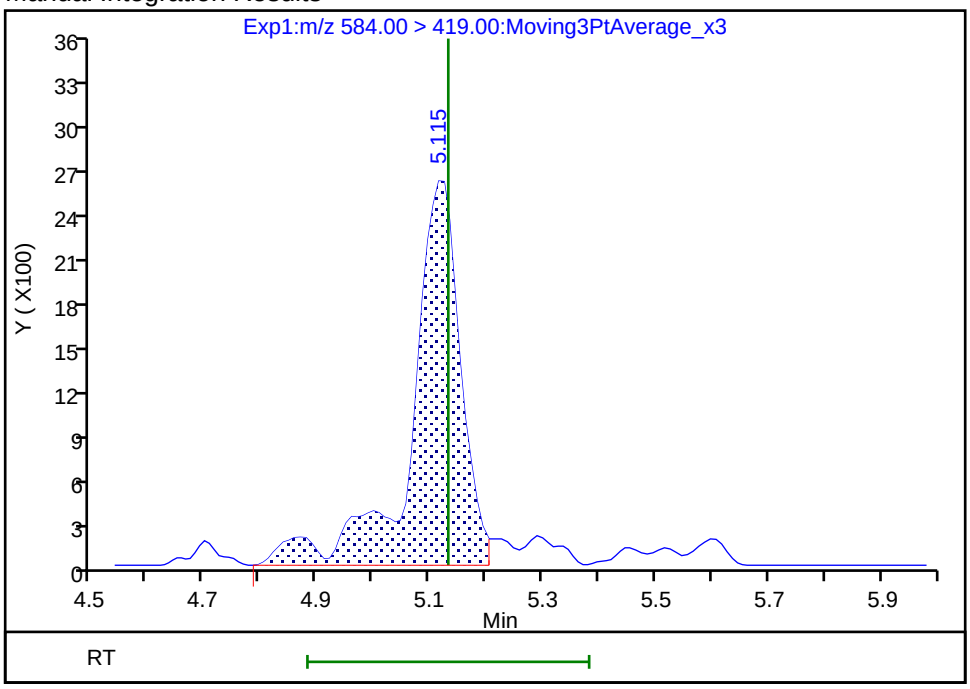
Processing Integration Results

RT: 5.12
Area: 18722
Amount: 0.012411
Amount Units: ng/ml




Manual Integration Results

RT: 5.12
Area: 15932
Amount: 0.010562
Amount Units: ng/ml




Reviewer: mongkols, 11-Sep-2020 11:10:52

Audit Action: Manually Integrated Audit Reason: Baseline

FORM VI
LCMS BY ISOTOPIC DILUTION - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 460-217659-1 Analy Batch No.: 410486

SDG No.:

Instrument ID: A13 GC Column: GeminiC18 3 ID: 3(mm) Heated Purge: (Y/N) N

Calibration Start Date: 09/08/2020 18:01 Calibration End Date: 09/08/2020 18:58 Calibration ID: 51771

Calibration Files:

| LEVEL: | LAB SAMPLE ID: | LAB FILE ID: |
|---|---|---|
| Level 1 | IC 320-410486/2 | 2020.09.08_A13_PFC_ICALX_004.d |
| Level 2 | IC 320-410486/3 | 2020.09.08_A13_PFC_ICALX_005.d |
| Level 3 | IC 320-410486/4 | 2020.09.08_A13_PFC_ICALX_006.d |
| Level 4 | IC 320-410486/5 | 2020.09.08_A13_PFC_ICALX_007.d |
| Level 5 | IC 320-410486/6 | 2020.09.08_A13_PFC_ICALX_008.d |
| Level 6 | IC 320-410486/7 | 2020.09.08_A13_PFC_ICALX_009.d |
| Level 7 | IC 320-410486/8 | 2020.09.08_A13_PFC_ICALX_010.d |

| ANALYTE | RRF | | | | | CURVE TYPE | COEFFICIENT | | | # | MIN RRF | %RSD | # | MAX %RSD | R^2 OR COD | # | MIN R^2 OR COD |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | LVL 1<br>LVL 6 | LVL 2<br>LVL 7 | LVL 3 | LVL 4 | LVL 5 | | B | M1 | M2 | | | | | | | | |
| Perfluorobutanoic acid (PFBA) | 0.6260<br>0.7728 | 0.6521<br>0.7091 | 0.7474 | 0.8576 | 0.8378 | AveID | | 0.7433 | | | | 11.8 | | 35.0 | | | |
| Perfluoropentanoic acid (PFPeA) | 1.1909<br>0.9744 | 1.0279<br>0.8999 | 0.9546 | 1.0710 | 1.0760 | AveID | | 1.0278 | | | | 9.3 | | 35.0 | | | |
| Perfluorobutanesulfonic acid (PFBS) | 0.8456<br>1.0233 | 0.8578<br>0.9524 | 0.9748 | 1.1048 | 1.0849 | AveID | | 0.9776 | | | | 10.4 | | 35.0 | | | |
| 4:2 FTS | 2.7125<br>3.3329 | 3.1106<br>3.1306 | 3.0010 | 3.5854 | 3.8311 | AveID | | 3.2434 | | | | 11.5 | | 35.0 | | | |
| Perfluorohexanoic acid (PFHxA) | 0.9591<br>0.9332 | 0.9144<br>0.8775 | 0.8644 | 1.0061 | 0.9509 | AveID | | 0.9294 | | | | 5.3 | | 35.0 | | | |
| Perfluoropentanesulfonic acid (PFPeS) | 0.6936<br>0.8159 | 0.7186<br>0.7914 | 0.7464 | 0.8956 | 0.8652 | AveID | | 0.7896 | | | | 9.5 | | 50.0 | | | |
| HFPO-DA (GenX) | 0.2555<br>0.3059 | 0.2763<br>0.3032 | 0.2938 | 0.3206 | 0.3253 | AveID | | 0.2972 | | | | 8.3 | | 35.0 | | | |
| Perfluoroheptanoic acid (PFHpA) | 0.9244<br>1.0273 | 1.0443<br>0.9692 | 1.0054 | 1.0353 | 1.0690 | AveID | | 1.0107 | | | | 4.9 | | 35.0 | | | |
| Perfluorohexanesulfonic acid (PFHxS) | 1.2661<br>1.0695 | 1.0944<br>1.0383 | 1.0907 | 1.1073 | 1.1202 | AveID | | 1.1123 | | | | 6.6 | | 35.0 | | | |
| 4,8-Dioxa-3H-perfluorononanoic acid (ADONA) | 4.7032<br>5.0100 | 4.9441<br>4.0605 | 5.2049 | 6.2103 | 5.8204 | AveID | | 5.1362 | | | | 13.8 | | 50.0 | | | |
| 6:2 FTS | 2.6387<br>2.3323 | 2.4564<br>2.2154 | 2.2635 | 2.4615 | 2.4795 | AveID | | 2.4068 | | | | 6.1 | | 35.0 | | | |
| Perfluoroheptanesulfonic Acid (PFHpS) | 1.0091<br>1.1563 | 1.0372<br>1.1321 | 1.0634 | 1.3102 | 1.2636 | AveID | | 1.1388 | | | | 10.0 | | 50.0 | | | |
| Perfluorooctanoic acid (PFOA) | 1.2146<br>0.9314 | 1.0561<br>0.8780 | 0.9743 | 1.0470 | 1.0597 | AveID | | 1.0230 | | | | 10.7 | | 35.0 | | | |
| Perfluorooctanesulfonic acid (PFOS) | 1.0451<br>1.0379 | 0.9128<br>1.0191 | 1.0236 | 1.1353 | 1.0944 | AveID | | 1.0383 | | | | 6.7 | | 35.0 | | | |

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
LCMS BY ISOTOPIC DILUTION - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 460-217659-1 Analy Batch No.: 410486

SDG No.:

Instrument ID: A13 GC Column: GeminiC18 3 ID: 3(mm) Heated Purge: (Y/N) N

Calibration Start Date: 09/08/2020 18:01 Calibration End Date: 09/08/2020 18:58 Calibration ID: 51771

| ANALYTE | RRF | | | | | CURVE TYPE | COEFFICIENT | | | # | MIN RRF | %RSD | # | MAX %RSD | R^2 OR COD | # | MIN R^2 OR COD |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | LVL 1<br>LVL 6 | LVL 2<br>LVL 7 | LVL 3 | LVL 4 | LVL 5 | | B | M1 | M2 | | | | | | | | |
| Perfluorononanoic acid (PFNA) | 0.9795<br>0.9747 | 0.8787<br>0.9004 | 0.9338 | 0.9599 | 1.0191 | AveID | | 0.9494 | | | | 5.1 | | 35.0 | | | |
| F-53B Major | 2.1844<br>2.6154 | 2.3334<br>2.4294 | 2.3987 | 2.8125 | 2.7357 | AveID | | 2.5014 | | | | 9.1 | | 50.0 | | | |
| Perfluorooctanesulfonamide (FOSA) | 0.8759<br>1.0006 | 0.8875<br>0.9377 | 0.9053 | 0.9916 | 0.9698 | AveID | | 0.9383 | | | | 5.4 | | 35.0 | | | |
| Perfluorononanesulfonic acid (PFNS) | 0.6919<br>0.7921 | 0.6796<br>0.7940 | 0.7615 | 0.8537 | 0.8502 | AveID | | 0.7747 | | | | 8.9 | | 50.0 | | | |
| Perfluorodecanoic acid (PFDA) | 0.8485<br>0.9389 | 0.8795<br>0.8254 | 0.8997 | 0.9407 | 0.9423 | AveID | | 0.8964 | | | | 5.3 | | 35.0 | | | |
| 8:2 FTS | 2.2948<br>2.4573 | 2.3623<br>2.4132 | 2.3954 | 2.7027 | 2.6777 | AveID | | 2.4719 | | | | 6.4 | | 35.0 | | | |
| N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA) | 0.6856<br>0.8903 | 0.7511<br>0.8504 | 0.7555 | 0.8623 | 0.8433 | AveID | | 0.8055 | | | | 9.3 | | 35.0 | | | |
| Perfluorodecanesulfonic acid (PFDS) | 0.6355<br>0.6443 | 0.5862<br>0.6541 | 0.6400 | 0.7394 | 0.7123 | AveID | | 0.6588 | | | | 7.8 | | 50.0 | | | |
| Perfluoroundecanoic acid (PFUnA) | 0.7130<br>0.7104 | 0.5775<br>0.7070 | 0.5682 | 0.6602 | 0.6943 | AveID | | 0.6615 | | | | 9.6 | | 35.0 | | | |
| N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA) | 0.6495<br>0.8777 | 0.6761<br>0.8996 | 0.7086 | 0.7982 | 0.8089 | AveID | | 0.7741 | | | | 12.7 | | 35.0 | | | |
| NMeFOSE | 1.0464<br>1.0928 | 0.9811<br>0.9945 | 0.9709 | 1.1631 | 1.2038 | AveID | | 1.0647 | | | | 8.6 | | 35.0 | | | |
| NMeFOSA | 0.8424<br>0.9910 | 0.8942<br>0.9249 | 0.9560 | 1.1441 | 1.1295 | AveID | | 0.9832 | | | | 11.7 | | 35.0 | | | |
| F-53B Minor | 3.9873<br>4.2789 | 3.8567<br>3.6060 | 4.2153 | 5.2161 | 5.0569 | AveID | | 4.3167 | | | | 14.0 | | 50.0 | | | |
| NEtFOSE | 0.9201<br>1.0311 | 1.0877<br>0.9837 | 1.0121 | 1.1320 | 1.0809 | AveID | | 1.0354 | | | | 6.9 | | 35.0 | | | |
| NEtFOSA | 0.9872<br>1.0161 | 1.0222<br>1.0193 | 1.0426 | 1.1714 | 1.1750 | AveID | | 1.0620 | | | | 7.3 | | 35.0 | | | |
| Perfluorododecanoic acid (PFDoA) | 0.9325<br>0.9112 | 0.9018<br>0.8052 | 0.9669 | 0.9481 | 0.9198 | AveID | | 0.9122 | | | | 5.7 | | 35.0 | | | |
| 10:2 FTS | 1.3912<br>1.6960 | 1.5243<br>1.7524 | 1.5434 | 1.7342 | 1.7817 | AveID | | 1.6319 | | | | 9.0 | | 50.0 | | | |
| Perfluorododecanesulfonic acid (PFDoS) | 0.2066<br>0.2638 | 0.2469<br>0.2674 | 0.2543 | 0.2883 | 0.2732 | AveID | | 0.2572 | | | | 10.1 | | 50.0 | | | |
| Perfluorotridecanoic acid (PFTriA) | 0.8372<br>0.9274 | 0.9017<br>0.8121 | 0.9432 | 1.1225 | 1.0169 | AveID | | 0.9373 | | | | 11.3 | | 50.0 | | | |
| Perfluorotetradecanoic acid (PFTeA) | 1.0570<br>0.9408 | 1.0145<br>0.8192 | 0.9791 | 1.0311 | 1.0484 | AveID | | 0.9843 | | | | 8.5 | | 35.0 | | | |

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
LCMS BY ISOTOPIC DILUTION - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 460-217659-1 Analy Batch No.: 410486

SDG No.:

Instrument ID: A13 GC Column: GeminiC18 3 ID: 3(mm) Heated Purge: (Y/N) N

Calibration Start Date: 09/08/2020 18:01 Calibration End Date: 09/08/2020 18:58 Calibration ID: 51771

| ANALYTE | RRF | | | | | CURVE TYPE | COEFFICIENT | | | # | MIN RRF | %RSD | # | MAX %RSD | R^2 OR COD | # | MIN R^2 OR COD |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | LVL 1<br>LVL 6 | LVL 2<br>LVL 7 | LVL 3 | LVL 4 | LVL 5 | | B | M1 | M2 | | | | | | | | |
| Perfluoro-n-hexadecanoic acid (PFHxDA) | +++++<br>0.9074 | 1.4206<br>+++++ | 1.0304 | 1.0505 | 0.9488 | L2ID | 0.0235 | 0.9514 | | | | | | | 0.9970 | | 0.9900 |
| Perfluoro-n-octadecanoic acid (PFODA) | 0.6470<br>0.7580 | 0.6560<br>0.7612 | 0.6955 | 0.8276 | 0.7687 | AveID | | 0.7306 | | | | 9.1 | | 50.0 | | | |
| 13C4 PFBA | 0.8405<br>0.8473 | 0.8394<br>0.8848 | 0.8380 | 0.8350 | 0.8643 | Ave | | 0.8499 | | | | 2.1 | | 50.0 | | | |
| 13C5 PFPeA | 0.6680<br>0.6580 | 0.6591<br>0.6875 | 0.6662 | 0.6392 | 0.6593 | Ave | | 0.6625 | | | | 2.2 | | 50.0 | | | |
| 13C3 PFBS | 0.8243<br>0.8342 | 0.7965<br>0.8587 | 0.8096 | 0.8293 | 0.8693 | Ave | | 0.8317 | | | | 3.1 | | 50.0 | | | |
| M2-4:2 FTS | 0.2271<br>0.1899 | 0.2044<br>0.1927 | 0.2109 | 0.2077 | 0.1935 | Ave | | 0.2037 | | | | 6.4 | | 50.0 | | | |
| 13C2 PFHxA | 0.8140<br>0.8003 | 0.8231<br>0.8266 | 0.8245 | 0.8031 | 0.8363 | Ave | | 0.8183 | | | | 1.6 | | 50.0 | | | |
| 13C3 HFPO-DA | 0.5798<br>0.5975 | 0.5722<br>0.6115 | 0.5729 | 0.5774 | 0.5949 | Ave | | 0.5866 | | | | 2.5 | | 50.0 | | | |
| 13C4 PFHpA | 0.8076<br>0.8067 | 0.8048<br>0.7969 | 0.7849 | 0.8097 | 0.8303 | Ave | | 0.8058 | | | | 1.7 | | 50.0 | | | |
| 18O2 PFHxS | 0.5584<br>0.5398 | 0.5342<br>0.5494 | 0.5386 | 0.5405 | 0.5535 | Ave | | 0.5449 | | | | 1.6 | | 50.0 | | | |
| M2-6:2 FTS | 0.2443<br>0.2212 | 0.2456<br>0.2090 | 0.2439 | 0.2371 | 0.2430 | Ave | | 0.2349 | | | | 6.0 | | 50.0 | | | |
| 13C4 PFOA | 0.9911<br>0.9793 | 0.9860<br>0.9909 | 0.9836 | 0.9659 | 0.9976 | Ave | | 0.9849 | | | | 1.0 | | 50.0 | | | |
| 13C4 PFOS | 0.3920<br>0.3873 | 0.3860<br>0.3989 | 0.3858 | 0.3752 | 0.3964 | Ave | | 0.3888 | | | | 2.0 | | 50.0 | | | |
| 13C5 PFNA | 0.8966<br>0.8714 | 0.9043<br>0.8974 | 0.9046 | 0.9454 | 0.9497 | Ave | | 0.9099 | | | | 3.1 | | 50.0 | | | |
| 13C8 FOSA | 0.5669<br>0.5468 | 0.5394<br>0.5596 | 0.5507 | 0.5632 | 0.5827 | Ave | | 0.5585 | | | | 2.6 | | 50.0 | | | |
| 13C2 PFDA | 1.1090<br>1.0535 | 1.0994<br>1.0906 | 1.0999 | 1.1187 | 1.1446 | Ave | | 1.1022 | | | | 2.5 | | 50.0 | | | |
| M2-8:2 FTS | 0.3374<br>0.2901 | 0.3251<br>0.2598 | 0.3198 | 0.3228 | 0.3200 | Ave | | 0.3107 | | | | 8.6 | | 50.0 | | | |
| d3-NMeFOSAA | 0.5634<br>0.5532 | 0.5660<br>0.5887 | 0.5776 | 0.5489 | 0.5800 | Ave | | 0.5682 | | | | 2.6 | | 50.0 | | | |
| 13C2 PFUnA | 1.0798<br>1.0082 | 1.0964<br>1.0479 | 1.0855 | 1.1102 | 1.1185 | Ave | | 1.0781 | | | | 3.6 | | 50.0 | | | |
| d5-NEtFOSAA | 0.5803<br>0.5131 | 0.5738<br>0.4781 | 0.5931 | 0.5617 | 0.5506 | Ave | | 0.5501 | | | | 7.4 | | 50.0 | | | |

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
LCMS BY ISOTOPIC DILUTION - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 460-217659-1 Analy Batch No.: 410486

SDG No.:

Instrument ID: A13 GC Column: GeminiC18 3 ID: 3(mm) Heated Purge: (Y/N) N

Calibration Start Date: 09/08/2020 18:01 Calibration End Date: 09/08/2020 18:58 Calibration ID: 51771

| ANALYTE | RRF | | | | | CURVE TYPE | COEFFICIENT | | | # | MIN RRF | %RSD | # | MAX %RSD | R^2 OR COD | # | MIN R^2 OR COD |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | LVL 1<br>LVL 6 | LVL 2<br>LVL 7 | LVL 3 | LVL 4 | LVL 5 | | B | M1 | M2 | | | | | | | | |
| d7-N-MeFOSE-M | 0.1403<br>0.1378 | 0.1325<br>0.1485 | 0.1338 | 0.1439 | 0.1416 | Ave | | 0.1398 | | | | 4.0 | | 50.0 | | | |
| d-N-MeFOSA-M | 0.2508<br>0.2808 | 0.2454<br>0.2997 | 0.2423 | 0.2562 | 0.2644 | Ave | | 0.2628 | | | | 7.9 | | 50.0 | | | |
| d9-N-EtFOSE-M | 0.1636<br>0.1642 | 0.1591<br>0.1668 | 0.1639 | 0.1608 | 0.1698 | Ave | | 0.1640 | | | | 2.2 | | 50.0 | | | |
| d-N-EtFOSA-M | 0.2410<br>0.2742 | 0.2377<br>0.2736 | 0.2299 | 0.2443 | 0.2560 | Ave | | 0.2510 | | | | 7.0 | | 50.0 | | | |
| 13C2 PFDoA | 1.1585<br>1.1483 | 1.1513<br>1.1555 | 1.1432 | 1.1566 | 1.2101 | Ave | | 1.1605 | | | | 1.9 | | 50.0 | | | |
| 13C2 PFTeDA | 1.0839<br>1.1433 | 1.0930<br>1.2303 | 1.1401 | 1.1630 | 1.1692 | Ave | | 1.1461 | | | | 4.3 | | 50.0 | | | |
| 13C2 PFHxDA | 1.2238<br>1.1567 | 1.2101<br>1.1305 | 1.1872 | 1.1658 | 1.2746 | Ave | | 1.1927 | | | | 4.0 | | 50.0 | | | |
| 13C8 PFOA | 0.8882<br>0.9230 | 0.8667<br>0.9376 | 0.8769 | 0.8695 | 0.8737 | Ave | | 0.8908 | | | | 3.2 | | 50.0 | | | |
| 13C8 PFOS | 0.2116<br>0.2117 | 0.2024<br>0.2133 | 0.2098 | 0.1970 | 0.2073 | Ave | | 0.2076 | | | | 2.8 | | 50.0 | | | |

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
LCMS BY ISOTOPIC DILUTION - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 460-217659-1 Analy Batch No.: 410486

SDG No.:

Instrument ID: A13 GC Column: GeminiC18 3 ID: 3(mm) Heated Purge: (Y/N) N

Calibration Start Date: 09/08/2020 18:01 Calibration End Date: 09/08/2020 18:58 Calibration ID: 51771

Calibration Files:

| LEVEL: | LAB SAMPLE ID: | LAB FILE ID: |
|---|---|---|
| Level 1 | IC 320-410486/2 | 2020.09.08_A13_PFC_ICALX_004.d |
| Level 2 | IC 320-410486/3 | 2020.09.08_A13_PFC_ICALX_005.d |
| Level 3 | IC 320-410486/4 | 2020.09.08_A13_PFC_ICALX_006.d |
| Level 4 | IC 320-410486/5 | 2020.09.08_A13_PFC_ICALX_007.d |
| Level 5 | IC 320-410486/6 | 2020.09.08_A13_PFC_ICALX_008.d |
| Level 6 | IC 320-410486/7 | 2020.09.08_A13_PFC_ICALX_009.d |
| Level 7 | IC 320-410486/8 | 2020.09.08_A13_PFC_ICALX_010.d |

| ANALYTE | IS REF | CURVE TYPE | RESPONSE | | | | | CONCENTRATION (NG/ML) | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | LVL 1<br>LVL 6 | LVL 2<br>LVL 7 | LVL 3 | LVL 4 | LVL 5 | LVL 1<br>LVL 6 | LVL 2<br>LVL 7 | LVL 3 | LVL 4 | LVL 5 |
| Perfluorobutanoic acid (PFBA) | | AveID | 61128<br>14438781 | 123553<br>26655152 | 709495 | 3061240 | 7550897 | 0.0250<br>5.00 | 0.0500<br>10.0 | 0.250 | 1.00 | 2.50 |
| Perfluoropentanoic acid (PFPeA) | | AveID | 92418<br>14138743 | 152923<br>26282266 | 720372 | 2926237 | 7398690 | 0.0250<br>5.00 | 0.0500<br>10.0 | 0.250 | 1.00 | 2.50 |
| Perfluorobutanesulfonic acid (PFBS) | | AveID | 71582<br>16640464 | 136339<br>30714271 | 790299 | 3461956 | 8694694 | 0.0221<br>4.42 | 0.0442<br>8.84 | 0.221 | 0.884 | 2.21 |
| 4:2 FTS | | AveID | 66853<br>13032064 | 134070<br>23932034 | 669502 | 2972806 | 7222435 | 0.0234<br>4.67 | 0.0467<br>9.34 | 0.234 | 0.934 | 2.34 |
| Perfluorohexanoic acid (PFHxA) | | AveID | 90694<br>16468853 | 169905<br>30815520 | 807254 | 3453700 | 8293337 | 0.0250<br>5.00 | 0.0500<br>10.0 | 0.250 | 1.00 | 2.50 |
| Perfluoropentanesulfonic acid (PFPeS) | | AveID | 62309<br>14078526 | 121195<br>27082975 | 642082 | 2978054 | 7357818 | 0.0235<br>4.69 | 0.0469<br>9.38 | 0.235 | 0.938 | 2.35 |
| HFPO-DA (GenX) | | AveID | 17209<br>4031168 | 35679<br>7876756 | 190661 | 791192 | 2018411 | 0.0250<br>5.00 | 0.0500<br>10.0 | 0.250 | 1.00 | 2.50 |
| Perfluoroheptanoic acid (PFHpA) | | AveID | 86732<br>18273603 | 189696<br>32814594 | 893875 | 3583423 | 9256124 | 0.0250<br>5.00 | 0.0500<br>10.0 | 0.250 | 1.00 | 2.50 |
| Perfluorohexanesulfonic acid (PFHxS) | | AveID | 74745<br>11584719 | 120086<br>22053412 | 605478 | 2328312 | 5884181 | 0.0228<br>4.55 | 0.0455<br>9.10 | 0.228 | 0.910 | 2.28 |
| 4,8-Dioxa-3H-perfluorononanoic acid (ADONA) | | AveID | 201790<br>40309055 | 405770<br>64819077 | 2142670 | 9381994 | 22665425 | 0.0236<br>4.71 | 0.0471<br>9.42 | 0.236 | 0.942 | 2.36 |
| 6:2 FTS | | AveID | 70998<br>10786932 | 129089<br>18651101 | 592730 | 2365036 | 5956664 | 0.0237<br>4.74 | 0.0474<br>9.48 | 0.237 | 0.948 | 2.37 |
| Perfluoroheptanesulfonic Acid (PFHpS) | | AveID | 43755<br>9402297 | 86028<br>18263636 | 442411 | 2000325 | 4972809 | 0.0238<br>4.76 | 0.0476<br>9.52 | 0.238 | 0.952 | 2.38 |
| Perfluorooctanoic acid (PFOA) | | AveID | 139847<br>20113180 | 235055<br>36963255 | 1085567 | 4327071 | 11036141 | 0.0250<br>5.00 | 0.0500<br>10.0 | 0.250 | 1.00 | 2.50 |
| Perfluorooctanesulfonic acid (PFOS) | | AveID | 44172<br>8226757 | 73805<br>16026278 | 415124 | 1689700 | 4198333 | 0.0232<br>4.64 | 0.0464<br>9.28 | 0.232 | 0.928 | 2.32 |
| Perfluorononanoic acid (PFNA) | | AveID | 102031<br>18728268 | 179366<br>34328615 | 956806 | 3887335 | 10113220 | 0.0250<br>5.00 | 0.0500<br>10.0 | 0.250 | 1.00 | 2.51 |

FORM VI
LCMS BY ISOTOPIC DILUTION - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 460-217659-1 Analy Batch No.: 410486

SDG No.:

Instrument ID: A13 GC Column: GeminiC18 3 ID: 3(mm) Heated Purge: (Y/N) N

Calibration Start Date: 09/08/2020 18:01 Calibration End Date: 09/08/2020 18:58 Calibration ID: 51771

| ANALYTE | IS REF | CURVE TYPE | RESPONSE | | | | | CONCENTRATION (NG/ML) | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | LVL 1<br>LVL 6 | LVL 2<br>LVL 7 | LVL 3 | LVL 4 | LVL 5 | LVL 1<br>LVL 6 | LVL 2<br>LVL 7 | LVL 3 | LVL 4 | LVL 5 |
| F-53B Major | | AveID | 92727<br>20819244 | 189474<br>38369939 | 976991 | 4203800 | 10540021 | 0.0233<br>4.66 | 0.0466<br>9.32 | 0.233 | 0.932 | 2.33 |
| Perfluorooctanesulfonamide (FOSA) | | AveID | 57692<br>12065086 | 108069<br>22290641 | 564719 | 2387088 | 5893720 | 0.0250<br>5.00 | 0.0500<br>10.0 | 0.250 | 1.00 | 2.50 |
| Perfluorononanesulfonic acid (PFNS) | | AveID | 30255<br>6494679 | 56843<br>12917552 | 319494 | 1314349 | 3374107 | 0.0240<br>4.80 | 0.0480<br>9.60 | 0.240 | 0.960 | 2.40 |
| Perfluorodecanoic acid (PFDA) | | AveID | 109318<br>21812231 | 218271<br>38244371 | 1120870 | 4498411 | 11249076 | 0.0250<br>5.00 | 0.0500<br>10.0 | 0.250 | 1.00 | 2.50 |
| 8:2 FTS | | AveID | 86172<br>15056794 | 166092<br>25512691 | 831326 | 3572258 | 8559688 | 0.0240<br>4.79 | 0.0479<br>9.58 | 0.240 | 0.958 | 2.40 |
| N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA) | | AveID | 44870<br>10861594 | 95954<br>21267414 | 494318 | 2023389 | 5100889 | 0.0250<br>5.00 | 0.0500<br>10.0 | 0.250 | 1.00 | 2.50 |
| Perfluorodecanesulfonic acid (PFDS) | | AveID | 27904<br>5305131 | 49232<br>10686131 | 269601 | 1143074 | 2838619 | 0.0241<br>4.82 | 0.0482<br>9.64 | 0.241 | 0.964 | 2.41 |
| Perfluoroundecanoic acid (PFUnA) | | AveID | 89445<br>15793712 | 142918<br>31474743 | 698590 | 3136200 | 8106772 | 0.0250<br>5.00 | 0.0500<br>10.0 | 0.250 | 1.00 | 2.50 |
| N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA) | | AveID | 43786<br>9931516 | 87576<br>18272482 | 476100 | 1916577 | 4644784 | 0.0250<br>5.00 | 0.0500<br>10.0 | 0.250 | 1.00 | 2.50 |
| NMeFOSE | | AveID | 17062<br>3319950 | 29334<br>6274125 | 147125 | 715511 | 1778047 | 0.0250<br>5.00 | 0.0500<br>10.0 | 0.250 | 1.00 | 2.50 |
| NMeFOSA | | AveID | 24548<br>6137462 | 49525<br>11776983 | 262426 | 1252850 | 3114938 | 0.0250<br>5.00 | 0.0500<br>10.0 | 0.250 | 1.00 | 2.50 |
| F-53B Minor | | AveID | 171076<br>34426796 | 316523<br>57564339 | 1735311 | 7880150 | 19692127 | 0.0236<br>4.71 | 0.0471<br>9.42 | 0.236 | 0.942 | 2.36 |
| NEtFOSE | | AveID | 17486<br>3733346 | 39060<br>6971778 | 187883 | 777947 | 1913658 | 0.0250<br>5.00 | 0.0500<br>10.0 | 0.250 | 1.00 | 2.50 |
| NEtFOSA | | AveID | 27644<br>6144124 | 54851<br>11849335 | 271456 | 1223169 | 3136862 | 0.0250<br>5.00 | 0.0500<br>10.0 | 0.250 | 1.00 | 2.50 |
| Perfluorododecanoic acid (PFDoA) | | AveID | 125510<br>23072242 | 234353<br>39528010 | 1252132 | 4715418 | 11677975 | 0.0250<br>5.00 | 0.0500<br>10.0 | 0.250 | 1.01 | 2.52 |
| 10:2 FTS | | AveID | 52569<br>10457328 | 107845<br>18642571 | 539015 | 2306558 | 5731243 | 0.0241<br>4.82 | 0.0482<br>9.64 | 0.241 | 0.964 | 2.41 |
| Perfluorododecanesulfonic acid (PFDoS) | | AveID | 9107<br>2180724 | 20826<br>4386576 | 107576 | 447598 | 1093416 | 0.0242<br>4.84 | 0.0484<br>9.68 | 0.242 | 0.968 | 2.42 |
| Perfluorotridecanoic acid (PFTriA) | | AveID | 112676<br>23483480 | 234324<br>39862771 | 1221450 | 5549854 | 12833545 | 0.0250<br>5.00 | 0.0500<br>10.0 | 0.250 | 1.00 | 2.50 |
| Perfluorotetradecanoic acid (PFTeA) | | AveID | 133099<br>23717630 | 250286<br>42819972 | 1264431 | 5131503 | 12795824 | 0.0250<br>5.00 | 0.0500<br>10.0 | 0.250 | 1.00 | 2.50 |
| Perfluoro-n-hexadecanoic acid (PFHxDA) | | L2ID | +++++<br>23144595 | 388029<br>+++++ | 1385662 | 5235054 | 12612258 | +++++<br>5.00 | 0.0500<br>+++++ | 0.250 | 1.00 | 2.50 |
| Perfluoro-n-octadecanoic acid (PFODA) | | AveID | 91989<br>19334584 | 179176<br>36559244 | 935248 | 4124214 | 10217750 | 0.0250<br>5.00 | 0.0500<br>10.0 | 0.250 | 1.00 | 2.50 |

FORM VI
LCMS BY ISOTOPIC DILUTION - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 460-217659-1 Analy Batch No.: 410486

SDG No.:

Instrument ID: A13 GC Column: GeminiC18 3 ID: 3(mm) Heated Purge: (Y/N) N

Calibration Start Date: 09/08/2020 18:01 Calibration End Date: 09/08/2020 18:58 Calibration ID: 51771

| ANALYTE | IS REF | CURVE TYPE | RESPONSE | | | | | CONCENTRATION (NG/ML) | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | LVL 1<br>LVL 6 | LVL 2<br>LVL 7 | LVL 3 | LVL 4 | LVL 5 | LVL 1<br>LVL 6 | LVL 2<br>LVL 7 | LVL 3 | LVL 4 | LVL 5 |
| 13C4 PFBA | 13PF<br>OA | Ave | 9764452<br>9342061 | 9473390<br>9397601 | 9492767 | 8923921 | 9013235 | 2.50<br>2.50 | 2.50<br>2.50 | 2.50 | 2.50 | 2.50 |
| 13C5 PFPeA | 13PF<br>OA | Ave | 7760357<br>7255234 | 7438352<br>7301470 | 7546021 | 6830859 | 6876235 | 2.50<br>2.50 | 2.50<br>2.50 | 2.50 | 2.50 | 2.50 |
| 13C3 PFBS | 13PF<br>OA | Ave | 8906242<br>8553899 | 8360594<br>8481982 | 8529189 | 8241841 | 8431444 | 2.33<br>2.33 | 2.33<br>2.33 | 2.33 | 2.33 | 2.33 |
| M2-4:2 FTS | 13PF<br>OA | Ave | 2464632<br>1955076 | 2155074<br>1911168 | 2230896 | 2072842 | 1885203 | 2.34<br>2.34 | 2.34<br>2.34 | 2.34 | 2.34 | 2.34 |
| 13C2 PFHxA | 13PF<br>OA | Ave | 9456357<br>8823741 | 9290117<br>8779452 | 9339168 | 8582211 | 8721278 | 2.50<br>2.50 | 2.50<br>2.50 | 2.50 | 2.50 | 2.50 |
| 13C3 HFPO-DA | 13PF<br>OA | Ave | 6736079<br>6588356 | 6457615<br>6494935 | 6489896 | 6170375 | 6204174 | 2.50<br>2.50 | 2.50<br>2.50 | 2.50 | 2.50 | 2.50 |
| 13C4 PFHpA | 13PF<br>OA | Ave | 9382537<br>8894028 | 9082861<br>8464192 | 8890952 | 8652756 | 8658843 | 2.50<br>2.50 | 2.50<br>2.50 | 2.50 | 2.50 | 2.50 |
| 18O2 PFHxS | 13PF<br>OA | Ave | 6137023<br>5630354 | 5703634<br>5520203 | 5771004 | 5464678 | 5460626 | 2.37<br>2.37 | 2.37<br>2.37 | 2.37 | 2.37 | 2.37 |
| M2-6:2 FTS | 13PF<br>OA | Ave | 2696323<br>2317416 | 2633110<br>2109180 | 2624141 | 2407058 | 2407481 | 2.38<br>2.38 | 2.38<br>2.38 | 2.38 | 2.38 | 2.38 |
| 13C4 PFOA | 13PF<br>OA | Ave | 11514032<br>10797424 | 11128157<br>10524627 | 11141953 | 10322203 | 10403846 | 2.50<br>2.50 | 2.50<br>2.50 | 2.50 | 2.50 | 2.50 |
| 13C4 PFOS | 13PF<br>OA | Ave | 4354260<br>4082668 | 4164582<br>4050192 | 4177857 | 3832936 | 3951981 | 2.39<br>2.39 | 2.39<br>2.39 | 2.39 | 2.39 | 2.39 |
| 13C5 PFNA | 13PF<br>OA | Ave | 10416635<br>9607630 | 10206104<br>9530979 | 10246517 | 10103666 | 9904240 | 2.50<br>2.50 | 2.50<br>2.50 | 2.50 | 2.50 | 2.50 |
| 13C8 FOSA | 13PF<br>OA | Ave | 6586517<br>6028710 | 6088259<br>5943159 | 6237740 | 6018555 | 6077423 | 2.50<br>2.50 | 2.50<br>2.50 | 2.50 | 2.50 | 2.50 |
| 13C2 PFDA | 13PF<br>OA | Ave | 12883489<br>11615360 | 12408694<br>11582996 | 12458933 | 11955497 | 11937334 | 2.50<br>2.50 | 2.50<br>2.50 | 2.50 | 2.50 | 2.50 |
| M2-8:2 FTS | 13PF<br>OA | Ave | 3755172<br>3063702 | 3515524<br>2642999 | 3470562 | 3304386 | 3196689 | 2.40<br>2.40 | 2.40<br>2.40 | 2.40 | 2.40 | 2.40 |
| d3-NMeFOSAA | 13PF<br>OA | Ave | 6544790<br>6099651 | 6387921<br>6252520 | 6542549 | 5866210 | 6048740 | 2.50<br>2.50 | 2.50<br>2.50 | 2.50 | 2.50 | 2.50 |
| 13C2 PFUnA | 13PF<br>OA | Ave | 12544970<br>11116061 | 12374202<br>11130004 | 12295425 | 11864798 | 11664379 | 2.50<br>2.50 | 2.50<br>2.50 | 2.50 | 2.50 | 2.50 |
| d5-NEtFOSAA | 13PF<br>OA | Ave | 6741542<br>5657723 | 6476169<br>5077808 | 6718667 | 6002493 | 5742065 | 2.50<br>2.50 | 2.50<br>2.50 | 2.50 | 2.50 | 2.50 |
| d7-N-MeFOSE-M | 13PF<br>OA | Ave | 8152330<br>7595314 | 7474639<br>7886277 | 7576494 | 7689569 | 7385364 | 12.5<br>12.5 | 12.5<br>12.5 | 12.5 | 12.5 | 12.5 |
| d-N-MeFOSA-M | 13PF<br>OA | Ave | 2913932<br>3096486 | 2769186<br>3183250 | 2745104 | 2737546 | 2757873 | 2.50<br>2.50 | 2.50<br>2.50 | 2.50 | 2.50 | 2.50 |
| d9-N-EtFOSE-M | 13PF<br>OA | Ave | 9502545<br>9051681 | 8977322<br>8859198 | 9281452 | 8590768 | 8851823 | 12.5<br>12.5 | 12.5<br>12.5 | 12.5 | 12.5 | 12.5 |

FORM VI
LCMS BY ISOTOPIC DILUTION - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 460-217659-1 Analy Batch No.: 410486

SDG No.:

Instrument ID: A13 GC Column: GeminiC18 3 ID: 3(mm) Heated Purge: (Y/N) N

Calibration Start Date: 09/08/2020 18:01 Calibration End Date: 09/08/2020 18:58 Calibration ID: 51771

| ANALYTE | IS REF | CURVE TYPE | RESPONSE | | | | | CONCENTRATION (NG/ML) | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | LVL 1<br>LVL 6 | LVL 2<br>LVL 7 | LVL 3 | LVL 4 | LVL 5 | LVL 1<br>LVL 6 | LVL 2<br>LVL 7 | LVL 3 | LVL 4 | LVL 5 |
| d-N-EtFOSA-M | 13PF<br>OA | Ave | 2800193<br>3023483 | 2682893<br>2906316 | 2603727 | 2610483 | 2669751 | 2.50<br>2.50 | 2.50<br>2.50 | 2.50 | 2.50 | 2.50 |
| 13C2 PFDoA | 13PF<br>OA | Ave | 13459227<br>12660330 | 12993670<br>12272069 | 12949938 | 12360280 | 12620498 | 2.50<br>2.50 | 2.50<br>2.50 | 2.50 | 2.50 | 2.50 |
| 13C2 PFTeDA | 13PF<br>OA | Ave | 12592012<br>12605192 | 12335685<br>13067077 | 12914651 | 12428995 | 12193198 | 2.50<br>2.50 | 2.50<br>2.50 | 2.50 | 2.50 | 2.50 |
| 13C2 PFHxDA | 13PF<br>OA | Ave | 14218004<br>12753004 | 13657597<br>12006459 | 13447822 | 12458626 | 13292918 | 2.50<br>2.50 | 2.50<br>2.50 | 2.50 | 2.50 | 2.50 |
| 13C8 PFOA | 13PF<br>OA | Ave | 10101494<br>9963084 | 9576396<br>9748895 | 9724361 | 9097652 | 8920434 | 2.45<br>2.45 | 2.45<br>2.45 | 2.45 | 2.45 | 2.45 |
| 13C8 PFOS | 13PF<br>OA | Ave | 2349789<br>2231106 | 2184217<br>2165574 | 2271472 | 2012625 | 2066897 | 2.39<br>2.39 | 2.39<br>2.39 | 2.39 | 2.39 | 2.39 |

Curve Type Legend:

Ave = Average ISTD
AveID = Average isotope dilution
L2ID = Linear 1/conc^2 IsoDil

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\A13\20200908-102913.b\2020.09.08_A13_PFC_ICALX_004.d
Lims ID: IC STD 1
Client ID:
Sample Type: IC Calib Level: 1
Inject. Date: 08-Sep-2020 18:01:46 ALS Bottle#: 1 Worklist Smp#: 2
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Sample Info: ISTD 1 (21)
Misc. Info.: Plate: 1 Rack: 2
Operator ID: SACINSTLCMS01 Instrument ID: A13
Sublist: chrom-PFAS_A13*sub3

Method: \\chromfs\Sacramento\ChromData\A13\20200908-102913.b\PFAS_A13.m
Limit Group: LC PFC ICAL
Last Update: 09-Sep-2020 10:21:38 Calib Date: 08-Sep-2020 18:58:15
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\A13\20200908-102913.b\2020.09.08_A13_PFC_ICALX_010.d

Column 1 : Gemini C18 3um 3 x 100mm ( 3.00 mm) Det: EXP1
Process Host: CTX1007

First Level Reviewer: novoaj Date: 09-Sep-2020 08:56:31
Ratio Calibration: Average of Initial Calibration

| Signal | RT | EXP RT | DLT RT | REL RT | Response | Amount ng/ml | Ratio(Limits) | %Rec | S/N | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| D 1 13C4 PFBA | | | | | | | | | | |
| 217.00 > 172.00 | 2.482 | 2.477 | 0.005 | 0.610 | 9764452 | 2.47 | | 98.9 | 29623 | |
| 2 Perfluorobutanoic acid | | | | | | | | | | |
| 212.90 > 169.00 | 2.482 | 2.480 | 0.002 | 1.000 | 61128 | 0.0211 | | 84.2 | 21.7 | |
| D 4 13C5 PFPeA | | | | | | | | | | |
| 267.90 > 223.00 | 2.878 | 2.873 | 0.005 | 0.708 | 7760357 | 2.52 | | 101 | 30897 | |
| 5 Perfluoropentanoic acid | | | | | | | | | | M |
| 262.90 > 219.00 | 2.878 | 2.875 | 0.003 | 1.000 | 92418 | 0.0290 | | 116 | 15.7 | M |
| D 14 13C3 PFBS | | | | | | | | | | |
| 301.90 > 80.00 | 2.913 | 2.913 | 0.0 | 0.716 | 8906242 | 2.30 | | 99.1 | 18410 | |
| 6 Perfluorobutanesulfonic acid | | | | | | | | | | |
| 298.90 > 80.00 | 2.913 | 2.913 | 0.0 | 1.000 | 71582 | 0.0191 | Target=2.18 | 86.5 | 76.8 | |
| 298.90 > 99.00 | 2.913 | 2.913 | 0.0 | 1.000 | 32776 | | 2.18(1.09-3.26) | 86.5 | 19.5 | |
| 7 4:2 FTS | | | | | | | | | | |
| 327.00 > 307.00 | 3.226 | 3.221 | 0.005 | 1.000 | 66853 | 0.0195 | | 83.6 | 252 | |
| D 8 M2-4:2 FTS | | | | | | | | | | |
| 329.00 > 81.00 | 3.226 | 3.222 | 0.004 | 0.793 | 2464632 | 2.60 | | 111 | 2020 | |
| D 9 13C2 PFHxA | | | | | | | | | | |
| 315.00 > 270.00 | 3.268 | 3.264 | 0.004 | 0.804 | 9456357 | 2.49 | | 99.5 | 21845 | |
| 10 Perfluorohexanoic acid | | | | | | | | | | |
| 313.00 > 269.00 | 3.268 | 3.265 | 0.003 | 1.000 | 90694 | 0.0258 | Target=11.68 | 103 | 17.7 | |
| 313.00 > 119.00 | 3.258 | 3.265 | -0.007 | 0.997 | 8690 | | 10.44(5.84-17.52) | 103 | 3.5 | |
| 11 Perfluoropentanesulfonic acid | | | | | | | | | | |
| 349.00 > 80.00 | 3.279 | 3.279 | 0.0 | 1.126 | 62309 | 0.0206 | Target=2.56 | 87.9 | 82.8 | |
| 349.00 > 99.00 | 3.279 | 3.279 | 0.0 | 1.126 | 23076 | | 2.70(1.28-3.84) | 87.9 | 29.5 | |
| 12 HPFO-DA | | | | | | | | | | |
| 285.00 > 169.00 | 3.388 | 3.386 | 0.002 | 1.000 | 17209 | 0.0215 | | 86.0 | 123 | |

| Signal | RT | EXP RT | DLT RT | REL RT | Response | Amount ng/ml | Ratio(Limits) | %Rec | S/N | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| D 13 13C3 HFPO-DA | | | | | | | | | | |
| 287.00 > 169.00 | 3.388 | 3.386 | 0.002 | 0.833 | 6736079 | 2.47 | | 98.8 | 7132 | |
| 16 Perfluoroheptanoic acid | | | | | | | | | | M |
| 363.00 > 319.00 | 3.675 | 3.670 | 0.005 | 1.003 | 86732 | 0.0229 | Target=3.85 | 91.5 | 13.4 | M |
| 363.00 > 169.00 | 3.675 | 3.670 | 0.005 | 1.003 | 23999 | | 3.61(1.92-5.77) | 91.5 | 15.8 | M |
| D 15 13C4 PFHpA | | | | | | | | | | |
| 367.00 > 322.00 | 3.665 | 3.668 | -0.003 | 0.901 | 9382537 | 2.51 | | 100 | 12673 | |
| 18 Perfluorohexanesulfonic acid | | | | | | | | | | |
| 399.00 > 80.00 | 3.675 | 3.672 | 0.003 | 1.000 | 74745 | 0.0259 | Target=3.25 | 114 | 91.9 | |
| 399.00 > 99.00 | 3.675 | 3.672 | 0.003 | 1.000 | 23007 | | 3.25(1.62-4.87) | 114 | 17.6 | |
| D 17 18O2 PFHxS | | | | | | | | | | |
| 403.00 > 84.00 | 3.675 | 3.672 | 0.003 | 0.904 | 6137023 | 2.42 | | 102 | 47831 | |
| 19 DONA | | | | | | | | | | |
| 377.00 > 251.00 | 3.723 | 3.719 | 0.004 | 0.840 | 201790 | 0.0216 | Target=2.76 | 91.6 | 344 | |
| 377.00 > 85.00 | 3.723 | 3.719 | 0.004 | 0.840 | 72093 | | 2.80(1.38-4.14) | 91.6 | 196 | |
| D 20 M2-6:2 FTS | | | | | | | | | | |
| 429.00 > 81.00 | 4.051 | 4.043 | 0.008 | 0.996 | 2696323 | 2.47 | | 104 | 4400 | |
| 21 6:2 FTS | | | | | | | | | | |
| 427.00 > 407.00 | 4.051 | 4.043 | 0.008 | 1.000 | 70998 | 0.0260 | | 110 | 158 | |
| 22 Perfluoroheptanesulfonic acid | | | | | | | | | | |
| 449.00 > 80.00 | 4.059 | 4.056 | 0.003 | 0.915 | 43755 | 0.0211 | Target=4.29 | 88.6 | 85.5 | |
| 449.00 > 99.00 | 4.059 | 4.056 | 0.003 | 0.915 | 10027 | | 4.36(2.15-6.44) | 88.6 | 19.1 | |
| $ 23 13C8 PFOA | | | | | | | | | | |
| 421.00 > 376.00 | 4.059 | 4.058 | 0.001 | 0.998 | 10101494 | 2.44 | | 99.7 | 11748 | |
| * 25 13C2 PFOA | | | | | | | | | | |
| 415.00 > 370.00 | 4.067 | 4.065 | 0.002 | | 11617577 | 2.50 | | | 6120 | |
| D 24 13C4 PFOA | | | | | | | | | | |
| 417.00 > 372.00 | 4.067 | 4.065 | 0.002 | 1.000 | 11514032 | 2.52 | | 101 | 12203 | |
| 26 Perfluorooctanoic acid | | | | | | | | | | |
| 413.00 > 369.00 | 4.067 | 4.066 | 0.001 | 1.000 | 139847 | 0.0297 | Target=2.95 | 119 | 30.4 | |
| 413.00 > 169.00 | 4.067 | 4.066 | 0.001 | 1.000 | 45935 | | 3.04(1.47-4.42) | 119 | 73.5 | |
| $ 27 13C8 PFOS | | | | | | | | | | |
| 507.00 > 99.00 | 4.434 | 4.426 | 0.008 | 1.090 | 2349789 | 2.44 | | 102 | 1955 | |
| D 29 13C4 PFOS | | | | | | | | | | |
| 503.00 > 80.00 | 4.434 | 4.429 | 0.005 | 1.090 | 4354260 | 2.41 | | 101 | 7550 | |
| 28 Perfluorooctanesulfonic acid | | | | | | | | | | M |
| 499.00 > 80.00 | 4.434 | 4.432 | 0.002 | 1.000 | 44172 | 0.0234 | Target=4.28 | 101 | 73.7 | M |
| 499.00 > 99.00 | 4.434 | 4.432 | 0.002 | 1.000 | 10212 | | 4.33(2.14-6.41) | 101 | 15.5 | M |
| D 31 13C5 PFNA | | | | | | | | | | |
| 468.00 > 423.00 | 4.451 | 4.448 | 0.003 | 1.094 | 10416635 | 2.46 | | 98.5 | 28988 | |
| 30 Perfluorononanoic acid | | | | | | | | | | |
| 463.00 > 419.00 | 4.451 | 4.449 | 0.002 | 1.000 | 102031 | 0.0258 | Target=8.00 | 103 | 30.2 | |
| 463.00 > 169.00 | 4.451 | 4.449 | 0.002 | 1.000 | 8929 | | 11.43(4.00-12.01) | 103 | 23.5 | |
| 32 9ClFOS | | | | | | | | | | |
| 531.00 > 351.00 | 4.636 | 4.632 | 0.004 | 1.046 | 92727 | 0.0203 | | 87.3 | 114 | |
| D 34 13C8 FOSA | | | | | | | | | | |
| 506.00 > 78.00 | 4.743 | 4.738 | 0.005 | 1.166 | 6586517 | 2.54 | | 102 | 19622 | |

| Signal | RT | EXP RT | DLT RT | REL RT | Response | Amount ng/ml | Ratio(Limits) | %Rec | S/N | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| 33 Perfluorooctanesulfonamide | | | | | | | | | | |
| 498.00 > 78.00 | 4.743 | 4.739 | 0.004 | 1.000 | 57692 | 0.0233 | | 93.3 | 251 | |
| 35 Perfluorononanesulfonic acid | | | | | | | | | | |
| 549.00 > 80.00 | 4.786 | 4.781 | 0.005 | 1.080 | 30255 | 0.0214 | Target=2.15 | 89.3 | 141 | |
| 549.00 > 99.00 | 4.786 | 4.781 | 0.005 | 1.080 | 12739 | | 2.37(1.08-3.23) | 89.3 | 21.9 | |
| 36 Perfluorodecanoic acid | | | | | | | | | | |
| 513.00 > 469.00 | 4.813 | 4.808 | 0.005 | 1.000 | 109318 | 0.0237 | Target=10.44 | 94.7 | 52.9 | |
| 513.00 > 169.00 | 4.804 | 4.808 | -0.004 | 0.998 | 12482 | | 8.76(5.22-15.65) | 94.7 | 43.4 | |
| D 37 13C2 PFDA | | | | | | | | | | |
| 515.00 > 470.00 | 4.813 | 4.808 | 0.005 | 1.183 | 12883489 | 2.52 | | 101 | 12548 | |
| D 38 M2-8:2 FTS | | | | | | | | | | |
| 529.00 > 81.00 | 4.813 | 4.810 | 0.003 | 1.183 | 3755172 | 2.60 | | 109 | 6307 | |
| 39 8:2 FTS | | | | | | | | | | |
| 527.00 > 507.00 | 4.813 | 4.810 | 0.003 | 1.000 | 86172 | 0.0222 | | 92.8 | 618 | |
| D 40 d3-NMeFOSAA | | | | | | | | | | |
| 573.00 > 419.00 | 4.971 | 4.972 | -0.001 | 1.222 | 6544790 | 2.48 | | 99.1 | 8382 | |
| 41 NMeFOSAA | | | | | | | | | | M |
| 570.00 > 419.00 | 4.981 | 4.978 | 0.003 | 1.002 | 44870 | 0.0213 | | 85.1 | 17.9 | M |
| 42 Perfluorodecanesulfonic acid | | | | | | | | | | |
| 599.00 > 80.00 | 5.107 | 5.103 | 0.003 | 1.152 | 27904 | 0.0232 | Target=2.36 | 96.5 | 98.4 | |
| 599.00 > 99.00 | 5.107 | 5.103 | 0.003 | 1.152 | 10985 | | 2.54(1.18-3.54) | 96.5 | 42.0 | |
| 45 Perfluoroundecanoic acid | | | | | | | | | | |
| 563.00 > 519.00 | 5.135 | 5.132 | 0.003 | 1.000 | 89445 | 0.0269 | Target=8.67 | 108 | 67.7 | |
| 563.00 > 169.00 | 5.135 | 5.132 | 0.003 | 1.000 | 8362 | | 10.70(4.34-13.01) | 108 | 22.7 | |
| D 44 13C2 PFUnA | | | | | | | | | | |
| 565.00 > 520.00 | 5.135 | 5.132 | 0.003 | 1.263 | 12544970 | 2.50 | | 100 | 9800 | |
| D 46 d5-NEtFOSAA | | | | | | | | | | |
| 589.00 > 419.00 | 5.145 | 5.139 | 0.006 | 1.265 | 6741542 | 2.64 | | 105 | 2516 | |
| 48 NEtFOSA | | | | | | | | | | M |
| 584.00 > 419.00 | 5.154 | 5.148 | 0.006 | 1.002 | 43786 | 0.0210 | | 83.9 | 103 | M |
| D 43 d7-N-MeFOSE-M | | | | | | | | | | |
| 623.00 > 59.00 | 5.184 | 5.182 | 0.002 | 1.275 | 8152330 | 12.6 | | 100 | 2975 | |
| 47 N-MeFOSE-M | | | | | | | | | | |
| 616.00 > 59.00 | 5.194 | 5.195 | -0.001 | 1.002 | 17062 | 0.0246 | | 98.3 | 32.5 | |
| D 49 d-N-MeFOSA-M | | | | | | | | | | |
| 515.00 > 169.00 | 5.205 | 5.205 | 0.0 | 1.280 | 2913932 | 2.39 | | 95.4 | 43.2 | |
| 50 NMeFOSA | | | | | | | | | | |
| 512.00 > 169.00 | 5.216 | 5.213 | 0.003 | 1.002 | 24548 | 0.0214 | | 85.7 | 54.8 | |
| 51 11ClFOS | | | | | | | | | | |
| 631.00 > 451.00 | 5.270 | 5.271 | -0.001 | 1.189 | 171076 | 0.0218 | | 92.4 | 667 | |
| D 52 d9-N-EtFOSE-M | | | | | | | | | | |
| 639.00 > 59.00 | 5.353 | 5.352 | 0.001 | 1.316 | 9502545 | 12.5 | | 99.7 | 3993 | |
| 53 N-EtFOSE-M | | | | | | | | | | |
| 630.00 > 59.00 | 5.362 | 5.366 | -0.004 | 1.002 | 17486 | 0.0222 | | 88.9 | 33.9 | |
| D 54 d-N-EtFOSA-M | | | | | | | | | | |
| 531.00 > 169.00 | 5.379 | 5.379 | 0.0 | 1.323 | 2800193 | 2.40 | | 96.0 | 252 | |

| Signal | RT | EXP RT | DLT RT | REL RT | Response | Amount ng/ml | Ratio(Limits) | %Rec | S/N | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| 55 N-EtFOSA-M | | | | | | | | | | |
| 526.00 > 169.00 | 5.387 | 5.386 | 0.001 | 1.002 | 27644 | 0.0232 | | 93.0 | 82.6 | |
| 57 Perfluorododecanoic acid | | | | | | | | | | |
| 613.00 > 569.00 | 5.429 | 5.428 | 0.001 | 1.000 | 125510 | 0.0256 | Target=9.05 | 102 | 83.3 | |
| 613.00 > 169.00 | 5.429 | 5.428 | 0.001 | 1.000 | 12625 | | 9.94(4.52-13.57) | 102 | 43.0 | |
| D 56 13C2 PFDoA | | | | | | | | | | |
| 615.00 > 570.00 | 5.429 | 5.428 | 0.001 | 1.335 | 13459227 | 2.50 | | 99.8 | 4451 | |
| 58 10:2 FTS | | | | | | | | | | |
| 627.00 > 607.00 | 5.445 | 5.445 | 0.0 | 1.131 | 52569 | 0.0205 | | 85.3 | 334 | |
| 59 PFDoS | | | | | | | | | | |
| 699.00 > 80.00 | 5.662 | 5.665 | -0.003 | 1.277 | 9107 | 0.0194 | Target=0.57 | 80.3 | 115 | |
| 699.00 > 99.00 | 5.671 | 5.665 | 0.006 | 1.279 | 17221 | | 0.53(0.29-0.86) | 80.3 | 82.2 | |
| 60 Perfluorotridecanoic acid | | | | | | | | | | |
| 663.00 > 619.00 | 5.709 | 5.704 | 0.005 | 1.052 | 112676 | 0.0223 | Target=7.06 | 89.3 | 139 | |
| 663.00 > 169.00 | 5.702 | 5.704 | -0.002 | 1.050 | 15814 | | 7.13(3.53-10.59) | 89.3 | 73.0 | |
| 62 Perfluorotetradecanoic acid | | | | | | | | | | |
| 713.00 > 669.00 | 5.958 | 5.954 | 0.004 | 1.000 | 133099 | 0.0268 | Target=11.23 | 107 | 118 | |
| 713.00 > 219.00 | 5.950 | 5.954 | -0.004 | 0.999 | 10143 | | 13.12(5.62-16.85) | 107 | 125 | |
| D 61 13C2 PFTeDA | | | | | | | | | | |
| 715.00 > 670.00 | 5.958 | 5.953 | 0.005 | 1.465 | 12592012 | 2.36 | | 94.6 | 13754 | |
| D 64 13C2 PFHxDA | | | | | | | | | | |
| 815.00 > 770.00 | 6.446 | 6.437 | 0.009 | 1.585 | 14218004 | 2.57 | | 103 | 5532 | |
| 63 Perfluorohexadecanoic acid | | | | | | | | | | |
| 813.00 > 769.00 | 6.446 | 6.439 | 0.007 | 1.000 | 272360 | 0.0257 | Target=9.45 | 103 | 67.1 | |
| 813.00 > 169.00 | 6.446 | 6.439 | 0.007 | 1.000 | 30300 | | 8.99(4.72-14.17) | 103 | 135 | |
| 65 Perfluorooctadecanoic acid | | | | | | | | | | |
| 913.00 > 869.00 | 6.920 | 6.915 | 0.005 | 1.074 | 91989 | 0.0221 | Target=11.13 | 88.6 | 57.8 | |
| 913.00 > 169.00 | 6.920 | 6.915 | 0.005 | 1.074 | 7694 | | 11.96(5.56-16.69) | 88.6 | 65.0 | |

## QC Flag Legend

Review Flags

M - Manually Integrated

## Reagents:

LCPFC_LL1_00021 Amount Added: 1.00 Units: mL

Report Date: 09-Sep-2020 10:21:42 Chrom Revision: 2.3 20-Aug-2020 13:57:12

Eurofins TestAmerica, Sacramento

Data File: \\chromfs\Sacramento\ChromData\A13\20200908-102913.b\2020.09.08_A13_PFC_ICALX_004.d

Injection Date: 08-Sep-2020 18:01:46 Instrument ID: A13

Lims ID: IC STD 1

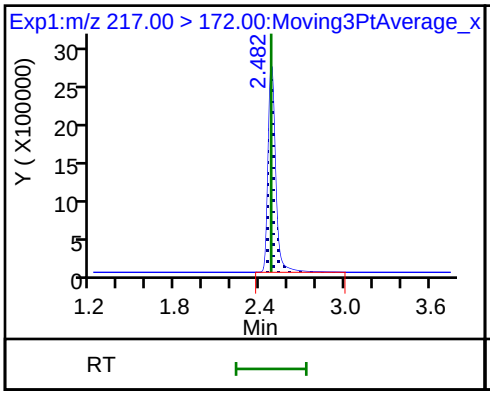
Client ID:

Operator ID: SACINSTLCMS01 ALS Bottle#: 1 Worklist Smp#: 2

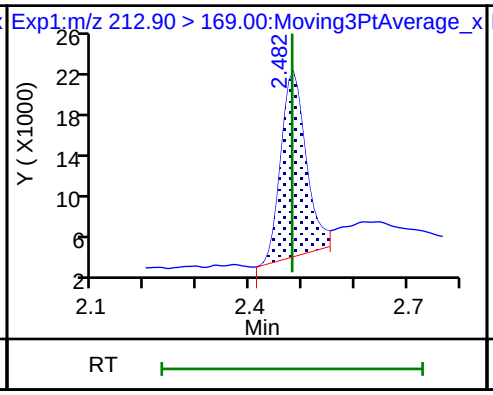
Injection Vol: 20.0 ul Dil. Factor: 1.0000

Method: PFAS_A13 Limit Group: LC PFC ICAL

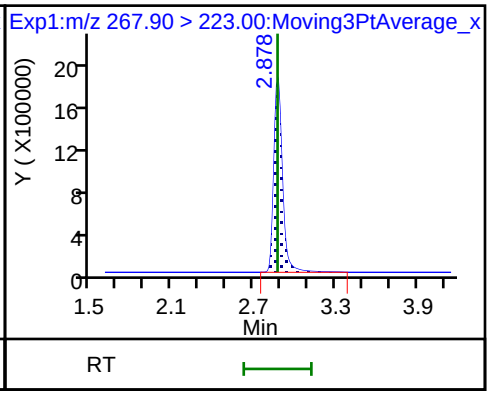
D 1 13C4 PFBA



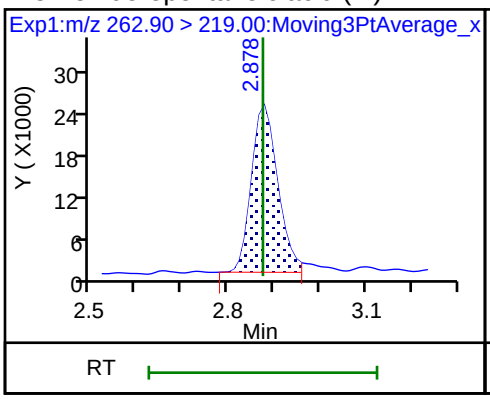

2 Perfluorobutanoic acid



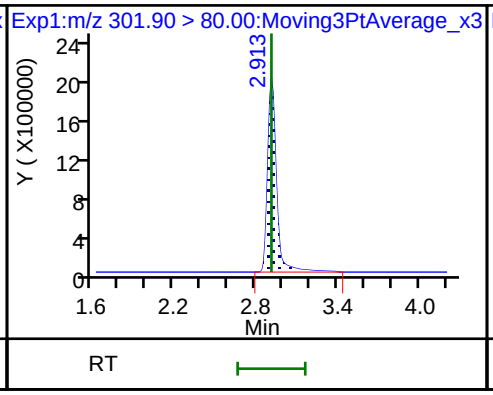

D 4 13C5 PFPeA



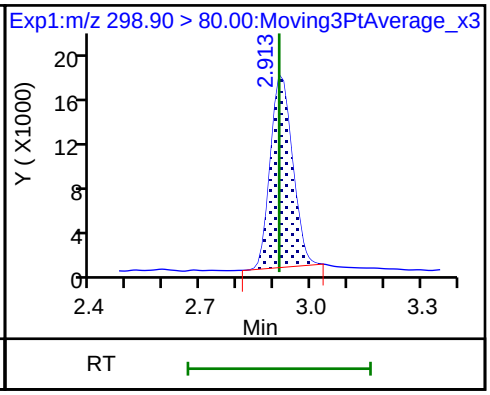

5 Perfluoropentanoic acid (M)



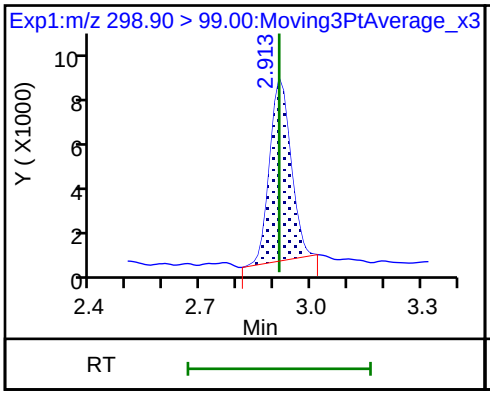

D 14 13C3 PFBS



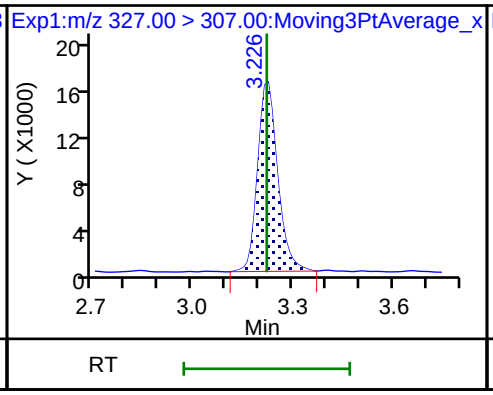

6 Perfluorobutanesulfonic acid



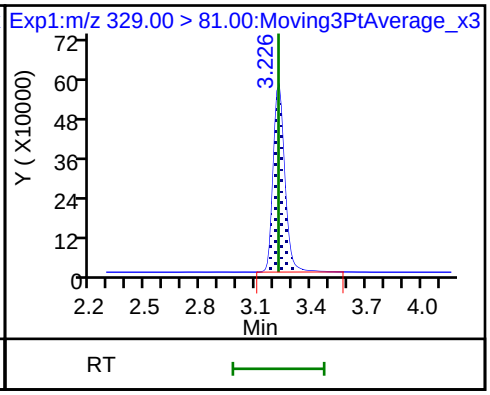

6 Perfluorobutanesulfonic acid



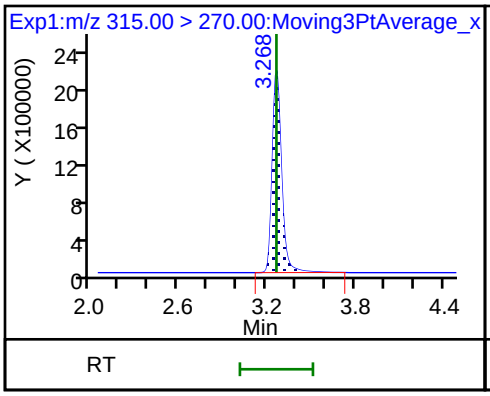

7 4:2 FTS



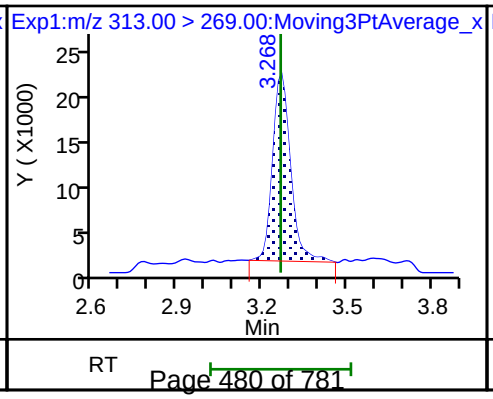

D 8 M2-4:2 FTS



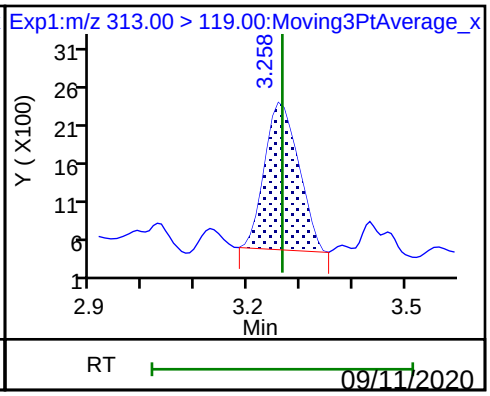

D 9 13C2 PFHxA



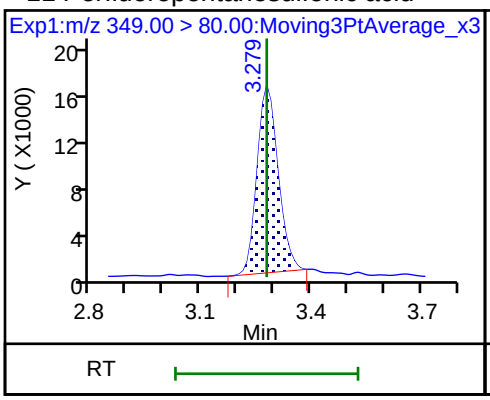

10 Perfluorohexanoic acid



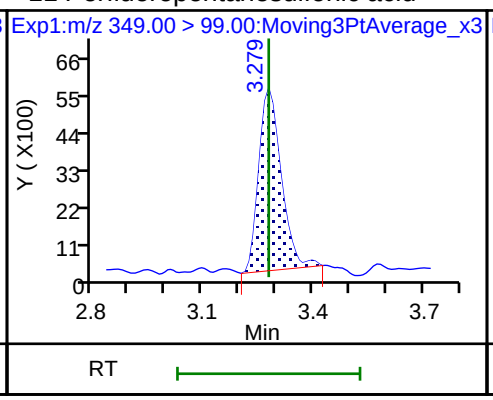

10 Perfluorohexanoic acid



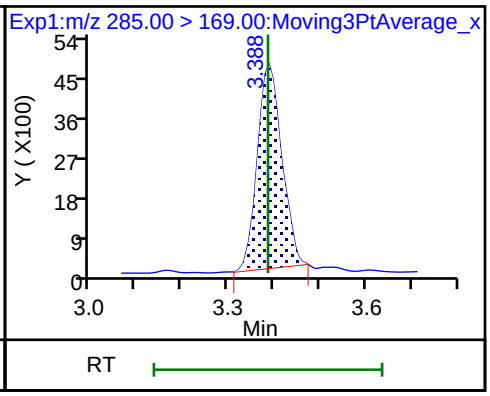
11 Perfluoropentanesulfonic acid



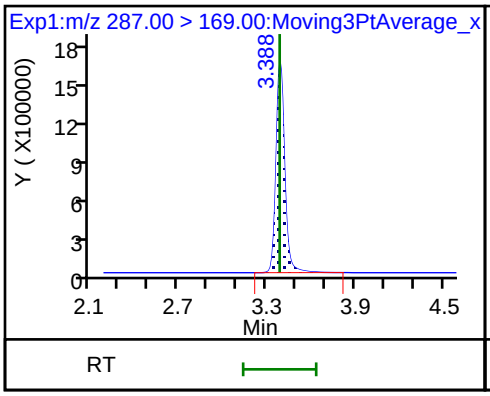

11 Perfluoropentanesulfonic acid



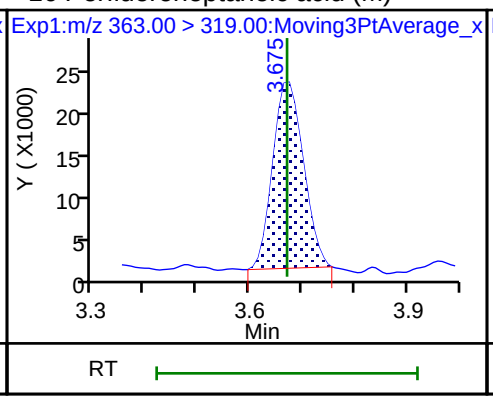

12 HPFO-DA



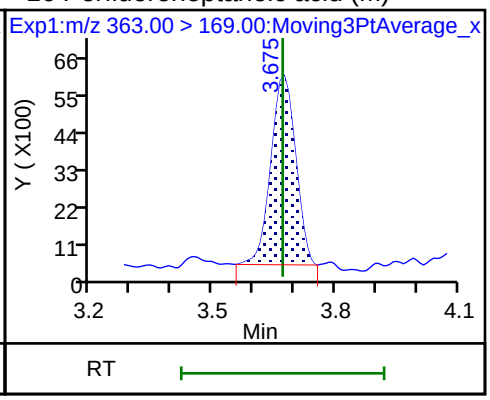

D 13 13C3 HFPO-DA



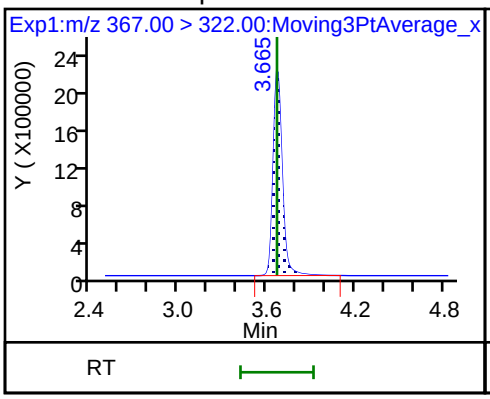

16 Perfluoroheptanoic acid (M)



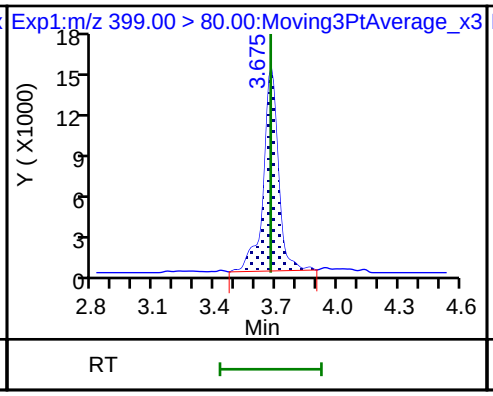

16 Perfluoroheptanoic acid (M)



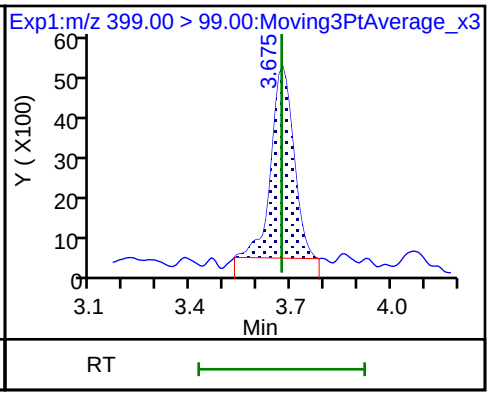

D 15 13C4 PFHpA



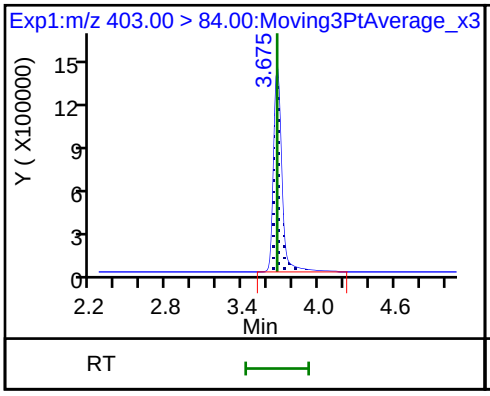

18 Perfluorohexanesulfonic acid



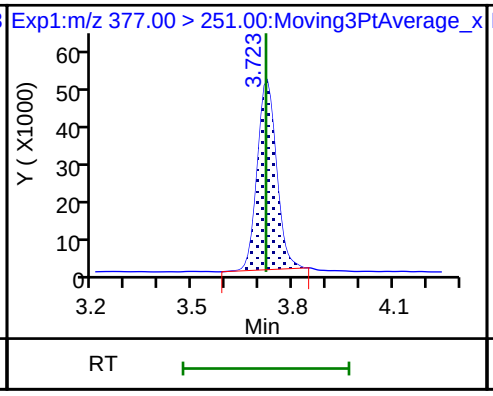

18 Perfluorohexanesulfonic acid



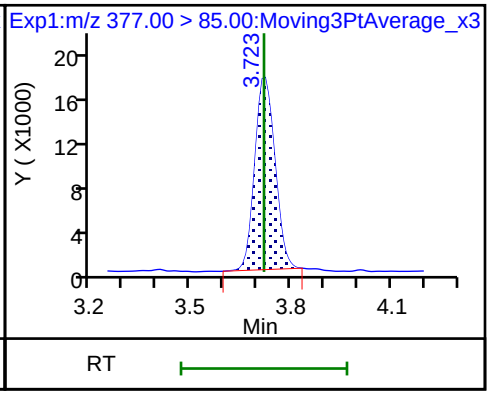

D 17 18O2 PFHxS



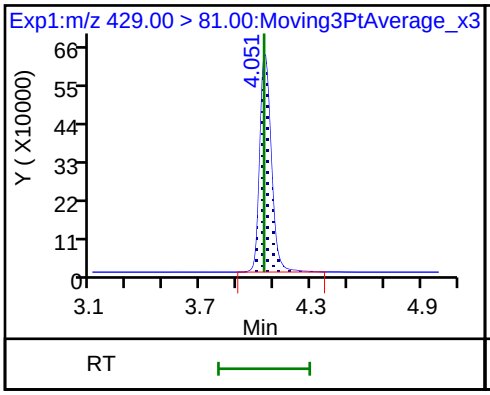

19 DONA



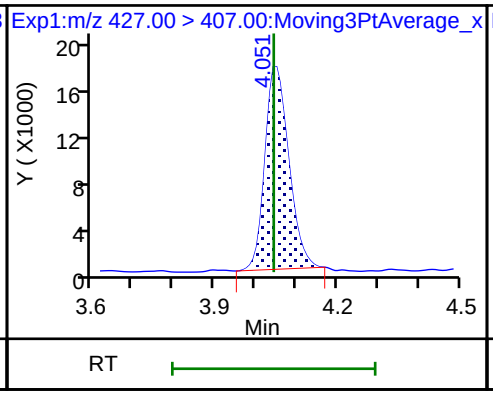

19 DONA



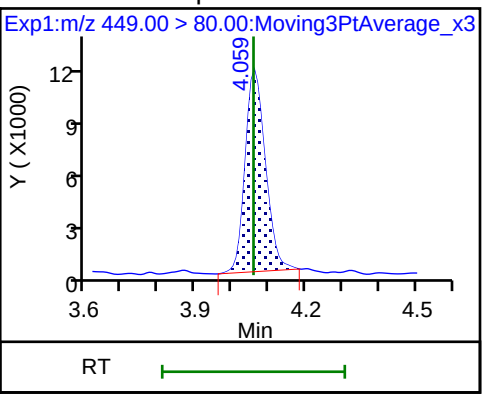
D 20 M2-6:2 FTS




21 6:2 FTS




22 Perfluoroheptanesulfonic acid

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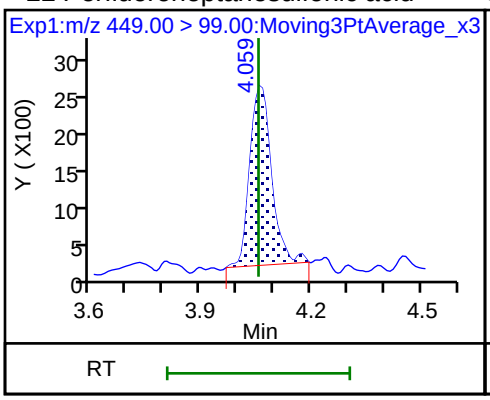
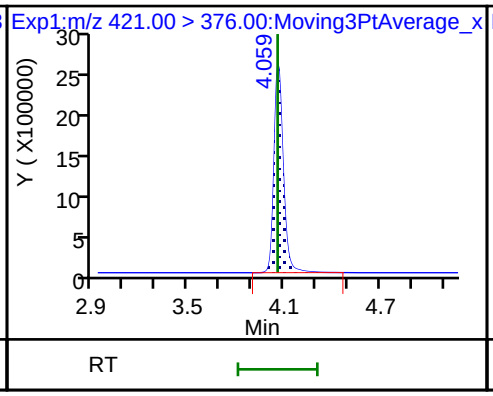
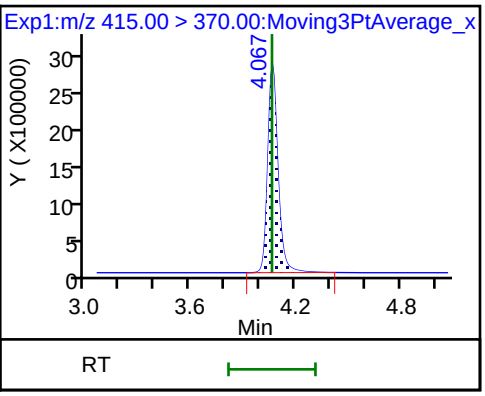


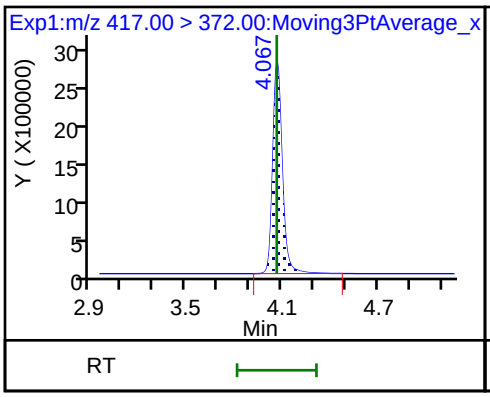

$ 23 13C8 PFOA



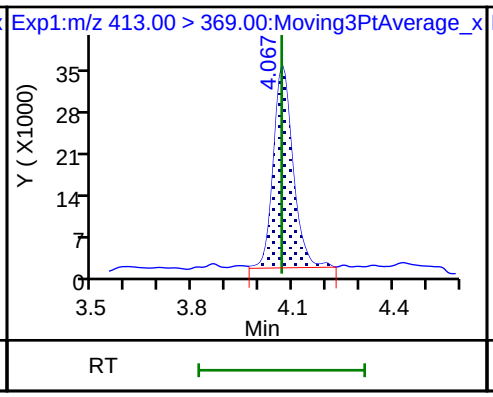

* 25 13C2 PFOA



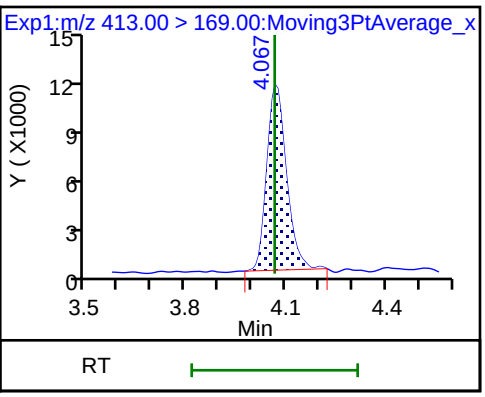

D 24 13C4 PFOA



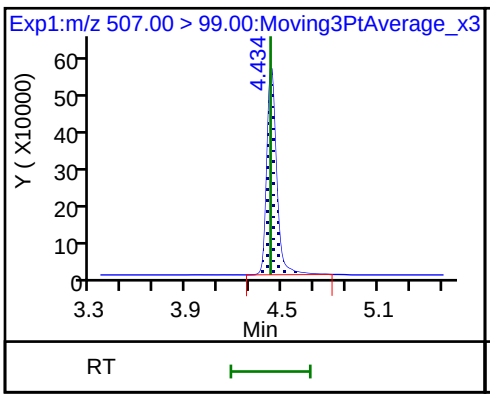

26 Perfluorooctanoic acid



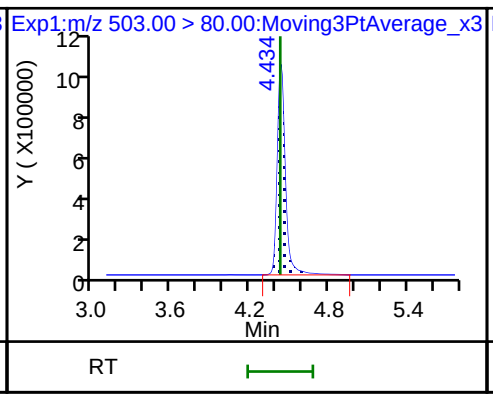

26 Perfluorooctanoic acid



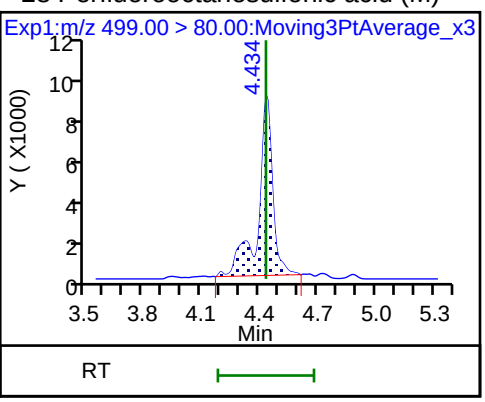

$ 27 13C8 PFOS



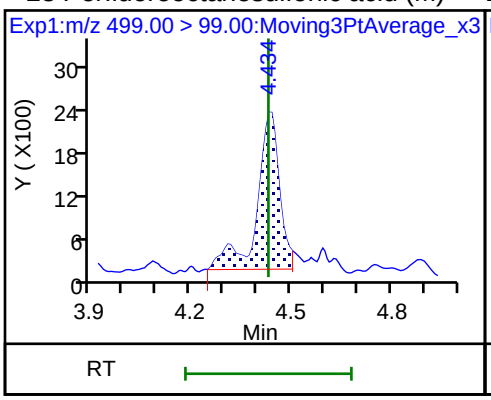

D 29 13C4 PFOS



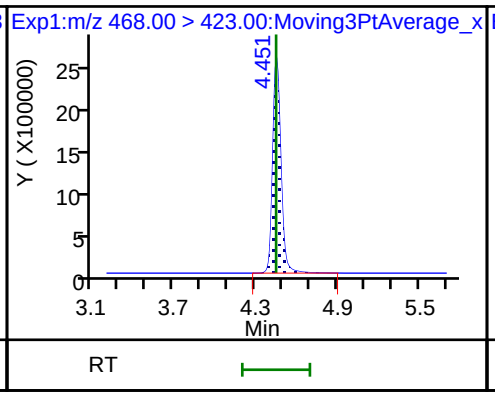

28 Perfluorooctanesulfonic acid (M)



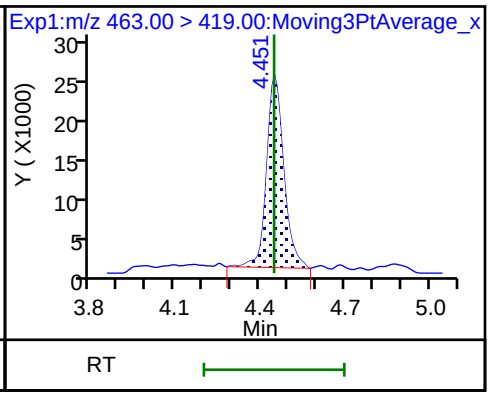
28 Perfluorooctanesulfonic acid (M)



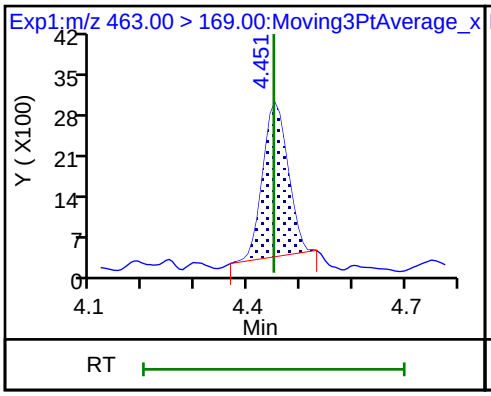

D 31 13C5 PFNA



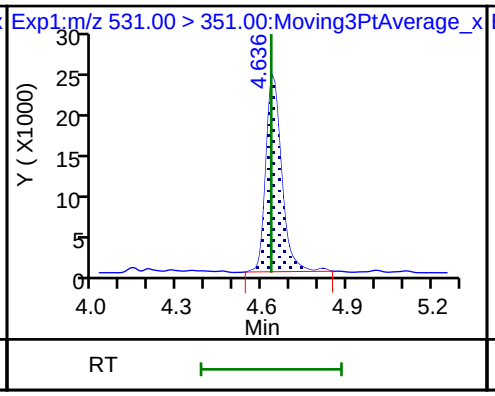

30 Perfluorononanoic acid



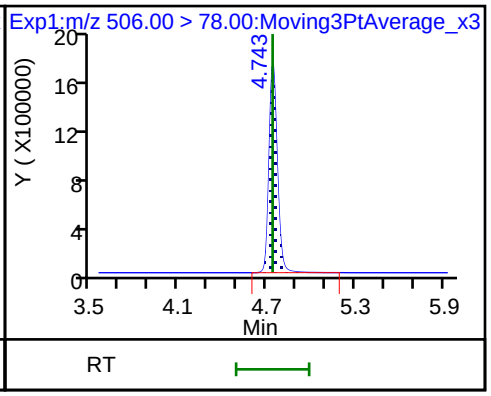

30 Perfluorononanoic acid



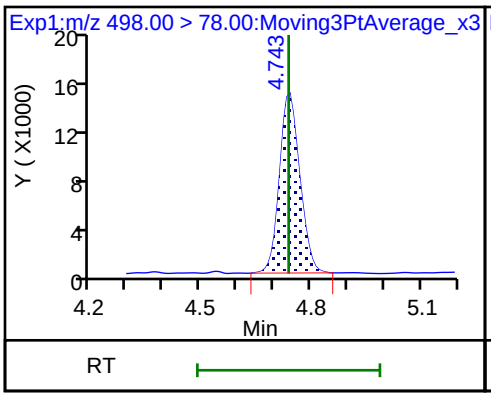

32 9ClFOS



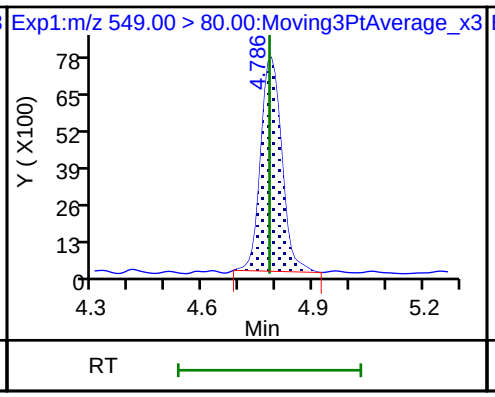

D 34 13C8 FOSA



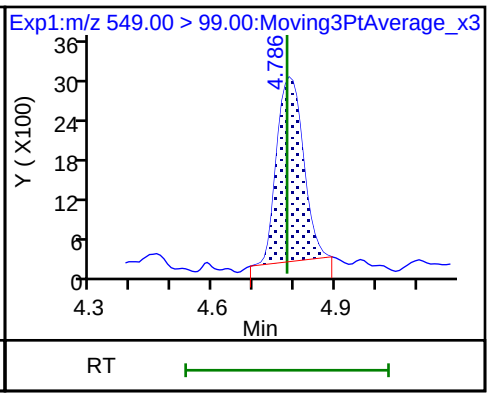

33 Perfluorooctanesulfonamide



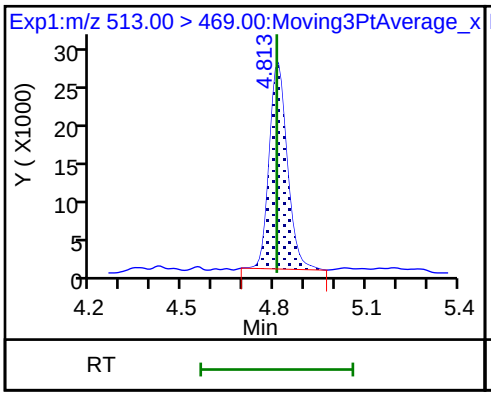

35 Perfluorononanesulfonic acid



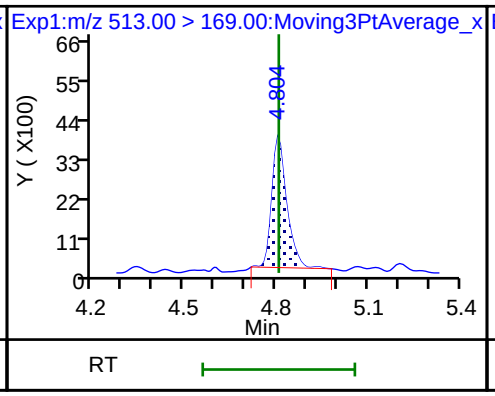

35 Perfluorononanesulfonic acid



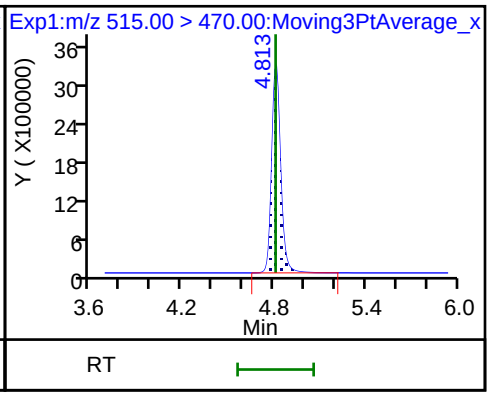

36 Perfluorodecanoic acid



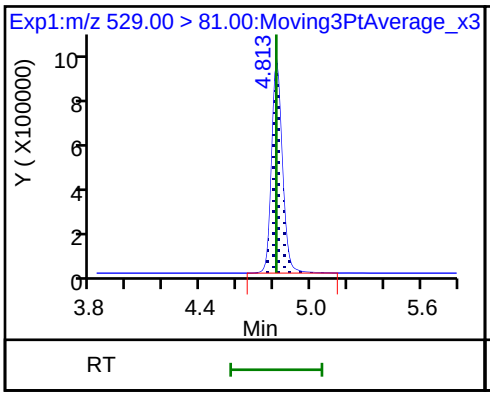

36 Perfluorodecanoic acid



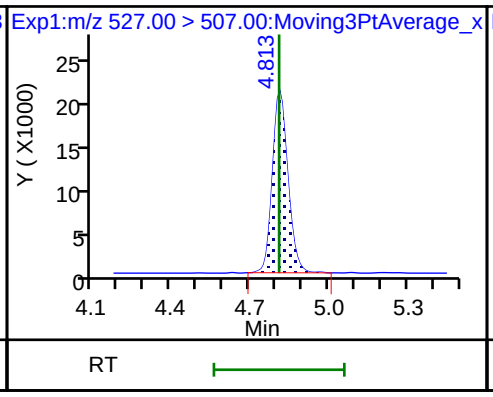

D 37 13C2 PFDA



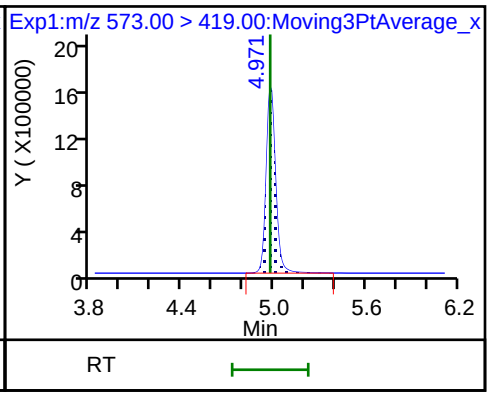
D 38 M2-8:2 FTS



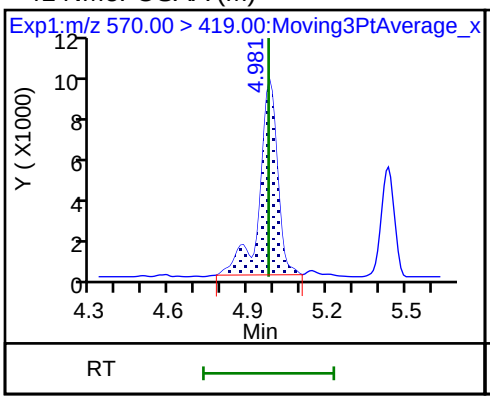

39 8:2 FTS



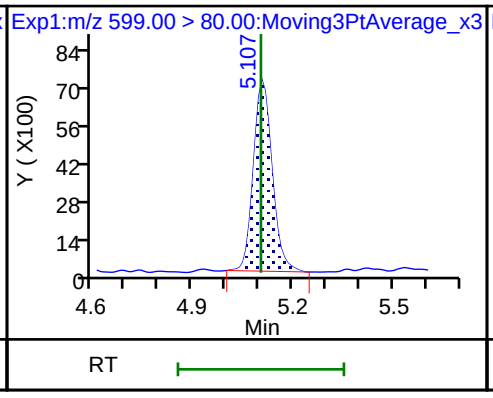

D 40 d3-NMeFOSAA



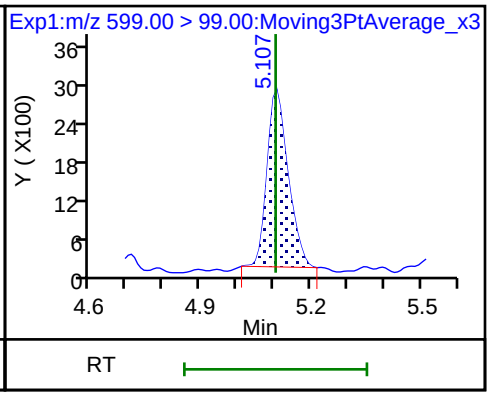

41 NMeFOSAA (M)



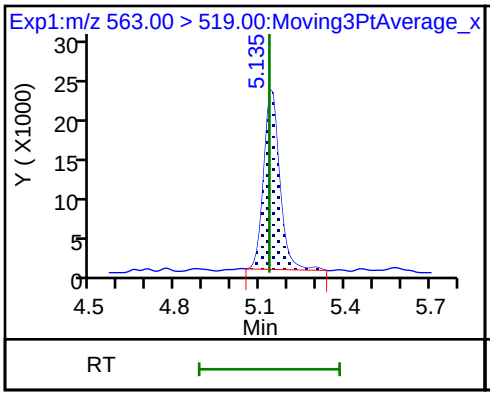

42 Perfluorodecanesulfonic acid



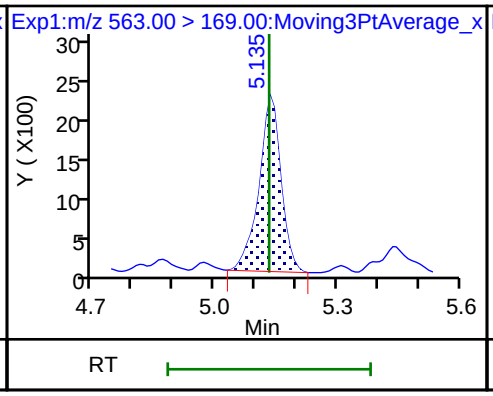

42 Perfluorodecanesulfonic acid



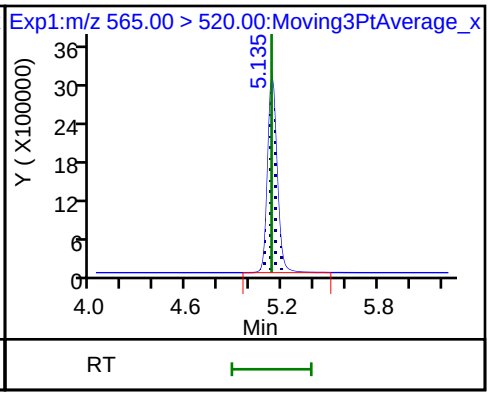

45 Perfluoroundecanoic acid



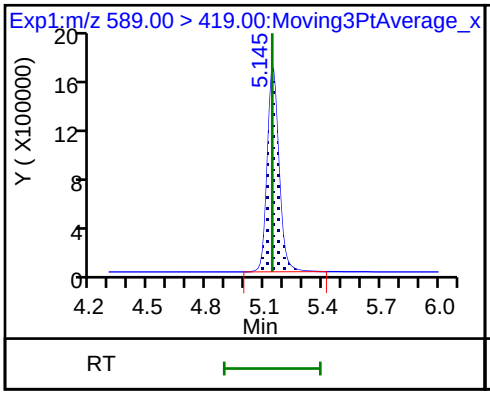

45 Perfluoroundecanoic acid



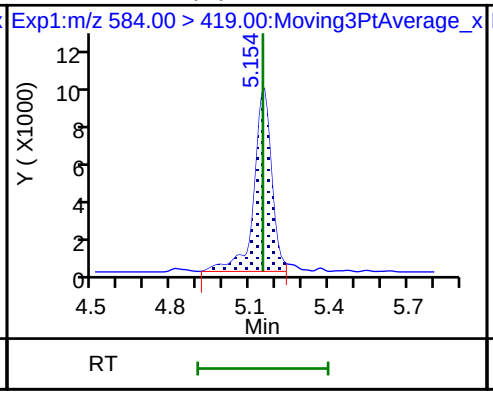

D 44 13C2 PFUnA



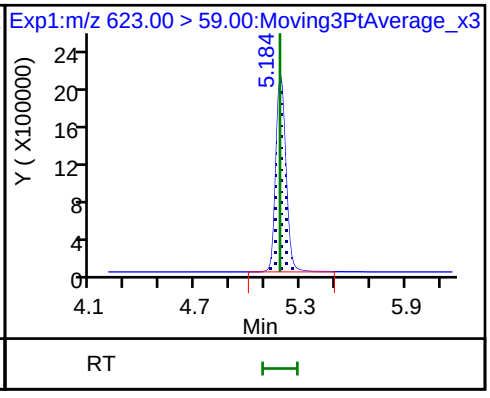

D 46 d5-NEtFOSAA



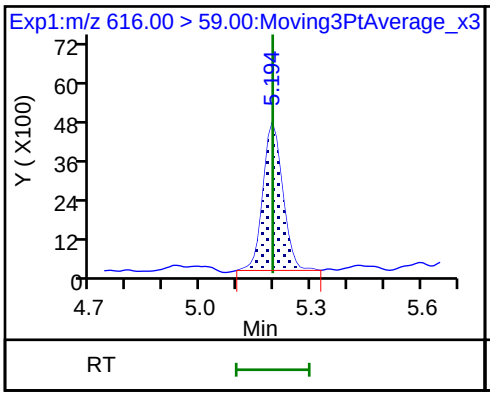

48 NEtFOSA (M)



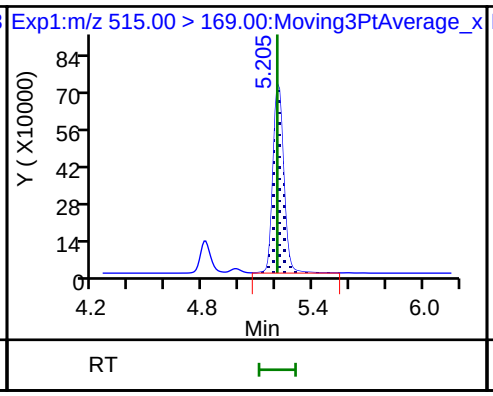

D 43 d7-N-MeFOSE-M



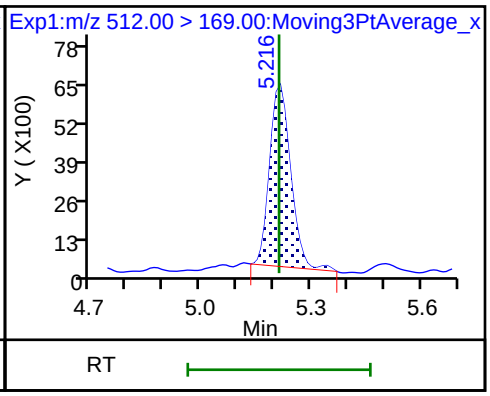
47 N-MeFOSE-M



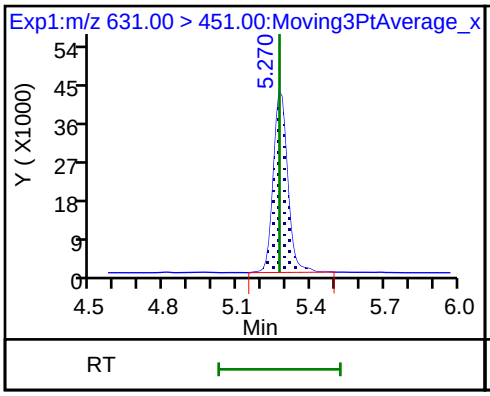

D 49 d-N-MeFOSA-M



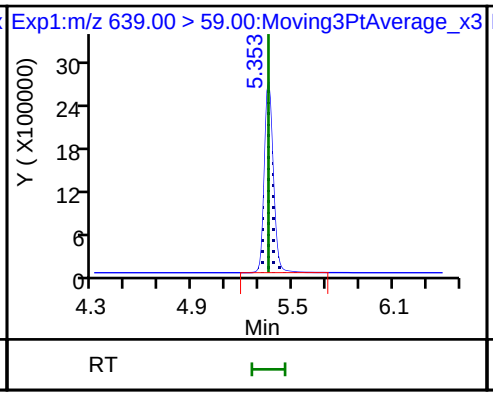

50 NMeFOSA



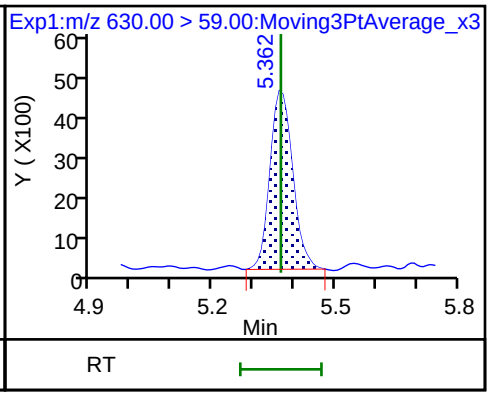

51 11ClFOS



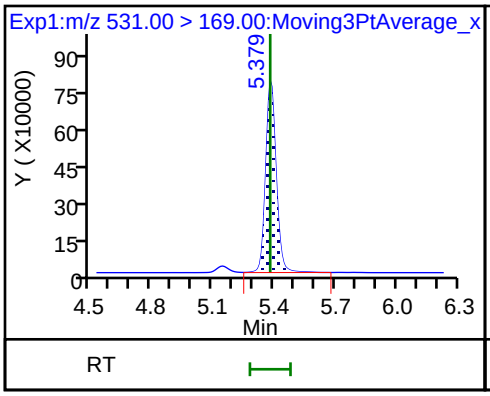

D 52 d9-N-EtFOSE-M



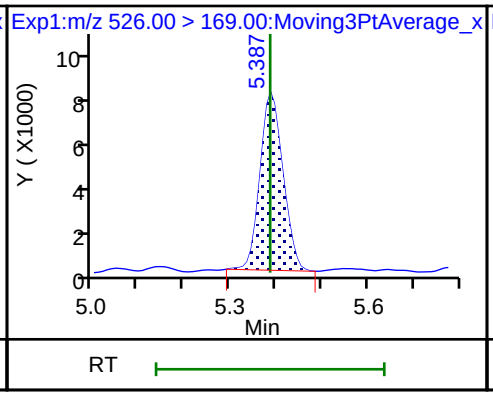

53 N-EtFOSE-M



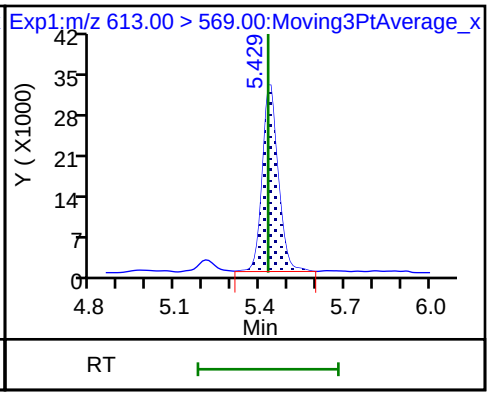

D 54 d-N-EtFOSA-M



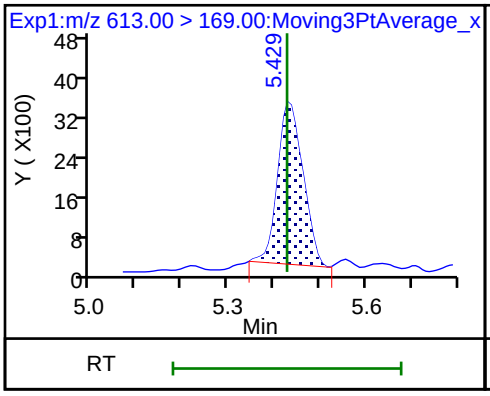

55 N-EtFOSA-M



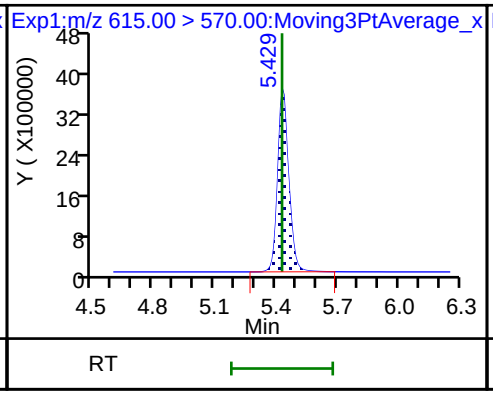

57 Perfluorododecanoic acid



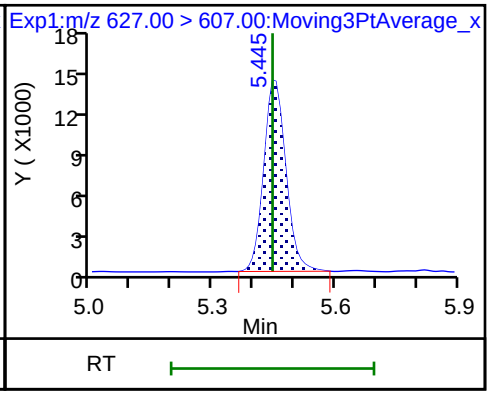

57 Perfluorododecanoic acid



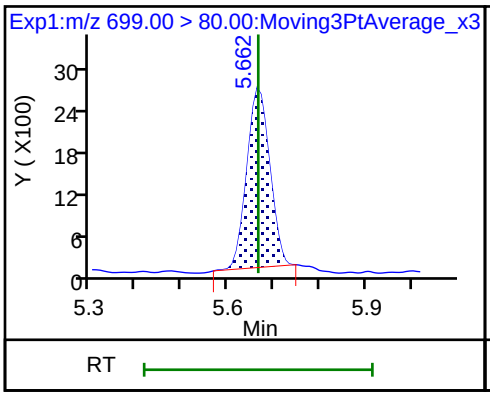

D 56 13C2 PFDoA



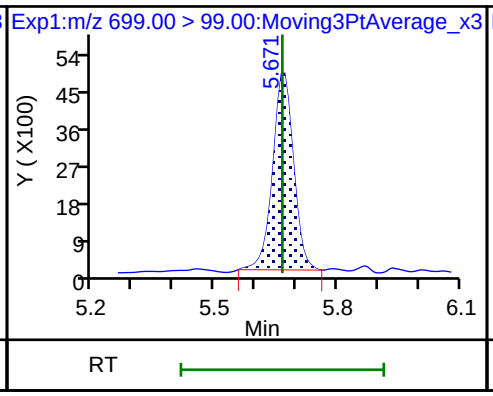

58 10:2 FTS



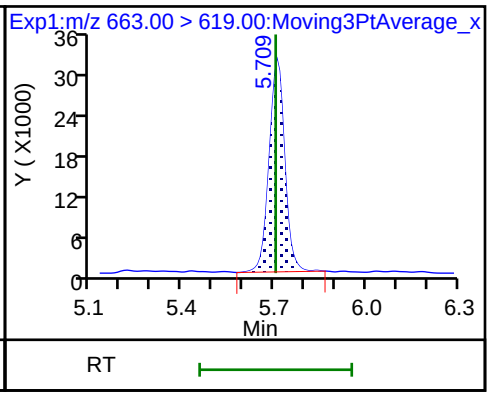
59 PFDoS



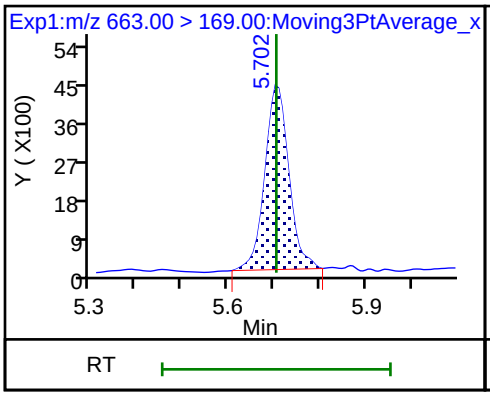

59 PFDoS



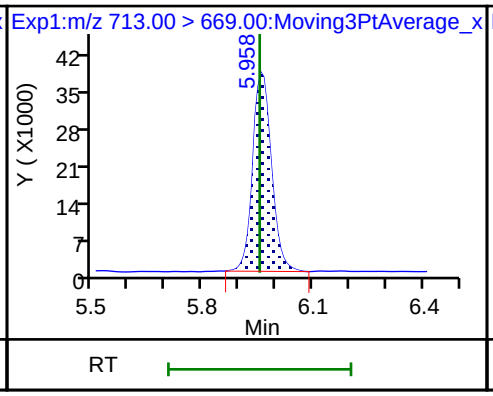

60 Perfluorotridecanoic acid



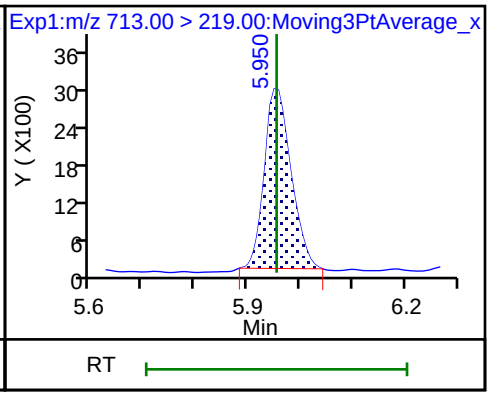

60 Perfluorotridecanoic acid



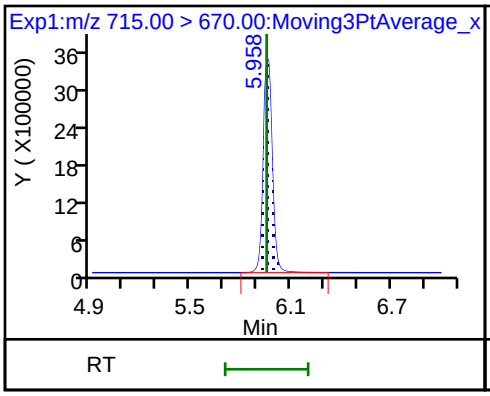

62 Perfluorotetradecanoic acid



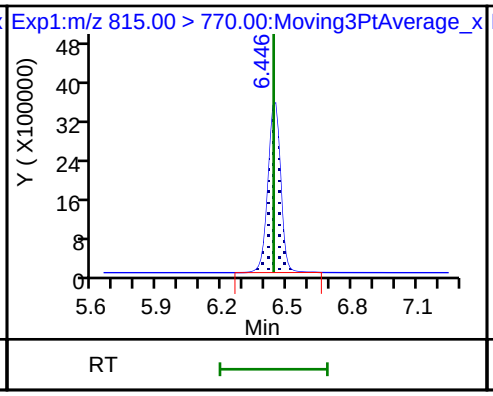

62 Perfluorotetradecanoic acid



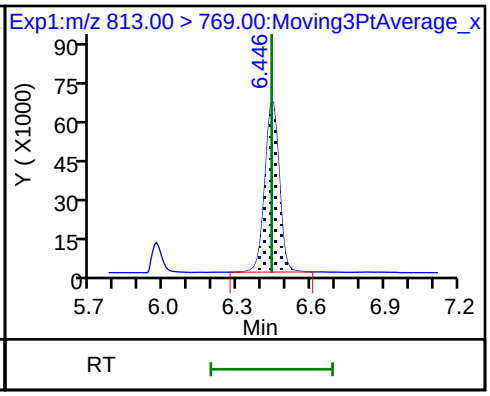

D 61 13C2 PFTeDA



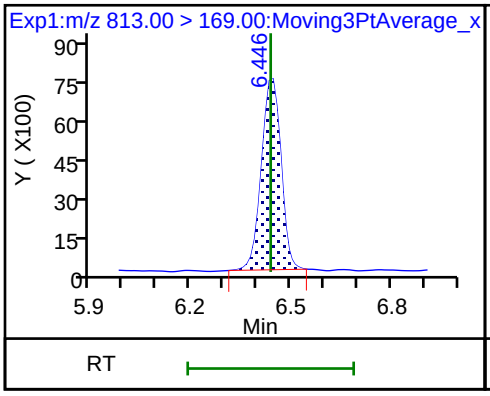

D 64 13C2 PFHxDA



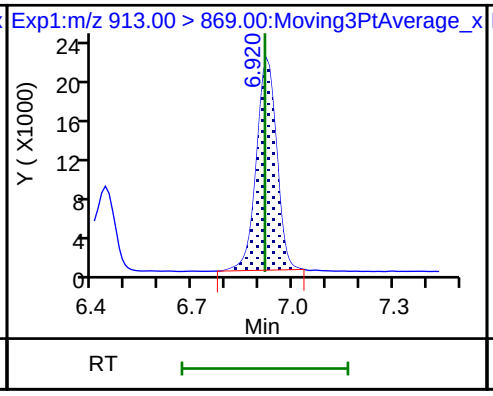

63 Perfluorohexadecanoic acid



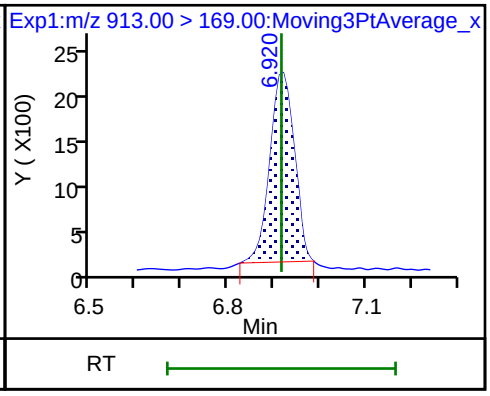

63 Perfluorohexadecanoic acid




65 Perfluorooctadecanoic acid




65 Perfluorooctadecanoic acid



Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

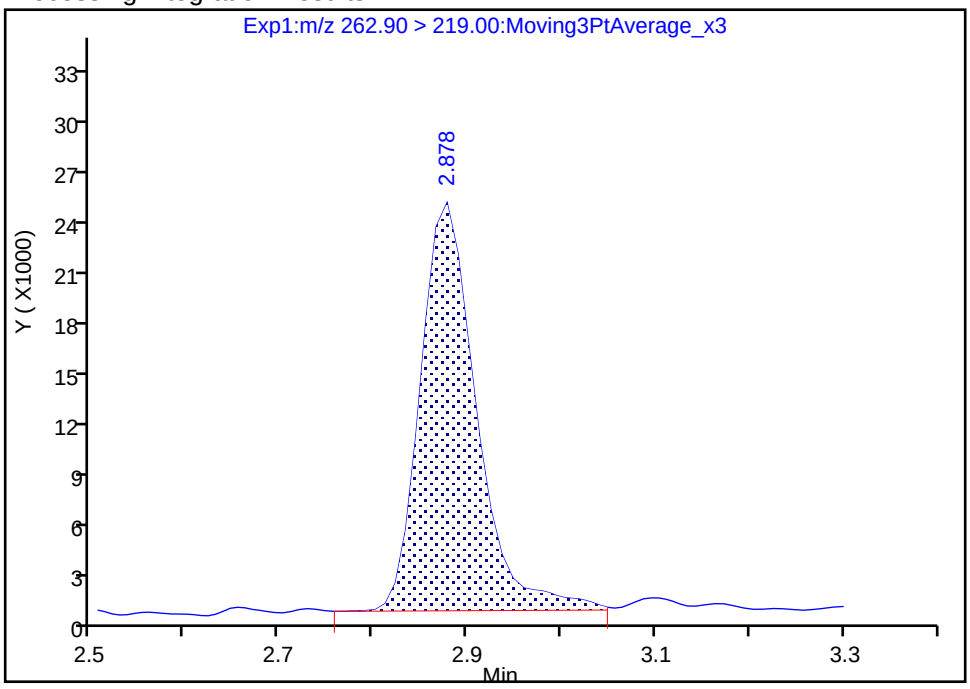
Data File: \\chromfs\Sacramento\ChromData\A13\20200908-102913.b\2020.09.08_A13_PFC_ICALX_004.d
Injection Date: 08-Sep-2020 18:01:46 Instrument ID: A13
Lims ID: IC STD 1
Client ID:
Operator ID: SACINSTLCMS01 ALS Bottle#: 1 Worklist Smp#: 2
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFAS_A13 Limit Group: LC PFC ICAL
Column: Gemini C18 3um 3 x 100mm ( 3.00 mm) Detector EXP1

## 5 Perfluoropentanoic acid, CAS: 2706-90-3

Signal: 1

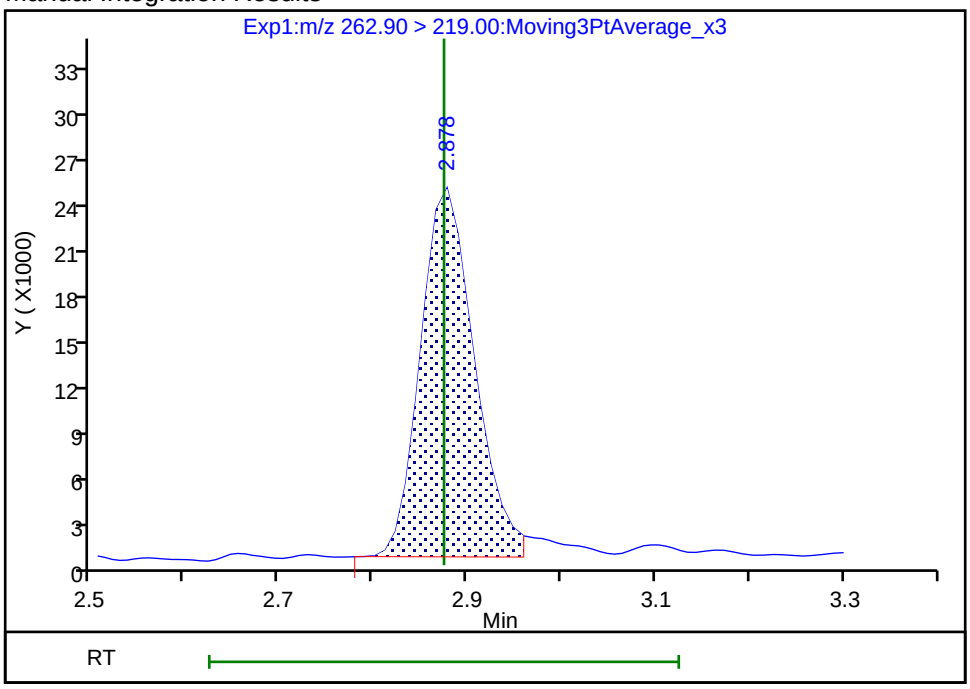
Processing Integration Results

RT: 2.88
Area: 96347
Amount: 0.029987
Amount Units: ng/ml




Manual Integration Results

RT: 2.88
Area: 92418
Amount: 0.028967
Amount Units: ng/ml




Reviewer: novoaj, 09-Sep-2020 09:16:50
Audit Action: Manually Integrated Audit Reason: Baseline

Eurofins TestAmerica, Sacramento

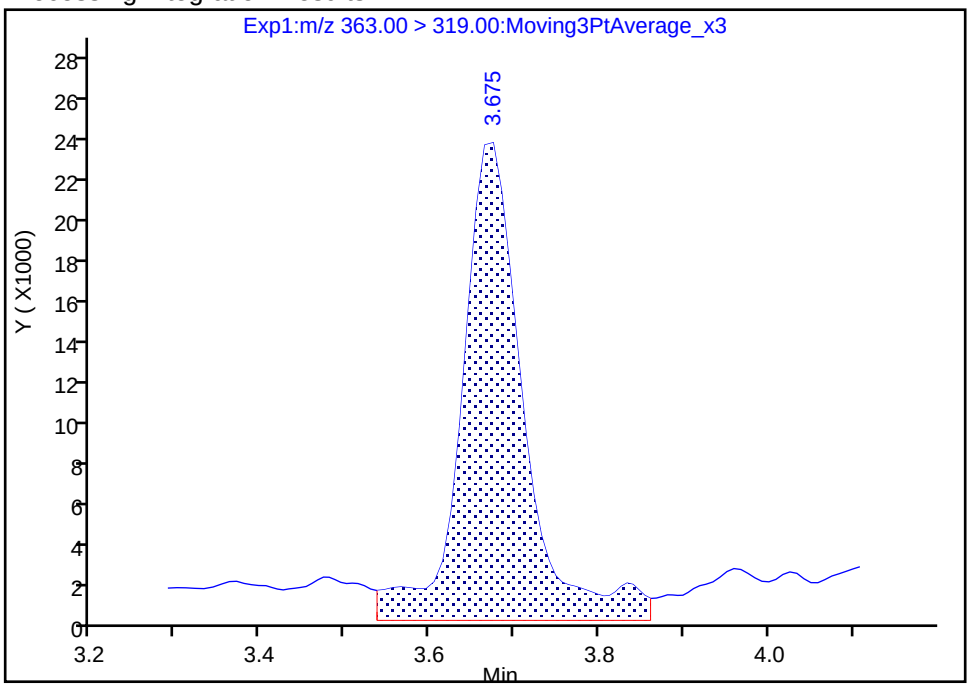
Data File: \\chromfs\Sacramento\ChromData\A13\20200908-102913.b\2020.09.08_A13_PFC_ICALX_004.d
Injection Date: 08-Sep-2020 18:01:46 Instrument ID: A13
Lims ID: IC STD 1
Client ID:
Operator ID: SACINSTLCMS01 ALS Bottle#: 1 Worklist Smp#: 2
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFAS_A13 Limit Group: LC PFC ICAL
Column: Gemini C18 3um 3 x 100mm ( 3.00 mm) Detector EXP1

## 16 Perfluoroheptanoic acid, CAS: 375-85-9

Signal: 1

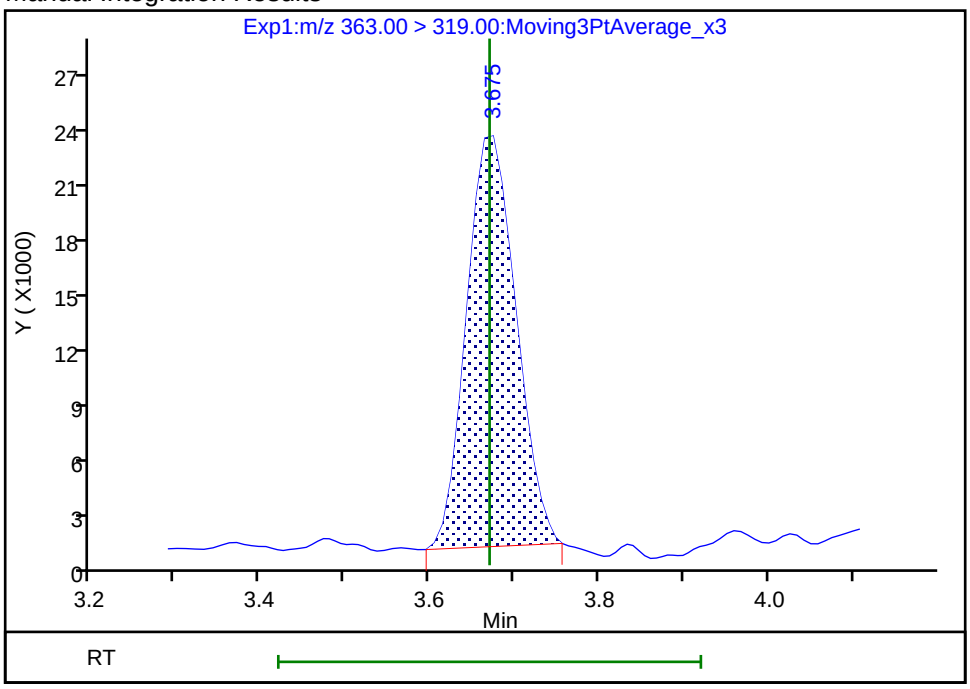
Processing Integration Results

RT: 3.67
Area: 117474
Amount: 0.029599
Amount Units: ng/ml




Manual Integration Results

RT: 3.67
Area: 86732
Amount: 0.022865
Amount Units: ng/ml




Reviewer: novoaj, 09-Sep-2020 09:17:59
Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

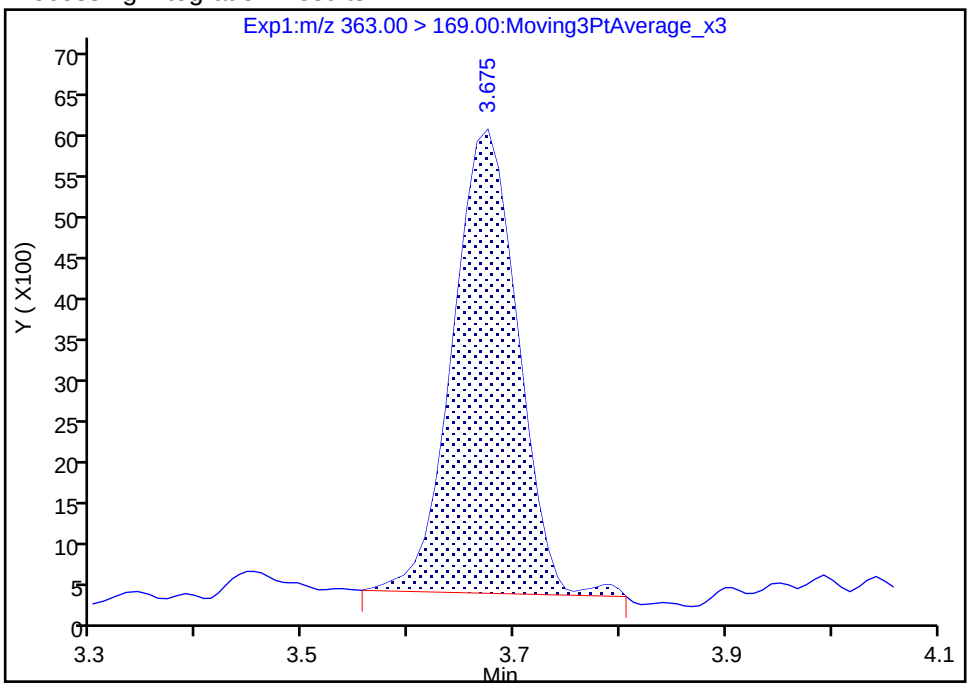
Data File: \\chromfs\Sacramento\ChromData\A13\20200908-102913.b\2020.09.08_A13_PFC_ICALX_004.d
Injection Date: 08-Sep-2020 18:01:46 Instrument ID: A13
Lims ID: IC STD 1
Client ID:
Operator ID: SACINSTLCMS01 ALS Bottle#: 1 Worklist Smp#: 2
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFAS_A13 Limit Group: LC PFC ICAL
Column: Gemini C18 3um 3 x 100mm ( 3.00 mm ID) Detector EXP1

## 16 Perfluoroheptanoic acid, CAS: 375-85-9

Signal: 2

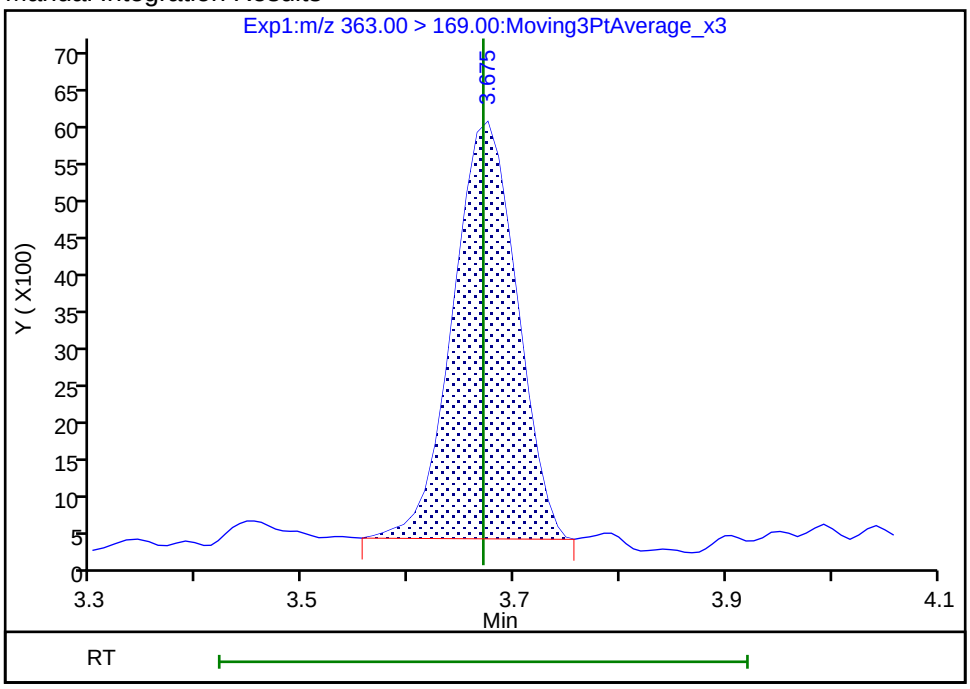
Processing Integration Results

RT: 3.67
Area: 24533
Amount: 0.029599
Amount Units: ng/ml




Manual Integration Results

RT: 3.67
Area: 23999
Amount: 0.022865
Amount Units: ng/ml




Reviewer: novoaj, 09-Sep-2020 09:18:11
Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

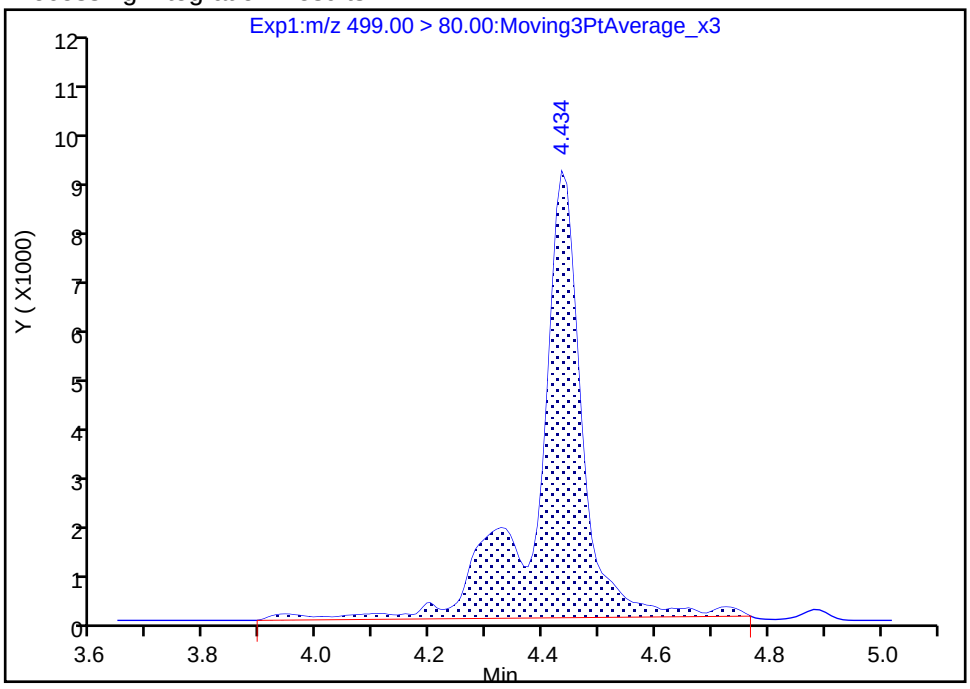
Data File: \\chromfs\Sacramento\ChromData\A13\20200908-102913.b\2020.09.08_A13_PFC_ICALX_004.d
Injection Date: 08-Sep-2020 18:01:46 Instrument ID: A13
Lims ID: IC STD 1
Client ID:
Operator ID: SACINSTLCMS01 ALS Bottle#: 1 Worklist Smp#: 2
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFAS_A13 Limit Group: LC PFC ICAL
Column: Gemini C18 3um 3 x 100mm ( 3.00 mm) Detector EXP1

## 28 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 1

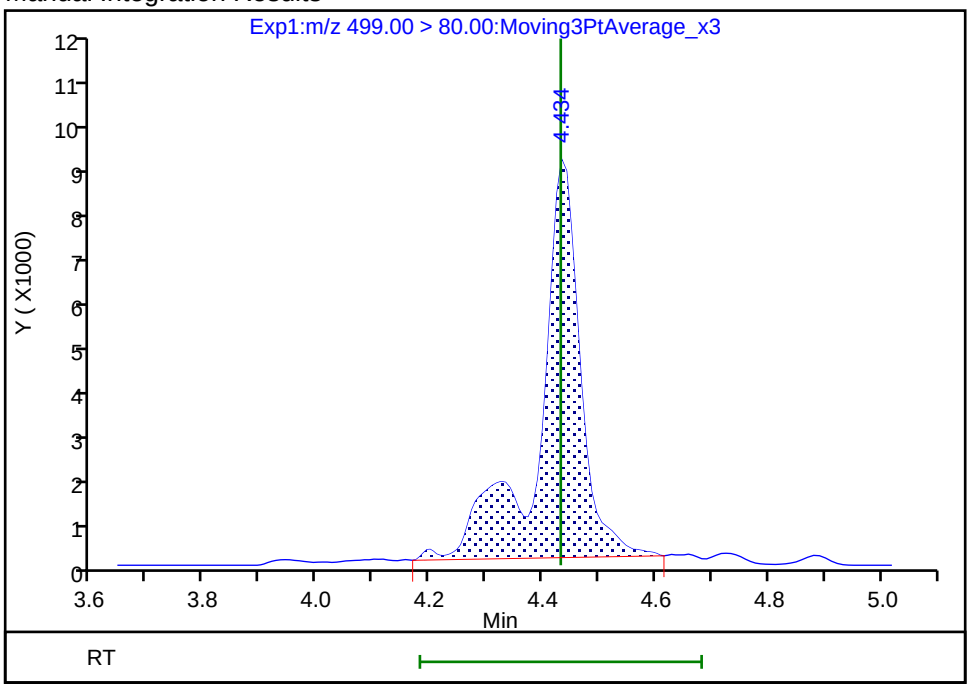
Processing Integration Results

RT: 4.43
Area: 49593
Amount: 0.025219
Amount Units: ng/ml




Manual Integration Results

RT: 4.43
Area: 44172
Amount: 0.023351
Amount Units: ng/ml




Reviewer: novoaj, 09-Sep-2020 09:18:59
Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

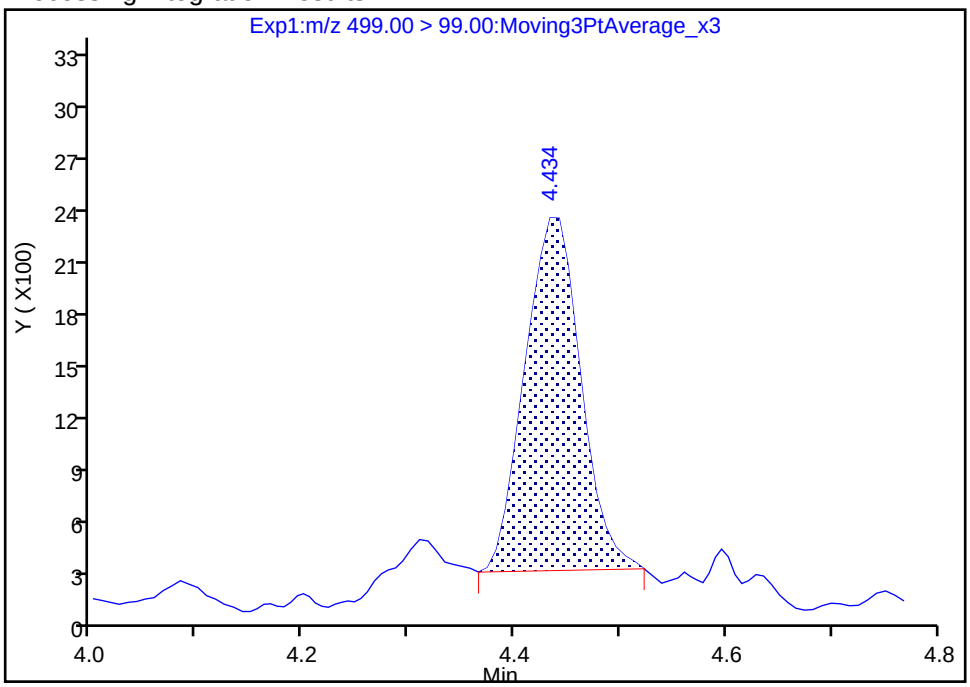
Data File: \\chromfs\Sacramento\ChromData\A13\20200908-102913.b\2020.09.08_A13_PFC_ICALX_004.d
Injection Date: 08-Sep-2020 18:01:46 Instrument ID: A13
Lims ID: IC STD 1
Client ID:
Operator ID: SACINSTLCMS01 ALS Bottle#: 1 Worklist Smp#: 2
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFAS_A13 Limit Group: LC PFC ICAL
Column: Gemini C18 3um 3 x 100mm ( 3.00 mm ) Detector EXP1

## 28 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 2

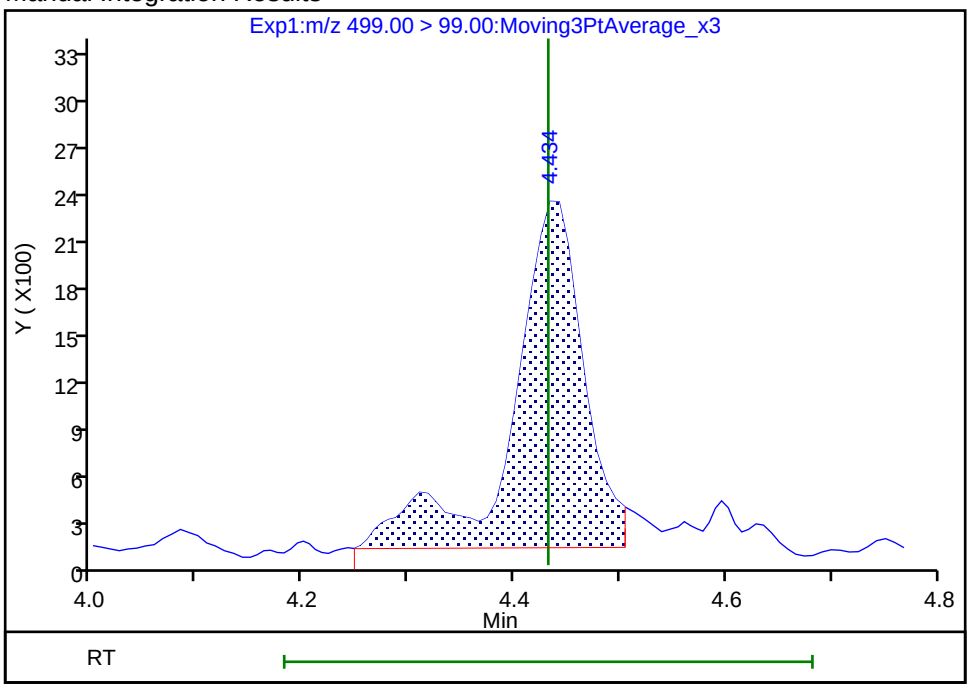
Processing Integration Results

RT: 4.43
Area: 7374
Amount: 0.025219
Amount Units: ng/ml




Manual Integration Results

RT: 4.43
Area: 10212
Amount: 0.023351
Amount Units: ng/ml




Reviewer: novoaj, 09-Sep-2020 09:19:19
Audit Action: Manually Integrated Audit Reason: Isomers

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

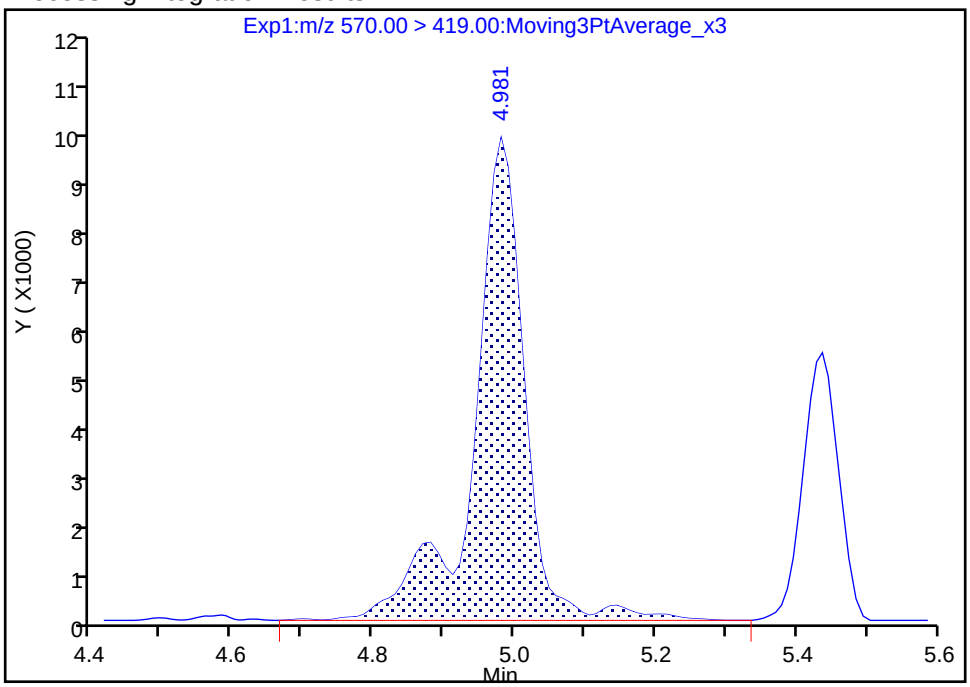
Data File: \\chromfs\Sacramento\ChromData\A13\20200908-102913.b\2020.09.08_A13_PFC_ICALX_004.d
Injection Date: 08-Sep-2020 18:01:46 Instrument ID: A13
Lims ID: IC STD 1
Client ID:
Operator ID: SACINSTLCMS01 ALS Bottle#: 1 Worklist Smp#: 2
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFAS_A13 Limit Group: LC PFC ICAL
Column: Gemini C18 3um 3 x 100mm ( 3.00 mm ) Detector EXP1

## 41 NMeFOSAA, CAS: 2355-31-9

Signal: 1

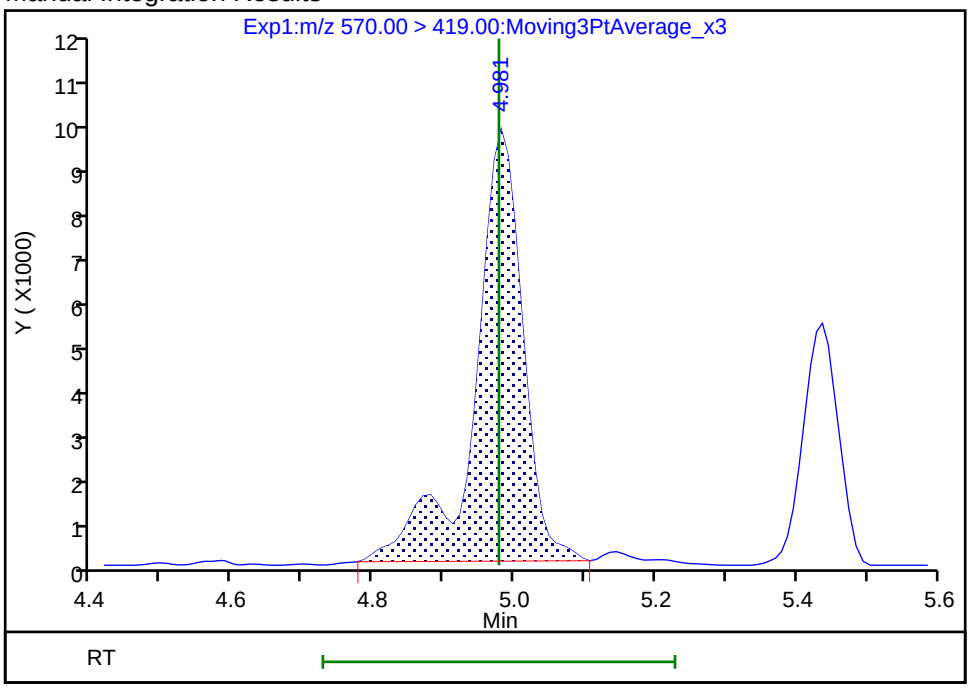
Processing Integration Results

RT: 4.98
Area: 48122
Amount: 0.021987
Amount Units: ng/ml




Manual Integration Results

RT: 4.98
Area: 44870
Amount: 0.021278
Amount Units: ng/ml




Reviewer: novoaj, 09-Sep-2020 09:20:44
Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

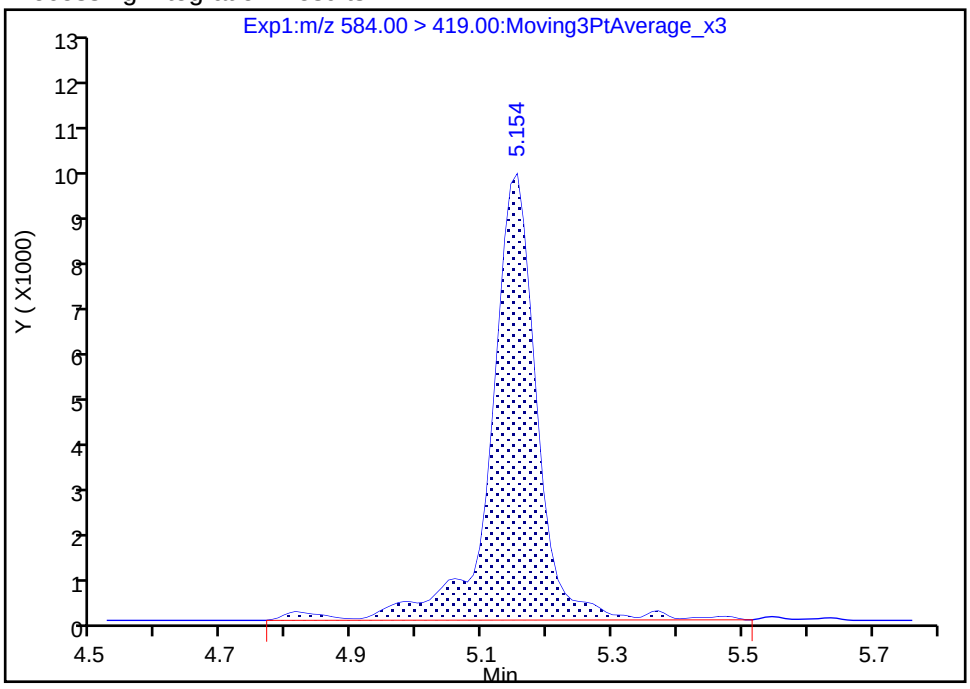
Data File: \\chromfs\Sacramento\ChromData\A13\20200908-102913.b\2020.09.08_A13_PFC_ICALX_004.d
Injection Date: 08-Sep-2020 18:01:46 Instrument ID: A13
Lims ID: IC STD 1
Client ID:
Operator ID: SACINSTLCMS01 ALS Bottle#: 1 Worklist Smp#: 2
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFAS_A13 Limit Group: LC PFC ICAL
Column: Gemini C18 3um 3 x 100mm ( 3.00 mm) Detector EXP1

## 48 NEtFOSA, CAS: 2991-50-6

Signal: 1

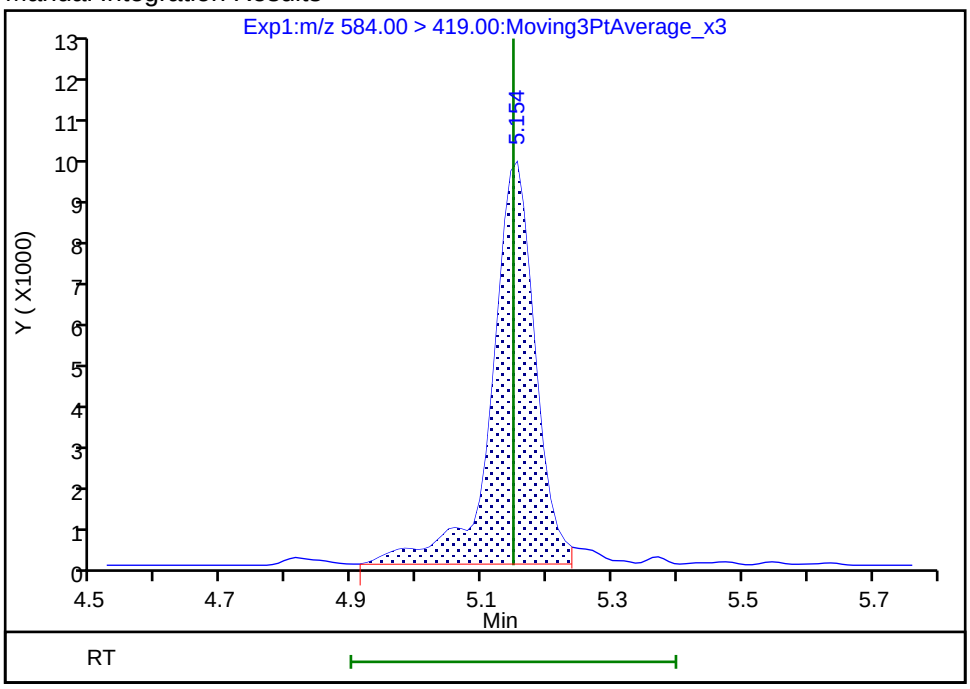
Processing Integration Results

RT: 5.15
Area: 46896
Amount: 0.022098
Amount Units: ng/ml




Manual Integration Results

RT: 5.15
Area: 43786
Amount: 0.020976
Amount Units: ng/ml




Reviewer: novoaj, 09-Sep-2020 09:21:20
Audit Action: Manually Integrated Audit Reason: Baseline

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\A13\20200908-102913.b\2020.09.08_A13_PFC_ICALX_005.d
Lims ID: IC STD 2
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 08-Sep-2020 18:11:11 ALS Bottle#: 2 Worklist Smp#: 3
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Sample Info: ISTD 2 (20)
Misc. Info.: Plate: 1 Rack: 2
Operator ID: SACINSTLCMS01 Instrument ID: A13
Sublist: chrom-PFAS_A13*sub3

Method: \\chromfs\Sacramento\ChromData\A13\20200908-102913.b\PFAS_A13.m
Limit Group: LC PFC ICAL
Last Update: 09-Sep-2020 10:21:48 Calib Date: 08-Sep-2020 18:58:15
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\A13\20200908-102913.b\2020.09.08_A13_PFC_ICALX_010.d

Column 1 : Gemini C18 3um 3 x 100mm ( 3.00 mm) Det: EXP1
Process Host: CTX1007

First Level Reviewer: novoaj Date: 09-Sep-2020 08:50:54
Ratio Calibration: Average of Initial Calibration

| Signal | RT | EXP RT | DLT RT | REL RT | Response | Amount ng/ml | Ratio(Limits) | %Rec | S/N | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| D 1 13C4 PFBA | | | | | | | | | | |
| 217.00 > 172.00 | 2.482 | 2.477 | 0.005 | 0.610 | 9473390 | 2.47 | | 98.8 | 27930 | |
| 2 Perfluorobutanoic acid | | | | | | | | | | |
| 212.90 > 169.00 | 2.482 | 2.480 | 0.002 | 1.000 | 123553 | 0.0439 | | 87.7 | 41.6 | |
| D 4 13C5 PFPeA | | | | | | | | | | |
| 267.90 > 223.00 | 2.878 | 2.873 | 0.005 | 0.708 | 7438352 | 2.49 | | 99.5 | 17518 | |
| 5 Perfluoropentanoic acid | | | | | | | | | | |
| 262.90 > 219.00 | 2.878 | 2.875 | 0.003 | 1.000 | 152923 | 0.0500 | | 100 | 23.3 | |
| D 14 13C3 PFBS | | | | | | | | | | |
| 301.90 > 80.00 | 2.913 | 2.913 | 0.0 | 0.716 | 8360594 | 2.23 | | 95.8 | 18664 | |
| 6 Perfluorobutanesulfonic acid | | | | | | | | | | |
| 298.90 > 80.00 | 2.913 | 2.913 | 0.0 | 1.000 | 136339 | 0.0388 | Target=2.18 | 87.7 | 109 | |
| 298.90 > 99.00 | 2.913 | 2.913 | 0.0 | 1.000 | 64438 | | 2.12(1.09-3.26) | 87.7 | 33.0 | |
| 7 4:2 FTS | | | | | | | | | | |
| 327.00 > 307.00 | 3.225 | 3.221 | 0.004 | 1.000 | 134070 | 0.0448 | | 95.9 | 574 | |
| D 8 M2-4:2 FTS | | | | | | | | | | |
| 329.00 > 81.00 | 3.225 | 3.222 | 0.003 | 0.793 | 2155074 | 2.34 | | 100 | 1136 | |
| D 9 13C2 PFHxA | | | | | | | | | | |
| 315.00 > 270.00 | 3.268 | 3.264 | 0.004 | 0.804 | 9290117 | 2.51 | | 101 | 30616 | |
| 10 Perfluorohexanoic acid | | | | | | | | | | |
| 313.00 > 269.00 | 3.268 | 3.265 | 0.003 | 1.000 | 169905 | 0.0492 | Target=11.68 | 98.4 | 30.4 | |
| 313.00 > 119.00 | 3.268 | 3.265 | 0.003 | 1.000 | 14604 | | 11.63(5.84-17.52) | 98.4 | 6.2 | |
| 11 Perfluoropentanesulfonic acid | | | | | | | | | | |
| 349.00 > 80.00 | 3.279 | 3.279 | 0.0 | 1.126 | 121195 | 0.0427 | Target=2.56 | 91.0 | 107 | |
| 349.00 > 99.00 | 3.279 | 3.279 | 0.0 | 1.126 | 48672 | | 2.49(1.28-3.84) | 91.0 | 51.3 | |
| 12 HPFO-DA | | | | | | | | | | |
| 285.00 > 169.00 | 3.388 | 3.386 | 0.002 | 1.000 | 35679 | 0.0465 | | 92.9 | 287 | |

| Signal | RT | EXP RT | DLT RT | REL RT | Response | Amount ng/ml | Ratio(Limits) | %Rec | S/N | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| D 13 13C3 HFPO-DA | | | | | | | | | | |
| 287.00 > 169.00 | 3.388 | 3.386 | 0.002 | 0.833 | 6457615 | 2.44 | | 97.5 | 4665 | |
| D 15 13C4 PFHpA | | | | | | | | | | |
| 367.00 > 322.00 | 3.674 | 3.668 | 0.006 | 0.904 | 9082861 | 2.50 | | 99.9 | 39589 | |
| 16 Perfluoroheptanoic acid | | | | | | | | | | |
| 363.00 > 319.00 | 3.674 | 3.670 | 0.004 | 1.000 | 189696 | 0.0517 | Target=3.85 | 103 | 25.7 | |
| 363.00 > 169.00 | 3.665 | 3.670 | -0.006 | 0.997 | 43430 | | 4.37(1.92-5.77) | 103 | 26.6 | |
| 18 Perfluorohexanesulfonic acid | | | | | | | | | | M |
| 399.00 > 80.00 | 3.674 | 3.672 | 0.002 | 1.000 | 120086 | 0.0448 | Target=3.25 | 98.4 | 129 | M |
| 399.00 > 99.00 | 3.674 | 3.672 | 0.002 | 1.000 | 39110 | | 3.07(1.62-4.87) | 98.4 | 36.3 | M |
| D 17 18O2 PFHxS | | | | | | | | | | |
| 403.00 > 84.00 | 3.674 | 3.672 | 0.002 | 0.904 | 5703634 | 2.32 | | 98.0 | 3072 | |
| 19 DONA | | | | | | | | | | |
| 377.00 > 251.00 | 3.722 | 3.719 | 0.003 | 0.839 | 405770 | 0.0453 | Target=2.76 | 96.3 | 861 | |
| 377.00 > 85.00 | 3.713 | 3.719 | -0.006 | 0.837 | 137577 | | 2.95(1.38-4.14) | 96.3 | 383 | |
| D 20 M2-6:2 FTS | | | | | | | | | | |
| 429.00 > 81.00 | 4.042 | 4.043 | -0.001 | 0.994 | 2633110 | 2.48 | | 105 | 4644 | |
| 21 6:2 FTS | | | | | | | | | | |
| 427.00 > 407.00 | 4.042 | 4.043 | -0.001 | 1.000 | 129089 | 0.0484 | | 102 | 267 | |
| 22 Perfluoroheptanesulfonic acid | | | | | | | | | | |
| 449.00 > 80.00 | 4.059 | 4.056 | 0.003 | 0.915 | 86028 | 0.0434 | Target=4.29 | 91.1 | 122 | |
| 449.00 > 99.00 | 4.059 | 4.056 | 0.003 | 0.915 | 18166 | | 4.74(2.15-6.44) | 91.1 | 27.8 | |
| $ 23 13C8 PFOA | | | | | | | | | | |
| 421.00 > 376.00 | 4.059 | 4.058 | 0.001 | 0.998 | 9576396 | 2.38 | | 97.3 | 10633 | |
| * 25 13C2 PFOA | | | | | | | | | | |
| 415.00 > 370.00 | 4.067 | 4.065 | 0.002 | | 11286436 | 2.50 | | | 10082 | |
| D 24 13C4 PFOA | | | | | | | | | | |
| 417.00 > 372.00 | 4.067 | 4.065 | 0.002 | 1.000 | 11128157 | 2.50 | | 100 | 21960 | |
| 26 Perfluorooctanoic acid | | | | | | | | | | |
| 413.00 > 369.00 | 4.067 | 4.066 | 0.001 | 1.000 | 235055 | 0.0516 | Target=2.95 | 103 | 48.1 | |
| 413.00 > 169.00 | 4.067 | 4.066 | 0.001 | 1.000 | 73514 | | 3.20(1.47-4.42) | 103 | 96.8 | |
| $ 27 13C8 PFOS | | | | | | | | | | |
| 507.00 > 99.00 | 4.426 | 4.426 | 0.0 | 1.088 | 2184217 | 2.33 | | 97.5 | 3447 | |
| D 29 13C4 PFOS | | | | | | | | | | |
| 503.00 > 80.00 | 4.435 | 4.429 | 0.006 | 1.090 | 4164582 | 2.37 | | 99.3 | 6494 | |
| 28 Perfluorooctanesulfonic acid | | | | | | | | | | M |
| 499.00 > 80.00 | 4.435 | 4.432 | 0.003 | 1.000 | 73805 | 0.0408 | Target=4.28 | 87.9 | 69.3 | M |
| 499.00 > 99.00 | 4.426 | 4.432 | -0.006 | 0.998 | 17915 | | 4.12(2.14-6.41) | 87.9 | 29.0 | M |
| D 31 13C5 PFNA | | | | | | | | | | |
| 468.00 > 423.00 | 4.452 | 4.448 | 0.004 | 1.095 | 10206104 | 2.48 | | 99.4 | 9827 | |
| 30 Perfluorononanoic acid | | | | | | | | | | |
| 463.00 > 419.00 | 4.452 | 4.449 | 0.003 | 1.000 | 179366 | 0.0463 | Target=8.00 | 92.6 | 46.0 | |
| 463.00 > 169.00 | 4.452 | 4.449 | 0.003 | 1.000 | 25709 | | 6.98(4.00-12.01) | 92.6 | 44.8 | |
| 32 9ClFOS | | | | | | | | | | |
| 531.00 > 351.00 | 4.635 | 4.632 | 0.003 | 1.045 | 189474 | 0.0435 | | 93.3 | 214 | |
| D 34 13C8 FOSA | | | | | | | | | | |
| 506.00 > 78.00 | 4.742 | 4.738 | 0.004 | 1.166 | 6088259 | 2.41 | | 96.6 | 4803 | |

| Signal | RT | EXP RT | DLT RT | REL RT | Response | Amount ng/ml | Ratio(Limits) | %Rec | S/N | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| 33 Perfluorooctanesulfonamide | | | | | | | | | | |
| 498.00 > 78.00 | 4.742 | 4.739 | 0.003 | 1.000 | 108069 | 0.0473 | | 94.6 | 489 | |
| 35 Perfluorononanesulfonic acid | | | | | | | | | | |
| 549.00 > 80.00 | 4.786 | 4.781 | 0.005 | 1.079 | 56843 | 0.0421 | Target=2.15 | 87.7 | 144 | |
| 549.00 > 99.00 | 4.777 | 4.781 | -0.004 | 1.077 | 27088 | | 2.10(1.08-3.23) | 87.7 | 54.4 | |
| 36 Perfluorodecanoic acid | | | | | | | | | | |
| 513.00 > 469.00 | 4.813 | 4.808 | 0.005 | 1.000 | 218271 | 0.0491 | Target=10.44 | 98.1 | 114 | |
| 513.00 > 169.00 | 4.813 | 4.808 | 0.005 | 1.000 | 19137 | | 11.41(5.22-15.65) | 98.1 | 41.5 | |
| D 37 13C2 PFDA | | | | | | | | | | |
| 515.00 > 470.00 | 4.813 | 4.808 | 0.005 | 1.183 | 12408694 | 2.49 | | 99.7 | 28693 | |
| D 38 M2-8:2 FTS | | | | | | | | | | |
| 529.00 > 81.00 | 4.813 | 4.810 | 0.003 | 1.183 | 3515524 | 2.51 | | 105 | 5258 | |
| 39 8:2 FTS | | | | | | | | | | |
| 527.00 > 507.00 | 4.813 | 4.810 | 0.003 | 1.000 | 166092 | 0.0458 | | 95.6 | 1183 | |
| D 40 d3-NMeFOSAA | | | | | | | | | | |
| 573.00 > 419.00 | 4.980 | 4.972 | 0.008 | 1.225 | 6387921 | 2.49 | | 99.6 | 4989 | |
| 41 NMeFOSAA | | | | | | | | | | M |
| 570.00 > 419.00 | 4.980 | 4.978 | 0.002 | 1.000 | 95954 | 0.0466 | | 93.2 | 27.7 | M |
| 42 Perfluorodecanesulfonic acid | | | | | | | | | | |
| 599.00 > 80.00 | 5.106 | 5.103 | 0.003 | 1.151 | 49232 | 0.0429 | Target=2.36 | 89.0 | 151 | |
| 599.00 > 99.00 | 5.106 | 5.103 | 0.003 | 1.151 | 19763 | | 2.49(1.18-3.54) | 89.0 | 66.3 | |
| 45 Perfluoroundecanoic acid | | | | | | | | | | |
| 563.00 > 519.00 | 5.134 | 5.132 | 0.002 | 1.000 | 142918 | 0.0436 | Target=8.67 | 87.3 | 113 | |
| 563.00 > 169.00 | 5.134 | 5.132 | 0.002 | 1.000 | 21159 | | 6.75(4.34-13.01) | 87.3 | 80.3 | |
| D 44 13C2 PFUnA | | | | | | | | | | |
| 565.00 > 520.00 | 5.134 | 5.132 | 0.002 | 1.262 | 12374202 | 2.54 | | 102 | 8250 | |
| D 46 d5-NEtFOSAA | | | | | | | | | | |
| 589.00 > 419.00 | 5.144 | 5.139 | 0.005 | 1.265 | 6476169 | 2.61 | | 104 | 2613 | |
| 48 NEtFOSA | | | | | | | | | | M |
| 584.00 > 419.00 | 5.153 | 5.148 | 0.005 | 1.002 | 87576 | 0.0437 | | 87.3 | 201 | M |
| D 43 d7-N-MeFOSE-M | | | | | | | | | | |
| 623.00 > 59.00 | 5.183 | 5.182 | 0.001 | 1.274 | 7474639 | 11.8 | | 94.8 | 2802 | |
| 47 N-MeFOSE-M | | | | | | | | | | |
| 616.00 > 59.00 | 5.204 | 5.195 | 0.009 | 1.004 | 29334 | 0.0461 | | 92.2 | 54.9 | |
| D 49 d-N-MeFOSA-M | | | | | | | | | | |
| 515.00 > 169.00 | 5.204 | 5.205 | -0.001 | 1.280 | 2769186 | 2.33 | | 93.4 | 42.5 | |
| 50 NMeFOSA | | | | | | | | | | |
| 512.00 > 169.00 | 5.215 | 5.213 | 0.002 | 1.002 | 49525 | 0.0455 | | 91.0 | 117 | |
| 51 11ClFOS | | | | | | | | | | |
| 631.00 > 451.00 | 5.269 | 5.271 | -0.002 | 1.188 | 316523 | 0.0421 | | 89.3 | 953 | |
| D 52 d9-N-EtFOSE-M | | | | | | | | | | |
| 639.00 > 59.00 | 5.353 | 5.352 | 0.001 | 1.316 | 8977322 | 12.1 | | 97.0 | 2421 | |
| 53 N-EtFOSE-M | | | | | | | | | | |
| 630.00 > 59.00 | 5.370 | 5.366 | 0.004 | 1.003 | 39060 | 0.0525 | | 105 | 92.3 | |
| D 54 d-N-EtFOSA-M | | | | | | | | | | |
| 531.00 > 169.00 | 5.378 | 5.379 | -0.001 | 1.322 | 2682893 | 2.37 | | 94.7 | 239 | |

| Signal | RT | EXP RT | DLT RT | REL RT | Response | Amount ng/ml | Ratio(Limits) | %Rec | S/N | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| 55 N-EtFOSA-M | | | | | | | | | | |
| 526.00 > 169.00 | 5.387 | 5.386 | 0.001 | 1.002 | 54851 | 0.0481 | | 96.3 | 91.5 | |
| 57 Perfluorododecanoic acid | | | | | | | | | | |
| 613.00 > 569.00 | 5.436 | 5.428 | 0.008 | 1.000 | 234353 | 0.0494 | Target=9.05 | 98.9 | 156 | |
| 613.00 > 169.00 | 5.436 | 5.428 | 0.008 | 1.000 | 26216 | | 8.94(4.52-13.57) | 98.9 | 109 | |
| D 56 13C2 PFDoA | | | | | | | | | | |
| 615.00 > 570.00 | 5.436 | 5.428 | 0.008 | 1.337 | 12993670 | 2.48 | | 99.2 | 6242 | |
| 58 10:2 FTS | | | | | | | | | | |
| 627.00 > 607.00 | 5.445 | 5.445 | 0.0 | 1.131 | 107845 | 0.0450 | | 93.4 | 730 | |
| 59 PFDoS | | | | | | | | | | |
| 699.00 > 80.00 | 5.670 | 5.665 | 0.005 | 1.279 | 20826 | 0.0465 | Target=0.57 | 96.0 | 176 | |
| 699.00 > 99.00 | 5.670 | 5.665 | 0.005 | 1.279 | 33867 | | 0.61(0.29-0.86) | 96.0 | 133 | |
| 60 Perfluorotridecanoic acid | | | | | | | | | | |
| 663.00 > 619.00 | 5.701 | 5.704 | -0.003 | 1.049 | 234324 | 0.0481 | Target=7.06 | 96.2 | 268 | |
| 663.00 > 169.00 | 5.701 | 5.704 | -0.003 | 1.049 | 30709 | | 7.63(3.53-10.59) | 96.2 | 162 | |
| D 61 13C2 PFTeDA | | | | | | | | | | |
| 715.00 > 670.00 | 5.957 | 5.953 | 0.004 | 1.465 | 12335685 | 2.38 | | 95.4 | 15072 | |
| 62 Perfluorotetradecanoic acid | | | | | | | | | | |
| 713.00 > 669.00 | 5.965 | 5.954 | 0.011 | 1.001 | 250286 | 0.0515 | Target=11.23 | 103 | 186 | |
| 713.00 > 219.00 | 5.957 | 5.954 | 0.003 | 1.000 | 22332 | | 11.21(5.62-16.85) | 103 | 173 | |
| D 64 13C2 PFHxDA | | | | | | | | | | |
| 815.00 > 770.00 | 6.440 | 6.437 | 0.003 | 1.584 | 13657597 | 2.54 | | 101 | 7678 | |
| 63 Perfluorohexadecanoic acid | | | | | | | | | | |
| 813.00 > 769.00 | 6.440 | 6.439 | 0.001 | 1.000 | 388029 | 0.0500 | Target=9.45 | 100 | 93.0 | |
| 813.00 > 169.00 | 6.440 | 6.439 | 0.001 | 1.000 | 41369 | | 9.38(4.72-14.17) | 100 | 191 | |
| 65 Perfluorooctadecanoic acid | | | | | | | | | | |
| 913.00 > 869.00 | 6.923 | 6.915 | 0.008 | 1.075 | 179176 | 0.0449 | Target=11.13 | 89.8 | 114 | |
| 913.00 > 169.00 | 6.923 | 6.915 | 0.008 | 1.075 | 16143 | | 11.10(5.56-16.69) | 89.8 | 130 | |

## QC Flag Legend

Review Flags

M - Manually Integrated

## Reagents:

LCPFC_LL2_00020 Amount Added: 1.00 Units: mL

Report Date: 09-Sep-2020 10:21:51 Chrom Revision: 2.3 20-Aug-2020 13:57:12

Eurofins TestAmerica, Sacramento

Data File: \\chromfs\Sacramento\ChromData\A13\20200908-102913.b\2020.09.08_A13_PFC_ICALX_005.d

Injection Date: 08-Sep-2020 18:11:11 Instrument ID: A13

Lims ID: IC STD 2

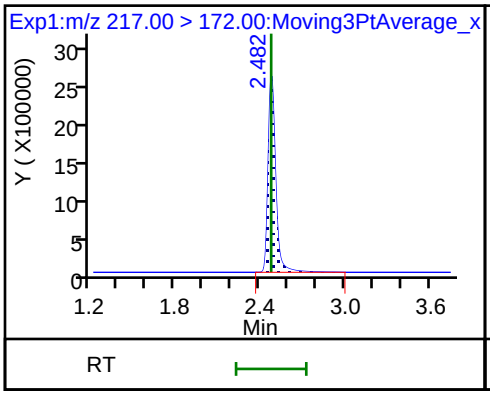
Client ID:

Operator ID: SACINSTLCMS01 ALS Bottle#: 2 Worklist Smp#: 3

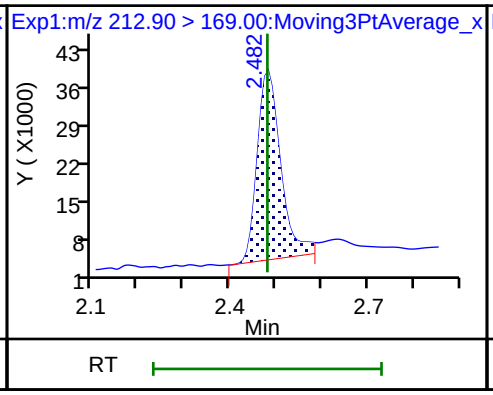
Injection Vol: 20.0 ul Dil. Factor: 1.0000

Method: PFAS_A13 Limit Group: LC PFC ICAL

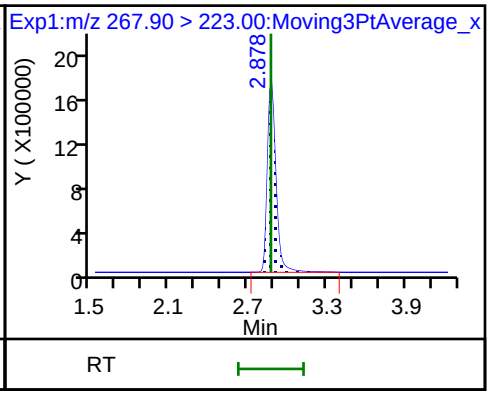
D 1 13C4 PFBA



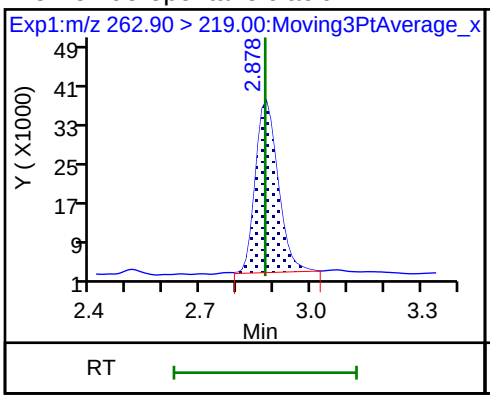

2 Perfluorobutanoic acid



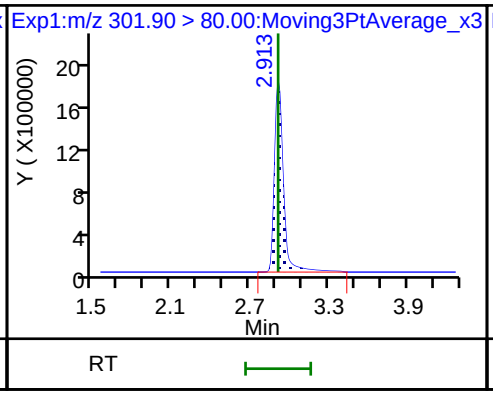

D 4 13C5 PFPeA



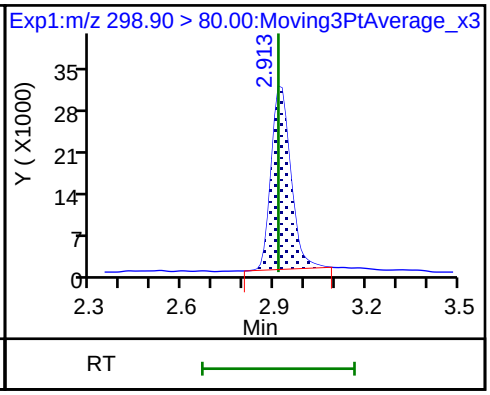

5 Perfluoropentanoic acid



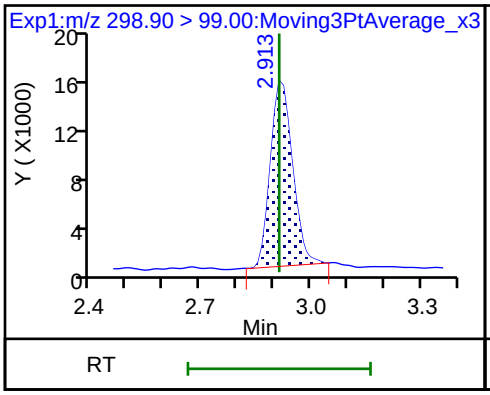

D 14 13C3 PFBS



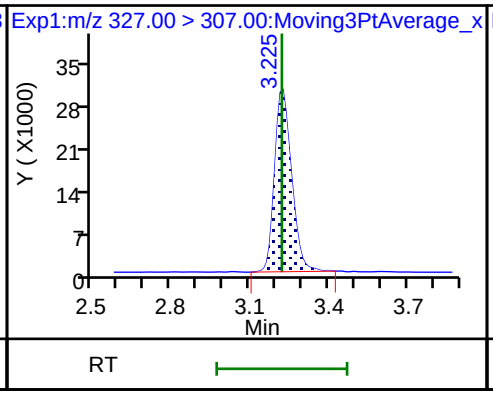

6 Perfluorobutanesulfonic acid



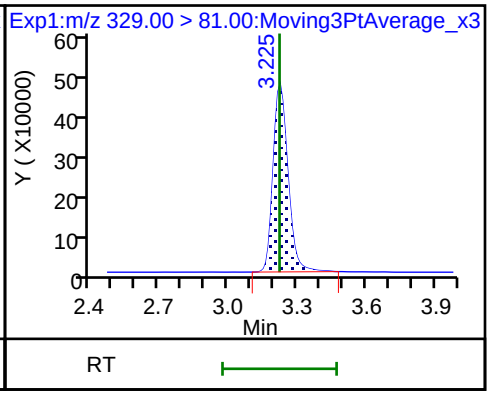

6 Perfluorobutanesulfonic acid



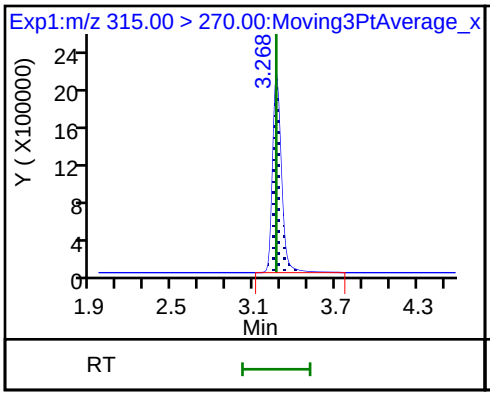

7 4:2 FTS



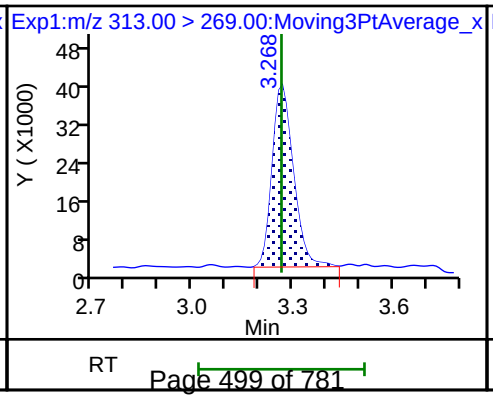

D 8 M2-4:2 FTS



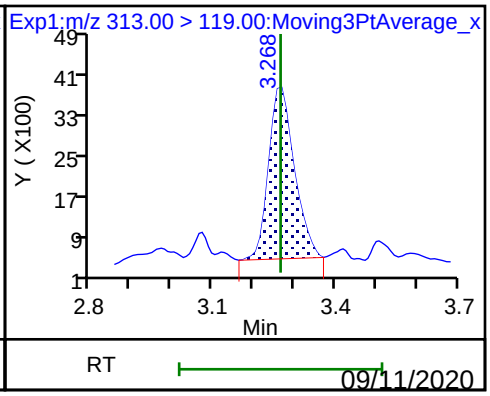

D 9 13C2 PFHxA



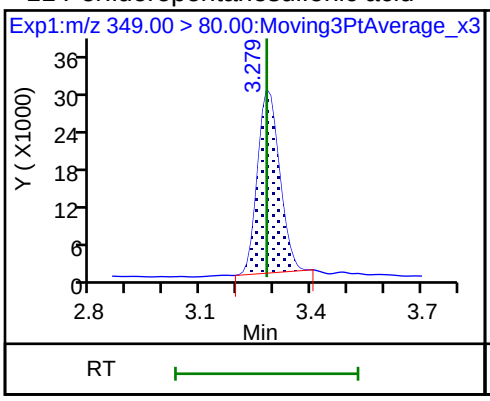

10 Perfluorohexanoic acid



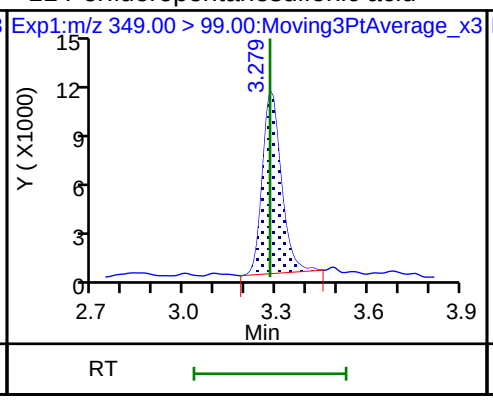

10 Perfluorohexanoic acid



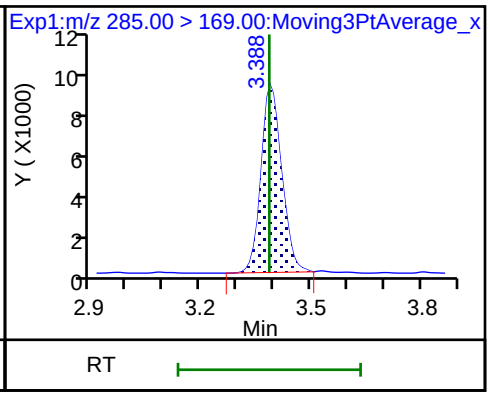
11 Perfluoropentanesulfonic acid



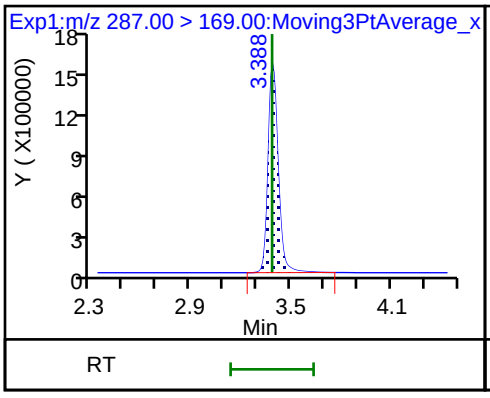

11 Perfluoropentanesulfonic acid



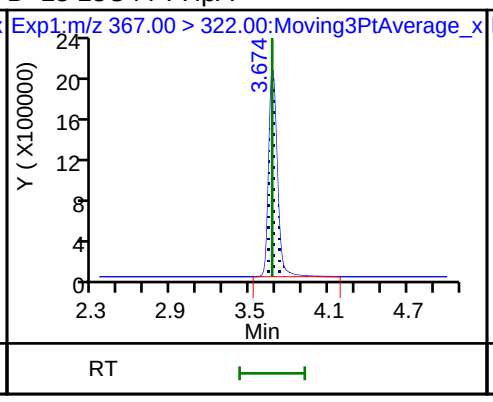

12 HPFO-DA



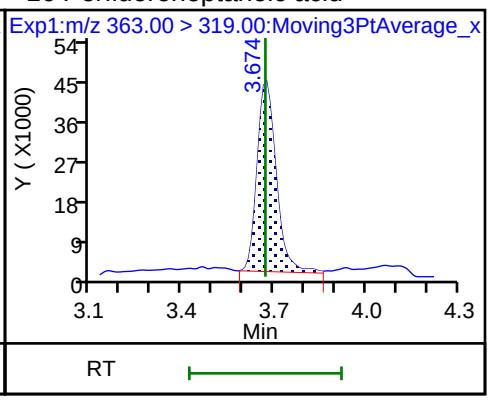

D 13 13C3 HFPO-DA



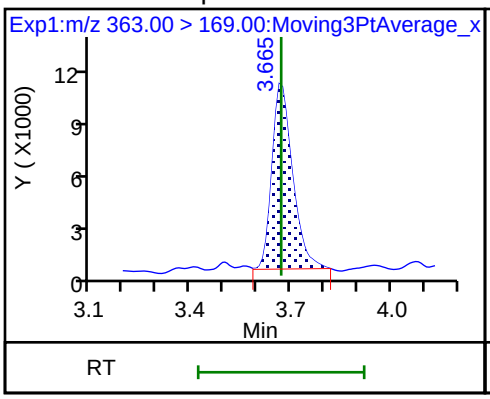

D 15 13C4 PFHpA



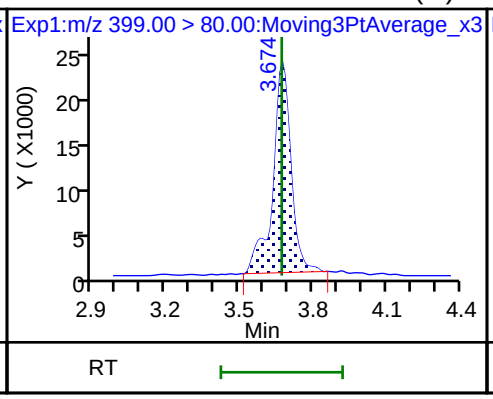

16 Perfluoroheptanoic acid



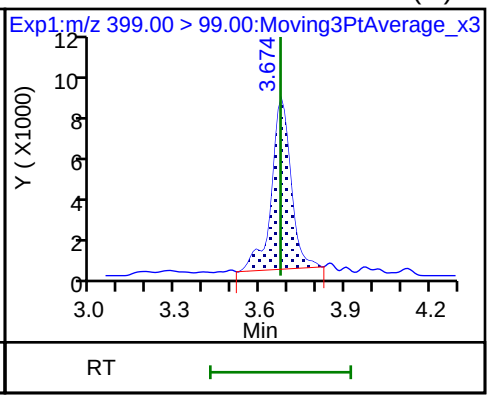

16 Perfluoroheptanoic acid



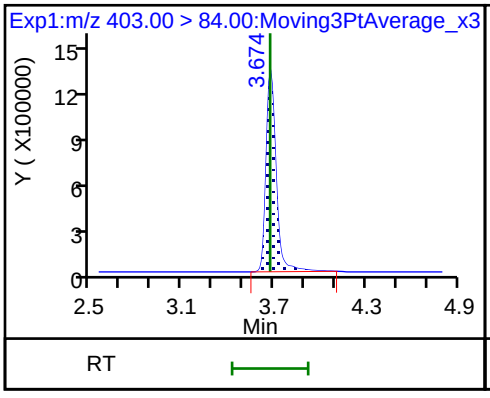

18 Perfluorohexanesulfonic acid (M)



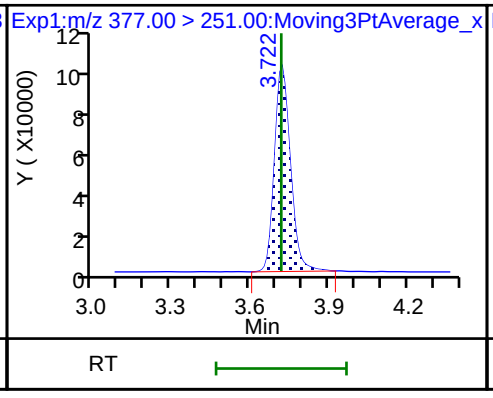

18 Perfluorohexanesulfonic acid (M)



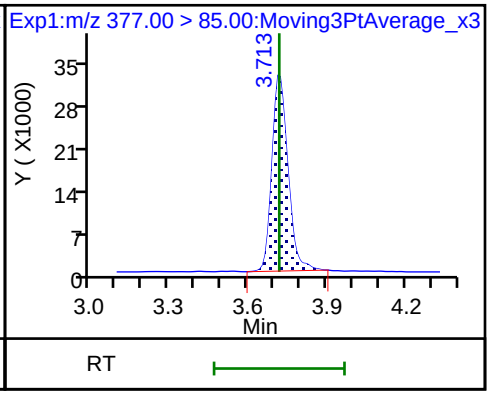

D 17 18O2 PFHxS



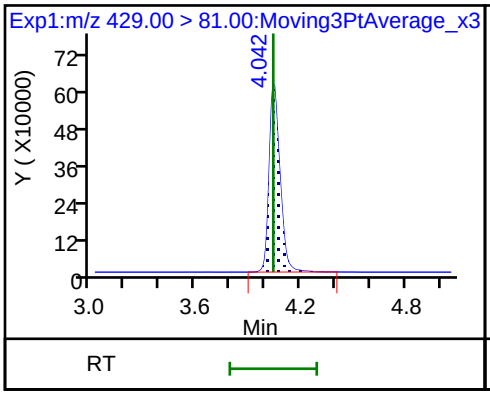

19 DONA



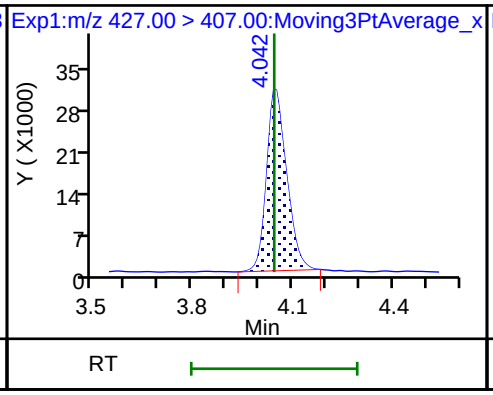

19 DONA



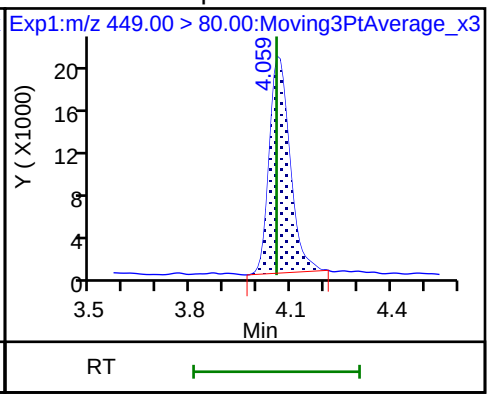
D 20 M2-6:2 FTS



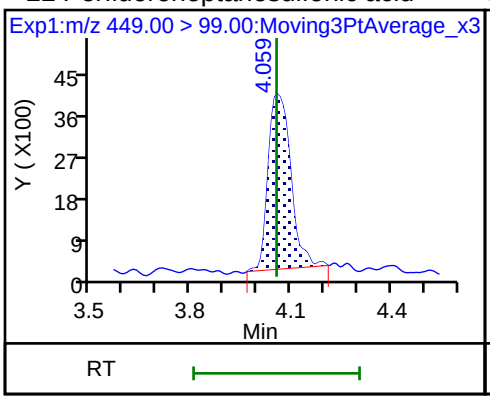

21 6:2 FTS



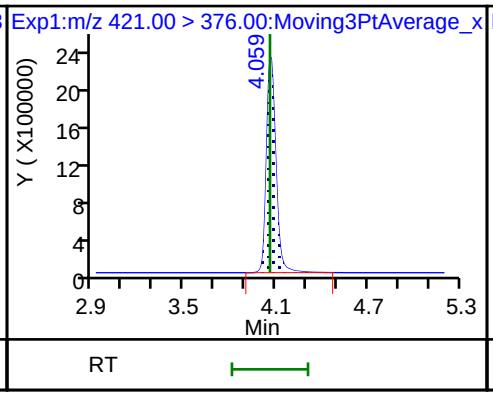

22 Perfluoroheptanesulfonic acid



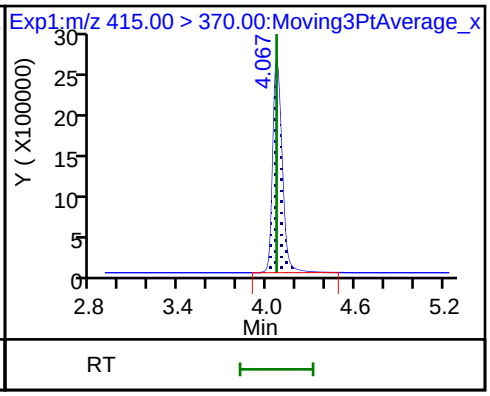

22 Perfluoroheptanesulfonic acid



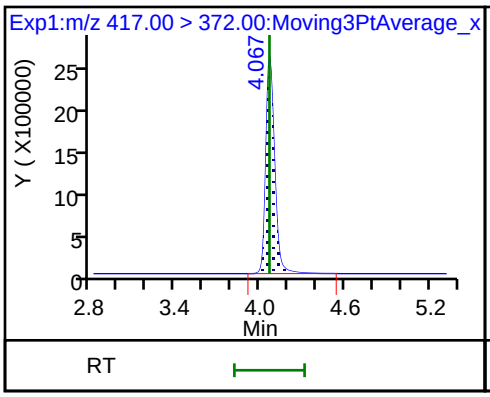

$ 23 13C8 PFOA



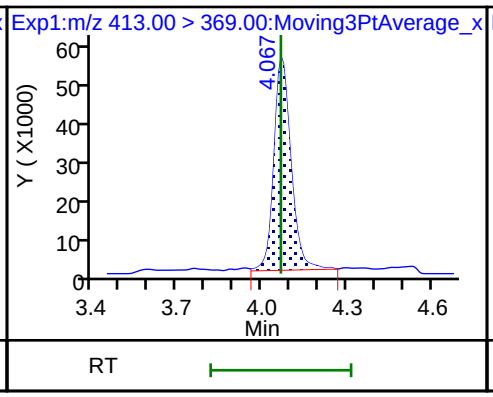

* 25 13C2 PFOA



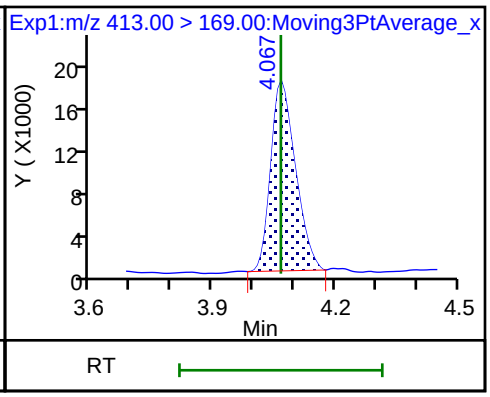

D 24 13C4 PFOA



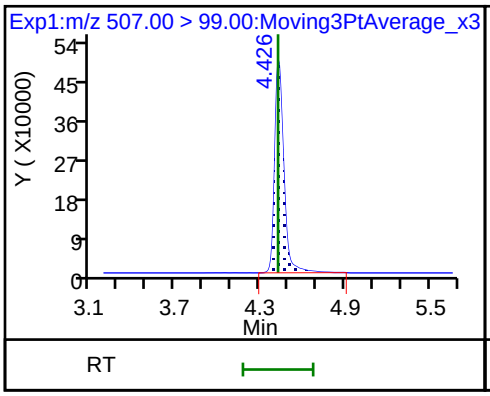

26 Perfluorooctanoic acid



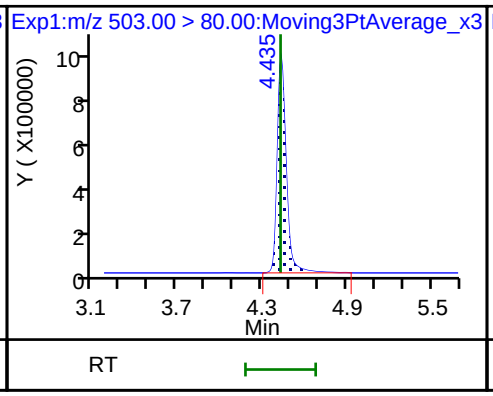

26 Perfluorooctanoic acid



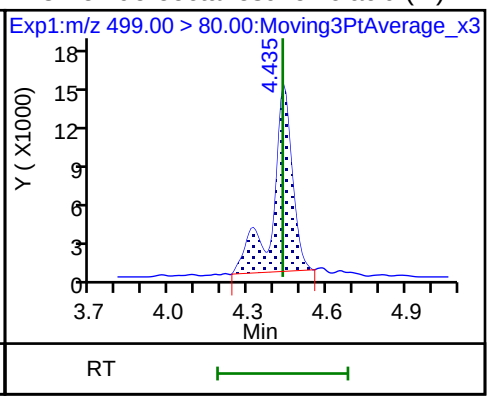

$ 27 13C8 PFOS



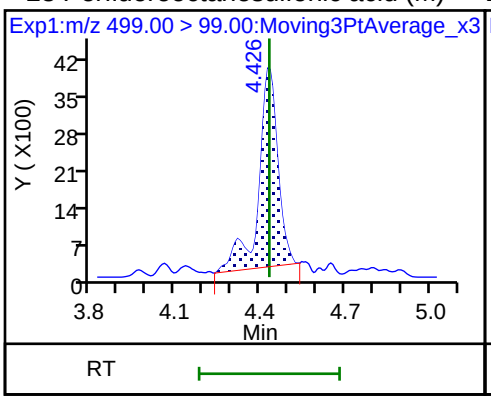

D 29 13C4 PFOS



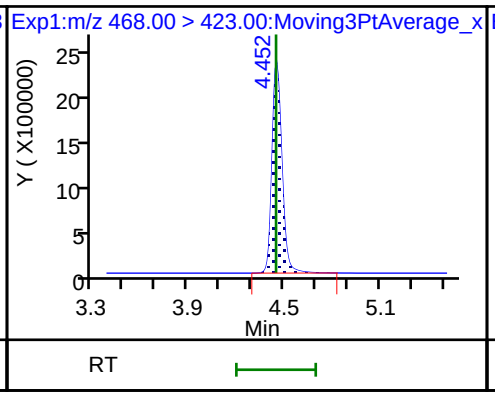

28 Perfluorooctanesulfonic acid (M)



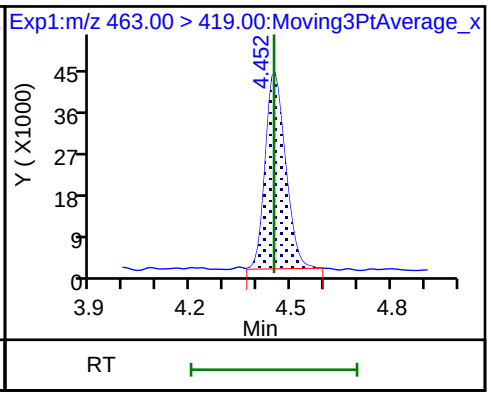
28 Perfluorooctanesulfonic acid (M)



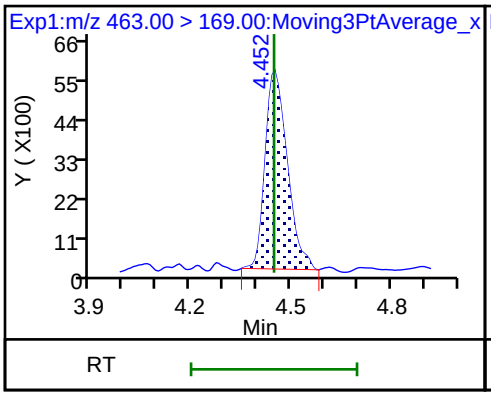

D 31 13C5 PFNA



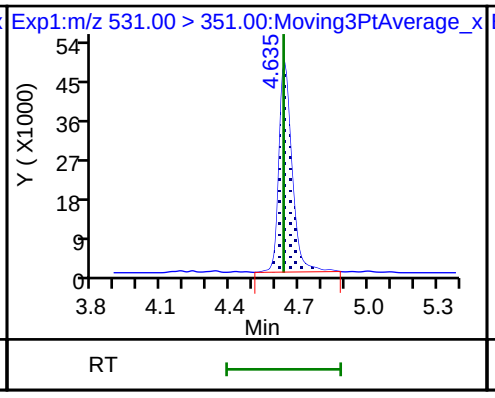

30 Perfluorononanoic acid



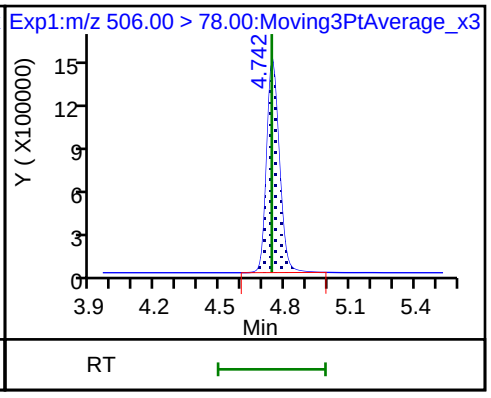

30 Perfluorononanoic acid



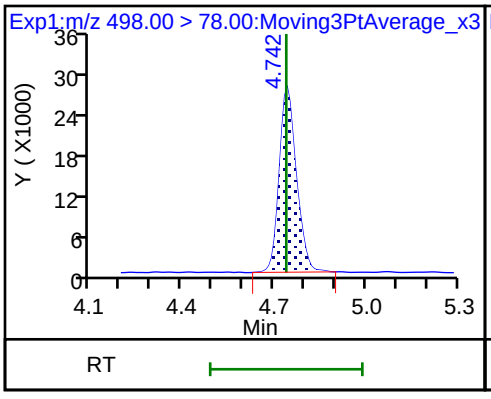

32 9ClFOS



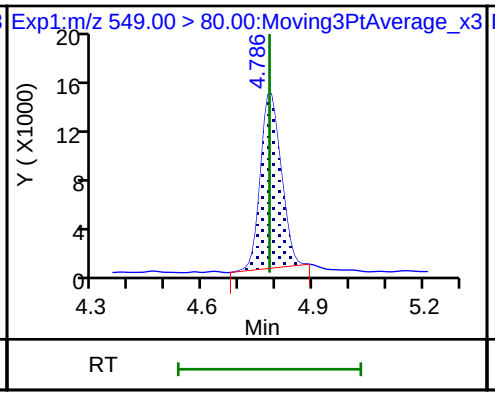

D 34 13C8 FOSA



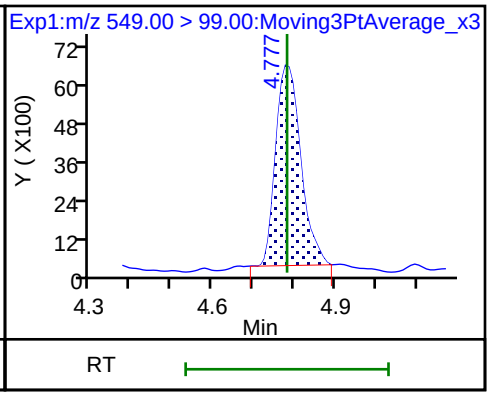

33 Perfluorooctanesulfonamide



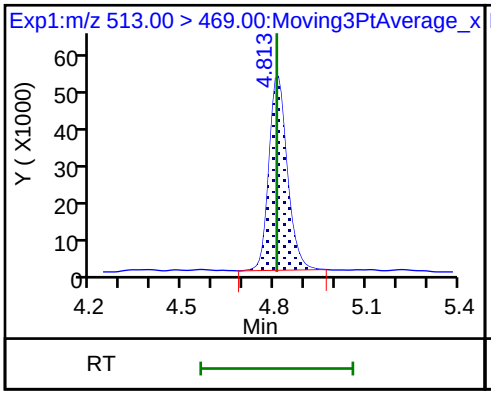

35 Perfluorononanesulfonic acid



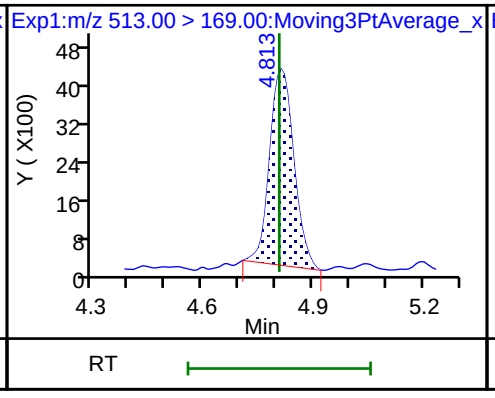

35 Perfluorononanesulfonic acid



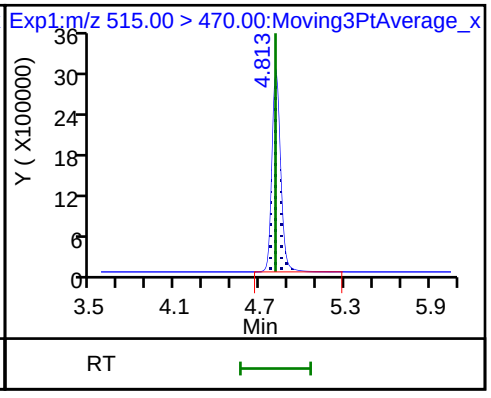

36 Perfluorodecanoic acid



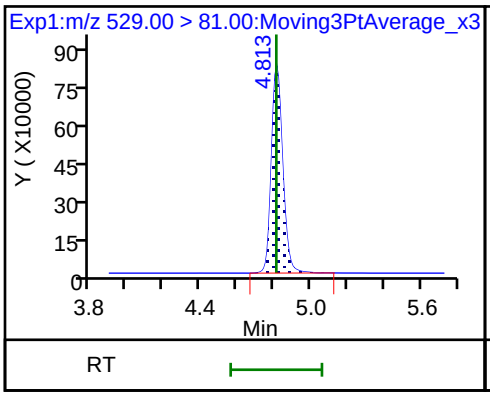

36 Perfluorodecanoic acid



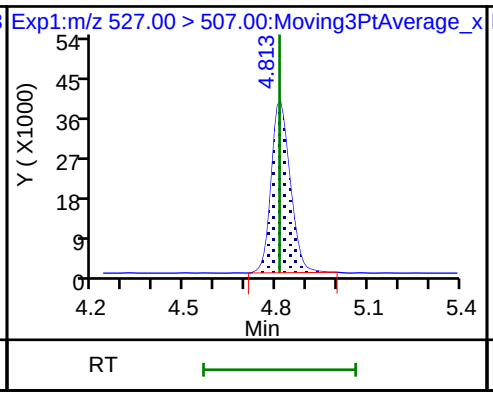

D 37 13C2 PFDA



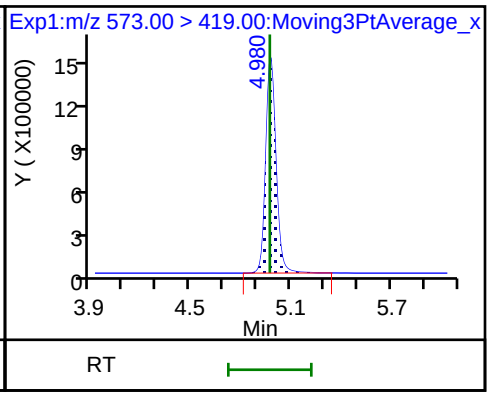
D 38 M2-8:2 FTS



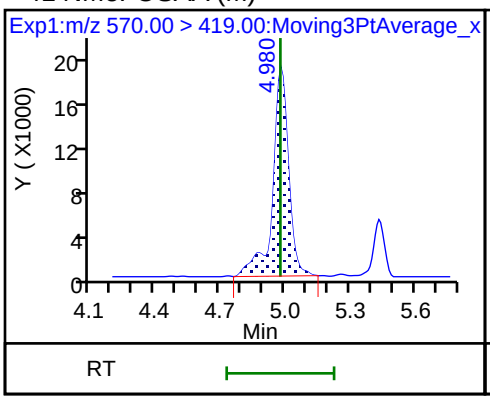

39 8:2 FTS



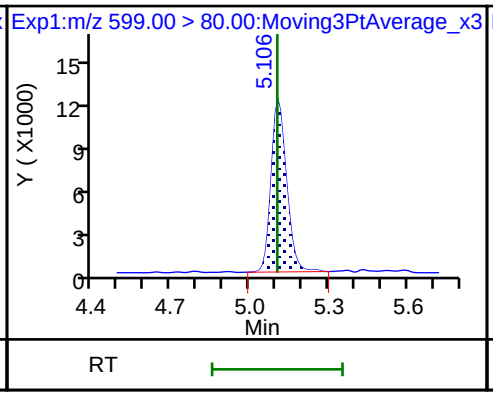

D 40 d3-NMeFOSAA



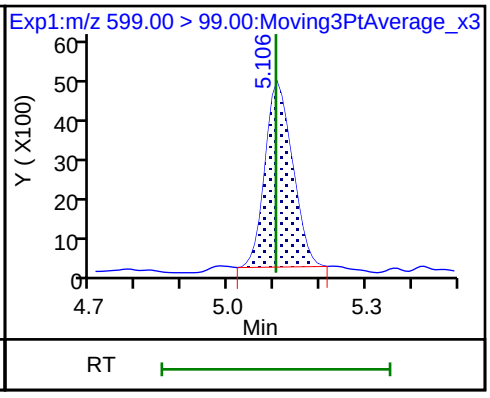

41 NMeFOSAA (M)



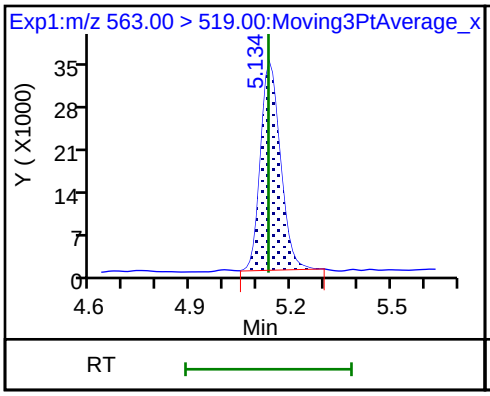

42 Perfluorodecanesulfonic acid



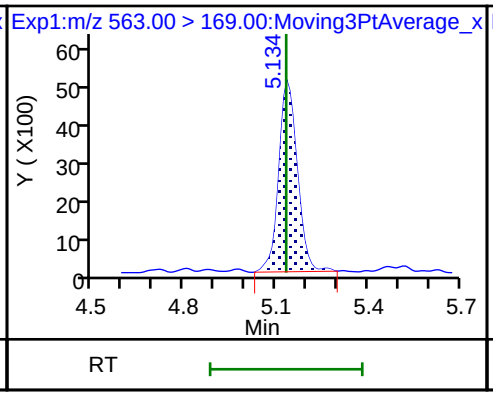

42 Perfluorodecanesulfonic acid



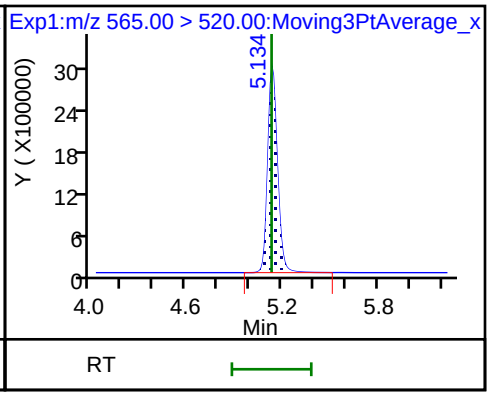

45 Perfluoroundecanoic acid



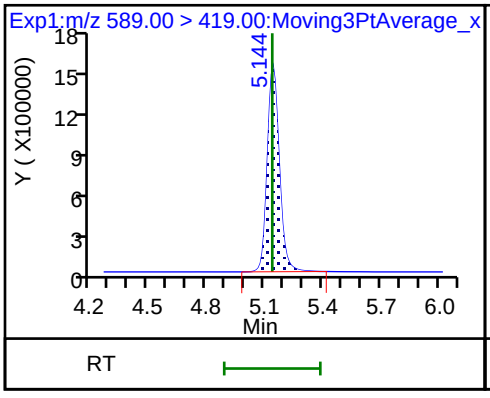

45 Perfluoroundecanoic acid



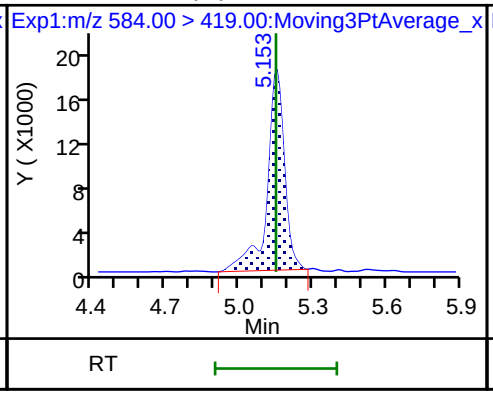

D 44 13C2 PFUnA



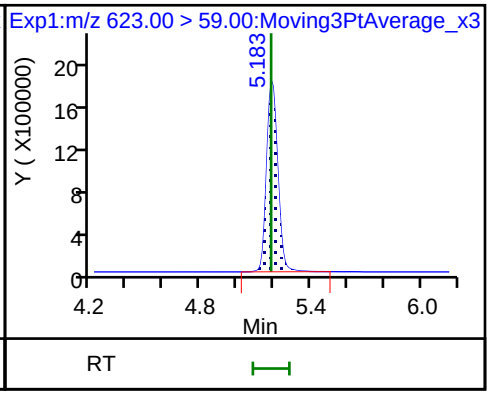

D 46 d5-NEtFOSAA



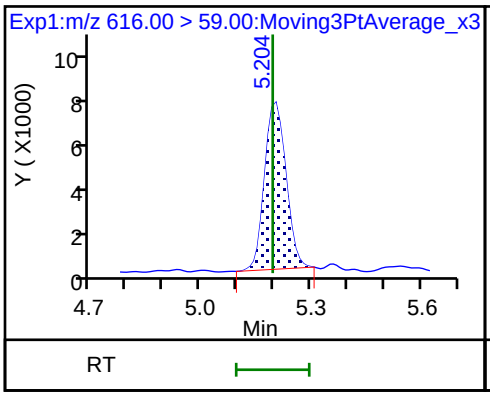

48 NEtFOSA (M)



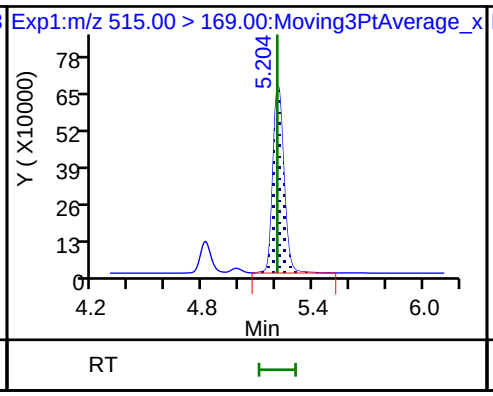

D 43 d7-N-MeFOSE-M



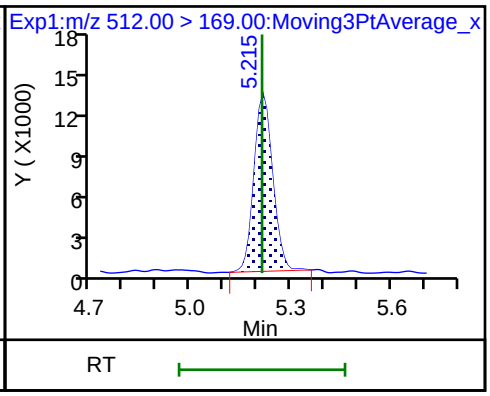
47 N-MeFOSE-M



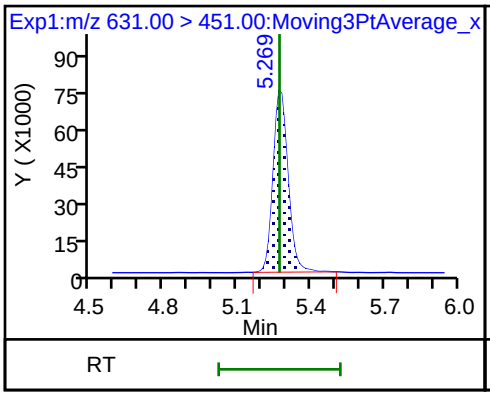

D 49 d-N-MeFOSA-M



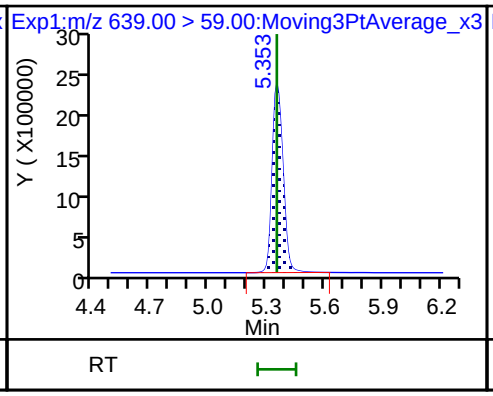

50 NMeFOSA



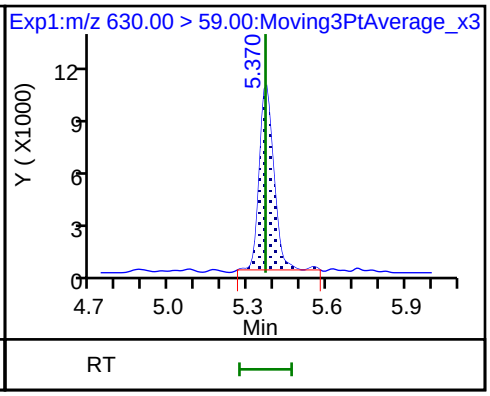

51 11ClFOS



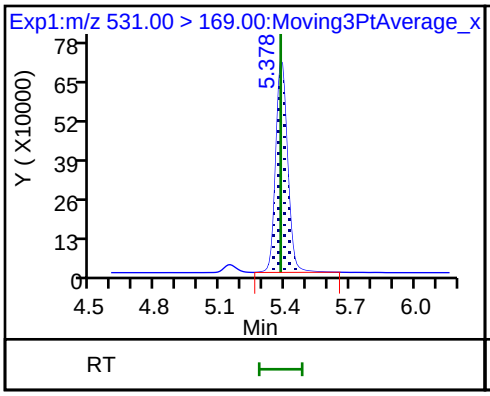

D 52 d9-N-EtFOSE-M



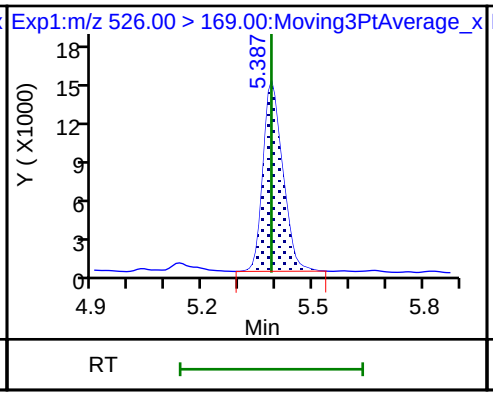

53 N-EtFOSE-M



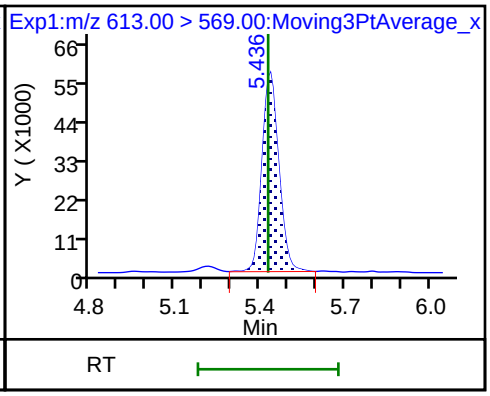

D 54 d-N-EtFOSA-M



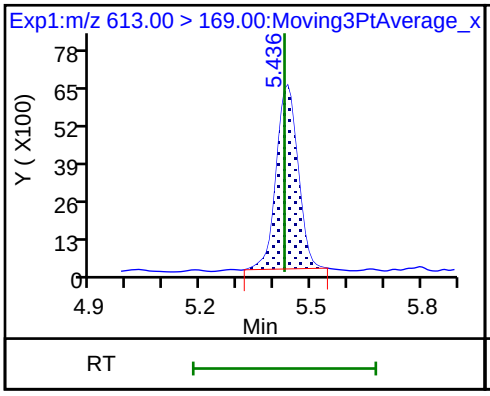

55 N-EtFOSA-M



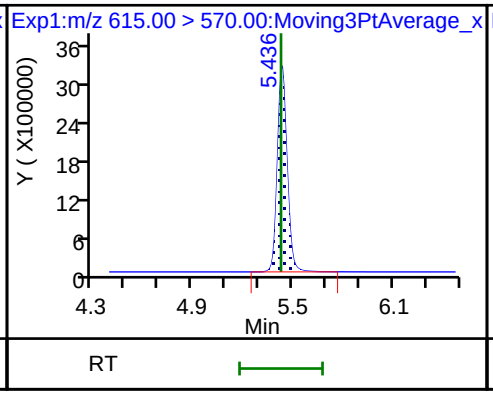

57 Perfluorododecanoic acid



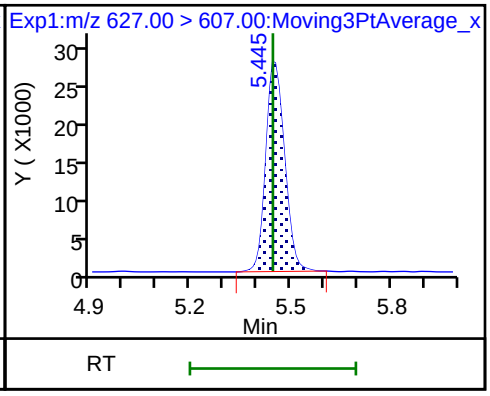

57 Perfluorododecanoic acid



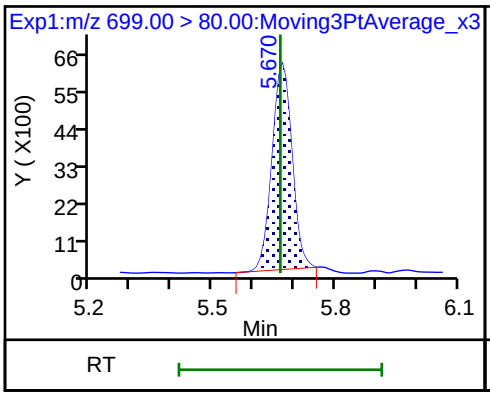

D 56 13C2 PFDoA



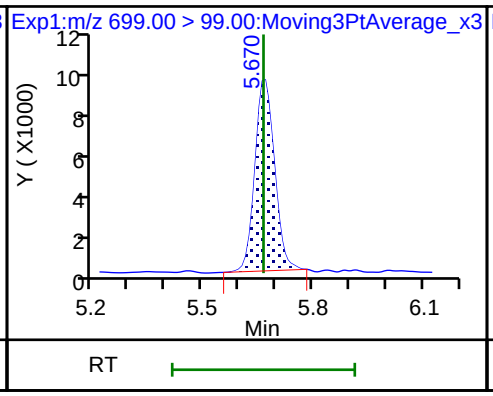

58 10:2 FTS



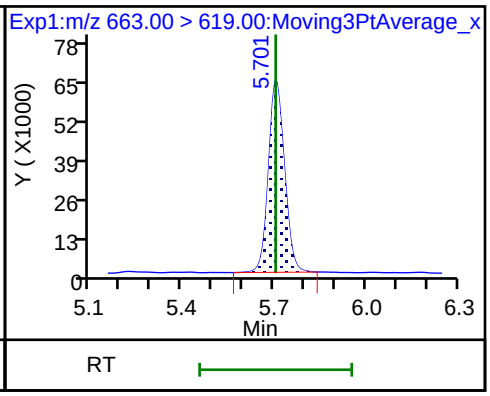
59 PFDoS



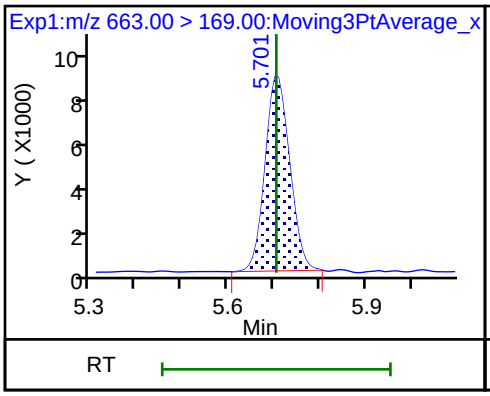

59 PFDoS



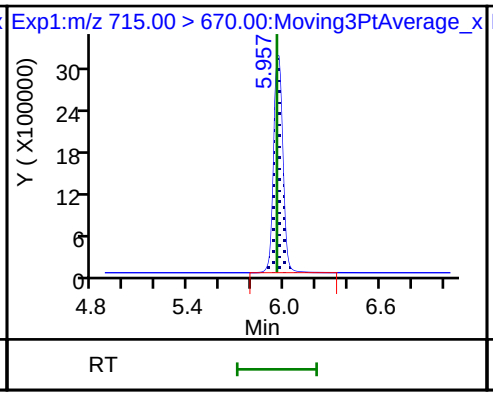

60 Perfluorotridecanoic acid



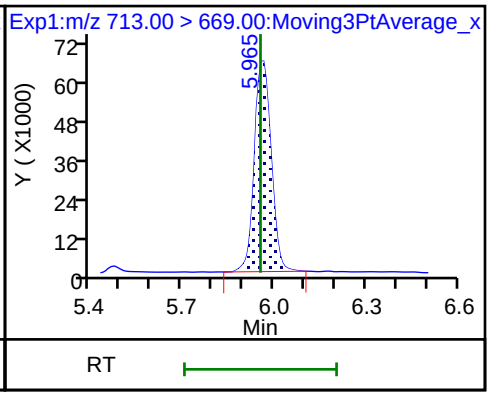

60 Perfluorotridecanoic acid



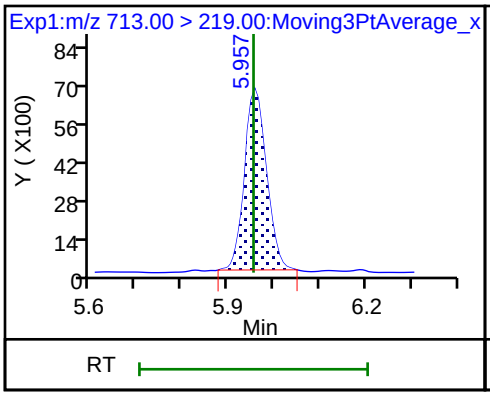

D 61 13C2 PFTeDA



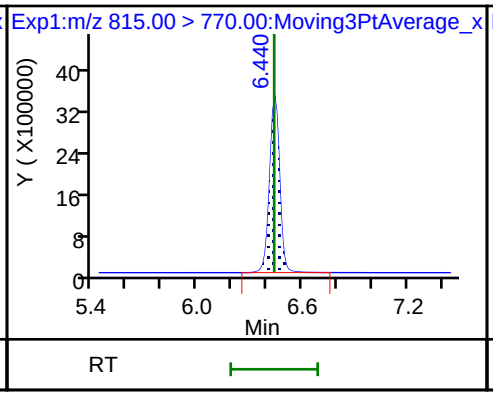

62 Perfluorotetradecanoic acid



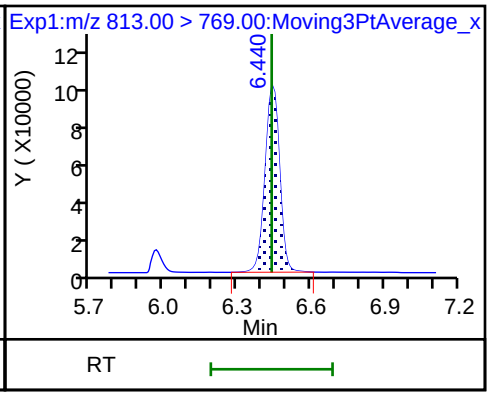

62 Perfluorotetradecanoic acid



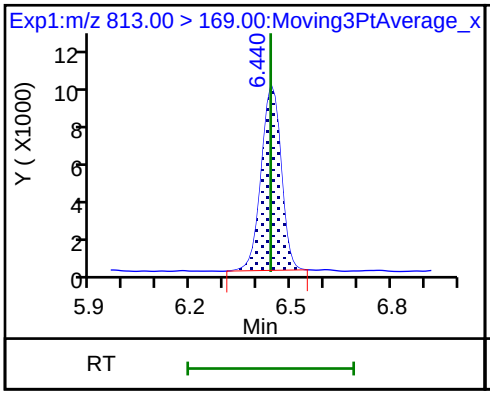

D 64 13C2 PFHxDA



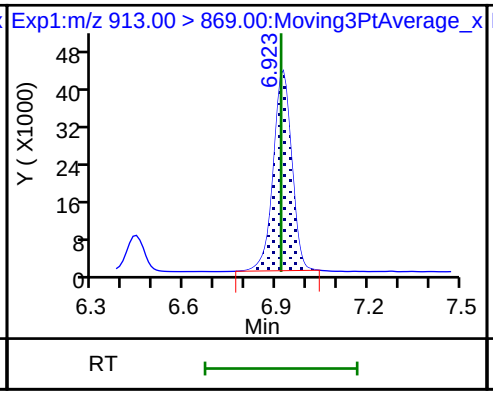

63 Perfluorohexadecanoic acid



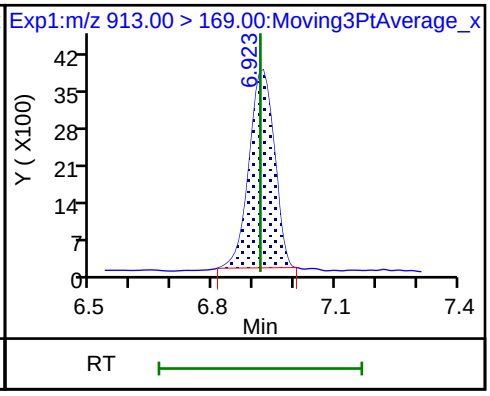

63 Perfluorohexadecanoic acid




65 Perfluorooctadecanoic acid




65 Perfluorooctadecanoic acid



Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

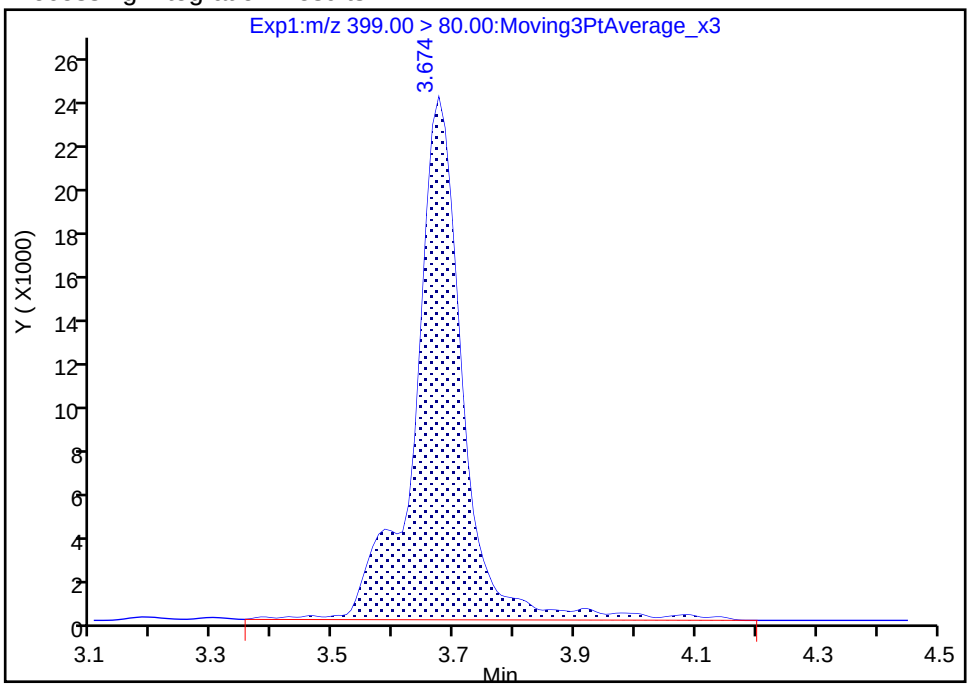
Data File: \\chromfs\Sacramento\ChromData\A13\20200908-102913.b\2020.09.08_A13_PFC_ICALX_005.d
Injection Date: 08-Sep-2020 18:11:11 Instrument ID: A13
Lims ID: IC STD 2
Client ID:
Operator ID: SACINSTLCMS01 ALS Bottle#: 2 Worklist Smp#: 3
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFAS_A13 Limit Group: LC PFC ICAL
Column: Gemini C18 3um 3 x 100mm ( 3.00 mm ) Detector EXP1

## 18 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 1

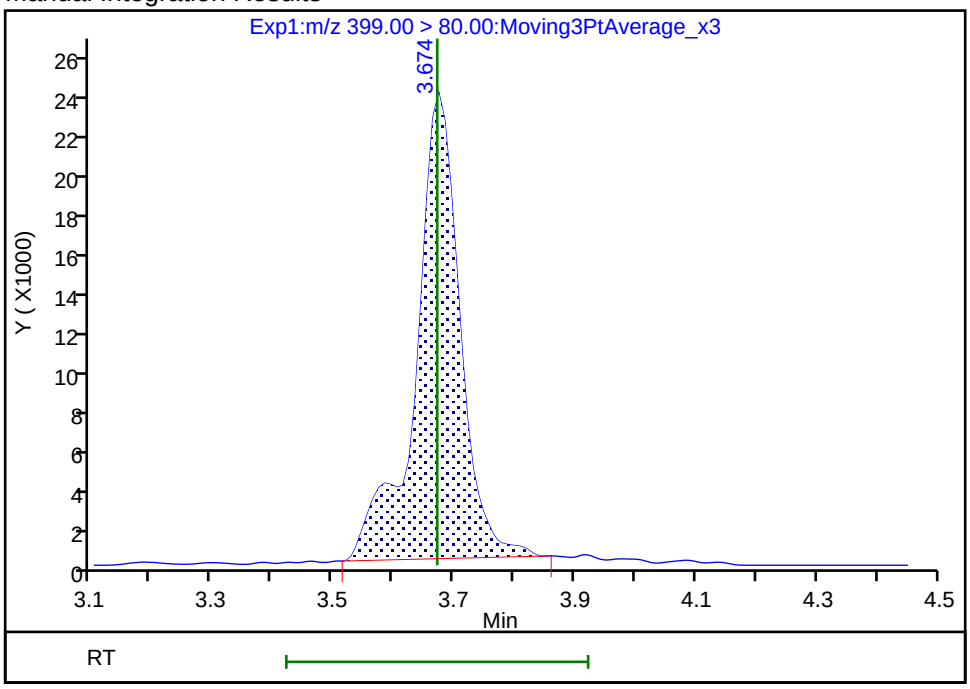
Processing Integration Results

RT: 3.67
Area: 132370
Amount: 0.048644
Amount Units: ng/ml




Manual Integration Results

RT: 3.67
Area: 120086
Amount: 0.044764
Amount Units: ng/ml




Reviewer: novoaj, 09-Sep-2020 09:27:22
Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

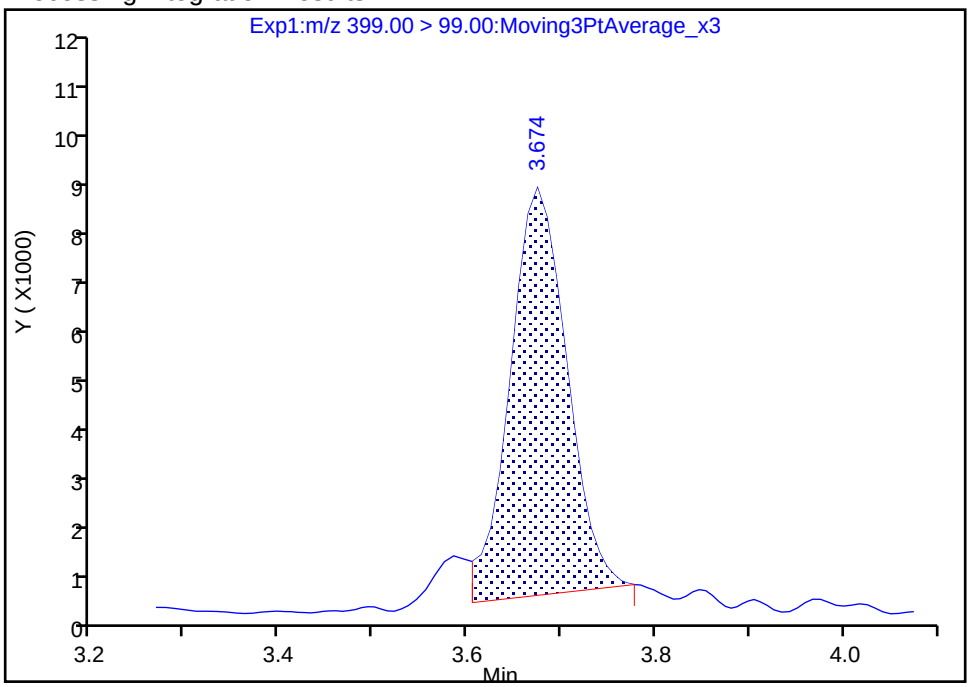
Data File: \\chromfs\Sacramento\ChromData\A13\20200908-102913.b\2020.09.08_A13_PFC_ICALX_005.d
Injection Date: 08-Sep-2020 18:11:11 Instrument ID: A13
Lims ID: IC STD 2
Client ID:
Operator ID: SACINSTLCMS01 ALS Bottle#: 2 Worklist Smp#: 3
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFAS_A13 Limit Group: LC PFC ICAL
Column: Gemini C18 3um 3 x 100mm ( 3.00 mm ID) Detector EXP1

## 18 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 2

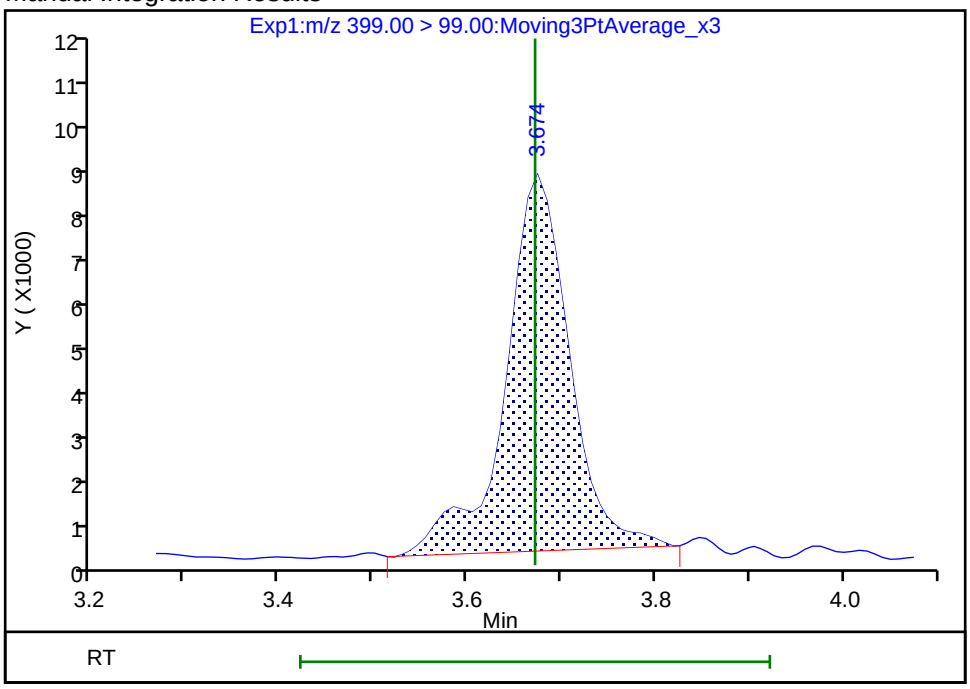
Processing Integration Results

RT: 3.67
Area: 33734
Amount: 0.048644
Amount Units: ng/ml




Manual Integration Results

RT: 3.67
Area: 39110
Amount: 0.044764
Amount Units: ng/ml




Reviewer: novoaj, 09-Sep-2020 09:27:39
Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

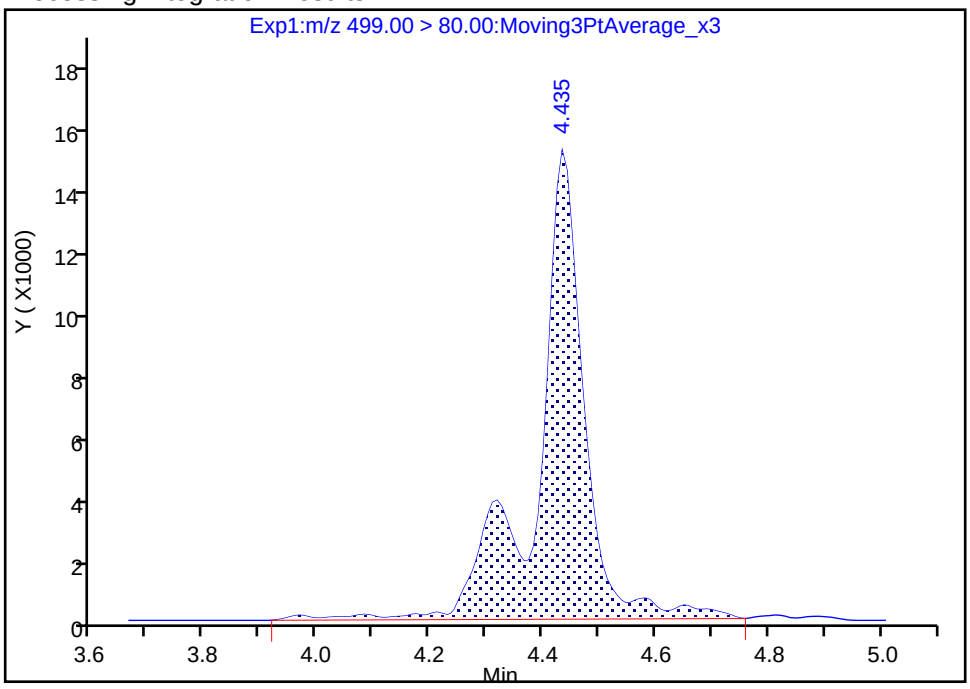
Data File: \\chromfs\Sacramento\ChromData\A13\20200908-102913.b\2020.09.08_A13_PFC_ICALX_005.d
Injection Date: 08-Sep-2020 18:11:11 Instrument ID: A13
Lims ID: IC STD 2
Client ID:
Operator ID: SACINSTLCMS01 ALS Bottle#: 2 Worklist Smp#: 3
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFAS_A13 Limit Group: LC PFC ICAL
Column: Gemini C18 3um 3 x 100mm ( 3.00 mm) Detector EXP1

## 28 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 1

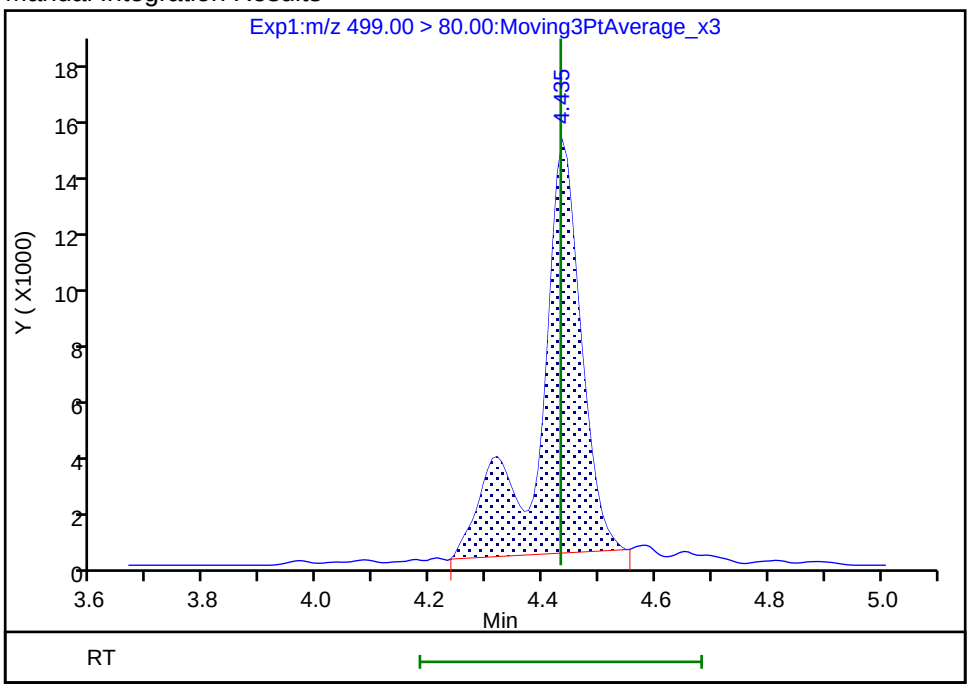
Processing Integration Results

RT: 4.43
Area: 86681
Amount: 0.046882
Amount Units: ng/ml




Manual Integration Results

RT: 4.43
Area: 73805
Amount: 0.040793
Amount Units: ng/ml




Reviewer: novoaj, 09-Sep-2020 09:28:23
Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

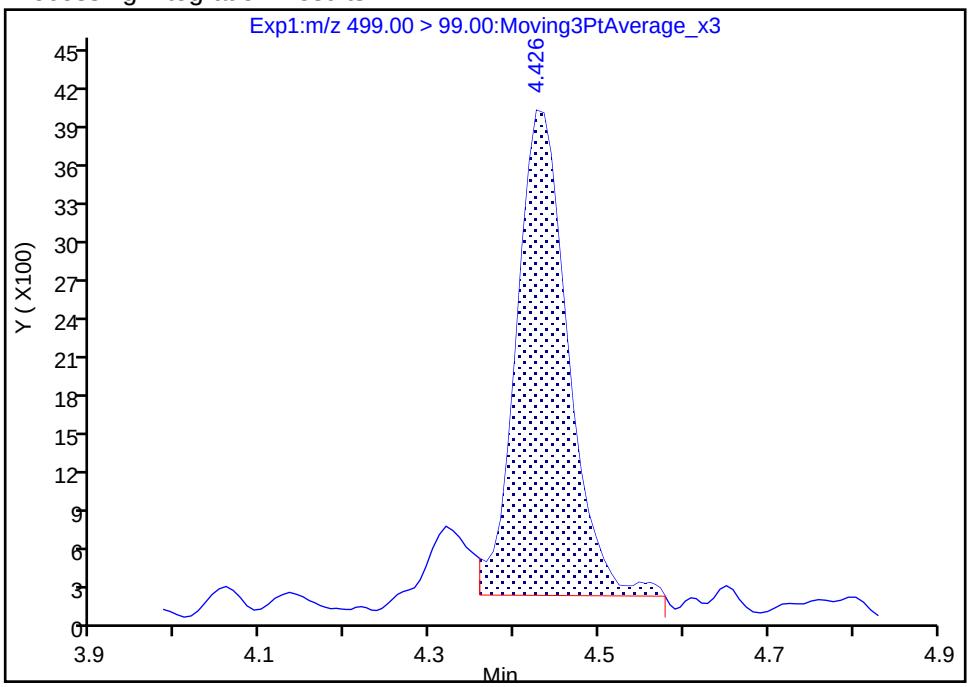
Data File: \\chromfs\Sacramento\ChromData\A13\20200908-102913.b\2020.09.08_A13_PFC_ICALX_005.d
Injection Date: 08-Sep-2020 18:11:11 Instrument ID: A13
Lims ID: IC STD 2
Client ID:
Operator ID: SACINSTLCMS01 ALS Bottle#: 2 Worklist Smp#: 3
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFAS_A13 Limit Group: LC PFC ICAL
Column: Gemini C18 3um 3 x 100mm ( 3.00 mm ) Detector EXP1

## 28 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 2

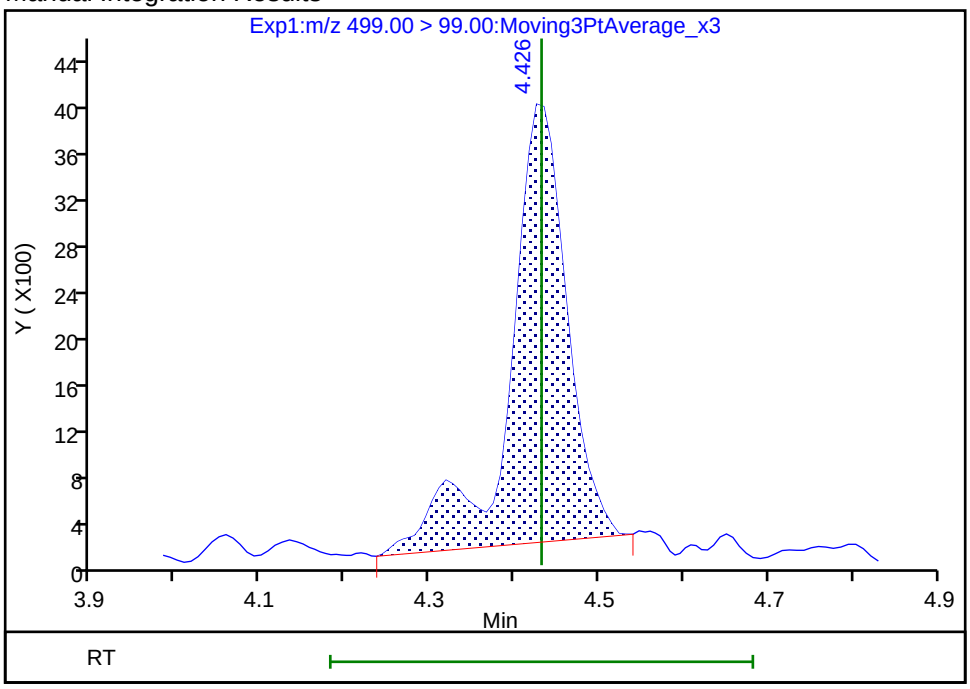
Processing Integration Results

RT: 4.43
Area: 16068
Amount: 0.046882
Amount Units: ng/ml




Manual Integration Results

RT: 4.43
Area: 17915
Amount: 0.040793
Amount Units: ng/ml




Reviewer: novoaj, 09-Sep-2020 09:28:32
Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

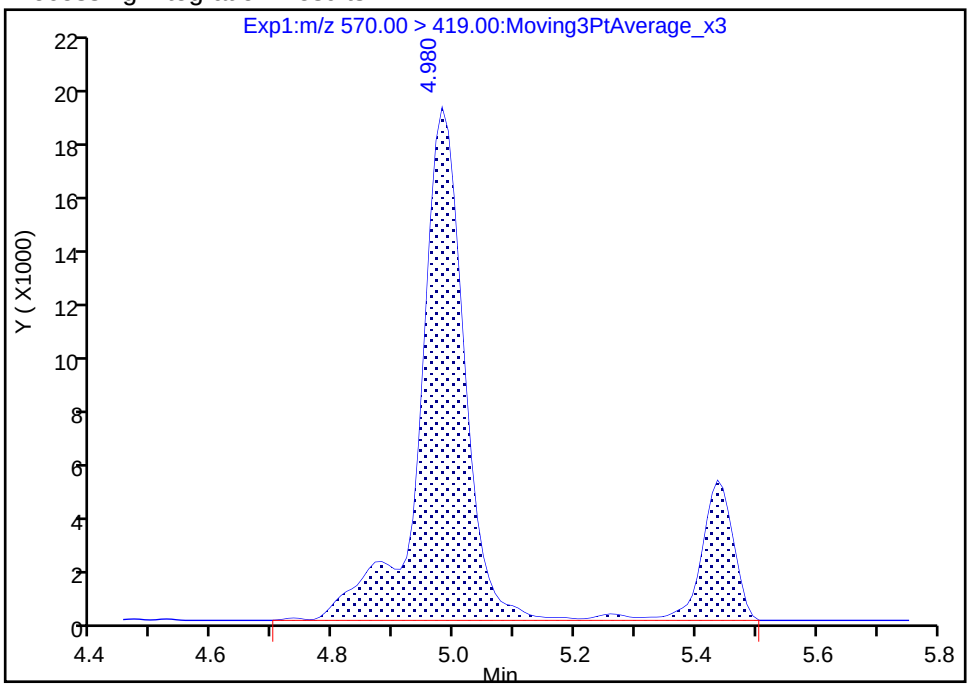
Data File: \\chromfs\Sacramento\ChromData\A13\20200908-102913.b\2020.09.08_A13_PFC_ICALX_005.d
Injection Date: 08-Sep-2020 18:11:11 Instrument ID: A13
Lims ID: IC STD 2
Client ID:
Operator ID: SACINSTLCMS01 ALS Bottle#: 2 Worklist Smp#: 3
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFAS_A13 Limit Group: LC PFC ICAL
Column: Gemini C18 3um 3 x 100mm ( 3.00 mm) Detector EXP1

## 41 NMeFOSAA, CAS: 2355-31-9

Signal: 1

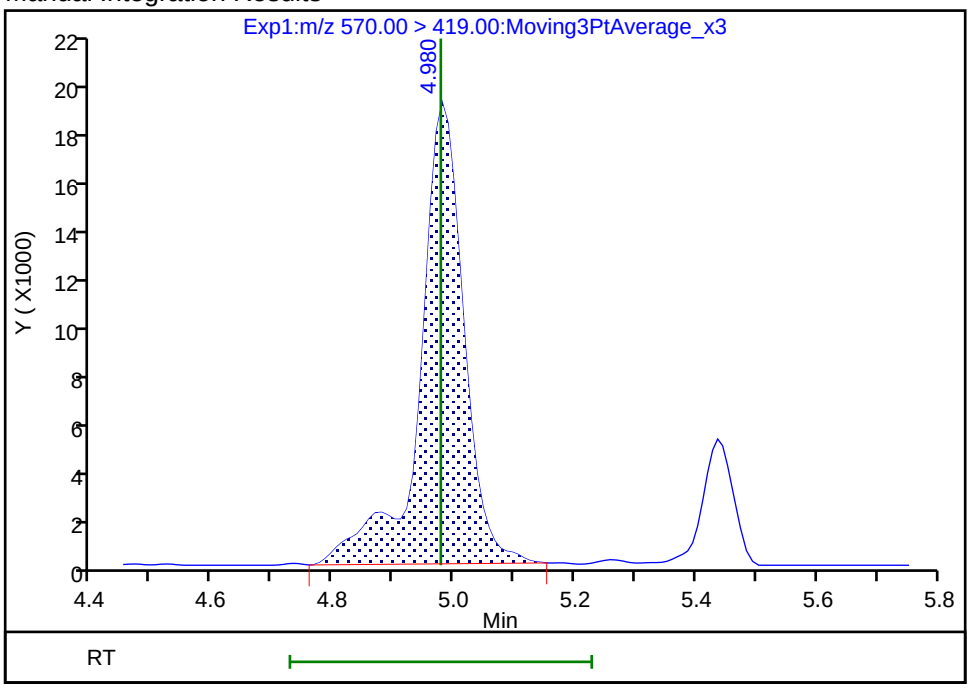
Processing Integration Results

RT: 4.98
Area: 116899
Amount: 0.055192
Amount Units: ng/ml




Manual Integration Results

RT: 4.98
Area: 95954
Amount: 0.046621
Amount Units: ng/ml




Reviewer: novoaj, 09-Sep-2020 09:28:54
Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

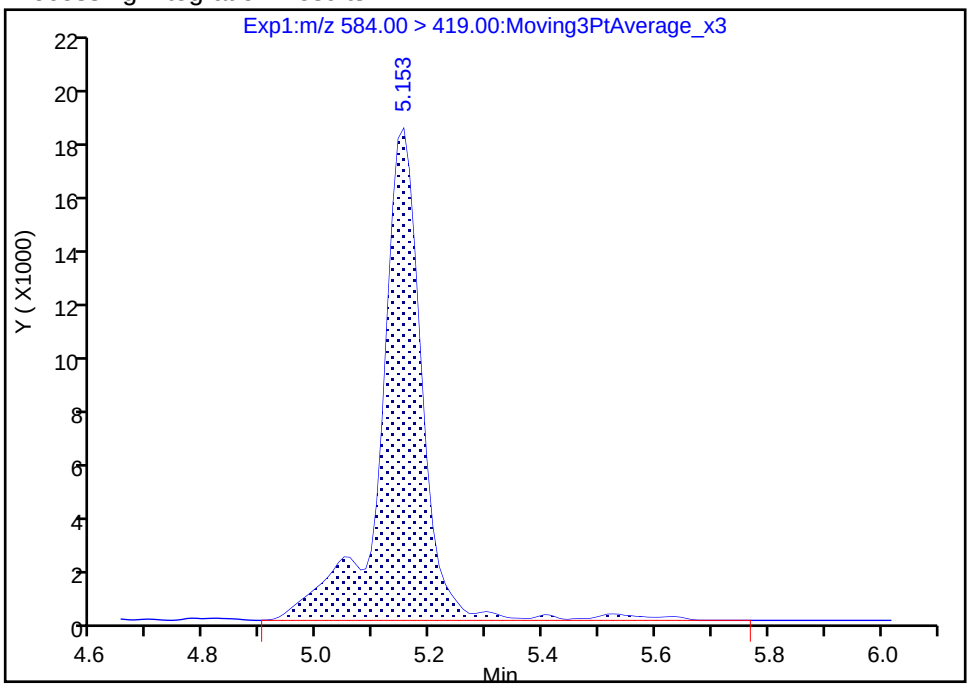
| | | | | | |
|---|---|---|---|---|---|
| Data File: | \\chromfs\Sacramento\ChromData\A13\20200908-102913.b\2020.09.08_A13_PFC_ICALX_005.d | | | | |
| Injection Date: | 08-Sep-2020 18:11:11 | Instrument ID: | A13 | | |
| Lims ID: | IC STD 2 | | | | |
| Client ID: | | | | | |
| Operator ID: | SACINSTLCMS01 | ALS Bottle#: | 2 | Worklist Smp#: | 3 |
| Injection Vol: | 20.0 ul | Dil. Factor: | 1.0000 | | |
| Method: | PFAS_A13 | Limit Group: | LC PFC ICAL | | |
| Column: | Gemini C18 3um 3 x 100mm ( 3.00 mm ) | Detector | EXP1 | | |

## 48 NEtFOSA, CAS: 2991-50-6

Signal: 1

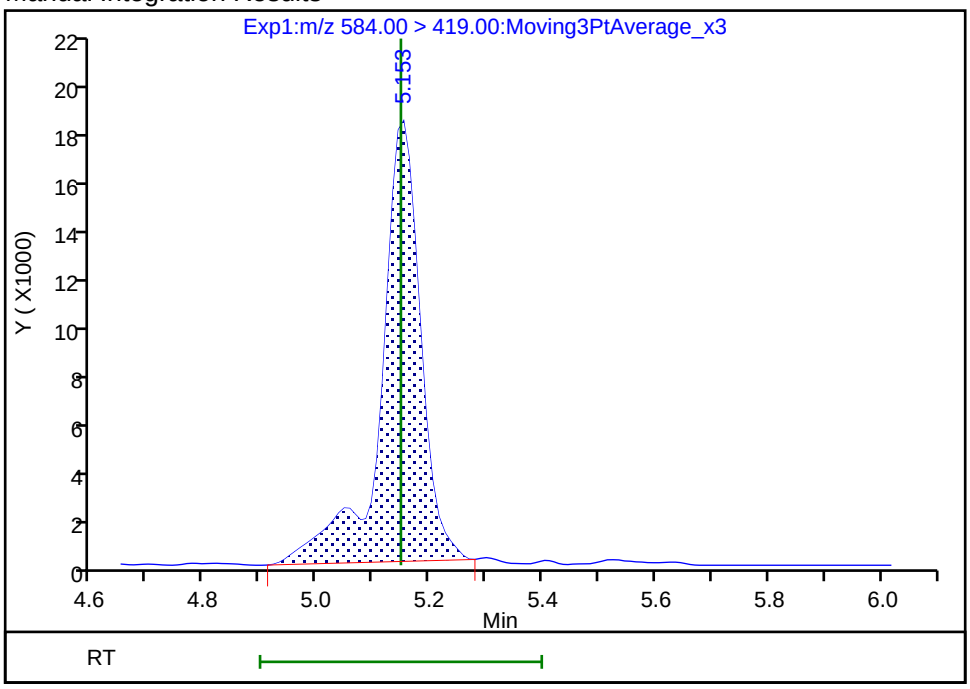
Processing Integration Results

RT: 5.15
Area: 93291
Amount: 0.046147
Amount Units: ng/ml




Manual Integration Results

RT: 5.15
Area: 87576
Amount: 0.043672
Amount Units: ng/ml




Reviewer: novoaj, 09-Sep-2020 09:29:20

Audit Action: Manually Integrated Audit Reason: Baseline

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\A13\20200908-102913.b\2020.09.08_A13_PFC_ICALX_006.d
Lims ID: IC STD 3
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 08-Sep-2020 18:20:37 ALS Bottle#: 3 Worklist Smp#: 4
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Sample Info: ISTD 3 (19)
Misc. Info.: Plate: 1 Rack: 2
Operator ID: SACINSTLCMS01 Instrument ID: A13
Sublist: chrom-PFAS_A13*sub3

Method: \\chromfs\Sacramento\ChromData\A13\20200908-102913.b\PFAS_A13.m
Limit Group: LC PFC ICAL
Last Update: 09-Sep-2020 10:21:58 Calib Date: 08-Sep-2020 18:58:15
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\A13\20200908-102913.b\2020.09.08_A13_PFC_ICALX_010.d

Column 1 : Gemini C18 3um 3 x 100mm ( 3.00 mm) Det: EXP1
Process Host: CTX1007

First Level Reviewer: novoaj Date: 09-Sep-2020 08:55:10
Ratio Calibration: Average of Initial Calibration

| Signal | RT | EXP RT | DLT RT | REL RT | Response | Amount ng/ml | Ratio(Limits) | %Rec | S/N | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| D 1 13C4 PFBA | | | | | | | | | | |
| 217.00 > 172.00 | 2.475 | 2.477 | -0.002 | 0.608 | 9492767 | 2.47 | | 98.6 | 26062 | |
| 2 Perfluorobutanoic acid | | | | | | | | | | |
| 212.90 > 169.00 | 2.482 | 2.480 | 0.002 | 1.003 | 709495 | 0.2514 | | 101 | 242 | |
| D 4 13C5 PFPeA | | | | | | | | | | |
| 267.90 > 223.00 | 2.878 | 2.873 | 0.005 | 0.708 | 7546021 | 2.51 | | 101 | 22825 | |
| 5 Perfluoropentanoic acid | | | | | | | | | | |
| 262.90 > 219.00 | 2.878 | 2.875 | 0.003 | 1.000 | 720372 | 0.2322 | | 92.9 | 129 | |
| D 14 13C3 PFBS | | | | | | | | | | |
| 301.90 > 80.00 | 2.913 | 2.913 | 0.0 | 0.716 | 8529189 | 2.26 | | 97.3 | 21044 | |
| 6 Perfluorobutanesulfonic acid | | | | | | | | | | |
| 298.90 > 80.00 | 2.913 | 2.913 | 0.0 | 1.000 | 790299 | 0.2204 | Target=2.18 | 99.7 | 808 | |
| 298.90 > 99.00 | 2.913 | 2.913 | 0.0 | 1.000 | 346519 | | 2.28(1.09-3.26) | 99.7 | 149 | |
| 7 4:2 FTS | | | | | | | | | | |
| 327.00 > 307.00 | 3.225 | 3.221 | 0.004 | 1.000 | 669502 | 0.2160 | | 92.5 | 813 | |
| D 8 M2-4:2 FTS | | | | | | | | | | |
| 329.00 > 81.00 | 3.225 | 3.222 | 0.003 | 0.793 | 2230896 | 2.42 | | 103 | 1466 | |
| D 9 13C2 PFHxA | | | | | | | | | | |
| 315.00 > 270.00 | 3.268 | 3.264 | 0.004 | 0.804 | 9339168 | 2.52 | | 101 | 36466 | |
| 10 Perfluorohexanoic acid | | | | | | | | | | |
| 313.00 > 269.00 | 3.268 | 3.265 | 0.003 | 1.000 | 807254 | 0.2325 | Target=11.68 | 93.0 | 134 | |
| 313.00 > 119.00 | 3.268 | 3.265 | 0.003 | 1.000 | 70103 | | 11.52(5.84-17.52) | 93.0 | 28.6 | |
| 11 Perfluoropentanesulfonic acid | | | | | | | | | | |
| 349.00 > 80.00 | 3.279 | 3.279 | 0.0 | 1.126 | 642082 | 0.2217 | Target=2.56 | 94.5 | 266 | |
| 349.00 > 99.00 | 3.279 | 3.279 | 0.0 | 1.126 | 249136 | | 2.58(1.28-3.84) | 94.5 | 185 | |
| 12 HPFO-DA | | | | | | | | | | |
| 285.00 > 169.00 | 3.388 | 3.386 | 0.002 | 1.000 | 190661 | 0.2471 | | 98.8 | 560 | |

| Signal | RT | EXP RT | DLT RT | REL RT | Response | Amount ng/ml | Ratio(Limits) | %Rec | S/N | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| D 13 13C3 HFPO-DA | | | | | | | | | | |
| 287.00 > 169.00 | 3.388 | 3.386 | 0.002 | 0.833 | 6489896 | 2.44 | | 97.7 | 5062 | |
| 16 Perfluoroheptanoic acid | | | | | | | | | | |
| 363.00 > 319.00 | 3.675 | 3.670 | 0.005 | 1.000 | 893875 | 0.2487 | Target=3.85 | 99.5 | 126 | |
| 363.00 > 169.00 | 3.675 | 3.670 | 0.005 | 1.000 | 221395 | | 4.04(1.92-5.77) | 99.5 | 127 | |
| D 15 13C4 PFHpA | | | | | | | | | | |
| 367.00 > 322.00 | 3.675 | 3.668 | 0.007 | 0.904 | 8890952 | 2.44 | | 97.4 | 5361 | |
| D 17 18O2 PFHxS | | | | | | | | | | |
| 403.00 > 84.00 | 3.675 | 3.672 | 0.003 | 0.904 | 5771004 | 2.34 | | 98.8 | 47510 | |
| 18 Perfluorohexanesulfonic acid | | | | | | | | | | M |
| 399.00 > 80.00 | 3.675 | 3.672 | 0.003 | 1.000 | 605478 | 0.2231 | Target=3.25 | 98.1 | 116253 | |
| 399.00 > 99.00 | 3.675 | 3.672 | 0.003 | 1.000 | 181306 | | 3.34(1.62-4.87) | 98.1 | 105 | M |
| 19 DONA | | | | | | | | | | |
| 377.00 > 251.00 | 3.722 | 3.719 | 0.003 | 0.839 | 2142670 | 0.2386 | Target=2.76 | 101 | 2508 | |
| 377.00 > 85.00 | 3.722 | 3.719 | 0.003 | 0.839 | 706836 | | 3.03(1.38-4.14) | 101 | 703 | |
| D 20 M2-6:2 FTS | | | | | | | | | | |
| 429.00 > 81.00 | 4.042 | 4.043 | -0.001 | 0.994 | 2624141 | 2.47 | | 104 | 4204 | |
| 21 6:2 FTS | | | | | | | | | | |
| 427.00 > 407.00 | 4.042 | 4.043 | -0.001 | 1.000 | 592730 | 0.2229 | | 94.0 | 678 | |
| 22 Perfluoroheptanesulfonic acid | | | | | | | | | | |
| 449.00 > 80.00 | 4.059 | 4.056 | 0.003 | 0.915 | 442411 | 0.2222 | Target=4.29 | 93.4 | 378 | |
| 449.00 > 99.00 | 4.059 | 4.056 | 0.003 | 0.915 | 110876 | | 3.99(2.15-6.44) | 93.4 | 171 | |
| $ 23 13C8 PFOA | | | | | | | | | | |
| 421.00 > 376.00 | 4.059 | 4.058 | 0.001 | 0.998 | 9724361 | 2.41 | | 98.4 | 9799 | |
| * 25 13C2 PFOA | | | | | | | | | | |
| 415.00 > 370.00 | 4.067 | 4.065 | 0.002 | | 11327488 | 2.50 | | | 4040 | |
| D 24 13C4 PFOA | | | | | | | | | | |
| 417.00 > 372.00 | 4.067 | 4.065 | 0.002 | 1.000 | 11141953 | 2.50 | | 99.9 | 7325 | |
| 26 Perfluorooctanoic acid | | | | | | | | | | |
| 413.00 > 369.00 | 4.067 | 4.066 | 0.001 | 1.000 | 1085567 | 0.2381 | Target=2.95 | 95.2 | 222 | |
| 413.00 > 169.00 | 4.067 | 4.066 | 0.001 | 1.000 | 368954 | | 2.94(1.47-4.42) | 95.2 | 377 | |
| $ 27 13C8 PFOS | | | | | | | | | | |
| 507.00 > 99.00 | 4.426 | 4.426 | 0.0 | 1.088 | 2271472 | 2.42 | | 101 | 4386 | |
| D 29 13C4 PFOS | | | | | | | | | | |
| 503.00 > 80.00 | 4.435 | 4.429 | 0.006 | 1.090 | 4177857 | 2.37 | | 99.2 | 2565 | |
| 28 Perfluorooctanesulfonic acid | | | | | | | | | | M |
| 499.00 > 80.00 | 4.435 | 4.432 | 0.003 | 1.000 | 415124 | 0.2287 | Target=4.28 | 98.6 | 476 | |
| 499.00 > 99.00 | 4.435 | 4.432 | 0.003 | 1.000 | 91049 | | 4.56(2.14-6.41) | 98.6 | 122 | M |
| D 31 13C5 PFNA | | | | | | | | | | |
| 468.00 > 423.00 | 4.452 | 4.448 | 0.004 | 1.095 | 10246517 | 2.49 | | 99.4 | 35851 | |
| 30 Perfluorononanoic acid | | | | | | | | | | |
| 463.00 > 419.00 | 4.452 | 4.449 | 0.003 | 1.000 | 956806 | 0.2459 | Target=8.00 | 98.4 | 238 | |
| 463.00 > 169.00 | 4.452 | 4.449 | 0.003 | 1.000 | 123834 | | 7.73(4.00-12.01) | 98.4 | 267 | |
| 32 9ClFOS | | | | | | | | | | |
| 531.00 > 351.00 | 4.636 | 4.632 | 0.004 | 1.045 | 976991 | 0.2234 | | 95.9 | 813 | |
| D 34 13C8 FOSA | | | | | | | | | | |
| 506.00 > 78.00 | 4.743 | 4.738 | 0.005 | 1.166 | 6237740 | 2.47 | | 98.6 | 6501 | |

| Signal | RT | EXP RT | DLT RT | REL RT | Response | Amount ng/ml | Ratio(Limits) | %Rec | S/N | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| 33 Perfluorooctanesulfonamide | | | | | | | | | | |
| 498.00 > 78.00 | 4.743 | 4.739 | 0.004 | 1.000 | 564719 | 0.2412 | | 96.5 | 1793 | |
| 35 Perfluorononanesulfonic acid | | | | | | | | | | |
| 549.00 > 80.00 | 4.786 | 4.781 | 0.005 | 1.079 | 319494 | 0.2359 | Target=2.15 | 98.3 | 707 | |
| 549.00 > 99.00 | 4.786 | 4.781 | 0.005 | 1.079 | 145666 | | 2.19(1.08-3.23) | 98.3 | 320 | |
| 36 Perfluorodecanoic acid | | | | | | | | | | |
| 513.00 > 469.00 | 4.813 | 4.808 | 0.005 | 1.000 | 1120870 | 0.2509 | Target=10.44 | 100 | 569 | |
| 513.00 > 169.00 | 4.813 | 4.808 | 0.005 | 1.000 | 100223 | | 11.18(5.22-15.65) | 100 | 206 | |
| D 37 13C2 PFDA | | | | | | | | | | |
| 515.00 > 470.00 | 4.813 | 4.808 | 0.005 | 1.183 | 12458933 | 2.49 | | 99.8 | 10087 | |
| D 38 M2-8:2 FTS | | | | | | | | | | |
| 529.00 > 81.00 | 4.813 | 4.810 | 0.003 | 1.183 | 3470562 | 2.47 | | 103 | 3012 | |
| 39 8:2 FTS | | | | | | | | | | |
| 527.00 > 507.00 | 4.813 | 4.810 | 0.003 | 1.000 | 831326 | 0.2321 | | 96.9 | 3537 | |
| D 40 d3-NMeFOSAA | | | | | | | | | | |
| 573.00 > 419.00 | 4.980 | 4.972 | 0.008 | 1.225 | 6542549 | 2.54 | | 102 | 3166 | |
| 41 NMeFOSAA | | | | | | | | | | |
| 570.00 > 419.00 | 4.980 | 4.978 | 0.002 | 1.000 | 494318 | 0.2345 | | 93.8 | 103 | |
| 42 Perfluorodecanesulfonic acid | | | | | | | | | | |
| 599.00 > 80.00 | 5.106 | 5.103 | 0.003 | 1.151 | 269601 | 0.2341 | Target=2.36 | 97.1 | 535 | |
| 599.00 > 99.00 | 5.106 | 5.103 | 0.003 | 1.151 | 115180 | | 2.34(1.18-3.54) | 97.1 | 241 | |
| 45 Perfluoroundecanoic acid | | | | | | | | | | |
| 563.00 > 519.00 | 5.134 | 5.132 | 0.002 | 1.000 | 698590 | 0.2147 | Target=8.67 | 85.9 | 512 | |
| 563.00 > 169.00 | 5.134 | 5.132 | 0.002 | 1.000 | 88117 | | 7.93(4.34-13.01) | 85.9 | 275 | |
| D 44 13C2 PFUnA | | | | | | | | | | |
| 565.00 > 520.00 | 5.134 | 5.132 | 0.002 | 1.262 | 12295425 | 2.52 | | 101 | 54224 | |
| D 46 d5-NEtFOSAA | | | | | | | | | | |
| 589.00 > 419.00 | 5.144 | 5.139 | 0.005 | 1.265 | 6718667 | 2.70 | | 108 | 3637 | |
| 48 NEtFOSA | | | | | | | | | | |
| 584.00 > 419.00 | 5.153 | 5.148 | 0.005 | 1.002 | 476100 | 0.2289 | | 91.5 | 3510 | |
| D 43 d7-N-MeFOSE-M | | | | | | | | | | |
| 623.00 > 59.00 | 5.183 | 5.182 | 0.001 | 1.274 | 7576494 | 12.0 | | 95.7 | 2957 | |
| 47 N-MeFOSE-M | | | | | | | | | | |
| 616.00 > 59.00 | 5.204 | 5.195 | 0.009 | 1.004 | 147125 | 0.2280 | | 91.2 | 254 | |
| D 49 d-N-MeFOSA-M | | | | | | | | | | |
| 515.00 > 169.00 | 5.204 | 5.205 | -0.001 | 1.280 | 2745104 | 2.31 | | 92.2 | 48.7 | |
| 50 NMeFOSA | | | | | | | | | | |
| 512.00 > 169.00 | 5.216 | 5.213 | 0.003 | 1.002 | 262426 | 0.2431 | | 97.2 | 240 | |
| 51 11ClFOS | | | | | | | | | | |
| 631.00 > 451.00 | 5.280 | 5.271 | 0.009 | 1.191 | 1735311 | 0.2300 | | 97.7 | 1616 | |
| D 52 d9-N-EtFOSE-M | | | | | | | | | | |
| 639.00 > 59.00 | 5.354 | 5.352 | 0.002 | 1.316 | 9281452 | 12.5 | | 99.9 | 4076 | |
| 53 N-EtFOSE-M | | | | | | | | | | |
| 630.00 > 59.00 | 5.371 | 5.366 | 0.005 | 1.003 | 187883 | 0.2444 | | 97.8 | 368 | |
| D 54 d-N-EtFOSA-M | | | | | | | | | | |
| 531.00 > 169.00 | 5.380 | 5.379 | 0.001 | 1.323 | 2603727 | 2.29 | | 91.6 | 257 | |

| Signal | RT | EXP RT | DLT RT | REL RT | Response | Amount ng/ml | Ratio(Limits) | %Rec | S/N | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| 55 N-EtFOSA-M | | | | | | | | | | |
| 526.00 > 169.00 | 5.388 | 5.386 | 0.002 | 1.002 | 271456 | 0.2454 | | 98.2 | 179 | |
| 57 Perfluorododecanoic acid | | | | | | | | | | |
| 613.00 > 569.00 | 5.429 | 5.428 | 0.001 | 1.000 | 1252132 | 0.2650 | Target=9.05 | 106 | 779 | |
| 613.00 > 169.00 | 5.429 | 5.428 | 0.001 | 1.000 | 134931 | | 9.28(4.52-13.57) | 106 | 530 | |
| D 56 13C2 PFDoA | | | | | | | | | | |
| 615.00 > 570.00 | 5.429 | 5.428 | 0.001 | 1.335 | 12949938 | 2.46 | | 98.5 | 12026 | |
| 58 10:2 FTS | | | | | | | | | | |
| 627.00 > 607.00 | 5.446 | 5.445 | 0.001 | 1.132 | 539015 | 0.2279 | | 94.6 | 2301 | |
| 59 PFDoS | | | | | | | | | | |
| 699.00 > 80.00 | 5.671 | 5.665 | 0.006 | 1.279 | 107576 | 0.2393 | Target=0.57 | 98.9 | 490 | |
| 699.00 > 99.00 | 5.663 | 5.665 | -0.002 | 1.277 | 187466 | | 0.57(0.29-0.86) | 98.9 | 579 | |
| 60 Perfluorotridecanoic acid | | | | | | | | | | |
| 663.00 > 619.00 | 5.710 | 5.704 | 0.006 | 1.052 | 1221450 | 0.2516 | Target=7.06 | 101 | 1053 | |
| 663.00 > 169.00 | 5.702 | 5.704 | -0.002 | 1.050 | 166475 | | 7.34(3.53-10.59) | 101 | 592 | |
| D 61 13C2 PFTeDA | | | | | | | | | | |
| 715.00 > 670.00 | 5.958 | 5.953 | 0.005 | 1.465 | 12914651 | 2.49 | | 99.5 | 9286 | |
| 62 Perfluorotetradecanoic acid | | | | | | | | | | |
| 713.00 > 669.00 | 5.958 | 5.954 | 0.004 | 1.000 | 1264431 | 0.2487 | Target=11.23 | 99.5 | 928 | |
| 713.00 > 219.00 | 5.950 | 5.954 | -0.004 | 0.999 | 113550 | | 11.14(5.62-16.85) | 99.5 | 624 | |
| D 64 13C2 PFHxDA | | | | | | | | | | |
| 815.00 > 770.00 | 6.435 | 6.437 | -0.002 | 1.582 | 13447822 | 2.49 | | 99.5 | 11120 | |
| 63 Perfluorohexadecanoic acid | | | | | | | | | | |
| 813.00 > 769.00 | 6.446 | 6.439 | 0.007 | 1.002 | 1385662 | 0.2461 | Target=9.45 | 98.4 | 306 | |
| 813.00 > 169.00 | 6.446 | 6.439 | 0.007 | 1.002 | 147710 | | 9.38(4.72-14.17) | 98.4 | 647 | |
| 65 Perfluorooctadecanoic acid | | | | | | | | | | |
| 913.00 > 869.00 | 6.920 | 6.915 | 0.005 | 1.075 | 935248 | 0.2380 | Target=11.13 | 95.2 | 492 | |
| 913.00 > 169.00 | 6.920 | 6.915 | 0.005 | 1.075 | 82869 | | 11.29(5.56-16.69) | 95.2 | 499 | |

## QC Flag Legend

Review Flags

M - Manually Integrated

## Reagents:

LCPFC_LL3_00019 Amount Added: 1.00 Units: mL

Report Date: 09-Sep-2020 10:22:01 Chrom Revision: 2.3 20-Aug-2020 13:57:12

Eurofins TestAmerica, Sacramento

Data File: \\chromfs\Sacramento\ChromData\A13\20200908-102913.b\2020.09.08_A13_PFC_ICALX_006.d

Injection Date: 08-Sep-2020 18:20:37 Instrument ID: A13

Lims ID: IC STD 3

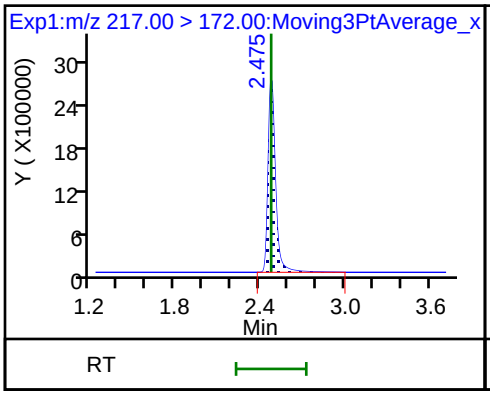
Client ID:

Operator ID: SACINSTLCMS01 ALS Bottle#: 3 Worklist Smp#: 4

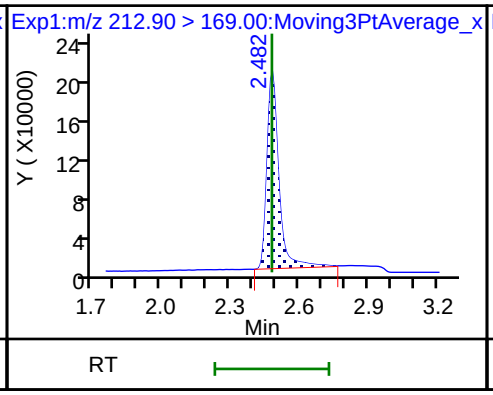
Injection Vol: 20.0 ul Dil. Factor: 1.0000

Method: PFAS_A13 Limit Group: LC PFC ICAL

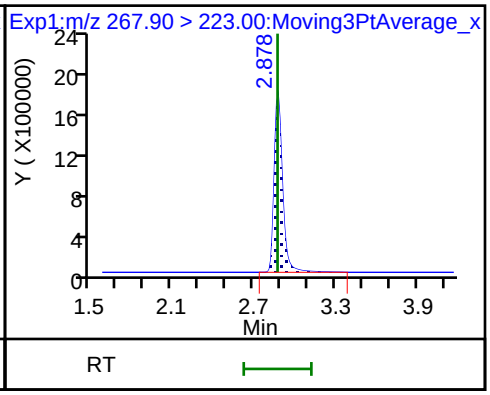
D 1 13C4 PFBA



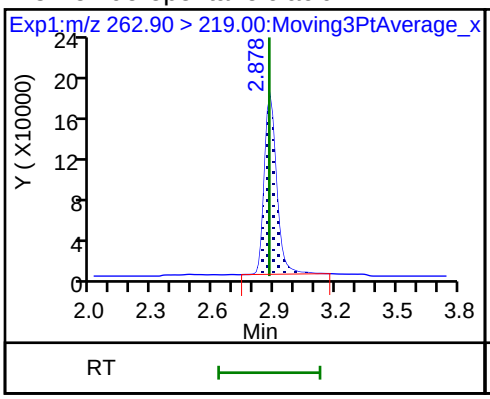

2 Perfluorobutanoic acid



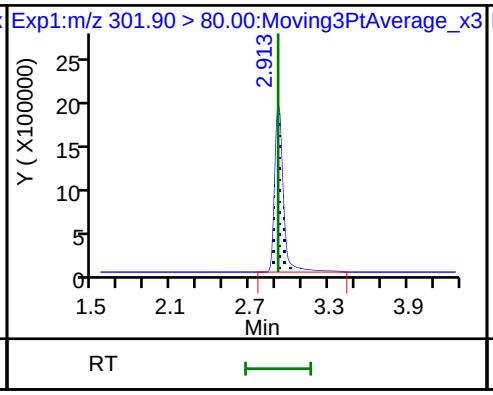

D 4 13C5 PFPeA



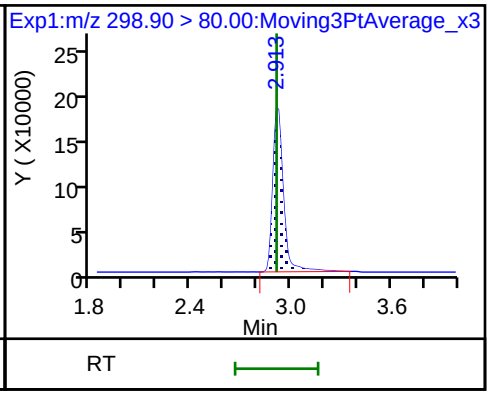

5 Perfluoropentanoic acid



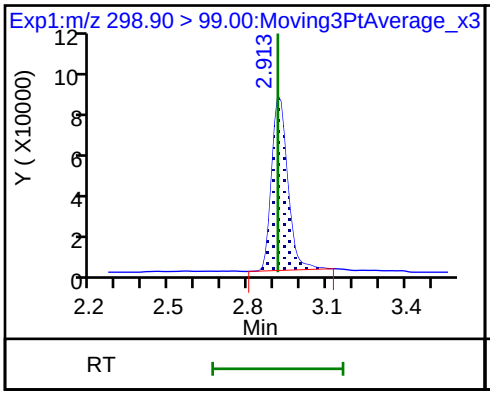

D 14 13C3 PFBS



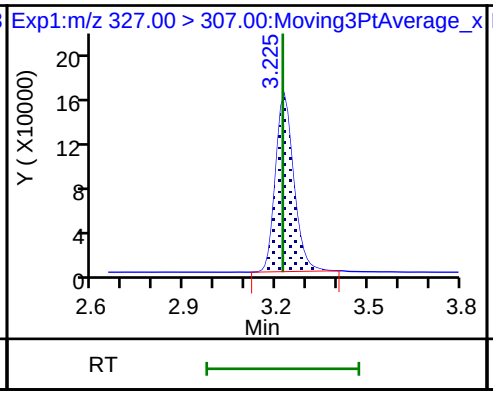

6 Perfluorobutanesulfonic acid



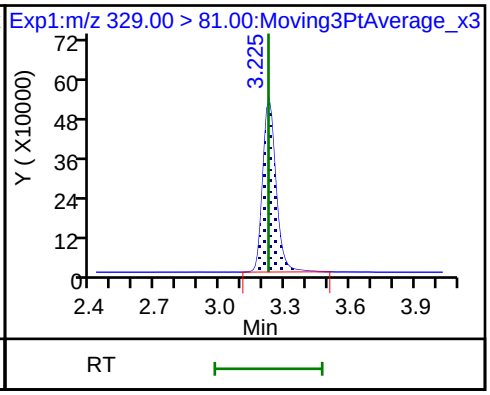

6 Perfluorobutanesulfonic acid



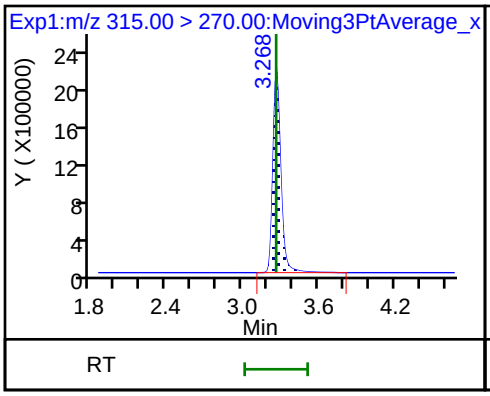

7 4:2 FTS



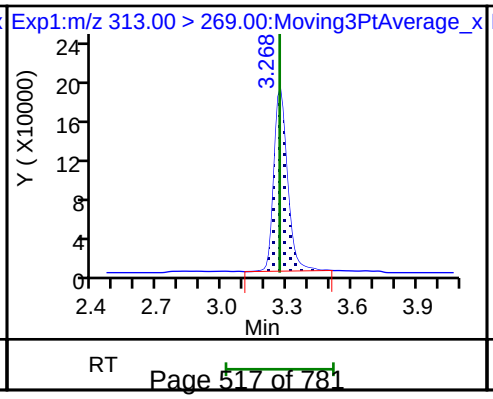

D 8 M2-4:2 FTS



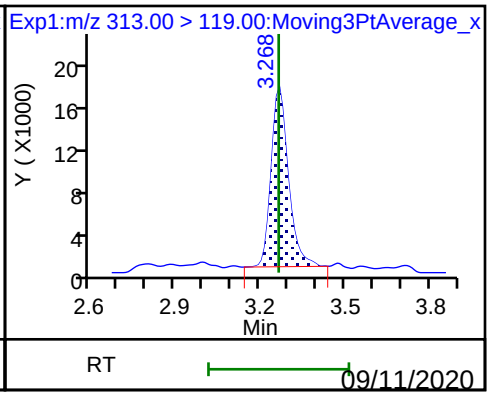

D 9 13C2 PFHxA



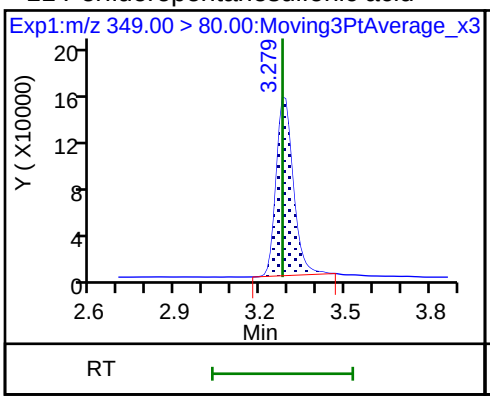

10 Perfluorohexanoic acid



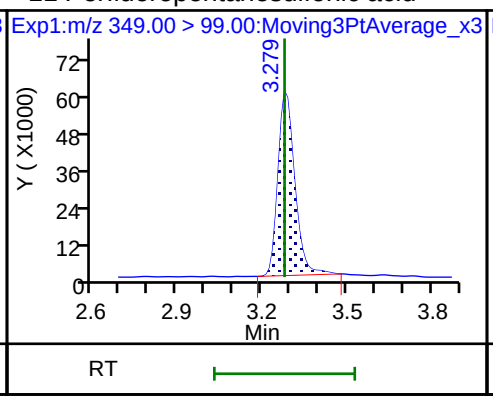

10 Perfluorohexanoic acid



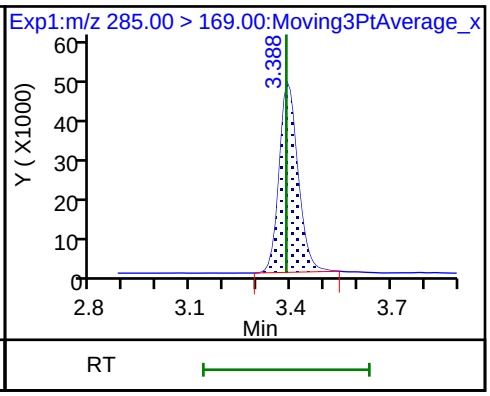
11 Perfluoropentanesulfonic acid



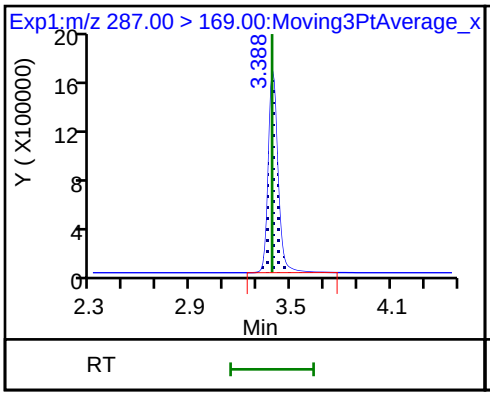

11 Perfluoropentanesulfonic acid



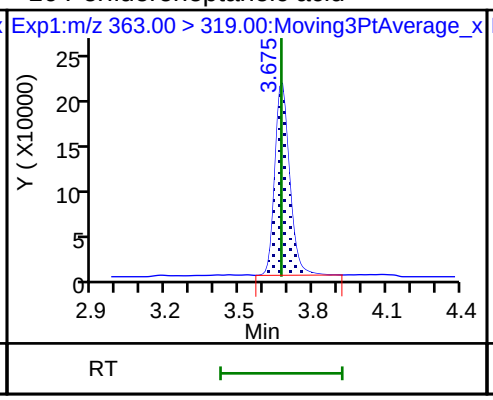

12 HPFO-DA



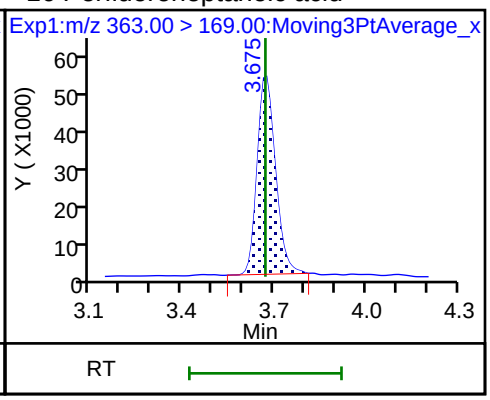

D 13 13C3 HFPO-DA



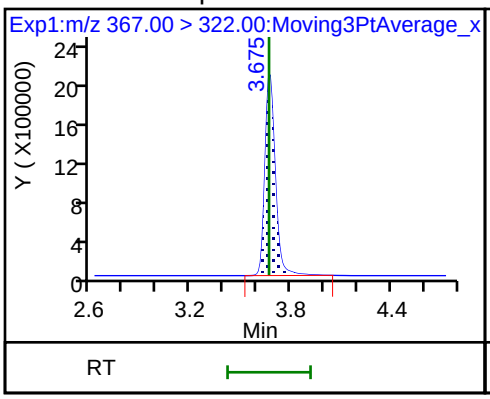

16 Perfluoroheptanoic acid



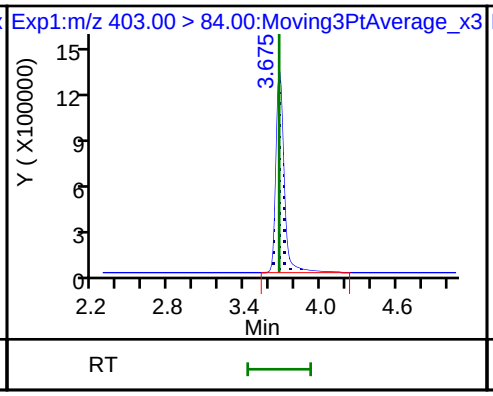

16 Perfluoroheptanoic acid



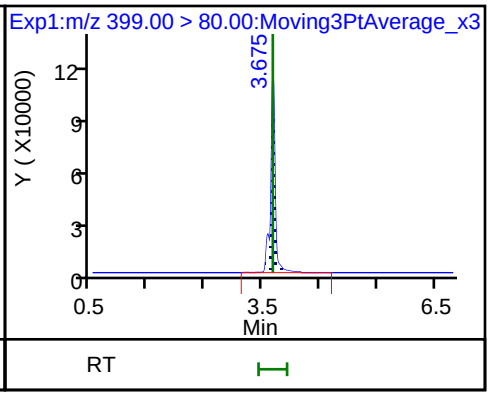

D 15 13C4 PFHpA



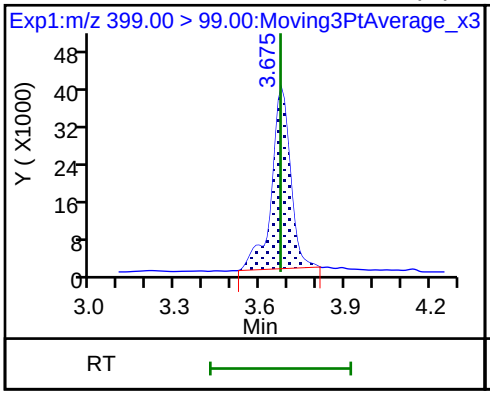

D 17 18O2 PFHxS



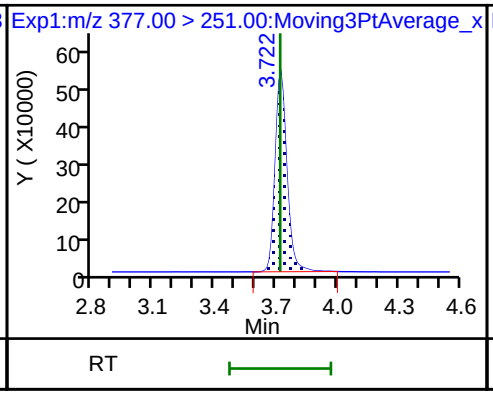

18 Perfluorohexanesulfonic acid



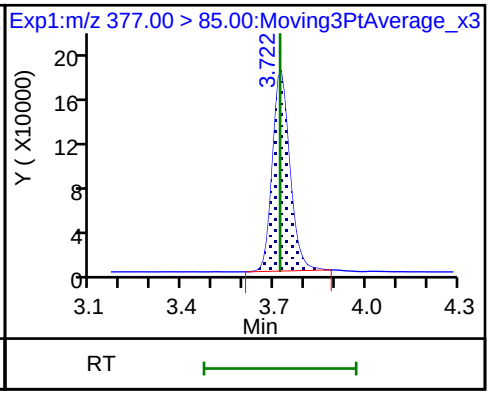

18 Perfluorohexanesulfonic acid (M)



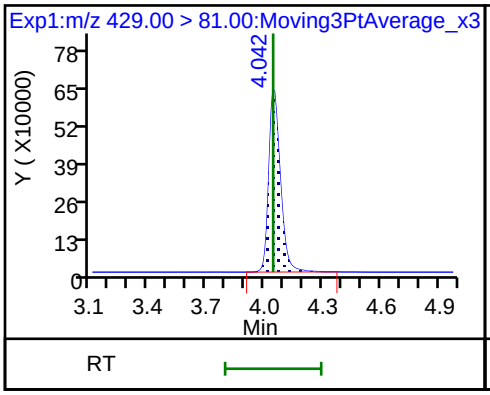

19 DONA



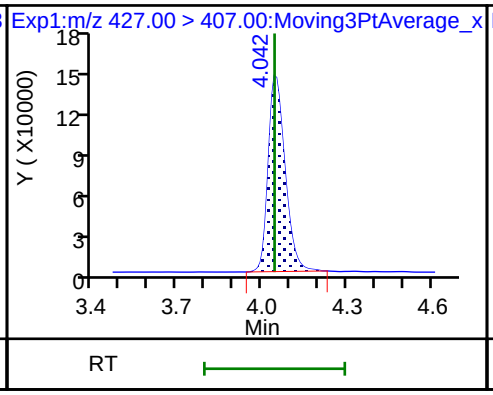

19 DONA



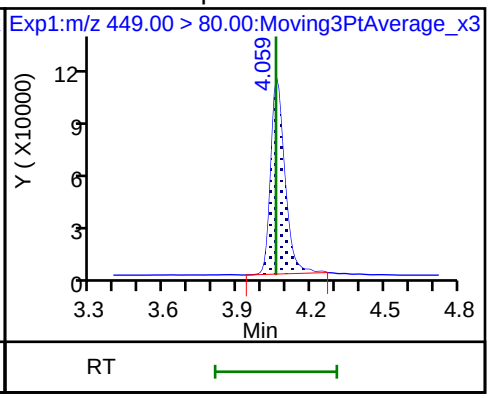
D 20 M2-6:2 FTS



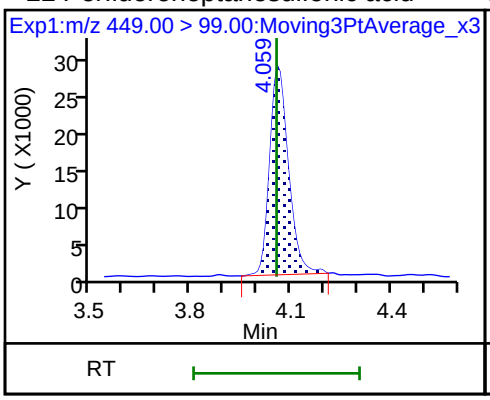

21 6:2 FTS



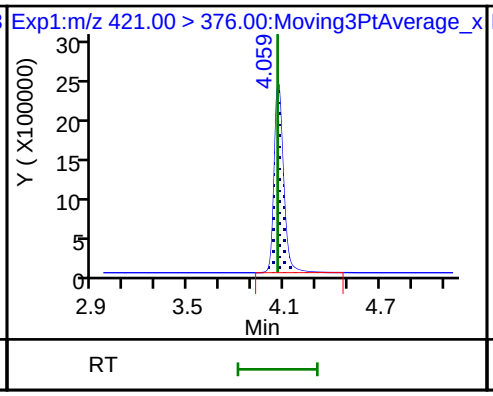

22 Perfluoroheptanesulfonic acid



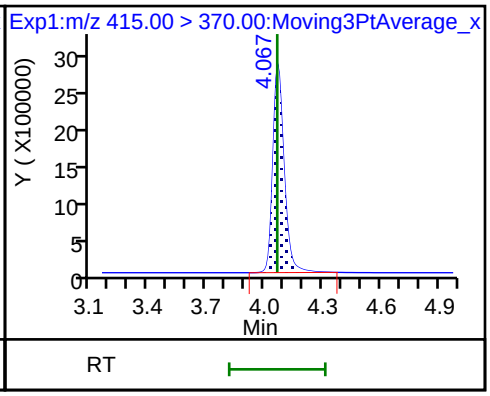

22 Perfluoroheptanesulfonic acid



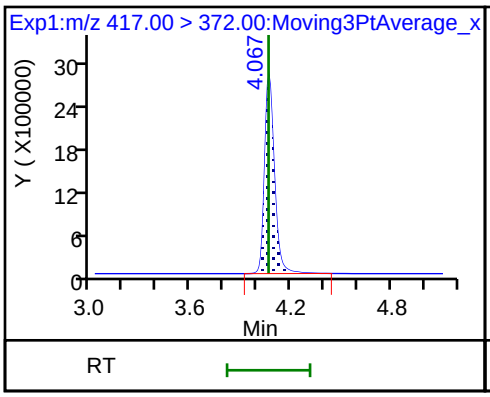

$ 23 13C8 PFOA



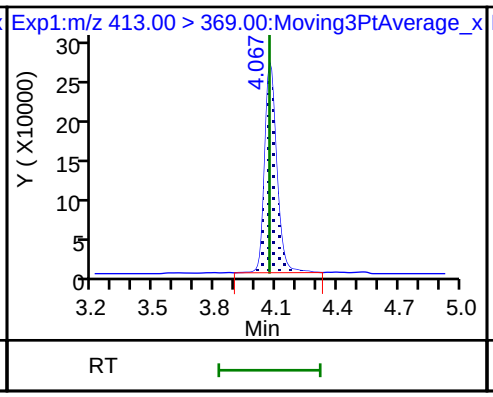

* 25 13C2 PFOA



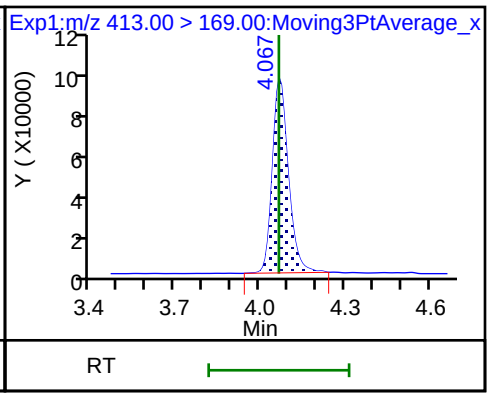

D 24 13C4 PFOA



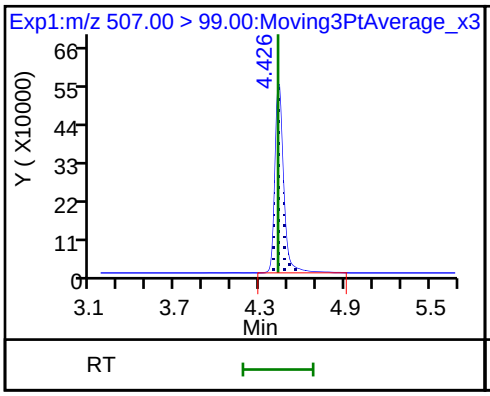

26 Perfluorooctanoic acid



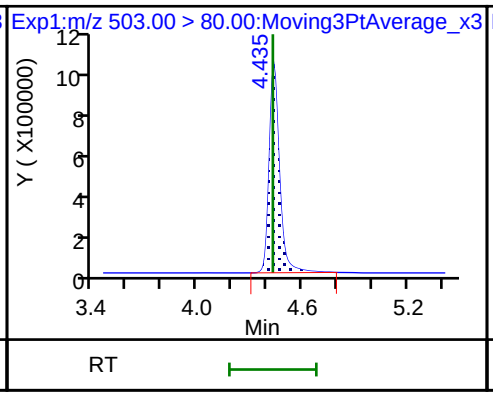

26 Perfluorooctanoic acid



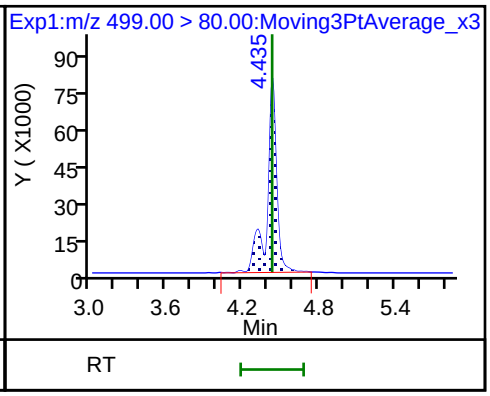

$ 27 13C8 PFOS



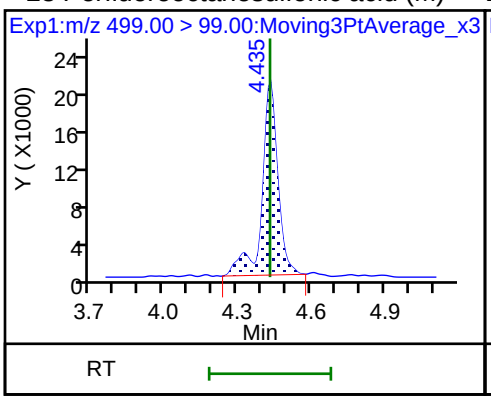

D 29 13C4 PFOS



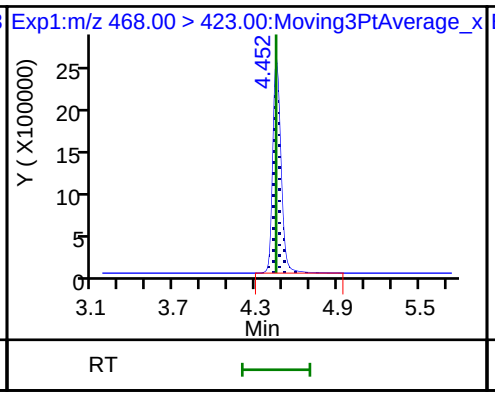

28 Perfluorooctanesulfonic acid



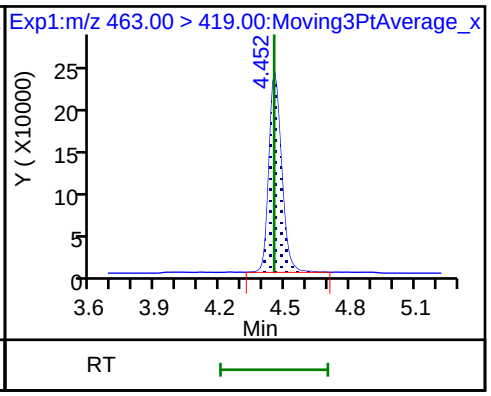
28 Perfluorooctanesulfonic acid (M)



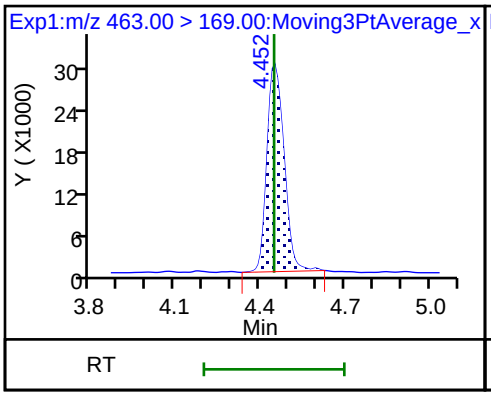

D 31 13C5 PFNA



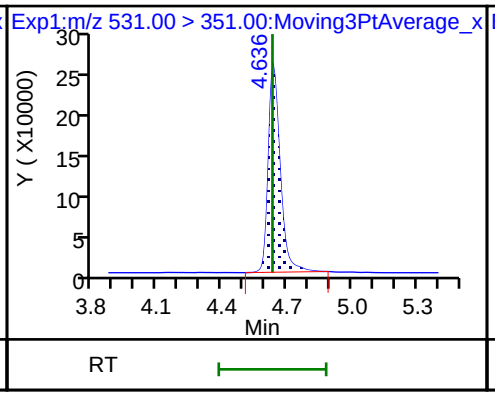

30 Perfluorononanoic acid



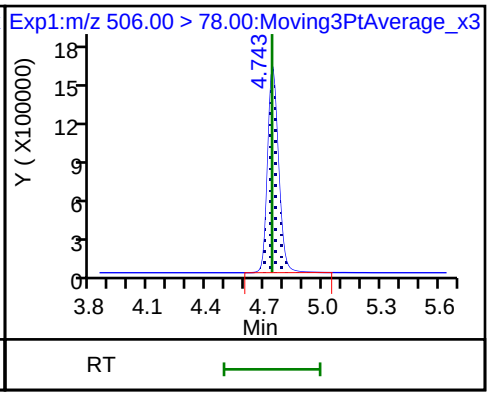

30 Perfluorononanoic acid



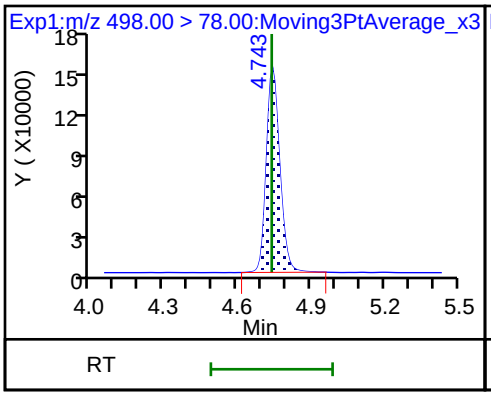

32 9ClFOS



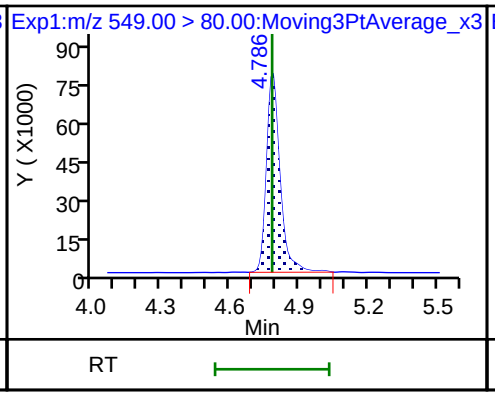

D 34 13C8 FOSA



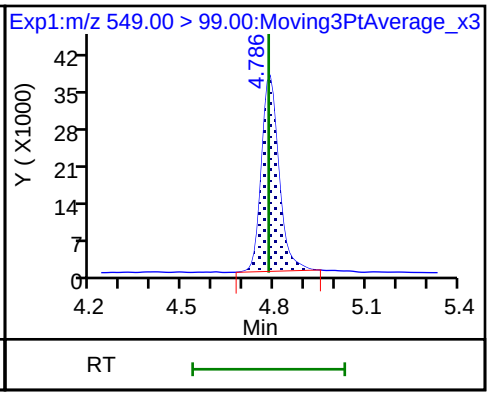

33 Perfluorooctanesulfonamide



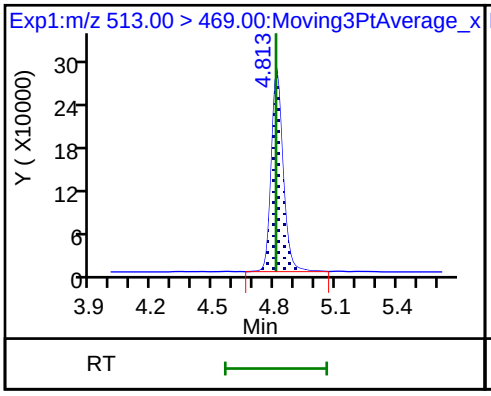

35 Perfluorononanesulfonic acid



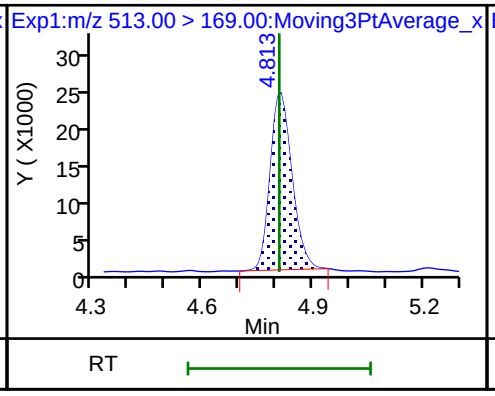

35 Perfluorononanesulfonic acid



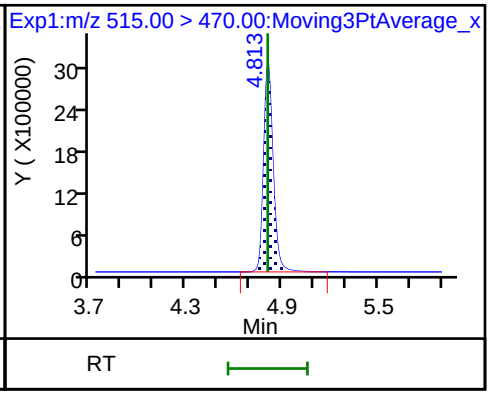

36 Perfluorodecanoic acid



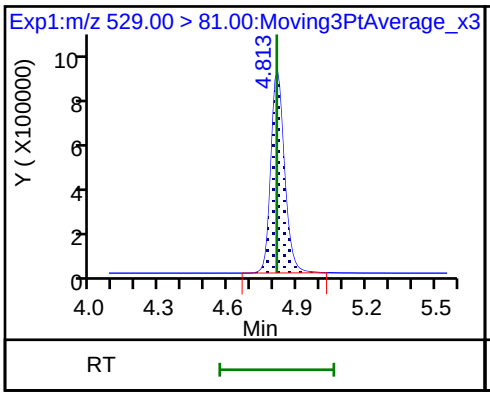

36 Perfluorodecanoic acid



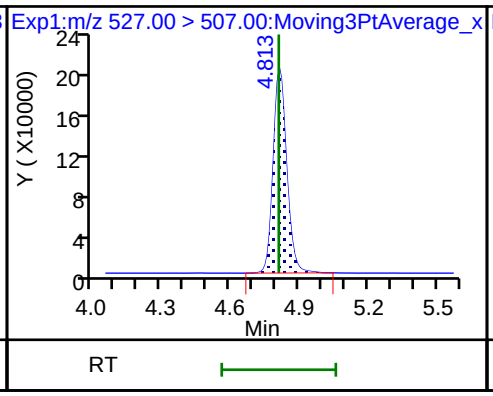

D 37 13C2 PFDA



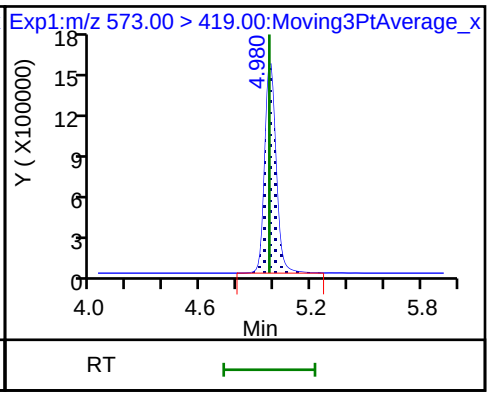
D 38 M2-8:2 FTS



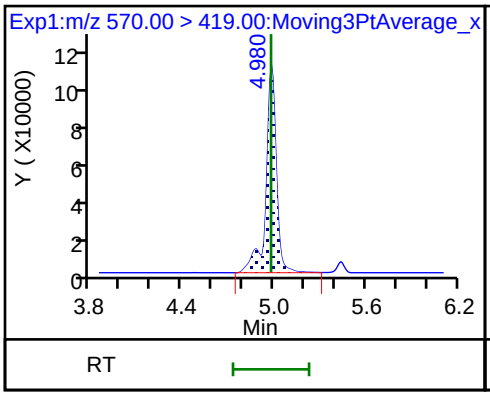

39 8:2 FTS



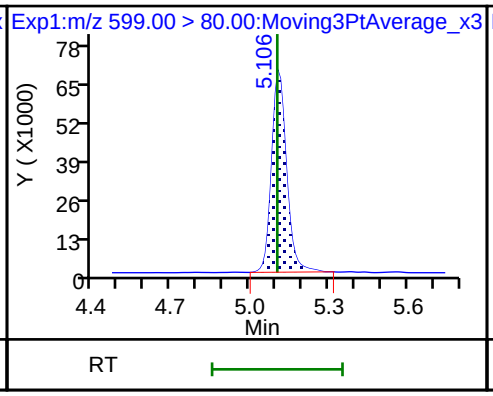

D 40 d3-NMeFOSAA



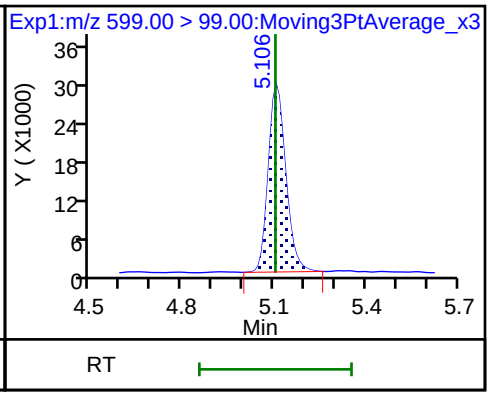

41 NMeFOSAA



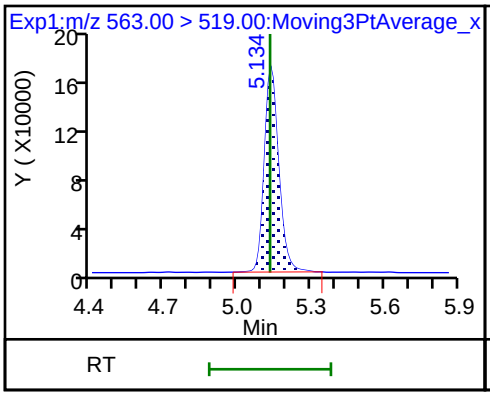

42 Perfluorodecanesulfonic acid



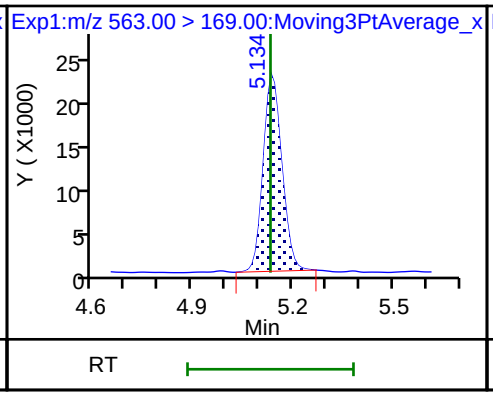

42 Perfluorodecanesulfonic acid



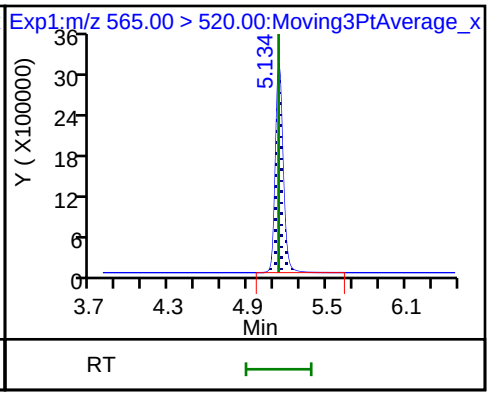

45 Perfluoroundecanoic acid



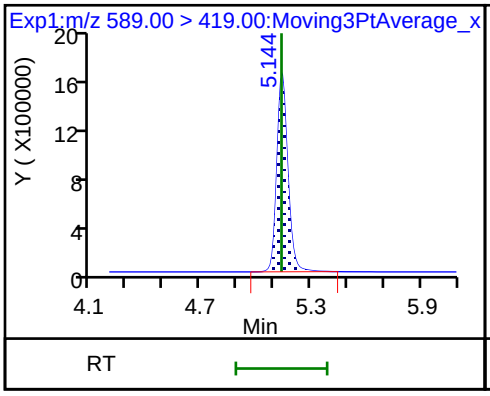

45 Perfluoroundecanoic acid



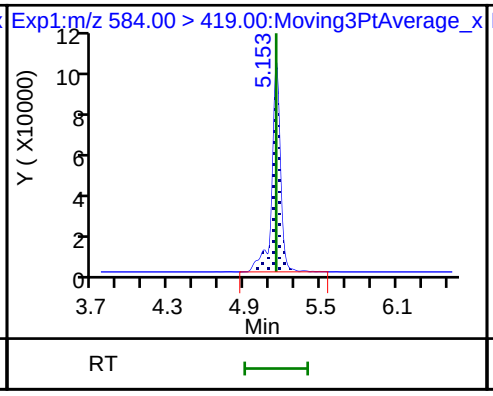

D 44 13C2 PFUnA



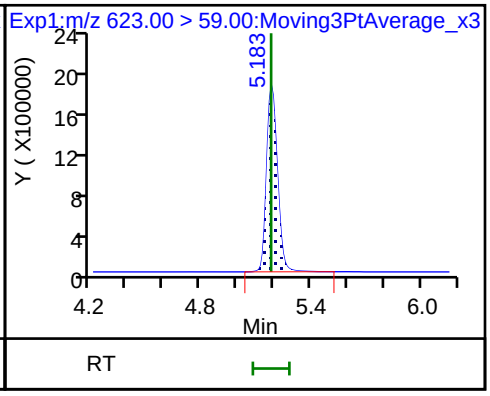

D 46 d5-NEtFOSAA



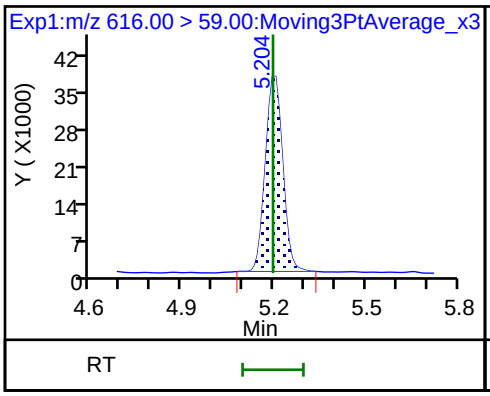

48 NEtFOSA



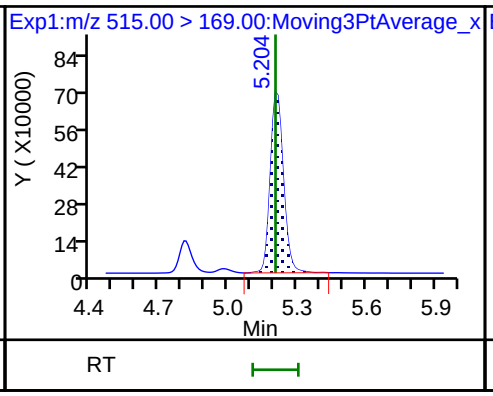

D 43 d7-N-MeFOSE-M



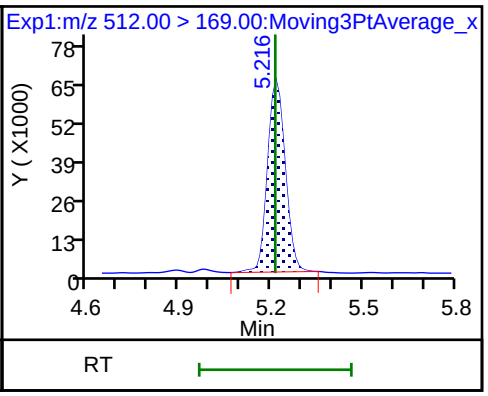
47 N-MeFOSE-M



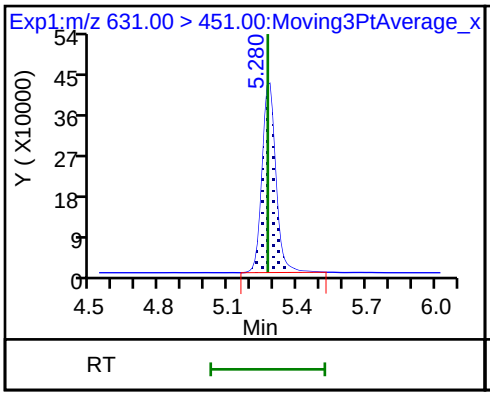

D 49 d-N-MeFOSA-M



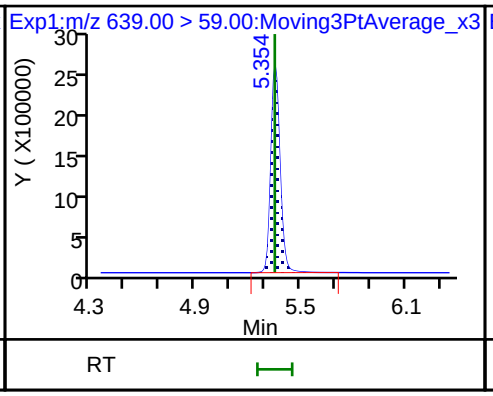

50 NMeFOSA



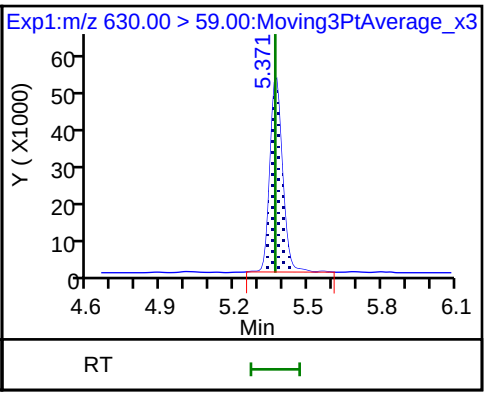

51 11ClFOS



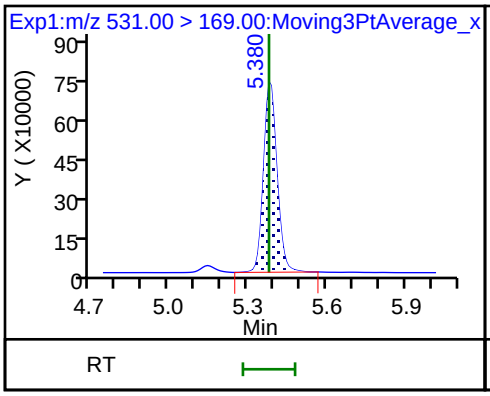

D 52 d9-N-EtFOSE-M



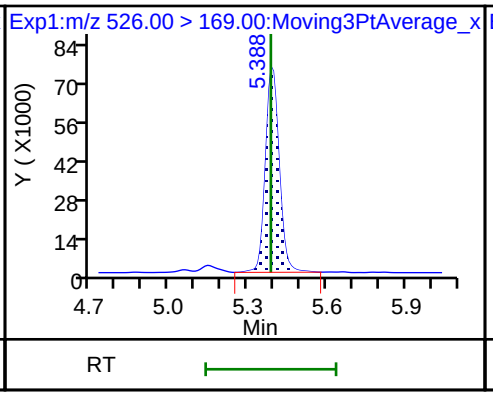

53 N-EtFOSE-M



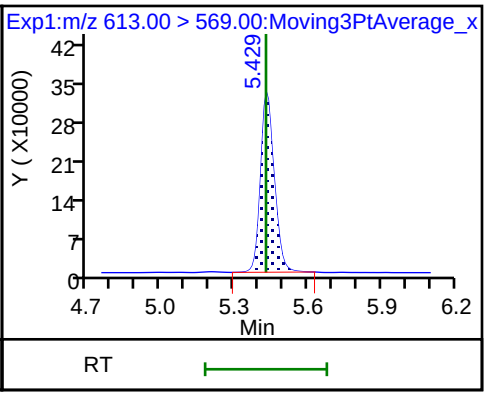

D 54 d-N-EtFOSA-M



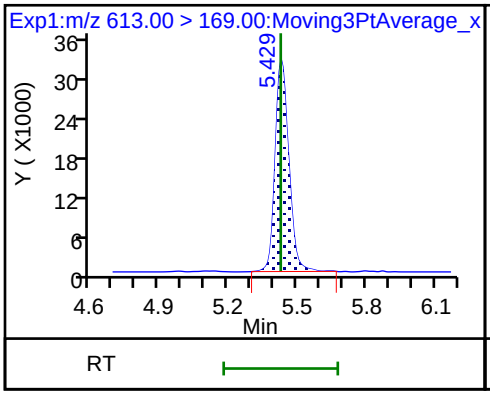

55 N-EtFOSA-M



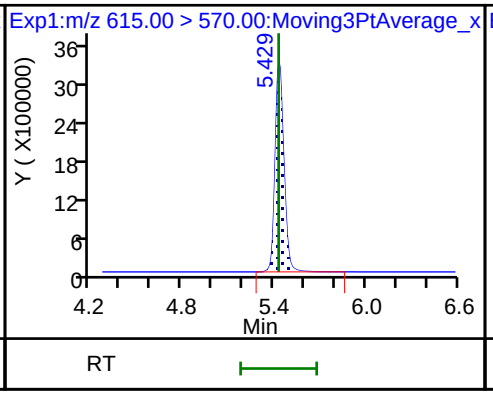

57 Perfluorododecanoic acid



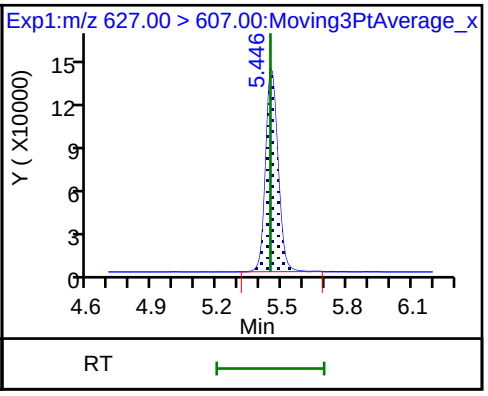

57 Perfluorododecanoic acid



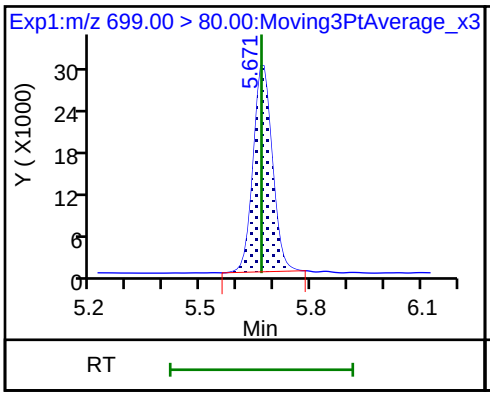

D 56 13C2 PFDoA



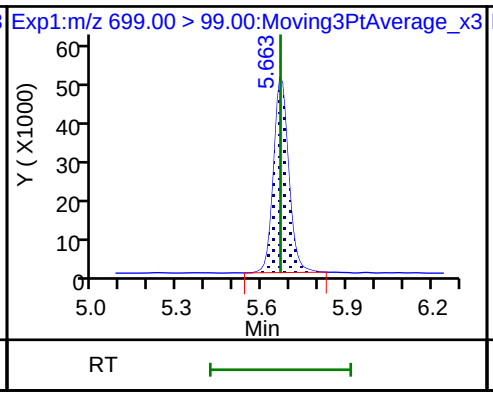

58 10:2 FTS



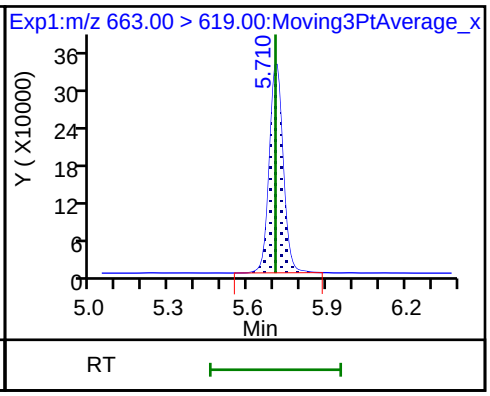
59 PFDoS



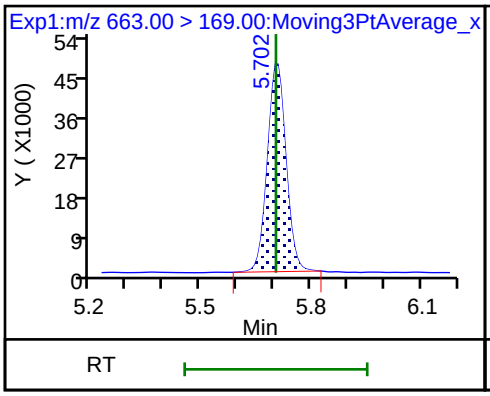

59 PFDoS



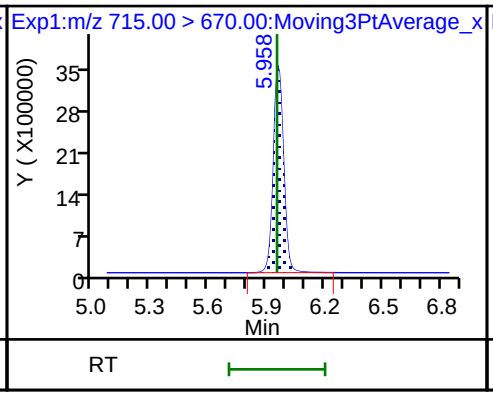

60 Perfluorotridecanoic acid



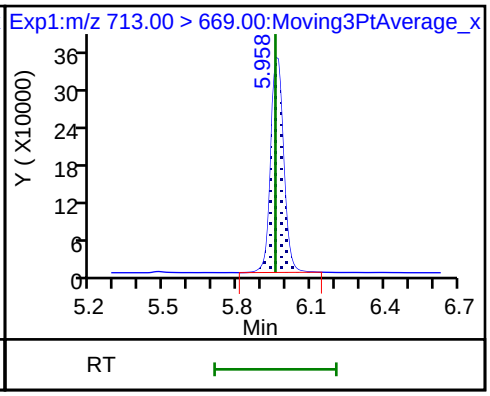

60 Perfluorotridecanoic acid



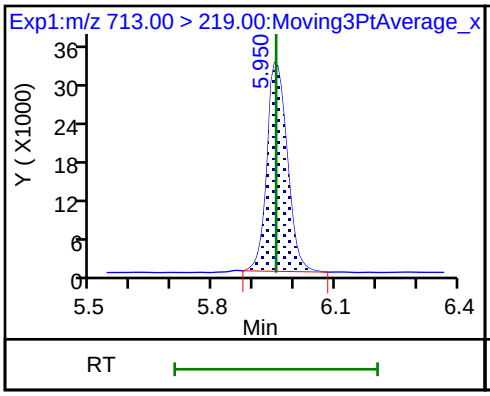

D 61 13C2 PFTeDA



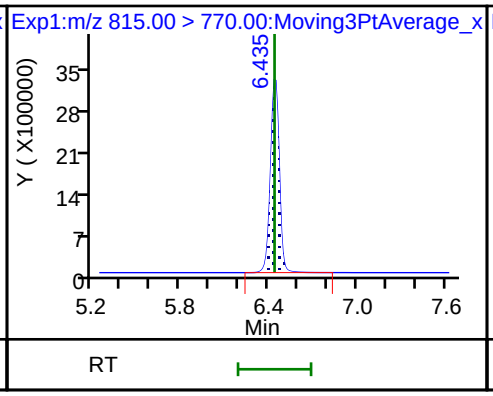

62 Perfluorotetradecanoic acid



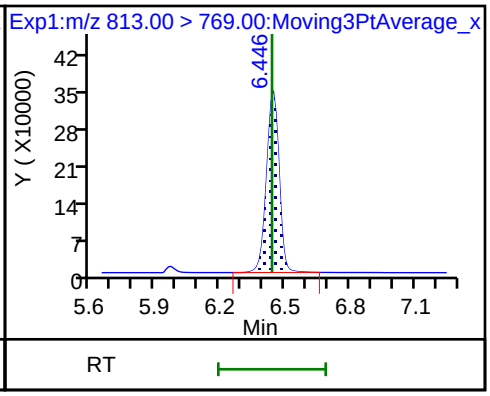

62 Perfluorotetradecanoic acid



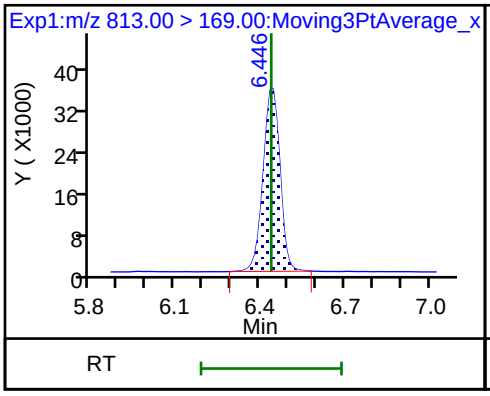

D 64 13C2 PFHxDA



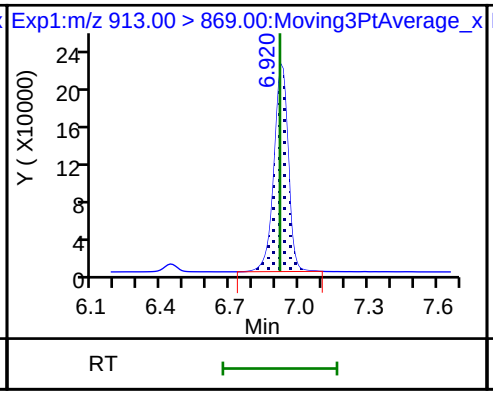

63 Perfluorohexadecanoic acid



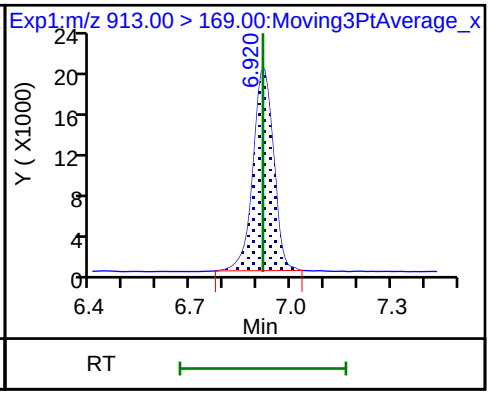

63 Perfluorohexadecanoic acid




65 Perfluorooctadecanoic acid




65 Perfluorooctadecanoic acid



Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

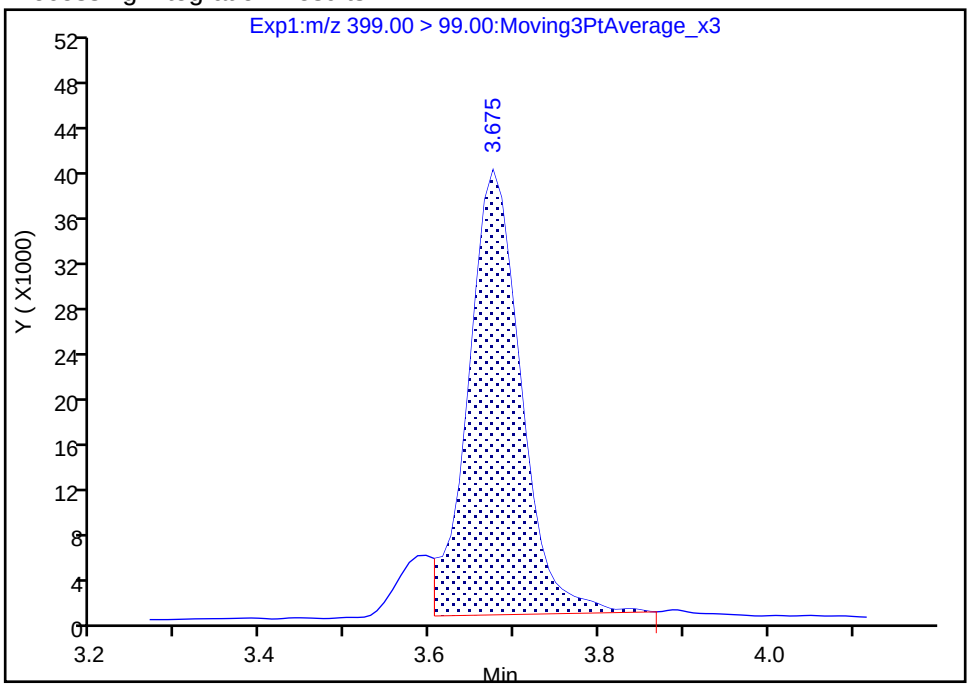
Data File: \\chromfs\Sacramento\ChromData\A13\20200908-102913.b\2020.09.08_A13_PFC_ICALX_006.d
Injection Date: 08-Sep-2020 18:20:37 Instrument ID: A13
Lims ID: IC STD 3
Client ID:
Operator ID: SACINSTLCMS01 ALS Bottle#: 3 Worklist Smp#: 4
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFAS_A13 Limit Group: LC PFC ICAL
Column: Gemini C18 3um 3 x 100mm ( 3.00 mm ID) Detector EXP1

## 18 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 2

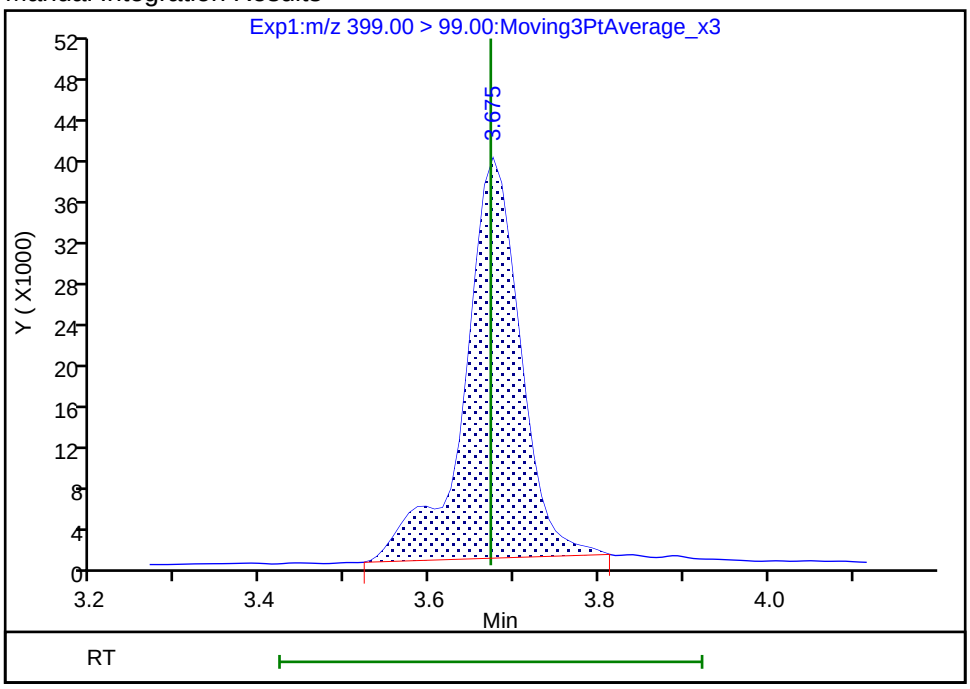
Processing Integration Results

RT: 3.67
Area: 170077
Amount: 0.223069
Amount Units: ng/ml




Manual Integration Results

RT: 3.67
Area: 181306
Amount: 0.223069
Amount Units: ng/ml




Reviewer: novoaj, 09-Sep-2020 09:30:41
Audit Action: Manually Integrated Audit Reason: Isomers

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

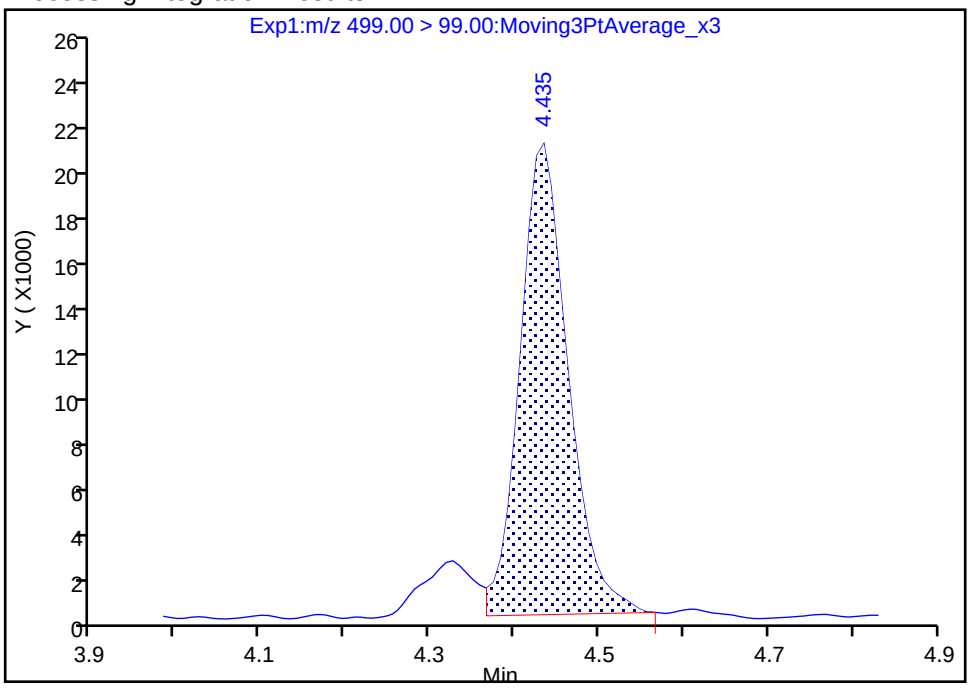
Data File: \\chromfs\Sacramento\ChromData\A13\20200908-102913.b\2020.09.08_A13_PFC_ICALX_006.d
Injection Date: 08-Sep-2020 18:20:37 Instrument ID: A13
Lims ID: IC STD 3
Client ID:
Operator ID: SACINSTLCMS01 ALS Bottle#: 3 Worklist Smp#: 4
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFAS_A13 Limit Group: LC PFC ICAL
Column: Gemini C18 3um 3 x 100mm ( 3.00 mm) Detector EXP1

## 28 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 2

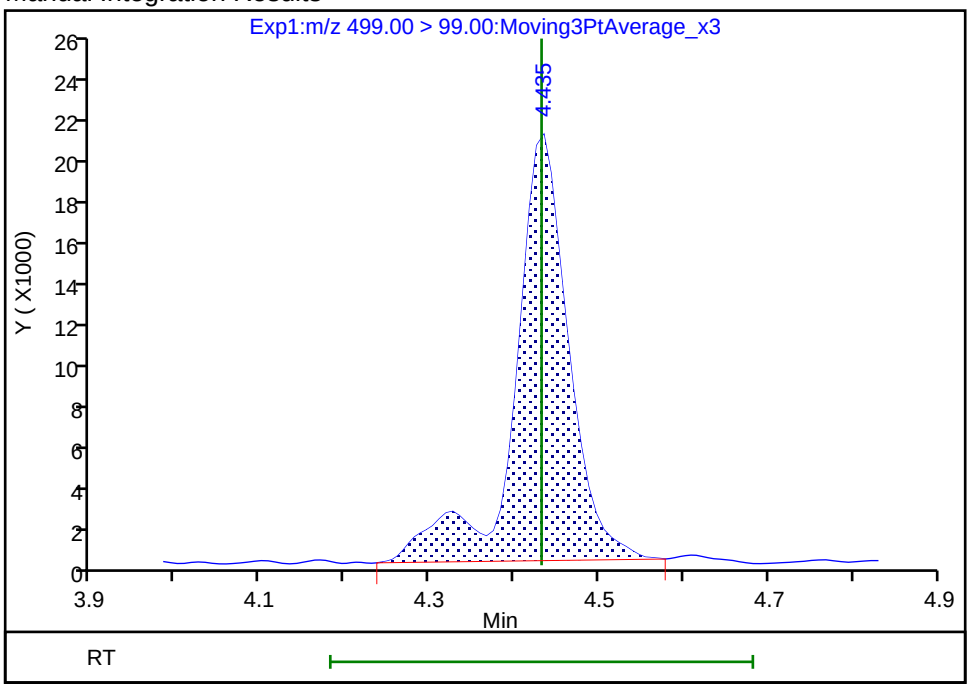
Processing Integration Results

RT: 4.43
Area: 80371
Amount: 0.228713
Amount Units: ng/ml




Manual Integration Results

RT: 4.43
Area: 91049
Amount: 0.228713
Amount Units: ng/ml




Reviewer: novoaj, 09-Sep-2020 09:31:03
Audit Action: Manually Integrated Audit Reason: Isomers

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\A13\20200908-102913.b\2020.09.08_A13_PFC_ICALX_007.d
Lims ID: IC STD 4
Client ID:
Sample Type: ICIS Calib Level: 4
Inject. Date: 08-Sep-2020 18:30:01 ALS Bottle#: 4 Worklist Smp#: 5
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Sample Info: ISTD 4 (30)
Misc. Info.: Plate: 1 Rack: 2
Operator ID: SACINSTLCMS01 Instrument ID: A13
Sublist: chrom-PFAS_A13*sub3

Method: \\chromfs\Sacramento\ChromData\A13\20200908-102913.b\PFAS_A13.m
Limit Group: LC PFC ICAL
Last Update: 09-Sep-2020 10:22:07 Calib Date: 08-Sep-2020 18:58:15
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\A13\20200908-102913.b\2020.09.08_A13_PFC_ICALX_010.d

Column 1 : Gemini C18 3um 3 x 100mm ( 3.00 mm) Det: EXP1
Process Host: CTX1007

First Level Reviewer: novoaj Date: 09-Sep-2020 09:15:32
Ratio Calibration: Average of Initial Calibration

| Signal | RT | EXP RT | DLT RT | REL RT | Response | Amount ng/ml | Ratio(Limits) | %Rec | S/N | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| D 1 13C4 PFBA | | | | | | | | | | |
| 217.00 > 172.00 | 2.475 | 2.477 | -0.002 | 0.610 | 8923921 | 2.46 | | 98.3 | 29364 | |
| 2 Perfluorobutanoic acid | | | | | | | | | | |
| 212.90 > 169.00 | 2.475 | 2.480 | -0.005 | 1.000 | 3061240 | 1.15 | | 115 | 1319 | |
| D 4 13C5 PFPeA | | | | | | | | | | |
| 267.90 > 223.00 | 2.867 | 2.873 | -0.006 | 0.706 | 6830859 | 2.41 | | 96.5 | 21453 | |
| 5 Perfluoropentanoic acid | | | | | | | | | | |
| 262.90 > 219.00 | 2.867 | 2.875 | -0.008 | 1.000 | 2926237 | 1.04 | | 104 | 551 | |
| D 14 13C3 PFBS | | | | | | | | | | |
| 301.90 > 80.00 | 2.913 | 2.913 | 0.0 | 0.718 | 8241841 | 2.32 | | 99.7 | 16754 | |
| 6 Perfluorobutanesulfonic acid | | | | | | | | | | |
| 298.90 > 80.00 | 2.913 | 2.913 | 0.0 | 1.000 | 3461956 | 1.00 | Target=2.18 | 113 | 5050 | |
| 298.90 > 99.00 | 2.913 | 2.913 | 0.0 | 1.000 | 1545504 | | 2.24(1.09-3.26) | 113 | 812 | |
| 7 4:2 FTS | | | | | | | | | | |
| 327.00 > 307.00 | 3.215 | 3.221 | -0.006 | 1.000 | 2972806 | 1.03 | | 111 | 2211 | |
| D 8 M2-4:2 FTS | | | | | | | | | | |
| 329.00 > 81.00 | 3.215 | 3.222 | -0.007 | 0.792 | 2072842 | 2.38 | | 102 | 1364 | |
| D 9 13C2 PFHxA | | | | | | | | | | |
| 315.00 > 270.00 | 3.258 | 3.264 | -0.006 | 0.803 | 8582211 | 2.45 | | 98.1 | 34052 | |
| 10 Perfluorohexanoic acid | | | | | | | | | | |
| 313.00 > 269.00 | 3.258 | 3.265 | -0.007 | 1.000 | 3453700 | 1.08 | Target=11.68 | 108 | 724 | |
| 313.00 > 119.00 | 3.258 | 3.265 | -0.007 | 1.000 | 269279 | | 12.83(5.84-17.52) | 108 | 102 | |
| 11 Perfluoropentanesulfonic acid | | | | | | | | | | |
| 349.00 > 80.00 | 3.279 | 3.279 | 0.0 | 1.126 | 2978054 | 1.06 | Target=2.56 | 113 | 1278 | |
| 349.00 > 99.00 | 3.279 | 3.279 | 0.0 | 1.126 | 1130944 | | 2.63(1.28-3.84) | 113 | 1404 | |
| 12 HPFO-DA | | | | | | | | | | |
| 285.00 > 169.00 | 3.380 | 3.386 | -0.006 | 1.000 | 791192 | 1.08 | | 108 | 1589 | |

| Signal | RT | EXP RT | DLT RT | REL RT | Response | Amount ng/ml | Ratio(Limits) | %Rec | S/N | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| D 13 13C3 HFPO-DA | | | | | | | | | | |
| 287.00 > 169.00 | 3.380 | 3.386 | -0.006 | 0.833 | 6170375 | 2.46 | | 98.4 | 3788 | |
| 16 Perfluoroheptanoic acid | | | | | | | | | | |
| 363.00 > 319.00 | 3.665 | 3.670 | -0.005 | 1.000 | 3583423 | 1.02 | Target=3.85 | 102 | 420 | |
| 363.00 > 169.00 | 3.665 | 3.670 | -0.005 | 1.000 | 952249 | | 3.76(1.92-5.77) | 102 | 407 | |
| D 15 13C4 PFHpA | | | | | | | | | | |
| 367.00 > 322.00 | 3.665 | 3.668 | -0.003 | 0.903 | 8652756 | 2.51 | | 100 | 47207 | |
| 18 Perfluorohexanesulfonic acid | | | | | | | | | | M |
| 399.00 > 80.00 | 3.665 | 3.672 | -0.007 | 1.000 | 2328312 | 0.9059 | Target=3.25 | 99.5 | 441942 | |
| 399.00 > 99.00 | 3.665 | 3.672 | -0.007 | 1.000 | 696370 | | 3.34(1.62-4.87) | 99.5 | 188 | M |
| D 17 18O2 PFHxS | | | | | | | | | | |
| 403.00 > 84.00 | 3.665 | 3.672 | -0.007 | 0.903 | 5464678 | 2.35 | | 99.2 | 19811 | |
| 19 DONA | | | | | | | | | | |
| 377.00 > 251.00 | 3.714 | 3.719 | -0.005 | 0.839 | 9381994 | 1.14 | Target=2.76 | 121 | 11562 | |
| 377.00 > 85.00 | 3.714 | 3.719 | -0.005 | 0.839 | 3163705 | | 2.97(1.38-4.14) | 121 | 3203 | |
| D 20 M2-6:2 FTS | | | | | | | | | | |
| 429.00 > 81.00 | 4.042 | 4.043 | -0.001 | 0.996 | 2407058 | 2.40 | | 101 | 2486 | |
| 21 6:2 FTS | | | | | | | | | | |
| 427.00 > 407.00 | 4.042 | 4.043 | -0.001 | 1.000 | 2365036 | 0.9696 | | 102 | 1646 | |
| 22 Perfluoroheptanesulfonic acid | | | | | | | | | | |
| 449.00 > 80.00 | 4.051 | 4.056 | -0.005 | 0.915 | 2000325 | 1.10 | Target=4.29 | 115 | 1896 | |
| 449.00 > 99.00 | 4.051 | 4.056 | -0.005 | 0.915 | 471955 | | 4.24(2.15-6.44) | 115 | 610 | |
| $ 23 13C8 PFOA | | | | | | | | | | |
| 421.00 > 376.00 | 4.051 | 4.058 | -0.007 | 0.998 | 9097652 | 2.39 | | 97.6 | 10651 | |
| * 25 13C2 PFOA | | | | | | | | | | |
| 415.00 > 370.00 | 4.059 | 4.065 | -0.006 | | 10686922 | 2.50 | | | 9716 | |
| D 24 13C4 PFOA | | | | | | | | | | |
| 417.00 > 372.00 | 4.059 | 4.065 | -0.006 | 1.000 | 10322203 | 2.45 | | 98.1 | 9900 | |
| 26 Perfluorooctanoic acid | | | | | | | | | | |
| 413.00 > 369.00 | 4.059 | 4.066 | -0.007 | 1.000 | 4327071 | 1.02 | Target=2.95 | 102 | 934 | |
| 413.00 > 169.00 | 4.059 | 4.066 | -0.007 | 1.000 | 1505513 | | 2.87(1.47-4.42) | 102 | 1294 | |
| $ 27 13C8 PFOS | | | | | | | | | | |
| 507.00 > 99.00 | 4.417 | 4.426 | -0.009 | 1.088 | 2012625 | 2.27 | | 94.9 | 732 | |
| D 29 13C4 PFOS | | | | | | | | | | |
| 503.00 > 80.00 | 4.425 | 4.429 | -0.004 | 1.090 | 3832936 | 2.31 | | 96.5 | 3311 | |
| 28 Perfluorooctanesulfonic acid | | | | | | | | | | M |
| 499.00 > 80.00 | 4.425 | 4.432 | -0.007 | 1.000 | 1689700 | 1.01 | Target=4.28 | 109 | 983 | |
| 499.00 > 99.00 | 4.425 | 4.432 | -0.007 | 1.000 | 397889 | | 4.25(2.14-6.41) | 109 | 264 | M |
| D 31 13C5 PFNA | | | | | | | | | | |
| 468.00 > 423.00 | 4.442 | 4.448 | -0.006 | 1.094 | 10103666 | 2.60 | | 104 | 11785 | |
| 30 Perfluorononanoic acid | | | | | | | | | | |
| 463.00 > 419.00 | 4.442 | 4.449 | -0.007 | 1.000 | 3887335 | 1.01 | Target=8.00 | 101 | 1000 | |
| 463.00 > 169.00 | 4.442 | 4.449 | -0.007 | 1.000 | 519708 | | 7.48(4.00-12.01) | 101 | 935 | |
| 32 9ClFOS | | | | | | | | | | |
| 531.00 > 351.00 | 4.629 | 4.632 | -0.003 | 1.046 | 4203800 | 1.05 | | 112 | 3874 | |
| D 34 13C8 FOSA | | | | | | | | | | |
| 506.00 > 78.00 | 4.734 | 4.738 | -0.004 | 1.166 | 6018555 | 2.52 | | 101 | 6026 | |

| Signal | RT | EXP RT | DLT RT | REL RT | Response | Amount ng/ml | Ratio(Limits) | %Rec | S/N | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| 33 Perfluorooctanesulfonamide | | | | | | | | | | |
| 498.00 > 78.00 | 4.734 | 4.739 | -0.005 | 1.000 | 2387088 | 1.06 | | 106 | 4356 | |
| 35 Perfluorononanesulfonic acid | | | | | | | | | | |
| 549.00 > 80.00 | 4.778 | 4.781 | -0.003 | 1.080 | 1314349 | 1.06 | Target=2.15 | 110 | 1673 | |
| 549.00 > 99.00 | 4.778 | 4.781 | -0.003 | 1.080 | 633965 | | 2.07(1.08-3.23) | 110 | 1021 | |
| 36 Perfluorodecanoic acid | | | | | | | | | | |
| 513.00 > 469.00 | 4.804 | 4.808 | -0.004 | 1.000 | 4498411 | 1.05 | Target=10.44 | 105 | 2349 | |
| 513.00 > 169.00 | 4.804 | 4.808 | -0.004 | 1.000 | 430936 | | 10.44(5.22-15.65) | 105 | 329 | |
| D 37 13C2 PFDA | | | | | | | | | | |
| 515.00 > 470.00 | 4.804 | 4.808 | -0.004 | 1.184 | 11955497 | 2.54 | | 101 | 13873 | |
| D 38 M2-8:2 FTS | | | | | | | | | | |
| 529.00 > 81.00 | 4.804 | 4.810 | -0.006 | 1.184 | 3304386 | 2.49 | | 104 | 2813 | |
| 39 8:2 FTS | | | | | | | | | | |
| 527.00 > 507.00 | 4.804 | 4.810 | -0.006 | 1.000 | 3572258 | 1.05 | | 109 | 3440 | |
| D 40 d3-NMeFOSAA | | | | | | | | | | |
| 573.00 > 419.00 | 4.962 | 4.972 | -0.010 | 1.222 | 5866210 | 2.41 | | 96.6 | 4362 | |
| 41 NMeFOSAA | | | | | | | | | | |
| 570.00 > 419.00 | 4.971 | 4.978 | -0.007 | 1.002 | 2023389 | 1.07 | | 107 | 262 | |
| 42 Perfluorodecanesulfonic acid | | | | | | | | | | |
| 599.00 > 80.00 | 5.097 | 5.103 | -0.006 | 1.152 | 1143074 | 1.08 | Target=2.36 | 112 | 2301 | |
| 599.00 > 99.00 | 5.097 | 5.103 | -0.006 | 1.152 | 492424 | | 2.32(1.18-3.54) | 112 | 1051 | |
| 45 Perfluoroundecanoic acid | | | | | | | | | | |
| 563.00 > 519.00 | 5.126 | 5.132 | -0.006 | 1.000 | 3136200 | 1.00 | Target=8.67 | 99.8 | 1592 | |
| 563.00 > 169.00 | 5.126 | 5.132 | -0.006 | 1.000 | 374011 | | 8.39(4.34-13.01) | 99.8 | 1389 | |
| D 44 13C2 PFUnA | | | | | | | | | | |
| 565.00 > 520.00 | 5.126 | 5.132 | -0.006 | 1.263 | 11864798 | 2.57 | | 103 | 6598 | |
| D 46 d5-NEtFOSAA | | | | | | | | | | |
| 589.00 > 419.00 | 5.135 | 5.139 | -0.004 | 1.265 | 6002493 | 2.55 | | 102 | 5423 | |
| 48 NEtFOSA | | | | | | | | | | |
| 584.00 > 419.00 | 5.145 | 5.148 | -0.003 | 1.002 | 1916577 | 1.03 | | 103 | 13396 | |
| D 43 d7-N-MeFOSE-M | | | | | | | | | | |
| 623.00 > 59.00 | 5.174 | 5.182 | -0.008 | 1.275 | 7689569 | 12.9 | | 103 | 4025 | |
| 47 N-MeFOSE-M | | | | | | | | | | |
| 616.00 > 59.00 | 5.184 | 5.195 | -0.011 | 1.002 | 715511 | 1.09 | | 109 | 932 | |
| D 49 d-N-MeFOSA-M | | | | | | | | | | |
| 515.00 > 169.00 | 5.205 | 5.205 | 0.0 | 1.282 | 2737546 | 2.44 | | 97.5 | 43.9 | |
| 50 NMeFOSA | | | | | | | | | | |
| 512.00 > 169.00 | 5.205 | 5.213 | -0.008 | 1.000 | 1252850 | 1.16 | | 116 | 286 | |
| 51 11ClFOS | | | | | | | | | | |
| 631.00 > 451.00 | 5.270 | 5.271 | -0.001 | 1.191 | 7880150 | 1.14 | | 121 | 4724 | |
| D 52 d9-N-EtFOSE-M | | | | | | | | | | |
| 639.00 > 59.00 | 5.345 | 5.352 | -0.007 | 1.317 | 8590768 | 12.3 | | 98.0 | 2735 | |
| 53 N-EtFOSE-M | | | | | | | | | | |
| 630.00 > 59.00 | 5.362 | 5.366 | -0.004 | 1.003 | 777947 | 1.09 | | 109 | 1100 | |
| D 54 d-N-EtFOSA-M | | | | | | | | | | |
| 531.00 > 169.00 | 5.379 | 5.379 | 0.0 | 1.325 | 2610483 | 2.43 | | 97.3 | 220 | |

| Signal | RT | EXP RT | DLT RT | REL RT | Response | Amount ng/ml | Ratio(Limits) | %Rec | S/N | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| 55 N-EtFOSA-M | | | | | | | | | | |
| 526.00 > 169.00 | 5.379 | 5.386 | -0.007 | 1.000 | 1223169 | 1.10 | | 110 | 219 | |
| 57 Perfluorododecanoic acid | | | | | | | | | | |
| 613.00 > 569.00 | 5.421 | 5.428 | -0.007 | 1.000 | 4715418 | 1.05 | Target=9.05 | 104 | 2269 | |
| 613.00 > 169.00 | 5.429 | 5.428 | 0.001 | 1.002 | 521703 | | 9.04(4.52-13.57) | 104 | 1247 | |
| D 56 13C2 PFDoA | | | | | | | | | | |
| 615.00 > 570.00 | 5.421 | 5.428 | -0.007 | 1.335 | 12360280 | 2.49 | | 99.7 | 6582 | |
| 58 10:2 FTS | | | | | | | | | | |
| 627.00 > 607.00 | 5.445 | 5.445 | 0.0 | 1.133 | 2306558 | 1.02 | | 106 | 3763 | |
| 59 PFDoS | | | | | | | | | | |
| 699.00 > 80.00 | 5.662 | 5.665 | -0.003 | 1.279 | 447598 | 1.09 | Target=0.57 | 112 | 1874 | |
| 699.00 > 99.00 | 5.662 | 5.665 | -0.003 | 1.279 | 767338 | | 0.58(0.29-0.86) | 112 | 1453 | |
| 60 Perfluorotridecanoic acid | | | | | | | | | | |
| 663.00 > 619.00 | 5.702 | 5.704 | -0.002 | 1.052 | 5549854 | 1.20 | Target=7.06 | 120 | 4508 | |
| 663.00 > 169.00 | 5.702 | 5.704 | -0.002 | 1.052 | 715138 | | 7.76(3.53-10.59) | 120 | 1862 | |
| D 61 13C2 PFTeDA | | | | | | | | | | |
| 715.00 > 670.00 | 5.950 | 5.953 | -0.003 | 1.466 | 12428995 | 2.54 | | 101 | 17683 | |
| 62 Perfluorotetradecanoic acid | | | | | | | | | | |
| 713.00 > 669.00 | 5.942 | 5.954 | -0.012 | 0.999 | 5131503 | 1.05 | Target=11.23 | 105 | 3917 | |
| 713.00 > 219.00 | 5.950 | 5.954 | -0.004 | 1.000 | 464017 | | 11.06(5.62-16.85) | 105 | 2059 | |
| D 64 13C2 PFHxDA | | | | | | | | | | |
| 815.00 > 770.00 | 6.435 | 6.437 | -0.002 | 1.585 | 12458626 | 2.44 | | 97.7 | 7569 | |
| 63 Perfluorohexadecanoic acid | | | | | | | | | | |
| 813.00 > 769.00 | 6.435 | 6.439 | -0.004 | 1.000 | 5235054 | 1.08 | Target=9.45 | 108 | 1229 | |
| 813.00 > 169.00 | 6.435 | 6.439 | -0.004 | 1.000 | 532847 | | 9.82(4.72-14.17) | 108 | 1672 | |
| 65 Perfluorooctadecanoic acid | | | | | | | | | | |
| 913.00 > 869.00 | 6.911 | 6.915 | -0.004 | 1.074 | 4124214 | 1.13 | Target=11.13 | 113 | 1635 | |
| 913.00 > 169.00 | 6.911 | 6.915 | -0.004 | 1.074 | 360403 | | 11.44(5.56-16.69) | 113 | 1226 | |

## QC Flag Legend

Review Flags

M - Manually Integrated

## Reagents:

LCPFC_LL4_00030 Amount Added: 1.00 Units: mL

Report Date: 09-Sep-2020 10:22:11 Chrom Revision: 2.3 20-Aug-2020 13:57:12

Eurofins TestAmerica, Sacramento

Data File: \\chromfs\Sacramento\ChromData\A13\20200908-102913.b\2020.09.08_A13_PFC_ICALX_007.d

Injection Date: 08-Sep-2020 18:30:01 Instrument ID: A13

Lims ID: IC STD 4

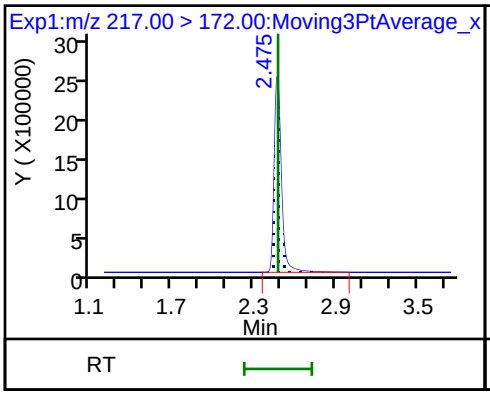
Client ID:

Operator ID: SACINSTLCMS01 ALS Bottle#: 4 Worklist Smp#: 5

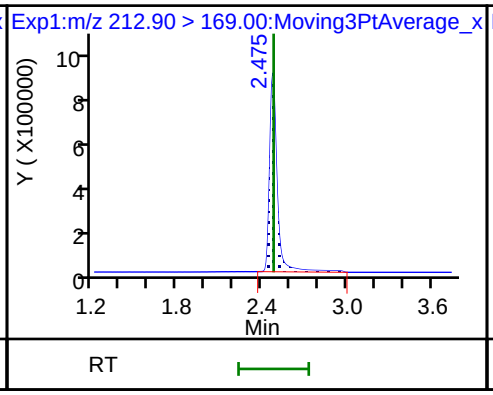
Injection Vol: 20.0 ul Dil. Factor: 1.0000

Method: PFAS_A13 Limit Group: LC PFC ICAL

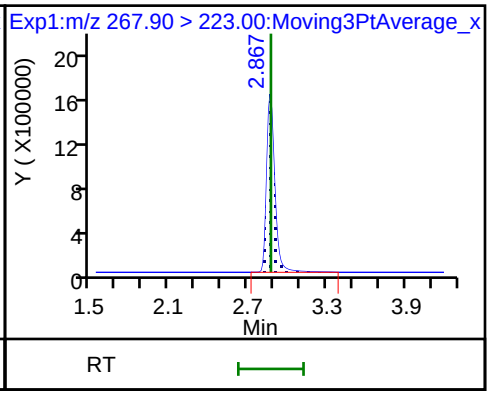
D 1 13C4 PFBA



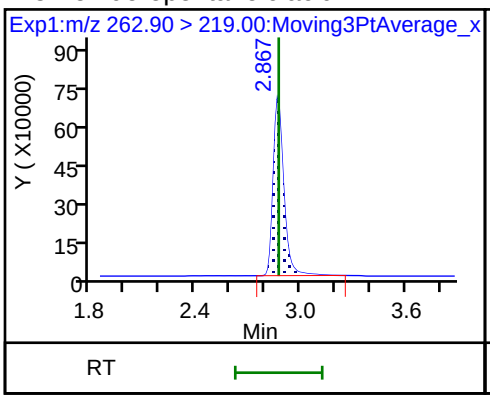

2 Perfluorobutanoic acid



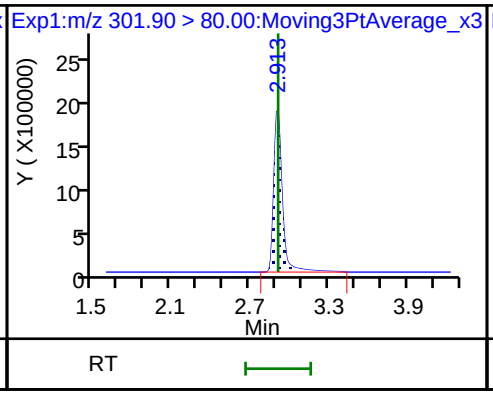

D 4 13C5 PFPeA



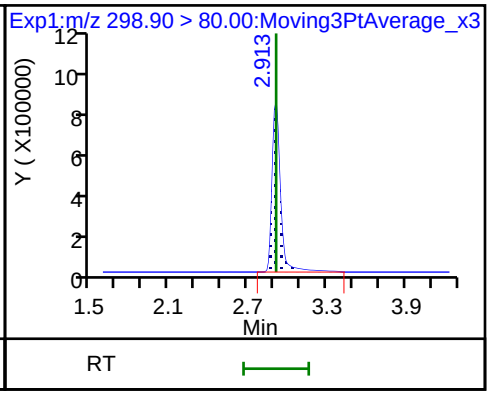

5 Perfluoropentanoic acid



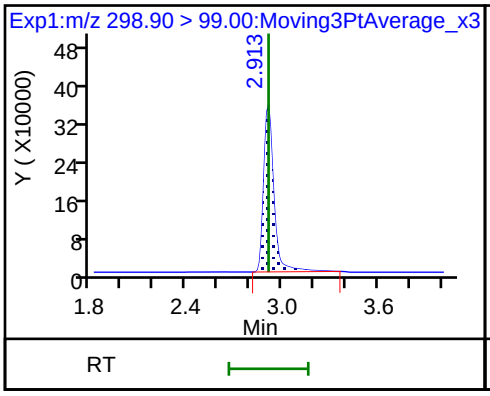

D 14 13C3 PFBS



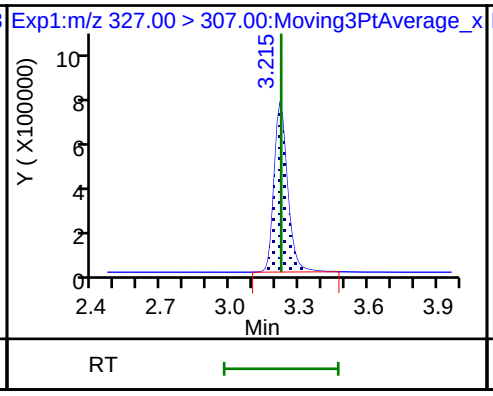

6 Perfluorobutanesulfonic acid



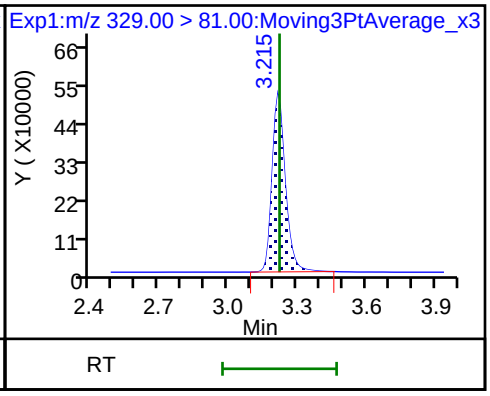

6 Perfluorobutanesulfonic acid



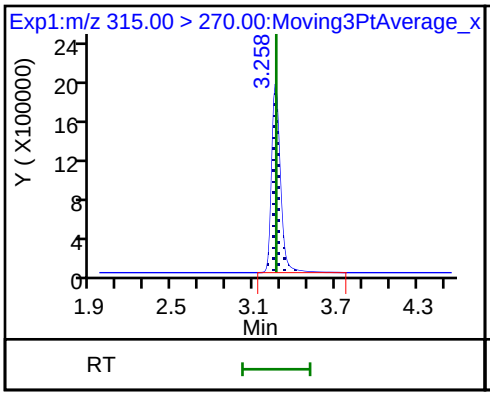

7 4:2 FTS



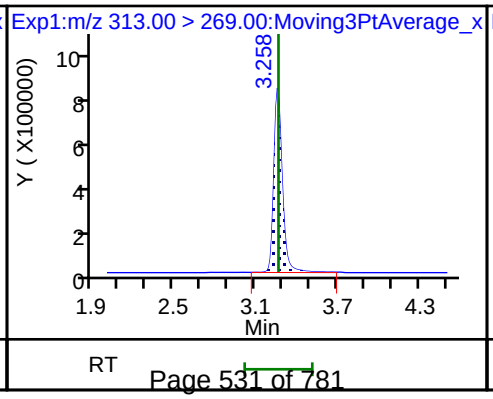

D 8 M2-4:2 FTS



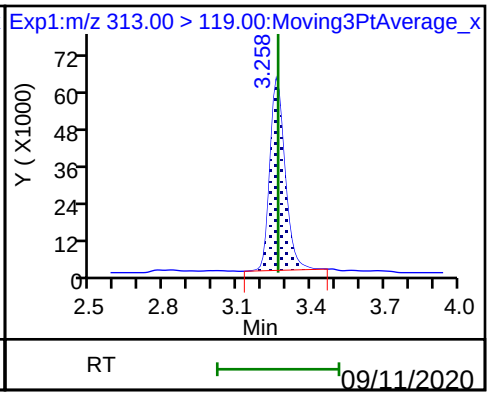

D 9 13C2 PFHxA



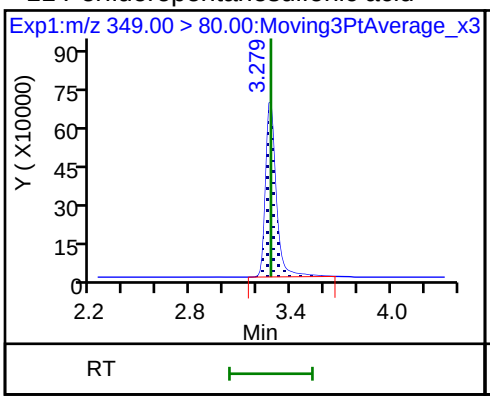

10 Perfluorohexanoic acid



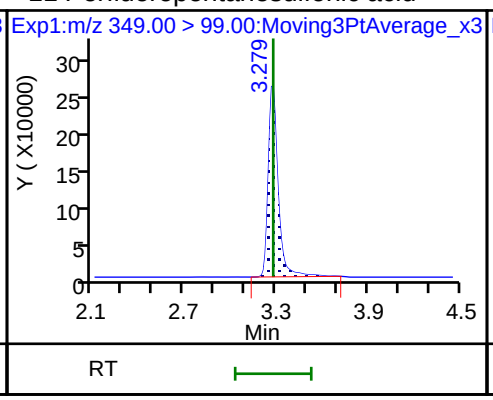

10 Perfluorohexanoic acid



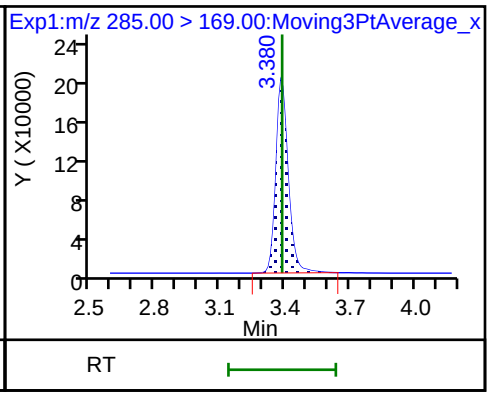
11 Perfluoropentanesulfonic acid



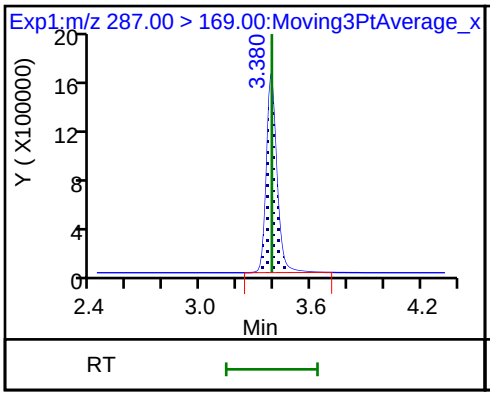

11 Perfluoropentanesulfonic acid



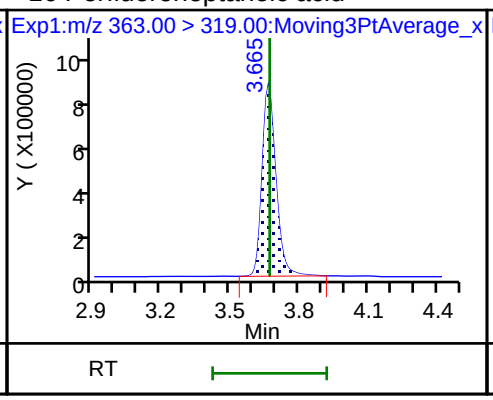

12 HPFO-DA



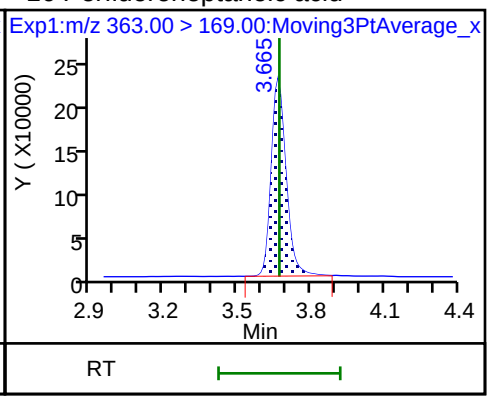

D 13 13C3 HFPO-DA



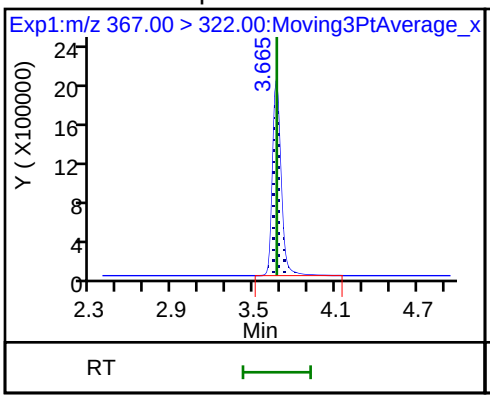

16 Perfluoroheptanoic acid



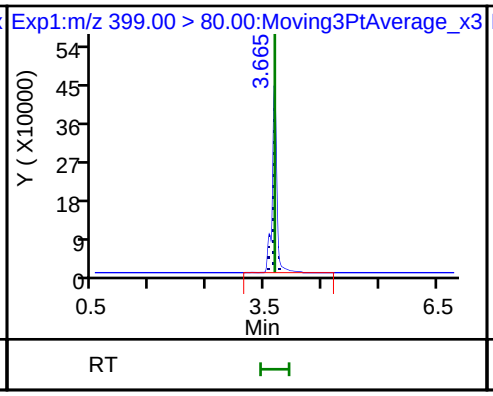

16 Perfluoroheptanoic acid



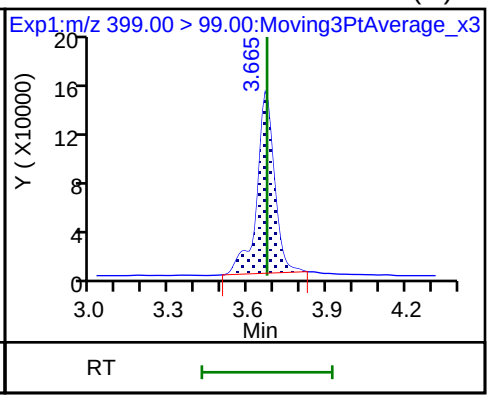

D 15 13C4 PFHpA



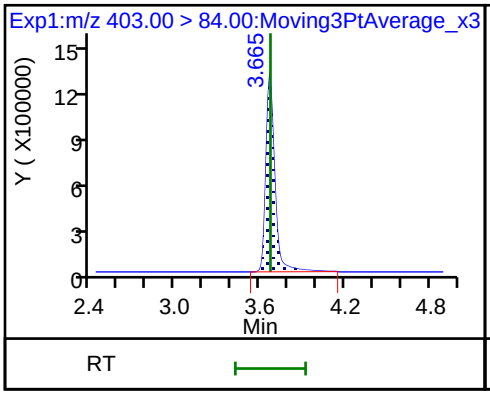

18 Perfluorohexanesulfonic acid



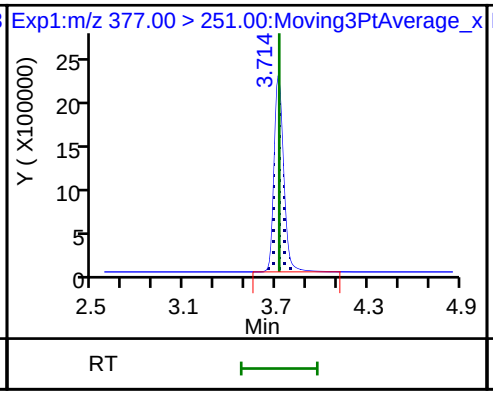

18 Perfluorohexanesulfonic acid (M)




D 17 18O2 PFHxS




19 DONA

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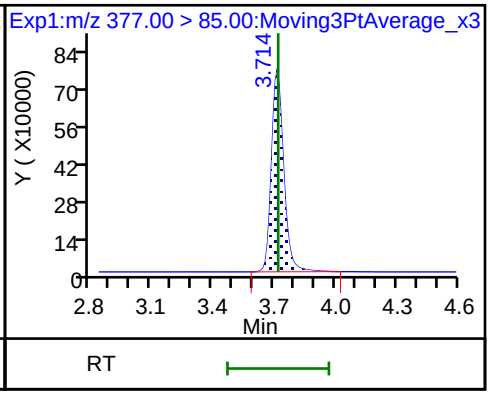
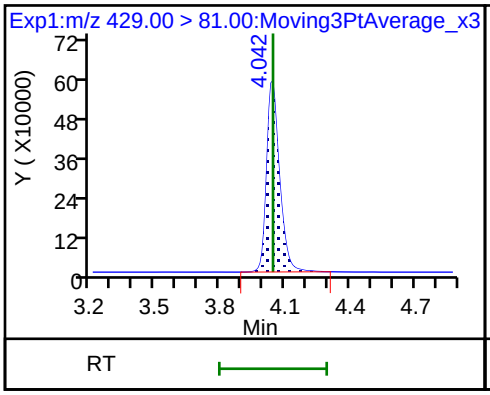
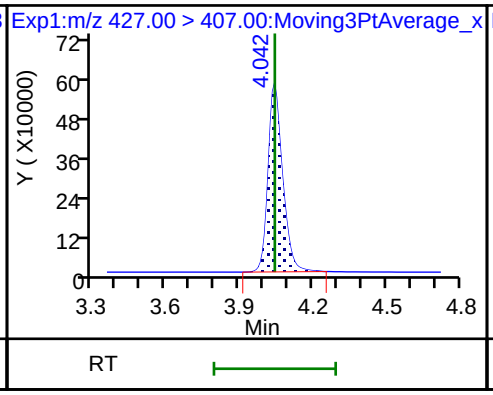


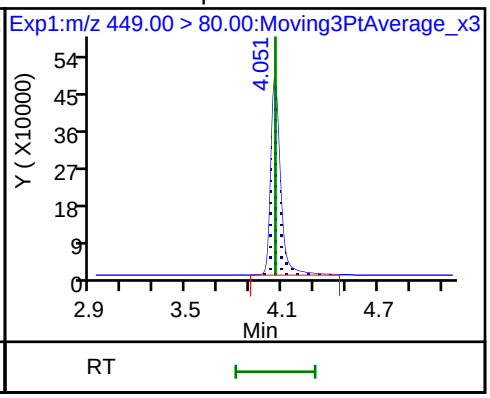
D 20 M2-6:2 FTS




21 6:2 FTS




22 Perfluoroheptanesulfonic acid

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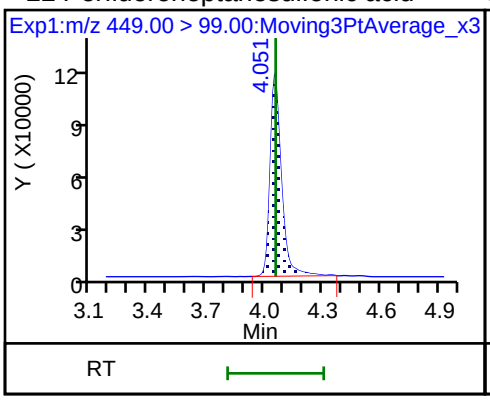
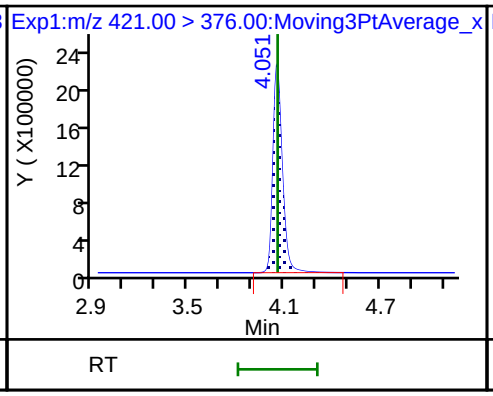
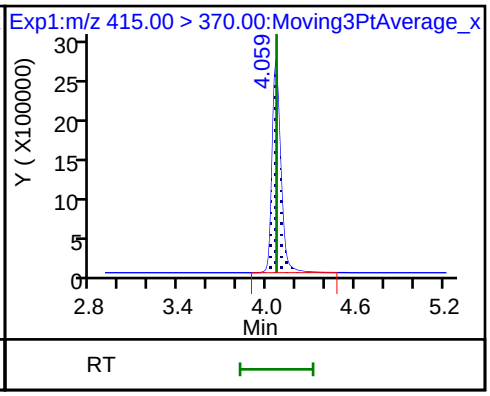


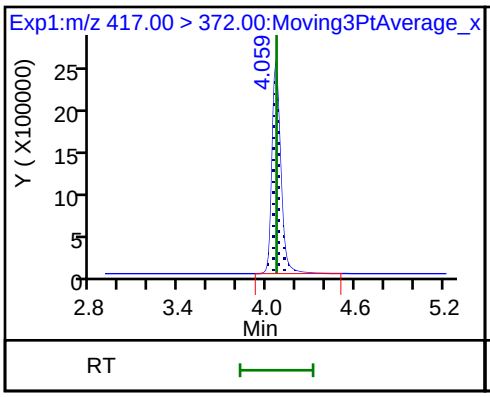

$ 23 13C8 PFOA



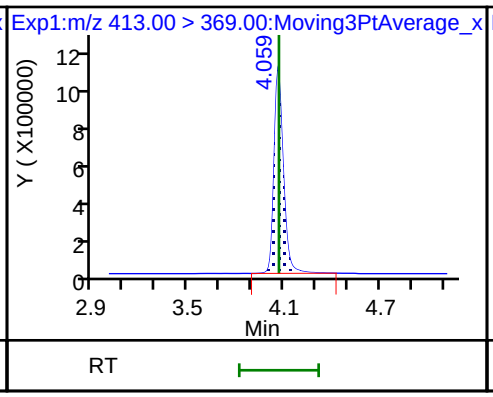

* 25 13C2 PFOA



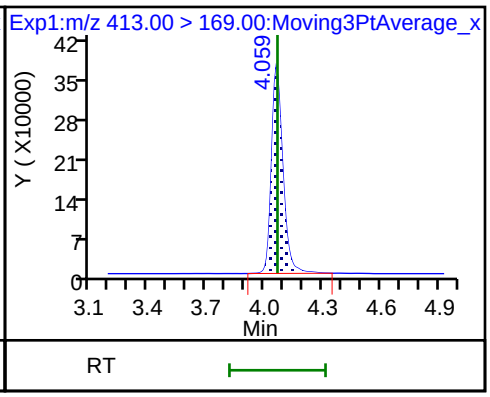

D 24 13C4 PFOA



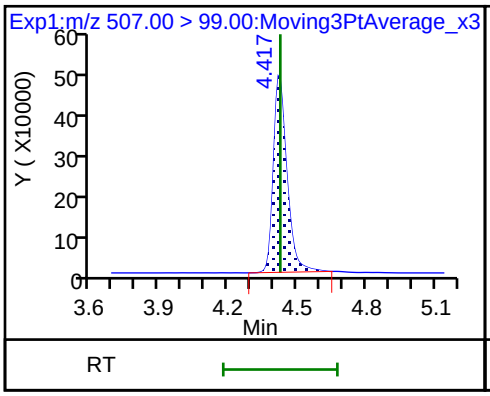

26 Perfluorooctanoic acid



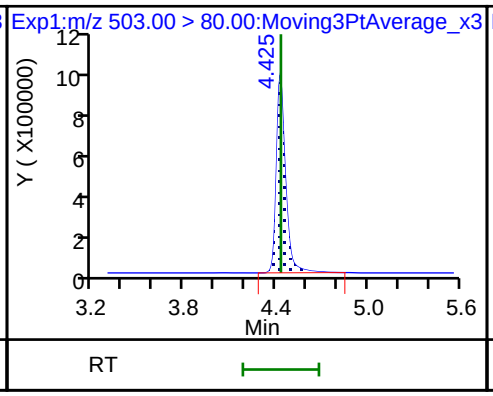

26 Perfluorooctanoic acid



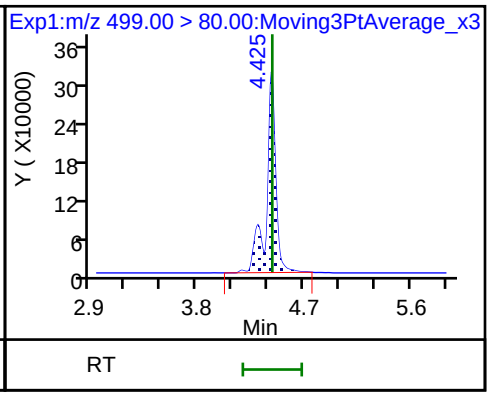

$ 27 13C8 PFOS



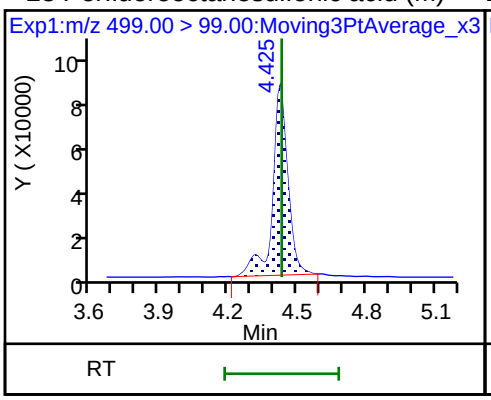

D 29 13C4 PFOS



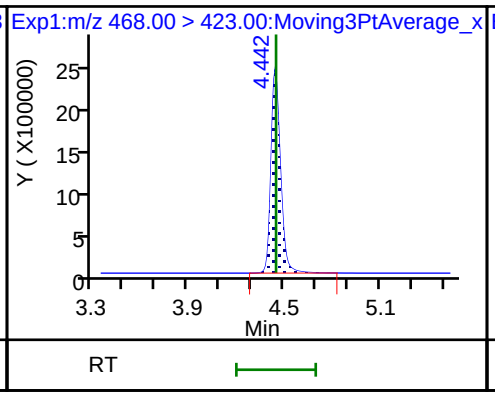

28 Perfluorooctanesulfonic acid



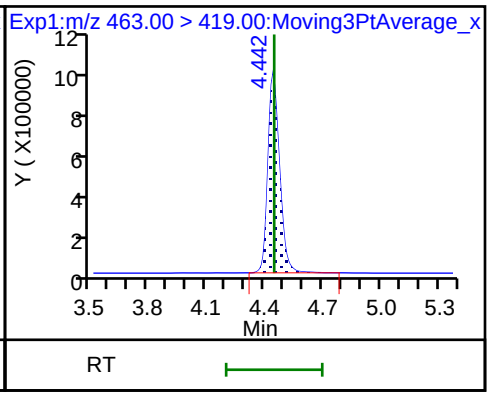
28 Perfluorooctanesulfonic acid (M)



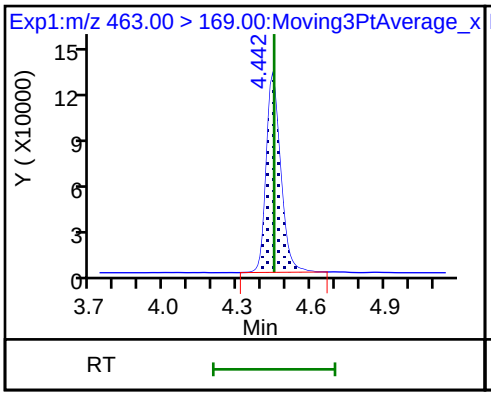

D 31 13C5 PFNA



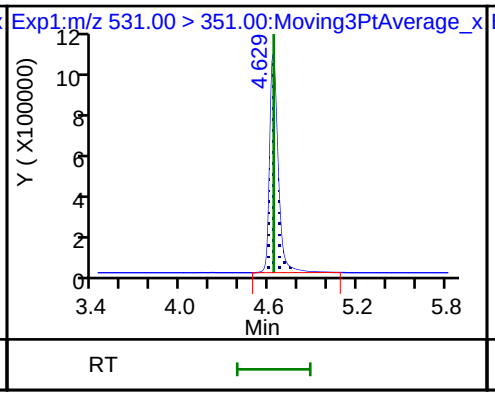

30 Perfluorononanoic acid



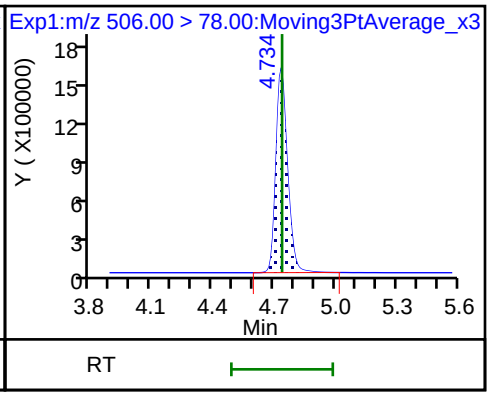

30 Perfluorononanoic acid



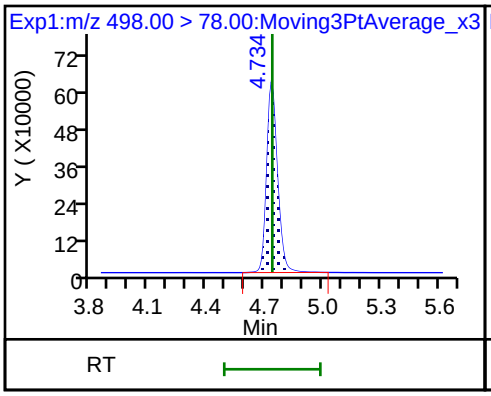

32 9ClFOS



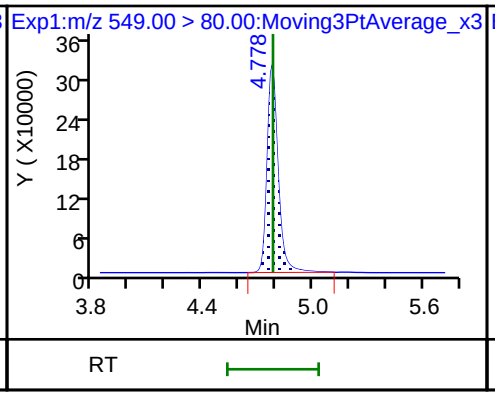

D 34 13C8 FOSA



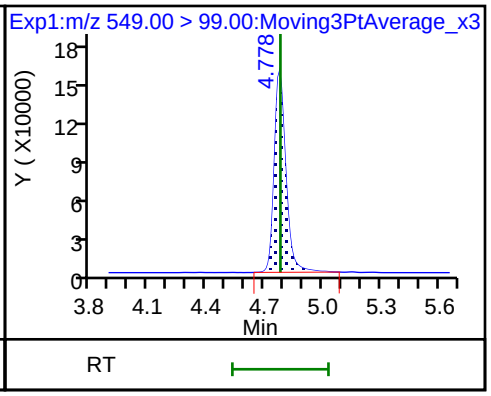

33 Perfluorooctanesulfonamide



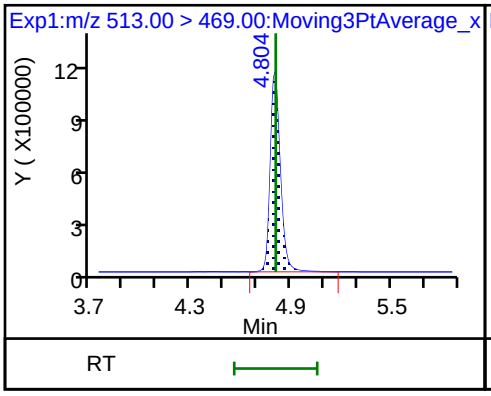

35 Perfluorononanesulfonic acid



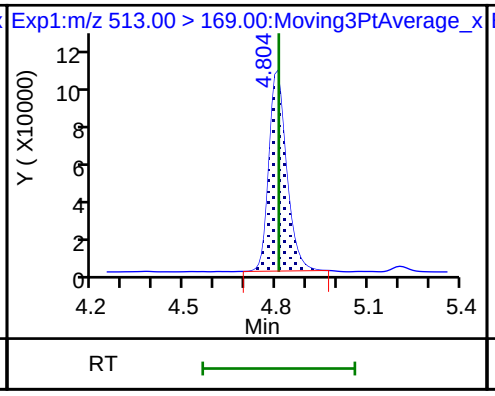

35 Perfluorononanesulfonic acid



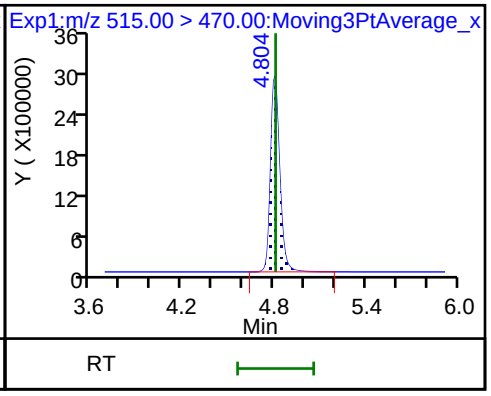

36 Perfluorodecanoic acid



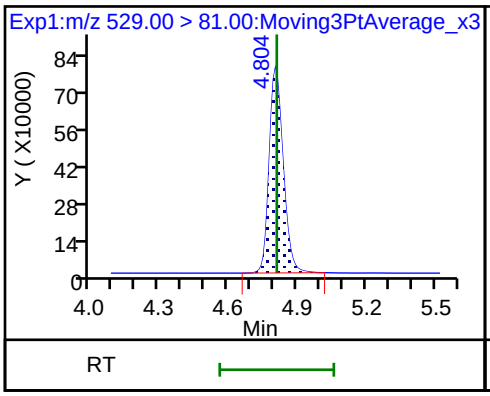

36 Perfluorodecanoic acid



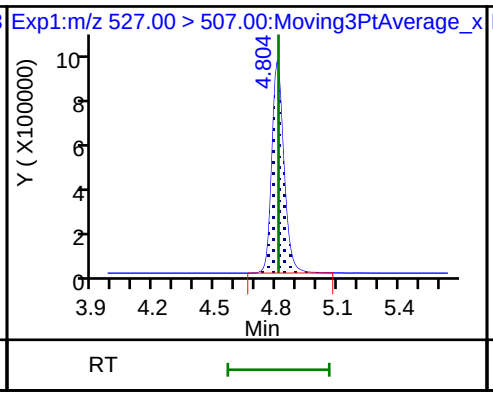

D 37 13C2 PFDA



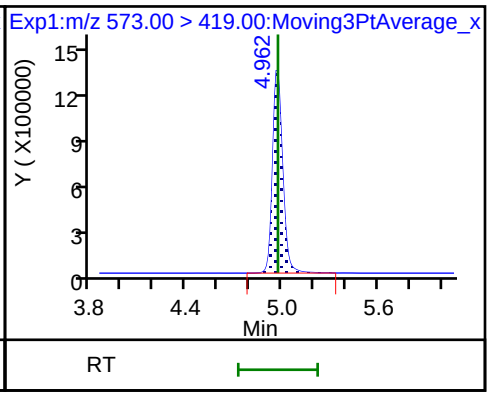
D 38 M2-8:2 FTS



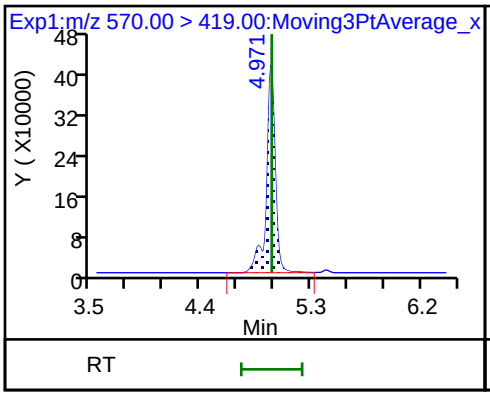

39 8:2 FTS



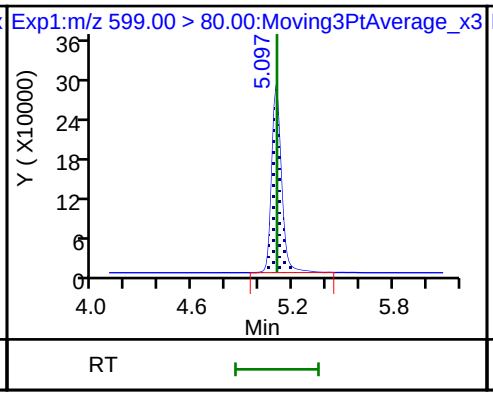

D 40 d3-NMeFOSAA



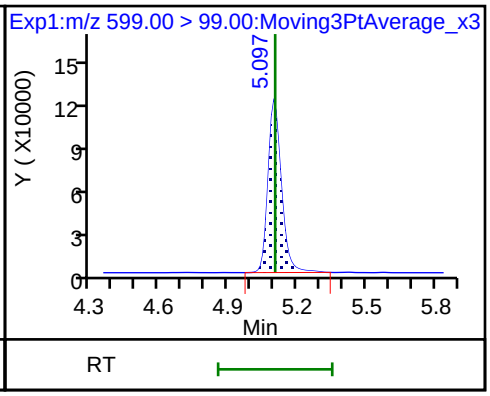

41 NMeFOSAA



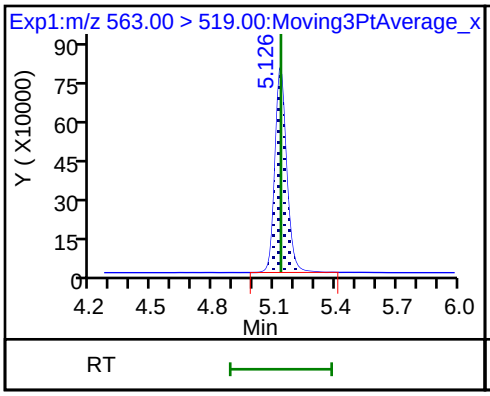

42 Perfluorodecanesulfonic acid



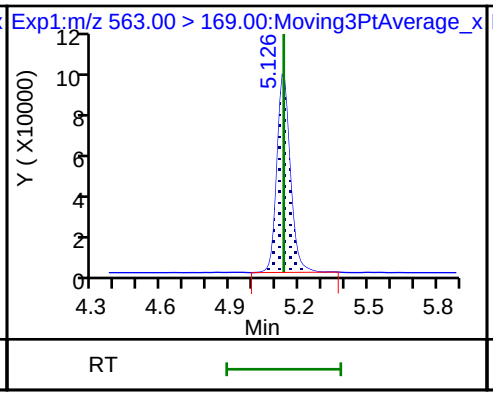

42 Perfluorodecanesulfonic acid



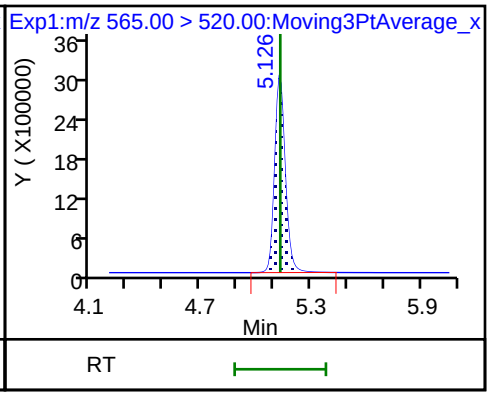

45 Perfluoroundecanoic acid



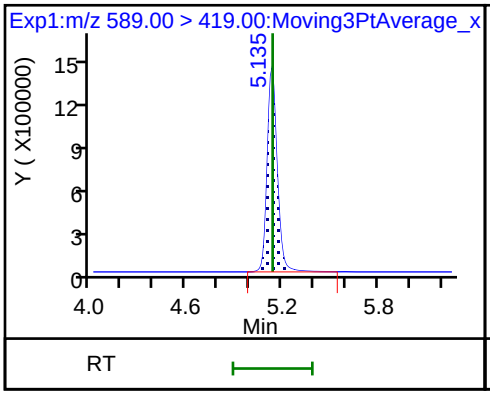

45 Perfluoroundecanoic acid



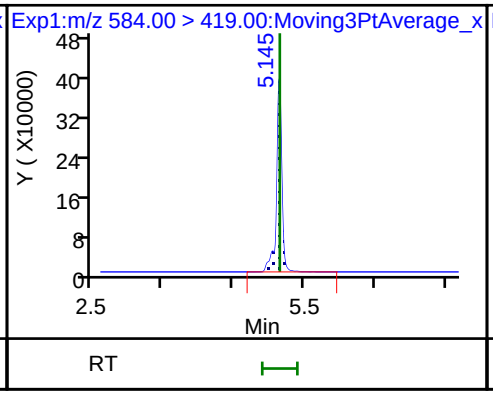

D 44 13C2 PFUnA



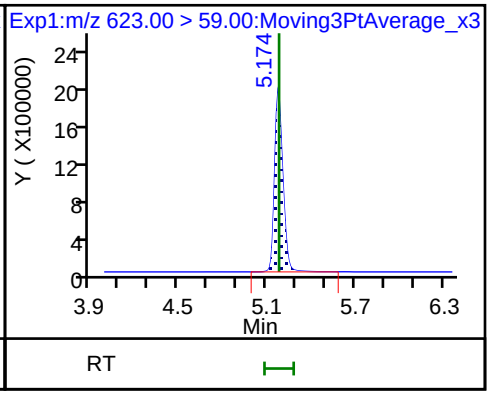

D 46 d5-NEtFOSAA



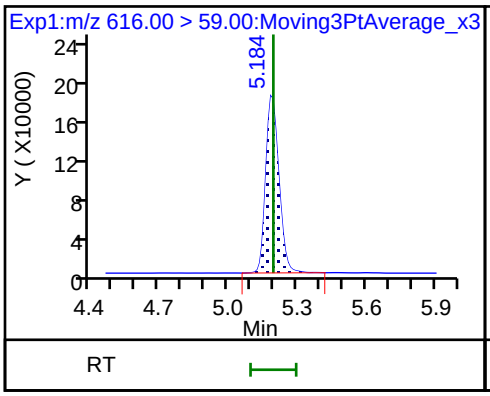

48 NEtFOSA



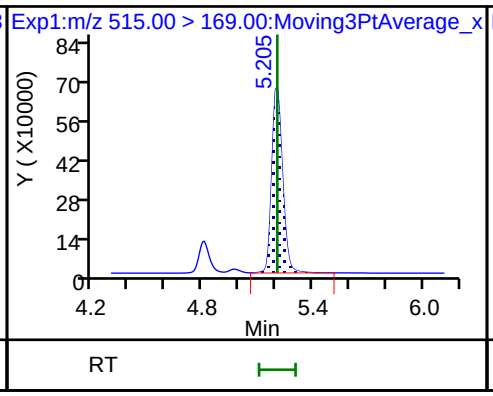

D 43 d7-N-MeFOSE-M



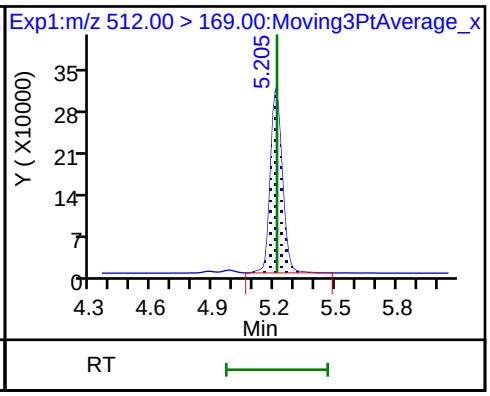
47 N-MeFOSE-M



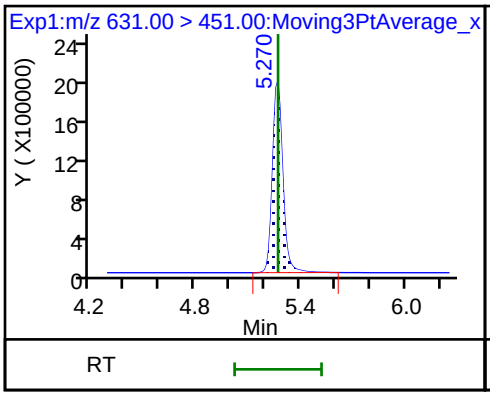

D 49 d-N-MeFOSA-M



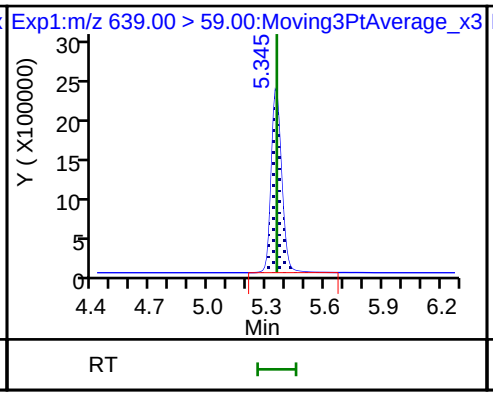

50 NMeFOSA



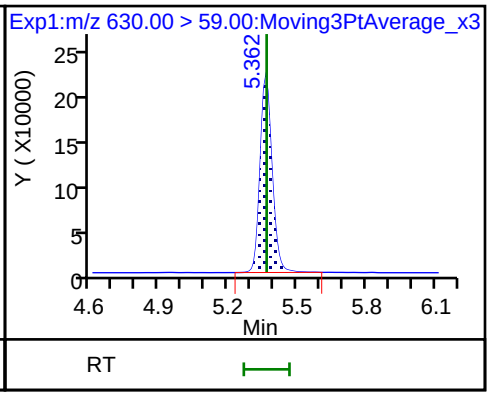

51 11ClFOS



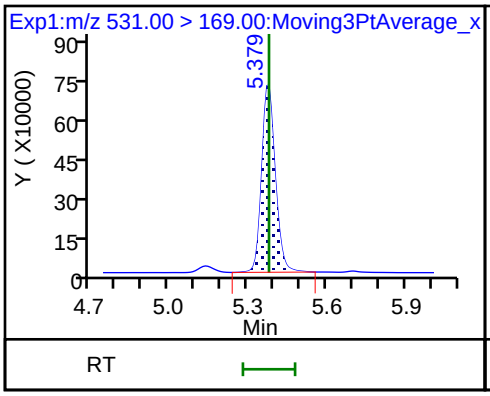

D 52 d9-N-EtFOSE-M



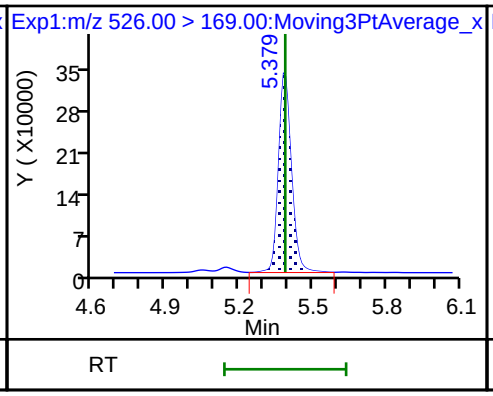

53 N-EtFOSE-M



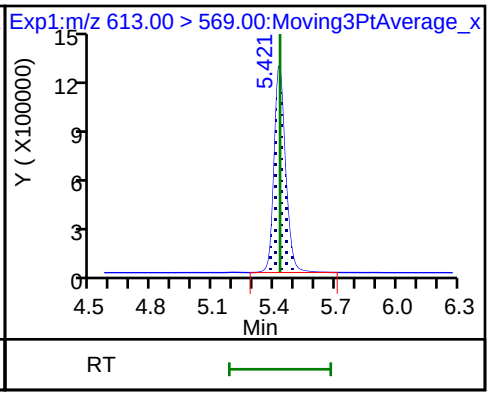

D 54 d-N-EtFOSA-M



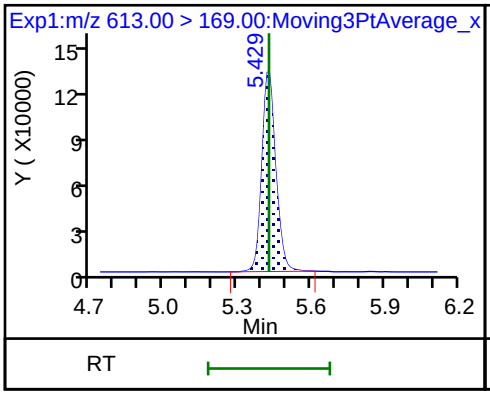

55 N-EtFOSA-M



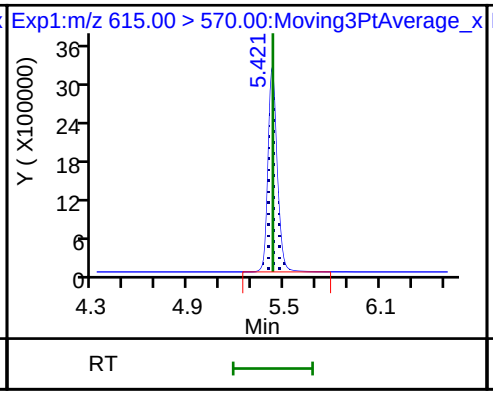

57 Perfluorododecanoic acid



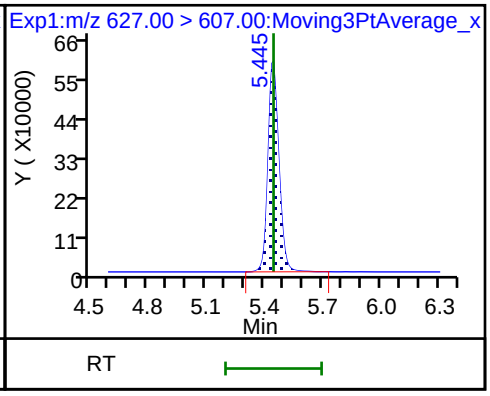

57 Perfluorododecanoic acid



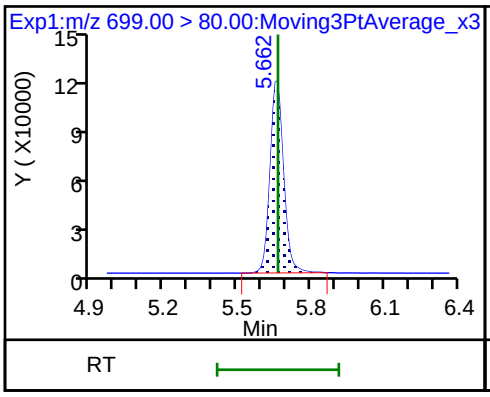

D 56 13C2 PFDoA



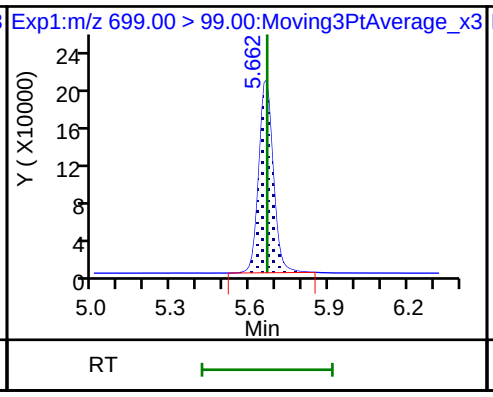

58 10:2 FTS



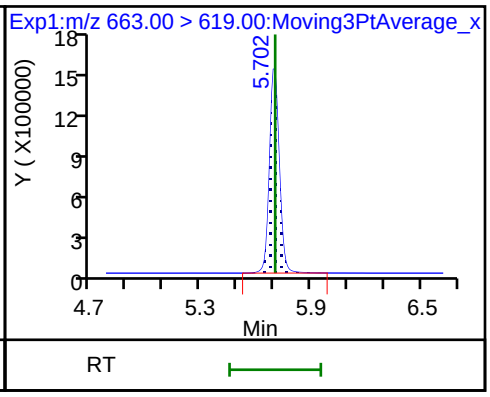
59 PFDoS



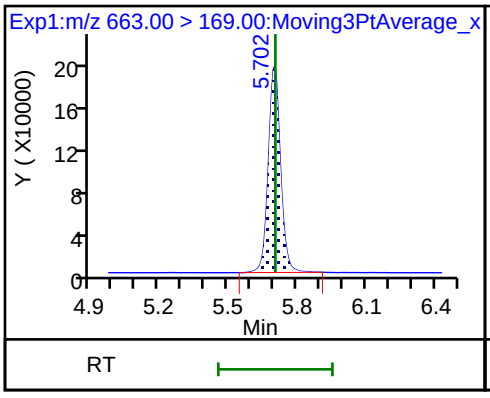

59 PFDoS



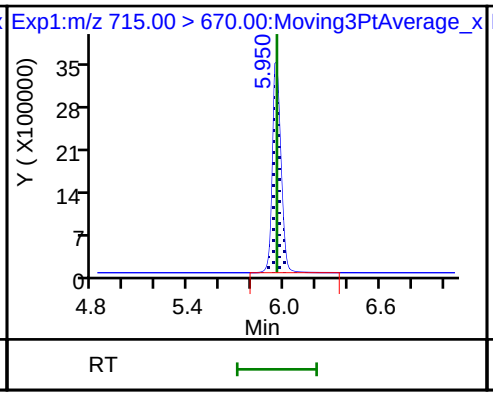

60 Perfluorotridecanoic acid



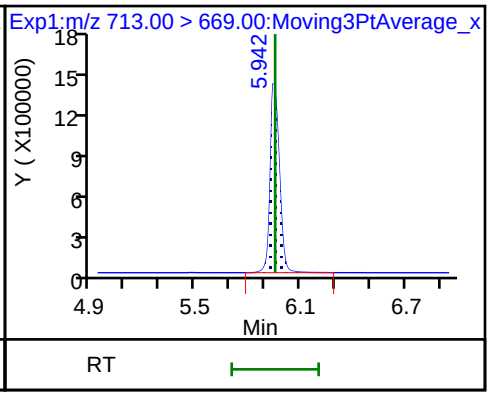

60 Perfluorotridecanoic acid



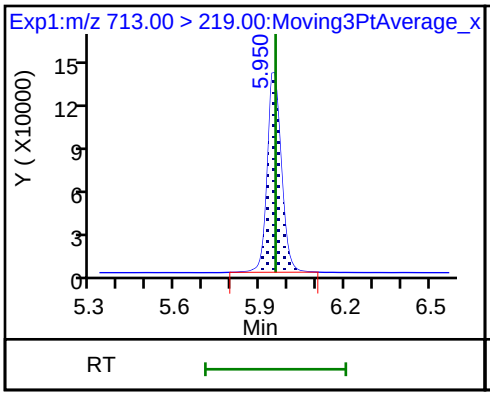

D 61 13C2 PFTeDA



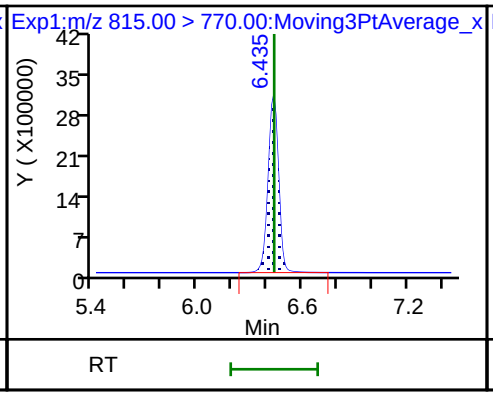

62 Perfluorotetradecanoic acid



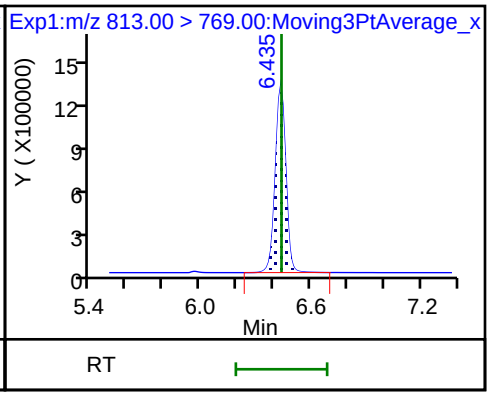

62 Perfluorotetradecanoic acid



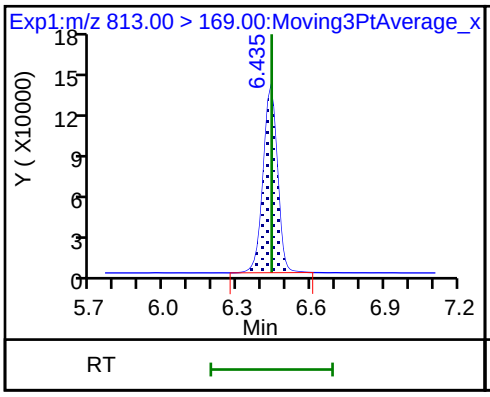

D 64 13C2 PFHxDA



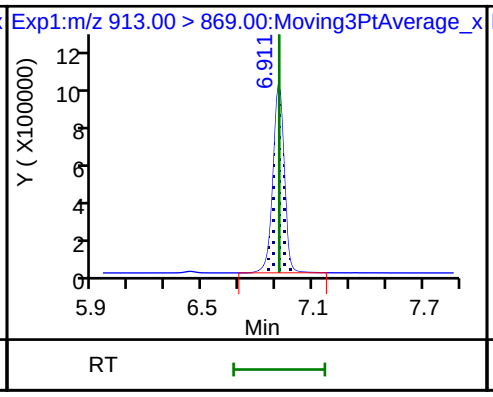

63 Perfluorohexadecanoic acid



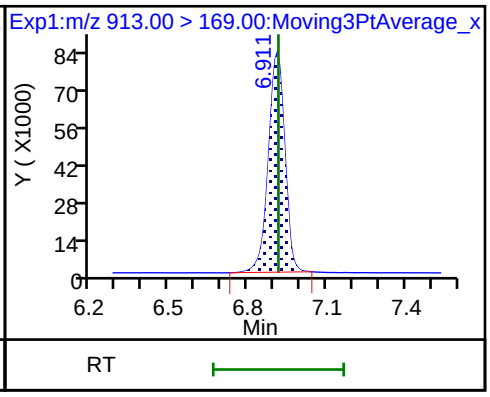

63 Perfluorohexadecanoic acid




65 Perfluorooctadecanoic acid




65 Perfluorooctadecanoic acid



Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

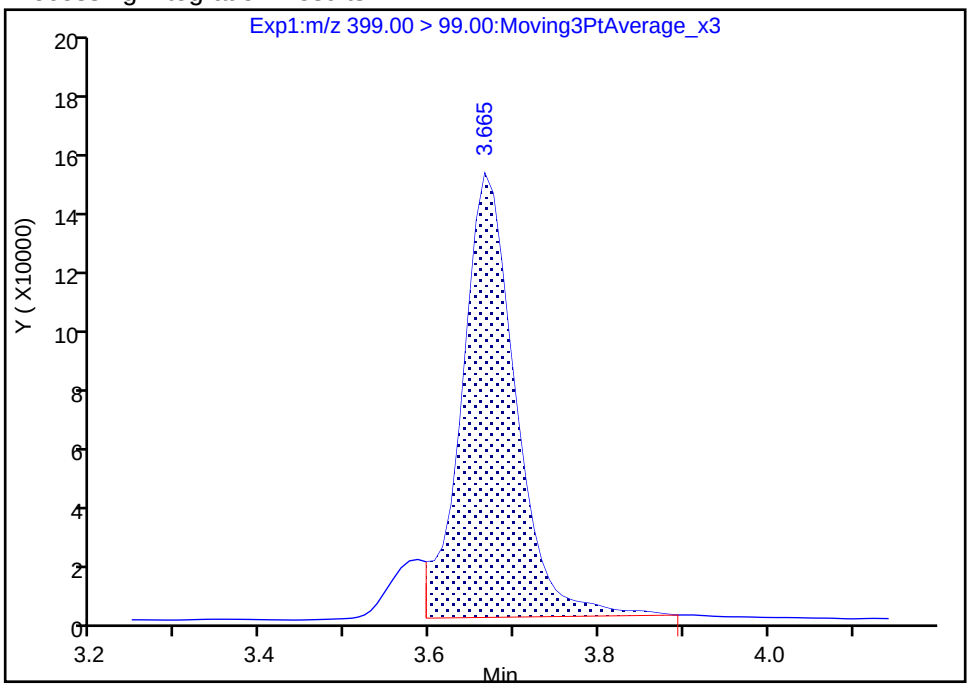
Data File: \\chromfs\Sacramento\ChromData\A13\20200908-102913.b\2020.09.08_A13_PFC_ICALX_007.d
Injection Date: 08-Sep-2020 18:30:01 Instrument ID: A13
Lims ID: IC STD 4
Client ID:
Operator ID: SACINSTLCMS01 ALS Bottle#: 4 Worklist Smp#: 5
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFAS_A13 Limit Group: LC PFC ICAL
Column: Gemini C18 3um 3 x 100mm ( 3.00 mm) Detector EXP1

## 18 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 2

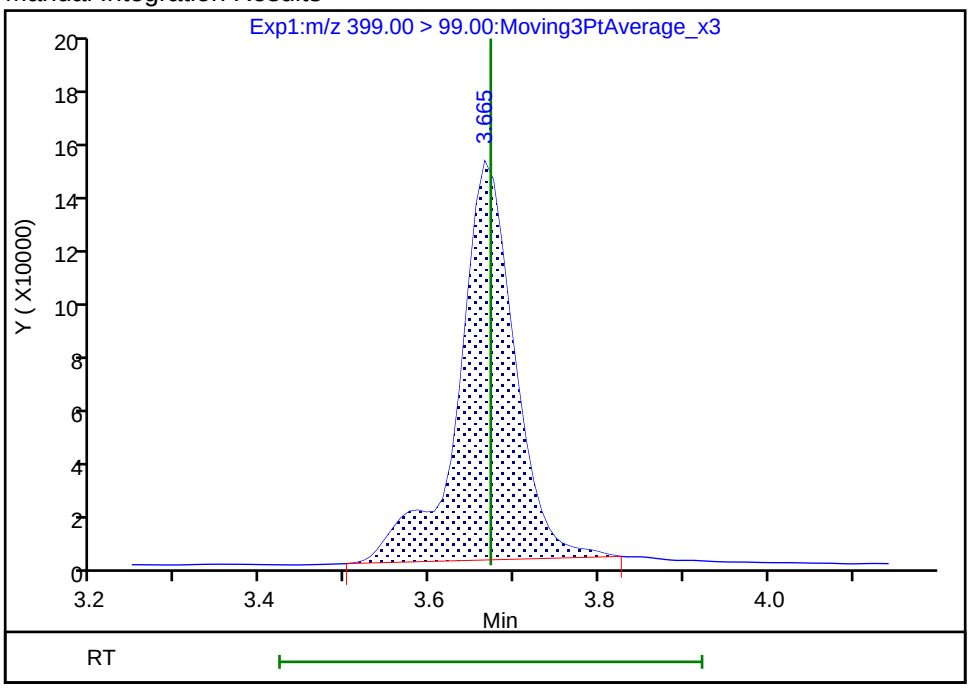
Processing Integration Results

RT: 3.66
Area: 662358
Amount: 0.910000
Amount Units: ng/ml




Manual Integration Results

RT: 3.66
Area: 696370
Amount: 0.905877
Amount Units: ng/ml




Reviewer: novoaj, 09-Sep-2020 08:57:39
Audit Action: Manually Integrated Audit Reason: Isomers

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

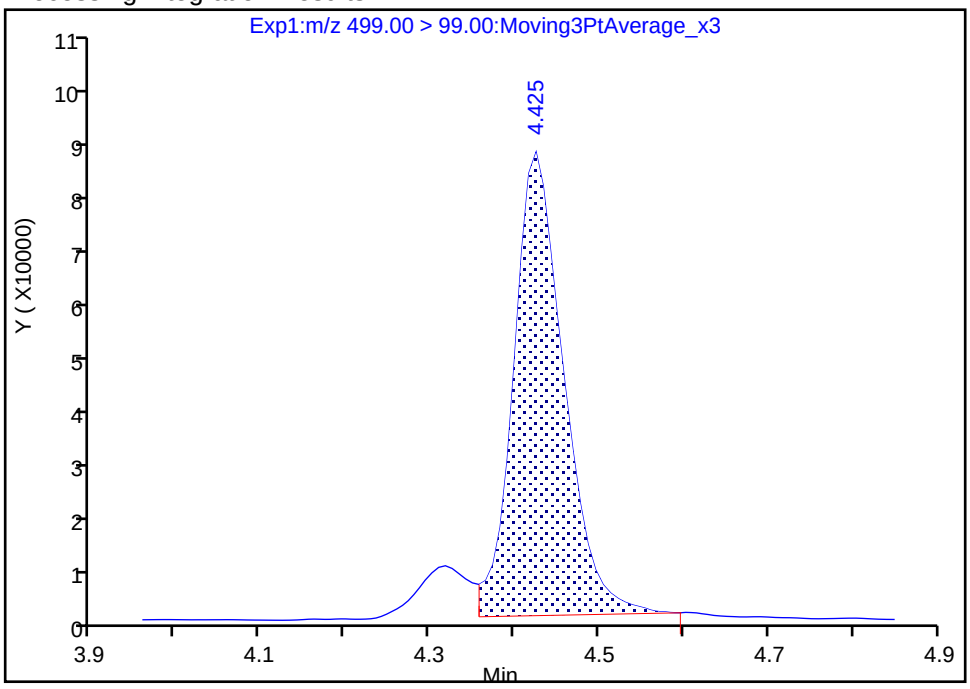
Data File: \\chromfs\Sacramento\ChromData\A13\20200908-102913.b\2020.09.08_A13_PFC_ICALX_007.d
Injection Date: 08-Sep-2020 18:30:01 Instrument ID: A13
Lims ID: IC STD 4
Client ID:
Operator ID: SACINSTLCMS01 ALS Bottle#: 4 Worklist Smp#: 5
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFAS_A13 Limit Group: LC PFC ICAL
Column: Gemini C18 3um 3 x 100mm ( 3.00 mm) Detector EXP1

## 28 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 2

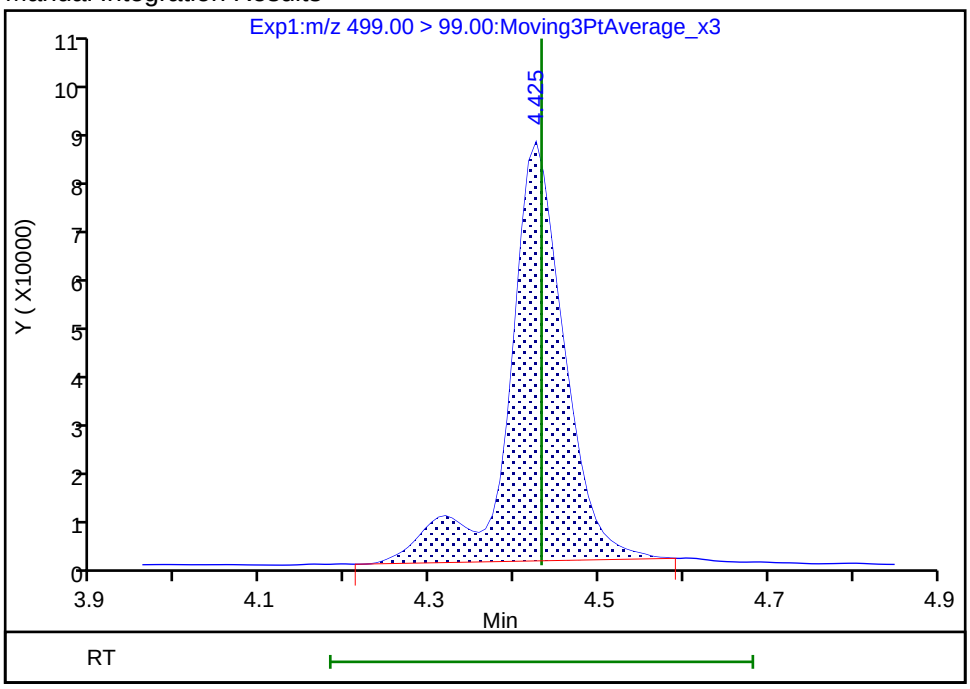
Processing Integration Results

RT: 4.43
Area: 357686
Amount: 0.928000
Amount Units: ng/ml




Manual Integration Results

RT: 4.43
Area: 397889
Amount: 1.014716
Amount Units: ng/ml




Reviewer: novoaj, 09-Sep-2020 08:57:51
Audit Action: Manually Integrated Audit Reason: Isomers

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\A13\20200908-102913.b\2020.09.08_A13_PFC_ICALX_008.d
Lims ID: IC STD 5
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 08-Sep-2020 18:39:25 ALS Bottle#: 5 Worklist Smp#: 6
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Sample Info: ISTD 5 (31)
Misc. Info.: Plate: 1 Rack: 2
Operator ID: SACINSTLCMS01 Instrument ID: A13
Sublist: chrom-PFAS_A13*sub3

Method: \\chromfs\Sacramento\ChromData\A13\20200908-102913.b\PFAS_A13.m
Limit Group: LC PFC ICAL
Last Update: 09-Sep-2020 10:22:16 Calib Date: 08-Sep-2020 18:58:15
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\A13\20200908-102913.b\2020.09.08_A13_PFC_ICALX_010.d

Column 1 : Gemini C18 3um 3 x 100mm ( 3.00 mm) Det: EXP1
Process Host: CTX1007

First Level Reviewer: novoaj Date: 09-Sep-2020 09:33:08
Ratio Calibration: Average of Initial Calibration

| Signal | RT | EXP RT | DLT RT | REL RT | Response | Amount ng/ml | Ratio(Limits) | %Rec | S/N | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| D 1 13C4 PFBA | | | | | | | | | | |
| 217.00 > 172.00 | 2.475 | 2.477 | -0.002 | 0.608 | 9013235 | 2.54 | | 102 | 26573 | |
| 2 Perfluorobutanoic acid | | | | | | | | | | |
| 212.90 > 169.00 | 2.482 | 2.480 | 0.002 | 1.003 | 7550897 | 2.82 | | 113 | 3035 | |
| D 4 13C5 PFPeA | | | | | | | | | | |
| 267.90 > 223.00 | 2.878 | 2.873 | 0.005 | 0.708 | 6876235 | 2.49 | | 99.5 | 23645 | |
| 5 Perfluoropentanoic acid | | | | | | | | | | |
| 262.90 > 219.00 | 2.878 | 2.875 | 0.003 | 1.000 | 7398690 | 2.62 | | 105 | 1425 | |
| D 14 13C3 PFBS | | | | | | | | | | |
| 301.90 > 80.00 | 2.913 | 2.913 | 0.0 | 0.716 | 8431444 | 2.43 | | 105 | 19934 | |
| 6 Perfluorobutanesulfonic acid | | | | | | | | | | |
| 298.90 > 80.00 | 2.913 | 2.913 | 0.0 | 1.000 | 8694694 | 2.45 | Target=2.18 | 111 | 11250 | |
| 298.90 > 99.00 | 2.913 | 2.913 | 0.0 | 1.000 | 4002675 | | 2.17(1.09-3.26) | 111 | 2388 | |
| 7 4:2 FTS | | | | | | | | | | |
| 327.00 > 307.00 | 3.215 | 3.221 | -0.006 | 0.997 | 7222435 | 2.76 | | 118 | 15219 | |
| D 8 M2-4:2 FTS | | | | | | | | | | |
| 329.00 > 81.00 | 3.226 | 3.222 | 0.004 | 0.793 | 1885203 | 2.22 | | 95.0 | 1022 | |
| D 9 13C2 PFHxA | | | | | | | | | | |
| 315.00 > 270.00 | 3.258 | 3.264 | -0.006 | 0.801 | 8721278 | 2.55 | | 102 | 34042 | |
| 10 Perfluorohexanoic acid | | | | | | | | | | |
| 313.00 > 269.00 | 3.268 | 3.265 | 0.003 | 1.003 | 8293337 | 2.56 | Target=11.68 | 102 | 1465 | |
| 313.00 > 119.00 | 3.258 | 3.265 | -0.007 | 1.000 | 703192 | | 11.79(5.84-17.52) | 102 | 241 | |
| 11 Perfluoropentanesulfonic acid | | | | | | | | | | |
| 349.00 > 80.00 | 3.279 | 3.279 | 0.0 | 1.126 | 7357818 | 2.57 | Target=2.56 | 110 | 12879 | |
| 349.00 > 99.00 | 3.279 | 3.279 | 0.0 | 1.126 | 2900744 | | 2.54(1.28-3.84) | 110 | 3796 | |
| 12 HPFO-DA | | | | | | | | | | |
| 285.00 > 169.00 | 3.388 | 3.386 | 0.002 | 1.000 | 2018411 | 2.74 | | 109 | 1515 | |

| Signal | RT | EXP RT | DLT RT | REL RT | Response | Amount ng/ml | Ratio(Limits) | %Rec | S/N | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| D 13 13C3 HFPO-DA | | | | | | | | | | |
| 287.00 > 169.00 | 3.388 | 3.386 | 0.002 | 0.833 | 6204174 | 2.54 | | 101 | 4157 | |
| 16 Perfluoroheptanoic acid | | | | | | | | | | |
| 363.00 > 319.00 | 3.665 | 3.670 | -0.005 | 1.000 | 9256124 | 2.64 | Target=3.85 | 106 | 1408 | |
| 363.00 > 169.00 | 3.665 | 3.670 | -0.005 | 1.000 | 2406618 | | 3.85(1.92-5.77) | 106 | 1115 | |
| D 15 13C4 PFHpA | | | | | | | | | | |
| 367.00 > 322.00 | 3.665 | 3.668 | -0.003 | 0.901 | 8658843 | 2.58 | | 103 | 5748 | |
| D 17 18O2 PFHxS | | | | | | | | | | |
| 403.00 > 84.00 | 3.675 | 3.672 | 0.003 | 0.904 | 5460626 | 2.40 | | 102 | 3906 | |
| 18 Perfluorohexanesulfonic acid | | | | | | | | | | M |
| 399.00 > 80.00 | 3.675 | 3.672 | 0.003 | 1.000 | 5884181 | 2.29 | Target=3.25 | 101 | 383 | |
| 399.00 > 99.00 | 3.675 | 3.672 | 0.003 | 1.000 | 1787989 | | 3.29(1.62-4.87) | 101 | 183 | M |
| 19 DONA | | | | | | | | | | |
| 377.00 > 251.00 | 3.713 | 3.719 | -0.006 | 0.839 | 22665425 | 2.67 | Target=2.76 | 113 | 12196 | |
| 377.00 > 85.00 | 3.713 | 3.719 | -0.006 | 0.839 | 8178266 | | 2.77(1.38-4.14) | 113 | 4889 | |
| D 20 M2-6:2 FTS | | | | | | | | | | |
| 429.00 > 81.00 | 4.042 | 4.043 | -0.001 | 0.994 | 2407481 | 2.46 | | 103 | 3041 | |
| 21 6:2 FTS | | | | | | | | | | |
| 427.00 > 407.00 | 4.042 | 4.043 | -0.001 | 1.000 | 5956664 | 2.44 | | 103 | 2518 | |
| 22 Perfluoroheptanesulfonic acid | | | | | | | | | | |
| 449.00 > 80.00 | 4.059 | 4.056 | 0.003 | 0.917 | 4972809 | 2.64 | Target=4.29 | 111 | 10076 | |
| 449.00 > 99.00 | 4.059 | 4.056 | 0.003 | 0.917 | 1115147 | | 4.46(2.15-6.44) | 111 | 473 | |
| $ 23 13C8 PFOA | | | | | | | | | | |
| 421.00 > 376.00 | 4.059 | 4.058 | 0.001 | 0.998 | 8920434 | 2.40 | | 98.1 | 7487 | |
| * 25 13C2 PFOA | | | | | | | | | | |
| 415.00 > 370.00 | 4.067 | 4.065 | 0.002 | | 10428958 | 2.50 | | | 15743 | |
| D 24 13C4 PFOA | | | | | | | | | | |
| 417.00 > 372.00 | 4.067 | 4.065 | 0.002 | 1.000 | 10403846 | 2.53 | | 101 | 6067 | |
| 26 Perfluorooctanoic acid | | | | | | | | | | |
| 413.00 > 369.00 | 4.067 | 4.066 | 0.001 | 1.000 | 11036141 | 2.59 | Target=2.95 | 104 | 2771 | |
| 413.00 > 169.00 | 4.067 | 4.066 | 0.001 | 1.000 | 3688804 | | 2.99(1.47-4.42) | 104 | 1846 | |
| $ 27 13C8 PFOS | | | | | | | | | | |
| 507.00 > 99.00 | 4.426 | 4.426 | 0.0 | 1.088 | 2066897 | 2.39 | | 99.9 | 1345 | |
| D 29 13C4 PFOS | | | | | | | | | | |
| 503.00 > 80.00 | 4.426 | 4.429 | -0.003 | 1.088 | 3951981 | 2.44 | | 102 | 3570 | |
| 28 Perfluorooctanesulfonic acid | | | | | | | | | | M |
| 499.00 > 80.00 | 4.435 | 4.432 | 0.003 | 1.002 | 4198333 | 2.45 | Target=4.28 | 105 | 990 | |
| 499.00 > 99.00 | 4.426 | 4.432 | -0.006 | 1.000 | 988852 | | 4.25(2.14-6.41) | 105 | 244 | M |
| D 31 13C5 PFNA | | | | | | | | | | |
| 468.00 > 423.00 | 4.443 | 4.448 | -0.005 | 1.092 | 9904240 | 2.61 | | 104 | 10228 | |
| 30 Perfluorononanoic acid | | | | | | | | | | |
| 463.00 > 419.00 | 4.452 | 4.449 | 0.003 | 1.002 | 10113220 | 2.69 | Target=8.00 | 107 | 2498 | |
| 463.00 > 169.00 | 4.452 | 4.449 | 0.003 | 1.002 | 1298629 | | 7.79(4.00-12.01) | 107 | 1536 | |
| 32 9ClFOS | | | | | | | | | | |
| 531.00 > 351.00 | 4.629 | 4.632 | -0.003 | 1.046 | 10540021 | 2.55 | | 109 | 10342 | |
| D 34 13C8 FOSA | | | | | | | | | | |
| 506.00 > 78.00 | 4.734 | 4.738 | -0.004 | 1.164 | 6077423 | 2.61 | | 104 | 6282 | |

| Signal | RT | EXP RT | DLT RT | REL RT | Response | Amount ng/ml | Ratio(Limits) | %Rec | S/N | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| 33 Perfluorooctanesulfonamide | | | | | | | | | | |
| 498.00 > 78.00 | 4.743 | 4.739 | 0.004 | 1.002 | 5893720 | 2.58 | | 103 | 5173 | |
| 35 Perfluorononanesulfonic acid | | | | | | | | | | |
| 549.00 > 80.00 | 4.777 | 4.781 | -0.004 | 1.079 | 3374107 | 2.63 | Target=2.15 | 110 | 8210 | |
| 549.00 > 99.00 | 4.777 | 4.781 | -0.004 | 1.079 | 1567245 | | 2.15(1.08-3.23) | 110 | 1379 | |
| 36 Perfluorodecanoic acid | | | | | | | | | | |
| 513.00 > 469.00 | 4.804 | 4.808 | -0.004 | 1.000 | 11249076 | 2.63 | Target=10.44 | 105 | 3912 | |
| 513.00 > 169.00 | 4.804 | 4.808 | -0.004 | 1.000 | 1038148 | | 10.84(5.22-15.65) | 105 | 352 | |
| D 37 13C2 PFDA | | | | | | | | | | |
| 515.00 > 470.00 | 4.804 | 4.808 | -0.004 | 1.181 | 11937334 | 2.60 | | 104 | 41304 | |
| D 38 M2-8:2 FTS | | | | | | | | | | |
| 529.00 > 81.00 | 4.813 | 4.810 | 0.003 | 1.183 | 3196689 | 2.47 | | 103 | 5017 | |
| 39 8:2 FTS | | | | | | | | | | |
| 527.00 > 507.00 | 4.813 | 4.810 | 0.003 | 1.000 | 8559688 | 2.59 | | 108 | 6821 | |
| D 40 d3-NMeFOSAA | | | | | | | | | | |
| 573.00 > 419.00 | 4.971 | 4.972 | -0.001 | 1.222 | 6048740 | 2.55 | | 102 | 6069 | |
| 41 NMeFOSAA | | | | | | | | | | |
| 570.00 > 419.00 | 4.980 | 4.978 | 0.002 | 1.002 | 5100889 | 2.62 | | 105 | 424 | |
| 42 Perfluorodecanesulfonic acid | | | | | | | | | | |
| 599.00 > 80.00 | 5.106 | 5.103 | 0.003 | 1.154 | 2838619 | 2.61 | Target=2.36 | 108 | 3575 | |
| 599.00 > 99.00 | 5.106 | 5.103 | 0.003 | 1.154 | 1203758 | | 2.36(1.18-3.54) | 108 | 1279 | |
| 45 Perfluoroundecanoic acid | | | | | | | | | | |
| 563.00 > 519.00 | 5.135 | 5.132 | 0.003 | 1.000 | 8106772 | 2.63 | Target=8.67 | 105 | 2020 | |
| 563.00 > 169.00 | 5.135 | 5.132 | 0.003 | 1.000 | 935818 | | 8.66(4.34-13.01) | 105 | 1657 | |
| D 44 13C2 PFUnA | | | | | | | | | | |
| 565.00 > 520.00 | 5.135 | 5.132 | 0.003 | 1.262 | 11664379 | 2.59 | | 104 | 7866 | |
| D 46 d5-NEtFOSAA | | | | | | | | | | |
| 589.00 > 419.00 | 5.135 | 5.139 | -0.004 | 1.262 | 5742065 | 2.50 | | 100 | 5241 | |
| 48 NEtFOSA | | | | | | | | | | |
| 584.00 > 419.00 | 5.144 | 5.148 | -0.004 | 1.002 | 4644784 | 2.61 | | 104 | 1422 | |
| D 43 d7-N-MeFOSE-M | | | | | | | | | | |
| 623.00 > 59.00 | 5.183 | 5.182 | 0.001 | 1.274 | 7385364 | 12.7 | | 101 | 2229 | |
| 47 N-MeFOSE-M | | | | | | | | | | |
| 616.00 > 59.00 | 5.193 | 5.195 | -0.002 | 1.002 | 1778047 | 2.83 | | 113 | 2233 | |
| D 49 d-N-MeFOSA-M | | | | | | | | | | |
| 515.00 > 169.00 | 5.205 | 5.205 | -0.001 | 1.280 | 2757873 | 2.52 | | 101 | 52.0 | |
| 50 NMeFOSA | | | | | | | | | | |
| 512.00 > 169.00 | 5.216 | 5.213 | 0.003 | 1.002 | 3114938 | 2.87 | | 115 | 271 | |
| 51 11ClFOS | | | | | | | | | | |
| 631.00 > 451.00 | 5.269 | 5.271 | -0.002 | 1.190 | 19692127 | 2.76 | | 117 | 4961 | |
| D 52 d9-N-EtFOSE-M | | | | | | | | | | |
| 639.00 > 59.00 | 5.354 | 5.352 | 0.002 | 1.316 | 8851823 | 12.9 | | 104 | 3469 | |
| 53 N-EtFOSE-M | | | | | | | | | | |
| 630.00 > 59.00 | 5.363 | 5.366 | -0.003 | 1.002 | 1913658 | 2.61 | | 104 | 1911 | |
| D 54 d-N-EtFOSA-M | | | | | | | | | | |
| 531.00 > 169.00 | 5.380 | 5.379 | 0.001 | 1.323 | 2669751 | 2.55 | | 102 | 190 | |

| Signal | RT | EXP RT | DLT RT | REL RT | Response | Amount ng/ml | Ratio(Limits) | %Rec | S/N | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| 55 N-EtFOSA-M | | | | | | | | | | |
| 526.00 > 169.00 | 5.388 | 5.386 | 0.002 | 1.002 | 3136862 | 2.77 | | 111 | 230 | |
| 57 Perfluorododecanoic acid | | | | | | | | | | |
| 613.00 > 569.00 | 5.429 | 5.428 | 0.001 | 1.000 | 11677975 | 2.54 | Target=9.05 | 101 | 3851 | |
| 613.00 > 169.00 | 5.429 | 5.428 | 0.001 | 1.000 | 1356282 | | 8.61(4.52-13.57) | 101 | 2502 | |
| D 56 13C2 PFDoA | | | | | | | | | | |
| 615.00 > 570.00 | 5.429 | 5.428 | 0.001 | 1.335 | 12620498 | 2.61 | | 104 | 6903 | |
| 58 10:2 FTS | | | | | | | | | | |
| 627.00 > 607.00 | 5.446 | 5.445 | 0.001 | 1.132 | 5731243 | 2.63 | | 109 | 3398 | |
| 59 PFDoS | | | | | | | | | | |
| 699.00 > 80.00 | 5.663 | 5.665 | -0.002 | 1.279 | 1093416 | 2.57 | Target=0.57 | 106 | 1792 | |
| 699.00 > 99.00 | 5.663 | 5.665 | -0.002 | 1.279 | 1874304 | | 0.58(0.29-0.86) | 106 | 3121 | |
| 60 Perfluorotridecanoic acid | | | | | | | | | | |
| 663.00 > 619.00 | 5.703 | 5.704 | -0.001 | 1.050 | 12833545 | 2.71 | Target=7.06 | 108 | 10802 | |
| 663.00 > 169.00 | 5.703 | 5.704 | -0.001 | 1.050 | 1893728 | | 6.78(3.53-10.59) | 108 | 2421 | |
| 62 Perfluorotetradecanoic acid | | | | | | | | | | |
| 713.00 > 669.00 | 5.958 | 5.954 | 0.004 | 1.001 | 12795824 | 2.67 | Target=11.23 | 107 | 6276 | |
| 713.00 > 219.00 | 5.950 | 5.954 | -0.004 | 1.000 | 1126945 | | 11.35(5.62-16.85) | 107 | 4084 | |
| D 61 13C2 PFTeDA | | | | | | | | | | |
| 715.00 > 670.00 | 5.950 | 5.953 | -0.003 | 1.463 | 12193198 | 2.55 | | 102 | 21415 | |
| D 64 13C2 PFHxDA | | | | | | | | | | |
| 815.00 > 770.00 | 6.435 | 6.437 | -0.002 | 1.582 | 13292918 | 2.67 | | 107 | 9560 | |
| 63 Perfluorohexadecanoic acid | | | | | | | | | | |
| 813.00 > 769.00 | 6.435 | 6.439 | -0.004 | 1.000 | 12612258 | 2.47 | Target=9.45 | 98.7 | 2171 | |
| 813.00 > 169.00 | 6.435 | 6.439 | -0.004 | 1.000 | 1223034 | | 10.31(4.72-14.17) | 98.7 | 3093 | |
| 65 Perfluorooctadecanoic acid | | | | | | | | | | |
| 913.00 > 869.00 | 6.912 | 6.915 | -0.003 | 1.074 | 10217750 | 2.63 | Target=11.13 | 105 | 3189 | |
| 913.00 > 169.00 | 6.912 | 6.915 | -0.003 | 1.074 | 943924 | | 10.82(5.56-16.69) | 105 | 2040 | |

## QC Flag Legend

Review Flags

M - Manually Integrated

## Reagents:

LCPFC_LL5_00031 Amount Added: 1.00 Units: mL

Report Date: 09-Sep-2020 10:22:20 Chrom Revision: 2.3 20-Aug-2020 13:57:12

Eurofins TestAmerica, Sacramento

Data File: \\chromfs\Sacramento\ChromData\A13\20200908-102913.b\2020.09.08_A13_PFC_ICALX_008.d

Injection Date: 08-Sep-2020 18:39:25 Instrument ID: A13

Lims ID: IC STD 5

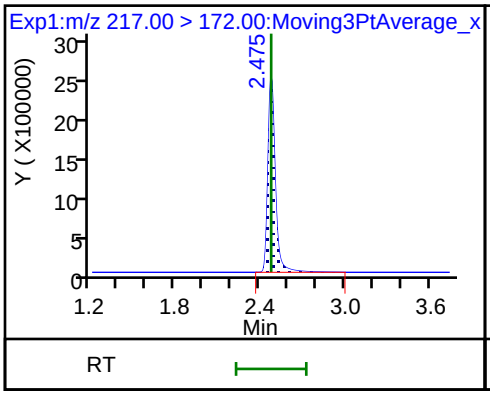
Client ID:

Operator ID: SACINSTLCMS01 ALS Bottle#: 5 Worklist Smp#: 6

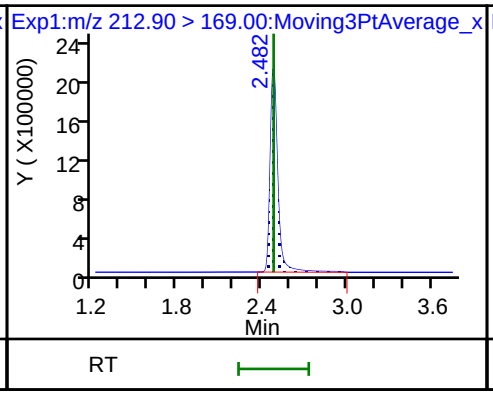
Injection Vol: 20.0 ul Dil. Factor: 1.0000

Method: PFAS_A13 Limit Group: LC PFC ICAL

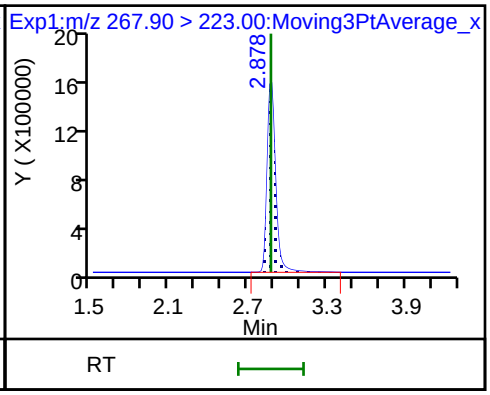
D 1 13C4 PFBA



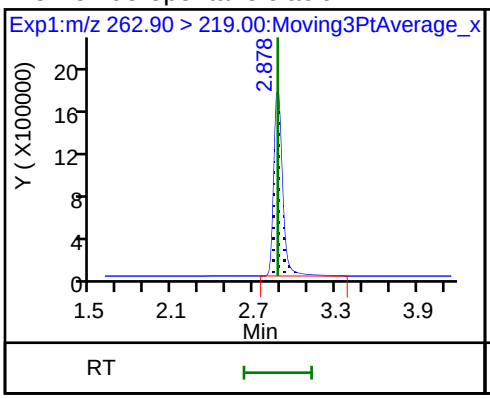

2 Perfluorobutanoic acid



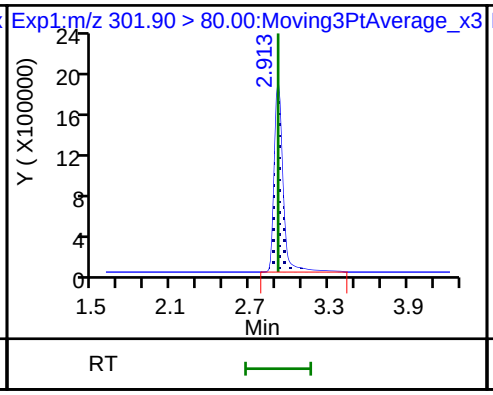

D 4 13C5 PFPeA



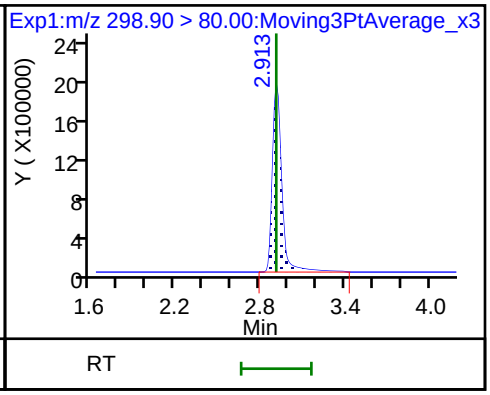

5 Perfluoropentanoic acid



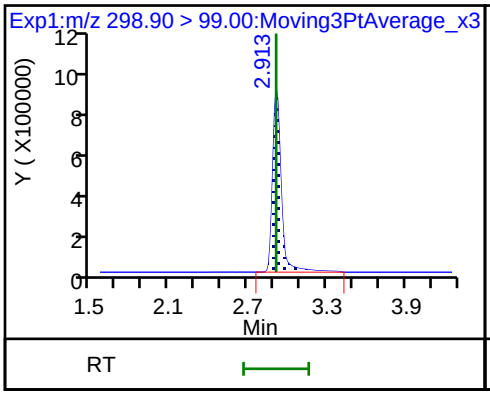

D 14 13C3 PFBS



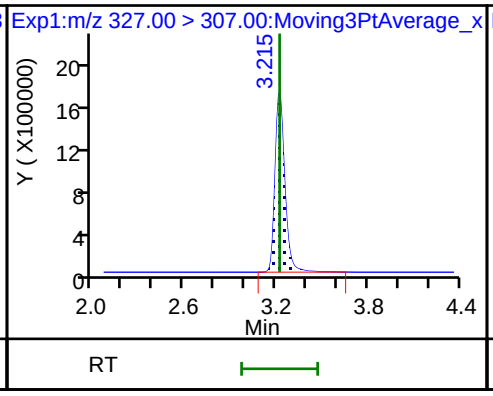

6 Perfluorobutanesulfonic acid



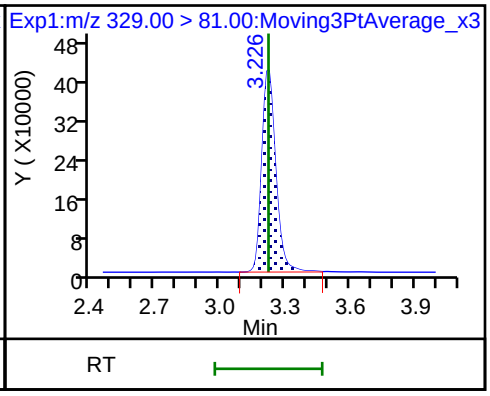

6 Perfluorobutanesulfonic acid



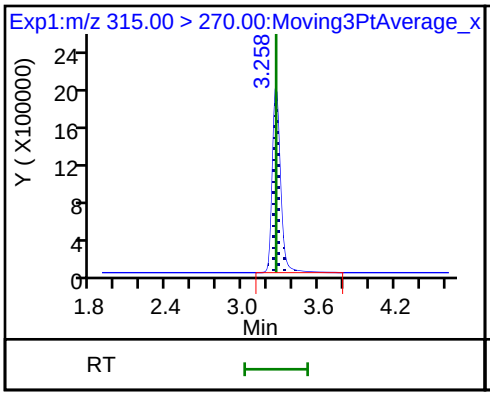

7 4:2 FTS



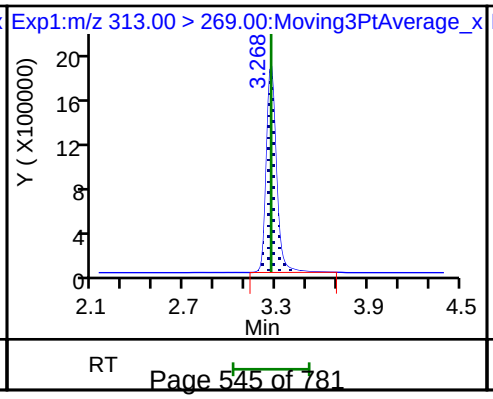

D 8 M2-4:2 FTS



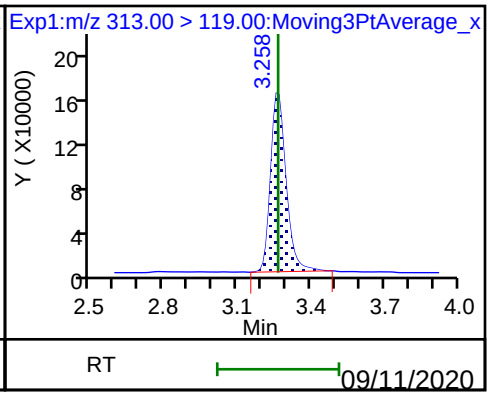

D 9 13C2 PFHxA



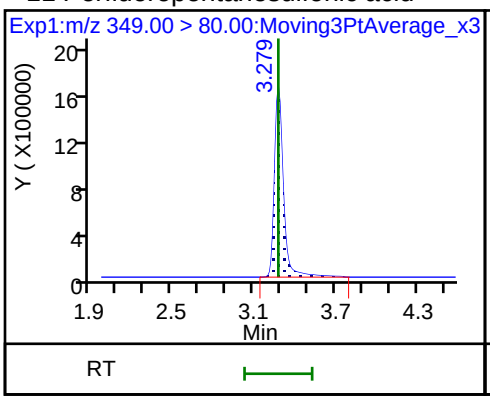

10 Perfluorohexanoic acid



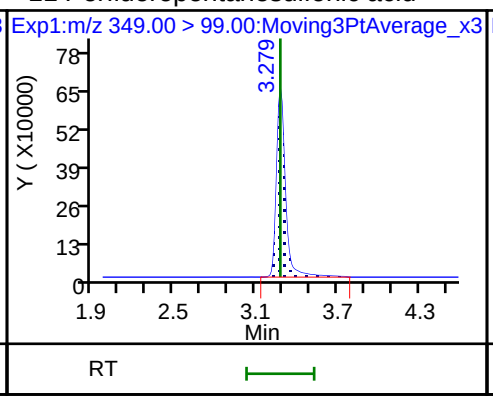

10 Perfluorohexanoic acid



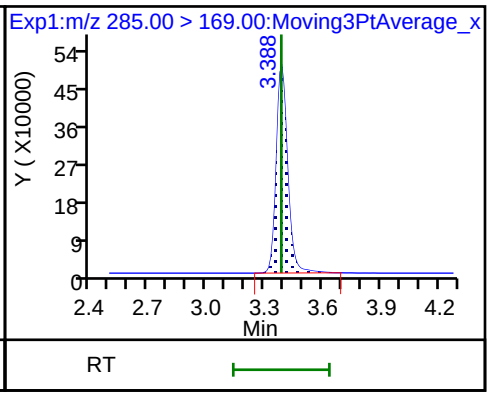
11 Perfluoropentanesulfonic acid



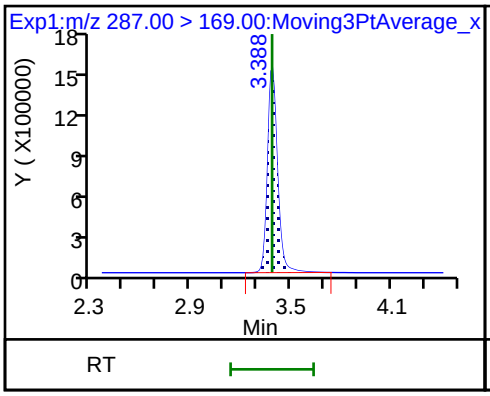

11 Perfluoropentanesulfonic acid



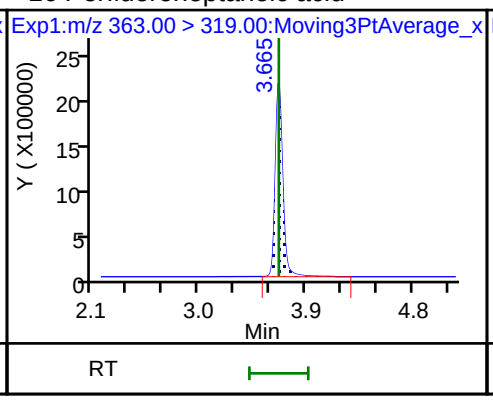

12 HPFO-DA



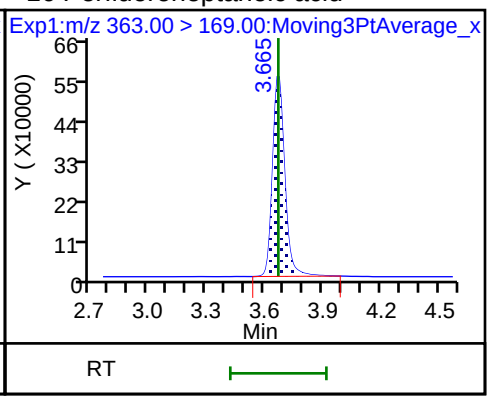

D 13 13C3 HFPO-DA



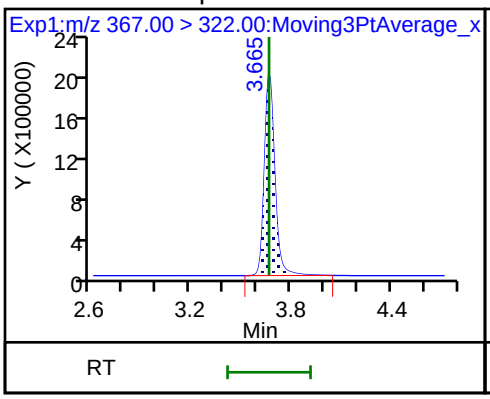

16 Perfluoroheptanoic acid



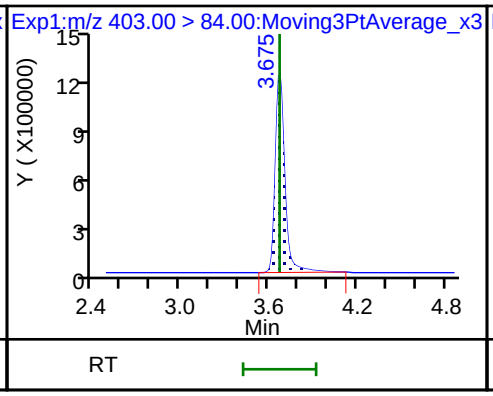

16 Perfluoroheptanoic acid



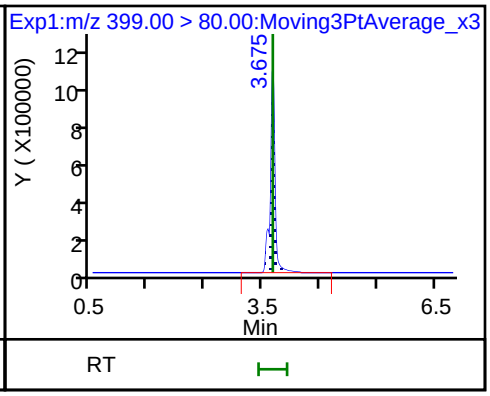

D 15 13C4 PFHpA



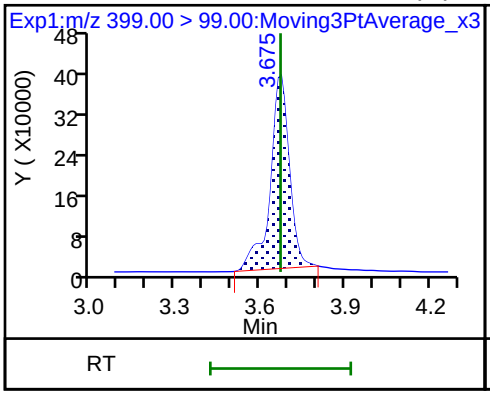

D 17 18O2 PFHxS



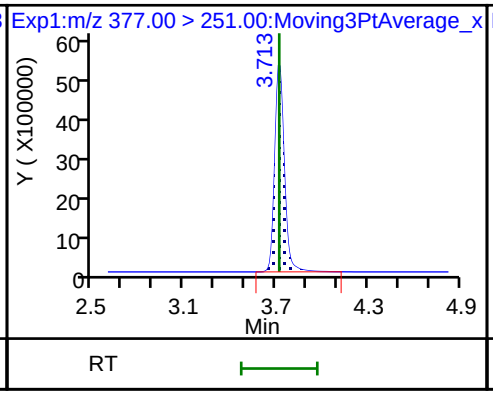

18 Perfluorohexanesulfonic acid



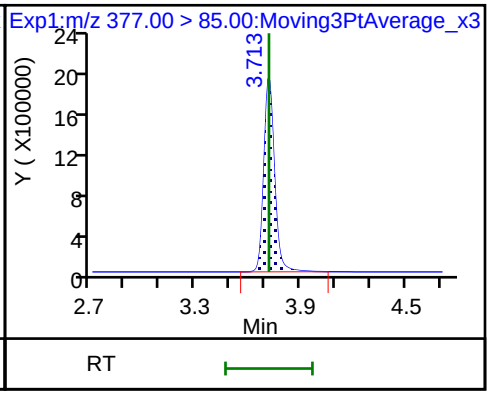

18 Perfluorohexanesulfonic acid (M)



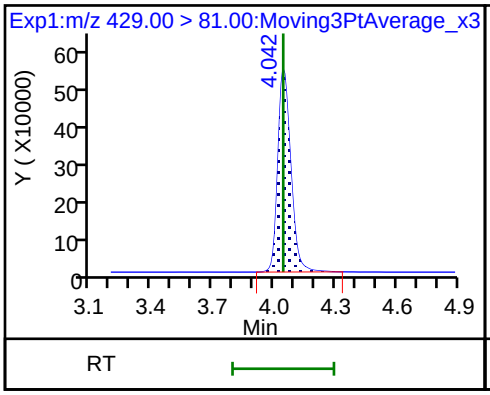

19 DONA



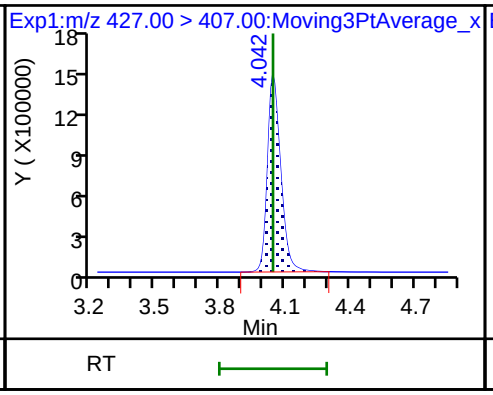

19 DONA



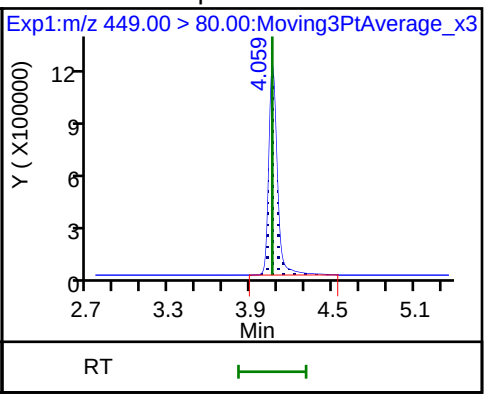
D 20 M2-6:2 FTS



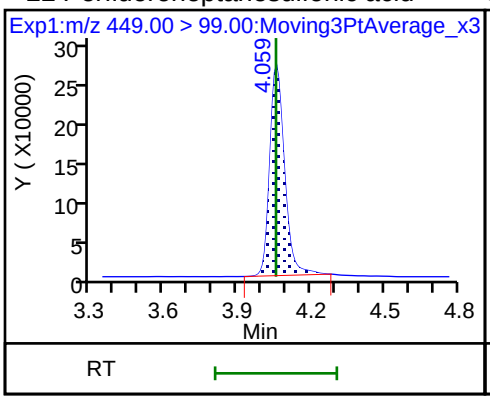

21 6:2 FTS



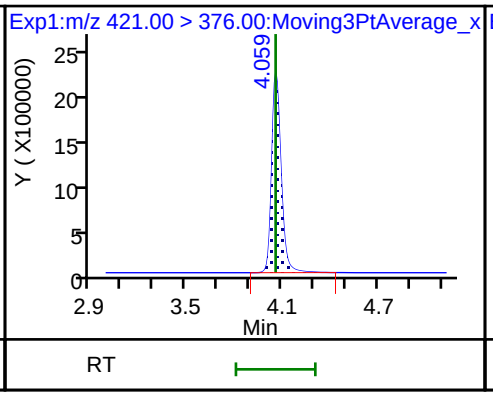

22 Perfluoroheptanesulfonic acid



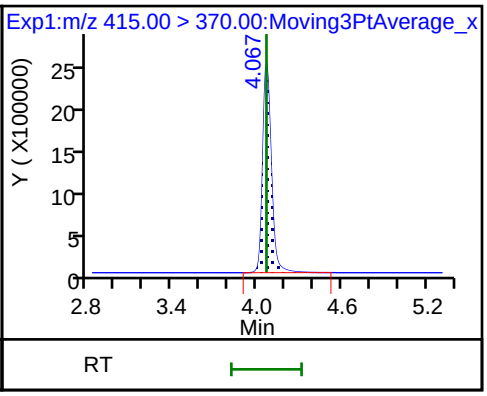

22 Perfluoroheptanesulfonic acid



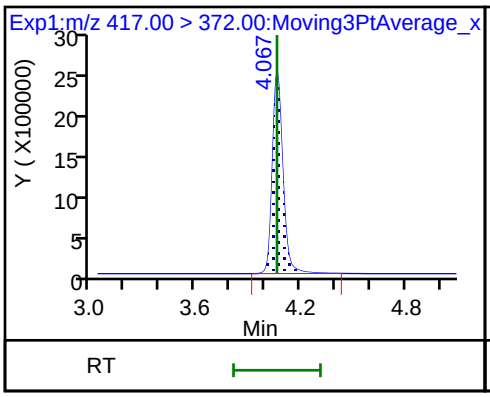

$ 23 13C8 PFOA



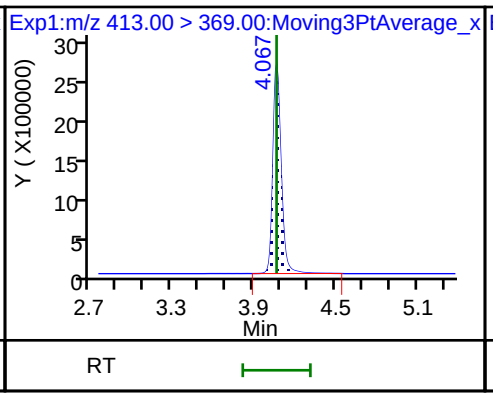

* 25 13C2 PFOA



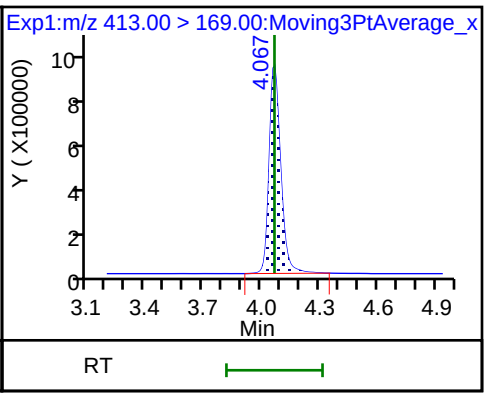

D 24 13C4 PFOA



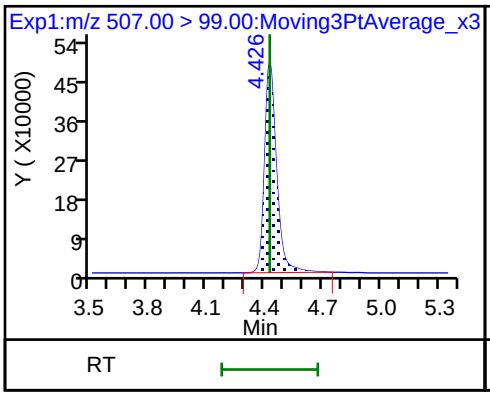

26 Perfluorooctanoic acid



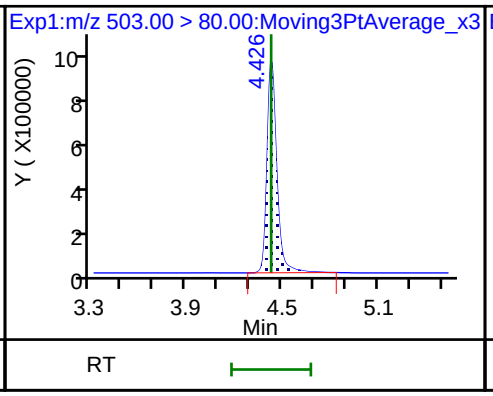

26 Perfluorooctanoic acid



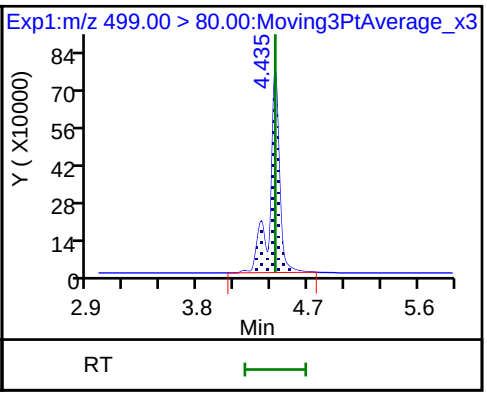

$ 27 13C8 PFOS



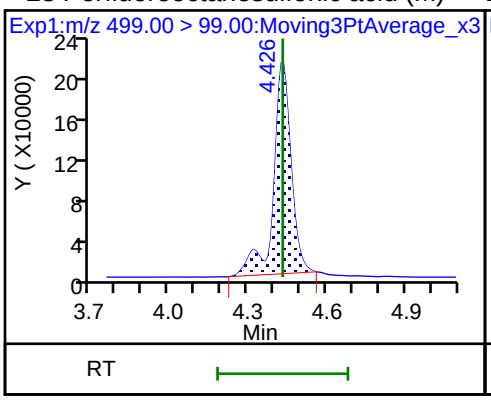

D 29 13C4 PFOS



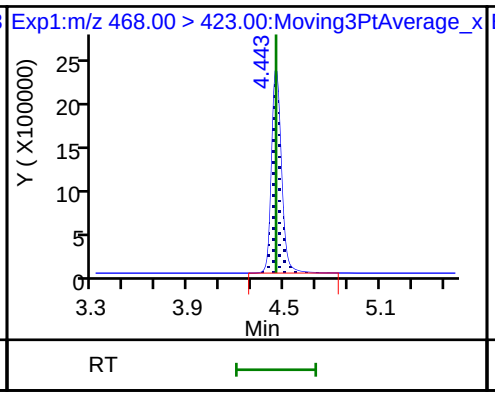

28 Perfluorooctanesulfonic acid



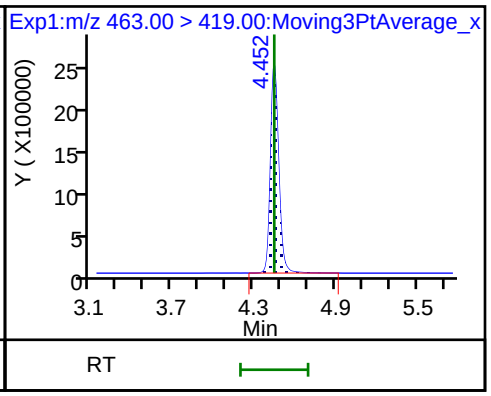
28 Perfluorooctanesulfonic acid (M)



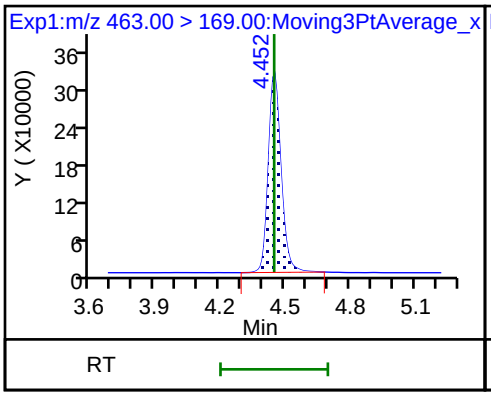

D 31 13C5 PFNA



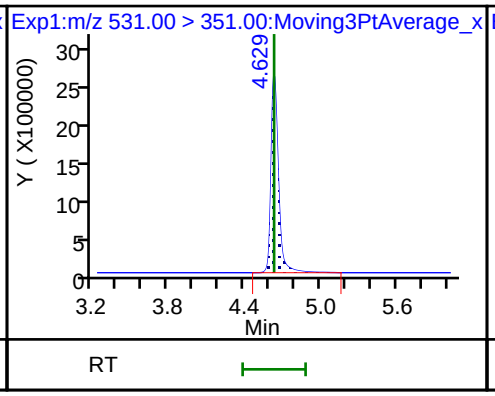

30 Perfluorononanoic acid



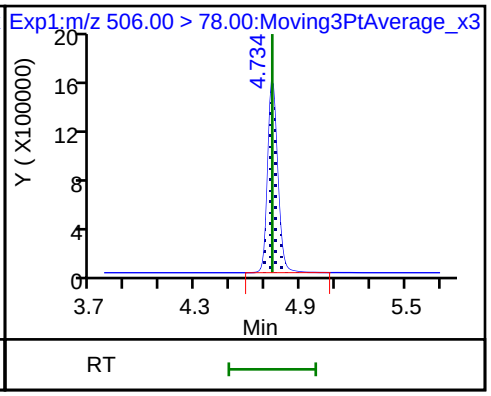

30 Perfluorononanoic acid



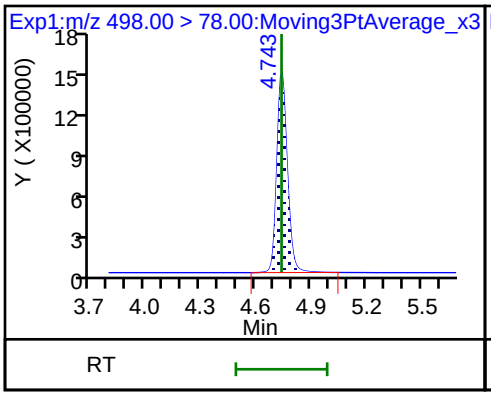

32 9ClFOS



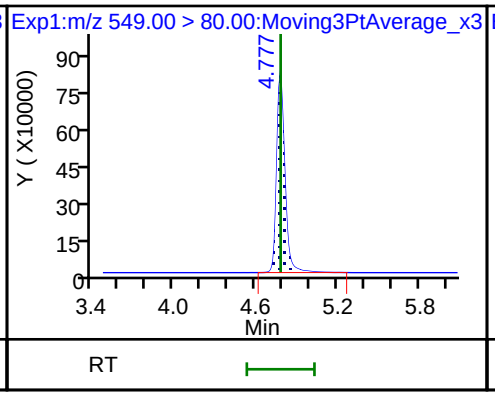

D 34 13C8 FOSA



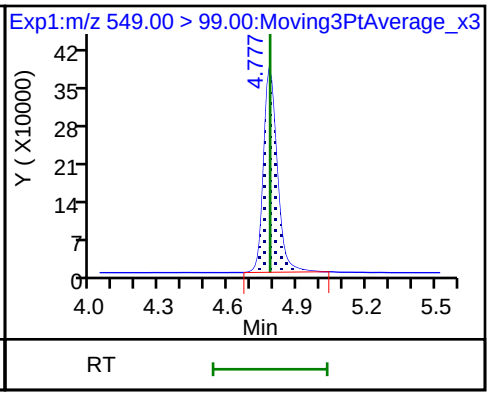

33 Perfluorooctanesulfonamide



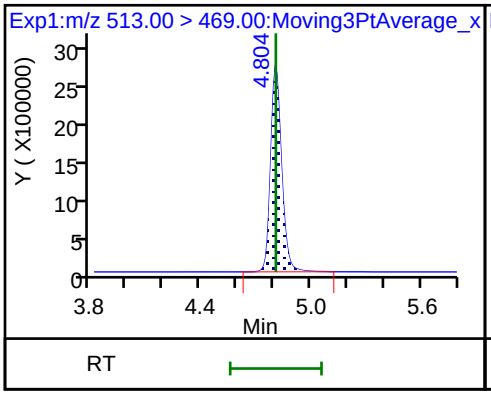

35 Perfluorononanesulfonic acid



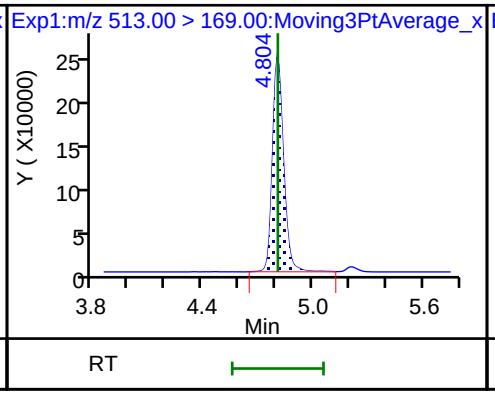

35 Perfluorononanesulfonic acid



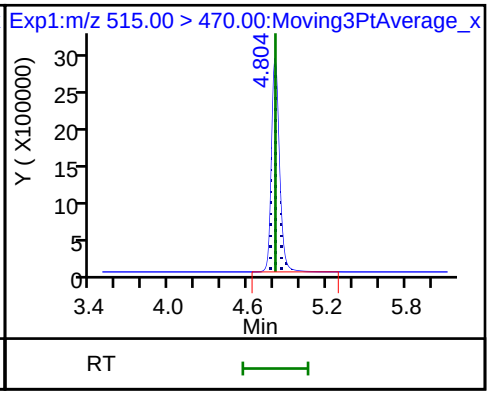

36 Perfluorodecanoic acid



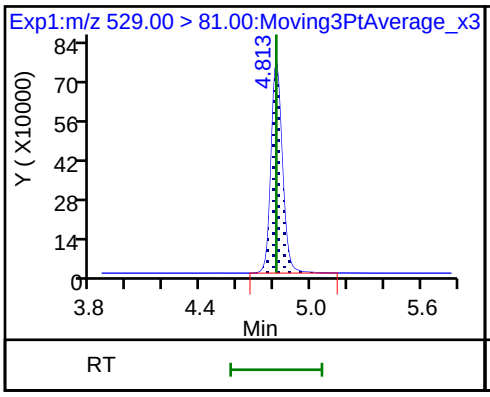

36 Perfluorodecanoic acid



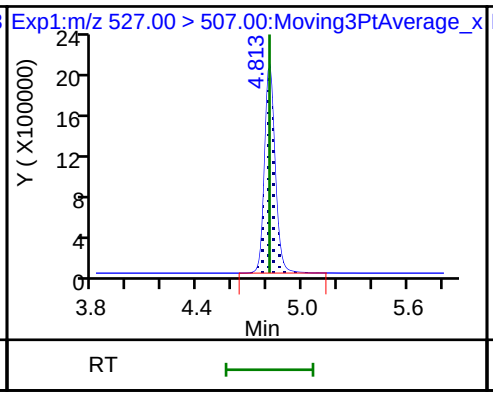

D 37 13C2 PFDA



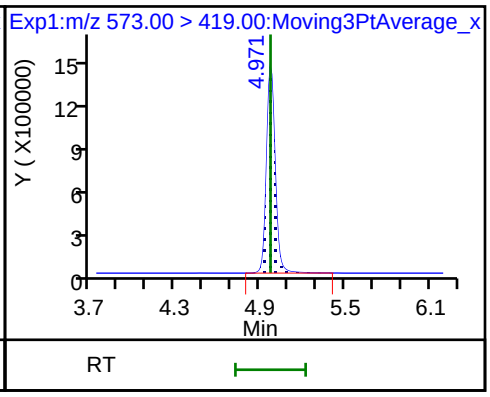
D 38 M2-8:2 FTS



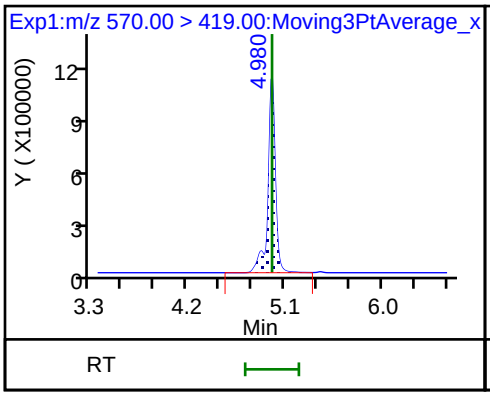

39 8:2 FTS



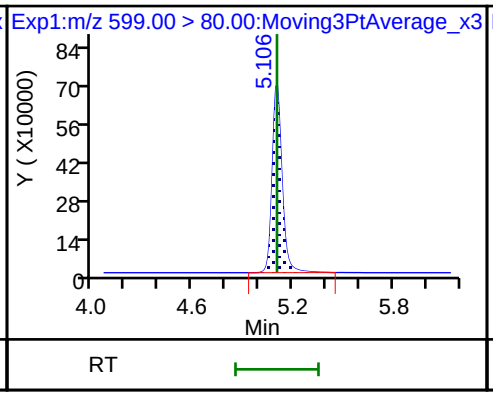

D 40 d3-NMeFOSAA



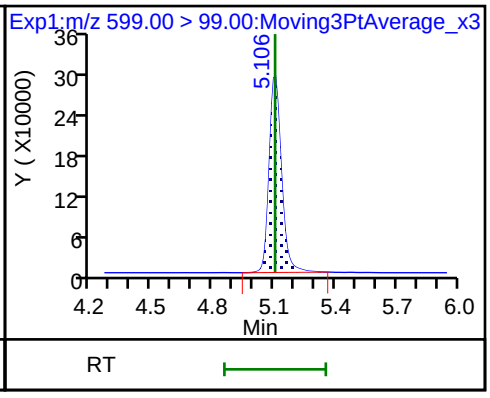

41 NMeFOSAA



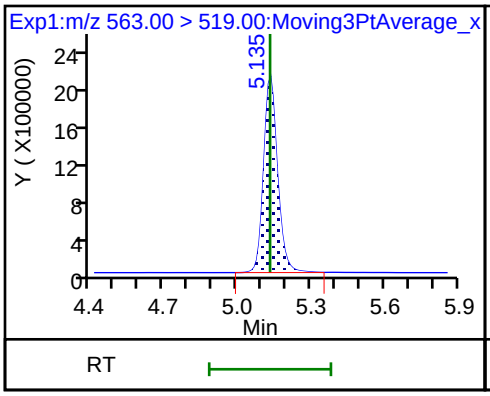

42 Perfluorodecanesulfonic acid



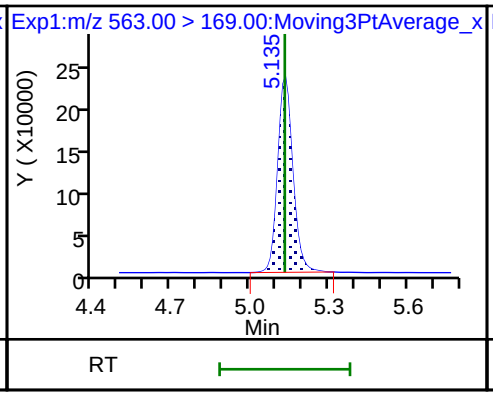

42 Perfluorodecanesulfonic acid



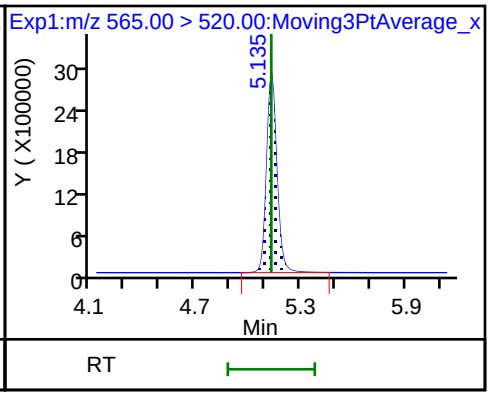

45 Perfluoroundecanoic acid



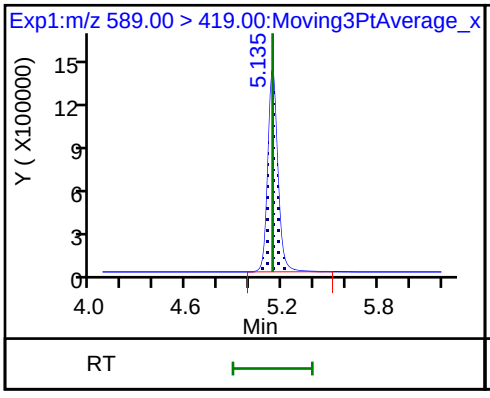

45 Perfluoroundecanoic acid



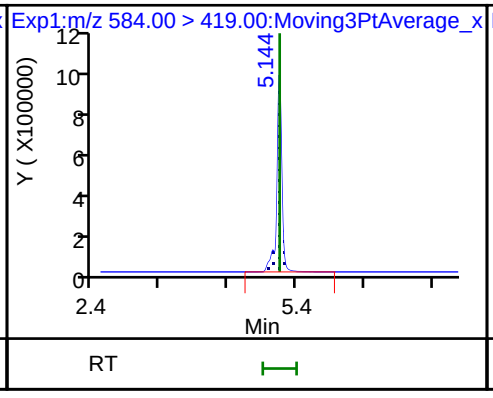

D 44 13C2 PFUnA



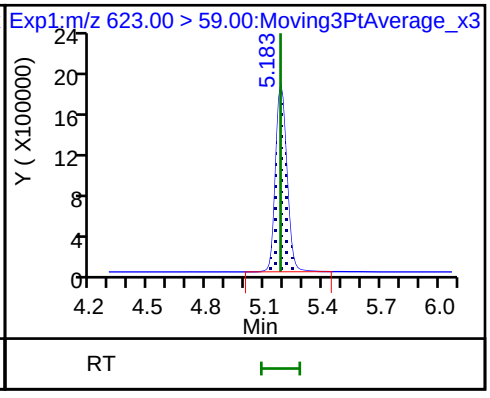

D 46 d5-NEtFOSAA



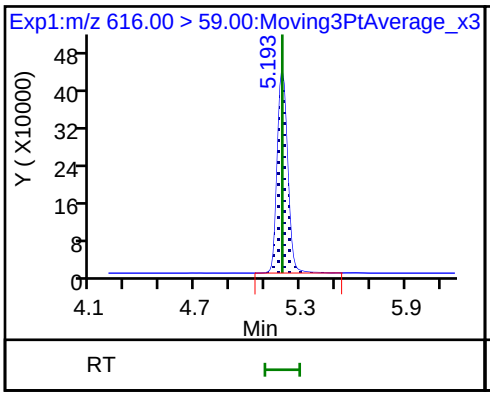

48 NEtFOSA



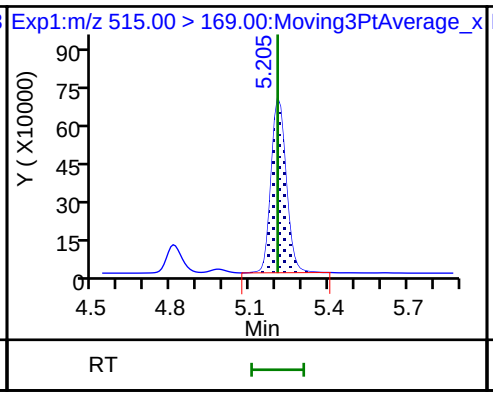

D 43 d7-N-MeFOSE-M



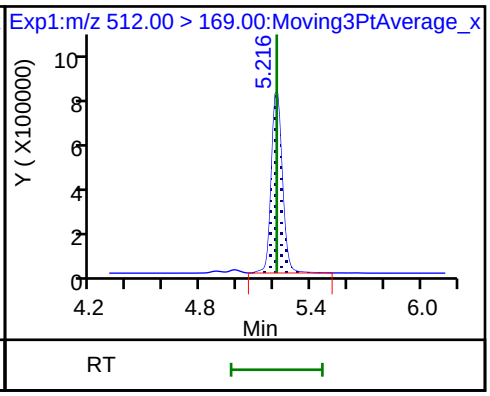
47 N-MeFOSE-M



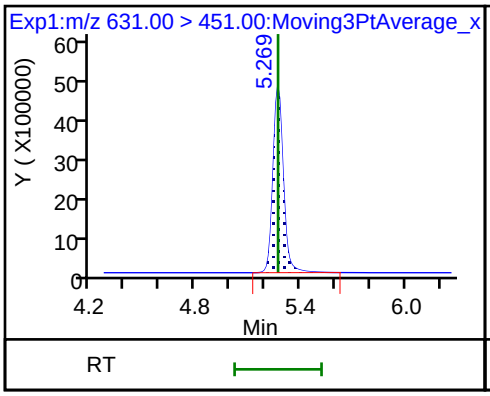

D 49 d-N-MeFOSA-M



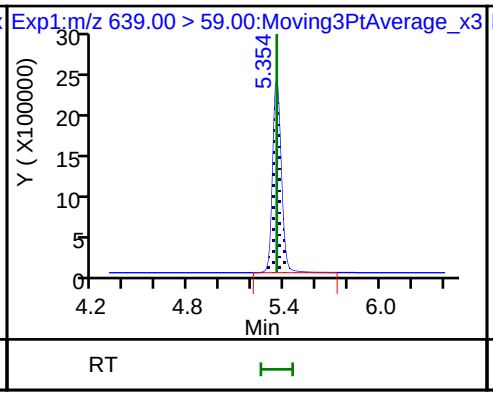

50 NMeFOSA



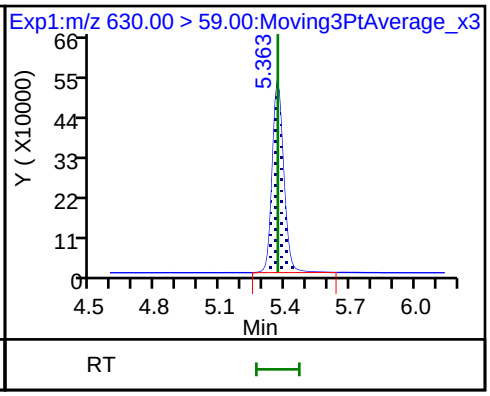

51 11ClFOS



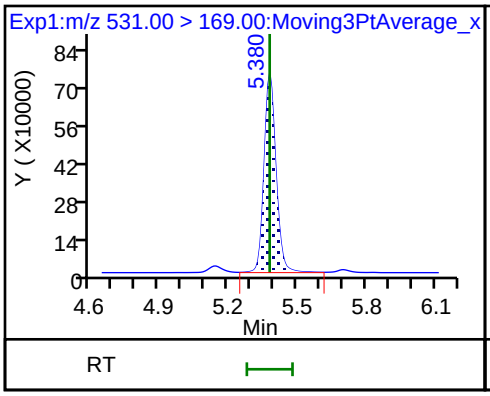

D 52 d9-N-EtFOSE-M



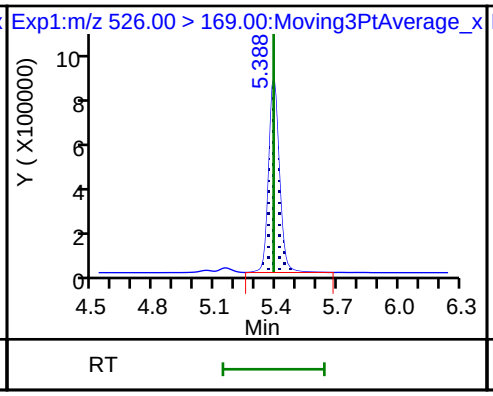

53 N-EtFOSE-M



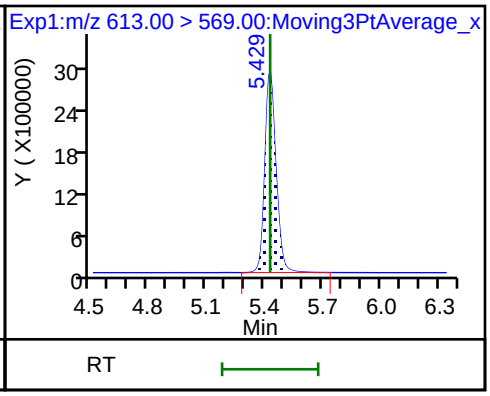

D 54 d-N-EtFOSA-M



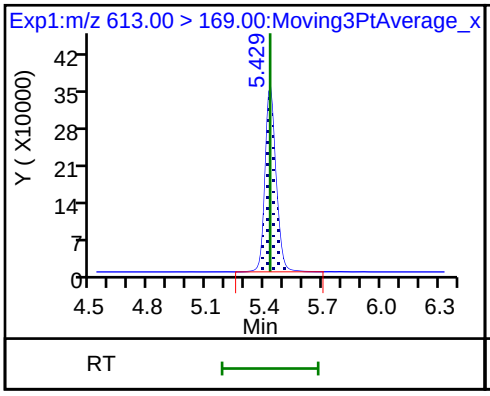

55 N-EtFOSA-M



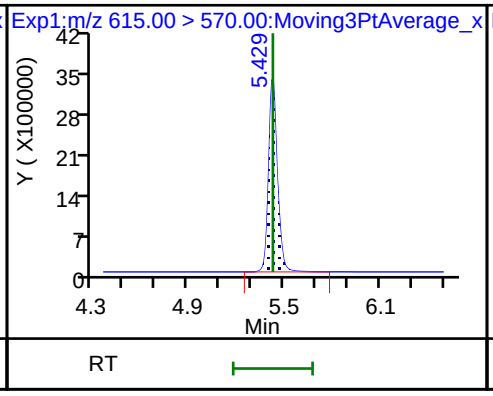

57 Perfluorododecanoic acid



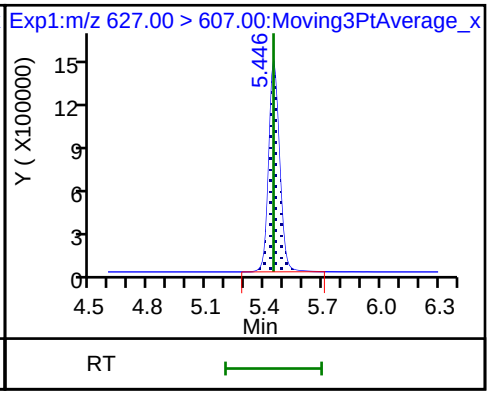

57 Perfluorododecanoic acid



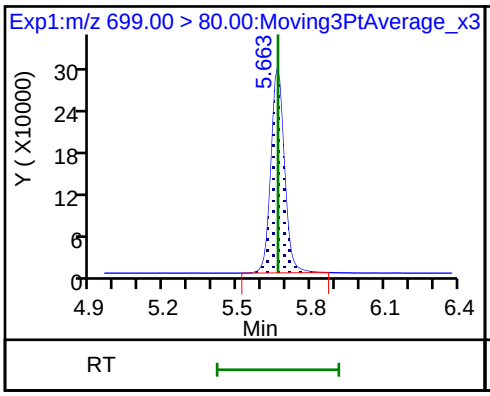

D 56 13C2 PFDoA



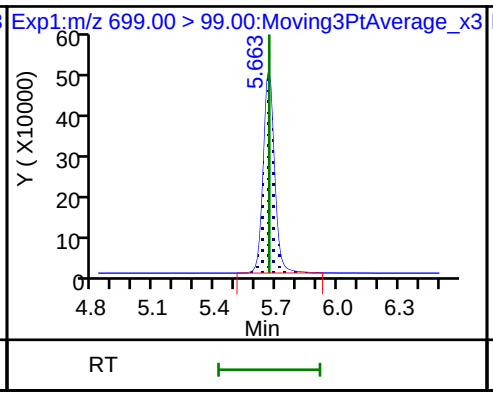

58 10:2 FTS



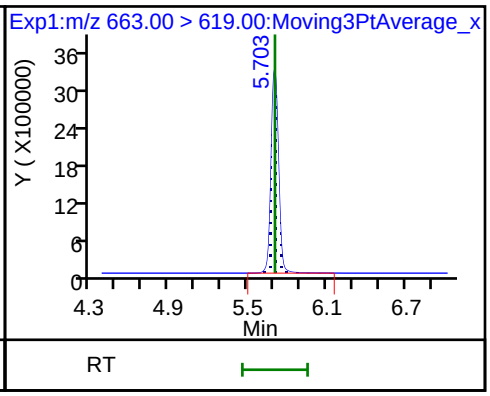
59 PFDoS



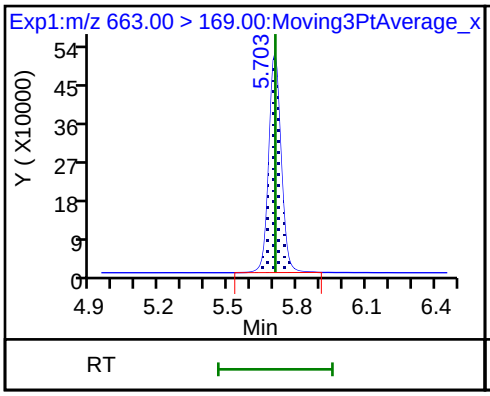

59 PFDoS



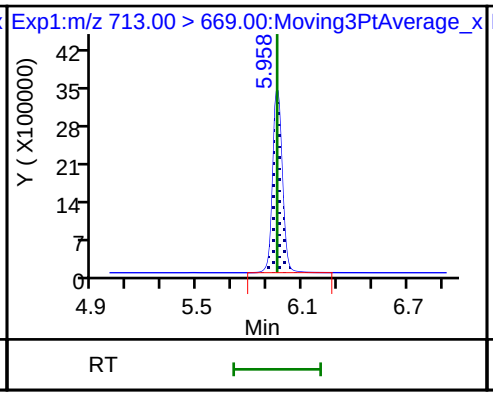

60 Perfluorotridecanoic acid



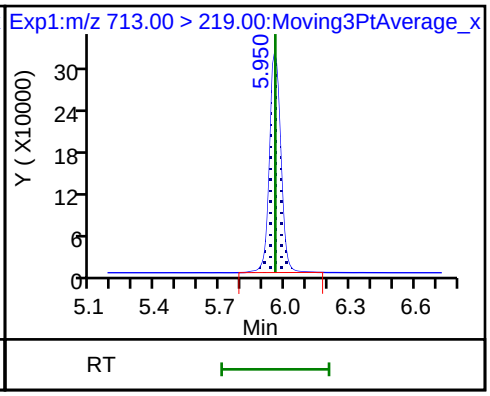

60 Perfluorotridecanoic acid



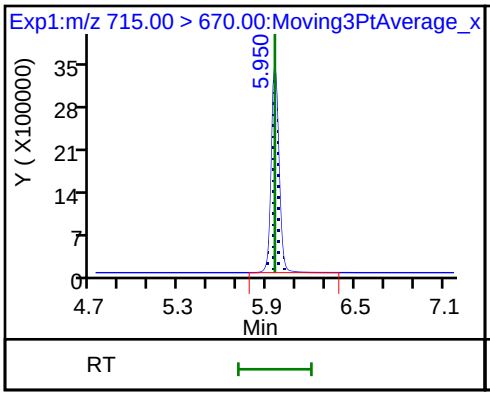

62 Perfluorotetradecanoic acid



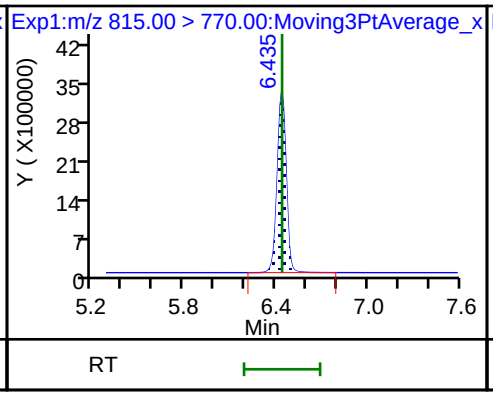

62 Perfluorotetradecanoic acid



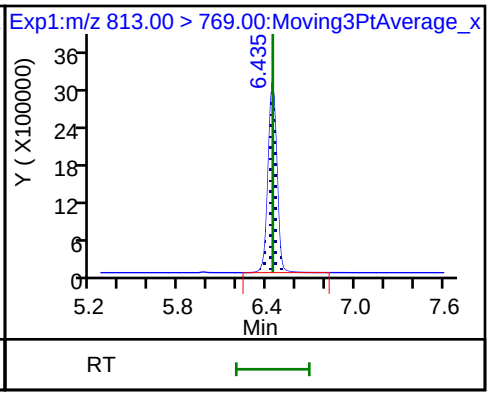

D 61 13C2 PFTeDA



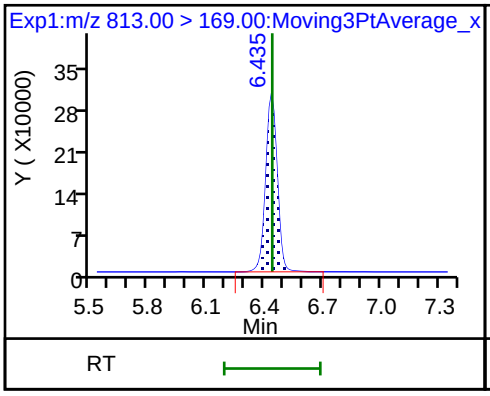

D 64 13C2 PFHxDA



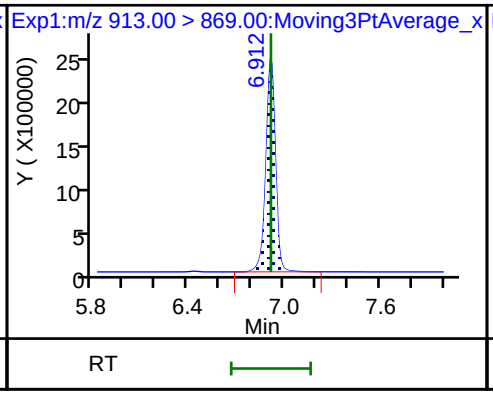

63 Perfluorohexadecanoic acid



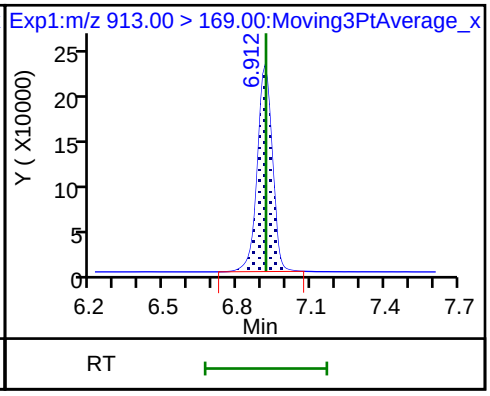

63 Perfluorohexadecanoic acid




65 Perfluorooctadecanoic acid




65 Perfluorooctadecanoic acid



Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

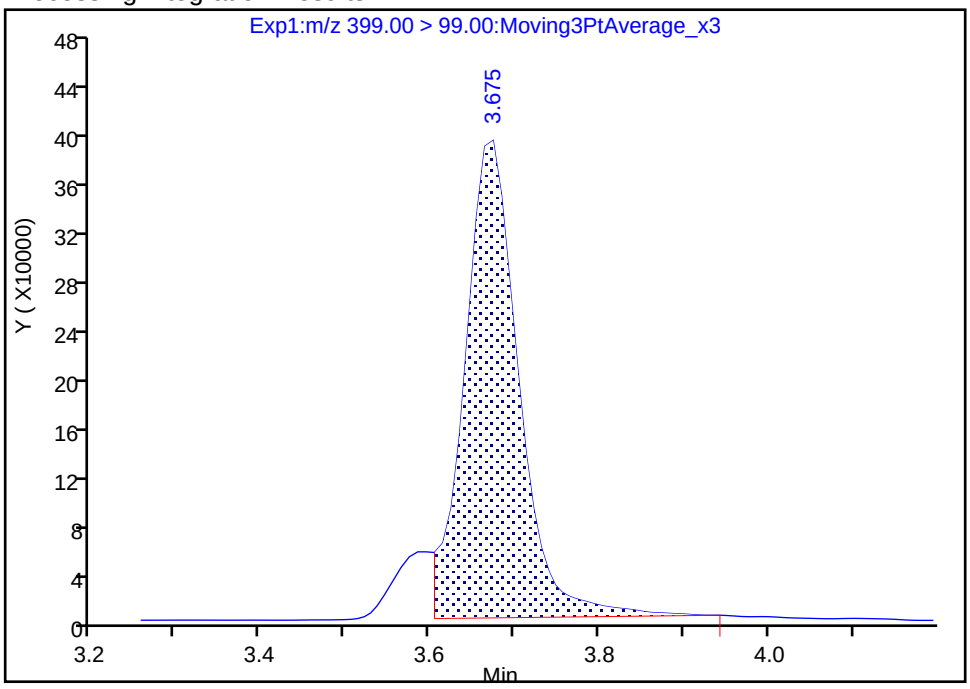
Data File: \\chromfs\Sacramento\ChromData\A13\20200908-102913.b\2020.09.08_A13_PFC_ICALX_008.d
Injection Date: 08-Sep-2020 18:39:25 Instrument ID: A13
Lims ID: IC STD 5
Client ID:
Operator ID: SACINSTLCMS01 ALS Bottle#: 5 Worklist Smp#: 6
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFAS_A13 Limit Group: LC PFC ICAL
Column: Gemini C18 3um 3 x 100mm ( 3.00 mm) Detector EXP1

## 18 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 2

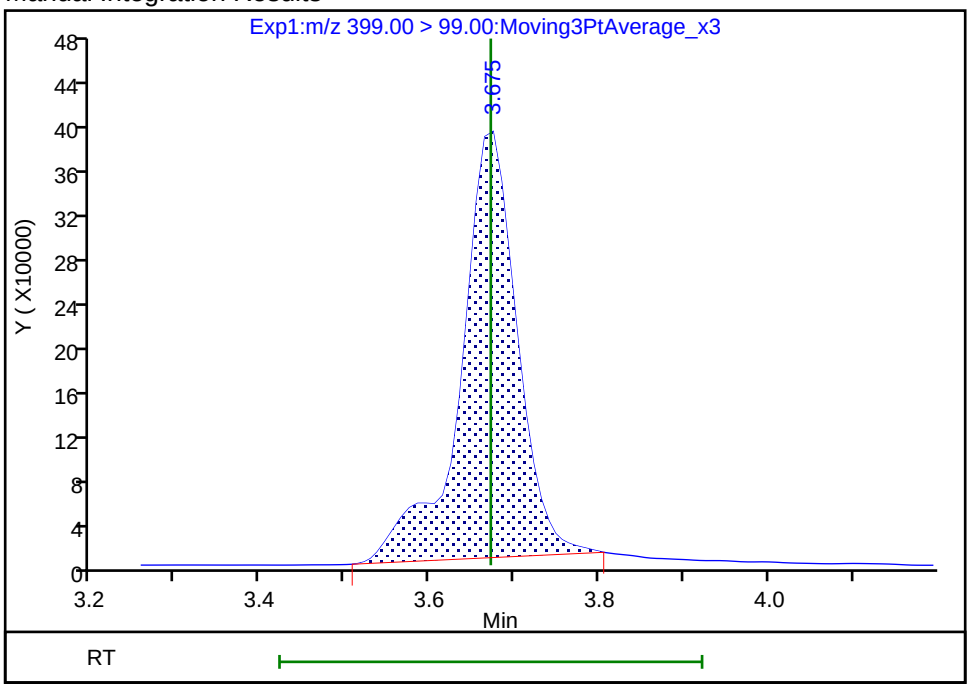
Processing Integration Results

RT: 3.67
Area: 1718164
Amount: 2.291059
Amount Units: ng/ml




Manual Integration Results

RT: 3.67
Area: 1787989
Amount: 2.291059
Amount Units: ng/ml




Reviewer: novoaj, 09-Sep-2020 09:32:19
Audit Action: Manually Integrated Audit Reason: Isomers

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

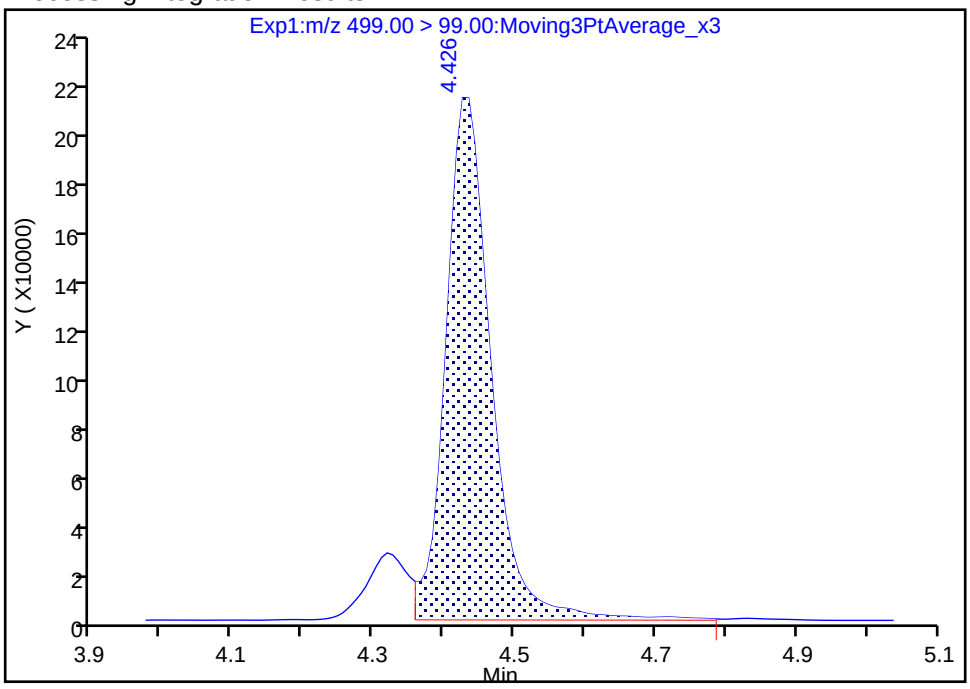
Data File: \\chromfs\Sacramento\ChromData\A13\20200908-102913.b\2020.09.08_A13_PFC_ICALX_008.d
Injection Date: 08-Sep-2020 18:39:25 Instrument ID: A13
Lims ID: IC STD 5
Client ID:
Operator ID: SACINSTLCMS01 ALS Bottle#: 5 Worklist Smp#: 6
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFAS_A13 Limit Group: LC PFC ICAL
Column: Gemini C18 3um 3 x 100mm ( 3.00 mm ID) Detector EXP1

## 28 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 2

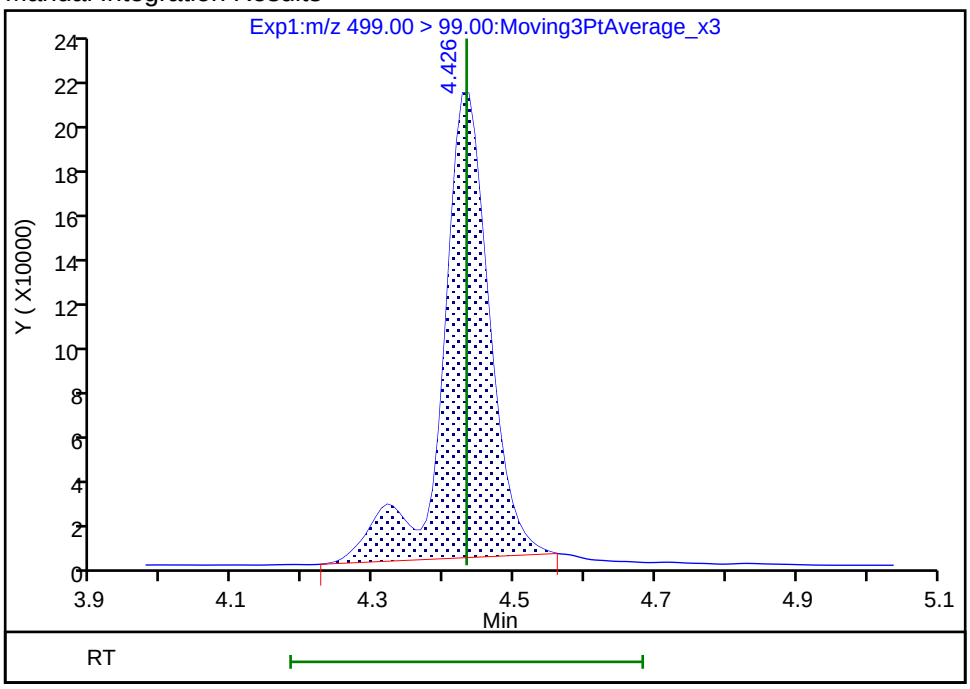
Processing Integration Results

RT: 4.43
Area: 958729
Amount: 2.445279
Amount Units: ng/ml




Manual Integration Results

RT: 4.43
Area: 988852
Amount: 2.445279
Amount Units: ng/ml




Reviewer: novoaj, 09-Sep-2020 09:32:34
Audit Action: Manually Integrated Audit Reason: Isomers

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\A13\20200908-102913.b\2020.09.08_A13_PFC_ICALX_009.d
Lims ID: IC STD 6
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 08-Sep-2020 18:48:50 ALS Bottle#: 6 Worklist Smp#: 7
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Sample Info: ISTD 6 (25)
Misc. Info.: Plate: 1 Rack: 2
Operator ID: SACINSTLCMS01 Instrument ID: A13
Sublist: chrom-PFAS_A13*sub3

Method: \\chromfs\Sacramento\ChromData\A13\20200908-102913.b\PFAS_A13.m
Limit Group: LC PFC ICAL
Last Update: 09-Sep-2020 10:22:26 Calib Date: 08-Sep-2020 18:58:15
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\A13\20200908-102913.b\2020.09.08_A13_PFC_ICALX_010.d

Column 1 : Gemini C18 3um 3 x 100mm ( 3.00 mm) Det: EXP1
Process Host: CTX1007

First Level Reviewer: novoaj Date: 09-Sep-2020 09:34:20
Ratio Calibration: Average of Initial Calibration

| Signal | RT | EXP RT | DLT RT | REL RT | Response | Amount ng/ml | Ratio(Limits) | %Rec | S/N | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| D 1 13C4 PFBA | | | | | | | | | | |
| 217.00 > 172.00 | 2.475 | 2.477 | -0.002 | 0.610 | 9342061 | 2.49 | | 99.7 | 29170 | |
| 2 Perfluorobutanoic acid | | | | | | | | | | |
| 212.90 > 169.00 | 2.475 | 2.480 | -0.005 | 1.000 | 14438781 | 5.20 | | 104 | 6298 | |
| D 4 13C5 PFPeA | | | | | | | | | | |
| 267.90 > 223.00 | 2.867 | 2.873 | -0.006 | 0.706 | 7255234 | 2.48 | | 99.3 | 19791 | |
| 5 Perfluoropentanoic acid | | | | | | | | | | |
| 262.90 > 219.00 | 2.867 | 2.875 | -0.008 | 1.000 | 14138743 | 4.74 | | 94.8 | 2722 | |
| D 14 13C3 PFBS | | | | | | | | | | |
| 301.90 > 80.00 | 2.913 | 2.913 | 0.0 | 0.718 | 8553899 | 2.33 | | 100 | 19850 | |
| 6 Perfluorobutanesulfonic acid | | | | | | | | | | |
| 298.90 > 80.00 | 2.913 | 2.913 | 0.0 | 1.000 | 16640464 | 4.63 | Target=2.18 | 105 | 23960 | |
| 298.90 > 99.00 | 2.913 | 2.913 | 0.0 | 1.000 | 7793957 | | 2.14(1.09-3.26) | 105 | 4818 | |
| 7 4:2 FTS | | | | | | | | | | |
| 327.00 > 307.00 | 3.215 | 3.221 | -0.006 | 1.000 | 13032064 | 4.80 | | 103 | 69387 | |
| D 8 M2-4:2 FTS | | | | | | | | | | |
| 329.00 > 81.00 | 3.215 | 3.222 | -0.007 | 0.792 | 1955076 | 2.18 | | 93.2 | 1127 | |
| D 9 13C2 PFHxA | | | | | | | | | | |
| 315.00 > 270.00 | 3.258 | 3.264 | -0.006 | 0.803 | 8823741 | 2.45 | | 97.8 | 35781 | |
| 10 Perfluorohexanoic acid | | | | | | | | | | |
| 313.00 > 269.00 | 3.258 | 3.265 | -0.007 | 1.000 | 16468853 | 5.02 | Target=11.68 | 100 | 3400 | |
| 313.00 > 119.00 | 3.258 | 3.265 | -0.007 | 1.000 | 1333217 | | 12.35(5.84-17.52) | 100 | 387 | |
| 11 Perfluoropentanesulfonic acid | | | | | | | | | | |
| 349.00 > 80.00 | 3.279 | 3.279 | 0.0 | 1.126 | 14078526 | 4.85 | Target=2.56 | 103 | 27670 | |
| 349.00 > 99.00 | 3.279 | 3.279 | 0.0 | 1.126 | 5673613 | | 2.48(1.28-3.84) | 103 | 10296 | |
| 12 HPFO-DA | | | | | | | | | | |
| 285.00 > 169.00 | 3.380 | 3.386 | -0.006 | 1.000 | 4031168 | 5.15 | | 103 | 2544 | |

| Signal | RT | EXP RT | DLT RT | REL RT | Response | Amount ng/ml | Ratio(Limits) | %Rec | S/N | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| D 13 13C3 HFPO-DA | | | | | | | | | | |
| 287.00 > 169.00 | 3.380 | 3.386 | -0.006 | 0.833 | 6588356 | 2.55 | | 102 | 6163 | |
| D 15 13C4 PFHpA | | | | | | | | | | |
| 367.00 > 322.00 | 3.665 | 3.668 | -0.003 | 0.903 | 8894028 | 2.50 | | 100 | 15188 | |
| 16 Perfluoroheptanoic acid | | | | | | | | | | |
| 363.00 > 319.00 | 3.665 | 3.670 | -0.005 | 1.000 | 18273603 | 5.08 | Target=3.85 | 102 | 2975 | |
| 363.00 > 169.00 | 3.665 | 3.670 | -0.005 | 1.000 | 4838244 | | 3.78(1.92-5.77) | 102 | 1660 | |
| D 17 18O2 PFHxS | | | | | | | | | | |
| 403.00 > 84.00 | 3.665 | 3.672 | -0.007 | 0.903 | 5630354 | 2.34 | | 99.1 | 36905 | |
| 18 Perfluorohexanesulfonic acid | | | | | | | | | | M |
| 399.00 > 80.00 | 3.665 | 3.672 | -0.007 | 1.000 | 11584719 | 4.37 | Target=3.25 | 96.1 | 368 | |
| 399.00 > 99.00 | 3.665 | 3.672 | -0.007 | 1.000 | 3480916 | | 3.33(1.62-4.87) | 96.1 | 234 | M |
| 19 DONA | | | | | | | | | | |
| 377.00 > 251.00 | 3.714 | 3.719 | -0.005 | 0.839 | 40309055 | 4.59 | Target=2.76 | 97.5 | 78468 | |
| 377.00 > 85.00 | 3.714 | 3.719 | -0.005 | 0.839 | 15535125 | | 2.59(1.38-4.14) | 97.5 | 55759 | |
| D 20 M2-6:2 FTS | | | | | | | | | | |
| 429.00 > 81.00 | 4.042 | 4.043 | -0.001 | 0.996 | 2317416 | 2.24 | | 94.2 | 3706 | |
| 21 6:2 FTS | | | | | | | | | | |
| 427.00 > 407.00 | 4.042 | 4.043 | -0.001 | 1.000 | 10786932 | 4.59 | | 96.9 | 30065 | |
| 22 Perfluoroheptanesulfonic acid | | | | | | | | | | |
| 449.00 > 80.00 | 4.051 | 4.056 | -0.005 | 0.915 | 9402297 | 4.83 | Target=4.29 | 102 | 1921 | |
| 449.00 > 99.00 | 4.059 | 4.056 | 0.003 | 0.917 | 2298799 | | 4.09(2.15-6.44) | 102 | 2524 | |
| $ 23 13C8 PFOA | | | | | | | | | | |
| 421.00 > 376.00 | 4.059 | 4.058 | 0.001 | 1.000 | 9963084 | 2.54 | | 104 | 22821 | |
| * 25 13C2 PFOA | | | | | | | | | | |
| 415.00 > 370.00 | 4.059 | 4.065 | -0.006 | | 11025683 | 2.50 | | | 6701 | |
| D 24 13C4 PFOA | | | | | | | | | | |
| 417.00 > 372.00 | 4.059 | 4.065 | -0.006 | 1.000 | 10797424 | 2.49 | | 99.4 | 57301 | |
| 26 Perfluorooctanoic acid | | | | | | | | | | |
| 413.00 > 369.00 | 4.067 | 4.066 | 0.001 | 1.002 | 20113180 | 4.55 | Target=2.95 | 91.0 | 4493 | |
| 413.00 > 169.00 | 4.067 | 4.066 | 0.001 | 1.002 | 7056457 | | 2.85(1.47-4.42) | 91.0 | 5639 | |
| $ 27 13C8 PFOS | | | | | | | | | | |
| 507.00 > 99.00 | 4.425 | 4.426 | -0.001 | 1.090 | 2231106 | 2.44 | | 102 | 2408 | |
| D 29 13C4 PFOS | | | | | | | | | | |
| 503.00 > 80.00 | 4.425 | 4.429 | -0.004 | 1.090 | 4082668 | 2.38 | | 99.6 | 2801 | |
| 28 Perfluorooctanesulfonic acid | | | | | | | | | | M |
| 499.00 > 80.00 | 4.425 | 4.432 | -0.007 | 1.000 | 8226757 | 4.64 | Target=4.28 | 100.0 | 1135 | |
| 499.00 > 99.00 | 4.425 | 4.432 | -0.007 | 1.000 | 1911199 | | 4.30(2.14-6.41) | 100.0 | 286 | M |
| D 31 13C5 PFNA | | | | | | | | | | |
| 468.00 > 423.00 | 4.442 | 4.448 | -0.006 | 1.094 | 9607630 | 2.39 | | 95.8 | 4478 | |
| 30 Perfluorononanoic acid | | | | | | | | | | |
| 463.00 > 419.00 | 4.442 | 4.449 | -0.007 | 1.000 | 18728268 | 5.13 | Target=8.00 | 103 | 4360 | |
| 463.00 > 169.00 | 4.442 | 4.449 | -0.007 | 1.000 | 2524084 | | 7.42(4.00-12.01) | 103 | 2968 | |
| 32 9ClFOS | | | | | | | | | | |
| 531.00 > 351.00 | 4.629 | 4.632 | -0.003 | 1.046 | 20819244 | 4.87 | | 105 | 18300 | |
| D 34 13C8 FOSA | | | | | | | | | | |
| 506.00 > 78.00 | 4.734 | 4.738 | -0.004 | 1.166 | 6028710 | 2.45 | | 97.9 | 7097 | |

| Signal | RT | EXP RT | DLT RT | REL RT | Response | Amount ng/ml | Ratio(Limits) | %Rec | S/N | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| 33 Perfluorooctanesulfonamide | | | | | | | | | | |
| 498.00 > 78.00 | 4.734 | 4.739 | -0.005 | 1.000 | 12065086 | 5.33 | | 107 | 13984 | |
| 35 Perfluorononanesulfonic acid | | | | | | | | | | |
| 549.00 > 80.00 | 4.777 | 4.781 | -0.004 | 1.080 | 6494679 | 4.91 | Target=2.15 | 102 | 8487 | |
| 549.00 > 99.00 | 4.777 | 4.781 | -0.004 | 1.080 | 3136606 | | 2.07(1.08-3.23) | 102 | 2643 | |
| 36 Perfluorodecanoic acid | | | | | | | | | | |
| 513.00 > 469.00 | 4.804 | 4.808 | -0.004 | 1.000 | 21812231 | 5.24 | Target=10.44 | 105 | 12432 | |
| 513.00 > 169.00 | 4.804 | 4.808 | -0.004 | 1.000 | 2050270 | | 10.64(5.22-15.65) | 105 | 333 | |
| D 37 13C2 PFDA | | | | | | | | | | |
| 515.00 > 470.00 | 4.804 | 4.808 | -0.004 | 1.184 | 11615360 | 2.39 | | 95.6 | 15932 | |
| D 38 M2-8:2 FTS | | | | | | | | | | |
| 529.00 > 81.00 | 4.804 | 4.810 | -0.006 | 1.184 | 3063702 | 2.24 | | 93.4 | 5267 | |
| 39 8:2 FTS | | | | | | | | | | |
| 527.00 > 507.00 | 4.804 | 4.810 | -0.006 | 1.000 | 15056794 | 4.76 | | 99.4 | 14872 | |
| D 40 d3-NMeFOSAA | | | | | | | | | | |
| 573.00 > 419.00 | 4.971 | 4.972 | -0.001 | 1.225 | 6099651 | 2.43 | | 97.4 | 2051 | |
| 41 NMeFOSAA | | | | | | | | | | |
| 570.00 > 419.00 | 4.971 | 4.978 | -0.007 | 1.000 | 10861594 | 5.53 | | 111 | 1827 | |
| 42 Perfluorodecanesulfonic acid | | | | | | | | | | |
| 599.00 > 80.00 | 5.097 | 5.103 | -0.006 | 1.152 | 5305131 | 4.71 | Target=2.36 | 97.8 | 3283 | |
| 599.00 > 99.00 | 5.097 | 5.103 | -0.006 | 1.152 | 2353342 | | 2.25(1.18-3.54) | 97.8 | 3415 | |
| 45 Perfluoroundecanoic acid | | | | | | | | | | |
| 563.00 > 519.00 | 5.126 | 5.132 | -0.006 | 1.000 | 15793712 | 5.37 | Target=8.67 | 107 | 3414 | |
| 563.00 > 169.00 | 5.126 | 5.132 | -0.006 | 1.000 | 1766802 | | 8.94(4.34-13.01) | 107 | 2634 | |
| D 44 13C2 PFUnA | | | | | | | | | | |
| 565.00 > 520.00 | 5.126 | 5.132 | -0.006 | 1.263 | 11116061 | 2.34 | | 93.5 | 6029 | |
| D 46 d5-NEtFOSAA | | | | | | | | | | |
| 589.00 > 419.00 | 5.135 | 5.139 | -0.004 | 1.265 | 5657723 | 2.33 | | 93.3 | 7205 | |
| 48 NEtFOSA | | | | | | | | | | |
| 584.00 > 419.00 | 5.145 | 5.148 | -0.003 | 1.002 | 9931516 | 5.67 | | 113 | 25136 | |
| D 43 d7-N-MeFOSE-M | | | | | | | | | | |
| 623.00 > 59.00 | 5.184 | 5.182 | 0.002 | 1.277 | 7595314 | 12.3 | | 98.6 | 1955 | |
| 47 N-MeFOSE-M | | | | | | | | | | |
| 616.00 > 59.00 | 5.194 | 5.195 | -0.001 | 1.002 | 3319950 | 5.13 | | 103 | 2422 | |
| D 49 d-N-MeFOSA-M | | | | | | | | | | |
| 515.00 > 169.00 | 5.205 | 5.205 | 0.0 | 1.282 | 3096486 | 2.67 | | 107 | 50.3 | |
| 50 NMeFOSA | | | | | | | | | | |
| 512.00 > 169.00 | 5.205 | 5.213 | -0.008 | 1.000 | 6137462 | 5.04 | | 101 | 334 | |
| 51 11ClFOS | | | | | | | | | | |
| 631.00 > 451.00 | 5.270 | 5.271 | -0.001 | 1.191 | 34426796 | 4.67 | | 99.1 | 80934 | |
| D 52 d9-N-EtFOSE-M | | | | | | | | | | |
| 639.00 > 59.00 | 5.353 | 5.352 | 0.001 | 1.319 | 9051681 | 12.5 | | 100 | 3323 | |
| 53 N-EtFOSE-M | | | | | | | | | | |
| 630.00 > 59.00 | 5.362 | 5.366 | -0.004 | 1.002 | 3733346 | 4.98 | | 99.6 | 2602 | |
| D 54 d-N-EtFOSA-M | | | | | | | | | | |
| 531.00 > 169.00 | 5.379 | 5.379 | 0.0 | 1.325 | 3023483 | 2.73 | | 109 | 176 | |

| Signal | RT | EXP RT | DLT RT | REL RT | Response | Amount ng/ml | Ratio(Limits) | %Rec | S/N | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| 55 N-EtFOSA-M | | | | | | | | | | |
| 526.00 > 169.00 | 5.387 | 5.386 | 0.001 | 1.002 | 6144124 | 4.78 | | 95.7 | 211 | |
| 57 Perfluorododecanoic acid | | | | | | | | | | |
| 613.00 > 569.00 | 5.420 | 5.428 | -0.008 | 1.000 | 23072242 | 4.99 | Target=9.05 | 99.9 | 5954 | |
| 613.00 > 169.00 | 5.428 | 5.428 | 0.0 | 1.002 | 2454536 | | 9.40(4.52-13.57) | 99.9 | 3492 | |
| D 56 13C2 PFDoA | | | | | | | | | | |
| 615.00 > 570.00 | 5.420 | 5.428 | -0.008 | 1.335 | 12660330 | 2.47 | | 98.9 | 4966 | |
| 58 10:2 FTS | | | | | | | | | | |
| 627.00 > 607.00 | 5.445 | 5.445 | 0.0 | 1.133 | 10457328 | 5.01 | | 104 | 5300 | |
| 59 PFDoS | | | | | | | | | | |
| 699.00 > 80.00 | 5.662 | 5.665 | -0.003 | 1.279 | 2180724 | 4.96 | Target=0.57 | 103 | 2500 | |
| 699.00 > 99.00 | 5.662 | 5.665 | -0.003 | 1.279 | 3874044 | | 0.56(0.29-0.86) | 103 | 3724 | |
| 60 Perfluorotridecanoic acid | | | | | | | | | | |
| 663.00 > 619.00 | 5.701 | 5.704 | -0.003 | 1.052 | 23483480 | 4.95 | Target=7.06 | 99.0 | 8682 | |
| 663.00 > 169.00 | 5.701 | 5.704 | -0.003 | 1.052 | 3434358 | | 6.84(3.53-10.59) | 99.0 | 3096 | |
| D 61 13C2 PFTeDA | | | | | | | | | | |
| 715.00 > 670.00 | 5.949 | 5.953 | -0.004 | 1.466 | 12605192 | 2.49 | | 99.8 | 17516 | |
| 62 Perfluorotetradecanoic acid | | | | | | | | | | |
| 713.00 > 669.00 | 5.949 | 5.954 | -0.005 | 1.000 | 23717630 | 4.78 | Target=11.23 | 95.6 | 8788 | |
| 713.00 > 219.00 | 5.949 | 5.954 | -0.005 | 1.000 | 2140608 | | 11.08(5.62-16.85) | 95.6 | 4424 | |
| D 64 13C2 PFHxDA | | | | | | | | | | |
| 815.00 > 770.00 | 6.434 | 6.437 | -0.003 | 1.585 | 12753004 | 2.42 | | 97.0 | 9163 | |
| 63 Perfluorohexadecanoic acid | | | | | | | | | | |
| 813.00 > 769.00 | 6.434 | 6.439 | -0.005 | 1.000 | 23144595 | 4.74 | Target=9.45 | 94.9 | 2205 | |
| 813.00 > 169.00 | 6.434 | 6.439 | -0.005 | 1.000 | 2773680 | | 8.34(4.72-14.17) | 94.9 | 4048 | |
| 65 Perfluorooctadecanoic acid | | | | | | | | | | |
| 913.00 > 869.00 | 6.911 | 6.915 | -0.004 | 1.074 | 19334584 | 5.19 | Target=11.13 | 104 | 3620 | |
| 913.00 > 169.00 | 6.911 | 6.915 | -0.004 | 1.074 | 1871260 | | 10.33(5.56-16.69) | 104 | 2911 | |

## QC Flag Legend

Review Flags

M - Manually Integrated

## Reagents:

LCPFC_LL6_00025 Amount Added: 1.00 Units: mL

Report Date: 09-Sep-2020 10:22:29 Chrom Revision: 2.3 20-Aug-2020 13:57:12

Eurofins TestAmerica, Sacramento

Data File: \\chromfs\Sacramento\ChromData\A13\20200908-102913.b\2020.09.08_A13_PFC_ICALX_009.d

Injection Date: 08-Sep-2020 18:48:50 Instrument ID: A13

Lims ID: IC STD 6

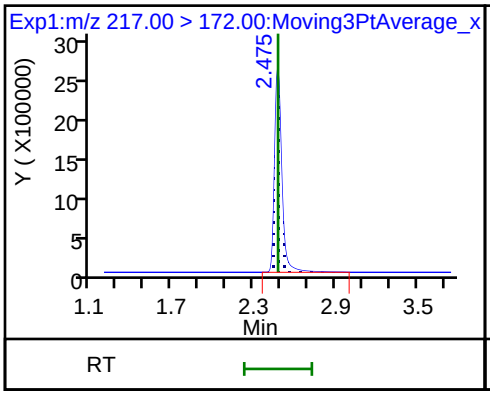
Client ID:

Operator ID: SACINSTLCMS01 ALS Bottle#: 6 Worklist Smp#: 7

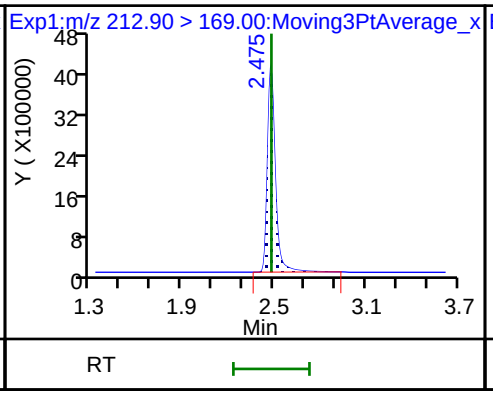
Injection Vol: 20.0 ul Dil. Factor: 1.0000

Method: PFAS_A13 Limit Group: LC PFC ICAL

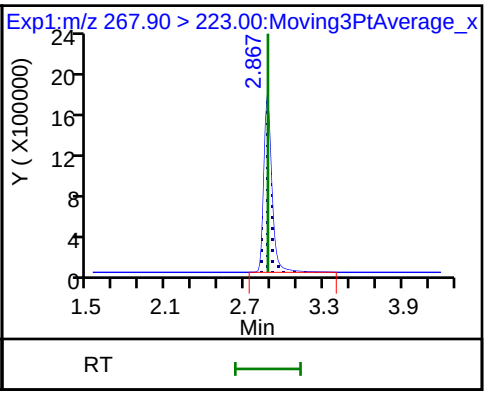
D 1 13C4 PFBA



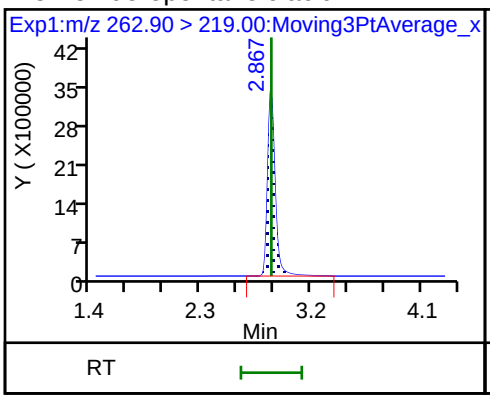

2 Perfluorobutanoic acid



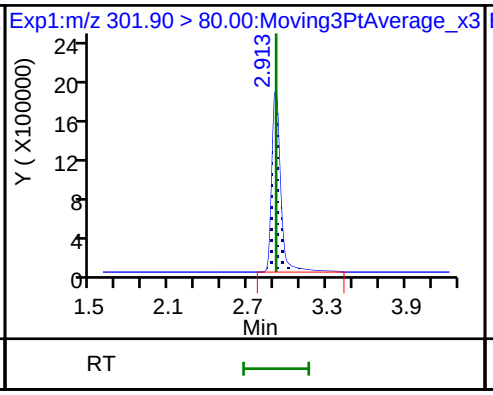

D 4 13C5 PFPeA



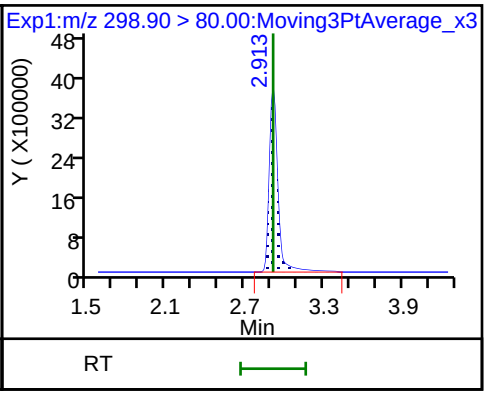

5 Perfluoropentanoic acid



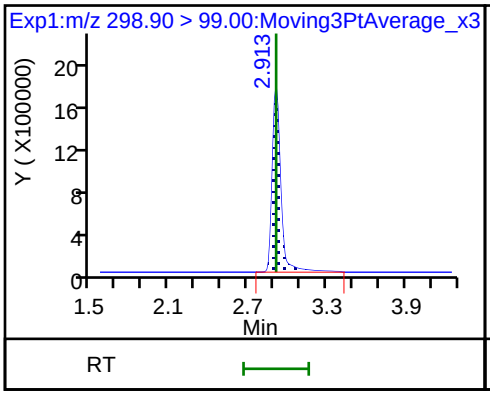

D 14 13C3 PFBS



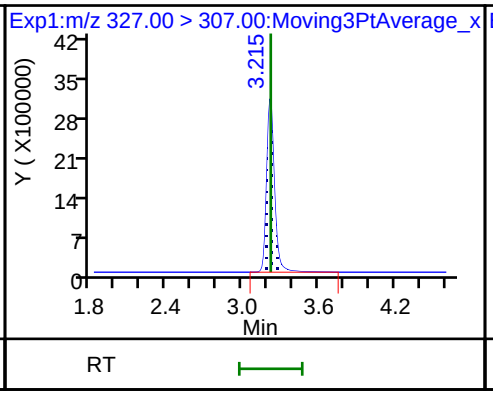

6 Perfluorobutanesulfonic acid



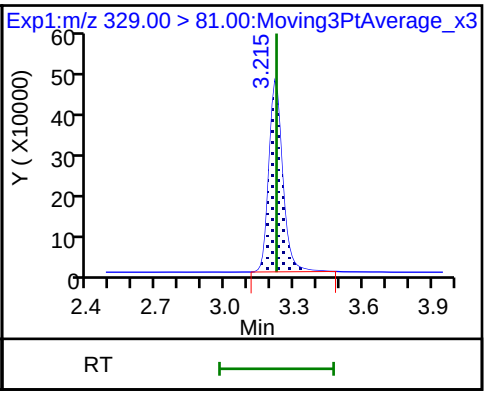

6 Perfluorobutanesulfonic acid



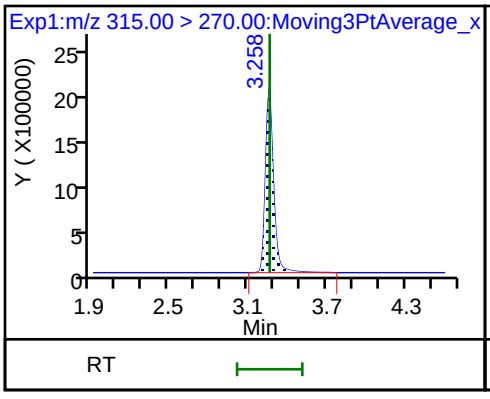

7 4:2 FTS



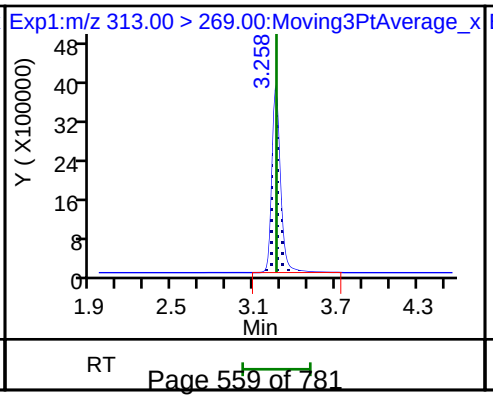

D 8 M2-4:2 FTS



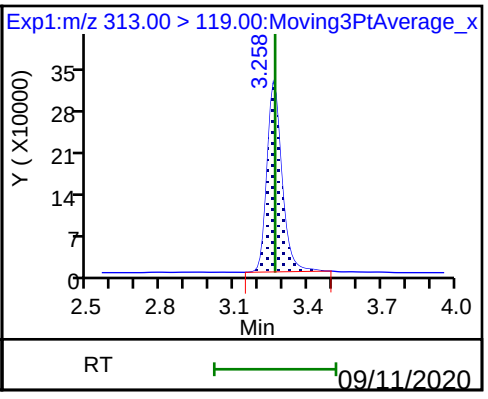

D 9 13C2 PFHxA




10 Perfluorohexanoic acid




10 Perfluorohexanoic acid



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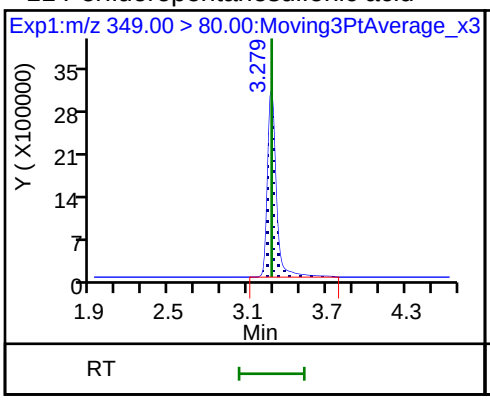


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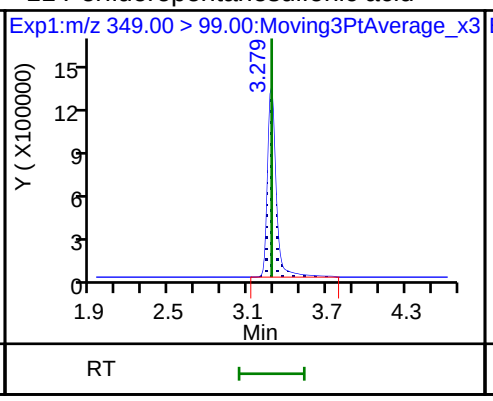
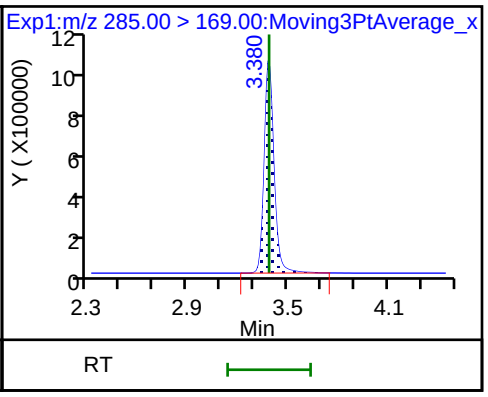
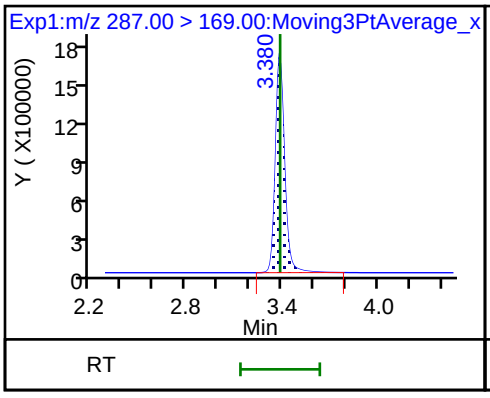



12 HPFO-DA




D 13 13C3 HFPO-DA

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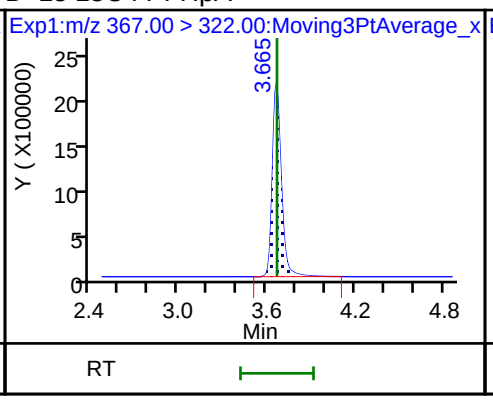
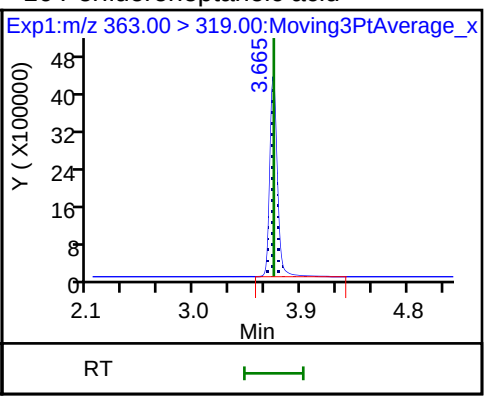
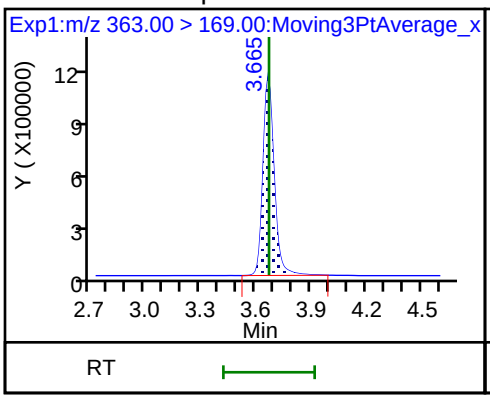


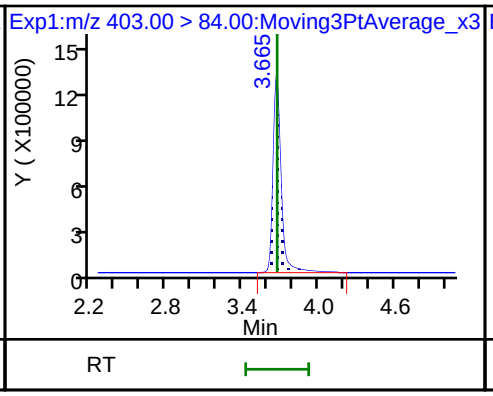

16 Perfluoroheptanoic acid



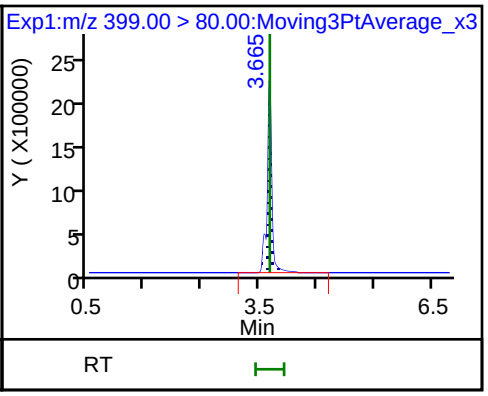

16 Perfluoroheptanoic acid



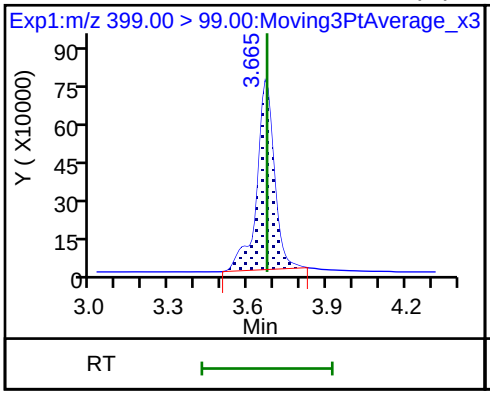

D 17 18O2 PFHxS



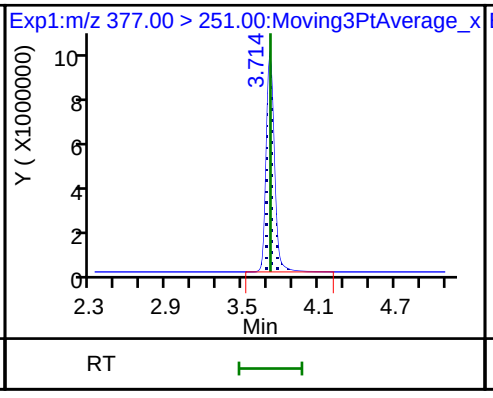

18 Perfluorohexanesulfonic acid




18 Perfluorohexanesulfonic acid (M)




19 DONA

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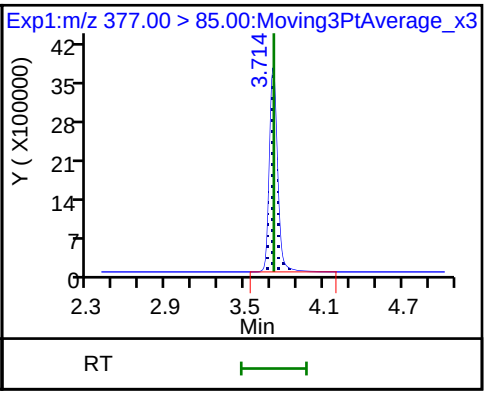
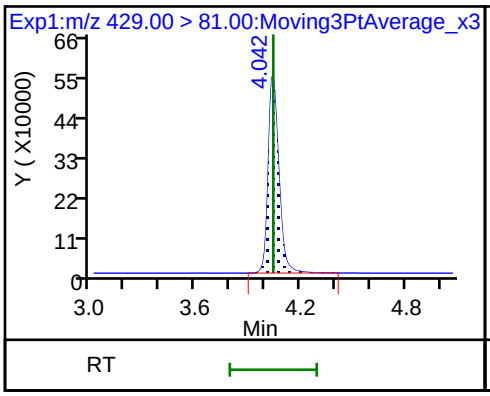
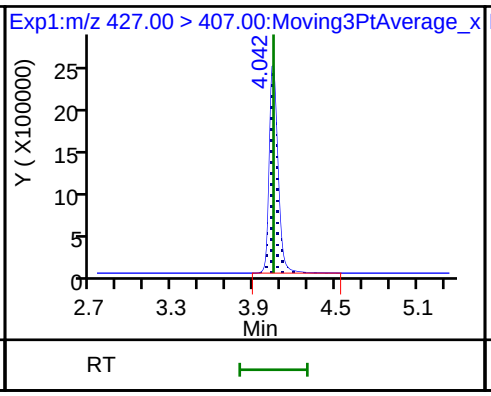


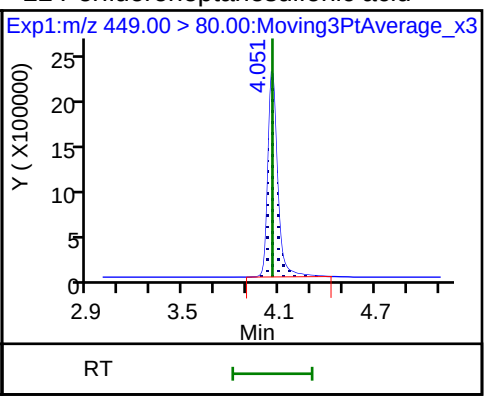
D 20 M2-6:2 FTS



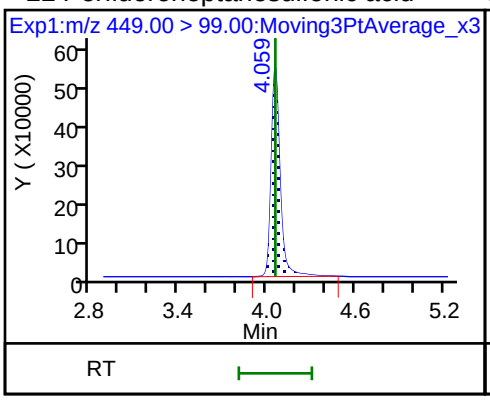

21 6:2 FTS



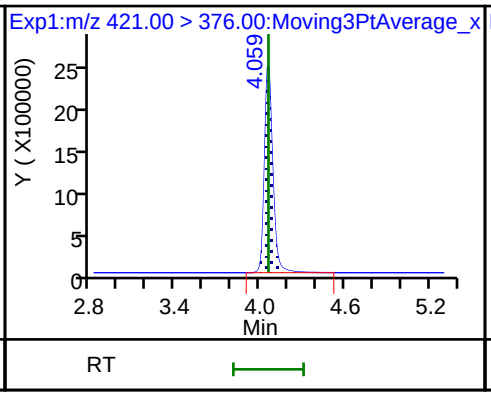

22 Perfluoroheptanesulfonic acid



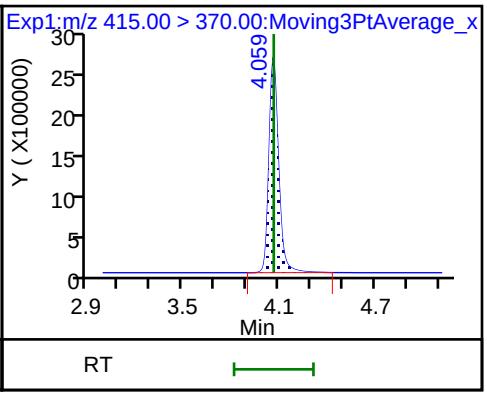

22 Perfluoroheptanesulfonic acid




$ 23 13C8 PFOA




* 25 13C2 PFOA

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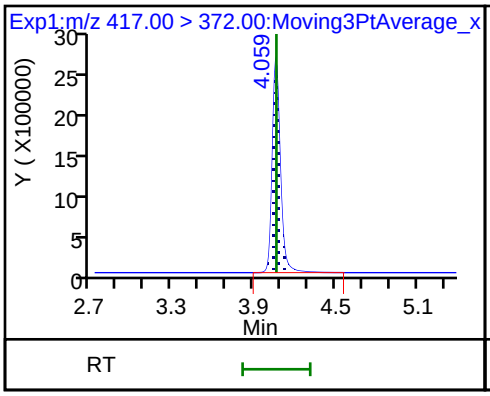
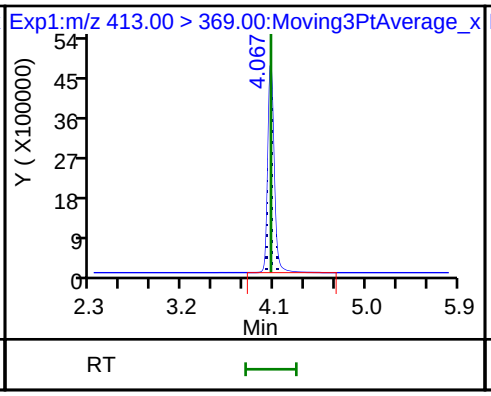



26 Perfluorooctanoic acid

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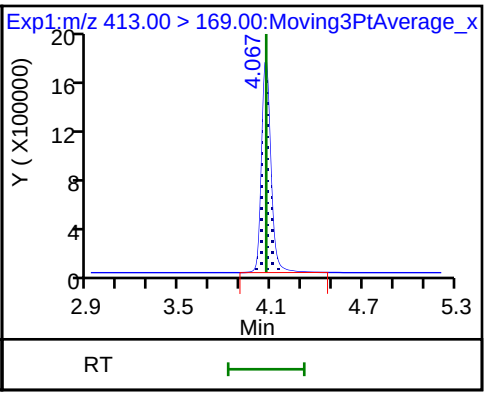


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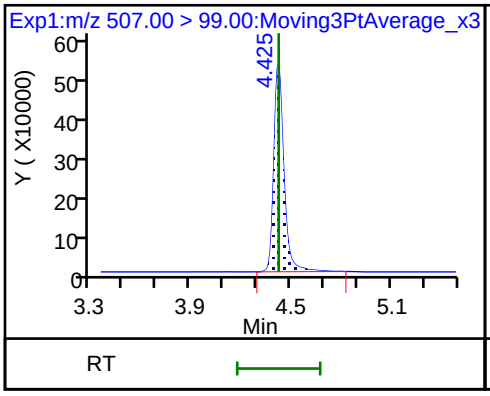
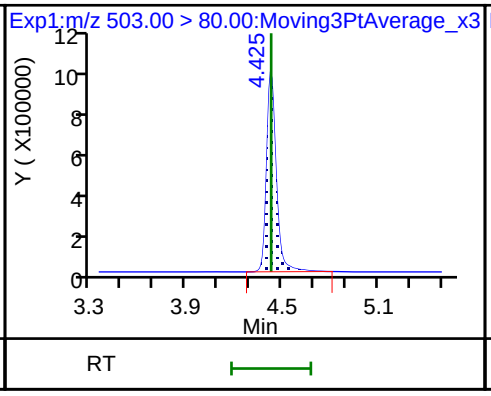
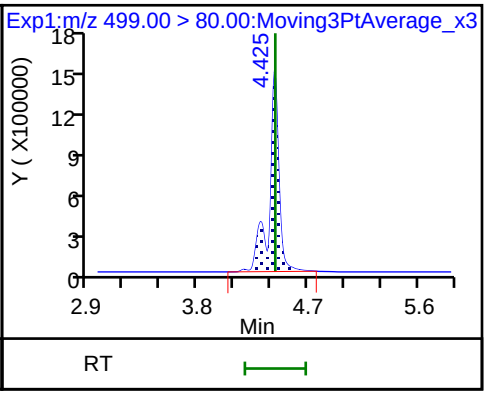


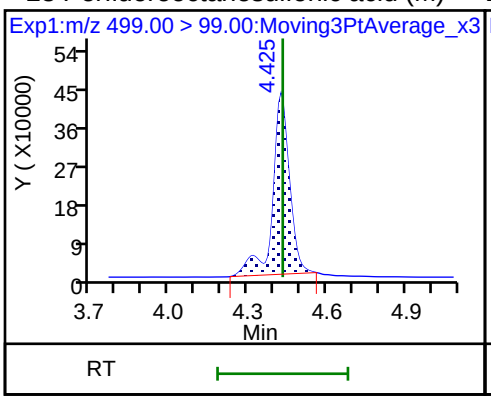

D 29 13C4 PFOS




28 Perfluorooctanesulfonic acid



28 Perfluorooctanesulfonic acid (M)

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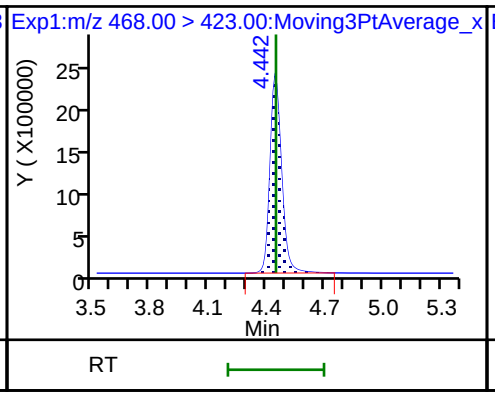
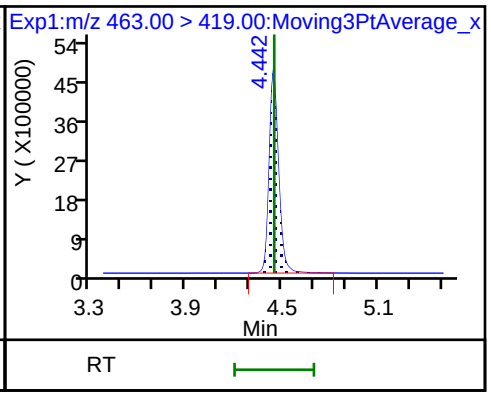
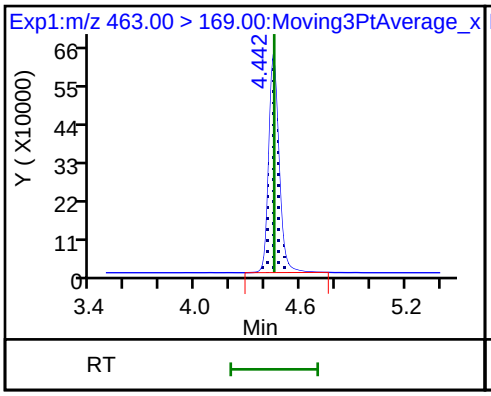


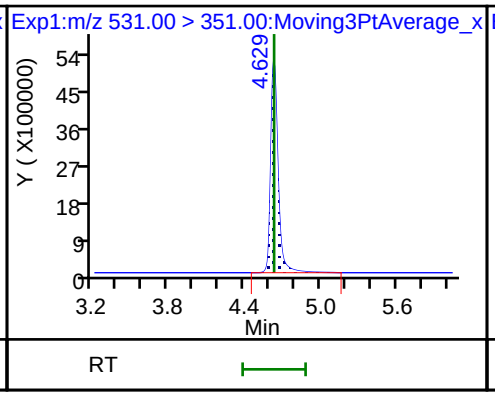

30 Perfluorononanoic acid



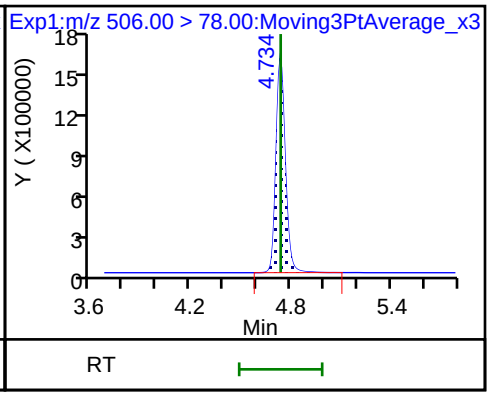

30 Perfluorononanoic acid



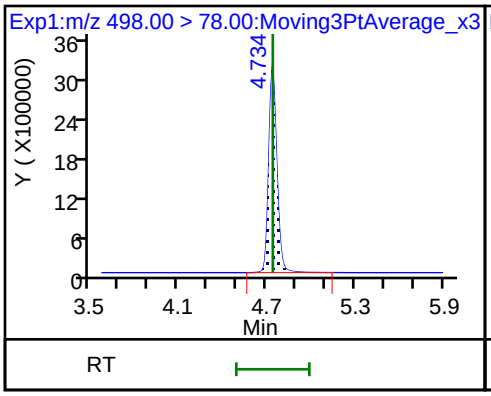

32 9ClFOS



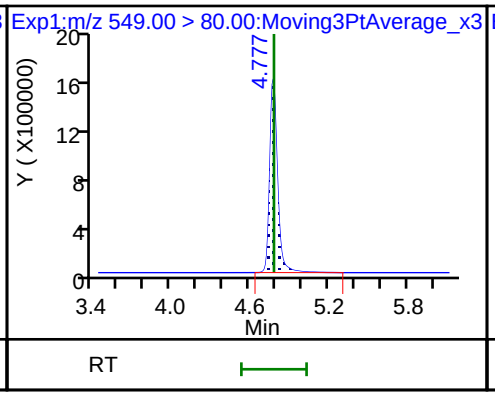

D 34 13C8 FOSA



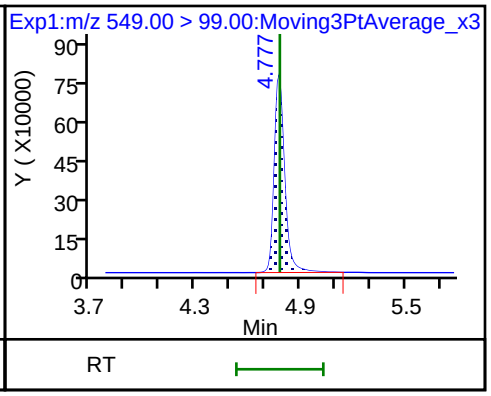

33 Perfluorooctanesulfonamide



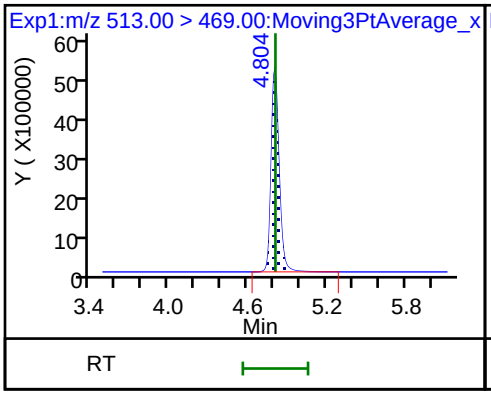

35 Perfluorononanesulfonic acid



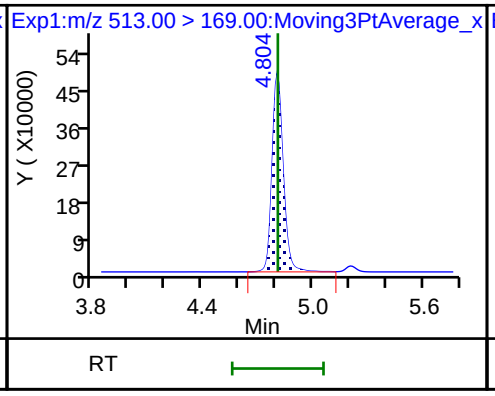

35 Perfluorononanesulfonic acid



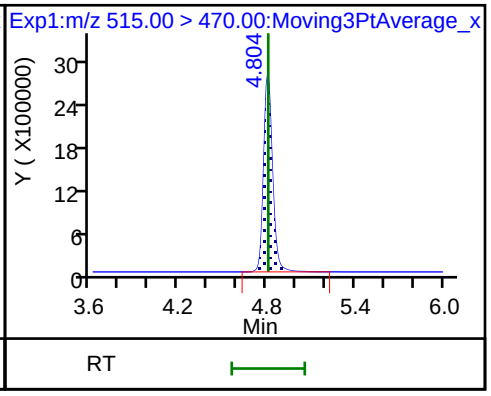

36 Perfluorodecanoic acid



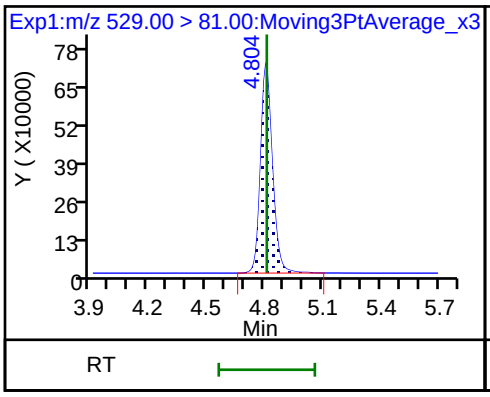

36 Perfluorodecanoic acid



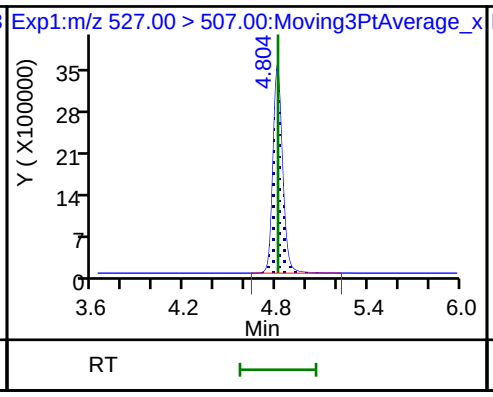

D 37 13C2 PFDA



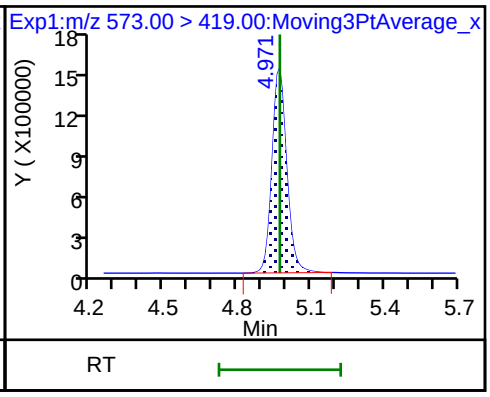
D 38 M2-8:2 FTS



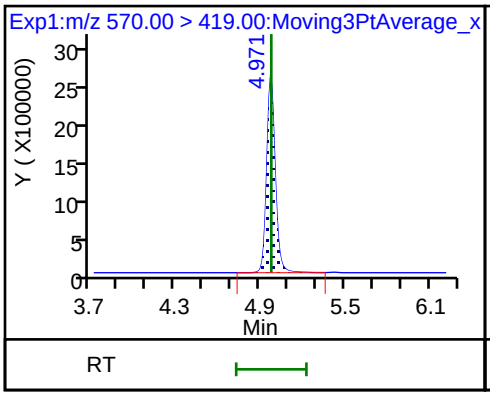

39 8:2 FTS



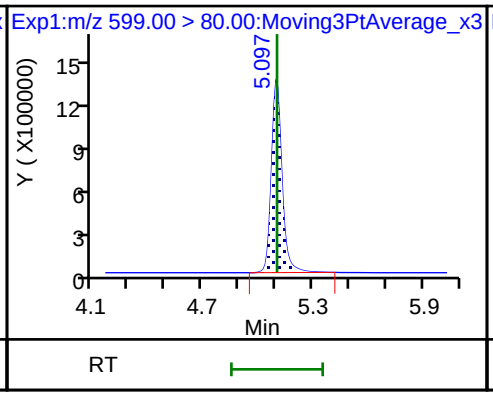

D 40 d3-NMeFOSAA



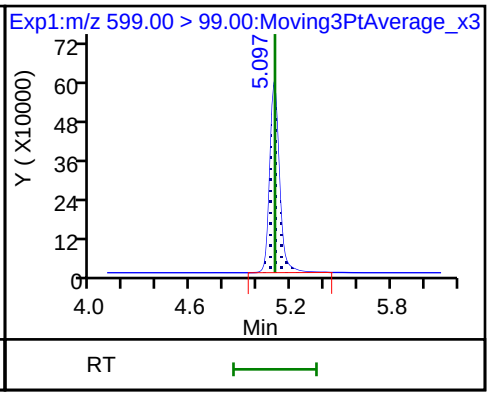

41 NMeFOSAA



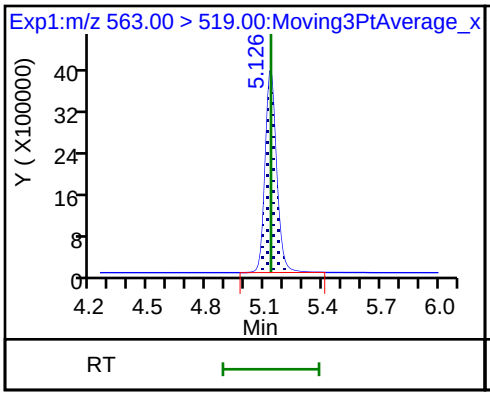

42 Perfluorodecanesulfonic acid



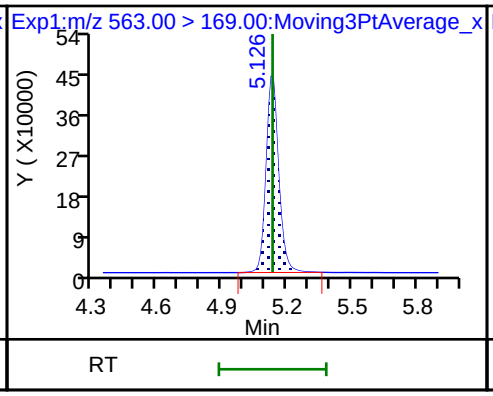

42 Perfluorodecanesulfonic acid



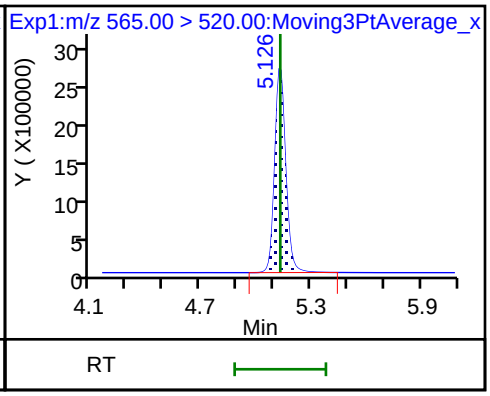

45 Perfluoroundecanoic acid



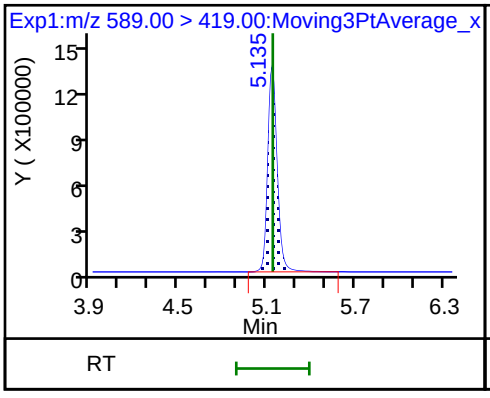

45 Perfluoroundecanoic acid



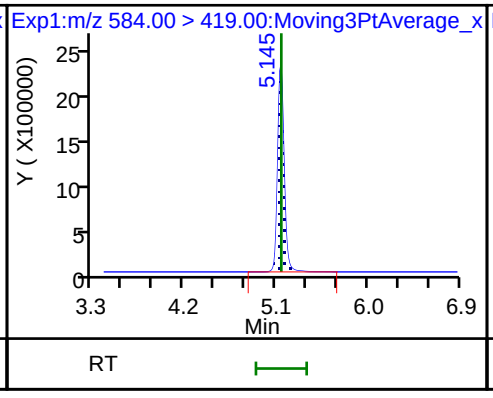

D 44 13C2 PFUnA



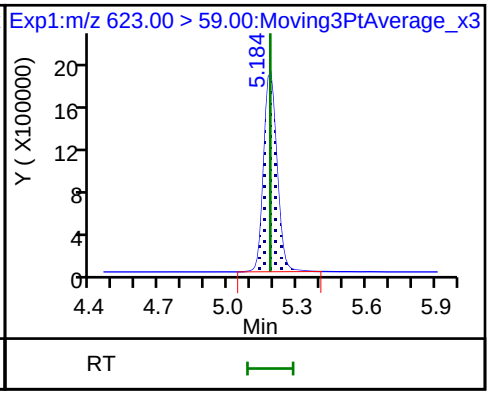

D 46 d5-NEtFOSAA



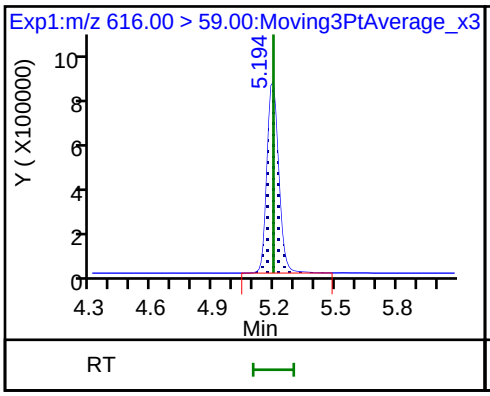

48 NEtFOSA



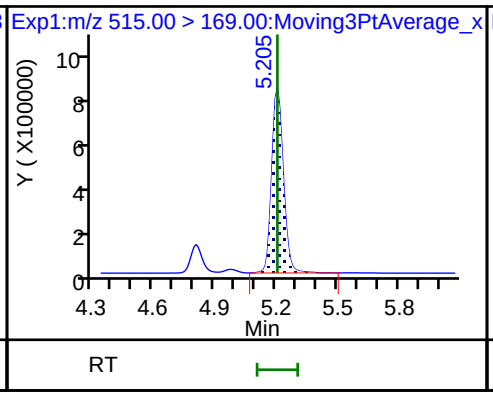

D 43 d7-N-MeFOSE-M



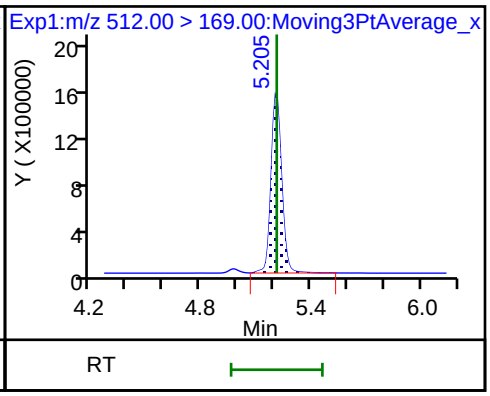
47 N-MeFOSE-M



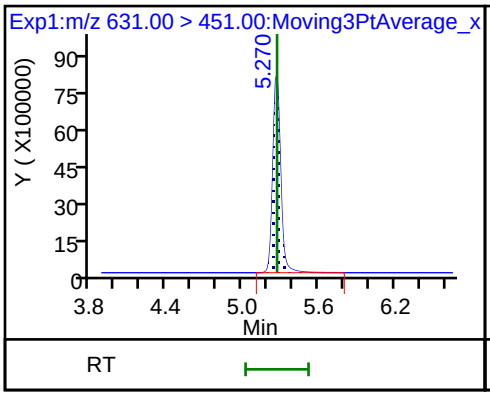

D 49 d-N-MeFOSA-M



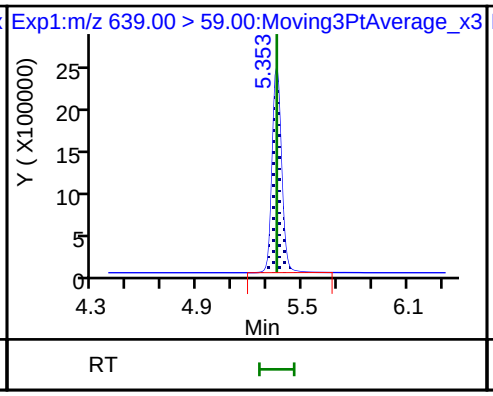

50 NMeFOSA



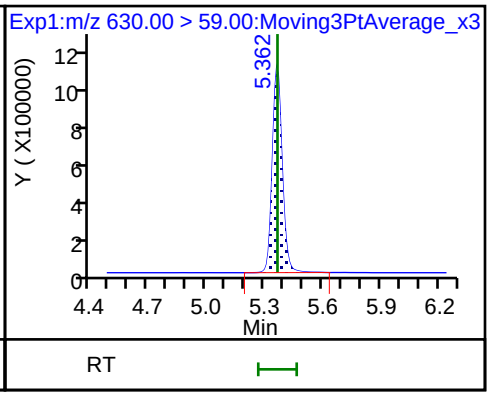

51 11ClFOS



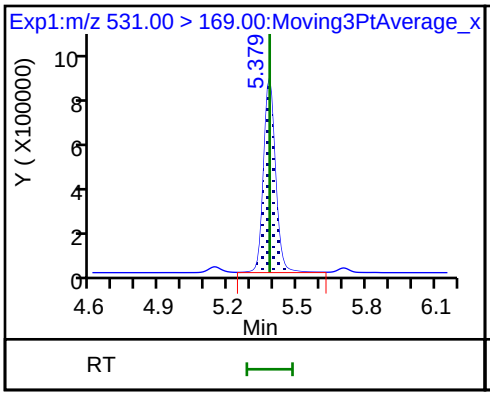

D 52 d9-N-EtFOSE-M



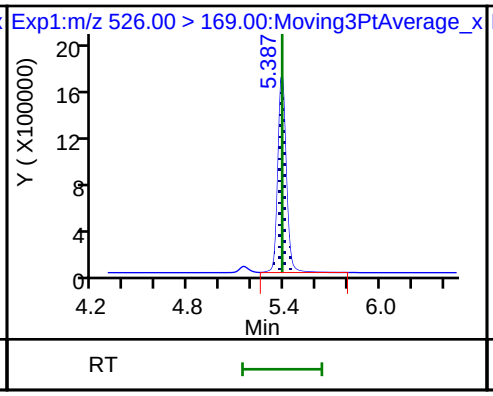

53 N-EtFOSE-M



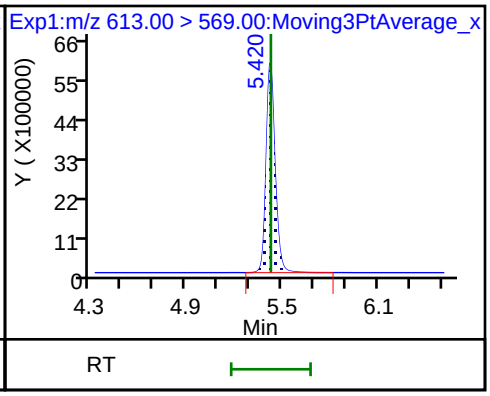

D 54 d-N-EtFOSA-M



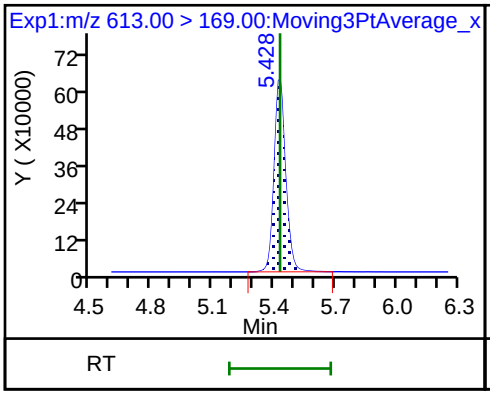

55 N-EtFOSA-M



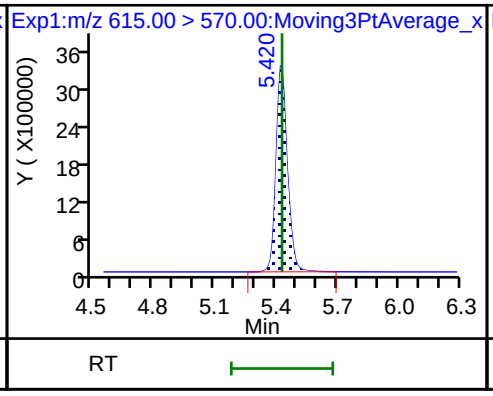

57 Perfluorododecanoic acid



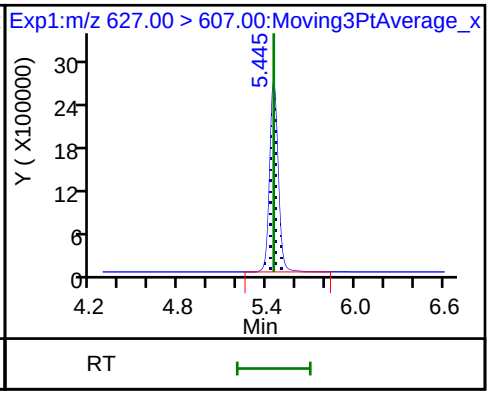

57 Perfluorododecanoic acid



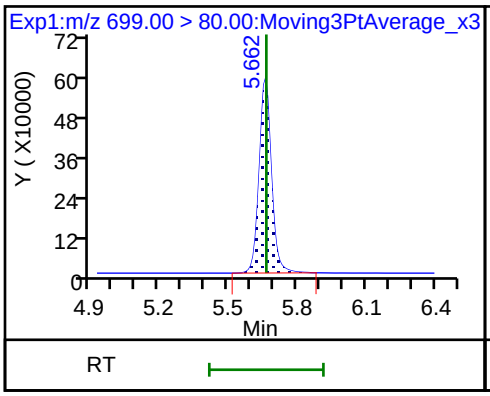

D 56 13C2 PFDoA



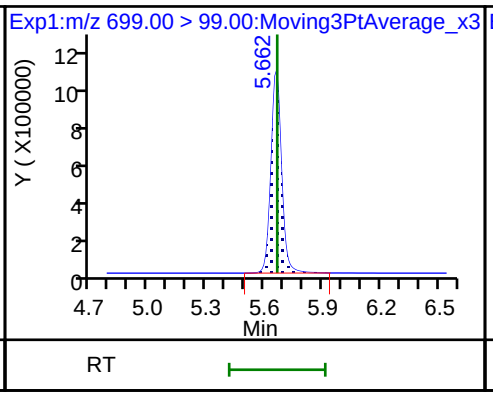

58 10:2 FTS



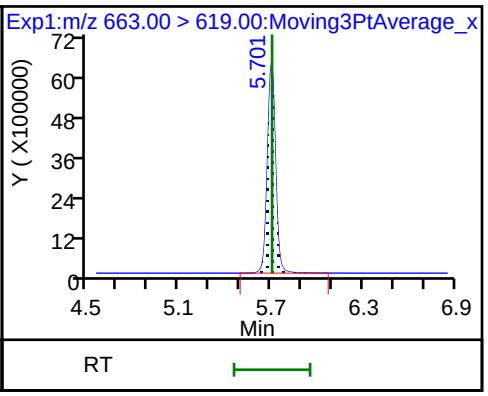
59 PFDoS



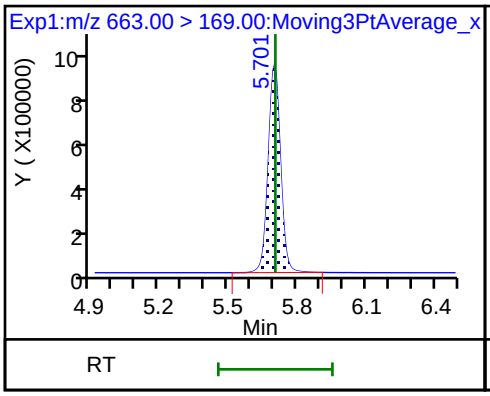

59 PFDoS



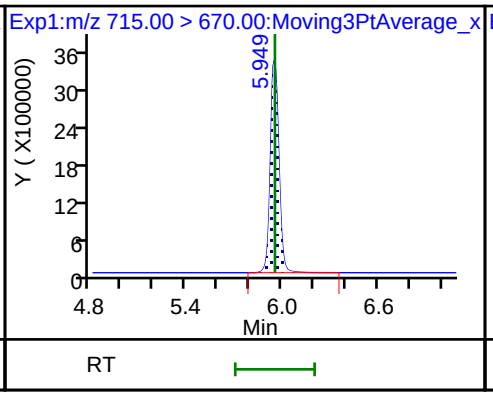

60 Perfluorotridecanoic acid



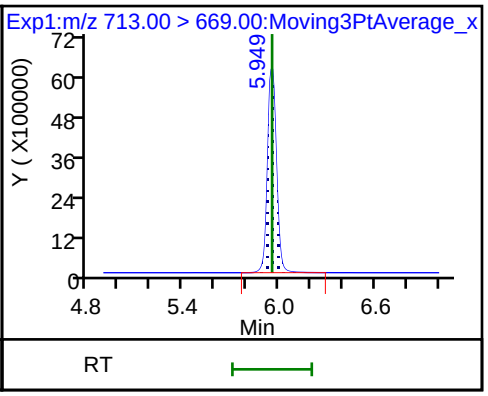

60 Perfluorotridecanoic acid



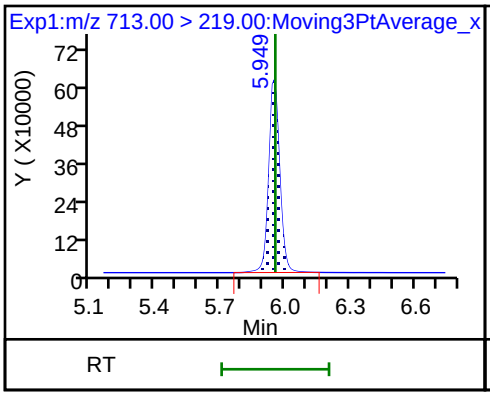

D 61 13C2 PFTeDA



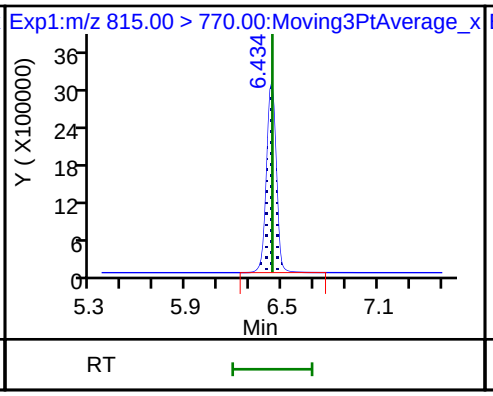

62 Perfluorotetradecanoic acid



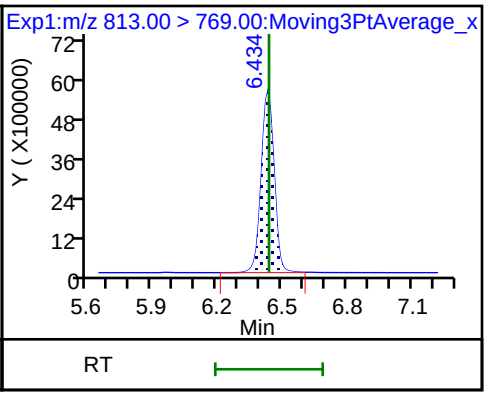

62 Perfluorotetradecanoic acid



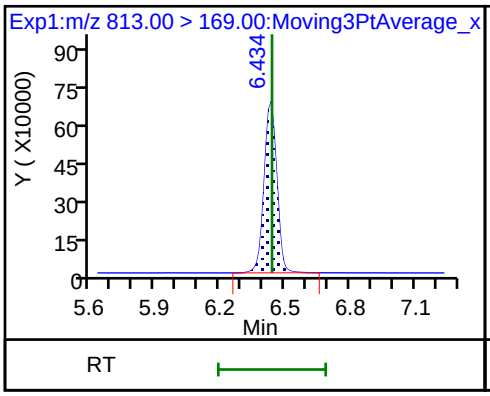

D 64 13C2 PFHxDA



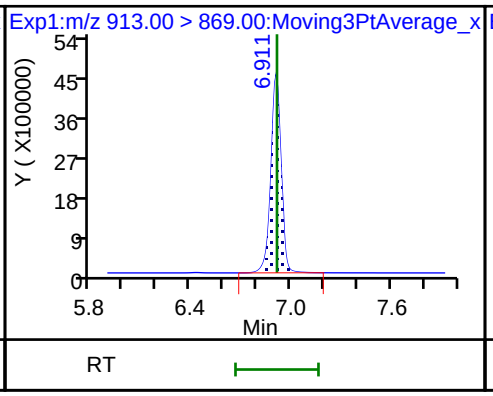

63 Perfluorohexadecanoic acid



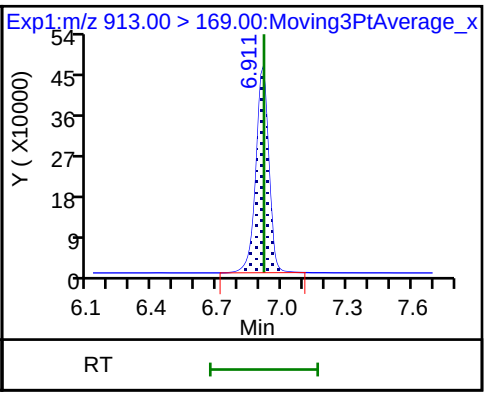

63 Perfluorohexadecanoic acid




65 Perfluorooctadecanoic acid




65 Perfluorooctadecanoic acid



Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

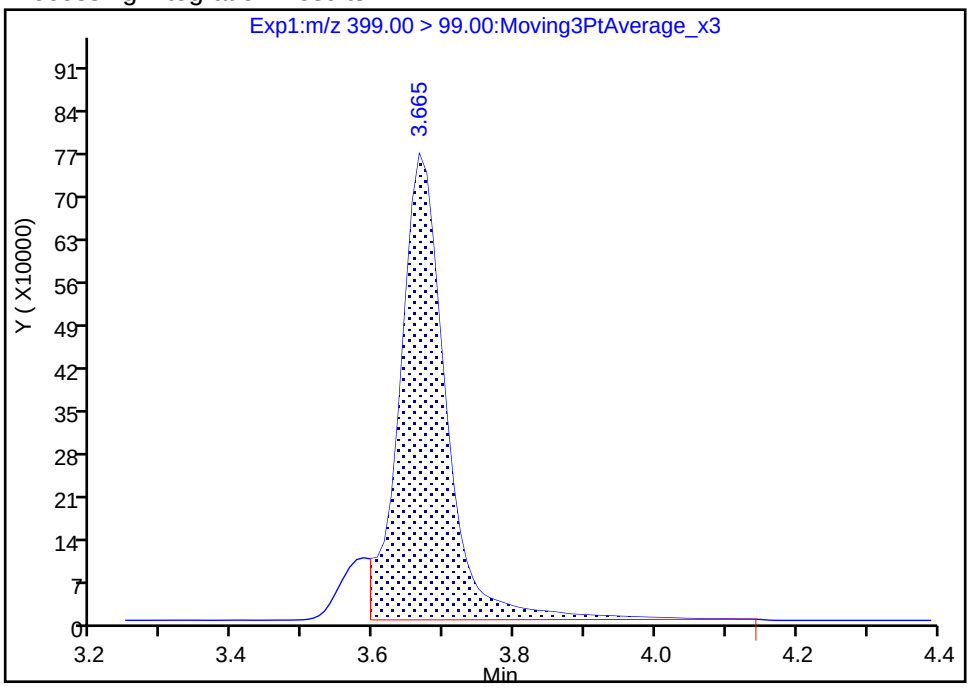
Data File: \\chromfs\Sacramento\ChromData\A13\20200908-102913.b\2020.09.08_A13_PFC_ICALX_009.d
Injection Date: 08-Sep-2020 18:48:50 Instrument ID: A13
Lims ID: IC STD 6
Client ID:
Operator ID: SACINSTLCMS01 ALS Bottle#: 6 Worklist Smp#: 7
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFAS_A13 Limit Group: LC PFC ICAL
Column: Gemini C18 3um 3 x 100mm ( 3.00 mm) Detector EXP1

## 18 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 2

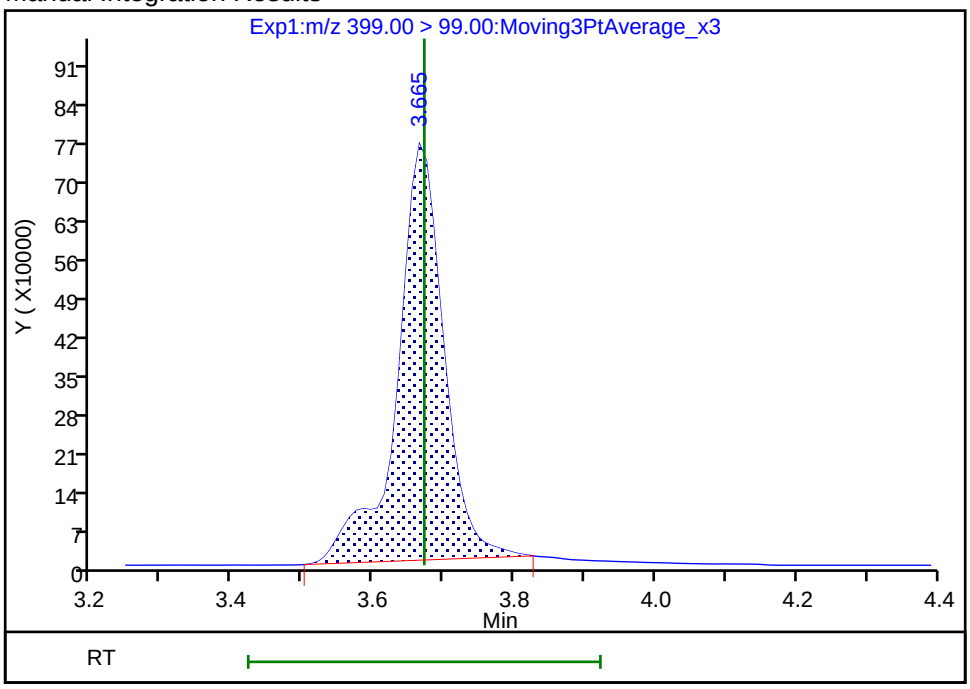
Processing Integration Results

RT: 3.66
Area: 3443485
Amount: 4.374641
Amount Units: ng/ml




Manual Integration Results

RT: 3.66
Area: 3480916
Amount: 4.374641
Amount Units: ng/ml




Reviewer: novoaj, 09-Sep-2020 09:33:52
Audit Action: Manually Integrated Audit Reason: Isomers

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

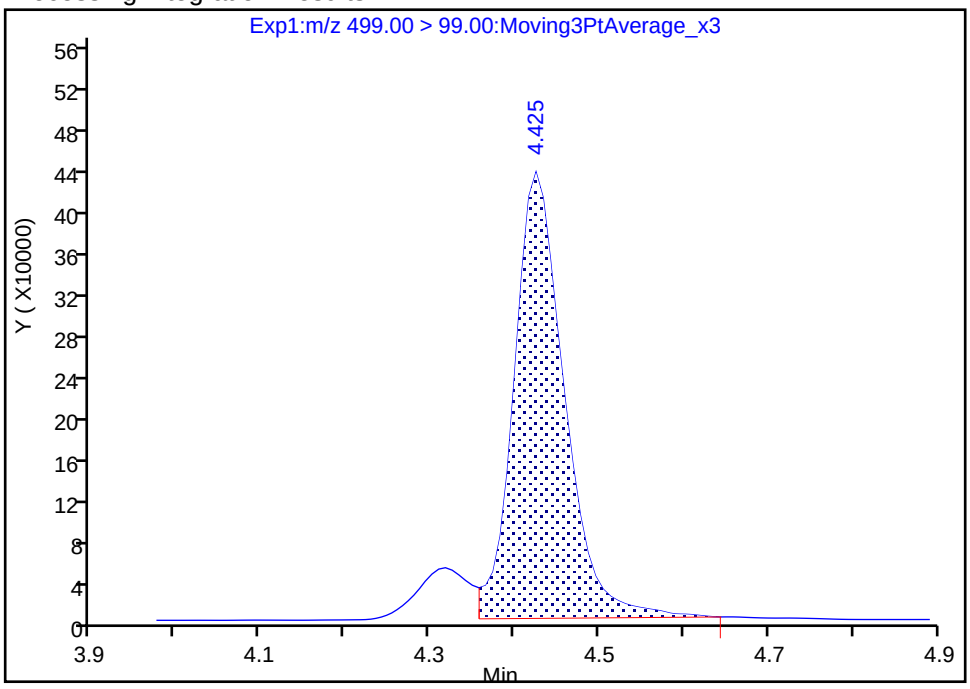
Data File: \\chromfs\Sacramento\ChromData\A13\20200908-102913.b\2020.09.08_A13_PFC_ICALX_009.d
Injection Date: 08-Sep-2020 18:48:50 Instrument ID: A13
Lims ID: IC STD 6
Client ID:
Operator ID: SACINSTLCMS01 ALS Bottle#: 6 Worklist Smp#: 7
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFAS_A13 Limit Group: LC PFC ICAL
Column: Gemini C18 3um 3 x 100mm ( 3.00 mm) Detector EXP1

## 28 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 2

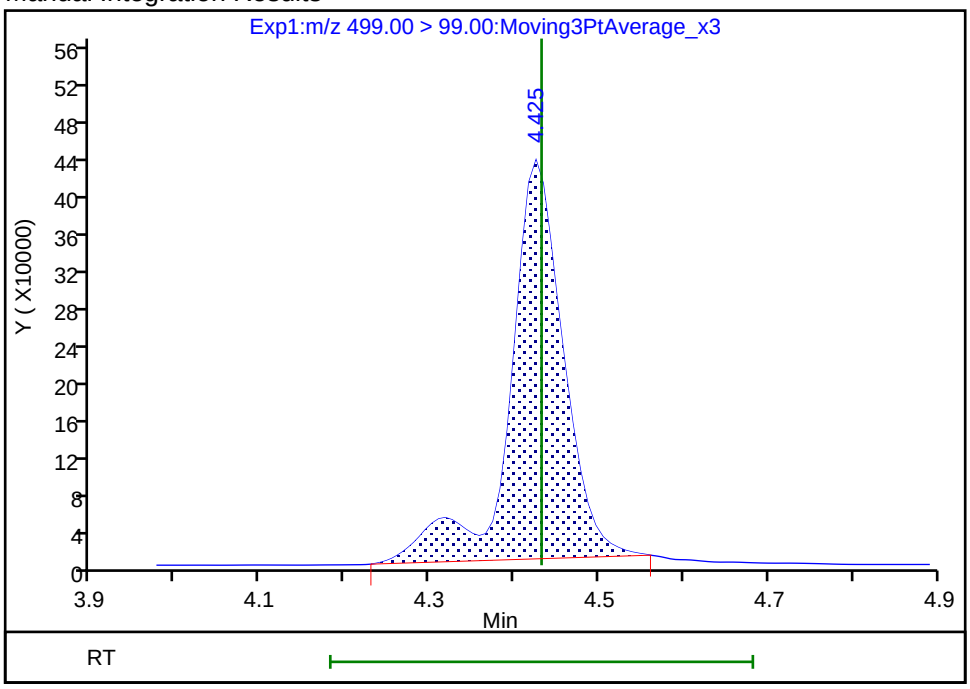
Processing Integration Results

RT: 4.43
Area: 1799432
Amount: 4.638216
Amount Units: ng/ml




Manual Integration Results

RT: 4.43
Area: 1911199
Amount: 4.638216
Amount Units: ng/ml




Reviewer: novoaj, 09-Sep-2020 09:34:02
Audit Action: Manually Integrated Audit Reason: Isomers

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\A13\20200908-102913.b\2020.09.08_A13_PFC_ICALX_010.d
Lims ID: IC STD 7
Client ID:
Sample Type: IC Calib Level: 7
Inject. Date: 08-Sep-2020 18:58:15 ALS Bottle#: 7 Worklist Smp#: 8
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Sample Info: ISTD 7 (24)
Misc. Info.: Plate: 1 Rack: 2
Operator ID: SACINSTLCMS01 Instrument ID: A13
Sublist: chrom-PFAS_A13*sub3

Method: \\chromfs\Sacramento\ChromData\A13\20200908-102913.b\PFAS_A13.m
Limit Group: LC PFC ICAL
Last Update: 09-Sep-2020 10:22:35 Calib Date: 08-Sep-2020 18:58:15
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\A13\20200908-102913.b\2020.09.08_A13_PFC_ICALX_010.d

Column 1 : Gemini C18 3um 3 x 100mm ( 3.00 mm) Det: EXP1
Process Host: CTX1007

First Level Reviewer: novoaj Date: 09-Sep-2020 09:35:28
Ratio Calibration: Average of Initial Calibration

| Signal | RT | EXP RT | DLT RT | REL RT | Response | Amount ng/ml | Ratio(Limits) | %Rec | S/N | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| D 1 13C4 PFBA | | | | | | | | | | |
| 217.00 > 172.00 | 2.475 | 2.477 | -0.002 | 0.608 | 9397601 | 2.60 | | 104 | 29482 | |
| 2 Perfluorobutanoic acid | | | | | | | | | | |
| 212.90 > 169.00 | 2.482 | 2.480 | 0.002 | 1.003 | 26655152 | 9.54 | | 95.4 | 10992 | |
| D 4 13C5 PFPeA | | | | | | | | | | |
| 267.90 > 223.00 | 2.866 | 2.873 | -0.007 | 0.705 | 7301470 | 2.59 | | 104 | 9064 | |
| 5 Perfluoropentanoic acid | | | | | | | | | | |
| 262.90 > 219.00 | 2.878 | 2.875 | 0.003 | 1.004 | 26282266 | 8.76 | | 87.6 | 4885 | |
| D 14 13C3 PFBS | | | | | | | | | | |
| 301.90 > 80.00 | 2.913 | 2.913 | 0.0 | 0.716 | 8481982 | 2.40 | | 103 | 18551 | |
| 6 Perfluorobutanesulfonic acid | | | | | | | | | | |
| 298.90 > 80.00 | 2.913 | 2.913 | 0.0 | 1.000 | 30714271 | 8.61 | Target=2.18 | 97.4 | 40604 | |
| 298.90 > 99.00 | 2.913 | 2.913 | 0.0 | 1.000 | 14617523 | | 2.10(1.09-3.26) | 97.4 | 8151 | |
| 7 4:2 FTS | | | | | | | | | | |
| 327.00 > 307.00 | 3.225 | 3.221 | 0.004 | 1.000 | 23932034 | 9.01 | | 96.5 | 123231 | |
| D 8 M2-4:2 FTS | | | | | | | | | | |
| 329.00 > 81.00 | 3.225 | 3.222 | 0.003 | 0.793 | 1911168 | 2.21 | | 94.6 | 1333 | |
| D 9 13C2 PFHxA | | | | | | | | | | |
| 315.00 > 270.00 | 3.268 | 3.264 | 0.004 | 0.804 | 8779452 | 2.53 | | 101 | 7369 | |
| 10 Perfluorohexanoic acid | | | | | | | | | | |
| 313.00 > 269.00 | 3.268 | 3.265 | 0.003 | 1.000 | 30815520 | 9.44 | Target=11.68 | 94.4 | 6213 | |
| 313.00 > 119.00 | 3.268 | 3.265 | 0.003 | 1.000 | 2753405 | | 11.19(5.84-17.52) | 94.4 | 1045 | |
| 11 Perfluoropentanesulfonic acid | | | | | | | | | | |
| 349.00 > 80.00 | 3.279 | 3.279 | 0.0 | 1.126 | 27082975 | 9.40 | Target=2.56 | 100 | 47068 | |
| 349.00 > 99.00 | 3.279 | 3.279 | 0.0 | 1.126 | 10833609 | | 2.50(1.28-3.84) | 100 | 14642 | |
| 12 HPFO-DA | | | | | | | | | | |
| 285.00 > 169.00 | 3.388 | 3.386 | 0.002 | 1.000 | 7876756 | 10.2 | | 102 | 2787 | |

| Signal | RT | EXP RT | DLT RT | REL RT | Response | Amount ng/ml | Ratio(Limits) | %Rec | S/N | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| D 13 13C3 HFPO-DA | | | | | | | | | | |
| 287.00 > 169.00 | 3.388 | 3.386 | 0.002 | 0.833 | 6494935 | 2.61 | | 104 | 7350 | |
| 16 Perfluoroheptanoic acid | | | | | | | | | | |
| 363.00 > 319.00 | 3.675 | 3.670 | 0.005 | 1.003 | 32814594 | 9.59 | Target=3.85 | 95.9 | 5041 | |
| 363.00 > 169.00 | 3.665 | 3.670 | -0.005 | 1.000 | 9357169 | | 3.51(1.92-5.77) | 95.9 | 7006 | |
| D 15 13C4 PFHpA | | | | | | | | | | |
| 367.00 > 322.00 | 3.665 | 3.668 | -0.003 | 0.901 | 8464192 | 2.47 | | 98.9 | 25759 | |
| 18 Perfluorohexanesulfonic acid | | | | | | | | | | M |
| 399.00 > 80.00 | 3.675 | 3.672 | 0.003 | 1.000 | 22053412 | 8.49 | Target=3.25 | 93.3 | 1417 | |
| 399.00 > 99.00 | 3.675 | 3.672 | 0.003 | 1.000 | 7065635 | | 3.12(1.62-4.87) | 93.3 | 286 | M |
| D 17 18O2 PFHxS | | | | | | | | | | |
| 403.00 > 84.00 | 3.675 | 3.672 | 0.003 | 0.904 | 5520203 | 2.38 | | 101 | 28380 | |
| 19 DONA | | | | | | | | | | |
| 377.00 > 251.00 | 3.722 | 3.719 | 0.003 | 0.841 | 64819077 | 7.45 | Target=2.76 | 79.1 | 55219 | |
| 377.00 > 85.00 | 3.722 | 3.719 | 0.003 | 0.841 | 29174058 | | 2.22(1.38-4.14) | 79.1 | 23580 | |
| D 20 M2-6:2 FTS | | | | | | | | | | |
| 429.00 > 81.00 | 4.042 | 4.043 | -0.001 | 0.994 | 2109180 | 2.11 | | 89.0 | 3812 | |
| 21 6:2 FTS | | | | | | | | | | |
| 427.00 > 407.00 | 4.042 | 4.043 | -0.001 | 1.000 | 18651101 | 8.73 | | 92.0 | 9182 | |
| 22 Perfluoroheptanesulfonic acid | | | | | | | | | | |
| 449.00 > 80.00 | 4.059 | 4.056 | 0.003 | 0.917 | 18263636 | 9.46 | Target=4.29 | 99.4 | 38583 | |
| 449.00 > 99.00 | 4.059 | 4.056 | 0.003 | 0.917 | 4383758 | | 4.17(2.15-6.44) | 99.4 | 1888 | |
| * 25 13C2 PFOA | | | | | | | | | | |
| 415.00 > 370.00 | 4.067 | 4.065 | 0.002 | | 10620941 | 2.50 | | | 4177 | |
| D 24 13C4 PFOA | | | | | | | | | | |
| 417.00 > 372.00 | 4.067 | 4.065 | 0.002 | 1.000 | 10524627 | 2.52 | | 101 | 14649 | |
| $ 23 13C8 PFOA | | | | | | | | | | |
| 421.00 > 376.00 | 4.059 | 4.058 | 0.001 | 0.998 | 9748895 | 2.58 | | 105 | 4287 | |
| 26 Perfluorooctanoic acid | | | | | | | | | | |
| 413.00 > 369.00 | 4.067 | 4.066 | 0.001 | 1.000 | 36963255 | 8.58 | Target=2.95 | 85.8 | 8509 | |
| 413.00 > 169.00 | 4.067 | 4.066 | 0.001 | 1.000 | 13581931 | | 2.72(1.47-4.42) | 85.8 | 23304 | |
| $ 27 13C8 PFOS | | | | | | | | | | |
| 507.00 > 99.00 | 4.426 | 4.426 | 0.0 | 1.088 | 2165574 | 2.46 | | 103 | 2505 | |
| D 29 13C4 PFOS | | | | | | | | | | |
| 503.00 > 80.00 | 4.426 | 4.429 | -0.003 | 1.088 | 4050192 | 2.45 | | 103 | 3525 | |
| 28 Perfluorooctanesulfonic acid | | | | | | | | | | M |
| 499.00 > 80.00 | 4.435 | 4.432 | 0.003 | 1.002 | 16026278 | 9.11 | Target=4.28 | 98.1 | 1227 | |
| 499.00 > 99.00 | 4.426 | 4.432 | -0.006 | 1.000 | 3879549 | | 4.13(2.14-6.41) | 98.1 | 363 | M |
| D 31 13C5 PFNA | | | | | | | | | | |
| 468.00 > 423.00 | 4.452 | 4.448 | 0.004 | 1.095 | 9530979 | 2.47 | | 98.6 | 8101 | |
| 30 Perfluorononanoic acid | | | | | | | | | | |
| 463.00 > 419.00 | 4.452 | 4.449 | 0.003 | 1.000 | 34328615 | 9.48 | Target=8.00 | 94.8 | 3654 | |
| 463.00 > 169.00 | 4.452 | 4.449 | 0.003 | 1.000 | 4761903 | | 7.21(4.00-12.01) | 94.8 | 3713 | |
| 32 9ClFOS | | | | | | | | | | |
| 531.00 > 351.00 | 4.629 | 4.632 | -0.003 | 1.046 | 38369939 | 9.05 | | 97.1 | 36611 | |
| D 34 13C8 FOSA | | | | | | | | | | |
| 506.00 > 78.00 | 4.734 | 4.738 | -0.004 | 1.164 | 5943159 | 2.50 | | 100 | 5954 | |

| Signal | RT | EXP RT | DLT RT | REL RT | Response | Amount ng/ml | Ratio(Limits) | %Rec | S/N | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| 33 Perfluorooctanesulfonamide | | | | | | | | | | |
| 498.00 > 78.00 | 4.734 | 4.739 | -0.005 | 1.000 | 22290641 | 10.0 | | 99.9 | 46252 | |
| 35 Perfluorononanesulfonic acid | | | | | | | | | | |
| 549.00 > 80.00 | 4.777 | 4.781 | -0.004 | 1.079 | 12917552 | 9.84 | Target=2.15 | 102 | 5248 | |
| 549.00 > 99.00 | 4.777 | 4.781 | -0.004 | 1.079 | 6190666 | | 2.09(1.08-3.23) | 102 | 9011 | |
| 36 Perfluorodecanoic acid | | | | | | | | | | |
| 513.00 > 469.00 | 4.804 | 4.808 | -0.004 | 1.000 | 38244371 | 9.21 | Target=10.44 | 92.1 | 10436 | |
| 513.00 > 169.00 | 4.804 | 4.808 | -0.004 | 1.000 | 3909883 | | 9.78(5.22-15.65) | 92.1 | 327 | |
| D 37 13C2 PFDA | | | | | | | | | | |
| 515.00 > 470.00 | 4.804 | 4.808 | -0.004 | 1.181 | 11582996 | 2.47 | | 98.9 | 8711 | |
| D 38 M2-8:2 FTS | | | | | | | | | | |
| 529.00 > 81.00 | 4.813 | 4.810 | 0.003 | 1.183 | 2642999 | 2.00 | | 83.6 | 3766 | |
| 39 8:2 FTS | | | | | | | | | | |
| 527.00 > 507.00 | 4.813 | 4.810 | 0.003 | 1.000 | 25512691 | 9.35 | | 97.6 | 7118 | |
| D 40 d3-NMeFOSAA | | | | | | | | | | |
| 573.00 > 419.00 | 4.971 | 4.972 | -0.001 | 1.222 | 6252520 | 2.59 | | 104 | 3726 | |
| 41 NMeFOSAA | | | | | | | | | | |
| 570.00 > 419.00 | 4.980 | 4.978 | 0.002 | 1.002 | 21267414 | 10.6 | | 106 | 2546 | |
| 42 Perfluorodecanesulfonic acid | | | | | | | | | | |
| 599.00 > 80.00 | 5.106 | 5.103 | 0.003 | 1.154 | 10686131 | 9.57 | Target=2.36 | 99.3 | 41423 | |
| 599.00 > 99.00 | 5.096 | 5.103 | -0.007 | 1.151 | 4772492 | | 2.24(1.18-3.54) | 99.3 | 6822 | |
| 45 Perfluoroundecanoic acid | | | | | | | | | | |
| 563.00 > 519.00 | 5.135 | 5.132 | 0.003 | 1.000 | 31474743 | 10.7 | Target=8.67 | 107 | 8662 | |
| 563.00 > 169.00 | 5.135 | 5.132 | 0.003 | 1.000 | 3368366 | | 9.34(4.34-13.01) | 107 | 5712 | |
| D 44 13C2 PFUnA | | | | | | | | | | |
| 565.00 > 520.00 | 5.135 | 5.132 | 0.003 | 1.262 | 11130004 | 2.43 | | 97.2 | 7395 | |
| D 46 d5-NEtFOSAA | | | | | | | | | | |
| 589.00 > 419.00 | 5.135 | 5.139 | -0.004 | 1.262 | 5077808 | 2.17 | | 86.9 | 2594 | |
| 48 NEtFOSA | | | | | | | | | | |
| 584.00 > 419.00 | 5.144 | 5.148 | -0.004 | 1.002 | 18272482 | 11.6 | | 116 | 44810 | |
| D 43 d7-N-MeFOSE-M | | | | | | | | | | |
| 623.00 > 59.00 | 5.183 | 5.182 | 0.001 | 1.274 | 7886277 | 13.3 | | 106 | 2940 | |
| 47 N-MeFOSE-M | | | | | | | | | | |
| 616.00 > 59.00 | 5.193 | 5.195 | -0.002 | 1.002 | 6274125 | 9.34 | | 93.4 | 2394 | |
| D 49 d-N-MeFOSA-M | | | | | | | | | | |
| 515.00 > 169.00 | 5.205 | 5.205 | 0.0 | 1.280 | 3183250 | 2.85 | | 114 | 55.1 | |
| 50 NMeFOSA | | | | | | | | | | |
| 512.00 > 169.00 | 5.216 | 5.213 | 0.003 | 1.002 | 11776983 | 9.41 | | 94.1 | 264 | |
| 51 11ClFOS | | | | | | | | | | |
| 631.00 > 451.00 | 5.269 | 5.271 | -0.002 | 1.190 | 57564339 | 7.87 | | 83.5 | 79221 | |
| D 52 d9-N-EtFOSE-M | | | | | | | | | | |
| 639.00 > 59.00 | 5.354 | 5.352 | 0.002 | 1.316 | 8859198 | 12.7 | | 102 | 3402 | |
| 53 N-EtFOSE-M | | | | | | | | | | |
| 630.00 > 59.00 | 5.371 | 5.366 | 0.005 | 1.003 | 6971778 | 9.50 | | 95.0 | 2914 | |
| D 54 d-N-EtFOSA-M | | | | | | | | | | |
| 531.00 > 169.00 | 5.380 | 5.379 | 0.001 | 1.323 | 2906316 | 2.73 | | 109 | 125 | |

| Signal | RT | EXP RT | DLT RT | REL RT | Response | Amount ng/ml | Ratio(Limits) | %Rec | S/N | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| 55 N-EtFOSA-M | | | | | | | | | | |
| 526.00 > 169.00 | 5.388 | 5.386 | 0.002 | 1.002 | 11849335 | 9.60 | | 96.0 | 276 | |
| 57 Perfluorododecanoic acid | | | | | | | | | | |
| 613.00 > 569.00 | 5.429 | 5.428 | 0.001 | 1.000 | 39528010 | 8.83 | Target=9.05 | 88.3 | 7680 | |
| 613.00 > 169.00 | 5.421 | 5.428 | -0.007 | 0.998 | 4859476 | | 8.13(4.52-13.57) | 88.3 | 4289 | |
| D 56 13C2 PFDoA | | | | | | | | | | |
| 615.00 > 570.00 | 5.429 | 5.428 | 0.001 | 1.335 | 12272069 | 2.49 | | 99.6 | 12096 | |
| 58 10:2 FTS | | | | | | | | | | |
| 627.00 > 607.00 | 5.446 | 5.445 | 0.001 | 1.132 | 18642571 | 10.4 | | 107 | 2748 | |
| 59 PFDoS | | | | | | | | | | |
| 699.00 > 80.00 | 5.663 | 5.665 | -0.002 | 1.279 | 4386576 | 10.1 | Target=0.57 | 104 | 5412 | |
| 699.00 > 99.00 | 5.663 | 5.665 | -0.002 | 1.279 | 7722379 | | 0.57(0.29-0.86) | 104 | 5508 | |
| 60 Perfluorotridecanoic acid | | | | | | | | | | |
| 663.00 > 619.00 | 5.703 | 5.704 | -0.001 | 1.050 | 39862771 | 8.66 | Target=7.06 | 86.6 | 12885 | |
| 663.00 > 169.00 | 5.703 | 5.704 | -0.001 | 1.050 | 6699439 | | 5.95(3.53-10.59) | 86.6 | 5896 | |
| D 61 13C2 PFTeDA | | | | | | | | | | |
| 715.00 > 670.00 | 5.950 | 5.953 | -0.003 | 1.463 | 13067077 | 2.68 | | 107 | 12443 | |
| 62 Perfluorotetradecanoic acid | | | | | | | | | | |
| 713.00 > 669.00 | 5.950 | 5.954 | -0.004 | 1.000 | 42819972 | 8.32 | Target=11.23 | 83.2 | 11055 | |
| 713.00 > 219.00 | 5.950 | 5.954 | -0.004 | 1.000 | 4434917 | | 9.66(5.62-16.85) | 83.2 | 8519 | |
| D 64 13C2 PFHxDA | | | | | | | | | | |
| 815.00 > 770.00 | 6.435 | 6.437 | -0.002 | 1.582 | 12006459 | 2.37 | | 94.8 | 5324 | |
| 63 Perfluorohexadecanoic acid | | | | | | | | | | |
| 813.00 > 769.00 | 6.435 | 6.439 | -0.004 | 1.000 | 37625003 | 8.21 | Target=9.45 | 82.1 | 4245 | |
| 813.00 > 169.00 | 6.435 | 6.439 | -0.004 | 1.000 | 4773146 | | 7.88(4.72-14.17) | 82.1 | 6871 | |
| 65 Perfluorooctadecanoic acid | | | | | | | | | | |
| 913.00 > 869.00 | 6.912 | 6.915 | -0.003 | 1.074 | 36559244 | 10.4 | Target=11.13 | 104 | 4901 | |
| 913.00 > 169.00 | 6.912 | 6.915 | -0.003 | 1.074 | 3340210 | | 10.95(5.56-16.69) | 104 | 2874 | |

## QC Flag Legend

Review Flags

M - Manually Integrated

## Reagents:

LCPFC_LL7_00024 Amount Added: 1.00 Units: mL

Report Date: 09-Sep-2020 10:22:39 Chrom Revision: 2.3 20-Aug-2020 13:57:12

Eurofins TestAmerica, Sacramento

Data File: \\chromfs\Sacramento\ChromData\A13\20200908-102913.b\2020.09.08_A13_PFC_ICALX_010.d

Injection Date: 08-Sep-2020 18:58:15 Instrument ID: A13

Lims ID: IC STD 7

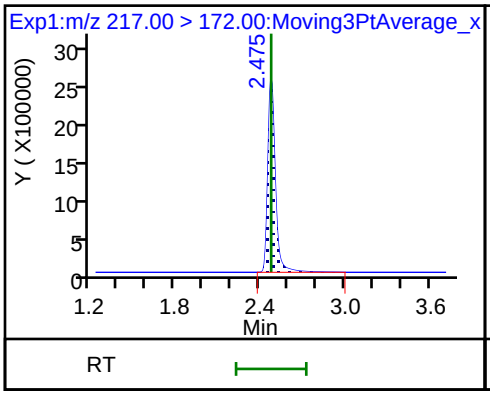
Client ID:

Operator ID: SACINSTLCMS01 ALS Bottle#: 7 Worklist Smp#: 8

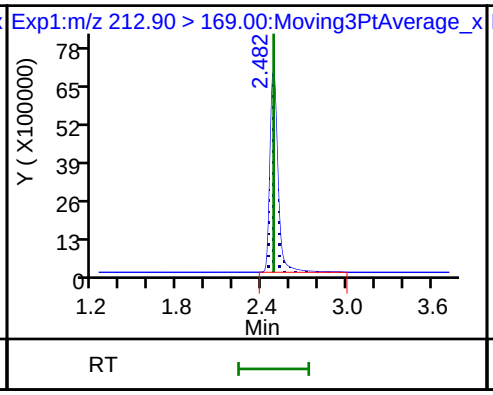
Injection Vol: 20.0 ul Dil. Factor: 1.0000

Method: PFAS_A13 Limit Group: LC PFC ICAL

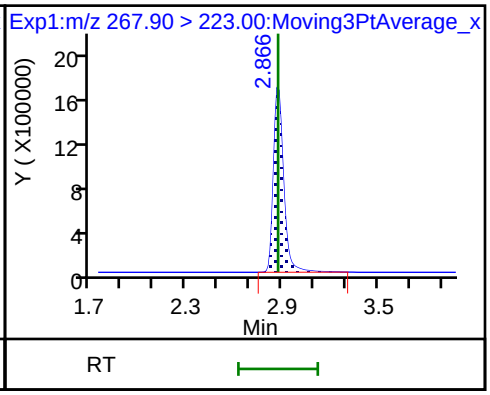
D 1 13C4 PFBA



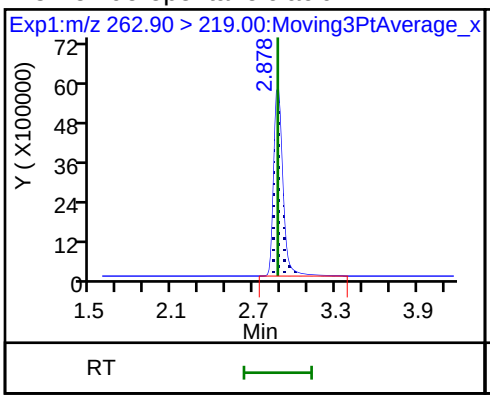

2 Perfluorobutanoic acid



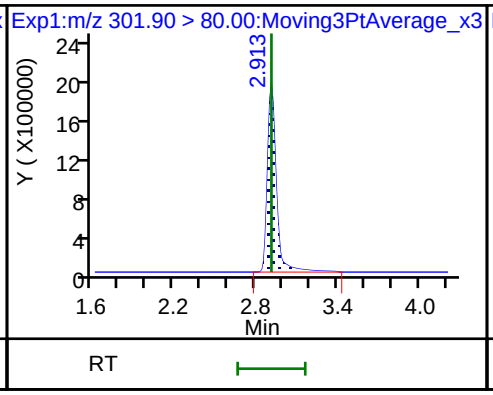

D 4 13C5 PFPeA



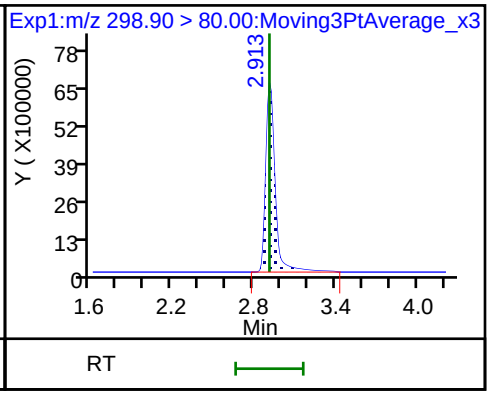

5 Perfluoropentanoic acid



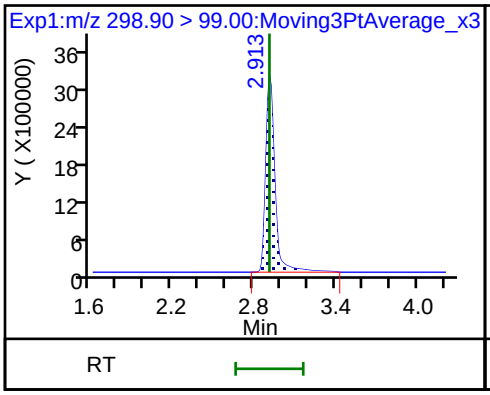

D 14 13C3 PFBS



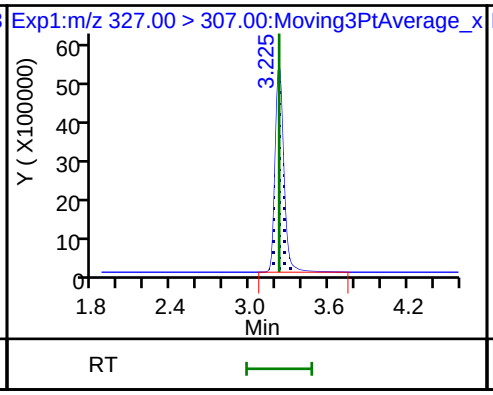

6 Perfluorobutanesulfonic acid



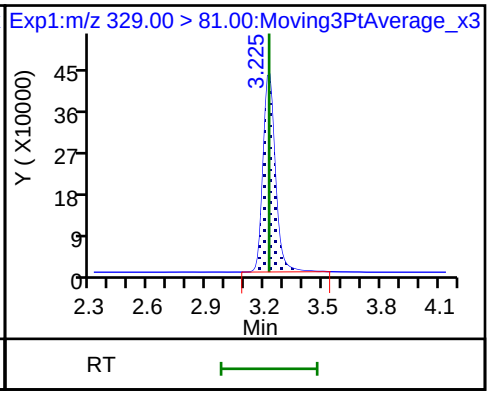

6 Perfluorobutanesulfonic acid



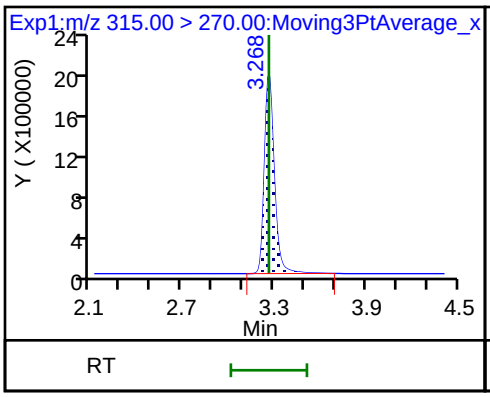

7 4:2 FTS



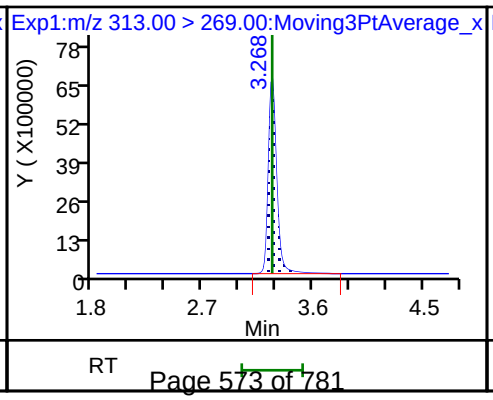

D 8 M2-4:2 FTS



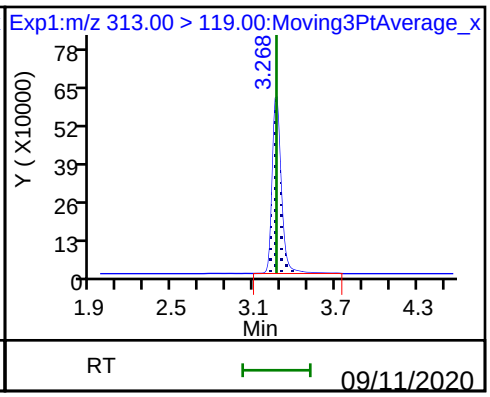

D 9 13C2 PFHxA



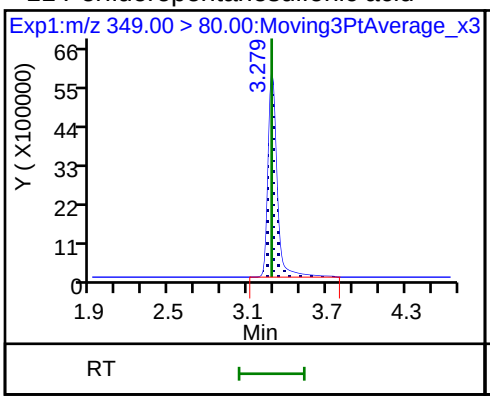

10 Perfluorohexanoic acid



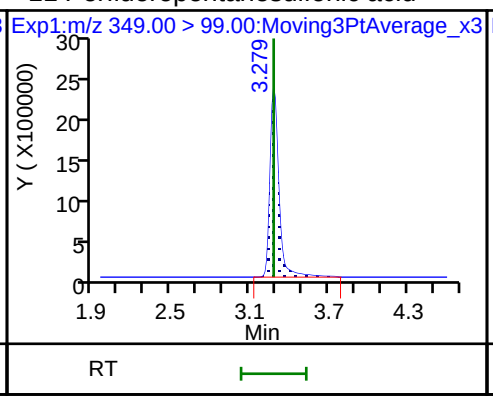

10 Perfluorohexanoic acid



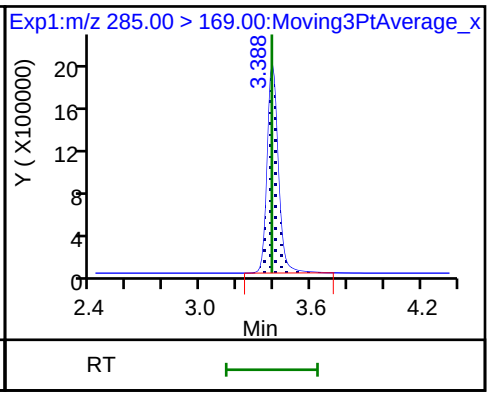
11 Perfluoropentanesulfonic acid



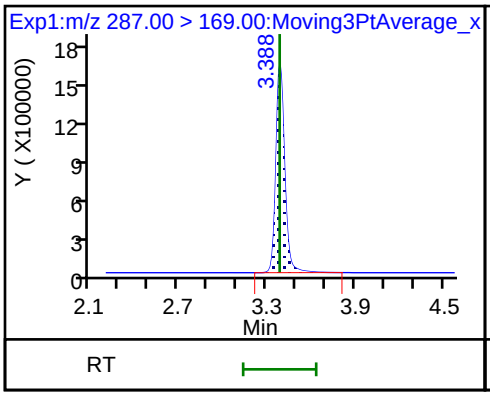

11 Perfluoropentanesulfonic acid



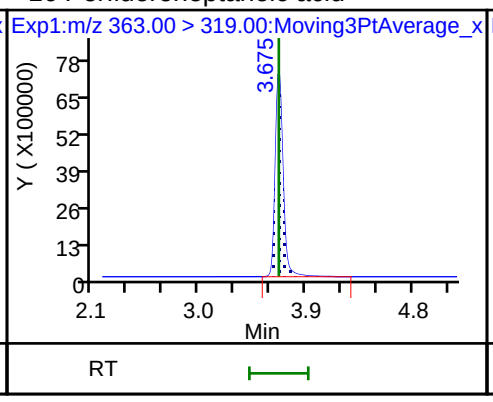

12 HPFO-DA



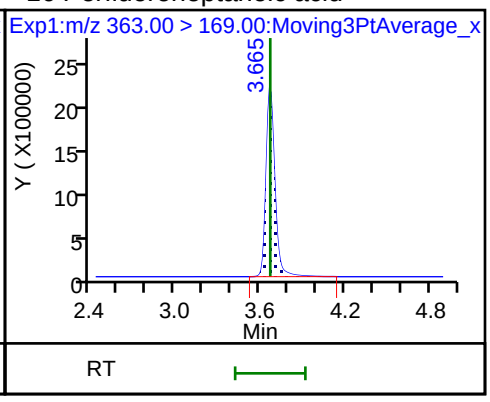

D 13 13C3 HFPO-DA



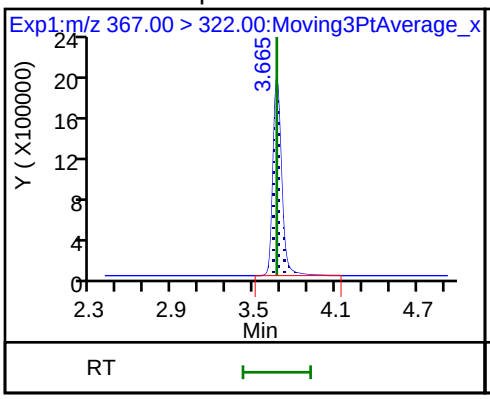

16 Perfluoroheptanoic acid



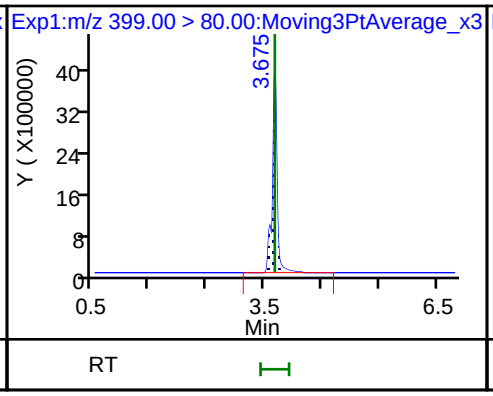

16 Perfluoroheptanoic acid



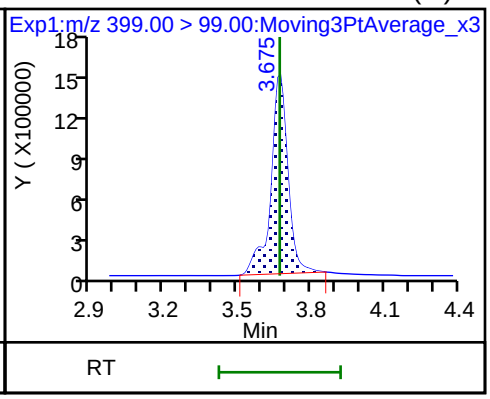

D 15 13C4 PFHpA



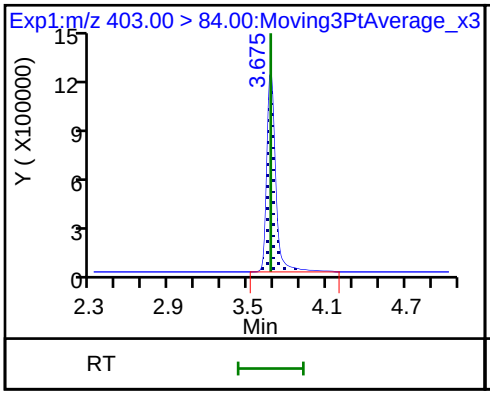

18 Perfluorohexanesulfonic acid



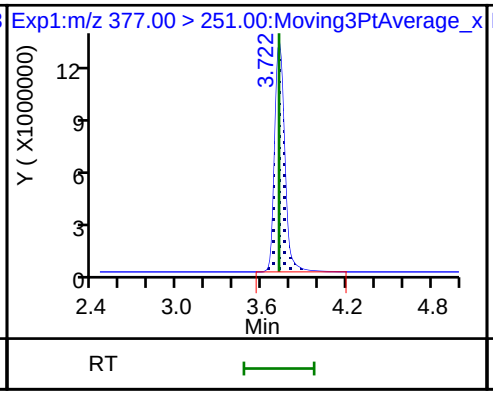

18 Perfluorohexanesulfonic acid (M)



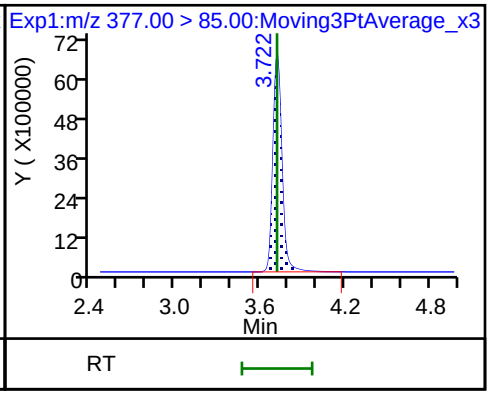

D 17 18O2 PFHxS



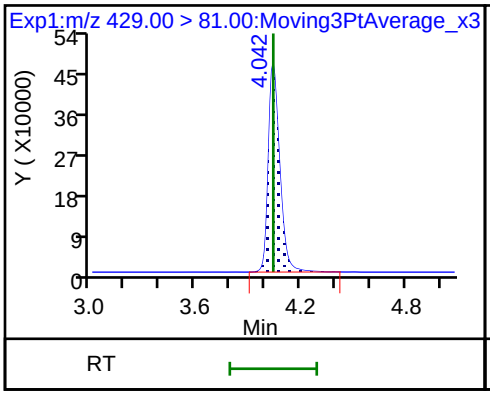

19 DONA



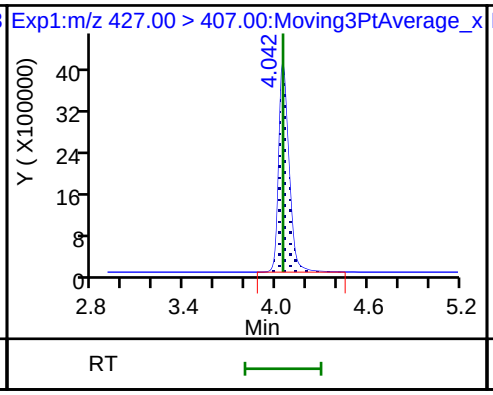

19 DONA



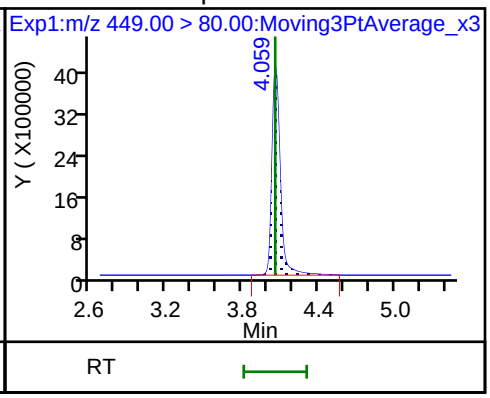
D 20 M2-6:2 FTS



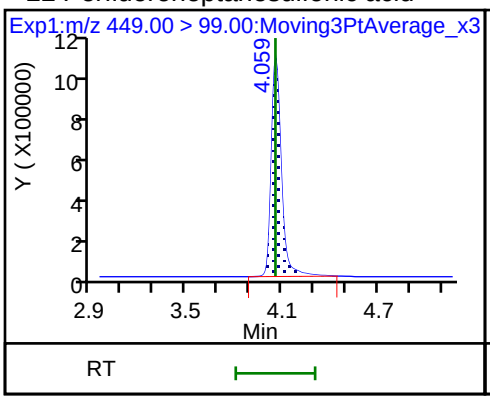

21 6:2 FTS



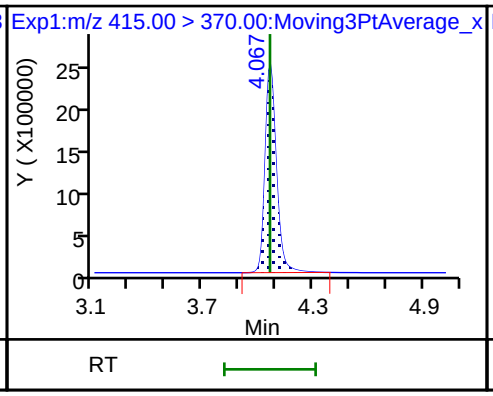

22 Perfluoroheptanesulfonic acid



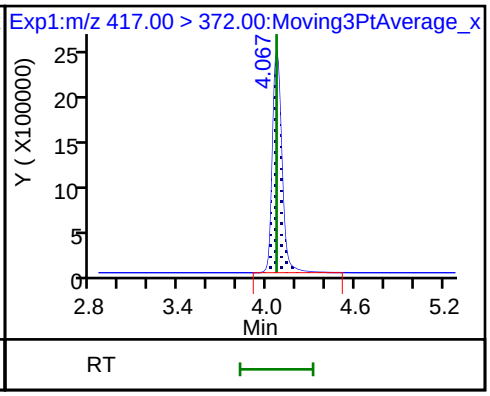

22 Perfluoroheptanesulfonic acid



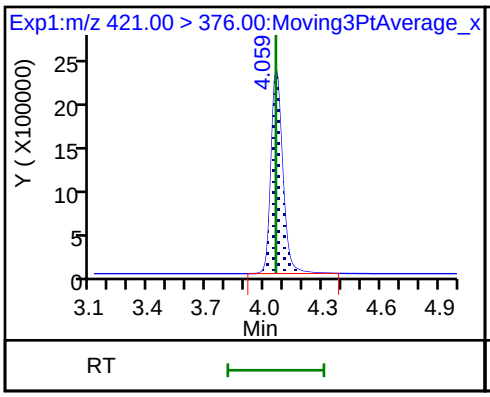

* 25 13C2 PFOA



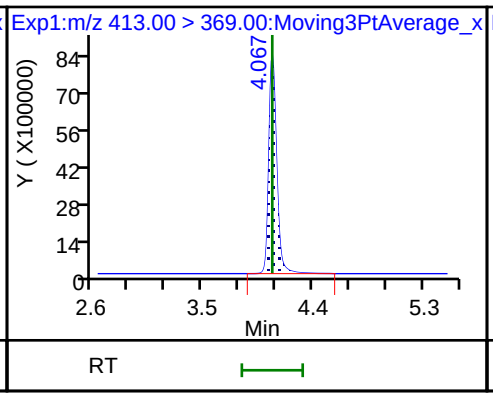

D 24 13C4 PFOA



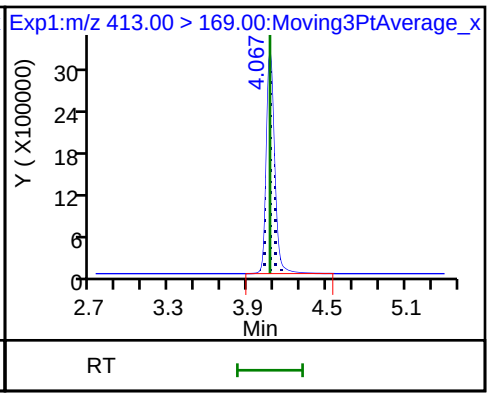

$ 23 13C8 PFOA



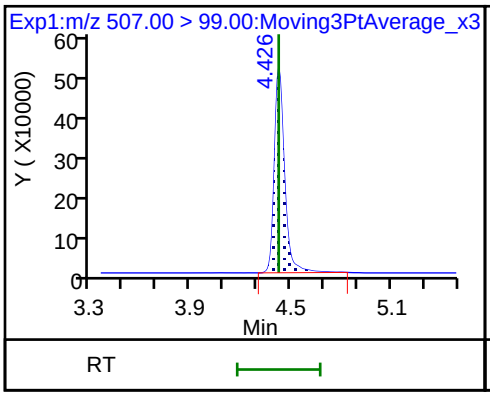

26 Perfluorooctanoic acid



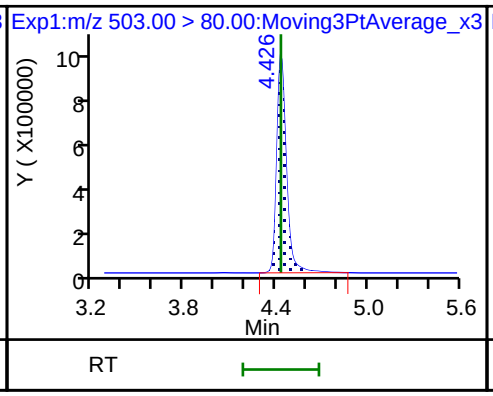

26 Perfluorooctanoic acid



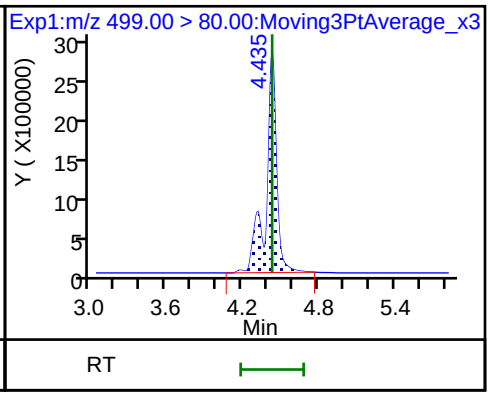

$ 27 13C8 PFOS



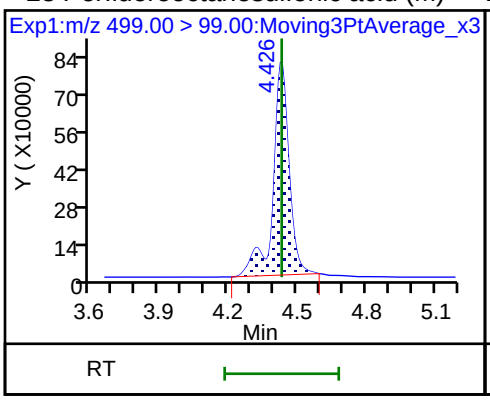

D 29 13C4 PFOS



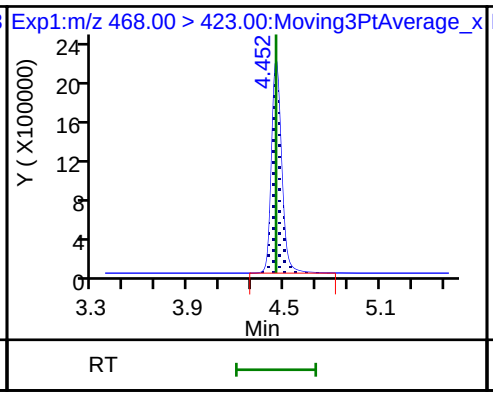

28 Perfluorooctanesulfonic acid



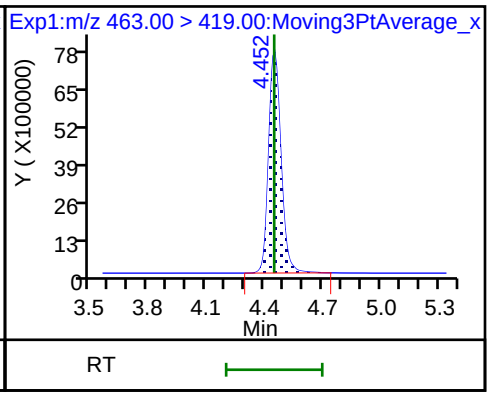
28 Perfluorooctanesulfonic acid (M)



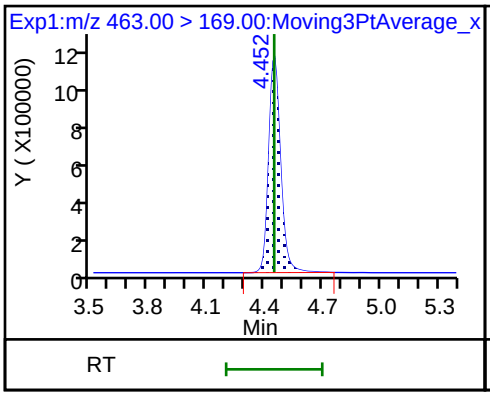

D 31 13C5 PFNA



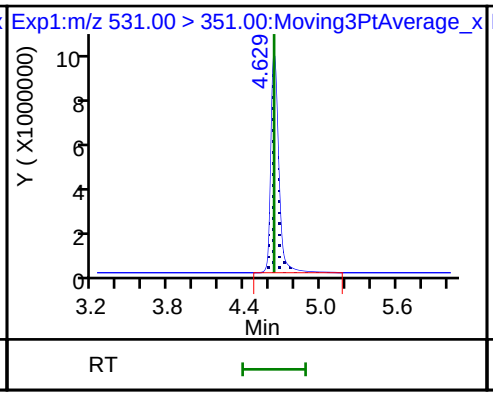

30 Perfluorononanoic acid



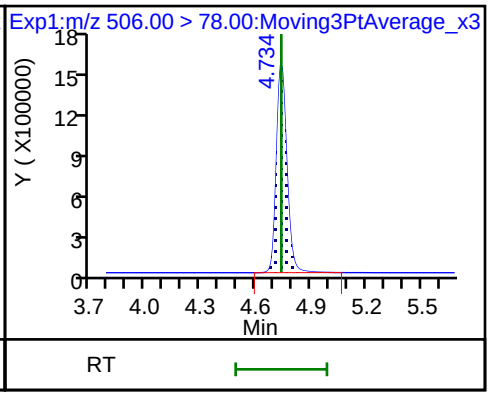

30 Perfluorononanoic acid



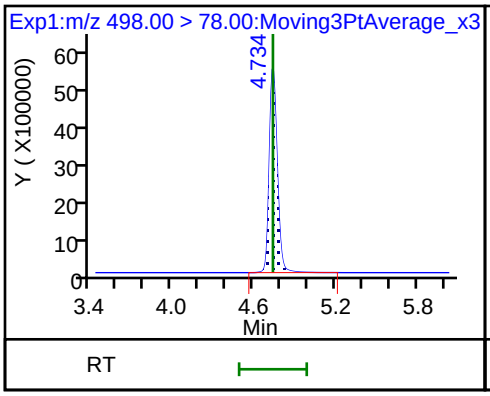

32 9ClFOS



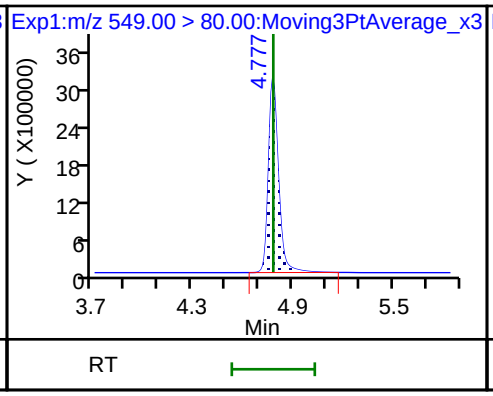

D 34 13C8 FOSA



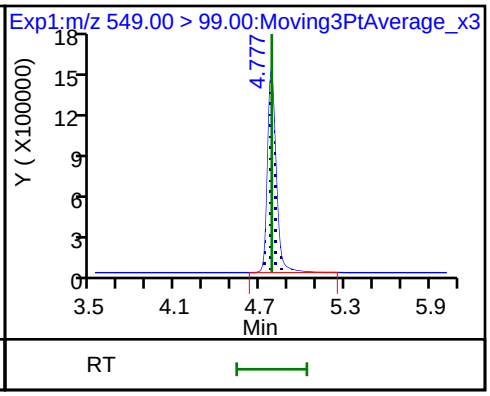

33 Perfluorooctanesulfonamide



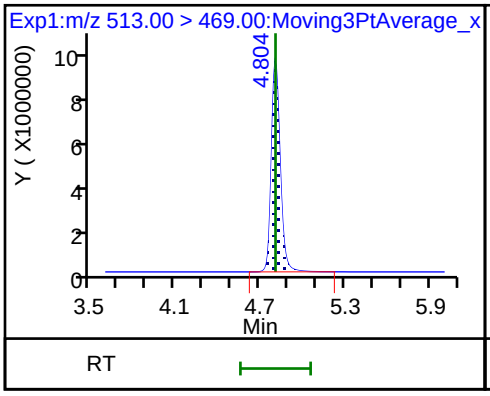

35 Perfluorononanesulfonic acid



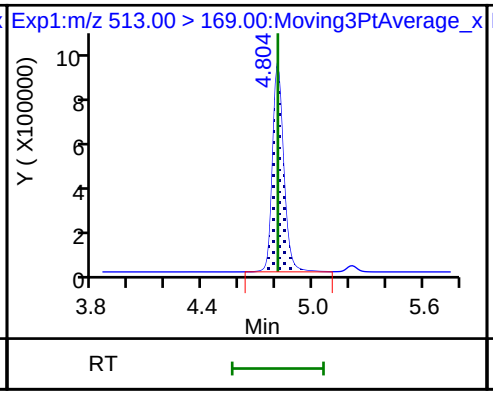

35 Perfluorononanesulfonic acid



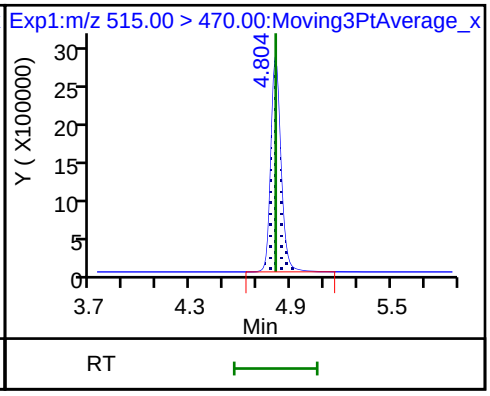

36 Perfluorodecanoic acid



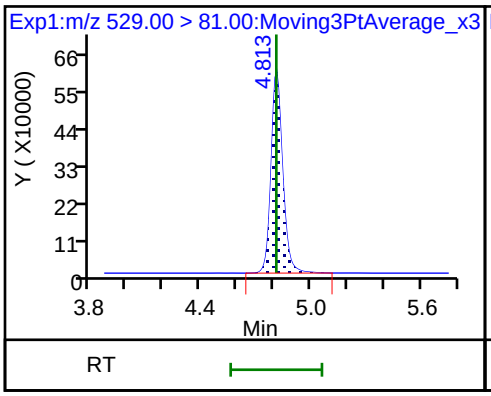

36 Perfluorodecanoic acid



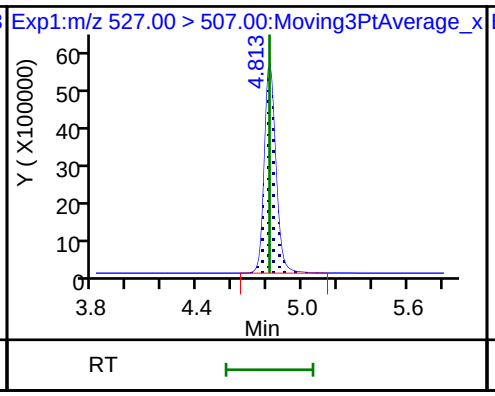

D 37 13C2 PFDA



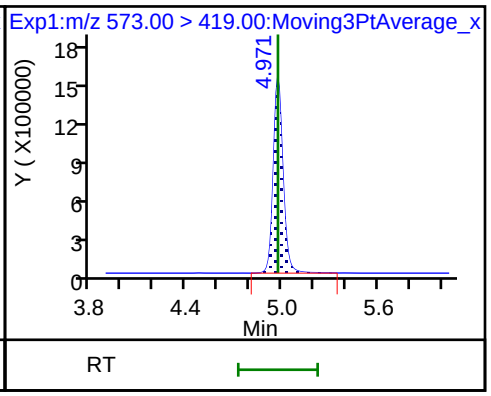
D 38 M2-8:2 FTS



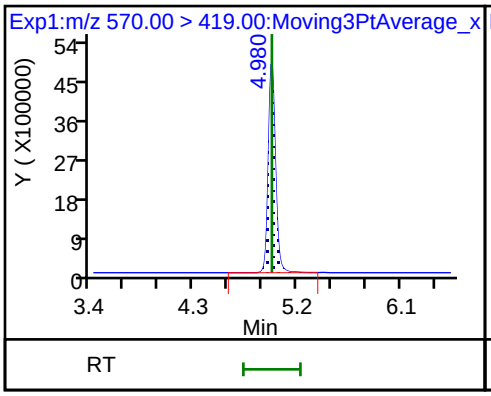

39 8:2 FTS



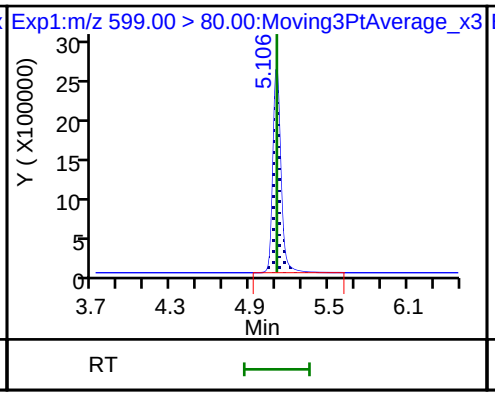

D 40 d3-NMeFOSAA



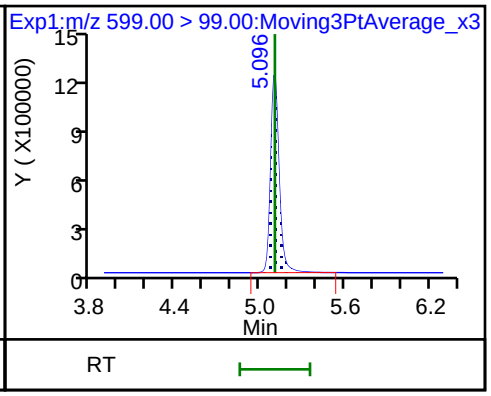

41 NMeFOSAA



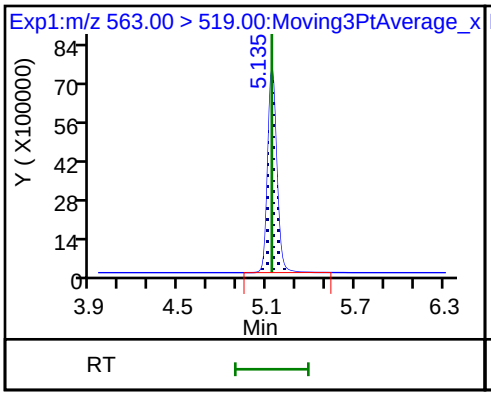

42 Perfluorodecanesulfonic acid



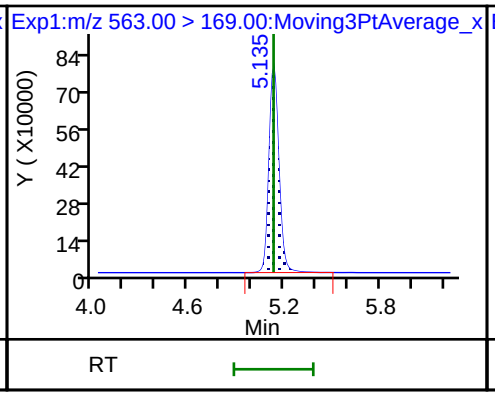

42 Perfluorodecanesulfonic acid



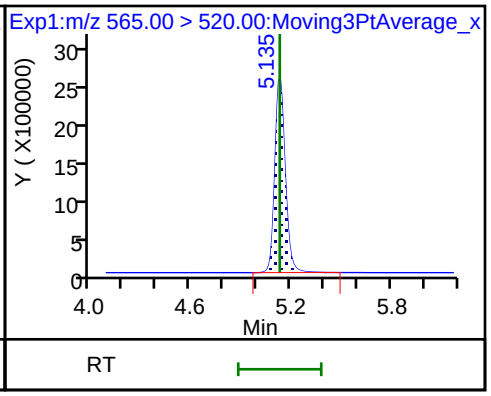

45 Perfluoroundecanoic acid



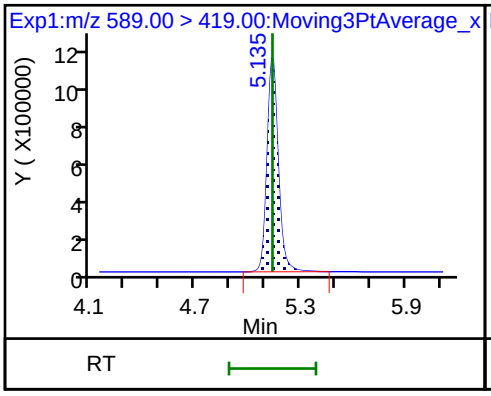

45 Perfluoroundecanoic acid



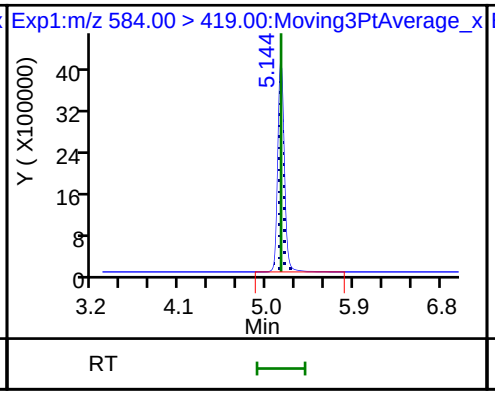

D 44 13C2 PFUnA



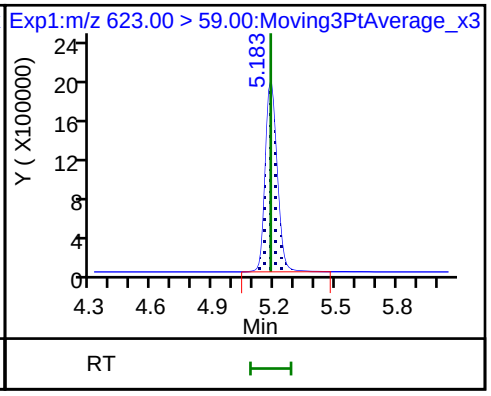

D 46 d5-NEtFOSAA



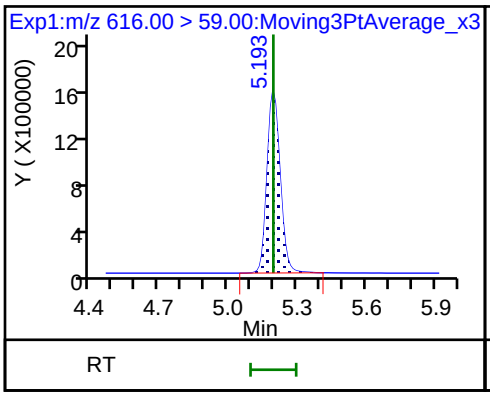

48 NEtFOSA



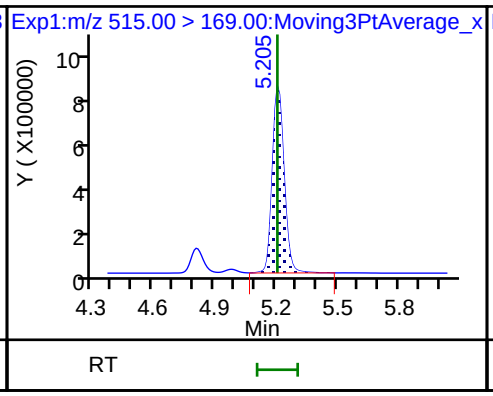

D 43 d7-N-MeFOSE-M



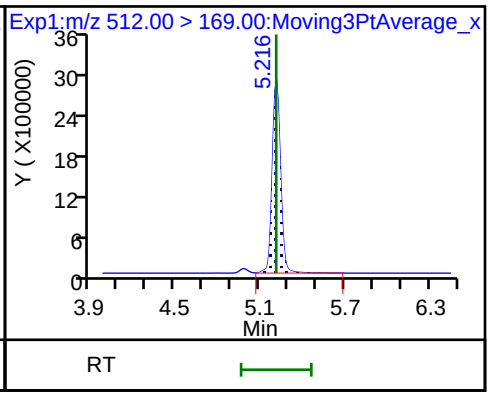
47 N-MeFOSE-M



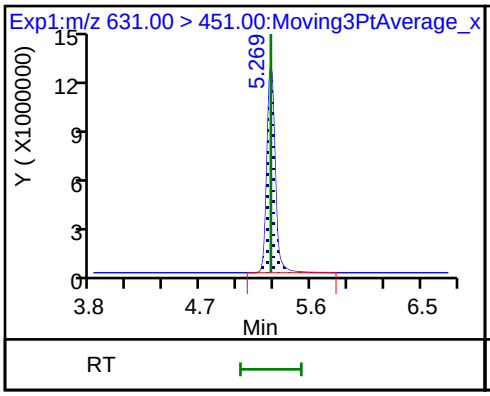

D 49 d-N-MeFOSA-M



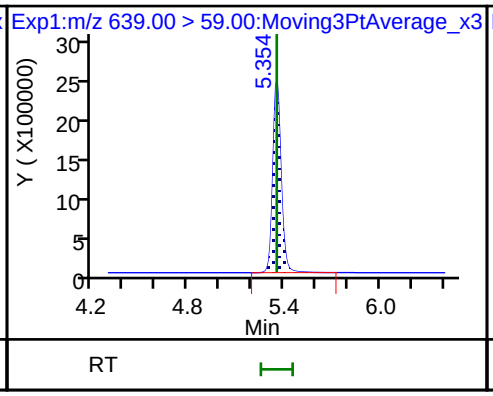

50 NMeFOSA



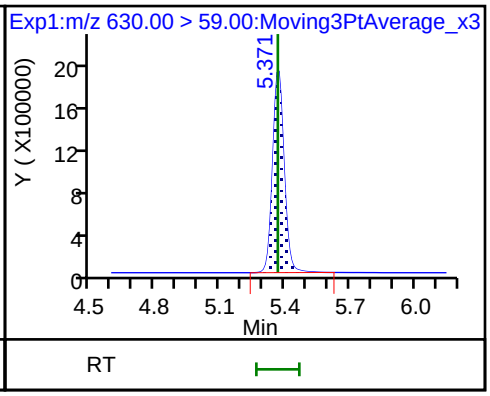

51 11ClFOS



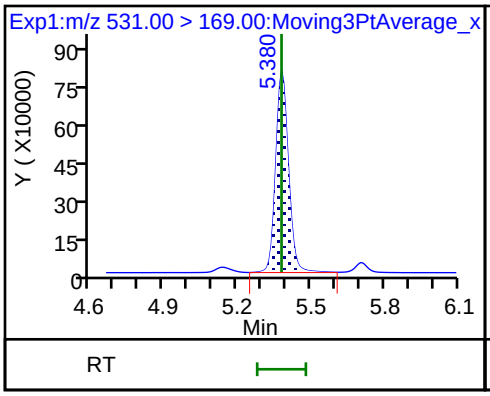

D 52 d9-N-EtFOSE-M



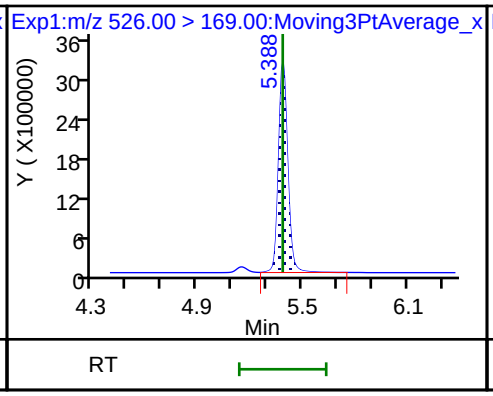

53 N-EtFOSE-M



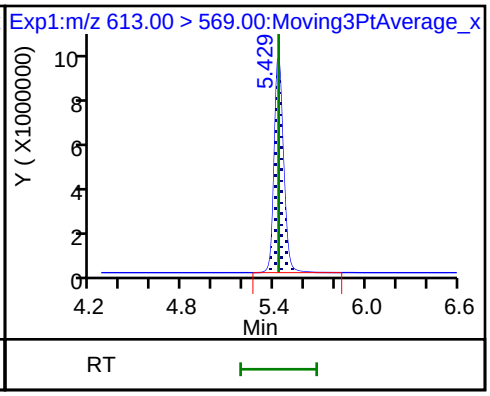

D 54 d-N-EtFOSA-M



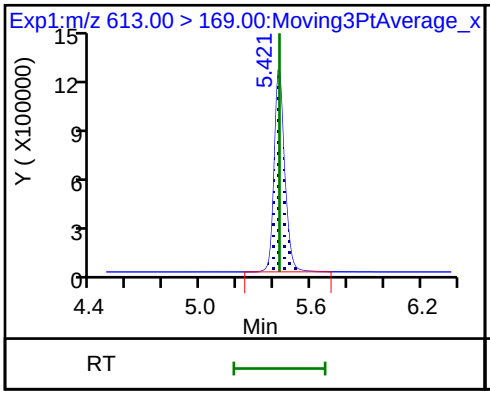

55 N-EtFOSA-M



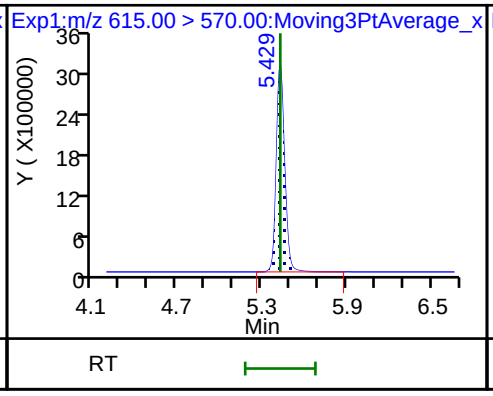

57 Perfluorododecanoic acid



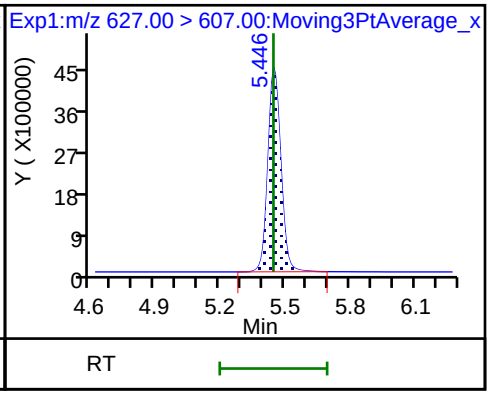

57 Perfluorododecanoic acid



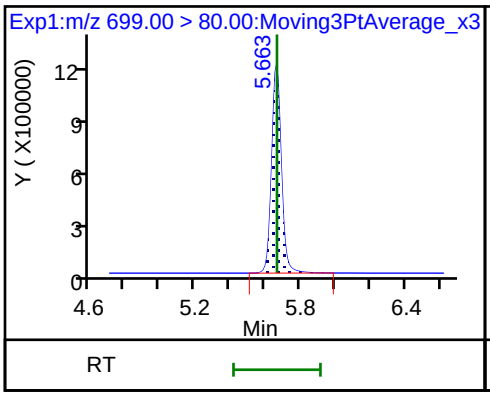

D 56 13C2 PFDoA



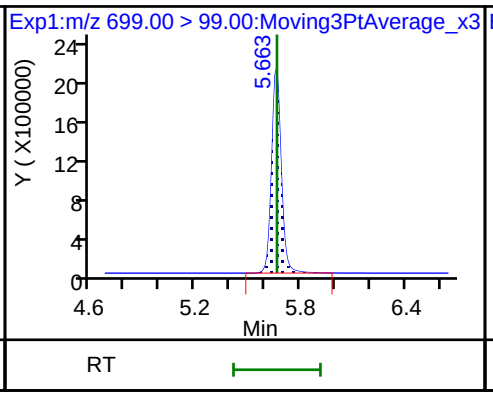

58 10:2 FTS



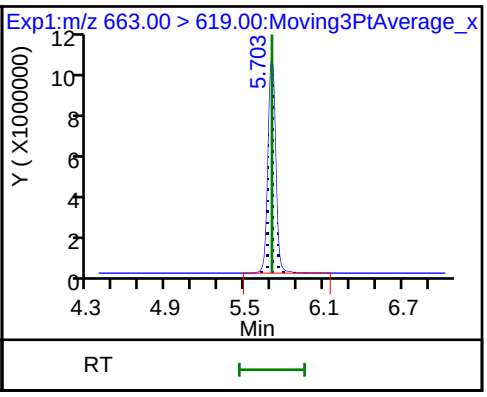
59 PFDoS



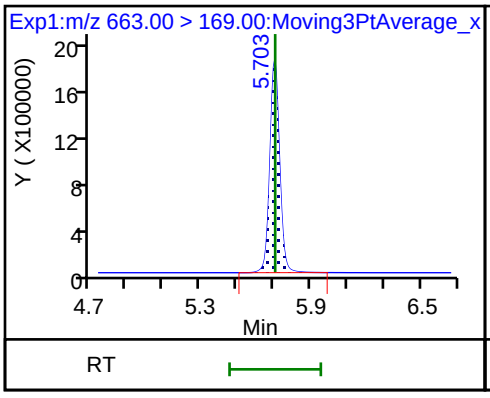

59 PFDoS



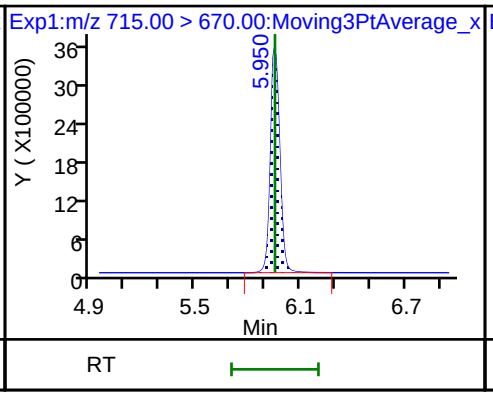

60 Perfluorotridecanoic acid



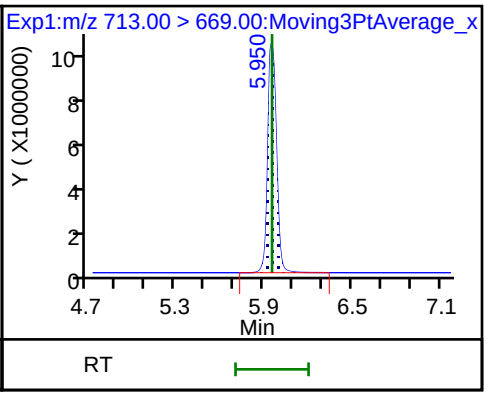

60 Perfluorotridecanoic acid



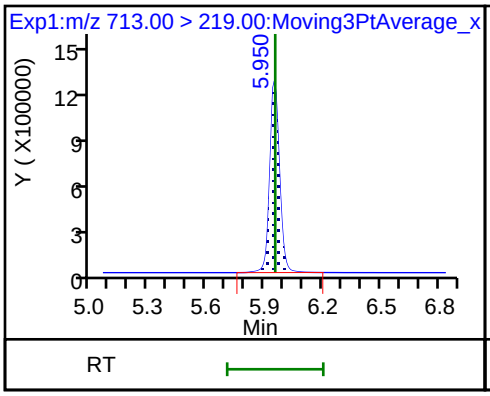

D 61 13C2 PFTeDA



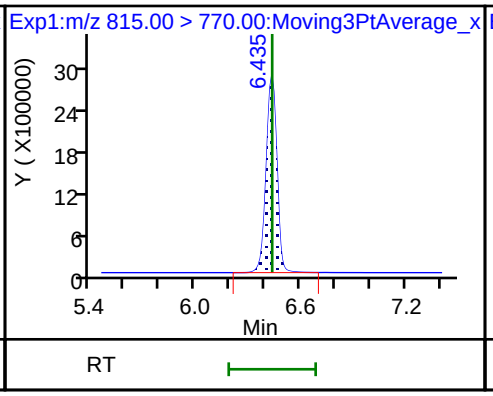

62 Perfluorotetradecanoic acid



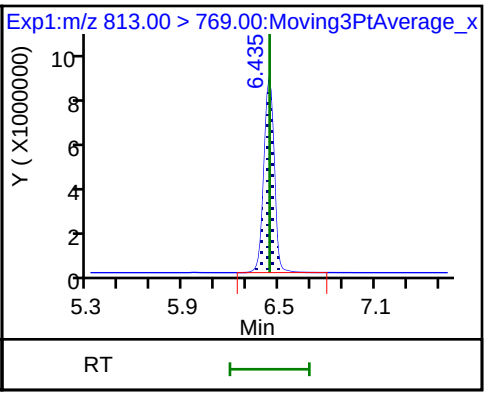

62 Perfluorotetradecanoic acid



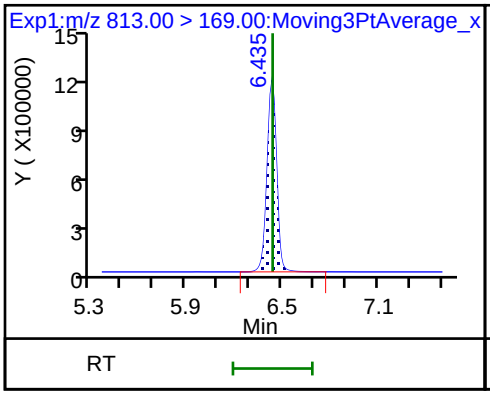

D 64 13C2 PFHxDA



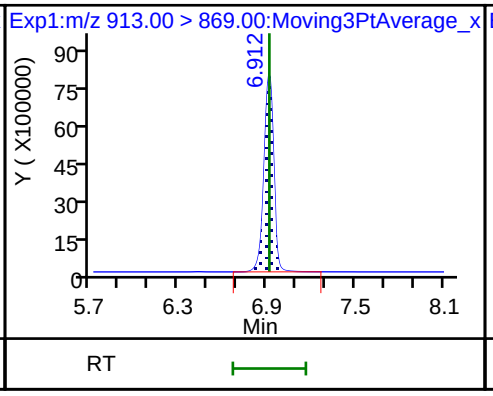

63 Perfluorohexadecanoic acid



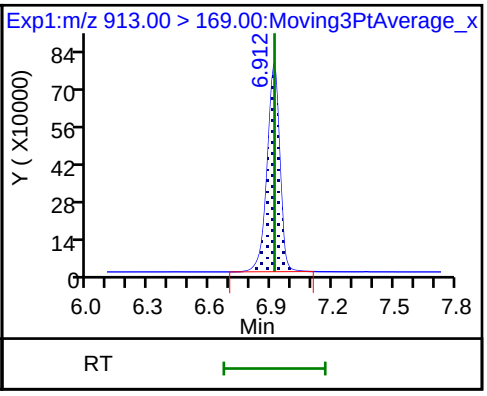

63 Perfluorohexadecanoic acid




65 Perfluorooctadecanoic acid




65 Perfluorooctadecanoic acid



Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

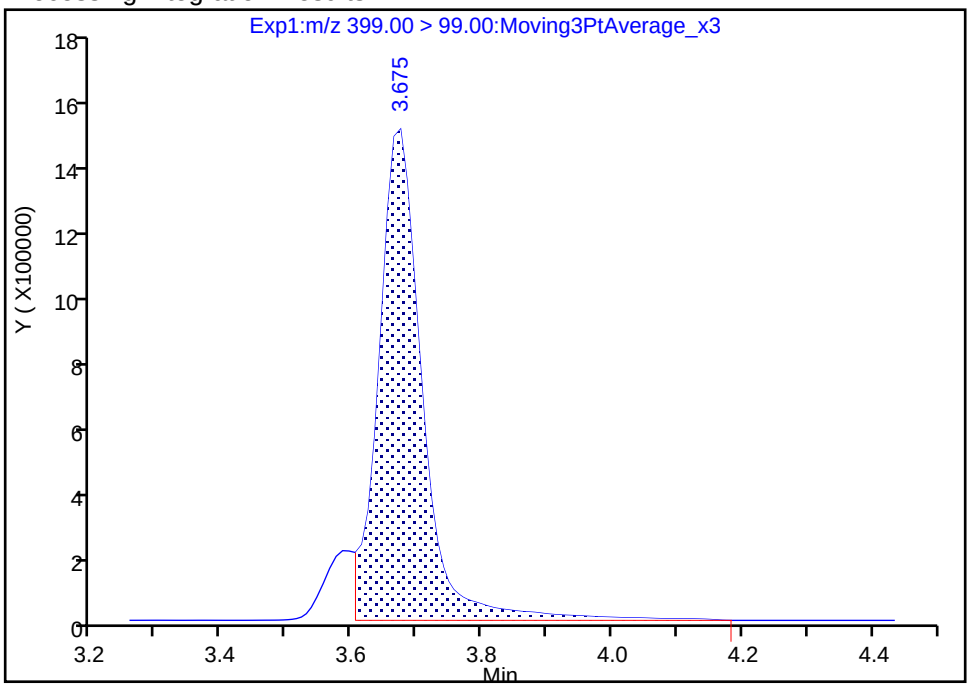
Data File: \\chromfs\Sacramento\ChromData\A13\20200908-102913.b\2020.09.08_A13_PFC_ICALX_010.d
Injection Date: 08-Sep-2020 18:58:15 Instrument ID: A13
Lims ID: IC STD 7
Client ID:
Operator ID: SACINSTLCMS01 ALS Bottle#: 7 Worklist Smp#: 8
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFAS_A13 Limit Group: LC PFC ICAL
Column: Gemini C18 3um 3 x 100mm ( 3.00 mm) Detector EXP1

## 18 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 2

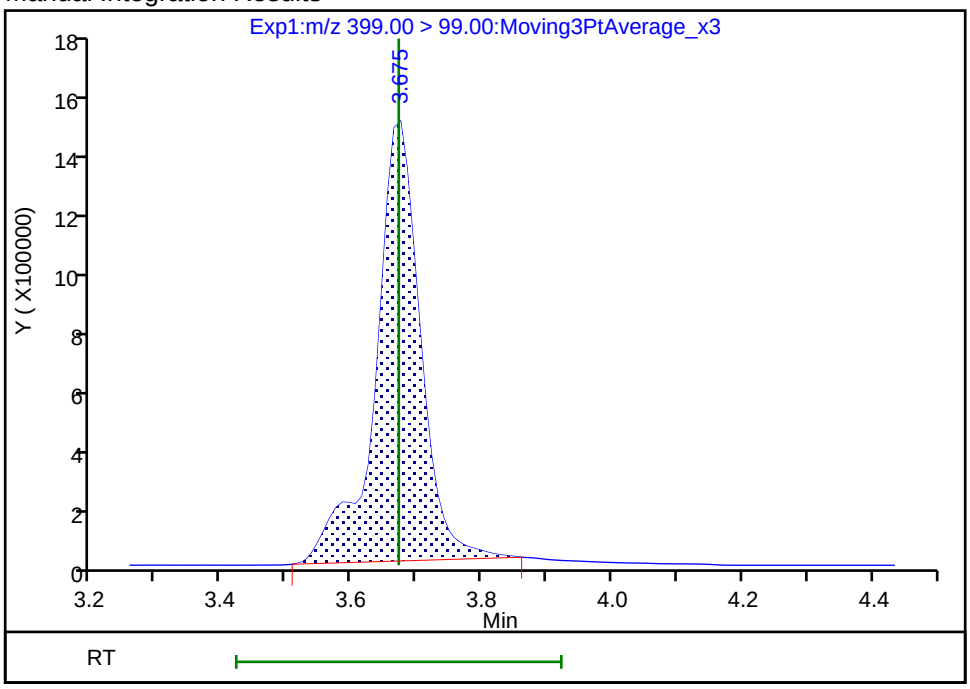
Processing Integration Results

RT: 3.67
Area: 6911789
Amount: 8.494022
Amount Units: ng/ml




Manual Integration Results

RT: 3.67
Area: 7065635
Amount: 8.494022
Amount Units: ng/ml




Reviewer: novoaj, 09-Sep-2020 09:35:02
Audit Action: Manually Integrated Audit Reason: Isomers

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

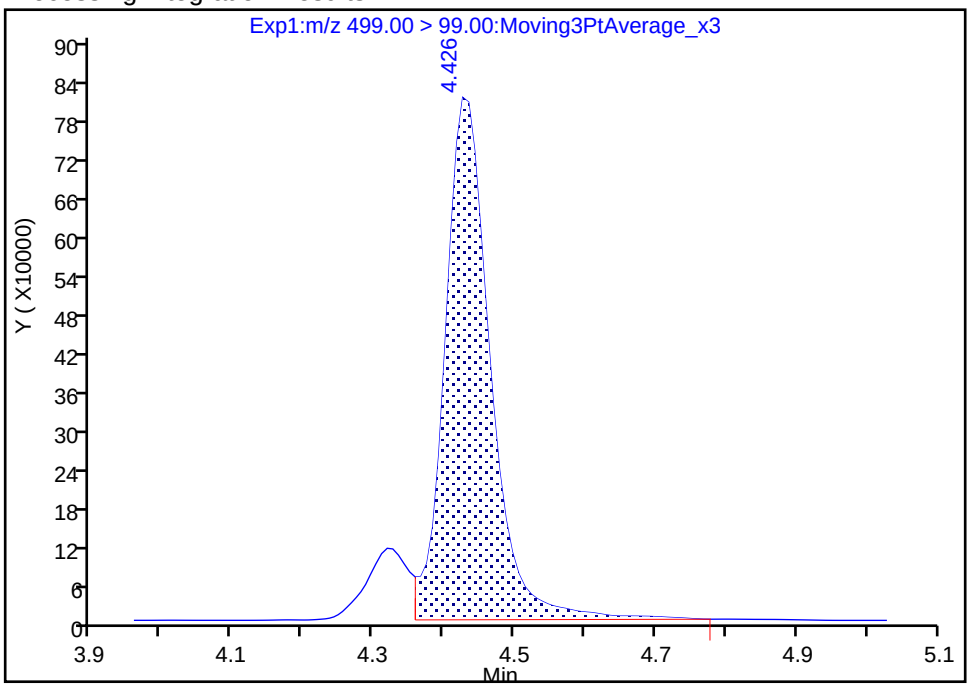
Data File: \\chromfs\Sacramento\ChromData\A13\20200908-102913.b\2020.09.08_A13_PFC_ICALX_010.d
Injection Date: 08-Sep-2020 18:58:15 Instrument ID: A13
Lims ID: IC STD 7
Client ID:
Operator ID: SACINSTLCMS01 ALS Bottle#: 7 Worklist Smp#: 8
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFAS_A13 Limit Group: LC PFC ICAL
Column: Gemini C18 3um 3 x 100mm ( 3.00 mm ID) Detector EXP1

## 28 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 2

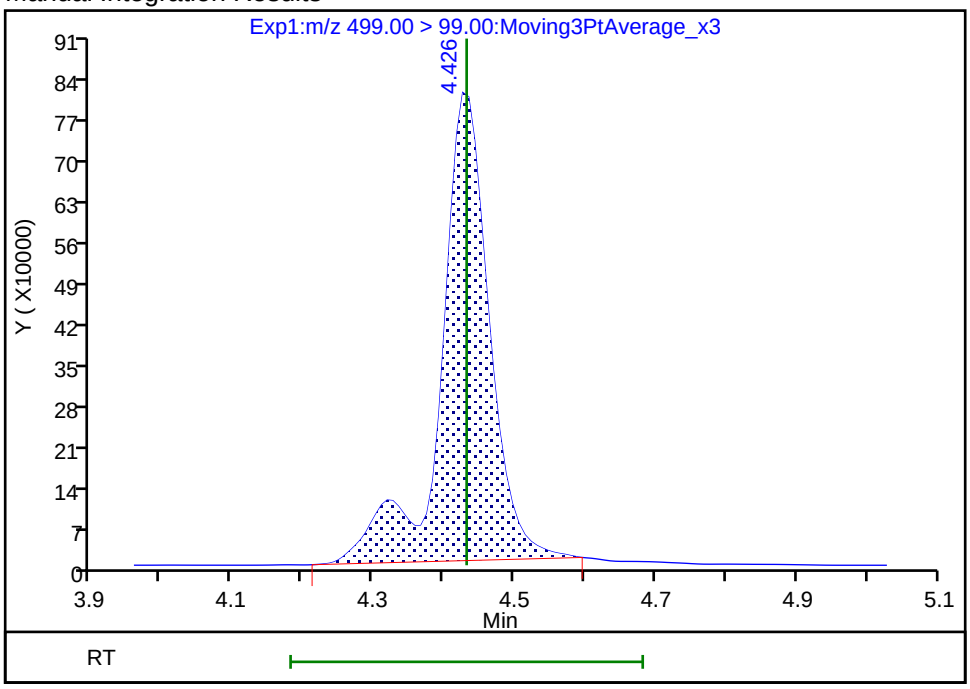
Processing Integration Results

RT: 4.43
Area: 3620654
Amount: 9.108009
Amount Units: ng/ml




Manual Integration Results

RT: 4.43
Area: 3879549
Amount: 9.108009
Amount Units: ng/ml




Reviewer: novoaj, 09-Sep-2020 09:35:12
Audit Action: Manually Integrated Audit Reason: Isomers

FORM VII
LCMS CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Sacramento  Job No.: 460-217659-1

SDG No.:

Lab Sample ID: ICV 320-410486/10  Calibration Date: 09/08/2020 19:17

Instrument ID: A13  Calib Start Date: 09/08/2020 18:01

GC Column: GeminiC18 3x100  ID: 3.00(mm)  Calib End Date: 09/08/2020 18:58

Lab File ID: 2020.09.08_A13_PFC_ICALX_012.d  Conc. Units: ng/mL

| ANALYTE | CURVE TYPE | AVE RRF | RRF | MIN RRF | CALC AMOUNT | SPIKE AMOUNT | %D | MAX %D |
|---|---|---|---|---|---|---|---|---|
| Perfluorobutanoic acid (PFBA) | AveID | 0.7433 | 0.7837 | | 2.64 | 2.50 | 5.4 | 40.0 |
| Perfluoropentanoic acid (PFPeA) | AveID | 1.028 | 0.9789 | | 2.38 | 2.50 | -4.8 | 40.0 |
| Perfluorobutanesulfonic acid (PFBS) | AveID | 0.9776 | 1.006 | | 2.57 | 2.50 | 2.9 | 50.0 |
| 4:2 FTS | AveID | 3.243 | 3.297 | | 2.37 | 2.34 | 1.6 | 50.0 |
| Perfluorohexanoic acid (PFHxA) | AveID | 0.9294 | 1.008 | | 2.71 | 2.50 | 8.5 | 40.0 |
| Perfluoropentanesulfonic acid (PFPeS) | AveID | 0.7896 | 0.8066 | | 2.40 | 2.35 | 2.2 | 50.0 |
| HFPO-DA (GenX) | AveID | 0.2972 | 0.3099 | | 2.61 | 2.50 | 4.3 | 40.0 |
| Perfluoroheptanoic acid (PFHpA) | AveID | 1.011 | 1.011 | | 2.50 | 2.50 | 0.0 | 40.0 |
| Perfluorohexanesulfonic acid (PFHxS) | AveID | 1.112 | 1.092 | | 2.46 | 2.50 | -1.8 | 40.0 |
| 4,8-Dioxa-3H-perfluorononanoic acid (ADONA) | AveID | 5.136 | 5.229 | | 2.55 | 2.50 | 1.8 | 50.0 |
| 6:2 FTS | AveID | 2.407 | 2.370 | | 2.33 | 2.37 | -1.5 | 40.0 |
| Perfluoroheptanesulfonic Acid (PFHpS) | AveID | 1.139 | 1.119 | | 2.34 | 2.38 | -1.7 | 50.0 |
| Perfluorooctanoic acid (PFOA) | AveID | 1.023 | 0.9807 | | 2.40 | 2.50 | -4.1 | 40.0 |
| Perfluorooctanesulfonic acid (PFOS) | AveID | 1.038 | 0.9888 | | 2.38 | 2.50 | -4.8 | 40.0 |
| Perfluorononanoic acid (PFNA) | AveID | 0.9494 | 1.045 | | 2.75 | 2.50 | 10.1 | 40.0 |
| F-53B Major | AveID | 2.501 | 2.596 | | 2.59 | 2.50 | 3.8 | 50.0 |
| Perfluorooctanesulfonamide (FOSA) | AveID | 0.9383 | 0.9695 | | 2.58 | 2.50 | 3.3 | 40.0 |
| Perfluorononanesulfonic acid (PFNS) | AveID | 0.7747 | 0.8108 | | 2.51 | 2.40 | 4.7 | 50.0 |
| 8:2 FTS | AveID | 2.472 | 2.522 | | 2.44 | 2.40 | 2.0 | 40.0 |
| Perfluorodecanoic acid (PFDA) | AveID | 0.8964 | 0.9635 | | 2.69 | 2.50 | 7.5 | 40.0 |
| N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA) | AveID | 0.8055 | 0.8058 | | 2.50 | 2.50 | 0.0 | 40.0 |
| Perfluorodecanesulfonic acid (PFDS) | AveID | 0.6588 | 0.6512 | | 2.38 | 2.41 | -1.2 | 50.0 |
| Perfluoroundecanoic acid (PFUnA) | AveID | 0.6615 | 0.6064 | | 2.29 | 2.50 | -8.3 | 40.0 |
| N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA) | AveID | 0.7741 | 0.7480 | | 2.42 | 2.50 | -3.4 | 40.0 |
| NMeFOSE | AveID | 1.065 | 1.049 | | 2.46 | 2.50 | -1.4 | 40.0 |
| NMeFOSA | AveID | 0.9832 | 0.7770 | | 1.98 | 2.50 | -21.0 | 50.0 |
| F-53B Minor | AveID | 4.317 | 4.512 | | 2.61 | 2.50 | 4.5 | 50.0 |
| NEtFOSE | AveID | 1.035 | 0.9731 | | 2.35 | 2.50 | -6.0 | 40.0 |
| NEtFOSA | AveID | 1.062 | 0.8513 | | 2.00 | 2.50 | -19.8 | 40.0 |
| Perfluorododecanoic acid (PFDoA) | AveID | 0.9122 | 0.9187 | | 2.52 | 2.50 | 0.7 | 40.0 |
| 10:2 FTS | AveID | 1.632 | 1.678 | | 2.48 | 2.41 | 2.8 | 50.0 |
| Perfluorododecanesulfonic acid (PFDoS) | AveID | 0.2572 | 0.2704 | | 2.54 | 2.42 | 5.1 | 50.0 |

FORM VII
LCMS CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Sacramento  Job No.: 460-217659-1

SDG No.:

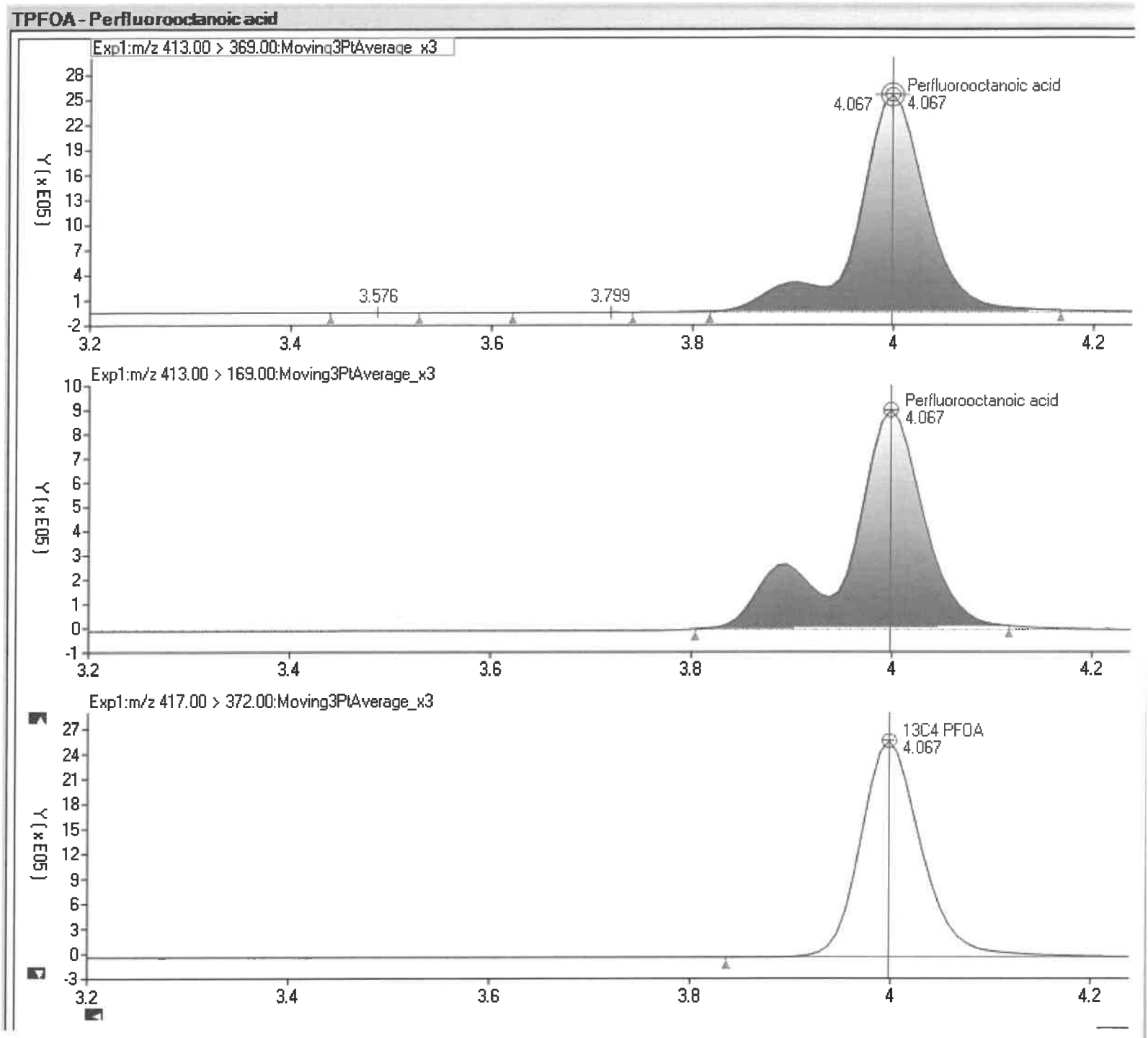
Lab Sample ID: ICV 320-410486/10  Calibration Date: 09/08/2020 19:17

Instrument ID: A13  Calib Start Date: 09/08/2020 18:01

GC Column: GeminiC18 3x100  ID: 3.00(mm)  Calib End Date: 09/08/2020 18:58

Lab File ID: 2020.09.08_A13_PFC_ICALX_012.d  Conc. Units: ng/mL

| ANALYTE | CURVE TYPE | AVE RRF | RRF | MIN RRF | CALC AMOUNT | SPIKE AMOUNT | %D | MAX %D |
|---|---|---|---|---|---|---|---|---|
| Perfluorotridecanoic acid (PFTriA) | AveID | 0.9373 | 0.8839 | | 2.36 | 2.50 | -5.7 | 50.0 |
| Perfluorotetradecanoic acid (PFTeA) | AveID | 0.9843 | 1.031 | | 2.62 | 2.50 | 4.7 | 50.0 |
| Perfluoro-n-hexadecanoic acid (PFHxDA) | L2ID | | 0.8924 | | 2.32 | 2.50 | -7.2 | 50.0 |
| Perfluoro-n-octadecanoic acid (PFODA) | AveID | 0.7306 | 0.7422 | | 2.54 | 2.50 | 1.6 | 50.0 |
| 13C4 PFBA | Ave | 0.8499 | 0.8332 | | 2.45 | 2.50 | -2.0 | 50.0 |
| 13C5 PFPeA | Ave | 0.6625 | 0.6462 | | 2.44 | 2.50 | -2.5 | 50.0 |
| 13C3 PFBS | Ave | 0.8317 | 0.8581 | | 2.40 | 2.33 | 3.2 | 50.0 |
| M2-4:2 FTS | Ave | 0.2037 | 0.2012 | | 2.31 | 2.34 | -1.3 | 50.0 |
| 13C2 PFHxA | Ave | 0.8183 | 0.8139 | | 2.49 | 2.50 | -0.5 | 50.0 |
| 13C3 HFPO-DA | Ave | 0.5866 | 0.5805 | | 2.47 | 2.50 | -1.0 | 50.0 |
| 13C4 PFHpA | Ave | 0.8058 | 0.8261 | | 2.56 | 2.50 | 2.5 | 50.0 |
| 18O2 PFHxS | Ave | 0.5449 | 0.5684 | | 2.47 | 2.37 | 4.3 | 50.0 |
| M2-6:2 FTS | Ave | 0.2349 | 0.2294 | | 2.32 | 2.38 | -2.3 | 50.0 |
| 13C4 PFOA | Ave | 0.9849 | 0.9636 | | 2.45 | 2.50 | -2.2 | 50.0 |
| 13C4 PFOS | Ave | 0.3888 | 0.3888 | | 2.39 | 2.39 | 0.0 | 50.0 |
| 13C5 PFNA | Ave | 0.9099 | 0.9430 | | 2.59 | 2.50 | 3.6 | 50.0 |
| 13C8 FOSA | Ave | 0.5585 | 0.5616 | | 2.51 | 2.50 | 0.6 | 50.0 |
| 13C2 PFDA | Ave | 1.102 | 1.121 | | 2.54 | 2.50 | 1.7 | 50.0 |
| M2-8:2 FTS | Ave | 0.3107 | 0.3062 | | 2.36 | 2.40 | -1.5 | 50.0 |
| d3-NMeFOSAA | Ave | 0.5682 | 0.5495 | | 2.42 | 2.50 | -3.3 | 50.0 |
| 13C2 PFUnA | Ave | 1.078 | 1.150 | | 2.67 | 2.50 | 6.7 | 50.0 |
| d5-NEtFOSAA | Ave | 0.5501 | 0.5660 | | 2.57 | 2.50 | 2.9 | 50.0 |
| d7-N-MeFOSE-M | Ave | 0.1398 | 0.1362 | | 12.2 | 12.5 | -2.6 | 50.0 |
| d-N-MeFOSA-M | Ave | 0.2628 | 0.2722 | | 2.59 | 2.50 | 3.6 | 50.0 |
| d9-N-EtFOSE-M | Ave | 0.1640 | 0.1652 | | 12.6 | 12.5 | 0.7 | 50.0 |
| d-N-EtFOSA-M | Ave | 0.2510 | 0.2503 | | 2.49 | 2.50 | -0.3 | 50.0 |
| 13C2 PFDoA | Ave | 1.160 | 1.169 | | 2.52 | 2.50 | 0.8 | 50.0 |
| 13C2 PFTeDA | Ave | 1.146 | 1.221 | | 2.66 | 2.50 | 6.6 | 50.0 |
| 13C2 PFHxDA | Ave | 1.193 | 1.180 | | 2.47 | 2.50 | -1.0 | 50.0 |
| 13C8 PFOA | Ave | 0.8908 | 0.8710 | | 2.39 | 2.45 | -2.2 | 50.0 |
| 13C8 PFOS | Ave | 0.2076 | 0.2073 | | 2.39 | 2.39 | -0.1 | 50.0 |


TPFOA - Perfluorooctanoic acid
Exp1:m/z 413.00 > 369.00:Moving3PtAverage_x3
Perfluorooctanoic acid
4.067
4.067
3.576
3.799
Y [ x E05 ]
Exp1:m/z 413.00 > 169.00:Moving3PtAverage_x3
Perfluorooctanoic acid
4.067
Y [ x E05 ]
Exp1:m/z 417.00 > 372.00:Moving3PtAverage_x3
13C4 PFOA
4.067
Y [ x E05 ]

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\A13\20200908-102913.b\2020.09.08_A13_PFC_ICALX_012.d
Lims ID: ICV
Client ID:
Sample Type: ICV
Inject. Date: 08-Sep-2020 19:17:01 ALS Bottle#: 9 Worklist Smp#: 10
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Sample Info: ICV (44)
Misc. Info.: Plate: 1 Rack: 2
Operator ID: SACINSTLCMS01 Instrument ID: A13
Sublist:

Method: \\chromfs\Sacramento\ChromData\A13\20200908-102913.b\PFAS_A13.m
Limit Group: LC PFC ICAL
Last Update: 09-Sep-2020 10:25:31 Calib Date: 08-Sep-2020 18:58:15
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\A13\20200908-102913.b\2020.09.08_A13_PFC_ICALX_010.d

Column 1 : Gemini C18 3um 3 x 100mm ( 3.00 mm) Det: EXP1
Process Host: CTX1007

First Level Reviewer: novoaj Date: 09-Sep-2020 09:43:58
Ratio Calibration: Average of Initial Calibration

| Signal | RT | EXP RT | DLT RT | REL RT | Response | Amount ng/ml | Ratio(Limits) | %Rec | S/N | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| D 1 13C4 PFBA | | | | | | | | | | |
| 217.00 > 172.00 | 2.475 | 2.475 | 0.0 | 0.610 | 9374238 | 2.45 | | 98.0 | 29313 | |
| 2 Perfluorobutanoic acid | | | | | | | | | | |
| 212.90 > 169.00 | 2.475 | 2.482 | -0.007 | 1.000 | 7346636 | 2.64 | | | 3071 | |
| D 4 13C5 PFPeA | | | | | | | | | | |
| 267.90 > 223.00 | 2.867 | 2.866 | 0.001 | 0.706 | 7269695 | 2.44 | | 97.5 | 17451 | |
| 5 Perfluoropentanoic acid | | | | | | | | | | |
| 262.90 > 219.00 | 2.867 | 2.878 | -0.011 | 1.000 | 7116538 | 2.38 | | | 1258 | |
| D 14 13C3 PFBS | | | | | | | | | | |
| 301.90 > 80.00 | 2.913 | 2.913 | 0.0 | 0.718 | 8978194 | 2.40 | | 103 | 21091 | |
| 6 Perfluorobutanesulfonic acid | | | | | | | | | | |
| 298.90 > 80.00 | 2.913 | 2.913 | 0.0 | 1.000 | 9710103 | 2.57 | Target=2.18 | | 12076 | |
| 298.90 > 99.00 | 2.913 | 2.913 | 0.0 | 1.000 | 4582049 | | 2.12(1.09-3.26) | | 2798 | |
| 7 4:2 FTS | | | | | | | | | | |
| 327.00 > 307.00 | 3.215 | 3.225 | -0.010 | 1.000 | 6968509 | 2.37 | | | 43172 | |
| D 8 M2-4:2 FTS | | | | | | | | | | |
| 329.00 > 81.00 | 3.215 | 3.225 | -0.010 | 0.792 | 2113865 | 2.31 | | 98.7 | 1403 | |
| D 9 13C2 PFHxA | | | | | | | | | | |
| 315.00 > 270.00 | 3.258 | 3.268 | -0.010 | 0.803 | 9156947 | 2.49 | | 99.5 | 30385 | |
| 10 Perfluorohexanoic acid | | | | | | | | | | |
| 313.00 > 269.00 | 3.258 | 3.268 | -0.010 | 1.000 | 9232974 | 2.71 | Target=11.68 | | 1356 | |
| 313.00 > 119.00 | 3.258 | 3.268 | -0.010 | 1.000 | 763317 | | 12.10(5.84-17.52) | | 269 | |
| 11 Perfluoropentanesulfonic acid | | | | | | | | | | |
| 349.00 > 80.00 | 3.279 | 3.279 | 0.0 | 1.126 | 7303820 | 2.40 | Target=2.56 | | 11891 | |
| 349.00 > 99.00 | 3.279 | 3.279 | 0.0 | 1.126 | 2706498 | | 2.70(1.28-3.84) | | 1079 | |
| 12 HPFO-DA | | | | | | | | | | |
| 285.00 > 169.00 | 3.380 | 3.388 | -0.008 | 1.000 | 2023922 | 2.61 | | | 3326 | |

| Signal | RT | EXP RT | DLT RT | REL RT | Response | Amount ng/ml | Ratio(Limits) | %Rec | S/N | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| D 13 13C3 HFPO-DA | | | | | | | | | | |
| 287.00 > 169.00 | 3.380 | 3.388 | -0.008 | 0.833 | 6530908 | 2.47 | | 99.0 | 5031 | |
| D 15 13C4 PFHpA | | | | | | | | | | |
| 367.00 > 322.00 | 3.665 | 3.665 | 0.0 | 0.903 | 9294602 | 2.56 | | 103 | 5852 | |
| 16 Perfluoroheptanoic acid | | | | | | | | | | |
| 363.00 > 319.00 | 3.665 | 3.675 | -0.010 | 1.000 | 9398836 | 2.50 | Target=3.85 | | 1444 | |
| 363.00 > 169.00 | 3.665 | 3.675 | -0.010 | 1.000 | 2400747 | | 3.91(1.92-5.77) | | 1386 | |
| 18 Perfluorohexanesulfonic acid | | | | | | | | | | M |
| 399.00 > 80.00 | 3.665 | 3.675 | -0.010 | 1.000 | 6986123 | 2.46 | Target=3.25 | | 492 | |
| 399.00 > 99.00 | 3.665 | 3.675 | -0.010 | 1.000 | 2148966 | | 3.25(1.62-4.87) | | 337 | M |
| D 17 18O2 PFHxS | | | | | | | | | | |
| 403.00 > 84.00 | 3.665 | 3.675 | -0.010 | 0.903 | 6049698 | 2.47 | | 104 | 41874 | |
| 19 DONA | | | | | | | | | | |
| 377.00 > 251.00 | 3.714 | 3.722 | -0.008 | 0.839 | 22876394 | 2.55 | Target=2.76 | | 36438 | |
| 377.00 > 85.00 | 3.714 | 3.722 | -0.008 | 0.839 | 8215963 | | 2.78(1.38-4.14) | | 10294 | |
| D 20 M2-6:2 FTS | | | | | | | | | | |
| 429.00 > 81.00 | 4.034 | 4.042 | -0.008 | 0.994 | 2452326 | 2.32 | | 97.7 | 4363 | |
| 21 6:2 FTS | | | | | | | | | | |
| 427.00 > 407.00 | 4.034 | 4.042 | -0.008 | 1.000 | 5799874 | 2.33 | | | 6019 | |
| 22 Perfluoroheptanesulfonic acid | | | | | | | | | | |
| 449.00 > 80.00 | 4.051 | 4.059 | -0.008 | 0.915 | 4660138 | 2.34 | Target=4.29 | | 3451 | |
| 449.00 > 99.00 | 4.051 | 4.059 | -0.008 | 0.915 | 1113012 | | 4.19(2.15-6.44) | | 684 | |
| $ 23 13C8 PFOA | | | | | | | | | | |
| 421.00 > 376.00 | 4.051 | 4.059 | -0.008 | 0.998 | 9593800 | 2.39 | | 97.8 | 5692 | |
| D 24 13C4 PFOA | | | | | | | | | | |
| 417.00 > 372.00 | 4.059 | 4.067 | -0.008 | 1.000 | 10841053 | 2.45 | | 97.8 | 8375 | |
| * 25 13C2 PFOA | | | | | | | | | | |
| 415.00 > 370.00 | 4.059 | 4.067 | -0.008 | | 11250632 | 2.50 | | | 11389 | |
| 26 Perfluorooctanoic acid | | | | | | | | | | |
| 413.00 > 369.00 | 4.059 | 4.067 | -0.008 | 1.000 | 10631850 | 2.40 | Target=2.95 | | 2718 | |
| 413.00 > 169.00 | 4.059 | 4.067 | -0.008 | 1.000 | 3654571 | | 2.91(1.47-4.42) | | 355 | |
| $ 27 13C8 PFOS | | | | | | | | | | |
| 507.00 > 99.00 | 4.425 | 4.426 | -0.001 | 1.090 | 2229395 | 2.39 | | 99.9 | 1931 | |
| D 29 13C4 PFOS | | | | | | | | | | |
| 503.00 > 80.00 | 4.425 | 4.426 | -0.001 | 1.090 | 4182151 | 2.39 | | 100 | 3072 | |
| 28 Perfluorooctanesulfonic acid | | | | | | | | | | M |
| 499.00 > 80.00 | 4.425 | 4.435 | -0.010 | 1.000 | 4325845 | 2.38 | Target=4.28 | | 1036 | |
| 499.00 > 99.00 | 4.425 | 4.435 | -0.010 | 1.000 | 991238 | | 4.36(2.14-6.41) | | 358 | M |
| D 31 13C5 PFNA | | | | | | | | | | |
| 468.00 > 423.00 | 4.442 | 4.452 | -0.010 | 1.094 | 10609665 | 2.59 | | 104 | 17951 | |
| 30 Perfluorononanoic acid | | | | | | | | | | |
| 463.00 > 419.00 | 4.442 | 4.452 | -0.010 | 1.000 | 11087715 | 2.75 | Target=8.00 | | 2494 | |
| 463.00 > 169.00 | 4.442 | 4.452 | -0.010 | 1.000 | 1484677 | | 7.47(4.00-12.01) | | 1742 | |
| 32 9ClFOS | | | | | | | | | | |
| 531.00 > 351.00 | 4.627 | 4.629 | -0.002 | 1.046 | 11354622 | 2.59 | | | 11793 | |
| D 34 13C8 FOSA | | | | | | | | | | |
| 506.00 > 78.00 | 4.732 | 4.734 | -0.002 | 1.166 | 6317907 | 2.51 | | 101 | 6359 | |

| Signal | RT | EXP RT | DLT RT | REL RT | Response | Amount ng/ml | Ratio(Limits) | %Rec | S/N | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| 33 Perfluorooctanesulfonamide | | | | | | | | | | |
| 498.00 > 78.00 | 4.732 | 4.734 | -0.002 | 1.000 | 6125059 | 2.58 | | | 5016 | |
| 35 Perfluorononanesulfonic acid | | | | | | | | | | |
| 549.00 > 80.00 | 4.775 | 4.777 | -0.002 | 1.079 | 3404985 | 2.51 | Target=2.15 | | 8329 | |
| 549.00 > 99.00 | 4.775 | 4.777 | -0.002 | 1.079 | 1639724 | | 2.08(1.08-3.23) | | 3389 | |
| 36 Perfluorodecanoic acid | | | | | | | | | | |
| 513.00 > 469.00 | 4.802 | 4.804 | -0.002 | 1.000 | 12147311 | 2.69 | Target=10.44 | | 4248 | |
| 513.00 > 169.00 | 4.802 | 4.804 | -0.002 | 1.000 | 1159003 | | 10.48(5.22-15.65) | | 496 | |
| D 37 13C2 PFDA | | | | | | | | | | |
| 515.00 > 470.00 | 4.802 | 4.804 | -0.002 | 1.183 | 12607006 | 2.54 | | 102 | 45037 | |
| D 38 M2-8:2 FTS | | | | | | | | | | |
| 529.00 > 81.00 | 4.802 | 4.813 | -0.011 | 1.183 | 3299874 | 2.36 | | 98.5 | 7368 | |
| 39 8:2 FTS | | | | | | | | | | |
| 527.00 > 507.00 | 4.802 | 4.813 | -0.011 | 1.000 | 8322904 | 2.44 | | | 11696 | |
| D 40 d3-NMeFOSAA | | | | | | | | | | |
| 573.00 > 419.00 | 4.968 | 4.971 | -0.003 | 1.224 | 6181841 | 2.42 | | 96.7 | 2991 | |
| 41 NMeFOSAA | | | | | | | | | | |
| 570.00 > 419.00 | 4.968 | 4.980 | -0.012 | 1.000 | 4981184 | 2.50 | | | 875 | |
| 42 Perfluorodecanesulfonic acid | | | | | | | | | | |
| 599.00 > 80.00 | 5.094 | 5.106 | -0.012 | 1.151 | 2746100 | 2.38 | Target=2.36 | | 2091 | |
| 599.00 > 99.00 | 5.094 | 5.106 | -0.012 | 1.151 | 1178138 | | 2.33(1.18-3.54) | | 1865 | |
| 45 Perfluoroundecanoic acid | | | | | | | | | | |
| 563.00 > 519.00 | 5.132 | 5.135 | -0.003 | 1.000 | 7847578 | 2.29 | Target=8.67 | | 2665 | |
| 563.00 > 169.00 | 5.132 | 5.135 | -0.003 | 1.000 | 973607 | | 8.06(4.34-13.01) | | 1585 | |
| D 44 13C2 PFUnA | | | | | | | | | | |
| 565.00 > 520.00 | 5.132 | 5.135 | -0.003 | 1.264 | 12941659 | 2.67 | | 107 | 15410 | |
| D 46 d5-NEtFOSAA | | | | | | | | | | |
| 589.00 > 419.00 | 5.132 | 5.135 | -0.003 | 1.264 | 6367370 | 2.57 | | 103 | 4356 | |
| 48 NEtFOSA | | | | | | | | | | |
| 584.00 > 419.00 | 5.142 | 5.144 | -0.002 | 1.002 | 4762734 | 2.42 | | | 1484 | |
| D 43 d7-N-MeFOSE-M | | | | | | | | | | |
| 623.00 > 59.00 | 5.180 | 5.183 | -0.003 | 1.276 | 7660584 | 12.2 | | 97.4 | 2495 | |
| 47 N-MeFOSE-M | | | | | | | | | | |
| 616.00 > 59.00 | 5.190 | 5.193 | -0.003 | 1.002 | 1607879 | 2.46 | | | 1491 | |
| D 49 d-N-MeFOSA-M | | | | | | | | | | |
| 515.00 > 169.00 | 5.200 | 5.205 | -0.005 | 1.281 | 3061963 | 2.59 | | 104 | 41.2 | |
| 50 NMeFOSA | | | | | | | | | | |
| 512.00 > 169.00 | 5.212 | 5.216 | -0.004 | 1.002 | 2379204 | 1.98 | | | 201 | |
| 51 11ClFOS | | | | | | | | | | |
| 631.00 > 451.00 | 5.265 | 5.269 | -0.004 | 1.190 | 19738003 | 2.61 | | | 5172 | |
| D 52 d9-N-EtFOSE-M | | | | | | | | | | |
| 639.00 > 59.00 | 5.350 | 5.354 | -0.004 | 1.318 | 9291378 | 12.6 | | 101 | 3532 | |
| 53 N-EtFOSE-M | | | | | | | | | | |
| 630.00 > 59.00 | 5.367 | 5.371 | -0.004 | 1.003 | 1808302 | 2.35 | | | 1536 | |
| D 54 d-N-EtFOSA-M | | | | | | | | | | |
| 531.00 > 169.00 | 5.376 | 5.380 | -0.004 | 1.325 | 2815518 | 2.49 | | 99.7 | 179 | |

| Signal | RT | EXP RT | DLT RT | REL RT | Response | Amount ng/ml | Ratio(Limits) | %Rec | S/N | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| 55 N-EtFOSA-M | | | | | | | | | | |
| 526.00 > 169.00 | 5.384 | 5.388 | -0.004 | 1.002 | 2396746 | 2.00 | | | 185 | |
| 57 Perfluorododecanoic acid | | | | | | | | | | |
| 613.00 > 569.00 | 5.426 | 5.429 | -0.003 | 1.000 | 12087521 | 2.52 | Target=9.05 | | 5041 | |
| 613.00 > 169.00 | 5.426 | 5.429 | -0.003 | 1.000 | 1349359 | | 8.96(4.52-13.57) | | 2635 | |
| D 56 13C2 PFDoA | | | | | | | | | | |
| 615.00 > 570.00 | 5.426 | 5.429 | -0.003 | 1.337 | 13157507 | 2.52 | | 101 | 4567 | |
| 58 10:2 FTS | | | | | | | | | | |
| 627.00 > 607.00 | 5.442 | 5.446 | -0.004 | 1.133 | 5572224 | 2.48 | | | 3633 | |
| 59 PFDoS | | | | | | | | | | |
| 699.00 > 80.00 | 5.657 | 5.663 | -0.006 | 1.279 | 1144991 | 2.54 | Target=0.57 | | 2162 | |
| 699.00 > 99.00 | 5.657 | 5.663 | -0.006 | 1.279 | 2014285 | | 0.57(0.29-0.86) | | 3405 | |
| 60 Perfluorotridecanoic acid | | | | | | | | | | |
| 663.00 > 619.00 | 5.698 | 5.703 | -0.005 | 1.050 | 11630013 | 2.36 | Target=7.06 | | 8034 | |
| 663.00 > 169.00 | 5.698 | 5.703 | -0.005 | 1.050 | 1636752 | | 7.11(3.53-10.59) | | 1987 | |
| D 61 13C2 PFTeDA | | | | | | | | | | |
| 715.00 > 670.00 | 5.944 | 5.950 | -0.006 | 1.464 | 13738968 | 2.66 | | 107 | 30151 | |
| 62 Perfluorotetradecanoic acid | | | | | | | | | | |
| 713.00 > 669.00 | 5.944 | 5.950 | -0.006 | 1.000 | 14165086 | 2.62 | Target=11.23 | | 7649 | |
| 713.00 > 219.00 | 5.944 | 5.950 | -0.006 | 1.000 | 1233160 | | 11.49(5.62-16.85) | | 288 | |
| D 64 13C2 PFHxDA | | | | | | | | | | |
| 815.00 > 770.00 | 6.426 | 6.435 | -0.009 | 1.583 | 13280912 | 2.47 | | 99.0 | 9667 | |
| 63 Perfluorohexadecanoic acid | | | | | | | | | | |
| 813.00 > 769.00 | 6.437 | 6.435 | 0.002 | 1.002 | 11852402 | 2.32 | Target=9.45 | | 2183 | |
| 813.00 > 169.00 | 6.437 | 6.435 | 0.002 | 1.002 | 1337717 | | 8.86(4.72-14.17) | | 3126 | |
| 65 Perfluorooctadecanoic acid | | | | | | | | | | |
| 913.00 > 869.00 | 6.905 | 6.912 | -0.007 | 1.075 | 9857590 | 2.54 | Target=11.13 | | 2557 | |
| 913.00 > 169.00 | 6.905 | 6.912 | -0.007 | 1.075 | 862082 | | 11.43(5.56-16.69) | | 1780 | |

## QC Flag Legend

Review Flags

M - Manually Integrated

## Reagents:

LCPFCIC_FULL_00044 Amount Added: 1.00 Units: mL

Report Date: 09-Sep-2020 10:25:35 Chrom Revision: 2.3 20-Aug-2020 13:57:12

Eurofins TestAmerica, Sacramento

Data File: \\chromfs\Sacramento\ChromData\A13\20200908-102913.b\2020.09.08_A13_PFC_ICALX_012.d

Injection Date: 08-Sep-2020 19:17:01 Instrument ID: A13

Lims ID: ICV

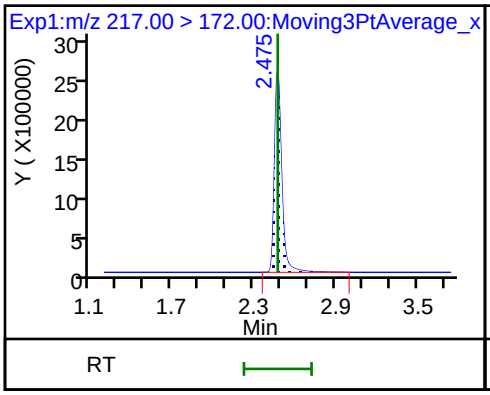
Client ID:

Operator ID: SACINSTLCMS01 ALS Bottle#: 9 Worklist Smp#: 10

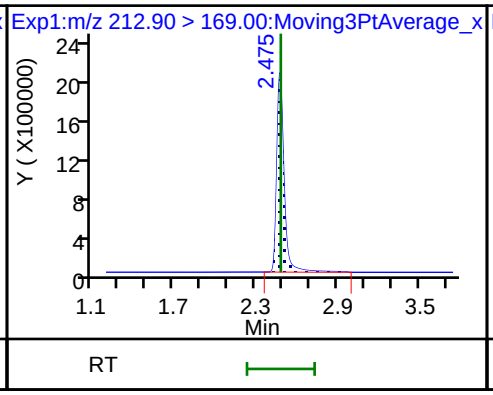
Injection Vol: 20.0 ul Dil. Factor: 1.0000

Method: PFAS_A13 Limit Group: LC PFC ICAL

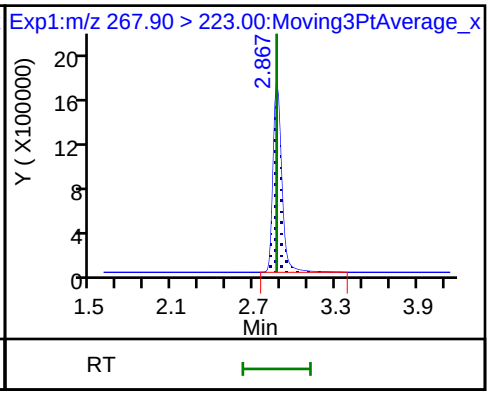
D 1 13C4 PFBA



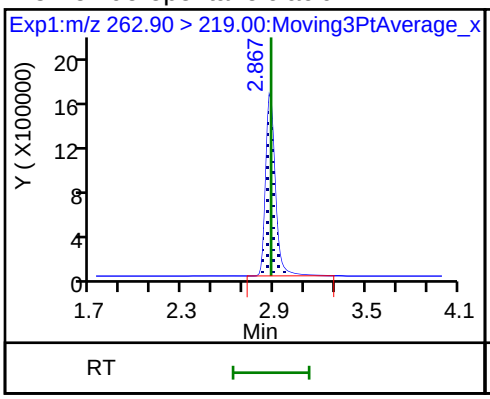

2 Perfluorobutanoic acid



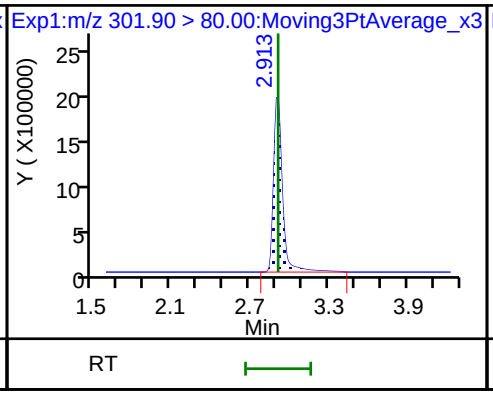

D 4 13C5 PFPeA



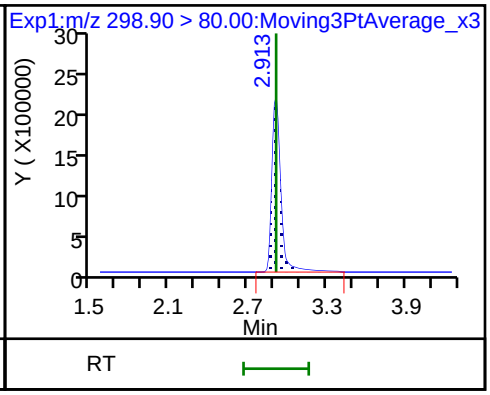

5 Perfluoropentanoic acid



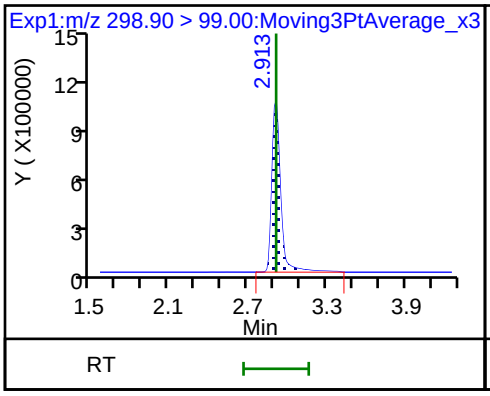

D 14 13C3 PFBS



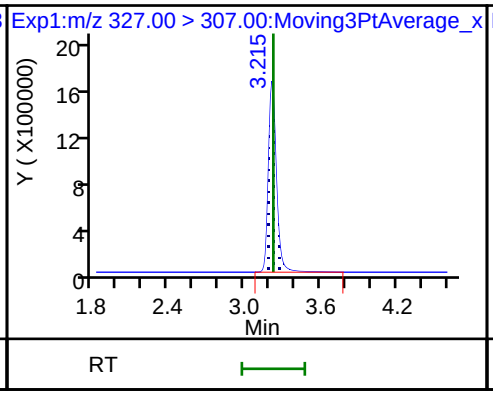

6 Perfluorobutanesulfonic acid



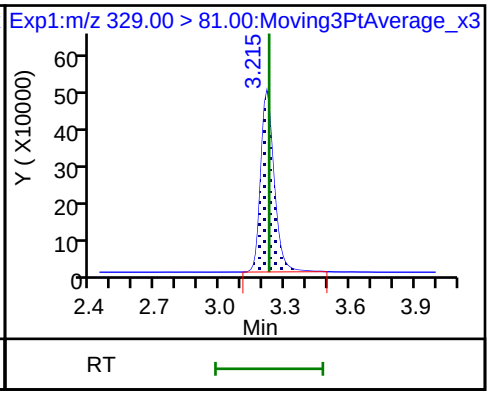

6 Perfluorobutanesulfonic acid



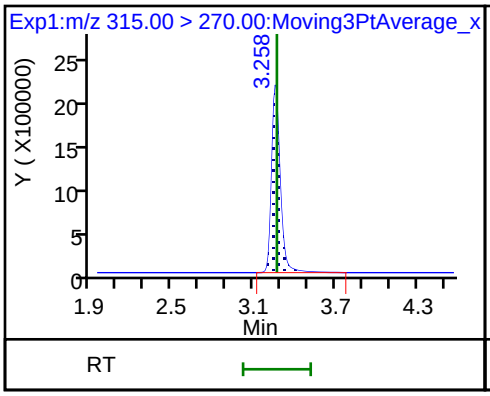

7 4:2 FTS



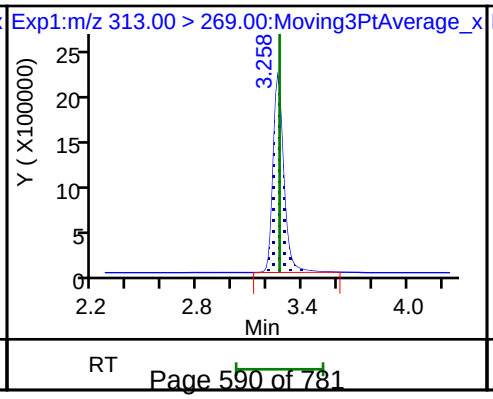

D 8 M2-4:2 FTS



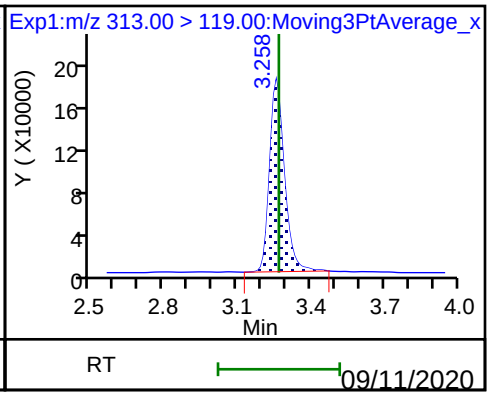

D 9 13C2 PFHxA



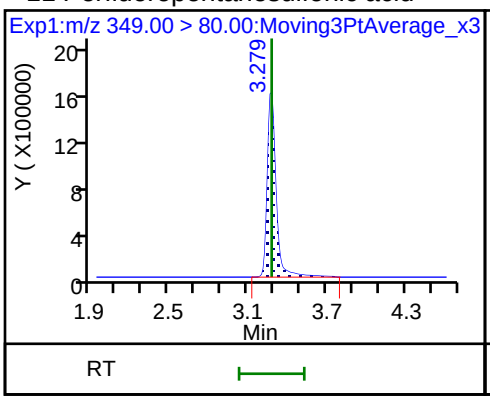

10 Perfluorohexanoic acid



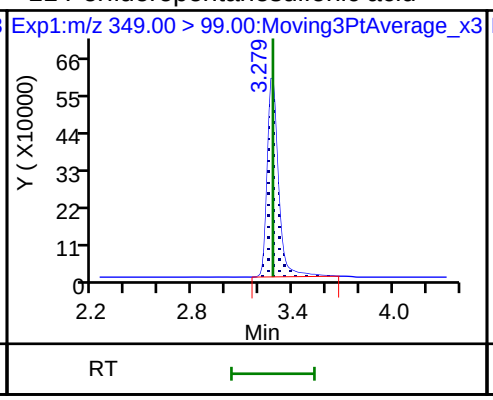

10 Perfluorohexanoic acid



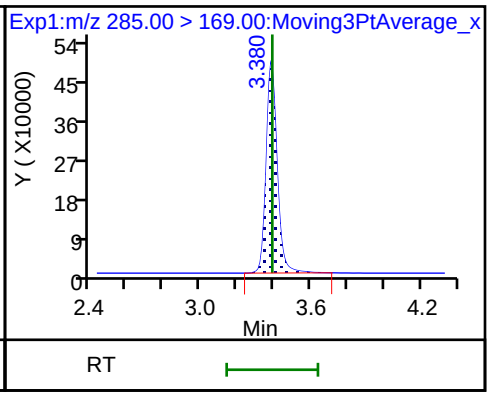
11 Perfluoropentanesulfonic acid



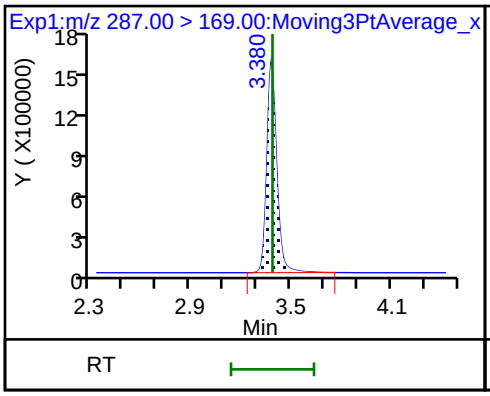

11 Perfluoropentanesulfonic acid



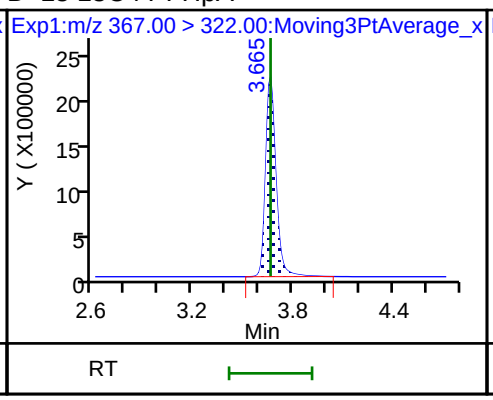

12 HPFO-DA



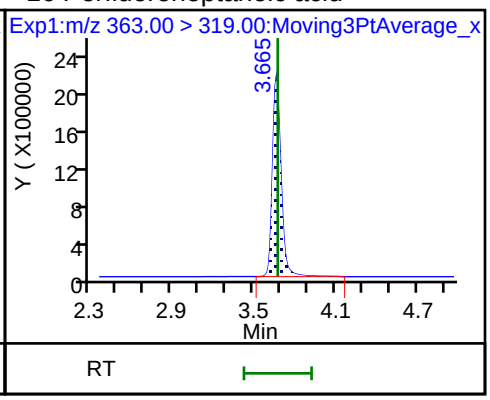

D 13 13C3 HFPO-DA



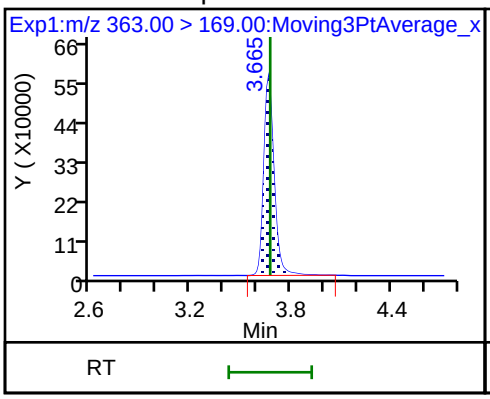

D 15 13C4 PFHpA



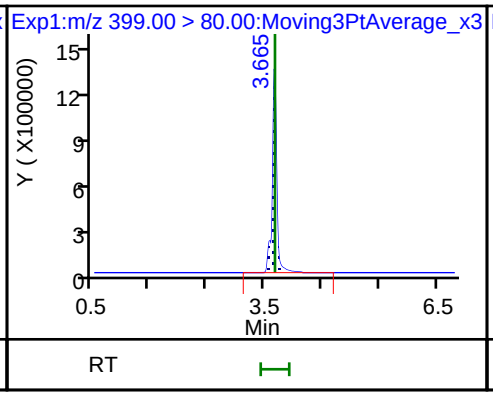

16 Perfluoroheptanoic acid



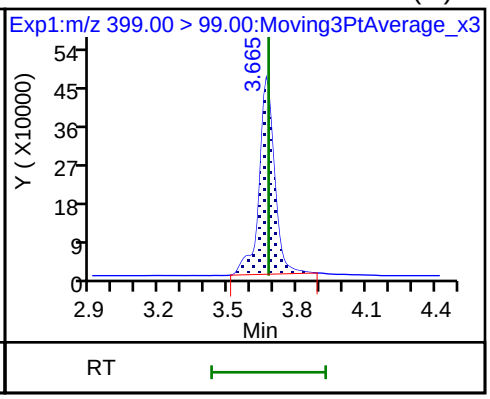

16 Perfluoroheptanoic acid



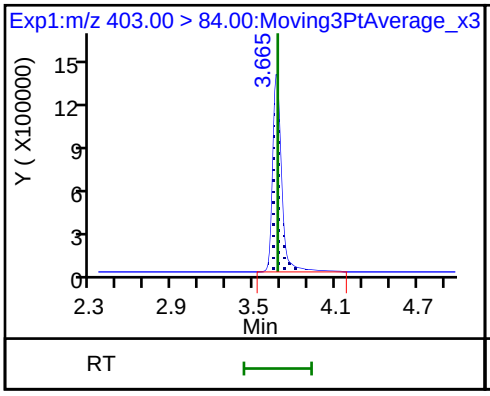

18 Perfluorohexanesulfonic acid



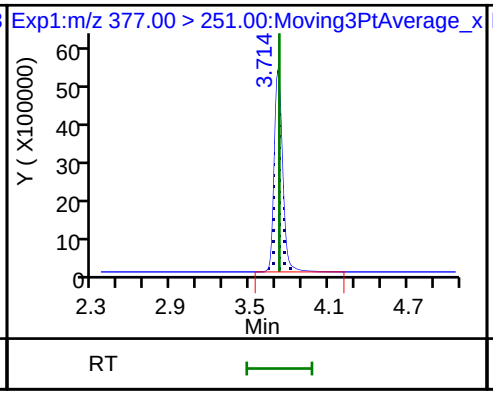

18 Perfluorohexanesulfonic acid (M)



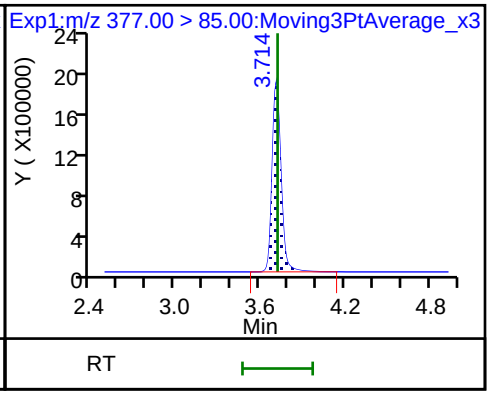

D 17 18O2 PFHxS



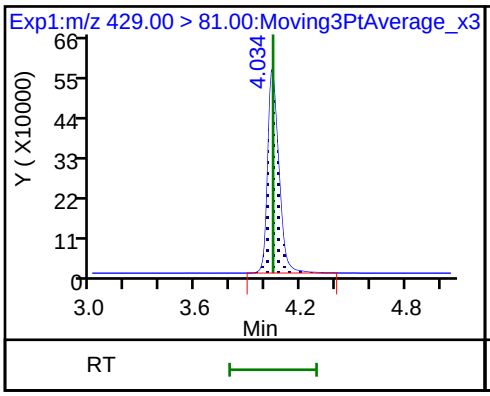

19 DONA



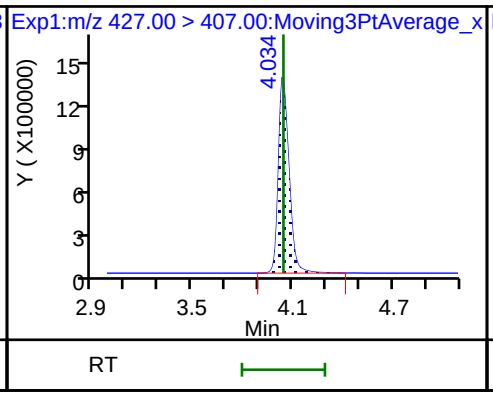

19 DONA



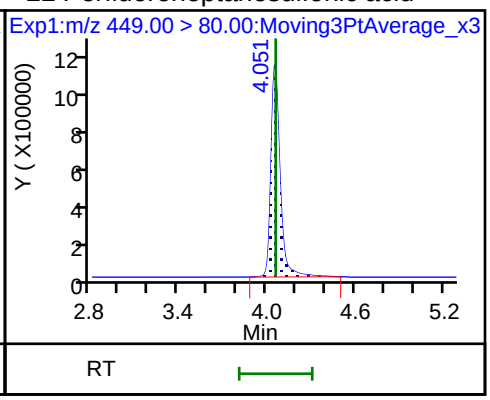
D 20 M2-6:2 FTS



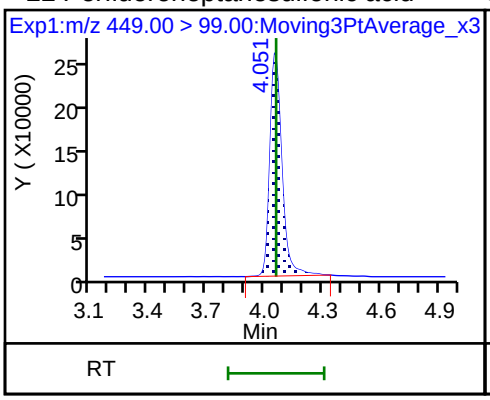

21 6:2 FTS



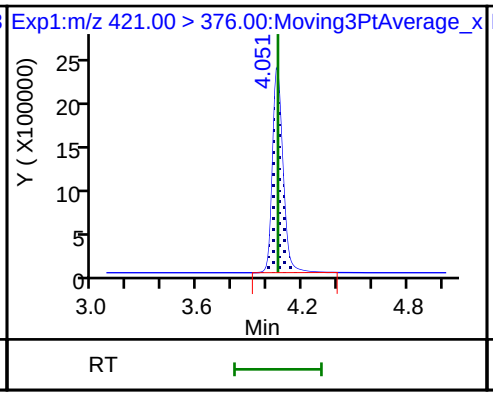

22 Perfluoroheptanesulfonic acid



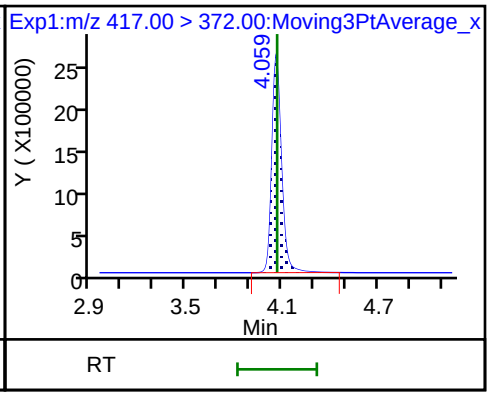

22 Perfluoroheptanesulfonic acid



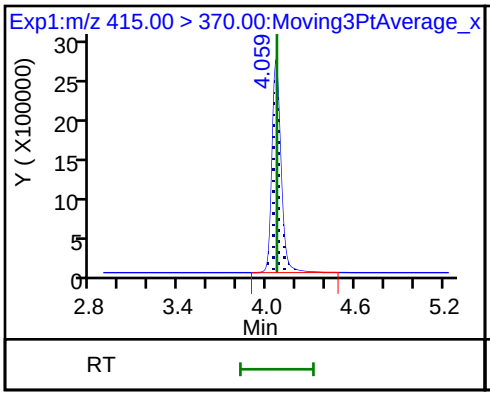

$ 23 13C8 PFOA



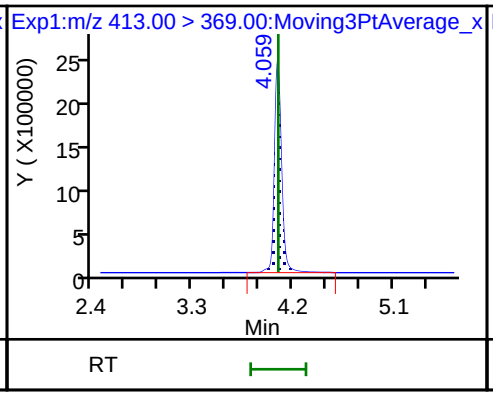

D 24 13C4 PFOA



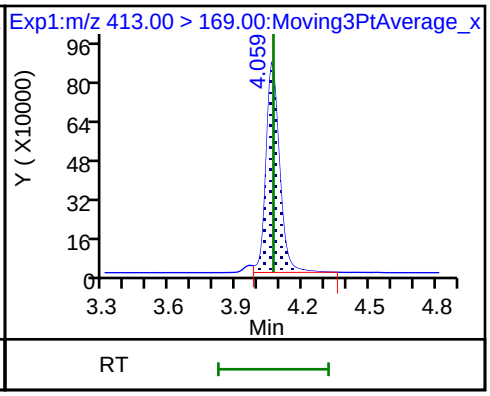

* 25 13C2 PFOA



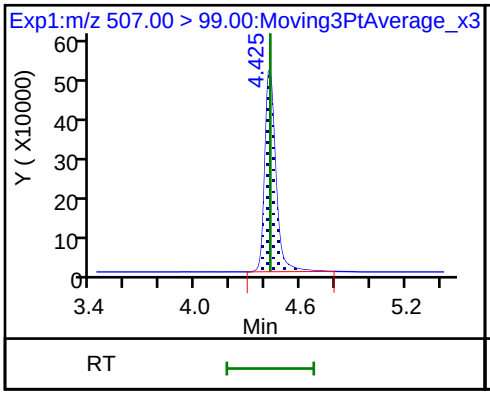

26 Perfluorooctanoic acid



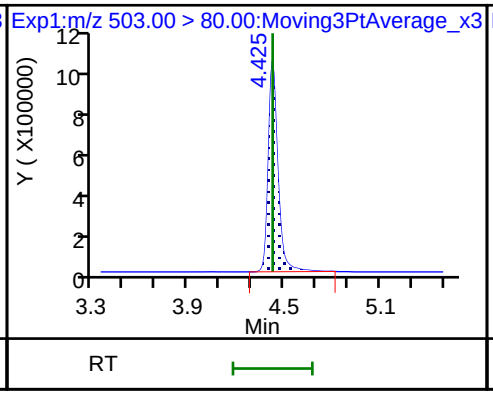

26 Perfluorooctanoic acid



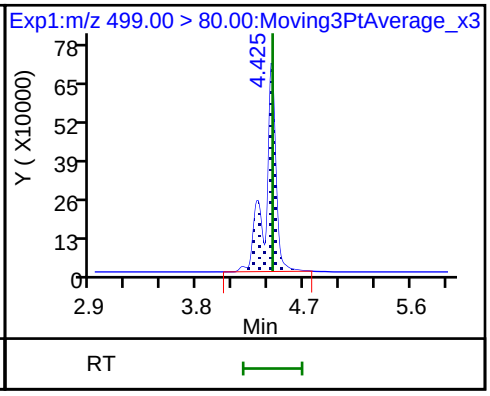

$ 27 13C8 PFOS



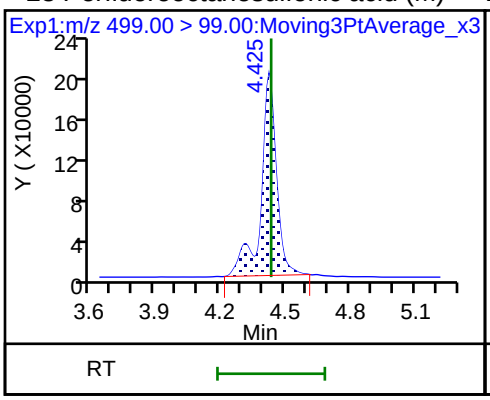

D 29 13C4 PFOS



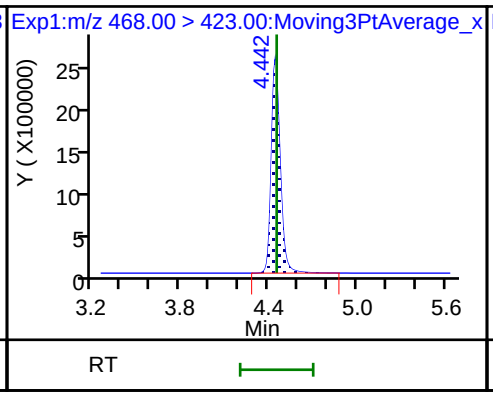

28 Perfluorooctanesulfonic acid



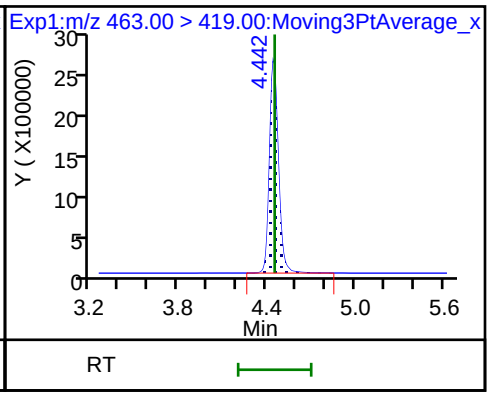
28 Perfluorooctanesulfonic acid (M)



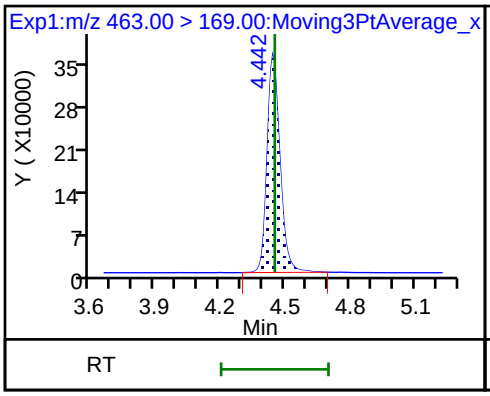

D 31 13C5 PFNA



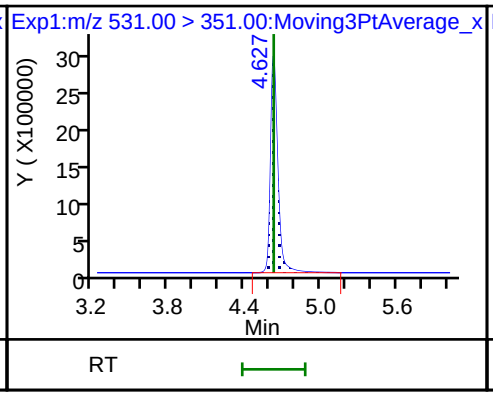

30 Perfluorononanoic acid



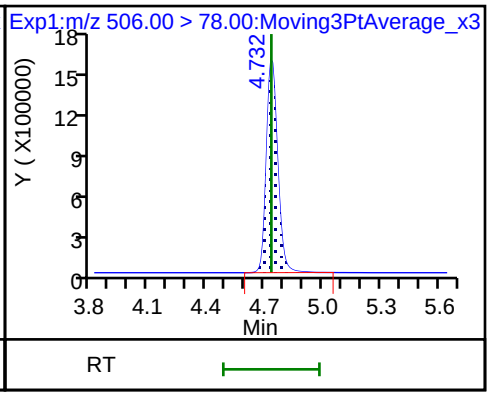

30 Perfluorononanoic acid



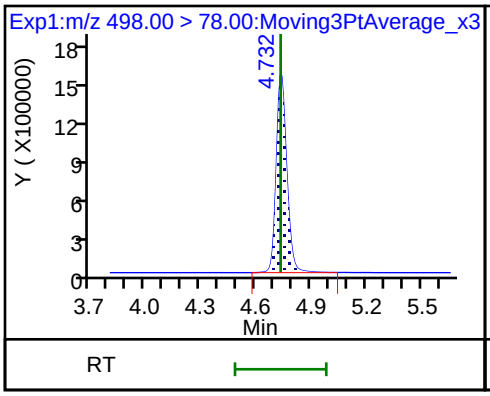

32 9ClFOS



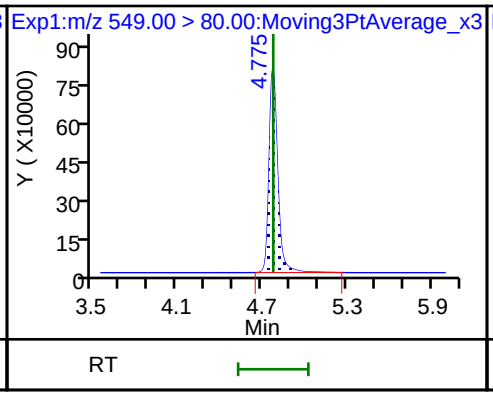

D 34 13C8 FOSA



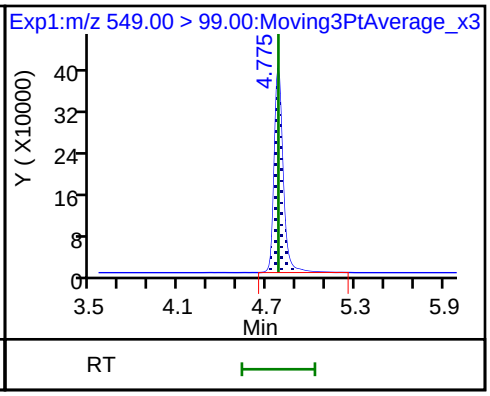

33 Perfluorooctanesulfonamide



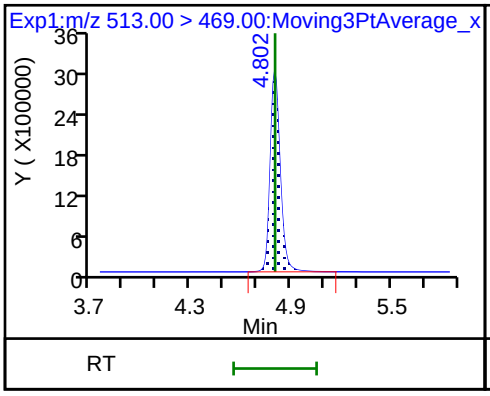

35 Perfluorononanesulfonic acid



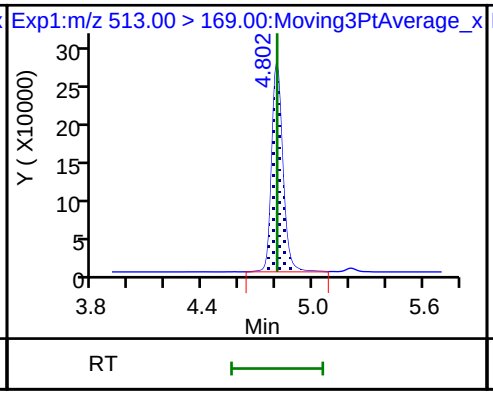

35 Perfluorononanesulfonic acid



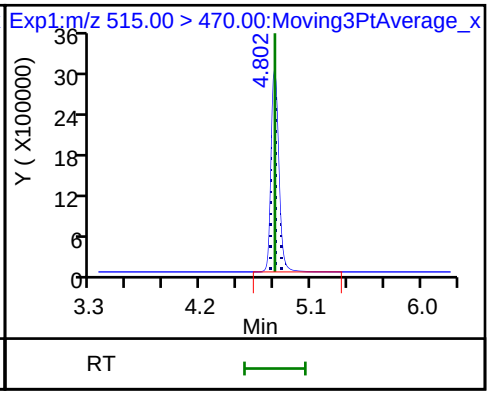

36 Perfluorodecanoic acid



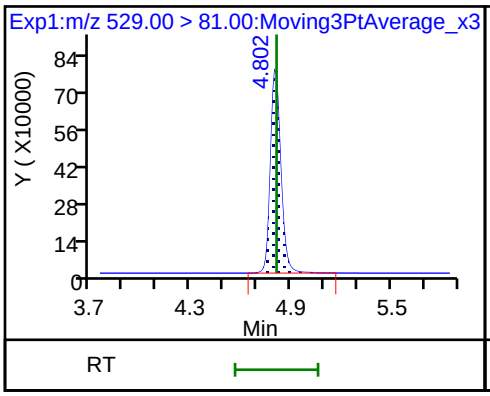

36 Perfluorodecanoic acid



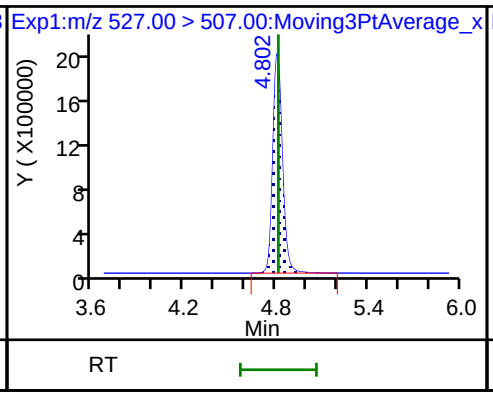

D 37 13C2 PFDA



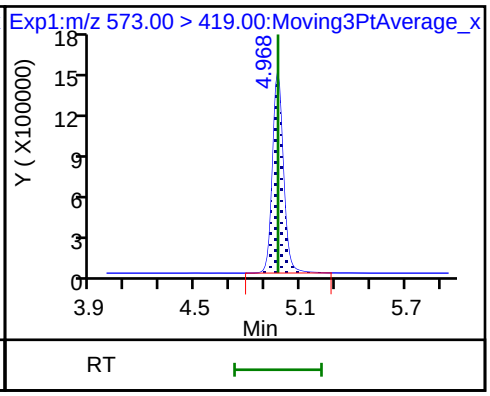
D 38 M2-8:2 FTS



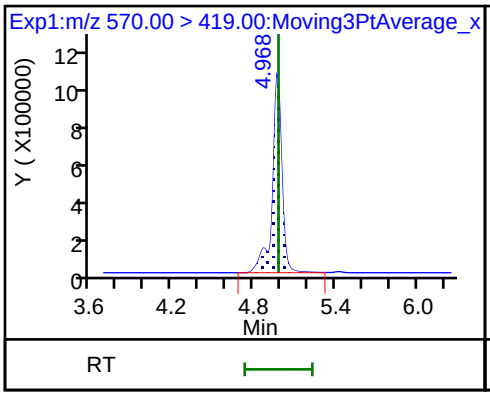

39 8:2 FTS



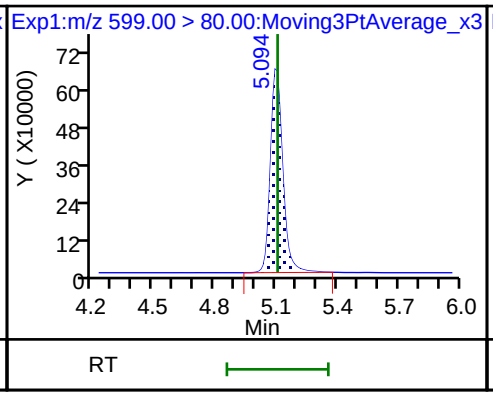

D 40 d3-NMeFOSAA



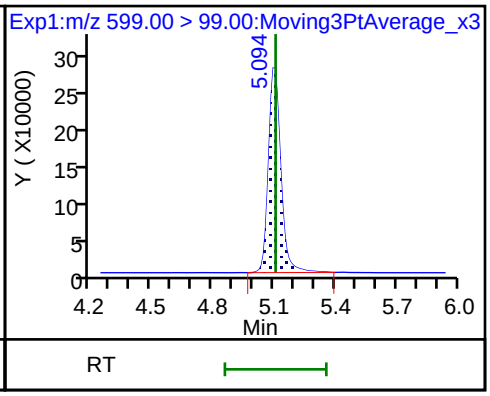

41 NMeFOSAA



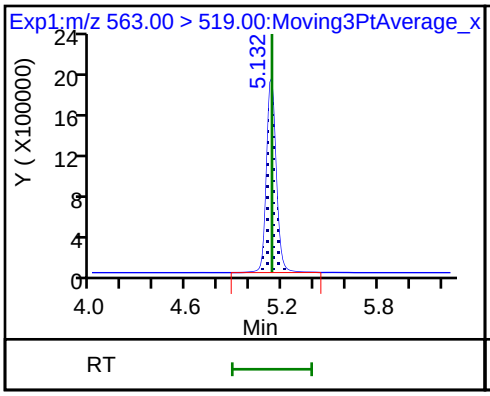

42 Perfluorodecanesulfonic acid



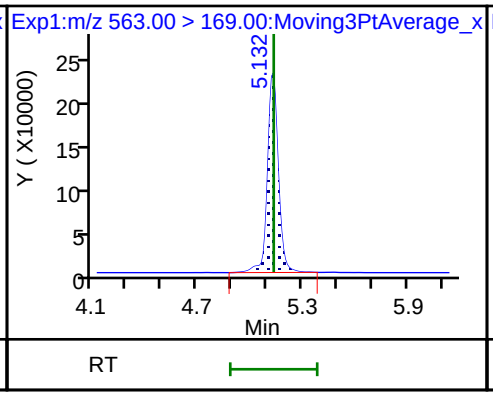

42 Perfluorodecanesulfonic acid



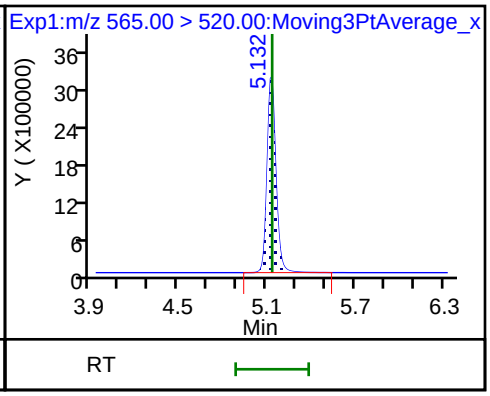

45 Perfluoroundecanoic acid



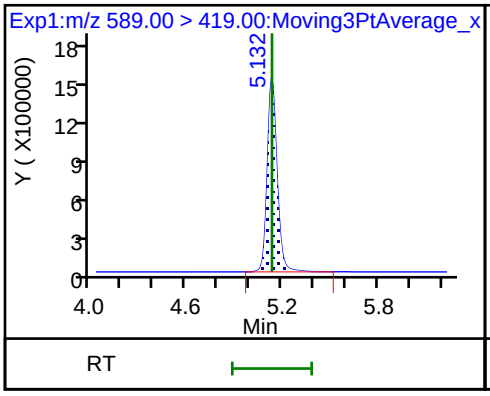

45 Perfluoroundecanoic acid



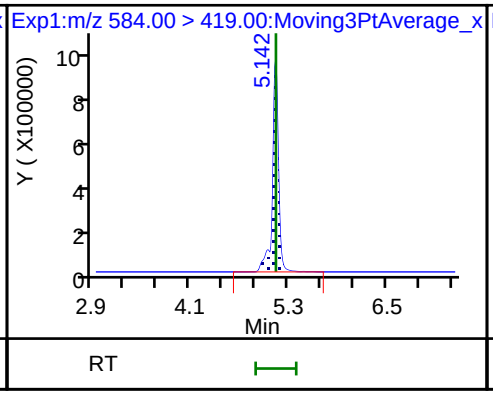

D 44 13C2 PFUnA



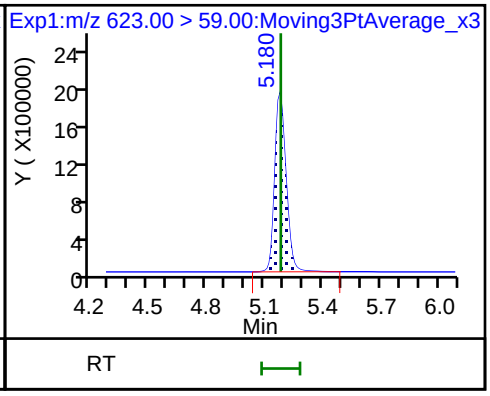

D 46 d5-NEtFOSAA



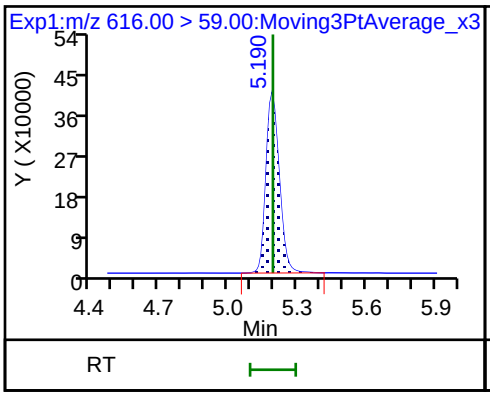

48 NEtFOSA



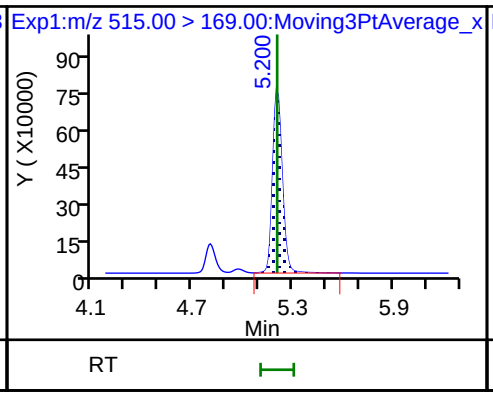

D 43 d7-N-MeFOSE-M



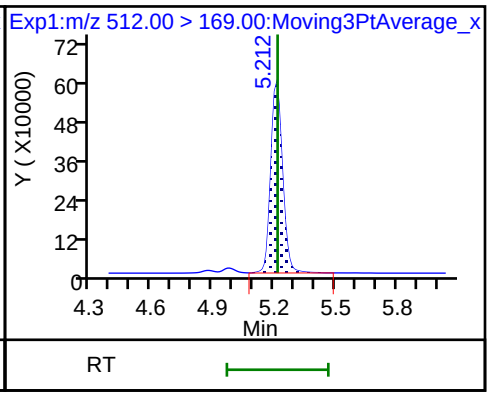
47 N-MeFOSE-M



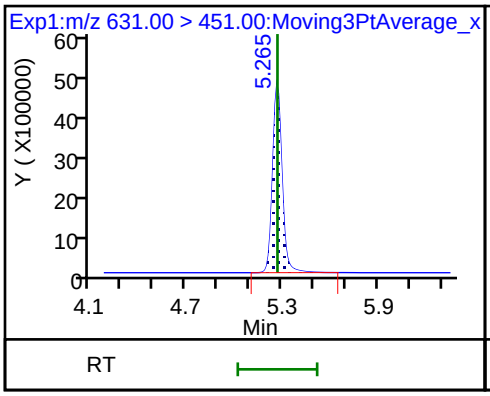

D 49 d-N-MeFOSA-M



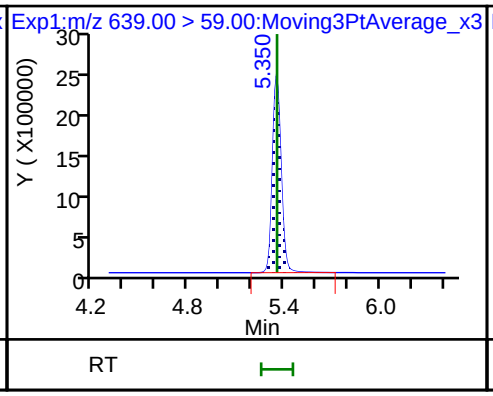

50 NMeFOSA



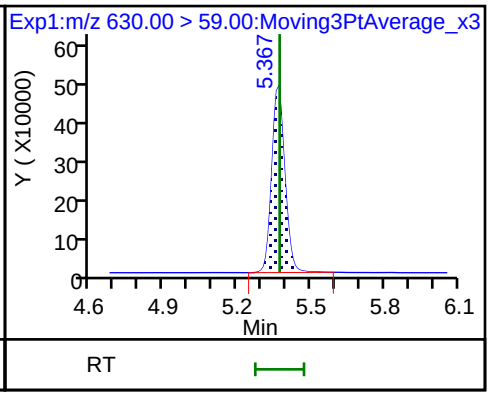

51 11ClFOS



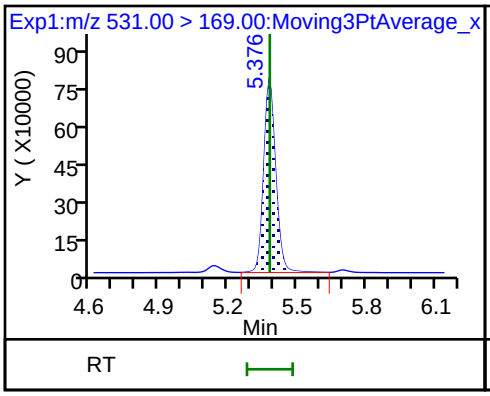

D 52 d9-N-EtFOSE-M



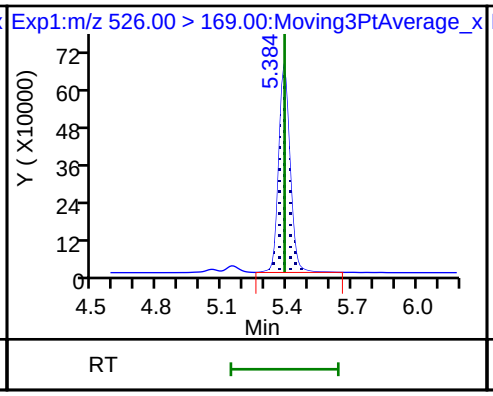

53 N-EtFOSE-M



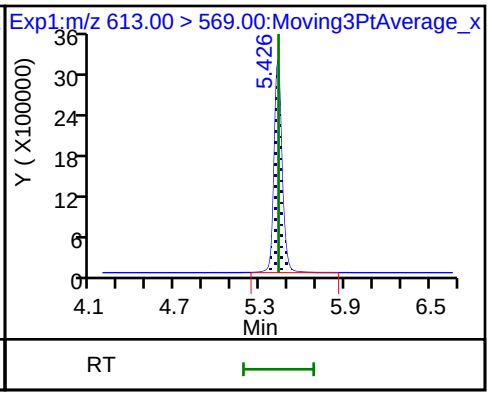

D 54 d-N-EtFOSA-M



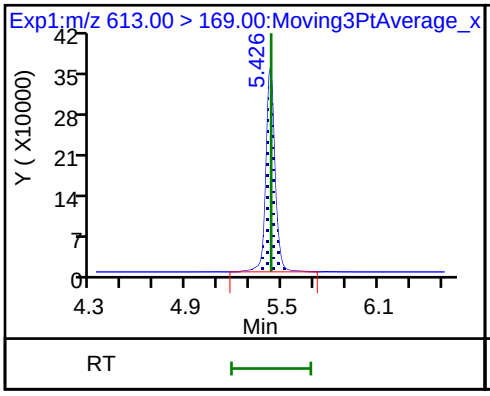

55 N-EtFOSA-M



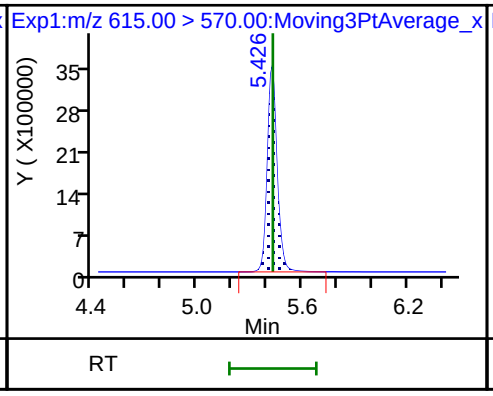

57 Perfluorododecanoic acid



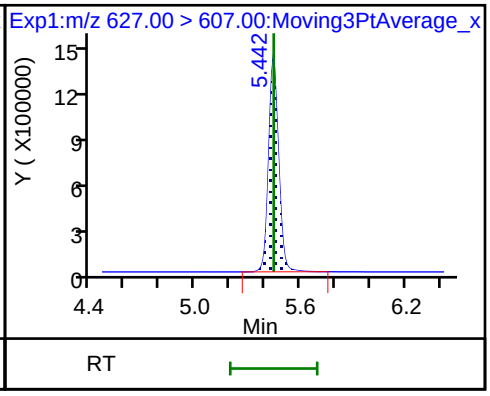

57 Perfluorododecanoic acid



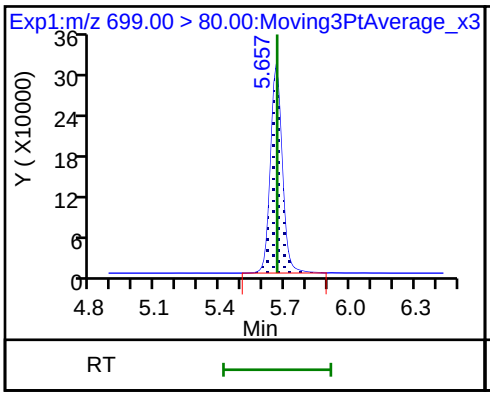

D 56 13C2 PFDoA



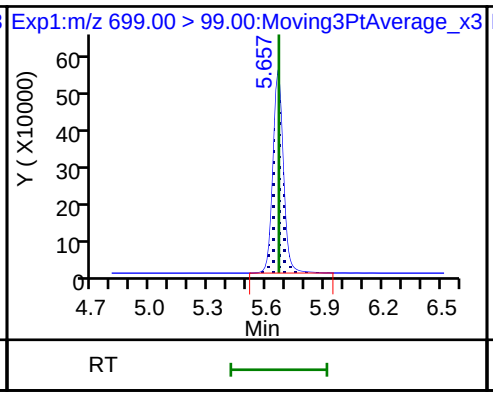

58 10:2 FTS



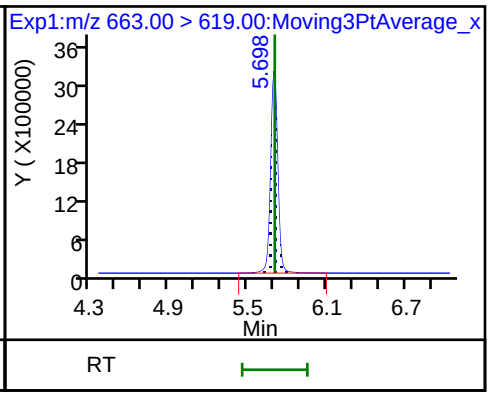
59 PFDoS



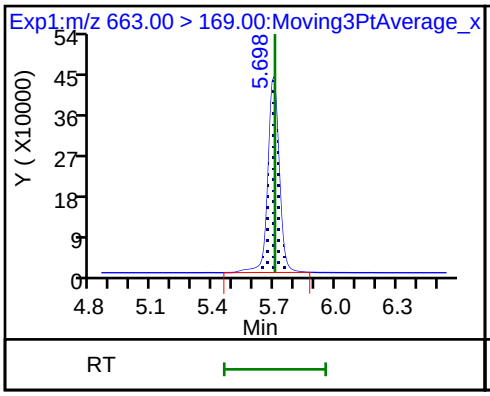

59 PFDoS



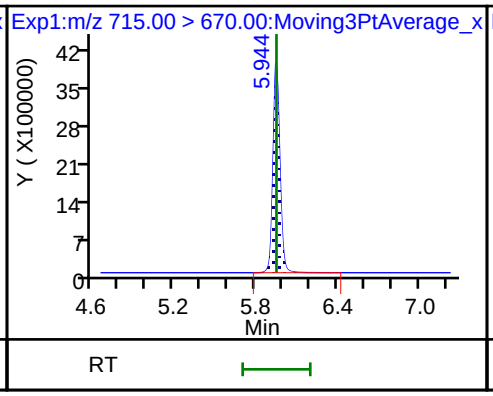

60 Perfluorotridecanoic acid



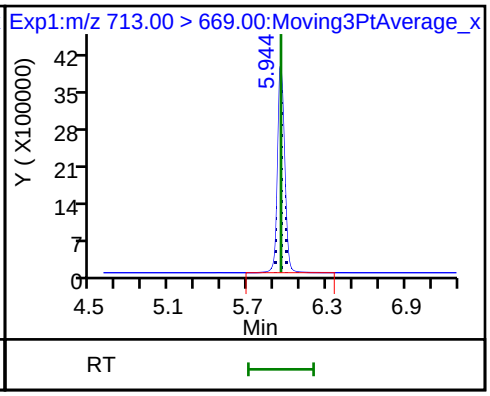

60 Perfluorotridecanoic acid



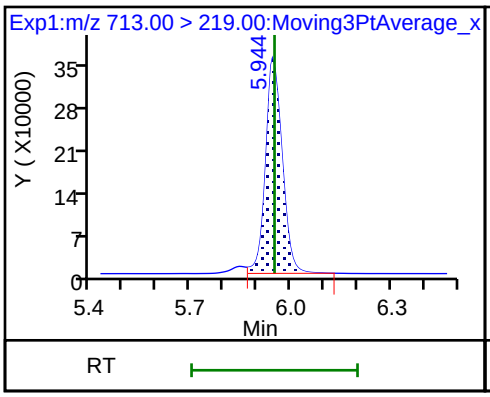

D 61 13C2 PFTeDA



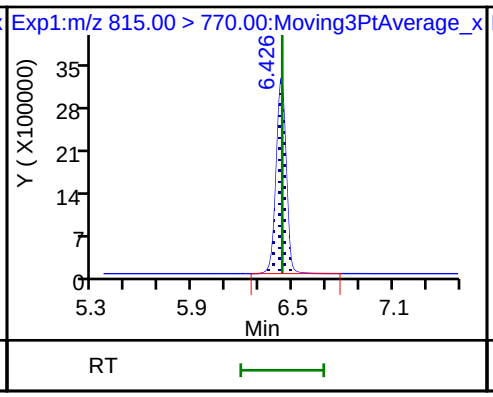

62 Perfluorotetradecanoic acid



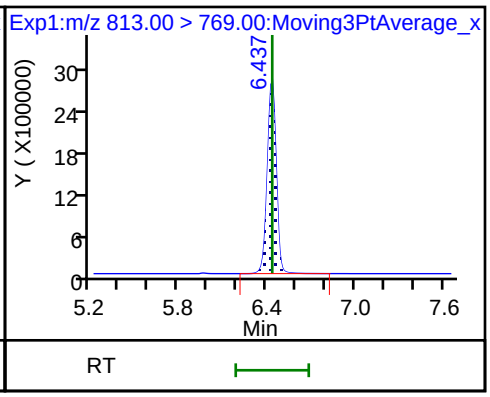

62 Perfluorotetradecanoic acid



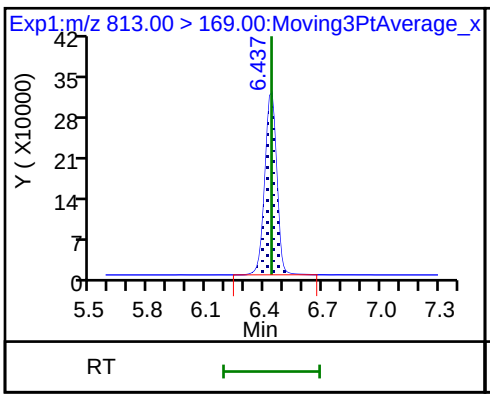

D 64 13C2 PFHxDA



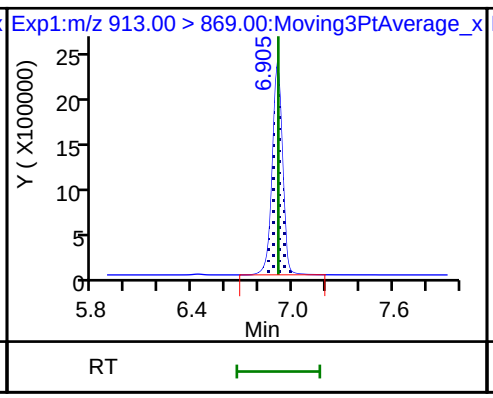

63 Perfluorohexadecanoic acid



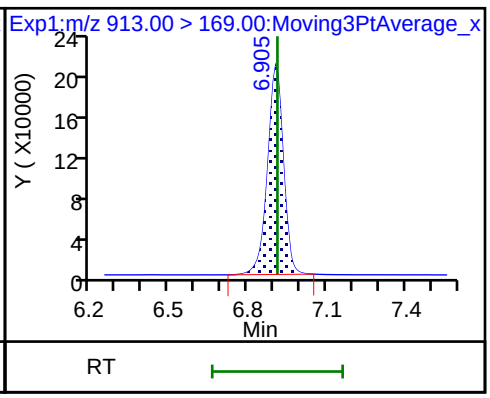

63 Perfluorohexadecanoic acid




65 Perfluorooctadecanoic acid




65 Perfluorooctadecanoic acid



Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

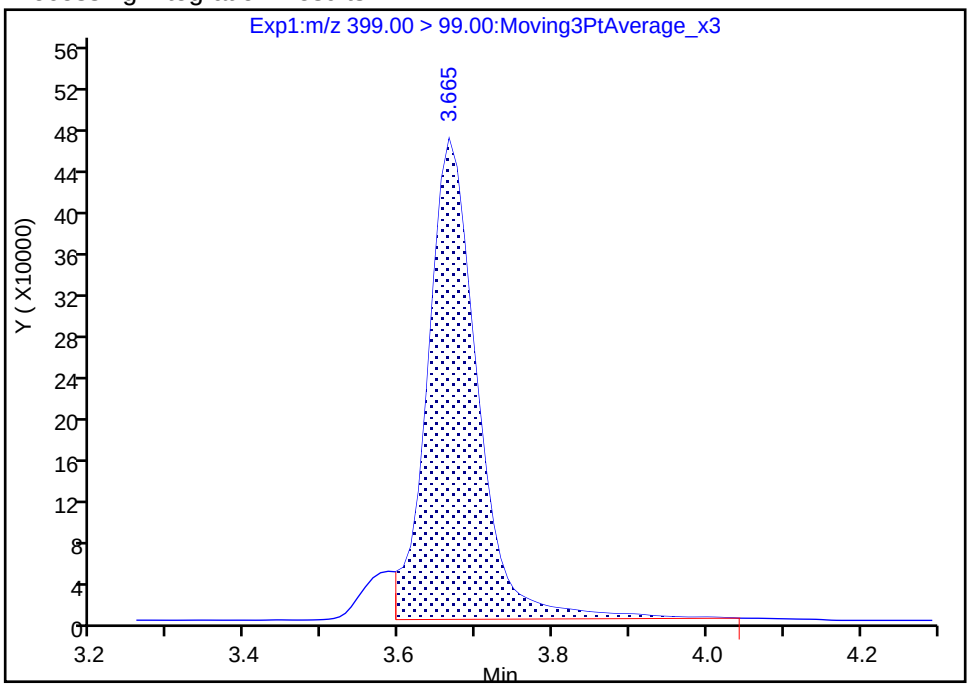
Data File: \\chromfs\Sacramento\ChromData\A13\20200908-102913.b\2020.09.08_A13_PFC_ICALX_012.d
Injection Date: 08-Sep-2020 19:17:01 Instrument ID: A13
Lims ID: ICV
Client ID:
Operator ID: SACINSTLCMS01 ALS Bottle#: 9 Worklist Smp#: 10
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFAS_A13 Limit Group: LC PFC ICAL
Column: Gemini C18 3um 3 x 100mm ( 3.00 mm) Detector EXP1

## 18 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 2

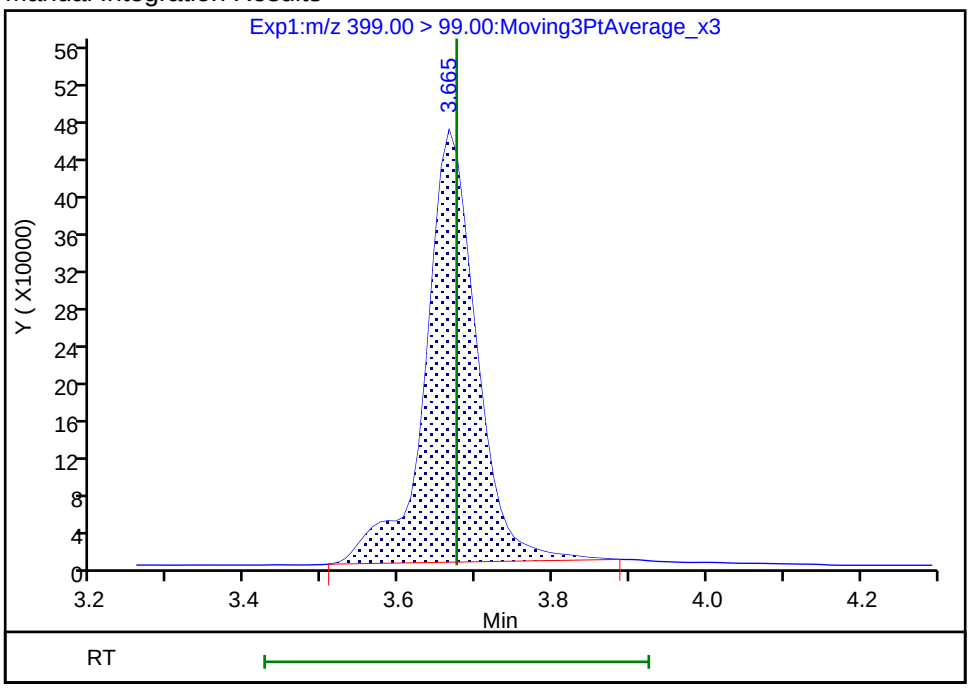
Processing Integration Results

RT: 3.66
Area: 2092557
Amount: 2.455247
Amount Units: ng/ml




Manual Integration Results

RT: 3.66
Area: 2148966
Amount: 2.455247
Amount Units: ng/ml




Reviewer: novoaj, 09-Sep-2020 09:42:56
Audit Action: Manually Integrated Audit Reason: Isomers

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

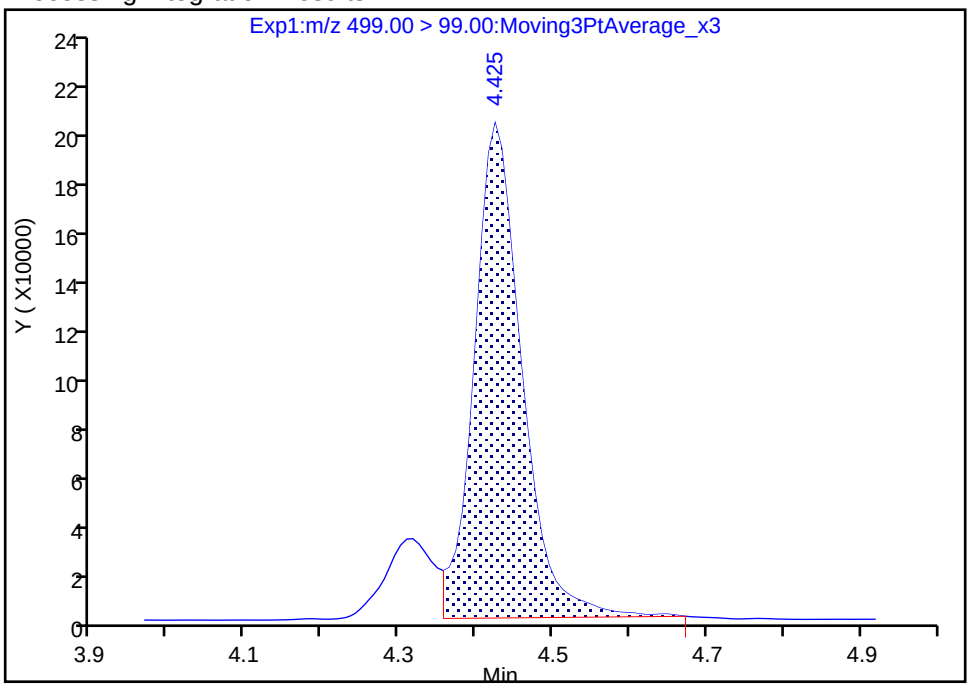
Data File: \\chromfs\Sacramento\ChromData\A13\20200908-102913.b\2020.09.08_A13_PFC_ICALX_012.d
Injection Date: 08-Sep-2020 19:17:01 Instrument ID: A13
Lims ID: ICV
Client ID:
Operator ID: SACINSTLCMS01 ALS Bottle#: 9 Worklist Smp#: 10
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFAS_A13 Limit Group: LC PFC ICAL
Column: Gemini C18 3um 3 x 100mm ( 3.00 mm) Detector EXP1

## 28 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 2

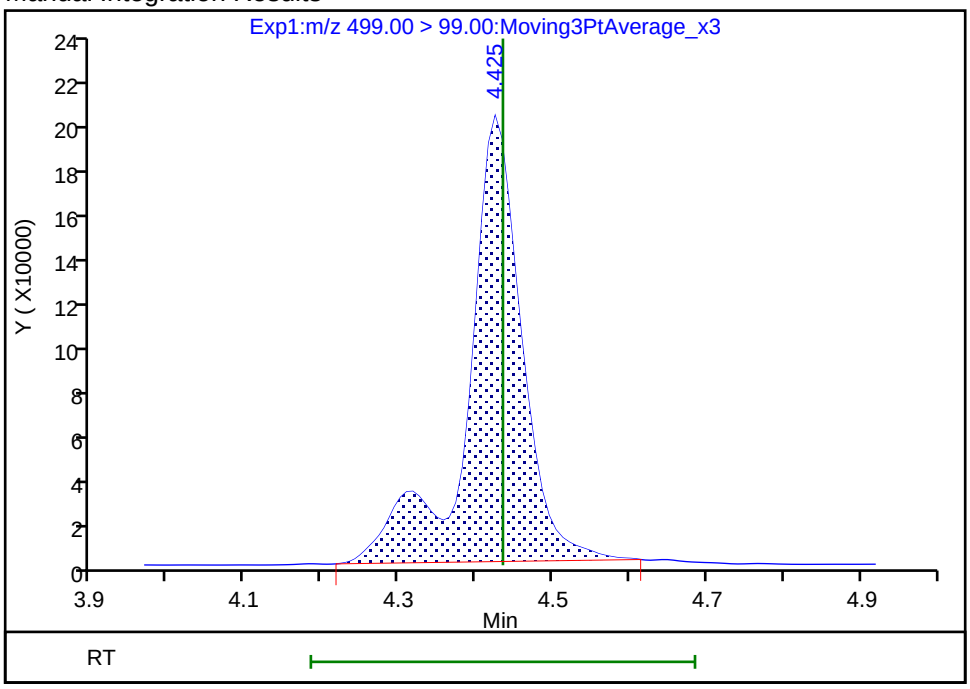
Processing Integration Results

RT: 4.42
Area: 867015
Amount: 2.380881
Amount Units: ng/ml




Manual Integration Results

RT: 4.42
Area: 991238
Amount: 2.380881
Amount Units: ng/ml




Reviewer: novoaj, 09-Sep-2020 09:44:37
Audit Action: Manually Integrated Audit Reason: Isomers

FORM VII
LCMS CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Sacramento  Job No.: 460-217659-1

SDG No.:

Lab Sample ID: CCVL 320-410989/2  Calibration Date: 09/10/2020 10:46

Instrument ID: A13  Calib Start Date: 09/08/2020 18:01

GC Column: GeminiC18 3x100  ID: 3.00(mm)  Calib End Date: 09/08/2020 18:58

Lab File ID: 2020.09.10_A13_PFC_A_005.d  Conc. Units: ng/mL

| ANALYTE | CURVE TYPE | AVE RRF | RRF | MIN RRF | CALC AMOUNT | SPIKE AMOUNT | %D | MAX %D |
|---|---|---|---|---|---|---|---|---|
| Perfluorobutanoic acid (PFBA) | AveID | 0.7433 | 0.6393 | | 0.0430 | 0.0500 | -14.0 | 50.0 |
| Perfluoropentanoic acid (PFPeA) | AveID | 1.028 | 0.9883 | | 0.0481 | 0.0500 | -3.8 | 50.0 |
| Perfluorobutanesulfonic acid (PFBS) | AveID | 0.9776 | 0.8315 | | 0.0376 | 0.0442 | -14.9 | 50.0 |
| 4:2 FTS | AveID | 3.243 | 2.986 | | 0.430 | 0.467 | -7.9 | 50.0 |
| Perfluorohexanoic acid (PFHxA) | AveID | 0.9294 | 0.9140 | | 0.0492 | 0.0500 | -1.7 | 50.0 |
| Perfluoropentanesulfonic acid (PFPeS) | AveID | 0.7896 | 0.7367 | | 0.0438 | 0.0469 | -6.7 | 50.0 |
| HFPO-DA (GenX) | AveID | 0.2972 | 0.2266 | | 0.0381 | 0.0500 | -23.8 | 50.0 |
| Perfluoroheptanoic acid (PFHpA) | AveID | 1.011 | 0.9192 | | 0.0455 | 0.0500 | -9.1 | 50.0 |
| Perfluorohexanesulfonic acid (PFHxS) | AveID | 1.112 | 1.055 | | 0.0432 | 0.0455 | -5.1 | 50.0 |
| 4,8-Dioxa-3H-perfluorononanoic acid (ADONA) | AveID | 5.136 | 5.048 | | 0.0463 | 0.0471 | -1.7 | 50.0 |
| 6:2 FTS | AveID | 2.407 | 2.546 | | 0.501 | 0.474 | 5.8 | 50.0 |
| Perfluoroheptanesulfonic Acid (PFHpS) | AveID | 1.139 | 1.037 | | 0.0434 | 0.0476 | -8.9 | 50.0 |
| Perfluorooctanoic acid (PFOA) | AveID | 1.023 | 1.031 | | 0.0504 | 0.0500 | 0.8 | 50.0 |
| Perfluorooctanesulfonic acid (PFOS) | AveID | 1.038 | 1.080 | | 0.0483 | 0.0464 | 4.0 | 50.0 |
| Perfluorononanoic acid (PFNA) | AveID | 0.9494 | 0.8908 | | 0.0469 | 0.0500 | -6.2 | 50.0 |
| F-53B Major | AveID | 2.501 | 2.182 | | 0.0407 | 0.0466 | -12.8 | 50.0 |
| Perfluorooctanesulfonamide (FOSA) | AveID | 0.9383 | 0.8932 | | 0.0476 | 0.0500 | -4.8 | 50.0 |
| Perfluorononanesulfonic acid (PFNS) | AveID | 0.7747 | 0.7552 | | 0.0468 | 0.0480 | -2.5 | 50.0 |
| Perfluorodecanoic acid (PFDA) | AveID | 0.8964 | 0.7834 | | 0.0437 | 0.0500 | -12.6 | 50.0 |
| 8:2 FTS | AveID | 2.472 | 2.187 | | 0.424 | 0.479 | -11.5 | 50.0 |
| N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA) | AveID | 0.8055 | 0.6542 | | 0.406 | 0.500 | -18.8 | 50.0 |
| Perfluorodecanesulfonic acid (PFDS) | AveID | 0.6588 | 0.5829 | | 0.0426 | 0.0482 | -11.5 | 50.0 |
| Perfluoroundecanoic acid (PFUnA) | AveID | 0.6615 | 0.5979 | | 0.0452 | 0.0500 | -9.6 | 50.0 |
| N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA) | AveID | 0.7741 | 0.7155 | | 0.462 | 0.500 | -7.6 | 50.0 |
| NMeFOSE | AveID | 1.065 | 0.9098 | | 0.0427 | 0.0500 | -14.5 | 50.0 |
| NMeFOSA | AveID | 0.9832 | 0.9793 | | 0.750 | 0.0500 | -0.4 | 50.0 |
| F-53B Minor | AveID | 4.317 | 3.797 | | 0.0414 | 0.0471 | -12.0 | 50.0 |
| NEtFOSE | AveID | 1.035 | 0.9119 | | 0.0440 | 0.0500 | -11.9 | 50.0 |
| NEtFOSA | AveID | 1.062 | 0.9727 | | 1.00 | 0.0500 | -8.4 | 50.0 |
| Perfluorododecanoic acid (PFDoA) | AveID | 0.9122 | 0.8292 | | 0.0454 | 0.0500 | -9.1 | 50.0 |
| 10:2 FTS | AveID | 1.632 | 1.628 | | 0.0481 | 0.0482 | -0.2 | 50.0 |
| Perfluorododecanesulfonic acid (PFDoS) | AveID | 0.2572 | 0.2437 | | 0.0459 | 0.0484 | -5.3 | 50.0 |

FORM VII 537 (modified)

FORM VII
LCMS CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Sacramento  Job No.: 460-217659-1

SDG No.:

Lab Sample ID: CCVL 320-410989/2  Calibration Date: 09/10/2020 10:46

Instrument ID: A13  Calib Start Date: 09/08/2020 18:01

GC Column: GeminiC18 3x100  ID: 3.00(mm)  Calib End Date: 09/08/2020 18:58

Lab File ID: 2020.09.10_A13_PFC_A_005.d  Conc. Units: ng/mL

| ANALYTE | CURVE TYPE | AVE RRF | RRF | MIN RRF | CALC AMOUNT | SPIKE AMOUNT | %D | MAX %D |
|---|---|---|---|---|---|---|---|---|
| Perfluorotridecanoic acid (PFTriA) | AveID | 0.9373 | 0.8420 | | 0.0449 | 0.0500 | -10.2 | 50.0 |
| Perfluorotetradecanoic acid (PFTeA) | AveID | 0.9843 | 0.9339 | | 0.0474 | 0.0500 | -5.1 | 50.0 |
| Perfluoro-n-hexadecanoic acid (PFHxDA) | L2ID | | 1.310 | | 0.0442 | 0.0500 | -11.6 | 50.0 |
| Perfluoro-n-octadecanoic acid (PFODA) | AveID | 0.7306 | 0.6613 | | 0.0453 | 0.0500 | -9.5 | 50.0 |
| 13C4 PFBA | Ave | 0.8499 | 0.9283 | | 2.73 | 2.50 | 9.2 | 50.0 |
| 13C5 PFPeA | Ave | 0.6625 | 0.7189 | | 2.71 | 2.50 | 8.5 | 50.0 |
| 13C3 PFBS | Ave | 0.8317 | 0.9737 | | 2.72 | 2.33 | 17.1 | 50.0 |
| M2-4:2 FTS | Ave | 0.2037 | 0.2208 | | 2.53 | 2.34 | 8.4 | 50.0 |
| 13C2 PFHxA | Ave | 0.8183 | 0.8849 | | 2.70 | 2.50 | 8.1 | 50.0 |
| 13C3 HFPO-DA | Ave | 0.5866 | 0.6231 | | 2.66 | 2.50 | 6.2 | 50.0 |
| 13C4 PFHpA | Ave | 0.8058 | 0.8699 | | 2.70 | 2.50 | 8.0 | 50.0 |
| 18O2 PFHxS | Ave | 0.5449 | 0.6446 | | 2.80 | 2.37 | 18.3 | 50.0 |
| M2-6:2 FTS | Ave | 0.2349 | 0.2526 | | 2.55 | 2.38 | 7.5 | 50.0 |
| 13C4 PFOA | Ave | 0.9849 | 1.044 | | 2.65 | 2.50 | 6.0 | 50.0 |
| 13C4 PFOS | Ave | 0.3888 | 0.4406 | | 2.71 | 2.39 | 13.3 | 50.0 |
| 13C5 PFNA | Ave | 0.9099 | 0.9625 | | 2.64 | 2.50 | 5.8 | 50.0 |
| 13C8 FOSA | Ave | 0.5585 | 0.6342 | | 2.84 | 2.50 | 13.6 | 50.0 |
| 13C2 PFDA | Ave | 1.102 | 1.184 | | 2.69 | 2.50 | 7.4 | 50.0 |
| M2-8:2 FTS | Ave | 0.3107 | 0.3705 | | 2.86 | 2.40 | 19.2 | 50.0 |
| d3-NMeFOSAA | Ave | 0.5682 | 0.5753 | | 2.53 | 2.50 | 1.2 | 50.0 |
| 13C2 PFUnA | Ave | 1.078 | 1.149 | | 2.67 | 2.50 | 6.6 | 50.0 |
| d5-NEtFOSAA | Ave | 0.5501 | 0.6012 | | 2.73 | 2.50 | 9.3 | 50.0 |
| d7-N-MeFOSE-M | Ave | 0.1398 | 0.1205 | | 10.8 | 12.5 | -13.8 | 50.0 |
| d-N-MeFOSA-M | Ave | 0.2628 | 0.2833 | | 2.70 | 2.50 | 7.8 | 50.0 |
| d9-N-EtFOSE-M | Ave | 0.1640 | 0.1410 | | 10.8 | 12.5 | -14.0 | 50.0 |
| d-N-EtFOSA-M | Ave | 0.2510 | 0.2759 | | 2.75 | 2.50 | 9.9 | 50.0 |
| 13C2 PFDoA | Ave | 1.160 | 1.247 | | 2.69 | 2.50 | 7.5 | 50.0 |
| 13C2 PFTeDA | Ave | 1.146 | 1.147 | | 2.50 | 2.50 | 0.0 | 50.0 |
| 13C2 PFHxDA | Ave | 1.193 | 1.277 | | 2.68 | 2.50 | 7.1 | 50.0 |
| 13C8 PFOA | Ave | 0.8908 | 0.8537 | | 2.35 | 2.45 | -4.2 | 50.0 |
| 13C8 PFOS | Ave | 0.2076 | 0.2148 | | 2.47 | 2.39 | 3.5 | 50.0 |

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\A13\20200910-103012.b\2020.09.10_A13_PFC_A_005.d
Lims ID: CCVL
Client ID:
Sample Type: CCVL
Inject. Date: 10-Sep-2020 10:46:09 ALS Bottle#: 51 Worklist Smp#: 2
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Sample Info: CCVL (26)
Misc. Info.: Plate: 1 Rack: 1
Operator ID: SACINSTLCMS01 Instrument ID: A13
Sublist: chrom-PFAS_A13*sub3

Method: \\chromfs\Sacramento\ChromData\A13\20200910-103012.b\PFAS_A13.m
Limit Group: LC PFC ICAL
Last Update: 10-Sep-2020 11:17:23 Calib Date: 08-Sep-2020 18:58:15
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\A13\20200908-102913.b\2020.09.08_A13_PFC_ICALX_010.d

Column 1 : Gemini C18 3um 3 x 100mm ( 3.00 mm) Det: EXP1
Process Host: CTX1047

First Level Reviewer: hsuw Date: 10-Sep-2020 11:17:23
Ratio Calibration: Average of Initial Calibration

| Signal | RT | EXP RT | DLT RT | REL RT | Response | Amount ng/ml | Ratio(Limits) | %Rec | S/N | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| D 1 13C4 PFBA | | | | | | | | | | |
| 217.00 > 172.00 | 2.483 | 2.482 | 0.001 | 0.609 | 9568379 | 2.73 | | 109 | 12310 | |
| 2 Perfluorobutanoic acid | | | | | | | | | | M |
| 212.90 > 169.00 | 2.483 | 2.482 | 0.001 | 1.000 | 122348 | 0.0430 | | 86.0 | 33.4 | M |
| D 4 13C5 PFPeA | | | | | | | | | | |
| 267.90 > 223.00 | 2.878 | 2.878 | 0.0 | 0.706 | 7409957 | 2.71 | | 109 | 15364 | |
| 5 Perfluoropentanoic acid | | | | | | | | | | |
| 262.90 > 219.00 | 2.878 | 2.878 | 0.0 | 1.000 | 146471 | 0.0481 | | 96.2 | 16.1 | |
| D 14 13C3 PFBS | | | | | | | | | | |
| 301.90 > 80.00 | 2.925 | 2.913 | 0.012 | 0.718 | 9333803 | 2.72 | | 117 | 17282 | |
| 6 Perfluorobutanesulfonic acid | | | | | | | | | | M |
| 298.90 > 80.00 | 2.925 | 2.913 | 0.012 | 1.000 | 147546 | 0.0376 | Target=2.18 | 85.1 | 88.8 | |
| 298.90 > 99.00 | 2.925 | 2.913 | 0.012 | 1.000 | 66207 | | 2.23(1.09-3.26) | | 29.1 | M |
| 7 4:2 FTS | | | | | | | | | | |
| 327.00 > 307.00 | 3.226 | 3.225 | 0.001 | 1.000 | 1269814 | 0.4300 | | 92.1 | 2484 | |
| D 8 M2-4:2 FTS | | | | | | | | | | |
| 329.00 > 81.00 | 3.226 | 3.225 | 0.001 | 0.791 | 2125940 | 2.53 | | 108 | 1332 | |
| 10 Perfluorohexanoic acid | | | | | | | | | | |
| 313.00 > 269.00 | 3.269 | 3.268 | 0.001 | 1.000 | 166730 | 0.0492 | Target=11.68 | 98.3 | 24.4 | |
| 313.00 > 119.00 | 3.269 | 3.268 | 0.001 | 1.000 | 12418 | | 13.43(5.84-17.52) | | 7.7 | |
| D 9 13C2 PFHxA | | | | | | | | | | |
| 315.00 > 270.00 | 3.269 | 3.268 | 0.001 | 0.802 | 9121339 | 2.70 | | 108 | 8430 | |
| 11 Perfluoropentanesulfonic acid | | | | | | | | | | |
| 349.00 > 80.00 | 3.290 | 3.279 | 0.011 | 1.125 | 138702 | 0.0438 | Target=2.56 | 93.3 | 103 | |
| 349.00 > 99.00 | 3.290 | 3.279 | 0.011 | 1.125 | 55321 | | 2.51(1.28-3.84) | | 49.5 | |
| 12 HPFO-DA | | | | | | | | | | |
| 285.00 > 169.00 | 3.397 | 3.388 | 0.009 | 1.000 | 29103 | 0.0381 | | 76.2 | 146 | |

| Signal | RT | EXP RT | DLT RT | REL RT | Response | Amount ng/ml | Ratio(Limits) | %Rec | S/N | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| D 13 13C3 HFPO-DA | | | | | | | | | | |
| 287.00 > 169.00 | 3.397 | 3.388 | 0.009 | 0.834 | 6422431 | 2.66 | | 106 | 4045 | |
| 16 Perfluoroheptanoic acid | | | | | | | | | | |
| 363.00 > 319.00 | 3.675 | 3.675 | 0.0 | 1.000 | 164839 | 0.0455 | Target=3.85 | 90.9 | 23.7 | |
| 363.00 > 169.00 | 3.685 | 3.675 | 0.010 | 1.003 | 46018 | | 3.58(1.92-5.77) | | 29.0 | |
| D 15 13C4 PFHpA | | | | | | | | | | |
| 367.00 > 322.00 | 3.675 | 3.675 | 0.0 | 0.902 | 8966692 | 2.70 | | 108 | 29366 | |
| D 17 18O2 PFHxS | | | | | | | | | | |
| 403.00 > 84.00 | 3.685 | 3.675 | 0.010 | 0.904 | 6285006 | 2.80 | | 118 | 56202 | |
| 18 Perfluorohexanesulfonic acid | | | | | | | | | | M |
| 399.00 > 80.00 | 3.685 | 3.675 | 0.010 | 1.000 | 127615 | 0.0432 | Target=3.25 | 94.9 | 70.1 | M |
| 399.00 > 99.00 | 3.685 | 3.675 | 0.010 | 1.000 | 41043 | | 3.11(1.62-4.87) | | 29.9 | M |
| 19 DONA | | | | | | | | | | |
| 377.00 > 251.00 | 3.732 | 3.722 | 0.010 | 0.840 | 431876 | 0.0463 | Target=2.76 | 98.3 | 816 | |
| 377.00 > 85.00 | 3.723 | 3.722 | 0.001 | 0.838 | 132392 | | 3.26(1.38-4.14) | | 200 | |
| D 20 M2-6:2 FTS | | | | | | | | | | |
| 429.00 > 81.00 | 4.051 | 4.050 | 0.001 | 0.994 | 2473214 | 2.55 | | 108 | 2528 | |
| 21 6:2 FTS | | | | | | | | | | |
| 427.00 > 407.00 | 4.051 | 4.050 | 0.001 | 1.000 | 1256753 | 0.5014 | | 106 | 1880 | |
| 22 Perfluoroheptanesulfonic acid | | | | | | | | | | M |
| 449.00 > 80.00 | 4.067 | 4.059 | 0.008 | 0.916 | 89684 | 0.0434 | Target=4.29 | 91.1 | 104 | |
| 449.00 > 99.00 | 4.067 | 4.059 | 0.008 | 0.916 | 20457 | | 4.38(2.15-6.44) | | 34.5 | M |
| $ 23 13C8 PFOA | | | | | | | | | | |
| 421.00 > 376.00 | 4.067 | 4.059 | 0.008 | 0.998 | 8614323 | 2.35 | | 95.8 | 11475 | |
| 26 Perfluorooctanoic acid | | | | | | | | | | M |
| 413.00 > 369.00 | 4.076 | 4.067 | 0.009 | 1.000 | 222011 | 0.0504 | Target=2.95 | 101 | 41.1 | M |
| 413.00 > 169.00 | 4.076 | 4.067 | 0.009 | 1.000 | 69302 | | 3.20(1.47-4.42) | | 69.9 | |
| * 25 13C2 PFOA | | | | | | | | | | |
| 415.00 > 370.00 | 4.076 | 4.067 | 0.009 | | 10307380 | 2.50 | | | 6789 | |
| D 24 13C4 PFOA | | | | | | | | | | |
| 417.00 > 372.00 | 4.076 | 4.067 | 0.009 | 1.000 | 10765093 | 2.65 | | 106 | 8119 | |
| $ 27 13C8 PFOS | | | | | | | | | | |
| 507.00 > 99.00 | 4.434 | 4.426 | 0.008 | 1.088 | 2116770 | 2.47 | | 103 | 3046 | |
| D 29 13C4 PFOS | | | | | | | | | | |
| 503.00 > 80.00 | 4.442 | 4.435 | 0.007 | 1.090 | 4341333 | 2.71 | | 113 | 1625 | |
| 28 Perfluorooctanesulfonic acid | | | | | | | | | | M |
| 499.00 > 80.00 | 4.442 | 4.435 | 0.007 | 1.000 | 91021 | 0.0483 | Target=4.28 | 104 | 126 | |
| 499.00 > 99.00 | 4.434 | 4.435 | -0.001 | 0.998 | 19655 | | 4.63(2.14-6.41) | | 25.6 | M |
| D 31 13C5 PFNA | | | | | | | | | | |
| 468.00 > 423.00 | 4.460 | 4.443 | 0.017 | 1.094 | 9920662 | 2.64 | | 106 | 8523 | |
| 30 Perfluorononanoic acid | | | | | | | | | | |
| 463.00 > 419.00 | 4.451 | 4.452 | -0.001 | 0.998 | 176739 | 0.0469 | Target=8.00 | 93.8 | 42.1 | |
| 463.00 > 169.00 | 4.451 | 4.452 | -0.001 | 0.998 | 23525 | | 7.51(4.00-12.01) | | 37.5 | |
| 32 9ClFOS | | | | | | | | | | M |
| 531.00 > 351.00 | 4.636 | 4.629 | 0.007 | 1.044 | 184713 | 0.0407 | | 87.2 | 207 | M |
| D 34 13C8 FOSA | | | | | | | | | | |
| 506.00 > 78.00 | 4.743 | 4.743 | 0.0 | 1.164 | 6536461 | 2.84 | | 114 | 12689 | |

| Signal | RT | EXP RT | DLT RT | REL RT | Response | Amount ng/ml | Ratio(Limits) | %Rec | S/N | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| 33 Perfluorooctanesulfonamide | | | | | | | | | | |
| 498.00 > 78.00 | 4.752 | 4.743 | 0.009 | 1.002 | 116772 | 0.0476 | | 95.2 | 408 | |
| 35 Perfluorononanesulfonic acid | | | | | | | | | | |
| 549.00 > 80.00 | 4.787 | 4.777 | 0.009 | 1.077 | 65844 | 0.0468 | Target=2.15 | 97.5 | 195 | |
| 549.00 > 99.00 | 4.787 | 4.777 | 0.009 | 1.077 | 33731 | | 1.95(1.08-3.23) | | 73.3 | |
| 36 Perfluorodecanoic acid | | | | | | | | | | |
| 513.00 > 469.00 | 4.813 | 4.804 | 0.009 | 1.000 | 191196 | 0.0437 | Target=10.44 | 87.4 | 89.1 | |
| 513.00 > 169.00 | 4.813 | 4.804 | 0.009 | 1.000 | 20304 | | 9.42(5.22-15.65) | | 45.3 | |
| D 37 13C2 PFDA | | | | | | | | | | |
| 515.00 > 470.00 | 4.813 | 4.804 | 0.009 | 1.181 | 12203246 | 2.69 | | 107 | 30940 | |
| D 38 M2-8:2 FTS | | | | | | | | | | |
| 529.00 > 81.00 | 4.813 | 4.813 | 0.0 | 1.181 | 3658543 | 2.86 | | 119 | 4461 | |
| 39 8:2 FTS | | | | | | | | | | |
| 527.00 > 507.00 | 4.822 | 4.813 | 0.009 | 1.002 | 1600334 | 0.4238 | | 88.5 | 3210 | |
| D 40 d3-NMeFOSAA | | | | | | | | | | |
| 573.00 > 419.00 | 4.981 | 4.971 | 0.010 | 1.222 | 5929422 | 2.53 | | 101 | 3664 | |
| 41 NMeFOSAA | | | | | | | | | | |
| 570.00 > 419.00 | 4.981 | 4.971 | 0.010 | 1.000 | 775752 | 0.4061 | | 81.2 | 195 | |
| 42 Perfluorodecanesulfonic acid | | | | | | | | | | |
| 599.00 > 80.00 | 5.107 | 5.106 | 0.001 | 1.150 | 51033 | 0.0426 | Target=2.36 | 88.5 | 149 | |
| 599.00 > 99.00 | 5.107 | 5.106 | 0.001 | 1.150 | 23903 | | 2.14(1.18-3.54) | | 88.4 | |
| D 44 13C2 PFUnA | | | | | | | | | | |
| 565.00 > 520.00 | 5.135 | 5.135 | 0.0 | 1.260 | 11848193 | 2.67 | | 107 | 5041 | |
| 45 Perfluoroundecanoic acid | | | | | | | | | | M |
| 563.00 > 519.00 | 5.135 | 5.135 | 0.0 | 1.000 | 141688 | 0.0452 | Target=8.67 | 90.4 | 85.5 | M |
| 563.00 > 169.00 | 5.135 | 5.135 | 0.0 | 1.000 | 17730 | | 7.99(4.34-13.01) | | 52.2 | |
| D 46 d5-NEtFOSAA | | | | | | | | | | |
| 589.00 > 419.00 | 5.145 | 5.135 | 0.010 | 1.262 | 6197037 | 2.73 | | 109 | 6943 | |
| 48 NEtFOSA | | | | | | | | | | |
| 584.00 > 419.00 | 5.145 | 5.144 | 0.001 | 1.000 | 886793 | 0.4621 | | 92.4 | 166507 | |
| D 43 d7-N-MeFOSE-M | | | | | | | | | | |
| 623.00 > 59.00 | 5.184 | 5.184 | 0.0 | 1.272 | 6212366 | 10.8 | | 86.2 | 2911 | |
| 47 N-MeFOSE-M | | | | | | | | | | |
| 616.00 > 59.00 | 5.194 | 5.194 | 0.0 | 1.002 | 22609 | 0.0427 | | 85.5 | 41.0 | |
| D 49 d-N-MeFOSA-M | | | | | | | | | | |
| 515.00 > 169.00 | 5.216 | 5.205 | 0.011 | 1.280 | 2920071 | 2.69 | | 108 | 43.1 | |
| 50 NMeFOSA | | | | | | | | | | |
| 512.00 > 169.00 | 5.216 | 5.216 | 0.0 | 1.000 | 57195 | 0.0498 | | 99.6 | 37.9 | |
| 51 11ClFOS | | | | | | | | | | |
| 631.00 > 451.00 | 5.280 | 5.270 | 0.010 | 1.189 | 324884 | 0.0414 | | 88.0 | 1031 | |
| D 52 d9-N-EtFOSE-M | | | | | | | | | | |
| 639.00 > 59.00 | 5.353 | 5.362 | -0.009 | 1.313 | 7269202 | 10.7 | | 86.0 | 2802 | |
| 53 N-EtFOSE-M | | | | | | | | | | |
| 630.00 > 59.00 | 5.370 | 5.371 | -0.001 | 1.003 | 26514 | 0.0440 | | 88.1 | 50.5 | |
| D 54 d-N-EtFOSA-M | | | | | | | | | | |
| 531.00 > 169.00 | 5.387 | 5.379 | 0.008 | 1.322 | 2843678 | 2.75 | | 110 | 229 | |

| Signal | RT | EXP RT | DLT RT | REL RT | Response | Amount ng/ml | Ratio(Limits) | %Rec | S/N | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| 55 N-EtFOSA-M | | | | | | | | | | |
| 526.00 > 169.00 | 5.387 | 5.387 | 0.0 | 1.000 | 55323 | 0.0458 | | 91.6 | 23.5 | |
| D 56 13C2 PFDoA | | | | | | | | | | |
| 615.00 > 570.00 | 5.428 | 5.429 | -0.001 | 1.332 | 12852946 | 2.69 | | 107 | 8184 | |
| 57 Perfluorododecanoic acid | | | | | | | | | | |
| 613.00 > 569.00 | 5.437 | 5.429 | 0.008 | 1.002 | 213147 | 0.0454 | Target=9.05 | 90.9 | 113 | |
| 613.00 > 169.00 | 5.437 | 5.429 | 0.008 | 1.002 | 21838 | | 9.76(4.52-13.57) | | 76.3 | |
| 58 10:2 FTS | | | | | | | | | | |
| 627.00 > 607.00 | 5.453 | 5.445 | 0.008 | 1.133 | 119887 | 0.0481 | | 99.8 | 794 | |
| 59 PFDoS | | | | | | | | | | |
| 699.00 > 80.00 | 5.670 | 5.662 | 0.008 | 1.276 | 21426 | 0.0459 | Target=0.57 | 94.7 | 188 | |
| 699.00 > 99.00 | 5.670 | 5.662 | 0.008 | 1.276 | 37013 | | 0.58(0.29-0.86) | | 135 | |
| 60 Perfluorotridecanoic acid | | | | | | | | | | |
| 663.00 > 619.00 | 5.702 | 5.702 | 0.0 | 1.050 | 216448 | 0.0449 | Target=7.06 | 89.8 | 235 | |
| 663.00 > 169.00 | 5.709 | 5.702 | 0.007 | 1.052 | 28852 | | 7.50(3.53-10.59) | | 134 | |
| 62 Perfluorotetradecanoic acid | | | | | | | | | | |
| 713.00 > 669.00 | 5.957 | 5.950 | 0.007 | 1.000 | 220762 | 0.0474 | Target=11.23 | 94.9 | 159 | |
| 713.00 > 219.00 | 5.957 | 5.950 | 0.007 | 1.000 | 18935 | | 11.66(5.62-16.85) | | 167 | |
| D 61 13C2 PFTeDA | | | | | | | | | | |
| 715.00 > 670.00 | 5.957 | 5.950 | 0.007 | 1.462 | 11819706 | 2.50 | | 100 | 16559 | |
| D 64 13C2 PFHxDA | | | | | | | | | | |
| 815.00 > 770.00 | 6.434 | 6.435 | -0.001 | 1.579 | 13162466 | 2.68 | | 107 | 8511 | |
| 63 Perfluorohexadecanoic acid | | | | | | | | | | |
| 813.00 > 769.00 | 6.434 | 6.435 | -0.001 | 1.000 | 344886 | 0.0442 | Target=9.45 | 88.4 | 102 | |
| 813.00 > 169.00 | 6.434 | 6.435 | -0.001 | 1.000 | 38611 | | 8.93(4.72-14.17) | | 231 | |
| 65 Perfluorooctadecanoic acid | | | | | | | | | | |
| 913.00 > 869.00 | 6.911 | 6.902 | 0.009 | 1.074 | 174082 | 0.0453 | Target=11.13 | 90.5 | 120 | |
| 913.00 > 169.00 | 6.911 | 6.902 | 0.009 | 1.074 | 15694 | | 11.09(5.56-16.69) | | 125 | |

## QC Flag Legend

Review Flags

M - Manually Integrated

## Reagents:

LCPFC_LLCCVL_00026 Amount Added: 1.00 Units: mL

Report Date: 10-Sep-2020 11:17:25 Chrom Revision: 2.3 09-Sep-2020 15:12:58

Eurofins TestAmerica, Sacramento

Data File: \\chromfs\Sacramento\ChromData\A13\20200910-103012.b\2020.09.10_A13_PFC_A_005.d

Injection Date: 10-Sep-2020 10:46:09 Instrument ID: A13

Lims ID: CCVL

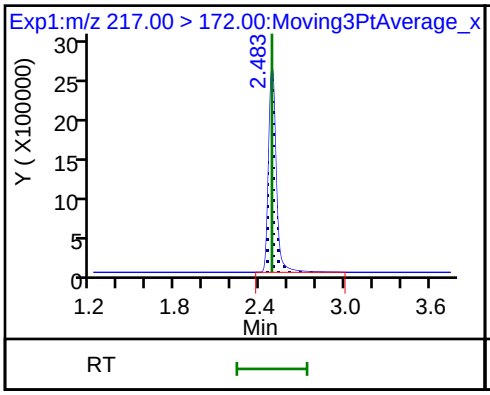
Client ID:

Operator ID: SACINSTLCMS01 ALS Bottle#: 51 Worklist Smp#: 2

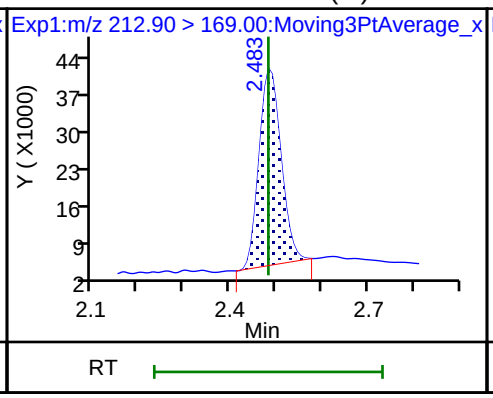
Injection Vol: 20.0 ul Dil. Factor: 1.0000

Method: PFAS_A13 Limit Group: LC PFC ICAL

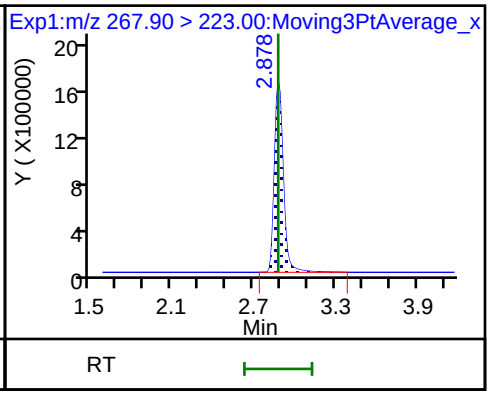
D 1 13C4 PFBA



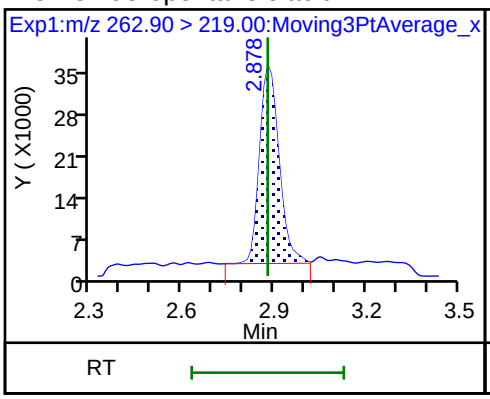

2 Perfluorobutanoic acid (M)



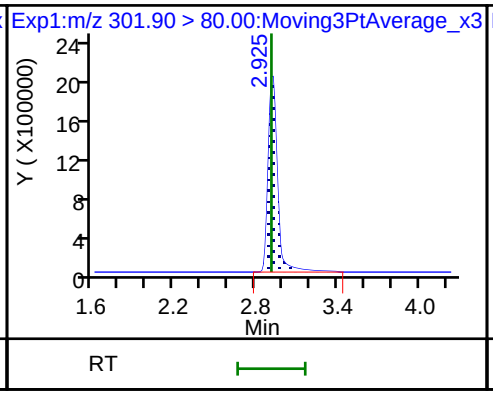

D 4 13C5 PFPeA



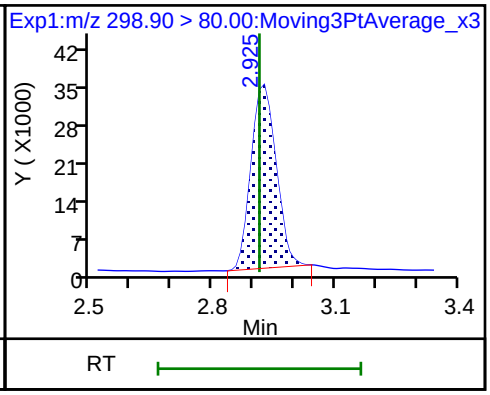

5 Perfluoropentanoic acid



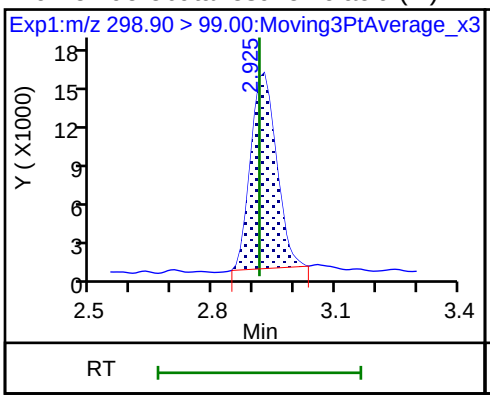

D 14 13C3 PFBS



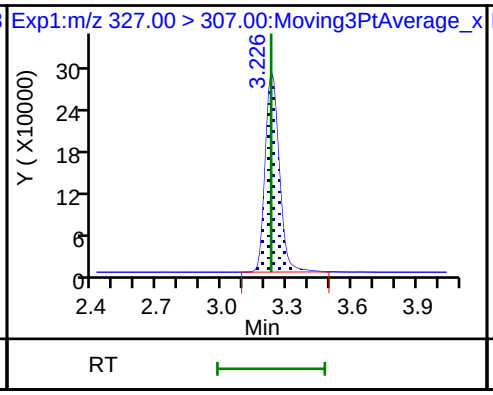

6 Perfluorobutanesulfonic acid



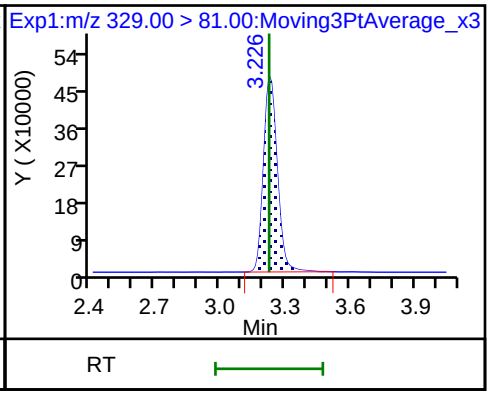

6 Perfluorobutanesulfonic acid (M)



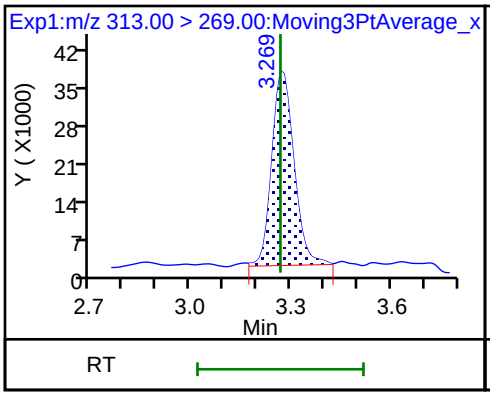

7 4:2 FTS



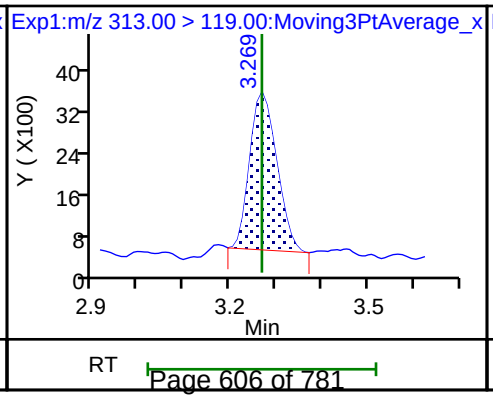

D 8 M2-4:2 FTS



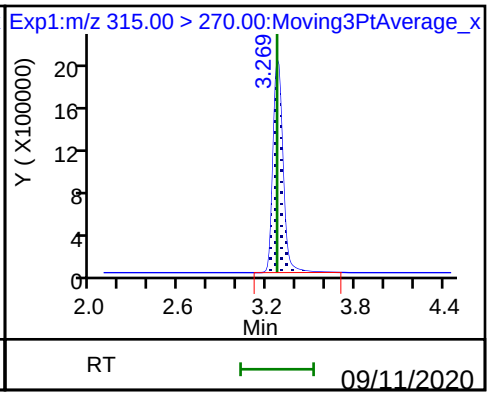

10 Perfluorohexanoic acid



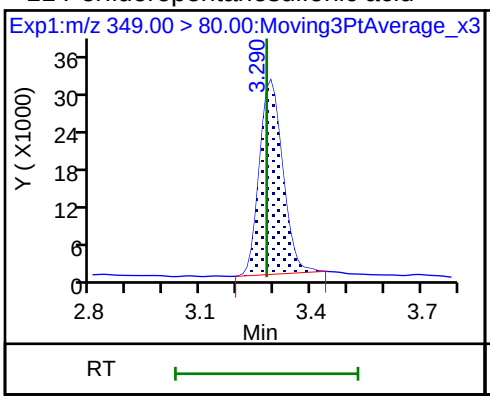

10 Perfluorohexanoic acid



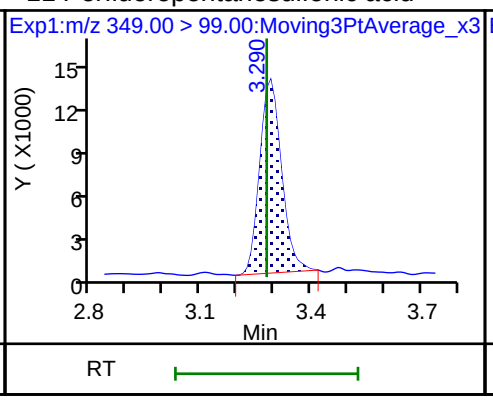

D 9 13C2 PFHxA



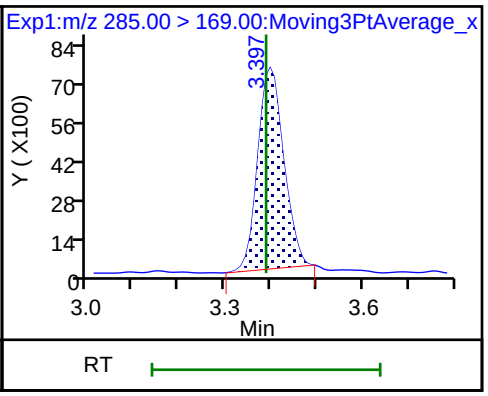
11 Perfluoropentanesulfonic acid



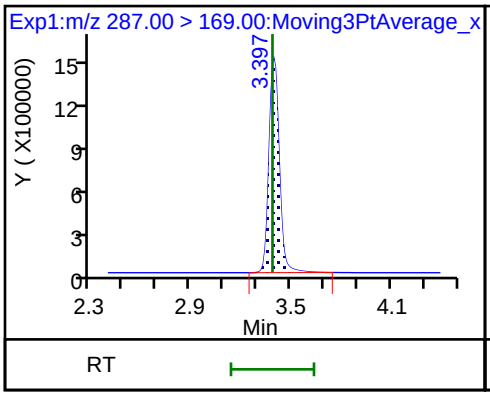

11 Perfluoropentanesulfonic acid



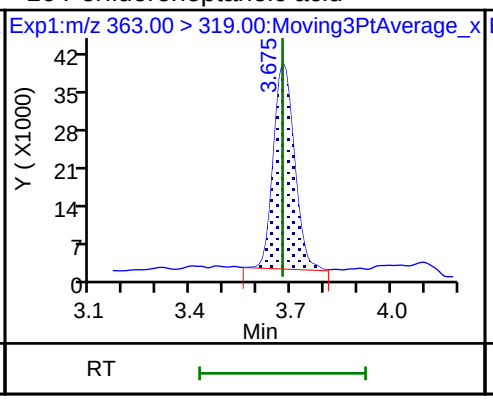

12 HPFO-DA



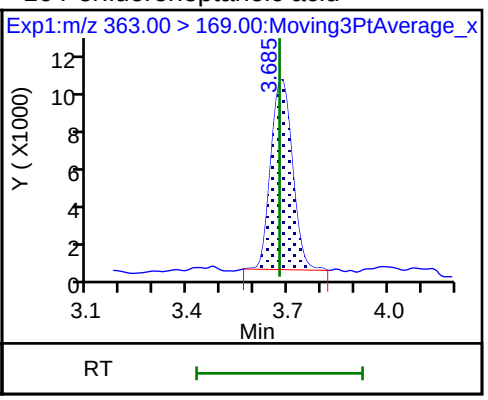

D 13 13C3 HFPO-DA



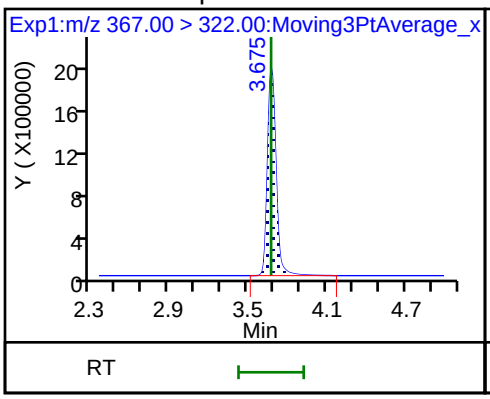

16 Perfluoroheptanoic acid



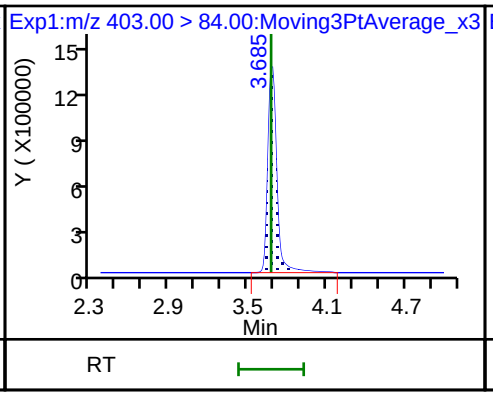

16 Perfluoroheptanoic acid



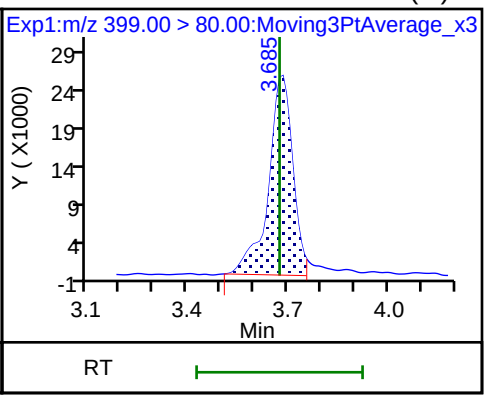

D 15 13C4 PFHpA



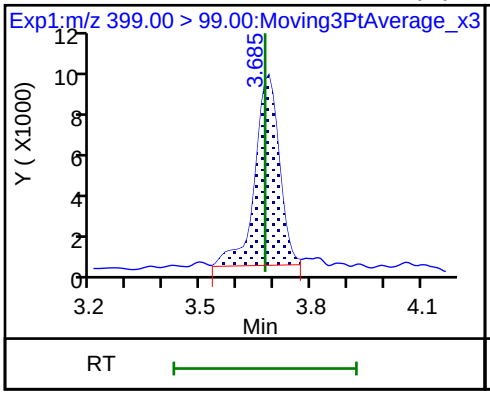

D 17 18O2 PFHxS



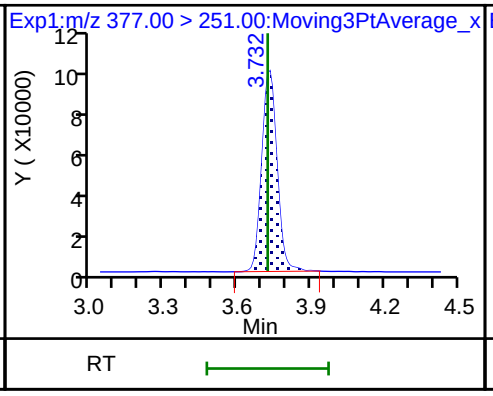

18 Perfluorohexanesulfonic acid (M)



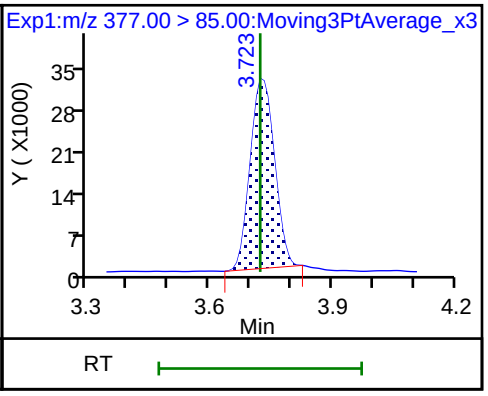

18 Perfluorohexanesulfonic acid (M)



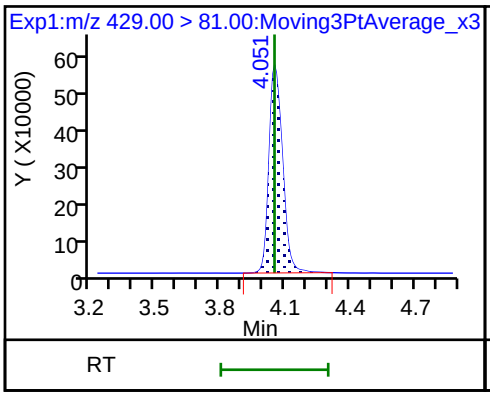

19 DONA



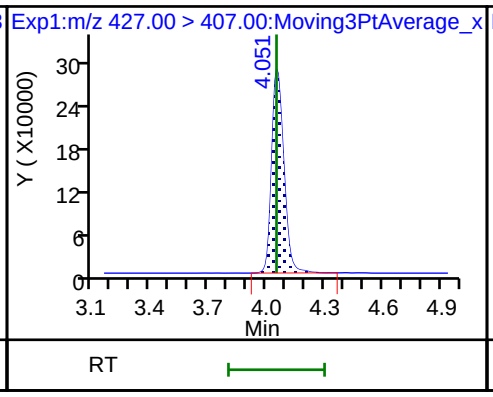

19 DONA



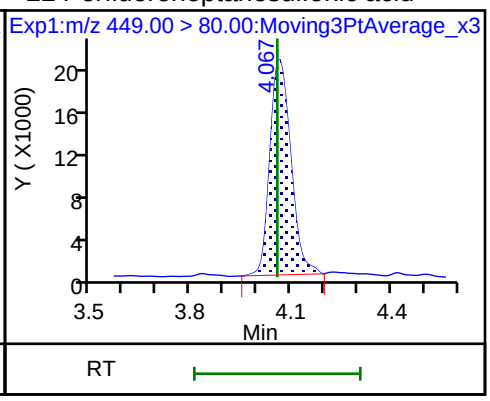
D 20 M2-6:2 FTS



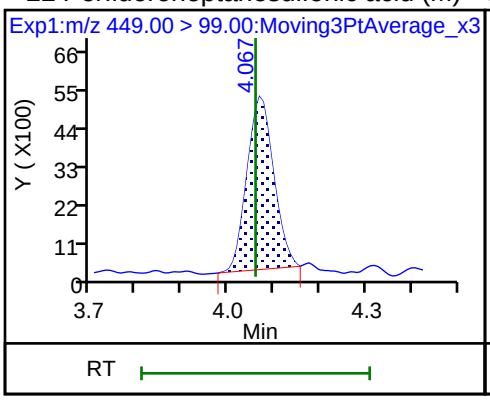

21 6:2 FTS



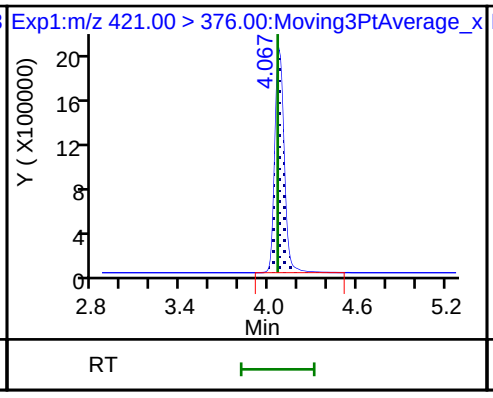

22 Perfluoroheptanesulfonic acid



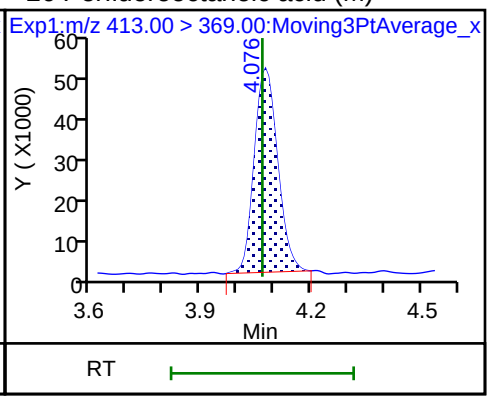

22 Perfluoroheptanesulfonic acid (M)



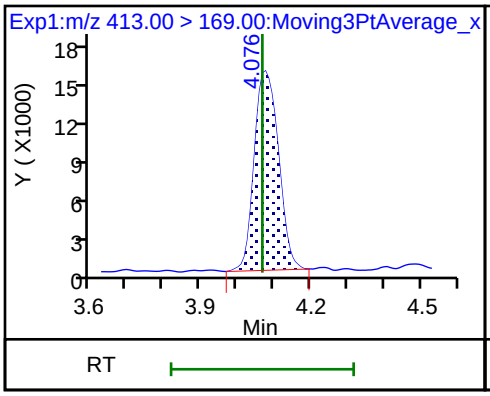

$ 23 13C8 PFOA



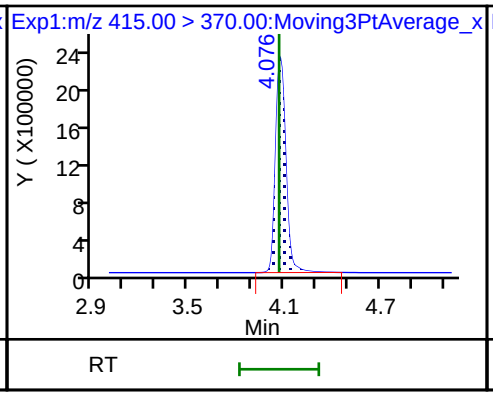

26 Perfluorooctanoic acid (M)



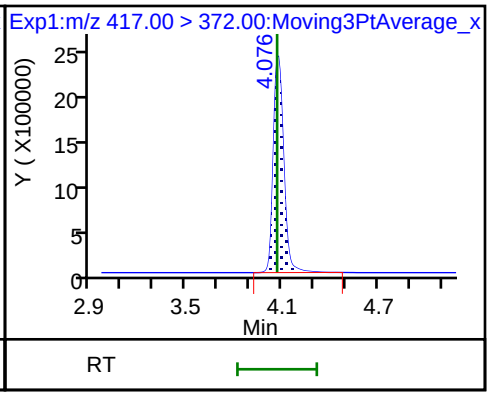

26 Perfluorooctanoic acid



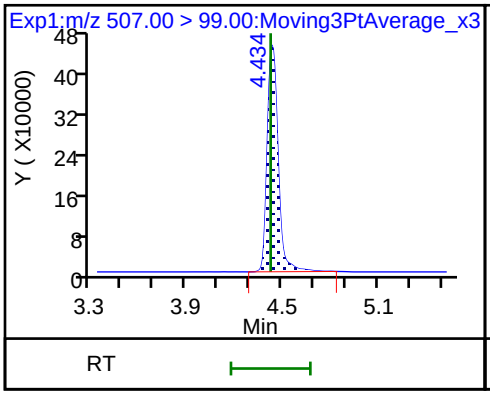

* 25 13C2 PFOA



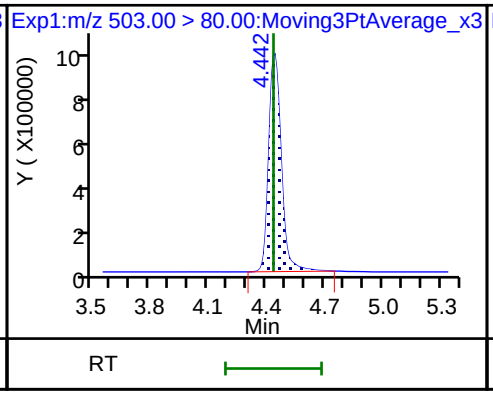

D 24 13C4 PFOA



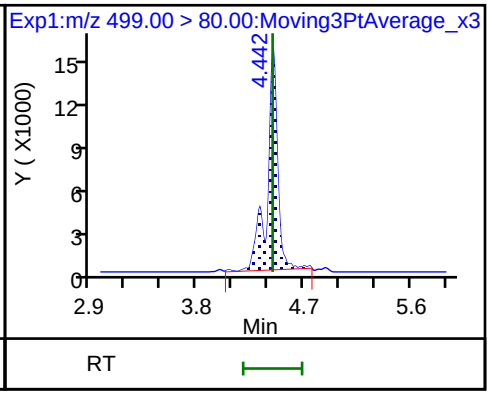

$ 27 13C8 PFOS



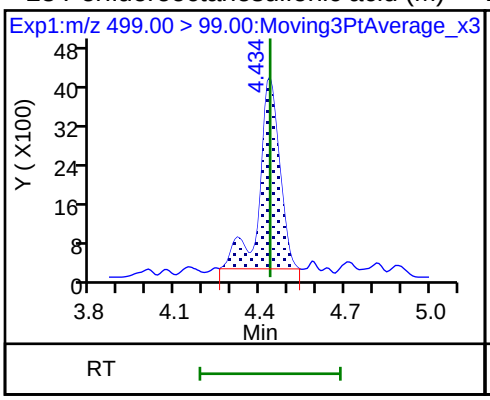

D 29 13C4 PFOS



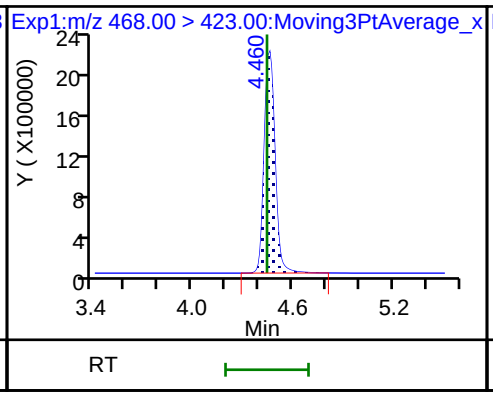

28 Perfluorooctanesulfonic acid



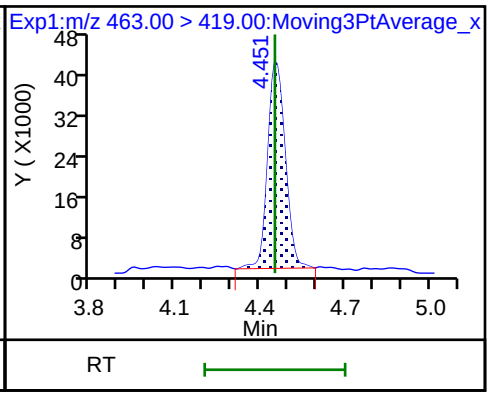
28 Perfluorooctanesulfonic acid (M)



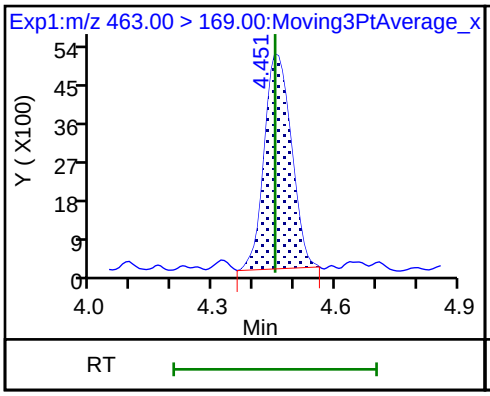

D 31 13C5 PFNA



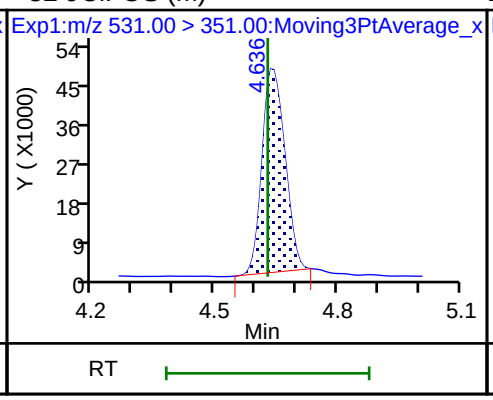

30 Perfluorononanoic acid



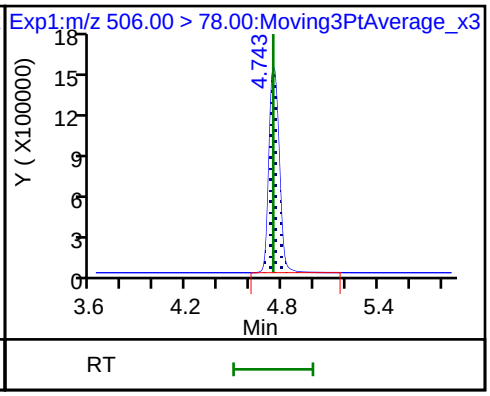

30 Perfluorononanoic acid



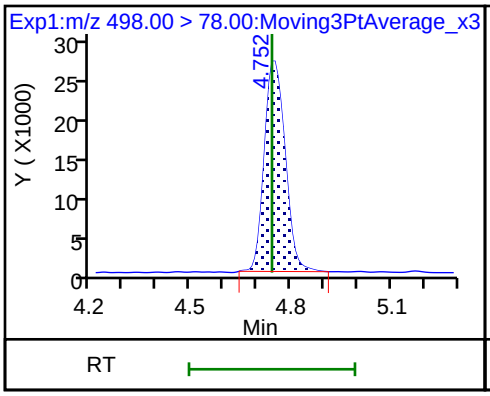

32 9ClFOS (M)



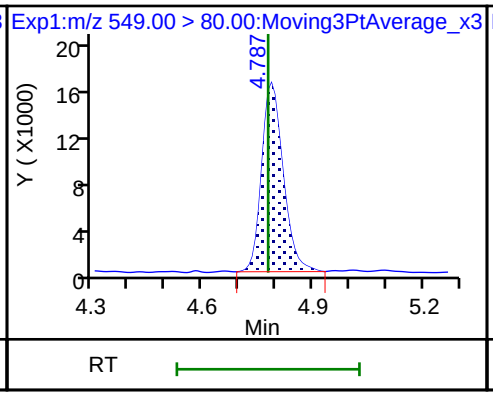

D 34 13C8 FOSA



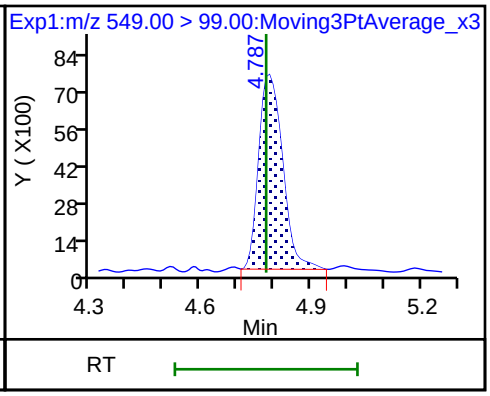

33 Perfluorooctanesulfonamide



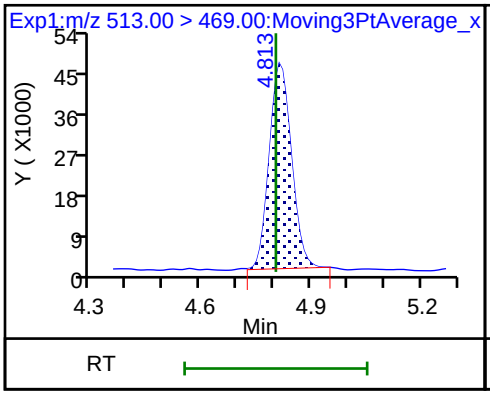

35 Perfluorononanesulfonic acid



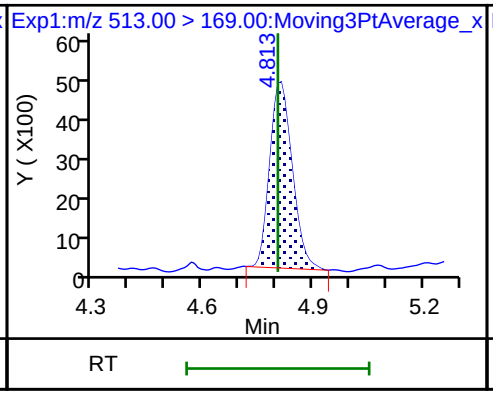

35 Perfluorononanesulfonic acid



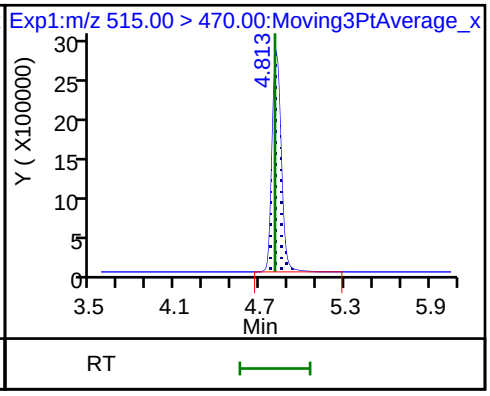

36 Perfluorodecanoic acid



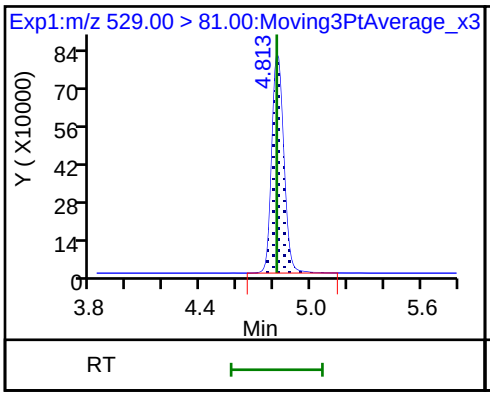

36 Perfluorodecanoic acid



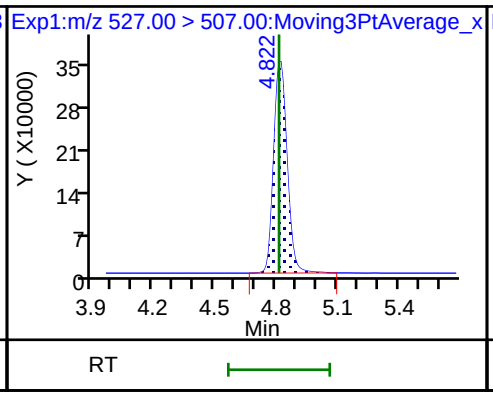

D 37 13C2 PFDA



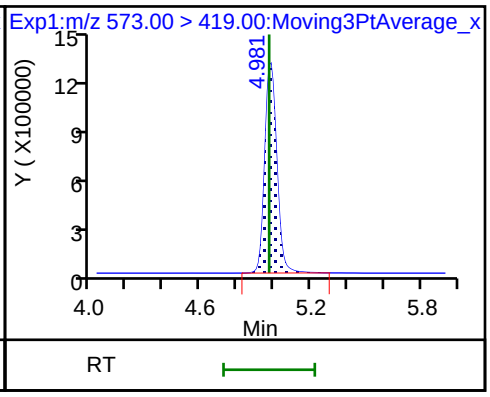
D 38 M2-8:2 FTS



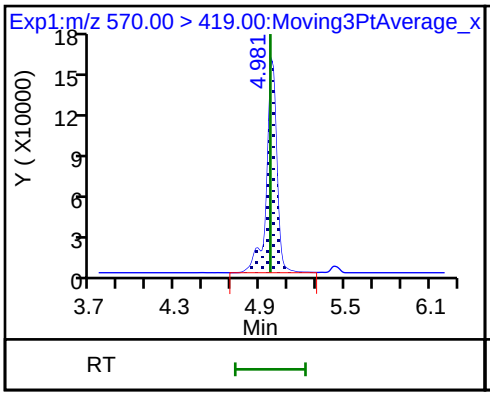

39 8:2 FTS



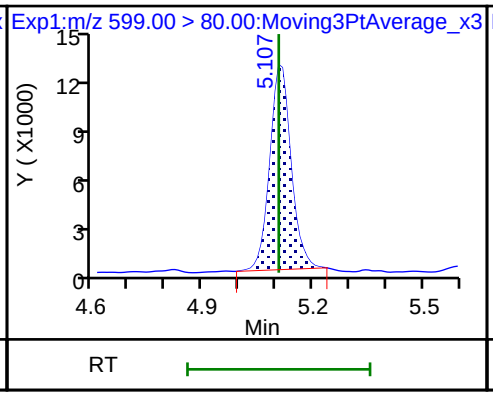

D 40 d3-NMeFOSAA



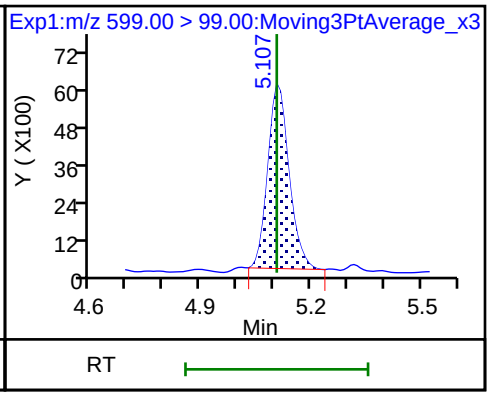

41 NMeFOSAA



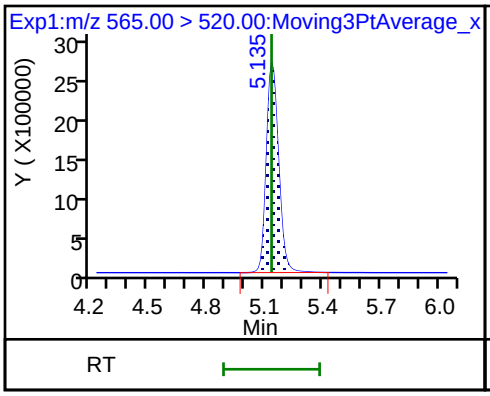

42 Perfluorodecanesulfonic acid



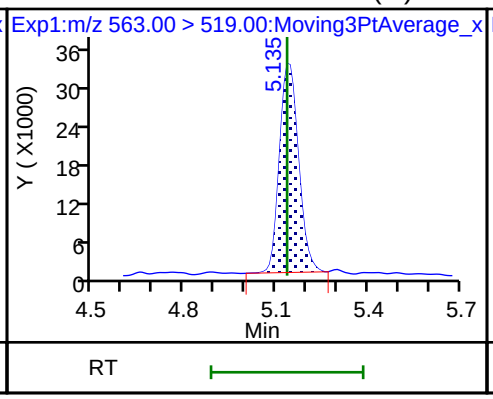

42 Perfluorodecanesulfonic acid



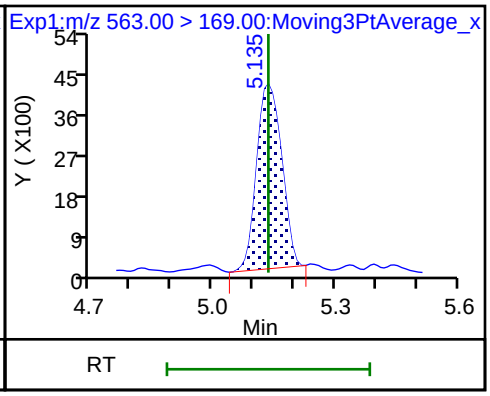

D 44 13C2 PFUnA



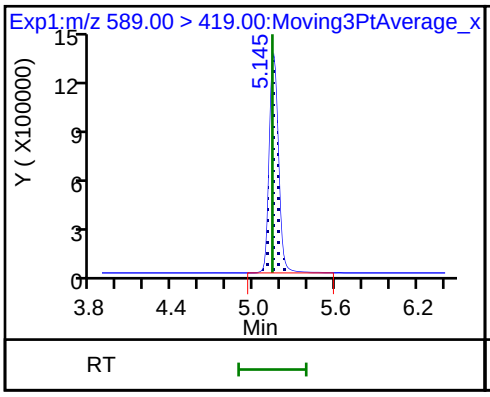

45 Perfluoroundecanoic acid (M)



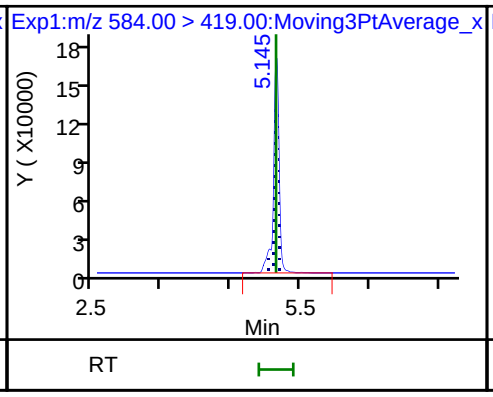

45 Perfluoroundecanoic acid



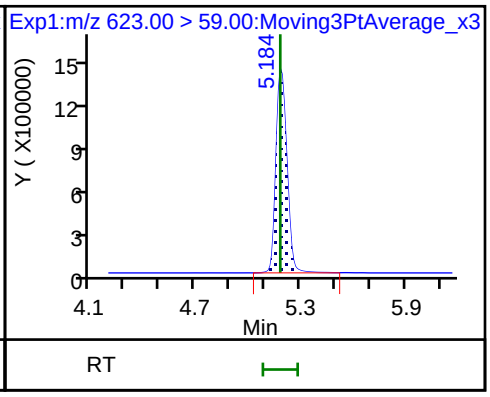

D 46 d5-NEtFOSAA



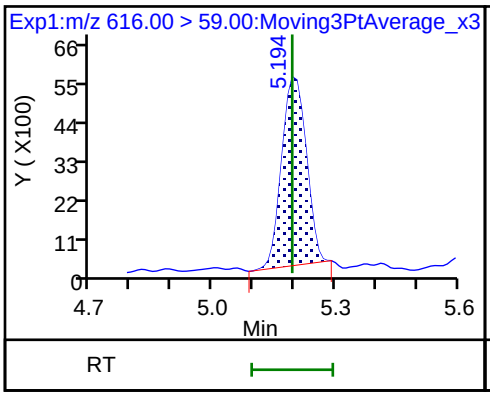

48 NEtFOSA



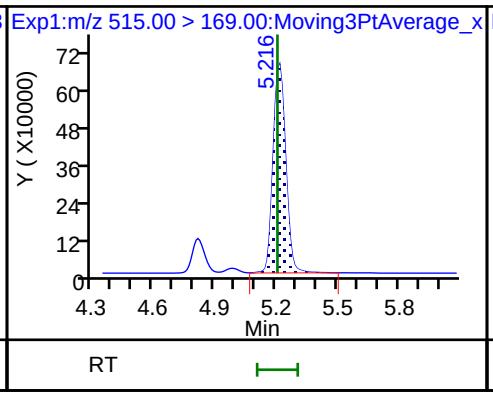

D 43 d7-N-MeFOSE-M



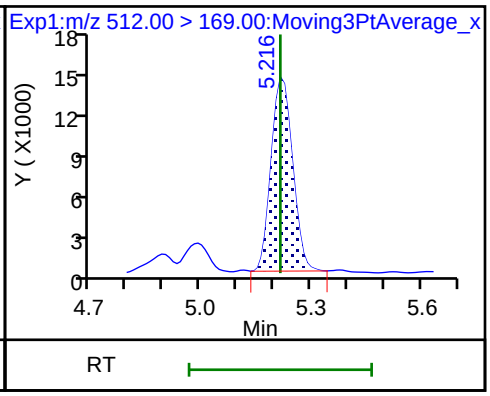
47 N-MeFOSE-M



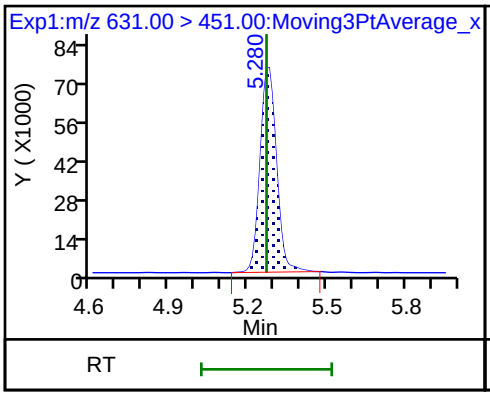

D 49 d-N-MeFOSA-M



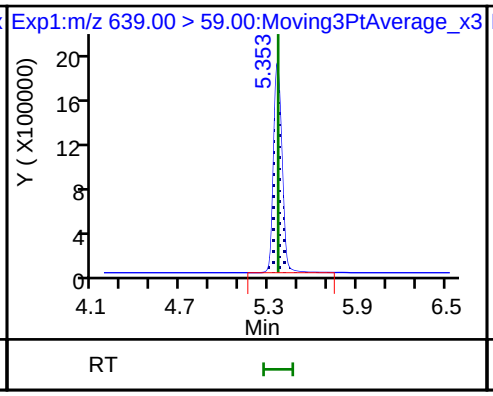

50 NMeFOSA



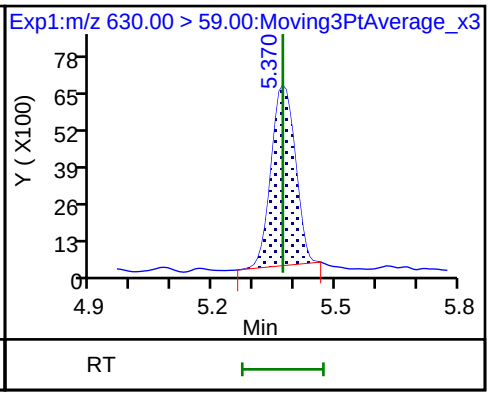

51 11ClFOS



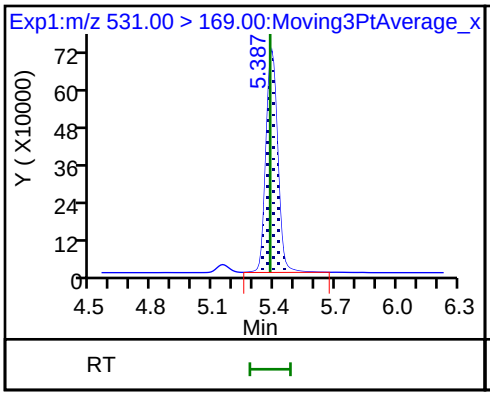

D 52 d9-N-EtFOSE-M



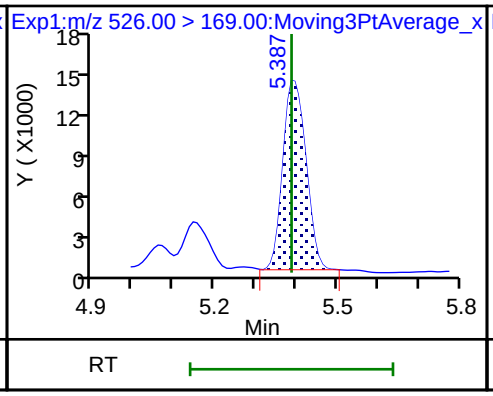

53 N-EtFOSE-M



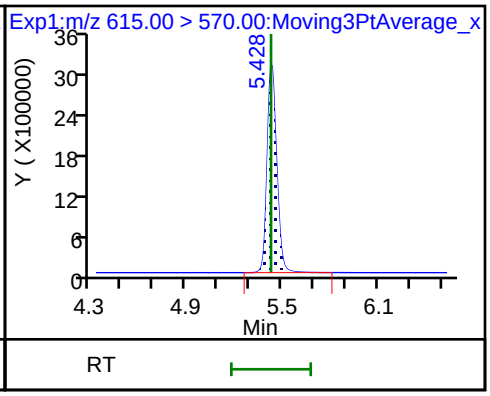

D 54 d-N-EtFOSA-M



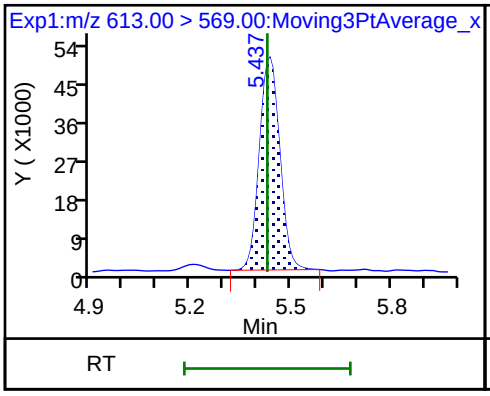

55 N-EtFOSA-M



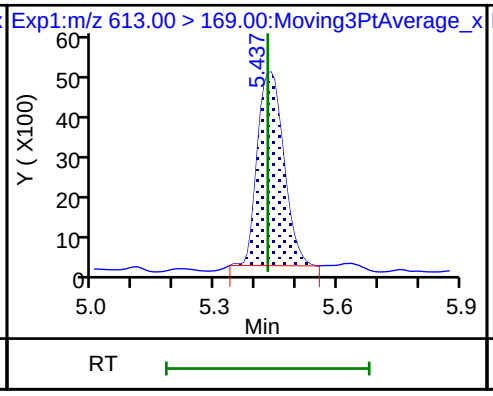

D 56 13C2 PFDoA



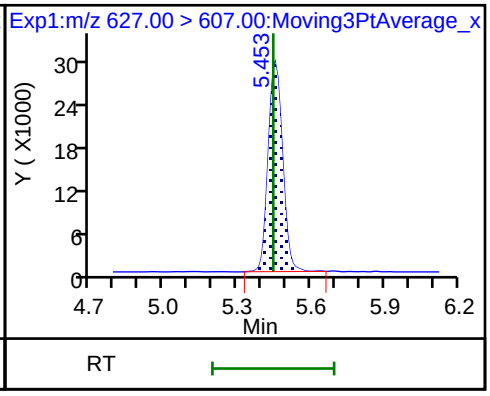

57 Perfluorododecanoic acid



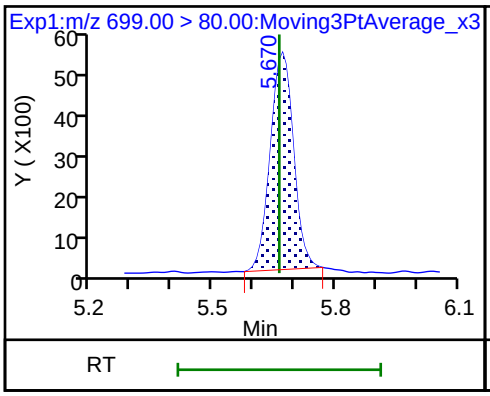

57 Perfluorododecanoic acid



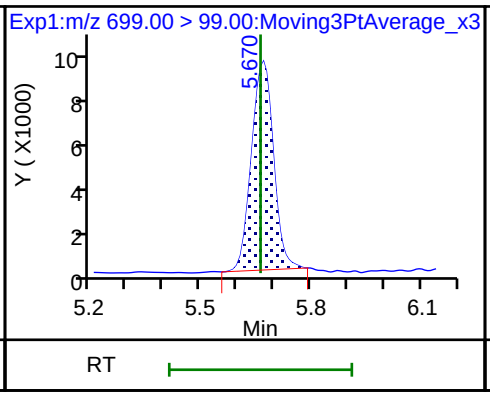

58 10:2 FTS



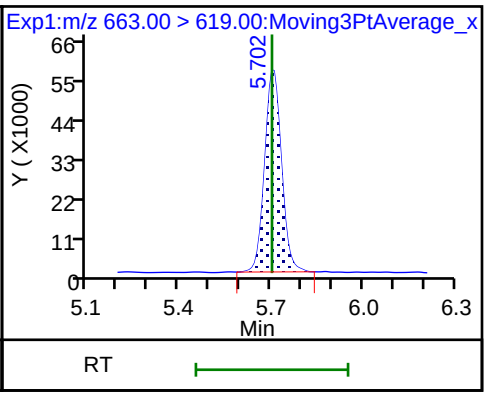
59 PFDoS



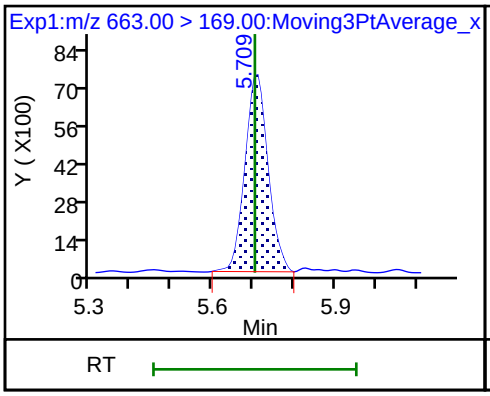

59 PFDoS



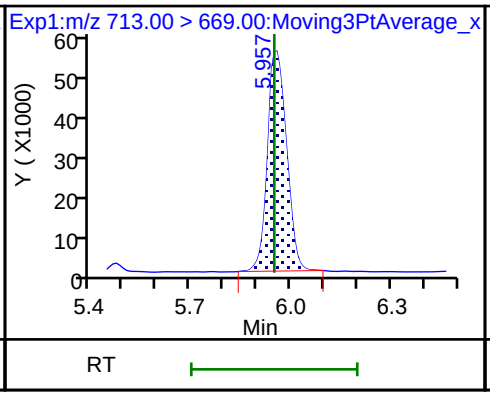

60 Perfluorotridecanoic acid



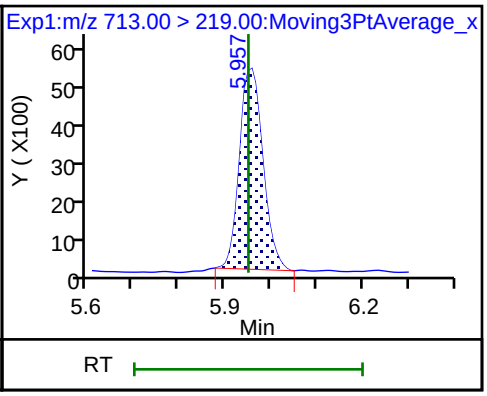

60 Perfluorotridecanoic acid



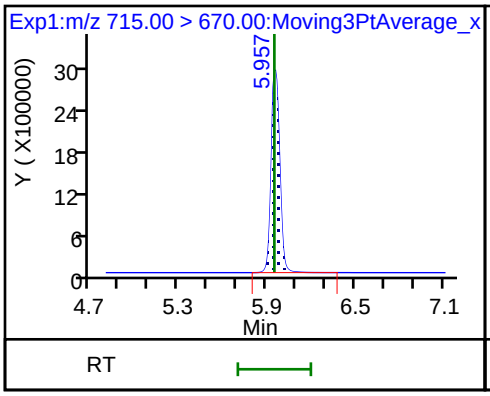

62 Perfluorotetradecanoic acid



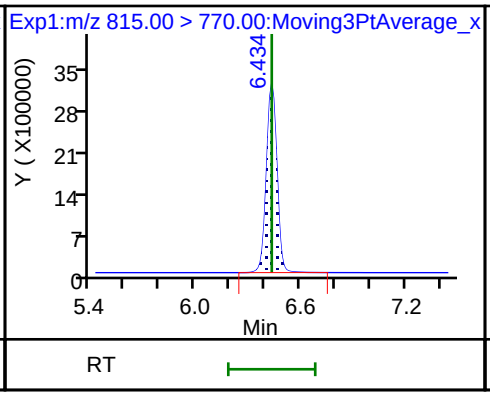

62 Perfluorotetradecanoic acid



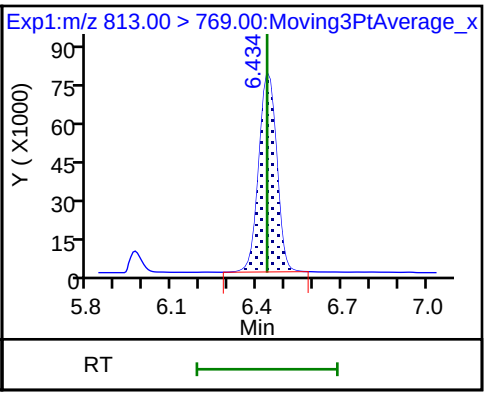

D 61 13C2 PFTeDA



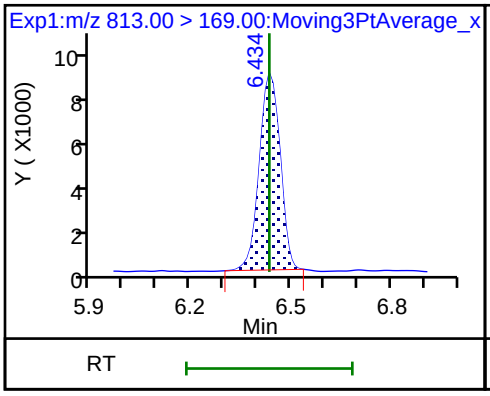

D 64 13C2 PFHxDA



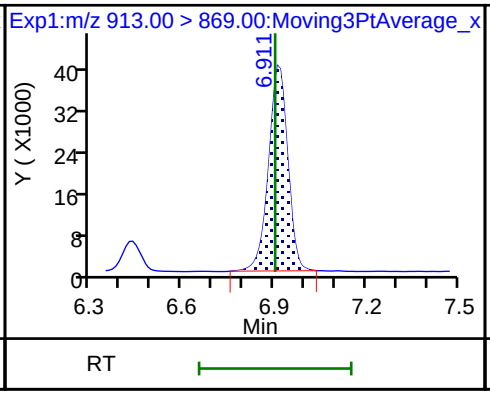

63 Perfluorohexadecanoic acid



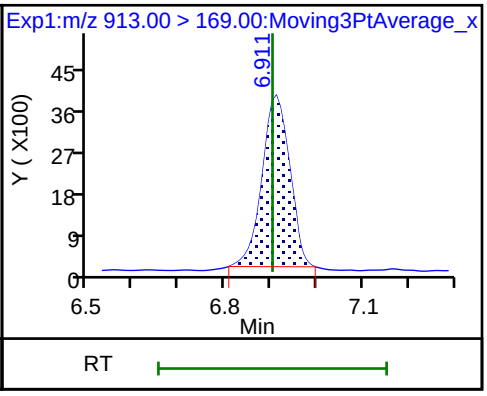

63 Perfluorohexadecanoic acid




65 Perfluorooctadecanoic acid




65 Perfluorooctadecanoic acid



Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

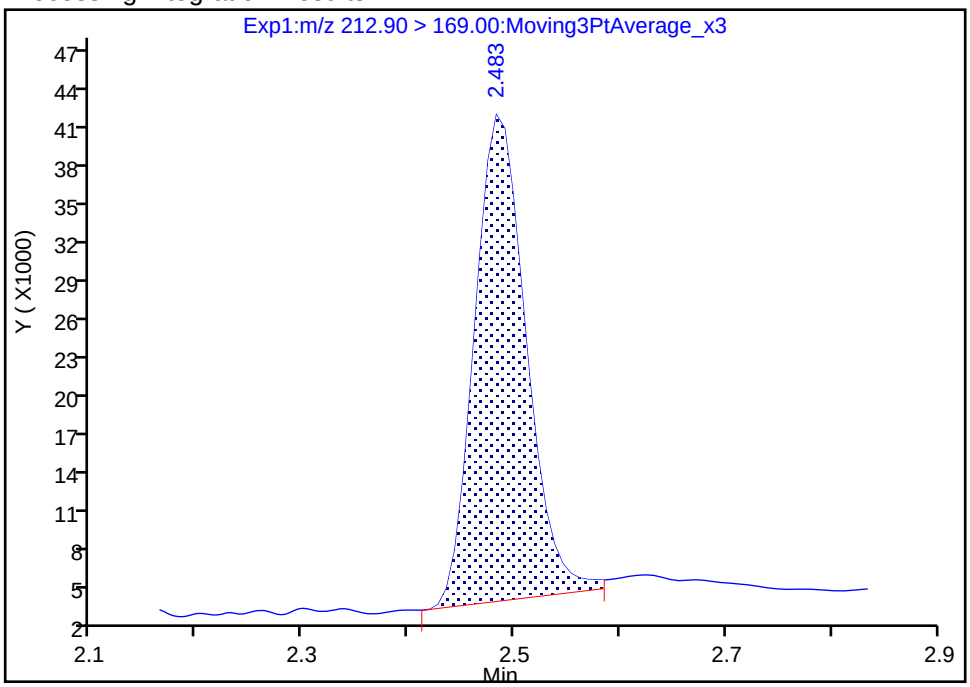
Data File: \\chromfs\Sacramento\ChromData\A13\20200910-103012.b\2020.09.10_A13_PFC_A_005.d
Injection Date: 10-Sep-2020 10:46:09 Instrument ID: A13
Lims ID: CCVL
Client ID:
Operator ID: SACINSTLCMS01 ALS Bottle#: 51 Worklist Smp#: 2
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFAS_A13 Limit Group: LC PFC ICAL
Column: Gemini C18 3um 3 x 100mm ( 3.00 mm) Detector EXP1

## 2 Perfluorobutanoic acid, CAS: 375-22-4

Signal: 1

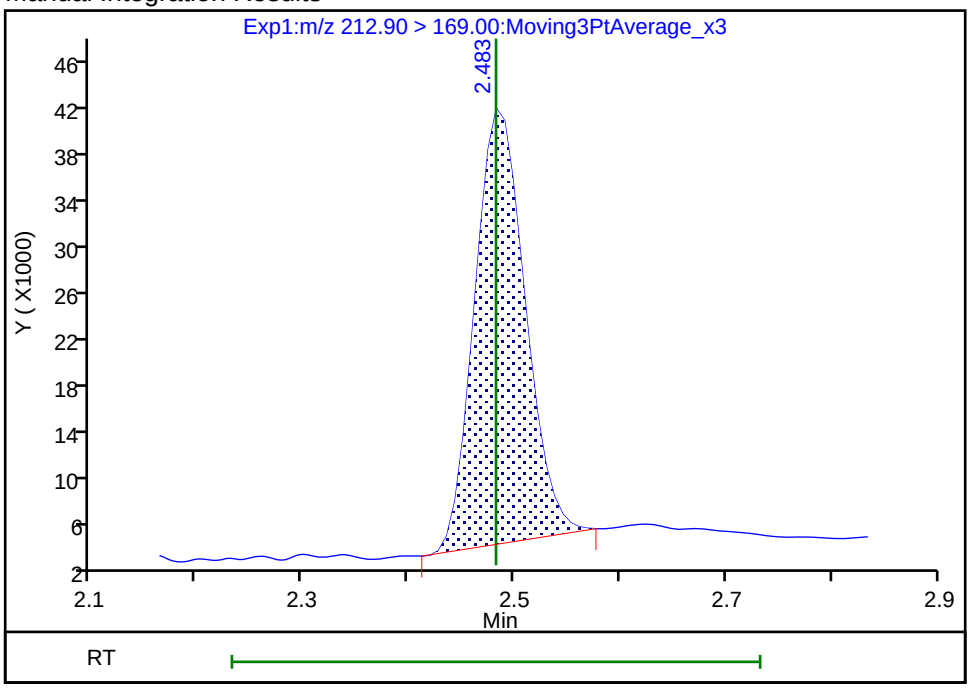
Processing Integration Results

RT: 2.48
Area: 126406
Amount: 0.044436
Amount Units: ng/ml




Manual Integration Results

RT: 2.48
Area: 122348
Amount: 0.043009
Amount Units: ng/ml




Reviewer: hsuw, 10-Sep-2020 11:15:06
Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

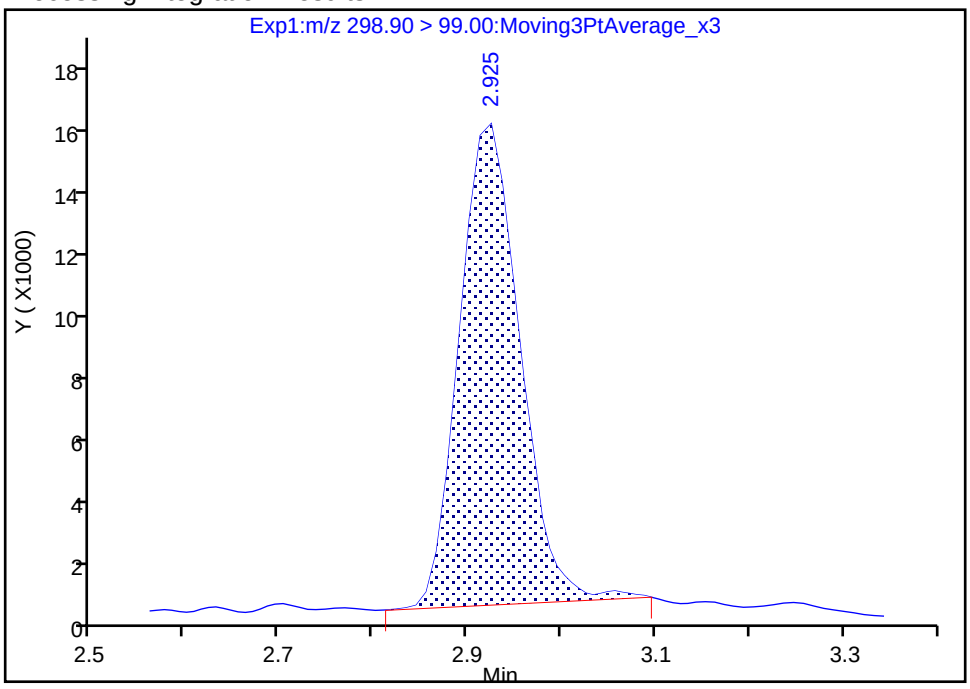
Data File: \\chromfs\Sacramento\ChromData\A13\20200910-103012.b\2020.09.10_A13_PFC_A_005.d
Injection Date: 10-Sep-2020 10:46:09 Instrument ID: A13
Lims ID: CCVL
Client ID:
Operator ID: SACINSTLCMS01 ALS Bottle#: 51 Worklist Smp#: 2
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFAS_A13 Limit Group: LC PFC ICAL
Column: Gemini C18 3um 3 x 100mm ( 3.00 mm ) Detector EXP1

## 6 Perfluorobutanesulfonic acid, CAS: 375-73-5

Signal: 2

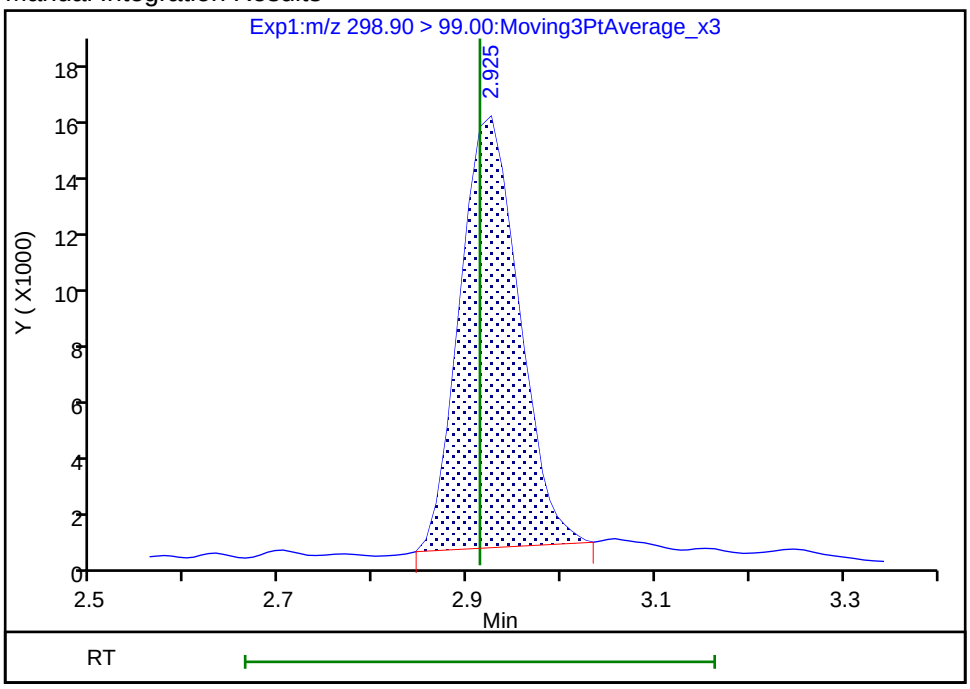
Processing Integration Results

RT: 2.93
Area: 68434
Amount: 0.037594
Amount Units: ng/ml




Manual Integration Results

RT: 2.93
Area: 66207
Amount: 0.037594
Amount Units: ng/ml




Reviewer: hsuw, 10-Sep-2020 11:15:16
Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

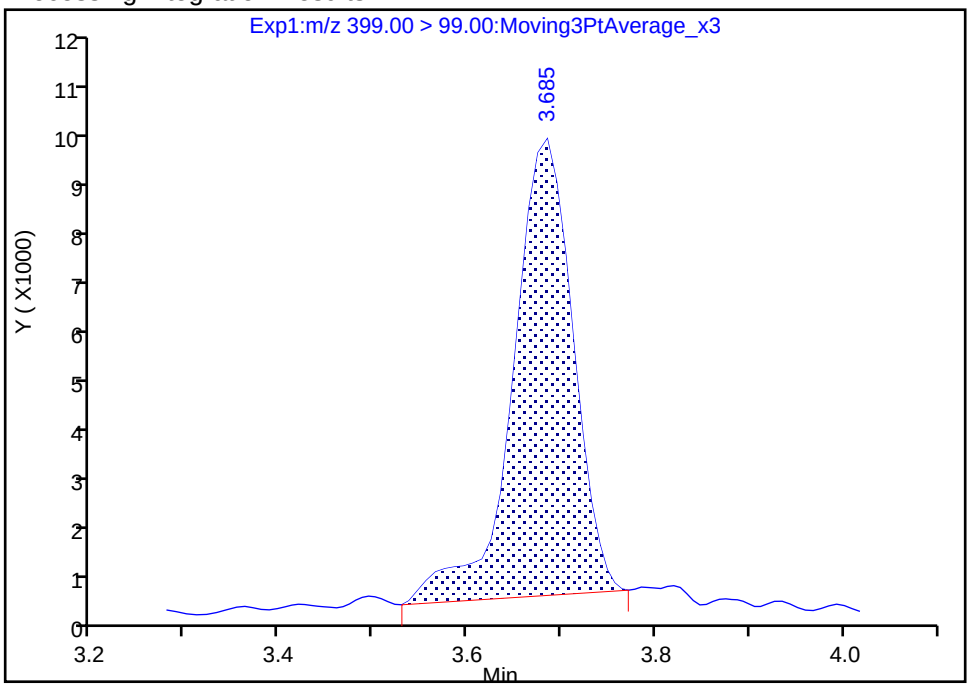
Data File: \\chromfs\Sacramento\ChromData\A13\20200910-103012.b\2020.09.10_A13_PFC_A_005.d
Injection Date: 10-Sep-2020 10:46:09 Instrument ID: A13
Lims ID: CCVL
Client ID:
Operator ID: SACINSTLCMS01 ALS Bottle#: 51 Worklist Smp#: 2
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFAS_A13 Limit Group: LC PFC ICAL
Column: Gemini C18 3um 3 x 100mm ( 3.00 mm ) Detector EXP1

## 18 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 2

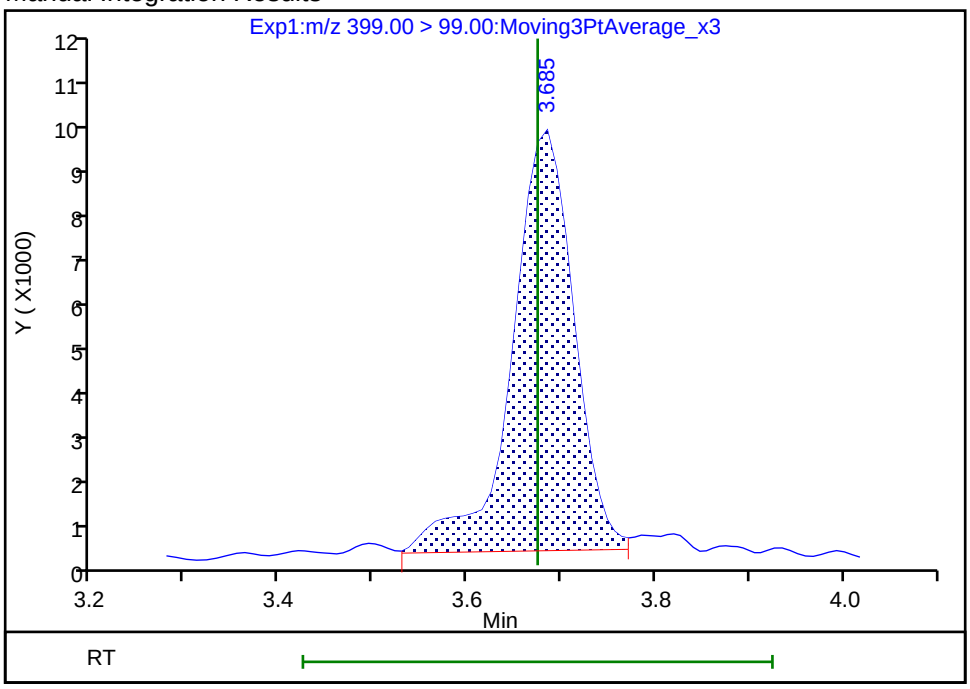
Processing Integration Results

RT: 3.68
Area: 39003
Amount: 0.047788
Amount Units: ng/ml




Manual Integration Results

RT: 3.68
Area: 41043
Amount: 0.043171
Amount Units: ng/ml




Reviewer: hsuw, 10-Sep-2020 11:15:41
Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

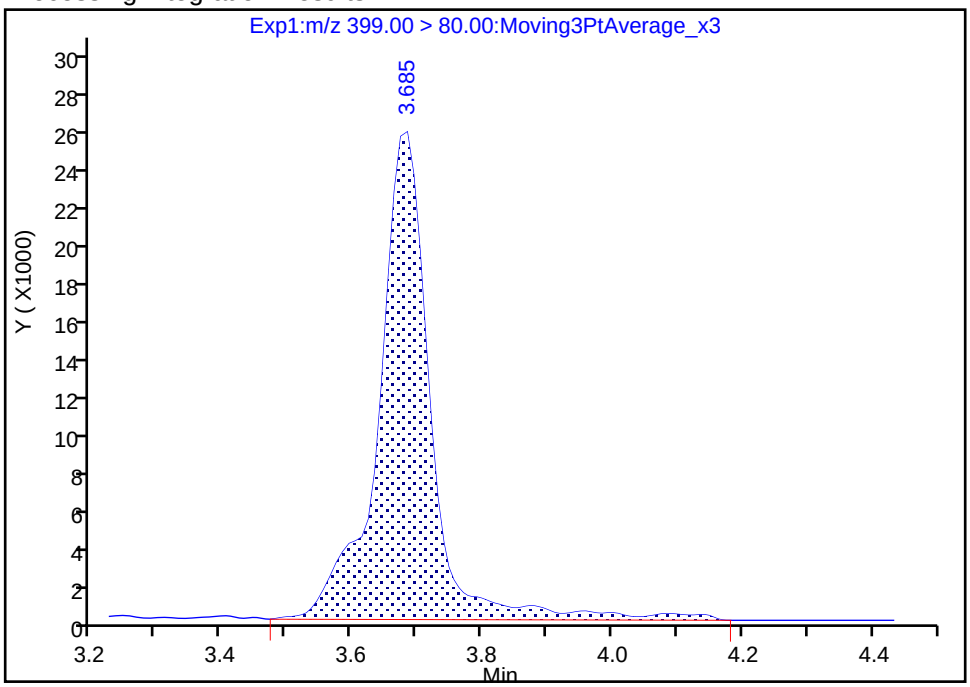
Data File: \\chromfs\Sacramento\ChromData\A13\20200910-103012.b\2020.09.10_A13_PFC_A_005.d
Injection Date: 10-Sep-2020 10:46:09 Instrument ID: A13
Lims ID: CCVL
Client ID:
Operator ID: SACINSTLCMS01 ALS Bottle#: 51 Worklist Smp#: 2
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFAS_A13 Limit Group: LC PFC ICAL
Column: Gemini C18 3um 3 x 100mm ( 3.00 mm ID) Detector EXP1

## 18 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 1

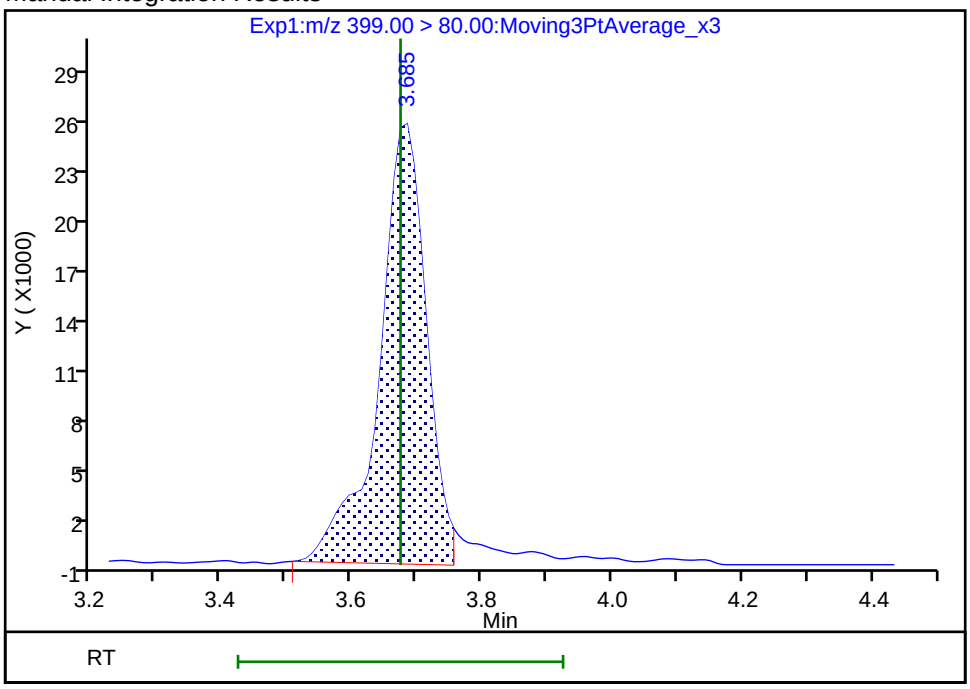
Processing Integration Results

RT: 3.68
Area: 141263
Amount: 0.047788
Amount Units: ng/ml




Manual Integration Results

RT: 3.68
Area: 127615
Amount: 0.043171
Amount Units: ng/ml




Reviewer: hsuw, 10-Sep-2020 11:15:46
Audit Action: Manually Integrated Audit Reason: Baseline

Eurofins TestAmerica, Sacramento

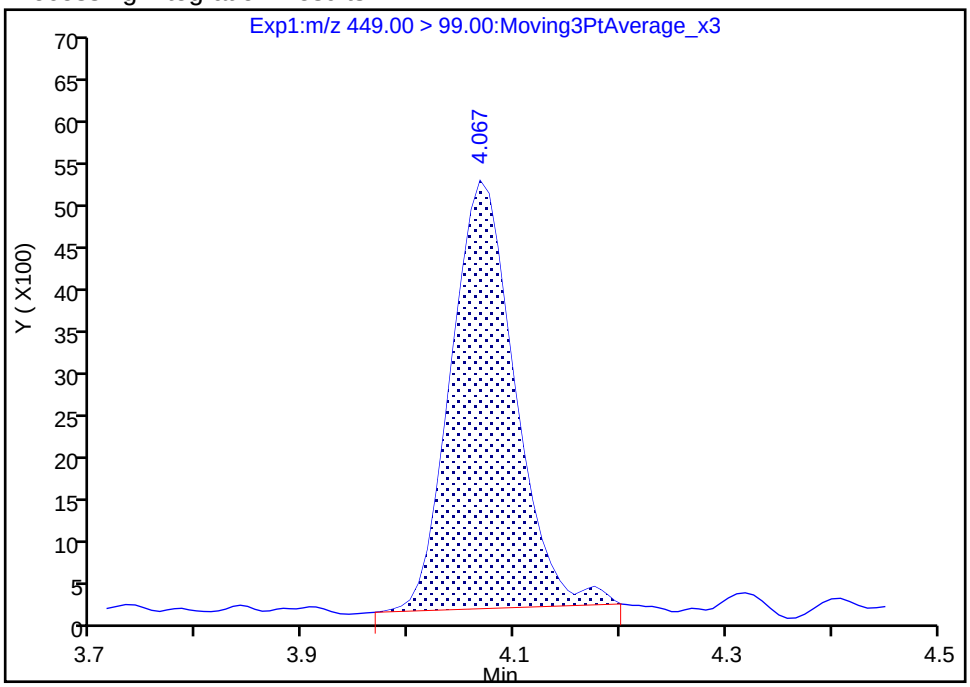
| | | | | | |
|---|---|---|---|---|---|
| Data File: | \\chromfs\Sacramento\ChromData\A13\20200910-103012.b\2020.09.10_A13_PFC_A_005.d | | | | |
| Injection Date: | 10-Sep-2020 10:46:09 | Instrument ID: | A13 | | |
| Lims ID: | CCVL | | | | |
| Client ID: | | | | | |
| Operator ID: | SACINSTLCMS01 | ALS Bottle#: | 51 | Worklist Smp#: | 2 |
| Injection Vol: | 20.0 ul | Dil. Factor: | 1.0000 | | |
| Method: | PFAS_A13 | Limit Group: | LC PFC ICAL | | |
| Column: | Gemini C18 3um 3 x 100mm ( 3.00 mm ID) | Detector | EXP1 | | |

## 22 Perfluoroheptanesulfonic acid, CAS: 375-92-8

Signal: 2

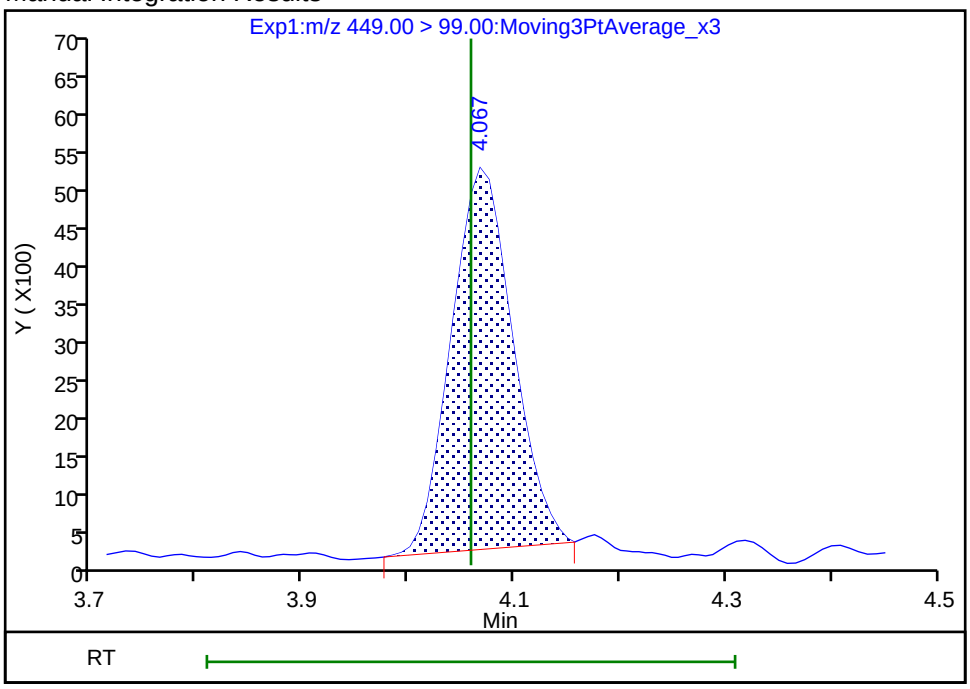
Processing Integration Results

RT: 4.07
Area: 21569
Amount: 0.043354
Amount Units: ng/ml




Manual Integration Results

RT: 4.07
Area: 20457
Amount: 0.043354
Amount Units: ng/ml




Reviewer: hsuw, 10-Sep-2020 11:16:01
Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

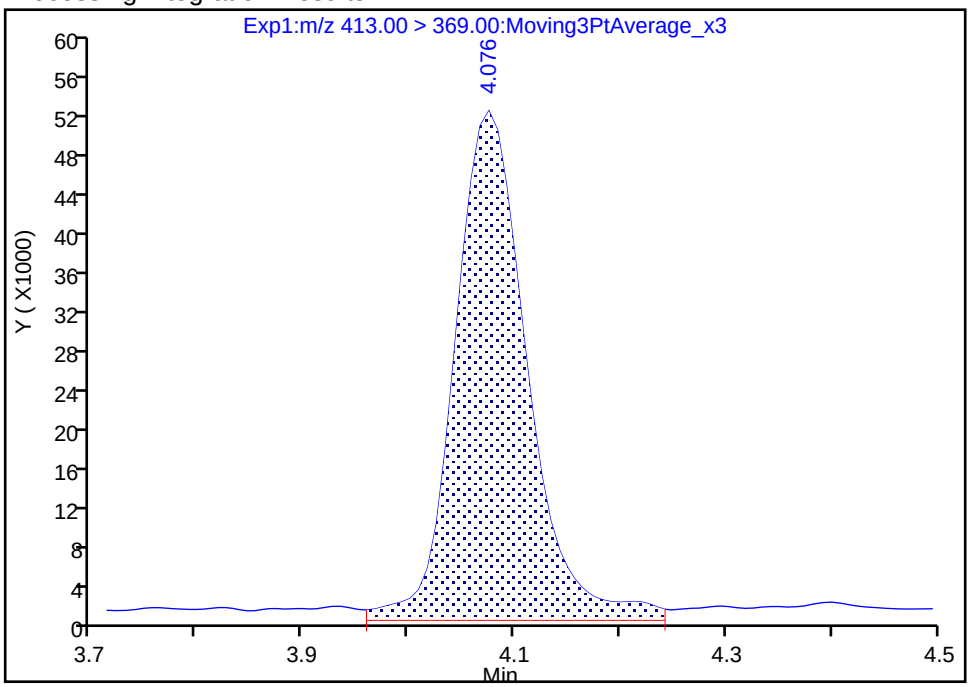
Data File: \\chromfs\Sacramento\ChromData\A13\20200910-103012.b\2020.09.10_A13_PFC_A_005.d
Injection Date: 10-Sep-2020 10:46:09 Instrument ID: A13
Lims ID: CCVL
Client ID:
Operator ID: SACINSTLCMS01 ALS Bottle#: 51 Worklist Smp#: 2
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFAS_A13 Limit Group: LC PFC ICAL
Column: Gemini C18 3um 3 x 100mm ( 3.00 mm ) Detector EXP1

## 26 Perfluorooctanoic acid, CAS: 335-67-1

Signal: 1

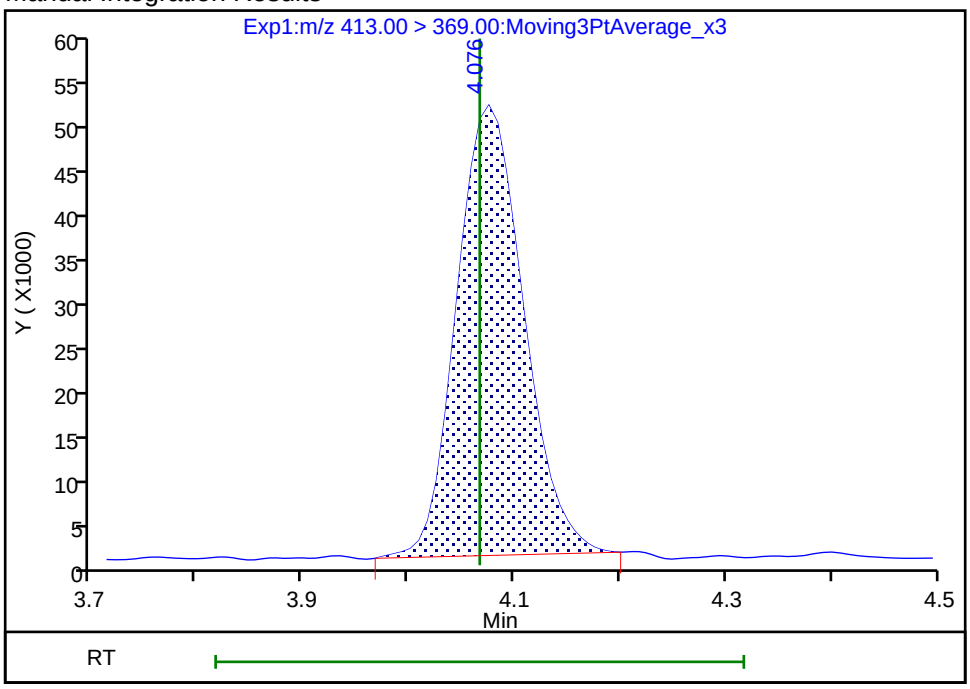
Processing Integration Results

RT: 4.08
Area: 247747
Amount: 0.056241
Amount Units: ng/ml




Manual Integration Results

RT: 4.08
Area: 222011
Amount: 0.050398
Amount Units: ng/ml




Reviewer: hsuw, 10-Sep-2020 11:16:11
Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

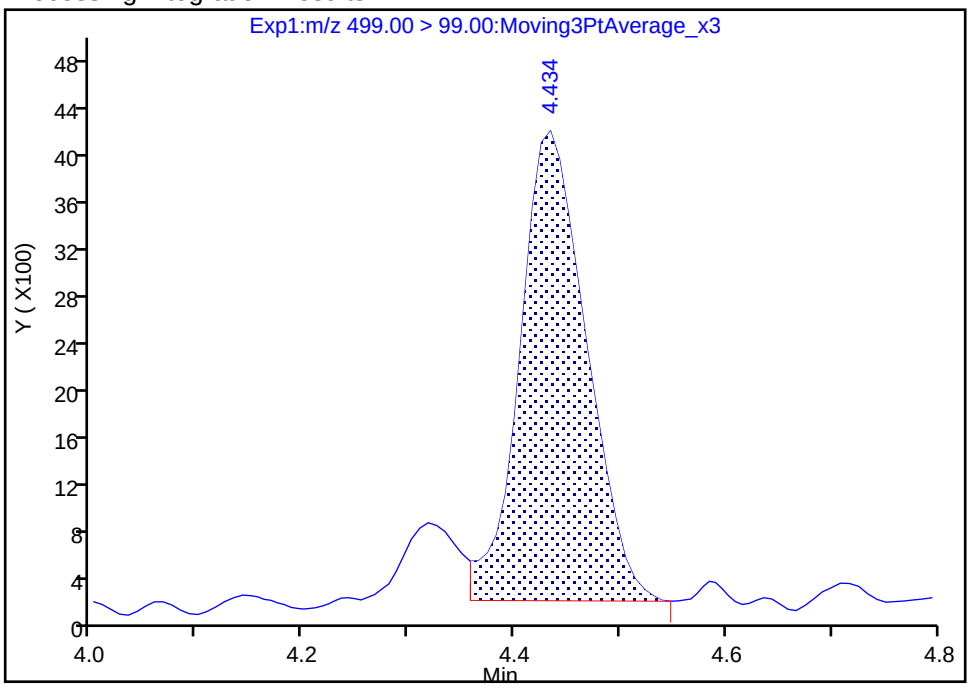
Data File: \\chromfs\Sacramento\ChromData\A13\20200910-103012.b\2020.09.10_A13_PFC_A_005.d
Injection Date: 10-Sep-2020 10:46:09 Instrument ID: A13
Lims ID: CCVL
Client ID:
Operator ID: SACINSTLCMS01 ALS Bottle#: 51 Worklist Smp#: 2
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFAS_A13 Limit Group: LC PFC ICAL
Column: Gemini C18 3um 3 x 100mm ( 3.00 mm) Detector EXP1

## 28 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 2

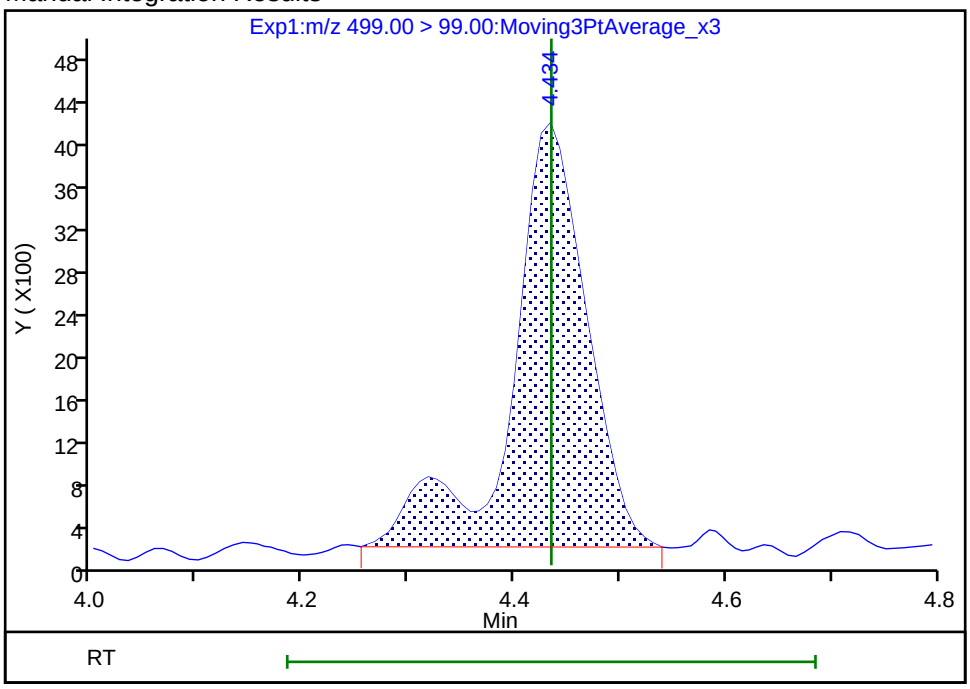
Processing Integration Results

RT: 4.43
Area: 17414
Amount: 0.048260
Amount Units: ng/ml




Manual Integration Results

RT: 4.43
Area: 19655
Amount: 0.048260
Amount Units: ng/ml




Reviewer: hsuw, 10-Sep-2020 11:16:33
Audit Action: Manually Integrated Audit Reason: Isomers

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

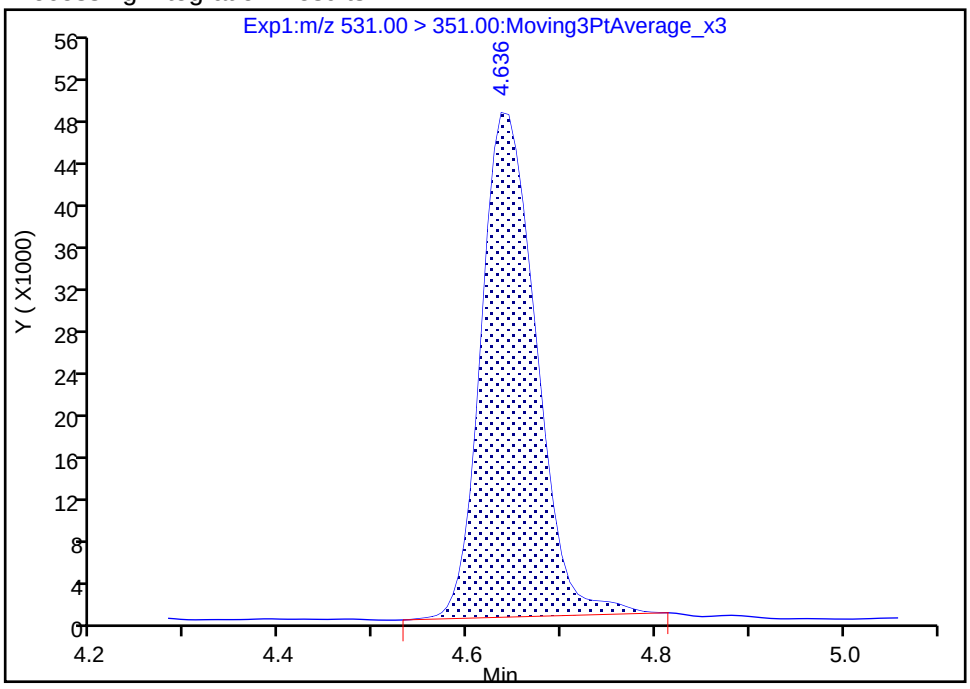
Data File: \\chromfs\Sacramento\ChromData\A13\20200910-103012.b\2020.09.10_A13_PFC_A_005.d
Injection Date: 10-Sep-2020 10:46:09 Instrument ID: A13
Lims ID: CCVL
Client ID:
Operator ID: SACINSTLCMS01 ALS Bottle#: 51 Worklist Smp#: 2
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFAS_A13 Limit Group: LC PFC ICAL
Column: Gemini C18 3um 3 x 100mm ( 3.00 mm) Detector EXP1

## 32 9ClFOS, CAS: 756426-58-1

Signal: 1

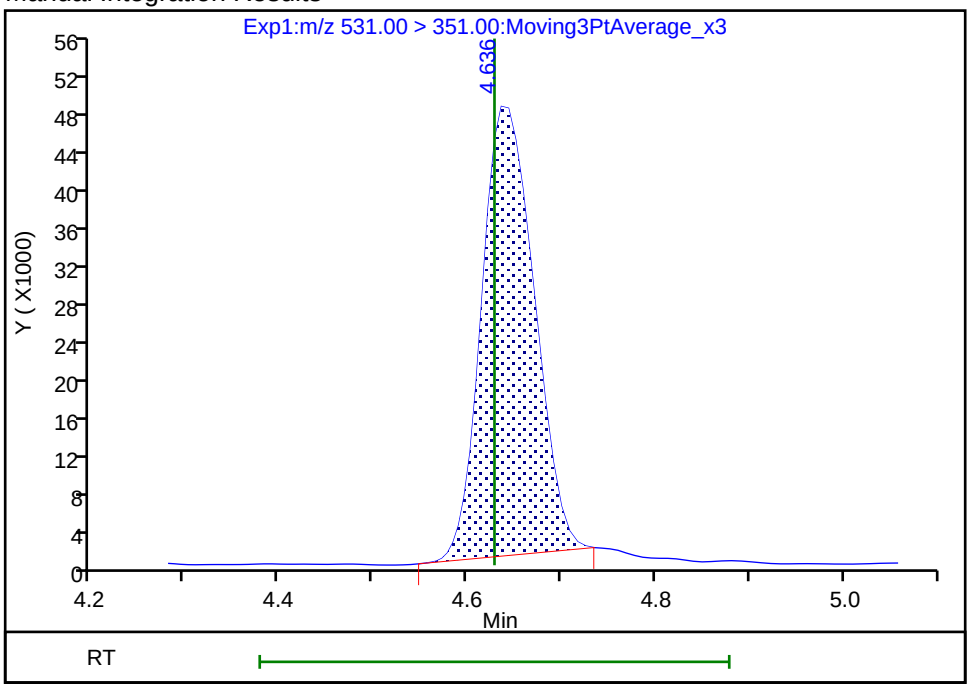
Processing Integration Results

RT: 4.64
Area: 195401
Amount: 0.043006
Amount Units: ng/ml




Manual Integration Results

RT: 4.64
Area: 184713
Amount: 0.040653
Amount Units: ng/ml




Reviewer: hsuw, 10-Sep-2020 11:16:50
Audit Action: Manually Integrated Audit Reason: Baseline

Eurofins TestAmerica, Sacramento

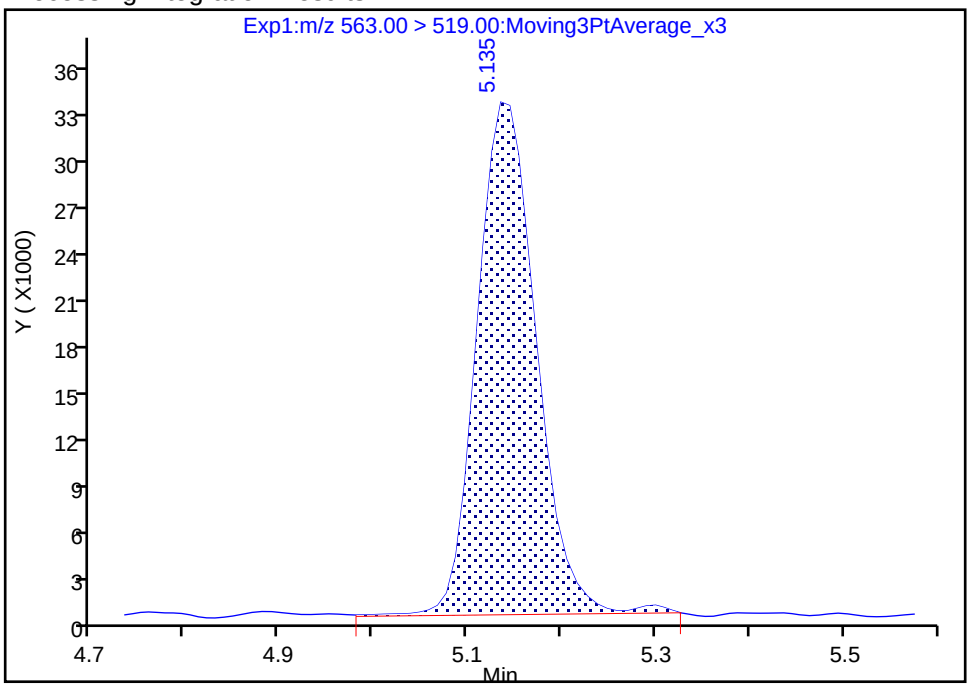
Data File: \\chromfs\Sacramento\ChromData\A13\20200910-103012.b\2020.09.10_A13_PFC_A_005.d
Injection Date: 10-Sep-2020 10:46:09 Instrument ID: A13
Lims ID: CCVL
Client ID:
Operator ID: SACINSTLCMS01 ALS Bottle#: 51 Worklist Smp#: 2
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFAS_A13 Limit Group: LC PFC ICAL
Column: Gemini C18 3um 3 x 100mm ( 3.00 mm) Detector EXP1

## 45 Perfluoroundecanoic acid, CAS: 2058-94-8

Signal: 1

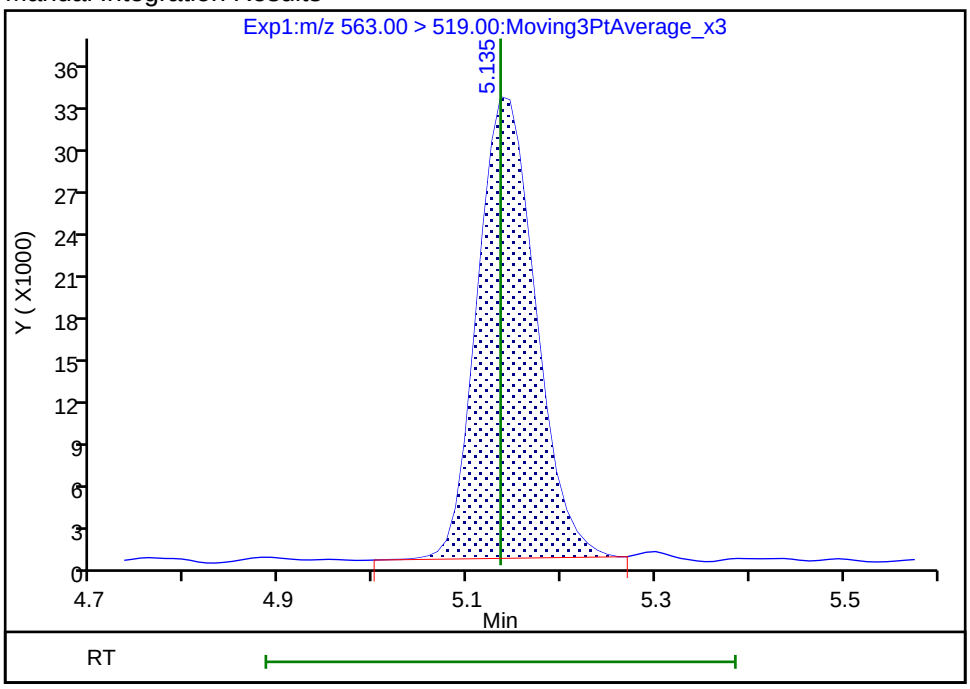
Processing Integration Results

RT: 5.14
Area: 144963
Amount: 0.046240
Amount Units: ng/ml




Manual Integration Results

RT: 5.14
Area: 141688
Amount: 0.045195
Amount Units: ng/ml




Reviewer: hsuw, 10-Sep-2020 11:17:05
Audit Action: Manually Integrated Audit Reason: Baseline

FORM VII
LCMS CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Sacramento  Job No.: 460-217659-1

SDG No.:

Lab Sample ID: CCV 320-410989/3  Calibration Date: 09/10/2020 10:55

Instrument ID: A13  Calib Start Date: 09/08/2020 18:01

GC Column: GeminiC18 3x100  ID: 3.00(mm)  Calib End Date: 09/08/2020 18:58

Lab File ID: 2020.09.10_A13_PFC_A_006.d  Conc. Units: ng/mL

| ANALYTE | CURVE TYPE | AVE RRF | RRF | MIN RRF | CALC AMOUNT | SPIKE AMOUNT | %D | MAX %D |
|---|---|---|---|---|---|---|---|---|
| Perfluorobutanoic acid (PFBA) | AveID | 0.7433 | 0.8124 | | 1.09 | 1.00 | 9.3 | 40.0 |
| Perfluoropentanoic acid (PFPeA) | AveID | 1.028 | 1.041 | | 1.01 | 1.00 | 1.3 | 40.0 |
| Perfluorobutanesulfonic acid (PFBS) | AveID | 0.9776 | 1.060 | | 0.958 | 0.884 | 8.4 | 50.0 |
| 4:2 FTS | AveID | 3.243 | 3.614 | | 1.04 | 0.934 | 11.4 | 50.0 |
| Perfluorohexanoic acid (PFHxA) | AveID | 0.9294 | 1.043 | | 1.12 | 1.00 | 12.3 | 40.0 |
| Perfluoropentanesulfonic acid (PFPeS) | AveID | 0.7896 | 0.8648 | | 1.03 | 0.938 | 9.5 | 50.0 |
| HFPO-DA (GenX) | AveID | 0.2972 | 0.3133 | | 1.05 | 1.00 | 5.4 | 40.0 |
| Perfluoroheptanoic acid (PFHpA) | AveID | 1.011 | 1.035 | | 1.02 | 1.00 | 2.4 | 40.0 |
| Perfluorohexanesulfonic acid (PFHxS) | AveID | 1.112 | 1.112 | | 0.910 | 0.910 | 0.0 | 40.0 |
| 4,8-Dioxa-3H-perfluorononanoic acid (ADONA) | AveID | 5.136 | 6.025 | | 1.11 | 0.942 | 17.3 | 50.0 |
| 6:2 FTS | AveID | 2.407 | 2.514 | | 0.990 | 0.948 | 4.4 | 40.0 |
| Perfluoroheptanesulfonic Acid (PFHpS) | AveID | 1.139 | 1.268 | | 1.06 | 0.952 | 11.4 | 50.0 |
| Perfluorooctanoic acid (PFOA) | AveID | 1.023 | 1.096 | | 1.07 | 1.00 | 7.1 | 40.0 |
| Perfluorooctanesulfonic acid (PFOS) | AveID | 1.038 | 1.142 | | 1.02 | 0.928 | 10.0 | 40.0 |
| Perfluorononanoic acid (PFNA) | AveID | 0.9494 | 0.9897 | | 1.04 | 1.00 | 4.2 | 40.0 |
| F-53B Major | AveID | 2.501 | 2.813 | | 1.05 | 0.932 | 12.4 | 50.0 |
| Perfluorooctanesulfonamide (FOSA) | AveID | 0.9383 | 1.003 | | 1.07 | 1.00 | 6.8 | 40.0 |
| Perfluorononanesulfonic acid (PFNS) | AveID | 0.7747 | 0.8874 | | 1.10 | 0.960 | 14.5 | 50.0 |
| Perfluorodecanoic acid (PFDA) | AveID | 0.8964 | 0.9802 | | 1.09 | 1.00 | 9.3 | 40.0 |
| 8:2 FTS | AveID | 2.472 | 2.692 | | 1.04 | 0.958 | 8.9 | 40.0 |
| N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA) | AveID | 0.8055 | 0.8510 | | 1.06 | 1.00 | 5.7 | 40.0 |
| Perfluorodecanesulfonic acid (PFDS) | AveID | 0.6588 | 0.7013 | | 1.03 | 0.964 | 6.5 | 50.0 |
| Perfluoroundecanoic acid (PFUnA) | AveID | 0.6615 | 0.7016 | | 1.06 | 1.00 | 6.1 | 40.0 |
| N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA) | AveID | 0.7741 | 0.8147 | | 1.05 | 1.00 | 5.2 | 40.0 |
| NMeFOSE | AveID | 1.065 | 1.240 | | 1.16 | 1.00 | 16.4 | 40.0 |
| NMeFOSA | AveID | 0.9832 | 1.200 | | 1.22 | 1.00 | 22.1 | 50.0 |
| F-53B Minor | AveID | 4.317 | 5.153 | | 1.12 | 0.942 | 19.4 | 50.0 |
| NEtFOSE | AveID | 1.035 | 1.106 | | 1.07 | 1.00 | 6.8 | 40.0 |
| NEtFOSA | AveID | 1.062 | 1.155 | | 1.09 | 1.00 | 8.8 | 40.0 |
| Perfluorododecanoic acid (PFDoA) | AveID | 0.9122 | 0.9942 | | 1.10 | 1.01 | 9.0 | 40.0 |
| 10:2 FTS | AveID | 1.632 | 2.009 | | 1.19 | 0.964 | 23.1 | 50.0 |
| Perfluorododecanesulfonic acid (PFDoS) | AveID | 0.2572 | 0.2682 | | 1.01 | 0.968 | 4.3 | 50.0 |

FORM VII 537 (modified)

FORM VII
LCMS CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Sacramento  Job No.: 460-217659-1

SDG No.:

Lab Sample ID: CCV 320-410989/3  Calibration Date: 09/10/2020 10:55

Instrument ID: A13  Calib Start Date: 09/08/2020 18:01

GC Column: GeminiC18 3x100  ID: 3.00(mm)  Calib End Date: 09/08/2020 18:58

Lab File ID: 2020.09.10_A13_PFC_A_006.d  Conc. Units: ng/mL

| ANALYTE | CURVE TYPE | AVE RRF | RRF | MIN RRF | CALC AMOUNT | SPIKE AMOUNT | %D | MAX %D |
|---|---|---|---|---|---|---|---|---|
| Perfluorotridecanoic acid (PFTriA) | AveID | 0.9373 | 1.127 | | 1.20 | 1.00 | 20.2 | 50.0 |
| Perfluorotetradecanoic acid (PFTeA) | AveID | 0.9843 | 1.044 | | 1.06 | 1.00 | 6.0 | 50.0 |
| Perfluoro-n-hexadecanoic acid (PFHxDA) | L2ID | | 0.9357 | | 0.959 | 1.00 | -4.1 | 50.0 |
| Perfluoro-n-octadecanoic acid (PFODA) | AveID | 0.7306 | 0.9072 | | 1.24 | 1.00 | 24.2 | 50.0 |
| 13C4 PFBA | Ave | 0.8499 | 0.9174 | | 2.70 | 2.50 | 7.9 | 50.0 |
| 13C5 PFPeA | Ave | 0.6625 | 0.6943 | | 2.62 | 2.50 | 4.8 | 50.0 |
| 13C3 PFBS | Ave | 0.8317 | 0.9400 | | 2.63 | 2.33 | 13.0 | 50.0 |
| M2-4:2 FTS | Ave | 0.2037 | 0.1950 | | 2.24 | 2.34 | -4.3 | 50.0 |
| 13C2 PFHxA | Ave | 0.8183 | 0.8360 | | 2.55 | 2.50 | 2.2 | 50.0 |
| 13C3 HFPO-DA | Ave | 0.5866 | 0.5837 | | 2.49 | 2.50 | -0.5 | 50.0 |
| 13C4 PFHpA | Ave | 0.8058 | 0.8546 | | 2.65 | 2.50 | 6.0 | 50.0 |
| 18O2 PFHxS | Ave | 0.5449 | 0.5795 | | 2.52 | 2.37 | 6.3 | 50.0 |
| M2-6:2 FTS | Ave | 0.2349 | 0.2431 | | 2.46 | 2.38 | 3.5 | 50.0 |
| 13C4 PFOA | Ave | 0.9849 | 0.9624 | | 2.44 | 2.50 | -2.3 | 50.0 |
| 13C4 PFOS | Ave | 0.3888 | 0.3973 | | 2.44 | 2.39 | 2.2 | 50.0 |
| 13C5 PFNA | Ave | 0.9099 | 0.9593 | | 2.64 | 2.50 | 5.4 | 50.0 |
| 13C8 FOSA | Ave | 0.5585 | 0.5729 | | 2.57 | 2.50 | 2.6 | 50.0 |
| 13C2 PFDA | Ave | 1.102 | 1.055 | | 2.39 | 2.50 | -4.3 | 50.0 |
| M2-8:2 FTS | Ave | 0.3107 | 0.3134 | | 2.42 | 2.40 | 0.9 | 50.0 |
| d3-NMeFOSAA | Ave | 0.5682 | 0.5558 | | 2.45 | 2.50 | -2.2 | 50.0 |
| 13C2 PFUnA | Ave | 1.078 | 1.054 | | 2.44 | 2.50 | -2.3 | 50.0 |
| d5-NEtFOSAA | Ave | 0.5501 | 0.5592 | | 2.54 | 2.50 | 1.7 | 50.0 |
| d7-N-MeFOSE-M | Ave | 0.1398 | 0.1212 | | 10.8 | 12.5 | -13.3 | 50.0 |
| d-N-MeFOSA-M | Ave | 0.2628 | 0.2524 | | 2.40 | 2.50 | -4.0 | 50.0 |
| d9-N-EtFOSE-M | Ave | 0.1640 | 0.1516 | | 11.6 | 12.5 | -7.6 | 50.0 |
| d-N-EtFOSA-M | Ave | 0.2510 | 0.2477 | | 2.47 | 2.50 | -1.3 | 50.0 |
| 13C2 PFDoA | Ave | 1.160 | 1.063 | | 2.29 | 2.50 | -8.4 | 50.0 |
| 13C2 PFTeDA | Ave | 1.146 | 1.045 | | 2.28 | 2.50 | -8.8 | 50.0 |
| 13C2 PFHxDA | Ave | 1.193 | 1.045 | | 2.19 | 2.50 | -12.4 | 50.0 |
| 13C8 PFOA | Ave | 0.8908 | 0.8560 | | 2.35 | 2.45 | -3.9 | 50.0 |
| 13C8 PFOS | Ave | 0.2076 | 0.2121 | | 2.44 | 2.39 | 2.2 | 50.0 |

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\A13\20200910-103012.b\2020.09.10_A13_PFC_A_006.d
Lims ID: CCV L4
Client ID:
Sample Type: CCVIS
Inject. Date: 10-Sep-2020 10:55:32 ALS Bottle#: 52 Worklist Smp#: 3
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Sample Info: CCV L4 (30)
Misc. Info.: Plate: 1 Rack: 1
Operator ID: SACINSTLCMS01 Instrument ID: A13
Sublist: chrom-PFAS_A13*sub3

Method: \\chromfs\Sacramento\ChromData\A13\20200910-103012.b\PFAS_A13.m
Limit Group: LC PFC ICAL
Last Update: 10-Sep-2020 11:44:11 Calib Date: 08-Sep-2020 18:58:15
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\A13\20200908-102913.b\2020.09.08_A13_PFC_ICALX_010.d

Column 1 : Gemini C18 3um 3 x 100mm ( 3.00 mm) Det: EXP1
Process Host: CTX1047

First Level Reviewer: hsuw Date: 10-Sep-2020 11:40:34
Ratio Calibration: Average of Initial Calibration

| Signal | RT | EXP RT | DLT RT | REL RT | Response | Amount ng/ml | Ratio(Limits) | %Rec | S/N | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| D 1 13C4 PFBA | | | | | | | | | | |
| 217.00 > 172.00 | 2.482 | 2.482 | 0.0 | 0.610 | 9579527 | 2.70 | | 108 | 12245 | |
| 2 Perfluorobutanoic acid | | | | | | | | | | |
| 212.90 > 169.00 | 2.482 | 2.482 | 0.0 | 1.000 | 3113019 | 1.09 | | 109 | 903 | |
| D 4 13C5 PFPeA | | | | | | | | | | |
| 267.90 > 223.00 | 2.878 | 2.878 | 0.0 | 0.708 | 7249985 | 2.62 | | 105 | 14585 | |
| 5 Perfluoropentanoic acid | | | | | | | | | | |
| 262.90 > 219.00 | 2.878 | 2.878 | 0.0 | 1.000 | 3019418 | 1.01 | | 101 | 313 | |
| D 14 13C3 PFBS | | | | | | | | | | |
| 301.90 > 80.00 | 2.913 | 2.913 | 0.0 | 0.716 | 9128362 | 2.63 | | 113 | 13998 | |
| 6 Perfluorobutanesulfonic acid | | | | | | | | | | |
| 298.90 > 80.00 | 2.913 | 2.913 | 0.0 | 1.000 | 3678403 | 0.9583 | Target=2.18 | 108 | 3642 | |
| 298.90 > 99.00 | 2.913 | 2.913 | 0.0 | 1.000 | 1631690 | | 2.25(1.09-3.26) | | 699 | |
| 7 4:2 FTS | | | | | | | | | | |
| 327.00 > 307.00 | 3.225 | 3.225 | 0.0 | 1.000 | 2749660 | 1.04 | | 111 | 7064 | |
| D 8 M2-4:2 FTS | | | | | | | | | | |
| 329.00 > 81.00 | 3.225 | 3.225 | 0.0 | 0.793 | 1901912 | 2.24 | | 95.7 | 1340 | |
| 10 Perfluorohexanoic acid | | | | | | | | | | |
| 313.00 > 269.00 | 3.268 | 3.268 | 0.0 | 1.000 | 3643016 | 1.12 | Target=11.68 | 112 | 491 | |
| 313.00 > 119.00 | 3.268 | 3.268 | 0.0 | 1.000 | 273056 | | 13.34(5.84-17.52) | | 112 | |
| D 9 13C2 PFHxA | | | | | | | | | | |
| 315.00 > 270.00 | 3.268 | 3.268 | 0.0 | 0.804 | 8729926 | 2.55 | | 102 | 16609 | |
| 11 Perfluoropentanesulfonic acid | | | | | | | | | | |
| 349.00 > 80.00 | 3.279 | 3.279 | 0.0 | 1.126 | 3184867 | 1.03 | Target=2.56 | 110 | 3793 | |
| 349.00 > 99.00 | 3.279 | 3.279 | 0.0 | 1.126 | 1211084 | | 2.63(1.28-3.84) | | 838 | |
| 12 HPFO-DA | | | | | | | | | | |
| 285.00 > 169.00 | 3.388 | 3.388 | 0.0 | 1.000 | 763865 | 1.05 | | 105 | 2887 | |

| Signal | RT | EXP RT | DLT RT | REL RT | Response | Amount ng/ml | Ratio(Limits) | %Rec | S/N | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| D 13 13C3 HFPO-DA | | | | | | | | | | |
| 287.00 > 169.00 | 3.388 | 3.388 | 0.0 | 0.833 | 6095345 | 2.49 | | 99.5 | 8032 | |
| 16 Perfluoroheptanoic acid | | | | | | | | | | |
| 363.00 > 319.00 | 3.675 | 3.675 | 0.0 | 1.000 | 3694239 | 1.02 | Target=3.85 | 102 | 569 | |
| 363.00 > 169.00 | 3.675 | 3.675 | 0.0 | 1.000 | 969461 | | 3.81(1.92-5.77) | | 480 | |
| D 15 13C4 PFHpA | | | | | | | | | | |
| 367.00 > 322.00 | 3.675 | 3.675 | 0.0 | 0.904 | 8923332 | 2.65 | | 106 | 8551 | |
| D 17 18O2 PFHxS | | | | | | | | | | |
| 403.00 > 84.00 | 3.675 | 3.675 | 0.0 | 0.904 | 5724203 | 2.52 | | 106 | 32269 | |
| 18 Perfluorohexanesulfonic acid | | | | | | | | | | |
| 399.00 > 80.00 | 3.675 | 3.675 | 0.0 | 1.000 | 2450150 | 0.9101 | Target=3.25 | 100 | 431529 | |
| 399.00 > 99.00 | 3.675 | 3.675 | 0.0 | 1.000 | 788696 | | 3.11(1.62-4.87) | | 279 | |
| 19 DONA | | | | | | | | | | |
| 377.00 > 251.00 | 3.722 | 3.722 | 0.0 | 0.839 | 9417580 | 1.11 | Target=2.76 | 117 | 23335 | |
| 377.00 > 85.00 | 3.722 | 3.722 | 0.0 | 0.839 | 3316204 | | 2.84(1.38-4.14) | | 2829 | |
| D 20 M2-6:2 FTS | | | | | | | | | | |
| 429.00 > 81.00 | 4.050 | 4.050 | 0.0 | 0.996 | 2411940 | 2.46 | | 104 | 4372 | |
| 21 6:2 FTS | | | | | | | | | | |
| 427.00 > 407.00 | 4.050 | 4.050 | 0.0 | 1.000 | 2419953 | 0.99 | | 104 | 2289 | |
| 22 Perfluoroheptanesulfonic acid | | | | | | | | | | |
| 449.00 > 80.00 | 4.059 | 4.059 | 0.0 | 0.915 | 2003284 | 1.06 | Target=4.29 | 111 | 1173 | |
| 449.00 > 99.00 | 4.059 | 4.059 | 0.0 | 0.915 | 486084 | | 4.12(2.15-6.44) | | 285 | |
| $ 23 13C8 PFOA | | | | | | | | | | |
| 421.00 > 376.00 | 4.059 | 4.059 | 0.0 | 0.998 | 8750653 | 2.35 | | 96.1 | 19609 | |
| 26 Perfluorooctanoic acid | | | | | | | | | | |
| 413.00 > 369.00 | 4.067 | 4.067 | 0.0 | 1.000 | 4409467 | 1.07 | Target=2.95 | 107 | 1236 | |
| 413.00 > 169.00 | 4.067 | 4.067 | 0.0 | 1.000 | 1476214 | | 2.99(1.47-4.42) | | 1205 | |
| * 25 13C2 PFOA | | | | | | | | | | |
| 415.00 > 370.00 | 4.067 | 4.067 | 0.0 | | 10441921 | 2.50 | | | 16786 | |
| D 24 13C4 PFOA | | | | | | | | | | |
| 417.00 > 372.00 | 4.067 | 4.067 | 0.0 | 1.000 | 10049813 | 2.44 | | 97.7 | 6976 | |
| $ 27 13C8 PFOS | | | | | | | | | | |
| 507.00 > 99.00 | 4.426 | 4.426 | 0.0 | 1.088 | 2117138 | 2.44 | | 102 | 2633 | |
| D 29 13C4 PFOS | | | | | | | | | | |
| 503.00 > 80.00 | 4.435 | 4.435 | 0.0 | 1.090 | 3965539 | 2.44 | | 102 | 2088 | |
| 28 Perfluorooctanesulfonic acid | | | | | | | | | | M |
| 499.00 > 80.00 | 4.435 | 4.435 | 0.0 | 1.000 | 1758758 | 1.02 | Target=4.28 | 110 | 734 | |
| 499.00 > 99.00 | 4.435 | 4.435 | 0.0 | 1.000 | 427482 | | 4.11(2.14-6.41) | | 345 | M |
| D 31 13C5 PFNA | | | | | | | | | | |
| 468.00 > 423.00 | 4.443 | 4.443 | 0.0 | 1.093 | 10016711 | 2.64 | | 105 | 34380 | |
| 30 Perfluorononanoic acid | | | | | | | | | | |
| 463.00 > 419.00 | 4.452 | 4.452 | 0.0 | 1.002 | 3973286 | 1.04 | Target=8.00 | 104 | 895 | |
| 463.00 > 169.00 | 4.452 | 4.452 | 0.0 | 1.002 | 523711 | | 7.59(4.00-12.01) | | 676 | |
| 32 9ClFOS | | | | | | | | | | |
| 531.00 > 351.00 | 4.629 | 4.629 | 0.0 | 1.044 | 4349450 | 1.05 | | 112 | 11025 | |
| D 34 13C8 FOSA | | | | | | | | | | |
| 506.00 > 78.00 | 4.743 | 4.743 | 0.0 | 1.166 | 5982024 | 2.56 | | 103 | 4724 | |

| Signal | RT | EXP RT | DLT RT | REL RT | Response | Amount ng/ml | Ratio(Limits) | %Rec | S/N | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| 33 Perfluorooctanesulfonamide | | | | | | | | | | |
| 498.00 > 78.00 | 4.743 | 4.743 | 0.0 | 1.000 | 2398915 | 1.07 | | 107 | 3729 | |
| 35 Perfluorononanesulfonic acid | | | | | | | | | | |
| 549.00 > 80.00 | 4.777 | 4.777 | 0.0 | 1.077 | 1413536 | 1.10 | Target=2.15 | 115 | 1444 | |
| 549.00 > 99.00 | 4.777 | 4.777 | 0.0 | 1.077 | 681596 | | 2.07(1.08-3.23) | | 1016 | |
| 36 Perfluorodecanoic acid | | | | | | | | | | |
| 513.00 > 469.00 | 4.804 | 4.804 | 0.0 | 1.000 | 4317923 | 1.09 | Target=10.44 | 109 | 1747 | |
| 513.00 > 169.00 | 4.804 | 4.804 | 0.0 | 1.000 | 376871 | | 11.46(5.22-15.65) | | 286 | |
| D 37 13C2 PFDA | | | | | | | | | | |
| 515.00 > 470.00 | 4.804 | 4.804 | 0.0 | 1.181 | 11013280 | 2.39 | | 95.7 | 9294 | |
| D 38 M2-8:2 FTS | | | | | | | | | | |
| 529.00 > 81.00 | 4.813 | 4.813 | 0.0 | 1.183 | 3134763 | 2.42 | | 101 | 3758 | |
| 39 8:2 FTS | | | | | | | | | | |
| 527.00 > 507.00 | 4.813 | 4.813 | 0.0 | 1.000 | 3375593 | 1.04 | | 109 | 7922 | |
| D 40 d3-NMeFOSAA | | | | | | | | | | |
| 573.00 > 419.00 | 4.971 | 4.971 | 0.0 | 1.222 | 5804124 | 2.45 | | 97.8 | 4798 | |
| 41 NMeFOSAA | | | | | | | | | | |
| 570.00 > 419.00 | 4.971 | 4.971 | 0.0 | 1.000 | 1975799 | 1.06 | | 106 | 310 | |
| 42 Perfluorodecanesulfonic acid | | | | | | | | | | |
| 599.00 > 80.00 | 5.106 | 5.106 | 0.0 | 1.151 | 1121795 | 1.03 | Target=2.36 | 106 | 1450 | |
| 599.00 > 99.00 | 5.106 | 5.106 | 0.0 | 1.151 | 494613 | | 2.27(1.18-3.54) | | 1397 | |
| D 44 13C2 PFUnA | | | | | | | | | | |
| 565.00 > 520.00 | 5.135 | 5.135 | 0.0 | 1.263 | 11001331 | 2.44 | | 97.7 | 11477 | |
| 45 Perfluoroundecanoic acid | | | | | | | | | | |
| 563.00 > 519.00 | 5.135 | 5.135 | 0.0 | 1.000 | 3090478 | 1.06 | Target=8.67 | 106 | 1478 | |
| 563.00 > 169.00 | 5.135 | 5.135 | 0.0 | 1.000 | 334169 | | 9.25(4.34-13.01) | | 1157 | |
| D 46 d5-NEtFOSAA | | | | | | | | | | |
| 589.00 > 419.00 | 5.135 | 5.135 | 0.0 | 1.263 | 5839236 | 2.54 | | 102 | 3134 | |
| 48 NEtFOSA | | | | | | | | | | |
| 584.00 > 419.00 | 5.144 | 5.144 | 0.0 | 1.002 | 1902872 | 1.05 | | 105 | 24131 | |
| D 43 d7-N-MeFOSE-M | | | | | | | | | | |
| 623.00 > 59.00 | 5.184 | 5.184 | 0.0 | 1.275 | 6330112 | 10.8 | | 86.7 | 2098 | |
| 47 N-MeFOSE-M | | | | | | | | | | |
| 616.00 > 59.00 | 5.194 | 5.194 | 0.0 | 1.002 | 627755 | 1.16 | | 116 | 939 | |
| D 49 d-N-MeFOSA-M | | | | | | | | | | |
| 515.00 > 169.00 | 5.205 | 5.205 | 0.0 | 1.280 | 2635175 | 2.40 | | 96.0 | 47.8 | |
| 50 NMeFOSA | | | | | | | | | | |
| 512.00 > 169.00 | 5.216 | 5.216 | 0.0 | 1.002 | 1265093 | 1.22 | | 122 | 242 | |
| 51 11ClFOS | | | | | | | | | | |
| 631.00 > 451.00 | 5.270 | 5.270 | 0.0 | 1.188 | 8053875 | 1.12 | | 119 | 7592 | |
| D 52 d9-N-EtFOSE-M | | | | | | | | | | |
| 639.00 > 59.00 | 5.362 | 5.362 | 0.0 | 1.318 | 7916492 | 11.6 | | 92.4 | 2435 | |
| 53 N-EtFOSE-M | | | | | | | | | | |
| 630.00 > 59.00 | 5.371 | 5.371 | 0.0 | 1.002 | 700149 | 1.07 | | 107 | 852 | |
| D 54 d-N-EtFOSA-M | | | | | | | | | | |
| 531.00 > 169.00 | 5.379 | 5.379 | 0.0 | 1.323 | 2586321 | 2.47 | | 98.7 | 184 | |

| Signal | RT | EXP RT | DLT RT | REL RT | Response | Amount ng/ml | Ratio(Limits) | %Rec | S/N | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| 55 N-EtFOSA-M | | | | | | | | | | |
| 526.00 > 169.00 | 5.387 | 5.387 | 0.0 | 1.002 | 1194903 | 1.09 | | 109 | 208 | |
| D 56 13C2 PFDoA | | | | | | | | | | |
| 615.00 > 570.00 | 5.429 | 5.429 | 0.0 | 1.335 | 11096313 | 2.29 | | 91.6 | 4578 | |
| 57 Perfluorododecanoic acid | | | | | | | | | | |
| 613.00 > 569.00 | 5.429 | 5.429 | 0.0 | 1.000 | 4439118 | 1.10 | Target=9.05 | 109 | 1792 | |
| 613.00 > 169.00 | 5.420 | 5.429 | -0.009 | 0.998 | 469333 | | 9.46(4.52-13.57) | | 1147 | |
| 58 10:2 FTS | | | | | | | | | | |
| 627.00 > 607.00 | 5.445 | 5.445 | 0.0 | 1.131 | 2534573 | 1.19 | | 123 | 1956 | |
| 59 PFDoS | | | | | | | | | | |
| 699.00 > 80.00 | 5.662 | 5.662 | 0.0 | 1.277 | 430816 | 1.01 | Target=0.57 | 104 | 975 | |
| 699.00 > 99.00 | 5.662 | 5.662 | 0.0 | 1.277 | 754861 | | 0.57(0.29-0.86) | | 1628 | |
| 60 Perfluorotridecanoic acid | | | | | | | | | | |
| 663.00 > 619.00 | 5.702 | 5.702 | 0.0 | 1.050 | 5000174 | 1.20 | Target=7.06 | 120 | 3374 | |
| 663.00 > 169.00 | 5.694 | 5.702 | -0.008 | 1.049 | 684416 | | 7.31(3.53-10.59) | | 1493 | |
| 62 Perfluorotetradecanoic acid | | | | | | | | | | |
| 713.00 > 669.00 | 5.950 | 5.950 | 0.0 | 1.000 | 4559543 | 1.06 | Target=11.23 | 106 | 2896 | |
| 713.00 > 219.00 | 5.950 | 5.950 | 0.0 | 1.000 | 404495 | | 11.27(5.62-16.85) | | 2301 | |
| D 61 13C2 PFTeDA | | | | | | | | | | |
| 715.00 > 670.00 | 5.950 | 5.950 | 0.0 | 1.463 | 10910817 | 2.28 | | 91.2 | 12815 | |
| D 64 13C2 PFHxDA | | | | | | | | | | |
| 815.00 > 770.00 | 6.435 | 6.435 | 0.0 | 1.582 | 10906696 | 2.19 | | 87.6 | 6314 | |
| 63 Perfluorohexadecanoic acid | | | | | | | | | | |
| 813.00 > 769.00 | 6.435 | 6.435 | 0.0 | 1.000 | 4081956 | 0.9588 | Target=9.45 | 95.9 | 1033 | |
| 813.00 > 169.00 | 6.435 | 6.435 | 0.0 | 1.000 | 464623 | | 8.79(4.72-14.17) | | 1508 | |
| 65 Perfluorooctadecanoic acid | | | | | | | | | | |
| 913.00 > 869.00 | 6.902 | 6.902 | 0.0 | 1.073 | 3957774 | 1.24 | Target=11.13 | 124 | 1670 | |
| 913.00 > 169.00 | 6.902 | 6.902 | 0.0 | 1.073 | 327261 | | 12.09(5.56-16.69) | | 1210 | |

## QC Flag Legend

Review Flags

M - Manually Integrated

## Reagents:

LCPFC_LL4_00030 Amount Added: 1.00 Units: mL

Report Date: 10-Sep-2020 11:44:15 Chrom Revision: 2.3 09-Sep-2020 15:12:58

Eurofins TestAmerica, Sacramento

Data File: \\chromfs\Sacramento\ChromData\A13\20200910-103012.b\2020.09.10_A13_PFC_A_006.d

Injection Date: 10-Sep-2020 10:55:32 Instrument ID: A13

Lims ID: CCV L4

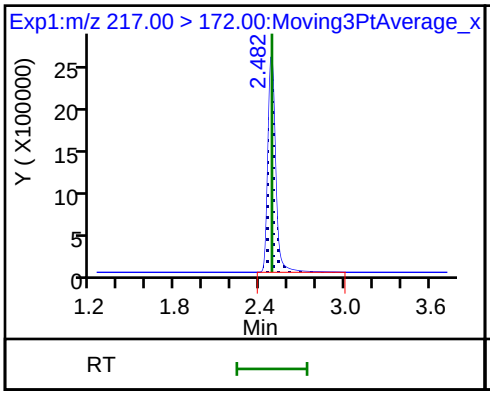
Client ID:

Operator ID: SACINSTLCMS01 ALS Bottle#: 52 Worklist Smp#: 3

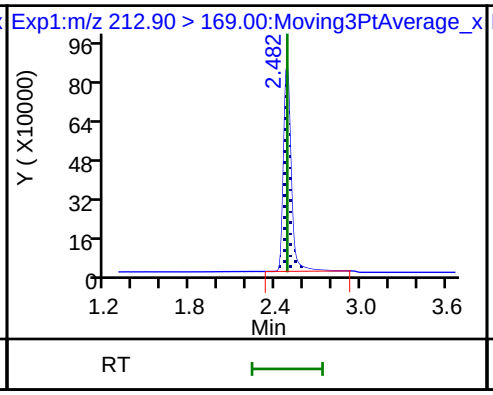
Injection Vol: 20.0 ul Dil. Factor: 1.0000

Method: PFAS_A13 Limit Group: LC PFC ICAL

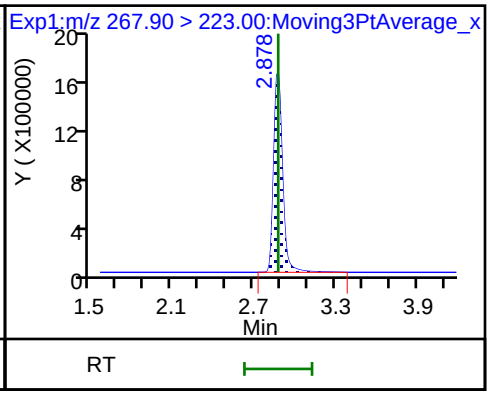
D 1 13C4 PFBA



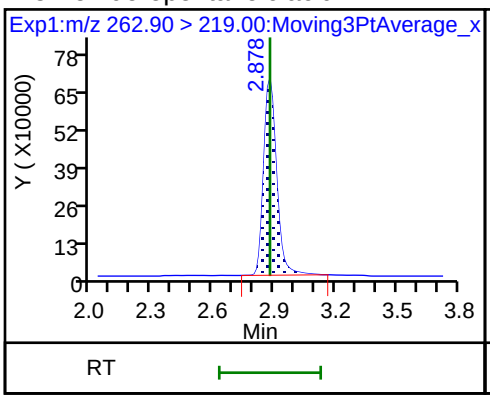

2 Perfluorobutanoic acid



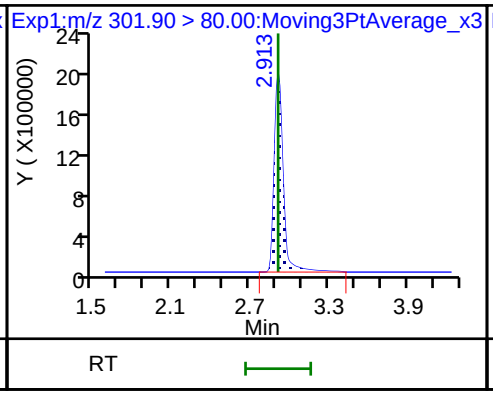

D 4 13C5 PFPeA



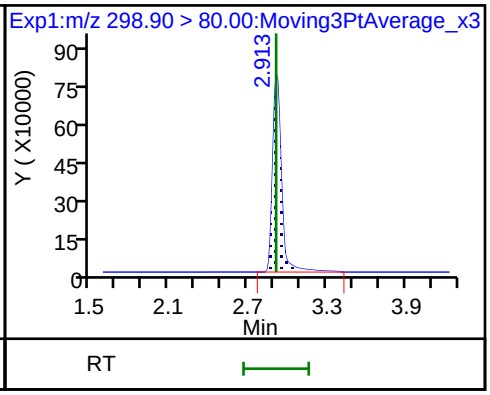

5 Perfluoropentanoic acid



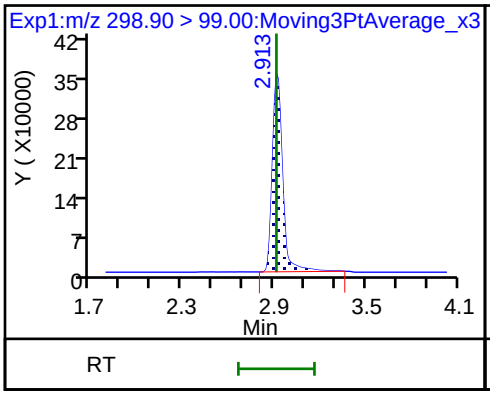

D 14 13C3 PFBS



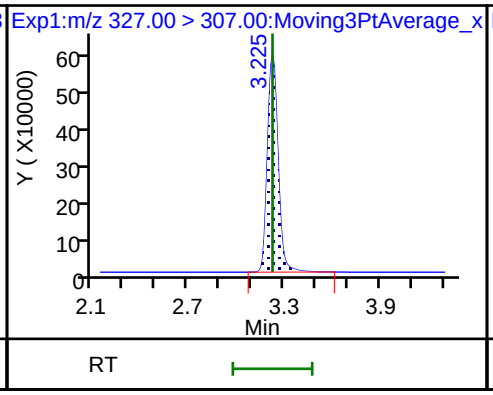

6 Perfluorobutanesulfonic acid



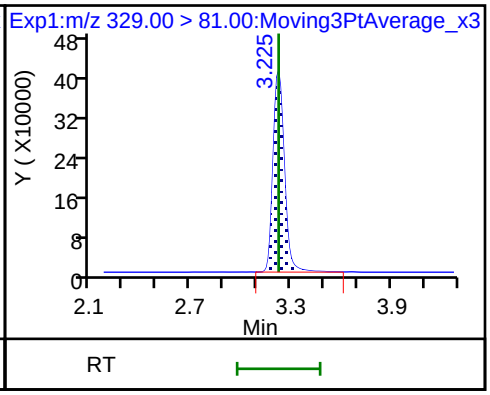

6 Perfluorobutanesulfonic acid



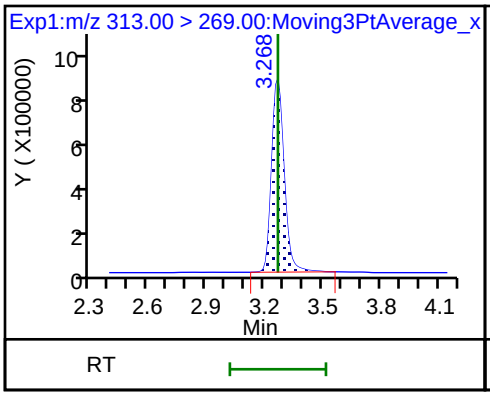

7 4:2 FTS



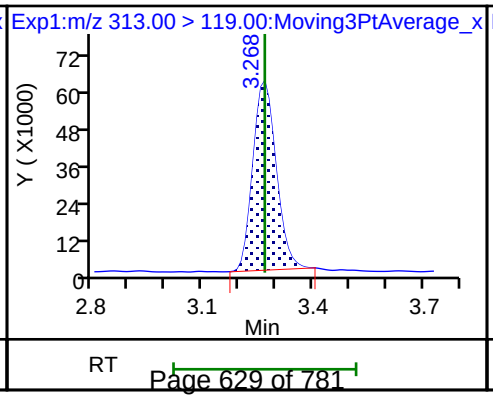

D 8 M2-4:2 FTS



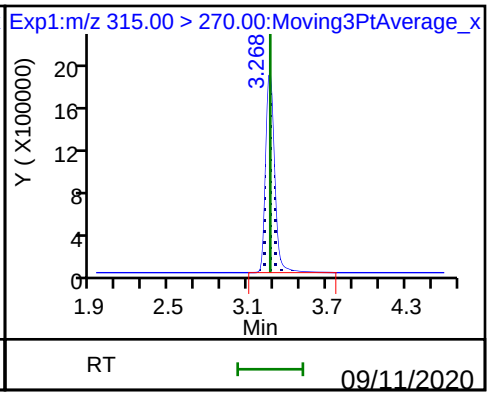

10 Perfluorohexanoic acid



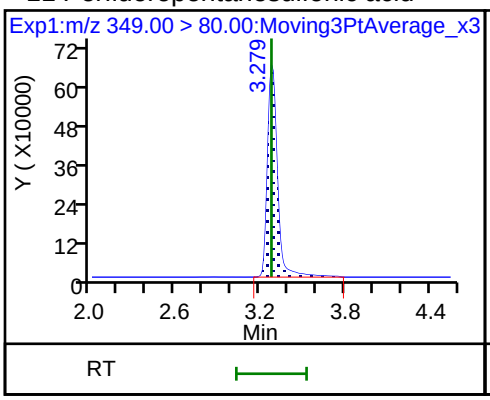

10 Perfluorohexanoic acid



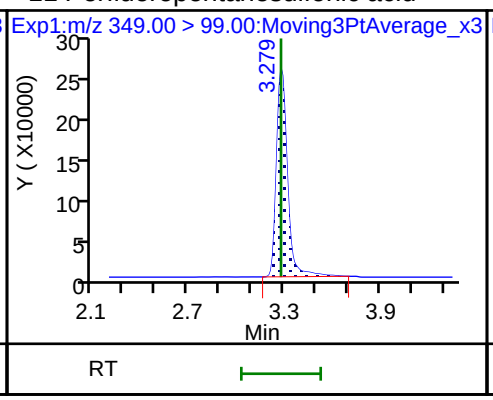

D 9 13C2 PFHxA



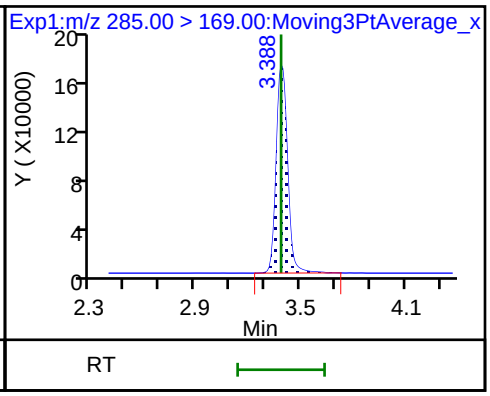
11 Perfluoropentanesulfonic acid



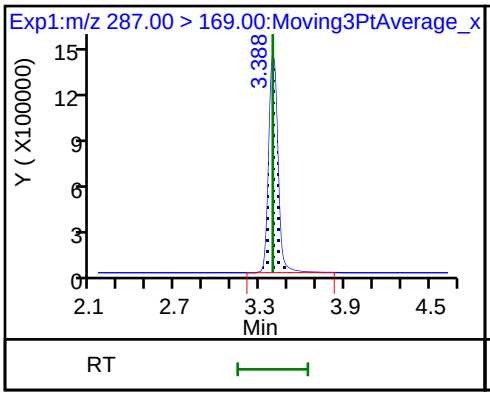

11 Perfluoropentanesulfonic acid



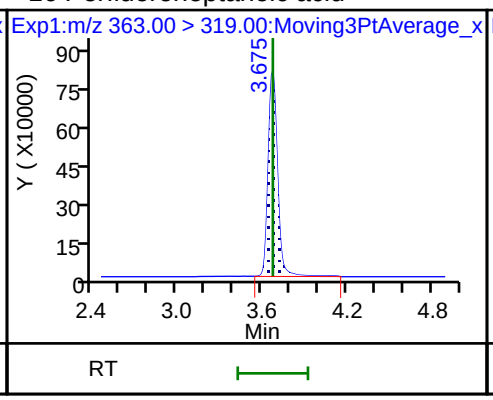

12 HPFO-DA



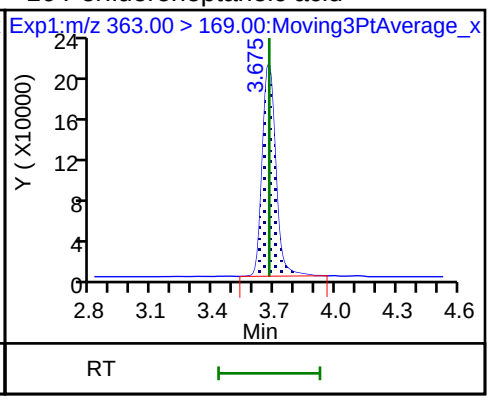

D 13 13C3 HFPO-DA



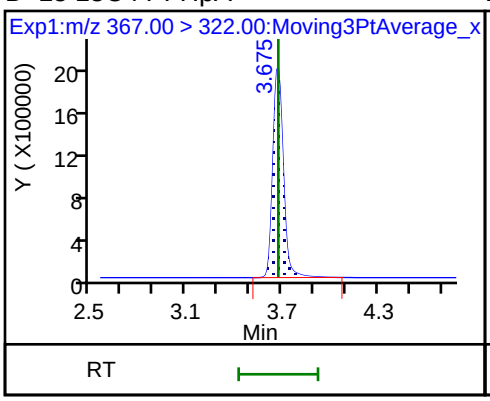

16 Perfluoroheptanoic acid



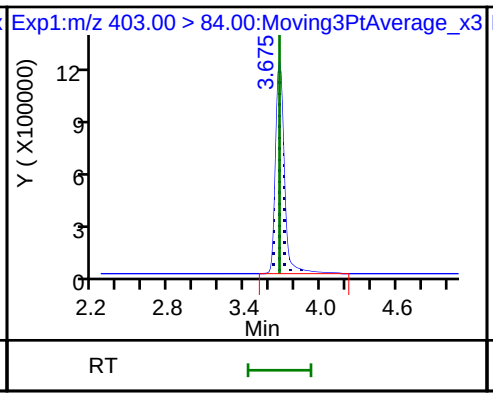

16 Perfluoroheptanoic acid



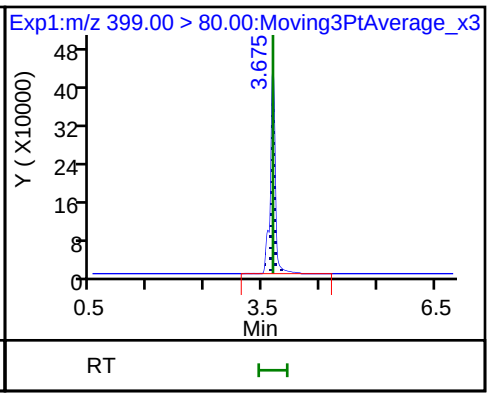

D 15 13C4 PFHpA



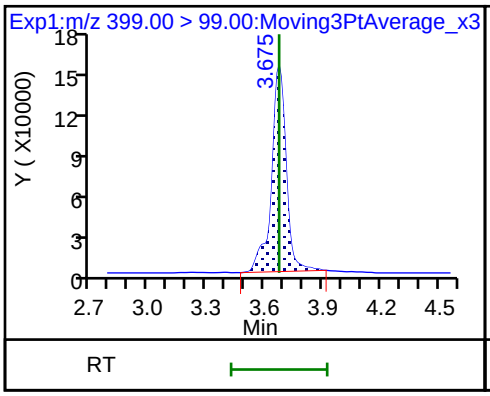

D 17 18O2 PFHxS



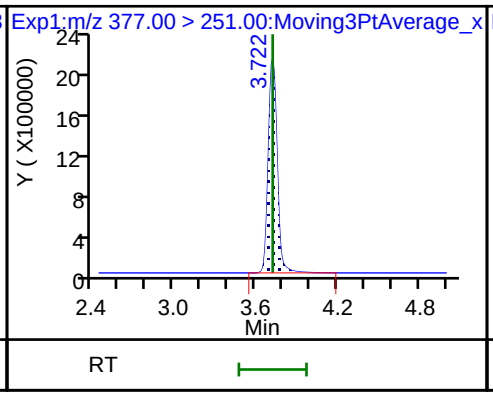

18 Perfluorohexanesulfonic acid



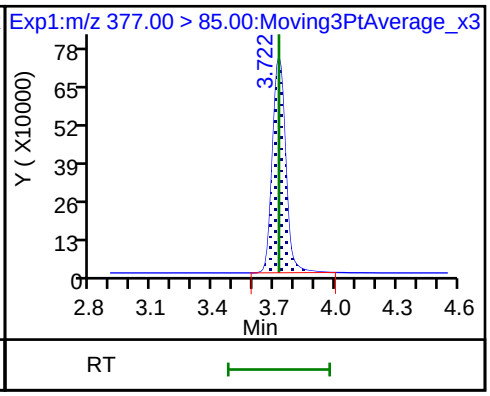

18 Perfluorohexanesulfonic acid



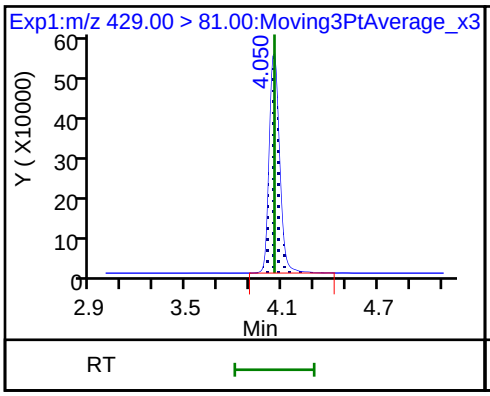

19 DONA



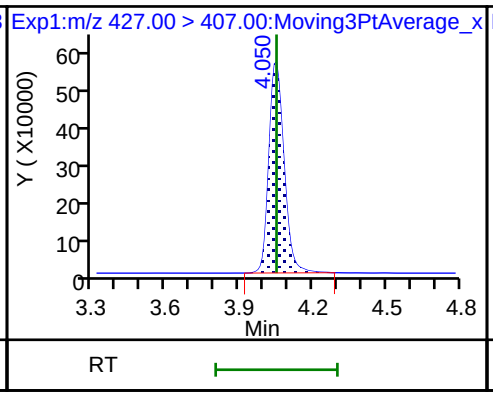

19 DONA



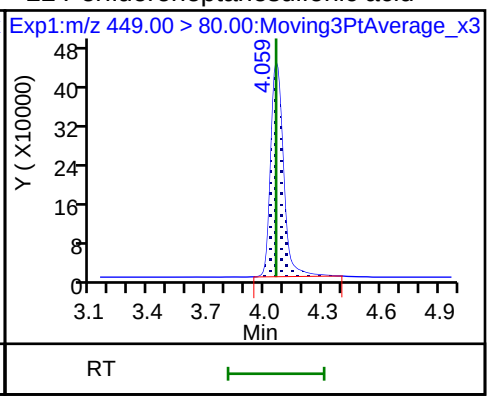
D 20 M2-6:2 FTS



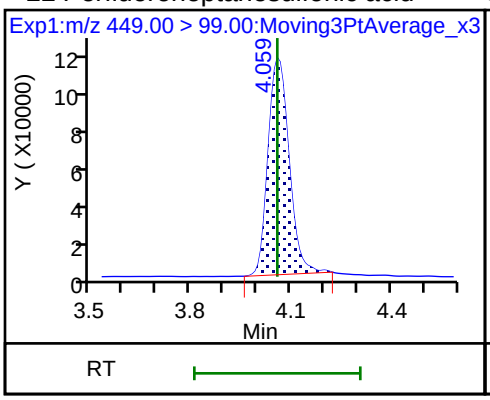

21 6:2 FTS



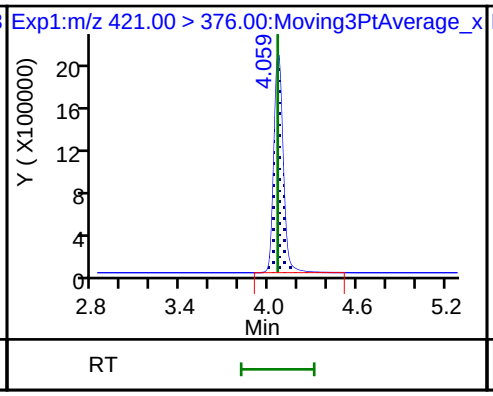

22 Perfluoroheptanesulfonic acid



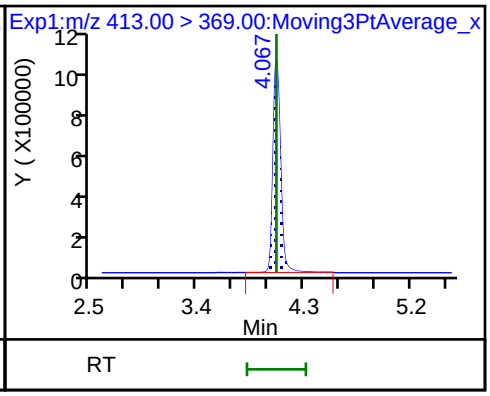

22 Perfluoroheptanesulfonic acid



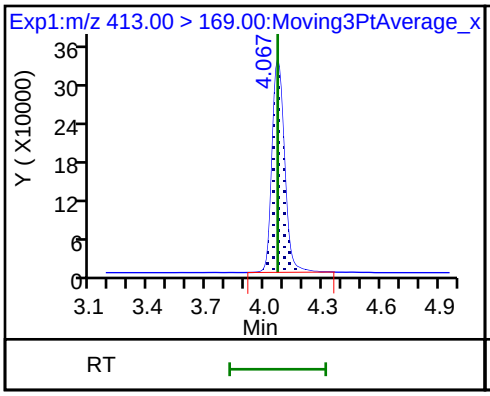

$ 23 13C8 PFOA



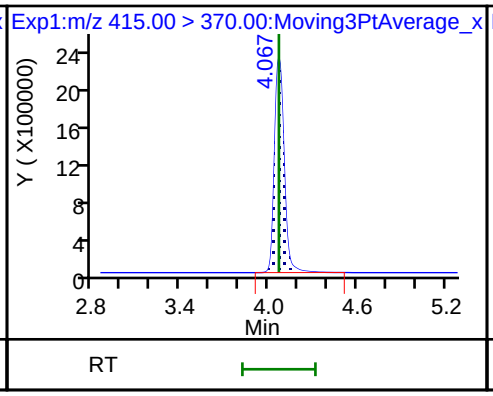

26 Perfluorooctanoic acid



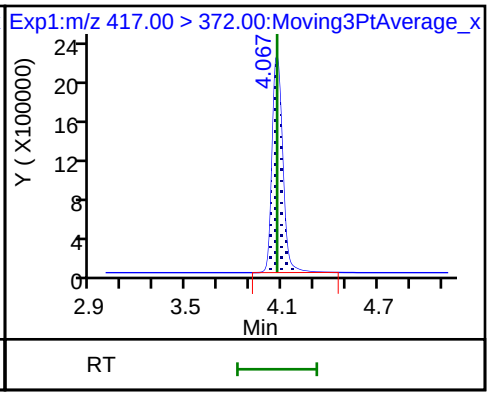

26 Perfluorooctanoic acid



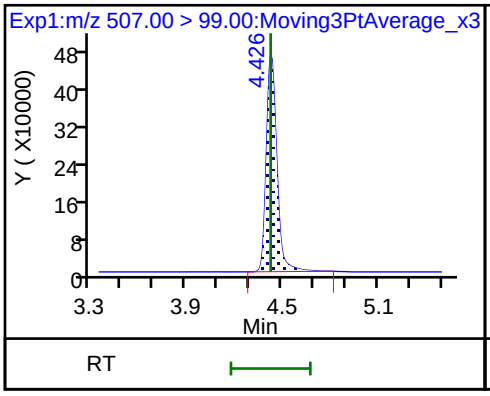

* 25 13C2 PFOA



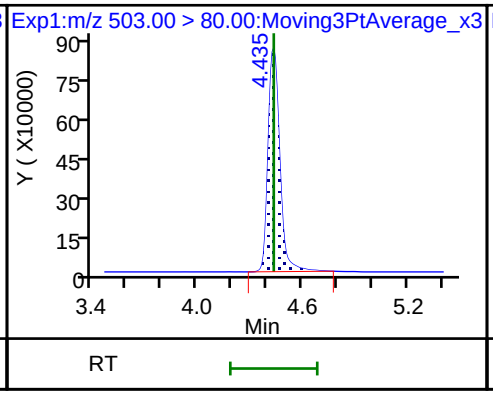

D 24 13C4 PFOA



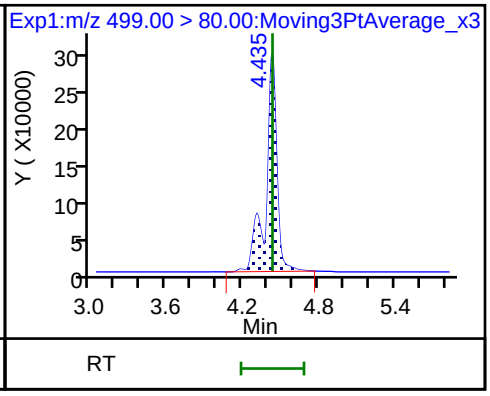

$ 27 13C8 PFOS



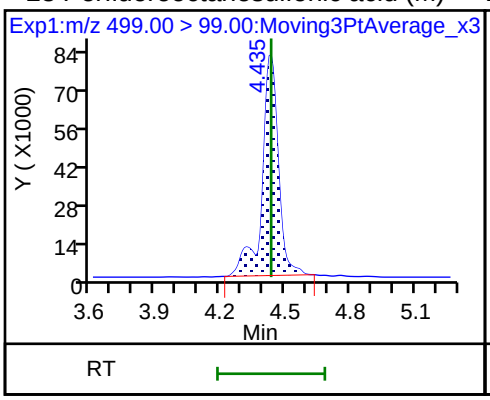

D 29 13C4 PFOS



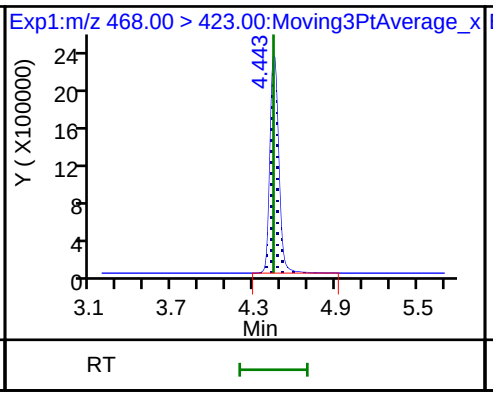

28 Perfluorooctanesulfonic acid



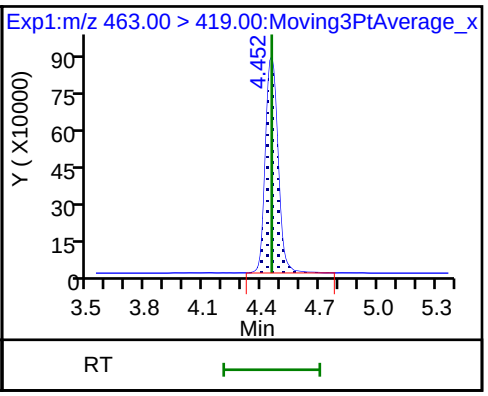
28 Perfluorooctanesulfonic acid (M)



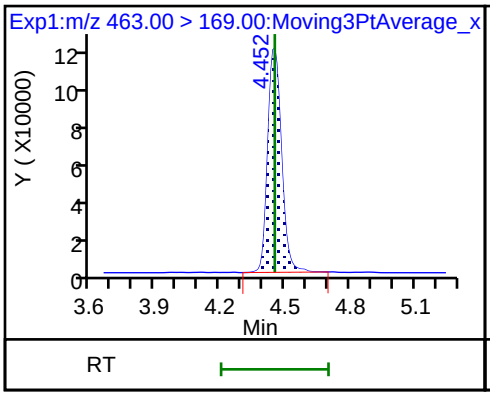

D 31 13C5 PFNA



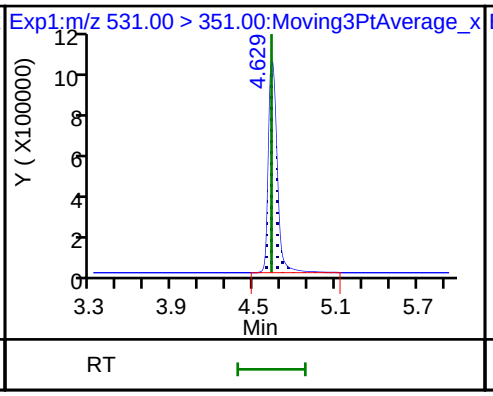

30 Perfluorononanoic acid



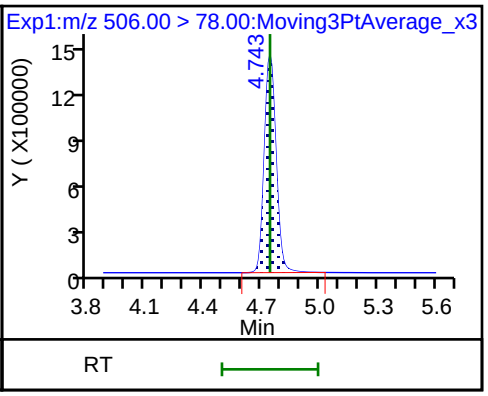

30 Perfluorononanoic acid



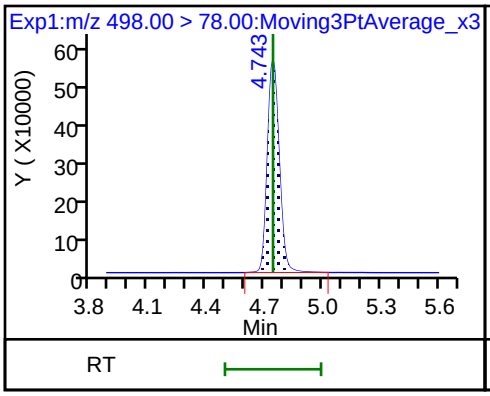

32 9ClFOS



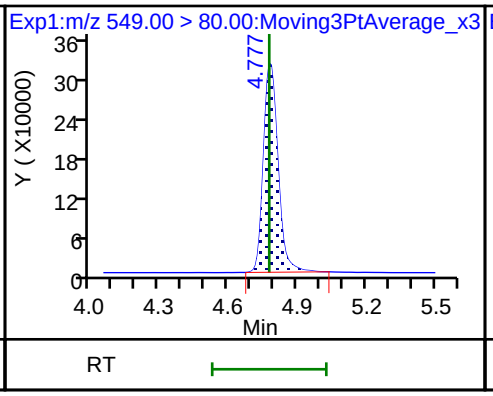

D 34 13C8 FOSA



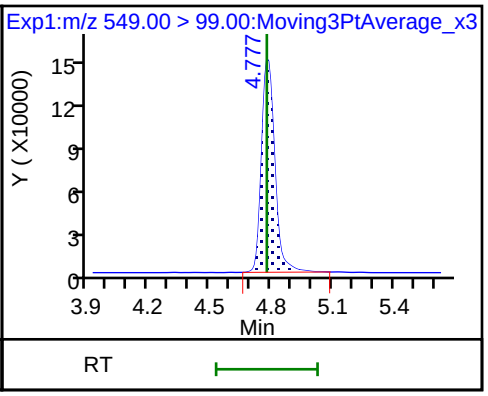

33 Perfluorooctanesulfonamide



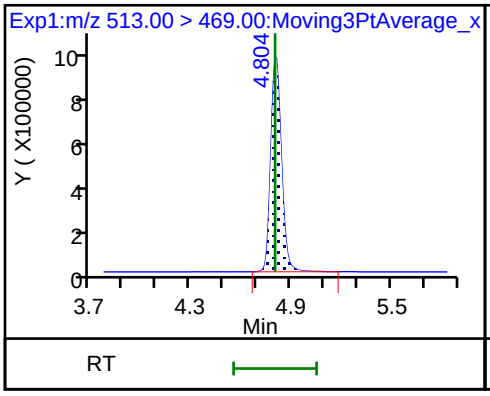

35 Perfluorononanesulfonic acid



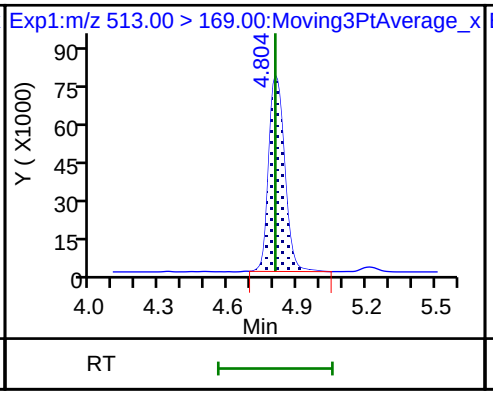

35 Perfluorononanesulfonic acid



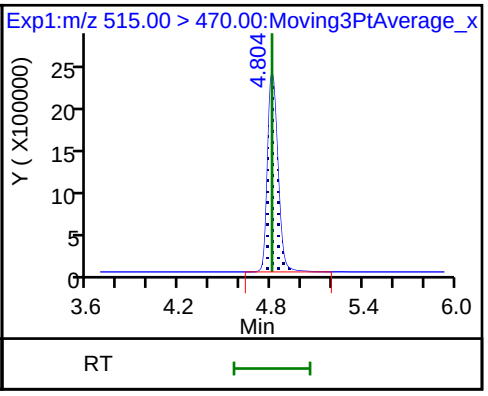

36 Perfluorodecanoic acid



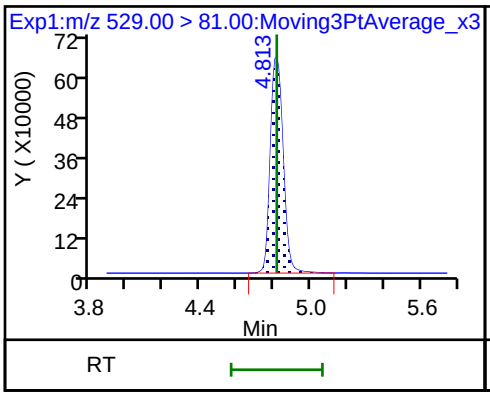

36 Perfluorodecanoic acid



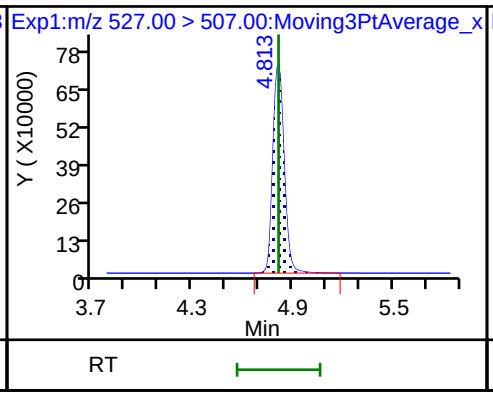

D 37 13C2 PFDA



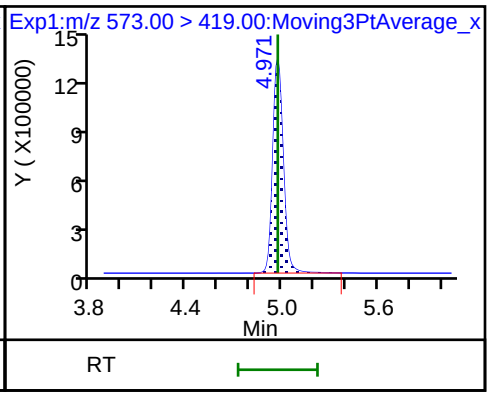
D 38 M2-8:2 FTS



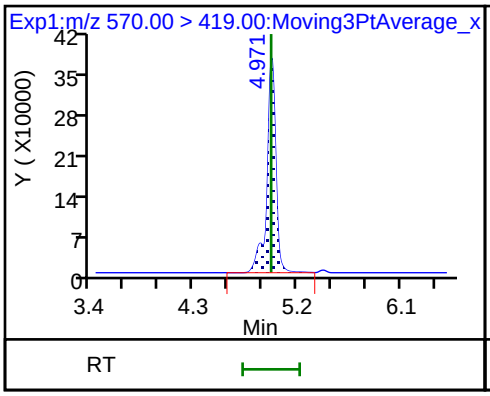

39 8:2 FTS



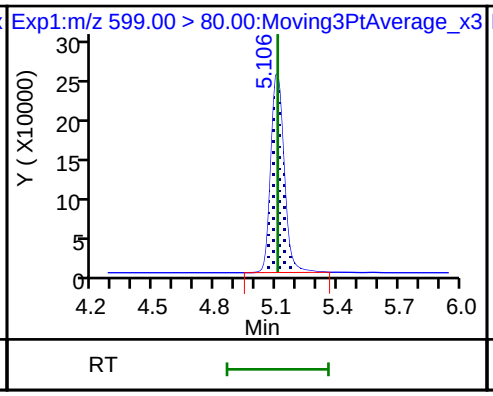

D 40 d3-NMeFOSAA



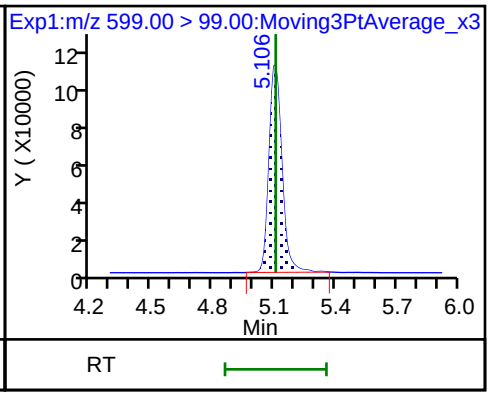

41 NMeFOSAA



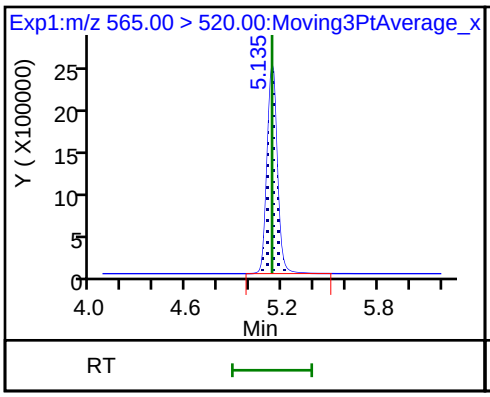

42 Perfluorodecanesulfonic acid



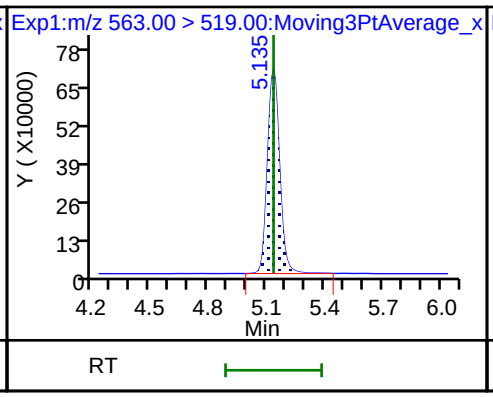

42 Perfluorodecanesulfonic acid



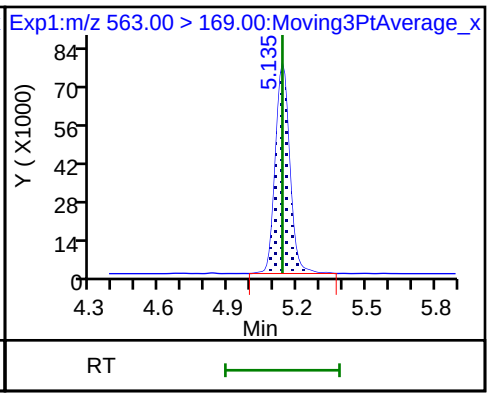

D 44 13C2 PFUnA



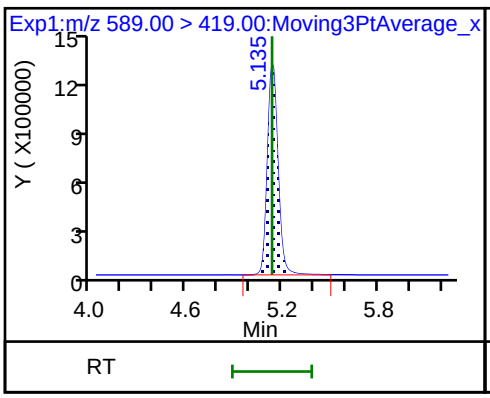

45 Perfluoroundecanoic acid



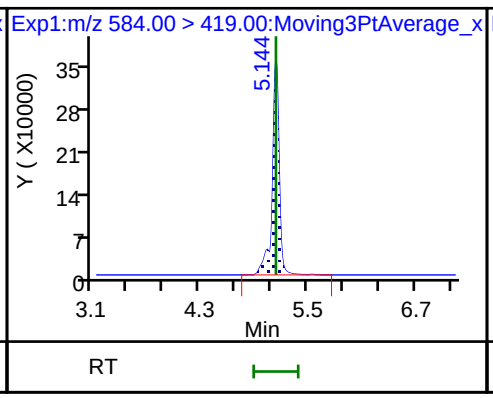

45 Perfluoroundecanoic acid



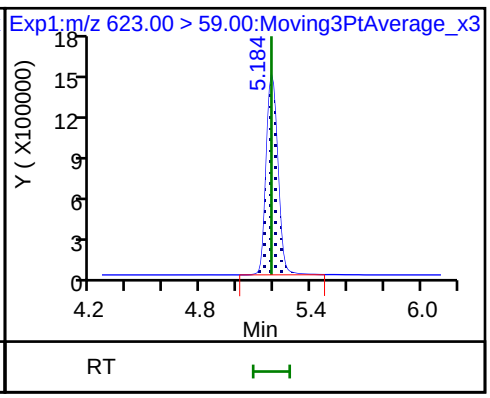

D 46 d5-NEtFOSAA



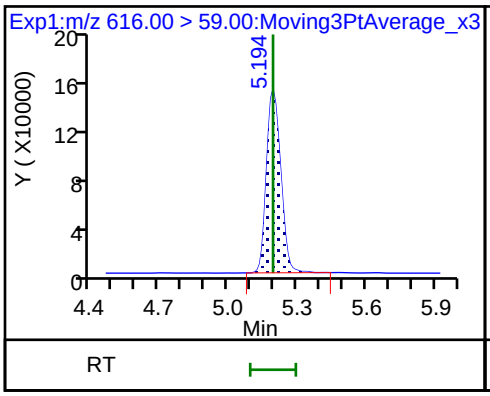

48 NEtFOSA



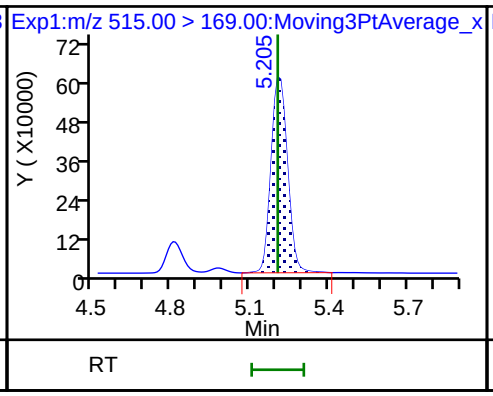

D 43 d7-N-MeFOSE-M



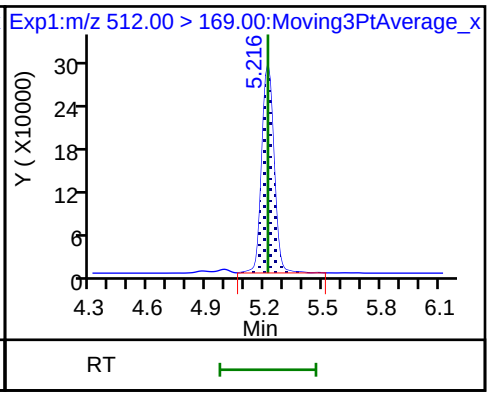
47 N-MeFOSE-M



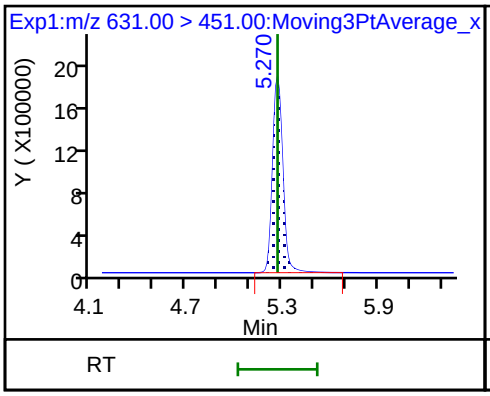

D 49 d-N-MeFOSA-M



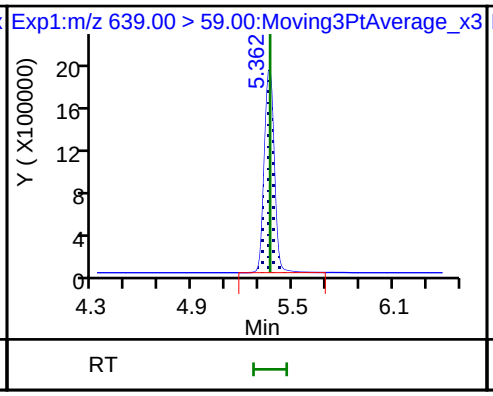

50 NMeFOSA



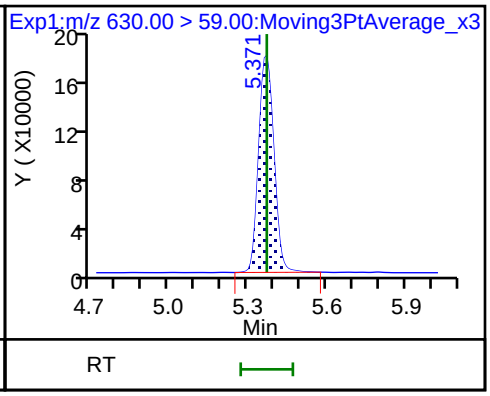

51 11ClFOS



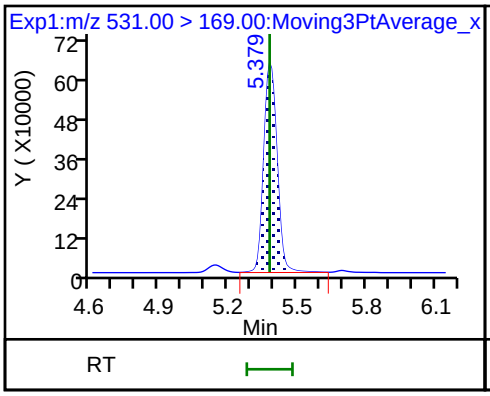

D 52 d9-N-EtFOSE-M



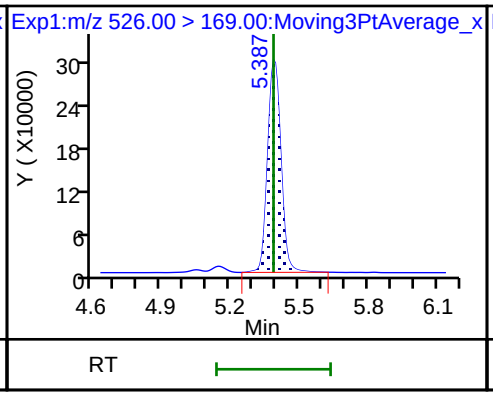

53 N-EtFOSE-M



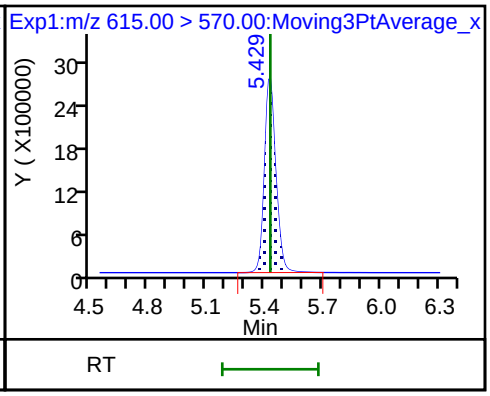

D 54 d-N-EtFOSA-M



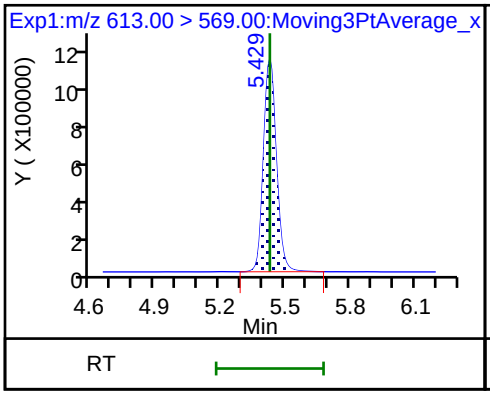

55 N-EtFOSA-M



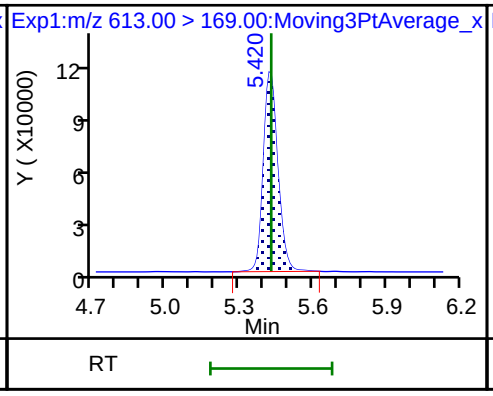

D 56 13C2 PFDoA



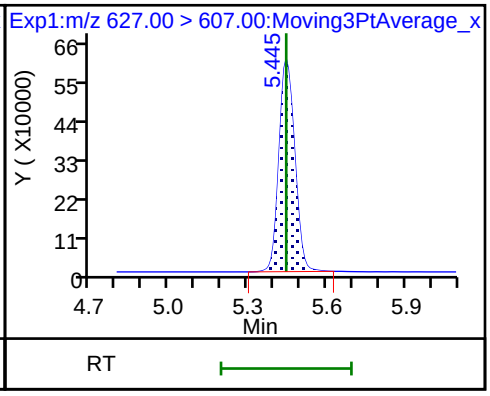

57 Perfluorododecanoic acid



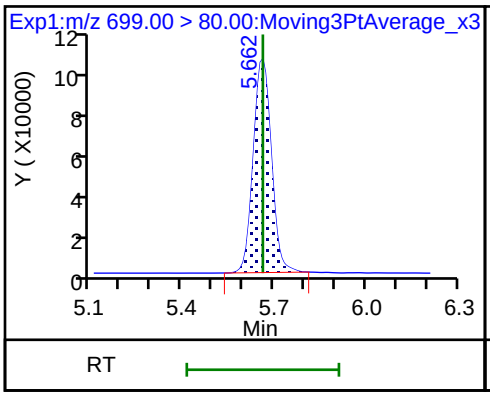

57 Perfluorododecanoic acid



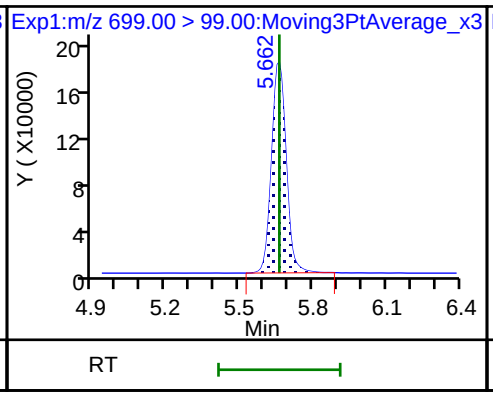

58 10:2 FTS



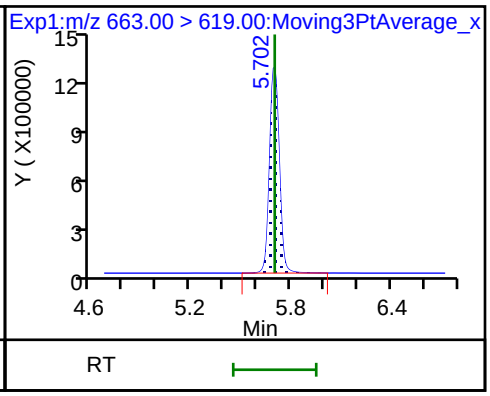
59 PFDoS



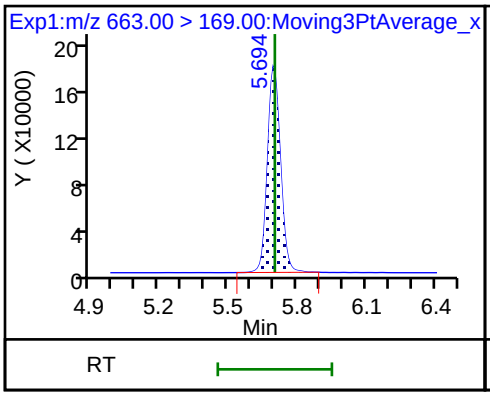

59 PFDoS



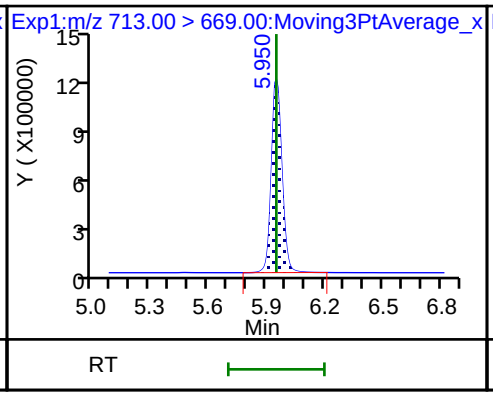

60 Perfluorotridecanoic acid



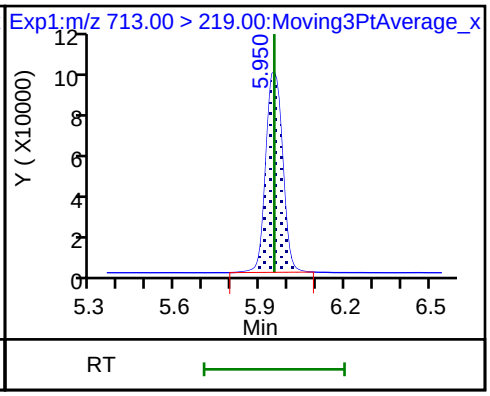

60 Perfluorotridecanoic acid



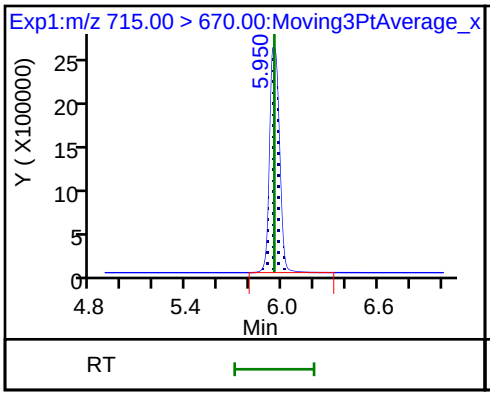

62 Perfluorotetradecanoic acid



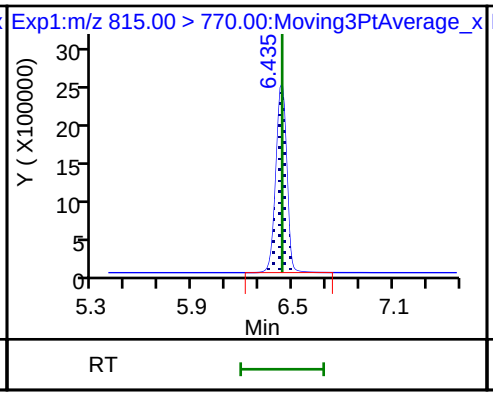

62 Perfluorotetradecanoic acid



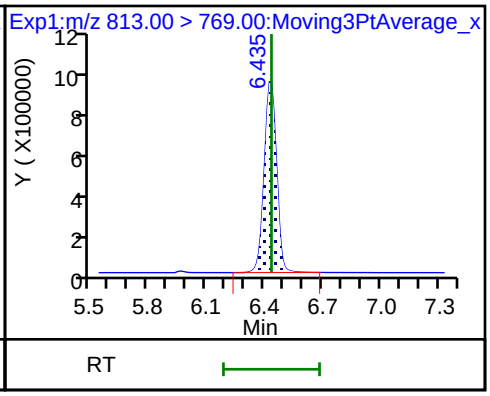

D 61 13C2 PFTeDA



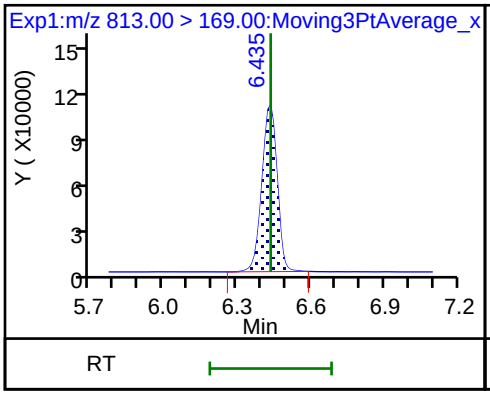

D 64 13C2 PFHxDA



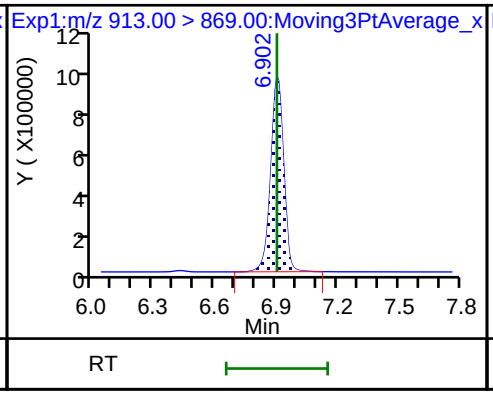

63 Perfluorohexadecanoic acid



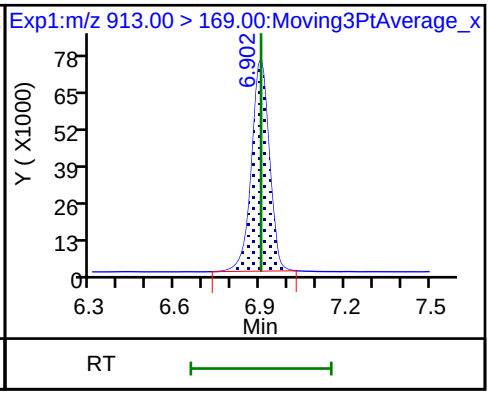

63 Perfluorohexadecanoic acid




65 Perfluorooctadecanoic acid




65 Perfluorooctadecanoic acid



Eurofins TestAmerica, Sacramento

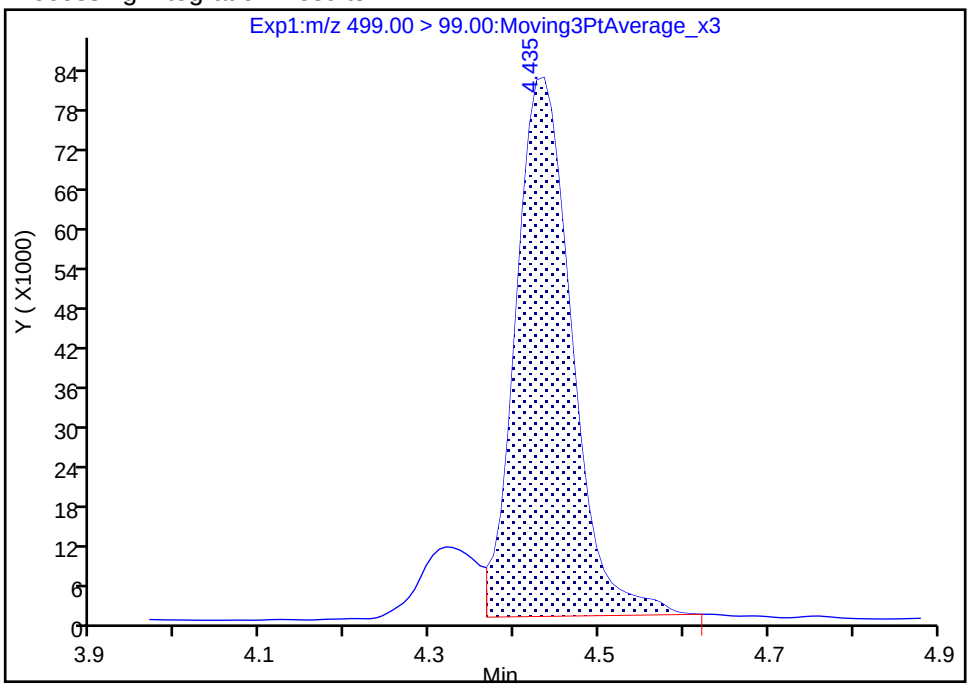
Data File: \\chromfs\Sacramento\ChromData\A13\20200910-103012.b\2020.09.10_A13_PFC_A_006.d
Injection Date: 10-Sep-2020 10:55:32 Instrument ID: A13
Lims ID: CCV L4
Client ID:
Operator ID: SACINSTLCMS01 ALS Bottle#: 52 Worklist Smp#: 3
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFAS_A13 Limit Group: LC PFC ICAL
Column: Gemini C18 3um 3 x 100mm ( 3.00 mm) Detector EXP1

## 28 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 2

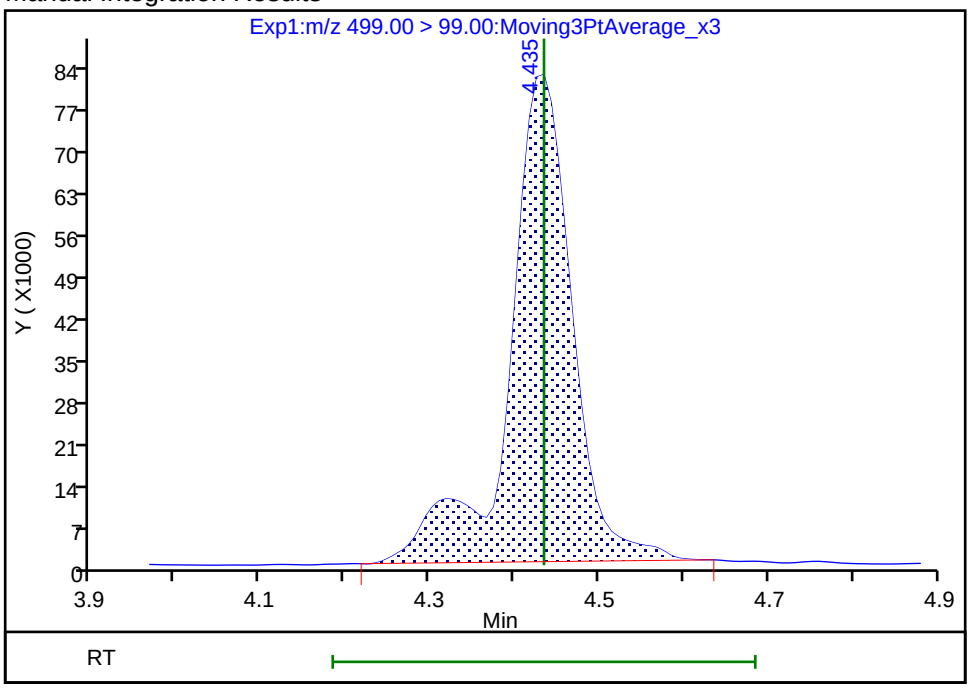
Processing Integration Results

RT: 4.43
Area: 376662
Amount: 1.020870
Amount Units: ng/ml




Manual Integration Results

RT: 4.43
Area: 427482
Amount: 1.020870
Amount Units: ng/ml




Reviewer: hsuw, 10-Sep-2020 11:17:49
Audit Action: Manually Integrated Audit Reason: Isomers

FORM VII
LCMS CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Sacramento  Job No.: 460-217659-1

SDG No.:

Lab Sample ID: CCV 320-411143/1  Calibration Date: 09/10/2020 17:58

Instrument ID: A13  Calib Start Date: 09/08/2020 18:01

GC Column: GeminiC18 3x100  ID: 3.00(mm)  Calib End Date: 09/08/2020 18:58

Lab File ID: 2020.09.10_A13_PFC_A_058.d  Conc. Units: ng/mL

| ANALYTE | CURVE TYPE | AVE RRF | RRF | MIN RRF | CALC AMOUNT | SPIKE AMOUNT | %D | MAX %D |
|---|---|---|---|---|---|---|---|---|
| Perfluorobutanoic acid (PFBA) | AveID | 0.7433 | 0.8216 | | 1.11 | 1.00 | 10.5 | 40.0 |
| Perfluoropentanoic acid (PFPeA) | AveID | 1.028 | 1.047 | | 1.02 | 1.00 | 1.9 | 40.0 |
| Perfluorobutanesulfonic acid (PFBS) | AveID | 0.9776 | 1.089 | | 0.985 | 0.884 | 11.4 | 50.0 |
| 4:2 FTS | AveID | 3.243 | 3.725 | | 1.07 | 0.934 | 14.8 | 50.0 |
| Perfluorohexanoic acid (PFHxA) | AveID | 0.9294 | 1.064 | | 1.14 | 1.00 | 14.4 | 40.0 |
| Perfluoropentanesulfonic acid (PFPeS) | AveID | 0.7896 | 0.8278 | | 0.983 | 0.938 | 4.8 | 50.0 |
| HFPO-DA (GenX) | AveID | 0.2972 | 0.3176 | | 1.07 | 1.00 | 6.9 | 40.0 |
| Perfluoroheptanoic acid (PFHpA) | AveID | 1.011 | 1.078 | | 1.07 | 1.00 | 6.7 | 40.0 |
| Perfluorohexanesulfonic acid (PFHxS) | AveID | 1.112 | 1.109 | | 0.907 | 0.910 | -0.3 | 40.0 |
| 4,8-Dioxa-3H-perfluorononanoic acid (ADONA) | AveID | 5.136 | 5.873 | | 1.08 | 0.942 | 14.3 | 50.0 |
| 6:2 FTS | AveID | 2.407 | 2.458 | | 0.968 | 0.948 | 2.1 | 40.0 |
| Perfluoroheptanesulfonic Acid (PFHpS) | AveID | 1.139 | 1.232 | | 1.03 | 0.952 | 8.1 | 50.0 |
| Perfluorooctanoic acid (PFOA) | AveID | 1.023 | 1.051 | | 1.03 | 1.00 | 2.7 | 40.0 |
| Perfluorooctanesulfonic acid (PFOS) | AveID | 1.038 | 1.117 | | 0.999 | 0.928 | 7.6 | 40.0 |
| Perfluorononanoic acid (PFNA) | AveID | 0.9494 | 1.017 | | 1.07 | 1.00 | 7.1 | 40.0 |
| F-53B Major | AveID | 2.501 | 2.788 | | 1.04 | 0.932 | 11.4 | 50.0 |
| Perfluorooctanesulfonamide (FOSA) | AveID | 0.9383 | 0.9946 | | 1.06 | 1.00 | 6.0 | 40.0 |
| Perfluorononanesulfonic acid (PFNS) | AveID | 0.7747 | 0.8310 | | 1.03 | 0.960 | 7.3 | 50.0 |
| 8:2 FTS | AveID | 2.472 | 2.867 | | 1.11 | 0.958 | 16.0 | 40.0 |
| Perfluorodecanoic acid (PFDA) | AveID | 0.8964 | 0.9091 | | 1.01 | 1.00 | 1.4 | 40.0 |
| N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA) | AveID | 0.8055 | 0.8324 | | 1.03 | 1.00 | 3.3 | 40.0 |
| Perfluorodecanesulfonic acid (PFDS) | AveID | 0.6588 | 0.7119 | | 1.04 | 0.964 | 8.1 | 50.0 |
| Perfluoroundecanoic acid (PFUnA) | AveID | 0.6615 | 0.6563 | | 0.993 | 1.00 | -0.8 | 40.0 |
| N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA) | AveID | 0.7741 | 0.7982 | | 1.03 | 1.00 | 3.1 | 40.0 |
| NMeFOSE | AveID | 1.065 | 1.218 | | 1.14 | 1.00 | 14.4 | 40.0 |
| NMeFOSA | AveID | 0.9832 | 1.067 | | 1.09 | 1.00 | 8.5 | 50.0 |
| F-53B Minor | AveID | 4.317 | 5.085 | | 1.11 | 0.942 | 17.8 | 50.0 |
| NEtFOSE | AveID | 1.035 | 1.084 | | 1.05 | 1.00 | 4.7 | 40.0 |
| NEtFOSA | AveID | 1.062 | 1.160 | | 1.09 | 1.00 | 9.2 | 40.0 |
| Perfluorododecanoic acid (PFDoA) | AveID | 0.9122 | 0.9728 | | 1.07 | 1.01 | 6.6 | 40.0 |
| 10:2 FTS | AveID | 1.632 | 1.864 | | 1.10 | 0.964 | 14.2 | 50.0 |
| Perfluorododecanesulfonic acid (PFDoS) | AveID | 0.2572 | 0.2536 | | 0.954 | 0.968 | -1.4 | 50.0 |

FORM VII 537 (modified)

FORM VII
LCMS CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Sacramento  Job No.: 460-217659-1

SDG No.:

Lab Sample ID: CCV 320-411143/1  Calibration Date: 09/10/2020 17:58

Instrument ID: A13  Calib Start Date: 09/08/2020 18:01

GC Column: GeminiC18 3x100  ID: 3.00(mm)  Calib End Date: 09/08/2020 18:58

Lab File ID: 2020.09.10_A13_PFC_A_058.d  Conc. Units: ng/mL

| ANALYTE | CURVE TYPE | AVE RRF | RRF | MIN RRF | CALC AMOUNT | SPIKE AMOUNT | %D | MAX %D |
|---|---|---|---|---|---|---|---|---|
| Perfluorotridecanoic acid (PFTriA) | AveID | 0.9373 | 1.098 | | 1.17 | 1.00 | 17.1 | 50.0 |
| Perfluorotetradecanoic acid (PFTeA) | AveID | 0.9843 | 0.9797 | | 0.996 | 1.00 | -0.5 | 50.0 |
| Perfluoro-n-hexadecanoic acid (PFHxDA) | L2ID | | 1.053 | | 1.08 | 1.00 | 8.3 | 50.0 |
| Perfluoro-n-octadecanoic acid (PFODA) | AveID | 0.7306 | 0.8802 | | 1.21 | 1.00 | 20.5 | 50.0 |
| 13C4 PFBA | Ave | 0.8499 | 0.9181 | | 2.70 | 2.50 | 8.0 | 50.0 |
| 13C5 PFPeA | Ave | 0.6625 | 0.6923 | | 2.61 | 2.50 | 4.5 | 50.0 |
| 13C3 PFBS | Ave | 0.8317 | 0.9375 | | 2.62 | 2.33 | 12.7 | 50.0 |
| M2-4:2 FTS | Ave | 0.2037 | 0.2127 | | 2.44 | 2.34 | 4.4 | 50.0 |
| 13C2 PFHxA | Ave | 0.8183 | 0.8542 | | 2.61 | 2.50 | 4.4 | 50.0 |
| 13C3 HFPO-DA | Ave | 0.5866 | 0.6027 | | 2.57 | 2.50 | 2.7 | 50.0 |
| 13C4 PFHpA | Ave | 0.8058 | 0.8662 | | 2.69 | 2.50 | 7.5 | 50.0 |
| 18O2 PFHxS | Ave | 0.5449 | 0.5890 | | 2.56 | 2.37 | 8.1 | 50.0 |
| M2-6:2 FTS | Ave | 0.2349 | 0.2411 | | 2.44 | 2.38 | 2.7 | 50.0 |
| 13C4 PFOA | Ave | 0.9849 | 1.000 | | 2.54 | 2.50 | 1.6 | 50.0 |
| 13C4 PFOS | Ave | 0.3888 | 0.4144 | | 2.55 | 2.39 | 6.6 | 50.0 |
| 13C5 PFNA | Ave | 0.9099 | 0.9243 | | 2.54 | 2.50 | 1.6 | 50.0 |
| 13C8 FOSA | Ave | 0.5585 | 0.5832 | | 2.61 | 2.50 | 4.4 | 50.0 |
| 13C2 PFDA | Ave | 1.102 | 1.104 | | 2.51 | 2.50 | 0.2 | 50.0 |
| M2-8:2 FTS | Ave | 0.3107 | 0.3118 | | 2.40 | 2.40 | 0.4 | 50.0 |
| d3-NMeFOSAA | Ave | 0.5682 | 0.5771 | | 2.54 | 2.50 | 1.6 | 50.0 |
| 13C2 PFUnA | Ave | 1.078 | 1.138 | | 2.64 | 2.50 | 5.5 | 50.0 |
| d5-NEtFOSAA | Ave | 0.5501 | 0.5827 | | 2.65 | 2.50 | 5.9 | 50.0 |
| d7-N-MeFOSE-M | Ave | 0.1398 | 0.1166 | | 10.4 | 12.5 | -16.5 | 50.0 |
| d-N-MeFOSA-M | Ave | 0.2628 | 0.2726 | | 2.59 | 2.50 | 3.7 | 50.0 |
| d9-N-EtFOSE-M | Ave | 0.1640 | 0.1510 | | 11.5 | 12.5 | -7.9 | 50.0 |
| d-N-EtFOSA-M | Ave | 0.2510 | 0.2478 | | 2.47 | 2.50 | -1.3 | 50.0 |
| 13C2 PFDoA | Ave | 1.160 | 1.065 | | 2.29 | 2.50 | -8.2 | 50.0 |
| 13C2 PFTeDA | Ave | 1.146 | 1.022 | | 2.23 | 2.50 | -10.9 | 50.0 |
| 13C2 PFHxDA | Ave | 1.193 | 1.049 | | 2.20 | 2.50 | -12.1 | 50.0 |
| 13C8 PFOA | Ave | 0.8908 | 0.8681 | | 2.39 | 2.45 | -2.5 | 50.0 |
| 13C8 PFOS | Ave | 0.2076 | 0.2192 | | 2.52 | 2.39 | 5.6 | 50.0 |

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\A13\20200910-103052.b\2020.09.10_A13_PFC_A_058.d
Lims ID: CCV L4
Client ID:
Sample Type: CCV
Inject. Date: 10-Sep-2020 17:58:31 ALS Bottle#: 52 Worklist Smp#: 1
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Sample Info: CCV L4
Misc. Info.: Plate: 1 Rack: 1
Operator ID: SACINSTLCMS01 Instrument ID: A13
Sublist: chrom-PFAS_A13*sub3

Method: \\chromfs\Sacramento\ChromData\A13\20200910-103052.b\PFAS_A13.m
Limit Group: LC PFC ICAL
Last Update: 11-Sep-2020 08:47:02 Calib Date: 08-Sep-2020 18:58:15
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\A13\20200908-102913.b\2020.09.08_A13_PFC_ICALX_010.d

Column 1 : Gemini C18 3um 3 x 100mm ( 3.00 mm) Det: EXP1
Process Host: CTX1053

First Level Reviewer: mongkols Date: 11-Sep-2020 08:47:02
Ratio Calibration: Average of Initial Calibration

| Signal | RT | EXP RT | DLT RT | REL RT | Response | Amount ng/ml | Ratio(Limits) | %Rec | S/N | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| D 1 13C4 PFBA | | | | | | | | | | |
| 217.00 > 172.00 | 2.467 | 2.475 | -0.008 | 0.609 | 9162946 | 2.70 | | 108 | 12957 | |
| 2 Perfluorobutanoic acid | | | | | | | | | | |
| 212.90 > 169.00 | 2.475 | 2.482 | -0.007 | 1.003 | 3011406 | 1.11 | | 111 | 439 | |
| D 4 13C5 PFPeA | | | | | | | | | | |
| 267.90 > 223.00 | 2.866 | 2.867 | -0.001 | 0.708 | 6909420 | 2.61 | | 105 | 12587 | |
| 5 Perfluoropentanoic acid | | | | | | | | | | |
| 262.90 > 219.00 | 2.866 | 2.867 | -0.001 | 1.000 | 2893971 | 1.02 | | 102 | 147 | |
| D 14 13C3 PFBS | | | | | | | | | | |
| 301.90 > 80.00 | 2.901 | 2.913 | -0.012 | 0.716 | 8700836 | 2.62 | | 113 | 15518 | |
| 6 Perfluorobutanesulfonic acid | | | | | | | | | | |
| 298.90 > 80.00 | 2.901 | 2.913 | -0.012 | 1.000 | 3602378 | 0.9846 | Target=2.18 | 111 | 3347 | |
| 298.90 > 99.00 | 2.901 | 2.913 | -0.012 | 1.000 | 1570606 | | 2.29(1.09-3.26) | | 379 | |
| 7 4:2 FTS | | | | | | | | | | |
| 327.00 > 307.00 | 3.204 | 3.215 | -0.011 | 1.000 | 2954311 | 1.07 | | 115 | 2968 | |
| D 8 M2-4:2 FTS | | | | | | | | | | |
| 329.00 > 81.00 | 3.204 | 3.215 | -0.011 | 0.791 | 1982910 | 2.44 | | 104 | 1183 | |
| 10 Perfluorohexanoic acid | | | | | | | | | | |
| 313.00 > 269.00 | 3.247 | 3.258 | -0.011 | 1.000 | 3626839 | 1.14 | Target=11.68 | 114 | 127 | |
| 313.00 > 119.00 | 3.247 | 3.258 | -0.011 | 1.000 | 268198 | | 13.52(5.84-17.52) | | 77.9 | |
| D 9 13C2 PFHxA | | | | | | | | | | |
| 315.00 > 270.00 | 3.247 | 3.258 | -0.011 | 0.802 | 8525171 | 2.61 | | 104 | 6773 | |
| 11 Perfluoropentanesulfonic acid | | | | | | | | | | |
| 349.00 > 80.00 | 3.268 | 3.279 | -0.011 | 1.126 | 2905724 | 0.9834 | Target=2.56 | 105 | 375 | |
| 349.00 > 99.00 | 3.268 | 3.279 | -0.011 | 1.126 | 1189796 | | 2.44(1.28-3.84) | | 452 | |
| 12 HPFO-DA | | | | | | | | | | |
| 285.00 > 169.00 | 3.371 | 3.380 | -0.009 | 1.000 | 764203 | 1.07 | | 107 | 1365 | |

| Signal | RT | EXP RT | DLT RT | REL RT | Response | Amount ng/ml | Ratio(Limits) | %Rec | S/N | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| D 13 13C3 HFPO-DA | | | | | | | | | | |
| 287.00 > 169.00 | 3.371 | 3.380 | -0.009 | 0.832 | 6015223 | 2.57 | | 103 | 7252 | |
| D 17 18O2 PFHxS | | | | | | | | | | |
| 403.00 > 84.00 | 3.655 | 3.665 | -0.010 | 0.902 | 5560720 | 2.56 | | 108 | 1323 | |
| 16 Perfluoroheptanoic acid | | | | | | | | | | |
| 363.00 > 319.00 | 3.655 | 3.665 | -0.010 | 1.000 | 3727616 | 1.07 | Target=3.85 | 107 | 299 | |
| 363.00 > 169.00 | 3.655 | 3.665 | -0.010 | 1.000 | 964153 | | 3.87(1.92-5.77) | | 316 | |
| 18 Perfluorohexanesulfonic acid | | | | | | | | | | M |
| 399.00 > 80.00 | 3.655 | 3.665 | -0.010 | 1.000 | 2371813 | 0.9069 | Target=3.25 | 99.7 | 304 | |
| 399.00 > 99.00 | 3.655 | 3.665 | -0.010 | 1.000 | 770354 | | 3.08(1.62-4.87) | | 252 | M |
| D 15 13C4 PFHpA | | | | | | | | | | |
| 367.00 > 322.00 | 3.655 | 3.665 | -0.010 | 0.902 | 8644864 | 2.69 | | 107 | 4758 | |
| 19 DONA | | | | | | | | | | |
| 377.00 > 251.00 | 3.704 | 3.713 | -0.009 | 0.840 | 9150878 | 1.08 | Target=2.76 | 114 | 5689 | |
| 377.00 > 85.00 | 3.704 | 3.713 | -0.009 | 0.840 | 3312037 | | 2.76(1.38-4.14) | | 2749 | |
| D 20 M2-6:2 FTS | | | | | | | | | | |
| 429.00 > 81.00 | 4.026 | 4.042 | -0.016 | 0.994 | 2285999 | 2.44 | | 103 | 2888 | |
| 21 6:2 FTS | | | | | | | | | | |
| 427.00 > 407.00 | 4.026 | 4.042 | -0.016 | 1.000 | 2243024 | 0.9683 | | 102 | 670 | |
| 22 Perfluoroheptanesulfonic acid | | | | | | | | | | |
| 449.00 > 80.00 | 4.042 | 4.051 | -0.009 | 0.917 | 1939402 | 1.03 | Target=4.29 | 108 | 976 | |
| 449.00 > 99.00 | 4.042 | 4.051 | -0.009 | 0.917 | 461654 | | 4.20(2.15-6.44) | | 268 | |
| $ 23 13C8 PFOA | | | | | | | | | | |
| 421.00 > 376.00 | 4.042 | 4.051 | -0.009 | 0.998 | 8481638 | 2.39 | | 97.5 | 5503 | |
| D 24 13C4 PFOA | | | | | | | | | | |
| 417.00 > 372.00 | 4.051 | 4.059 | -0.008 | 1.000 | 9983996 | 2.54 | | 102 | 5474 | |
| 26 Perfluorooctanoic acid | | | | | | | | | | |
| 413.00 > 369.00 | 4.051 | 4.059 | -0.008 | 1.000 | 4200928 | 1.03 | Target=2.95 | 103 | 585 | |
| 413.00 > 169.00 | 4.051 | 4.059 | -0.008 | 1.000 | 1404240 | | 2.99(1.47-4.42) | | 847 | |
| * 25 13C2 PFOA | | | | | | | | | | |
| 415.00 > 370.00 | 4.051 | 4.059 | -0.008 | | 9979910 | 2.50 | | | 16990 | |
| $ 27 13C8 PFOS | | | | | | | | | | |
| 507.00 > 99.00 | 4.408 | 4.416 | -0.008 | 1.088 | 2091640 | 2.52 | | 106 | 2216 | |
| 28 Perfluorooctanesulfonic acid | | | | | | | | | | M |
| 499.00 > 80.00 | 4.416 | 4.425 | -0.009 | 1.002 | 1715129 | 1.00 | Target=4.28 | 108 | 260 | |
| 499.00 > 99.00 | 4.408 | 4.425 | -0.017 | 1.000 | 415556 | | 4.13(2.14-6.41) | | 313 | M |
| D 29 13C4 PFOS | | | | | | | | | | |
| 503.00 > 80.00 | 4.408 | 4.425 | -0.017 | 1.088 | 3953490 | 2.55 | | 107 | 8327 | |
| 30 Perfluorononanoic acid | | | | | | | | | | |
| 463.00 > 419.00 | 4.425 | 4.433 | -0.008 | 0.998 | 3760808 | 1.07 | Target=8.00 | 107 | 856 | |
| 463.00 > 169.00 | 4.425 | 4.433 | -0.008 | 0.998 | 488303 | | 7.70(4.00-12.01) | | 642 | |
| D 31 13C5 PFNA | | | | | | | | | | |
| 468.00 > 423.00 | 4.433 | 4.442 | -0.009 | 1.094 | 9224451 | 2.54 | | 102 | 19957 | |
| 32 9ClFOS | | | | | | | | | | |
| 531.00 > 351.00 | 4.614 | 4.620 | -0.006 | 1.047 | 4297755 | 1.04 | | 111 | 9349 | |
| D 34 13C8 FOSA | | | | | | | | | | |
| 506.00 > 78.00 | 4.732 | 4.740 | -0.008 | 1.168 | 5820407 | 2.61 | | 104 | 5046 | |

| Signal | RT | EXP RT | DLT RT | REL RT | Response | Amount ng/ml | Ratio(Limits) | %Rec | S/N | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| 33 Perfluorooctanesulfonamide | | | | | | | | | | |
| 498.00 > 78.00 | 4.732 | 4.740 | -0.008 | 1.000 | 2315616 | 1.06 | | 106 | 1768 | |
| 35 Perfluorononanesulfonic acid | | | | | | | | | | |
| 549.00 > 80.00 | 4.758 | 4.766 | -0.008 | 1.079 | 1319643 | 1.03 | Target=2.15 | 107 | 1611 | |
| 549.00 > 99.00 | 4.758 | 4.766 | -0.008 | 1.079 | 650810 | | 2.03(1.08-3.23) | | 783 | |
| D 37 13C2 PFDA | | | | | | | | | | |
| 515.00 > 470.00 | 4.784 | 4.793 | -0.009 | 1.181 | 11022443 | 2.51 | | 100 | 8039 | |
| 36 Perfluorodecanoic acid | | | | | | | | | | |
| 513.00 > 469.00 | 4.784 | 4.793 | -0.009 | 1.000 | 4008209 | 1.01 | Target=10.44 | 101 | 1167 | |
| 513.00 > 169.00 | 4.784 | 4.793 | -0.009 | 1.000 | 385225 | | 10.40(5.22-15.65) | | 290 | |
| D 38 M2-8:2 FTS | | | | | | | | | | |
| 529.00 > 81.00 | 4.784 | 4.802 | -0.018 | 1.181 | 2981276 | 2.40 | | 100 | 3784 | |
| 39 8:2 FTS | | | | | | | | | | |
| 527.00 > 507.00 | 4.784 | 4.802 | -0.018 | 1.000 | 3419040 | 1.11 | | 116 | 3191 | |
| D 40 d3-NMeFOSAA | | | | | | | | | | |
| 573.00 > 419.00 | 4.949 | 4.959 | -0.010 | 1.222 | 5759158 | 2.54 | | 102 | 4877 | |
| 41 NMeFOSAA | | | | | | | | | | |
| 570.00 > 419.00 | 4.949 | 4.959 | -0.010 | 1.000 | 1917559 | 1.03 | | 103 | 347 | |
| 42 Perfluorodecanesulfonic acid | | | | | | | | | | |
| 599.00 > 80.00 | 5.074 | 5.084 | -0.010 | 1.151 | 1135263 | 1.04 | Target=2.36 | 108 | 2747 | |
| 599.00 > 99.00 | 5.074 | 5.084 | -0.010 | 1.151 | 482856 | | 2.35(1.18-3.54) | | 724 | |
| D 44 13C2 PFUnA | | | | | | | | | | |
| 565.00 > 520.00 | 5.103 | 5.113 | -0.010 | 1.260 | 11354884 | 2.64 | | 106 | 6363 | |
| 45 Perfluoroundecanoic acid | | | | | | | | | | |
| 563.00 > 519.00 | 5.103 | 5.113 | -0.010 | 1.000 | 2983937 | 0.99 | Target=8.67 | 99.2 | 1327 | |
| 563.00 > 169.00 | 5.103 | 5.113 | -0.010 | 1.000 | 359106 | | 8.31(4.34-13.01) | | 949 | |
| D 46 d5-NEtFOSAA | | | | | | | | | | |
| 589.00 > 419.00 | 5.113 | 5.123 | -0.010 | 1.262 | 5815324 | 2.65 | | 106 | 2304 | |
| 48 NEtFOSA | | | | | | | | | | |
| 584.00 > 419.00 | 5.113 | 5.132 | -0.019 | 1.000 | 1856725 | 1.03 | | 103 | 6128 | |
| D 43 d7-N-MeFOSE-M | | | | | | | | | | |
| 623.00 > 59.00 | 5.180 | 5.190 | -0.010 | 1.279 | 5820748 | 10.4 | | 83.5 | 3667 | |
| 47 N-MeFOSE-M | | | | | | | | | | |
| 616.00 > 59.00 | 5.200 | 5.200 | 0.0 | 1.004 | 567321 | 1.14 | | 114 | 559 | |
| D 49 d-N-MeFOSA-M | | | | | | | | | | |
| 515.00 > 169.00 | 5.212 | 5.212 | 0.0 | 1.287 | 2720748 | 2.59 | | 104 | 39.2 | |
| 50 NMeFOSA | | | | | | | | | | |
| 512.00 > 169.00 | 5.212 | 5.223 | -0.011 | 1.000 | 1160900 | 1.08 | | 108 | 233 | |
| 51 11ClFOS | | | | | | | | | | |
| 631.00 > 451.00 | 5.244 | 5.255 | -0.011 | 1.190 | 7924073 | 1.11 | | 118 | 3954 | |
| D 52 d9-N-EtFOSE-M | | | | | | | | | | |
| 639.00 > 59.00 | 5.350 | 5.359 | -0.009 | 1.321 | 7537238 | 11.5 | | 92.1 | 2888 | |
| 53 N-EtFOSE-M | | | | | | | | | | |
| 630.00 > 59.00 | 5.367 | 5.376 | -0.009 | 1.003 | 653504 | 1.05 | | 105 | 803 | |
| D 54 d-N-EtFOSA-M | | | | | | | | | | |
| 531.00 > 169.00 | 5.376 | 5.385 | -0.009 | 1.327 | 2472880 | 2.47 | | 98.7 | 194 | |

| Signal | RT | EXP RT | DLT RT | REL RT | Response | Amount ng/ml | Ratio(Limits) | %Rec | S/N | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| 55 N-EtFOSA-M | | | | | | | | | | |
| 526.00 > 169.00 | 5.384 | 5.393 | -0.009 | 1.002 | 1147034 | 1.09 | | 109 | 194 | |
| D 56 13C2 PFDoA | | | | | | | | | | |
| 615.00 > 570.00 | 5.401 | 5.409 | -0.008 | 1.333 | 10627217 | 2.29 | | 91.8 | 5359 | |
| 57 Perfluorododecanoic acid | | | | | | | | | | |
| 613.00 > 569.00 | 5.393 | 5.409 | -0.016 | 0.998 | 4159881 | 1.07 | Target=9.05 | 107 | 1829 | |
| 613.00 > 169.00 | 5.401 | 5.409 | -0.008 | 1.000 | 462439 | | 9.00(4.52-13.57) | | 1000 | |
| 58 10:2 FTS | | | | | | | | | | |
| 627.00 > 607.00 | 5.418 | 5.426 | -0.008 | 1.132 | 2236272 | 1.10 | | 114 | 2306 | |
| 59 PFDoS | | | | | | | | | | |
| 699.00 > 80.00 | 5.633 | 5.642 | -0.009 | 1.278 | 406040 | 0.9543 | Target=0.57 | 98.6 | 1198 | |
| 699.00 > 99.00 | 5.633 | 5.642 | -0.009 | 1.278 | 745458 | | 0.54(0.29-0.86) | | 1235 | |
| 60 Perfluorotridecanoic acid | | | | | | | | | | |
| 663.00 > 619.00 | 5.668 | 5.676 | -0.008 | 1.049 | 4667143 | 1.17 | Target=7.06 | 117 | 2641 | |
| 663.00 > 169.00 | 5.668 | 5.676 | -0.008 | 1.049 | 670095 | | 6.96(3.53-10.59) | | 1259 | |
| D 61 13C2 PFTeDA | | | | | | | | | | |
| 715.00 > 670.00 | 5.909 | 5.920 | -0.011 | 1.459 | 10195416 | 2.23 | | 89.1 | 11627 | |
| 62 Perfluorotetradecanoic acid | | | | | | | | | | |
| 713.00 > 669.00 | 5.909 | 5.920 | -0.011 | 1.000 | 3999237 | 1.00 | Target=11.23 | 99.5 | 2104 | |
| 713.00 > 219.00 | 5.909 | 5.920 | -0.011 | 1.000 | 387870 | | 10.31(5.62-16.85) | | 1855 | |
| 63 Perfluorohexadecanoic acid | | | | | | | | | | |
| 813.00 > 769.00 | 6.382 | 6.393 | -0.011 | 1.000 | 4410773 | 1.08 | Target=9.45 | 108 | 2675 | |
| 813.00 > 169.00 | 6.382 | 6.393 | -0.011 | 1.000 | 443939 | | 9.94(4.72-14.17) | | 1344 | |
| D 64 13C2 PFHxDA | | | | | | | | | | |
| 815.00 > 770.00 | 6.382 | 6.393 | -0.011 | 1.576 | 10468266 | 2.20 | | 87.9 | 7192 | |
| 65 Perfluorooctadecanoic acid | | | | | | | | | | |
| 913.00 > 869.00 | 6.834 | 6.842 | -0.008 | 1.071 | 3685623 | 1.20 | Target=11.13 | 120 | 1512 | |
| 913.00 > 169.00 | 6.825 | 6.842 | -0.017 | 1.069 | 321200 | | 11.47(5.56-16.69) | | 1139 | |

## QC Flag Legend

Review Flags

M - Manually Integrated

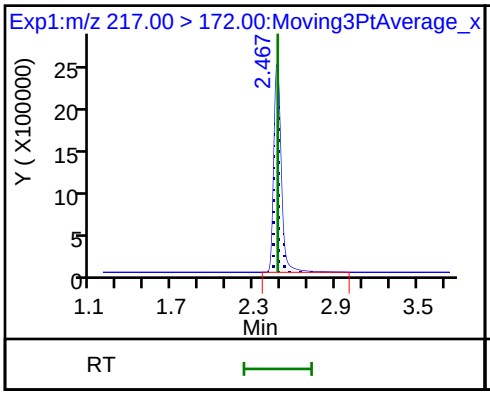
## Reagents:

LCPFC_LL4_00030 Amount Added: 1.00 Units: mL

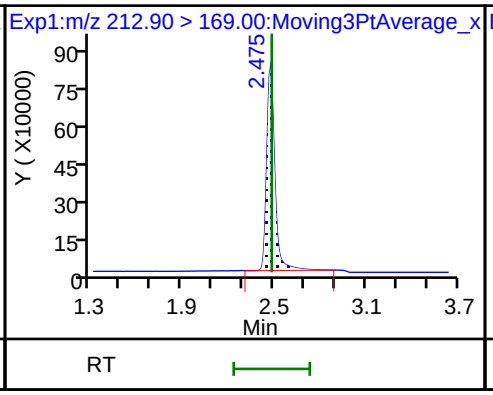
Eurofins TestAmerica, Sacramento

Data File: \\chromfs\Sacramento\ChromData\A13\20200910-103052.b\2020.09.10_A13_PFC_A_058.d
Injection Date: 10-Sep-2020 17:58:31 Instrument ID: A13
Lims ID: CCV L4
Client ID:
Operator ID: SACINSTLCMS01 ALS Bottle#: 52 Worklist Smp#: 1
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFAS_A13 Limit Group: LC PFC ICAL

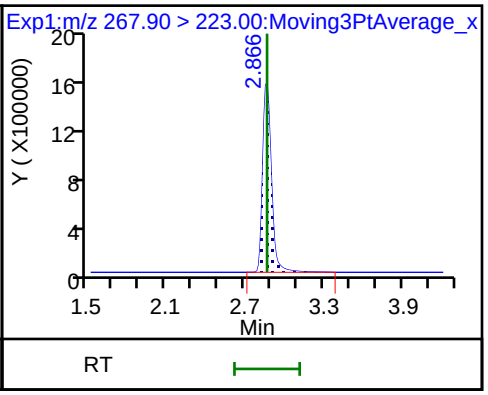
D 1 13C4 PFBA



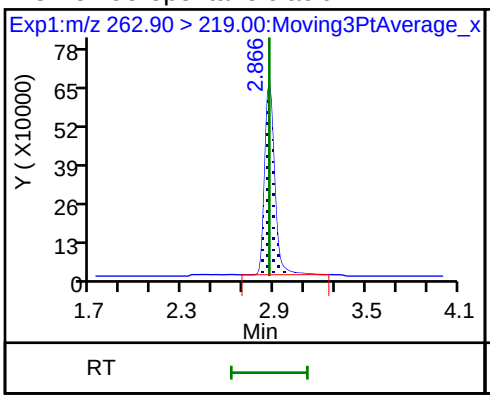

2 Perfluorobutanoic acid



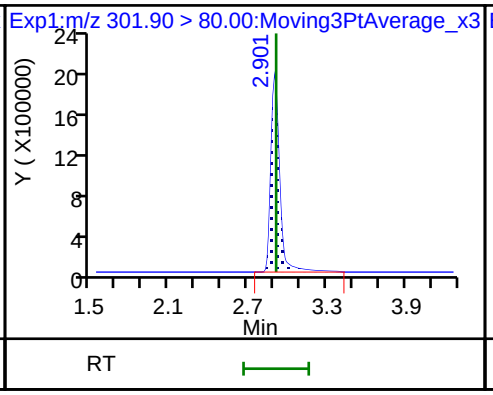

D 4 13C5 PFPeA



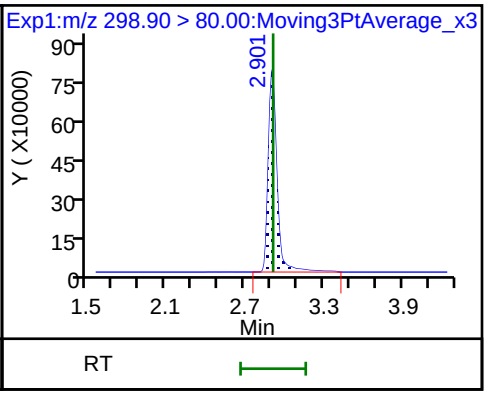

5 Perfluoropentanoic acid



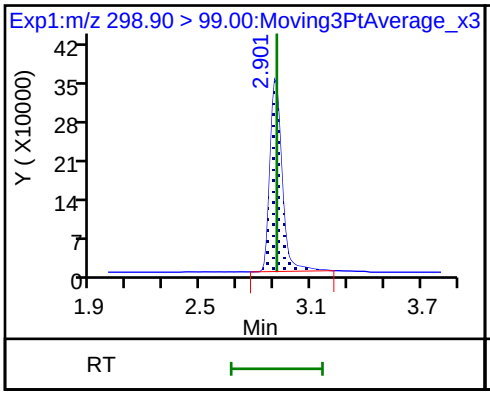

D 14 13C3 PFBS



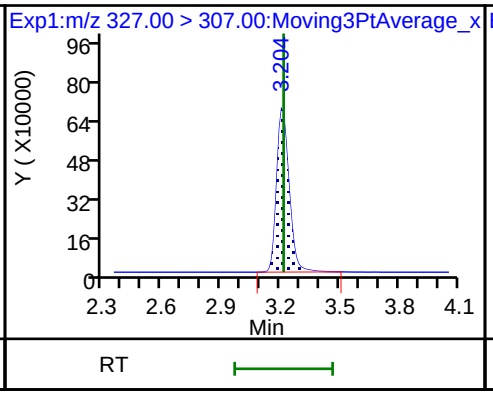

6 Perfluorobutanesulfonic acid



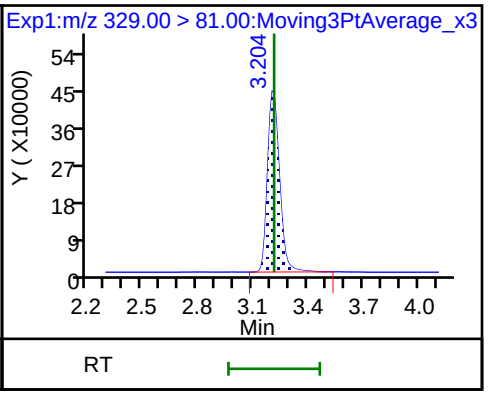

6 Perfluorobutanesulfonic acid



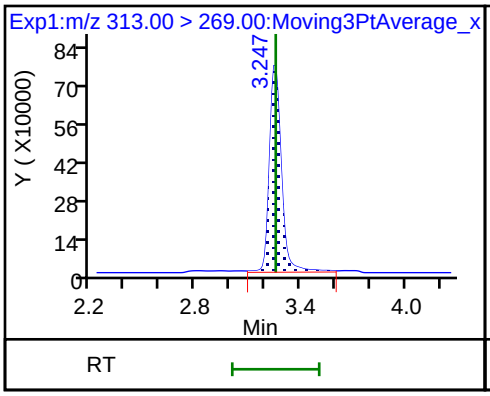

7 4:2 FTS



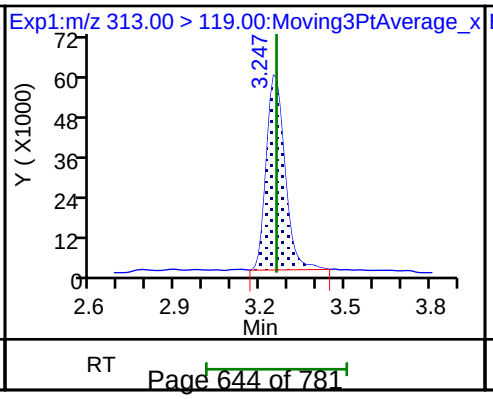

D 8 M2-4:2 FTS



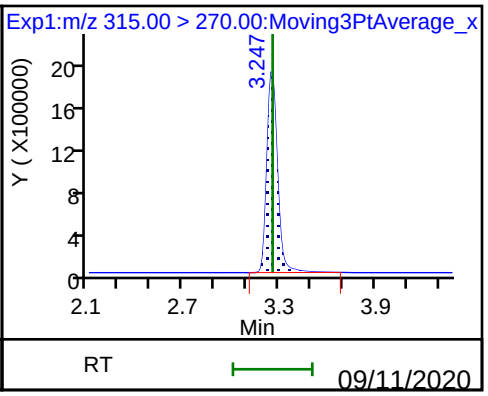

10 Perfluorohexanoic acid



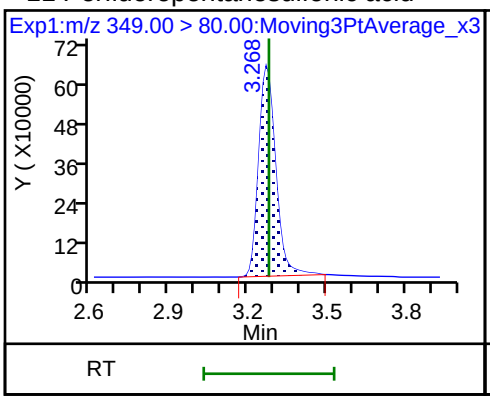

10 Perfluorohexanoic acid



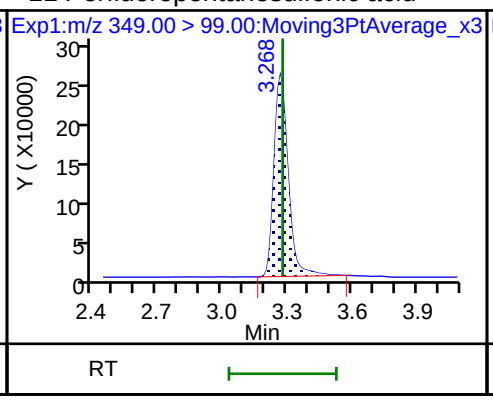

D 9 13C2 PFHxA



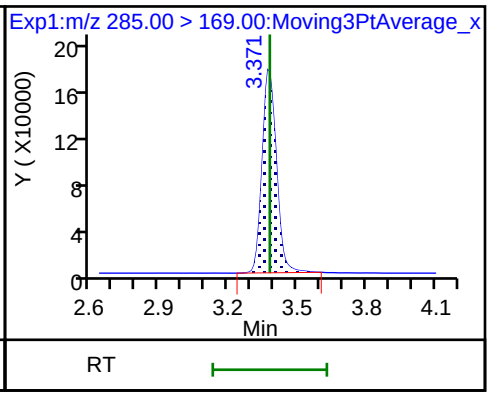
11 Perfluoropentanesulfonic acid



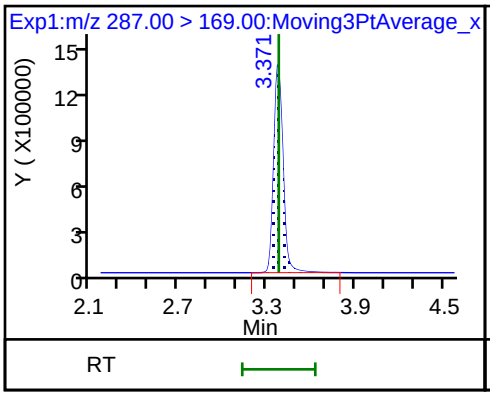

11 Perfluoropentanesulfonic acid



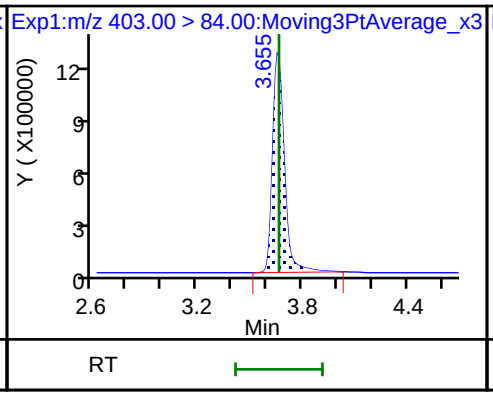

12 HPFO-DA



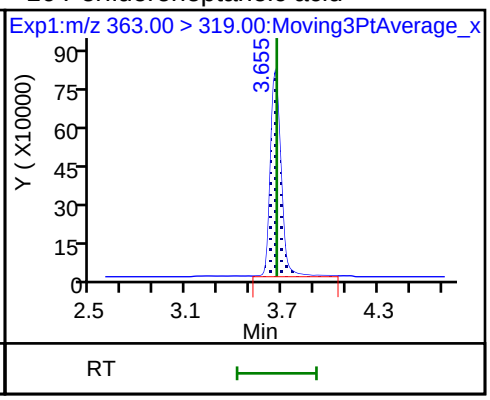

D 13 13C3 HFPO-DA



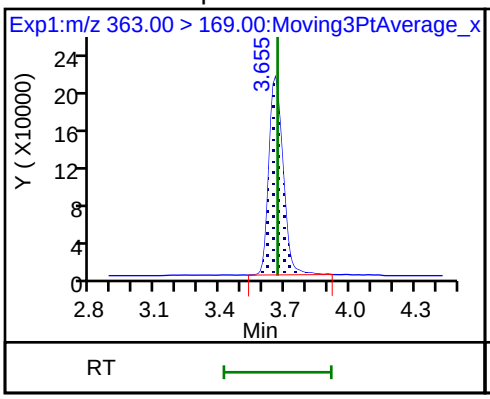

D 17 18O2 PFHxS



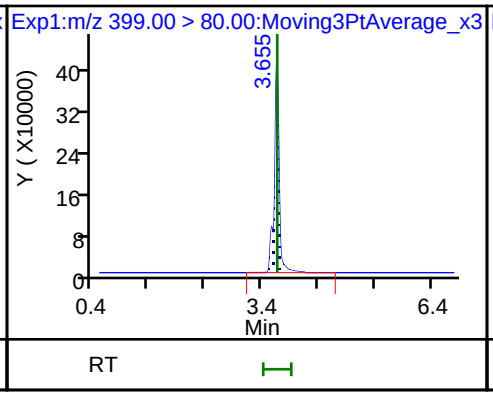

16 Perfluoroheptanoic acid



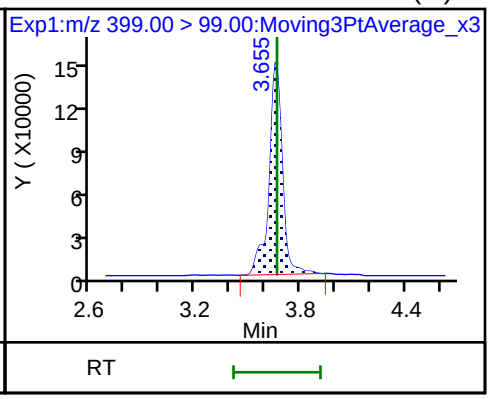

16 Perfluoroheptanoic acid



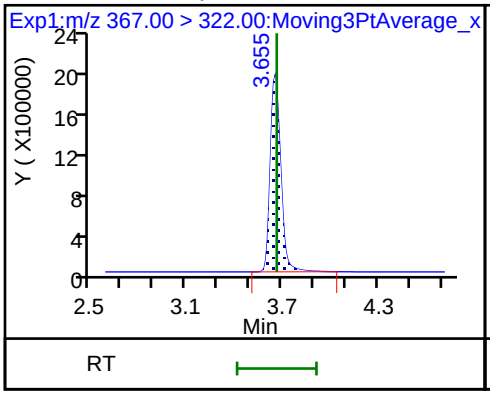

18 Perfluorohexanesulfonic acid



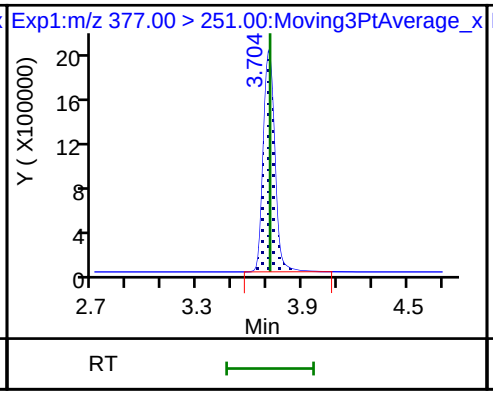

18 Perfluorohexanesulfonic acid (M)



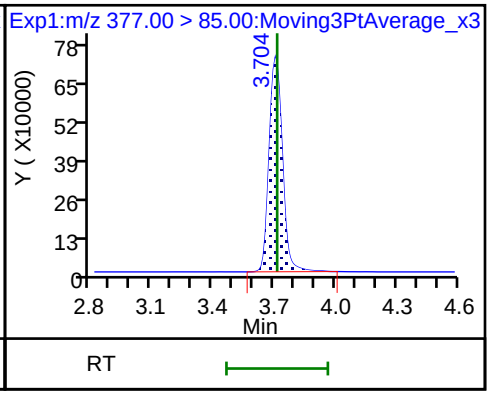

D 15 13C4 PFHpA



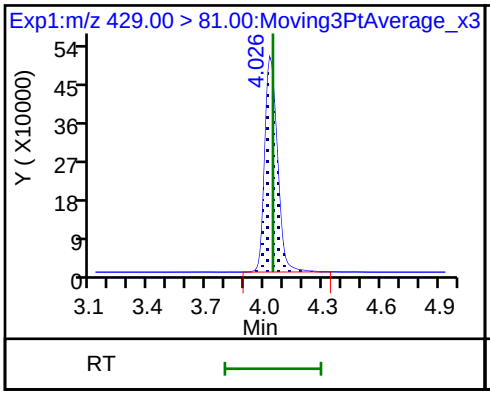

19 DONA



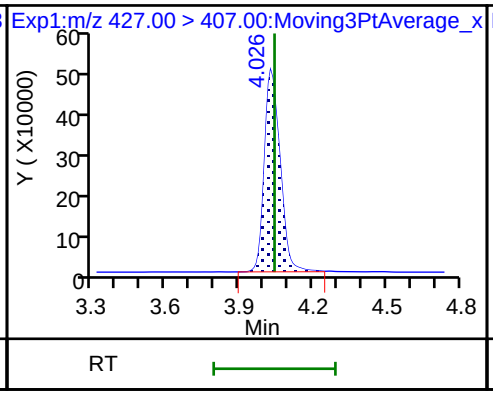

19 DONA



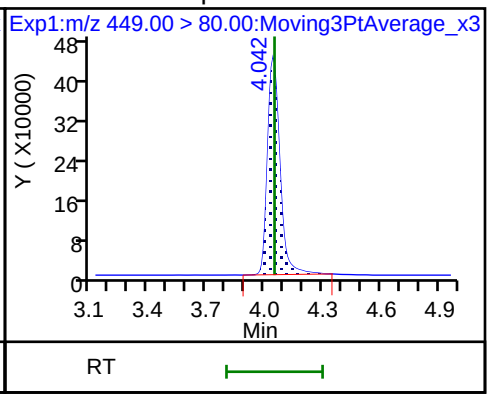
D 20 M2-6:2 FTS



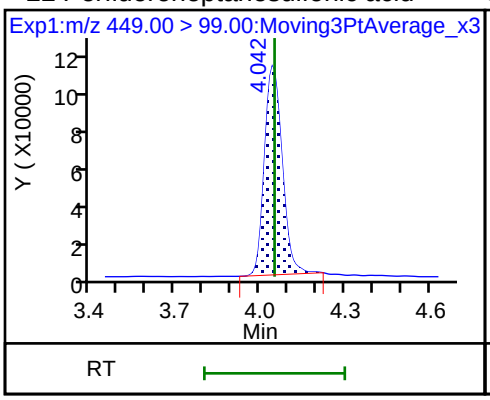

21 6:2 FTS



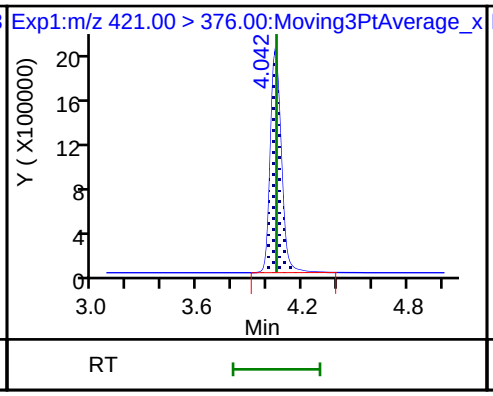

22 Perfluoroheptanesulfonic acid



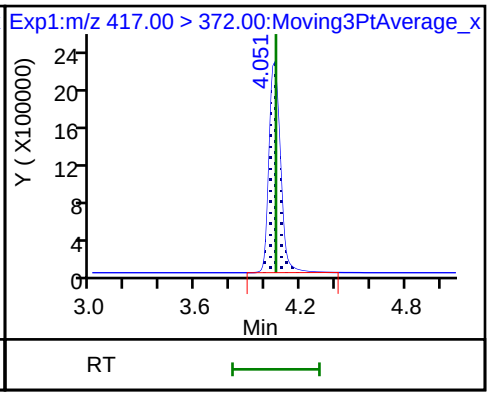

22 Perfluoroheptanesulfonic acid



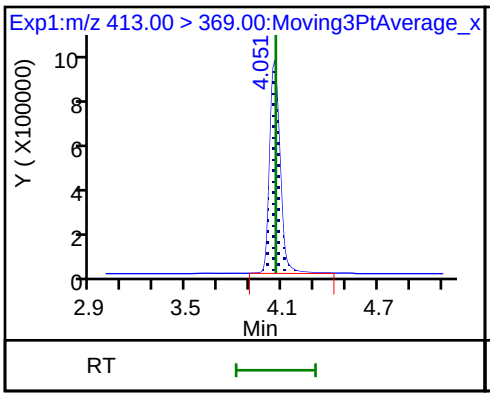

$ 23 13C8 PFOA



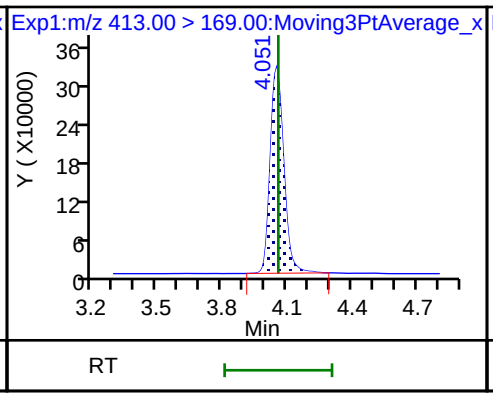

D 24 13C4 PFOA



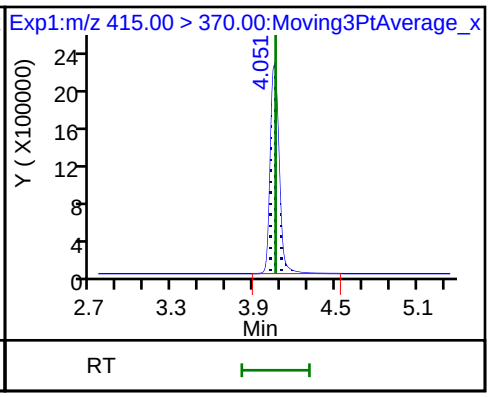

26 Perfluorooctanoic acid



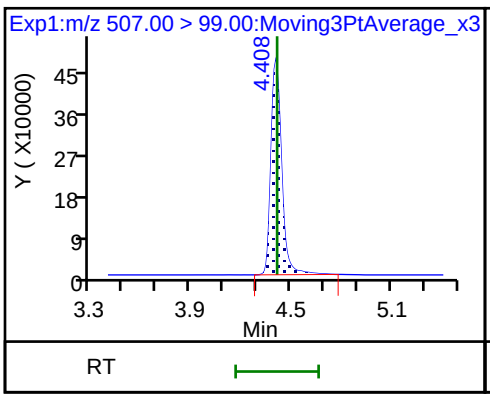

26 Perfluorooctanoic acid



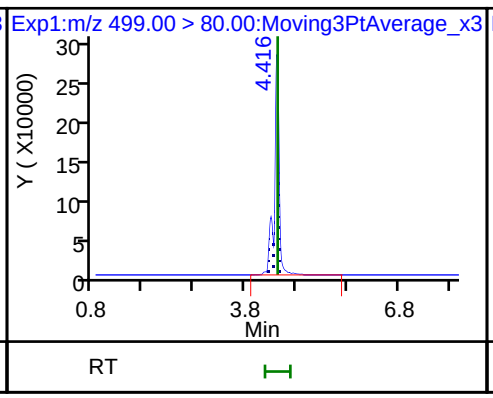

* 25 13C2 PFOA



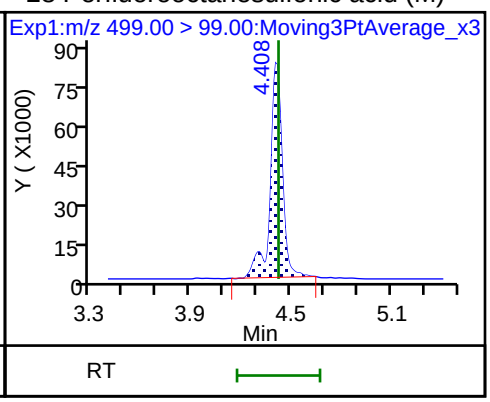

$ 27 13C8 PFOS



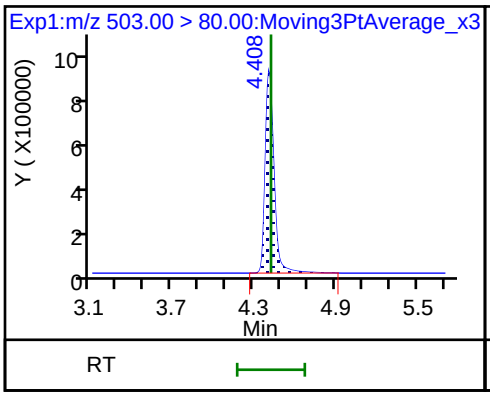

28 Perfluorooctanesulfonic acid



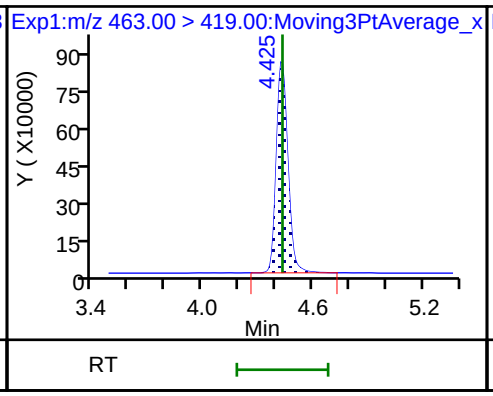

28 Perfluorooctanesulfonic acid (M)



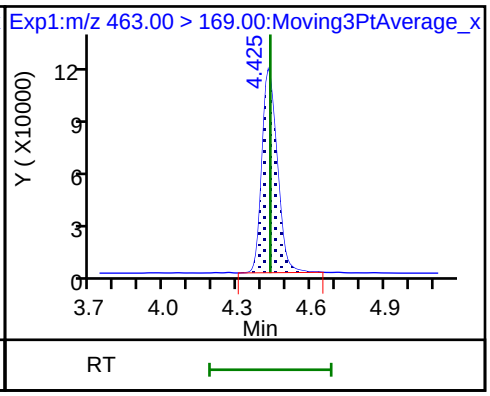
D 29 13C4 PFOS



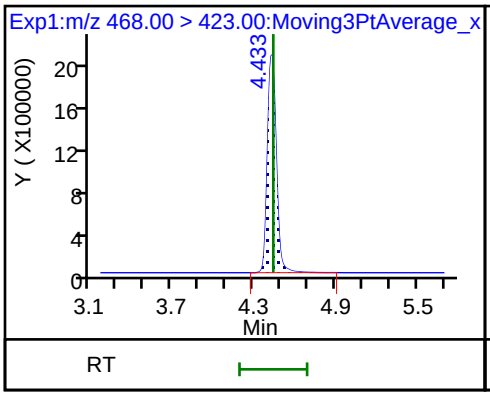

30 Perfluorononanoic acid



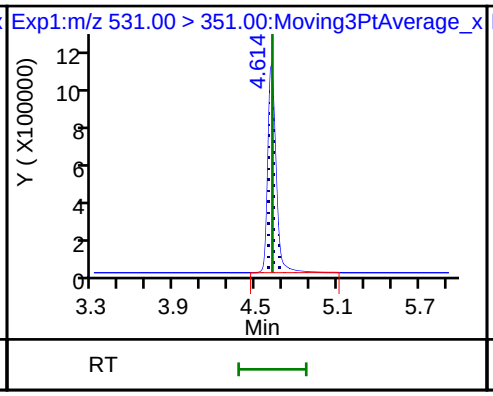

30 Perfluorononanoic acid



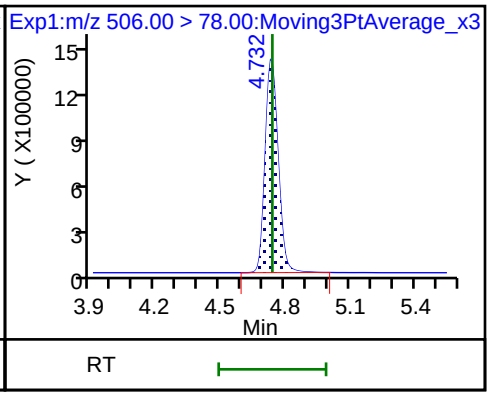

D 31 13C5 PFNA



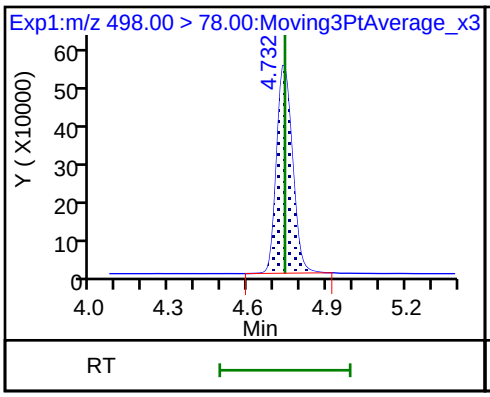

32 9ClFOS



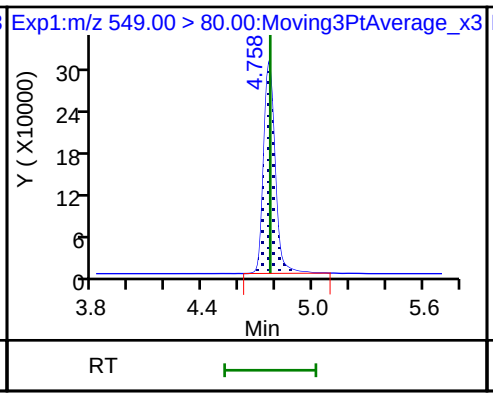

D 34 13C8 FOSA



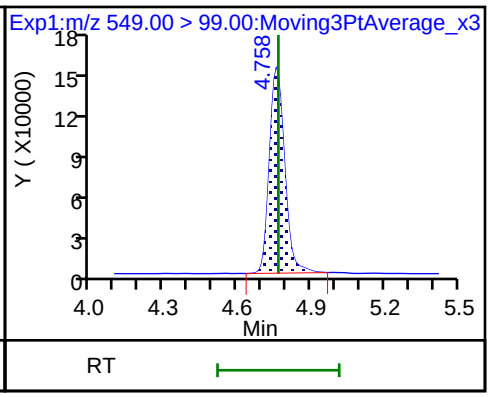

33 Perfluorooctanesulfonamide



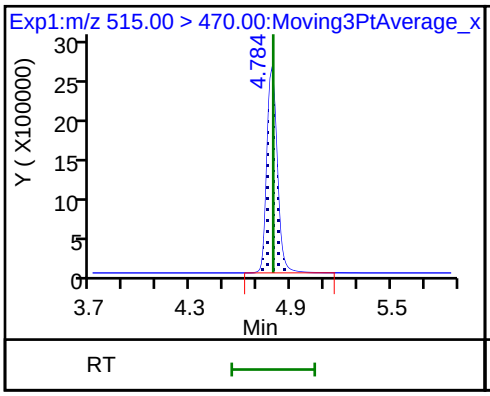

35 Perfluorononanesulfonic acid



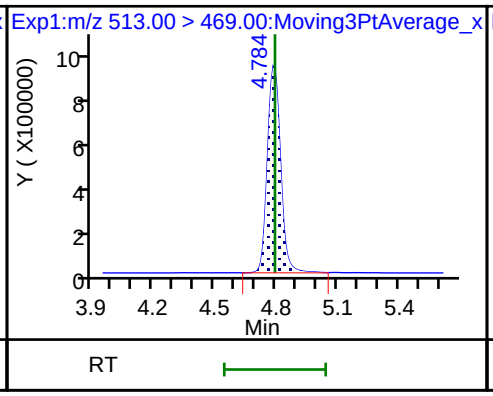

35 Perfluorononanesulfonic acid



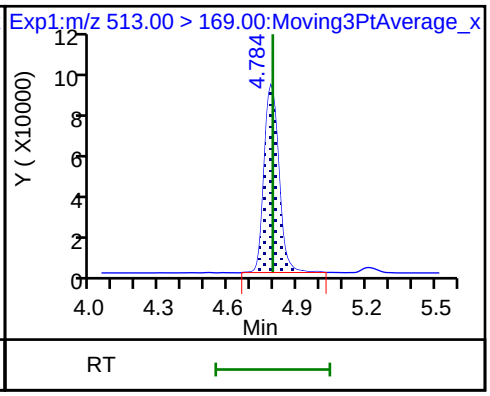

D 37 13C2 PFDA



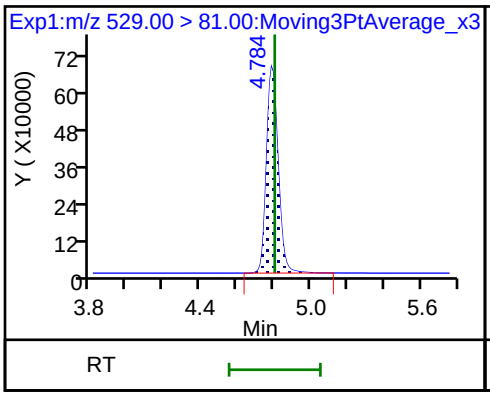

36 Perfluorodecanoic acid



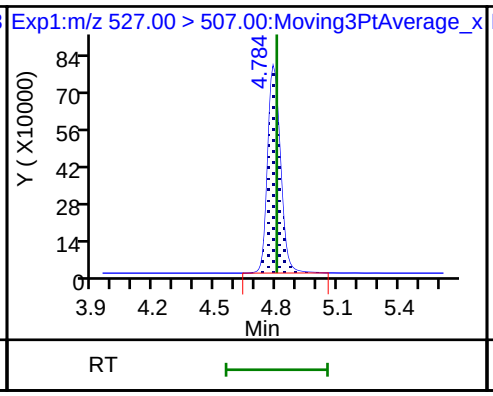

36 Perfluorodecanoic acid



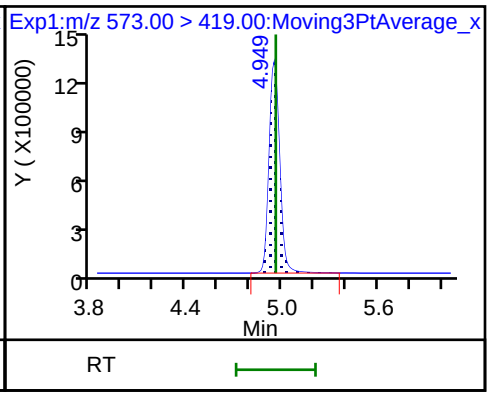
D 38 M2-8:2 FTS



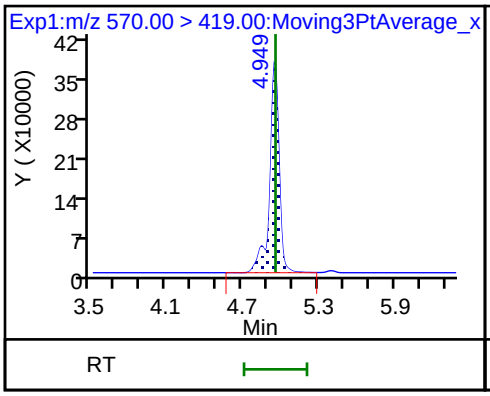

39 8:2 FTS



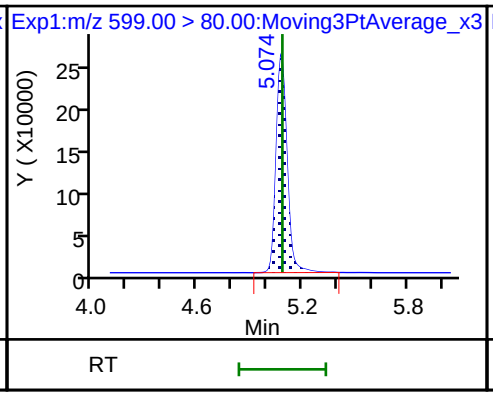

D 40 d3-NMeFOSAA



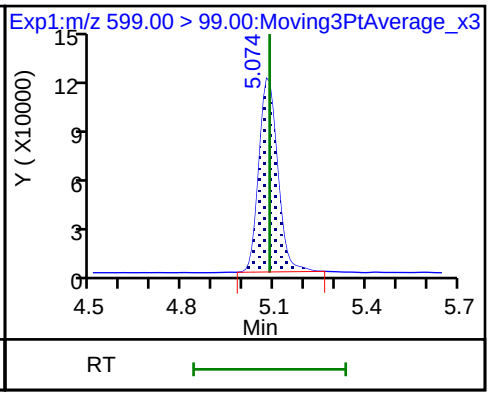

41 NMeFOSAA



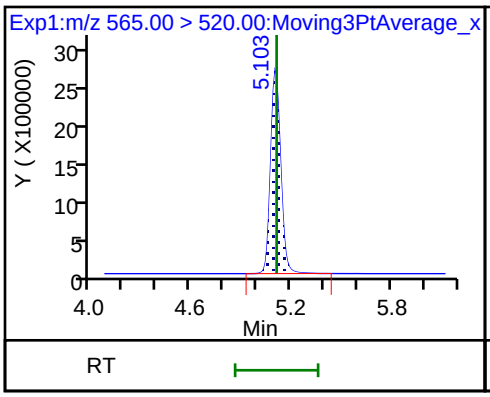

42 Perfluorodecanesulfonic acid



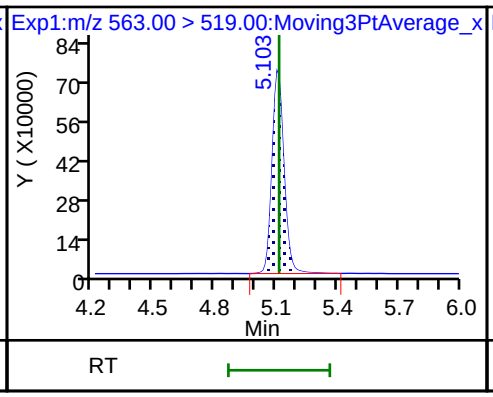

42 Perfluorodecanesulfonic acid



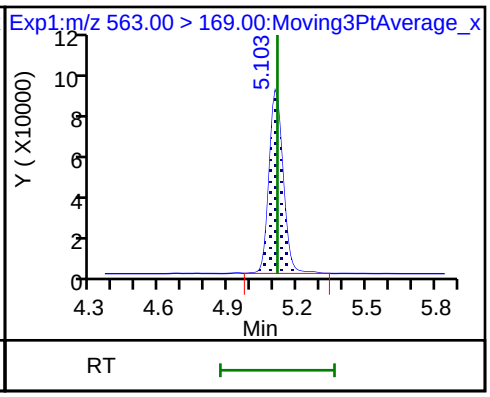

D 44 13C2 PFUnA



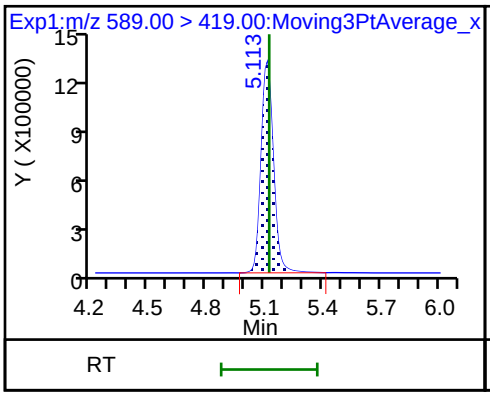

45 Perfluoroundecanoic acid



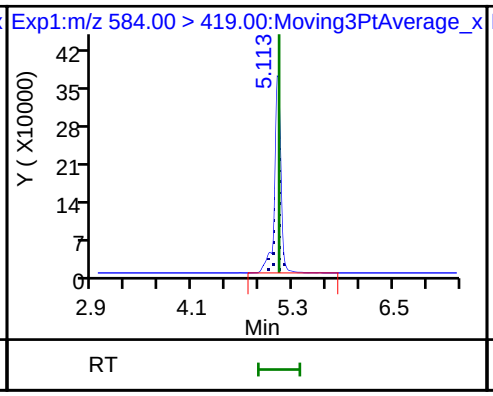

45 Perfluoroundecanoic acid



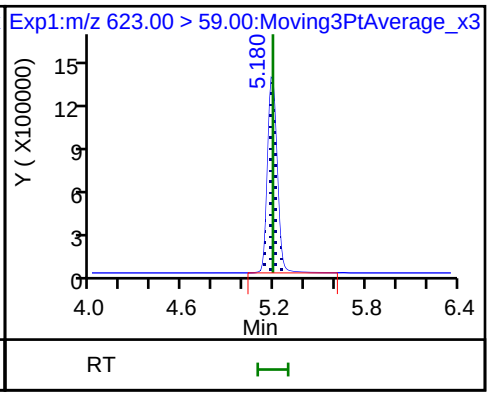

D 46 d5-NEtFOSAA



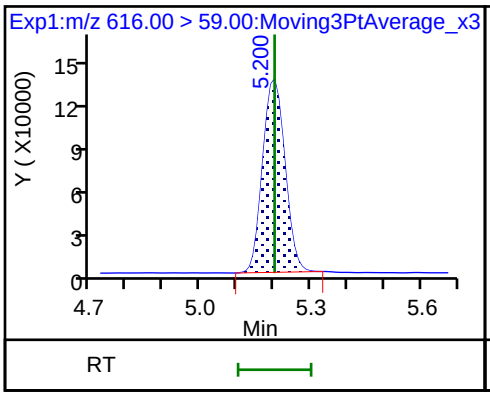

48 NEtFOSA



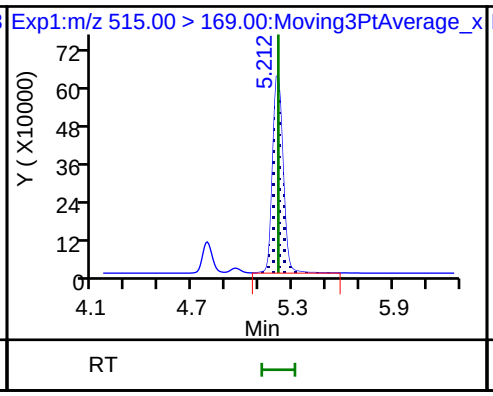

D 43 d7-N-MeFOSE-M



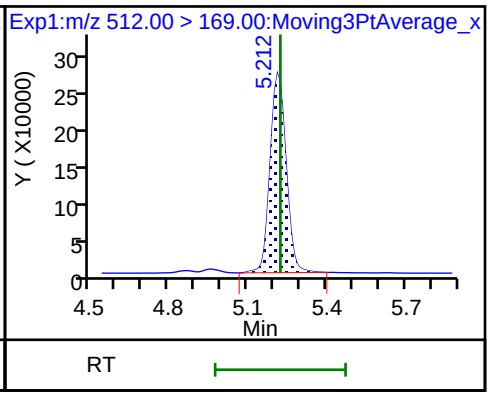
47 N-MeFOSE-M



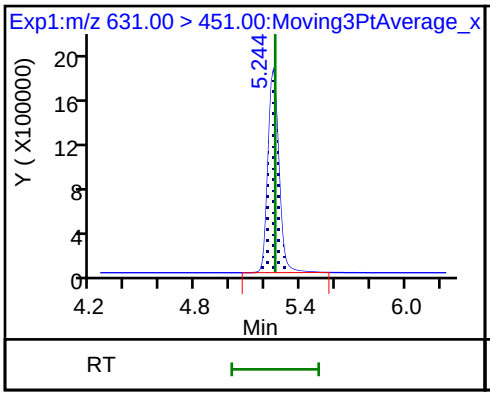

D 49 d-N-MeFOSA-M



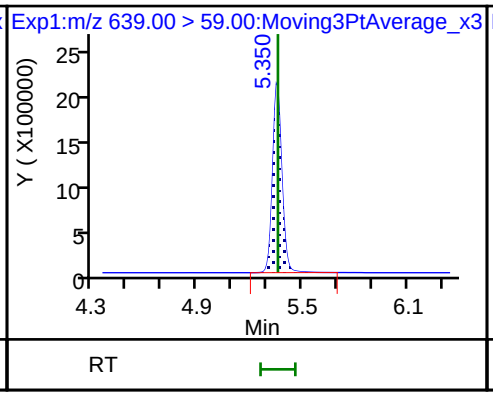

50 NMeFOSA



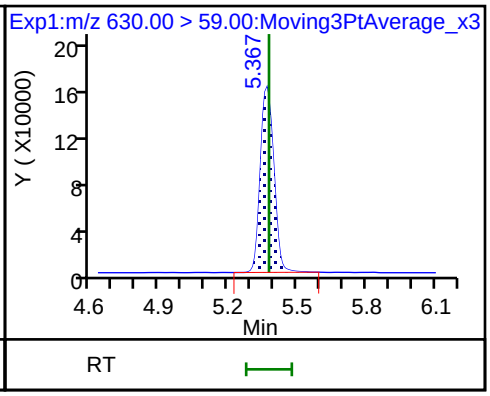

51 11ClFOS



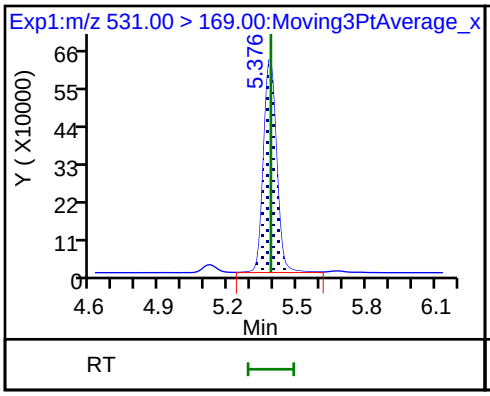

D 52 d9-N-EtFOSE-M



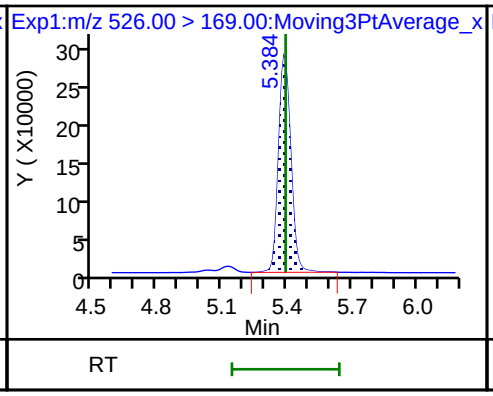

53 N-EtFOSE-M



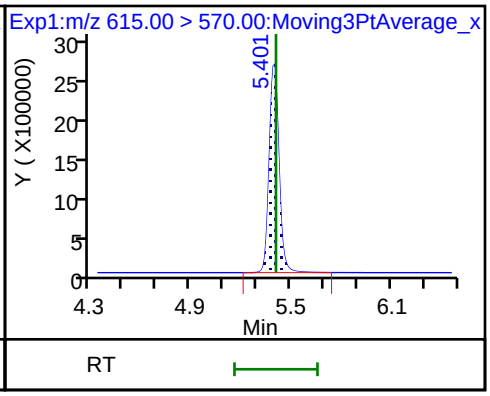

D 54 d-N-EtFOSA-M



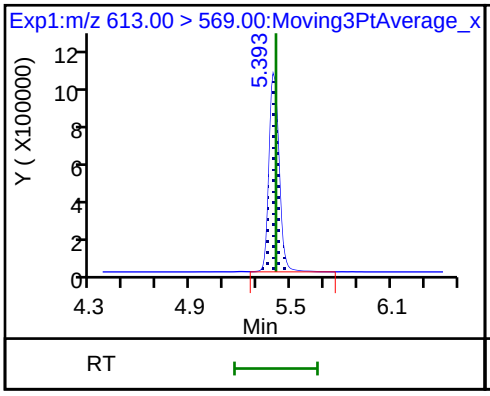

55 N-EtFOSA-M



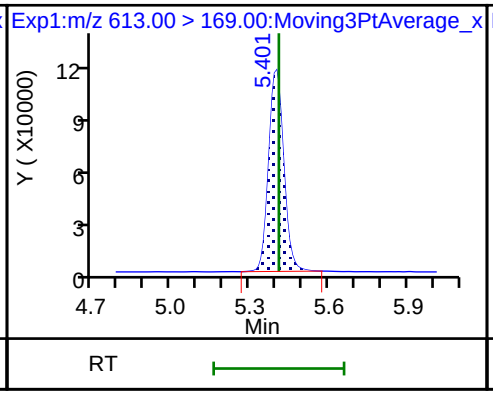

D 56 13C2 PFDoA



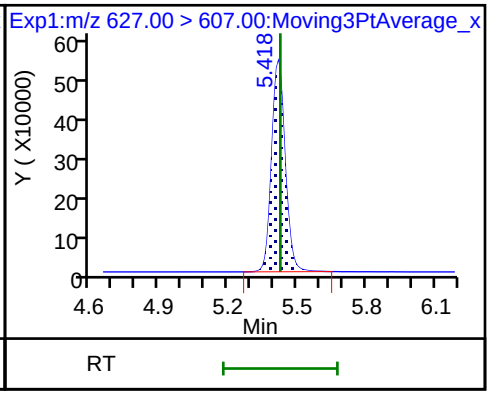

57 Perfluorododecanoic acid



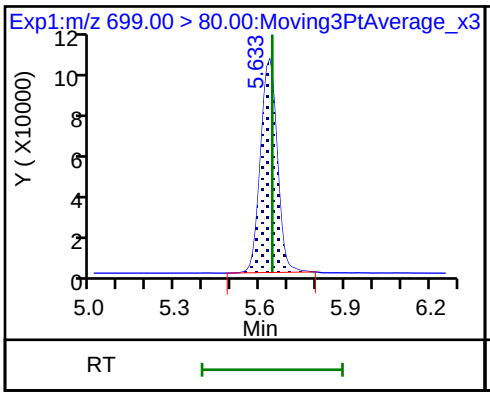

57 Perfluorododecanoic acid



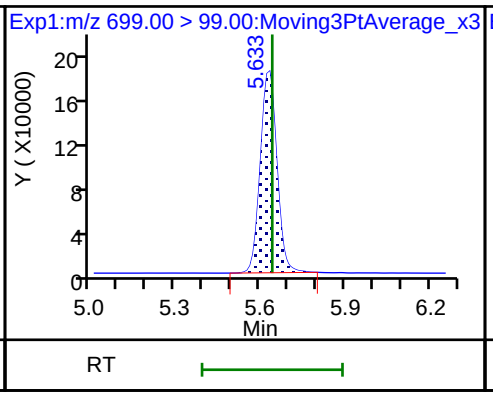

58 10:2 FTS



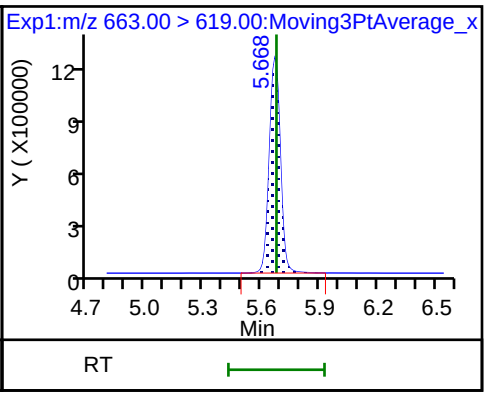
59 PFDoS



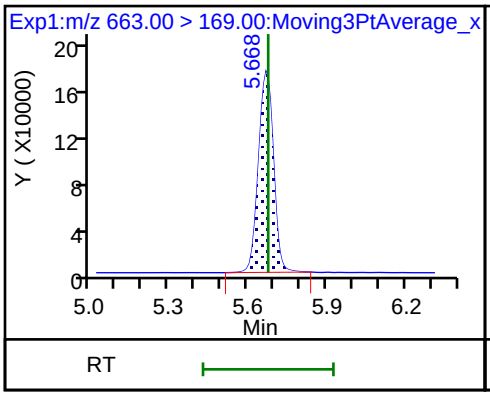

59 PFDoS



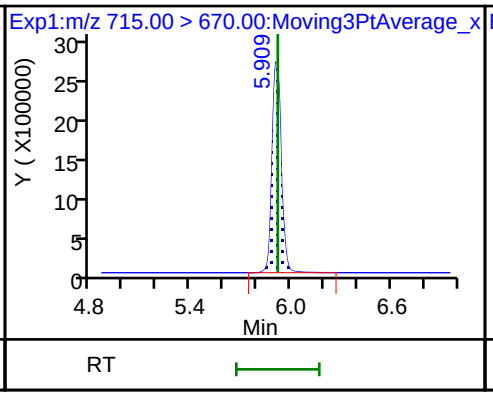

60 Perfluorotridecanoic acid



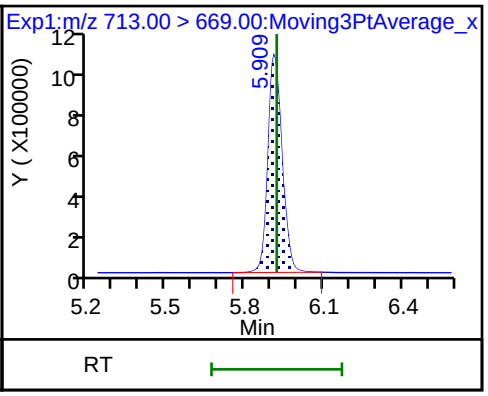

60 Perfluorotridecanoic acid



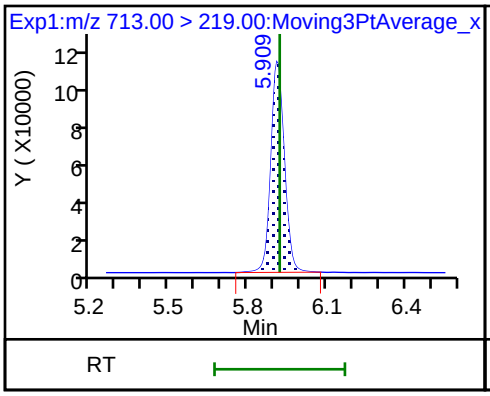

D 61 13C2 PFTeDA



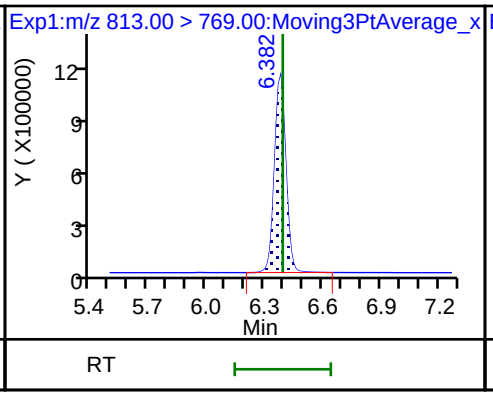

62 Perfluorotetradecanoic acid



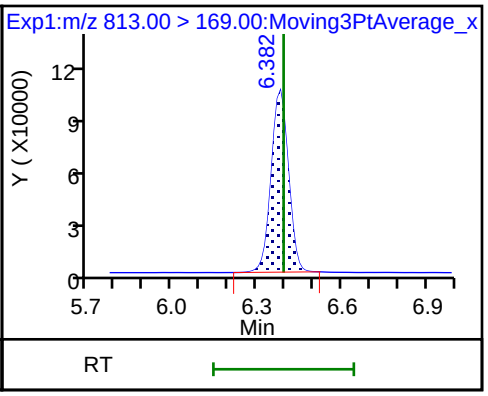

62 Perfluorotetradecanoic acid



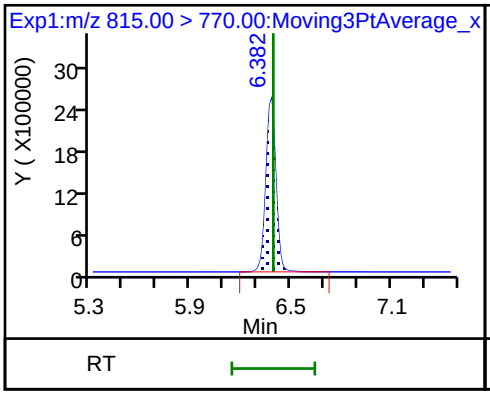

63 Perfluorohexadecanoic acid



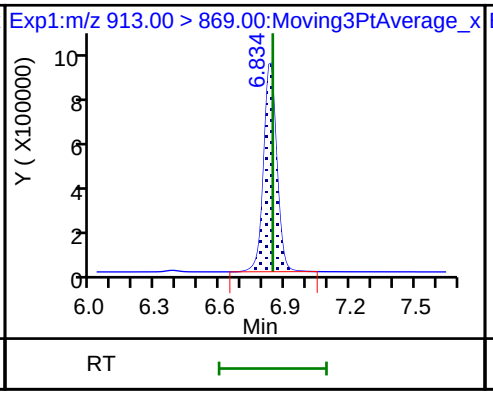

63 Perfluorohexadecanoic acid



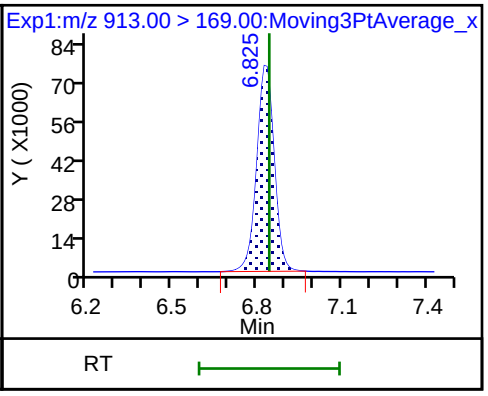

D 64 13C2 PFHxDA




65 Perfluorooctadecanoic acid




65 Perfluorooctadecanoic acid



Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

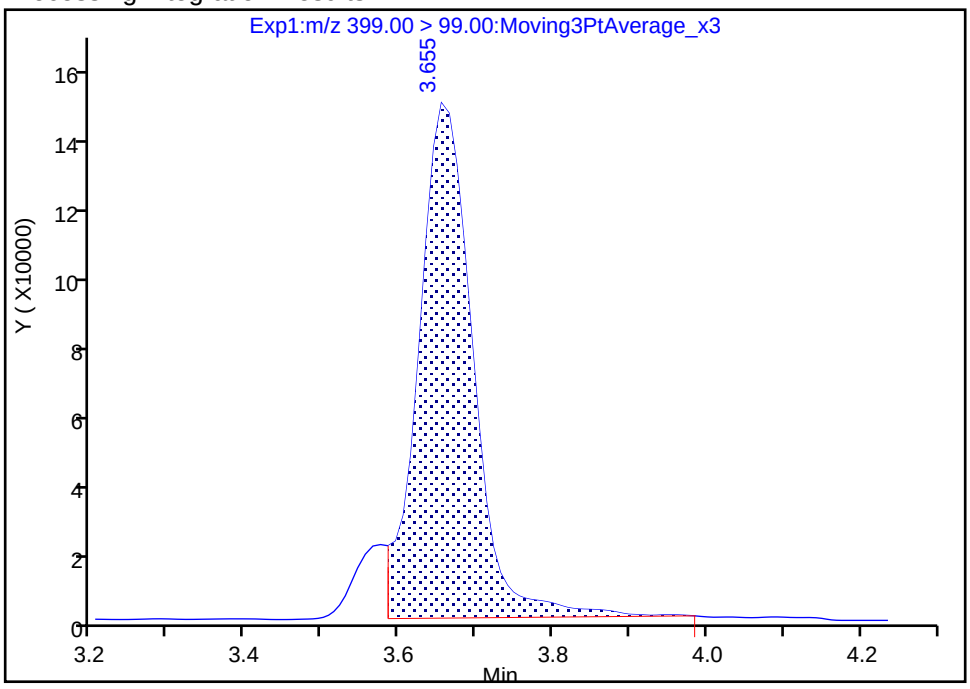
Data File: \\chromfs\Sacramento\ChromData\A13\20200910-103052.b\2020.09.10_A13_PFC_A_058.d
Injection Date: 10-Sep-2020 17:58:31 Instrument ID: A13
Lims ID: CCV L4
Client ID:
Operator ID: SACINSTLCMS01 ALS Bottle#: 52 Worklist Smp#: 1
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFAS_A13 Limit Group: LC PFC ICAL
Column: Gemini C18 3um 3 x 100mm ( 3.00 mm) Detector EXP1

## 18 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 2

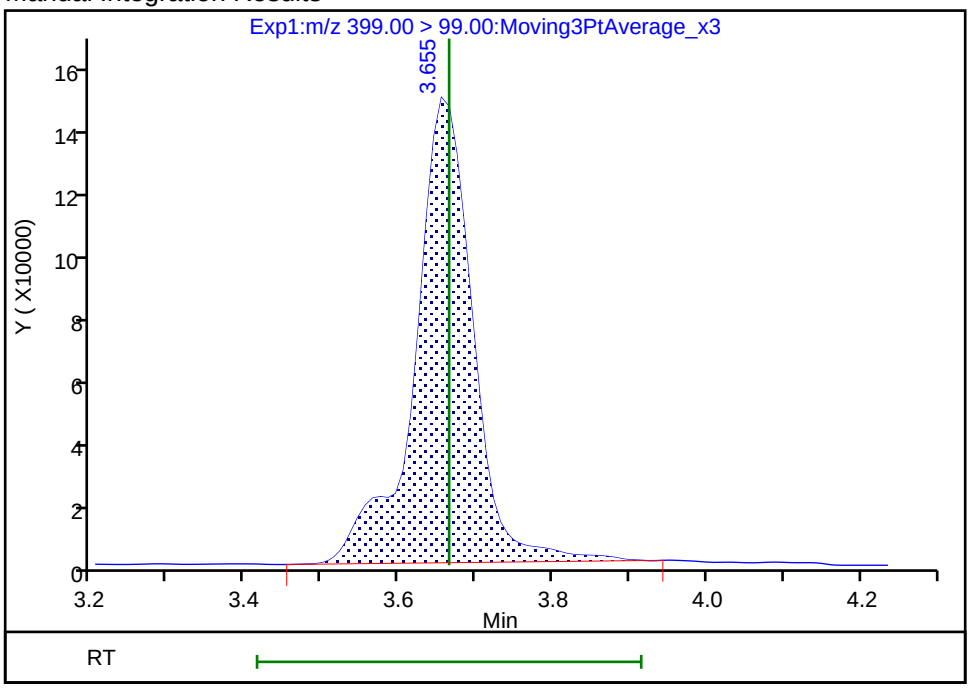
Processing Integration Results

RT: 3.65
Area: 714360
Amount: 0.906864
Amount Units: ng/ml




Manual Integration Results

RT: 3.65
Area: 770354
Amount: 0.906864
Amount Units: ng/ml




Reviewer: mongkols, 11-Sep-2020 08:46:13
Audit Action: Manually Integrated Audit Reason: Isomers

Eurofins TestAmerica, Sacramento

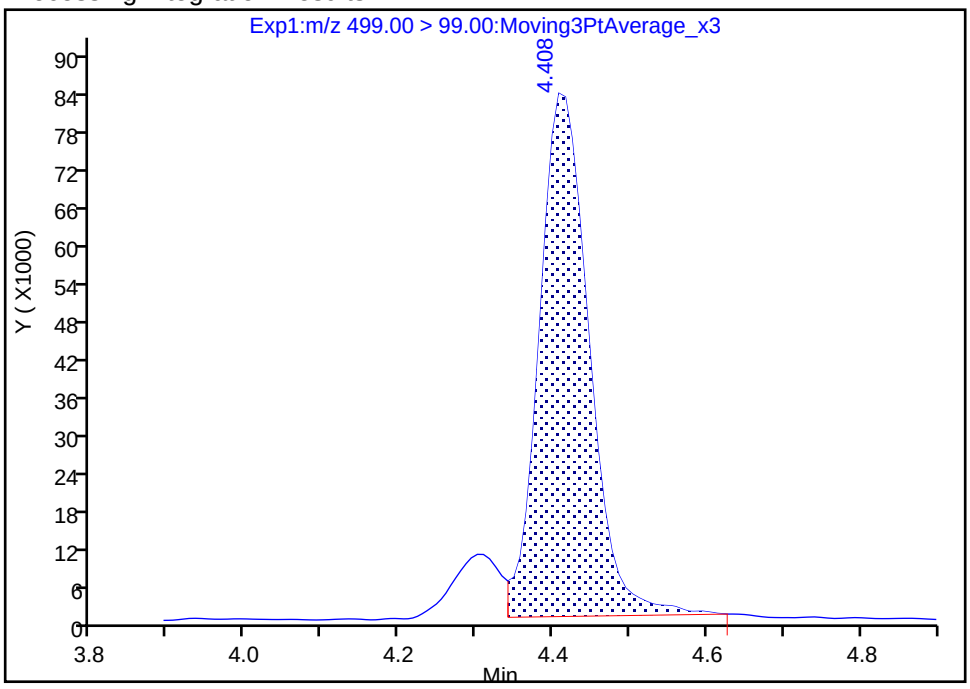
Data File: \\chromfs\Sacramento\ChromData\A13\20200910-103052.b\2020.09.10_A13_PFC_A_058.d
Injection Date: 10-Sep-2020 17:58:31 Instrument ID: A13
Lims ID: CCV L4
Client ID:
Operator ID: SACINSTLCMS01 ALS Bottle#: 52 Worklist Smp#: 1
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFAS_A13 Limit Group: LC PFC ICAL
Column: Gemini C18 3um 3 x 100mm ( 3.00 mm) Detector EXP1

## 28 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 2

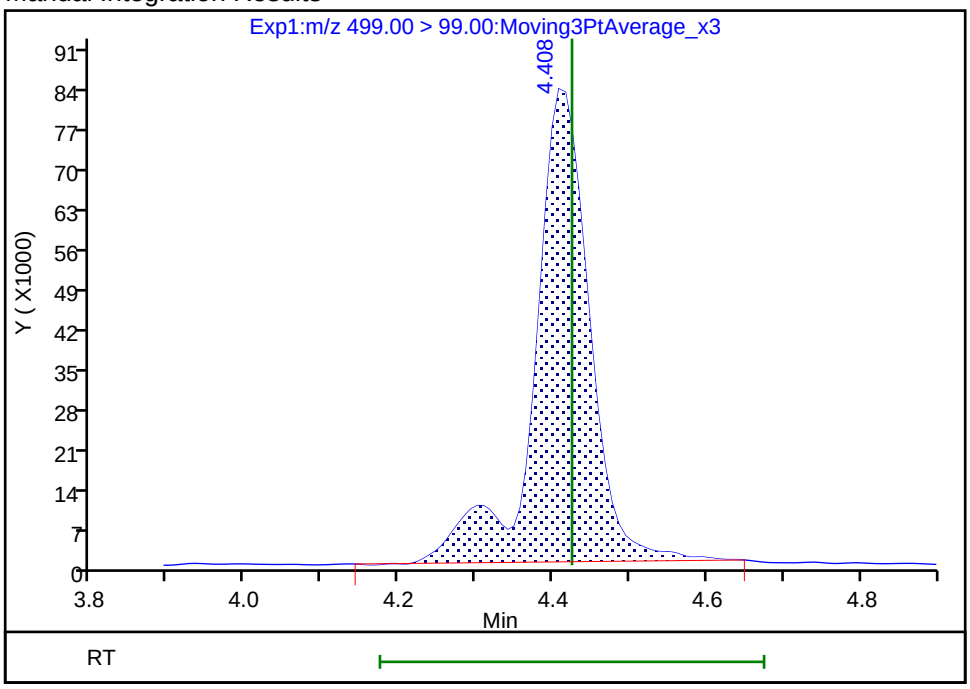
Processing Integration Results

RT: 4.41
Area: 372687
Amount: 0.998579
Amount Units: ng/ml




Manual Integration Results

RT: 4.41
Area: 415556
Amount: 0.998579
Amount Units: ng/ml




Reviewer: mongkols, 11-Sep-2020 08:46:19
Audit Action: Manually Integrated Audit Reason: Isomers

FORM VII
LCMS CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Sacramento  Job No.: 460-217659-1

SDG No.:

Lab Sample ID: CCV 320-411143/13  Calibration Date: 09/10/2020 19:51

Instrument ID: A13  Calib Start Date: 09/08/2020 18:01

GC Column: GeminiC18 3x100  ID: 3.00(mm)  Calib End Date: 09/08/2020 18:58

Lab File ID: 2020.09.10_A13_PFC_A_070.d  Conc. Units: ng/mL

| ANALYTE | CURVE TYPE | AVE RRF | RRF | MIN RRF | CALC AMOUNT | SPIKE AMOUNT | %D | MAX %D |
|---|---|---|---|---|---|---|---|---|
| Perfluorobutanoic acid (PFBA) | AveID | 0.7433 | 0.8030 | | 2.70 | 2.50 | 8.0 | 40.0 |
| Perfluoropentanoic acid (PFPeA) | AveID | 1.028 | 1.113 | | 2.71 | 2.50 | 8.3 | 40.0 |
| Perfluorobutanesulfonic acid (PFBS) | AveID | 0.9776 | 0.9866 | | 2.23 | 2.21 | 0.9 | 50.0 |
| 4:2 FTS | AveID | 3.243 | 3.581 | | 2.58 | 2.34 | 10.4 | 50.0 |
| Perfluorohexanoic acid (PFHxA) | AveID | 0.9294 | 0.9733 | | 2.62 | 2.50 | 4.7 | 40.0 |
| Perfluoropentanesulfonic acid (PFPeS) | AveID | 0.7896 | 0.8254 | | 2.45 | 2.35 | 4.5 | 50.0 |
| HFPO-DA (GenX) | AveID | 0.2972 | 0.3110 | | 2.62 | 2.50 | 4.6 | 40.0 |
| Perfluoroheptanoic acid (PFHpA) | AveID | 1.011 | 1.054 | | 2.61 | 2.50 | 4.3 | 40.0 |
| Perfluorohexanesulfonic acid (PFHxS) | AveID | 1.112 | 1.036 | | 2.12 | 2.28 | -6.8 | 40.0 |
| 4,8-Dioxa-3H-perfluorononanoic acid (ADONA) | AveID | 5.136 | 5.446 | | 2.50 | 2.36 | 6.0 | 50.0 |
| 6:2 FTS | AveID | 2.407 | 2.669 | | 2.63 | 2.37 | 10.9 | 40.0 |
| Perfluoroheptanesulfonic Acid (PFHpS) | AveID | 1.139 | 1.200 | | 2.51 | 2.38 | 5.4 | 50.0 |
| Perfluorooctanoic acid (PFOA) | AveID | 1.023 | 1.043 | | 2.55 | 2.50 | 2.0 | 40.0 |
| Perfluorooctanesulfonic acid (PFOS) | AveID | 1.038 | 1.086 | | 2.43 | 2.32 | 4.6 | 40.0 |
| Perfluorononanoic acid (PFNA) | AveID | 0.9494 | 1.024 | | 2.70 | 2.51 | 7.8 | 40.0 |
| F-53B Major | AveID | 2.501 | 2.658 | | 2.48 | 2.33 | 6.2 | 50.0 |
| Perfluorooctanesulfonamide (FOSA) | AveID | 0.9383 | 0.9649 | | 2.57 | 2.50 | 2.8 | 40.0 |
| Perfluorononanesulfonic acid (PFNS) | AveID | 0.7747 | 0.8355 | | 2.59 | 2.40 | 7.8 | 50.0 |
| 8:2 FTS | AveID | 2.472 | 2.563 | | 2.48 | 2.40 | 3.7 | 40.0 |
| Perfluorodecanoic acid (PFDA) | AveID | 0.8964 | 0.9783 | | 2.73 | 2.50 | 9.1 | 40.0 |
| N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA) | AveID | 0.8055 | 0.8298 | | 2.58 | 2.50 | 3.0 | 40.0 |
| Perfluorodecanesulfonic acid (PFDS) | AveID | 0.6588 | 0.7066 | | 2.59 | 2.41 | 7.2 | 50.0 |
| Perfluoroundecanoic acid (PFUnA) | AveID | 0.6615 | 0.6916 | | 2.62 | 2.50 | 4.6 | 40.0 |
| N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA) | AveID | 0.7741 | 0.7880 | | 2.55 | 2.50 | 1.8 | 40.0 |
| NMeFOSE | AveID | 1.065 | 1.108 | | 2.60 | 2.50 | 4.0 | 40.0 |
| NMeFOSA | AveID | 0.9832 | 1.177 | | 2.99 | 2.50 | 19.7 | 50.0 |
| F-53B Minor | AveID | 4.317 | 4.855 | | 2.65 | 2.36 | 12.5 | 50.0 |
| NEtFOSE | AveID | 1.035 | 1.174 | | 2.83 | 2.50 | 13.4 | 40.0 |
| NEtFOSA | AveID | 1.062 | 1.202 | | 2.83 | 2.50 | 13.2 | 40.0 |
| Perfluorododecanoic acid (PFDoA) | AveID | 0.9122 | 0.9358 | | 2.58 | 2.52 | 2.6 | 40.0 |
| 10:2 FTS | AveID | 1.632 | 1.811 | | 2.68 | 2.41 | 11.0 | 50.0 |
| Perfluorododecanesulfonic acid (PFDoS) | AveID | 0.2572 | 0.2653 | | 2.50 | 2.42 | 3.1 | 50.0 |

FORM VII
LCMS CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Sacramento  Job No.: 460-217659-1

SDG No.:

Lab Sample ID: CCV 320-411143/13  Calibration Date: 09/10/2020 19:51

Instrument ID: A13  Calib Start Date: 09/08/2020 18:01

GC Column: GeminiC18 3x100  ID: 3.00(mm)  Calib End Date: 09/08/2020 18:58

Lab File ID: 2020.09.10_A13_PFC_A_070.d  Conc. Units: ng/mL

| ANALYTE | CURVE TYPE | AVE RRF | RRF | MIN RRF | CALC AMOUNT | SPIKE AMOUNT | %D | MAX %D |
|---|---|---|---|---|---|---|---|---|
| Perfluorotridecanoic acid (PFTriA) | AveID | 0.9373 | 1.134 | | 3.03 | 2.50 | 21.0 | 50.0 |
| Perfluorotetradecanoic acid (PFTeA) | AveID | 0.9843 | 1.082 | | 2.75 | 2.50 | 9.9 | 50.0 |
| Perfluoro-n-hexadecanoic acid (PFHxDA) | L2ID | | 0.9384 | | 2.44 | 2.50 | -2.4 | 50.0 |
| Perfluoro-n-octadecanoic acid (PFODA) | AveID | 0.7306 | 0.8446 | | 2.89 | 2.50 | 15.6 | 50.0 |
| 13C4 PFBA | Ave | 0.8499 | 0.9225 | | 2.71 | 2.50 | 8.5 | 50.0 |
| 13C5 PFPeA | Ave | 0.6625 | 0.6857 | | 2.59 | 2.50 | 3.5 | 50.0 |
| 13C3 PFBS | Ave | 0.8317 | 1.039 | | 2.91 | 2.33 | 24.9 | 50.0 |
| M2-4:2 FTS | Ave | 0.2037 | 0.2065 | | 2.37 | 2.34 | 1.3 | 50.0 |
| 13C2 PFHxA | Ave | 0.8183 | 0.8817 | | 2.69 | 2.50 | 7.7 | 50.0 |
| 13C3 HFPO-DA | Ave | 0.5866 | 0.6063 | | 2.58 | 2.50 | 3.4 | 50.0 |
| 13C4 PFHpA | Ave | 0.8058 | 0.8621 | | 2.67 | 2.50 | 7.0 | 50.0 |
| 18O2 PFHxS | Ave | 0.5449 | 0.6382 | | 2.77 | 2.37 | 17.1 | 50.0 |
| M2-6:2 FTS | Ave | 0.2349 | 0.2228 | | 2.25 | 2.38 | -5.1 | 50.0 |
| 13C4 PFOA | Ave | 0.9849 | 0.9944 | | 2.52 | 2.50 | 1.0 | 50.0 |
| 13C4 PFOS | Ave | 0.3888 | 0.4429 | | 2.72 | 2.39 | 13.9 | 50.0 |
| 13C5 PFNA | Ave | 0.9099 | 0.9111 | | 2.50 | 2.50 | 0.1 | 50.0 |
| 13C8 FOSA | Ave | 0.5585 | 0.5975 | | 2.68 | 2.50 | 7.0 | 50.0 |
| 13C2 PFDA | Ave | 1.102 | 1.105 | | 2.51 | 2.50 | 0.3 | 50.0 |
| M2-8:2 FTS | Ave | 0.3107 | 0.3160 | | 2.44 | 2.40 | 1.7 | 50.0 |
| d3-NMeFOSAA | Ave | 0.5682 | 0.6007 | | 2.64 | 2.50 | 5.7 | 50.0 |
| 13C2 PFUnA | Ave | 1.078 | 1.096 | | 2.54 | 2.50 | 1.7 | 50.0 |
| d5-NEtFOSAA | Ave | 0.5501 | 0.5631 | | 2.56 | 2.50 | 2.4 | 50.0 |
| d7-N-MeFOSE-M | Ave | 0.1398 | 0.1315 | | 11.8 | 12.5 | -5.9 | 50.0 |
| d-N-MeFOSA-M | Ave | 0.2628 | 0.2648 | | 2.52 | 2.50 | 0.8 | 50.0 |
| d9-N-EtFOSE-M | Ave | 0.1640 | 0.1465 | | 11.2 | 12.5 | -10.7 | 50.0 |
| d-N-EtFOSA-M | Ave | 0.2510 | 0.2522 | | 2.51 | 2.50 | 0.5 | 50.0 |
| 13C2 PFDoA | Ave | 1.160 | 1.114 | | 2.40 | 2.50 | -4.0 | 50.0 |
| 13C2 PFTeDA | Ave | 1.146 | 1.110 | | 2.42 | 2.50 | -3.2 | 50.0 |
| 13C2 PFHxDA | Ave | 1.193 | 1.118 | | 2.34 | 2.50 | -6.3 | 50.0 |
| 13C8 PFOA | Ave | 0.8908 | 0.8842 | | 2.43 | 2.45 | -0.7 | 50.0 |
| 13C8 PFOS | Ave | 0.2076 | 0.2240 | | 2.58 | 2.39 | 7.9 | 50.0 |

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\A13\20200910-103052.b\2020.09.10_A13_PFC_A_070.d
Lims ID: CCV L5
Client ID:
Sample Type: CCV
Inject. Date: 10-Sep-2020 19:51:24 ALS Bottle#: 53 Worklist Smp#: 13
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Sample Info: CCV L5
Misc. Info.: Plate: 1 Rack: 1
Operator ID: SACINSTLCMS01 Instrument ID: A13
Sublist: chrom-PFAS_A13*sub3

Method: \\chromfs\Sacramento\ChromData\A13\20200910-103052.b\PFAS_A13.m
Limit Group: LC PFC ICAL
Last Update: 11-Sep-2020 10:58:29 Calib Date: 08-Sep-2020 18:58:15
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\A13\20200908-102913.b\2020.09.08_A13_PFC_ICALX_010.d

Column 1 : Gemini C18 3um 3 x 100mm ( 3.00 mm) Det: EXP1
Process Host: CTX1053

First Level Reviewer: mongkols Date: 11-Sep-2020 10:58:29
Ratio Calibration: Average of Initial Calibration

| Signal | RT | EXP RT | DLT RT | REL RT | Response | Amount ng/ml | Ratio(Limits) | %Rec | S/N | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| D 1 13C4 PFBA | | | | | | | | | | |
| 217.00 > 172.00 | 2.475 | 2.475 | 0.0 | 0.611 | 9238505 | 2.71 | | 109 | 11454 | |
| 2 Perfluorobutanoic acid | | | | | | | | | | |
| 212.90 > 169.00 | 2.475 | 2.482 | -0.007 | 1.000 | 7418068 | 2.70 | | 108 | 619 | |
| D 4 13C5 PFPeA | | | | | | | | | | |
| 267.90 > 223.00 | 2.856 | 2.867 | -0.011 | 0.705 | 6867202 | 2.59 | | 104 | 9341 | |
| 5 Perfluoropentanoic acid | | | | | | | | | | |
| 262.90 > 219.00 | 2.867 | 2.867 | 0.0 | 1.004 | 7643271 | 2.71 | | 108 | 291 | |
| D 14 13C3 PFBS | | | | | | | | | | |
| 301.90 > 80.00 | 2.902 | 2.913 | -0.011 | 0.716 | 9678203 | 2.90 | | 125 | 17526 | |
| 6 Perfluorobutanesulfonic acid | | | | | | | | | | |
| 298.90 > 80.00 | 2.902 | 2.913 | -0.011 | 1.000 | 9076506 | 2.23 | Target=2.18 | 101 | 5976 | |
| 298.90 > 99.00 | 2.902 | 2.913 | -0.011 | 1.000 | 4169958 | | 2.18(1.09-3.26) | | 1147 | |
| 7 4:2 FTS | | | | | | | | | | |
| 327.00 > 307.00 | 3.204 | 3.215 | -0.011 | 1.000 | 6916919 | 2.58 | | 110 | 16683 | |
| D 8 M2-4:2 FTS | | | | | | | | | | |
| 329.00 > 81.00 | 3.204 | 3.215 | -0.011 | 0.791 | 1931368 | 2.37 | | 101 | 999 | |
| 10 Perfluorohexanoic acid | | | | | | | | | | |
| 313.00 > 269.00 | 3.247 | 3.258 | -0.011 | 1.000 | 8593924 | 2.62 | Target=11.68 | 105 | 389 | |
| 313.00 > 119.00 | 3.247 | 3.258 | -0.011 | 1.000 | 703305 | | 12.22(5.84-17.52) | | 231 | |
| D 9 13C2 PFHxA | | | | | | | | | | |
| 315.00 > 270.00 | 3.247 | 3.258 | -0.011 | 0.802 | 8829582 | 2.69 | | 108 | 16475 | |
| 11 Perfluoropentanesulfonic acid | | | | | | | | | | |
| 349.00 > 80.00 | 3.268 | 3.279 | -0.011 | 1.126 | 8057138 | 2.45 | Target=2.56 | 105 | 7772 | |
| 349.00 > 99.00 | 3.268 | 3.279 | -0.011 | 1.126 | 3222992 | | 2.50(1.28-3.84) | | 2374 | |
| 12 HPFO-DA | | | | | | | | | | |
| 285.00 > 169.00 | 3.371 | 3.380 | -0.009 | 1.000 | 1888715 | 2.62 | | 105 | 2274 | |

| Signal | RT | EXP RT | DLT RT | REL RT | Response | Amount ng/ml | Ratio(Limits) | %Rec | S/N | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| D 13 13C3 HFPO-DA | | | | | | | | | | |
| 287.00 > 169.00 | 3.371 | 3.380 | -0.009 | 0.832 | 6072482 | 2.58 | | 103 | 2836 | |
| D 17 18O2 PFHxS | | | | | | | | | | |
| 403.00 > 84.00 | 3.655 | 3.665 | -0.010 | 0.902 | 6046764 | 2.77 | | 117 | 4154 | |
| 16 Perfluoroheptanoic acid | | | | | | | | | | |
| 363.00 > 319.00 | 3.655 | 3.665 | -0.010 | 1.000 | 9097014 | 2.61 | Target=3.85 | 104 | 646 | |
| 363.00 > 169.00 | 3.655 | 3.665 | -0.010 | 1.000 | 2308850 | | 3.94(1.92-5.77) | | 804 | |
| 18 Perfluorohexanesulfonic acid | | | | | | | | | | M |
| 399.00 > 80.00 | 3.655 | 3.665 | -0.010 | 1.000 | 6027147 | 2.12 | Target=3.25 | 93.2 | 444 | |
| 399.00 > 99.00 | 3.655 | 3.665 | -0.010 | 1.000 | 2031678 | | 2.97(1.62-4.87) | | 542 | M |
| D 15 13C4 PFHpA | | | | | | | | | | |
| 367.00 > 322.00 | 3.655 | 3.665 | -0.010 | 0.902 | 8633340 | 2.67 | | 107 | 7543 | |
| 19 DONA | | | | | | | | | | |
| 377.00 > 251.00 | 3.705 | 3.713 | -0.009 | 0.840 | 22753630 | 2.50 | Target=2.76 | 106 | 24470 | |
| 377.00 > 85.00 | 3.705 | 3.713 | -0.009 | 0.840 | 8279526 | | 2.75(1.38-4.14) | | 4570 | |
| D 20 M2-6:2 FTS | | | | | | | | | | |
| 429.00 > 81.00 | 4.026 | 4.042 | -0.016 | 0.994 | 2119960 | 2.25 | | 94.9 | 1691 | |
| 21 6:2 FTS | | | | | | | | | | |
| 427.00 > 407.00 | 4.026 | 4.042 | -0.016 | 1.000 | 5646452 | 2.63 | | 111 | 2623 | |
| 22 Perfluoroheptanesulfonic acid | | | | | | | | | | |
| 449.00 > 80.00 | 4.042 | 4.051 | -0.009 | 0.917 | 5069109 | 2.51 | Target=4.29 | 105 | 3813 | |
| 449.00 > 99.00 | 4.042 | 4.051 | -0.009 | 0.917 | 1242702 | | 4.08(2.15-6.44) | | 743 | |
| $ 23 13C8 PFOA | | | | | | | | | | |
| 421.00 > 376.00 | 4.042 | 4.051 | -0.009 | 0.998 | 8668929 | 2.43 | | 99.3 | 4214 | |
| D 24 13C4 PFOA | | | | | | | | | | |
| 417.00 > 372.00 | 4.051 | 4.059 | -0.008 | 1.000 | 9958634 | 2.52 | | 101 | 4347 | |
| 26 Perfluorooctanoic acid | | | | | | | | | | |
| 413.00 > 369.00 | 4.051 | 4.059 | -0.008 | 1.000 | 10397910 | 2.55 | Target=2.95 | 102 | 1186 | |
| 413.00 > 169.00 | 4.051 | 4.059 | -0.008 | 1.000 | 3494276 | | 2.98(1.47-4.42) | | 2037 | |
| * 25 13C2 PFOA | | | | | | | | | | |
| 415.00 > 370.00 | 4.051 | 4.059 | -0.008 | | 10014836 | 2.50 | | | 5325 | |
| $ 27 13C8 PFOS | | | | | | | | | | |
| 507.00 > 99.00 | 4.409 | 4.416 | -0.007 | 1.089 | 2144568 | 2.58 | | 108 | 1273 | |
| 28 Perfluorooctanesulfonic acid | | | | | | | | | | M |
| 499.00 > 80.00 | 4.409 | 4.425 | -0.016 | 1.000 | 4468490 | 2.43 | Target=4.28 | 105 | 523 | |
| 499.00 > 99.00 | 4.409 | 4.425 | -0.016 | 1.000 | 1112579 | | 4.02(2.14-6.41) | | 552 | M |
| D 29 13C4 PFOS | | | | | | | | | | |
| 503.00 > 80.00 | 4.409 | 4.425 | -0.016 | 1.089 | 4240348 | 2.72 | | 114 | 4088 | |
| 30 Perfluorononanoic acid | | | | | | | | | | |
| 463.00 > 419.00 | 4.426 | 4.433 | -0.007 | 1.000 | 9360453 | 2.70 | Target=8.00 | 108 | 1819 | |
| 463.00 > 169.00 | 4.426 | 4.433 | -0.007 | 1.000 | 1188935 | | 7.87(4.00-12.01) | | 1221 | |
| D 31 13C5 PFNA | | | | | | | | | | |
| 468.00 > 423.00 | 4.426 | 4.442 | -0.016 | 1.093 | 9124087 | 2.50 | | 100 | 5789 | |
| 32 9ClFOS | | | | | | | | | | |
| 531.00 > 351.00 | 4.609 | 4.620 | -0.011 | 1.045 | 10986456 | 2.48 | | 106 | 22127 | |
| D 34 13C8 FOSA | | | | | | | | | | |
| 506.00 > 78.00 | 4.734 | 4.740 | -0.006 | 1.169 | 5984010 | 2.67 | | 107 | 4232 | |

| Signal | RT | EXP RT | DLT RT | REL RT | Response | Amount ng/ml | Ratio(Limits) | %Rec | S/N | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| 33 Perfluorooctanesulfonamide | | | | | | | | | | |
| 498.00 > 78.00 | 4.734 | 4.740 | -0.006 | 1.000 | 5774148 | 2.57 | | 103 | 6122 | |
| 35 Perfluorononanesulfonic acid | | | | | | | | | | |
| 549.00 > 80.00 | 4.751 | 4.766 | -0.015 | 1.078 | 3557544 | 2.59 | Target=2.15 | 108 | 2187 | |
| 549.00 > 99.00 | 4.760 | 4.766 | -0.006 | 1.080 | 1734805 | | 2.05(1.08-3.23) | | 2044 | |
| D 37 13C2 PFDA | | | | | | | | | | |
| 515.00 > 470.00 | 4.786 | 4.793 | -0.007 | 1.182 | 11069205 | 2.51 | | 100 | 4169 | |
| 36 Perfluorodecanoic acid | | | | | | | | | | |
| 513.00 > 469.00 | 4.786 | 4.793 | -0.007 | 1.000 | 10828506 | 2.73 | Target=10.44 | 109 | 2854 | |
| 513.00 > 169.00 | 4.777 | 4.793 | -0.016 | 0.998 | 977667 | | 11.08(5.22-15.65) | | 255 | |
| D 38 M2-8:2 FTS | | | | | | | | | | |
| 529.00 > 81.00 | 4.786 | 4.802 | -0.016 | 1.182 | 3031437 | 2.44 | | 102 | 3194 | |
| 39 8:2 FTS | | | | | | | | | | |
| 527.00 > 507.00 | 4.786 | 4.802 | -0.016 | 1.000 | 7769535 | 2.48 | | 104 | 7173 | |
| D 40 d3-NMeFOSAA | | | | | | | | | | |
| 573.00 > 419.00 | 4.942 | 4.959 | -0.017 | 1.220 | 6015773 | 2.64 | | 106 | 2696 | |
| 41 NMeFOSAA | | | | | | | | | | |
| 570.00 > 419.00 | 4.952 | 4.959 | -0.007 | 1.002 | 4992158 | 2.58 | | 103 | 1012 | |
| 42 Perfluorodecanesulfonic acid | | | | | | | | | | |
| 599.00 > 80.00 | 5.077 | 5.084 | -0.007 | 1.152 | 3021243 | 2.58 | Target=2.36 | 107 | 2064 | |
| 599.00 > 99.00 | 5.077 | 5.084 | -0.007 | 1.152 | 1334990 | | 2.26(1.18-3.54) | | 1331 | |
| D 44 13C2 PFUnA | | | | | | | | | | |
| 565.00 > 520.00 | 5.106 | 5.113 | -0.007 | 1.261 | 10977429 | 2.54 | | 102 | 3818 | |
| 45 Perfluoroundecanoic acid | | | | | | | | | | |
| 563.00 > 519.00 | 5.106 | 5.113 | -0.007 | 1.000 | 7600050 | 2.62 | Target=8.67 | 105 | 2286 | |
| 563.00 > 169.00 | 5.106 | 5.113 | -0.007 | 1.000 | 884701 | | 8.59(4.34-13.01) | | 1228 | |
| D 46 d5-NEtFOSAA | | | | | | | | | | |
| 589.00 > 419.00 | 5.106 | 5.123 | -0.017 | 1.261 | 5638982 | 2.56 | | 102 | 2253 | |
| 48 NEtFOSA | | | | | | | | | | |
| 584.00 > 419.00 | 5.116 | 5.132 | -0.016 | 1.002 | 4443654 | 2.54 | | 102 | 56764 | |
| D 43 d7-N-MeFOSE-M | | | | | | | | | | |
| 623.00 > 59.00 | 5.184 | 5.190 | -0.006 | 1.280 | 6586851 | 11.8 | | 94.1 | 2711 | |
| 47 N-MeFOSE-M | | | | | | | | | | |
| 616.00 > 59.00 | 5.194 | 5.200 | -0.006 | 1.002 | 1459038 | 2.60 | | 104 | 1285 | |
| D 49 d-N-MeFOSA-M | | | | | | | | | | |
| 515.00 > 169.00 | 5.205 | 5.212 | -0.007 | 1.285 | 2652425 | 2.52 | | 101 | 46.0 | |
| 50 NMeFOSA | | | | | | | | | | |
| 512.00 > 169.00 | 5.216 | 5.223 | -0.007 | 1.002 | 3121977 | 2.99 | | 120 | 230 | |
| 51 11ClFOS | | | | | | | | | | |
| 631.00 > 451.00 | 5.238 | 5.255 | -0.017 | 1.188 | 20284769 | 2.65 | | 112 | 30089 | |
| D 52 d9-N-EtFOSE-M | | | | | | | | | | |
| 639.00 > 59.00 | 5.353 | 5.359 | -0.006 | 1.322 | 7337019 | 11.2 | | 89.3 | 3187 | |
| 53 N-EtFOSE-M | | | | | | | | | | |
| 630.00 > 59.00 | 5.362 | 5.376 | -0.014 | 1.002 | 1722263 | 2.83 | | 113 | 1569 | |
| D 54 d-N-EtFOSA-M | | | | | | | | | | |
| 531.00 > 169.00 | 5.379 | 5.385 | -0.006 | 1.328 | 2525444 | 2.51 | | 100 | 151 | |

| Signal | RT | EXP RT | DLT RT | REL RT | Response | Amount ng/ml | Ratio(Limits) | %Rec | S/N | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| 55 N-EtFOSA-M | | | | | | | | | | |
| 526.00 > 169.00 | 5.387 | 5.393 | -0.006 | 1.002 | 3035353 | 2.83 | | 113 | 208 | |
| D 56 13C2 PFDoA | | | | | | | | | | |
| 615.00 > 570.00 | 5.396 | 5.409 | -0.013 | 1.332 | 11154477 | 2.40 | | 96.0 | 6981 | |
| 57 Perfluorododecanoic acid | | | | | | | | | | |
| 613.00 > 569.00 | 5.404 | 5.409 | -0.005 | 1.002 | 10501275 | 2.58 | Target=9.05 | 103 | 3185 | |
| 613.00 > 169.00 | 5.396 | 5.409 | -0.013 | 1.000 | 1139650 | | 9.21(4.52-13.57) | | 2365 | |
| 58 10:2 FTS | | | | | | | | | | |
| 627.00 > 607.00 | 5.412 | 5.426 | -0.014 | 1.131 | 5525388 | 2.68 | | 111 | 3093 | |
| 59 PFDoS | | | | | | | | | | |
| 699.00 > 80.00 | 5.627 | 5.642 | -0.015 | 1.276 | 1138905 | 2.50 | Target=0.57 | 103 | 1437 | |
| 699.00 > 99.00 | 5.627 | 5.642 | -0.015 | 1.276 | 1938020 | | 0.59(0.29-0.86) | | 2101 | |
| 60 Perfluorotridecanoic acid | | | | | | | | | | |
| 663.00 > 619.00 | 5.662 | 5.676 | -0.014 | 1.049 | 12652242 | 3.03 | Target=7.06 | 121 | 4919 | |
| 663.00 > 169.00 | 5.662 | 5.676 | -0.014 | 1.049 | 1656382 | | 7.64(3.53-10.59) | | 1862 | |
| D 61 13C2 PFTeDA | | | | | | | | | | |
| 715.00 > 670.00 | 5.905 | 5.920 | -0.015 | 1.458 | 11115339 | 2.42 | | 96.8 | 10483 | |
| 62 Perfluorotetradecanoic acid | | | | | | | | | | |
| 713.00 > 669.00 | 5.910 | 5.920 | -0.010 | 1.001 | 12035386 | 2.75 | Target=11.23 | 110 | 5601 | |
| 713.00 > 219.00 | 5.905 | 5.920 | -0.015 | 1.000 | 1062242 | | 11.33(5.62-16.85) | | 3753 | |
| 63 Perfluorohexadecanoic acid | | | | | | | | | | |
| 813.00 > 769.00 | 6.379 | 6.393 | -0.014 | 1.000 | 10505851 | 2.44 | Target=9.45 | 97.6 | 4666 | |
| 813.00 > 169.00 | 6.379 | 6.393 | -0.014 | 1.000 | 1282236 | | 8.19(4.72-14.17) | | 2987 | |
| D 64 13C2 PFHxDA | | | | | | | | | | |
| 815.00 > 770.00 | 6.379 | 6.393 | -0.014 | 1.575 | 11195324 | 2.34 | | 93.7 | 7064 | |
| 65 Perfluorooctadecanoic acid | | | | | | | | | | |
| 913.00 > 869.00 | 6.824 | 6.842 | -0.018 | 1.070 | 9455314 | 2.89 | Target=11.13 | 116 | 2946 | |
| 913.00 > 169.00 | 6.824 | 6.842 | -0.018 | 1.070 | 899445 | | 10.51(5.56-16.69) | | 2342 | |

## QC Flag Legend

Review Flags

M - Manually Integrated

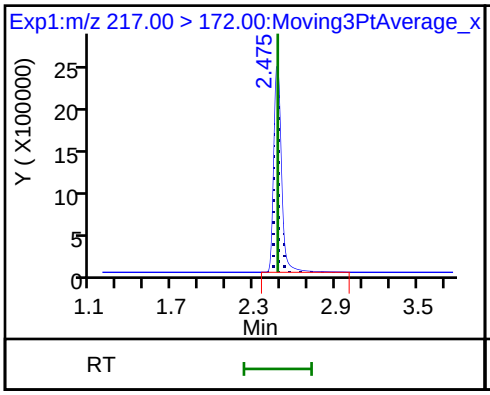
## Reagents:

LCPFC_LL5_00031 Amount Added: 1.00 Units: mL

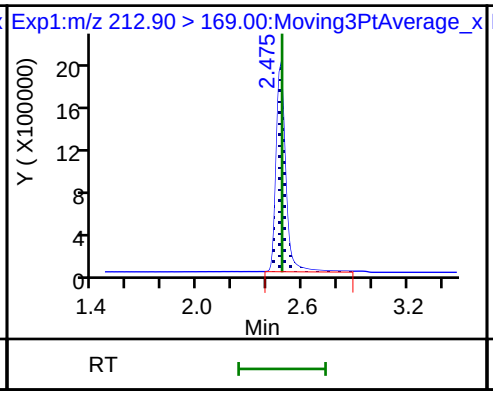
Eurofins TestAmerica, Sacramento

Data File: \\chromfs\Sacramento\ChromData\A13\20200910-103052.b\2020.09.10_A13_PFC_A_070.d
Injection Date: 10-Sep-2020 19:51:24 Instrument ID: A13
Lims ID: CCV L5
Client ID:
Operator ID: SACINSTLCMS01 ALS Bottle#: 53 Worklist Smp#: 13
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFAS_A13 Limit Group: LC PFC ICAL

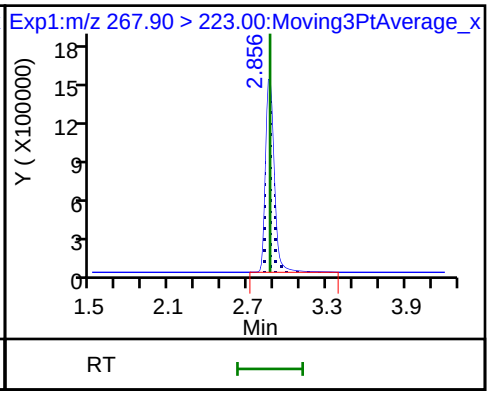
D 1 13C4 PFBA



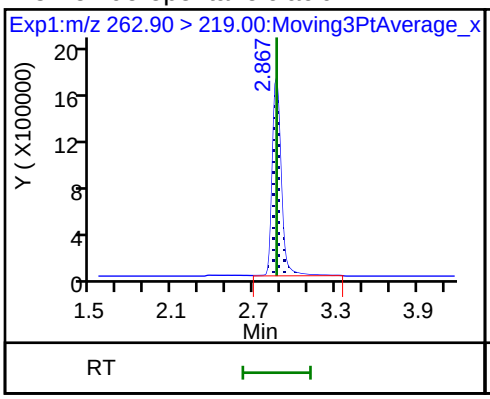

2 Perfluorobutanoic acid



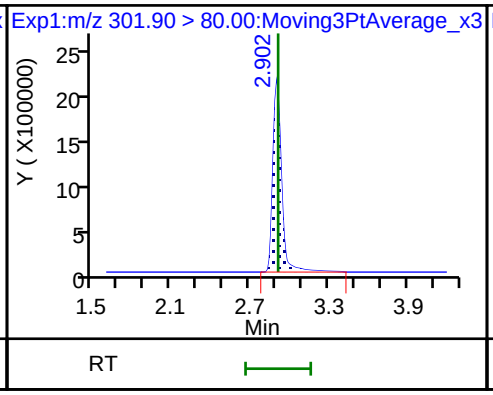

D 4 13C5 PFPeA



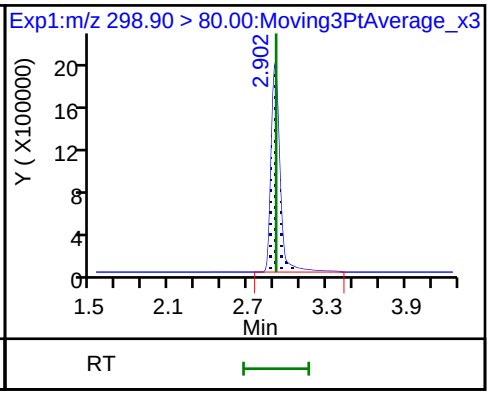

5 Perfluoropentanoic acid



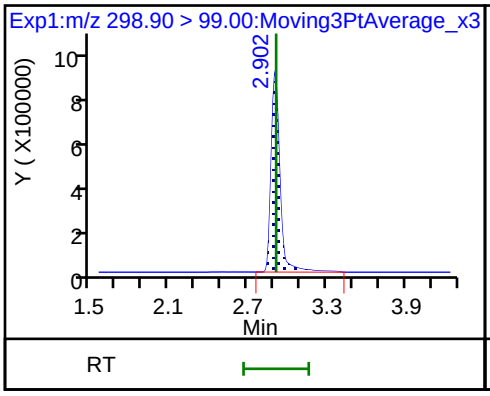

D 14 13C3 PFBS



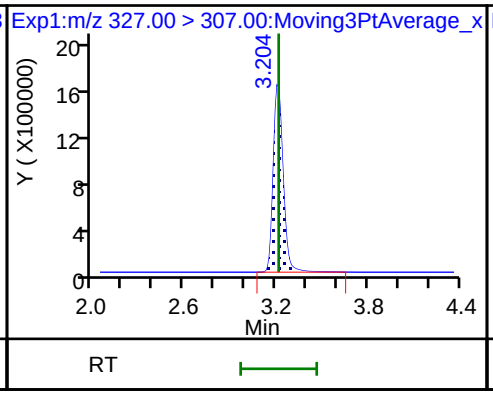

6 Perfluorobutanesulfonic acid



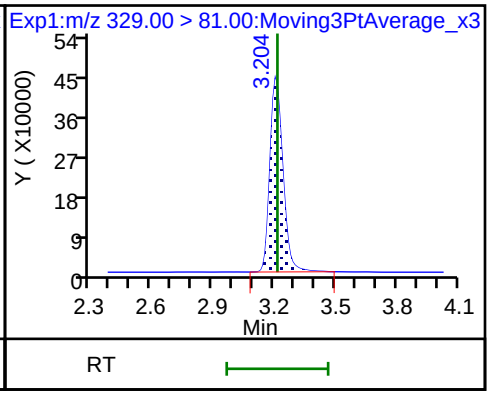

6 Perfluorobutanesulfonic acid



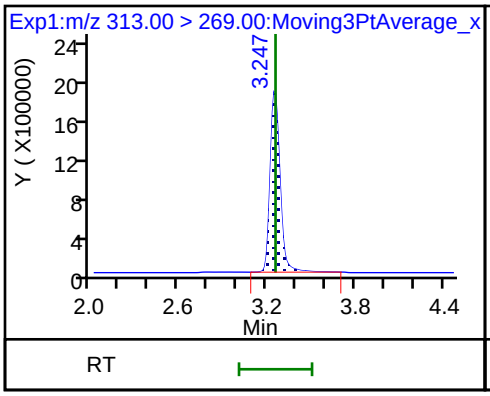

7 4:2 FTS



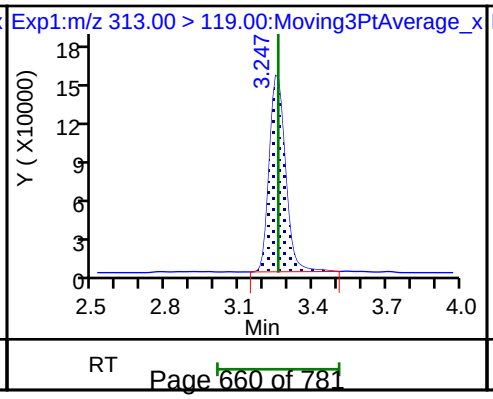

D 8 M2-4:2 FTS



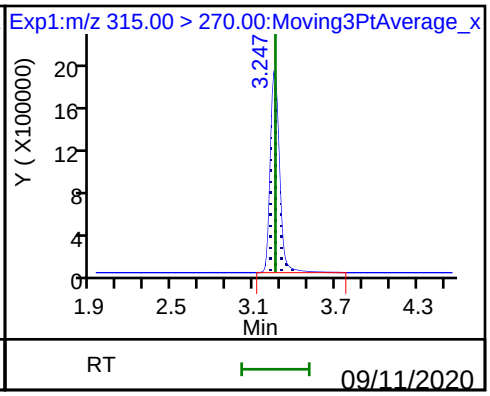

10 Perfluorohexanoic acid



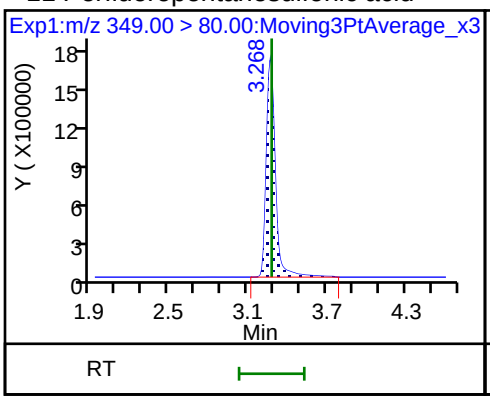

10 Perfluorohexanoic acid



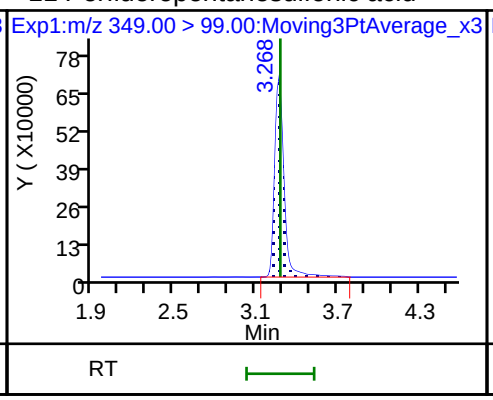

D 9 13C2 PFHxA



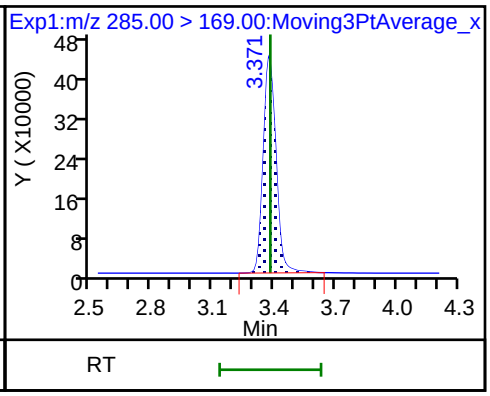
11 Perfluoropentanesulfonic acid



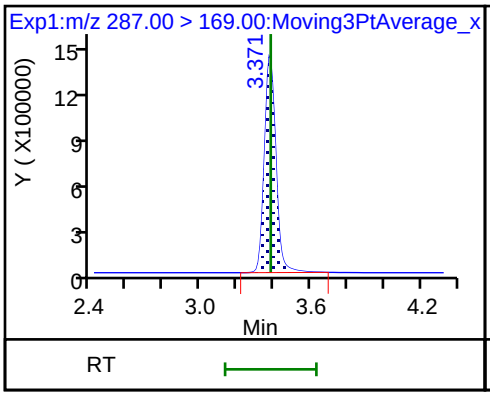

11 Perfluoropentanesulfonic acid



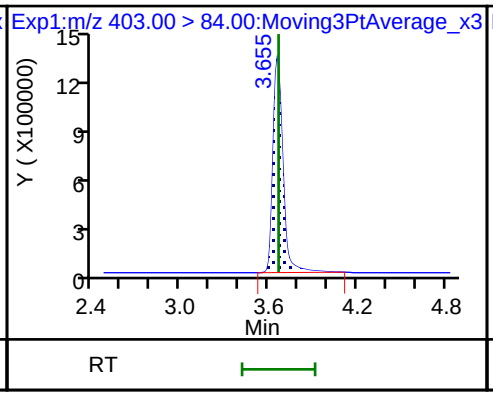

12 HPFO-DA



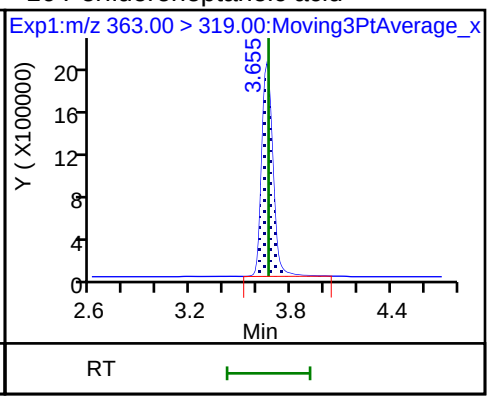

D 13 13C3 HFPO-DA



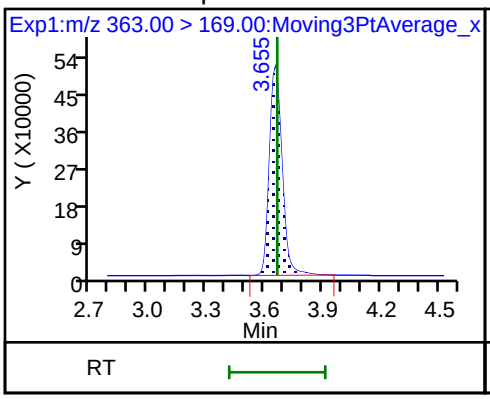

D 17 18O2 PFHxS



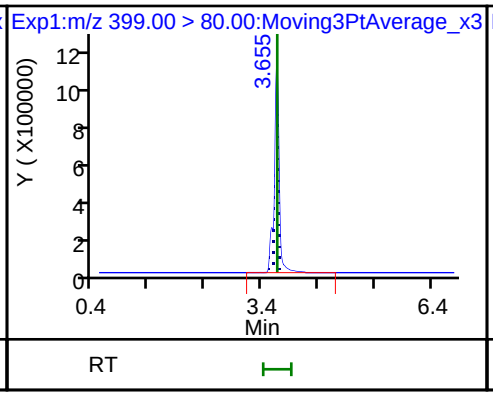

16 Perfluoroheptanoic acid



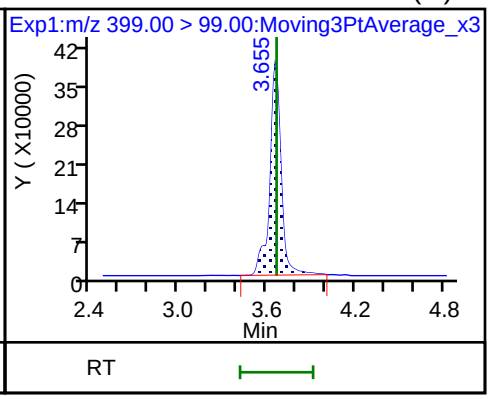

16 Perfluoroheptanoic acid



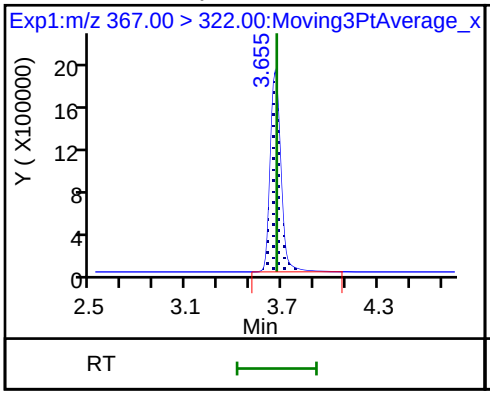

18 Perfluorohexanesulfonic acid



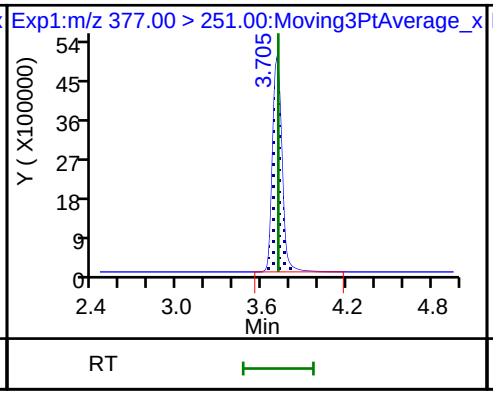

18 Perfluorohexanesulfonic acid (M)



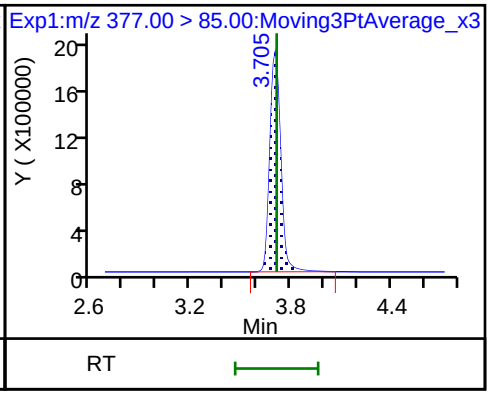

D 15 13C4 PFHpA



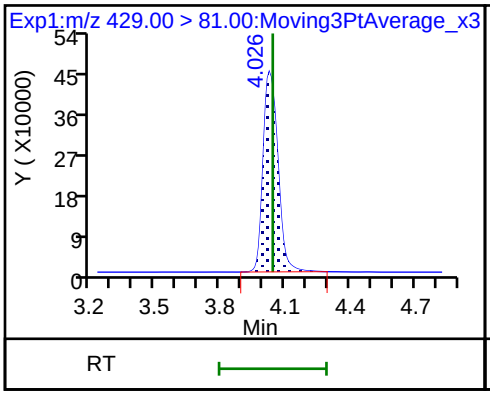

19 DONA



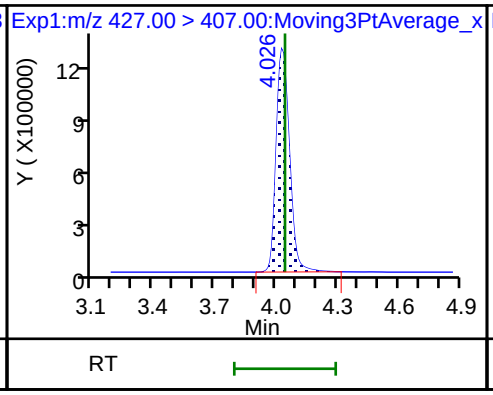

19 DONA



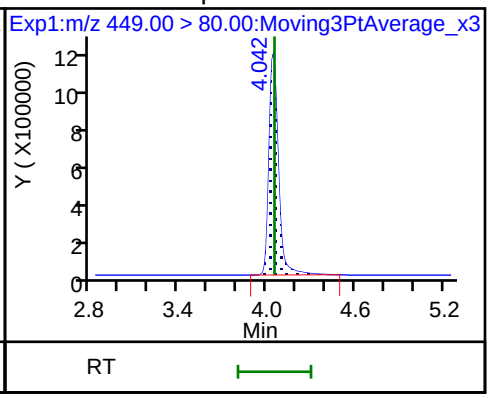
D 20 M2-6:2 FTS



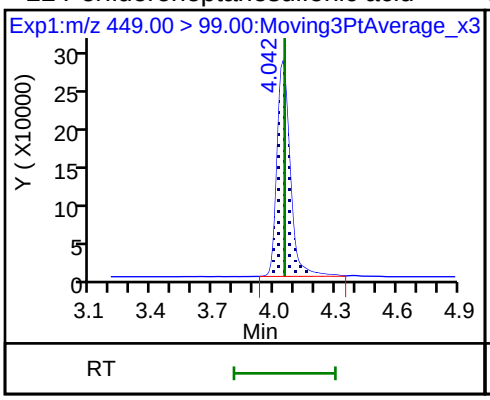

21 6:2 FTS



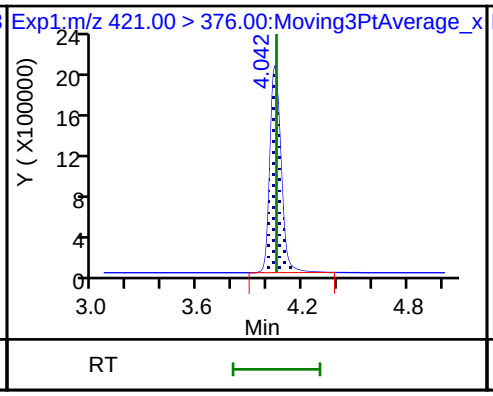

22 Perfluoroheptanesulfonic acid



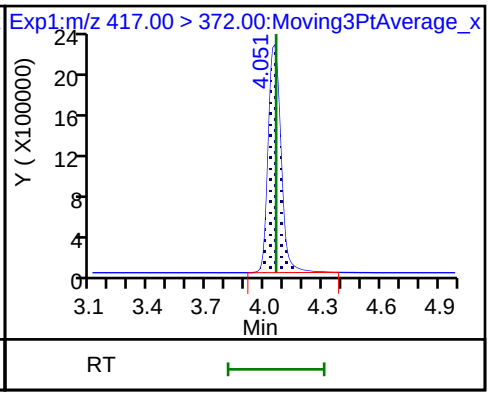

22 Perfluoroheptanesulfonic acid



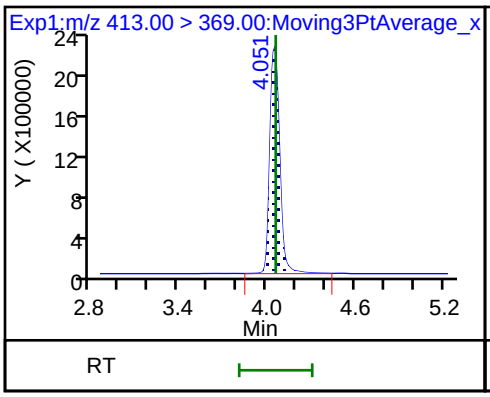

$ 23 13C8 PFOA



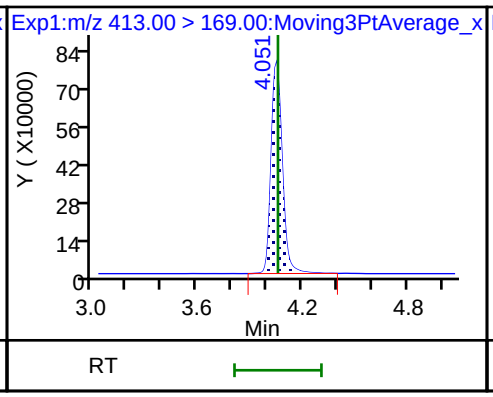

D 24 13C4 PFOA



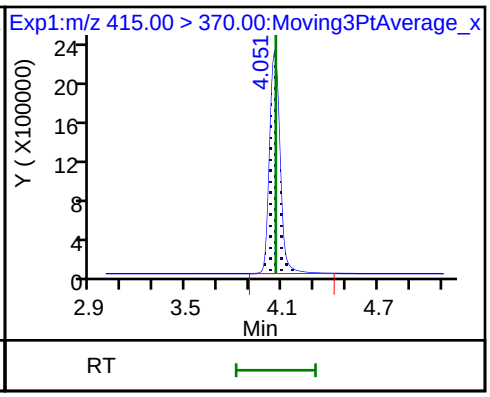

26 Perfluorooctanoic acid



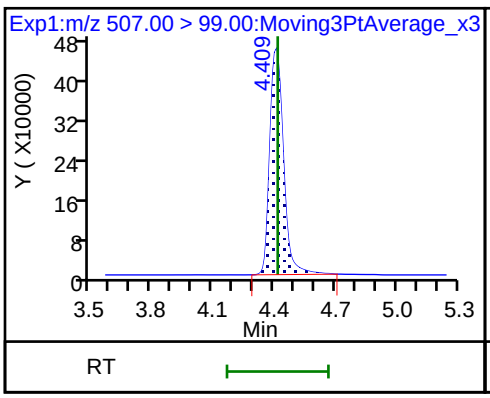

26 Perfluorooctanoic acid



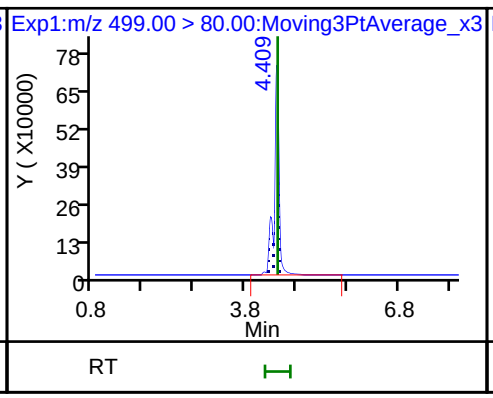

* 25 13C2 PFOA



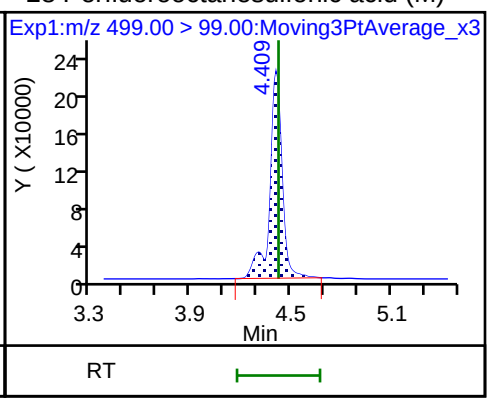

$ 27 13C8 PFOS



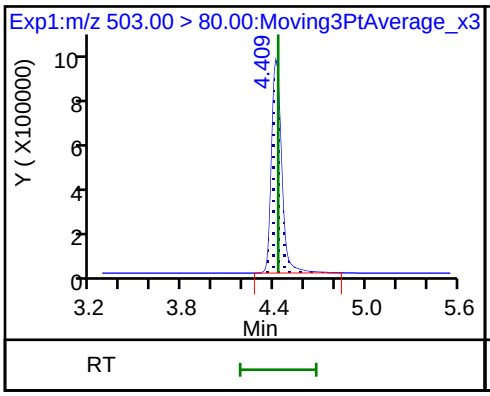

28 Perfluorooctanesulfonic acid



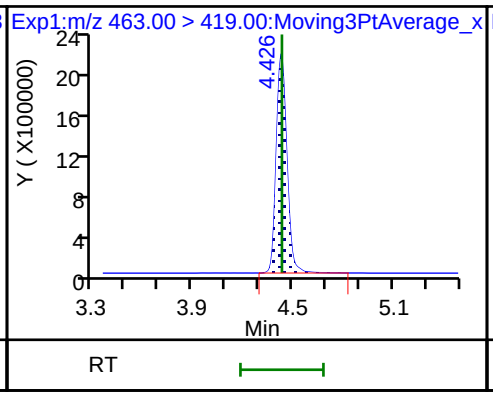

28 Perfluorooctanesulfonic acid (M)



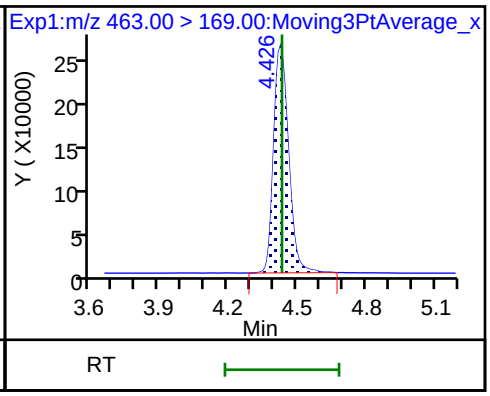
D 29 13C4 PFOS



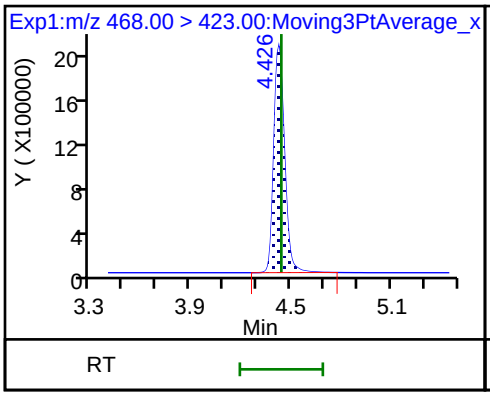

30 Perfluorononanoic acid



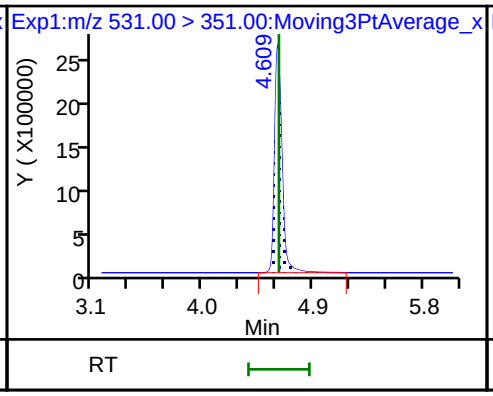

30 Perfluorononanoic acid



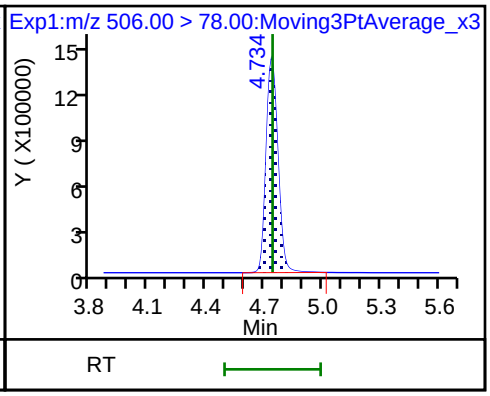

D 31 13C5 PFNA



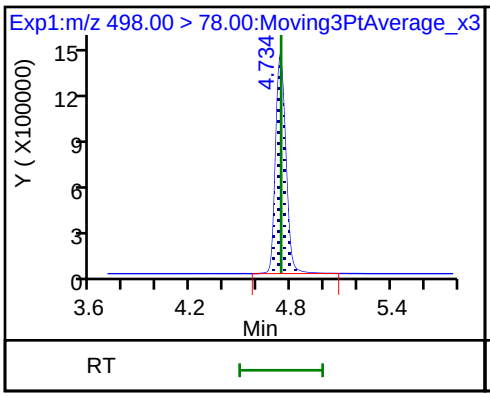

32 9ClFOS



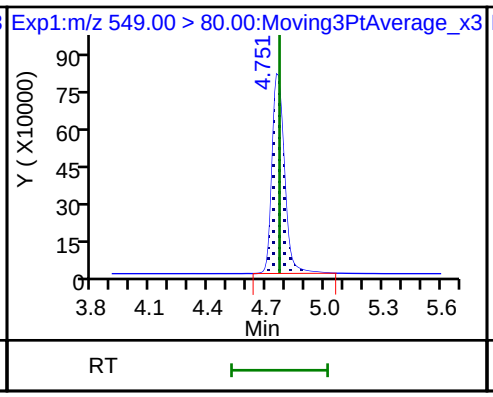

D 34 13C8 FOSA



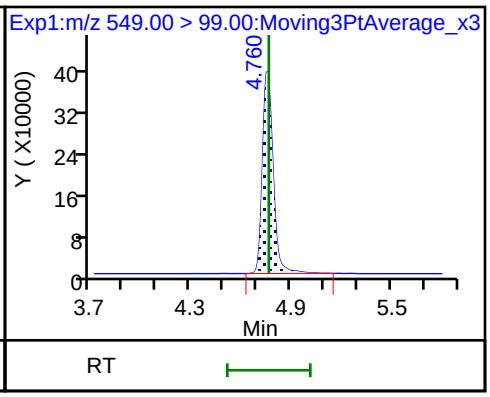

33 Perfluorooctanesulfonamide



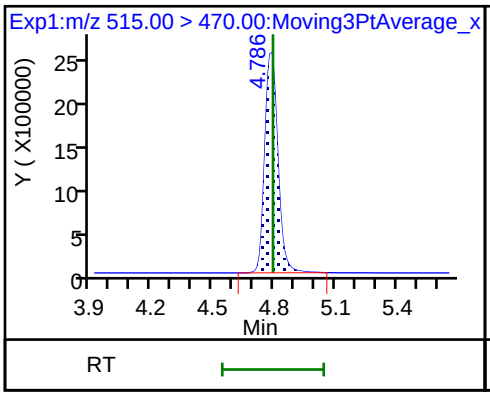

35 Perfluorononanesulfonic acid



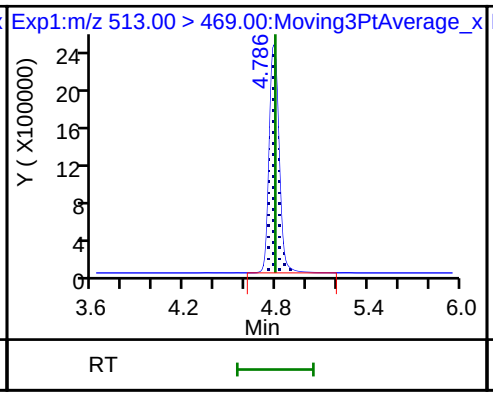

35 Perfluorononanesulfonic acid



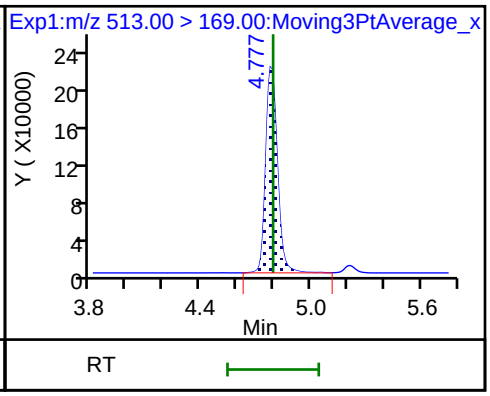

D 37 13C2 PFDA



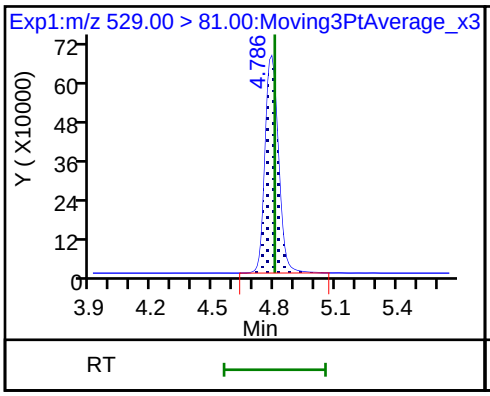

36 Perfluorodecanoic acid



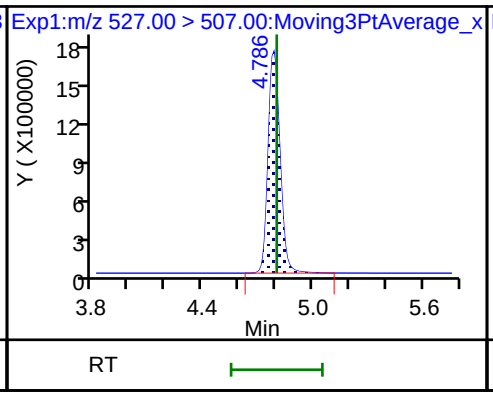

36 Perfluorodecanoic acid



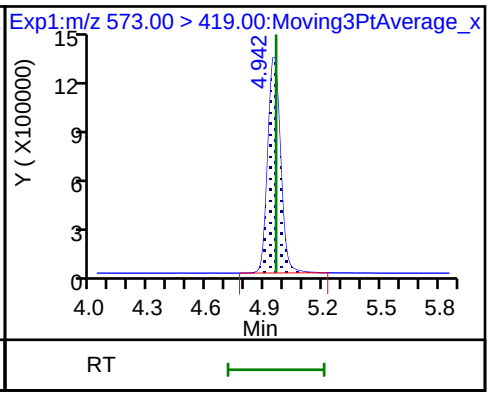
D 38 M2-8:2 FTS



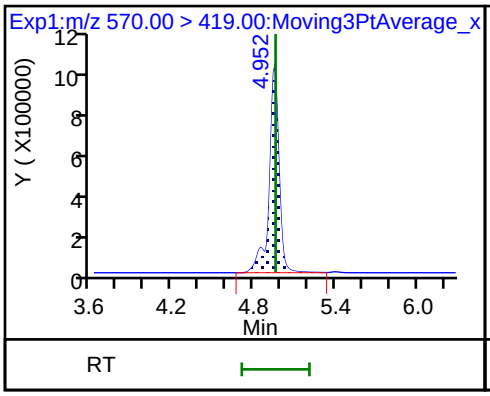

39 8:2 FTS



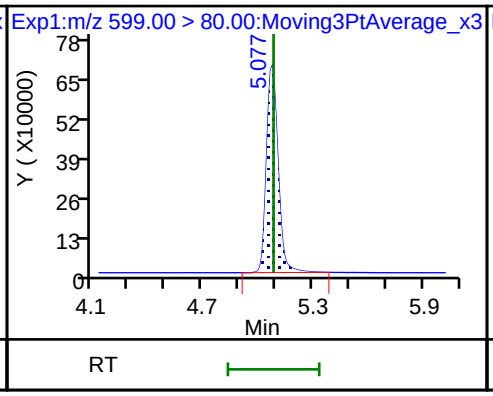

D 40 d3-NMeFOSAA



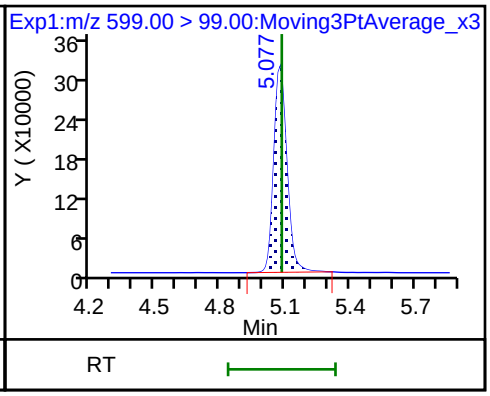

41 NMeFOSAA



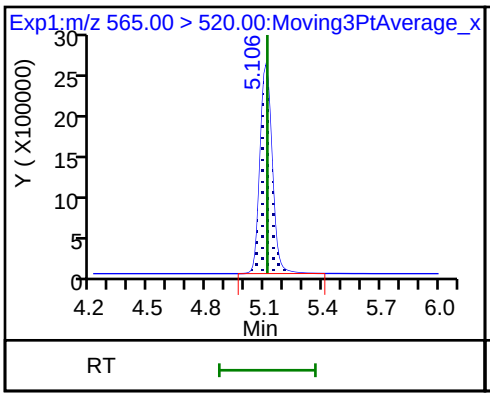

42 Perfluorodecanesulfonic acid



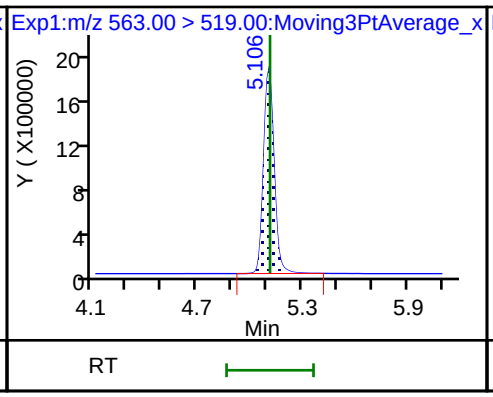

42 Perfluorodecanesulfonic acid



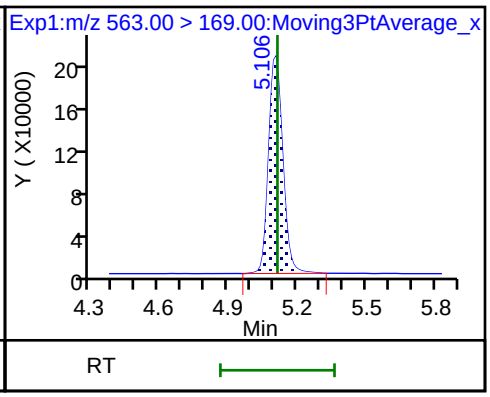

D 44 13C2 PFUnA



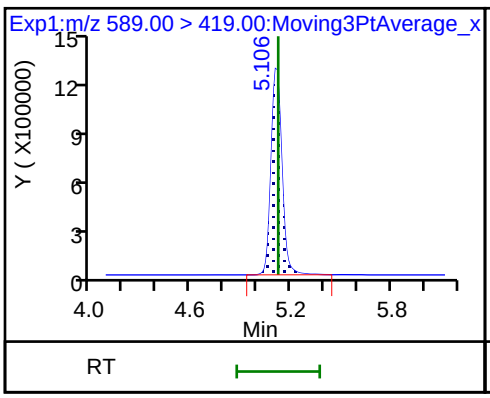

45 Perfluoroundecanoic acid



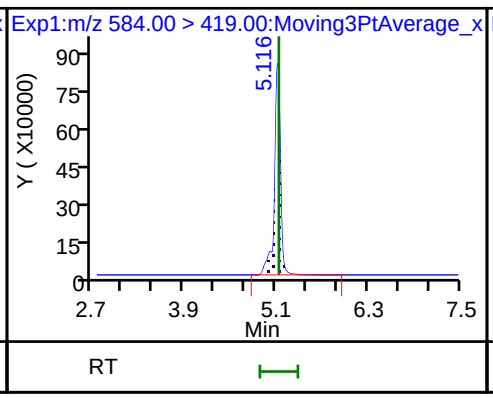

45 Perfluoroundecanoic acid



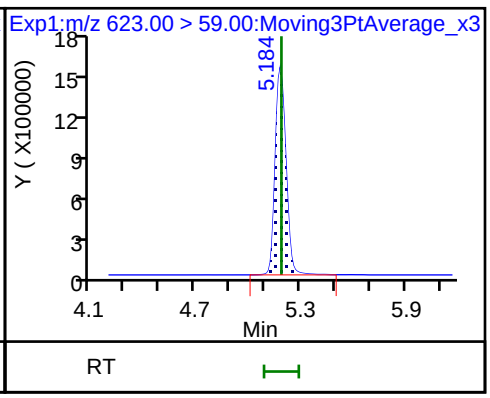

D 46 d5-NEtFOSAA



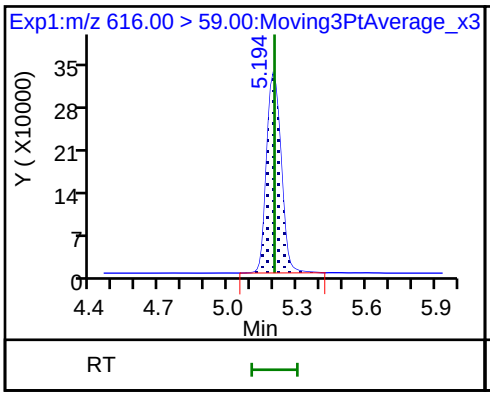

48 NEtFOSA



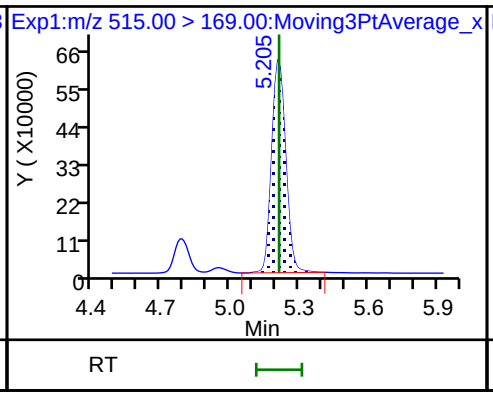

D 43 d7-N-MeFOSE-M



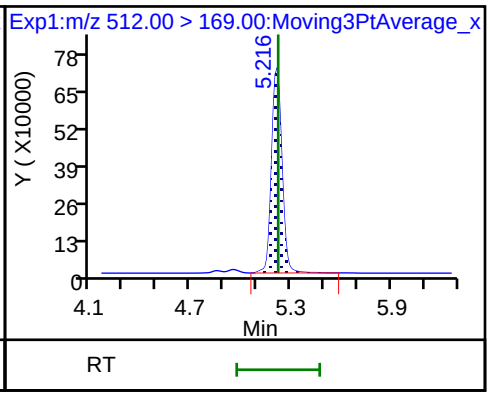
47 N-MeFOSE-M



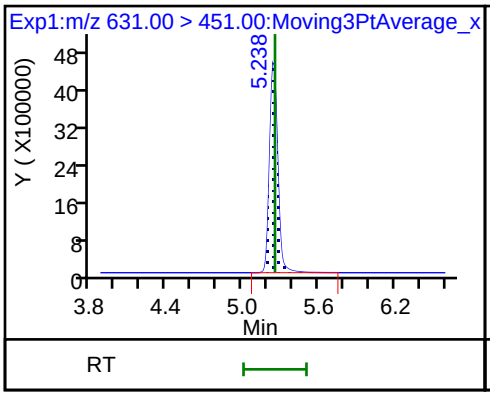

D 49 d-N-MeFOSA-M



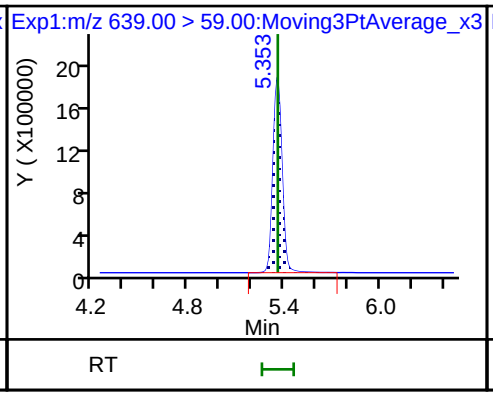

50 NMeFOSA



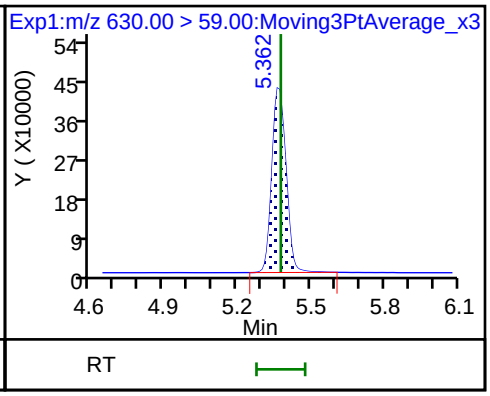

51 11ClFOS



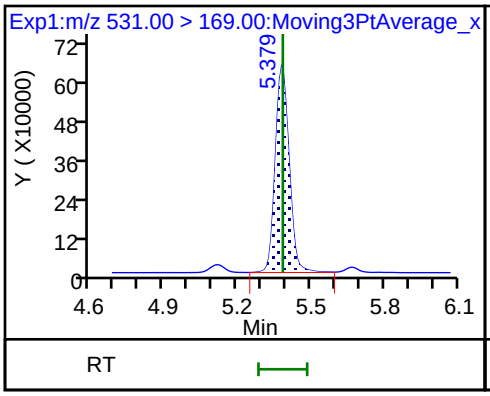

D 52 d9-N-EtFOSE-M



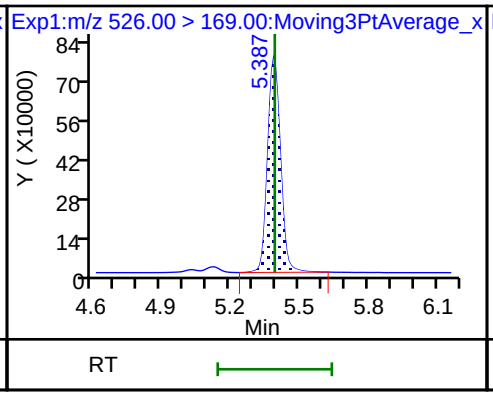

53 N-EtFOSE-M



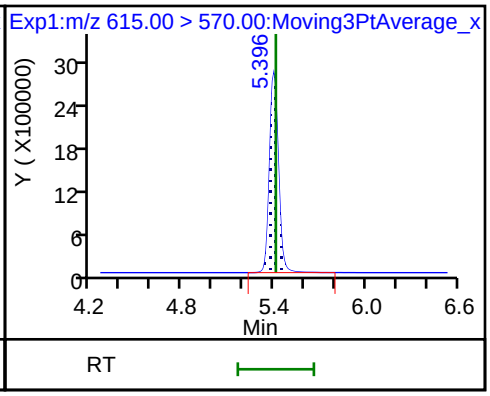

D 54 d-N-EtFOSA-M



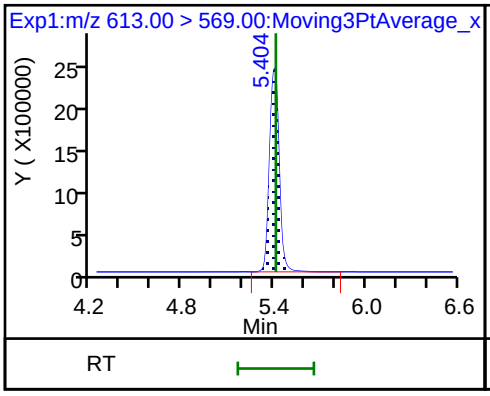

55 N-EtFOSA-M



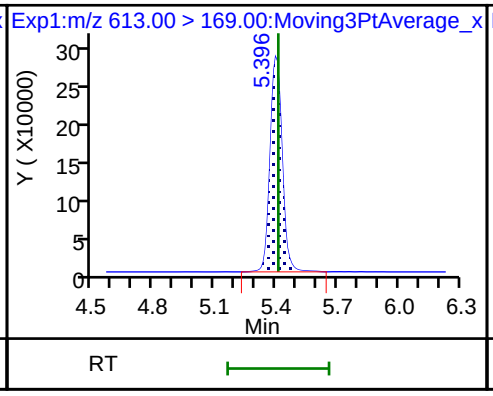

D 56 13C2 PFDoA



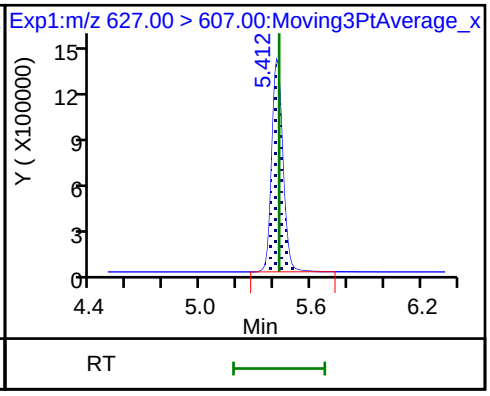

57 Perfluorododecanoic acid



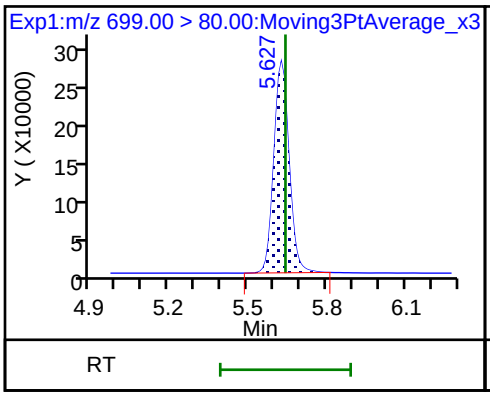

57 Perfluorododecanoic acid



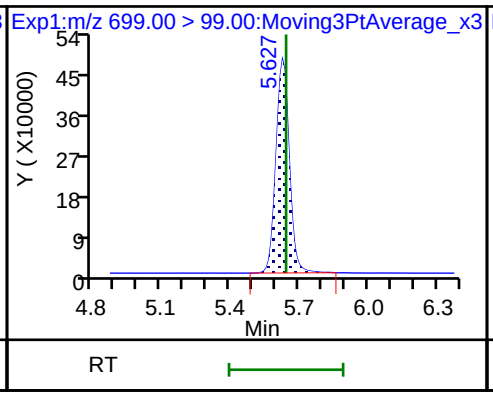

58 10:2 FTS



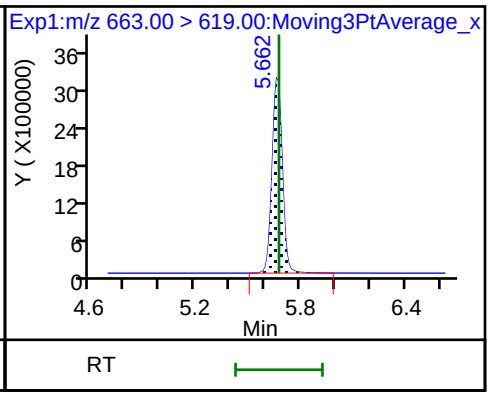
59 PFDoS



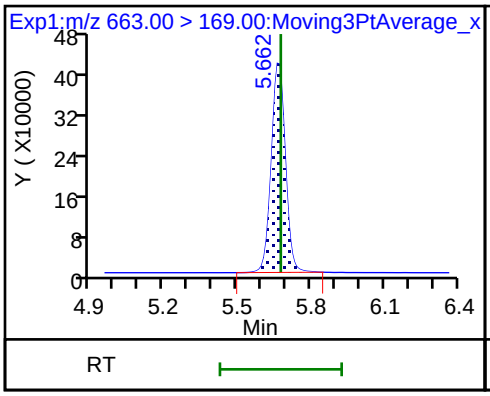

59 PFDoS



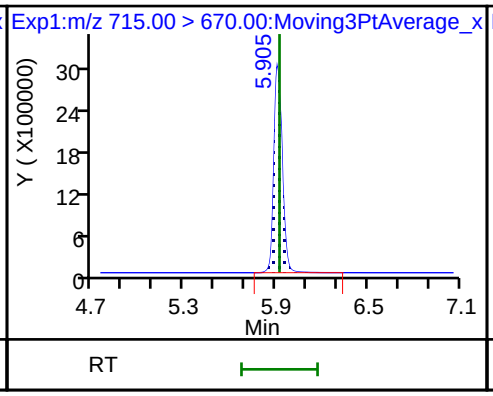

60 Perfluorotridecanoic acid



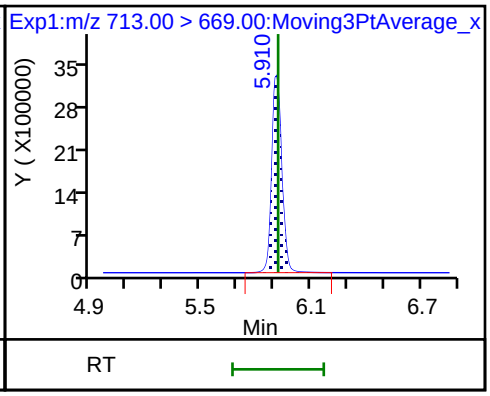

60 Perfluorotridecanoic acid



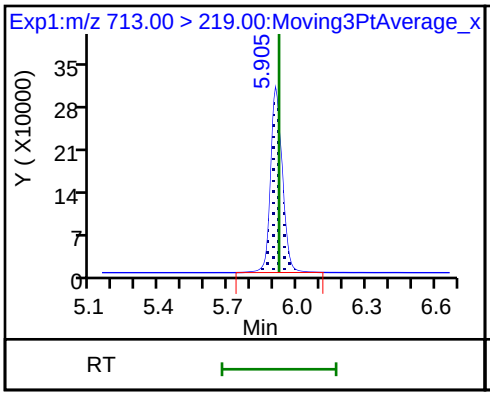

D 61 13C2 PFTeDA



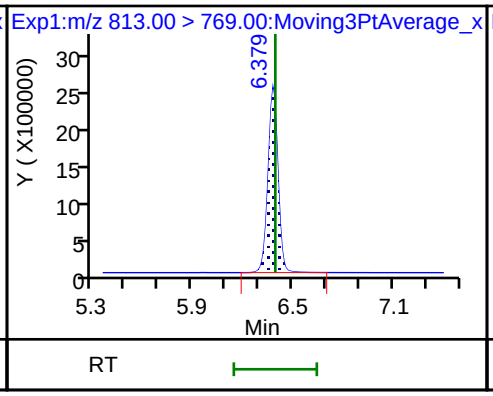

62 Perfluorotetradecanoic acid



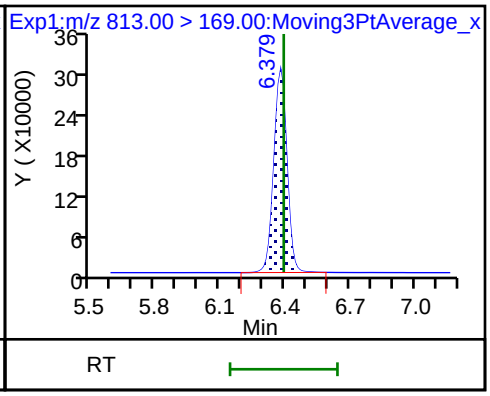

62 Perfluorotetradecanoic acid



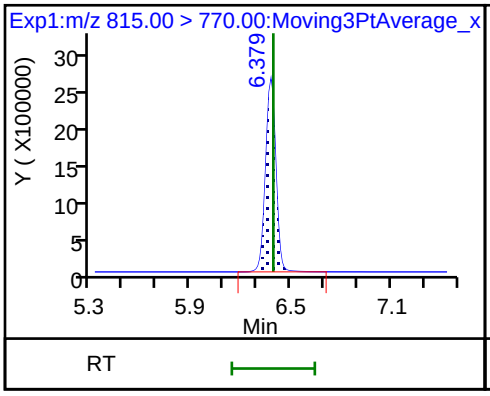

63 Perfluorohexadecanoic acid



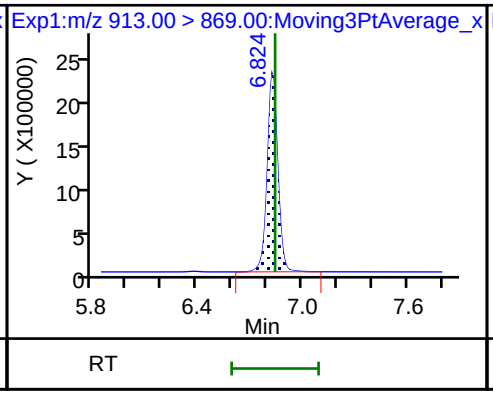

63 Perfluorohexadecanoic acid



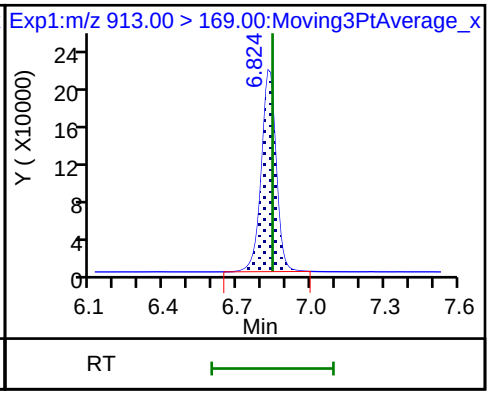

D 64 13C2 PFHxDA




65 Perfluorooctadecanoic acid




65 Perfluorooctadecanoic acid



Eurofins TestAmerica, Sacramento

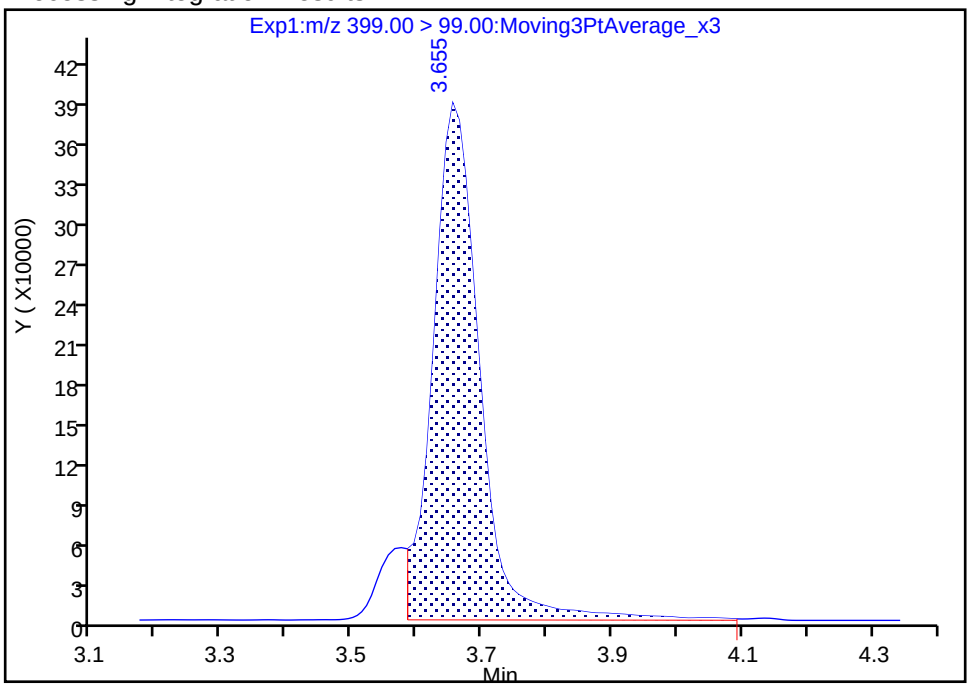
Data File: \\chromfs\Sacramento\ChromData\A13\20200910-103052.b\2020.09.10_A13_PFC_A_070.d
Injection Date: 10-Sep-2020 19:51:24 Instrument ID: A13
Lims ID: CCV L5
Client ID:
Operator ID: SACINSTLCMS01 ALS Bottle#: 53 Worklist Smp#: 13
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFAS_A13 Limit Group: LC PFC ICAL
Column: Gemini C18 3um 3 x 100mm ( 3.00 mm) Detector EXP1

## 18 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 2

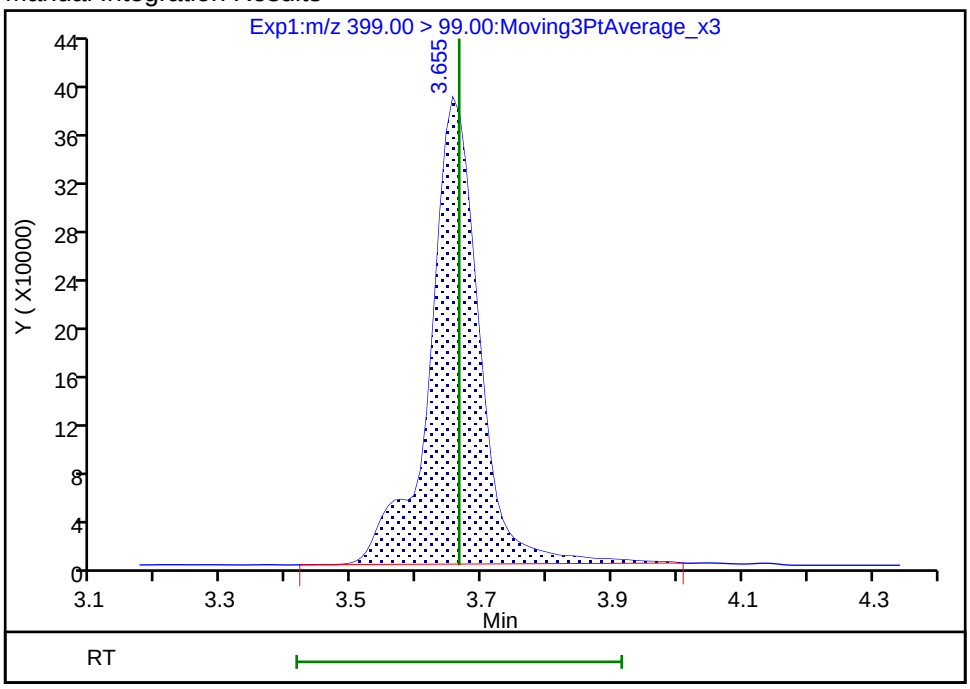
Processing Integration Results

RT: 3.65
Area: 1905520
Amount: 2.119246
Amount Units: ng/ml




Manual Integration Results

RT: 3.65
Area: 2031678
Amount: 2.119246
Amount Units: ng/ml




Reviewer: mongkols, 11-Sep-2020 10:58:07
Audit Action: Manually Integrated Audit Reason: Isomers

Eurofins TestAmerica, Sacramento

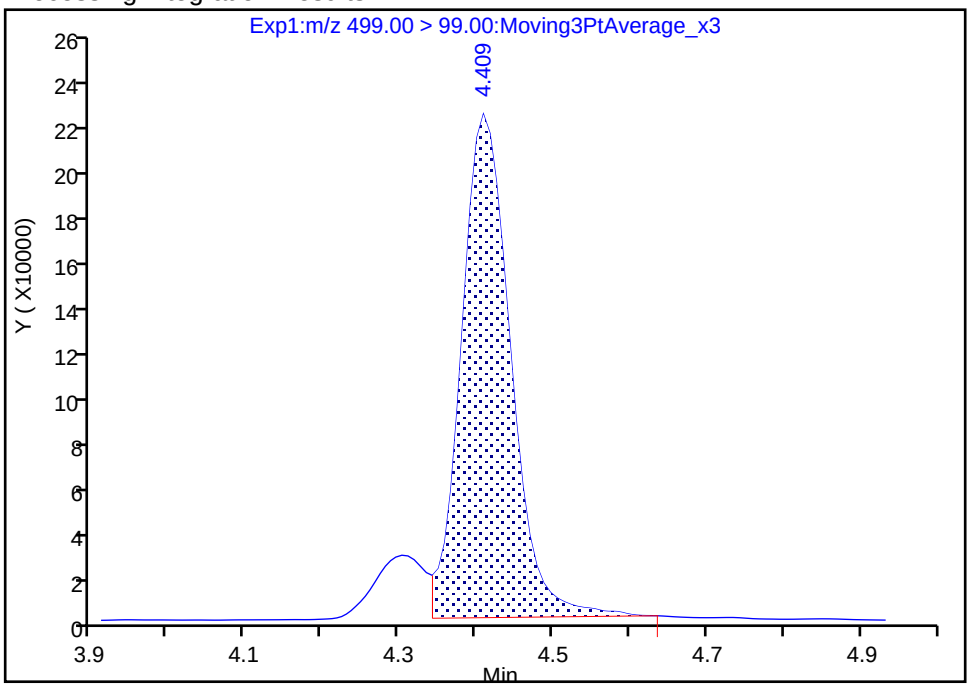
Data File: \\chromfs\Sacramento\ChromData\A13\20200910-103052.b\2020.09.10_A13_PFC_A_070.d
Injection Date: 10-Sep-2020 19:51:24 Instrument ID: A13
Lims ID: CCV L5
Client ID:
Operator ID: SACINSTLCMS01 ALS Bottle#: 53 Worklist Smp#: 13
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFAS_A13 Limit Group: LC PFC ICAL
Column: Gemini C18 3um 3 x 100mm ( 3.00 mm) Detector EXP1

## 28 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 2

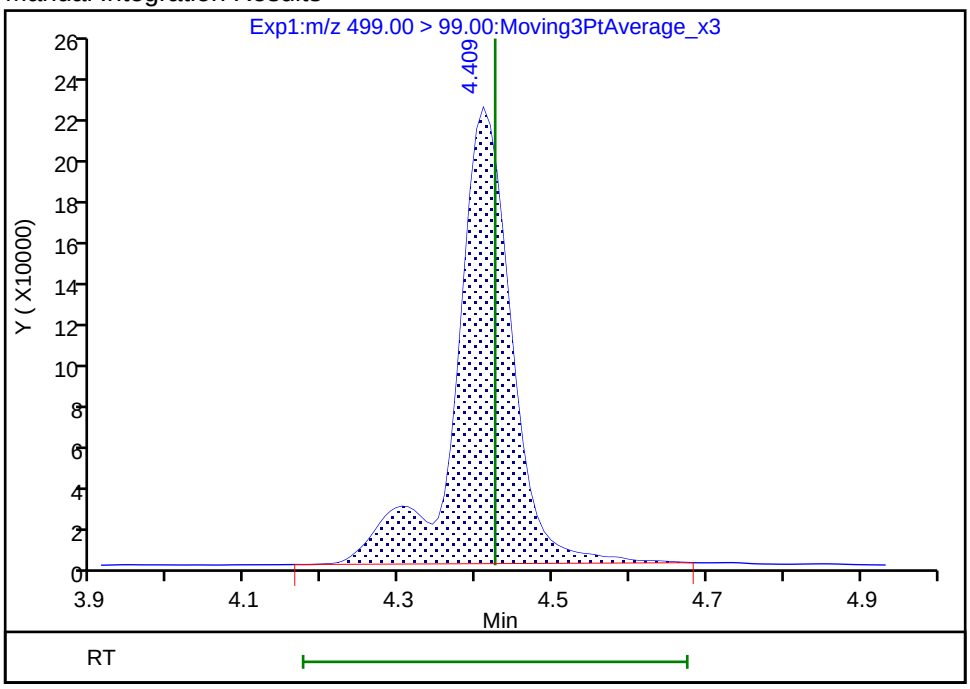
Processing Integration Results

RT: 4.41
Area: 974777
Amount: 2.425636
Amount Units: ng/ml




Manual Integration Results

RT: 4.41
Area: 1112579
Amount: 2.425636
Amount Units: ng/ml




Reviewer: mongkols, 11-Sep-2020 10:58:16
Audit Action: Manually Integrated Audit Reason: Isomers

FORM VII
LCMS CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Sacramento  Job No.: 460-217659-1

SDG No.:

Lab Sample ID: CCV 320-411143/22  Calibration Date: 09/10/2020 21:16

Instrument ID: A13  Calib Start Date: 09/08/2020 18:01

GC Column: GeminiC18 3x100  ID: 3.00(mm)  Calib End Date: 09/08/2020 18:58

Lab File ID: 2020.09.10_A13_PFC_A_079.d  Conc. Units: ng/mL

| ANALYTE | CURVE TYPE | AVE RRF | RRF | MIN RRF | CALC AMOUNT | SPIKE AMOUNT | %D | MAX %D |
|---|---|---|---|---|---|---|---|---|
| Perfluorobutanoic acid (PFBA) | AveID | 0.7433 | 0.8243 | | 1.11 | 1.00 | 10.9 | 40.0 |
| Perfluoropentanoic acid (PFPeA) | AveID | 1.028 | 1.084 | | 1.06 | 1.00 | 5.5 | 40.0 |
| Perfluorobutanesulfonic acid (PFBS) | AveID | 0.9776 | 1.055 | | 0.954 | 0.884 | 7.9 | 50.0 |
| 4:2 FTS | AveID | 3.243 | 3.574 | | 1.03 | 0.934 | 10.2 | 50.0 |
| Perfluorohexanoic acid (PFHxA) | AveID | 0.9294 | 0.9807 | | 1.06 | 1.00 | 5.5 | 40.0 |
| Perfluoropentanesulfonic acid (PFPeS) | AveID | 0.7896 | 0.8997 | | 1.07 | 0.938 | 14.0 | 50.0 |
| HFPO-DA (GenX) | AveID | 0.2972 | 0.3133 | | 1.05 | 1.00 | 5.4 | 40.0 |
| Perfluoroheptanoic acid (PFHpA) | AveID | 1.011 | 1.097 | | 1.09 | 1.00 | 8.5 | 40.0 |
| Perfluorohexanesulfonic acid (PFHxS) | AveID | 1.112 | 1.123 | | 0.919 | 0.910 | 1.0 | 40.0 |
| 4,8-Dioxa-3H-perfluorononanoic acid (ADONA) | AveID | 5.136 | 5.915 | | 1.09 | 0.942 | 15.2 | 50.0 |
| 6:2 FTS | AveID | 2.407 | 2.493 | | 0.982 | 0.948 | 3.6 | 40.0 |
| Perfluoroheptanesulfonic Acid (PFHpS) | AveID | 1.139 | 1.273 | | 1.07 | 0.952 | 11.8 | 50.0 |
| Perfluorooctanoic acid (PFOA) | AveID | 1.023 | 1.051 | | 1.03 | 1.00 | 2.8 | 40.0 |
| Perfluorooctanesulfonic acid (PFOS) | AveID | 1.038 | 1.140 | | 1.02 | 0.928 | 9.8 | 40.0 |
| Perfluorononanoic acid (PFNA) | AveID | 0.9494 | 1.010 | | 1.07 | 1.00 | 6.4 | 40.0 |
| F-53B Major | AveID | 2.501 | 2.837 | | 1.06 | 0.932 | 13.4 | 50.0 |
| Perfluorooctanesulfonamide (FOSA) | AveID | 0.9383 | 0.9837 | | 1.05 | 1.00 | 4.8 | 40.0 |
| Perfluorononanesulfonic acid (PFNS) | AveID | 0.7747 | 0.9087 | | 1.13 | 0.960 | 17.3 | 50.0 |
| 8:2 FTS | AveID | 2.472 | 2.671 | | 1.04 | 0.958 | 8.1 | 40.0 |
| Perfluorodecanoic acid (PFDA) | AveID | 0.8964 | 0.9066 | | 1.01 | 1.00 | 1.1 | 40.0 |
| N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA) | AveID | 0.8055 | 0.8546 | | 1.06 | 1.00 | 6.1 | 40.0 |
| Perfluorodecanesulfonic acid (PFDS) | AveID | 0.6588 | 0.7132 | | 1.04 | 0.964 | 8.2 | 50.0 |
| Perfluoroundecanoic acid (PFUnA) | AveID | 0.6615 | 0.6457 | | 0.977 | 1.00 | -2.4 | 40.0 |
| N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA) | AveID | 0.7741 | 0.8105 | | 1.05 | 1.00 | 4.7 | 40.0 |
| NMeFOSE | AveID | 1.065 | 1.129 | | 1.06 | 1.00 | 6.1 | 40.0 |
| NMeFOSA | AveID | 0.9832 | 1.155 | | 1.18 | 1.00 | 17.5 | 50.0 |
| F-53B Minor | AveID | 4.317 | 5.330 | | 1.16 | 0.942 | 23.5 | 50.0 |
| NEtFOSE | AveID | 1.035 | 1.069 | | 1.03 | 1.00 | 3.2 | 40.0 |
| NEtFOSA | AveID | 1.062 | 1.166 | | 1.10 | 1.00 | 9.8 | 40.0 |
| Perfluorododecanoic acid (PFDoA) | AveID | 0.9122 | 0.9732 | | 1.07 | 1.01 | 6.7 | 40.0 |
| 10:2 FTS | AveID | 1.632 | 1.887 | | 1.12 | 0.964 | 15.6 | 50.0 |
| Perfluorododecanesulfonic acid (PFDoS) | AveID | 0.2572 | 0.2921 | | 1.10 | 0.968 | 13.5 | 50.0 |

FORM VII 537 (modified)

FORM VII
LCMS CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Sacramento  Job No.: 460-217659-1

SDG No.:

Lab Sample ID: CCV 320-411143/22  Calibration Date: 09/10/2020 21:16

Instrument ID: A13  Calib Start Date: 09/08/2020 18:01

GC Column: GeminiC18 3x100  ID: 3.00(mm)  Calib End Date: 09/08/2020 18:58

Lab File ID: 2020.09.10_A13_PFC_A_079.d  Conc. Units: ng/mL

| ANALYTE | CURVE TYPE | AVE RRF | RRF | MIN RRF | CALC AMOUNT | SPIKE AMOUNT | %D | MAX %D |
|---|---|---|---|---|---|---|---|---|
| Perfluorotridecanoic acid (PFTriA) | AveID | 0.9373 | 1.043 | | 1.11 | 1.00 | 11.3 | 50.0 |
| Perfluorotetradecanoic acid (PFTeA) | AveID | 0.9843 | 1.051 | | 1.07 | 1.00 | 6.8 | 50.0 |
| Perfluoro-n-hexadecanoic acid (PFHxDA) | L2ID | | 0.9877 | | 1.01 | 1.00 | 1.3 | 50.0 |
| Perfluoro-n-octadecanoic acid (PFODA) | AveID | 0.7306 | 0.8004 | | 1.10 | 1.00 | 9.6 | 50.0 |
| 13C4 PFBA | Ave | 0.8499 | 0.9335 | | 2.75 | 2.50 | 9.8 | 50.0 |
| 13C5 PFPeA | Ave | 0.6625 | 0.6786 | | 2.56 | 2.50 | 2.4 | 50.0 |
| 13C3 PFBS | Ave | 0.8317 | 0.9567 | | 2.67 | 2.33 | 15.0 | 50.0 |
| M2-4:2 FTS | Ave | 0.2037 | 0.1871 | | 2.14 | 2.34 | -8.2 | 50.0 |
| 13C2 PFHxA | Ave | 0.8183 | 0.8936 | | 2.73 | 2.50 | 9.2 | 50.0 |
| 13C3 HFPO-DA | Ave | 0.5866 | 0.6232 | | 2.66 | 2.50 | 6.2 | 50.0 |
| 13C4 PFHpA | Ave | 0.8058 | 0.8406 | | 2.61 | 2.50 | 4.3 | 50.0 |
| 18O2 PFHxS | Ave | 0.5449 | 0.6173 | | 2.68 | 2.37 | 13.3 | 50.0 |
| M2-6:2 FTS | Ave | 0.2349 | 0.2255 | | 2.28 | 2.38 | -4.0 | 50.0 |
| 13C4 PFOA | Ave | 0.9849 | 0.9873 | | 2.51 | 2.50 | 0.2 | 50.0 |
| 13C4 PFOS | Ave | 0.3888 | 0.4199 | | 2.58 | 2.39 | 8.0 | 50.0 |
| 13C5 PFNA | Ave | 0.9099 | 0.9579 | | 2.63 | 2.50 | 5.3 | 50.0 |
| 13C8 FOSA | Ave | 0.5585 | 0.6006 | | 2.69 | 2.50 | 7.5 | 50.0 |
| 13C2 PFDA | Ave | 1.102 | 1.156 | | 2.62 | 2.50 | 4.9 | 50.0 |
| M2-8:2 FTS | Ave | 0.3107 | 0.2989 | | 2.30 | 2.40 | -3.8 | 50.0 |
| d3-NMeFOSAA | Ave | 0.5682 | 0.5366 | | 2.36 | 2.50 | -5.6 | 50.0 |
| 13C2 PFUnA | Ave | 1.078 | 1.080 | | 2.50 | 2.50 | 0.2 | 50.0 |
| d5-NEtFOSAA | Ave | 0.5501 | 0.5404 | | 2.46 | 2.50 | -1.8 | 50.0 |
| d7-N-MeFOSE-M | Ave | 0.1398 | 0.1321 | | 11.8 | 12.5 | -5.5 | 50.0 |
| d-N-MeFOSA-M | Ave | 0.2628 | 0.2656 | | 2.53 | 2.50 | 1.0 | 50.0 |
| d9-N-EtFOSE-M | Ave | 0.1640 | 0.1499 | | 11.4 | 12.5 | -8.6 | 50.0 |
| d-N-EtFOSA-M | Ave | 0.2510 | 0.2552 | | 2.54 | 2.50 | 1.7 | 50.0 |
| 13C2 PFDoA | Ave | 1.160 | 1.119 | | 2.41 | 2.50 | -3.6 | 50.0 |
| 13C2 PFTeDA | Ave | 1.146 | 1.028 | | 2.24 | 2.50 | -10.3 | 50.0 |
| 13C2 PFHxDA | Ave | 1.193 | 1.100 | | 2.31 | 2.50 | -7.7 | 50.0 |
| 13C8 PFOA | Ave | 0.8908 | 0.8395 | | 2.31 | 2.45 | -5.8 | 50.0 |
| 13C8 PFOS | Ave | 0.2076 | 0.2264 | | 2.61 | 2.39 | 9.1 | 50.0 |

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\A13\20200910-103052.b\2020.09.10_A13_PFC_A_079.d
Lims ID: CCV L4
Client ID:
Sample Type: CCV
Inject. Date: 10-Sep-2020 21:16:05 ALS Bottle#: 52 Worklist Smp#: 22
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Sample Info: CCV L4
Misc. Info.: Plate: 1 Rack: 1
Operator ID: SACINSTLCMS01 Instrument ID: A13
Sublist: chrom-PFAS_A13*sub3

Method: \\chromfs\Sacramento\ChromData\A13\20200910-103052.b\PFAS_A13.m
Limit Group: LC PFC ICAL
Last Update: 11-Sep-2020 12:13:20 Calib Date: 08-Sep-2020 18:58:15
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\A13\20200908-102913.b\2020.09.08_A13_PFC_ICALX_010.d

Column 1 : Gemini C18 3um 3 x 100mm ( 3.00 mm) Det: EXP1
Process Host: CTX1053

First Level Reviewer: mongkols Date: 11-Sep-2020 12:13:20
Ratio Calibration: Average of Initial Calibration

| Signal | RT | EXP RT | DLT RT | REL RT | Response | Amount ng/ml | Ratio(Limits) | %Rec | S/N | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| D 1 13C4 PFBA | | | | | | | | | | |
| 217.00 > 172.00 | 2.475 | 2.475 | 0.0 | 0.611 | 9329681 | 2.75 | | 110 | 9750 | |
| 2 Perfluorobutanoic acid | | | | | | | | | | |
| 212.90 > 169.00 | 2.475 | 2.482 | -0.007 | 1.000 | 3076028 | 1.11 | | 111 | 239 | |
| D 4 13C5 PFPeA | | | | | | | | | | |
| 267.90 > 223.00 | 2.867 | 2.867 | -0.001 | 0.708 | 6781686 | 2.56 | | 102 | 6223 | |
| 5 Perfluoropentanoic acid | | | | | | | | | | |
| 262.90 > 219.00 | 2.867 | 2.867 | -0.001 | 1.000 | 2940178 | 1.05 | | 105 | 147 | |
| D 14 13C3 PFBS | | | | | | | | | | |
| 301.90 > 80.00 | 2.901 | 2.913 | -0.012 | 0.716 | 8891917 | 2.67 | | 115 | 27150 | |
| 6 Perfluorobutanesulfonic acid | | | | | | | | | | |
| 298.90 > 80.00 | 2.901 | 2.913 | -0.012 | 1.000 | 3567687 | 0.9542 | Target=2.18 | 108 | 3844 | |
| 298.90 > 99.00 | 2.901 | 2.913 | -0.012 | 1.000 | 1664510 | | 2.14(1.09-3.26) | | 607 | |
| 7 4:2 FTS | | | | | | | | | | |
| 327.00 > 307.00 | 3.215 | 3.215 | 0.0 | 1.003 | 2496234 | 1.03 | | 110 | 3413 | |
| D 8 M2-4:2 FTS | | | | | | | | | | |
| 329.00 > 81.00 | 3.204 | 3.215 | -0.011 | 0.791 | 1746130 | 2.14 | | 91.8 | 768 | |
| 10 Perfluorohexanoic acid | | | | | | | | | | |
| 313.00 > 269.00 | 3.247 | 3.258 | -0.011 | 1.000 | 3503165 | 1.06 | Target=11.68 | 106 | 194 | |
| 313.00 > 119.00 | 3.247 | 3.258 | -0.011 | 1.000 | 285480 | | 12.27(5.84-17.52) | | 110 | |
| D 9 13C2 PFHxA | | | | | | | | | | |
| 315.00 > 270.00 | 3.247 | 3.258 | -0.011 | 0.802 | 8930145 | 2.73 | | 109 | 16660 | |
| 11 Perfluoropentanesulfonic acid | | | | | | | | | | |
| 349.00 > 80.00 | 3.268 | 3.279 | -0.011 | 1.126 | 3227669 | 1.07 | Target=2.56 | 114 | 3788 | |
| 349.00 > 99.00 | 3.268 | 3.279 | -0.011 | 1.126 | 1242449 | | 2.60(1.28-3.84) | | 487 | |
| 12 HPFO-DA | | | | | | | | | | |
| 285.00 > 169.00 | 3.371 | 3.380 | -0.009 | 1.000 | 780539 | 1.05 | | 105 | 2236 | |

| Signal | RT | EXP RT | DLT RT | REL RT | Response | Amount ng/ml | Ratio(Limits) | %Rec | S/N | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| D 13 13C3 HFPO-DA | | | | | | | | | | |
| 287.00 > 169.00 | 3.371 | 3.380 | -0.009 | 0.832 | 6228121 | 2.66 | | 106 | 6863 | |
| D 17 18O2 PFHxS | | | | | | | | | | |
| 403.00 > 84.00 | 3.655 | 3.665 | -0.010 | 0.902 | 5836303 | 2.68 | | 113 | 4142 | |
| 16 Perfluoroheptanoic acid | | | | | | | | | | |
| 363.00 > 319.00 | 3.655 | 3.665 | -0.010 | 1.000 | 3685829 | 1.09 | Target=3.85 | 109 | 304 | |
| 363.00 > 169.00 | 3.655 | 3.665 | -0.010 | 1.000 | 954993 | | 3.86(1.92-5.77) | | 409 | |
| 18 Perfluorohexanesulfonic acid | | | | | | | | | | |
| 399.00 > 80.00 | 3.655 | 3.665 | -0.010 | 1.000 | 2521982 | 0.9187 | Target=3.25 | 101 | 375 | |
| 399.00 > 99.00 | 3.655 | 3.665 | -0.010 | 1.000 | 805369 | | 3.13(1.62-4.87) | | 204 | |
| D 15 13C4 PFHpA | | | | | | | | | | |
| 367.00 > 322.00 | 3.655 | 3.665 | -0.010 | 0.902 | 8401312 | 2.61 | | 104 | 6998 | |
| 19 DONA | | | | | | | | | | |
| 377.00 > 251.00 | 3.704 | 3.713 | -0.009 | 0.839 | 9351889 | 1.08 | Target=2.76 | 115 | 5317 | |
| 377.00 > 85.00 | 3.704 | 3.713 | -0.009 | 0.839 | 3278430 | | 2.85(1.38-4.14) | | 3272 | |
| D 20 M2-6:2 FTS | | | | | | | | | | |
| 429.00 > 81.00 | 4.026 | 4.042 | -0.016 | 0.994 | 2140866 | 2.28 | | 96.0 | 2081 | |
| 21 6:2 FTS | | | | | | | | | | |
| 427.00 > 407.00 | 4.026 | 4.042 | -0.016 | 1.000 | 2130097 | 0.9818 | | 104 | 1078 | |
| 22 Perfluoroheptanesulfonic acid | | | | | | | | | | M |
| 449.00 > 80.00 | 4.042 | 4.051 | -0.009 | 0.915 | 2034806 | 1.06 | Target=4.29 | 112 | 1027 | |
| 449.00 > 99.00 | 4.042 | 4.051 | -0.009 | 0.915 | 495633 | | 4.11(2.15-6.44) | | 291 | M |
| $ 23 13C8 PFOA | | | | | | | | | | |
| 421.00 > 376.00 | 4.042 | 4.051 | -0.009 | 0.998 | 8213768 | 2.31 | | 94.2 | 4629 | |
| D 24 13C4 PFOA | | | | | | | | | | |
| 417.00 > 372.00 | 4.051 | 4.059 | -0.008 | 1.000 | 9867386 | 2.51 | | 100 | 11473 | |
| 26 Perfluorooctanoic acid | | | | | | | | | | |
| 413.00 > 369.00 | 4.051 | 4.059 | -0.008 | 1.000 | 4154114 | 1.03 | Target=2.95 | 103 | 594 | |
| 413.00 > 169.00 | 4.051 | 4.059 | -0.008 | 1.000 | 1359343 | | 3.06(1.47-4.42) | | 913 | |
| * 25 13C2 PFOA | | | | | | | | | | |
| 415.00 > 370.00 | 4.051 | 4.059 | -0.008 | | 9993829 | 2.50 | | | 7814 | |
| $ 27 13C8 PFOS | | | | | | | | | | |
| 507.00 > 99.00 | 4.409 | 4.416 | -0.007 | 1.089 | 2162683 | 2.61 | | 109 | 1487 | |
| 28 Perfluorooctanesulfonic acid | | | | | | | | | | M |
| 499.00 > 80.00 | 4.409 | 4.425 | -0.016 | 0.998 | 1775189 | 1.02 | Target=4.28 | 110 | 627 | |
| 499.00 > 99.00 | 4.418 | 4.425 | -0.007 | 1.000 | 439413 | | 4.04(2.14-6.41) | | 378 | M |
| D 29 13C4 PFOS | | | | | | | | | | |
| 503.00 > 80.00 | 4.418 | 4.425 | -0.007 | 1.091 | 4011329 | 2.58 | | 108 | 4002 | |
| 30 Perfluorononanoic acid | | | | | | | | | | |
| 463.00 > 419.00 | 4.426 | 4.433 | -0.007 | 1.000 | 3876297 | 1.07 | Target=8.00 | 106 | 422 | |
| 463.00 > 169.00 | 4.426 | 4.433 | -0.007 | 1.000 | 484504 | | 8.00(4.00-12.01) | | 612 | |
| D 31 13C5 PFNA | | | | | | | | | | |
| 468.00 > 423.00 | 4.426 | 4.442 | -0.016 | 1.093 | 9572717 | 2.63 | | 105 | 7784 | |
| 32 9ClFOS | | | | | | | | | | |
| 531.00 > 351.00 | 4.615 | 4.620 | -0.005 | 1.045 | 4438245 | 1.06 | | 113 | 4292 | |
| D 34 13C8 FOSA | | | | | | | | | | |
| 506.00 > 78.00 | 4.734 | 4.740 | -0.006 | 1.169 | 6002130 | 2.69 | | 108 | 4990 | |

| Signal | RT | EXP RT | DLT RT | REL RT | Response | Amount ng/ml | Ratio(Limits) | %Rec | S/N | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| 33 Perfluorooctanesulfonamide | | | | | | | | | | |
| 498.00 > 78.00 | 4.734 | 4.740 | -0.006 | 1.000 | 2361721 | 1.05 | | 105 | 3571 | |
| 35 Perfluorononanesulfonic acid | | | | | | | | | | |
| 549.00 > 80.00 | 4.760 | 4.766 | -0.006 | 1.077 | 1464145 | 1.13 | Target=2.15 | 117 | 2169 | |
| 549.00 > 99.00 | 4.760 | 4.766 | -0.006 | 1.077 | 722612 | | 2.03(1.08-3.23) | | 812 | |
| D 37 13C2 PFDA | | | | | | | | | | |
| 515.00 > 470.00 | 4.786 | 4.793 | -0.007 | 1.182 | 11554869 | 2.62 | | 105 | 6656 | |
| 36 Perfluorodecanoic acid | | | | | | | | | | |
| 513.00 > 469.00 | 4.786 | 4.793 | -0.007 | 1.000 | 4190132 | 1.01 | Target=10.44 | 101 | 1318 | |
| 513.00 > 169.00 | 4.786 | 4.793 | -0.007 | 1.000 | 404334 | | 10.36(5.22-15.65) | | 292 | |
| D 38 M2-8:2 FTS | | | | | | | | | | |
| 529.00 > 81.00 | 4.786 | 4.802 | -0.016 | 1.182 | 2862120 | 2.30 | | 96.2 | 2417 | |
| 39 8:2 FTS | | | | | | | | | | |
| 527.00 > 507.00 | 4.786 | 4.802 | -0.016 | 1.000 | 3058069 | 1.04 | | 108 | 4883 | |
| D 40 d3-NMeFOSAA | | | | | | | | | | |
| 573.00 > 419.00 | 4.952 | 4.959 | -0.007 | 1.223 | 5362963 | 2.36 | | 94.4 | 2281 | |
| 41 NMeFOSAA | | | | | | | | | | |
| 570.00 > 419.00 | 4.952 | 4.959 | -0.007 | 1.000 | 1833367 | 1.06 | | 106 | 340 | |
| 42 Perfluorodecanesulfonic acid | | | | | | | | | | |
| 599.00 > 80.00 | 5.078 | 5.084 | -0.006 | 1.149 | 1153891 | 1.04 | Target=2.36 | 108 | 1108 | |
| 599.00 > 99.00 | 5.078 | 5.084 | -0.006 | 1.149 | 507729 | | 2.27(1.18-3.54) | | 904 | |
| D 44 13C2 PFUnA | | | | | | | | | | |
| 565.00 > 520.00 | 5.107 | 5.113 | -0.006 | 1.261 | 10793063 | 2.50 | | 100 | 3831 | |
| 45 Perfluoroundecanoic acid | | | | | | | | | | |
| 563.00 > 519.00 | 5.107 | 5.113 | -0.006 | 1.000 | 2790524 | 0.9771 | Target=8.67 | 97.6 | 678 | |
| 563.00 > 169.00 | 5.107 | 5.113 | -0.006 | 1.000 | 300512 | | 9.29(4.34-13.01) | | 592 | |
| D 46 d5-NEtFOSAA | | | | | | | | | | |
| 589.00 > 419.00 | 5.116 | 5.123 | -0.007 | 1.263 | 5400896 | 2.46 | | 98.2 | 1087 | |
| 48 NEtFOSA | | | | | | | | | | |
| 584.00 > 419.00 | 5.116 | 5.132 | -0.016 | 1.000 | 1751019 | 1.05 | | 105 | 2336 | |
| D 43 d7-N-MeFOSE-M | | | | | | | | | | |
| 623.00 > 59.00 | 5.194 | 5.190 | 0.004 | 1.282 | 6603154 | 11.8 | | 94.5 | 2418 | |
| 47 N-MeFOSE-M | | | | | | | | | | |
| 616.00 > 59.00 | 5.205 | 5.200 | 0.005 | 1.002 | 596459 | 1.06 | | 106 | 603 | |
| D 49 d-N-MeFOSA-M | | | | | | | | | | |
| 515.00 > 169.00 | 5.216 | 5.212 | 0.004 | 1.288 | 2653919 | 2.53 | | 101 | 40.1 | |
| 50 NMeFOSA | | | | | | | | | | |
| 512.00 > 169.00 | 5.216 | 5.223 | -0.007 | 1.000 | 1226113 | 1.17 | | 117 | 220 | |
| 51 11ClFOS | | | | | | | | | | |
| 631.00 > 451.00 | 5.249 | 5.255 | -0.006 | 1.188 | 8427654 | 1.16 | | 123 | 3302 | |
| D 52 d9-N-EtFOSE-M | | | | | | | | | | |
| 639.00 > 59.00 | 5.362 | 5.359 | 0.003 | 1.324 | 7489742 | 11.4 | | 91.4 | 4641 | |
| 53 N-EtFOSE-M | | | | | | | | | | |
| 630.00 > 59.00 | 5.371 | 5.376 | -0.005 | 1.002 | 640505 | 1.03 | | 103 | 903 | |
| D 54 d-N-EtFOSA-M | | | | | | | | | | |
| 531.00 > 169.00 | 5.388 | 5.385 | 0.003 | 1.330 | 2550508 | 2.54 | | 102 | 201 | |

| Signal | RT | EXP RT | DLT RT | REL RT | Response | Amount ng/ml | Ratio(Limits) | %Rec | S/N | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| 55 N-EtFOSA-M | | | | | | | | | | |
| 526.00 > 169.00 | 5.396 | 5.393 | 0.003 | 1.002 | 1189944 | 1.10 | | 110 | 198 | |
| D 56 13C2 PFDoA | | | | | | | | | | |
| 615.00 > 570.00 | 5.396 | 5.409 | -0.013 | 1.332 | 11180580 | 2.41 | | 96.4 | 16050 | |
| 57 Perfluorododecanoic acid | | | | | | | | | | |
| 613.00 > 569.00 | 5.404 | 5.409 | -0.005 | 1.002 | 4378450 | 1.07 | Target=9.05 | 107 | 1363 | |
| 613.00 > 169.00 | 5.404 | 5.409 | -0.005 | 1.002 | 473662 | | 9.24(4.52-13.57) | | 1198 | |
| 58 10:2 FTS | | | | | | | | | | |
| 627.00 > 607.00 | 5.412 | 5.426 | -0.014 | 1.131 | 2174144 | 1.11 | | 116 | 3479 | |
| 59 PFDoS | | | | | | | | | | |
| 699.00 > 80.00 | 5.627 | 5.642 | -0.015 | 1.274 | 474520 | 1.10 | Target=0.57 | 114 | 1729 | |
| 699.00 > 99.00 | 5.627 | 5.642 | -0.015 | 1.274 | 773710 | | 0.61(0.29-0.86) | | 1316 | |
| 60 Perfluorotridecanoic acid | | | | | | | | | | |
| 663.00 > 619.00 | 5.671 | 5.676 | -0.005 | 1.051 | 4666293 | 1.11 | Target=7.06 | 111 | 1467 | |
| 663.00 > 169.00 | 5.662 | 5.676 | -0.014 | 1.049 | 637788 | | 7.32(3.53-10.59) | | 1506 | |
| D 61 13C2 PFTeDA | | | | | | | | | | |
| 715.00 > 670.00 | 5.911 | 5.920 | -0.010 | 1.459 | 10276933 | 2.24 | | 89.7 | 7263 | |
| 62 Perfluorotetradecanoic acid | | | | | | | | | | |
| 713.00 > 669.00 | 5.911 | 5.920 | -0.010 | 1.000 | 4323821 | 1.07 | Target=11.23 | 107 | 2046 | |
| 713.00 > 219.00 | 5.911 | 5.920 | -0.010 | 1.000 | 403002 | | 10.73(5.62-16.85) | | 1639 | |
| 63 Perfluorohexadecanoic acid | | | | | | | | | | |
| 813.00 > 769.00 | 6.379 | 6.393 | -0.014 | 1.000 | 4344384 | 1.01 | Target=9.45 | 101 | 1859 | |
| 813.00 > 169.00 | 6.379 | 6.393 | -0.014 | 1.000 | 459299 | | 9.46(4.72-14.17) | | 1483 | |
| D 64 13C2 PFHxDA | | | | | | | | | | |
| 815.00 > 770.00 | 6.379 | 6.393 | -0.014 | 1.575 | 10996473 | 2.31 | | 92.3 | 5184 | |
| 65 Perfluorooctadecanoic acid | | | | | | | | | | |
| 913.00 > 869.00 | 6.833 | 6.842 | -0.009 | 1.071 | 3520615 | 1.10 | Target=11.13 | 110 | 1245 | |
| 913.00 > 169.00 | 6.824 | 6.842 | -0.018 | 1.070 | 339600 | | 10.37(5.56-16.69) | | 1275 | |

## QC Flag Legend

Review Flags

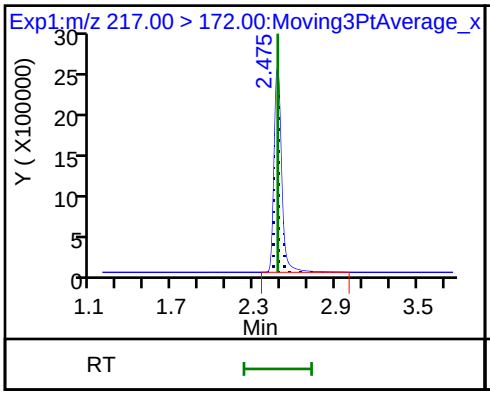
M - Manually Integrated

## Reagents:

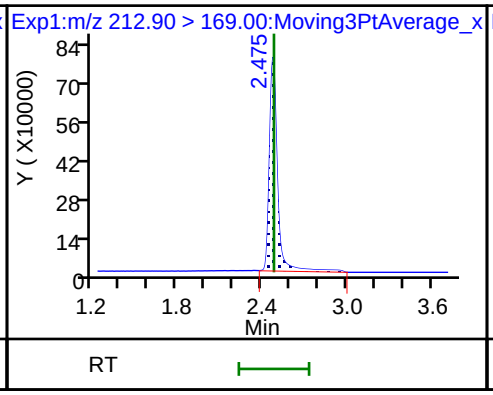
LCPFC_LL4_00030 Amount Added: 1.00 Units: mL

Data File: \\chromfs\Sacramento\ChromData\A13\20200910-103052.b\2020.09.10_A13_PFC_A_079.d
Injection Date: 10-Sep-2020 21:16:05 Instrument ID: A13
Lims ID: CCV L4
Client ID:
Operator ID: SACINSTLCMS01 ALS Bottle#: 52 Worklist Smp#: 22
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFAS_A13 Limit Group: LC PFC ICAL

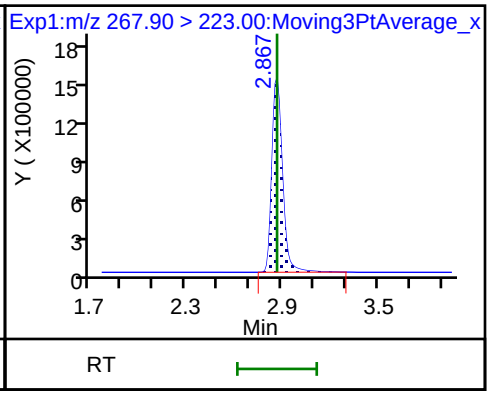
D 1 13C4 PFBA



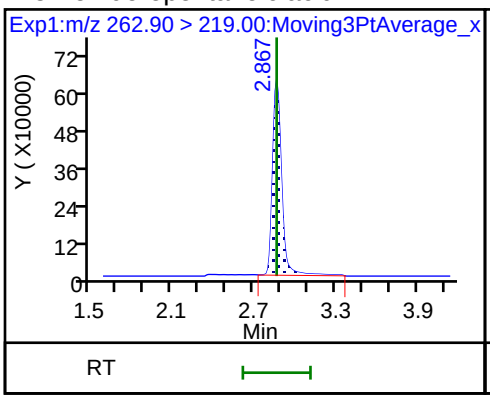

2 Perfluorobutanoic acid



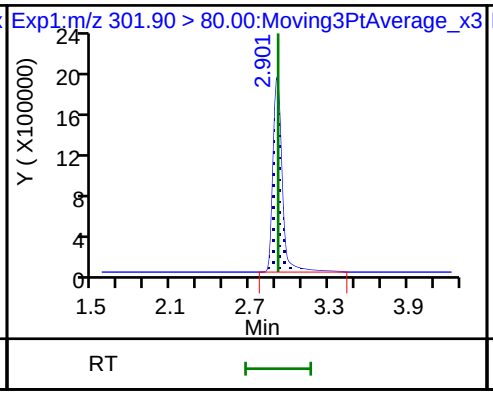

D 4 13C5 PFPeA



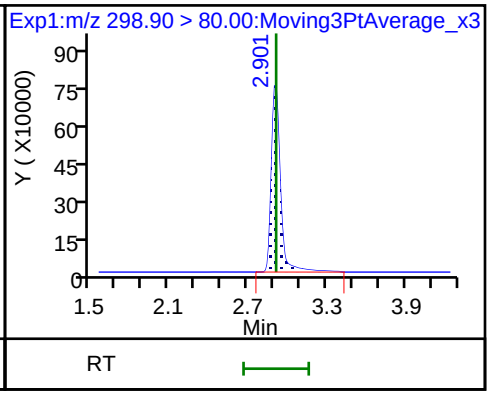

5 Perfluoropentanoic acid



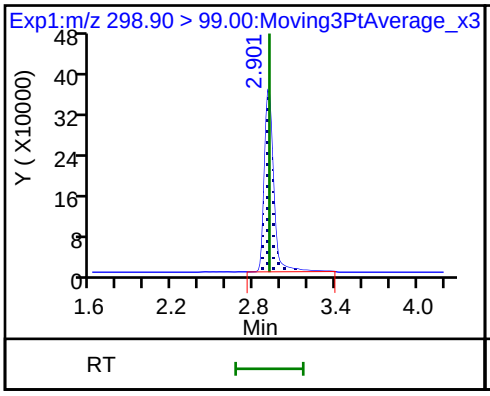

D 14 13C3 PFBS



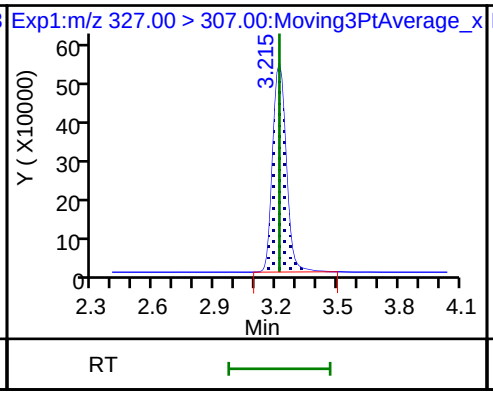

6 Perfluorobutanesulfonic acid



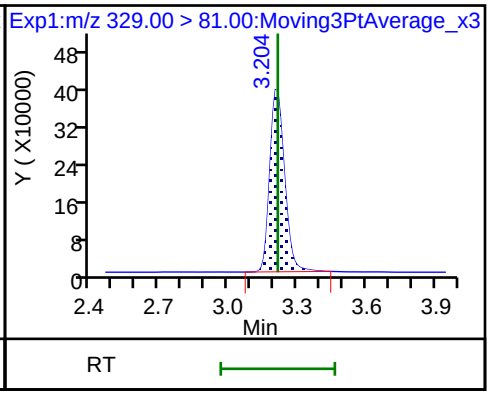

6 Perfluorobutanesulfonic acid



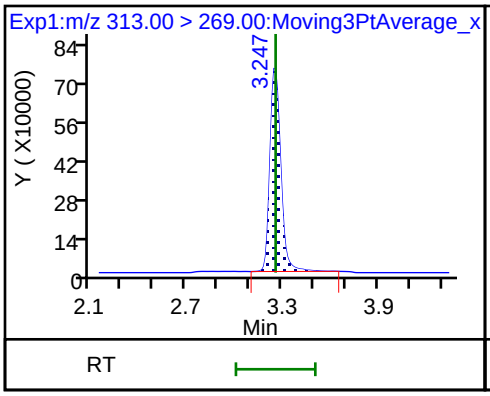

7 4:2 FTS



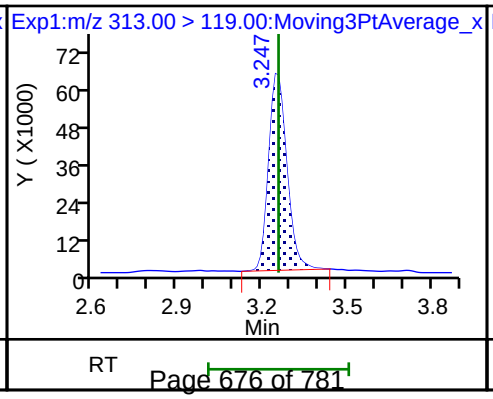

D 8 M2-4:2 FTS



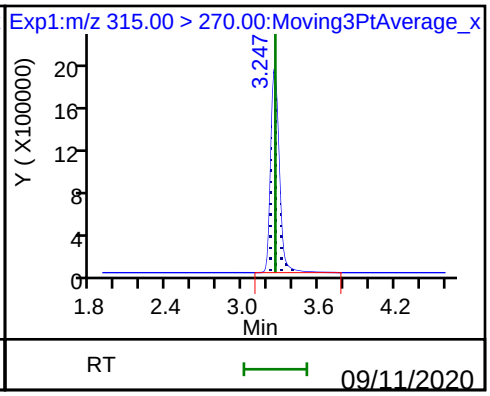

10 Perfluorohexanoic acid



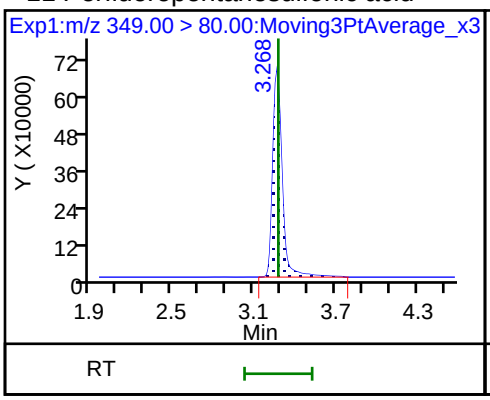

10 Perfluorohexanoic acid



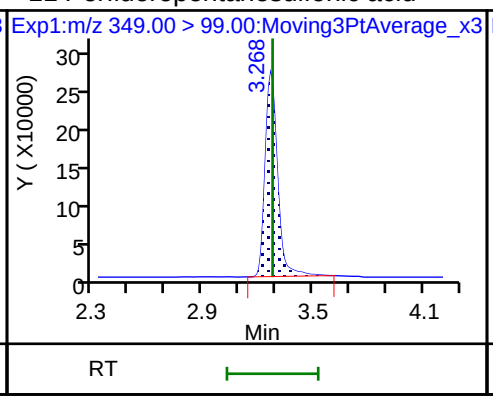

D 9 13C2 PFHxA



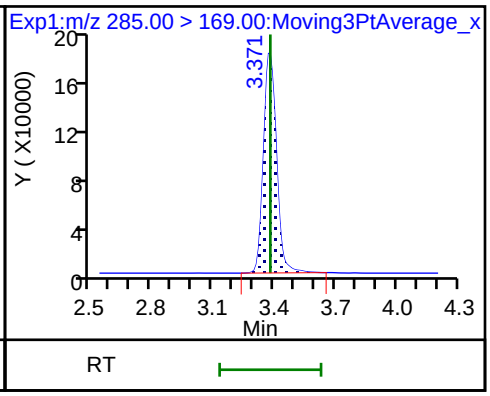
11 Perfluoropentanesulfonic acid



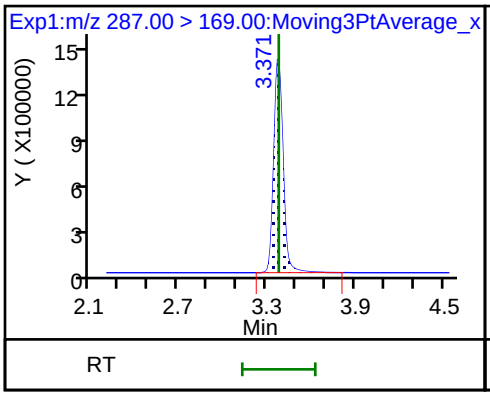

11 Perfluoropentanesulfonic acid



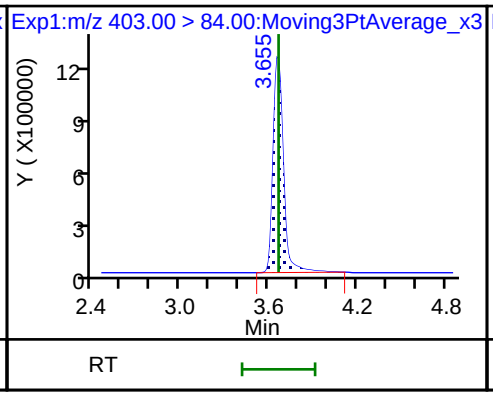

12 HPFO-DA



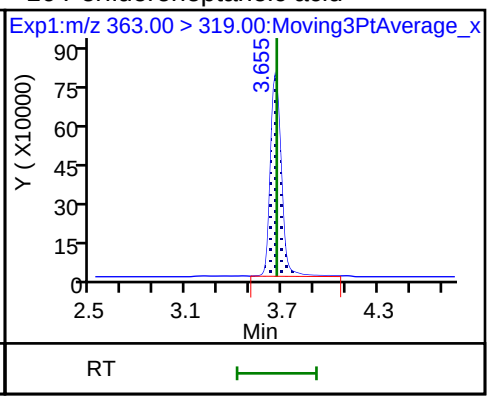

D 13 13C3 HFPO-DA



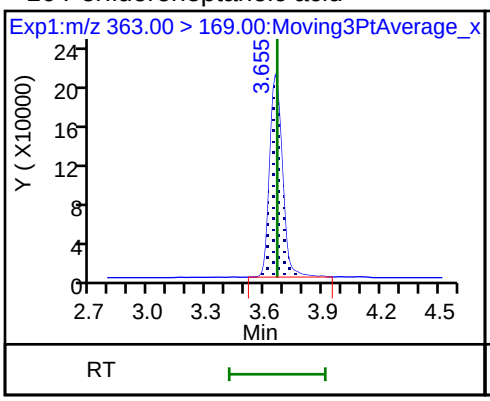

D 17 18O2 PFHxS



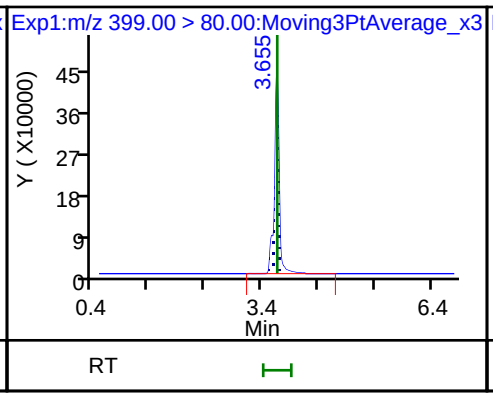

16 Perfluoroheptanoic acid



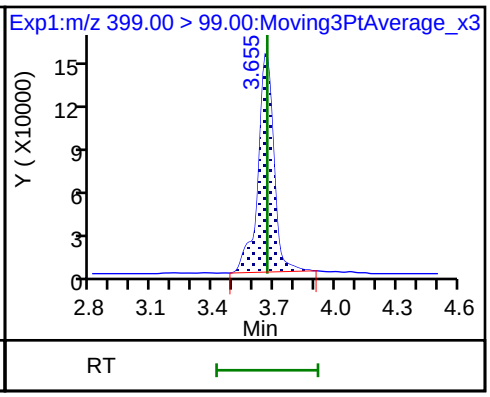

16 Perfluoroheptanoic acid



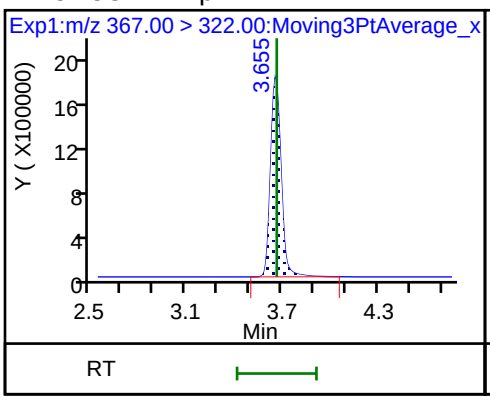

18 Perfluorohexanesulfonic acid



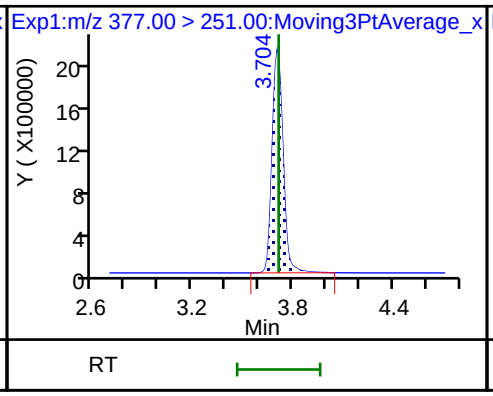

18 Perfluorohexanesulfonic acid



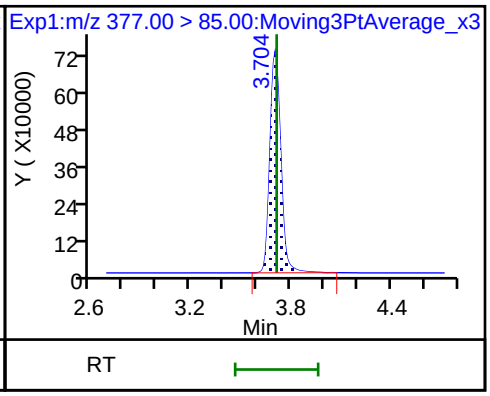

D 15 13C4 PFHpA



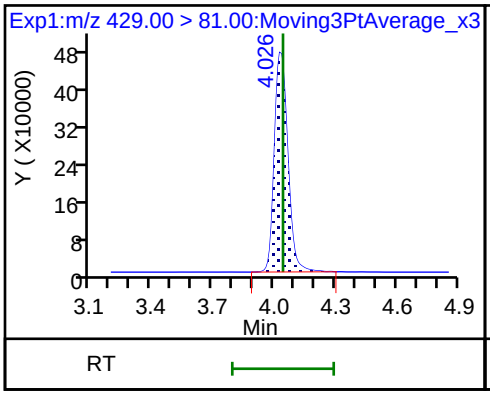

19 DONA



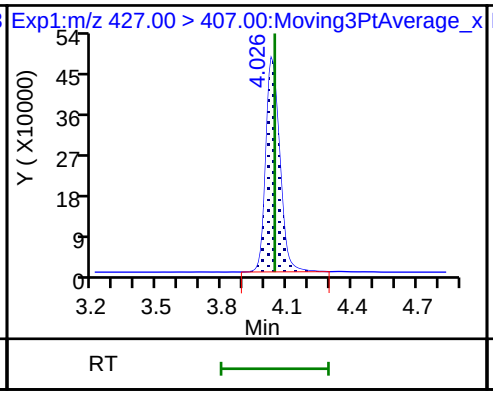

19 DONA



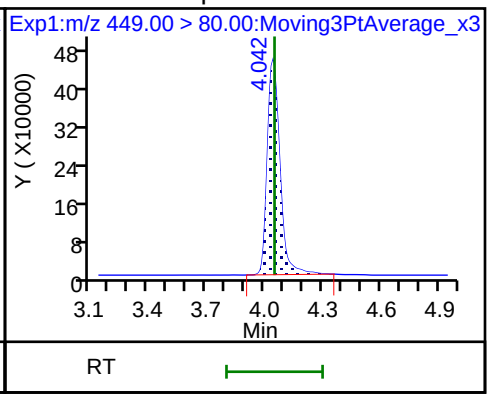
D 20 M2-6:2 FTS



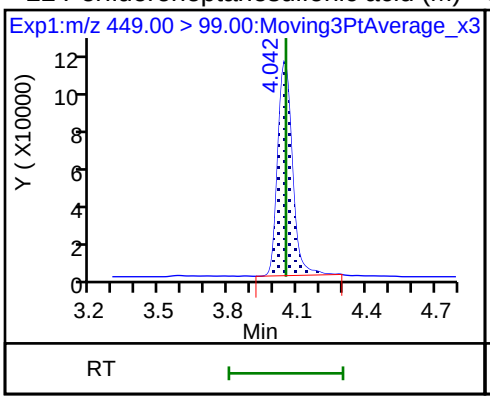

21 6:2 FTS



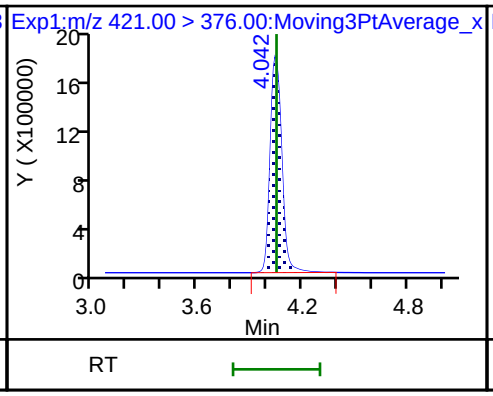

22 Perfluoroheptanesulfonic acid



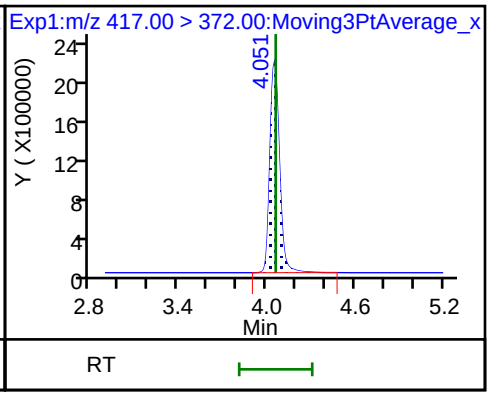

22 Perfluoroheptanesulfonic acid (M)



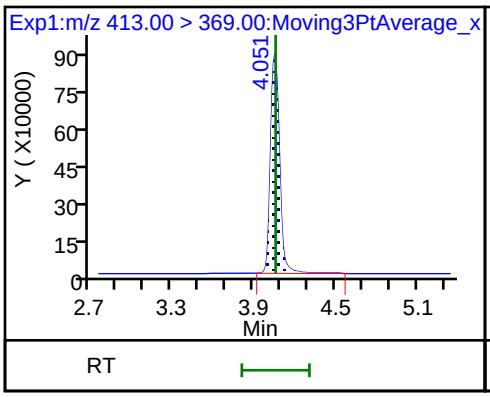

$ 23 13C8 PFOA



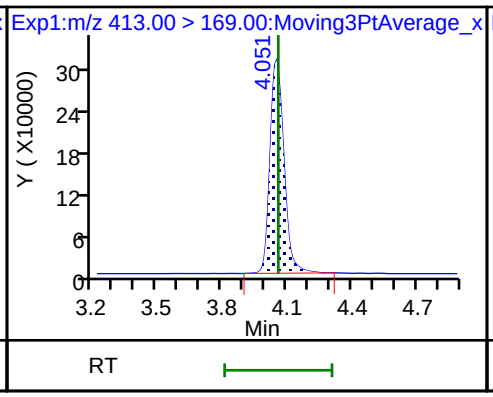

D 24 13C4 PFOA



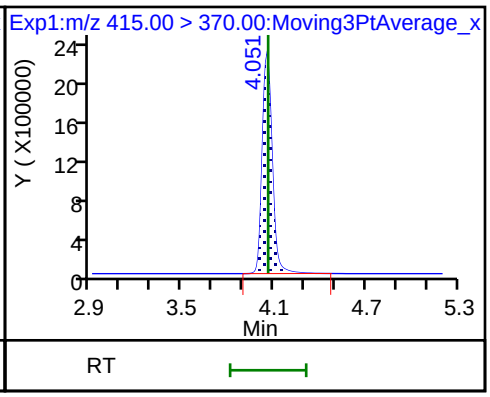

26 Perfluorooctanoic acid



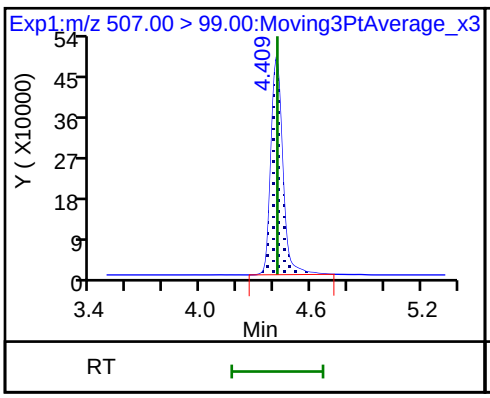

26 Perfluorooctanoic acid



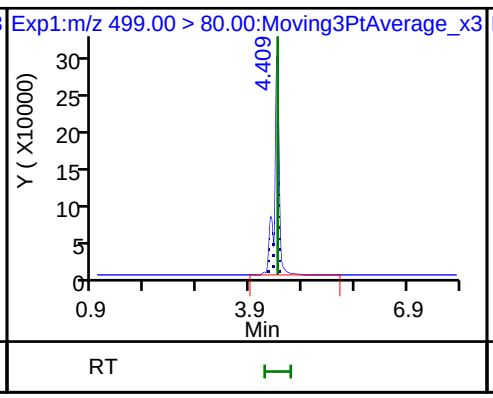

* 25 13C2 PFOA



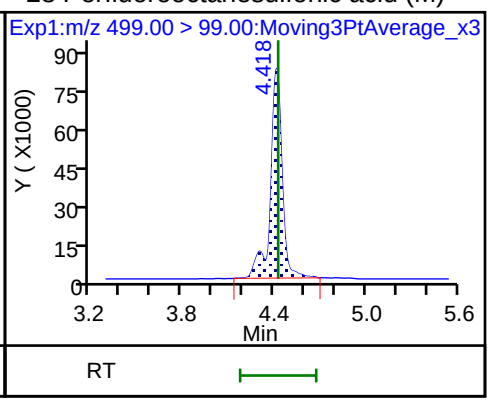

$ 27 13C8 PFOS



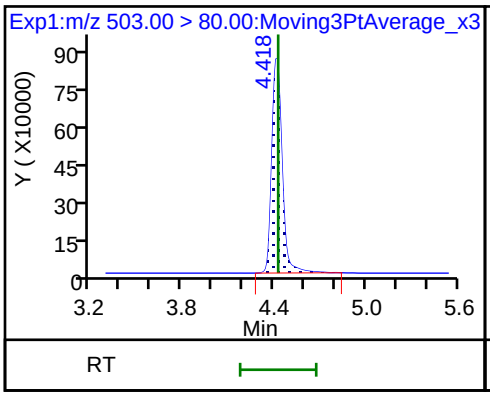

28 Perfluorooctanesulfonic acid



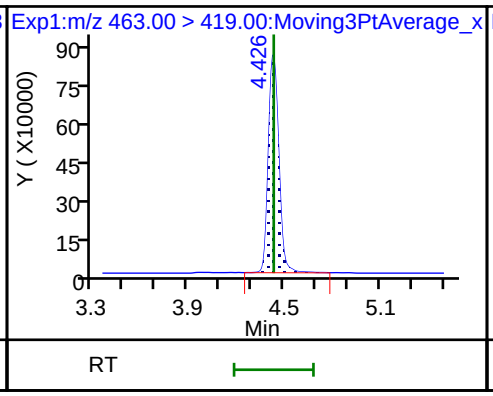

28 Perfluorooctanesulfonic acid (M)



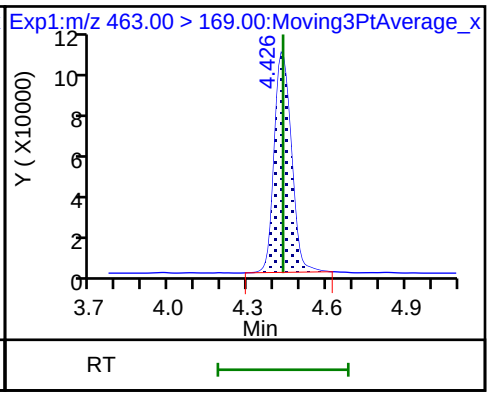
D 29 13C4 PFOS



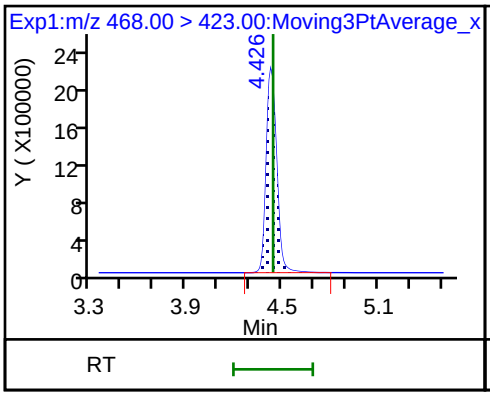

30 Perfluorononanoic acid



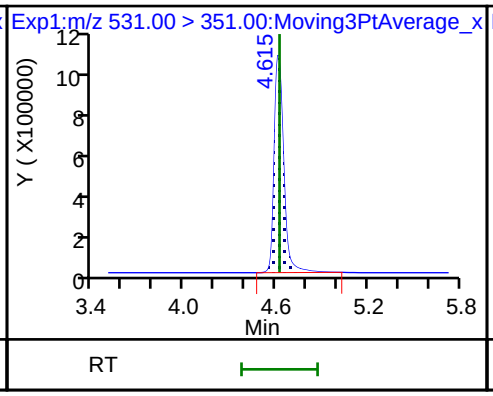

30 Perfluorononanoic acid



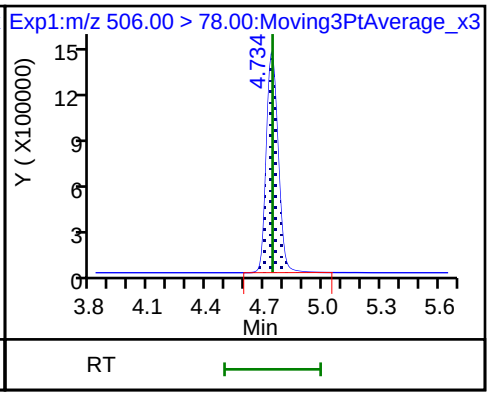

D 31 13C5 PFNA



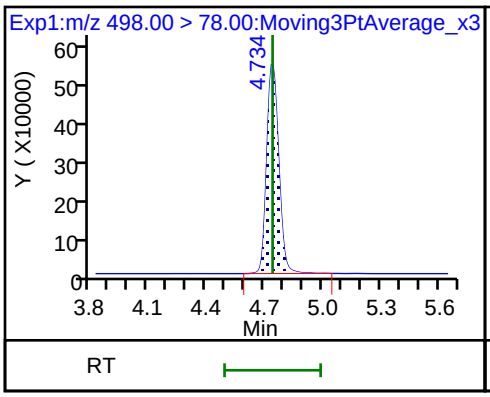

32 9ClFOS



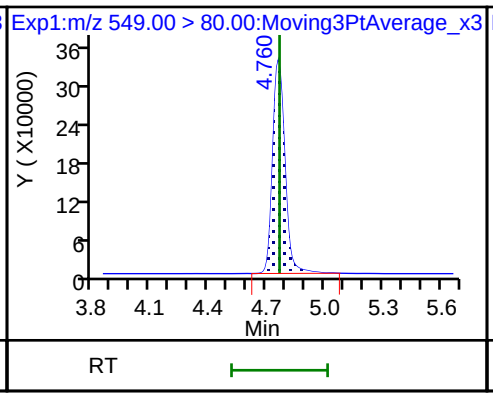

D 34 13C8 FOSA



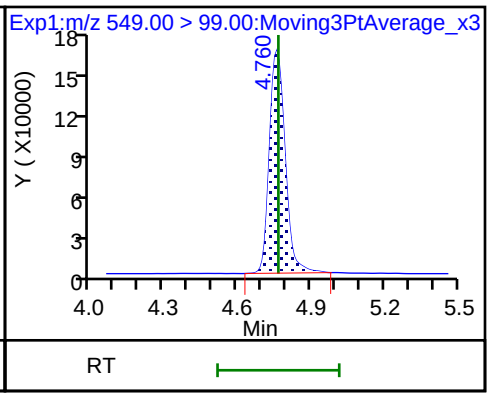

33 Perfluorooctanesulfonamide



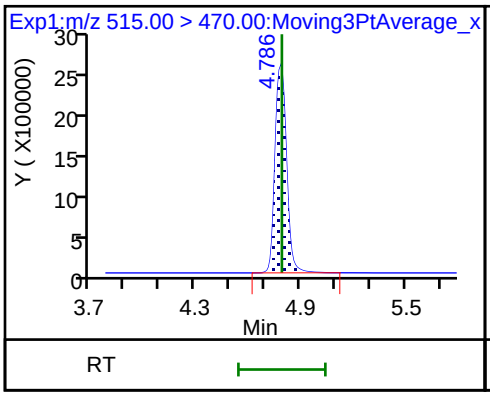

35 Perfluorononanesulfonic acid



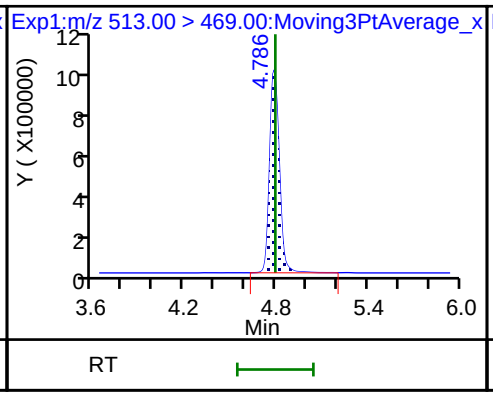

35 Perfluorononanesulfonic acid



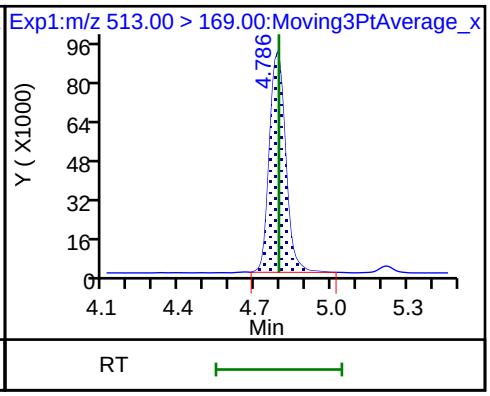

D 37 13C2 PFDA



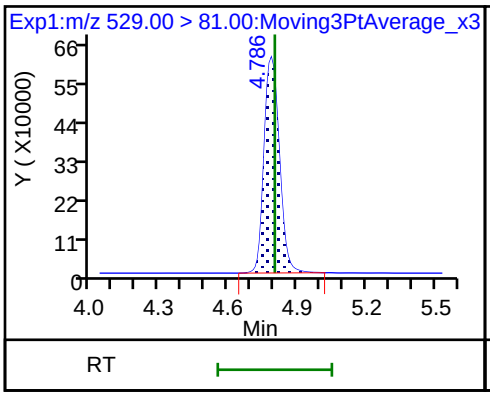

36 Perfluorodecanoic acid



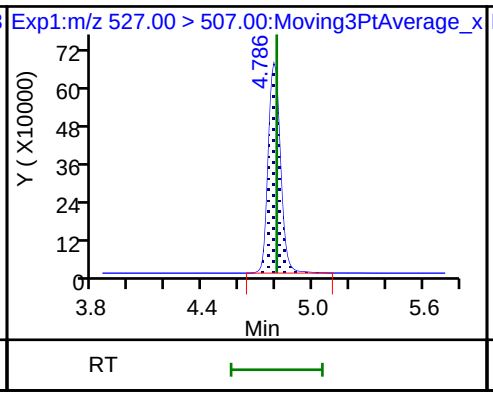

36 Perfluorodecanoic acid



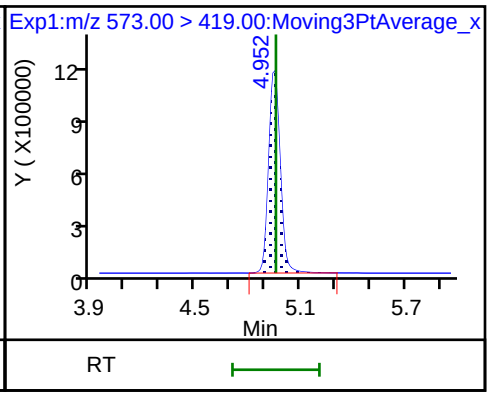
D 38 M2-8:2 FTS



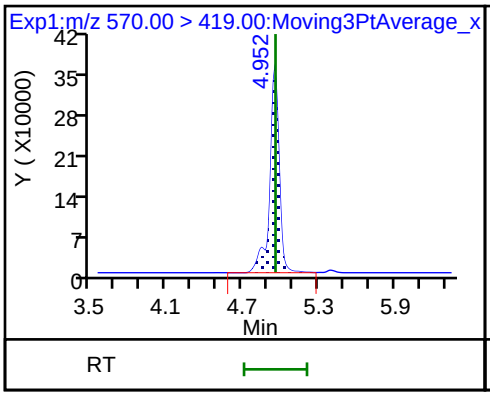

39 8:2 FTS



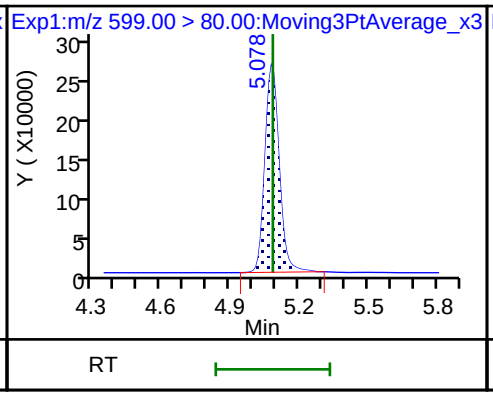

D 40 d3-NMeFOSAA



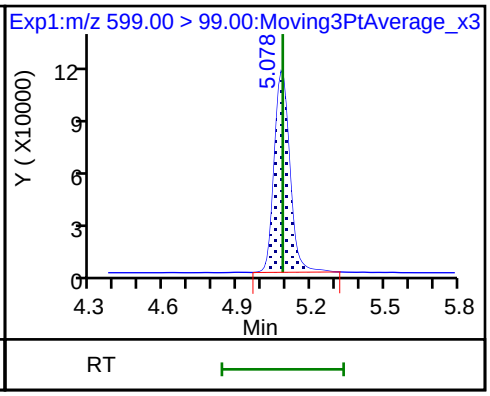

41 NMeFOSAA



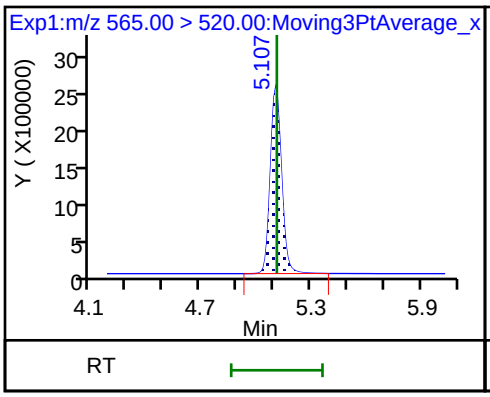

42 Perfluorodecanesulfonic acid



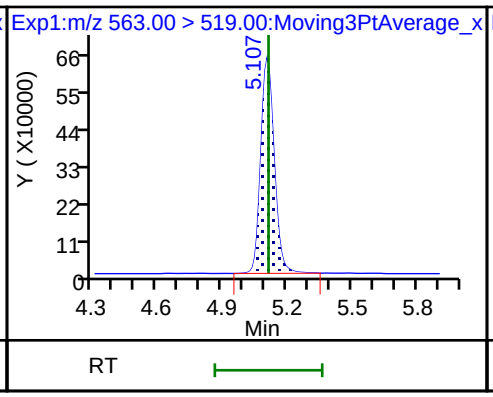

42 Perfluorodecanesulfonic acid



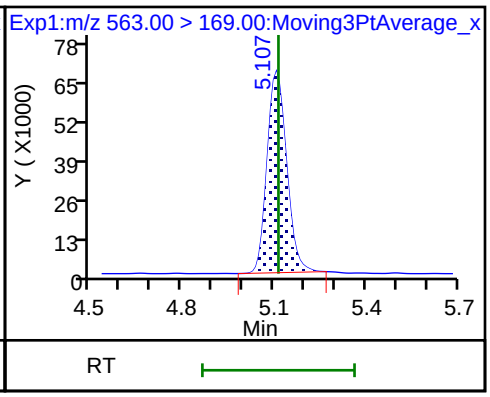

D 44 13C2 PFUnA



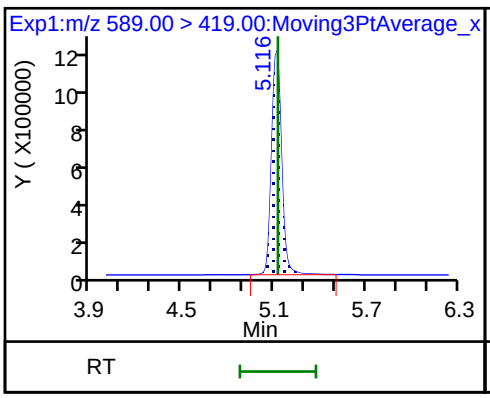

45 Perfluoroundecanoic acid



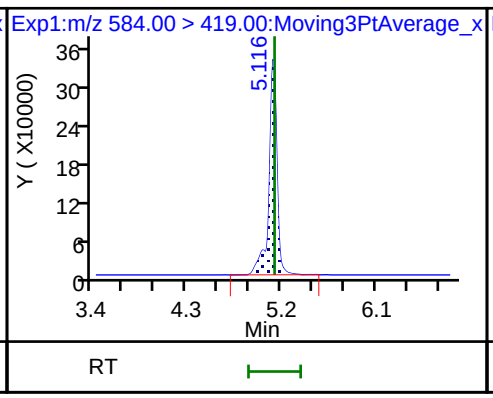

45 Perfluoroundecanoic acid



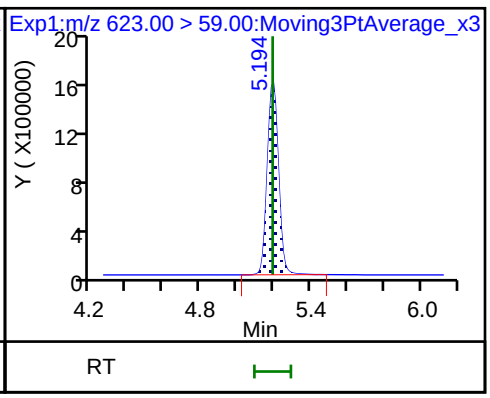

D 46 d5-NEtFOSAA



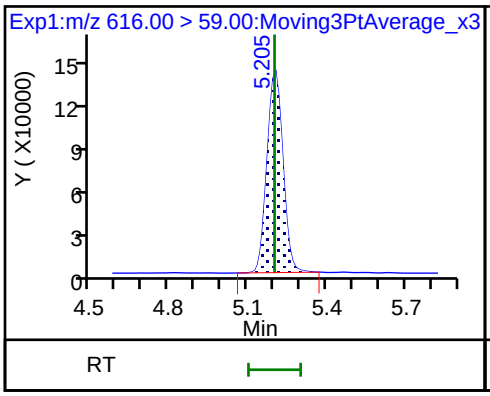

48 NEtFOSA



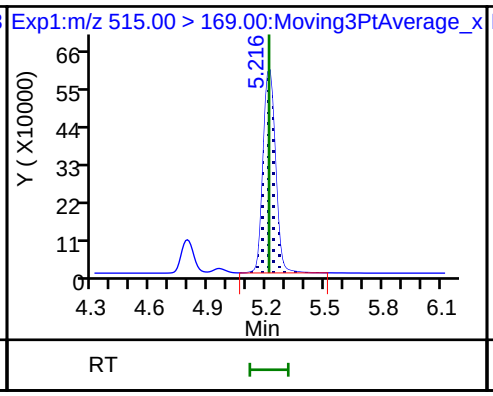

D 43 d7-N-MeFOSE-M



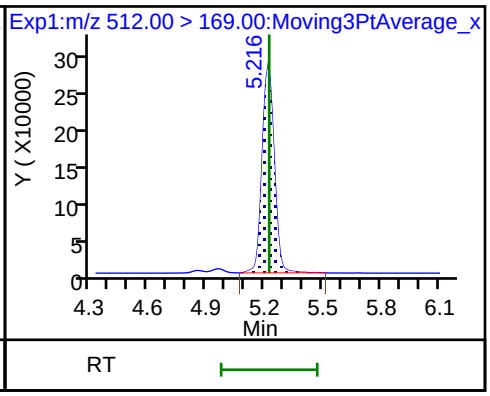
47 N-MeFOSE-M



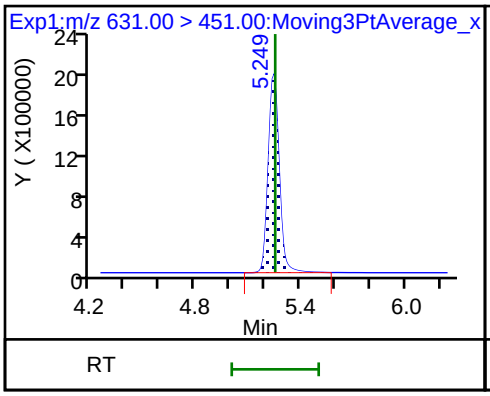

D 49 d-N-MeFOSA-M



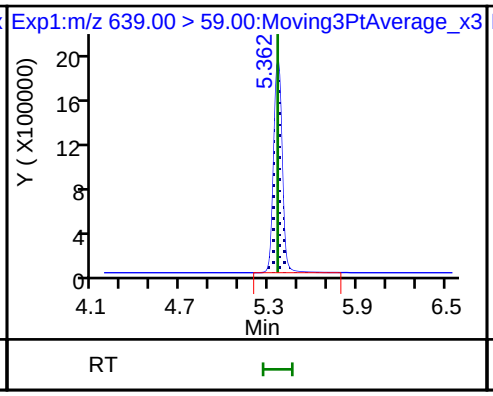

50 NMeFOSA



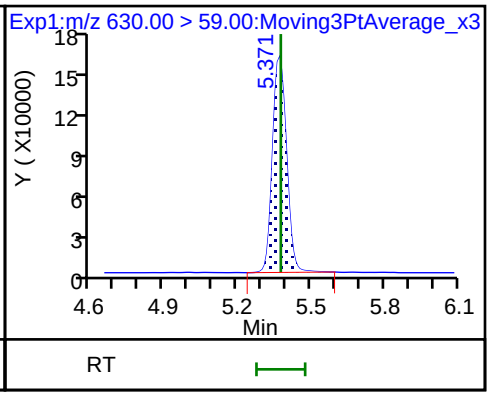

51 11ClFOS



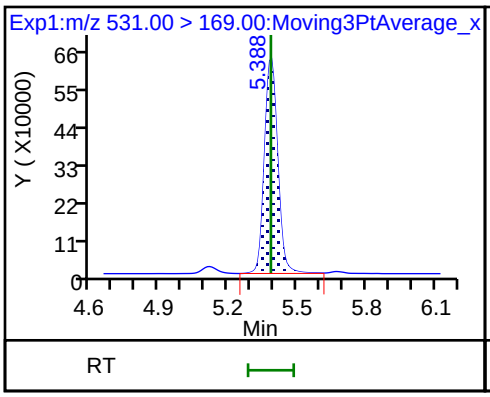

D 52 d9-N-EtFOSE-M



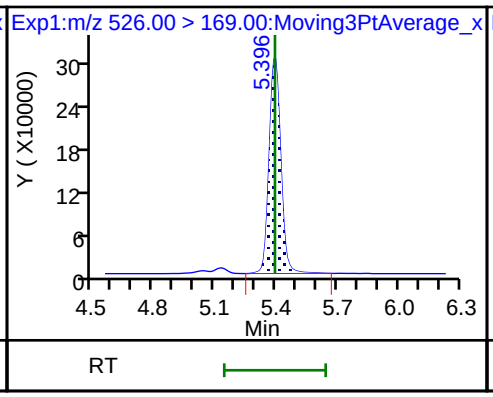

53 N-EtFOSE-M



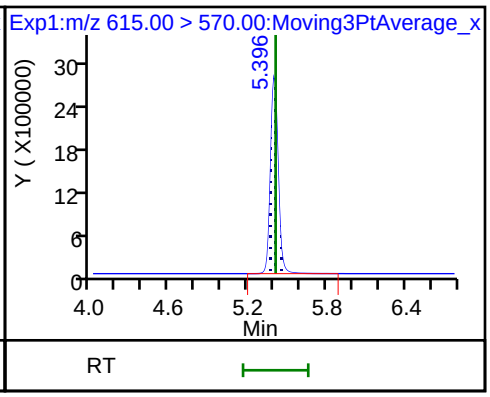

D 54 d-N-EtFOSA-M



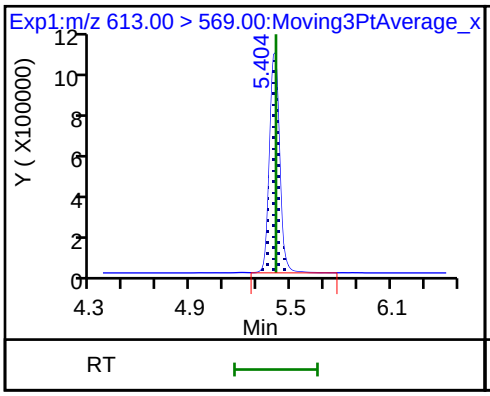

55 N-EtFOSA-M



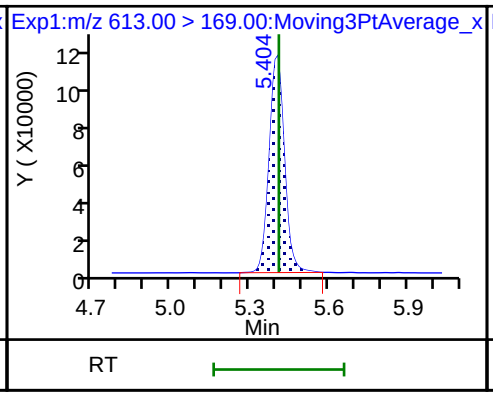

D 56 13C2 PFDoA



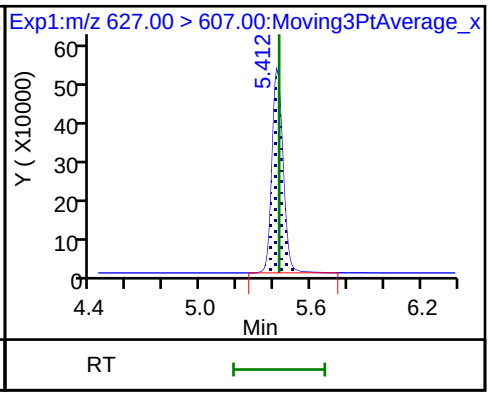

57 Perfluorododecanoic acid



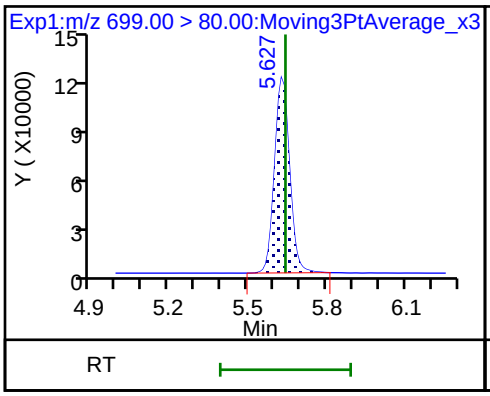

57 Perfluorododecanoic acid



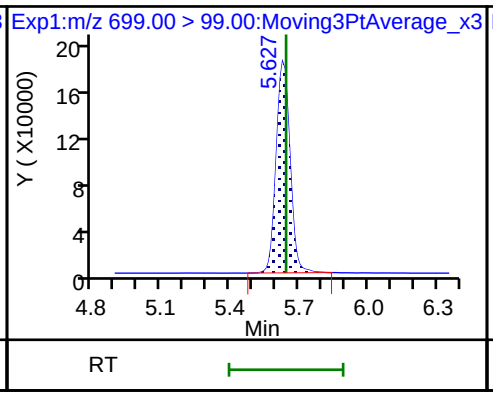

58 10:2 FTS



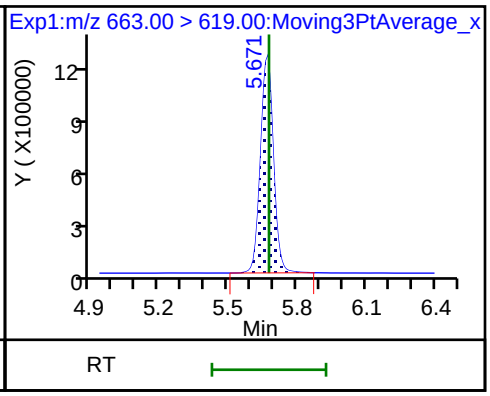
59 PFDoS



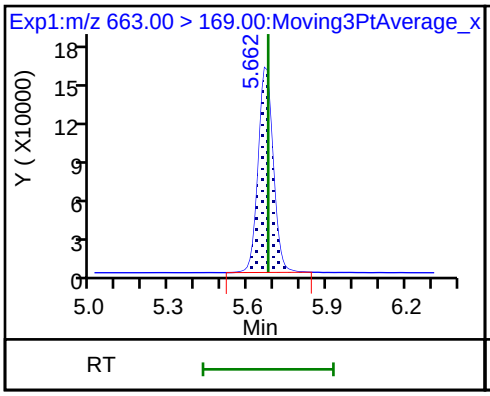

59 PFDoS



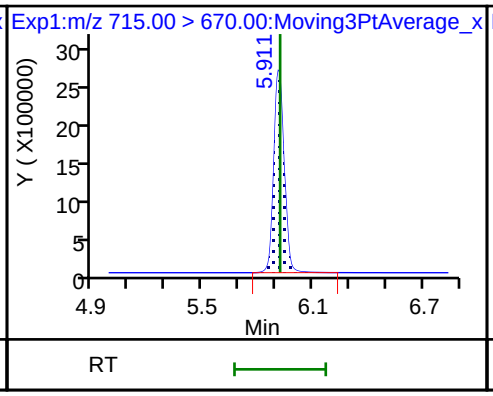

60 Perfluorotridecanoic acid



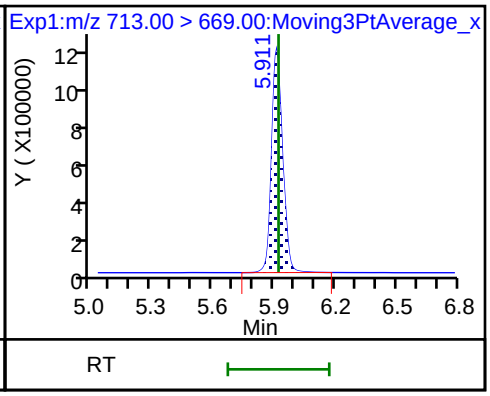

60 Perfluorotridecanoic acid



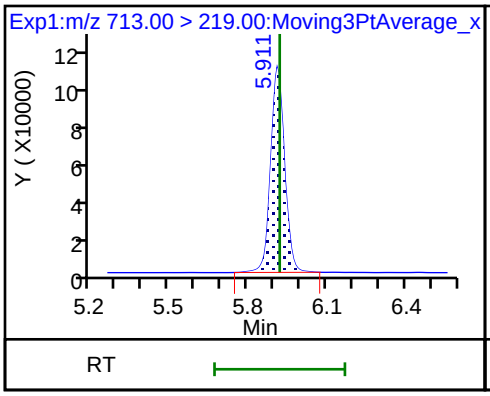

D 61 13C2 PFTeDA



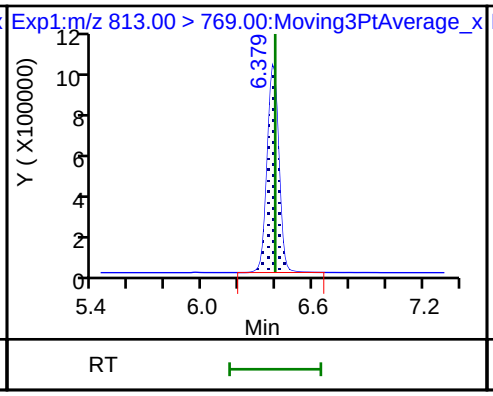

62 Perfluorotetradecanoic acid



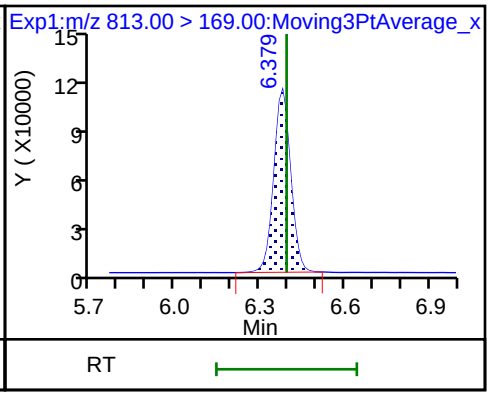

62 Perfluorotetradecanoic acid



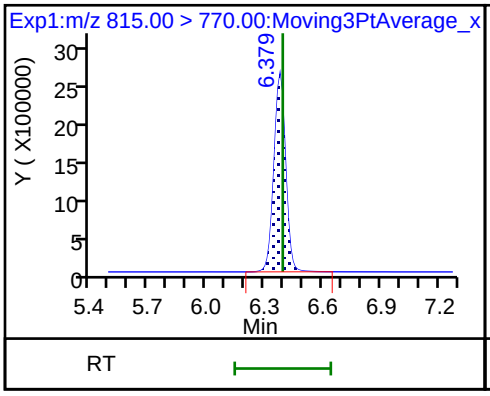

63 Perfluorohexadecanoic acid



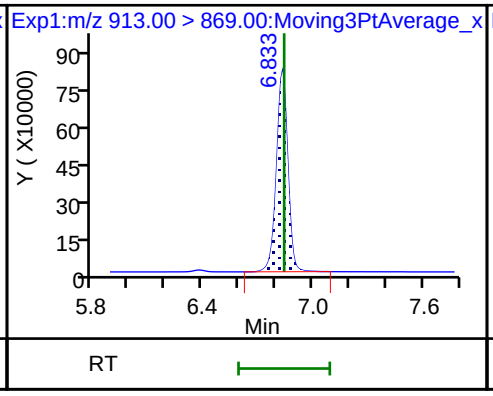

63 Perfluorohexadecanoic acid



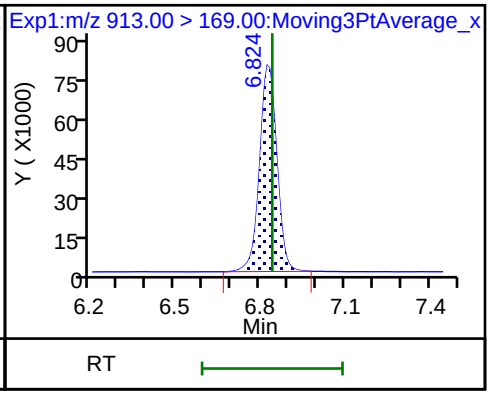

D 64 13C2 PFHxDA




65 Perfluorooctadecanoic acid




65 Perfluorooctadecanoic acid



Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

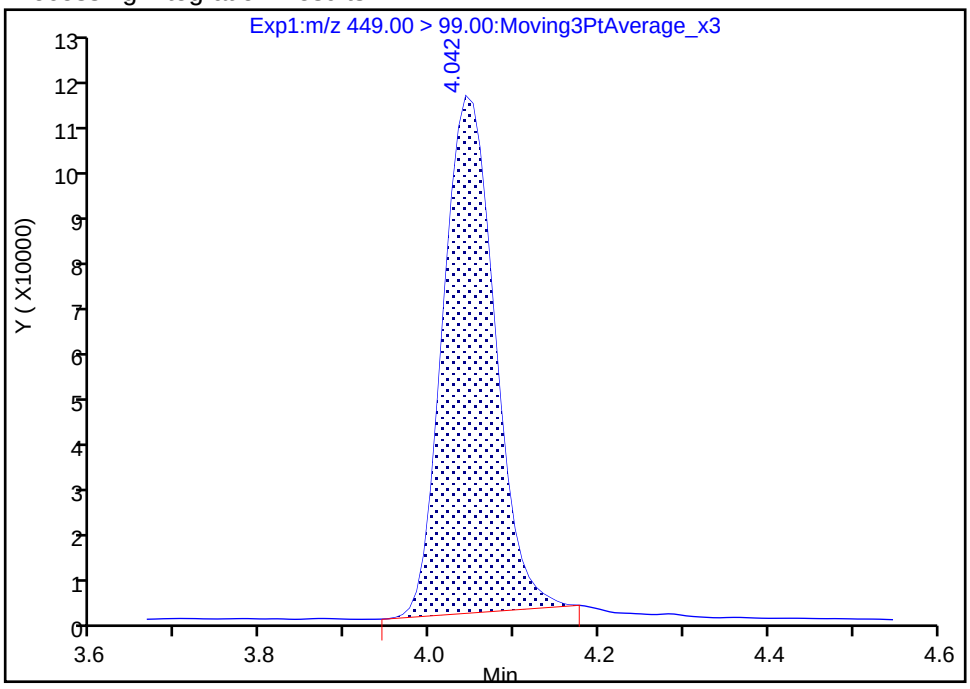
Data File: \\chromfs\Sacramento\ChromData\A13\20200910-103052.b\2020.09.10_A13_PFC_A_079.d
Injection Date: 10-Sep-2020 21:16:05 Instrument ID: A13
Lims ID: CCV L4
Client ID:
Operator ID: SACINSTLCMS01 ALS Bottle#: 52 Worklist Smp#: 22
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFAS_A13 Limit Group: LC PFC ICAL
Column: Gemini C18 3um 3 x 100mm ( 3.00 mm) Detector EXP1

## 22 Perfluoroheptanesulfonic acid, CAS: 375-92-8

Signal: 2

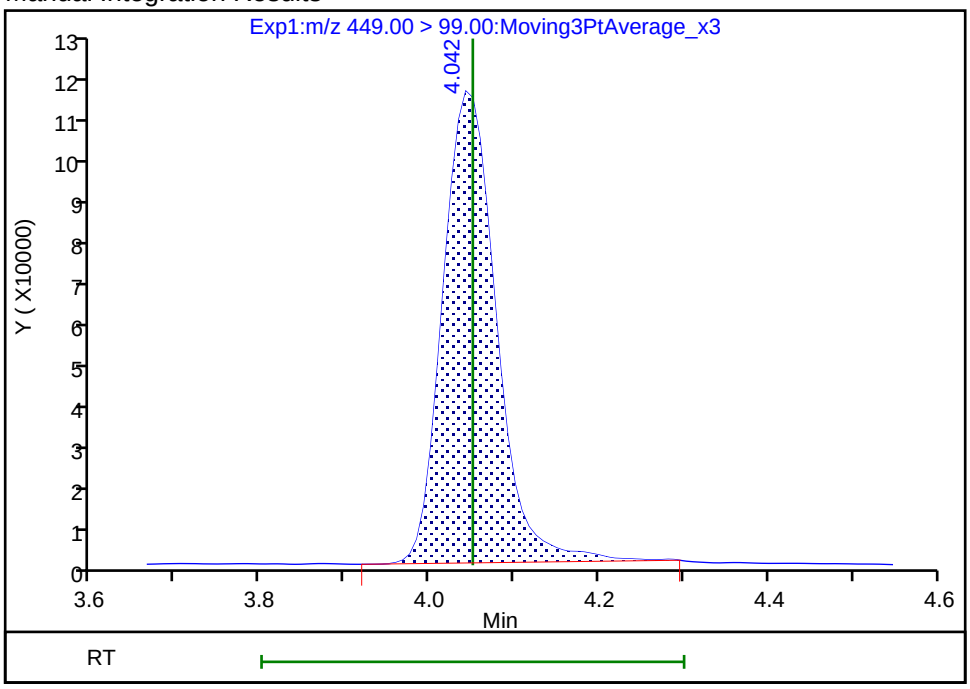
Processing Integration Results

RT: 4.04
Area: 474142
Amount: 1.064563
Amount Units: ng/ml




Manual Integration Results

RT: 4.04
Area: 495633
Amount: 1.064563
Amount Units: ng/ml




Reviewer: mongkols, 11-Sep-2020 12:12:01
Audit Action: Manually Integrated Audit Reason: Baseline

Eurofins TestAmerica, Sacramento

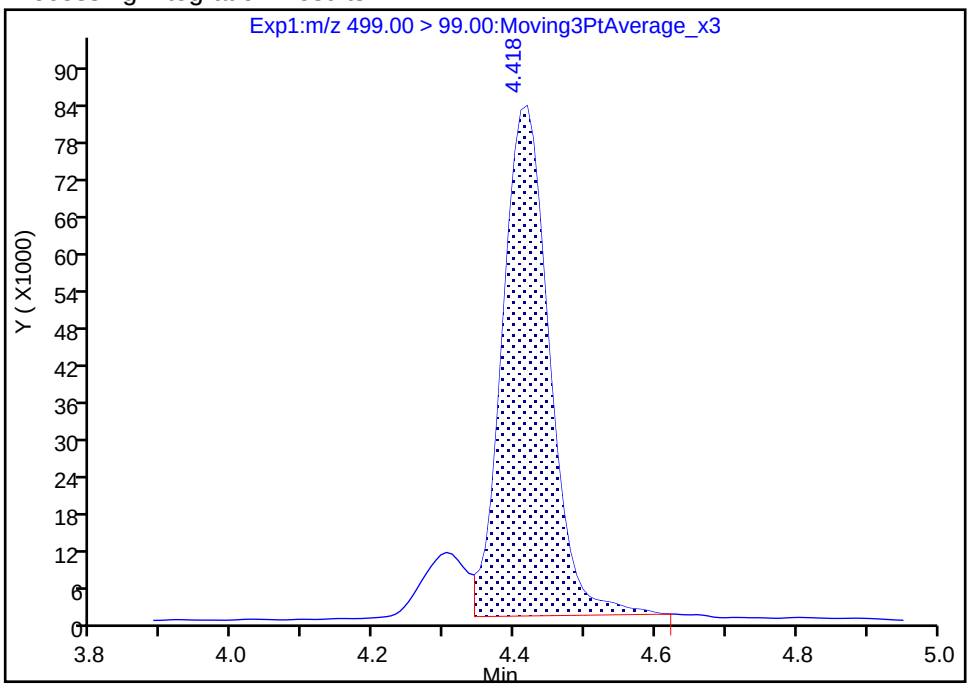
Data File: \\chromfs\Sacramento\ChromData\A13\20200910-103052.b\2020.09.10_A13_PFC_A_079.d
Injection Date: 10-Sep-2020 21:16:05 Instrument ID: A13
Lims ID: CCV L4
Client ID:
Operator ID: SACINSTLCMS01 ALS Bottle#: 52 Worklist Smp#: 22
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFAS_A13 Limit Group: LC PFC ICAL
Column: Gemini C18 3um 3 x 100mm ( 3.00 mm ) Detector EXP1

## 28 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 2

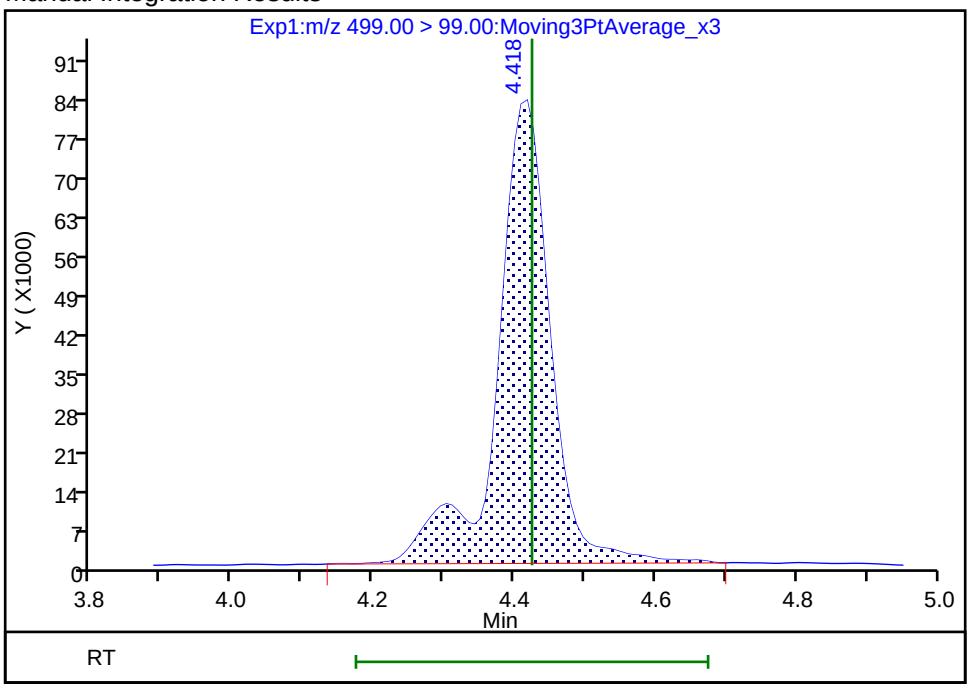
Processing Integration Results

RT: 4.42
Area: 382074
Amount: 1.018645
Amount Units: ng/ml




Manual Integration Results

RT: 4.42
Area: 439413
Amount: 1.018645
Amount Units: ng/ml




Reviewer: mongkols, 11-Sep-2020 12:12:08
Audit Action: Manually Integrated Audit Reason: Baseline

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento  Job No.: 460-217659-1

SDG No.:

Client Sample ID:  Lab Sample ID: MB 320-410906/1-A

Matrix: Water  Lab File ID: 2020.09.10_A13_PFC_A_059.d

Analysis Method: 537 (modified)  Date Collected:

Extraction Method: 3535  Date Extracted: 09/09/2020 18:39

Sample wt/vol: 250(mL)  Date Analyzed: 09/10/2020 18:07

Con. Extract Vol.: 10.00(mL)  Dilution Factor: 1

Injection Volume: 20(uL)  GC Column: GeminiC18 3x100 ID: 3(mm)

% Moisture:  GPC Cleanup:(Y/N) N

Analysis Batch No.: 411143  Units: ng/L

| CAS NO. | COMPOUND NAME | RESULT | Q | RL | MDL |
|---|---|---|---|---|---|
| 375-22-4 | Perfluorobutanoic acid (PFBA) | 0.541 | J | 2.00 | 0.35 |
| 2706-90-3 | Perfluoropentanoic acid (PFPeA) | 0.49 | U | 2.00 | 0.49 |
| 307-24-4 | Perfluorohexanoic acid (PFHxA) | 0.58 | U | 2.00 | 0.58 |
| 375-85-9 | Perfluoroheptanoic acid (PFHpA) | 0.25 | U | 2.00 | 0.25 |
| 335-67-1 | Perfluorooctanoic acid (PFOA) | 0.85 | U | 2.00 | 0.85 |
| 375-95-1 | Perfluorononanoic acid (PFNA) | 0.27 | U | 2.00 | 0.27 |
| 335-76-2 | Perfluorodecanoic acid (PFDA) | 0.31 | U | 2.00 | 0.31 |
| 2058-94-8 | Perfluoroundecanoic acid (PFUnA) | 1.10 | U | 2.00 | 1.10 |
| 307-55-1 | Perfluorododecanoic acid (PFDoA) | 0.55 | U | 2.00 | 0.55 |
| 72629-94-8 | Perfluorotridecanoic acid (PFTriA) | 1.30 | U | 2.00 | 1.30 |
| 376-06-7 | Perfluorotetradecanoic acid (PFTeA) | 0.29 | U | 2.00 | 0.29 |
| 375-73-5 | Perfluorobutanesulfonic acid (PFBS) | 0.20 | U | 2.00 | 0.20 |
| 355-46-4 | Perfluorohexanesulfonic acid (PFHxS) | 0.339 | J | 2.00 | 0.17 |
| 375-92-8 | Perfluoroheptanesulfonic Acid (PFHpS) | 0.19 | U | 2.00 | 0.19 |
| 1763-23-1 | Perfluorooctanesulfonic acid (PFOS) | 0.54 | U | 2.00 | 0.54 |
| 335-77-3 | Perfluorodecanesulfonic acid (PFDS) | 0.32 | U | 2.00 | 0.32 |
| 754-91-6 | Perfluorooctanesulfonamide (FOSA) | 0.35 | U | 2.00 | 0.35 |
| 2355-31-9 | N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA) | 3.10 | U | 20.0 | 3.10 |
| 2991-50-6 | N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA) | 1.90 | U | 20.0 | 1.90 |
| 27619-97-2 | 6:2 FTS | 2.00 | U | 20.0 | 2.00 |
| 39108-34-4 | 8:2 FTS | 2.00 | U | 20.0 | 2.00 |

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento  Job No.: 460-217659-1

SDG No.:

Client Sample ID:  Lab Sample ID: MB 320-410906/1-A

Matrix: Water  Lab File ID: 2020.09.10_A13_PFC_A_059.d

Analysis Method: 537 (modified)  Date Collected:

Extraction Method: 3535  Date Extracted: 09/09/2020 18:39

Sample wt/vol: 250(mL)  Date Analyzed: 09/10/2020 18:07

Con. Extract Vol.: 10.00(mL)  Dilution Factor: 1

Injection Volume: 20(uL)  GC Column: GeminiC18 3x100 ID: 3(mm)

% Moisture:  GPC Cleanup:(Y/N) N

Analysis Batch No.: 411143  Units: ng/L

| CAS NO. | ISOTOPE DILUTION | %REC | Q | LIMITS |
|---|---|---|---|---|
| STL00992 | 13C4 PFBA | 90 | | 25-150 |
| STL01893 | 13C5 PFPeA | 94 | | 25-150 |
| STL00993 | 13C2 PFHxA | 93 | | 25-150 |
| STL01892 | 13C4 PFHpA | 91 | | 25-150 |
| STL00990 | 13C4 PFOA | 90 | | 25-150 |
| STL00995 | 13C5 PFNA | 91 | | 25-150 |
| STL00996 | 13C2 PFDA | 90 | | 25-150 |
| STL00997 | 13C2 PFUnA | 91 | | 25-150 |
| STL00998 | 13C2 PFDoA | 79 | | 25-150 |
| STL02116 | 13C2 PFTeDA | 79 | | 25-150 |
| STL02337 | 13C3 PFBS | 98 | | 25-150 |
| STL00994 | 18O2 PFHxS | 100 | | 25-150 |
| STL00991 | 13C4 PFOS | 97 | | 25-150 |
| STL01056 | 13C8 FOSA | 83 | | 25-150 |
| STL02118 | d3-NMeFOSAA | 87 | | 25-150 |
| STL02117 | d5-NEtFOSAA | 90 | | 25-150 |
| STL02279 | M2-6:2 FTS | 99 | | 25-150 |
| STL02280 | M2-8:2 FTS | 106 | | 25-150 |

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\A13\20200910-103052.b\2020.09.10_A13_PFC_A_059.d
Lims ID: MB 320-410906/1-A
Client ID:
Sample Type: MB
Inject. Date: 10-Sep-2020 18:07:54 ALS Bottle#: 32 Worklist Smp#: 2
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Sample Info: mb 320-410906/1-a DUE 9/28 PFC_WATER
Misc. Info.: Plate: 1 Rack: 4
Operator ID: SACINSTLCMS01 Instrument ID: A13

Method: \\chromfs\Sacramento\ChromData\A13\20200910-103052.b\PFAS_A13.m
Limit Group: LC PFC ICAL
Last Update: 11-Sep-2020 08:47:52 Calib Date: 08-Sep-2020 18:58:15
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\A13\20200908-102913.b\2020.09.08_A13_PFC_ICALX_010.d

Column 1 : Gemini C18 3um 3 x 100mm ( 3.00 mm) Det: EXP1
Process Host: CTX1053

First Level Reviewer: mongkols Date: 11-Sep-2020 08:47:52
Ratio Calibration: CCV Sample: \\chromfs\Sacramento\ChromData\A13\20200910-103052.b\2020.09.10_A13_PFC_A_058.d

| Signal | RT | EXP RT | DLT RT | REL RT | Response | Amount ng/ml | Ratio(Limits) | %Rec | S/N | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| D 1 13C4 PFBA | | | | | | | | | | |
| 217.00 > 172.00 | 2.467 | 2.475 | -0.008 | 0.609 | 8490568 | 2.26 | | 90.3 | 12218 | |
| 2 Perfluorobutanoic acid | | | | | | | | | | M |
| 212.90 > 169.00 | 2.475 | 2.482 | -0.007 | 1.003 | 34130 | 0.0135 | | | 2.6 | M |
| D 4 13C5 PFPeA | | | | | | | | | | |
| 267.90 > 223.00 | 2.867 | 2.867 | 0.0 | 0.708 | 6881035 | 2.35 | | 93.9 | 3973 | |
| 5 Perfluoropentanoic acid | | | | | | | | | | |
| 262.90 > 219.00 | 2.867 | 2.867 | 0.0 | 1.000 | 24912 | 0.008806 | | | 1.3 | |
| D 14 13C3 PFBS | | | | | | | | | | |
| 301.90 > 80.00 | 2.902 | 2.913 | -0.011 | 0.716 | 8356408 | 2.27 | | 97.6 | 3869 | |
| 6 Perfluorobutanesulfonic acid | | | | | | | | | | M |
| 298.90 > 80.00 | 2.902 | 2.913 | -0.011 | 1.000 | 6324 | 0.001800 | Target=2.29 | | 5.5 | M |
| 298.90 > 99.00 | 2.913 | 2.913 | 0.0 | 1.004 | 2720 | | 2.33(1.15-3.44) | | 1.1 | |
| 7 4:2 FTS | | | | | | | | | | |
| 327.00 > 307.00 | 3.204 | 3.215 | -0.011 | 1.000 | 2984 | 0.000995 | | | 13.4 | |
| D 8 M2-4:2 FTS | | | | | | | | | | |
| 329.00 > 81.00 | 3.204 | 3.215 | -0.011 | 0.791 | 2158187 | 2.39 | | 102 | 1077 | |
| D 9 13C2 PFHxA | | | | | | | | | | |
| 315.00 > 270.00 | 3.247 | 3.258 | -0.011 | 0.802 | 8429645 | 2.33 | | 93.1 | 13990 | |
| D 13 13C3 HFPO-DA | | | | | | | | | | |
| 287.00 > 169.00 | 3.371 | 3.380 | -0.009 | 0.832 | 5728956 | 2.21 | | 88.2 | 4756 | |
| D 17 18O2 PFHxS | | | | | | | | | | |
| 403.00 > 84.00 | 3.655 | 3.665 | -0.010 | 0.902 | 5677230 | 2.35 | | 99.5 | 29743 | |
| 18 Perfluorohexanesulfonic acid | | | | | | | | | | M |
| 399.00 > 80.00 | 3.665 | 3.665 | 0.0 | 1.003 | 22632 | 0.008476 | Target=3.08 | | 22.8 | M |
| 399.00 > 99.00 | 3.655 | 3.665 | -0.010 | 1.000 | 7899 | | 2.87(1.54-4.62) | | 6.1 | M |
| D 15 13C4 PFHpA | | | | | | | | | | |
| 367.00 > 322.00 | 3.655 | 3.665 | -0.010 | 0.902 | 8131495 | 2.28 | | 91.2 | 12467 | |

| Signal | RT | EXP RT | DLT RT | REL RT | Response | Amount ng/ml | Ratio(Limits) | %Rec | S/N | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| D 20 M2-6:2 FTS | | | | | | | | | | |
| 429.00 > 81.00 | 4.034 | 4.042 | -0.008 | 0.996 | 2450776 | 2.36 | | 99.2 | 3076 | |
| 21 6:2 FTS | | | | | | | | | | |
| 427.00 > 407.00 | 4.034 | 4.042 | -0.008 | 1.000 | 12257 | 0.004935 | | | 6.0 | |
| $ 23 13C8 PFOA | | | | | | | | | | |
| 421.00 > 376.00 | 4.059 | 4.051 | 0.008 | 1.002 | 2439 | 0.000619 | | | 9.2 | |
| D 24 13C4 PFOA | | | | | | | | | | |
| 417.00 > 372.00 | 4.051 | 4.059 | -0.008 | 1.000 | 9756444 | 2.24 | | 89.5 | 13357 | |
| 26 Perfluorooctanoic acid | | | | | | | | | | M |
| 413.00 > 369.00 | 4.042 | 4.059 | -0.017 | 0.998 | 31758 | 0.007955 | Target=2.99 | | 5.1 | M |
| 413.00 > 169.00 | 4.051 | 4.059 | -0.008 | 1.000 | 9600 | | 3.31(1.50-4.49) | | 9.9 | M |
| * 25 13C2 PFOA | | | | | | | | | | |
| 415.00 > 370.00 | 4.051 | 4.059 | -0.008 | | 11066836 | 2.50 | | | 5924 | |
| D 29 13C4 PFOS | | | | | | | | | | |
| 503.00 > 80.00 | 4.408 | 4.425 | -0.017 | 1.088 | 3995775 | 2.32 | | 97.1 | 1942 | |
| D 31 13C5 PFNA | | | | | | | | | | |
| 468.00 > 423.00 | 4.425 | 4.442 | -0.017 | 1.092 | 9194203 | 2.28 | | 91.3 | 16344 | |
| D 34 13C8 FOSA | | | | | | | | | | |
| 506.00 > 78.00 | 4.734 | 4.740 | -0.006 | 1.169 | 5146215 | 2.08 | | 83.3 | 6277 | |
| 33 Perfluorooctanesulfonamide | | | | | | | | | | |
| 498.00 > 78.00 | 4.734 | 4.740 | -0.006 | 1.000 | 9929 | 0.005140 | | | 33.0 | |
| D 37 13C2 PFDA | | | | | | | | | | |
| 515.00 > 470.00 | 4.786 | 4.793 | -0.007 | 1.182 | 10981376 | 2.25 | | 90.0 | 15600 | |
| D 38 M2-8:2 FTS | | | | | | | | | | |
| 529.00 > 81.00 | 4.786 | 4.802 | -0.016 | 1.182 | 3491680 | 2.54 | | 106 | 6543 | |
| 39 8:2 FTS | | | | | | | | | | |
| 527.00 > 507.00 | 4.795 | 4.802 | -0.007 | 1.002 | 6504 | 0.001805 | | | 26.3 | |
| D 40 d3-NMeFOSAA | | | | | | | | | | |
| 573.00 > 419.00 | 4.942 | 4.959 | -0.017 | 1.220 | 5450705 | 2.17 | | 86.7 | 3995 | |
| 41 NMeFOSAA | | | | | | | | | | M |
| 570.00 > 419.00 | 4.942 | 4.959 | -0.017 | 1.000 | 10129 | 0.005768 | | | 6.0 | M |
| D 44 13C2 PFUnA | | | | | | | | | | |
| 565.00 > 520.00 | 5.106 | 5.113 | -0.007 | 1.261 | 10827484 | 2.27 | | 90.8 | 9747 | |
| D 46 d5-NEtFOSAA | | | | | | | | | | |
| 589.00 > 419.00 | 5.106 | 5.123 | -0.017 | 1.261 | 5464579 | 2.24 | | 89.8 | 2692 | |
| 48 NEtFOSA | | | | | | | | | | M |
| 584.00 > 419.00 | 5.116 | 5.132 | -0.016 | 1.002 | 7452 | 0.004404 | | | 32.9 | M |
| D 43 d7-N-MeFOSE-M | | | | | | | | | | |
| 623.00 > 59.00 | 5.184 | 5.190 | -0.006 | 1.280 | 2025186 | 3.27 | | 26.2 | 1083 | |
| D 49 d-N-MeFOSA-M | | | | | | | | | | |
| 515.00 > 169.00 | 5.205 | 5.212 | -0.007 | 1.285 | 1884613 | 1.62 | | 64.8 | 31.3 | |
| 50 NMeFOSA | | | | | | | | | | |
| 512.00 > 169.00 | 5.205 | 5.223 | -0.018 | 1.000 | 1873 | 0.002527 | | | 4.5 | |
| 51 11ClFOS | | | | | | | | | | |
| 631.00 > 451.00 | 5.238 | 5.255 | -0.017 | 1.188 | 4662 | 0.000646 | | | 9.6 | |
| D 52 d9-N-EtFOSE-M | | | | | | | | | | |
| 639.00 > 59.00 | 5.353 | 5.359 | -0.006 | 1.322 | 1685876 | 2.32 | | 18.6 | 792 | |

| Signal | RT | EXP RT | DLT RT | REL RT | Response | Amount ng/ml | Ratio(Limits) | %Rec | S/N | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| D 54 d-N-EtFOSA-M | | | | | | | | | | |
| 531.00 > 169.00 | 5.379 | 5.385 | -0.006 | 1.328 | 1333168 | 1.20 | | 48.0 | 131 | |
| 55 N-EtFOSA-M | | | | | | | | | | |
| 526.00 > 169.00 | 5.387 | 5.393 | -0.006 | 1.002 | 2473 | 0.004367 | | | 5.8 | |
| D 56 13C2 PFDoA | | | | | | | | | | |
| 615.00 > 570.00 | 5.396 | 5.409 | -0.013 | 1.332 | 10201202 | 1.99 | | 79.4 | 7255 | |
| 60 Perfluorotridecanoic acid | | | | | | | | | | |
| 663.00 > 619.00 | 5.662 | 5.676 | -0.014 | 1.049 | 10678 | 0.002792 | Target=6.96 | | 10.1 | |
| 663.00 > 169.00 | 5.662 | 5.676 | -0.014 | 1.049 | 1389 | | 7.69(3.48-10.45) | | 8.3 | |
| D 61 13C2 PFTeDA | | | | | | | | | | |
| 715.00 > 670.00 | 5.910 | 5.920 | -0.010 | 1.459 | 9979093 | 1.97 | | 78.7 | 16188 | |
| 62 Perfluorotetradecanoic acid | | | | | | | | | | M |
| 713.00 > 669.00 | 5.910 | 5.920 | -0.010 | 1.000 | 19579 | 0.004983 | Target=10.31 | | 9.6 | |
| 713.00 > 219.00 | 5.921 | 5.920 | 0.001 | 1.002 | 2236 | | 8.76(5.16-15.47) | | 17.1 | M |
| 63 Perfluorohexadecanoic acid | | | | | | | | | | |
| 813.00 > 769.00 | 6.379 | 6.393 | -0.014 | 1.000 | 110075 | 0.003558 | Target=9.94 | | 101 | |
| 813.00 > 169.00 | 6.379 | 6.393 | -0.014 | 1.000 | 13451 | | 8.18(4.97-14.90) | | 58.0 | |
| D 64 13C2 PFHxDA | | | | | | | | | | |
| 815.00 > 770.00 | 6.379 | 6.393 | -0.014 | 1.575 | 10250307 | 1.94 | | 77.7 | 8561 | |

## QC Flag Legend

Review Flags

M - Manually Integrated

Report Date: 11-Sep-2020 08:47:52 Chrom Revision: 2.3 09-Sep-2020 15:12:58

Eurofins TestAmerica, Sacramento

Data File: \\chromfs\Sacramento\ChromData\A13\20200910-103052.b\2020.09.10_A13_PFC_A_059.d

Injection Date: 10-Sep-2020 18:07:54 Instrument ID: A13

Lims ID: MB 320-410906/1-A

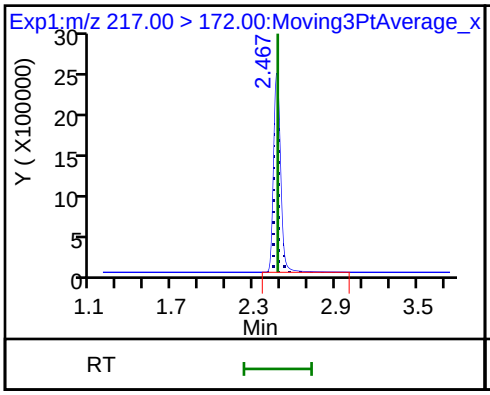
Client ID:

Operator ID: SACINSTLCMS01 ALS Bottle#: 32 Worklist Smp#: 2

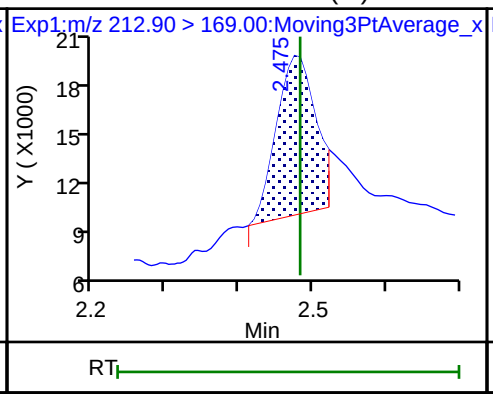
Injection Vol: 20.0 ul Dil. Factor: 1.0000

Method: PFAS_A13 Limit Group: LC PFC ICAL

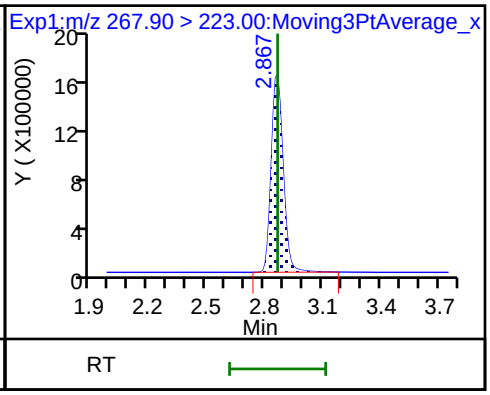
D 1 13C4 PFBA



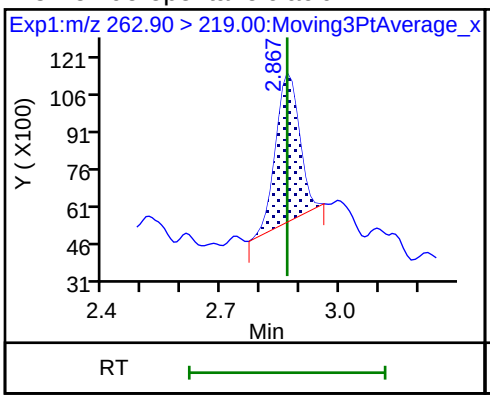

2 Perfluorobutanoic acid (M)



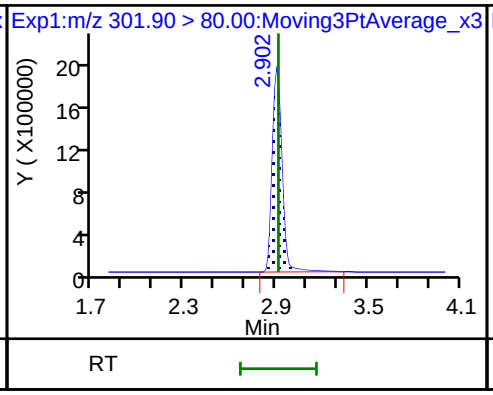

D 4 13C5 PFPeA



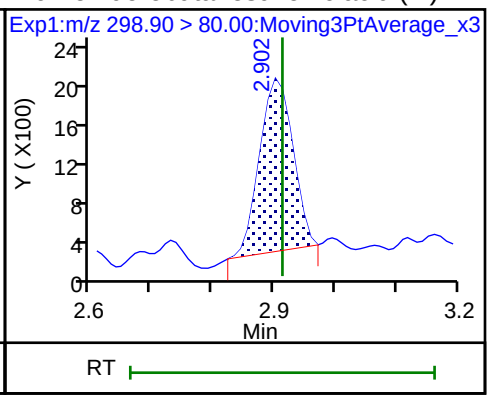

5 Perfluoropentanoic acid



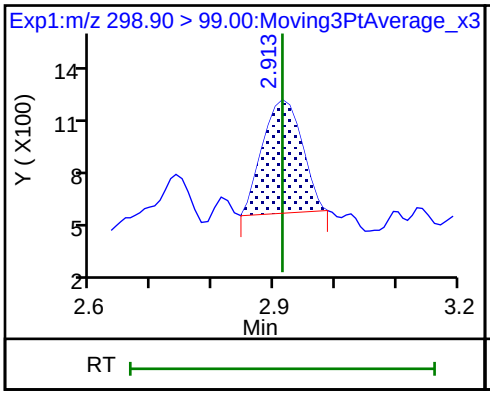

D 14 13C3 PFBS



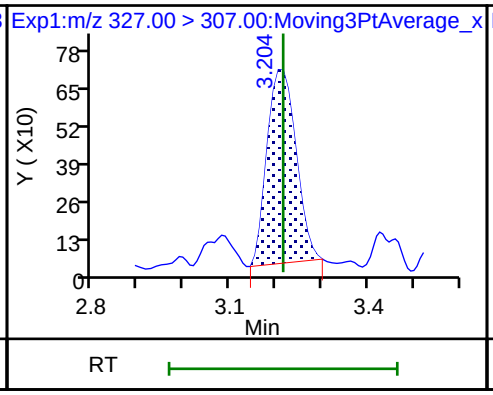

6 Perfluorobutanesulfonic acid (M)



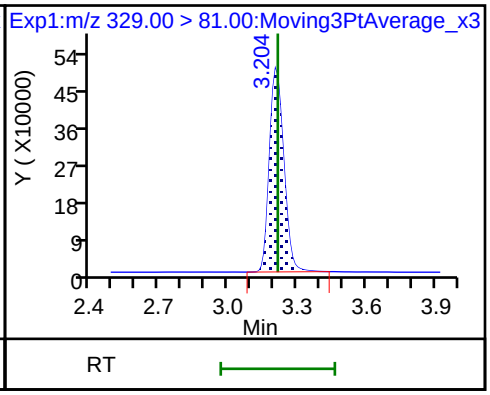

6 Perfluorobutanesulfonic acid



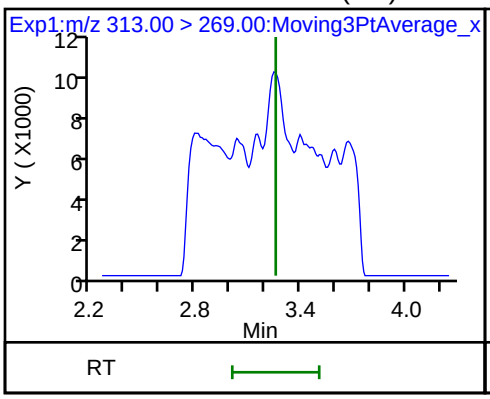

7 4:2 FTS



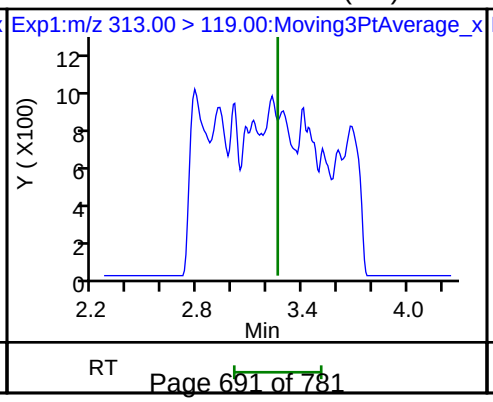

D 8 M2-4:2 FTS



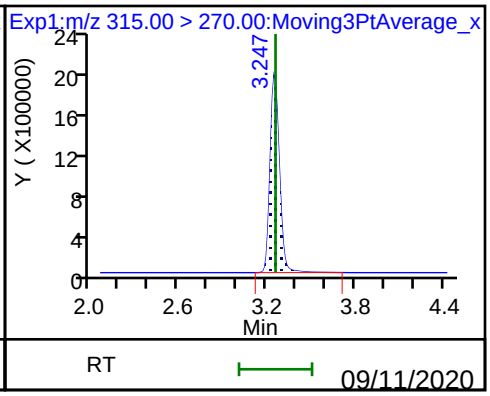

10 Perfluorohexanoic acid (ND)



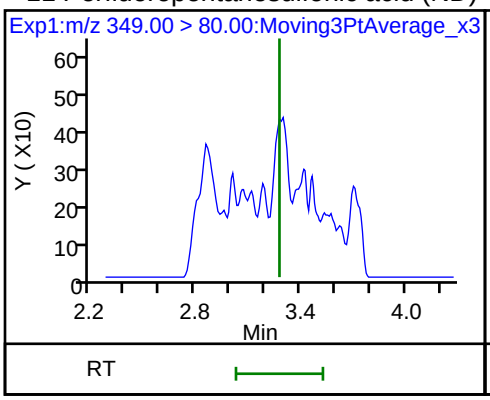

10 Perfluorohexanoic acid (ND)



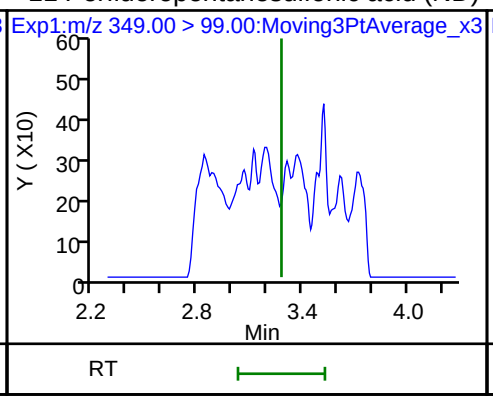

D 9 13C2 PFHxA



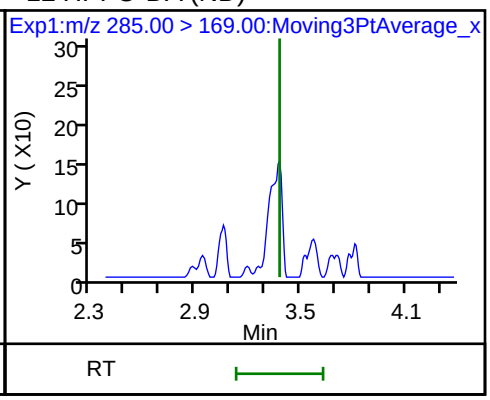
11 Perfluoropentanesulfonic acid (ND)



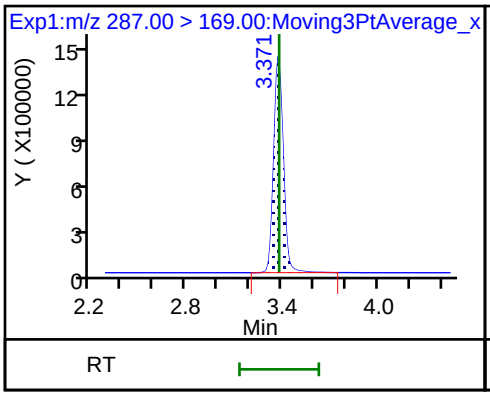

11 Perfluoropentanesulfonic acid (ND)



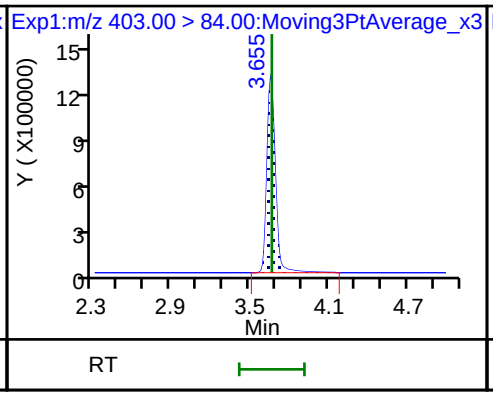

12 HPFO-DA (ND)



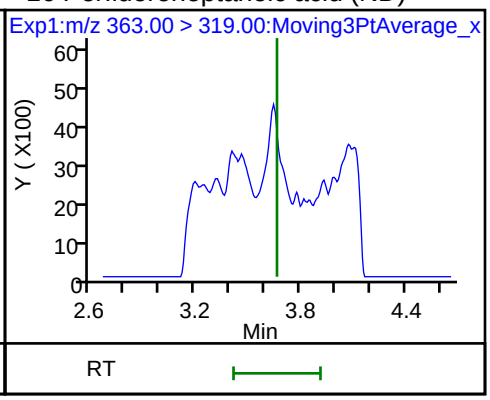

D 13 13C3 HFPO-DA



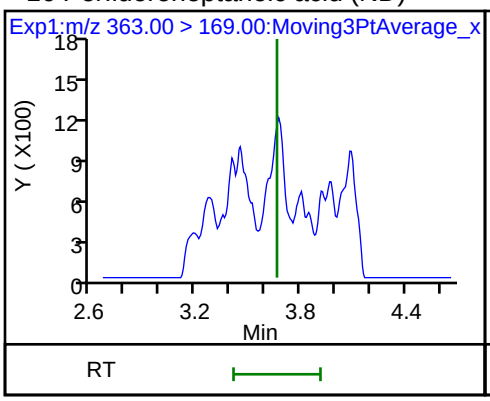

D 17 18O2 PFHxS



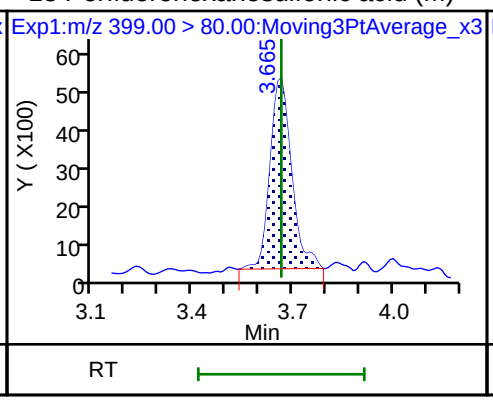

16 Perfluoroheptanoic acid (ND)



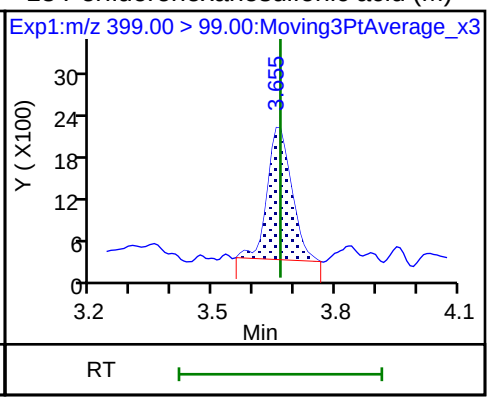

16 Perfluoroheptanoic acid (ND)



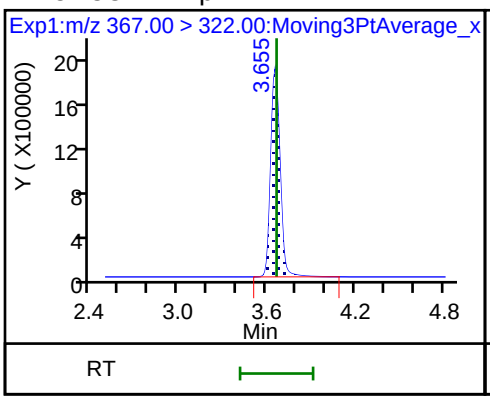

18 Perfluorohexanesulfonic acid (M)



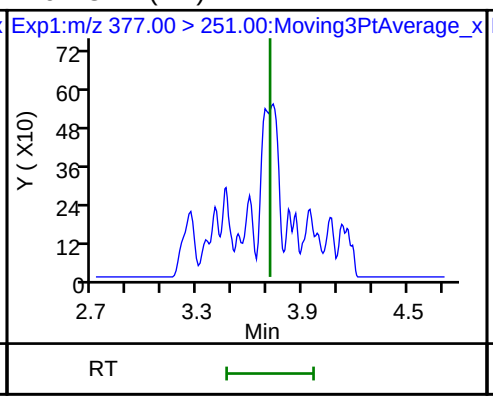

18 Perfluorohexanesulfonic acid (M)



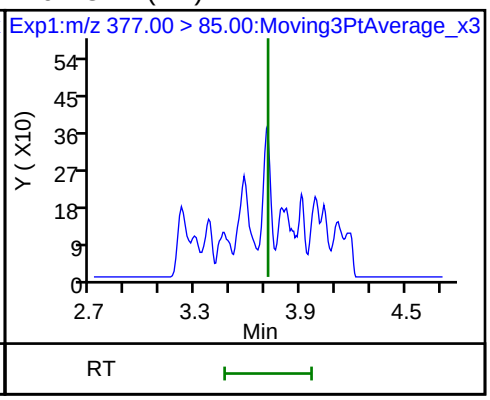

D 15 13C4 PFHpA



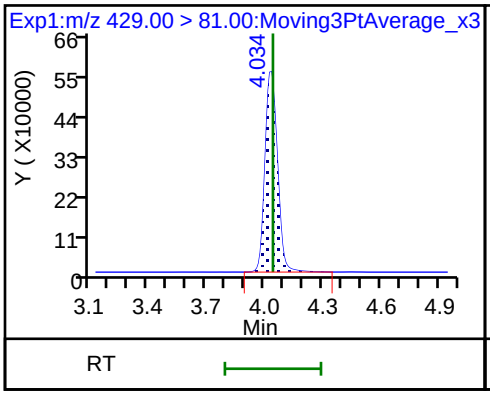

19 DONA (ND)



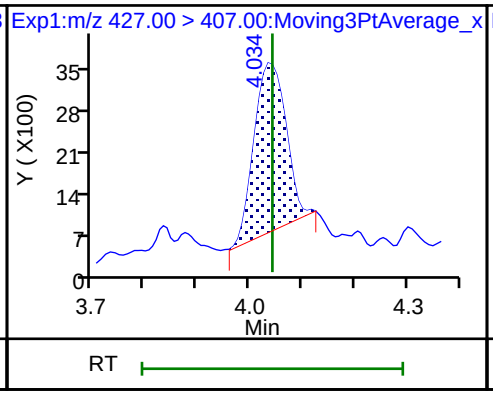

19 DONA (ND)



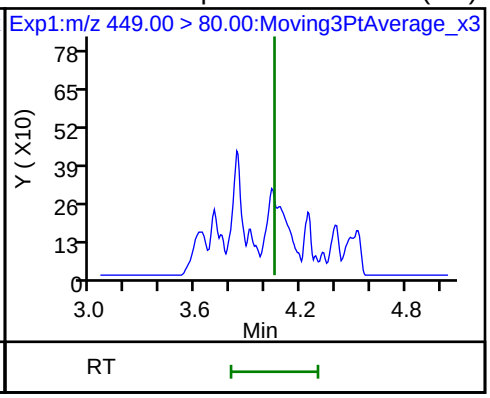
D 20 M2-6:2 FTS



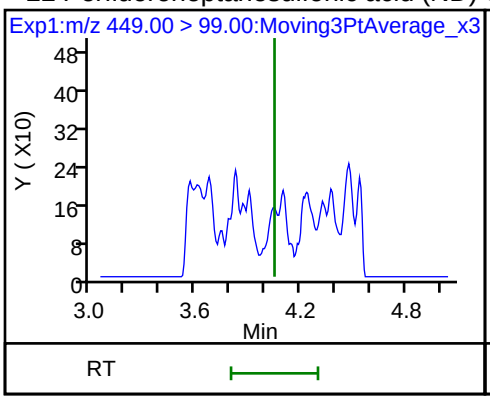

21 6:2 FTS



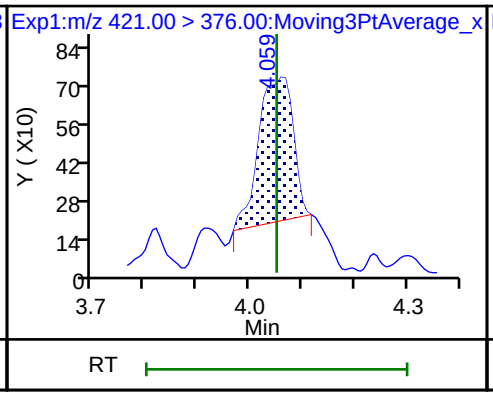

22 Perfluoroheptanesulfonic acid (ND)



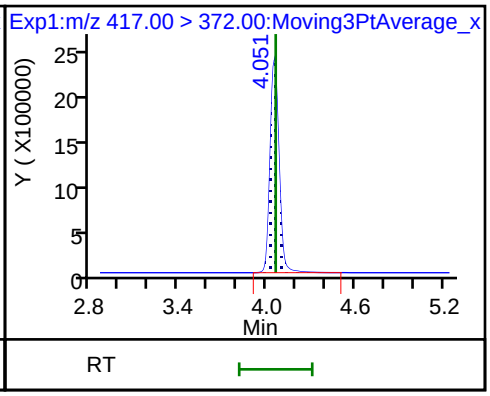

22 Perfluoroheptanesulfonic acid (ND)



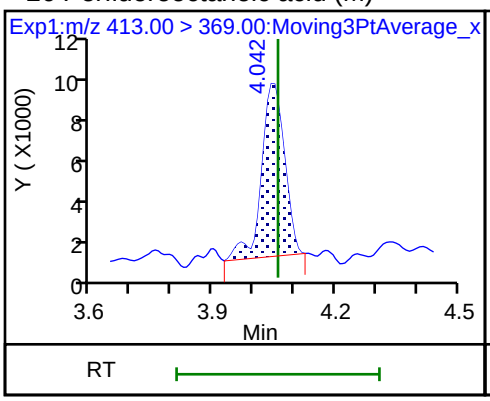

$ 23 13C8 PFOA



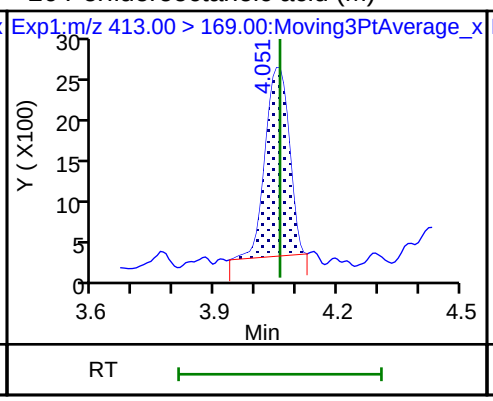

D 24 13C4 PFOA



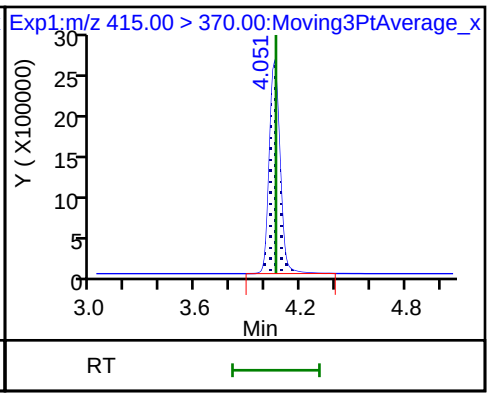

26 Perfluorooctanoic acid (M)



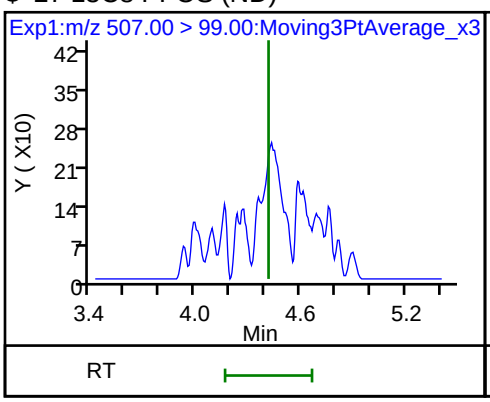

26 Perfluorooctanoic acid (M)



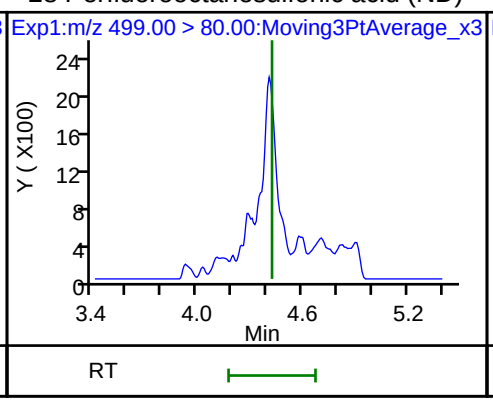

* 25 13C2 PFOA



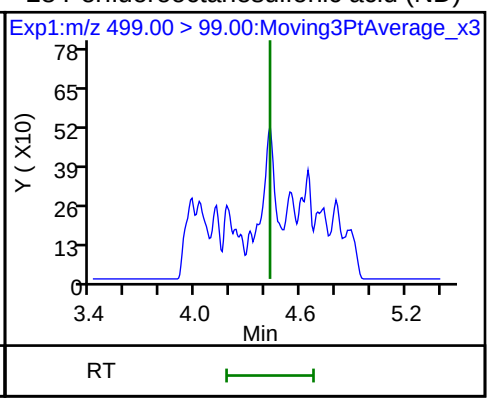

$ 27 13C8 PFOS (ND)



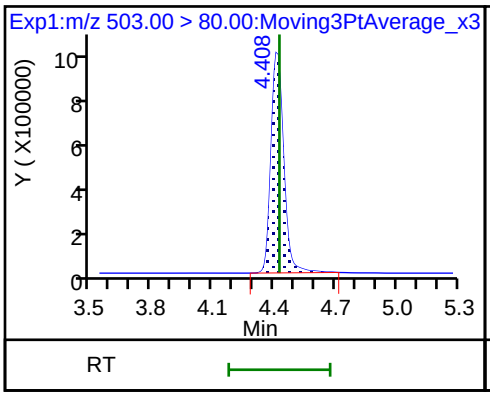

28 Perfluorooctanesulfonic acid (ND)



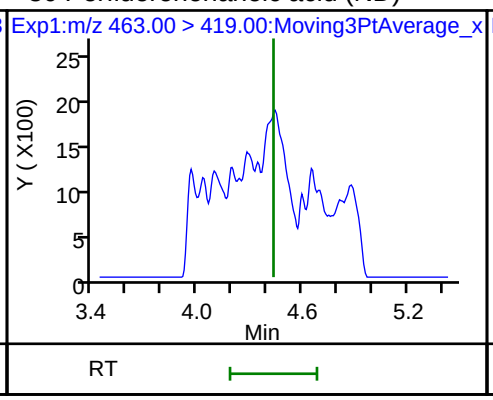

28 Perfluorooctanesulfonic acid (ND)



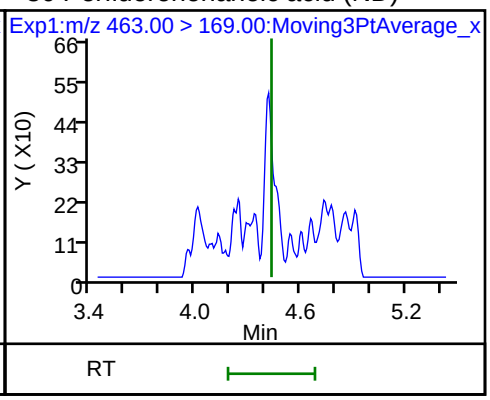
D 29 13C4 PFOS



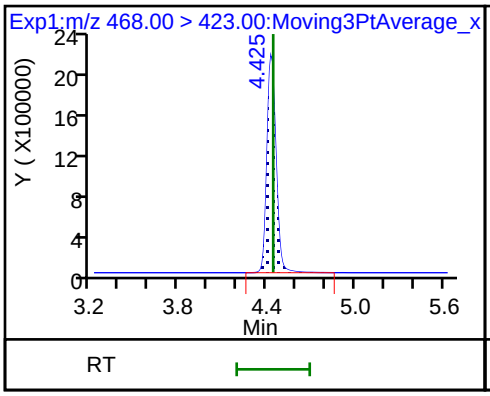

30 Perfluorononanoic acid (ND)



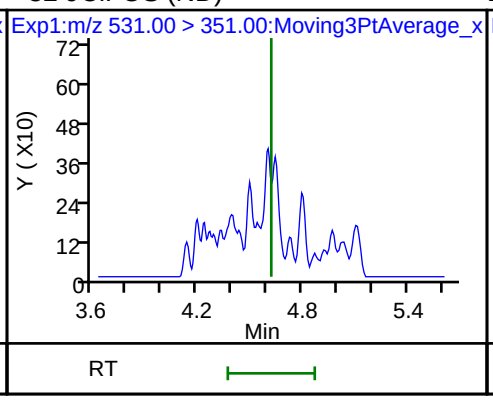

30 Perfluorononanoic acid (ND)



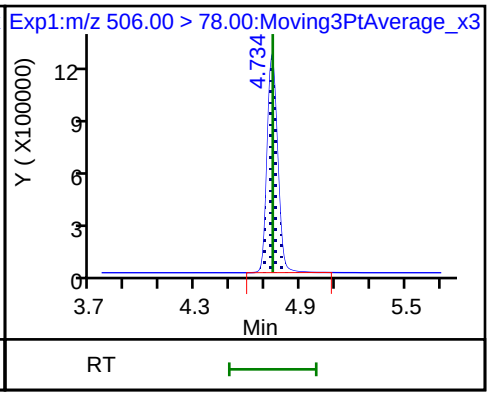

D 31 13C5 PFNA



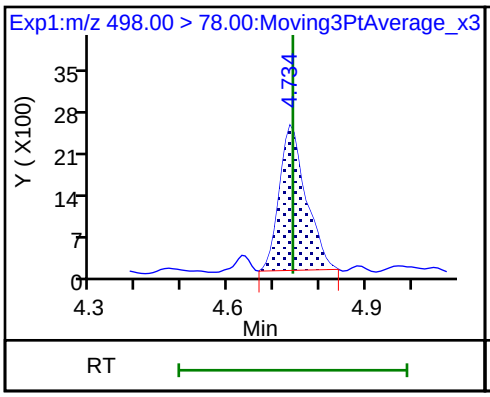

32 9ClFOS (ND)



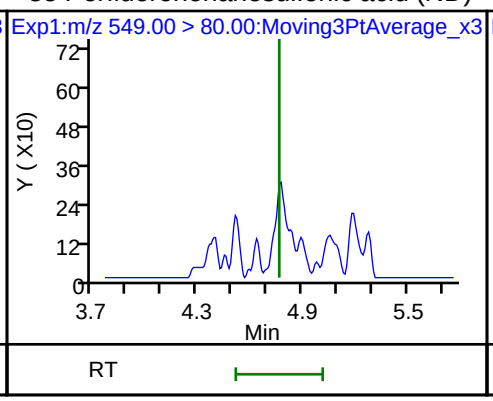

D 34 13C8 FOSA



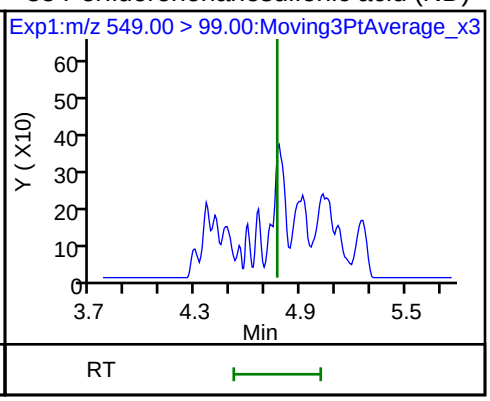

33 Perfluorooctanesulfonamide



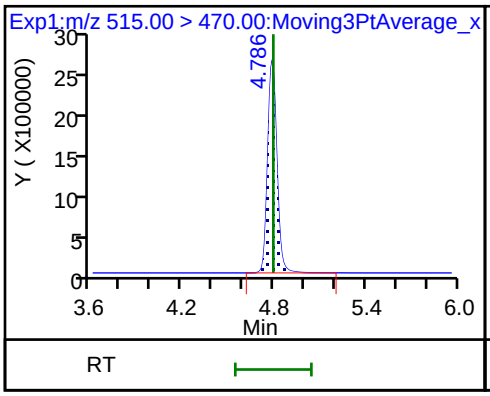

35 Perfluorononanesulfonic acid (ND)



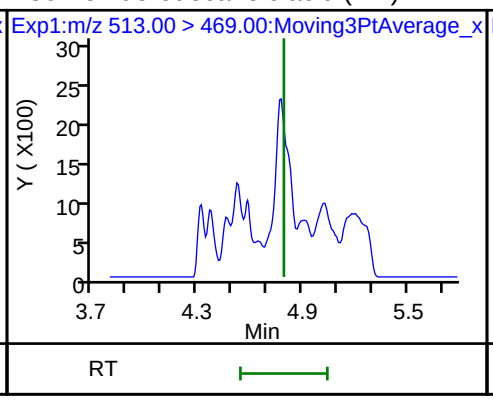

35 Perfluorononanesulfonic acid (ND)



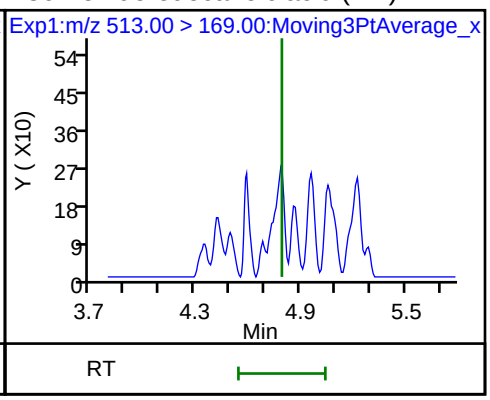

D 37 13C2 PFDA



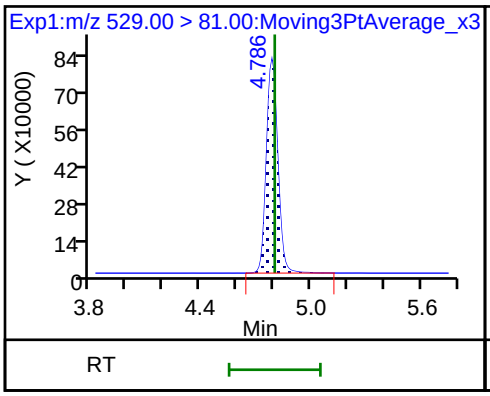

36 Perfluorodecanoic acid (ND)



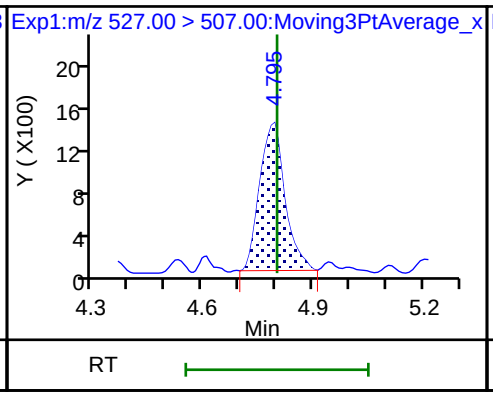

36 Perfluorodecanoic acid (ND)



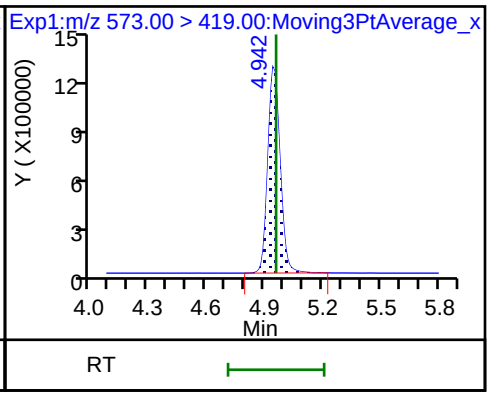
D 38 M2-8:2 FTS



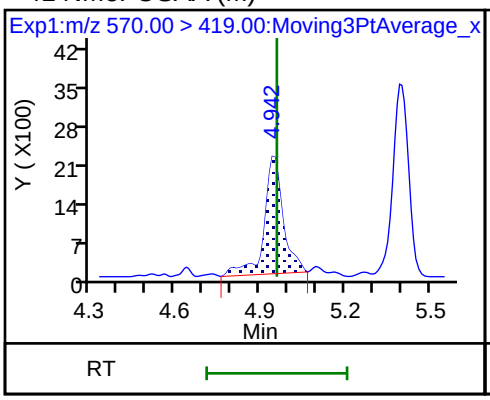

39 8:2 FTS



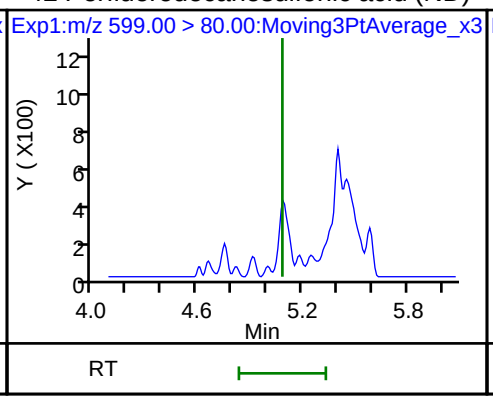

D 40 d3-NMeFOSAA



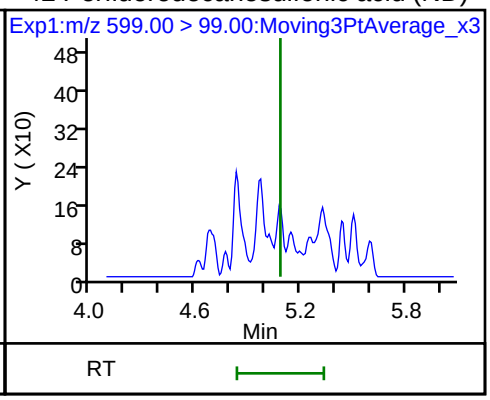

41 NMeFOSAA (M)



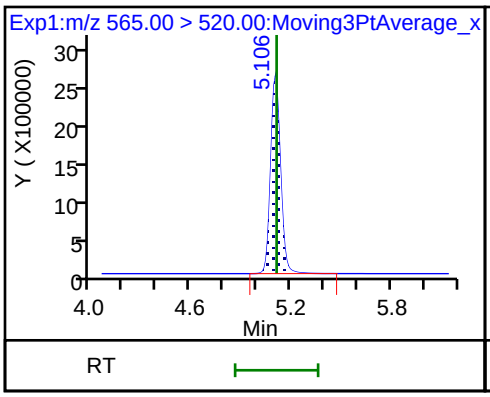

42 Perfluorodecanesulfonic acid (ND)



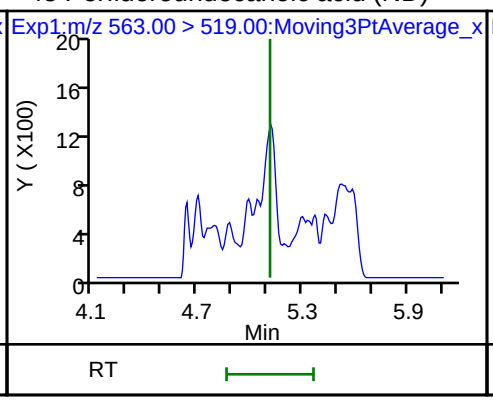

42 Perfluorodecanesulfonic acid (ND)



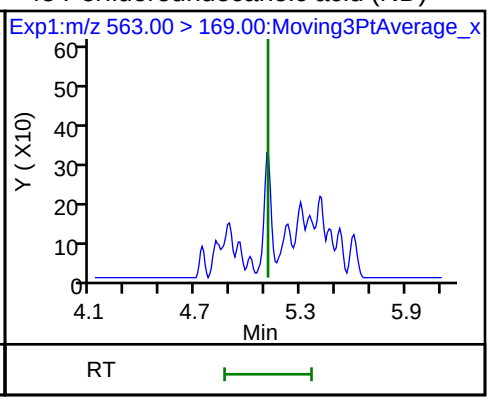

D 44 13C2 PFUnA



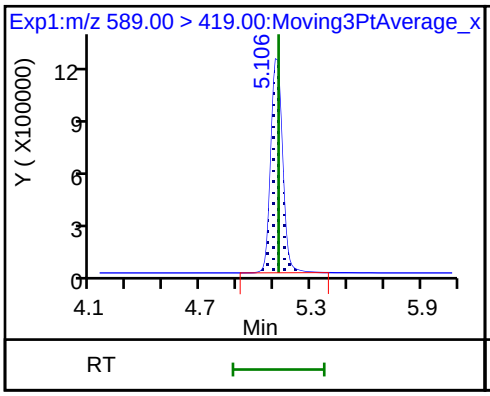

45 Perfluoroundecanoic acid (ND)



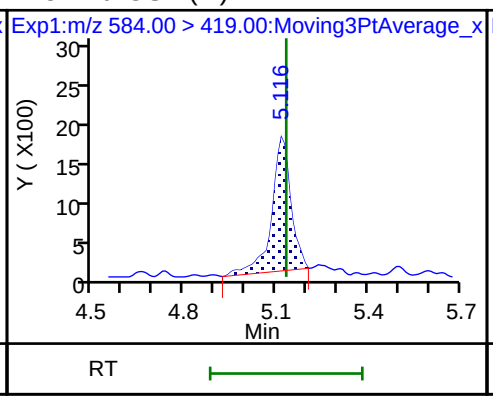

45 Perfluoroundecanoic acid (ND)



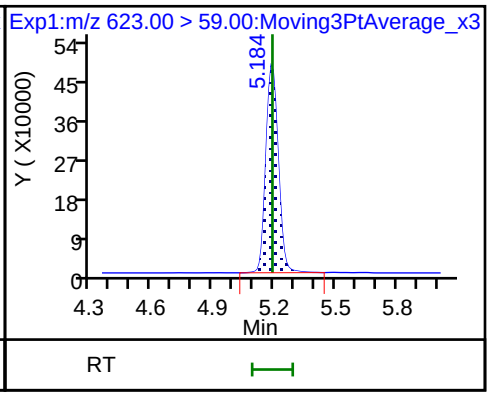

D 46 d5-NEtFOSAA



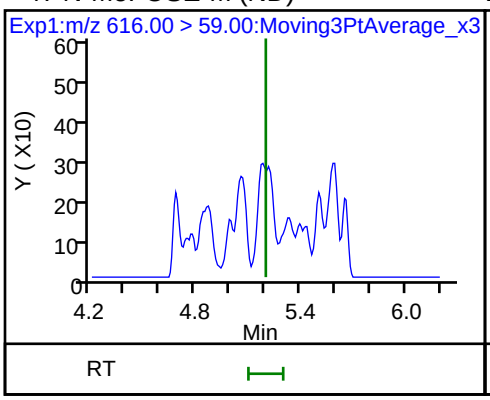

48 NEtFOSA (M)



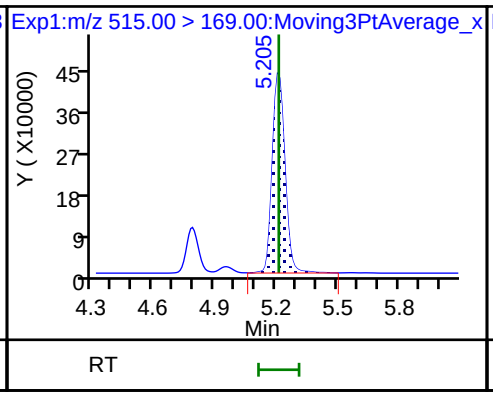

D 43 d7-N-MeFOSE-M



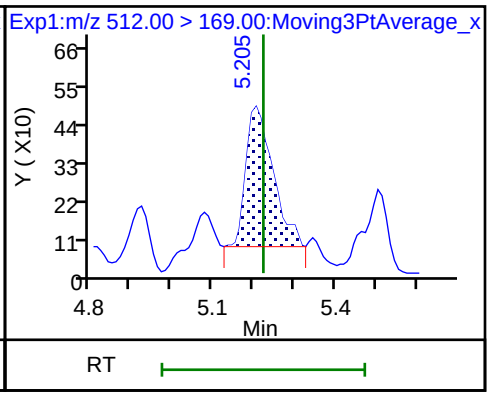
47 N-MeFOSE-M (ND)



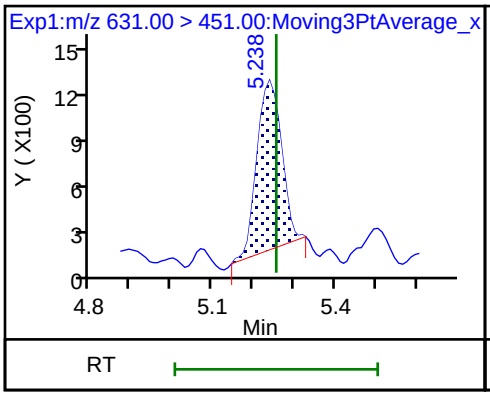

D 49 d-N-MeFOSA-M



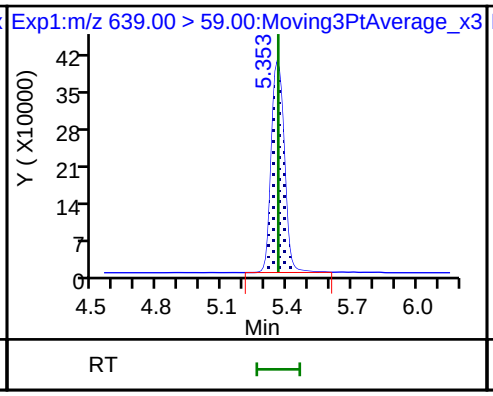

50 NMeFOSA



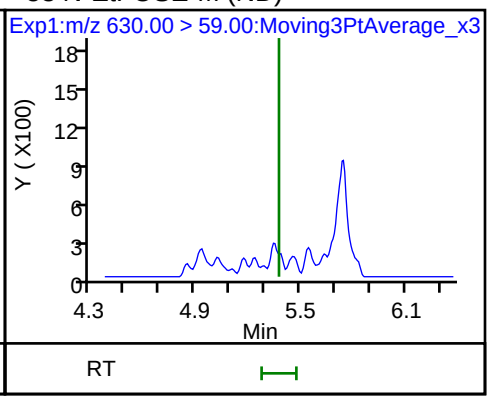

51 11ClFOS



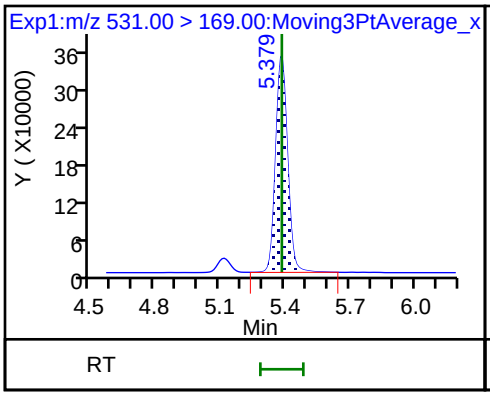

D 52 d9-N-EtFOSE-M



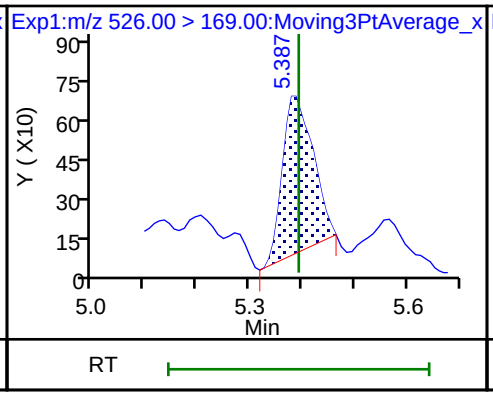

53 N-EtFOSE-M (ND)



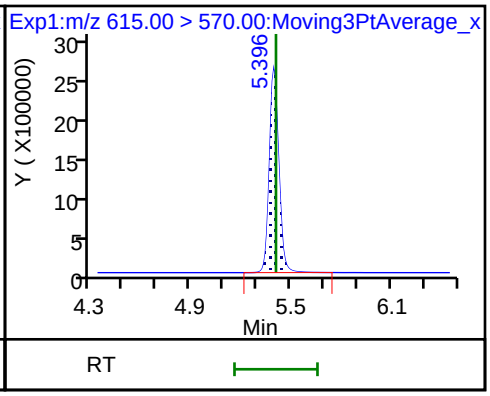

D 54 d-N-EtFOSA-M



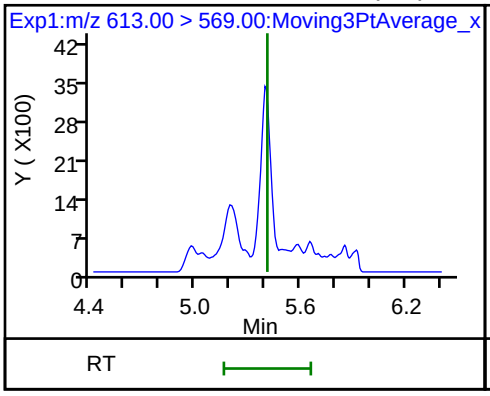

55 N-EtFOSA-M



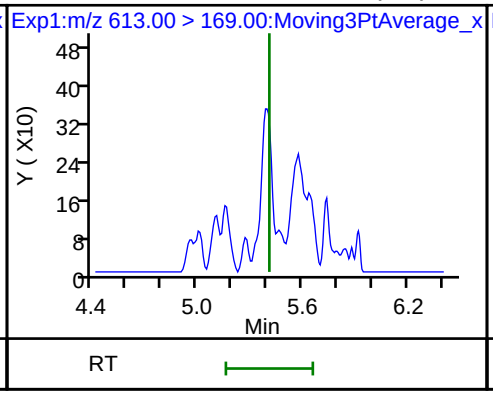

D 56 13C2 PFDoA



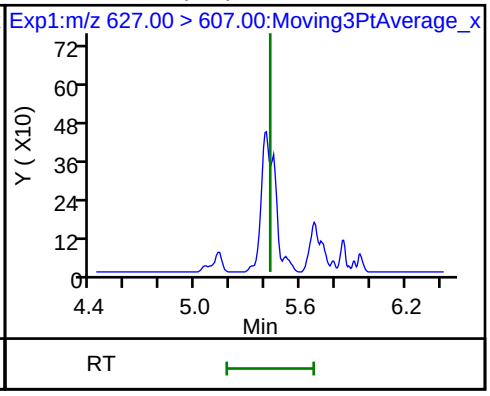

57 Perfluorododecanoic acid (ND)



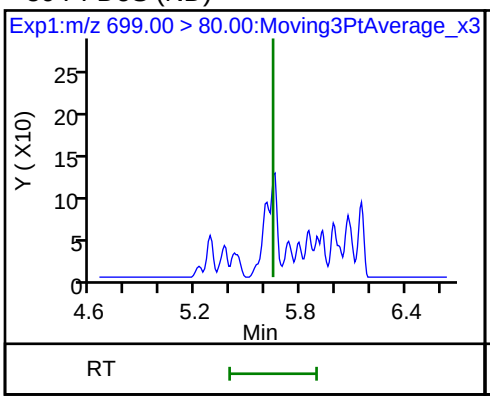

57 Perfluorododecanoic acid (ND)



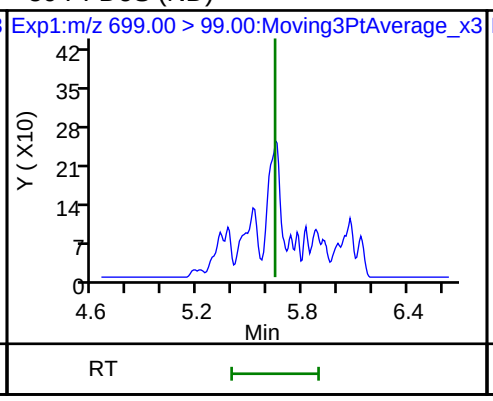

58 10:2 FTS (ND)



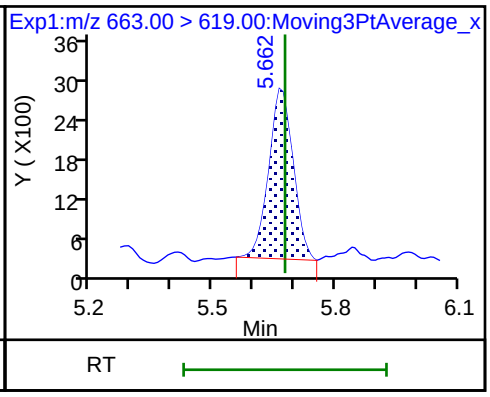
59 PFDoS (ND)



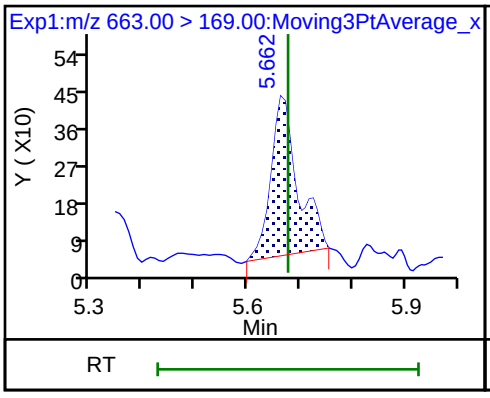

59 PFDoS (ND)



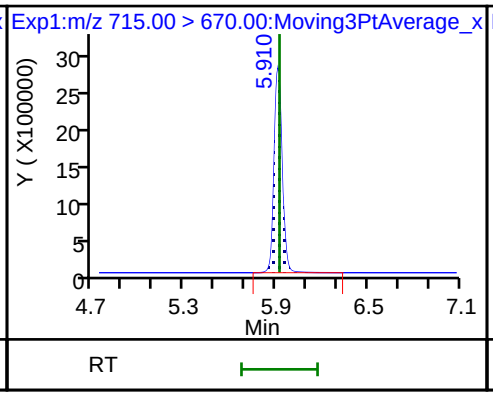

60 Perfluorotridecanoic acid



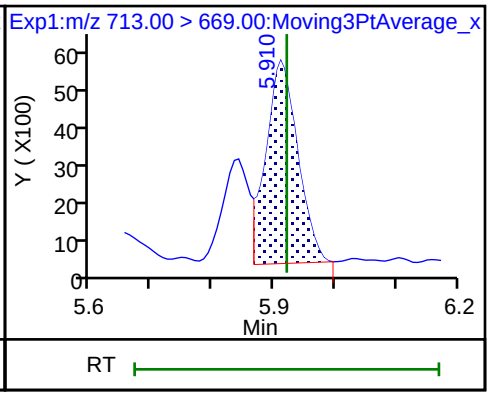

60 Perfluorotridecanoic acid



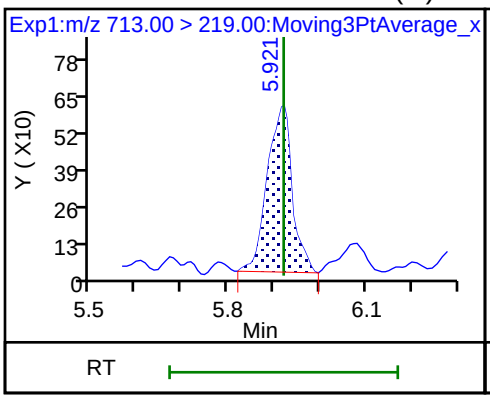

D 61 13C2 PFTeDA



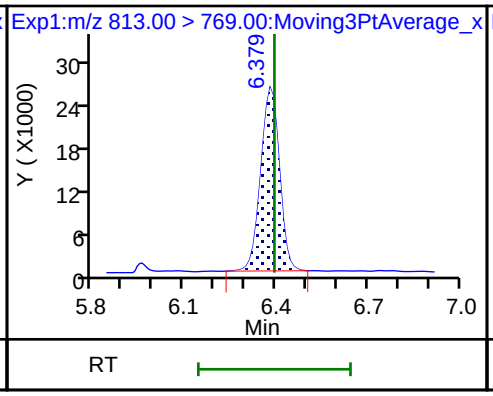

62 Perfluorotetradecanoic acid



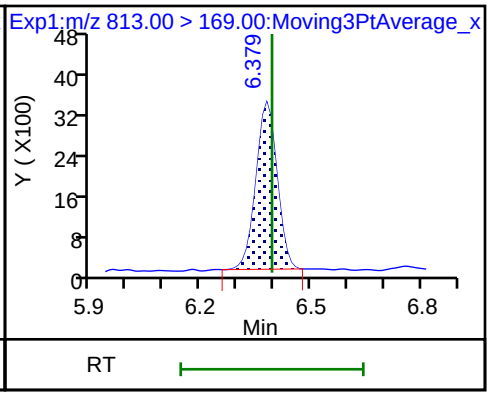

62 Perfluorotetradecanoic acid (M)



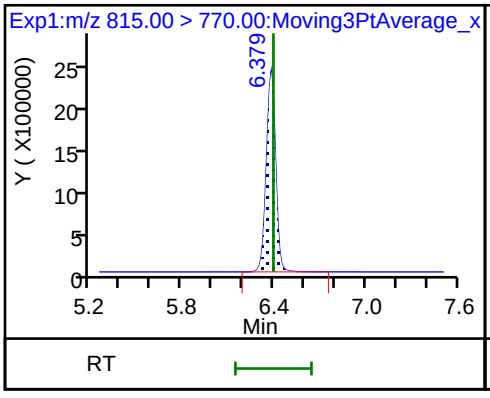

63 Perfluorohexadecanoic acid



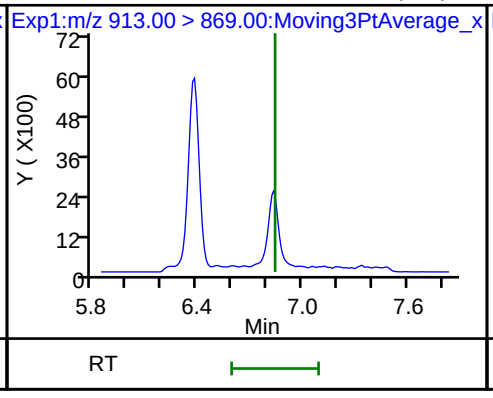

63 Perfluorohexadecanoic acid



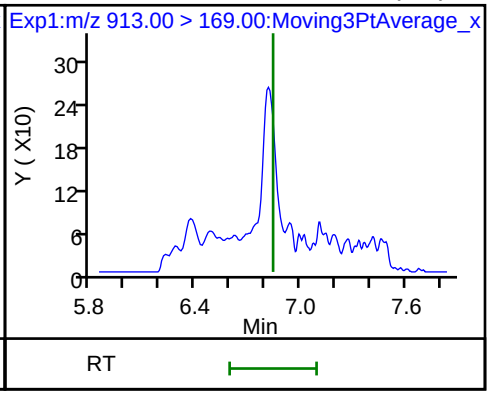

D 64 13C2 PFHxDA




65 Perfluorooctadecanoic acid (ND)




65 Perfluorooctadecanoic acid (ND)



Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

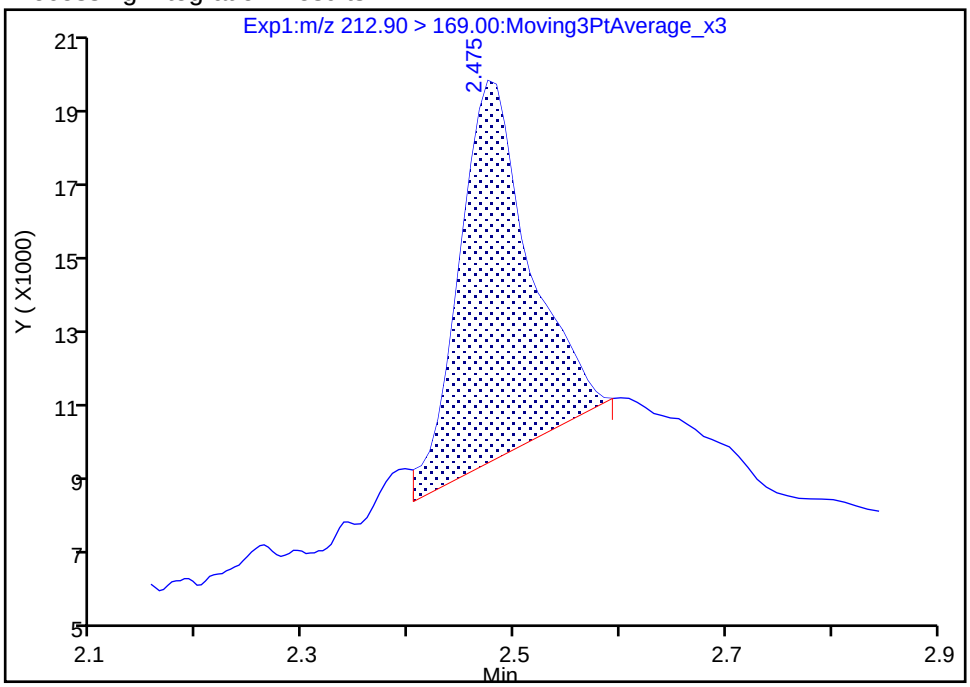
Data File: \\chromfs\Sacramento\ChromData\A13\20200910-103052.b\2020.09.10_A13_PFC_A_059.d
Injection Date: 10-Sep-2020 18:07:54 Instrument ID: A13
Lims ID: MB 320-410906/1-A
Client ID:
Operator ID: SACINSTLCMS01 ALS Bottle#: 32 Worklist Smp#: 2
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFAS_A13 Limit Group: LC PFC ICAL
Column: Gemini C18 3um 3 x 100mm ( 3.00 mm) Detector EXP1

## 2 Perfluorobutanoic acid, CAS: 375-22-4

Signal: 1

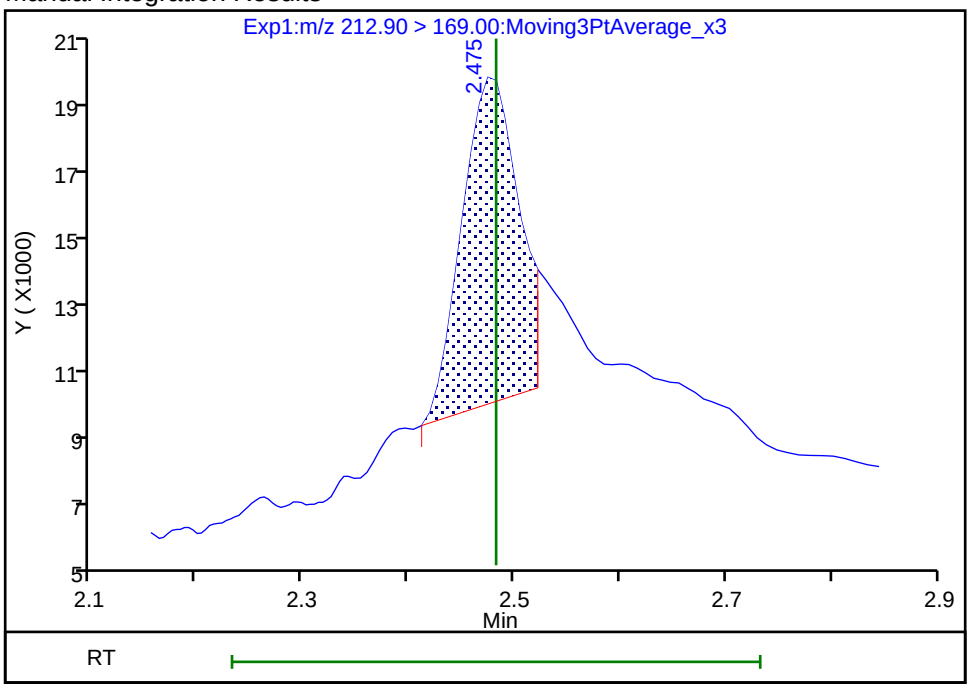
Processing Integration Results

RT: 2.47
Area: 45298
Amount: 0.017945
Amount Units: ng/ml




Manual Integration Results

RT: 2.47
Area: 34130
Amount: 0.013521
Amount Units: ng/ml




Reviewer: mongkols, 11-Sep-2020 08:37:08
Audit Action: Manually Integrated Audit Reason: Baseline

Eurofins TestAmerica, Sacramento

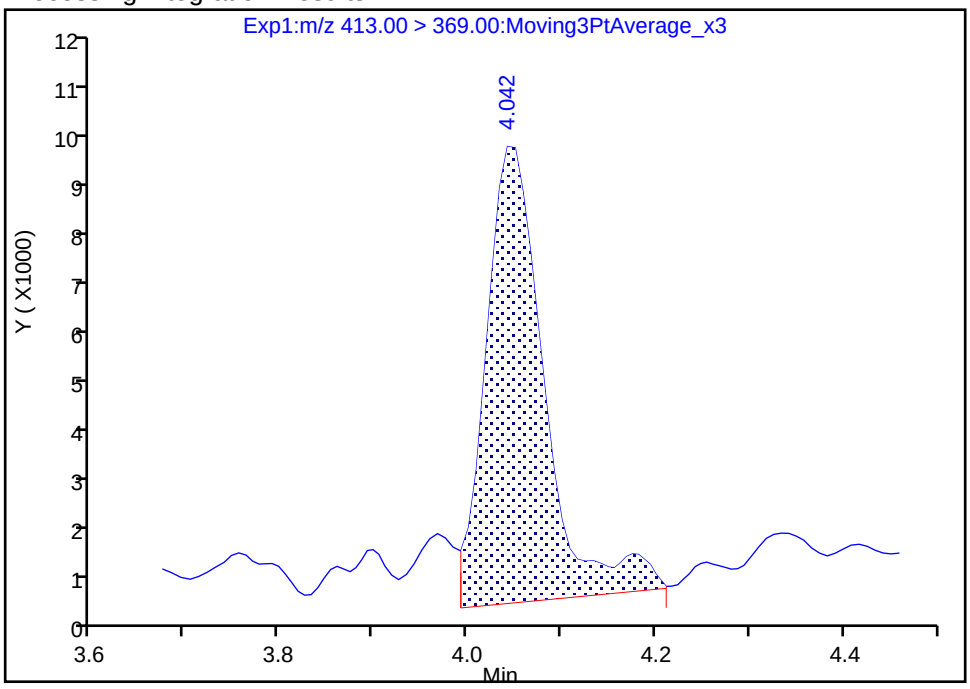
Data File: \\chromfs\Sacramento\ChromData\A13\20200910-103052.b\2020.09.10_A13_PFC_A_059.d
Injection Date: 10-Sep-2020 18:07:54 Instrument ID: A13
Lims ID: MB 320-410906/1-A
Client ID:
Operator ID: SACINSTLCMS01 ALS Bottle#: 32 Worklist Smp#: 2
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFAS_A13 Limit Group: LC PFC ICAL
Column: Gemini C18 3um 3 x 100mm ( 3.00 mm) Detector: EXP1

## 26 Perfluorooctanoic acid, CAS: 335-67-1

Signal: 1

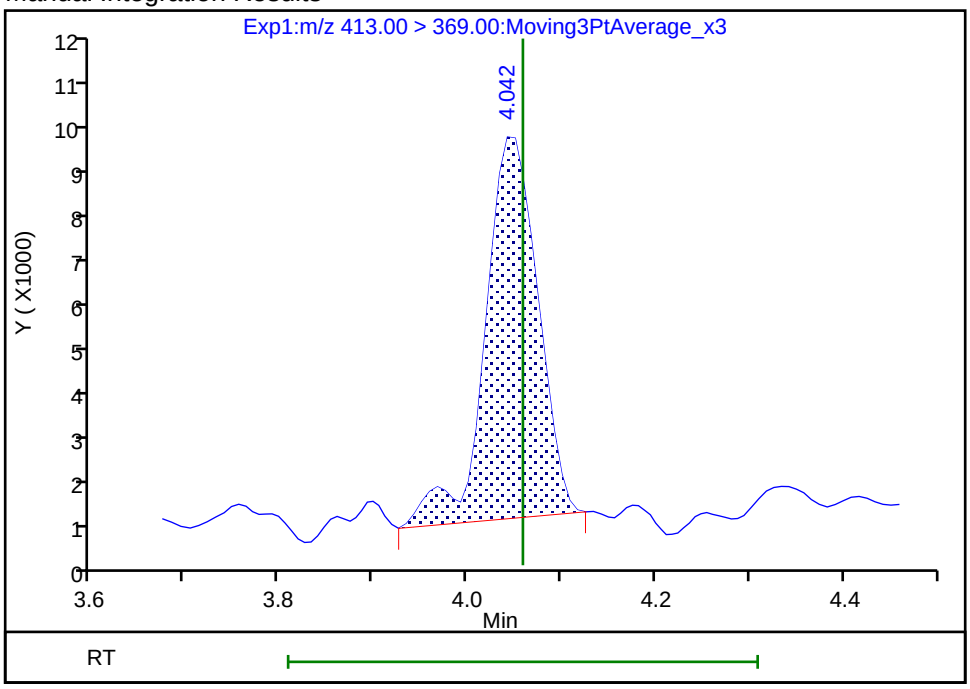
Processing Integration Results

RT: 4.04
Area: 37918
Amount: 0.009498
Amount Units: ng/ml




Manual Integration Results

RT: 4.04
Area: 31758
Amount: 0.007955
Amount Units: ng/ml




Reviewer: mongkols, 11-Sep-2020 08:37:47
Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

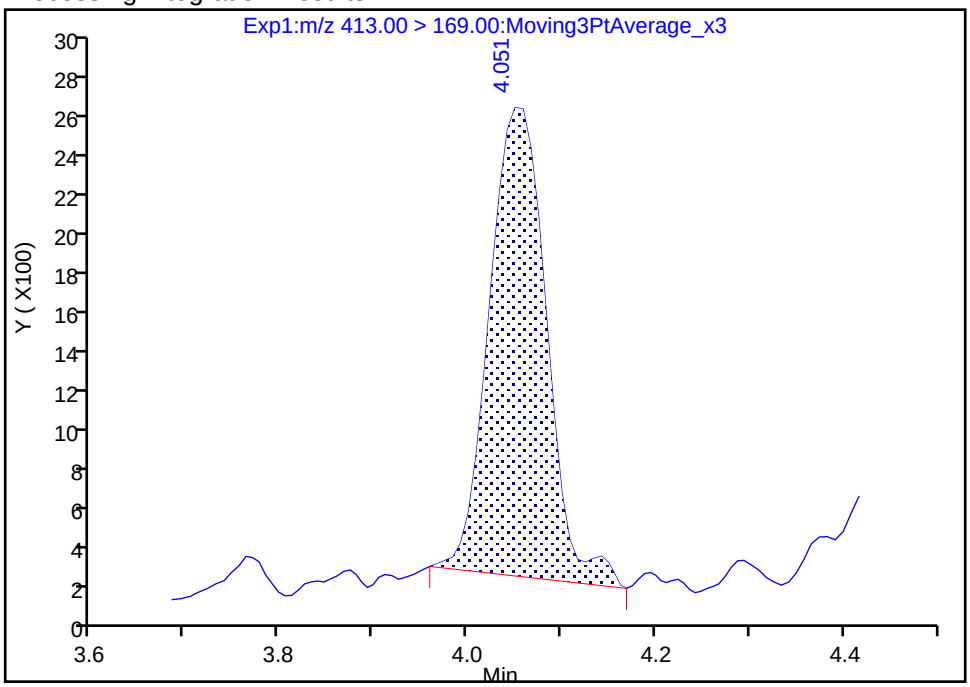
Data File: \\chromfs\Sacramento\ChromData\A13\20200910-103052.b\2020.09.10_A13_PFC_A_059.d
Injection Date: 10-Sep-2020 18:07:54 Instrument ID: A13
Lims ID: MB 320-410906/1-A
Client ID:
Operator ID: SACINSTLCMS01 ALS Bottle#: 32 Worklist Smp#: 2
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFAS_A13 Limit Group: LC PFC ICAL
Column: Gemini C18 3um 3 x 100mm ( 3.00 mm) Detector EXP1

## 26 Perfluorooctanoic acid, CAS: 335-67-1

Signal: 2

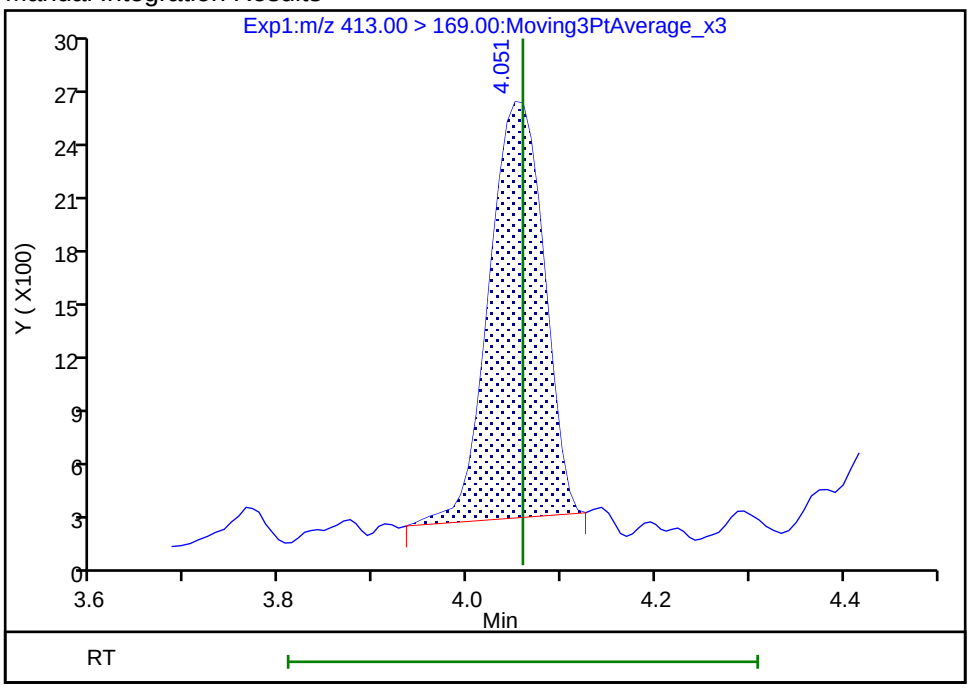
Processing Integration Results

RT: 4.05
Area: 10150
Amount: 0.009498
Amount Units: ng/ml




Manual Integration Results

RT: 4.05
Area: 9600
Amount: 0.007955
Amount Units: ng/ml




Reviewer: mongkols, 11-Sep-2020 08:37:51
Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

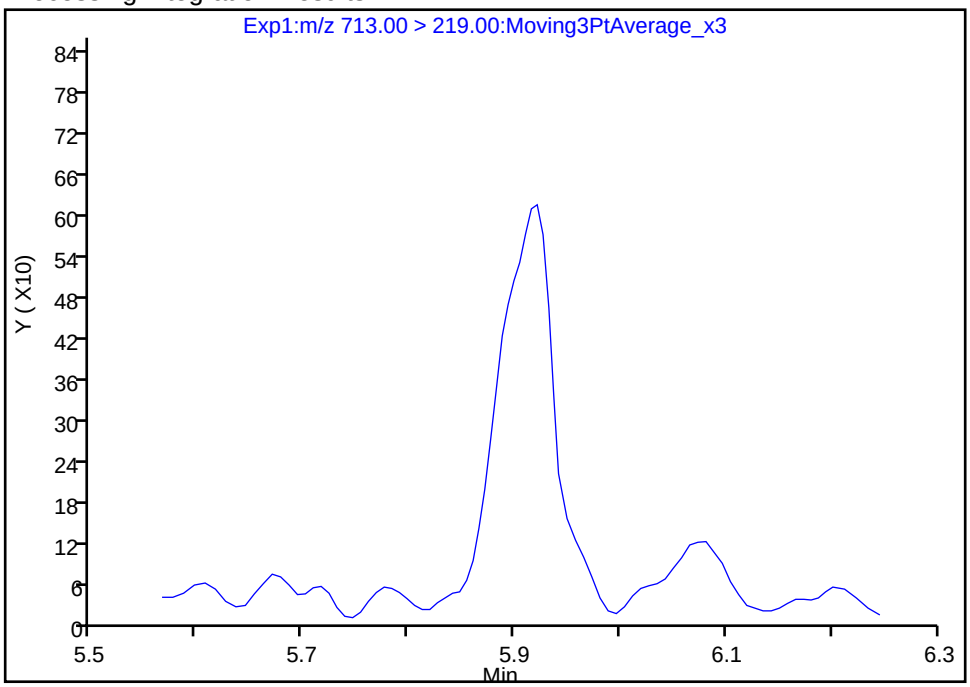
Data File: \\chromfs\Sacramento\ChromData\A13\20200910-103052.b\2020.09.10_A13_PFC_A_059.d
Injection Date: 10-Sep-2020 18:07:54 Instrument ID: A13
Lims ID: MB 320-410906/1-A
Client ID:
Operator ID: SACINSTLCMS01 ALS Bottle#: 32 Worklist Smp#: 2
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFAS_A13 Limit Group: LC PFC ICAL
Column: Gemini C18 3um 3 x 100mm ( 3.00 mm) Detector EXP1

## 62 Perfluorotetradecanoic acid, CAS: 376-06-7

Signal: 2

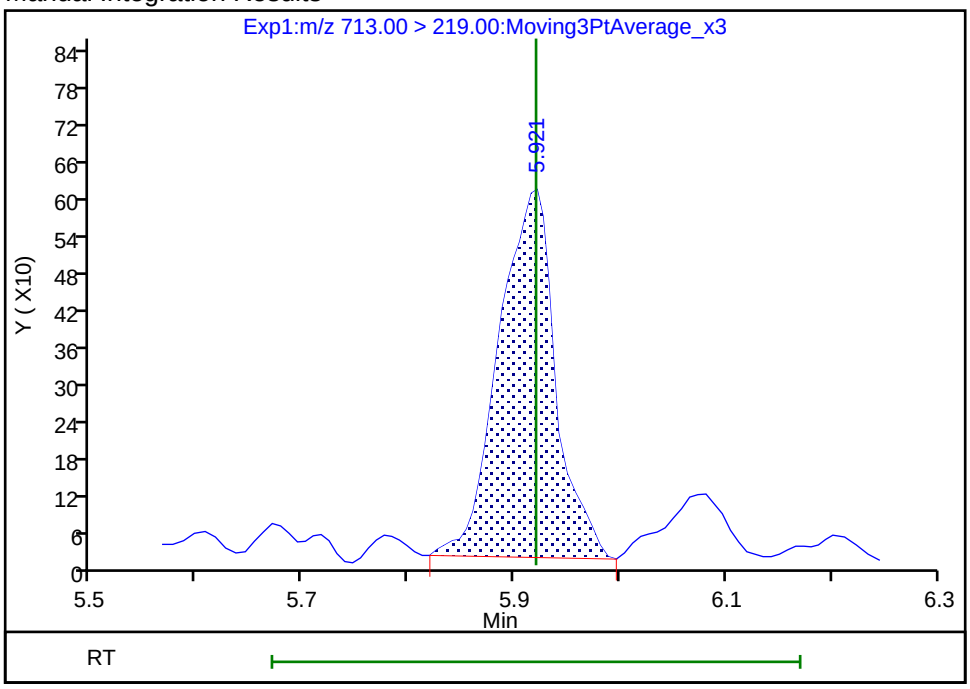
Not Detected
Expected RT: 5.92

Processing Integration Results




Manual Integration Results

RT: 5.92
Area: 2236
Amount: 0.004983
Amount Units: ng/ml




Reviewer: mongkols, 11-Sep-2020 08:47:32
Audit Action: Manually Integrated Audit Reason: Baseline

Eurofins TestAmerica, Sacramento

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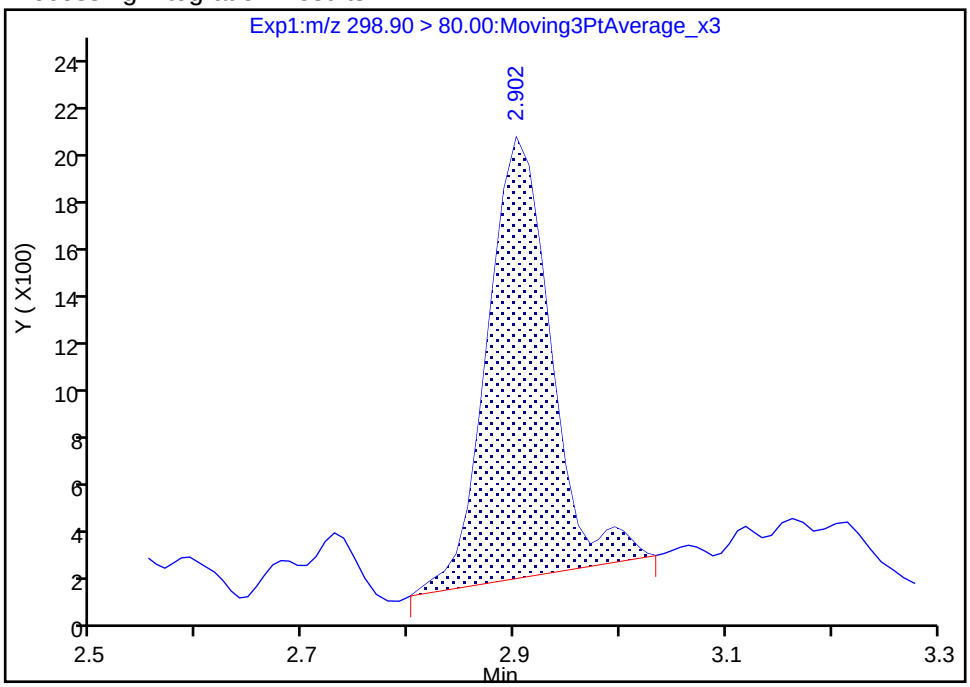
|---|---|---|---|---|---|
| Data File: | \\chromfs\Sacramento\ChromData\A13\20200910-103052.b\2020.09.10_A13_PFC_A_059.d | | | | |
| Injection Date: | 10-Sep-2020 18:07:54 | Instrument ID: | A13 | | |
| Lims ID: | MB 320-410906/1-A | | | | |
| Client ID: | | | | | |
| Operator ID: | SACINSTLCMS01 | ALS Bottle#: | 32 | Worklist Smp#: | 2 |
| Injection Vol: | 20.0 ul | Dil. Factor: | 1.0000 | | |
| Method: | PFAS_A13 | Limit Group: | LC PFC ICAL | | |
| Column: | Gemini C18 3um 3 x 100mm ( 3.00 mm) | Detector | EXP1 | | |

## 6 Perfluorobutanesulfonic acid, CAS: 375-73-5

Signal: 1

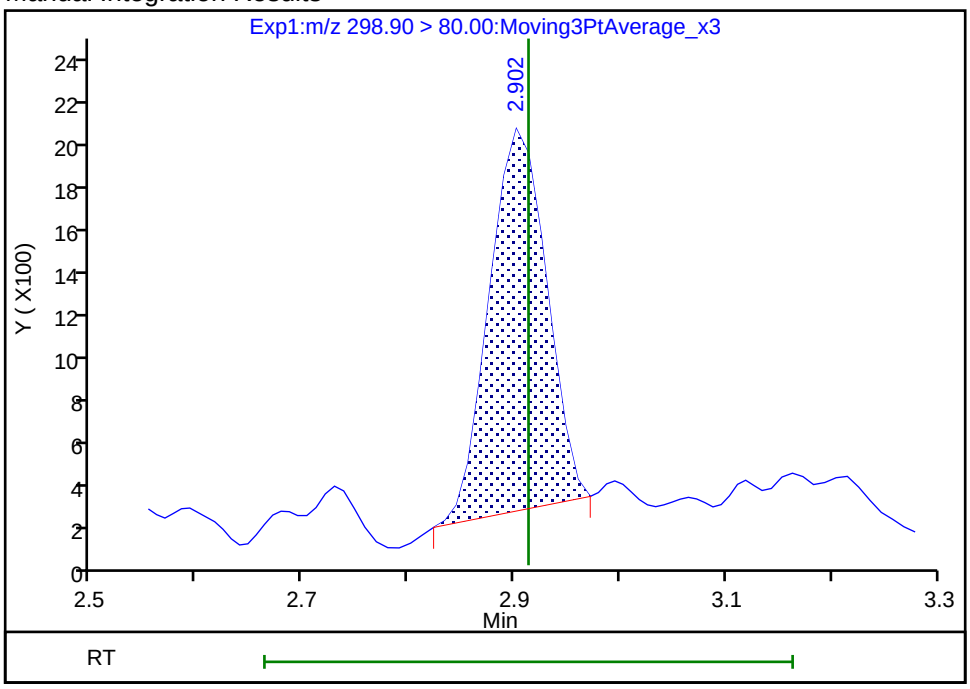
Processing Integration Results

RT: 2.90
Area: 7302
Amount: 0.002078
Amount Units: ng/ml




Manual Integration Results

RT: 2.90
Area: 6324
Amount: 0.001800
Amount Units: ng/ml




Reviewer: mongkols, 11-Sep-2020 08:37:15
Audit Action: Manually Integrated Audit Reason: Baseline

Eurofins TestAmerica, Sacramento

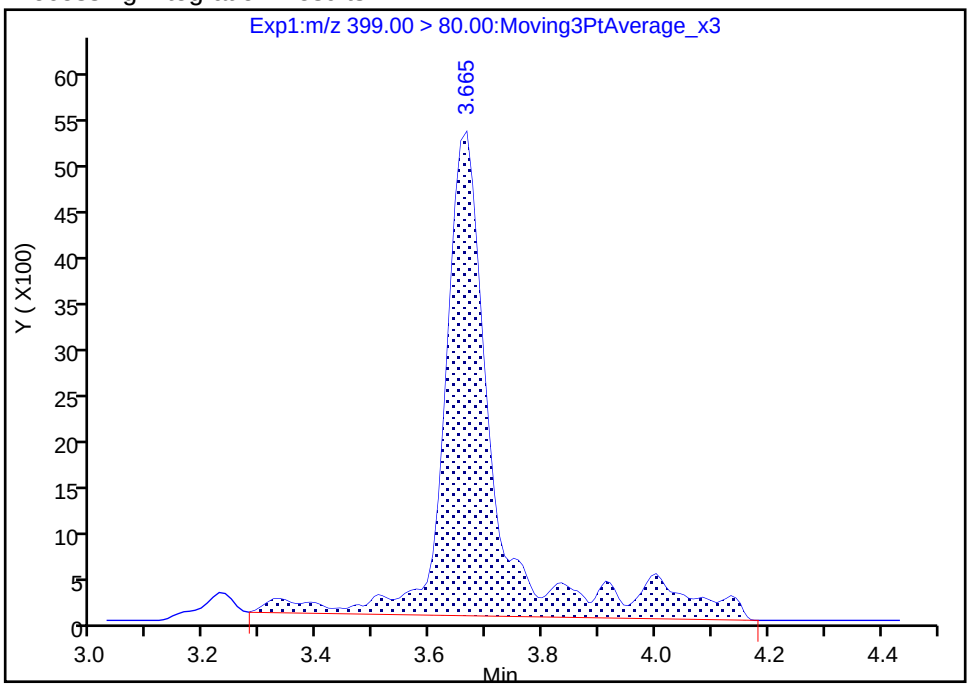
Data File: \\chromfs\Sacramento\ChromData\A13\20200910-103052.b\2020.09.10_A13_PFC_A_059.d
Injection Date: 10-Sep-2020 18:07:54 Instrument ID: A13
Lims ID: MB 320-410906/1-A
Client ID:
Operator ID: SACINSTLCMS01 ALS Bottle#: 32 Worklist Smp#: 2
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFAS_A13 Limit Group: LC PFC ICAL
Column: Gemini C18 3um 3 x 100mm ( 3.00 mm) Detector EXP1

## 18 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 1

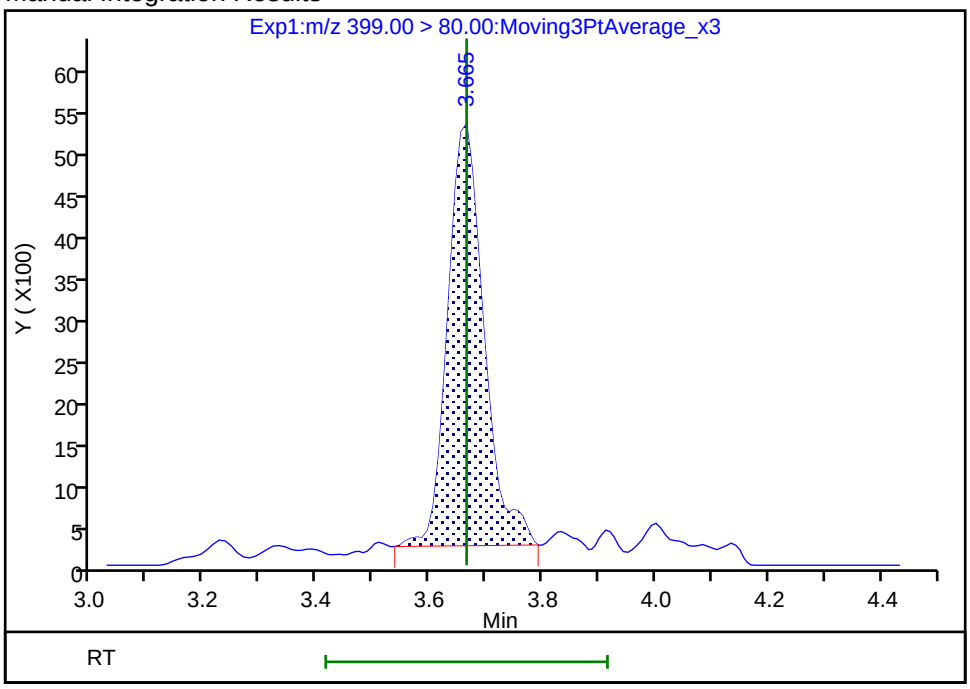
Processing Integration Results

RT: 3.66
Area: 33004
Amount: 0.012360
Amount Units: ng/ml




Manual Integration Results

RT: 3.66
Area: 22632
Amount: 0.008476
Amount Units: ng/ml




Reviewer: mongkols, 11-Sep-2020 08:37:31
Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

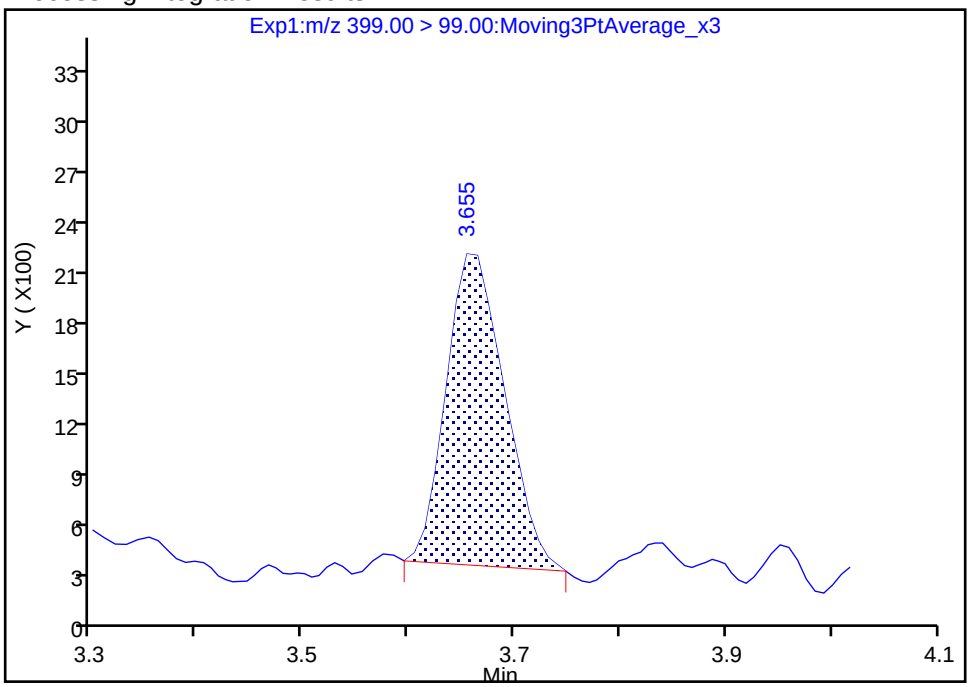
Data File: \\chromfs\Sacramento\ChromData\A13\20200910-103052.b\2020.09.10_A13_PFC_A_059.d
Injection Date: 10-Sep-2020 18:07:54 Instrument ID: A13
Lims ID: MB 320-410906/1-A
Client ID:
Operator ID: SACINSTLCMS01 ALS Bottle#: 32 Worklist Smp#: 2
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFAS_A13 Limit Group: LC PFC ICAL
Column: Gemini C18 3um 3 x 100mm ( 3.00 mm ID) Detector EXP1

## 18 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 2

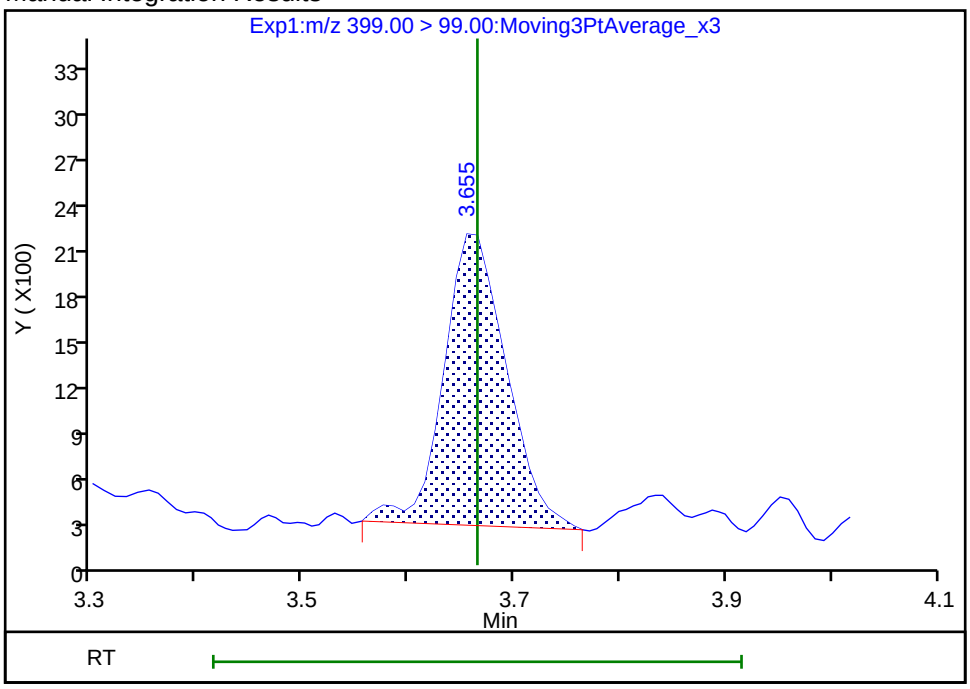
Processing Integration Results

RT: 3.65
Area: 7096
Amount: 0.012360
Amount Units: ng/ml




Manual Integration Results

RT: 3.65
Area: 7899
Amount: 0.008476
Amount Units: ng/ml




Reviewer: mongkols, 11-Sep-2020 08:37:37
Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

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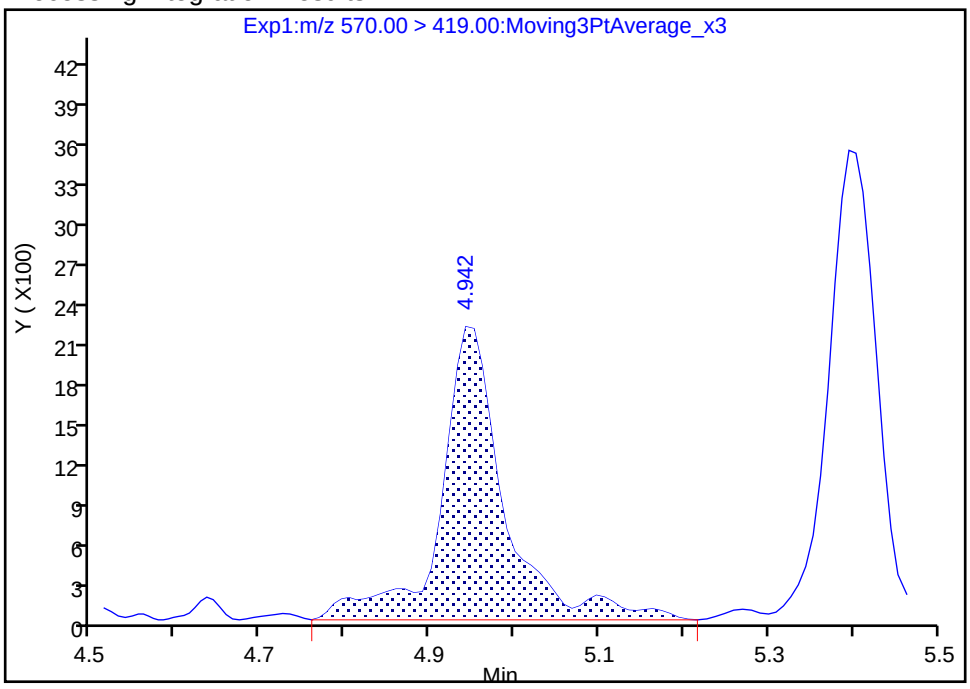
| Injection Date: | 10-Sep-2020 18:07:54 | Instrument ID: | A13 | | |
| Lims ID: | MB 320-410906/1-A | | | | |
| Client ID: | | | | | |
| Operator ID: | SACINSTLCMS01 | ALS Bottle#: | 32 | Worklist Smp#: | 2 |
| Injection Vol: | 20.0 ul | Dil. Factor: | 1.0000 | | |
| Method: | PFAS_A13 | Limit Group: | LC PFC ICAL | | |
| Column: | Gemini C18 3um 3 x 100mm ( 3.00 mm) | Detector | EXP1 | | |

## 41 NMeFOSAA, CAS: 2355-31-9

Signal: 1

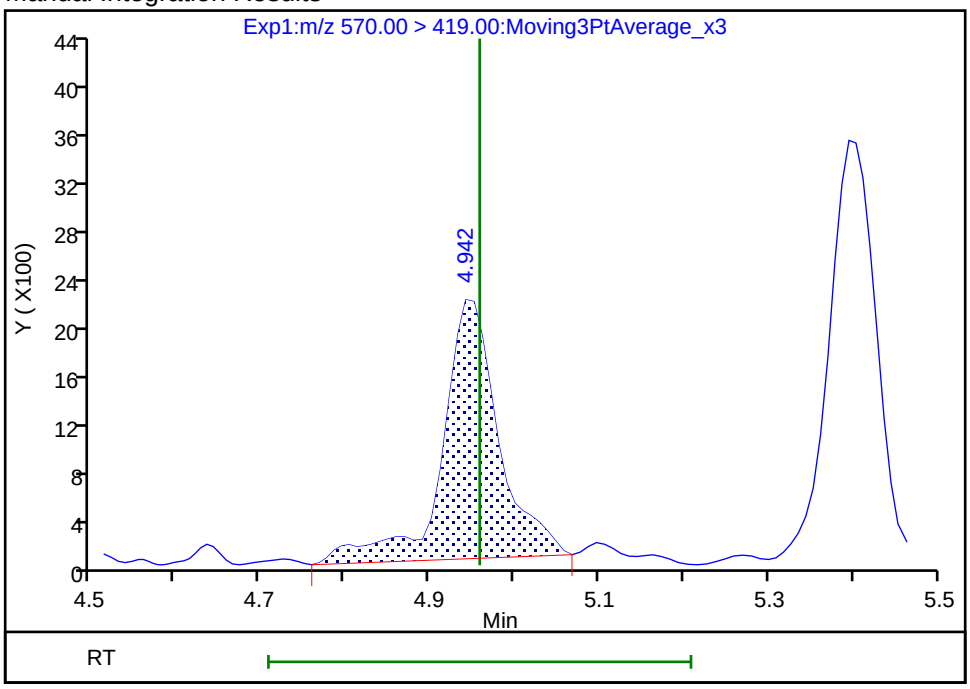
Processing Integration Results

RT: 4.94
Area: 11674
Amount: 0.006647
Amount Units: ng/ml




Manual Integration Results

RT: 4.94
Area: 10129
Amount: 0.005768
Amount Units: ng/ml




Reviewer: mongkols, 11-Sep-2020 08:38:03
Audit Action: Manually Integrated Audit Reason: Baseline

Eurofins TestAmerica, Sacramento

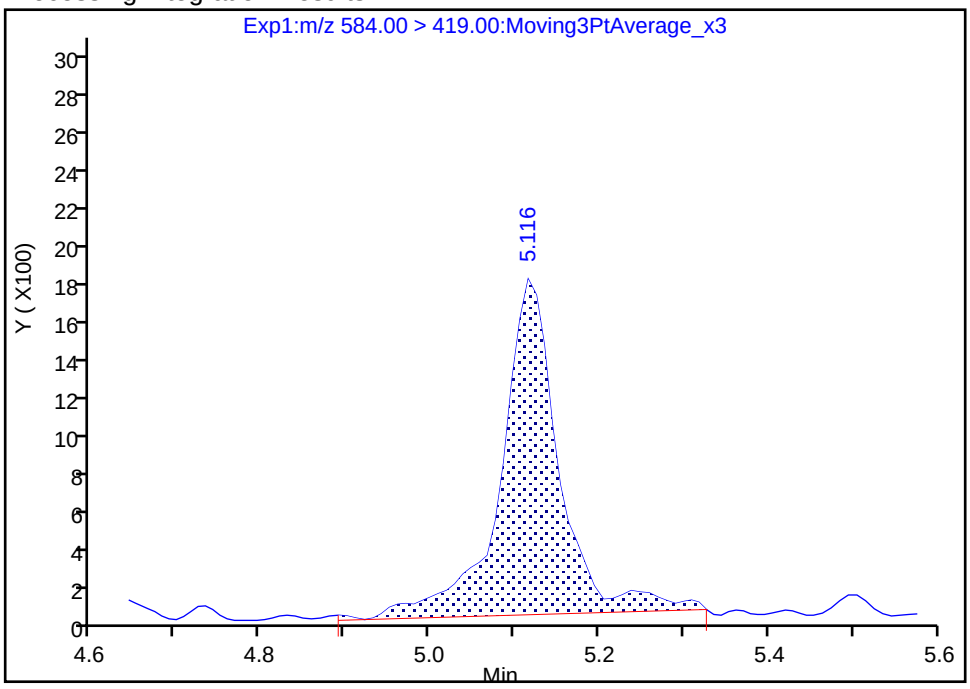
| | | | | | |
|---|---|---|---|---|---|
| Data File: | \\chromfs\Sacramento\ChromData\A13\20200910-103052.b\2020.09.10_A13_PFC_A_059.d | | | | |
| Injection Date: | 10-Sep-2020 18:07:54 | Instrument ID: | A13 | | |
| Lims ID: | MB 320-410906/1-A | | | | |
| Client ID: | | | | | |
| Operator ID: | SACINSTLCMS01 | ALS Bottle#: | 32 | Worklist Smp#: | 2 |
| Injection Vol: | 20.0 ul | Dil. Factor: | 1.0000 | | |
| Method: | PFAS_A13 | Limit Group: | LC PFC ICAL | | |
| Column: | Gemini C18 3um 3 x 100mm ( 3.00 mm) | Detector | EXP1 | | |

## 48 NEtFOSA, CAS: 2991-50-6

Signal: 1

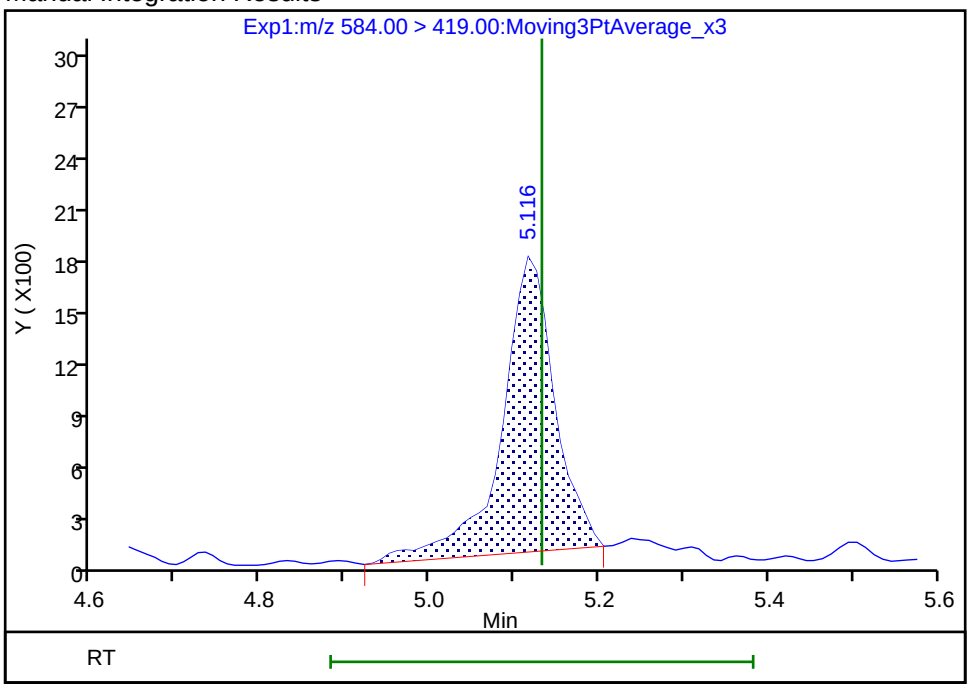
Processing Integration Results

RT: 5.12
Area: 8561
Amount: 0.005060
Amount Units: ng/ml




Manual Integration Results

RT: 5.12
Area: 7452
Amount: 0.004404
Amount Units: ng/ml




Reviewer: mongkols, 11-Sep-2020 08:38:11
Audit Action: Manually Integrated Audit Reason: Baseline

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento  Job No.: 460-217659-1

SDG No.:

Client Sample ID:  Lab Sample ID: CCB 320-410989/1

Matrix: Water  Lab File ID: 2020.09.10_A13_PFC_A_004.d

Analysis Method: 537 (modified)  Date Collected:

Extraction Method:  Date Extracted:

Sample wt/vol: 1(mL)  Date Analyzed: 09/10/2020 10:36

Con. Extract Vol.:  Dilution Factor: 1

Injection Volume: 20(uL)  GC Column: GeminiC18 3x100 ID: 3(mm)

% Moisture:  GPC Cleanup:(Y/N) N

Analysis Batch No.: 410989  Units: ng/mL

| CAS NO. | COMPOUND NAME | RESULT | Q | RL | MDL |
|---|---|---|---|---|---|
| 375-22-4 | Perfluorobutanoic acid (PFBA) | 0.0088 | U | 0.050 | 0.0088 |
| 2706-90-3 | Perfluoropentanoic acid (PFPeA) | 0.012 | U | 0.050 | 0.012 |
| 307-24-4 | Perfluorohexanoic acid (PFHxA) | 0.015 | U | 0.050 | 0.015 |
| 375-85-9 | Perfluoroheptanoic acid (PFHpA) | 0.0063 | U | 0.050 | 0.0063 |
| 335-67-1 | Perfluorooctanoic acid (PFOA) | 0.021 | U | 0.050 | 0.021 |
| 375-95-1 | Perfluorononanoic acid (PFNA) | 0.0068 | U | 0.050 | 0.0068 |
| 335-76-2 | Perfluorodecanoic acid (PFDA) | 0.0078 | U | 0.050 | 0.0078 |
| 2058-94-8 | Perfluoroundecanoic acid (PFUnA) | 0.028 | U | 0.050 | 0.028 |
| 307-55-1 | Perfluorododecanoic acid (PFDoA) | 0.014 | U | 0.050 | 0.014 |
| 72629-94-8 | Perfluorotridecanoic acid (PFTriA) | 0.033 | U | 0.050 | 0.033 |
| 376-06-7 | Perfluorotetradecanoic acid (PFTeA) | 0.0073 | U | 0.050 | 0.0073 |
| 375-73-5 | Perfluorobutanesulfonic acid (PFBS) | 0.0050 | U | 0.050 | 0.0050 |
| 355-46-4 | Perfluorohexanesulfonic acid (PFHxS) | 0.00764 | J | 0.050 | 0.0043 |
| 375-92-8 | Perfluoroheptanesulfonic Acid (PFHpS) | 0.0048 | U | 0.050 | 0.0048 |
| 1763-23-1 | Perfluorooctanesulfonic acid (PFOS) | 0.014 | U | 0.050 | 0.014 |
| 335-77-3 | Perfluorodecanesulfonic acid (PFDS) | 0.0080 | U | 0.050 | 0.0080 |
| 754-91-6 | Perfluorooctanesulfonamide (FOSA) | 0.0088 | U | 0.050 | 0.0088 |
| 2355-31-9 | N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA) | 0.078 | U | 0.50 | 0.078 |
| 2991-50-6 | N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA) | 0.048 | U | 0.50 | 0.048 |
| 27619-97-2 | 6:2 FTS | 0.050 | U | 0.50 | 0.050 |
| 39108-34-4 | 8:2 FTS | 0.050 | U | 0.50 | 0.050 |

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento  Job No.: 460-217659-1

SDG No.:

Client Sample ID:  Lab Sample ID: CCB 320-410989/1

Matrix: Water  Lab File ID: 2020.09.10_A13_PFC_A_004.d

Analysis Method: 537 (modified)  Date Collected:

Extraction Method:  Date Extracted:

Sample wt/vol: 1(mL)  Date Analyzed: 09/10/2020 10:36

Con. Extract Vol.:  Dilution Factor: 1

Injection Volume: 20(uL)  GC Column: GeminiC18 3x100 ID: 3(mm)

% Moisture:  GPC Cleanup:(Y/N) N

Analysis Batch No.: 410989  Units: ng/mL

| CAS NO. | ISOTOPE DILUTION | %REC | Q | LIMITS |
|---|---|---|---|---|
| STL00992 | 13C4 PFBA | 111 | | 25-150 |
| STL01893 | 13C5 PFPeA | 106 | | 25-150 |
| STL00993 | 13C2 PFHxA | 106 | | 25-150 |
| STL01892 | 13C4 PFHpA | 108 | | 25-150 |
| STL00990 | 13C4 PFOA | 102 | | 25-150 |
| STL00995 | 13C5 PFNA | 108 | | 25-150 |
| STL00996 | 13C2 PFDA | 105 | | 25-150 |
| STL00997 | 13C2 PFUnA | 104 | | 25-150 |
| STL00998 | 13C2 PFDoA | 103 | | 25-150 |
| STL02116 | 13C2 PFTeDA | 101 | | 25-150 |
| STL02337 | 13C3 PFBS | 118 | | 25-150 |
| STL00994 | 18O2 PFHxS | 118 | | 25-150 |
| STL00991 | 13C4 PFOS | 113 | | 25-150 |
| STL01056 | 13C8 FOSA | 114 | | 25-150 |
| STL02118 | d3-NMeFOSAA | 107 | | 25-150 |
| STL02117 | d5-NEtFOSAA | 116 | | 25-150 |
| STL02279 | M2-6:2 FTS | 107 | | 25-150 |
| STL02280 | M2-8:2 FTS | 115 | | 25-150 |

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\A13\20200910-103012.b\2020.09.10_A13_PFC_A_004.d
Lims ID: CCB
Client ID:
Sample Type: CCB
Inject. Date: 10-Sep-2020 10:36:46 ALS Bottle#: 50 Worklist Smp#: 1
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Sample Info: CCB (53)
Misc. Info.: Plate: 1 Rack: 1
Operator ID: SACINSTLCMS01 Instrument ID: A13

Method: \\chromfs\Sacramento\ChromData\A13\20200910-103012.b\PFAS_A13.m
Limit Group: LC PFC ICAL
Last Update: 10-Sep-2020 11:08:38 Calib Date: 08-Sep-2020 18:58:15
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\A13\20200908-102913.b\2020.09.08_A13_PFC_ICALX_010.d

Column 1 : Gemini C18 3um 3 x 100mm ( 3.00 mm) Det: EXP1
Process Host: CTX1047

First Level Reviewer: hsuw Date: 10-Sep-2020 11:08:38
Ratio Calibration: CCV Sample: \\chromfs\Sacramento\ChromData\A13\20200909-102987.b\2020.09.09_A13_PFC_B_025.d

| Signal | RT | EXP RT | DLT RT | REL RT | Response | Amount ng/ml | Ratio(Limits) | %Rec | S/N | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| D 1 13C4 PFBA | | | | | | | | | | |
| 217.00 > 172.00 | 2.483 | 2.482 | 0.001 | 0.609 | 10087930 | 2.78 | | 111 | 12029 | |
| D 4 13C5 PFPeA | | | | | | | | | | |
| 267.90 > 223.00 | 2.878 | 2.878 | 0.0 | 0.706 | 7506032 | 2.66 | | 106 | 13996 | |
| 5 Perfluoropentanoic acid | | | | | | | | | | |
| 262.90 > 219.00 | 2.878 | 2.878 | 0.0 | 1.000 | 13309 | 0.004313 | | | 1.3 | |
| D 14 13C3 PFBS | | | | | | | | | | |
| 301.90 > 80.00 | 2.913 | 2.913 | 0.0 | 0.715 | 9748363 | 2.75 | | 118 | 17822 | |
| D 8 M2-4:2 FTS | | | | | | | | | | |
| 329.00 > 81.00 | 3.226 | 3.225 | 0.001 | 0.791 | 2167168 | 2.49 | | 107 | 1240 | |
| D 9 13C2 PFHxA | | | | | | | | | | |
| 315.00 > 270.00 | 3.268 | 3.268 | 0.0 | 0.802 | 9254851 | 2.65 | | 106 | 21538 | |
| D 13 13C3 HFPO-DA | | | | | | | | | | |
| 287.00 > 169.00 | 3.388 | 3.388 | 0.0 | 0.831 | 6625863 | 2.65 | | 106 | 8337 | |
| 16 Perfluoroheptanoic acid | | | | | | | | | | M |
| 363.00 > 319.00 | 3.665 | 3.675 | -0.010 | 0.997 | 7467 | 0.001988 | Target=3.83 | | 1.2 | M |
| 363.00 > 169.00 | 3.675 | 3.675 | 0.0 | 1.000 | 2571 | | 2.90(1.91-5.74) | | 1.6 | |
| D 15 13C4 PFHpA | | | | | | | | | | |
| 367.00 > 322.00 | 3.675 | 3.675 | 0.0 | 0.902 | 9292420 | 2.70 | | 108 | 12688 | |
| D 17 18O2 PFHxS | | | | | | | | | | |
| 403.00 > 84.00 | 3.675 | 3.675 | 0.0 | 0.902 | 6509748 | 2.80 | | 118 | 52730 | |
| 18 Perfluorohexanesulfonic acid | | | | | | | | | | |
| 399.00 > 80.00 | 3.685 | 3.675 | 0.010 | 1.003 | 23392 | 0.007640 | Target=3.06 | | 30.2 | |
| 399.00 > 99.00 | 3.685 | 3.675 | 0.010 | 1.003 | 6661 | | 3.51(1.53-4.58) | | 6.6 | |
| D 20 M2-6:2 FTS | | | | | | | | | | |
| 429.00 > 81.00 | 4.051 | 4.050 | 0.001 | 0.994 | 2544054 | 2.54 | | 107 | 3105 | |
| 21 6:2 FTS | | | | | | | | | | |
| 427.00 > 407.00 | 4.051 | 4.050 | 0.001 | 1.000 | 23891 | 0.009267 | | | 51.3 | |

| Signal | RT | EXP RT | DLT RT | REL RT | Response | Amount ng/ml | Ratio(Limits) | %Rec | S/N | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| $ 23 13C8 PFOA | | | | | | | | | | |
| 421.00 > 376.00 | 4.067 | 4.059 | 0.008 | 0.998 | 9047761 | 2.38 | | 97.3 | 5636 | |
| 26 Perfluorooctanoic acid | | | | | | | | | | |
| 413.00 > 369.00 | 4.075 | 4.067 | 0.008 | 1.000 | 42620 | 0.009682 | Target=2.96 | | 7.2 | |
| 413.00 > 169.00 | 4.084 | 4.067 | 0.017 | 1.002 | 10294 | | 4.14(1.48-4.44) | | 14.1 | |
| * 25 13C2 PFOA | | | | | | | | | | |
| 415.00 > 370.00 | 4.075 | 4.067 | 0.008 | | 10666800 | 2.50 | | | 18421 | |
| D 24 13C4 PFOA | | | | | | | | | | |
| 417.00 > 372.00 | 4.075 | 4.067 | 0.008 | 1.000 | 10757172 | 2.56 | | 102 | 8100 | |
| $ 27 13C8 PFOS | | | | | | | | | | |
| 507.00 > 99.00 | 4.434 | 4.426 | 0.008 | 1.088 | 2377517 | 2.68 | | 112 | 1984 | |
| D 29 13C4 PFOS | | | | | | | | | | |
| 503.00 > 80.00 | 4.434 | 4.435 | -0.001 | 1.088 | 4484493 | 2.70 | | 113 | 8139 | |
| D 31 13C5 PFNA | | | | | | | | | | |
| 468.00 > 423.00 | 4.451 | 4.443 | 0.008 | 1.092 | 10510046 | 2.71 | | 108 | 39183 | |
| D 34 13C8 FOSA | | | | | | | | | | |
| 506.00 > 78.00 | 4.743 | 4.743 | 0.0 | 1.164 | 6805883 | 2.86 | | 114 | 6446 | |
| 33 Perfluorooctanesulfonamide | | | | | | | | | | |
| 498.00 > 78.00 | 4.734 | 4.743 | -0.009 | 0.998 | 4295 | 0.001681 | | | 17.6 | |
| D 37 13C2 PFDA | | | | | | | | | | |
| 515.00 > 470.00 | 4.813 | 4.804 | 0.009 | 1.181 | 12385520 | 2.63 | | 105 | 21585 | |
| D 38 M2-8:2 FTS | | | | | | | | | | |
| 529.00 > 81.00 | 4.813 | 4.813 | 0.0 | 1.181 | 3643722 | 2.75 | | 115 | 3549 | |
| 39 8:2 FTS | | | | | | | | | | |
| 527.00 > 507.00 | 4.804 | 4.813 | -0.009 | 0.998 | 2825 | 0.000751 | | | 24.8 | |
| D 40 d3-NMeFOSAA | | | | | | | | | | |
| 573.00 > 419.00 | 4.981 | 4.971 | 0.010 | 1.222 | 6502775 | 2.68 | | 107 | 11197 | |
| 41 NMeFOSAA | | | | | | | | | | |
| 570.00 > 419.00 | 5.000 | 4.971 | 0.029 | 1.004 | 1261 | 0.000602 | | | 0.4 | |
| D 44 13C2 PFUnA | | | | | | | | | | |
| 565.00 > 520.00 | 5.135 | 5.135 | 0.0 | 1.260 | 12015890 | 2.61 | | 104 | 8820 | |
| D 46 d5-NEtFOSAA | | | | | | | | | | |
| 589.00 > 419.00 | 5.144 | 5.135 | 0.009 | 1.262 | 6828057 | 2.91 | | 116 | 3486 | |
| D 43 d7-N-MeFOSE-M | | | | | | | | | | |
| 623.00 > 59.00 | 5.184 | 5.184 | 0.0 | 1.272 | 7125799 | 11.9 | | 95.6 | 1818 | |
| D 49 d-N-MeFOSA-M | | | | | | | | | | |
| 515.00 > 169.00 | 5.205 | 5.205 | 0.0 | 1.277 | 3170535 | 2.83 | | 113 | 52.5 | |
| D 52 d9-N-EtFOSE-M | | | | | | | | | | |
| 639.00 > 59.00 | 5.353 | 5.362 | -0.009 | 1.314 | 7942882 | 11.4 | | 90.8 | 2491 | |
| D 54 d-N-EtFOSA-M | | | | | | | | | | |
| 531.00 > 169.00 | 5.379 | 5.379 | 0.0 | 1.320 | 2984738 | 2.79 | | 111 | 218 | |
| D 56 13C2 PFDoA | | | | | | | | | | |
| 615.00 > 570.00 | 5.429 | 5.429 | 0.0 | 1.332 | 12707189 | 2.57 | | 103 | 6139 | |
| 57 Perfluorododecanoic acid | | | | | | | | | | |
| 613.00 > 569.00 | 5.437 | 5.429 | 0.008 | 1.002 | 8712 | 0.001879 | Target=9.32 | | 5.7 | |
| 613.00 > 169.00 | 5.429 | 5.429 | 0.0 | 1.000 | 1544 | | 5.64(4.66-13.98) | | 8.1 | |

| Signal | RT | EXP RT | DLT RT | REL RT | Response | Amount ng/ml | Ratio(Limits) | %Rec | S/N | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| 62 Perfluorotetradecanoic acid | | | | | | | | | | |
| 713.00 > 669.00 | 5.950 | 5.950 | 0.0 | 1.000 | 17299 | 0.003549 | Target=11.32 | | 16.8 | |
| 713.00 > 219.00 | 5.950 | 5.950 | 0.0 | 1.000 | 1791 | | 9.66(5.66-16.98) | | 20.3 | |
| D 61 13C2 PFTeDA | | | | | | | | | | |
| 715.00 > 670.00 | 5.950 | 5.950 | 0.0 | 1.460 | 12379535 | 2.53 | | 101 | 11080 | |
| D 64 13C2 PFHxDA | | | | | | | | | | |
| 815.00 > 770.00 | 6.435 | 6.435 | 0.0 | 1.579 | 12647823 | 2.49 | | 99.4 | 5380 | |
| 63 Perfluorohexadecanoic acid | | | | | | | | | | |
| 813.00 > 769.00 | 6.435 | 6.435 | 0.0 | 1.000 | 126950 | 0.001715 | Target=9.98 | | 41.7 | |
| 813.00 > 169.00 | 6.435 | 6.435 | 0.0 | 1.000 | 15117 | | 8.40(4.99-14.97) | | 75.5 | |

## QC Flag Legend

Review Flags

M - Manually Integrated

## Reagents:

LCPFC_LL0_00053 Amount Added: 1.00 Units: mL

Report Date: 10-Sep-2020 11:08:40 Chrom Revision: 2.3 09-Sep-2020 15:12:58

Eurofins TestAmerica, Sacramento

Data File: \\chromfs\Sacramento\ChromData\A13\20200910-103012.b\2020.09.10_A13_PFC_A_004.d

Injection Date: 10-Sep-2020 10:36:46 Instrument ID: A13

Lims ID: CCB

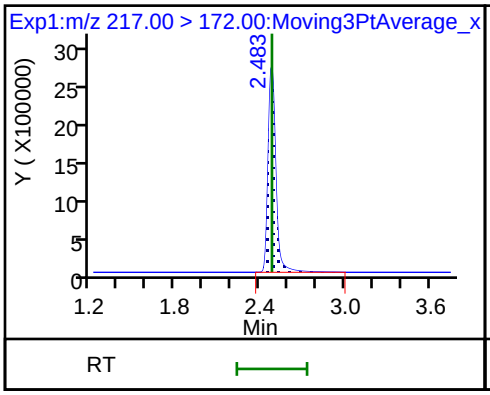
Client ID:

Operator ID: SACINSTLCMS01 ALS Bottle#: 50 Worklist Smp#: 1

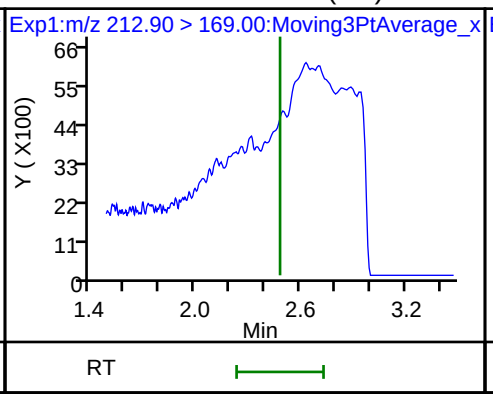
Injection Vol: 20.0 ul Dil. Factor: 1.0000

Method: PFAS_A13 Limit Group: LC PFC ICAL

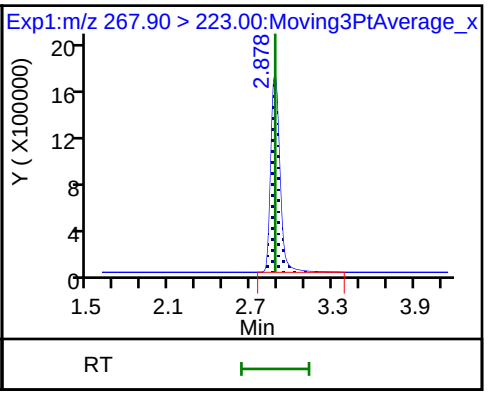
D 1 13C4 PFBA



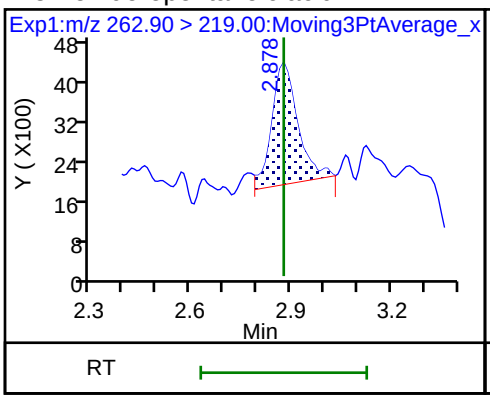

2 Perfluorobutanoic acid (ND)



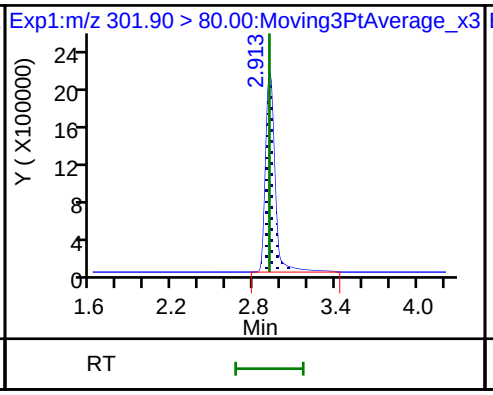

D 4 13C5 PFPeA



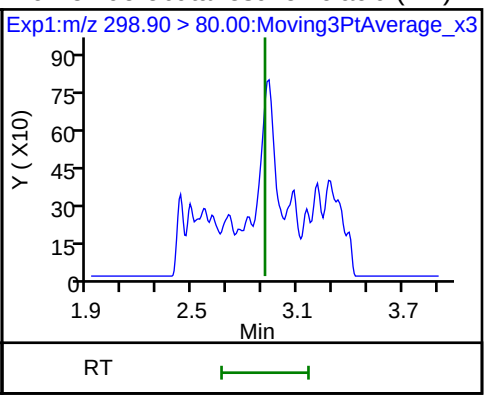

5 Perfluoropentanoic acid



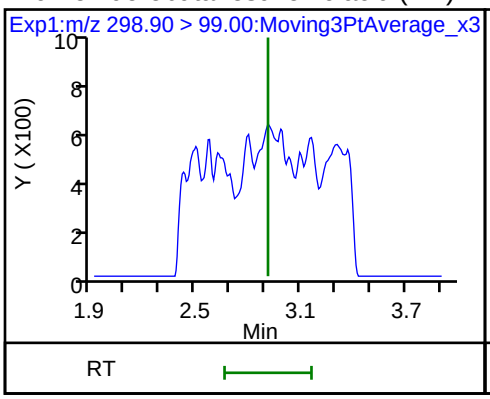

D 14 13C3 PFBS



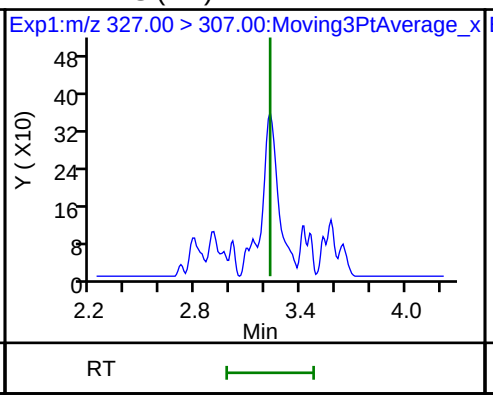

6 Perfluorobutanesulfonic acid (ND)



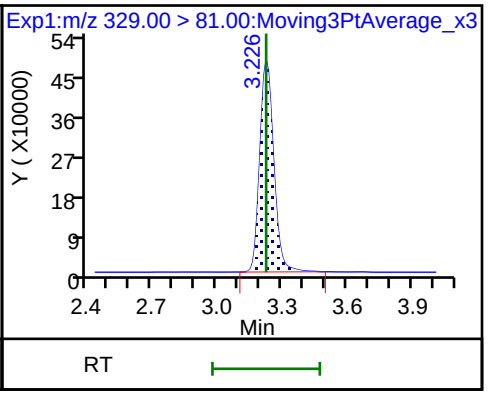

6 Perfluorobutanesulfonic acid (ND)



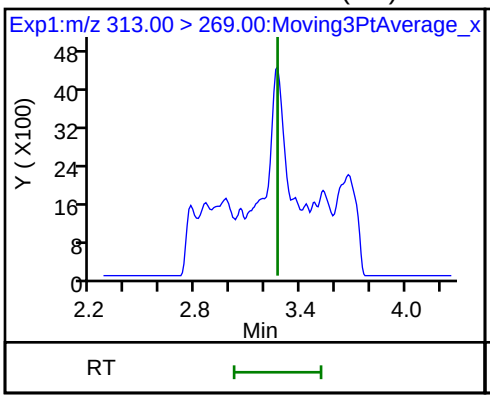

7 4:2 FTS (ND)



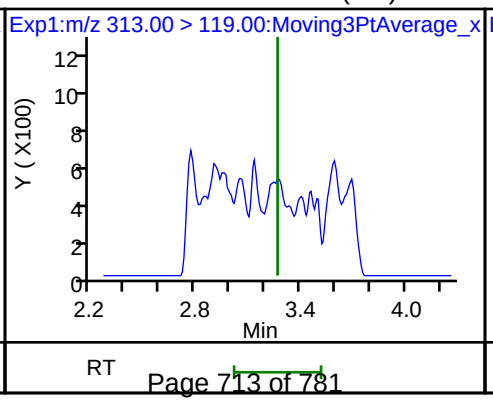

D 8 M2-4:2 FTS



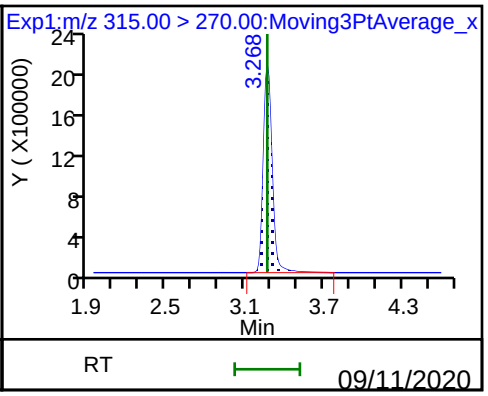

10 Perfluorohexanoic acid (ND)



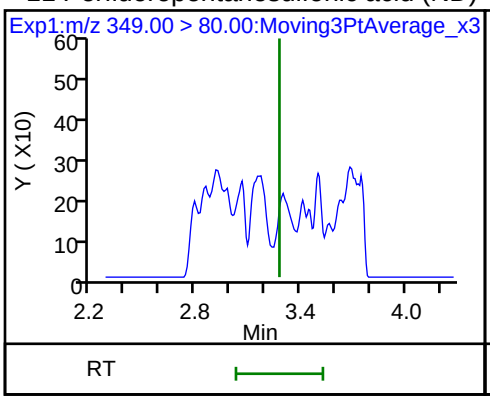

10 Perfluorohexanoic acid (ND)



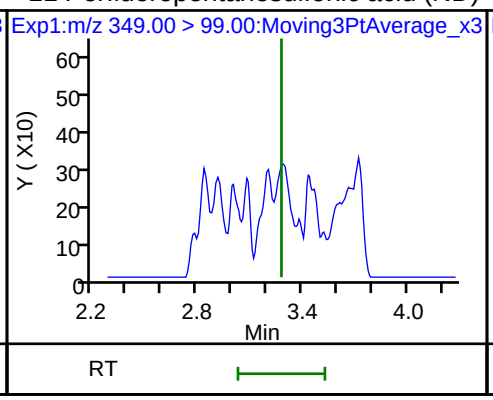

D 9 13C2 PFHxA



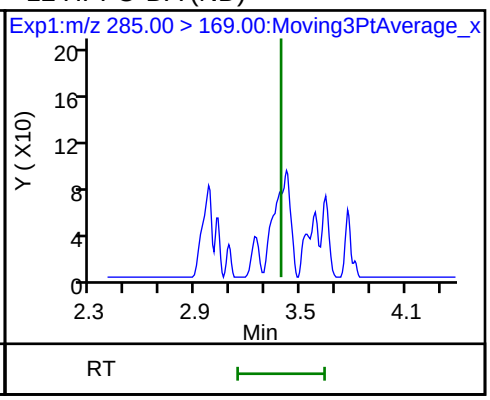
11 Perfluoropentanesulfonic acid (ND)



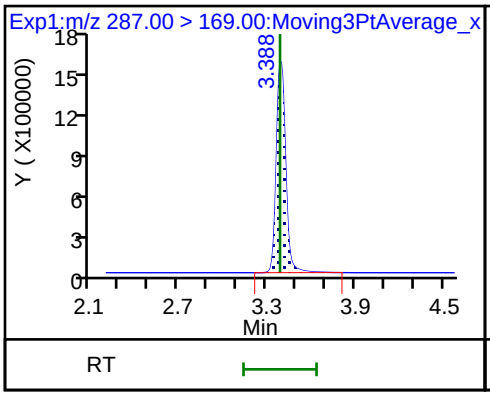

11 Perfluoropentanesulfonic acid (ND)



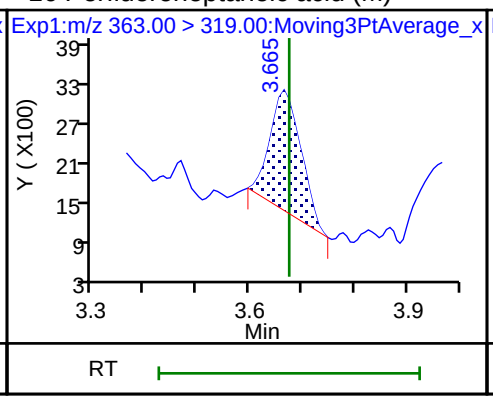

12 HPFO-DA (ND)



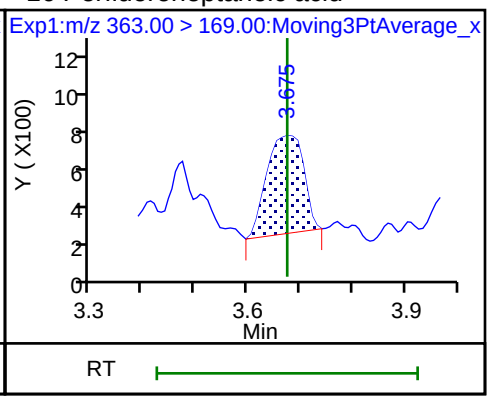

D 13 13C3 HFPO-DA



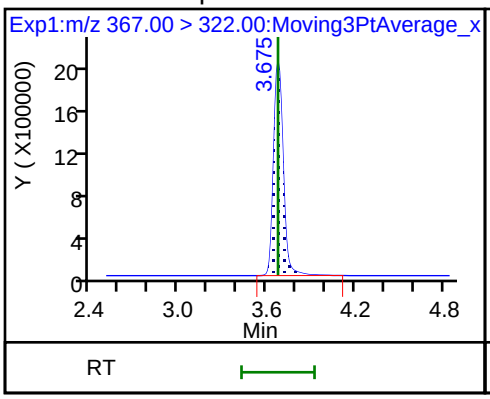

16 Perfluoroheptanoic acid (M)



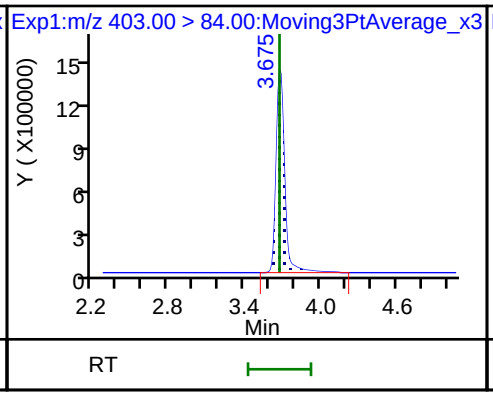

16 Perfluoroheptanoic acid



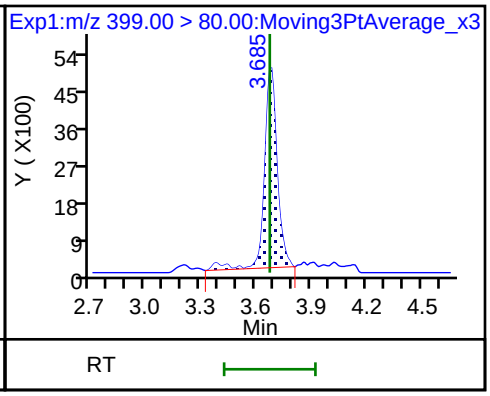

D 15 13C4 PFHpA



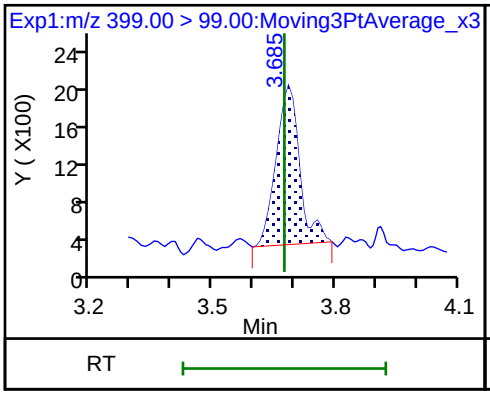

D 17 18O2 PFHxS



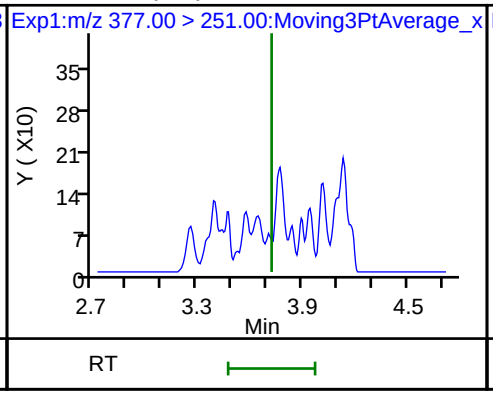

18 Perfluorohexanesulfonic acid



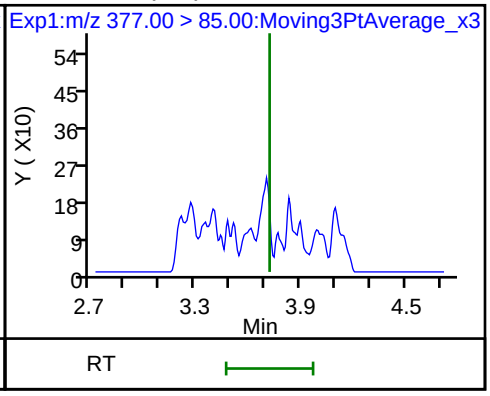

18 Perfluorohexanesulfonic acid



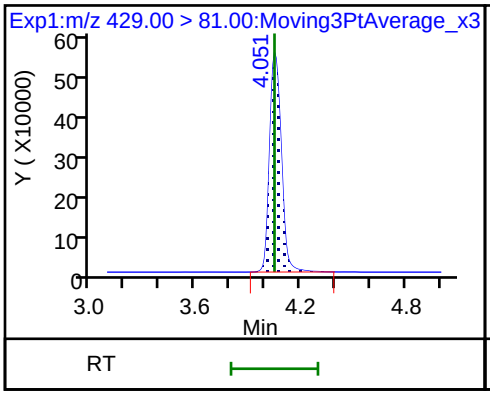

19 DONA (ND)



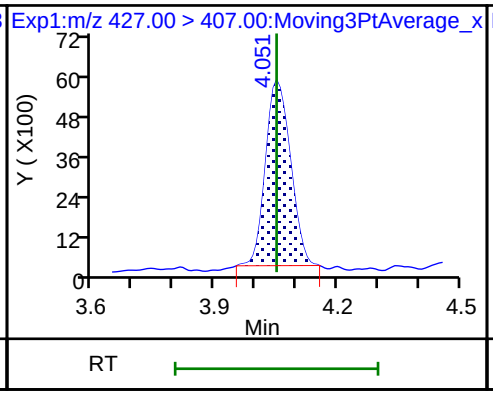

19 DONA (ND)



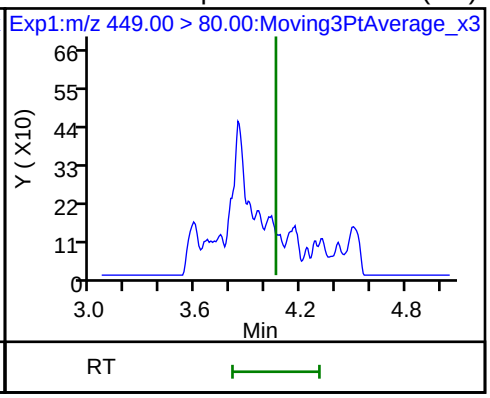
D 20 M2-6:2 FTS



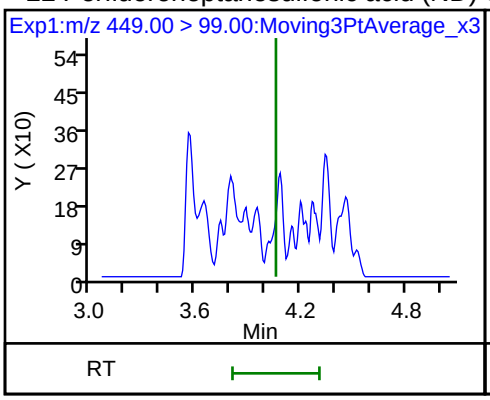

21 6:2 FTS



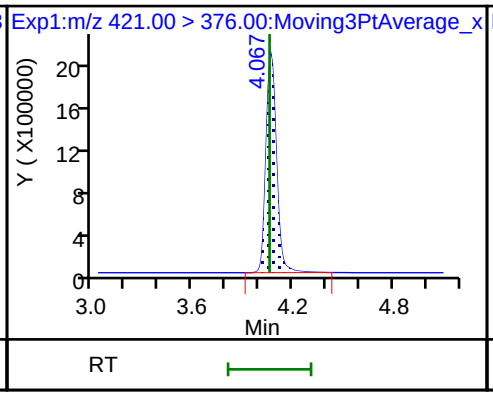

22 Perfluoroheptanesulfonic acid (ND)



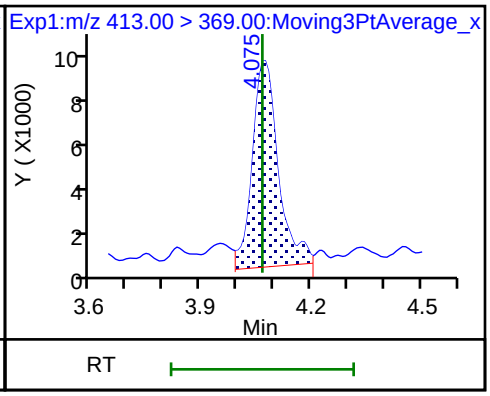

22 Perfluoroheptanesulfonic acid (ND)



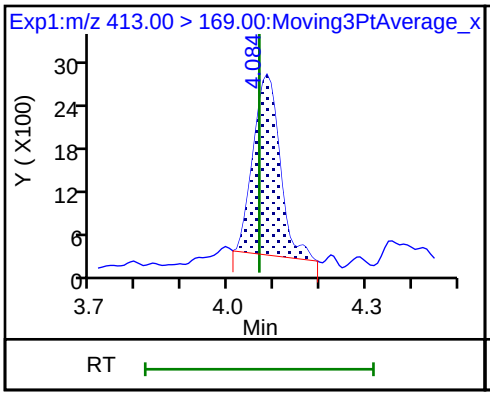

$ 23 13C8 PFOA



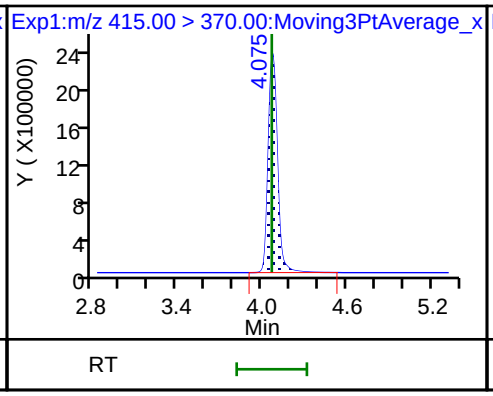

26 Perfluorooctanoic acid



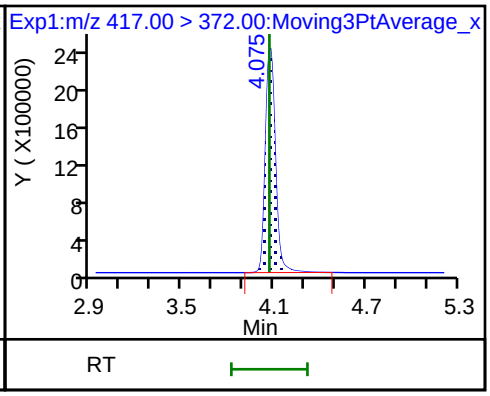

26 Perfluorooctanoic acid



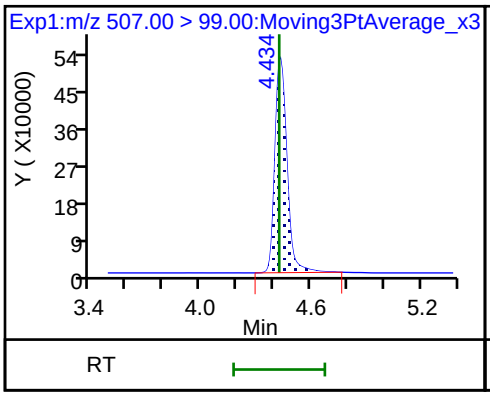

* 25 13C2 PFOA



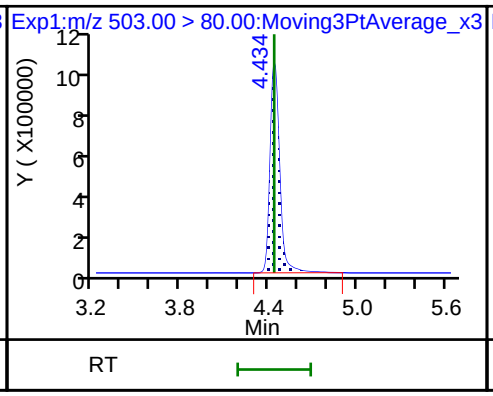

D 24 13C4 PFOA



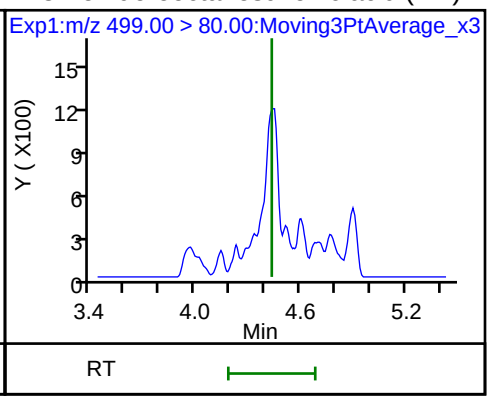

$ 27 13C8 PFOS



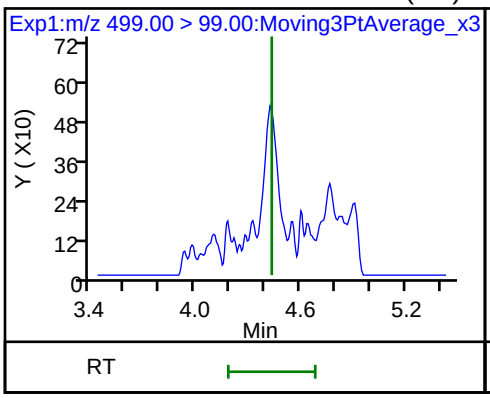

D 29 13C4 PFOS



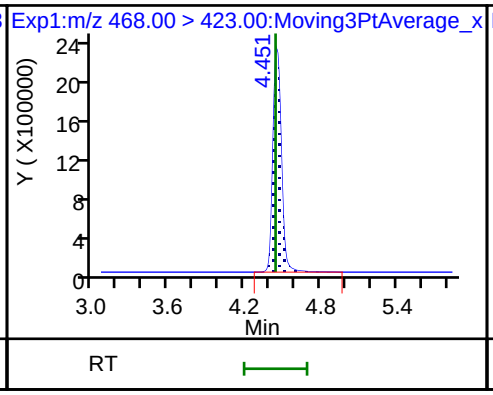

28 Perfluorooctanesulfonic acid (ND)



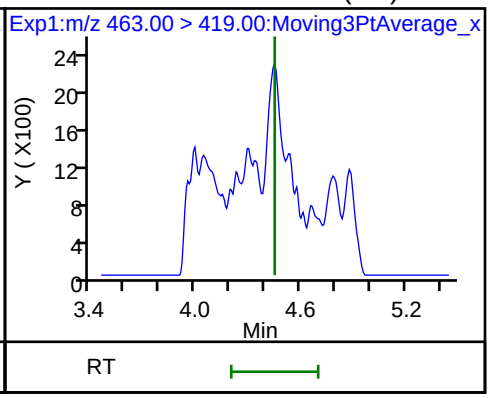
28 Perfluorooctanesulfonic acid (ND)



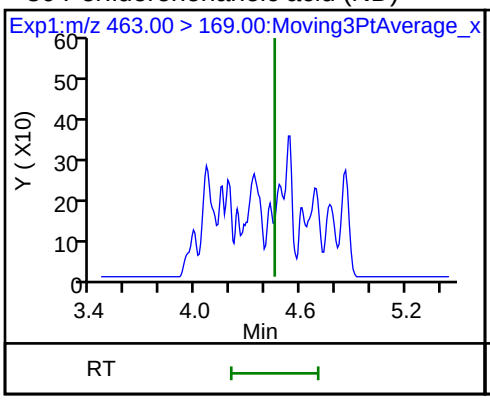

D 31 13C5 PFNA



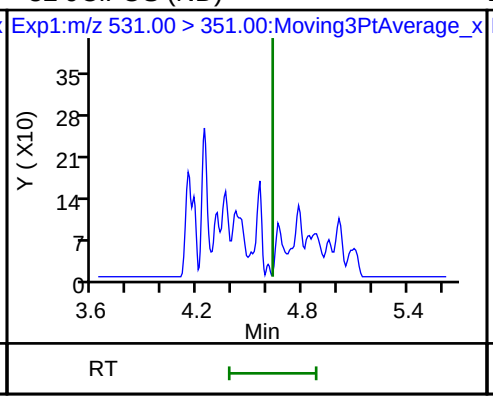

30 Perfluorononanoic acid (ND)



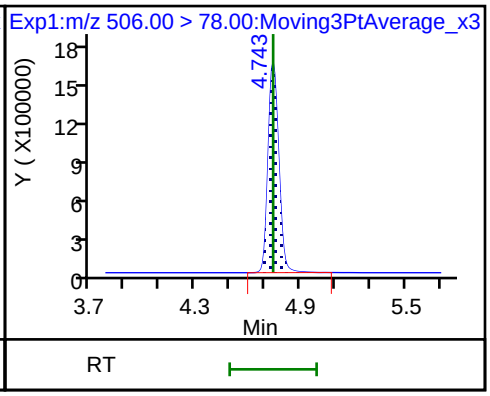

30 Perfluorononanoic acid (ND)



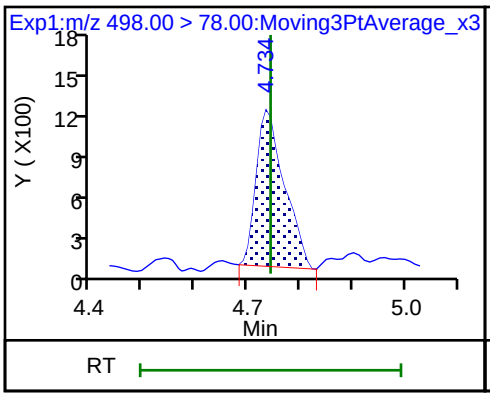

32 9ClFOS (ND)



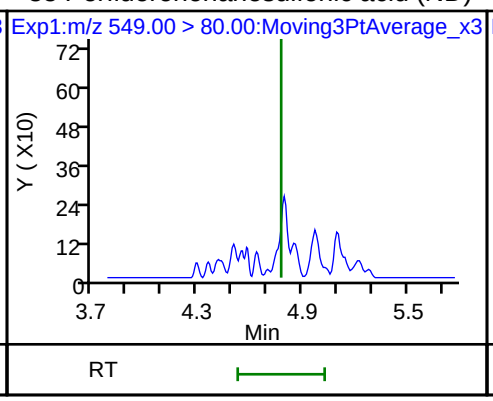

D 34 13C8 FOSA



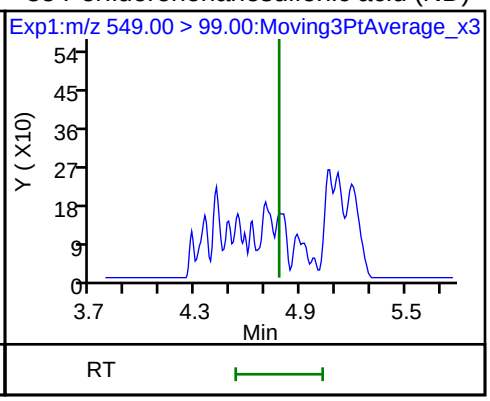

33 Perfluorooctanesulfonamide



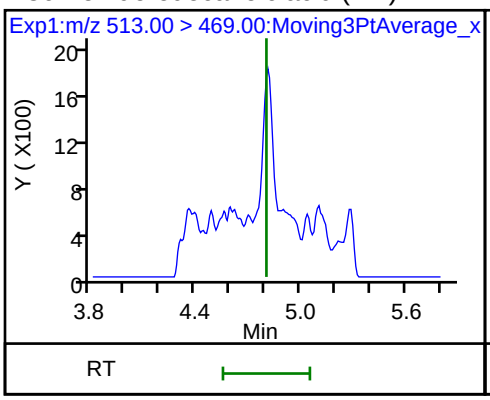

35 Perfluorononanesulfonic acid (ND)



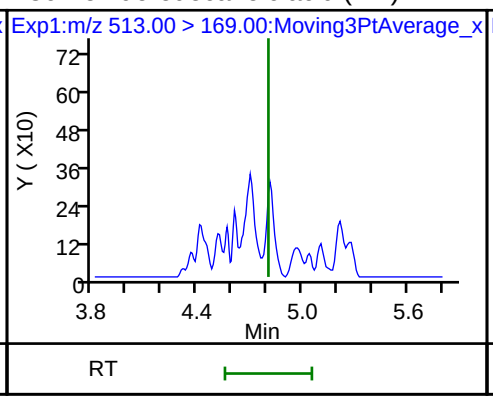

35 Perfluorononanesulfonic acid (ND)



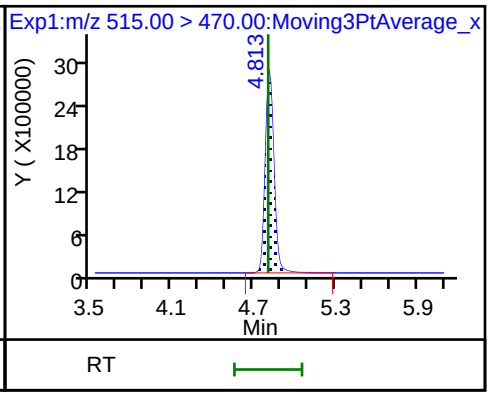

36 Perfluorodecanoic acid (ND)



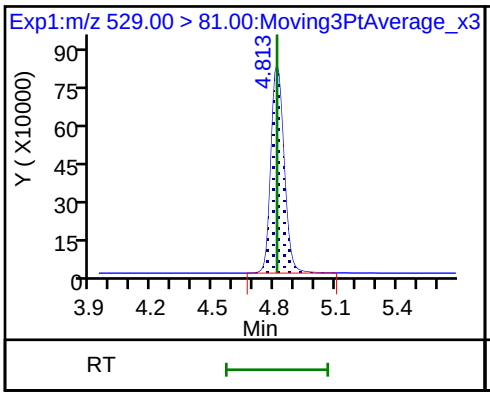

36 Perfluorodecanoic acid (ND)



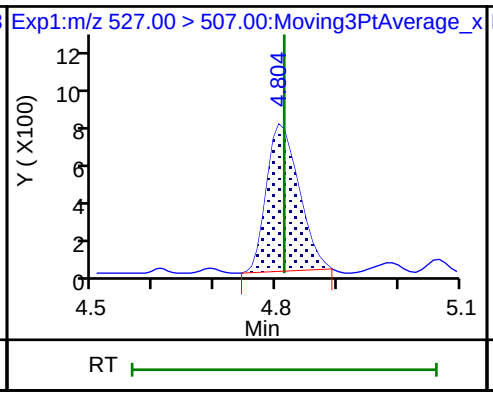

D 37 13C2 PFDA



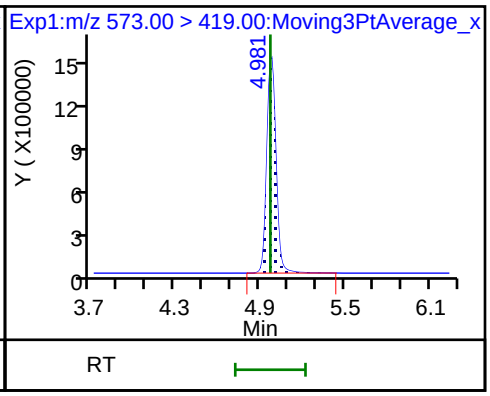
D 38 M2-8:2 FTS



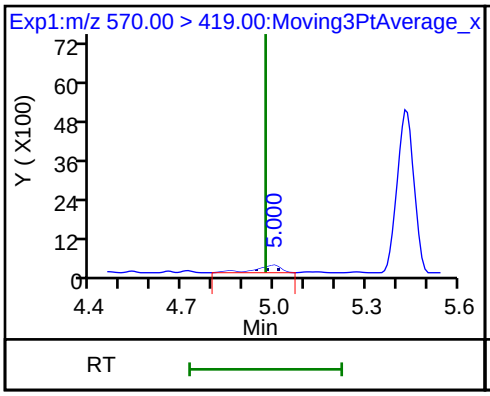

39 8:2 FTS



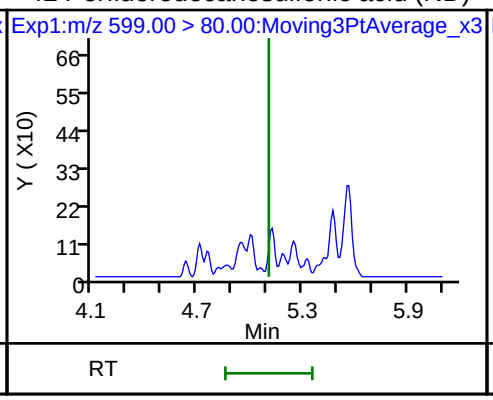

D 40 d3-NMeFOSAA



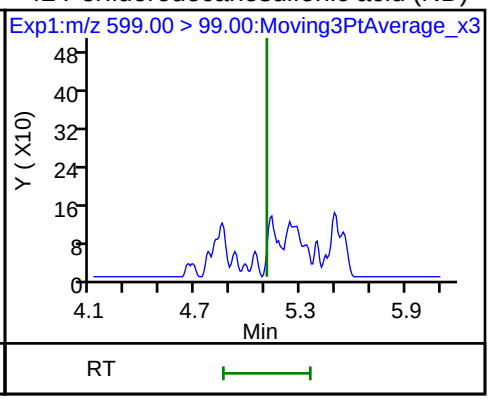

41 NMeFOSAA



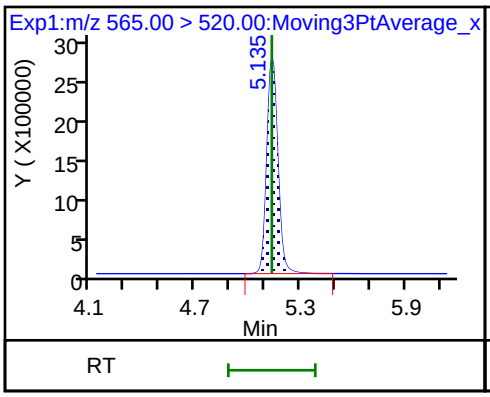

42 Perfluorodecanesulfonic acid (ND)



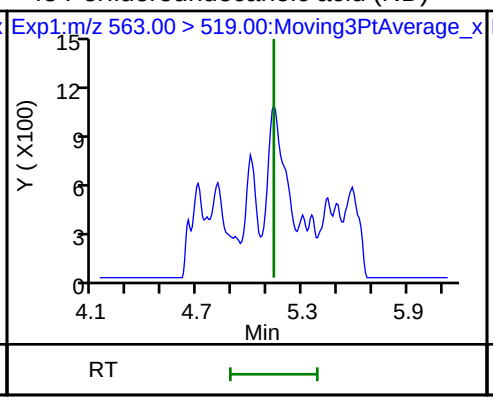

42 Perfluorodecanesulfonic acid (ND)



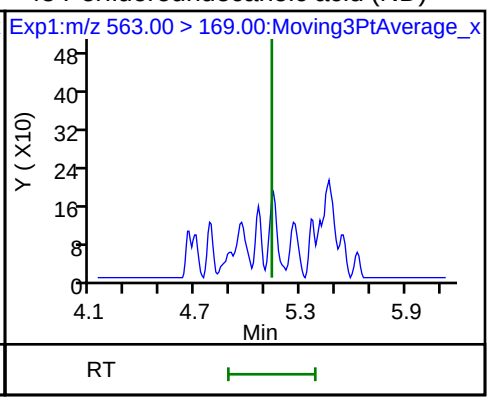

D 44 13C2 PFUnA



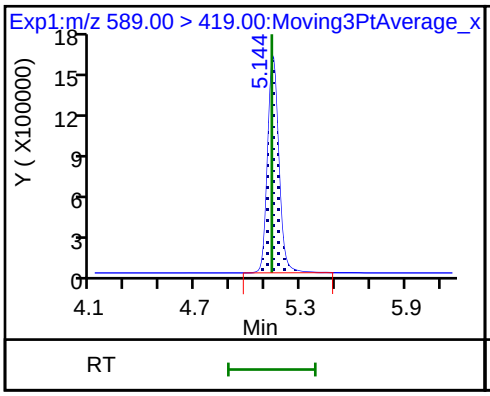

45 Perfluoroundecanoic acid (ND)



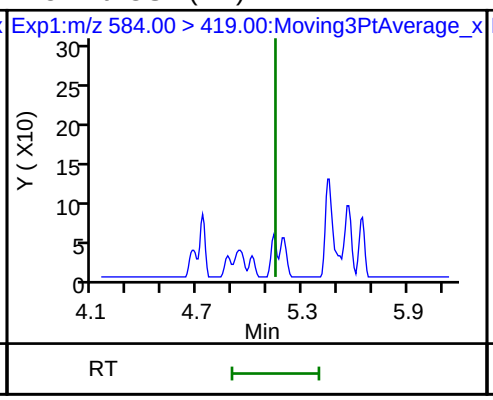

45 Perfluoroundecanoic acid (ND)



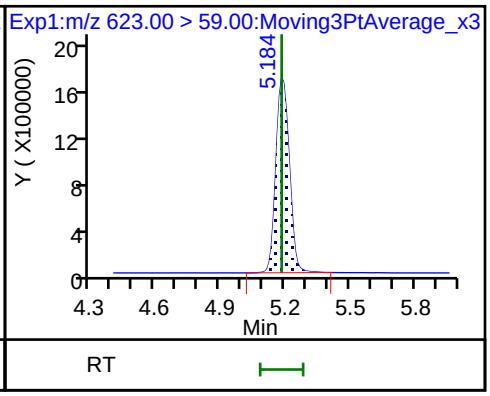

D 46 d5-NEtFOSAA



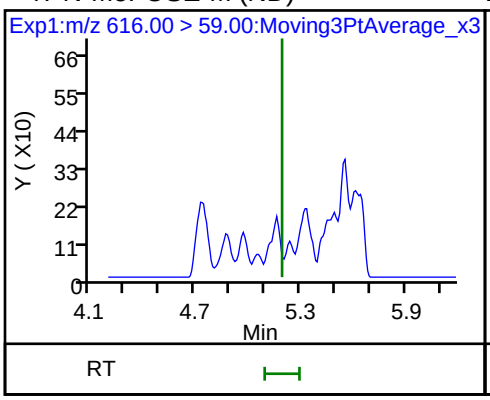

48 NEtFOSA (ND)



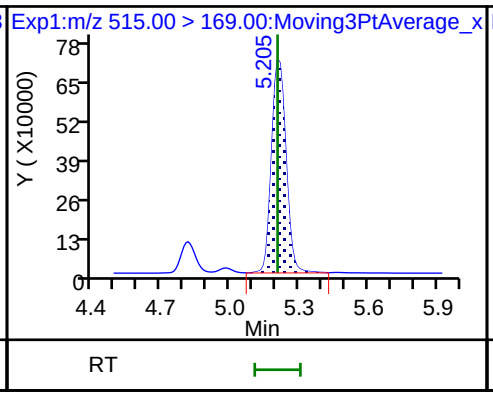

D 43 d7-N-MeFOSE-M



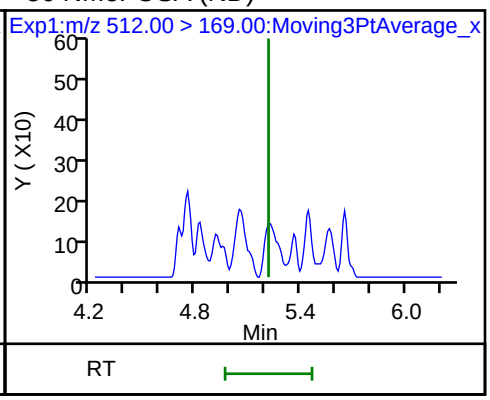
47 N-MeFOSE-M (ND)



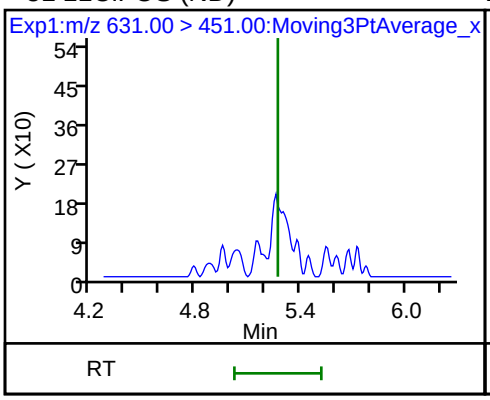

D 49 d-N-MeFOSA-M



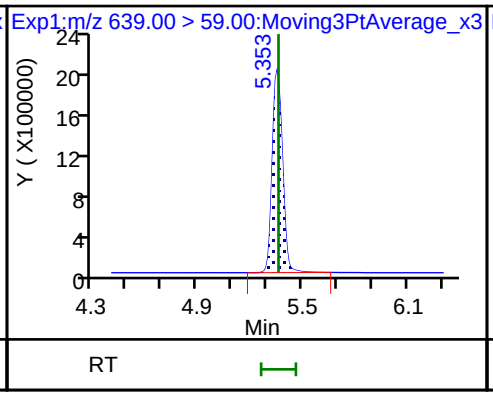

50 NMeFOSA (ND)



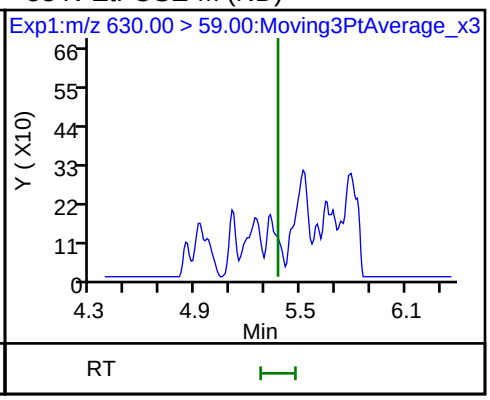

51 11ClFOS (ND)



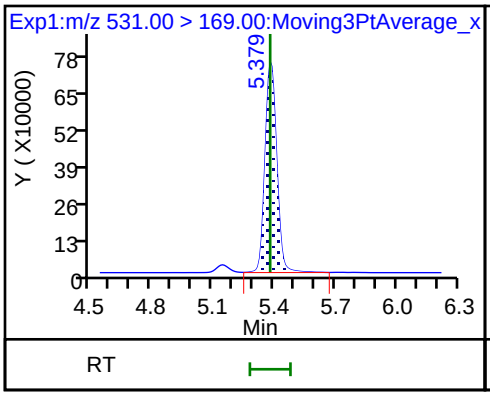

D 52 d9-N-EtFOSE-M



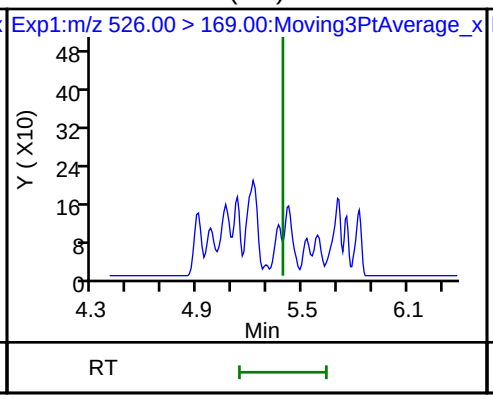

53 N-EtFOSE-M (ND)



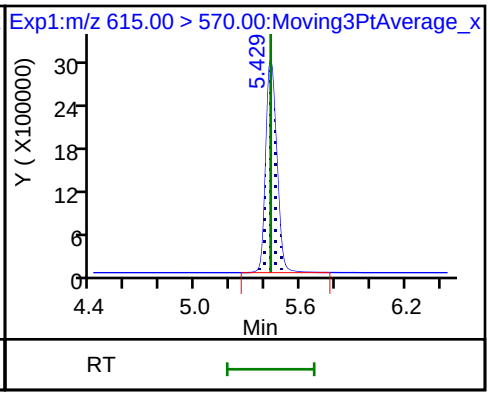

D 54 d-N-EtFOSA-M



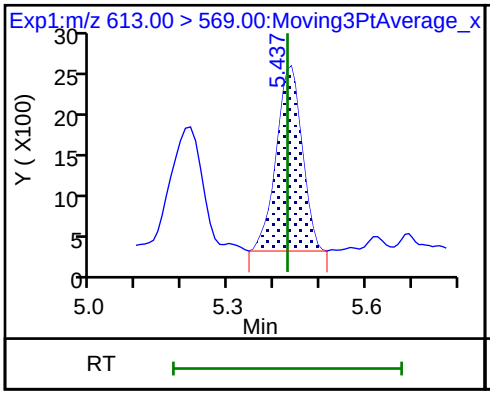

55 N-EtFOSA-M (ND)



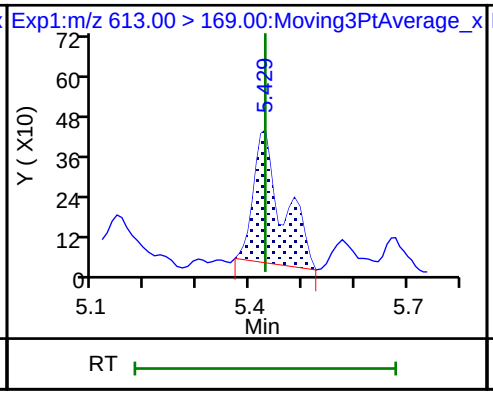

D 56 13C2 PFDoA



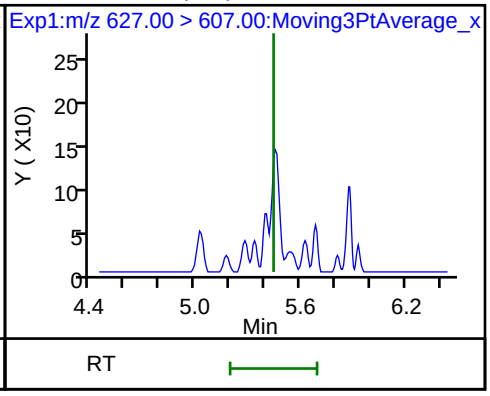

57 Perfluorododecanoic acid



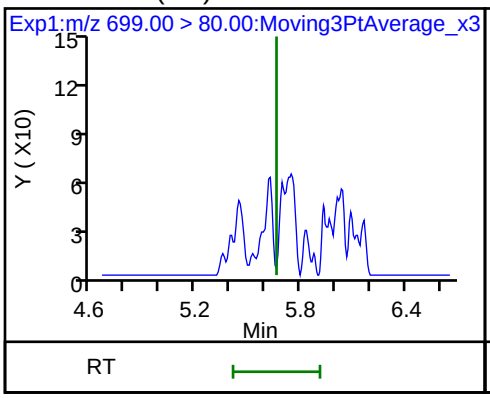

57 Perfluorododecanoic acid



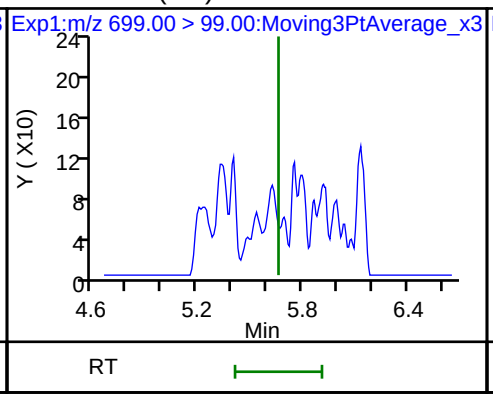

58 10:2 FTS (ND)



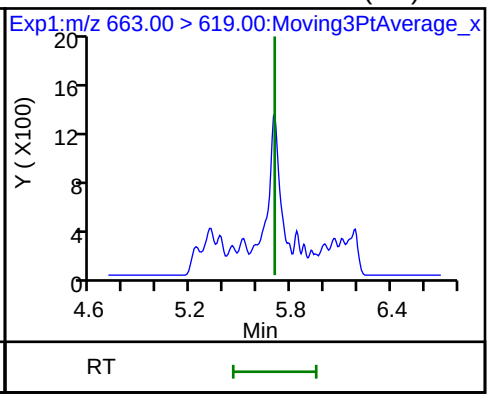
59 PFDoS (ND)



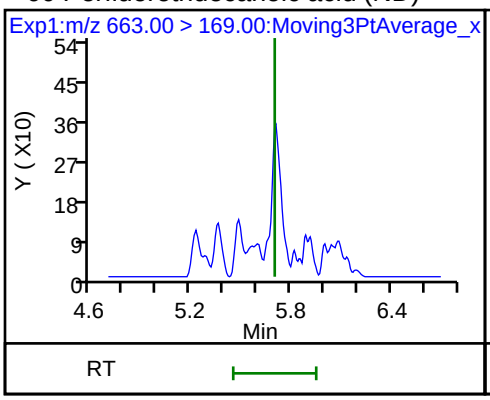

59 PFDoS (ND)



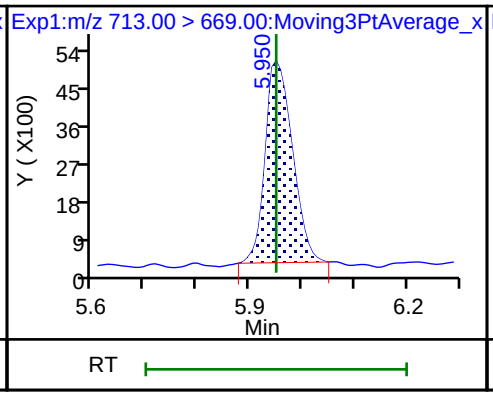

60 Perfluorotridecanoic acid (ND)



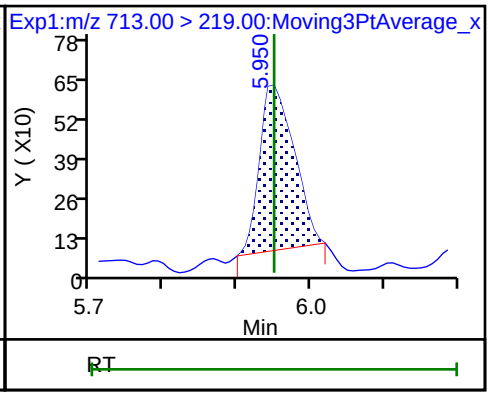

60 Perfluorotridecanoic acid (ND)



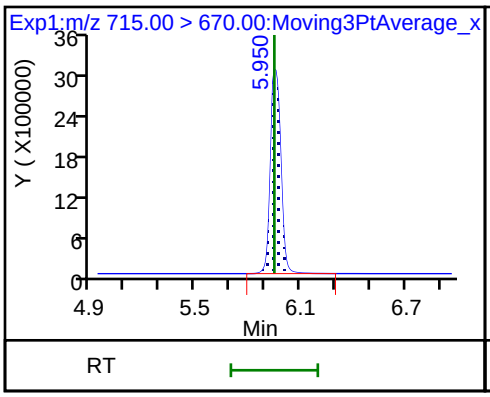

62 Perfluorotetradecanoic acid



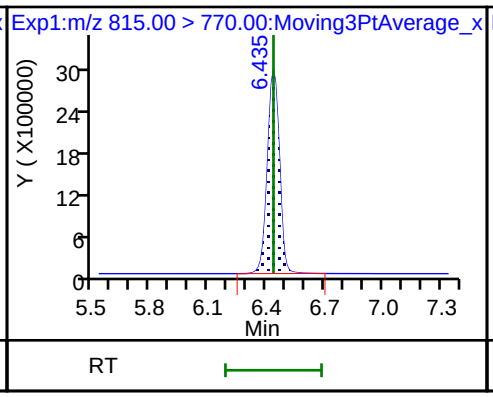

62 Perfluorotetradecanoic acid



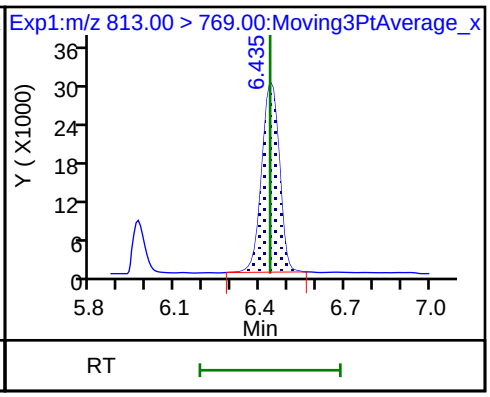

D 61 13C2 PFTeDA



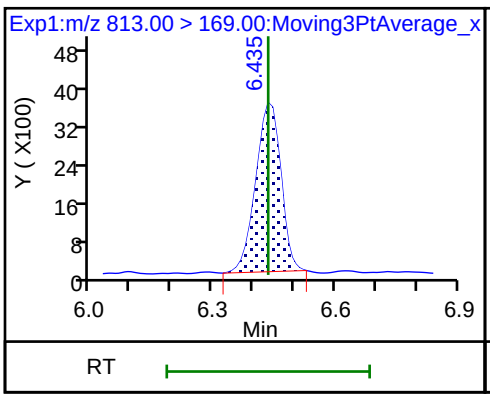

D 64 13C2 PFHxDA



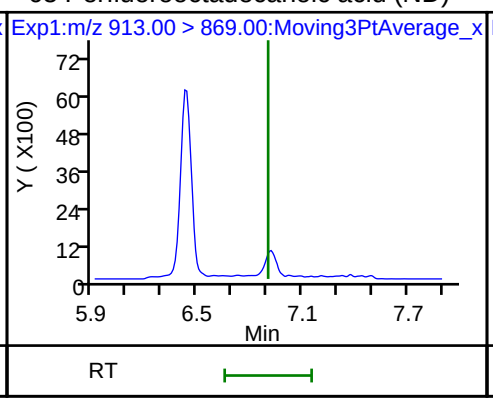

63 Perfluorohexadecanoic acid



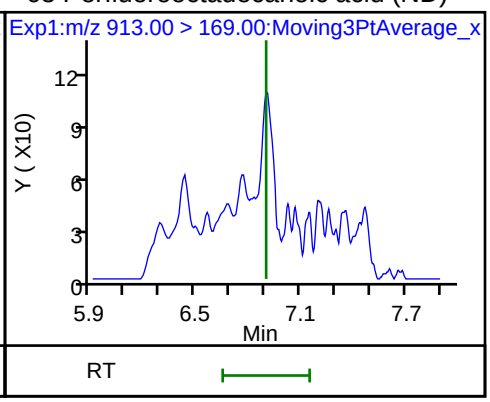

63 Perfluorohexadecanoic acid




65 Perfluorooctadecanoic acid (ND)




65 Perfluorooctadecanoic acid (ND)



Eurofins TestAmerica, Sacramento

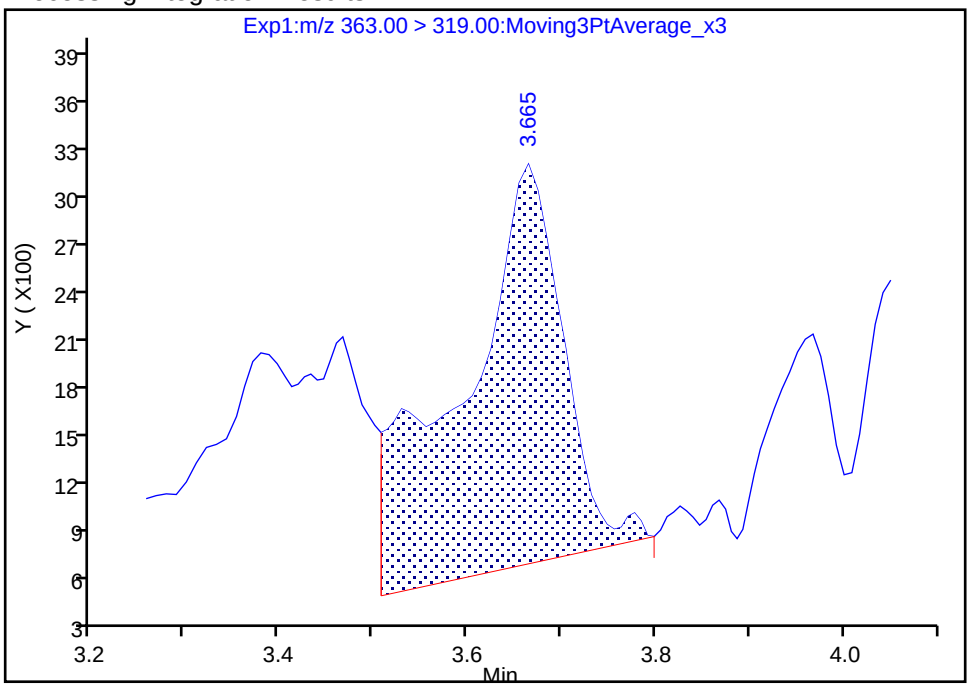
Data File: \\chromfs\Sacramento\ChromData\A13\20200910-103012.b\2020.09.10_A13_PFC_A_004.d
Injection Date: 10-Sep-2020 10:36:46 Instrument ID: A13
Lims ID: CCB
Client ID:
Operator ID: SACINSTLCMS01 ALS Bottle#: 50 Worklist Smp#: 1
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFAS_A13 Limit Group: LC PFC ICAL
Column: Gemini C18 3um 3 x 100mm ( 3.00 mm) Detector EXP1

## 16 Perfluoroheptanoic acid, CAS: 375-85-9

Signal: 1

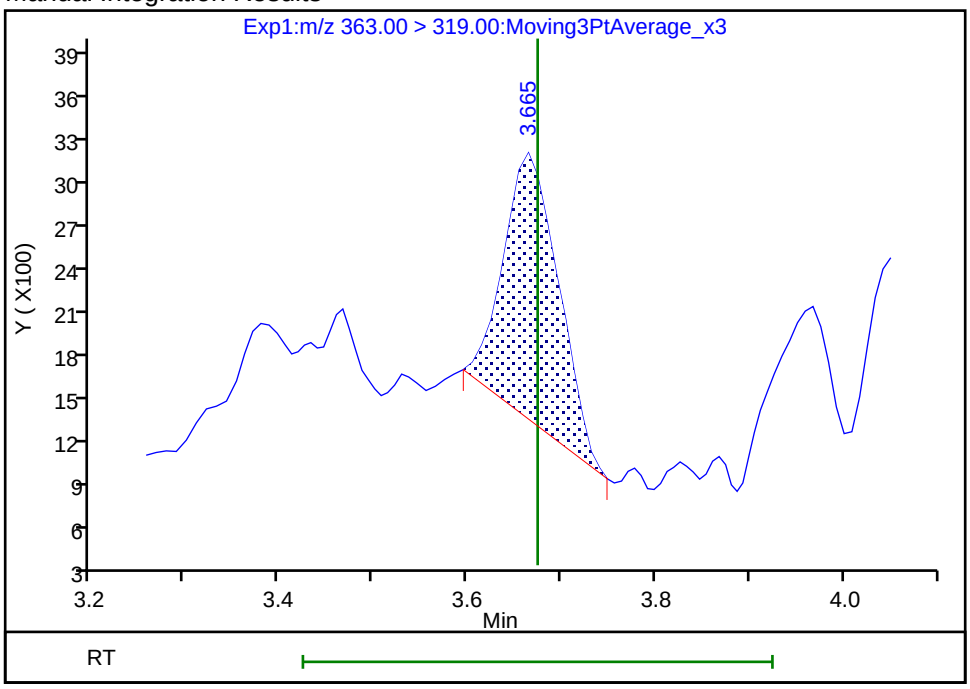
Processing Integration Results

RT: 3.66
Area: 18920
Amount: 0.005036
Amount Units: ng/ml




Manual Integration Results

RT: 3.66
Area: 7467
Amount: 0.001988
Amount Units: ng/ml




Reviewer: hsuw, 10-Sep-2020 11:08:19
Audit Action: Manually Integrated Audit Reason: Baseline

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento  Job No.: 460-217659-1

SDG No.:

Client Sample ID:  Lab Sample ID: ICB 320-410486/9

Matrix: Water  Lab File ID: 2020.09.08_A13_PFC_ICALX_011.d

Analysis Method: 537 (modified)  Date Collected:

Extraction Method:  Date Extracted:

Sample wt/vol: 1(mL)  Date Analyzed: 09/08/2020 19:07

Con. Extract Vol.:  Dilution Factor: 1

Injection Volume: 20(uL)  GC Column: GeminiC18 3x100 ID: 3(mm)

% Moisture:  GPC Cleanup:(Y/N) N

Analysis Batch No.: 410486  Units: ng/mL

| CAS NO. | COMPOUND NAME | RESULT | Q | RL | MDL |
|---|---|---|---|---|---|
| 375-22-4 | Perfluorobutanoic acid (PFBA) | 0.0088 | U | 0.050 | 0.0088 |
| 2706-90-3 | Perfluoropentanoic acid (PFPeA) | 0.012 | U | 0.050 | 0.012 |
| 307-24-4 | Perfluorohexanoic acid (PFHxA) | 0.015 | U | 0.050 | 0.015 |
| 375-85-9 | Perfluoroheptanoic acid (PFHpA) | 0.0063 | U | 0.050 | 0.0063 |
| 335-67-1 | Perfluorooctanoic acid (PFOA) | 0.021 | U | 0.050 | 0.021 |
| 375-95-1 | Perfluorononanoic acid (PFNA) | 0.0068 | U | 0.050 | 0.0068 |
| 335-76-2 | Perfluorodecanoic acid (PFDA) | 0.0078 | U | 0.050 | 0.0078 |
| 2058-94-8 | Perfluoroundecanoic acid (PFUnA) | 0.028 | U | 0.050 | 0.028 |
| 307-55-1 | Perfluorododecanoic acid (PFDoA) | 0.014 | U | 0.050 | 0.014 |
| 72629-94-8 | Perfluorotridecanoic acid (PFTriA) | 0.033 | U | 0.050 | 0.033 |
| 376-06-7 | Perfluorotetradecanoic acid (PFTeA) | 0.00850 | J | 0.050 | 0.0073 |
| 375-73-5 | Perfluorobutanesulfonic acid (PFBS) | 0.0050 | U | 0.050 | 0.0050 |
| 355-46-4 | Perfluorohexanesulfonic acid (PFHxS) | 0.00804 | J | 0.050 | 0.0043 |
| 375-92-8 | Perfluoroheptanesulfonic Acid (PFHpS) | 0.0048 | U | 0.050 | 0.0048 |
| 1763-23-1 | Perfluorooctanesulfonic acid (PFOS) | 0.014 | U | 0.050 | 0.014 |
| 335-77-3 | Perfluorodecanesulfonic acid (PFDS) | 0.0080 | U | 0.050 | 0.0080 |
| 754-91-6 | Perfluorooctanesulfonamide (FOSA) | 0.0088 | U | 0.050 | 0.0088 |
| 2355-31-9 | N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA) | 0.078 | U | 0.50 | 0.078 |
| 2991-50-6 | N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA) | 0.048 | U | 0.50 | 0.048 |
| 27619-97-2 | 6:2 FTS | 0.050 | U | 0.50 | 0.050 |
| 39108-34-4 | 8:2 FTS | 0.050 | U | 0.50 | 0.050 |

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento  Job No.: 460-217659-1

SDG No.:

Client Sample ID:  Lab Sample ID: ICB 320-410486/9

Matrix: Water  Lab File ID: 2020.09.08_A13_PFC_ICALX_011.d

Analysis Method: 537 (modified)  Date Collected:

Extraction Method:  Date Extracted:

Sample wt/vol: 1(mL)  Date Analyzed: 09/08/2020 19:07

Con. Extract Vol.:  Dilution Factor: 1

Injection Volume: 20(uL)  GC Column: GeminiC18 3x100 ID: 3(mm)

% Moisture:  GPC Cleanup:(Y/N) N

Analysis Batch No.: 410486  Units: ng/mL

| CAS NO. | ISOTOPE DILUTION | %REC | Q | LIMITS |
|---|---|---|---|---|
| STL00992 | 13C4 PFBA | 100 | | 25-150 |
| STL01893 | 13C5 PFPeA | 99 | | 25-150 |
| STL00993 | 13C2 PFHxA | 101 | | 25-150 |
| STL01892 | 13C4 PFHpA | 104 | | 25-150 |
| STL00990 | 13C4 PFOA | 102 | | 25-150 |
| STL00995 | 13C5 PFNA | 106 | | 25-150 |
| STL00996 | 13C2 PFDA | 103 | | 25-150 |
| STL00997 | 13C2 PFUnA | 107 | | 25-150 |
| STL00998 | 13C2 PFDoA | 100 | | 25-150 |
| STL02116 | 13C2 PFTeDA | 98 | | 25-150 |
| STL02337 | 13C3 PFBS | 106 | | 25-150 |
| STL00994 | 18O2 PFHxS | 103 | | 25-150 |
| STL00991 | 13C4 PFOS | 101 | | 25-150 |
| STL01056 | 13C8 FOSA | 106 | | 25-150 |
| STL02118 | d3-NMeFOSAA | 104 | | 25-150 |
| STL02117 | d5-NEtFOSAA | 104 | | 25-150 |
| STL02279 | M2-6:2 FTS | 111 | | 25-150 |
| STL02280 | M2-8:2 FTS | 106 | | 25-150 |

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\A13\20200908-102913.b\2020.09.08_A13_PFC_ICALX_011.d
Lims ID: ICB
Client ID:
Sample Type: ICB
Inject. Date: 08-Sep-2020 19:07:39 ALS Bottle#: 8 Worklist Smp#: 9
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Sample Info: ICB (53)
Misc. Info.: Plate: 1 Rack: 2
Operator ID: SACINSTLCMS01 Instrument ID: A13

Method: \\chromfs\Sacramento\ChromData\A13\20200908-102913.b\PFAS_A13.m
Limit Group: LC PFC ICAL
Last Update: 09-Sep-2020 10:25:31 Calib Date: 08-Sep-2020 18:58:15
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\A13\20200908-102913.b\2020.09.08_A13_PFC_ICALX_010.d

Column 1 : Gemini C18 3um 3 x 100mm ( 3.00 mm) Det: EXP1
Process Host: CTX1007

First Level Reviewer: novoaj Date: 09-Sep-2020 10:26:17
Ratio Calibration: Average of Initial Calibration

| Signal | RT | EXP RT | DLT RT | REL RT | Response | Amount ng/ml | Ratio(Limits) | %Rec | S/N | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| D 1 13C4 PFBA | | | | | | | | | | |
| 217.00 > 172.00 | 2.475 | 2.475 | -0.001 | 0.610 | 9353836 | 2.51 | | 100 | 28165 | |
| D 4 13C5 PFPeA | | | | | | | | | | |
| 267.90 > 223.00 | 2.866 | 2.866 | 0.0 | 0.706 | 7204810 | 2.48 | | 99.2 | 23988 | |
| 5 Perfluoropentanoic acid | | | | | | | | | | |
| 262.90 > 219.00 | 2.866 | 2.878 | -0.012 | 1.000 | 17954 | 0.006061 | | | 2.7 | |
| D 14 13C3 PFBS | | | | | | | | | | |
| 301.90 > 80.00 | 2.913 | 2.913 | 0.0 | 0.718 | 8948459 | 2.45 | | 106 | 20529 | |
| 7 4:2 FTS | | | | | | | | | | |
| 327.00 > 307.00 | 3.215 | 3.225 | -0.010 | 1.000 | 5353 | 0.001765 | | | 20.4 | |
| D 8 M2-4:2 FTS | | | | | | | | | | |
| 329.00 > 81.00 | 3.215 | 3.225 | -0.010 | 0.792 | 2183652 | 2.44 | | 105 | 918 | |
| D 9 13C2 PFHxA | | | | | | | | | | |
| 315.00 > 270.00 | 3.257 | 3.268 | -0.011 | 0.803 | 9044801 | 2.52 | | 101 | 12642 | |
| D 13 13C3 HFPO-DA | | | | | | | | | | |
| 287.00 > 169.00 | 3.380 | 3.388 | -0.008 | 0.833 | 6480303 | 2.52 | | 101 | 4455 | |
| D 15 13C4 PFHpA | | | | | | | | | | |
| 367.00 > 322.00 | 3.665 | 3.665 | 0.0 | 0.903 | 9173076 | 2.60 | | 104 | 6686 | |
| 16 Perfluoroheptanoic acid | | | | | | | | | | |
| 363.00 > 319.00 | 3.665 | 3.675 | -0.010 | 1.000 | 14826 | 0.003998 | Target=3.85 | | 2.3 | |
| 363.00 > 169.00 | 3.674 | 3.675 | -0.001 | 1.003 | 3724 | | 3.98(1.92-5.77) | | 2.9 | |
| 18 Perfluorohexanesulfonic acid | | | | | | | | | | M |
| 399.00 > 80.00 | 3.665 | 3.675 | -0.010 | 1.000 | 21953 | 0.008045 | Target=3.25 | | 22.9 | M |
| 399.00 > 99.00 | 3.674 | 3.675 | -0.001 | 1.003 | 9276 | | 2.37(1.62-4.87) | | 7.2 | M |
| D 17 18O2 PFHxS | | | | | | | | | | |
| 403.00 > 84.00 | 3.665 | 3.675 | -0.010 | 0.903 | 5801999 | 2.43 | | 103 | 69339 | |

| Signal | RT | EXP RT | DLT RT | REL RT | Response | Amount ng/ml | Ratio(Limits) | %Rec | S/N | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| 19 DONA | | | | | | | | | | |
| 377.00 > 251.00 | 3.722 | 3.722 | 0.0 | 0.841 | 15214 | 0.001715 | Target=2.76 | | 17.4 | |
| 377.00 > 85.00 | 3.713 | 3.722 | -0.009 | 0.839 | 5657 | | 2.69(1.38-4.14) | | 13.4 | |
| D 20 M2-6:2 FTS | | | | | | | | | | |
| 429.00 > 81.00 | 4.042 | 4.042 | 0.0 | 0.996 | 2708399 | 2.63 | | 111 | 4579 | |
| 21 6:2 FTS | | | | | | | | | | |
| 427.00 > 407.00 | 4.034 | 4.042 | -0.008 | 0.998 | 6369 | 0.002321 | | | 11.9 | |
| $ 23 13C8 PFOA | | | | | | | | | | |
| 421.00 > 376.00 | 4.059 | 4.059 | 0.0 | 1.000 | 9314260 | 2.38 | | 97.4 | 25757 | |
| D 24 13C4 PFOA | | | | | | | | | | |
| 417.00 > 372.00 | 4.059 | 4.067 | -0.008 | 1.000 | 10965976 | 2.54 | | 102 | 13364 | |
| * 25 13C2 PFOA | | | | | | | | | | |
| 415.00 > 370.00 | 4.059 | 4.067 | -0.008 | | 10961287 | 2.50 | | | 4214 | |
| 26 Perfluorooctanoic acid | | | | | | | | | | M |
| 413.00 > 369.00 | 4.059 | 4.067 | -0.008 | 1.000 | 47192 | 0.0105 | Target=2.95 | | 9.2 | M |
| 413.00 > 169.00 | 4.059 | 4.067 | -0.008 | 1.000 | 14280 | | 3.30(1.47-4.42) | | 18.4 | M |
| $ 27 13C8 PFOS | | | | | | | | | | |
| 507.00 > 99.00 | 4.426 | 4.426 | 0.0 | 1.091 | 2096105 | 2.30 | | 96.4 | 852 | |
| D 29 13C4 PFOS | | | | | | | | | | |
| 503.00 > 80.00 | 4.426 | 4.426 | 0.0 | 1.091 | 4126863 | 2.42 | | 101 | 2890 | |
| D 31 13C5 PFNA | | | | | | | | | | |
| 468.00 > 423.00 | 4.443 | 4.452 | -0.009 | 1.095 | 10556937 | 2.65 | | 106 | 31181 | |
| 32 9ClFOS | | | | | | | | | | |
| 531.00 > 351.00 | 4.621 | 4.629 | -0.008 | 1.044 | 11385 | 0.002636 | | | 8.6 | |
| D 34 13C8 FOSA | | | | | | | | | | |
| 506.00 > 78.00 | 4.734 | 4.734 | 0.0 | 1.166 | 6482471 | 2.65 | | 106 | 6372 | |
| 33 Perfluorooctanesulfonamide | | | | | | | | | | |
| 498.00 > 78.00 | 4.734 | 4.734 | 0.0 | 1.000 | 8220 | 0.003378 | | | 15.2 | |
| D 37 13C2 PFDA | | | | | | | | | | |
| 515.00 > 470.00 | 4.804 | 4.804 | 0.0 | 1.184 | 12447492 | 2.58 | | 103 | 6753 | |
| D 38 M2-8:2 FTS | | | | | | | | | | |
| 529.00 > 81.00 | 4.804 | 4.813 | -0.009 | 1.184 | 3458687 | 2.54 | | 106 | 3755 | |
| 39 8:2 FTS | | | | | | | | | | |
| 527.00 > 507.00 | 4.813 | 4.813 | 0.0 | 1.002 | 8220 | 0.002303 | | | 31.2 | |
| D 40 d3-NMeFOSAA | | | | | | | | | | |
| 573.00 > 419.00 | 4.970 | 4.971 | -0.001 | 1.225 | 6472891 | 2.60 | | 104 | 4110 | |
| 41 NMeFOSAA | | | | | | | | | | M |
| 570.00 > 419.00 | 4.970 | 4.980 | -0.010 | 1.000 | 71795 | 0.0344 | | | 20.3 | M |
| 42 Perfluorodecanesulfonic acid | | | | | | | | | | |
| 599.00 > 80.00 | 5.096 | 5.106 | -0.010 | 1.151 | 3544 | 0.003115 | Target=2.36 | | 9.1 | |
| 599.00 > 99.00 | 5.096 | 5.106 | -0.010 | 1.151 | 1649 | | 2.15(1.18-3.54) | | 6.5 | |
| D 44 13C2 PFUnA | | | | | | | | | | |
| 565.00 > 520.00 | 5.125 | 5.135 | -0.010 | 1.263 | 12650929 | 2.68 | | 107 | 9871 | |
| D 46 d5-NEtFOSAA | | | | | | | | | | |
| 589.00 > 419.00 | 5.134 | 5.135 | -0.001 | 1.265 | 6282636 | 2.60 | | 104 | 5162 | |
| 48 NEtFOSA | | | | | | | | | | M |
| 584.00 > 419.00 | 5.144 | 5.144 | 0.0 | 1.002 | 66227 | 0.0340 | | | 68.1 | M |

| Signal | RT | EXP RT | DLT RT | REL RT | Response | Amount ng/ml | Ratio(Limits) | %Rec | S/N | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| D 43 d7-N-MeFOSE-M | | | | | | | | | | |
| 623.00 > 59.00 | 5.183 | 5.183 | 0.0 | 1.277 | 7673762 | 12.5 | | 100 | 2539 | |
| D 49 d-N-MeFOSA-M | | | | | | | | | | |
| 515.00 > 169.00 | 5.204 | 5.205 | -0.001 | 1.282 | 2988270 | 2.59 | | 104 | 54.2 | |
| 50 NMeFOSA | | | | | | | | | | |
| 512.00 > 169.00 | 5.216 | 5.216 | 0.0 | 1.002 | 2611 | 0.002222 | | | 5.7 | |
| 51 11ClFOS | | | | | | | | | | |
| 631.00 > 451.00 | 5.269 | 5.269 | 0.0 | 1.190 | 19662 | 0.002638 | | | 14.6 | |
| D 52 d9-N-EtFOSE-M | | | | | | | | | | |
| 639.00 > 59.00 | 5.345 | 5.354 | -0.009 | 1.317 | 9048716 | 12.6 | | 101 | 2765 | |
| 53 N-EtFOSE-M | | | | | | | | | | |
| 630.00 > 59.00 | 5.371 | 5.371 | 0.0 | 1.005 | 2280 | 0.003042 | | | 4.6 | |
| D 54 d-N-EtFOSA-M | | | | | | | | | | |
| 531.00 > 169.00 | 5.380 | 5.380 | 0.0 | 1.325 | 2909921 | 2.64 | | 106 | 233 | |
| 55 N-EtFOSA-M | | | | | | | | | | |
| 526.00 > 169.00 | 5.388 | 5.388 | 0.0 | 1.002 | 2438 | 0.001972 | | | 5.4 | |
| 57 Perfluorododecanoic acid | | | | | | | | | | |
| 613.00 > 569.00 | 5.421 | 5.429 | -0.008 | 1.000 | 29530 | 0.006376 | Target=9.05 | | 14.5 | |
| 613.00 > 169.00 | 5.429 | 5.429 | 0.0 | 1.002 | 3612 | | 8.18(4.52-13.57) | | 15.8 | |
| D 56 13C2 PFDoA | | | | | | | | | | |
| 615.00 > 570.00 | 5.421 | 5.429 | -0.008 | 1.336 | 12693174 | 2.49 | | 99.8 | 9570 | |
| 58 10:2 FTS | | | | | | | | | | |
| 627.00 > 607.00 | 5.438 | 5.446 | -0.008 | 1.132 | 4146 | 0.001759 | | | 9.7 | |
| 59 PFDoS | | | | | | | | | | |
| 699.00 > 80.00 | 5.671 | 5.663 | 0.008 | 1.281 | 1456 | 0.003278 | Target=0.57 | | 10.8 | |
| 699.00 > 99.00 | 5.663 | 5.663 | 0.0 | 1.279 | 2141 | | 0.68(0.29-0.86) | | 8.6 | |
| 60 Perfluorotridecanoic acid | | | | | | | | | | |
| 663.00 > 619.00 | 5.702 | 5.703 | -0.001 | 1.052 | 24113 | 0.005067 | Target=7.06 | | 17.7 | |
| 663.00 > 169.00 | 5.702 | 5.703 | -0.001 | 1.052 | 2897 | | 8.32(3.53-10.59) | | 12.0 | |
| D 61 13C2 PFTeDA | | | | | | | | | | |
| 715.00 > 670.00 | 5.950 | 5.950 | 0.0 | 1.466 | 12353730 | 2.46 | | 98.3 | 24110 | |
| 62 Perfluorotetradecanoic acid | | | | | | | | | | |
| 713.00 > 669.00 | 5.950 | 5.950 | 0.0 | 1.000 | 41323 | 0.008496 | Target=11.23 | | 25.9 | |
| 713.00 > 219.00 | 5.950 | 5.950 | 0.0 | 1.000 | 3466 | | 11.92(5.62-16.85) | | 29.9 | |
| D 64 13C2 PFHxDA | | | | | | | | | | |
| 815.00 > 770.00 | 6.435 | 6.435 | 0.0 | 1.585 | 12586771 | 2.41 | | 96.3 | 6826 | |
| 63 Perfluorohexadecanoic acid | | | | | | | | | | |
| 813.00 > 769.00 | 6.435 | 6.435 | 0.0 | 1.000 | 159136 | 0.008562 | Target=9.45 | | 42.3 | |
| 813.00 > 169.00 | 6.435 | 6.435 | 0.0 | 1.000 | 19484 | | 8.17(4.72-14.17) | | 58.8 | |
| 65 Perfluorooctadecanoic acid | | | | | | | | | | |
| 913.00 > 869.00 | 6.911 | 6.912 | -0.001 | 1.074 | 39603 | 0.0108 | Target=11.13 | | 13.4 | |
| 913.00 > 169.00 | 6.911 | 6.912 | -0.001 | 1.074 | 3172 | | 12.49(5.56-16.69) | | 12.9 | |

## QC Flag Legend

Review Flags

M - Manually Integrated

## Reagents:

LCPFC_LL0_00051 Amount Added: 1.00 Units: mL

Report Date: 09-Sep-2020 10:26:48 Chrom Revision: 2.3 20-Aug-2020 13:57:12

Eurofins TestAmerica, Sacramento

Data File: \\chromfs\Sacramento\ChromData\A13\20200908-102913.b\2020.09.08_A13_PFC_ICALX_011.d

Injection Date: 08-Sep-2020 19:07:39 Instrument ID: A13

Lims ID: ICB

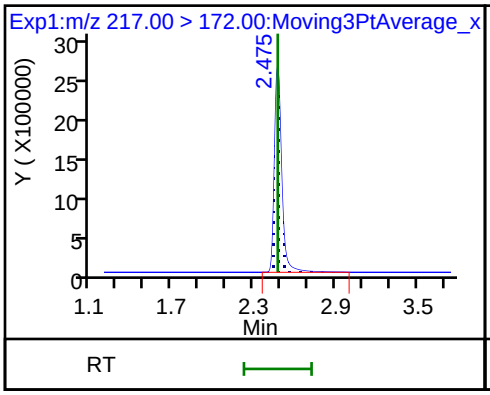
Client ID:

Operator ID: SACINSTLCMS01 ALS Bottle#: 8 Worklist Smp#: 9

Injection Vol: 20.0 ul Dil. Factor: 1.0000

Method: PFAS_A13 Limit Group: LC PFC ICAL

D 1 13C4 PFBA

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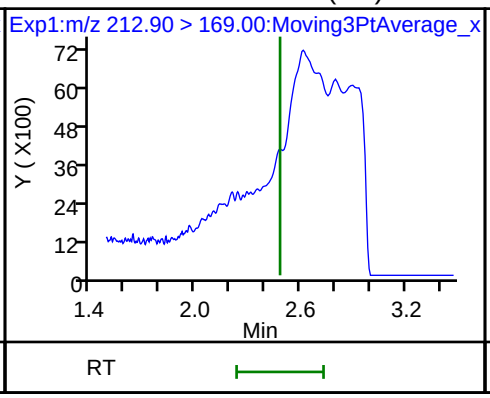
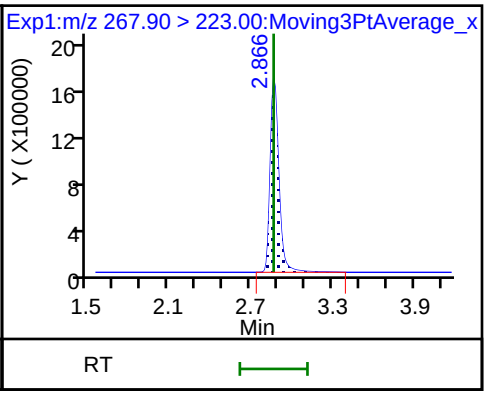
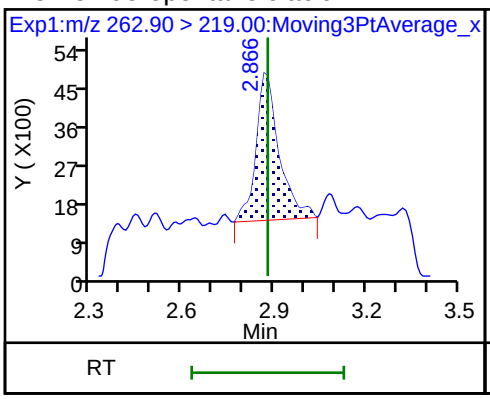


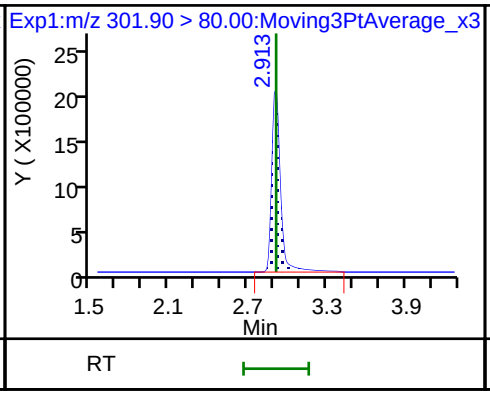

D 4 13C5 PFPeA




5 Perfluoropentanoic acid




D 14 13C3 PFBS

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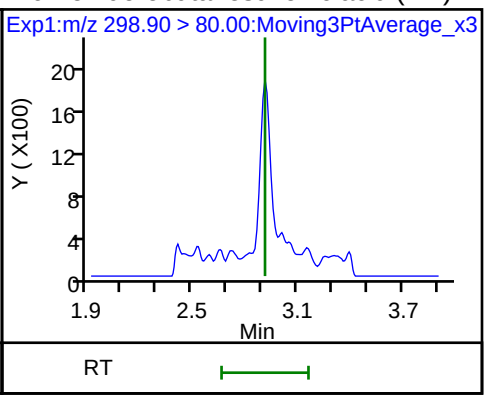
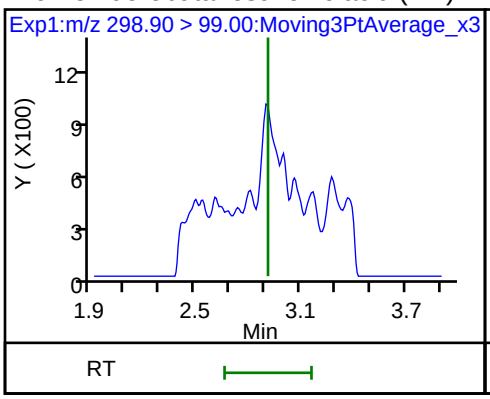
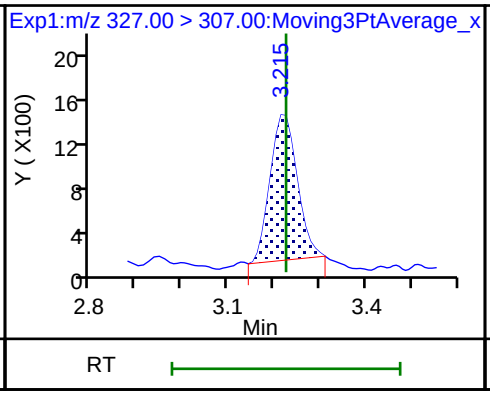


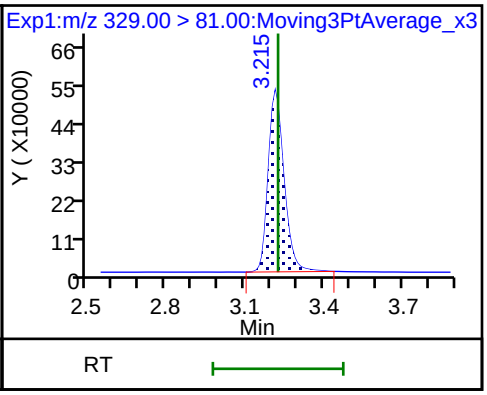

6 Perfluorobutanesulfonic acid (ND)



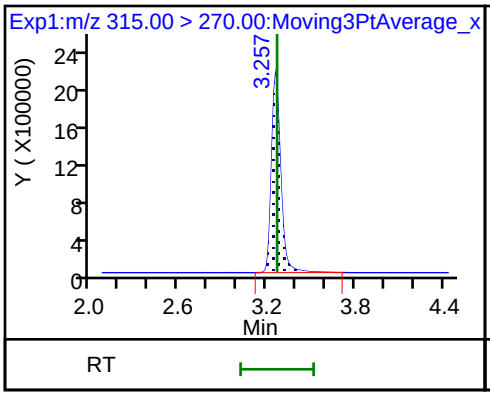

7 4:2 FTS




D 8 M2-4:2 FTS




D 9 13C2 PFHxA

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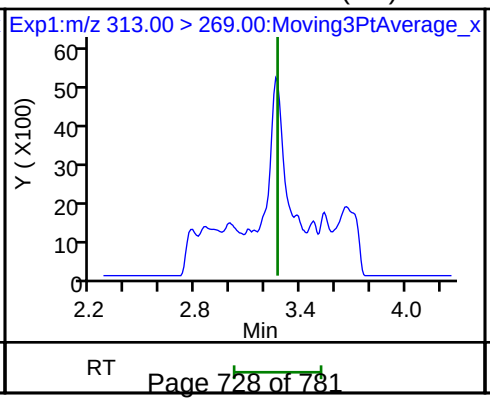


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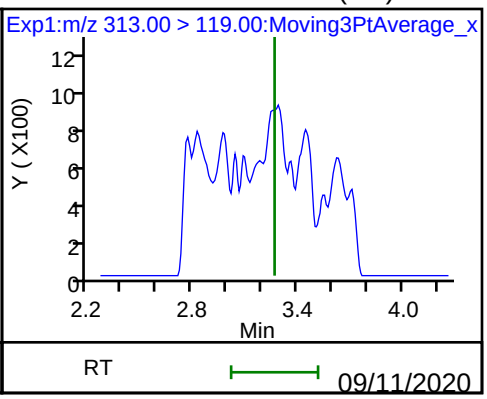

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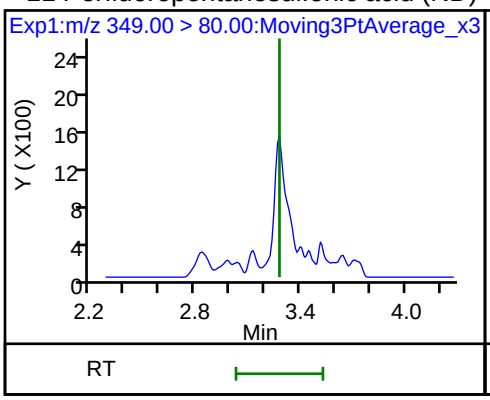


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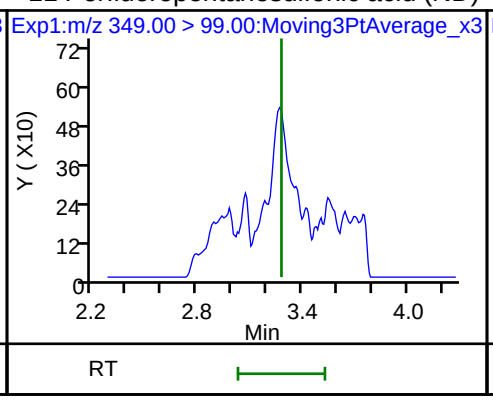
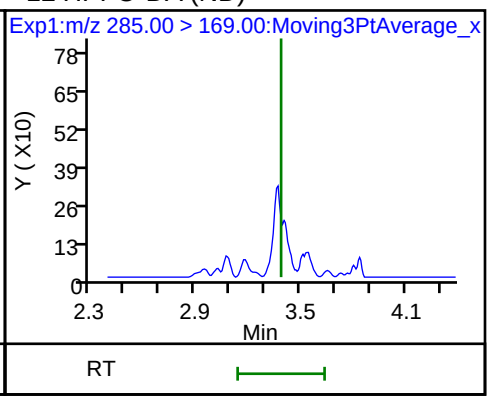
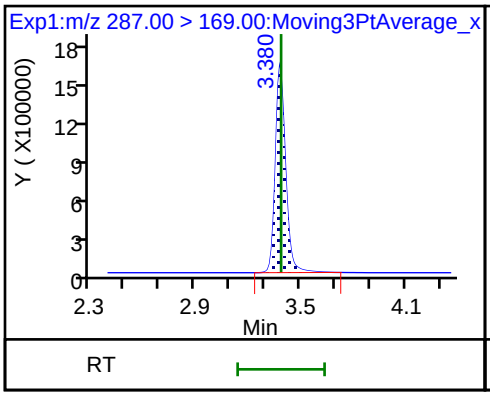



12 HPFO-DA (ND)




D 13 13C3 HFPO-DA

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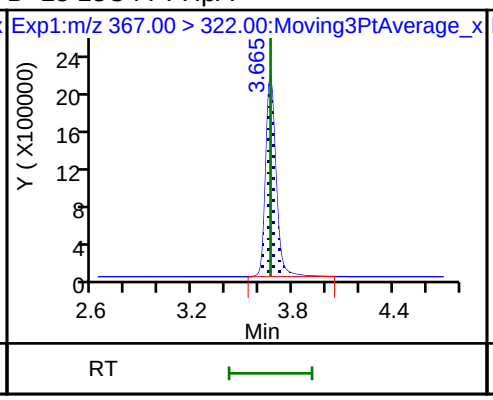
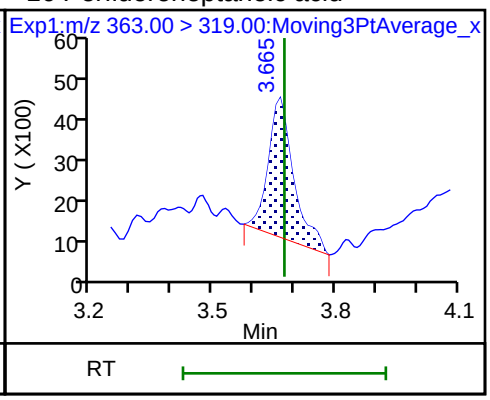
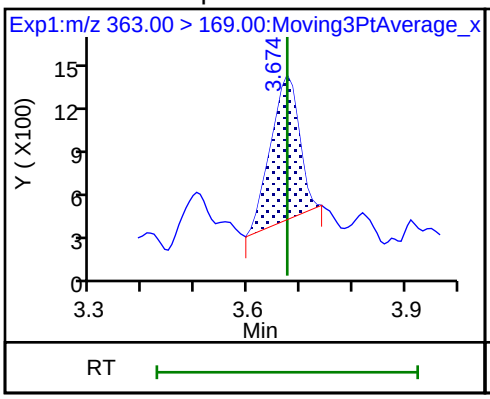



16 Perfluoroheptanoic acid




16 Perfluoroheptanoic acid

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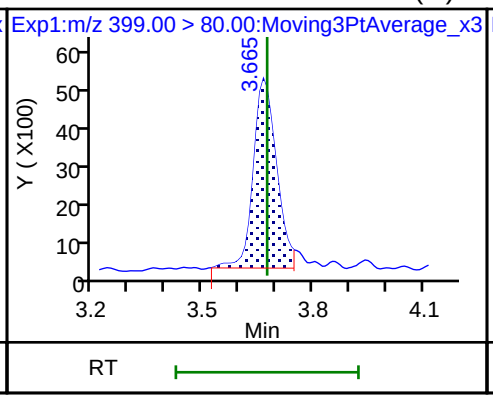


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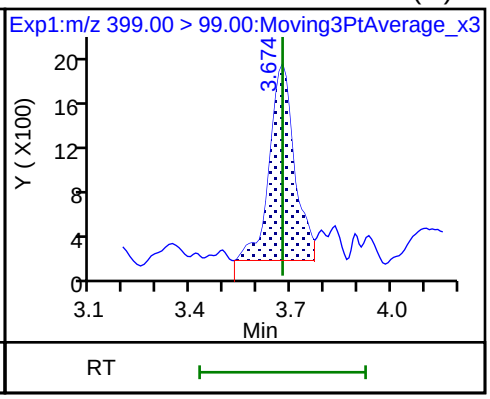
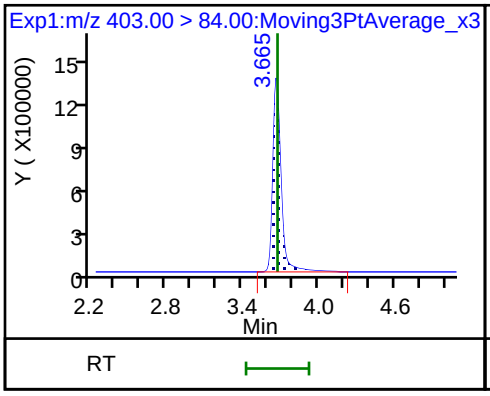
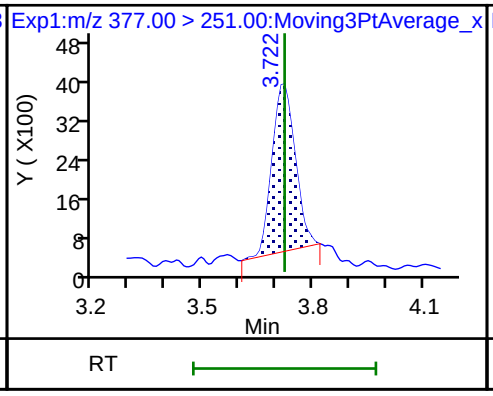



D 17 18O2 PFHxS




19 DONA

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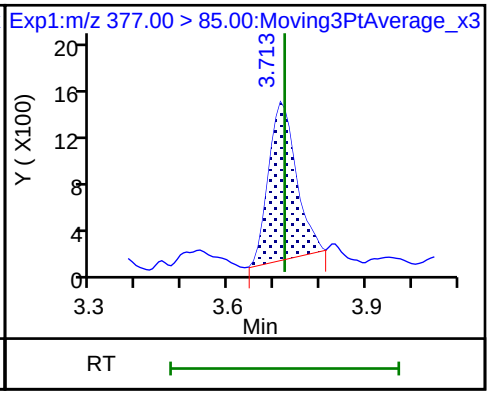
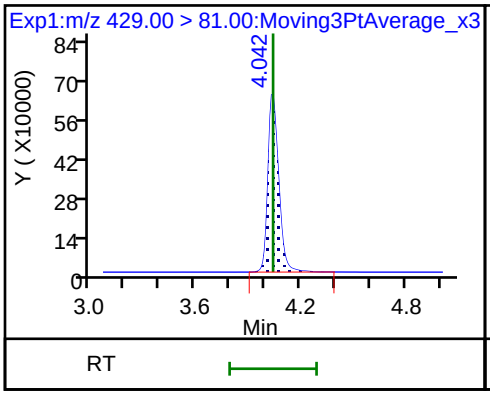
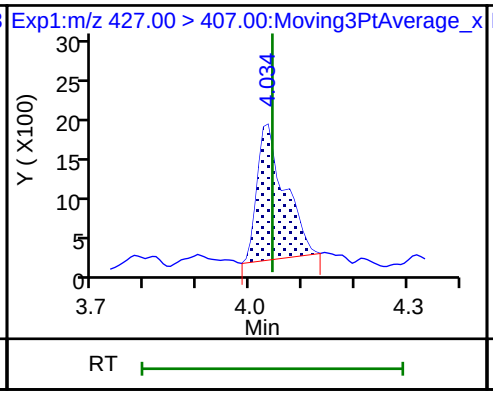


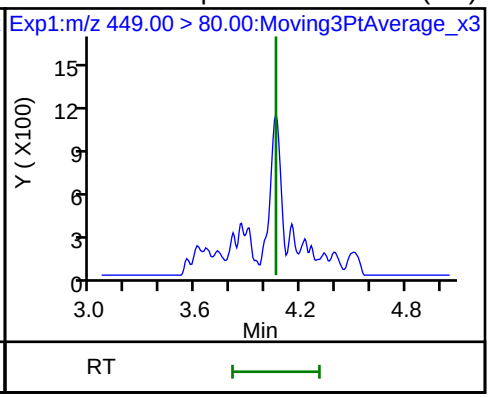
D 20 M2-6:2 FTS




21 6:2 FTS




22 Perfluoroheptanesulfonic acid (ND)

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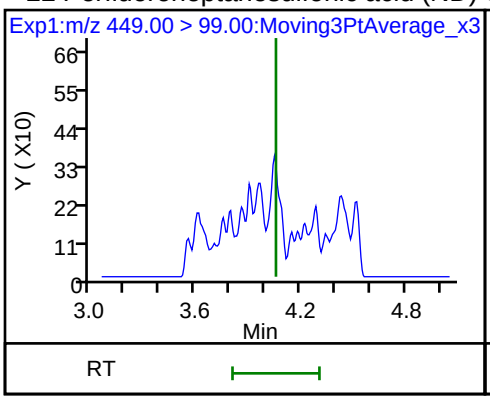
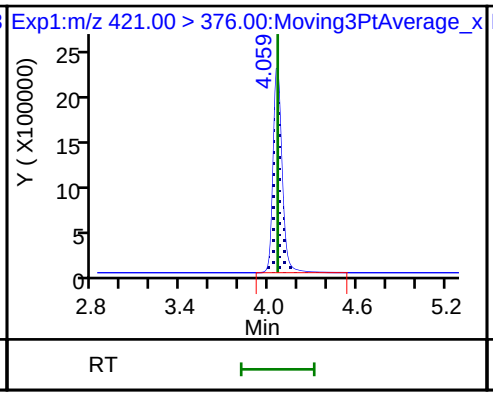



$ 23 13C8 PFOA

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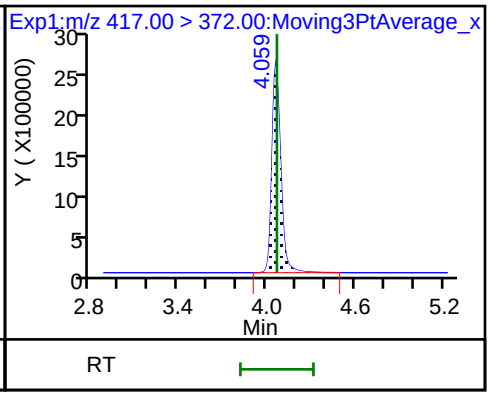


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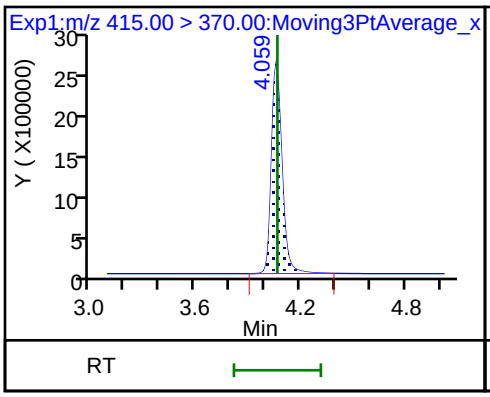
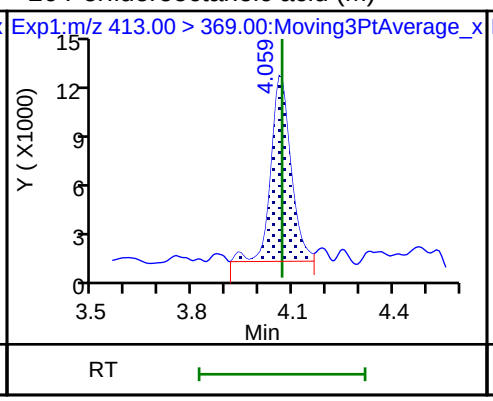



26 Perfluorooctanoic acid (M)

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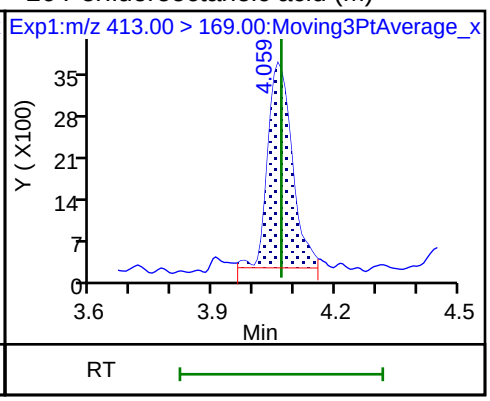


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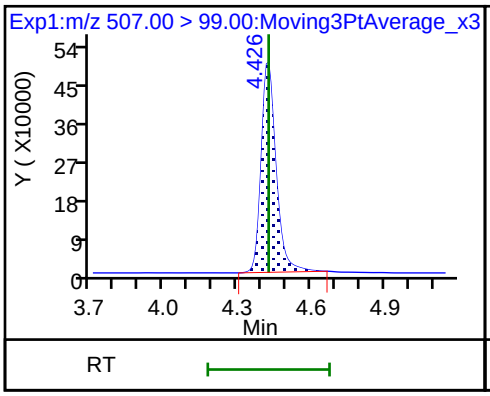


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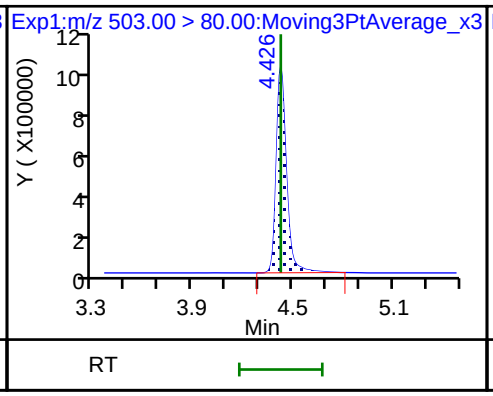


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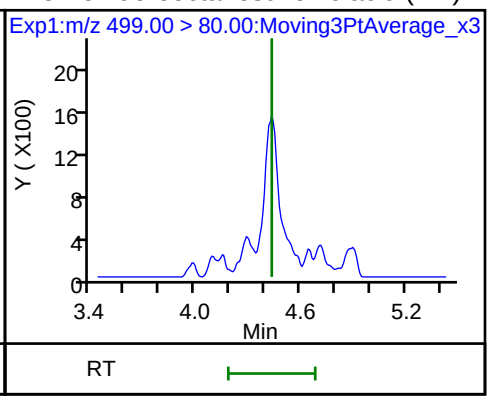

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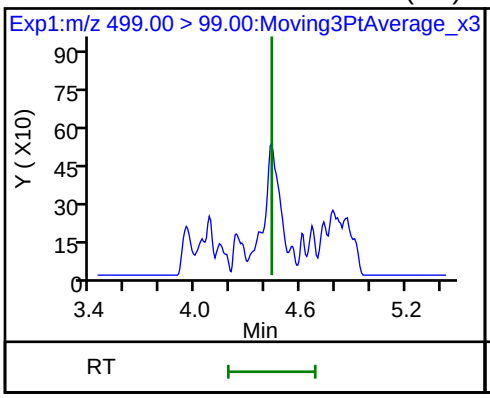
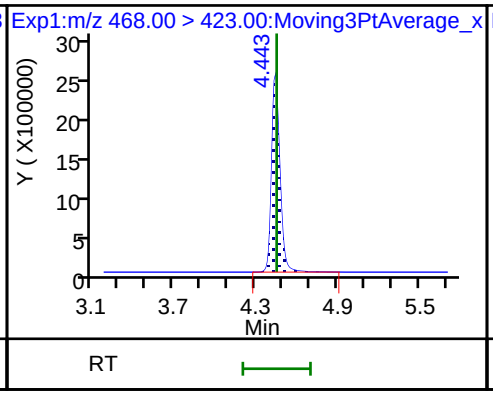
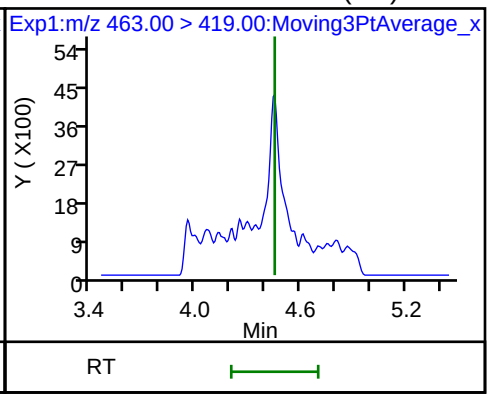



D 31 13C5 PFNA




30 Perfluorononanoic acid (ND)

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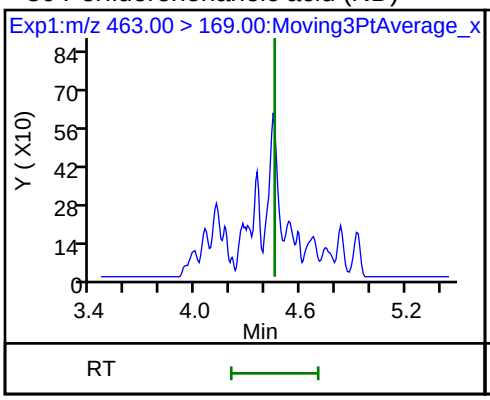
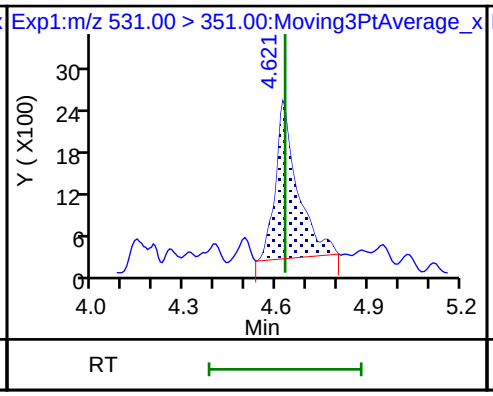
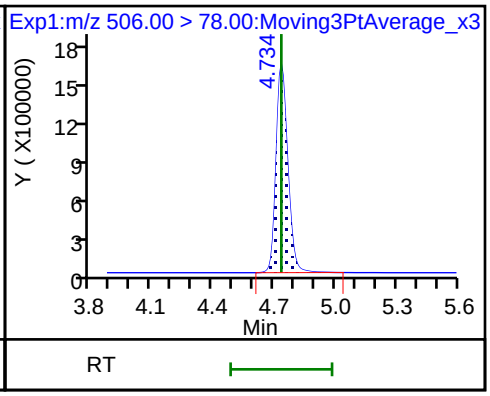


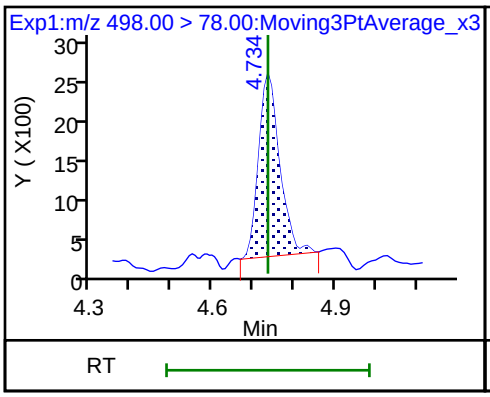

32 9ClFOS



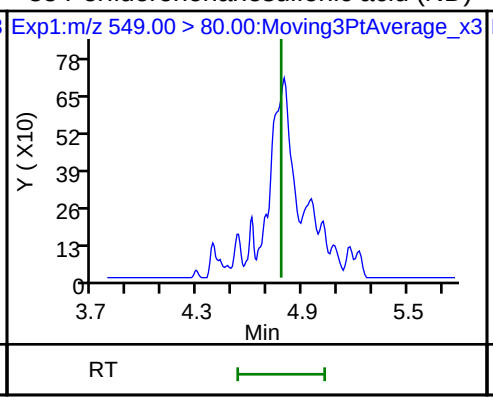

D 34 13C8 FOSA




33 Perfluorooctanesulfonamide




35 Perfluorononanesulfonic acid (ND)

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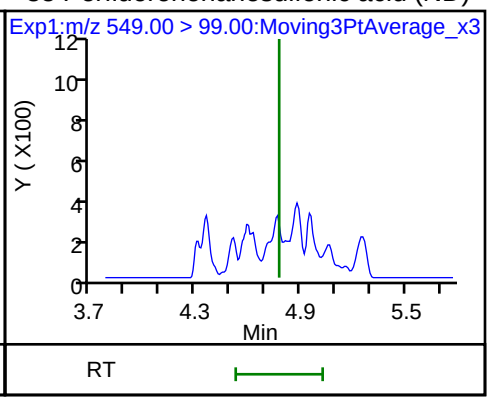
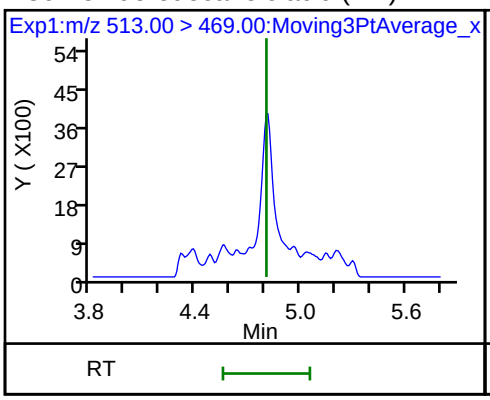
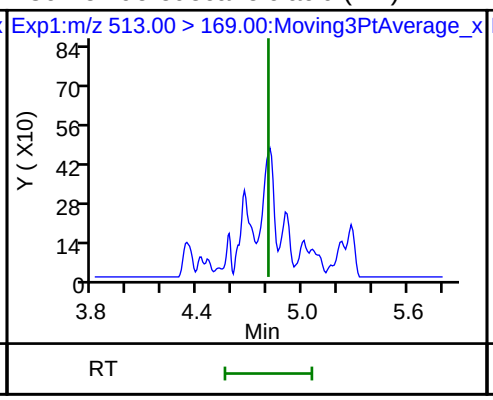


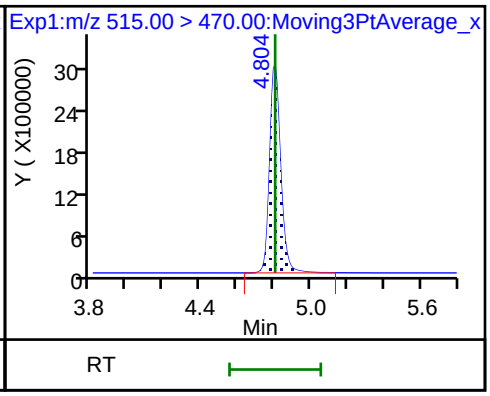

36 Perfluorodecanoic acid (ND)



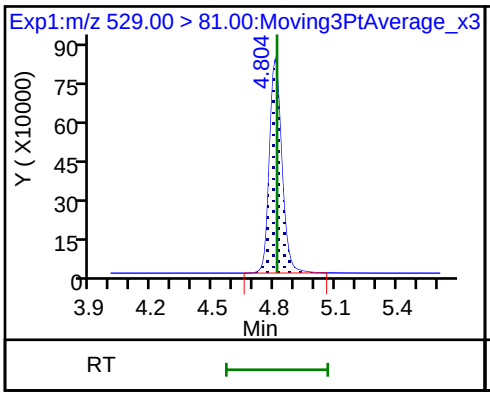

36 Perfluorodecanoic acid (ND)



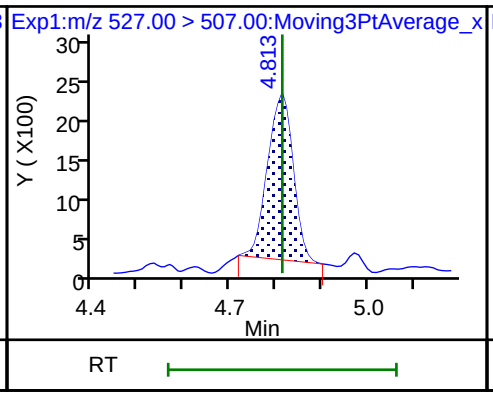

D 37 13C2 PFDA



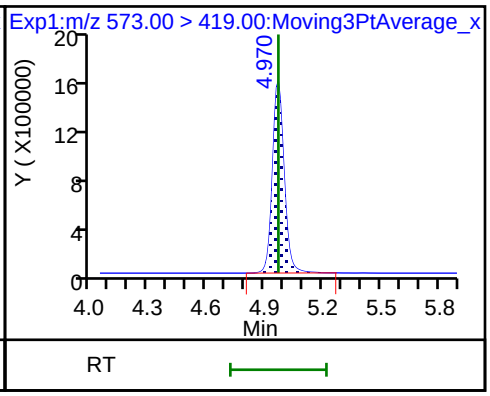
D 38 M2-8:2 FTS



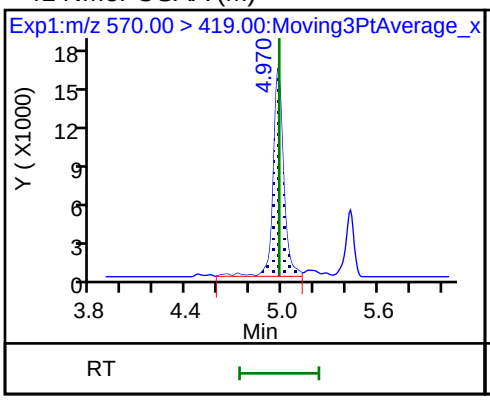

39 8:2 FTS



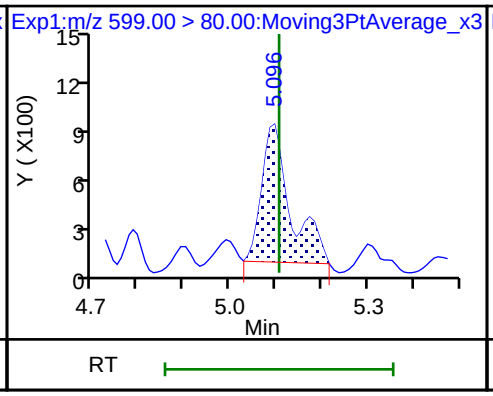

D 40 d3-NMeFOSAA



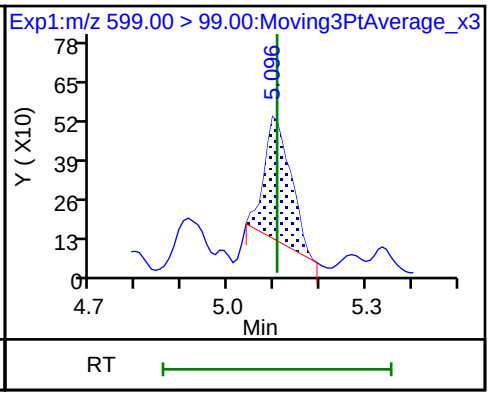

41 NMeFOSAA (M)



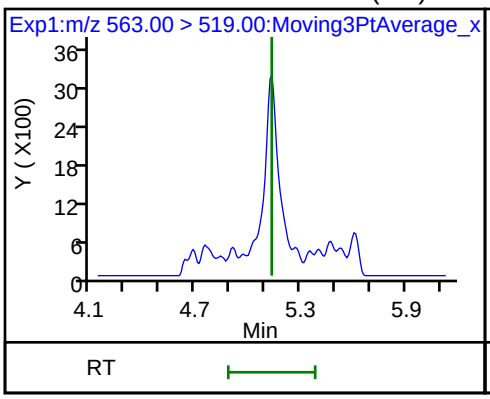

42 Perfluorodecanesulfonic acid



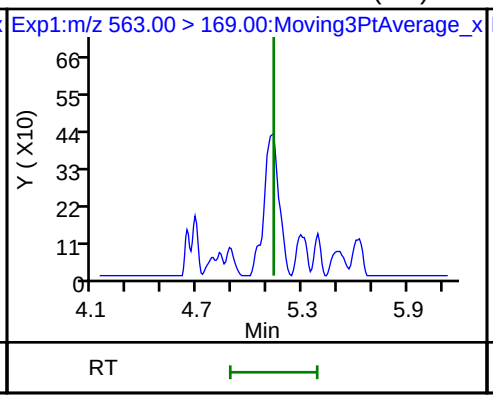

42 Perfluorodecanesulfonic acid



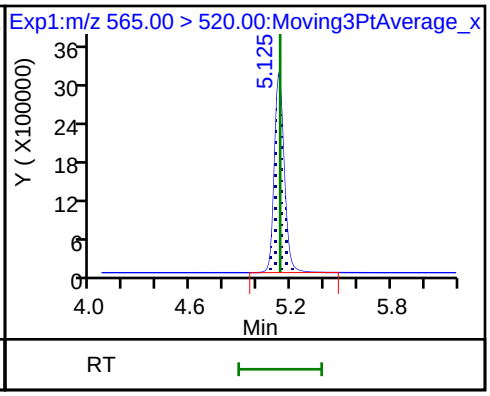

45 Perfluoroundecanoic acid (ND)



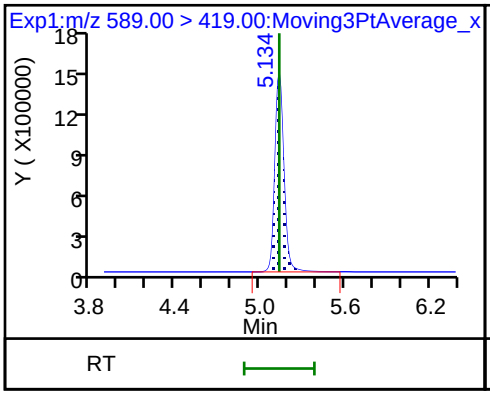

45 Perfluoroundecanoic acid (ND)



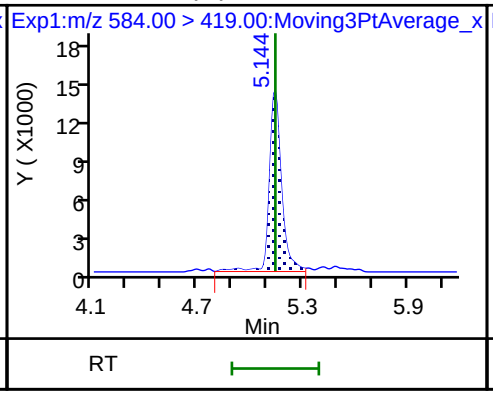

D 44 13C2 PFUnA



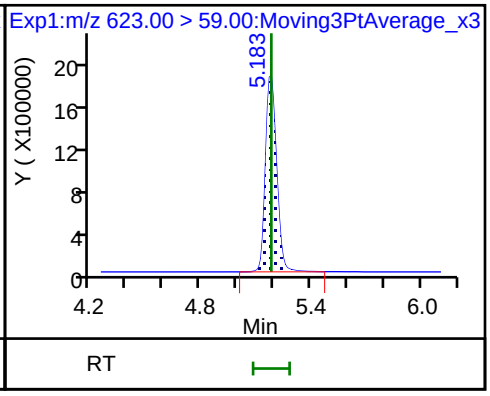

D 46 d5-NEtFOSAA



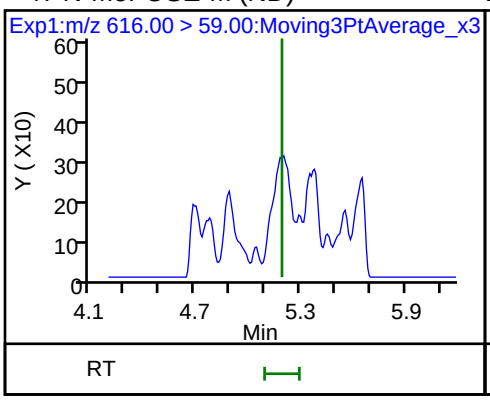

48 NEtFOSA (M)



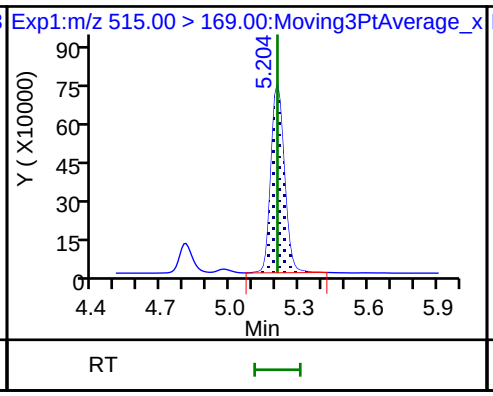

D 43 d7-N-MeFOSE-M



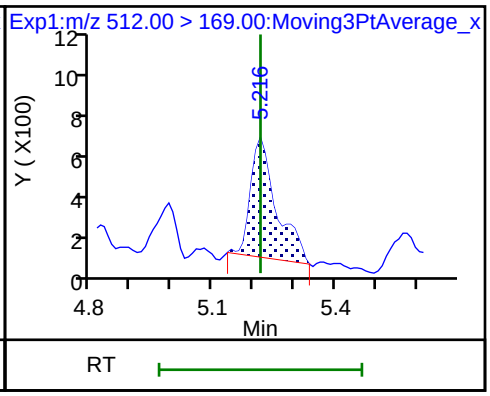
47 N-MeFOSE-M (ND)



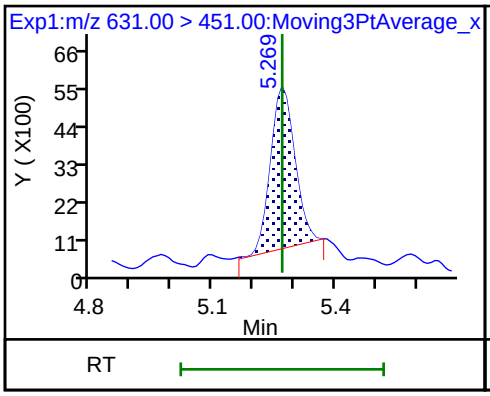

D 49 d-N-MeFOSA-M



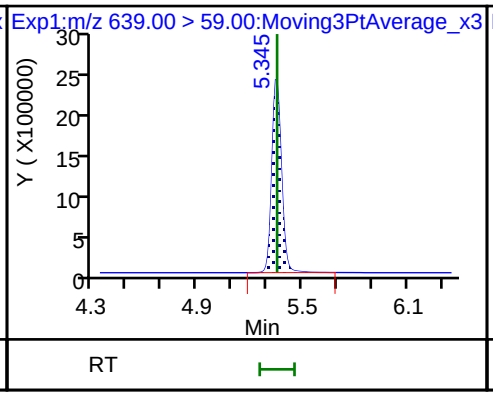

50 NMeFOSA



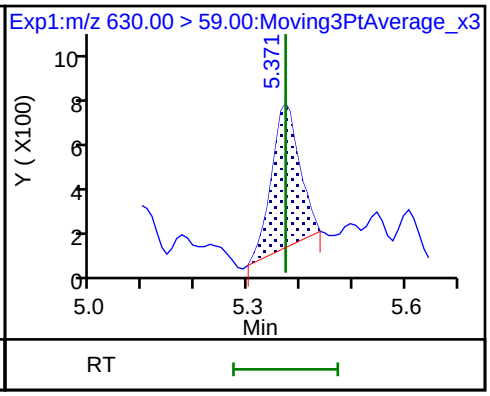

51 11ClFOS



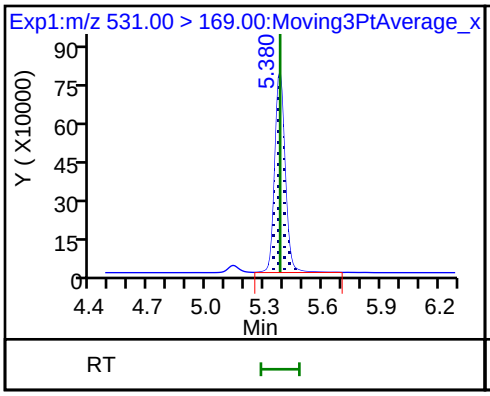

D 52 d9-N-EtFOSE-M



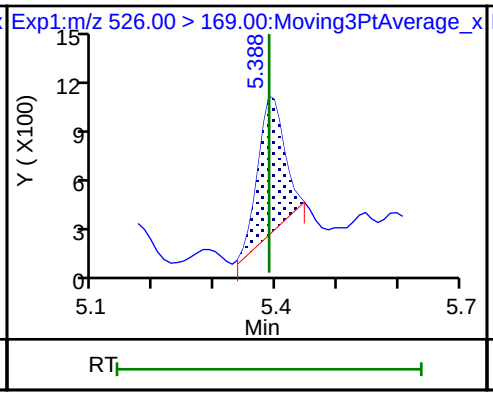

53 N-EtFOSE-M



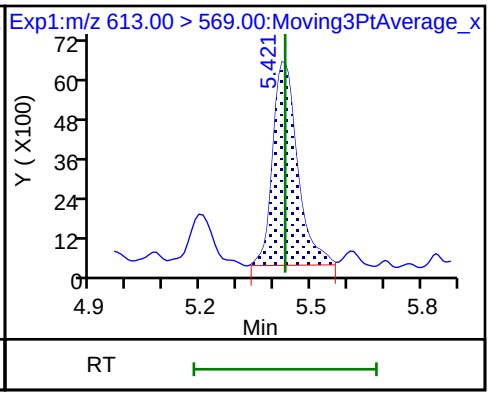

D 54 d-N-EtFOSA-M



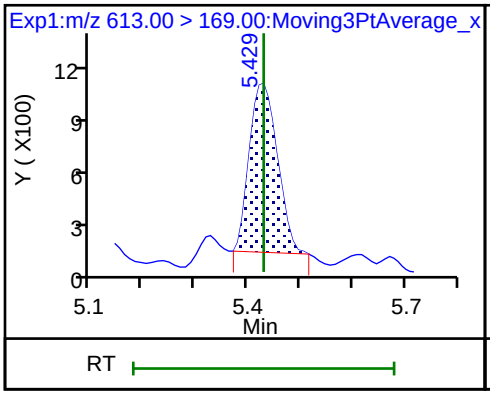

55 N-EtFOSA-M



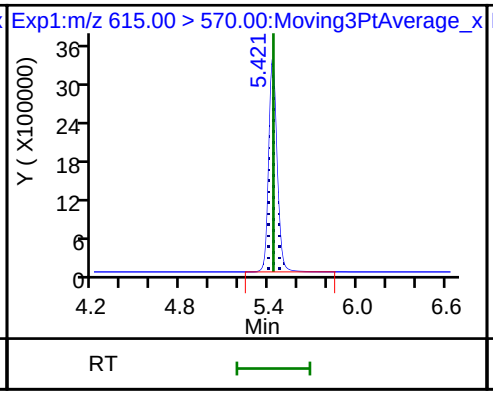

57 Perfluorododecanoic acid



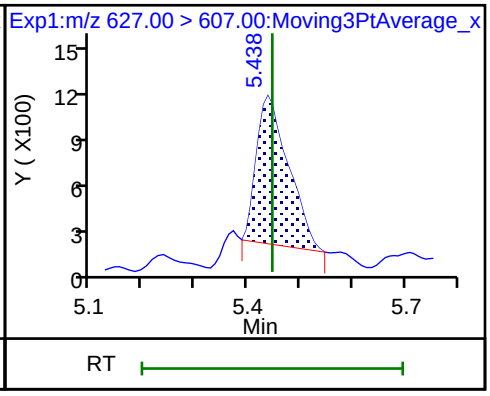

57 Perfluorododecanoic acid



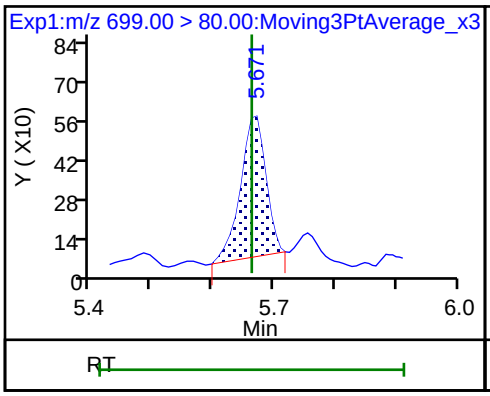

D 56 13C2 PFDoA



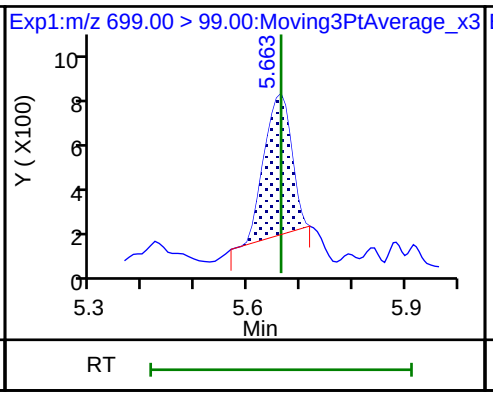

58 10:2 FTS



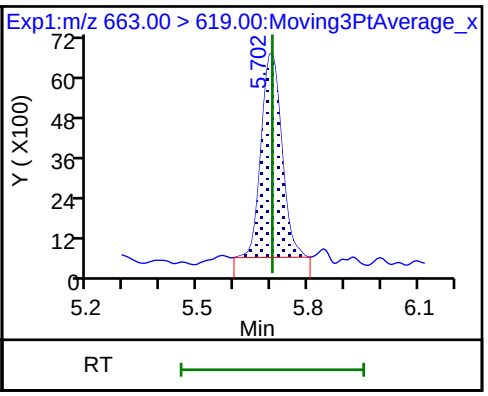
59 PFDoS



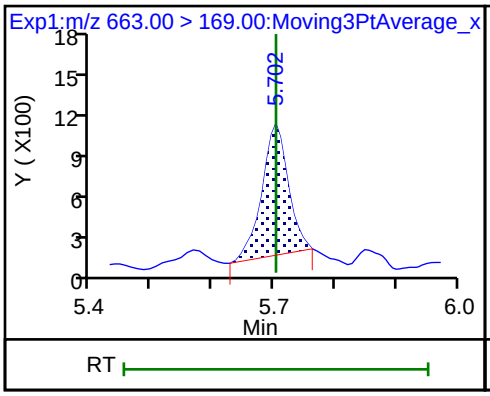

59 PFDoS



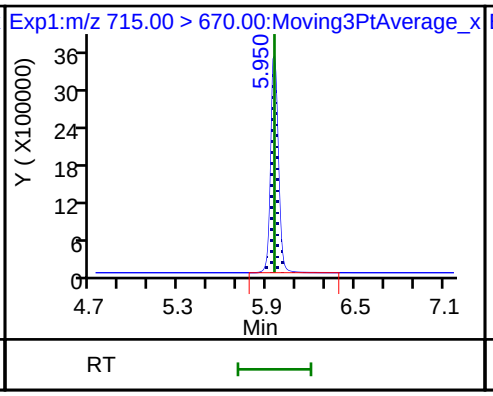

60 Perfluorotridecanoic acid



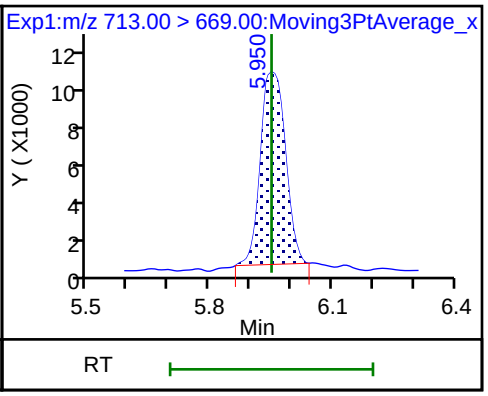

60 Perfluorotridecanoic acid



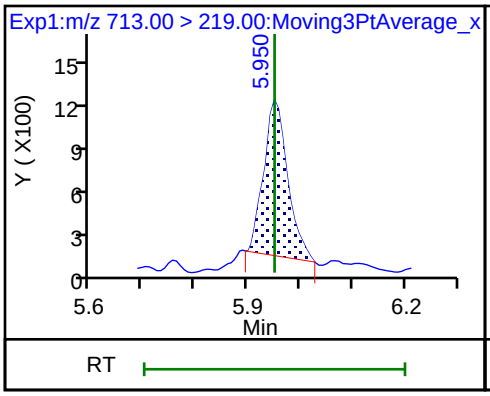

D 61 13C2 PFTeDA



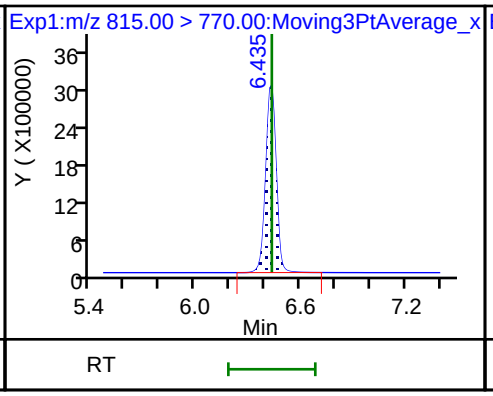

62 Perfluorotetradecanoic acid



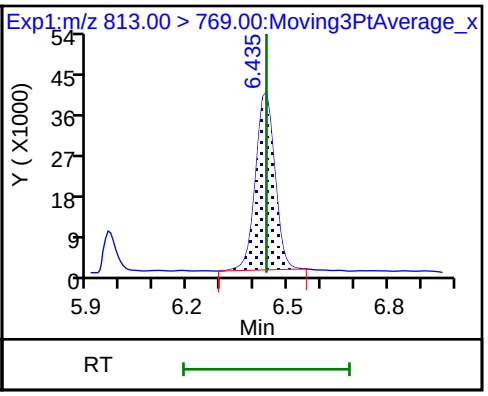

62 Perfluorotetradecanoic acid



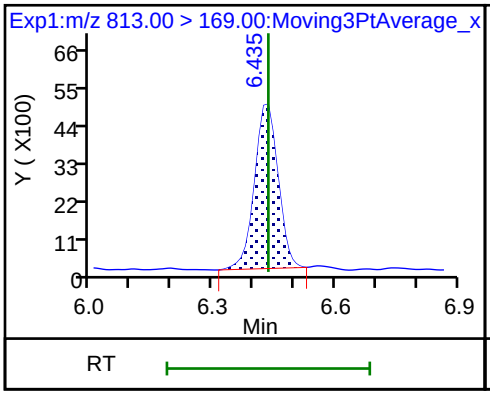

D 64 13C2 PFHxDA



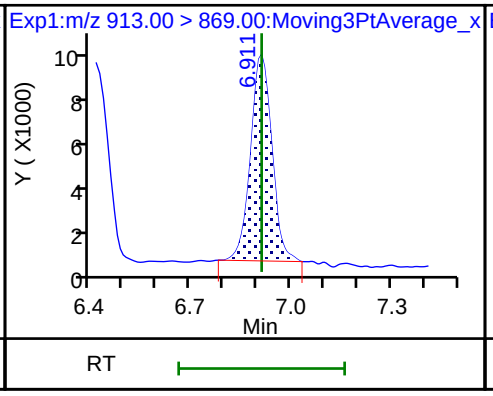

63 Perfluorohexadecanoic acid



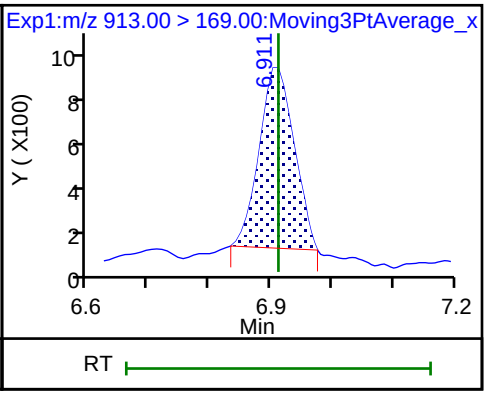

63 Perfluorohexadecanoic acid




65 Perfluorooctadecanoic acid




65 Perfluorooctadecanoic acid



Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

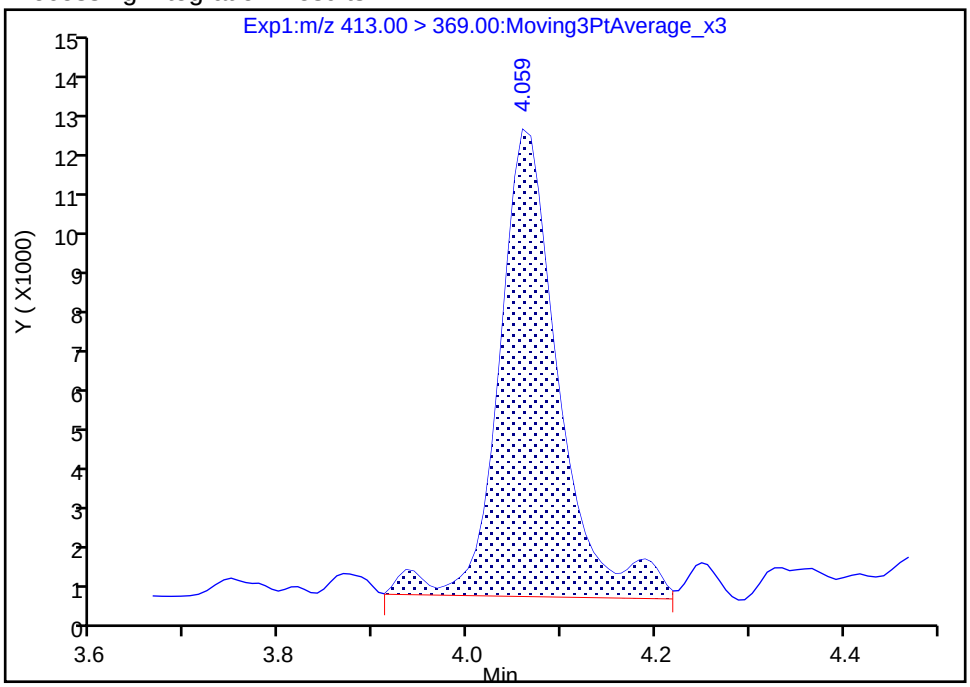
Data File: \\chromfs\Sacramento\ChromData\A13\20200908-102913.b\2020.09.08_A13_PFC_ICALX_011.d
Injection Date: 08-Sep-2020 19:07:39 Instrument ID: A13
Lims ID: ICB
Client ID:
Operator ID: SACINSTLCMS01 ALS Bottle#: 8 Worklist Smp#: 9
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFAS_A13 Limit Group: LC PFC ICAL
Column: Gemini C18 3um 3 x 100mm ( 3.00 mm) Detector EXP1

## 26 Perfluorooctanoic acid, CAS: 335-67-1

Signal: 1

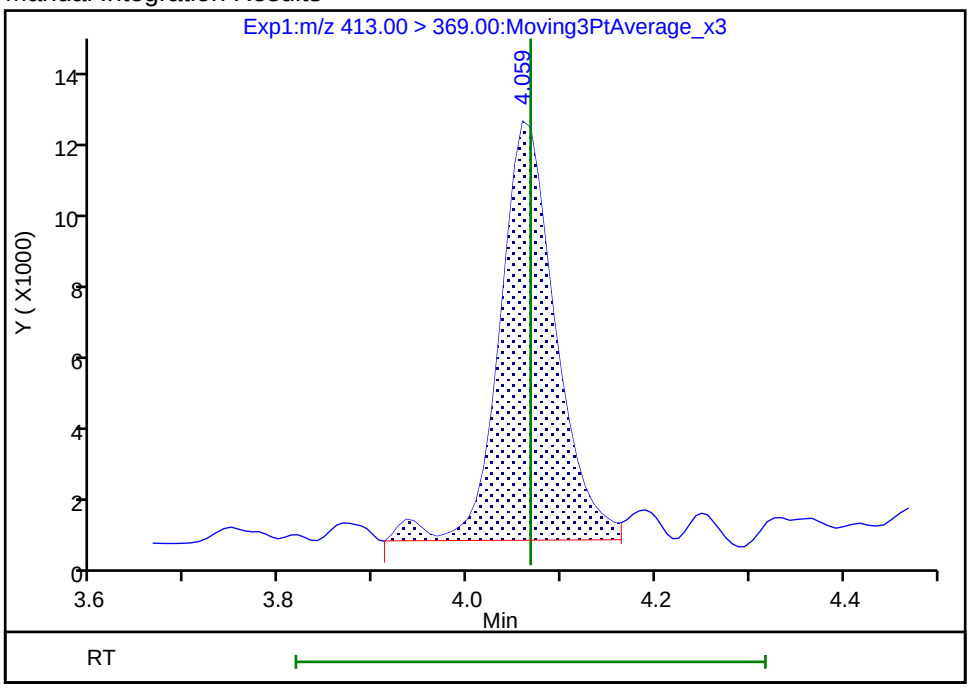
Processing Integration Results

RT: 4.06
Area: 50803
Amount: 0.011321
Amount Units: ng/ml




Manual Integration Results

RT: 4.06
Area: 47192
Amount: 0.010517
Amount Units: ng/ml




Reviewer: novoaj, 09-Sep-2020 09:37:19
Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

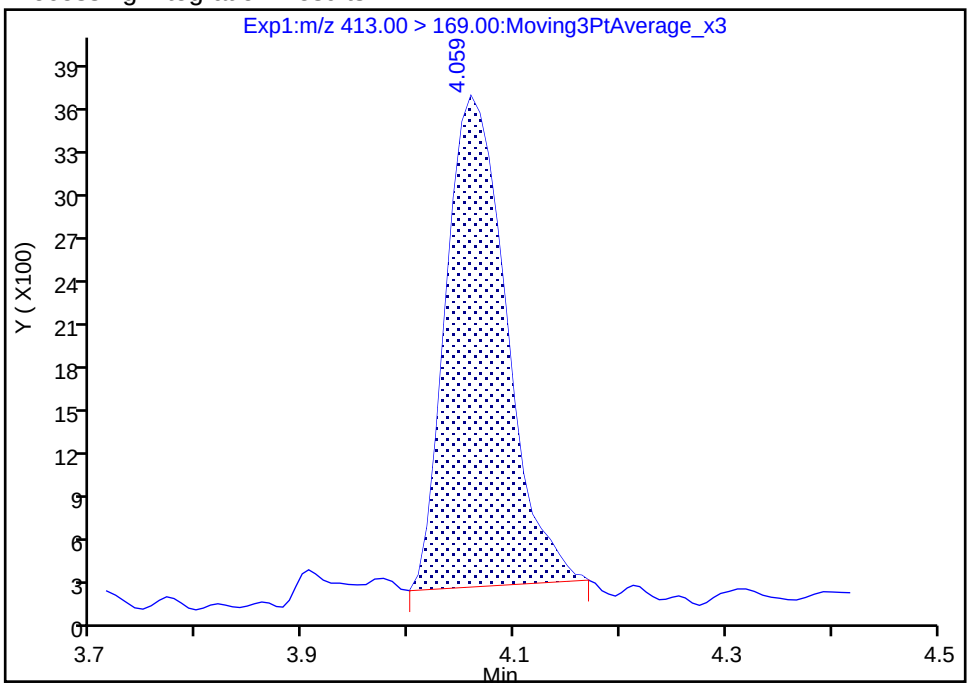
Data File: \\chromfs\Sacramento\ChromData\A13\20200908-102913.b\2020.09.08_A13_PFC_ICALX_011.d
Injection Date: 08-Sep-2020 19:07:39 Instrument ID: A13
Lims ID: ICB
Client ID:
Operator ID: SACINSTLCMS01 ALS Bottle#: 8 Worklist Smp#: 9
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFAS_A13 Limit Group: LC PFC ICAL
Column: Gemini C18 3um 3 x 100mm ( 3.00 mm ID) Detector EXP1

## 26 Perfluorooctanoic acid, CAS: 335-67-1

Signal: 2

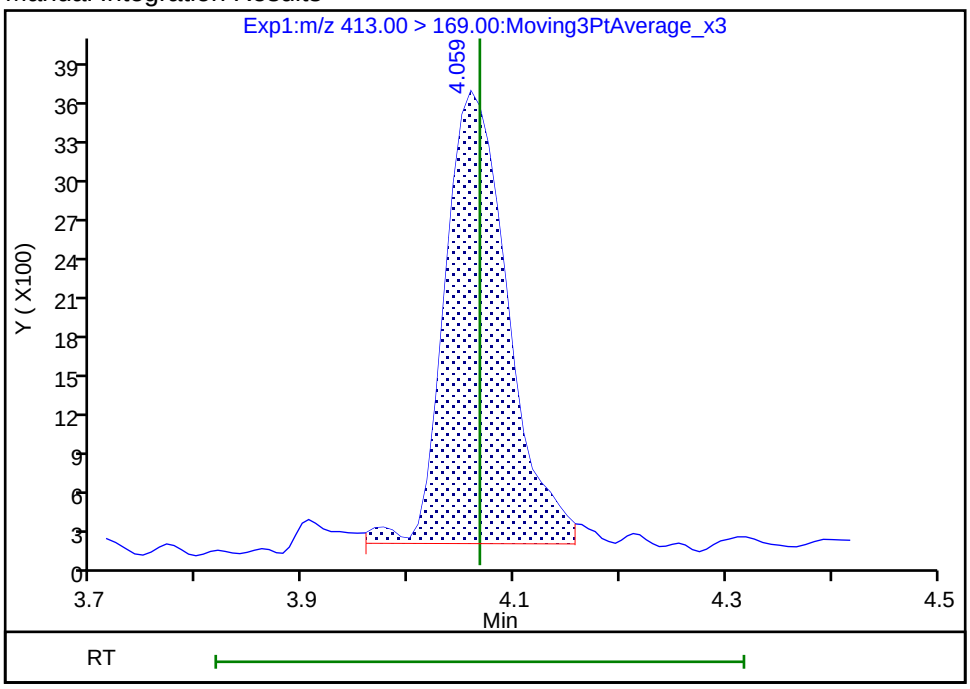
Processing Integration Results

RT: 4.06
Area: 13389
Amount: 0.011321
Amount Units: ng/ml




Manual Integration Results

RT: 4.06
Area: 14280
Amount: 0.010517
Amount Units: ng/ml




Reviewer: novoaj, 09-Sep-2020 09:37:33
Audit Action: Manually Integrated Audit Reason: Isomers

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

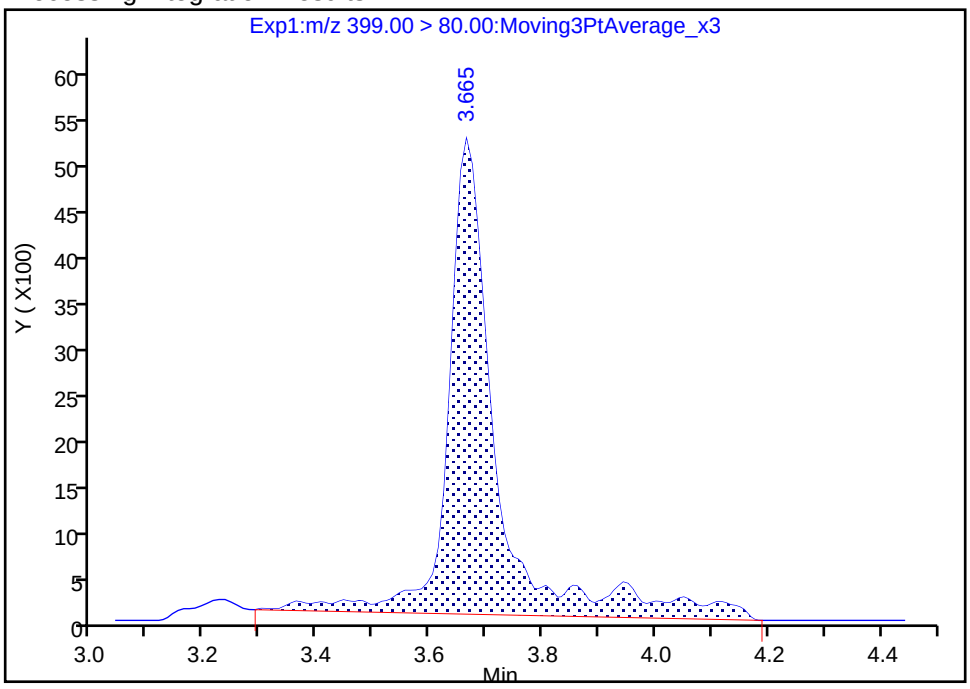
Data File: \\chromfs\Sacramento\ChromData\A13\20200908-102913.b\2020.09.08_A13_PFC_ICALX_011.d
Injection Date: 08-Sep-2020 19:07:39 Instrument ID: A13
Lims ID: ICB
Client ID:
Operator ID: SACINSTLCMS01 ALS Bottle#: 8 Worklist Smp#: 9
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFAS_A13 Limit Group: LC PFC ICAL
Column: Gemini C18 3um 3 x 100mm ( 3.00 mm) Detector: EXP1

## 18 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 1

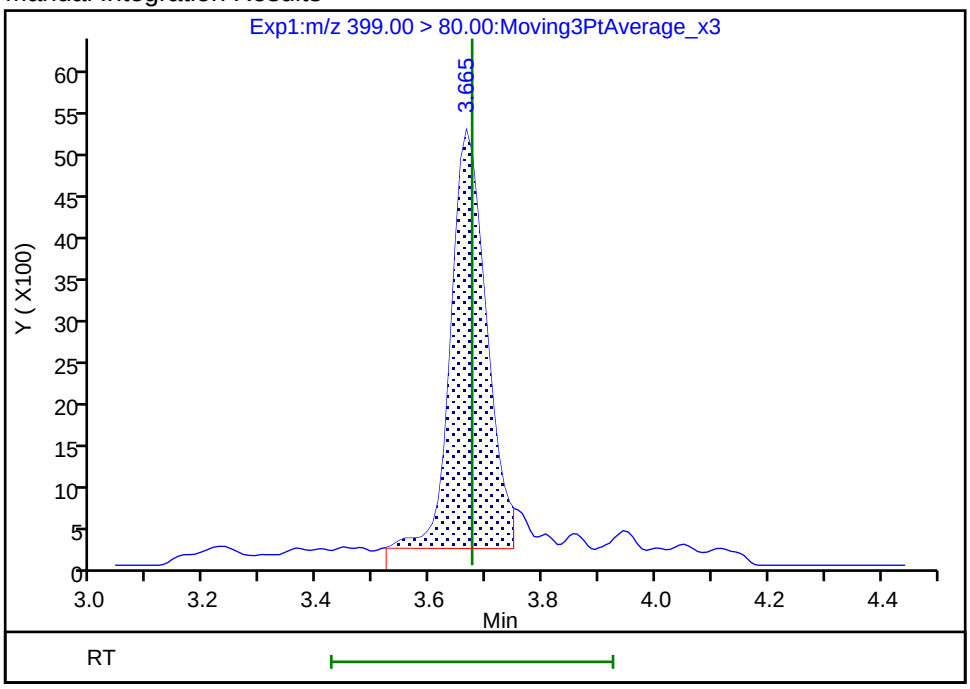
Processing Integration Results

RT: 3.66
Area: 30942
Amount: 0.011339
Amount Units: ng/ml




Manual Integration Results

RT: 3.66
Area: 21953
Amount: 0.008045
Amount Units: ng/ml




Reviewer: novoaj, 09-Sep-2020 09:36:39
Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

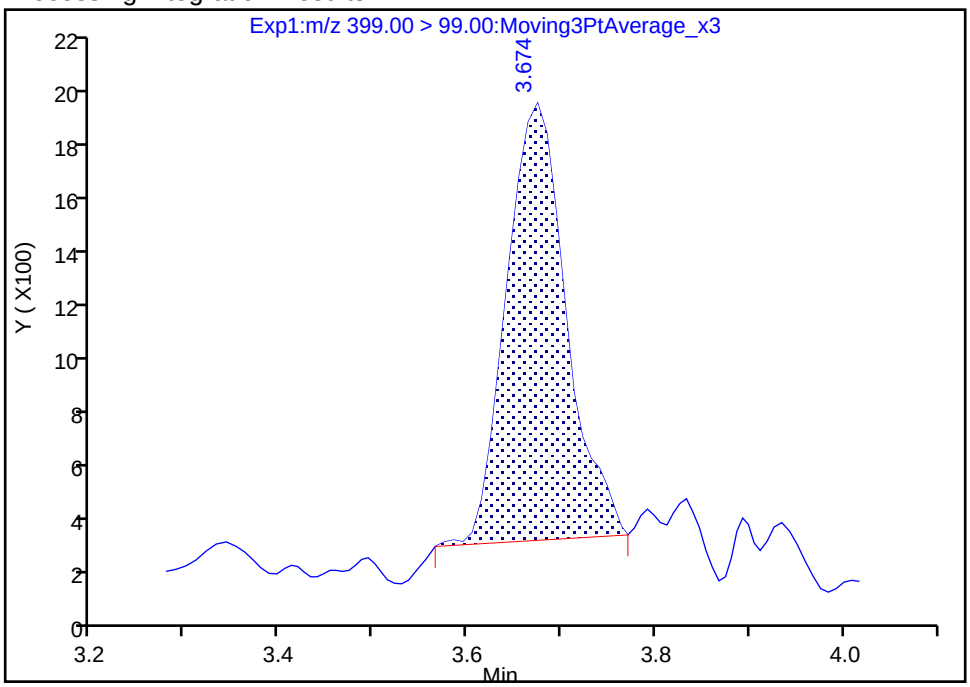
Data File: \\chromfs\Sacramento\ChromData\A13\20200908-102913.b\2020.09.08_A13_PFC_ICALX_011.d
Injection Date: 08-Sep-2020 19:07:39 Instrument ID: A13
Lims ID: ICB
Client ID:
Operator ID: SACINSTLCMS01 ALS Bottle#: 8 Worklist Smp#: 9
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFAS_A13 Limit Group: LC PFC ICAL
Column: Gemini C18 3um 3 x 100mm ( 3.00 mm ID) Detector EXP1

## 18 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 2

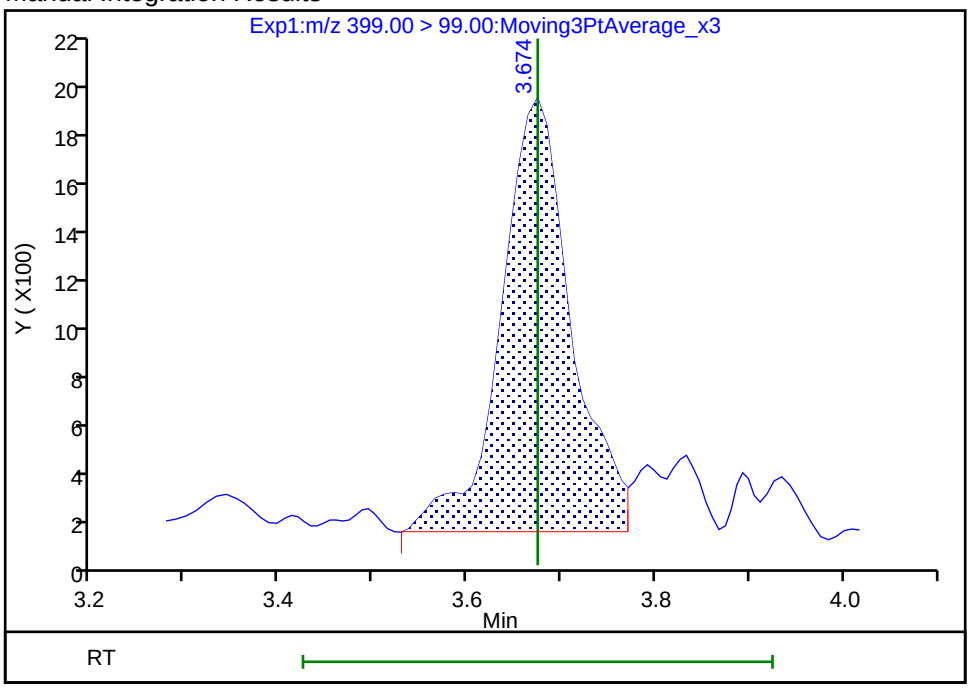
Processing Integration Results

RT: 3.67
Area: 7199
Amount: 0.011339
Amount Units: ng/ml




Manual Integration Results

RT: 3.67
Area: 9276
Amount: 0.008045
Amount Units: ng/ml




Reviewer: novoaj, 09-Sep-2020 09:36:56
Audit Action: Manually Integrated Audit Reason: Isomers

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

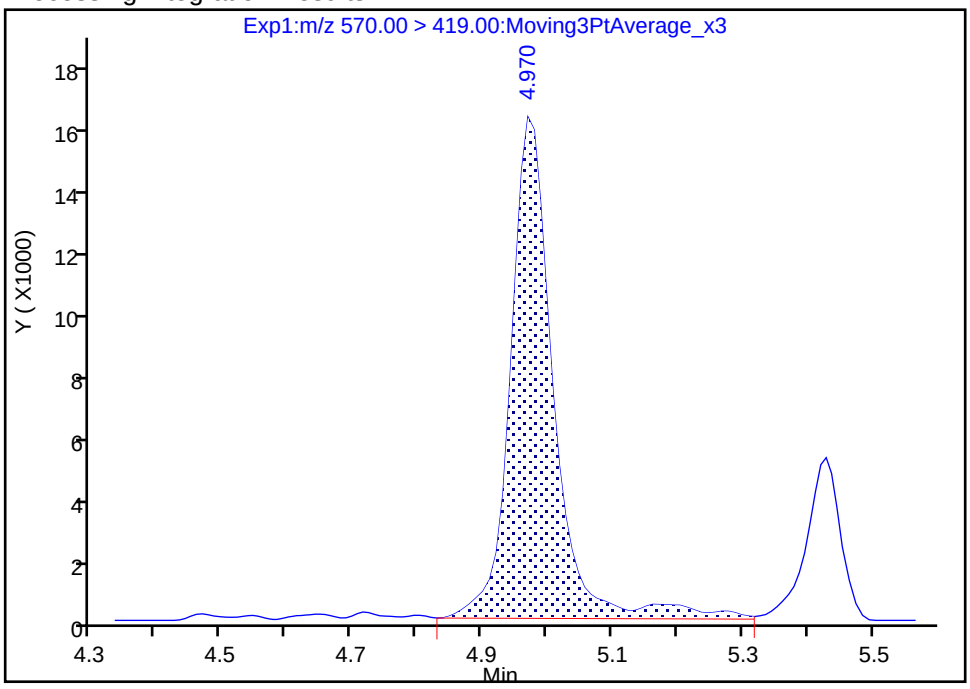
Data File: \\chromfs\Sacramento\ChromData\A13\20200908-102913.b\2020.09.08_A13_PFC_ICALX_011.d
Injection Date: 08-Sep-2020 19:07:39 Instrument ID: A13
Lims ID: ICB
Client ID:
Operator ID: SACINSTLCMS01 ALS Bottle#: 8 Worklist Smp#: 9
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFAS_A13 Limit Group: LC PFC ICAL
Column: Gemini C18 3um 3 x 100mm ( 3.00 mm ID) Detector EXP1

## 41 NMeFOSAA, CAS: 2355-31-9

Signal: 1

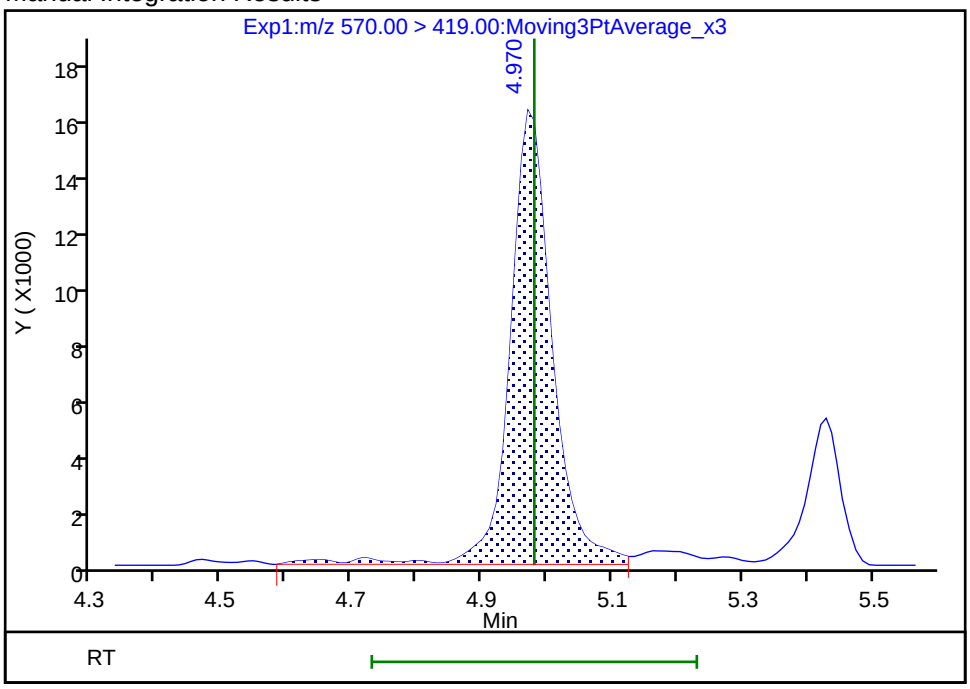
Processing Integration Results

RT: 4.97
Area: 72995
Amount: 0.035000
Amount Units: ng/ml




Manual Integration Results

RT: 4.97
Area: 71795
Amount: 0.034425
Amount Units: ng/ml




Reviewer: novoaj, 09-Sep-2020 09:38:17
Audit Action: Manually Integrated Audit Reason: Isomers

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

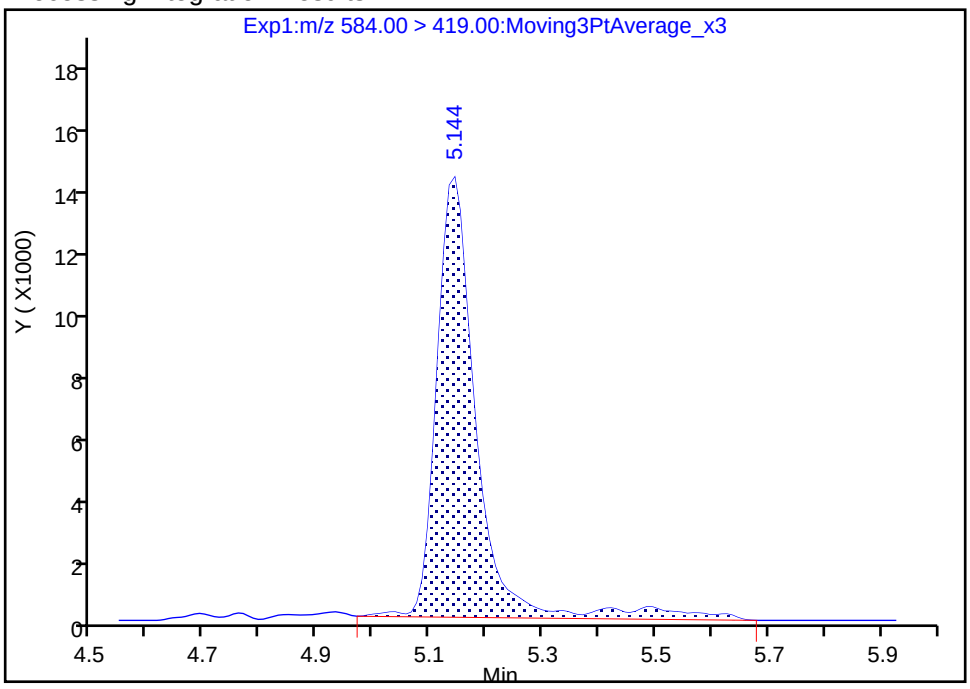
Data File: \\chromfs\Sacramento\ChromData\A13\20200908-102913.b\2020.09.08_A13_PFC_ICALX_011.d
Injection Date: 08-Sep-2020 19:07:39 Instrument ID: A13
Lims ID: ICB
Client ID:
Operator ID: SACINSTLCMS01 ALS Bottle#: 8 Worklist Smp#: 9
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFAS_A13 Limit Group: LC PFC ICAL
Column: Gemini C18 3um 3 x 100mm ( 3.00 mm) Detector EXP1

## 48 NEtFOSA, CAS: 2991-50-6

Signal: 1

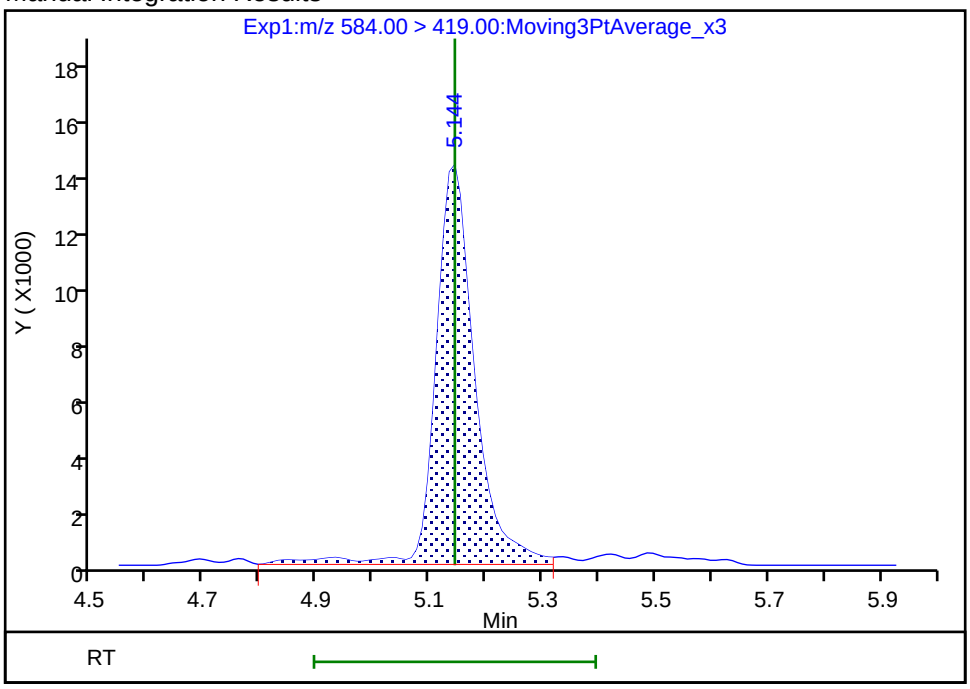
Processing Integration Results

RT: 5.14
Area: 67816
Amount: 0.034860
Amount Units: ng/ml




Manual Integration Results

RT: 5.14
Area: 66227
Amount: 0.034043
Amount Units: ng/ml




Reviewer: novoaj, 09-Sep-2020 09:38:33
Audit Action: Manually Integrated Audit Reason: Isomers

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento  Job No.: 460-217659-1

SDG No.:

Client Sample ID:  Lab Sample ID: LCS 320-410906/2-A

Matrix: Water  Lab File ID: 2020.09.10_A13_PFC_A_060.d

Analysis Method: 537 (modified)  Date Collected:

Extraction Method: 3535  Date Extracted: 09/09/2020 18:39

Sample wt/vol: 250(mL)  Date Analyzed: 09/10/2020 18:17

Con. Extract Vol.: 10.00(mL)  Dilution Factor: 1

Injection Volume: 20(uL)  GC Column: GeminiC18 3x100 ID: 3(mm)

% Moisture:  GPC Cleanup:(Y/N) N

Analysis Batch No.: 411143  Units: ng/L

| CAS NO. | COMPOUND NAME | RESULT | Q | RL | MDL |
|---|---|---|---|---|---|
| 375-22-4 | Perfluorobutanoic acid (PFBA) | 41.57 | | 2.00 | 0.35 |
| 2706-90-3 | Perfluoropentanoic acid (PFPeA) | 39.75 | | 2.00 | 0.49 |
| 307-24-4 | Perfluorohexanoic acid (PFHxA) | 41.17 | | 2.00 | 0.58 |
| 375-85-9 | Perfluoroheptanoic acid (PFHpA) | 41.33 | | 2.00 | 0.25 |
| 335-67-1 | Perfluorooctanoic acid (PFOA) | 40.45 | | 2.00 | 0.85 |
| 375-95-1 | Perfluorononanoic acid (PFNA) | 42.87 | | 2.00 | 0.27 |
| 335-76-2 | Perfluorodecanoic acid (PFDA) | 39.95 | | 2.00 | 0.31 |
| 2058-94-8 | Perfluoroundecanoic acid (PFUnA) | 40.85 | | 2.00 | 1.10 |
| 307-55-1 | Perfluorododecanoic acid (PFDoA) | 42.34 | | 2.00 | 0.55 |
| 72629-94-8 | Perfluorotridecanoic acid (PFTriA) | 42.64 | | 2.00 | 1.30 |
| 376-06-7 | Perfluorotetradecanoic acid (PFTeA) | 39.43 | | 2.00 | 0.29 |
| 375-73-5 | Perfluorobutanesulfonic acid (PFBS) | 34.17 | | 2.00 | 0.20 |
| 355-46-4 | Perfluorohexanesulfonic acid (PFHxS) | 33.74 | | 2.00 | 0.17 |
| 375-92-8 | Perfluoroheptanesulfonic Acid (PFHpS) | 39.47 | | 2.00 | 0.19 |
| 1763-23-1 | Perfluorooctanesulfonic acid (PFOS) | 38.86 | | 2.00 | 0.54 |
| 335-77-3 | Perfluorodecanesulfonic acid (PFDS) | 37.63 | | 2.00 | 0.32 |
| 754-91-6 | Perfluorooctanesulfonamide (FOSA) | 40.01 | | 2.00 | 0.35 |
| 2355-31-9 | N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA) | 42.21 | | 20.0 | 3.10 |
| 2991-50-6 | N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA) | 38.74 | | 20.0 | 1.90 |
| 27619-97-2 | 6:2 FTS | 37.38 | | 20.0 | 2.00 |
| 39108-34-4 | 8:2 FTS | 36.84 | | 20.0 | 2.00 |

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento  Job No.: 460-217659-1

SDG No.:

Client Sample ID:  Lab Sample ID: LCS 320-410906/2-A

Matrix: Water  Lab File ID: 2020.09.10_A13_PFC_A_060.d

Analysis Method: 537 (modified)  Date Collected:

Extraction Method: 3535  Date Extracted: 09/09/2020 18:39

Sample wt/vol: 250(mL)  Date Analyzed: 09/10/2020 18:17

Con. Extract Vol.: 10.00(mL)  Dilution Factor: 1

Injection Volume: 20(uL)  GC Column: GeminiC18 3x100 ID: 3(mm)

% Moisture:  GPC Cleanup:(Y/N) N

Analysis Batch No.: 411143  Units: ng/L

| CAS NO. | ISOTOPE DILUTION | %REC | Q | LIMITS |
|---|---|---|---|---|
| STL00992 | 13C4 PFBA | 90 | | 25-150 |
| STL01893 | 13C5 PFPeA | 89 | | 25-150 |
| STL00993 | 13C2 PFHxA | 93 | | 25-150 |
| STL01892 | 13C4 PFHpA | 89 | | 25-150 |
| STL00990 | 13C4 PFOA | 84 | | 25-150 |
| STL00995 | 13C5 PFNA | 88 | | 25-150 |
| STL00996 | 13C2 PFDA | 87 | | 25-150 |
| STL00997 | 13C2 PFUnA | 82 | | 25-150 |
| STL00998 | 13C2 PFDoA | 75 | | 25-150 |
| STL02116 | 13C2 PFTeDA | 73 | | 25-150 |
| STL02337 | 13C3 PFBS | 101 | | 25-150 |
| STL00994 | 18O2 PFHxS | 99 | | 25-150 |
| STL00991 | 13C4 PFOS | 94 | | 25-150 |
| STL01056 | 13C8 FOSA | 85 | | 25-150 |
| STL02118 | d3-NMeFOSAA | 82 | | 25-150 |
| STL02117 | d5-NEtFOSAA | 84 | | 25-150 |
| STL02279 | M2-6:2 FTS | 93 | | 25-150 |
| STL02280 | M2-8:2 FTS | 105 | | 25-150 |

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\A13\20200910-103052.b\2020.09.10_A13_PFC_A_060.d
Lims ID: LCS 320-410906/2-A
Client ID:
Sample Type: LCS
Inject. Date: 10-Sep-2020 18:17:18 ALS Bottle#: 33 Worklist Smp#: 3
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Sample Info: lcs 320-410906/2-a
Misc. Info.: Plate: 1 Rack: 4
Operator ID: SACINSTLCMS01 Instrument ID: A13

Method: \\chromfs\Sacramento\ChromData\A13\20200910-103052.b\PFAS_A13.m
Limit Group: LC PFC ICAL
Last Update: 11-Sep-2020 08:48:52 Calib Date: 08-Sep-2020 18:58:15
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\A13\20200908-102913.b\2020.09.08_A13_PFC_ICALX_010.d

Column 1 : Gemini C18 3um 3 x 100mm ( 3.00 mm) Det: EXP1
Process Host: CTX1053

First Level Reviewer: mongkols Date: 11-Sep-2020 08:48:52
Ratio Calibration: CCV Sample: \\chromfs\Sacramento\ChromData\A13\20200910-103052.b\2020.09.10_A13_PFC_A_058.d

| Signal | RT | EXP RT | DLT RT | REL RT | Response | Amount ng/ml | Ratio(Limits) | %Rec | S/N | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| D 1 13C4 PFBA | | | | | | | | | | |
| 217.00 > 172.00 | 2.468 | 2.475 | -0.007 | 0.609 | 8095825 | 2.24 | | 89.7 | 10898 | |
| 2 Perfluorobutanoic acid | | | | | | | | | | |
| 212.90 > 169.00 | 2.468 | 2.482 | -0.014 | 1.000 | 2501513 | 1.04 | | 104 | 334 | |
| D 4 13C5 PFPeA | | | | | | | | | | |
| 267.90 > 223.00 | 2.857 | 2.867 | -0.010 | 0.705 | 6281782 | 2.23 | | 89.3 | 4392 | |
| 5 Perfluoropentanoic acid | | | | | | | | | | |
| 262.90 > 219.00 | 2.868 | 2.867 | 0.001 | 1.004 | 2566541 | 0.99 | | 99.4 | 141 | |
| D 14 13C3 PFBS | | | | | | | | | | |
| 301.90 > 80.00 | 2.903 | 2.913 | -0.010 | 0.716 | 8267707 | 2.34 | | 101 | 6147 | |
| 6 Perfluorobutanesulfonic acid | | | | | | | | | | |
| 298.90 > 80.00 | 2.903 | 2.913 | -0.010 | 1.000 | 2969757 | 0.8542 | Target=2.29 | 96.6 | 906 | |
| 298.90 > 99.00 | 2.903 | 2.913 | -0.010 | 1.000 | 1318689 | | 2.25(1.15-3.44) | | 347 | |
| 7 4:2 FTS | | | | | | | | | | |
| 327.00 > 307.00 | 3.205 | 3.215 | -0.010 | 1.000 | 2625814 | 0.9357 | | 100 | 3198 | |
| D 8 M2-4:2 FTS | | | | | | | | | | |
| 329.00 > 81.00 | 3.205 | 3.215 | -0.010 | 0.791 | 2020279 | 2.33 | | 100.0 | 1195 | |
| 10 Perfluorohexanoic acid | | | | | | | | | | |
| 313.00 > 269.00 | 3.248 | 3.258 | -0.010 | 1.000 | 3079956 | 1.03 | Target=13.52 | 103 | 124 | |
| 313.00 > 119.00 | 3.248 | 3.258 | -0.010 | 1.000 | 239752 | | 12.85(6.76-20.28) | | 83.5 | |
| D 9 13C2 PFHxA | | | | | | | | | | |
| 315.00 > 270.00 | 3.248 | 3.258 | -0.010 | 0.801 | 8050426 | 2.32 | | 92.6 | 13974 | |
| 11 Perfluoropentanesulfonic acid | | | | | | | | | | |
| 349.00 > 80.00 | 3.269 | 3.279 | -0.010 | 1.126 | 2778984 | 0.9898 | Target=2.44 | 106 | 1959 | |
| 349.00 > 99.00 | 3.269 | 3.279 | -0.010 | 1.126 | 1063338 | | 2.61(1.22-3.66) | | 499 | |
| 12 HPFO-DA | | | | | | | | | | |
| 285.00 > 169.00 | 3.372 | 3.380 | -0.008 | 1.000 | 629450 | 0.9878 | | 98.8 | 1426 | |

| Signal | RT | EXP RT | DLT RT | REL RT | Response | Amount ng/ml | Ratio(Limits) | %Rec | S/N | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| D 13 13C3 HFPO-DA | | | | | | | | | | |
| 287.00 > 169.00 | 3.372 | 3.380 | -0.008 | 0.832 | 5359689 | 2.15 | | 86.0 | 7863 | |
| D 17 18O2 PFHxS | | | | | | | | | | |
| 403.00 > 84.00 | 3.657 | 3.665 | -0.008 | 0.902 | 5432692 | 2.35 | | 99.2 | 1990 | |
| 16 Perfluoroheptanoic acid | | | | | | | | | | |
| 363.00 > 319.00 | 3.657 | 3.665 | -0.008 | 1.000 | 3179419 | 1.03 | Target=3.87 | 103 | 272 | |
| 363.00 > 169.00 | 3.657 | 3.665 | -0.008 | 1.000 | 836996 | | 3.80(1.93-5.80) | | 325 | |
| 18 Perfluorohexanesulfonic acid | | | | | | | | | | M |
| 399.00 > 80.00 | 3.657 | 3.665 | -0.008 | 1.000 | 2155327 | 0.8435 | Target=3.08 | 92.7 | 2393 | |
| 399.00 > 99.00 | 3.657 | 3.665 | -0.008 | 1.000 | 712928 | | 3.02(1.54-4.62) | | 327 | M |
| D 15 13C4 PFHpA | | | | | | | | | | |
| 367.00 > 322.00 | 3.657 | 3.665 | -0.008 | 0.902 | 7611110 | 2.22 | | 88.9 | 4059 | |
| 19 DONA | | | | | | | | | | |
| 377.00 > 251.00 | 3.707 | 3.713 | -0.006 | 0.840 | 7677257 | 0.9673 | Target=2.76 | 103 | 6132 | |
| 377.00 > 85.00 | 3.697 | 3.713 | -0.016 | 0.838 | 2556543 | | 3.00(1.38-4.14) | | 3448 | |
| D 20 M2-6:2 FTS | | | | | | | | | | |
| 429.00 > 81.00 | 4.028 | 4.042 | -0.014 | 0.994 | 2211186 | 2.22 | | 93.3 | 1962 | |
| 21 6:2 FTS | | | | | | | | | | |
| 427.00 > 407.00 | 4.028 | 4.042 | -0.014 | 1.000 | 2093958 | 0.9345 | | 98.6 | 913 | |
| 22 Perfluoroheptanesulfonic acid | | | | | | | | | | |
| 449.00 > 80.00 | 4.045 | 4.051 | -0.006 | 0.917 | 1736587 | 0.9868 | Target=4.20 | 104 | 1049 | |
| 449.00 > 99.00 | 4.045 | 4.051 | -0.006 | 0.917 | 409543 | | 4.24(2.10-6.30) | | 260 | |
| D 24 13C4 PFOA | | | | | | | | | | |
| 417.00 > 372.00 | 4.045 | 4.059 | -0.014 | 0.998 | 8768663 | 2.10 | | 83.8 | 11551 | |
| 26 Perfluorooctanoic acid | | | | | | | | | | |
| 413.00 > 369.00 | 4.053 | 4.059 | -0.006 | 1.002 | 3628308 | 1.01 | Target=2.99 | 101 | 565 | |
| 413.00 > 169.00 | 4.045 | 4.059 | -0.014 | 1.000 | 1203394 | | 3.02(1.50-4.49) | | 799 | |
| * 25 13C2 PFOA | | | | | | | | | | |
| 415.00 > 370.00 | 4.053 | 4.059 | -0.006 | | 10619287 | 2.50 | | | 3367 | |
| 28 Perfluorooctanesulfonic acid | | | | | | | | | | M |
| 499.00 > 80.00 | 4.410 | 4.425 | -0.015 | 1.000 | 1558725 | 0.9715 | Target=4.13 | 105 | 294 | |
| 499.00 > 99.00 | 4.410 | 4.425 | -0.015 | 1.000 | 370980 | | 4.20(2.06-6.19) | | 289 | M |
| D 29 13C4 PFOS | | | | | | | | | | |
| 503.00 > 80.00 | 4.410 | 4.425 | -0.015 | 1.088 | 3693114 | 2.24 | | 93.6 | 3141 | |
| 30 Perfluorononanoic acid | | | | | | | | | | |
| 463.00 > 419.00 | 4.427 | 4.433 | -0.006 | 1.000 | 3441238 | 1.07 | Target=7.70 | 107 | 733 | |
| 463.00 > 169.00 | 4.427 | 4.433 | -0.006 | 1.000 | 408997 | | 8.41(3.85-11.55) | | 468 | |
| D 31 13C5 PFNA | | | | | | | | | | |
| 468.00 > 423.00 | 4.427 | 4.442 | -0.015 | 1.092 | 8455052 | 2.19 | | 87.5 | 5931 | |
| 32 9ClFOS | | | | | | | | | | |
| 531.00 > 351.00 | 4.610 | 4.620 | -0.010 | 1.045 | 3756301 | 0.9718 | | 104 | 4139 | |
| D 34 13C8 FOSA | | | | | | | | | | |
| 506.00 > 78.00 | 4.736 | 4.740 | -0.004 | 1.168 | 5046321 | 2.13 | | 85.1 | 4124 | |
| 33 Perfluorooctanesulfonamide | | | | | | | | | | |
| 498.00 > 78.00 | 4.736 | 4.740 | -0.004 | 1.000 | 1894625 | 1.00 | | 100 | 1818 | |

| Signal | RT | EXP RT | DLT RT | REL RT | Response | Amount ng/ml | Ratio(Limits) | %Rec | S/N | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| 35 Perfluorononanesulfonic acid | | | | | | | | | | |
| 549.00 > 80.00 | 4.761 | 4.766 | -0.005 | 1.080 | 1197614 | 1.00 | Target=2.03 | 104 | 1777 | |
| 549.00 > 99.00 | 4.761 | 4.766 | -0.005 | 1.080 | 572417 | | 2.09(1.01-3.04) | | 808 | |
| D 37 13C2 PFDA | | | | | | | | | | |
| 515.00 > 470.00 | 4.779 | 4.793 | -0.014 | 1.179 | 10221947 | 2.18 | | 87.3 | 8934 | |
| 36 Perfluorodecanoic acid | | | | | | | | | | |
| 513.00 > 469.00 | 4.788 | 4.793 | -0.005 | 1.002 | 3660734 | 1.00 | Target=10.40 | 99.9 | 1229 | |
| 513.00 > 169.00 | 4.779 | 4.793 | -0.014 | 1.000 | 350672 | | 10.44(5.20-15.61) | | 323 | |
| D 38 M2-8:2 FTS | | | | | | | | | | |
| 529.00 > 81.00 | 4.788 | 4.802 | -0.014 | 1.181 | 3310524 | 2.51 | | 105 | 3348 | |
| 39 8:2 FTS | | | | | | | | | | |
| 527.00 > 507.00 | 4.788 | 4.802 | -0.014 | 1.000 | 3147264 | 0.9211 | | 96.1 | 8780 | |
| D 40 d3-NMeFOSAA | | | | | | | | | | |
| 573.00 > 419.00 | 4.945 | 4.959 | -0.014 | 1.220 | 4961057 | 2.06 | | 82.2 | 3956 | |
| 41 NMeFOSAA | | | | | | | | | | |
| 570.00 > 419.00 | 4.955 | 4.959 | -0.004 | 1.002 | 1686865 | 1.06 | | 106 | 351 | |
| 42 Perfluorodecanesulfonic acid | | | | | | | | | | |
| 599.00 > 80.00 | 5.081 | 5.084 | -0.003 | 1.152 | 957830 | 0.9409 | Target=2.35 | 97.6 | 701 | |
| 599.00 > 99.00 | 5.081 | 5.084 | -0.003 | 1.152 | 426072 | | 2.25(1.18-3.53) | | 1004 | |
| D 44 13C2 PFUnA | | | | | | | | | | |
| 565.00 > 520.00 | 5.100 | 5.113 | -0.013 | 1.258 | 9422463 | 2.06 | | 82.3 | 8589 | |
| 45 Perfluoroundecanoic acid | | | | | | | | | | |
| 563.00 > 519.00 | 5.100 | 5.113 | -0.013 | 1.000 | 2545854 | 1.02 | Target=8.31 | 102 | 921 | |
| 563.00 > 169.00 | 5.100 | 5.113 | -0.013 | 1.000 | 289678 | | 8.79(4.15-12.46) | | 809 | |
| D 46 d5-NEtFOSAA | | | | | | | | | | |
| 589.00 > 419.00 | 5.110 | 5.123 | -0.013 | 1.261 | 4930565 | 2.11 | | 84.4 | 3652 | |
| 48 NEtFOSA | | | | | | | | | | |
| 584.00 > 419.00 | 5.119 | 5.132 | -0.013 | 1.002 | 1478446 | 0.9684 | | 96.8 | 19887 | |
| D 43 d7-N-MeFOSE-M | | | | | | | | | | |
| 623.00 > 59.00 | 5.187 | 5.190 | -0.003 | 1.280 | 1633870 | 2.75 | | 22.0 | 1030 | |
| 47 N-MeFOSE-M | | | | | | | | | | |
| 616.00 > 59.00 | 5.197 | 5.200 | -0.003 | 1.002 | 134305 | 0.9651 | | 96.5 | 193 | |
| D 49 d-N-MeFOSA-M | | | | | | | | | | |
| 515.00 > 169.00 | 5.208 | 5.212 | -0.004 | 1.285 | 1831184 | 1.64 | | 65.6 | 38.1 | |
| 50 NMeFOSA | | | | | | | | | | |
| 512.00 > 169.00 | 5.219 | 5.223 | -0.004 | 1.002 | 783886 | 1.09 | | 109 | 185 | |
| 51 11ClFOS | | | | | | | | | | |
| 631.00 > 451.00 | 5.241 | 5.255 | -0.014 | 1.188 | 6415822 | 0.9618 | | 102 | 5462 | |
| D 52 d9-N-EtFOSE-M | | | | | | | | | | |
| 639.00 > 59.00 | 5.356 | 5.359 | -0.003 | 1.321 | 1542473 | 2.21 | | 17.7 | 1141 | |
| 53 N-EtFOSE-M | | | | | | | | | | |
| 630.00 > 59.00 | 5.373 | 5.376 | -0.003 | 1.003 | 127538 | 1.00 | | 99.8 | 162 | |
| D 54 d-N-EtFOSA-M | | | | | | | | | | |
| 531.00 > 169.00 | 5.382 | 5.385 | -0.003 | 1.328 | 1185489 | 1.11 | | 44.5 | 110 | |
| 55 N-EtFOSA-M | | | | | | | | | | |
| 526.00 > 169.00 | 5.390 | 5.393 | -0.003 | 1.002 | 471189 | 0.9357 | | 93.6 | 100 | |

| Signal | RT | EXP RT | DLT RT | REL RT | Response | Amount ng/ml | Ratio(Limits) | %Rec | S/N | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| D 56 13C2 PFDoA | | | | | | | | | | |
| 615.00 > 570.00 | 5.398 | 5.409 | -0.011 | 1.332 | 9205145 | 1.87 | | 74.7 | 8420 | |
| 57 Perfluorododecanoic acid | | | | | | | | | | |
| 613.00 > 569.00 | 5.398 | 5.409 | -0.011 | 1.000 | 3555739 | 1.06 | Target=9.00 | 106 | 1937 | |
| 613.00 > 169.00 | 5.398 | 5.409 | -0.011 | 1.000 | 361747 | | 9.83(4.50-13.49) | | 690 | |
| 58 10:2 FTS | | | | | | | | | | |
| 627.00 > 607.00 | 5.415 | 5.426 | -0.011 | 1.131 | 2365754 | 1.05 | | 109 | 4740 | |
| 59 PFDoS | | | | | | | | | | |
| 699.00 > 80.00 | 5.629 | 5.642 | -0.013 | 1.276 | 380832 | 0.9582 | Target=0.54 | 99.0 | 1552 | |
| 699.00 > 99.00 | 5.629 | 5.642 | -0.013 | 1.276 | 640468 | | 0.59(0.27-0.82) | | 1372 | |
| 60 Perfluorotridecanoic acid | | | | | | | | | | |
| 663.00 > 619.00 | 5.665 | 5.676 | -0.011 | 1.049 | 3679051 | 1.07 | Target=6.96 | 107 | 2480 | |
| 663.00 > 169.00 | 5.665 | 5.676 | -0.011 | 1.049 | 509175 | | 7.23(3.48-10.45) | | 1257 | |
| D 61 13C2 PFTeDA | | | | | | | | | | |
| 715.00 > 670.00 | 5.907 | 5.920 | -0.013 | 1.457 | 8866205 | 1.82 | | 72.8 | 6697 | |
| 62 Perfluorotetradecanoic acid | | | | | | | | | | |
| 713.00 > 669.00 | 5.907 | 5.920 | -0.013 | 1.000 | 3441366 | 0.9858 | Target=10.31 | 98.6 | 1850 | |
| 713.00 > 219.00 | 5.912 | 5.920 | -0.008 | 1.001 | 310351 | | 11.09(5.16-15.47) | | 1117 | |
| 63 Perfluorohexadecanoic acid | | | | | | | | | | |
| 813.00 > 769.00 | 6.381 | 6.393 | -0.012 | 1.002 | 3847273 | 0.9110 | Target=9.94 | 91.1 | 2848 | |
| 813.00 > 169.00 | 6.381 | 6.393 | -0.012 | 1.002 | 383709 | | 10.03(4.97-14.90) | | 1239 | |
| D 64 13C2 PFHxDA | | | | | | | | | | |
| 815.00 > 770.00 | 6.369 | 6.393 | -0.024 | 1.571 | 10804779 | 2.13 | | 85.3 | 8712 | |
| 65 Perfluorooctadecanoic acid | | | | | | | | | | |
| 913.00 > 869.00 | 6.826 | 6.842 | -0.016 | 1.072 | 3162341 | 1.00 | Target=11.47 | 100 | 1591 | |
| 913.00 > 169.00 | 6.826 | 6.842 | -0.016 | 1.072 | 292894 | | 10.80(5.74-17.21) | | 1388 | |

## QC Flag Legend

Review Flags

M - Manually Integrated

Report Date: 11-Sep-2020 08:48:52 Chrom Revision: 2.3 09-Sep-2020 15:12:58

Eurofins TestAmerica, Sacramento

Data File: \\chromfs\Sacramento\ChromData\A13\20200910-103052.b\2020.09.10_A13_PFC_A_060.d

Injection Date: 10-Sep-2020 18:17:18 Instrument ID: A13

Lims ID: LCS 320-410906/2-A

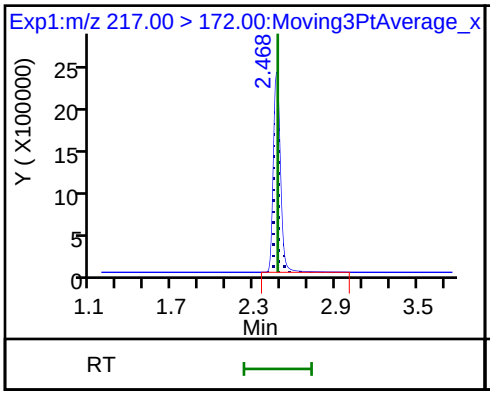
Client ID:

Operator ID: SACINSTLCMS01 ALS Bottle#: 33 Worklist Smp#: 3

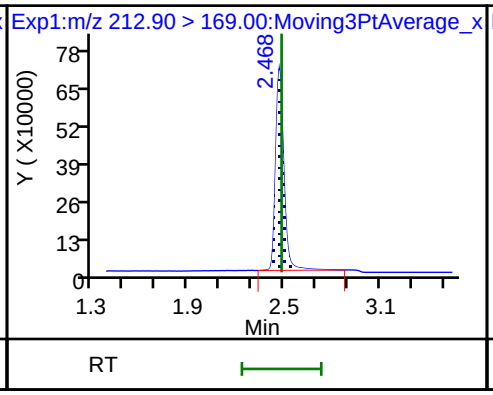
Injection Vol: 20.0 ul Dil. Factor: 1.0000

Method: PFAS_A13 Limit Group: LC PFC ICAL

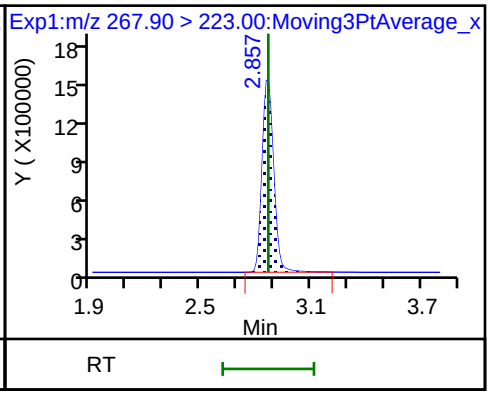
D 1 13C4 PFBA



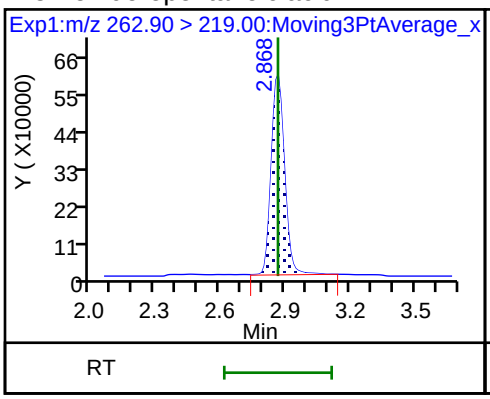

2 Perfluorobutanoic acid



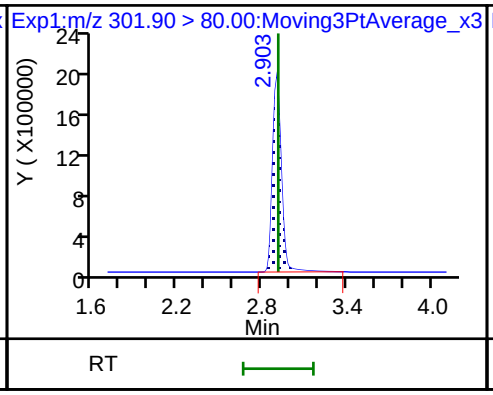

D 4 13C5 PFPeA



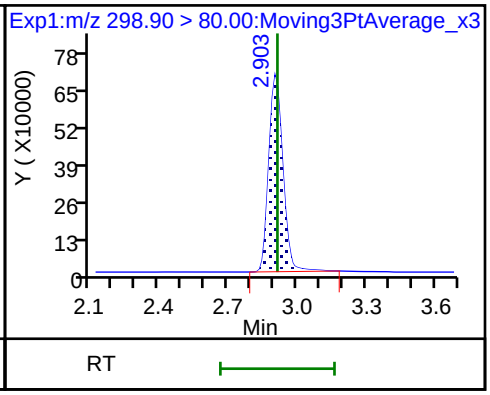

5 Perfluoropentanoic acid



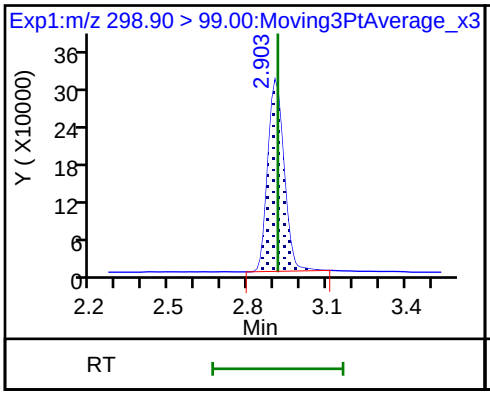

D 14 13C3 PFBS



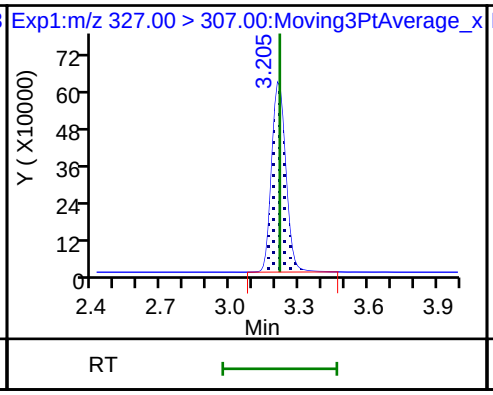

6 Perfluorobutanesulfonic acid



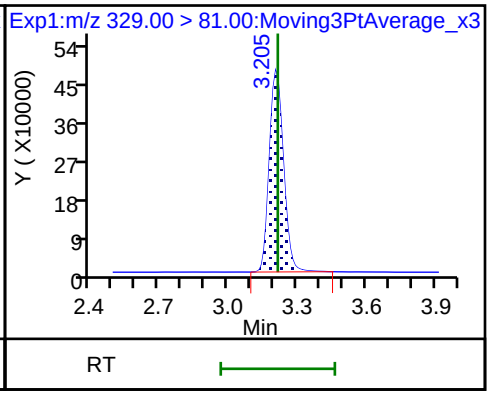

6 Perfluorobutanesulfonic acid



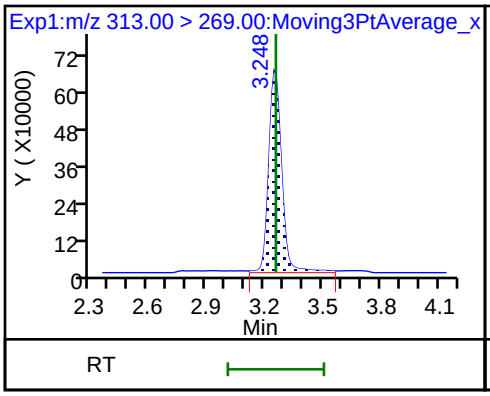

7 4:2 FTS



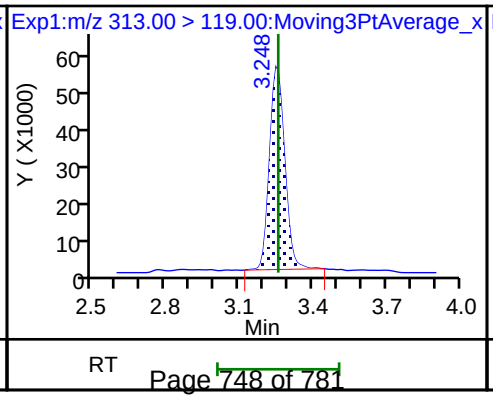

D 8 M2-4:2 FTS



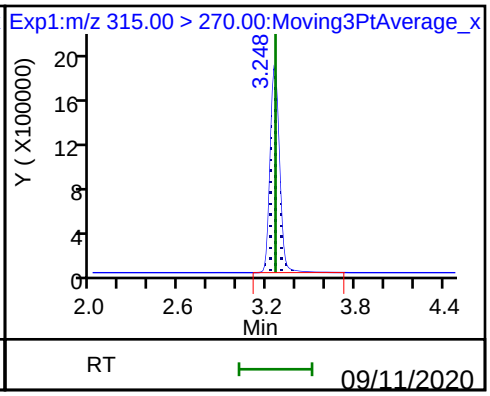

10 Perfluorohexanoic acid



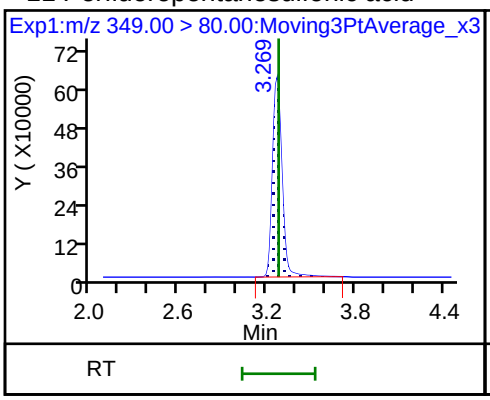

10 Perfluorohexanoic acid



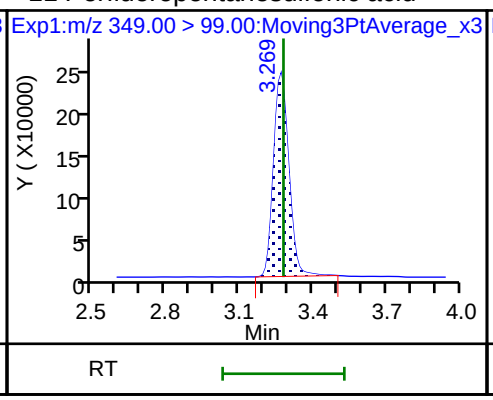

D 9 13C2 PFHxA



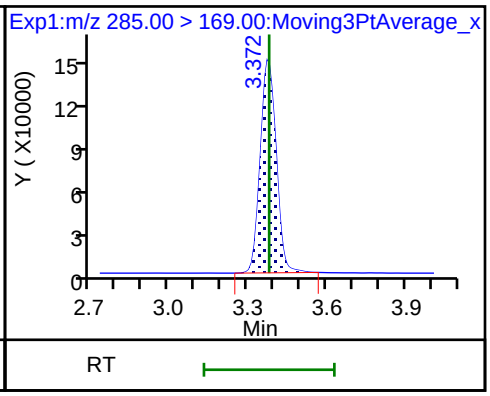
11 Perfluoropentanesulfonic acid



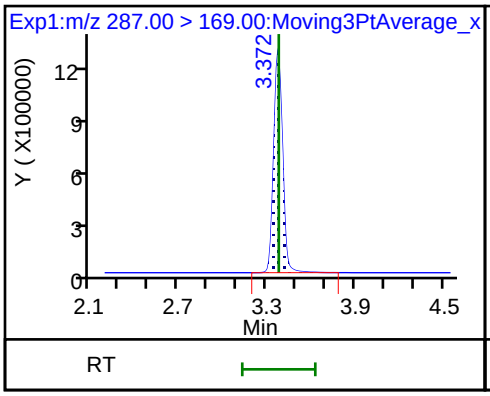

11 Perfluoropentanesulfonic acid



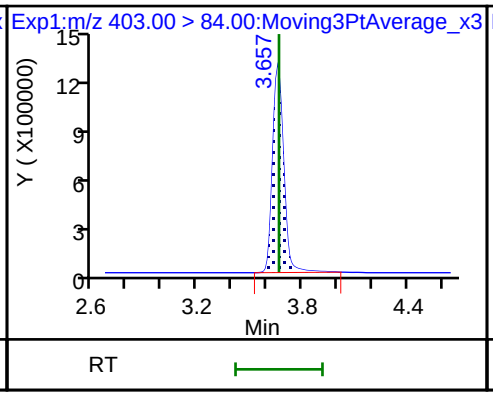

12 HPFO-DA



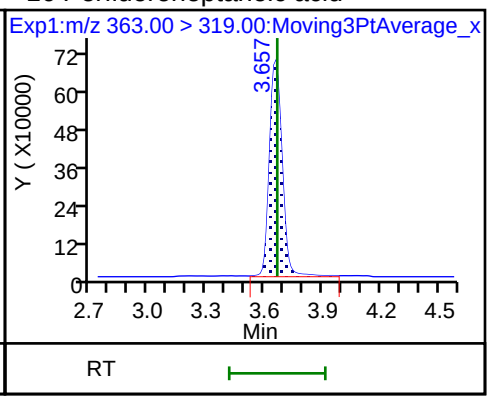

D 13 13C3 HFPO-DA



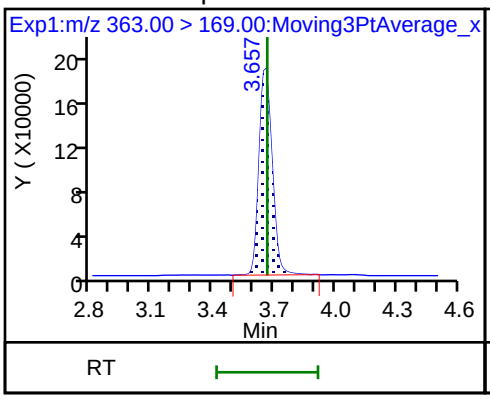

D 17 18O2 PFHxS



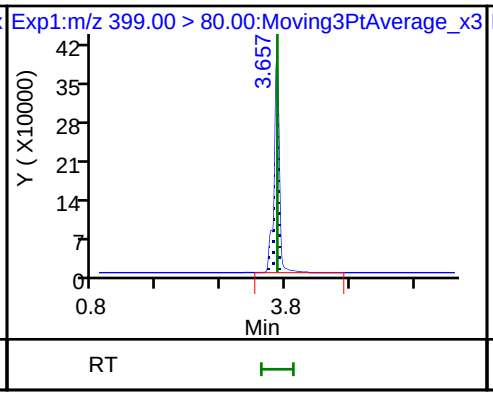

16 Perfluoroheptanoic acid



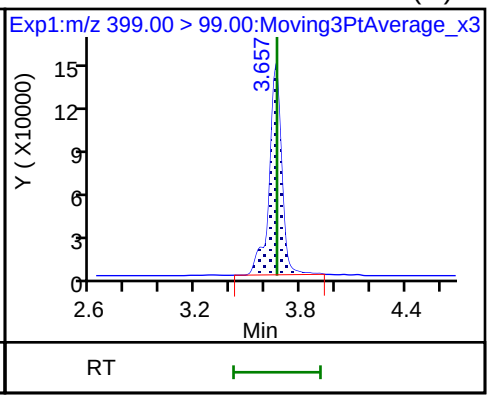

16 Perfluoroheptanoic acid



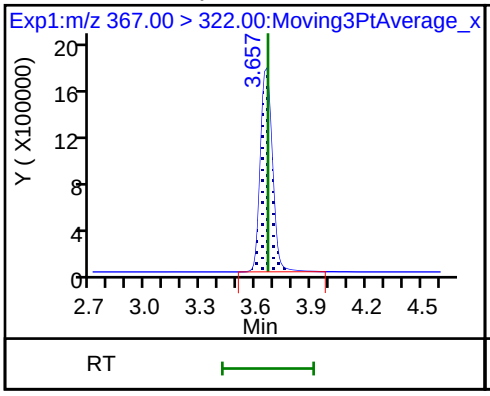

18 Perfluorohexanesulfonic acid



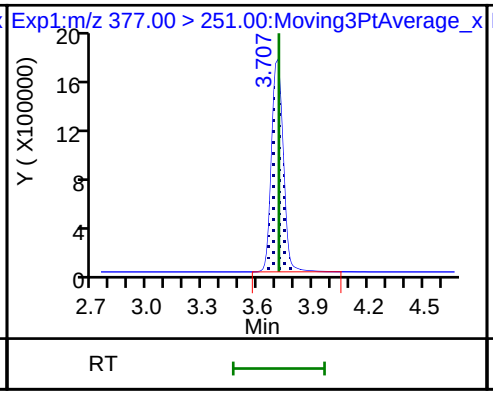

18 Perfluorohexanesulfonic acid (M)




D 15 13C4 PFHpA




19 DONA

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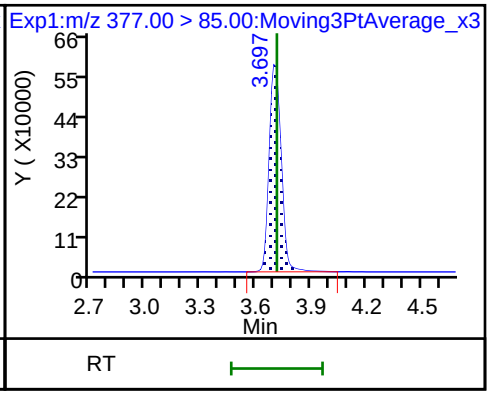
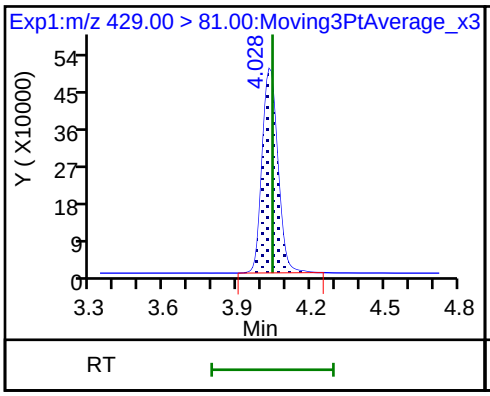
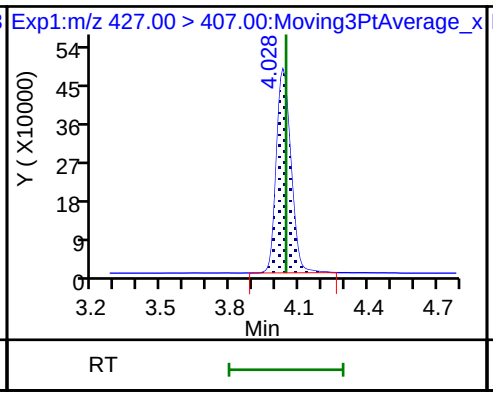


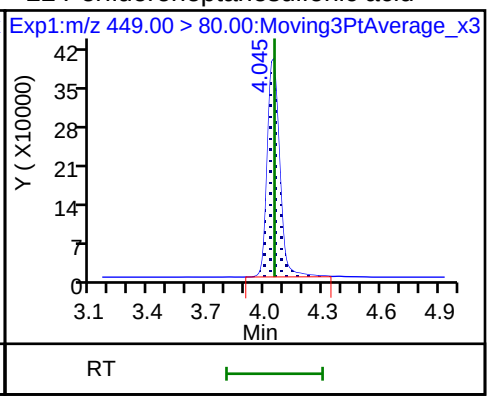
D 20 M2-6:2 FTS



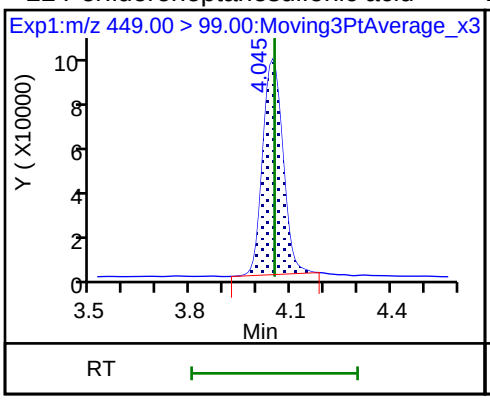

21 6:2 FTS



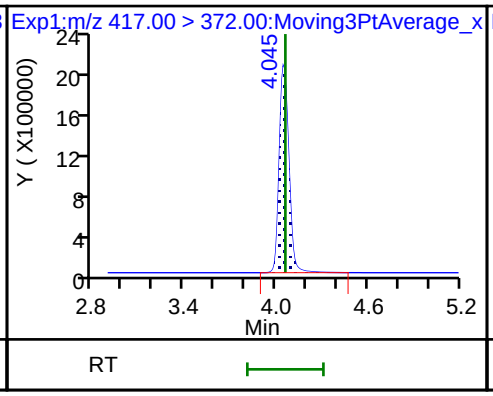

22 Perfluoroheptanesulfonic acid



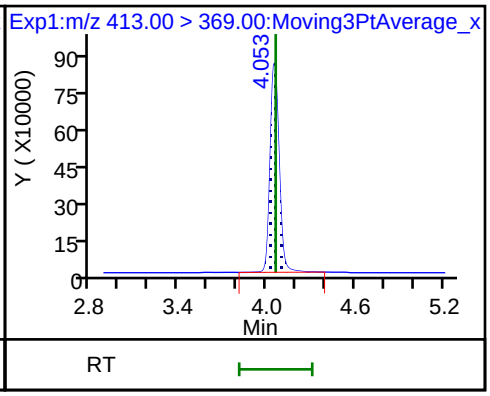

22 Perfluoroheptanesulfonic acid



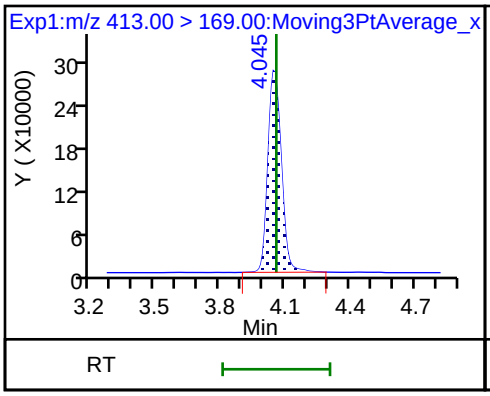

D 24 13C4 PFOA



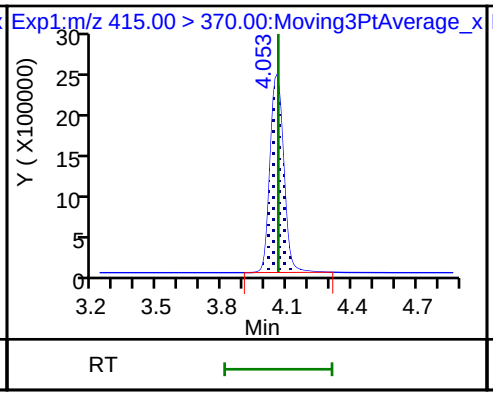

26 Perfluorooctanoic acid



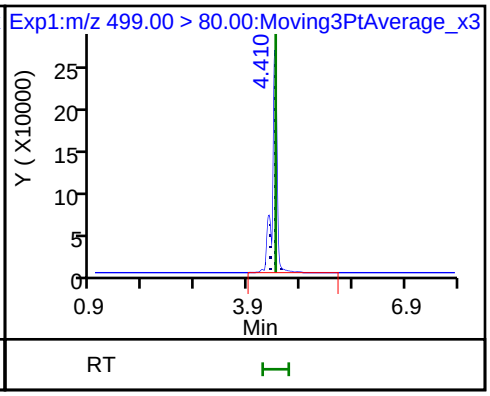

26 Perfluorooctanoic acid



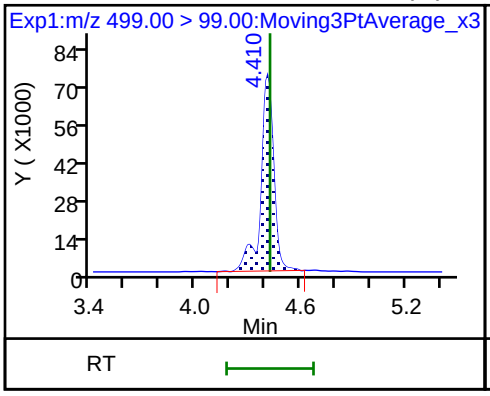

* 25 13C2 PFOA



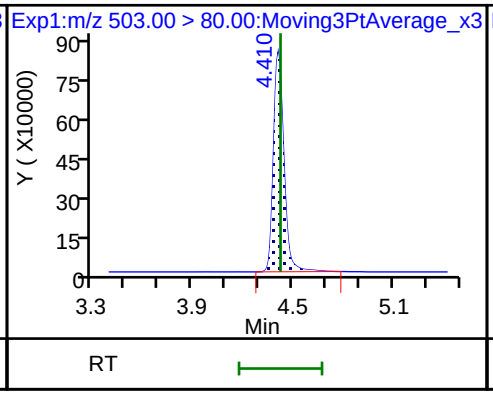

28 Perfluorooctanesulfonic acid



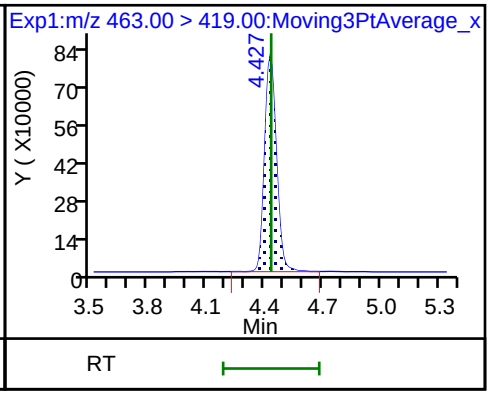

28 Perfluorooctanesulfonic acid (M)



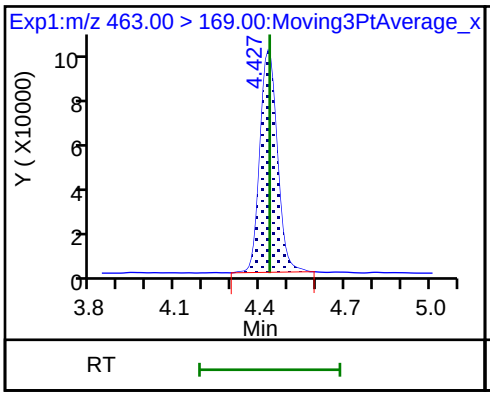

D 29 13C4 PFOS



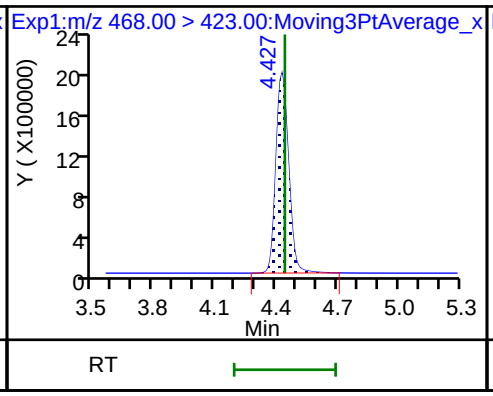

30 Perfluorononanoic acid



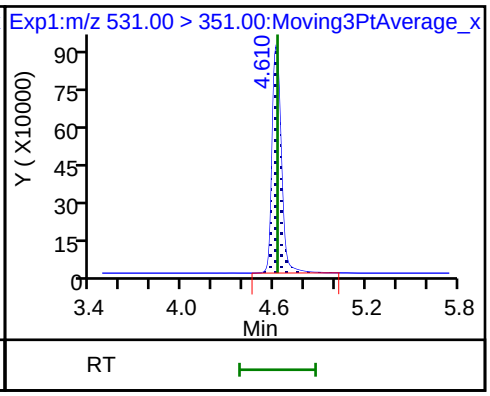
30 Perfluorononanoic acid



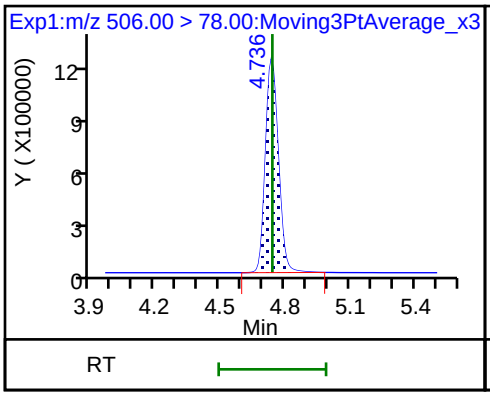

D 31 13C5 PFNA



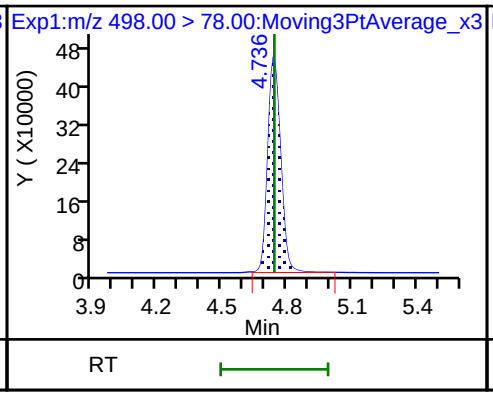

32 9ClFOS



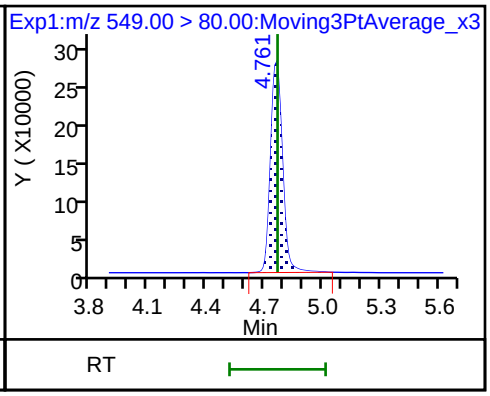

D 34 13C8 FOSA



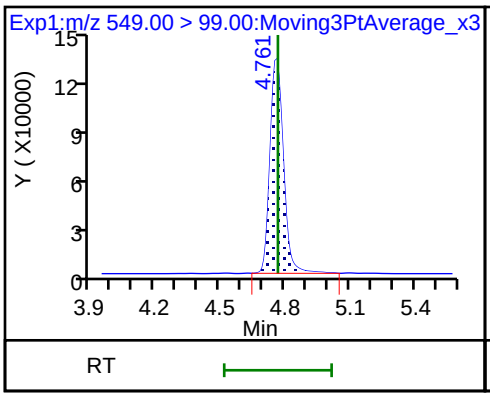

33 Perfluorooctanesulfonamide



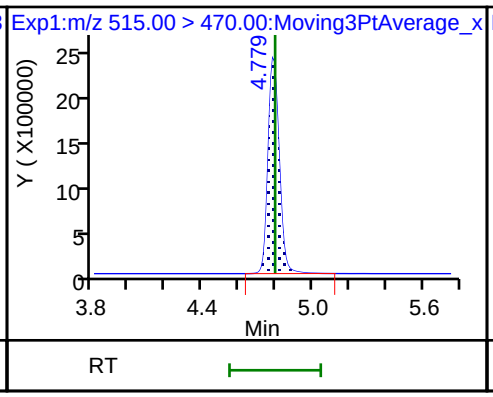

35 Perfluorononanesulfonic acid



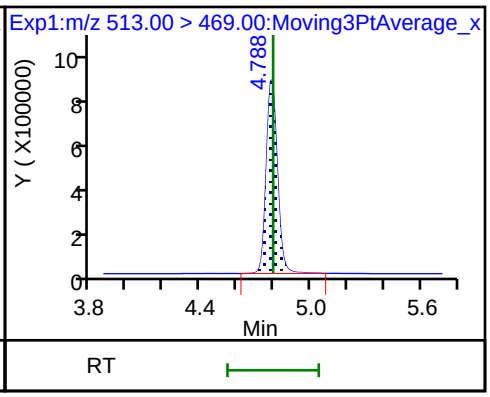

35 Perfluorononanesulfonic acid



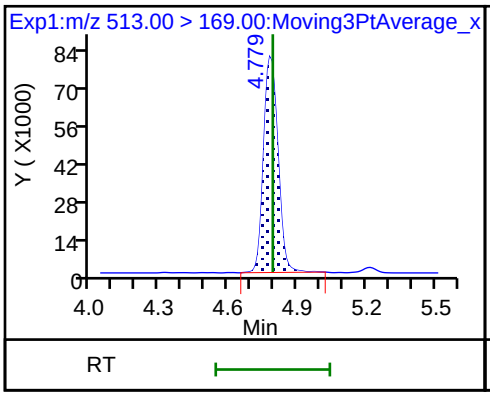

D 37 13C2 PFDA



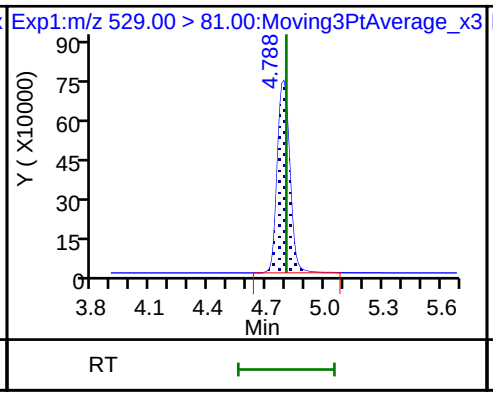

36 Perfluorodecanoic acid



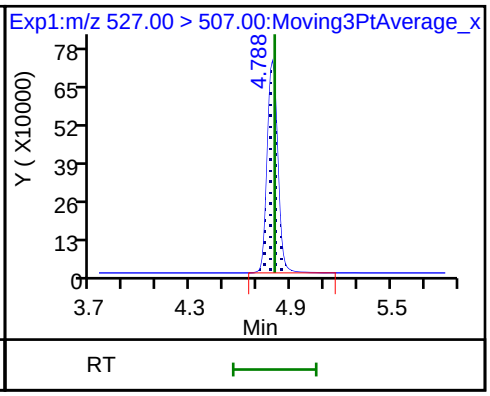

36 Perfluorodecanoic acid



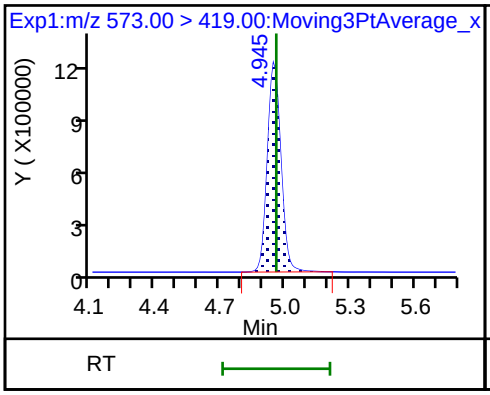

D 38 M2-8:2 FTS



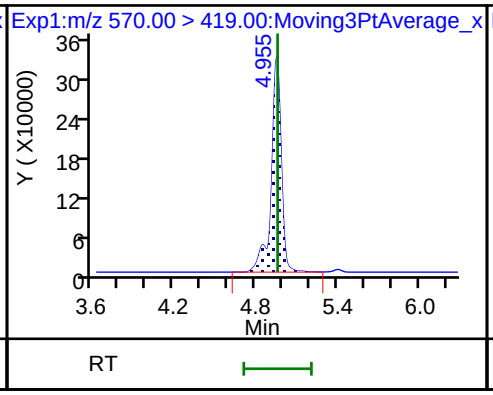

39 8:2 FTS



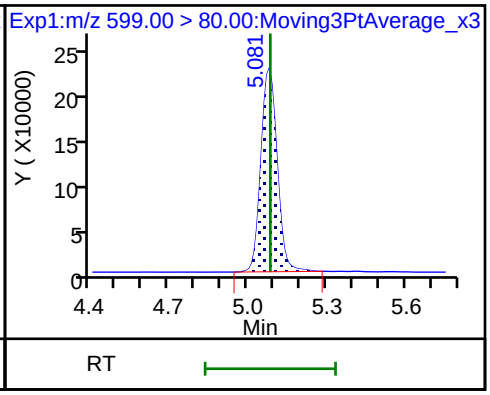
D 40 d3-NMeFOSAA



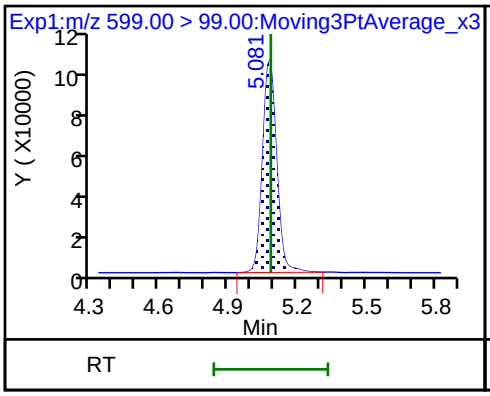

41 NMeFOSAA



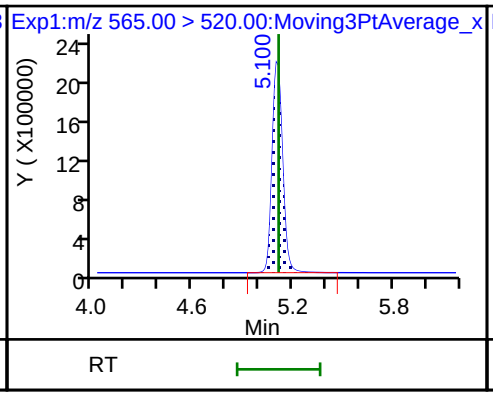

42 Perfluorodecanesulfonic acid



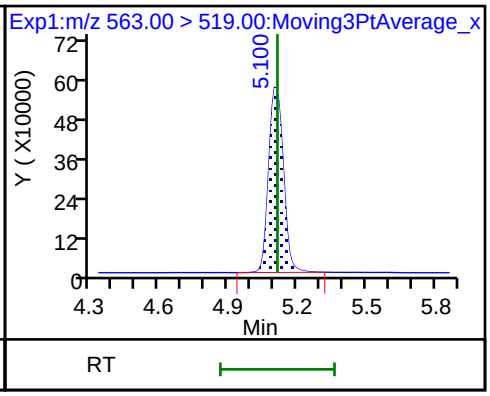

42 Perfluorodecanesulfonic acid



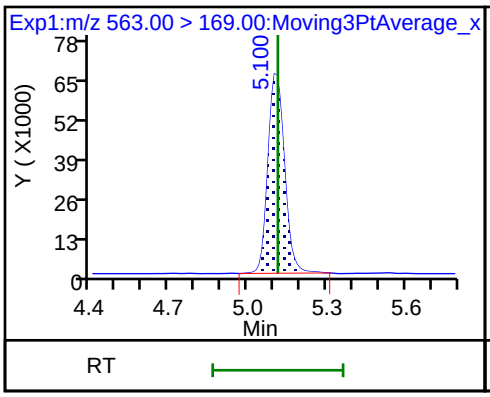

D 44 13C2 PFUnA



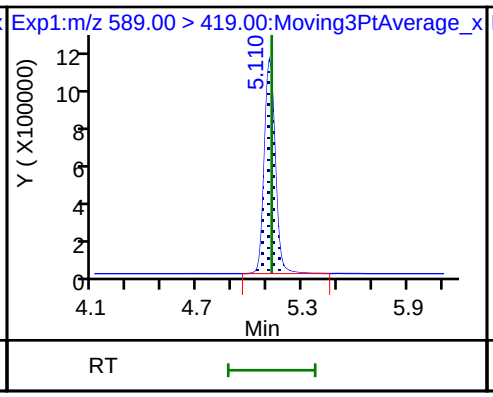

45 Perfluoroundecanoic acid



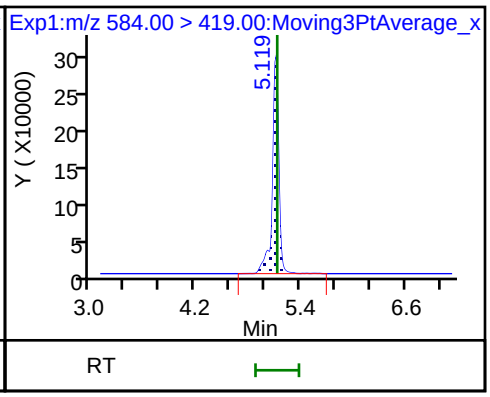

45 Perfluoroundecanoic acid



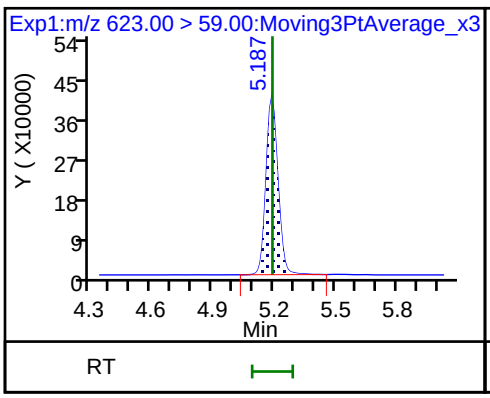

D 46 d5-NEtFOSAA



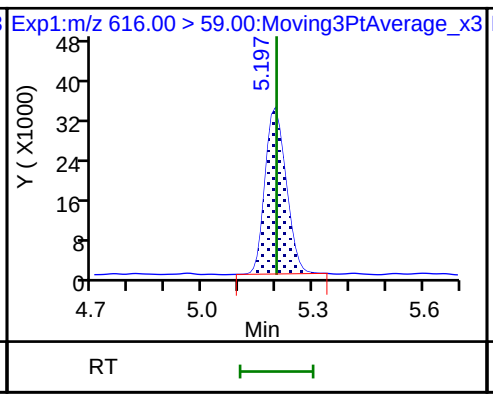

48 NEtFOSA



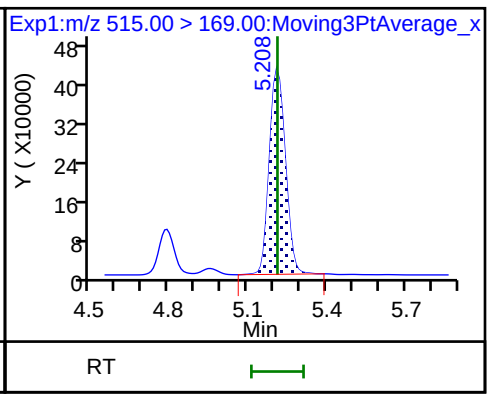

D 43 d7-N-MeFOSE-M



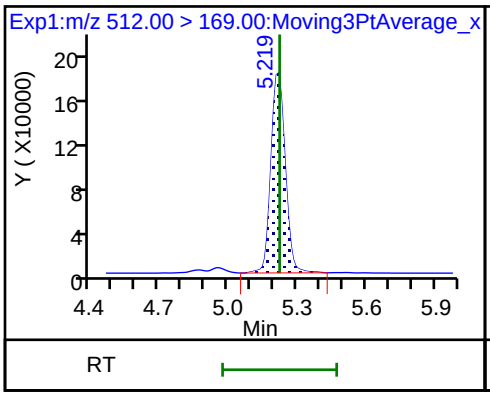

47 N-MeFOSE-M



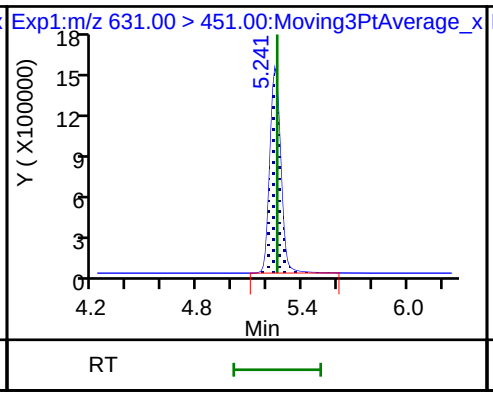

D 49 d-N-MeFOSA-M



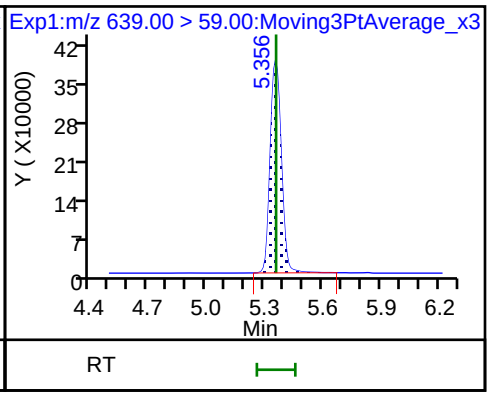
50 NMeFOSA



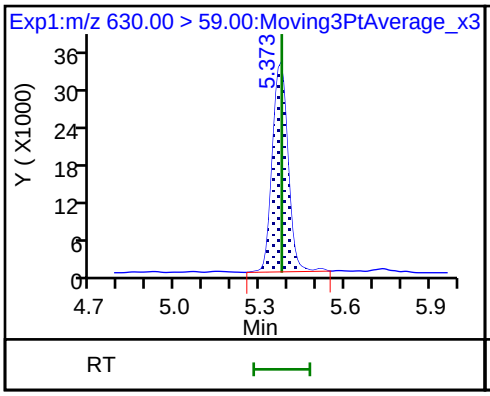

51 11ClFOS



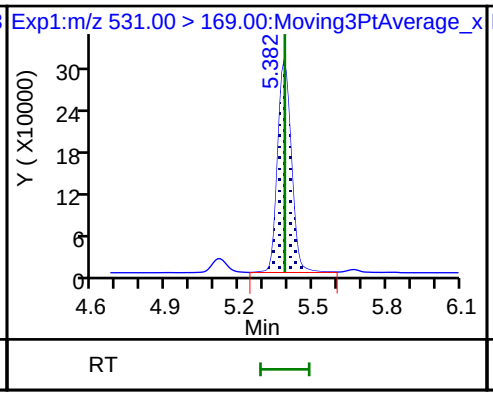

D 52 d9-N-EtFOSE-M



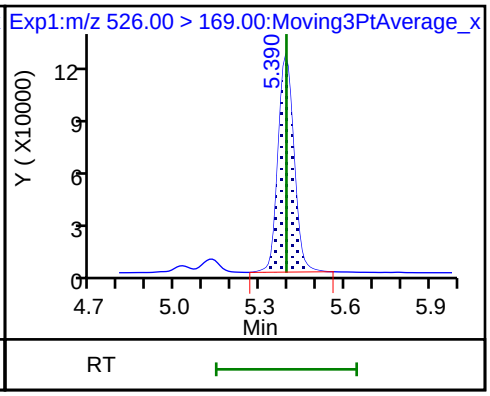

53 N-EtFOSE-M



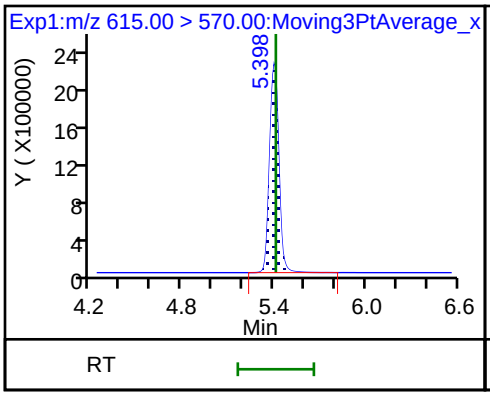

D 54 d-N-EtFOSA-M



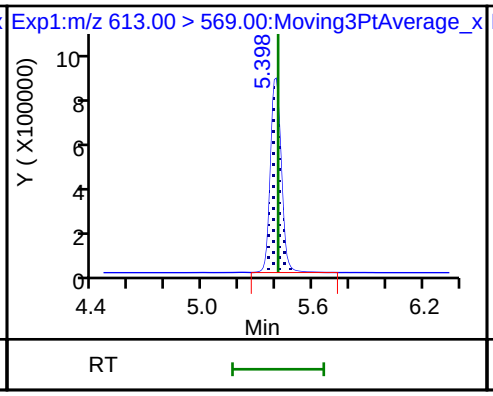

55 N-EtFOSA-M



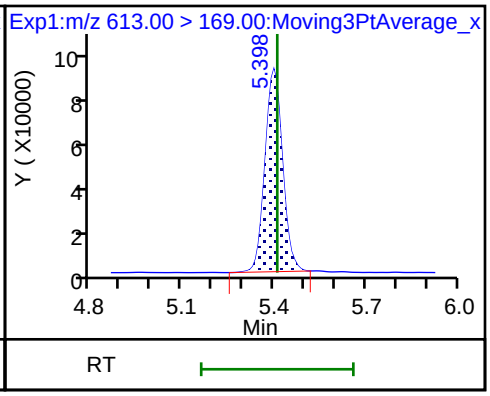

D 56 13C2 PFDoA



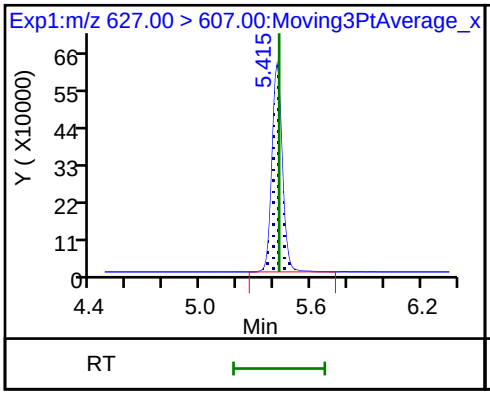

57 Perfluorododecanoic acid



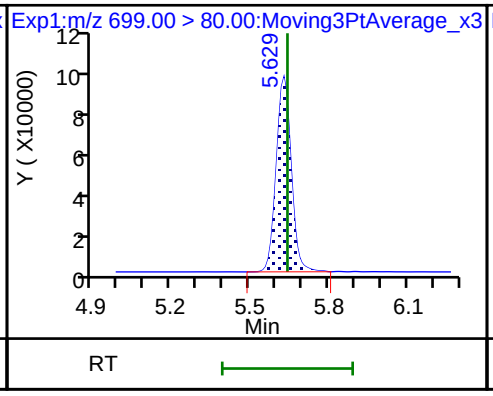

57 Perfluorododecanoic acid



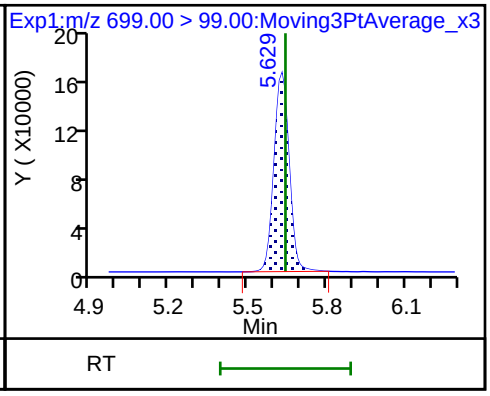

58 10:2 FTS



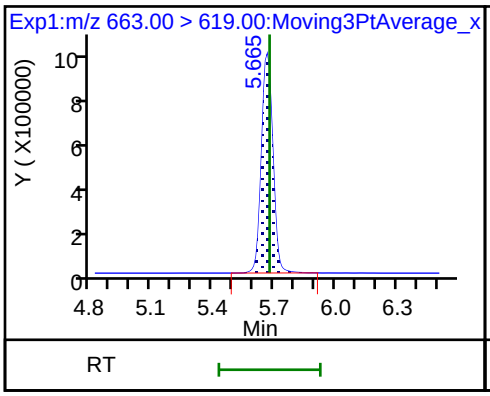

59 PFDoS



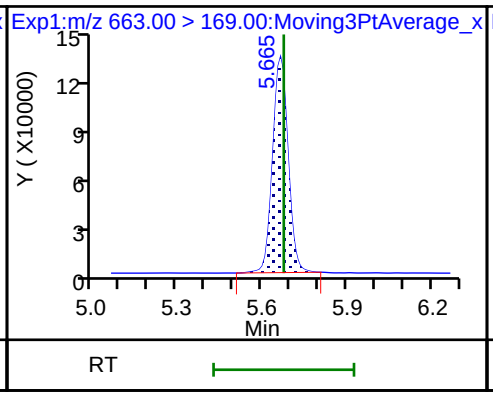

59 PFDoS



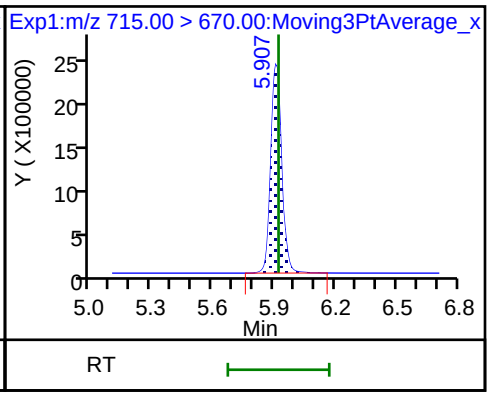
60 Perfluorotridecanoic acid



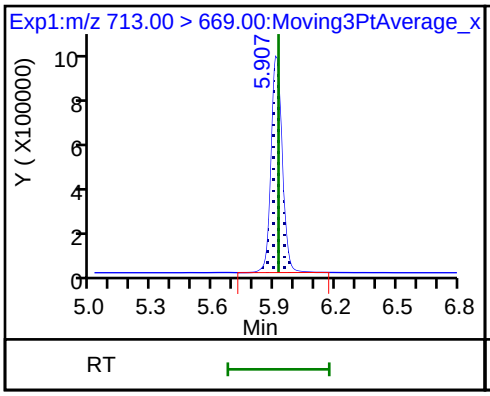

60 Perfluorotridecanoic acid



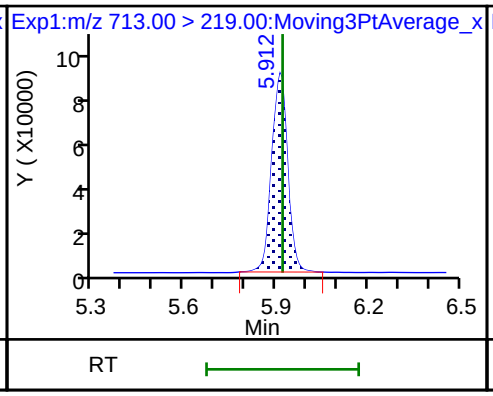

D 61 13C2 PFTeDA



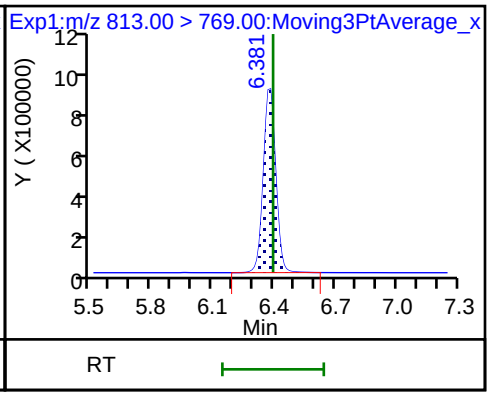

62 Perfluorotetradecanoic acid



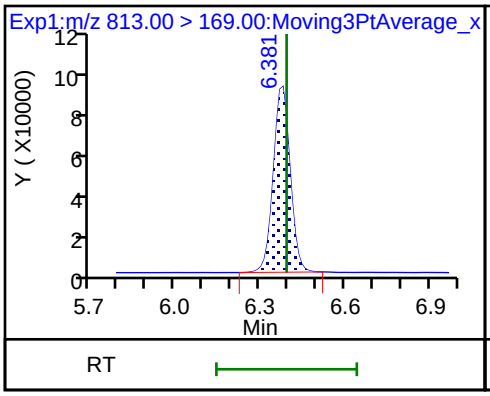

62 Perfluorotetradecanoic acid



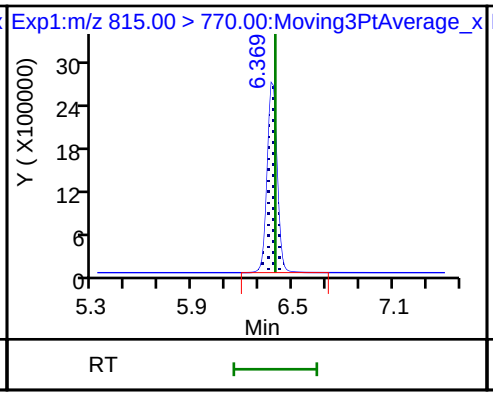

63 Perfluorohexadecanoic acid



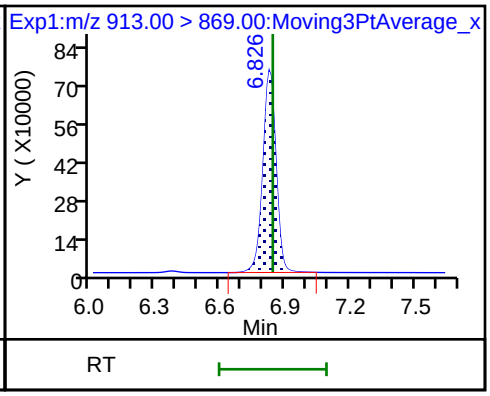

63 Perfluorohexadecanoic acid



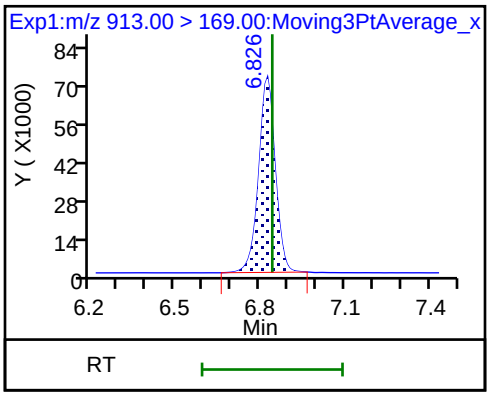

D 64 13C2 PFHxDA




65 Perfluorooctadecanoic acid




65 Perfluorooctadecanoic acid



Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

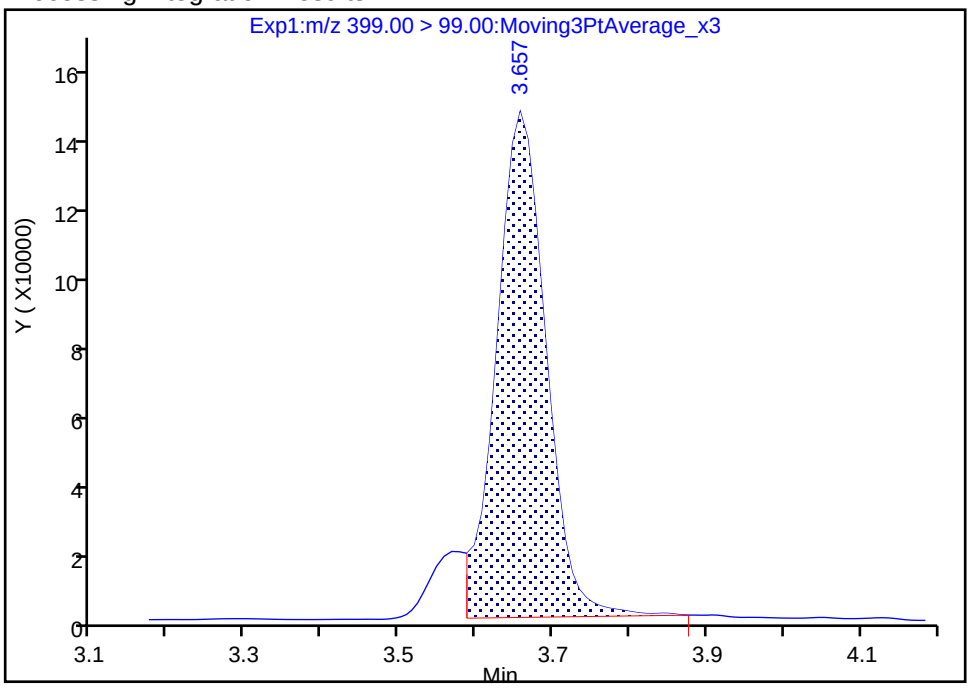
Data File: \\chromfs\Sacramento\ChromData\A13\20200910-103052.b\2020.09.10_A13_PFC_A_060.d
Injection Date: 10-Sep-2020 18:17:18 Instrument ID: A13
Lims ID: LCS 320-410906/2-A
Client ID:
Operator ID: SACINSTLCMS01 ALS Bottle#: 33 Worklist Smp#: 3
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFAS_A13 Limit Group: LC PFC ICAL
Column: Gemini C18 3um 3 x 100mm ( 3.00 mm) Detector EXP1

## 18 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 2

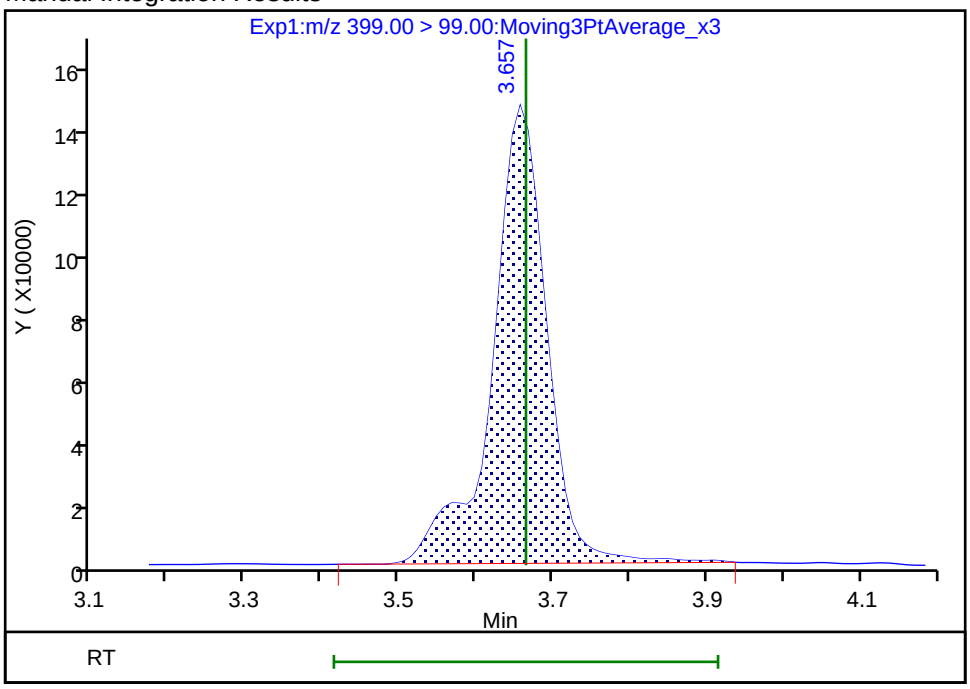
Processing Integration Results

RT: 3.66
Area: 643716
Amount: 0.843511
Amount Units: ng/ml




Manual Integration Results

RT: 3.66
Area: 712928
Amount: 0.843511
Amount Units: ng/ml




Reviewer: mongkols, 11-Sep-2020 08:48:12
Audit Action: Manually Integrated Audit Reason: Isomers

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

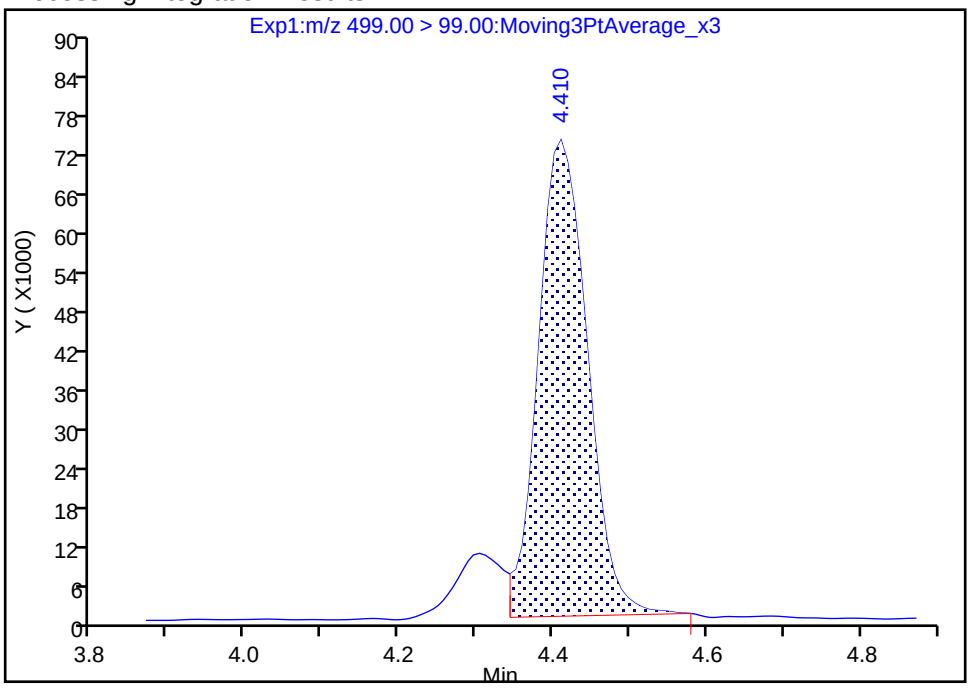
Data File: \\chromfs\Sacramento\ChromData\A13\20200910-103052.b\2020.09.10_A13_PFC_A_060.d
Injection Date: 10-Sep-2020 18:17:18 Instrument ID: A13
Lims ID: LCS 320-410906/2-A
Client ID:
Operator ID: SACINSTLCMS01 ALS Bottle#: 33 Worklist Smp#: 3
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFAS_A13 Limit Group: LC PFC ICAL
Column: Gemini C18 3um 3 x 100mm ( 3.00 mm ID) Detector EXP1

## 28 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 2

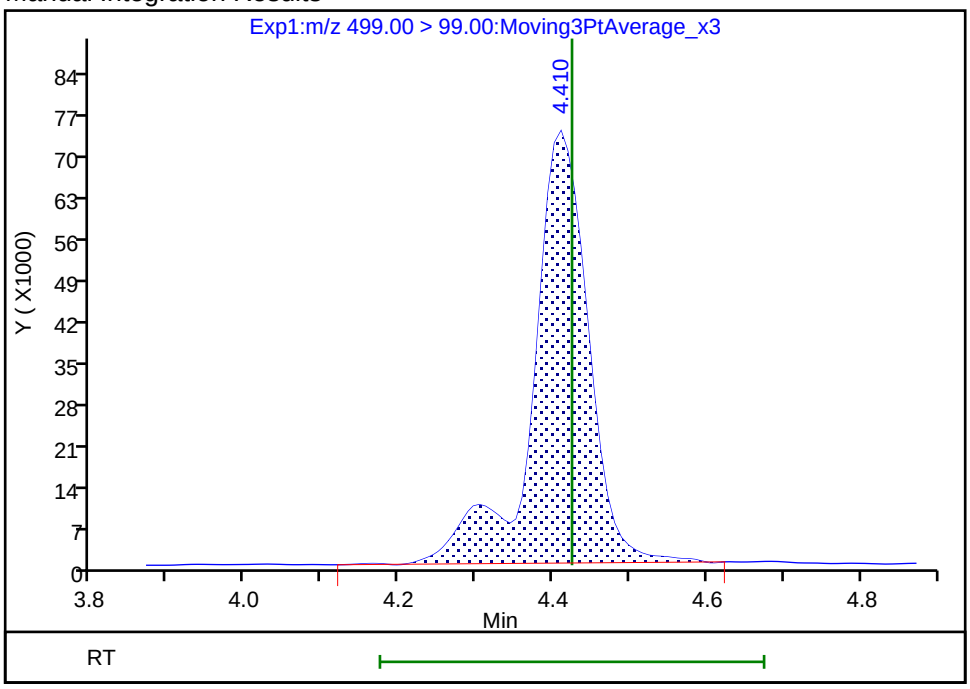
Processing Integration Results

RT: 4.41
Area: 322629
Amount: 0.971501
Amount Units: ng/ml




Manual Integration Results

RT: 4.41
Area: 370980
Amount: 0.971501
Amount Units: ng/ml




Reviewer: mongkols, 11-Sep-2020 08:48:18
Audit Action: Manually Integrated Audit Reason: Isomers

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento  Job No.: 460-217659-1

SDG No.:

Client Sample ID:  Lab Sample ID: LCSD 320-410906/3-A

Matrix: Water  Lab File ID: 2020.09.10_A13_PFC_A_061.d

Analysis Method: 537 (modified)  Date Collected:

Extraction Method: 3535  Date Extracted: 09/09/2020 18:39

Sample wt/vol: 250(mL)  Date Analyzed: 09/10/2020 18:26

Con. Extract Vol.: 10.00(mL)  Dilution Factor: 1

Injection Volume: 20(uL)  GC Column: GeminiC18 3x100 ID: 3(mm)

% Moisture:  GPC Cleanup:(Y/N) N

Analysis Batch No.: 411143  Units: ng/L

| CAS NO. | COMPOUND NAME | RESULT | Q | RL | MDL |
|---|---|---|---|---|---|
| 375-22-4 | Perfluorobutanoic acid (PFBA) | 40.94 | | 2.00 | 0.35 |
| 2706-90-3 | Perfluoropentanoic acid (PFPeA) | 37.79 | | 2.00 | 0.49 |
| 307-24-4 | Perfluorohexanoic acid (PFHxA) | 38.69 | | 2.00 | 0.58 |
| 375-85-9 | Perfluoroheptanoic acid (PFHpA) | 39.70 | | 2.00 | 0.25 |
| 335-67-1 | Perfluorooctanoic acid (PFOA) | 39.54 | | 2.00 | 0.85 |
| 375-95-1 | Perfluorononanoic acid (PFNA) | 39.84 | | 2.00 | 0.27 |
| 335-76-2 | Perfluorodecanoic acid (PFDA) | 39.91 | | 2.00 | 0.31 |
| 2058-94-8 | Perfluoroundecanoic acid (PFUnA) | 38.05 | | 2.00 | 1.10 |
| 307-55-1 | Perfluorododecanoic acid (PFDoA) | 42.61 | | 2.00 | 0.55 |
| 72629-94-8 | Perfluorotridecanoic acid (PFTriA) | 38.43 | | 2.00 | 1.30 |
| 376-06-7 | Perfluorotetradecanoic acid (PFTeA) | 41.06 | | 2.00 | 0.29 |
| 375-73-5 | Perfluorobutanesulfonic acid (PFBS) | 34.86 | | 2.00 | 0.20 |
| 355-46-4 | Perfluorohexanesulfonic acid (PFHxS) | 32.49 | | 2.00 | 0.17 |
| 375-92-8 | Perfluoroheptanesulfonic Acid (PFHpS) | 38.52 | | 2.00 | 0.19 |
| 1763-23-1 | Perfluorooctanesulfonic acid (PFOS) | 36.48 | | 2.00 | 0.54 |
| 335-77-3 | Perfluorodecanesulfonic acid (PFDS) | 36.88 | | 2.00 | 0.32 |
| 754-91-6 | Perfluorooctanesulfonamide (FOSA) | 40.35 | | 2.00 | 0.35 |
| 2355-31-9 | N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA) | 41.43 | | 20.0 | 3.10 |
| 2991-50-6 | N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA) | 38.81 | | 20.0 | 1.90 |
| 27619-97-2 | 6:2 FTS | 37.38 | | 20.0 | 2.00 |
| 39108-34-4 | 8:2 FTS | 36.01 | | 20.0 | 2.00 |

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento  Job No.: 460-217659-1

SDG No.:

Client Sample ID:  Lab Sample ID: LCSD 320-410906/3-A

Matrix: Water  Lab File ID: 2020.09.10_A13_PFC_A_061.d

Analysis Method: 537 (modified)  Date Collected:

Extraction Method: 3535  Date Extracted: 09/09/2020 18:39

Sample wt/vol: 250(mL)  Date Analyzed: 09/10/2020 18:26

Con. Extract Vol.: 10.00(mL)  Dilution Factor: 1

Injection Volume: 20(uL)  GC Column: GeminiC18 3x100 ID: 3(mm)

% Moisture:  GPC Cleanup:(Y/N) N

Analysis Batch No.: 411143  Units: ng/L

| CAS NO. | ISOTOPE DILUTION | %REC | Q | LIMITS |
|---|---|---|---|---|
| STL00992 | 13C4 PFBA | 88 | | 25-150 |
| STL01893 | 13C5 PFPeA | 91 | | 25-150 |
| STL00993 | 13C2 PFHxA | 88 | | 25-150 |
| STL01892 | 13C4 PFHpA | 87 | | 25-150 |
| STL00990 | 13C4 PFOA | 85 | | 25-150 |
| STL00995 | 13C5 PFNA | 87 | | 25-150 |
| STL00996 | 13C2 PFDA | 82 | | 25-150 |
| STL00997 | 13C2 PFUnA | 85 | | 25-150 |
| STL00998 | 13C2 PFDoA | 75 | | 25-150 |
| STL02116 | 13C2 PFTeDA | 69 | | 25-150 |
| STL02337 | 13C3 PFBS | 96 | | 25-150 |
| STL00994 | 18O2 PFHxS | 97 | | 25-150 |
| STL00991 | 13C4 PFOS | 94 | | 25-150 |
| STL01056 | 13C8 FOSA | 83 | | 25-150 |
| STL02118 | d3-NMeFOSAA | 82 | | 25-150 |
| STL02117 | d5-NEtFOSAA | 86 | | 25-150 |
| STL02279 | M2-6:2 FTS | 98 | | 25-150 |
| STL02280 | M2-8:2 FTS | 99 | | 25-150 |

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\A13\20200910-103052.b\2020.09.10_A13_PFC_A_061.d
Lims ID: LCSD 320-410906/3-A
Client ID:
Sample Type: LCSD
Inject. Date: 10-Sep-2020 18:26:42 ALS Bottle#: 34 Worklist Smp#: 4
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Sample Info: lcsd 320-410906/3-a
Misc. Info.: Plate: 1 Rack: 4
Operator ID: SACINSTLCMS01 Instrument ID: A13

Method: \\chromfs\Sacramento\ChromData\A13\20200910-103052.b\PFAS_A13.m
Limit Group: LC PFC ICAL
Last Update: 11-Sep-2020 08:51:04 Calib Date: 08-Sep-2020 18:58:15
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\A13\20200908-102913.b\2020.09.08_A13_PFC_ICALX_010.d

Column 1 : Gemini C18 3um 3 x 100mm ( 3.00 mm) Det: EXP1
Process Host: CTX1053

First Level Reviewer: mongkols Date: 11-Sep-2020 08:51:04
Ratio Calibration: CCV Sample: \\chromfs\Sacramento\ChromData\A13\20200910-103052.b\2020.09.10_A13_PFC_A_058.d

| Signal | RT | EXP RT | DLT RT | REL RT | Response | Amount ng/ml | Ratio(Limits) | %Rec | S/N | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| D 1 13C4 PFBA | | | | | | | | | | |
| 217.00 > 172.00 | 2.475 | 2.475 | 0.0 | 0.611 | 8611050 | 2.19 | | 87.6 | 12012 | |
| 2 Perfluorobutanoic acid | | | | | | | | | | |
| 212.90 > 169.00 | 2.475 | 2.482 | -0.007 | 1.000 | 2619959 | 1.02 | | 102 | 360 | |
| D 4 13C5 PFPeA | | | | | | | | | | |
| 267.90 > 223.00 | 2.866 | 2.867 | -0.001 | 0.708 | 6951390 | 2.27 | | 90.7 | 12367 | |
| 5 Perfluoropentanoic acid | | | | | | | | | | |
| 262.90 > 219.00 | 2.866 | 2.867 | -0.001 | 1.000 | 2699913 | 0.9447 | | 94.5 | 144 | |
| D 14 13C3 PFBS | | | | | | | | | | |
| 301.90 > 80.00 | 2.901 | 2.913 | -0.012 | 0.716 | 8619888 | 2.24 | | 96.3 | 14207 | |
| 6 Perfluorobutanesulfonic acid | | | | | | | | | | |
| 298.90 > 80.00 | 2.901 | 2.913 | -0.012 | 1.000 | 3159004 | 0.8716 | Target=2.29 | 98.6 | 2710 | |
| 298.90 > 99.00 | 2.913 | 2.913 | 0.0 | 1.004 | 1436269 | | 2.20(1.15-3.44) | | 554 | |
| 7 4:2 FTS | | | | | | | | | | |
| 327.00 > 307.00 | 3.215 | 3.215 | 0.0 | 1.000 | 2601875 | 0.8579 | | 91.9 | 4305 | |
| D 8 M2-4:2 FTS | | | | | | | | | | |
| 329.00 > 81.00 | 3.215 | 3.215 | 0.0 | 0.794 | 2183368 | 2.32 | | 99.1 | 1101 | |
| 10 Perfluorohexanoic acid | | | | | | | | | | |
| 313.00 > 269.00 | 3.258 | 3.258 | 0.0 | 1.000 | 3010355 | 0.9673 | Target=13.52 | 96.7 | 131 | |
| 313.00 > 119.00 | 3.258 | 3.258 | 0.0 | 1.000 | 240787 | | 12.50(6.76-20.28) | | 74.8 | |
| D 9 13C2 PFHxA | | | | | | | | | | |
| 315.00 > 270.00 | 3.258 | 3.258 | 0.0 | 0.804 | 8371557 | 2.21 | | 88.4 | 2187 | |
| 11 Perfluoropentanesulfonic acid | | | | | | | | | | |
| 349.00 > 80.00 | 3.268 | 3.279 | -0.011 | 1.126 | 2772904 | 0.9473 | Target=2.44 | 101 | 1520 | |
| 349.00 > 99.00 | 3.268 | 3.279 | -0.011 | 1.126 | 1116139 | | 2.48(1.22-3.66) | | 683 | |
| 12 HPFO-DA | | | | | | | | | | |
| 285.00 > 169.00 | 3.380 | 3.380 | 0.0 | 1.003 | 650552 | 0.9490 | | 94.9 | 1932 | |

| Signal | RT | EXP RT | DLT RT | REL RT | Response | Amount ng/ml | Ratio(Limits) | %Rec | S/N | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| D 13 13C3 HFPO-DA | | | | | | | | | | |
| 287.00 > 169.00 | 3.371 | 3.380 | -0.009 | 0.832 | 5766083 | 2.12 | | 84.9 | 3739 | |
| D 17 18O2 PFHxS | | | | | | | | | | |
| 403.00 > 84.00 | 3.665 | 3.665 | 0.0 | 0.905 | 5799004 | 2.30 | | 97.2 | 40992 | |
| 16 Perfluoroheptanoic acid | | | | | | | | | | |
| 363.00 > 319.00 | 3.655 | 3.665 | -0.010 | 1.000 | 3252873 | 0.99 | Target=3.87 | 99.3 | 264 | |
| 363.00 > 169.00 | 3.655 | 3.665 | -0.010 | 1.000 | 844935 | | 3.85(1.93-5.80) | | 288 | |
| 18 Perfluorohexanesulfonic acid | | | | | | | | | | |
| 399.00 > 80.00 | 3.655 | 3.665 | -0.010 | 0.997 | 2215324 | 0.8122 | Target=3.08 | 89.3 | 2144 | |
| 399.00 > 99.00 | 3.665 | 3.665 | 0.0 | 1.000 | 751703 | | 2.95(1.54-4.62) | | 269 | |
| D 15 13C4 PFHpA | | | | | | | | | | |
| 367.00 > 322.00 | 3.655 | 3.665 | -0.010 | 0.902 | 8106799 | 2.17 | | 86.9 | 4477 | |
| 19 DONA | | | | | | | | | | |
| 377.00 > 251.00 | 3.704 | 3.713 | -0.009 | 0.840 | 8039648 | 0.9296 | Target=2.76 | 98.7 | 7544 | |
| 377.00 > 85.00 | 3.704 | 3.713 | -0.009 | 0.840 | 2828002 | | 2.84(1.38-4.14) | | 2537 | |
| D 20 M2-6:2 FTS | | | | | | | | | | |
| 429.00 > 81.00 | 4.026 | 4.042 | -0.016 | 0.994 | 2531041 | 2.33 | | 98.0 | 3091 | |
| 21 6:2 FTS | | | | | | | | | | |
| 427.00 > 407.00 | 4.026 | 4.042 | -0.016 | 1.000 | 2396662 | 0.9344 | | 98.6 | 1070 | |
| 22 Perfluoroheptanesulfonic acid | | | | | | | | | | |
| 449.00 > 80.00 | 4.042 | 4.051 | -0.009 | 0.917 | 1846518 | 0.9629 | Target=4.20 | 101 | 882 | |
| 449.00 > 99.00 | 4.042 | 4.051 | -0.009 | 0.917 | 425476 | | 4.34(2.10-6.30) | | 242 | |
| D 24 13C4 PFOA | | | | | | | | | | |
| 417.00 > 372.00 | 4.050 | 4.059 | -0.009 | 1.000 | 9651889 | 2.12 | | 84.7 | 6464 | |
| 26 Perfluorooctanoic acid | | | | | | | | | | |
| 413.00 > 369.00 | 4.050 | 4.059 | -0.009 | 1.000 | 3903860 | 0.9884 | Target=2.99 | 98.8 | 592 | |
| 413.00 > 169.00 | 4.050 | 4.059 | -0.009 | 1.000 | 1312635 | | 2.97(1.50-4.49) | | 858 | |
| * 25 13C2 PFOA | | | | | | | | | | |
| 415.00 > 370.00 | 4.050 | 4.059 | -0.009 | | 11572344 | 2.50 | | | 9428 | |
| 28 Perfluorooctanesulfonic acid | | | | | | | | | | M |
| 499.00 > 80.00 | 4.418 | 4.425 | -0.007 | 1.002 | 1594456 | 0.9120 | Target=4.13 | 98.3 | 336 | |
| 499.00 > 99.00 | 4.409 | 4.425 | -0.016 | 1.000 | 402599 | | 3.96(2.06-6.19) | | 383 | M |
| D 29 13C4 PFOS | | | | | | | | | | |
| 503.00 > 80.00 | 4.409 | 4.425 | -0.016 | 1.089 | 4024369 | 2.24 | | 93.6 | 3330 | |
| 30 Perfluorononanoic acid | | | | | | | | | | |
| 463.00 > 419.00 | 4.426 | 4.433 | -0.007 | 1.000 | 3466593 | 1.00 | Target=7.70 | 99.6 | 702 | |
| 463.00 > 169.00 | 4.426 | 4.433 | -0.007 | 1.000 | 448036 | | 7.74(3.85-11.55) | | 586 | |
| D 31 13C5 PFNA | | | | | | | | | | |
| 468.00 > 423.00 | 4.426 | 4.442 | -0.016 | 1.093 | 9164716 | 2.18 | | 87.0 | 8121 | |
| 32 9ClFOS | | | | | | | | | | |
| 531.00 > 351.00 | 4.615 | 4.620 | -0.005 | 1.047 | 3889922 | 0.9236 | | 99.1 | 2468 | |
| D 34 13C8 FOSA | | | | | | | | | | |
| 506.00 > 78.00 | 4.743 | 4.740 | 0.003 | 1.171 | 5357665 | 2.07 | | 82.9 | 7495 | |
| 33 Perfluorooctanesulfonamide | | | | | | | | | | |
| 498.00 > 78.00 | 4.743 | 4.740 | 0.003 | 1.000 | 2028652 | 1.01 | | 101 | 2487 | |

| Signal | RT | EXP RT | DLT RT | REL RT | Response | Amount ng/ml | Ratio(Limits) | %Rec | S/N | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| 35 Perfluorononanesulfonic acid | | | | | | | | | | |
| 549.00 > 80.00 | 4.760 | 4.766 | -0.006 | 1.080 | 1245909 | 0.9551 | Target=2.03 | 99.5 | 2009 | |
| 549.00 > 99.00 | 4.760 | 4.766 | -0.006 | 1.080 | 572729 | | 2.18(1.01-3.04) | | 699 | |
| D 37 13C2 PFDA | | | | | | | | | | |
| 515.00 > 470.00 | 4.786 | 4.793 | -0.007 | 1.182 | 10437260 | 2.05 | | 81.8 | 11925 | |
| 36 Perfluorodecanoic acid | | | | | | | | | | |
| 513.00 > 469.00 | 4.786 | 4.793 | -0.007 | 1.000 | 3733889 | 1.00 | Target=10.40 | 99.8 | 1004 | |
| 513.00 > 169.00 | 4.786 | 4.793 | -0.007 | 1.000 | 359323 | | 10.39(5.20-15.61) | | 306 | |
| D 38 M2-8:2 FTS | | | | | | | | | | |
| 529.00 > 81.00 | 4.786 | 4.802 | -0.016 | 1.182 | 3417476 | 2.38 | | 99.2 | 3968 | |
| 39 8:2 FTS | | | | | | | | | | |
| 527.00 > 507.00 | 4.786 | 4.802 | -0.016 | 1.000 | 3174993 | 0.9001 | | 94.0 | 5461 | |
| D 40 d3-NMeFOSAA | | | | | | | | | | |
| 573.00 > 419.00 | 4.951 | 4.959 | -0.008 | 1.222 | 5387883 | 2.05 | | 81.9 | 5540 | |
| 41 NMeFOSAA | | | | | | | | | | |
| 570.00 > 419.00 | 4.951 | 4.959 | -0.008 | 1.000 | 1798044 | 1.04 | | 104 | 428 | |
| 42 Perfluorodecanesulfonic acid | | | | | | | | | | |
| 599.00 > 80.00 | 5.077 | 5.084 | -0.007 | 1.151 | 1022714 | 0.9219 | Target=2.35 | 95.6 | 918 | |
| 599.00 > 99.00 | 5.077 | 5.084 | -0.007 | 1.151 | 440971 | | 2.32(1.18-3.53) | | 868 | |
| D 44 13C2 PFUnA | | | | | | | | | | |
| 565.00 > 520.00 | 5.106 | 5.113 | -0.007 | 1.261 | 10651317 | 2.13 | | 85.4 | 7567 | |
| 45 Perfluoroundecanoic acid | | | | | | | | | | |
| 563.00 > 519.00 | 5.106 | 5.113 | -0.007 | 1.000 | 2680982 | 0.9513 | Target=8.31 | 95.1 | 1073 | |
| 563.00 > 169.00 | 5.115 | 5.113 | 0.002 | 1.002 | 328498 | | 8.16(4.15-12.46) | | 779 | |
| D 46 d5-NEtFOSAA | | | | | | | | | | |
| 589.00 > 419.00 | 5.115 | 5.123 | -0.008 | 1.263 | 5448264 | 2.14 | | 85.6 | 2952 | |
| 48 NEtFOSA | | | | | | | | | | |
| 584.00 > 419.00 | 5.125 | 5.132 | -0.007 | 1.002 | 1636974 | 0.9703 | | 97.0 | 1589 | |
| D 43 d7-N-MeFOSE-M | | | | | | | | | | |
| 623.00 > 59.00 | 5.183 | 5.190 | -0.007 | 1.280 | 2152305 | 3.33 | | 26.6 | 1335 | |
| 47 N-MeFOSE-M | | | | | | | | | | |
| 616.00 > 59.00 | 5.204 | 5.200 | 0.004 | 1.004 | 173306 | 0.9454 | | 94.5 | 261 | |
| D 49 d-N-MeFOSA-M | | | | | | | | | | |
| 515.00 > 169.00 | 5.216 | 5.212 | 0.004 | 1.288 | 1836160 | 1.51 | | 60.4 | 36.6 | |
| 50 NMeFOSA | | | | | | | | | | |
| 512.00 > 169.00 | 5.216 | 5.223 | -0.007 | 1.000 | 757305 | 1.05 | | 105 | 171 | |
| 51 11ClFOS | | | | | | | | | | |
| 631.00 > 451.00 | 5.248 | 5.255 | -0.007 | 1.190 | 6346181 | 0.8731 | | 92.7 | 5447 | |
| D 52 d9-N-EtFOSE-M | | | | | | | | | | |
| 639.00 > 59.00 | 5.354 | 5.359 | -0.005 | 1.322 | 1971574 | 2.60 | | 20.8 | 1208 | |
| 53 N-EtFOSE-M | | | | | | | | | | |
| 630.00 > 59.00 | 5.371 | 5.376 | -0.005 | 1.003 | 158909 | 0.9731 | | 97.3 | 160 | |
| D 54 d-N-EtFOSA-M | | | | | | | | | | |
| 531.00 > 169.00 | 5.388 | 5.385 | 0.003 | 1.330 | 1335216 | 1.15 | | 46.0 | 113 | |
| 55 N-EtFOSA-M | | | | | | | | | | |
| 526.00 > 169.00 | 5.396 | 5.393 | 0.003 | 1.002 | 560760 | 0.9887 | | 98.9 | 115 | |

| Signal | RT | EXP RT | DLT RT | REL RT | Response | Amount ng/ml | Ratio(Limits) | %Rec | S/N | Flags |
|---|---|---|---|---|---|---|---|---|---|---|
| D 56 13C2 PFDoA | | | | | | | | | | |
| 615.00 > 570.00 | 5.405 | 5.409 | -0.004 | 1.334 | 10035502 | 1.87 | | 74.7 | 11299 | |
| 57 Perfluorododecanoic acid | | | | | | | | | | |
| 613.00 > 569.00 | 5.396 | 5.409 | -0.013 | 0.998 | 3900981 | 1.07 | Target=9.00 | 107 | 2063 | |
| 613.00 > 169.00 | 5.405 | 5.409 | -0.004 | 1.000 | 397692 | | 9.81(4.50-13.49) | | 776 | |
| 58 10:2 FTS | | | | | | | | | | |
| 627.00 > 607.00 | 5.421 | 5.426 | -0.005 | 1.133 | 2613700 | 1.12 | | 116 | 4878 | |
| 59 PFDoS | | | | | | | | | | |
| 699.00 > 80.00 | 5.627 | 5.642 | -0.015 | 1.276 | 400135 | 0.9239 | Target=0.54 | 95.4 | 1152 | |
| 699.00 > 99.00 | 5.627 | 5.642 | -0.015 | 1.276 | 667597 | | 0.60(0.27-0.82) | | 1463 | |
| 60 Perfluorotridecanoic acid | | | | | | | | | | |
| 663.00 > 619.00 | 5.671 | 5.676 | -0.005 | 1.049 | 3614896 | 0.9608 | Target=6.96 | 96.1 | 1883 | |
| 663.00 > 169.00 | 5.671 | 5.676 | -0.005 | 1.049 | 527159 | | 6.86(3.48-10.45) | | 1722 | |
| D 61 13C2 PFTeDA | | | | | | | | | | |
| 715.00 > 670.00 | 5.911 | 5.920 | -0.009 | 1.459 | 9158135 | 1.73 | | 69.0 | 9324 | |
| 62 Perfluorotetradecanoic acid | | | | | | | | | | |
| 713.00 > 669.00 | 5.911 | 5.920 | -0.009 | 1.000 | 3701396 | 1.03 | Target=10.31 | 103 | 2012 | |
| 713.00 > 219.00 | 5.911 | 5.920 | -0.009 | 1.000 | 346774 | | 10.67(5.16-15.47) | | 1124 | |
| 63 Perfluorohexadecanoic acid | | | | | | | | | | |
| 813.00 > 769.00 | 6.379 | 6.393 | -0.014 | 1.000 | 3875828 | 0.9486 | Target=9.94 | 94.9 | 2440 | |
| 813.00 > 169.00 | 6.379 | 6.393 | -0.014 | 1.000 | 439715 | | 8.81(4.97-14.90) | | 1493 | |
| D 64 13C2 PFHxDA | | | | | | | | | | |
| 815.00 > 770.00 | 6.379 | 6.393 | -0.014 | 1.575 | 10464476 | 1.90 | | 75.8 | 8262 | |
| 65 Perfluorooctadecanoic acid | | | | | | | | | | |
| 913.00 > 869.00 | 6.825 | 6.842 | -0.017 | 1.070 | 3791071 | 1.24 | Target=11.47 | 124 | 1718 | |
| 913.00 > 169.00 | 6.825 | 6.842 | -0.017 | 1.070 | 302668 | | 12.53(5.74-17.21) | | 1211 | |

## QC Flag Legend

Review Flags

M - Manually Integrated

Report Date: 11-Sep-2020 08:51:05 Chrom Revision: 2.3 09-Sep-2020 15:12:58

Eurofins TestAmerica, Sacramento

Data File: \\chromfs\Sacramento\ChromData\A13\20200910-103052.b\2020.09.10_A13_PFC_A_061.d

Injection Date: 10-Sep-2020 18:26:42 Instrument ID: A13

Lims ID: LCSD 320-410906/3-A

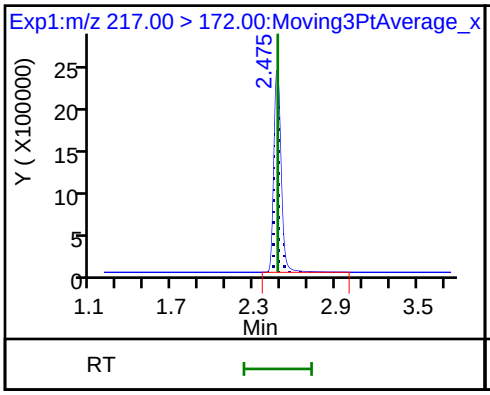
Client ID:

Operator ID: SACINSTLCMS01 ALS Bottle#: 34 Worklist Smp#: 4

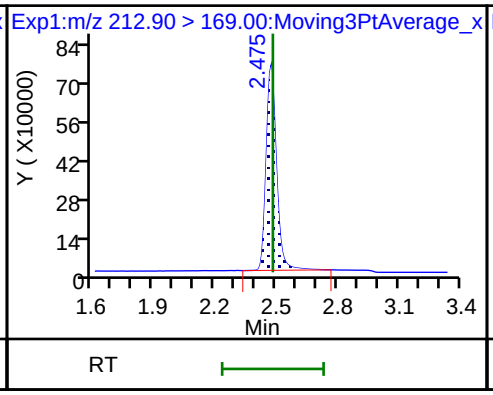
Injection Vol: 20.0 ul Dil. Factor: 1.0000

Method: PFAS_A13 Limit Group: LC PFC ICAL

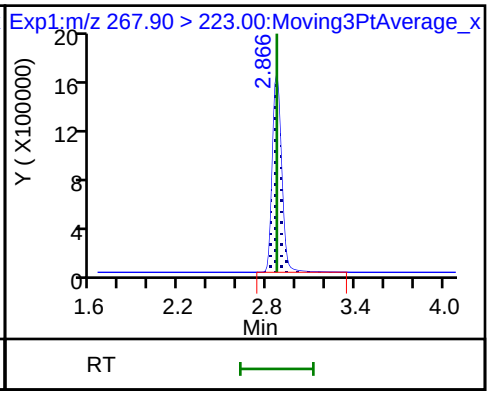
D 1 13C4 PFBA



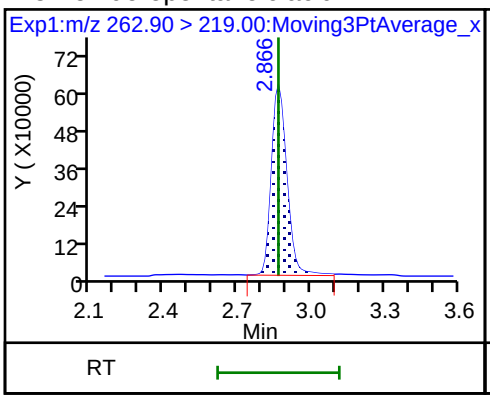

2 Perfluorobutanoic acid



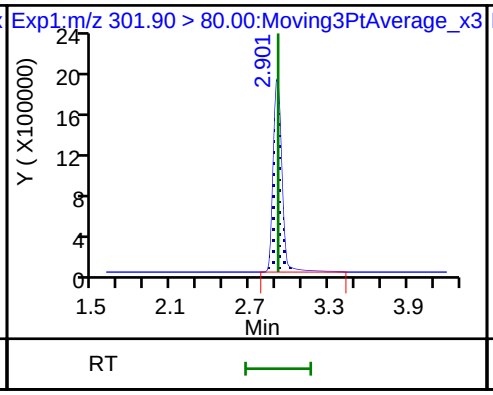

D 4 13C5 PFPeA



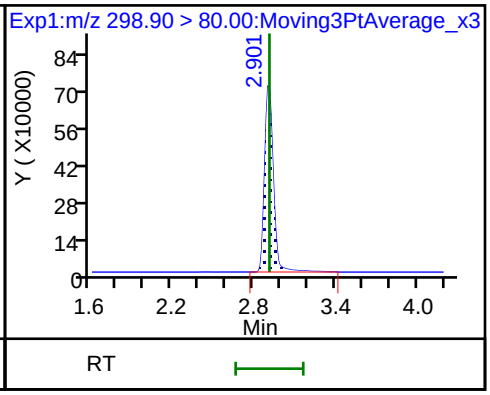

5 Perfluoropentanoic acid



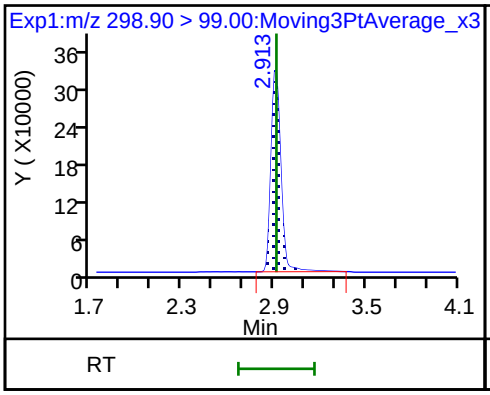

D 14 13C3 PFBS



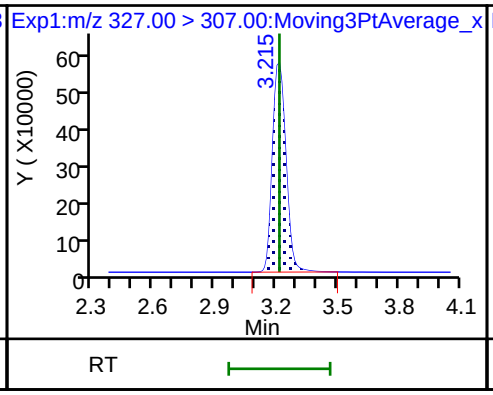

6 Perfluorobutanesulfonic acid



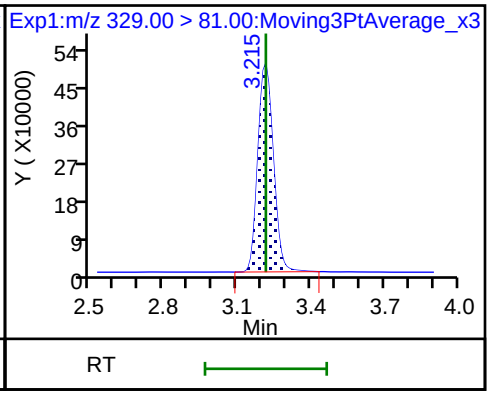

6 Perfluorobutanesulfonic acid



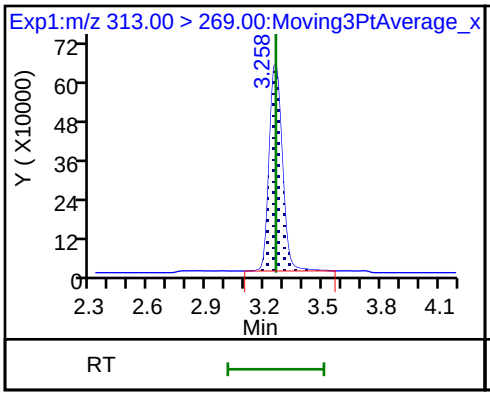

7 4:2 FTS



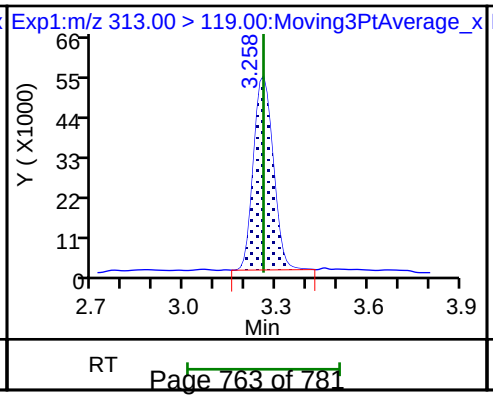

D 8 M2-4:2 FTS



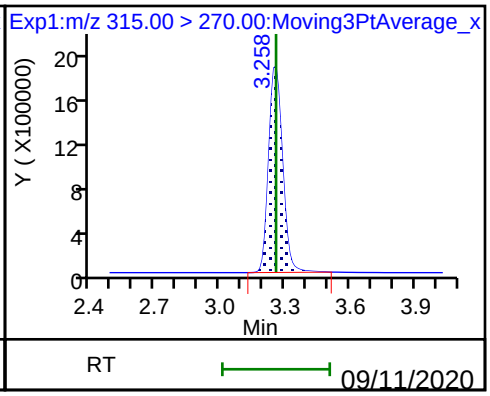

10 Perfluorohexanoic acid



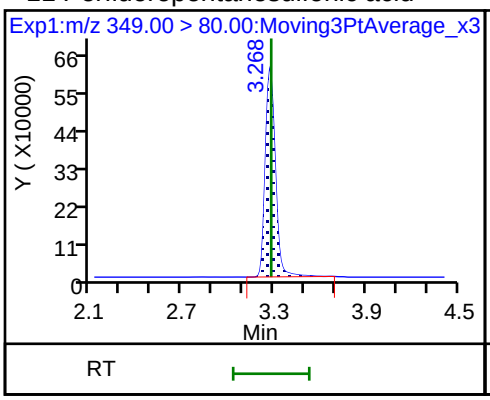

10 Perfluorohexanoic acid



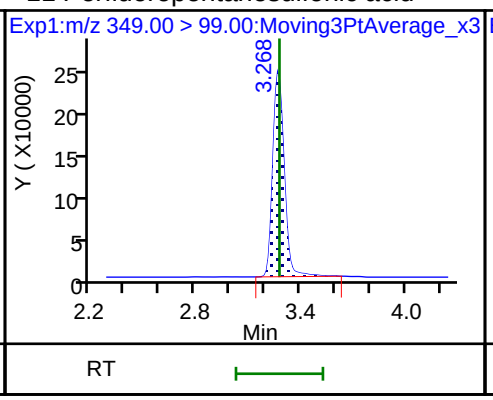

D 9 13C2 PFHxA



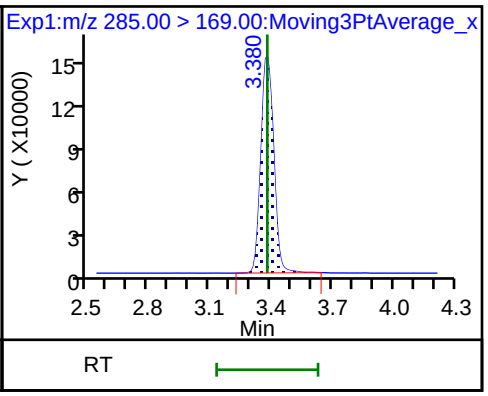
11 Perfluoropentanesulfonic acid



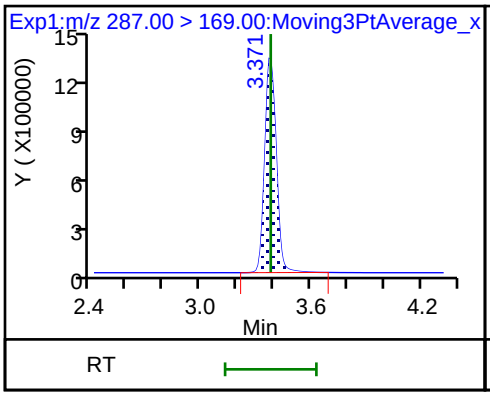

11 Perfluoropentanesulfonic acid



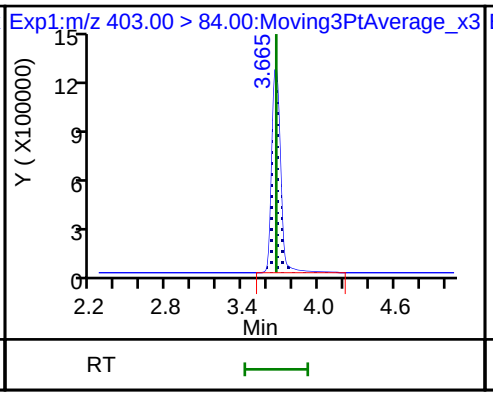

12 HPFO-DA



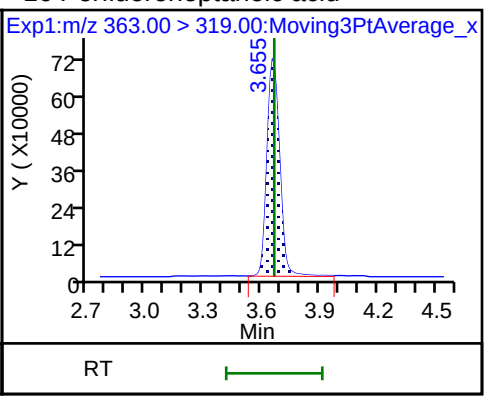

D 13 13C3 HFPO-DA



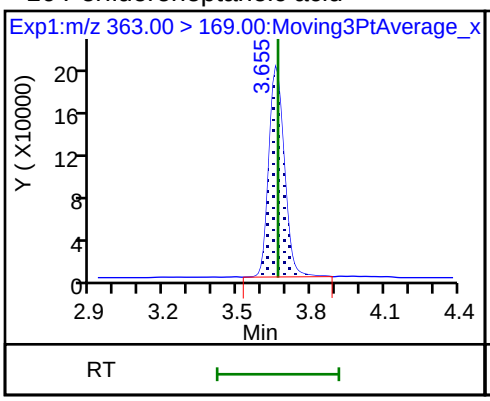

D 17 18O2 PFHxS



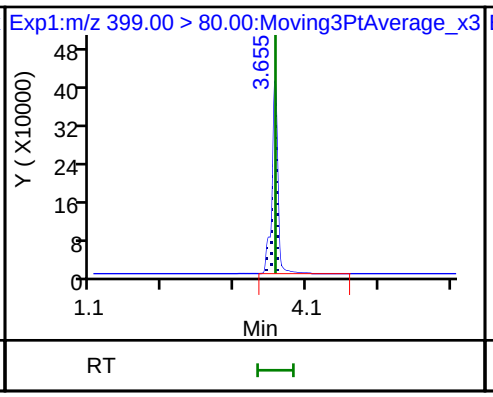

16 Perfluoroheptanoic acid



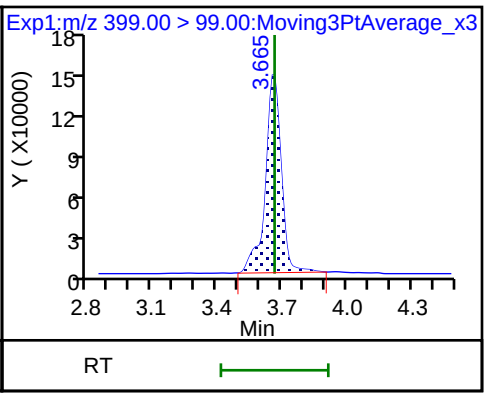

16 Perfluoroheptanoic acid



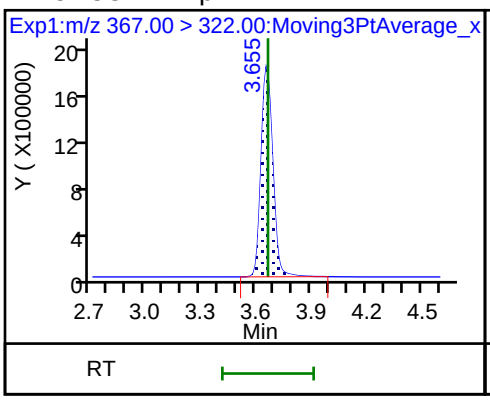

18 Perfluorohexanesulfonic acid



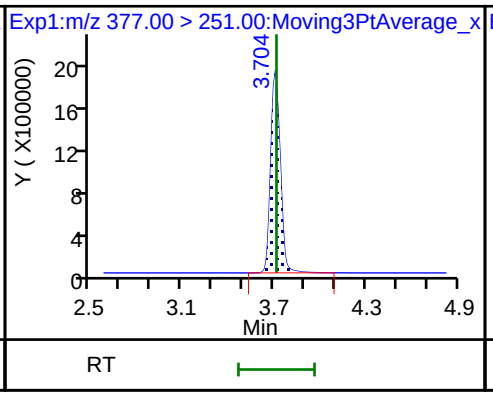

18 Perfluorohexanesulfonic acid



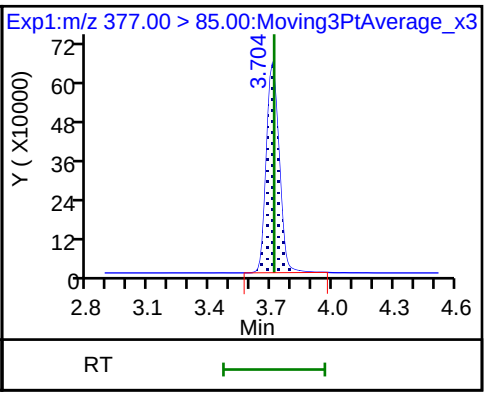

D 15 13C4 PFHpA



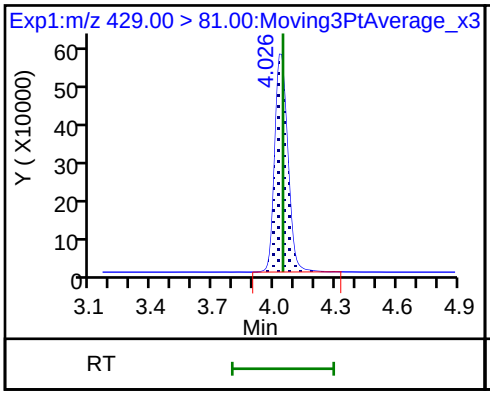

19 DONA



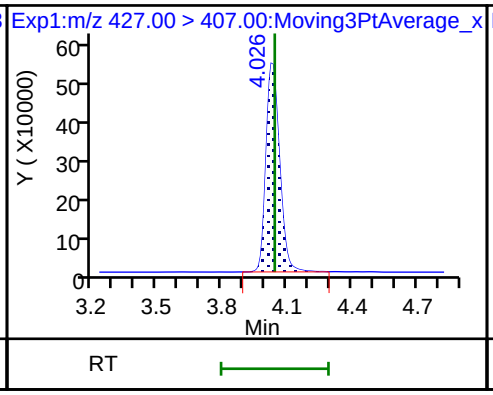

19 DONA



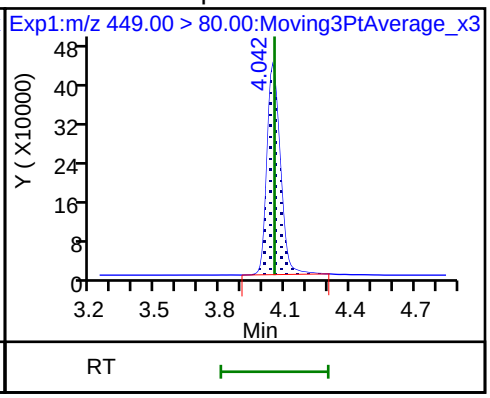
D 20 M2-6:2 FTS



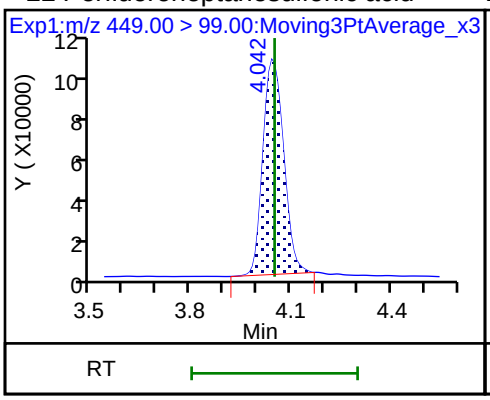

21 6:2 FTS



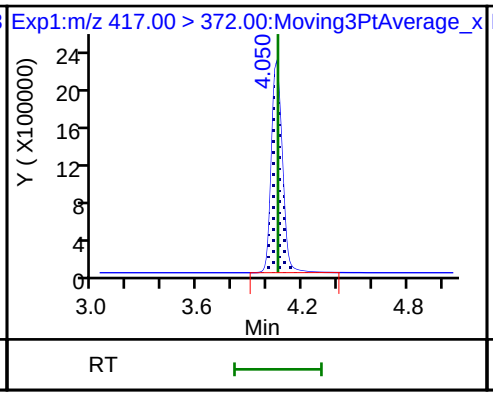

22 Perfluoroheptanesulfonic acid



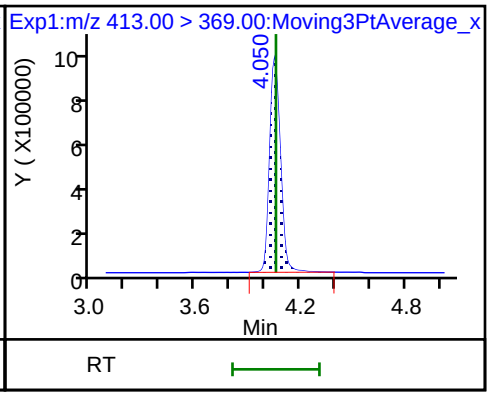

22 Perfluoroheptanesulfonic acid



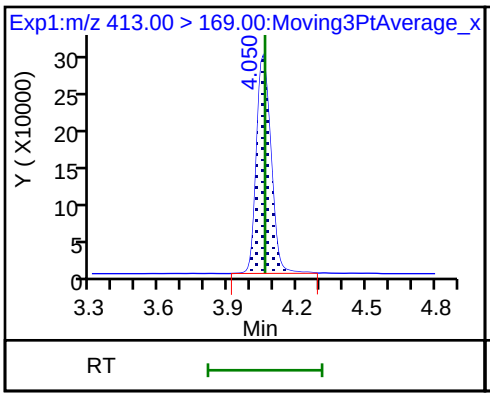

D 24 13C4 PFOA



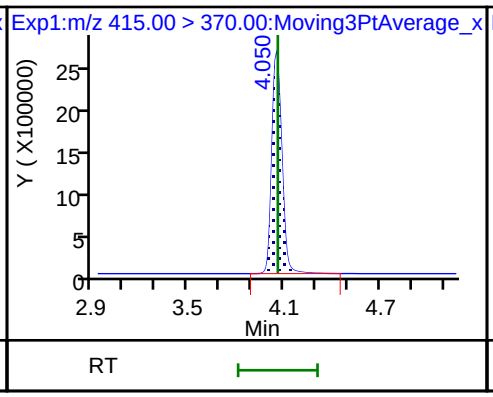

26 Perfluorooctanoic acid



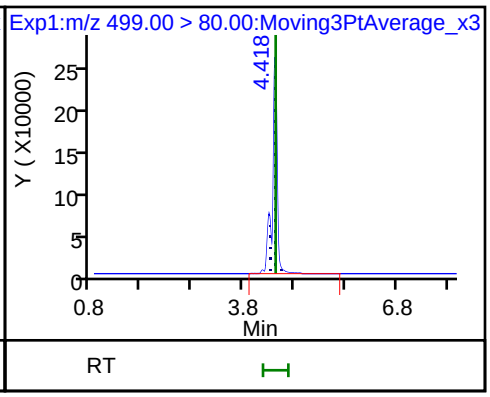

26 Perfluorooctanoic acid



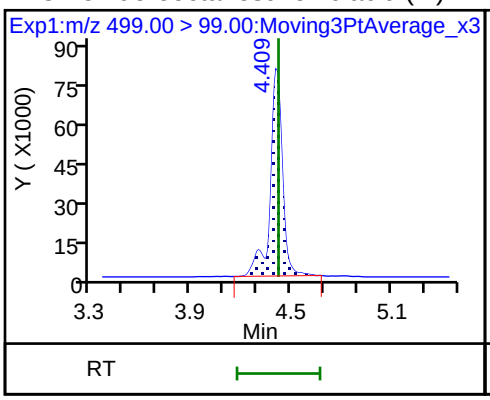

* 25 13C2 PFOA



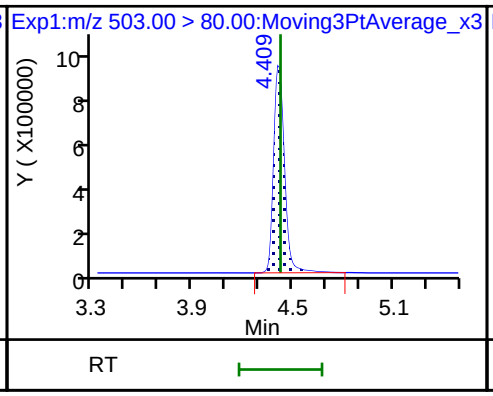

28 Perfluorooctanesulfonic acid



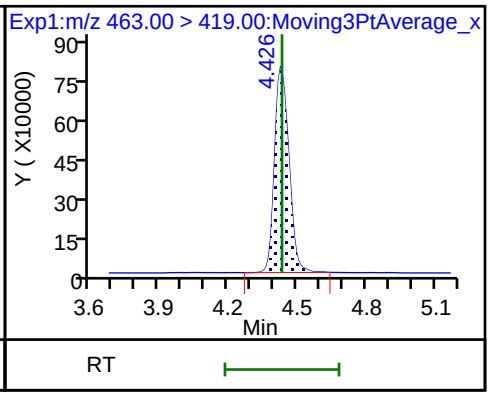

28 Perfluorooctanesulfonic acid (M)



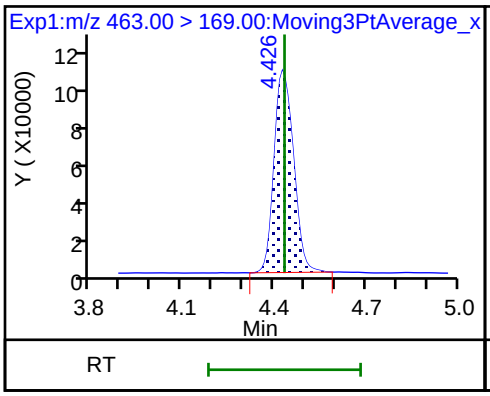

D 29 13C4 PFOS



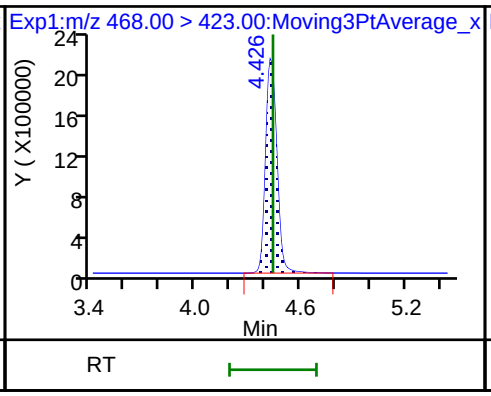

30 Perfluorononanoic acid



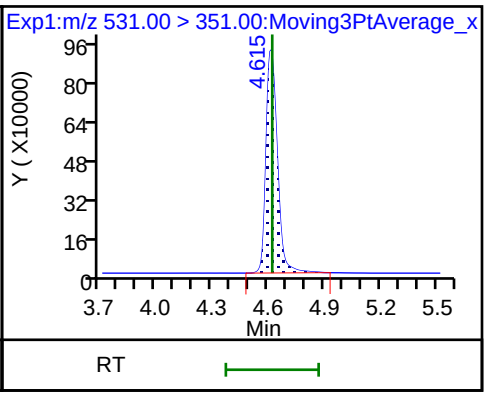
30 Perfluorononanoic acid



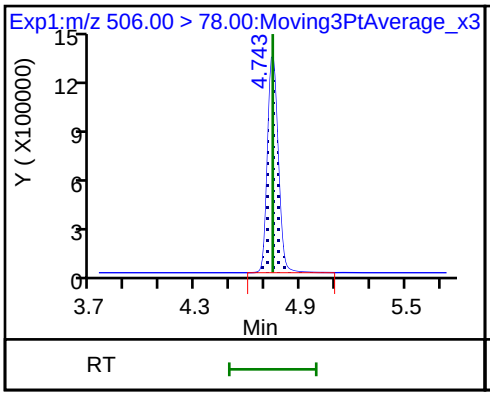

D 31 13C5 PFNA



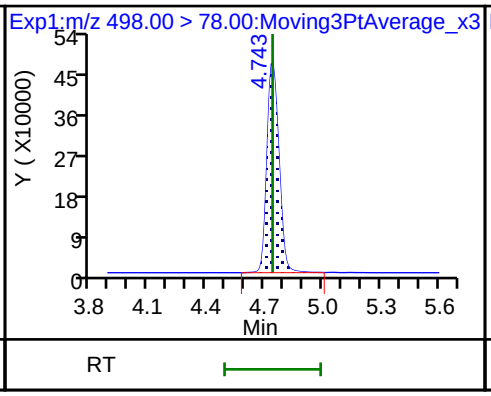

32 9ClFOS



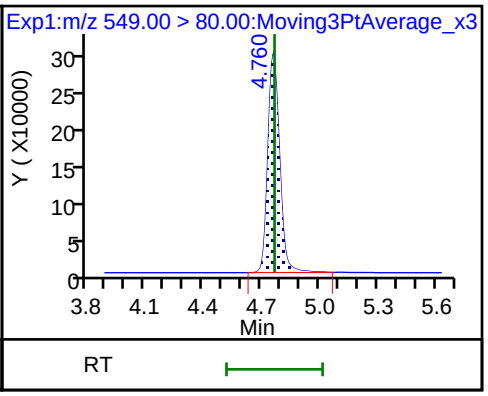

D 34 13C8 FOSA



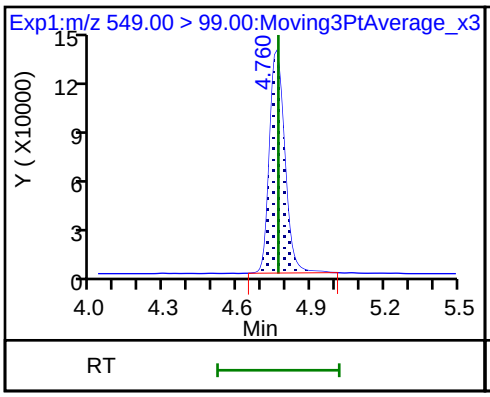

33 Perfluorooctanesulfonamide



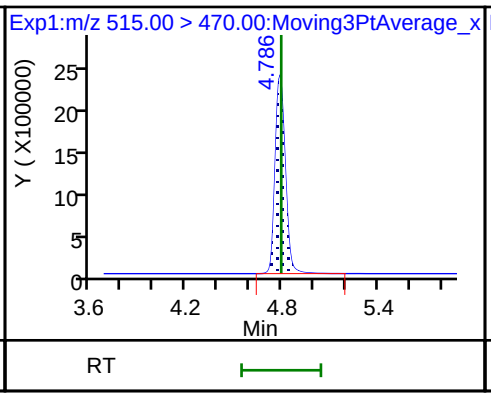

35 Perfluorononanesulfonic acid



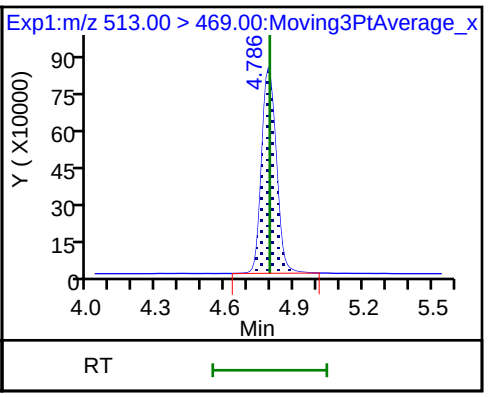

35 Perfluorononanesulfonic acid



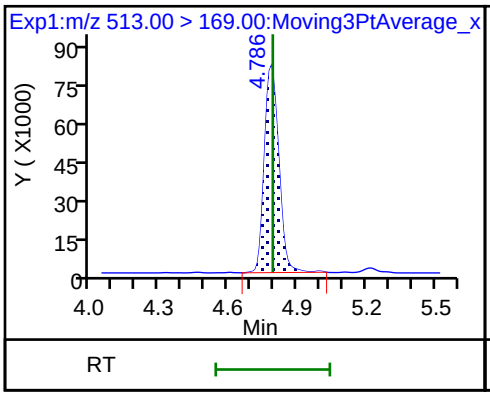

D 37 13C2 PFDA



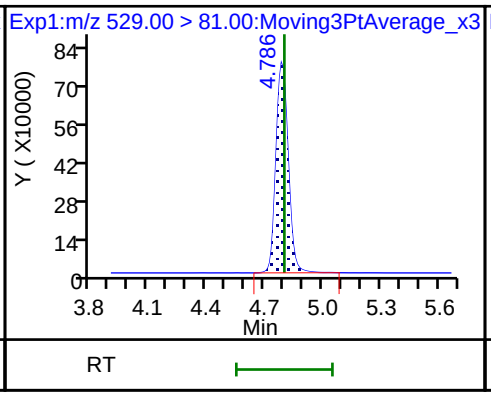

36 Perfluorodecanoic acid



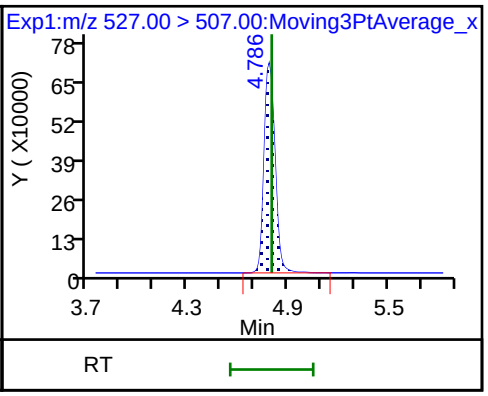

36 Perfluorodecanoic acid



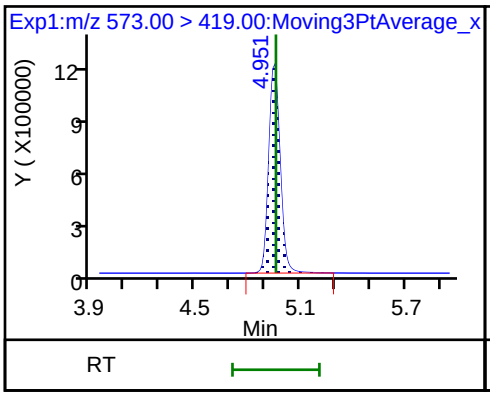

D 38 M2-8:2 FTS



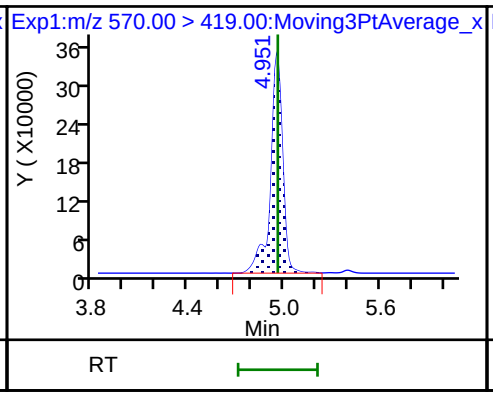

39 8:2 FTS



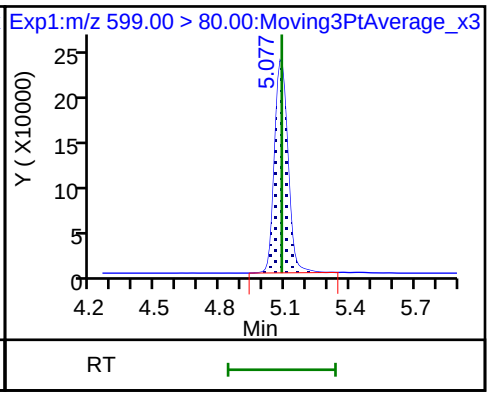
D 40 d3-NMeFOSAA



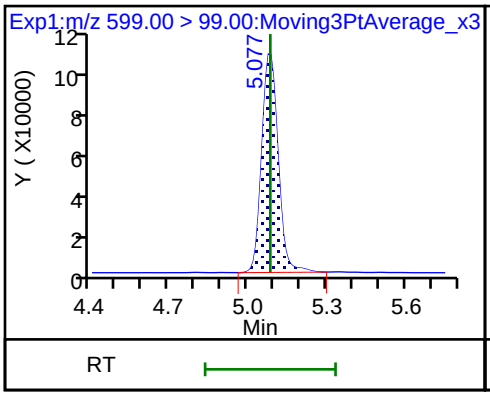

41 NMeFOSAA



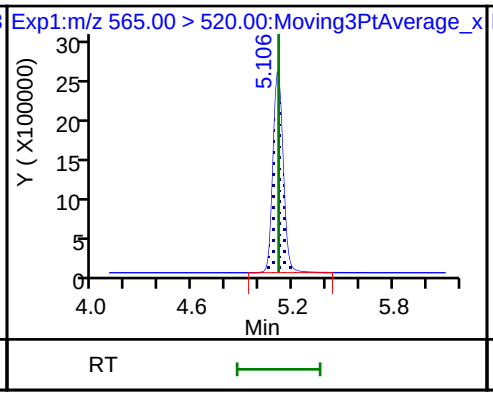

42 Perfluorodecanesulfonic acid



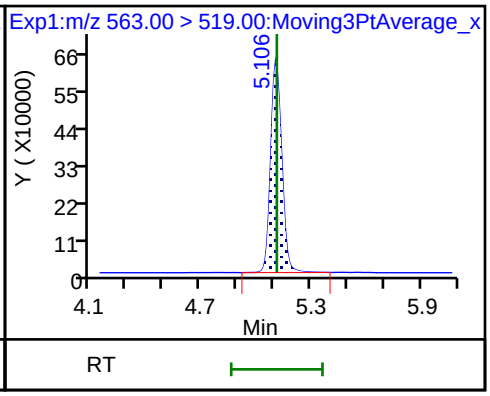

42 Perfluorodecanesulfonic acid



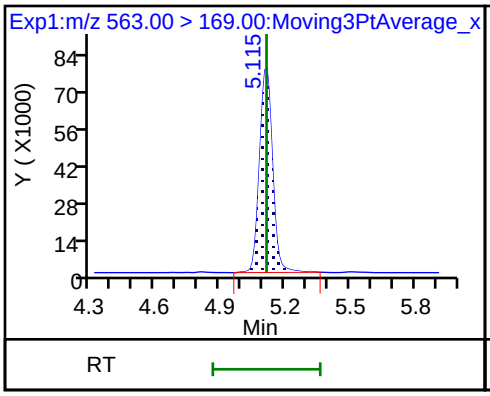

D 44 13C2 PFUnA



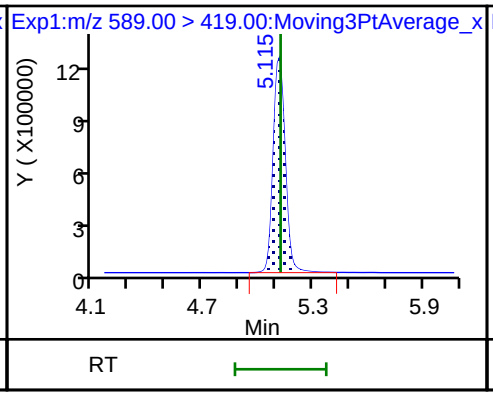

45 Perfluoroundecanoic acid



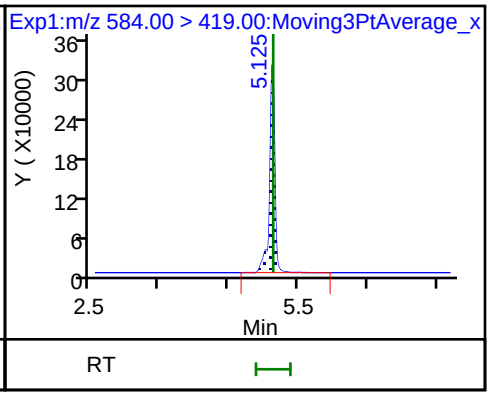

45 Perfluoroundecanoic acid



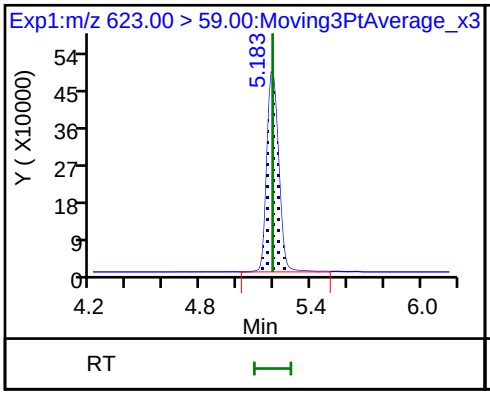

D 46 d5-NEtFOSAA



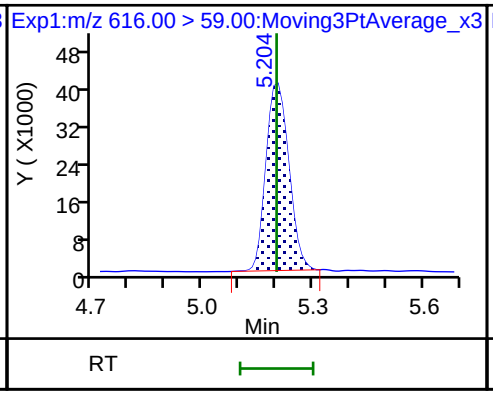

48 NEtFOSA



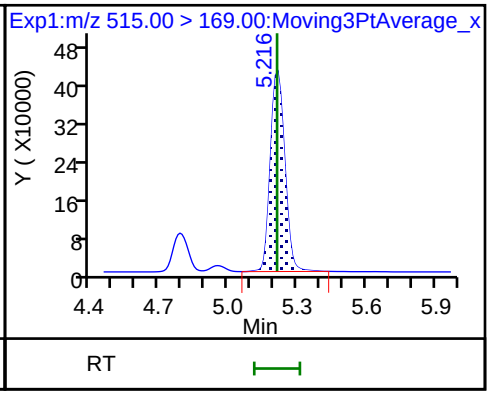

D 43 d7-N-MeFOSE-M



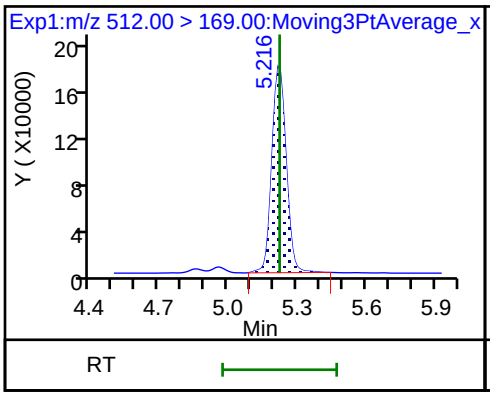

47 N-MeFOSE-M



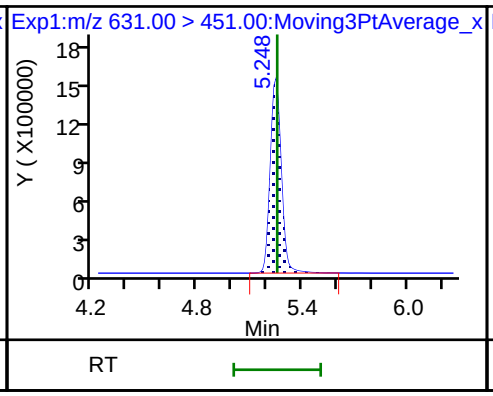

D 49 d-N-MeFOSA-M



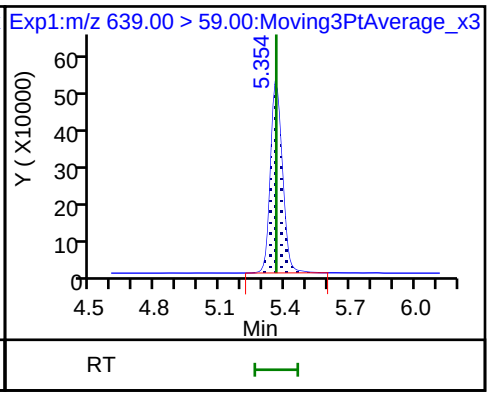
50 NMeFOSA



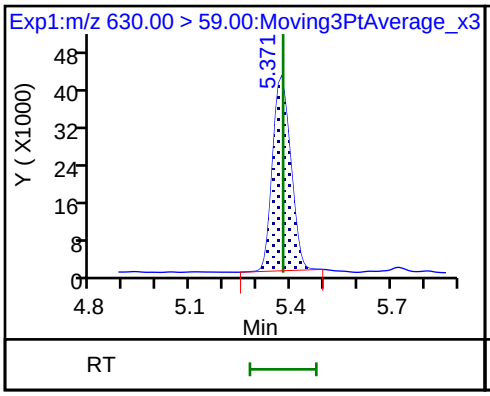

51 11ClFOS



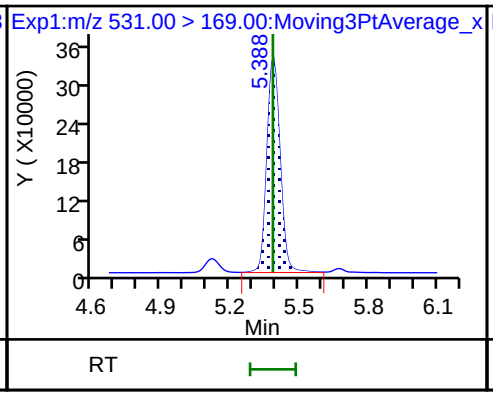

D 52 d9-N-EtFOSE-M



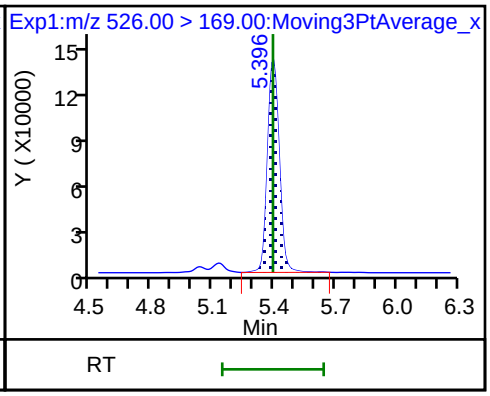

53 N-EtFOSE-M



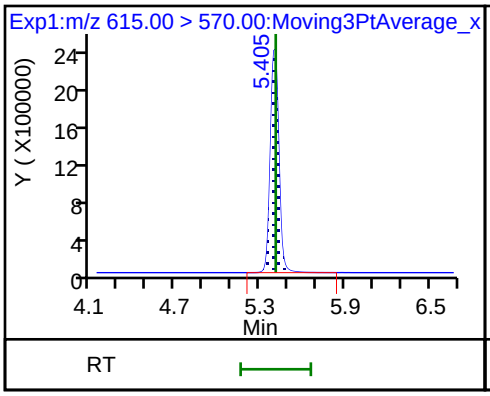

D 54 d-N-EtFOSA-M



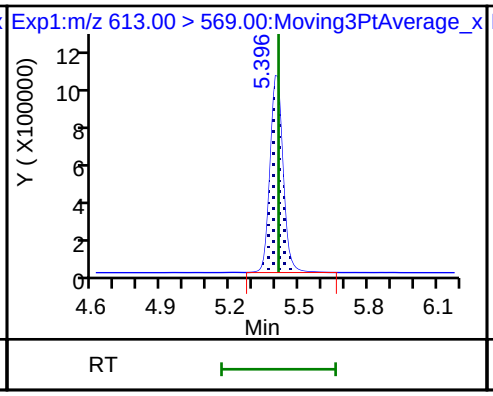

55 N-EtFOSA-M



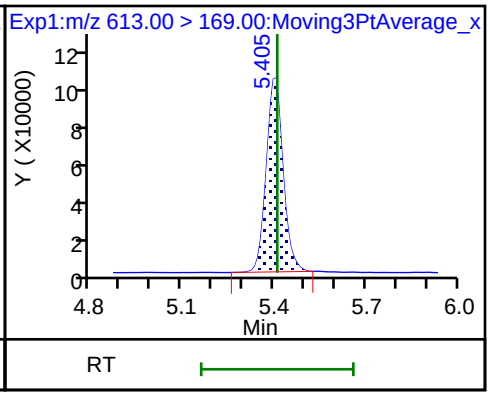

D 56 13C2 PFDoA



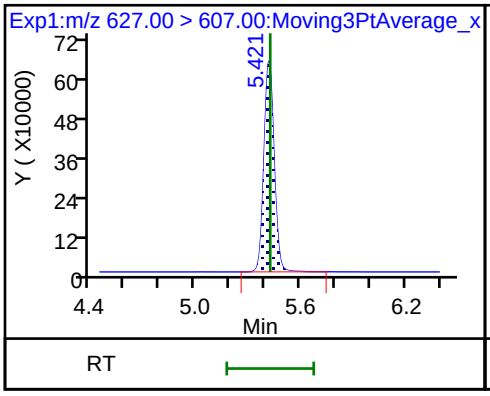

57 Perfluorododecanoic acid



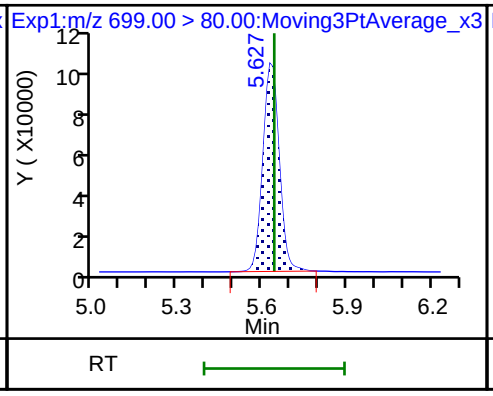

57 Perfluorododecanoic acid



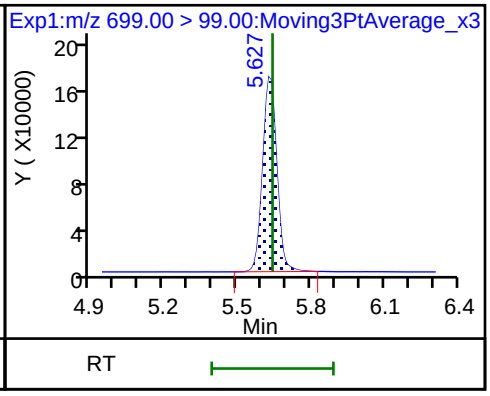

58 10:2 FTS



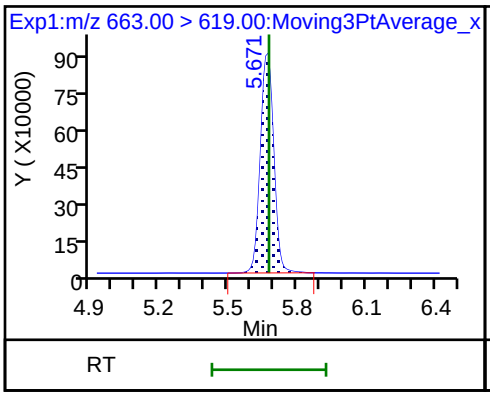

59 PFDoS



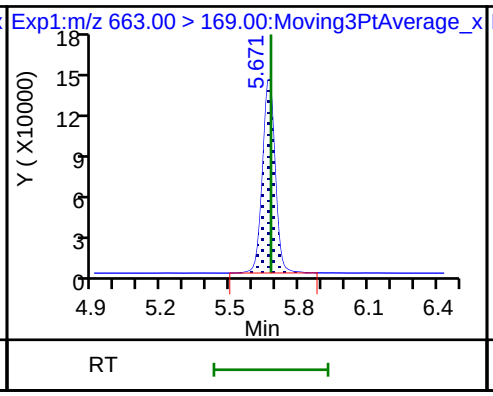

59 PFDoS



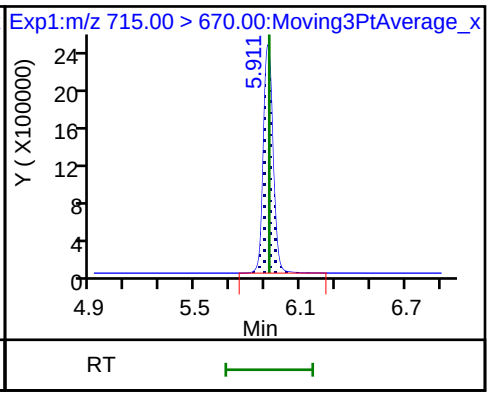
60 Perfluorotridecanoic acid



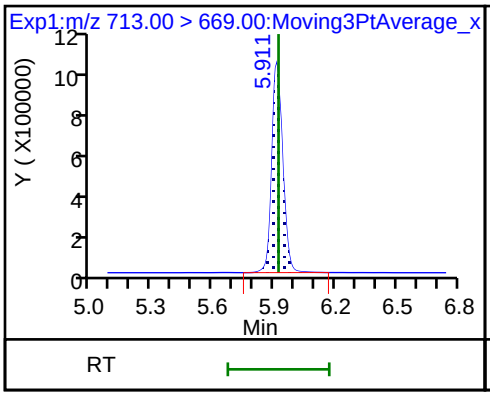

60 Perfluorotridecanoic acid



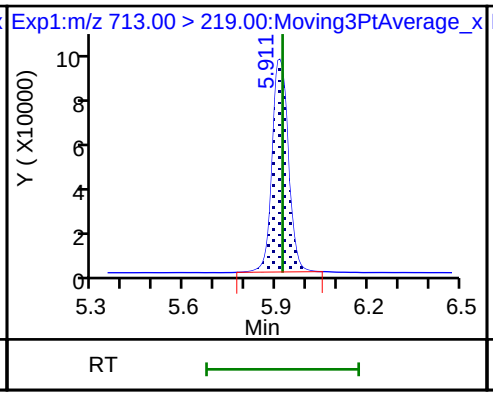

D 61 13C2 PFTeDA



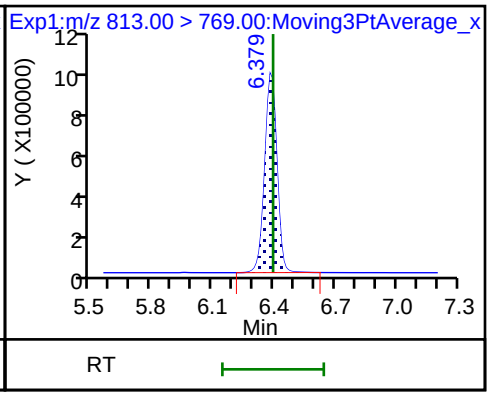

62 Perfluorotetradecanoic acid



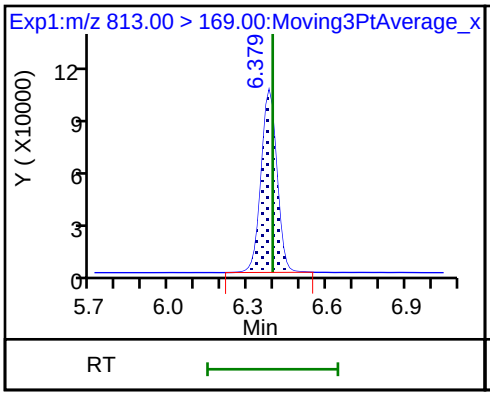

62 Perfluorotetradecanoic acid



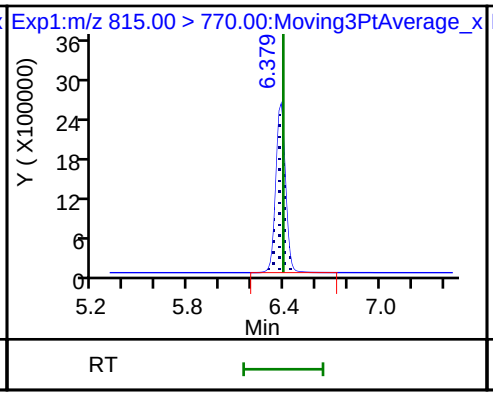

63 Perfluorohexadecanoic acid



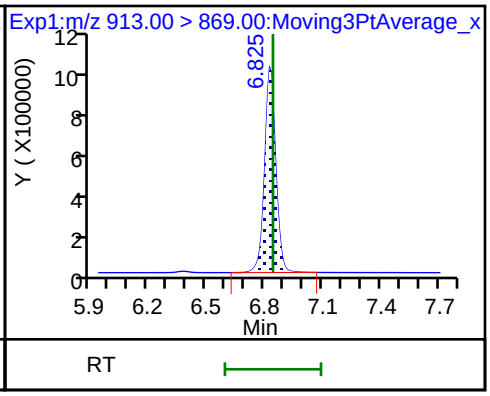

63 Perfluorohexadecanoic acid



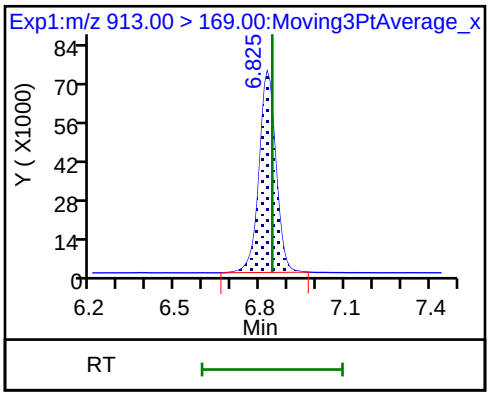

D 64 13C2 PFHxDA




65 Perfluorooctadecanoic acid




65 Perfluorooctadecanoic acid



Eurofins TestAmerica, Sacramento

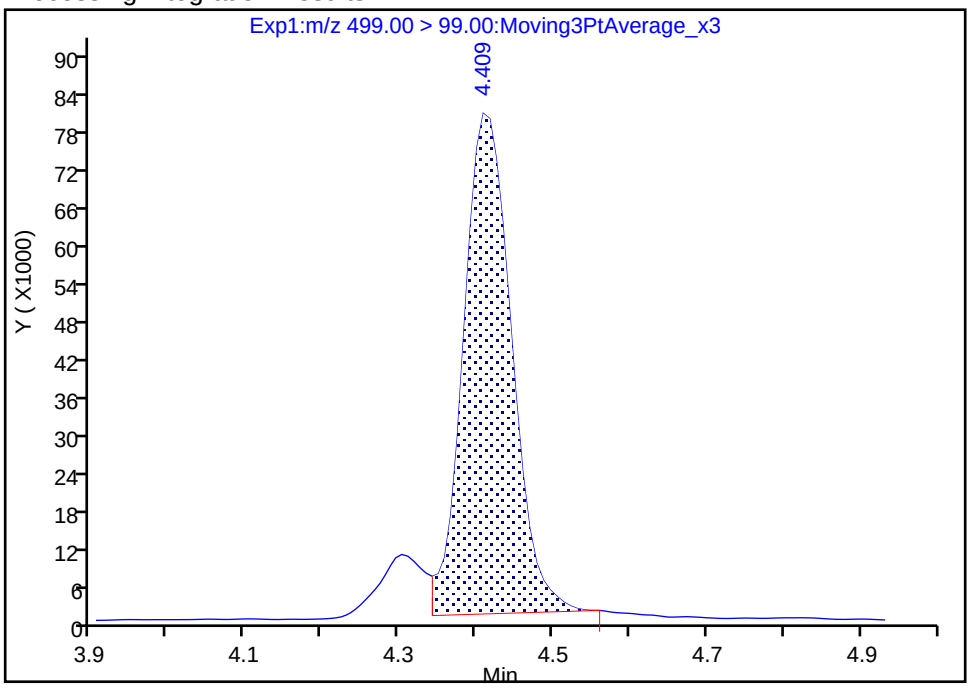
| | | | | | |
|---|---|---|---|---|---|
| Data File: | \\chromfs\Sacramento\ChromData\A13\20200910-103052.b\2020.09.10_A13_PFC_A_061.d | | | | |
| Injection Date: | 10-Sep-2020 18:26:42 | Instrument ID: | A13 | | |
| Lims ID: | LCSD 320-410906/3-A | | | | |
| Client ID: | | | | | |
| Operator ID: | SACINSTLCMS01 | ALS Bottle#: | 34 | Worklist Smp#: | 4 |
| Injection Vol: | 20.0 ul | Dil. Factor: | 1.0000 | | |
| Method: | PFAS_A13 | Limit Group: | LC PFC ICAL | | |
| Column: | Gemini C18 3um 3 x 100mm ( 3.00 mm ID) | Detector | EXP1 | | |

## 28 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 2

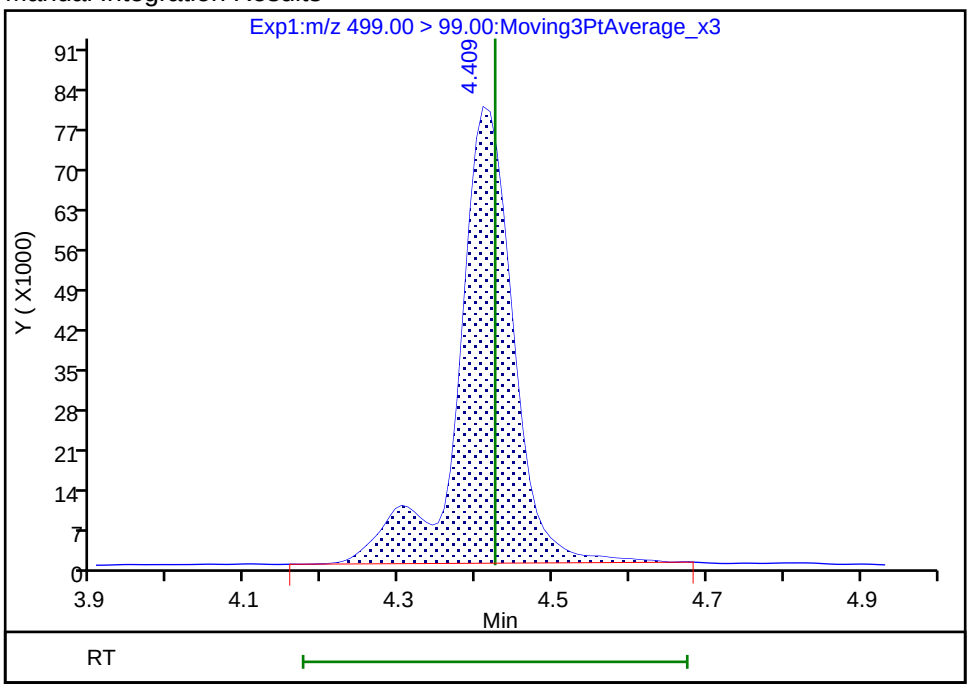
Processing Integration Results

RT: 4.41
Area: 346859
Amount: 0.911971
Amount Units: ng/ml




Manual Integration Results

RT: 4.41
Area: 402599
Amount: 0.911971
Amount Units: ng/ml




Reviewer: mongkols, 11-Sep-2020 08:50:42
Audit Action: Manually Integrated Audit Reason: Isomers

LCMS ANALYSIS RUN LOG

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 460-217659-1

SDG No.:

Instrument ID: A13 Start Date: 09/08/2020 18:01

Analysis Batch Number: 410486 End Date: 09/08/2020 19:26

| LAB SAMPLE ID | CLIENT SAMPLE ID | DATE ANALYZED | DILUTION FACTOR | LAB FILE ID | COLUMN ID |
|---|---|---|---|---|---|
| IC 320-410486/2 | | 09/08/2020 18:01 | 1 | 2020.09.08_A13_PFC_ICALX_004.d | GeminiC18 3x100 3(mm) |
| IC 320-410486/3 | | 09/08/2020 18:11 | 1 | 2020.09.08_A13_PFC_ICALX_005.d | GeminiC18 3x100 3(mm) |
| IC 320-410486/4 | | 09/08/2020 18:20 | 1 | 2020.09.08_A13_PFC_ICALX_006.d | GeminiC18 3x100 3(mm) |
| IC 320-410486/5 ICIS | | 09/08/2020 18:30 | 1 | 2020.09.08_A13_PFC_ICALX_007.d | GeminiC18 3x100 3(mm) |
| IC 320-410486/6 | | 09/08/2020 18:39 | 1 | 2020.09.08_A13_PFC_ICALX_008.d | GeminiC18 3x100 3(mm) |
| IC 320-410486/7 | | 09/08/2020 18:48 | 1 | 2020.09.08_A13_PFC_ICALX_009.d | GeminiC18 3x100 3(mm) |
| IC 320-410486/8 | | 09/08/2020 18:58 | 1 | 2020.09.08_A13_PFC_ICALX_010.d | GeminiC18 3x100 3(mm) |
| ICB 320-410486/9 | | 09/08/2020 19:07 | 1 | 2020.09.08_A13_PFC_ICALX_011.d | GeminiC18 3x100 3(mm) |
| ICV 320-410486/10 | | 09/08/2020 19:17 | 1 | 2020.09.08_A13_PFC_ICALX_012.d | GeminiC18 3x100 3(mm) |
| ZZZZZ | | 09/08/2020 19:26 | 1 | | GeminiC18 3x100 3(mm) |

537 (modified)

LCMS ANALYSIS RUN LOG

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 460-217659-1

SDG No.:

Instrument ID: A13 Start Date: 09/10/2020 10:36

Analysis Batch Number: 410989 End Date: 09/10/2020 11:14

| LAB SAMPLE ID | CLIENT SAMPLE ID | DATE ANALYZED | DILUTION FACTOR | LAB FILE ID | COLUMN ID |
|---|---|---|---|---|---|
| CCB 320-410989/1 | | 09/10/2020 10:36 | 1 | 2020.09.10_A13_PFC A 004.d | GeminiC18 3x100 3(mm) |
| CCVL 320-410989/2 | | 09/10/2020 10:46 | 1 | 2020.09.10_A13_PFC A 005.d | GeminiC18 3x100 3(mm) |
| CCV 320-410989/3 CCVIS | | 09/10/2020 10:55 | 1 | 2020.09.10_A13_PFC A 006.d | GeminiC18 3x100 3(mm) |
| ZZZZZ | | 09/10/2020 11:04 | 10 | | GeminiC18 3x100 3(mm) |
| CCV 320-410989/5 | | 09/10/2020 11:14 | 1 | | GeminiC18 3x100 3(mm) |

537 (modified)

LCMS ANALYSIS RUN LOG

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 460-217659-1

SDG No.:

Instrument ID: A13 Start Date: 09/10/2020 17:58

Analysis Batch Number: 411143 End Date: 09/10/2020 21:16

| LAB SAMPLE ID | CLIENT SAMPLE ID | DATE ANALYZED | DILUTION FACTOR | LAB FILE ID | COLUMN ID |
|---|---|---|---|---|---|
| CCV 320-411143/1 | | 09/10/2020 17:58 | 1 | 2020.09.10_A13_PFC_A_058.d | GeminiC18 3x100 3(mm) |
| MB 320-410906/1-A | | 09/10/2020 18:07 | 1 | 2020.09.10_A13_PFC_A_059.d | GeminiC18 3x100 3(mm) |
| LCS 320-410906/2-A | | 09/10/2020 18:17 | 1 | 2020.09.10_A13_PFC_A_060.d | GeminiC18 3x100 3(mm) |
| LCSD 320-410906/3-A | | 09/10/2020 18:26 | 1 | 2020.09.10_A13_PFC_A_061.d | GeminiC18 3x100 3(mm) |
| 460-217659-1 | MW-201 | 09/10/2020 18:36 | 1 | 2020.09.10_A13_PFC_A_062.d | GeminiC18 3x100 3(mm) |
| 460-217659-2 | MW-207 | 09/10/2020 18:45 | 1 | 2020.09.10_A13_PFC_A_063.d | GeminiC18 3x100 3(mm) |
| 460-217659-3 | MW-210 | 09/10/2020 18:54 | 1 | 2020.09.10_A13_PFC_A_064.d | GeminiC18 3x100 3(mm) |
| 460-217659-4 | MW-211 | 09/10/2020 19:04 | 1 | 2020.09.10_A13_PFC_A_065.d | GeminiC18 3x100 3(mm) |
| 460-217659-5 | MW-214 | 09/10/2020 19:13 | 1 | 2020.09.10_A13_PFC_A_066.d | GeminiC18 3x100 3(mm) |
| 460-217659-6 | MW-216 | 09/10/2020 19:23 | 1 | 2020.09.10_A13_PFC_A_067.d | GeminiC18 3x100 3(mm) |
| 460-217659-7 | MW-217 | 09/10/2020 19:32 | 1 | 2020.09.10_A13_PFC_A_068.d | GeminiC18 3x100 3(mm) |
| ZZZZZ | | 09/10/2020 19:42 | 1 | | GeminiC18 3x100 3(mm) |
| CCV 320-411143/13 | | 09/10/2020 19:51 | 1 | 2020.09.10_A13_PFC_A_070.d | GeminiC18 3x100 3(mm) |
| 460-217659-8 | FB | 09/10/2020 20:00 | 1 | 2020.09.10_A13_PFC_A_071.d | GeminiC18 3x100 3(mm) |
| ZZZZZ | | 09/10/2020 20:10 | 1 | | GeminiC18 3x100 3(mm) |
| ZZZZZ | | 09/10/2020 20:19 | 1 | | GeminiC18 3x100 3(mm) |
| ZZZZZ | | 09/10/2020 20:29 | 1 | | GeminiC18 3x100 3(mm) |
| ZZZZZ | | 09/10/2020 20:38 | 1 | | GeminiC18 3x100 3(mm) |
| ZZZZZ | | 09/10/2020 20:47 | 1 | | GeminiC18 3x100 3(mm) |
| ZZZZZ | | 09/10/2020 20:57 | 1 | | GeminiC18 3x100 3(mm) |
| ZZZZZ | | 09/10/2020 21:06 | 1 | | GeminiC18 3x100 3(mm) |
| CCV 320-411143/22 | | 09/10/2020 21:16 | 1 | 2020.09.10_A13_PFC_A_079.d | GeminiC18 3x100 3(mm) |

537 (modified)

# LCMS BATCH WORKSHEET

Lab Name: Eurofins TestAmerica, Sacramen  Job No.: 460-217659-1

SDG No.:

Batch Number: 410906  Batch Start Date: 09/09/20 18:39  Batch Analyst: Pham, Vince

Batch Method: 3535  Batch End Date: 09/10/20 01:40

| Lab Sample ID | Client Sample ID | Method Chain | Basis | GrossWeight | TareWeight | InitialAmount | FinalAmount | LCMPFC_IDA 00243 | LCPFC-IS 00481 |
|---|---|---|---|---|---|---|---|---|---|
| MB 320-410906/1 | | 3535, 537 (modified) | | | | 250 mL | 10.00 mL | 500 uL | 500 uL |
| LCS 320-410906/2 | | 3535, 537 (modified) | | | | 250 mL | 10.00 mL | 500 uL | 500 uL |
| LCSD 320-410906/3 | | 3535, 537 (modified) | | | | 250 mL | 10.00 mL | 500 uL | 500 uL |
| 460-217659-D-1 | MW-201 | 3535, 537 (modified) | T | 291.85 g | 26.14 g | 265.7 mL | 10.00 mL | 500 uL | 500 uL |
| 460-217659-D-2 | MW-207 | 3535, 537 (modified) | T | 292.84 g | 26.10 g | 266.7 mL | 10.00 mL | 500 uL | 500 uL |
| 460-217659-D-3 | MW-210 | 3535, 537 (modified) | T | 275.14 g | 26.36 g | 248.8 mL | 10.00 mL | 500 uL | 500 uL |
| 460-217659-D-4 | MW-211 | 3535, 537 (modified) | T | 277.10 g | 26.37 g | 250.7 mL | 10.00 mL | 500 uL | 500 uL |
| 460-217659-D-5 | MW-214 | 3535, 537 (modified) | T | 268.10 g | 26.93 g | 241.2 mL | 10.00 mL | 500 uL | 500 uL |
| 460-217659-D-6 | MW-216 | 3535, 537 (modified) | T | 298.87 g | 26.10 g | 272.8 mL | 10.00 mL | 500 uL | 500 uL |
| 460-217659-D-7 | MW-217 | 3535, 537 (modified) | T | 293.18 g | 27.13 g | 266.1 mL | 10.00 mL | 500 uL | 500 uL |
| 460-217659-D-8 | FB | 3535, 537 (modified) | T | 301.97 g | 26.90 g | 275.1 mL | 10.00 mL | 500 uL | 500 uL |

| Lab Sample ID | Client Sample ID | Method Chain | Basis | LCPFCSP 00328 | AnalysisComment | | | | |
|---|---|---|---|---|---|---|---|---|---|
| MB 320-410906/1 | | 3535, 537 (modified) | | | | | | | |
| LCS 320-410906/2 | | 3535, 537 (modified) | | 500 uL | | | | | |
| LCSD 320-410906/3 | | 3535, 537 (modified) | | 500 uL | | | | | |
| 460-217659-D-1 | MW-201 | 3535, 537 (modified) | T | | | | | | |
| 460-217659-D-2 | MW-207 | 3535, 537 (modified) | T | | Clogged. Bottle + remaining sample = 71.38g | | | | |
| 460-217659-D-3 | MW-210 | 3535, 537 (modified) | T | | | | | | |
| 460-217659-D-4 | MW-211 | 3535, 537 (modified) | T | | | | | | |

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

# LCMS BATCH WORKSHEET

Lab Name: Eurofins TestAmerica, Sacramen  Job No.: 460-217659-1

SDG No.:

Batch Number: 410906  Batch Start Date: 09/09/20 18:39  Batch Analyst: Pham, Vince

Batch Method: 3535  Batch End Date: 09/10/20 01:40

| Lab Sample ID | Client Sample ID | Method Chain | Basis | LCPFCSP 00328 | AnalysisComment | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 460-217659-D-5 | MW-214 | 3535, 537 (modified) | T | | | | | | |
| 460-217659-D-6 | MW-216 | 3535, 537 (modified) | T | | Clogged. Bottle + remaining sample = 178.76g | | | | |
| 460-217659-D-7 | MW-217 | 3535, 537 (modified) | T | | | | | | |
| 460-217659-D-8 | FB | 3535, 537 (modified) | T | | | | | | |

| Batch Notes | |
|---|---|
| Balance ID | QA-081 |
| Batch Comment | Eurofins label ID matches client label. VP 9/09/20. Centrifuge tube #18720040 |
| First End time | 09/10/2020 01:40 |
| H2O ID | 9/08/20 |
| Hexane ID | 2122754 |
| Manifold ID | BE, BQ |
| Methanol ID | 2138290 |
| Sodium Hydroxide ID | 2141971 |
| Pipette/Syringe/Dispenser ID | R10872I |
| Analyst ID - Reagent Drop | VP |
| Analyst ID - IS Reagent Drop | VP |
| Analyst ID - IS Reagent Drop Witness | JER |
| Solvent Lot # | 2140105 |
| Solvent Name | 0.3% NH4OH/MeOH |
| SPE Cartridge Lot ID | 005730044a |
| SPE Cartridge Type | Oasis WAX 500mg |
| First Start time | 09/09/2020 18:39 |

| Basis | Basis Description |
|---|---|
| T | Total/NA |

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

# Shipping and Receiving Documents

# Chain of Custody Record 454721

eurofins | Environment Testing TestAmerica

Address: 5 grossinger rd, Liberty, NY

Regulatory Program: ☐ DW ☐ NPDES ☐ RCRA ☒ Other: NY Cat B

TAL-8210

| Client Contact | Project Manager: Fuad Dahan | Site Contact: Omayra Perez | Date: | COC No: |
|---|---|---|---|---|
| Company Name: SCS | Tel/Email: | Lab Contact: | Carrier: | 1 of 1 COCs |
| Address: 12a Maple ave | Analysis Turnaround Time | | | Sampler: |
| City/State/Zip: Pine Brook, NJ | ☐ CALENDAR DAYS ☐ WORKING DAYS | | | For Lab Use Only: |
| Phone: 973 808 9050 | TAT if different from Below | | | Walk-in Client: |
| Fax: | ☐ 2 weeks ☒ 1 week 5 Standard ☐ 2 days ☐ 1 day | | | Lab Sampling: |
| Project Name: Grossingers | | | | Job / SDG No.: 217659 |
| Site: | | | | |
| PO # 9313 Phase 10 | | | | |

5-Day RUSH

| Sample Identification | Sample Date | Sample Time | Sample Type (C=Comp, G=Grab) | Matrix | # of Cont. | Filtered Sample (Y / N) | Perform MS / MSD (Y / N) | 1,4-Dioxane (8270C SIM) | PFAS (537.1) | Sample Specific Notes: |
|---|---|---|---|---|---|---|---|---|---|---|
| MW-201 | 9/3/20 | 910 | Grab | GW | 5 | N | N | X | X | 1 |
| MW-207 | | 1110 | | | | | | | | 2 |
| MW-210 | | 1035 | | | | | | | | 3 |
| MW-211 | | 1400 | | | | | | | | 4 |
| MW-214 | | 930 | | | | | | | | 5 |
| MW-216 | | 1330 | | | | | | | | 6 |
| MW-217 | | 1235 | ↓ | ↓ | ↓ | | | | | 7 |
| FB | ↓ | 1500 | | DI | 4 | | | | | 8 |
| TB | 9/1/20 | | | ↓ | 2 | | | | | 9 |

460-217659 Chain of Custody

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other _____

**Possible Hazard Identification:**
Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.

☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

**Sample Disposal ( A fee may be assessed if samples are retained longer than 1 month)**

☐ Return to Client ☒ Disposal by Lab ☐ Archive for _____ Months

**Special Instructions/QC Requirements & Comments:**

| Custody Seals Intact: ☐ Yes ☐ No | Custody Seal No.: | | Cooler Temp. (°C): Obs'd: _____ Corr'd: _____ | | Therm ID No.: _____ |
|---|---|---|---|---|---|
| Relinquished by: | Company: SCS | Date/Time: 9/4/20 | Received by: | Company: ETA | Date/Time: 9/4/20 1400 |
| Relinquished by: | Company: ETA | Date/Time: 9/4/20 1625 | Received by: | Company: TAEL | Date/Time: 9/4/20 1625 |
| Relinquished by: | Company: | Date/Time: | Received in Laboratory by: | Company: | Date/Time: |

NO COC Lot # 11-4.4

**Eurofins TestAmerica Edison**
**Receipt Temperature and pH Log**

Job Number: 217659

Number of Coolers: 1 IR Gun # 11

## Cooler Temperatures

| | RAW | CORRECTED | | RAW | CORRECTED | | RAW | CORRECTED |
|---|---|---|---|---|---|---|---|---|
| Cooler #1: | 4.4 ℃ | 4.4 ℃ | Cooler #4: | ℃ | ℃ | Cooler #7: | ℃ | ℃ |
| Cooler #2: | ℃ | ℃ | Cooler #5: | ℃ | ℃ | Cooler #8: | ℃ | ℃ |
| Cooler #3: | ℃ | ℃ | Cooler #6: | ℃ | ℃ | Cooler #9: | ℃ | ℃ |

| TALS Sample Number | Ammonia (pH<2) | COD (pH<2) | Nitrate Nitrite (pH<2) | Metals* (pH<2) | Hardness (pH<2) | Pest (pH 5-9) | EPH or QAM (pH<2) | Phenols (pH<2) | Sulfide (pH>9) | TKN (pH<2) | TOC (pH<2) | Total Cyanide (pH>12) | Total Phos (pH<2) | Other | Other |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
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**If pH adjustments are required record the information below:**

**Sample No(s). adjusted:** _____

**Preservative Name/Conc.:** _____ Volume of Preservative used (ml): _____

**Lot # of Preservative(s):** _____ Expiration Date: _____

*The appropriate Project Manager and Department Manager should be notified about the samples which were pH adjusted.*

** Samples for Metal analysis which are out of compliance must be acidified at least 24 hours prior to analysis.*

**Initials:** _____ **Date:** 9/4/2020

**Eurofins TestAmerica, Edison**
777 New Durham Road
Edison, NJ 08817
Phone: 732-549-3900 Fax: 732-549-3679

# Chain of Custody Record

eurofins | Environment Testing America

| Client Information (Sub Contract Lab) | Sampler: | Lab PM: Penas, Omayra | Carrier Tracking No(s): | COC No: 460-59373.1 |
|---|---|---|---|---|
| Client Contact: Shipping/Receiving | Phone: | E-Mail: Omayra.Penas@Eurofinset.com | State of Origin: New York | Page: Page 1 of 1 |
| Company: TestAmerica Laboratories, Inc. | | Accreditations Required (See note): NELAP - New York | | Job #: 460-217659-1 |
| Address: 880 Riverside Parkway, , | Due Date Requested: 9/11/2020 | | | |
| City: West Sacramento | TAT Requested (days): | | | |
| State, Zip: CA, 95605 | | | | |
| Phone: 916-373-5600(Tel) 916-372-1059(Fax) | PO #: | | | |
| Email: | WO #: | | | |
| Project Name: Grossingers | Project #: 46021703 | | | |
| Site: | SSOW#: | | | |

**Analysis Requested**

**Preservation Codes:**

| | |
|---|---|
| A - HCL | M - Hexane |
| B - NaOH | N - None |
| C - Zn Acetate | O - AsNaO2 |
| D - Nitric Acid | P - Na2O4S |
| E - NaHSO4 | Q - Na2SO3 |
| F - MeOH | R - Na2S2O3 |
| G - Amchlor | S - H2SO4 |
| H - Ascorbic Acid | T - TSP Dodecahydrate |
| I - Ice | U - Acetone |
| J - DI Water | V - MCAA |
| K - EDTA | W - pH 4-5 |
| L - EDA | Z - other (specify) |

Other:

| Sample Identification - Client ID (Lab ID) | Sample Date | Sample Time | Sample Type (C=Comp, G=grab) | Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air) | Field Filtered Sample (Yes or No) | Perform MS/MSD (Yes or No) | PFC_IDA/3535_PFC PFAS, Standard List (21 Analytes) SAC | Total Number of containers | Special Instructions/Note: |
|---|---|---|---|---|---|---|---|---|---|
| | | | Preservation Code: | | | | | | |
| MW-201 (460-217659-1) | 9/3/20 | 09:10 Eastern | | Water | | | X | 2 | |
| MW-207 (460-217659-2) | 9/3/20 | 11:10 Eastern | | Water | | | X | 2 | |
| MW-210 (460-217659-3) | 9/3/20 | 10:35 Eastern | | Water | | | X | 2 | |
| MW-211 (460-217659-4) | 9/3/20 | 14:00 Eastern | | Water | | | X | 2 | |
| MW-214 (460-217659-5) | 9/3/20 | 09:30 Eastern | | Water | | | X | 2 | |
| MW-216 (460-217659-6) | 9/3/20 | 13:30 Eastern | | Water | | | X | 2 | |
| MW-217 (460-217659-7) | 9/3/20 | 12:35 Eastern | | Water | | | X | 2 | |
| FB (460-217659-8) | 9/3/20 | 15:00 Eastern | | Water | | | X | 2 | |
| | | | | | | | | | |

Note: Since laboratory accreditations are subject to change, Eurofins TestAmerica places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins TestAmerica attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said complicance to Eurofins TestAmerica.

| Possible Hazard Identification | Sample Disposal ( A fee may be assessed if samples are retained longer than 1 month) |
|---|---|
| Unconfirmed | ☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months |
| Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 1 | Special Instructions/QC Requirements: |

| Empty Kit Relinquished by: | Date: | Time: | Method of Shipment: |
|---|---|---|---|

| | Relinquished by: | Date/Time: | Company | Received by: | Date/Time: | Company |
|---|---|---|---|---|---|---|
| 1 | | 9/8/20 1900 | ETA-Edi | | 09/09/20 10:40 | ETA-SAC |
| 2 | Relinquished by: | Date/Time: | Company | Received by: | Date/Time: | Company |
| 3 | Relinquished by: | Date/Time: | Company | Received by: | Date/Time: | Company |

| Custody Seals Intact: ∆ Yes ∆ No | Custody Seal No.: | Cooler Temperature(s) °C and Other Remarks: 05: 1.0 CORR: 0.5 |
|---|---|---|

Ver: 01/16/2019

(6/6) - PINK AND GREY DISCOLORATION. 09/09/20



09/11/2020

# Login Sample Receipt Checklist

Client: SESI Consulting Engineers

Job Number: 460-217659-1

**Login Number: 217659**
**List Number: 1**
**Creator: Rivera, Kenneth**

**List Source: Eurofins TestAmerica, Edison**

| Question | Answer | Comment |
|---|---|---|
| Radioactivity wasn't checked or is </= background as measured by a survey meter. | N/A | |
| The cooler's custody seal, if present, is intact. | True | |
| Sample custody seals, if present, are intact. | True | |
| The cooler or samples do not appear to have been compromised or tampered with. | True | |
| Samples were received on ice. | True | |
| Cooler Temperature is acceptable. | True | |
| Cooler Temperature is recorded. | True | |
| COC is present. | True | |
| COC is filled out in ink and legible. | True | |
| COC is filled out with all pertinent information. | True | |
| Is the Field Sampler's name present on COC? | True | |
| There are no discrepancies between the containers received and the COC. | True | |
| Samples are received within Holding Time (excluding tests with immediate HTs) | True | |
| Sample containers have legible labels. | True | |
| Containers are not broken or leaking. | True | |
| Sample collection date/times are provided. | True | |
| Appropriate sample containers are used. | True | |
| Sample bottles are completely filled. | True | |
| Sample Preservation Verified. | True | |
| There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs | True | |
| Containers requiring zero headspace have no headspace or bubble is <6mm (1/4"). | True | |
| Multiphasic samples are not present. | True | |
| Samples do not require splitting or compositing. | True | |
| Residual Chlorine Checked. | N/A | |

# Login Sample Receipt Checklist

Client: SESI Consulting Engineers

Job Number: 460-217659-1

**Login Number: 217659**
**List Number: 2**
**Creator: Saephan, Kae C**

**List Source: Eurofins TestAmerica, Sacramento**
**List Creation: 09/09/20 01:30 PM**

| Question | Answer | Comment |
|---|---|---|
| Radioactivity wasn't checked or is </= background as measured by a survey meter. | True | |
| The cooler's custody seal, if present, is intact. | N/A | |
| Sample custody seals, if present, are intact. | N/A | |
| The cooler or samples do not appear to have been compromised or tampered with. | True | |
| Samples were received on ice. | True | |
| Cooler Temperature is acceptable. | True | |
| Cooler Temperature is recorded. | True | ob: 1.0c corr: 0.5c |
| COC is present. | True | |
| COC is filled out in ink and legible. | True | |
| COC is filled out with all pertinent information. | True | |
| Is the Field Sampler's name present on COC? | False | Received project as a subcontract. |
| There are no discrepancies between the containers received and the COC. | True | |
| Samples are received within Holding Time (excluding tests with immediate HTs) | True | |
| Sample containers have legible labels. | True | |
| Containers are not broken or leaking. | True | |
| Sample collection date/times are provided. | True | |
| Appropriate sample containers are used. | True | |
| Sample bottles are completely filled. | True | |
| Sample Preservation Verified. | N/A | |
| There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs | True | |
| Containers requiring zero headspace have no headspace or bubble is <6mm (1/4"). | True | |
| Multiphasic samples are not present. | True | |
| Samples do not require splitting or compositing. | True | |
| Residual Chlorine Checked. | N/A | |

www.alphalab.com

# Alpha Analytical

## Laboratory Code: 11148

**SDG Number: L2009793**

*The original project report/data package is held by Alpha Analytical. This report/data package is paginated and should be reproduced only in its entirety. Alpha Analytical holds no responsibility for results and/or data that are not consistent with the original.*

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**Project Name:** GROSSINGERS
**Project Number:** 9313

**Lab Number:** L2009793
**Report Date:** 03/18/20

| Alpha Sample ID | Client ID | Matrix | Sample Location | Collection Date/Time | Receive Date |
|---|---|---|---|---|---|
| L2009793-01 | MW-213 | WATER | LIBERTY, NY | 03/04/20 14:30 | 03/04/20 |
| L2009793-02 | MW-214 | WATER | LIBERTY, NY | 03/04/20 10:30 | 03/04/20 |
| L2009793-03 | FB | WATER | LIBERTY, NY | 03/04/20 15:00 | 03/04/20 |
| L2009793-04 | TB | WATER | LIBERTY, NY | 03/03/20 00:00 | 03/04/20 |

## Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet NELAP requirements for all NELAP accredited parameters unless otherwise noted in the following narrative. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. Tentatively Identified Compounds (TICs), if requested, are reported for compounds identified to be present and are not part of the method/program Target Compound List, even if only a subset of the TCL are being reported. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively. When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. All specific QC information is also incorporated in the Data Usability format of our Data Merger tool where it can be reviewed along with any associated usability implications. Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances the specific failure is not narrated but noted in the associated QC table. The information is also incorporated in the Data Usability format of our Data Merger tool where it can be reviewed along with any associated usability implications.

Please see the associated ADEx data file for a comparison of laboratory reporting limits that were achieved with the regulatory Numerical Standards requested on the Chain of Custody.

HOLD POLICY
For samples submitted on hold, Alpha's policy is to hold samples (with the exception of Air canisters) free of charge for 21 calendar days from the date the project is completed. After 21 calendar days, we will dispose of all samples submitted including those put on hold unless you have contacted your Client Service Representative and made arrangements for Alpha to continue to hold the samples. Air canisters will be disposed after 3 business days from the date the project is completed.

Please contact Client Services at 800-624-9220 with any questions.

**Case Narrative (continued)**

Report Submission

March 18, 2020: This final report includes the results of all requested analyses.

March 10, 2020: This is a preliminary report.

All non-detect (ND) or estimated concentrations (J-qualified) have been quantitated to the limit noted in the MDL column.

Perfluorinated Alkyl Acids by Isotope Dilution

L2009793-01: Extracted Internal Standard recoveries were outside the acceptance criteria for individual analytes. Please refer to the surrogate section of the report for details.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature: Melissa Sturgis Report Date: 03/18/20

Title: Technical Director/Representative

## GLOSSARY

***Acronyms***

DL - Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the limit of quantitation (LOQ). The DL includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

EDL - Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).

EMPC - Estimated Maximum Possible Concentration: The concentration that results from the signal present at the retention time of an analyte when the ions meet all of the identification criteria except the ion abundance ratio criteria. An EMPC is a worst-case estimate of the concentration.

EPA - Environmental Protection Agency.

LCS - Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.

LCSD - Laboratory Control Sample Duplicate: Refer to LCS.

LFB - Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.

LOD - Limit of Detection: This value represents the level to which a target analyte can reliably be detected for a specific analyte in a specific matrix by a specific method. The LOD includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

LOQ - Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

MDL - Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.

MS - Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available. For Method 332.0, the spike recovery is calculated using the native concentration, including estimated values.

MSD - Matrix Spike Sample Duplicate: Refer to MS.

NA - Not Applicable.

NC - Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.

NDPA/DPA - N-Nitrosodiphenylamine/Diphenylamine.

NI - Not Ignitable.

NP - Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.

RL - Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.

RPD - Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.

SRM - Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.

STLP - Semi-dynamic Tank Leaching Procedure per EPA Method 1315.

TEF - Toxic Equivalency Factors: The values assigned to each dioxin and furan to evaluate their toxicity relative to 2,3,7,8-TCDD.

TEQ - Toxic Equivalent: The measure of a sample's toxicity derived by multiplying each dioxin and furan by its corresponding TEF and then summing the resulting values.

TIC - Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

***Footnotes***

*Report Format:* DU Report with 'J' Qualifiers

1 - The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method.

***Terms***

Analytical Method: Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

Difference: With respect to Total Oxidizable Precursor (TOP) Assay analysis, the difference is defined as the Post-Treatment value minus the Pre-Treatment value.

Final pH: As it pertains to Sample Receipt & Container Information section of the report, Final pH reflects pH of container determined after adjustment at the laboratory, if applicable. If no adjustment required, value reflects Initial pH.

Frozen Date/Time: With respect to Volatile Organics in soil, Frozen Date/Time reflects the date/time at which associated Reagent Water-preserved vials were initially frozen. Note: If frozen date/time is beyond 48 hours from sample collection, value will be reflected in 'bold'.

Initial pH: As it pertains to Sample Receipt & Container Information section of the report, Initial pH reflects pH of container determined upon receipt, if applicable.

PAH Total: With respect to Alkylated PAH analyses, the 'PAHs, Total' result is defined as the summation of results for all or a subset of the following compounds: Naphthalene, C1-C4 Naphthalenes, 2-Methylnaphthalene, 1-Methylnaphthalene, Biphenyl, Acenaphthylene, Acenaphthene, Fluorene, C1-C3 Fluorenes, Phenanthrene, C1-C4 Phenanthrenes/Anthracenes, Anthracene, Fluoranthene, Pyrene, C1-C4 Fluoranthenes/Pyrenes, Benz(a)anthracene, Chrysene, C1-C4 Chrysenes, Benzo(b)fluoranthene, Benzo(j)+(k)fluoranthene, Benzo(e)pyrene, Benzo(a)pyrene, Perylene, Indeno(1,2,3-cd)pyrene, Dibenz(ah)+(ac)anthracene, Benzo(g,h,i)perylene. If a 'Total' result is requested, the results of its individual components will also be reported.

PFAS Total: With respect to PFAS analyses, the 'PFAS, Total (5)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA and PFOS. If a 'Total' result is requested, the results of its individual components will also be reported.

The target compound Chlordane (CAS No. 57-74-9) is reported for GC ECD analyses. Per EPA,this compound "refers to a mixture of chlordane isomers, other chlorinated hydrocarbons and numerous other components." (Reference: USEPA Toxicological Review of Chlordane, In Support of Summary Information on the Integrated Risk Information System (IRIS), December 1997.)

Total: With respect to Organic analyses, a 'Total' result is defined as the summation of results for individual isomers or Aroclors. If a 'Total' result is requested, the results of its individual components will also be reported. This is applicable to 'Total' results for methods 8260, 8081 and 8082.

***Data Qualifiers***

**A** - Spectra identified as "Aldol Condensates" are byproducts of the extraction/concentration procedures when acetone is introduced in the process.

**B** - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).

**C** - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.

**D** - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.

**E** - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.

**G** - The concentration may be biased high due to matrix interferences (i.e, co-elution) with non-target compound(s). The result should be considered estimated.

**H** - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.

**I** - The lower value for the two columns has been reported due to obvious interference.

**M** - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.

**NJ** - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.

**P** - The RPD between the results for the two columns exceeds the method-specified criteria.

**Q** - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)

**R** - Analytical results are from sample re-analysis.

*Report Format:* DU Report with 'J' Qualifiers

***Data Qualifiers***

**RE** - Analytical results are from sample re-extraction.

**S** - Analytical results are from modified screening analysis.

**J** - Estimated value. The Target analyte concentration is below the quantitation limit (RL), but above the Method Detection Limit (MDL) or Estimated Detection Limit (EDL) for SPME-related analyses. This represents an estimated concentration for Tentatively Identified Compounds (TICs).

**ND** - Not detected at the method detection limit (MDL) for the sample, or estimated detection limit (EDL) for SPME-related analyses.

*Report Format:* DU Report with 'J' Qualifiers

## Volatile Organics Instruments

Volatile Organics:

| | |
|---|---|
| Instrument: Agilent 7890 GC/5975C MSD | Columns (length x ID x df): |
| Trap: Supelco K Trap (VOACARB 3000) | RTX-VMS 20m x 0.18mm x 1um |
| Concentrator: EST Encon (or equivalent) | RTX-VMS 30m x 0.25mm x 1.4um |
| Autosampler: EST Centurion (or equivalent) | RTX-502.2 40m x 0.18mm x 1um |
| Purge time: 11 min | |

Volatile Organics: VPH

| | |
|---|---|
| Instrument: Agilent 6890 (or equivalent) | Column Type: Restek RTX 502.2 |
| Trap: Supelco K Trap (VOACARB 3000) | Column Length: 105 Meters |
| Concentrator: EST Encon (or equivalent) | df: 3.00 um |
| Autosampler: EST Centurion (or equivalent) | ID: 0.53mm |

Volatile Organics: PIANO

| | |
|---|---|
| Instrument: Agilent 7890 GC/5975C MSD | Column Type: DB-VRX |
| Trap: Supelco K Trap (VOACARB 3000) | Column Length: 60 Meters |
| Concentrator: Tekmar Velocity / EST Encon | df: 1.40 um |
| Autosampler: Varian Archon / EST Centurion | ID: 0.25 mm |
| Purge time: 11 min | Desorb: 1 min |

Volatile Organics: Dissolved Gas

| | |
|---|---|
| Instrument: Agilent 7890 (or equivalent) with FID/TCD | |
| | Column Type: Haysep S Column |
| | Column Length: 2 Meters packed (100/200 mesh) |
| Autosampler: LEAP Headspace | Purge time: 0.6 min |

## Volatile Organics in Air Instruments

Volatile Organics in Air:

Instruments: Agilent 6890 GC / 5975 MSD Shimadzu QP2010-SE / QP2020

| | |
|---|---|
| Concentrator: Entech 7100A or 7200 | Column Type: Restek RTX-1 |
| Autosampler: Entech 7016CA or 7016D | Column Length: 60 Meters |
| | df: 1.00 um |
| | ID: 0.25 mm or 0.32 mm |

Trap 1: Glass Bead: manufacturer-Entech: 20 cm packing material
Trap 2: Tenax: manufacturer-Entech: 20 cm packing material

**Semivolatile Organics Instruments - Westborough**

Semivolatile Organics (Acid/Base/Neutral Extractables):

| | |
|---|---|
| Instrument: Agilent 5973N MSD | Injection volume: 1 ul;2 uL LVI |
| Column Type: Restek RXI-5SILMS | df: 0.32 um |
| Column Length: 30 Meters | ID: 0.25 mm |

Polynuclear Aromatic Hydrocarbons by 8270 SIM:

| | |
|---|---|
| Instrument: Agilent 5973 MSD | Injection volume: 1 ul;2 uL LVI |
| Column Type: Restek RXI-5SILMS | df: 0.25 um |
| Column Length: 30 Meters | ID: 0.25 mm |

Pesticides/PCB/Herbicides:

| | |
|---|---|
| Instrument: Agilent 6890 w/Dual Micro ECDs | Injection Volume: 1uL |
| Column A: Restek RTX-CL/STX-CL | df: 0.32 |
| Column B: Restek RTX/STX-CLPPesticide II | df: 0.25 |
| Column Length: 30 Meters | ID: 0.32 mm |

Petroleum/EPH:

| | |
|---|---|
| Instrument: Agilent 6890 w/FID / HP 5890 w/ FID | Injection Volume: 1uL |
| Column: Restek RTX 5 | df: 0.25 |
| Column Length: 30 Meters | |
| ID: 0.32 mm | |

**Semivolatile Organic Instruments - Mansfield**

Semivolatile Organics (ALK-PAH Extractables):

| | |
|---|---|
| Instrument: Agilent 5973N / 5975 MSD | Injection volume: 1 ul |
| Column Type: ZB-5 | df: 0.25 um |
| Column Length: 60 Meters | ID: 0.25 mm |

Semivolatile Organics (8270):

| | |
|---|---|
| Instrument: Agilent 5973N / 5975 MSD | Injection volume: 2 ul |
| Column Type: ZB-Semivolatiles | df: 0.25 um |
| Column Length: 30 Meters | ID: 0.25 mm |

Semivolatile Organics (8270 SIM):

| | |
|---|---|
| Instrument: Agilent 5973N / 5975 MSD | Injection volume: 3 ul |
| Column Type: ZB-5 | df: 0.25 um |
| Column Length: 30 Meters | ID: 0.25 mm |

Semivolatile Organics (1,4-Dioxane):

| | |
|---|---|
| Instrument: Agilent 5973N / 5975 / 5977 MSD | Injection volume: 3 ul |
| Column Type: RTX-5 | df: 0.25um, 0.18 um |
| Column Length: 30 Meters | ID: 0.25um, 0.18 mm |

Semivolatile Organics (209 Congener):

| | |
|---|---|
| Instrument: Agilent 5973N / 5975 MSD | Injection volume: 3 ul |
| Column Type: RTX-5, RTX-PCB | df: 0.25um, 0.18 um |
| Column Length: 60 Meters | ID: 0.25um, 0.18 mm |

Semivolatile Organics (8081):

| | |
|---|---|
| Instrument: Agilent 6890 / 7890 | Injection volume: 1 ul |
| Column Type: RTX-5 / RTX-CLP II | df: 0.25 um |
| Column Length: 60 Meters | ID: 0.25 mm |

Semivolatile Organics (8082):

| | |
|---|---|
| Instrument: Agilent 6890 w/Dual Micro ECDs | Injection Volume: 1uL |
| Column A: Restek RTX-CL/STX-CL | df: 0.32 |
| Column B: Restek RTX/STX-CLPPesticide II | df: 0.25 |
| Column Length: 30 Meters | ID: 0.32 mm |

Semivolatile Organics (SHC Extractables):

| | |
|---|---|
| Instrument: Agilent 6890 | Injection volume: 1 ul |
| Column Type: RTX-5 | df: 0.25 um |
| Column Length: 60 Meters | ID: 0.25 mm |

# Sample Delivery Group Summary

Alpha Job Number : L2009793

Account Name : Soils Engineering Services, Inc.
Project Number : 9313
Project Name : GROSSINGERS

Received : 04-MAR-2020
Reviewer : Brennan Williams

## Delivery Information

Samples Delivered By : Alpha Courier

Chain of Custody : Present

## Cooler Information

| Cooler | Seal/Seal# | Preservation | Temperature(°C) | Additional Information |
|---|---|---|---|---|
| A | Absent/ | Ice | 2.5 | |

## Condition Information

| | |
|---|---|
| 1) All samples on COC received? | **YES** |
| 2) Extra samples received? | **NO** |
| 3) Are there any sample container discrepancies? | **NO** |
| 4) Are there any discrepancies between sample labels & COC? | **NO** |
| 5) Are samples in appropriate containers for requested analysis? | **YES** |
| 6) Are samples properly preserved for requested analysis? | **YES** |
| 7) Are samples within holding time for requested analysis? | **YES** |
| 8) All sampling equipment returned? | **NA** |

## Volatile Organics/VPH

| | |
|---|---|
| 1) Reagent Water Vials Frozen by Client? | **NO** |

ALPHA ANALYTICAL LABORATORIES, INC.
LOGIN CHAIN OF CUSTODY REPORT
Mar 18 2020, 02:06 pm

Login Number: L2009793
Account: SESI Soils Engineering Services, Inc.Project: 9313
Received: 04MAR20 Due Date: 18MAR20

| Sample # | Client ID | Mat | PR | Collected |
|---|---|---|---|---|
| L2009793-01 | MW-213 | 1 | S0 | 04MAR20 14:30 |
| 8260: report 15 TICs 8270: report 15 TICs ASP-B Package Due Date: 03/18/20 | | | | |
| A2-NY-537-ISOTOPE,ASP-B,NYTCL-8260 | | | | |
| L2009793-02 | MW-214 | 1 | S0 | 04MAR20 10:30 |
| 8260: report 15 TICs 8270: report 15 TICs Package Due Date: 03/18/20 | | | | |
| A2-NY-537-ISOTOPE,NYTCL-8260 | | | | |
| L2009793-03 | FB | 1 | S0 | 04MAR20 15:00 |
| 8260: report 15 TICs 8270: report 15 TICs Package Due Date: 03/18/20 | | | | |
| A2-NY-537-ISOTOPE | | | | |
| L2009793-04 | TB | 1 | S0 | 03MAR20 00:00 |
| 8260: report 15 TICs 8270: report 15 TICs Package Due Date: 03/18/20 | | | | |
| NYTCL-8260 | | | | |



Logged By: Michelle Callahan

# NEW YORK CHAIN OF CUSTODY

ALPHA

Westborough, MA 01581
8 Walkup Dr.
TEL: 508-898-9220
FAX: 508-898-9193

Mansfield, MA 02048
320 Forbes Blvd
TEL: 508-822-9300
FAX: 508-822-3288

**Service Centers**
Mahwah, NJ 07430: 35 Whitney Rd, Suite 5
Albany, NY 12205: 14 Walker Way
Tonawanda, NY 14150: 275 Cooper Ave, Suite 105

Page: 1 of 1

Date Rec'd in Lab: 3/4/20

ALPHA Job #: L2009793

**Client Information**
Client: SESI
Address: 124 Maple Ave
Pine Brook, NJ
Phone: 973808 9050
Fax:
Email: FD@sesi.org

**Project Information**
Project Name: Grossingers
Project Location: Liberty, NY
Project #: 9313
(Use Project name as Project #)
Project Manager: Fred Dahan
ALPHAQuote #:

**Turn-Around Time**
Standard: X
Rush (only if pre approved): ☐
Due Date: 1 week
# of Days:

**Deliverables**
☐ ASP-A ☐ ASP-B
☐ EQuIS (1 File) ☒ EQuIS (4 File)
☐ Other NY Cat B

**Regulatory Requirement**
☐ NY TOGS ☐ NY Part 375
☐ AWQ Standards ☐ NY CP-51
☐ NY Restricted Use ☐ Other
☒ NY Unrestricted Use
☐ NYC Sewer Discharge
NY Cat B

**Billing Information**
☒ Same as Client Info
PO # 9313 phase 10

**Disposal Site Information**
Please identify below location of applicable disposal facilities.
Disposal Facility:
☐ NJ ☐ NY
☐ Other:

These samples have been previously analyzed by Alpha ☐

**Other project specific requirements/comments:**

**Please specify Metals or TAL.**

**ANALYSIS**

**Sample Filtration**
☐ Done
☐ Lab to do
*Preservation*
☐ Lab to do
*(Please Specify below)*

| ALPHA Lab ID (Lab Use Only) | Sample ID | Collection Date | Collection Time | Sample Matrix | Sampler's Initials | TCL VOA+15 | PFAS, 537 | Sample Specific Comments | Total Bottle |
|---|---|---|---|---|---|---|---|---|---|
| 09793-01 | MW-213 | 3/4/20 | 1430 | GW | JCS | X | X | | |
| -02 | MW-214 | ↓ | 1030 | ↓ | ↓ | X | X | | |
| -03 | FB | ↓ | 1500 | DI | ↓ | | X | | |
| -04 | TB | 3/3/20 | | ↓ | | X | | | |

Preservative Code:
A = None
B = HCl
C = $HNO_3$
D = $H_2SO_4$
E = NaOH
F = MeOH
G = $NaHSO_4$
H = $Na_2S_2O_3$
K/E = Zn Ac/NaOH
O = Other

Container Code
P = Plastic
A = Amber Glass
V = Vial
G = Glass
B = Bacteria Cup
C = Cube
O = Other
E = Encore
D = BOD Bottle

Westboro: Certification No: MA935
Mansfield: Certification No: MA015

| | | |
|---|---|---|
| Container Type | V | P |
| Preservative | B | A |

| Relinquished By: | Date/Time | Received By: | Date/Time |
|---|---|---|---|
| | 3/4/20 1650 | | 3/4/20 1650 |
| | 3/4/20 1650 | | 3/4/20 1650 |
| | 3/4/20 2100 | | 3/4/20 2100 |

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. BY EXECUTING THIS COC, THE CLIENT HAS READ AND AGREES TO BE BOUND BY ALPHA'S TERMS & CONDITIONS. (See reverse side.)

Form No: 01-25 HC (rev. 30-Sept-2013)

# Organics

# GC/MS 8260
# Analysis

# Volatiles QC Summary

# Surrogate Recovery Summary
# Form 2
# Volatiles

**Client: Soils Engineering Services, Inc.**
**Project Name: GROSSINGERS**

**Lab Number: L2009793**
**Project Number: 9313**
**Matrix: Water**

| CLIENT ID (LAB SAMPLE NO.) | SMC1 DCA | SMC2 TOL | SMC3 BFB | SMC4 DBFM | TOT OUT |
|---|---|---|---|---|---|
| MW-213 (L2009793-01) | 102 | 95 | 93 | 96 | 0 |
| MW-214 (L2009793-02) | 99 | 96 | 93 | 96 | 0 |
| TB (L2009793-04) | 124 | 106 | 102 | 97 | 0 |
| WG1348135-3LCS | 122 | 103 | 97 | 93 | 0 |
| WG1348135-4LCSD | 123 | 104 | 99 | 95 | 0 |
| WG1348135-5BLANK | 122 | 105 | 100 | 96 | 0 |
| WG1348564-3LCS | 97 | 97 | 95 | 97 | 0 |
| WG1348564-4LCSD | 99 | 97 | 94 | 98 | 0 |
| WG1348564-5BLANK | 98 | 96 | 94 | 93 | 0 |

**QC LIMITS**

**(70-130) DCA = 1,2-DICHLOROETHANE-D4**
**(70-130) TOL = TOLUENE-D8**
**(70-130) BFB = 4-BROMOFLUOROBENZENE**
**(70-130) DBFM = DIBROMOFLUOROMETHANE**

*** Values outside of QC limits**

**FORM II NYTCL-8260**

# Laboratory Control Sample Summary
# Form 3
# Volatiles

| | | | |
|---|---|---|---|
| **Client** | : Soils Engineering Services, Inc. | **Lab Number** | : L2009793 |
| **Project Name** | : GROSSINGERS | **Project Number** | : 9313 |
| **Matrix** | : WATER | | |
| **LCS Sample ID** | : WG1348135-3 | **Analysis Date** : 03/06/20 09:46 | **File ID** : V22200306A01 |
| **LCSD Sample ID** | : WG1348135-4 | **Analysis Date** : 03/06/20 10:11 | **File ID** : V22200306A02 |

| | Laboratory Control Sample | | | Laboratory Control Duplicate | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Parameter | True (ug/l) | Found (ug/l) | %R | True (ug/l) | Found (ug/l) | %R | RPD | Recovery Limits | RPD Limit |
| Methylene chloride | 10 | 9.7 | 97 | 10 | 9.4 | 94 | 3 | 70-130 | 20 |
| 1,1-Dichloroethane | 10 | 10 | 100 | 10 | 10 | 100 | 0 | 70-130 | 20 |
| Chloroform | 10 | 10 | 100 | 10 | 10 | 100 | 0 | 70-130 | 20 |
| Carbon tetrachloride | 10 | 11 | 110 | 10 | 11 | 110 | 0 | 63-132 | 20 |
| 1,2-Dichloropropane | 10 | 8.6 | 86 | 10 | 8.7 | 87 | 1 | 70-130 | 20 |
| Dibromochloromethane | 10 | 10 | 100 | 10 | 10 | 100 | 0 | 63-130 | 20 |
| 1,1,2-Trichloroethane | 10 | 9.9 | 99 | 10 | 9.6 | 96 | 3 | 70-130 | 20 |
| Tetrachloroethene | 10 | 9.8 | 98 | 10 | 9.9 | 99 | 1 | 70-130 | 20 |
| Chlorobenzene | 10 | 10 | 100 | 10 | 9.8 | 98 | 2 | 75-130 | 20 |
| Trichlorofluoromethane | 10 | 11 | 110 | 10 | 11 | 110 | 0 | 62-150 | 20 |
| 1,2-Dichloroethane | 10 | 9.2 | 92 | 10 | 9.4 | 94 | 2 | 70-130 | 20 |
| 1,1,1-Trichloroethane | 10 | 11 | 110 | 10 | 11 | 110 | 0 | 67-130 | 20 |
| Bromodichloromethane | 10 | 10 | 100 | 10 | 10 | 100 | 0 | 67-130 | 20 |
| trans-1,3-Dichloropropene | 10 | 11 | 110 | 10 | 12 | 120 | 9 | 70-130 | 20 |
| cis-1,3-Dichloropropene | 10 | 9.8 | 98 | 10 | 10 | 100 | 2 | 70-130 | 20 |
| 1,1-Dichloropropene | 10 | 9.7 | 97 | 10 | 10 | 100 | 3 | 70-130 | 20 |
| Bromoform | 10 | 9.6 | 96 | 10 | 10 | 100 | 4 | 54-136 | 20 |
| 1,1,2,2-Tetrachloroethane | 10 | 9.1 | 91 | 10 | 9.6 | 96 | 5 | 67-130 | 20 |
| Benzene | 10 | 9.6 | 96 | 10 | 9.8 | 98 | 2 | 70-130 | 20 |
| Toluene | 10 | 10 | 100 | 10 | 10 | 100 | 0 | 70-130 | 20 |
| Ethylbenzene | 10 | 11 | 110 | 10 | 10 | 100 | 10 | 70-130 | 20 |
| Chloromethane | 10 | 10 | 100 | 10 | 9.5 | 95 | 5 | 64-130 | 20 |
| Bromomethane | 10 | 3.1 | 31 Q | 10 | 4.4 | 44 | 35 Q | 39-139 | 20 |
| Vinyl chloride | 10 | 8.8 | 88 | 10 | 9.0 | 90 | 2 | 55-140 | 20 |
| Chloroethane | 10 | 7.8 | 78 | 10 | 7.7 | 77 | 1 | 55-138 | 20 |
| 1,1-Dichloroethene | 10 | 9.6 | 96 | 10 | 9.8 | 98 | 2 | 61-145 | 20 |

# Laboratory Control Sample Summary
# Form 3
# Volatiles

| | | | |
|---|---|---|---|
| **Client** | : Soils Engineering Services, Inc. | **Lab Number** | : L2009793 |
| **Project Name** | : GROSSINGERS | **Project Number** | : 9313 |
| **Matrix** | : WATER | | |
| **LCS Sample ID** | : WG1348135-3 | **Analysis Date** : 03/06/20 09:46 | **File ID** : V22200306A01 |
| **LCSD Sample ID** | : WG1348135-4 | **Analysis Date** : 03/06/20 10:11 | **File ID** : V22200306A02 |

| | Laboratory Control Sample | | | Laboratory Control Duplicate | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Parameter | True (ug/l) | Found (ug/l) | %R | True (ug/l) | Found (ug/l) | %R | RPD | Recovery Limits | RPD Limit |
| trans-1,2-Dichloroethene | 10 | 9.6 | 96 | 10 | 9.7 | 97 | 1 | 70-130 | 20 |
| Trichloroethene | 10 | 9.1 | 91 | 10 | 9.5 | 95 | 4 | 70-130 | 20 |
| 1,2-Dichlorobenzene | 10 | 9.7 | 97 | 10 | 9.7 | 97 | 0 | 70-130 | 20 |
| 1,3-Dichlorobenzene | 10 | 9.8 | 98 | 10 | 9.9 | 99 | 1 | 70-130 | 20 |
| 1,4-Dichlorobenzene | 10 | 9.8 | 98 | 10 | 10 | 100 | 2 | 70-130 | 20 |
| Methyl tert butyl ether | 10 | 11 | 110 | 10 | 11 | 110 | 0 | 63-130 | 20 |
| p/m-Xylene | 20 | 20 | 100 | 20 | 20 | 100 | 0 | 70-130 | 20 |
| o-Xylene | 20 | 20 | 100 | 20 | 20 | 100 | 0 | 70-130 | 20 |
| cis-1,2-Dichloroethene | 10 | 9.7 | 97 | 10 | 9.7 | 97 | 0 | 70-130 | 20 |
| Dibromomethane | 10 | 9.5 | 95 | 10 | 9.4 | 94 | 1 | 70-130 | 20 |
| 1,2,3-Trichloropropane | 10 | 9.9 | 99 | 10 | 10 | 100 | 1 | 64-130 | 20 |
| Acrylonitrile | 10 | 9.1 | 91 | 10 | 8.7 | 87 | 4 | 70-130 | 20 |
| Styrene | 20 | 20 | 100 | 20 | 20 | 100 | 0 | 70-130 | 20 |
| Dichlorodifluoromethane | 10 | 9.4 | 94 | 10 | 9.6 | 96 | 2 | 36-147 | 20 |
| Acetone | 10 | 8.3 | 83 | 10 | 6.9 | 69 | 18 | 58-148 | 20 |
| Carbon disulfide | 10 | 11 | 110 | 10 | 10 | 100 | 10 | 51-130 | 20 |
| 2-Butanone | 10 | 7.8 | 78 | 10 | 7.8 | 78 | 0 | 63-138 | 20 |
| Vinyl acetate | 10 | 9.9 | 99 | 10 | 12 | 120 | 19 | 70-130 | 20 |
| 4-Methyl-2-pentanone | 10 | 9.7 | 97 | 10 | 9.9 | 99 | 2 | 59-130 | 20 |
| 2-Hexanone | 10 | 9.0 | 90 | 10 | 9.0 | 90 | 0 | 57-130 | 20 |
| Bromochloromethane | 10 | 9.7 | 97 | 10 | 9.7 | 97 | 0 | 70-130 | 20 |
| 2,2-Dichloropropane | 10 | 12 | 120 | 10 | 16 | 160 Q | 29 Q | 63-133 | 20 |
| 1,2-Dibromoethane | 10 | 9.6 | 96 | 10 | 9.4 | 94 | 2 | 70-130 | 20 |
| 1,3-Dichloropropane | 10 | 10 | 100 | 10 | 10 | 100 | 0 | 70-130 | 20 |
| 1,1,1,2-Tetrachloroethane | 10 | 10 | 100 | 10 | 10 | 100 | 0 | 64-130 | 20 |
| Bromobenzene | 10 | 9.6 | 96 | 10 | 9.9 | 99 | 3 | 70-130 | 20 |

# Laboratory Control Sample Summary
# Form 3
# Volatiles

| | | | |
|---|---|---|---|
| **Client** | : Soils Engineering Services, Inc. | **Lab Number** | : L2009793 |
| **Project Name** | : GROSSINGERS | **Project Number** | : 9313 |
| **Matrix** | : WATER | | |
| **LCS Sample ID** | : WG1348135-3 | **Analysis Date** : 03/06/20 09:46 | **File ID** : V22200306A01 |
| **LCSD Sample ID** | : WG1348135-4 | **Analysis Date** : 03/06/20 10:11 | **File ID** : V22200306A02 |

| | Laboratory Control Sample | | | Laboratory Control Duplicate | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Parameter | True (ug/l) | Found (ug/l) | %R | True (ug/l) | Found (ug/l) | %R | RPD | Recovery Limits | RPD Limit |
| n-Butylbenzene | 10 | 10 | 100 | 10 | 10 | 100 | 0 | 53-136 | 20 |
| sec-Butylbenzene | 10 | 8.9 | 89 | 10 | 10 | 100 | 12 | 70-130 | 20 |
| tert-Butylbenzene | 10 | 9.6 | 96 | 10 | 9.7 | 97 | 1 | 70-130 | 20 |
| o-Chlorotoluene | 10 | 10 | 100 | 10 | 11 | 110 | 10 | 70-130 | 20 |
| p-Chlorotoluene | 10 | 10 | 100 | 10 | 10 | 100 | 0 | 70-130 | 20 |
| 1,2-Dibromo-3-chloropropane | 10 | 8.3 | 83 | 10 | 8.3 | 83 | 0 | 41-144 | 20 |
| Hexachlorobutadiene | 10 | 11 | 110 | 10 | 12 | 120 | 9 | 63-130 | 20 |
| Isopropylbenzene | 10 | 9.8 | 98 | 10 | 9.9 | 99 | 1 | 70-130 | 20 |
| p-Isopropyltoluene | 10 | 9.3 | 93 | 10 | 9.5 | 95 | 2 | 70-130 | 20 |
| Naphthalene | 10 | 8.7 | 87 | 10 | 9.1 | 91 | 4 | 70-130 | 20 |
| n-Propylbenzene | 10 | 9.8 | 98 | 10 | 10 | 100 | 2 | 69-130 | 20 |
| 1,2,3-Trichlorobenzene | 10 | 10 | 100 | 10 | 10 | 100 | 0 | 70-130 | 20 |
| 1,2,4-Trichlorobenzene | 10 | 10 | 100 | 10 | 10 | 100 | 0 | 70-130 | 20 |
| 1,3,5-Trimethylbenzene | 10 | 10 | 100 | 10 | 10 | 100 | 0 | 64-130 | 20 |
| 1,2,4-Trimethylbenzene | 10 | 10 | 100 | 10 | 10 | 100 | 0 | 70-130 | 20 |
| 1,4-Dioxane | 500 | 500 | 100 | 500 | 420 | 84 | 17 | 56-162 | 20 |
| p-Diethylbenzene | 10 | 9.7 | 97 | 10 | 10 | 100 | 3 | 70-130 | 20 |
| p-Ethyltoluene | 10 | 9.9 | 99 | 10 | 10 | 100 | 1 | 70-130 | 20 |
| 1,2,4,5-Tetramethylbenzene | 10 | 10 | 100 | 10 | 10 | 100 | 0 | 70-130 | 20 |
| Ethyl ether | 10 | 9.4 | 94 | 10 | 9.4 | 94 | 0 | 59-134 | 20 |
| trans-1,4-Dichloro-2-butene | 10 | 9.1 | 91 | 10 | 10 | 100 | 9 | 70-130 | 20 |

# Laboratory Control Sample Summary
# Form 3
# Volatiles

| | | | |
|---|---|---|---|
| **Client** | : Soils Engineering Services, Inc. | **Lab Number** | : L2009793 |
| **Project Name** | : GROSSINGERS | **Project Number** | : 9313 |
| **Matrix** | : WATER | | |
| **LCS Sample ID** | : WG1348564-3 | **Analysis Date** : 03/07/20 09:31 | **File ID** : V01200307A01 |
| **LCSD Sample ID** | : WG1348564-4 | **Analysis Date** : 03/07/20 09:55 | **File ID** : V01200307A02 |

| | Laboratory Control Sample | | | Laboratory Control Duplicate | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Parameter | True (ug/l) | Found (ug/l) | %R | True (ug/l) | Found (ug/l) | %R | RPD | Recovery Limits | RPD Limit |
| Methylene chloride | 10 | 12 | 120 | 10 | 12 | 120 | 0 | 70-130 | 20 |
| 1,1-Dichloroethane | 10 | 11 | 110 | 10 | 12 | 120 | 9 | 70-130 | 20 |
| Chloroform | 10 | 12 | 120 | 10 | 12 | 120 | 0 | 70-130 | 20 |
| Carbon tetrachloride | 10 | 10 | 100 | 10 | 11 | 110 | 10 | 63-132 | 20 |
| 1,2-Dichloropropane | 10 | 11 | 110 | 10 | 12 | 120 | 9 | 70-130 | 20 |
| Dibromochloromethane | 10 | 10 | 100 | 10 | 11 | 110 | 10 | 63-130 | 20 |
| 1,1,2-Trichloroethane | 10 | 11 | 110 | 10 | 11 | 110 | 0 | 70-130 | 20 |
| Tetrachloroethene | 10 | 10 | 100 | 10 | 11 | 110 | 10 | 70-130 | 20 |
| Chlorobenzene | 10 | 11 | 110 | 10 | 11 | 110 | 0 | 75-130 | 20 |
| Trichlorofluoromethane | 10 | 11 | 110 | 10 | 12 | 120 | 9 | 62-150 | 20 |
| 1,2-Dichloroethane | 10 | 12 | 120 | 10 | 12 | 120 | 0 | 70-130 | 20 |
| 1,1,1-Trichloroethane | 10 | 11 | 110 | 10 | 11 | 110 | 0 | 67-130 | 20 |
| Bromodichloromethane | 10 | 11 | 110 | 10 | 11 | 110 | 0 | 67-130 | 20 |
| trans-1,3-Dichloropropene | 10 | 11 | 110 | 10 | 11 | 110 | 0 | 70-130 | 20 |
| cis-1,3-Dichloropropene | 10 | 11 | 110 | 10 | 11 | 110 | 0 | 70-130 | 20 |
| 1,1-Dichloropropene | 10 | 11 | 110 | 10 | 12 | 120 | 9 | 70-130 | 20 |
| Bromoform | 10 | 9.8 | 98 | 10 | 10 | 100 | 2 | 54-136 | 20 |
| 1,1,2,2-Tetrachloroethane | 10 | 10 | 100 | 10 | 11 | 110 | 10 | 67-130 | 20 |
| Benzene | 10 | 11 | 110 | 10 | 11 | 110 | 0 | 70-130 | 20 |
| Toluene | 10 | 11 | 110 | 10 | 11 | 110 | 0 | 70-130 | 20 |
| Ethylbenzene | 10 | 11 | 110 | 10 | 11 | 110 | 0 | 70-130 | 20 |
| Chloromethane | 10 | 12 | 120 | 10 | 12 | 120 | 0 | 64-130 | 20 |
| Bromomethane | 10 | 9.6 | 96 | 10 | 9.4 | 94 | 2 | 39-139 | 20 |
| Vinyl chloride | 10 | 10 | 100 | 10 | 11 | 110 | 10 | 55-140 | 20 |
| Chloroethane | 10 | 12 | 120 | 10 | 12 | 120 | 0 | 55-138 | 20 |
| 1,1-Dichloroethene | 10 | 11 | 110 | 10 | 12 | 120 | 9 | 61-145 | 20 |

# Laboratory Control Sample Summary
# Form 3
# Volatiles

**Client** : Soils Engineering Services, Inc. **Lab Number** : L2009793
**Project Name** : GROSSINGERS **Project Number** : 9313
**Matrix** : WATER
**LCS Sample ID** : WG1348564-3 **Analysis Date** : 03/07/20 09:31 **File ID** : V01200307A01
**LCSD Sample ID** : WG1348564-4 **Analysis Date** : 03/07/20 09:55 **File ID** : V01200307A02

| | Laboratory Control Sample | | | Laboratory Control Duplicate | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Parameter | True (ug/l) | Found (ug/l) | %R | True (ug/l) | Found (ug/l) | %R | RPD | Recovery Limits | RPD Limit |
| trans-1,2-Dichloroethene | 10 | 11 | 110 | 10 | 12 | 120 | 9 | 70-130 | 20 |
| Trichloroethene | 10 | 11 | 110 | 10 | 11 | 110 | 0 | 70-130 | 20 |
| 1,2-Dichlorobenzene | 10 | 11 | 110 | 10 | 11 | 110 | 0 | 70-130 | 20 |
| 1,3-Dichlorobenzene | 10 | 11 | 110 | 10 | 11 | 110 | 0 | 70-130 | 20 |
| 1,4-Dichlorobenzene | 10 | 11 | 110 | 10 | 11 | 110 | 0 | 70-130 | 20 |
| Methyl tert butyl ether | 10 | 11 | 110 | 10 | 12 | 120 | 9 | 63-130 | 20 |
| p/m-Xylene | 20 | 22 | 110 | 20 | 23 | 115 | 4 | 70-130 | 20 |
| o-Xylene | 20 | 22 | 110 | 20 | 23 | 115 | 4 | 70-130 | 20 |
| cis-1,2-Dichloroethene | 10 | 12 | 120 | 10 | 12 | 120 | 0 | 70-130 | 20 |
| Dibromomethane | 10 | 11 | 110 | 10 | 11 | 110 | 0 | 70-130 | 20 |
| 1,2,3-Trichloropropane | 10 | 10 | 100 | 10 | 10 | 100 | 0 | 64-130 | 20 |
| Acrylonitrile | 10 | 12 | 120 | 10 | 13 | 130 | 8 | 70-130 | 20 |
| Styrene | 20 | 22 | 110 | 20 | 22 | 110 | 0 | 70-130 | 20 |
| Dichlorodifluoromethane | 10 | 9.3 | 93 | 10 | 9.7 | 97 | 4 | 36-147 | 20 |
| Acetone | 10 | 15 | 150 Q | 10 | 12 | 120 | 22 Q | 58-148 | 20 |
| Carbon disulfide | 10 | 11 | 110 | 10 | 11 | 110 | 0 | 51-130 | 20 |
| 2-Butanone | 10 | 12 | 120 | 10 | 12 | 120 | 0 | 63-138 | 20 |
| Vinyl acetate | 10 | 12 | 120 | 10 | 12 | 120 | 0 | 70-130 | 20 |
| 4-Methyl-2-pentanone | 10 | 11 | 110 | 10 | 12 | 120 | 9 | 59-130 | 20 |
| 2-Hexanone | 10 | 9.8 | 98 | 10 | 10 | 100 | 2 | 57-130 | 20 |
| Bromochloromethane | 10 | 12 | 120 | 10 | 12 | 120 | 0 | 70-130 | 20 |
| 2,2-Dichloropropane | 10 | 12 | 120 | 10 | 13 | 130 | 8 | 63-133 | 20 |
| 1,2-Dibromoethane | 10 | 11 | 110 | 10 | 11 | 110 | 0 | 70-130 | 20 |
| 1,3-Dichloropropane | 10 | 11 | 110 | 10 | 11 | 110 | 0 | 70-130 | 20 |
| 1,1,1,2-Tetrachloroethane | 10 | 10 | 100 | 10 | 11 | 110 | 10 | 64-130 | 20 |
| Bromobenzene | 10 | 11 | 110 | 10 | 11 | 110 | 0 | 70-130 | 20 |

# Laboratory Control Sample Summary
# Form 3
# Volatiles

**Client** : Soils Engineering Services, Inc. **Lab Number** : L2009793
**Project Name** : GROSSINGERS **Project Number** : 9313
**Matrix** : WATER
**LCS Sample ID** : WG1348564-3 **Analysis Date** : 03/07/20 09:31 **File ID** : V01200307A01
**LCSD Sample ID** : WG1348564-4 **Analysis Date** : 03/07/20 09:55 **File ID** : V01200307A02

| | Laboratory Control Sample | | | Laboratory Control Duplicate | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Parameter | True (ug/l) | Found (ug/l) | %R | True (ug/l) | Found (ug/l) | %R | RPD | Recovery Limits | RPD Limit |
| n-Butylbenzene | 10 | 11 | 110 | 10 | 12 | 120 | 9 | 53-136 | 20 |
| sec-Butylbenzene | 10 | 11 | 110 | 10 | 11 | 110 | 0 | 70-130 | 20 |
| tert-Butylbenzene | 10 | 11 | 110 | 10 | 11 | 110 | 0 | 70-130 | 20 |
| o-Chlorotoluene | 10 | 11 | 110 | 10 | 11 | 110 | 0 | 70-130 | 20 |
| p-Chlorotoluene | 10 | 11 | 110 | 10 | 11 | 110 | 0 | 70-130 | 20 |
| 1,2-Dibromo-3-chloropropane | 10 | 9.2 | 92 | 10 | 10 | 100 | 8 | 41-144 | 20 |
| Hexachlorobutadiene | 10 | 10 | 100 | 10 | 11 | 110 | 10 | 63-130 | 20 |
| Isopropylbenzene | 10 | 11 | 110 | 10 | 11 | 110 | 0 | 70-130 | 20 |
| p-Isopropyltoluene | 10 | 11 | 110 | 10 | 11 | 110 | 0 | 70-130 | 20 |
| Naphthalene | 10 | 8.8 | 88 | 10 | 9.8 | 98 | 11 | 70-130 | 20 |
| n-Propylbenzene | 10 | 11 | 110 | 10 | 11 | 110 | 0 | 69-130 | 20 |
| 1,2,3-Trichlorobenzene | 10 | 9.0 | 90 | 10 | 10 | 100 | 11 | 70-130 | 20 |
| 1,2,4-Trichlorobenzene | 10 | 9.8 | 98 | 10 | 10 | 100 | 2 | 70-130 | 20 |
| 1,3,5-Trimethylbenzene | 10 | 11 | 110 | 10 | 11 | 110 | 0 | 64-130 | 20 |
| 1,2,4-Trimethylbenzene | 10 | 11 | 110 | 10 | 11 | 110 | 0 | 70-130 | 20 |
| 1,4-Dioxane | 500 | 680 | 136 | 500 | 720 | 144 | 6 | 56-162 | 20 |
| p-Diethylbenzene | 10 | 11 | 110 | 10 | 11 | 110 | 0 | 70-130 | 20 |
| p-Ethyltoluene | 10 | 11 | 110 | 10 | 11 | 110 | 0 | 70-130 | 20 |
| 1,2,4,5-Tetramethylbenzene | 10 | 10 | 100 | 10 | 11 | 110 | 10 | 70-130 | 20 |
| Ethyl ether | 10 | 11 | 110 | 10 | 12 | 120 | 9 | 59-134 | 20 |
| trans-1,4-Dichloro-2-butene | 10 | 11 | 110 | 10 | 11 | 110 | 0 | 70-130 | 20 |

# Method Blank Summary
# Form 4
# Volatiles

| | | | |
|---|---|---|---|
| **Client** | : Soils Engineering Services, Inc. | **Lab Number** | : L2009793 |
| **Project Name** | : GROSSINGERS | **Project Number** | : 9313 |
| **Lab Sample ID** | : WG1348135-5 | **Lab File ID** | : V22200306A05 |
| **Instrument ID** | : VOA122 | | |
| **Matrix** | : WATER | **Analysis Date** | : 03/06/20 11:24 |

| Client Sample No. | Lab Sample ID | Analysis Date |
|---|---|---|
| WG1348135-3LCS | WG1348135-3 | 03/06/20 09:46 |
| WG1348135-4LCSD | WG1348135-4 | 03/06/20 10:11 |
| TB | L2009793-04 | 03/06/20 15:30 |

# Method Blank Summary
# Form 4
# Volatiles

| | | | |
|---|---|---|---|
| **Client** | : Soils Engineering Services, Inc. | **Lab Number** | : L2009793 |
| **Project Name** | : GROSSINGERS | **Project Number** | : 9313 |
| **Lab Sample ID** | : WG1348564-5 | **Lab File ID** | : V01200307A06 |
| **Instrument ID** | : VOA101 | | |
| **Matrix** | : WATER | **Analysis Date** | : 03/07/20 11:30 |

| Client Sample No. | Lab Sample ID | Analysis Date |
|---|---|---|
| WG1348564-3LCS | WG1348564-3 | 03/07/20 09:31 |
| WG1348564-4LCSD | WG1348564-4 | 03/07/20 09:55 |
| MW-213 | L2009793-01 | 03/07/20 13:29 |
| MW-214 | L2009793-02 | 03/07/20 13:53 |

# Instrument Performance Check (Tune) Summary
# Form 5
# Volatiles
# Bromofluorobenzene (BFB)

| | | | |
|---|---|---|---|
| **Client** | : Soils Engineering Services, Inc. | **Lab Number** | : L2009793 |
| **Project Name** | : GROSSINGERS | **Project Number** | : 9313 |
| **Instrument ID** | : VOA122 | **Analysis Date** | : 12/19/19 14:35 |
| **Tune Standard** | : WG1323153-1 | **Tune File ID** | : V22191219NBF1_tune |

| m/e | Ion Abundance Criteria | %Relative Abundance |
|---|---|---|
| 50 | 15.0 - 40.0% of mass 95 | 21.6 |
| 75 | 30.0 - 60.0% of mass 95 | 50.3 |
| 95 | Base Peak, 100% relative abundance | 100 |
| 96 | 5.0 - 9.0% of mass 95 | 6.6 |
| 173 | Less than 2.0% of mass 174 | 1 (1.2 )1 |
| 174 | Greater than 50.0 of mass 95 | 83.4 |
| 175 | 5.0 - 9.0% of mass 174 | 6.1 (7.3 )1 |
| 176 | 95.0 - 101% of mass 174 | 81.3 (97.5)1 |
| 177 | 5.0 - 9.0% of mass 176 | 5.4 (6.7 )2 |

1-Value is % of mass 174 2-Value is % of mass 176

**This Check Applies to the following Samples, MS, MSD, Blanks, and Standards:**

| Client Sample ID | Lab Sample ID | File ID | Analysis Date/Time |
|---|---|---|---|
| STDL0.2PPB | R1267884-1 | V22191219N03 | 12/19/19 15:43 |
| STDL0.5PPB | R1267884-2 | V22191219N05 | 12/19/19 16:33 |
| STDL2PPB | R1267884-3 | V22191219N07 | 12/19/19 17:23 |
| STDL10PPB | R1267884-5 | V22191219N08 | 12/19/19 17:48 |
| STDL30PPB | R1267884-4 | V22191219N09 | 12/19/19 18:12 |
| STDL80PPB | R1267884-7 | V22191219N10 | 12/19/19 18:37 |
| STDL120PPB | R1267884-6 | V22191219N11 | 12/19/19 19:03 |
| STDL200PPB | R1267884-8 | V22191219N12 | 12/19/19 19:28 |
| ICV QUANT REPORT | R1267884-9 | V22191219N18 | 12/19/19 21:58 |

# Instrument Performance Check (Tune) Summary
# Form 5
# Volatiles
# Bromofluorobenzene (BFB)

| | | | |
|---|---|---|---|
| **Client** | : Soils Engineering Services, Inc. | **Lab Number** | : L2009793 |
| **Project Name** | : GROSSINGERS | **Project Number** | : 9313 |
| **Instrument ID** | : VOA122 | **Analysis Date** | : 03/06/20 09:33 |
| **Tune Standard** | : WG1348135-1 | **Tune File ID** | : V22200306ABF1_tune |

| m/e | Ion Abundance Criteria | %Relative Abundance |
|---|---|---|
| 50 | 15.0 - 40.0% of mass 95 | 21.7 |
| 75 | 30.0 - 60.0% of mass 95 | 58.7 |
| 95 | Base Peak, 100% relative abundance | 100 |
| 96 | 5.0 - 9.0% of mass 95 | 6.6 |
| 173 | Less than 2.0% of mass 174 | 0 (0 )1 |
| 174 | Greater than 50.0 of mass 95 | 88.1 |
| 175 | 5.0 - 9.0% of mass 174 | 7.2 (8.2 )1 |
| 176 | 95.0 - 101% of mass 174 | 86.1 (97.8)1 |
| 177 | 5.0 - 9.0% of mass 176 | 5.4 (6.3 )2 |

1-Value is % of mass 174 2-Value is % of mass 176

**This Check Applies to the following Samples, MS, MSD, Blanks, and Standards:**

| Client Sample ID | Lab Sample ID | File ID | Analysis Date/Time |
|---|---|---|---|
| WG1348135-2CCAL | WG1348135-2 | V22200306A01 | 03/06/20 09:46 |
| WG1348135-3LCS | WG1348135-3 | V22200306A01 | 03/06/20 09:46 |
| WG1348135-4LCSD | WG1348135-4 | V22200306A02 | 03/06/20 10:11 |
| WG1348135-5BLANK | WG1348135-5 | V22200306A05 | 03/06/20 11:24 |
| TB | L2009793-04 | V22200306A15 | 03/06/20 15:30 |

# Instrument Performance Check (Tune) Summary
# Form 5
# Volatiles
# Bromofluorobenzene (BFB)

| | | | |
|---|---|---|---|
| **Client** | : Soils Engineering Services, Inc. | **Lab Number** | : L2009793 |
| **Project Name** | : GROSSINGERS | **Project Number** | : 9313 |
| **Instrument ID** | : VOA101 | **Analysis Date** | : 02/19/20 13:23 |
| **Tune Standard** | : WG1342454-1 | **Tune File ID** | : V01200219ABF6_tune |

| m/e | Ion Abundance Criteria | %Relative Abundance |
|---|---|---|
| 50 | 15.0 - 40.0% of mass 95 | 21 |
| 75 | 30.0 - 60.0% of mass 95 | 46.2 |
| 95 | Base Peak, 100% relative abundance | 100 |
| 96 | 5.0 - 9.0% of mass 95 | 6.8 |
| 173 | Less than 2.0% of mass 174 | 0 (0 )1 |
| 174 | Greater than 50.0 of mass 95 | 69.9 |
| 175 | 5.0 - 9.0% of mass 174 | 5.1 (7.3 )1 |
| 176 | 95.0 - 101% of mass 174 | 68.7 (98.3)1 |
| 177 | 5.0 - 9.0% of mass 176 | 4.4 (6.4 )2 |

1-Value is % of mass 174 2-Value is % of mass 176

**This Check Applies to the following Samples, MS, MSD, Blanks, and Standards:**

| Client Sample ID | Lab Sample ID | File ID | Analysis Date/Time |
|---|---|---|---|
| STD0.5PPB | R1286244-1 | V01200219A05 | 02/19/20 15:13 |
| STD2.0PPB | R1286244-3 | V01200219A07 | 02/19/20 16:00 |
| STD10PPB | R1286244-2 | V01200219A08 | 02/19/20 16:24 |
| STD30PPB | R1286244-4 | V01200219A09 | 02/19/20 16:48 |
| STD80PPB | R1286244-6 | V01200219A10 | 02/19/20 17:12 |
| STD120PPB | R1286244-5 | V01200219A11 | 02/19/20 17:35 |
| STD200PPB | R1286244-7 | V01200219A12 | 02/19/20 17:59 |
| STD0.15PPB | R1286244-8 | V01200219A18 | 02/19/20 20:21 |
| ICV Quant Report | R1286244-9 | V01200219A20 | 02/19/20 21:09 |

# Instrument Performance Check (Tune) Summary
# Form 5
# Volatiles
# Bromofluorobenzene (BFB)

| | | | |
|---|---|---|---|
| **Client** | : Soils Engineering Services, Inc. | **Lab Number** | : L2009793 |
| **Project Name** | : GROSSINGERS | **Project Number** | : 9313 |
| **Instrument ID** | : VOA101 | **Analysis Date** | : 03/07/20 09:10 |
| **Tune Standard** | : WG1348564-1 | **Tune File ID** | : V01200307ABF1_tune |

| m/e | Ion Abundance Criteria | %Relative Abundance |
|---|---|---|
| 50 | 15.0 - 40.0% of mass 95 | 22.7 |
| 75 | 30.0 - 60.0% of mass 95 | 46.7 |
| 95 | Base Peak, 100% relative abundance | 100 |
| 96 | 5.0 - 9.0% of mass 95 | 6.9 |
| 173 | Less than 2.0% of mass 174 | 0.3 (.4 )1 |
| 174 | Greater than 50.0 of mass 95 | 69.3 |
| 175 | 5.0 - 9.0% of mass 174 | 5.4 (7.8 )1 |
| 176 | 95.0 - 101% of mass 174 | 66.8 (96.3)1 |
| 177 | 5.0 - 9.0% of mass 176 | 4.3 (6.4 )2 |

1-Value is % of mass 174 2-Value is % of mass 176

**This Check Applies to the following Samples, MS, MSD, Blanks, and Standards:**

| Client Sample ID | Lab Sample ID | File ID | Analysis Date/Time |
|---|---|---|---|
| WG1348564-2CCAL | WG1348564-2 | V01200307A01 | 03/07/20 09:31 |
| WG1348564-3LCS | WG1348564-3 | V01200307A01 | 03/07/20 09:31 |
| WG1348564-4LCSD | WG1348564-4 | V01200307A02 | 03/07/20 09:55 |
| WG1348564-5BLANK | WG1348564-5 | V01200307A06 | 03/07/20 11:30 |
| MW-213 | L2009793-01 | V01200307A11 | 03/07/20 13:29 |
| MW-214 | L2009793-02 | V01200307A12 | 03/07/20 13:53 |

# Internal Standard Area and RT Summary
# Form 8a
# Volatiles

| | | | |
|---|---|---|---|
| **Client** | : Soils Engineering Services, Inc. | **Lab Number** | : L2009793 |
| **Project Name** | : GROSSINGERS | **Project Number** | : 9313 |
| **Instrument ID** | : VOA122 | **Analysis Date** | : 03/06/20 09:46 |
| **Sample No** | : WG1348135-2 | **Lab File ID** | : V22200306A01 |

| | Fluorobenzene (IS) | | Chlorobenzene-d5 | | 1,4-Dichlorobenzene-D4 | |
|---|---|---|---|---|---|---|
| | Area | RT | Area | RT | Area | RT |
| WG1348135-2 | 254411 | 5.83 | 187639 | 9.35 | 100182 | 12.10 |
| Upper Limit | 508822 | 6.33 | 375278 | 9.85 | 200364 | 12.60 |
| Lower Limit | 127206 | 5.33 | 93820 | 8.85 | 50091 | 11.60 |
| Sample ID | | | | | | |
| WG1348135-3 LCS | 254411 | 5.83 | 187639 | 9.35 | 100182 | 12.10 |
| WG1348135-4 LCSD | 257345 | 5.83 | 195420 | 9.35 | 100925 | 12.11 |
| WG1348135-5 BLANK | 260517 | 5.83 | 191517 | 9.35 | 97483 | 12.11 |
| TB | 248267 | 5.83 | 183847 | 9.35 | 90923 | 12.11 |

Area Upper Limit = +100% of internal standard area
Area Lower Limit = - 50% of internal standard area

RT Upper Limit = +0.50 minutes of internal standard RT
RT Lower Limit = -0.50 minutes of internal standard RT

* Values outside of QC limits

# Internal Standard Area and RT Summary
# Form 8a
# Volatiles

| | | | |
|---|---|---|---|
| **Client** | : Soils Engineering Services, Inc. | **Lab Number** | : L2009793 |
| **Project Name** | : GROSSINGERS | **Project Number** | : 9313 |
| **Instrument ID** | : VOA101 | **Analysis Date** | : 03/07/20 09:31 |
| **Sample No** | : WG1348564-2 | **Lab File ID** | : V01200307A01 |

| | Fluorobenzene (IS) | | Chlorobenzene-d5 | | 1,4-Dichlorobenzene-D4 | |
|---|---|---|---|---|---|---|
| | Area | RT | Area | RT | Area | RT |
| WG1348564-2 | 235149 | 6.63 | 168234 | 10.52 | 84540 | 13.32 |
| Upper Limit | 470298 | 7.13 | 336468 | 11.02 | 169080 | 13.82 |
| Lower Limit | 117575 | 6.13 | 84117 | 10.02 | 42270 | 12.82 |
| Sample ID | | | | | | |
| WG1348564-3 LCS | 235149 | 6.63 | 168234 | 10.52 | 84540 | 13.32 |
| WG1348564-4 LCSD | 223803 | 6.63 | 161802 | 10.52 | 83096 | 13.32 |
| WG1348564-5 BLANK | 209557 | 6.63 | 151704 | 10.53 | 77414 | 13.32 |
| MW-213 | 202811 | 6.63 | 149497 | 10.52 | 76786 | 13.32 |
| MW-214 | 201389 | 6.63 | 148843 | 10.52 | 76874 | 13.32 |

Area Upper Limit = +100% of internal standard area
Area Lower Limit = - 50% of internal standard area

RT Upper Limit = +0.50 minutes of internal standard RT
RT Lower Limit = -0.50 minutes of internal standard RT

* Values outside of QC limits

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**Created By:** Jason Hebert
**File:** PM5049-1
**Page:** 1

## Volatile Organics - EPA 8260C (WATER)

**Holding Time:** 14 days
**Container / Sample Preservation:** 3 - Vial HCl preserved

| Analyte | CAS # | RL | MDL | Units | LCS Criteria | LCS RPD | MS Criteria | MS RPD | Duplicate RPD | Surrogate Criteria | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Methylene chloride | 75-09-2 | 3 | 0.678 | ug/l | 70-130 | 20 | 70-130 | 20 | 20 | | | |
| 1,1-Dichloroethane | 75-34-3 | 0.75 | 0.210 | ug/l | 70-130 | 20 | 70-130 | 20 | 20 | | | |
| Chloroform | 67-66-3 | 0.75 | 0.222 | ug/l | 70-130 | 20 | 70-130 | 20 | 20 | | | |
| Carbon tetrachloride | 56-23-5 | 0.5 | 0.134 | ug/l | 63-132 | 20 | 63-132 | 20 | 20 | | | |
| 1,2-Dichloropropane | 78-87-5 | 1.75 | 0.137 | ug/l | 70-130 | 20 | 70-130 | 20 | 20 | | | |
| Dibromochloromethane | 124-48-1 | 0.5 | 0.149 | ug/l | 63-130 | 20 | 63-130 | 20 | 20 | | | |
| 1,1,2-Trichloroethane | 79-00-5 | 0.75 | 0.144 | ug/l | 70-130 | 20 | 70-130 | 20 | 20 | | | |
| Tetrachloroethene | 127-18-4 | 0.5 | 0.181 | ug/l | 70-130 | 20 | 70-130 | 20 | 20 | | | |
| Chlorobenzene | 108-90-7 | 0.5 | 0.178 | ug/l | 75-130 | 25 | 75-130 | 25 | 25 | | | |
| Trichlorofluoromethane | 75-69-4 | 2.5 | 0.161 | ug/l | 62-150 | 20 | 62-150 | 20 | 20 | | | |
| 1,2-Dichloroethane | 107-06-2 | 0.5 | 0.132 | ug/l | 70-130 | 20 | 70-130 | 20 | 20 | | | |
| 1,1,1-Trichloroethane | 71-55-6 | 0.5 | 0.158 | ug/l | 67-130 | 20 | 67-130 | 20 | 20 | | | |
| Bromodichloromethane | 75-27-4 | 0.5 | 0.192 | ug/l | 67-130 | 20 | 67-130 | 20 | 20 | | | |
| trans-1,3-Dichloropropene | 10061-02-6 | 0.5 | 0.164 | ug/l | 70-130 | 20 | 70-130 | 20 | 20 | | | |
| cis-1,3-Dichloropropene | 10061-01-5 | 0.5 | 0.144 | ug/l | 70-130 | 20 | 70-130 | 20 | 20 | | | |
| 1,3-Dichloropropene, Total | 542-75-6 | 0.5 | 0.144 | ug/l | | | | 20 | 20 | | | |
| 1,3-Dichloropropene, Total | 542-75-6 | 0.5 | 0.144 | ug/l | | | | 20 | 20 | | | |
| 1,1-Dichloropropene | 563-58-6 | 2.5 | 0.240 | ug/l | 70-130 | 20 | 70-130 | 20 | 20 | | | |
| Bromoform | 75-25-2 | 2 | 0.248 | ug/l | 54-136 | 20 | 54-136 | 20 | 20 | | | |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | 0.5 | 0.167 | ug/l | 67-130 | 20 | 67-130 | 20 | 20 | | | |
| Benzene | 71-43-2 | 0.5 | 0.159 | ug/l | 70-130 | 25 | 70-130 | 25 | 25 | | | |
| Toluene | 108-88-3 | 0.75 | 0.203 | ug/l | 70-130 | 25 | 70-130 | 25 | 25 | | | |
| Ethylbenzene | 100-41-4 | 0.5 | 0.167 | ug/l | 70-130 | 20 | 70-130 | 20 | 20 | | | |
| Chloromethane | 74-87-3 | 2.5 | 0.200 | ug/l | 64-130 | 20 | 64-130 | 20 | 20 | | | |
| Bromomethane | 74-83-9 | 1 | 0.256 | ug/l | 39-139 | 20 | 39-139 | 20 | 20 | | | |
| Vinyl chloride | 75-01-4 | 1 | 0.0714 | ug/l | 55-140 | 20 | 55-140 | 20 | 20 | | | |
| Chloroethane | 75-00-3 | 1 | 0.134 | ug/l | 55-138 | 20 | 55-138 | 20 | 20 | | | |
| 1,1-Dichloroethene | 75-35-4 | 0.5 | 0.169 | ug/l | 61-145 | 25 | 61-145 | 25 | 25 | | | |
| trans-1,2-Dichloroethene | 156-60-5 | 0.75 | 0.163 | ug/l | 70-130 | 20 | 70-130 | 20 | 20 | | | |
| 1,2-Dichloroethene (total) | 540-59-0 | 0.5 | 0.163 | ug/l | | | | 20 | 20 | | | |
| 1,2-Dichloroethene (total) | 540-59-0 | 0.5 | 0.163 | ug/l | | | | 20 | 20 | | | |
| Trichloroethene | 79-01-6 | 0.5 | 0.175 | ug/l | 70-130 | 25 | 70-130 | 25 | 25 | | | |
| 1,2-Dichlorobenzene | 95-50-1 | 2.5 | 0.184 | ug/l | 70-130 | 20 | 70-130 | 20 | 20 | | | |
| 1,3-Dichlorobenzene | 541-73-1 | 2.5 | 0.186 | ug/l | 70-130 | 20 | 70-130 | 20 | 20 | | | |
| 1,4-Dichlorobenzene | 106-46-7 | 2.5 | 0.187 | ug/l | 70-130 | 20 | 70-130 | 20 | 20 | | | |
| Methyl tert butyl ether | 1634-04-4 | 1 | 0.166 | ug/l | 63-130 | 20 | 63-130 | 20 | 20 | | | |
| p/m-Xylene | 179601-23-1 | 1 | 0.332 | ug/l | 70-130 | 20 | 70-130 | 20 | 20 | | | |
| o-Xylene | 95-47-6 | 1 | 0.392 | ug/l | 70-130 | 20 | 70-130 | 20 | 20 | | | |
| Xylene (Total) | 1330-20-7 | 1 | 0.330 | ug/l | | | | 20 | 20 | | | |
| Xylene (Total) | 1330-20-7 | 1 | 0.330 | ug/l | | | | 20 | 20 | | | |
| cis-1,2-Dichloroethene | 156-59-2 | 0.5 | 0.187 | ug/l | 70-130 | 20 | 70-130 | 20 | 20 | | | |
| Dibromomethane | 74-95-3 | 5 | 0.363 | ug/l | 70-130 | 20 | 70-130 | 20 | 20 | | | |

***Please Note that the RL information provided in this table is calculated using a 100% Solids factor.*** ***(Soil/Solids only)***
***Please Note that the information provided in this table is subject to change at anytime at the discretion of Alpha Analytical, Inc.***

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**Created By:** Jason Hebert
**File:** PM5049-1
**Page:** 2

## Volatile Organics - EPA 8260C (WATER)

**Holding Time:** 14 days
**Container / Sample Preservation:** 3 - Vial HCl preserved

| Analyte | CAS # | RL | MDL | Units | LCS Criteria | LCS RPD | MS Criteria | MS RPD | Duplicate RPD | Surrogate Criteria | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,4-Dichlorobutane | 110-56-5 | 5 | 0.464 | ug/l | 70-130 | 20 | 70-130 | 20 | 20 | | | |
| 1,2,3-Trichloropropane | 96-18-4 | 5 | 0.176 | ug/l | 64-130 | 20 | 64-130 | 20 | 20 | | | |
| Styrene | 100-42-5 | 1 | 0.359 | ug/l | 70-130 | 20 | 70-130 | 20 | 20 | | | |
| Dichlorodifluoromethane | 75-71-8 | 5 | 0.244 | ug/l | 36-147 | 20 | 36-147 | 20 | 20 | | | |
| Acetone | 67-64-1 | 5 | 1.46 | ug/l | 58-148 | 20 | 58-148 | 20 | 20 | | | |
| Carbon disulfide | 75-15-0 | 5 | 0.299 | ug/l | 51-130 | 20 | 51-130 | 20 | 20 | | | |
| 2-Butanone | 78-93-3 | 5 | 1.94 | ug/l | 63-138 | 20 | 63-138 | 20 | 20 | | | |
| Vinyl acetate | 108-05-4 | 5 | 0.311 | ug/l | 70-130 | 20 | 70-130 | 20 | 20 | | | |
| 4-Methyl-2-pentanone | 108-10-1 | 5 | 0.416 | ug/l | 59-130 | 20 | 59-130 | 20 | 20 | | | |
| 2-Hexanone | 591-78-6 | 5 | 0.515 | ug/l | 57-130 | 20 | 57-130 | 20 | 20 | | | |
| Ethyl methacrylate | 97-63-2 | 5 | 0.606 | ug/l | 70-130 | 20 | 70-130 | 20 | 20 | | | |
| Acrylonitrile | 107-13-1 | 5 | 0.430 | ug/l | 70-130 | 20 | 70-130 | 20 | 20 | | | |
| Bromochloromethane | 74-97-5 | 2.5 | 0.152 | ug/l | 70-130 | 20 | 70-130 | 20 | 20 | | | |
| Tetrahydrofuran | 109-99-9 | 5 | 0.525 | ug/l | 58-130 | 20 | 58-130 | 20 | 20 | | | |
| 2,2-Dichloropropane | 594-20-7 | 2.5 | 0.204 | ug/l | 63-133 | 20 | 63-133 | 20 | 20 | | | |
| 1,2-Dibromoethane | 106-93-4 | 2 | 0.193 | ug/l | 70-130 | 20 | 70-130 | 20 | 20 | | | |
| 1,3-Dichloropropane | 142-28-9 | 2.5 | 0.212 | ug/l | 70-130 | 20 | 70-130 | 20 | 20 | | | |
| 1,1,1,2-Tetrachloroethane | 630-20-6 | 0.5 | 0.164 | ug/l | 64-130 | 20 | 64-130 | 20 | 20 | | | |
| Bromobenzene | 108-86-1 | 2.5 | 0.152 | ug/l | 70-130 | 20 | 70-130 | 20 | 20 | | | |
| n-Butylbenzene | 104-51-8 | 0.5 | 0.192 | ug/l | 53-136 | 20 | 53-136 | 20 | 20 | | | |
| sec-Butylbenzene | 135-98-8 | 0.5 | 0.181 | ug/l | 70-130 | 20 | 70-130 | 20 | 20 | | | |
| tert-Butylbenzene | 98-06-6 | 2.5 | 0.196 | ug/l | 70-130 | 20 | 70-130 | 20 | 20 | | | |
| o-Chlorotoluene | 95-49-8 | 2.5 | 0.215 | ug/l | 70-130 | 20 | 70-130 | 20 | 20 | | | |
| p-Chlorotoluene | 106-43-4 | 2.5 | 0.185 | ug/l | 70-130 | 20 | 70-130 | 20 | 20 | | | |
| 1,2-Dibromo-3-chloropropane | 96-12-8 | 2.5 | 0.353 | ug/l | 41-144 | 20 | 41-144 | 20 | 20 | | | |
| Hexachlorobutadiene | 87-68-3 | 0.5 | 0.217 | ug/l | 63-130 | 20 | 63-130 | 20 | 20 | | | |
| Isopropylbenzene | 98-82-8 | 0.5 | 0.187 | ug/l | 70-130 | 20 | 70-130 | 20 | 20 | | | |
| p-Isopropyltoluene | 99-87-6 | 0.5 | 0.188 | ug/l | 70-130 | 20 | 70-130 | 20 | 20 | | | |
| Naphthalene | 91-20-3 | 2.5 | 0.216 | ug/l | 70-130 | 20 | 70-130 | 20 | 20 | | | |
| n-Propylbenzene | 103-65-1 | 0.5 | 0.173 | ug/l | 69-130 | 20 | 69-130 | 20 | 20 | | | |
| 1,2,3-Trichlorobenzene | 87-61-6 | 2.5 | 0.234 | ug/l | 70-130 | 20 | 70-130 | 20 | 20 | | | |
| 1,2,4-Trichlorobenzene | 120-82-1 | 2.5 | 0.220 | ug/l | 70-130 | 20 | 70-130 | 20 | 20 | | | |
| 1,3,5-Trimethylbenzene | 108-67-8 | 2.5 | 0.217 | ug/l | 64-130 | 20 | 64-130 | 20 | 20 | | | |
| 1,3,5-Trichlorobenzene | 108-70-3 | 2 | 0.141 | ug/l | 70-130 | 20 | 70-130 | 20 | 20 | | | |
| 1,2,4-Trimethylbenzene | 95-63-6 | 2.5 | 0.191 | ug/l | 70-130 | 20 | 70-130 | 20 | 20 | | | |
| trans-1,4-Dichloro-2-butene | 110-57-6 | 2.5 | 0.213 | ug/l | 70-130 | 20 | 70-130 | 20 | 20 | | | |
| Ethyl ether | 60-29-7 | 2.5 | 0.163 | ug/l | 59-134 | 20 | 59-134 | 20 | 20 | | | |
| Methyl Acetate | 79-20-9 | 10 | 0.234 | ug/l | 70-130 | 20 | 70-130 | 20 | 20 | | | |
| Ethyl Acetate | 141-78-6 | 10 | 0.716 | ug/l | 70-130 | 20 | 70-130 | 20 | 20 | | | |
| Isopropyl Ether | 108-20-3 | 2 | 0.425 | ug/l | 70-130 | 20 | 70-130 | 20 | 20 | | | |
| Cyclohexane | 110-82-7 | 10 | 0.271 | ug/l | 70-130 | 20 | 70-130 | 20 | 20 | | | |
| Ethyl-Tert-Butyl-Ether | 637-92-3 | 2 | 0.179 | ug/l | 70-130 | 20 | 70-130 | 20 | 20 | | | |

***Please Note that the RL information provided in this table is calculated using a 100% Solids factor.*** ***(Soil/Solids only)***
***Please Note that the information provided in this table is subject to change at anytime at the discretion of Alpha Analytical, Inc.***

## Volatile Organics - EPA 8260C (WATER)

**Holding Time:** 14 days
**Container / Sample Preservation:** 3 - Vial HCl preserved

| Analyte | CAS # | RL | MDL | Units | LCS Criteria | LCS RPD | MS Criteria | MS RPD | Duplicate RPD | Surrogate Criteria | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Tertiary-Amyl Methyl Ether | 994-05-8 | 2 | 0.278 | ug/l | 66-130 | 20 | 66-130 | 20 | 20 | | | |
| 1,4-Dioxane | 123-91-1 | 250 | 60.8 | ug/l | 56-162 | 20 | 56-162 | 20 | 20 | | | |
| 1,1,2-Trichloro-1,2,2-Trifluoroethane | 76-13-1 | 10 | 0.148 | ug/l | 70-130 | 20 | 70-130 | 20 | 20 | | | |
| Methyl cyclohexane | 108-87-2 | 10 | 0.396 | ug/l | 70-130 | 20 | 70-130 | 20 | 20 | | | |
| 1,4-Diethylbenzene | 105-05-5 | 2 | 0.392 | ug/l | 70-130 | 20 | 70-130 | 20 | 20 | | | |
| 4-Ethyltoluene | 622-96-8 | 2 | 0.340 | ug/l | 70-130 | 20 | 70-130 | 20 | 20 | | | |
| 1,2,4,5-Tetramethylbenzene | 95-93-2 | 2 | 0.542 | ug/l | 70-130 | 20 | 70-130 | 20 | 20 | | | |
| *1,2-Dichloroethane-d4* | *17060-07-0* | | | | | | | | | *70-130* | | |
| *Toluene-d8* | *2037-26-5* | | | | | | | | | *70-130* | | |
| *4-Bromofluorobenzene* | *460-00-4* | | | | | | | | | *70-130* | | |
| *Dibromofluoromethane* | *1868-53-7* | | | | | | | | | *70-130* | | |

***Please Note that the RL information provided in this table is calculated using a 100% Solids factor.*** ***(Soil/Solids only)***
***Please Note that the information provided in this table is subject to change at anytime at the discretion of Alpha Analytical, Inc.***

**Date Created:** 06/19/18
**Created By:** Jason Hebert
**File:** PM5047-1
**Page:** 1

## Volatile Organics - EPA 8260C (SOIL-LOW)

**Holding Time:** 14 days
**Container / Sample Preservation:** 1 - Vial Large Septa unpreserved (4oz)

| Analyte | CAS # | RL | MDL | Units | LCS Criteria | LCS RPD | MS Criteria | MS RPD | Duplicate RPD | Surrogate Criteria | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Methylene chloride | 75-09-2 | 5 | 2.29 | ug/kg | 70-130 | 30 | 70-130 | 30 | 30 | | | |
| 1,1-Dichloroethane | 75-34-3 | 1 | 0.145 | ug/kg | 70-130 | 30 | 70-130 | 30 | 30 | | | |
| Chloroform | 67-66-3 | 1.5 | 0.140 | ug/kg | 70-130 | 30 | 70-130 | 30 | 30 | | | |
| Carbon tetrachloride | 56-23-5 | 1 | 0.230 | ug/kg | 70-130 | 30 | 70-130 | 30 | 30 | | | |
| 1,2-Dichloropropane | 78-87-5 | 1 | 0.125 | ug/kg | 70-130 | 30 | 70-130 | 30 | 30 | | | |
| Dibromochloromethane | 124-48-1 | 1 | 0.140 | ug/kg | 70-130 | 30 | 70-130 | 30 | 30 | | | |
| 1,1,2-Trichloroethane | 79-00-5 | 1 | 0.267 | ug/kg | 70-130 | 30 | 70-130 | 30 | 30 | | | |
| Tetrachloroethene | 127-18-4 | 0.5 | 0.196 | ug/kg | 70-130 | 30 | 70-130 | 30 | 30 | | | |
| Chlorobenzene | 108-90-7 | 0.5 | 0.127 | ug/kg | 70-130 | 30 | 70-130 | 30 | 30 | | | |
| Trichlorofluoromethane | 75-69-4 | 4 | 0.695 | ug/kg | 70-139 | 30 | 70-139 | 30 | 30 | | | |
| 1,2-Dichloroethane | 107-06-2 | 1 | 0.257 | ug/kg | 70-130 | 30 | 70-130 | 30 | 30 | | | |
| 1,1,1-Trichloroethane | 71-55-6 | 0.5 | 0.167 | ug/kg | 70-130 | 30 | 70-130 | 30 | 30 | | | |
| Bromodichloromethane | 75-27-4 | 0.5 | 0.109 | ug/kg | 70-130 | 30 | 70-130 | 30 | 30 | | | |
| trans-1,3-Dichloropropene | 10061-02-6 | 1 | 0.273 | ug/kg | 70-130 | 30 | 70-130 | 30 | 30 | | | |
| cis-1,3-Dichloropropene | 10061-01-5 | 0.5 | 0.158 | ug/kg | 70-130 | 30 | 70-130 | 30 | 30 | | | |
| 1,3-Dichloropropene, Total | 542-75-6 | 0.5 | 0.158 | ug/kg | | | | 30 | 30 | | | |
| 1,3-Dichloropropene, Total | 542-75-6 | 0.5 | 0.158 | ug/kg | | | | 30 | 30 | | | |
| 1,1-Dichloropropene | 563-58-6 | 0.5 | 0.159 | ug/kg | 70-130 | 30 | 70-130 | 30 | 30 | | | |
| Bromoform | 75-25-2 | 4 | 0.246 | ug/kg | 70-130 | 30 | 70-130 | 30 | 30 | | | |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | 0.5 | 0.166 | ug/kg | 70-130 | 30 | 70-130 | 30 | 30 | | | |
| Benzene | 71-43-2 | 0.5 | 0.166 | ug/kg | 70-130 | 30 | 70-130 | 30 | 30 | | | |
| Toluene | 108-88-3 | 1 | 0.543 | ug/kg | 70-130 | 30 | 70-130 | 30 | 30 | | | |
| Ethylbenzene | 100-41-4 | 1 | 0.141 | ug/kg | 70-130 | 30 | 70-130 | 30 | 30 | | | |
| Chloromethane | 74-87-3 | 4 | 0.932 | ug/kg | 52-130 | 30 | 52-130 | 30 | 30 | | | |
| Bromomethane | 74-83-9 | 2 | 0.581 | ug/kg | 57-147 | 30 | 57-147 | 30 | 30 | | | |
| Vinyl chloride | 75-01-4 | 1 | 0.335 | ug/kg | 67-130 | 30 | 67-130 | 30 | 30 | | | |
| Chloroethane | 75-00-3 | 2 | 0.452 | ug/kg | 50-151 | 30 | 50-151 | 30 | 30 | | | |
| 1,1-Dichloroethene | 75-35-4 | 1 | 0.238 | ug/kg | 65-135 | 30 | 65-135 | 30 | 30 | | | |
| trans-1,2-Dichloroethene | 156-60-5 | 1.5 | 0.137 | ug/kg | 70-130 | 30 | 70-130 | 30 | 30 | | | |
| Trichloroethene | 79-01-6 | 0.5 | 0.137 | ug/kg | 70-130 | 30 | 70-130 | 30 | 30 | | | |
| 1,2-Dichlorobenzene | 95-50-1 | 2 | 0.144 | ug/kg | 70-130 | 30 | 70-130 | 30 | 30 | | | |
| 1,3-Dichlorobenzene | 541-73-1 | 2 | 0.148 | ug/kg | 70-130 | 30 | 70-130 | 30 | 30 | | | |
| 1,4-Dichlorobenzene | 106-46-7 | 2 | 0.171 | ug/kg | 70-130 | 30 | 70-130 | 30 | 30 | | | |
| Methyl tert butyl ether | 1634-04-4 | 2 | 0.201 | ug/kg | 66-130 | 30 | 66-130 | 30 | 30 | | | |
| p/m-Xylene | 179601-23-1 | 2 | 0.560 | ug/kg | 70-130 | 30 | 70-130 | 30 | 30 | | | |
| o-Xylene | 95-47-6 | 1 | 0.291 | ug/kg | 70-130 | 30 | 70-130 | 30 | 30 | | | |
| Xylene (Total) | 1330-20-7 | 1 | 0.291 | ug/kg | | | | 30 | 30 | | | |
| Xylene (Total) | 1330-20-7 | 1 | 0.291 | ug/kg | | | | 30 | 30 | | | |
| cis-1,2-Dichloroethene | 156-59-2 | 1 | 0.175 | ug/kg | 70-130 | 30 | 70-130 | 30 | 30 | | | |
| 1,2-Dichloroethene (total) | 540-59-0 | 1 | 0.137 | ug/kg | | | | 30 | 30 | | | |
| 1,2-Dichloroethene (total) | 540-59-0 | 1 | 0.137 | ug/kg | | | | 30 | 30 | | | |
| Dibromomethane | 74-95-3 | 2 | 0.238 | ug/kg | 70-130 | 30 | 70-130 | 30 | 30 | | | |

***Please Note that the RL information provided in this table is calculated using a 100% Solids factor. (Soil/Solids only)***
***Please Note that the information provided in this table is subject to change at anytime at the discretion of Alpha Analytical, Inc.***

**Volatile Organics - EPA 8260C (SOIL-LOW)**

**Holding Time:** 14 days
**Container / Sample Preservation:** 1 - Vial Large Septa unpreserved (4oz)

| Analyte | CAS # | RL | MDL | Units | LCS Criteria | LCS RPD | MS Criteria | MS RPD | Duplicate RPD | Surrogate Criteria | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,4-Dichlorobutane | 110-56-5 | 10 | 0.226 | ug/kg | 70-130 | 30 | 70-130 | 30 | 30 | | | |
| 1,2,3-Trichloropropane | 96-18-4 | 2 | 0.127 | ug/kg | 68-130 | 30 | 68-130 | 30 | 30 | | | |
| Styrene | 100-42-5 | 1 | 0.196 | ug/kg | 70-130 | 30 | 70-130 | 30 | 30 | | | |
| Dichlorodifluoromethane | 75-71-8 | 10 | 0.915 | ug/kg | 30-146 | 30 | 30-146 | 30 | 30 | | | |
| Acetone | 67-64-1 | 10 | 4.81 | ug/kg | 54-140 | 30 | 54-140 | 30 | 30 | | | |
| Carbon disulfide | 75-15-0 | 10 | 4.55 | ug/kg | 59-130 | 30 | 59-130 | 30 | 30 | | | |
| 2-Butanone | 78-93-3 | 10 | 2.22 | ug/kg | 70-130 | 30 | 70-130 | 30 | 30 | | | |
| Vinyl acetate | 108-05-4 | 10 | 2.15 | ug/kg | 70-130 | 30 | 70-130 | 30 | 30 | | | |
| 4-Methyl-2-pentanone | 108-10-1 | 10 | 1.28 | ug/kg | 70-130 | 30 | 70-130 | 30 | 30 | | | |
| 2-Hexanone | 591-78-6 | 10 | 1.18 | ug/kg | 70-130 | 30 | 70-130 | 30 | 30 | | | |
| Ethyl methacrylate | 97-63-2 | 10 | 1.58 | ug/kg | 70-130 | 30 | 70-130 | 30 | 30 | | | |
| Acrylonitrile | 107-13-1 | 4 | 1.15 | ug/kg | 70-130 | 30 | 70-130 | 30 | 30 | | | |
| Bromochloromethane | 74-97-5 | 2 | 0.205 | ug/kg | 70-130 | 30 | 70-130 | 30 | 30 | | | |
| Tetrahydrofuran | 109-99-9 | 4 | 1.59 | ug/kg | 66-130 | 30 | 66-130 | 30 | 30 | | | |
| 2,2-Dichloropropane | 594-20-7 | 2 | 0.202 | ug/kg | 70-130 | 30 | 70-130 | 30 | 30 | | | |
| 1,2-Dibromoethane | 106-93-4 | 1 | 0.279 | ug/kg | 70-130 | 30 | 70-130 | 30 | 30 | | | |
| 1,3-Dichloropropane | 142-28-9 | 2 | 0.167 | ug/kg | 69-130 | 30 | 69-130 | 30 | 30 | | | |
| 1,1,1,2-Tetrachloroethane | 630-20-6 | 0.5 | 0.132 | ug/kg | 70-130 | 30 | 70-130 | 30 | 30 | | | |
| Bromobenzene | 108-86-1 | 2 | 0.145 | ug/kg | 70-130 | 30 | 70-130 | 30 | 30 | | | |
| n-Butylbenzene | 104-51-8 | 1 | 0.167 | ug/kg | 70-130 | 30 | 70-130 | 30 | 30 | | | |
| sec-Butylbenzene | 135-98-8 | 1 | 0.146 | ug/kg | 70-130 | 30 | 70-130 | 30 | 30 | | | |
| tert-Butylbenzene | 98-06-6 | 2 | 0.118 | ug/kg | 70-130 | 30 | 70-130 | 30 | 30 | | | |
| 1,3,5-Trichlorobenzene | 108-70-3 | 2 | 0.173 | ug/kg | 70-139 | 30 | 70-130 | 30 | 30 | | | |
| o-Chlorotoluene | 95-49-8 | 2 | 0.191 | ug/kg | 70-130 | 30 | 70-130 | 30 | 30 | | | |
| p-Chlorotoluene | 106-43-4 | 2 | 0.108 | ug/kg | 70-130 | 30 | 70-130 | 30 | 30 | | | |
| 1,2-Dibromo-3-chloropropane | 96-12-8 | 3 | 0.998 | ug/kg | 68-130 | 30 | 68-130 | 30 | 30 | | | |
| Hexachlorobutadiene | 87-68-3 | 4 | 0.169 | ug/kg | 67-130 | 30 | 67-130 | 30 | 30 | | | |
| Isopropylbenzene | 98-82-8 | 1 | 0.109 | ug/kg | 70-130 | 30 | 70-130 | 30 | 30 | | | |
| p-Isopropyltoluene | 99-87-6 | 1 | 0.109 | ug/kg | 70-130 | 30 | 70-130 | 30 | 30 | | | |
| Naphthalene | 91-20-3 | 4 | 0.650 | ug/kg | 70-130 | 30 | 70-130 | 30 | 30 | | | |
| n-Propylbenzene | 103-65-1 | 1 | 0.171 | ug/kg | 70-130 | 30 | 70-130 | 30 | 30 | | | |
| 1,2,3-Trichlorobenzene | 87-61-6 | 2 | 0.322 | ug/kg | 70-130 | 30 | 70-130 | 30 | 30 | | | |
| 1,2,4-Trichlorobenzene | 120-82-1 | 2 | 0.272 | ug/kg | 70-130 | 30 | 70-130 | 30 | 30 | | | |
| 1,3,5-Trimethylbenzene | 108-67-8 | 2 | 0.193 | ug/kg | 70-130 | 30 | 70-130 | 30 | 30 | | | |
| 1,2,4-Trimethylbenzene | 95-63-6 | 2 | 0.334 | ug/kg | 70-130 | 30 | 70-130 | 30 | 30 | | | |
| trans-1,4-Dichloro-2-butene | 110-57-6 | 5 | 1.42 | ug/kg | 70-130 | 30 | 70-130 | 30 | 30 | | | |
| iso-Propyl Alcohol | 67-63-0 | 100 | 100 | ug/kg | 70-130 | 20 | 70-130 | 20 | 20 | | | |
| Ethyl ether | 60-29-7 | 2 | 0.341 | ug/kg | 67-130 | 30 | 67-130 | 30 | 30 | | | |
| Methyl Acetate | 79-20-9 | 4 | 0.950 | ug/kg | 65-130 | 30 | 65-130 | 30 | 30 | | | |
| Ethyl Acetate | 141-78-6 | 10 | 1.21 | ug/kg | 70-130 | 30 | 70-130 | 30 | 30 | | | |
| Isopropyl Ether | 108-20-3 | 2 | 0.213 | ug/kg | 66-130 | 30 | 66-130 | 30 | 30 | | | |
| Cyclohexane | 110-82-7 | 10 | 0.544 | ug/kg | 70-130 | 30 | 70-130 | 30 | 30 | | | |

***Please Note that the RL information provided in this table is calculated using a 100% Solids factor. (Soil/Solids only)***
***Please Note that the information provided in this table is subject to change at anytime at the discretion of Alpha Analytical, Inc.***

## Volatile Organics - EPA 8260C (SOIL-LOW)

**Holding Time:** 14 days
**Container / Sample Preservation:** 1 - Vial Large Septa unpreserved (4oz)

| Analyte | CAS # | RL | MDL | Units | LCS Criteria | LCS RPD | MS Criteria | MS RPD | Duplicate RPD | Surrogate Criteria | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Ethyl-Tert-Butyl-Ether | 637-92-3 | 2 | 0.128 | ug/kg | 70-130 | 30 | 70-130 | 30 | 30 | | | |
| Tertiary-Amyl Methyl Ether | 994-05-8 | 2 | 0.176 | ug/kg | 70-130 | 30 | 70-130 | 30 | 30 | | | |
| 1,4-Dioxane | 123-91-1 | 100 | 35.1 | ug/kg | 65-136 | 30 | 65-136 | 30 | 30 | | | |
| 1,1,2-Trichloro-1,2,2-Trifluoroethane | 76-13-1 | 4 | 0.693 | ug/kg | 70-130 | 30 | 70-130 | 30 | 30 | | | |
| *1,2-Dichloroethane-d4* | *17060-07-0* | | | | | | | | | *70-130* | | |
| *Toluene-d8* | *2037-26-5* | | | | | | | | | *70-130* | | |
| *4-Bromofluorobenzene* | *460-00-4* | | | | | | | | | *70-130* | | |
| *Dibromofluoromethane* | *1868-53-7* | | | | | | | | | *70-130* | | |

***Please Note that the RL information provided in this table is calculated using a 100% Solids factor. (Soil/Solids only)***
***Please Note that the information provided in this table is subject to change at anytime at the discretion of Alpha Analytical, Inc.***

**Date Created:** 06/19/18
**Created By:** Jason Hebert
**File:** PM5048-1
**Page:** 1

## Volatile Organics - EPA 8260C (SOIL-HIGH)

**Holding Time:** 14 days
**Container / Sample Preservation:** 1 - Vial Large Septa unpreserved (4oz)

| Analyte | CAS # | RL | MDL | Units | LCS Criteria | LCS RPD | MS Criteria | MS RPD | Duplicate RPD | Surrogate Criteria | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Methylene chloride | 75-09-2 | 250 | 115 | ug/kg | 70-130 | 30 | 70-130 | 30 | 30 | | | |
| 1,1-Dichloroethane | 75-34-3 | 50 | 7.25 | ug/kg | 70-130 | 30 | 70-130 | 30 | 30 | | | |
| Chloroform | 67-66-3 | 75 | 7.00 | ug/kg | 70-130 | 30 | 70-130 | 30 | 30 | | | |
| Carbon tetrachloride | 56-23-5 | 50 | 11.5 | ug/kg | 70-130 | 30 | 70-130 | 30 | 30 | | | |
| 1,2-Dichloropropane | 78-87-5 | 50 | 6.25 | ug/kg | 70-130 | 30 | 70-130 | 30 | 30 | | | |
| Dibromochloromethane | 124-48-1 | 50 | 7.00 | ug/kg | 70-130 | 30 | 70-130 | 30 | 30 | | | |
| 1,1,2-Trichloroethane | 79-00-5 | 50 | 13.4 | ug/kg | 70-130 | 30 | 70-130 | 30 | 30 | | | |
| Tetrachloroethene | 127-18-4 | 25 | 9.80 | ug/kg | 70-130 | 30 | 70-130 | 30 | 30 | | | |
| Chlorobenzene | 108-90-7 | 25 | 6.35 | ug/kg | 70-130 | 30 | 70-130 | 30 | 30 | | | |
| Trichlorofluoromethane | 75-69-4 | 200 | 34.8 | ug/kg | 70-139 | 30 | 70-139 | 30 | 30 | | | |
| 1,2-Dichloroethane | 107-06-2 | 50 | 12.9 | ug/kg | 70-130 | 30 | 70-130 | 30 | 30 | | | |
| 1,1,1-Trichloroethane | 71-55-6 | 25 | 8.35 | ug/kg | 70-130 | 30 | 70-130 | 30 | 30 | | | |
| Bromodichloromethane | 75-27-4 | 25 | 5.45 | ug/kg | 70-130 | 30 | 70-130 | 30 | 30 | | | |
| trans-1,3-Dichloropropene | 10061-02-6 | 50 | 13.7 | ug/kg | 70-130 | 30 | 70-130 | 30 | 30 | | | |
| cis-1,3-Dichloropropene | 10061-01-5 | 25 | 7.90 | ug/kg | 70-130 | 30 | 70-130 | 30 | 30 | | | |
| 1,3-Dichloropropene, Total | 542-75-6 | 25 | 7.90 | ug/kg | | | | 30 | 30 | | | |
| 1,3-Dichloropropene, Total | 542-75-6 | 25 | 7.90 | ug/kg | | | | 30 | 30 | | | |
| 1,1-Dichloropropene | 563-58-6 | 25 | 7.95 | ug/kg | 70-130 | 30 | 70-130 | 30 | 30 | | | |
| Bromoform | 75-25-2 | 200 | 12.3 | ug/kg | 70-130 | 30 | 70-130 | 30 | 30 | | | |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | 25 | 8.30 | ug/kg | 70-130 | 30 | 70-130 | 30 | 30 | | | |
| Benzene | 71-43-2 | 25 | 8.30 | ug/kg | 70-130 | 30 | 70-130 | 30 | 30 | | | |
| Toluene | 108-88-3 | 50 | 27.2 | ug/kg | 70-130 | 30 | 70-130 | 30 | 30 | | | |
| Ethylbenzene | 100-41-4 | 50 | 7.05 | ug/kg | 70-130 | 30 | 70-130 | 30 | 30 | | | |
| Chloromethane | 74-87-3 | 200 | 46.6 | ug/kg | 52-130 | 30 | 52-130 | 30 | 30 | | | |
| Bromomethane | 74-83-9 | 100 | 29.1 | ug/kg | 57-147 | 30 | 57-147 | 30 | 30 | | | |
| Vinyl chloride | 75-01-4 | 50 | 16.8 | ug/kg | 67-130 | 30 | 67-130 | 30 | 30 | | | |
| Chloroethane | 75-00-3 | 100 | 22.6 | ug/kg | 50-151 | 30 | 50-151 | 30 | 30 | | | |
| 1,1-Dichloroethene | 75-35-4 | 50 | 11.9 | ug/kg | 65-135 | 30 | 65-135 | 30 | 30 | | | |
| trans-1,2-Dichloroethene | 156-60-5 | 75 | 6.85 | ug/kg | 70-130 | 30 | 70-130 | 30 | 30 | | | |
| Trichloroethene | 79-01-6 | 25 | 6.85 | ug/kg | 70-130 | 30 | 70-130 | 30 | 30 | | | |
| 1,2-Dichlorobenzene | 95-50-1 | 100 | 7.20 | ug/kg | 70-130 | 30 | 70-130 | 30 | 30 | | | |
| 1,3-Dichlorobenzene | 541-73-1 | 100 | 7.40 | ug/kg | 70-130 | 30 | 70-130 | 30 | 30 | | | |
| 1,4-Dichlorobenzene | 106-46-7 | 100 | 8.55 | ug/kg | 70-130 | 30 | 70-130 | 30 | 30 | | | |
| Methyl tert butyl ether | 1634-04-4 | 100 | 10.1 | ug/kg | 66-130 | 30 | 66-130 | 30 | 30 | | | |
| p/m-Xylene | 179601-23-1 | 100 | 28.0 | ug/kg | 70-130 | 30 | 70-130 | 30 | 30 | | | |
| o-Xylene | 95-47-6 | 50 | 14.6 | ug/kg | 70-130 | 30 | 70-130 | 30 | 30 | | | |
| Xylene (Total) | 1330-20-7 | 50 | 14.6 | ug/kg | | | | 30 | 30 | | | |
| Xylene (Total) | 1330-20-7 | 50 | 14.6 | ug/kg | | | | 30 | 30 | | | |
| cis-1,2-Dichloroethene | 156-59-2 | 50 | 8.75 | ug/kg | 70-130 | 30 | 70-130 | 30 | 30 | | | |
| 1,2-Dichloroethene (total) | 540-59-0 | 50 | 6.85 | ug/kg | | | | 30 | 30 | | | |
| 1,2-Dichloroethene (total) | 540-59-0 | 50 | 6.85 | ug/kg | | | | 30 | 30 | | | |
| Dibromomethane | 74-95-3 | 100 | 11.9 | ug/kg | 70-130 | 30 | 70-130 | 30 | 30 | | | |

***Please Note that the RL information provided in this table is calculated using a 100% Solids factor. (Soil/Solids only)***
***Please Note that the information provided in this table is subject to change at anytime at the discretion of Alpha Analytical, Inc.***

**Volatile Organics - EPA 8260C (SOIL-HIGH)**

**Holding Time:** 14 days
**Container / Sample Preservation:** 1 - Vial Large Septa unpreserved (4oz)

| Analyte | CAS # | RL | MDL | Units | LCS Criteria | LCS RPD | MS Criteria | MS RPD | Duplicate RPD | Surrogate Criteria | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,4-Dichlorobutane | 110-56-5 | 500 | 11.3 | ug/kg | 70-130 | 30 | 70-130 | 30 | 30 | | | |
| 1,2,3-Trichloropropane | 96-18-4 | 100 | 6.35 | ug/kg | 68-130 | 30 | 68-130 | 30 | 30 | | | |
| Styrene | 100-42-5 | 50 | 9.80 | ug/kg | 70-130 | 30 | 70-130 | 30 | 30 | | | |
| Dichlorodifluoromethane | 75-71-8 | 500 | 45.8 | ug/kg | 30-146 | 30 | 30-146 | 30 | 30 | | | |
| Acetone | 67-64-1 | 500 | 241 | ug/kg | 54-140 | 30 | 54-140 | 30 | 30 | | | |
| Carbon disulfide | 75-15-0 | 500 | 228 | ug/kg | 59-130 | 30 | 59-130 | 30 | 30 | | | |
| 2-Butanone | 78-93-3 | 500 | 111 | ug/kg | 70-130 | 30 | 70-130 | 30 | 30 | | | |
| Vinyl acetate | 108-05-4 | 500 | 108 | ug/kg | 70-130 | 30 | 70-130 | 30 | 30 | | | |
| 4-Methyl-2-pentanone | 108-10-1 | 500 | 64.0 | ug/kg | 70-130 | 30 | 70-130 | 30 | 30 | | | |
| 2-Hexanone | 591-78-6 | 500 | 59.0 | ug/kg | 70-130 | 30 | 70-130 | 30 | 30 | | | |
| Ethyl methacrylate | 97-63-2 | 500 | 79.0 | ug/kg | 70-130 | 30 | 70-130 | 30 | 30 | | | |
| Acrylonitrile | 107-13-1 | 200 | 57.5 | ug/kg | 70-130 | 30 | 70-130 | 30 | 30 | | | |
| Bromochloromethane | 74-97-5 | 100 | 10.3 | ug/kg | 70-130 | 30 | 70-130 | 30 | 30 | | | |
| Tetrahydrofuran | 109-99-9 | 200 | 79.5 | ug/kg | 66-130 | 30 | 66-130 | 30 | 30 | | | |
| 2,2-Dichloropropane | 594-20-7 | 100 | 10.1 | ug/kg | 70-130 | 30 | 70-130 | 30 | 30 | | | |
| 1,2-Dibromoethane | 106-93-4 | 50 | 14.0 | ug/kg | 70-130 | 30 | 70-130 | 30 | 30 | | | |
| 1,3-Dichloropropane | 142-28-9 | 100 | 8.35 | ug/kg | 69-130 | 30 | 69-130 | 30 | 30 | | | |
| 1,1,1,2-Tetrachloroethane | 630-20-6 | 25 | 6.60 | ug/kg | 70-130 | 30 | 70-130 | 30 | 30 | | | |
| Bromobenzene | 108-86-1 | 100 | 7.25 | ug/kg | 70-130 | 30 | 70-130 | 30 | 30 | | | |
| n-Butylbenzene | 104-51-8 | 50 | 8.35 | ug/kg | 70-130 | 30 | 70-130 | 30 | 30 | | | |
| sec-Butylbenzene | 135-98-8 | 50 | 7.30 | ug/kg | 70-130 | 30 | 70-130 | 30 | 30 | | | |
| tert-Butylbenzene | 98-06-6 | 100 | 5.90 | ug/kg | 70-130 | 30 | 70-130 | 30 | 30 | | | |
| 1,3,5-Trichlorobenzene | 108-70-3 | 100 | 8.65 | ug/kg | 70-139 | 30 | 70-130 | 30 | 30 | | | |
| o-Chlorotoluene | 95-49-8 | 100 | 9.55 | ug/kg | 70-130 | 30 | 70-130 | 30 | 30 | | | |
| p-Chlorotoluene | 106-43-4 | 100 | 5.40 | ug/kg | 70-130 | 30 | 70-130 | 30 | 30 | | | |
| 1,2-Dibromo-3-chloropropane | 96-12-8 | 150 | 49.9 | ug/kg | 68-130 | 30 | 68-130 | 30 | 30 | | | |
| Hexachlorobutadiene | 87-68-3 | 200 | 8.45 | ug/kg | 67-130 | 30 | 67-130 | 30 | 30 | | | |
| Isopropylbenzene | 98-82-8 | 50 | 5.45 | ug/kg | 70-130 | 30 | 70-130 | 30 | 30 | | | |
| p-Isopropyltoluene | 99-87-6 | 50 | 5.45 | ug/kg | 70-130 | 30 | 70-130 | 30 | 30 | | | |
| Naphthalene | 91-20-3 | 200 | 32.5 | ug/kg | 70-130 | 30 | 70-130 | 30 | 30 | | | |
| n-Propylbenzene | 103-65-1 | 50 | 8.55 | ug/kg | 70-130 | 30 | 70-130 | 30 | 30 | | | |
| 1,2,3-Trichlorobenzene | 87-61-6 | 100 | 16.1 | ug/kg | 70-130 | 30 | 70-130 | 30 | 30 | | | |
| 1,2,4-Trichlorobenzene | 120-82-1 | 100 | 13.6 | ug/kg | 70-130 | 30 | 70-130 | 30 | 30 | | | |
| 1,3,5-Trimethylbenzene | 108-67-8 | 100 | 9.65 | ug/kg | 70-130 | 30 | 70-130 | 30 | 30 | | | |
| 1,2,4-Trimethylbenzene | 95-63-6 | 100 | 16.7 | ug/kg | 70-130 | 30 | 70-130 | 30 | 30 | | | |
| trans-1,4-Dichloro-2-butene | 110-57-6 | 250 | 71.0 | ug/kg | 70-130 | 30 | 70-130 | 30 | 30 | | | |
| iso-Propyl Alcohol | 67-63-0 | 5000 | 5000 | ug/kg | 70-130 | 20 | 70-130 | 20 | 20 | | | |
| Ethyl ether | 60-29-7 | 100 | 17.1 | ug/kg | 67-130 | 30 | 67-130 | 30 | 30 | | | |
| Methyl Acetate | 79-20-9 | 200 | 47.5 | ug/kg | 65-130 | 30 | 65-130 | 30 | 30 | | | |
| Ethyl Acetate | 141-78-6 | 500 | 60.5 | ug/kg | 70-130 | 30 | 70-130 | 30 | 30 | | | |
| Isopropyl Ether | 108-20-3 | 100 | 10.7 | ug/kg | 66-130 | 30 | 66-130 | 30 | 30 | | | |
| Cyclohexane | 110-82-7 | 500 | 27.2 | ug/kg | 70-130 | 30 | 70-130 | 30 | 30 | | | |

***Please Note that the RL information provided in this table is calculated using a 100% Solids factor. (Soil/Solids only)***
***Please Note that the information provided in this table is subject to change at anytime at the discretion of Alpha Analytical, Inc.***

**Volatile Organics - EPA 8260C (SOIL-HIGH)**

**Holding Time:** 14 days
**Container / Sample Preservation:** 1 - Vial Large Septa unpreserved (4oz)

| Analyte | CAS # | RL | MDL | Units | LCS Criteria | LCS RPD | MS Criteria | MS RPD | Duplicate RPD | Surrogate Criteria | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Ethyl-Tert-Butyl-Ether | 637-92-3 | 100 | 6.40 | ug/kg | 70-130 | 30 | 70-130 | 30 | 30 | | | |
| Tertiary-Amyl Methyl Ether | 994-05-8 | 100 | 8.80 | ug/kg | 70-130 | 30 | 70-130 | 30 | 30 | | | |
| 1,4-Dioxane | 123-91-1 | 5000 | 1755 | ug/kg | 65-136 | 30 | 65-136 | 30 | 30 | | | |
| 1,1,2-Trichloro-1,2,2-Trifluoroethane | 76-13-1 | 200 | 34.7 | ug/kg | 70-130 | 30 | 70-130 | 30 | 30 | | | |
| *1,2-Dichloroethane-d4* | *17060-07-0* | | | | | | | | | *70-130* | | |
| *Toluene-d8* | *2037-26-5* | | | | | | | | | *70-130* | | |
| *4-Bromofluorobenzene* | *460-00-4* | | | | | | | | | *70-130* | | |
| *Dibromofluoromethane* | *1868-53-7* | | | | | | | | | *70-130* | | |

***Please Note that the RL information provided in this table is calculated using a 100% Solids factor. (Soil/Solids only)***
***Please Note that the information provided in this table is subject to change at anytime at the discretion of Alpha Analytical, Inc.***

# Volatiles Sample Data

# Results Summary
# Form 1
# Volatile Organics by GC/MS

| | | | |
|---|---|---|---|
| **Client** | : Soils Engineering Services, Inc. | **Lab Number** | : L2009793 |
| **Project Name** | : GROSSINGERS | **Project Number** | : 9313 |
| **Lab ID** | : L2009793-01 | **Date Collected** | : 03/04/20 14:30 |
| **Client ID** | : MW-213 | **Date Received** | : 03/04/20 |
| **Sample Location** | : LIBERTY, NY | **Date Analyzed** | : 03/07/20 13:29 |
| **Sample Matrix** | : WATER | **Dilution Factor** | : 1 |
| **Analytical Method** | : 1,8260C | **Analyst** | : AJK |
| **Lab File ID** | : V01200307A11 | **Instrument ID** | : VOA101 |
| **Sample Amount** | : 10 ml | **GC Column** | : RTX-502.2 |
| **Level** | : LOW | **%Solids** | : N/A |
| **Extract Volume (MeOH)** | : N/A | **Injection Volume** | : N/A |

| | | ug/L | | | |
|---|---|---|---|---|---|
| **CAS NO.** | **Parameter** | **Results** | **RL** | **MDL** | **Qualifier** |
| 75-09-2 | Methylene chloride | ND | 2.5 | 0.70 | U |
| 75-34-3 | 1,1-Dichloroethane | ND | 2.5 | 0.70 | U |
| 67-66-3 | Chloroform | ND | 2.5 | 0.70 | U |
| 56-23-5 | Carbon tetrachloride | ND | 0.50 | 0.13 | U |
| 78-87-5 | 1,2-Dichloropropane | ND | 1.0 | 0.14 | U |
| 124-48-1 | Dibromochloromethane | ND | 0.50 | 0.15 | U |
| 79-00-5 | 1,1,2-Trichloroethane | ND | 1.5 | 0.50 | U |
| 127-18-4 | Tetrachloroethene | ND | 0.50 | 0.18 | U |
| 108-90-7 | Chlorobenzene | ND | 2.5 | 0.70 | U |
| 75-69-4 | Trichlorofluoromethane | 71 | 2.5 | 0.70 | |
| 107-06-2 | 1,2-Dichloroethane | ND | 0.50 | 0.13 | U |
| 71-55-6 | 1,1,1-Trichloroethane | ND | 2.5 | 0.70 | U |
| 75-27-4 | Bromodichloromethane | ND | 0.50 | 0.19 | U |
| 10061-02-6 | trans-1,3-Dichloropropene | ND | 0.50 | 0.16 | U |
| 10061-01-5 | cis-1,3-Dichloropropene | ND | 0.50 | 0.14 | U |
| 542-75-6 | 1,3-Dichloropropene, Total | ND | 0.50 | 0.14 | U |
| 563-58-6 | 1,1-Dichloropropene | ND | 2.5 | 0.70 | U |
| 75-25-2 | Bromoform | ND | 2.0 | 0.65 | U |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | ND | 0.50 | 0.17 | U |
| 71-43-2 | Benzene | ND | 0.50 | 0.16 | U |
| 108-88-3 | Toluene | ND | 2.5 | 0.70 | U |
| 100-41-4 | Ethylbenzene | ND | 2.5 | 0.70 | U |
| 74-87-3 | Chloromethane | ND | 2.5 | 0.70 | U |
| 74-83-9 | Bromomethane | ND | 2.5 | 0.70 | U |
| 75-01-4 | Vinyl chloride | ND | 1.0 | 0.07 | U |

# Results Summary
# Form 1
# Volatile Organics by GC/MS

| | | | |
|---|---|---|---|
| **Client** | : Soils Engineering Services, Inc. | **Lab Number** | : L2009793 |
| **Project Name** | : GROSSINGERS | **Project Number** | : 9313 |
| **Lab ID** | : L2009793-01 | **Date Collected** | : 03/04/20 14:30 |
| **Client ID** | : MW-213 | **Date Received** | : 03/04/20 |
| **Sample Location** | : LIBERTY, NY | **Date Analyzed** | : 03/07/20 13:29 |
| **Sample Matrix** | : WATER | **Dilution Factor** | : 1 |
| **Analytical Method** | : 1,8260C | **Analyst** | : AJK |
| **Lab File ID** | : V01200307A11 | **Instrument ID** | : VOA101 |
| **Sample Amount** | : 10 ml | **GC Column** | : RTX-502.2 |
| **Level** | : LOW | **%Solids** | : N/A |
| **Extract Volume (MeOH)** | : N/A | **Injection Volume** | : N/A |

| | | ug/L | | | |
|---|---|---|---|---|---|
| **CAS NO.** | **Parameter** | **Results** | **RL** | **MDL** | **Qualifier** |
| 75-00-3 | Chloroethane | ND | 2.5 | 0.70 | U |
| 75-35-4 | 1,1-Dichloroethene | ND | 0.50 | 0.17 | U |
| 156-60-5 | trans-1,2-Dichloroethene | ND | 2.5 | 0.70 | U |
| 79-01-6 | Trichloroethene | ND | 0.50 | 0.18 | U |
| 95-50-1 | 1,2-Dichlorobenzene | ND | 2.5 | 0.70 | U |
| 541-73-1 | 1,3-Dichlorobenzene | ND | 2.5 | 0.70 | U |
| 106-46-7 | 1,4-Dichlorobenzene | ND | 2.5 | 0.70 | U |
| 1634-04-4 | Methyl tert butyl ether | ND | 2.5 | 0.70 | U |
| 179601-23-1 | p/m-Xylene | ND | 2.5 | 0.70 | U |
| 95-47-6 | o-Xylene | ND | 2.5 | 0.70 | U |
| 1330-20-7 | Xylenes, Total | ND | 2.5 | 0.70 | U |
| 156-59-2 | cis-1,2-Dichloroethene | ND | 2.5 | 0.70 | U |
| 540-59-0 | 1,2-Dichloroethene, Total | ND | 2.5 | 0.70 | U |
| 74-95-3 | Dibromomethane | ND | 5.0 | 1.0 | U |
| 96-18-4 | 1,2,3-Trichloropropane | ND | 2.5 | 0.70 | U |
| 107-13-1 | Acrylonitrile | ND | 5.0 | 1.5 | U |
| 100-42-5 | Styrene | ND | 2.5 | 0.70 | U |
| 75-71-8 | Dichlorodifluoromethane | 74 | 5.0 | 1.0 | |
| 67-64-1 | Acetone | ND | 5.0 | 1.5 | U |
| 75-15-0 | Carbon disulfide | ND | 5.0 | 1.0 | U |
| 78-93-3 | 2-Butanone | ND | 5.0 | 1.9 | U |
| 108-05-4 | Vinyl acetate | ND | 5.0 | 1.0 | U |
| 108-10-1 | 4-Methyl-2-pentanone | ND | 5.0 | 1.0 | U |
| 591-78-6 | 2-Hexanone | ND | 5.0 | 1.0 | U |
| 74-97-5 | Bromochloromethane | ND | 2.5 | 0.70 | U |

# Results Summary
# Form 1
# Volatile Organics by GC/MS

| | | | |
|---|---|---|---|
| **Client** | : Soils Engineering Services, Inc. | **Lab Number** | : L2009793 |
| **Project Name** | : GROSSINGERS | **Project Number** | : 9313 |
| **Lab ID** | : L2009793-01 | **Date Collected** | : 03/04/20 14:30 |
| **Client ID** | : MW-213 | **Date Received** | : 03/04/20 |
| **Sample Location** | : LIBERTY, NY | **Date Analyzed** | : 03/07/20 13:29 |
| **Sample Matrix** | : WATER | **Dilution Factor** | : 1 |
| **Analytical Method** | : 1,8260C | **Analyst** | : AJK |
| **Lab File ID** | : V01200307A11 | **Instrument ID** | : VOA101 |
| **Sample Amount** | : 10 ml | **GC Column** | : RTX-502.2 |
| **Level** | : LOW | **%Solids** | : N/A |
| **Extract Volume (MeOH)** | : N/A | **Injection Volume** | : N/A |

| | | ug/L | | | |
|---|---|---|---|---|---|
| **CAS NO.** | **Parameter** | **Results** | **RL** | **MDL** | **Qualifier** |
| 594-20-7 | 2,2-Dichloropropane | ND | 2.5 | 0.70 | U |
| 106-93-4 | 1,2-Dibromoethane | ND | 2.0 | 0.65 | U |
| 142-28-9 | 1,3-Dichloropropane | ND | 2.5 | 0.70 | U |
| 630-20-6 | 1,1,1,2-Tetrachloroethane | ND | 2.5 | 0.70 | U |
| 108-86-1 | Bromobenzene | ND | 2.5 | 0.70 | U |
| 104-51-8 | n-Butylbenzene | ND | 2.5 | 0.70 | U |
| 135-98-8 | sec-Butylbenzene | ND | 2.5 | 0.70 | U |
| 98-06-6 | tert-Butylbenzene | ND | 2.5 | 0.70 | U |
| 95-49-8 | o-Chlorotoluene | ND | 2.5 | 0.70 | U |
| 106-43-4 | p-Chlorotoluene | ND | 2.5 | 0.70 | U |
| 96-12-8 | 1,2-Dibromo-3-chloropropane | ND | 2.5 | 0.70 | U |
| 87-68-3 | Hexachlorobutadiene | ND | 2.5 | 0.70 | U |
| 98-82-8 | Isopropylbenzene | ND | 2.5 | 0.70 | U |
| 99-87-6 | p-Isopropyltoluene | ND | 2.5 | 0.70 | U |
| 91-20-3 | Naphthalene | ND | 2.5 | 0.70 | U |
| 103-65-1 | n-Propylbenzene | ND | 2.5 | 0.70 | U |
| 87-61-6 | 1,2,3-Trichlorobenzene | ND | 2.5 | 0.70 | U |
| 120-82-1 | 1,2,4-Trichlorobenzene | ND | 2.5 | 0.70 | U |
| 108-67-8 | 1,3,5-Trimethylbenzene | ND | 2.5 | 0.70 | U |
| 95-63-6 | 1,2,4-Trimethylbenzene | ND | 2.5 | 0.70 | U |
| 123-91-1 | 1,4-Dioxane | ND | 250 | 61. | U |
| 105-05-5 | p-Diethylbenzene | ND | 2.0 | 0.70 | U |
| 622-96-8 | p-Ethyltoluene | ND | 2.0 | 0.70 | U |
| 95-93-2 | 1,2,4,5-Tetramethylbenzene | ND | 2.0 | 0.54 | U |
| 60-29-7 | Ethyl ether | ND | 2.5 | 0.70 | U |

# Results Summary
# Form 1
# Volatile Organics by GC/MS

| | | | |
|---|---|---|---|
| **Client** | : Soils Engineering Services, Inc. | **Lab Number** | : L2009793 |
| **Project Name** | : GROSSINGERS | **Project Number** | : 9313 |
| **Lab ID** | : L2009793-01 | **Date Collected** | : 03/04/20 14:30 |
| **Client ID** | : MW-213 | **Date Received** | : 03/04/20 |
| **Sample Location** | : LIBERTY, NY | **Date Analyzed** | : 03/07/20 13:29 |
| **Sample Matrix** | : WATER | **Dilution Factor** | : 1 |
| **Analytical Method** | : 1,8260C | **Analyst** | : AJK |
| **Lab File ID** | : V01200307A11 | **Instrument ID** | : VOA101 |
| **Sample Amount** | : 10 ml | **GC Column** | : RTX-502.2 |
| **Level** | : LOW | **%Solids** | : N/A |
| **Extract Volume (MeOH)** | : N/A | **Injection Volume** | : N/A |

| | | ug/L | | | |
|---|---|---|---|---|---|
| **CAS NO.** | **Parameter** | **Results** | **RL** | **MDL** | **Qualifier** |
| 110-57-6 | trans-1,4-Dichloro-2-butene | ND | 2.5 | 0.70 | U |

# Tentatively Identified Compounds
# Form 1
# Volatile Organics by GC/MS

| | | | |
|---|---|---|---|
| **Client** | : Soils Engineering Services, Inc. | **Lab Number** | : L2009793 |
| **Project Name** | : GROSSINGERS | **Project Number** | : 9313 |
| **Lab ID** | : L2009793-01 | **Date Collected** | : 03/04/20 14:30 |
| **Client ID** | : MW-213 | **Date Received** | : 03/04/20 |
| **Sample Location** | : LIBERTY, NY | **Date Analyzed** | : 03/07/20 13:29 |
| **Sample Matrix** | : WATER | **Dilution Factor** | : 1 |
| **Analytical Method** | : 1,8260C | **Analyst** | : AJK |
| **Lab File ID** | : V01200307A11 | **Instrument ID** | : VOA101 |
| **Sample Amount** | : 10 ml | **GC Column** | : RTX-502.2 |
| **Level** | : | **%Solids** | : N/A |
| **Extract Volume (MeOH)** | : N/A | **Injection Volume** | : N/A |

**Number TICS found: 2** **Concentration Units: ug/L**

| CAS Number | Compound Name | RT | EST. CONC. | Qualifier |
|---|---|---|---|---|
| 000075-43-4 | Fluorodichloromethane | 2.82 | 16.6 | NJ |
| | Total TIC Compounds | | 16.6J | J |

# Results Summary
# Form 1
# Volatile Organics by GC/MS

| | | | |
|---|---|---|---|
| **Client** | : Soils Engineering Services, Inc. | **Lab Number** | : L2009793 |
| **Project Name** | : GROSSINGERS | **Project Number** | : 9313 |
| **Lab ID** | : L2009793-02 | **Date Collected** | : 03/04/20 10:30 |
| **Client ID** | : MW-214 | **Date Received** | : 03/04/20 |
| **Sample Location** | : LIBERTY, NY | **Date Analyzed** | : 03/07/20 13:53 |
| **Sample Matrix** | : WATER | **Dilution Factor** | : 1 |
| **Analytical Method** | : 1,8260C | **Analyst** | : AJK |
| **Lab File ID** | : V01200307A12 | **Instrument ID** | : VOA101 |
| **Sample Amount** | : 10 ml | **GC Column** | : RTX-502.2 |
| **Level** | : LOW | **%Solids** | : N/A |
| **Extract Volume (MeOH)** | : N/A | **Injection Volume** | : N/A |

| | | ug/L | | | |
|---|---|---|---|---|---|
| **CAS NO.** | **Parameter** | **Results** | **RL** | **MDL** | **Qualifier** |
| 75-09-2 | Methylene chloride | ND | 2.5 | 0.70 | U |
| 75-34-3 | 1,1-Dichloroethane | ND | 2.5 | 0.70 | U |
| 67-66-3 | Chloroform | ND | 2.5 | 0.70 | U |
| 56-23-5 | Carbon tetrachloride | ND | 0.50 | 0.13 | U |
| 78-87-5 | 1,2-Dichloropropane | ND | 1.0 | 0.14 | U |
| 124-48-1 | Dibromochloromethane | ND | 0.50 | 0.15 | U |
| 79-00-5 | 1,1,2-Trichloroethane | ND | 1.5 | 0.50 | U |
| 127-18-4 | Tetrachloroethene | ND | 0.50 | 0.18 | U |
| 108-90-7 | Chlorobenzene | ND | 2.5 | 0.70 | U |
| 75-69-4 | Trichlorofluoromethane | 10 | 2.5 | 0.70 | |
| 107-06-2 | 1,2-Dichloroethane | ND | 0.50 | 0.13 | U |
| 71-55-6 | 1,1,1-Trichloroethane | ND | 2.5 | 0.70 | U |
| 75-27-4 | Bromodichloromethane | ND | 0.50 | 0.19 | U |
| 10061-02-6 | trans-1,3-Dichloropropene | ND | 0.50 | 0.16 | U |
| 10061-01-5 | cis-1,3-Dichloropropene | ND | 0.50 | 0.14 | U |
| 542-75-6 | 1,3-Dichloropropene, Total | ND | 0.50 | 0.14 | U |
| 563-58-6 | 1,1-Dichloropropene | ND | 2.5 | 0.70 | U |
| 75-25-2 | Bromoform | ND | 2.0 | 0.65 | U |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | ND | 0.50 | 0.17 | U |
| 71-43-2 | Benzene | ND | 0.50 | 0.16 | U |
| 108-88-3 | Toluene | ND | 2.5 | 0.70 | U |
| 100-41-4 | Ethylbenzene | ND | 2.5 | 0.70 | U |
| 74-87-3 | Chloromethane | ND | 2.5 | 0.70 | U |
| 74-83-9 | Bromomethane | ND | 2.5 | 0.70 | U |
| 75-01-4 | Vinyl chloride | ND | 1.0 | 0.07 | U |

# Results Summary
# Form 1
# Volatile Organics by GC/MS

| | | | |
|---|---|---|---|
| **Client** | : Soils Engineering Services, Inc. | **Lab Number** | : L2009793 |
| **Project Name** | : GROSSINGERS | **Project Number** | : 9313 |
| **Lab ID** | : L2009793-02 | **Date Collected** | : 03/04/20 10:30 |
| **Client ID** | : MW-214 | **Date Received** | : 03/04/20 |
| **Sample Location** | : LIBERTY, NY | **Date Analyzed** | : 03/07/20 13:53 |
| **Sample Matrix** | : WATER | **Dilution Factor** | : 1 |
| **Analytical Method** | : 1,8260C | **Analyst** | : AJK |
| **Lab File ID** | : V01200307A12 | **Instrument ID** | : VOA101 |
| **Sample Amount** | : 10 ml | **GC Column** | : RTX-502.2 |
| **Level** | : LOW | **%Solids** | : N/A |
| **Extract Volume (MeOH)** | : N/A | **Injection Volume** | : N/A |

| | | ug/L | | | |
|---|---|---|---|---|---|
| **CAS NO.** | **Parameter** | **Results** | **RL** | **MDL** | **Qualifier** |
| 75-00-3 | Chloroethane | ND | 2.5 | 0.70 | U |
| 75-35-4 | 1,1-Dichloroethene | ND | 0.50 | 0.17 | U |
| 156-60-5 | trans-1,2-Dichloroethene | ND | 2.5 | 0.70 | U |
| 79-01-6 | Trichloroethene | ND | 0.50 | 0.18 | U |
| 95-50-1 | 1,2-Dichlorobenzene | ND | 2.5 | 0.70 | U |
| 541-73-1 | 1,3-Dichlorobenzene | ND | 2.5 | 0.70 | U |
| 106-46-7 | 1,4-Dichlorobenzene | ND | 2.5 | 0.70 | U |
| 1634-04-4 | Methyl tert butyl ether | ND | 2.5 | 0.70 | U |
| 179601-23-1 | p/m-Xylene | ND | 2.5 | 0.70 | U |
| 95-47-6 | o-Xylene | ND | 2.5 | 0.70 | U |
| 1330-20-7 | Xylenes, Total | ND | 2.5 | 0.70 | U |
| 156-59-2 | cis-1,2-Dichloroethene | ND | 2.5 | 0.70 | U |
| 540-59-0 | 1,2-Dichloroethene, Total | ND | 2.5 | 0.70 | U |
| 74-95-3 | Dibromomethane | ND | 5.0 | 1.0 | U |
| 96-18-4 | 1,2,3-Trichloropropane | ND | 2.5 | 0.70 | U |
| 107-13-1 | Acrylonitrile | ND | 5.0 | 1.5 | U |
| 100-42-5 | Styrene | ND | 2.5 | 0.70 | U |
| 75-71-8 | Dichlorodifluoromethane | 27 | 5.0 | 1.0 | |
| 67-64-1 | Acetone | ND | 5.0 | 1.5 | U |
| 75-15-0 | Carbon disulfide | ND | 5.0 | 1.0 | U |
| 78-93-3 | 2-Butanone | ND | 5.0 | 1.9 | U |
| 108-05-4 | Vinyl acetate | ND | 5.0 | 1.0 | U |
| 108-10-1 | 4-Methyl-2-pentanone | ND | 5.0 | 1.0 | U |
| 591-78-6 | 2-Hexanone | ND | 5.0 | 1.0 | U |
| 74-97-5 | Bromochloromethane | ND | 2.5 | 0.70 | U |

# Results Summary
# Form 1
# Volatile Organics by GC/MS

| | | | |
|---|---|---|---|
| **Client** | : Soils Engineering Services, Inc. | **Lab Number** | : L2009793 |
| **Project Name** | : GROSSINGERS | **Project Number** | : 9313 |
| **Lab ID** | : L2009793-02 | **Date Collected** | : 03/04/20 10:30 |
| **Client ID** | : MW-214 | **Date Received** | : 03/04/20 |
| **Sample Location** | : LIBERTY, NY | **Date Analyzed** | : 03/07/20 13:53 |
| **Sample Matrix** | : WATER | **Dilution Factor** | : 1 |
| **Analytical Method** | : 1,8260C | **Analyst** | : AJK |
| **Lab File ID** | : V01200307A12 | **Instrument ID** | : VOA101 |
| **Sample Amount** | : 10 ml | **GC Column** | : RTX-502.2 |
| **Level** | : LOW | **%Solids** | : N/A |
| **Extract Volume (MeOH)** | : N/A | **Injection Volume** | : N/A |

| | | ug/L | | | |
|---|---|---|---|---|---|
| **CAS NO.** | **Parameter** | **Results** | **RL** | **MDL** | **Qualifier** |
| 594-20-7 | 2,2-Dichloropropane | ND | 2.5 | 0.70 | U |
| 106-93-4 | 1,2-Dibromoethane | ND | 2.0 | 0.65 | U |
| 142-28-9 | 1,3-Dichloropropane | ND | 2.5 | 0.70 | U |
| 630-20-6 | 1,1,1,2-Tetrachloroethane | ND | 2.5 | 0.70 | U |
| 108-86-1 | Bromobenzene | ND | 2.5 | 0.70 | U |
| 104-51-8 | n-Butylbenzene | ND | 2.5 | 0.70 | U |
| 135-98-8 | sec-Butylbenzene | ND | 2.5 | 0.70 | U |
| 98-06-6 | tert-Butylbenzene | ND | 2.5 | 0.70 | U |
| 95-49-8 | o-Chlorotoluene | ND | 2.5 | 0.70 | U |
| 106-43-4 | p-Chlorotoluene | ND | 2.5 | 0.70 | U |
| 96-12-8 | 1,2-Dibromo-3-chloropropane | ND | 2.5 | 0.70 | U |
| 87-68-3 | Hexachlorobutadiene | ND | 2.5 | 0.70 | U |
| 98-82-8 | Isopropylbenzene | ND | 2.5 | 0.70 | U |
| 99-87-6 | p-Isopropyltoluene | ND | 2.5 | 0.70 | U |
| 91-20-3 | Naphthalene | ND | 2.5 | 0.70 | U |
| 103-65-1 | n-Propylbenzene | ND | 2.5 | 0.70 | U |
| 87-61-6 | 1,2,3-Trichlorobenzene | ND | 2.5 | 0.70 | U |
| 120-82-1 | 1,2,4-Trichlorobenzene | ND | 2.5 | 0.70 | U |
| 108-67-8 | 1,3,5-Trimethylbenzene | ND | 2.5 | 0.70 | U |
| 95-63-6 | 1,2,4-Trimethylbenzene | ND | 2.5 | 0.70 | U |
| 123-91-1 | 1,4-Dioxane | ND | 250 | 61. | U |
| 105-05-5 | p-Diethylbenzene | ND | 2.0 | 0.70 | U |
| 622-96-8 | p-Ethyltoluene | ND | 2.0 | 0.70 | U |
| 95-93-2 | 1,2,4,5-Tetramethylbenzene | ND | 2.0 | 0.54 | U |
| 60-29-7 | Ethyl ether | ND | 2.5 | 0.70 | U |

# Results Summary
# Form 1
# Volatile Organics by GC/MS

| | | | |
|---|---|---|---|
| **Client** | : Soils Engineering Services, Inc. | **Lab Number** | : L2009793 |
| **Project Name** | : GROSSINGERS | **Project Number** | : 9313 |
| **Lab ID** | : L2009793-02 | **Date Collected** | : 03/04/20 10:30 |
| **Client ID** | : MW-214 | **Date Received** | : 03/04/20 |
| **Sample Location** | : LIBERTY, NY | **Date Analyzed** | : 03/07/20 13:53 |
| **Sample Matrix** | : WATER | **Dilution Factor** | : 1 |
| **Analytical Method** | : 1,8260C | **Analyst** | : AJK |
| **Lab File ID** | : V01200307A12 | **Instrument ID** | : VOA101 |
| **Sample Amount** | : 10 ml | **GC Column** | : RTX-502.2 |
| **Level** | : LOW | **%Solids** | : N/A |
| **Extract Volume (MeOH)** | : N/A | **Injection Volume** | : N/A |

| | | ug/L | | | |
|---|---|---|---|---|---|
| **CAS NO.** | **Parameter** | **Results** | **RL** | **MDL** | **Qualifier** |
| 110-57-6 | trans-1,4-Dichloro-2-butene | ND | 2.5 | 0.70 | U |

# Tentatively Identified Compounds
# Form 1
# Volatile Organics by GC/MS

| | | | |
|---|---|---|---|
| **Client** | : Soils Engineering Services, Inc. | **Lab Number** | : L2009793 |
| **Project Name** | : GROSSINGERS | **Project Number** | : 9313 |
| **Lab ID** | : L2009793-02 | **Date Collected** | : 03/04/20 10:30 |
| **Client ID** | : MW-214 | **Date Received** | : 03/04/20 |
| **Sample Location** | : LIBERTY, NY | **Date Analyzed** | : 03/07/20 13:53 |
| **Sample Matrix** | : WATER | **Dilution Factor** | : 1 |
| **Analytical Method** | : 1,8260C | **Analyst** | : AJK |
| **Lab File ID** | : V01200307A12 | **Instrument ID** | : VOA101 |
| **Sample Amount** | : 10 ml | **GC Column** | : RTX-502.2 |
| **Level** | : | **%Solids** | : N/A |
| **Extract Volume (MeOH)** | : N/A | **Injection Volume** | : N/A |

**Number TICS found: 2** **Concentration Units: ug/L**

| CAS Number | Compound Name | RT | EST. CONC. | Qualifier |
|---|---|---|---|---|
| 000075-43-4 | Fluorodichloromethane | 2.81 | 5.11 | NJ |
| | Total TIC Compounds | | 5.11J | J |

# Results Summary
# Form 1
# Volatile Organics by GC/MS

| | | | |
|---|---|---|---|
| **Client** | : Soils Engineering Services, Inc. | **Lab Number** | : L2009793 |
| **Project Name** | : GROSSINGERS | **Project Number** | : 9313 |
| **Lab ID** | : L2009793-04 | **Date Collected** | : 03/03/20 00:00 |
| **Client ID** | : TB | **Date Received** | : 03/04/20 |
| **Sample Location** | : LIBERTY, NY | **Date Analyzed** | : 03/06/20 15:30 |
| **Sample Matrix** | : WATER | **Dilution Factor** | : 1 |
| **Analytical Method** | : 1,8260C | **Analyst** | : MKS |
| **Lab File ID** | : V22200306A15 | **Instrument ID** | : VOA122 |
| **Sample Amount** | : 10 ml | **GC Column** | : RTX-502.2 |
| **Level** | : LOW | **%Solids** | : N/A |
| **Extract Volume (MeOH)** | : N/A | **Injection Volume** | : N/A |

| | | ug/L | | | |
|---|---|---|---|---|---|
| **CAS NO.** | **Parameter** | **Results** | **RL** | **MDL** | **Qualifier** |
| 75-09-2 | Methylene chloride | ND | 2.5 | 0.70 | U |
| 75-34-3 | 1,1-Dichloroethane | ND | 2.5 | 0.70 | U |
| 67-66-3 | Chloroform | ND | 2.5 | 0.70 | U |
| 56-23-5 | Carbon tetrachloride | ND | 0.50 | 0.13 | U |
| 78-87-5 | 1,2-Dichloropropane | ND | 1.0 | 0.14 | U |
| 124-48-1 | Dibromochloromethane | ND | 0.50 | 0.15 | U |
| 79-00-5 | 1,1,2-Trichloroethane | ND | 1.5 | 0.50 | U |
| 127-18-4 | Tetrachloroethene | ND | 0.50 | 0.18 | U |
| 108-90-7 | Chlorobenzene | ND | 2.5 | 0.70 | U |
| 75-69-4 | Trichlorofluoromethane | ND | 2.5 | 0.70 | U |
| 107-06-2 | 1,2-Dichloroethane | ND | 0.50 | 0.13 | U |
| 71-55-6 | 1,1,1-Trichloroethane | ND | 2.5 | 0.70 | U |
| 75-27-4 | Bromodichloromethane | ND | 0.50 | 0.19 | U |
| 10061-02-6 | trans-1,3-Dichloropropene | ND | 0.50 | 0.16 | U |
| 10061-01-5 | cis-1,3-Dichloropropene | ND | 0.50 | 0.14 | U |
| 542-75-6 | 1,3-Dichloropropene, Total | ND | 0.50 | 0.14 | U |
| 563-58-6 | 1,1-Dichloropropene | ND | 2.5 | 0.70 | U |
| 75-25-2 | Bromoform | ND | 2.0 | 0.65 | U |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | ND | 0.50 | 0.17 | U |
| 71-43-2 | Benzene | ND | 0.50 | 0.16 | U |
| 108-88-3 | Toluene | ND | 2.5 | 0.70 | U |
| 100-41-4 | Ethylbenzene | ND | 2.5 | 0.70 | U |
| 74-87-3 | Chloromethane | ND | 2.5 | 0.70 | U |
| 74-83-9 | Bromomethane | ND | 2.5 | 0.70 | U |
| 75-01-4 | Vinyl chloride | ND | 1.0 | 0.07 | U |

# Results Summary
# Form 1
# Volatile Organics by GC/MS

| | | | |
|---|---|---|---|
| **Client** | : Soils Engineering Services, Inc. | **Lab Number** | : L2009793 |
| **Project Name** | : GROSSINGERS | **Project Number** | : 9313 |
| **Lab ID** | : L2009793-04 | **Date Collected** | : 03/03/20 00:00 |
| **Client ID** | : TB | **Date Received** | : 03/04/20 |
| **Sample Location** | : LIBERTY, NY | **Date Analyzed** | : 03/06/20 15:30 |
| **Sample Matrix** | : WATER | **Dilution Factor** | : 1 |
| **Analytical Method** | : 1,8260C | **Analyst** | : MKS |
| **Lab File ID** | : V22200306A15 | **Instrument ID** | : VOA122 |
| **Sample Amount** | : 10 ml | **GC Column** | : RTX-502.2 |
| **Level** | : LOW | **%Solids** | : N/A |
| **Extract Volume (MeOH)** | : N/A | **Injection Volume** | : N/A |

| | | ug/L | | | |
|---|---|---|---|---|---|
| **CAS NO.** | **Parameter** | **Results** | **RL** | **MDL** | **Qualifier** |
| 75-00-3 | Chloroethane | ND | 2.5 | 0.70 | U |
| 75-35-4 | 1,1-Dichloroethene | ND | 0.50 | 0.17 | U |
| 156-60-5 | trans-1,2-Dichloroethene | ND | 2.5 | 0.70 | U |
| 79-01-6 | Trichloroethene | ND | 0.50 | 0.18 | U |
| 95-50-1 | 1,2-Dichlorobenzene | ND | 2.5 | 0.70 | U |
| 541-73-1 | 1,3-Dichlorobenzene | ND | 2.5 | 0.70 | U |
| 106-46-7 | 1,4-Dichlorobenzene | ND | 2.5 | 0.70 | U |
| 1634-04-4 | Methyl tert butyl ether | ND | 2.5 | 0.70 | U |
| 179601-23-1 | p/m-Xylene | ND | 2.5 | 0.70 | U |
| 95-47-6 | o-Xylene | ND | 2.5 | 0.70 | U |
| 1330-20-7 | Xylenes, Total | ND | 2.5 | 0.70 | U |
| 156-59-2 | cis-1,2-Dichloroethene | ND | 2.5 | 0.70 | U |
| 540-59-0 | 1,2-Dichloroethene, Total | ND | 2.5 | 0.70 | U |
| 74-95-3 | Dibromomethane | ND | 5.0 | 1.0 | U |
| 96-18-4 | 1,2,3-Trichloropropane | ND | 2.5 | 0.70 | U |
| 107-13-1 | Acrylonitrile | ND | 5.0 | 1.5 | U |
| 100-42-5 | Styrene | ND | 2.5 | 0.70 | U |
| 75-71-8 | Dichlorodifluoromethane | ND | 5.0 | 1.0 | U |
| 67-64-1 | Acetone | ND | 5.0 | 1.5 | U |
| 75-15-0 | Carbon disulfide | ND | 5.0 | 1.0 | U |
| 78-93-3 | 2-Butanone | ND | 5.0 | 1.9 | U |
| 108-05-4 | Vinyl acetate | ND | 5.0 | 1.0 | U |
| 108-10-1 | 4-Methyl-2-pentanone | ND | 5.0 | 1.0 | U |
| 591-78-6 | 2-Hexanone | ND | 5.0 | 1.0 | U |
| 74-97-5 | Bromochloromethane | ND | 2.5 | 0.70 | U |

# Results Summary
# Form 1
# Volatile Organics by GC/MS

| | | | |
|---|---|---|---|
| **Client** | : Soils Engineering Services, Inc. | **Lab Number** | : L2009793 |
| **Project Name** | : GROSSINGERS | **Project Number** | : 9313 |
| **Lab ID** | : L2009793-04 | **Date Collected** | : 03/03/20 00:00 |
| **Client ID** | : TB | **Date Received** | : 03/04/20 |
| **Sample Location** | : LIBERTY, NY | **Date Analyzed** | : 03/06/20 15:30 |
| **Sample Matrix** | : WATER | **Dilution Factor** | : 1 |
| **Analytical Method** | : 1,8260C | **Analyst** | : MKS |
| **Lab File ID** | : V22200306A15 | **Instrument ID** | : VOA122 |
| **Sample Amount** | : 10 ml | **GC Column** | : RTX-502.2 |
| **Level** | : LOW | **%Solids** | : N/A |
| **Extract Volume (MeOH)** | : N/A | **Injection Volume** | : N/A |

| | | ug/L | | | |
|---|---|---|---|---|---|
| **CAS NO.** | **Parameter** | **Results** | **RL** | **MDL** | **Qualifier** |
| 594-20-7 | 2,2-Dichloropropane | ND | 2.5 | 0.70 | U |
| 106-93-4 | 1,2-Dibromoethane | ND | 2.0 | 0.65 | U |
| 142-28-9 | 1,3-Dichloropropane | ND | 2.5 | 0.70 | U |
| 630-20-6 | 1,1,1,2-Tetrachloroethane | ND | 2.5 | 0.70 | U |
| 108-86-1 | Bromobenzene | ND | 2.5 | 0.70 | U |
| 104-51-8 | n-Butylbenzene | ND | 2.5 | 0.70 | U |
| 135-98-8 | sec-Butylbenzene | ND | 2.5 | 0.70 | U |
| 98-06-6 | tert-Butylbenzene | ND | 2.5 | 0.70 | U |
| 95-49-8 | o-Chlorotoluene | ND | 2.5 | 0.70 | U |
| 106-43-4 | p-Chlorotoluene | ND | 2.5 | 0.70 | U |
| 96-12-8 | 1,2-Dibromo-3-chloropropane | ND | 2.5 | 0.70 | U |
| 87-68-3 | Hexachlorobutadiene | ND | 2.5 | 0.70 | U |
| 98-82-8 | Isopropylbenzene | ND | 2.5 | 0.70 | U |
| 99-87-6 | p-Isopropyltoluene | ND | 2.5 | 0.70 | U |
| 91-20-3 | Naphthalene | ND | 2.5 | 0.70 | U |
| 103-65-1 | n-Propylbenzene | ND | 2.5 | 0.70 | U |
| 87-61-6 | 1,2,3-Trichlorobenzene | ND | 2.5 | 0.70 | U |
| 120-82-1 | 1,2,4-Trichlorobenzene | ND | 2.5 | 0.70 | U |
| 108-67-8 | 1,3,5-Trimethylbenzene | ND | 2.5 | 0.70 | U |
| 95-63-6 | 1,2,4-Trimethylbenzene | ND | 2.5 | 0.70 | U |
| 123-91-1 | 1,4-Dioxane | ND | 250 | 61. | U |
| 105-05-5 | p-Diethylbenzene | ND | 2.0 | 0.70 | U |
| 622-96-8 | p-Ethyltoluene | ND | 2.0 | 0.70 | U |
| 95-93-2 | 1,2,4,5-Tetramethylbenzene | ND | 2.0 | 0.54 | U |
| 60-29-7 | Ethyl ether | ND | 2.5 | 0.70 | U |

# Results Summary
# Form 1
# Volatile Organics by GC/MS

| | | | |
|---|---|---|---|
| **Client** | : Soils Engineering Services, Inc. | **Lab Number** | : L2009793 |
| **Project Name** | : GROSSINGERS | **Project Number** | : 9313 |
| **Lab ID** | : L2009793-04 | **Date Collected** | : 03/03/20 00:00 |
| **Client ID** | : TB | **Date Received** | : 03/04/20 |
| **Sample Location** | : LIBERTY, NY | **Date Analyzed** | : 03/06/20 15:30 |
| **Sample Matrix** | : WATER | **Dilution Factor** | : 1 |
| **Analytical Method** | : 1,8260C | **Analyst** | : MKS |
| **Lab File ID** | : V22200306A15 | **Instrument ID** | : VOA122 |
| **Sample Amount** | : 10 ml | **GC Column** | : RTX-502.2 |
| **Level** | : LOW | **%Solids** | : N/A |
| **Extract Volume (MeOH)** | : N/A | **Injection Volume** | : N/A |

| | | ug/L | | | |
|---|---|---|---|---|---|
| **CAS NO.** | **Parameter** | **Results** | **RL** | **MDL** | **Qualifier** |
| 110-57-6 | trans-1,4-Dichloro-2-butene | ND | 2.5 | 0.70 | U |

# Tentatively Identified Compounds
# Form 1
# Volatile Organics by GC/MS

| | | | |
|---|---|---|---|
| **Client** | : Soils Engineering Services, Inc. | **Lab Number** | : L2009793 |
| **Project Name** | : GROSSINGERS | **Project Number** | : 9313 |
| **Lab ID** | : L2009793-04 | **Date Collected** | : 03/03/20 00:00 |
| **Client ID** | : TB | **Date Received** | : 03/04/20 |
| **Sample Location** | : LIBERTY, NY | **Date Analyzed** | : 03/06/20 15:30 |
| **Sample Matrix** | : WATER | **Dilution Factor** | : 1 |
| **Analytical Method** | : 1,8260C | **Analyst** | : PD |
| **Lab File ID** | : V22200306A15 | **Instrument ID** | : VOA122 |
| **Sample Amount** | : 10 ml | **GC Column** | : RTX-502.2 |
| **Level** | : | **%Solids** | : N/A |
| **Extract Volume (MeOH)** | : N/A | **Injection Volume** | : N/A |

**Number TICS found: 0** **Concentration Units: ug/L**

| CAS Number | Compound Name | RT | EST. CONC. | Qualifier |
|---|---|---|---|---|
| | NO TENTATIVELY IDENTIFIED COMPOUNDS | | | |

# Results Summary
# Form 1
# Volatile Organics by GC/MS

| | | | |
|---|---|---|---|
| **Client** | : Soils Engineering Services, Inc. | **Lab Number** | : L2009793 |
| **Project Name** | : GROSSINGERS | **Project Number** | : 9313 |
| **Lab ID** | : WG1348135-5 | **Date Collected** | : NA |
| **Client ID** | : WG1348135-5BLANK | **Date Received** | : NA |
| **Sample Location** | : | **Date Analyzed** | : 03/06/20 11:24 |
| **Sample Matrix** | : WATER | **Dilution Factor** | : 1 |
| **Analytical Method** | : 1,8260C | **Analyst** | : PD |
| **Lab File ID** | : V22200306A05 | **Instrument ID** | : VOA122 |
| **Sample Amount** | : 10 ml | **GC Column** | : RTX-502.2 |
| **Level** | : LOW | **%Solids** | : N/A |
| **Extract Volume (MeOH)** | : N/A | **Injection Volume** | : N/A |

| | | ug/L | | | |
|---|---|---|---|---|---|
| **CAS NO.** | **Parameter** | **Results** | **RL** | **MDL** | **Qualifier** |
| 75-09-2 | Methylene chloride | ND | 2.5 | 0.70 | U |
| 75-34-3 | 1,1-Dichloroethane | ND | 2.5 | 0.70 | U |
| 67-66-3 | Chloroform | ND | 2.5 | 0.70 | U |
| 56-23-5 | Carbon tetrachloride | ND | 0.50 | 0.13 | U |
| 78-87-5 | 1,2-Dichloropropane | ND | 1.0 | 0.14 | U |
| 124-48-1 | Dibromochloromethane | ND | 0.50 | 0.15 | U |
| 79-00-5 | 1,1,2-Trichloroethane | ND | 1.5 | 0.50 | U |
| 127-18-4 | Tetrachloroethene | ND | 0.50 | 0.18 | U |
| 108-90-7 | Chlorobenzene | ND | 2.5 | 0.70 | U |
| 75-69-4 | Trichlorofluoromethane | ND | 2.5 | 0.70 | U |
| 107-06-2 | 1,2-Dichloroethane | ND | 0.50 | 0.13 | U |
| 71-55-6 | 1,1,1-Trichloroethane | ND | 2.5 | 0.70 | U |
| 75-27-4 | Bromodichloromethane | ND | 0.50 | 0.19 | U |
| 10061-02-6 | trans-1,3-Dichloropropene | ND | 0.50 | 0.16 | U |
| 10061-01-5 | cis-1,3-Dichloropropene | ND | 0.50 | 0.14 | U |
| 542-75-6 | 1,3-Dichloropropene, Total | ND | 0.50 | 0.14 | U |
| 563-58-6 | 1,1-Dichloropropene | ND | 2.5 | 0.70 | U |
| 75-25-2 | Bromoform | ND | 2.0 | 0.65 | U |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | ND | 0.50 | 0.17 | U |
| 71-43-2 | Benzene | ND | 0.50 | 0.16 | U |
| 108-88-3 | Toluene | ND | 2.5 | 0.70 | U |
| 100-41-4 | Ethylbenzene | ND | 2.5 | 0.70 | U |
| 74-87-3 | Chloromethane | ND | 2.5 | 0.70 | U |
| 74-83-9 | Bromomethane | ND | 2.5 | 0.70 | U |
| 75-01-4 | Vinyl chloride | ND | 1.0 | 0.07 | U |

# Results Summary
# Form 1
# Volatile Organics by GC/MS

| | | | |
|---|---|---|---|
| **Client** | : Soils Engineering Services, Inc. | **Lab Number** | : L2009793 |
| **Project Name** | : GROSSINGERS | **Project Number** | : 9313 |
| **Lab ID** | : WG1348135-5 | **Date Collected** | : NA |
| **Client ID** | : WG1348135-5BLANK | **Date Received** | : NA |
| **Sample Location** | : | **Date Analyzed** | : 03/06/20 11:24 |
| **Sample Matrix** | : WATER | **Dilution Factor** | : 1 |
| **Analytical Method** | : 1,8260C | **Analyst** | : PD |
| **Lab File ID** | : V22200306A05 | **Instrument ID** | : VOA122 |
| **Sample Amount** | : 10 ml | **GC Column** | : RTX-502.2 |
| **Level** | : LOW | **%Solids** | : N/A |
| **Extract Volume (MeOH)** | : N/A | **Injection Volume** | : N/A |

| | | ug/L | | | |
|---|---|---|---|---|---|
| **CAS NO.** | **Parameter** | **Results** | **RL** | **MDL** | **Qualifier** |
| 75-00-3 | Chloroethane | ND | 2.5 | 0.70 | U |
| 75-35-4 | 1,1-Dichloroethene | ND | 0.50 | 0.17 | U |
| 156-60-5 | trans-1,2-Dichloroethene | ND | 2.5 | 0.70 | U |
| 79-01-6 | Trichloroethene | ND | 0.50 | 0.18 | U |
| 95-50-1 | 1,2-Dichlorobenzene | ND | 2.5 | 0.70 | U |
| 541-73-1 | 1,3-Dichlorobenzene | ND | 2.5 | 0.70 | U |
| 106-46-7 | 1,4-Dichlorobenzene | ND | 2.5 | 0.70 | U |
| 1634-04-4 | Methyl tert butyl ether | ND | 2.5 | 0.70 | U |
| 179601-23-1 | p/m-Xylene | ND | 2.5 | 0.70 | U |
| 95-47-6 | o-Xylene | ND | 2.5 | 0.70 | U |
| 1330-20-7 | Xylenes, Total | ND | 2.5 | 0.70 | U |
| 156-59-2 | cis-1,2-Dichloroethene | ND | 2.5 | 0.70 | U |
| 540-59-0 | 1,2-Dichloroethene, Total | ND | 2.5 | 0.70 | U |
| 74-95-3 | Dibromomethane | ND | 5.0 | 1.0 | U |
| 96-18-4 | 1,2,3-Trichloropropane | ND | 2.5 | 0.70 | U |
| 107-13-1 | Acrylonitrile | ND | 5.0 | 1.5 | U |
| 100-42-5 | Styrene | ND | 2.5 | 0.70 | U |
| 75-71-8 | Dichlorodifluoromethane | ND | 5.0 | 1.0 | U |
| 67-64-1 | Acetone | ND | 5.0 | 1.5 | U |
| 75-15-0 | Carbon disulfide | ND | 5.0 | 1.0 | U |
| 78-93-3 | 2-Butanone | ND | 5.0 | 1.9 | U |
| 108-05-4 | Vinyl acetate | ND | 5.0 | 1.0 | U |
| 108-10-1 | 4-Methyl-2-pentanone | ND | 5.0 | 1.0 | U |
| 591-78-6 | 2-Hexanone | ND | 5.0 | 1.0 | U |
| 74-97-5 | Bromochloromethane | ND | 2.5 | 0.70 | U |

# Results Summary
# Form 1
# Volatile Organics by GC/MS

| | | | |
|---|---|---|---|
| **Client** | : Soils Engineering Services, Inc. | **Lab Number** | : L2009793 |
| **Project Name** | : GROSSINGERS | **Project Number** | : 9313 |
| **Lab ID** | : WG1348135-5 | **Date Collected** | : NA |
| **Client ID** | : WG1348135-5BLANK | **Date Received** | : NA |
| **Sample Location** | : | **Date Analyzed** | : 03/06/20 11:24 |
| **Sample Matrix** | : WATER | **Dilution Factor** | : 1 |
| **Analytical Method** | : 1,8260C | **Analyst** | : PD |
| **Lab File ID** | : V22200306A05 | **Instrument ID** | : VOA122 |
| **Sample Amount** | : 10 ml | **GC Column** | : RTX-502.2 |
| **Level** | : LOW | **%Solids** | : N/A |
| **Extract Volume (MeOH)** | : N/A | **Injection Volume** | : N/A |

| | | ug/L | | | |
|---|---|---|---|---|---|
| **CAS NO.** | **Parameter** | **Results** | **RL** | **MDL** | **Qualifier** |
| 594-20-7 | 2,2-Dichloropropane | ND | 2.5 | 0.70 | U |
| 106-93-4 | 1,2-Dibromoethane | ND | 2.0 | 0.65 | U |
| 142-28-9 | 1,3-Dichloropropane | ND | 2.5 | 0.70 | U |
| 630-20-6 | 1,1,1,2-Tetrachloroethane | ND | 2.5 | 0.70 | U |
| 108-86-1 | Bromobenzene | ND | 2.5 | 0.70 | U |
| 104-51-8 | n-Butylbenzene | ND | 2.5 | 0.70 | U |
| 135-98-8 | sec-Butylbenzene | ND | 2.5 | 0.70 | U |
| 98-06-6 | tert-Butylbenzene | ND | 2.5 | 0.70 | U |
| 95-49-8 | o-Chlorotoluene | ND | 2.5 | 0.70 | U |
| 106-43-4 | p-Chlorotoluene | ND | 2.5 | 0.70 | U |
| 96-12-8 | 1,2-Dibromo-3-chloropropane | ND | 2.5 | 0.70 | U |
| 87-68-3 | Hexachlorobutadiene | ND | 2.5 | 0.70 | U |
| 98-82-8 | Isopropylbenzene | ND | 2.5 | 0.70 | U |
| 99-87-6 | p-Isopropyltoluene | ND | 2.5 | 0.70 | U |
| 91-20-3 | Naphthalene | ND | 2.5 | 0.70 | U |
| 103-65-1 | n-Propylbenzene | ND | 2.5 | 0.70 | U |
| 87-61-6 | 1,2,3-Trichlorobenzene | ND | 2.5 | 0.70 | U |
| 120-82-1 | 1,2,4-Trichlorobenzene | ND | 2.5 | 0.70 | U |
| 108-67-8 | 1,3,5-Trimethylbenzene | ND | 2.5 | 0.70 | U |
| 95-63-6 | 1,2,4-Trimethylbenzene | ND | 2.5 | 0.70 | U |
| 123-91-1 | 1,4-Dioxane | ND | 250 | 61. | U |
| 105-05-5 | p-Diethylbenzene | ND | 2.0 | 0.70 | U |
| 622-96-8 | p-Ethyltoluene | ND | 2.0 | 0.70 | U |
| 95-93-2 | 1,2,4,5-Tetramethylbenzene | ND | 2.0 | 0.54 | U |
| 60-29-7 | Ethyl ether | ND | 2.5 | 0.70 | U |

# Results Summary
# Form 1
# Volatile Organics by GC/MS

| | | | |
|---|---|---|---|
| **Client** | : Soils Engineering Services, Inc. | **Lab Number** | : L2009793 |
| **Project Name** | : GROSSINGERS | **Project Number** | : 9313 |
| **Lab ID** | : WG1348135-5 | **Date Collected** | : NA |
| **Client ID** | : WG1348135-5BLANK | **Date Received** | : NA |
| **Sample Location** | : | **Date Analyzed** | : 03/06/20 11:24 |
| **Sample Matrix** | : WATER | **Dilution Factor** | : 1 |
| **Analytical Method** | : 1,8260C | **Analyst** | : PD |
| **Lab File ID** | : V22200306A05 | **Instrument ID** | : VOA122 |
| **Sample Amount** | : 10 ml | **GC Column** | : RTX-502.2 |
| **Level** | : LOW | **%Solids** | : N/A |
| **Extract Volume (MeOH)** | : N/A | **Injection Volume** | : N/A |

| | | ug/L | | | |
|---|---|---|---|---|---|
| **CAS NO.** | **Parameter** | **Results** | **RL** | **MDL** | **Qualifier** |
| 110-57-6 | trans-1,4-Dichloro-2-butene | ND | 2.5 | 0.70 | U |

# Tentatively Identified Compounds
# Form 1
# Volatile Organics by GC/MS

| | | | |
|---|---|---|---|
| **Client** | : Soils Engineering Services, Inc. | **Lab Number** | : L2009793 |
| **Project Name** | : GROSSINGERS | **Project Number** | : 9313 |
| **Lab ID** | : WG1348135-5 | **Date Collected** | : NA |
| **Client ID** | : WG1348135-5BLANK | **Date Received** | : NA |
| **Sample Location** | : | **Date Analyzed** | : 03/06/20 11:24 |
| **Sample Matrix** | : WATER | **Dilution Factor** | : 1 |
| **Analytical Method** | : 1,8260C | **Analyst** | : PD |
| **Lab File ID** | : V22200306A05 | **Instrument ID** | : VOA122 |
| **Sample Amount** | : 10 ml | **GC Column** | : RTX-502.2 |
| **Level** | : | **%Solids** | : N/A |
| **Extract Volume (MeOH)** | : N/A | **Injection Volume** | : N/A |

**Number TICS found: 0** **Concentration Units: ug/L**

| CAS Number | Compound Name | RT | EST. CONC. | Qualifier |
|---|---|---|---|---|
| | NO TENTATIVELY IDENTIFIED COMPOUNDS | | | |

# Results Summary
# Form 1
# Volatile Organics by GC/MS

| | | | |
|---|---|---|---|
| **Client** | : Soils Engineering Services, Inc. | **Lab Number** | : L2009793 |
| **Project Name** | : GROSSINGERS | **Project Number** | : 9313 |
| **Lab ID** | : WG1348564-5 | **Date Collected** | : NA |
| **Client ID** | : WG1348564-5BLANK | **Date Received** | : NA |
| **Sample Location** | : | **Date Analyzed** | : 03/07/20 11:30 |
| **Sample Matrix** | : WATER | **Dilution Factor** | : 1 |
| **Analytical Method** | : 1,8260C | **Analyst** | : MKS |
| **Lab File ID** | : V01200307A06 | **Instrument ID** | : VOA101 |
| **Sample Amount** | : 10 ml | **GC Column** | : RTX-502.2 |
| **Level** | : LOW | **%Solids** | : N/A |
| **Extract Volume (MeOH)** | : N/A | **Injection Volume** | : N/A |

| | | ug/L | | | |
|---|---|---|---|---|---|
| **CAS NO.** | **Parameter** | **Results** | **RL** | **MDL** | **Qualifier** |
| 75-09-2 | Methylene chloride | ND | 2.5 | 0.70 | U |
| 75-34-3 | 1,1-Dichloroethane | ND | 2.5 | 0.70 | U |
| 67-66-3 | Chloroform | ND | 2.5 | 0.70 | U |
| 56-23-5 | Carbon tetrachloride | ND | 0.50 | 0.13 | U |
| 78-87-5 | 1,2-Dichloropropane | ND | 1.0 | 0.14 | U |
| 124-48-1 | Dibromochloromethane | ND | 0.50 | 0.15 | U |
| 79-00-5 | 1,1,2-Trichloroethane | ND | 1.5 | 0.50 | U |
| 127-18-4 | Tetrachloroethene | ND | 0.50 | 0.18 | U |
| 108-90-7 | Chlorobenzene | ND | 2.5 | 0.70 | U |
| 75-69-4 | Trichlorofluoromethane | ND | 2.5 | 0.70 | U |
| 107-06-2 | 1,2-Dichloroethane | ND | 0.50 | 0.13 | U |
| 71-55-6 | 1,1,1-Trichloroethane | ND | 2.5 | 0.70 | U |
| 75-27-4 | Bromodichloromethane | ND | 0.50 | 0.19 | U |
| 10061-02-6 | trans-1,3-Dichloropropene | ND | 0.50 | 0.16 | U |
| 10061-01-5 | cis-1,3-Dichloropropene | ND | 0.50 | 0.14 | U |
| 542-75-6 | 1,3-Dichloropropene, Total | ND | 0.50 | 0.14 | U |
| 563-58-6 | 1,1-Dichloropropene | ND | 2.5 | 0.70 | U |
| 75-25-2 | Bromoform | ND | 2.0 | 0.65 | U |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | ND | 0.50 | 0.17 | U |
| 71-43-2 | Benzene | ND | 0.50 | 0.16 | U |
| 108-88-3 | Toluene | ND | 2.5 | 0.70 | U |
| 100-41-4 | Ethylbenzene | ND | 2.5 | 0.70 | U |
| 74-87-3 | Chloromethane | ND | 2.5 | 0.70 | U |
| 74-83-9 | Bromomethane | ND | 2.5 | 0.70 | U |
| 75-01-4 | Vinyl chloride | ND | 1.0 | 0.07 | U |

# Results Summary
# Form 1
# Volatile Organics by GC/MS

| | | | |
|---|---|---|---|
| **Client** | : Soils Engineering Services, Inc. | **Lab Number** | : L2009793 |
| **Project Name** | : GROSSINGERS | **Project Number** | : 9313 |
| **Lab ID** | : WG1348564-5 | **Date Collected** | : NA |
| **Client ID** | : WG1348564-5BLANK | **Date Received** | : NA |
| **Sample Location** | : | **Date Analyzed** | : 03/07/20 11:30 |
| **Sample Matrix** | : WATER | **Dilution Factor** | : 1 |
| **Analytical Method** | : 1,8260C | **Analyst** | : MKS |
| **Lab File ID** | : V01200307A06 | **Instrument ID** | : VOA101 |
| **Sample Amount** | : 10 ml | **GC Column** | : RTX-502.2 |
| **Level** | : LOW | **%Solids** | : N/A |
| **Extract Volume (MeOH)** | : N/A | **Injection Volume** | : N/A |

| | | ug/L | | | |
|---|---|---|---|---|---|
| **CAS NO.** | **Parameter** | **Results** | **RL** | **MDL** | **Qualifier** |
| 75-00-3 | Chloroethane | ND | 2.5 | 0.70 | U |
| 75-35-4 | 1,1-Dichloroethene | ND | 0.50 | 0.17 | U |
| 156-60-5 | trans-1,2-Dichloroethene | ND | 2.5 | 0.70 | U |
| 79-01-6 | Trichloroethene | ND | 0.50 | 0.18 | U |
| 95-50-1 | 1,2-Dichlorobenzene | ND | 2.5 | 0.70 | U |
| 541-73-1 | 1,3-Dichlorobenzene | ND | 2.5 | 0.70 | U |
| 106-46-7 | 1,4-Dichlorobenzene | ND | 2.5 | 0.70 | U |
| 1634-04-4 | Methyl tert butyl ether | ND | 2.5 | 0.70 | U |
| 179601-23-1 | p/m-Xylene | ND | 2.5 | 0.70 | U |
| 95-47-6 | o-Xylene | ND | 2.5 | 0.70 | U |
| 1330-20-7 | Xylenes, Total | ND | 2.5 | 0.70 | U |
| 156-59-2 | cis-1,2-Dichloroethene | ND | 2.5 | 0.70 | U |
| 540-59-0 | 1,2-Dichloroethene, Total | ND | 2.5 | 0.70 | U |
| 74-95-3 | Dibromomethane | ND | 5.0 | 1.0 | U |
| 96-18-4 | 1,2,3-Trichloropropane | ND | 2.5 | 0.70 | U |
| 107-13-1 | Acrylonitrile | ND | 5.0 | 1.5 | U |
| 100-42-5 | Styrene | ND | 2.5 | 0.70 | U |
| 75-71-8 | Dichlorodifluoromethane | ND | 5.0 | 1.0 | U |
| 67-64-1 | Acetone | ND | 5.0 | 1.5 | U |
| 75-15-0 | Carbon disulfide | ND | 5.0 | 1.0 | U |
| 78-93-3 | 2-Butanone | ND | 5.0 | 1.9 | U |
| 108-05-4 | Vinyl acetate | ND | 5.0 | 1.0 | U |
| 108-10-1 | 4-Methyl-2-pentanone | ND | 5.0 | 1.0 | U |
| 591-78-6 | 2-Hexanone | ND | 5.0 | 1.0 | U |
| 74-97-5 | Bromochloromethane | ND | 2.5 | 0.70 | U |

# Results Summary
# Form 1
# Volatile Organics by GC/MS

| | | | |
|---|---|---|---|
| **Client** | : Soils Engineering Services, Inc. | **Lab Number** | : L2009793 |
| **Project Name** | : GROSSINGERS | **Project Number** | : 9313 |
| **Lab ID** | : WG1348564-5 | **Date Collected** | : NA |
| **Client ID** | : WG1348564-5BLANK | **Date Received** | : NA |
| **Sample Location** | : | **Date Analyzed** | : 03/07/20 11:30 |
| **Sample Matrix** | : WATER | **Dilution Factor** | : 1 |
| **Analytical Method** | : 1,8260C | **Analyst** | : MKS |
| **Lab File ID** | : V01200307A06 | **Instrument ID** | : VOA101 |
| **Sample Amount** | : 10 ml | **GC Column** | : RTX-502.2 |
| **Level** | : LOW | **%Solids** | : N/A |
| **Extract Volume (MeOH)** | : N/A | **Injection Volume** | : N/A |

| | | ug/L | | | |
|---|---|---|---|---|---|
| **CAS NO.** | **Parameter** | **Results** | **RL** | **MDL** | **Qualifier** |
| 594-20-7 | 2,2-Dichloropropane | ND | 2.5 | 0.70 | U |
| 106-93-4 | 1,2-Dibromoethane | ND | 2.0 | 0.65 | U |
| 142-28-9 | 1,3-Dichloropropane | ND | 2.5 | 0.70 | U |
| 630-20-6 | 1,1,1,2-Tetrachloroethane | ND | 2.5 | 0.70 | U |
| 108-86-1 | Bromobenzene | ND | 2.5 | 0.70 | U |
| 104-51-8 | n-Butylbenzene | ND | 2.5 | 0.70 | U |
| 135-98-8 | sec-Butylbenzene | ND | 2.5 | 0.70 | U |
| 98-06-6 | tert-Butylbenzene | ND | 2.5 | 0.70 | U |
| 95-49-8 | o-Chlorotoluene | ND | 2.5 | 0.70 | U |
| 106-43-4 | p-Chlorotoluene | ND | 2.5 | 0.70 | U |
| 96-12-8 | 1,2-Dibromo-3-chloropropane | ND | 2.5 | 0.70 | U |
| 87-68-3 | Hexachlorobutadiene | ND | 2.5 | 0.70 | U |
| 98-82-8 | Isopropylbenzene | ND | 2.5 | 0.70 | U |
| 99-87-6 | p-Isopropyltoluene | ND | 2.5 | 0.70 | U |
| 91-20-3 | Naphthalene | ND | 2.5 | 0.70 | U |
| 103-65-1 | n-Propylbenzene | ND | 2.5 | 0.70 | U |
| 87-61-6 | 1,2,3-Trichlorobenzene | ND | 2.5 | 0.70 | U |
| 120-82-1 | 1,2,4-Trichlorobenzene | ND | 2.5 | 0.70 | U |
| 108-67-8 | 1,3,5-Trimethylbenzene | ND | 2.5 | 0.70 | U |
| 95-63-6 | 1,2,4-Trimethylbenzene | ND | 2.5 | 0.70 | U |
| 123-91-1 | 1,4-Dioxane | ND | 250 | 61. | U |
| 105-05-5 | p-Diethylbenzene | ND | 2.0 | 0.70 | U |
| 622-96-8 | p-Ethyltoluene | ND | 2.0 | 0.70 | U |
| 95-93-2 | 1,2,4,5-Tetramethylbenzene | ND | 2.0 | 0.54 | U |
| 60-29-7 | Ethyl ether | ND | 2.5 | 0.70 | U |

# Results Summary
# Form 1
# Volatile Organics by GC/MS

| | | | |
|---|---|---|---|
| **Client** | : Soils Engineering Services, Inc. | **Lab Number** | : L2009793 |
| **Project Name** | : GROSSINGERS | **Project Number** | : 9313 |
| **Lab ID** | : WG1348564-5 | **Date Collected** | : NA |
| **Client ID** | : WG1348564-5BLANK | **Date Received** | : NA |
| **Sample Location** | : | **Date Analyzed** | : 03/07/20 11:30 |
| **Sample Matrix** | : WATER | **Dilution Factor** | : 1 |
| **Analytical Method** | : 1,8260C | **Analyst** | : MKS |
| **Lab File ID** | : V01200307A06 | **Instrument ID** | : VOA101 |
| **Sample Amount** | : 10 ml | **GC Column** | : RTX-502.2 |
| **Level** | : LOW | **%Solids** | : N/A |
| **Extract Volume (MeOH)** | : N/A | **Injection Volume** | : N/A |

| | | ug/L | | | |
|---|---|---|---|---|---|
| **CAS NO.** | **Parameter** | **Results** | **RL** | **MDL** | **Qualifier** |
| 110-57-6 | trans-1,4-Dichloro-2-butene | ND | 2.5 | 0.70 | U |

# Tentatively Identified Compounds
# Form 1
# Volatile Organics by GC/MS

| | | | |
|---|---|---|---|
| **Client** | : Soils Engineering Services, Inc. | **Lab Number** | : L2009793 |
| **Project Name** | : GROSSINGERS | **Project Number** | : 9313 |
| **Lab ID** | : WG1348564-5 | **Date Collected** | : NA |
| **Client ID** | : WG1348564-5BLANK | **Date Received** | : NA |
| **Sample Location** | : | **Date Analyzed** | : 03/07/20 11:30 |
| **Sample Matrix** | : WATER | **Dilution Factor** | : 1 |
| **Analytical Method** | : 1,8260C | **Analyst** | : MKS |
| **Lab File ID** | : V01200307A06 | **Instrument ID** | : VOA101 |
| **Sample Amount** | : 10 ml | **GC Column** | : RTX-502.2 |
| **Level** | : | **%Solids** | : N/A |
| **Extract Volume (MeOH)** | : N/A | **Injection Volume** | : N/A |

**Number TICS found: 0** **Concentration Units: ug/L**

| CAS Number | Compound Name | RT | EST. CONC. | Qualifier |
|---|---|---|---|---|
| | NO TENTATIVELY IDENTIFIED COMPOUNDS | | | |

Quantitation Report (QT Reviewed)

Data Path : I:\VOLATILES\VOA122\2020\200306A\
Data File : V22200306A15.D
Acq On : 06 Mar 2020 03:30 pm
Operator : VOA122:MKS
Sample : l2009793-04,31,10,10,,a
Misc : WG1348135,ICAL16379
ALS Vial : 15 Sample Multiplier: 1

Quant Time: Mar 07 14:50:56 2020
Quant Method : I:\VOLATILES\VOA122\2020\200306A\V122_191219N_8260.m
Quant Title : VOLATILES BY GC/MS
QLast Update : Fri Dec 20 07:20:50 2019
Response via : Initial Calibration

CCAL FILE(s) : 1 - I:\VOLATILES\VOA122\2020\200306A\V22200306A01.D
Sub List : 8260-NYTCL - Megamix plus Diox

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| Internal Standards | | | | | | |
| 1) Fluorobenzene | 5.827 | 96 | 248267 | 10.000 | ug/L | 0.00 |
| Standard Area 1 = 254411 | | | Recovery = 97.59% | | | |
| 62) Chlorobenzene-d5 | 9.353 | 117 | 183847 | 10.000 | ug/L | 0.00 |
| Standard Area 1 = 187639 | | | Recovery = 97.98% | | | |
| 83) 1,4-Dichlorobenzene-d4 | 12.107 | 152 | 90923 | 10.000 | ug/L | 0.00 |
| Standard Area 1 = 100182 | | | Recovery = 90.76% | | | |
| System Monitoring Compounds | | | | | | |
| 38) Dibromofluoromethane | 5.018 | 113 | 69357 | 9.672 | ug/L | 0.00 |
| Spiked Amount 10.000 | Range 70 - 130 | | Recovery = 96.72% | | | |
| 46) 1,2-Dichloroethane-d4 | 5.541 | 65 | 102755 | 12.401 | ug/L | 0.00 |
| Spiked Amount 10.000 | Range 70 - 130 | | Recovery = 124.01% | | | |
| 63) Toluene-d8 | 7.519 | 98 | 252440 | 10.628 | ug/L | 0.00 |
| Spiked Amount 10.000 | Range 70 - 130 | | Recovery = 106.28% | | | |
| 87) 4-Bromofluorobenzene | 10.874 | 95 | 90795 | 10.170 | ug/L | 0.00 |
| Spiked Amount 10.000 | Range 70 - 130 | | Recovery = 101.70% | | | |
| Target Compounds | | | | | | Qvalue |
| 2) Dichlorodifluoromethane | 0.000 | | 0 | N.D. | | |
| 3) Chloromethane | 0.000 | | 0 | N.D. | | |
| 4) Vinyl chloride | 0.000 | | 0 | N.D. | | |
| 5) Bromomethane | 2.076 | 94 | 93 | Below Cal | | 94 |
| 6) Chloroethane | 0.000 | | 0 | N.D. | | |
| 7) Trichlorofluoromethane | 0.000 | | 0 | N.D. | | |
| 8) Ethyl ether | 0.000 | | 0 | N.D. | | |
| 10) 1,1-Dichloroethene | 0.000 | | 0 | N.D. | | |
| 11) Carbon disulfide | 2.833 | 76 | 123 | N.D. | | |
| 15) Methylene chloride | 0.000 | | 0 | N.D. | | |
| 17) Acetone | 0.000 | | 0 | N.D. | | |
| 18) trans-1,2-Dichloroethene | 0.000 | | 0 | N.D. | | |
| 21) Methyl tert-butyl ether | 0.000 | | 0 | N.D. | | |
| 25) 1,1-Dichloroethane | 0.000 | | 0 | N.D. | | |
| 27) Acrylonitrile | 0.000 | | 0 | N.D. | | |
| 29) Vinyl acetate | 0.000 | | 0 | N.D. | | |
| 30) cis-1,2-Dichloroethene | 0.000 | | 0 | N.D. | | |
| 31) 2,2-Dichloropropane | 0.000 | | 0 | N.D. | | |
| 32) Bromochloromethane | 0.000 | | 0 | N.D. | | |
| 34) Chloroform | 0.000 | | 0 | N.D. | | |

Data Path : I:\VOLATILES\VOA122\2020\200306A\
Data File : V22200306A15.D
Acq On : 06 Mar 2020 03:30 pm
Operator : VOA122:MKS
Sample : l2009793-04,31,10,10,,a
Misc : WG1348135,ICAL16379
ALS Vial : 15 Sample Multiplier: 1

Quant Time: Mar 07 14:50:56 2020
Quant Method : I:\VOLATILES\VOA122\2020\200306A\V122_191219N_8260.m
Quant Title : VOLATILES BY GC/MS
QLast Update : Fri Dec 20 07:20:50 2019
Response via : Initial Calibration

CCAL FILE(s) : 1 - I:\VOLATILES\VOA122\2020\200306A\V22200306A01.D
Sub List : 8260-NYTCL - Megamix plus Diox

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 36) Carbon tetrachloride | 0.000 | | 0 | | N.D. | |
| 39) 1,1,1-Trichloroethane | 0.000 | | 0 | | N.D. | |
| 41) 2-Butanone | 0.000 | | 0 | | N.D. | |
| 42) 1,1-Dichloropropene | 0.000 | | 0 | | N.D. | |
| 44) Benzene | 0.000 | | 0 | | N.D. | |
| 47) 1,2-Dichloroethane | 0.000 | | 0 | | N.D. | |
| 51) Trichloroethene | 0.000 | | 0 | | N.D. | |
| 53) Dibromomethane | 0.000 | | 0 | | N.D. | |
| 54) 1,2-Dichloropropane | 0.000 | | 0 | | N.D. | |
| 57) Bromodichloromethane | 0.000 | | 0 | | N.D. | |
| 60) 1,4-Dioxane | 0.000 | | 0 | | N.D. | |
| 61) cis-1,3-Dichloropropene | 0.000 | | 0 | | N.D. | |
| 64) Toluene | 0.000 | | 0 | | N.D. | |
| 65) 4-Methyl-2-pentanone | 0.000 | | 0 | | N.D. | |
| 66) Tetrachloroethene | 0.000 | | 0 | | N.D. | |
| 68) trans-1,3-Dichloropropene | 0.000 | | 0 | | N.D. | |
| 71) 1,1,2-Trichloroethane | 0.000 | | 0 | | N.D. | |
| 72) Chlorodibromomethane | 0.000 | | 0 | | N.D. | |
| 73) 1,3-Dichloropropane | 0.000 | | 0 | | N.D. | |
| 74) 1,2-Dibromoethane | 0.000 | | 0 | | N.D. | |
| 76) 2-Hexanone | 0.000 | | 0 | | N.D. | |
| 77) Chlorobenzene | 0.000 | | 0 | | N.D. | |
| 78) Ethylbenzene | 9.345 | 91 | 516 | | N.D. | |
| 79) 1,1,1,2-Tetrachloroethane | 0.000 | | 0 | | N.D. | |
| 80) p/m Xylene | 0.000 | | 0 | | N.D. | |
| 81) o Xylene | 0.000 | | 0 | | N.D. | |
| 82) Styrene | 0.000 | | 0 | | N.D. | |
| 84) Bromoform | 0.000 | | 0 | | N.D. | |
| 86) Isopropylbenzene | 0.000 | | 0 | | N.D. | |
| 88) Bromobenzene | 0.000 | | 0 | | N.D. | |
| 89) n-Propylbenzene | 10.874 | 91 | 509 | | N.D. | |
| 91) 1,1,2,2-Tetrachloroethane | 0.000 | | 0 | | N.D. | |
| 92) 4-Ethyltoluene | 0.000 | | 0 | | N.D. | |
| 93) 2-Chlorotoluene | 0.000 | | 0 | | N.D. | |
| 94) 1,3,5-Trimethylbenzene | 0.000 | | 0 | | N.D. | |
| 95) 1,2,3-Trichloropropane | 0.000 | | 0 | | N.D. | |
| 96) trans-1,4-Dichloro-2-b... | 0.000 | | 0 | | N.D. | |
| 97) 4-Chlorotoluene | 0.000 | | 0 | | N.D. | |
| 98) tert-Butylbenzene | 0.000 | | 0 | | N.D. | |

Data Path : I:\VOLATILES\VOA122\2020\200306A\
Data File : V22200306A15.D
Acq On : 06 Mar 2020 03:30 pm
Operator : VOA122:MKS
Sample : l2009793-04,31,10,10,,a
Misc : WG1348135,ICAL16379
ALS Vial : 15 Sample Multiplier: 1

Quant Time: Mar 07 14:50:56 2020
Quant Method : I:\VOLATILES\VOA122\2020\200306A\V122_191219N_8260.m
Quant Title : VOLATILES BY GC/MS
QLast Update : Fri Dec 20 07:20:50 2019
Response via : Initial Calibration

CCAL FILE(s) : 1 - I:\VOLATILES\VOA122\2020\200306A\V22200306A01.D
Sub List : 8260-NYTCL - Megamix plus Diox

| | Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|---|
| 101) | 1,2,4-Trimethylbenzene | 0.000 | | 0 | | N.D. | |
| 102) | sec-Butylbenzene | 0.000 | | 0 | | N.D. | |
| 103) | p-Isopropyltoluene | 0.000 | | 0 | | N.D. | |
| 104) | 1,3-Dichlorobenzene | 12.114 | 146 | 161 | | N.D. | |
| 105) | 1,4-Dichlorobenzene | 12.114 | 146 | 161 | | N.D. | |
| 106) | p-Diethylbenzene | 0.000 | | 0 | | N.D. | |
| 107) | n-Butylbenzene | 0.000 | | 0 | | N.D. | |
| 108) | 1,2-Dichlorobenzene | 0.000 | | 0 | | N.D. | |
| 109) | 1,2,4,5-Tetramethylben... | 0.000 | | 0 | | N.D. | |
| 110) | 1,2-Dibromo-3-chloropr... | 0.000 | | 0 | | N.D. | |
| 112) | Hexachlorobutadiene | 0.000 | | 0 | | N.D. | |
| 113) | 1,2,4-Trichlorobenzene | 0.000 | | 0 | | N.D. | |
| 114) | Naphthalene | 14.265 | 128 | 241 | | N.D. | |
| 115) | 1,2,3-Trichlorobenzene | 0.000 | | 0 | | N.D. | |

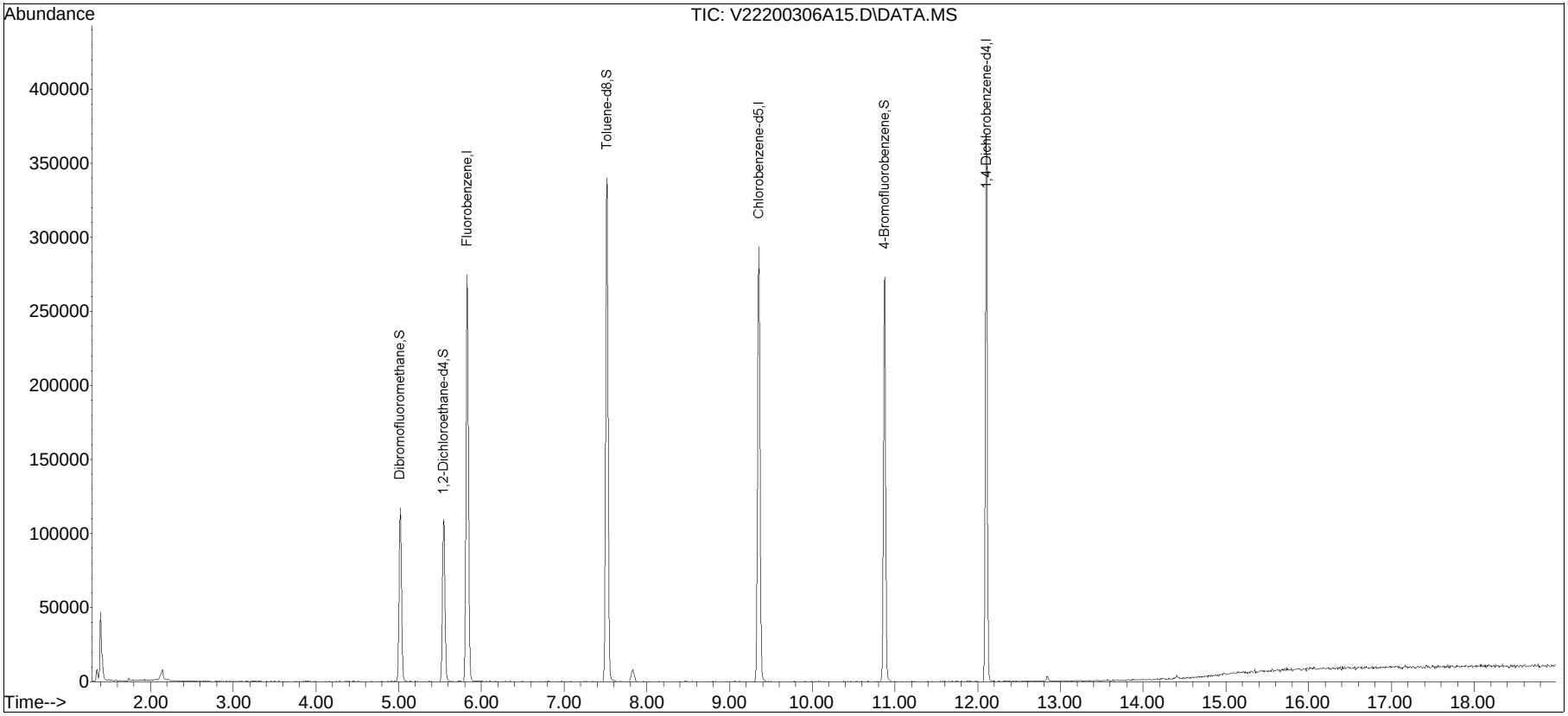
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : I:\VOLATILES\VOA122\2020\200306A\
Data File : V22200306A15.D
Acq On : 06 Mar 2020 03:30 pm
Operator : VOA122:MKS
Sample : l2009793-04,31,10,10,,a
Misc : WG1348135,ICAL16379
ALS Vial : 15 Sample Multiplier: 1

Quant Time: Mar 07 14:50:56 2020
Quant Method : I:\VOLATILES\VOA122\2020\200306A\V122_191219N_8260.m
Quant Title : VOLATILES BY GC/MS
QLast Update : Fri Dec 20 07:20:50 2019
Response via : Initial Calibration

Sub List : 8260-NYTCL - Megamix plus Diox00306A\V22200306A01.D•



Manual Integration Report

| | | | |
|---|---|---|---|
| Data Path | : I:\VOLATILES\VOA122\2020\2Q | Method | : V122_191219N_8260.m |
| Data File | : V22200306A15.D | Operator | : VOA122:MKS |
| Date Inj'd | : 3/6/2020 3:30 pm | Instrument | : VOA122 |
| Sample | : l2009793-04,31,10,10,,a | Quant Date | : 3/7/2020 1:50 pm |

There are no manual integrations or false positives in this file.

LSC Area Percent Report

Data Path : I:\VOLATILES\VOA122\2020\200306A\
Data File : V22200306A15.D
Acq On : 06 Mar 2020 03:30 pm
Operator : VOA122:PD
Sample : l2009793-04,31,10,10,,a
Misc : WG1348135,ICAL16379
ALS Vial : 15 Sample Multiplier: 1

Integration Parameters: rteint.p
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 3 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : I:\VOLATILES\VOA122\2020\200306A\V122_191219N_8260.m
Title : VOLATILES BY GC/MS

Signal : TIC: V22200306A15.D\DATA.MS

| peak # | R.T. min | first scan | max scan | last scan | PK TY | peak height | corr. area | corr. % max. | % of total |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 5.018 | 472 | 478 | 491 | rBB | 117463 | 241060 | 34.90% | 7.041% |
| 2 | 5.549 | 538 | 546 | 556 | rBB | 109826 | 261841 | 37.90% | 7.648% |
| 3 | 5.827 | 571 | 577 | 589 | rBV | 274861 | 552407 | 79.97% | 16.136% |
| 4 | 7.519 | 764 | 772 | 789 | rBB | 340310 | 690803 | 100.00% | 20.179% |
| 5 | 7.831 | 803 | 812 | 821 | rBB | 8145 | 21250 | 3.08% | 0.621% |
| 6 | 9.353 | 999 | 1007 | 1020 | rBB | 293664 | 595460 | 86.20% | 17.394% |
| 7 | 10.874 | 1192 | 1200 | 1212 | rBB | 273276 | 479884 | 69.47% | 14.018% |
| 8 | 12.100 | 1352 | 1358 | 1367 | rBV | 369432 | 580738 | 84.07% | 16.964% |

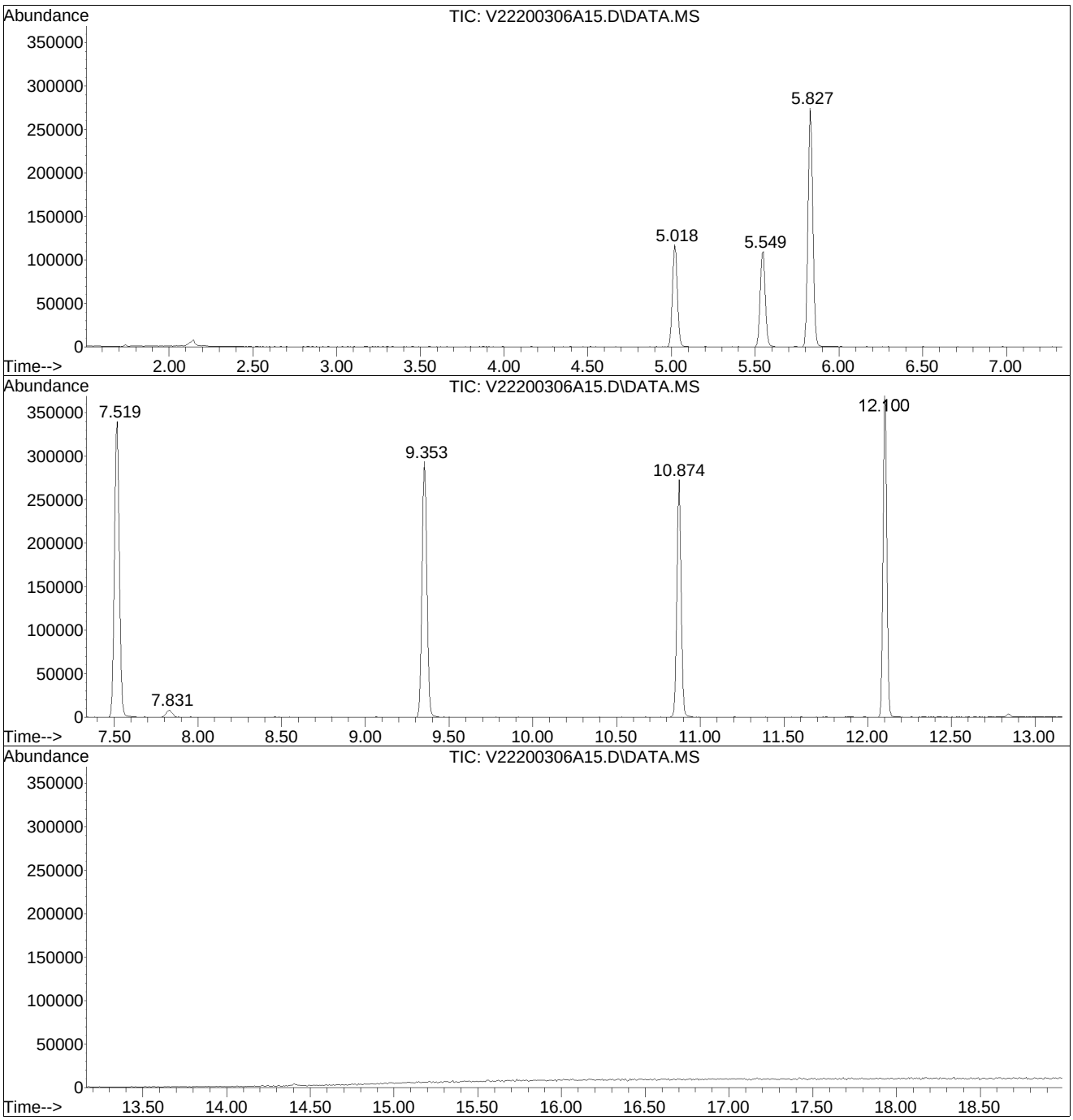
Sum of corrected areas: 3423443

LSC Report - Integrated Chromatogram

Data Path : I:\VOLATILES\VOA122\2020\200306A\
Data File : V22200306A15.D
Acq On : 06 Mar 2020 03:30 pm
Operator : VOA122:PD
Sample : l2009793-04,31,10,10,,a
Misc : WG1348135,ICAL16379
ALS Vial : 15 Sample Multiplier: 1

Quant Method : I:\VOLATILES\VOA122\2020\200306A\V122_191219N_8260.m
Quant Title : VOLATILES BY GC/MS

TIC Library : I:\nist-db\NIST02.L
TIC Integration Parameters: rteint.p



Library Search Compound Report

Data Path : I:\VOLATILES\VOA122\2020\200306A\
Data File : V22200306A15.D
Acq On : 06 Mar 2020 03:30 pm
Operator : VOA122:PD
Sample : l2009793-04,31,10,10,,a
Misc : WG1348135,ICAL16379
ALS Vial : 15 Sample Multiplier: 1

Quant Method : I:\VOLATILES\VOA122\2020\200306A\V122_191219N_8260.m
Quant Title : VOLATILES BY GC/MS

TIC Library : I:\nist-db\NIST02.L
TIC Integration Parameters: rteint.p

No Library Search Compounds Detected
**********

Tentatively Identified Compound (LSC) summary

Data Path : I:\VOLATILES\VOA122\2020\200306A\
Data File : V22200306A15.D
Acq On : 06 Mar 2020 03:30 pm
Operator : VOA122:PD
Sample : l2009793-04,31,10,10,,a
Misc : WG1348135,ICAL16379
ALS Vial : 15 Sample Multiplier: 1

Quant Method : I:\VOLATILES\VOA122\2020\200306A\V122_191219N_8260.m
Quant Title : VOLATILES BY GC/MS

TIC Library : I:\nist-db\NIST02.L
TIC Integration Parameters: rteint.p

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

Quantitation Report (QT/LSC Reviewed)

Data Path : I:\VOLATILES\VOA101\2020\200307A\
Data File : V01200307A11.D
Acq On : 7 Mar 2020 1:29 pm
Operator : VOA101:ajk
Sample : l2009793-01,31,10,10,,a
Misc : WG1348564,ICAL16539
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Mar 08 18:15:10 2020
Quant Method : I:\VOLATILES\VOA101\2020\200307A\V101_200219A_8260.m
Quant Title : VOLATILES BY GC/MS
QLast Update : Thu Feb 20 09:49:21 2020
Response via : Initial Calibration

CCAL FILE(s) : 1 - I:\VOLATILES\VOA101\2020\200307A\V01200307A01.D
Sub List : 8260-NYTCL - Megamix plus Diox

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| Internal Standards | | | | | | |
| 1) Fluorobenzene | 6.634 | 96 | 202811 | 10.000 | ug/L | 0.00 |
| Standard Area 1 = 235149 | | | Recovery = 86.25% | | | |
| 59) Chlorobenzene-d5 | 10.524 | 117 | 149497 | 10.000 | ug/L | 0.00 |
| Standard Area 1 = 168234 | | | Recovery = 88.86% | | | |
| 79) 1,4-Dichlorobenzene-d4 | 13.324 | 152 | 76786 | 10.000 | ug/L | 0.00 |
| Standard Area 1 = 84540 | | | Recovery = 90.83% | | | |
| System Monitoring Compounds | | | | | | |
| 36) Dibromofluoromethane | 5.739 | 113 | 50082 | 9.586 | ug/L | 0.00 |
| Spiked Amount 10.000 | Range 70 - 130 | | Recovery = 95.86% | | | |
| 43) 1,2-Dichloroethane-d4 | 6.323 | 65 | 57263 | 10.226 | ug/L | 0.00 |
| Spiked Amount 10.000 | Range 70 - 130 | | Recovery = 102.26% | | | |
| 60) Toluene-d8 | 8.500 | 98 | 203694 | 9.538 | ug/L | 0.00 |
| Spiked Amount 10.000 | Range 70 - 130 | | Recovery = 95.38% | | | |
| 83) 4-Bromofluorobenzene | 12.030 | 95 | 77261 | 9.334 | ug/L | 0.00 |
| Spiked Amount 10.000 | Range 70 - 130 | | Recovery = 93.34% | | | |
| Target Compounds | | | | | | Qvalue |
| 2) Dichlorodifluoromethane | 1.822 | 85 | 269847 | 73.877 | ug/L | 99 |
| 3) Chloromethane | 0.000 | | 0 | N.D. | d | |
| 4) Vinyl chloride | 0.000 | | 0 | N.D. | | |
| 5) Bromomethane | 2.471 | 94 | 157 | 0.075 | ug/L # | 66 |
| 6) Chloroethane | 0.000 | | 0 | N.D. | | |
| 7) Trichlorofluoromethane | 2.755 | 101 | 430630 | 71.460 | ug/L | 100 |
| 8) Ethyl ether | 0.000 | | 0 | N.D. | | |
| 10) 1,1-Dichloroethene | 0.000 | | 0 | N.D. | | |
| 11) Carbon disulfide | 3.322 | 76 | 478 | N.D. | | |
| 15) Methylene chloride | 3.884 | 84 | 1314 | 0.342 | ug/L | 74 |
| 17) Acetone | 3.939 | 43 | 735 | Below Cal | # | 42 |
| 18) trans-1,2-Dichloroethene | 0.000 | | 0 | N.D. | | |
| 20) Methyl tert-butyl ether | 0.000 | | 0 | N.D. | d | |
| 23) 1,1-Dichloroethane | 0.000 | | 0 | N.D. | | |
| 25) Acrylonitrile | 0.000 | | 0 | N.D. | | |
| 27) Vinyl acetate | 0.000 | | 0 | N.D. | | |
| 28) cis-1,2-Dichloroethene | 0.000 | | 0 | N.D. | | |
| 29) 2,2-Dichloropropane | 0.000 | | 0 | N.D. | | |
| 30) Bromochloromethane | 0.000 | | 0 | N.D. | | |
| 32) Chloroform | 5.554 | 83 | 577 | 0.079 | ug/L # | 40 |

Data Path : I:\VOLATILES\VOA101\2020\200307A\
Data File : V01200307A11.D
Acq On : 7 Mar 2020 1:29 pm
Operator : VOA101:ajk
Sample : l2009793-01,31,10,10,,a
Misc : WG1348564,ICAL16539
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Mar 08 18:15:10 2020
Quant Method : I:\VOLATILES\VOA101\2020\200307A\V101_200219A_8260.m
Quant Title : VOLATILES BY GC/MS
QLast Update : Thu Feb 20 09:49:21 2020
Response via : Initial Calibration

CCAL FILE(s) : 1 - I:\VOLATILES\VOA101\2020\200307A\V01200307A01.D
Sub List : 8260-NYTCL - Megamix plus Diox

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 34) Carbon tetrachloride | 0.000 | | 0 | | N.D. | |
| 37) 1,1,1-Trichloroethane | 5.783 | 97 | 56 | | N.D. | |
| 39) 2-Butanone | 0.000 | | 0 | | N.D. | |
| 40) 1,1-Dichloropropene | 0.000 | | 0 | | N.D. | |
| 41) Benzene | 6.170 | 78 | 526 | | N.D. | |
| 44) 1,2-Dichloroethane | 0.000 | | 0 | | N.D. | |
| 48) Trichloroethene | 0.000 | | 0 | | N.D. | |
| 50) Dibromomethane | 0.000 | | 0 | | N.D. | |
| 51) 1,2-Dichloropropane | 0.000 | | 0 | | N.D. | |
| 54) Bromodichloromethane | 0.000 | | 0 | | N.D. | |
| 57) 1,4-Dioxane | 0.000 | | 0 | | N.D. | |
| 58) cis-1,3-Dichloropropene | 0.000 | | 0 | | N.D. | |
| 61) Toluene | 8.566 | 92 | 262 | | N.D. | |
| 62) 4-Methyl-2-pentanone | 0.000 | | 0 | | N.D. | |
| 63) Tetrachloroethene | 0.000 | | 0 | | N.D. | |
| 65) trans-1,3-Dichloropropene | 0.000 | | 0 | | N.D. | |
| 68) 1,1,2-Trichloroethane | 0.000 | | 0 | | N.D. | |
| 69) Chlorodibromomethane | 0.000 | | 0 | | N.D. | |
| 70) 1,3-Dichloropropane | 0.000 | | 0 | | N.D. | |
| 71) 1,2-Dibromoethane | 0.000 | | 0 | | N.D. | |
| 72) 2-Hexanone | 0.000 | | 0 | | N.D. | |
| 73) Chlorobenzene | 10.552 | 112 | 584 | | N.D. | |
| 74) Ethylbenzene | 0.000 | | 0 | | N.D. | |
| 75) 1,1,1,2-Tetrachloroethane | 0.000 | | 0 | | N.D. | |
| 76) p/m Xylene | 0.000 | | 0 | | N.D. | |
| 77) o Xylene | 0.000 | | 0 | | N.D. | |
| 78) Styrene | 0.000 | | 0 | | N.D. | |
| 80) Bromoform | 0.000 | | 0 | | N.D. | |
| 82) Isopropylbenzene | 0.000 | | 0 | | N.D. | |
| 84) Bromobenzene | 0.000 | | 0 | | N.D. | |
| 85) n-Propylbenzene | 0.000 | | 0 | | N.D. | |
| 87) 1,1,2,2-Tetrachloroethane | 0.000 | | 0 | | N.D. | |
| 88) 4-Ethyltoluene | 0.000 | | 0 | | N.D. | |
| 89) 2-Chlorotoluene | 0.000 | | 0 | | N.D. | |
| 90) 1,3,5-Trimethylbenzene | 0.000 | | 0 | | N.D. | |
| 91) 1,2,3-Trichloropropane | 0.000 | | 0 | | N.D. | |
| 92) trans-1,4-Dichloro-2-b... | 0.000 | | 0 | | N.D. | |
| 93) 4-Chlorotoluene | 0.000 | | 0 | | N.D. | |
| 94) tert-Butylbenzene | 12.789 | 119 | 109 | | N.D. | |

Data Path : I:\VOLATILES\VOA101\2020\200307A\
Data File : V01200307A11.D
Acq On : 7 Mar 2020 1:29 pm
Operator : VOA101:ajk
Sample : l2009793-01,31,10,10,,a
Misc : WG1348564,ICAL16539
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Mar 08 18:15:10 2020
Quant Method : I:\VOLATILES\VOA101\2020\200307A\V101_200219A_8260.m
Quant Title : VOLATILES BY GC/MS
QLast Update : Thu Feb 20 09:49:21 2020
Response via : Initial Calibration

CCAL FILE(s) : 1 - I:\VOLATILES\VOA101\2020\200307A\V01200307A01.D
Sub List : 8260-NYTCL - Megamix plus Diox

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 97) 1,2,4-Trimethylbenzene | 0.000 | | 0 | N.D. d | | |
| 98) sec-Butylbenzene | 12.980 | 105 | 860 | N.D. | | |
| 99) p-Isopropyltoluene | 0.000 | | 0 | N.D. | | |
| 100) 1,3-Dichlorobenzene | 0.000 | | 0 | N.D. d | | |
| 101) 1,4-Dichlorobenzene | 13.340 | 146 | 328 | N.D. | | |
| 102) p-Diethylbenzene | 0.000 | | 0 | N.D. | | |
| 103) n-Butylbenzene | 0.000 | | 0 | N.D. | | |
| 104) 1,2-Dichlorobenzene | 13.820 | 146 | 104 | N.D. | | |
| 105) 1,2,4,5-Tetramethylben... | 0.000 | | 0 | N.D. | | |
| 106) 1,2-Dibromo-3-chloropr... | 0.000 | | 0 | N.D. | | |
| 108) Hexachlorobutadiene | 0.000 | | 0 | N.D. | | |
| 109) 1,2,4-Trichlorobenzene | 0.000 | | 0 | N.D. | | |
| 110) Naphthalene | 15.741 | 128 | 1062 | 0.139 | ug/L | 100 |
| 111) 1,2,3-Trichlorobenzene | 0.000 | | 0 | N.D. | | |

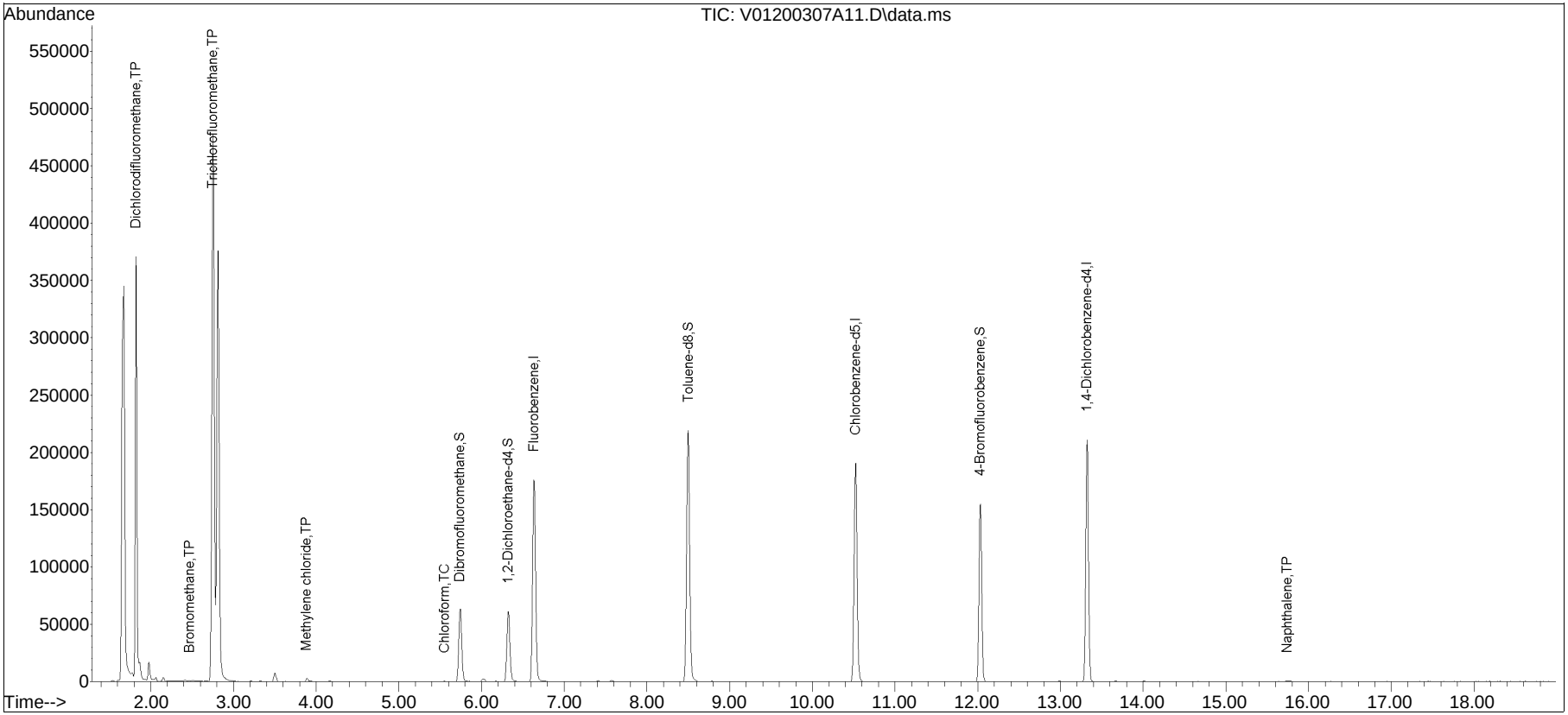
(#) = qualifier out of range (m) = manual integration (+) = signals summed

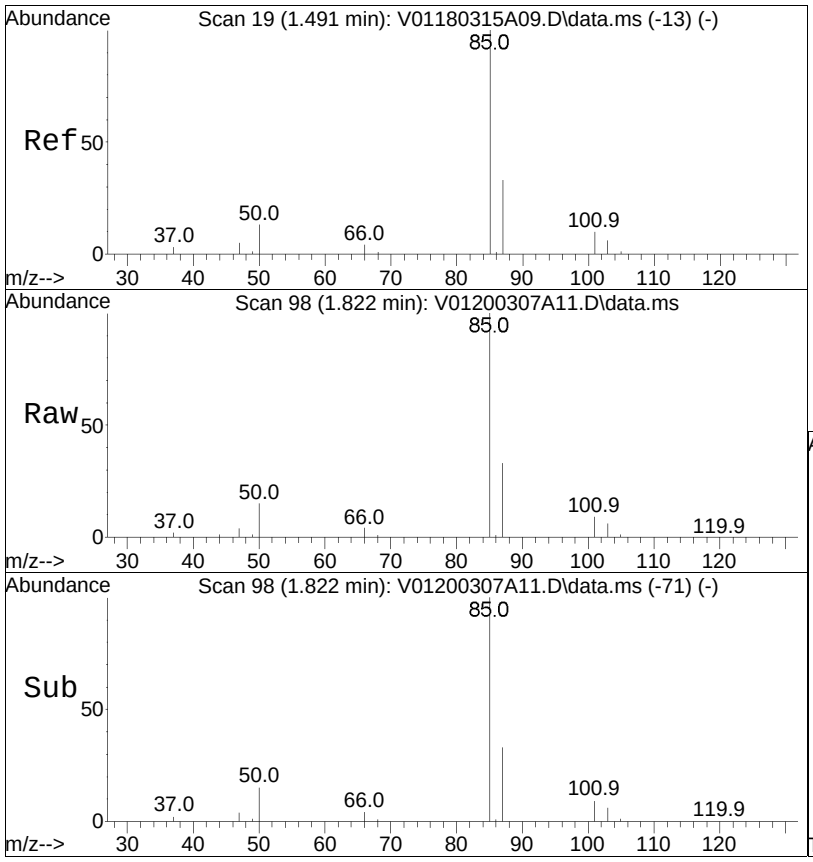
Quantitation Report (QT/LSC Reviewed)

Data Path : I:\VOLATILES\VOA101\2020\200307A\
Data File : V01200307A11.D
Acq On : 7 Mar 2020 1:29 pm
Operator : VOA101:ajk
Sample : l2009793-01,31,10,10,,a
Misc : WG1348564,ICAL16539
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Mar 08 18:15:10 2020
Quant Method : I:\VOLATILES\VOA101\2020\200307A\V101_200219A_8260.m
Quant Title : VOLATILES BY GC/MS
QLast Update : Thu Feb 20 09:49:21 2020
Response via : Initial Calibration

Sub List : 8260-NYTCL - Megamix plus Diox00307A\V01200307A01.D•

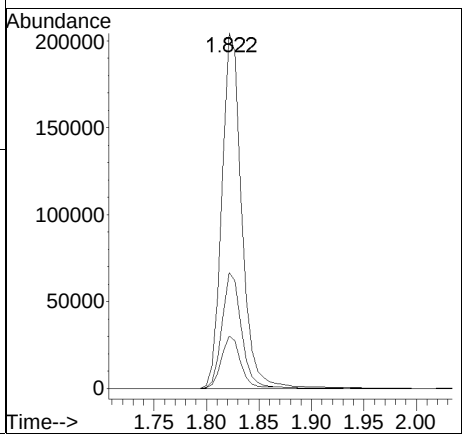


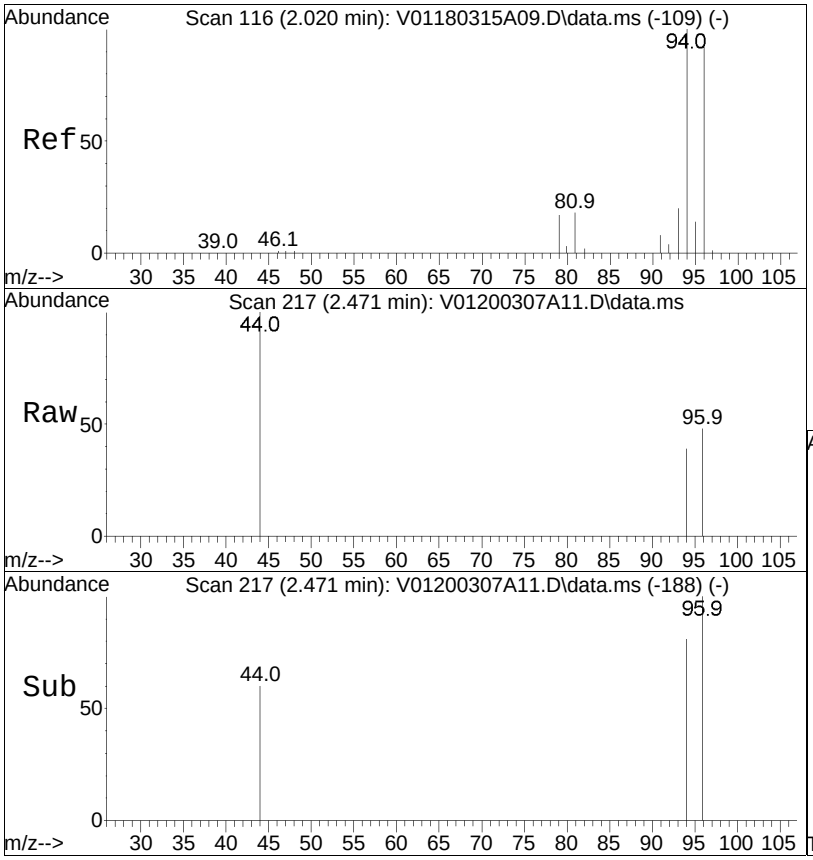



#2
Dichlorodifluoromethane
Concen: 73.88 ug/L
RT: 1.822 min Scan# 98
Delta R.T. 0.001 min
Lab File: V01200307A11.D
Acq: 7 Mar 2020 1:29 pm

Tgt Ion: 85 Resp: 269847

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 85 | 100 | | |
| 87 | 32.2 | 20.9 | 43.5 |
| 50 | 14.6 | 9.1 | 18.9 |

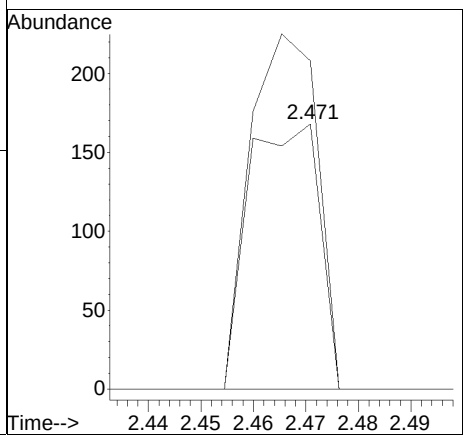


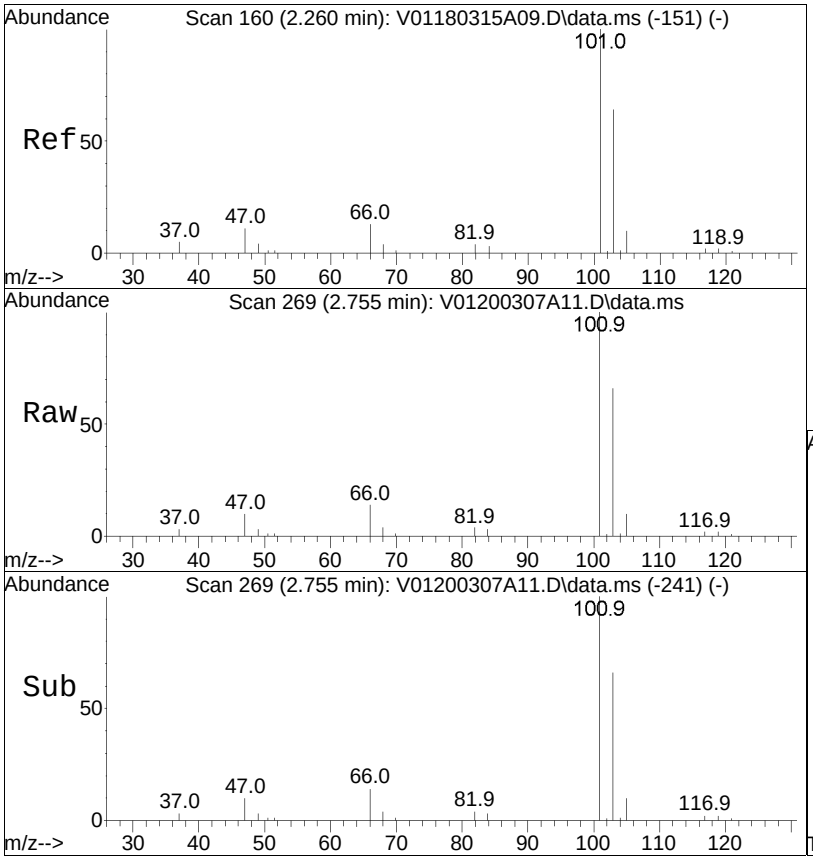



#5
Bromomethane
Concen: 0.07 ug/L
RT: 2.471 min Scan# 217
Delta R.T. 0.006 min
Lab File: V01200307A11.D
Acq: 7 Mar 2020 1:29 pm

Tgt Ion: 94 Resp: 157

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 94 | 100 | | |
| 96 | 126.8 | 73.6 | 113.6# |

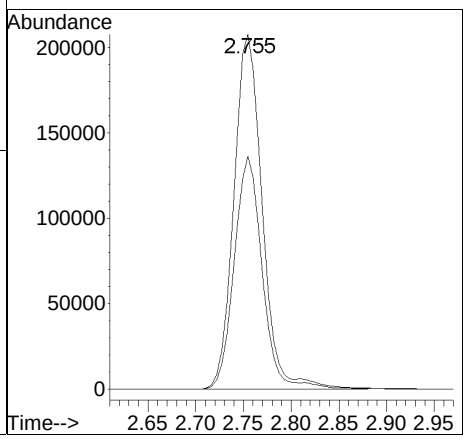


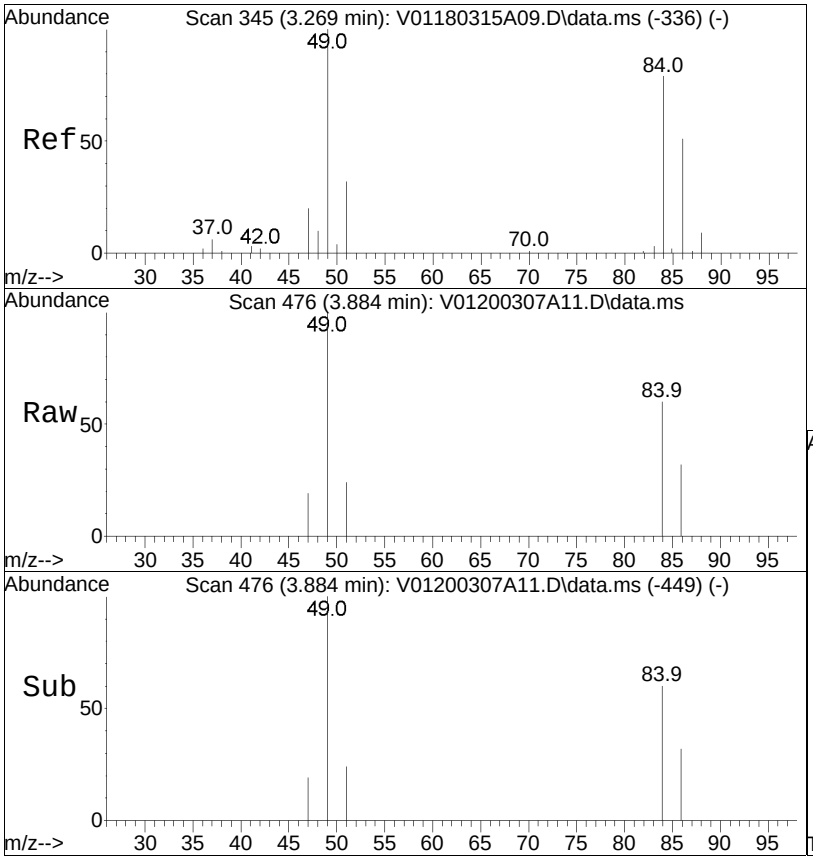



#7
Trichlorofluoromethane
Concen: 71.46 ug/L
RT: 2.755 min Scan# 269
Delta R.T. 0.001 min
Lab File: V01200307A11.D
Acq: 7 Mar 2020 1:29 pm

Tgt Ion:101 Resp: 430630

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 101 | 100 | | |
| 103 | 65.0 | 52.3 | 78.5 |

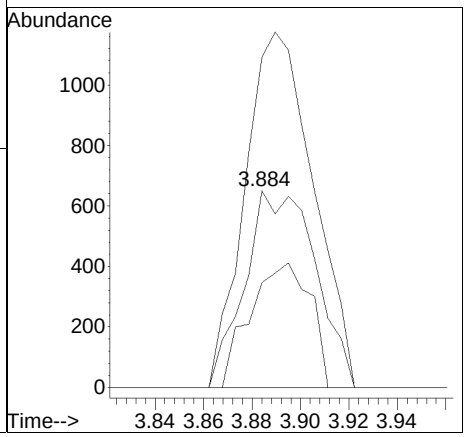


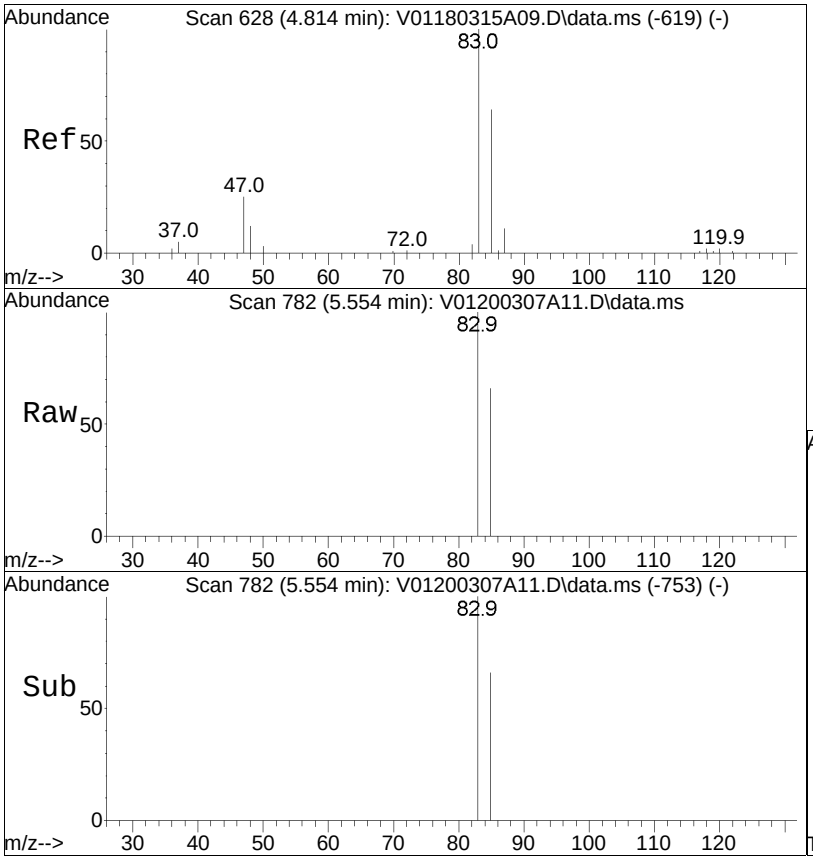



#15
Methylene chloride
Concen: 0.34 ug/L
RT: 3.884 min Scan# 476
Delta R.T. -0.005 min
Lab File: V01200307A11.D
Acq: 7 Mar 2020 1:29 pm

Tgt Ion: 84 Resp: 1314

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 84 | 100 | | |
| 86 | 54.1 | 41.7 | 86.7 |
| 49 | 175.0 | 89.1 | 185.1 |

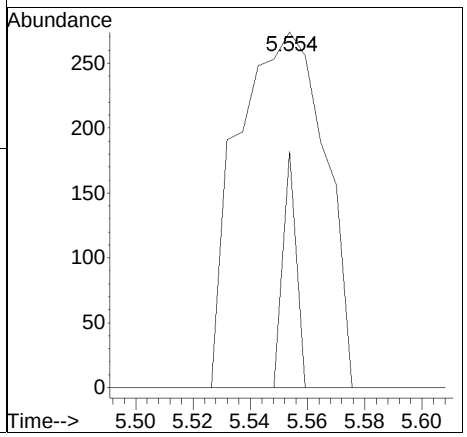


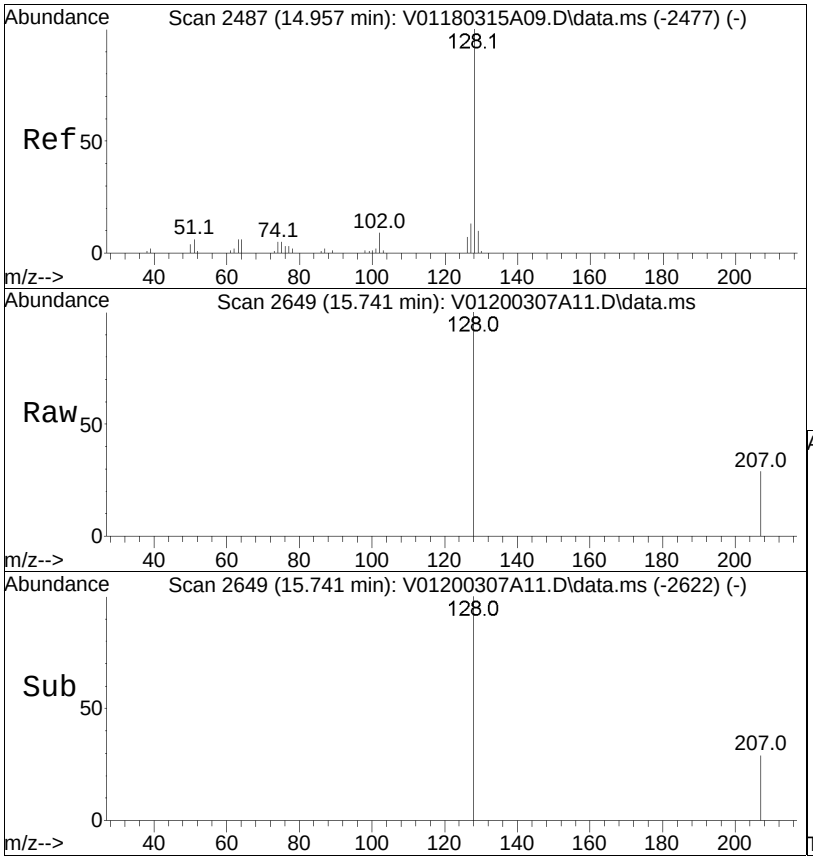



#32
Chloroform
Concen: 0.08 ug/L
RT: 5.554 min Scan# 782
Delta R.T. 0.006 min
Lab File: V01200307A11.D
Acq: 7 Mar 2020 1:29 pm

Tgt Ion: 83 Resp: 577

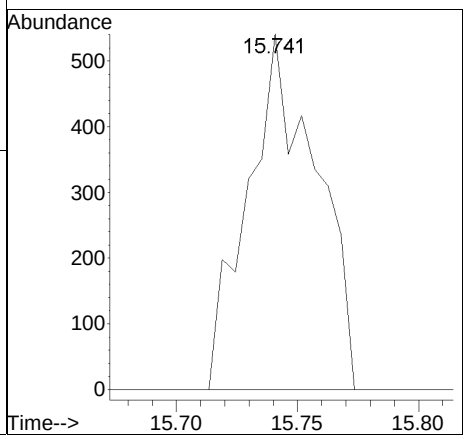
| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 83 | 100 | | |
| 85 | 10.4 | 42.3 | 87.8# |
| 47 | 0.0 | 17.8 | 37.0# |
| 48 | 0.0 | 9.3 | 19.3# |






#110
Naphthalene
Concen: 0.14 ug/L
RT: 15.741 min Scan# 2649
Delta R.T. -0.000 min
Lab File: V01200307A11.D
Acq: 7 Mar 2020 1:29 pm

Tgt Ion:128 Resp: 1062



Manual Integration Report

| | | | |
|---|---|---|---|
| Data Path | : I:\VOLATILES\VOA101\2020\2Q | Method | : V101_200219A_8260.m |
| Data File | : V01200307A11.D | Operator | : VOA101:ajk |
| Date Inj'd | : 3/7/2020 1:29 pm | Instrument | : VOA 101 |
| Sample | : l2009793-01,31,10,10,,a | Quant Date | : 3/8/2020 6:03 pm |

There are no manual integrations or false positives in this file.

LSC Area Percent Report

Data Path : I:\VOLATILES\VOA101\2020\200307A\
Data File : V01200307A11.D
Acq On : 7 Mar 2020 1:29 pm
Operator : VOA101:ajk
Sample : l2009793-01,31,10,10,,a
Misc : WG1348564,ICAL16539
ALS Vial : 11 Sample Multiplier: 1

Integration Parameters: rteint.p
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 3 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : I:\VOLATILES\VOA101\2020\200307A\V101_200219A_8260.m
Title : VOLATILES BY GC/MS

Signal : TIC: V01200307A11.D\data.ms

| peak # | R.T. min | first scan | max scan | last scan | PK TY | peak height | corr. area | corr. % max. | % of total |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 1.674 | 61 | 71 | 86 | rBV | 344063 | 830874 | 86.67% | 14.698% |
| 2 | 1.822 | 93 | 98 | 116 | rVB | 369058 | 497975 | 51.95% | 8.809% |
| 3 | 2.755 | 259 | 269 | 275 | rBV | 477272 | 958625 | 100.00% | 16.958% |
| 4 | 2.815 | 275 | 280 | 310 | rVB | 375863 | 738672 | 77.06% | 13.067% |
| 5 | 5.745 | 806 | 817 | 835 | rBV | 63375 | 158933 | 16.58% | 2.812% |
| 6 | 6.323 | 912 | 923 | 940 | rBV | 61124 | 156808 | 16.36% | 2.774% |
| 7 | 6.634 | 968 | 980 | 1014 | rBB | 176321 | 444135 | 46.33% | 7.857% |
| 8 | 8.500 | 1309 | 1322 | 1346 | rBB | 219352 | 561365 | 58.56% | 9.931% |
| 9 | 10.524 | 1681 | 1693 | 1712 | rBB | 190921 | 478992 | 49.97% | 8.473% |
| 10 | 12.030 | 1959 | 1969 | 1983 | rBB | 155069 | 354821 | 37.01% | 6.277% |
| 11 | 13.324 | 2195 | 2206 | 2223 | rBB | 211067 | 471640 | 49.20% | 8.343% |

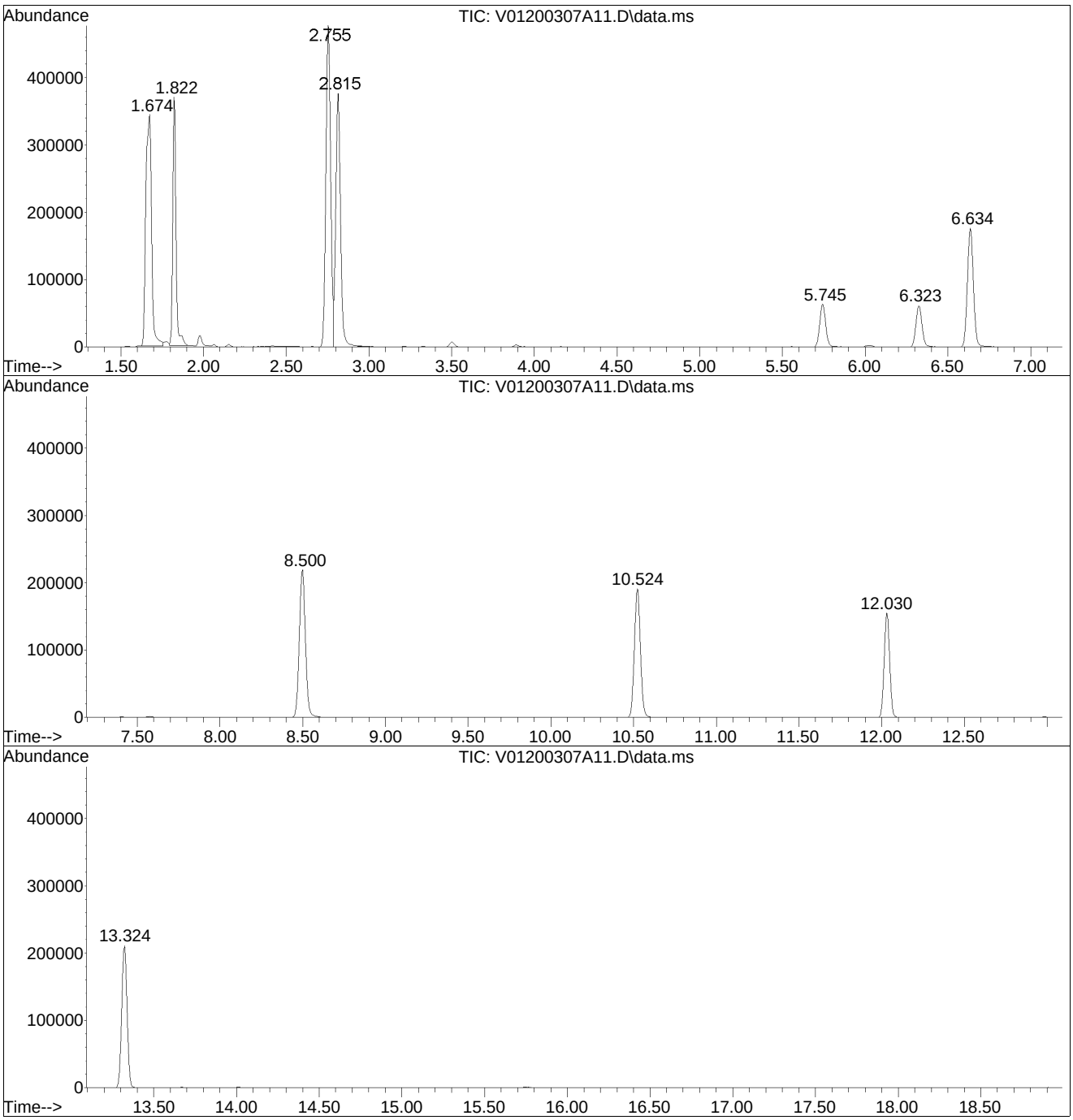
Sum of corrected areas: 5652840

LSC Report - Integrated Chromatogram

Data Path : I:\VOLATILES\VOA101\2020\200307A\
Data File : V01200307A11.D
Acq On : 7 Mar 2020 1:29 pm
Operator : VOA101:ajk
Sample : l2009793-01,31,10,10,,a
Misc : WG1348564,ICAL16539
ALS Vial : 11 Sample Multiplier: 1

Quant Method : I:\VOLATILES\VOA101\2020\200307A\V101_200219A_8260.m
Quant Title : VOLATILES BY GC/MS

TIC Library : I:\nist-db\NIST02.L
TIC Integration Parameters: rteint.p



# Library Search Compound Report

Data Path : I:\VOLATILES\VOA101\2020\200307A\
Data File : V01200307A11.D
Acq On : 7 Mar 2020 1:29 pm
Operator : VOA101:ajk
Sample : l2009793-01,31,10,10,,a
Misc : WG1348564,ICAL16539
ALS Vial : 11 Sample Multiplier: 1

Quant Method : I:\VOLATILES\VOA101\2020\200307A\V101_200219A_8260.m
Quant Title : VOLATILES BY GC/MS

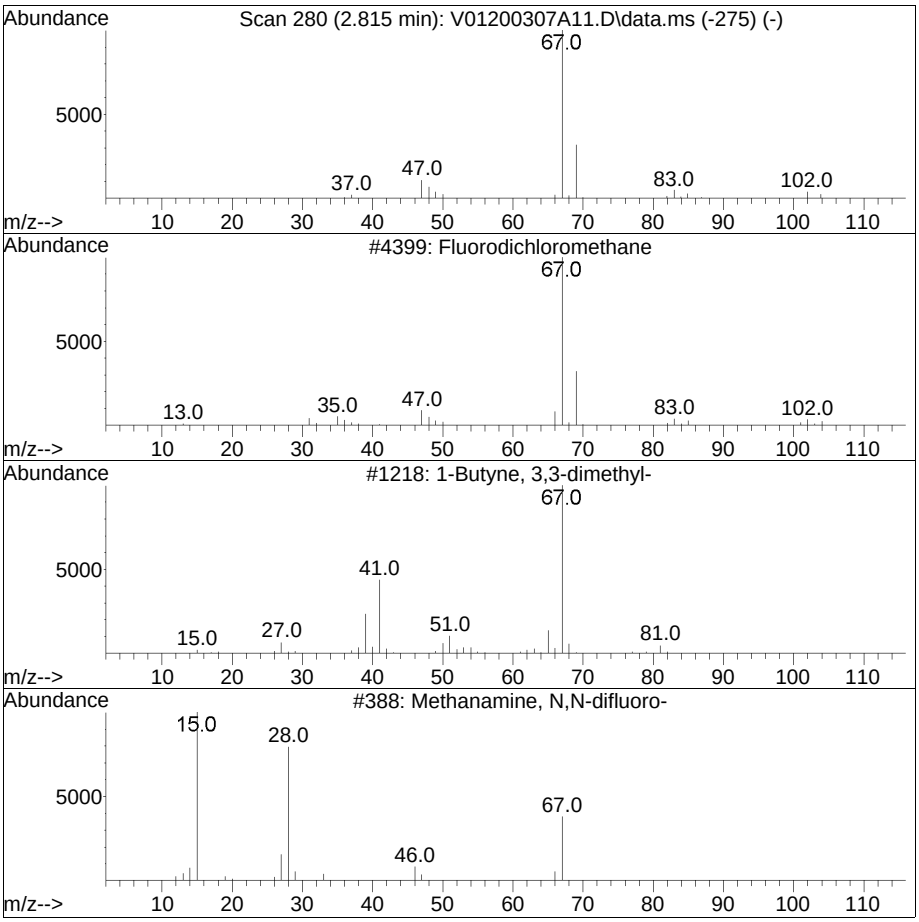
TIC Library : I:\nist-db\NIST02.L
TIC Integration Parameters: rteint.p

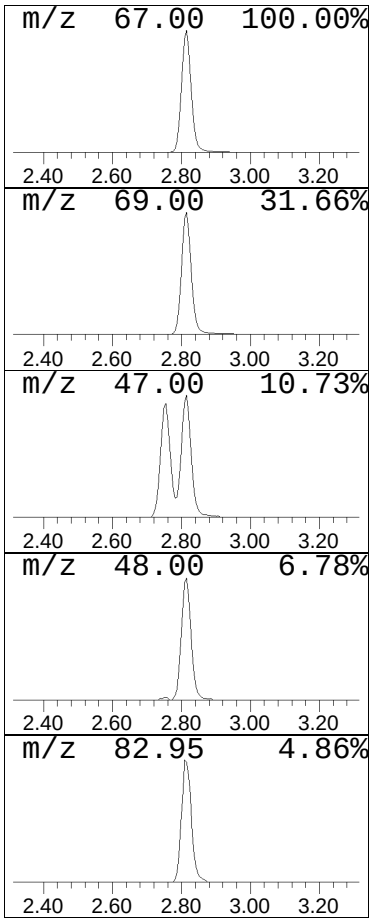
**********

Peak Number 2 Fluorodichloromethane Concentration Rank 2

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 2.815 | 16.63 ug/L | 738672 | Fluorobenzene | 6.634 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | Fluorodichloromethane | 102 | CHCl2F | 000075-43-4 | 91 |
| 2 | 1-Butyne, 3,3-dimethyl- | 82 | C6H10 | 000917-92-0 | 7 |
| 3 | Methanamine, N,N-difluoro- | 67 | CH3F2N | 000753-58-2 | 5 |
| 4 | 1-Hexyne | 82 | C6H10 | 000693-02-7 | 4 |
| 5 | Divinyl sulphone | 118 | C4H6O2S | 000077-77-0 | 4 |



Tentatively Identified Compound (LSC) summary

Data Path : I:\VOLATILES\VOA101\2020\200307A\
Data File : V01200307A11.D
Acq On : 7 Mar 2020 1:29 pm
Operator : VOA101:ajk
Sample : l2009793-01,31,10,10,,a
Misc : WG1348564,ICAL16539
ALS Vial : 11 Sample Multiplier: 1

Quant Method : I:\VOLATILES\VOA101\2020\200307A\V101_200219A_8260.m
Quant Title : VOLATILES BY GC/MS

TIC Library : I:\nist-db\NIST02.L
TIC Integration Parameters: rteint.p

| | | | | | --Internal Standard--- | | | |
|---|---|---|---|---|---|---|---|---|
| TIC Top Hit name | RT | EstConc | Units | Response | # | RT | Resp | Conc |
| Fluorodichlorom... | 2.815 | 16.6 | ug/L | 738672 | 1 | 6.634 | 444135 | 10.0 |

Quantitation Report (QT/LSC Reviewed)

Data Path : I:\VOLATILES\VOA101\2020\200307A\
Data File : V01200307A12.D
Acq On : 7 Mar 2020 1:53 pm
Operator : VOA101:ajk
Sample : l2009793-02,31,10,10,,a
Misc : WG1348564,ICAL16539
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Mar 08 18:16:26 2020
Quant Method : I:\VOLATILES\VOA101\2020\200307A\V101_200219A_8260.m
Quant Title : VOLATILES BY GC/MS
QLast Update : Thu Feb 20 09:49:21 2020
Response via : Initial Calibration

CCAL FILE(s) : 1 - I:\VOLATILES\VOA101\2020\200307A\V01200307A01.D
Sub List : 8260-NYTCL - Megamix plus Diox

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| Internal Standards | | | | | | |
| 1) Fluorobenzene | 6.634 | 96 | 201389 | 10.000 | ug/L | 0.00 |
| Standard Area 1 = 235149 | | | Recovery = 85.64% | | | |
| 59) Chlorobenzene-d5 | 10.524 | 117 | 148843 | 10.000 | ug/L | 0.00 |
| Standard Area 1 = 168234 | | | Recovery = 88.47% | | | |
| 79) 1,4-Dichlorobenzene-d4 | 13.323 | 152 | 76874 | 10.000 | ug/L | 0.00 |
| Standard Area 1 = 84540 | | | Recovery = 90.93% | | | |
| System Monitoring Compounds | | | | | | |
| 36) Dibromofluoromethane | 5.745 | 113 | 49788 | 9.597 | ug/L | 0.00 |
| Spiked Amount 10.000 | Range 70 - 130 | | Recovery = 95.97% | | | |
| 43) 1,2-Dichloroethane-d4 | 6.323 | 65 | 55182 | 9.924 | ug/L | 0.00 |
| Spiked Amount 10.000 | Range 70 - 130 | | Recovery = 99.24% | | | |
| 60) Toluene-d8 | 8.500 | 98 | 203238 | 9.558 | ug/L | 0.00 |
| Spiked Amount 10.000 | Range 70 - 130 | | Recovery = 95.58% | | | |
| 83) 4-Bromofluorobenzene | 12.036 | 95 | 77003 | 9.292 | ug/L | 0.00 |
| Spiked Amount 10.000 | Range 70 - 130 | | Recovery = 92.92% | | | |
| Target Compounds | | | | | | Qvalue |
| 2) Dichlorodifluoromethane | 1.821 | 85 | 98775 | 27.233 | ug/L | 99 |
| 3) Chloromethane | 2.029 | 50 | 125 | N.D. | | |
| 4) Vinyl chloride | 0.000 | | 0 | N.D. | | |
| 5) Bromomethane | 2.471 | 94 | 102 | N.D. | | |
| 6) Chloroethane | 0.000 | | 0 | N.D. | | |
| 7) Trichlorofluoromethane | 2.754 | 101 | 62785 | 10.492 | ug/L | 96 |
| 8) Ethyl ether | 0.000 | | 0 | N.D. | | |
| 10) 1,1-Dichloroethene | 0.000 | | 0 | N.D. | | |
| 11) Carbon disulfide | 3.327 | 76 | 342 | N.D. | | |
| 15) Methylene chloride | 0.000 | | 0 | N.D. | | |
| 17) Acetone | 3.933 | 43 | 817 | Below Cal # | | 64 |
| 18) trans-1,2-Dichloroethene | 0.000 | | 0 | N.D. | | |
| 20) Methyl tert-butyl ether | 4.157 | 73 | 302 | N.D. | | |
| 23) 1,1-Dichloroethane | 0.000 | | 0 | N.D. | | |
| 25) Acrylonitrile | 0.000 | | 0 | N.D. | | |
| 27) Vinyl acetate | 0.000 | | 0 | N.D. | | |
| 28) cis-1,2-Dichloroethene | 0.000 | | 0 | N.D. | | |
| 29) 2,2-Dichloropropane | 0.000 | | 0 | N.D. | | |
| 30) Bromochloromethane | 0.000 | | 0 | N.D. | | |
| 32) Chloroform | 0.000 | | 0 | N.D. | | |

Data Path : I:\VOLATILES\VOA101\2020\200307A\
Data File : V01200307A12.D
Acq On : 7 Mar 2020 1:53 pm
Operator : VOA101:ajk
Sample : l2009793-02,31,10,10,,a
Misc : WG1348564,ICAL16539
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Mar 08 18:16:26 2020
Quant Method : I:\VOLATILES\VOA101\2020\200307A\V101_200219A_8260.m
Quant Title : VOLATILES BY GC/MS
QLast Update : Thu Feb 20 09:49:21 2020
Response via : Initial Calibration

CCAL FILE(s) : 1 - I:\VOLATILES\VOA101\2020\200307A\V01200307A01.D
Sub List : 8260-NYTCL - Megamix plus Diox

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 34) Carbon tetrachloride | 0.000 | | 0 | | N.D. | |
| 37) 1,1,1-Trichloroethane | 0.000 | | 0 | | N.D. | |
| 39) 2-Butanone | 0.000 | | 0 | | N.D. | |
| 40) 1,1-Dichloropropene | 0.000 | | 0 | | N.D. | |
| 41) Benzene | 0.000 | | 0 | | N.D. | |
| 44) 1,2-Dichloroethane | 0.000 | | 0 | | N.D. | |
| 48) Trichloroethene | 0.000 | | 0 | | N.D. | |
| 50) Dibromomethane | 0.000 | | 0 | | N.D. | |
| 51) 1,2-Dichloropropane | 0.000 | | 0 | | N.D. | |
| 54) Bromodichloromethane | 0.000 | | 0 | | N.D. | |
| 57) 1,4-Dioxane | 0.000 | | 0 | | N.D. | |
| 58) cis-1,3-Dichloropropene | 0.000 | | 0 | | N.D. | |
| 61) Toluene | 0.000 | | 0 | | N.D. | |
| 62) 4-Methyl-2-pentanone | 0.000 | | 0 | | N.D. | |
| 63) Tetrachloroethene | 0.000 | | 0 | | N.D. | |
| 65) trans-1,3-Dichloropropene | 0.000 | | 0 | | N.D. | |
| 68) 1,1,2-Trichloroethane | 0.000 | | 0 | | N.D. | |
| 69) Chlorodibromomethane | 0.000 | | 0 | | N.D. | |
| 70) 1,3-Dichloropropane | 0.000 | | 0 | | N.D. | |
| 71) 1,2-Dibromoethane | 0.000 | | 0 | | N.D. | |
| 72) 2-Hexanone | 0.000 | | 0 | | N.D. | |
| 73) Chlorobenzene | 0.000 | | 0 | | N.D. | |
| 74) Ethylbenzene | 10.524 | 91 | 51 | | N.D. | |
| 75) 1,1,1,2-Tetrachloroethane | 0.000 | | 0 | | N.D. | |
| 76) p/m Xylene | 0.000 | | 0 | | N.D. | |
| 77) o Xylene | 0.000 | | 0 | | N.D. | |
| 78) Styrene | 0.000 | | 0 | | N.D. | |
| 80) Bromoform | 0.000 | | 0 | | N.D. | |
| 82) Isopropylbenzene | 0.000 | | 0 | | N.D. | |
| 84) Bromobenzene | 0.000 | | 0 | | N.D. | |
| 85) n-Propylbenzene | 0.000 | | 0 | | N.D. | |
| 87) 1,1,2,2-Tetrachloroethane | 0.000 | | 0 | | N.D. | |
| 88) 4-Ethyltoluene | 0.000 | | 0 | | N.D. | |
| 89) 2-Chlorotoluene | 0.000 | | 0 | | N.D. | |
| 90) 1,3,5-Trimethylbenzene | 0.000 | | 0 | | N.D. | |
| 91) 1,2,3-Trichloropropane | 0.000 | | 0 | | N.D. | |
| 92) trans-1,4-Dichloro-2-b... | 0.000 | | 0 | | N.D. | |
| 93) 4-Chlorotoluene | 0.000 | | 0 | | N.D. | |
| 94) tert-Butylbenzene | 0.000 | | 0 | | N.D. | |

Data Path : I:\VOLATILES\VOA101\2020\200307A\
Data File : V01200307A12.D
Acq On : 7 Mar 2020 1:53 pm
Operator : VOA101:ajk
Sample : l2009793-02,31,10,10,,a
Misc : WG1348564,ICAL16539
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Mar 08 18:16:26 2020
Quant Method : I:\VOLATILES\VOA101\2020\200307A\V101_200219A_8260.m
Quant Title : VOLATILES BY GC/MS
QLast Update : Thu Feb 20 09:49:21 2020
Response via : Initial Calibration

CCAL FILE(s) : 1 - I:\VOLATILES\VOA101\2020\200307A\V01200307A01.D
Sub List : 8260-NYTCL - Megamix plus Diox

| | Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|---|
| 97) | 1,2,4-Trimethylbenzene | 12.871 | 105 | 50 | N.D. | | |
| 98) | sec-Butylbenzene | 12.871 | 105 | 50 | N.D. | | |
| 99) | p-Isopropyltoluene | 13.143 | 119 | 1246 | 0.082 | ug/L # | 63 |
| 100) | 1,3-Dichlorobenzene | 0.000 | | 0 | N.D. | d | |
| 101) | 1,4-Dichlorobenzene | 13.345 | 146 | 54 | N.D. | | |
| 102) | p-Diethylbenzene | 0.000 | | 0 | N.D. | | |
| 103) | n-Butylbenzene | 0.000 | | 0 | N.D. | | |
| 104) | 1,2-Dichlorobenzene | 0.000 | | 0 | N.D. | | |
| 105) | 1,2,4,5-Tetramethylben... | 0.000 | | 0 | N.D. | | |
| 106) | 1,2-Dibromo-3-chloropr... | 0.000 | | 0 | N.D. | | |
| 108) | Hexachlorobutadiene | 0.000 | | 0 | N.D. | | |
| 109) | 1,2,4-Trichlorobenzene | 0.000 | | 0 | N.D. | | |
| 110) | Naphthalene | 15.752 | 128 | 400 | N.D. | | |
| 111) | 1,2,3-Trichlorobenzene | 0.000 | | 0 | N.D. | | |

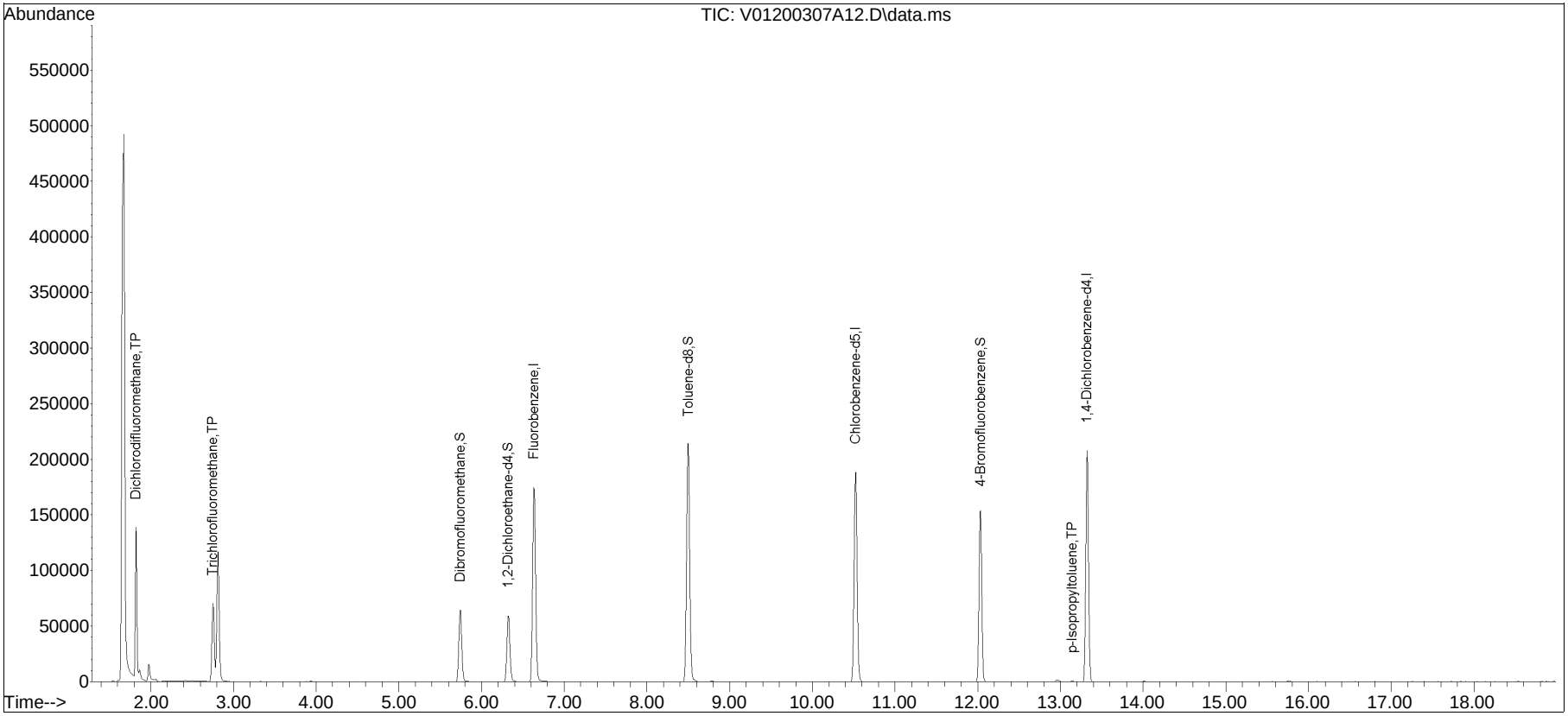
(#) = qualifier out of range (m) = manual integration (+) = signals summed

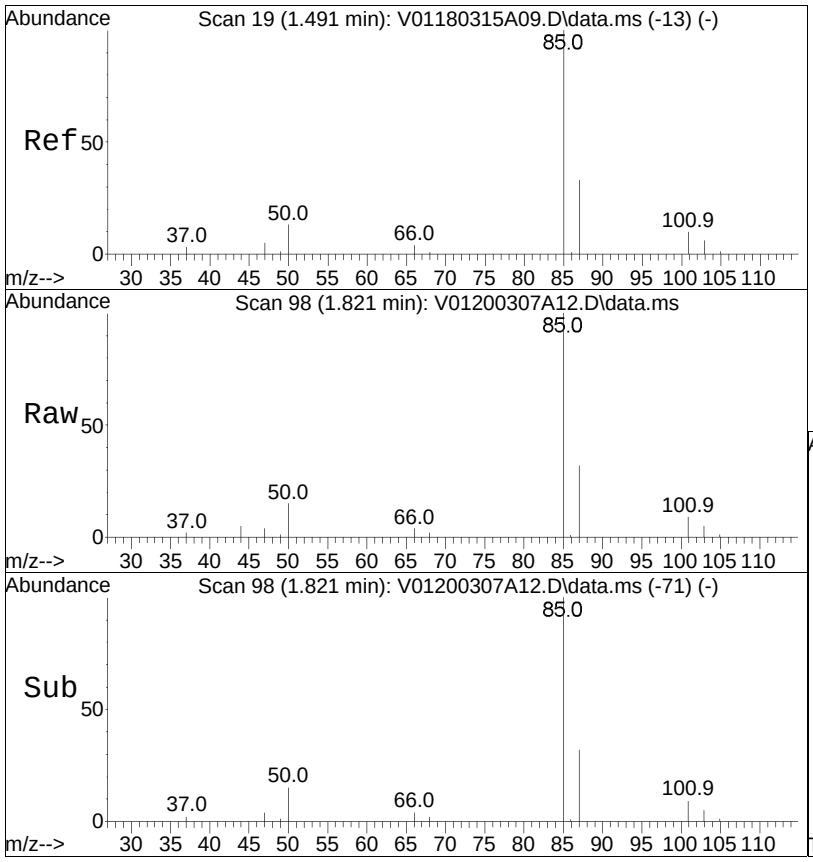
Quantitation Report (QT/LSC Reviewed)

Data Path : I:\VOLATILES\VOA101\2020\200307A\
Data File : V01200307A12.D
Acq On : 7 Mar 2020 1:53 pm
Operator : VOA101:ajk
Sample : l2009793-02,31,10,10,,a
Misc : WG1348564,ICAL16539
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Mar 08 18:16:26 2020
Quant Method : I:\VOLATILES\VOA101\2020\200307A\V101_200219A_8260.m
Quant Title : VOLATILES BY GC/MS
QLast Update : Thu Feb 20 09:49:21 2020
Response via : Initial Calibration

Sub List : 8260-NYTCL - Megamix plus Diox00307A\V01200307A01.D•

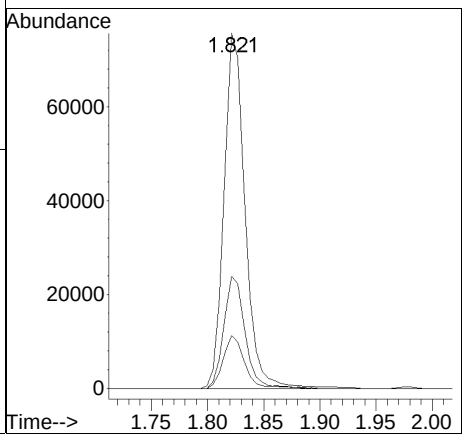


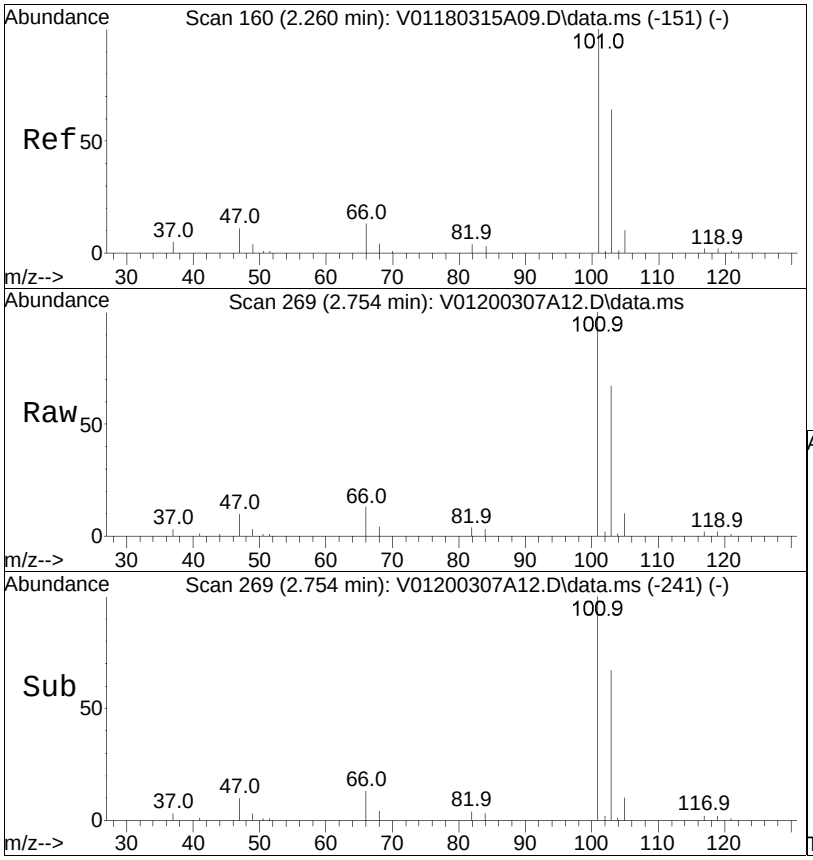



#2
Dichlorodifluoromethane
Concen: 27.23 ug/L
RT: 1.821 min Scan# 98
Delta R.T. 0.000 min
Lab File: V01200307A12.D
Acq: 7 Mar 2020 1:53 pm

Tgt Ion: 85 Resp: 98775

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 85 | 100 | | |
| 87 | 31.6 | 20.9 | 43.5 |
| 50 | 14.6 | 9.1 | 18.9 |

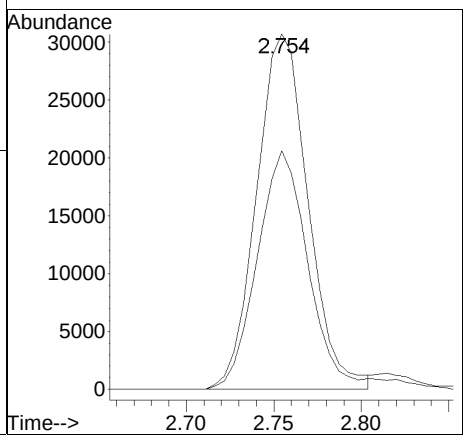


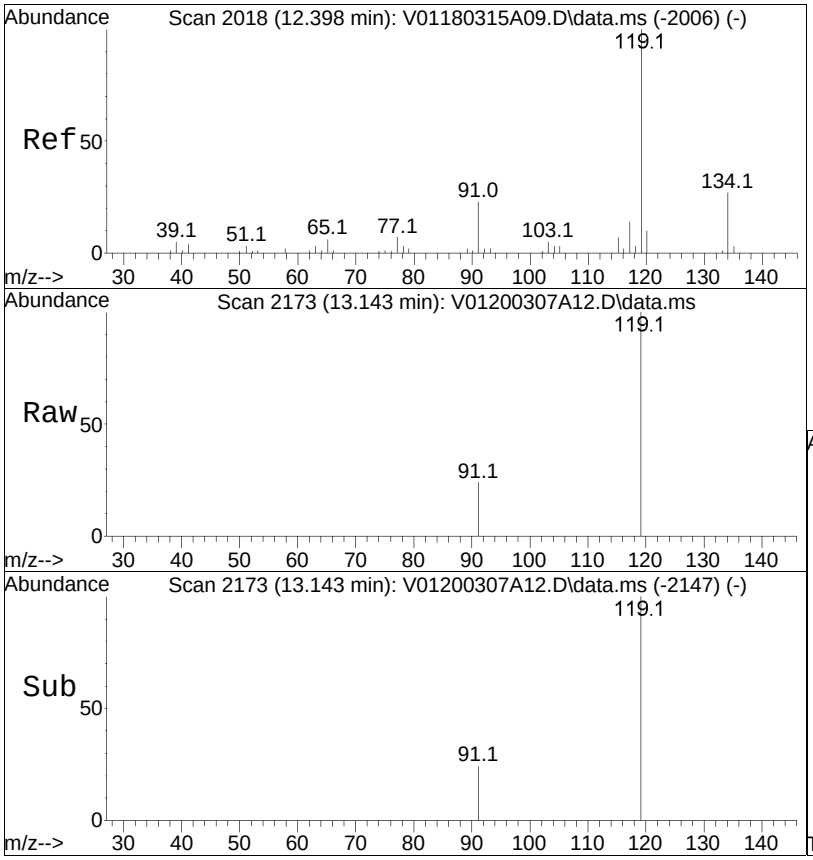



#7
Trichlorofluoromethane
Concen: 10.49 ug/L
RT: 2.754 min Scan# 269
Delta R.T. 0.000 min
Lab File: V01200307A12.D
Acq: 7 Mar 2020 1:53 pm

Tgt Ion:101 Resp: 62785

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 101 | 100 | | |
| 103 | 68.4 | 52.3 | 78.5 |

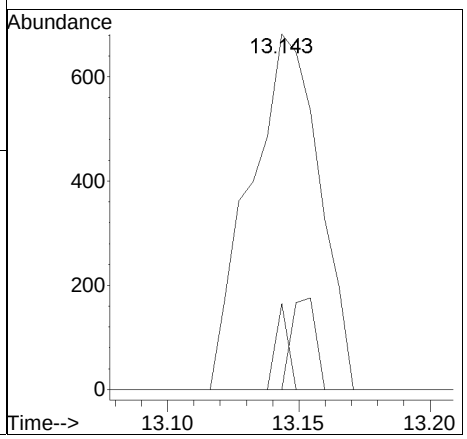





#99
p-Isopropyltoluene
Concen: 0.08 ug/L
RT: 13.143 min Scan# 2173
Delta R.T. -0.006 min
Lab File: V01200307A12.D
Acq: 7 Mar 2020 1:53 pm

Tgt Ion:119 Resp: 1246

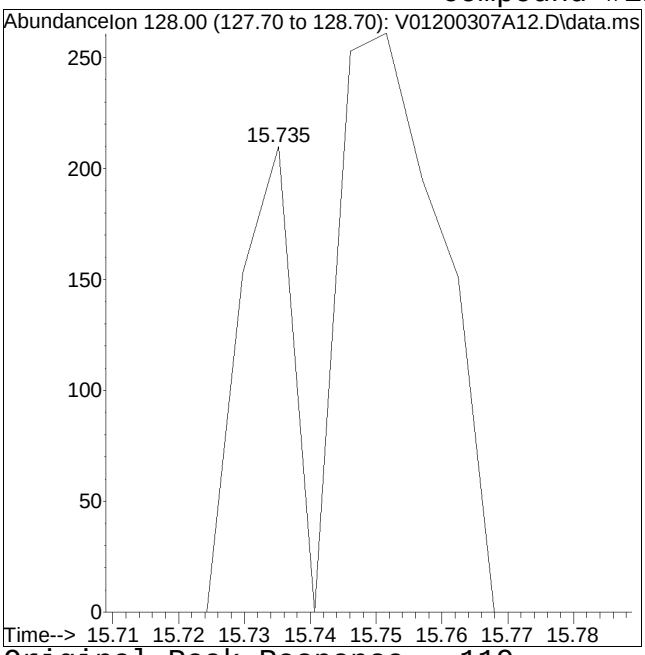
| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 119 | 100 | | |
| 134 | 9.0 | 17.7 | 36.7# |
| 91 | 4.3 | 15.4 | 32.0# |

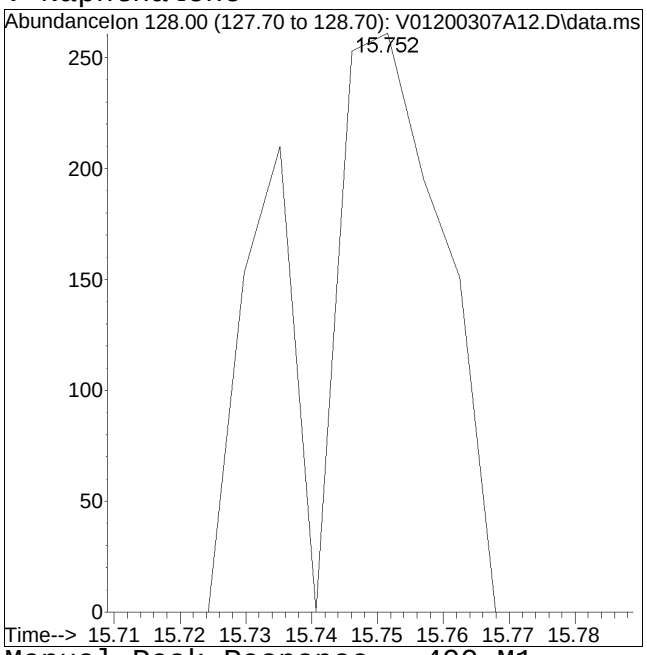


# Manual Integration Report

Data Path : I:\VOLATILES\VOA101\2020\2QMethod : V101_200219A_8260.m
Data File : V01200307A12.D Operator : VOA101:ajk
Date Inj'd : 3/7/2020 1:53 pm Instrument : VOA 101
Sample : l2009793-02,31,10,10,,a Quant Date : 3/8/2020 6:03 pm

## Compound #110: Naphthalene




Original Peak Response = 119 Manual Peak Response = 400 M1

M1 = Split or tailing peak, auto integration stopped early resulting in false low area count.

LSC Area Percent Report

Data Path : I:\VOLATILES\VOA101\2020\200307A\
Data File : V01200307A12.D
Acq On : 7 Mar 2020 1:53 pm
Operator : VOA101:ajk
Sample : l2009793-02,31,10,10,,a
Misc : WG1348564,ICAL16539
ALS Vial : 12 Sample Multiplier: 1

Integration Parameters: rteint.p
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 3 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : I:\VOLATILES\VOA101\2020\200307A\V101_200219A_8260.m
Title : VOLATILES BY GC/MS

Signal : TIC: V01200307A12.D\data.ms

| peak # | R.T. min | first scan | max scan | last scan | PK TY | peak height | corr. area | corr. % max. | % of total |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 1.674 | 61 | 71 | 93 | rBV | 490970 | 1196466 | 100.00% | 27.676% |
| 2 | 1.821 | 94 | 98 | 104 | rBV | 133959 | 165984 | 13.87% | 3.839% |
| 3 | 2.754 | 257 | 269 | 274 | rBV | 70032 | 138113 | 11.54% | 3.195% |
| 4 | 2.815 | 274 | 280 | 298 | rVB | 116639 | 224816 | 18.79% | 5.200% |
| 5 | 5.745 | 806 | 817 | 837 | rBB | 64607 | 158019 | 13.21% | 3.655% |
| 6 | 6.323 | 913 | 923 | 943 | rBB | 59121 | 152586 | 12.75% | 3.530% |
| 7 | 6.634 | 966 | 980 | 1005 | rBV | 174846 | 440180 | 36.79% | 10.182% |
| 8 | 8.495 | 1309 | 1321 | 1345 | rBB | 214565 | 555337 | 46.41% | 12.846% |
| 9 | 10.524 | 1681 | 1693 | 1711 | rBB | 188648 | 475404 | 39.73% | 10.997% |
| 10 | 12.030 | 1959 | 1969 | 1984 | rBB | 154400 | 350403 | 29.29% | 8.105% |
| 11 | 13.323 | 2195 | 2206 | 2219 | rBB | 207817 | 465840 | 38.93% | 10.775% |

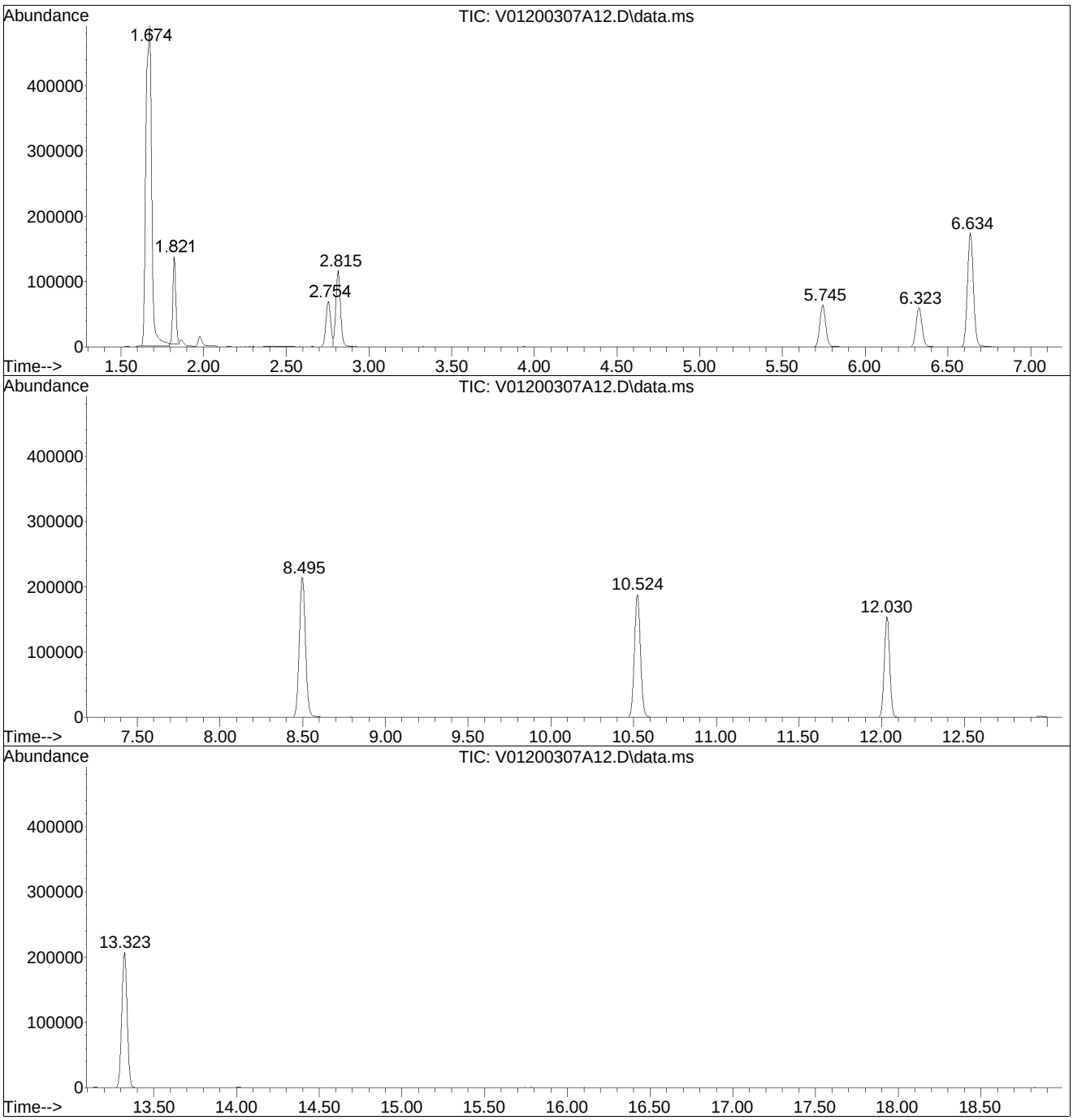
Sum of corrected areas: 4323148

LSC Report - Integrated Chromatogram

Data Path : I:\VOLATILES\VOA101\2020\200307A\
Data File : V01200307A12.D
Acq On : 7 Mar 2020 1:53 pm
Operator : VOA101:ajk
Sample : l2009793-02,31,10,10,,a
Misc : WG1348564,ICAL16539
ALS Vial : 12 Sample Multiplier: 1

Quant Method : I:\VOLATILES\VOA101\2020\200307A\V101_200219A_8260.m
Quant Title : VOLATILES BY GC/MS

TIC Library : I:\nist-db\NIST02.L
TIC Integration Parameters: rteint.p



# Library Search Compound Report

Data Path : I:\VOLATILES\VOA101\2020\200307A\
Data File : V01200307A12.D
Acq On : 7 Mar 2020 1:53 pm
Operator : VOA101:ajk
Sample : l2009793-02,31,10,10,,a
Misc : WG1348564,ICAL16539
ALS Vial : 12 Sample Multiplier: 1

Quant Method : I:\VOLATILES\VOA101\2020\200307A\V101_200219A_8260.m
Quant Title : VOLATILES BY GC/MS

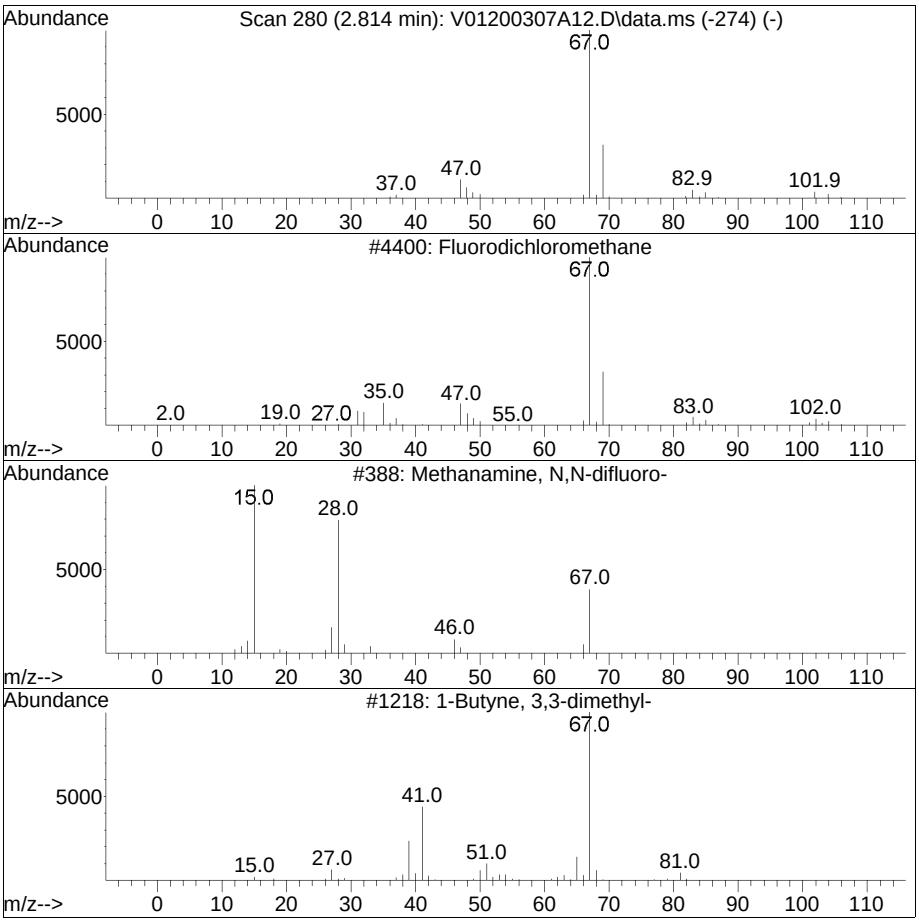
TIC Library : I:\nist-db\NIST02.L
TIC Integration Parameters: rteint.p

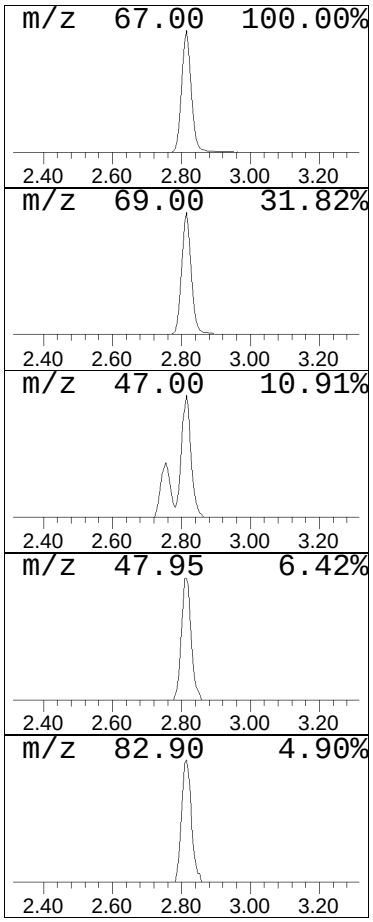
**********

Peak Number 2 Fluorodichloromethane Concentration Rank 2

| R.T. | EstConc | Area | Relative to ISTD | R.T. |
|---|---|---|---|---|
| 2.814 | 5.11 ug/L | 224816 | Fluorobenzene | 6.634 |

| Hit# of 5 | Tentative ID | MW | MolForm | CAS# | Qual |
|---|---|---|---|---|---|
| 1 | Fluorodichloromethane | 102 | CHCl2F | 000075-43-4 | 91 |
| 2 | Methanamine, N,N-difluoro- | 67 | CH3F2N | 000753-58-2 | 5 |
| 3 | 1-Butyne, 3,3-dimethyl- | 82 | C6H10 | 000917-92-0 | 4 |
| 4 | 1-Hexyne | 82 | C6H10 | 000693-02-7 | 4 |
| 5 | Chlorine dioxide | 67 | ClO2 | 010049-04-4 | 4 |



Tentatively Identified Compound (LSC) summary

Data Path : I:\VOLATILES\VOA101\2020\200307A\
Data File : V01200307A12.D
Acq On : 7 Mar 2020 1:53 pm
Operator : VOA101:ajk
Sample : l2009793-02,31,10,10,,a
Misc : WG1348564,ICAL16539
ALS Vial : 12 Sample Multiplier: 1

Quant Method : I:\VOLATILES\VOA101\2020\200307A\V101_200219A_8260.m
Quant Title : VOLATILES BY GC/MS

TIC Library : I:\nist-db\NIST02.L
TIC Integration Parameters: rteint.p

| | | | | | --Internal Standard--- | | | |
|---|---|---|---|---|---|---|---|---|
| TIC Top Hit name | RT | EstConc | Units | Response | # | RT | Resp | Conc |
| Fluorodichlorom... | 2.814 | 5.1 | ug/L | 224816 | 1 | 6.634 | 440180 | 10.0 |

# Volatiles Standards Data

# Initial Calibration

# Initial Calibration Summary
# Form 6
# Volatiles

| | | | |
|---|---|---|---|
| **Client** | **: Soils Engineering Services, Inc.** | **Lab Number** | **: L2009793** |
| **Project Name** | **: GROSSINGERS** | **Project Number** | **: 9313** |
| **Instrument ID** | **: VOA122** | **Ical Ref** | **: ICAL16379** |
| **Calibration dates** | **: 12/19/19 15:43 12/19/19 19:28** | | |

Calibration Files
L11 =V22191219N03.D L1 =V22191219N05.D L2 =V22191219N07.D L3 =V22191219N08.D L4 =V22191219N09.D
L6 =V22191219N10.D L8 =V22191219N11.D L10 =V22191219N12.D

| | | Compound | L11 | L1 | L2 | L3 | L4 | L6 | L8 | L10 | Avg | %RSD |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1) | I | Fluorobenzene | ----------ISTD---------- | | | | | | | | | |
| 2) | TP | Dichlorodifluo | | 0.144 | 0.173 | 0.189 | 0.184 | 0.168 | 0.176 | 0.171 | 0.172 | 8.43 |
| 3) | TP | Chloromethane | | 0.239 | 0.236 | 0.242 | 0.233 | 0.209 | 0.216 | 0.214 | 0.227 | 5.94 |
| 4) | TC | Vinyl chloride | 0.224 | 0.221 | 0.276 | 0.281 | 0.276 | 0.249 | 0.257 | 0.255 | 0.255 | 9.04 |
| 5) | TP | Bromomethane | 0.430 | 0.327 | 0.276 | 0.230 | 0.189 | 0.176 | | | *Q | 0.9975 |
| 6) | TP | Chloroethane | | 0.178 | 0.205 | 0.209 | 0.201 | 0.169 | 0.142 | | 0.184 | 14.19 |
| 7) | TP | Trichlorofluor | | 0.294 | 0.366 | 0.388 | 0.376 | 0.334 | 0.343 | 0.334 | 0.348 | 9.09 |
| 8) | TP | Ethyl ether | | 0.094 | 0.105 | 0.107 | 0.106 | 0.102 | 0.104 | 0.102 | 0.103 | 4.30 |
| 10) | TC | 1,1-Dichloroet | | 0.181 | 0.208 | 0.218 | 0.209 | 0.185 | 0.189 | 0.183 | 0.196 | 7.71 |
| 11) | TP | Carbon disulfide | | 0.496 | 0.561 | 0.561 | 0.528 | 0.468 | 0.490 | 0.480 | 0.512 | 7.45 |
| 12) | TP | Freon-113 | | 0.183 | 0.228 | 0.240 | 0.229 | 0.205 | 0.212 | 0.207 | 0.215 | 8.98 |
| 13) | TP | Iodomethane | | | 0.081 | 0.139 | 0.212 | 0.206 | 0.203 | 0.188 | *Q | 0.9983 |
| 14) | TP | Acrolein | | 0.024 | 0.028 | 0.030 | 0.032 | 0.030 | 0.033 | 0.032 | 0.030# | 9.80 |
| 15) | TP | Methylene chlo | | 0.216 | 0.237 | 0.235 | 0.225 | 0.209 | 0.217 | 0.215 | 0.222 | 4.65 |
| 17) | TP | Acetone | | 0.079 | 0.054 | 0.055 | 0.056 | 0.050 | 0.052 | 0.052 | 0.057# | 17.81 |
| 18) | TP | trans-1,2-Dich | | 0.191 | 0.232 | 0.230 | 0.221 | 0.196 | 0.204 | 0.200 | 0.211 | 7.96 |
| 19) | TP | Methyl acetate | | 0.110 | 0.115 | 0.094 | 0.088 | 0.090 | 0.096 | 0.095 | 0.098# | 10.44 |
| 21) | TP | Methyl tert butyl ether | | 0.479 | 0.509 | 0.510 | 0.481 | 0.432 | 0.439 | 0.410 | 0.466 | 8.44 |
| 22) | TP | tert-Butyl alc | | 0.018 | 0.016 | 0.014 | 0.012 | 0.012 | 0.014 | 0.014 | 0.015# | 14.63 |
| 24) | TP | Diisopropyl ether | | 0.610 | 0.671 | 0.677 | 0.673 | 0.639 | 0.664 | 0.655 | 0.655 | 3.64 |
| 25) | TP | 1,1-Dichloroet | | 0.357 | 0.460 | 0.454 | 0.441 | 0.412 | 0.428 | 0.411 | 0.423 | 8.26 |
| 26) | TP | Halothane | | 0.163 | 0.198 | 0.197 | 0.193 | 0.178 | 0.185 | 0.182 | 0.185 | 6.60 |
| 27) | TP | Acrylonitrile | | 0.047 | 0.055 | 0.053 | 0.055 | 0.052 | 0.054 | 0.053 | 0.053 | 5.63 |
| 28) | TP | Ethyl tert-but | | 0.605 | 0.654 | 0.669 | 0.673 | 0.630 | 0.645 | 0.606 | 0.640 | 4.30 |
| 29) | TP | Vinyl acetate | | 0.278 | 0.380 | 0.338 | 0.346 | 0.371 | 0.406 | 0.409 | 0.361 | 12.60 |
| 30) | TP | cis-1,2-Dichlo | | 0.240 | 0.288 | 0.282 | 0.271 | 0.244 | 0.252 | 0.245 | 0.260 | 7.56 |
| 31) | TP | 2,2-Dichloropr | | 0.248 | 0.340 | 0.265 | 0.200 | 0.209 | 0.228 | 0.222 | 0.244 | 19.38 |
| 32) | TP | Bromochloromet | | 0.111 | 0.123 | 0.123 | 0.115 | 0.094 | 0.095 | 0.094 | 0.108 | 12.53 |
| 33) | TP | Cyclohexane | | 0.351 | 0.429 | 0.448 | 0.431 | 0.407 | 0.428 | 0.421 | 0.417 | 7.50 |
| 34) | TC | Chloroform | | 0.390 | 0.443 | 0.442 | 0.427 | 0.396 | 0.408 | 0.404 | 0.416 | 5.23 |
| 35) | TP | Ethyl acetate | | 0.166 | 0.148 | 0.151 | 0.153 | 0.147 | 0.154 | 0.151 | 0.153 | 4.07 |
| 36) | TP | Carbon tetrachloride | 0.292 | 0.309 | 0.380 | 0.391 | 0.376 | 0.352 | 0.370 | 0.362 | 0.354 | 10.01 |
| 37) | TP | Tetrahydrofuran | | 0.055 | 0.057 | 0.054 | 0.054 | 0.051 | 0.053 | 0.051 | 0.054 | 3.90 |
| 38) | S | Dibromofluoromethane | 0.287 | 0.299 | 0.298 | 0.290 | 0.290 | 0.284 | 0.283 | 0.279 | 0.289 | 2.42 |
| 39) | TP | 1,1,1-Trichlor | | 0.347 | 0.404 | 0.414 | 0.397 | 0.364 | 0.376 | 0.364 | 0.381 | 6.48 |
| 41) | TP | 2-Butanone | | 0.096 | 0.075 | 0.069 | 0.066 | 0.063 | 0.066 | 0.064 | 0.071# | 16.03 |

# Initial Calibration Summary
# Form 6
# Volatiles

| | | | |
|---|---|---|---|
| **Client** | **: Soils Engineering Services, Inc.** | **Lab Number** | **: L2009793** |
| **Project Name** | **: GROSSINGERS** | **Project Number** | **: 9313** |
| **Instrument ID** | **: VOA122** | **Ical Ref** | **: ICAL16379** |
| **Calibration dates** | **: 12/19/19 15:43 12/19/19 19:28** | | |

Calibration Files
L11 =V22191219N03.D L1 =V22191219N05.D L2 =V22191219N07.D L3 =V22191219N08.D L4 =V22191219N09.D
L6 =V22191219N10.D L8 =V22191219N11.D L10 =V22191219N12.D

| | Compound | L11 | L1 | L2 | L3 | L4 | L6 | L8 | L10 | Avg | %RSD |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 42) TP | 1,1-Dichloropr | | 0.258 | 0.334 | 0.342 | 0.339 | 0.312 | 0.326 | 0.319 | 0.319 | 9.05 |
| 44) TP | Benzene | 0.817 | 0.801 | 0.948 | 0.954 | 0.935 | 0.873 | 0.900 | 0.873 | 0.888 | 6.53 |
| 45) TP | Tertiary-Amyl Methyl Ether | | 0.508 | 0.611 | 0.626 | 0.641 | 0.617 | 0.634 | 0.605 | 0.606 | 7.39 |
| 46) S | 1,2-Dichloroethane-d4 | 0.354 | 0.361 | 0.356 | 0.313 | 0.316 | 0.319 | 0.322 | 0.329 | 0.334 | 5.93 |
| 47) T | 1,2-Dichloroet | | 0.248 | 0.241 | 0.226 | 0.222 | 0.207 | 0.212 | 0.215 | 0.225 | 6.72 |
| 50) TP | Methyl cyclohe | | 0.334 | 0.420 | 0.469 | 0.457 | 0.439 | 0.459 | 0.451 | 0.433 | 10.67 |
| 51) TP | Trichloroethene | 0.228 | 0.227 | 0.260 | 0.265 | 0.267 | 0.247 | 0.257 | 0.257 | 0.251 | 6.36 |
| 53) TP | Dibromomethane | | 0.135 | 0.138 | 0.139 | 0.138 | 0.131 | 0.133 | 0.126 | 0.134 | 3.58 |
| 54) TC | 1,2-Dichloropr | | 0.220 | 0.240 | 0.248 | 0.247 | 0.232 | 0.239 | 0.236 | 0.237 | 3.92 |
| 56) TP | 2-Chloroethyl | | 0.103 | 0.122 | 0.123 | 0.112 | 0.090 | 0.080 | | 0.105 | 16.46 |
| 57) TP | Bromodichlorom | | 0.276 | 0.308 | 0.330 | 0.335 | 0.318 | 0.329 | 0.322 | 0.317 | 6.34 |
| 60) TP | 1,4-Dioxane | | 0.002 | 0.001 | 0.001 | 0.002 | 0.002 | 0.002 | 0.002 | 0.002# | 8.89 |
| 61) TP | cis-1,3-Dichlo | | 0.328 | 0.369 | 0.413 | 0.415 | 0.393 | 0.403 | 0.397 | 0.388 | 7.87 |
| 62) I | Chlorobenzene-d5 | ----------ISTD---------- | | | | | | | | | |
| 63) S | Toluene-d8 | 1.306 | 1.308 | 1.317 | 1.309 | 1.297 | 1.280 | 1.276 | 1.244 | 1.292 | 1.87 |
| 64) TC | Toluene | | 0.640 | 0.764 | 0.756 | 0.741 | 0.705 | 0.724 | 0.703 | 0.719 | 5.86 |
| 65) TP | 4-Methyl-2-pen | | 0.056 | 0.068 | 0.068 | 0.076 | 0.074 | 0.077 | 0.074 | 0.070# | 10.54 |
| 66) TP | Tetrachloroethene | | 0.327 | 0.371 | 0.379 | 0.372 | 0.345 | 0.356 | 0.343 | 0.356 | 5.30 |
| 68) TP | trans-1,3-Dich | | 0.344 | 0.398 | 0.408 | 0.407 | 0.389 | 0.394 | 0.373 | 0.388 | 5.81 |
| 70) TP | Ethyl methacry | | 0.222 | 0.252 | 0.265 | 0.277 | 0.277 | 0.284 | 0.274 | 0.265 | 8.20 |
| 71) TP | 1,1,2-Trichlor | | 0.176 | 0.195 | 0.195 | 0.197 | 0.185 | 0.187 | 0.181 | 0.188 | 4.18 |
| 72) TP | Chlorodibromom | | 0.238 | 0.274 | 0.284 | 0.293 | 0.284 | 0.291 | 0.283 | 0.278 | 6.69 |
| 73) TP | 1,3-Dichloropr | | 0.356 | 0.392 | 0.396 | 0.399 | 0.379 | 0.384 | 0.365 | 0.382 | 4.22 |
| 74) TP | 1,2-Dibromoethane | | 0.206 | 0.235 | 0.239 | 0.236 | 0.230 | 0.233 | 0.221 | 0.229 | 4.97 |
| 76) TP | 2-Hexanone | | 0.102 | 0.118 | 0.121 | 0.128 | 0.128 | 0.131 | 0.125 | 0.122 | 7.92 |
| 77) TP | Chlorobenzene | | 0.768 | 0.829 | 0.848 | 0.835 | 0.786 | 0.805 | 0.785 | 0.808 | 3.71 |
| 78) TC | Ethylbenzene | | 1.198 | 1.418 | 1.497 | 1.485 | 1.410 | 1.429 | 1.355 | 1.399 | 7.20 |
| 79) TP | 1,1,1,2-Tetrac | | 0.237 | 0.308 | 0.315 | 0.317 | 0.301 | 0.305 | 0.293 | 0.297 | 9.25 |
| 80) TP | p/m Xylene | | 0.462 | 0.572 | 0.590 | 0.598 | 0.569 | 0.584 | 0.568 | 0.563 | 8.21 |
| 81) TP | o Xylene | | 0.436 | 0.521 | 0.549 | 0.558 | 0.544 | 0.560 | 0.544 | 0.530 | 8.24 |
| 82) TP | Styrene | | 0.699 | 0.830 | 0.907 | 0.948 | 0.923 | 0.924 | 0.866 | 0.871 | 9.83 |
| 83) I | 1,4-Dichlorobenzene-d4 | ----------ISTD---------- | | | | | | | | | |
| 84) TP | Bromoform | | 0.303 | 0.336 | 0.355 | 0.375 | 0.381 | 0.402 | 0.403 | 0.365 | 10.01 |
| 86) TP | Isopropylbenzene | | 2.906 | 3.462 | 3.518 | 3.297 | 3.148 | 3.244 | 3.212 | 3.255 | 6.26 |
| 87) S | 4-Bromofluorobenzene | 0.979 | 0.989 | 1.004 | 0.998 | 0.965 | 0.957 | 0.967 | 0.996 | 0.982 | 1.79 |
| 88) TP | Bromobenzene | | 0.622 | 0.712 | 0.713 | 0.667 | 0.653 | 0.684 | 0.685 | 0.677 | 4.82 |

# Initial Calibration Summary
# Form 6
# Volatiles

| | | | |
|---|---|---|---|
| **Client** | **: Soils Engineering Services, Inc.** | **Lab Number** | **: L2009793** |
| **Project Name** | **: GROSSINGERS** | **Project Number** | **: 9313** |
| **Instrument ID** | **: VOA122** | **Ical Ref** | **: ICAL16379** |
| **Calibration dates** | **: 12/19/19 15:43 12/19/19 19:28** | | |

Calibration Files
L11 =V22191219N03.D L1 =V22191219N05.D L2 =V22191219N07.D L3 =V22191219N08.D L4 =V22191219N09.D
L6 =V22191219N10.D L8 =V22191219N11.D L10 =V22191219N12.D

| | Compound | L11 | L1 | L2 | L3 | L4 | L6 | L8 | L10 | Avg | %RSD |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 89) TP | n-Propylbenzene | | 2.923 | 3.548 | 3.674 | 3.509 | 3.380 | 3.448 | 3.314 | 3.400 | 7.07 |
| 90) TP | 1,4-Dichlorobu | | 0.683 | 0.746 | 0.727 | 0.724 | 0.709 | 0.745 | 0.739 | 0.725 | 3.12 |
| 91) TP | 1,1,2,2-Tetrac | | 0.517 | 0.521 | 0.512 | 0.504 | 0.484 | 0.498 | 0.486 | 0.503 | 2.89 |
| 92) TP | 4-Ethyltoluene | | 2.263 | 2.762 | 2.887 | 2.733 | 2.604 | 2.674 | 2.601 | 2.646 | 7.40 |
| 93) TP | 2-Chlorotoluene | | 1.935 | 2.310 | 2.344 | 2.227 | 2.095 | 2.165 | 2.124 | 2.171 | 6.41 |
| 94) TP | 1,3,5-Trimethy | | 1.992 | 2.376 | 2.480 | 2.381 | 2.281 | 2.349 | 2.321 | 2.311 | 6.66 |
| 95) TP | 1,2,3-Trichlor | | 0.429 | 0.454 | 0.433 | 0.424 | 0.414 | 0.434 | 0.434 | 0.432 | 2.80 |
| 96) TP | trans-1,4-Dich | | 0.142 | 0.146 | 0.141 | 0.143 | 0.141 | 0.144 | 0.144 | 0.143 | 1.27 |
| 97) TP | 4-Chlorotoluene | | 1.770 | 2.063 | 2.115 | 2.018 | 1.923 | 1.980 | 1.934 | 1.972 | 5.68 |
| 98) TP | tert-Butylbenzene | | 1.758 | 2.060 | 2.173 | 2.087 | 2.029 | 2.106 | 2.074 | 2.041 | 6.49 |
| 101) TP | 1,2,4-Trimethy | | 1.930 | 2.252 | 2.364 | 2.308 | 2.252 | 2.314 | 2.251 | 2.239 | 6.36 |
| 102) TP | sec-Butylbenzene | | 2.300 | 2.835 | 2.973 | 3.138 | 3.061 | 3.101 | 3.006 | 2.916 | 9.92 |
| 103) TP | p-Isopropyltol | | 1.991 | 2.390 | 2.564 | 2.750 | 2.682 | 2.717 | 2.633 | 2.532 | 10.55 |
| 104) TP | 1,3-Dichlorobe | | 1.261 | 1.357 | 1.380 | 1.318 | 1.263 | 1.293 | 1.267 | 1.305 | 3.67 |
| 105) TP | 1,4-Dichlorobe | | 1.240 | 1.370 | 1.361 | 1.286 | 1.237 | 1.257 | 1.244 | 1.285 | 4.47 |
| 106) TP | p-Diethylbenzene | | 1.048 | 1.238 | 1.350 | 1.330 | 1.334 | 1.371 | 1.361 | 1.290 | 8.95 |
| 107) TP | n-Butylbenzene | | 1.653 | 1.975 | 2.130 | 2.075 | 2.007 | 2.055 | 1.979 | 1.982 | 7.84 |
| 108) TP | 1,2-Dichlorobe | | 1.065 | 1.216 | 1.217 | 1.175 | 1.137 | 1.174 | 1.138 | 1.160 | 4.58 |
| 109) TP | 1,2,4,5-Tetram | | 1.428 | 1.677 | 1.760 | 1.741 | 1.768 | 1.843 | 1.860 | 1.725 | 8.40 |
| 110) TP | 1,2-Dibromo-3- | | 0.078 | 0.088 | 0.085 | 0.088 | 0.089 | 0.096 | 0.095 | 0.088 | 7.12 |
| 111) TP | 1,3,5-Trichlor | | 0.643 | 0.773 | 0.771 | 0.732 | 0.708 | 0.723 | 0.729 | 0.726 | 6.07 |
| 112) TP | Hexachlorobuta | | 0.229 | 0.240 | 0.258 | 0.247 | 0.235 | 0.248 | 0.253 | 0.244 | 4.22 |
| 113) TP | 1,2,4-Trichlor | | 0.639 | 0.687 | 0.702 | 0.670 | 0.639 | 0.661 | 0.663 | 0.666 | 3.51 |
| 114) TP | Naphthalene | | 1.448 | 1.502 | 1.536 | 1.526 | 1.547 | 1.619 | 1.629 | 1.544 | 4.11 |
| 115) TP | 1,2,3-Trichlor | | 0.613 | 0.605 | 0.631 | 0.600 | 0.591 | 0.615 | 0.618 | 0.611 | 2.16 |

# Initial Calibration Summary
# Form 6
# Volatiles

| | | | |
|---|---|---|---|
| **Client** | **: Soils Engineering Services, Inc.** | **Lab Number** | **: L2009793** |
| **Project Name** | **: GROSSINGERS** | **Project Number** | **: 9313** |
| **Instrument ID** | **: VOA101** | **Ical Ref** | **: ICAL16539** |
| **Calibration dates** | **: 02/19/20 15:13 02/19/20 20:21** | | |

Calibration Files
L11 =V01200219A18.D L1 =V01200219A05.D L2 =V01200219A07.D L3 =V01200219A08.D L4 =V01200219A09.D
L6 =V01200219A10.D L8 =V01200219A11.D L10 =V01200219A12.D

| | | Compound | L11 | L1 | L2 | L3 | L4 | L6 | L8 | L10 | Avg | %RSD |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1) | I | Fluorobenzene | ----------ISTD---------- | | | | | | | | | |
| 2) | TP | Dichlorodifluo | | 0.146 | 0.159 | 0.182 | 0.181 | 0.200 | 0.198 | 0.196 | 0.180 | 11.48 |
| 3) | TP | Chloromethane | | 0.260 | 0.252 | 0.269 | 0.264 | 0.286 | 0.287 | 0.289 | 0.273 | 5.51 |
| 4) | TC | Vinyl chloride | 0.265 | 0.211 | 0.227 | 0.253 | 0.252 | 0.278 | 0.278 | 0.274 | 0.255 | 9.67 |
| 5) | TP | Bromomethane | | 0.112 | 0.096 | 0.088 | 0.087 | 0.105 | 0.117 | 0.121 | 0.104 | 13.30 |
| 6) | TP | Chloroethane | | 0.126 | 0.143 | 0.152 | 0.151 | 0.161 | 0.158 | 0.145 | 0.148 | 7.96 |
| 7) | TP | Trichlorofluor | | 0.257 | 0.262 | 0.299 | 0.298 | 0.326 | 0.322 | 0.316 | 0.297 | 9.33 |
| 8) | TP | Ethyl ether | | 0.076 | 0.072 | 0.087 | 0.084 | 0.092 | 0.091 | 0.092 | 0.085 | 9.62 |
| 10) | TC | 1,1-Dichloroet | | 0.140 | 0.162 | 0.184 | 0.184 | 0.202 | 0.200 | 0.199 | 0.182 | 12.74 |
| 11) | TP | Carbon disulfide | | 0.504 | 0.443 | 0.477 | 0.466 | 0.516 | 0.520 | 0.521 | 0.492 | 6.17 |
| 12) | TP | Freon-113 | | 0.147 | 0.159 | 0.183 | 0.180 | 0.199 | 0.195 | 0.192 | 0.179 | 10.69 |
| 13) | TP | Iodomethane | | 0.188 | 0.188 | 0.233 | 0.259 | 0.279 | 0.267 | 0.262 | 0.239 | 15.83 |
| 14) | TP | Acrolein | | | 0.020 | 0.023 | 0.023 | 0.025 | 0.024 | 0.026 | 0.024# | 8.39 |
| 15) | TP | Methylene chlo | | 0.168 | 0.176 | 0.191 | 0.186 | 0.202 | 0.202 | 0.204 | 0.190 | 7.42 |
| 16) | TP | Isopropyl alcohol | | | 0.006 | 0.006 | 0.006 | 0.006 | 0.006 | 0.007 | 0.006# | 4.11 |
| 17) | TP | Acetone | | 0.148 | 0.054 | 0.038 | 0.034 | 0.034 | 0.033 | 0.034 | *L | 0.9997 |
| 18) | TP | trans-1,2-Dich | | 0.178 | 0.173 | 0.192 | 0.189 | 0.207 | 0.207 | 0.207 | 0.193 | 7.36 |
| 19) | TP | Methyl acetate | | | 0.111 | 0.097 | 0.088 | 0.094 | 0.089 | 0.087 | 0.095# | 9.57 |
| 20) | TP | Methyl tert butyl ether | | 0.379 | 0.376 | 0.411 | 0.403 | 0.441 | 0.430 | 0.441 | 0.412 | 6.63 |
| 21) | TP | tert-Butyl alc | | 0.008 | 0.009 | 0.011 | 0.010 | 0.010 | 0.010 | 0.011 | 0.010# | 11.06 |
| 22) | TP | Diisopropyl ether | | 0.641 | 0.662 | 0.735 | 0.710 | 0.767 | 0.751 | 0.744 | 0.716 | 6.65 |
| 23) | TP | 1,1-Dichloroet | | 0.358 | 0.378 | 0.423 | 0.414 | 0.449 | 0.443 | 0.441 | 0.415 | 8.37 |
| 24) | TP | Halothane | | 0.116 | 0.136 | 0.157 | 0.158 | 0.176 | 0.174 | 0.175 | 0.156 | 14.63 |
| 25) | TP | Acrylonitrile | | 0.029 | 0.035 | 0.044 | 0.044 | 0.047 | 0.046 | 0.048 | 0.042# | 16.59 |
| 26) | TP | Ethyl tert-but | | 0.577 | 0.574 | 0.638 | 0.628 | 0.677 | 0.665 | 0.670 | 0.633 | 6.77 |
| 27) | TP | Vinyl acetate | | 0.401 | 0.375 | 0.413 | 0.416 | 0.454 | 0.439 | 0.437 | 0.419 | 6.34 |
| 28) | TP | cis-1,2-Dichlo | | 0.198 | 0.213 | 0.228 | 0.225 | 0.248 | 0.247 | 0.249 | 0.230 | 8.62 |
| 29) | TP | 2,2-Dichloropr | | 0.255 | 0.269 | 0.291 | 0.288 | 0.313 | 0.303 | 0.302 | 0.289 | 7.13 |
| 30) | TP | Bromochloromet | | 0.069 | 0.083 | 0.091 | 0.092 | 0.096 | 0.093 | 0.092 | 0.088 | 10.84 |
| 31) | TP | Cyclohexane | | 0.374 | 0.386 | 0.439 | 0.441 | 0.485 | 0.473 | 0.468 | 0.438 | 9.83 |
| 32) | TC | Chloroform | | 0.302 | 0.323 | 0.356 | 0.362 | 0.396 | 0.395 | 0.395 | 0.361 | 10.39 |
| 33) | TP | Ethyl acetate | | 0.149 | 0.132 | 0.129 | 0.128 | 0.138 | 0.134 | 0.139 | 0.136 | 5.28 |
| 34) | TP | Carbon tetrachloride | 0.280 | 0.217 | 0.256 | 0.295 | 0.293 | 0.334 | 0.328 | 0.328 | 0.291 | 13.88 |
| 35) | TP | Tetrahydrofuran | | | 0.037 | 0.038 | 0.037 | 0.039 | 0.037 | 0.038 | 0.038# | 2.10 |
| 36) | S | Dibromofluoromethane | 0.259 | 0.263 | 0.257 | 0.259 | 0.254 | 0.256 | 0.258 | 0.254 | 0.258 | 1.07 |
| 37) | TP | 1,1,1-Trichlor | | 0.276 | 0.303 | 0.337 | 0.336 | 0.373 | 0.369 | 0.369 | 0.338 | 10.92 |

# Initial Calibration Summary
# Form 6
# Volatiles

| | | | |
|---|---|---|---|
| **Client** | **: Soils Engineering Services, Inc.** | **Lab Number** | **: L2009793** |
| **Project Name** | **: GROSSINGERS** | **Project Number** | **: 9313** |
| **Instrument ID** | **: VOA101** | **Ical Ref** | **: ICAL16539** |
| **Calibration dates** | **: 02/19/20 15:13 02/19/20 20:21** | | |

Calibration Files
L11 =V01200219A18.D L1 =V01200219A05.D L2 =V01200219A07.D L3 =V01200219A08.D L4 =V01200219A09.D
L6 =V01200219A10.D L8 =V01200219A11.D L10 =V01200219A12.D

| | Compound | L11 | L1 | L2 | L3 | L4 | L6 | L8 | L10 | Avg | %RSD |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 38) TP | 2-Butanol | | | 0.010 | 0.009 | 0.009 | 0.009 | 0.009 | 0.010 | 0.009# | 6.29 |
| 39) TP | 2-Butanone | | | 0.058 | 0.056 | 0.050 | 0.056 | 0.054 | 0.057 | 0.055# | 5.36 |
| 40) TP | 1,1-Dichloropr | | 0.228 | 0.253 | 0.289 | 0.291 | 0.324 | 0.319 | 0.320 | 0.289 | 12.66 |
| 41) TP | Benzene | 0.867 | 0.671 | 0.716 | 0.792 | 0.777 | 0.858 | 0.856 | 0.856 | 0.799 | 9.27 |
| 42) TP | Tertiary-Amyl Methyl Ether | | 0.440 | 0.424 | 0.468 | 0.456 | 0.505 | 0.498 | 0.510 | 0.471 | 7.14 |
| 43) S | 1,2-Dichloroethane-d4 | 0.268 | 0.288 | 0.280 | 0.274 | 0.275 | 0.274 | 0.272 | 0.278 | 0.276 | 2.24 |
| 44) TP | 1,2-Dichloroet | | 0.213 | 0.234 | 0.252 | 0.248 | 0.272 | 0.268 | 0.268 | 0.251 | 8.54 |
| 46) TP | 2-Methyl-2-but | | 0.007 | 0.008 | 0.009 | 0.009 | 0.009 | 0.009 | 0.010 | 0.009# | 11.87 |
| 47) TP | Methyl cyclohe | | 0.257 | 0.279 | 0.325 | 0.326 | 0.368 | 0.366 | 0.367 | 0.327 | 13.68 |
| 48) TP | Trichloroethene | 0.244 | 0.182 | 0.194 | 0.216 | 0.216 | 0.238 | 0.236 | 0.235 | 0.220 | 10.22 |
| 50) TP | Dibromomethane | | 0.071 | 0.086 | 0.094 | 0.096 | 0.105 | 0.104 | 0.106 | 0.095 | 13.34 |
| 51) TC | 1,2-Dichloropr | | 0.186 | 0.202 | 0.231 | 0.227 | 0.250 | 0.248 | 0.248 | 0.227 | 10.95 |
| 52) TP | 4-penten-2-ol | | | 0.006 | 0.007 | 0.007 | 0.007 | 0.007 | 0.008 | 0.007# | 9.02 |
| 53) TP | 2-Chloroethyl | | | | 0.057 | 0.064 | 0.077 | 0.073 | 0.079 | 0.070 | 13.11 |
| 54) TP | Bromodichlorom | | 0.224 | 0.232 | 0.257 | 0.257 | 0.288 | 0.286 | 0.288 | 0.262 | 10.21 |
| 57) TP | 1,4-Dioxane | | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001# | 6.05 |
| 58) TP | cis-1,3-Dichlo | | 0.277 | 0.288 | 0.318 | 0.320 | 0.352 | 0.348 | 0.349 | 0.322 | 9.42 |
| 59) I | Chlorobenzene-d5 | ----------ISTD---------- | | | | | | | | | |
| 60) S | Toluene-d8 | 1.416 | 1.429 | 1.437 | 1.432 | 1.418 | 1.427 | 1.432 | 1.437 | 1.429 | 0.55 |
| 61) TC | Toluene | | 0.592 | 0.660 | 0.720 | 0.708 | 0.787 | 0.792 | 0.793 | 0.722 | 10.60 |
| 62) TP | 4-Methyl-2-pen | | 0.041 | 0.057 | 0.068 | 0.067 | 0.076 | 0.074 | 0.077 | 0.066# | 19.76 |
| 63) TP | Tetrachloroethene | | 0.237 | 0.271 | 0.305 | 0.305 | 0.346 | 0.344 | 0.350 | 0.308 | 13.80 |
| 65) TP | trans-1,3-Dich | | 0.330 | 0.327 | 0.367 | 0.373 | 0.417 | 0.415 | 0.424 | 0.379 | 10.79 |
| 66) TP | 4-Methyl-2-pen | | 0.033 | 0.034 | 0.036 | 0.036 | 0.036 | 0.035 | 0.039 | 0.036# | 4.69 |
| 67) TP | Ethyl methacry | | 0.227 | 0.219 | 0.245 | 0.245 | 0.277 | 0.269 | 0.280 | 0.252 | 9.68 |
| 68) TP | 1,1,2-Trichlor | | 0.135 | 0.150 | 0.167 | 0.161 | 0.180 | 0.178 | 0.183 | 0.165 | 10.76 |
| 69) TP | Chlorodibromom | | 0.190 | 0.199 | 0.236 | 0.240 | 0.274 | 0.274 | 0.283 | 0.242 | 15.35 |
| 70) TP | 1,3-Dichloropr | | 0.300 | 0.318 | 0.344 | 0.341 | 0.381 | 0.377 | 0.387 | 0.350 | 9.52 |
| 71) TP | 1,2-Dibromoethane | | 0.149 | 0.173 | 0.187 | 0.189 | 0.210 | 0.210 | 0.217 | 0.191 | 12.69 |
| 72) TP | 2-Hexanone | | 0.152 | 0.115 | 0.115 | 0.112 | 0.126 | 0.122 | 0.127 | 0.124 | 10.99 |
| 73) TP | Chlorobenzene | | 0.662 | 0.705 | 0.765 | 0.754 | 0.837 | 0.838 | 0.841 | 0.772 | 9.19 |
| 74) TC | Ethylbenzene | | 1.169 | 1.220 | 1.342 | 1.320 | 1.476 | 1.470 | 1.472 | 1.353 | 9.32 |
| 75) TP | 1,1,1,2-Tetrac | | 0.229 | 0.251 | 0.273 | 0.277 | 0.311 | 0.311 | 0.315 | 0.281 | 11.81 |
| 76) TP | p/m Xylene | | 0.434 | 0.467 | 0.523 | 0.519 | 0.581 | 0.578 | 0.572 | 0.525 | 10.95 |
| 77) TP | o Xylene | | 0.403 | 0.450 | 0.490 | 0.482 | 0.540 | 0.539 | 0.534 | 0.491 | 10.56 |
| 78) TP | Styrene | | 0.680 | 0.737 | 0.808 | 0.807 | 0.908 | 0.913 | 0.909 | 0.823 | 11.22 |

# Initial Calibration Summary
# Form 6
# Volatiles

| | | | |
|---|---|---|---|
| **Client** | **: Soils Engineering Services, Inc.** | **Lab Number** | **: L2009793** |
| **Project Name** | **: GROSSINGERS** | **Project Number** | **: 9313** |
| **Instrument ID** | **: VOA101** | **Ical Ref** | **: ICAL16539** |
| **Calibration dates** | **: 02/19/20 15:13 02/19/20 20:21** | | |

Calibration Files
L11 =V01200219A18.D L1 =V01200219A05.D L2 =V01200219A07.D L3 =V01200219A08.D L4 =V01200219A09.D
L6 =V01200219A10.D L8 =V01200219A11.D L10 =V01200219A12.D

| | | Compound | L11 | L1 | L2 | L3 | L4 | L6 | L8 | L10 | Avg | %RSD |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 79) | I | 1,4-Dichlorobenzene-d4 | ----------ISTD---------- | | | | | | | | | |
| 80) | TP | Bromoform | | 0.177 | 0.213 | 0.261 | 0.266 | 0.282 | 0.286 | 0.289 | 0.253 | 16.74 |
| 82) | TP | Isopropylbenzene | | 2.357 | 2.369 | 2.726 | 2.615 | 2.747 | 2.745 | 2.666 | 2.604 | 6.58 |
| 83) | S | 4-Bromofluorobenzene | 1.109 | 1.130 | 1.114 | 1.109 | 1.090 | 1.028 | 1.044 | 1.001 | 1.078 | 4.40 |
| 84) | TP | Bromobenzene | | 0.524 | 0.528 | 0.598 | 0.588 | 0.616 | 0.617 | 0.607 | 0.582 | 6.86 |
| 85) | TP | n-Propylbenzene | | 2.473 | 2.588 | 2.924 | 2.831 | 2.981 | 3.001 | 2.920 | 2.817 | 7.31 |
| 86) | TP | 1,4-Dichlorobu | | 0.817 | 0.697 | 0.761 | 0.738 | 0.759 | 0.743 | 0.725 | 0.749 | 4.96 |
| 87) | TP | 1,1,2,2-Tetrac | | 0.379 | 0.369 | 0.400 | 0.389 | 0.412 | 0.407 | 0.412 | 0.395 | 4.26 |
| 88) | TP | 4-Ethyltoluene | | 1.974 | 2.093 | 2.374 | 2.298 | 2.464 | 2.496 | 2.427 | 2.304 | 8.61 |
| 89) | TP | 2-Chlorotoluene | | 1.698 | 1.730 | 1.908 | 1.856 | 1.969 | 1.988 | 1.942 | 1.870 | 6.17 |
| 90) | TP | 1,3,5-Trimethy | | 1.764 | 1.872 | 2.070 | 2.002 | 2.138 | 2.162 | 2.104 | 2.016 | 7.35 |
| 91) | TP | 1,2,3-Trichlor | | 0.441 | 0.341 | 0.368 | 0.364 | 0.363 | 0.369 | 0.360 | 0.372 | 8.49 |
| 92) | TP | trans-1,4-Dich | | 0.097 | 0.113 | 0.125 | 0.119 | 0.131 | 0.130 | 0.129 | 0.121 | 10.18 |
| 93) | TP | 4-Chlorotoluene | | 1.554 | 1.659 | 1.831 | 1.775 | 1.902 | 1.914 | 1.872 | 1.787 | 7.55 |
| 94) | TP | tert-Butylbenzene | | 1.442 | 1.546 | 1.744 | 1.692 | 1.834 | 1.856 | 1.821 | 1.705 | 9.25 |
| 97) | TP | 1,2,4-Trimethy | | 1.793 | 1.808 | 1.996 | 1.962 | 2.119 | 2.129 | 2.102 | 1.987 | 7.15 |
| 98) | TP | sec-Butylbenzene | | 1.808 | 1.953 | 2.118 | 2.077 | 2.281 | 2.325 | 2.306 | 2.124 | 9.21 |
| 99) | TP | p-Isopropyltol | | 1.731 | 1.747 | 1.953 | 1.921 | 2.116 | 2.156 | 2.133 | 1.965 | 9.10 |
| 100) | TP | 1,3-Dichlorobe | | 0.932 | 0.990 | 1.080 | 1.054 | 1.168 | 1.183 | 1.185 | 1.085 | 9.21 |
| 101) | TP | 1,4-Dichlorobe | | 1.001 | 0.977 | 1.080 | 1.072 | 1.178 | 1.191 | 1.194 | 1.099 | 8.25 |
| 102) | TP | p-Diethylbenzene | | 0.865 | 0.931 | 1.027 | 1.036 | 1.156 | 1.180 | 1.177 | 1.053 | 11.83 |
| 103) | TP | n-Butylbenzene | | 1.269 | 1.296 | 1.411 | 1.406 | 1.576 | 1.616 | 1.625 | 1.457 | 10.25 |
| 104) | TP | 1,2-Dichlorobe | | 0.840 | 0.865 | 0.924 | 0.929 | 1.036 | 1.041 | 1.048 | 0.955 | 9.13 |
| 105) | TP | 1,2,4,5-Tetram | | 1.368 | 1.377 | 1.526 | 1.567 | 1.754 | 1.759 | 1.758 | 1.587 | 11.02 |
| 106) | TP | 1,2-Dibromo-3- | | | 0.030 | 0.049 | 0.051 | 0.059 | 0.058 | 0.061 | *Q | 0.9994 |
| 107) | TP | 1,3,5-Trichlor | | 0.427 | 0.451 | 0.490 | 0.493 | 0.562 | 0.566 | 0.573 | 0.509 | 11.60 |
| 108) | TP | Hexachlorobuta | | 0.129 | 0.134 | 0.136 | 0.142 | 0.160 | 0.172 | 0.174 | 0.150 | 12.54 |
| 109) | TP | 1,2,4-Trichlor | | 0.448 | 0.397 | 0.402 | 0.430 | 0.487 | 0.487 | 0.499 | 0.450 | 9.36 |
| 110) | TP | Naphthalene | | 1.297 | 0.867 | 0.851 | 0.900 | 1.033 | 0.998 | 1.036 | 0.998 | 15.33 |
| 111) | TP | 1,2,3-Trichlor | | 0.365 | 0.307 | 0.308 | 0.328 | 0.372 | 0.367 | 0.377 | 0.346 | 9.00 |

# Response Factor Report VOA122

Method Path : I:\VOLATILES\VOA122\2019\191219N\
Method File : V122_191219N_8260.m
Title : VOLATILES BY GC/MS
Last Update : Fri Dec 20 07:20:50 2019
Response Via : Initial Calibration

Calibration Files
L11 =V22191219N03.D L1 =V22191219N05.D L2 =V22191219N07.D L3 =V22191219N08.D L4 =V22191219N09.D
L6 =V22191219N10.D L8 =V22191219N11.D L10 =V22191219N12.D

| | | Compound | L11 | L1 | L2 | L3 | L4 | L6 | L8 | L10 | Avg | %RSD |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1) | I | Fluorobenzene | ---------- | ISTD | ---------- | | | | | | | |
| 2) | TP | Dichlorodifluo... | | 0.144 | 0.173 | 0.189 | 0.184 | 0.168 | 0.176 | 0.171 | 0.172 | 8.43 |
| 3) | TP | Chloromethane | | 0.239 | 0.236 | 0.242 | 0.233 | 0.209 | 0.216 | 0.214 | 0.227 | 5.94 |
| 4) | TC | Vinyl chloride | 0.224 | 0.221 | 0.276 | 0.281 | 0.276 | 0.249 | 0.257 | 0.255 | 0.255 | 9.04 |
| 5) | TP | Bromomethane | 0.430 | 0.327 | 0.276 | 0.230 | 0.189 | 0.176 | | | *Q | 0.9975 |
| 6) | TP | Chloroethane | | 0.178 | 0.205 | 0.209 | 0.201 | 0.169 | 0.142 | | 0.184 | 14.19 |
| 7) | TP | Trichlorofluor... | | 0.294 | 0.366 | 0.388 | 0.376 | 0.334 | 0.343 | 0.334 | 0.348 | 9.09 |
| 8) | TP | Ethyl ether | | 0.094 | 0.105 | 0.107 | 0.106 | 0.102 | 0.104 | 0.102 | 0.103 | 4.30 |
| 10) | TC | 1,1-Dichloroet... | | 0.181 | 0.208 | 0.218 | 0.209 | 0.185 | 0.189 | 0.183 | 0.196 | 7.71 |
| 11) | TP | Carbon disulfide | | 0.496 | 0.561 | 0.561 | 0.528 | 0.468 | 0.490 | 0.480 | 0.512 | 7.45 |
| 12) | TP | Freon-113 | | 0.183 | 0.228 | 0.240 | 0.229 | 0.205 | 0.212 | 0.207 | 0.215 | 8.98 |
| 13) | TP | Iodomethane | | | 0.081 | 0.139 | 0.212 | 0.206 | 0.203 | 0.188 | *Q | 0.9983 |
| 14) | TP | Acrolein | | 0.024 | 0.028 | 0.030 | 0.032 | 0.030 | 0.033 | 0.032 | 0.030# | 9.80 |
| 15) | TP | Methylene chlo... | | 0.216 | 0.237 | 0.235 | 0.225 | 0.209 | 0.217 | 0.215 | 0.222 | 4.65 |
| 17) | TP | Acetone | | 0.079 | 0.054 | 0.055 | 0.056 | 0.050 | 0.052 | 0.052 | 0.057# | 17.81 |
| 18) | TP | trans-1,2-Dich... | | 0.191 | 0.232 | 0.230 | 0.221 | 0.196 | 0.204 | 0.200 | 0.211 | 7.96 |
| 19) | TP | Methyl acetate | | 0.110 | 0.115 | 0.094 | 0.088 | 0.090 | 0.096 | 0.095 | 0.098# | 10.44 |
| 21) | TP | Methyl tert-bu... | | 0.479 | 0.509 | 0.510 | 0.481 | 0.432 | 0.439 | 0.410 | 0.466 | 8.44 |
| 22) | TP | tert-Butyl alc... | | 0.018 | 0.016 | 0.014 | 0.012 | 0.012 | 0.014 | 0.014 | 0.015# | 14.63 |
| 24) | TP | Diisopropyl ether | | 0.610 | 0.671 | 0.677 | 0.673 | 0.639 | 0.664 | 0.655 | 0.655 | 3.64 |
| 25) | TP | 1,1-Dichloroet... | | 0.357 | 0.460 | 0.454 | 0.441 | 0.412 | 0.428 | 0.411 | 0.423 | 8.26 |
| 26) | TP | Halothane | | 0.163 | 0.198 | 0.197 | 0.193 | 0.178 | 0.185 | 0.182 | 0.185 | 6.60 |
| 27) | TP | Acrylonitrile | | 0.047 | 0.055 | 0.053 | 0.055 | 0.052 | 0.054 | 0.053 | 0.053 | 5.63 |
| 28) | TP | Ethyl tert-but... | | 0.605 | 0.654 | 0.669 | 0.673 | 0.630 | 0.645 | 0.606 | 0.640 | 4.30 |
| 29) | TP | Vinyl acetate | | 0.278 | 0.380 | 0.338 | 0.346 | 0.371 | 0.406 | 0.409 | 0.361 | 12.60 |
| 30) | TP | cis-1,2-Dichlo... | | 0.240 | 0.288 | 0.282 | 0.271 | 0.244 | 0.252 | 0.245 | 0.260 | 7.56 |
| 31) | TP | 2,2-Dichloropr... | | 0.248 | 0.340 | 0.265 | 0.200 | 0.209 | 0.228 | 0.222 | 0.244 | 19.38 |
| 32) | TP | Bromochloromet... | | 0.111 | 0.123 | 0.123 | 0.115 | 0.094 | 0.095 | 0.094 | 0.108 | 12.53 |
| 33) | TP | Cyclohexane | | 0.351 | 0.429 | 0.448 | 0.431 | 0.407 | 0.428 | 0.421 | 0.417 | 7.50 |
| 34) | TC | Chloroform | | 0.390 | 0.443 | 0.442 | 0.427 | 0.396 | 0.408 | 0.404 | 0.416 | 5.23 |
| 35) | TP | Ethyl acetate | | 0.166 | 0.148 | 0.151 | 0.153 | 0.147 | 0.154 | 0.151 | 0.153 | 4.07 |

# Response Factor Report VOA122

Method Path : I:\VOLATILES\VOA122\2019\191219N\
Method File : V122_191219N_8260.m
Title : VOLATILES BY GC/MS
Last Update : Fri Dec 20 07:20:50 2019
Response Via : Initial Calibration

Calibration Files
L11 =V22191219N03.D L1 =V22191219N05.D L2 =V22191219N07.D L3 =V22191219N08.D L4 =V22191219N09.D
L6 =V22191219N10.D L8 =V22191219N11.D L10 =V22191219N12.D

| | | Compound | L11 | L1 | L2 | L3 | L4 | L6 | L8 | L10 | Avg | %RSD |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 36) | TP | Carbon tetrach... | 0.292 | 0.309 | 0.380 | 0.391 | 0.376 | 0.352 | 0.370 | 0.362 | 0.354 | 10.01 |
| 37) | TP | Tetrahydrofuran | | 0.055 | 0.057 | 0.054 | 0.054 | 0.051 | 0.053 | 0.051 | 0.054 | 3.90 |
| 38) | S | Dibromofluorom... | 0.287 | 0.299 | 0.298 | 0.290 | 0.290 | 0.284 | 0.283 | 0.279 | 0.289 | 2.42 |
| 39) | TP | 1,1,1-Trichlor... | | 0.347 | 0.404 | 0.414 | 0.397 | 0.364 | 0.376 | 0.364 | 0.381 | 6.48 |
| 41) | TP | 2-Butanone | | 0.096 | 0.075 | 0.069 | 0.066 | 0.063 | 0.066 | 0.064 | 0.071# | 16.03 |
| 42) | TP | 1,1-Dichloropr... | | 0.258 | 0.334 | 0.342 | 0.339 | 0.312 | 0.326 | 0.319 | 0.319 | 9.05 |
| 44) | TP | Benzene | 0.817 | 0.801 | 0.948 | 0.954 | 0.935 | 0.873 | 0.900 | 0.873 | 0.888 | 6.53 |
| 45) | TP | tert-Amyl meth... | | 0.508 | 0.611 | 0.626 | 0.641 | 0.617 | 0.634 | 0.605 | 0.606 | 7.39 |
| 46) | S | 1,2-Dichloroet... | 0.354 | 0.361 | 0.356 | 0.313 | 0.316 | 0.319 | 0.322 | 0.329 | 0.334 | 5.93 |
| 47) | T | 1,2-Dichloroet... | | 0.248 | 0.241 | 0.226 | 0.222 | 0.207 | 0.212 | 0.215 | 0.225 | 6.72 |
| 50) | TP | Methyl cyclohe... | | 0.334 | 0.420 | 0.469 | 0.457 | 0.439 | 0.459 | 0.451 | 0.433 | 10.67 |
| 51) | TP | Trichloroethene | 0.228 | 0.227 | 0.260 | 0.265 | 0.267 | 0.247 | 0.257 | 0.257 | 0.251 | 6.36 |
| 53) | TP | Dibromomethane | | 0.135 | 0.138 | 0.139 | 0.138 | 0.131 | 0.133 | 0.126 | 0.134 | 3.58 |
| 54) | TC | 1,2-Dichloropr... | | 0.220 | 0.240 | 0.248 | 0.247 | 0.232 | 0.239 | 0.236 | 0.237 | 3.92 |
| 56) | TP | 2-Chloroethyl ... | | 0.103 | 0.122 | 0.123 | 0.112 | 0.090 | 0.080 | | 0.105 | 16.46 |
| 57) | TP | Bromodichlorom... | | 0.276 | 0.308 | 0.330 | 0.335 | 0.318 | 0.329 | 0.322 | 0.317 | 6.34 |
| 60) | TP | 1,4-Dioxane | | 0.002 | 0.001 | 0.001 | 0.002 | 0.002 | 0.002 | 0.002 | 0.002# | 8.89 |
| 61) | TP | cis-1,3-Dichlo... | | 0.328 | 0.369 | 0.413 | 0.415 | 0.393 | 0.403 | 0.397 | 0.388 | 7.87 |
| 62) | I | Chlorobenzene-d5 | ----------ISTD---------- | | | | | | | | | |
| 63) | S | Toluene-d8 | 1.306 | 1.308 | 1.317 | 1.309 | 1.297 | 1.280 | 1.276 | 1.244 | 1.292 | 1.87 |
| 64) | TC | Toluene | | 0.640 | 0.764 | 0.756 | 0.741 | 0.705 | 0.724 | 0.703 | 0.719 | 5.86 |
| 65) | TP | 4-Methyl-2-pen... | | 0.056 | 0.068 | 0.068 | 0.076 | 0.074 | 0.077 | 0.074 | 0.070# | 10.54 |
| 66) | TP | Tetrachloroethene | | 0.327 | 0.371 | 0.379 | 0.372 | 0.345 | 0.356 | 0.343 | 0.356 | 5.30 |
| 68) | TP | trans-1,3-Dich... | | 0.344 | 0.398 | 0.408 | 0.407 | 0.389 | 0.394 | 0.373 | 0.388 | 5.81 |
| 70) | TP | Ethyl methacry... | | 0.222 | 0.252 | 0.265 | 0.277 | 0.277 | 0.284 | 0.274 | 0.265 | 8.20 |
| 71) | TP | 1,1,2-Trichlor... | | 0.176 | 0.195 | 0.195 | 0.197 | 0.185 | 0.187 | 0.181 | 0.188 | 4.18 |
| 72) | TP | Chlorodibromom... | | 0.238 | 0.274 | 0.284 | 0.293 | 0.284 | 0.291 | 0.283 | 0.278 | 6.69 |
| 73) | TP | 1,3-Dichloropr... | | 0.356 | 0.392 | 0.396 | 0.399 | 0.379 | 0.384 | 0.365 | 0.382 | 4.22 |
| 74) | TP | 1,2-Dibromoethane | | 0.206 | 0.235 | 0.239 | 0.236 | 0.230 | 0.233 | 0.221 | 0.229 | 4.97 |
| 76) | TP | 2-Hexanone | | 0.102 | 0.118 | 0.121 | 0.128 | 0.128 | 0.131 | 0.125 | 0.122 | 7.92 |
| 77) | TP | Chlorobenzene | | 0.768 | 0.829 | 0.848 | 0.835 | 0.786 | 0.805 | 0.785 | 0.808 | 3.71 |

# Response Factor Report VOA122

Method Path : I:\VOLATILES\VOA122\2019\191219N\
Method File : V122_191219N_8260.m
Title : VOLATILES BY GC/MS
Last Update : Fri Dec 20 07:20:50 2019
Response Via : Initial Calibration

Calibration Files
L11 =V22191219N03.D L1 =V22191219N05.D L2 =V22191219N07.D L3 =V22191219N08.D L4 =V22191219N09.D
L6 =V22191219N10.D L8 =V22191219N11.D L10 =V22191219N12.D

| | | Compound | L11 | L1 | L2 | L3 | L4 | L6 | L8 | L10 | Avg | %RSD |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 78) | TC | Ethylbenzene | | 1.198 | 1.418 | 1.497 | 1.485 | 1.410 | 1.429 | 1.355 | 1.399 | 7.20 |
| 79) | TP | 1,1,1,2-Tetrac... | | 0.237 | 0.308 | 0.315 | 0.317 | 0.301 | 0.305 | 0.293 | 0.297 | 9.25 |
| 80) | TP | p/m Xylene | | 0.462 | 0.572 | 0.590 | 0.598 | 0.569 | 0.584 | 0.568 | 0.563 | 8.21 |
| 81) | TP | o Xylene | | 0.436 | 0.521 | 0.549 | 0.558 | 0.544 | 0.560 | 0.544 | 0.530 | 8.24 |
| 82) | TP | Styrene | | 0.699 | 0.830 | 0.907 | 0.948 | 0.923 | 0.924 | 0.866 | 0.871 | 9.83 |
| 83) | I | 1,4-Dichlorobenzene-d4 | ----------ISTD---------- | | | | | | | | | |
| 84) | TP | Bromoform | | 0.303 | 0.336 | 0.355 | 0.375 | 0.381 | 0.402 | 0.403 | 0.365 | 10.01 |
| 86) | TP | Isopropylbenzene | | 2.906 | 3.462 | 3.518 | 3.297 | 3.148 | 3.244 | 3.212 | 3.255 | 6.26 |
| 87) | S | 4-Bromofluorob... | 0.979 | 0.989 | 1.004 | 0.998 | 0.965 | 0.957 | 0.967 | 0.996 | 0.982 | 1.79 |
| 88) | TP | Bromobenzene | | 0.622 | 0.712 | 0.713 | 0.667 | 0.653 | 0.684 | 0.685 | 0.677 | 4.82 |
| 89) | TP | n-Propylbenzene | | 2.923 | 3.548 | 3.674 | 3.509 | 3.380 | 3.448 | 3.314 | 3.400 | 7.07 |
| 90) | TP | 1,4-Dichlorobu... | | 0.683 | 0.746 | 0.727 | 0.724 | 0.709 | 0.745 | 0.739 | 0.725 | 3.12 |
| 91) | TP | 1,1,2,2-Tetrac... | | 0.517 | 0.521 | 0.512 | 0.504 | 0.484 | 0.498 | 0.486 | 0.503 | 2.89 |
| 92) | TP | 4-Ethyltoluene | | 2.263 | 2.762 | 2.887 | 2.733 | 2.604 | 2.674 | 2.601 | 2.646 | 7.40 |
| 93) | TP | 2-Chlorotoluene | | 1.935 | 2.310 | 2.344 | 2.227 | 2.095 | 2.165 | 2.124 | 2.171 | 6.41 |
| 94) | TP | 1,3,5-Trimethy... | | 1.992 | 2.376 | 2.480 | 2.381 | 2.281 | 2.349 | 2.321 | 2.311 | 6.66 |
| 95) | TP | 1,2,3-Trichlor... | | 0.429 | 0.454 | 0.433 | 0.424 | 0.414 | 0.434 | 0.434 | 0.432 | 2.80 |
| 96) | TP | trans-1,4-Dich... | | 0.142 | 0.146 | 0.141 | 0.143 | 0.141 | 0.144 | 0.144 | 0.143 | 1.27 |
| 97) | TP | 4-Chlorotoluene | | 1.770 | 2.063 | 2.115 | 2.018 | 1.923 | 1.980 | 1.934 | 1.972 | 5.68 |
| 98) | TP | tert-Butylbenzene | | 1.758 | 2.060 | 2.173 | 2.087 | 2.029 | 2.106 | 2.074 | 2.041 | 6.49 |
| 101) | TP | 1,2,4-Trimethy... | | 1.930 | 2.252 | 2.364 | 2.308 | 2.252 | 2.314 | 2.251 | 2.239 | 6.36 |
| 102) | TP | sec-Butylbenzene | | 2.300 | 2.835 | 2.973 | 3.138 | 3.061 | 3.101 | 3.006 | 2.916 | 9.92 |
| 103) | TP | p-Isopropyltol... | | 1.991 | 2.390 | 2.564 | 2.750 | 2.682 | 2.717 | 2.633 | 2.532 | 10.55 |
| 104) | TP | 1,3-Dichlorobe... | | 1.261 | 1.357 | 1.380 | 1.318 | 1.263 | 1.293 | 1.267 | 1.305 | 3.67 |
| 105) | TP | 1,4-Dichlorobe... | | 1.240 | 1.370 | 1.361 | 1.286 | 1.237 | 1.257 | 1.244 | 1.285 | 4.47 |
| 106) | TP | p-Diethylbenzene | | 1.048 | 1.238 | 1.350 | 1.330 | 1.334 | 1.371 | 1.361 | 1.290 | 8.95 |
| 107) | TP | n-Butylbenzene | | 1.653 | 1.975 | 2.130 | 2.075 | 2.007 | 2.055 | 1.979 | 1.982 | 7.84 |
| 108) | TP | 1,2-Dichlorobe... | | 1.065 | 1.216 | 1.217 | 1.175 | 1.137 | 1.174 | 1.138 | 1.160 | 4.58 |
| 109) | TP | 1,2,4,5-Tetram... | | 1.428 | 1.677 | 1.760 | 1.741 | 1.768 | 1.843 | 1.860 | 1.725 | 8.40 |
| 110) | TP | 1,2-Dibromo-3-... | | 0.078 | 0.088 | 0.085 | 0.088 | 0.089 | 0.096 | 0.095 | 0.088 | 7.12 |
| 111) | TP | 1,3,5-Trichlor... | | 0.643 | 0.773 | 0.771 | 0.732 | 0.708 | 0.723 | 0.729 | 0.726 | 6.07 |

Method Path : I:\VOLATILES\VOA122\2019\191219N\
Method File : V122_191219N_8260.m
Title : VOLATILES BY GC/MS
Last Update : Fri Dec 20 07:20:50 2019
Response Via : Initial Calibration

Calibration Files
L11 =V22191219N03.D L1 =V22191219N05.D L2 =V22191219N07.D L3 =V22191219N08.D L4 =V22191219N09.D
L6 =V22191219N10.D L8 =V22191219N11.D L10 =V22191219N12.D

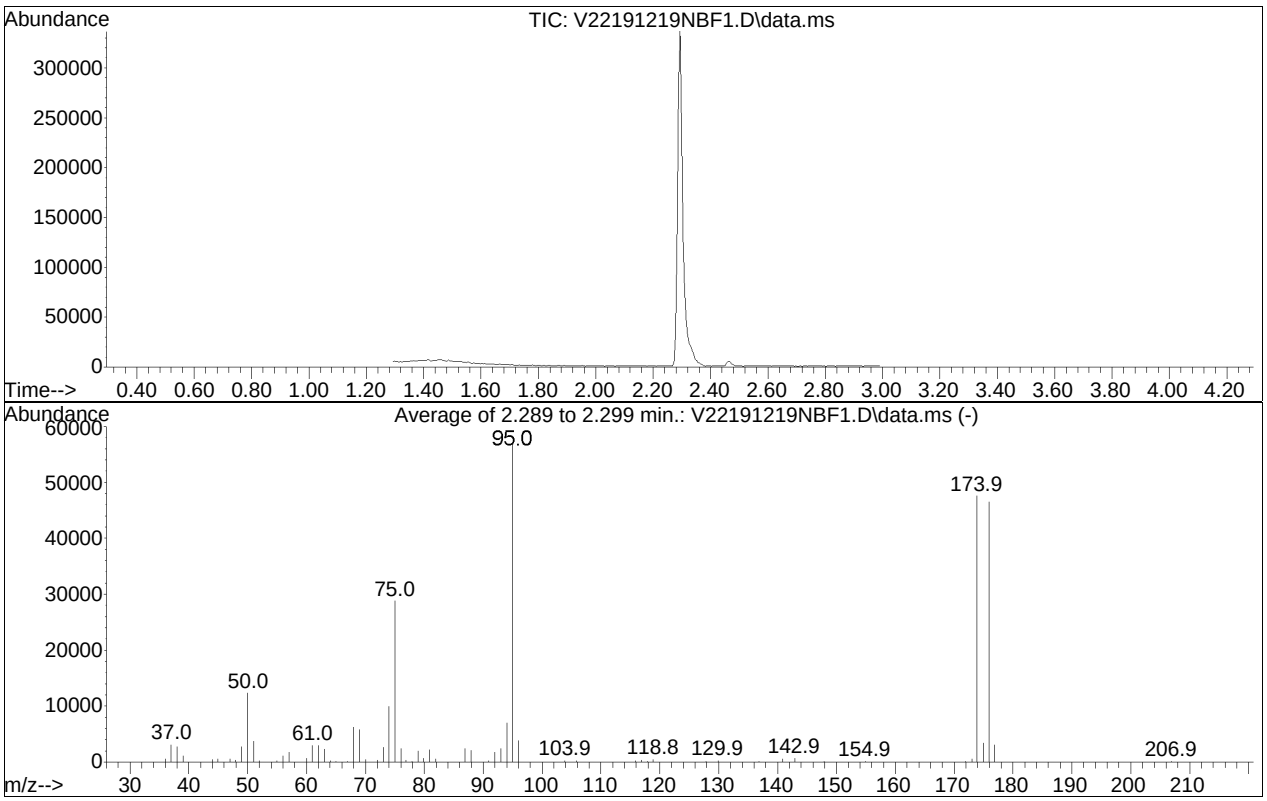
| | Compound | L11 | L1 | L2 | L3 | L4 | L6 | L8 | L10 | Avg | %RSD |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 112) TP | Hexachlorobuta... | 0.229 | 0.240 | 0.258 | 0.247 | 0.235 | 0.248 | 0.253 | 0.244 | | 4.22 |
| 113) TP | 1,2,4-Trichlor... | 0.639 | 0.687 | 0.702 | 0.670 | 0.639 | 0.661 | 0.663 | 0.666 | | 3.51 |
| 114) TP | Naphthalene | 1.448 | 1.502 | 1.536 | 1.526 | 1.547 | 1.619 | 1.629 | 1.544 | | 4.11 |
| 115) TP | 1,2,3-Trichlor... | 0.613 | 0.605 | 0.631 | 0.600 | 0.591 | 0.615 | 0.618 | 0.611 | | 2.16 |

(#) = Out of Range

Data Path : I:\VOLATILES\VOA122\2019\191219N\
Data File : V22191219NBF1.D
Acq On : 19 Dec 2019 02:35 pm
Operator : VOA122:NLK
Sample : WG1323153-1
Misc : WG1323153
ALS Vial : 1 Sample Multiplier: 1

Integration File: rteint.p

Method : I:\VOLATILES\VOA122\2019\191219N\V122_191219N_8260.m
Title : VOLATILES BY GC/MS
Last Update : Fri Dec 20 07:20:50 2019




AutoFind: Scans 191, 192, 193; Background Corrected with Scan 185

| Target Mass | Rel. to Mass | Lower Limit% | Upper Limit% | Rel. Abn% | Raw Abn | Result Pass/Fail |
|---|---|---|---|---|---|---|
| 50 | 95 | 15 | 40 | 21.6 | 12339 | PASS |
| 75 | 95 | 30 | 60 | 50.3 | 28771 | PASS |
| 95 | 95 | 100 | 100 | 100.0 | 57152 | PASS |
| 96 | 95 | 5 | 9 | 6.6 | 3797 | PASS |
| 173 | 174 | 0.00 | 2 | 1.2 | 567 | PASS |
| 174 | 95 | 50 | 100 | 83.4 | 47648 | PASS |
| 175 | 174 | 5 | 9 | 7.3 | 3459 | PASS |
| 176 | 174 | 95 | 101 | 97.5 | 46467 | PASS |
| 177 | 176 | 5 | 9 | 6.7 | 3102 | PASS |

Quantitation Report (QT Reviewed)

Data Path : I:\VOLATILES\VOA122\2019\191219N\
Data File : V22191219N03.D
Acq On : 19 Dec 2019 03:43 pm
Operator : VOA122:NLK
Sample : I8260STDL0.2PPB
Misc : WG1323153
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Dec 20 07:29:50 2019
Quant Method : I:\VOLATILES\VOA122\2019\191219N\V122_191219N_8260.m
Quant Title : VOLATILES BY GC/MS
QLast Update : Fri Dec 20 07:20:50 2019
Response via : Initial Calibration

CCAL FILE(s) : 1 - I:\VOLATILES\VOA122\2019\191219N\V22191219N08.D
Sub List : 8260-L11+BM - Level 11 for 8260-LRR plus BM

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| Internal Standards | | | | | | |
| 1) Fluorobenzene | 5.836 | 96 | 338480 | 10.000 | ug/L | 0.00 |
| Standard Area 1 = 326684 | | | Recovery = 103.61% | | | |
| 62) Chlorobenzene-d5 | 9.360 | 117 | 266409 | 10.000 | ug/L | 0.00 |
| Standard Area 1 = 264570 | | | Recovery = 100.70% | | | |
| 83) 1,4-Dichlorobenzene-d4 | 12.107 | 152 | 132596 | 10.000 | ug/L | 0.00 |
| Standard Area 1 = 133749 | | | Recovery = 99.14% | | | |
| System Monitoring Compounds | | | | | | |
| 38) Dibromofluoromethane | 5.026 | 113 | 97227 | 9.945 | ug/L | 0.00 |
| Spiked Amount 10.000 | Range 70 - 130 | | Recovery = 99.45% | | | |
| 46) 1,2-Dichloroethane-d4 | 5.549 | 65 | 119774 | 10.603 | ug/L | 0.00 |
| Spiked Amount 10.000 | Range 70 - 130 | | Recovery = 106.03% | | | |
| 63) Toluene-d8 | 7.519 | 98 | 347907 | 10.108 | ug/L | 0.00 |
| Spiked Amount 10.000 | Range 70 - 130 | | Recovery = 101.08% | | | |
| 87) 4-Bromofluorobenzene | 10.874 | 95 | 129857 | 9.973 | ug/L | 0.00 |
| Spiked Amount 10.000 | Range 70 - 130 | | Recovery = 99.73% | | | |
| Target Compounds | | | | | | Qvalue |
| 4) Vinyl chloride | 1.787 | 62 | 1515 | 0.176 | ug/L | 95 |
| 5) Bromomethane | 2.084 | 94 | 2913M1 | 0.152 | ug/L | |
| 36) Carbon tetrachloride | 4.979 | 117 | 1974 | 0.165 | ug/L | 93 |
| 44) Benzene | 5.416 | 78 | 5529 | 0.184 | ug/L # | 89 |
| 51) Trichloroethene | 6.009 | 95 | 1541 | 0.181 | ug/L | 90 |

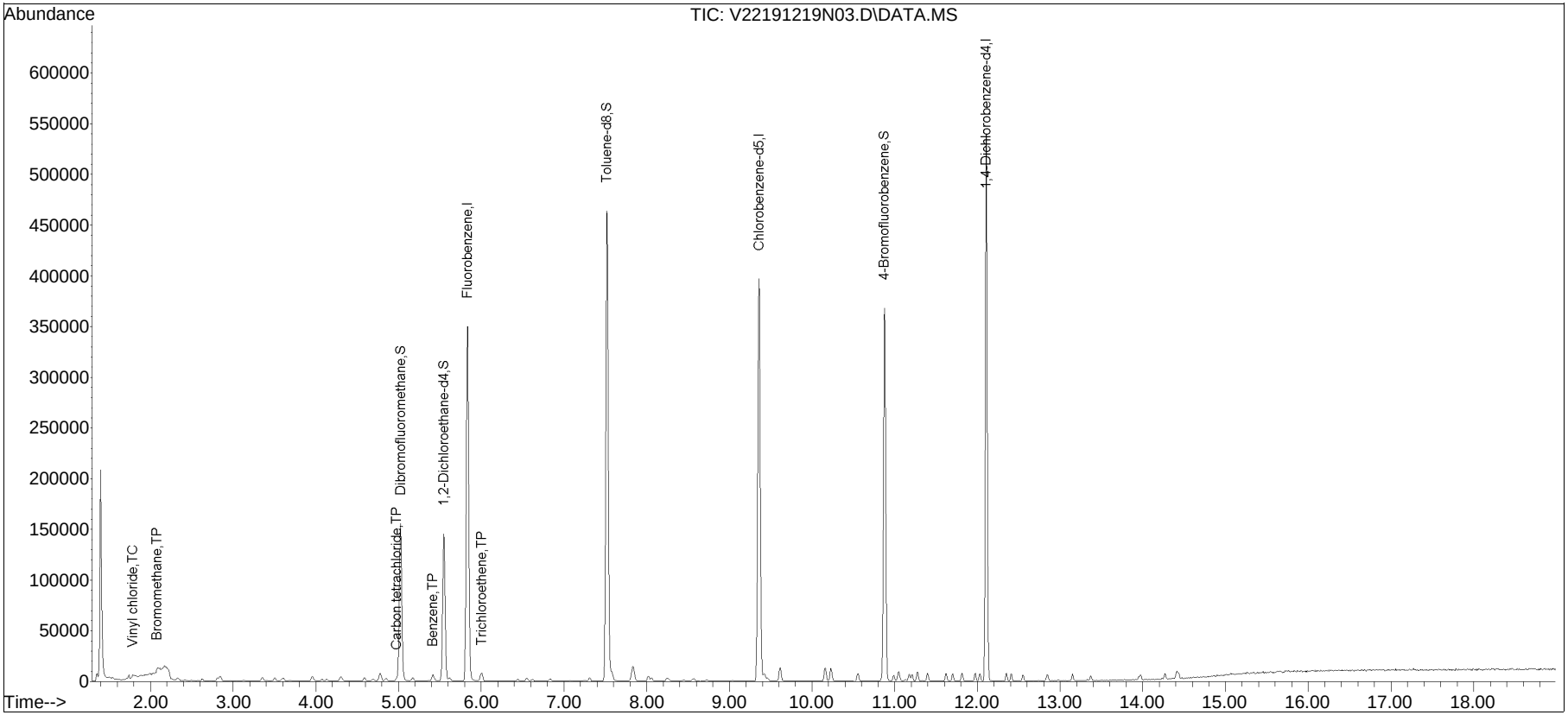
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : I:\VOLATILES\VOA122\2019\191219N\
Data File : V22191219N03.D
Acq On : 19 Dec 2019 03:43 pm
Operator : VOA122:NLK
Sample : I8260STDL0.2PPB
Misc : WG1323153
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Dec 20 07:29:50 2019
Quant Method : I:\VOLATILES\VOA122\2019\191219N\V122_191219N_8260.m
Quant Title : VOLATILES BY GC/MS
QLast Update : Fri Dec 20 07:20:50 2019
Response via : Initial Calibration

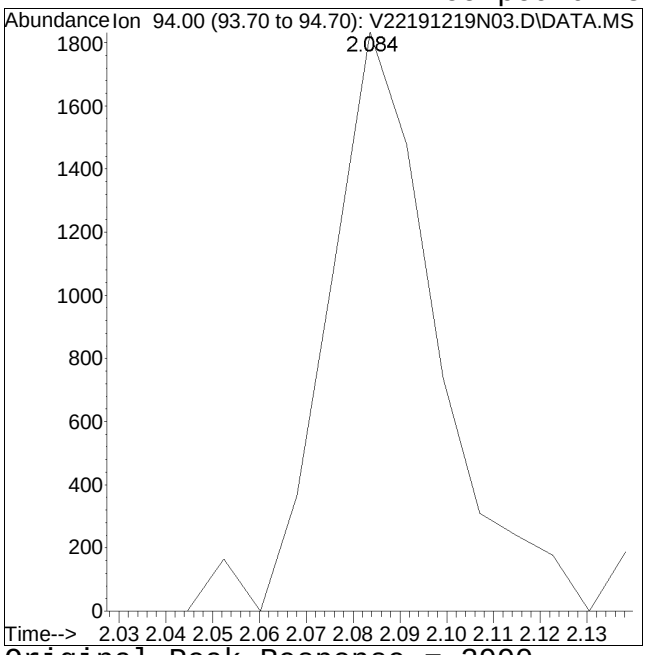
Sub List : 8260-L11+BM - Level 11 for 8260-LRR plus BM219N08.D•

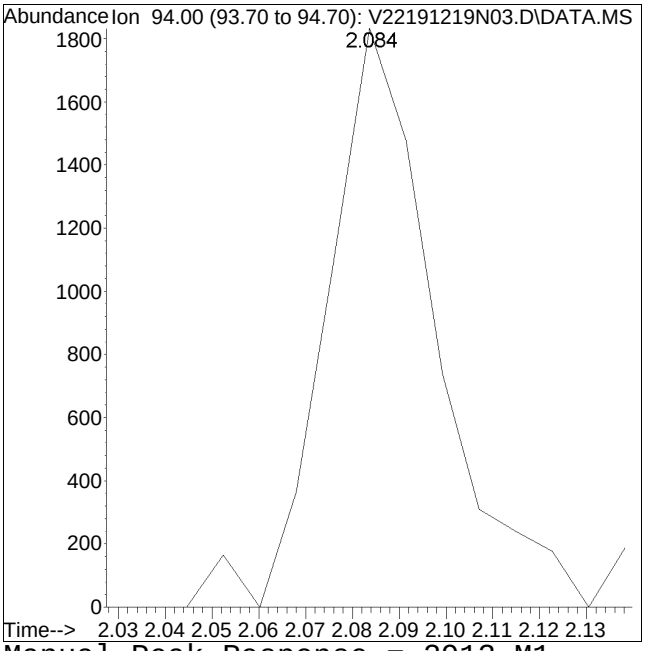


# Manual Integration Report

Data Path : I:\VOLATILES\VOA122\2019\1QMethod : V122_191219N_8260.m
Data File : V22191219N03.D Operator : VOA122:NLK
Date Inj'd : 12/19/2019 3:43 pm Instrument : VOA122
Sample : I8260STDL0.2PPB Quant Date : 12/20/2019 7:29 am

## Compound #5: Bromomethane




Original Peak Response = 2990 Manual Peak Response = 2913 M1
M1 = Split or tailing peak, auto integration stopped early resulting in false low area count.

Quantitation Report (QT Reviewed)

Data Path : I:\VOLATILES\VOA122\2019\191219N\
Data File : V22191219N05.D
Acq On : 19 Dec 2019 04:33 pm
Operator : VOA122:NLK
Sample : I8260STDL0.5PPB
Misc : WG1323153
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Dec 20 07:30:01 2019
Quant Method : I:\VOLATILES\VOA122\2019\191219N\V122_191219N_8260.m
Quant Title : VOLATILES BY GC/MS
QLast Update : Fri Dec 20 07:20:50 2019
Response via : Initial Calibration

CCAL FILE(s) : 1 - I:\VOLATILES\VOA122\2019\191219N\V22191219N08.D
Sub List : 8260-Curve - Megamix plus Diox

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| Internal Standards | | | | | | |
| 1) Fluorobenzene | 5.836 | 96 | 326319 | 10.000 | ug/L | 0.00 |
| Standard Area 1 = 326684 | | | Recovery = 99.89% | | | |
| 62) Chlorobenzene-d5 | 9.360 | 117 | 265316 | 10.000 | ug/L | 0.00 |
| Standard Area 1 = 264570 | | | Recovery = 100.28% | | | |
| 83) 1,4-Dichlorobenzene-d4 | 12.107 | 152 | 130429 | 10.000 | ug/L | 0.00 |
| Standard Area 1 = 133749 | | | Recovery = 97.52% | | | |
| System Monitoring Compounds | | | | | | |
| 38) Dibromofluoromethane | 5.026 | 113 | 97548 | 10.350 | ug/L | 0.00 |
| Spiked Amount 10.000 | Range 70 - 130 | | Recovery = 103.50% | | | |
| 46) 1,2-Dichloroethane-d4 | 5.549 | 65 | 117790 | 10.816 | ug/L | 0.00 |
| Spiked Amount 10.000 | Range 70 - 130 | | Recovery = 108.16% | | | |
| 63) Toluene-d8 | 7.519 | 98 | 347015 | 10.123 | ug/L | 0.00 |
| Spiked Amount 10.000 | Range 70 - 130 | | Recovery = 101.23% | | | |
| 87) 4-Bromofluorobenzene | 10.874 | 95 | 128953 | 10.069 | ug/L | 0.00 |
| Spiked Amount 10.000 | Range 70 - 130 | | Recovery = 100.69% | | | |
| Target Compounds | | | | | | Qvalue |
| 2) Dichlorodifluoromethane | 1.537 | 85 | 2342 | 0.417 | ug/L | 89 |
| 3) Chloromethane | 1.732 | 50 | 3906 | 0.527 | ug/L | 95 |
| 4) Vinyl chloride | 1.787 | 62 | 3610 | 0.434 | ug/L | 100 |
| 5) Bromomethane | 2.084 | 94 | 5338 | 0.517 | ug/L | 95 |
| 6) Chloroethane | 2.193 | 64 | 2911 | 0.485 | ug/L | 86 |
| 7) Trichlorofluoromethane | 2.326 | 101 | 4803 | 0.423 | ug/L | 98 |
| 8) Ethyl ether | 2.622 | 74 | 1529 | 0.456 | ug/L # | 1 |
| 10) 1,1-Dichloroethene | 2.809 | 96 | 2954 | 0.462 | ug/L | 87 |
| 11) Carbon disulfide | 2.833 | 76 | 8091 | 0.484 | ug/L | 98 |
| 12) Freon-113 | 2.848 | 101 | 2980 | 0.425 | ug/L | 96 |
| 13) Iodomethane | 2.950 | 142 | 640 | 1.682 | ug/L # | 79 |
| 14) Acrolein | 3.129 | 56 | 399 | 0.409 | ug/L | 95 |
| 15) Methylene chloride | 3.356 | 84 | 3530 | 0.487 | ug/L | 79 |
| 17) Acetone | 3.403 | 43 | 1295 | 0.697 | ug/L # | 57 |
| 18) trans-1,2-Dichloroethene | 3.504 | 96 | 3121 | 0.454 | ug/L | 89 |
| 19) Methyl acetate | 3.520 | 43 | 1800 | 0.561 | ug/L # | 67 |
| 21) Methyl tert-butyl ether | 3.605 | 73 | 7810 | 0.514 | ug/L # | 80 |
| 22) tert-Butyl alcohol | 3.691 | 59 | 1500 | 3.147 | ug/L # | 70 |
| 24) Diisopropyl ether | 3.964 | 45 | 9954 | 0.465 | ug/L | 90 |
| 25) 1,1-Dichloroethane | 4.082 | 63 | 5825 | 0.422 | ug/L | 92 |
| 26) Halothane | 4.136 | 117 | 2665 | 0.441 | ug/L | 99 |

Data Path : I:\VOLATILES\VOA122\2019\191219N\
Data File : V22191219N05.D
Acq On : 19 Dec 2019 04:33 pm
Operator : VOA122:NLK
Sample : I8260STDL0.5PPB
Misc : WG1323153
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Dec 20 07:30:01 2019
Quant Method : I:\VOLATILES\VOA122\2019\191219N\V122_191219N_8260.m
Quant Title : VOLATILES BY GC/MS
QLast Update : Fri Dec 20 07:20:50 2019
Response via : Initial Calibration

CCAL FILE(s) : 1 - I:\VOLATILES\VOA122\2019\191219N\V22191219N08.D
Sub List : 8260-Curve - Megamix plus Diox

| Compound | R.T. | QIon | Response | Conc | Units | | Dev(Min) |
|---|---|---|---|---|---|---|---|
| 27) Acrylonitrile | 4.128 | 53 | 759 | 0.440 | ug/L | | 91 |
| 28) Ethyl tert-butyl ether | 4.300 | 59 | 9875 | 0.473 | ug/L | | 88 |
| 29) Vinyl acetate | 4.316 | 43 | 4540 | 0.385 | ug/L | # | 77 |
| 30) cis-1,2-Dichloroethene | 4.589 | 96 | 3923 | 0.462 | ug/L | # | 82 |
| 31) 2,2-Dichloropropane | 4.690 | 77 | 4046 | 0.507 | ug/L | # | 80 |
| 32) Bromochloromethane | 4.776 | 128 | 1810 | 0.514 | ug/L | # | 78 |
| 33) Cyclohexane | 4.784 | 56 | 5733 | 0.422 | ug/L | | 81 |
| 34) Chloroform | 4.854 | 83 | 6361 | 0.469 | ug/L | | 95 |
| 35) Ethyl acetate | 4.971 | 43 | 2703 | 0.542 | ug/L | # | 80 |
| 36) Carbon tetrachloride | 4.987 | 117 | 5037 | 0.436 | ug/L | | 97 |
| 37) Tetrahydrofuran | 5.002 | 42 | 893 | 0.510 | ug/L | # | 75 |
| 39) 1,1,1-Trichloroethane | 5.049 | 97 | 5661 | 0.456 | ug/L | | 94 |
| 41) 2-Butanone | 5.151 | 43 | 1562 | 0.671 | ug/L | # | 50 |
| 42) 1,1-Dichloropropene | 5.174 | 75 | 4207 | 0.405 | ug/L | | 98 |
| 44) Benzene | 5.416 | 78 | 13063 | 0.451 | ug/L | | 96 |
| 45) tert-Amyl methyl ether | 5.533 | 73 | 8294 | 0.420 | ug/L | | 95 |
| 47) 1,2-Dichloroethane | 5.620 | 62 | 4051 | 0.553 | ug/L | | 94 |
| 50) Methyl cyclohexane | 6.000 | 83 | 5456 | 0.386 | ug/L | # | 73 |
| 51) Trichloroethene | 6.009 | 95 | 3696 | 0.451 | ug/L | | 96 |
| 53) Dibromomethane | 6.441 | 93 | 2206 | 0.504 | ug/L | # | 77 |
| 54) 1,2-Dichloropropane | 6.554 | 63 | 3597 | 0.464 | ug/L | | 97 |
| 56) 2-Chloroethyl vinyl ether | 7.245 | 63 | 1687 | 0.493 | ug/L | # | 82 |
| 57) Bromodichloromethane | 6.614 | 83 | 4500 | 0.435 | ug/L | # | 95 |
| 60) 1,4-Dioxane | 6.839 | 88 | 5202 | 102.098 | ug/L | # | 82 |
| 61) cis-1,3-Dichloropropene | 7.315 | 75 | 5358 | 0.423 | ug/L | # | 88 |
| 64) Toluene | 7.581 | 92 | 8488 | 0.445 | ug/L | | 99 |
| 65) 4-Methyl-2-pentanone | 8.026 | 58 | 738 | 0.395 | ug/L | # | 42 |
| 66) Tetrachloroethene | 8.026 | 166 | 4337 | 0.459 | ug/L | | 94 |
| 68) trans-1,3-Dichloropropene | 8.057 | 75 | 4567 | 0.444 | ug/L | | 87 |
| 70) Ethyl methacrylate | 8.260 | 69 | 2941 | 0.419 | ug/L | | 87 |
| 71) 1,1,2-Trichloroethane | 8.237 | 83 | 2340 | 0.469 | ug/L | | 89 |
| 72) Chlorodibromomethane | 8.440 | 129 | 3162 | 0.428 | ug/L | | 98 |
| 73) 1,3-Dichloropropane | 8.565 | 76 | 4729 | 0.467 | ug/L | | 98 |
| 74) 1,2-Dibromoethane | 8.721 | 107 | 2738 | 0.451 | ug/L | | 96 |
| 76) 2-Hexanone | 9.033 | 43 | 1358 | 0.421 | ug/L | # | 81 |
| 77) Chlorobenzene | 9.384 | 112 | 10187 | 0.475 | ug/L | # | 88 |
| 78) Ethylbenzene | 9.423 | 91 | 15892 | 0.428 | ug/L | | 98 |
| 79) 1,1,1,2-Tetrachloroethane | 9.462 | 131 | 3148 | 0.400 | ug/L | # | 58 |
| 80) p/m Xylene | 9.610 | 106 | 12245 | 0.819 | ug/L | | 95 |
| 81) o Xylene | 10.156 | 106 | 11555 | 0.821 | ug/L | | 94 |

Quantitation Report (QT Reviewed)

Data Path : I:\VOLATILES\VOA122\2019\191219N\
Data File : V22191219N05.D
Acq On : 19 Dec 2019 04:33 pm
Operator : VOA122:NLK
Sample : I8260STDL0.5PPB
Misc : WG1323153
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Dec 20 07:30:01 2019
Quant Method : I:\VOLATILES\VOA122\2019\191219N\V122_191219N_8260.m
Quant Title : VOLATILES BY GC/MS
QLast Update : Fri Dec 20 07:20:50 2019
Response via : Initial Calibration

CCAL FILE(s) : 1 - I:\VOLATILES\VOA122\2019\191219N\V22191219N08.D
Sub List : 8260-Curve - Megamix plus Diox

| Compound | R.T. | QIon | Response | Conc | Units | | Dev(Min) |
|---|---|---|---|---|---|---|---|
| 82) Styrene | 10.227 | 104 | 18537 | 0.802 | ug/L | | 95 |
| 84) Bromoform | 10.234 | 173 | 1973 | 0.414 | ug/L | | 92 |
| 86) Isopropylbenzene | 10.554 | 105 | 18949 | 0.446 | ug/L | | 93 |
| 88) Bromobenzene | 10.991 | 156 | 4054 | 0.459 | ug/L | | 97 |
| 89) n-Propylbenzene | 11.046 | 91 | 19062 | 0.430 | ug/L | | 97 |
| 90) 1,4-Dichlorobutane | 11.062 | 55 | 4451 | 0.471 | ug/L | | 97 |
| 91) 1,1,2,2-Tetrachloroethane | 11.124 | 83 | 3370 | 0.514 | ug/L | | 92 |
| 92) 4-Ethyltoluene | 11.179 | 105 | 14760 | 0.428 | ug/L | | 99 |
| 93) 2-Chlorotoluene | 11.210 | 91 | 12618 | 0.446 | ug/L | | 97 |
| 94) 1,3,5-Trimethylbenzene | 11.280 | 105 | 12991 | 0.431 | ug/L | | 98 |
| 95) 1,2,3-Trichloropropane | 11.265 | 75 | 2795 | 0.497 | ug/L | | 92 |
| 96) trans-1,4-Dichloro-2-b... | 11.327 | 53 | 927 | 0.497 | ug/L | # | 73 |
| 97) 4-Chlorotoluene | 11.397 | 91 | 11546 | 0.449 | ug/L | | 98 |
| 98) tert-Butylbenzene | 11.624 | 119 | 11464 | 0.431 | ug/L | | 95 |
| 101) 1,2,4-Trimethylbenzene | 11.702 | 105 | 12588 | 0.431 | ug/L | | 96 |
| 102) sec-Butylbenzene | 11.811 | 105 | 14999 | 0.394 | ug/L | | 93 |
| 103) p-Isopropyltoluene | 11.974 | 119 | 12983 | 0.393 | ug/L | | 97 |
| 104) 1,3-Dichlorobenzene | 12.030 | 146 | 8222 | 0.483 | ug/L | | 95 |
| 105) 1,4-Dichlorobenzene | 12.121 | 146 | 8089M3 | 0.483 | ug/L | | |
| 106) p-Diethylbenzene | 12.350 | 119 | 6834 | 0.406 | ug/L | | 96 |
| 107) n-Butylbenzene | 12.406 | 91 | 10780 | 0.417 | ug/L | | 98 |
| 108) 1,2-Dichlorobenzene | 12.552 | 146 | 6944 | 0.459 | ug/L | | 98 |
| 109) 1,2,4,5-Tetramethylben... | 13.151 | 119 | 9313 | 0.414 | ug/L | | 96 |
| 110) 1,2-Dibromo-3-chloropr... | 13.332 | 155 | 506 | 0.439 | ug/L | | 90 |
| 111) 1,3,5-Trichlorobenzene | 13.367 | 180 | 4191 | 0.443 | ug/L | | 91 |
| 112) Hexachlorobutadiene | 13.951 | 225 | 1491 | 0.468 | ug/L | | 94 |
| 113) 1,2,4-Trichlorobenzene | 13.972 | 180 | 4164 | 0.480 | ug/L | | 96 |
| 114) Naphthalene | 14.265 | 128 | 9442 | 0.469 | ug/L | | 100 |
| 115) 1,2,3-Trichlorobenzene | 14.432 | 180 | 3999 | 0.502 | ug/L | | 97 |

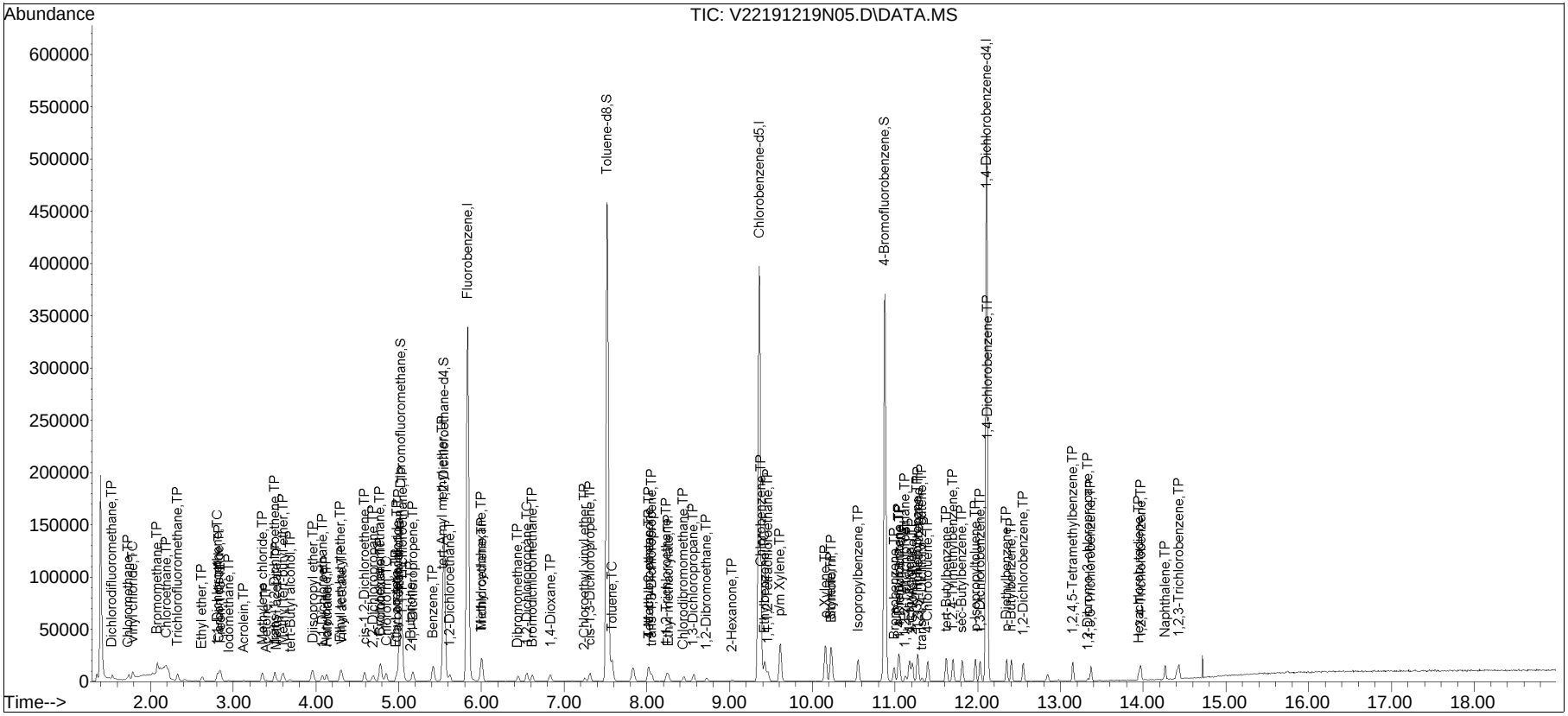
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : I:\VOLATILES\VOA122\2019\191219N\
Data File : V22191219N05.D
Acq On : 19 Dec 2019 04:33 pm
Operator : VOA122:NLK
Sample : I8260STDL0.5PPB
Misc : WG1323153
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Dec 20 07:30:01 2019
Quant Method : I:\VOLATILES\VOA122\2019\191219N\V122_191219N_8260.m
Quant Title : VOLATILES BY GC/MS
QLast Update : Fri Dec 20 07:20:50 2019
Response via : Initial Calibration

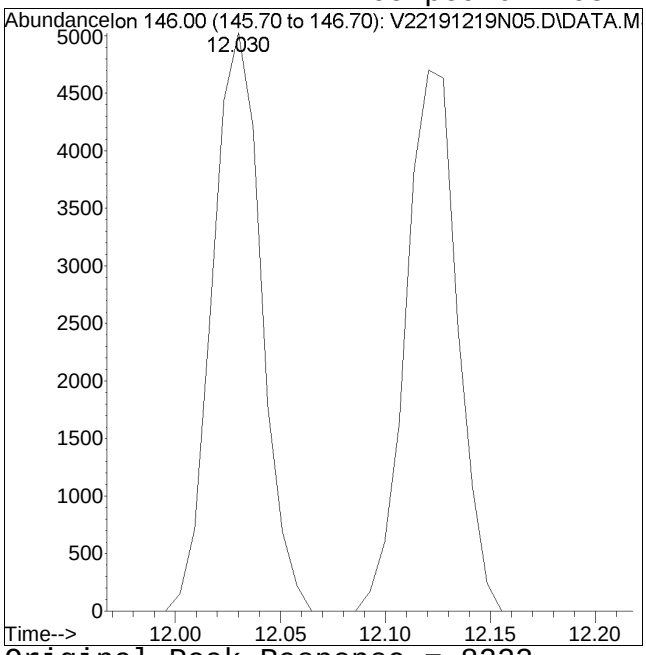
Sub List : 8260-Curve - Megamix plus Diox91219N\V22191219N08.D•

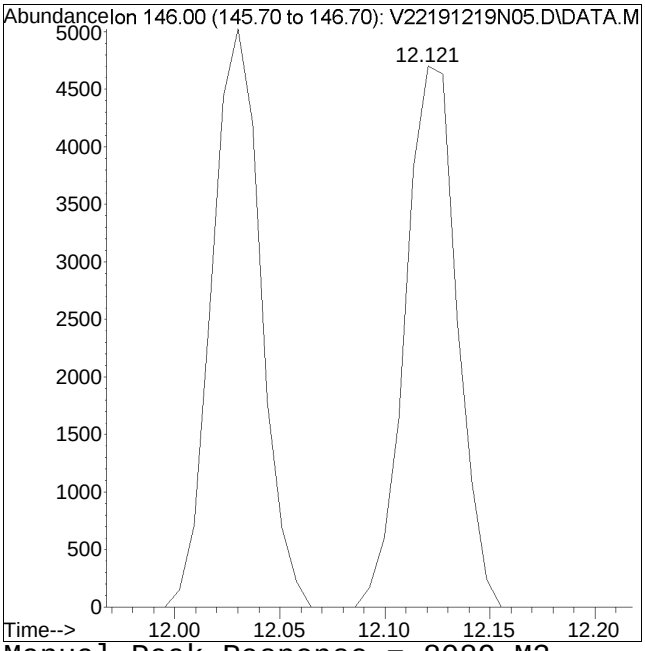


Manual Integration Report

Data Path : I:\VOLATILES\VOA122\2019\1QMethod : V122_191219N_8260.m
Data File : V22191219N05.D Operator : VOA122:NLK
Date Inj'd : 12/19/2019 4:33 pm Instrument : VOA122
Sample : I8260STDL0.5PPB Quant Date : 12/20/2019 7:29 am

Compound #105: 1,4-Dichlorobenzene




Original Peak Response = 8222 Manual Peak Response = 8089 M3

M3 = Misidentification of the peak (i.e. 1,4-dichlorobenzene identified as 1,3-dichlorobenzene), or misidentification from 2 partially resolved peaks not being split.

Quantitation Report (QT Reviewed)

Data Path : I:\VOLATILES\VOA122\2019\191219N\
Data File : V22191219N07.D
Acq On : 19 Dec 2019 05:23 pm
Operator : VOA122:NLK
Sample : I8260STDL2PPB
Misc : WG1323153
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Dec 20 07:30:11 2019
Quant Method : I:\VOLATILES\VOA122\2019\191219N\V122_191219N_8260.m
Quant Title : VOLATILES BY GC/MS
QLast Update : Fri Dec 20 07:20:50 2019
Response via : Initial Calibration

CCAL FILE(s) : 1 - I:\VOLATILES\VOA122\2019\191219N\V22191219N08.D
Sub List : 8260-Curve - Megamix plus Diox

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| Internal Standards | | | | | | |
| 1) Fluorobenzene | 5.836 | 96 | 329256 | 10.000 | ug/L | 0.00 |
| Standard Area 1 = 326684 | | | Recovery = 100.79% | | | |
| 62) Chlorobenzene-d5 | 9.360 | 117 | 262047 | 10.000 | ug/L | 0.00 |
| Standard Area 1 = 264570 | | | Recovery = 99.05% | | | |
| 83) 1,4-Dichlorobenzene-d4 | 12.107 | 152 | 127597 | 10.000 | ug/L | 0.00 |
| Standard Area 1 = 133749 | | | Recovery = 95.40% | | | |
| System Monitoring Compounds | | | | | | |
| 38) Dibromofluoromethane | 5.026 | 113 | 98190 | 10.325 | ug/L | 0.00 |
| Spiked Amount 10.000 | Range 70 - 130 | | Recovery = 103.25% | | | |
| 46) 1,2-Dichloroethane-d4 | 5.549 | 65 | 117183 | 10.664 | ug/L | 0.00 |
| Spiked Amount 10.000 | Range 70 - 130 | | Recovery = 106.64% | | | |
| 63) Toluene-d8 | 7.519 | 98 | 345140 | 10.194 | ug/L | 0.00 |
| Spiked Amount 10.000 | Range 70 - 130 | | Recovery = 101.94% | | | |
| 87) 4-Bromofluorobenzene | 10.874 | 95 | 128144 | 10.228 | ug/L | 0.00 |
| Spiked Amount 10.000 | Range 70 - 130 | | Recovery = 102.28% | | | |
| Target Compounds | | | | | | Qvalue |
| 2) Dichlorodifluoromethane | 1.537 | 85 | 11381 | 2.009 | ug/L # | 94 |
| 3) Chloromethane | 1.732 | 50 | 15528 | 2.076 | ug/L | 97 |
| 4) Vinyl chloride | 1.787 | 62 | 18178 | 2.165 | ug/L | 96 |
| 5) Bromomethane | 2.084 | 94 | 18192 | 2.357 | ug/L | 96 |
| 6) Chloroethane | 2.193 | 64 | 13503 | 2.229 | ug/L | 99 |
| 7) Trichlorofluoromethane | 2.333 | 101 | 24076 | 2.102 | ug/L | 97 |
| 8) Ethyl ether | 2.630 | 74 | 6894 | 2.037 | ug/L # | 1 |
| 10) 1,1-Dichloroethene | 2.809 | 96 | 13702 | 2.123 | ug/L | 85 |
| 11) Carbon disulfide | 2.841 | 76 | 36952 | 2.192 | ug/L | 98 |
| 12) Freon-113 | 2.849 | 101 | 15031 | 2.124 | ug/L | 97 |
| 13) Iodomethane | 2.942 | 142 | 5325 | 2.325 | ug/L | 93 |
| 14) Acrolein | 3.129 | 56 | 1845 | 1.874 | ug/L | 84 |
| 15) Methylene chloride | 3.348 | 84 | 15587 | 2.131 | ug/L | 81 |
| 17) Acetone | 3.403 | 43 | 3561 | 1.899 | ug/L | 94 |
| 18) trans-1,2-Dichloroethene | 3.504 | 96 | 15271 | 2.202 | ug/L | 89 |
| 19) Methyl acetate | 3.512 | 43 | 7567 | 2.338 | ug/L # | 91 |
| 21) Methyl tert-butyl ether | 3.606 | 73 | 33540 | 2.187 | ug/L # | 90 |
| 22) tert-Butyl alcohol | 3.684 | 59 | 5391 | 11.209 | ug/L # | 90 |
| 24) Diisopropyl ether | 3.957 | 45 | 44181 | 2.047 | ug/L | 94 |
| 25) 1,1-Dichloroethane | 4.082 | 63 | 30317 | 2.175 | ug/L | 97 |
| 26) Halothane | 4.128 | 117 | 13012 | 2.135 | ug/L | 96 |

Data Path : I:\VOLATILES\VOA122\2019\191219N\
Data File : V22191219N07.D
Acq On : 19 Dec 2019 05:23 pm
Operator : VOA122:NLK
Sample : I8260STDL2PPB
Misc : WG1323153
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Dec 20 07:30:11 2019
Quant Method : I:\VOLATILES\VOA122\2019\191219N\V122_191219N_8260.m
Quant Title : VOLATILES BY GC/MS
QLast Update : Fri Dec 20 07:20:50 2019
Response via : Initial Calibration

CCAL FILE(s) : 1 - I:\VOLATILES\VOA122\2019\191219N\V22191219N08.D
Sub List : 8260-Curve - Megamix plus Diox

| Compound | R.T. | QIon | Response | Conc | Units | | Dev(Min) |
|---|---|---|---|---|---|---|---|
| 27) Acrylonitrile | 4.121 | 53 | 3650 | 2.099 | ug/L | | 97 |
| 28) Ethyl tert-butyl ether | 4.300 | 59 | 43050 | 2.042 | ug/L | | 95 |
| 29) Vinyl acetate | 4.316 | 43 | 24992 | 2.102 | ug/L | # | 91 |
| 30) cis-1,2-Dichloroethene | 4.589 | 96 | 18942 | 2.211 | ug/L | | 90 |
| 31) 2,2-Dichloropropane | 4.698 | 77 | 22362 | 2.778 | ug/L | | 91 |
| 32) Bromochloromethane | 4.776 | 128 | 8115 | 2.284 | ug/L | # | 83 |
| 33) Cyclohexane | 4.784 | 56 | 28264 | 2.060 | ug/L | | 81 |
| 34) Chloroform | 4.846 | 83 | 29189 | 2.133 | ug/L | # | 96 |
| 35) Ethyl acetate | 4.971 | 43 | 9736 | 1.934 | ug/L | # | 94 |
| 36) Carbon tetrachloride | 4.987 | 117 | 25020 | 2.147 | ug/L | # | 95 |
| 37) Tetrahydrofuran | 5.010 | 42 | 3770 | 2.136 | ug/L | # | 86 |
| 39) 1,1,1-Trichloroethane | 5.057 | 97 | 26629 | 2.124 | ug/L | | 95 |
| 41) 2-Butanone | 5.151 | 43 | 4951 | 2.107 | ug/L | # | 75 |
| 42) 1,1-Dichloropropene | 5.174 | 75 | 22015 | 2.098 | ug/L | | 98 |
| 44) Benzene | 5.416 | 78 | 62418 | 2.136 | ug/L | | 95 |
| 45) tert-Amyl methyl ether | 5.533 | 73 | 40218 | 2.016 | ug/L | | 94 |
| 47) 1,2-Dichloroethane | 5.620 | 62 | 15869 | 2.146 | ug/L | | 98 |
| 50) Methyl cyclohexane | 6.000 | 83 | 27646 | 1.940 | ug/L | | 84 |
| 51) Trichloroethene | 6.009 | 95 | 17140 | 2.073 | ug/L | | 95 |
| 53) Dibromomethane | 6.441 | 93 | 9058 | 2.049 | ug/L | # | 84 |
| 54) 1,2-Dichloropropane | 6.554 | 63 | 15802 | 2.022 | ug/L | | 98 |
| 56) 2-Chloroethyl vinyl ether | 7.246 | 63 | 8010 | 2.319 | ug/L | | 93 |
| 57) Bromodichloromethane | 6.614 | 83 | 20313 | 1.947 | ug/L | | 98 |
| 60) 1,4-Dioxane | 6.830 | 88 | 17255 | 335.639 | ug/L | # | 81 |
| 61) cis-1,3-Dichloropropene | 7.306 | 75 | 24319 | 1.901 | ug/L | # | 89 |
| 64) Toluene | 7.582 | 92 | 40038 | 2.125 | ug/L | | 97 |
| 65) 4-Methyl-2-pentanone | 8.026 | 58 | 3566 | 1.932 | ug/L | | 81 |
| 66) Tetrachloroethene | 8.018 | 166 | 19466 | 2.086 | ug/L | | 93 |
| 68) trans-1,3-Dichloropropene | 8.057 | 75 | 20863 | 2.054 | ug/L | | 87 |
| 70) Ethyl methacrylate | 8.260 | 69 | 13185 | 1.902 | ug/L | | 95 |
| 71) 1,1,2-Trichloroethane | 8.245 | 83 | 10222 | 2.073 | ug/L | | 94 |
| 72) Chlorodibromomethane | 8.448 | 129 | 14385 | 1.973 | ug/L | | 97 |
| 73) 1,3-Dichloropropane | 8.565 | 76 | 20539 | 2.054 | ug/L | | 100 |
| 74) 1,2-Dibromoethane | 8.728 | 107 | 12300 | 2.053 | ug/L | | 97 |
| 76) 2-Hexanone | 9.033 | 43 | 6170 | 1.934 | ug/L | # | 91 |
| 77) Chlorobenzene | 9.376 | 112 | 43471 | 2.053 | ug/L | | 97 |
| 78) Ethylbenzene | 9.423 | 91 | 74322 | 2.027 | ug/L | | 99 |
| 79) 1,1,1,2-Tetrachloroethane | 9.462 | 131 | 16162 | 2.079 | ug/L | | 92 |
| 80) p/m Xylene | 9.610 | 106 | 59978 | 4.064 | ug/L | | 99 |
| 81) o Xylene | 10.156 | 106 | 54612 | 3.931 | ug/L | | 97 |

Quantitation Report (QT Reviewed)

Data Path : I:\VOLATILES\VOA122\2019\191219N\
Data File : V22191219N07.D
Acq On : 19 Dec 2019 05:23 pm
Operator : VOA122:NLK
Sample : I8260STDL2PPB
Misc : WG1323153
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Dec 20 07:30:11 2019
Quant Method : I:\VOLATILES\VOA122\2019\191219N\V122_191219N_8260.m
Quant Title : VOLATILES BY GC/MS
QLast Update : Fri Dec 20 07:20:50 2019
Response via : Initial Calibration

CCAL FILE(s) : 1 - I:\VOLATILES\VOA122\2019\191219N\V22191219N08.D
Sub List : 8260-Curve - Megamix plus Diox

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 82) Styrene | 10.227 | 104 | 87021 | 3.814 | ug/L | 98 |
| 84) Bromoform | 10.242 | 173 | 8566 | 1.839 | ug/L | 98 |
| 86) Isopropylbenzene | 10.554 | 105 | 88342 | 2.127 | ug/L | 99 |
| 88) Bromobenzene | 10.991 | 156 | 18175 | 2.105 | ug/L | 100 |
| 89) n-Propylbenzene | 11.046 | 91 | 90534 | 2.087 | ug/L | 98 |
| 90) 1,4-Dichlorobutane | 11.054 | 55 | 19027 | 2.058 | ug/L | 99 |
| 91) 1,1,2,2-Tetrachloroethane | 11.124 | 83 | 13297 | 2.071 | ug/L | 99 |
| 92) 4-Ethyltoluene | 11.171 | 105 | 70494 | 2.088 | ug/L | 100 |
| 93) 2-Chlorotoluene | 11.210 | 91 | 58957 | 2.128 | ug/L | 99 |
| 94) 1,3,5-Trimethylbenzene | 11.273 | 105 | 60632 | 2.056 | ug/L | 98 |
| 95) 1,2,3-Trichloropropane | 11.265 | 75 | 11579 | 2.103 | ug/L | 95 |
| 96) trans-1,4-Dichloro-2-b... | 11.327 | 53 | 3726 | 2.041 | ug/L | 83 |
| 97) 4-Chlorotoluene | 11.397 | 91 | 52651 | 2.093 | ug/L | 98 |
| 98) tert-Butylbenzene | 11.624 | 119 | 52571 | 2.019 | ug/L | 99 |
| 101) 1,2,4-Trimethylbenzene | 11.702 | 105 | 57467 | 2.012 | ug/L | 99 |
| 102) sec-Butylbenzene | 11.811 | 105 | 72346 | 1.944 | ug/L | 100 |
| 103) p-Isopropyltoluene | 11.974 | 119 | 60999 | 1.888 | ug/L | 98 |
| 104) 1,3-Dichlorobenzene | 12.030 | 146 | 34624 | 2.079 | ug/L | 100 |
| 105) 1,4-Dichlorobenzene | 12.121 | 146 | 34972 | 2.133 | ug/L | 95 |
| 106) p-Diethylbenzene | 12.350 | 119 | 31592 | 1.919 | ug/L | 100 |
| 107) n-Butylbenzene | 12.406 | 91 | 50407 | 1.993 | ug/L | 98 |
| 108) 1,2-Dichlorobenzene | 12.552 | 146 | 31040 | 2.096 | ug/L | 97 |
| 109) 1,2,4,5-Tetramethylben... | 13.151 | 119 | 42802 | 1.944 | ug/L | 99 |
| 110) 1,2-Dibromo-3-chloropr... | 13.332 | 155 | 2258 | 2.001 | ug/L | 93 |
| 111) 1,3,5-Trichlorobenzene | 13.367 | 180 | 19737 | 2.132 | ug/L | 94 |
| 112) Hexachlorobutadiene | 13.951 | 225 | 6137 | 1.969 | ug/L | 99 |
| 113) 1,2,4-Trichlorobenzene | 13.972 | 180 | 17535 | 2.064 | ug/L | 98 |
| 114) Naphthalene | 14.265 | 128 | 38337 | 1.946 | ug/L | 100 |
| 115) 1,2,3-Trichlorobenzene | 14.432 | 180 | 15450 | 1.983 | ug/L | 97 |

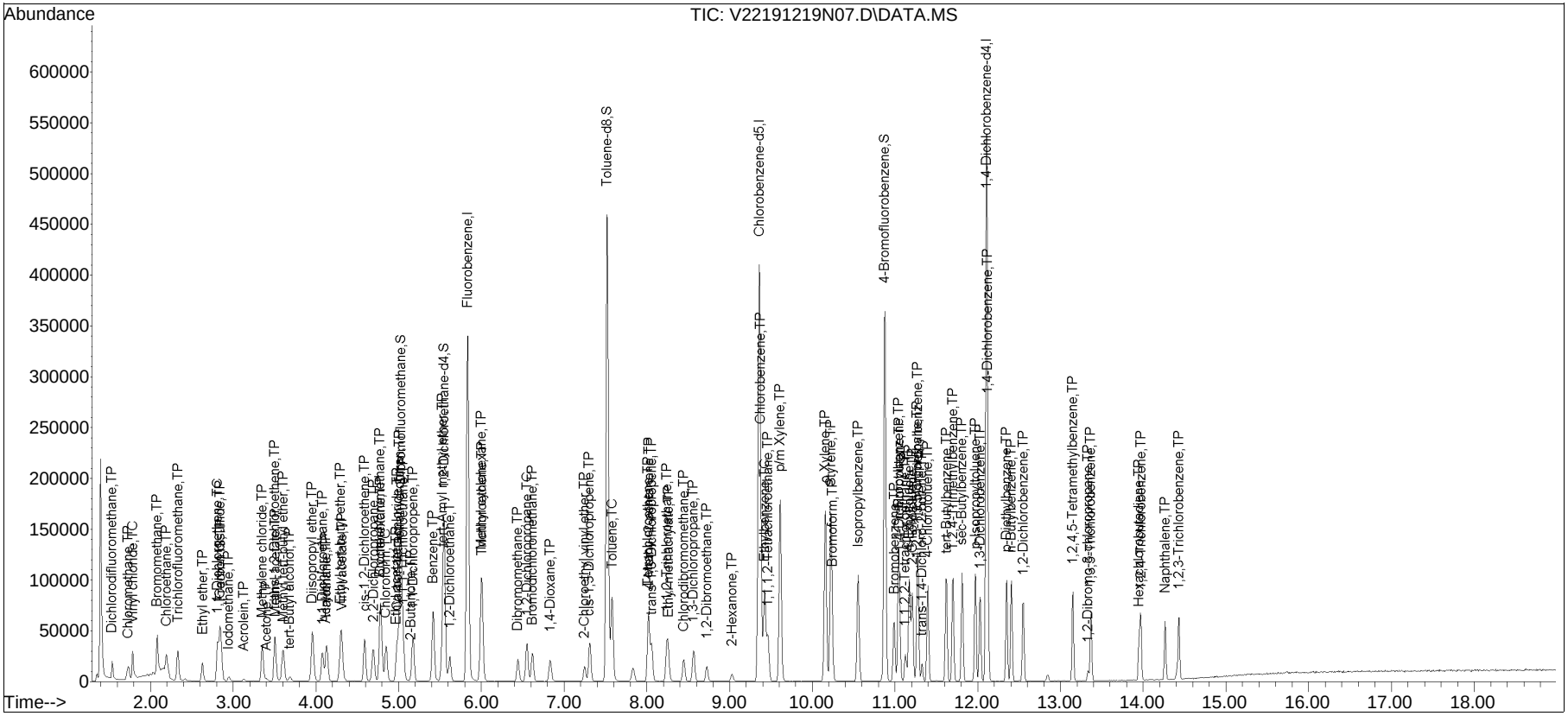
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : I:\VOLATILES\VOA122\2019\191219N\
Data File : V22191219N07.D
Acq On : 19 Dec 2019 05:23 pm
Operator : VOA122:NLK
Sample : I8260STDL2PPB
Misc : WG1323153
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Dec 20 07:30:11 2019
Quant Method : I:\VOLATILES\VOA122\2019\191219N\V122_191219N_8260.m
Quant Title : VOLATILES BY GC/MS
QLast Update : Fri Dec 20 07:20:50 2019
Response via : Initial Calibration

Sub List : 8260-Curve - Megamix plus Diox91219N\V22191219N08.D•



Manual Integration Report

| | | | |
|---|---|---|---|
| Data Path | : I:\VOLATILES\VOA122\2019\1 | QMethod | : V122_191219N_8260.m |
| Data File | : V22191219N07.D | Operator | : VOA122:NLK |
| Date Inj'd | : 12/19/2019 5:23 pm | Instrument | : VOA122 |
| Sample | : I8260STDL2PPB | Quant Date | : 12/20/2019 7:30 am |

There are no manual integrations or false positives in this file.

Quantitation Report (QT Reviewed)

Data Path : I:\VOLATILES\VOA122\2019\191219N\
Data File : V22191219N08.D
Acq On : 19 Dec 2019 05:48 pm
Operator : VOA122:NLK
Sample : I8260STDL10PPB
Misc : WG1323153
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Dec 20 07:30:21 2019
Quant Method : I:\VOLATILES\VOA122\2019\191219N\V122_191219N_8260.m
Quant Title : VOLATILES BY GC/MS
QLast Update : Fri Dec 20 07:20:50 2019
Response via : Initial Calibration

CCAL FILE(s) : 1 - I:\VOLATILES\VOA122\2019\191219N\V22191219N08.D
Sub List : 8260-Curve - Megamix plus Diox

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| Internal Standards | | | | | | |
| 1) Fluorobenzene | 5.836 | 96 | 326684 | 10.000 | ug/L | 0.00 |
| Standard Area 1 = 326684 | | | Recovery = 100.00% | | | |
| 62) Chlorobenzene-d5 | 9.360 | 117 | 264570 | 10.000 | ug/L | 0.00 |
| Standard Area 1 = 264570 | | | Recovery = 100.00% | | | |
| 83) 1,4-Dichlorobenzene-d4 | 12.107 | 152 | 133749 | 10.000 | ug/L | 0.00 |
| Standard Area 1 = 133749 | | | Recovery = 100.00% | | | |
| System Monitoring Compounds | | | | | | |
| 38) Dibromofluoromethane | 5.026 | 113 | 94645 | 10.030 | ug/L | 0.00 |
| Spiked Amount 10.000 | Range 70 - 130 | | Recovery = 100.30% | | | |
| 46) 1,2-Dichloroethane-d4 | 5.549 | 65 | 102413 | 9.393 | ug/L | 0.00 |
| Spiked Amount 10.000 | Range 70 - 130 | | Recovery = 93.93% | | | |
| 63) Toluene-d8 | 7.519 | 98 | 346274 | 10.130 | ug/L | 0.00 |
| Spiked Amount 10.000 | Range 70 - 130 | | Recovery = 101.30% | | | |
| 87) 4-Bromofluorobenzene | 10.874 | 95 | 133508 | 10.166 | ug/L | 0.00 |
| Spiked Amount 10.000 | Range 70 - 130 | | Recovery = 101.66% | | | |
| Target Compounds | | | | | | Qvalue |
| 2) Dichlorodifluoromethane | 1.537 | 85 | 61693 | 10.978 | ug/L | 98 |
| 3) Chloromethane | 1.732 | 50 | 79068 | 10.654 | ug/L | 98 |
| 4) Vinyl chloride | 1.787 | 62 | 91786 | 11.017 | ug/L | 97 |
| 5) Bromomethane | 2.084 | 94 | 75016 | 10.807 | ug/L | 97 |
| 6) Chloroethane | 2.193 | 64 | 68327 | 11.366 | ug/L | 99 |
| 7) Trichlorofluoromethane | 2.333 | 101 | 126713 | 11.150 | ug/L | 100 |
| 8) Ethyl ether | 2.630 | 74 | 34922 | 10.400 | ug/L # | 1 |
| 10) 1,1-Dichloroethene | 2.809 | 96 | 71170 | 11.112 | ug/L | 84 |
| 11) Carbon disulfide | 2.841 | 76 | 183138 | 10.951 | ug/L | 98 |
| 12) Freon-113 | 2.848 | 101 | 78415 | 11.169 | ug/L | 98 |
| 13) Iodomethane | 2.950 | 142 | 45506 | 7.921 | ug/L | 94 |
| 14) Acrolein | 3.129 | 56 | 9702 | 9.929 | ug/L | 91 |
| 15) Methylene chloride | 3.356 | 84 | 76627 | 10.561 | ug/L | 83 |
| 17) Acetone | 3.403 | 43 | 18105 | 9.729 | ug/L | 99 |
| 18) trans-1,2-Dichloroethene | 3.504 | 96 | 75264 | 10.937 | ug/L | 89 |
| 19) Methyl acetate | 3.520 | 43 | 30610 | 9.534 | ug/L | 97 |
| 21) Methyl tert-butyl ether | 3.605 | 73 | 166724 | 10.956 | ug/L | 92 |
| 22) tert-Butyl alcohol | 3.683 | 59 | 23486 | 49.216 | ug/L # | 91 |
| 24) Diisopropyl ether | 3.957 | 45 | 221158 | 10.328 | ug/L | 93 |
| 25) 1,1-Dichloroethane | 4.082 | 63 | 148292 | 10.724 | ug/L | 98 |
| 26) Halothane | 4.128 | 117 | 64328 | 10.638 | ug/L | 99 |

Data Path : I:\VOLATILES\VOA122\2019\191219N\
Data File : V22191219N08.D
Acq On : 19 Dec 2019 05:48 pm
Operator : VOA122:NLK
Sample : I8260STDL10PPB
Misc : WG1323153
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Dec 20 07:30:21 2019
Quant Method : I:\VOLATILES\VOA122\2019\191219N\V122_191219N_8260.m
Quant Title : VOLATILES BY GC/MS
QLast Update : Fri Dec 20 07:20:50 2019
Response via : Initial Calibration

CCAL FILE(s) : 1 - I:\VOLATILES\VOA122\2019\191219N\V22191219N08.D
Sub List : 8260-Curve - Megamix plus Diox

| Compound | R.T. | QIon | Response | Conc | Units | | Dev(Min) |
|---|---|---|---|---|---|---|---|
| 27) Acrylonitrile | 4.128 | 53 | 17376 | 10.072 | ug/L | | 92 |
| 28) Ethyl tert-butyl ether | 4.300 | 59 | 218516 | 10.448 | ug/L | | 91 |
| 29) Vinyl acetate | 4.316 | 43 | 110386 | 9.358 | ug/L | # | 93 |
| 30) cis-1,2-Dichloroethene | 4.589 | 96 | 92108 | 10.837 | ug/L | | 89 |
| 31) 2,2-Dichloropropane | 4.690 | 77 | 86423 | 10.820 | ug/L | | 90 |
| 32) Bromochloromethane | 4.776 | 128 | 40332 | 11.442 | ug/L | # | 86 |
| 33) Cyclohexane | 4.784 | 56 | 146302 | 10.748 | ug/L | | 88 |
| 34) Chloroform | 4.846 | 83 | 144360 | 10.632 | ug/L | | 96 |
| 35) Ethyl acetate | 4.971 | 43 | 49475 | 9.904 | ug/L | | 97 |
| 36) Carbon tetrachloride | 4.987 | 117 | 127675 | 11.044 | ug/L | | 98 |
| 37) Tetrahydrofuran | 5.002 | 42 | 17535 | 10.012 | ug/L | | 93 |
| 39) 1,1,1-Trichloroethane | 5.057 | 97 | 135183 | 10.867 | ug/L | | 95 |
| 41) 2-Butanone | 5.151 | 43 | 22495 | 9.647 | ug/L | # | 83 |
| 42) 1,1-Dichloropropene | 5.174 | 75 | 111619 | 10.722 | ug/L | | 98 |
| 44) Benzene | 5.416 | 78 | 311780 | 10.753 | ug/L | | 96 |
| 45) tert-Amyl methyl ether | 5.533 | 73 | 204351 | 10.326 | ug/L | | 95 |
| 47) 1,2-Dichloroethane | 5.620 | 62 | 73721 | 10.047 | ug/L | | 98 |
| 50) Methyl cyclohexane | 6.000 | 83 | 153062 | 10.828 | ug/L | | 86 |
| 51) Trichloroethene | 6.009 | 95 | 86702 | 10.569 | ug/L | | 98 |
| 53) Dibromomethane | 6.441 | 93 | 45572 | 10.391 | ug/L | | 86 |
| 54) 1,2-Dichloropropane | 6.554 | 63 | 80870 | 10.427 | ug/L | | 98 |
| 56) 2-Chloroethyl vinyl ether | 7.245 | 63 | 40118 | 11.704 | ug/L | | 95 |
| 57) Bromodichloromethane | 6.614 | 83 | 107876 | 10.424 | ug/L | | 100 |
| 60) 1,4-Dioxane | 6.830 | 88 | 23420 | 459.145 | ug/L | # | 74 |
| 61) cis-1,3-Dichloropropene | 7.315 | 75 | 134928 | 10.631 | ug/L | # | 89 |
| 64) Toluene | 7.581 | 92 | 200092 | 10.520 | ug/L | | 99 |
| 65) 4-Methyl-2-pentanone | 8.018 | 58 | 18039 | 9.680 | ug/L | | 83 |
| 66) Tetrachloroethene | 8.018 | 166 | 100200 | 10.635 | ug/L | | 93 |
| 68) trans-1,3-Dichloropropene | 8.057 | 75 | 107859 | 10.518 | ug/L | | 89 |
| 70) Ethyl methacrylate | 8.260 | 69 | 70116 | 10.019 | ug/L | | 97 |
| 71) 1,1,2-Trichloroethane | 8.245 | 83 | 51723 | 10.390 | ug/L | | 97 |
| 72) Chlorodibromomethane | 8.447 | 129 | 75155 | 10.209 | ug/L | | 98 |
| 73) 1,3-Dichloropropane | 8.565 | 76 | 104798 | 10.379 | ug/L | | 99 |
| 74) 1,2-Dibromoethane | 8.721 | 107 | 63330 | 10.469 | ug/L | | 99 |
| 76) 2-Hexanone | 9.025 | 43 | 31962 | 9.925 | ug/L | | 95 |
| 77) Chlorobenzene | 9.376 | 112 | 224297 | 10.493 | ug/L | | 98 |
| 78) Ethylbenzene | 9.423 | 91 | 396150 | 10.703 | ug/L | | 99 |
| 79) 1,1,1,2-Tetrachloroethane | 9.462 | 131 | 83412 | 10.629 | ug/L | | 97 |
| 80) p/m Xylene | 9.610 | 106 | 312191 | 20.950 | ug/L | | 98 |
| 81) o Xylene | 10.156 | 106 | 290374 | 20.699 | ug/L | | 95 |

Data Path : I:\VOLATILES\VOA122\2019\191219N\
Data File : V22191219N08.D
Acq On : 19 Dec 2019 05:48 pm
Operator : VOA122:NLK
Sample : I8260STDL10PPB
Misc : WG1323153
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Dec 20 07:30:21 2019
Quant Method : I:\VOLATILES\VOA122\2019\191219N\V122_191219N_8260.m
Quant Title : VOLATILES BY GC/MS
QLast Update : Fri Dec 20 07:20:50 2019
Response via : Initial Calibration

CCAL FILE(s) : 1 - I:\VOLATILES\VOA122\2019\191219N\V22191219N08.D
Sub List : 8260-Curve - Megamix plus Diox

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 82) Styrene | 10.226 | 104 | 479684 | 20.822 | ug/L | 97 |
| 84) Bromoform | 10.234 | 173 | 47544 | 9.739 | ug/L | 100 |
| 86) Isopropylbenzene | 10.554 | 105 | 470467 | 10.806 | ug/L | 100 |
| 88) Bromobenzene | 10.991 | 156 | 95417 | 10.541 | ug/L | 98 |
| 89) n-Propylbenzene | 11.046 | 91 | 491380 | 10.807 | ug/L | 99 |
| 90) 1,4-Dichlorobutane | 11.054 | 55 | 97266 | 10.036 | ug/L | 97 |
| 91) 1,1,2,2-Tetrachloroethane | 11.124 | 83 | 68489 | 10.179 | ug/L | 99 |
| 92) 4-Ethyltoluene | 11.171 | 105 | 386078 | 10.908 | ug/L | 100 |
| 93) 2-Chlorotoluene | 11.210 | 91 | 313479 | 10.794 | ug/L | 100 |
| 94) 1,3,5-Trimethylbenzene | 11.272 | 105 | 331729 | 10.730 | ug/L | 99 |
| 95) 1,2,3-Trichloropropane | 11.272 | 75 | 57912 | 10.034 | ug/L | 98 |
| 96) trans-1,4-Dichloro-2-b... | 11.327 | 53 | 18917 | 9.886 | ug/L | 82 |
| 97) 4-Chlorotoluene | 11.397 | 91 | 282848 | 10.725 | ug/L | 100 |
| 98) tert-Butylbenzene | 11.624 | 119 | 290594 | 10.646 | ug/L | 98 |
| 101) 1,2,4-Trimethylbenzene | 11.702 | 105 | 316173 | 10.559 | ug/L | 99 |
| 102) sec-Butylbenzene | 11.811 | 105 | 397612 | 10.194 | ug/L | 100 |
| 103) p-Isopropyltoluene | 11.974 | 119 | 342939 | 10.125 | ug/L | 98 |
| 104) 1,3-Dichlorobenzene | 12.030 | 146 | 184563 | 10.571 | ug/L | 98 |
| 105) 1,4-Dichlorobenzene | 12.121 | 146 | 182065 | 10.592 | ug/L | 98 |
| 106) p-Diethylbenzene | 12.350 | 119 | 180589 | 10.464 | ug/L | 99 |
| 107) n-Butylbenzene | 12.406 | 91 | 284903 | 10.747 | ug/L | 98 |
| 108) 1,2-Dichlorobenzene | 12.552 | 146 | 162801 | 10.490 | ug/L | 98 |
| 109) 1,2,4,5-Tetramethylben... | 13.151 | 119 | 235408 | 10.201 | ug/L | 99 |
| 110) 1,2-Dibromo-3-chloropr... | 13.332 | 155 | 11319 | 9.570 | ug/L | 99 |
| 111) 1,3,5-Trichlorobenzene | 13.367 | 180 | 103142 | 10.628 | ug/L | 96 |
| 112) Hexachlorobutadiene | 13.951 | 225 | 34513 | 10.565 | ug/L | 97 |
| 113) 1,2,4-Trichlorobenzene | 13.972 | 180 | 93901 | 10.545 | ug/L | 99 |
| 114) Naphthalene | 14.264 | 128 | 205482 | 9.951 | ug/L | 100 |
| 115) 1,2,3-Trichlorobenzene | 14.432 | 180 | 84414 | 10.337 | ug/L | 99 |

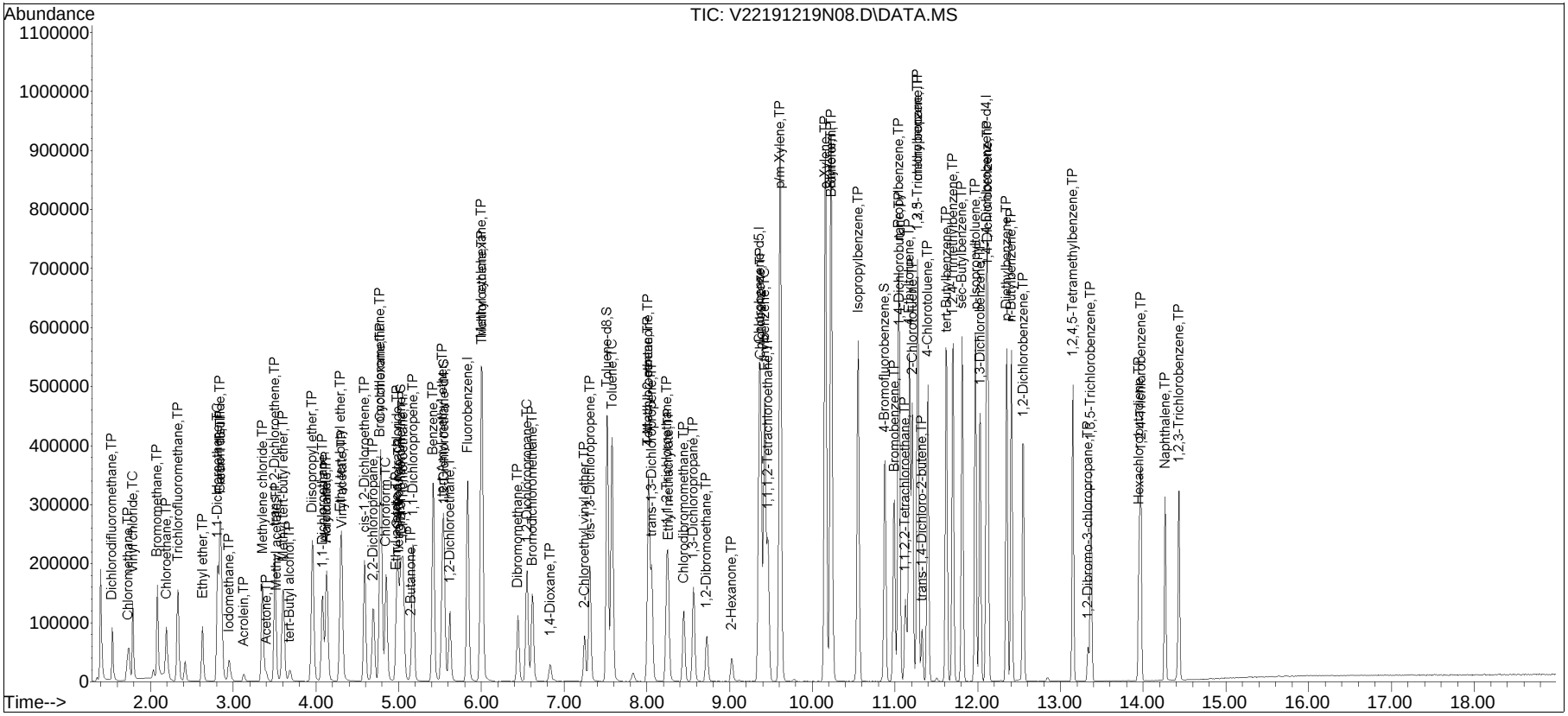
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : I:\VOLATILES\VOA122\2019\191219N\
Data File : V22191219N08.D
Acq On : 19 Dec 2019 05:48 pm
Operator : VOA122:NLK
Sample : I8260STDL10PPB
Misc : WG1323153
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Dec 20 07:30:21 2019
Quant Method : I:\VOLATILES\VOA122\2019\191219N\V122_191219N_8260.m
Quant Title : VOLATILES BY GC/MS
QLast Update : Fri Dec 20 07:20:50 2019
Response via : Initial Calibration

Sub List : 8260-Curve - Megamix plus Diox91219N\V22191219N08.D•



# Manual Integration Report

| | | | |
|---|---|---|---|
| Data Path | : I:\VOLATILES\VOA122\2019\1Q | Method | : V122_191219N_8260.m |
| Data File | : V22191219N08.D | Operator | : VOA122:NLK |
| Date Inj'd | : 12/19/2019 5:48 pm | Instrument | : VOA122 |
| Sample | : I8260STDL10PPB | Quant Date | : 12/20/2019 7:30 am |

There are no manual integrations or false positives in this file.

Quantitation Report (QT Reviewed)

Data Path : I:\VOLATILES\VOA122\2019\191219N\
Data File : V22191219N09.D
Acq On : 19 Dec 2019 06:12 pm
Operator : VOA122:NLK
Sample : I8260STDL30PPB
Misc : WG1323153
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Dec 20 07:30:30 2019
Quant Method : I:\VOLATILES\VOA122\2019\191219N\V122_191219N_8260.m
Quant Title : VOLATILES BY GC/MS
QLast Update : Fri Dec 20 07:20:50 2019
Response via : Initial Calibration

CCAL FILE(s) : 1 - I:\VOLATILES\VOA122\2019\191219N\V22191219N08.D
Sub List : 8260-Curve - Megamix plus Diox

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| Internal Standards | | | | | | |
| 1) Fluorobenzene | 5.836 | 96 | 329987 | 10.000 | ug/L | 0.00 |
| Standard Area 1 = 326684 | | | Recovery = 101.01% | | | |
| 62) Chlorobenzene-d5 | 9.360 | 117 | 271947 | 10.000 | ug/L | 0.00 |
| Standard Area 1 = 264570 | | | Recovery = 102.79% | | | |
| 83) 1,4-Dichlorobenzene-d4 | 12.107 | 152 | 146001 | 10.000 | ug/L | 0.00 |
| Standard Area 1 = 133749 | | | Recovery = 109.16% | | | |
| System Monitoring Compounds | | | | | | |
| 38) Dibromofluoromethane | 5.026 | 113 | 95752 | 10.046 | ug/L | 0.00 |
| Spiked Amount 10.000 | Range 70 - 130 | | Recovery = 100.46% | | | |
| 46) 1,2-Dichloroethane-d4 | 5.549 | 65 | 104358 | 9.476 | ug/L | 0.00 |
| Spiked Amount 10.000 | Range 70 - 130 | | Recovery = 94.76% | | | |
| 63) Toluene-d8 | 7.519 | 98 | 352646 | 10.037 | ug/L | 0.00 |
| Spiked Amount 10.000 | Range 70 - 130 | | Recovery = 100.37% | | | |
| 87) 4-Bromofluorobenzene | 10.874 | 95 | 140906 | 9.828 | ug/L | 0.00 |
| Spiked Amount 10.000 | Range 70 - 130 | | Recovery = 98.28% | | | |
| Target Compounds | | | | | | Qvalue |
| 2) Dichlorodifluoromethane | 1.537 | 85 | 181737 | 32.016 | ug/L | 97 |
| 3) Chloromethane | 1.732 | 50 | 231005 | 30.816 | ug/L | 99 |
| 4) Vinyl chloride | 1.787 | 62 | 273580 | 32.510 | ug/L | 98 |
| 5) Bromomethane | 2.084 | 94 | 186845 | 28.180 | ug/L | 98 |
| 6) Chloroethane | 2.185 | 64 | 198906 | 32.757 | ug/L | 99 |
| 7) Trichlorofluoromethane | 2.333 | 101 | 372444 | 32.446 | ug/L | 100 |
| 8) Ethyl ether | 2.630 | 74 | 105070 | 30.978 | ug/L # | 1 |
| 10) 1,1-Dichloroethene | 2.809 | 96 | 206919 | 31.983 | ug/L | 82 |
| 11) Carbon disulfide | 2.841 | 76 | 522273 | 30.918 | ug/L | 99 |
| 12) Freon-113 | 2.848 | 101 | 227193 | 32.036 | ug/L | 96 |
| 13) Iodomethane | 2.950 | 142 | 210149 | 30.999 | ug/L | 94 |
| 14) Acrolein | 3.129 | 56 | 31929 | 32.351 | ug/L | 99 |
| 15) Methylene chloride | 3.356 | 84 | 222727 | 30.389 | ug/L | 82 |
| 17) Acetone | 3.395 | 43 | 55748 | 29.658 | ug/L | 97 |
| 18) trans-1,2-Dichloroethene | 3.504 | 96 | 218580 | 31.446 | ug/L | 90 |
| 19) Methyl acetate | 3.512 | 43 | 86829 | 26.773 | ug/L | 96 |
| 21) Methyl tert-butyl ether | 3.606 | 73 | 476658 | 31.010 | ug/L | 93 |
| 22) tert-Butyl alcohol | 3.684 | 59 | 61303 | 127.178 | ug/L # | 93 |
| 24) Diisopropyl ether | 3.957 | 45 | 666218 | 30.802 | ug/L | 94 |
| 25) 1,1-Dichloroethane | 4.082 | 63 | 436535 | 31.252 | ug/L | 97 |
| 26) Halothane | 4.128 | 117 | 191075 | 31.283 | ug/L | 99 |

Data Path : I:\VOLATILES\VOA122\2019\191219N\
Data File : V22191219N09.D
Acq On : 19 Dec 2019 06:12 pm
Operator : VOA122:NLK
Sample : I8260STDL30PPB
Misc : WG1323153
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Dec 20 07:30:30 2019
Quant Method : I:\VOLATILES\VOA122\2019\191219N\V122_191219N_8260.m
Quant Title : VOLATILES BY GC/MS
QLast Update : Fri Dec 20 07:20:50 2019
Response via : Initial Calibration

CCAL FILE(s) : 1 - I:\VOLATILES\VOA122\2019\191219N\V22191219N08.D
Sub List : 8260-Curve - Megamix plus Diox

| Compound | R.T. | QIon | Response | Conc | Units | | Dev(Min) |
|---|---|---|---|---|---|---|---|
| 27) Acrylonitrile | 4.128 | 53 | 54088 | 31.038 | ug/L | | 94 |
| 28) Ethyl tert-butyl ether | 4.300 | 59 | 665892 | 31.519 | ug/L | | 91 |
| 29) Vinyl acetate | 4.316 | 43 | 342076 | 28.708 | ug/L | # | 93 |
| 30) cis-1,2-Dichloroethene | 4.589 | 96 | 268378 | 31.259 | ug/L | | 89 |
| 31) 2,2-Dichloropropane | 4.690 | 77 | 198011 | 24.543 | ug/L | | 91 |
| 32) Bromochloromethane | 4.776 | 128 | 113809 | 31.963 | ug/L | # | 88 |
| 33) Cyclohexane | 4.784 | 56 | 427164 | 31.069 | ug/L | | 84 |
| 34) Chloroform | 4.846 | 83 | 422585 | 30.811 | ug/L | | 96 |
| 35) Ethyl acetate | 4.971 | 43 | 151779 | 30.078 | ug/L | | 97 |
| 36) Carbon tetrachloride | 4.987 | 117 | 372099 | 31.864 | ug/L | | 99 |
| 37) Tetrahydrofuran | 5.002 | 42 | 53767 | 30.393 | ug/L | | 91 |
| 39) 1,1,1-Trichloroethane | 5.057 | 97 | 393017 | 31.277 | ug/L | | 96 |
| 41) 2-Butanone | 5.151 | 43 | 65428 | 27.778 | ug/L | | 87 |
| 42) 1,1-Dichloropropene | 5.174 | 75 | 335748 | 31.929 | ug/L | | 98 |
| 44) Benzene | 5.416 | 78 | 925327 | 31.594 | ug/L | | 95 |
| 45) tert-Amyl methyl ether | 5.533 | 73 | 634363 | 31.733 | ug/L | | 96 |
| 47) 1,2-Dichloroethane | 5.620 | 62 | 220002 | 29.683 | ug/L | | 99 |
| 50) Methyl cyclohexane | 6.000 | 83 | 452835 | 31.714 | ug/L | | 85 |
| 51) Trichloroethene | 6.009 | 95 | 264245 | 31.890 | ug/L | | 97 |
| 53) Dibromomethane | 6.441 | 93 | 136696 | 30.857 | ug/L | | 87 |
| 54) 1,2-Dichloropropane | 6.554 | 63 | 244629 | 31.227 | ug/L | | 99 |
| 56) 2-Chloroethyl vinyl ether | 7.245 | 63 | 110717 | 31.976 | ug/L | | 95 |
| 57) Bromodichloromethane | 6.614 | 83 | 331493 | 31.710 | ug/L | | 100 |
| 60) 1,4-Dioxane | 6.830 | 88 | 32183 | 624.627 | ug/L | # | 76 |
| 61) cis-1,3-Dichloropropene | 7.306 | 75 | 410972 | 32.057 | ug/L | # | 91 |
| 64) Toluene | 7.581 | 92 | 604721 | 30.931 | ug/L | | 100 |
| 65) 4-Methyl-2-pentanone | 8.018 | 58 | 61838 | 32.283 | ug/L | | 90 |
| 66) Tetrachloroethene | 8.018 | 166 | 303352 | 31.323 | ug/L | | 94 |
| 68) trans-1,3-Dichloropropene | 8.057 | 75 | 332424 | 31.536 | ug/L | | 90 |
| 70) Ethyl methacrylate | 8.260 | 69 | 226392 | 31.472 | ug/L | | 99 |
| 71) 1,1,2-Trichloroethane | 8.245 | 83 | 160343 | 31.336 | ug/L | | 97 |
| 72) Chlorodibromomethane | 8.448 | 129 | 239390 | 31.636 | ug/L | | 98 |
| 73) 1,3-Dichloropropane | 8.565 | 76 | 325760 | 31.389 | ug/L | | 99 |
| 74) 1,2-Dibromoethane | 8.728 | 107 | 192574 | 30.970 | ug/L | | 99 |
| 76) 2-Hexanone | 9.025 | 43 | 104114 | 31.454 | ug/L | | 95 |
| 77) Chlorobenzene | 9.376 | 112 | 680828 | 30.986 | ug/L | | 91 |
| 78) Ethylbenzene | 9.423 | 91 | 1211910 | 31.855 | ug/L | | 99 |
| 79) 1,1,1,2-Tetrachloroethane | 9.462 | 131 | 258437 | 32.038 | ug/L | | 96 |
| 80) p/m Xylene | 9.610 | 106 | 975195 | 63.666 | ug/L | | 98 |
| 81) o Xylene | 10.156 | 106 | 910714 | 63.159 | ug/L | | 97 |

Data Path : I:\VOLATILES\VOA122\2019\191219N\
Data File : V22191219N09.D
Acq On : 19 Dec 2019 06:12 pm
Operator : VOA122:NLK
Sample : I8260STDL30PPB
Misc : WG1323153
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Dec 20 07:30:30 2019
Quant Method : I:\VOLATILES\VOA122\2019\191219N\V122_191219N_8260.m
Quant Title : VOLATILES BY GC/MS
QLast Update : Fri Dec 20 07:20:50 2019
Response via : Initial Calibration

CCAL FILE(s) : 1 - I:\VOLATILES\VOA122\2019\191219N\V22191219N08.D
Sub List : 8260-Curve - Megamix plus Diox

| | Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|---|
| 82) | Styrene | 10.227 | 104 | 1546155 | 65.294 | ug/L | 97 |
| 84) | Bromoform | 10.242 | 173 | 164444 | 30.858 | ug/L | 99 |
| 86) | Isopropylbenzene | 10.554 | 105 | 1443914 | 30.382 | ug/L | 99 |
| 88) | Bromobenzene | 10.991 | 156 | 292341 | 29.585 | ug/L | 99 |
| 89) | n-Propylbenzene | 11.046 | 91 | 1537159 | 30.970 | ug/L | 99 |
| 90) | 1,4-Dichlorobutane | 11.054 | 55 | 316957 | 29.960 | ug/L | 98 |
| 91) | 1,1,2,2-Tetrachloroethane | 11.124 | 83 | 220566 | 30.029 | ug/L | 100 |
| 92) | 4-Ethyltoluene | 11.171 | 105 | 1196864 | 30.978 | ug/L | 100 |
| 93) | 2-Chlorotoluene | 11.210 | 91 | 975645 | 30.774 | ug/L | 99 |
| 94) | 1,3,5-Trimethylbenzene | 11.272 | 105 | 1042940 | 30.905 | ug/L | 99 |
| 95) | 1,2,3-Trichloropropane | 11.265 | 75 | 185673 | 29.470 | ug/L | 99 |
| 96) | trans-1,4-Dichloro-2-b... | 11.327 | 53 | 62478 | 29.911 | ug/L | 85 |
| 97) | 4-Chlorotoluene | 11.397 | 91 | 883964 | 30.704 | ug/L | 100 |
| 98) | tert-Butylbenzene | 11.624 | 119 | 913929 | 30.674 | ug/L | 98 |
| 101) | 1,2,4-Trimethylbenzene | 11.702 | 105 | 1011063 | 30.932 | ug/L | 99 |
| 102) | sec-Butylbenzene | 11.811 | 105 | 1374661 | 32.286 | ug/L | 97 |
| 103) | p-Isopropyltoluene | 11.974 | 119 | 1204623 | 32.582 | ug/L | 96 |
| 104) | 1,3-Dichlorobenzene | 12.030 | 146 | 577122 | 30.281 | ug/L | 98 |
| 105) | 1,4-Dichlorobenzene | 12.121 | 146 | 563092 | 30.009 | ug/L | 99 |
| 106) | p-Diethylbenzene | 12.350 | 119 | 582726 | 30.933 | ug/L | 99 |
| 107) | n-Butylbenzene | 12.406 | 91 | 908980 | 31.410 | ug/L | 99 |
| 108) | 1,2-Dichlorobenzene | 12.552 | 146 | 514831 | 30.389 | ug/L | 98 |
| 109) | 1,2,4,5-Tetramethylben... | 13.151 | 119 | 762369 | 30.265 | ug/L | 99 |
| 110) | 1,2-Dibromo-3-chloropr... | 13.332 | 155 | 38387 | 29.731 | ug/L | 100 |
| 111) | 1,3,5-Trichlorobenzene | 13.367 | 180 | 320560 | 30.260 | ug/L | 96 |
| 112) | Hexachlorobutadiene | 13.951 | 225 | 107974 | 30.279 | ug/L | 99 |
| 113) | 1,2,4-Trichlorobenzene | 13.972 | 180 | 293477 | 30.192 | ug/L | 99 |
| 114) | Naphthalene | 14.265 | 128 | 668300 | 29.648 | ug/L | 100 |
| 115) | 1,2,3-Trichlorobenzene | 14.432 | 180 | 262712 | 29.471 | ug/L | 99 |

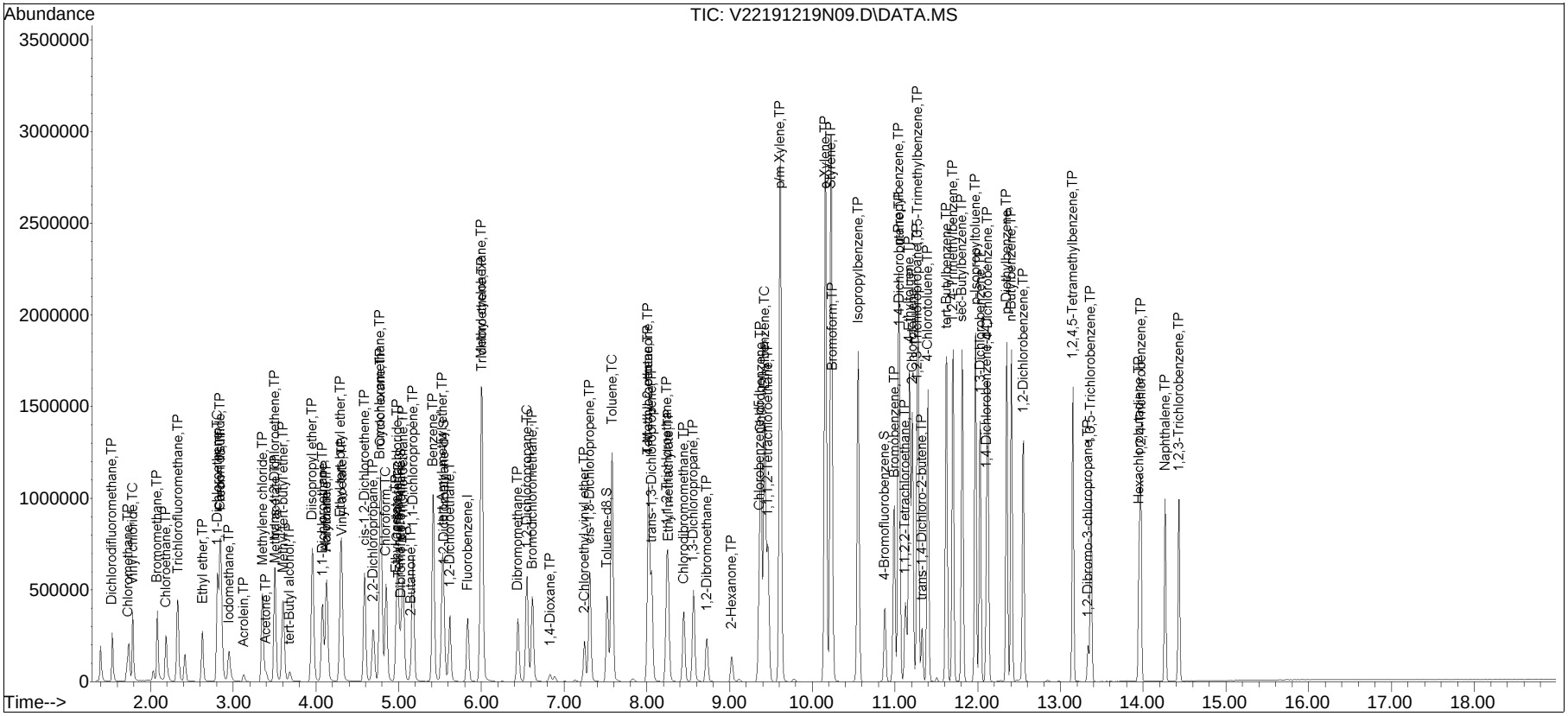
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : I:\VOLATILES\VOA122\2019\191219N\
Data File : V22191219N09.D
Acq On : 19 Dec 2019 06:12 pm
Operator : VOA122:NLK
Sample : I8260STDL30PPB
Misc : WG1323153
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Dec 20 07:30:30 2019
Quant Method : I:\VOLATILES\VOA122\2019\191219N\V122_191219N_8260.m
Quant Title : VOLATILES BY GC/MS
QLast Update : Fri Dec 20 07:20:50 2019
Response via : Initial Calibration

Sub List : 8260-Curve - Megamix plus Diox91219N\V22191219N08.D•



# Manual Integration Report

| | | | |
|---|---|---|---|
| Data Path | : I:\VOLATILES\VOA122\2019\1Q | Method | : V122_191219N_8260.m |
| Data File | : V22191219N09.D | Operator | : VOA122:NLK |
| Date Inj'd | : 12/19/2019 6:12 pm | Instrument | : VOA122 |
| Sample | : I8260STDL30PPB | Quant Date | : 12/20/2019 7:30 am |

There are no manual integrations or false positives in this file.

Quantitation Report (QT Reviewed)

Data Path : I:\VOLATILES\VOA122\2019\191219N\
Data File : V22191219N10.D
Acq On : 19 Dec 2019 06:37 pm
Operator : VOA122:NLK
Sample : I8260STDL80PPB
Misc : WG1323153
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Dec 20 07:30:40 2019
Quant Method : I:\VOLATILES\VOA122\2019\191219N\V122_191219N_8260.m
Quant Title : VOLATILES BY GC/MS
QLast Update : Fri Dec 20 07:20:50 2019
Response via : Initial Calibration

CCAL FILE(s) : 1 - I:\VOLATILES\VOA122\2019\191219N\V22191219N08.D
Sub List : 8260-Curve - Megamix plus Diox

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| Internal Standards | | | | | | |
| 1) Fluorobenzene | 5.836 | 96 | 353091 | 10.000 | ug/L | 0.00 |
| Standard Area 1 = 326684 | | | Recovery = 108.08% | | | |
| 62) Chlorobenzene-d5 | 9.361 | 117 | 292699 | 10.000 | ug/L | 0.00 |
| Standard Area 1 = 264570 | | | Recovery = 110.63% | | | |
| 83) 1,4-Dichlorobenzene-d4 | 12.108 | 152 | 156233 | 10.000 | ug/L | 0.00 |
| Standard Area 1 = 133749 | | | Recovery = 116.81% | | | |
| System Monitoring Compounds | | | | | | |
| 38) Dibromofluoromethane | 5.026 | 113 | 100314 | 9.836 | ug/L | 0.00 |
| Spiked Amount 10.000 | Range 70 - 130 | | Recovery = 98.36% | | | |
| 46) 1,2-Dichloroethane-d4 | 5.549 | 65 | 112516 | 9.548 | ug/L | 0.00 |
| Spiked Amount 10.000 | Range 70 - 130 | | Recovery = 95.48% | | | |
| 63) Toluene-d8 | 7.519 | 98 | 374593 | 9.906 | ug/L | 0.00 |
| Spiked Amount 10.000 | Range 70 - 130 | | Recovery = 99.06% | | | |
| 87) 4-Bromofluorobenzene | 10.874 | 95 | 149529 | 9.747 | ug/L | 0.00 |
| Spiked Amount 10.000 | Range 70 - 130 | | Recovery = 97.47% | | | |
| Target Compounds | | | | | | Qvalue |
| 2) Dichlorodifluoromethane | 1.537 | 85 | 475363 | 78.265 | ug/L # | 96 |
| 3) Chloromethane | 1.733 | 50 | 591527 | 73.747 | ug/L | 98 |
| 4) Vinyl chloride | 1.787 | 62 | 704412 | 78.229 | ug/L | 99 |
| 5) Bromomethane | 2.084 | 94 | 496225 | 80.771 | ug/L | 98 |
| 6) Chloroethane | 2.185 | 64 | 476748 | 73.376 | ug/L | 98 |
| 7) Trichlorofluoromethane | 2.326 | 101 | 943013 | 76.775 | ug/L | 99 |
| 8) Ethyl ether | 2.630 | 74 | 286884 | 79.048 | ug/L # | 1 |
| 10) 1,1-Dichloroethene | 2.810 | 96 | 521293 | 75.304 | ug/L | 82 |
| 11) Carbon disulfide | 2.841 | 76 | 1321756 | 73.128 | ug/L | 98 |
| 12) Freon-113 | 2.849 | 101 | 579032 | 76.305 | ug/L | 96 |
| 13) Iodomethane | 2.950 | 142 | 580572 | 80.282 | ug/L | 93 |
| 14) Acrolein | 3.130 | 56 | 85047 | 80.531 | ug/L | 98 |
| 15) Methylene chloride | 3.356 | 84 | 591104 | 75.373 | ug/L | 84 |
| 17) Acetone | 3.395 | 43 | 139997 | 69.606 | ug/L | 97 |
| 18) trans-1,2-Dichloroethene | 3.504 | 96 | 554957 | 74.616 | ug/L | 89 |
| 19) Methyl acetate | 3.512 | 43 | 255580 | 73.648 | ug/L | 95 |
| 21) Methyl tert-butyl ether | 3.606 | 73 | 1219501 | 74.146 | ug/L | 93 |
| 22) tert-Butyl alcohol | 3.684 | 59 | 176316 | 341.848 | ug/L | 94 |
| 24) Diisopropyl ether | 3.957 | 45 | 1803953 | 77.946 | ug/L | 95 |
| 25) 1,1-Dichloroethane | 4.082 | 63 | 1162798 | 77.798 | ug/L | 98 |
| 26) Halothane | 4.128 | 117 | 501444 | 76.725 | ug/L | 100 |

Data Path : I:\VOLATILES\VOA122\2019\191219N\
Data File : V22191219N10.D
Acq On : 19 Dec 2019 06:37 pm
Operator : VOA122:NLK
Sample : I8260STDL80PPB
Misc : WG1323153
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Dec 20 07:30:40 2019
Quant Method : I:\VOLATILES\VOA122\2019\191219N\V122_191219N_8260.m
Quant Title : VOLATILES BY GC/MS
QLast Update : Fri Dec 20 07:20:50 2019
Response via : Initial Calibration

CCAL FILE(s) : 1 - I:\VOLATILES\VOA122\2019\191219N\V22191219N08.D
Sub List : 8260-Curve - Megamix plus Diox

| Compound | R.T. | QIon | Response | Conc | Units | | Dev(Min) |
|---|---|---|---|---|---|---|---|
| 27) Acrylonitrile | 4.128 | 53 | 147313 | 79.003 | ug/L | | 95 |
| 28) Ethyl tert-butyl ether | 4.300 | 59 | 1780294 | 78.753 | ug/L | | 95 |
| 29) Vinyl acetate | 4.316 | 43 | 1048382 | 82.226 | ug/L | | 94 |
| 30) cis-1,2-Dichloroethene | 4.589 | 96 | 688823 | 74.980 | ug/L | | 87 |
| 31) 2,2-Dichloropropane | 4.690 | 77 | 590283 | 68.378 | ug/L | | 93 |
| 32) Bromochloromethane | 4.776 | 128 | 264180 | 69.340 | ug/L | | 88 |
| 33) Cyclohexane | 4.784 | 56 | 1150076 | 78.174 | ug/L | | 83 |
| 34) Chloroform | 4.846 | 83 | 1117930 | 76.176 | ug/L | | 96 |
| 35) Ethyl acetate | 4.971 | 43 | 415282 | 76.912 | ug/L | | 97 |
| 36) Carbon tetrachloride | 4.987 | 117 | 994453 | 79.585 | ug/L | | 99 |
| 37) Tetrahydrofuran | 5.003 | 42 | 145047 | 76.626 | ug/L | | 95 |
| 39) 1,1,1-Trichloroethane | 5.049 | 97 | 1027791 | 76.441 | ug/L | | 96 |
| 41) 2-Butanone | 5.151 | 43 | 179063 | 71.049 | ug/L | | 87 |
| 42) 1,1-Dichloropropene | 5.174 | 75 | 882632 | 78.444 | ug/L | | 98 |
| 44) Benzene | 5.416 | 78 | 2465179 | 78.662 | ug/L | | 95 |
| 45) tert-Amyl methyl ether | 5.533 | 73 | 1742404 | 81.457 | ug/L | | 96 |
| 47) 1,2-Dichloroethane | 5.620 | 62 | 585709 | 73.854 | ug/L | | 98 |
| 50) Methyl cyclohexane | 6.000 | 83 | 1239541 | 81.130 | ug/L | | 85 |
| 51) Trichloroethene | 6.009 | 95 | 698954 | 78.834 | ug/L | | 98 |
| 53) Dibromomethane | 6.441 | 93 | 369763 | 78.007 | ug/L | | 86 |
| 54) 1,2-Dichloropropane | 6.554 | 63 | 656151 | 78.277 | ug/L | | 99 |
| 56) 2-Chloroethyl vinyl ether | 7.246 | 63 | 253137 | 68.325 | ug/L | | 95 |
| 57) Bromodichloromethane | 6.614 | 83 | 897906 | 80.272 | ug/L | | 100 |
| 60) 1,4-Dioxane | 6.831 | 88 | 45312 | 821.897 | ug/L | # | 77 |
| 61) cis-1,3-Dichloropropene | 7.315 | 75 | 1111109 | 81.000 | ug/L | # | 91 |
| 64) Toluene | 7.582 | 92 | 1650318 | 78.427 | ug/L | | 99 |
| 65) 4-Methyl-2-pentanone | 8.018 | 58 | 174326 | 84.557 | ug/L | | 91 |
| 66) Tetrachloroethene | 8.018 | 166 | 808848 | 77.598 | ug/L | | 93 |
| 68) trans-1,3-Dichloropropene | 8.057 | 75 | 911464 | 80.338 | ug/L | | 90 |
| 70) Ethyl methacrylate | 8.260 | 69 | 648422 | 83.750 | ug/L | | 99 |
| 71) 1,1,2-Trichloroethane | 8.245 | 83 | 434231 | 78.845 | ug/L | | 97 |
| 72) Chlorodibromomethane | 8.448 | 129 | 665799 | 81.750 | ug/L | | 98 |
| 73) 1,3-Dichloropropane | 8.565 | 76 | 887538 | 79.457 | ug/L | | 99 |
| 74) 1,2-Dibromoethane | 8.729 | 107 | 538454 | 80.455 | ug/L | | 100 |
| 76) 2-Hexanone | 9.025 | 43 | 298671 | 83.835 | ug/L | | 96 |
| 77) Chlorobenzene | 9.384 | 112 | 1840060 | 77.807 | ug/L | | 92 |
| 78) Ethylbenzene | 9.423 | 91 | 3302172 | 80.643 | ug/L | | 100 |
| 79) 1,1,1,2-Tetrachloroethane | 9.462 | 131 | 704844 | 81.183 | ug/L | | 97 |
| 80) p/m Xylene | 9.618 | 106 | 2664257 | 161.604 | ug/L | | 99 |
| 81) o Xylene | 10.164 | 106 | 2547513 | 164.148 | ug/L | | 99 |

Data Path : I:\VOLATILES\VOA122\2019\191219N\
Data File : V22191219N10.D
Acq On : 19 Dec 2019 06:37 pm
Operator : VOA122:NLK
Sample : I8260STDL80PPB
Misc : WG1323153
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Dec 20 07:30:40 2019
Quant Method : I:\VOLATILES\VOA122\2019\191219N\V122_191219N_8260.m
Quant Title : VOLATILES BY GC/MS
QLast Update : Fri Dec 20 07:20:50 2019
Response via : Initial Calibration

CCAL FILE(s) : 1 - I:\VOLATILES\VOA122\2019\191219N\V22191219N08.D
Sub List : 8260-Curve - Megamix plus Diox

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 82) Styrene | 10.227 | 104 | 4320311 | 169.512 | ug/L | 97 |
| 84) Bromoform | 10.242 | 173 | 476470 | 83.553 | ug/L | 99 |
| 86) Isopropylbenzene | 10.554 | 105 | 3934872 | 77.373 | ug/L | 98 |
| 88) Bromobenzene | 10.992 | 156 | 816771 | 77.244 | ug/L | 99 |
| 89) n-Propylbenzene | 11.046 | 91 | 4225126 | 79.552 | ug/L | 100 |
| 90) 1,4-Dichlorobutane | 11.054 | 55 | 886734 | 78.327 | ug/L | 98 |
| 91) 1,1,2,2-Tetrachloroethane | 11.124 | 83 | 605373 | 77.022 | ug/L | 99 |
| 92) 4-Ethyltoluene | 11.179 | 105 | 3254669 | 78.721 | ug/L | 99 |
| 93) 2-Chlorotoluene | 11.210 | 91 | 2618901 | 77.197 | ug/L | 99 |
| 94) 1,3,5-Trimethylbenzene | 11.280 | 105 | 2850389 | 78.931 | ug/L | 99 |
| 95) 1,2,3-Trichloropropane | 11.265 | 75 | 517581 | 76.771 | ug/L | 99 |
| 96) trans-1,4-Dichloro-2-b... | 11.327 | 53 | 176056 | 78.766 | ug/L | 88 |
| 97) 4-Chlorotoluene | 11.397 | 91 | 2403565 | 78.019 | ug/L | 99 |
| 98) tert-Butylbenzene | 11.624 | 119 | 2535740 | 79.532 | ug/L | 98 |
| 101) 1,2,4-Trimethylbenzene | 11.702 | 105 | 2815066 | 80.482 | ug/L | 100 |
| 102) sec-Butylbenzene | 11.811 | 105 | 3825275 | 83.959 | ug/L | 97 |
| 103) p-Isopropyltoluene | 11.975 | 119 | 3351531 | 84.713 | ug/L | 99 |
| 104) 1,3-Dichlorobenzene | 12.031 | 146 | 1578605 | 77.402 | ug/L | 98 |
| 105) 1,4-Dichlorobenzene | 12.122 | 146 | 1546208 | 77.005 | ug/L | 98 |
| 106) p-Diethylbenzene | 12.351 | 119 | 1666824 | 82.685 | ug/L | 100 |
| 107) n-Butylbenzene | 12.407 | 91 | 2508248 | 80.996 | ug/L | 99 |
| 108) 1,2-Dichlorobenzene | 12.553 | 146 | 1420773 | 78.372 | ug/L | 98 |
| 109) 1,2,4,5-Tetramethylben... | 13.152 | 119 | 2210222 | 81.996 | ug/L | 99 |
| 110) 1,2-Dibromo-3-chloropr... | 13.333 | 155 | 111782 | 80.905 | ug/L | 99 |
| 111) 1,3,5-Trichlorobenzene | 13.368 | 180 | 884642 | 78.039 | ug/L | 96 |
| 112) Hexachlorobutadiene | 13.952 | 225 | 293653 | 76.956 | ug/L | 98 |
| 113) 1,2,4-Trichlorobenzene | 13.973 | 180 | 798899 | 76.807 | ug/L | 98 |
| 114) Naphthalene | 14.265 | 128 | 1933750 | 80.170 | ug/L | 100 |
| 115) 1,2,3-Trichlorobenzene | 14.433 | 180 | 738416 | 77.410 | ug/L | 99 |

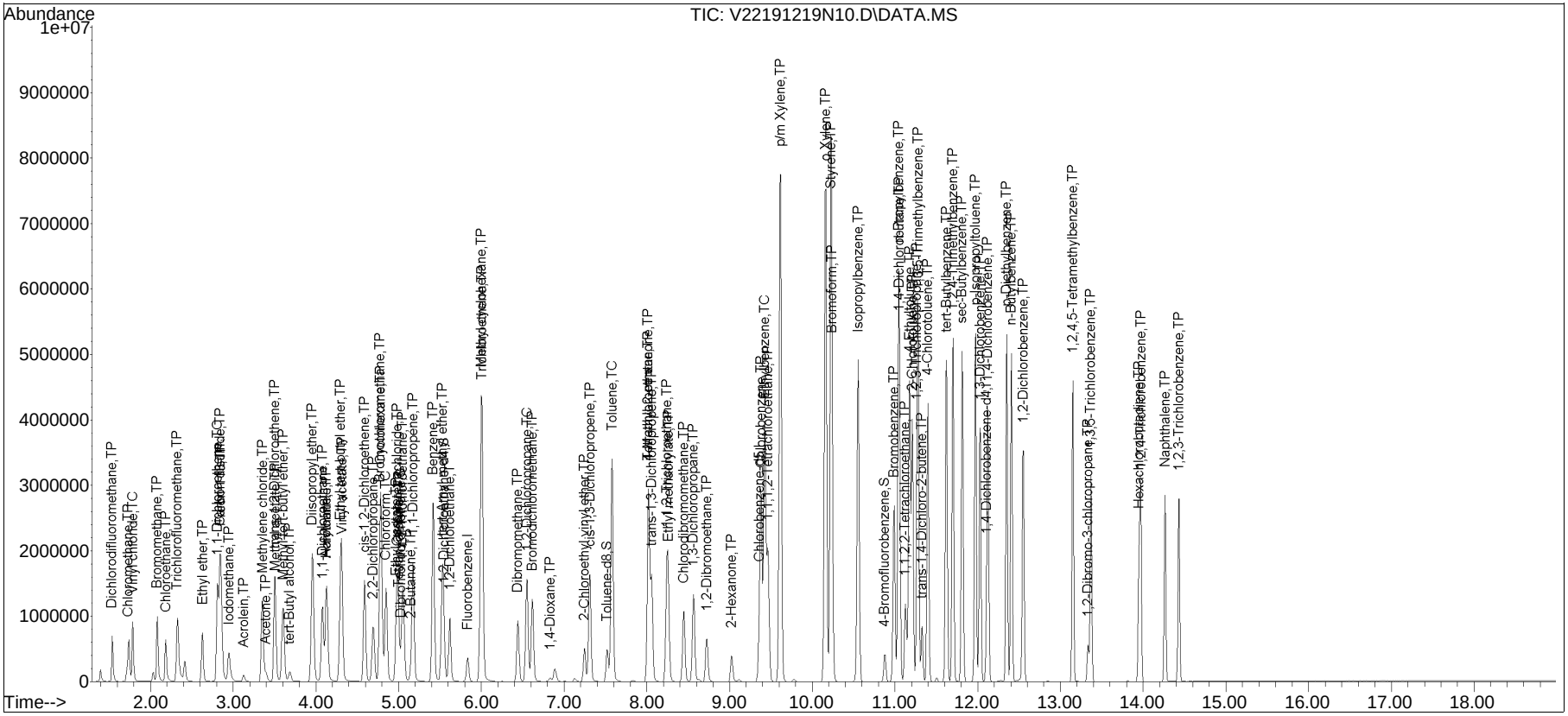
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : I:\VOLATILES\VOA122\2019\191219N\
Data File : V22191219N10.D
Acq On : 19 Dec 2019 06:37 pm
Operator : VOA122:NLK
Sample : I8260STDL80PPB
Misc : WG1323153
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Dec 20 07:30:40 2019
Quant Method : I:\VOLATILES\VOA122\2019\191219N\V122_191219N_8260.m
Quant Title : VOLATILES BY GC/MS
QLast Update : Fri Dec 20 07:20:50 2019
Response via : Initial Calibration

Sub List : 8260-Curve - Megamix plus Diox91219N\V22191219N08.D•



Manual Integration Report

| | | | |
|---|---|---|---|
| Data Path | : I:\VOLATILES\VOA122\2019\1Q | Method | : V122_191219N_8260.m |
| Data File | : V22191219N10.D | Operator | : VOA122:NLK |
| Date Inj'd | : 12/19/2019 6:37 pm | Instrument | : VOA122 |
| Sample | : I8260STDL80PPB | Quant Date | : 12/20/2019 7:30 am |

There are no manual integrations or false positives in this file.

Quantitation Report (QT Reviewed)

Data Path : I:\VOLATILES\VOA122\2019\191219N\
Data File : V22191219N11.D
Acq On : 19 Dec 2019 07:03 pm
Operator : VOA122:NLK
Sample : I8260STDL120PPB
Misc : WG1323153
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Dec 20 07:30:49 2019
Quant Method : I:\VOLATILES\VOA122\2019\191219N\V122_191219N_8260.m
Quant Title : VOLATILES BY GC/MS
QLast Update : Fri Dec 20 07:20:50 2019
Response via : Initial Calibration

CCAL FILE(s) : 1 - I:\VOLATILES\VOA122\2019\191219N\V22191219N08.D
Sub List : 8260-Curve - Megamix plus Diox

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| Internal Standards | | | | | | |
| 1) Fluorobenzene | 5.836 | 96 | 360742 | 10.000 | ug/L | 0.00 |
| Standard Area 1 = 326684 | | | Recovery = 110.43% | | | |
| 62) Chlorobenzene-d5 | 9.361 | 117 | 303905 | 10.000 | ug/L | 0.00 |
| Standard Area 1 = 264570 | | | Recovery = 114.87% | | | |
| 83) 1,4-Dichlorobenzene-d4 | 12.107 | 152 | 157812 | 10.000 | ug/L | 0.00 |
| Standard Area 1 = 133749 | | | Recovery = 117.99% | | | |
| System Monitoring Compounds | | | | | | |
| 38) Dibromofluoromethane | 5.026 | 113 | 102049 | 9.794 | ug/L | 0.00 |
| Spiked Amount 10.000 | Range 70 - 130 | | Recovery = 97.94% | | | |
| 46) 1,2-Dichloroethane-d4 | 5.549 | 65 | 116120 | 9.645 | ug/L | 0.00 |
| Spiked Amount 10.000 | Range 70 - 130 | | Recovery = 96.45% | | | |
| 63) Toluene-d8 | 7.519 | 98 | 387645 | 9.873 | ug/L | 0.00 |
| Spiked Amount 10.000 | Range 70 - 130 | | Recovery = 98.73% | | | |
| 87) 4-Bromofluorobenzene | 10.882 | 95 | 152545 | 9.844 | ug/L | 0.00 |
| Spiked Amount 10.000 | Range 70 - 130 | | Recovery = 98.44% | | | |
| Target Compounds | | | | | | Qvalue |
| 2) Dichlorodifluoromethane | 1.537 | 85 | 763457 | 123.031 | ug/L | 97 |
| 3) Chloromethane | 1.733 | 50 | 935377 | 114.142 | ug/L | 98 |
| 4) Vinyl chloride | 1.779 | 62 | 1112340 | 120.912 | ug/L | 99 |
| 5) Bromomethane | 2.084 | 94 | 803562 | 173.685 | ug/L | 97 |
| 6) Chloroethane | 2.185 | 64 | 613663 | 92.445 | ug/L | 99 |
| 7) Trichlorofluoromethane | 2.326 | 101 | 1486795 | 118.480 | ug/L | 100 |
| 8) Ethyl ether | 2.630 | 74 | 450208 | 121.419 | ug/L # | 1 |
| 10) 1,1-Dichloroethene | 2.810 | 96 | 818978 | 115.797 | ug/L | 82 |
| 11) Carbon disulfide | 2.841 | 76 | 2120396 | 114.825 | ug/L | 98 |
| 12) Freon-113 | 2.849 | 101 | 918265 | 118.443 | ug/L | 96 |
| 13) Iodomethane | 2.950 | 142 | 879658 | 122.003 | ug/L | 94 |
| 14) Acrolein | 3.130 | 56 | 140701 | 130.405 | ug/L | 98 |
| 15) Methylene chloride | 3.348 | 84 | 941261 | 117.477 | ug/L | 84 |
| 17) Acetone | 3.395 | 43 | 225833 | 109.901 | ug/L | 98 |
| 18) trans-1,2-Dichloroethene | 3.504 | 96 | 883684 | 116.294 | ug/L | 90 |
| 19) Methyl acetate | 3.512 | 43 | 414049 | 116.783 | ug/L | 95 |
| 21) Methyl tert-butyl ether | 3.606 | 73 | 1899599 | 113.047 | ug/L | 93 |
| 22) tert-Butyl alcohol | 3.684 | 59 | 303619 | 576.183 | ug/L | 95 |
| 24) Diisopropyl ether | 3.957 | 45 | 2874037 | 121.549 | ug/L | 95 |
| 25) 1,1-Dichloroethane | 4.082 | 63 | 1853938 | 121.408 | ug/L | 98 |
| 26) Halothane | 4.128 | 117 | 800327 | 119.859 | ug/L | 99 |

Data Path : I:\VOLATILES\VOA122\2019\191219N\
Data File : V22191219N11.D
Acq On : 19 Dec 2019 07:03 pm
Operator : VOA122:NLK
Sample : I8260STDL120PPB
Misc : WG1323153
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Dec 20 07:30:49 2019
Quant Method : I:\VOLATILES\VOA122\2019\191219N\V122_191219N_8260.m
Quant Title : VOLATILES BY GC/MS
QLast Update : Fri Dec 20 07:20:50 2019
Response via : Initial Calibration

CCAL FILE(s) : 1 - I:\VOLATILES\VOA122\2019\191219N\V22191219N08.D
Sub List : 8260-Curve - Megamix plus Diox

| Compound | R.T. | QIon | Response | Conc | Units | | Dev(Min) |
|---|---|---|---|---|---|---|---|
| 27) Acrylonitrile | 4.128 | 53 | 235394 | 123.563 | ug/L | | 96 |
| 28) Ethyl tert-butyl ether | 4.300 | 59 | 2790185 | 120.809 | ug/L | | 97 |
| 29) Vinyl acetate | 4.316 | 43 | 1756945 | 134.877 | ug/L | | 95 |
| 30) cis-1,2-Dichloroethene | 4.589 | 96 | 1089484 | 116.077 | ug/L | | 88 |
| 31) 2,2-Dichloropropane | 4.690 | 77 | 988846 | 112.118 | ug/L | | 93 |
| 32) Bromochloromethane | 4.776 | 128 | 411550 | 105.730 | ug/L | | 89 |
| 33) Cyclohexane | 4.784 | 56 | 1853304 | 123.303 | ug/L | | 84 |
| 34) Chloroform | 4.847 | 83 | 1766459 | 117.813 | ug/L | | 96 |
| 35) Ethyl acetate | 4.971 | 43 | 668340 | 121.154 | ug/L | | 98 |
| 36) Carbon tetrachloride | 4.987 | 117 | 1603179 | 125.580 | ug/L | | 99 |
| 37) Tetrahydrofuran | 5.003 | 42 | 227689 | 117.733 | ug/L | | 96 |
| 39) 1,1,1-Trichloroethane | 5.049 | 97 | 1627234 | 118.458 | ug/L | | 96 |
| 41) 2-Butanone | 5.143 | 43 | 287605 | 111.696 | ug/L | | 87 |
| 42) 1,1-Dichloropropene | 5.174 | 75 | 1412664 | 122.888 | ug/L | | 98 |
| 44) Benzene | 5.416 | 78 | 3896581 | 121.700 | ug/L | | 95 |
| 45) tert-Amyl methyl ether | 5.533 | 73 | 2743137 | 125.521 | ug/L | | 96 |
| 47) 1,2-Dichloroethane | 5.620 | 62 | 919776 | 113.518 | ug/L | | 98 |
| 50) Methyl cyclohexane | 6.000 | 83 | 1986037 | 127.232 | ug/L | | 86 |
| 51) Trichloroethene | 6.009 | 95 | 1114259 | 123.009 | ug/L | | 98 |
| 53) Dibromomethane | 6.441 | 93 | 574242 | 118.575 | ug/L | | 86 |
| 54) 1,2-Dichloropropane | 6.554 | 63 | 1032523 | 120.565 | ug/L | | 99 |
| 56) 2-Chloroethyl vinyl ether | 7.246 | 63 | 347509 | 91.807 | ug/L | | 90 |
| 57) Bromodichloromethane | 6.614 | 83 | 1423359 | 124.548 | ug/L | | 100 |
| 60) 1,4-Dioxane | 6.831 | 88 | 73548 | 1305.765 | ug/L | # | 80 |
| 61) cis-1,3-Dichloropropene | 7.315 | 75 | 1744201 | 124.455 | ug/L | # | 91 |
| 64) Toluene | 7.582 | 92 | 2638618 | 120.769 | ug/L | | 98 |
| 65) 4-Methyl-2-pentanone | 8.019 | 58 | 281037 | 131.291 | ug/L | | 92 |
| 66) Tetrachloroethene | 8.019 | 166 | 1296977 | 119.839 | ug/L | | 93 |
| 68) trans-1,3-Dichloropropene | 8.058 | 75 | 1435892 | 121.895 | ug/L | | 90 |
| 70) Ethyl methacrylate | 8.260 | 69 | 1037475 | 129.058 | ug/L | | 98 |
| 71) 1,1,2-Trichloroethane | 8.245 | 83 | 683258 | 119.488 | ug/L | | 98 |
| 72) Chlorodibromomethane | 8.448 | 129 | 1059694 | 125.316 | ug/L | | 98 |
| 73) 1,3-Dichloropropane | 8.565 | 76 | 1399839 | 120.699 | ug/L | | 99 |
| 74) 1,2-Dibromoethane | 8.729 | 107 | 848898 | 122.163 | ug/L | | 100 |
| 76) 2-Hexanone | 9.025 | 43 | 478032 | 129.232 | ug/L | | 97 |
| 77) Chlorobenzene | 9.384 | 112 | 2937003 | 119.611 | ug/L | | 92 |
| 78) Ethylbenzene | 9.423 | 91 | 5210145 | 122.547 | ug/L | | 100 |
| 79) 1,1,1,2-Tetrachloroethane | 9.462 | 131 | 1111795 | 123.333 | ug/L | | 97 |
| 80) p/m Xylene | 9.618 | 106 | 4262694 | 249.026 | ug/L | | 98 |
| 81) o Xylene | 10.164 | 106 | 4084335 | 253.468 | ug/L | | 99 |

Data Path : I:\VOLATILES\VOA122\2019\191219N\
Data File : V22191219N11.D
Acq On : 19 Dec 2019 07:03 pm
Operator : VOA122:NLK
Sample : I8260STDL120PPB
Misc : WG1323153
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Dec 20 07:30:49 2019
Quant Method : I:\VOLATILES\VOA122\2019\191219N\V122_191219N_8260.m
Quant Title : VOLATILES BY GC/MS
QLast Update : Fri Dec 20 07:20:50 2019
Response via : Initial Calibration

CCAL FILE(s) : 1 - I:\VOLATILES\VOA122\2019\191219N\V22191219N08.D
Sub List : 8260-Curve - Megamix plus Diox

| | Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|---|
| 82) | Styrene | 10.234 | 104 | 6738088 | 254.627 | ug/L | 96 |
| 84) | Bromoform | 10.242 | 173 | 760721 | 132.065 | ug/L | 100 |
| 86) | Isopropylbenzene | 10.554 | 105 | 6143972 | 119.603 | ug/L | 98 |
| 88) | Bromobenzene | 10.992 | 156 | 1296036 | 121.342 | ug/L | 100 |
| 89) | n-Propylbenzene | 11.046 | 91 | 6529363 | 121.706 | ug/L | 99 |
| 90) | 1,4-Dichlorobutane | 11.062 | 55 | 1410790 | 123.371 | ug/L | 99 |
| 91) | 1,1,2,2-Tetrachloroethane | 11.124 | 83 | 942976 | 118.775 | ug/L | 100 |
| 92) | 4-Ethyltoluene | 11.179 | 105 | 5064354 | 121.267 | ug/L | 98 |
| 93) | 2-Chlorotoluene | 11.210 | 91 | 4099186 | 119.622 | ug/L | 98 |
| 94) | 1,3,5-Trimethylbenzene | 11.280 | 105 | 4449135 | 121.970 | ug/L | 99 |
| 95) | 1,2,3-Trichloropropane | 11.273 | 75 | 820995 | 120.558 | ug/L | 99 |
| 96) | trans-1,4-Dichloro-2-b... | 11.327 | 53 | 273533 | 121.152 | ug/L | 92 |
| 97) | 4-Chlorotoluene | 11.397 | 91 | 3749574 | 120.492 | ug/L | 98 |
| 98) | tert-Butylbenzene | 11.624 | 119 | 3987332 | 123.808 | ug/L | 98 |
| 101) | 1,2,4-Trimethylbenzene | 11.702 | 105 | 4381755 | 124.020 | ug/L | 99 |
| 102) | sec-Butylbenzene | 11.811 | 105 | 5872658 | 127.607 | ug/L | 97 |
| 103) | p-Isopropyltoluene | 11.975 | 119 | 5145033 | 128.744 | ug/L | 96 |
| 104) | 1,3-Dichlorobenzene | 12.030 | 146 | 2448526 | 118.855 | ug/L | 98 |
| 105) | 1,4-Dichlorobenzene | 12.128 | 146 | 2381367 | 117.411 | ug/L | 98 |
| 106) | p-Diethylbenzene | 12.350 | 119 | 2595846 | 127.482 | ug/L | 99 |
| 107) | n-Butylbenzene | 12.406 | 91 | 3891793 | 124.415 | ug/L | 100 |
| 108) | 1,2-Dichlorobenzene | 12.552 | 146 | 2222457 | 121.367 | ug/L | 98 |
| 109) | 1,2,4,5-Tetramethylben... | 13.151 | 119 | 3489243 | 128.151 | ug/L | 99 |
| 110) | 1,2-Dibromo-3-chloropr... | 13.332 | 155 | 182127 | 130.500 | ug/L | 99 |
| 111) | 1,3,5-Trichlorobenzene | 13.374 | 180 | 1368931 | 119.553 | ug/L | 96 |
| 112) | Hexachlorobutadiene | 13.951 | 225 | 468837 | 121.636 | ug/L | 98 |
| 113) | 1,2,4-Trichlorobenzene | 13.972 | 180 | 1251549 | 119.121 | ug/L | 98 |
| 114) | Naphthalene | 14.265 | 128 | 3065065 | 125.801 | ug/L | 100 |
| 115) | 1,2,3-Trichlorobenzene | 14.432 | 180 | 1165479 | 120.957 | ug/L | 98 |

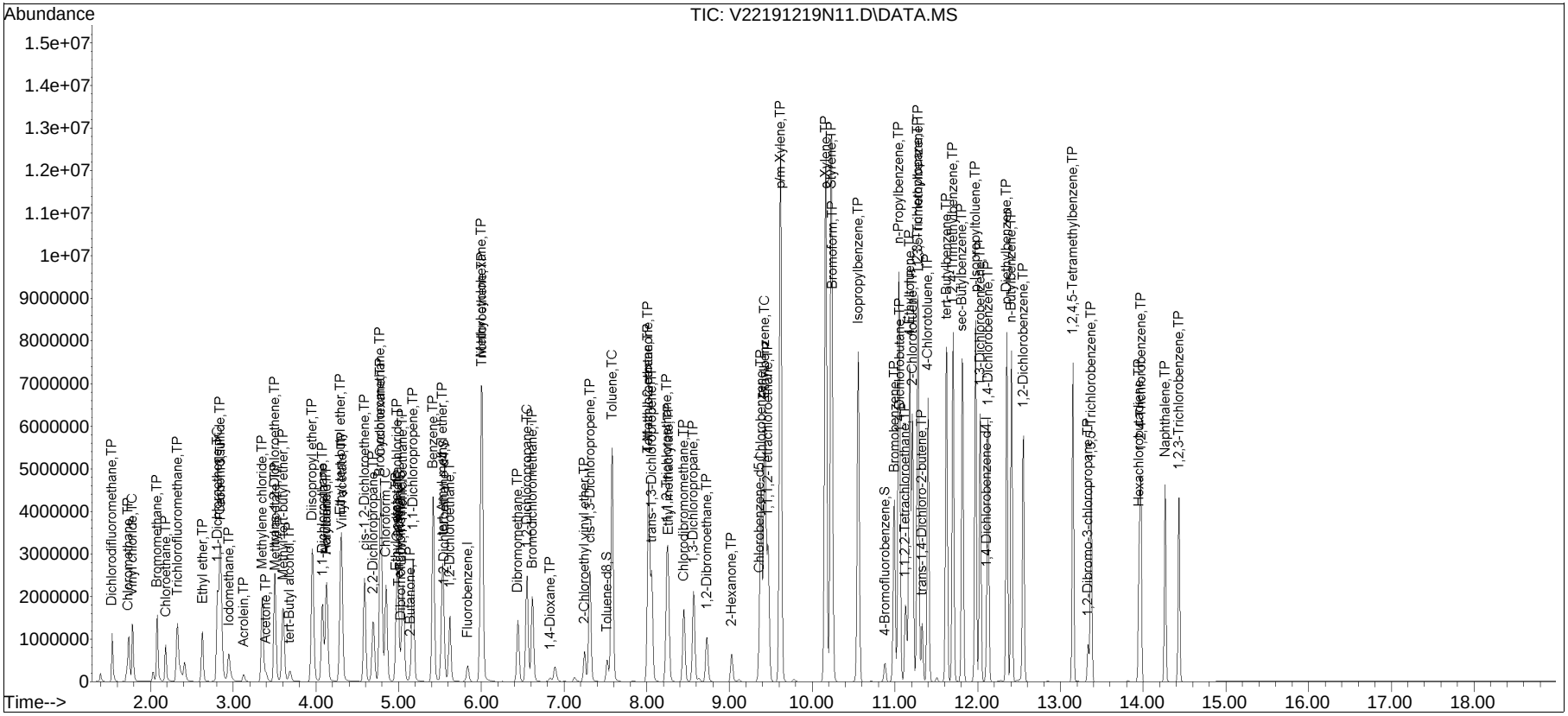
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : I:\VOLATILES\VOA122\2019\191219N\
Data File : V22191219N11.D
Acq On : 19 Dec 2019 07:03 pm
Operator : VOA122:NLK
Sample : I8260STDL120PPB
Misc : WG1323153
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Dec 20 07:30:49 2019
Quant Method : I:\VOLATILES\VOA122\2019\191219N\V122_191219N_8260.m
Quant Title : VOLATILES BY GC/MS
QLast Update : Fri Dec 20 07:20:50 2019
Response via : Initial Calibration

Sub List : 8260-Curve - Megamix plus Diox91219N\V22191219N08.D•



# Manual Integration Report

| | | | |
|---|---|---|---|
| Data Path | : I:\VOLATILES\VOA122\2019\1Q | Method | : V122_191219N_8260.m |
| Data File | : V22191219N11.D | Operator | : VOA122:NLK |
| Date Inj'd | : 12/19/2019 7:03 pm | Instrument | : VOA122 |
| Sample | : I8260STDL120PPB | Quant Date | : 12/20/2019 7:30 am |

There are no manual integrations or false positives in this file.

Quantitation Report (QT Reviewed)

Data Path : I:\VOLATILES\VOA122\2019\191219N\
Data File : V22191219N12.D
Acq On : 19 Dec 2019 07:28 pm
Operator : VOA122:NLK
Sample : I8260STDL200PPB
Misc : WG1323153
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Dec 20 07:31:00 2019
Quant Method : I:\VOLATILES\VOA122\2019\191219N\V122_191219N_8260.m
Quant Title : VOLATILES BY GC/MS
QLast Update : Fri Dec 20 07:20:50 2019
Response via : Initial Calibration

CCAL FILE(s) : 1 - I:\VOLATILES\VOA122\2019\191219N\V22191219N08.D
Sub List : 8260-Curve - Megamix plus Diox

| Compound | R.T. | QIon | Response | Conc Units | Dev(Min) |
|---|---|---|---|---|---|
| Internal Standards | | | | | |
| 1) Fluorobenzene | 5.836 | 96 | 378716 | 10.000 ug/L | 0.00 |
| Standard Area 1 = 326684 | | | Recovery = 115.93% | | |
| 62) Chlorobenzene-d5 | 9.360 | 117 | 323796 | 10.000 ug/L | 0.00 |
| Standard Area 1 = 264570 | | | Recovery = 122.39% | | |
| 83) 1,4-Dichlorobenzene-d4 | 12.108 | 152 | 162957 | 10.000 ug/L | 0.00 |
| Standard Area 1 = 133749 | | | Recovery = 121.84% | | |
| System Monitoring Compounds | | | | | |
| 38) Dibromofluoromethane | 5.026 | 113 | 105812 | 9.673 ug/L | 0.00 |
| Spiked Amount 10.000 | Range 70 - 130 | | Recovery = 96.73% | | |
| 46) 1,2-Dichloroethane-d4 | 5.549 | 65 | 124579 | 9.856 ug/L | 0.00 |
| Spiked Amount 10.000 | Range 70 - 130 | | Recovery = 98.56% | | |
| 63) Toluene-d8 | 7.527 | 98 | 402810 | 9.629 ug/L | 0.00 |
| Spiked Amount 10.000 | Range 70 - 130 | | Recovery = 96.29% | | |
| 87) 4-Bromofluorobenzene | 10.874 | 95 | 162345 | 10.146 ug/L | 0.00 |
| Spiked Amount 10.000 | Range 70 - 130 | | Recovery = 101.46% | | |
| Target Compounds | | | | | Qvalue |
| 2) Dichlorodifluoromethane | 1.537 | 85 | 1292780 | 198.444 ug/L | 96 |
| 3) Chloromethane | 1.732 | 50 | 1621673 | 188.497 ug/L | 98 |
| 4) Vinyl chloride | 1.787 | 62 | 1934492 | 200.301 ug/L | 99 |
| 5) Bromomethane | 2.084 | 94 | 1384988 | Below Cal | 98 |
| 6) Chloroethane | 2.177 | 64 | 662507 | 95.067 ug/L | 99 |
| 7) Trichlorofluoromethane | 2.326 | 101 | 2527234 | 191.833 ug/L | 100 |
| 8) Ethyl ether | 2.630 | 74 | 776336 | 199.437 ug/L # | 1 |
| 10) 1,1-Dichloroethene | 2.809 | 96 | 1383466 | 186.328 ug/L | 82 |
| 11) Carbon disulfide | 2.841 | 76 | 3638232 | 187.669 ug/L | 98 |
| 12) Freon-113 | 2.848 | 101 | 1566743 | 192.496 ug/L | 96 |
| 13) Iodomethane | 2.950 | 142 | 1421571 | 198.417 ug/L | 93 |
| 14) Acrolein | 3.129 | 56 | 244886 | 216.194 ug/L | 98 |
| 15) Methylene chloride | 3.348 | 84 | 1631855 | 194.003 ug/L | 84 |
| 17) Acetone | 3.403 | 43 | 392551 | 181.968 ug/L | 97 |
| 18) trans-1,2-Dichloroethene | 3.504 | 96 | 1511193 | 189.436 ug/L | 90 |
| 19) Methyl acetate | 3.520 | 43 | 721153 | 193.748 ug/L | 95 |
| 21) Methyl tert-butyl ether | 3.606 | 73 | 3107453 | 176.151 ug/L | 94 |
| 22) tert-Butyl alcohol | 3.691 | 59 | 538407 | 973.253 ug/L | 95 |
| 24) Diisopropyl ether | 3.957 | 45 | 4958831 | 199.766 ug/L | 95 |
| 25) 1,1-Dichloroethane | 4.082 | 63 | 3112271 | 194.140 ug/L | 98 |
| 26) Halothane | 4.128 | 117 | 1381709 | 197.108 ug/L | 99 |

Data Path : I:\VOLATILES\VOA122\2019\191219N\
Data File : V22191219N12.D
Acq On : 19 Dec 2019 07:28 pm
Operator : VOA122:NLK
Sample : I8260STDL200PPB
Misc : WG1323153
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Dec 20 07:31:00 2019
Quant Method : I:\VOLATILES\VOA122\2019\191219N\V122_191219N_8260.m
Quant Title : VOLATILES BY GC/MS
QLast Update : Fri Dec 20 07:20:50 2019
Response via : Initial Calibration

CCAL FILE(s) : 1 - I:\VOLATILES\VOA122\2019\191219N\V22191219N08.D
Sub List : 8260-Curve - Megamix plus Diox

| Compound | R.T. | QIon | Response | Conc | Units | | Dev(Min) |
|---|---|---|---|---|---|---|---|
| 27) Acrylonitrile | 4.128 | 53 | 404202 | 202.103 | ug/L | | 96 |
| 28) Ethyl tert-butyl ether | 4.300 | 59 | 4592218 | 189.397 | ug/L | | 94 |
| 29) Vinyl acetate | 4.316 | 43 | 3101236 | 226.777 | ug/L | | 96 |
| 30) cis-1,2-Dichloroethene | 4.589 | 96 | 1852748 | 188.029 | ug/L | | 88 |
| 31) 2,2-Dichloropropane | 4.698 | 77 | 1680641 | 181.512 | ug/L | | 92 |
| 32) Bromochloromethane | 4.784 | 128 | 712945 | 174.468 | ug/L | | 89 |
| 33) Cyclohexane | 4.784 | 56 | 3191763 | 202.274 | ug/L | | 84 |
| 34) Chloroform | 4.846 | 83 | 3058020 | 194.274 | ug/L | | 96 |
| 35) Ethyl acetate | 4.971 | 43 | 1141867 | 197.168 | ug/L | | 97 |
| 36) Carbon tetrachloride | 4.987 | 117 | 2739973 | 204.441 | ug/L | | 99 |
| 37) Tetrahydrofuran | 5.003 | 42 | 388983 | 191.588 | ug/L | | 95 |
| 39) 1,1,1-Trichloroethane | 5.057 | 97 | 2754445 | 190.999 | ug/L | | 96 |
| 41) 2-Butanone | 5.151 | 43 | 484351 | 179.177 | ug/L | | 87 |
| 42) 1,1-Dichloropropene | 5.174 | 75 | 2415157 | 200.124 | ug/L | | 98 |
| 44) Benzene | 5.416 | 78 | 6614554 | 196.785 | ug/L | | 94 |
| 45) tert-Amyl methyl ether | 5.533 | 73 | 4580274 | 199.639 | ug/L | | 96 |
| 47) 1,2-Dichloroethane | 5.620 | 62 | 1630337 | 191.666 | ug/L | | 98 |
| 50) Methyl cyclohexane | 6.000 | 83 | 3417333 | 208.535 | ug/L | | 86 |
| 51) Trichloroethene | 6.009 | 95 | 1948171 | 204.863 | ug/L | | 98 |
| 53) Dibromomethane | 6.441 | 93 | 953098 | 187.465 | ug/L | | 86 |
| 54) 1,2-Dichloropropane | 6.554 | 63 | 1786855 | 198.745 | ug/L | | 99 |
| 56) 2-Chloroethyl vinyl ether | 7.246 | 63 | 491557 | 123.700 | ug/L | | 90 |
| 57) Bromodichloromethane | 6.614 | 83 | 2435641 | 203.010 | ug/L | | 100 |
| 60) 1,4-Dioxane | 6.830 | 88 | 125960 | 2130.149 | ug/L | # | 78 |
| 61) cis-1,3-Dichloropropene | 7.315 | 75 | 3009636 | 204.557 | ug/L | # | 91 |
| 64) Toluene | 7.581 | 92 | 4551495 | 195.524 | ug/L | | 96 |
| 65) 4-Methyl-2-pentanone | 8.018 | 58 | 478485 | 209.800 | ug/L | | 93 |
| 66) Tetrachloroethene | 8.026 | 166 | 2220317 | 192.552 | ug/L | | 93 |
| 68) trans-1,3-Dichloropropene | 8.057 | 75 | 2414333 | 192.366 | ug/L | | 90 |
| 70) Ethyl methacrylate | 8.260 | 69 | 1777184 | 207.495 | ug/L | | 98 |
| 71) 1,1,2-Trichloroethane | 8.245 | 83 | 1171121 | 192.223 | ug/L | | 98 |
| 72) Chlorodibromomethane | 8.448 | 129 | 1829554 | 203.066 | ug/L | | 99 |
| 73) 1,3-Dichloropropane | 8.565 | 76 | 2361859 | 191.138 | ug/L | | 99 |
| 74) 1,2-Dibromoethane | 8.728 | 107 | 1433396 | 193.606 | ug/L | | 100 |
| 76) 2-Hexanone | 9.025 | 43 | 808616 | 205.174 | ug/L | | 98 |
| 77) Chlorobenzene | 9.384 | 112 | 5083262 | 194.302 | ug/L | | 92 |
| 78) Ethylbenzene | 9.431 | 91 | 8775212 | 193.721 | ug/L | | 98 |
| 79) 1,1,1,2-Tetrachloroethane | 9.470 | 131 | 1896002 | 197.405 | ug/L | | 97 |
| 80) p/m Xylene | 9.618 | 106 | 7357105 | 403.398 | ug/L | | 93 |
| 81) o Xylene | 10.164 | 106 | 7048096 | 410.526 | ug/L | | 94 |

Quantitation Report (QT Reviewed)

Data Path : I:\VOLATILES\VOA122\2019\191219N\
Data File : V22191219N12.D
Acq On : 19 Dec 2019 07:28 pm
Operator : VOA122:NLK
Sample : I8260STDL200PPB
Misc : WG1323153
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Dec 20 07:31:00 2019
Quant Method : I:\VOLATILES\VOA122\2019\191219N\V122_191219N_8260.m
Quant Title : VOLATILES BY GC/MS
QLast Update : Fri Dec 20 07:20:50 2019
Response via : Initial Calibration

CCAL FILE(s) : 1 - I:\VOLATILES\VOA122\2019\191219N\V22191219N08.D
Sub List : 8260-Curve - Megamix plus Diox

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 82) Styrene | 10.234 | 104 | 11215207 | 397.779 | ug/L | 94 |
| 84) Bromoform | 10.242 | 173 | 1313413 | 220.816 | ug/L | 99 |
| 86) Isopropylbenzene | 10.554 | 105 | 10467695 | 197.338 | ug/L | 97 |
| 88) Bromobenzene | 10.991 | 156 | 2232822 | 202.449 | ug/L | 100 |
| 89) n-Propylbenzene | 11.046 | 91 | 10801808 | 194.987 | ug/L | 97 |
| 90) 1,4-Dichlorobutane | 11.062 | 55 | 2408234 | 203.946 | ug/L | 99 |
| 91) 1,1,2,2-Tetrachloroethane | 11.132 | 83 | 1583313 | 193.133 | ug/L | 99 |
| 92) 4-Ethyltoluene | 11.179 | 105 | 8477395 | 196.584 | ug/L | 97 |
| 93) 2-Chlorotoluene | 11.210 | 91 | 6921345 | 195.601 | ug/L | 98 |
| 94) 1,3,5-Trimethylbenzene | 11.280 | 105 | 7563738 | 200.808 | ug/L | 98 |
| 95) 1,2,3-Trichloropropane | 11.273 | 75 | 1413864 | 201.062 | ug/L | 99 |
| 96) trans-1,4-Dichloro-2-b... | 11.327 | 53 | 469104 | 201.214 | ug/L | 92 |
| 97) 4-Chlorotoluene | 11.397 | 91 | 6301928 | 196.118 | ug/L | 97 |
| 98) tert-Butylbenzene | 11.624 | 119 | 6758793 | 203.237 | ug/L | 97 |
| 101) 1,2,4-Trimethylbenzene | 11.702 | 105 | 7336773 | 201.101 | ug/L | 98 |
| 102) sec-Butylbenzene | 11.819 | 105 | 9796273 | 206.142 | ug/L | 99 |
| 103) p-Isopropyltoluene | 11.975 | 119 | 8579727 | 207.912 | ug/L | 96 |
| 104) 1,3-Dichlorobenzene | 12.031 | 146 | 4128827 | 194.091 | ug/L | 97 |
| 105) 1,4-Dichlorobenzene | 12.128 | 146 | 4055380 | 193.634 | ug/L | 98 |
| 106) p-Diethylbenzene | 12.351 | 119 | 4436328 | 210.990 | ug/L | 99 |
| 107) n-Butylbenzene | 12.407 | 91 | 6451388 | 199.730 | ug/L | 98 |
| 108) 1,2-Dichlorobenzene | 12.553 | 146 | 3710344 | 196.223 | ug/L | 98 |
| 109) 1,2,4,5-Tetramethylben... | 13.152 | 119 | 6063383 | 215.662 | ug/L | 98 |
| 110) 1,2-Dibromo-3-chloropr... | 13.333 | 155 | 309923 | 215.059 | ug/L | 100 |
| 111) 1,3,5-Trichlorobenzene | 13.374 | 180 | 2376739 | 201.015 | ug/L | 97 |
| 112) Hexachlorobutadiene | 13.952 | 225 | 826188 | 207.581 | ug/L | 99 |
| 113) 1,2,4-Trichlorobenzene | 13.973 | 180 | 2159264 | 199.028 | ug/L | 98 |
| 114) Naphthalene | 14.265 | 128 | 5310003 | 211.061 | ug/L | 100 |
| 115) 1,2,3-Trichlorobenzene | 14.432 | 180 | 2014701 | 202.491 | ug/L | 99 |

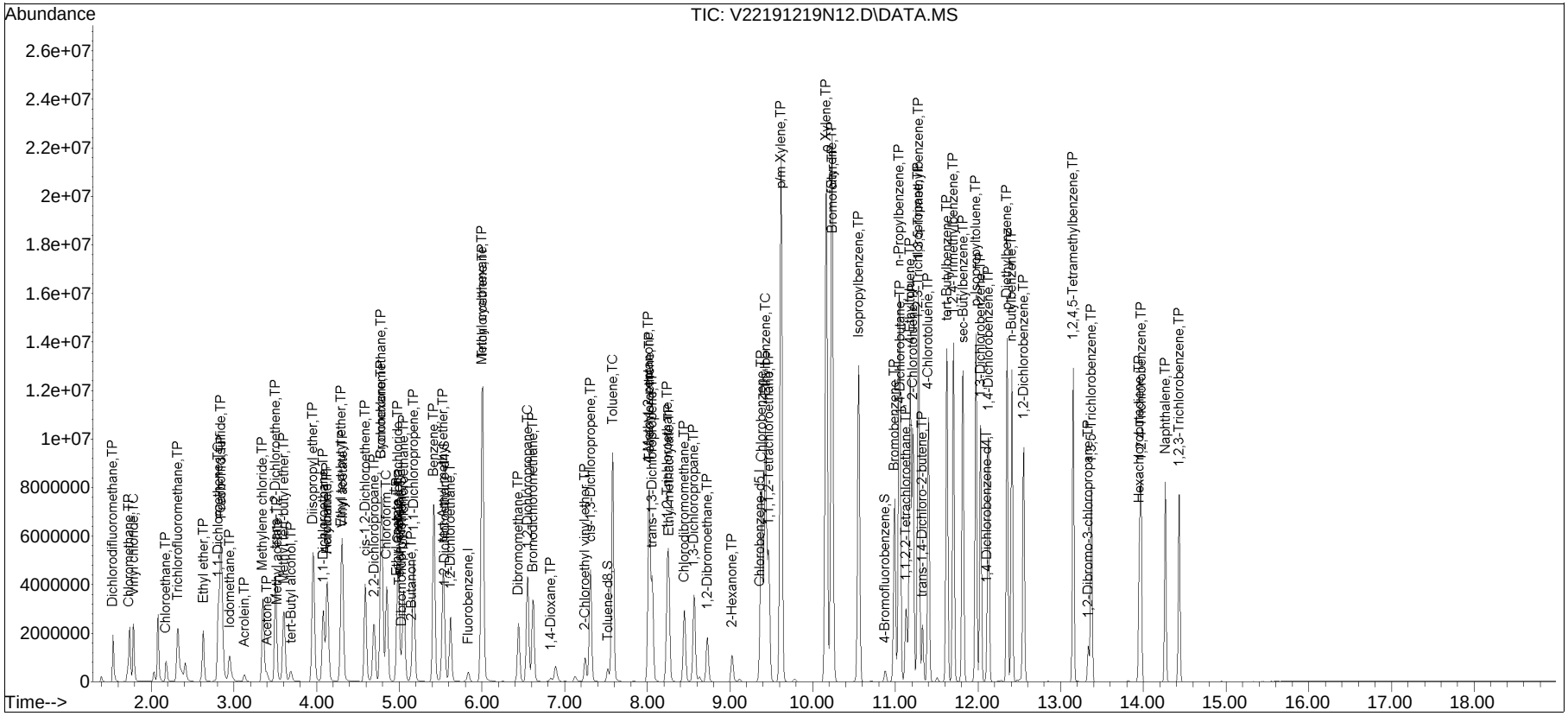
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : I:\VOLATILES\VOA122\2019\191219N\
Data File : V22191219N12.D
Acq On : 19 Dec 2019 07:28 pm
Operator : VOA122:NLK
Sample : I8260STDL200PPB
Misc : WG1323153
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Dec 20 07:31:00 2019
Quant Method : I:\VOLATILES\VOA122\2019\191219N\V122_191219N_8260.m
Quant Title : VOLATILES BY GC/MS
QLast Update : Fri Dec 20 07:20:50 2019
Response via : Initial Calibration

Sub List : 8260-Curve - Megamix plus Diox91219N\V22191219N08.D•



Manual Integration Report

| | | | |
|---|---|---|---|
| Data Path | : I:\VOLATILES\VOA122\2019\1Q | Method | : V122_191219N_8260.m |
| Data File | : V22191219N12.D | Operator | : VOA122:NLK |
| Date Inj'd | : 12/19/2019 7:28 pm | Instrument | : VOA122 |
| Sample | : I8260STDL200PPB | Quant Date | : 12/20/2019 7:30 am |

There are no manual integrations or false positives in this file.

# Evaluate Continuing Calibration Report

Data Path : I:\VOLATILES\VOA122\2019\191219N\
Data File : V22191219N18.D
Acq On : 19 Dec 2019 09:58 pm
Operator : VOA122:NLK
Sample : C8260STDL10PPB
Misc : WG1323153
ALS Vial : 18 Sample Multiplier: 1

Quant Time: Dec 20 07:23:19 2019
Quant Method : I:\VOLATILES\VOA122\2019\191219N\V122_191219N_8260.m
Quant Title : VOLATILES BY GC/MS
QLast Update : Fri Dec 20 07:20:50 2019
Response via : Initial Calibration

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

| | | Compound | AvgRF | CCRF | %Dev | Area% | Dev(min) |
|---|---|---|---|---|---|---|---|
| 1 | I | Fluorobenzene | 1.000 | 1.000 | 0.0 | 105 | 0.00 |
| 2 | TP | Dichlorodifluoromethane | 0.172 | 0.232 | -34.9# | 129 | 0.00 |
| 3 | TP | Chloromethane | 0.227 | 0.258 | -13.7 | 112 | 0.00 |
| 4 | TC | Vinyl chloride | 0.255 | 0.286 | -12.2 | 107 | 0.00 |
| 5 | TP | Bromomethane | * 10.000 | 10.235 | -2.3 | 100 | 0.00 |
| 6 | TP | Chloroethane | 0.184 | 0.190 | -3.3 | 96 | 0.00 |
| 7 | TP | Trichlorofluoromethane | 0.348 | 0.366 | -5.2 | 99 | 0.00 |
| 8 | TP | Ethyl ether | 0.103 | 0.120 | -16.5 | 118 | 0.00 |
| 10 | TC | 1,1-Dichloroethene | 0.196 | 0.185 | 5.6 | 89 | 0.00 |
| 11 | TP | Carbon disulfide | 0.512 | 0.613 | -19.7 | 115 | 0.00 |
| 12 | TP | Freon-113 | 0.215 | 0.222 | -3.3 | 97 | 0.00 |
| 13 | TP | Iodomethane | * 10.000 | 10.927 | -9.3 | 155 | 0.00 |
| 14 | TP | Acrolein | 0.030 | 0.028# | 6.7 | 98 | 0.00 |
| 15 | TP | Methylene chloride | 0.222 | 0.211 | 5.0 | 94 | 0.00 |
| 17 | TP | Acetone | 0.057 | 0.057# | 0.0 | 109 | 0.00 |
| 18 | TP | trans-1,2-Dichloroethene | 0.211 | 0.213 | -0.9 | 97 | 0.00 |
| 19 | TP | Methyl acetate | 0.098 | 0.081# | 17.3 | 91 | 0.00 |
| 21 | TP | Methyl tert-butyl ether | 0.466 | 0.534 | -14.6 | 110 | 0.00 |
| 22 | TP | tert-Butyl alcohol | 0.015 | 0.013# | 13.3 | 94 | 0.00 |
| 24 | TP | Diisopropyl ether | 0.655 | 0.697 | -6.4 | 108 | 0.00 |
| 25 | TP | 1,1-Dichloroethane | 0.423 | 0.385 | 9.0 | 89 | 0.00 |
| 26 | TP | Halothane | 0.185 | 0.171 | 7.6 | 91 | 0.00 |
| 27 | TP | Acrylonitrile | 0.053 | 0.062 | -17.0 | 122 | 0.00 |
| 28 | TP | Ethyl tert-butyl ether | 0.640 | 0.691 | -8.0 | 109 | 0.00 |
| 29 | TP | Vinyl acetate | 0.361 | 0.312 | 13.6 | 97 | 0.00 |
| 30 | TP | cis-1,2-Dichloroethene | 0.260 | 0.235 | 9.6 | 88 | 0.00 |
| 31 | TP | 2,2-Dichloropropane | 0.244 | 0.136 | 44.3# | 54 | 0.00 |
| 32 | TP | Bromochloromethane | 0.108 | 0.108 | 0.0 | 92 | 0.00 |
| 33 | TP | Cyclohexane | 0.417 | 0.403 | 3.4 | 95 | 0.00 |
| 34 | TC | Chloroform | 0.416 | 0.392 | 5.8 | 93 | 0.00 |
| 35 | TP | Ethyl acetate | 0.153 | 0.153 | 0.0 | 106 | 0.00 |
| 36 | TP | Carbon tetrachloride | 0.354 | 0.330 | 6.8 | 89 | 0.00 |
| 37 | TP | Tetrahydrofuran | 0.054 | 0.059 | -9.3 | 116 | 0.00 |
| 38 | S | Dibromofluoromethane | 0.289 | 0.291 | -0.7 | 105 | 0.00 |
| 39 | TP | 1,1,1-Trichloroethane | 0.381 | 0.358 | 6.0 | 91 | 0.00 |
| 41 | TP | 2-Butanone | 0.071 | 0.068# | 4.2 | 104 | 0.00 |
| 42 | TP | 1,1-Dichloropropene | 0.319 | 0.303 | 5.0 | 93 | 0.00 |
| 44 | TP | Benzene | 0.888 | 0.849 | 4.4 | 94 | 0.00 |
| 45 | TP | tert-Amyl methyl ether | 0.606 | 0.633 | -4.5 | 106 | 0.00 |

Data Path : I:\VOLATILES\VOA122\2019\191219N\
Data File : V22191219N18.D
Acq On : 19 Dec 2019 09:58 pm
Operator : VOA122:NLK
Sample : C8260STDL10PPB
Misc : WG1323153
ALS Vial : 18 Sample Multiplier: 1

Quant Time: Dec 20 07:23:19 2019
Quant Method : I:\VOLATILES\VOA122\2019\191219N\V122_191219N_8260.m
Quant Title : VOLATILES BY GC/MS
QLast Update : Fri Dec 20 07:20:50 2019
Response via : Initial Calibration

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

| | | Compound | AvgRF | CCRF | %Dev | Area% | Dev(min) |
|---|---|---|---|---|---|---|---|
| 46 | S | 1,2-Dichloroethane-d4 | 0.334 | 0.314 | 6.0 | 105 | 0.00 |
| 47 | T | 1,2-Dichloroethane | 0.225 | 0.212 | 5.8 | 99 | 0.00 |
| 50 | TP | Methyl cyclohexane | 0.433 | 0.380 | 12.2 | 85 | 0.00 |
| 51 | TP | Trichloroethene | 0.251 | 0.234 | 6.8 | 93 | 0.00 |
| 53 | TP | Dibromomethane | 0.134 | 0.125 | 6.7 | 94 | 0.00 |
| 54 | TC | 1,2-Dichloropropane | 0.237 | 0.230 | 3.0 | 98 | 0.00 |
| 56 | TP | 2-Chloroethyl vinyl ether | 0.105 | 0.109 | -3.8 | 93 | 0.00 |
| 57 | TP | Bromodichloromethane | 0.317 | 0.291 | 8.2 | 93 | 0.00 |
| 60 | TP | 1,4-Dioxane | 0.00156 | 0.00177# | -13.5 | 130 | 0.00 |
| 61 | TP | cis-1,3-Dichloropropene | 0.388 | 0.351 | 9.5 | 89 | 0.00 |
| 62 | I | Chlorobenzene-d5 | 1.000 | 1.000 | 0.0 | 106 | 0.00 |
| 63 | S | Toluene-d8 | 1.292 | 1.295 | -0.2 | 105 | 0.00 |
| 64 | TC | Toluene | 0.719 | 0.670 | 6.8 | 94 | 0.00 |
| 65 | TP | 4-Methyl-2-pentanone | 0.070 | 0.070# | 0.0 | 110 | 0.00 |
| 66 | TP | Tetrachloroethene | 0.356 | 0.334 | 6.2 | 94 | 0.00 |
| 68 | TP | trans-1,3-Dichloropropene | 0.388 | 0.343 | 11.6 | 89 | 0.00 |
| 70 | TP | Ethyl methacrylate | 0.265 | 0.282 | -6.4 | 113 | 0.00 |
| 71 | TP | 1,1,2-Trichloroethane | 0.188 | 0.180 | 4.3 | 98 | 0.00 |
| 72 | TP | Chlorodibromomethane | 0.278 | 0.264 | 5.0 | 99 | 0.00 |
| 73 | TP | 1,3-Dichloropropane | 0.382 | 0.376 | 1.6 | 101 | 0.00 |
| 74 | TP | 1,2-Dibromoethane | 0.229 | 0.221 | 3.5 | 98 | 0.00 |
| 76 | TP | 2-Hexanone | 0.122 | 0.117 | 4.1 | 103 | 0.00 |
| 77 | TP | Chlorobenzene | 0.808 | 0.775 | 4.1 | 97 | 0.00 |
| 78 | TC | Ethylbenzene | 1.399 | 1.374 | 1.8 | 97 | 0.00 |
| 79 | TP | 1,1,1,2-Tetrachloroethane | 0.297 | 0.290 | 2.4 | 98 | 0.00 |
| 80 | TP | p/m Xylene | 0.563 | 0.530 | 5.9 | 95 | 0.00 |
| 81 | TP | o Xylene | 0.530 | 0.522 | 1.5 | 101 | 0.00 |
| 82 | TP | Styrene | 0.871 | 0.847 | 2.8 | 99 | 0.00 |
| 83 | I | 1,4-Dichlorobenzene-d4 | 1.000 | 1.000 | 0.0 | 107 | 0.00 |
| 84 | TP | Bromoform | 0.365 | 0.330 | 9.6 | 100 | 0.00 |
| 86 | TP | Isopropylbenzene | 3.255 | 3.079 | 5.4 | 94 | 0.00 |
| 87 | S | 4-Bromofluorobenzene | 0.982 | 1.005 | -2.3 | 108 | 0.00 |
| 88 | TP | Bromobenzene | 0.677 | 0.659 | 2.7 | 99 | 0.00 |
| 89 | TP | n-Propylbenzene | 3.400 | 3.280 | 3.5 | 96 | 0.00 |
| 90 | TP | 1,4-Dichlorobutane | 0.725 | 0.764 | -5.4 | 113 | 0.00 |
| 91 | TP | 1,1,2,2-Tetrachloroethane | 0.503 | 0.504 | -0.2 | 106 | 0.00 |
| 92 | TP | 4-Ethyltoluene | 2.646 | 2.664 | -0.7 | 99 | 0.00 |

# Evaluate Continuing Calibration Report

Data Path : I:\VOLATILES\VOA122\2019\191219N\
Data File : V22191219N18.D
Acq On : 19 Dec 2019 09:58 pm
Operator : VOA122:NLK
Sample : C8260STDL10PPB
Misc : WG1323153
ALS Vial : 18 Sample Multiplier: 1

Quant Time: Dec 20 07:23:19 2019
Quant Method : I:\VOLATILES\VOA122\2019\191219N\V122_191219N_8260.m
Quant Title : VOLATILES BY GC/MS
QLast Update : Fri Dec 20 07:20:50 2019
Response via : Initial Calibration

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

| | Compound | AvgRF | CCRF | %Dev | Area% | Dev(min) |
|---|---|---|---|---|---|---|
| 93 TP | 2-Chlorotoluene | 2.171 | 2.141 | 1.4 | 98 | 0.00 |
| 94 TP | 1,3,5-Trimethylbenzene | 2.311 | 2.181 | 5.6 | 94 | 0.00 |
| 95 TP | 1,2,3-Trichloropropane | 0.432 | 0.411 | 4.9 | 102 | 0.00 |
| 96 TP | trans-1,4-Dichloro-2-butene | 0.143 | 0.126 | 11.9 | 96 | 0.00 |
| 97 TP | 4-Chlorotoluene | 1.972 | 1.872 | 5.1 | 95 | 0.00 |
| 98 TP | tert-Butylbenzene | 2.041 | 1.951 | 4.4 | 96 | 0.00 |
| 101 TP | 1,2,4-Trimethylbenzene | 2.239 | 2.223 | 0.7 | 101 | 0.00 |
| 102 TP | sec-Butylbenzene | 2.916 | 2.851 | 2.2 | 103 | 0.00 |
| 103 TP | p-Isopropyltoluene | 2.532 | 2.523 | 0.4 | 106 | 0.00 |
| 104 TP | 1,3-Dichlorobenzene | 1.305 | 1.280 | 1.9 | 100 | 0.00 |
| 105 TP | 1,4-Dichlorobenzene | 1.285 | 1.214 | 5.5 | 96 | 0.00 |
| 106 TP | p-Diethylbenzene | 1.290 | 1.188 | 7.9 | 94 | 0.00 |
| 107 TP | n-Butylbenzene | 1.982 | 1.929 | 2.7 | 97 | 0.00 |
| 108 TP | 1,2-Dichlorobenzene | 1.160 | 1.116 | 3.8 | 98 | 0.00 |
| 109 TP | 1,2,4,5-Tetramethylbenzene | 1.725 | 1.601 | 7.2 | 98 | 0.00 |
| 110 TP | 1,2-Dibromo-3-chloropropane | 0.088 | 0.082 | 6.8 | 104 | 0.00 |
| 111 TP | 1,3,5-Trichlorobenzene | 0.726 | 0.675 | 7.0 | 94 | 0.00 |
| 112 TP | Hexachlorobutadiene | 0.244 | 0.235 | 3.7 | 98 | 0.00 |
| 113 TP | 1,2,4-Trichlorobenzene | 0.666 | 0.661 | 0.8 | 101 | 0.00 |
| 114 TP | Naphthalene | 1.544 | 1.501 | 2.8 | 105 | 0.00 |
| 115 TP | 1,2,3-Trichlorobenzene | 0.611 | 0.596 | 2.5 | 101 | 0.00 |

* Evaluation of CC level amount vs concentration.
(#) = Out of Range SPCC's out = 7 CCC's out = 0

Quantitation Report (QT Reviewed)

Data Path : I:\VOLATILES\VOA122\2019\191219N\
Data File : V22191219N18.D
Acq On : 19 Dec 2019 09:58 pm
Operator : VOA122:NLK
Sample : C8260STDL10PPB
Misc : WG1323153
ALS Vial : 18 Sample Multiplier: 1

Quant Time: Dec 20 07:23:19 2019
Quant Method : I:\VOLATILES\VOA122\2019\191219N\V122_191219N_8260.m
Quant Title : VOLATILES BY GC/MS
QLast Update : Fri Dec 20 07:20:50 2019
Response via : Initial Calibration

CCAL FILE(s) : 1 - I:\VOLATILES\VOA122\2019\191219N\V22191219N08.D
Sub List : 8260-Curve - Megamix plus Diox

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| Internal Standards | | | | | | |
| 1) Fluorobenzene | 5.836 | 96 | 343497 | 10.000 | ug/L | 0.00 |
| Standard Area 1 = 326684 | | | Recovery = 105.15% | | | |
| 62) Chlorobenzene-d5 | 9.360 | 117 | 280968 | 10.000 | ug/L | 0.00 |
| Standard Area 1 = 264570 | | | Recovery = 106.20% | | | |
| 83) 1,4-Dichlorobenzene-d4 | 12.107 | 152 | 143496 | 10.000 | ug/L | 0.00 |
| Standard Area 1 = 133749 | | | Recovery = 107.29% | | | |
| System Monitoring Compounds | | | | | | |
| 38) Dibromofluoromethane | 5.026 | 113 | 99813 | 10.060 | ug/L | 0.00 |
| Spiked Amount 10.000 | Range 70 - 130 | | Recovery = 100.60% | | | |
| 46) 1,2-Dichloroethane-d4 | 5.549 | 65 | 107968 | 9.418 | ug/L | 0.00 |
| Spiked Amount 10.000 | Range 70 - 130 | | Recovery = 94.18% | | | |
| 63) Toluene-d8 | 7.519 | 98 | 363836 | 10.023 | ug/L | 0.00 |
| Spiked Amount 10.000 | Range 70 - 130 | | Recovery = 100.23% | | | |
| 87) 4-Bromofluorobenzene | 10.874 | 95 | 144143 | 10.230 | ug/L | 0.00 |
| Spiked Amount 10.000 | Range 70 - 130 | | Recovery = 102.30% | | | |
| Target Compounds | | | | | | Qvalue |
| 2) Dichlorodifluoromethane | 1.537 | 85 | 79537 | 13.461 | ug/L | 97 |
| 3) Chloromethane | 1.740 | 50 | 88718 | 11.370 | ug/L | 99 |
| 4) Vinyl chloride | 1.787 | 62 | 98088 | 11.198 | ug/L | 98 |
| 5) Bromomethane | 2.084 | 94 | 74901 | 10.235 | ug/L | 98 |
| 6) Chloroethane | 2.185 | 64 | 65435 | 10.352 | ug/L | 100 |
| 7) Trichlorofluoromethane | 2.325 | 101 | 125842 | 10.532 | ug/L | 98 |
| 8) Ethyl ether | 2.630 | 74 | 41343 | 11.710 | ug/L # | 1 |
| 10) 1,1-Dichloroethene | 2.809 | 96 | 63554 | 9.437 | ug/L | 83 |
| 11) Carbon disulfide | 2.841 | 76 | 210670 | 11.981 | ug/L | 99 |
| 12) Freon-113 | 2.848 | 101 | 76422 | 10.352 | ug/L | 96 |
| 13) Iodomethane | 2.950 | 142 | 70428 | 10.927 | ug/L | 94 |
| 14) Acrolein | 3.129 | 56 | 9477 | 9.224 | ug/L | 100 |
| 15) Methylene chloride | 3.356 | 84 | 72342 | 9.482 | ug/L | 83 |
| 17) Acetone | 3.395 | 43 | 19690 | 10.063 | ug/L | 97 |
| 18) trans-1,2-Dichloroethene | 3.504 | 96 | 73154 | 10.110 | ug/L | 91 |
| 19) Methyl acetate | 3.512 | 43 | 27857 | 8.252 | ug/L | 97 |
| 21) Methyl tert-butyl ether | 3.598 | 73 | 183409 | 11.463 | ug/L | 92 |
| 22) tert-Butyl alcohol | 3.683 | 59 | 21971 | 43.788 | ug/L # | 88 |
| 24) Diisopropyl ether | 3.957 | 45 | 239535 | 10.639 | ug/L | 94 |
| 25) 1,1-Dichloroethane | 4.074 | 63 | 132289 | 9.098 | ug/L | 98 |
| 26) Halothane | 4.128 | 117 | 58727 | 9.237 | ug/L | 100 |

Data Path : I:\VOLATILES\VOA122\2019\191219N\
Data File : V22191219N18.D
Acq On : 19 Dec 2019 09:58 pm
Operator : VOA122:NLK
Sample : C8260STDL10PPB
Misc : WG1323153
ALS Vial : 18 Sample Multiplier: 1

Quant Time: Dec 20 07:23:19 2019
Quant Method : I:\VOLATILES\VOA122\2019\191219N\V122_191219N_8260.m
Quant Title : VOLATILES BY GC/MS
QLast Update : Fri Dec 20 07:20:50 2019
Response via : Initial Calibration

CCAL FILE(s) : 1 - I:\VOLATILES\VOA122\2019\191219N\V22191219N08.D
Sub List : 8260-Curve - Megamix plus Diox

| Compound | R.T. | QIon | Response | Conc | Units | | Dev(Min) |
|---|---|---|---|---|---|---|---|
| 27) Acrylonitrile | 4.128 | 53 | 21197 | 11.685 | ug/L | | 98 |
| 28) Ethyl tert-butyl ether | 4.300 | 59 | 237314 | 10.791 | ug/L | | 87 |
| 29) Vinyl acetate | 4.316 | 43 | 107215 | 8.644 | ug/L | # | 91 |
| 30) cis-1,2-Dichloroethene | 4.589 | 96 | 80741 | 9.034 | ug/L | # | 85 |
| 31) 2,2-Dichloropropane | 4.690 | 77 | 46603 | 5.549 | ug/L | | 89 |
| 32) Bromochloromethane | 4.776 | 128 | 37097 | 10.009 | ug/L | # | 87 |
| 33) Cyclohexane | 4.784 | 56 | 138503 | 9.677 | ug/L | | 88 |
| 34) Chloroform | 4.846 | 83 | 134671 | 9.433 | ug/L | | 95 |
| 35) Ethyl acetate | 4.971 | 43 | 52396 | 9.975 | ug/L | | 97 |
| 36) Carbon tetrachloride | 4.987 | 117 | 113385 | 9.328 | ug/L | | 98 |
| 37) Tetrahydrofuran | 5.002 | 42 | 20289 | 11.018 | ug/L | | 93 |
| 39) 1,1,1-Trichloroethane | 5.049 | 97 | 122897 | 9.396 | ug/L | | 96 |
| 41) 2-Butanone | 5.151 | 43 | 23408 | 9.547 | ug/L | # | 80 |
| 42) 1,1-Dichloropropene | 5.174 | 75 | 104226 | 9.522 | ug/L | | 97 |
| 44) Benzene | 5.416 | 78 | 291538 | 9.563 | ug/L | | 95 |
| 45) tert-Amyl methyl ether | 5.533 | 73 | 217587 | 10.456 | ug/L | | 95 |
| 47) 1,2-Dichloroethane | 5.620 | 62 | 72749 | 9.429 | ug/L | | 98 |
| 50) Methyl cyclohexane | 6.000 | 83 | 130659 | 8.791 | ug/L | | 85 |
| 51) Trichloroethene | 6.009 | 95 | 80373 | 9.318 | ug/L | | 97 |
| 53) Dibromomethane | 6.441 | 93 | 42806 | 9.283 | ug/L | # | 85 |
| 54) 1,2-Dichloropropane | 6.545 | 63 | 78928 | 9.679 | ug/L | | 98 |
| 56) 2-Chloroethyl vinyl ether | 7.245 | 63 | 37509 | 10.407 | ug/L | | 94 |
| 57) Bromodichloromethane | 6.614 | 83 | 100095 | 9.198 | ug/L | | 99 |
| 60) 1,4-Dioxane | 6.830 | 88 | 30467 | 568.065 | ug/L | # | 78 |
| 61) cis-1,3-Dichloropropene | 7.306 | 75 | 120530 | 9.032 | ug/L | # | 90 |
| 64) Toluene | 7.581 | 92 | 188218 | 9.318 | ug/L | | 99 |
| 65) 4-Methyl-2-pentanone | 8.018 | 58 | 19766 | 9.988 | ug/L | | 90 |
| 66) Tetrachloroethene | 8.018 | 166 | 93800 | 9.375 | ug/L | | 94 |
| 68) trans-1,3-Dichloropropene | 8.057 | 75 | 96293 | 8.842 | ug/L | | 87 |
| 70) Ethyl methacrylate | 8.260 | 69 | 79137 | 10.648 | ug/L | | 97 |
| 71) 1,1,2-Trichloroethane | 8.245 | 83 | 50530 | 9.558 | ug/L | | 97 |
| 72) Chlorodibromomethane | 8.447 | 129 | 74313 | 9.505 | ug/L | | 99 |
| 73) 1,3-Dichloropropane | 8.564 | 76 | 105636 | 9.852 | ug/L | | 99 |
| 74) 1,2-Dibromoethane | 8.721 | 107 | 61971 | 9.646 | ug/L | | 98 |
| 76) 2-Hexanone | 9.025 | 43 | 32804 | 9.592 | ug/L | | 96 |
| 77) Chlorobenzene | 9.384 | 112 | 217795 | 9.594 | ug/L | | 97 |
| 78) Ethylbenzene | 9.423 | 91 | 386129 | 9.823 | ug/L | | 99 |
| 79) 1,1,1,2-Tetrachloroethane | 9.462 | 131 | 81515 | 9.781 | ug/L | | 97 |
| 80) p/m Xylene | 9.610 | 106 | 297957 | 18.828 | ug/L | | 95 |
| 81) o Xylene | 10.156 | 106 | 293346 | 19.691 | ug/L | | 96 |

Data Path : I:\VOLATILES\VOA122\2019\191219N\
Data File : V22191219N18.D
Acq On : 19 Dec 2019 09:58 pm
Operator : VOA122:NLK
Sample : C8260STDL10PPB
Misc : WG1323153
ALS Vial : 18 Sample Multiplier: 1

Quant Time: Dec 20 07:23:19 2019
Quant Method : I:\VOLATILES\VOA122\2019\191219N\V122_191219N_8260.m
Quant Title : VOLATILES BY GC/MS
QLast Update : Fri Dec 20 07:20:50 2019
Response via : Initial Calibration

CCAL FILE(s) : 1 - I:\VOLATILES\VOA122\2019\191219N\V22191219N08.D
Sub List : 8260-Curve - Megamix plus Diox

| Compound | R.T. | QIon | Response | Conc | Units | | Dev(Min) |
|---|---|---|---|---|---|---|---|
| 82) Styrene | 10.226 | 104 | 475903 | 19.452 | ug/L | | 98 |
| 84) Bromoform | 10.242 | 173 | 47329 | 9.036 | ug/L | | 99 |
| 86) Isopropylbenzene | 10.554 | 105 | 441852 | 9.460 | ug/L | | 100 |
| 88) Bromobenzene | 10.991 | 156 | 94626 | 9.743 | ug/L | | 100 |
| 89) n-Propylbenzene | 11.046 | 91 | 470682 | 9.649 | ug/L | | 99 |
| 90) 1,4-Dichlorobutane | 11.054 | 55 | 109571 | 10.538 | ug/L | | 96 |
| 91) 1,1,2,2-Tetrachloroethane | 11.124 | 83 | 72305 | 10.016 | ug/L | | 100 |
| 92) 4-Ethyltoluene | 11.171 | 105 | 382258 | 10.066 | ug/L | | 100 |
| 93) 2-Chlorotoluene | 11.210 | 91 | 307158 | 9.858 | ug/L | | 100 |
| 94) 1,3,5-Trimethylbenzene | 11.272 | 105 | 313000 | 9.437 | ug/L | | 99 |
| 95) 1,2,3-Trichloropropane | 11.265 | 75 | 58968 | 9.523 | ug/L | | 99 |
| 96) trans-1,4-Dichloro-2-b... | 11.327 | 53 | 18125 | 8.829 | ug/L | # | 80 |
| 97) 4-Chlorotoluene | 11.397 | 91 | 268670 | 9.495 | ug/L | | 99 |
| 98) tert-Butylbenzene | 11.624 | 119 | 280001 | 9.562 | ug/L | | 98 |
| 101) 1,2,4-Trimethylbenzene | 11.702 | 105 | 319059 | 9.931 | ug/L | | 98 |
| 102) sec-Butylbenzene | 11.811 | 105 | 409071 | 9.775 | ug/L | | 100 |
| 103) p-Isopropyltoluene | 11.974 | 119 | 362093 | 9.965 | ug/L | | 97 |
| 104) 1,3-Dichlorobenzene | 12.030 | 146 | 183743 | 9.809 | ug/L | | 98 |
| 105) 1,4-Dichlorobenzene | 12.121 | 146 | 174267 | 9.449 | ug/L | | 98 |
| 106) p-Diethylbenzene | 12.350 | 119 | 170416 | 9.204 | ug/L | | 99 |
| 107) n-Butylbenzene | 12.406 | 91 | 276842 | 9.733 | ug/L | | 99 |
| 108) 1,2-Dichlorobenzene | 12.552 | 146 | 160102 | 9.615 | ug/L | | 98 |
| 109) 1,2,4,5-Tetramethylben... | 13.151 | 119 | 229671 | 9.277 | ug/L | | 99 |
| 110) 1,2-Dibromo-3-chloropr... | 13.332 | 155 | 11786 | 9.288 | ug/L | | 95 |
| 111) 1,3,5-Trichlorobenzene | 13.367 | 180 | 96875 | 9.304 | ug/L | | 96 |
| 112) Hexachlorobutadiene | 13.951 | 225 | 33734 | 9.625 | ug/L | | 97 |
| 113) 1,2,4-Trichlorobenzene | 13.972 | 180 | 94834 | 9.927 | ug/L | | 98 |
| 114) Naphthalene | 14.264 | 128 | 215344 | 9.720 | ug/L | | 100 |
| 115) 1,2,3-Trichlorobenzene | 14.432 | 180 | 85510 | 9.760 | ug/L | | 97 |

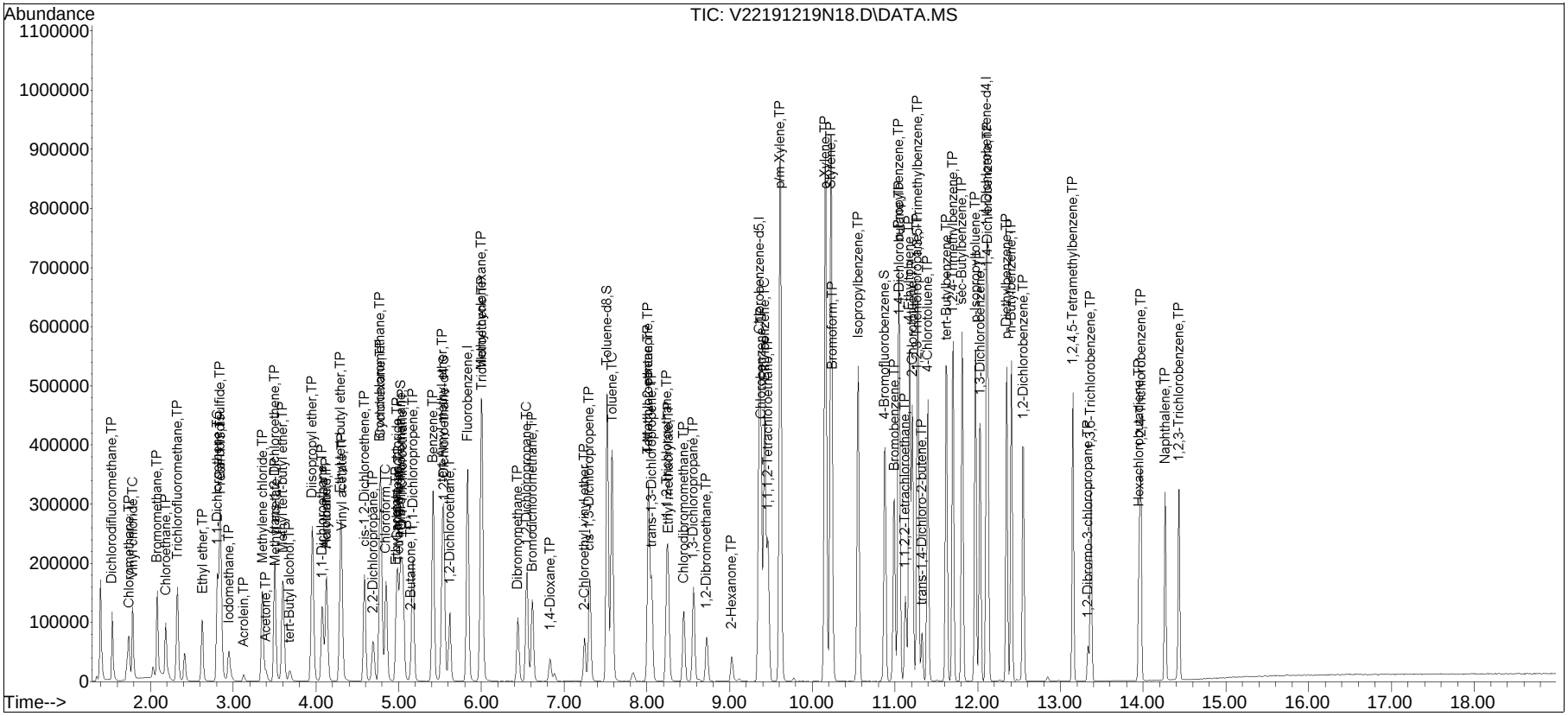
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : I:\VOLATILES\VOA122\2019\191219N\
Data File : V22191219N18.D
Acq On : 19 Dec 2019 09:58 pm
Operator : VOA122:NLK
Sample : C8260STDL10PPB
Misc : WG1323153
ALS Vial : 18 Sample Multiplier: 1

Quant Time: Dec 20 07:23:19 2019
Quant Method : I:\VOLATILES\VOA122\2019\191219N\V122_191219N_8260.m
Quant Title : VOLATILES BY GC/MS
QLast Update : Fri Dec 20 07:20:50 2019
Response via : Initial Calibration

Sub List : 8260-Curve - Megamix plus Diox91219N\V22191219N08.D•



Manual Integration Report

| | | | |
|---|---|---|---|
| Data Path | : I:\VOLATILES\VOA122\2019\1Q | Method | : V122_191219N_8260.m |
| Data File | : V22191219N18.D | Operator | : VOA122:NLK |
| Date Inj'd | : 12/19/2019 9:58 pm | Instrument | : VOA122 |
| Sample | : C8260STDL10PPB | Quant Date | : 12/20/2019 7:23 am |

There are no manual integrations or false positives in this file.

# Response Factor Report VOA 101

Method Path : I:\VOLATILES\VOA101\2020\200219A\
Method File : V101_200219A_8260.m
Title : VOLATILES BY GC/MS
Last Update : Wed Feb 19 21:32:55 2020
Response Via : Initial Calibration

Calibration Files
L11 =V01200219A18.D L1 =V01200219A05.D L2 =V01200219A07.D L3 =V01200219A08.D L4 =V01200219A09.D
L6 =V01200219A10.D L8 =V01200219A11.D L10 =V01200219A12.D

| | | Compound | L11 | L1 | L2 | L3 | L4 | L6 | L8 | L10 | Avg | %RSD |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1) | I | Fluorobenzene | ISTD | | | | | | | | | |
| 2) | TP | Dichlorodifluo... | | 0.146 | 0.159 | 0.182 | 0.181 | 0.200 | 0.198 | 0.196 | 0.180 | 11.48 |
| 3) | TP | Chloromethane | | 0.260 | 0.252 | 0.269 | 0.264 | 0.286 | 0.287 | 0.289 | 0.273 | 5.51 |
| 4) | TC | Vinyl chloride | 0.265 | 0.211 | 0.227 | 0.253 | 0.252 | 0.278 | 0.278 | 0.274 | 0.255 | 9.67 |
| 5) | TP | Bromomethane | | 0.112 | 0.096 | 0.088 | 0.087 | 0.105 | 0.117 | 0.121 | 0.104 | 13.30 |
| 6) | TP | Chloroethane | | 0.126 | 0.143 | 0.152 | 0.151 | 0.161 | 0.158 | 0.145 | 0.148 | 7.96 |
| 7) | TP | Trichlorofluor... | | 0.257 | 0.262 | 0.299 | 0.298 | 0.326 | 0.322 | 0.316 | 0.297 | 9.33 |
| 8) | TP | Ethyl ether | | 0.076 | 0.072 | 0.087 | 0.084 | 0.092 | 0.091 | 0.092 | 0.085 | 9.62 |
| 10) | TC | 1,1-Dichloroet... | | 0.140 | 0.162 | 0.184 | 0.184 | 0.202 | 0.200 | 0.199 | 0.182 | 12.74 |
| 11) | TP | Carbon disulfide | | 0.504 | 0.443 | 0.477 | 0.466 | 0.516 | 0.520 | 0.521 | 0.492 | 6.17 |
| 12) | TP | Freon-113 | | 0.147 | 0.159 | 0.183 | 0.180 | 0.199 | 0.195 | 0.192 | 0.179 | 10.69 |
| 13) | TP | Iodomethane | | 0.188 | 0.188 | 0.233 | 0.259 | 0.279 | 0.267 | 0.262 | 0.239 | 15.83 |
| 14) | TP | Acrolein | | | 0.020 | 0.023 | 0.023 | 0.025 | 0.024 | 0.026 | 0.024# | 8.39 |
| 15) | TP | Methylene chlo... | | 0.168 | 0.176 | 0.191 | 0.186 | 0.202 | 0.202 | 0.204 | 0.190 | 7.42 |
| 16) | TP | Isopropyl alcohol | | | 0.006 | 0.006 | 0.006 | 0.006 | 0.006 | 0.007 | 0.006# | 4.11 |
| 17) | TP | Acetone | | 0.148 | 0.054 | 0.038 | 0.034 | 0.034 | 0.033 | 0.034 | *L | 0.9997 |
| 18) | TP | trans-1,2-Dich... | | 0.178 | 0.173 | 0.192 | 0.189 | 0.207 | 0.207 | 0.207 | 0.193 | 7.36 |
| 19) | TP | Methyl acetate | | | 0.111 | 0.097 | 0.088 | 0.094 | 0.089 | 0.087 | 0.095# | 9.57 |
| 20) | TP | Methyl tert-bu... | | 0.379 | 0.376 | 0.411 | 0.403 | 0.441 | 0.430 | 0.441 | 0.412 | 6.63 |
| 21) | TP | tert-Butyl alc... | | 0.008 | 0.009 | 0.011 | 0.010 | 0.010 | 0.010 | 0.011 | 0.010# | 11.06 |
| 22) | TP | Diisopropyl ether | | 0.641 | 0.662 | 0.735 | 0.710 | 0.767 | 0.751 | 0.744 | 0.716 | 6.65 |
| 23) | TP | 1,1-Dichloroet... | | 0.358 | 0.378 | 0.423 | 0.414 | 0.449 | 0.443 | 0.441 | 0.415 | 8.37 |
| 24) | TP | Halothane | | 0.116 | 0.136 | 0.157 | 0.158 | 0.176 | 0.174 | 0.175 | 0.156 | 14.63 |
| 25) | TP | Acrylonitrile | | 0.029 | 0.035 | 0.044 | 0.044 | 0.047 | 0.046 | 0.048 | 0.042# | 16.59 |
| 26) | TP | Ethyl tert-but... | | 0.577 | 0.574 | 0.638 | 0.628 | 0.677 | 0.665 | 0.670 | 0.633 | 6.77 |
| 27) | TP | Vinyl acetate | | 0.401 | 0.375 | 0.413 | 0.416 | 0.454 | 0.439 | 0.437 | 0.419 | 6.34 |
| 28) | TP | cis-1,2-Dichlo... | | 0.198 | 0.213 | 0.228 | 0.225 | 0.248 | 0.247 | 0.249 | 0.230 | 8.62 |
| 29) | TP | 2,2-Dichloropr... | | 0.255 | 0.269 | 0.291 | 0.288 | 0.313 | 0.303 | 0.302 | 0.289 | 7.13 |
| 30) | TP | Bromochloromet... | | 0.069 | 0.083 | 0.091 | 0.092 | 0.096 | 0.093 | 0.092 | 0.088 | 10.84 |
| 31) | TP | Cyclohexane | | 0.374 | 0.386 | 0.439 | 0.441 | 0.485 | 0.473 | 0.468 | 0.438 | 9.83 |
| 32) | TC | Chloroform | | 0.302 | 0.323 | 0.356 | 0.362 | 0.396 | 0.395 | 0.395 | 0.361 | 10.39 |

# Response Factor Report VOA 101

Method Path : I:\VOLATILES\VOA101\2020\200219A\
Method File : V101_200219A_8260.m
Title : VOLATILES BY GC/MS
Last Update : Wed Feb 19 21:32:55 2020
Response Via : Initial Calibration

Calibration Files
L11 =V01200219A18.D L1 =V01200219A05.D L2 =V01200219A07.D L3 =V01200219A08.D L4 =V01200219A09.D
L6 =V01200219A10.D L8 =V01200219A11.D L10 =V01200219A12.D

| | | Compound | L11 | L1 | L2 | L3 | L4 | L6 | L8 | L10 | Avg | %RSD |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 33) | TP | Ethyl acetate | | 0.149 | 0.132 | 0.129 | 0.128 | 0.138 | 0.134 | 0.139 | 0.136 | 5.28 |
| 34) | TP | Carbon tetrach... | 0.280 | 0.217 | 0.256 | 0.295 | 0.293 | 0.334 | 0.328 | 0.328 | 0.291 | 13.88 |
| 35) | TP | Tetrahydrofuran | | | 0.037 | 0.038 | 0.037 | 0.039 | 0.037 | 0.038 | 0.038# | 2.10 |
| 36) | S | Dibromofluorom... | 0.259 | 0.263 | 0.257 | 0.259 | 0.254 | 0.256 | 0.258 | 0.254 | 0.258 | 1.07 |
| 37) | TP | 1,1,1-Trichlor... | | 0.276 | 0.303 | 0.337 | 0.336 | 0.373 | 0.369 | 0.369 | 0.338 | 10.92 |
| 38) | TP | 2-Butanol | | | 0.010 | 0.009 | 0.009 | 0.009 | 0.009 | 0.010 | 0.009# | 6.29 |
| 39) | TP | 2-Butanone | | | 0.058 | 0.056 | 0.050 | 0.056 | 0.054 | 0.057 | 0.055# | 5.36 |
| 40) | TP | 1,1-Dichloropr... | | 0.228 | 0.253 | 0.289 | 0.291 | 0.324 | 0.319 | 0.320 | 0.289 | 12.66 |
| 41) | TP | Benzene | 0.867 | 0.671 | 0.716 | 0.792 | 0.777 | 0.858 | 0.856 | 0.856 | 0.799 | 9.27 |
| 42) | TP | tert-Amyl meth... | | 0.440 | 0.424 | 0.468 | 0.456 | 0.505 | 0.498 | 0.510 | 0.471 | 7.14 |
| 43) | S | 1,2-Dichloroet... | 0.268 | 0.288 | 0.280 | 0.274 | 0.275 | 0.274 | 0.272 | 0.278 | 0.276 | 2.24 |
| 44) | TP | 1,2-Dichloroet... | | 0.213 | 0.234 | 0.252 | 0.248 | 0.272 | 0.268 | 0.268 | 0.251 | 8.54 |
| 46) | TP | 2-Methyl-2-but... | | 0.007 | 0.008 | 0.009 | 0.009 | 0.009 | 0.009 | 0.010 | 0.009# | 11.87 |
| 47) | TP | Methyl cyclohe... | | 0.257 | 0.279 | 0.325 | 0.326 | 0.368 | 0.366 | 0.367 | 0.327 | 13.68 |
| 48) | TP | Trichloroethene | 0.244 | 0.182 | 0.194 | 0.216 | 0.216 | 0.238 | 0.236 | 0.235 | 0.220 | 10.22 |
| 50) | TP | Dibromomethane | | 0.071 | 0.086 | 0.094 | 0.096 | 0.105 | 0.104 | 0.106 | 0.095 | 13.34 |
| 51) | TC | 1,2-Dichloropr... | | 0.186 | 0.202 | 0.231 | 0.227 | 0.250 | 0.248 | 0.248 | 0.227 | 10.95 |
| 52) | TP | 4-penten-2-ol | | | 0.006 | 0.007 | 0.007 | 0.007 | 0.007 | 0.008 | 0.007# | 9.02 |
| 53) | TP | 2-Chloroethyl ... | | | | 0.057 | 0.064 | 0.077 | 0.073 | 0.079 | 0.070 | 13.11 |
| 54) | TP | Bromodichlorom... | | 0.224 | 0.232 | 0.257 | 0.257 | 0.288 | 0.286 | 0.288 | 0.262 | 10.21 |
| 57) | TP | 1,4-Dioxane | | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001# | 6.05 |
| 58) | TP | cis-1,3-Dichlo... | | 0.277 | 0.288 | 0.318 | 0.320 | 0.352 | 0.348 | 0.349 | 0.322 | 9.42 |
| 59) | I | Chlorobenzene-d5 | ----------ISTD---------- | | | | | | | | | |
| 60) | S | Toluene-d8 | 1.416 | 1.429 | 1.437 | 1.432 | 1.418 | 1.427 | 1.432 | 1.437 | 1.429 | 0.55 |
| 61) | TC | Toluene | | 0.592 | 0.660 | 0.720 | 0.708 | 0.787 | 0.792 | 0.793 | 0.722 | 10.60 |
| 62) | TP | 4-Methyl-2-pen... | | 0.041 | 0.057 | 0.068 | 0.067 | 0.076 | 0.074 | 0.077 | 0.066# | 19.76 |
| 63) | TP | Tetrachloroethene | | 0.237 | 0.271 | 0.305 | 0.305 | 0.346 | 0.344 | 0.350 | 0.308 | 13.80 |
| 65) | TP | trans-1,3-Dich... | | 0.330 | 0.327 | 0.367 | 0.373 | 0.417 | 0.415 | 0.424 | 0.379 | 10.79 |
| 66) | TP | 4-Methyl-2-pen... | | 0.033 | 0.034 | 0.036 | 0.036 | 0.036 | 0.035 | 0.039 | 0.036# | 4.69 |
| 67) | TP | Ethyl methacry... | | 0.227 | 0.219 | 0.245 | 0.245 | 0.277 | 0.269 | 0.280 | 0.252 | 9.68 |
| 68) | TP | 1,1,2-Trichlor... | | 0.135 | 0.150 | 0.167 | 0.161 | 0.180 | 0.178 | 0.183 | 0.165 | 10.76 |

# Response Factor Report VOA 101

Method Path : I:\VOLATILES\VOA101\2020\200219A\
Method File : V101_200219A_8260.m
Title : VOLATILES BY GC/MS
Last Update : Wed Feb 19 21:32:55 2020
Response Via : Initial Calibration

Calibration Files
L11 =V01200219A18.D L1 =V01200219A05.D L2 =V01200219A07.D L3 =V01200219A08.D L4 =V01200219A09.D
L6 =V01200219A10.D L8 =V01200219A11.D L10 =V01200219A12.D

| | | Compound | L11 | L1 | L2 | L3 | L4 | L6 | L8 | L10 | Avg | %RSD |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 69) | TP | Chlorodibromom... | | 0.190 | 0.199 | 0.236 | 0.240 | 0.274 | 0.274 | 0.283 | 0.242 | 15.35 |
| 70) | TP | 1,3-Dichloropr... | | 0.300 | 0.318 | 0.344 | 0.341 | 0.381 | 0.377 | 0.387 | 0.350 | 9.52 |
| 71) | TP | 1,2-Dibromoethane | | 0.149 | 0.173 | 0.187 | 0.189 | 0.210 | 0.210 | 0.217 | 0.191 | 12.69 |
| 72) | TP | 2-Hexanone | | 0.152 | 0.115 | 0.115 | 0.112 | 0.126 | 0.122 | 0.127 | 0.124 | 10.99 |
| 73) | TP | Chlorobenzene | | 0.662 | 0.705 | 0.765 | 0.754 | 0.837 | 0.838 | 0.841 | 0.772 | 9.19 |
| 74) | TC | Ethylbenzene | | 1.169 | 1.220 | 1.342 | 1.320 | 1.476 | 1.470 | 1.472 | 1.353 | 9.32 |
| 75) | TP | 1,1,1,2-Tetrac... | | 0.229 | 0.251 | 0.273 | 0.277 | 0.311 | 0.311 | 0.315 | 0.281 | 11.81 |
| 76) | TP | p/m Xylene | | 0.434 | 0.467 | 0.523 | 0.519 | 0.581 | 0.578 | 0.572 | 0.525 | 10.95 |
| 77) | TP | o Xylene | | 0.403 | 0.450 | 0.490 | 0.482 | 0.540 | 0.539 | 0.534 | 0.491 | 10.56 |
| 78) | TP | Styrene | | 0.680 | 0.737 | 0.808 | 0.807 | 0.908 | 0.913 | 0.909 | 0.823 | 11.22 |
| 79) | I | 1,4-Dichlorobenzene-d4 | ----------ISTD---------- | | | | | | | | | |
| 80) | TP | Bromoform | | 0.177 | 0.213 | 0.261 | 0.266 | 0.282 | 0.286 | 0.289 | 0.253 | 16.74 |
| 82) | TP | Isopropylbenzene | | 2.357 | 2.369 | 2.726 | 2.615 | 2.747 | 2.745 | 2.666 | 2.604 | 6.58 |
| 83) | S | 4-Bromofluorob... | 1.109 | 1.130 | 1.114 | 1.109 | 1.090 | 1.028 | 1.044 | 1.001 | 1.078 | 4.40 |
| 84) | TP | Bromobenzene | | 0.524 | 0.528 | 0.598 | 0.588 | 0.616 | 0.617 | 0.607 | 0.582 | 6.86 |
| 85) | TP | n-Propylbenzene | | 2.473 | 2.588 | 2.924 | 2.831 | 2.981 | 3.001 | 2.920 | 2.817 | 7.31 |
| 86) | TP | 1,4-Dichlorobu... | | 0.817 | 0.697 | 0.761 | 0.738 | 0.759 | 0.743 | 0.725 | 0.749 | 4.96 |
| 87) | TP | 1,1,2,2-Tetrac... | | 0.379 | 0.369 | 0.400 | 0.389 | 0.412 | 0.407 | 0.412 | 0.395 | 4.26 |
| 88) | TP | 4-Ethyltoluene | | 1.974 | 2.093 | 2.374 | 2.298 | 2.464 | 2.496 | 2.427 | 2.304 | 8.61 |
| 89) | TP | 2-Chlorotoluene | | 1.698 | 1.730 | 1.908 | 1.856 | 1.969 | 1.988 | 1.942 | 1.870 | 6.17 |
| 90) | TP | 1,3,5-Trimethy... | | 1.764 | 1.872 | 2.070 | 2.002 | 2.138 | 2.162 | 2.104 | 2.016 | 7.35 |
| 91) | TP | 1,2,3-Trichlor... | | 0.441 | 0.341 | 0.394 | 0.364 | 0.363 | 0.369 | 0.360 | 0.376 | 8.65 |
| 92) | TP | trans-1,4-Dich... | | 0.097 | 0.113 | 0.125 | 0.119 | 0.131 | 0.130 | 0.129 | 0.121 | 10.18 |
| 93) | TP | 4-Chlorotoluene | | 1.554 | 1.659 | 1.831 | 1.775 | 1.902 | 1.914 | 1.872 | 1.787 | 7.55 |
| 94) | TP | tert-Butylbenzene | | 1.442 | 1.546 | 1.744 | 1.692 | 1.834 | 1.856 | 1.821 | 1.705 | 9.25 |
| 97) | TP | 1,2,4-Trimethy... | | 1.793 | 1.808 | 1.996 | 1.962 | 2.119 | 2.129 | 2.102 | 1.987 | 7.15 |
| 98) | TP | sec-Butylbenzene | | 1.808 | 1.953 | 2.118 | 2.077 | 2.281 | 2.325 | 2.306 | 2.124 | 9.21 |
| 99) | TP | p-Isopropyltol... | | 1.731 | 1.747 | 1.953 | 1.921 | 2.116 | 2.156 | 2.133 | 1.965 | 9.10 |
| 100) | TP | 1,3-Dichlorobe... | | 0.932 | 0.990 | 1.080 | 1.054 | 1.168 | 1.183 | 1.185 | 1.085 | 9.21 |
| 101) | TP | 1,4-Dichlorobe... | | 1.001 | 0.977 | 1.080 | 1.072 | 1.178 | 1.191 | 1.194 | 1.099 | 8.25 |
| 102) | TP | p-Diethylbenzene | | 0.865 | 0.931 | 1.027 | 1.036 | 1.156 | 1.180 | 1.177 | 1.053 | 11.83 |

Method Path : I:\VOLATILES\VOA101\2020\200219A\
Method File : V101_200219A_8260.m
Title : VOLATILES BY GC/MS
Last Update : Wed Feb 19 21:32:55 2020
Response Via : Initial Calibration

Calibration Files
L11 =V01200219A18.D L1 =V01200219A05.D L2 =V01200219A07.D L3 =V01200219A08.D L4 =V01200219A09.D
L6 =V01200219A10.D L8 =V01200219A11.D L10 =V01200219A12.D

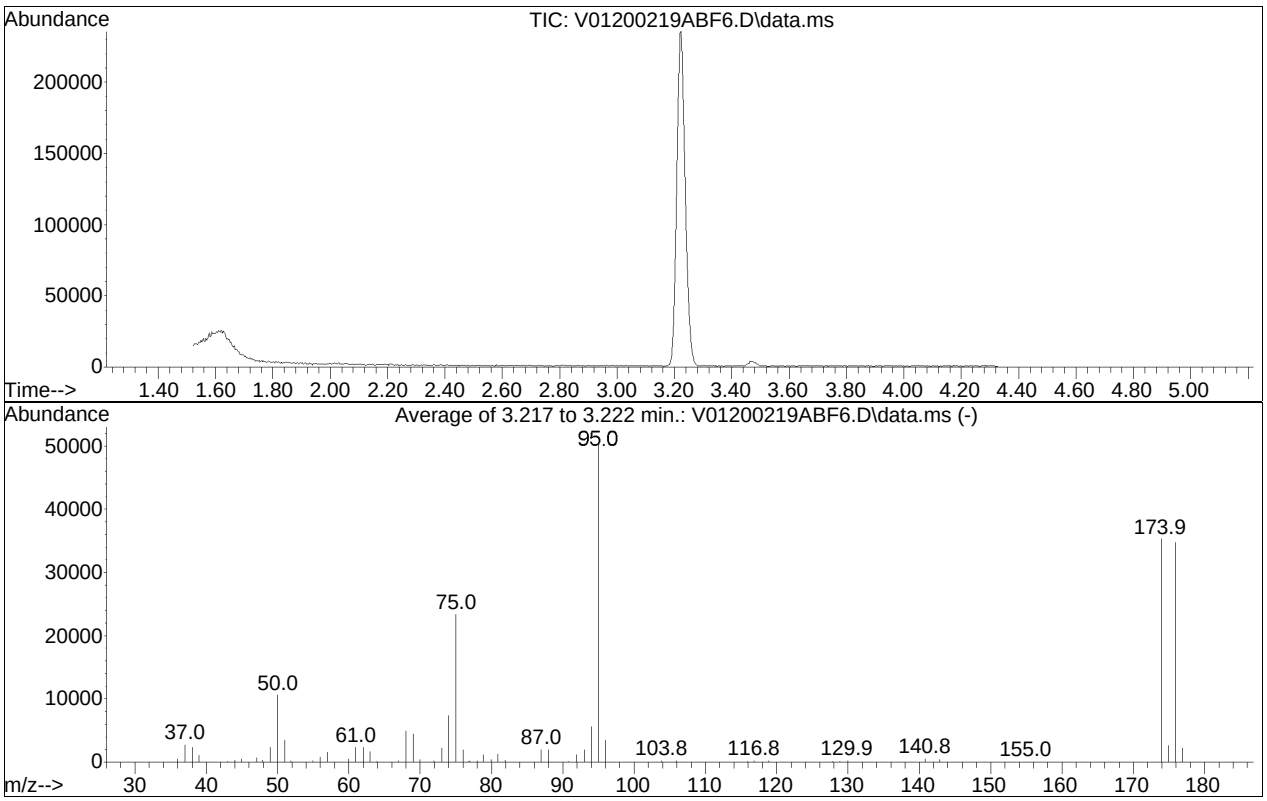
| | Compound | L11 | L1 | L2 | L3 | L4 | L6 | L8 | L10 | Avg | %RSD |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 103) TP | n-Butylbenzene | 1.269 | 1.296 | 1.411 | 1.406 | 1.576 | 1.616 | 1.625 | 1.457 | 10.25 | |
| 104) TP | 1,2-Dichlorobe... | 0.840 | 0.865 | 0.924 | 0.929 | 1.036 | 1.041 | 1.048 | 0.955 | 9.13 | |
| 105) TP | 1,2,4,5-Tetram... | 1.368 | 1.377 | 1.526 | 1.567 | 1.754 | 1.759 | 1.758 | 1.587 | 11.02 | |
| 106) TP | 1,2-Dibromo-3-... | | 0.030 | 0.049 | 0.051 | 0.059 | 0.058 | 0.061 | *Q | 0.9994 | |
| 107) TP | 1,3,5-Trichlor... | 0.427 | 0.451 | 0.490 | 0.493 | 0.562 | 0.566 | 0.573 | 0.509 | 11.60 | |
| 108) TP | Hexachlorobuta... | 0.129 | 0.134 | 0.136 | 0.142 | 0.160 | 0.172 | 0.174 | 0.150 | 12.54 | |
| 109) TP | 1,2,4-Trichlor... | 0.448 | 0.397 | 0.402 | 0.430 | 0.487 | 0.487 | 0.499 | 0.450 | 9.36 | |
| 110) TP | Naphthalene | 1.297 | 0.867 | 0.851 | 0.900 | 1.033 | 0.998 | 1.036 | 0.998 | 15.33 | |
| 111) TP | 1,2,3-Trichlor... | 0.365 | 0.307 | 0.308 | 0.328 | 0.372 | 0.367 | 0.377 | 0.346 | 9.00 | |

(#) = Out of Range

Data Path : I:\VOLATILES\VOA101\2020\200219A\
Data File : V01200219ABF6.D
Acq On : 19 Feb 2020 1:23 pm
Operator : VOA101:PD
Sample : WG1342454-1
Misc : WG1342454
ALS Vial : 6 Sample Multiplier: 1

Integration File: rteint.p

Method : I:\VOLATILES\VOA101\2020\200219A\V101_200219A_8260.m
Title : VOLATILES BY GC/MS
Last Update : Wed Feb 19 21:32:55 2020




AutoFind: Scans 586, 587, 588; Background Corrected with Scan 570

| Target Mass | Rel. to Mass | Lower Limit% | Upper Limit% | Rel. Abn% | Raw Abn | Result Pass/Fail |
|---|---|---|---|---|---|---|
| 50 | 95 | 15 | 40 | 21.0 | 10594 | PASS |
| 75 | 95 | 30 | 60 | 46.2 | 23363 | PASS |
| 95 | 95 | 100 | 100 | 100.0 | 50536 | PASS |
| 96 | 95 | 5 | 9 | 6.8 | 3452 | PASS |
| 173 | 174 | 0.00 | 2 | 0.0 | 0 | PASS |
| 174 | 95 | 50 | 100 | 69.9 | 35301 | PASS |
| 175 | 174 | 5 | 9 | 7.3 | 2572 | PASS |
| 176 | 174 | 95 | 101 | 98.3 | 34704 | PASS |
| 177 | 176 | 5 | 9 | 6.4 | 2218 | PASS |

Quantitation Report (QT Reviewed)

Data Path : I:\VOLATILES\VOA101\2020\200219A\
Data File : V01200219A05.D
Acq On : 19 Feb 2020 3:13 pm
Operator : VOA101:KJD
Sample : I8260STD0.5PPB
Misc : WG1342454
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Feb 19 21:31:42 2020
Quant Method : I:\VOLATILES\VOA101\2020\200219A\V101_200219A_8260.m
Quant Title : VOLATILES BY GC/MS
QLast Update : Wed Feb 19 21:31:36 2020
Response via : Initial Calibration

CCAL FILE(s) : 1 - I:\VOLATILES\VOA101\2020\200219A\V01200219A08.D
Sub List : 8260-CurveAlc - All compounds listed

| Compound | R.T. | QIon | Response | Conc Units | Dev(Min) |
|---|---|---|---|---|---|
| Internal Standards | | | | | |
| 1) Fluorobenzene | 6.634 | 96 | 212045 | 10.000 ug/L | 0.00 |
| Standard Area 1 = 204276 | | | Recovery = 103.80% | | |
| 59) Chlorobenzene-d5 | 10.524 | 117 | 151840 | 10.000 ug/L | 0.00 |
| Standard Area 1 = 145309 | | | Recovery = 104.49% | | |
| 79) 1,4-Dichlorobenzene-d4 | 13.323 | 152 | 72217 | 10.000 ug/L | 0.00 |
| Standard Area 1 = 69187 | | | Recovery = 104.38% | | |
| System Monitoring Compounds | | | | | |
| 36) Dibromofluoromethane | 5.745 | 113 | 55709 | 10.199 ug/L | 0.00 |
| Spiked Amount 10.000 | Range 70 - 130 | | Recovery = 101.99% | | |
| 43) 1,2-Dichloroethane-d4 | 6.323 | 65 | 61123 | 10.440 ug/L | 0.00 |
| Spiked Amount 10.000 | Range 70 - 130 | | Recovery = 104.40% | | |
| 60) Toluene-d8 | 8.500 | 98 | 216969 | 10.002 ug/L | 0.00 |
| Spiked Amount 10.000 | Range 70 - 130 | | Recovery = 100.02% | | |
| 83) 4-Bromofluorobenzene | 12.030 | 95 | 81598 | 10.482 ug/L | 0.00 |
| Spiked Amount 10.000 | Range 70 - 130 | | Recovery = 104.82% | | |
| Target Compounds | | | | | Qvalue |
| 2) Dichlorodifluoromethane | 1.816 | 85 | 1550 | 0.406 ug/L # | 84 |
| 3) Chloromethane | 2.040 | 50 | 2757 | 0.477 ug/L # | 91 |
| 4) Vinyl chloride | 2.116 | 62 | 2235 | 0.414 ug/L | 90 |
| 5) Bromomethane | 2.465 | 94 | 1184 | 0.539 ug/L | 96 |
| 6) Chloroethane | 2.596 | 64 | 1332 | 0.425 ug/L | 82 |
| 7) Trichlorofluoromethane | 2.749 | 101 | 2722 | 0.432 ug/L | 96 |
| 8) Ethyl ether | 3.076 | 74 | 802 | 0.446 ug/L # | 65 |
| 10) 1,1-Dichloroethene | 3.289 | 96 | 1485 | 0.385 ug/L # | 62 |
| 11) Carbon disulfide | 3.322 | 76 | 5339 | 0.511 ug/L # | 89 |
| 12) Freon-113 | 3.338 | 101 | 1563 | 0.411 ug/L # | 53 |
| 13) Iodomethane | 3.442 | 142 | 1990 | 0.392 ug/L # | 83 |
| 14) Acrolein | 0.000 | | 0 | N.D. d | |
| 15) Methylene chloride | 3.889 | 84 | 1777 | 0.442 ug/L | 78 |
| 16) Isopropyl alcohol | 0.000 | | 0 | N.D. d | |
| 17) Acetone | 3.928 | 43 | 1564 | 0.603 ug/L # | 64 |
| 18) trans-1,2-Dichloroethene | 4.059 | 96 | 1890 | 0.461 ug/L | 91 |
| 19) Methyl acetate | 4.069 | 43 | 2237 | 1.115 ug/L # | 58 |
| 20) Methyl tert-butyl ether | 4.162 | 73 | 4015 | 0.460 ug/L # | 79 |
| 21) tert-Butyl alcohol | 4.244 | 59 | 417 | 1.982 ug/L # | 71 |
| 22) Diisopropyl ether | 4.550 | 45 | 6793 | 0.448 ug/L | 95 |
| 23) 1,1-Dichloroethane | 4.697 | 63 | 3799 | 0.432 ug/L | 91 |

Data Path : I:\VOLATILES\VOA101\2020\200219A\
Data File : V01200219A05.D
Acq On : 19 Feb 2020 3:13 pm
Operator : VOA101:KJD
Sample : I8260STD0.5PPB
Misc : WG1342454
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Feb 19 21:31:42 2020
Quant Method : I:\VOLATILES\VOA101\2020\200219A\V101_200219A_8260.m
Quant Title : VOLATILES BY GC/MS
QLast Update : Wed Feb 19 21:31:36 2020
Response via : Initial Calibration

CCAL FILE(s) : 1 - I:\VOLATILES\VOA101\2020\200219A\V01200219A08.D
Sub List : 8260-CurveAlc - All compounds listed

| Compound | R.T. | QIon | Response | Conc | Units | | Dev(Min) |
|---|---|---|---|---|---|---|---|
| 24) Halothane | 4.751 | 117 | 1227 | 0.371 | ug/L | # | 57 |
| 25) Acrylonitrile | 4.746 | 53 | 312 | 0.351 | ug/L | # | 27 |
| 26) Ethyl tert-butyl ether | 4.932 | 59 | 6115 | 0.456 | ug/L | | 95 |
| 27) Vinyl acetate | 4.948 | 43 | 4252 | 0.478 | ug/L | # | 77 |
| 28) cis-1,2-Dichloroethene | 5.264 | 96 | 2094 | 0.430 | ug/L | # | 83 |
| 29) 2,2-Dichloropropane | 5.379 | 77 | 2699 | 0.441 | ug/L | | 87 |
| 30) Bromochloromethane | 5.466 | 128 | 727 | 0.390 | ug/L | # | 73 |
| 31) Cyclohexane | 5.483 | 56 | 3969 | 0.427 | ug/L | | 85 |
| 32) Chloroform | 5.548 | 83 | 3204 | 0.418 | ug/L | # | 95 |
| 33) Ethyl acetate | 5.657 | 43 | 1578 | 0.549 | ug/L | # | 72 |
| 34) Carbon tetrachloride | 5.701 | 117 | 2302 | 0.372 | ug/L | | 93 |
| 35) Tetrahydrofuran | 0.000 | | 0 | N.D. | d | | |
| 37) 1,1,1-Trichloroethane | 5.777 | 97 | 2931 | 0.409 | ug/L | # | 94 |
| 38) 2-Butanol | 0.000 | | 0 | N.D. | d | | |
| 39) 2-Butanone | 0.000 | | 0 | N.D. | d | | |
| 40) 1,1-Dichloropropene | 5.914 | 75 | 2422 | 0.395 | ug/L | | 98 |
| 41) Benzene | 6.181 | 78 | 7109 | 0.420 | ug/L | # | 93 |
| 42) tert-Amyl methyl ether | 6.296 | 73 | 4665 | 0.467 | ug/L | | 89 |
| 44) 1,2-Dichloroethane | 6.399 | 62 | 2257 | 0.424 | ug/L | # | 93 |
| 46) 2-Methyl-2-butanol | 6.497 | 59 | 352 | 1.913 | ug/L | # | 36 |
| 47) Methyl cyclohexane | 6.825 | 83 | 2725 | 0.393 | ug/L | # | 77 |
| 48) Trichloroethene | 6.836 | 95 | 1929 | 0.413 | ug/L | | 96 |
| 50) Dibromomethane | 7.311 | 93 | 758 | 0.377 | ug/L | | 88 |
| 51) 1,2-Dichloropropane | 7.441 | 63 | 1968 | 0.408 | ug/L | # | 94 |
| 52) 4-penten-2-ol | 0.000 | | 0 | N.D. | | | |
| 53) 2-Chloroethyl vinyl ether | 8.184 | 63 | 219 | 0.148 | ug/L | # | 1 |
| 54) Bromodichloromethane | 7.507 | 83 | 2375 | 0.428 | ug/L | # | 87 |
| 57) 1,4-Dioxane | 7.731 | 88 | 2203 | 111.844 | ug/L | # | 77 |
| 58) cis-1,3-Dichloropropene | 8.260 | 75 | 2941 | 0.431 | ug/L | | 91 |
| 61) Toluene | 8.560 | 92 | 4497 | 0.410 | ug/L | | 98 |
| 62) 4-Methyl-2-pentanone | 9.029 | 58 | 309 | 0.309 | ug/L | # | 1 |
| 63) Tetrachloroethene | 9.057 | 166 | 1801 | 0.385 | ug/L | | 85 |
| 65) trans-1,3-Dichloropropene | 9.084 | 75 | 2505 | 0.435 | ug/L | | 84 |
| 66) 4-Methyl-2-pentanol | 9.149 | 45 | 1271 | 2.345 | ug/L | # | 74 |
| 67) Ethyl methacrylate | 9.275 | 69 | 1720 | 0.450 | ug/L | # | 79 |
| 68) 1,1,2-Trichloroethane | 9.302 | 83 | 1022 | 0.408 | ug/L | | 97 |
| 69) Chlorodibromomethane | 9.531 | 129 | 1441 | 0.392 | ug/L | # | 89 |
| 70) 1,3-Dichloropropane | 9.651 | 76 | 2278 | 0.429 | ug/L | | 94 |
| 71) 1,2-Dibromoethane | 9.859 | 107 | 1135 | 0.392 | ug/L | | 97 |
| 72) 2-Hexanone | 10.148 | 43 | 1157 | 0.613 | ug/L | # | 56 |

Quantitation Report (QT Reviewed)

Data Path : I:\VOLATILES\VOA101\2020\200219A\
Data File : V01200219A05.D
Acq On : 19 Feb 2020 3:13 pm
Operator : VOA101:KJD
Sample : I8260STD0.5PPB
Misc : WG1342454
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Feb 19 21:31:42 2020
Quant Method : I:\VOLATILES\VOA101\2020\200219A\V101_200219A_8260.m
Quant Title : VOLATILES BY GC/MS
QLast Update : Wed Feb 19 21:31:36 2020
Response via : Initial Calibration

CCAL FILE(s) : 1 - I:\VOLATILES\VOA101\2020\200219A\V01200219A08.D
Sub List : 8260-CurveAlc - All compounds listed

| Compound | R.T. | QIon | Response | Conc | Units | | Dev(Min) |
|---|---|---|---|---|---|---|---|
| 73) Chlorobenzene | 10.541 | 112 | 5028 | 0.429 | ug/L | # | 72 |
| 74) Ethylbenzene | 10.579 | 91 | 8873 | 0.432 | ug/L | | 97 |
| 75) 1,1,1,2-Tetrachloroethane | 10.617 | 131 | 1739 | 0.408 | ug/L | # | 64 |
| 76) p/m Xylene | 10.764 | 106 | 6592 | 0.827 | ug/L | | 99 |
| 77) o Xylene | 11.305 | 106 | 6115 | 0.820 | ug/L | | 98 |
| 78) Styrene | 11.370 | 104 | 10323 | 0.826 | ug/L | | 100 |
| 80) Bromoform | 11.403 | 173 | 640 | 0.350 | ug/L | # | 55 |
| 82) Isopropylbenzene | 11.687 | 105 | 8510 | 0.453 | ug/L | | 96 |
| 84) Bromobenzene | 12.167 | 156 | 1891 | 0.450 | ug/L | | 99 |
| 85) n-Propylbenzene | 12.183 | 91 | 8930 | 0.439 | ug/L | | 99 |
| 86) 1,4-Dichlorobutane | 12.210 | 55 | 2950 | 0.546 | ug/L | # | 83 |
| 87) 1,1,2,2-Tetrachloroethane | 12.265 | 83 | 1368 | 0.479 | ug/L | # | 87 |
| 88) 4-Ethyltoluene | 12.319 | 105 | 7128 | 0.428 | ug/L | | 97 |
| 89) 2-Chlorotoluene | 12.374 | 91 | 6130 | 0.454 | ug/L | # | 88 |
| 90) 1,3,5-Trimethylbenzene | 12.412 | 105 | 6368 | 0.437 | ug/L | | 99 |
| 91) 1,2,3-Trichloropropane | 12.429 | 75 | 1591M1 | 0.586 | ug/L | | |
| 92) trans-1,4-Dichloro-2-b... | 12.472 | 53 | 350 | 0.402 | ug/L | # | 1 |
| 93) 4-Chlorotoluene | 12.570 | 91 | 5613 | 0.435 | ug/L | | 98 |
| 94) tert-Butylbenzene | 12.783 | 119 | 5206 | 0.423 | ug/L | | 98 |
| 97) 1,2,4-Trimethylbenzene | 12.865 | 105 | 6473 | 0.451 | ug/L | | 98 |
| 98) sec-Butylbenzene | 12.985 | 105 | 6528 | 0.426 | ug/L | | 95 |
| 99) p-Isopropyltoluene | 13.143 | 119 | 6251 | 0.440 | ug/L | | 96 |
| 100) 1,3-Dichlorobenzene | 13.252 | 146 | 3365 | 0.430 | ug/L | | 100 |
| 101) 1,4-Dichlorobenzene | 13.340 | 146 | 3616M3 | 0.456 | ug/L | | |
| 102) p-Diethylbenzene | 13.547 | 119 | 3124 | 0.411 | ug/L | | 95 |
| 103) n-Butylbenzene | 13.618 | 91 | 4582 | 0.435 | ug/L | | 98 |
| 104) 1,2-Dichlorobenzene | 13.809 | 146 | 3032 | 0.440 | ug/L | | 96 |
| 105) 1,2,4,5-Tetramethylben... | 14.420 | 119 | 4938 | 0.431 | ug/L | | 96 |
| 106) 1,2-Dibromo-3-chloropr... | 0.000 | | 0 | N.D. | | | |
| 107) 1,3,5-Trichlorobenzene | 14.698 | 180 | 1541 | 0.419 | ug/L | | 97 |
| 108) Hexachlorobutadiene | 15.337 | 225 | 466 | 0.431 | ug/L | # | 35 |
| 109) 1,2,4-Trichlorobenzene | 15.386 | 180 | 1616 | 0.497 | ug/L | # | 87 |
| 110) Naphthalene | 15.741 | 128 | 4683 | 0.650 | ug/L | | 100 |
| 111) 1,2,3-Trichlorobenzene | 15.959 | 180 | 1318 | 0.527 | ug/L | # | 57 |

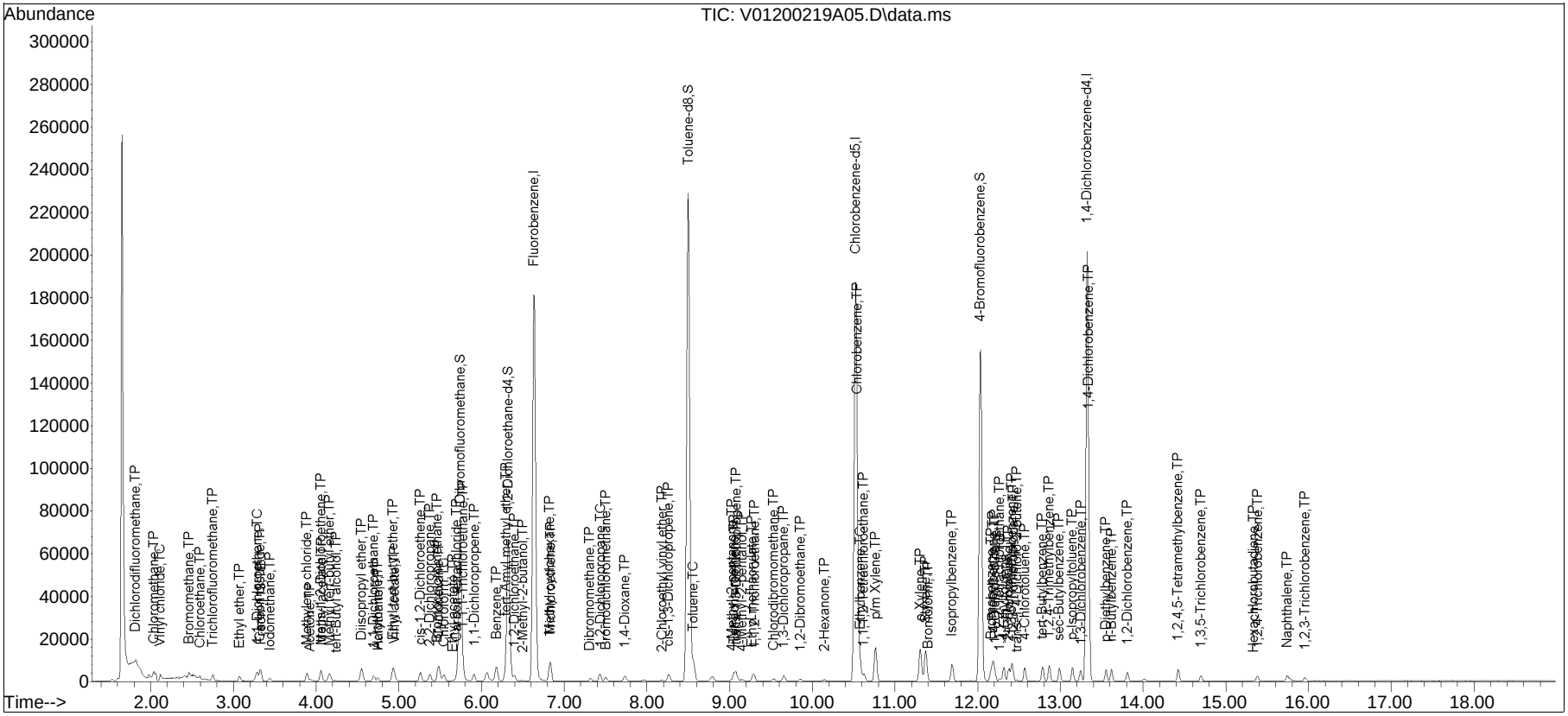
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : I:\VOLATILES\VOA101\2020\200219A\
Data File : V01200219A05.D
Acq On : 19 Feb 2020 3:13 pm
Operator : VOA101:KJD
Sample : I8260STD0.5PPB
Misc : WG1342454
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Feb 19 21:31:42 2020
Quant Method : I:\VOLATILES\VOA101\2020\200219A\V101_200219A_8260.m
Quant Title : VOLATILES BY GC/MS
QLast Update : Wed Feb 19 21:31:36 2020
Response via : Initial Calibration

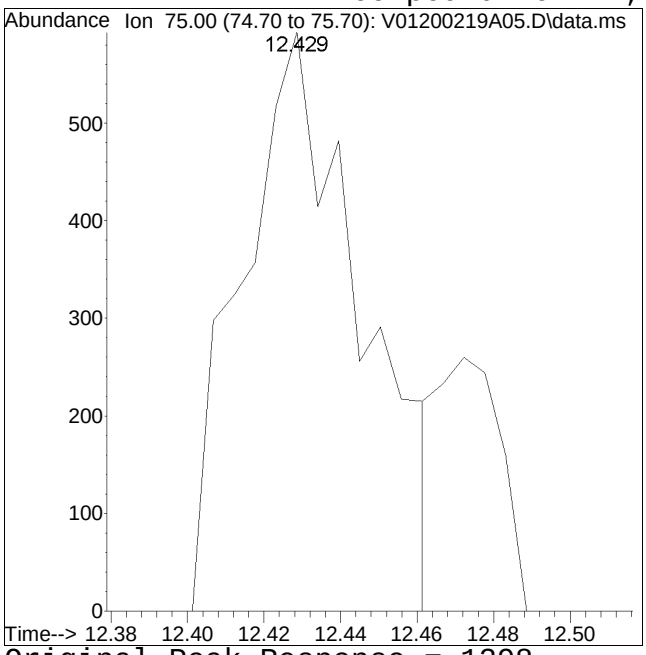
Sub List : 8260-CurveAlc - All compounds listed\V01200219A08.D•

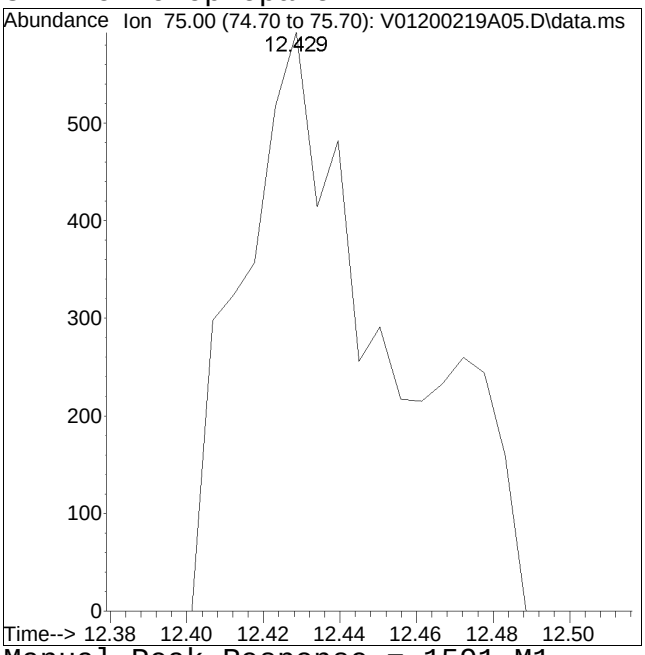


# Manual Integration Report

Data Path : I:\VOLATILES\VOA101\2020\2QMethod : V101_200219A_8260.m
Data File : V01200219A05.D Operator : VOA101:KJD
Date Inj'd : 2/19/2020 3:13 pm Instrument : VOA 101
Sample : I8260STD0.5PPB Quant Date : 2/19/2020 9:31 pm

## Compound #91: 1,2,3-Trichloropropane



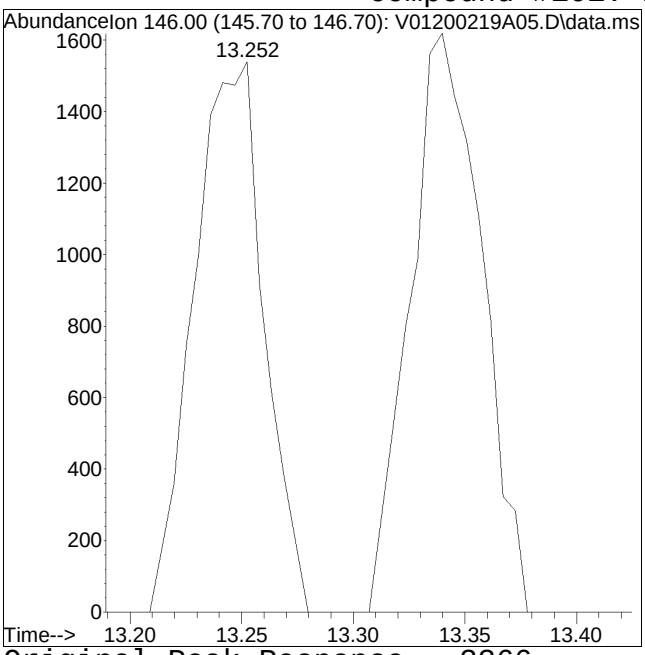

Original Peak Response = 1298 Manual Peak Response = 1591 M1

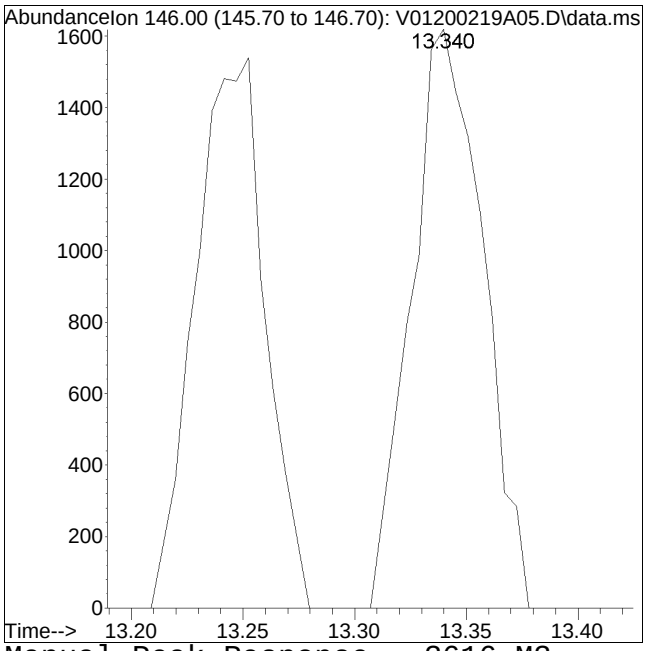
M1 = Split or tailing peak, auto integration stopped early resulting in false low area count.

Manual Integration Report

Data Path : I:\VOLATILES\VOA101\2020\2QMethod : V101_200219A_8260.m
Data File : V01200219A05.D Operator : VOA101:KJD
Date Inj'd : 2/19/2020 3:13 pm Instrument : VOA 101
Sample : I8260STD0.5PPB Quant Date : 2/19/2020 9:31 pm

Compound #101: 1,4-Dichlorobenzene




Original Peak Response = 3366 Manual Peak Response = 3616 M3

M3 = Misidentification of the peak (i.e. 1,4-dichlorobenzene identified as 1,3-dichlorobenzene), or misidentification from 2 partially resolved peaks not being split.

Quantitation Report (QT Reviewed)

Data Path : I:\VOLATILES\VOA101\2020\200219A\
Data File : V01200219A07.D
Acq On : 19 Feb 2020 4:00 pm
Operator : VOA101:KJD
Sample : I8260STD2.0PPB
Misc : WG1342454
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Feb 19 21:33:08 2020
Quant Method : I:\VOLATILES\VOA101\2020\200219A\V101_200219A_8260.m
Quant Title : VOLATILES BY GC/MS
QLast Update : Wed Feb 19 21:33:03 2020
Response via : Initial Calibration

CCAL FILE(s) : 1 - I:\VOLATILES\VOA101\2020\200219A\V01200219A08.D
Sub List : 8260-CurveAlc - All compounds listed

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| Internal Standards | | | | | | |
| 1) Fluorobenzene | 6.634 | 96 | 206497 | 10.000 | ug/L | 0.00 |
| Standard Area 1 = 204276 | | | Recovery = 101.09% | | | |
| 59) Chlorobenzene-d5 | 10.524 | 117 | 146191 | 10.000 | ug/L | 0.00 |
| Standard Area 1 = 145309 | | | Recovery = 100.61% | | | |
| 79) 1,4-Dichlorobenzene-d4 | 13.323 | 152 | 71185 | 10.000 | ug/L | 0.00 |
| Standard Area 1 = 69187 | | | Recovery = 102.89% | | | |
| System Monitoring Compounds | | | | | | |
| 36) Dibromofluoromethane | 5.745 | 113 | 53062 | 9.975 | ug/L | 0.00 |
| Spiked Amount 10.000 | Range 70 - 130 | | Recovery = 99.75% | | | |
| 43) 1,2-Dichloroethane-d4 | 6.323 | 65 | 57886 | 10.153 | ug/L | 0.00 |
| Spiked Amount 10.000 | Range 70 - 130 | | Recovery = 101.53% | | | |
| 60) Toluene-d8 | 8.500 | 98 | 210052 | 10.058 | ug/L | 0.00 |
| Spiked Amount 10.000 | Range 70 - 130 | | Recovery = 100.58% | | | |
| 83) 4-Bromofluorobenzene | 12.036 | 95 | 79265 | 10.330 | ug/L | 0.00 |
| Spiked Amount 10.000 | Range 70 - 130 | | Recovery = 103.30% | | | |
| Target Compounds | | | | | | Qvalue |
| 2) Dichlorodifluoromethane | 1.821 | 85 | 6547 | 1.760 | ug/L | 98 |
| 3) Chloromethane | 2.034 | 50 | 10396 | 1.847 | ug/L | 98 |
| 4) Vinyl chloride | 2.116 | 62 | 9387 | 1.784 | ug/L | 95 |
| 5) Bromomethane | 2.465 | 94 | 3953 | 1.849 | ug/L | 99 |
| 6) Chloroethane | 2.596 | 64 | 5893 | 1.931 | ug/L | 95 |
| 7) Trichlorofluoromethane | 2.749 | 101 | 10836 | 1.766 | ug/L | 98 |
| 8) Ethyl ether | 3.076 | 74 | 2971 | 1.697 | ug/L # | 66 |
| 10) 1,1-Dichloroethene | 3.295 | 96 | 6697 | 1.785 | ug/L # | 81 |
| 11) Carbon disulfide | 3.327 | 76 | 18310 | 1.801 | ug/L | 98 |
| 12) Freon-113 | 3.338 | 101 | 6584 | 1.779 | ug/L | 85 |
| 13) Iodomethane | 3.442 | 142 | 7747 | 1.567 | ug/L | 97 |
| 14) Acrolein | 3.627 | 56 | 836 | 1.720 | ug/L | 97 |
| 15) Methylene chloride | 3.889 | 84 | 7252 | 1.852 | ug/L | 88 |
| 16) Isopropyl alcohol | 3.791 | 45 | 1240 | 9.389 | ug/L # | 89 |
| 17) Acetone | 3.928 | 43 | 2233 | 1.644 | ug/L # | 76 |
| 18) trans-1,2-Dichloroethene | 4.059 | 96 | 7153 | 1.791 | ug/L | 90 |
| 19) Methyl acetate | 4.064 | 43 | 4593 | 2.352 | ug/L # | 77 |
| 20) Methyl tert-butyl ether | 4.157 | 73 | 15533 | 1.828 | ug/L | 91 |
| 21) tert-Butyl alcohol | 4.239 | 59 | 1865 | 9.100 | ug/L | 93 |
| 22) Diisopropyl ether | 4.550 | 45 | 27354 | 1.851 | ug/L | 95 |
| 23) 1,1-Dichloroethane | 4.697 | 63 | 15618 | 1.822 | ug/L | 97 |

Quantitation Report (QT Reviewed)

Data Path : I:\VOLATILES\VOA101\2020\200219A\
Data File : V01200219A07.D
Acq On : 19 Feb 2020 4:00 pm
Operator : VOA101:KJD
Sample : I8260STD2.0PPB
Misc : WG1342454
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Feb 19 21:33:08 2020
Quant Method : I:\VOLATILES\VOA101\2020\200219A\V101_200219A_8260.m
Quant Title : VOLATILES BY GC/MS
QLast Update : Wed Feb 19 21:33:03 2020
Response via : Initial Calibration

CCAL FILE(s) : 1 - I:\VOLATILES\VOA101\2020\200219A\V01200219A08.D
Sub List : 8260-CurveAlc - All compounds listed

| Compound | R.T. | QIon | Response | Conc | Units | | Dev(Min) |
|---|---|---|---|---|---|---|---|
| 24) Halothane | 4.746 | 117 | 5602 | 1.740 | ug/L | | 97 |
| 25) Acrylonitrile | 4.735 | 53 | 1450 | 1.676 | ug/L | | 99 |
| 26) Ethyl tert-butyl ether | 4.932 | 59 | 23721 | 1.816 | ug/L | | 95 |
| 27) Vinyl acetate | 4.942 | 43 | 15486 | 1.789 | ug/L | # | 93 |
| 28) cis-1,2-Dichloroethene | 5.264 | 96 | 8795 | 1.855 | ug/L | | 87 |
| 29) 2,2-Dichloropropane | 5.384 | 77 | 11105 | 1.862 | ug/L | | 96 |
| 30) Bromochloromethane | 5.472 | 128 | 3410 | 1.877 | ug/L | # | 81 |
| 31) Cyclohexane | 5.483 | 56 | 15936 | 1.761 | ug/L | | 86 |
| 32) Chloroform | 5.548 | 83 | 13336 | 1.787 | ug/L | | 99 |
| 33) Ethyl acetate | 5.668 | 43 | 5438 | 1.943 | ug/L | # | 56 |
| 34) Carbon tetrachloride | 5.712 | 117 | 10565 | 1.755 | ug/L | | 94 |
| 35) Tetrahydrofuran | 5.728 | 42 | 1525 | 1.955 | ug/L | # | 50 |
| 37) 1,1,1-Trichloroethane | 5.777 | 97 | 12528 | 1.797 | ug/L | | 96 |
| 38) 2-Butanol | 5.712 | 45 | 2139 | 11.025 | ug/L | # | 39 |
| 39) 2-Butanone | 5.876 | 43 | 2392 | 2.100 | ug/L | # | 36 |
| 40) 1,1-Dichloropropene | 5.908 | 75 | 10453 | 1.750 | ug/L | | 98 |
| 41) Benzene | 6.181 | 78 | 29564 | 1.792 | ug/L | | 93 |
| 42) tert-Amyl methyl ether | 6.290 | 73 | 17495 | 1.797 | ug/L | | 93 |
| 44) 1,2-Dichloroethane | 6.405 | 62 | 9684 | 1.870 | ug/L | | 97 |
| 46) 2-Methyl-2-butanol | 6.492 | 59 | 1648 | 9.199 | ug/L | | 94 |
| 47) Methyl cyclohexane | 6.825 | 83 | 11513 | 1.707 | ug/L | # | 78 |
| 48) Trichloroethene | 6.830 | 95 | 8006 | 1.761 | ug/L | | 99 |
| 50) Dibromomethane | 7.316 | 93 | 3548 | 1.813 | ug/L | | 98 |
| 51) 1,2-Dichloropropane | 7.436 | 63 | 8352 | 1.779 | ug/L | | 97 |
| 52) 4-penten-2-ol | 7.365 | 45 | 1179 | 8.399 | ug/L | # | 1 |
| 53) 2-Chloroethyl vinyl ether | 8.178 | 63 | 1738 | 1.204 | ug/L | # | 73 |
| 54) Bromodichloromethane | 7.502 | 83 | 9577 | 1.772 | ug/L | | 95 |
| 57) 1,4-Dioxane | 7.731 | 88 | 7575 | 394.907 | ug/L | # | 87 |
| 58) cis-1,3-Dichloropropene | 8.265 | 75 | 11882 | 1.788 | ug/L | | 96 |
| 61) Toluene | 8.566 | 92 | 19285 | 1.828 | ug/L | | 97 |
| 62) 4-Methyl-2-pentanone | 9.024 | 58 | 1674 | 1.741 | ug/L | # | 79 |
| 63) Tetrachloroethene | 9.062 | 166 | 7937 | 1.761 | ug/L | | 98 |
| 65) trans-1,3-Dichloropropene | 9.084 | 75 | 9562 | 1.726 | ug/L | | 81 |
| 66) 4-Methyl-2-pentanol | 9.138 | 45 | 5009 | 9.601 | ug/L | # | 88 |
| 67) Ethyl methacrylate | 9.275 | 69 | 6391 | 1.737 | ug/L | | 95 |
| 68) 1,1,2-Trichloroethane | 9.297 | 83 | 4396 | 1.822 | ug/L | | 97 |
| 69) Chlorodibromomethane | 9.526 | 129 | 5826 | 1.645 | ug/L | | 96 |
| 70) 1,3-Dichloropropane | 9.657 | 76 | 9294 | 1.818 | ug/L | | 98 |
| 71) 1,2-Dibromoethane | 9.853 | 107 | 5052 | 1.811 | ug/L | | 99 |
| 72) 2-Hexanone | 10.137 | 43 | 3368 | 1.855 | ug/L | | 92 |

Quantitation Report (QT Reviewed)

Data Path : I:\VOLATILES\VOA101\2020\200219A\
Data File : V01200219A07.D
Acq On : 19 Feb 2020 4:00 pm
Operator : VOA101:KJD
Sample : I8260STD2.0PPB
Misc : WG1342454
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Feb 19 21:33:08 2020
Quant Method : I:\VOLATILES\VOA101\2020\200219A\V101_200219A_8260.m
Quant Title : VOLATILES BY GC/MS
QLast Update : Wed Feb 19 21:33:03 2020
Response via : Initial Calibration

CCAL FILE(s) : 1 - I:\VOLATILES\VOA101\2020\200219A\V01200219A08.D
Sub List : 8260-CurveAlc - All compounds listed

| Compound | R.T. | QIon | Response | Conc | Units | | Dev(Min) |
|---|---|---|---|---|---|---|---|
| 73) Chlorobenzene | 10.546 | 112 | 20616 | 1.827 | ug/L | | 97 |
| 74) Ethylbenzene | 10.579 | 91 | 35685 | 1.805 | ug/L | | 100 |
| 75) 1,1,1,2-Tetrachloroethane | 10.623 | 131 | 7341 | 1.787 | ug/L | | 99 |
| 76) p/m Xylene | 10.764 | 106 | 27329 | 3.561 | ug/L | | 100 |
| 77) o Xylene | 11.305 | 106 | 26289 | 3.662 | ug/L | | 97 |
| 78) Styrene | 11.370 | 104 | 43097 | 3.581 | ug/L | | 99 |
| 80) Bromoform | 11.403 | 173 | 3032 | 1.681 | ug/L | | 94 |
| 82) Isopropylbenzene | 11.687 | 105 | 33722 | 1.820 | ug/L | | 99 |
| 84) Bromobenzene | 12.161 | 156 | 7514 | 1.813 | ug/L | | 98 |
| 85) n-Propylbenzene | 12.183 | 91 | 36840 | 1.837 | ug/L | | 100 |
| 86) 1,4-Dichlorobutane | 12.205 | 55 | 9928 | 1.863 | ug/L | | 100 |
| 87) 1,1,2,2-Tetrachloroethane | 12.270 | 83 | 5253 | 1.867 | ug/L | | 93 |
| 88) 4-Ethyltoluene | 12.314 | 105 | 29798 | 1.817 | ug/L | | 99 |
| 89) 2-Chlorotoluene | 12.374 | 91 | 24630 | 1.850 | ug/L | | 92 |
| 90) 1,3,5-Trimethylbenzene | 12.412 | 105 | 26650 | 1.857 | ug/L | | 100 |
| 91) 1,2,3-Trichloropropane | 12.429 | 75 | 4848M4 | 1.811 | ug/L | | |
| 92) trans-1,4-Dichloro-2-b... | 12.478 | 53 | 1607 | 1.872 | ug/L | # | 9 |
| 93) 4-Chlorotoluene | 12.570 | 91 | 23617 | 1.857 | ug/L | | 95 |
| 94) tert-Butylbenzene | 12.783 | 119 | 22012 | 1.814 | ug/L | | 98 |
| 97) 1,2,4-Trimethylbenzene | 12.865 | 105 | 25741 | 1.820 | ug/L | | 99 |
| 98) sec-Butylbenzene | 12.985 | 105 | 27800 | 1.839 | ug/L | | 97 |
| 99) p-Isopropyltoluene | 13.143 | 119 | 24868 | 1.778 | ug/L | | 97 |
| 100) 1,3-Dichlorobenzene | 13.247 | 146 | 14095 | 1.826 | ug/L | | 98 |
| 101) 1,4-Dichlorobenzene | 13.340 | 146 | 13905M3 | 1.778 | ug/L | | |
| 102) p-Diethylbenzene | 13.553 | 119 | 13259 | 1.768 | ug/L | | 95 |
| 103) n-Butylbenzene | 13.618 | 91 | 18446 | 1.778 | ug/L | | 98 |
| 104) 1,2-Dichlorobenzene | 13.815 | 146 | 12321 | 1.813 | ug/L | | 98 |
| 105) 1,2,4,5-Tetramethylben... | 14.426 | 119 | 19605 | 1.735 | ug/L | | 96 |
| 106) 1,2-Dibromo-3-chloropr... | 14.666 | 155 | 425 | 2.087 | ug/L | # | 64 |
| 107) 1,3,5-Trichlorobenzene | 14.698 | 180 | 6422 | 1.773 | ug/L | | 98 |
| 108) Hexachlorobutadiene | 15.342 | 225 | 1905 | 1.788 | ug/L | | 93 |
| 109) 1,2,4-Trichlorobenzene | 15.375 | 180 | 5650 | 1.764 | ug/L | | 99 |
| 110) Naphthalene | 15.741 | 128 | 12346 | 1.739 | ug/L | | 100 |
| 111) 1,2,3-Trichlorobenzene | 15.964 | 180 | 4364 | 1.771 | ug/L | | 96 |

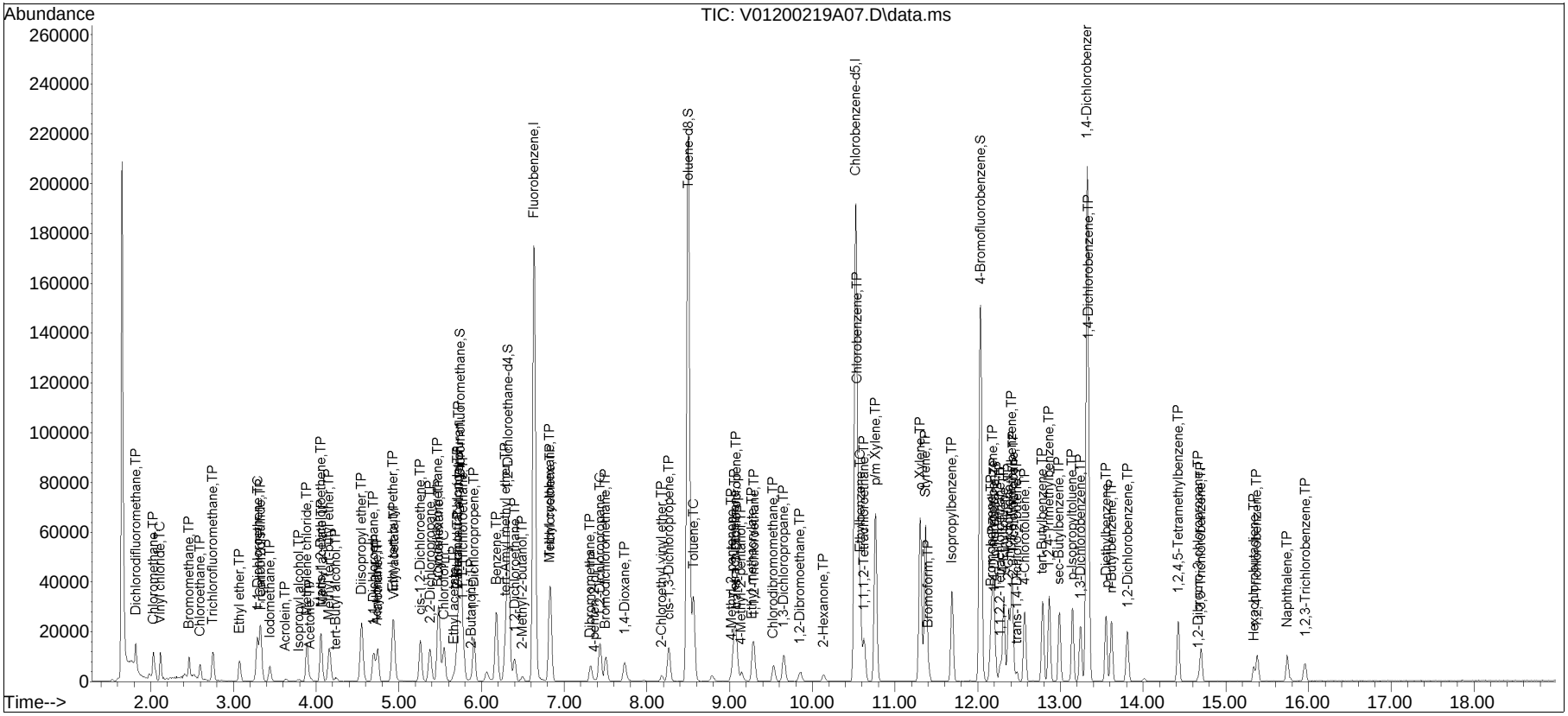
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : I:\VOLATILES\VOA101\2020\200219A\
Data File : V01200219A07.D
Acq On : 19 Feb 2020 4:00 pm
Operator : VOA101:KJD
Sample : I8260STD2.0PPB
Misc : WG1342454
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Feb 19 21:33:08 2020
Quant Method : I:\VOLATILES\VOA101\2020\200219A\V101_200219A_8260.m
Quant Title : VOLATILES BY GC/MS
QLast Update : Wed Feb 19 21:33:03 2020
Response via : Initial Calibration

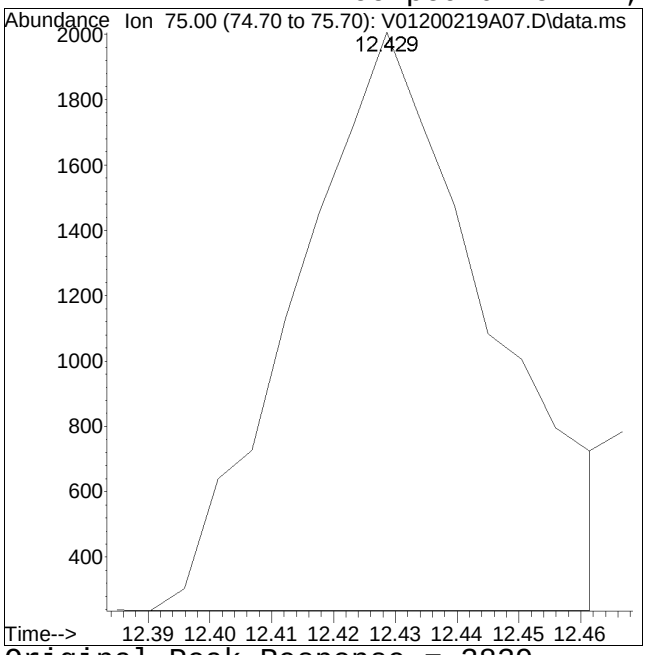
Sub List : 8260-CurveAlc - All compounds listed\V01200219A08.D•



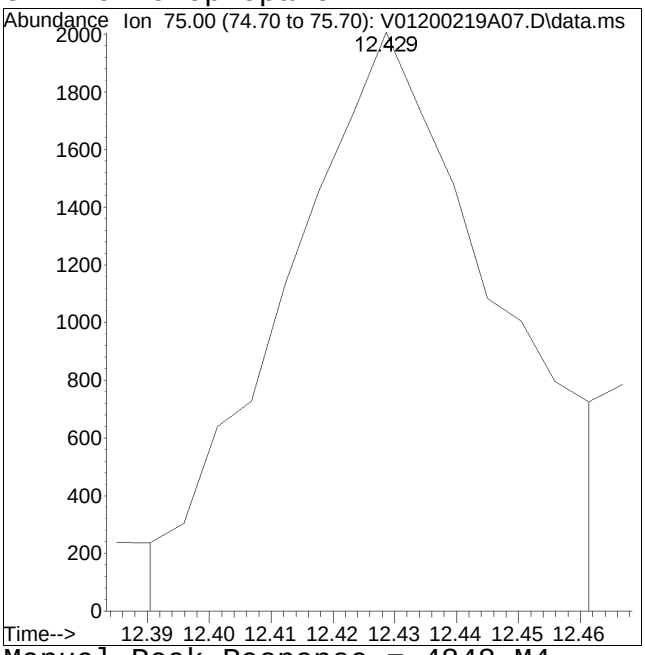
# Manual Integration Report

Data Path : I:\VOLATILES\VOA101\2020\2QMethod : V101_200219A_8260.m
Data File : V01200219A07.D Operator : VOA101:KJD
Date Inj'd : 2/19/2020 4:00 pm Instrument : VOA 101
Sample : I8260STD2.0PPB Quant Date : 2/19/2020 9:33 pm

## Compound #91: 1,2,3-Trichloropropane




Original Peak Response = 3839



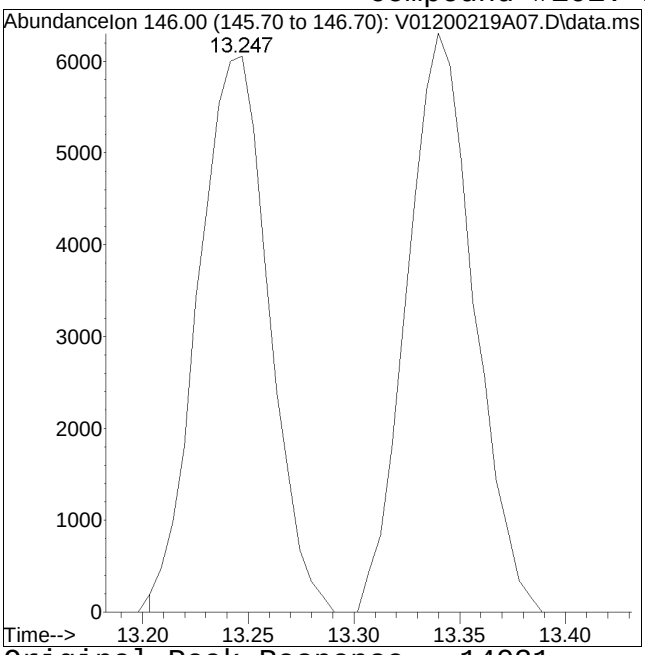

Manual Peak Response = 4848 M4

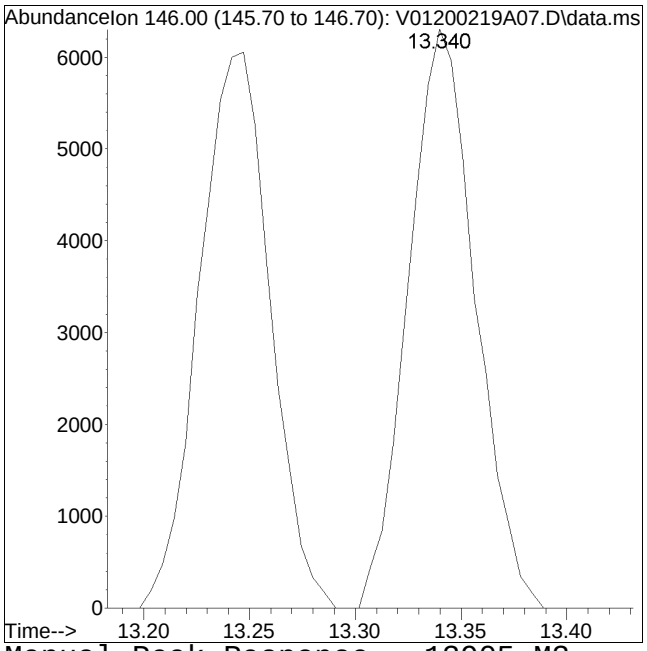
M4 = Poor automated baseline construction.

Manual Integration Report

Data Path : I:\VOLATILES\VOA101\2020\2QMethod : V101_200219A_8260.m
Data File : V01200219A07.D Operator : VOA101:KJD
Date Inj'd : 2/19/2020 4:00 pm Instrument : VOA 101
Sample : I8260STD2.0PPB Quant Date : 2/19/2020 9:33 pm

Compound #101: 1,4-Dichlorobenzene




Original Peak Response = 14031 Manual Peak Response = 13905 M3

M3 = Misidentification of the peak (i.e. 1,4-dichlorobenzene identified as 1,3-dichlorobenzene), or misidentification from 2 partially resolved peaks not being split.

Quantitation Report (QT Reviewed)

Data Path : I:\VOLATILES\VOA101\2020\200219A\
Data File : V01200219A08.D
Acq On : 19 Feb 2020 4:24 pm
Operator : VOA101:KJD
Sample : I8260STD10PPB
Misc : WG1342454
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Feb 19 16:49:18 2020
Quant Method : I:\VOLATILES\VOA101\2020\200219A\V101_200219A_8260.m
Quant Title : VOLATILES BY GC/MS
QLast Update : Wed Feb 19 16:47:40 2020
Response via : Initial Calibration

CCAL FILE(s) : 1 - I:\VOLATILES\VOA101\2020\200219A\V01200219A08.D
Sub List : 8260-CurveAlc - All compounds listed

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| Internal Standards | | | | | | |
| 1) Fluorobenzene | 6.634 | 96 | 204276 | 10.000 | ug/L | -0.01 |
| Standard Area 1 = 204276 | | | Recovery = 100.00% | | | |
| 59) Chlorobenzene-d5 | 10.524 | 117 | 145309 | 10.000 | ug/L | -0.01 |
| Standard Area 1 = 145309 | | | Recovery = 100.00% | | | |
| 79) 1,4-Dichlorobenzene-d4 | 13.323 | 152 | 69187 | 10.000 | ug/L | -0.01 |
| Standard Area 1 = 69187 | | | Recovery = 100.00% | | | |
| System Monitoring Compounds | | | | | | |
| 36) Dibromofluoromethane | 5.745 | 113 | 52893 | 10.000 | ug/L | 0.00 |
| Spiked Amount 10.000 | Range 70 - 130 | | Recovery = 100.00% | | | |
| 43) 1,2-Dichloroethane-d4 | 6.323 | 65 | 55895 | 10.000 | ug/L | -0.01 |
| Spiked Amount 10.000 | Range 70 - 130 | | Recovery = 100.00% | | | |
| 60) Toluene-d8 | 8.500 | 98 | 208136 | 10.000 | ug/L | 0.00 |
| Spiked Amount 10.000 | Range 70 - 130 | | Recovery = 100.00% | | | |
| 83) 4-Bromofluorobenzene | 12.030 | 95 | 76694 | 10.000 | ug/L | -0.01 |
| Spiked Amount 10.000 | Range 70 - 130 | | Recovery = 100.00% | | | |
| Target Compounds | | | | | | Qvalue |
| 2) Dichlorodifluoromethane | 1.821 | 85 | 37124 | 10.000 | ug/L | 99 |
| 3) Chloromethane | 2.034 | 50 | 55034 | 10.000 | ug/L | 99 |
| 4) Vinyl chloride | 2.116 | 62 | 51753 | 10.000 | ug/L | 100 |
| 5) Bromomethane | 2.465 | 94 | 17997 | 10.000 | ug/L | 99 |
| 6) Chloroethane | 2.602 | 64 | 31083 | 10.000 | ug/L | 98 |
| 7) Trichlorofluoromethane | 2.754 | 101 | 61117 | 10.000 | ug/L | 99 |
| 8) Ethyl ether | 3.076 | 74 | 17709 | 10.000 | ug/L | 80 |
| 10) 1,1-Dichloroethene | 3.289 | 96 | 37529 | 10.000 | ug/L | 84 |
| 11) Carbon disulfide | 3.322 | 76 | 97437 | 10.000 | ug/L | 99 |
| 12) Freon-113 | 3.333 | 101 | 37333 | 10.000 | ug/L | 92 |
| 13) Iodomethane | 3.442 | 142 | 47613 | 10.000 | ug/L | 98 |
| 14) Acrolein | 3.633 | 56 | 4704 | 10.000 | ug/L | 97 |
| 15) Methylene chloride | 3.889 | 84 | 38965 | 10.000 | ug/L | 86 |
| 16) Isopropyl alcohol | 3.791 | 45 | 6621 | 50.000 | ug/L | 97 |
| 17) Acetone | 3.928 | 43 | 7766 | 10.000 | ug/L | 92 |
| 18) trans-1,2-Dichloroethene | 4.064 | 96 | 39285 | 10.000 | ug/L | 89 |
| 19) Methyl acetate | 4.059 | 43 | 19915 | 10.000 | ug/L # | 89 |
| 20) Methyl tert-butyl ether | 4.162 | 73 | 83925 | 10.000 | ug/L | 94 |
| 21) tert-Butyl alcohol | 4.244 | 59 | 10786 | 50.000 | ug/L | 94 |
| 22) Diisopropyl ether | 4.550 | 45 | 150134 | 10.000 | ug/L | 93 |
| 23) 1,1-Dichloroethane | 4.697 | 63 | 86370 | 10.000 | ug/L | 98 |

Data Path : I:\VOLATILES\VOA101\2020\200219A\
Data File : V01200219A08.D
Acq On : 19 Feb 2020 4:24 pm
Operator : VOA101:KJD
Sample : I8260STD10PPB
Misc : WG1342454
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Feb 19 16:49:18 2020
Quant Method : I:\VOLATILES\VOA101\2020\200219A\V101_200219A_8260.m
Quant Title : VOLATILES BY GC/MS
QLast Update : Wed Feb 19 16:47:40 2020
Response via : Initial Calibration

CCAL FILE(s) : 1 - I:\VOLATILES\VOA101\2020\200219A\V01200219A08.D
Sub List : 8260-CurveAlc - All compounds listed

| Compound | R.T. | QIon | Response | Conc | Units | | Dev(Min) |
|---|---|---|---|---|---|---|---|
| 24) Halothane | 4.746 | 117 | 32119 | 10.000 | ug/L | | 99 |
| 25) Acrylonitrile | 4.735 | 53 | 8987 | 10.000 | ug/L | | 94 |
| 26) Ethyl tert-butyl ether | 4.932 | 59 | 130256 | 10.000 | ug/L | | 94 |
| 27) Vinyl acetate | 4.942 | 43 | 84331 | 10.000 | ug/L | | 97 |
| 28) cis-1,2-Dichloroethene | 5.264 | 96 | 46531 | 10.000 | ug/L | | 87 |
| 29) 2,2-Dichloropropane | 5.374 | 77 | 59515 | 10.000 | ug/L | | 98 |
| 30) Bromochloromethane | 5.472 | 128 | 18680 | 10.000 | ug/L | | 86 |
| 31) Cyclohexane | 5.488 | 56 | 89684 | 10.000 | ug/L | | 88 |
| 32) Chloroform | 5.548 | 83 | 72779 | 10.000 | ug/L | | 99 |
| 33) Ethyl acetate | 5.663 | 43 | 26348 | 10.000 | ug/L | # | 93 |
| 34) Carbon tetrachloride | 5.706 | 117 | 60340 | 10.000 | ug/L | | 97 |
| 35) Tetrahydrofuran | 5.723 | 42 | 7815 | 10.000 | ug/L | | 95 |
| 37) 1,1,1-Trichloroethane | 5.777 | 97 | 68802 | 10.000 | ug/L | | 97 |
| 38) 2-Butanol | 5.701 | 45 | 8907 | 50.000 | ug/L | # | 80 |
| 39) 2-Butanone | 5.865 | 43 | 11500 | 10.000 | ug/L | # | 48 |
| 40) 1,1-Dichloropropene | 5.908 | 75 | 59096 | 10.000 | ug/L | | 98 |
| 41) Benzene | 6.181 | 78 | 161807 | 10.000 | ug/L | | 94 |
| 42) tert-Amyl methyl ether | 6.290 | 73 | 95576 | 10.000 | ug/L | | 95 |
| 44) 1,2-Dichloroethane | 6.399 | 62 | 51556 | 10.000 | ug/L | | 99 |
| 46) 2-Methyl-2-butanol | 6.498 | 59 | 9194 | 50.000 | ug/L | | 99 |
| 47) Methyl cyclohexane | 6.825 | 83 | 66304 | 10.000 | ug/L | # | 80 |
| 48) Trichloroethene | 6.830 | 95 | 44195 | 10.000 | ug/L | | 98 |
| 50) Dibromomethane | 7.316 | 93 | 19218 | 10.000 | ug/L | | 99 |
| 51) 1,2-Dichloropropane | 7.431 | 63 | 47274 | 10.000 | ug/L | | 96 |
| 52) 4-penten-2-ol | 7.365 | 45 | 6859 | 50.000 | ug/L | # | 1 |
| 53) 2-Chloroethyl vinyl ether | 8.173 | 63 | 11611 | 10.000 | ug/L | | 92 |
| 54) Bromodichloromethane | 7.507 | 83 | 52544 | 10.000 | ug/L | | 98 |
| 57) 1,4-Dioxane | 7.736 | 88 | 9678 | 500.000 | ug/L | # | 85 |
| 58) cis-1,3-Dichloropropene | 8.265 | 75 | 65048 | 10.000 | ug/L | | 97 |
| 61) Toluene | 8.560 | 92 | 104575 | 10.000 | ug/L | | 97 |
| 62) 4-Methyl-2-pentanone | 9.024 | 58 | 9824 | 10.000 | ug/L | | 95 |
| 63) Tetrachloroethene | 9.057 | 166 | 44308 | 10.000 | ug/L | | 99 |
| 65) trans-1,3-Dichloropropene | 9.084 | 75 | 53326 | 10.000 | ug/L | | 87 |
| 66) 4-Methyl-2-pentanol | 9.138 | 45 | 26062 | 50.000 | ug/L | | 92 |
| 67) Ethyl methacrylate | 9.280 | 69 | 35623 | 10.000 | ug/L | | 99 |
| 68) 1,1,2-Trichloroethane | 9.297 | 83 | 24276 | 10.000 | ug/L | | 100 |
| 69) Chlorodibromomethane | 9.531 | 129 | 34246 | 10.000 | ug/L | | 98 |
| 70) 1,3-Dichloropropane | 9.657 | 76 | 50035 | 10.000 | ug/L | | 100 |
| 71) 1,2-Dibromoethane | 9.853 | 107 | 27170 | 10.000 | ug/L | | 99 |
| 72) 2-Hexanone | 10.131 | 43 | 16701 | 10.000 | ug/L | | 97 |

Quantitation Report (QT Reviewed)

Data Path : I:\VOLATILES\VOA101\2020\200219A\
Data File : V01200219A08.D
Acq On : 19 Feb 2020 4:24 pm
Operator : VOA101:KJD
Sample : I8260STD10PPB
Misc : WG1342454
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Feb 19 16:49:18 2020
Quant Method : I:\VOLATILES\VOA101\2020\200219A\V101_200219A_8260.m
Quant Title : VOLATILES BY GC/MS
QLast Update : Wed Feb 19 16:47:40 2020
Response via : Initial Calibration

CCAL FILE(s) : 1 - I:\VOLATILES\VOA101\2020\200219A\V01200219A08.D
Sub List : 8260-CurveAlc - All compounds listed

| | Compound | R.T. | QIon | Response | Conc | Units | | Dev(Min) |
|---|---|---|---|---|---|---|---|---|
| 73) | Chlorobenzene | 10.546 | 112 | 111228 | 10.000 | ug/L | | 98 |
| 74) | Ethylbenzene | 10.579 | 91 | 195036 | 10.000 | ug/L | | 98 |
| 75) | 1,1,1,2-Tetrachloroethane | 10.623 | 131 | 39661 | 10.000 | ug/L | | 98 |
| 76) | p/m Xylene | 10.764 | 106 | 151912 | 20.000 | ug/L | | 98 |
| 77) | o Xylene | 11.305 | 106 | 142436 | 20.000 | ug/L | | 97 |
| 78) | Styrene | 11.370 | 104 | 234716 | 20.000 | ug/L | | 100 |
| 80) | Bromoform | 11.408 | 173 | 18054 | 10.000 | ug/L | | 100 |
| 82) | Isopropylbenzene | 11.687 | 105 | 188615 | 10.000 | ug/L | | 99 |
| 84) | Bromobenzene | 12.161 | 156 | 41349 | 10.000 | ug/L | | 99 |
| 85) | n-Propylbenzene | 12.189 | 91 | 202326 | 10.000 | ug/L | | 99 |
| 86) | 1,4-Dichlorobutane | 12.210 | 55 | 52647 | 10.000 | ug/L | | 98 |
| 87) | 1,1,2,2-Tetrachloroethane | 12.270 | 83 | 27682 | 10.000 | ug/L | | 99 |
| 88) | 4-Ethyltoluene | 12.314 | 105 | 164229 | 10.000 | ug/L | | 100 |
| 89) | 2-Chlorotoluene | 12.374 | 91 | 132022 | 10.000 | ug/L | | 95 |
| 90) | 1,3,5-Trimethylbenzene | 12.412 | 105 | 143224 | 10.000 | ug/L | | 100 |
| 91) | 1,2,3-Trichloropropane | 12.429 | 75 | 27248 | 10.000 | ug/L | | 88 |
| 92) | trans-1,4-Dichloro-2-b... | 12.467 | 53 | 8672 | 10.000 | ug/L | # | 15 |
| 93) | 4-Chlorotoluene | 12.565 | 91 | 126692 | 10.000 | ug/L | | 96 |
| 94) | tert-Butylbenzene | 12.783 | 119 | 120652 | 10.000 | ug/L | | 98 |
| 97) | 1,2,4-Trimethylbenzene | 12.865 | 105 | 138087 | 10.000 | ug/L | | 99 |
| 98) | sec-Butylbenzene | 12.985 | 105 | 146532 | 10.000 | ug/L | | 99 |
| 99) | p-Isopropyltoluene | 13.149 | 119 | 135131 | 10.000 | ug/L | | 97 |
| 100) | 1,3-Dichlorobenzene | 13.242 | 146 | 74721 | 10.000 | ug/L | | 98 |
| 101) | 1,4-Dichlorobenzene | 13.340 | 146 | 74716 | 10.000 | ug/L | | 99 |
| 102) | p-Diethylbenzene | 13.547 | 119 | 71073 | 10.000 | ug/L | | 97 |
| 103) | n-Butylbenzene | 13.618 | 91 | 97642 | 10.000 | ug/L | | 98 |
| 104) | 1,2-Dichlorobenzene | 13.809 | 146 | 63947 | 10.000 | ug/L | | 98 |
| 105) | 1,2,4,5-Tetramethylben... | 14.426 | 119 | 105594 | 10.000 | ug/L | | 97 |
| 106) | 1,2-Dibromo-3-chloropr... | 14.671 | 155 | 3405 | 10.000 | ug/L | | 97 |
| 107) | 1,3,5-Trichlorobenzene | 14.698 | 180 | 33913 | 10.000 | ug/L | | 96 |
| 108) | Hexachlorobutadiene | 15.337 | 225 | 9420 | 10.000 | ug/L | | 98 |
| 109) | 1,2,4-Trichlorobenzene | 15.375 | 180 | 27823 | 10.000 | ug/L | | 96 |
| 110) | Naphthalene | 15.741 | 128 | 58893 | 10.000 | ug/L | | 100 |
| 111) | 1,2,3-Trichlorobenzene | 15.953 | 180 | 21278 | 10.000 | ug/L | | 96 |

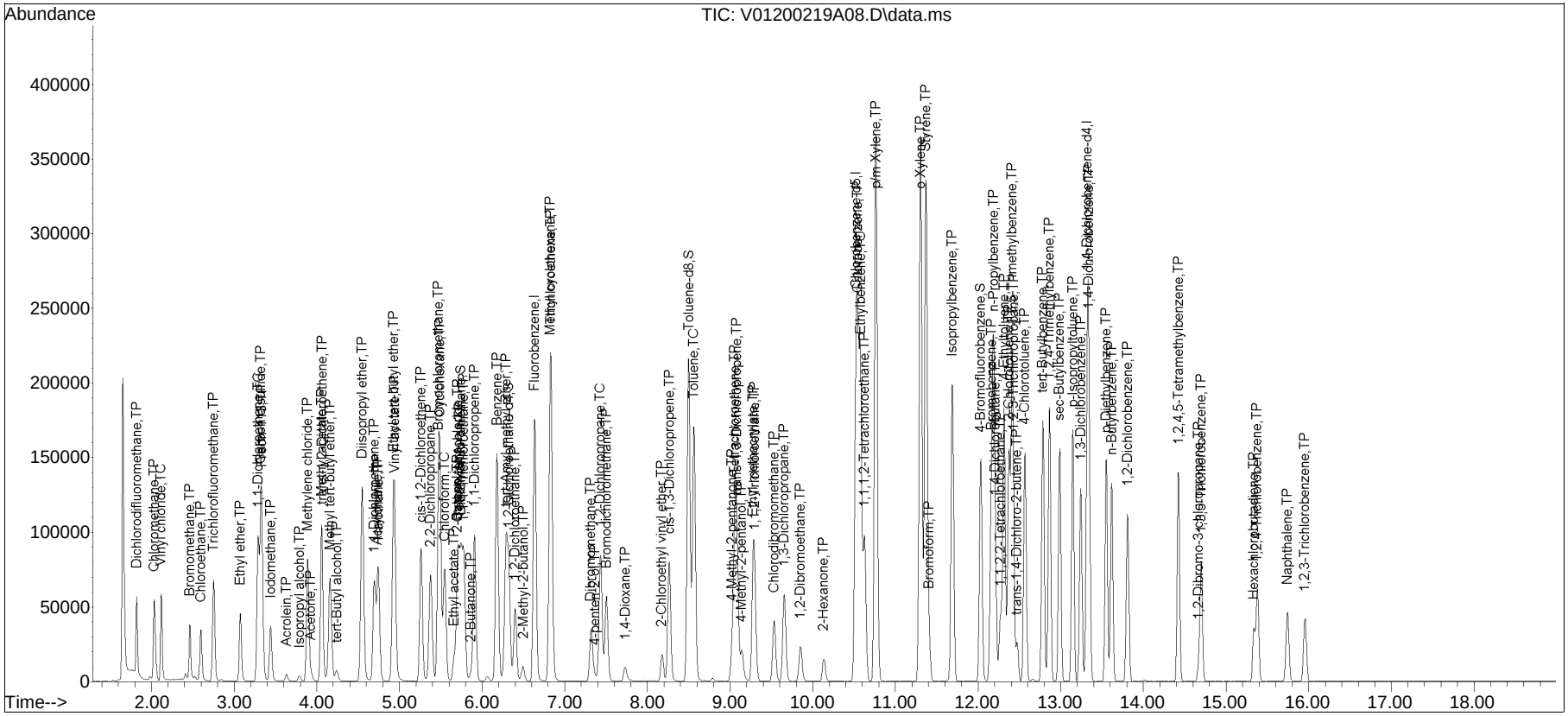
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : I:\VOLATILES\VOA101\2020\200219A\
Data File : V01200219A08.D
Acq On : 19 Feb 2020 4:24 pm
Operator : VOA101:KJD
Sample : I8260STD10PPB
Misc : WG1342454
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Feb 19 16:49:18 2020
Quant Method : I:\VOLATILES\VOA101\2020\200219A\V101_200219A_8260.m
Quant Title : VOLATILES BY GC/MS
QLast Update : Wed Feb 19 16:47:40 2020
Response via : Initial Calibration

Sub List : 8260-CurveAlc - All compounds listed\V01200219A08.D•



# Manual Integration Report

| | | | |
|---|---|---|---|
| Data Path | : I:\VOLATILES\VOA101\2020\2Q | Method | : V101_200219A_8260.m |
| Data File | : V01200219A08.D | Operator | : VOA101:KJD |
| Date Inj'd | : 2/19/2020 4:24 pm | Instrument | : VOA 101 |
| Sample | : I8260STD10PPB | Quant Date | : 2/19/2020 4:47 pm |

There are no manual integrations or false positives in this file.

Quantitation Report (QT Reviewed)

Data Path : I:\VOLATILES\VOA101\2020\200219A\
Data File : V01200219A09.D
Acq On : 19 Feb 2020 4:48 pm
Operator : VOA101:KJD
Sample : I8260STD30PPB
Misc : WG1342454
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Feb 19 18:17:00 2020
Quant Method : I:\VOLATILES\VOA101\2020\200219A\V101_200219A_8260.m
Quant Title : VOLATILES BY GC/MS
QLast Update : Wed Feb 19 17:00:54 2020
Response via : Initial Calibration

CCAL FILE(s) : 1 - I:\VOLATILES\VOA101\2020\200219A\V01200219A08.D
Sub List : 8260-CurveAlc - All compounds listed

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| Internal Standards | | | | | | |
| 1) Fluorobenzene | 6.634 | 96 | 207774 | 10.000 | ug/L | 0.00 |
| Standard Area 1 = 204276 | | | Recovery = 101.71% | | | |
| 59) Chlorobenzene-d5 | 10.524 | 117 | 148467 | 10.000 | ug/L | 0.00 |
| Standard Area 1 = 145309 | | | Recovery = 102.17% | | | |
| 79) 1,4-Dichlorobenzene-d4 | 13.323 | 152 | 72338 | 10.000 | ug/L | 0.00 |
| Standard Area 1 = 69187 | | | Recovery = 104.55% | | | |
| System Monitoring Compounds | | | | | | |
| 36) Dibromofluoromethane | 5.739 | 113 | 52877 | 9.818 | ug/L | 0.00 |
| Spiked Amount 10.000 | Range 70 - 130 | | Recovery = 98.18% | | | |
| 43) 1,2-Dichloroethane-d4 | 6.323 | 65 | 57154 | 9.796 | ug/L | 0.00 |
| Spiked Amount 10.000 | Range 70 - 130 | | Recovery = 97.96% | | | |
| 60) Toluene-d8 | 8.495 | 98 | 210563 | 9.905 | ug/L | 0.00 |
| Spiked Amount 10.000 | Range 70 - 130 | | Recovery = 99.05% | | | |
| 83) 4-Bromofluorobenzene | 12.030 | 95 | 78874 | 9.727 | ug/L | 0.00 |
| Spiked Amount 10.000 | Range 70 - 130 | | Recovery = 97.27% | | | |
| Target Compounds | | | | | | Qvalue |
| 2) Dichlorodifluoromethane | 1.821 | 85 | 112686 | 33.447 | ug/L | 100 |
| 3) Chloromethane | 2.034 | 50 | 164570 | 30.418 | ug/L | 99 |
| 4) Vinyl chloride | 2.116 | 62 | 157040 | 18.396 | ug/L | 100 |
| 5) Bromomethane | 2.465 | 94 | 54021 | 26.397 | ug/L | 99 |
| 6) Chloroethane | 2.596 | 64 | 93818 | 32.216 | ug/L | 96 |
| 7) Trichlorofluoromethane | 2.749 | 101 | 185999 | 32.819 | ug/L | 98 |
| 8) Ethyl ether | 3.076 | 74 | 52401 | 32.296 | ug/L | 79 |
| 10) 1,1-Dichloroethene | 3.289 | 96 | 114574 | 34.044 | ug/L | 87 |
| 11) Carbon disulfide | 3.322 | 76 | 290747 | 29.482 | ug/L | 99 |
| 12) Freon-113 | 3.333 | 101 | 111928 | 33.009 | ug/L | 92 |
| 13) Iodomethane | 3.442 | 142 | 161681 | 38.373 | ug/L | 99 |
| 14) Acrolein | 3.628 | 56 | 14166 | 31.514 | ug/L | 95 |
| 15) Methylene chloride | 3.889 | 84 | 116134 | 31.404 | ug/L | 86 |
| 16) Isopropyl alcohol | 3.780 | 45 | 19681 | 151.711 | ug/L | 94 |
| 17) Acetone | 3.928 | 43 | 21460 | 12.932 | ug/L | 92 |
| 18) trans-1,2-Dichloroethene | 4.059 | 96 | 117721 | 31.258 | ug/L | 88 |
| 19) Methyl acetate | 4.059 | 43 | 54986 | 18.917 | ug/L | 92 |
| 20) Methyl tert-butyl ether | 4.162 | 73 | 251231 | 31.120 | ug/L | 94 |
| 21) tert-Butyl alcohol | 4.239 | 59 | 31437 | 165.311 | ug/L | 91 |
| 22) Diisopropyl ether | 4.550 | 45 | 442302 | 31.336 | ug/L | 93 |
| 23) 1,1-Dichloroethane | 4.697 | 63 | 257938 | 32.126 | ug/L | 98 |

Data Path : I:\VOLATILES\VOA101\2020\200219A\
Data File : V01200219A09.D
Acq On : 19 Feb 2020 4:48 pm
Operator : VOA101:KJD
Sample : I8260STD30PPB
Misc : WG1342454
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Feb 19 18:17:00 2020
Quant Method : I:\VOLATILES\VOA101\2020\200219A\V101_200219A_8260.m
Quant Title : VOLATILES BY GC/MS
QLast Update : Wed Feb 19 17:00:54 2020
Response via : Initial Calibration

CCAL FILE(s) : 1 - I:\VOLATILES\VOA101\2020\200219A\V01200219A08.D
Sub List : 8260-CurveAlc - All compounds listed

| Compound | R.T. | QIon | Response | Conc | Units | | Dev(Min) |
|---|---|---|---|---|---|---|---|
| 24) Halothane | 4.741 | 117 | 98475 | 34.798 | ug/L | | 99 |
| 25) Acrylonitrile | 4.741 | 53 | 27222 | 36.215 | ug/L | | 95 |
| 26) Ethyl tert-butyl ether | 4.932 | 59 | 391444 | 31.597 | ug/L | | 96 |
| 27) Vinyl acetate | 4.942 | 43 | 259300 | 31.493 | ug/L | | 99 |
| 28) cis-1,2-Dichloroethene | 5.259 | 96 | 140284 | 31.736 | ug/L | | 88 |
| 29) 2,2-Dichloropropane | 5.379 | 77 | 179555 | 31.818 | ug/L | | 98 |
| 30) Bromochloromethane | 5.472 | 128 | 57442 | 34.190 | ug/L | | 89 |
| 31) Cyclohexane | 5.488 | 56 | 275120 | 33.124 | ug/L | | 87 |
| 32) Chloroform | 5.548 | 83 | 225564 | 33.186 | ug/L | | 97 |
| 33) Ethyl acetate | 5.657 | 43 | 79893 | 28.170 | ug/L | # | 93 |
| 34) Carbon tetrachloride | 5.706 | 117 | 182410 | 19.106 | ug/L | | 95 |
| 35) Tetrahydrofuran | 5.717 | 42 | 22974 | 29.414 | ug/L | | 99 |
| 37) 1,1,1-Trichloroethane | 5.777 | 97 | 209213 | 32.956 | ug/L | | 98 |
| 38) 2-Butanol | 5.701 | 45 | 27833 | 140.424 | ug/L | # | 80 |
| 39) 2-Butanone | 5.865 | 43 | 30980 | 26.109 | ug/L | # | 50 |
| 40) 1,1-Dichloropropene | 5.908 | 75 | 181208 | 33.942 | ug/L | | 98 |
| 41) Benzene | 6.176 | 78 | 484584 | 18.175 | ug/L | | 94 |
| 42) tert-Amyl methyl ether | 6.290 | 73 | 284247 | 30.824 | ug/L | | 94 |
| 44) 1,2-Dichloroethane | 6.399 | 62 | 154509 | 31.882 | ug/L | | 99 |
| 46) 2-Methyl-2-butanol | 6.492 | 59 | 29203 | 178.498 | ug/L | | 97 |
| 47) Methyl cyclohexane | 6.825 | 83 | 203180 | 34.098 | ug/L | # | 81 |
| 48) Trichloroethene | 6.830 | 95 | 134697 | 18.705 | ug/L | | 99 |
| 50) Dibromomethane | 7.316 | 93 | 59742 | 34.301 | ug/L | | 99 |
| 51) 1,2-Dichloropropane | 7.431 | 63 | 141360 | 32.959 | ug/L | | 96 |
| 52) 4-penten-2-ol | 7.360 | 45 | 20938 | 162.211 | ug/L | # | 1 |
| 53) 2-Chloroethyl vinyl ether | 8.178 | 63 | 40017 | 48.319 | ug/L | | 96 |
| 54) Bromodichloromethane | 7.502 | 83 | 160500 | 32.497 | ug/L | | 98 |
| 57) 1,4-Dioxane | 7.731 | 88 | 11557 | 574.705 | ug/L | # | 84 |
| 58) cis-1,3-Dichloropropene | 8.265 | 75 | 199156 | 32.546 | ug/L | | 98 |
| 61) Toluene | 8.566 | 92 | 315560 | 32.341 | ug/L | | 96 |
| 62) 4-Methyl-2-pentanone | 9.024 | 58 | 30038 | 36.661 | ug/L | | 93 |
| 63) Tetrachloroethene | 9.057 | 166 | 135724 | 33.708 | ug/L | | 99 |
| 65) trans-1,3-Dichloropropene | 9.084 | 75 | 165998 | 32.757 | ug/L | | 94 |
| 66) 4-Methyl-2-pentanol | 9.138 | 45 | 81098 | 158.150 | ug/L | | 97 |
| 67) Ethyl methacrylate | 9.275 | 69 | 109128 | 31.944 | ug/L | | 99 |
| 68) 1,1,2-Trichloroethane | 9.297 | 83 | 71930 | 32.154 | ug/L | | 97 |
| 69) Chlorodibromomethane | 9.531 | 129 | 106900 | 34.575 | ug/L | | 98 |
| 70) 1,3-Dichloropropane | 9.657 | 76 | 152102 | 31.940 | ug/L | | 100 |
| 71) 1,2-Dibromoethane | 9.853 | 107 | 84002 | 33.330 | ug/L | | 99 |
| 72) 2-Hexanone | 10.132 | 43 | 50044 | 26.435 | ug/L | | 94 |

Quantitation Report (QT Reviewed)

Data Path : I:\VOLATILES\VOA101\2020\200219A\
Data File : V01200219A09.D
Acq On : 19 Feb 2020 4:48 pm
Operator : VOA101:KJD
Sample : I8260STD30PPB
Misc : WG1342454
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Feb 19 18:17:00 2020
Quant Method : I:\VOLATILES\VOA101\2020\200219A\V101_200219A_8260.m
Quant Title : VOLATILES BY GC/MS
QLast Update : Wed Feb 19 17:00:54 2020
Response via : Initial Calibration

CCAL FILE(s) : 1 - I:\VOLATILES\VOA101\2020\200219A\V01200219A08.D
Sub List : 8260-CurveAlc - All compounds listed

| Compound | R.T. | QIon | Response | Conc | Units | | Dev(Min) |
|---|---|---|---|---|---|---|---|
| 73) Chlorobenzene | 10.546 | 112 | 335631 | 31.798 | ug/L | | 98 |
| 74) Ethylbenzene | 10.579 | 91 | 587941 | 31.838 | ug/L | | 99 |
| 75) 1,1,1,2-Tetrachloroethane | 10.628 | 131 | 123495 | 33.136 | ug/L | | 99 |
| 76) p/m Xylene | 10.764 | 106 | 462582 | 65.630 | ug/L | | 96 |
| 77) o Xylene | 11.305 | 106 | 429365 | 64.630 | ug/L | | 97 |
| 78) Styrene | 11.370 | 104 | 718943 | 65.306 | ug/L | | 100 |
| 80) Bromoform | 11.408 | 173 | 57661 | 36.724 | ug/L | | 99 |
| 82) Isopropylbenzene | 11.692 | 105 | 567400 | 31.579 | ug/L | | 100 |
| 84) Bromobenzene | 12.161 | 156 | 127515 | 32.067 | ug/L | | 98 |
| 85) n-Propylbenzene | 12.183 | 91 | 614365 | 31.908 | ug/L | | 98 |
| 86) 1,4-Dichlorobutane | 12.205 | 55 | 160079 | 29.178 | ug/L | | 98 |
| 87) 1,1,2,2-Tetrachloroethane | 12.265 | 83 | 84432 | 30.503 | ug/L | | 99 |
| 88) 4-Ethyltoluene | 12.314 | 105 | 498604 | 32.105 | ug/L | | 100 |
| 89) 2-Chlorotoluene | 12.374 | 91 | 402722 | 31.301 | ug/L | | 94 |
| 90) 1,3,5-Trimethylbenzene | 12.412 | 105 | 434363 | 31.573 | ug/L | | 99 |
| 91) 1,2,3-Trichloropropane | 12.429 | 75 | 78958M4 | 27.869 | ug/L | | |
| 92) trans-1,4-Dichloro-2-b... | 12.472 | 53 | 25903 | 32.053 | ug/L | # | 16 |
| 93) 4-Chlorotoluene | 12.565 | 91 | 385229 | 31.671 | ug/L | | 98 |
| 94) tert-Butylbenzene | 12.783 | 119 | 367263 | 32.189 | ug/L | | 97 |
| 97) 1,2,4-Trimethylbenzene | 12.865 | 105 | 425800 | 31.553 | ug/L | | 99 |
| 98) sec-Butylbenzene | 12.985 | 105 | 450725 | 31.798 | ug/L | | 99 |
| 99) p-Isopropyltoluene | 13.149 | 119 | 416805 | 31.828 | ug/L | | 97 |
| 100) 1,3-Dichlorobenzene | 13.242 | 146 | 228831 | 31.613 | ug/L | | 99 |
| 101) 1,4-Dichlorobenzene | 13.340 | 146 | 232558 | 31.539 | ug/L | | 99 |
| 102) p-Diethylbenzene | 13.553 | 119 | 224884 | 33.029 | ug/L | | 97 |
| 103) n-Butylbenzene | 13.618 | 91 | 305063 | 31.821 | ug/L | | 98 |
| 104) 1,2-Dichlorobenzene | 13.809 | 146 | 201527 | 31.786 | ug/L | | 98 |
| 105) 1,2,4,5-Tetramethylben... | 14.426 | 119 | 339999 | 33.016 | ug/L | | 97 |
| 106) 1,2-Dibromo-3-chloropr... | 14.666 | 155 | 11038 | 38.598 | ug/L | | 97 |
| 107) 1,3,5-Trichlorobenzene | 14.698 | 180 | 107040 | 32.450 | ug/L | | 98 |
| 108) Hexachlorobutadiene | 15.337 | 225 | 30877 | 32.092 | ug/L | | 98 |
| 109) 1,2,4-Trichlorobenzene | 15.381 | 180 | 93402 | 31.075 | ug/L | | 98 |
| 110) Naphthalene | 15.746 | 128 | 195312 | 26.863 | ug/L | | 100 |
| 111) 1,2,3-Trichlorobenzene | 15.953 | 180 | 71131 | 30.130 | ug/L | | 98 |

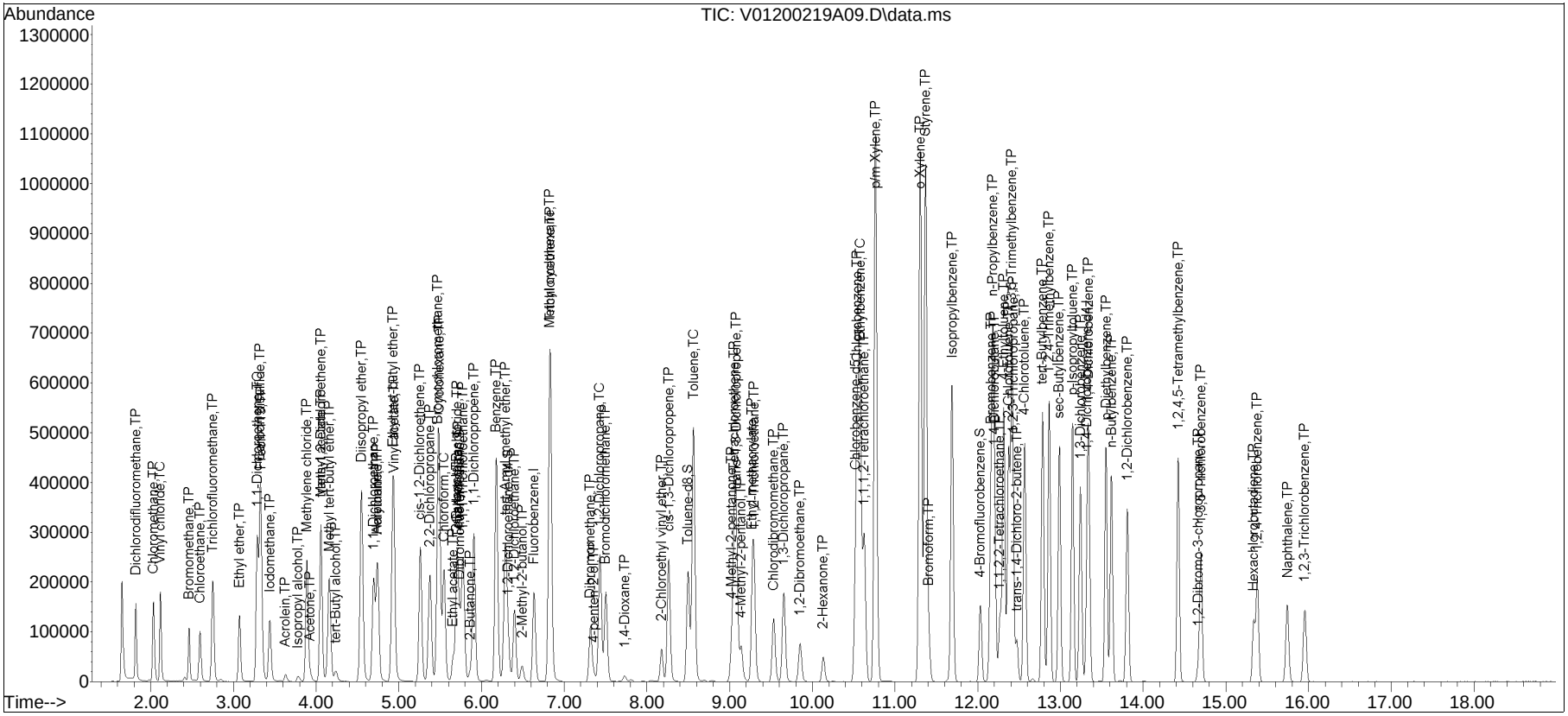
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : I:\VOLATILES\VOA101\2020\200219A\
Data File : V01200219A09.D
Acq On : 19 Feb 2020 4:48 pm
Operator : VOA101:KJD
Sample : I8260STD30PPB
Misc : WG1342454
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Feb 19 18:17:00 2020
Quant Method : I:\VOLATILES\VOA101\2020\200219A\V101_200219A_8260.m
Quant Title : VOLATILES BY GC/MS
QLast Update : Wed Feb 19 17:00:54 2020
Response via : Initial Calibration

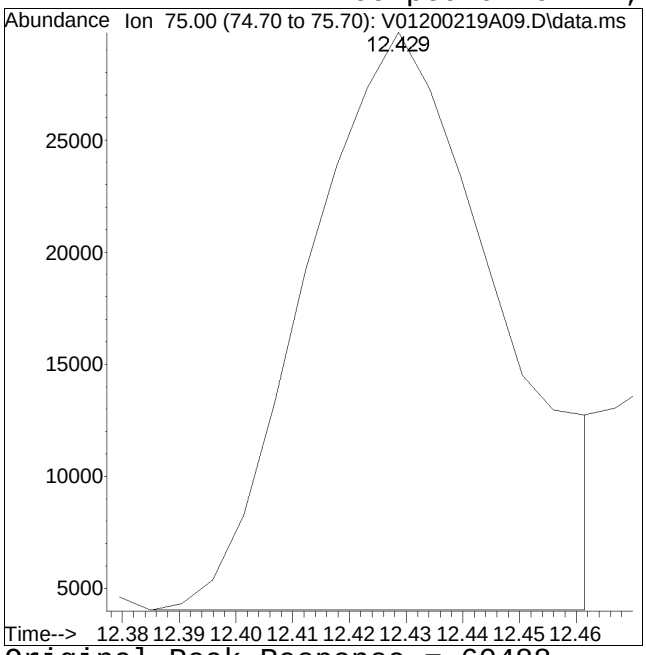
Sub List : 8260-CurveAlc - All compounds listed\V01200219A08.D•



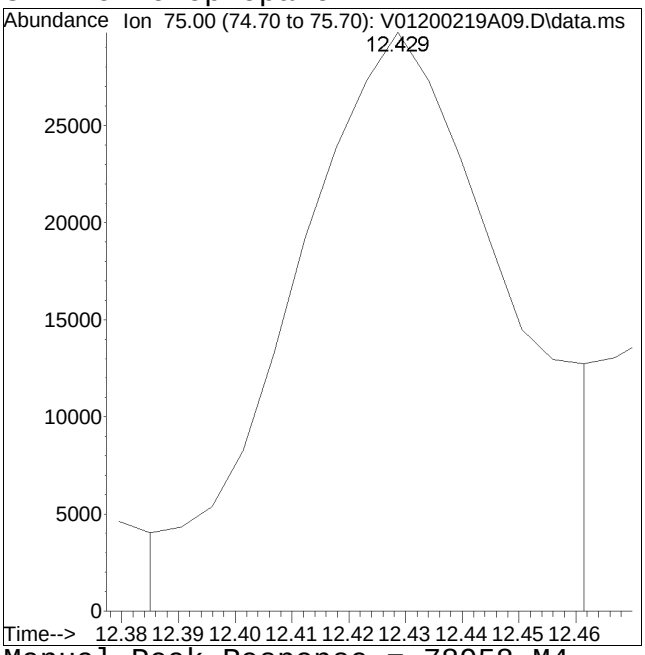
# Manual Integration Report

Data Path : I:\VOLATILES\VOA101\2020\2QMethod : V101_200219A_8260.m
Data File : V01200219A09.D Operator : VOA101:KJD
Date Inj'd : 2/19/2020 4:48 pm Instrument : VOA 101
Sample : I8260STD30PPB Quant Date : 2/19/2020 6:13 pm

## Compound #91: 1,2,3-Trichloropropane




Original Peak Response = 60488




Manual Peak Response = 78958 M4

M4 = Poor automated baseline construction.

Quantitation Report (QT Reviewed)

Data Path : I:\VOLATILES\VOA101\2020\200219A\
Data File : V01200219A10.D
Acq On : 19 Feb 2020 5:12 pm
Operator : VOA101:KJD
Sample : I8260STD80PPB
Misc : WG1342454
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Feb 19 18:18:20 2020
Quant Method : I:\VOLATILES\VOA101\2020\200219A\V101_200219A_8260.m
Quant Title : VOLATILES BY GC/MS
QLast Update : Wed Feb 19 17:00:54 2020
Response via : Initial Calibration

CCAL FILE(s) : 1 - I:\VOLATILES\VOA101\2020\200219A\V01200219A08.D
Sub List : 8260-CurveAlc - All compounds listed

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| Internal Standards | | | | | | |
| 1) Fluorobenzene | 6.634 | 96 | 216378 | 10.000 | ug/L | 0.00 |
| Standard Area 1 = 204276 | | | Recovery = 105.92% | | | |
| 59) Chlorobenzene-d5 | 10.524 | 117 | 154009 | 10.000 | ug/L | 0.00 |
| Standard Area 1 = 145309 | | | Recovery = 105.99% | | | |
| 79) 1,4-Dichlorobenzene-d4 | 13.324 | 152 | 82515 | 10.000 | ug/L | 0.00 |
| Standard Area 1 = 69187 | | | Recovery = 119.26% | | | |
| System Monitoring Compounds | | | | | | |
| 36) Dibromofluoromethane | 5.739 | 113 | 55448 | 9.886 | ug/L | 0.00 |
| Spiked Amount 10.000 | Range 70 - 130 | | Recovery = 98.86% | | | |
| 43) 1,2-Dichloroethane-d4 | 6.323 | 65 | 59238 | 9.750 | ug/L | 0.00 |
| Spiked Amount 10.000 | Range 70 - 130 | | Recovery = 97.50% | | | |
| 60) Toluene-d8 | 8.500 | 98 | 219757 | 9.965 | ug/L | 0.00 |
| Spiked Amount 10.000 | Range 70 - 130 | | Recovery = 99.65% | | | |
| 83) 4-Bromofluorobenzene | 12.030 | 95 | 84792 | 9.168 | ug/L | 0.00 |
| Spiked Amount 10.000 | Range 70 - 130 | | Recovery = 91.68% | | | |
| Target Compounds | | | | | | Qvalue |
| 2) Dichlorodifluoromethane | 1.822 | 85 | 345427 | 98.451 | ug/L | 100 |
| 3) Chloromethane | 2.034 | 50 | 495373 | 87.921 | ug/L | 99 |
| 4) Vinyl chloride | 2.116 | 62 | 481937 | 54.211 | ug/L | 100 |
| 5) Bromomethane | 2.465 | 94 | 181150 | 84.997 | ug/L | 100 |
| 6) Chloroethane | 2.591 | 64 | 278996 | 91.993 | ug/L | 97 |
| 7) Trichlorofluoromethane | 2.749 | 101 | 563584 | 95.489 | ug/L | 99 |
| 8) Ethyl ether | 3.071 | 74 | 159711 | 94.519 | ug/L | 81 |
| 10) 1,1-Dichloroethene | 3.289 | 96 | 350465 | 99.993 | ug/L | 89 |
| 11) Carbon disulfide | 3.328 | 76 | 893051 | 86.957 | ug/L | 99 |
| 12) Freon-113 | 3.328 | 101 | 344450 | 97.542 | ug/L | 92 |
| 13) Iodomethane | 3.442 | 142 | 482166 | 109.887 | ug/L | 99 |
| 14) Acrolein | 3.633 | 56 | 43644 | 93.230 | ug/L | 96 |
| 15) Methylene chloride | 3.890 | 84 | 348951 | 90.609 | ug/L | 87 |
| 16) Isopropyl alcohol | 3.786 | 45 | 55439 | 410.358 | ug/L # | 92 |
| 17) Acetone | 3.928 | 43 | 58183 | 33.668 | ug/L | 100 |
| 18) trans-1,2-Dichloroethene | 4.059 | 96 | 358426 | 91.388 | ug/L | 89 |
| 19) Methyl acetate | 4.059 | 43 | 163144 | 53.895 | ug/L | 93 |
| 20) Methyl tert-butyl ether | 4.157 | 73 | 763449 | 90.808 | ug/L | 95 |
| 21) tert-Butyl alcohol | 4.239 | 59 | 90870 | 458.837 | ug/L | 94 |
| 22) Diisopropyl ether | 4.550 | 45 | 1327630 | 90.319 | ug/L | 93 |
| 23) 1,1-Dichloroethane | 4.697 | 63 | 777003 | 92.926 | ug/L | 98 |

Data Path : I:\VOLATILES\VOA101\2020\200219A\
Data File : V01200219A10.D
Acq On : 19 Feb 2020 5:12 pm
Operator : VOA101:KJD
Sample : I8260STD80PPB
Misc : WG1342454
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Feb 19 18:18:20 2020
Quant Method : I:\VOLATILES\VOA101\2020\200219A\V101_200219A_8260.m
Quant Title : VOLATILES BY GC/MS
QLast Update : Wed Feb 19 17:00:54 2020
Response via : Initial Calibration

CCAL FILE(s) : 1 - I:\VOLATILES\VOA101\2020\200219A\V01200219A08.D
Sub List : 8260-CurveAlc - All compounds listed

| Compound | R.T. | QIon | Response | Conc | Units | | Dev(Min) |
|---|---|---|---|---|---|---|---|
| 24) Halothane | 4.741 | 117 | 304303 | 103.254 | ug/L | | 99 |
| 25) Acrylonitrile | 4.741 | 53 | 81962 | 104.704 | ug/L | | 96 |
| 26) Ethyl tert-butyl ether | 4.926 | 59 | 1172355 | 90.868 | ug/L | | 96 |
| 27) Vinyl acetate | 4.943 | 43 | 785517 | 91.609 | ug/L | | 99 |
| 28) cis-1,2-Dichloroethene | 5.259 | 96 | 429606 | 93.323 | ug/L | | 89 |
| 29) 2,2-Dichloropropane | 5.379 | 77 | 541738 | 92.182 | ug/L | | 100 |
| 30) Bromochloromethane | 5.472 | 128 | 166823 | 95.346 | ug/L | | 90 |
| 31) Cyclohexane | 5.488 | 56 | 839250 | 97.026 | ug/L | | 88 |
| 32) Chloroform | 5.548 | 83 | 685243 | 96.808 | ug/L | | 97 |
| 33) Ethyl acetate | 5.657 | 43 | 238718 | 80.826 | ug/L | # | 57 |
| 34) Carbon tetrachloride | 5.706 | 117 | 578167 | 58.149 | ug/L | | 97 |
| 35) Tetrahydrofuran | 5.712 | 42 | 66922 | 82.275 | ug/L | | 95 |
| 37) 1,1,1-Trichloroethane | 5.777 | 97 | 645624 | 97.657 | ug/L | | 98 |
| 38) 2-Butanol | 5.701 | 45 | 81199M3 | 393.379 | ug/L | | |
| 39) 2-Butanone | 5.865 | 43 | 96220 | 77.868 | ug/L | # | 52 |
| 40) 1,1-Dichloropropene | 5.908 | 75 | 560367 | 100.790 | ug/L | | 98 |
| 41) Benzene | 6.181 | 78 | 1485155 | 53.487 | ug/L | | 94 |
| 42) tert-Amyl methyl ether | 6.290 | 73 | 873479 | 90.954 | ug/L | | 94 |
| 44) 1,2-Dichloroethane | 6.399 | 62 | 470695 | 93.263 | ug/L | | 98 |
| 46) 2-Methyl-2-butanol | 6.487 | 59 | 78992 | 463.626 | ug/L | | 96 |
| 47) Methyl cyclohexane | 6.825 | 83 | 636343 | 102.545 | ug/L | | 83 |
| 48) Trichloroethene | 6.830 | 95 | 412034 | 54.944 | ug/L | | 98 |
| 50) Dibromomethane | 7.316 | 93 | 182502 | 100.616 | ug/L | | 97 |
| 51) 1,2-Dichloropropane | 7.436 | 63 | 432446 | 96.818 | ug/L | | 96 |
| 52) 4-penten-2-ol | 7.360 | 45 | 61463 | 457.231 | ug/L | # | 1 |
| 53) 2-Chloroethyl vinyl ether | 8.178 | 63 | 132546 | 153.681 | ug/L | | 97 |
| 54) Bromodichloromethane | 7.502 | 83 | 497909 | 96.804 | ug/L | | 98 |
| 57) 1,4-Dioxane | 7.731 | 88 | 15027 | 717.547 | ug/L | # | 86 |
| 58) cis-1,3-Dichloropropene | 8.266 | 75 | 609837 | 95.698 | ug/L | | 99 |
| 61) Toluene | 8.566 | 92 | 969430 | 95.780 | ug/L | | 97 |
| 62) 4-Methyl-2-pentanone | 9.024 | 58 | 93645 | 110.179 | ug/L | | 91 |
| 63) Tetrachloroethene | 9.062 | 166 | 426089 | 102.014 | ug/L | | 99 |
| 65) trans-1,3-Dichloropropene | 9.084 | 75 | 513887 | 97.758 | ug/L | | 90 |
| 66) 4-Methyl-2-pentanol | 9.139 | 45 | 224468 | 421.986 | ug/L | | 97 |
| 67) Ethyl methacrylate | 9.275 | 69 | 341353 | 96.327 | ug/L | | 98 |
| 68) 1,1,2-Trichloroethane | 9.291 | 83 | 221830 | 95.593 | ug/L | | 97 |
| 69) Chlorodibromomethane | 9.537 | 129 | 337109 | 105.110 | ug/L | | 97 |
| 70) 1,3-Dichloropropane | 9.657 | 76 | 469167 | 94.975 | ug/L | | 99 |
| 71) 1,2-Dibromoethane | 9.853 | 107 | 258935 | 99.042 | ug/L | | 99 |
| 72) 2-Hexanone | 10.132 | 43 | 155228 | 79.047 | ug/L | | 94 |

Quantitation Report (QT Reviewed)

Data Path : I:\VOLATILES\VOA101\2020\200219A\
Data File : V01200219A10.D
Acq On : 19 Feb 2020 5:12 pm
Operator : VOA101:KJD
Sample : I8260STD80PPB
Misc : WG1342454
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Feb 19 18:18:20 2020
Quant Method : I:\VOLATILES\VOA101\2020\200219A\V101_200219A_8260.m
Quant Title : VOLATILES BY GC/MS
QLast Update : Wed Feb 19 17:00:54 2020
Response via : Initial Calibration

CCAL FILE(s) : 1 - I:\VOLATILES\VOA101\2020\200219A\V01200219A08.D
Sub List : 8260-CurveAlc - All compounds listed

| Compound | R.T. | QIon | Response | Conc | Units | | Dev(Min) |
|---|---|---|---|---|---|---|---|
| 73) Chlorobenzene | 10.546 | 112 | 1030947 | 94.157 | ug/L | | 97 |
| 74) Ethylbenzene | 10.579 | 91 | 1817928 | 94.902 | ug/L | | 98 |
| 75) 1,1,1,2-Tetrachloroethane | 10.628 | 131 | 382756 | 99.005 | ug/L | | 99 |
| 76) p/m Xylene | 10.765 | 106 | 1432423 | 195.917 | ug/L | | 96 |
| 77) o Xylene | 11.305 | 106 | 1330004 | 192.994 | ug/L | | 97 |
| 78) Styrene | 11.370 | 104 | 2237622 | 195.943 | ug/L | | 99 |
| 80) Bromoform | 11.408 | 173 | 186187 | 103.957 | ug/L | | 100 |
| 82) Isopropylbenzene | 11.687 | 105 | 1813676 | 88.491 | ug/L | | 100 |
| 84) Bromobenzene | 12.161 | 156 | 406624 | 89.646 | ug/L | | 99 |
| 85) n-Propylbenzene | 12.183 | 91 | 1968144 | 89.612 | ug/L | | 98 |
| 86) 1,4-Dichlorobutane | 12.210 | 55 | 501127 | 80.077 | ug/L | | 98 |
| 87) 1,1,2,2-Tetrachloroethane | 12.271 | 83 | 271811 | 86.087 | ug/L | | 97 |
| 88) 4-Ethyltoluene | 12.314 | 105 | 1626749 | 91.828 | ug/L | | 100 |
| 89) 2-Chlorotoluene | 12.374 | 91 | 1299981 | 88.577 | ug/L | | 94 |
| 90) 1,3,5-Trimethylbenzene | 12.412 | 105 | 1411492 | 89.943 | ug/L | | 100 |
| 91) 1,2,3-Trichloropropane | 12.429 | 75 | 239903M4 | 74.233 | ug/L | | |
| 92) trans-1,4-Dichloro-2-b... | 12.472 | 53 | 86439 | 93.770 | ug/L | # | 17 |
| 93) 4-Chlorotoluene | 12.571 | 91 | 1255465 | 90.485 | ug/L | | 97 |
| 94) tert-Butylbenzene | 12.783 | 119 | 1210659 | 93.023 | ug/L | | 97 |
| 97) 1,2,4-Trimethylbenzene | 12.865 | 105 | 1398627 | 90.860 | ug/L | | 100 |
| 98) sec-Butylbenzene | 12.991 | 105 | 1506015 | 93.144 | ug/L | | 99 |
| 99) p-Isopropyltoluene | 13.144 | 119 | 1396619 | 93.494 | ug/L | | 97 |
| 100) 1,3-Dichlorobenzene | 13.242 | 146 | 770942 | 93.371 | ug/L | | 99 |
| 101) 1,4-Dichlorobenzene | 13.340 | 146 | 777417 | 92.428 | ug/L | | 99 |
| 102) p-Diethylbenzene | 13.553 | 119 | 763047 | 98.246 | ug/L | | 96 |
| 103) n-Butylbenzene | 13.618 | 91 | 1040666 | 95.163 | ug/L | | 98 |
| 104) 1,2-Dichlorobenzene | 13.809 | 146 | 684092 | 94.591 | ug/L | | 99 |
| 105) 1,2,4,5-Tetramethylben... | 14.420 | 119 | 1158180 | 98.595 | ug/L | | 97 |
| 106) 1,2-Dibromo-3-chloropr... | 14.671 | 155 | 39156 | 120.034 | ug/L | | 99 |
| 107) 1,3,5-Trichlorobenzene | 14.699 | 180 | 371143 | 98.637 | ug/L | | 97 |
| 108) Hexachlorobutadiene | 15.337 | 225 | 105710 | 96.320 | ug/L | | 99 |
| 109) 1,2,4-Trichlorobenzene | 15.381 | 180 | 321453 | 93.756 | ug/L | | 98 |
| 110) Naphthalene | 15.741 | 128 | 681656 | 82.190 | ug/L | | 100 |
| 111) 1,2,3-Trichlorobenzene | 15.954 | 180 | 245745 | 91.255 | ug/L | | 96 |

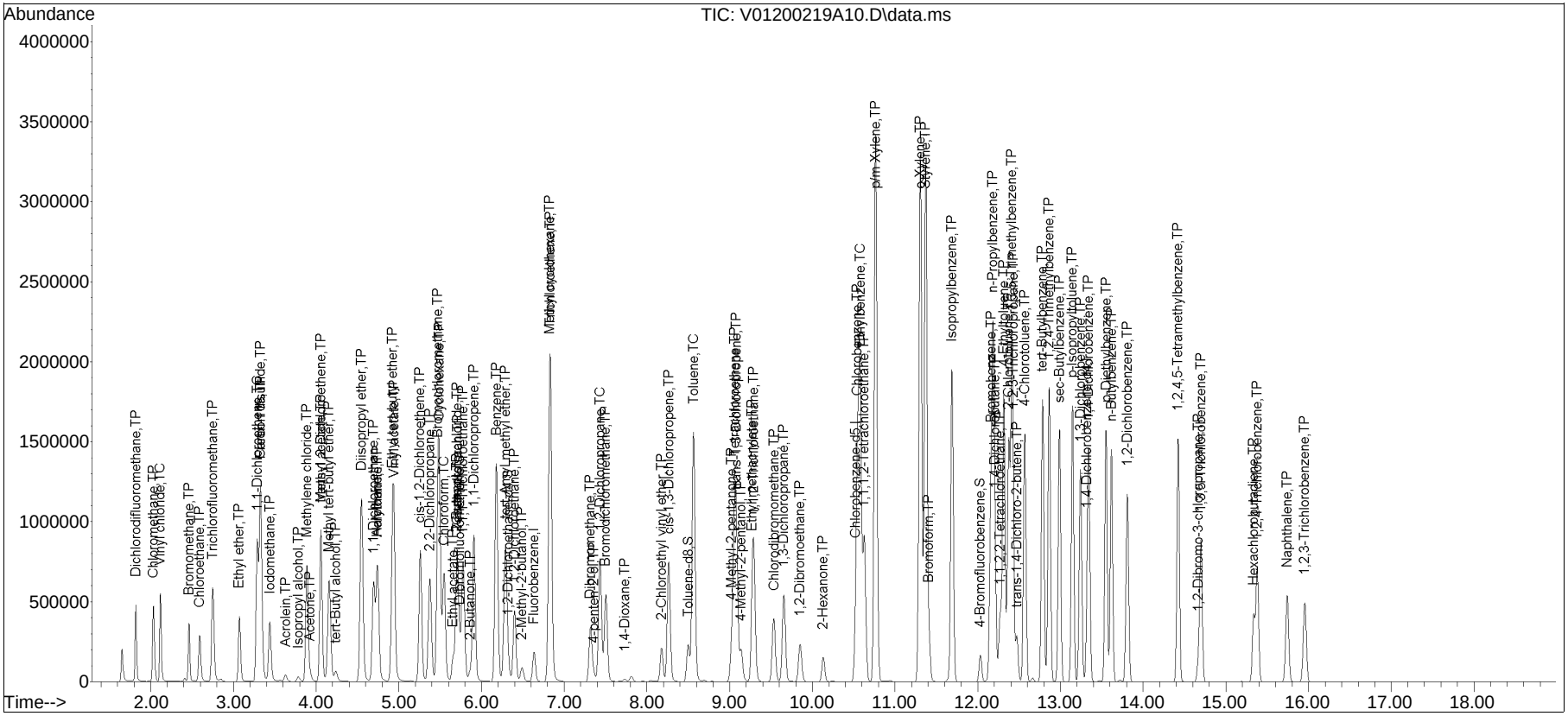
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : I:\VOLATILES\VOA101\2020\200219A\
Data File : V01200219A10.D
Acq On : 19 Feb 2020 5:12 pm
Operator : VOA101:KJD
Sample : I8260STD80PPB
Misc : WG1342454
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Feb 19 18:18:20 2020
Quant Method : I:\VOLATILES\VOA101\2020\200219A\V101_200219A_8260.m
Quant Title : VOLATILES BY GC/MS
QLast Update : Wed Feb 19 17:00:54 2020
Response via : Initial Calibration

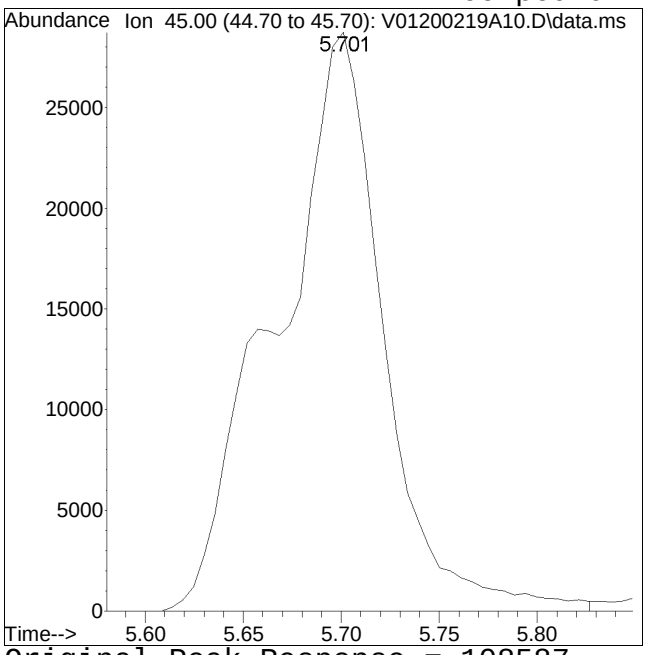
Sub List : 8260-CurveAlc - All compounds listed\V01200219A08.D•

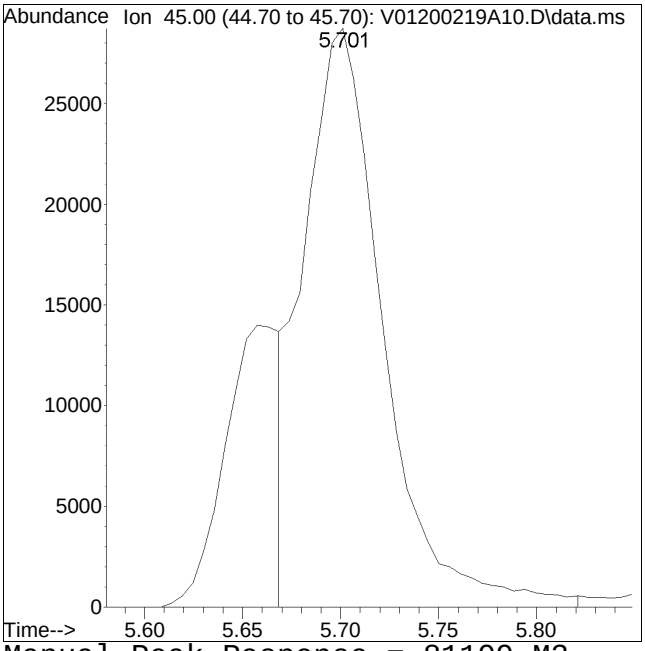


Manual Integration Report

Data Path : I:\VOLATILES\VOA101\2020\2QMethod : V101_200219A_8260.m
Data File : V01200219A10.D Operator : VOA101:KJD
Date Inj'd : 2/19/2020 5:12 pm Instrument : VOA 101
Sample : I8260STD80PPB Quant Date : 2/19/2020 6:13 pm

Compound #38: 2-Butanol



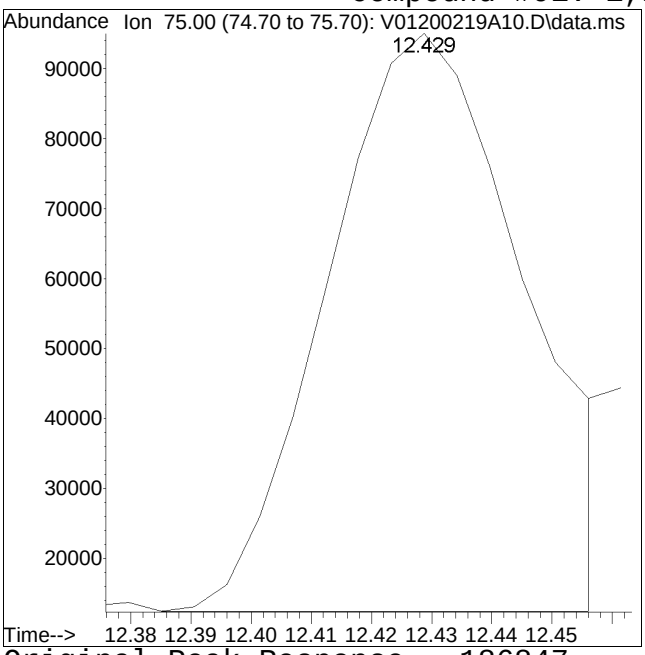




Original Peak Response = 108587 Manual Peak Response = 81199 M3
M3 = Misidentification of the peak (i.e. 1,4-dichlorobenzene identified as 1,3-dichlorobenzene), or misidentification from 2 partially resolved peaks not being split.

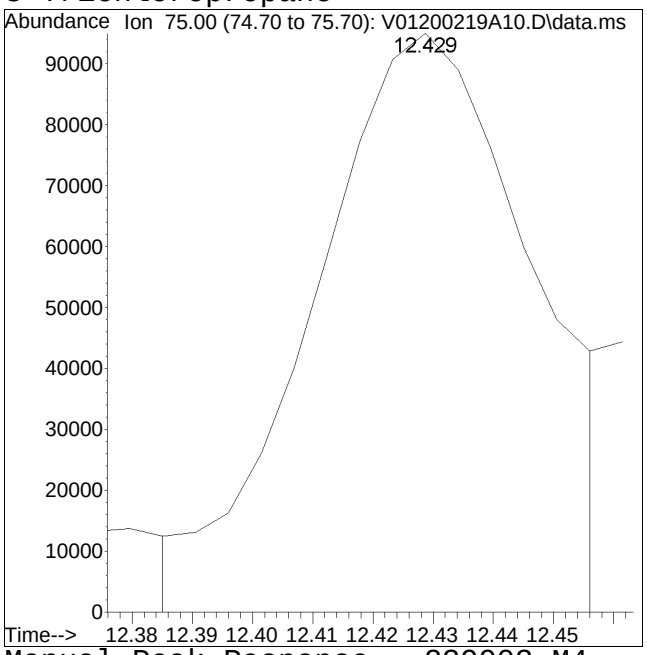
Manual Integration Report

Data Path : I:\VOLATILES\VOA101\2020\2QMethod : V101_200219A_8260.m
Data File : V01200219A10.D Operator : VOA101:KJD
Date Inj'd : 2/19/2020 5:12 pm Instrument : VOA 101
Sample : I8260STD80PPB Quant Date : 2/19/2020 6:13 pm

Compound #91: 1,2,3-Trichloropropane




Original Peak Response = 186847




Manual Peak Response = 239903 M4

M4 = Poor automated baseline construction.

Quantitation Report (QT Reviewed)

Data Path : I:\VOLATILES\VOA101\2020\200219A\
Data File : V01200219A11.D
Acq On : 19 Feb 2020 5:35 pm
Operator : VOA101:KJD
Sample : I8260STD120PPB
Misc : WG1342454
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Feb 19 18:20:01 2020
Quant Method : I:\VOLATILES\VOA101\2020\200219A\V101_200219A_8260.m
Quant Title : VOLATILES BY GC/MS
QLast Update : Wed Feb 19 17:00:54 2020
Response via : Initial Calibration

CCAL FILE(s) : 1 - I:\VOLATILES\VOA101\2020\200219A\V01200219A08.D
Sub List : 8260-CurveAlc - All compounds listed

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| Internal Standards | | | | | | |
| 1) Fluorobenzene | 6.634 | 96 | 227199 | 10.000 | ug/L | 0.00 |
| Standard Area 1 = 204276 | | | Recovery = 111.22% | | | |
| 59) Chlorobenzene-d5 | 10.524 | 117 | 160047 | 10.000 | ug/L | 0.00 |
| Standard Area 1 = 145309 | | | Recovery = 110.14% | | | |
| 79) 1,4-Dichlorobenzene-d4 | 13.323 | 152 | 85704 | 10.000 | ug/L | 0.00 |
| Standard Area 1 = 69187 | | | Recovery = 123.87% | | | |
| System Monitoring Compounds | | | | | | |
| 36) Dibromofluoromethane | 5.745 | 113 | 58608 | 9.952 | ug/L | 0.00 |
| Spiked Amount 10.000 | Range 70 - 130 | | Recovery = 99.52% | | | |
| 43) 1,2-Dichloroethane-d4 | 6.323 | 65 | 61791 | 9.686 | ug/L | 0.00 |
| Spiked Amount 10.000 | Range 70 - 130 | | Recovery = 96.86% | | | |
| 60) Toluene-d8 | 8.500 | 98 | 229218 | 10.002 | ug/L | 0.00 |
| Spiked Amount 10.000 | Range 70 - 130 | | Recovery = 100.02% | | | |
| 83) 4-Bromofluorobenzene | 12.030 | 95 | 89461 | 9.312 | ug/L | 0.00 |
| Spiked Amount 10.000 | Range 70 - 130 | | Recovery = 93.12% | | | |
| Target Compounds | | | | | | Qvalue |
| 2) Dichlorodifluoromethane | 1.821 | 85 | 539044 | 146.317 | ug/L | 100 |
| 3) Chloromethane | 2.034 | 50 | 783826 | 132.491 | ug/L | 99 |
| 4) Vinyl chloride | 2.122 | 62 | 756969 | 81.093 | ug/L | 99 |
| 5) Bromomethane | 2.465 | 94 | 318396 | 142.278 | ug/L | 100 |
| 6) Chloroethane | 2.591 | 64 | 429930 | 135.009 | ug/L | 97 |
| 7) Trichlorofluoromethane | 2.749 | 101 | 876614 | 141.452 | ug/L | 99 |
| 8) Ethyl ether | 3.076 | 74 | 248182 | 139.882 | ug/L | 82 |
| 10) 1,1-Dichloroethene | 3.289 | 96 | 545939 | 148.346 | ug/L | 90 |
| 11) Carbon disulfide | 3.327 | 76 | 1416464 | 131.353 | ug/L | 99 |
| 12) Freon-113 | 3.333 | 101 | 530392 | 143.044 | ug/L | 88 |
| 13) Iodomethane | 3.442 | 142 | 728141 | 158.041 | ug/L | 99 |
| 14) Acrolein | 3.628 | 56 | 66790 | 135.877 | ug/L | 97 |
| 15) Methylene chloride | 3.889 | 84 | 551194 | 136.308 | ug/L | 89 |
| 16) Isopropyl alcohol | 3.786 | 45 | 86588 | 610.396 | ug/L | 93 |
| 17) Acetone | 3.928 | 43 | 90139 | 49.675 | ug/L | 99 |
| 18) trans-1,2-Dichloroethene | 4.059 | 96 | 563061 | 136.726 | ug/L | 90 |
| 19) Methyl acetate | 4.059 | 43 | 242932 | 76.430 | ug/L | 94 |
| 20) Methyl tert-butyl ether | 4.157 | 73 | 1172835 | 132.858 | ug/L | 95 |
| 21) tert-Butyl alcohol | 4.239 | 59 | 141847 | 682.126 | ug/L | 95 |
| 22) Diisopropyl ether | 4.550 | 45 | 2047729 | 132.673 | ug/L | 93 |
| 23) 1,1-Dichloroethane | 4.697 | 63 | 1207831 | 137.571 | ug/L | 99 |

Quantitation Report (QT Reviewed)

Data Path : I:\VOLATILES\VOA101\2020\200219A\
Data File : V01200219A11.D
Acq On : 19 Feb 2020 5:35 pm
Operator : VOA101:KJD
Sample : I8260STD120PPB
Misc : WG1342454
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Feb 19 18:20:01 2020
Quant Method : I:\VOLATILES\VOA101\2020\200219A\V101_200219A_8260.m
Quant Title : VOLATILES BY GC/MS
QLast Update : Wed Feb 19 17:00:54 2020
Response via : Initial Calibration

CCAL FILE(s) : 1 - I:\VOLATILES\VOA101\2020\200219A\V01200219A08.D
Sub List : 8260-CurveAlc - All compounds listed

| Compound | R.T. | QIon | Response | Conc | Units | | Dev(Min) |
|---|---|---|---|---|---|---|---|
| 24) Halothane | 4.741 | 117 | 474072 | 153.198 | ug/L | | 99 |
| 25) Acrylonitrile | 4.741 | 53 | 125930 | 153.210 | ug/L | | 96 |
| 26) Ethyl tert-butyl ether | 4.926 | 59 | 1812284 | 133.778 | ug/L | | 96 |
| 27) Vinyl acetate | 4.943 | 43 | 1196013 | 132.839 | ug/L | | 99 |
| 28) cis-1,2-Dichloroethene | 5.259 | 96 | 672944 | 139.221 | ug/L | | 89 |
| 29) 2,2-Dichloropropane | 5.374 | 77 | 826968 | 134.014 | ug/L | | 100 |
| 30) Bromochloromethane | 5.472 | 128 | 253885 | 138.195 | ug/L | | 91 |
| 31) Cyclohexane | 5.488 | 56 | 1289863 | 142.019 | ug/L | | 89 |
| 32) Chloroform | 5.548 | 83 | 1076933 | 144.898 | ug/L | | 96 |
| 33) Ethyl acetate | 5.657 | 43 | 365899 | 117.986 | ug/L | # | 57 |
| 34) Carbon tetrachloride | 5.706 | 117 | 894554 | 85.685 | ug/L | | 96 |
| 35) Tetrahydrofuran | 5.712 | 42 | 102188 | 119.648 | ug/L | | 95 |
| 37) 1,1,1-Trichloroethane | 5.777 | 97 | 1005858 | 144.900 | ug/L | | 98 |
| 38) 2-Butanol | 5.701 | 45 | 125939M3 | 581.068 | ug/L | | |
| 39) 2-Butanone | 5.859 | 43 | 147904 | 113.994 | ug/L | # | 52 |
| 40) 1,1-Dichloropropene | 5.908 | 75 | 869413 | 148.928 | ug/L | | 98 |
| 41) Benzene | 6.181 | 78 | 2332627 | 80.007 | ug/L | | 95 |
| 42) tert-Amyl methyl ether | 6.290 | 73 | 1357787 | 134.651 | ug/L | | 94 |
| 44) 1,2-Dichloroethane | 6.399 | 62 | 729998 | 137.751 | ug/L | | 98 |
| 46) 2-Methyl-2-butanol | 6.492 | 59 | 123033 | 687.721 | ug/L | | 95 |
| 47) Methyl cyclohexane | 6.830 | 83 | 997276 | 153.054 | ug/L | | 83 |
| 48) Trichloroethene | 6.830 | 95 | 642558 | 81.602 | ug/L | | 98 |
| 50) Dibromomethane | 7.316 | 93 | 283993 | 149.113 | ug/L | | 98 |
| 51) 1,2-Dichloropropane | 7.436 | 63 | 675313 | 143.992 | ug/L | | 96 |
| 52) 4-penten-2-ol | 7.354 | 45 | 95478 | 676.445 | ug/L | # | 1 |
| 53) 2-Chloroethyl vinyl ether | 8.178 | 63 | 199920 | 220.758 | ug/L | | 98 |
| 54) Bromodichloromethane | 7.502 | 83 | 778816 | 144.207 | ug/L | | 98 |
| 57) 1,4-Dioxane | 7.731 | 88 | 23928 | 1088.156 | ug/L | # | 87 |
| 58) cis-1,3-Dichloropropene | 8.265 | 75 | 949838 | 141.953 | ug/L | | 99 |
| 61) Toluene | 8.566 | 92 | 1521258 | 144.631 | ug/L | | 96 |
| 62) 4-Methyl-2-pentanone | 9.029 | 58 | 143072 | 161.982 | ug/L | | 89 |
| 63) Tetrachloroethene | 9.062 | 166 | 661004 | 152.287 | ug/L | | 98 |
| 65) trans-1,3-Dichloropropene | 9.084 | 75 | 796941 | 145.885 | ug/L | | 92 |
| 66) 4-Methyl-2-pentanol | 9.138 | 45 | 334381 | 604.900 | ug/L | | 97 |
| 67) Ethyl methacrylate | 9.275 | 69 | 517352 | 140.484 | ug/L | | 99 |
| 68) 1,1,2-Trichloroethane | 9.291 | 83 | 342456 | 142.007 | ug/L | | 97 |
| 69) Chlorodibromomethane | 9.531 | 129 | 526345 | 157.922 | ug/L | | 97 |
| 70) 1,3-Dichloropropane | 9.657 | 76 | 723779 | 140.990 | ug/L | | 100 |
| 71) 1,2-Dibromoethane | 9.853 | 107 | 404164 | 148.760 | ug/L | | 99 |
| 72) 2-Hexanone | 10.132 | 43 | 233867 | 114.600 | ug/L | | 94 |

Quantitation Report (QT Reviewed)

Data Path : I:\VOLATILES\VOA101\2020\200219A\
Data File : V01200219A11.D
Acq On : 19 Feb 2020 5:35 pm
Operator : VOA101:KJD
Sample : I8260STD120PPB
Misc : WG1342454
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Feb 19 18:20:01 2020
Quant Method : I:\VOLATILES\VOA101\2020\200219A\V101_200219A_8260.m
Quant Title : VOLATILES BY GC/MS
QLast Update : Wed Feb 19 17:00:54 2020
Response via : Initial Calibration

CCAL FILE(s) : 1 - I:\VOLATILES\VOA101\2020\200219A\V01200219A08.D
Sub List : 8260-CurveAlc - All compounds listed

| | Compound | R.T. | QIon | Response | Conc | Units | | Dev(Min) |
|---|---|---|---|---|---|---|---|---|
| 73) | Chlorobenzene | 10.546 | 112 | 1608764 | 141.386 | ug/L | | 97 |
| 74) | Ethylbenzene | 10.579 | 91 | 2822375 | 141.779 | ug/L | | 98 |
| 75) | 1,1,1,2-Tetrachloroethane | 10.628 | 131 | 598166 | 148.887 | ug/L | | 99 |
| 76) | p/m Xylene | 10.764 | 106 | 2220738 | 292.278 | ug/L | | 97 |
| 77) | o Xylene | 11.310 | 106 | 2071769 | 289.288 | ug/L | | 97 |
| 78) | Styrene | 11.370 | 104 | 3508478 | 295.637 | ug/L | | 99 |
| 80) | Bromoform | 11.408 | 173 | 294635 | 158.387 | ug/L | | 100 |
| 82) | Isopropylbenzene | 11.692 | 105 | 2823228 | 132.623 | ug/L | | 100 |
| 84) | Bromobenzene | 12.161 | 156 | 634205 | 134.616 | ug/L | | 99 |
| 85) | n-Propylbenzene | 12.189 | 91 | 3086390 | 135.298 | ug/L | | 98 |
| 86) | 1,4-Dichlorobutane | 12.210 | 55 | 763844 | 117.515 | ug/L | | 98 |
| 87) | 1,1,2,2-Tetrachloroethane | 12.270 | 83 | 418354 | 127.570 | ug/L | | 97 |
| 88) | 4-Ethyltoluene | 12.320 | 105 | 2566776 | 139.499 | ug/L | | 100 |
| 89) | 2-Chlorotoluene | 12.374 | 91 | 2044940 | 134.152 | ug/L | | 94 |
| 90) | 1,3,5-Trimethylbenzene | 12.412 | 105 | 2223550 | 136.417 | ug/L | | 99 |
| 91) | 1,2,3-Trichloropropane | 12.429 | 75 | 379947M4 | 113.192 | ug/L | | |
| 92) | trans-1,4-Dichloro-2-b... | 12.472 | 53 | 133285 | 139.209 | ug/L | # | 17 |
| 93) | 4-Chlorotoluene | 12.571 | 91 | 1968758 | 136.614 | ug/L | | 97 |
| 94) | tert-Butylbenzene | 12.783 | 119 | 1908592 | 141.193 | ug/L | | 97 |
| 97) | 1,2,4-Trimethylbenzene | 12.865 | 105 | 2189175 | 136.924 | ug/L | | 99 |
| 98) | sec-Butylbenzene | 12.991 | 105 | 2391378 | 142.398 | ug/L | | 99 |
| 99) | p-Isopropyltoluene | 13.149 | 119 | 2217447 | 142.920 | ug/L | | 97 |
| 100) | 1,3-Dichlorobenzene | 13.242 | 146 | 1216281 | 141.825 | ug/L | | 99 |
| 101) | 1,4-Dichlorobenzene | 13.340 | 146 | 1225002 | 140.222 | ug/L | | 99 |
| 102) | p-Diethylbenzene | 13.553 | 119 | 1213510 | 150.432 | ug/L | | 96 |
| 103) | n-Butylbenzene | 13.618 | 91 | 1661724 | 146.301 | ug/L | | 98 |
| 104) | 1,2-Dichlorobenzene | 13.809 | 146 | 1070218 | 142.475 | ug/L | | 99 |
| 105) | 1,2,4,5-Tetramethylben... | 14.426 | 119 | 1809375 | 148.299 | ug/L | | 97 |
| 106) | 1,2-Dibromo-3-chloropr... | 14.666 | 155 | 59508 | 175.636 | ug/L | | 98 |
| 107) | 1,3,5-Trichlorobenzene | 14.704 | 180 | 582142 | 148.956 | ug/L | | 98 |
| 108) | Hexachlorobutadiene | 15.337 | 225 | 177333 | 155.568 | ug/L | | 99 |
| 109) | 1,2,4-Trichlorobenzene | 15.381 | 180 | 500584 | 140.570 | ug/L | | 98 |
| 110) | Naphthalene | 15.741 | 128 | 1026616 | 119.178 | ug/L | | 100 |
| 111) | 1,2,3-Trichlorobenzene | 15.953 | 180 | 377663 | 135.023 | ug/L | | 97 |

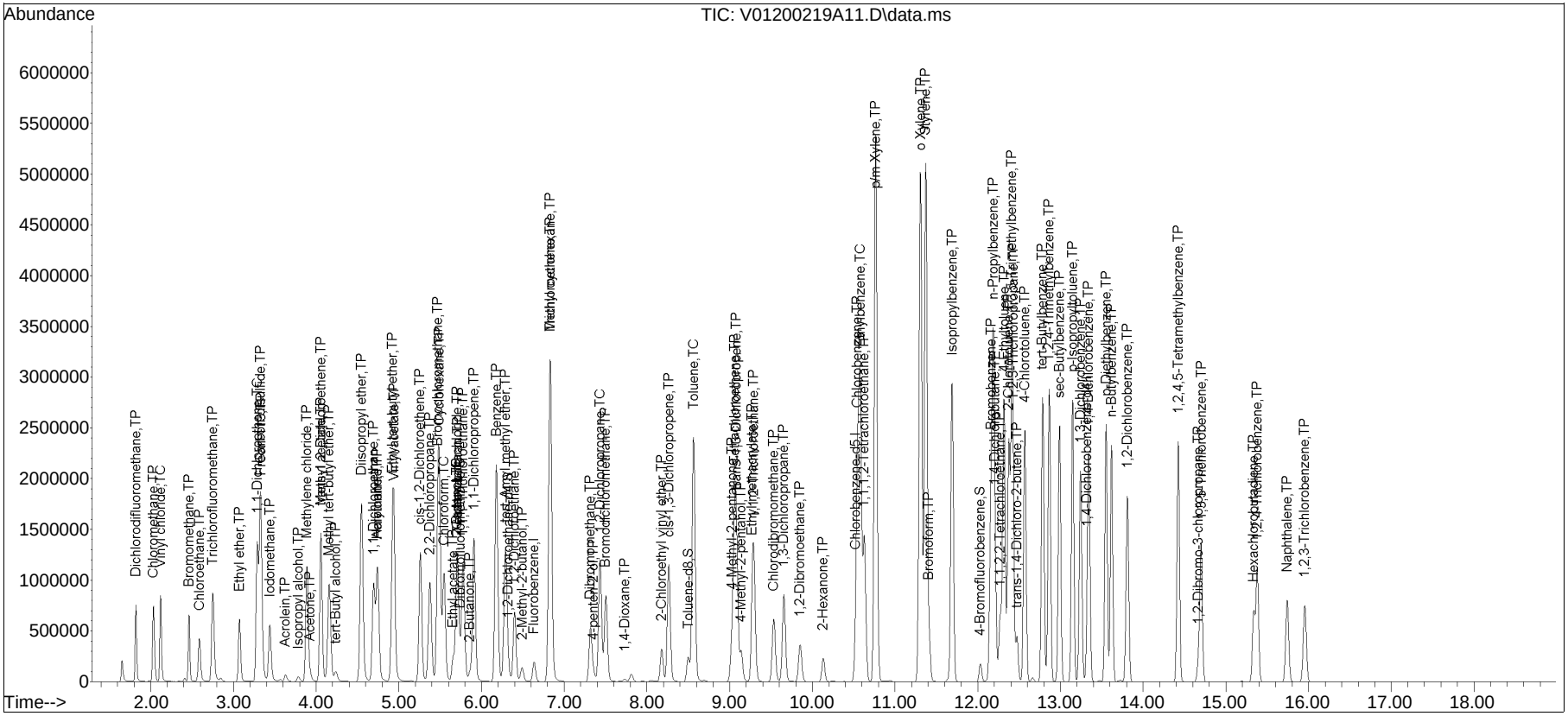
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : I:\VOLATILES\VOA101\2020\200219A\
Data File : V01200219A11.D
Acq On : 19 Feb 2020 5:35 pm
Operator : VOA101:KJD
Sample : I8260STD120PPB
Misc : WG1342454
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Feb 19 18:20:01 2020
Quant Method : I:\VOLATILES\VOA101\2020\200219A\V101_200219A_8260.m
Quant Title : VOLATILES BY GC/MS
QLast Update : Wed Feb 19 17:00:54 2020
Response via : Initial Calibration

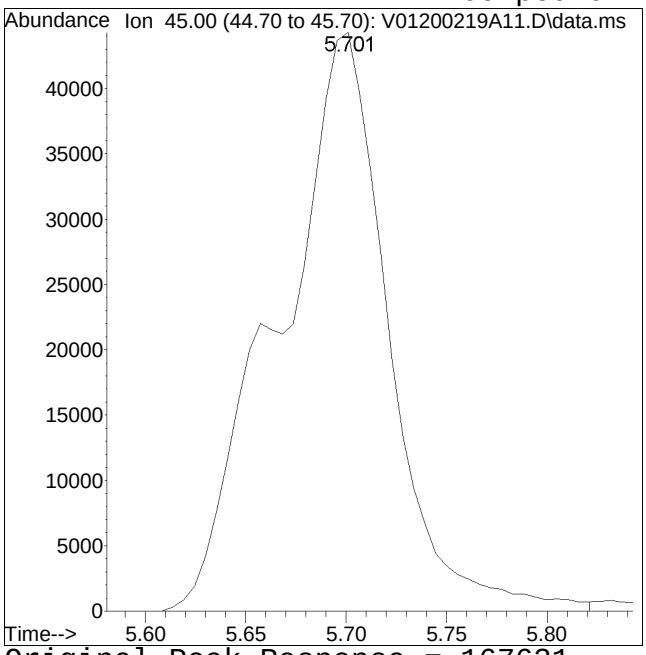
Sub List : 8260-CurveAlc - All compounds listed\V01200219A08.D•

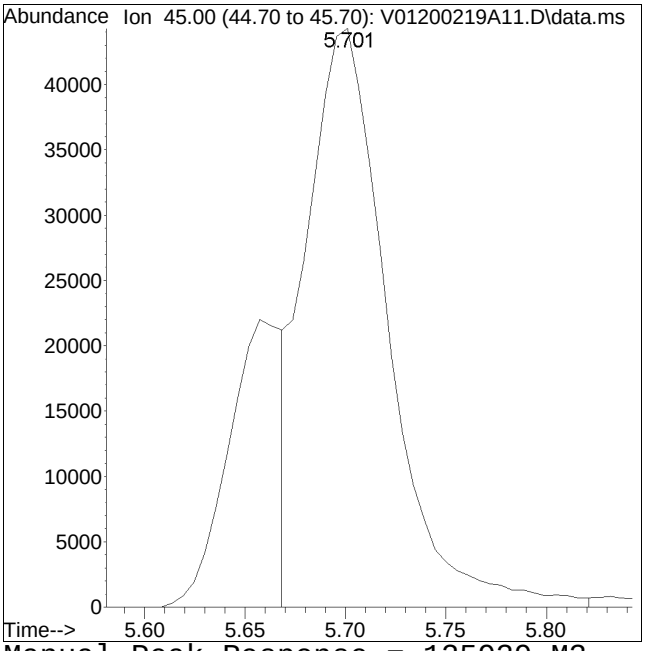


# Manual Integration Report

Data Path : I:\VOLATILES\VOA101\2020\2QMethod : V101_200219A_8260.m
Data File : V01200219A11.D Operator : VOA101:KJD
Date Inj'd : 2/19/2020 5:35 pm Instrument : VOA 101
Sample : I8260STD120PPB Quant Date : 2/19/2020 6:13 pm

## Compound #38: 2-Butanol



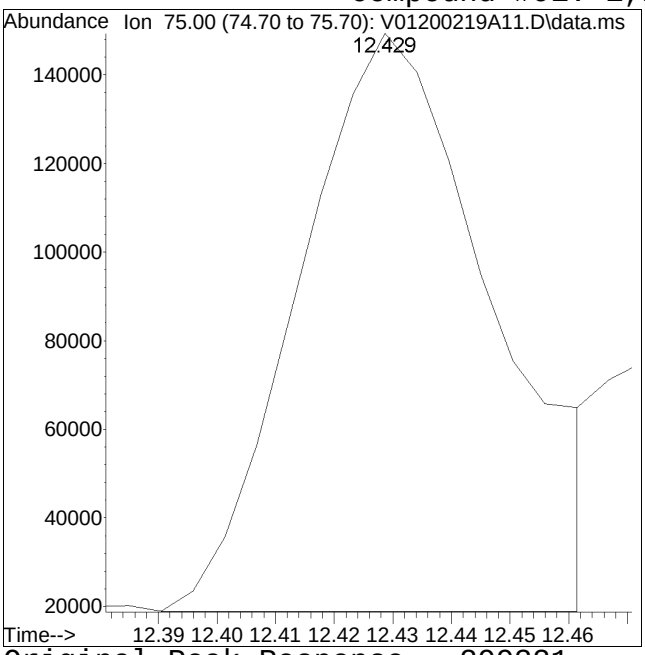

Original Peak Response = 167631 Manual Peak Response = 125939 M3

M3 = Misidentification of the peak (i.e. 1,4-dichlorobenzene identified as 1,3-dichlorobenzene), or misidentification from 2 partially resolved peaks not being split.

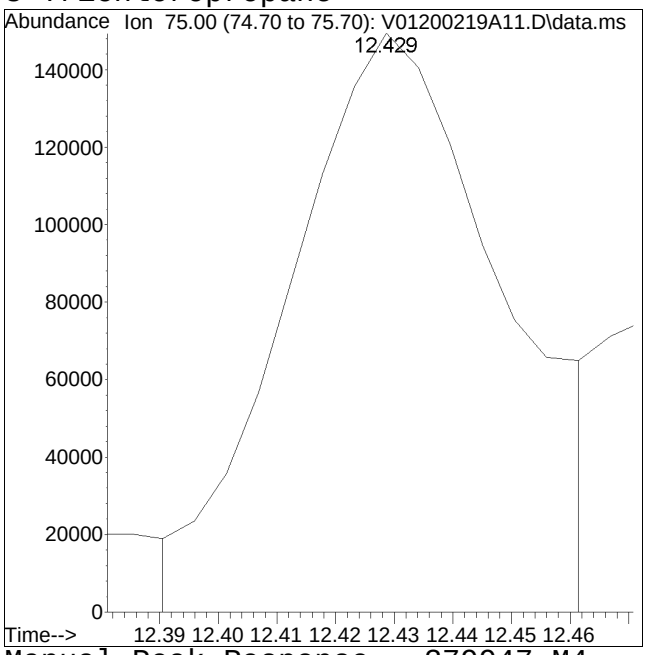
Manual Integration Report

Data Path : I:\VOLATILES\VOA101\2020\2QMethod : V101_200219A_8260.m
Data File : V01200219A11.D Operator : VOA101:KJD
Date Inj'd : 2/19/2020 5:35 pm Instrument : VOA 101
Sample : I8260STD120PPB Quant Date : 2/19/2020 6:13 pm

Compound #91: 1,2,3-Trichloropropane




Original Peak Response = 299321




Manual Peak Response = 379947 M4

M4 = Poor automated baseline construction.

Quantitation Report (QT Reviewed)

Data Path : I:\VOLATILES\VOA101\2020\200219A\
Data File : V01200219A12.D
Acq On : 19 Feb 2020 5:59 pm
Operator : VOA101:KJD
Sample : I8260STD200PPB
Misc : WG1342454
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Feb 19 18:22:02 2020
Quant Method : I:\VOLATILES\VOA101\2020\200219A\V101_200219A_8260.m
Quant Title : VOLATILES BY GC/MS
QLast Update : Wed Feb 19 18:20:11 2020
Response via : Initial Calibration

CCAL FILE(s) : 1 - I:\VOLATILES\VOA101\2020\200219A\V01200219A08.D
Sub List : 8260-CurveAlc - All compounds listed

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| Internal Standards | | | | | | |
| 1) Fluorobenzene | 6.634 | 96 | 238339 | 10.000 | ug/L | 0.00 |
| Standard Area 1 = 204276 | | | Recovery = 116.67% | | | |
| 59) Chlorobenzene-d5 | 10.524 | 117 | 166382 | 10.000 | ug/L | 0.00 |
| Standard Area 1 = 145309 | | | Recovery = 114.50% | | | |
| 79) 1,4-Dichlorobenzene-d4 | 13.323 | 152 | 92649 | 10.000 | ug/L | 0.00 |
| Standard Area 1 = 69187 | | | Recovery = 133.91% | | | |
| System Monitoring Compounds | | | | | | |
| 36) Dibromofluoromethane | 5.745 | 113 | 60622 | 9.861 | ug/L | 0.00 |
| Spiked Amount 10.000 | Range 70 - 130 | | Recovery = 98.61% | | | |
| 43) 1,2-Dichloroethane-d4 | 6.323 | 65 | 66258 | 10.010 | ug/L | 0.00 |
| Spiked Amount 10.000 | Range 70 - 130 | | Recovery = 100.10% | | | |
| 60) Toluene-d8 | 8.500 | 98 | 239068 | 10.053 | ug/L | 0.00 |
| Spiked Amount 10.000 | Range 70 - 130 | | Recovery = 100.53% | | | |
| 83) 4-Bromofluorobenzene | 12.036 | 95 | 92708 | 9.162 | ug/L | 0.00 |
| Spiked Amount 10.000 | Range 70 - 130 | | Recovery = 91.62% | | | |
| Target Compounds | | | | | | Qvalue |
| 2) Dichlorodifluoromethane | 1.821 | 85 | 935244 | 221.174 | ug/L | 99 |
| 3) Chloromethane | 2.034 | 50 | 1377433 | 214.199 | ug/L | 99 |
| 4) Vinyl chloride | 2.116 | 62 | 1305987 | 156.468 | ug/L | 99 |
| 5) Bromomethane | 2.460 | 94 | 577503 | 240.862 | ug/L | 99 |
| 6) Chloroethane | 2.580 | 64 | 689063 | 194.936 | ug/L | 97 |
| 7) Trichlorofluoromethane | 2.749 | 101 | 1506854 | 215.068 | ug/L | 99 |
| 8) Ethyl ether | 3.071 | 74 | 438275 | 219.946 | ug/L | 82 |
| 10) 1,1-Dichloroethene | 3.289 | 96 | 950961 | 223.224 | ug/L | 91 |
| 11) Carbon disulfide | 3.322 | 76 | 2482515 | 213.601 | ug/L | 99 |
| 12) Freon-113 | 3.327 | 101 | 914803 | 216.708 | ug/L | 86 |
| 13) Iodomethane | 3.437 | 142 | 1250265 | 222.692 | ug/L | 99 |
| 14) Acrolein | 3.628 | 56 | 121745 | 220.732 | ug/L | 95 |
| 15) Methylene chloride | 3.889 | 84 | 970375 | 217.331 | ug/L | 90 |
| 16) Isopropyl alcohol | 3.786 | 45 | 162450 | 1079.856 | ug/L # | 92 |
| 17) Acetone | 3.928 | 43 | 160649 | 118.702 | ug/L | 99 |
| 18) trans-1,2-Dichloroethene | 4.059 | 96 | 989028 | 217.219 | ug/L | 91 |
| 19) Methyl acetate | 4.059 | 43 | 415784 | 151.419 | ug/L | 94 |
| 20) Methyl tert-butyl ether | 4.157 | 73 | 2100540 | 216.727 | ug/L | 94 |
| 21) tert-Butyl alcohol | 4.239 | 59 | 262694 | 1131.425 | ug/L | 94 |
| 22) Diisopropyl ether | 4.550 | 45 | 3548623 | 209.427 | ug/L | 93 |
| 23) 1,1-Dichloroethane | 4.697 | 63 | 2101818 | 214.652 | ug/L | 99 |

Data Path : I:\VOLATILES\VOA101\2020\200219A\
Data File : V01200219A12.D
Acq On : 19 Feb 2020 5:59 pm
Operator : VOA101:KJD
Sample : I8260STD200PPB
Misc : WG1342454
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Feb 19 18:22:02 2020
Quant Method : I:\VOLATILES\VOA101\2020\200219A\V101_200219A_8260.m
Quant Title : VOLATILES BY GC/MS
QLast Update : Wed Feb 19 18:20:11 2020
Response via : Initial Calibration

CCAL FILE(s) : 1 - I:\VOLATILES\VOA101\2020\200219A\V01200219A08.D
Sub List : 8260-CurveAlc - All compounds listed

| Compound | R.T. | QIon | Response | Conc | Units | | Dev(Min) |
|---|---|---|---|---|---|---|---|
| 24) Halothane | 4.741 | 117 | 835186 | 229.465 | ug/L | | 99 |
| 25) Acrylonitrile | 4.741 | 53 | 226937 | 232.478 | ug/L | | 96 |
| 26) Ethyl tert-butyl ether | 4.932 | 59 | 3194559 | 213.955 | ug/L | | 95 |
| 27) Vinyl acetate | 4.942 | 43 | 2084996 | 210.179 | ug/L | | 100 |
| 28) cis-1,2-Dichloroethene | 5.259 | 96 | 1186802 | 219.955 | ug/L | | 90 |
| 29) 2,2-Dichloropropane | 5.374 | 77 | 1440003 | 210.866 | ug/L | | 100 |
| 30) Bromochloromethane | 5.472 | 128 | 437232 | 209.964 | ug/L | | 93 |
| 31) Cyclohexane | 5.483 | 56 | 2233121 | 216.339 | ug/L | | 89 |
| 32) Chloroform | 5.548 | 83 | 1883105 | 222.132 | ug/L | | 96 |
| 33) Ethyl acetate | 5.657 | 43 | 661867 | 205.760 | ug/L | # | 56 |
| 34) Carbon tetrachloride | 5.706 | 117 | 1564947 | 164.575 | ug/L | | 96 |
| 35) Tetrahydrofuran | 5.717 | 42 | 183396 | 204.451 | ug/L | | 97 |
| 37) 1,1,1-Trichloroethane | 5.777 | 97 | 1760065 | 222.191 | ug/L | | 98 |
| 38) 2-Butanol | 5.701 | 45 | 232214M3 | 1044.721 | ug/L | | |
| 39) 2-Butanone | 5.859 | 43 | 272554 | 208.868 | ug/L | # | 49 |
| 40) 1,1-Dichloropropene | 5.908 | 75 | 1527315 | 225.618 | ug/L | | 98 |
| 41) Benzene | 6.181 | 78 | 4078181 | 157.104 | ug/L | | 95 |
| 42) tert-Amyl methyl ether | 6.290 | 73 | 2430079 | 219.256 | ug/L | | 94 |
| 44) 1,2-Dichloroethane | 6.399 | 62 | 1279029 | 216.491 | ug/L | | 99 |
| 46) 2-Methyl-2-butanol | 6.492 | 59 | 228418 | 1124.314 | ug/L | | 97 |
| 47) Methyl cyclohexane | 6.830 | 83 | 1748850 | 229.334 | ug/L | | 85 |
| 48) Trichloroethene | 6.830 | 95 | 1122209 | 158.753 | ug/L | | 98 |
| 50) Dibromomethane | 7.316 | 93 | 507180 | 229.258 | ug/L | | 97 |
| 51) 1,2-Dichloropropane | 7.436 | 63 | 1179829 | 221.062 | ug/L | | 96 |
| 52) 4-penten-2-ol | 7.360 | 45 | 179638 | 1133.447 | ug/L | # | 1 |
| 53) 2-Chloroethyl vinyl ether | 8.178 | 63 | 375037 | 282.946 | ug/L | | 99 |
| 54) Bromodichloromethane | 7.507 | 83 | 1372247 | 223.752 | ug/L | | 98 |
| 57) 1,4-Dioxane | 7.731 | 88 | 44142 | 1992.775 | ug/L | # | 84 |
| 58) cis-1,3-Dichloropropene | 8.265 | 75 | 1662214 | 219.806 | ug/L | | 100 |
| 61) Toluene | 8.566 | 92 | 2639953 | 223.529 | ug/L | | 97 |
| 62) 4-Methyl-2-pentanone | 9.029 | 58 | 256124 | 240.838 | ug/L | | 89 |
| 63) Tetrachloroethene | 9.062 | 166 | 1164544 | 232.232 | ug/L | | 98 |
| 65) trans-1,3-Dichloropropene | 9.089 | 75 | 1410028 | 228.149 | ug/L | | 92 |
| 66) 4-Methyl-2-pentanol | 9.138 | 45 | 641063 | 1094.117 | ug/L | | 97 |
| 67) Ethyl methacrylate | 9.280 | 69 | 930917 | 226.561 | ug/L | | 98 |
| 68) 1,1,2-Trichloroethane | 9.291 | 83 | 609783 | 226.259 | ug/L | | 97 |
| 69) Chlorodibromomethane | 9.537 | 129 | 941411 | 240.359 | ug/L | | 97 |
| 70) 1,3-Dichloropropane | 9.657 | 76 | 1287024 | 225.148 | ug/L | | 100 |
| 71) 1,2-Dibromoethane | 9.853 | 107 | 723347 | 233.221 | ug/L | | 99 |
| 72) 2-Hexanone | 10.132 | 43 | 422016 | 204.925 | ug/L | | 92 |

Quantitation Report (QT Reviewed)

Data Path : I:\VOLATILES\VOA101\2020\200219A\
Data File : V01200219A12.D
Acq On : 19 Feb 2020 5:59 pm
Operator : VOA101:KJD
Sample : I8260STD200PPB
Misc : WG1342454
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Feb 19 18:22:02 2020
Quant Method : I:\VOLATILES\VOA101\2020\200219A\V101_200219A_8260.m
Quant Title : VOLATILES BY GC/MS
QLast Update : Wed Feb 19 18:20:11 2020
Response via : Initial Calibration

CCAL FILE(s) : 1 - I:\VOLATILES\VOA101\2020\200219A\V01200219A08.D
Sub List : 8260-CurveAlc - All compounds listed

| Compound | R.T. | QIon | Response | Conc | Units | | Dev(Min) |
|---|---|---|---|---|---|---|---|
| 73) Chlorobenzene | 10.546 | 112 | 2798194 | 221.249 | ug/L | | 97 |
| 74) Ethylbenzene | 10.579 | 91 | 4896940 | 220.835 | ug/L | | 98 |
| 75) 1,1,1,2-Tetrachloroethane | 10.634 | 131 | 1046835 | 228.451 | ug/L | | 98 |
| 76) p/m Xylene | 10.770 | 106 | 3807519 | 442.498 | ug/L | | 97 |
| 77) o Xylene | 11.310 | 106 | 3551720 | 441.123 | ug/L | | 97 |
| 78) Styrene | 11.376 | 104 | 6048587 | 449.453 | ug/L | | 99 |
| 80) Bromoform | 11.414 | 173 | 534749 | 233.141 | ug/L | | 100 |
| 82) Isopropylbenzene | 11.692 | 105 | 4940487 | 205.639 | ug/L | | 100 |
| 84) Bromobenzene | 12.161 | 156 | 1123837 | 209.780 | ug/L | | 99 |
| 85) n-Propylbenzene | 12.189 | 91 | 5410501 | 208.582 | ug/L | | 98 |
| 86) 1,4-Dichlorobutane | 12.210 | 55 | 1343560 | 192.723 | ug/L | | 98 |
| 87) 1,1,2,2-Tetrachloroethane | 12.270 | 83 | 763187 | 209.822 | ug/L | | 98 |
| 88) 4-Ethyltoluene | 12.320 | 105 | 4497011 | 212.601 | ug/L | | 100 |
| 89) 2-Chlorotoluene | 12.380 | 91 | 3597997 | 208.990 | ug/L | | 94 |
| 90) 1,3,5-Trimethylbenzene | 12.418 | 105 | 3897754 | 210.221 | ug/L | | 99 |
| 91) 1,2,3-Trichloropropane | 12.429 | 75 | 667907M4 | 190.406 | ug/L | | |
| 92) trans-1,4-Dichloro-2-b... | 12.478 | 53 | 239298 | 216.727 | ug/L | # | 17 |
| 93) 4-Chlorotoluene | 12.571 | 91 | 3469268 | 211.241 | ug/L | | 97 |
| 94) tert-Butylbenzene | 12.789 | 119 | 3374677 | 216.085 | ug/L | | 97 |
| 97) 1,2,4-Trimethylbenzene | 12.865 | 105 | 3895189 | 213.667 | ug/L | | 100 |
| 98) sec-Butylbenzene | 12.991 | 105 | 4272212 | 220.243 | ug/L | | 100 |
| 99) p-Isopropyltoluene | 13.149 | 119 | 3952780 | 220.231 | ug/L | | 97 |
| 100) 1,3-Dichlorobenzene | 13.247 | 146 | 2196144 | 221.985 | ug/L | | 99 |
| 101) 1,4-Dichlorobenzene | 13.345 | 146 | 2212481 | 220.485 | ug/L | | 99 |
| 102) p-Diethylbenzene | 13.553 | 119 | 2180831 | 227.945 | ug/L | | 96 |
| 103) n-Butylbenzene | 13.618 | 91 | 3011781 | 227.488 | ug/L | | 98 |
| 104) 1,2-Dichlorobenzene | 13.809 | 146 | 1942818 | 223.282 | ug/L | | 99 |
| 105) 1,2,4,5-Tetramethylben... | 14.426 | 119 | 3258200 | 225.639 | ug/L | | 97 |
| 106) 1,2-Dibromo-3-chloropr... | 14.671 | 155 | 112754 | 246.249 | ug/L | | 99 |
| 107) 1,3,5-Trichlorobenzene | 14.704 | 180 | 1061984 | 230.052 | ug/L | | 98 |
| 108) Hexachlorobutadiene | 15.337 | 225 | 321663 | 238.380 | ug/L | | 99 |
| 109) 1,2,4-Trichlorobenzene | 15.381 | 180 | 925129 | 226.029 | ug/L | | 98 |
| 110) Naphthalene | 15.741 | 128 | 1920365 | 209.150 | ug/L | | 100 |
| 111) 1,2,3-Trichlorobenzene | 15.953 | 180 | 698405 | 221.024 | ug/L | | 97 |

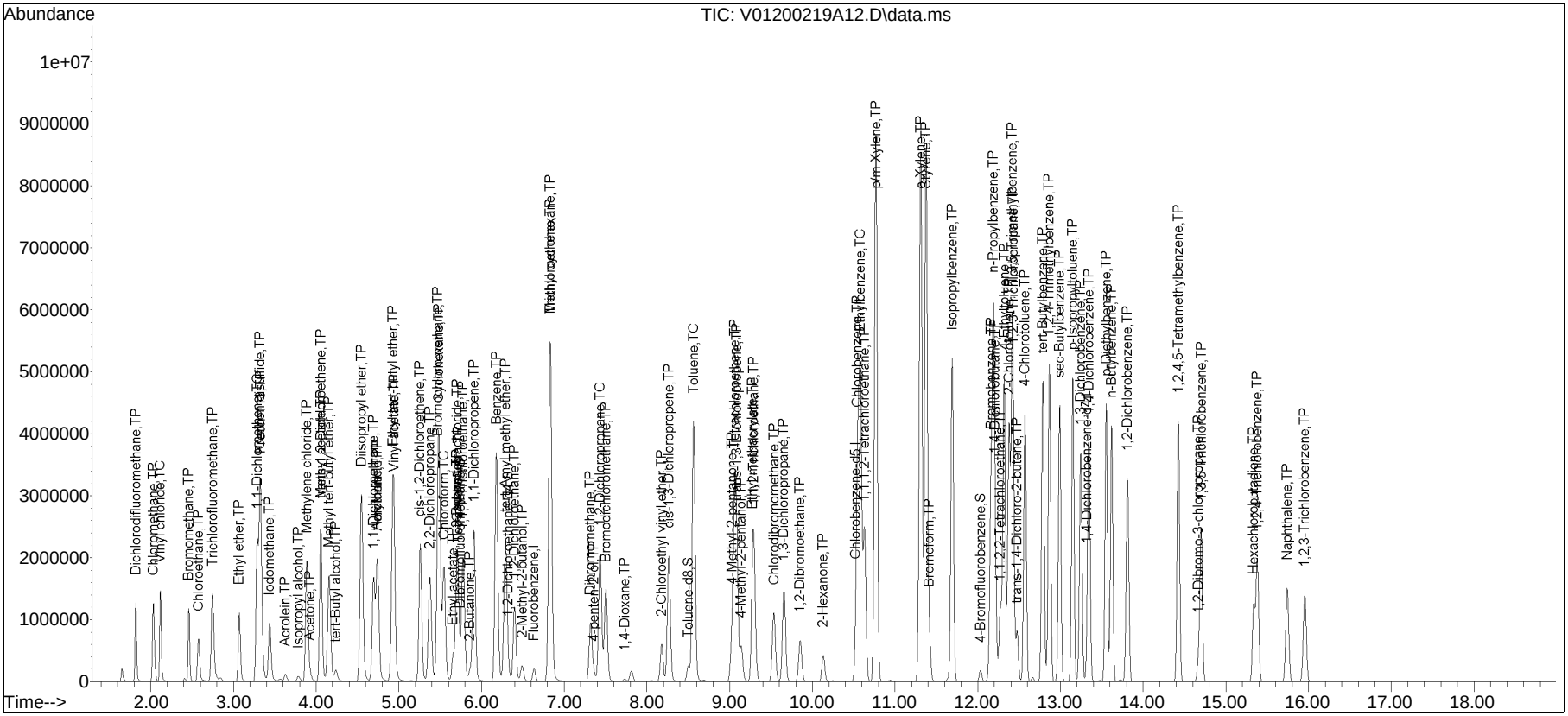
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : I:\VOLATILES\VOA101\2020\200219A\
Data File : V01200219A12.D
Acq On : 19 Feb 2020 5:59 pm
Operator : VOA101:KJD
Sample : I8260STD200PPB
Misc : WG1342454
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Feb 19 18:22:02 2020
Quant Method : I:\VOLATILES\VOA101\2020\200219A\V101_200219A_8260.m
Quant Title : VOLATILES BY GC/MS
QLast Update : Wed Feb 19 18:20:11 2020
Response via : Initial Calibration

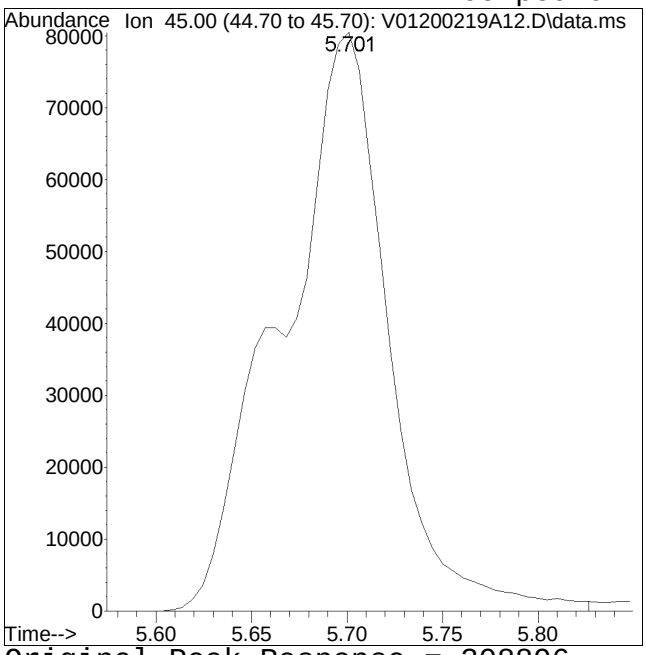
Sub List : 8260-CurveAlc - All compounds listed\V01200219A08.D•

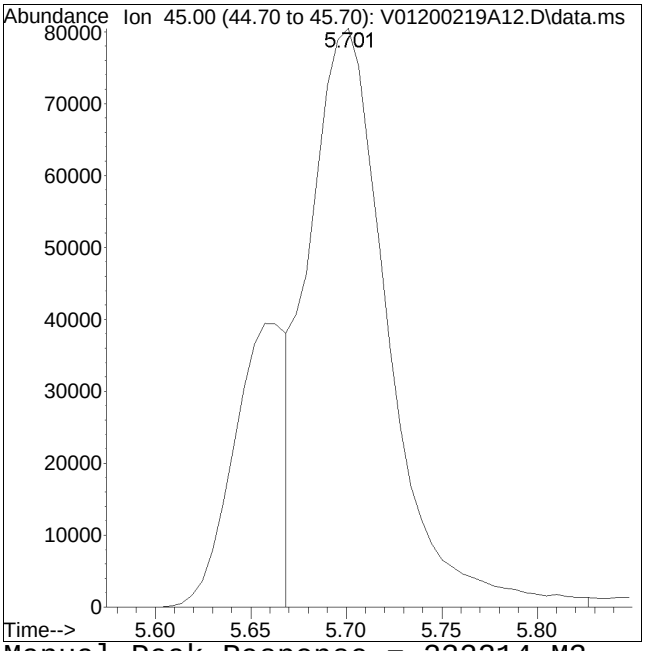


Manual Integration Report

Data Path : I:\VOLATILES\VOA101\2020\2QMethod : V101_200219A_8260.m
Data File : V01200219A12.D Operator : VOA101:KJD
Date Inj'd : 2/19/2020 5:59 pm Instrument : VOA 101
Sample : I8260STD200PPB Quant Date : 2/19/2020 6:20 pm

Compound #38: 2-Butanol



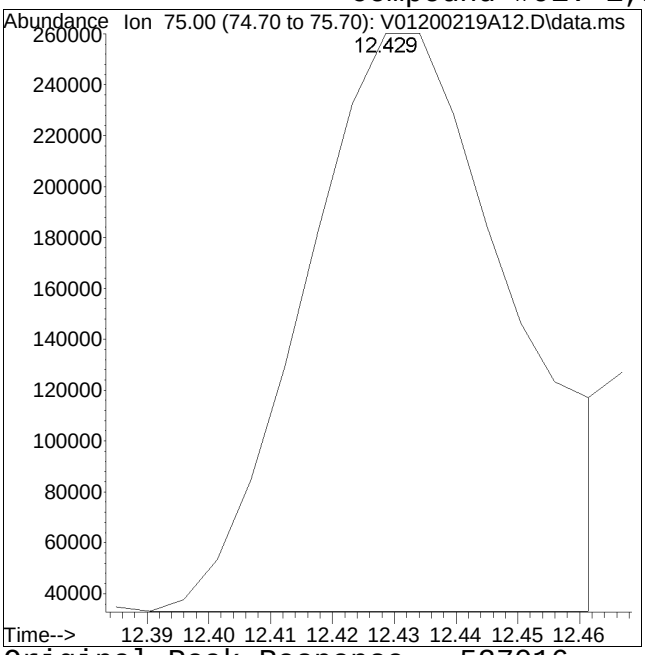




Original Peak Response = 308896 Manual Peak Response = 232214 M3
M3 = Misidentification of the peak (i.e. 1,4-dichlorobenzene identified as 1,3-dichlorobenzene), or misidentification from 2 partially resolved peaks not being split.

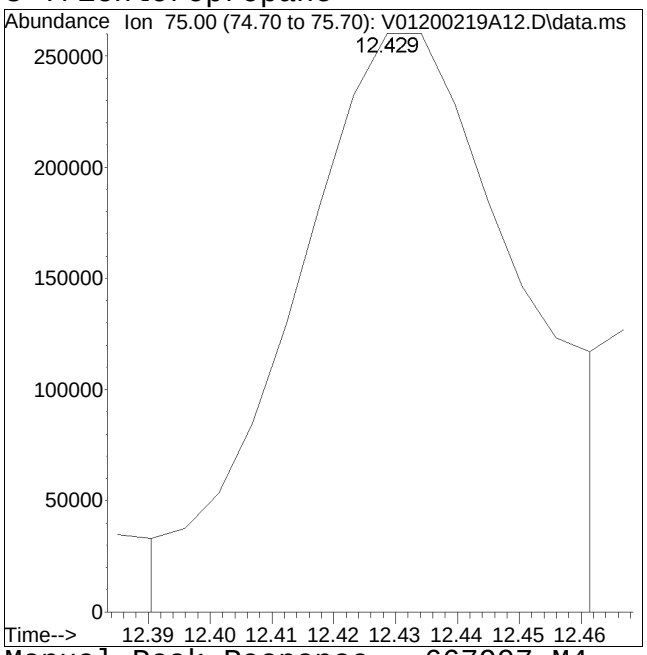
Manual Integration Report

Data Path : I:\VOLATILES\VOA101\2020\2QMethod : V101_200219A_8260.m
Data File : V01200219A12.D Operator : VOA101:KJD
Date Inj'd : 2/19/2020 5:59 pm Instrument : VOA 101
Sample : I8260STD200PPB Quant Date : 2/19/2020 6:20 pm

Compound #91: 1,2,3-Trichloropropane




Original Peak Response = 527016




Manual Peak Response = 667907 M4

M4 = Poor automated baseline construction.

Quantitation Report (QT Reviewed)

Data Path : I:\VOLATILES\VOA101\2020\200219A\
Data File : V01200219A18.D
Acq On : 19 Feb 2020 8:21 pm
Operator : VOA101:KJD
Sample : I8260STD0.15PPB
Misc : WG1342454
ALS Vial : 18 Sample Multiplier: 1

Quant Time: Feb 19 20:44:03 2020
Quant Method : I:\VOLATILES\VOA101\2020\200219A\V101_200219A_8260.m
Quant Title : VOLATILES BY GC/MS
QLast Update : Wed Feb 19 18:22:08 2020
Response via : Initial Calibration

CCAL FILE(s) : 1 - I:\VOLATILES\VOA101\2020\200219A\V01200219A08.D
Sub List : 8260-L11 - Level 11 for 8260-LRR product

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| Internal Standards | | | | | | |
| 1) Fluorobenzene | 6.634 | 96 | 204354 | 10.000 | ug/L | 0.00 |
| Standard Area 1 = 204276 | | | Recovery = 100.04% | | | |
| 59) Chlorobenzene-d5 | 10.524 | 117 | 147122 | 10.000 | ug/L | 0.00 |
| Standard Area 1 = 145309 | | | Recovery = 101.25% | | | |
| 79) 1,4-Dichlorobenzene-d4 | 13.323 | 152 | 70148 | 10.000 | ug/L | 0.00 |
| Standard Area 1 = 69187 | | | Recovery = 101.39% | | | |
| System Monitoring Compounds | | | | | | |
| 36) Dibromofluoromethane | 5.739 | 113 | 52962 | 10.065 | ug/L | 0.00 |
| Spiked Amount 10.000 | Range 70 - 130 | | Recovery = 100.65% | | | |
| 43) 1,2-Dichloroethane-d4 | 6.323 | 65 | 54733 | 9.643 | ug/L | 0.00 |
| Spiked Amount 10.000 | Range 70 - 130 | | Recovery = 96.43% | | | |
| 60) Toluene-d8 | 8.495 | 98 | 208367 | 9.903 | ug/L | 0.00 |
| Spiked Amount 10.000 | Range 70 - 130 | | Recovery = 99.03% | | | |
| 83) 4-Bromofluorobenzene | 12.030 | 95 | 77823 | 10.265 | ug/L | 0.00 |
| Spiked Amount 10.000 | Range 70 - 130 | | Recovery = 102.65% | | | |
| Target Compounds | | | | | | Qvalue |
| 4) Vinyl chloride | 2.122 | 62 | 811 | 0.116 | ug/L | 89 |
| 34) Carbon tetrachloride | 5.695 | 117 | 859 | 0.108 | ug/L # | 75 |
| 41) Benzene | 6.181 | 78 | 2657 | 0.123 | ug/L | 92 |
| 48) Trichloroethene | 6.830 | 95 | 748 | 0.127 | ug/L | 81 |

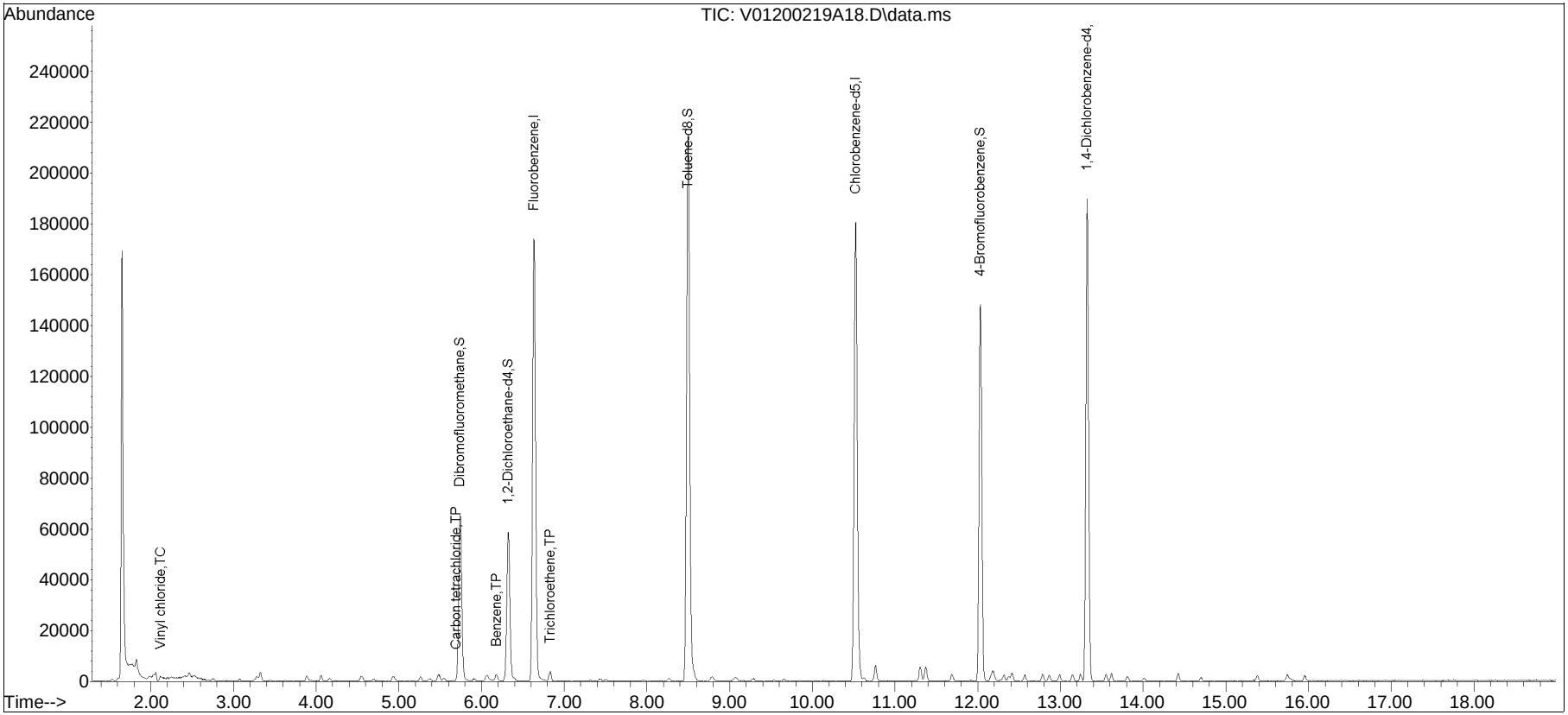
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : I:\VOLATILES\VOA101\2020\200219A\
Data File : V01200219A18.D
Acq On : 19 Feb 2020 8:21 pm
Operator : VOA101:KJD
Sample : I8260STD0.15PPB
Misc : WG1342454
ALS Vial : 18 Sample Multiplier: 1

Quant Time: Feb 19 20:44:03 2020
Quant Method : I:\VOLATILES\VOA101\2020\200219A\V101_200219A_8260.m
Quant Title : VOLATILES BY GC/MS
QLast Update : Wed Feb 19 18:22:08 2020
Response via : Initial Calibration

Sub List : 8260-L11 - Level 11 for 8260-LRR product200219A08.D•



Manual Integration Report

| | | | |
|---|---|---|---|
| Data Path | : I:\VOLATILES\VOA101\2020\2Q | Method | : V101_200219A_8260.m |
| Data File | : V01200219A18.D | Operator | : VOA101:KJD |
| Date Inj'd | : 2/19/2020 8:21 pm | Instrument | : VOA 101 |
| Sample | : I8260STD0.15PPB | Quant Date | : 2/19/2020 8:43 pm |

There are no manual integrations or false positives in this file.

# Evaluate Continuing Calibration Report

Data Path : I:\VOLATILES\VOA101\2020\200219A\
Data File : V01200219A20.D
Acq On : 19 Feb 2020 9:09 pm
Operator : VOA101:KJD
Sample : C8260STD10PPB
Misc : WG1342454
ALS Vial : 20 Sample Multiplier: 1

Quant Time: Feb 19 21:35:47 2020
Quant Method : I:\VOLATILES\VOA101\2020\200219A\V101_200219A_8260.m
Quant Title : VOLATILES BY GC/MS
QLast Update : Wed Feb 19 21:32:55 2020
Response via : Initial Calibration

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

| | | Compound | AvgRF | CCRF | %Dev | Area% | Dev(min) |
|---|---|---|---|---|---|---|---|
| 1 | I | Fluorobenzene | 1.000 | 1.000 | 0.0 | 101 | 0.00 |
| 2 | TP | Dichlorodifluoromethane | 0.180 | 0.156 | 13.3 | 87 | 0.00 |
| 3 | TP | Chloromethane | 0.273 | 0.263 | 3.7 | 99 | 0.00 |
| 4 | TC | Vinyl chloride | 0.255 | 0.246 | 3.5 | 98 | 0.00 |
| 5 | TP | Bromomethane | 0.104 | 0.115 | -10.6 | 132 | 0.00 |
| 6 | TP | Chloroethane | 0.148 | 0.150 | -1.4 | 99 | 0.00 |
| 7 | TP | Trichlorofluoromethane | 0.297 | 0.313 | -5.4 | 106 | 0.00 |
| 8 | TP | Ethyl ether | 0.085 | 0.092 | -8.2 | 107 | 0.00 |
| 10 | TC | 1,1-Dichloroethene | 0.182 | 0.183 | -0.5 | 100 | 0.00 |
| 11 | TP | Carbon disulfide | 0.492 | 0.507 | -3.0 | 107 | 0.00 |
| 12 | TP | Freon-113 | 0.179 | 0.199 | -11.2 | 110 | 0.00 |
| 13 | TP | Iodomethane | 0.239 | 0.157 | 34.3# | 68 | 0.00 |
| 14 | TP | Acrolein | 0.024 | 0.022# | 8.3 | 97 | 0.00 |
| 15 | TP | Methylene chloride | 0.190 | 0.188 | 1.1 | 100 | 0.00 |
| 16 | TP | Isopropyl alcohol | 0.00640 | 0.00567# | 11.4 | 88 | 0.00 |
| 17 | TP | Acetone | * 10.000 | 8.646 | 13.5 | 90 | 0.00 |
| 18 | TP | trans-1,2-Dichloroethene | 0.193 | 0.200 | -3.6 | 105 | 0.00 |
| 19 | TP | Methyl acetate | 0.095 | 0.096# | -1.1 | 100 | 0.00 |
| 20 | TP | Methyl tert-butyl ether | 0.412 | 0.415 | -0.7 | 102 | 0.00 |
| 21 | TP | tert-Butyl alcohol | 0.00992 | 0.01041# | -4.9 | 100 | 0.00 |
| 22 | TP | Diisopropyl ether | 0.716 | 0.759 | -6.0 | 104 | 0.00 |
| 23 | TP | 1,1-Dichloroethane | 0.415 | 0.411 | 1.0 | 98 | 0.00 |
| 24 | TP | Halothane | 0.156 | 0.164 | -5.1 | 105 | 0.00 |
| 25 | TP | Acrylonitrile | 0.042 | 0.045# | -7.1 | 103 | 0.01 |
| 26 | TP | Ethyl tert-butyl ether | 0.633 | 0.653 | -3.2 | 103 | 0.00 |
| 27 | TP | Vinyl acetate | 0.419 | 0.366 | 12.6 | 89 | 0.00 |
| 28 | TP | cis-1,2-Dichloroethene | 0.230 | 0.212 | 7.8 | 94 | 0.00 |
| 29 | TP | 2,2-Dichloropropane | 0.289 | 0.272 | 5.9 | 94 | 0.00 |
| 30 | TP | Bromochloromethane | 0.088 | 0.094 | -6.8 | 103 | 0.00 |
| 31 | TP | Cyclohexane | 0.438 | 0.461 | -5.3 | 106 | 0.00 |
| 32 | TC | Chloroform | 0.361 | 0.366 | -1.4 | 104 | 0.00 |
| 33 | TP | Ethyl acetate | 0.136 | 0.126 | 7.4 | 99 | 0.00 |
| 34 | TP | Carbon tetrachloride | 0.291 | 0.297 | -2.1 | 102 | 0.00 |
| 35 | TP | Tetrahydrofuran | 0.038 | 0.038# | 0.0 | 100 | 0.00 |
| 36 | S | Dibromofluoromethane | 0.258 | 0.262 | -1.6 | 102 | 0.00 |
| 37 | TP | 1,1,1-Trichloroethane | 0.338 | 0.340 | -0.6 | 102 | 0.00 |
| 38 | TP | 2-Butanol | 0.00940 | 0.00739# | 21.4# | 86 | 0.00 |
| 39 | TP | 2-Butanone | 0.055 | 0.048# | 12.7 | 86 | 0.00 |
| 40 | TP | 1,1-Dichloropropene | 0.289 | 0.290 | -0.3 | 101 | 0.00 |

Data Path : I:\VOLATILES\VOA101\2020\200219A\
Data File : V01200219A20.D
Acq On : 19 Feb 2020 9:09 pm
Operator : VOA101:KJD
Sample : C8260STD10PPB
Misc : WG1342454
ALS Vial : 20 Sample Multiplier: 1

Quant Time: Feb 19 21:35:47 2020
Quant Method : I:\VOLATILES\VOA101\2020\200219A\V101_200219A_8260.m
Quant Title : VOLATILES BY GC/MS
QLast Update : Wed Feb 19 21:32:55 2020
Response via : Initial Calibration

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

| | | Compound | AvgRF | CCRF | %Dev | Area% | Dev(min) |
|---|---|---|---|---|---|---|---|
| 41 | TP | Benzene | 0.799 | 0.785 | 1.8 | 100 | 0.00 |
| 42 | TP | tert-Amyl methyl ether | 0.471 | 0.474 | -0.6 | 102 | 0.00 |
| 43 | S | 1,2-Dichloroethane-d4 | 0.276 | 0.267 | 3.3 | 99 | 0.00 |
| 44 | TP | 1,2-Dichloroethane | 0.251 | 0.243 | 3.2 | 97 | 0.00 |
| 46 | TP | 2-Methyl-2-butanol | 0.00868 | 0.00821# | 5.4 | 92 | 0.00 |
| 47 | TP | Methyl cyclohexane | 0.327 | 0.324 | 0.9 | 101 | 0.00 |
| 48 | TP | Trichloroethene | 0.220 | 0.216 | 1.8 | 101 | 0.00 |
| 50 | TP | Dibromomethane | 0.095 | 0.092 | 3.2 | 99 | 0.00 |
| 51 | TC | 1,2-Dichloropropane | 0.227 | 0.226 | 0.4 | 99 | 0.00 |
| 52 | TP | 4-penten-2-ol | 0.00680 | 0.00607# | 10.7 | 91 | 0.00 |
| 53 | TP | 2-Chloroethyl vinyl ether | 0.070 | 0.052 | 25.7# | 92 | 0.00 |
| 54 | TP | Bromodichloromethane | 0.262 | 0.258 | 1.5 | 101 | 0.00 |
| 57 | TP | 1,4-Dioxane | 0.00093 | 0.00084# | 9.7 | 90 | 0.00 |
| 58 | TP | cis-1,3-Dichloropropene | 0.322 | 0.304 | 5.6 | 97 | 0.00 |
| 59 | I | Chlorobenzene-d5 | 1.000 | 1.000 | 0.0 | 101 | 0.00 |
| 60 | S | Toluene-d8 | 1.429 | 1.437 | -0.6 | 101 | 0.00 |
| 61 | TC | Toluene | 0.722 | 0.729 | -1.0 | 102 | 0.00 |
| 62 | TP | 4-Methyl-2-pentanone | 0.066 | 0.059# | 10.6 | 87 | 0.00 |
| 63 | TP | Tetrachloroethene | 0.308 | 0.313 | -1.6 | 103 | 0.00 |
| 65 | TP | trans-1,3-Dichloropropene | 0.379 | 0.347 | 8.4 | 95 | 0.00 |
| 66 | TP | 4-Methyl-2-pentanol | 0.036 | 0.033# | 8.3 | 93 | 0.00 |
| 67 | TP | Ethyl methacrylate | 0.252 | 0.260 | -3.2 | 107 | 0.00 |
| 68 | TP | 1,1,2-Trichloroethane | 0.165 | 0.160 | 3.0 | 96 | 0.00 |
| 69 | TP | Chlorodibromomethane | 0.242 | 0.235 | 2.9 | 100 | 0.00 |
| 70 | TP | 1,3-Dichloropropane | 0.350 | 0.343 | 2.0 | 100 | 0.00 |
| 71 | TP | 1,2-Dibromoethane | 0.191 | 0.187 | 2.1 | 101 | 0.00 |
| 72 | TP | 2-Hexanone | 0.124 | 0.099# | 20.2# | 87 | 0.00 |
| 73 | TP | Chlorobenzene | 0.772 | 0.781 | -1.2 | 103 | 0.00 |
| 74 | TC | Ethylbenzene | 1.353 | 1.388 | -2.6 | 104 | 0.00 |
| 75 | TP | 1,1,1,2-Tetrachloroethane | 0.281 | 0.284 | -1.1 | 105 | 0.00 |
| 76 | TP | p/m Xylene | 0.525 | 0.540 | -2.9 | 104 | 0.00 |
| 77 | TP | o Xylene | 0.491 | 0.515 | -4.9 | 106 | 0.00 |
| 78 | TP | Styrene | 0.823 | 0.839 | -1.9 | 104 | 0.00 |
| 79 | I | 1,4-Dichlorobenzene-d4 | 1.000 | 1.000 | 0.0 | 102 | 0.00 |
| 80 | TP | Bromoform | 0.253 | 0.260 | -2.8 | 101 | 0.00 |
| 82 | TP | Isopropylbenzene | 2.604 | 2.695 | -3.5 | 101 | 0.00 |
| 83 | S | 4-Bromofluorobenzene | 1.078 | 1.115 | -3.4 | 102 | 0.00 |

Evaluate Continuing Calibration Report

Data Path : I:\VOLATILES\VOA101\2020\200219A\
Data File : V01200219A20.D
Acq On : 19 Feb 2020 9:09 pm
Operator : VOA101:KJD
Sample : C8260STD10PPB
Misc : WG1342454
ALS Vial : 20 Sample Multiplier: 1

Quant Time: Feb 19 21:35:47 2020
Quant Method : I:\VOLATILES\VOA101\2020\200219A\V101_200219A_8260.m
Quant Title : VOLATILES BY GC/MS
QLast Update : Wed Feb 19 21:32:55 2020
Response via : Initial Calibration

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

| | Compound | AvgRF | CCRF | %Dev | Area% | Dev(min) |
|---|---|---|---|---|---|---|
| 84 TP | Bromobenzene | 0.582 | 0.612 | -5.2 | 104 | 0.00 |
| 85 TP | n-Propylbenzene | 2.817 | 2.963 | -5.2 | 103 | 0.00 |
| 86 TP | 1,4-Dichlorobutane | 0.749 | 0.815 | -8.8 | 109 | 0.00 |
| 87 TP | 1,1,2,2-Tetrachloroethane | 0.395 | 0.397 | -0.5 | 101 | 0.00 |
| 88 TP | 4-Ethyltoluene | 2.304 | 2.539 | -10.2 | 109 | 0.00 |
| 89 TP | 2-Chlorotoluene | 1.870 | 1.949 | -4.2 | 104 | 0.00 |
| 90 TP | 1,3,5-Trimethylbenzene | 2.016 | 2.070 | -2.7 | 102 | 0.00 |
| 91 TP | 1,2,3-Trichloropropane | 0.376 | 0.361 | 4.0 | 93 | 0.00 |
| 92 TP | trans-1,4-Dichloro-2-butene | 0.121 | 0.117 | 3.3 | 95 | 0.00 |
| 93 TP | 4-Chlorotoluene | 1.787 | 1.834 | -2.6 | 102 | 0.00 |
| 94 TP | tert-Butylbenzene | 1.705 | 1.790 | -5.0 | 104 | 0.00 |
| 97 TP | 1,2,4-Trimethylbenzene | 1.987 | 2.080 | -4.7 | 106 | 0.00 |
| 98 TP | sec-Butylbenzene | 2.124 | 2.315 | -9.0 | 111 | 0.00 |
| 99 TP | p-Isopropyltoluene | 1.965 | 1.998 | -1.7 | 104 | 0.00 |
| 100 TP | 1,3-Dichlorobenzene | 1.085 | 1.108 | -2.1 | 104 | 0.00 |
| 101 TP | 1,4-Dichlorobenzene | 1.099 | 1.092 | 0.6 | 103 | 0.00 |
| 102 TP | p-Diethylbenzene | 1.053 | 1.054 | -0.1 | 104 | 0.00 |
| 103 TP | n-Butylbenzene | 1.457 | 1.437 | 1.4 | 104 | 0.00 |
| 104 TP | 1,2-Dichlorobenzene | 0.955 | 0.940 | 1.6 | 103 | 0.00 |
| 105 TP | 1,2,4,5-Tetramethylbenzene | 1.587 | 1.592 | -0.3 | 106 | 0.00 |
| 106 TP | 1,2-Dibromo-3-chloropropane * | 10.000 | 9.623 | 3.8 | 99 | 0.00 |
| 107 TP | 1,3,5-Trichlorobenzene | 0.509 | 0.472 | 7.3 | 98 | 0.00 |
| 108 TP | Hexachlorobutadiene | 0.150 | 0.138 | 8.0 | 103 | 0.00 |
| 109 TP | 1,2,4-Trichlorobenzene | 0.450 | 0.420 | 6.7 | 106 | 0.00 |
| 110 TP | Naphthalene | 0.998 | 0.867 | 13.1 | 104 | 0.00 |
| 111 TP | 1,2,3-Trichlorobenzene | 0.346 | 0.324 | 6.4 | 107 | 0.00 |

* Evaluation of CC level amount vs concentration.
(#) = Out of Range SPCC's out = 14 CCC's out = 0

Quantitation Report (QT Reviewed)

Data Path : I:\VOLATILES\VOA101\2020\200219A\
Data File : V01200219A20.D
Acq On : 19 Feb 2020 9:09 pm
Operator : VOA101:KJD
Sample : C8260STD10PPB
Misc : WG1342454
ALS Vial : 20 Sample Multiplier: 1

Quant Time: Feb 19 21:35:47 2020
Quant Method : I:\VOLATILES\VOA101\2020\200219A\V101_200219A_8260.m
Quant Title : VOLATILES BY GC/MS
QLast Update : Wed Feb 19 21:32:55 2020
Response via : Initial Calibration

CCAL FILE(s) : 1 - I:\VOLATILES\VOA101\2020\200219A\V01200219A08.D
Sub List : 8260-CurveAlc - All compounds listed

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| Internal Standards | | | | | | |
| 1) Fluorobenzene | 6.634 | 96 | 206410 | 10.000 | ug/L | 0.00 |
| Standard Area 1 = 204276 | | | Recovery = 101.04% | | | |
| 59) Chlorobenzene-d5 | 10.524 | 117 | 146058 | 10.000 | ug/L | 0.00 |
| Standard Area 1 = 145309 | | | Recovery = 100.52% | | | |
| 79) 1,4-Dichlorobenzene-d4 | 13.323 | 152 | 70352 | 10.000 | ug/L | 0.00 |
| Standard Area 1 = 69187 | | | Recovery = 101.68% | | | |
| System Monitoring Compounds | | | | | | |
| 36) Dibromofluoromethane | 5.739 | 113 | 53996 | 10.155 | ug/L | 0.00 |
| Spiked Amount 10.000 | Range 70 - 130 | | Recovery = 101.55% | | | |
| 43) 1,2-Dichloroethane-d4 | 6.323 | 65 | 55105 | 9.669 | ug/L | 0.00 |
| Spiked Amount 10.000 | Range 70 - 130 | | Recovery = 96.69% | | | |
| 60) Toluene-d8 | 8.500 | 98 | 209813 | 10.055 | ug/L | 0.00 |
| Spiked Amount 10.000 | Range 70 - 130 | | Recovery = 100.55% | | | |
| 83) 4-Bromofluorobenzene | 12.030 | 95 | 78450 | 10.345 | ug/L | 0.00 |
| Spiked Amount 10.000 | Range 70 - 130 | | Recovery = 103.45% | | | |
| Target Compounds | | | | | | Qvalue |
| 2) Dichlorodifluoromethane | 1.821 | 85 | 32154 | 8.649 | ug/L | 99 |
| 3) Chloromethane | 2.034 | 50 | 54334 | 9.658 | ug/L | 99 |
| 4) Vinyl chloride | 2.116 | 62 | 50838 | 9.668 | ug/L | 100 |
| 5) Bromomethane | 2.465 | 94 | 23691 | 11.086 | ug/L | 99 |
| 6) Chloroethane | 2.596 | 64 | 30894 | 10.128 | ug/L | 99 |
| 7) Trichlorofluoromethane | 2.754 | 101 | 64629 | 10.538 | ug/L | 99 |
| 8) Ethyl ether | 3.076 | 74 | 18921 | 10.810 | ug/L | 83 |
| 10) 1,1-Dichloroethene | 3.289 | 96 | 37705 | 10.053 | ug/L | 89 |
| 11) Carbon disulfide | 3.327 | 76 | 104570 | 10.289 | ug/L | 99 |
| 12) Freon-113 | 3.333 | 101 | 41053 | 11.097 | ug/L | 94 |
| 13) Iodomethane | 3.442 | 142 | 32509 | 6.579 | ug/L | 98 |
| 14) Acrolein | 3.627 | 56 | 4559 | 9.382 | ug/L | 97 |
| 15) Methylene chloride | 3.889 | 84 | 38886 | 9.933 | ug/L | 89 |
| 16) Isopropyl alcohol | 3.786 | 45 | 5855 | 44.350 | ug/L # | 90 |
| 17) Acetone | 3.928 | 43 | 7006 | 8.646 | ug/L | 93 |
| 18) trans-1,2-Dichloroethene | 4.059 | 96 | 41336 | 10.356 | ug/L | 89 |
| 19) Methyl acetate | 4.059 | 43 | 19840 | 10.163 | ug/L # | 89 |
| 20) Methyl tert-butyl ether | 4.157 | 73 | 85682 | 10.087 | ug/L | 94 |
| 21) tert-Butyl alcohol | 4.239 | 59 | 10745 | 52.453 | ug/L # | 89 |
| 22) Diisopropyl ether | 4.550 | 45 | 156571 | 10.598 | ug/L | 93 |
| 23) 1,1-Dichloroethane | 4.697 | 63 | 84902 | 9.908 | ug/L | 98 |

Data Path : I:\VOLATILES\VOA101\2020\200219A\
Data File : V01200219A20.D
Acq On : 19 Feb 2020 9:09 pm
Operator : VOA101:KJD
Sample : C8260STD10PPB
Misc : WG1342454
ALS Vial : 20 Sample Multiplier: 1

Quant Time: Feb 19 21:35:47 2020
Quant Method : I:\VOLATILES\VOA101\2020\200219A\V101_200219A_8260.m
Quant Title : VOLATILES BY GC/MS
QLast Update : Wed Feb 19 21:32:55 2020
Response via : Initial Calibration

CCAL FILE(s) : 1 - I:\VOLATILES\VOA101\2020\200219A\V01200219A08.D
Sub List : 8260-CurveAlc - All compounds listed

| Compound | R.T. | QIon | Response | Conc | Units | | Dev(Min) |
|---|---|---|---|---|---|---|---|
| 24) Halothane | 4.746 | 117 | 33852 | 10.518 | ug/L | | 99 |
| 25) Acrylonitrile | 4.746 | 53 | 9293 | 10.743 | ug/L | | 94 |
| 26) Ethyl tert-butyl ether | 4.932 | 59 | 134769 | 10.320 | ug/L | | 90 |
| 27) Vinyl acetate | 4.942 | 43 | 75450 | 8.719 | ug/L | | 98 |
| 28) cis-1,2-Dichloroethene | 5.259 | 96 | 43860 | 9.254 | ug/L | | 88 |
| 29) 2,2-Dichloropropane | 5.379 | 77 | 56110 | 9.414 | ug/L | | 99 |
| 30) Bromochloromethane | 5.472 | 128 | 19316 | 10.635 | ug/L | | 89 |
| 31) Cyclohexane | 5.488 | 56 | 95075 | 10.513 | ug/L | | 89 |
| 32) Chloroform | 5.548 | 83 | 75564 | 10.132 | ug/L | | 97 |
| 33) Ethyl acetate | 5.657 | 43 | 26059 | 9.316 | ug/L | | 95 |
| 34) Carbon tetrachloride | 5.706 | 117 | 61322 | 10.193 | ug/L | | 96 |
| 35) Tetrahydrofuran | 5.723 | 42 | 7815 | 10.023 | ug/L | | 97 |
| 37) 1,1,1-Trichloroethane | 5.777 | 97 | 70260 | 10.082 | ug/L | | 98 |
| 38) 2-Butanol | 5.706 | 45 | 7627 | 39.328 | ug/L | # | 80 |
| 39) 2-Butanone | 5.859 | 43 | 9871 | 8.671 | ug/L | # | 43 |
| 40) 1,1-Dichloropropene | 5.908 | 75 | 59930 | 10.039 | ug/L | | 98 |
| 41) Benzene | 6.181 | 78 | 162090 | 9.829 | ug/L | | 95 |
| 42) tert-Amyl methyl ether | 6.290 | 73 | 97826 | 10.054 | ug/L | | 95 |
| 44) 1,2-Dichloroethane | 6.399 | 62 | 50179 | 9.693 | ug/L | | 98 |
| 46) 2-Methyl-2-butanol | 6.492 | 59 | 8478 | 47.345 | ug/L | | 95 |
| 47) Methyl cyclohexane | 6.825 | 83 | 66961 | 9.931 | ug/L | | 82 |
| 48) Trichloroethene | 6.830 | 95 | 44528 | 9.798 | ug/L | | 98 |
| 50) Dibromomethane | 7.316 | 93 | 19058 | 9.744 | ug/L | | 96 |
| 51) 1,2-Dichloropropane | 7.431 | 63 | 46603 | 9.933 | ug/L | | 95 |
| 52) 4-penten-2-ol | 7.365 | 45 | 6264 | 44.644 | ug/L | # | 1 |
| 53) 2-Chloroethyl vinyl ether | 8.178 | 63 | 10701 | 7.414 | ug/L | | 94 |
| 54) Bromodichloromethane | 7.507 | 83 | 53164 | 9.843 | ug/L | | 99 |
| 57) 1,4-Dioxane | 7.731 | 88 | 8714 | 454.477 | ug/L | # | 86 |
| 58) cis-1,3-Dichloropropene | 8.260 | 75 | 62805 | 9.456 | ug/L | | 99 |
| 61) Toluene | 8.566 | 92 | 106434 | 10.096 | ug/L | | 96 |
| 62) 4-Methyl-2-pentanone | 9.024 | 58 | 8566 | 8.916 | ug/L | | 95 |
| 63) Tetrachloroethene | 9.062 | 166 | 45662 | 10.140 | ug/L | | 99 |
| 65) trans-1,3-Dichloropropene | 9.084 | 75 | 50747 | 9.169 | ug/L | | 89 |
| 66) 4-Methyl-2-pentanol | 9.144 | 45 | 24149 | 46.328 | ug/L | | 96 |
| 67) Ethyl methacrylate | 9.280 | 69 | 37995 | 10.338 | ug/L | | 95 |
| 68) 1,1,2-Trichloroethane | 9.291 | 83 | 23327 | 9.678 | ug/L | | 96 |
| 69) Chlorodibromomethane | 9.531 | 129 | 34384 | 9.720 | ug/L | | 97 |
| 70) 1,3-Dichloropropane | 9.657 | 76 | 50096 | 9.807 | ug/L | | 99 |
| 71) 1,2-Dibromoethane | 9.853 | 107 | 27352 | 9.813 | ug/L | | 100 |
| 72) 2-Hexanone | 10.131 | 43 | 14495 | 7.990 | ug/L | | 96 |

Quantitation Report (QT Reviewed)

Data Path : I:\VOLATILES\VOA101\2020\200219A\
Data File : V01200219A20.D
Acq On : 19 Feb 2020 9:09 pm
Operator : VOA101:KJD
Sample : C8260STD10PPB
Misc : WG1342454
ALS Vial : 20 Sample Multiplier: 1

Quant Time: Feb 19 21:35:47 2020
Quant Method : I:\VOLATILES\VOA101\2020\200219A\V101_200219A_8260.m
Quant Title : VOLATILES BY GC/MS
QLast Update : Wed Feb 19 21:32:55 2020
Response via : Initial Calibration

CCAL FILE(s) : 1 - I:\VOLATILES\VOA101\2020\200219A\V01200219A08.D
Sub List : 8260-CurveAlc - All compounds listed

| Compound | R.T. | QIon | Response | Conc | Units | | Dev(Min) |
|---|---|---|---|---|---|---|---|
| 73) Chlorobenzene | 10.546 | 112 | 114059 | 10.120 | ug/L | | 98 |
| 74) Ethylbenzene | 10.579 | 91 | 202790 | 10.265 | ug/L | | 98 |
| 75) 1,1,1,2-Tetrachloroethane | 10.628 | 131 | 41546 | 10.123 | ug/L | | 99 |
| 76) p/m Xylene | 10.764 | 106 | 157620 | 20.555 | ug/L | | 97 |
| 77) o Xylene | 11.305 | 106 | 150545 | 20.991 | ug/L | | 97 |
| 78) Styrene | 11.370 | 104 | 245033 | 20.381 | ug/L | | 99 |
| 80) Bromoform | 11.408 | 173 | 18316 | 10.273 | ug/L | | 99 |
| 82) Isopropylbenzene | 11.687 | 105 | 189629 | 10.353 | ug/L | | 100 |
| 84) Bromobenzene | 12.161 | 156 | 43043 | 10.508 | ug/L | | 99 |
| 85) n-Propylbenzene | 12.183 | 91 | 208476 | 10.520 | ug/L | | 98 |
| 86) 1,4-Dichlorobutane | 12.210 | 55 | 57349 | 10.890 | ug/L | | 97 |
| 87) 1,1,2,2-Tetrachloroethane | 12.270 | 83 | 27898 | 10.030 | ug/L | | 98 |
| 88) 4-Ethyltoluene | 12.314 | 105 | 178596 | 11.020 | ug/L | | 100 |
| 89) 2-Chlorotoluene | 12.374 | 91 | 137123 | 10.422 | ug/L | | 95 |
| 90) 1,3,5-Trimethylbenzene | 12.412 | 105 | 145651 | 10.270 | ug/L | | 100 |
| 91) 1,2,3-Trichloropropane | 12.429 | 75 | 25396M3 | 9.600 | ug/L | | |
| 92) trans-1,4-Dichloro-2-b... | 12.472 | 53 | 8258 | 9.733 | ug/L | # | 16 |
| 93) 4-Chlorotoluene | 12.565 | 91 | 129046 | 10.265 | ug/L | | 96 |
| 94) tert-Butylbenzene | 12.783 | 119 | 125951 | 10.500 | ug/L | | 97 |
| 97) 1,2,4-Trimethylbenzene | 12.865 | 105 | 146331 | 10.469 | ug/L | | 99 |
| 98) sec-Butylbenzene | 12.985 | 105 | 162886 | 10.901 | ug/L | | 99 |
| 99) p-Isopropyltoluene | 13.143 | 119 | 140595 | 10.169 | ug/L | | 97 |
| 100) 1,3-Dichlorobenzene | 13.242 | 146 | 77925 | 10.213 | ug/L | | 98 |
| 101) 1,4-Dichlorobenzene | 13.340 | 146 | 76801 | 9.934 | ug/L | | 98 |
| 102) p-Diethylbenzene | 13.553 | 119 | 74131 | 10.004 | ug/L | | 97 |
| 103) n-Butylbenzene | 13.618 | 91 | 101088 | 9.862 | ug/L | | 98 |
| 104) 1,2-Dichlorobenzene | 13.809 | 146 | 66109 | 9.842 | ug/L | | 98 |
| 105) 1,2,4,5-Tetramethylben... | 14.426 | 119 | 111996 | 10.030 | ug/L | | 97 |
| 106) 1,2-Dibromo-3-chloropr... | 14.671 | 155 | 3367 | 9.623 | ug/L | | 98 |
| 107) 1,3,5-Trichlorobenzene | 14.698 | 180 | 33198 | 9.272 | ug/L | | 98 |
| 108) Hexachlorobutadiene | 15.337 | 225 | 9698 | 9.212 | ug/L | | 99 |
| 109) 1,2,4-Trichlorobenzene | 15.375 | 180 | 29517 | 9.324 | ug/L | | 96 |
| 110) Naphthalene | 15.741 | 128 | 60976 | 8.689 | ug/L | | 100 |
| 111) 1,2,3-Trichlorobenzene | 15.953 | 180 | 22779 | 9.353 | ug/L | | 98 |

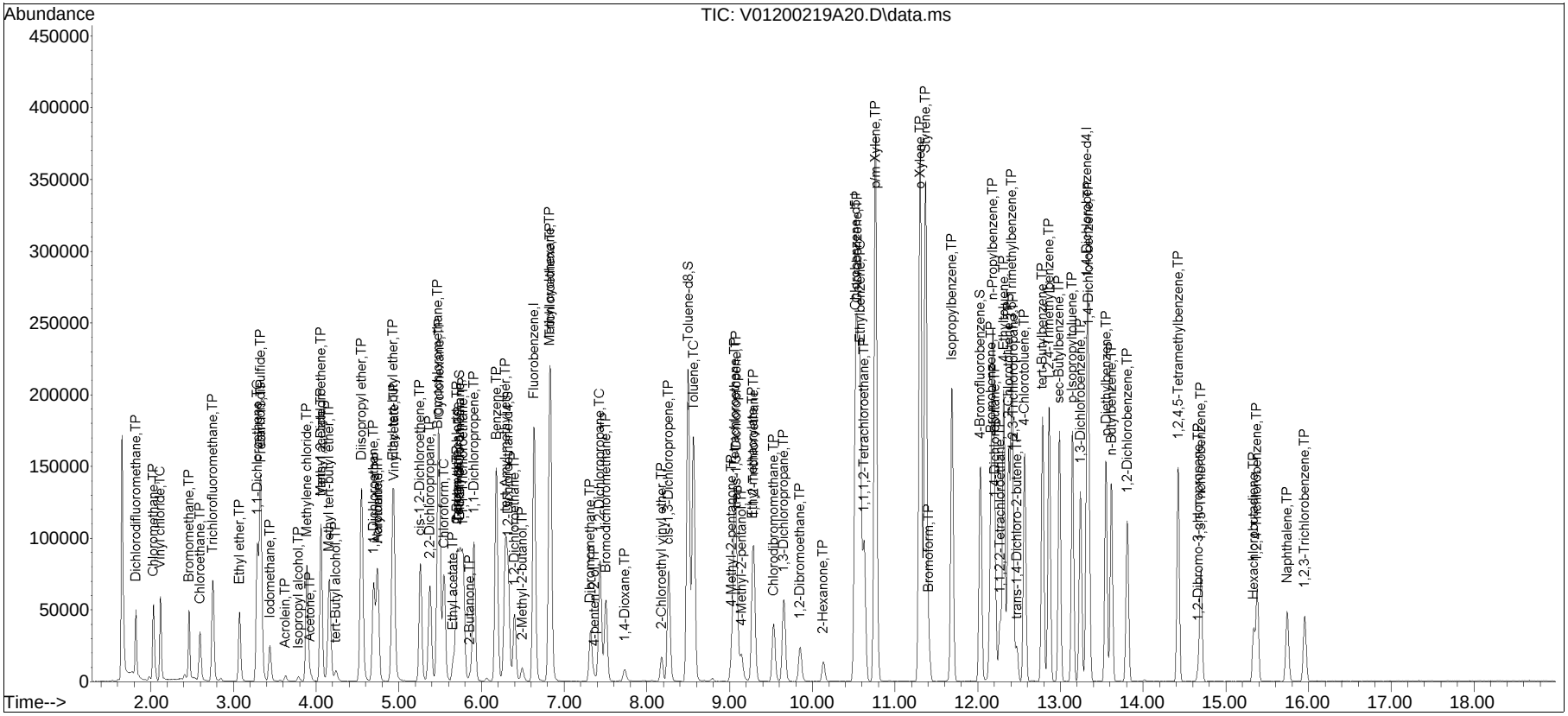
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : I:\VOLATILES\VOA101\2020\200219A\
Data File : V01200219A20.D
Acq On : 19 Feb 2020 9:09 pm
Operator : VOA101:KJD
Sample : C8260STD10PPB
Misc : WG1342454
ALS Vial : 20 Sample Multiplier: 1

Quant Time: Feb 19 21:35:47 2020
Quant Method : I:\VOLATILES\VOA101\2020\200219A\V101_200219A_8260.m
Quant Title : VOLATILES BY GC/MS
QLast Update : Wed Feb 19 21:32:55 2020
Response via : Initial Calibration

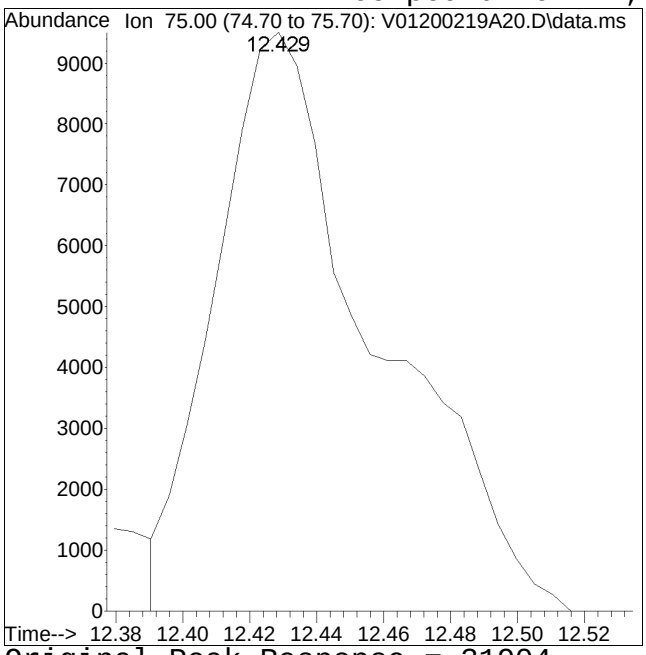
Sub List : 8260-CurveAlc - All compounds listed\V01200219A08.D•

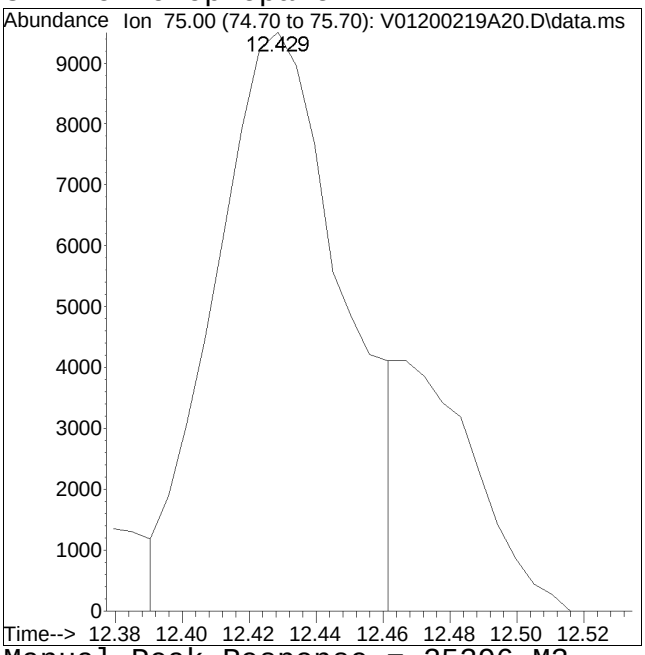


# Manual Integration Report

Data Path : I:\VOLATILES\VOA101\2020\2QMethod : V101_200219A_8260.m
Data File : V01200219A20.D Operator : VOA101:KJD
Date Inj'd : 2/19/2020 9:09 pm Instrument : VOA 101
Sample : C8260STD10PPB Quant Date : 2/19/2020 9:34 pm

## Compound #91: 1,2,3-Trichloropropane




Original Peak Response = 31904 Manual Peak Response = 25396 M3

M3 = Misidentification of the peak (i.e. 1,4-dichlorobenzene identified as 1,3-dichlorobenzene), or misidentification from 2 partially resolved peaks not being split.

# Continuing Calibration

# Calibration Verification Summary
# Form 7
# Volatiles

| | | | | | |
|---|---|---|---|---|---|
| **Client** | : Soils Engineering Services, Inc. | **Lab Number** | : L2009793 | | |
| **Project Name** | : GROSSINGERS | **Project Number** | : 9313 | | |
| **Instrument ID** | : VOA122 | **Calibration Date** | : 03/06/20 09:46 | | |
| **Lab File ID** | : V22200306A01 | **Init. Calib. Date(s)** | : 12/19/19 | 12/19/19 | |
| **Sample No** | : WG1348135-2 | **Init. Calib. Times** | : 15:43 | 19:28 | |
| **Channel** | : | | | | |

| Compound | Ave. RRF | RRF | Min RRF | %D | Max %D | Area% | Dev(min) |
|---|---|---|---|---|---|---|---|
| Fluorobenzene | 1 | 1 | - | 0 | 20 | 78 | 0 |
| Dichlorodifluoromethane | 0.172 | 0.162 | - | 5.8 | 20 | 67 | 0 |
| Chloromethane | 0.227 | 0.231 | - | -1.8 | 20 | 74 | 0 |
| Vinyl chloride | 0.255 | 0.226 | - | 11.4 | 20 | 63 | 0 |
| Bromomethane | 10 | 3.068 | - | 69.3* | 20 | 24 | 0 |
| Chloroethane | 0.184 | 0.143 | - | 22.3* | 20 | 53 | 0 |
| Trichlorofluoromethane | 0.348 | 0.387 | - | -11.2 | 20 | 78 | 0 |
| Ethyl ether | 0.103 | 0.097 | - | 5.8 | 20 | 71 | 0 |
| 1,1-Dichloroethene | 0.196 | 0.187 | - | 4.6 | 20 | 67 | 0 |
| Carbon disulfide | 0.512 | 0.551 | - | -7.6 | 20 | 77 | 0 |
| Freon-113 | 0.215 | 0.197 | - | 8.4 | 20 | 64 | 0 |
| Iodomethane | 10 | 2.656 | - | 73.4* | 20 | 13 | 0 |
| Acrolein | 0.03 | 0.026* | - | 13.3 | 20 | 67 | 0 |
| Methylene chloride | 0.222 | 0.216 | - | 2.7 | 20 | 72 | 0 |
| Acetone | 0.057 | 0.047* | - | 17.5 | 20 | 67 | 0 |
| trans-1,2-Dichloroethene | 0.211 | 0.203 | - | 3.8 | 20 | 69 | 0 |
| Methyl acetate | 0.098 | 0.099* | - | -1 | 20 | 82 | 0 |
| Methyl tert-butyl ether | 0.466 | 0.507 | - | -8.8 | 20 | 77 | 0 |
| tert-Butyl alcohol | 0.015 | 0.015* | - | 0 | 20 | 82 | 0 |
| Diisopropyl ether | 0.655 | 0.597 | - | 8.9 | 20 | 69 | 0 |
| 1,1-Dichloroethane | 0.423 | 0.435 | - | -2.8 | 20 | 75 | 0 |
| Halothane | 0.185 | 0.155 | - | 16.2 | 20 | 61 | 0 |
| Acrylonitrile | 0.053 | 0.048* | - | 9.4 | 20 | 70 | 0 |
| Ethyl tert-butyl ether | 0.64 | 0.61 | - | 4.7 | 20 | 71 | 0 |
| Vinyl acetate | 0.361 | 0.357 | - | 1.1 | 20 | 82 | 0 |
| cis-1,2-Dichloroethene | 0.26 | 0.252 | - | 3.1 | 20 | 70 | 0 |
| 2,2-Dichloropropane | 0.244 | 0.29 | - | -18.9 | 20 | 85 | 0 |
| Bromochloromethane | 0.108 | 0.105 | - | 2.8 | 20 | 66 | 0 |
| Cyclohexane | 0.417 | 0.352 | - | 15.6 | 20 | 61 | 0 |
| Chloroform | 0.416 | 0.434 | - | -4.3 | 20 | 76 | 0 |
| Ethyl acetate | 0.153 | 0.133 | - | 13.1 | 20 | 68 | 0 |
| Carbon tetrachloride | 0.354 | 0.388 | - | -9.6 | 20 | 77 | 0 |
| Tetrahydrofuran | 0.054 | 0.047* | - | 13 | 20 | 69 | 0 |
| Dibromofluoromethane | 0.289 | 0.268 | - | 7.3 | 20 | 72 | 0 |
| 1,1,1-Trichloroethane | 0.381 | 0.422 | - | -10.8 | 20 | 79 | 0 |
| 2-Butanone | 0.071 | 0.056* | - | 21.1* | 20 | 63 | 0 |
| 1,1-Dichloropropene | 0.319 | 0.309 | - | 3.1 | 20 | 70 | 0 |
| Benzene | 0.888 | 0.85 | - | 4.3 | 20 | 69 | 0 |
| tert-Amyl methyl ether | 0.606 | 0.575 | - | 5.1 | 20 | 72 | 0 |
| 1,2-Dichloroethane-d4 | 0.334 | 0.409 | - | -22.5* | 20 | 102 | 0 |
| 1,2-Dichloroethane | 0.225 | 0.207 | - | 8 | 20 | 71 | 0 |
| Methyl cyclohexane | 0.433 | 0.327 | - | 24.5* | 20 | 54 | 0 |
| Trichloroethene | 0.251 | 0.23 | - | 8.4 | 20 | 67 | 0 |

*** Value outside of QC limits.**

# Calibration Verification Summary
# Form 7
# Volatiles

| | | | | | |
|---|---|---|---|---|---|
| **Client** | : Soils Engineering Services, Inc. | **Lab Number** | : L2009793 | | |
| **Project Name** | : GROSSINGERS | **Project Number** | : 9313 | | |
| **Instrument ID** | : VOA122 | **Calibration Date** | : 03/06/20 09:46 | | |
| **Lab File ID** | : V22200306A01 | **Init. Calib. Date(s)** | : 12/19/19 | 12/19/19 | |
| **Sample No** | : WG1348135-2 | **Init. Calib. Times** | : 15:43 | 19:28 | |
| **Channel** | : | | | | |

| Compound | Ave. RRF | RRF | Min RRF | %D | Max %D | Area% | Dev(min) |
|---|---|---|---|---|---|---|---|
| Dibromomethane | 0.134 | 0.128 | - | 4.5 | 20 | 71 | 0 |
| 1,2-Dichloropropane | 0.237 | 0.205 | - | 13.5 | 20 | 65 | 0 |
| 2-Chloroethyl vinyl ether | 0.105 | 0.021* | - | 80* | 20 | 14 | 0 |
| Bromodichloromethane | 0.317 | 0.325 | - | -2.5 | 20 | 77 | 0 |
| 1,4-Dioxane | 0.00156 | 0.00158* | - | -1.3 | 20 | 86 | 0 |
| cis-1,3-Dichloropropene | 0.388 | 0.382 | - | 1.5 | 20 | 72 | 0 |
| Chlorobenzene-d5 | 1 | 1 | - | 0 | 20 | 71 | 0 |
| Toluene-d8 | 1.292 | 1.336 | - | -3.4 | 20 | 72 | 0 |
| Toluene | 0.719 | 0.751 | - | -4.5 | 20 | 70 | 0 |
| 4-Methyl-2-pentanone | 0.07 | 0.069* | - | 1.4 | 20 | 71 | 0 |
| Tetrachloroethene | 0.356 | 0.35 | - | 1.7 | 20 | 66 | 0 |
| trans-1,3-Dichloropropene | 0.388 | 0.433 | - | -11.6 | 20 | 75 | 0 |
| Ethyl methacrylate | 0.265 | 0.26 | - | 1.9 | 20 | 70 | 0 |
| 1,1,2-Trichloroethane | 0.188 | 0.186 | - | 1.1 | 20 | 67 | 0 |
| Chlorodibromomethane | 0.278 | 0.281 | - | -1.1 | 20 | 70 | 0 |
| 1,3-Dichloropropane | 0.382 | 0.395 | - | -3.4 | 20 | 71 | 0 |
| 1,2-Dibromoethane | 0.229 | 0.22 | - | 3.9 | 20 | 65 | 0 |
| 2-Hexanone | 0.122 | 0.11 | - | 9.8 | 20 | 65 | 0 |
| Chlorobenzene | 0.808 | 0.807 | - | 0.1 | 20 | 68 | 0 |
| Ethylbenzene | 1.399 | 1.489 | - | -6.4 | 20 | 71 | 0 |
| 1,1,1,2-Tetrachloroethane | 0.297 | 0.299 | - | -0.7 | 20 | 67 | 0 |
| p/m Xylene | 0.563 | 0.561 | - | 0.4 | 20 | 67 | 0 |
| o Xylene | 0.53 | 0.524 | - | 1.1 | 20 | 68 | 0 |
| Styrene | 0.871 | 0.86 | - | 1.3 | 20 | 67 | 0 |
| 1,4-Dichlorobenzene-d4 | 1 | 1 | - | 0 | 20 | 75 | 0 |
| Bromoform | 0.365 | 0.353 | - | 3.3 | 20 | 74 | 0 |
| Isopropylbenzene | 3.255 | 3.186 | - | 2.1 | 20 | 68 | 0 |
| 4-Bromofluorobenzene | 0.982 | 0.956 | - | 2.6 | 20 | 72 | 0 |
| Bromobenzene | 0.677 | 0.651 | - | 3.8 | 20 | 68 | 0 |
| n-Propylbenzene | 3.4 | 3.35 | - | 1.5 | 20 | 68 | 0 |
| 1,4-Dichlorobutane | 0.725 | 0.711 | - | 1.9 | 20 | 73 | 0 |
| 1,1,2,2-Tetrachloroethane | 0.503 | 0.46 | - | 8.5 | 20 | 67 | 0 |
| 4-Ethyltoluene | 2.646 | 2.629 | - | 0.6 | 20 | 68 | 0 |
| 2-Chlorotoluene | 2.171 | 2.26 | - | -4.1 | 20 | 72 | 0 |
| 1,3,5-Trimethylbenzene | 2.311 | 2.33 | - | -0.8 | 20 | 70 | 0 |
| 1,2,3-Trichloropropane | 0.432 | 0.427 | - | 1.2 | 20 | 74 | 0 |
| trans-1,4-Dichloro-2-buten | 0.143 | 0.13 | - | 9.1 | 20 | 69 | 0 |
| 4-Chlorotoluene | 1.972 | 2.059 | - | -4.4 | 20 | 73 | 0 |
| tert-Butylbenzene | 2.041 | 1.953 | - | 4.3 | 20 | 67 | 0 |
| 1,2,4-Trimethylbenzene | 2.239 | 2.324 | - | -3.8 | 20 | 74 | 0 |
| sec-Butylbenzene | 2.916 | 2.599 | - | 10.9 | 20 | 65 | 0 |
| p-Isopropyltoluene | 2.532 | 2.352 | - | 7.1 | 20 | 69 | 0 |
| 1,3-Dichlorobenzene | 1.305 | 1.279 | - | 2 | 20 | 69 | 0 |

*** Value outside of QC limits.**

# Calibration Verification Summary
# Form 7
# Volatiles

| | | | | | |
|---|---|---|---|---|---|
| **Client** | : Soils Engineering Services, Inc. | **Lab Number** | : L2009793 | | |
| **Project Name** | : GROSSINGERS | **Project Number** | : 9313 | | |
| **Instrument ID** | : VOA122 | **Calibration Date** | : 03/06/20 09:46 | | |
| **Lab File ID** | : V22200306A01 | **Init. Calib. Date(s)** | : 12/19/19 | 12/19/19 | |
| **Sample No** | : WG1348135-2 | **Init. Calib. Times** | : 15:43 | 19:28 | |
| **Channel** | : | | | | |

| Compound | Ave. RRF | RRF | Min RRF | %D | Max %D | Area% | Dev(min) |
|---|---|---|---|---|---|---|---|
| 1,4-Dichlorobenzene | 1.285 | 1.258 | - | 2.1 | 20 | 69 | 0 |
| p-Diethylbenzene | 1.29 | 1.25 | - | 3.1 | 20 | 69 | 0 |
| n-Butylbenzene | 1.982 | 2.033 | - | -2.6 | 20 | 71 | 0 |
| 1,2-Dichlorobenzene | 1.16 | 1.124 | - | 3.1 | 20 | 69 | 0 |
| 1,2,4,5-Tetramethylbenzene | 1.725 | 1.755 | - | -1.7 | 20 | 75 | 0 |
| 1,2-Dibromo-3-chloropropan | 0.088 | 0.073 | - | 17 | 20 | 65 | 0 |
| 1,3,5-Trichlorobenzene | 0.726 | 0.75 | - | -3.3 | 20 | 73 | 0 |
| Hexachlorobutadiene | 0.244 | 0.28 | - | -14.8 | 20 | 81 | 0 |
| 1,2,4-Trichlorobenzene | 0.666 | 0.691 | - | -3.8 | 20 | 74 | 0 |
| Naphthalene | 1.544 | 1.348 | - | 12.7 | 20 | 66 | 0 |
| 1,2,3-Trichlorobenzene | 0.611 | 0.62 | - | -1.5 | 20 | 74 | 0 |

*** Value outside of QC limits.**

# Calibration Verification Summary
# Form 7
# Volatiles

| | | | | | |
|---|---|---|---|---|---|
| **Client** | : Soils Engineering Services, Inc. | **Lab Number** | : L2009793 | | |
| **Project Name** | : GROSSINGERS | **Project Number** | : 9313 | | |
| **Instrument ID** | : VOA101 | **Calibration Date** | : 03/07/20 09:31 | | |
| **Lab File ID** | : V01200307A01 | **Init. Calib. Date(s)** | : 02/19/20 | 02/19/20 | |
| **Sample No** | : WG1348564-2 | **Init. Calib. Times** | : 15:13 | 20:21 | |
| **Channel** | : | | | | |

| Compound | Ave. RRF | RRF | Min RRF | %D | Max %D | Area% | Dev(min) |
|---|---|---|---|---|---|---|---|
| Fluorobenzene | 1 | 1 | - | 0 | 20 | 115 | 0 |
| Dichlorodifluoromethane | 0.18 | 0.167 | - | 7.2 | 20 | 106 | 0 |
| Chloromethane | 0.273 | 0.315 | - | -15.4 | 20 | 135 | 0 |
| Vinyl chloride | 0.255 | 0.269 | - | -5.5 | 20 | 122 | 0 |
| Bromomethane | 0.104 | 0.099* | - | 4.8 | 20 | 130 | 0 |
| Chloroethane | 0.148 | 0.174 | - | -17.6 | 20 | 132 | 0 |
| Trichlorofluoromethane | 0.297 | 0.319 | - | -7.4 | 20 | 123 | 0 |
| Ethyl ether | 0.085 | 0.096 | - | -12.9 | 20 | 127 | 0 |
| 1,1-Dichloroethene | 0.182 | 0.204 | - | -12.1 | 20 | 128 | 0 |
| Carbon disulfide | 0.492 | 0.526 | - | -6.9 | 20 | 127 | 0 |
| Freon-113 | 0.179 | 0.196 | - | -9.5 | 20 | 123 | 0 |
| Iodomethane | 0.239 | 0.053 | - | 77.8* | 20 | 26 | 0 |
| Acrolein | 0.024 | 0.027* | - | -12.5 | 20 | 136 | 0 |
| Methylene chloride | 0.19 | 0.225 | - | -18.4 | 20 | 136 | 0 |
| Acetone | 10 | 15.321 | - | -53.2* | 20 | 170 | 0 |
| trans-1,2-Dichloroethene | 0.193 | 0.219 | - | -13.5 | 20 | 131 | 0 |
| Methyl acetate | 0.095 | 0.11 | - | -15.8 | 20 | 130 | 0 |
| Methyl tert-butyl ether | 0.412 | 0.463 | - | -12.4 | 20 | 130 | 0 |
| tert-Butyl alcohol | 0.00992 | 0.01176* | - | -18.5 | 20 | 128 | 0 |
| Diisopropyl ether | 0.716 | 0.875 | - | -22.2* | 20 | 137 | 0 |
| 1,1-Dichloroethane | 0.415 | 0.477 | - | -14.9 | 20 | 130 | 0 |
| Halothane | 0.156 | 0.169 | - | -8.3 | 20 | 123 | 0 |
| Acrylonitrile | 0.042 | 0.051 | - | -21.4* | 20 | 134 | 0 |
| Ethyl tert-butyl ether | 0.633 | 0.735 | - | -16.1 | 20 | 133 | 0 |
| Vinyl acetate | 0.419 | 0.489 | - | -16.7 | 20 | 136 | 0 |
| cis-1,2-Dichloroethene | 0.23 | 0.267 | - | -16.1 | 20 | 135 | 0 |
| 2,2-Dichloropropane | 0.289 | 0.347 | - | -20.1* | 20 | 137 | 0 |
| Bromochloromethane | 0.088 | 0.108 | - | -22.7* | 20 | 135 | 0 |
| Cyclohexane | 0.438 | 0.492 | - | -12.3 | 20 | 129 | 0 |
| Chloroform | 0.361 | 0.416 | - | -15.2 | 20 | 134 | 0 |
| Ethyl acetate | 0.136 | 0.147 | - | -8.1 | 20 | 131 | 0 |
| Carbon tetrachloride | 0.291 | 0.305 | - | -4.8 | 20 | 119 | 0 |
| Tetrahydrofuran | 0.038 | 0.045* | - | -18.4 | 20 | 135 | -.01 |
| Dibromofluoromethane | 0.258 | 0.249 | - | 3.5 | 20 | 111 | 0 |
| 1,1,1-Trichloroethane | 0.338 | 0.366 | - | -8.3 | 20 | 125 | 0 |
| 2-Butanone | 0.055 | 0.066* | - | -20 | 20 | 135 | 0 |
| 1,1-Dichloropropene | 0.289 | 0.319 | - | -10.4 | 20 | 127 | 0 |
| Benzene | 0.799 | 0.879 | - | -10 | 20 | 128 | 0 |
| tert-Amyl methyl ether | 0.471 | 0.511 | - | -8.5 | 20 | 126 | 0 |
| 1,2-Dichloroethane-d4 | 0.276 | 0.269 | - | 2.5 | 20 | 113 | 0 |
| 1,2-Dichloroethane | 0.251 | 0.294 | - | -17.1 | 20 | 134 | 0 |
| Methyl cyclohexane | 0.327 | 0.347 | - | -6.1 | 20 | 123 | 0 |
| Trichloroethene | 0.22 | 0.242 | - | -10 | 20 | 129 | 0 |

*** Value outside of QC limits.**

# Calibration Verification Summary
# Form 7
# Volatiles

| | | | | | |
|---|---|---|---|---|---|
| **Client** | : Soils Engineering Services, Inc. | **Lab Number** | : L2009793 | | |
| **Project Name** | : GROSSINGERS | **Project Number** | : 9313 | | |
| **Instrument ID** | : VOA101 | **Calibration Date** | : 03/07/20 09:31 | | |
| **Lab File ID** | : V01200307A01 | **Init. Calib. Date(s)** | : 02/19/20 | 02/19/20 | |
| **Sample No** | : WG1348564-2 | **Init. Calib. Times** | : 15:13 | 20:21 | |
| **Channel** | : | | | | |

| Compound | Ave. RRF | RRF | Min RRF | %D | Max %D | Area% | Dev(min) |
|---|---|---|---|---|---|---|---|
| Dibromomethane | 0.095 | 0.107 | - | -12.6 | 20 | 131 | 0 |
| 1,2-Dichloropropane | 0.227 | 0.261 | - | -15 | 20 | 130 | 0 |
| 2-Chloroethyl vinyl ether | 0.07 | 0.058 | - | 17.1 | 20 | 117 | 0 |
| Bromodichloromethane | 0.262 | 0.282 | - | -7.6 | 20 | 126 | 0 |
| 1,4-Dioxane | 0.00093 | 0.00126* | - | -35.5* | 20 | 153 | -.01 |
| cis-1,3-Dichloropropene | 0.322 | 0.353 | - | -9.6 | 20 | 127 | 0 |
| Chlorobenzene-d5 | 1 | 1 | - | 0 | 20 | 116 | 0 |
| Toluene-d8 | 1.429 | 1.384 | - | 3.1 | 20 | 112 | 0 |
| Toluene | 0.722 | 0.794 | - | -10 | 20 | 128 | 0 |
| 4-Methyl-2-pentanone | 0.066 | 0.072* | - | -9.1 | 20 | 123 | 0 |
| Tetrachloroethene | 0.308 | 0.325 | - | -5.5 | 20 | 123 | 0 |
| trans-1,3-Dichloropropene | 0.379 | 0.407 | - | -7.4 | 20 | 128 | 0 |
| Ethyl methacrylate | 0.252 | 0.258 | - | -2.4 | 20 | 122 | 0 |
| 1,1,2-Trichloroethane | 0.165 | 0.181 | - | -9.7 | 20 | 125 | 0 |
| Chlorodibromomethane | 0.242 | 0.243 | - | -0.4 | 20 | 119 | 0 |
| 1,3-Dichloropropane | 0.35 | 0.378 | - | -8 | 20 | 127 | 0 |
| 1,2-Dibromoethane | 0.191 | 0.206 | - | -7.9 | 20 | 128 | 0 |
| 2-Hexanone | 0.124 | 0.121 | - | 2.4 | 20 | 122 | 0 |
| Chlorobenzene | 0.772 | 0.853 | - | -10.5 | 20 | 129 | 0 |
| Ethylbenzene | 1.353 | 1.475 | - | -9 | 20 | 127 | 0 |
| 1,1,1,2-Tetrachloroethane | 0.281 | 0.29 | - | -3.2 | 20 | 123 | 0 |
| p/m Xylene | 0.525 | 0.576 | - | -9.7 | 20 | 128 | 0 |
| o Xylene | 0.491 | 0.54 | - | -10 | 20 | 128 | 0 |
| Styrene | 0.823 | 0.894 | - | -8.6 | 20 | 128 | 0 |
| 1,4-Dichlorobenzene-d4 | 1 | 1 | - | 0 | 20 | 122 | 0 |
| Bromoform | 0.253 | 0.247 | - | 2.4 | 20 | 116 | 0 |
| Isopropylbenzene | 2.604 | 2.8 | - | -7.5 | 20 | 125 | 0 |
| 4-Bromofluorobenzene | 1.078 | 1.025 | - | 4.9 | 20 | 113 | 0 |
| Bromobenzene | 0.582 | 0.636 | - | -9.3 | 20 | 130 | 0 |
| n-Propylbenzene | 2.817 | 3.111 | - | -10.4 | 20 | 130 | 0 |
| 1,4-Dichlorobutane | 0.749 | 0.822 | - | -9.7 | 20 | 132 | 0 |
| 1,1,2,2-Tetrachloroethane | 0.395 | 0.413 | - | -4.6 | 20 | 126 | 0 |
| 4-Ethyltoluene | 2.304 | 2.533 | - | -9.9 | 20 | 130 | 0 |
| 2-Chlorotoluene | 1.87 | 2.089 | - | -11.7 | 20 | 134 | 0 |
| 1,3,5-Trimethylbenzene | 2.016 | 2.214 | - | -9.8 | 20 | 131 | 0 |
| 1,2,3-Trichloropropane | 0.372 | 0.373 | - | -0.3 | 20 | 124 | 0 |
| trans-1,4-Dichloro-2-buten | 0.121 | 0.134 | - | -10.7 | 20 | 131 | 0 |
| 4-Chlorotoluene | 1.787 | 1.995 | - | -11.6 | 20 | 133 | 0 |
| tert-Butylbenzene | 1.705 | 1.844 | - | -8.2 | 20 | 129 | 0 |
| 1,2,4-Trimethylbenzene | 1.987 | 2.198 | - | -10.6 | 20 | 135 | 0 |
| sec-Butylbenzene | 2.124 | 2.282 | - | -7.4 | 20 | 132 | 0 |
| p-Isopropyltoluene | 1.965 | 2.136 | - | -8.7 | 20 | 134 | 0 |
| 1,3-Dichlorobenzene | 1.085 | 1.222 | - | -12.6 | 20 | 138 | 0 |

*** Value outside of QC limits.**

# Calibration Verification Summary
# Form 7
# Volatiles

| | | | | |
|---|---|---|---|---|
| **Client** | : Soils Engineering Services, Inc. | **Lab Number** | : L2009793 | |
| **Project Name** | : GROSSINGERS | **Project Number** | : 9313 | |
| **Instrument ID** | : VOA101 | **Calibration Date** | : 03/07/20 09:31 | |
| **Lab File ID** | : V01200307A01 | **Init. Calib. Date(s)** | : 02/19/20 | 02/19/20 |
| **Sample No** | : WG1348564-2 | **Init. Calib. Times** | : 15:13 | 20:21 |
| **Channel** | : | | | |

| Compound | Ave. RRF | RRF | Min RRF | %D | Max %D | Area% | Dev(min) |
|---|---|---|---|---|---|---|---|
| 1,4-Dichlorobenzene | 1.099 | 1.242 | - | -13 | 20 | 141 | 0 |
| p-Diethylbenzene | 1.053 | 1.153 | - | -9.5 | 20 | 137 | 0 |
| n-Butylbenzene | 1.457 | 1.626 | - | -11.6 | 20 | 141 | 0 |
| 1,2-Dichlorobenzene | 0.955 | 1.048 | - | -9.7 | 20 | 139 | 0 |
| 1,2,4,5-Tetramethylbenzene | 1.587 | 1.635 | - | -3 | 20 | 131 | 0 |
| 1,2-Dibromo-3-chloropropan | 10 | 9.233 | - | 7.7 | 20 | 113 | 0 |
| 1,3,5-Trichlorobenzene | 0.509 | 0.53 | - | -4.1 | 20 | 132 | 0 |
| Hexachlorobutadiene | 0.15 | 0.156 | - | -4 | 20 | 140 | 0 |
| 1,2,4-Trichlorobenzene | 0.45 | 0.443 | - | 1.6 | 20 | 135 | 0 |
| Naphthalene | 0.998 | 0.874 | - | 12.4 | 20 | 125 | 0 |
| 1,2,3-Trichlorobenzene | 0.346 | 0.313 | - | 9.5 | 20 | 125 | 0 |

*** Value outside of QC limits.**

# Evaluate Continuing Calibration Report

Data Path : I:\VOLATILES\VOA122\2020\200306A\
Data File : V22200306A01.D
Acq On : 06 Mar 2020 09:46 am
Operator : VOA122:PD
Sample : WG1348135-2 (Sig #1); 8260 CCAL (Sig #2)
Misc : WG1348135,ICAL16379 (Sig #1); WG,ICAL16379 (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Mar 06 10:15:15 2020
Quant Method : I:\VOLATILES\VOA122\2020\200306A\V122_191219N_8260.m
Quant Title : VOLATILES BY GC/MS
QLast Update : Fri Dec 20 07:20:50 2019
Response via : Initial Calibration

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

| | | Compound | AvgRF | CCRF | %Dev | Area% | Dev(min) |
|---|---|---|---|---|---|---|---|
| 1 | I | Fluorobenzene | 1.000 | 1.000 | 0.0 | 78 | 0.00 |
| 2 | TP | Dichlorodifluoromethane | 0.172 | 0.162 | 5.8 | 67 | 0.00 |
| 3 | TP | Chloromethane | 0.227 | 0.231 | -1.8 | 74 | 0.00 |
| 4 | TC | Vinyl chloride | 0.255 | 0.226 | 11.4 | 63 | 0.00 |
| 5 | TP | Bromomethane | * 10.000 | 3.068 | 69.3# | 24# | 0.00 |
| 6 | TP | Chloroethane | 0.184 | 0.143 | 22.3# | 53 | 0.00 |
| 7 | TP | Trichlorofluoromethane | 0.348 | 0.387 | -11.2 | 78 | 0.00 |
| 8 | TP | Ethyl ether | 0.103 | 0.097 | 5.8 | 71 | 0.00 |
| 10 | TC | 1,1-Dichloroethene | 0.196 | 0.187 | 4.6 | 67 | 0.00 |
| 11 | TP | Carbon disulfide | 0.512 | 0.551 | -7.6 | 77 | 0.00 |
| 12 | TP | Freon-113 | 0.215 | 0.197 | 8.4 | 64 | 0.00 |
| 13 | TP | Iodomethane | * 10.000 | 2.656 | 73.4# | 13# | 0.00 |
| 14 | TP | Acrolein | 0.030 | 0.026# | 13.3 | 67 | 0.00 |
| 15 | TP | Methylene chloride | 0.222 | 0.216 | 2.7 | 72 | 0.00 |
| 17 | TP | Acetone | 0.057 | 0.047# | 17.5 | 67 | 0.00 |
| 18 | TP | trans-1,2-Dichloroethene | 0.211 | 0.203 | 3.8 | 69 | 0.00 |
| 19 | TP | Methyl acetate | 0.098 | 0.099# | -1.0 | 82 | 0.00 |
| 21 | TP | Methyl tert-butyl ether | 0.466 | 0.507 | -8.8 | 77 | 0.00 |
| 22 | TP | tert-Butyl alcohol | 0.015 | 0.015# | 0.0 | 82 | 0.00 |
| 24 | TP | Diisopropyl ether | 0.655 | 0.597 | 8.9 | 69 | 0.00 |
| 25 | TP | 1,1-Dichloroethane | 0.423 | 0.435 | -2.8 | 75 | 0.00 |
| 26 | TP | Halothane | 0.185 | 0.155 | 16.2 | 61 | 0.00 |
| 27 | TP | Acrylonitrile | 0.053 | 0.048# | 9.4 | 70 | 0.00 |
| 28 | TP | Ethyl tert-butyl ether | 0.640 | 0.610 | 4.7 | 71 | 0.00 |
| 29 | TP | Vinyl acetate | 0.361 | 0.357 | 1.1 | 82 | 0.00 |
| 30 | TP | cis-1,2-Dichloroethene | 0.260 | 0.252 | 3.1 | 70 | 0.00 |
| 31 | TP | 2,2-Dichloropropane | 0.244 | 0.290 | -18.9 | 85 | 0.00 |
| 32 | TP | Bromochloromethane | 0.108 | 0.105 | 2.8 | 66 | 0.00 |
| 33 | TP | Cyclohexane | 0.417 | 0.352 | 15.6 | 61 | 0.00 |
| 34 | TC | Chloroform | 0.416 | 0.434 | -4.3 | 76 | 0.00 |
| 35 | TP | Ethyl acetate | 0.153 | 0.133 | 13.1 | 68 | 0.00 |
| 36 | TP | Carbon tetrachloride | 0.354 | 0.388 | -9.6 | 77 | 0.00 |
| 37 | TP | Tetrahydrofuran | 0.054 | 0.047# | 13.0 | 69 | 0.00 |
| 38 | S | Dibromofluoromethane | 0.289 | 0.268 | 7.3 | 72 | 0.00 |
| 39 | TP | 1,1,1-Trichloroethane | 0.381 | 0.422 | -10.8 | 79 | 0.00 |
| 41 | TP | 2-Butanone | 0.071 | 0.056# | 21.1# | 63 | 0.00 |
| 42 | TP | 1,1-Dichloropropene | 0.319 | 0.309 | 3.1 | 70 | 0.00 |
| 44 | TP | Benzene | 0.888 | 0.850 | 4.3 | 69 | 0.00 |
| 45 | TP | tert-Amyl methyl ether | 0.606 | 0.575 | 5.1 | 72 | 0.00 |

Evaluate Continuing Calibration Report

Data Path : I:\VOLATILES\VOA122\2020\200306A\
Data File : V22200306A01.D
Acq On : 06 Mar 2020 09:46 am
Operator : VOA122:PD
Sample : WG1348135-2 (Sig #1); 8260 CCAL (Sig #2)
Misc : WG1348135,ICAL16379 (Sig #1); WG,ICAL16379 (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Mar 06 10:15:15 2020
Quant Method : I:\VOLATILES\VOA122\2020\200306A\V122_191219N_8260.m
Quant Title : VOLATILES BY GC/MS
QLast Update : Fri Dec 20 07:20:50 2019
Response via : Initial Calibration

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

| | | Compound | AvgRF | CCRF | %Dev | Area% | Dev(min) |
|---|---|---|---|---|---|---|---|
| 46 | S | 1,2-Dichloroethane-d4 | 0.334 | 0.409 | -22.5# | 102 | 0.00 |
| 47 | T | 1,2-Dichloroethane | 0.225 | 0.207 | 8.0 | 71 | 0.00 |
| 50 | TP | Methyl cyclohexane | 0.433 | 0.327 | 24.5# | 54 | 0.00 |
| 51 | TP | Trichloroethene | 0.251 | 0.230 | 8.4 | 67 | 0.00 |
| 53 | TP | Dibromomethane | 0.134 | 0.128 | 4.5 | 71 | 0.00 |
| 54 | TC | 1,2-Dichloropropane | 0.237 | 0.205 | 13.5 | 65 | 0.00 |
| 56 | TP | 2-Chloroethyl vinyl ether | 0.105 | 0.021# | 80.0# | 14# | 0.00 |
| 57 | TP | Bromodichloromethane | 0.317 | 0.325 | -2.5 | 77 | 0.00 |
| 60 | TP | 1,4-Dioxane | 0.00156 | 0.00158# | -1.3 | 86 | 0.00 |
| 61 | TP | cis-1,3-Dichloropropene | 0.388 | 0.382 | 1.5 | 72 | 0.00 |
| 62 | I | Chlorobenzene-d5 | 1.000 | 1.000 | 0.0 | 71 | 0.00 |
| 63 | S | Toluene-d8 | 1.292 | 1.336 | -3.4 | 72 | 0.00 |
| 64 | TC | Toluene | 0.719 | 0.751 | -4.5 | 70 | 0.00 |
| 65 | TP | 4-Methyl-2-pentanone | 0.070 | 0.069# | 1.4 | 71 | 0.00 |
| 66 | TP | Tetrachloroethene | 0.356 | 0.350 | 1.7 | 66 | 0.00 |
| 68 | TP | trans-1,3-Dichloropropene | 0.388 | 0.433 | -11.6 | 75 | 0.00 |
| 70 | TP | Ethyl methacrylate | 0.265 | 0.260 | 1.9 | 70 | 0.00 |
| 71 | TP | 1,1,2-Trichloroethane | 0.188 | 0.186 | 1.1 | 67 | 0.00 |
| 72 | TP | Chlorodibromomethane | 0.278 | 0.281 | -1.1 | 70 | 0.00 |
| 73 | TP | 1,3-Dichloropropane | 0.382 | 0.395 | -3.4 | 71 | 0.00 |
| 74 | TP | 1,2-Dibromoethane | 0.229 | 0.220 | 3.9 | 65 | 0.00 |
| 76 | TP | 2-Hexanone | 0.122 | 0.110 | 9.8 | 65 | 0.00 |
| 77 | TP | Chlorobenzene | 0.808 | 0.807 | 0.1 | 68 | 0.00 |
| 78 | TC | Ethylbenzene | 1.399 | 1.489 | -6.4 | 71 | 0.00 |
| 79 | TP | 1,1,1,2-Tetrachloroethane | 0.297 | 0.299 | -0.7 | 67 | 0.00 |
| 80 | TP | p/m Xylene | 0.563 | 0.561 | 0.4 | 67 | 0.00 |
| 81 | TP | o Xylene | 0.530 | 0.524 | 1.1 | 68 | 0.00 |
| 82 | TP | Styrene | 0.871 | 0.860 | 1.3 | 67 | 0.00 |
| 83 | I | 1,4-Dichlorobenzene-d4 | 1.000 | 1.000 | 0.0 | 75 | 0.00 |
| 84 | TP | Bromoform | 0.365 | 0.353 | 3.3 | 74 | 0.00 |
| 86 | TP | Isopropylbenzene | 3.255 | 3.186 | 2.1 | 68 | 0.00 |
| 87 | S | 4-Bromofluorobenzene | 0.982 | 0.956 | 2.6 | 72 | 0.00 |
| 88 | TP | Bromobenzene | 0.677 | 0.651 | 3.8 | 68 | 0.00 |
| 89 | TP | n-Propylbenzene | 3.400 | 3.350 | 1.5 | 68 | 0.00 |
| 90 | TP | 1,4-Dichlorobutane | 0.725 | 0.711 | 1.9 | 73 | 0.00 |
| 91 | TP | 1,1,2,2-Tetrachloroethane | 0.503 | 0.460 | 8.5 | 67 | 0.00 |
| 92 | TP | 4-Ethyltoluene | 2.646 | 2.629 | 0.6 | 68 | 0.00 |

Evaluate Continuing Calibration Report

Data Path : I:\VOLATILES\VOA122\2020\200306A\
Data File : V22200306A01.D
Acq On : 06 Mar 2020 09:46 am
Operator : VOA122:PD
Sample : WG1348135-2 (Sig #1); 8260 CCAL (Sig #2)
Misc : WG1348135,ICAL16379 (Sig #1); WG,ICAL16379 (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Mar 06 10:15:15 2020
Quant Method : I:\VOLATILES\VOA122\2020\200306A\V122_191219N_8260.m
Quant Title : VOLATILES BY GC/MS
QLast Update : Fri Dec 20 07:20:50 2019
Response via : Initial Calibration

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

| | Compound | AvgRF | CCRF | %Dev | Area% | Dev(min) |
|---|---|---|---|---|---|---|
| 93 TP | 2-Chlorotoluene | 2.171 | 2.260 | -4.1 | 72 | 0.00 |
| 94 TP | 1,3,5-Trimethylbenzene | 2.311 | 2.330 | -0.8 | 70 | 0.00 |
| 95 TP | 1,2,3-Trichloropropane | 0.432 | 0.427 | 1.2 | 74 | 0.00 |
| 96 TP | trans-1,4-Dichloro-2-butene | 0.143 | 0.130 | 9.1 | 69 | 0.00 |
| 97 TP | 4-Chlorotoluene | 1.972 | 2.059 | -4.4 | 73 | 0.00 |
| 98 TP | tert-Butylbenzene | 2.041 | 1.953 | 4.3 | 67 | 0.00 |
| 101 TP | 1,2,4-Trimethylbenzene | 2.239 | 2.324 | -3.8 | 74 | 0.00 |
| 102 TP | sec-Butylbenzene | 2.916 | 2.599 | 10.9 | 65 | 0.00 |
| 103 TP | p-Isopropyltoluene | 2.532 | 2.352 | 7.1 | 69 | 0.00 |
| 104 TP | 1,3-Dichlorobenzene | 1.305 | 1.279 | 2.0 | 69 | 0.00 |
| 105 TP | 1,4-Dichlorobenzene | 1.285 | 1.258 | 2.1 | 69 | 0.00 |
| 106 TP | p-Diethylbenzene | 1.290 | 1.250 | 3.1 | 69 | 0.00 |
| 107 TP | n-Butylbenzene | 1.982 | 2.033 | -2.6 | 71 | 0.00 |
| 108 TP | 1,2-Dichlorobenzene | 1.160 | 1.124 | 3.1 | 69 | 0.00 |
| 109 TP | 1,2,4,5-Tetramethylbenzene | 1.725 | 1.755 | -1.7 | 75 | 0.00 |
| 110 TP | 1,2-Dibromo-3-chloropropane | 0.088 | 0.073 | 17.0 | 65 | 0.00 |
| 111 TP | 1,3,5-Trichlorobenzene | 0.726 | 0.750 | -3.3 | 73 | 0.00 |
| 112 TP | Hexachlorobutadiene | 0.244 | 0.280 | -14.8 | 81 | 0.00 |
| 113 TP | 1,2,4-Trichlorobenzene | 0.666 | 0.691 | -3.8 | 74 | 0.00 |
| 114 TP | Naphthalene | 1.544 | 1.348 | 12.7 | 66 | 0.00 |
| 115 TP | 1,2,3-Trichlorobenzene | 0.611 | 0.620 | -1.5 | 74 | 0.00 |

* Evaluation of CC level amount vs concentration.
(#) = Out of Range SPCC's out = 10 CCC's out = 0

Quantitation Report (QT Reviewed)

Data Path : I:\VOLATILES\VOA122\2020\200306A\
Data File : V22200306A01.D
Acq On : 06 Mar 2020 09:46 am
Operator : VOA122:PD
Sample : WG1348135-2 (Sig #1); 8260 CCAL (Sig #2)
Misc : WG1348135,ICAL16379 (Sig #1); WG,ICAL16379 (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Mar 06 10:15:15 2020
Quant Method : I:\VOLATILES\VOA122\2020\200306A\V122_191219N_8260.m
Quant Title : VOLATILES BY GC/MS
QLast Update : Fri Dec 20 07:20:50 2019
Response via : Initial Calibration

Sub List : 8260-Curve - Megamix plus Diox

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| Internal Standards | | | | | | |
| 1) Fluorobenzene | 5.827 | 96 | 254411 | 10.000 | ug/L | 0.00 |
| 62) Chlorobenzene-d5 | 9.353 | 117 | 187639 | 10.000 | ug/L | 0.00 |
| 83) 1,4-Dichlorobenzene-d4 | 12.100 | 152 | 100182 | 10.000 | ug/L | 0.00 |
| System Monitoring Compounds | | | | | | |
| 38) Dibromofluoromethane | 5.018 | 113 | 68129 | 9.271 | ug/L | 0.00 |
| Spiked Amount 10.000 | Range 70 - 130 | | Recovery = 92.71% | | | |
| 46) 1,2-Dichloroethane-d4 | 5.541 | 65 | 103995 | 12.248 | ug/L | 0.00 |
| Spiked Amount 10.000 | Range 70 - 130 | | Recovery = 122.48% | | | |
| 63) Toluene-d8 | 7.511 | 98 | 250659 | 10.340 | ug/L | 0.00 |
| Spiked Amount 10.000 | Range 70 - 130 | | Recovery = 103.40% | | | |
| 87) 4-Bromofluorobenzene | 10.874 | 95 | 95819 | 9.740 | ug/L | 0.00 |
| Spiked Amount 10.000 | Range 70 - 130 | | Recovery = 97.40% | | | |
| Target Compounds | | | | | | Qvalue |
| 2) Dichlorodifluoromethane | 1.537 | 85 | 41146 | 9.402 | ug/L | 97 |
| 3) Chloromethane | 1.725 | 50 | 58706 | 10.158 | ug/L | 97 |
| 4) Vinyl chloride | 1.787 | 62 | 57424 | 8.851 | ug/L | 100 |
| 5) Bromomethane | 2.084 | 94 | 17858 | 3.068 | ug/L | 95 |
| 6) Chloroethane | 2.185 | 64 | 36432 | 7.782 | ug/L | 99 |
| 7) Trichlorofluoromethane | 2.326 | 101 | 98391 | 11.118 | ug/L | 99 |
| 8) Ethyl ether | 2.622 | 74 | 24720 | 9.453 | ug/L # | 1 |
| 10) 1,1-Dichloroethene | 2.809 | 96 | 47674 | 9.558 | ug/L # | 70 |
| 11) Carbon disulfide | 2.833 | 76 | 140151 | 10.762 | ug/L | 99 |
| 12) Freon-113 | 2.849 | 101 | 50221 | 9.185 | ug/L | 91 |
| 13) Iodomethane | 2.942 | 142 | 5972M1 | 2.656 | ug/L | |
| 14) Acrolein | 3.122 | 56 | 6488 | 8.526 | ug/L | 96 |
| 15) Methylene chloride | 3.348 | 84 | 54885 | 9.713 | ug/L | 85 |
| 17) Acetone | 3.395 | 43 | 12040 | 8.308 | ug/L | 96 |
| 18) trans-1,2-Dichloroethene | 3.504 | 96 | 51596 | 9.628 | ug/L | 85 |
| 19) Methyl acetate | 3.512 | 43 | 25079 | 10.030 | ug/L | 99 |
| 21) Methyl tert-butyl ether | 3.598 | 73 | 129055 | 10.890 | ug/L | 95 |
| 22) tert-Butyl alcohol | 3.676 | 59 | 19225 | 51.732 | ug/L | 96 |
| 24) Diisopropyl ether | 3.957 | 45 | 151837 | 9.105 | ug/L | 95 |
| 25) 1,1-Dichloroethane | 4.074 | 63 | 110704 | 10.280 | ug/L | 98 |
| 26) Halothane | 4.121 | 117 | 39371 | 8.361 | ug/L | 99 |
| 27) Acrylonitrile | 4.121 | 53 | 12183 | 9.068 | ug/L | 94 |
| 28) Ethyl tert-butyl ether | 4.300 | 59 | 155247 | 9.531 | ug/L | 96 |
| 29) Vinyl acetate | 4.308 | 43 | 90716 | 9.875 | ug/L # | 93 |
| 30) cis-1,2-Dichloroethene | 4.581 | 96 | 64237 | 9.704 | ug/L # | 84 |

Quantitation Report (QT Reviewed)

Data Path : I:\VOLATILES\VOA122\2020\200306A\
Data File : V22200306A01.D
Acq On : 06 Mar 2020 09:46 am
Operator : VOA122:PD
Sample : WG1348135-2 (Sig #1); 8260 CCAL (Sig #2)
Misc : WG1348135,ICAL16379 (Sig #1); WG,ICAL16379 (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Mar 06 10:15:15 2020
Quant Method : I:\VOLATILES\VOA122\2020\200306A\V122_191219N_8260.m
Quant Title : VOLATILES BY GC/MS
QLast Update : Fri Dec 20 07:20:50 2019
Response via : Initial Calibration

Sub List : 8260-Curve - Megamix plus Diox

| Compound | R.T. | QIon | Response | Conc | Units | | Dev(Min) |
|---|---|---|---|---|---|---|---|
| 31) 2,2-Dichloropropane | 4.683 | 77 | 73669 | 11.844 | ug/L | | 96 |
| 32) Bromochloromethane | 4.768 | 128 | 26588 | 9.686 | ug/L | # | 80 |
| 33) Cyclohexane | 4.776 | 56 | 89624 | 8.455 | ug/L | | 84 |
| 34) Chloroform | 4.846 | 83 | 110295 | 10.431 | ug/L | | 97 |
| 35) Ethyl acetate | 4.964 | 43 | 33878 | 8.708 | ug/L | | 97 |
| 36) Carbon tetrachloride | 4.979 | 117 | 98707 | 10.963 | ug/L | | 98 |
| 37) Tetrahydrofuran | 4.995 | 42 | 12062 | 8.844 | ug/L | | 96 |
| 39) 1,1,1-Trichloroethane | 5.049 | 97 | 107380 | 11.084 | ug/L | | 96 |
| 41) 2-Butanone | 5.143 | 43 | 14205 | 7.822 | ug/L | | 97 |
| 42) 1,1-Dichloropropene | 5.166 | 75 | 78596 | 9.695 | ug/L | | 94 |
| 44) Benzene | 5.408 | 78 | 216135 | 9.572 | ug/L | | 95 |
| 45) tert-Amyl methyl ether | 5.525 | 73 | 146324 | 9.494 | ug/L | | 98 |
| 47) 1,2-Dichloroethane | 5.620 | 62 | 52622 | 9.209 | ug/L | | 98 |
| 50) Methyl cyclohexane | 5.992 | 83 | 83303 | 7.567 | ug/L | # | 82 |
| 51) Trichloroethene | 6.000 | 95 | 58388 | 9.140 | ug/L | | 93 |
| 53) Dibromomethane | 6.433 | 93 | 32560 | 9.533 | ug/L | # | 84 |
| 54) 1,2-Dichloropropane | 6.545 | 63 | 52177 | 8.639 | ug/L | | 96 |
| 56) 2-Chloroethyl vinyl ether | 7.237 | 63 | 5422 | 2.031 | ug/L | # | 82 |
| 57) Bromodichloromethane | 6.614 | 83 | 82583 | 10.246 | ug/L | | 97 |
| 60) 1,4-Dioxane | 6.822 | 88 | 20049 | 504.717 | ug/L | # | 77 |
| 61) cis-1,3-Dichloropropene | 7.306 | 75 | 97304 | 9.845 | ug/L | | 92 |
| 64) Toluene | 7.574 | 92 | 140891 | 10.444 | ug/L | | 97 |
| 65) 4-Methyl-2-pentanone | 8.018 | 58 | 12859 | 9.730 | ug/L | | 91 |
| 66) Tetrachloroethene | 8.018 | 166 | 65720 | 9.835 | ug/L | | 89 |
| 68) trans-1,3-Dichloropropene | 8.050 | 75 | 81223 | 11.168 | ug/L | | 94 |
| 70) Ethyl methacrylate | 8.253 | 69 | 48834 | 9.839 | ug/L | | 100 |
| 71) 1,1,2-Trichloroethane | 8.237 | 83 | 34885 | 9.881 | ug/L | | 96 |
| 72) Chlorodibromomethane | 8.440 | 129 | 52646 | 10.083 | ug/L | | 98 |
| 73) 1,3-Dichloropropane | 8.557 | 76 | 74029 | 10.338 | ug/L | | 100 |
| 74) 1,2-Dibromoethane | 8.721 | 107 | 41189 | 9.600 | ug/L | | 99 |
| 76) 2-Hexanone | 9.017 | 43 | 20660 | 9.046 | ug/L | | 94 |
| 77) Chlorobenzene | 9.376 | 112 | 151410 | 9.987 | ug/L | | 96 |
| 78) Ethylbenzene | 9.415 | 91 | 279398 | 10.644 | ug/L | | 95 |
| 79) 1,1,1,2-Tetrachloroethane | 9.454 | 131 | 56154 | 10.089 | ug/L | | 95 |
| 80) p/m Xylene | 9.610 | 106 | 210523 | 19.919 | ug/L | | 90 |
| 81) o Xylene | 10.149 | 106 | 196807 | 19.781 | ug/L | | 88 |
| 82) Styrene | 10.219 | 104 | 322641 | 19.747 | ug/L | | 89 |
| 84) Bromoform | 10.234 | 173 | 35320 | 9.659 | ug/L | | 99 |
| 86) Isopropylbenzene | 10.547 | 105 | 319174 | 9.787 | ug/L | | 97 |
| 88) Bromobenzene | 10.984 | 156 | 65201 | 9.616 | ug/L | | 100 |
| 89) n-Propylbenzene | 11.038 | 91 | 335652 | 9.856 | ug/L | | 95 |

Quantitation Report (QT Reviewed)

Data Path : I:\VOLATILES\VOA122\2020\200306A\
Data File : V22200306A01.D
Acq On : 06 Mar 2020 09:46 am
Operator : VOA122:PD
Sample : WG1348135-2 (Sig #1); 8260 CCAL (Sig #2)
Misc : WG1348135,ICAL16379 (Sig #1); WG,ICAL16379 (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Mar 06 10:15:15 2020
Quant Method : I:\VOLATILES\VOA122\2020\200306A\V122_191219N_8260.m
Quant Title : VOLATILES BY GC/MS
QLast Update : Fri Dec 20 07:20:50 2019
Response via : Initial Calibration

Sub List : 8260-Curve - Megamix plus Diox

| | Compound | R.T. | QIon | Response | Conc | Units | | Dev(Min) |
|---|---|---|---|---|---|---|---|---|
| 90) | 1,4-Dichlorobutane | 11.054 | 55 | 71201 | 9.808 | ug/L | | 92 |
| 91) | 1,1,2,2-Tetrachloroethane | 11.124 | 83 | 46073 | 9.142 | ug/L | | 100 |
| 92) | 4-Ethyltoluene | 11.171 | 105 | 263407 | 9.936 | ug/L | | 96 |
| 93) | 2-Chlorotoluene | 11.202 | 91 | 226386 | 10.407 | ug/L | | 94 |
| 94) | 1,3,5-Trimethylbenzene | 11.273 | 105 | 233425 | 10.080 | ug/L | | 95 |
| 95) | 1,2,3-Trichloropropane | 11.265 | 75 | 42788 | 9.898 | ug/L | | 96 |
| 96) | trans-1,4-Dichloro-2-b... | 11.319 | 53 | 13062 | 9.113 | ug/L | # | 81 |
| 97) | 4-Chlorotoluene | 11.390 | 91 | 206274 | 10.442 | ug/L | | 93 |
| 98) | tert-Butylbenzene | 11.616 | 119 | 195666 | 9.570 | ug/L | | 92 |
| 101) | 1,2,4-Trimethylbenzene | 11.694 | 105 | 232810 | 10.380 | ug/L | | 95 |
| 102) | sec-Butylbenzene | 11.811 | 105 | 260421 | 8.914 | ug/L | | 96 |
| 103) | p-Isopropyltoluene | 11.968 | 119 | 235597 | 9.287 | ug/L | | 94 |
| 104) | 1,3-Dichlorobenzene | 12.023 | 146 | 128150 | 9.799 | ug/L | | 97 |
| 105) | 1,4-Dichlorobenzene | 12.121 | 146 | 126066 | 9.791 | ug/L | | 97 |
| 106) | p-Diethylbenzene | 12.343 | 119 | 125197 | 9.685 | ug/L | | 95 |
| 107) | n-Butylbenzene | 12.399 | 91 | 203640 | 10.255 | ug/L | | 96 |
| 108) | 1,2-Dichlorobenzene | 12.545 | 146 | 112579 | 9.684 | ug/L | | 96 |
| 109) | 1,2,4,5-Tetramethylben... | 13.144 | 119 | 175818 | 10.172 | ug/L | | 95 |
| 110) | 1,2-Dibromo-3-chloropr... | 13.332 | 155 | 7351 | 8.297 | ug/L | | 91 |
| 111) | 1,3,5-Trichlorobenzene | 13.367 | 180 | 75125 | 10.335 | ug/L | # | 96 |
| 112) | Hexachlorobutadiene | 13.944 | 225 | 28044 | 11.461 | ug/L | | 98 |
| 113) | 1,2,4-Trichlorobenzene | 13.965 | 180 | 69221 | 10.378 | ug/L | | 98 |
| 114) | Naphthalene | 14.265 | 128 | 135021 | 8.730 | ug/L | | 100 |
| 115) | 1,2,3-Trichlorobenzene | 14.432 | 180 | 62159 | 10.162 | ug/L | | 99 |

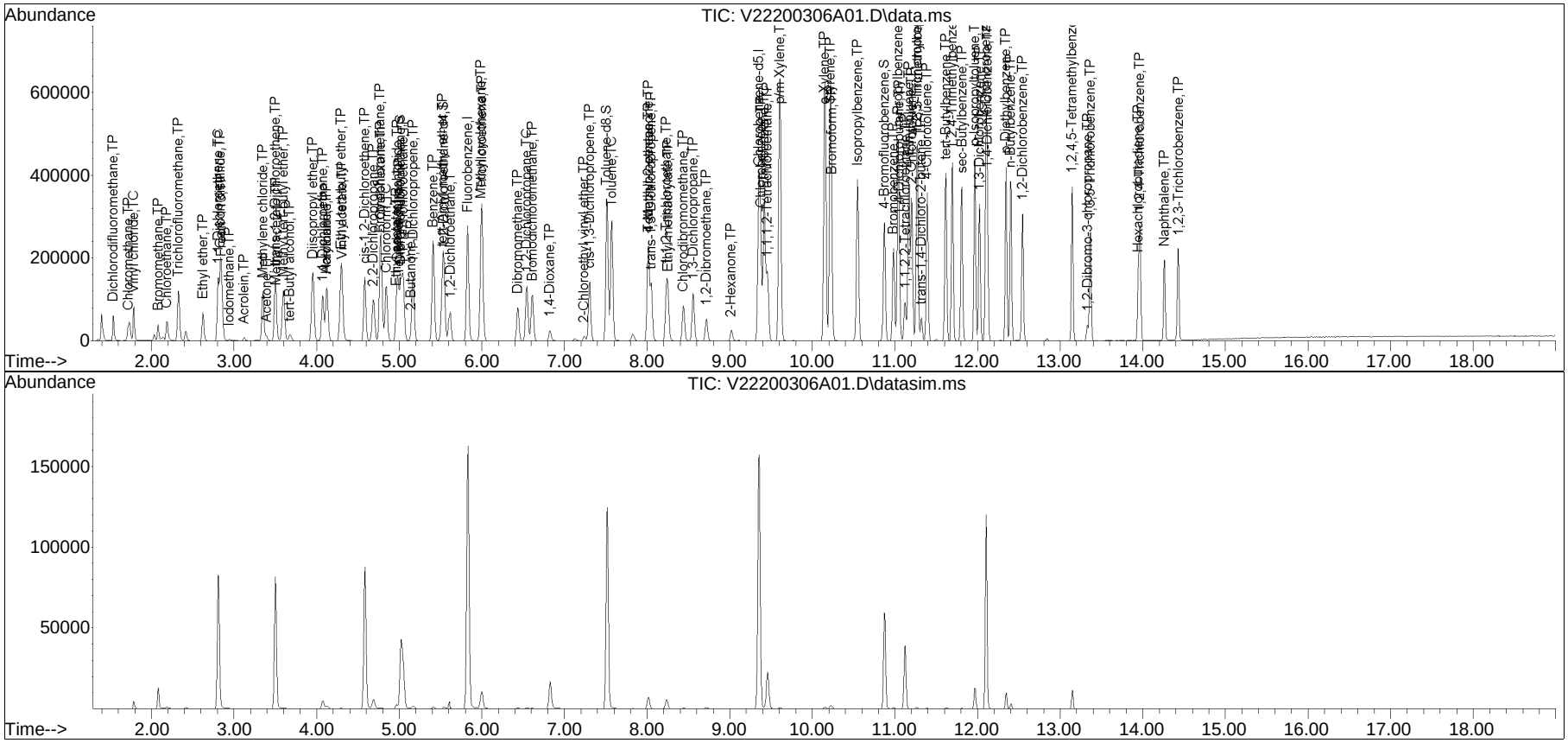
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : I:\VOLATILES\VOA122\2020\200306A\
Data File : V22200306A01.D
Acq On : 06 Mar 2020 09:46 am
Operator : VOA122:PD
Sample : WG1348135-2 (Sig #1); 8260 CCAL (Sig #2)
Misc : WG1348135,ICAL16379 (Sig #1); WG,ICAL16379 (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Mar 06 10:15:15 2020
Quant Method : I:\VOLATILES\VOA122\2020\200306A\V122_191219N_8260.m
Quant Title : VOLATILES BY GC/MS
QLast Update : Fri Dec 20 07:20:50 2019
Response via : Initial Calibration

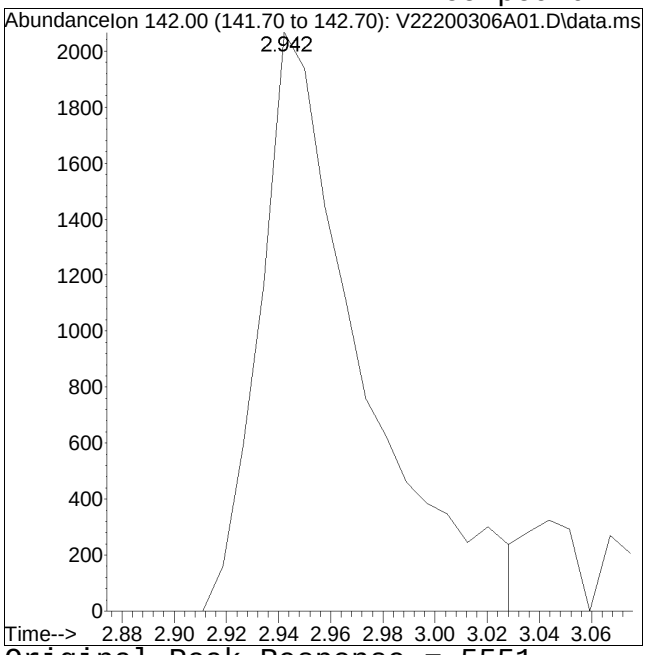
Sub List : 8260-Curve - Megamix plus Diox



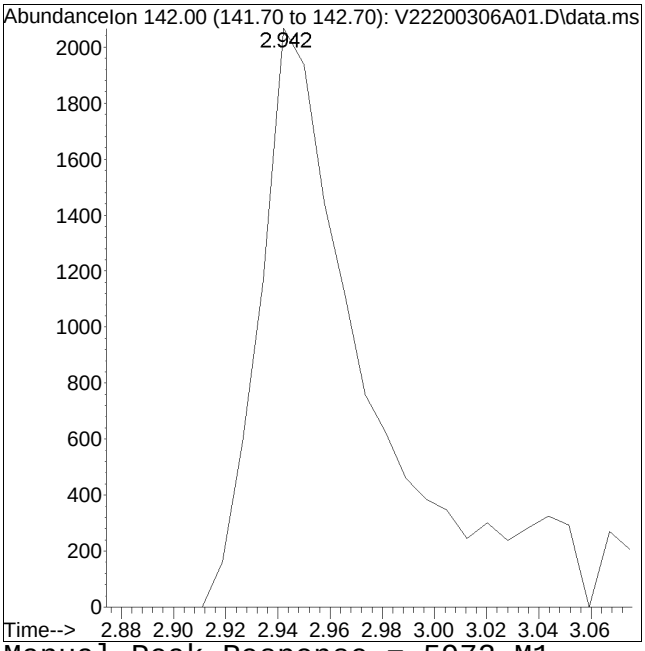
Manual Integration Report

Data Path : I:\VOLATILES\VOA122\2020\2QMethod : V122_191219N_8260.m
Data File : V22200306A01.D Operator : VOA122:PD
Date Inj'd : 3/6/2020 9:46 am Instrument : VOA122
Sample : WG1348135-2 Quant Date : 3/6/2020 10:12 am

Compound #13: Iodomethane




Original Peak Response = 5551




Manual Peak Response = 5972 M1

M1 = Split or tailing peak, auto integration stopped early resulting in false low area count.

# Evaluate Continuing Calibration Report

Data Path : I:\VOLATILES\VOA101\2020\200307A\
Data File : V01200307A01.D
Acq On : 7 Mar 2020 9:31 am
Operator : VOA101:MKS
Sample : WG1348564-2
Misc : WG1348564,ICAL16539
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Mar 07 10:52:38 2020
Quant Method : I:\VOLATILES\VOA101\2020\200307A\V101_200219A_8260.m
Quant Title : VOLATILES BY GC/MS
QLast Update : Thu Feb 20 09:49:21 2020
Response via : Initial Calibration

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

| | | Compound | AvgRF | CCRF | %Dev | Area% | Dev(min) |
|---|---|---|---|---|---|---|---|
| 1 | I | Fluorobenzene | 1.000 | 1.000 | 0.0 | 115 | 0.00 |
| 2 | TP | Dichlorodifluoromethane | 0.180 | 0.167 | 7.2 | 106 | 0.00 |
| 3 | TP | Chloromethane | 0.273 | 0.315 | -15.4 | 135 | 0.00 |
| 4 | TC | Vinyl chloride | 0.255 | 0.269 | -5.5 | 122 | 0.00 |
| 5 | TP | Bromomethane | 0.104 | 0.099# | 4.8 | 130 | 0.00 |
| 6 | TP | Chloroethane | 0.148 | 0.174 | -17.6 | 132 | 0.00 |
| 7 | TP | Trichlorofluoromethane | 0.297 | 0.319 | -7.4 | 123 | 0.00 |
| 8 | TP | Ethyl ether | 0.085 | 0.096 | -12.9 | 127 | 0.00 |
| 10 | TC | 1,1-Dichloroethene | 0.182 | 0.204 | -12.1 | 128 | 0.00 |
| 11 | TP | Carbon disulfide | 0.492 | 0.526 | -6.9 | 127 | 0.00 |
| 12 | TP | Freon-113 | 0.179 | 0.196 | -9.5 | 123 | 0.00 |
| 13 | TP | Iodomethane | 0.239 | 0.053 | 77.8# | 26# | 0.00 |
| 14 | TP | Acrolein | 0.024 | 0.027# | -12.5 | 136 | 0.00 |
| 15 | TP | Methylene chloride | 0.190 | 0.225 | -18.4 | 136 | 0.00 |
| 17 | TP | Acetone | * 10.000 | 15.321 | -53.2# | 170 | 0.00 |
| 18 | TP | trans-1,2-Dichloroethene | 0.193 | 0.219 | -13.5 | 131 | 0.00 |
| 19 | TP | Methyl acetate | 0.095 | 0.110 | -15.8 | 130 | 0.00 |
| 20 | TP | Methyl tert-butyl ether | 0.412 | 0.463 | -12.4 | 130 | 0.00 |
| 21 | TP | tert-Butyl alcohol | 0.00992 | 0.01176# | -18.5 | 128 | 0.00 |
| 22 | TP | Diisopropyl ether | 0.716 | 0.875 | -22.2# | 137 | 0.00 |
| 23 | TP | 1,1-Dichloroethane | 0.415 | 0.477 | -14.9 | 130 | 0.00 |
| 24 | TP | Halothane | 0.156 | 0.169 | -8.3 | 123 | 0.00 |
| 25 | TP | Acrylonitrile | 0.042 | 0.051 | -21.4# | 134 | 0.00 |
| 26 | TP | Ethyl tert-butyl ether | 0.633 | 0.735 | -16.1 | 133 | 0.00 |
| 27 | TP | Vinyl acetate | 0.419 | 0.489 | -16.7 | 136 | 0.00 |
| 28 | TP | cis-1,2-Dichloroethene | 0.230 | 0.267 | -16.1 | 135 | 0.00 |
| 29 | TP | 2,2-Dichloropropane | 0.289 | 0.347 | -20.1# | 137 | 0.00 |
| 30 | TP | Bromochloromethane | 0.088 | 0.108 | -22.7# | 135 | 0.00 |
| 31 | TP | Cyclohexane | 0.438 | 0.492 | -12.3 | 129 | 0.00 |
| 32 | TC | Chloroform | 0.361 | 0.416 | -15.2 | 134 | 0.00 |
| 33 | TP | Ethyl acetate | 0.136 | 0.147 | -8.1 | 131 | 0.00 |
| 34 | TP | Carbon tetrachloride | 0.291 | 0.305 | -4.8 | 119 | 0.00 |
| 35 | TP | Tetrahydrofuran | 0.038 | 0.045# | -18.4 | 135 | -0.01 |
| 36 | S | Dibromofluoromethane | 0.258 | 0.249 | 3.5 | 111 | 0.00 |
| 37 | TP | 1,1,1-Trichloroethane | 0.338 | 0.366 | -8.3 | 125 | 0.00 |
| 39 | TP | 2-Butanone | 0.055 | 0.066# | -20.0# | 135 | 0.00 |
| 40 | TP | 1,1-Dichloropropene | 0.289 | 0.319 | -10.4 | 127 | 0.00 |
| 41 | TP | Benzene | 0.799 | 0.879 | -10.0 | 128 | 0.00 |
| 42 | TP | tert-Amyl methyl ether | 0.471 | 0.511 | -8.5 | 126 | 0.00 |

Evaluate Continuing Calibration Report

Data Path : I:\VOLATILES\VOA101\2020\200307A\
Data File : V01200307A01.D
Acq On : 7 Mar 2020 9:31 am
Operator : VOA101:MKS
Sample : WG1348564-2
Misc : WG1348564,ICAL16539
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Mar 07 10:52:38 2020
Quant Method : I:\VOLATILES\VOA101\2020\200307A\V101_200219A_8260.m
Quant Title : VOLATILES BY GC/MS
QLast Update : Thu Feb 20 09:49:21 2020
Response via : Initial Calibration

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

| | | Compound | AvgRF | CCRF | %Dev | Area% | Dev(min) |
|---|---|---|---|---|---|---|---|
| 43 | S | 1,2-Dichloroethane-d4 | 0.276 | 0.269 | 2.5 | 113 | 0.00 |
| 44 | TP | 1,2-Dichloroethane | 0.251 | 0.294 | -17.1 | 134 | 0.00 |
| 47 | TP | Methyl cyclohexane | 0.327 | 0.347 | -6.1 | 123 | 0.00 |
| 48 | TP | Trichloroethene | 0.220 | 0.242 | -10.0 | 129 | 0.00 |
| 50 | TP | Dibromomethane | 0.095 | 0.107 | -12.6 | 131 | 0.00 |
| 51 | TC | 1,2-Dichloropropane | 0.227 | 0.261 | -15.0 | 130 | 0.00 |
| 53 | TP | 2-Chloroethyl vinyl ether | 0.070 | 0.058 | 17.1 | 117 | 0.00 |
| 54 | TP | Bromodichloromethane | 0.262 | 0.282 | -7.6 | 126 | 0.00 |
| 57 | TP | 1,4-Dioxane | 0.00093 | 0.00126# | -35.5# | 153 | -0.01 |
| 58 | TP | cis-1,3-Dichloropropene | 0.322 | 0.353 | -9.6 | 127 | 0.00 |
| 59 | I | Chlorobenzene-d5 | 1.000 | 1.000 | 0.0 | 116 | 0.00 |
| 60 | S | Toluene-d8 | 1.429 | 1.384 | 3.1 | 112 | 0.00 |
| 61 | TC | Toluene | 0.722 | 0.794 | -10.0 | 128 | 0.00 |
| 62 | TP | 4-Methyl-2-pentanone | 0.066 | 0.072# | -9.1 | 123 | 0.00 |
| 63 | TP | Tetrachloroethene | 0.308 | 0.325 | -5.5 | 123 | 0.00 |
| 65 | TP | trans-1,3-Dichloropropene | 0.379 | 0.407 | -7.4 | 128 | 0.00 |
| 67 | TP | Ethyl methacrylate | 0.252 | 0.258 | -2.4 | 122 | 0.00 |
| 68 | TP | 1,1,2-Trichloroethane | 0.165 | 0.181 | -9.7 | 125 | 0.00 |
| 69 | TP | Chlorodibromomethane | 0.242 | 0.243 | -0.4 | 119 | 0.00 |
| 70 | TP | 1,3-Dichloropropane | 0.350 | 0.378 | -8.0 | 127 | 0.00 |
| 71 | TP | 1,2-Dibromoethane | 0.191 | 0.206 | -7.9 | 128 | 0.00 |
| 72 | TP | 2-Hexanone | 0.124 | 0.121 | 2.4 | 122 | 0.00 |
| 73 | TP | Chlorobenzene | 0.772 | 0.853 | -10.5 | 129 | 0.00 |
| 74 | TC | Ethylbenzene | 1.353 | 1.475 | -9.0 | 127 | 0.00 |
| 75 | TP | 1,1,1,2-Tetrachloroethane | 0.281 | 0.290 | -3.2 | 123 | 0.00 |
| 76 | TP | p/m Xylene | 0.525 | 0.576 | -9.7 | 128 | 0.00 |
| 77 | TP | o Xylene | 0.491 | 0.540 | -10.0 | 128 | 0.00 |
| 78 | TP | Styrene | 0.823 | 0.894 | -8.6 | 128 | 0.00 |
| 79 | I | 1,4-Dichlorobenzene-d4 | 1.000 | 1.000 | 0.0 | 122 | 0.00 |
| 80 | TP | Bromoform | 0.253 | 0.247 | 2.4 | 116 | 0.00 |
| 82 | TP | Isopropylbenzene | 2.604 | 2.800 | -7.5 | 125 | 0.00 |
| 83 | S | 4-Bromofluorobenzene | 1.078 | 1.025 | 4.9 | 113 | 0.00 |
| 84 | TP | Bromobenzene | 0.582 | 0.636 | -9.3 | 130 | 0.00 |
| 85 | TP | n-Propylbenzene | 2.817 | 3.111 | -10.4 | 130 | 0.00 |
| 86 | TP | 1,4-Dichlorobutane | 0.749 | 0.822 | -9.7 | 132 | 0.00 |
| 87 | TP | 1,1,2,2-Tetrachloroethane | 0.395 | 0.413 | -4.6 | 126 | 0.00 |
| 88 | TP | 4-Ethyltoluene | 2.304 | 2.533 | -9.9 | 130 | 0.00 |

Evaluate Continuing Calibration Report

Data Path : I:\VOLATILES\VOA101\2020\200307A\
Data File : V01200307A01.D
Acq On : 7 Mar 2020 9:31 am
Operator : VOA101:MKS
Sample : WG1348564-2
Misc : WG1348564,ICAL16539
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Mar 07 10:52:38 2020
Quant Method : I:\VOLATILES\VOA101\2020\200307A\V101_200219A_8260.m
Quant Title : VOLATILES BY GC/MS
QLast Update : Thu Feb 20 09:49:21 2020
Response via : Initial Calibration

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

| | Compound | AvgRF | CCRF | %Dev | Area% | Dev(min) |
|---|---|---|---|---|---|---|
| 89 TP | 2-Chlorotoluene | 1.870 | 2.089 | -11.7 | 134 | 0.00 |
| 90 TP | 1,3,5-Trimethylbenzene | 2.016 | 2.214 | -9.8 | 131 | 0.00 |
| 91 TP | 1,2,3-Trichloropropane | 0.372 | 0.373 | -0.3 | 124 | 0.00 |
| 92 TP | trans-1,4-Dichloro-2-butene | 0.121 | 0.134 | -10.7 | 131 | 0.00 |
| 93 TP | 4-Chlorotoluene | 1.787 | 1.995 | -11.6 | 133 | 0.00 |
| 94 TP | tert-Butylbenzene | 1.705 | 1.844 | -8.2 | 129 | 0.00 |
| 97 TP | 1,2,4-Trimethylbenzene | 1.987 | 2.198 | -10.6 | 135 | 0.00 |
| 98 TP | sec-Butylbenzene | 2.124 | 2.282 | -7.4 | 132 | 0.00 |
| 99 TP | p-Isopropyltoluene | 1.965 | 2.136 | -8.7 | 134 | 0.00 |
| 100 TP | 1,3-Dichlorobenzene | 1.085 | 1.222 | -12.6 | 138 | 0.00 |
| 101 TP | 1,4-Dichlorobenzene | 1.099 | 1.242 | -13.0 | 141 | 0.00 |
| 102 TP | p-Diethylbenzene | 1.053 | 1.153 | -9.5 | 137 | 0.00 |
| 103 TP | n-Butylbenzene | 1.457 | 1.626 | -11.6 | 141 | 0.00 |
| 104 TP | 1,2-Dichlorobenzene | 0.955 | 1.048 | -9.7 | 139 | 0.00 |
| 105 TP | 1,2,4,5-Tetramethylbenzene | 1.587 | 1.635 | -3.0 | 131 | 0.00 |
| 106 TP | 1,2-Dibromo-3-chloropropane * | 10.000 | 9.233 | 7.7 | 113 | 0.00 |
| 107 TP | 1,3,5-Trichlorobenzene | 0.509 | 0.530 | -4.1 | 132 | 0.00 |
| 108 TP | Hexachlorobutadiene | 0.150 | 0.156 | -4.0 | 140 | 0.00 |
| 109 TP | 1,2,4-Trichlorobenzene | 0.450 | 0.443 | 1.6 | 135 | 0.00 |
| 110 TP | Naphthalene | 0.998 | 0.874 | 12.4 | 125 | 0.00 |
| 111 TP | 1,2,3-Trichlorobenzene | 0.346 | 0.313 | 9.5 | 125 | 0.00 |

* Evaluation of CC level amount vs concentration.
(#) = Out of Range SPCC's out = 7 CCC's out = 0

Quantitation Report (QT Reviewed)

Data Path : I:\VOLATILES\VOA101\2020\200307A\
Data File : V01200307A01.D
Acq On : 7 Mar 2020 9:31 am
Operator : VOA101:MKS
Sample : WG1348564-2
Misc : WG1348564,ICAL16539
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Mar 07 10:52:38 2020
Quant Method : I:\VOLATILES\VOA101\2020\200307A\V101_200219A_8260.m
Quant Title : VOLATILES BY GC/MS
QLast Update : Thu Feb 20 09:49:21 2020
Response via : Initial Calibration

CCAL FILE(s) : 1 - I:\VOLATILES\VOA101\2020\200307A\V01200307A01.D
Sub List : 8260-Curve - Megamix plus Diox

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| Internal Standards | | | | | | |
| 1) Fluorobenzene | 6.634 | 96 | 235149 | 10.000 | ug/L | 0.00 |
| Standard Area 1 = 235149 | | | Recovery = 100.00% | | | |
| 59) Chlorobenzene-d5 | 10.519 | 117 | 168234 | 10.000 | ug/L | 0.00 |
| Standard Area 1 = 168234 | | | Recovery = 100.00% | | | |
| 79) 1,4-Dichlorobenzene-d4 | 13.324 | 152 | 84540 | 10.000 | ug/L | 0.00 |
| Standard Area 1 = 84540 | | | Recovery = 100.00% | | | |
| System Monitoring Compounds | | | | | | |
| 36) Dibromofluoromethane | 5.739 | 113 | 58629 | 9.679 | ug/L | 0.00 |
| Spiked Amount 10.000 | Range 70 - 130 | | Recovery = 96.79% | | | |
| 43) 1,2-Dichloroethane-d4 | 6.323 | 65 | 63193 | 9.733 | ug/L | 0.00 |
| Spiked Amount 10.000 | Range 70 - 130 | | Recovery = 97.33% | | | |
| 60) Toluene-d8 | 8.495 | 98 | 232868 | 9.689 | ug/L | 0.00 |
| Spiked Amount 10.000 | Range 70 - 130 | | Recovery = 96.89% | | | |
| 83) 4-Bromofluorobenzene | 12.030 | 95 | 86682 | 9.512 | ug/L | 0.00 |
| Spiked Amount 10.000 | Range 70 - 130 | | Recovery = 95.12% | | | |
| Target Compounds | | | | | | Qvalue |
| 2) Dichlorodifluoromethane | 1.821 | 85 | 39382 | 9.299 | ug/L | 99 |
| 3) Chloromethane | 2.034 | 50 | 74082 | 11.559 | ug/L | 99 |
| 4) Vinyl chloride | 2.122 | 62 | 63293 | 10.566 | ug/L | 98 |
| 5) Bromomethane | 2.465 | 94 | 23347 | 9.590 | ug/L | 98 |
| 6) Chloroethane | 2.602 | 64 | 40931 | 11.779 | ug/L | 97 |
| 7) Trichlorofluoromethane | 2.755 | 101 | 75034 | 10.739 | ug/L | 98 |
| 8) Ethyl ether | 3.076 | 74 | 22528 | 11.298 | ug/L | 69 |
| 10) 1,1-Dichloroethene | 3.289 | 96 | 47950 | 11.222 | ug/L | 84 |
| 11) Carbon disulfide | 3.322 | 76 | 123777 | 10.691 | ug/L | 99 |
| 12) Freon-113 | 3.333 | 101 | 46096 | 10.937 | ug/L | 89 |
| 13) Iodomethane | 3.447 | 142 | 12507 | 2.222 | ug/L | 98 |
| 14) Acrolein | 3.633 | 56 | 6388 | 11.540 | ug/L | 93 |
| 15) Methylene chloride | 3.889 | 84 | 52915 | 11.865 | ug/L | 80 |
| 17) Acetone | 3.928 | 43 | 13165 | 15.321 | ug/L | 94 |
| 18) trans-1,2-Dichloroethene | 4.059 | 96 | 51485 | 11.322 | ug/L | 87 |
| 19) Methyl acetate | 4.059 | 43 | 25958 | 11.671 | ug/L # | 89 |
| 20) Methyl tert-butyl ether | 4.157 | 73 | 108978 | 11.262 | ug/L | 92 |
| 21) tert-Butyl alcohol | 4.244 | 59 | 13829 | 59.257 | ug/L | 90 |
| 22) Diisopropyl ether | 4.550 | 45 | 205837 | 12.230 | ug/L | 93 |
| 23) 1,1-Dichloroethane | 4.692 | 63 | 112193 | 11.493 | ug/L | 97 |
| 24) Halothane | 4.741 | 117 | 39650 | 10.814 | ug/L | 99 |

Quantitation Report (QT Reviewed)

Data Path : I:\VOLATILES\VOA101\2020\200307A\
Data File : V01200307A01.D
Acq On : 7 Mar 2020 9:31 am
Operator : VOA101:MKS
Sample : WG1348564-2
Misc : WG1348564,ICAL16539
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Mar 07 10:52:38 2020
Quant Method : I:\VOLATILES\VOA101\2020\200307A\V101_200219A_8260.m
Quant Title : VOLATILES BY GC/MS
QLast Update : Thu Feb 20 09:49:21 2020
Response via : Initial Calibration

CCAL FILE(s) : 1 - I:\VOLATILES\VOA101\2020\200307A\V01200307A01.D
Sub List : 8260-Curve - Megamix plus Diox

| Compound | R.T. | QIon | Response | Conc | Units | | Dev(Min) |
|---|---|---|---|---|---|---|---|
| 25) Acrylonitrile | 4.741 | 53 | 12007 | 12.184 | ug/L | | 96 |
| 26) Ethyl tert-butyl ether | 4.926 | 59 | 172807 | 11.615 | ug/L | | 95 |
| 27) Vinyl acetate | 4.937 | 43 | 114967 | 11.662 | ug/L | | 96 |
| 28) cis-1,2-Dichloroethene | 5.259 | 96 | 62789 | 11.629 | ug/L | | 85 |
| 29) 2,2-Dichloropropane | 5.374 | 77 | 81576 | 12.014 | ug/L | | 94 |
| 30) Bromochloromethane | 5.472 | 128 | 25310 | 12.232 | ug/L | # | 81 |
| 31) Cyclohexane | 5.483 | 56 | 115583 | 11.218 | ug/L | | 84 |
| 32) Chloroform | 5.543 | 83 | 97797 | 11.511 | ug/L | | 97 |
| 33) Ethyl acetate | 5.657 | 43 | 34479 | 10.820 | ug/L | # | 94 |
| 34) Carbon tetrachloride | 5.706 | 117 | 71727 | 10.466 | ug/L | | 97 |
| 35) Tetrahydrofuran | 5.712 | 42 | 10531 | 11.855 | ug/L | | 96 |
| 37) 1,1,1-Trichloroethane | 5.772 | 97 | 86135 | 10.849 | ug/L | | 97 |
| 39) 2-Butanone | 5.865 | 43 | 15530 | 11.974 | ug/L | # | 42 |
| 40) 1,1-Dichloropropene | 5.908 | 75 | 75126 | 11.046 | ug/L | | 98 |
| 41) Benzene | 6.176 | 78 | 206722 | 11.003 | ug/L | # | 92 |
| 42) tert-Amyl methyl ether | 6.285 | 73 | 120113 | 10.835 | ug/L | | 93 |
| 44) 1,2-Dichloroethane | 6.394 | 62 | 69043 | 11.707 | ug/L | | 99 |
| 47) Methyl cyclohexane | 6.825 | 83 | 81529 | 10.614 | ug/L | # | 75 |
| 48) Trichloroethene | 6.825 | 95 | 56959 | 11.002 | ug/L | | 98 |
| 50) Dibromomethane | 7.316 | 93 | 25266 | 11.339 | ug/L | | 99 |
| 51) 1,2-Dichloropropane | 7.431 | 63 | 61417 | 11.491 | ug/L | | 96 |
| 53) 2-Chloroethyl vinyl ether | 8.173 | 63 | 13541 | 8.235 | ug/L | | 92 |
| 54) Bromodichloromethane | 7.502 | 83 | 66289 | 10.773 | ug/L | | 98 |
| 57) 1,4-Dioxane | 7.725 | 88 | 14796 | 677.371 | ug/L | # | 83 |
| 58) cis-1,3-Dichloropropene | 8.260 | 75 | 82924 | 10.959 | ug/L | | 95 |
| 61) Toluene | 8.560 | 92 | 133589 | 11.002 | ug/L | | 96 |
| 62) 4-Methyl-2-pentanone | 9.018 | 58 | 12059 | 10.897 | ug/L | | 96 |
| 63) Tetrachloroethene | 9.057 | 166 | 54675 | 10.541 | ug/L | | 100 |
| 65) trans-1,3-Dichloropropene | 9.078 | 75 | 68512 | 10.747 | ug/L | | 90 |
| 67) Ethyl methacrylate | 9.275 | 69 | 43416 | 10.255 | ug/L | | 100 |
| 68) 1,1,2-Trichloroethane | 9.291 | 83 | 30395 | 10.949 | ug/L | | 98 |
| 69) Chlorodibromomethane | 9.531 | 129 | 40816 | 10.018 | ug/L | | 97 |
| 70) 1,3-Dichloropropane | 9.651 | 76 | 63672 | 10.822 | ug/L | | 99 |
| 71) 1,2-Dibromoethane | 9.853 | 107 | 34698 | 10.808 | ug/L | | 98 |
| 72) 2-Hexanone | 10.137 | 43 | 20402 | 9.764 | ug/L | | 96 |
| 73) Chlorobenzene | 10.546 | 112 | 143555 | 11.058 | ug/L | | 98 |
| 74) Ethylbenzene | 10.573 | 91 | 248082 | 10.902 | ug/L | | 100 |
| 75) 1,1,1,2-Tetrachloroethane | 10.623 | 131 | 48778 | 10.318 | ug/L | | 99 |
| 76) p/m Xylene | 10.759 | 106 | 193825 | 21.945 | ug/L | | 97 |
| 77) o Xylene | 11.299 | 106 | 181852 | 22.014 | ug/L | | 97 |

Quantitation Report (QT Reviewed)

Data Path : I:\VOLATILES\VOA101\2020\200307A\
Data File : V01200307A01.D
Acq On : 7 Mar 2020 9:31 am
Operator : VOA101:MKS
Sample : WG1348564-2
Misc : WG1348564,ICAL16539
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Mar 07 10:52:38 2020
Quant Method : I:\VOLATILES\VOA101\2020\200307A\V101_200219A_8260.m
Quant Title : VOLATILES BY GC/MS
QLast Update : Thu Feb 20 09:49:21 2020
Response via : Initial Calibration

CCAL FILE(s) : 1 - I:\VOLATILES\VOA101\2020\200307A\V01200307A01.D
Sub List : 8260-Curve - Megamix plus Diox

| Compound | R.T. | QIon | Response | Conc | Units | | Dev(Min) |
|---|---|---|---|---|---|---|---|
| 78) Styrene | 11.370 | 104 | 300693 | 21.714 | ug/L | | 99 |
| 80) Bromoform | 11.403 | 173 | 20917 | 9.763 | ug/L | | 98 |
| 82) Isopropylbenzene | 11.687 | 105 | 236675 | 10.753 | ug/L | | 99 |
| 84) Bromobenzene | 12.156 | 156 | 53793 | 10.928 | ug/L | | 99 |
| 85) n-Propylbenzene | 12.183 | 91 | 263027 | 11.045 | ug/L | | 98 |
| 86) 1,4-Dichlorobutane | 12.205 | 55 | 69502 | 10.983 | ug/L | | 100 |
| 87) 1,1,2,2-Tetrachloroethane | 12.265 | 83 | 34953 | 10.458 | ug/L | | 99 |
| 88) 4-Ethyltoluene | 12.314 | 105 | 214115 | 10.994 | ug/L | | 100 |
| 89) 2-Chlorotoluene | 12.374 | 91 | 176634 | 11.172 | ug/L | | 92 |
| 90) 1,3,5-Trimethylbenzene | 12.412 | 105 | 187130 | 10.981 | ug/L | | 100 |
| 91) 1,2,3-Trichloropropane | 12.429 | 75 | 31528M1 | 10.017 | ug/L | | |
| 92) trans-1,4-Dichloro-2-b... | 12.467 | 53 | 11352 | 11.134 | ug/L | # | 15 |
| 93) 4-Chlorotoluene | 12.565 | 91 | 168639 | 11.164 | ug/L | | 97 |
| 94) tert-Butylbenzene | 12.783 | 119 | 155854 | 10.813 | ug/L | | 98 |
| 97) 1,2,4-Trimethylbenzene | 12.860 | 105 | 185837 | 11.064 | ug/L | | 99 |
| 98) sec-Butylbenzene | 12.985 | 105 | 192927 | 10.745 | ug/L | | 98 |
| 99) p-Isopropyltoluene | 13.143 | 119 | 180605 | 10.871 | ug/L | | 97 |
| 100) 1,3-Dichlorobenzene | 13.242 | 146 | 103316 | 11.268 | ug/L | | 99 |
| 101) 1,4-Dichlorobenzene | 13.340 | 146 | 104984 | 11.300 | ug/L | | 98 |
| 102) p-Diethylbenzene | 13.547 | 119 | 97496 | 10.949 | ug/L | | 97 |
| 103) n-Butylbenzene | 13.613 | 91 | 137427 | 11.157 | ug/L | | 99 |
| 104) 1,2-Dichlorobenzene | 13.809 | 146 | 88616 | 10.979 | ug/L | | 98 |
| 105) 1,2,4,5-Tetramethylben... | 14.420 | 119 | 138194 | 10.300 | ug/L | | 97 |
| 106) 1,2-Dibromo-3-chloropr... | 14.666 | 155 | 3862 | 9.233 | ug/L | | 95 |
| 107) 1,3,5-Trichlorobenzene | 14.699 | 180 | 44789 | 10.410 | ug/L | | 97 |
| 108) Hexachlorobutadiene | 15.337 | 225 | 13218 | 10.449 | ug/L | | 98 |
| 109) 1,2,4-Trichlorobenzene | 15.375 | 180 | 37460 | 9.847 | ug/L | | 98 |
| 110) Naphthalene | 15.741 | 128 | 73889 | 8.762 | ug/L | | 100 |
| 111) 1,2,3-Trichlorobenzene | 15.953 | 180 | 26495 | 9.053 | ug/L | | 97 |

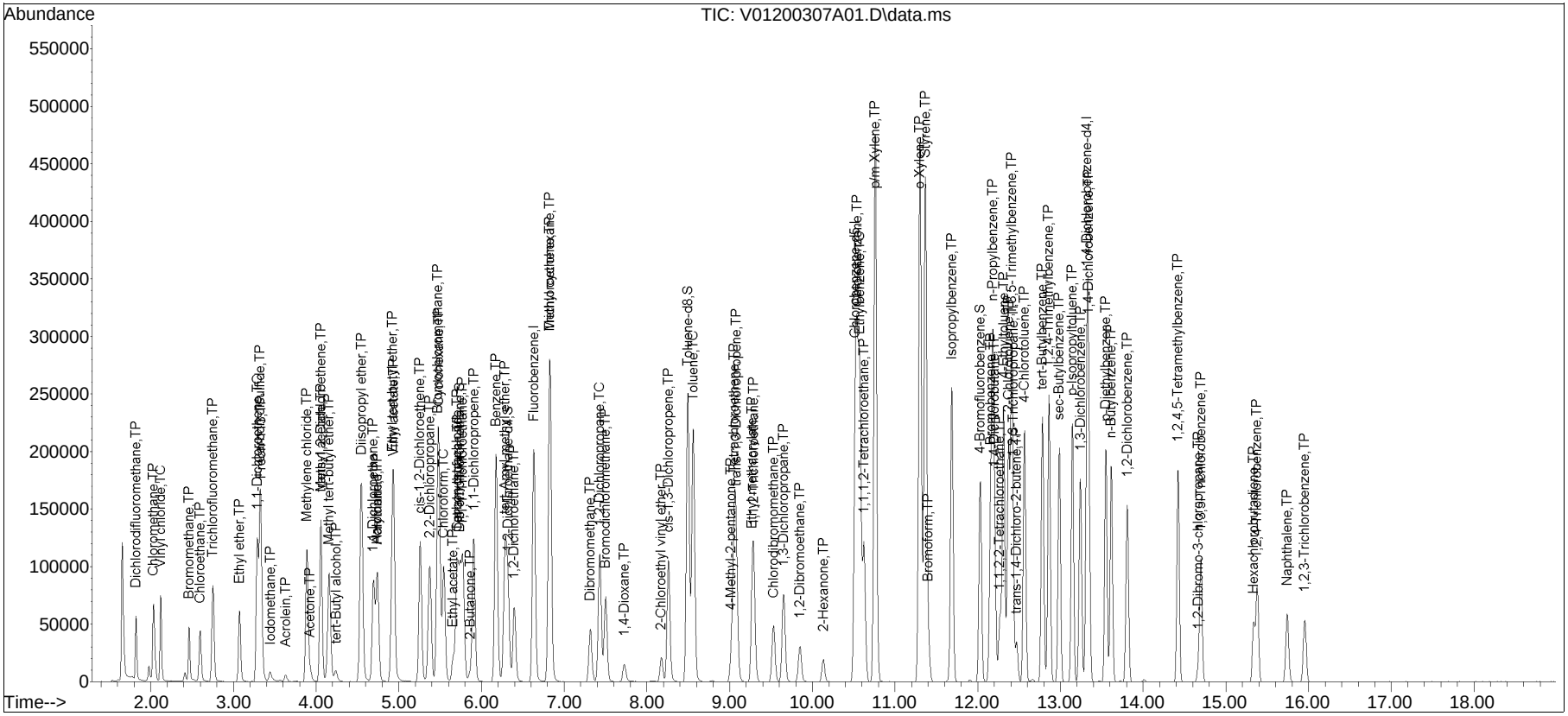
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : I:\VOLATILES\VOA101\2020\200307A\
Data File : V01200307A01.D
Acq On : 7 Mar 2020 9:31 am
Operator : VOA101:MKS
Sample : WG1348564-2
Misc : WG1348564,ICAL16539
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Mar 07 10:52:38 2020
Quant Method : I:\VOLATILES\VOA101\2020\200307A\V101_200219A_8260.m
Quant Title : VOLATILES BY GC/MS
QLast Update : Thu Feb 20 09:49:21 2020
Response via : Initial Calibration

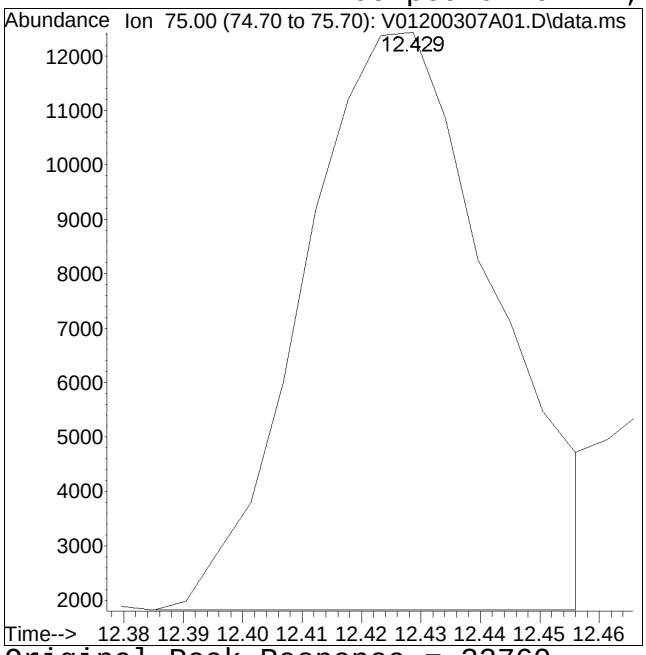
Sub List : 8260-Curve - Megamix plus Diox00307A\V01200307A01.D•



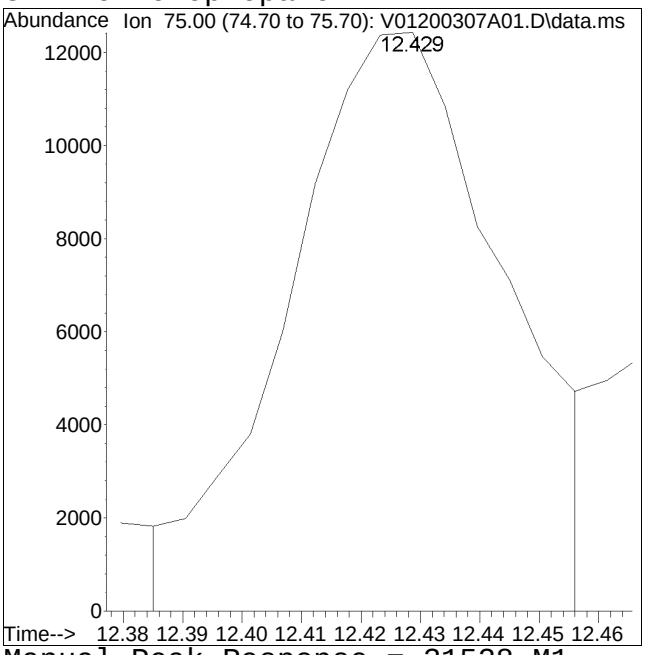
# Manual Integration Report

Data Path : I:\VOLATILES\VOA101\2020\2QMethod : V101_200219A_8260.m
Data File : V01200307A01.D Operator : VOA101:MKS
Date Inj'd : 3/7/2020 9:31 am Instrument : VOA 101
Sample : WG1348564-2 Quant Date : 3/7/2020 9:52 am

## Compound #91: 1,2,3-Trichloropropane




Original Peak Response = 23769



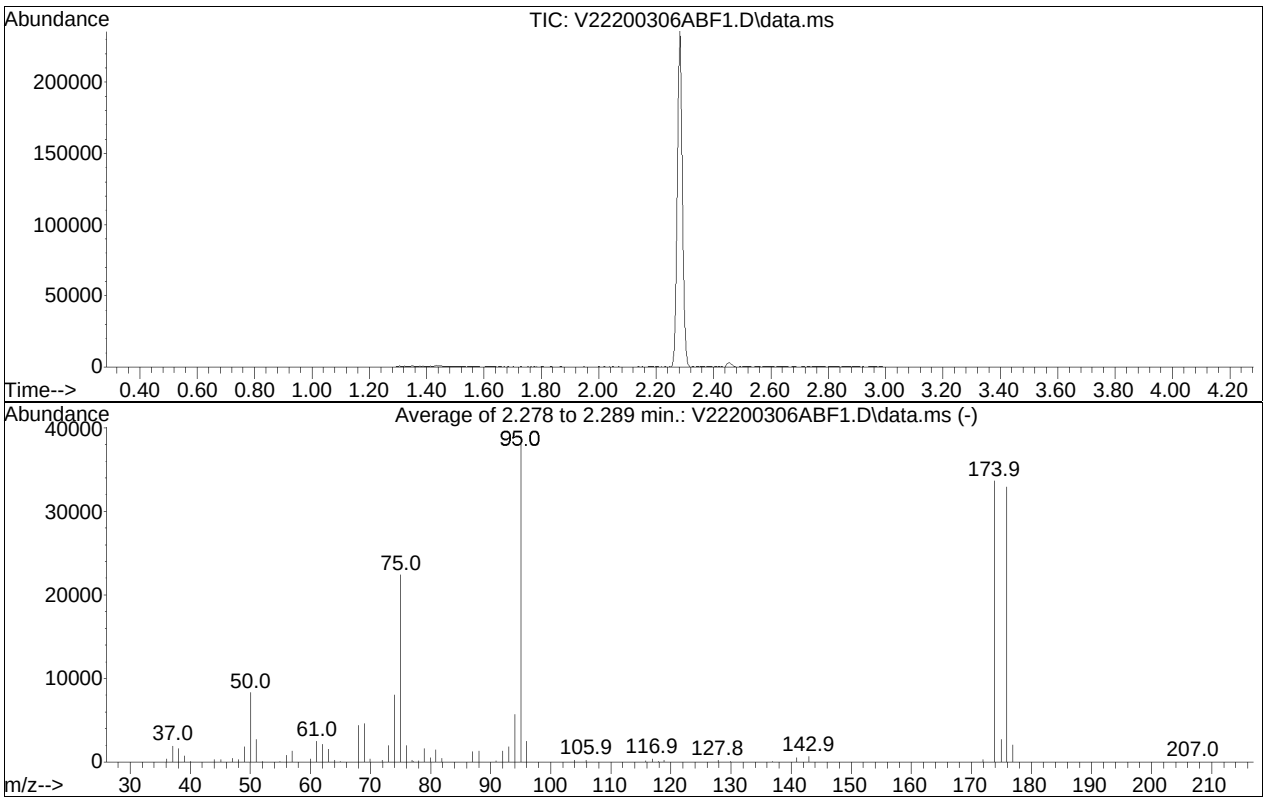

Manual Peak Response = 31528 M1

M1 = Split or tailing peak, auto integration stopped early resulting in false low area count.

Data Path : I:\VOLATILES\VOA122\2020\200306A\
Data File : V22200306ABF1.D
Acq On : 06 Mar 2020 09:33 am
Operator : VOA122:PD
Sample : WG1348135-1
Misc : WG1348135
ALS Vial : 1 Sample Multiplier: 1

Integration File: rteint.p

Method : I:\VOLATILES\VOA122\2020\200306A\V122_191219N_8260.m
Title : VOLATILES BY GC/MS
Last Update : Fri Dec 20 07:20:50 2019



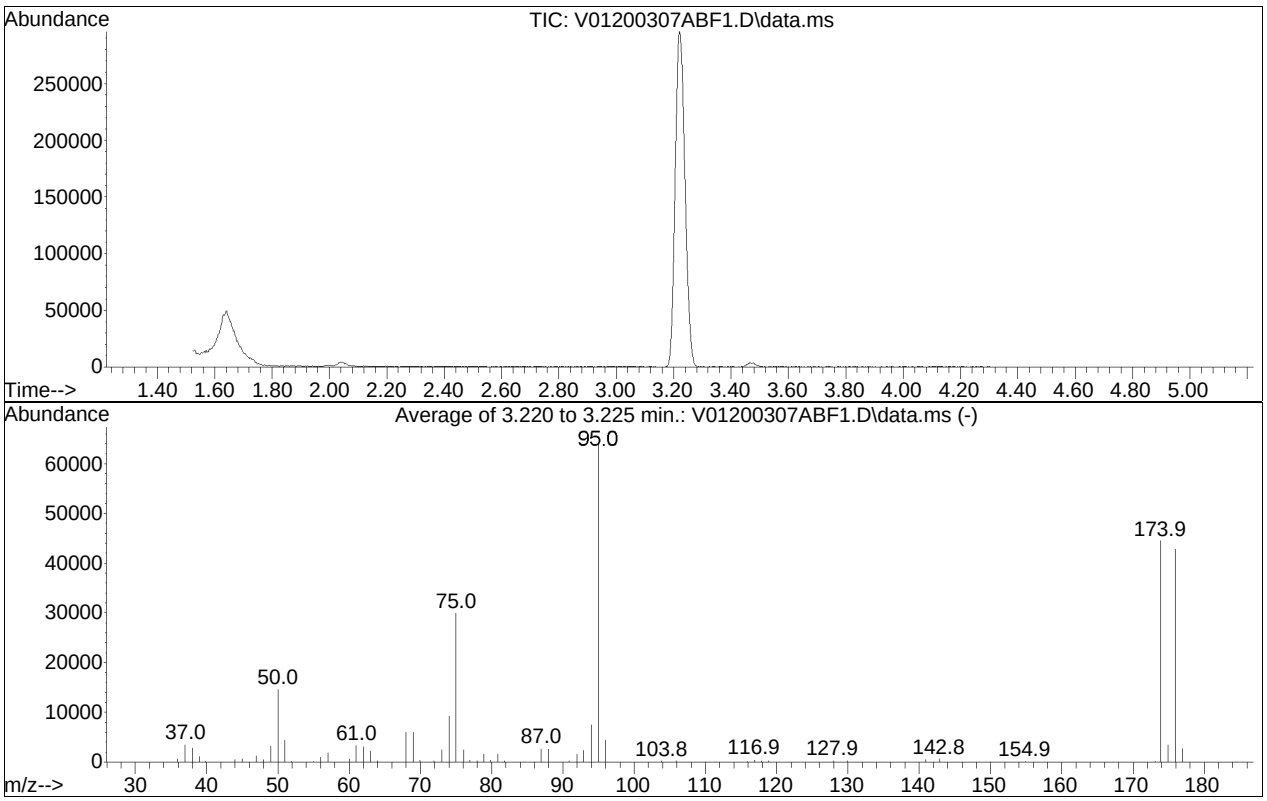

AutoFind: Scans 189, 190, 191; Background Corrected with Scan 182

| Target Mass | Rel. to Mass | Lower Limit% | Upper Limit% | Rel. Abn% | Raw Abn | Result Pass/Fail |
|---|---|---|---|---|---|---|
| 50 | 95 | 15 | 40 | 21.7 | 8302 | PASS |
| 75 | 95 | 30 | 60 | 58.7 | 22424 | PASS |
| 95 | 95 | 100 | 100 | 100.0 | 38221 | PASS |
| 96 | 95 | 5 | 9 | 6.6 | 2518 | PASS |
| 173 | 174 | 0.00 | 2 | 0.0 | 0 | PASS |
| 174 | 95 | 50 | 100 | 88.1 | 33669 | PASS |
| 175 | 174 | 5 | 9 | 8.2 | 2761 | PASS |
| 176 | 174 | 95 | 101 | 97.8 | 32915 | PASS |
| 177 | 176 | 5 | 9 | 6.3 | 2062 | PASS |

Data Path : I:\VOLATILES\VOA101\2020\200307A\
Data File : V01200307ABF1.D
Acq On : 7 Mar 2020 9:10 am
Operator : VOA101:MKS
Sample : WG1348564-1
Misc : WG1348564
ALS Vial : 1 Sample Multiplier: 1

Integration File: rteint.p

Method : I:\VOLATILES\VOA101\2020\200307A\V101_200219A_8260.m
Title : VOLATILES BY GC/MS
Last Update : Thu Feb 20 09:49:21 2020




AutoFind: Scans 587, 588, 589; Background Corrected with Scan 569

| Target Mass | Rel. to Mass | Lower Limit% | Upper Limit% | Rel. Abn% | Raw Abn | Result Pass/Fail |
|---|---|---|---|---|---|---|
| 50 | 95 | 15 | 40 | 22.7 | 14605 | PASS |
| 75 | 95 | 30 | 60 | 46.7 | 30003 | PASS |
| 95 | 95 | 100 | 100 | 100.0 | 64221 | PASS |
| 96 | 95 | 5 | 9 | 6.9 | 4461 | PASS |
| 173 | 174 | 0.00 | 2 | 0.4 | 175 | PASS |
| 174 | 95 | 50 | 100 | 69.3 | 44525 | PASS |
| 175 | 174 | 5 | 9 | 7.8 | 3465 | PASS |
| 176 | 174 | 95 | 101 | 96.3 | 42880 | PASS |
| 177 | 176 | 5 | 9 | 6.4 | 2748 | PASS |

# Volatiles Raw QC Data

Quantitation Report (QT Reviewed)

Data Path : I:\VOLATILES\VOA122\2020\200306A\
Data File : V22200306A05.D
Acq On : 06 Mar 2020 11:24 am
Operator : VOA122:PD
Sample : WG1348135-5,31,10,10 (Sig #1); METHOD BLK (Sig #2)
Misc : WG1348135,ICAL16379 (Sig #1); WG,ICAL16379 (Sig #2)
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Mar 06 11:46:48 2020
Quant Method : I:\VOLATILES\VOA122\2020\200306A\V122_191219N_8260.m
Quant Title : VOLATILES BY GC/MS
QLast Update : Fri Dec 20 07:20:50 2019
Response via : Initial Calibration

CCAL FILE(s) : 1 - I:\VOLATILES\VOA122\2020\200306A\V22200306A01.D
Sub List : 8260-Curve - Megamix plus Diox

| Compound | R.T. | QIon | Response | Conc Units | Dev(Min) |
|---|---|---|---|---|---|
| Internal Standards | | | | | |
| 1) Fluorobenzene | 5.827 | 96 | 260517 | 10.000 ug/L | 0.00 |
| Standard Area 1 = 254411 | | | Recovery = 102.40% | | |
| 62) Chlorobenzene-d5 | 9.353 | 117 | 191517 | 10.000 ug/L | 0.00 |
| Standard Area 1 = 187639 | | | Recovery = 102.07% | | |
| 83) 1,4-Dichlorobenzene-d4 | 12.107 | 152 | 97483 | 10.000 ug/L | 0.00 |
| Standard Area 1 = 100182 | | | Recovery = 97.31% | | |
| System Monitoring Compounds | | | | | |
| 38) Dibromofluoromethane | 5.018 | 113 | 72349 | 9.615 ug/L | 0.00 |
| Spiked Amount 10.000 | Range 70 - 130 | | Recovery = 96.15% | | |
| 46) 1,2-Dichloroethane-d4 | 5.549 | 65 | 105658 | 12.152 ug/L | 0.00 |
| Spiked Amount 10.000 | Range 70 - 130 | | Recovery = 121.52% | | |
| 63) Toluene-d8 | 7.519 | 98 | 260250 | 10.518 ug/L | 0.00 |
| Spiked Amount 10.000 | Range 70 - 130 | | Recovery = 105.18% | | |
| 87) 4-Bromofluorobenzene | 10.874 | 95 | 96134 | 10.043 ug/L | 0.00 |
| Spiked Amount 10.000 | Range 70 - 130 | | Recovery = 100.43% | | |
| Target Compounds | | | | | Qvalue |
| 2) Dichlorodifluoromethane | 0.000 | | 0 | N.D. | |
| 3) Chloromethane | 1.740 | 50 | 149 | N.D. | |
| 4) Vinyl chloride | 0.000 | | 0 | N.D. | |
| 5) Bromomethane | 0.000 | | 0 | N.D. d | |
| 6) Chloroethane | 0.000 | | 0 | N.D. | |
| 7) Trichlorofluoromethane | 0.000 | | 0 | N.D. | |
| 8) Ethyl ether | 0.000 | | 0 | N.D. | |
| 10) 1,1-Dichloroethene | 0.000 | | 0 | N.D. | |
| 11) Carbon disulfide | 2.833 | 76 | 360 | N.D. | |
| 15) Methylene chloride | 3.348 | 84 | 72 | N.D. | |
| 17) Acetone | 0.000 | | 0 | N.D. | |
| 18) trans-1,2-Dichloroethene | 0.000 | | 0 | N.D. | |
| 21) Methyl tert-butyl ether | 0.000 | | 0 | N.D. | |
| 25) 1,1-Dichloroethane | 0.000 | | 0 | N.D. | |
| 27) Acrylonitrile | 0.000 | | 0 | N.D. | |
| 29) Vinyl acetate | 0.000 | | 0 | N.D. | |
| 30) cis-1,2-Dichloroethene | 0.000 | | 0 | N.D. | |
| 31) 2,2-Dichloropropane | 0.000 | | 0 | N.D. | |
| 32) Bromochloromethane | 0.000 | | 0 | N.D. | |
| 34) Chloroform | 4.846 | 83 | 314 | N.D. | |

Data Path : I:\VOLATILES\VOA122\2020\200306A\
Data File : V22200306A05.D
Acq On : 06 Mar 2020 11:24 am
Operator : VOA122:PD
Sample : WG1348135-5,31,10,10 (Sig #1); METHOD BLK (Sig #2)
Misc : WG1348135,ICAL16379 (Sig #1); WG,ICAL16379 (Sig #2)
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Mar 06 11:46:48 2020
Quant Method : I:\VOLATILES\VOA122\2020\200306A\V122_191219N_8260.m
Quant Title : VOLATILES BY GC/MS
QLast Update : Fri Dec 20 07:20:50 2019
Response via : Initial Calibration

CCAL FILE(s) : 1 - I:\VOLATILES\VOA122\2020\200306A\V22200306A01.D
Sub List : 8260-Curve - Megamix plus Diox

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 36) Carbon tetrachloride | 0.000 | | 0 | N.D. | | |
| 39) 1,1,1-Trichloroethane | 0.000 | | 0 | N.D. | | |
| 41) 2-Butanone | 0.000 | | 0 | N.D. | | |
| 42) 1,1-Dichloropropene | 0.000 | | 0 | N.D. | | |
| 44) Benzene | 0.000 | | 0 | N.D. | | |
| 47) 1,2-Dichloroethane | 0.000 | | 0 | N.D. | | |
| 51) Trichloroethene | 0.000 | | 0 | N.D. | | |
| 53) Dibromomethane | 0.000 | | 0 | N.D. | | |
| 54) 1,2-Dichloropropane | 0.000 | | 0 | N.D. | | |
| 57) Bromodichloromethane | 0.000 | | 0 | N.D. | | |
| 60) 1,4-Dioxane | 0.000 | | 0 | N.D. | | |
| 61) cis-1,3-Dichloropropene | 0.000 | | 0 | N.D. | | |
| 64) Toluene | 0.000 | | 0 | N.D. | | |
| 65) 4-Methyl-2-pentanone | 0.000 | | 0 | N.D. | | |
| 66) Tetrachloroethene | 0.000 | | 0 | N.D. | | |
| 68) trans-1,3-Dichloropropene | 0.000 | | 0 | N.D. | | |
| 71) 1,1,2-Trichloroethane | 0.000 | | 0 | N.D. | | |
| 72) Chlorodibromomethane | 0.000 | | 0 | N.D. | | |
| 73) 1,3-Dichloropropane | 0.000 | | 0 | N.D. | | |
| 74) 1,2-Dibromoethane | 0.000 | | 0 | N.D. | | |
| 76) 2-Hexanone | 0.000 | | 0 | N.D. | d | |
| 77) Chlorobenzene | 0.000 | | 0 | N.D. | | |
| 78) Ethylbenzene | 9.353 | 91 | 290 | N.D. | | |
| 79) 1,1,1,2-Tetrachloroethane | 0.000 | | 0 | N.D. | | |
| 80) p/m Xylene | 0.000 | | 0 | N.D. | | |
| 81) o Xylene | 0.000 | | 0 | N.D. | | |
| 82) Styrene | 0.000 | | 0 | N.D. | | |
| 84) Bromoform | 0.000 | | 0 | N.D. | | |
| 86) Isopropylbenzene | 0.000 | | 0 | N.D. | | |
| 88) Bromobenzene | 0.000 | | 0 | N.D. | | |
| 89) n-Propylbenzene | 11.054 | 91 | 152 | N.D. | | |
| 91) 1,1,2,2-Tetrachloroethane | 0.000 | | 0 | N.D. | | |
| 92) 4-Ethyltoluene | 0.000 | | 0 | N.D. | | |
| 93) 2-Chlorotoluene | 11.054 | 91 | 152 | N.D. | | |
| 94) 1,3,5-Trimethylbenzene | 0.000 | | 0 | N.D. | | |
| 95) 1,2,3-Trichloropropane | 0.000 | | 0 | N.D. | | |
| 96) trans-1,4-Dichloro-2-b... | 0.000 | | 0 | N.D. | | |
| 97) 4-Chlorotoluene | 11.405 | 91 | 79 | N.D. | | |
| 98) tert-Butylbenzene | 0.000 | | 0 | N.D. | | |

Data Path : I:\VOLATILES\VOA122\2020\200306A\
Data File : V22200306A05.D
Acq On : 06 Mar 2020 11:24 am
Operator : VOA122:PD
Sample : WG1348135-5,31,10,10 (Sig #1); METHOD BLK (Sig #2)
Misc : WG1348135,ICAL16379 (Sig #1); WG,ICAL16379 (Sig #2)
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Mar 06 11:46:48 2020
Quant Method : I:\VOLATILES\VOA122\2020\200306A\V122_191219N_8260.m
Quant Title : VOLATILES BY GC/MS
QLast Update : Fri Dec 20 07:20:50 2019
Response via : Initial Calibration

CCAL FILE(s) : 1 - I:\VOLATILES\VOA122\2020\200306A\V22200306A01.D
Sub List : 8260-Curve - Megamix plus Diox

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 101) 1,2,4-Trimethylbenzene | 0.000 | | 0 | N.D. | | |
| 102) sec-Butylbenzene | 0.000 | | 0 | N.D. | | |
| 103) p-Isopropyltoluene | 11.974 | 119 | 73 | N.D. | | |
| 104) 1,3-Dichlorobenzene | 12.023 | 146 | 155 | N.D. | | |
| 105) 1,4-Dichlorobenzene | 12.114 | 146 | 322 | N.D. | | |
| 106) p-Diethylbenzene | 0.000 | | 0 | N.D. | | |
| 107) n-Butylbenzene | 12.406 | 91 | 418 | N.D. | | |
| 108) 1,2-Dichlorobenzene | 0.000 | | 0 | N.D. | | |
| 109) 1,2,4,5-Tetramethylben... | 13.144 | 119 | 160 | N.D. | | |
| 110) 1,2-Dibromo-3-chloropr... | 0.000 | | 0 | N.D. | | |
| 112) Hexachlorobutadiene | 13.944 | 225 | 334 | 0.140 | ug/L # | 74 |
| 113) 1,2,4-Trichlorobenzene | 13.965 | 180 | 76 | N.D. | | |
| 114) Naphthalene | 14.272 | 128 | 377 | N.D. | | |
| 115) 1,2,3-Trichlorobenzene | 14.432 | 180 | 84 | N.D. | | |

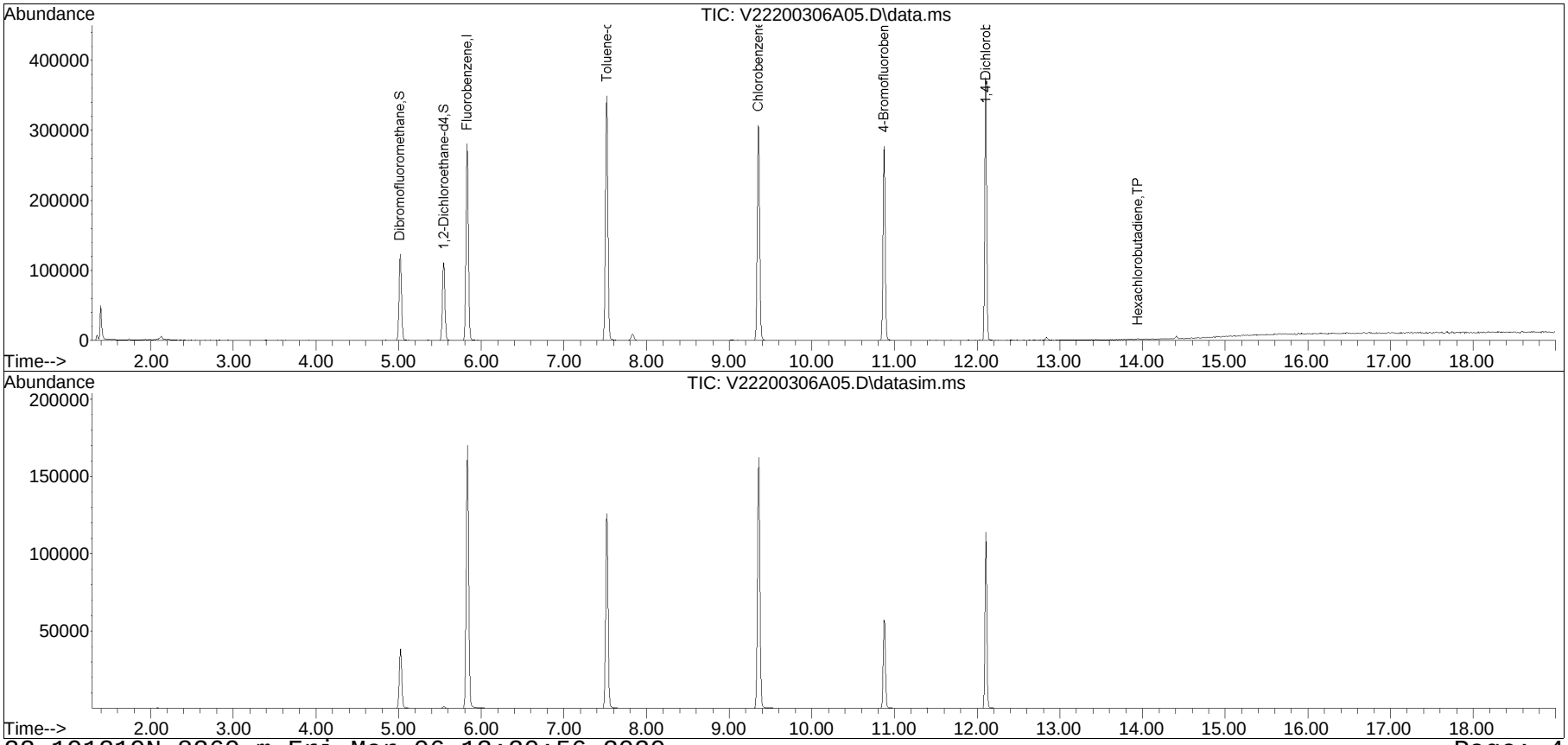
(#) = qualifier out of range (m) = manual integration (+) = signals summed

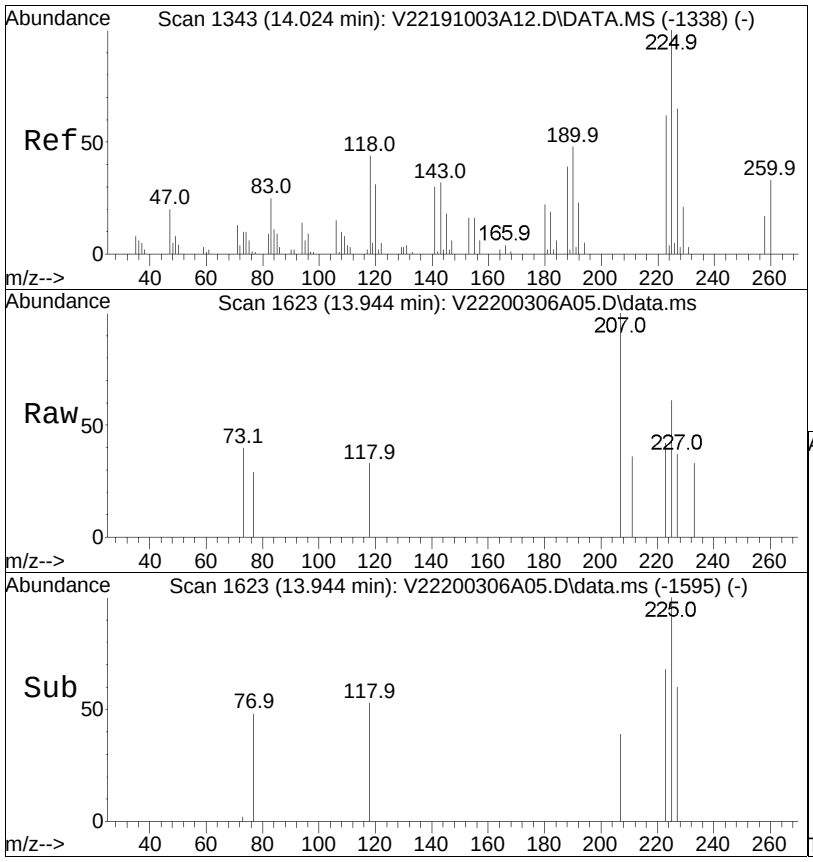
Quantitation Report (QT Reviewed)

Data Path : I:\VOLATILES\VOA122\2020\200306A\
Data File : V22200306A05.D
Acq On : 06 Mar 2020 11:24 am
Operator : VOA122:PD
Sample : WG1348135-5,31,10,10 (Sig #1); METHOD BLK (Sig #2)
Misc : WG1348135,ICAL16379 (Sig #1); WG,ICAL16379 (Sig #2)
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Mar 06 11:46:48 2020
Quant Method : I:\VOLATILES\VOA122\2020\200306A\V122_191219N_8260.m
Quant Title : VOLATILES BY GC/MS
QLast Update : Fri Dec 20 07:20:50 2019
Response via : Initial Calibration

Sub List : 8260-Curve - Megamix plus Diox00306A\V22200306A01.D•

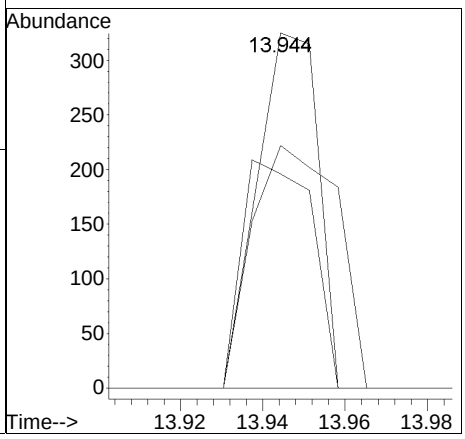





#112
Hexachlorobutadiene
Concen: 0.14 ug/L
RT: 13.944 min Scan# 1623
Delta R.T. -0.007 min
Lab File: V22200306A05.D
Acq: 06 Mar 2020 11:24 am

Tgt Ion:225 Resp: 334

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 225 | 100 | | |
| 223 | 95.2 | 49.8 | 74.8# |
| 227 | 73.4 | 52.2 | 78.4 |



Manual Integration Report

| | | | |
|---|---|---|---|
| Data Path | : I:\VOLATILES\VOA122\2020\2 | QMethod | : V122_191219N_8260.m |
| Data File | : V22200306A05.D | Operator | : VOA122:PD |
| Date Inj'd | : 3/6/2020 11:24 am | Instrument | : VOA122 |
| Sample | : WG1348135-5,31,10,10 | Quant Date | : 3/6/2020 11:46 am |

There are no manual integrations or false positives in this file.

LSC Area Percent Report

Data Path : I:\VOLATILES\VOA122\2020\200306A\
Data File : V22200306A05.D
Acq On : 06 Mar 2020 11:24 am
Operator : VOA122:PD
Sample : WG1348135-5,31,10,10 (Sig #1); METHOD BLK (Sig #2)
Misc : WG1348135,ICAL16379 (Sig #1); WG,ICAL16379 (Sig #2)
ALS Vial : 5 Sample Multiplier: 1

Integration Parameters: rteint.p
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 3 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : I:\VOLATILES\VOA122\2020\200306A\V122_191219N_8260.m
Title : VOLATILES BY GC/MS

Signal : TIC: V22200306A05.D\data.ms

| peak # | R.T. min | first scan | max scan | last scan | PK TY | peak height | corr. area | corr. % max. | % of total |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 5.018 | 471 | 478 | 489 | rBB | 123027 | 250030 | 35.22% | 7.077% |
| 2 | 5.541 | 535 | 545 | 555 | rBV | 110968 | 261698 | 36.87% | 7.407% |
| 3 | 5.827 | 566 | 577 | 590 | rBV | 280675 | 574346 | 80.91% | 16.256% |
| 4 | 7.519 | 764 | 772 | 784 | rBV | 349579 | 709859 | 100.00% | 20.092% |
| 5 | 7.831 | 805 | 812 | 820 | rBB | 8692 | 22436 | 3.16% | 0.635% |
| 6 | 9.353 | 997 | 1007 | 1018 | rBB | 307374 | 611975 | 86.21% | 17.321% |
| 7 | 10.874 | 1191 | 1200 | 1212 | rBV | 277537 | 499056 | 70.30% | 14.125% |
| 8 | 12.100 | 1352 | 1358 | 1372 | rBV | 375421 | 603672 | 85.04% | 17.086% |

Sum of corrected areas: 3533072

Signal : TIC: V22200306A05.D\datasim.ms

| peak # | R.T. min | first scan | max scan | last scan | PK TY | peak height | corr. area | corr. % max. | % of total |
|---|---|---|---|---|---|---|---|---|---|

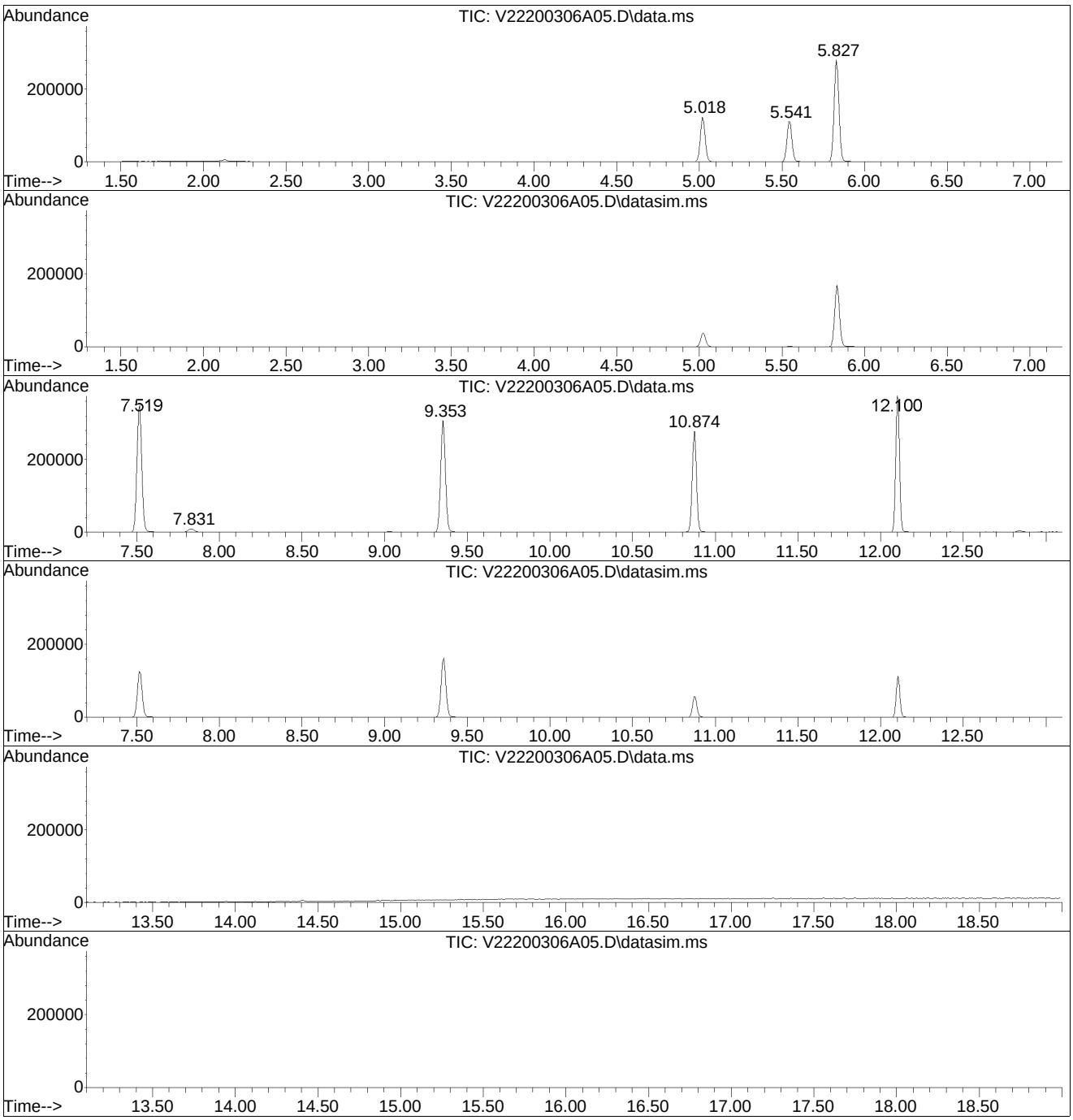
No peaks were detected using the above RTE integration parameters!

LSC Report - Integrated Chromatogram

Data Path : I:\VOLATILES\VOA122\2020\200306A\
Data File : V22200306A05.D
Acq On : 06 Mar 2020 11:24 am
Operator : VOA122:PD
Sample : WG1348135-5,31,10,10 (Sig #1); METHOD BLK (Sig #2)
Misc : WG1348135,ICAL16379 (Sig #1); WG,ICAL16379 (Sig #2)
ALS Vial : 5 Sample Multiplier: 1

Quant Method : I:\VOLATILES\VOA122\2020\200306A\V122_191219N_8260.m
Quant Title : VOLATILES BY GC/MS

TIC Library : I:\nist-db\NIST02.L
TIC Integration Parameters: rteint.p



Library Search Compound Report

Data Path : I:\VOLATILES\VOA122\2020\200306A\
Data File : V22200306A05.D
Acq On : 06 Mar 2020 11:24 am
Operator : VOA122:PD
Sample : WG1348135-5,31,10,10 (Sig #1); METHOD BLK (Sig #2)
Misc : WG1348135,ICAL16379 (Sig #1); WG,ICAL16379 (Sig #2)
ALS Vial : 5 Sample Multiplier: 1

Quant Method : I:\VOLATILES\VOA122\2020\200306A\V122_191219N_8260.m
Quant Title : VOLATILES BY GC/MS

TIC Library : I:\nist-db\NIST02.L
TIC Integration Parameters: rteint.p

No Library Search Compounds Detected
**********

Tentatively Identified Compound (LSC) summary

Data Path : I:\VOLATILES\VOA122\2020\200306A\
Data File : V22200306A05.D
Acq On : 06 Mar 2020 11:24 am
Operator : VOA122:PD
Sample : WG1348135-5,31,10,10 (Sig #1); METHOD BLK (Sig #2)
Misc : WG1348135,ICAL16379 (Sig #1); WG,ICAL16379 (Sig #2)
ALS Vial : 5 Sample Multiplier: 1

Quant Method : I:\VOLATILES\VOA122\2020\200306A\V122_191219N_8260.m
Quant Title : VOLATILES BY GC/MS

TIC Library : I:\nist-db\NIST02.L
TIC Integration Parameters: rteint.p

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

Quantitation Report (QT/LSC Reviewed)

Data Path : I:\VOLATILES\VOA101\2020\200307A\
Data File : V01200307A06.D
Acq On : 7 Mar 2020 11:30 am
Operator : VOA101:MKS
Sample : WG1348564-5,31,10,10
Misc : WG1348564,ICAL16539
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Mar 07 15:41:42 2020
Quant Method : I:\VOLATILES\VOA101\2020\200307A\V101_200219A_8260.m
Quant Title : VOLATILES BY GC/MS
QLast Update : Thu Feb 20 09:49:21 2020
Response via : Initial Calibration

CCAL FILE(s) : 1 - I:\VOLATILES\VOA101\2020\200307A\V01200307A01.D
Sub List : 8260-Curve - Megamix plus Diox

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| Internal Standards | | | | | | |
| 1) Fluorobenzene | 6.634 | 96 | 209557 | 10.000 | ug/L | 0.00 |
| Standard Area 1 = 235149 | | | Recovery = 89.12% | | | |
| 59) Chlorobenzene-d5 | 10.525 | 117 | 151704 | 10.000 | ug/L | 0.00 |
| Standard Area 1 = 168234 | | | Recovery = 90.17% | | | |
| 79) 1,4-Dichlorobenzene-d4 | 13.324 | 152 | 77414 | 10.000 | ug/L | 0.00 |
| Standard Area 1 = 84540 | | | Recovery = 91.57% | | | |
| System Monitoring Compounds | | | | | | |
| 36) Dibromofluoromethane | 5.745 | 113 | 50385 | 9.334 | ug/L | 0.00 |
| Spiked Amount 10.000 | Range 70 - 130 | | Recovery = 93.34% | | | |
| 43) 1,2-Dichloroethane-d4 | 6.323 | 65 | 56817 | 9.820 | ug/L | 0.00 |
| Spiked Amount 10.000 | Range 70 - 130 | | Recovery = 98.20% | | | |
| 60) Toluene-d8 | 8.495 | 98 | 209014 | 9.644 | ug/L | 0.00 |
| Spiked Amount 10.000 | Range 70 - 130 | | Recovery = 96.44% | | | |
| 83) 4-Bromofluorobenzene | 12.031 | 95 | 78335 | 9.387 | ug/L | 0.00 |
| Spiked Amount 10.000 | Range 70 - 130 | | Recovery = 93.87% | | | |
| Target Compounds | | | | | | Qvalue |
| 2) Dichlorodifluoromethane | 0.000 | | 0 | N.D. | | |
| 3) Chloromethane | 0.000 | | 0 | N.D. d | | |
| 4) Vinyl chloride | 0.000 | | 0 | N.D. | | |
| 5) Bromomethane | 2.471 | 94 | 259 | 0.119 | ug/L # | 73 |
| 6) Chloroethane | 0.000 | | 0 | N.D. | | |
| 7) Trichlorofluoromethane | 0.000 | | 0 | N.D. | | |
| 8) Ethyl ether | 0.000 | | 0 | N.D. | | |
| 10) 1,1-Dichloroethene | 0.000 | | 0 | N.D. | | |
| 11) Carbon disulfide | 3.322 | 76 | 815 | 0.079 | ug/L # | 73 |
| 15) Methylene chloride | 0.000 | | 0 | N.D. | | |
| 17) Acetone | 3.944 | 43 | 717 | Below Cal | # | 55 |
| 18) trans-1,2-Dichloroethene | 0.000 | | 0 | N.D. | | |
| 20) Methyl tert-butyl ether | 0.000 | | 0 | N.D. | | |
| 23) 1,1-Dichloroethane | 0.000 | | 0 | N.D. | | |
| 25) Acrylonitrile | 0.000 | | 0 | N.D. | | |
| 27) Vinyl acetate | 0.000 | | 0 | N.D. | | |
| 28) cis-1,2-Dichloroethene | 0.000 | | 0 | N.D. | | |
| 29) 2,2-Dichloropropane | 0.000 | | 0 | N.D. | | |
| 30) Bromochloromethane | 0.000 | | 0 | N.D. | | |
| 32) Chloroform | 0.000 | | 0 | N.D. | | |

Data Path : I:\VOLATILES\VOA101\2020\200307A\
Data File : V01200307A06.D
Acq On : 7 Mar 2020 11:30 am
Operator : VOA101:MKS
Sample : WG1348564-5,31,10,10
Misc : WG1348564,ICAL16539
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Mar 07 15:41:42 2020
Quant Method : I:\VOLATILES\VOA101\2020\200307A\V101_200219A_8260.m
Quant Title : VOLATILES BY GC/MS
QLast Update : Thu Feb 20 09:49:21 2020
Response via : Initial Calibration

CCAL FILE(s) : 1 - I:\VOLATILES\VOA101\2020\200307A\V01200307A01.D
Sub List : 8260-Curve - Megamix plus Diox

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 34) Carbon tetrachloride | 0.000 | | 0 | | N.D. | |
| 37) 1,1,1-Trichloroethane | 0.000 | | 0 | | N.D. | |
| 39) 2-Butanone | 0.000 | | 0 | | N.D. | |
| 40) 1,1-Dichloropropene | 0.000 | | 0 | | N.D. | |
| 41) Benzene | 0.000 | | 0 | | N.D. | |
| 44) 1,2-Dichloroethane | 0.000 | | 0 | | N.D. | |
| 48) Trichloroethene | 0.000 | | 0 | | N.D. | |
| 50) Dibromomethane | 0.000 | | 0 | | N.D. | |
| 51) 1,2-Dichloropropane | 0.000 | | 0 | | N.D. | |
| 54) Bromodichloromethane | 0.000 | | 0 | | N.D. | |
| 57) 1,4-Dioxane | 0.000 | | 0 | | N.D. | |
| 58) cis-1,3-Dichloropropene | 0.000 | | 0 | | N.D. | |
| 61) Toluene | 0.000 | | 0 | | N.D. | |
| 62) 4-Methyl-2-pentanone | 0.000 | | 0 | | N.D. | |
| 63) Tetrachloroethene | 0.000 | | 0 | | N.D. | |
| 65) trans-1,3-Dichloropropene | 0.000 | | 0 | | N.D. | |
| 68) 1,1,2-Trichloroethane | 0.000 | | 0 | | N.D. | |
| 69) Chlorodibromomethane | 0.000 | | 0 | | N.D. | |
| 70) 1,3-Dichloropropane | 0.000 | | 0 | | N.D. | |
| 71) 1,2-Dibromoethane | 0.000 | | 0 | | N.D. | |
| 72) 2-Hexanone | 0.000 | | 0 | | N.D. | |
| 73) Chlorobenzene | 10.535 | 112 | 59 | | N.D. | |
| 74) Ethylbenzene | 10.519 | 91 | 119 | | N.D. | |
| 75) 1,1,1,2-Tetrachloroethane | 0.000 | | 0 | | N.D. | |
| 76) p/m Xylene | 0.000 | | 0 | | N.D. | |
| 77) o Xylene | 0.000 | | 0 | | N.D. | |
| 78) Styrene | 0.000 | | 0 | | N.D. | |
| 80) Bromoform | 0.000 | | 0 | | N.D. | |
| 82) Isopropylbenzene | 0.000 | | 0 | | N.D. | |
| 84) Bromobenzene | 0.000 | | 0 | | N.D. | |
| 85) n-Propylbenzene | 12.189 | 91 | 187 | | N.D. | |
| 87) 1,1,2,2-Tetrachloroethane | 0.000 | | 0 | | N.D. | |
| 88) 4-Ethyltoluene | 12.412 | 105 | 109 | | N.D. | |
| 89) 2-Chlorotoluene | 0.000 | | 0 | | N.D. | |
| 90) 1,3,5-Trimethylbenzene | 12.412 | 105 | 109 | | N.D. | |
| 91) 1,2,3-Trichloropropane | 0.000 | | 0 | | N.D. | |
| 92) trans-1,4-Dichloro-2-b... | 0.000 | | 0 | | N.D. | |
| 93) 4-Chlorotoluene | 12.571 | 91 | 157 | | N.D. | |
| 94) tert-Butylbenzene | 0.000 | | 0 | | N.D. | |

Data Path : I:\VOLATILES\VOA101\2020\200307A\
Data File : V01200307A06.D
Acq On : 7 Mar 2020 11:30 am
Operator : VOA101:MKS
Sample : WG1348564-5,31,10,10
Misc : WG1348564,ICAL16539
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Mar 07 15:41:42 2020
Quant Method : I:\VOLATILES\VOA101\2020\200307A\V101_200219A_8260.m
Quant Title : VOLATILES BY GC/MS
QLast Update : Thu Feb 20 09:49:21 2020
Response via : Initial Calibration

CCAL FILE(s) : 1 - I:\VOLATILES\VOA101\2020\200307A\V01200307A01.D
Sub List : 8260-Curve - Megamix plus Diox

| | Compound | R.T. | QIon | Response | Conc | Units | | Dev(Min) |
|---|---|---|---|---|---|---|---|---|
| 97) | 1,2,4-Trimethylbenzene | 12.860 | 105 | 53 | N.D. | | | |
| 98) | sec-Butylbenzene | 12.996 | 105 | 117 | N.D. | | | |
| 99) | p-Isopropyltoluene | 13.144 | 119 | 222 | N.D. | | | |
| 100) | 1,3-Dichlorobenzene | 13.242 | 146 | 56 | N.D. | | | |
| 101) | 1,4-Dichlorobenzene | 13.346 | 146 | 342 | N.D. | | | |
| 102) | p-Diethylbenzene | 0.000 | | 0 | N.D. | | | |
| 103) | n-Butylbenzene | 13.624 | 91 | 288 | N.D. | | | |
| 104) | 1,2-Dichlorobenzene | 0.000 | | 0 | N.D. | | | |
| 105) | 1,2,4,5-Tetramethylben... | 14.426 | 119 | 228 | N.D. | | | |
| 106) | 1,2-Dibromo-3-chloropr... | 0.000 | | 0 | N.D. | | | |
| 108) | Hexachlorobutadiene | 0.000 | | 0 | N.D. | | | |
| 109) | 1,2,4-Trichlorobenzene | 15.370 | 180 | 290 | 0.083 | ug/L | # | 32 |
| 110) | Naphthalene | 15.741 | 128 | 1554 | 0.201 | ug/L | | 100 |
| 111) | 1,2,3-Trichlorobenzene | 15.948 | 180 | 374 | 0.140 | ug/L | # | 81 |

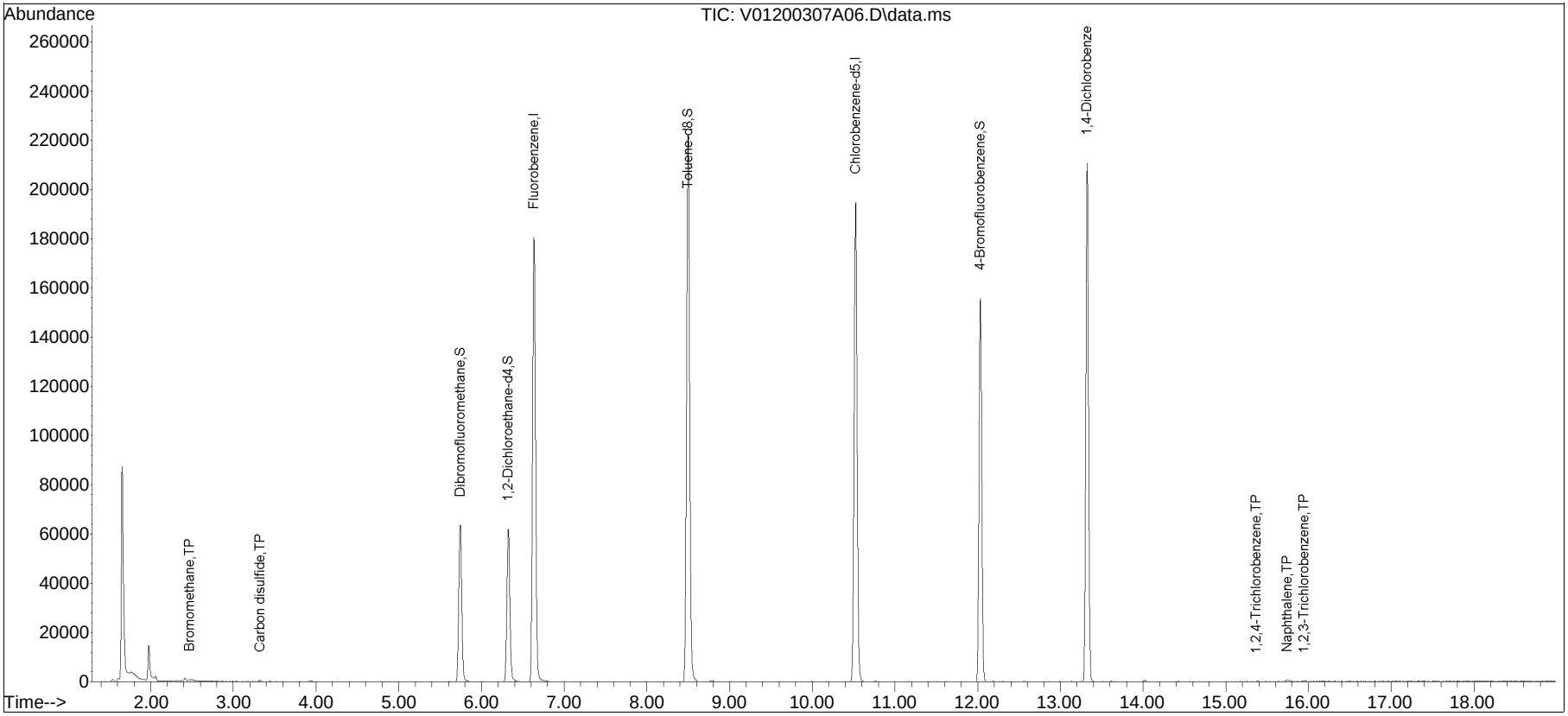
(#) = qualifier out of range (m) = manual integration (+) = signals summed

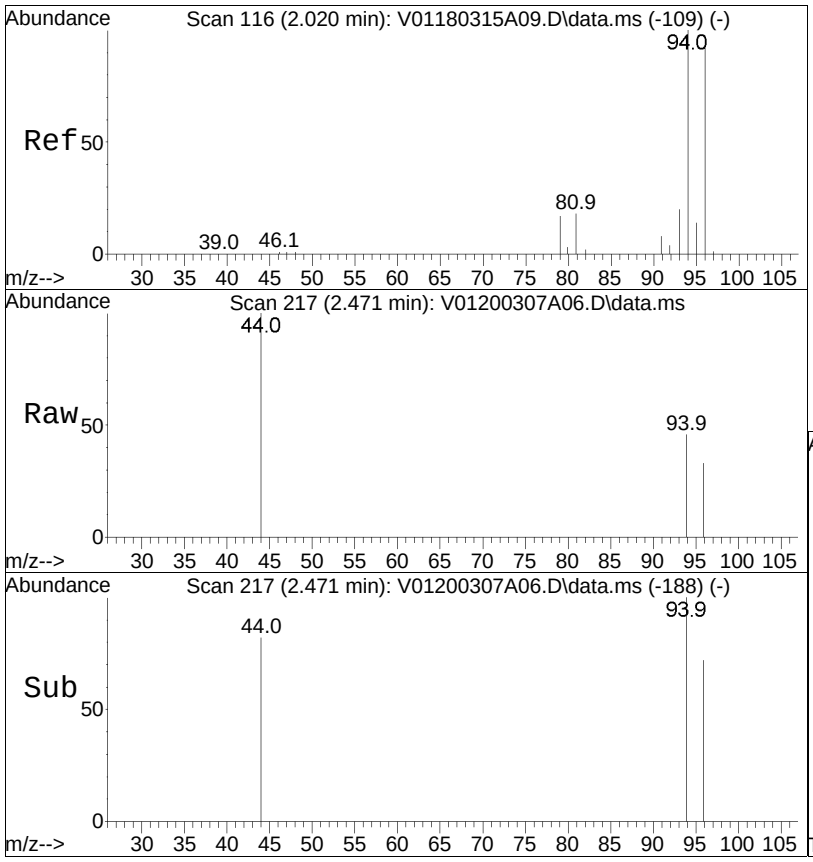
Quantitation Report (QT/LSC Reviewed)

Data Path : I:\VOLATILES\VOA101\2020\200307A\
Data File : V01200307A06.D
Acq On : 7 Mar 2020 11:30 am
Operator : VOA101:MKS
Sample : WG1348564-5,31,10,10
Misc : WG1348564,ICAL16539
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Mar 07 15:41:42 2020
Quant Method : I:\VOLATILES\VOA101\2020\200307A\V101_200219A_8260.m
Quant Title : VOLATILES BY GC/MS
QLast Update : Thu Feb 20 09:49:21 2020
Response via : Initial Calibration

Sub List : 8260-Curve - Megamix plus Diox00307A\V01200307A01.D•

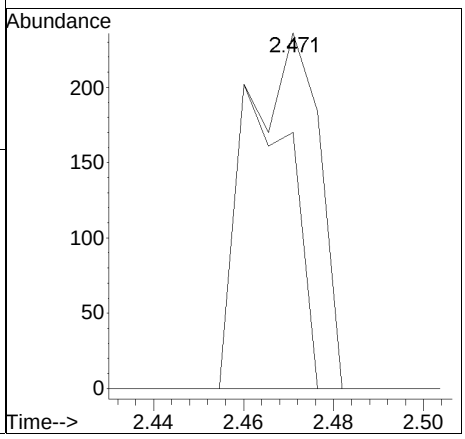


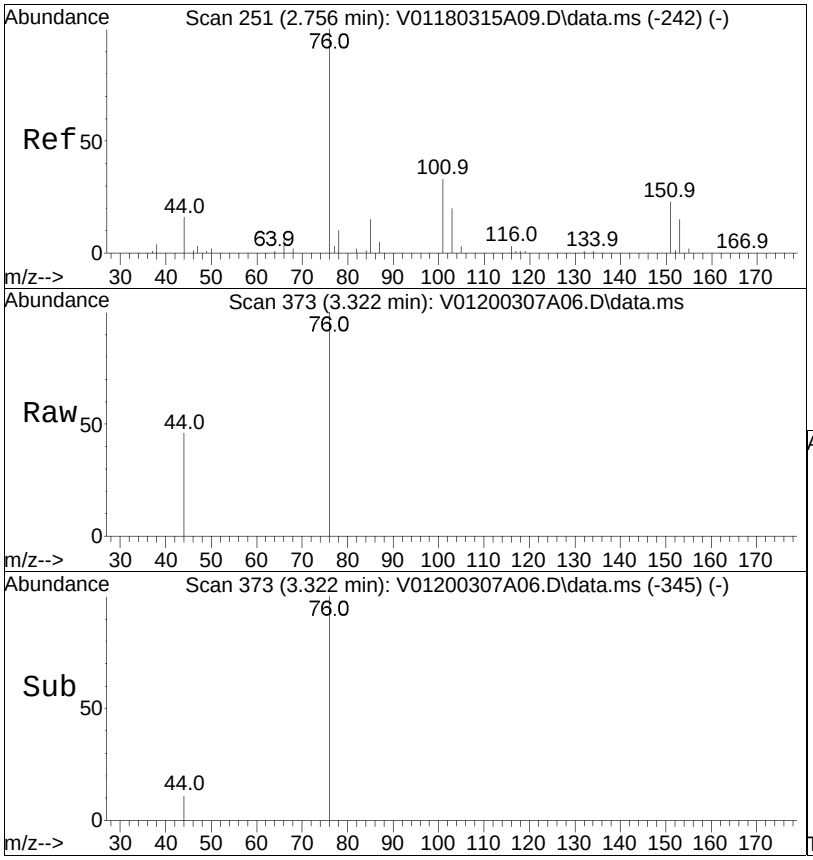



#5
Bromomethane
Concen: 0.12 ug/L
RT: 2.471 min Scan# 217
Delta R.T. 0.006 min
Lab File: V01200307A06.D
Acq: 7 Mar 2020 11:30 am

Tgt Ion: 94 Resp: 259

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 94 | 100 | | |
| 96 | 67.2 | 73.6 | 113.6# |

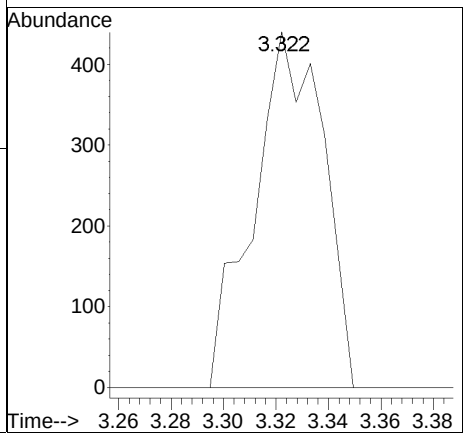


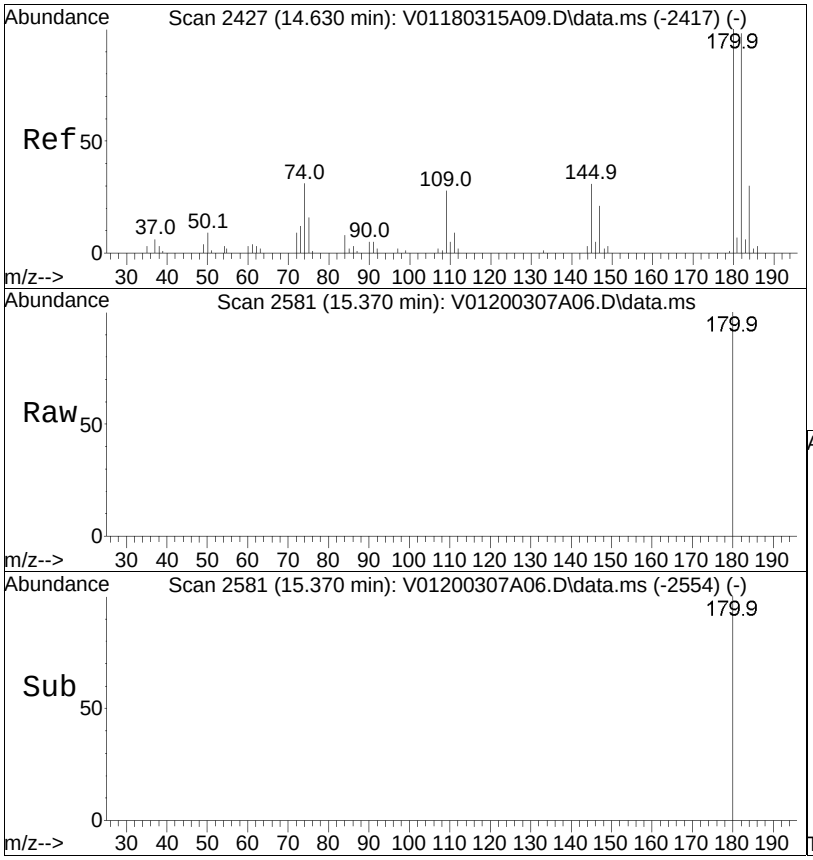



#11
Carbon disulfide
Concen: 0.08 ug/L
RT: 3.322 min Scan# 373
Delta R.T. 0.000 min
Lab File: V01200307A06.D
Acq: 7 Mar 2020 11:30 am

Tgt Ion: 76 Resp: 815

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 76 | 100 | | |
| 78 | 0.0 | 6.6 | 13.8# |

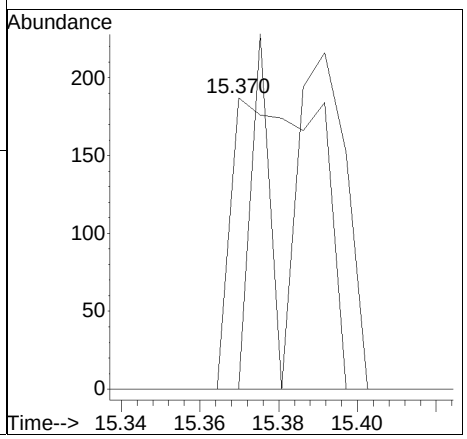


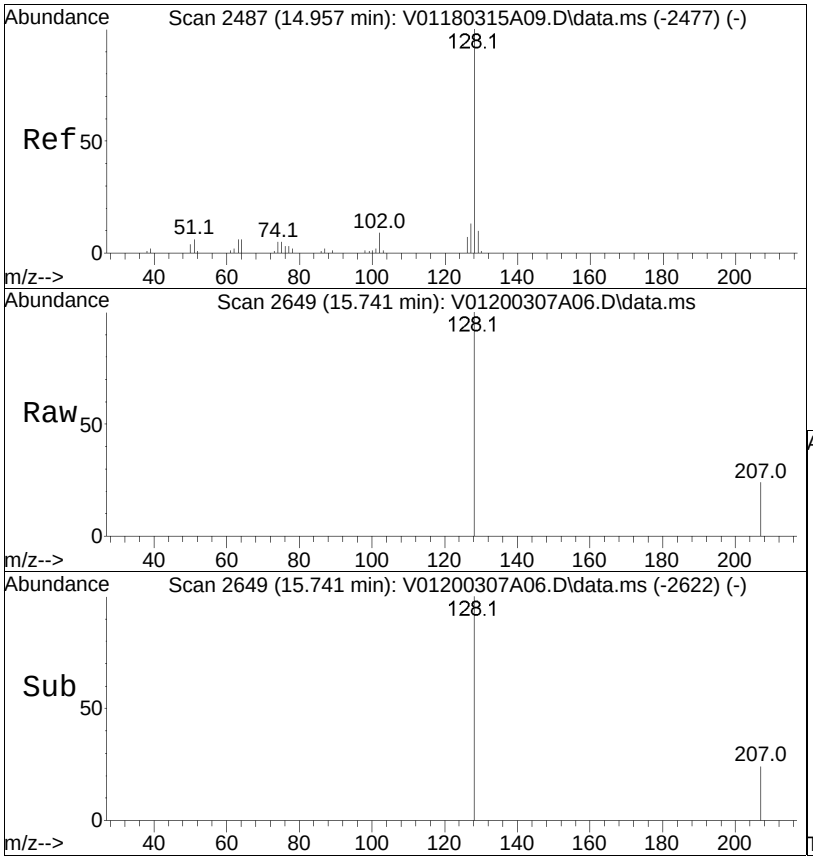



#109
1,2,4-Trichlorobenzene
Concen: 0.08 ug/L
RT: 15.370 min Scan# 2581
Delta R.T. -0.005 min
Lab File: V01200307A06.D
Acq: 7 Mar 2020 11:30 am

Tgt Ion:180 Resp: 290

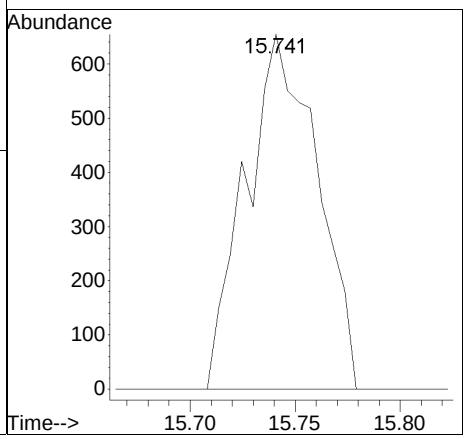
| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 180 | 100 | | |
| 182 | 25.9 | 75.8 | 113.8# |
| 145 | 0.0 | 26.1 | 39.1# |

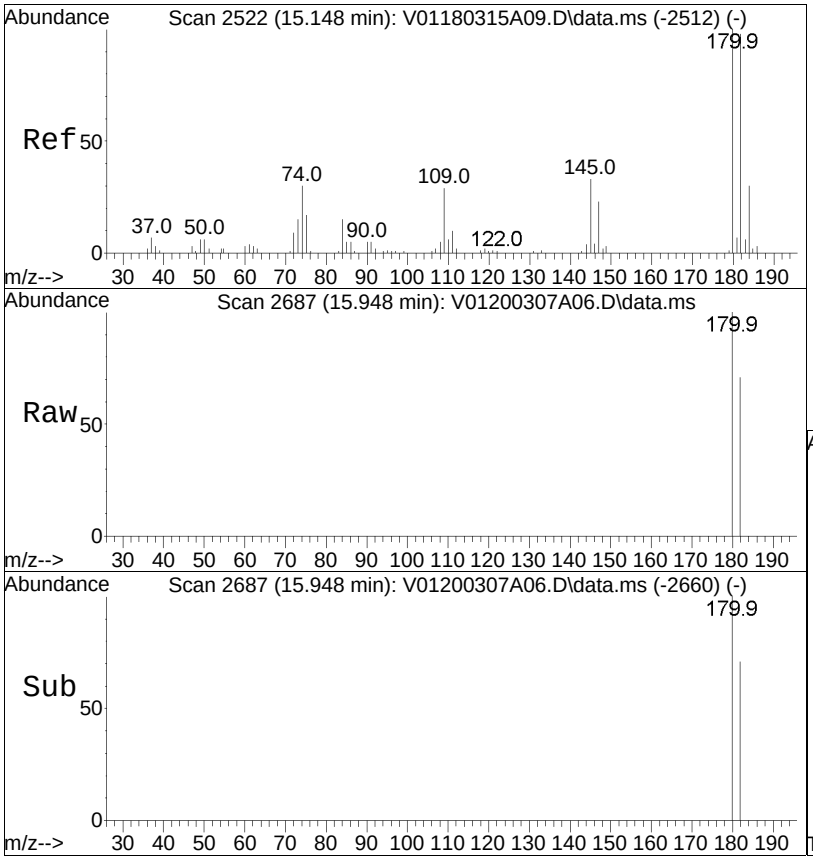





#110
Naphthalene
Concen: 0.20 ug/L
RT: 15.741 min Scan# 2649
Delta R.T. -0.000 min
Lab File: V01200307A06.D
Acq: 7 Mar 2020 11:30 am

Tgt Ion:128 Resp: 1554

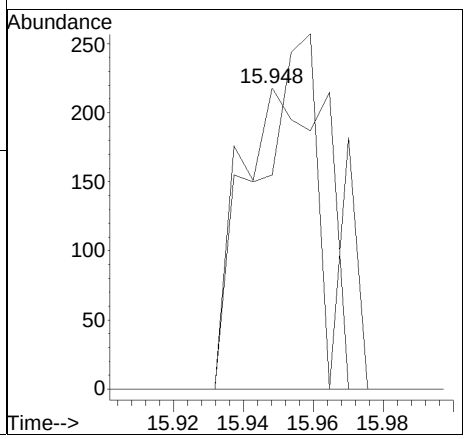





#111
1,2,3-Trichlorobenzene
Concen: 0.14 ug/L
RT: 15.948 min Scan# 2687
Delta R.T. -0.005 min
Lab File: V01200307A06.D
Acq: 7 Mar 2020 11:30 am

Tgt Ion:180 Resp: 374

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 180 | 100 | | |
| 182 | 100.0 | 75.4 | 113.0 |
| 145 | 0.0 | 25.0 | 37.6# |



Manual Integration Report

| | | | |
|---|---|---|---|
| Data Path | : I:\VOLATILES\VOA101\2020\2 | QMethod | : V101_200219A_8260.m |
| Data File | : V01200307A06.D | Operator | : VOA101:MKS |
| Date Inj'd | : 3/7/2020 11:30 am | Instrument | : VOA 101 |
| Sample | : WG1348564-5,31,10,10 | Quant Date | : 3/7/2020 2:41 pm |

There are no manual integrations or false positives in this file.

LSC Area Percent Report

Data Path : I:\VOLATILES\VOA101\2020\200307A\
Data File : V01200307A06.D
Acq On : 7 Mar 2020 11:30 am
Operator : VOA101:MKS
Sample : WG1348564-5,31,10,10
Misc : WG1348564,ICAL16539
ALS Vial : 6 Sample Multiplier: 1

Integration Parameters: rteint.p
Integrator: RTE
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 3 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : I:\VOLATILES\VOA101\2020\200307A\V101_200219A_8260.m
Title : VOLATILES BY GC/MS

Signal : TIC: V01200307A06.D\data.ms

| peak # | R.T. min | first scan | max scan | last scan | PK TY | peak height | corr. area | corr. % max. | % of total |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 1.653 | 61 | 67 | 86 | rBV | 86630 | 158005 | 27.61% | 5.565% |
| 2 | 1.974 | 121 | 126 | 134 | rBV | 14166 | 22085 | 3.86% | 0.778% |
| 3 | 5.745 | 806 | 817 | 834 | rBV | 63738 | 159976 | 27.95% | 5.634% |
| 4 | 6.323 | 913 | 923 | 945 | rBB | 61962 | 156304 | 27.31% | 5.505% |
| 5 | 6.634 | 968 | 980 | 1003 | rBV | 180753 | 453876 | 79.30% | 15.986% |
| 6 | 8.500 | 1309 | 1322 | 1344 | rBB | 222352 | 572343 | 100.00% | 20.158% |
| 7 | 10.525 | 1681 | 1693 | 1708 | rBB | 194955 | 485668 | 84.86% | 17.105% |
| 8 | 12.031 | 1959 | 1969 | 1982 | rBB | 155843 | 357290 | 62.43% | 12.584% |
| 9 | 13.324 | 2195 | 2206 | 2223 | rBB | 210765 | 473722 | 82.77% | 16.685% |

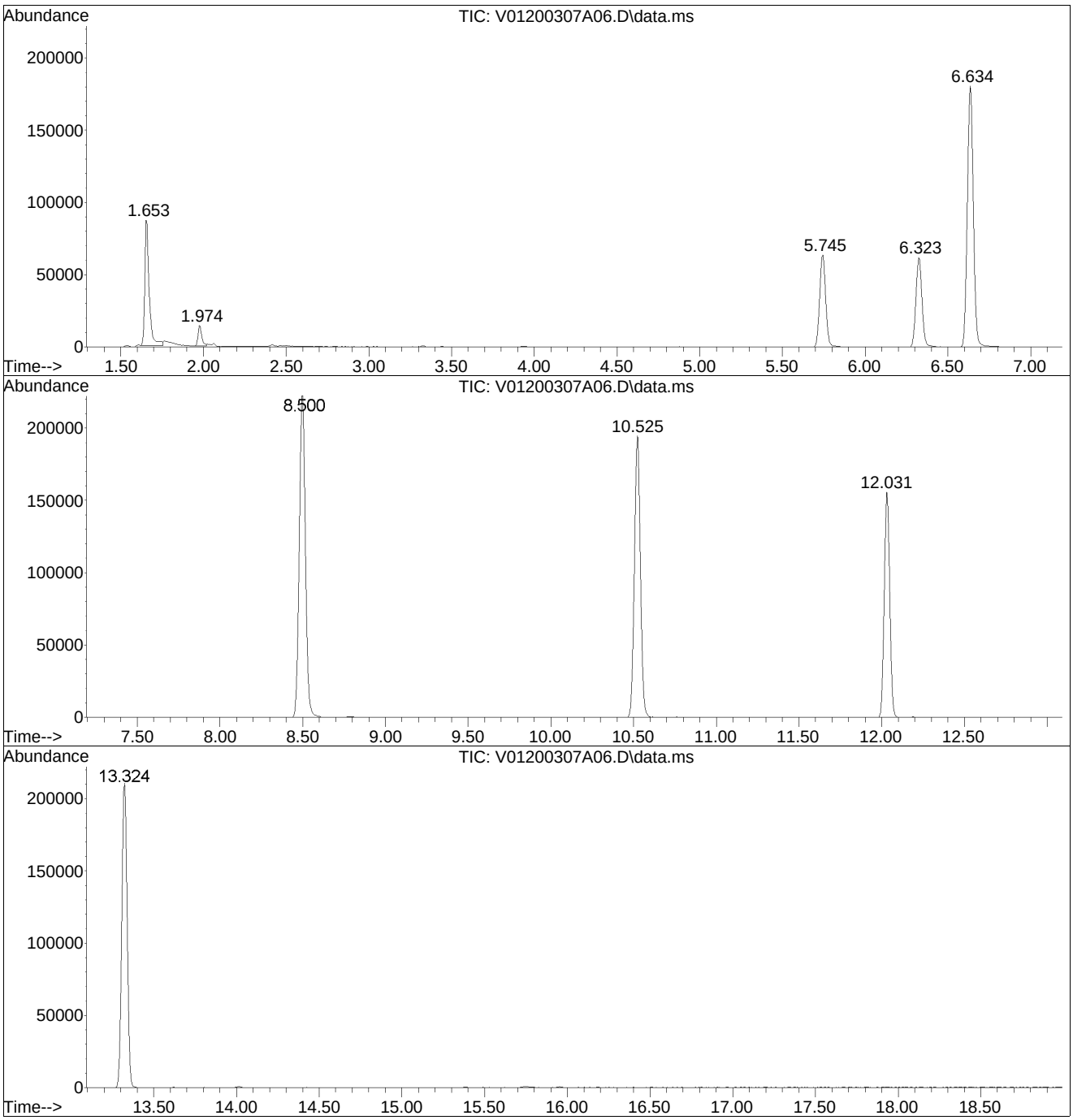
Sum of corrected areas: 2839269

LSC Report - Integrated Chromatogram

Data Path : I:\VOLATILES\VOA101\2020\200307A\
Data File : V01200307A06.D
Acq On : 7 Mar 2020 11:30 am
Operator : VOA101:MKS
Sample : WG1348564-5,31,10,10
Misc : WG1348564,ICAL16539
ALS Vial : 6 Sample Multiplier: 1

Quant Method : I:\VOLATILES\VOA101\2020\200307A\V101_200219A_8260.m
Quant Title : VOLATILES BY GC/MS

TIC Library : I:\nist-db\NIST02.L
TIC Integration Parameters: rteint.p



Library Search Compound Report

Data Path : I:\VOLATILES\VOA101\2020\200307A\
Data File : V01200307A06.D
Acq On : 7 Mar 2020 11:30 am
Operator : VOA101:MKS
Sample : WG1348564-5,31,10,10
Misc : WG1348564,ICAL16539
ALS Vial : 6 Sample Multiplier: 1

Quant Method : I:\VOLATILES\VOA101\2020\200307A\V101_200219A_8260.m
Quant Title : VOLATILES BY GC/MS

TIC Library : I:\nist-db\NIST02.L
TIC Integration Parameters: rteint.p

No Library Search Compounds Detected
**********

Tentatively Identified Compound (LSC) summary

Data Path : I:\VOLATILES\VOA101\2020\200307A\
Data File : V01200307A06.D
Acq On : 7 Mar 2020 11:30 am
Operator : VOA101:MKS
Sample : WG1348564-5,31,10,10
Misc : WG1348564,ICAL16539
ALS Vial : 6 Sample Multiplier: 1

Quant Method : I:\VOLATILES\VOA101\2020\200307A\V101_200219A_8260.m
Quant Title : VOLATILES BY GC/MS

TIC Library : I:\nist-db\NIST02.L
TIC Integration Parameters: rteint.p

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

Quantitation Report (QT Reviewed)

Data Path : I:\VOLATILES\VOA122\2020\200306A\
Data File : V22200306A01.D
Acq On : 06 Mar 2020 09:46 am
Operator : VOA122:PD
Sample : WG1348135-3,31,10,10 (Sig #1); 8260 CCAL (Sig #2)
Misc : WG1348135,ICAL16379 (Sig #1); WG,ICAL16379 (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Mar 06 10:15:15 2020
Quant Method : I:\VOLATILES\VOA122\2020\200306A\V122_191219N_8260.m
Quant Title : VOLATILES BY GC/MS
QLast Update : Fri Dec 20 07:20:50 2019
Response via : Initial Calibration

Sub List : 8260-Curve - Megamix plus Diox

| Compound | R.T. | QIon | Response | Conc | Units | | Dev(Min) |
|---|---|---|---|---|---|---|---|
| Internal Standards | | | | | | | |
| 1) Fluorobenzene | 5.827 | 96 | 254411 | 10.000 | ug/L | | 0.00 |
| 62) Chlorobenzene-d5 | 9.353 | 117 | 187639 | 10.000 | ug/L | | 0.00 |
| 83) 1,4-Dichlorobenzene-d4 | 12.100 | 152 | 100182 | 10.000 | ug/L | | 0.00 |
| System Monitoring Compounds | | | | | | | |
| 38) Dibromofluoromethane | 5.018 | 113 | 68129 | 9.271 | ug/L | | 0.00 |
| Spiked Amount 10.000 | Range 70 - 130 | | Recovery = 92.71% | | | | |
| 46) 1,2-Dichloroethane-d4 | 5.541 | 65 | 103995 | 12.248 | ug/L | | 0.00 |
| Spiked Amount 10.000 | Range 70 - 130 | | Recovery = 122.48% | | | | |
| 63) Toluene-d8 | 7.511 | 98 | 250659 | 10.340 | ug/L | | 0.00 |
| Spiked Amount 10.000 | Range 70 - 130 | | Recovery = 103.40% | | | | |
| 87) 4-Bromofluorobenzene | 10.874 | 95 | 95819 | 9.740 | ug/L | | 0.00 |
| Spiked Amount 10.000 | Range 70 - 130 | | Recovery = 97.40% | | | | |
| Target Compounds | | | | | | | Qvalue |
| 2) Dichlorodifluoromethane | 1.537 | 85 | 41146 | 9.402 | ug/L | | 97 |
| 3) Chloromethane | 1.725 | 50 | 58706 | 10.158 | ug/L | | 97 |
| 4) Vinyl chloride | 1.787 | 62 | 57424 | 8.851 | ug/L | | 100 |
| 5) Bromomethane | 2.084 | 94 | 17858 | 3.068 | ug/L | | 95 |
| 6) Chloroethane | 2.185 | 64 | 36432 | 7.782 | ug/L | | 99 |
| 7) Trichlorofluoromethane | 2.326 | 101 | 98391 | 11.118 | ug/L | | 99 |
| 8) Ethyl ether | 2.622 | 74 | 24720 | 9.453 | ug/L | # | 1 |
| 10) 1,1-Dichloroethene | 2.809 | 96 | 47674 | 9.558 | ug/L | # | 70 |
| 11) Carbon disulfide | 2.833 | 76 | 140151 | 10.762 | ug/L | | 99 |
| 15) Methylene chloride | 3.348 | 84 | 54885 | 9.713 | ug/L | | 85 |
| 17) Acetone | 3.395 | 43 | 12040 | 8.308 | ug/L | | 96 |
| 18) trans-1,2-Dichloroethene | 3.504 | 96 | 51596 | 9.628 | ug/L | | 85 |
| 21) Methyl tert-butyl ether | 3.598 | 73 | 129055 | 10.890 | ug/L | | 95 |
| 25) 1,1-Dichloroethane | 4.074 | 63 | 110704 | 10.280 | ug/L | | 98 |
| 27) Acrylonitrile | 4.121 | 53 | 12183 | 9.068 | ug/L | | 94 |
| 29) Vinyl acetate | 4.308 | 43 | 90716 | 9.875 | ug/L | # | 93 |
| 30) cis-1,2-Dichloroethene | 4.581 | 96 | 64237 | 9.704 | ug/L | # | 84 |
| 31) 2,2-Dichloropropane | 4.683 | 77 | 73669 | 11.844 | ug/L | | 96 |
| 32) Bromochloromethane | 4.768 | 128 | 26588 | 9.686 | ug/L | # | 80 |
| 34) Chloroform | 4.846 | 83 | 110295 | 10.431 | ug/L | | 97 |
| 36) Carbon tetrachloride | 4.979 | 117 | 98707 | 10.963 | ug/L | | 98 |
| 39) 1,1,1-Trichloroethane | 5.049 | 97 | 107380 | 11.084 | ug/L | | 96 |
| 41) 2-Butanone | 5.143 | 43 | 14205 | 7.822 | ug/L | | 97 |
| 42) 1,1-Dichloropropene | 5.166 | 75 | 78596 | 9.695 | ug/L | | 94 |

Data Path : I:\VOLATILES\VOA122\2020\200306A\
Data File : V22200306A01.D
Acq On : 06 Mar 2020 09:46 am
Operator : VOA122:PD
Sample : WG1348135-3,31,10,10 (Sig #1); 8260 CCAL (Sig #2)
Misc : WG1348135,ICAL16379 (Sig #1); WG,ICAL16379 (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Mar 06 10:15:15 2020
Quant Method : I:\VOLATILES\VOA122\2020\200306A\V122_191219N_8260.m
Quant Title : VOLATILES BY GC/MS
QLast Update : Fri Dec 20 07:20:50 2019
Response via : Initial Calibration

Sub List : 8260-Curve - Megamix plus Diox

| Compound | R.T. | QIon | Response | Conc | Units | | Dev(Min) |
|---|---|---|---|---|---|---|---|
| 44) Benzene | 5.408 | 78 | 216135 | 9.572 | ug/L | | 95 |
| 47) 1,2-Dichloroethane | 5.620 | 62 | 52622 | 9.209 | ug/L | | 98 |
| 51) Trichloroethene | 6.000 | 95 | 58388 | 9.140 | ug/L | | 93 |
| 53) Dibromomethane | 6.433 | 93 | 32560 | 9.533 | ug/L | # | 84 |
| 54) 1,2-Dichloropropane | 6.545 | 63 | 52177 | 8.639 | ug/L | | 96 |
| 57) Bromodichloromethane | 6.614 | 83 | 82583 | 10.246 | ug/L | | 97 |
| 60) 1,4-Dioxane | 6.822 | 88 | 20049 | 504.717 | ug/L | # | 77 |
| 61) cis-1,3-Dichloropropene | 7.306 | 75 | 97304 | 9.845 | ug/L | | 92 |
| 64) Toluene | 7.574 | 92 | 140891 | 10.444 | ug/L | | 97 |
| 65) 4-Methyl-2-pentanone | 8.018 | 58 | 12859 | 9.730 | ug/L | | 91 |
| 66) Tetrachloroethene | 8.018 | 166 | 65720 | 9.835 | ug/L | | 89 |
| 68) trans-1,3-Dichloropropene | 8.050 | 75 | 81223 | 11.168 | ug/L | | 94 |
| 71) 1,1,2-Trichloroethane | 8.237 | 83 | 34885 | 9.881 | ug/L | | 96 |
| 72) Chlorodibromomethane | 8.440 | 129 | 52646 | 10.083 | ug/L | | 98 |
| 73) 1,3-Dichloropropane | 8.557 | 76 | 74029 | 10.338 | ug/L | | 100 |
| 74) 1,2-Dibromoethane | 8.721 | 107 | 41189 | 9.600 | ug/L | | 99 |
| 76) 2-Hexanone | 9.017 | 43 | 20660 | 9.046 | ug/L | | 94 |
| 77) Chlorobenzene | 9.376 | 112 | 151410 | 9.987 | ug/L | | 96 |
| 78) Ethylbenzene | 9.415 | 91 | 279398 | 10.644 | ug/L | | 95 |
| 79) 1,1,1,2-Tetrachloroethane | 9.454 | 131 | 56154 | 10.089 | ug/L | | 95 |
| 80) p/m Xylene | 9.610 | 106 | 210523 | 19.919 | ug/L | | 90 |
| 81) o Xylene | 10.149 | 106 | 196807 | 19.781 | ug/L | | 88 |
| 82) Styrene | 10.219 | 104 | 322641 | 19.747 | ug/L | | 89 |
| 84) Bromoform | 10.234 | 173 | 35320 | 9.659 | ug/L | | 99 |
| 86) Isopropylbenzene | 10.547 | 105 | 319174 | 9.787 | ug/L | | 97 |
| 88) Bromobenzene | 10.984 | 156 | 65201 | 9.616 | ug/L | | 100 |
| 89) n-Propylbenzene | 11.038 | 91 | 335652 | 9.856 | ug/L | | 95 |
| 91) 1,1,2,2-Tetrachloroethane | 11.124 | 83 | 46073 | 9.142 | ug/L | | 100 |
| 92) 4-Ethyltoluene | 11.171 | 105 | 263407 | 9.936 | ug/L | | 96 |
| 93) 2-Chlorotoluene | 11.202 | 91 | 226386 | 10.407 | ug/L | | 94 |
| 94) 1,3,5-Trimethylbenzene | 11.273 | 105 | 233425 | 10.080 | ug/L | | 95 |
| 95) 1,2,3-Trichloropropane | 11.265 | 75 | 42788 | 9.898 | ug/L | | 96 |
| 96) trans-1,4-Dichloro-2-b... | 11.319 | 53 | 13062 | 9.113 | ug/L | # | 81 |
| 97) 4-Chlorotoluene | 11.390 | 91 | 206274 | 10.442 | ug/L | | 93 |
| 98) tert-Butylbenzene | 11.616 | 119 | 195666 | 9.570 | ug/L | | 92 |
| 101) 1,2,4-Trimethylbenzene | 11.694 | 105 | 232810 | 10.380 | ug/L | | 95 |
| 102) sec-Butylbenzene | 11.811 | 105 | 260421 | 8.914 | ug/L | | 96 |
| 103) p-Isopropyltoluene | 11.968 | 119 | 235597 | 9.287 | ug/L | | 94 |
| 104) 1,3-Dichlorobenzene | 12.023 | 146 | 128150 | 9.799 | ug/L | | 97 |
| 105) 1,4-Dichlorobenzene | 12.121 | 146 | 126066 | 9.791 | ug/L | | 97 |

Data Path : I:\VOLATILES\VOA122\2020\200306A\
Data File : V22200306A01.D
Acq On : 06 Mar 2020 09:46 am
Operator : VOA122:PD
Sample : WG1348135-3,31,10,10 (Sig #1); 8260 CCAL (Sig #2)
Misc : WG1348135,ICAL16379 (Sig #1); WG,ICAL16379 (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Mar 06 10:15:15 2020
Quant Method : I:\VOLATILES\VOA122\2020\200306A\V122_191219N_8260.m
Quant Title : VOLATILES BY GC/MS
QLast Update : Fri Dec 20 07:20:50 2019
Response via : Initial Calibration

Sub List : 8260-Curve - Megamix plus Diox

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 106) p-Diethylbenzene | 12.343 | 119 | 125197 | 9.685 | ug/L | 95 |
| 107) n-Butylbenzene | 12.399 | 91 | 203640 | 10.255 | ug/L | 96 |
| 108) 1,2-Dichlorobenzene | 12.545 | 146 | 112579 | 9.684 | ug/L | 96 |
| 109) 1,2,4,5-Tetramethylben... | 13.144 | 119 | 175818 | 10.172 | ug/L | 95 |
| 110) 1,2-Dibromo-3-chloropr... | 13.332 | 155 | 7351 | 8.297 | ug/L | 91 |
| 112) Hexachlorobutadiene | 13.944 | 225 | 28044 | 11.461 | ug/L | 98 |
| 113) 1,2,4-Trichlorobenzene | 13.965 | 180 | 69221 | 10.378 | ug/L | 98 |
| 114) Naphthalene | 14.265 | 128 | 135021 | 8.730 | ug/L | 100 |
| 115) 1,2,3-Trichlorobenzene | 14.432 | 180 | 62159 | 10.162 | ug/L | 99 |

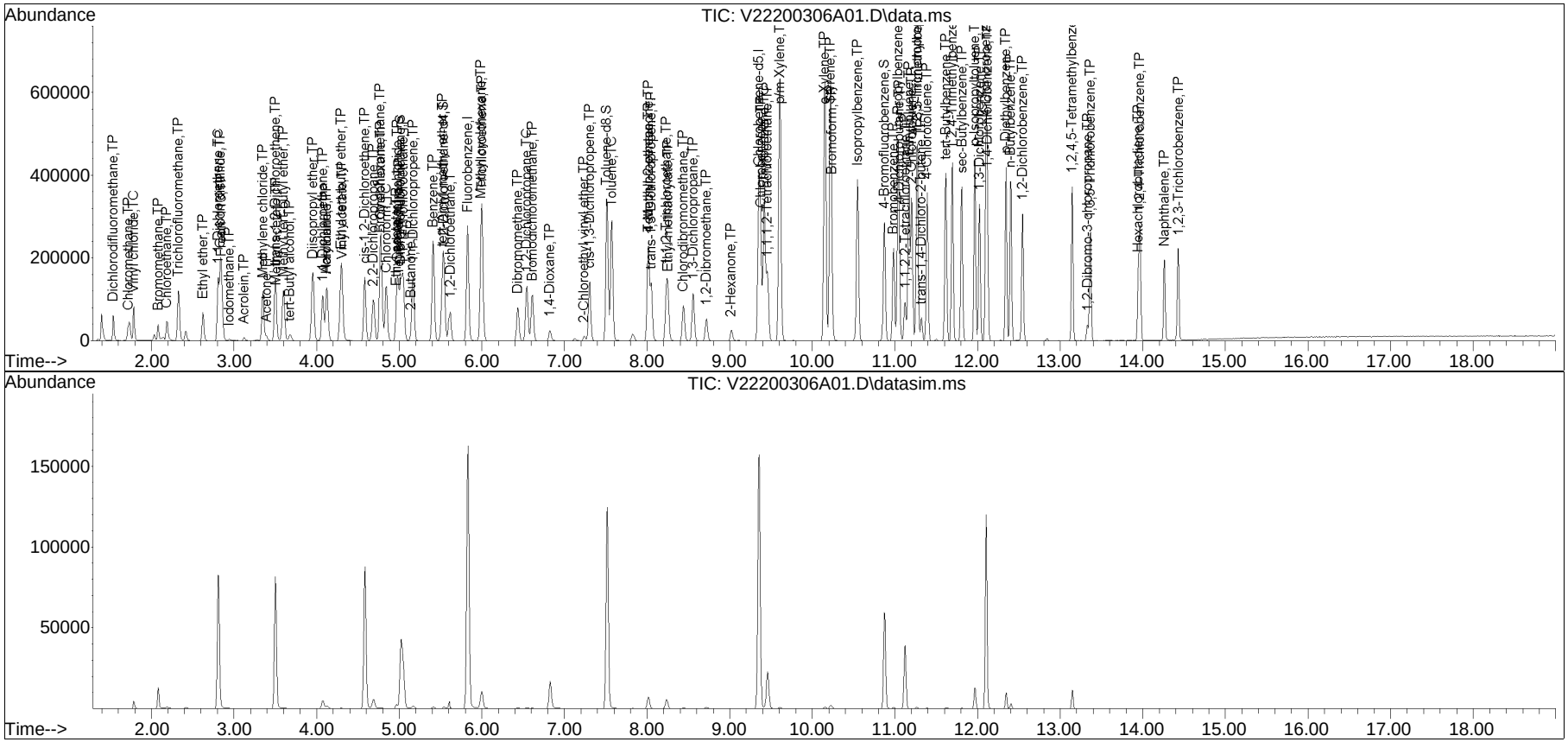
(#) = qualifier out of range (m) = manual integration (+) = signals summed

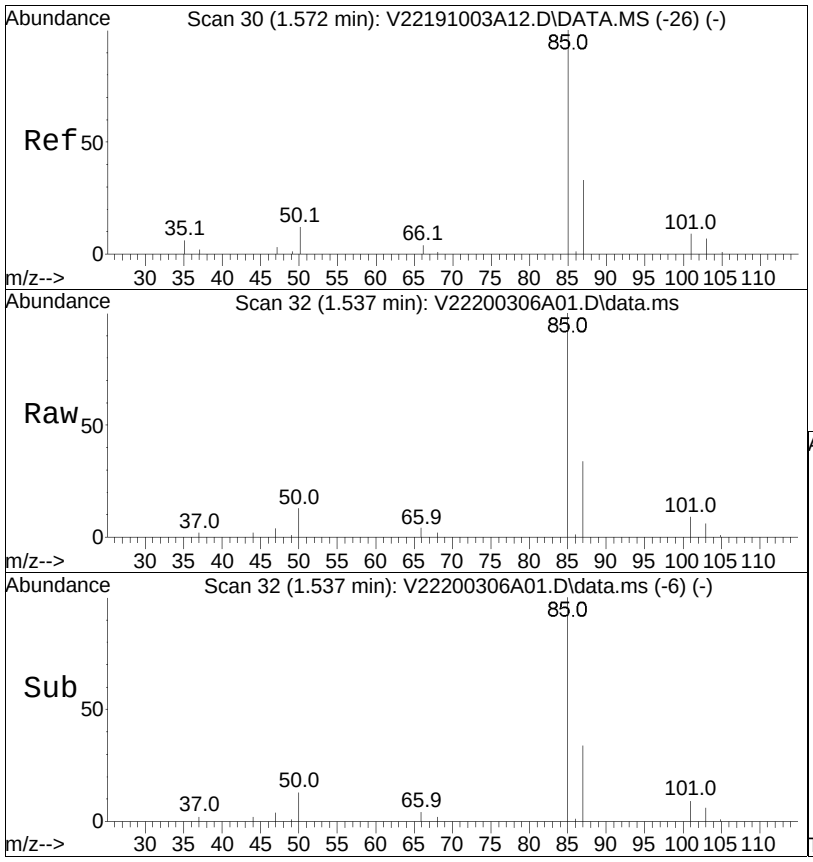
Quantitation Report (QT Reviewed)

Data Path : I:\VOLATILES\VOA122\2020\200306A\
Data File : V22200306A01.D
Acq On : 06 Mar 2020 09:46 am
Operator : VOA122:PD
Sample : WG1348135-3,31,10,10 (Sig #1); 8260 CCAL (Sig #2)
Misc : WG1348135,ICAL16379 (Sig #1); WG,ICAL16379 (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Mar 06 10:15:15 2020
Quant Method : I:\VOLATILES\VOA122\2020\200306A\V122_191219N_8260.m
Quant Title : VOLATILES BY GC/MS
QLast Update : Fri Dec 20 07:20:50 2019
Response via : Initial Calibration

Sub List : 8260-Curve - Megamix plus Diox

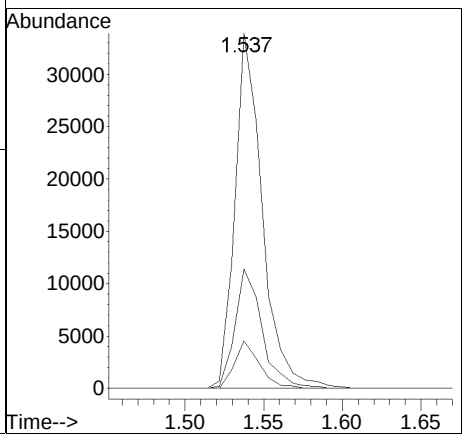


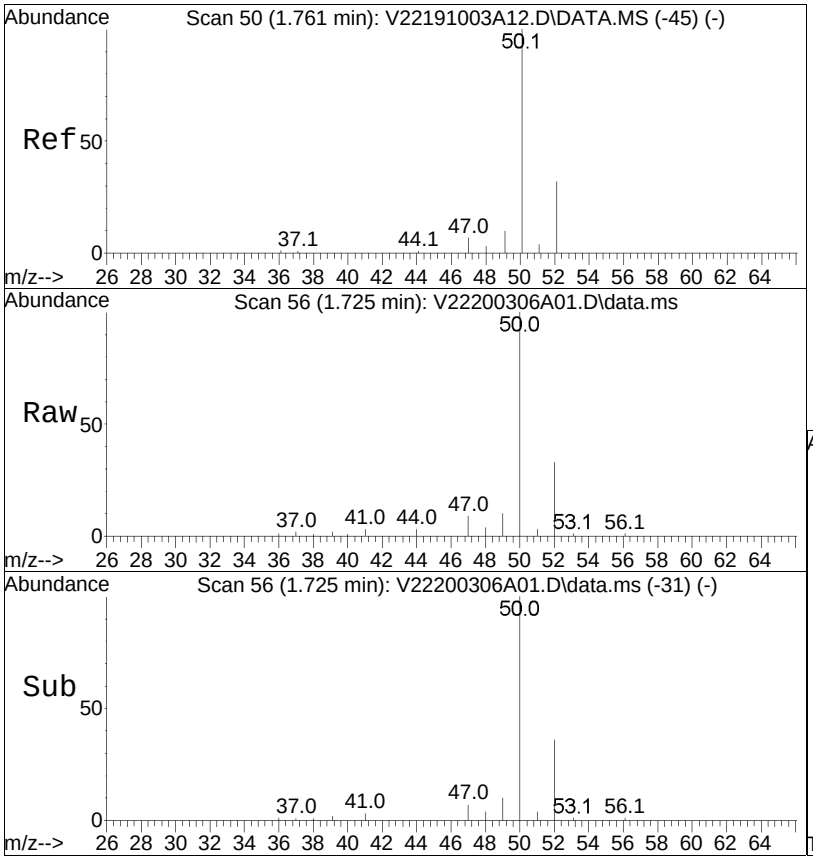



#2
Dichlorodifluoromethane
Concen: 9.40 ug/L
RT: 1.537 min Scan# 32
Delta R.T. 0.000 min
Lab File: V22200306A01.D
Acq: 06 Mar 2020 09:46 am

Tgt Ion: 85 Resp: 41146

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 85 | 100 | | |
| 87 | 33.3 | 20.7 | 42.9 |
| 50 | 12.2 | 6.8 | 14.2 |

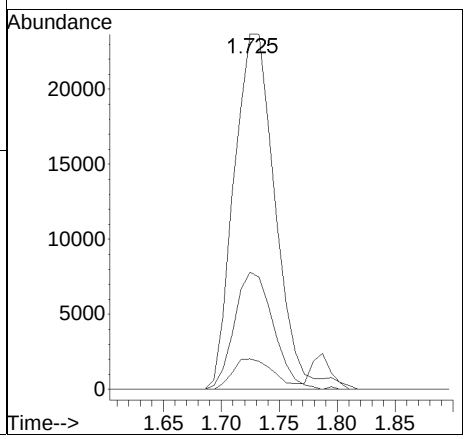


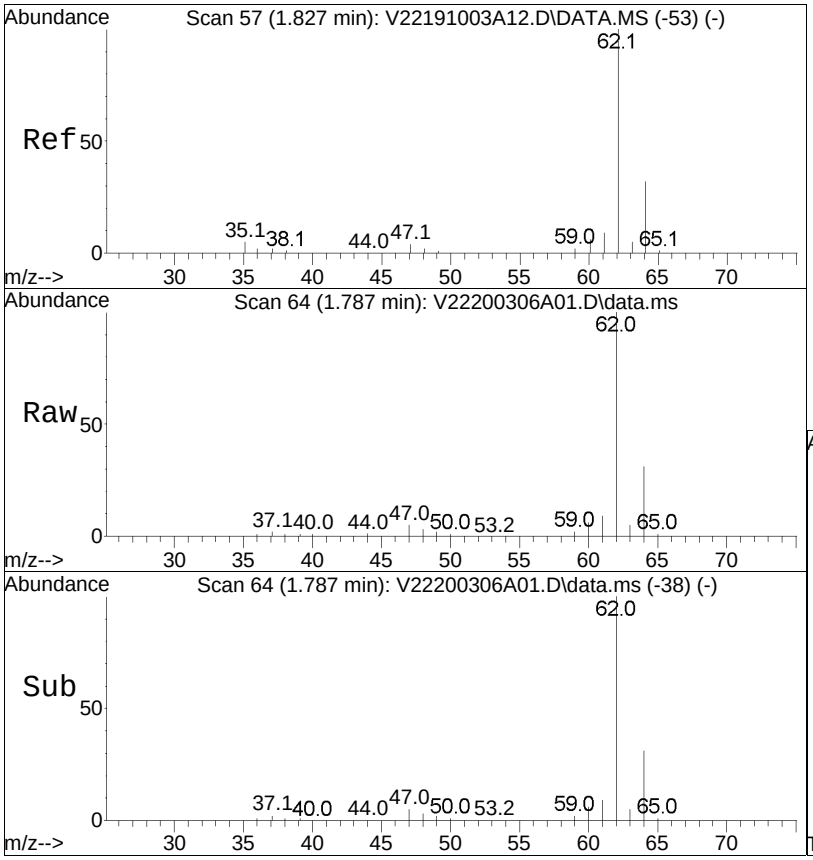



#3
Chloromethane
Concen: 10.16 ug/L
RT: 1.725 min Scan# 56
Delta R.T. -0.007 min
Lab File: V22200306A01.D
Acq: 06 Mar 2020 09:46 am

Tgt Ion: 50 Resp: 58706

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 50 | 100 | | |
| 52 | 31.3 | 12.8 | 52.8 |
| 47 | 8.5 | 0.0 | 30.0 |

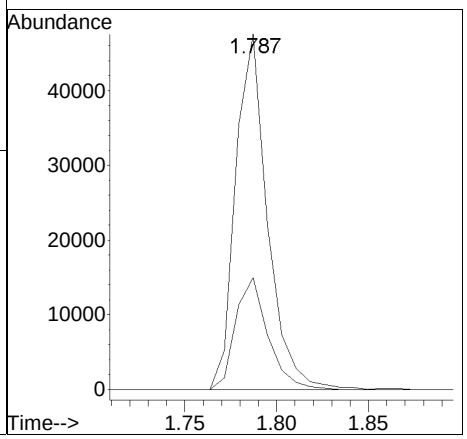


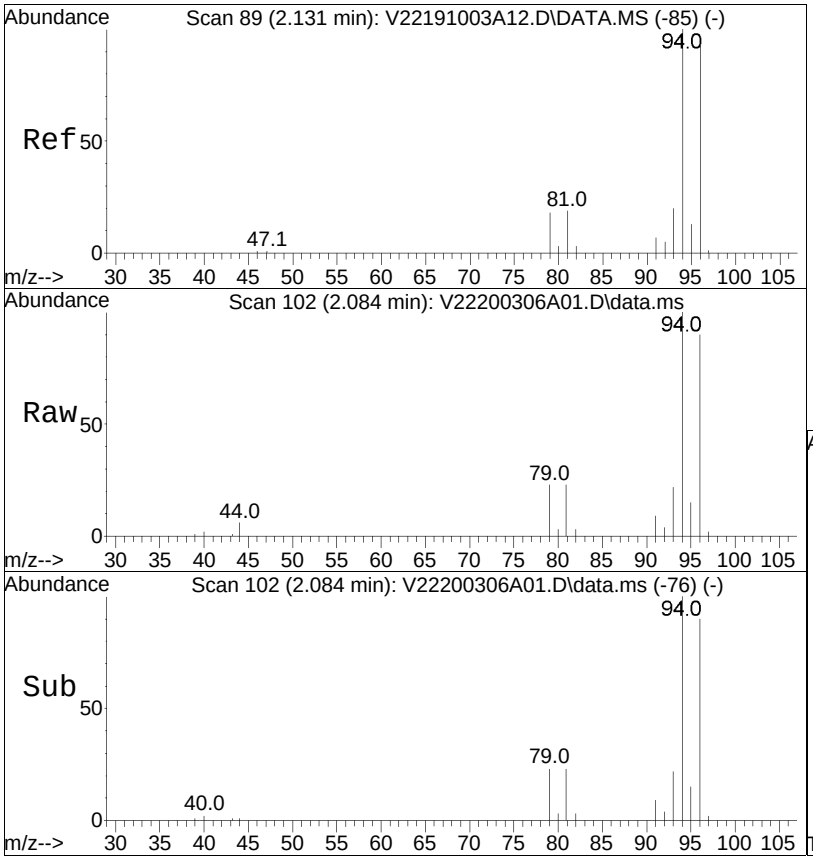



#4
Vinyl chloride
Concen: 8.85 ug/L
RT: 1.787 min Scan# 64
Delta R.T. 0.000 min
Lab File: V22200306A01.D
Acq: 06 Mar 2020 09:46 am

Tgt Ion: 62 Resp: 57424

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 62 | 100 | | |
| 64 | 32.0 | 12.0 | 52.0 |

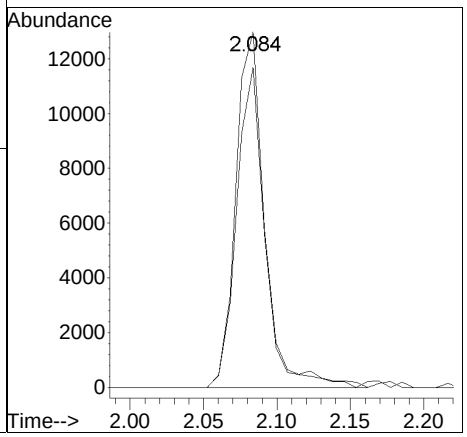


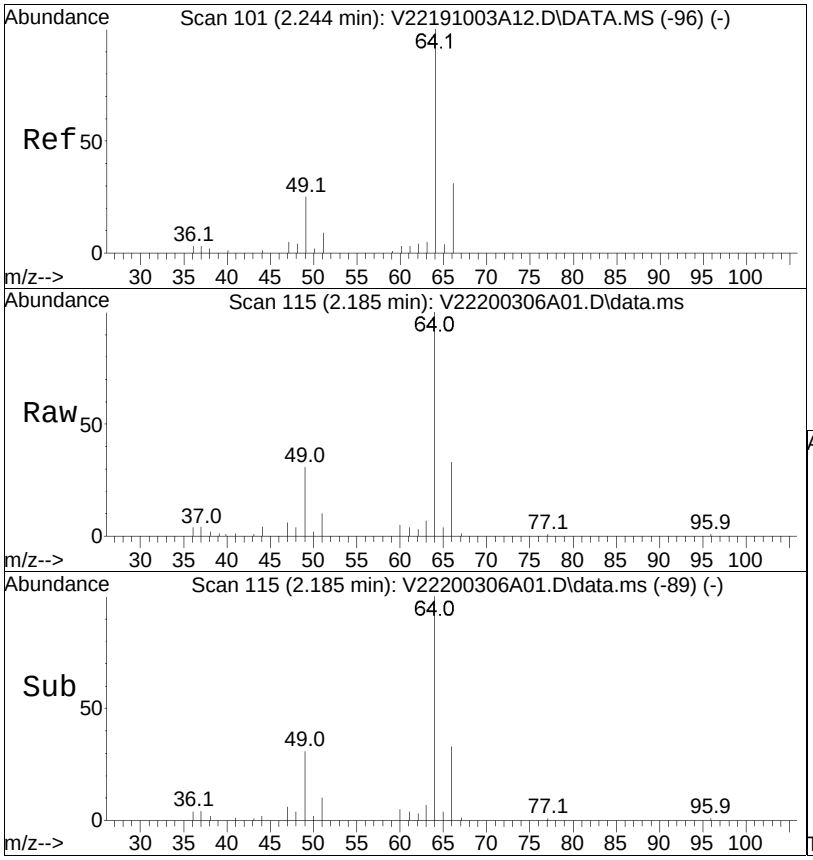



#5
Bromomethane
Concen: 3.07 ug/L
RT: 2.084 min Scan# 102
Delta R.T. -0.000 min
Lab File: V22200306A01.D
Acq: 06 Mar 2020 09:46 am

Tgt Ion: 94 Resp: 17858

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 94 | 100 | | |
| 96 | 88.2 | 72.8 | 112.8 |

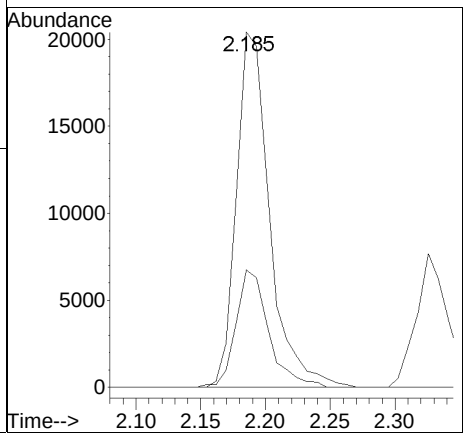


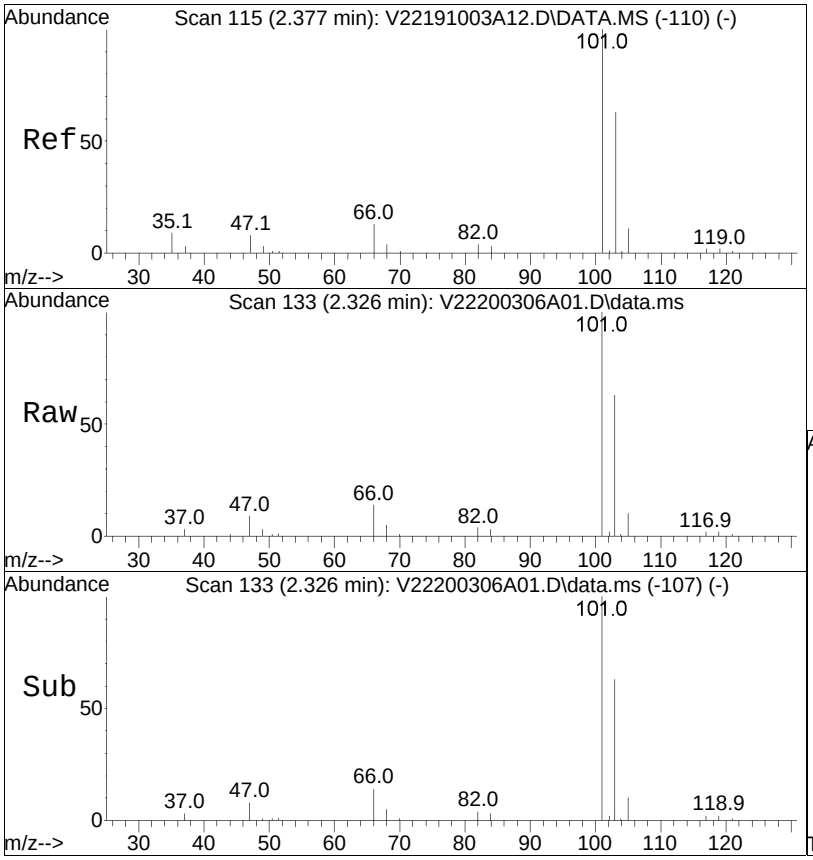



#6
Chloroethane
Concen: 7.78 ug/L
RT: 2.185 min Scan# 115
Delta R.T. 0.000 min
Lab File: V22200306A01.D
Acq: 06 Mar 2020 09:46 am

Tgt Ion: 64 Resp: 36432

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 64 | 100 | | |
| 66 | 32.7 | 12.2 | 52.2 |

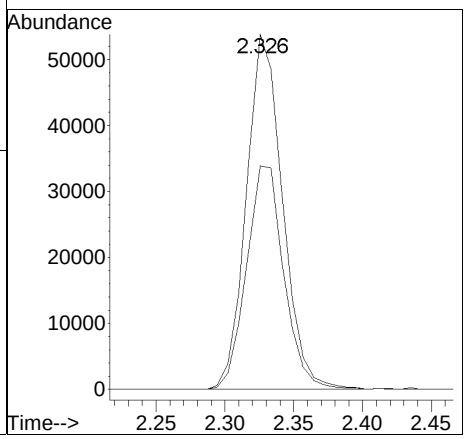


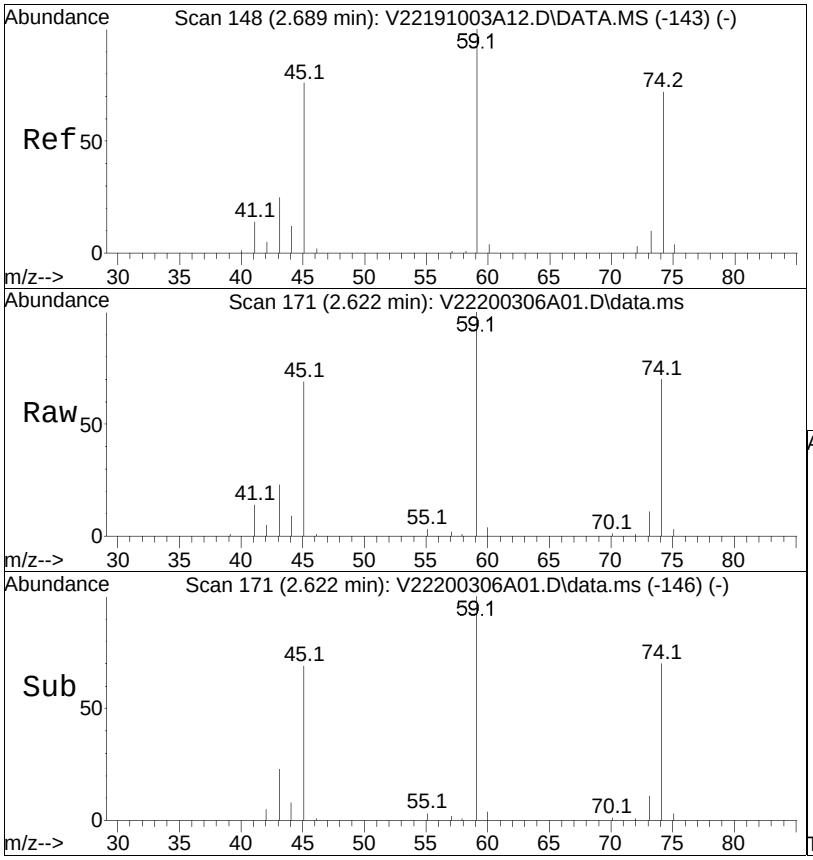



#7
Trichlorofluoromethane
Concen: 11.12 ug/L
RT: 2.326 min Scan# 133
Delta R.T. -0.000 min
Lab File: V22200306A01.D
Acq: 06 Mar 2020 09:46 am

Tgt Ion:101 Resp: 98391

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 101 | 100 | | |
| 103 | 65.3 | 51.6 | 77.4 |

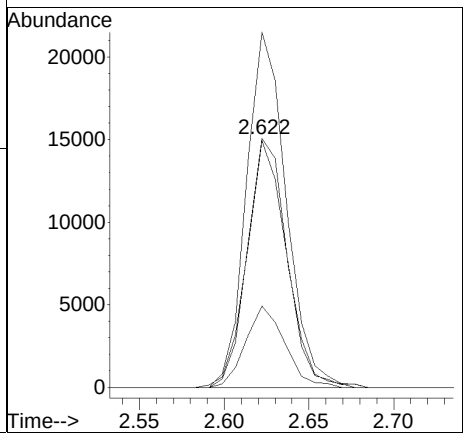


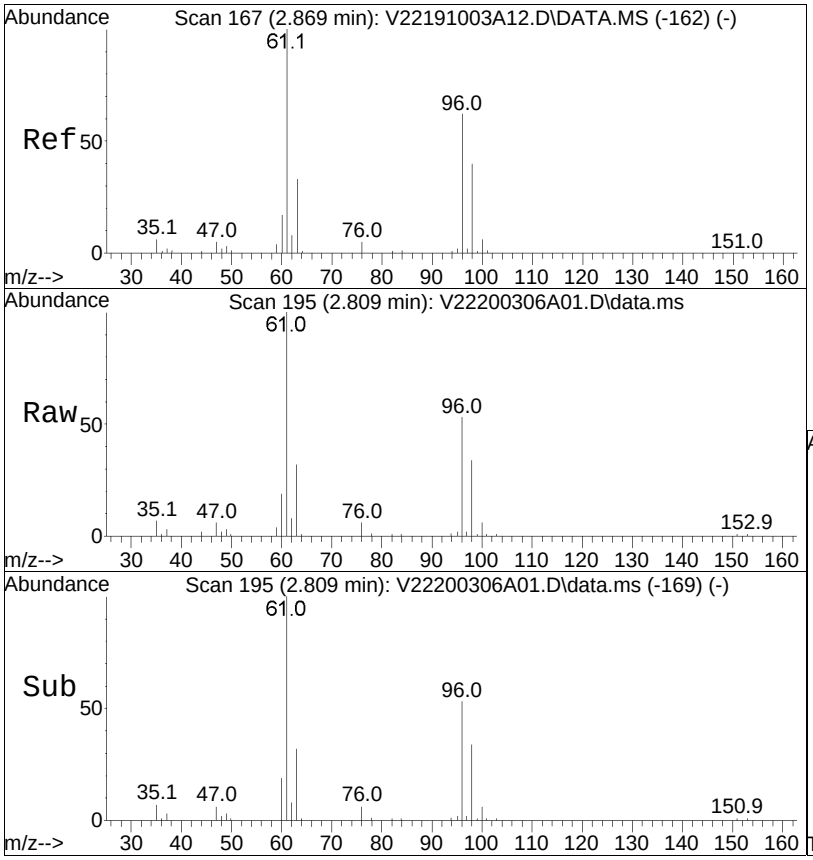



#8
Ethyl ether
Concen: 9.45 ug/L
RT: 2.622 min Scan# 171
Delta R.T. -0.008 min
Lab File: V22200306A01.D
Acq: 06 Mar 2020 09:46 am

Tgt Ion: 74 Resp: 24720

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 74 | 100 | | |
| 59 | 142.8 | 2122.4 | 4408.0# |
| 45 | 98.1 | 1435.1 | 2980.5# |
| 43 | 32.1 | 407.9 | 847.3# |

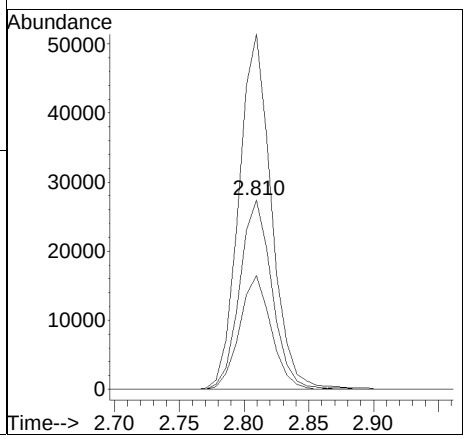


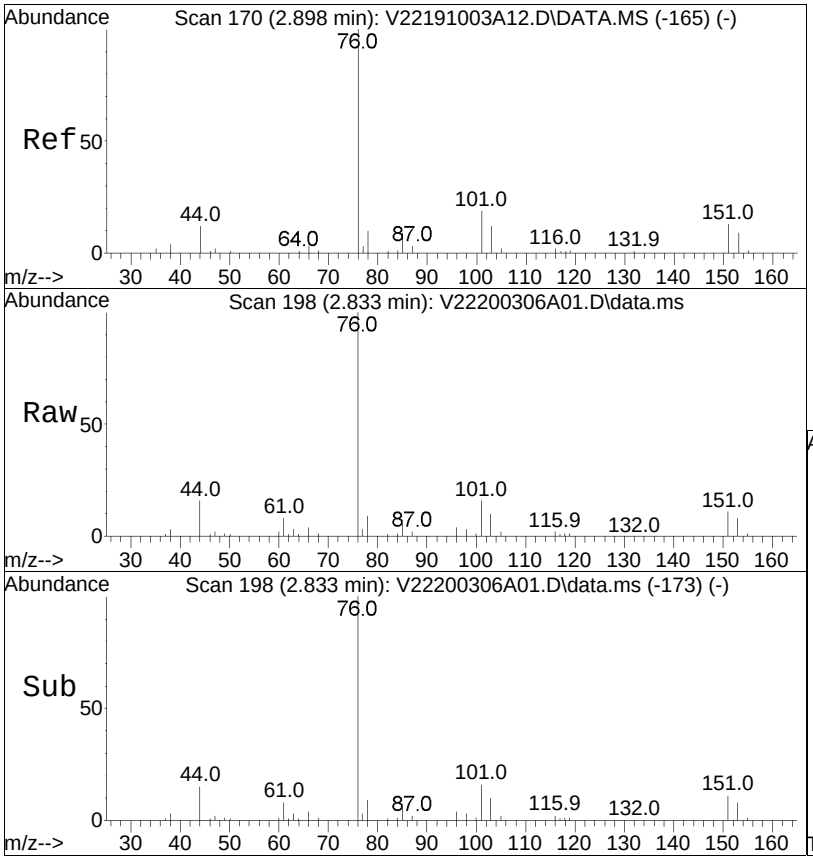



#10
1,1-Dichloroethene
Concen: 9.56 ug/L
RT: 2.809 min Scan# 195
Delta R.T. 0.000 min
Lab File: V22200306A01.D
Acq: 06 Mar 2020 09:46 am

Tgt Ion: 96 Resp: 47674

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 96 | 100 | | |
| 61 | 188.9 | 117.0 | 175.4# |
| 63 | 59.0 | 37.8 | 56.6# |

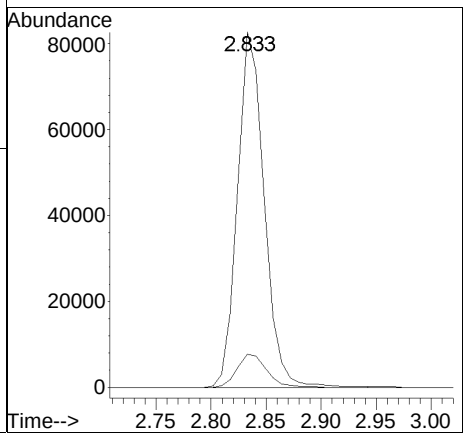


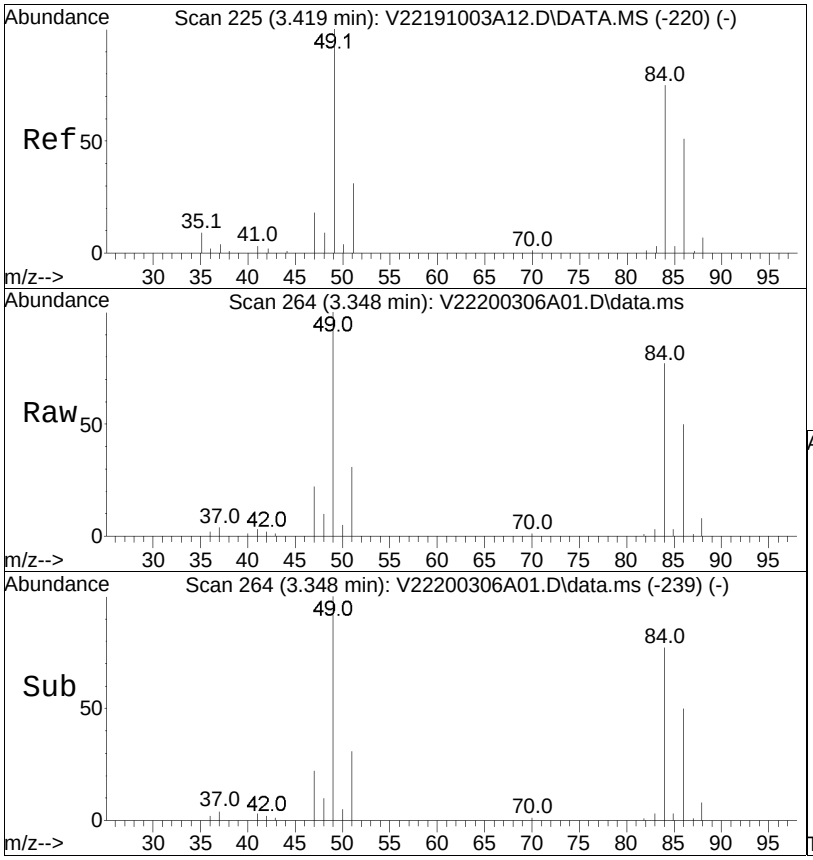



#11
Carbon disulfide
Concen: 10.76 ug/L
RT: 2.833 min Scan# 198
Delta R.T. -0.008 min
Lab File: V22200306A01.D
Acq: 06 Mar 2020 09:46 am

Tgt Ion: 76 Resp: 140151

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 76 | 100 | | |
| 78 | 10.4 | 6.4 | 13.4 |

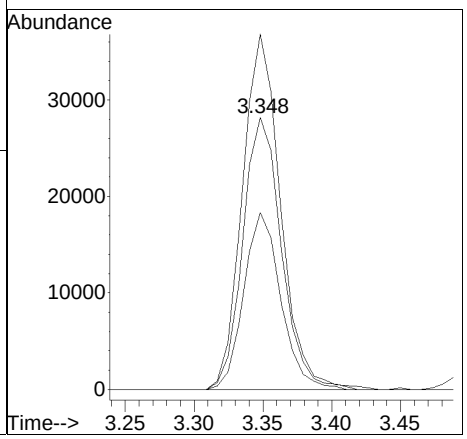


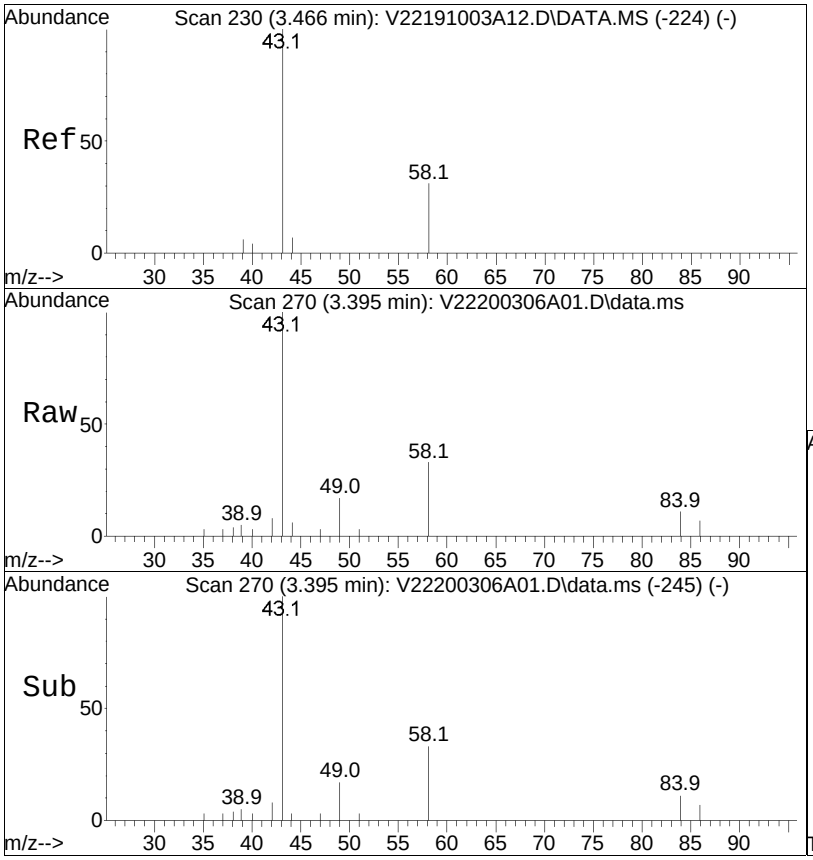



#15
Methylene chloride
Concen: 9.71 ug/L
RT: 3.348 min Scan# 264
Delta R.T. -0.008 min
Lab File: V22200306A01.D
Acq: 06 Mar 2020 09:46 am

Tgt Ion: 84 Resp: 54885

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 84 | 100 | | |
| 86 | 62.4 | 41.5 | 86.3 |
| 49 | 129.4 | 68.8 | 143.0 |

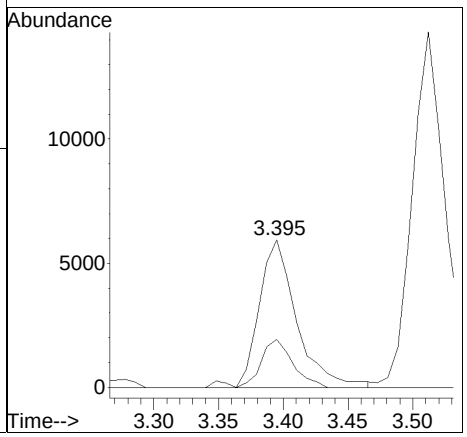


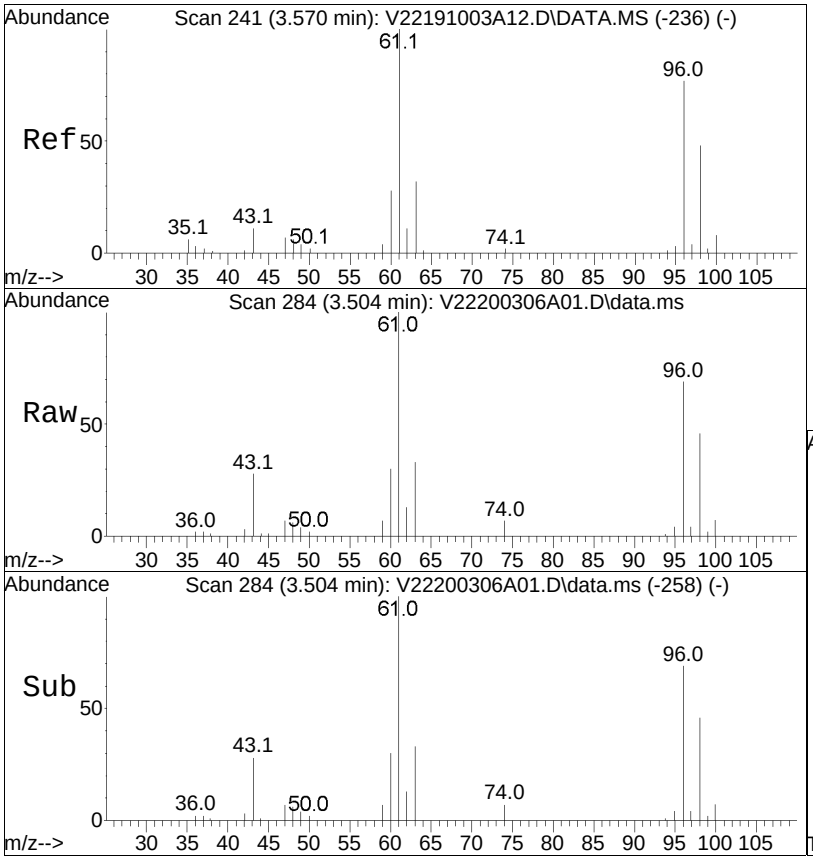



#17
Acetone
Concen: 8.31 ug/L
RT: 3.395 min Scan# 270
Delta R.T. -0.008 min
Lab File: V22200306A01.D
Acq: 06 Mar 2020 09:46 am

Tgt Ion: 43 Resp: 12040

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 43 | 100 | | |
| 58 | 27.0 | 23.1 | 34.7 |

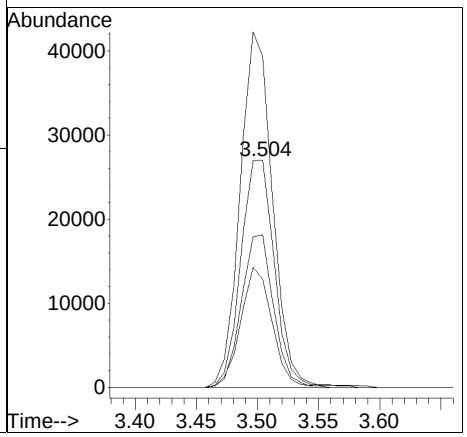


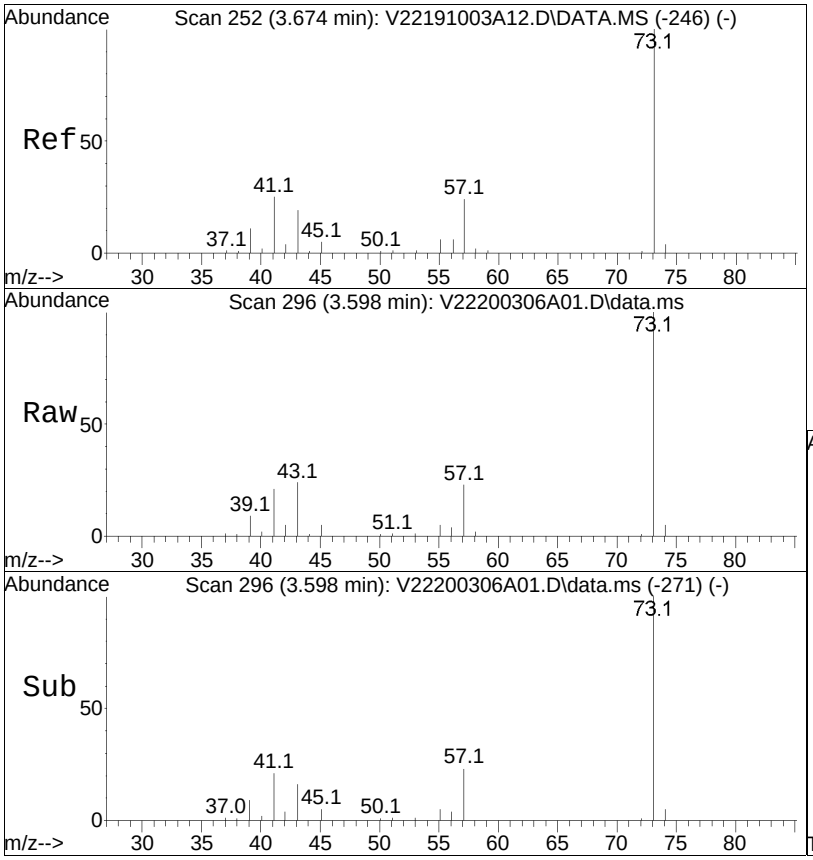



#18
trans-1,2-Dichloroethene
Concen: 9.63 ug/L
RT: 3.504 min Scan# 284
Delta R.T. 0.000 min
Lab File: V22200306A01.D
Acq: 06 Mar 2020 09:46 am

Tgt Ion: 96 Resp: 51596

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 96 | 100 | | |
| 61 | 151.1 | 81.6 | 169.6 |
| 98 | 64.3 | 41.8 | 86.8 |
| 63 | 49.5 | 26.3 | 54.7 |

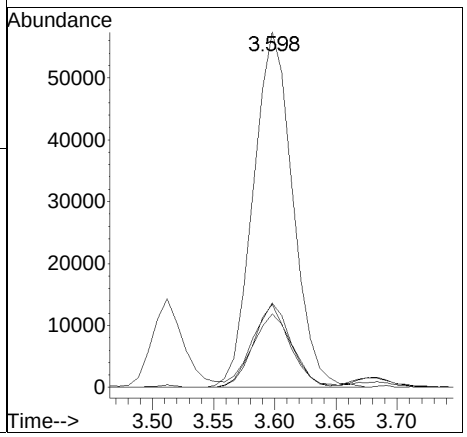


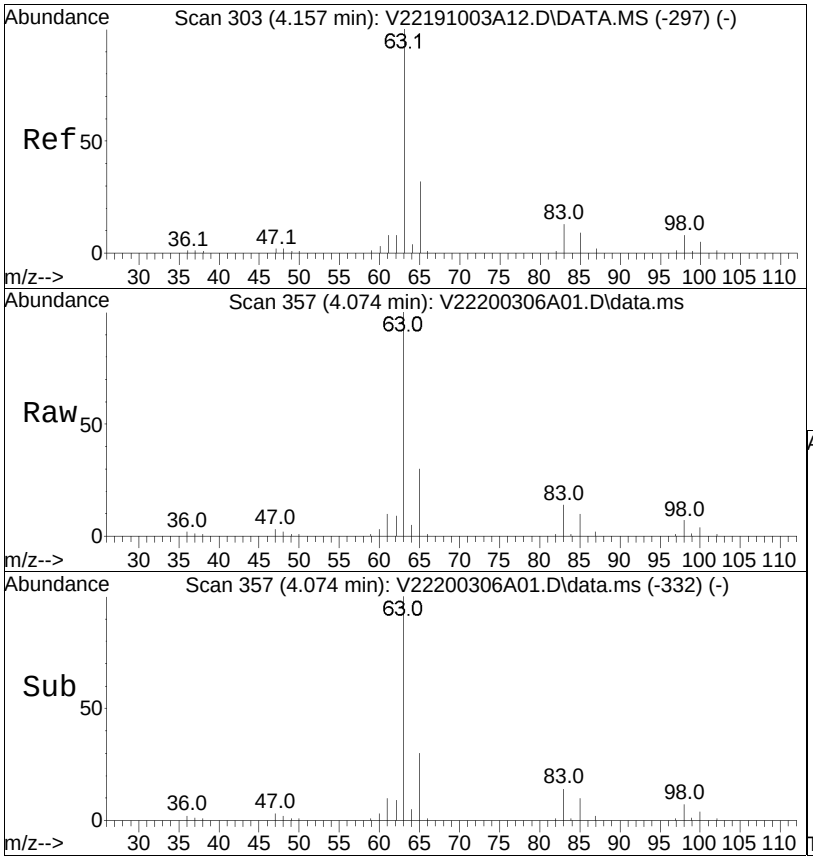



#21
Methyl tert-butyl ether
Concen: 10.89 ug/L
RT: 3.598 min Scan# 296
Delta R.T. -0.007 min
Lab File: V22200306A01.D
Acq: 06 Mar 2020 09:46 am

Tgt Ion: 73 Resp: 129055

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 73 | 100 | | |
| 57 | 21.9 | 13.6 | 28.2 |
| 43 | 23.1 | 12.7 | 26.5 |
| 41 | 20.6 | 11.4 | 23.8 |

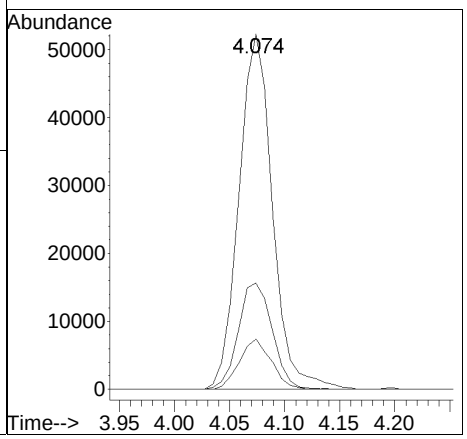


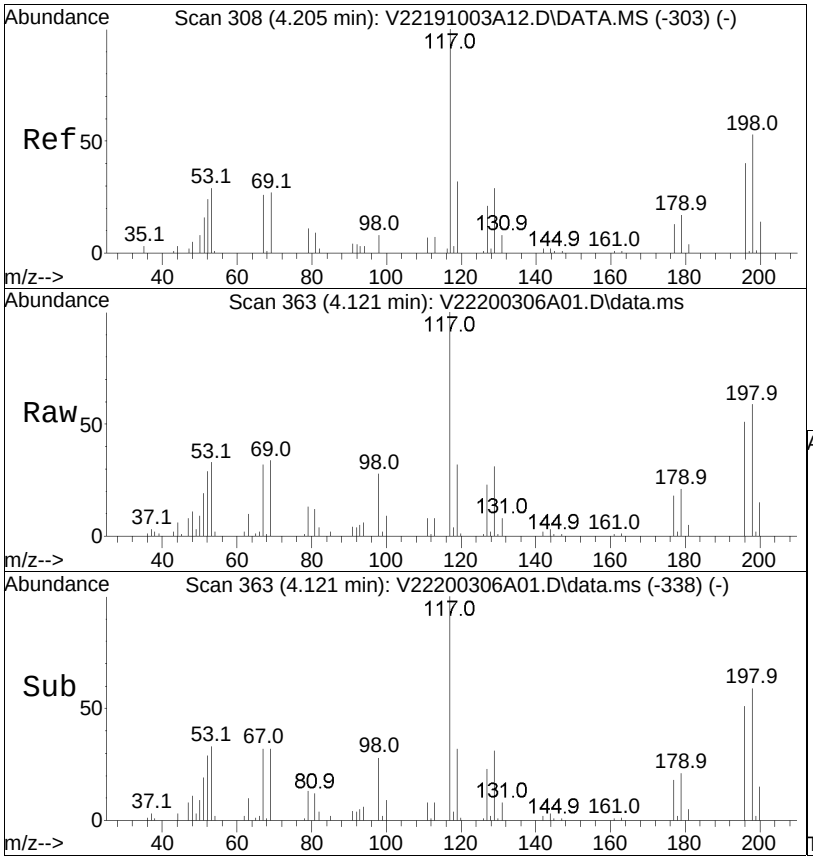



#25
1,1-Dichloroethane
Concen: 10.28 ug/L
RT: 4.074 min Scan# 357
Delta R.T. -0.008 min
Lab File: V22200306A01.D
Acq: 06 Mar 2020 09:46 am

Tgt Ion: 63 Resp: 110704

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 63 | 100 | | |
| 65 | 30.3 | 11.9 | 51.9 |
| 83 | 13.6 | 0.0 | 34.2 |

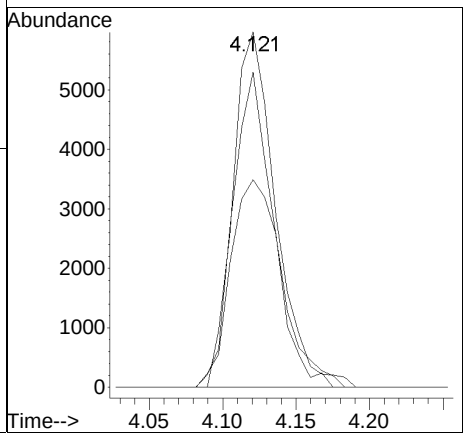


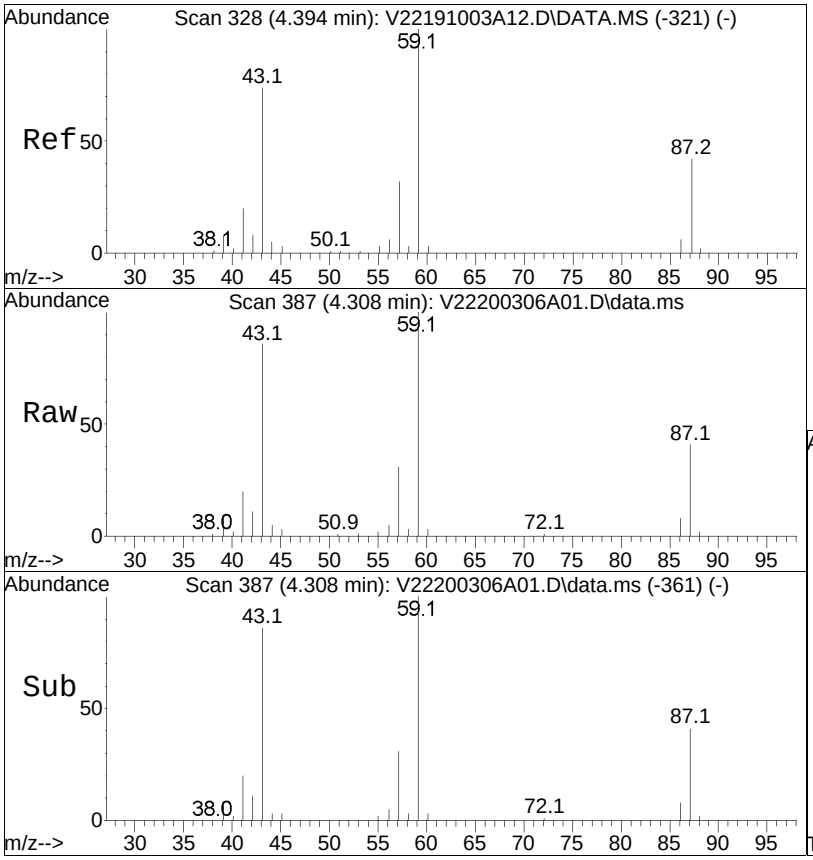



#27
Acrylonitrile
Concen: 9.07 ug/L
RT: 4.121 min Scan# 363
Delta R.T. -0.007 min
Lab File: V22200306A01.D
Acq: 06 Mar 2020 09:46 am

Tgt Ion: 53 Resp: 12183

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 53 | 100 | | |
| 52 | 86.4 | 63.8 | 95.8 |
| 51 | 66.6 | 50.2 | 75.4 |

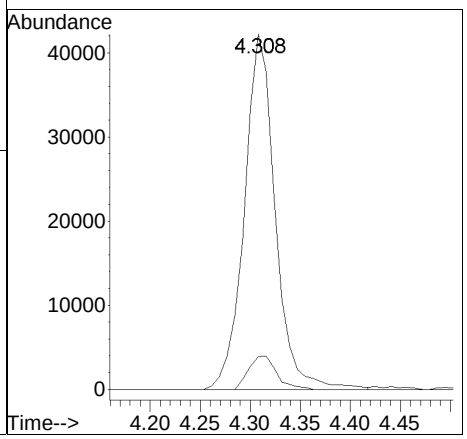


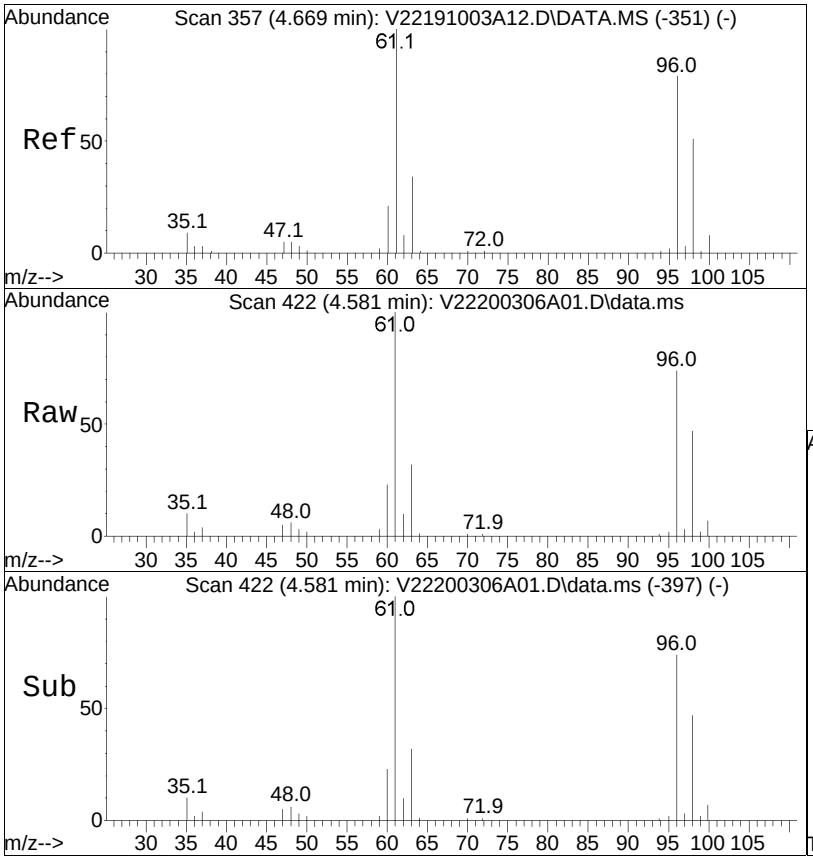



#29
Vinyl acetate
Concen: 9.87 ug/L
RT: 4.308 min Scan# 387
Delta R.T. -0.000 min
Lab File: V22200306A01.D
Acq: 06 Mar 2020 09:46 am

Tgt Ion: 43 Resp: 90716

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 43 | 100 | | |
| 86 | 8.5 | 8.9 | 13.3# |

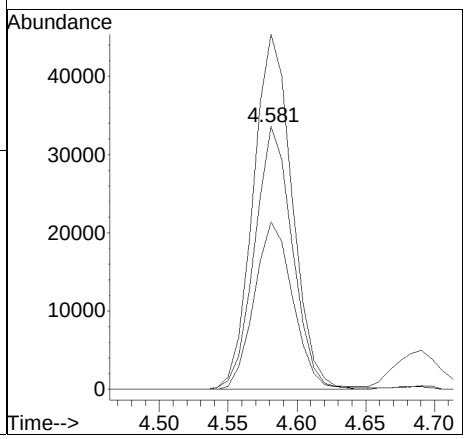


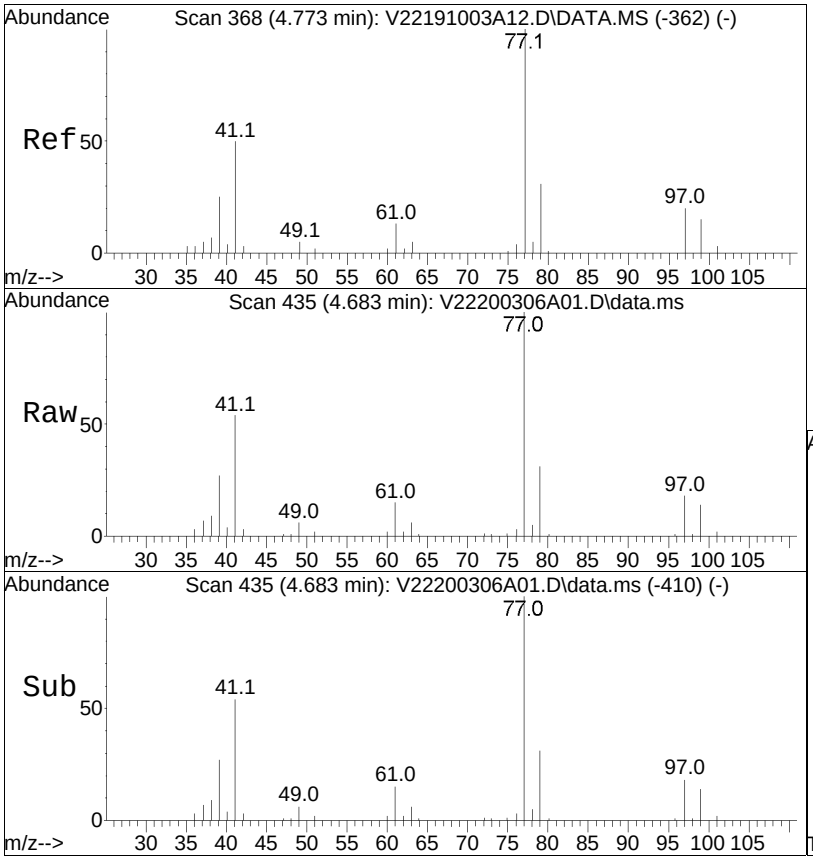



#30
cis-1,2-Dichloroethene
Concen: 9.70 ug/L
RT: 4.581 min Scan# 422
Delta R.T. -0.008 min
Lab File: V22200306A01.D
Acq: 06 Mar 2020 09:46 am

Tgt Ion: 96 Resp: 64237

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 96 | 100 | | |
| 61 | 139.2 | 90.3 | 135.5# |
| 98 | 64.9 | 50.8 | 76.2 |

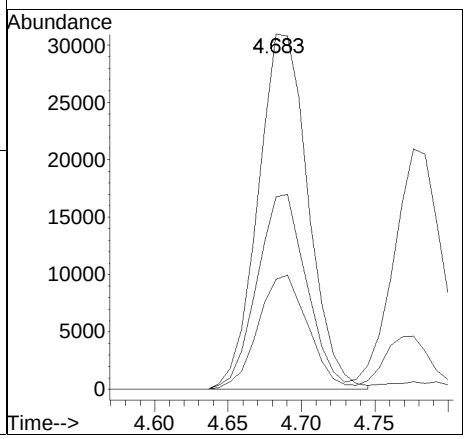


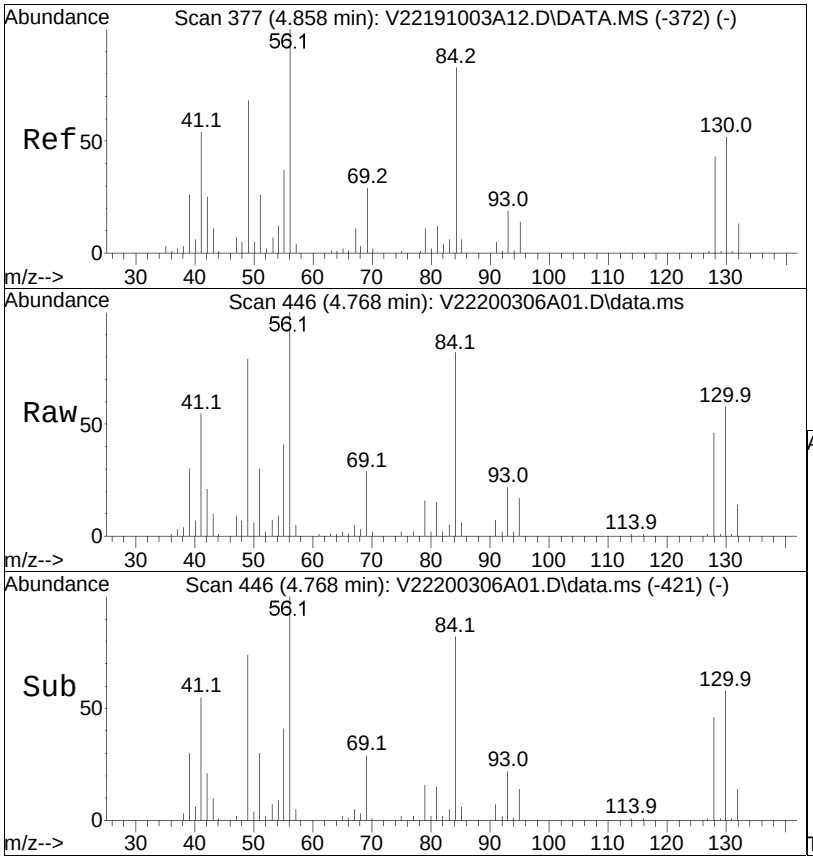



#31
2,2-Dichloropropane
Concen: 11.84 ug/L
RT: 4.683 min Scan# 435
Delta R.T. -0.007 min
Lab File: V22200306A01.D
Acq: 06 Mar 2020 09:46 am

Tgt Ion: 77 Resp: 73669

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 77 | 100 | | |
| 41 | 54.2 | 32.3 | 67.1 |
| 79 | 32.1 | 21.1 | 43.7 |

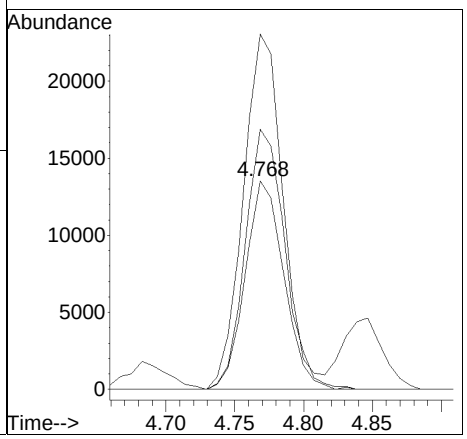


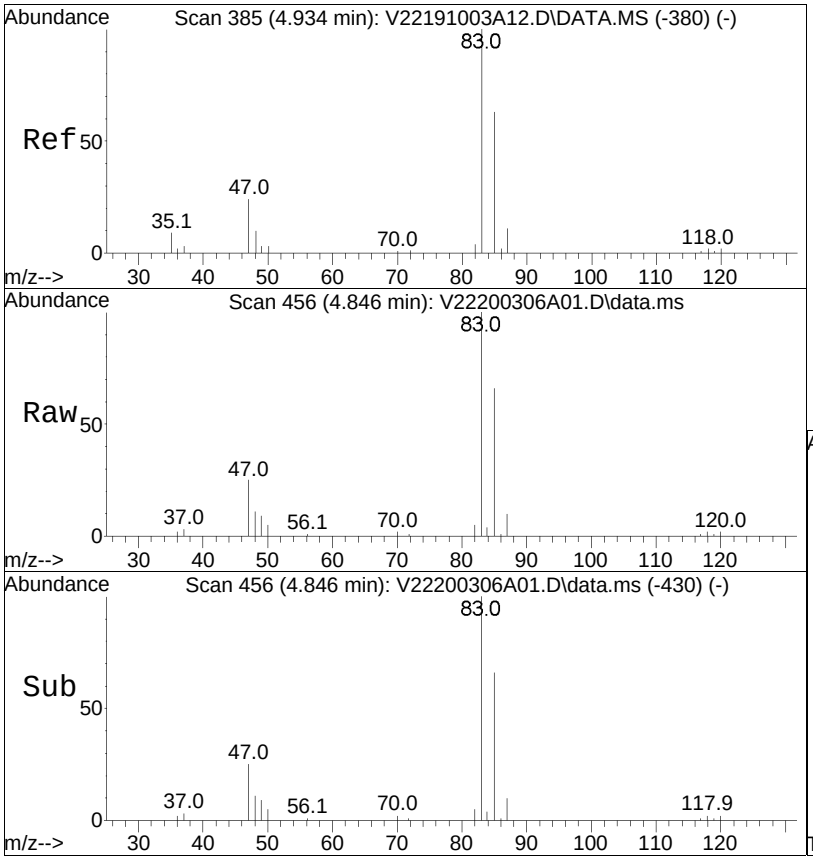



#32
Bromochloromethane
Concen: 9.69 ug/L
RT: 4.768 min Scan# 446
Delta R.T. -0.008 min
Lab File: V22200306A01.D
Acq: 06 Mar 2020 09:46 am

Tgt Ion:128 Resp: 26588

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 128 | 100 | | |
| 49 | 174.9 | 104.4 | 156.6# |
| 130 | 127.6 | 103.9 | 155.9 |

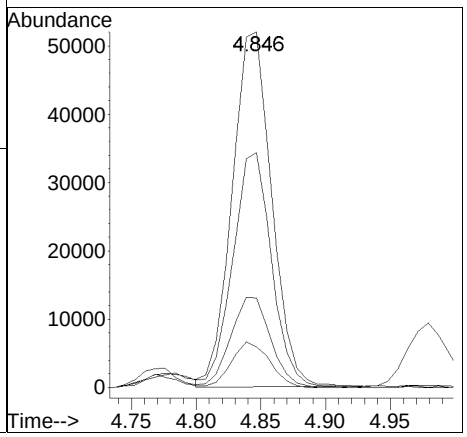


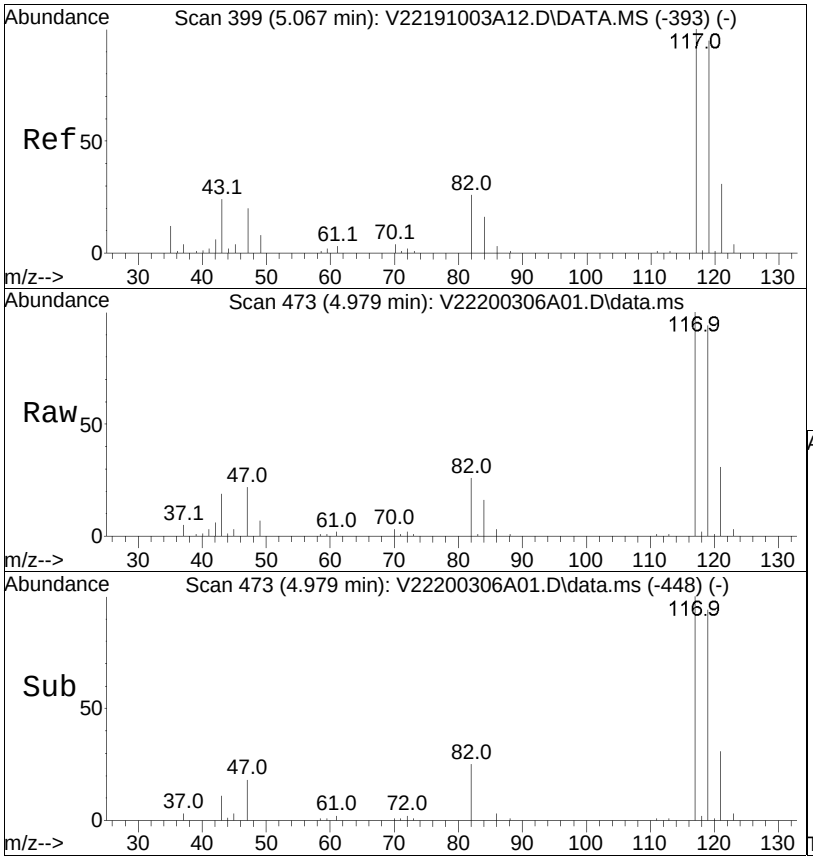



#34
Chloroform
Concen: 10.43 ug/L
RT: 4.846 min Scan# 456
Delta R.T. 0.000 min
Lab File: V22200306A01.D
Acq: 06 Mar 2020 09:46 am

Tgt Ion: 83 Resp: 110295

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 83 | 100 | | |
| 85 | 65.2 | 42.4 | 88.2 |
| 47 | 25.7 | 14.0 | 29.0 |
| 48 | 12.3 | 6.9 | 14.3 |

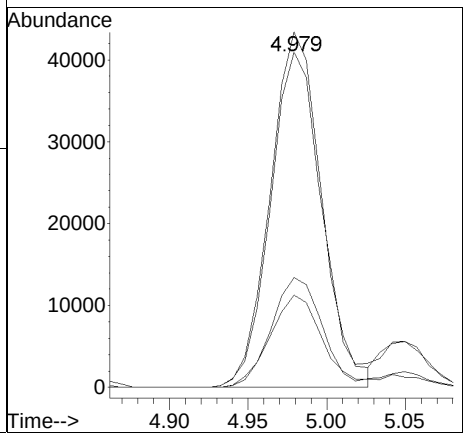


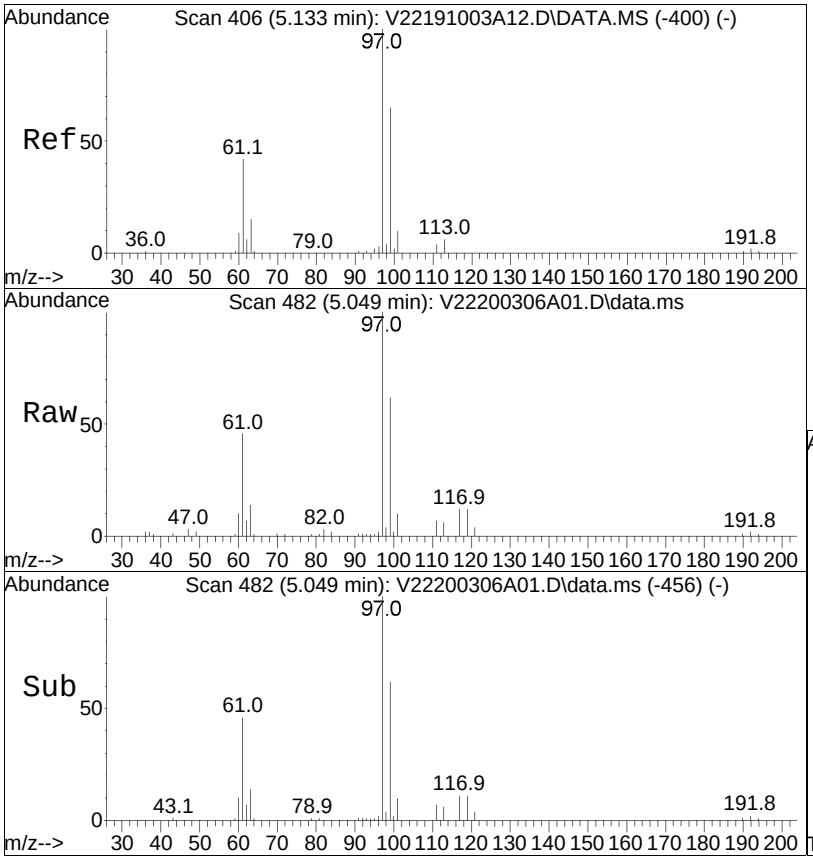



#36
Carbon tetrachloride
Concen: 10.96 ug/L
RT: 4.979 min Scan# 473
Delta R.T. -0.008 min
Lab File: V22200306A01.D
Acq: 06 Mar 2020 09:46 am

Tgt Ion:117 Resp: 98707

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 117 | 100 | | |
| 119 | 94.9 | 62.1 | 129.1 |
| 121 | 30.5 | 20.3 | 42.3 |
| 82 | 26.9 | 15.4 | 32.0 |

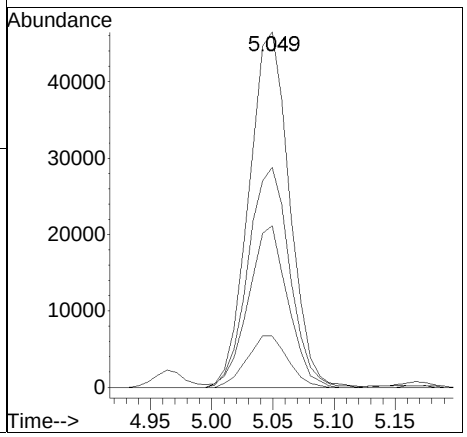


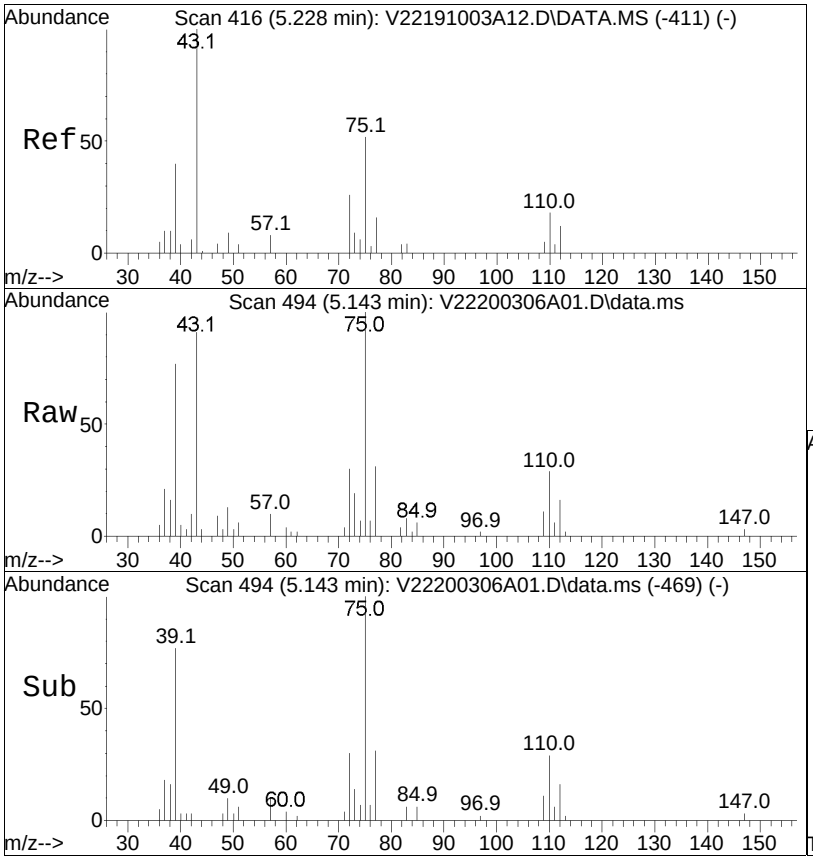



#39
1,1,1-Trichloroethane
Concen: 11.08 ug/L
RT: 5.049 min Scan# 482
Delta R.T. 0.000 min
Lab File: V22200306A01.D
Acq: 06 Mar 2020 09:46 am

Tgt Ion: 97 Resp: 107380

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 97 | 100 | | |
| 99 | 63.5 | 42.4 | 88.0 |
| 61 | 44.5 | 26.0 | 54.0 |
| 63 | 14.6 | 8.3 | 17.3 |

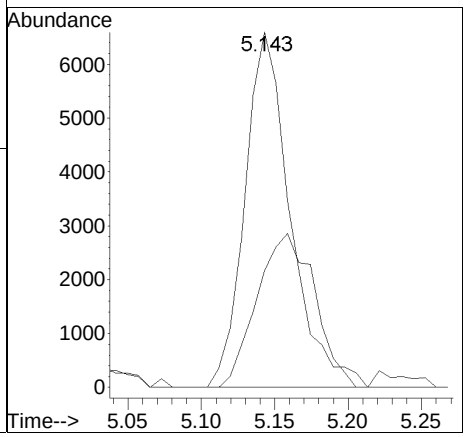


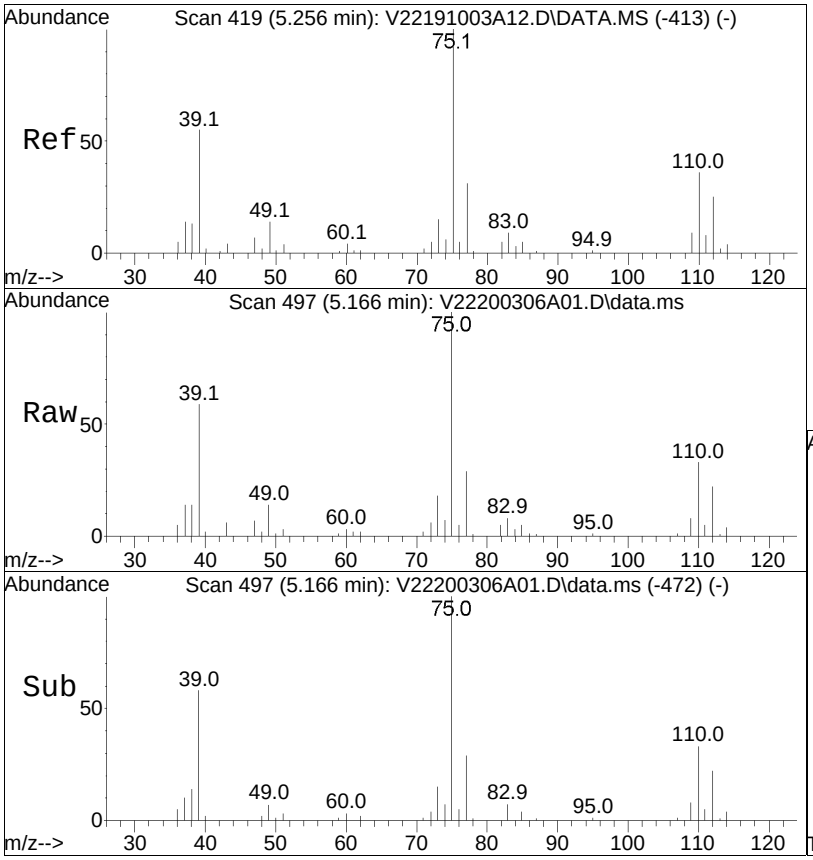



#41
2-Butanone
Concen: 7.82 ug/L
RT: 5.143 min Scan# 494
Delta R.T. -0.008 min
Lab File: V22200306A01.D
Acq: 06 Mar 2020 09:46 am

Tgt Ion: 43 Resp: 14205

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 43 | 100 | | |
| 72 | 54.7 | 45.8 | 68.8 |

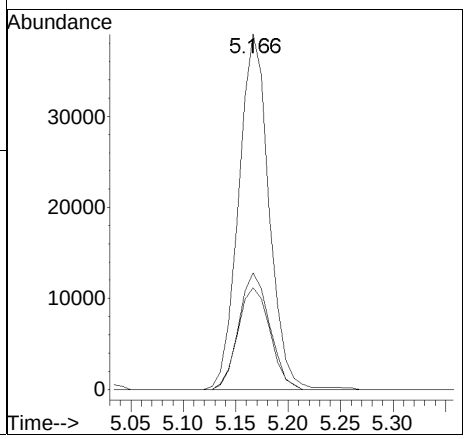


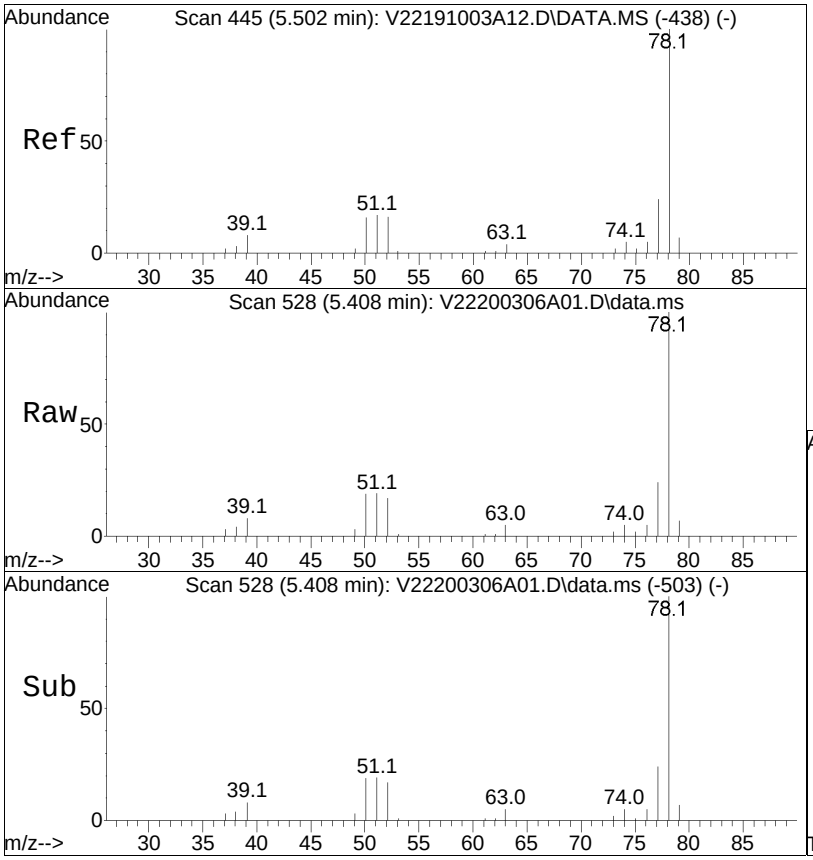



#42
1,1-Dichloropropene
Concen: 9.69 ug/L
RT: 5.166 min Scan# 497
Delta R.T. -0.008 min
Lab File: V22200306A01.D
Acq: 06 Mar 2020 09:46 am

Tgt Ion: 75 Resp: 78596

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 75 | 100 | | |
| 110 | 33.2 | 25.4 | 52.8 |
| 77 | 30.4 | 20.3 | 42.1 |

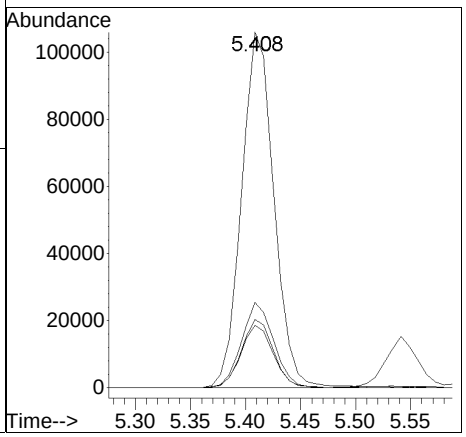


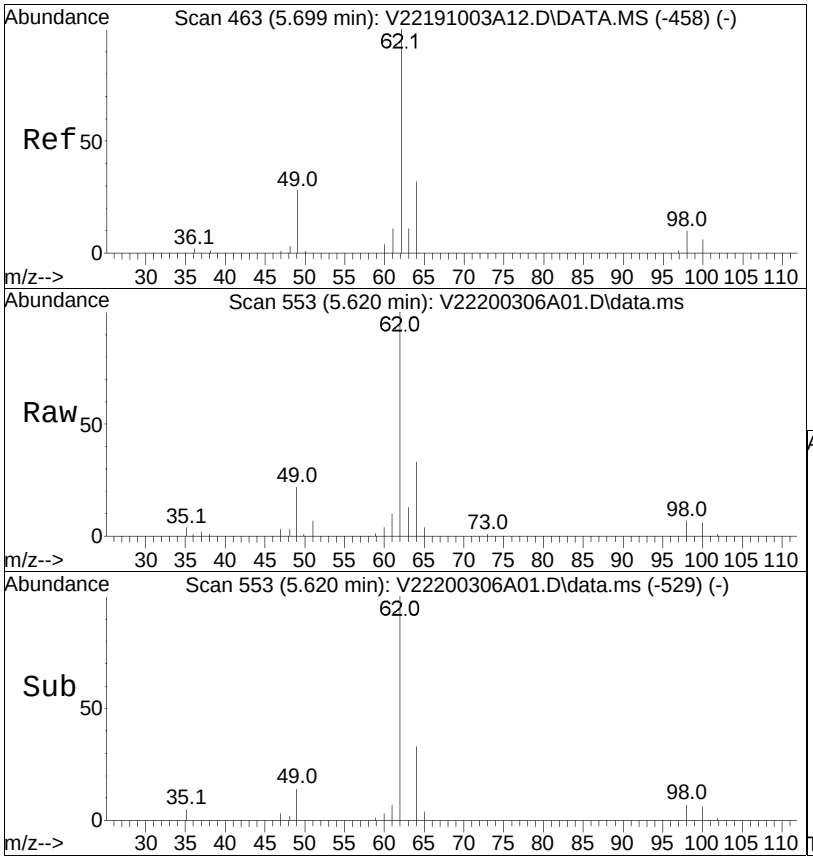



#44
Benzene
Concen: 9.57 ug/L
RT: 5.408 min Scan# 528
Delta R.T. -0.008 min
Lab File: V22200306A01.D
Acq: 06 Mar 2020 09:46 am

Tgt Ion: 78 Resp: 216135

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 78 | 100 | | |
| 77 | 23.5 | 15.4 | 32.0 |
| 51 | 18.8 | 9.8 | 20.4 |
| 52 | 17.4 | 9.2 | 19.2 |

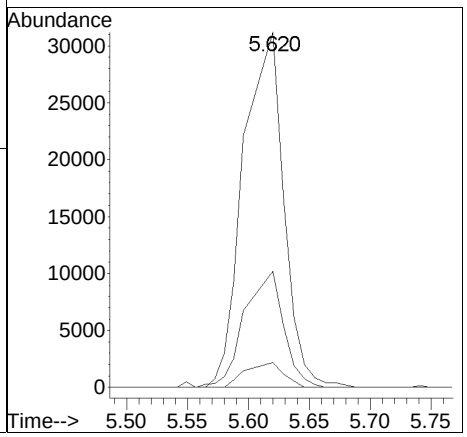


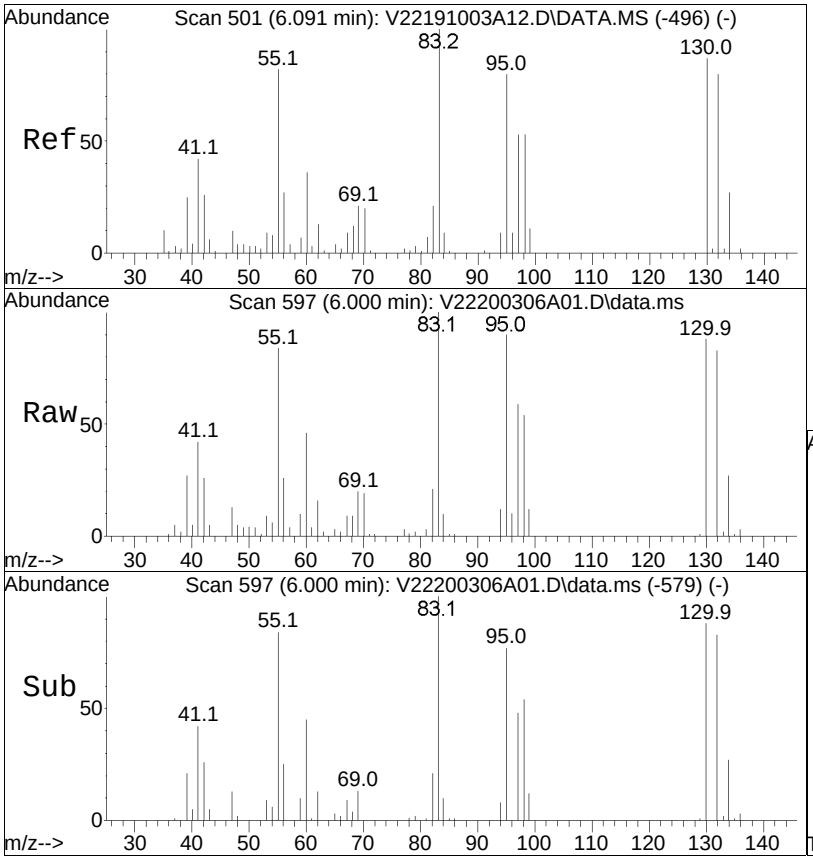



#47
1,2-Dichloroethane
Concen: 9.21 ug/L
RT: 5.620 min Scan# 553
Delta R.T. -0.000 min
Lab File: V22200306A01.D
Acq: 06 Mar 2020 09:46 am

Tgt Ion: 62 Resp: 52622

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 62 | 100 | | |
| 64 | 32.3 | 12.3 | 52.3 |
| 98 | 7.1 | 0.0 | 30.3 |

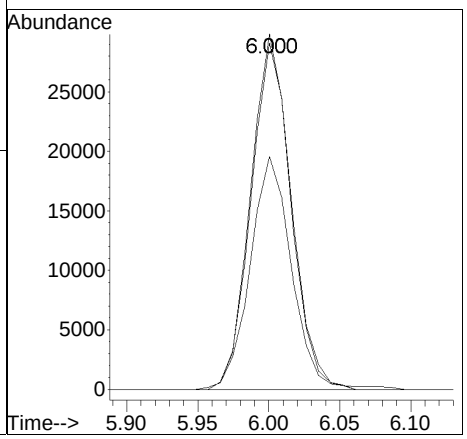


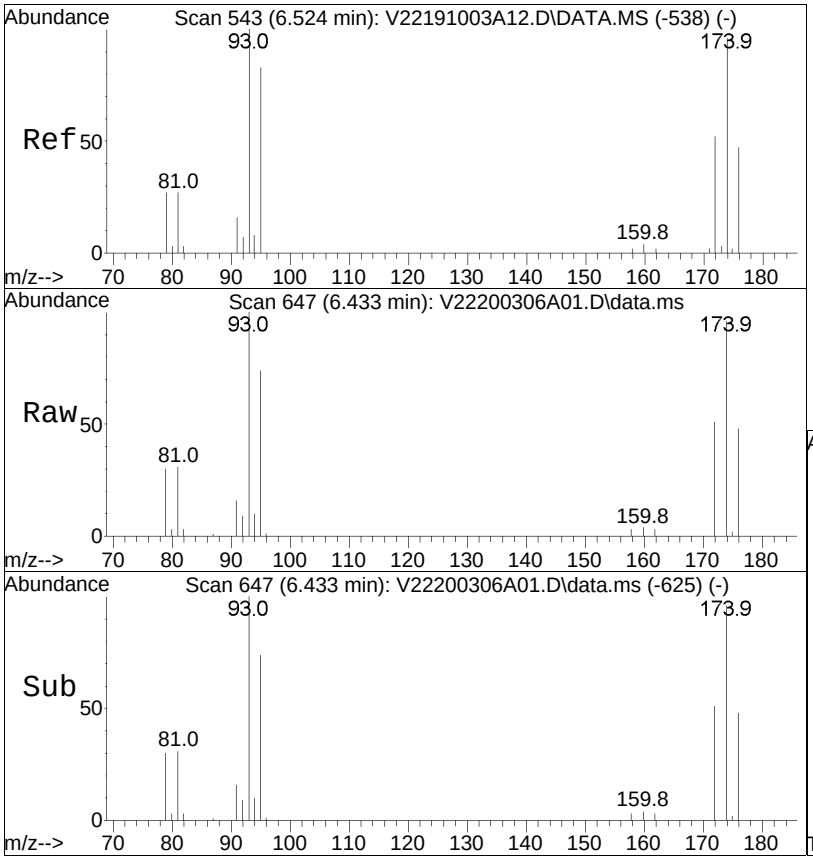



#51
Trichloroethene
Concen: 9.14 ug/L
RT: 6.000 min Scan# 597
Delta R.T. -0.009 min
Lab File: V22200306A01.D
Acq: 06 Mar 2020 09:46 am

Tgt Ion: 95 Resp: 58388

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 95 | 100 | | |
| 97 | 67.2 | 55.0 | 82.4 |
| 130 | 99.9 | 89.2 | 133.8 |

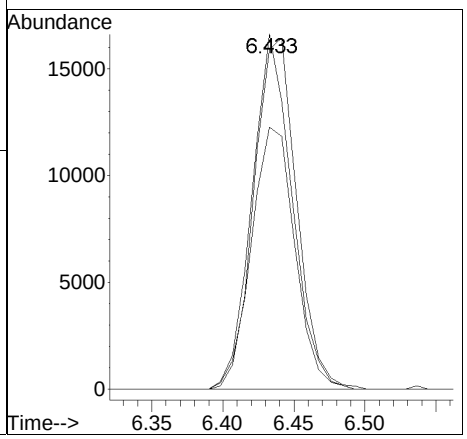


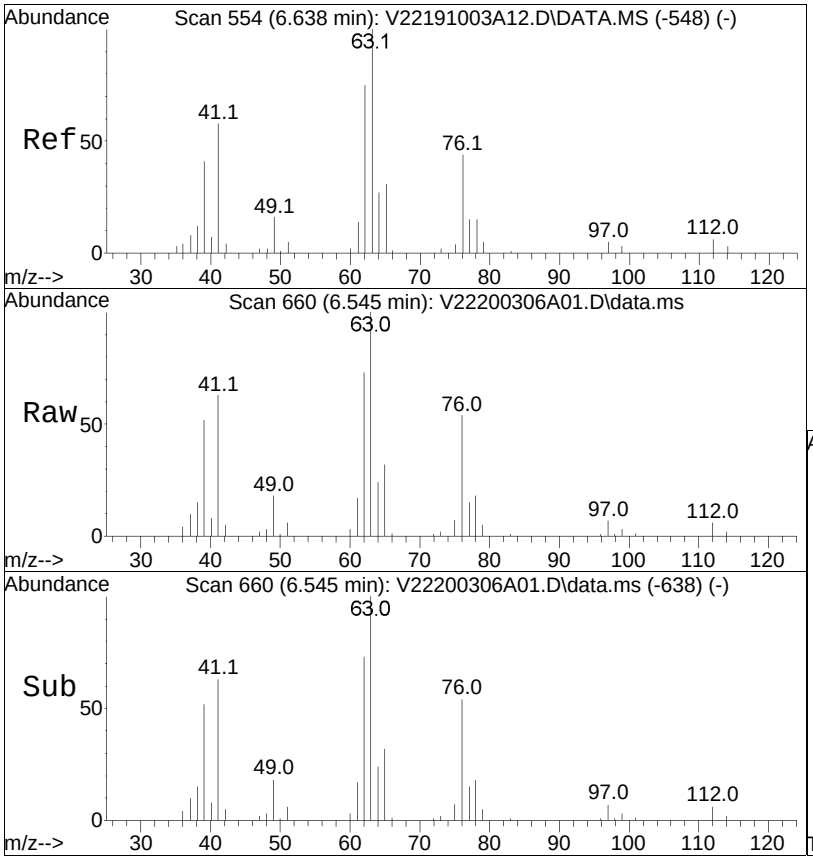



#53
Dibromomethane
Concen: 9.53 ug/L
RT: 6.433 min Scan# 647
Delta R.T. -0.008 min
Lab File: V22200306A01.D
Acq: 06 Mar 2020 09:46 am

Tgt Ion: 93 Resp: 32560

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 93 | 100 | | |
| 95 | 80.6 | 68.0 | 102.0 |
| 174 | 105.6 | 106.1 | 159.1# |

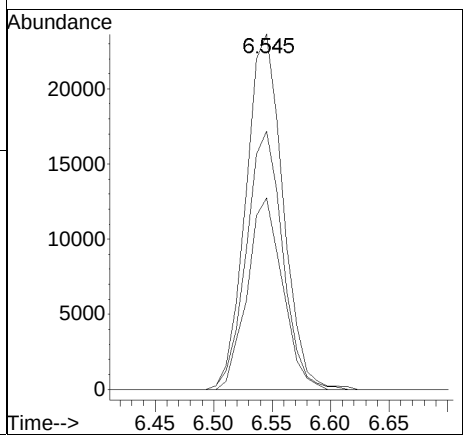


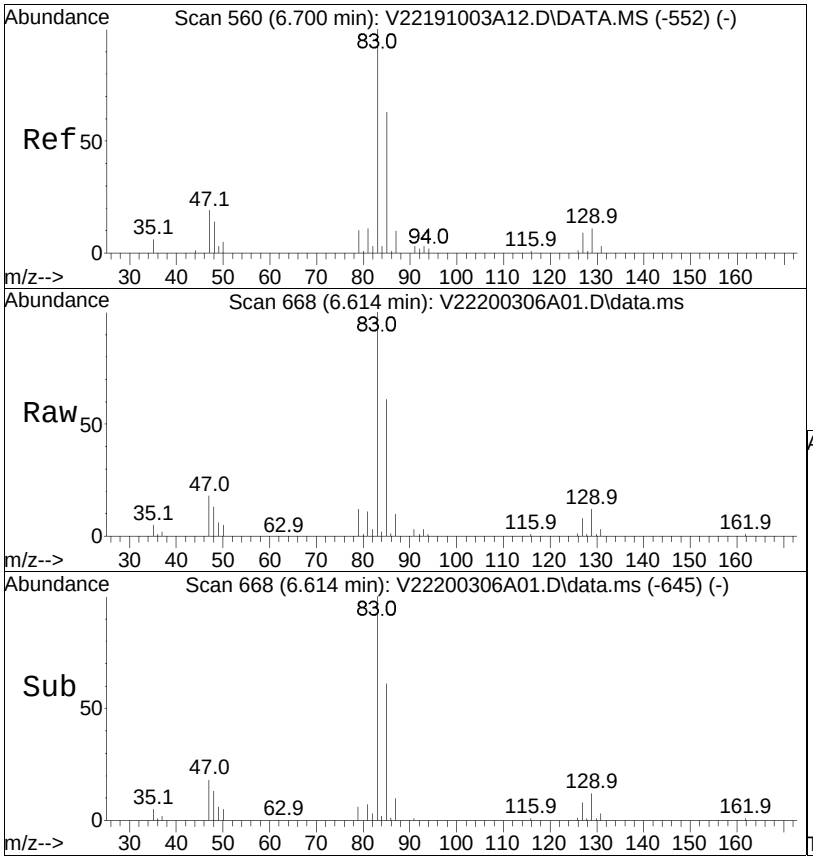



#54
1,2-Dichloropropane
Concen: 8.64 ug/L
RT: 6.545 min Scan# 660
Delta R.T. -0.009 min
Lab File: V22200306A01.D
Acq: 06 Mar 2020 09:46 am

Tgt Ion: 63 Resp: 52177

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 63 | 100 | | |
| 62 | 71.2 | 56.9 | 85.3 |
| 76 | 51.4 | 35.8 | 53.8 |

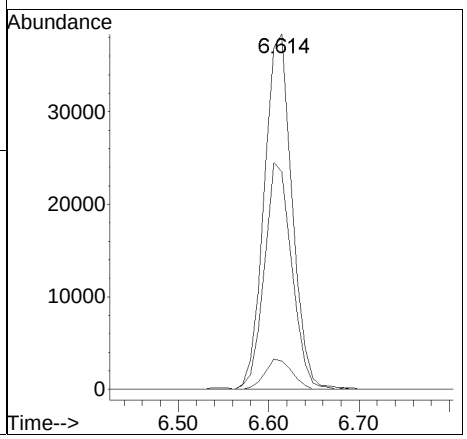


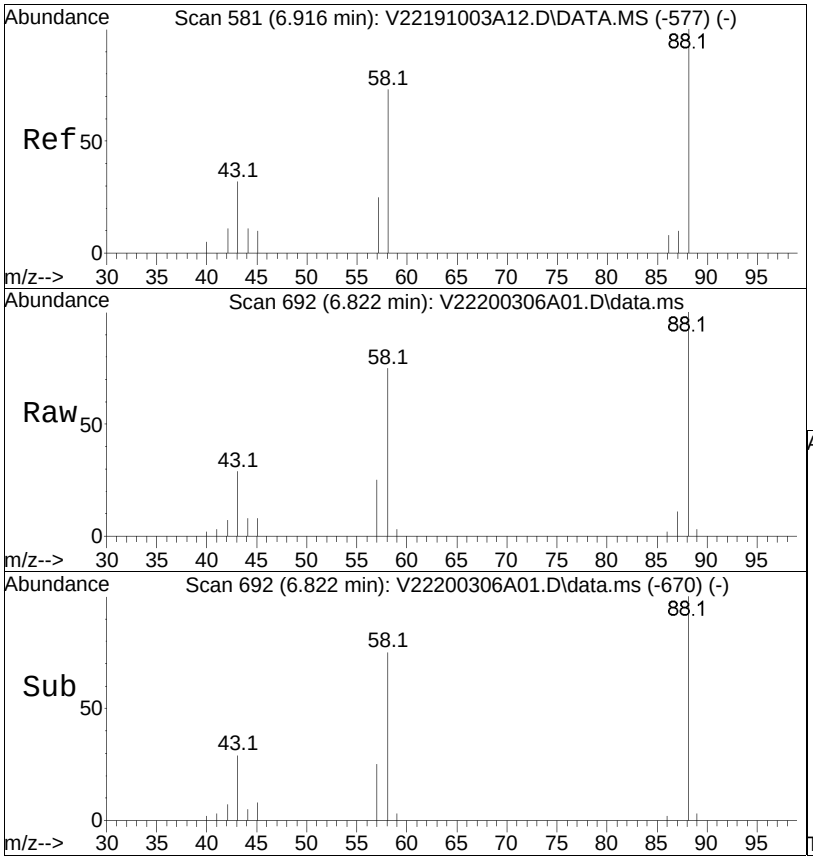



#57
Bromodichloromethane
Concen: 10.25 ug/L
RT: 6.614 min Scan# 668
Delta R.T. 0.000 min
Lab File: V22200306A01.D
Acq: 06 Mar 2020 09:46 am

Tgt Ion: 83 Resp: 82583

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 83 | 100 | | |
| 85 | 62.5 | 51.6 | 77.4 |
| 127 | 8.3 | 7.4 | 11.0 |

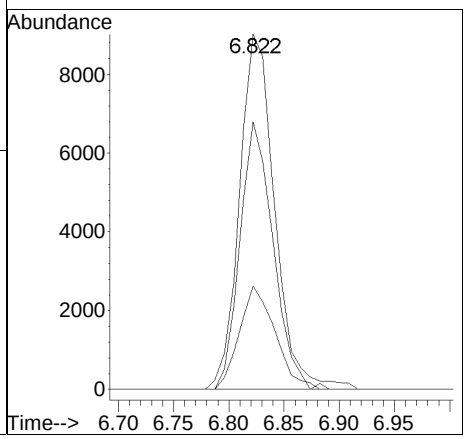


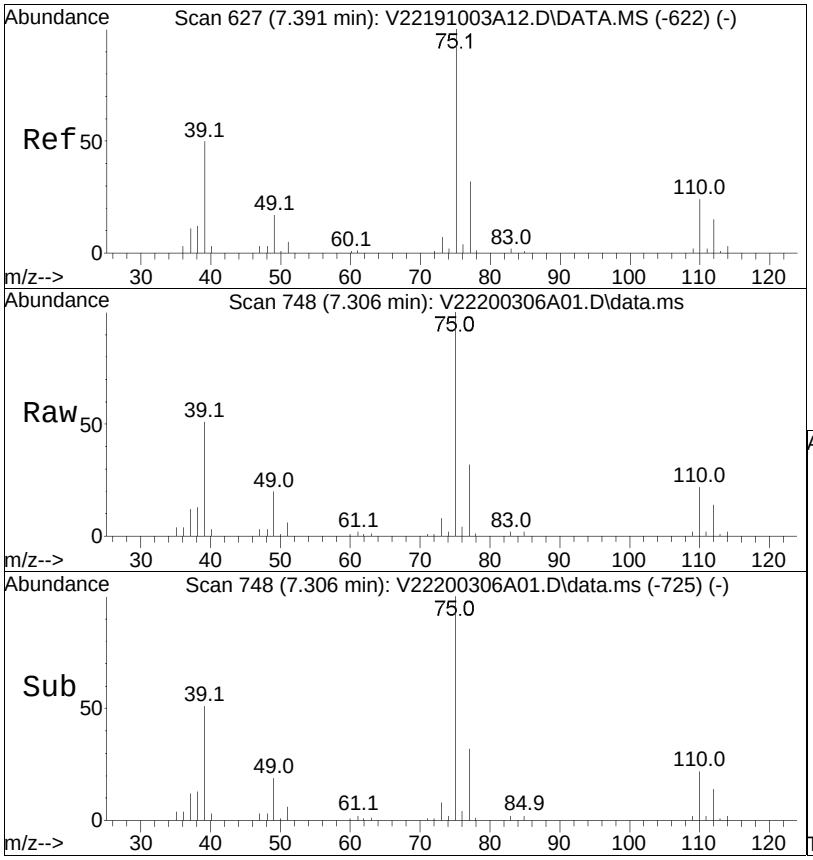



#60
1,4-Dioxane
Concen: 504.72 ug/L
RT: 6.822 min Scan# 692
Delta R.T. -0.008 min
Lab File: V22200306A01.D
Acq: 06 Mar 2020 09:46 am

Tgt Ion: 88 Resp: 20049

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 88 | 100 | | |
| 58 | 70.8 | 43.3 | 64.9# |
| 43 | 29.5 | 15.1 | 22.7# |

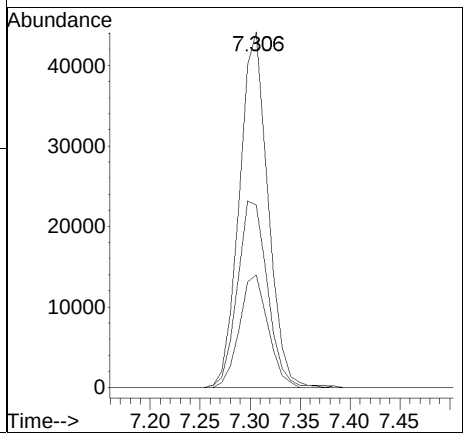


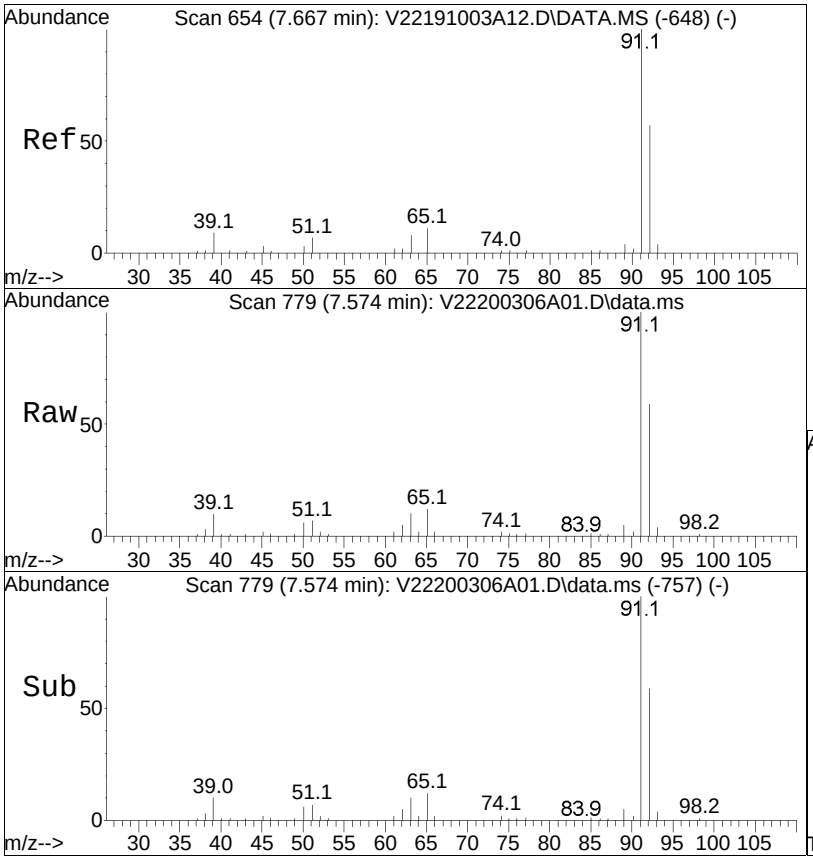



#61
cis-1,3-Dichloropropene
Concen: 9.84 ug/L
RT: 7.306 min Scan# 748
Delta R.T. 0.000 min
Lab File: V22200306A01.D
Acq: 06 Mar 2020 09:46 am

Tgt Ion: 75 Resp: 97304

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 75 | 100 | | |
| 77 | 28.6 | 25.6 | 38.4 |
| 39 | 49.7 | 35.4 | 53.0 |

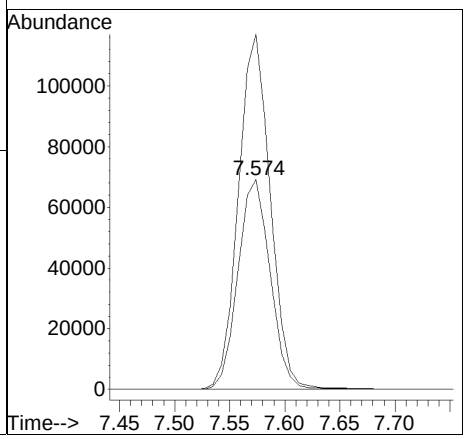


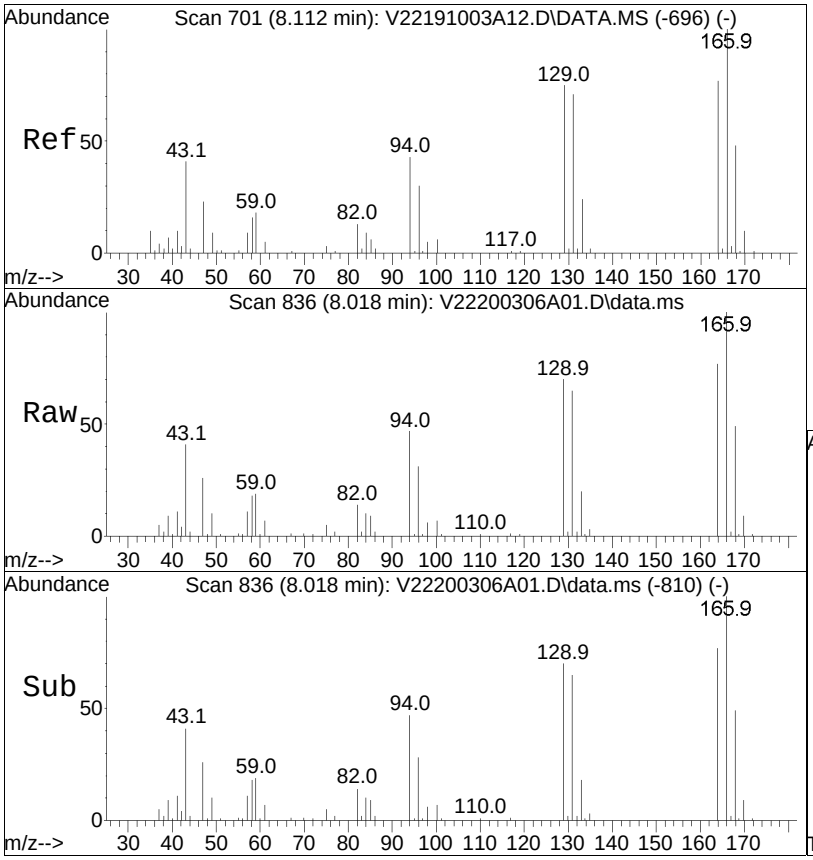



#64
Toluene
Concen: 10.44 ug/L
RT: 7.574 min Scan# 779
Delta R.T. -0.007 min
Lab File: V22200306A01.D
Acq: 06 Mar 2020 09:46 am

Tgt Ion: 92 Resp: 140891

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 92 | 100 | | |
| 91 | 167.2 | 137.0 | 205.6 |

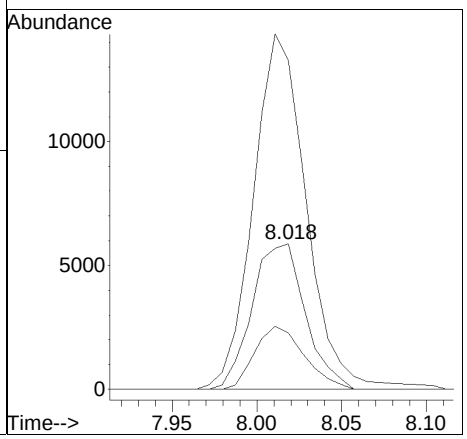


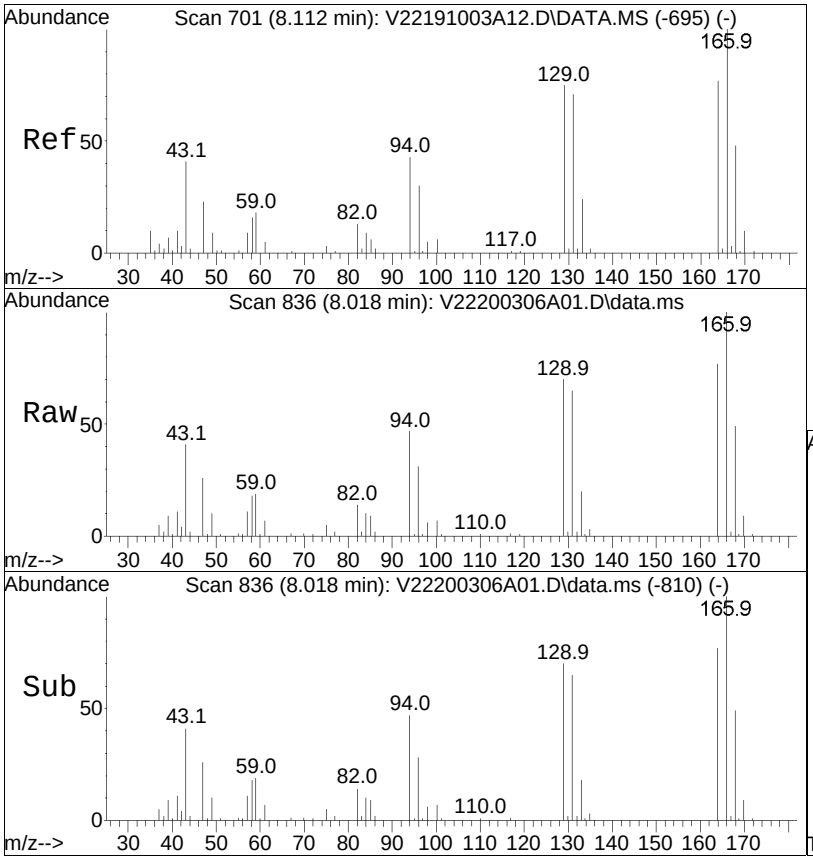



#65
4-Methyl-2-pentanone
Concen: 9.73 ug/L
RT: 8.018 min Scan# 836
Delta R.T. 0.000 min
Lab File: V22200306A01.D
Acq: 06 Mar 2020 09:46 am

Tgt Ion: 58 Resp: 12859

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 58 | 100 | | |
| 100 | 40.4 | 36.2 | 54.4 |
| 43 | 243.4 | 181.8 | 272.8 |

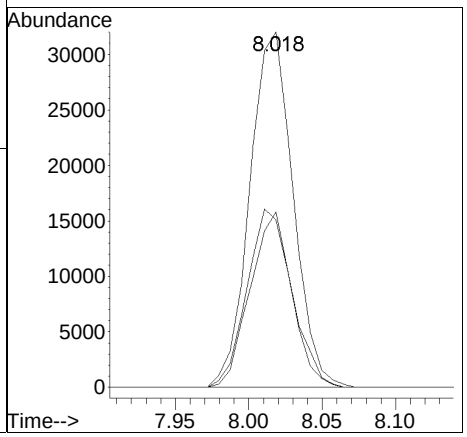


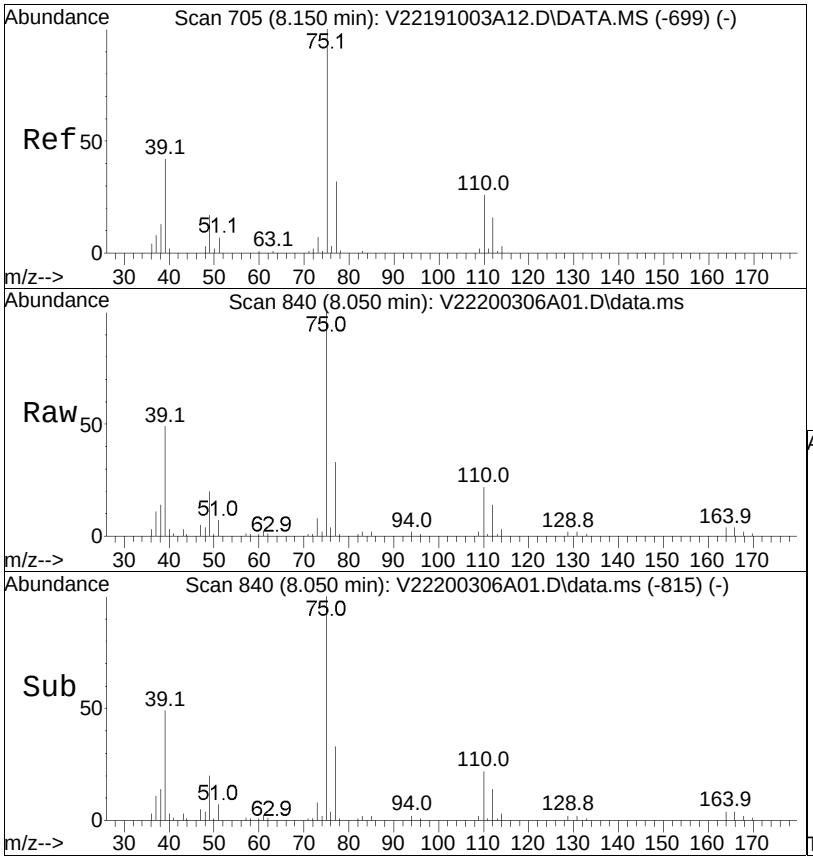



#66
Tetrachloroethene
Concen: 9.84 ug/L
RT: 8.018 min Scan# 836
Delta R.T. 0.000 min
Lab File: V22200306A01.D
Acq: 06 Mar 2020 09:46 am

Tgt Ion:166 Resp: 65720

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 166 | 100 | | |
| 168 | 48.7 | 27.8 | 67.8 |
| 94 | 50.6 | 16.7 | 56.7 |

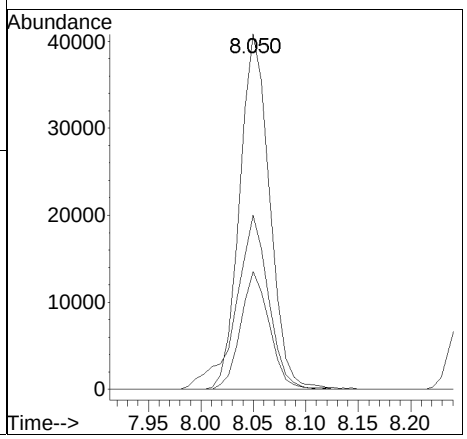


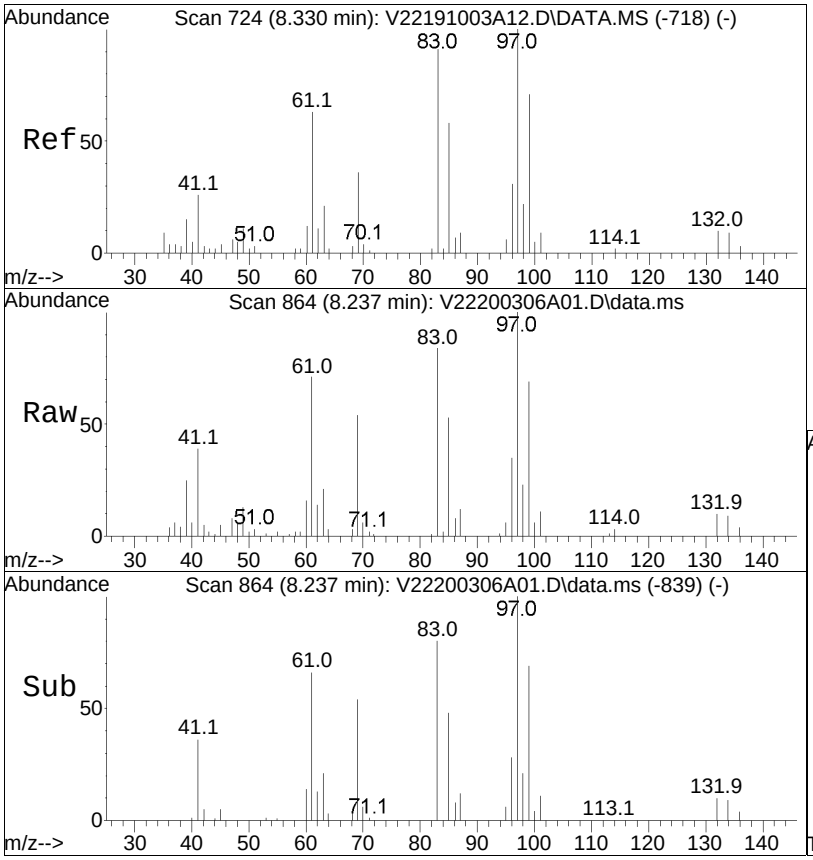



#68
trans-1,3-Dichloropropene
Concen: 11.17 ug/L
RT: 8.050 min Scan# 840
Delta R.T. -0.007 min
Lab File: V22200306A01.D
Acq: 06 Mar 2020 09:46 am

Tgt Ion: 75 Resp: 81223

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 75 | 100 | | |
| 77 | 31.8 | 11.9 | 51.9 |
| 39 | 53.7 | 27.4 | 67.4 |

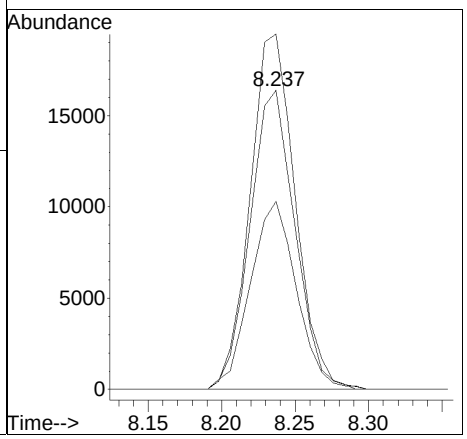


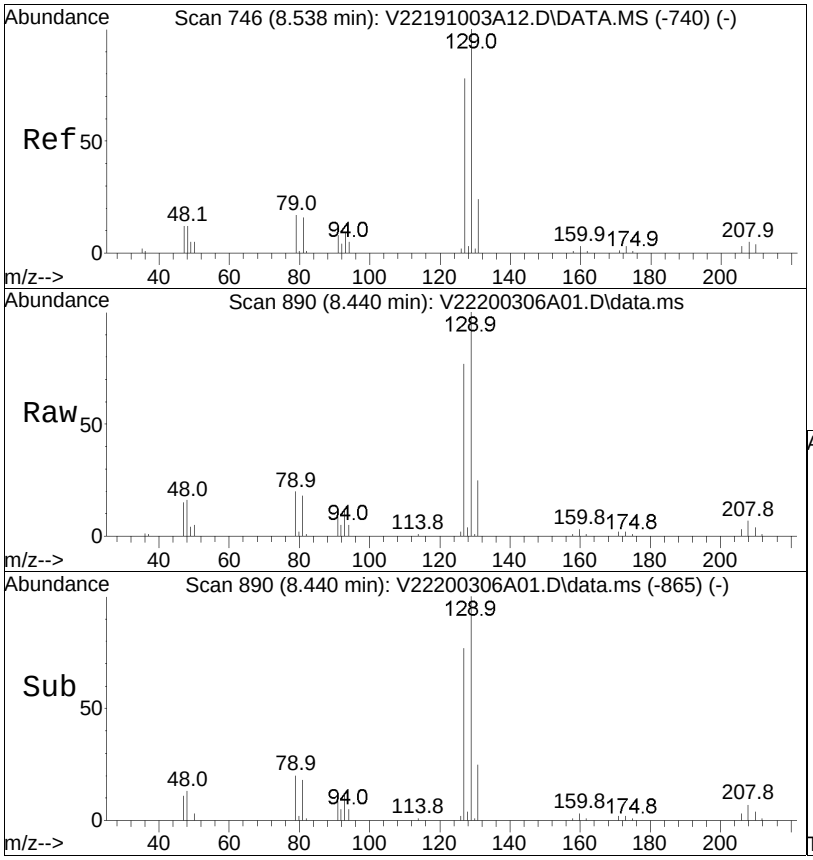



#71
1,1,2-Trichloroethane
Concen: 9.88 ug/L
RT: 8.237 min Scan# 864
Delta R.T. -0.008 min
Lab File: V22200306A01.D
Acq: 06 Mar 2020 09:46 am

Tgt Ion: 83 Resp: 34885

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 83 | 100 | | |
| 97 | 119.5 | 103.4 | 143.4 |
| 85 | 64.6 | 47.9 | 87.9 |

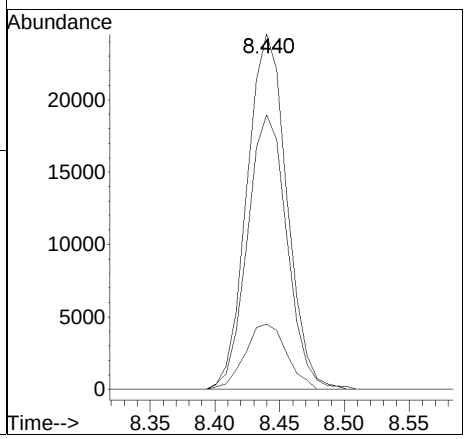


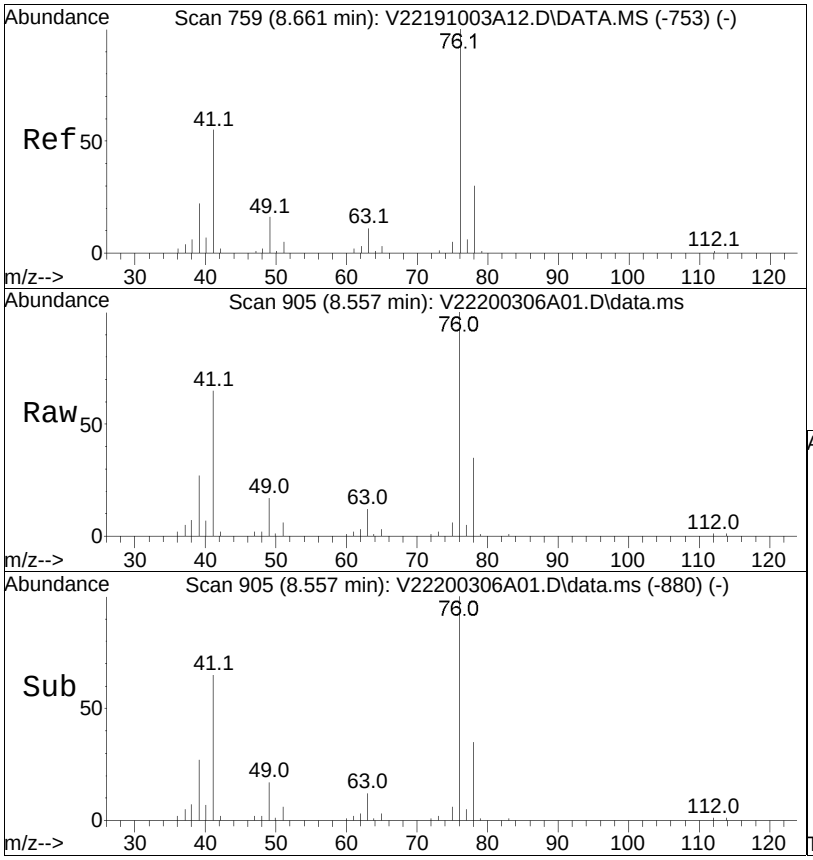



#72
Chlorodibromomethane
Concen: 10.08 ug/L
RT: 8.440 min Scan# 890
Delta R.T. -0.008 min
Lab File: V22200306A01.D
Acq: 06 Mar 2020 09:46 am

Tgt Ion:129 Resp: 52646

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 129 | 100 | | |
| 81 | 19.2 | 0.0 | 33.8 |
| 127 | 76.7 | 57.1 | 97.1 |

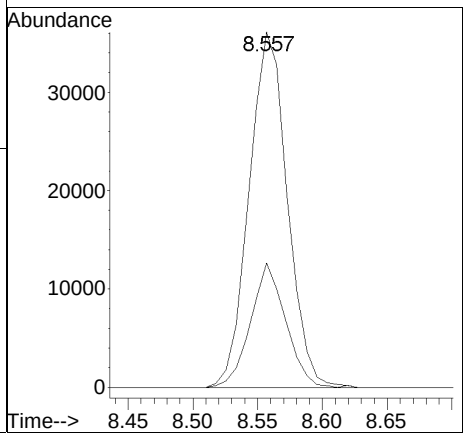


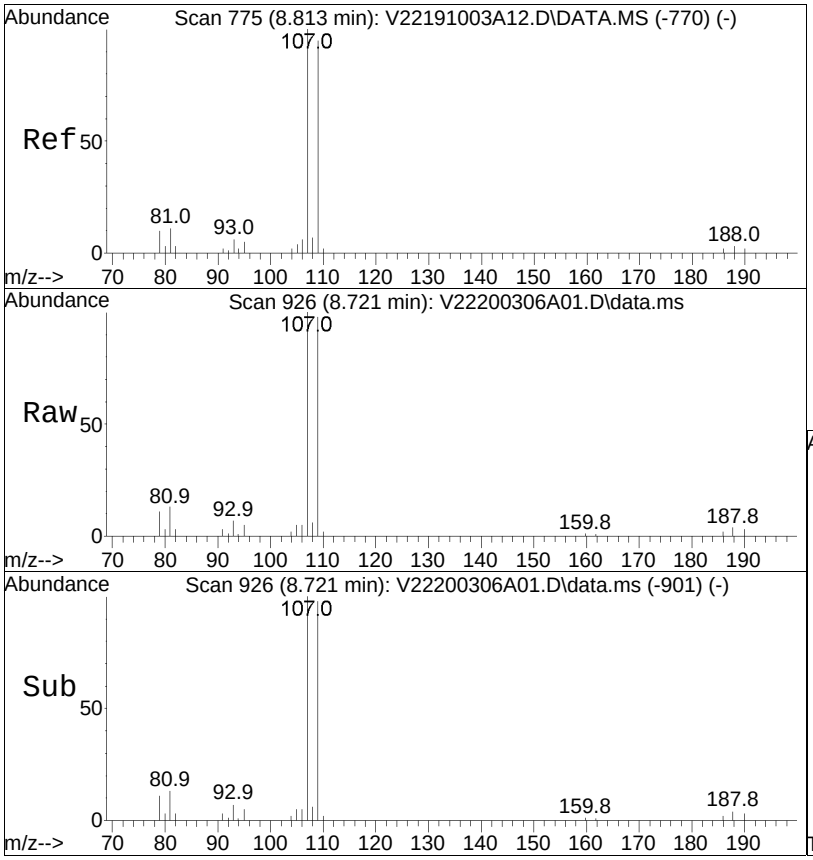



#73
1,3-Dichloropropane
Concen: 10.34 ug/L
RT: 8.557 min Scan# 905
Delta R.T. -0.008 min
Lab File: V22200306A01.D
Acq: 06 Mar 2020 09:46 am

Tgt Ion: 76 Resp: 74029

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 76 | 100 | | |
| 78 | 32.1 | 25.7 | 38.5 |

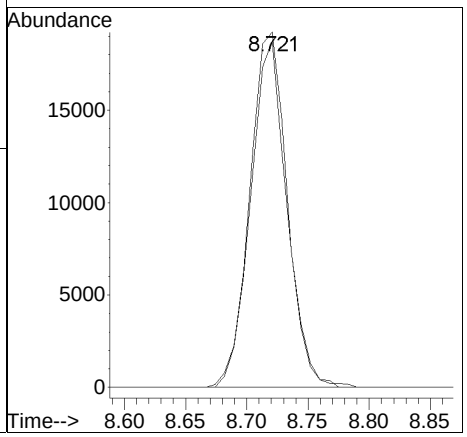


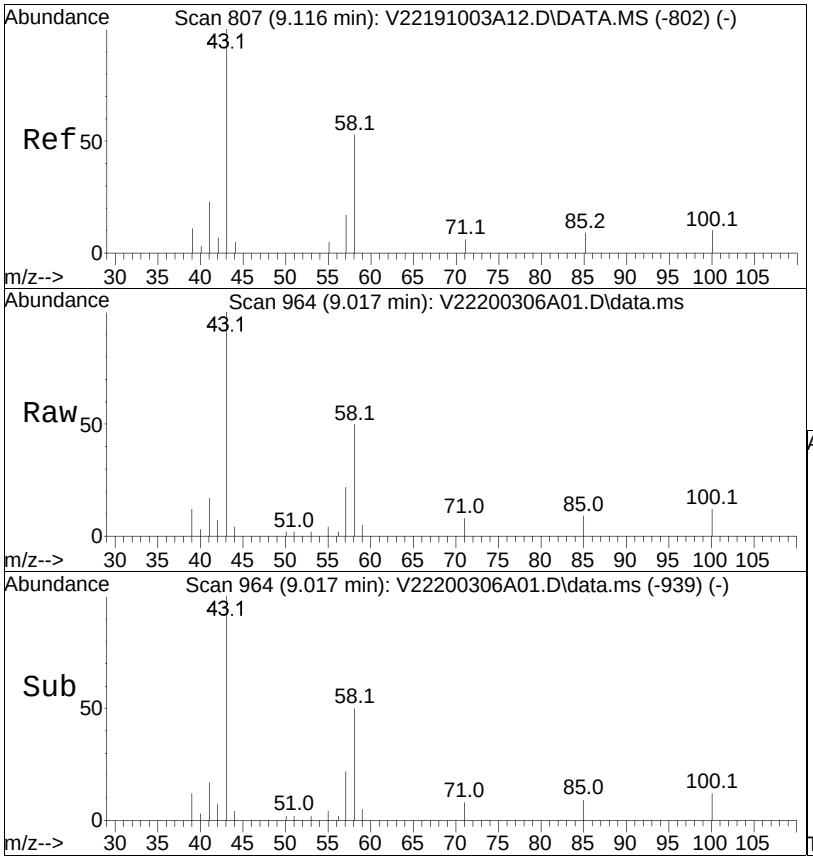



#74
1,2-Dibromoethane
Concen: 9.60 ug/L
RT: 8.721 min Scan# 926
Delta R.T. -0.007 min
Lab File: V22200306A01.D
Acq: 06 Mar 2020 09:46 am

Tgt Ion:107 Resp: 41189

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 107 | 100 | | |
| 109 | 93.4 | 75.1 | 112.7 |

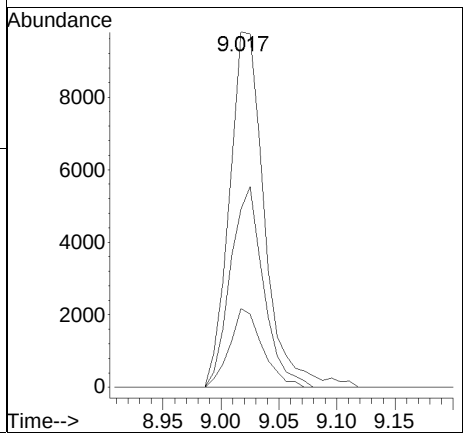


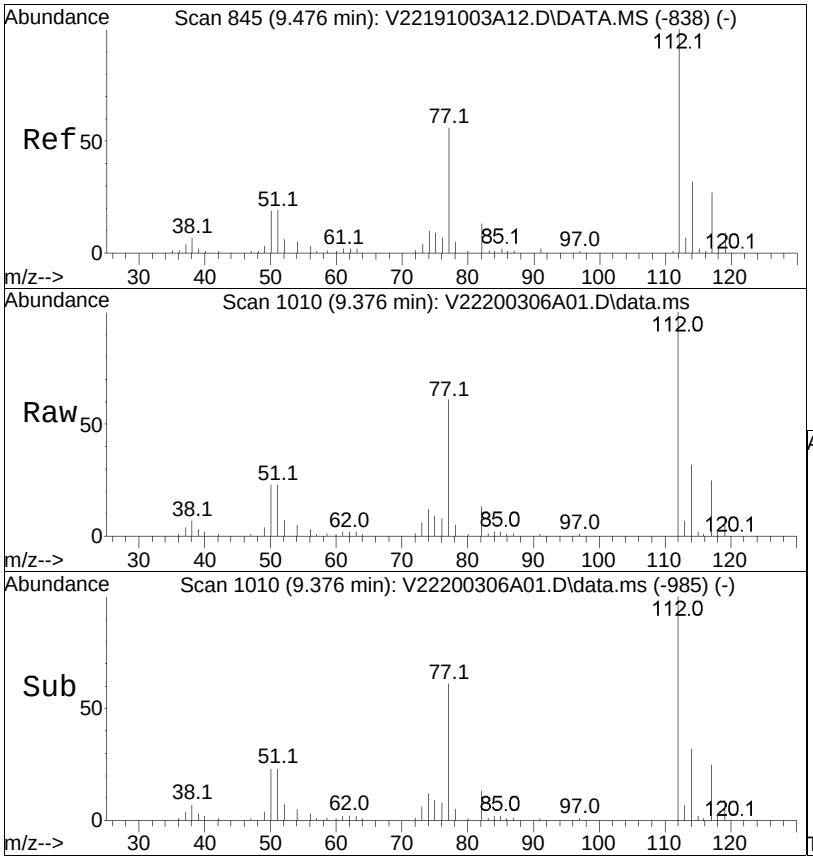



#76
2-Hexanone
Concen: 9.05 ug/L
RT: 9.017 min Scan# 964
Delta R.T. -0.008 min
Lab File: V22200306A01.D
Acq: 06 Mar 2020 09:46 am

Tgt Ion: 43 Resp: 20660

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 43 | 100 | | |
| 58 | 53.3 | 47.6 | 71.4 |
| 57 | 20.8 | 16.6 | 24.8 |

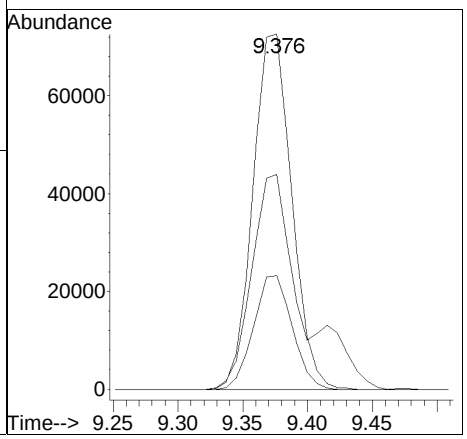


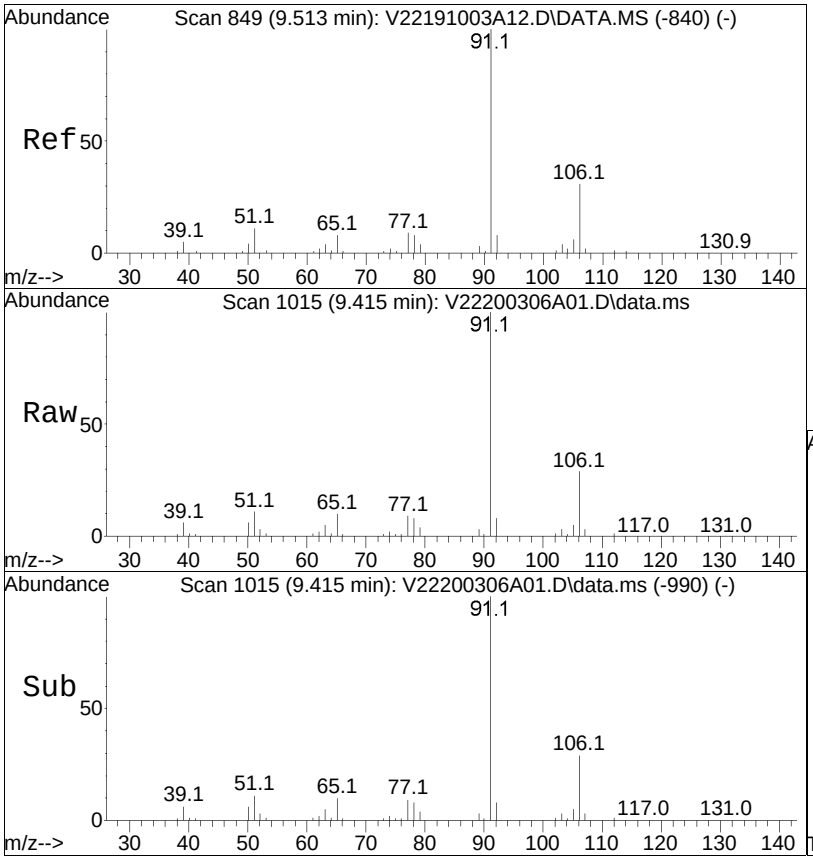



#77
Chlorobenzene
Concen: 9.99 ug/L
RT: 9.376 min Scan# 1010
Delta R.T. -0.008 min
Lab File: V22200306A01.D
Acq: 06 Mar 2020 09:46 am

Tgt Ion:112 Resp: 151410

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 112 | 100 | | |
| 77 | 65.7 | 55.4 | 83.0 |
| 114 | 31.8 | 26.2 | 39.4 |

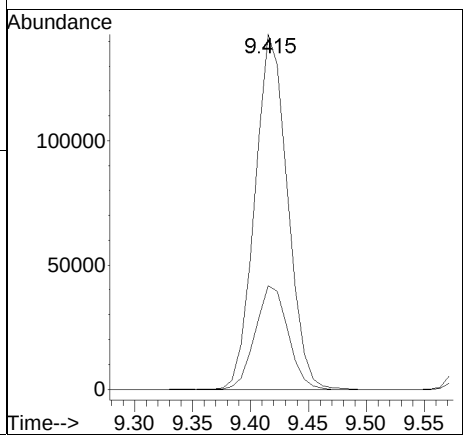


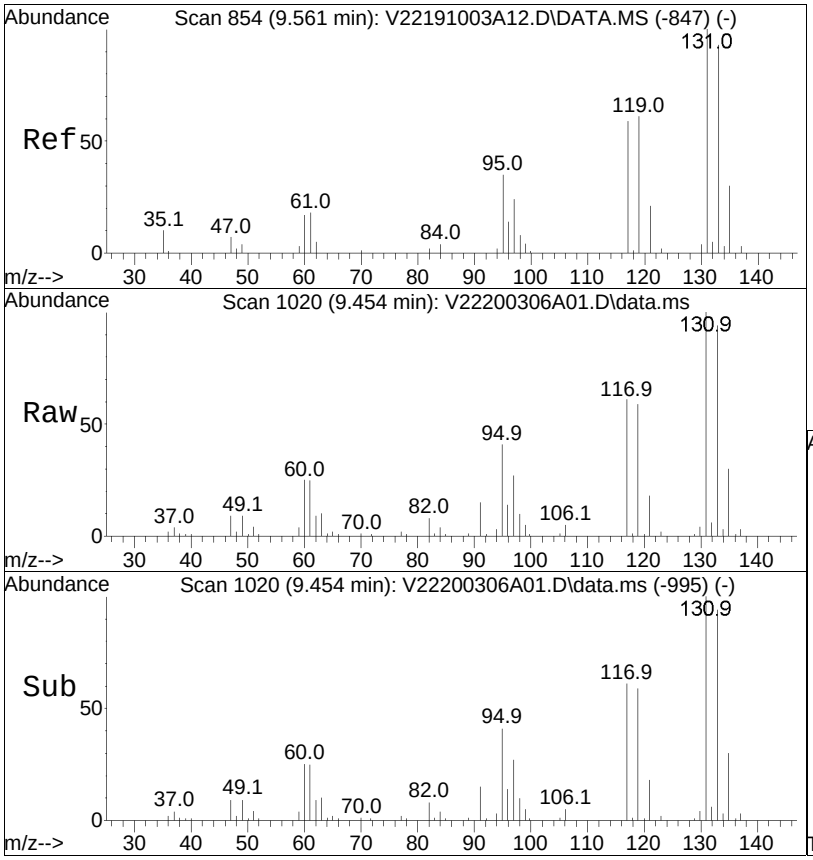



#78
Ethylbenzene
Concen: 10.64 ug/L
RT: 9.415 min Scan# 1015
Delta R.T. -0.008 min
Lab File: V22200306A01.D
Acq: 06 Mar 2020 09:46 am

Tgt Ion: 91 Resp: 279398

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 91 | 100 | | |
| 106 | 29.3 | 25.8 | 38.6 |

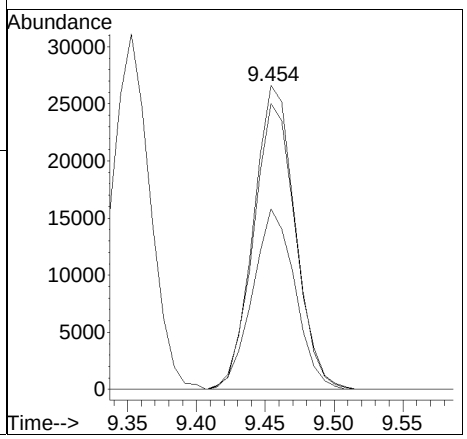


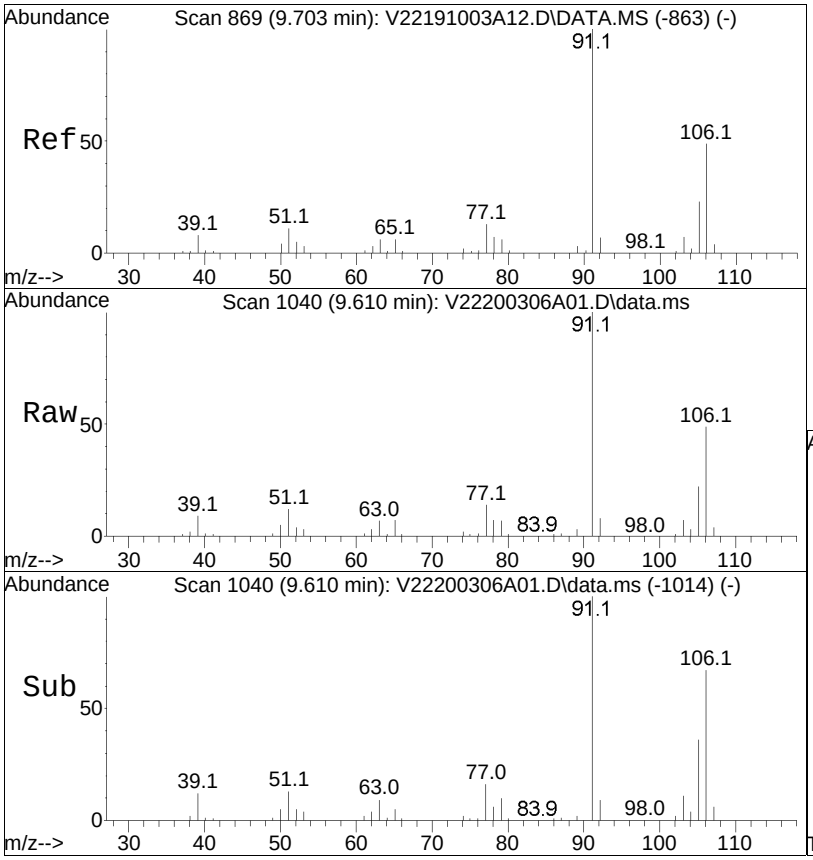



#79
1,1,1,2-Tetrachloroethane
Concen: 10.09 ug/L
RT: 9.454 min Scan# 1020
Delta R.T. -0.008 min
Lab File: V22200306A01.D
Acq: 06 Mar 2020 09:46 am

Tgt Ion:131 Resp: 56154

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 131 | 100 | | |
| 133 | 95.2 | 75.3 | 115.3 |
| 119 | 60.3 | 49.3 | 89.3 |

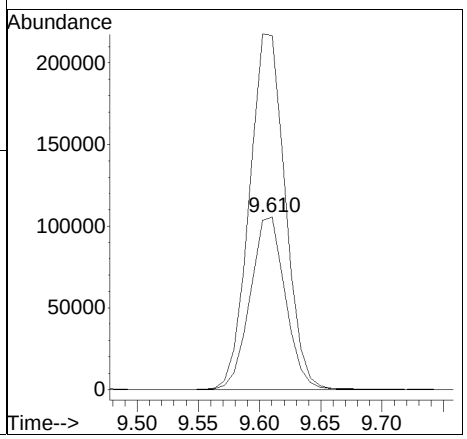


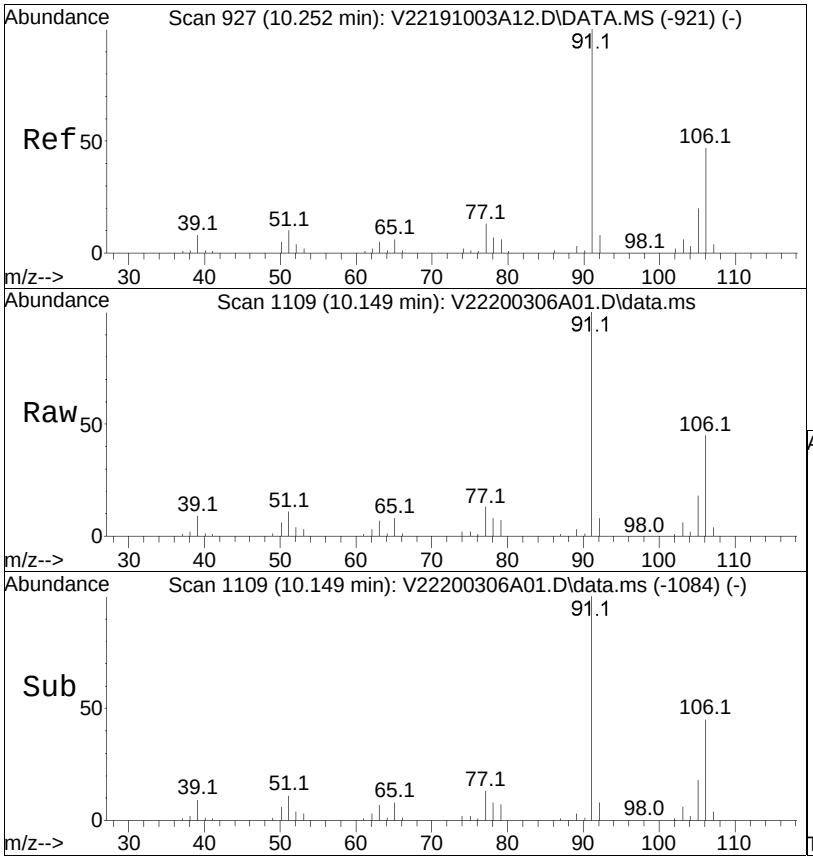



#80
p/m Xylene
Concen: 19.92 ug/L
RT: 9.610 min Scan# 1040
Delta R.T. 0.000 min
Lab File: V22200306A01.D
Acq: 06 Mar 2020 09:46 am

Tgt Ion:106 Resp: 210523

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 106 | 100 | | |
| 91 | 210.3 | 156.0 | 234.0 |

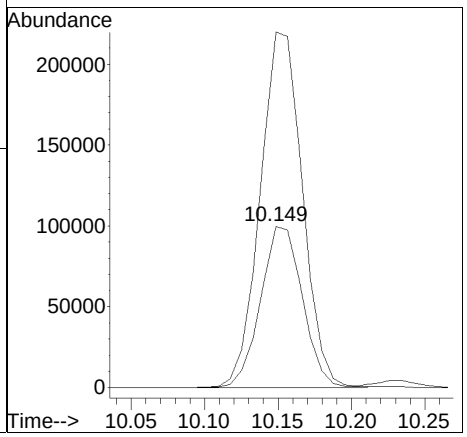


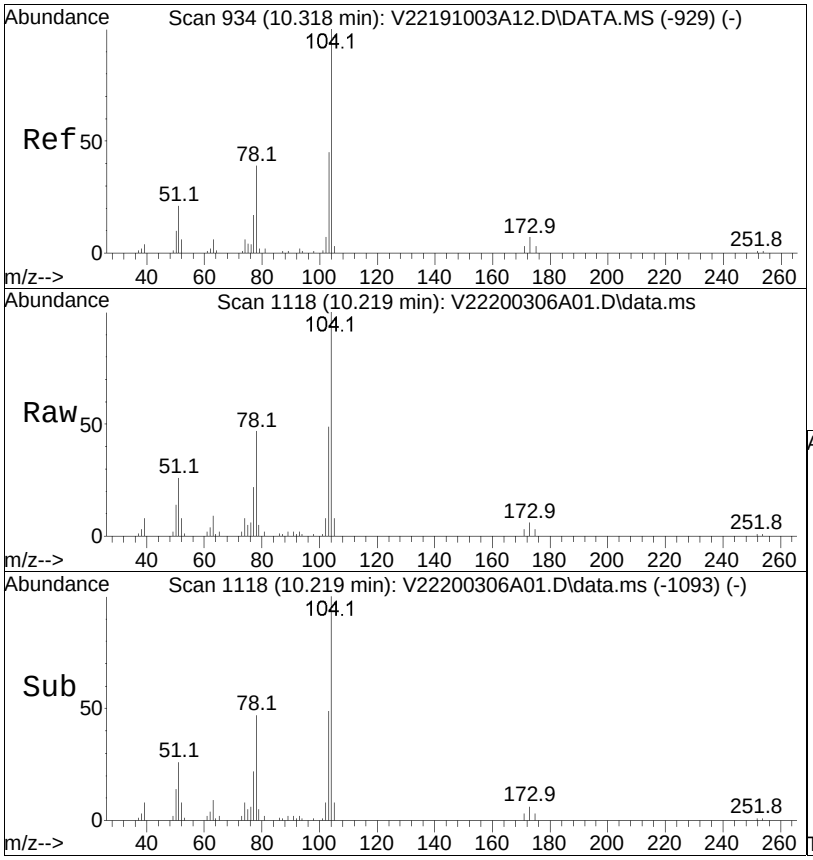



#81
o Xylene
Concen: 19.78 ug/L
RT: 10.149 min Scan# 1109
Delta R.T. -0.007 min
Lab File: V22200306A01.D
Acq: 06 Mar 2020 09:46 am

Tgt Ion:106 Resp: 196807

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 106 | 100 | | |
| 91 | 223.0 | 164.0 | 246.0 |

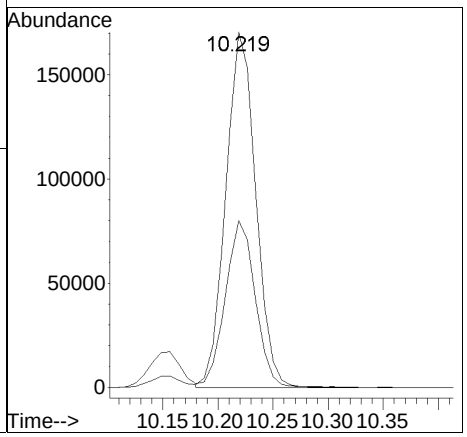


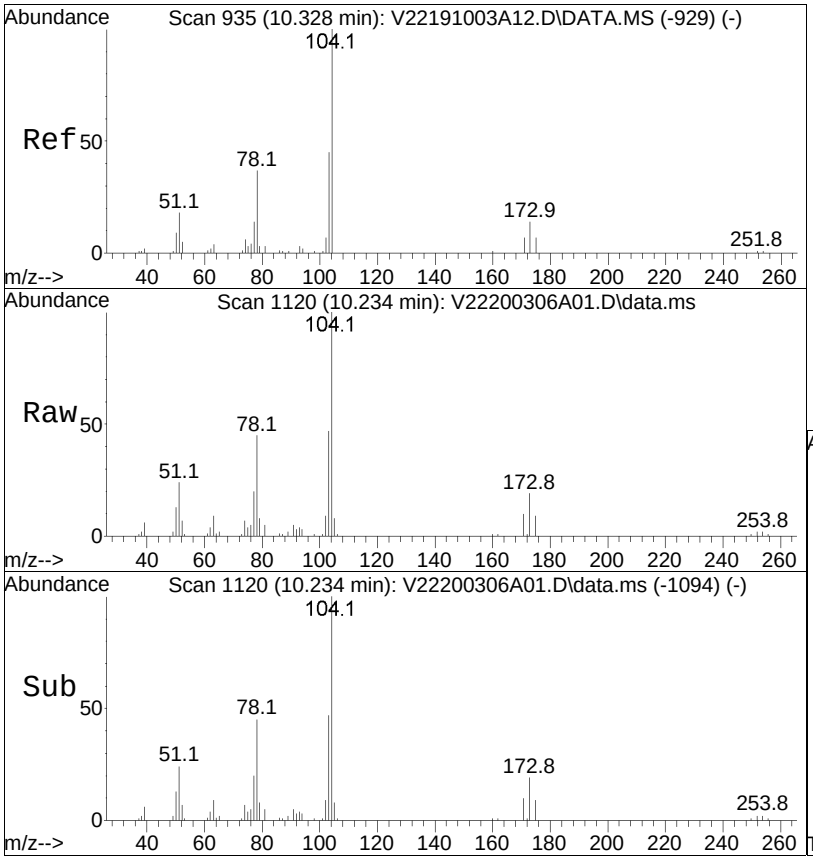



#82
Styrene
Concen: 19.75 ug/L
RT: 10.219 min Scan# 1118
Delta R.T. -0.008 min
Lab File: V22200306A01.D
Acq: 06 Mar 2020 09:46 am

Tgt Ion:104 Resp: 322641

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 104 | 100 | | |
| 78 | 46.9 | 32.1 | 48.1 |

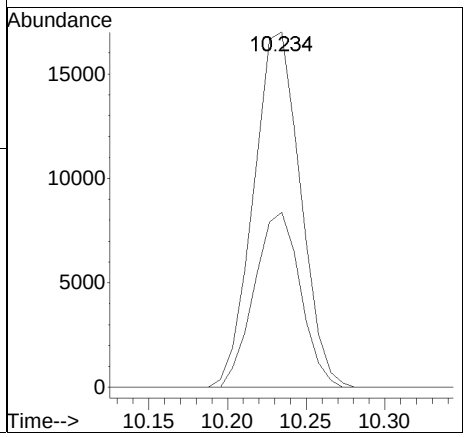


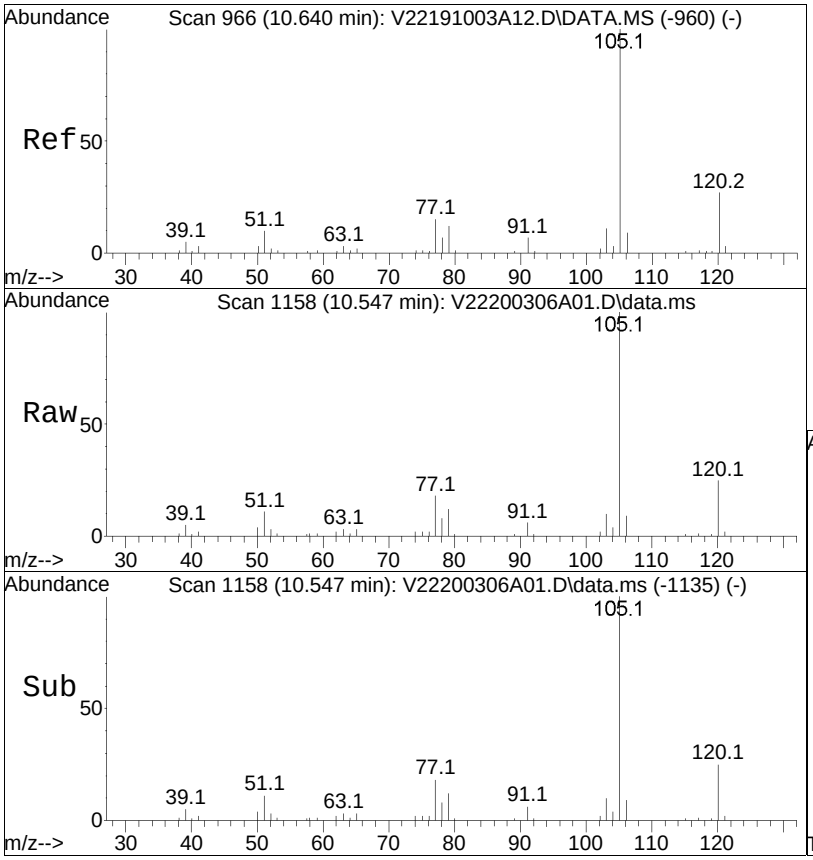



#84
Bromoform
Concen: 9.66 ug/L
RT: 10.234 min Scan# 1120
Delta R.T. 0.000 min
Lab File: V22200306A01.D
Acq: 06 Mar 2020 09:46 am

Tgt Ion:173 Resp: 35320

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 173 | 100 | | |
| 175 | 48.4 | 29.3 | 69.3 |

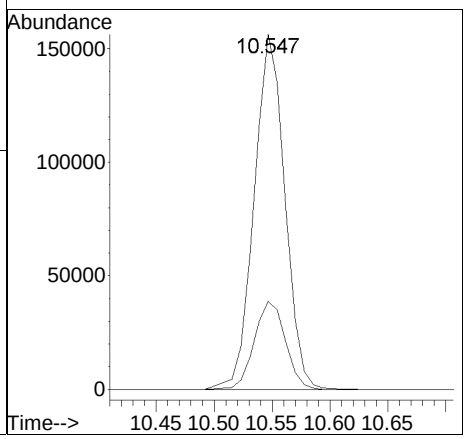


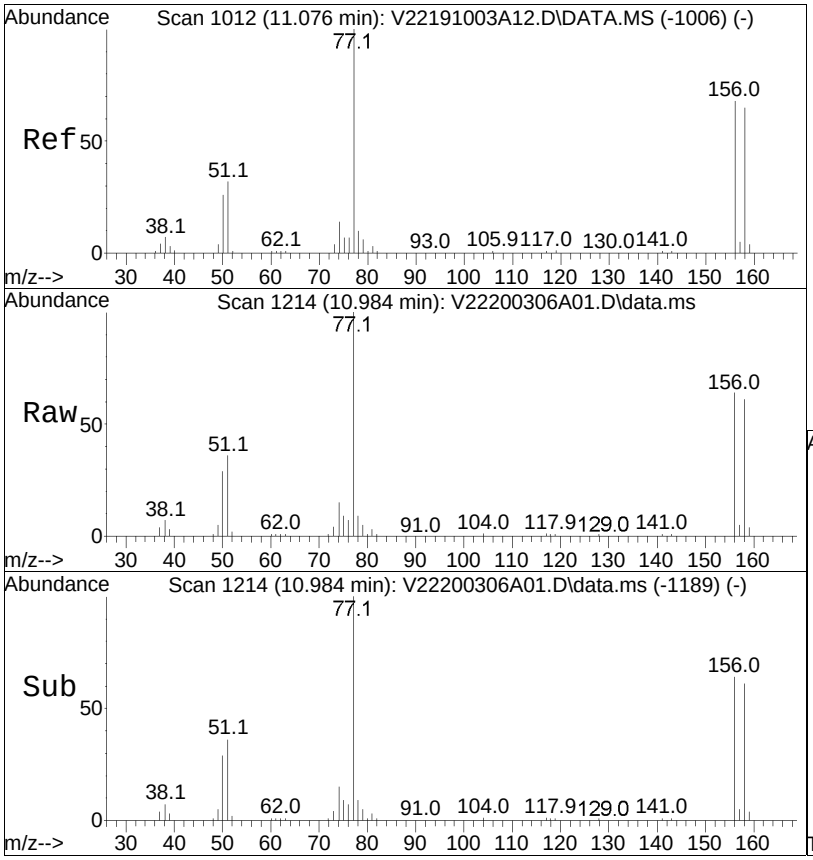



#86
Isopropylbenzene
Concen: 9.79 ug/L
RT: 10.547 min Scan# 1158
Delta R.T. -0.007 min
Lab File: V22200306A01.D
Acq: 06 Mar 2020 09:46 am

Tgt Ion:105 Resp: 319174

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 105 | 100 | | |
| 120 | 26.0 | 7.7 | 47.7 |

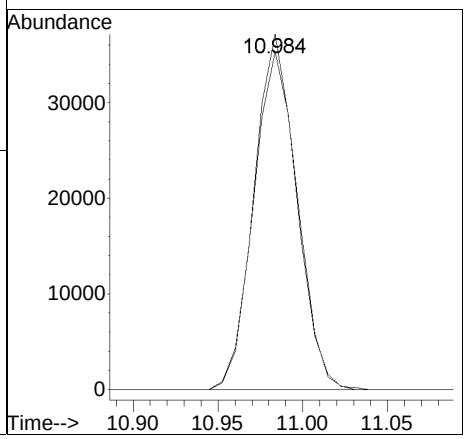


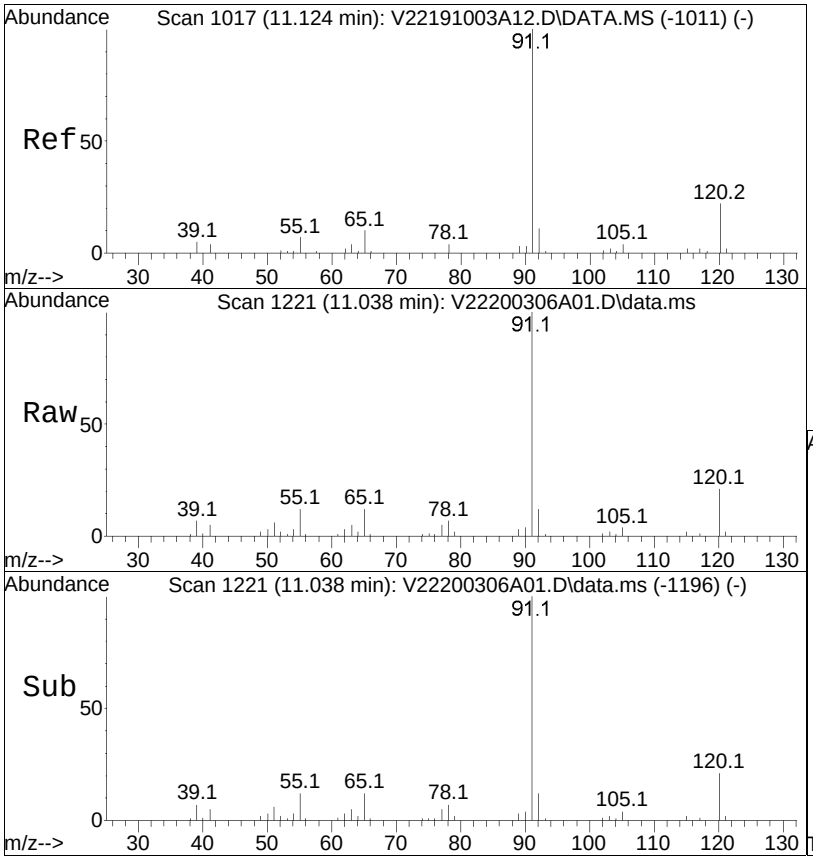



#88
Bromobenzene
Concen: 9.62 ug/L
RT: 10.984 min Scan# 1214
Delta R.T. -0.007 min
Lab File: V22200306A01.D
Acq: 06 Mar 2020 09:46 am

Tgt Ion:156 Resp: 65201

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 156 | 100 | | |
| 158 | 97.0 | 77.9 | 116.9 |

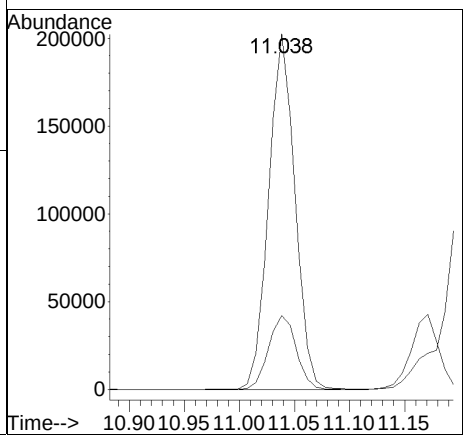


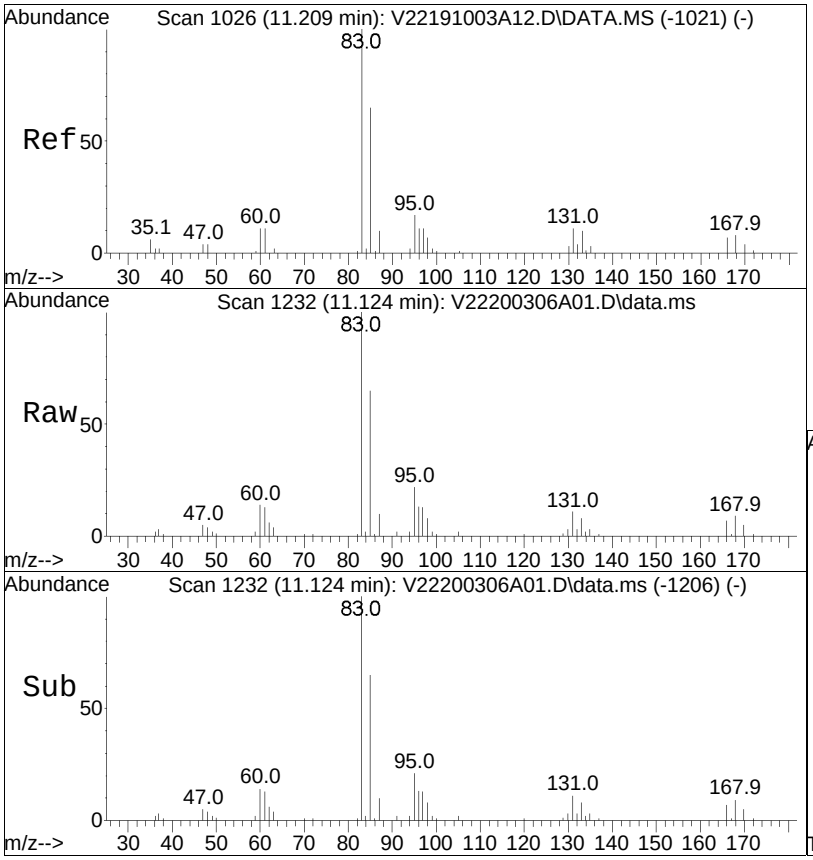



#89
n-Propylbenzene
Concen: 9.86 ug/L
RT: 11.038 min Scan# 1221
Delta R.T. -0.008 min
Lab File: V22200306A01.D
Acq: 06 Mar 2020 09:46 am

Tgt Ion: 91 Resp: 335652

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 91 | 100 | | |
| 120 | 21.8 | 19.5 | 29.3 |

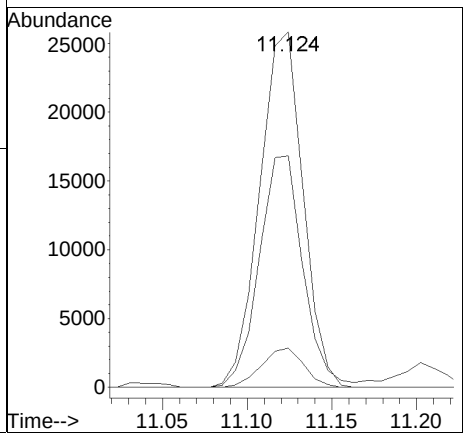


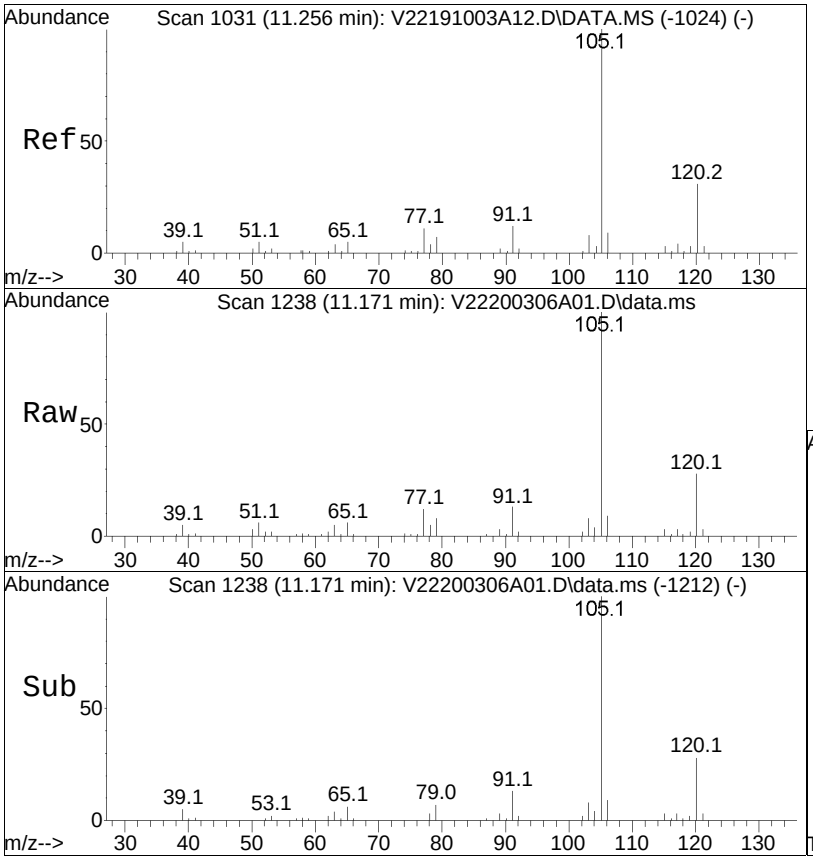



#91
1,1,2,2-Tetrachloroethane
Concen: 9.14 ug/L
RT: 11.124 min Scan# 1232
Delta R.T. 0.000 min
Lab File: V22200306A01.D
Acq: 06 Mar 2020 09:46 am

Tgt Ion: 83 Resp: 46073

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 83 | 100 | | |
| 131 | 10.9 | 0.0 | 30.8 |
| 85 | 65.7 | 45.4 | 85.4 |

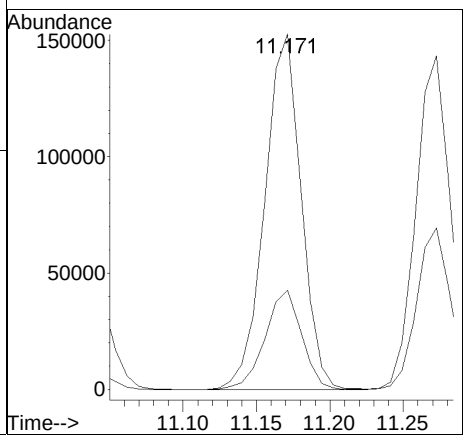


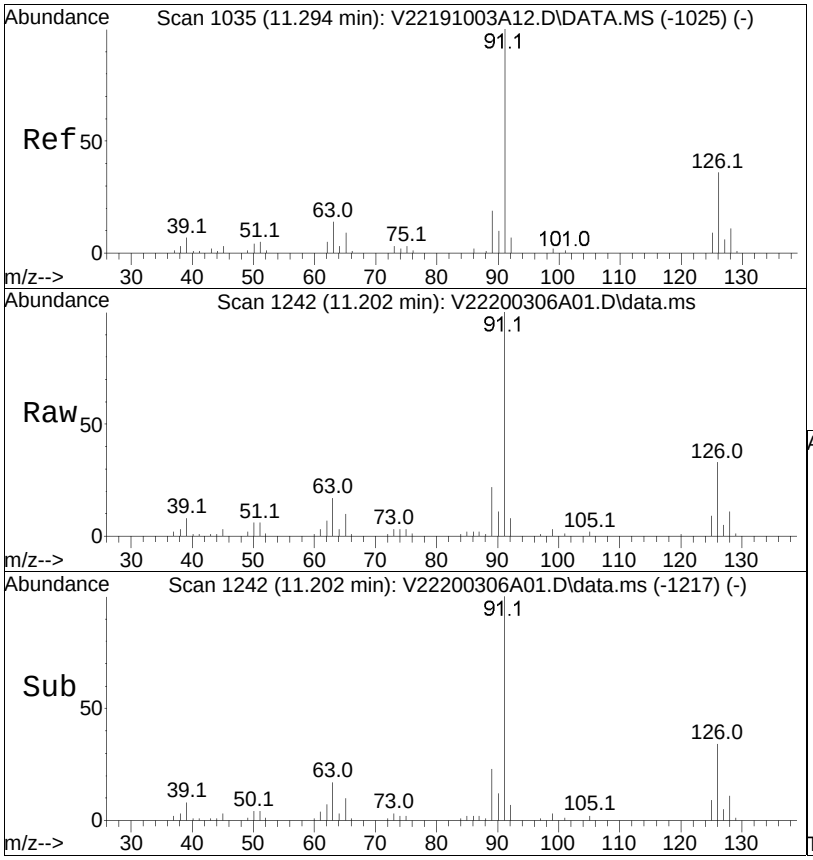



#92
4-Ethyltoluene
Concen: 9.94 ug/L
RT: 11.171 min Scan# 1238
Delta R.T. 0.000 min
Lab File: V22200306A01.D
Acq: 06 Mar 2020 09:46 am

Tgt Ion:105 Resp: 263407

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 105 | 100 | | |
| 120 | 28.0 | 19.8 | 41.0 |

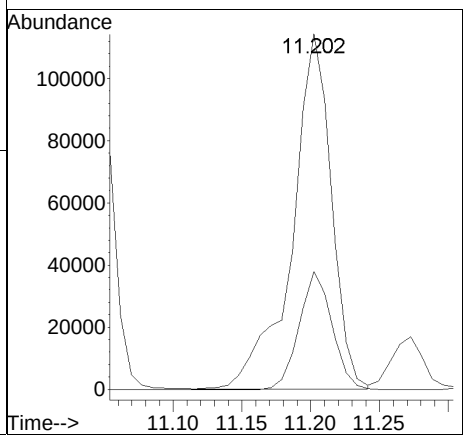


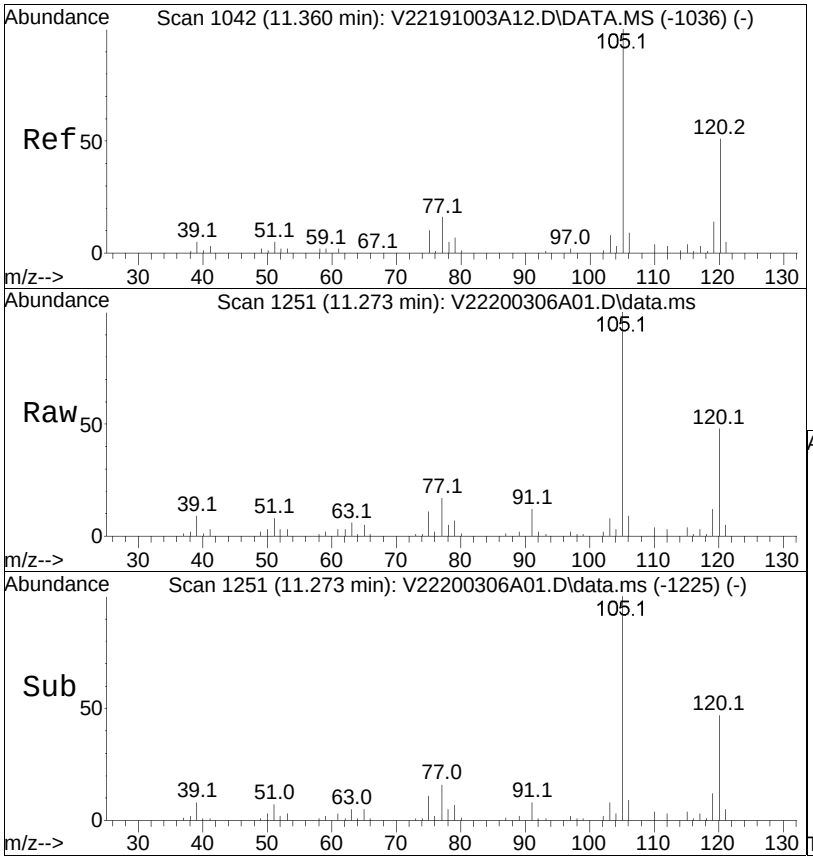



#93
2-Chlorotoluene
Concen: 10.41 ug/L
RT: 11.202 min Scan# 1242
Delta R.T. -0.008 min
Lab File: V22200306A01.D
Acq: 06 Mar 2020 09:46 am

Tgt Ion: 91 Resp: 226386

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 91 | 100 | | |
| 126 | 27.7 | 24.6 | 37.0 |

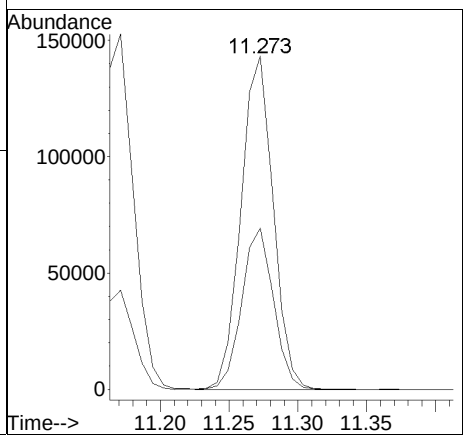


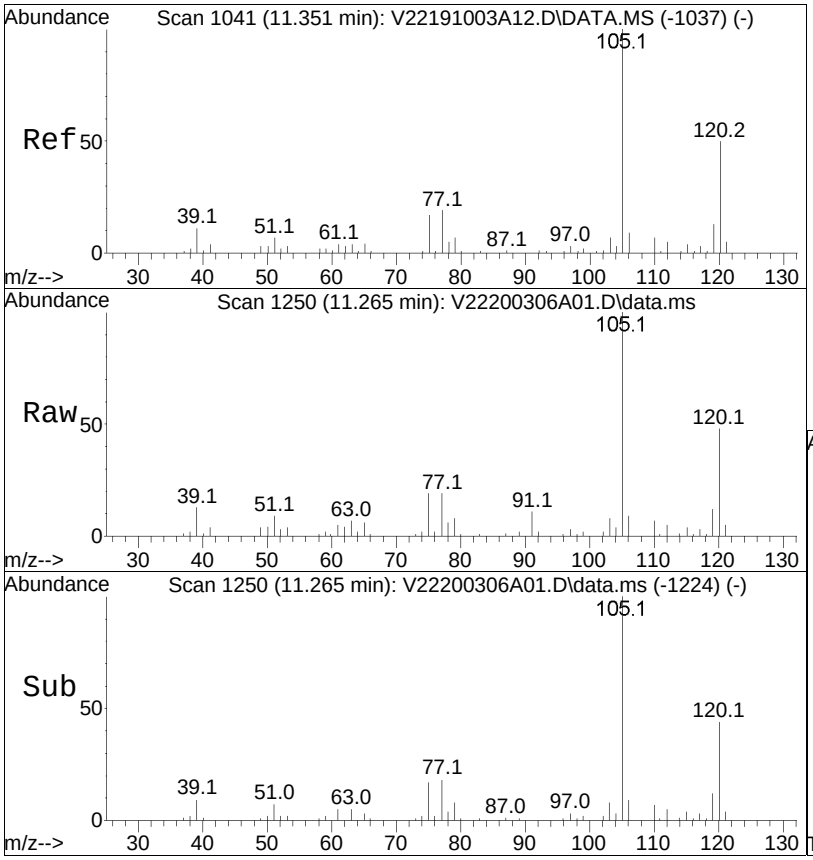



#94
1,3,5-Trimethylbenzene
Concen: 10.08 ug/L
RT: 11.273 min Scan# 1251
Delta R.T. 0.001 min
Lab File: V22200306A01.D
Acq: 06 Mar 2020 09:46 am

Tgt Ion:105 Resp: 233425

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 105 | 100 | | |
| 120 | 47.7 | 40.9 | 61.3 |

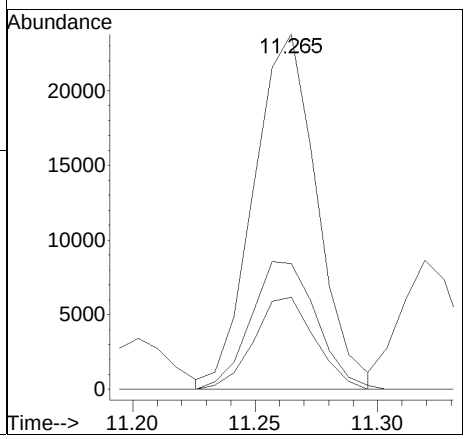


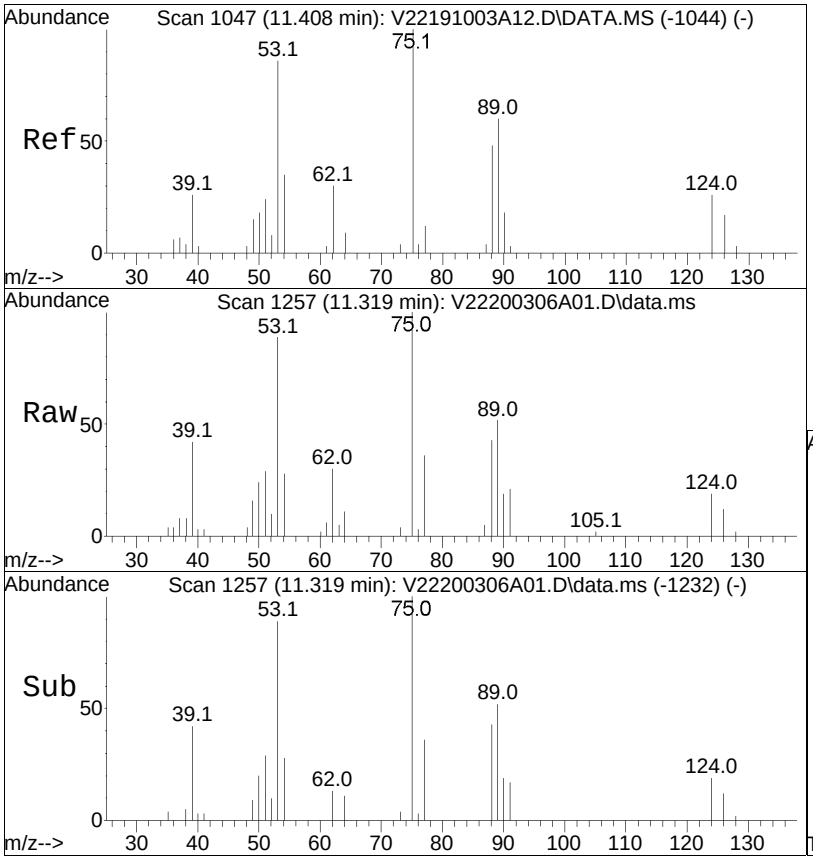



#95
1,2,3-Trichloropropane
Concen: 9.90 ug/L
RT: 11.265 min Scan# 1250
Delta R.T. -0.000 min
Lab File: V22200306A01.D
Acq: 06 Mar 2020 09:46 am

Tgt Ion: 75 Resp: 42788

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 75 | 100 | | |
| 110 | 37.4 | 26.3 | 54.7 |
| 112 | 25.1 | 16.8 | 35.0 |

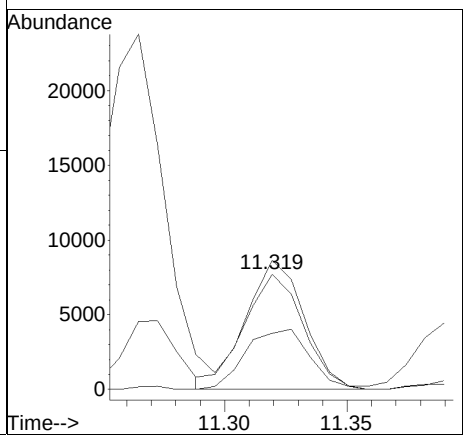


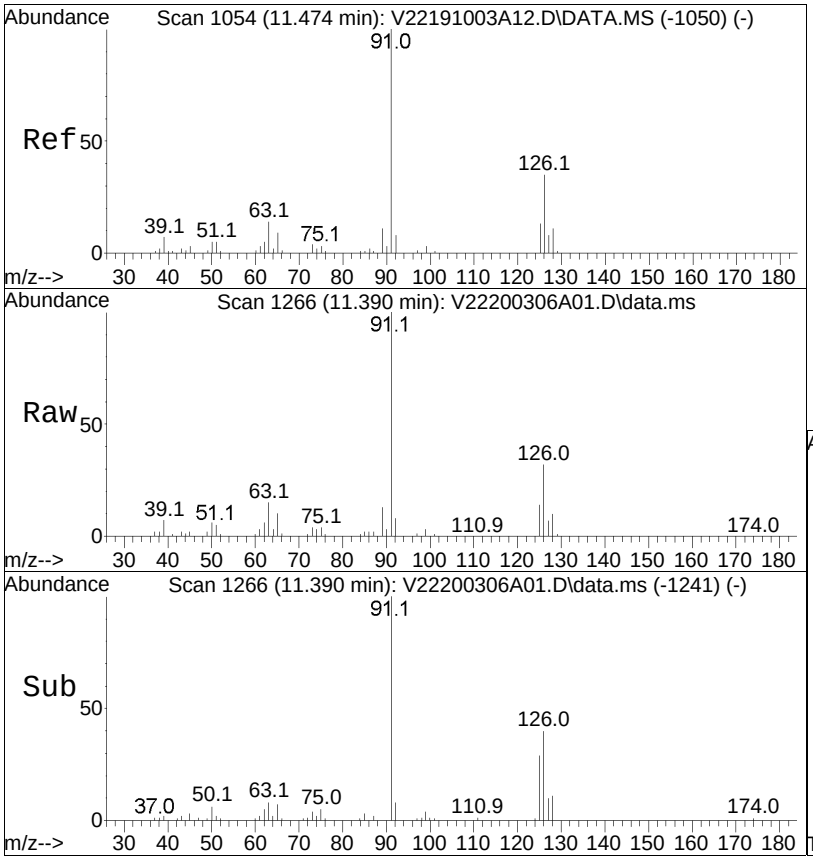



#96
trans-1,4-Dichloro-2-butene
Concen: 9.11 ug/L
RT: 11.319 min Scan# 1257
Delta R.T. -0.008 min
Lab File: V22200306A01.D
Acq: 06 Mar 2020 09:46 am

Tgt Ion: 53 Resp: 13062

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 53 | 100 | | |
| 88 | 56.0 | 46.3 | 69.5 |
| 75 | 105.9 | 109.0 | 163.4# |

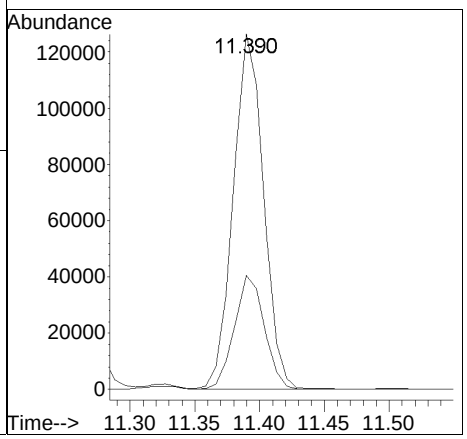


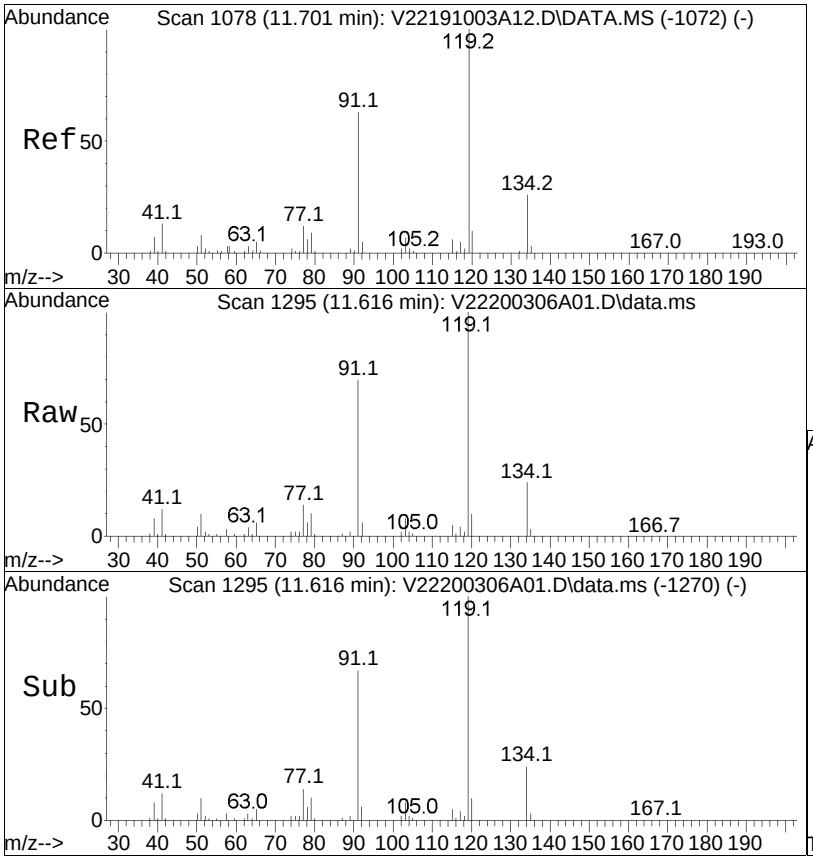



#97
4-Chlorotoluene
Concen: 10.44 ug/L
RT: 11.390 min Scan# 1266
Delta R.T. -0.007 min
Lab File: V22200306A01.D
Acq: 06 Mar 2020 09:46 am

Tgt Ion: 91 Resp: 206274

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 91 | 100 | | |
| 126 | 31.7 | 28.5 | 42.7 |

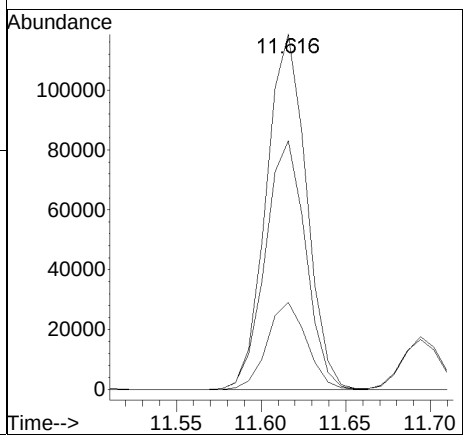


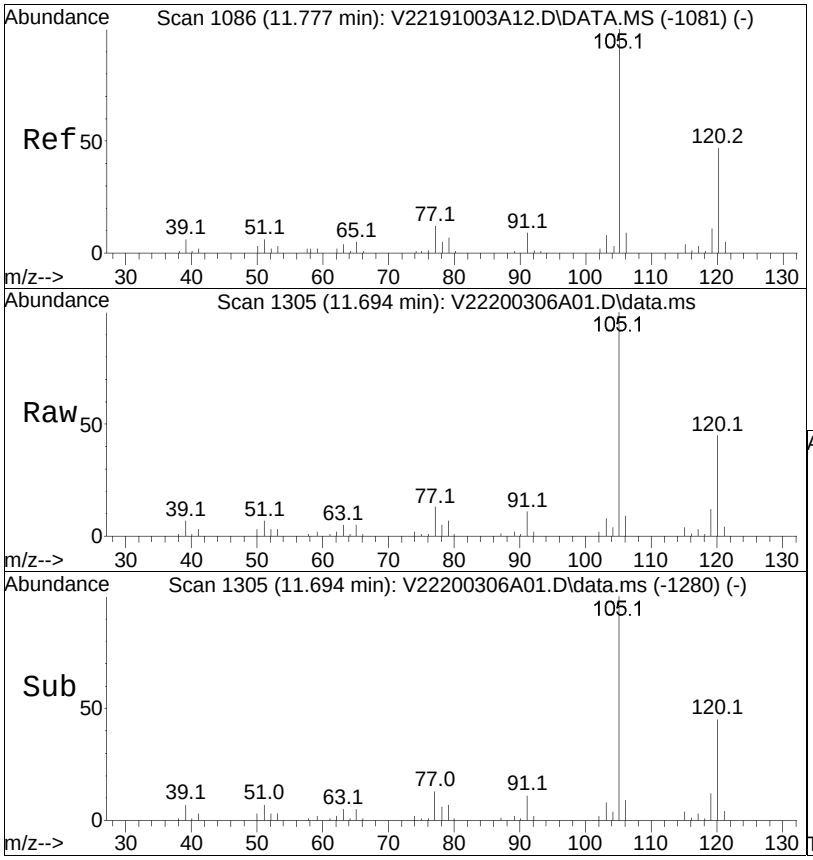



#98
tert-Butylbenzene
Concen: 9.57 ug/L
RT: 11.616 min Scan# 1295
Delta R.T. -0.008 min
Lab File: V22200306A01.D
Acq: 06 Mar 2020 09:46 am

Tgt Ion:119 Resp: 195666

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 119 | 100 | | |
| 91 | 70.7 | 50.2 | 75.4 |
| 134 | 24.0 | 20.8 | 31.2 |

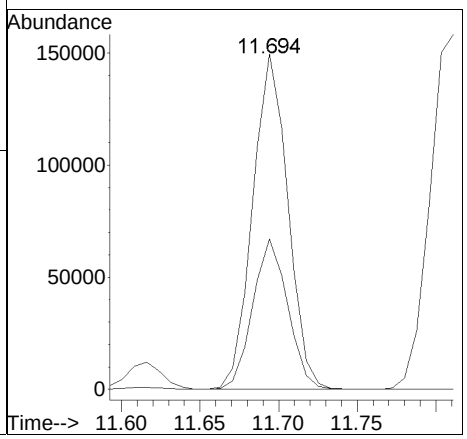


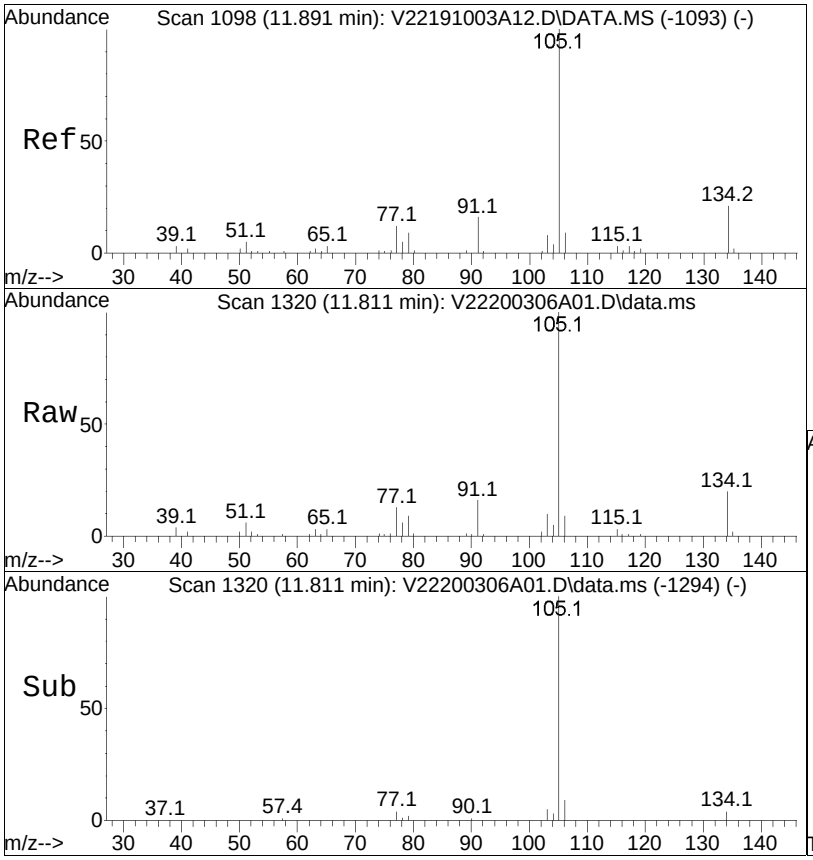



#101
1,2,4-Trimethylbenzene
Concen: 10.38 ug/L
RT: 11.694 min Scan# 1305
Delta R.T. -0.008 min
Lab File: V22200306A01.D
Acq: 06 Mar 2020 09:46 am

Tgt Ion:105 Resp: 232810

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 105 | 100 | | |
| 120 | 44.6 | 38.5 | 57.7 |

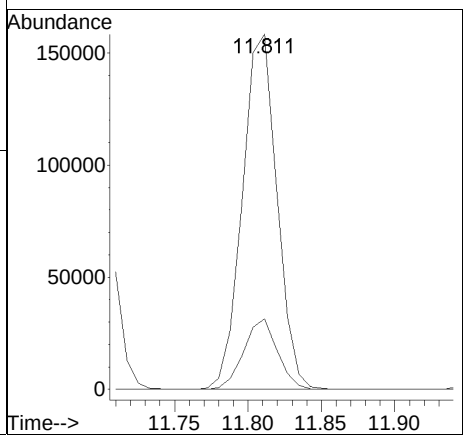


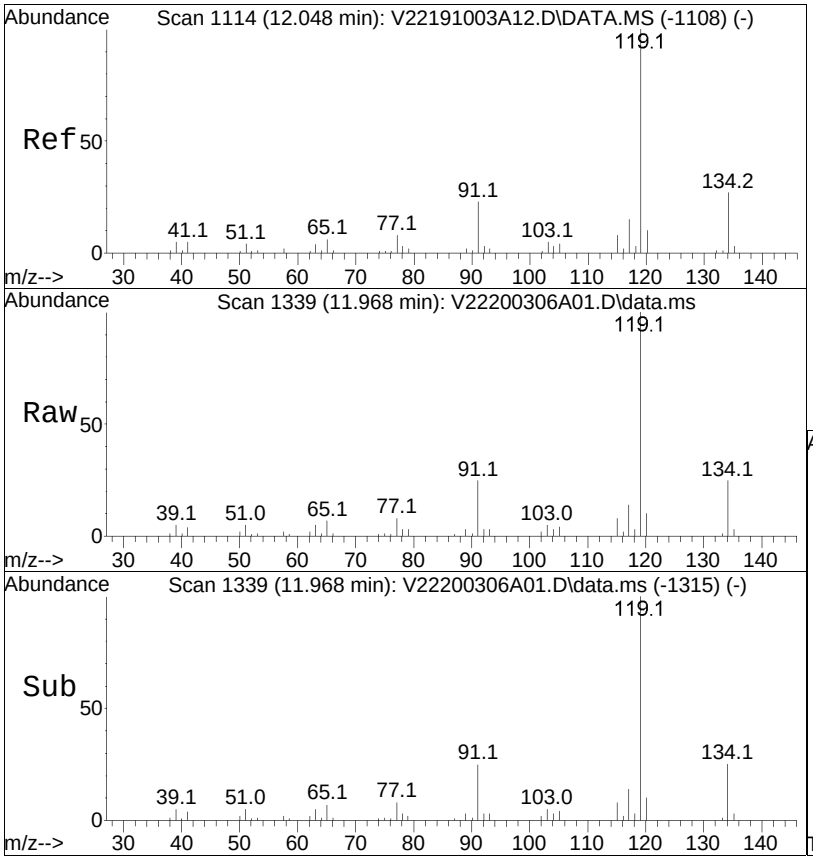



#102
sec-Butylbenzene
Concen: 8.91 ug/L
RT: 11.811 min Scan# 1320
Delta R.T. 0.000 min
Lab File: V22200306A01.D
Acq: 06 Mar 2020 09:46 am

Tgt Ion:105 Resp: 260421

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 105 | 100 | | |
| 134 | 19.3 | 13.9 | 28.9 |

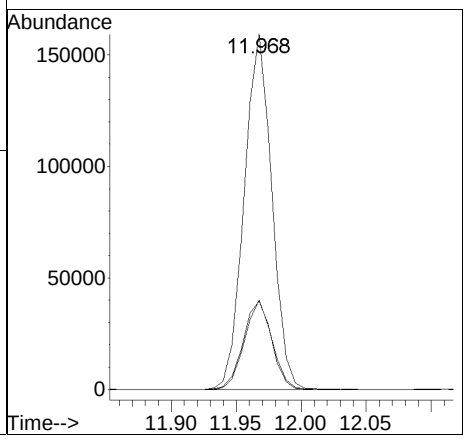


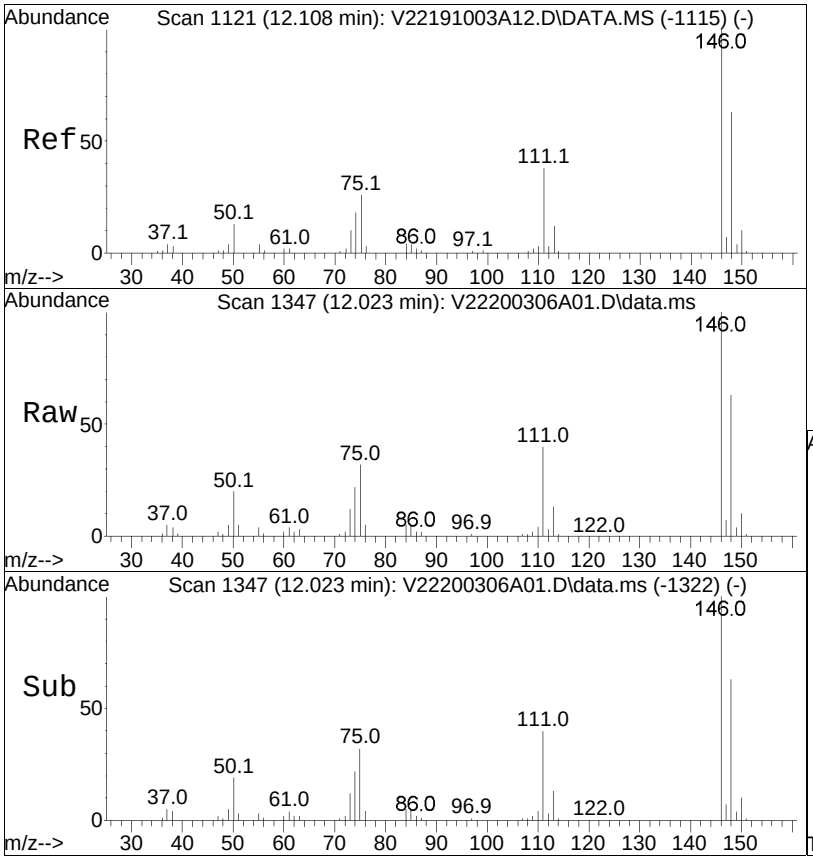



#103
p-Isopropyltoluene
Concen: 9.29 ug/L
RT: 11.968 min Scan# 1339
Delta R.T. -0.006 min
Lab File: V22200306A01.D
Acq: 06 Mar 2020 09:46 am

Tgt Ion:119 Resp: 235597

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 119 | 100 | | |
| 134 | 24.9 | 17.7 | 36.7 |
| 91 | 25.5 | 14.1 | 29.3 |

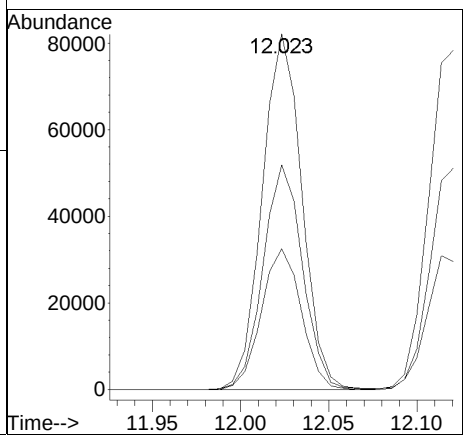


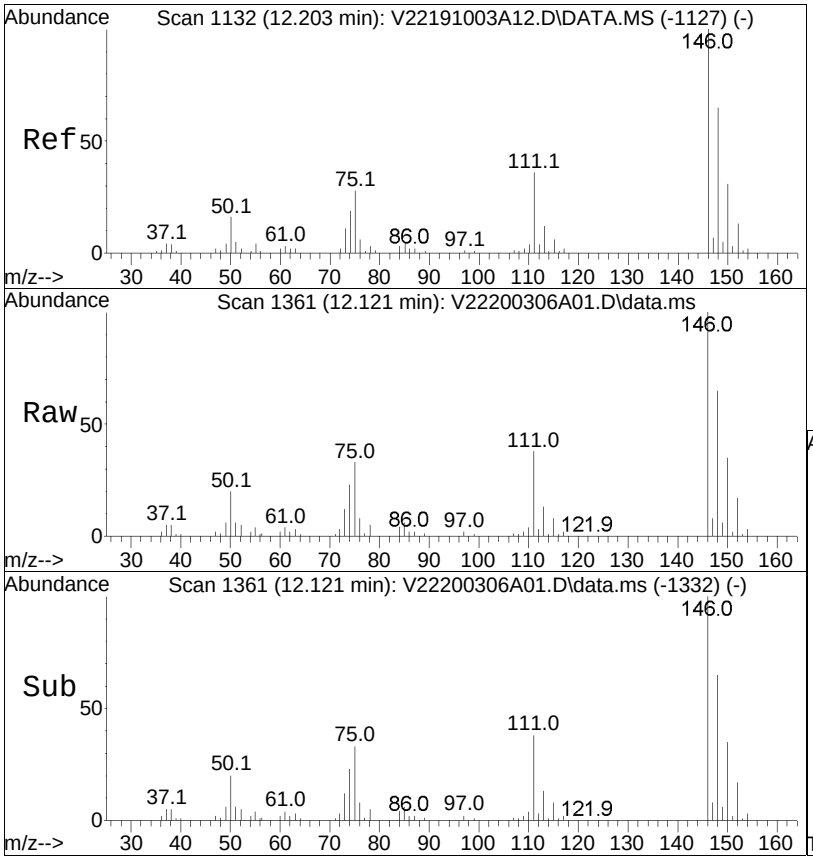



#104
1,3-Dichlorobenzene
Concen: 9.80 ug/L
RT: 12.023 min Scan# 1347
Delta R.T. -0.007 min
Lab File: V22200306A01.D
Acq: 06 Mar 2020 09:46 am

Tgt Ion:146 Resp: 128150

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 146 | 100 | | |
| 111 | 39.9 | 24.0 | 49.8 |
| 148 | 63.0 | 41.8 | 86.8 |

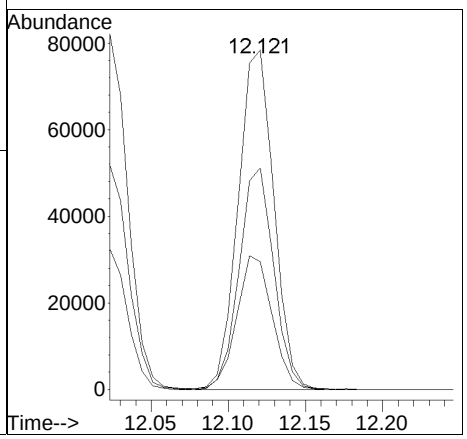


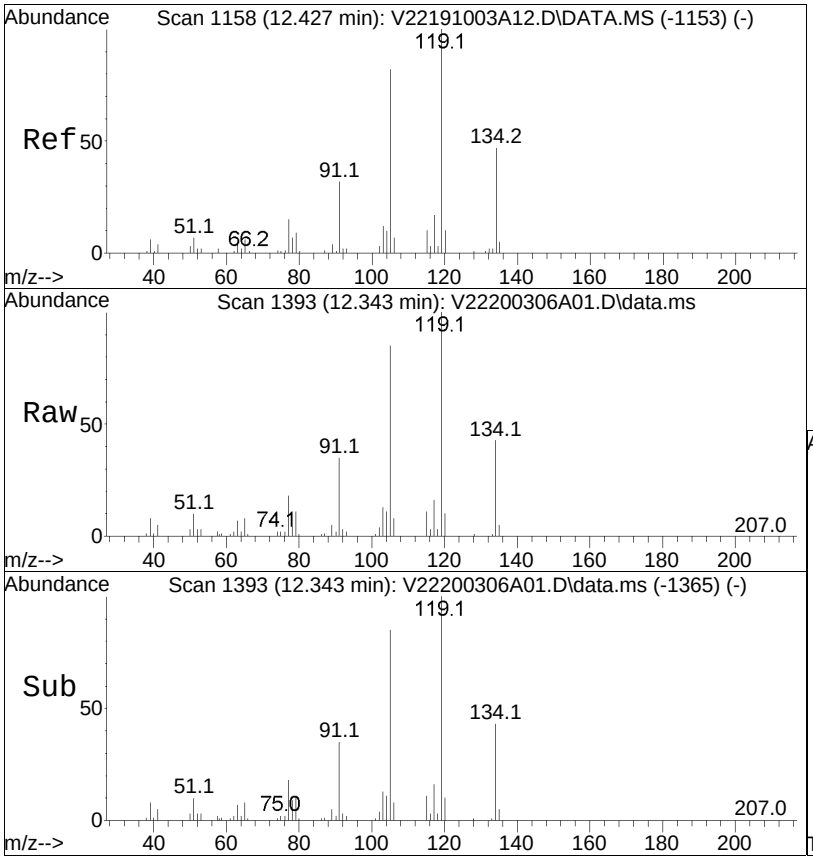



#105
1,4-Dichlorobenzene
Concen: 9.79 ug/L
RT: 12.121 min Scan# 1361
Delta R.T. -0.000 min
Lab File: V22200306A01.D
Acq: 06 Mar 2020 09:46 am

Tgt Ion:146 Resp: 126066

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 146 | 100 | | |
| 111 | 39.2 | 28.9 | 43.3 |
| 148 | 63.1 | 51.4 | 77.2 |

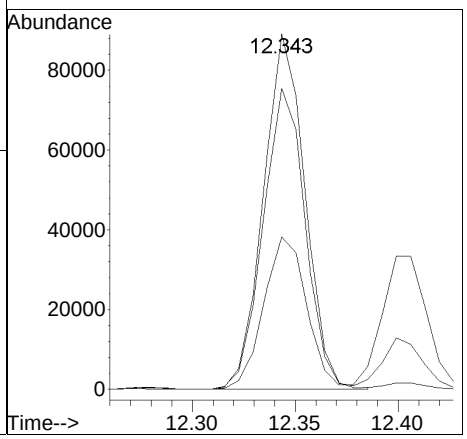


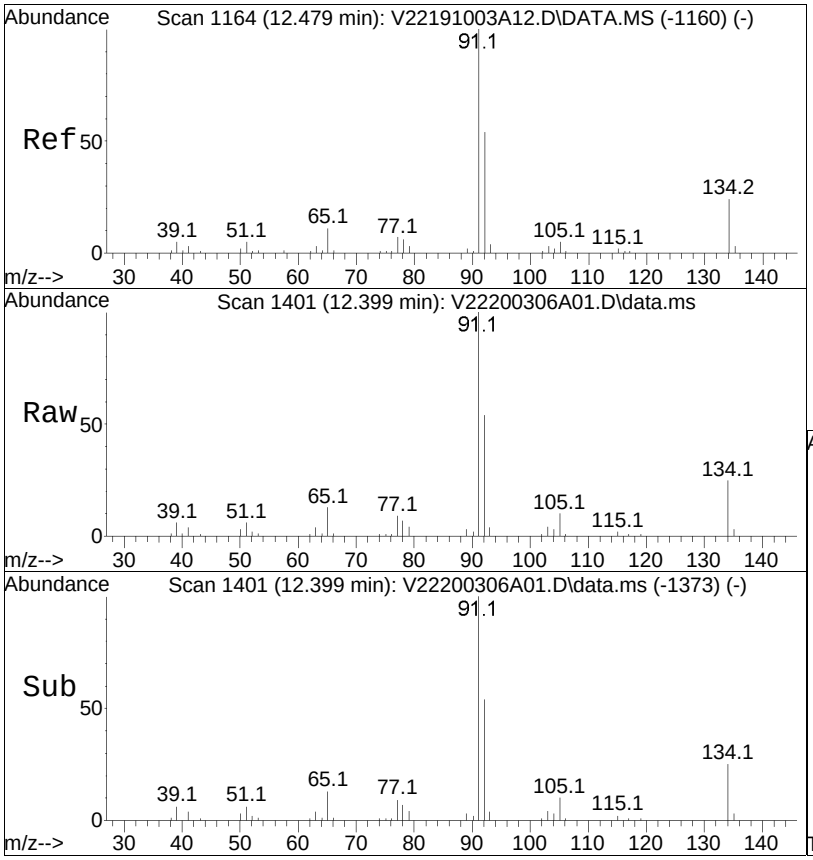



#106
p-Diethylbenzene
Concen: 9.69 ug/L
RT: 12.343 min Scan# 1393
Delta R.T. -0.007 min
Lab File: V22200306A01.D
Acq: 06 Mar 2020 09:46 am

Tgt Ion:119 Resp: 125197

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 119 | 100 | | |
| 105 | 86.0 | 53.4 | 110.8 |
| 134 | 44.3 | 30.9 | 64.1 |

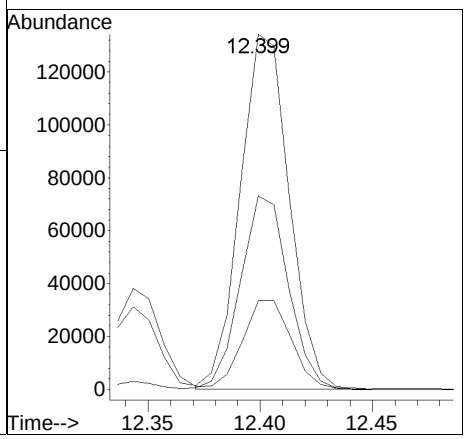


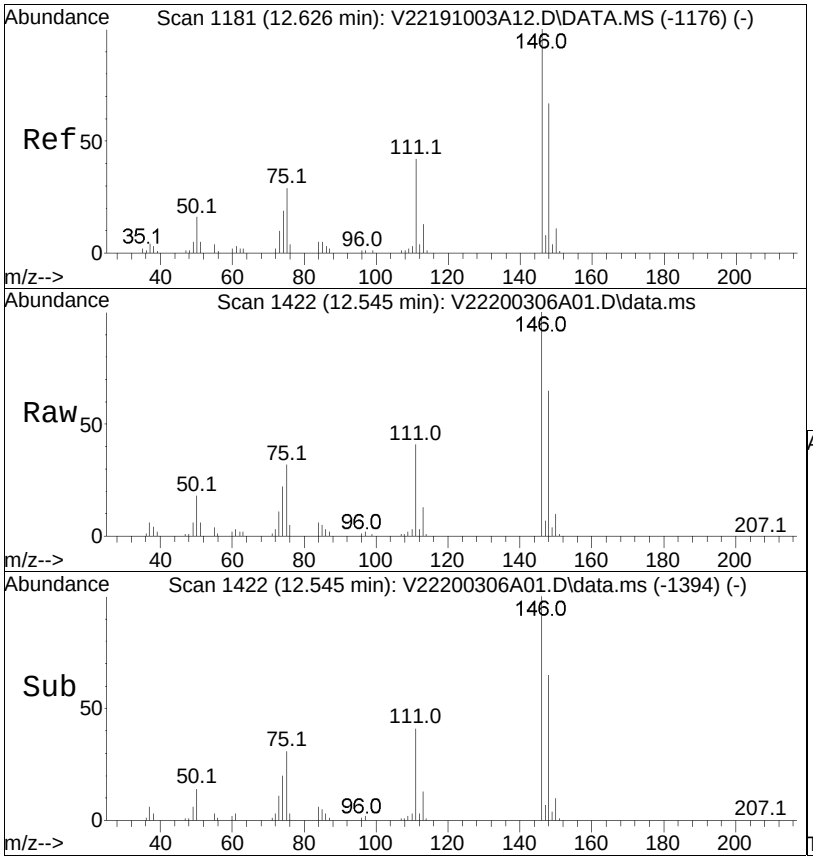



#107
n-Butylbenzene
Concen: 10.26 ug/L
RT: 12.399 min Scan# 1401
Delta R.T. -0.007 min
Lab File: V22200306A01.D
Acq: 06 Mar 2020 09:46 am

Tgt Ion: 91 Resp: 203640

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 91 | 100 | | |
| 92 | 53.6 | 44.6 | 66.8 |
| 134 | 25.1 | 22.9 | 34.3 |

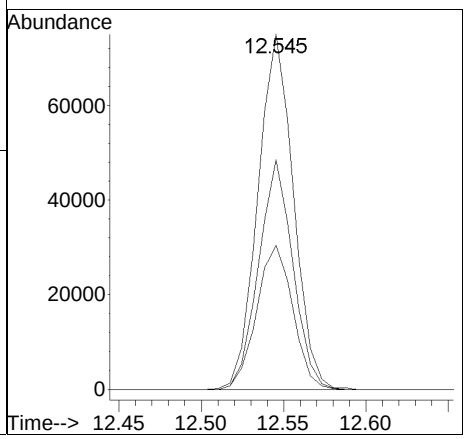


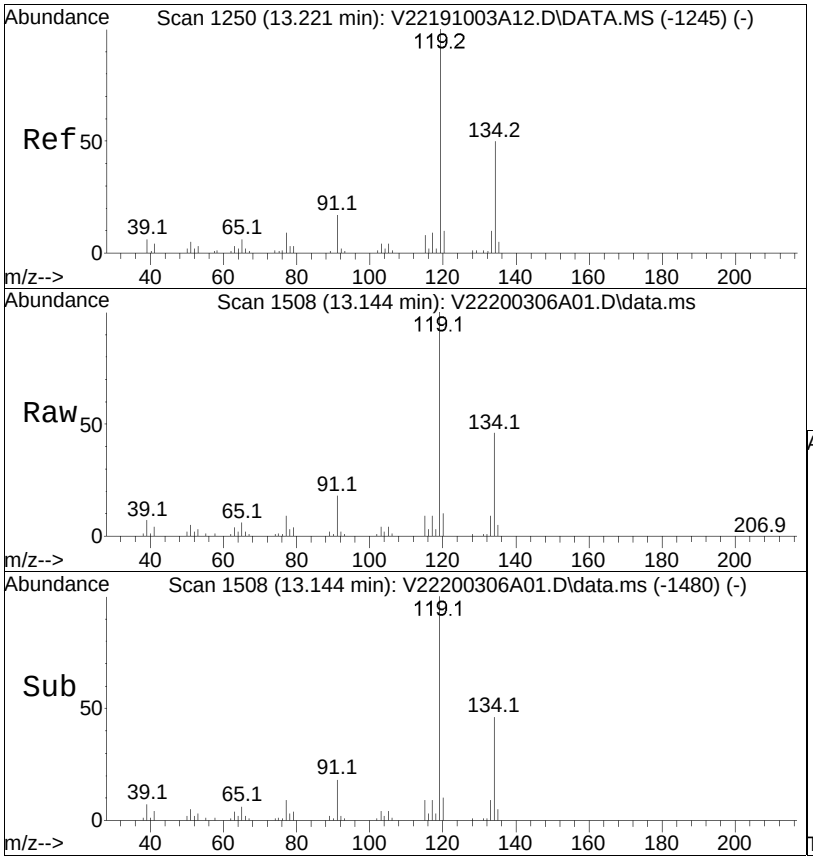



#108
1,2-Dichlorobenzene
Concen: 9.68 ug/L
RT: 12.545 min Scan# 1422
Delta R.T. -0.007 min
Lab File: V22200306A01.D
Acq: 06 Mar 2020 09:46 am

Tgt Ion:146 Resp: 112579

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 146 | 100 | | |
| 111 | 41.4 | 24.8 | 51.6 |
| 148 | 62.3 | 42.2 | 87.6 |

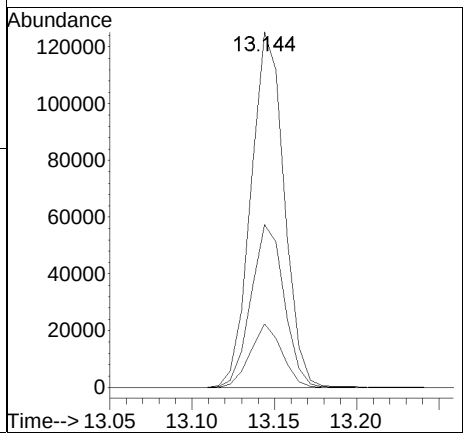


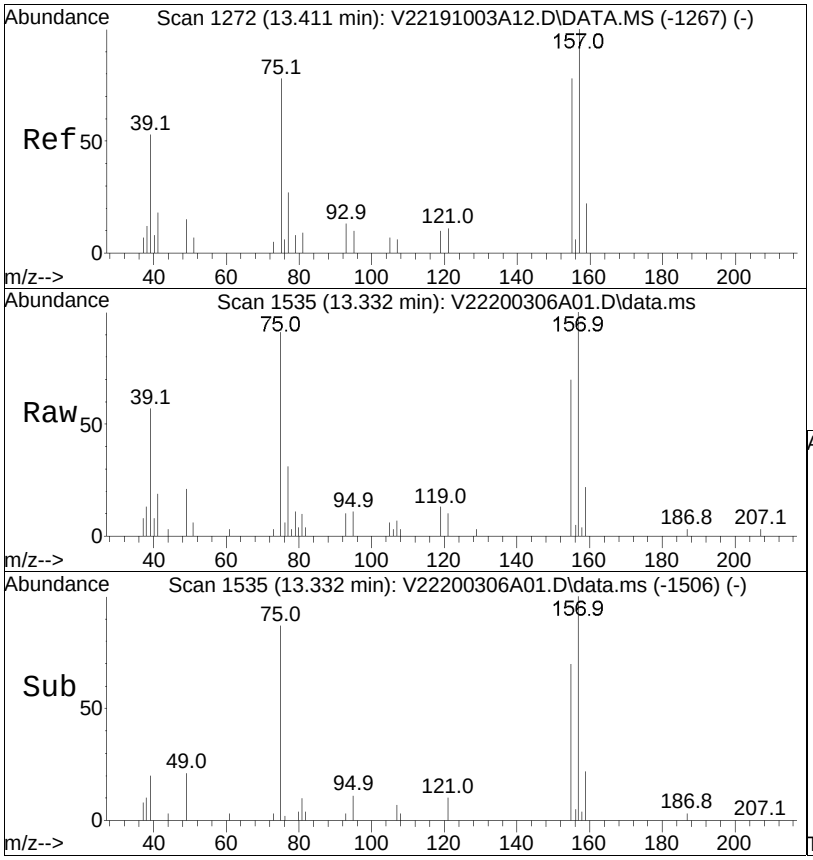



#109
1,2,4,5-Tetramethylbenzene
Concen: 10.17 ug/L
RT: 13.144 min Scan# 1508
Delta R.T. -0.007 min
Lab File: V22200306A01.D
Acq: 06 Mar 2020 09:46 am

Tgt Ion:119 Resp: 175818

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 119 | 100 | | |
| 134 | 45.8 | 31.9 | 66.1 |
| 91 | 17.0 | 9.8 | 20.3 |

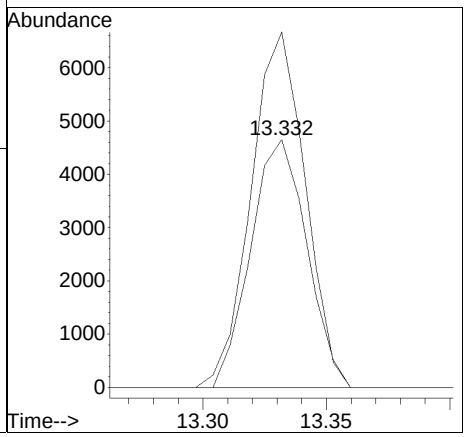


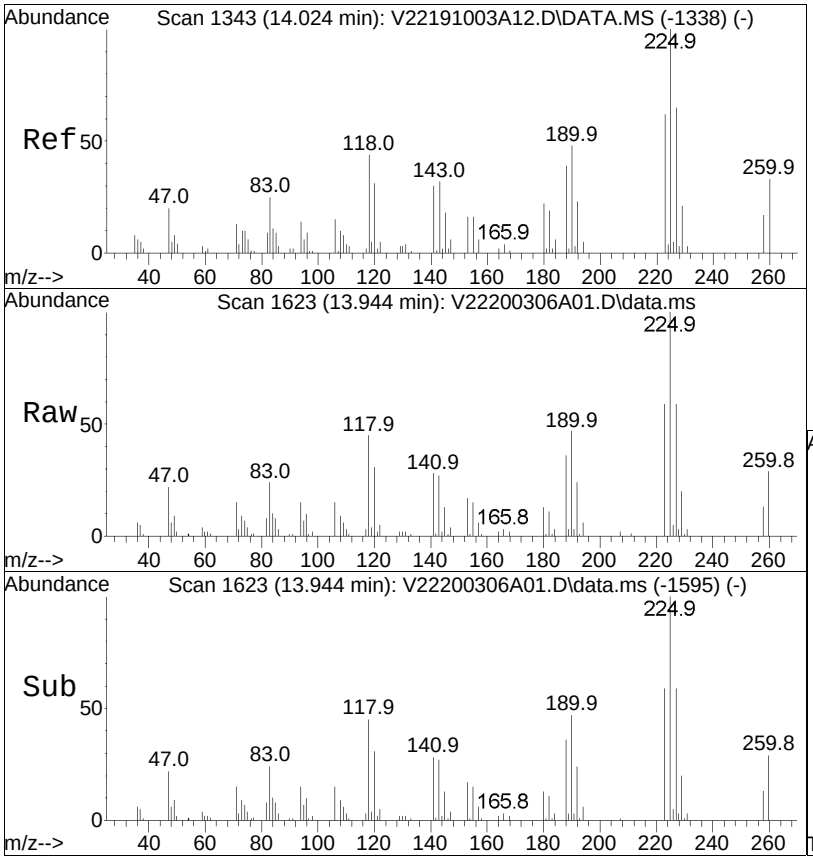



#110
1,2-Dibromo-3-chloropropane
Concen: 8.30 ug/L
RT: 13.332 min Scan# 1535
Delta R.T. -0.000 min
Lab File: V22200306A01.D
Acq: 06 Mar 2020 09:46 am

Tgt Ion:155 Resp: 7351

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 155 | 100 | | |
| 157 | 138.6 | 102.3 | 153.5 |

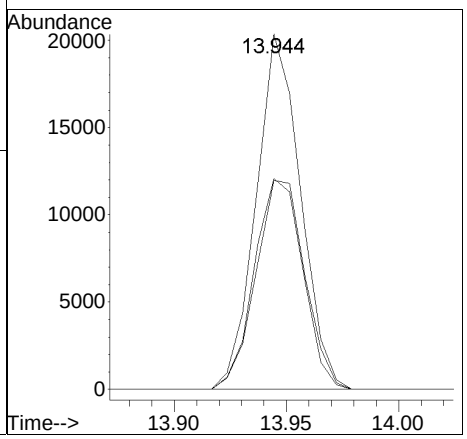


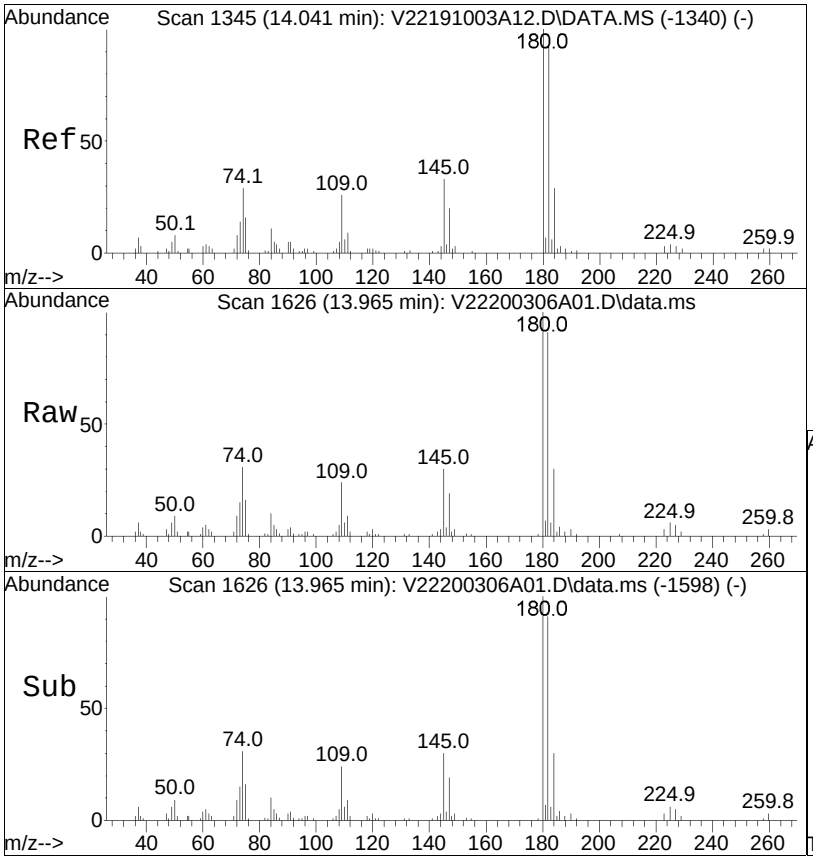



#112
Hexachlorobutadiene
Concen: 11.46 ug/L
RT: 13.944 min Scan# 1623
Delta R.T. -0.007 min
Lab File: V22200306A01.D
Acq: 06 Mar 2020 09:46 am

Tgt Ion:225 Resp: 28044

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 225 | 100 | | |
| 223 | 64.5 | 49.8 | 74.8 |
| 227 | 64.9 | 52.2 | 78.4 |

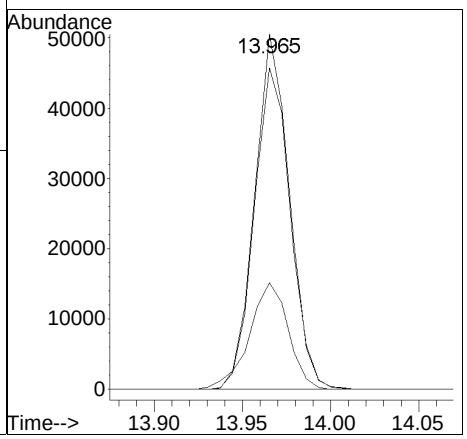


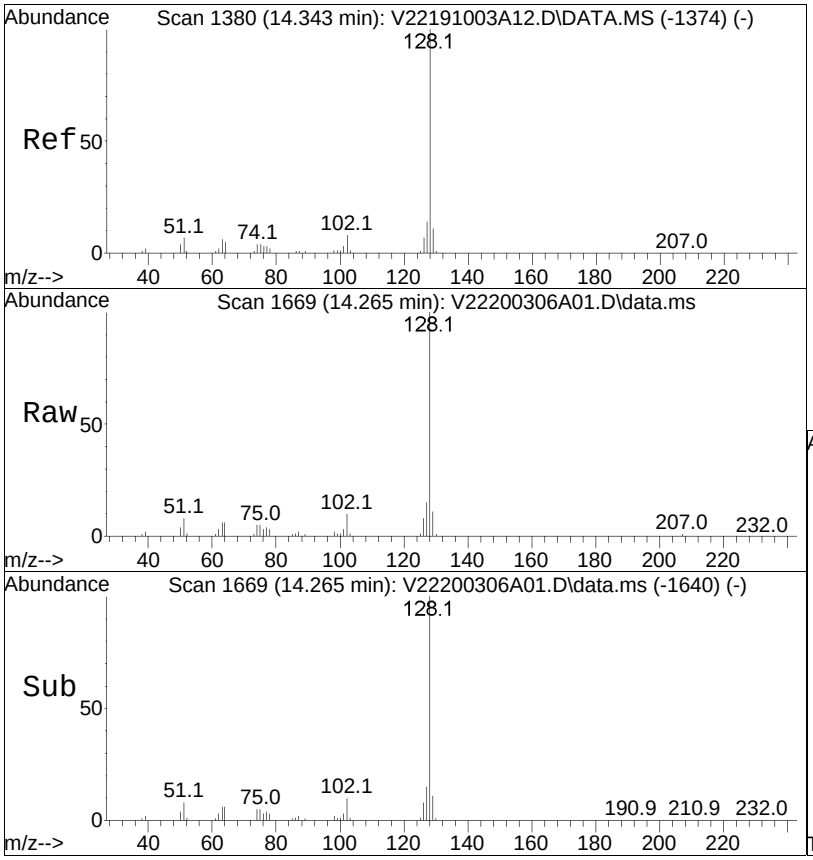



#113
1,2,4-Trichlorobenzene
Concen: 10.38 ug/L
RT: 13.965 min Scan# 1626
Delta R.T. -0.007 min
Lab File: V22200306A01.D
Acq: 06 Mar 2020 09:46 am

Tgt Ion:180 Resp: 69221

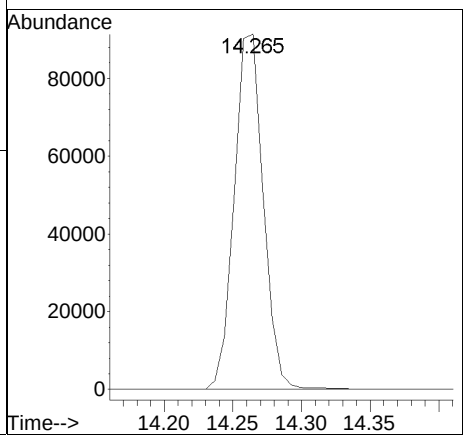
| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 180 | 100 | | |
| 182 | 94.5 | 76.6 | 114.8 |
| 145 | 33.7 | 25.5 | 38.3 |

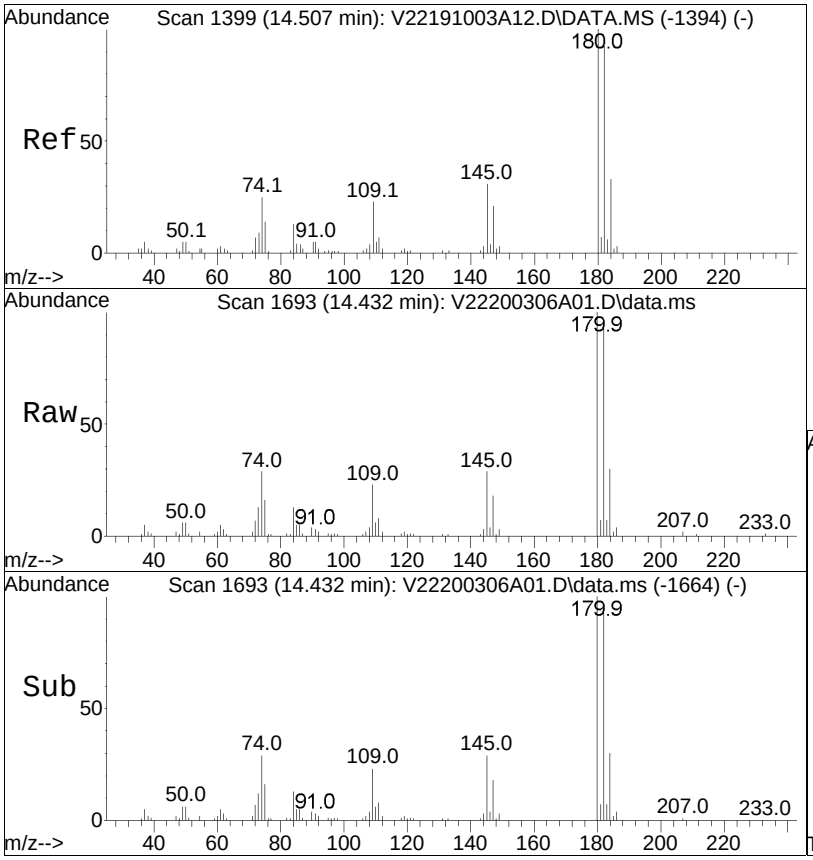





#114
Naphthalene
Concen: 8.73 ug/L
RT: 14.265 min Scan# 1669
Delta R.T. -0.000 min
Lab File: V22200306A01.D
Acq: 06 Mar 2020 09:46 am

Tgt Ion:128 Resp: 135021

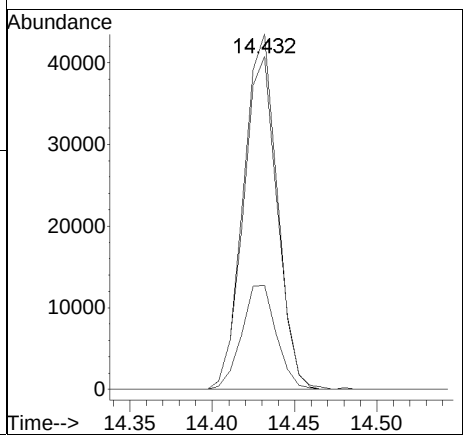





#115
1,2,3-Trichlorobenzene
Concen: 10.16 ug/L
RT: 14.432 min Scan# 1693
Delta R.T. -0.000 min
Lab File: V22200306A01.D
Acq: 06 Mar 2020 09:46 am

Tgt Ion:180 Resp: 62159

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 180 | 100 | | |
| 182 | 94.0 | 76.0 | 114.0 |
| 145 | 30.1 | 23.8 | 35.8 |



Quantitation Report (QT Reviewed)

Data Path : I:\VOLATILES\VOA101\2020\200307A\
Data File : V01200307A01.D
Acq On : 7 Mar 2020 9:31 am
Operator : VOA101:MKS
Sample : WG1348564-3,31,10,10
Misc : WG1348564,ICAL16539
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Mar 07 10:52:38 2020
Quant Method : I:\VOLATILES\VOA101\2020\200307A\V101_200219A_8260.m
Quant Title : VOLATILES BY GC/MS
QLast Update : Thu Feb 20 09:49:21 2020
Response via : Initial Calibration

CCAL FILE(s) : 1 - I:\VOLATILES\VOA101\2020\200307A\V01200307A01.D
Sub List : 8260-Curve - Megamix plus Diox

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| Internal Standards | | | | | | |
| 1) Fluorobenzene | 6.634 | 96 | 235149 | 10.000 | ug/L | 0.00 |
| Standard Area 1 = 235149 | | | Recovery = 100.00% | | | |
| 59) Chlorobenzene-d5 | 10.519 | 117 | 168234 | 10.000 | ug/L | 0.00 |
| Standard Area 1 = 168234 | | | Recovery = 100.00% | | | |
| 79) 1,4-Dichlorobenzene-d4 | 13.324 | 152 | 84540 | 10.000 | ug/L | 0.00 |
| Standard Area 1 = 84540 | | | Recovery = 100.00% | | | |
| System Monitoring Compounds | | | | | | |
| 36) Dibromofluoromethane | 5.739 | 113 | 58629 | 9.679 | ug/L | 0.00 |
| Spiked Amount 10.000 | Range 70 - 130 | | Recovery = 96.79% | | | |
| 43) 1,2-Dichloroethane-d4 | 6.323 | 65 | 63193 | 9.733 | ug/L | 0.00 |
| Spiked Amount 10.000 | Range 70 - 130 | | Recovery = 97.33% | | | |
| 60) Toluene-d8 | 8.495 | 98 | 232868 | 9.689 | ug/L | 0.00 |
| Spiked Amount 10.000 | Range 70 - 130 | | Recovery = 96.89% | | | |
| 83) 4-Bromofluorobenzene | 12.030 | 95 | 86682 | 9.512 | ug/L | 0.00 |
| Spiked Amount 10.000 | Range 70 - 130 | | Recovery = 95.12% | | | |
| Target Compounds | | | | | | Qvalue |
| 2) Dichlorodifluoromethane | 1.821 | 85 | 39382 | 9.299 | ug/L | 99 |
| 3) Chloromethane | 2.034 | 50 | 74082 | 11.559 | ug/L | 99 |
| 4) Vinyl chloride | 2.122 | 62 | 63293 | 10.566 | ug/L | 98 |
| 5) Bromomethane | 2.465 | 94 | 23347 | 9.590 | ug/L | 98 |
| 6) Chloroethane | 2.602 | 64 | 40931 | 11.779 | ug/L | 97 |
| 7) Trichlorofluoromethane | 2.755 | 101 | 75034 | 10.739 | ug/L | 98 |
| 8) Ethyl ether | 3.076 | 74 | 22528 | 11.298 | ug/L | 69 |
| 10) 1,1-Dichloroethene | 3.289 | 96 | 47950 | 11.222 | ug/L | 84 |
| 11) Carbon disulfide | 3.322 | 76 | 123777 | 10.691 | ug/L | 99 |
| 15) Methylene chloride | 3.889 | 84 | 52915 | 11.865 | ug/L | 80 |
| 17) Acetone | 3.928 | 43 | 13165 | 15.321 | ug/L | 94 |
| 18) trans-1,2-Dichloroethene | 4.059 | 96 | 51485 | 11.322 | ug/L | 87 |
| 20) Methyl tert-butyl ether | 4.157 | 73 | 108978 | 11.262 | ug/L | 92 |
| 23) 1,1-Dichloroethane | 4.692 | 63 | 112193 | 11.493 | ug/L | 97 |
| 25) Acrylonitrile | 4.741 | 53 | 12007 | 12.184 | ug/L | 96 |
| 27) Vinyl acetate | 4.937 | 43 | 114967 | 11.662 | ug/L | 96 |
| 28) cis-1,2-Dichloroethene | 5.259 | 96 | 62789 | 11.629 | ug/L | 85 |
| 29) 2,2-Dichloropropane | 5.374 | 77 | 81576 | 12.014 | ug/L | 94 |
| 30) Bromochloromethane | 5.472 | 128 | 25310 | 12.232 | ug/L # | 81 |
| 32) Chloroform | 5.543 | 83 | 97797 | 11.511 | ug/L | 97 |

Data Path : I:\VOLATILES\VOA101\2020\200307A\
Data File : V01200307A01.D
Acq On : 7 Mar 2020 9:31 am
Operator : VOA101:MKS
Sample : WG1348564-3,31,10,10
Misc : WG1348564,ICAL16539
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Mar 07 10:52:38 2020
Quant Method : I:\VOLATILES\VOA101\2020\200307A\V101_200219A_8260.m
Quant Title : VOLATILES BY GC/MS
QLast Update : Thu Feb 20 09:49:21 2020
Response via : Initial Calibration

CCAL FILE(s) : 1 - I:\VOLATILES\VOA101\2020\200307A\V01200307A01.D
Sub List : 8260-Curve - Megamix plus Diox

| Compound | R.T. | QIon | Response | Conc | Units | | Dev(Min) |
|---|---|---|---|---|---|---|---|
| 34) Carbon tetrachloride | 5.706 | 117 | 71727 | 10.466 | ug/L | | 97 |
| 37) 1,1,1-Trichloroethane | 5.772 | 97 | 86135 | 10.849 | ug/L | | 97 |
| 39) 2-Butanone | 5.865 | 43 | 15530 | 11.974 | ug/L | # | 42 |
| 40) 1,1-Dichloropropene | 5.908 | 75 | 75126 | 11.046 | ug/L | | 98 |
| 41) Benzene | 6.176 | 78 | 206722 | 11.003 | ug/L | # | 92 |
| 44) 1,2-Dichloroethane | 6.394 | 62 | 69043 | 11.707 | ug/L | | 99 |
| 48) Trichloroethene | 6.825 | 95 | 56959 | 11.002 | ug/L | | 98 |
| 50) Dibromomethane | 7.316 | 93 | 25266 | 11.339 | ug/L | | 99 |
| 51) 1,2-Dichloropropane | 7.431 | 63 | 61417 | 11.491 | ug/L | | 96 |
| 54) Bromodichloromethane | 7.502 | 83 | 66289 | 10.773 | ug/L | | 98 |
| 57) 1,4-Dioxane | 7.725 | 88 | 14796 | 677.371 | ug/L | # | 83 |
| 58) cis-1,3-Dichloropropene | 8.260 | 75 | 82924 | 10.959 | ug/L | | 95 |
| 61) Toluene | 8.560 | 92 | 133589 | 11.002 | ug/L | | 96 |
| 62) 4-Methyl-2-pentanone | 9.018 | 58 | 12059 | 10.897 | ug/L | | 96 |
| 63) Tetrachloroethene | 9.057 | 166 | 54675 | 10.541 | ug/L | | 100 |
| 65) trans-1,3-Dichloropropene | 9.078 | 75 | 68512 | 10.747 | ug/L | | 90 |
| 68) 1,1,2-Trichloroethane | 9.291 | 83 | 30395 | 10.949 | ug/L | | 98 |
| 69) Chlorodibromomethane | 9.531 | 129 | 40816 | 10.018 | ug/L | | 97 |
| 70) 1,3-Dichloropropane | 9.651 | 76 | 63672 | 10.822 | ug/L | | 99 |
| 71) 1,2-Dibromoethane | 9.853 | 107 | 34698 | 10.808 | ug/L | | 98 |
| 72) 2-Hexanone | 10.137 | 43 | 20402 | 9.764 | ug/L | | 96 |
| 73) Chlorobenzene | 10.546 | 112 | 143555 | 11.058 | ug/L | | 98 |
| 74) Ethylbenzene | 10.573 | 91 | 248082 | 10.902 | ug/L | | 100 |
| 75) 1,1,1,2-Tetrachloroethane | 10.623 | 131 | 48778 | 10.318 | ug/L | | 99 |
| 76) p/m Xylene | 10.759 | 106 | 193825 | 21.945 | ug/L | | 97 |
| 77) o Xylene | 11.299 | 106 | 181852 | 22.014 | ug/L | | 97 |
| 78) Styrene | 11.370 | 104 | 300693 | 21.714 | ug/L | | 99 |
| 80) Bromoform | 11.403 | 173 | 20917 | 9.763 | ug/L | | 98 |
| 82) Isopropylbenzene | 11.687 | 105 | 236675 | 10.753 | ug/L | | 99 |
| 84) Bromobenzene | 12.156 | 156 | 53793 | 10.928 | ug/L | | 99 |
| 85) n-Propylbenzene | 12.183 | 91 | 263027 | 11.045 | ug/L | | 98 |
| 87) 1,1,2,2-Tetrachloroethane | 12.265 | 83 | 34953 | 10.458 | ug/L | | 99 |
| 88) 4-Ethyltoluene | 12.314 | 105 | 214115 | 10.994 | ug/L | | 100 |
| 89) 2-Chlorotoluene | 12.374 | 91 | 176634 | 11.172 | ug/L | | 92 |
| 90) 1,3,5-Trimethylbenzene | 12.412 | 105 | 187130 | 10.981 | ug/L | | 100 |
| 91) 1,2,3-Trichloropropane | 12.429 | 75 | 31528M1 | 10.017 | ug/L | | |
| 92) trans-1,4-Dichloro-2-b... | 12.467 | 53 | 11352 | 11.134 | ug/L | # | 15 |
| 93) 4-Chlorotoluene | 12.565 | 91 | 168639 | 11.164 | ug/L | | 97 |
| 94) tert-Butylbenzene | 12.783 | 119 | 155854 | 10.813 | ug/L | | 98 |

Quantitation Report (QT Reviewed)

Data Path : I:\VOLATILES\VOA101\2020\200307A\
Data File : V01200307A01.D
Acq On : 7 Mar 2020 9:31 am
Operator : VOA101:MKS
Sample : WG1348564-3,31,10,10
Misc : WG1348564,ICAL16539
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Mar 07 10:52:38 2020
Quant Method : I:\VOLATILES\VOA101\2020\200307A\V101_200219A_8260.m
Quant Title : VOLATILES BY GC/MS
QLast Update : Thu Feb 20 09:49:21 2020
Response via : Initial Calibration

CCAL FILE(s) : 1 - I:\VOLATILES\VOA101\2020\200307A\V01200307A01.D
Sub List : 8260-Curve - Megamix plus Diox

| | Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|---|
| 97) | 1,2,4-Trimethylbenzene | 12.860 | 105 | 185837 | 11.064 | ug/L | 99 |
| 98) | sec-Butylbenzene | 12.985 | 105 | 192927 | 10.745 | ug/L | 98 |
| 99) | p-Isopropyltoluene | 13.143 | 119 | 180605 | 10.871 | ug/L | 97 |
| 100) | 1,3-Dichlorobenzene | 13.242 | 146 | 103316 | 11.268 | ug/L | 99 |
| 101) | 1,4-Dichlorobenzene | 13.340 | 146 | 104984 | 11.300 | ug/L | 98 |
| 102) | p-Diethylbenzene | 13.547 | 119 | 97496 | 10.949 | ug/L | 97 |
| 103) | n-Butylbenzene | 13.613 | 91 | 137427 | 11.157 | ug/L | 99 |
| 104) | 1,2-Dichlorobenzene | 13.809 | 146 | 88616 | 10.979 | ug/L | 98 |
| 105) | 1,2,4,5-Tetramethylben... | 14.420 | 119 | 138194 | 10.300 | ug/L | 97 |
| 106) | 1,2-Dibromo-3-chloropr... | 14.666 | 155 | 3862 | 9.233 | ug/L | 95 |
| 108) | Hexachlorobutadiene | 15.337 | 225 | 13218 | 10.449 | ug/L | 98 |
| 109) | 1,2,4-Trichlorobenzene | 15.375 | 180 | 37460 | 9.847 | ug/L | 98 |
| 110) | Naphthalene | 15.741 | 128 | 73889 | 8.762 | ug/L | 100 |
| 111) | 1,2,3-Trichlorobenzene | 15.953 | 180 | 26495 | 9.053 | ug/L | 97 |

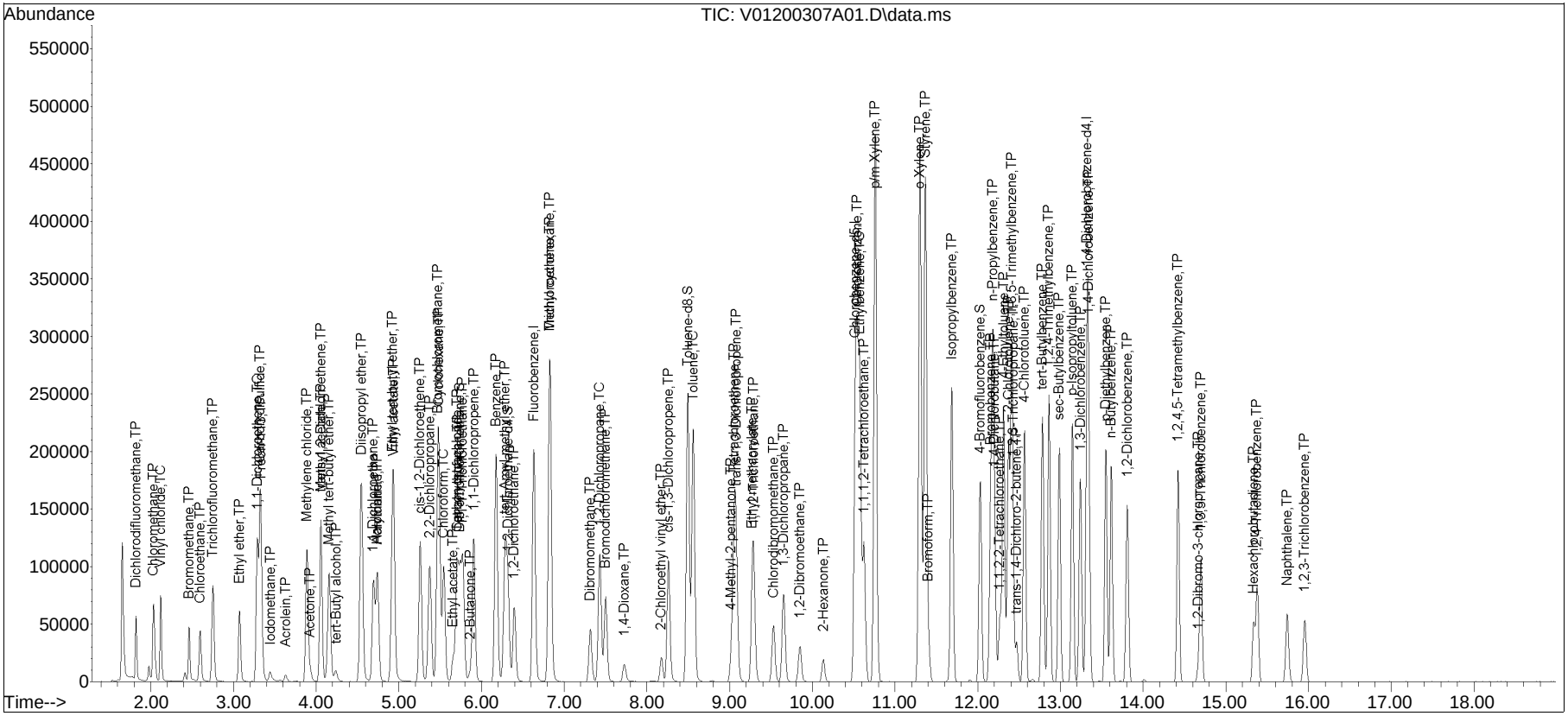
(#) = qualifier out of range (m) = manual integration (+) = signals summed

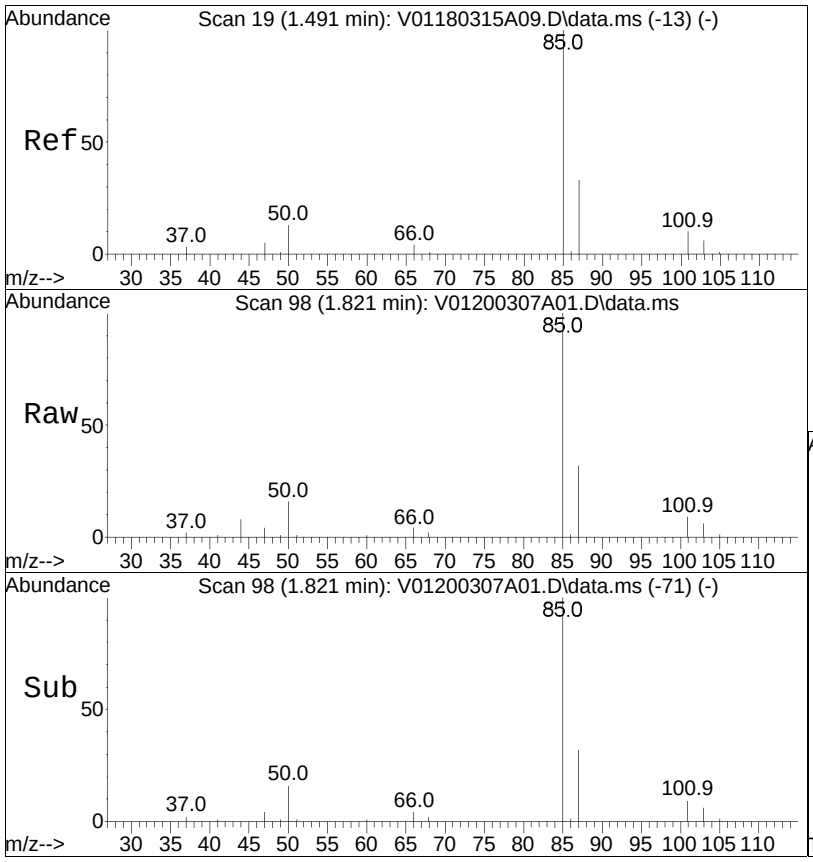
Quantitation Report (QT Reviewed)

Data Path : I:\VOLATILES\VOA101\2020\200307A\
Data File : V01200307A01.D
Acq On : 7 Mar 2020 9:31 am
Operator : VOA101:MKS
Sample : WG1348564-3,31,10,10
Misc : WG1348564,ICAL16539
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Mar 07 10:52:38 2020
Quant Method : I:\VOLATILES\VOA101\2020\200307A\V101_200219A_8260.m
Quant Title : VOLATILES BY GC/MS
QLast Update : Thu Feb 20 09:49:21 2020
Response via : Initial Calibration

Sub List : 8260-Curve - Megamix plus Diox00307A\V01200307A01.D•

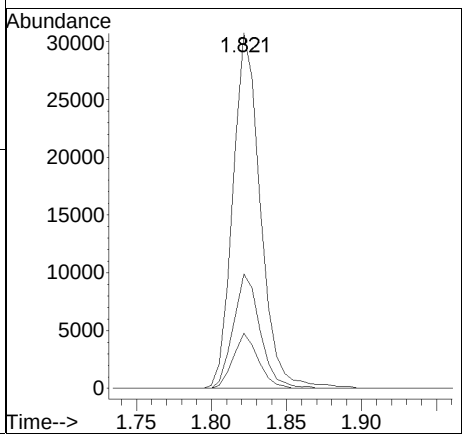


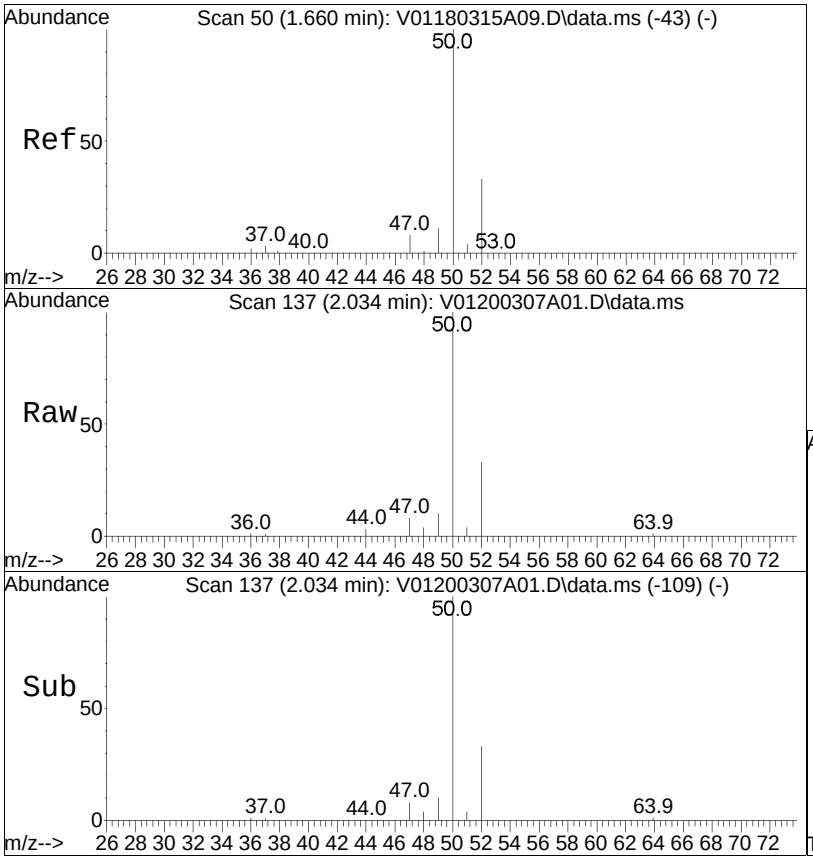



#2
Dichlorodifluoromethane
Concen: 9.30 ug/L
RT: 1.821 min Scan# 98
Delta R.T. 0.000 min
Lab File: V01200307A01.D
Acq: 7 Mar 2020 9:31 am

Tgt Ion: 85 Resp: 39382

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 85 | 100 | | |
| 87 | 31.3 | 20.9 | 43.5 |
| 50 | 14.2 | 9.1 | 18.9 |

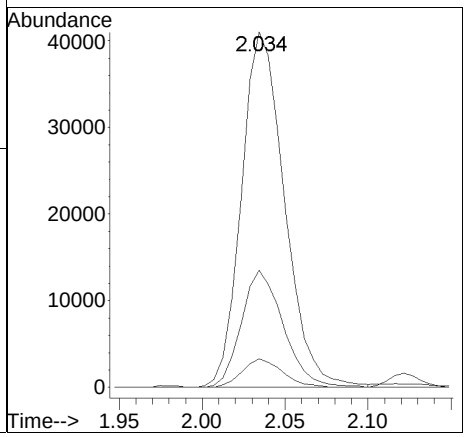


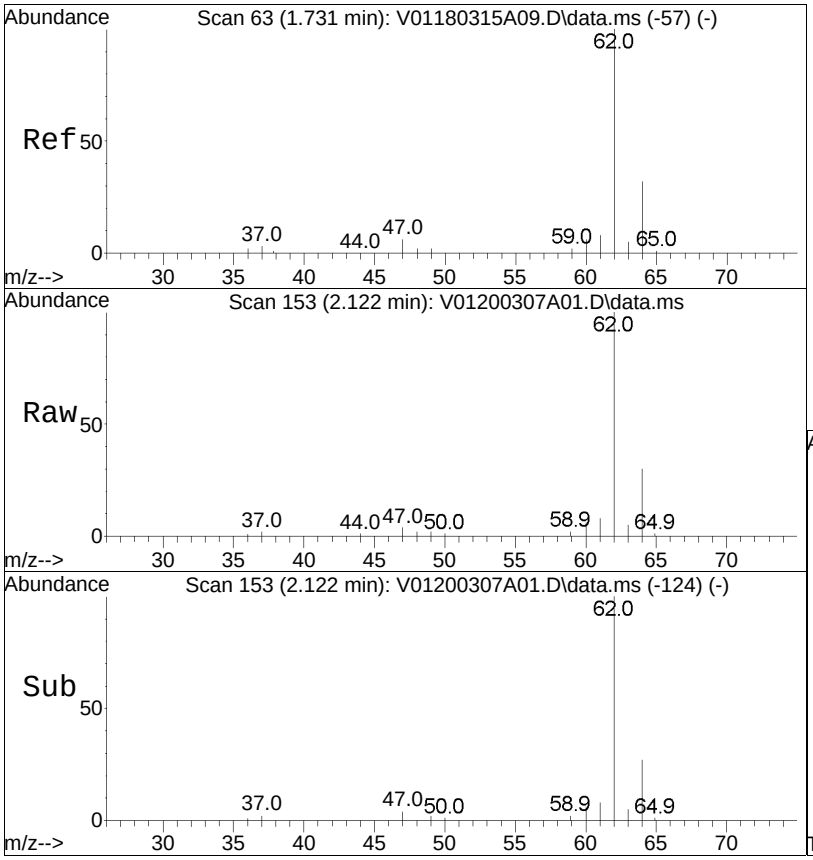



#3
Chloromethane
Concen: 11.56 ug/L
RT: 2.034 min Scan# 137
Delta R.T. 0.000 min
Lab File: V01200307A01.D
Acq: 7 Mar 2020 9:31 am

Tgt Ion: 50 Resp: 74082

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 50 | 100 | | |
| 52 | 32.2 | 12.8 | 52.8 |
| 47 | 7.6 | 0.0 | 28.3 |

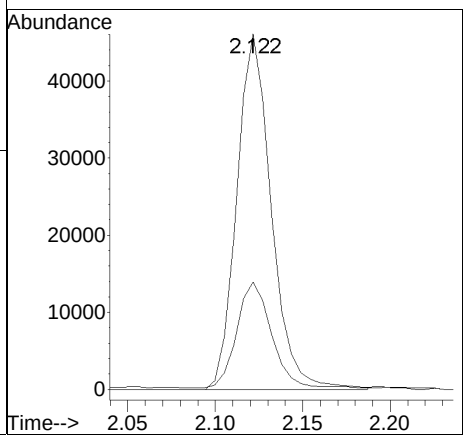


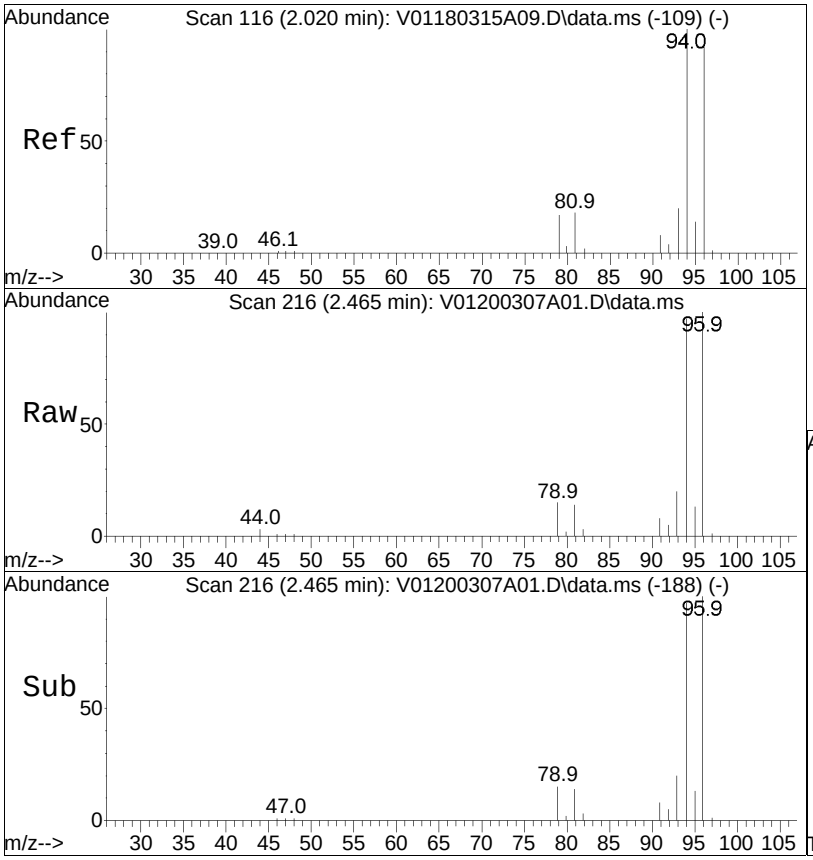



#4
Vinyl chloride
Concen: 10.57 ug/L
RT: 2.122 min Scan# 153
Delta R.T. 0.006 min
Lab File: V01200307A01.D
Acq: 7 Mar 2020 9:31 am

Tgt Ion: 62 Resp: 63293

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 62 | 100 | | |
| 64 | 29.7 | 10.8 | 50.8 |

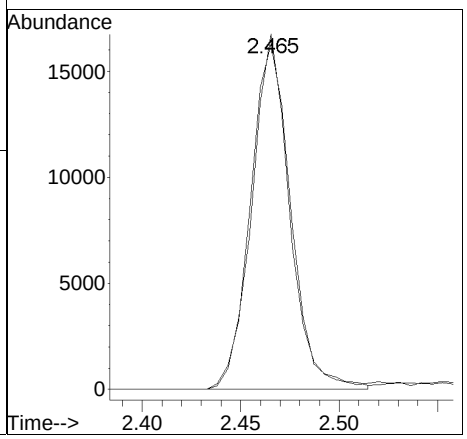


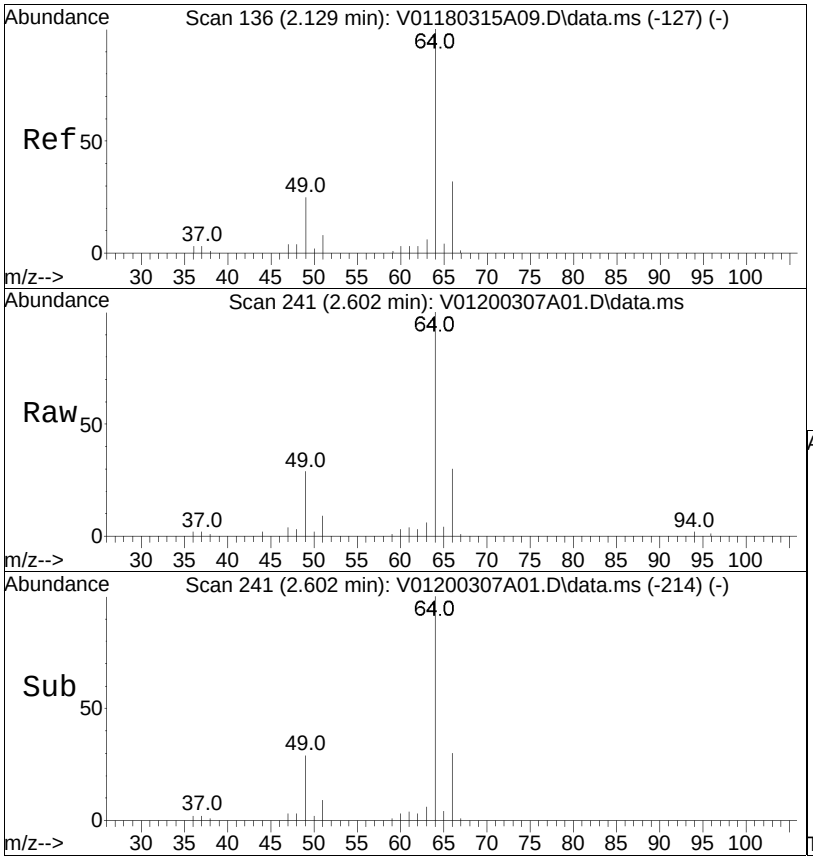



#5
Bromomethane
Concen: 9.59 ug/L
RT: 2.465 min Scan# 216
Delta R.T. 0.000 min
Lab File: V01200307A01.D
Acq: 7 Mar 2020 9:31 am

Tgt Ion: 94 Resp: 23347

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 94 | 100 | | |
| 96 | 95.2 | 73.6 | 113.6 |

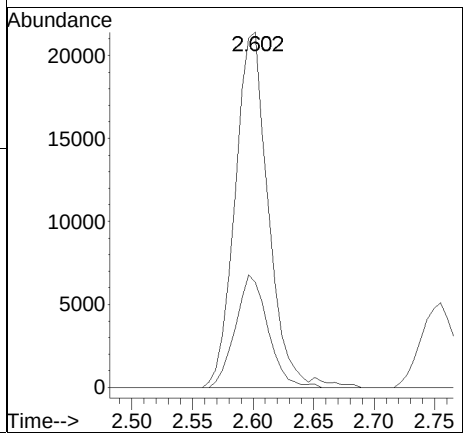


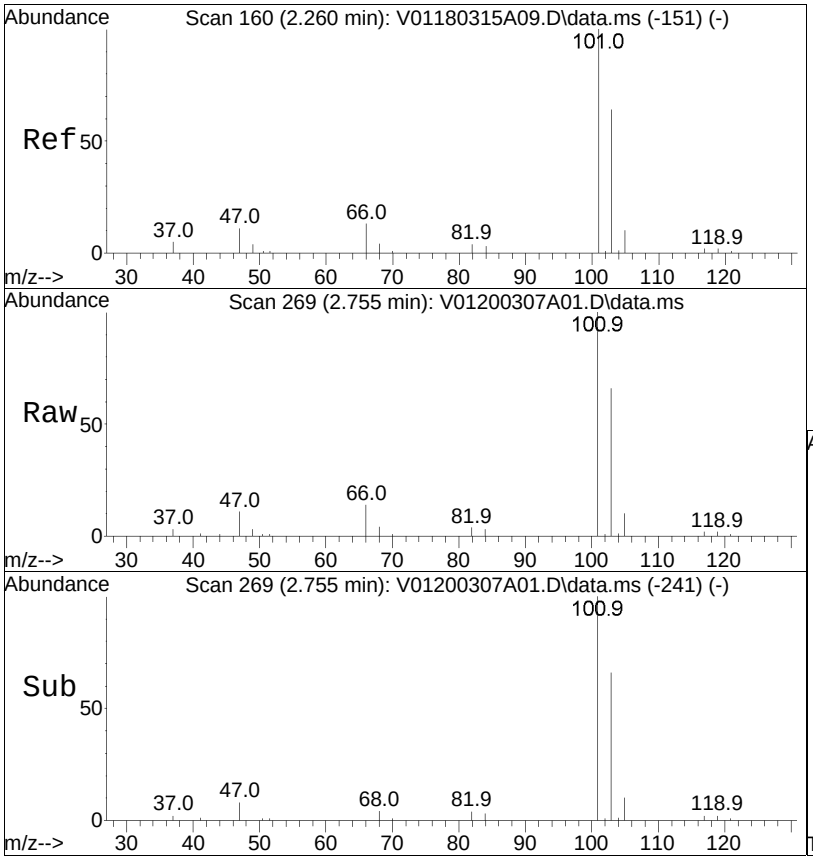



#6
Chloroethane
Concen: 11.78 ug/L
RT: 2.602 min Scan# 241
Delta R.T. -0.000 min
Lab File: V01200307A01.D
Acq: 7 Mar 2020 9:31 am

Tgt Ion: 64 Resp: 40931

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 64 | 100 | | |
| 66 | 30.9 | 12.7 | 52.7 |

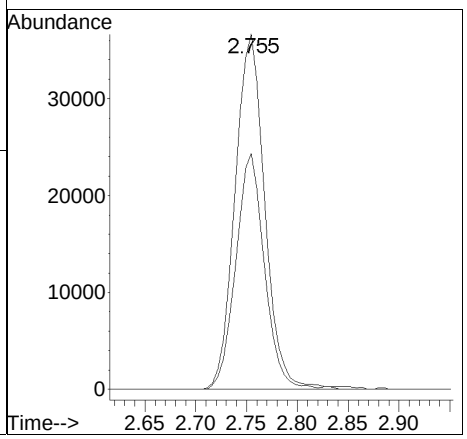


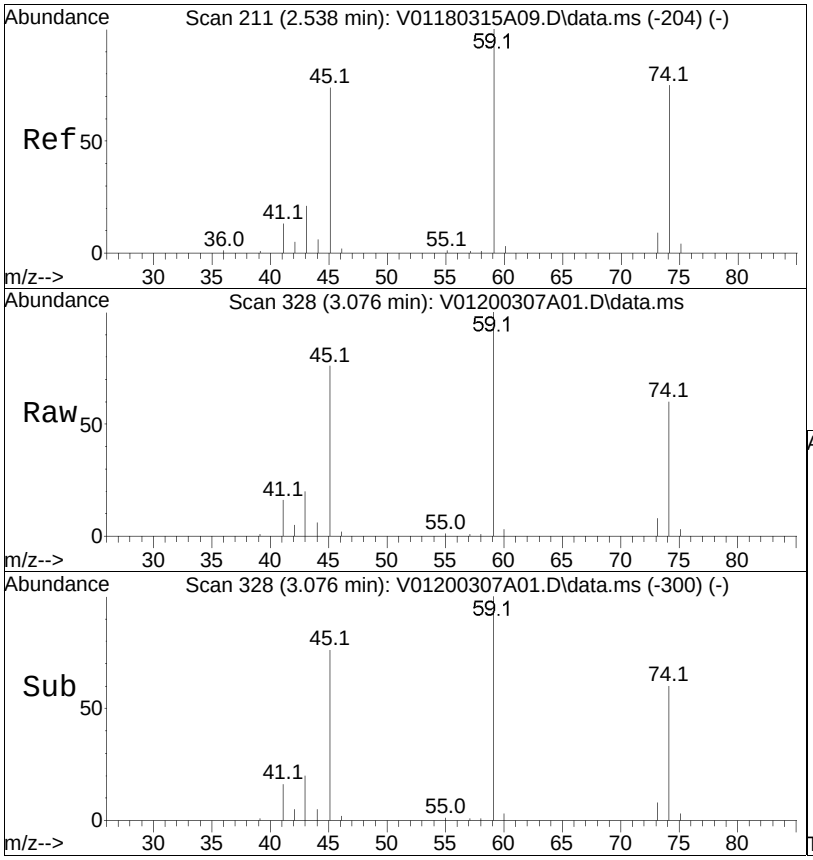



#7
Trichlorofluoromethane
Concen: 10.74 ug/L
RT: 2.755 min Scan# 269
Delta R.T. 0.001 min
Lab File: V01200307A01.D
Acq: 7 Mar 2020 9:31 am

Tgt Ion:101 Resp: 75034

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 101 | 100 | | |
| 103 | 63.7 | 52.3 | 78.5 |

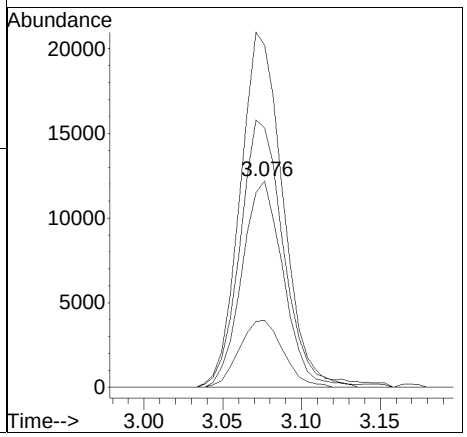


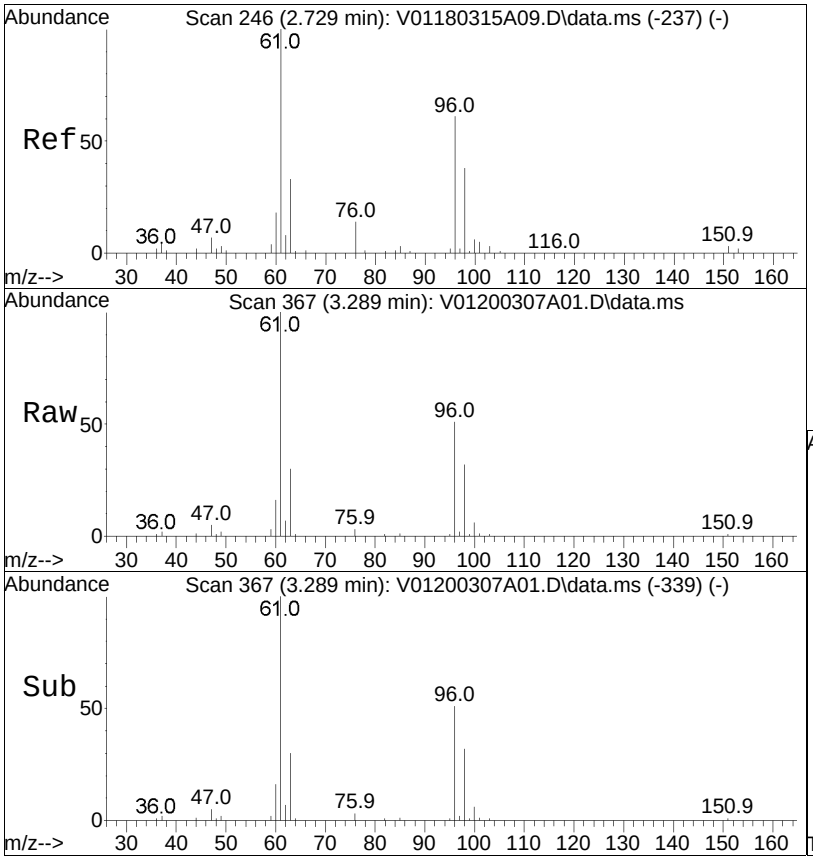



#8
Ethyl ether
Concen: 11.30 ug/L
RT: 3.076 min Scan# 328
Delta R.T. 0.000 min
Lab File: V01200307A01.D
Acq: 7 Mar 2020 9:31 am

Tgt Ion: 74 Resp: 22528

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 74 | 100 | | |
| 59 | 177.8 | 88.1 | 182.9 |
| 45 | 134.3 | 66.1 | 137.3 |
| 43 | 34.1 | 19.7 | 40.9 |

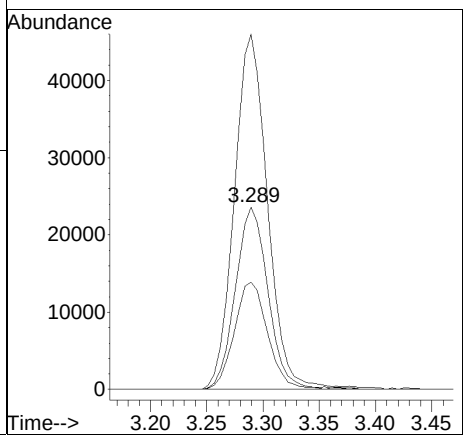


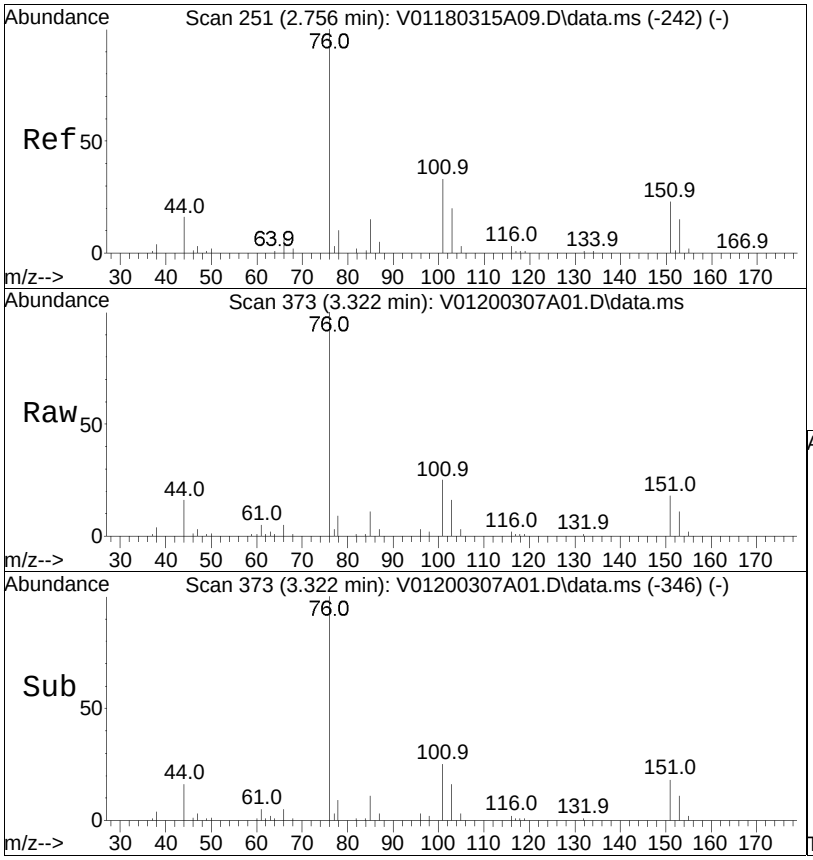



#10
1,1-Dichloroethene
Concen: 11.22 ug/L
RT: 3.289 min Scan# 367
Delta R.T. 0.000 min
Lab File: V01200307A01.D
Acq: 7 Mar 2020 9:31 am

Tgt Ion: 96 Resp: 47950

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 96 | 100 | | |
| 61 | 197.5 | 136.8 | 205.2 |
| 63 | 59.6 | 43.6 | 65.4 |

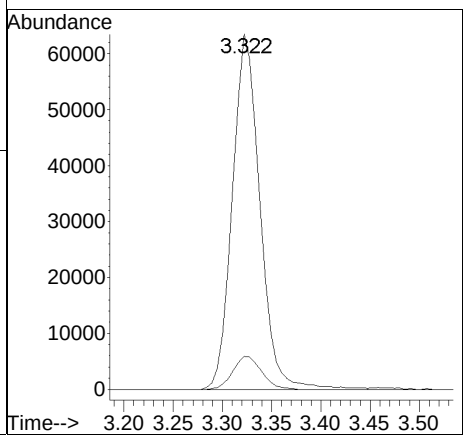


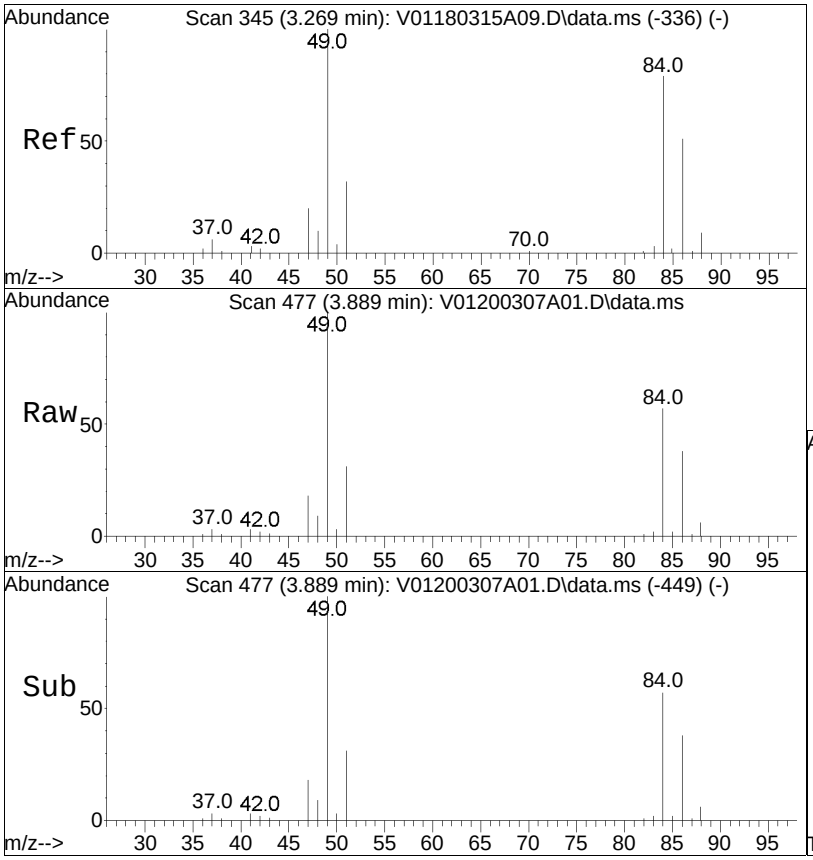



#11
Carbon disulfide
Concen: 10.69 ug/L
RT: 3.322 min Scan# 373
Delta R.T. -0.000 min
Lab File: V01200307A01.D
Acq: 7 Mar 2020 9:31 am

Tgt Ion: 76 Resp: 123777

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 76 | 100 | | |
| 78 | 9.7 | 6.6 | 13.8 |

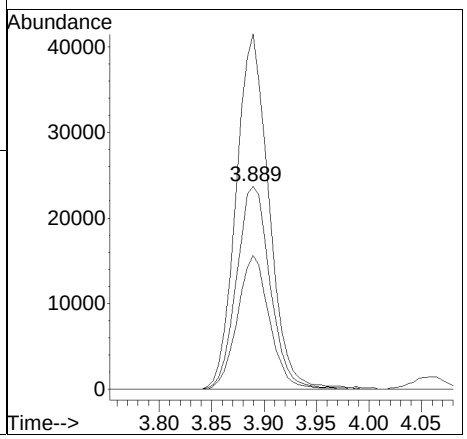


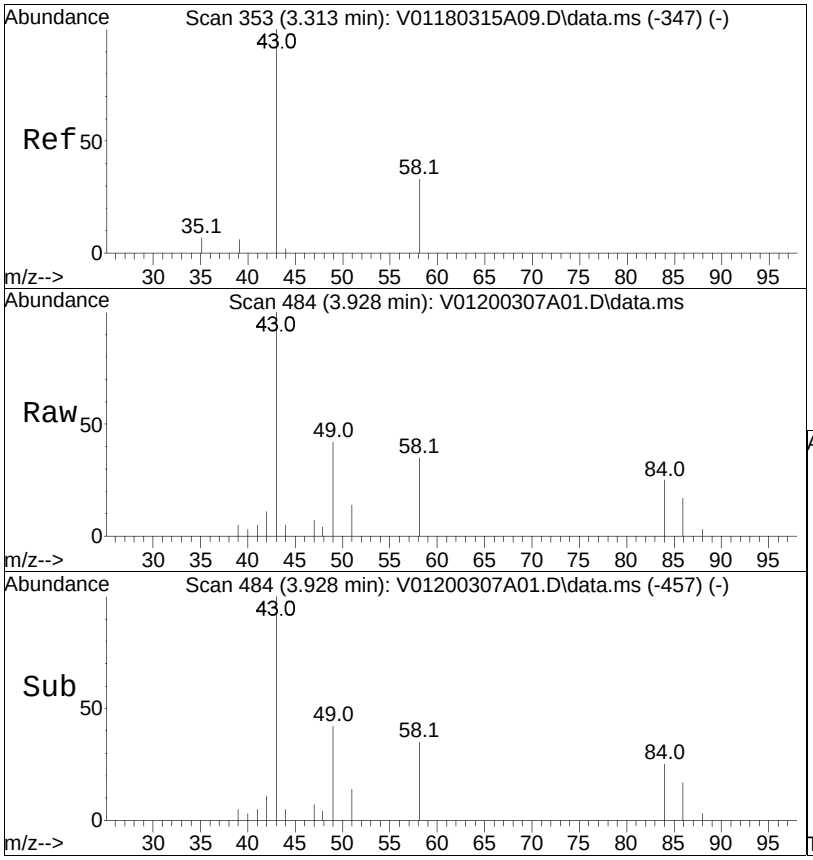



#15
Methylene chloride
Concen: 11.87 ug/L
RT: 3.889 min Scan# 477
Delta R.T. 0.000 min
Lab File: V01200307A01.D
Acq: 7 Mar 2020 9:31 am

Tgt Ion: 84 Resp: 52915

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 84 | 100 | | |
| 86 | 63.1 | 41.7 | 86.7 |
| 49 | 171.3 | 89.1 | 185.1 |

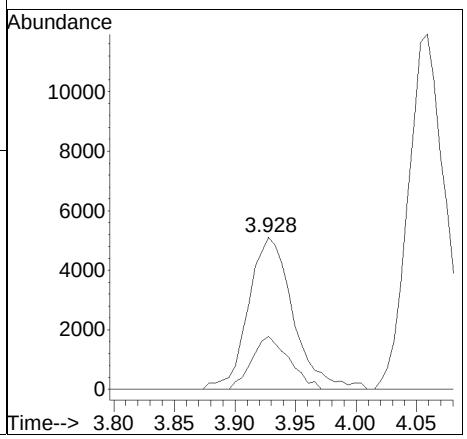


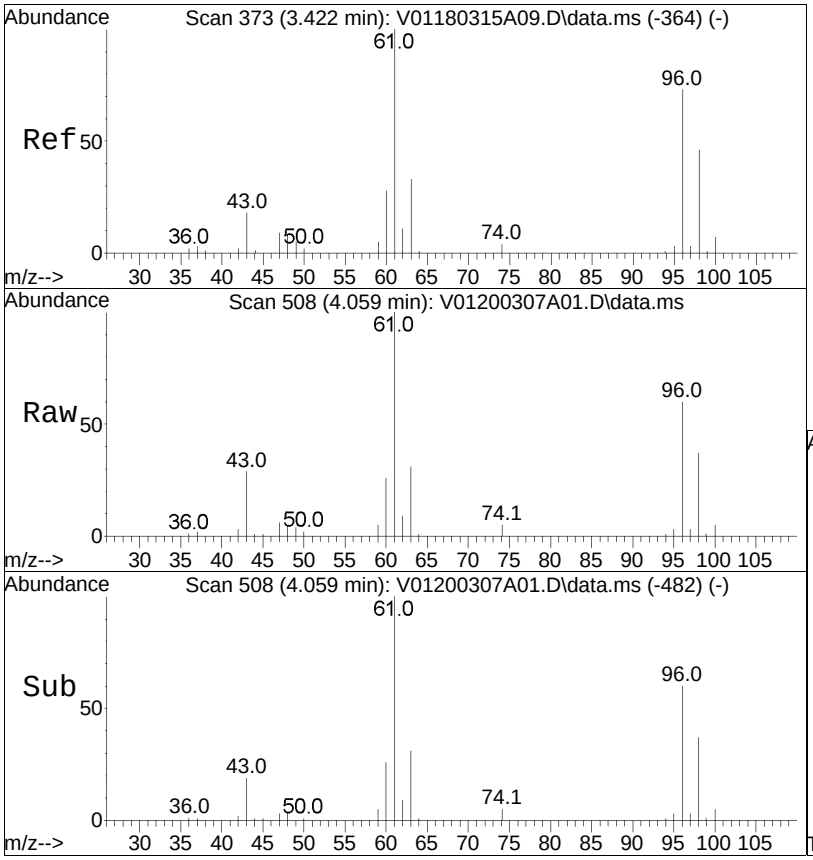



#17
Acetone
Concen: 15.32 ug/L
RT: 3.928 min Scan# 484
Delta R.T. -0.000 min
Lab File: V01200307A01.D
Acq: 7 Mar 2020 9:31 am

Tgt Ion: 43 Resp: 13165

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 43 | 100 | | |
| 58 | 29.2 | 25.9 | 38.9 |

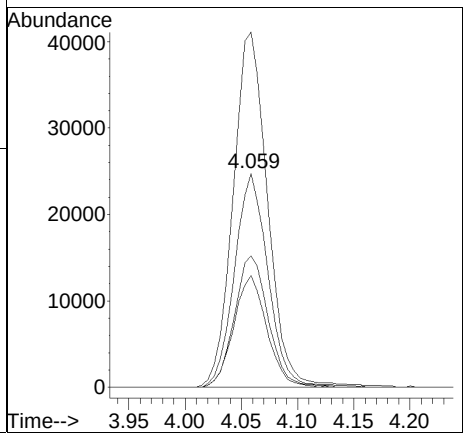


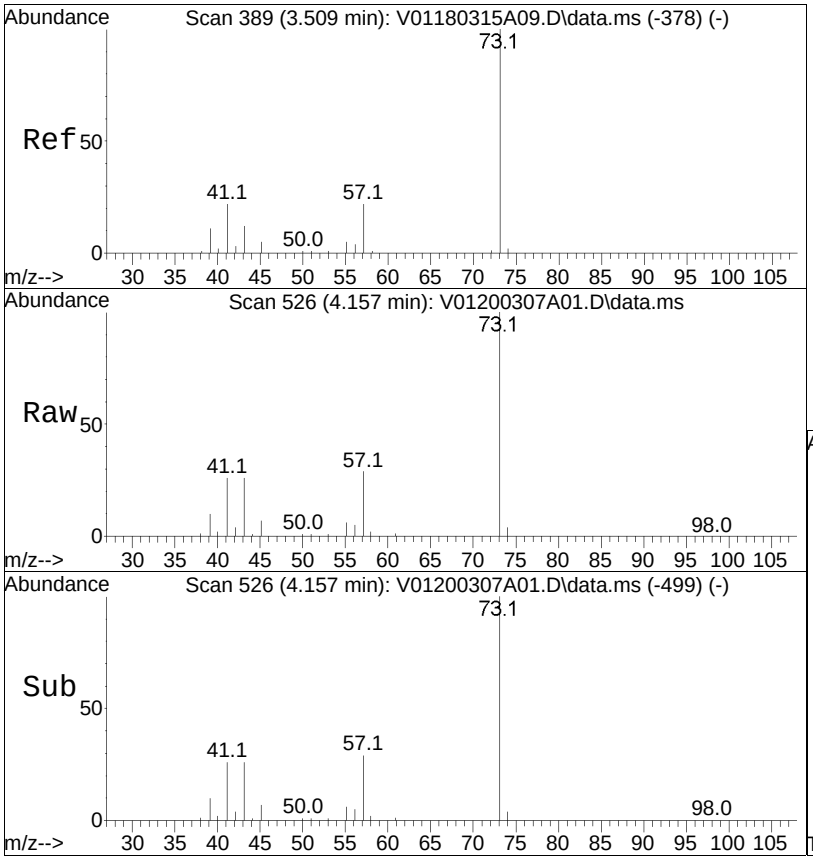



#18
trans-1,2-Dichloroethene
Concen: 11.32 ug/L
RT: 4.059 min Scan# 508
Delta R.T. -0.005 min
Lab File: V01200307A01.D
Acq: 7 Mar 2020 9:31 am

Tgt Ion: 96 Resp: 51485

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 96 | 100 | | |
| 61 | 171.2 | 95.3 | 197.9 |
| 98 | 62.2 | 41.0 | 85.2 |
| 63 | 51.7 | 30.2 | 62.6 |

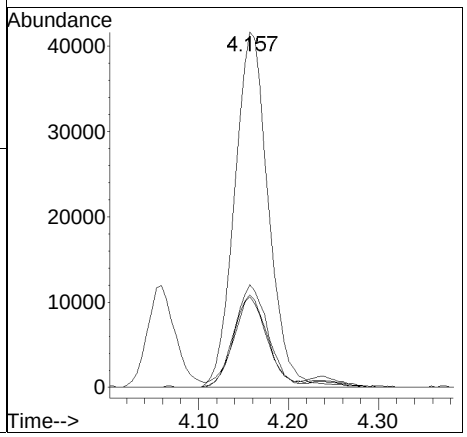


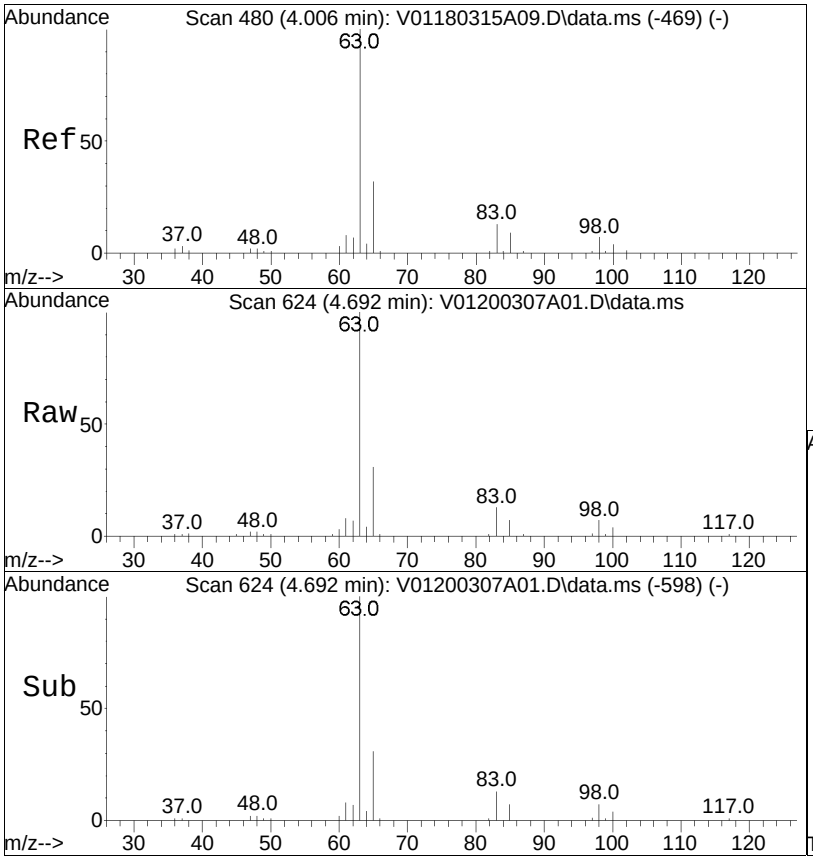



#20
Methyl tert-butyl ether
Concen: 11.26 ug/L
RT: 4.157 min Scan# 526
Delta R.T. -0.005 min
Lab File: V01200307A01.D
Acq: 7 Mar 2020 9:31 am

Tgt Ion: 73 Resp: 108978

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 73 | 100 | | |
| 57 | 28.9 | 14.8 | 30.6 |
| 43 | 24.4 | 15.5 | 32.3 |
| 41 | 26.1 | 14.1 | 29.3 |

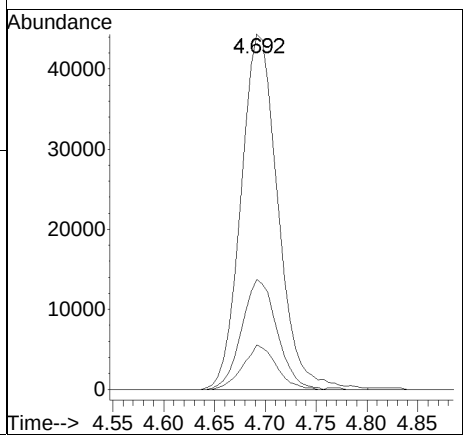


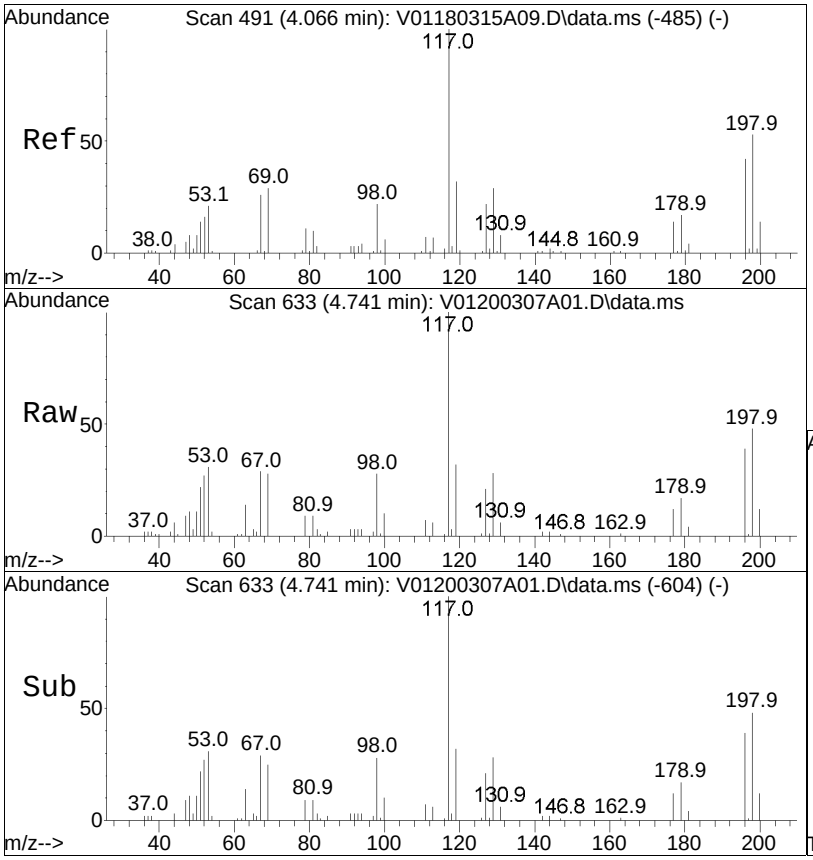



#23
1,1-Dichloroethane
Concen: 11.49 ug/L
RT: 4.692 min Scan# 624
Delta R.T. -0.005 min
Lab File: V01200307A01.D
Acq: 7 Mar 2020 9:31 am

Tgt Ion: 63 Resp: 112193

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 63 | 100 | | |
| 65 | 29.6 | 10.9 | 50.9 |
| 83 | 11.3 | 0.0 | 33.0 |

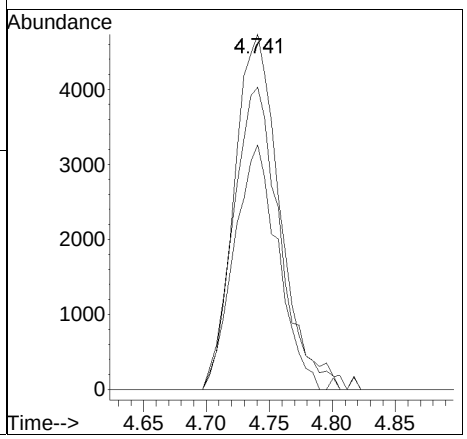


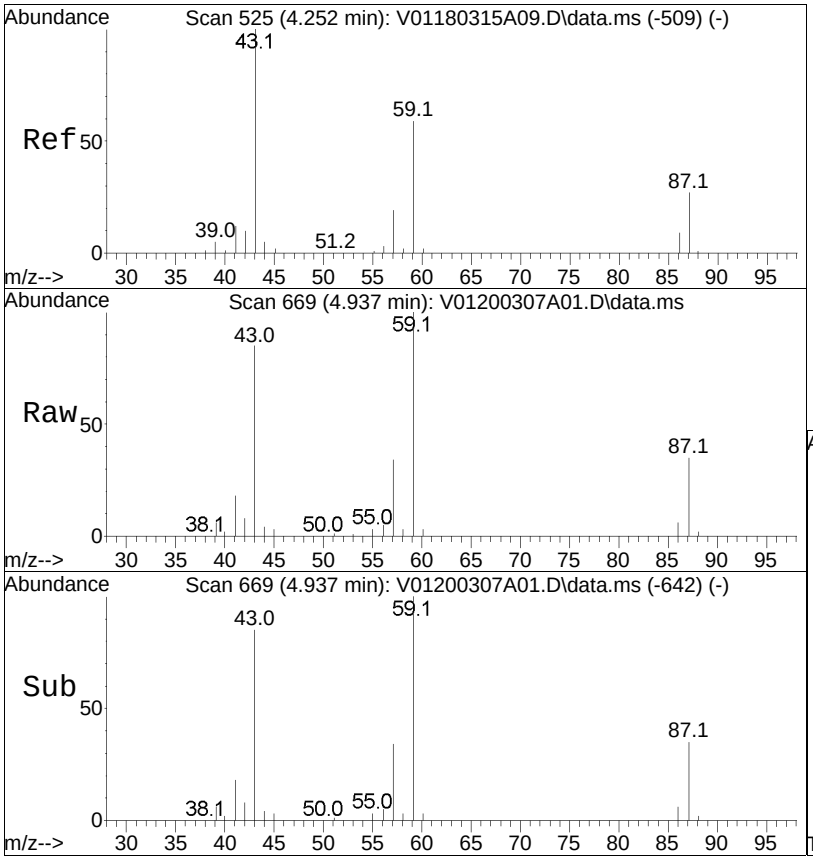



#25
Acrylonitrile
Concen: 12.18 ug/L
RT: 4.741 min Scan# 633
Delta R.T. 0.006 min
Lab File: V01200307A01.D
Acq: 7 Mar 2020 9:31 am

Tgt Ion: 53 Resp: 12007

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 53 | 100 | | |
| 52 | 85.2 | 69.1 | 103.7 |
| 51 | 66.0 | 58.3 | 87.5 |

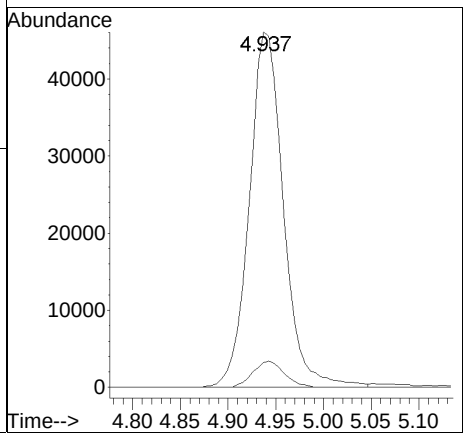


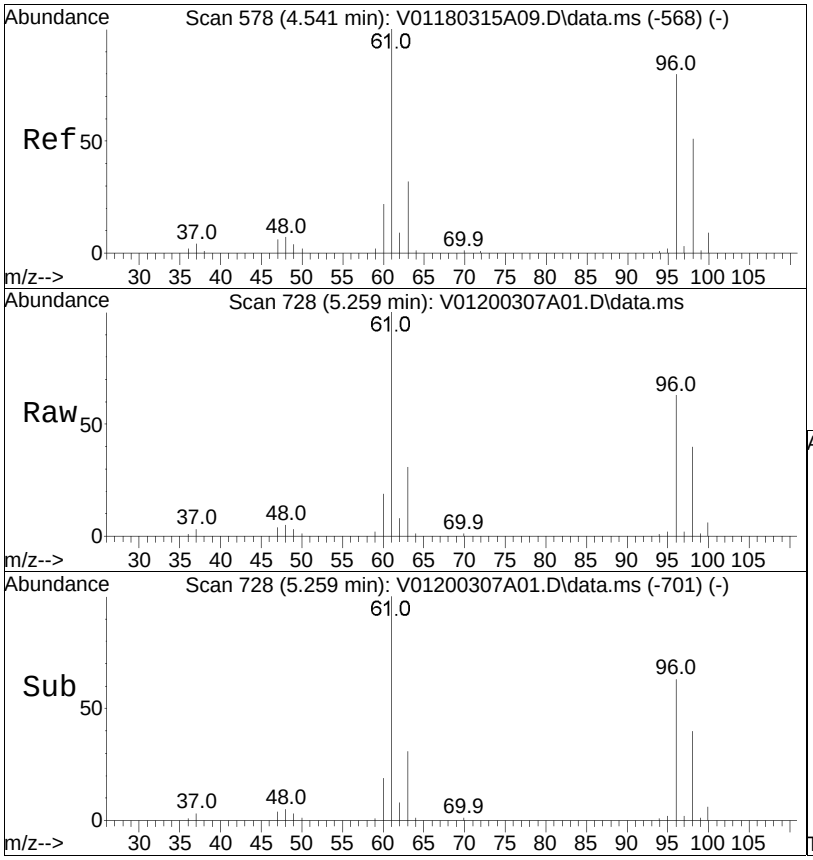



#27
Vinyl acetate
Concen: 11.66 ug/L
RT: 4.937 min Scan# 669
Delta R.T. -0.005 min
Lab File: V01200307A01.D
Acq: 7 Mar 2020 9:31 am

Tgt Ion: 43 Resp: 114967

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 43 | 100 | | |
| 86 | 6.8 | 6.6 | 9.8 |

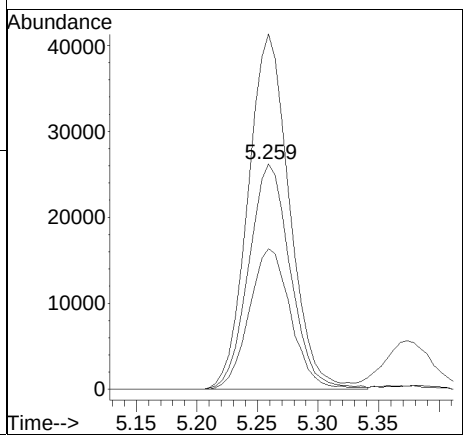


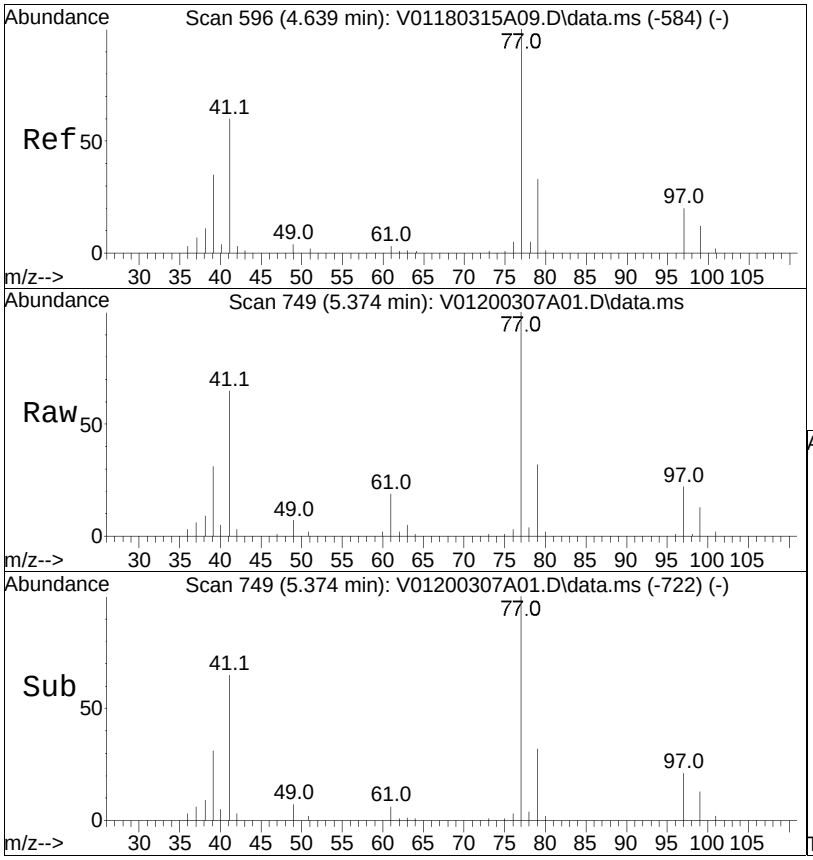



#28
cis-1,2-Dichloroethene
Concen: 11.63 ug/L
RT: 5.259 min Scan# 728
Delta R.T. -0.005 min
Lab File: V01200307A01.D
Acq: 7 Mar 2020 9:31 am

Tgt Ion: 96 Resp: 62789

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 96 | 100 | | |
| 61 | 156.6 | 105.8 | 158.6 |
| 98 | 62.4 | 51.1 | 76.7 |

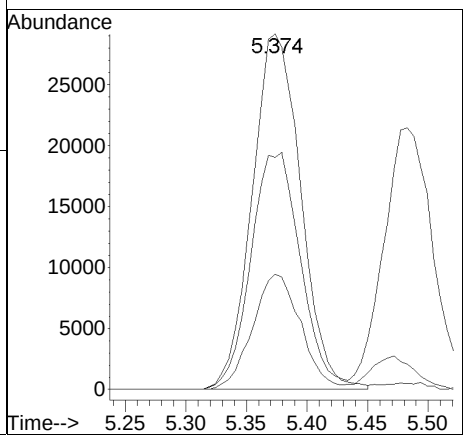


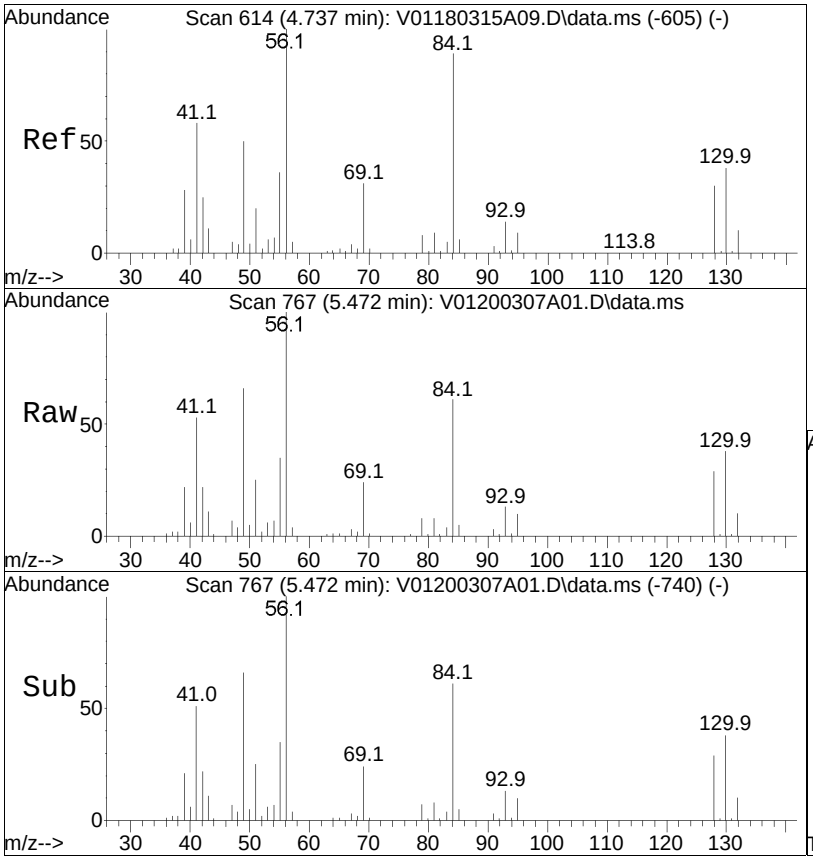



#29
2,2-Dichloropropane
Concen: 12.01 ug/L
RT: 5.374 min Scan# 749
Delta R.T. -0.000 min
Lab File: V01200307A01.D
Acq: 7 Mar 2020 9:31 am

Tgt Ion: 77 Resp: 81576

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 77 | 100 | | |
| 41 | 68.0 | 39.6 | 82.3 |
| 79 | 31.8 | 20.9 | 43.3 |

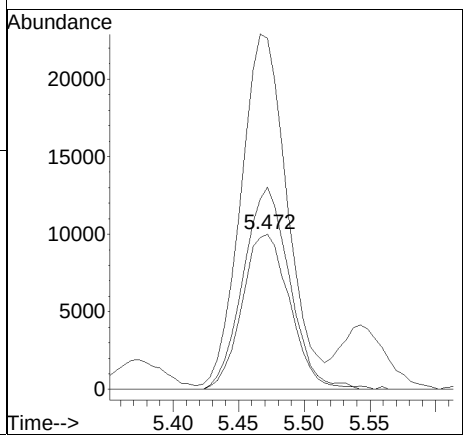


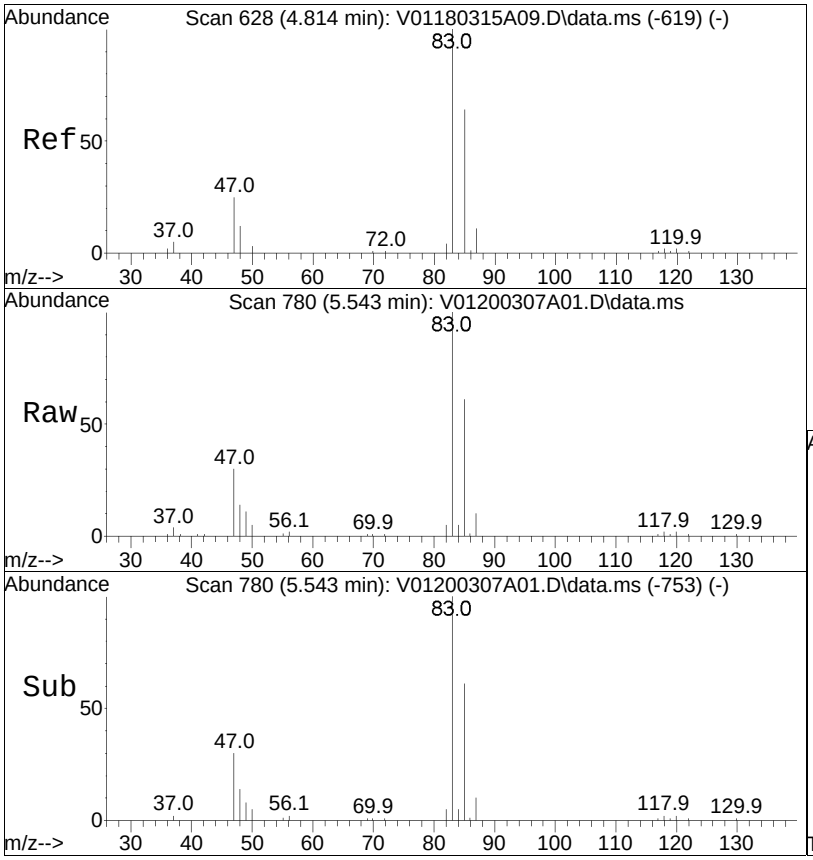



#30
Bromochloromethane
Concen: 12.23 ug/L
RT: 5.472 min Scan# 767
Delta R.T. -0.000 min
Lab File: V01200307A01.D
Acq: 7 Mar 2020 9:31 am

Tgt Ion:128 Resp: 25310

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 128 | 100 | | |
| 49 | 221.0 | 140.4 | 210.6# |
| 130 | 127.1 | 103.1 | 154.7 |

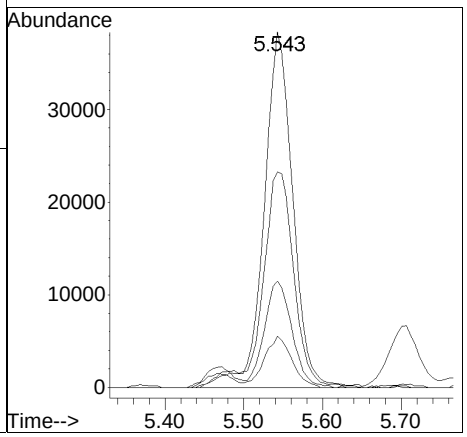


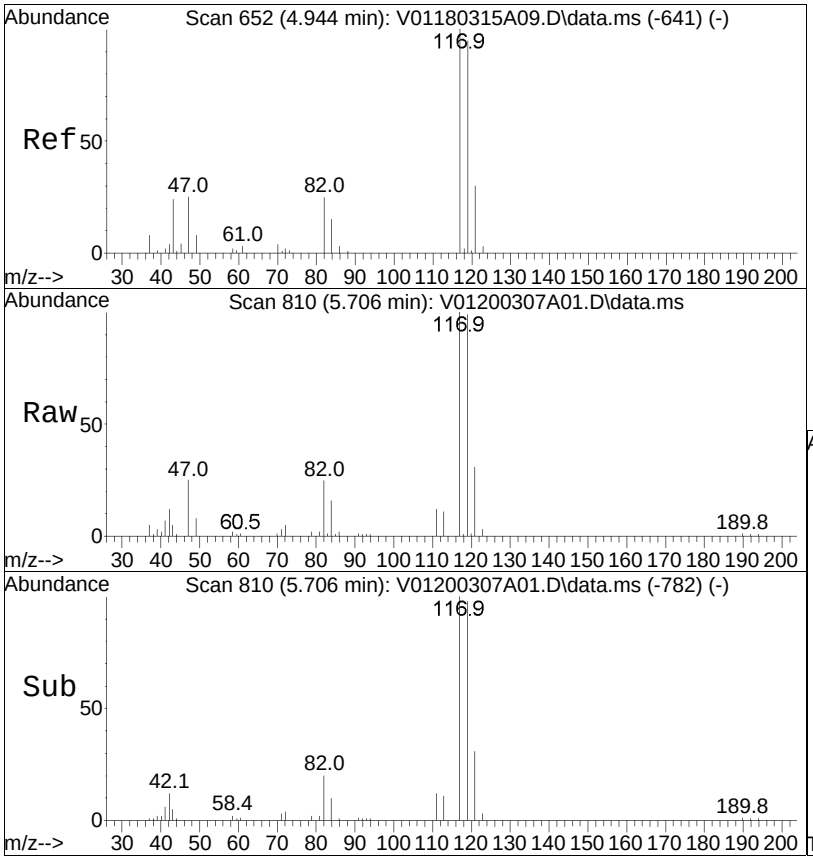



#32
Chloroform
Concen: 11.51 ug/L
RT: 5.543 min Scan# 780
Delta R.T. -0.005 min
Lab File: V01200307A01.D
Acq: 7 Mar 2020 9:31 am

Tgt Ion: 83 Resp: 97797

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 83 | 100 | | |
| 85 | 62.6 | 42.3 | 87.8 |
| 47 | 28.6 | 17.8 | 37.0 |
| 48 | 13.8 | 9.3 | 19.3 |

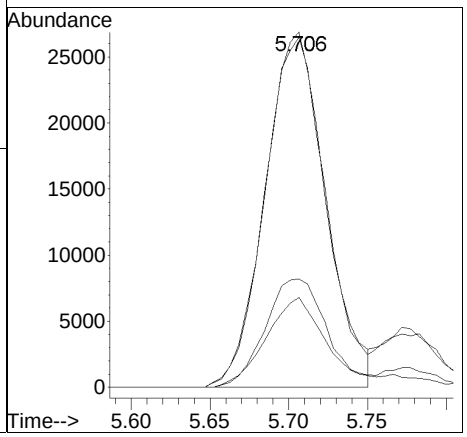


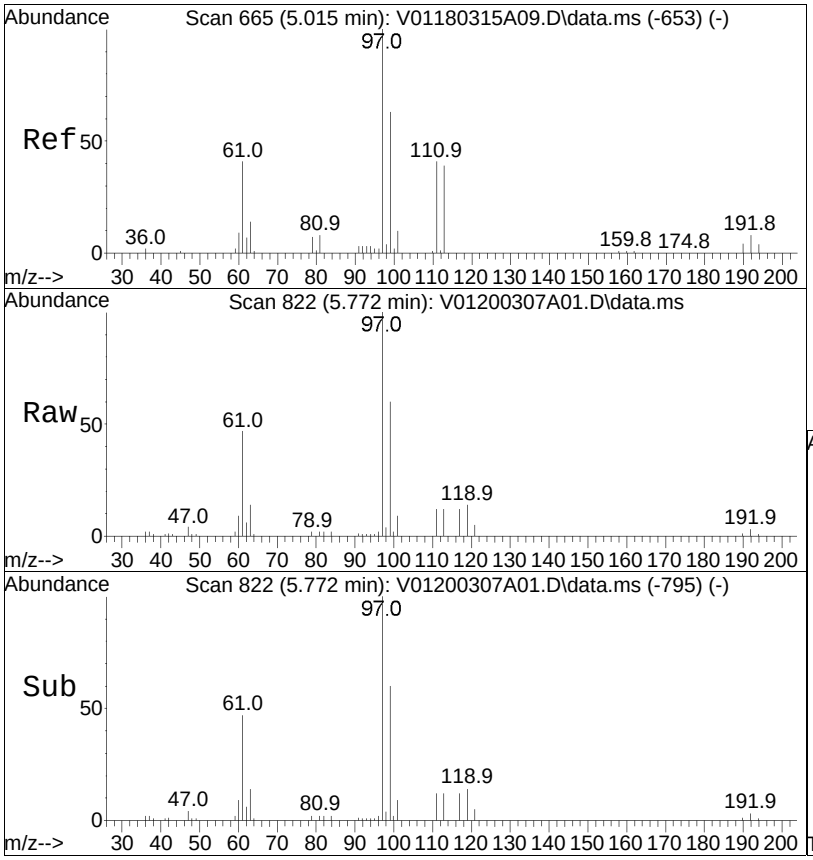



#34
Carbon tetrachloride
Concen: 10.47 ug/L
RT: 5.706 min Scan# 810
Delta R.T. 0.000 min
Lab File: V01200307A01.D
Acq: 7 Mar 2020 9:31 am

Tgt Ion:117 Resp: 71727

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 117 | 100 | | |
| 119 | 99.1 | 62.1 | 128.9 |
| 121 | 31.6 | 19.8 | 41.0 |
| 82 | 25.3 | 17.1 | 35.5 |

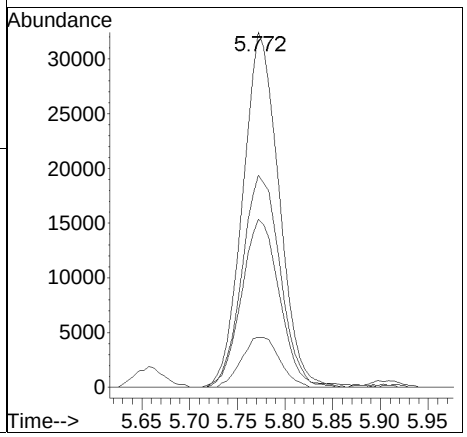


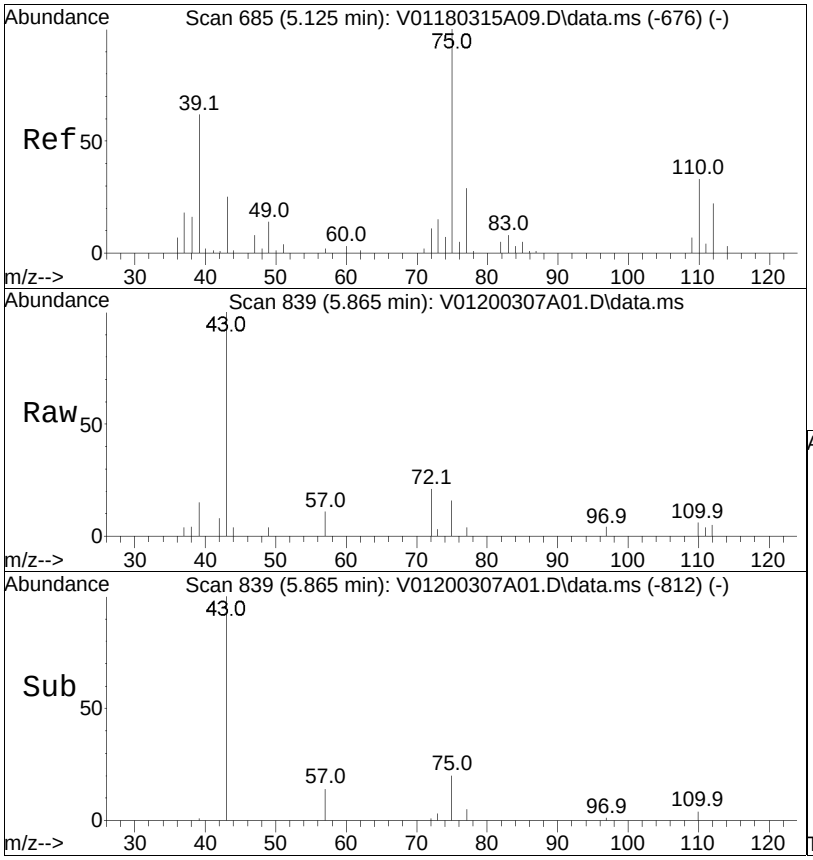



#37
1,1,1-Trichloroethane
Concen: 10.85 ug/L
RT: 5.772 min Scan# 822
Delta R.T. -0.005 min
Lab File: V01200307A01.D
Acq: 7 Mar 2020 9:31 am

Tgt Ion: 97 Resp: 86135

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 97 | 100 | | |
| 99 | 62.6 | 41.7 | 86.7 |
| 61 | 49.5 | 29.4 | 61.2 |
| 63 | 14.8 | 9.4 | 19.4 |

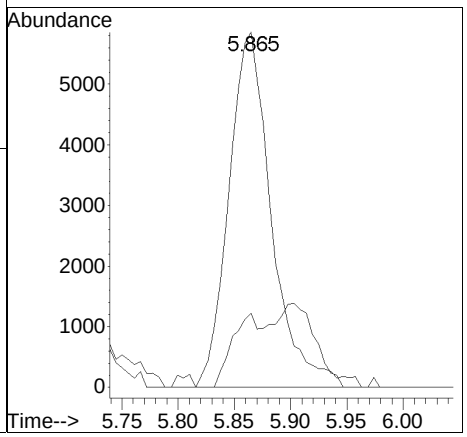


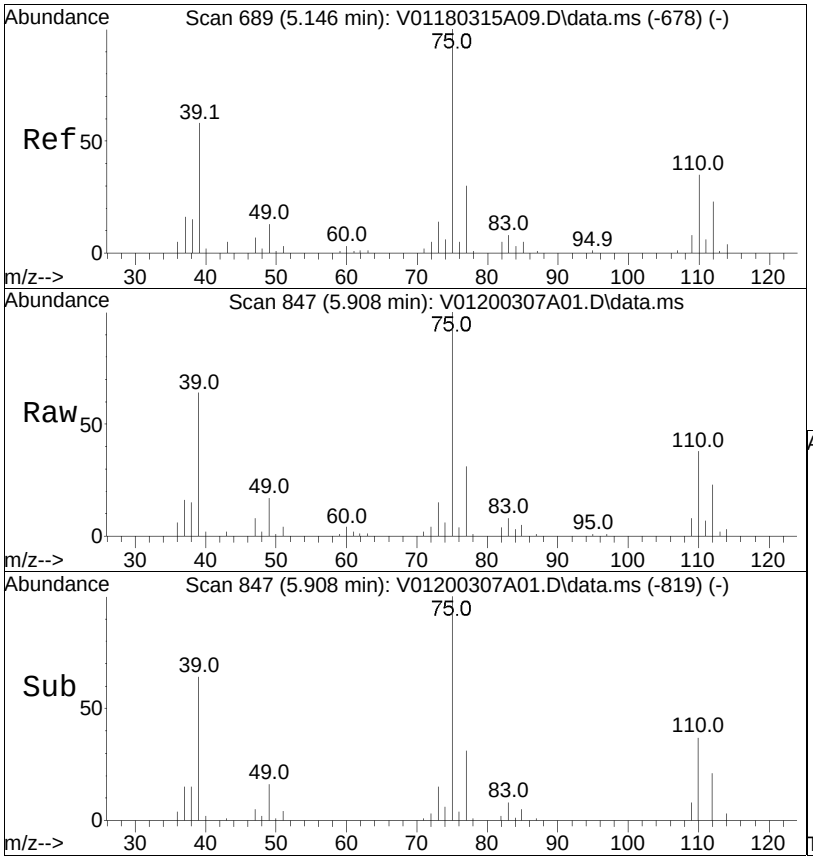



#39
2-Butanone
Concen: 11.97 ug/L
RT: 5.865 min Scan# 839
Delta R.T. -0.000 min
Lab File: V01200307A01.D
Acq: 7 Mar 2020 9:31 am

Tgt Ion: 43 Resp: 15530

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 43 | 100 | | |
| 72 | 14.4 | 45.8 | 68.6# |

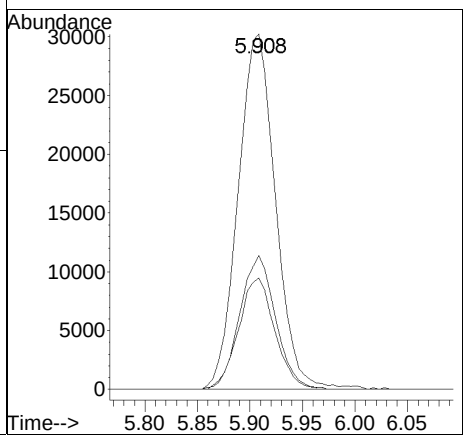


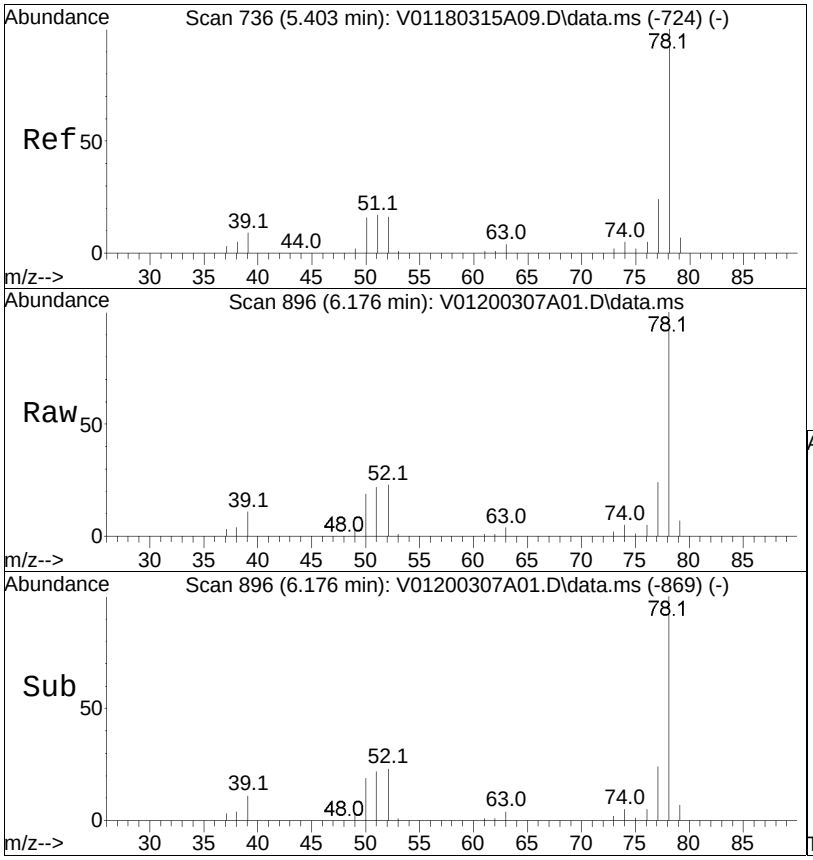



#40
1,1-Dichloropropene
Concen: 11.05 ug/L
RT: 5.908 min Scan# 847
Delta R.T. 0.000 min
Lab File: V01200307A01.D
Acq: 7 Mar 2020 9:31 am

Tgt Ion: 75 Resp: 75126

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 75 | 100 | | |
| 110 | 36.0 | 22.2 | 46.2 |
| 77 | 30.4 | 20.2 | 42.0 |

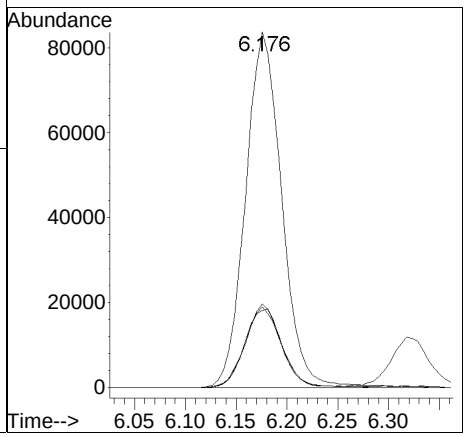


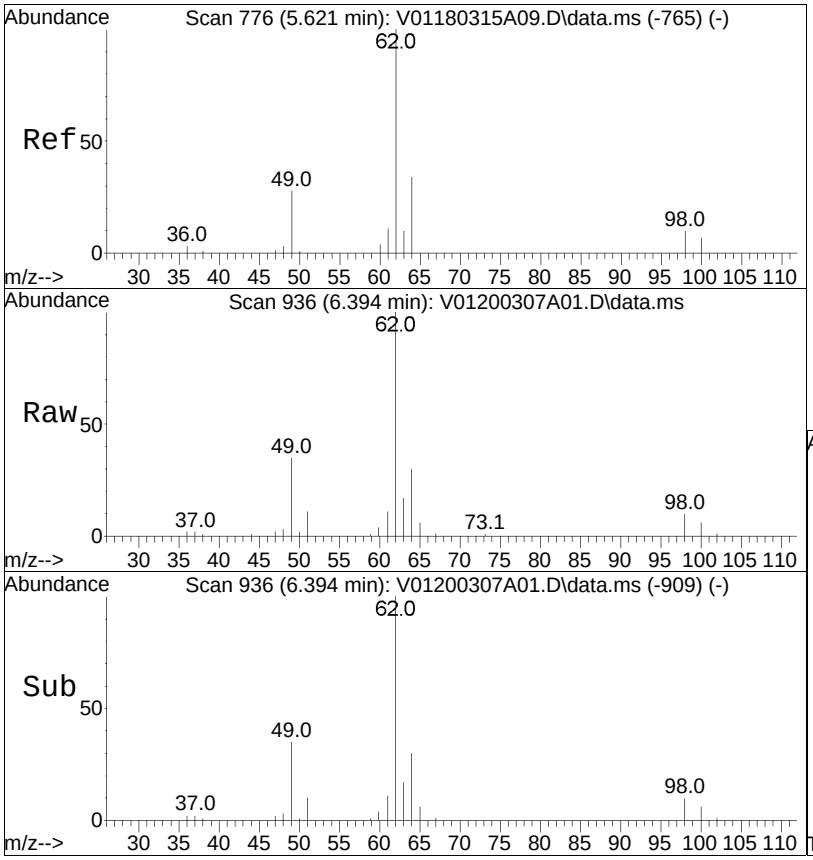



#41
Benzene
Concen: 11.00 ug/L
RT: 6.176 min Scan# 896
Delta R.T. -0.005 min
Lab File: V01200307A01.D
Acq: 7 Mar 2020 9:31 am

Tgt Ion: 78 Resp: 206722

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 78 | 100 | | |
| 77 | 23.3 | 15.7 | 32.5 |
| 51 | 23.0 | 11.6 | 24.2 |
| 52 | 22.7 | 10.9 | 22.5# |

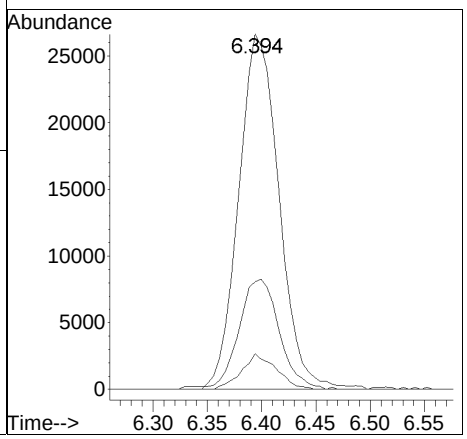


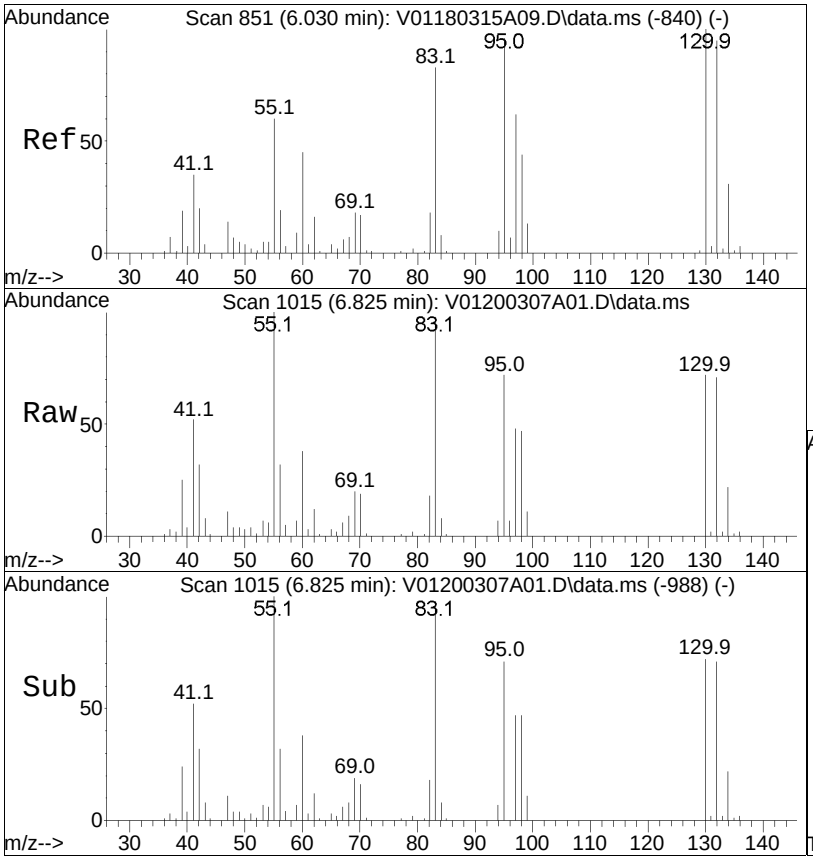



#44
1,2-Dichloroethane
Concen: 11.71 ug/L
RT: 6.394 min Scan# 936
Delta R.T. -0.005 min
Lab File: V01200307A01.D
Acq: 7 Mar 2020 9:31 am

Tgt Ion: 62 Resp: 69043

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 62 | 100 | | |
| 64 | 31.4 | 12.1 | 52.1 |
| 98 | 8.6 | 0.0 | 28.8 |

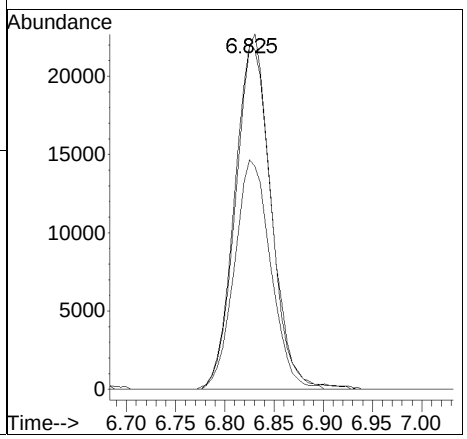


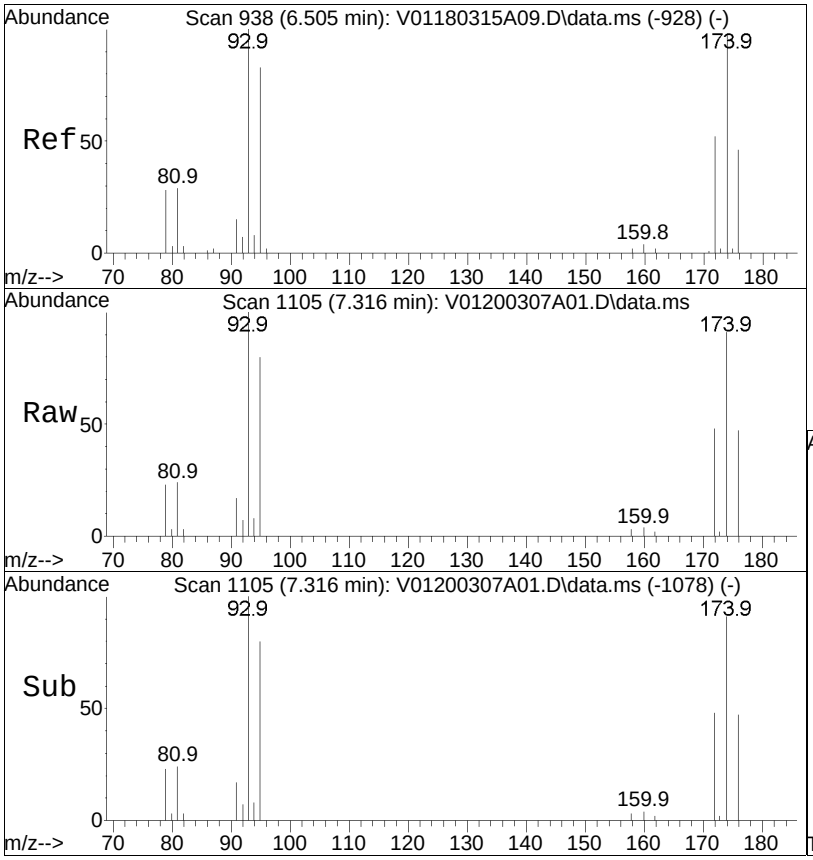



#48
Trichloroethene
Concen: 11.00 ug/L
RT: 6.825 min Scan# 1015
Delta R.T. -0.005 min
Lab File: V01200307A01.D
Acq: 7 Mar 2020 9:31 am

Tgt Ion: 95 Resp: 56959

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 95 | 100 | | |
| 97 | 66.1 | 54.4 | 81.6 |
| 130 | 99.6 | 80.6 | 120.8 |

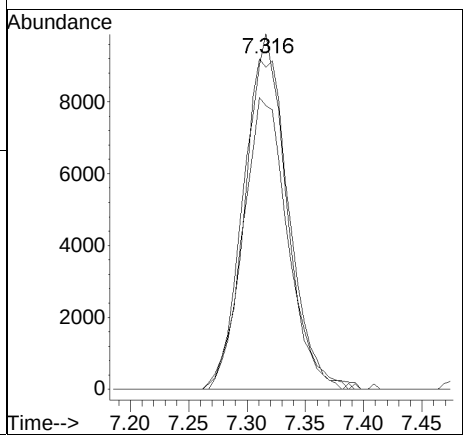


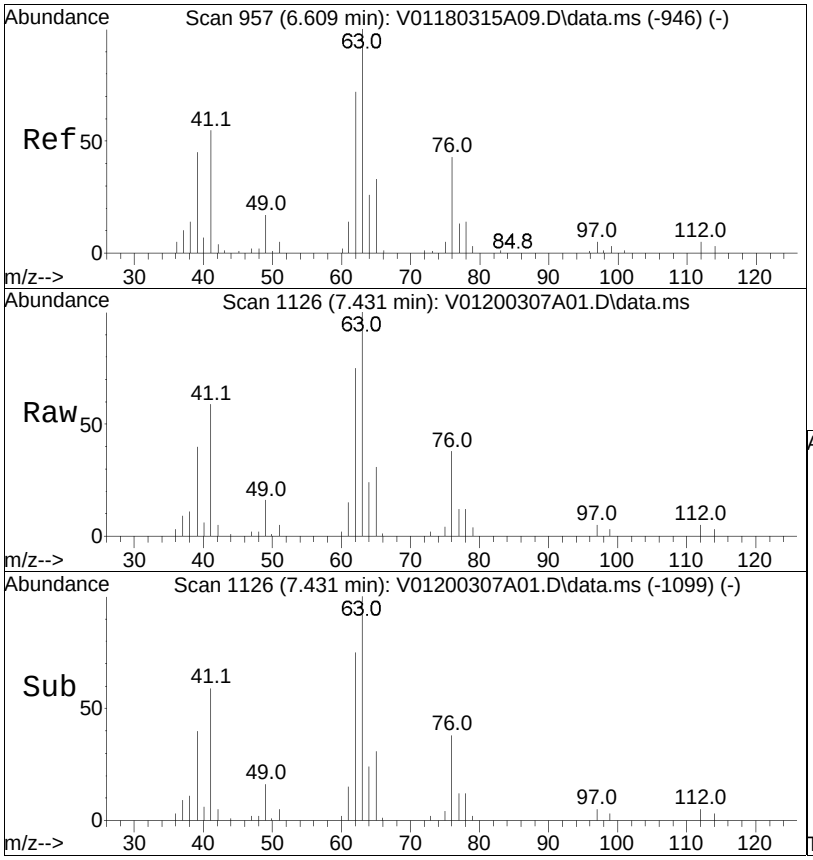



#50
Dibromomethane
Concen: 11.34 ug/L
RT: 7.316 min Scan# 1105
Delta R.T. 0.000 min
Lab File: V01200307A01.D
Acq: 7 Mar 2020 9:31 am

Tgt Ion: 93 Resp: 25266

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 93 | 100 | | |
| 95 | 85.4 | 68.6 | 102.8 |
| 174 | 99.1 | 80.5 | 120.7 |

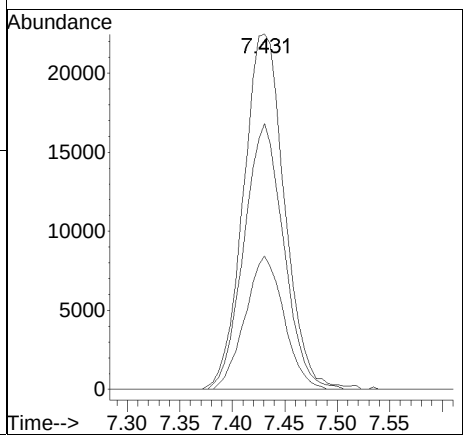


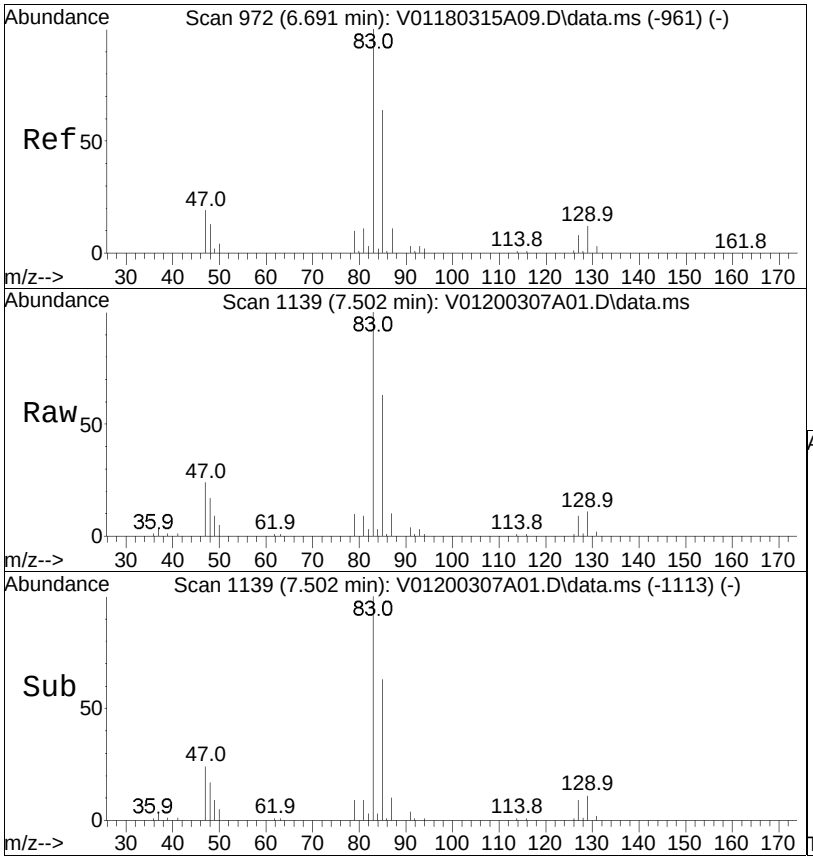



#51
1,2-Dichloropropane
Concen: 11.49 ug/L
RT: 7.431 min Scan# 1126
Delta R.T. -0.000 min
Lab File: V01200307A01.D
Acq: 7 Mar 2020 9:31 am

Tgt Ion: 63 Resp: 61417

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 63 | 100 | | |
| 62 | 72.2 | 57.2 | 85.8 |
| 76 | 35.4 | 33.6 | 50.4 |

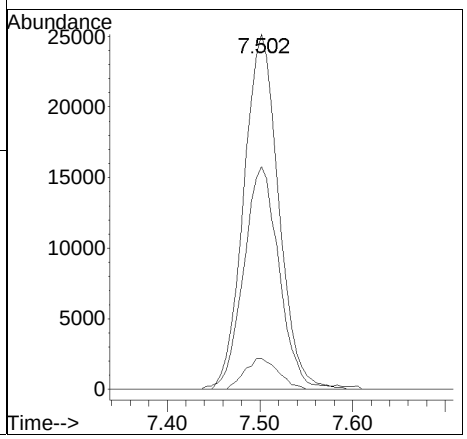


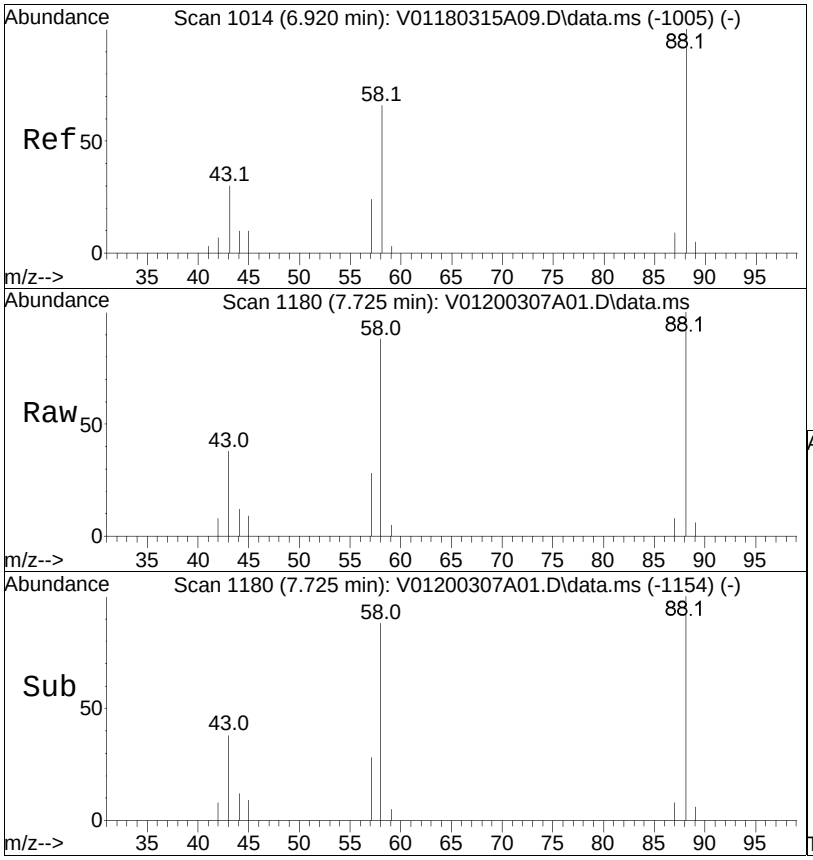



#54
Bromodichloromethane
Concen: 10.77 ug/L
RT: 7.502 min Scan# 1139
Delta R.T. -0.005 min
Lab File: V01200307A01.D
Acq: 7 Mar 2020 9:31 am

Tgt Ion: 83 Resp: 66289

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 83 | 100 | | |
| 85 | 63.3 | 52.2 | 78.4 |
| 127 | 8.4 | 6.9 | 10.3 |

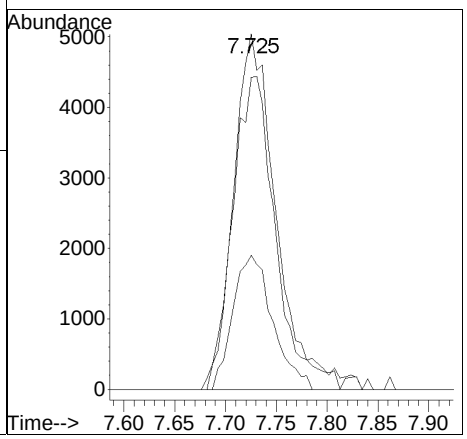


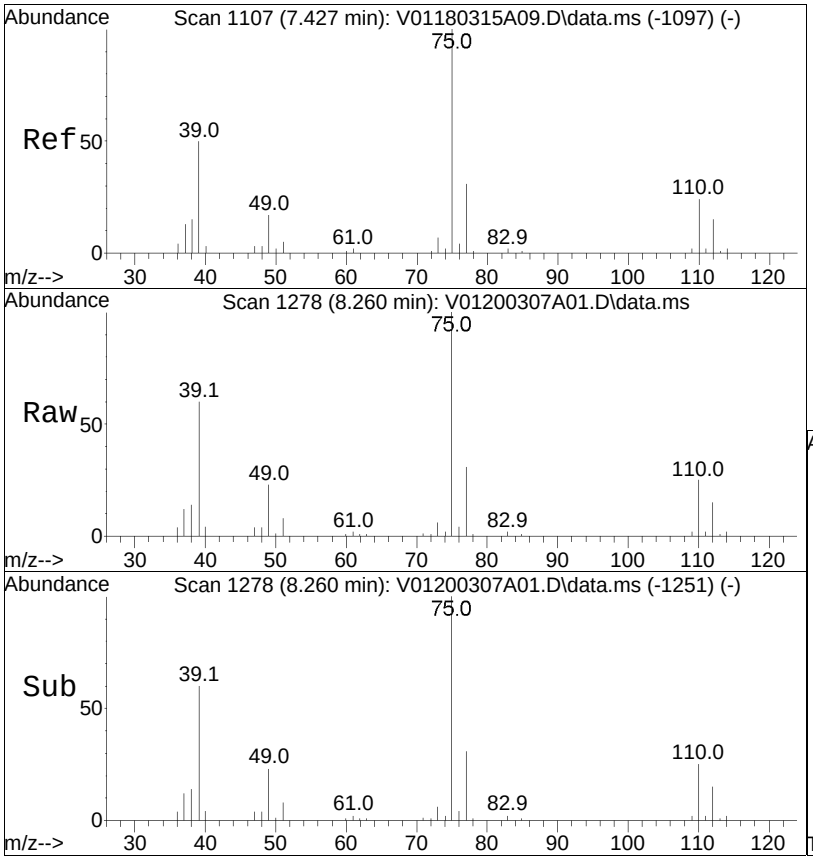



#57
1,4-Dioxane
Concen: 677.37 ug/L
RT: 7.725 min Scan# 1180
Delta R.T. -0.011 min
Lab File: V01200307A01.D
Acq: 7 Mar 2020 9:31 am

Tgt Ion: 88 Resp: 14796

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 88 | 100 | | |
| 58 | 88.0 | 54.8 | 82.2# |
| 43 | 35.1 | 29.3 | 43.9 |

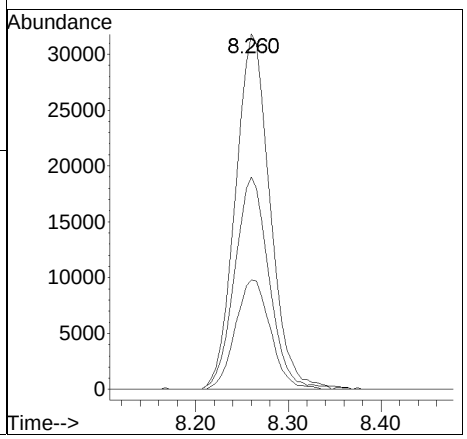


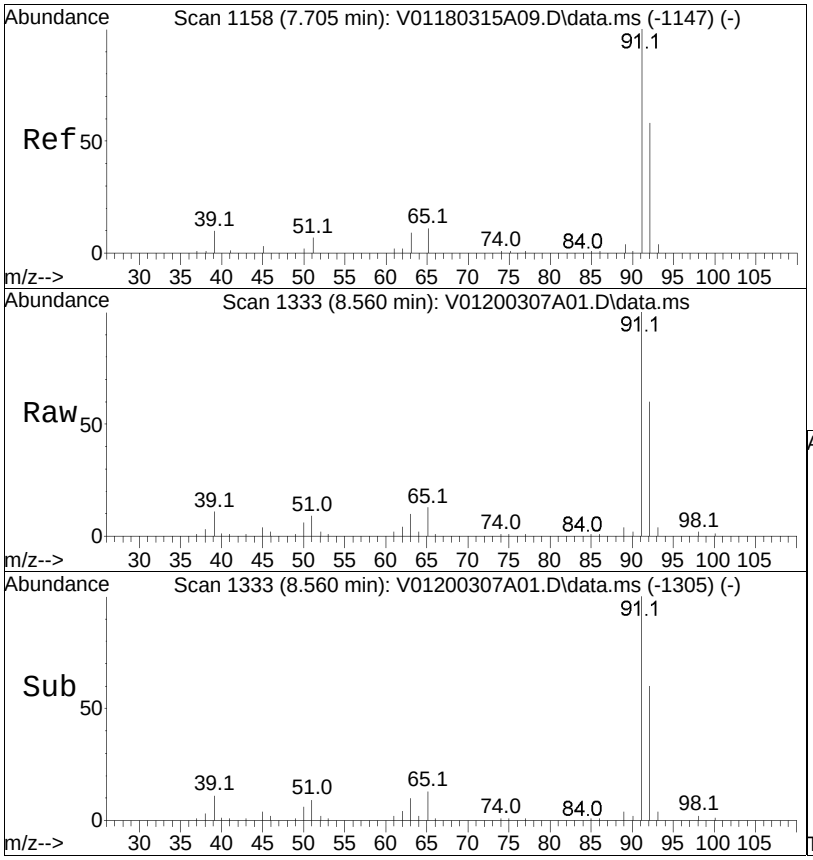



#58
cis-1,3-Dichloropropene
Concen: 10.96 ug/L
RT: 8.260 min Scan# 1278
Delta R.T. -0.005 min
Lab File: V01200307A01.D
Acq: 7 Mar 2020 9:31 am

Tgt Ion: 75 Resp: 82924

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 75 | 100 | | |
| 77 | 31.2 | 25.1 | 37.7 |
| 39 | 59.2 | 42.6 | 63.8 |

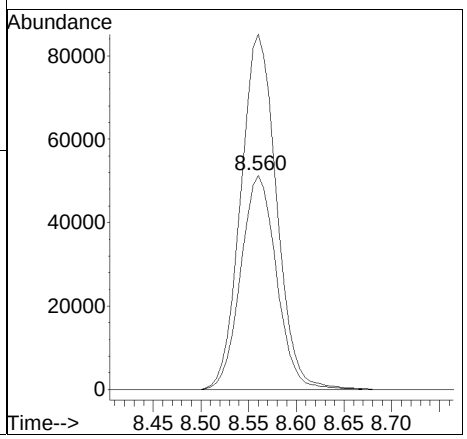


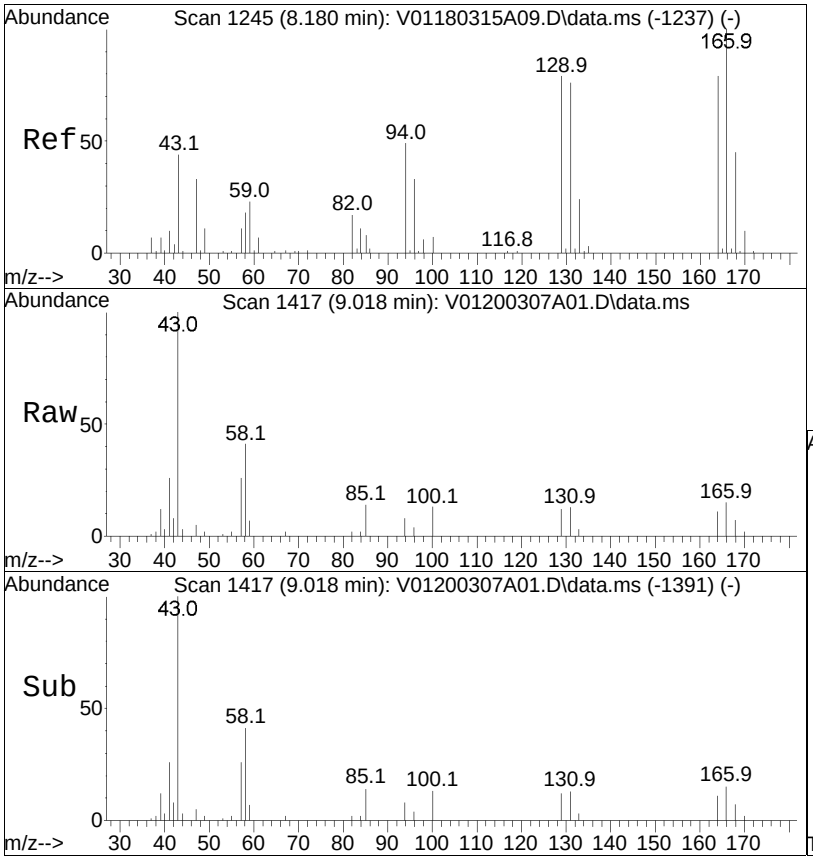



#61
Toluene
Concen: 11.00 ug/L
RT: 8.560 min Scan# 1333
Delta R.T. 0.000 min
Lab File: V01200307A01.D
Acq: 7 Mar 2020 9:31 am

Tgt Ion: 92 Resp: 133589

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 92 | 100 | | |
| 91 | 166.2 | 137.5 | 206.3 |

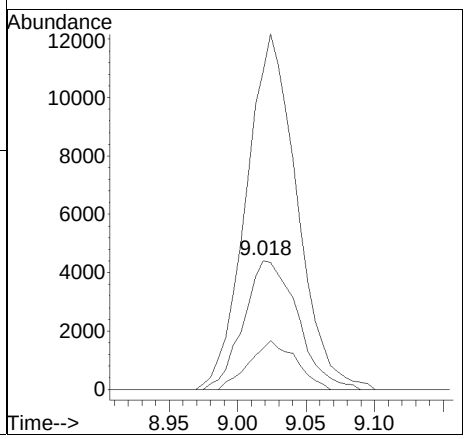


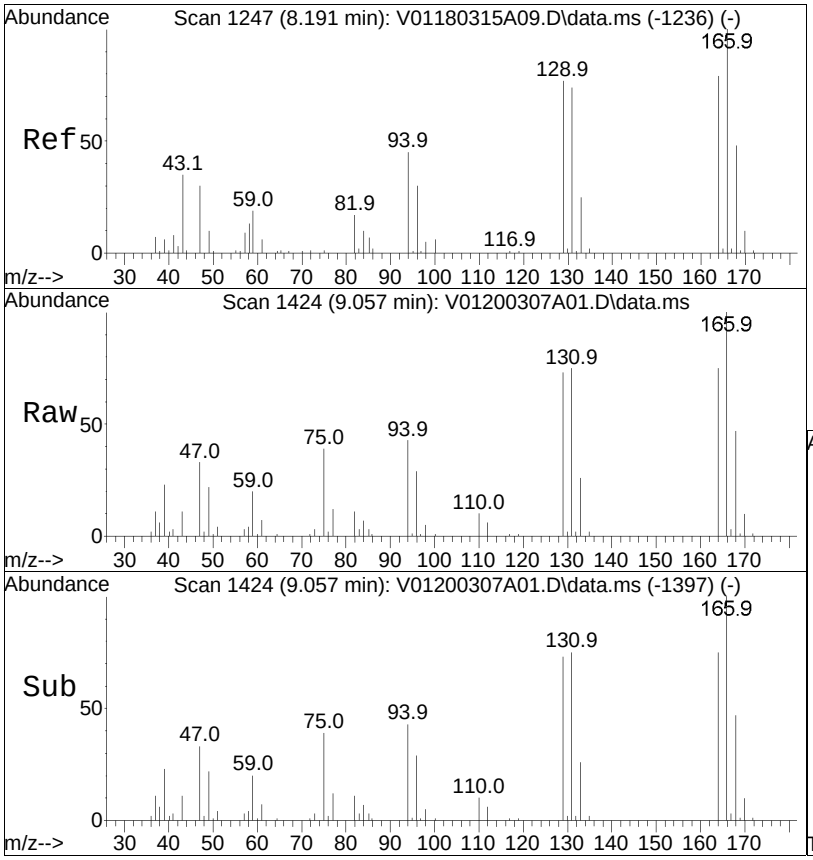



#62
4-Methyl-2-pentanone
Concen: 10.90 ug/L
RT: 9.018 min Scan# 1417
Delta R.T. -0.006 min
Lab File: V01200307A01.D
Acq: 7 Mar 2020 9:31 am

Tgt Ion: 58 Resp: 12059

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 58 | 100 | | |
| 100 | 32.8 | 31.8 | 47.6 |
| 43 | 260.9 | 212.5 | 318.7 |

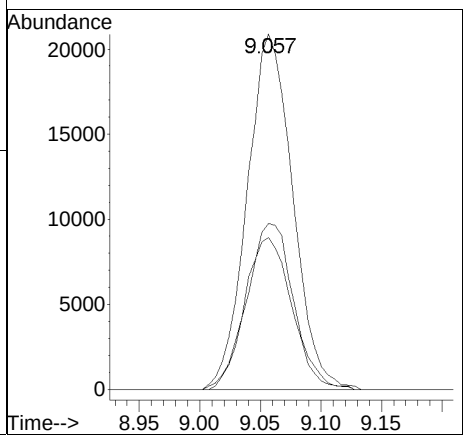


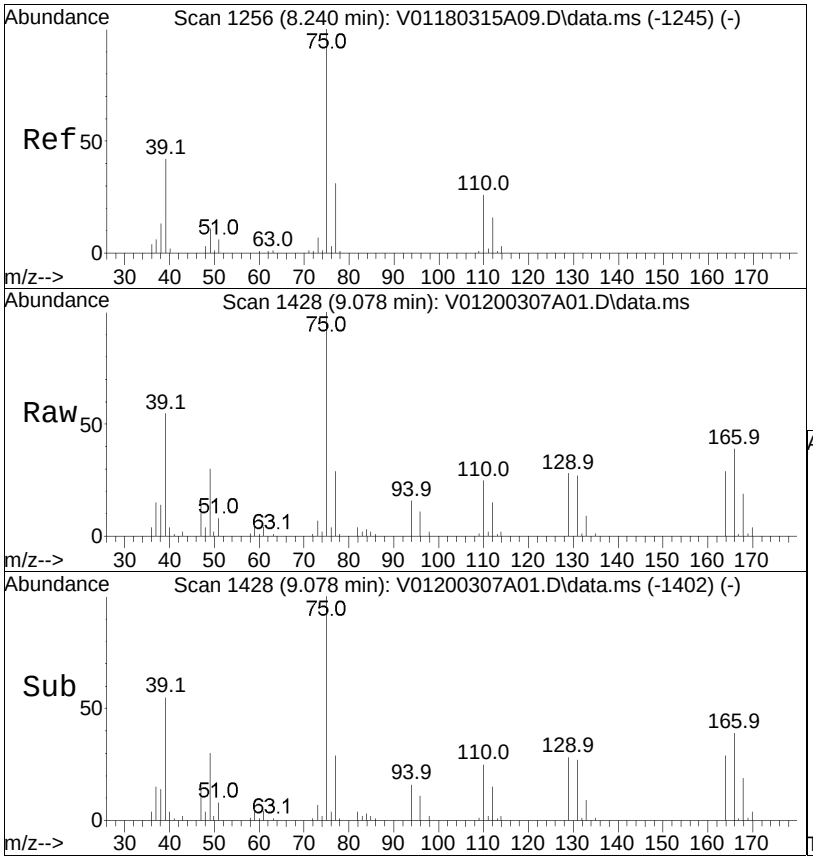



#63
Tetrachloroethene
Concen: 10.54 ug/L
RT: 9.057 min Scan# 1424
Delta R.T. -0.000 min
Lab File: V01200307A01.D
Acq: 7 Mar 2020 9:31 am

Tgt Ion:166 Resp: 54675

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 166 | 100 | | |
| 168 | 47.7 | 27.4 | 67.4 |
| 94 | 44.5 | 24.8 | 64.8 |

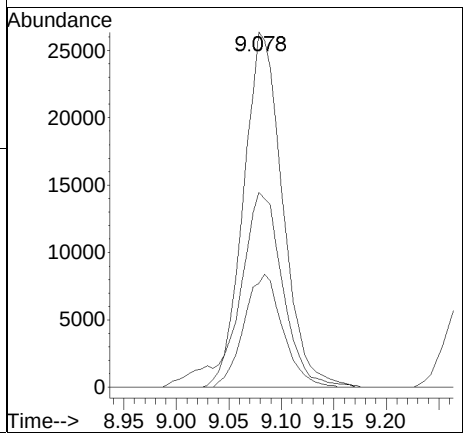


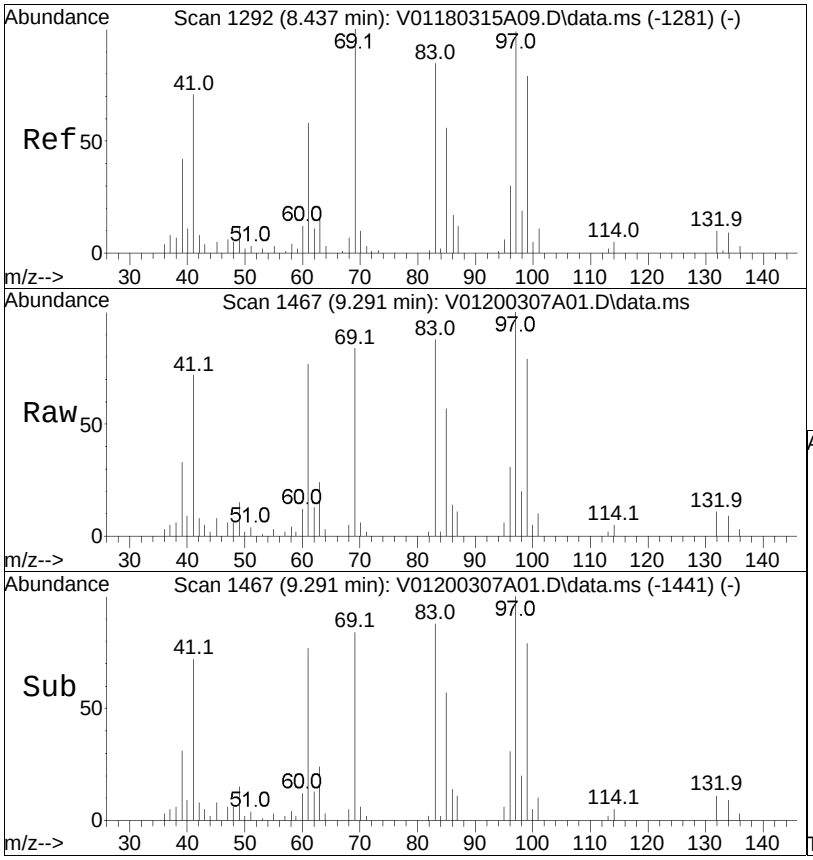



#65
trans-1,3-Dichloropropene
Concen: 10.75 ug/L
RT: 9.078 min Scan# 1428
Delta R.T. -0.006 min
Lab File: V01200307A01.D
Acq: 7 Mar 2020 9:31 am

Tgt Ion: 75 Resp: 68512

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 75 | 100 | | |
| 77 | 31.6 | 11.8 | 51.8 |
| 39 | 61.6 | 30.2 | 70.2 |

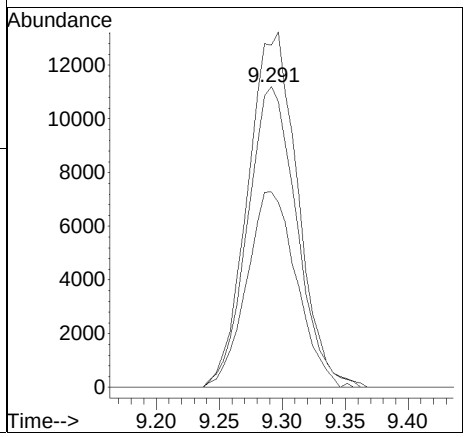


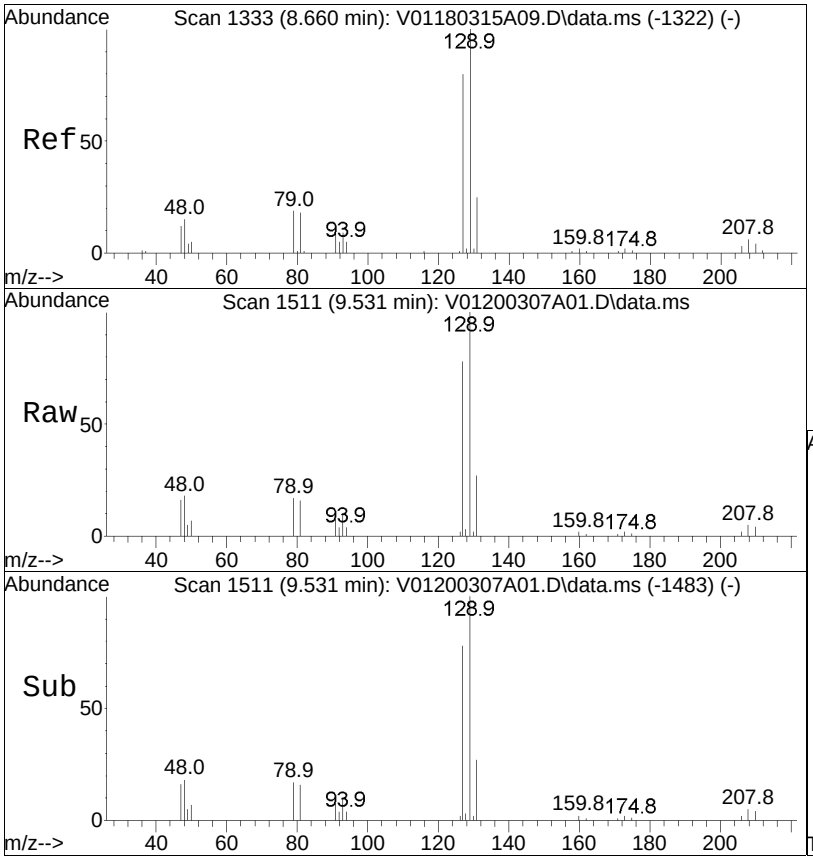



#68
1,1,2-Trichloroethane
Concen: 10.95 ug/L
RT: 9.291 min Scan# 1467
Delta R.T. -0.006 min
Lab File: V01200307A01.D
Acq: 7 Mar 2020 9:31 am

Tgt Ion: 83 Resp: 30395

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 83 | 100 | | |
| 97 | 120.2 | 96.7 | 136.7 |
| 85 | 66.3 | 45.3 | 85.3 |

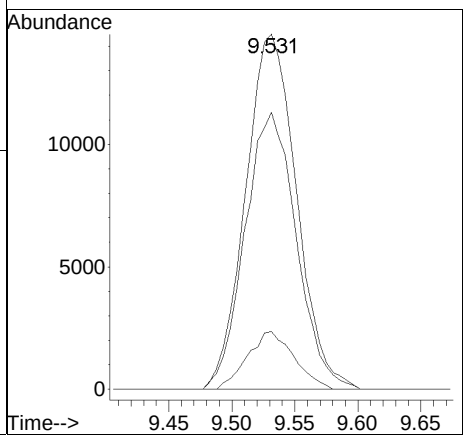


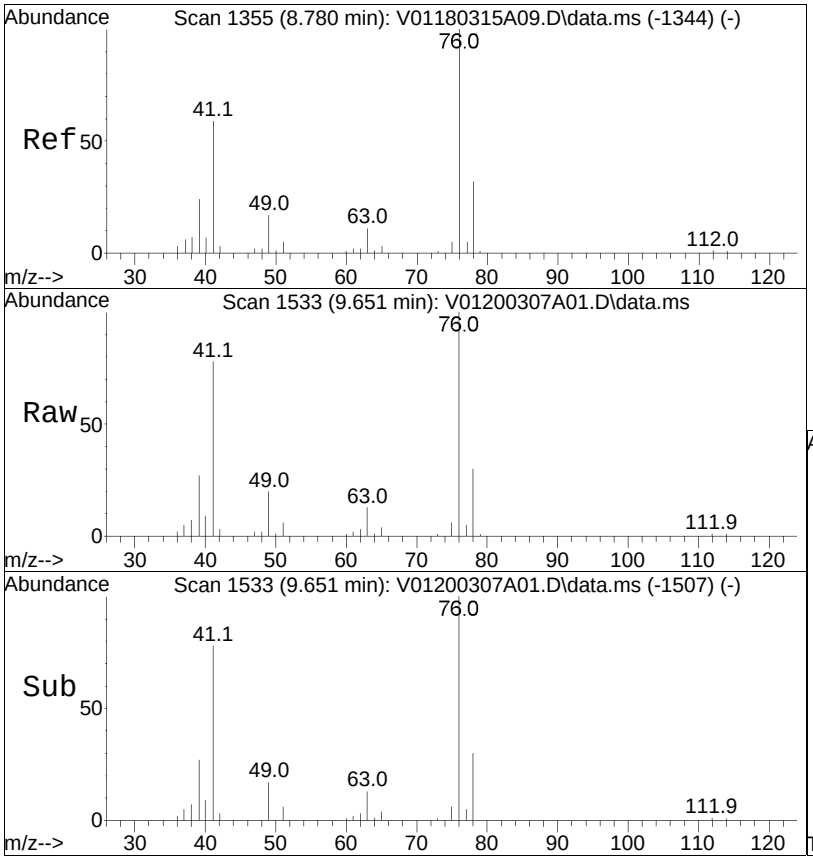



#69
Chlorodibromomethane
Concen: 10.02 ug/L
RT: 9.531 min Scan# 1511
Delta R.T. 0.000 min
Lab File: V01200307A01.D
Acq: 7 Mar 2020 9:31 am

Tgt Ion:129 Resp: 40816

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 129 | 100 | | |
| 81 | 14.9 | 0.0 | 37.9 |
| 127 | 78.7 | 56.6 | 96.6 |

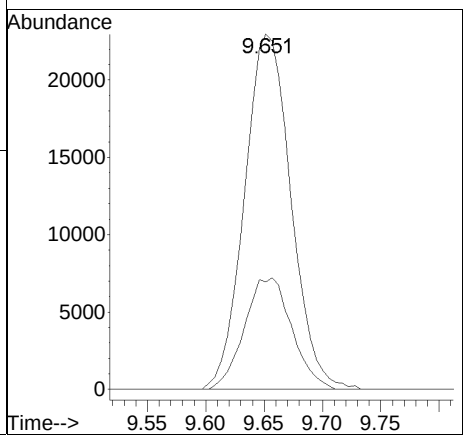


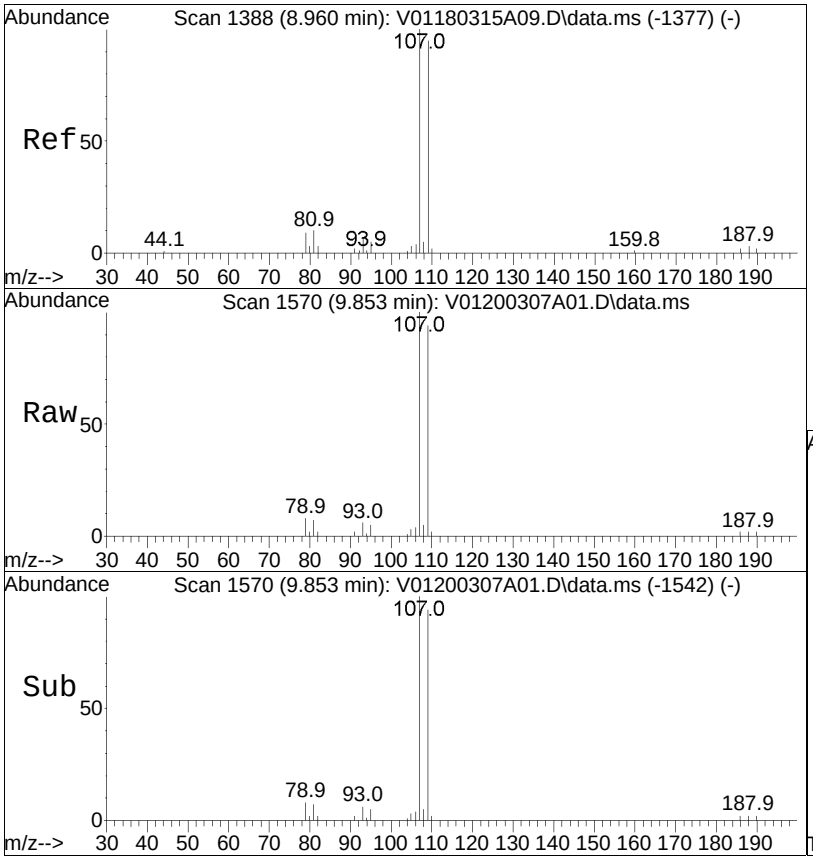



#70
1,3-Dichloropropane
Concen: 10.82 ug/L
RT: 9.651 min Scan# 1533
Delta R.T. -0.006 min
Lab File: V01200307A01.D
Acq: 7 Mar 2020 9:31 am

Tgt Ion: 76 Resp: 63672

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 76 | 100 | | |
| 78 | 32.0 | 25.8 | 38.8 |

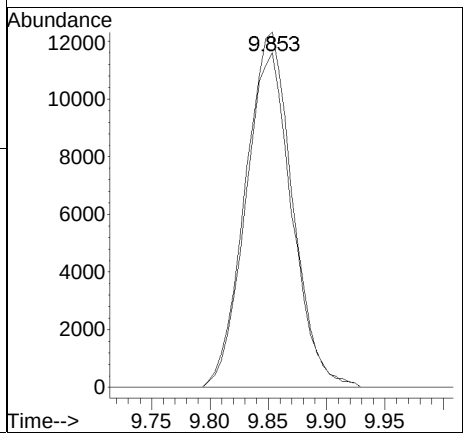


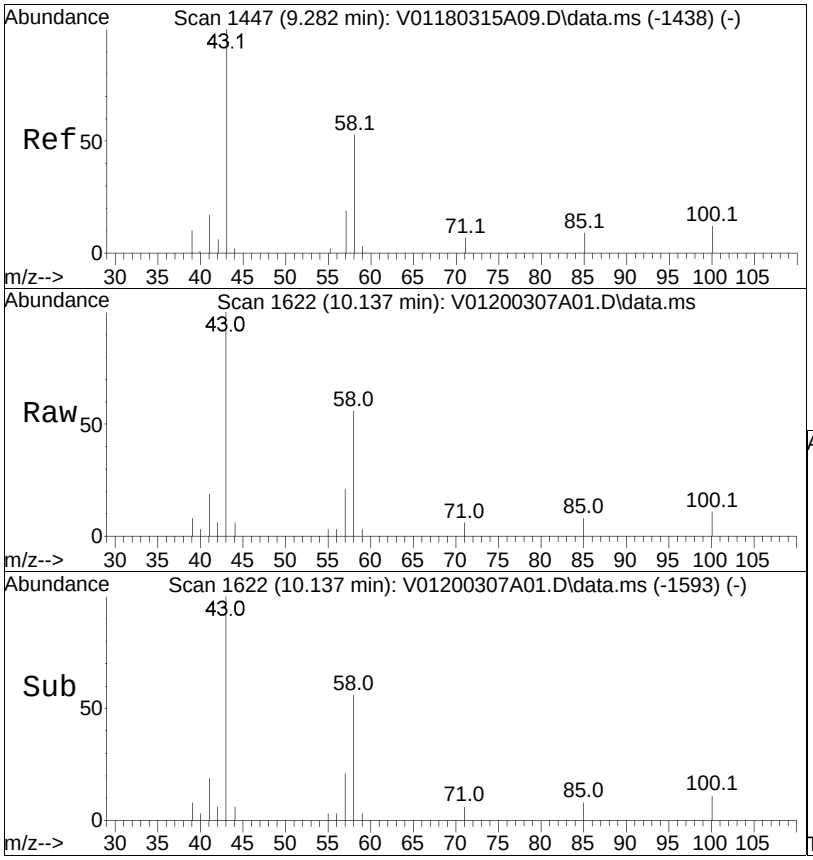



#71
1,2-Dibromoethane
Concen: 10.81 ug/L
RT: 9.853 min Scan# 1570
Delta R.T. 0.000 min
Lab File: V01200307A01.D
Acq: 7 Mar 2020 9:31 am

Tgt Ion:107 Resp: 34698

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 107 | 100 | | |
| 109 | 92.7 | 75.6 | 113.4 |

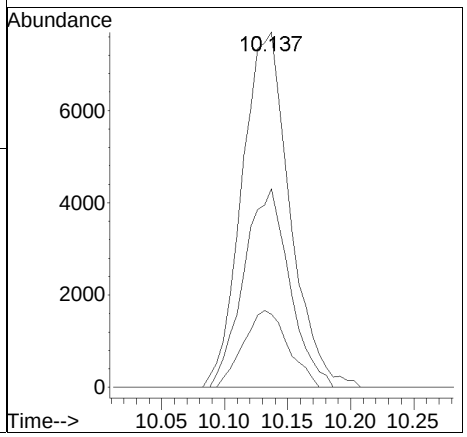


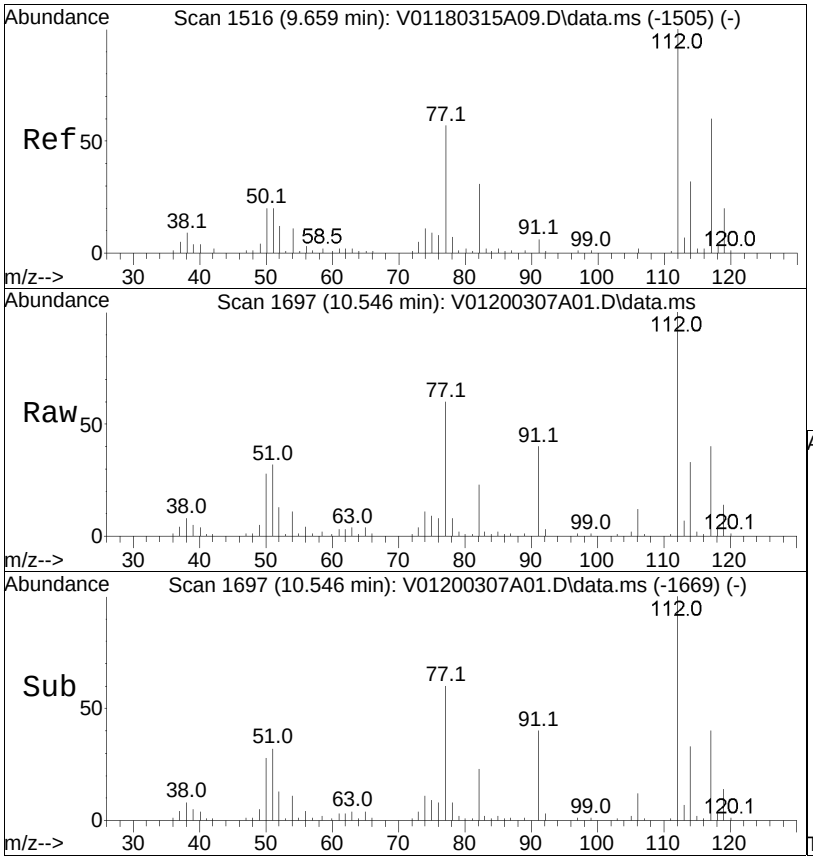



#72
2-Hexanone
Concen: 9.76 ug/L
RT: 10.137 min Scan# 1622
Delta R.T. 0.006 min
Lab File: V01200307A01.D
Acq: 7 Mar 2020 9:31 am

Tgt Ion: 43 Resp: 20402

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 43 | 100 | | |
| 58 | 53.6 | 40.8 | 61.2 |
| 57 | 20.3 | 14.2 | 21.4 |

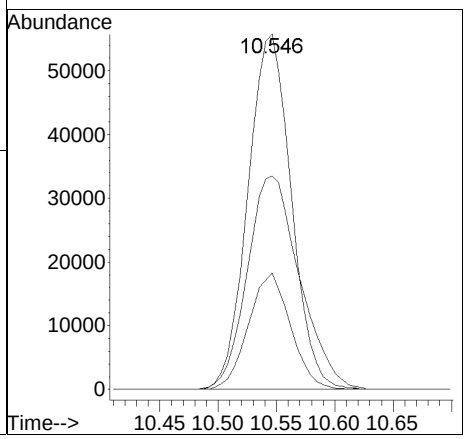


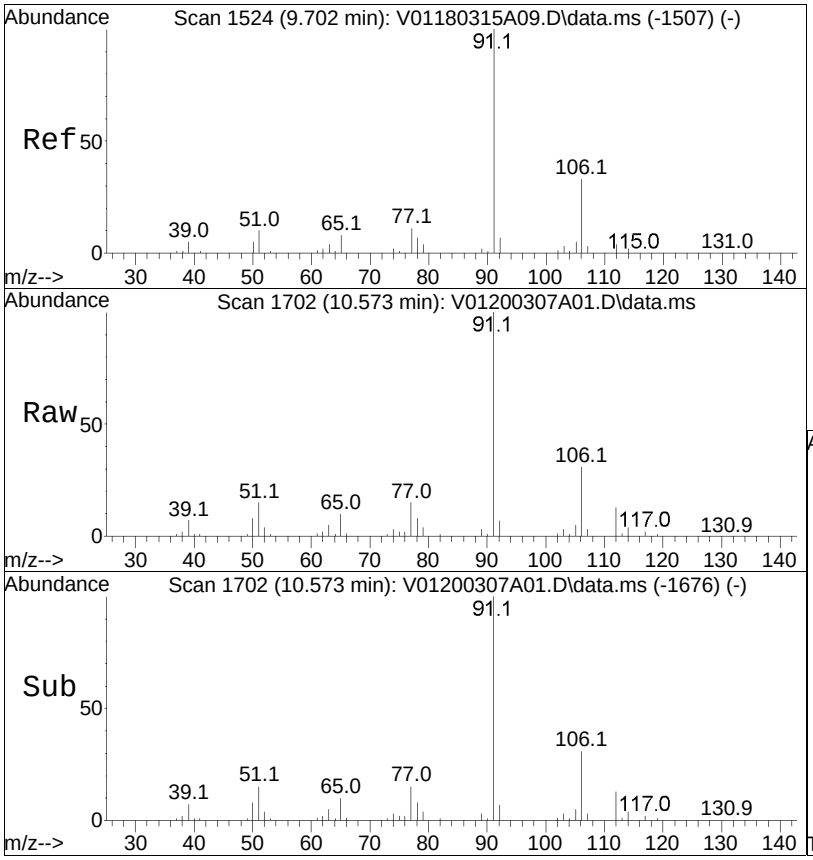



#73
Chlorobenzene
Concen: 11.06 ug/L
RT: 10.546 min Scan# 1697
Delta R.T. 0.000 min
Lab File: V01200307A01.D
Acq: 7 Mar 2020 9:31 am

Tgt Ion:112 Resp: 143555

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 112 | 100 | | |
| 77 | 72.7 | 59.8 | 89.6 |
| 114 | 31.9 | 25.4 | 38.2 |

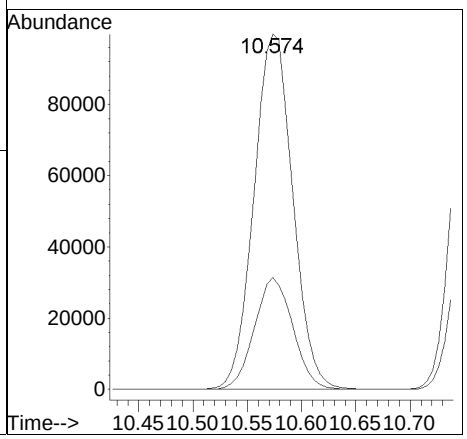


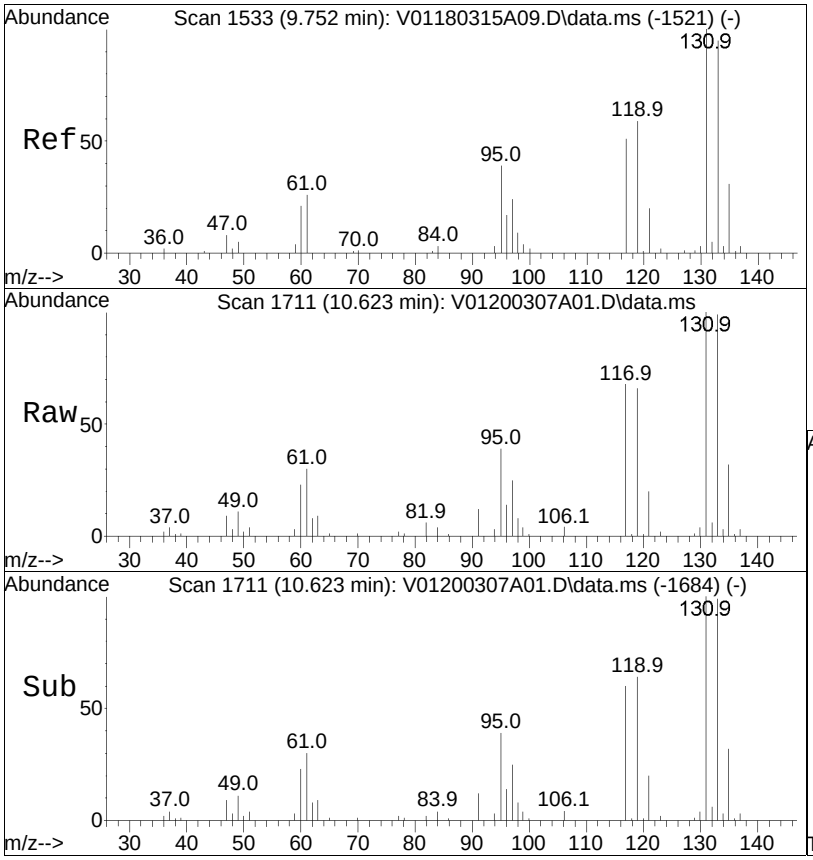



#74
Ethylbenzene
Concen: 10.90 ug/L
RT: 10.573 min Scan# 1702
Delta R.T. -0.006 min
Lab File: V01200307A01.D
Acq: 7 Mar 2020 9:31 am

Tgt Ion: 91 Resp: 248082

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 91 | 100 | | |
| 106 | 31.0 | 24.7 | 37.1 |

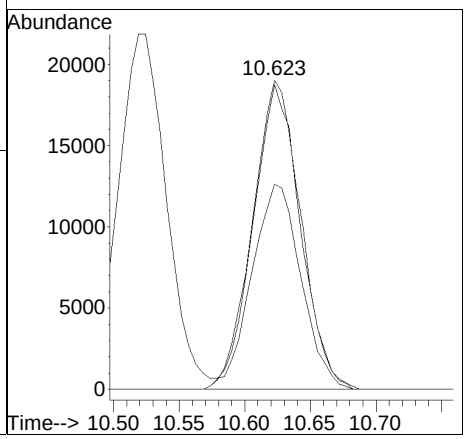


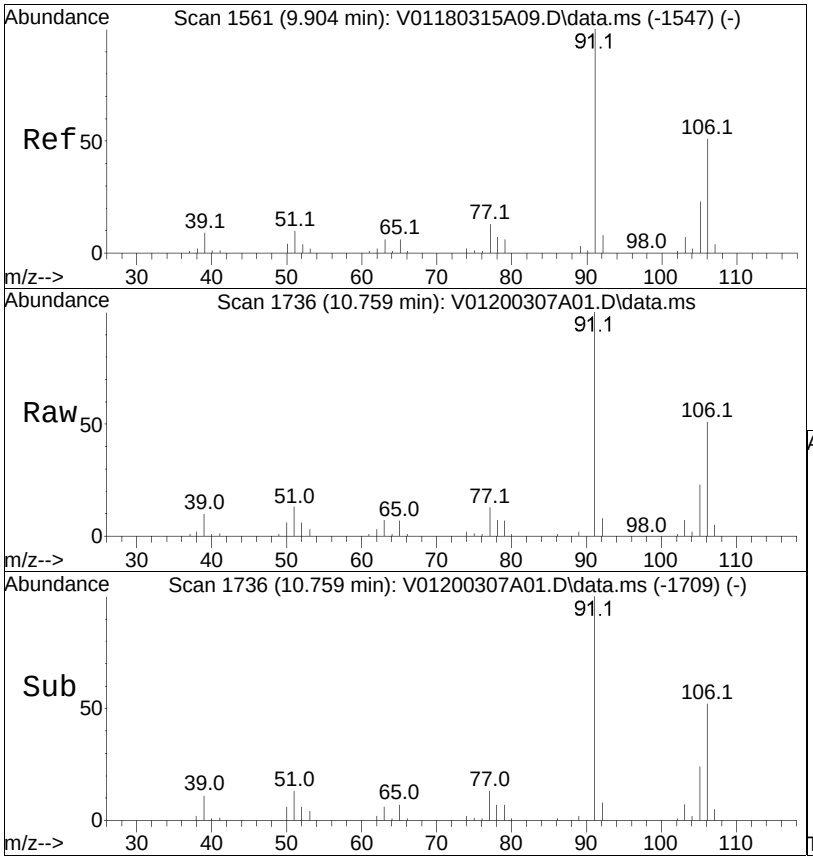



#75
1,1,1,2-Tetrachloroethane
Concen: 10.32 ug/L
RT: 10.623 min Scan# 1711
Delta R.T. -0.000 min
Lab File: V01200307A01.D
Acq: 7 Mar 2020 9:31 am

Tgt Ion:131 Resp: 48778

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 131 | 100 | | |
| 133 | 96.1 | 75.8 | 115.8 |
| 119 | 67.4 | 45.8 | 85.8 |

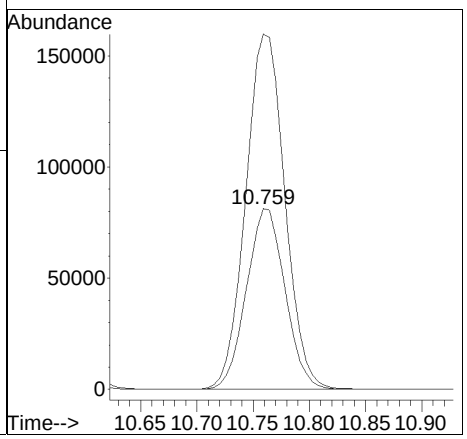


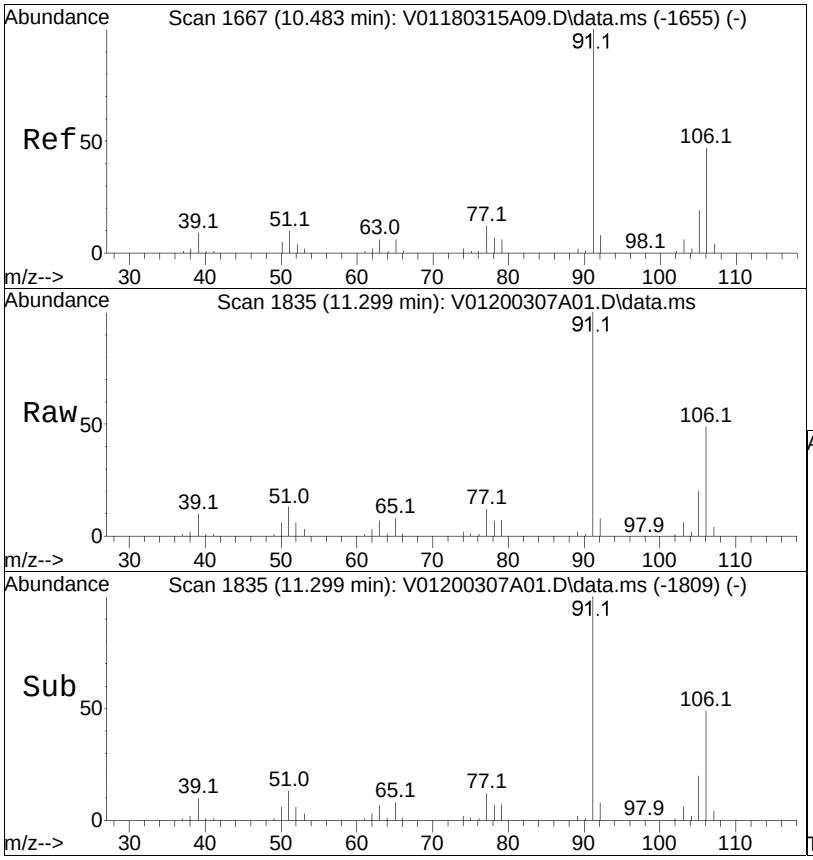



#76
p/m Xylene
Concen: 21.94 ug/L
RT: 10.759 min Scan# 1736
Delta R.T. -0.005 min
Lab File: V01200307A01.D
Acq: 7 Mar 2020 9:31 am

Tgt Ion:106 Resp: 193825

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 106 | 100 | | |
| 91 | 199.4 | 162.9 | 244.3 |

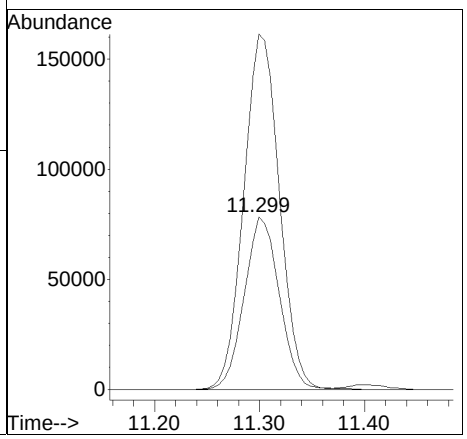


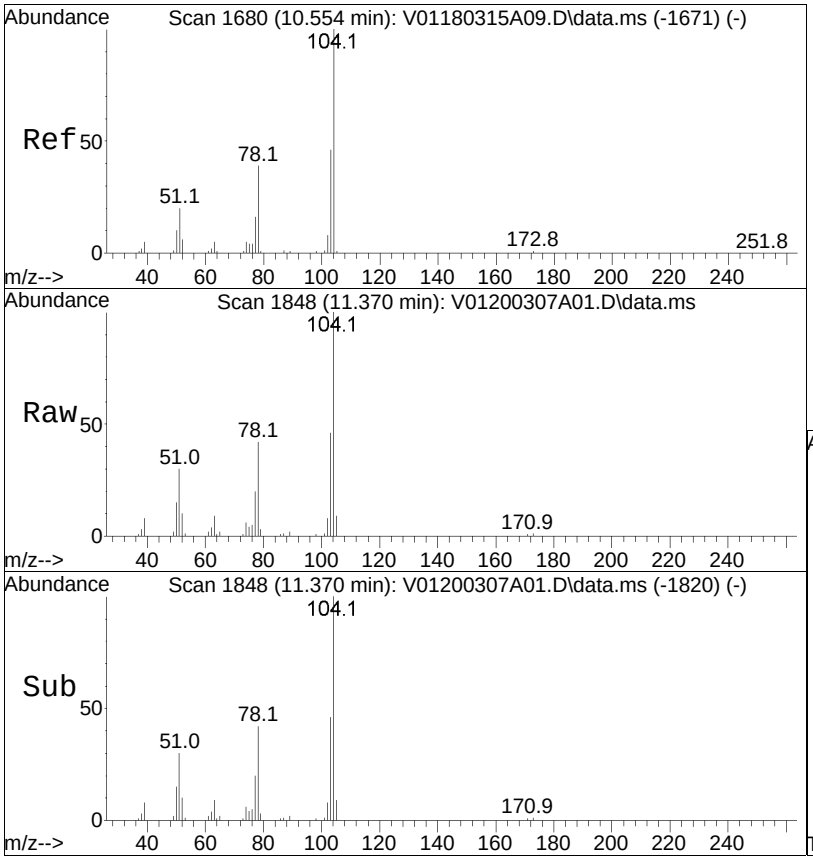



#77
o Xylene
Concen: 22.01 ug/L
RT: 11.299 min Scan# 1835
Delta R.T. -0.006 min
Lab File: V01200307A01.D
Acq: 7 Mar 2020 9:31 am

Tgt Ion:106 Resp: 181852

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 106 | 100 | | |
| 91 | 209.4 | 171.2 | 256.8 |

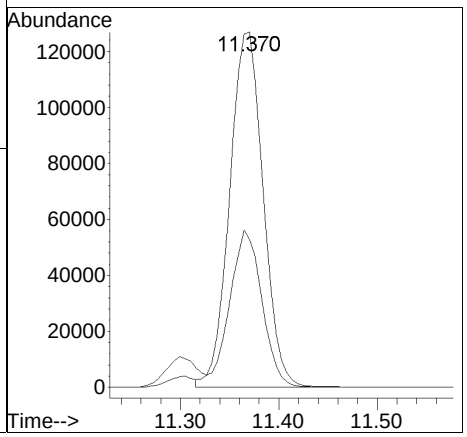


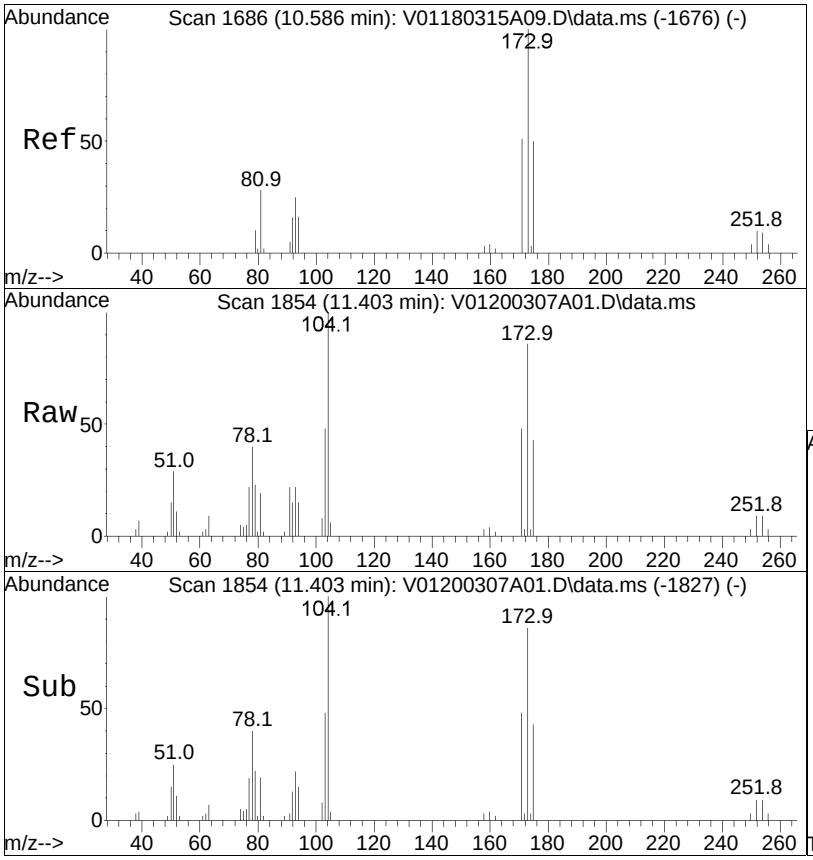



#78
Styrene
Concen: 21.71 ug/L
RT: 11.370 min Scan# 1848
Delta R.T. 0.000 min
Lab File: V01200307A01.D
Acq: 7 Mar 2020 9:31 am

Tgt Ion:104 Resp: 300693

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 104 | 100 | | |
| 78 | 42.3 | 34.2 | 51.4 |

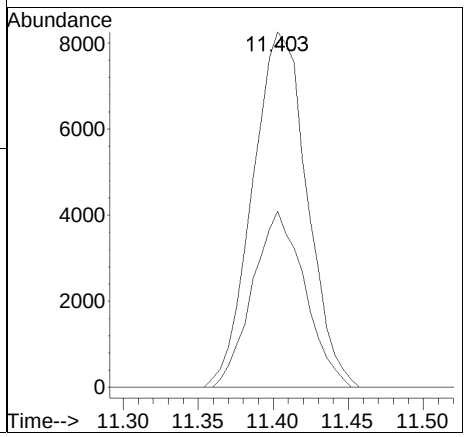


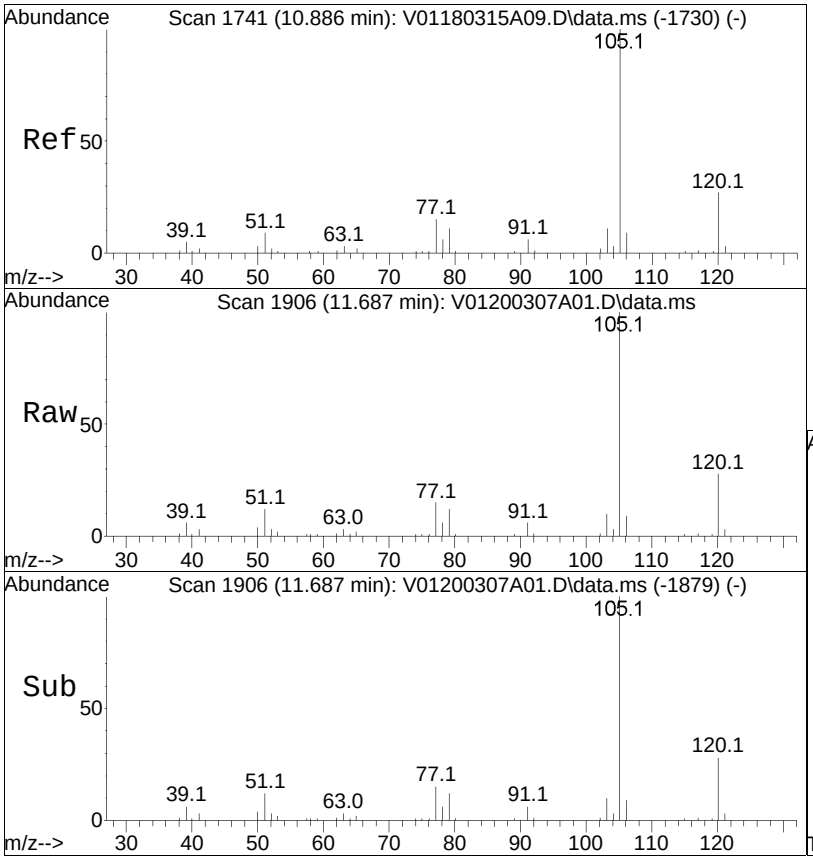



#80
Bromoform
Concen: 9.76 ug/L
RT: 11.403 min Scan# 1854
Delta R.T. -0.005 min
Lab File: V01200307A01.D
Acq: 7 Mar 2020 9:31 am

Tgt Ion:173 Resp: 20917

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 173 | 100 | | |
| 175 | 47.3 | 28.6 | 68.6 |

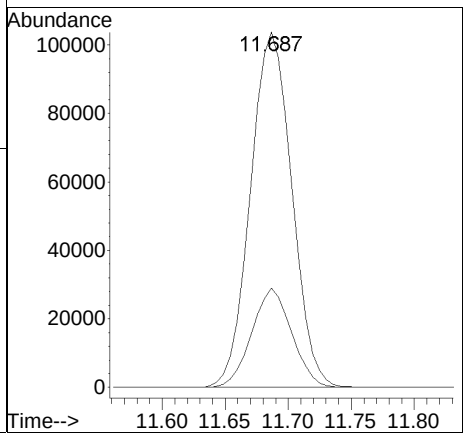


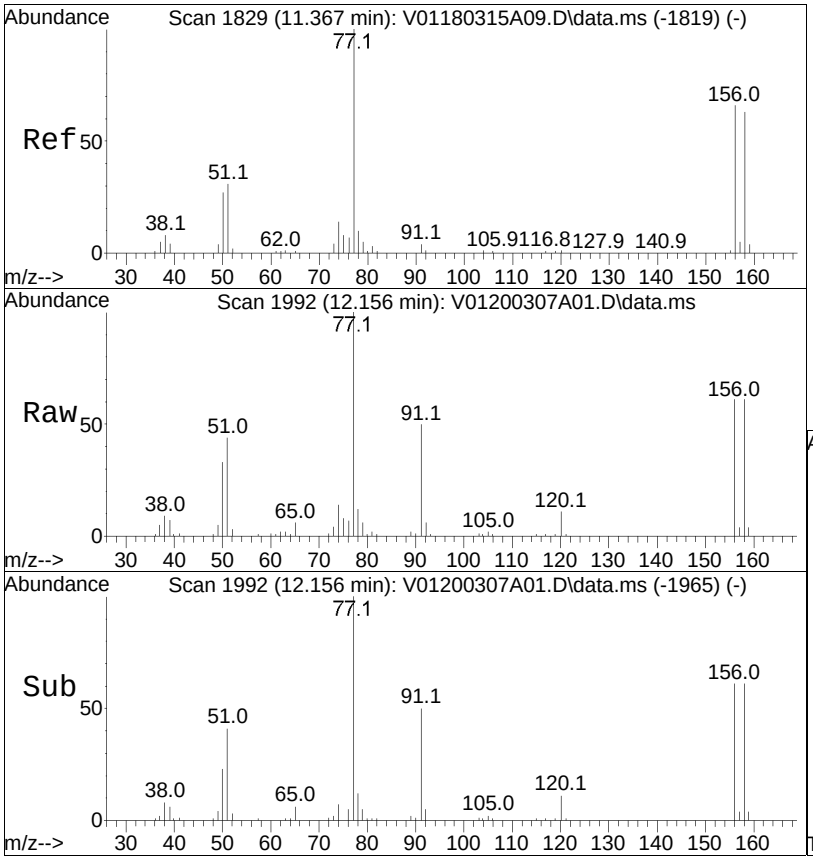



#82
Isopropylbenzene
Concen: 10.75 ug/L
RT: 11.687 min Scan# 1906
Delta R.T. -0.000 min
Lab File: V01200307A01.D
Acq: 7 Mar 2020 9:31 am

Tgt Ion:105 Resp: 236675

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 105 | 100 | | |
| 120 | 26.9 | 7.3 | 47.3 |

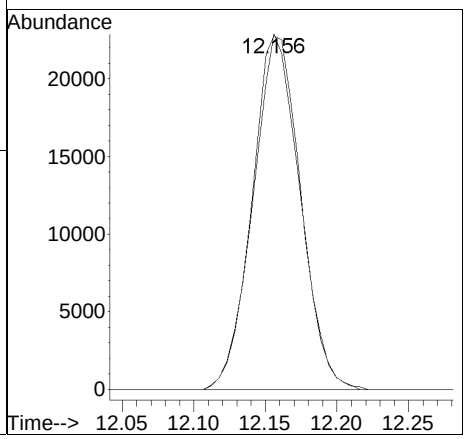


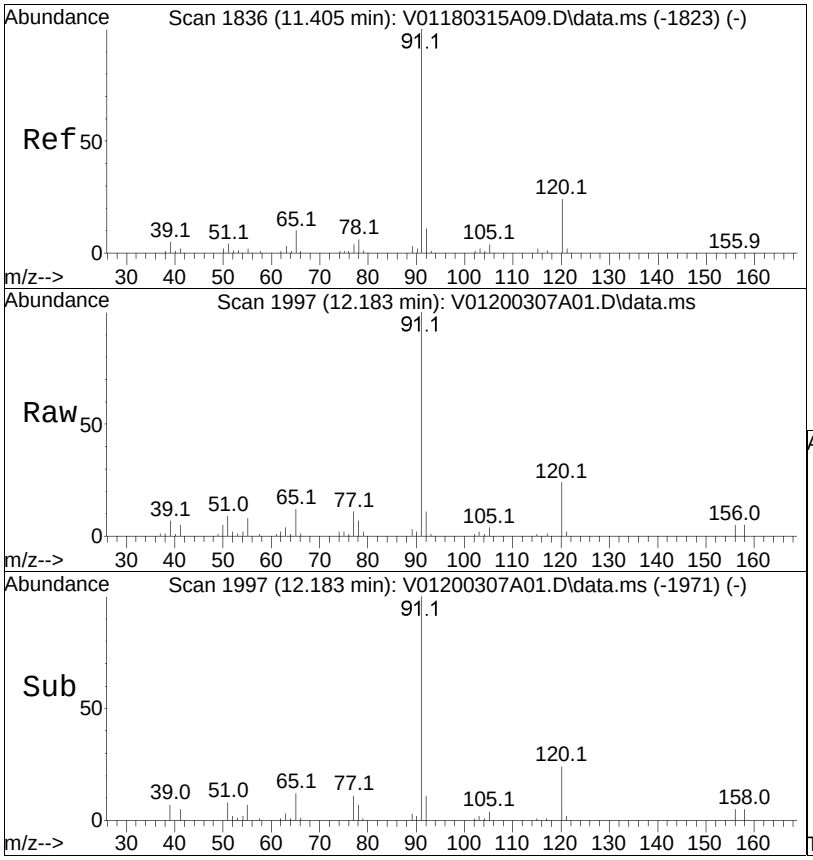



#84
Bromobenzene
Concen: 10.93 ug/L
RT: 12.156 min Scan# 1992
Delta R.T. -0.005 min
Lab File: V01200307A01.D
Acq: 7 Mar 2020 9:31 am

Tgt Ion:156 Resp: 53793

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 156 | 100 | | |
| 158 | 96.7 | 78.2 | 117.4 |

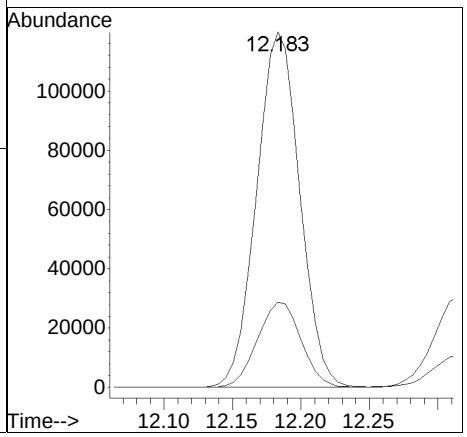


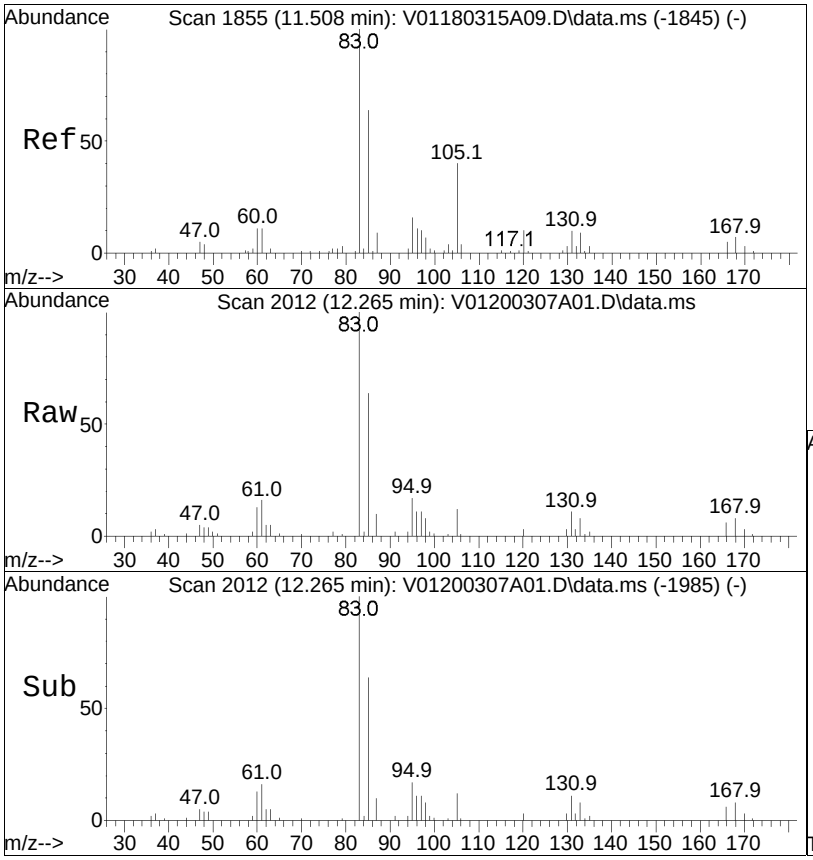



#85
n-Propylbenzene
Concen: 11.04 ug/L
RT: 12.183 min Scan# 1997
Delta R.T. -0.006 min
Lab File: V01200307A01.D
Acq: 7 Mar 2020 9:31 am

Tgt Ion: 91 Resp: 263027

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 91 | 100 | | |
| 120 | 24.2 | 18.6 | 28.0 |

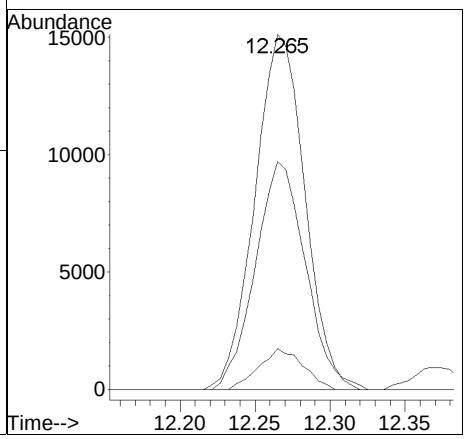


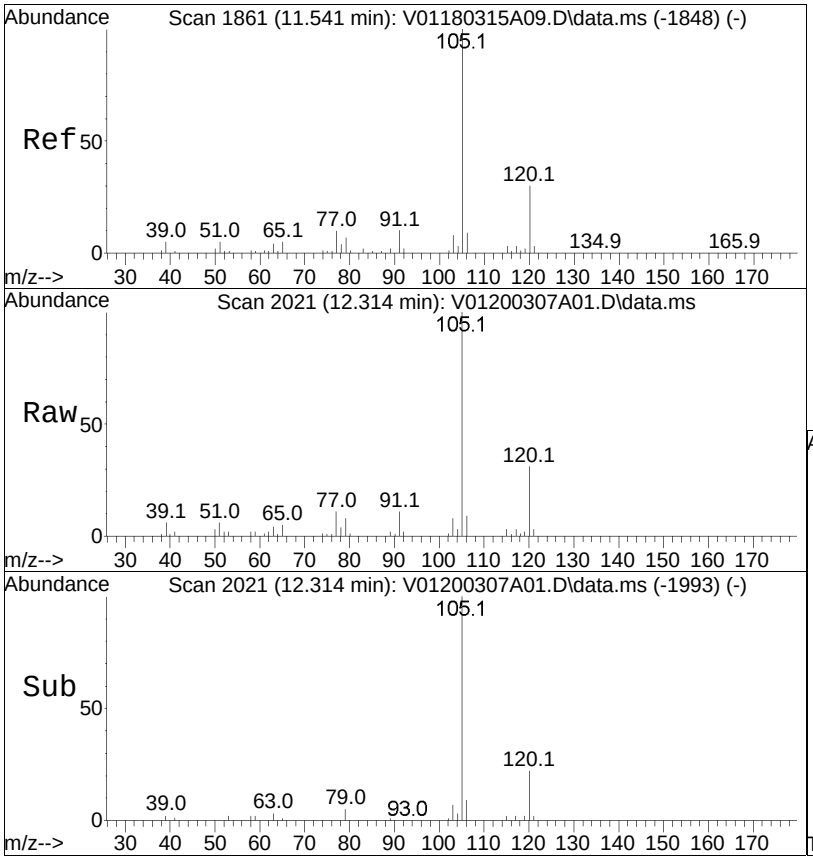



#87
1,1,2,2-Tetrachloroethane
Concen: 10.46 ug/L
RT: 12.265 min Scan# 2012
Delta R.T. -0.005 min
Lab File: V01200307A01.D
Acq: 7 Mar 2020 9:31 am

Tgt Ion: 83 Resp: 34953

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 83 | 100 | | |
| 131 | 10.2 | 0.0 | 30.1 |
| 85 | 64.6 | 45.8 | 85.8 |

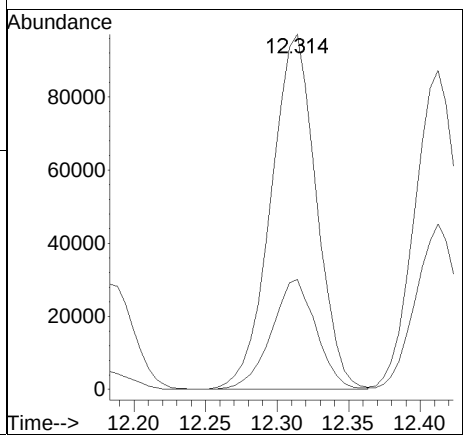


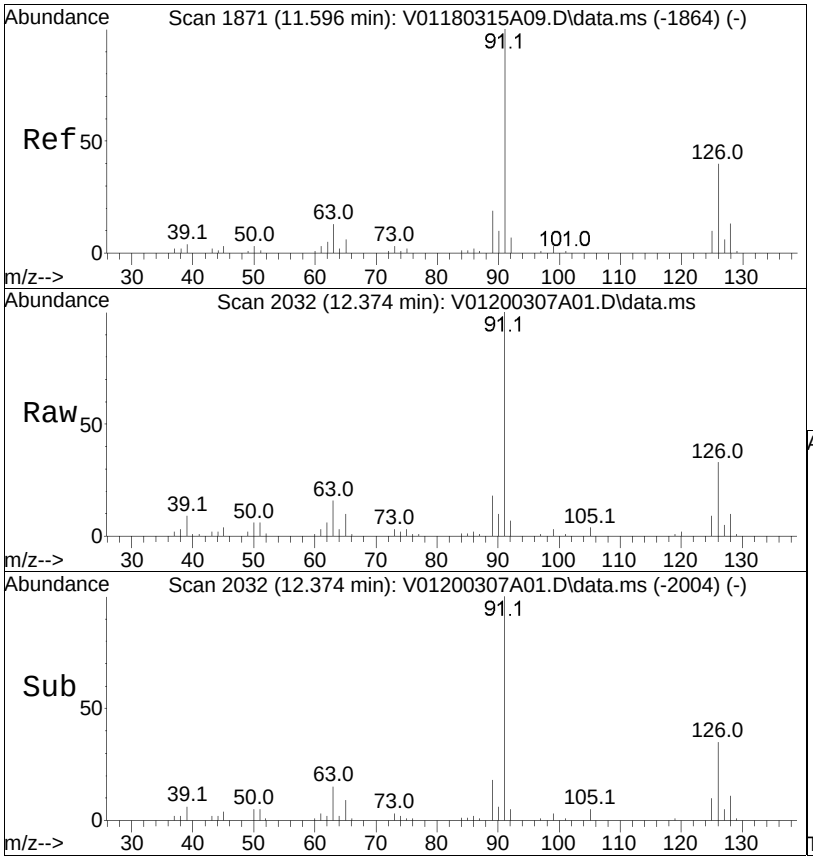



#88
4-Ethyltoluene
Concen: 10.99 ug/L
RT: 12.314 min Scan# 2021
Delta R.T. 0.000 min
Lab File: V01200307A01.D
Acq: 7 Mar 2020 9:31 am

Tgt Ion:105 Resp: 214115

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 105 | 100 | | |
| 120 | 30.5 | 19.8 | 41.0 |

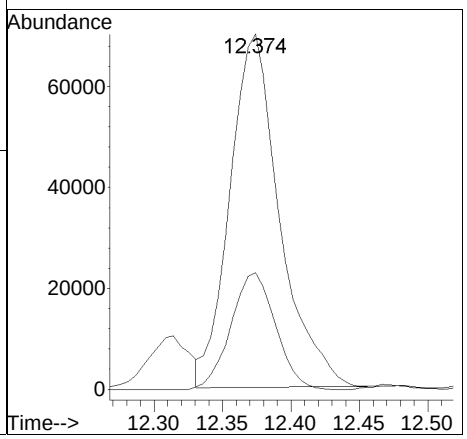


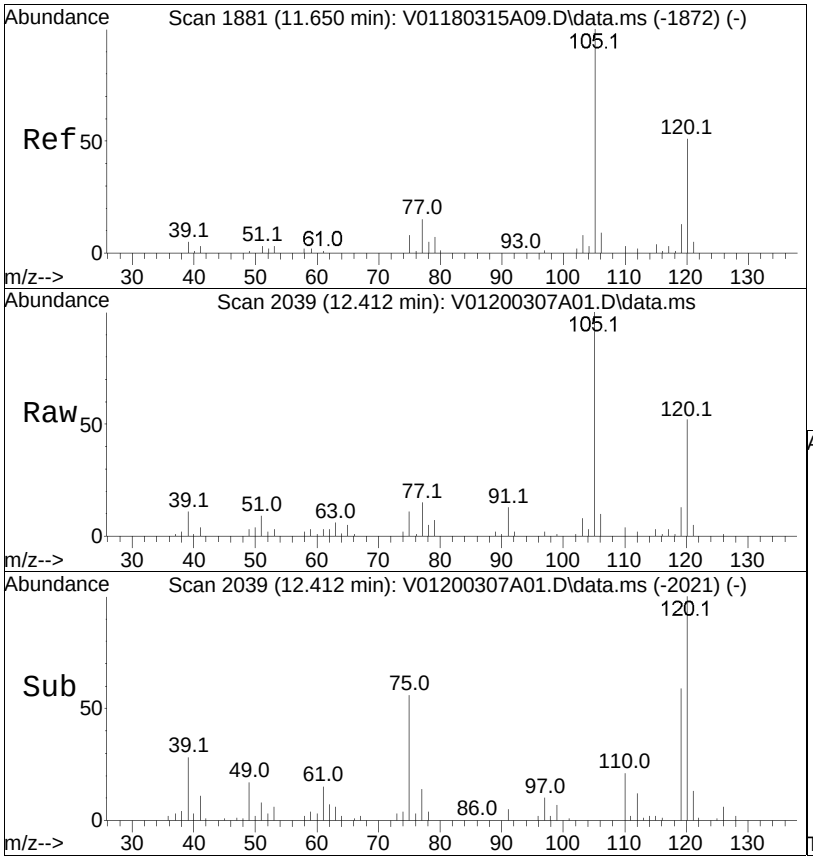



#89
2-Chlorotoluene
Concen: 11.17 ug/L
RT: 12.374 min Scan# 2032
Delta R.T. 0.000 min
Lab File: V01200307A01.D
Acq: 7 Mar 2020 9:31 am

Tgt Ion: 91 Resp: 176634

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 91 | 100 | | |
| 126 | 29.5 | 27.1 | 40.7 |

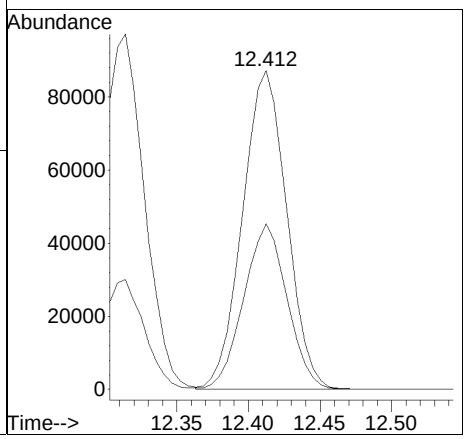


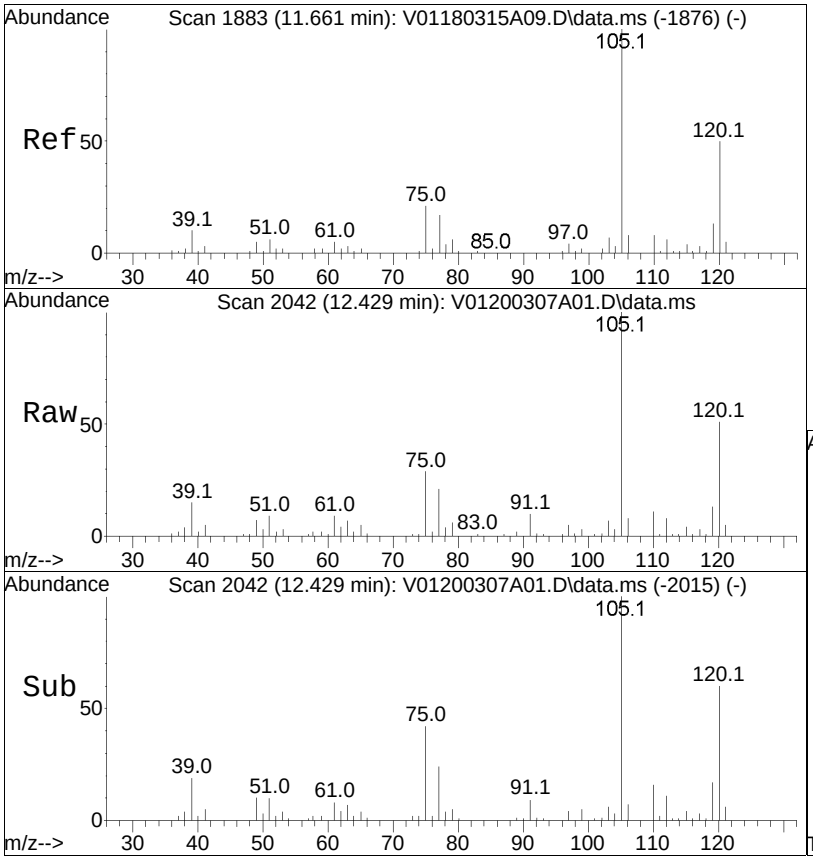



#90
1,3,5-Trimethylbenzene
Concen: 10.98 ug/L
RT: 12.412 min Scan# 2039
Delta R.T. 0.000 min
Lab File: V01200307A01.D
Acq: 7 Mar 2020 9:31 am

Tgt Ion:105 Resp: 187130

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 105 | 100 | | |
| 120 | 50.8 | 40.6 | 60.8 |

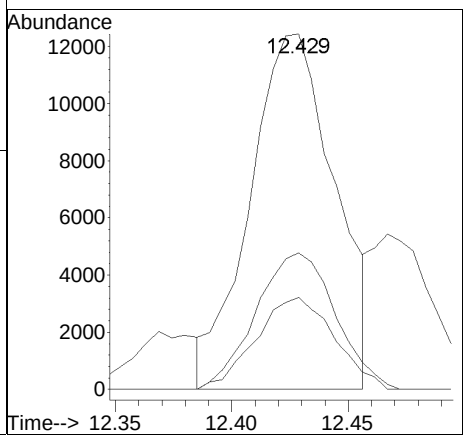


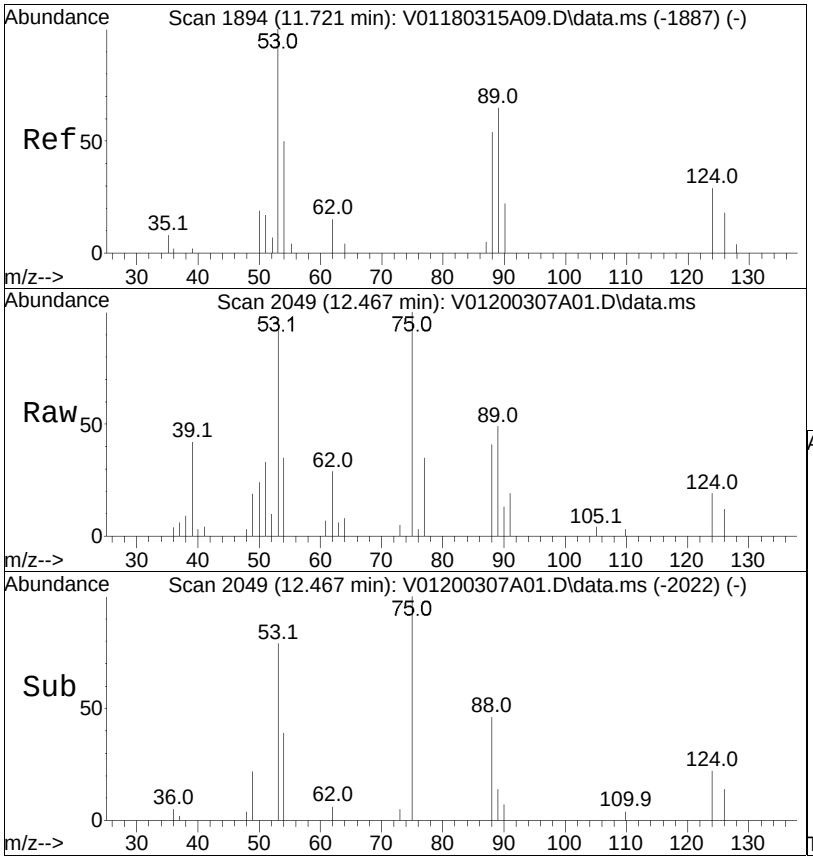



#91
1,2,3-Trichloropropane
Concen: 10.02 ug/L M1
RT: 12.429 min Scan# 2042
Delta R.T. -0.000 min
Lab File: V01200307A01.D
Acq: 7 Mar 2020 9:31 am

Tgt Ion: 75 Resp: 31528

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 75 | 100 | | |
| 110 | 36.0 | 26.5 | 54.9 |
| 112 | 24.0 | 17.0 | 35.2 |

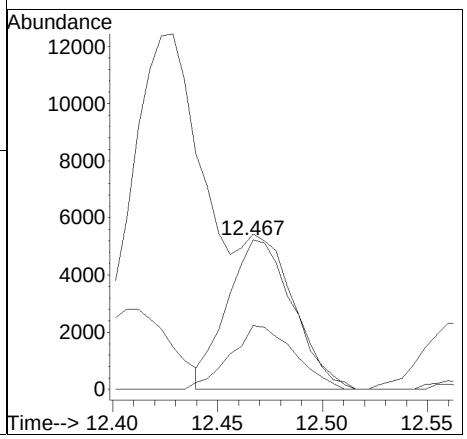


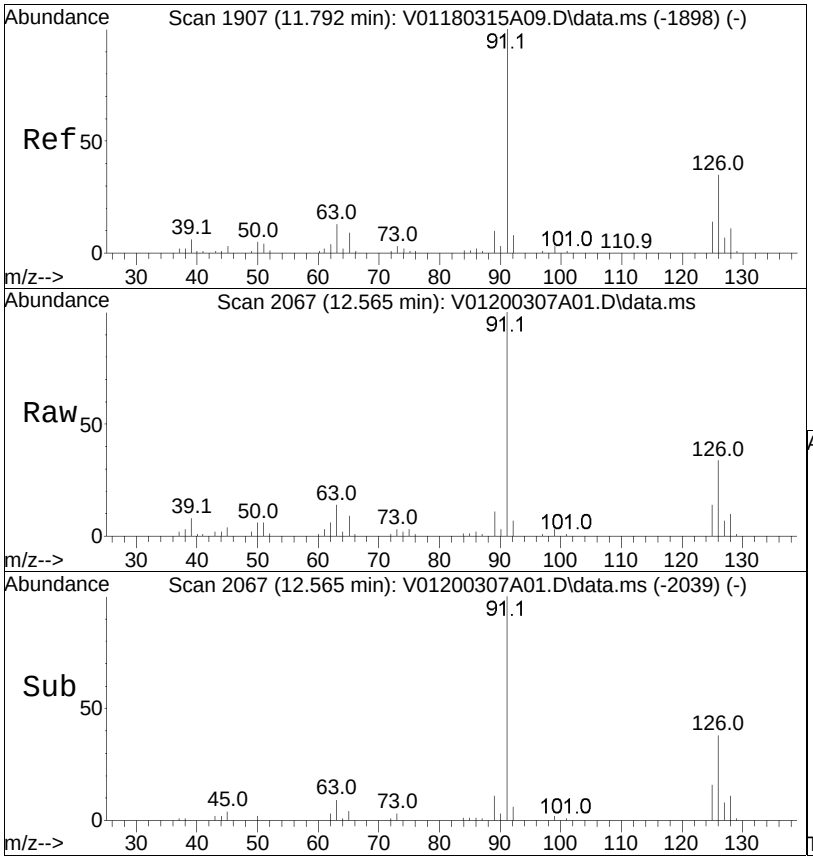



#92
trans-1,4-Dichloro-2-butene
Concen: 11.13 ug/L
RT: 12.467 min Scan# 2049
Delta R.T. -0.000 min
Lab File: V01200307A01.D
Acq: 7 Mar 2020 9:31 am

Tgt Ion: 53 Resp: 11352

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 53 | 100 | | |
| 88 | 41.6 | 46.0 | 69.0# |
| 75 | 0.0 | 107.0 | 160.4# |

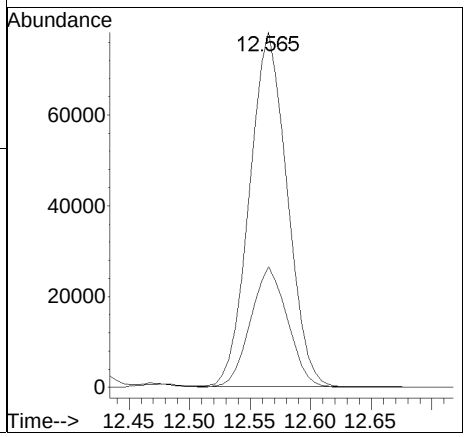


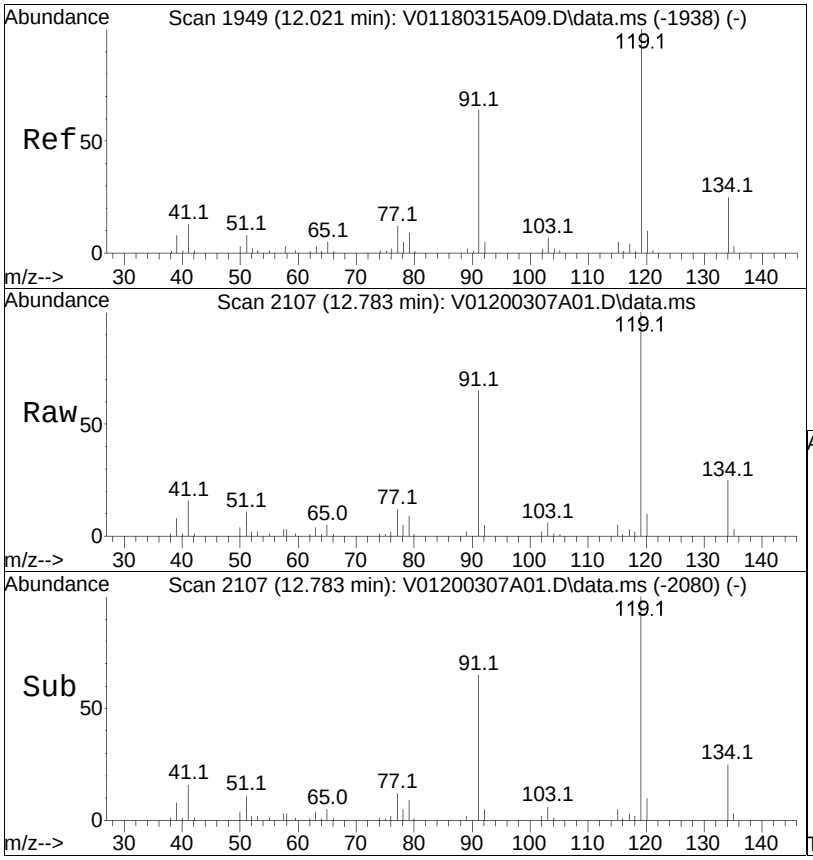



#93
4-Chlorotoluene
Concen: 11.16 ug/L
RT: 12.565 min Scan# 2067
Delta R.T. 0.000 min
Lab File: V01200307A01.D
Acq: 7 Mar 2020 9:31 am

Tgt Ion: 91 Resp: 168639

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 91 | 100 | | |
| 126 | 33.6 | 28.2 | 42.2 |

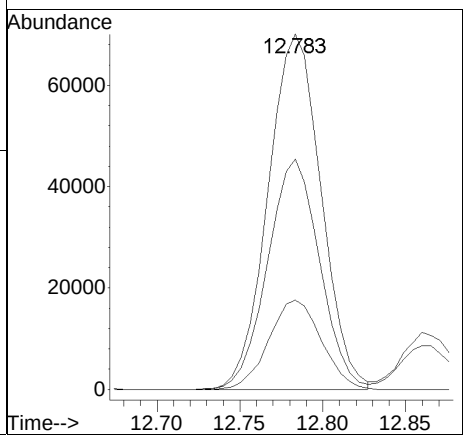


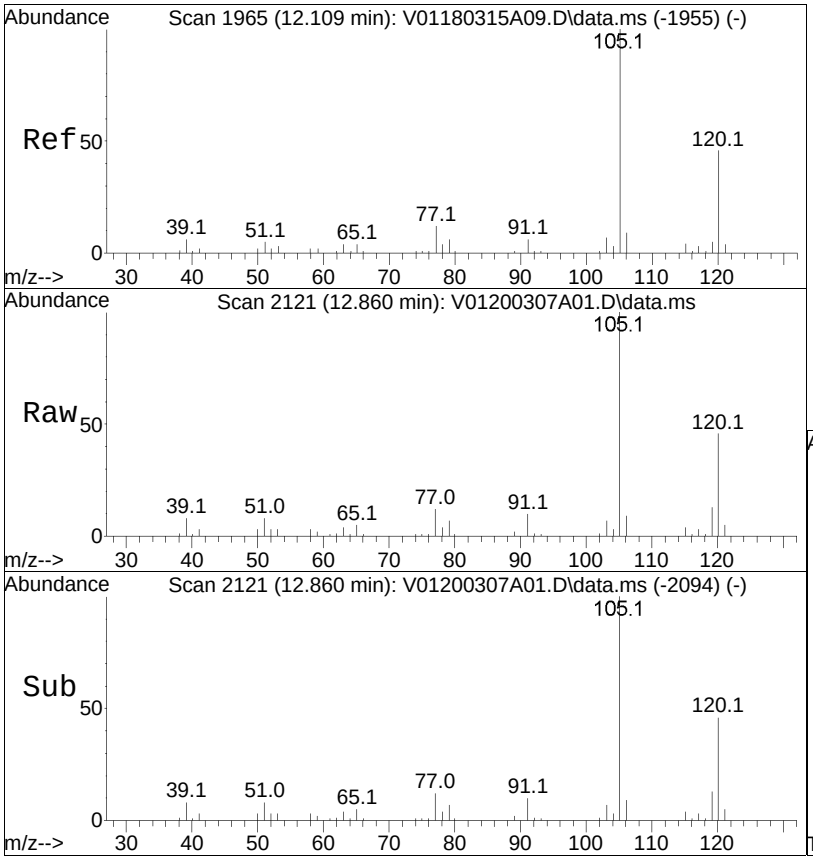



#94
tert-Butylbenzene
Concen: 10.81 ug/L
RT: 12.783 min Scan# 2107
Delta R.T. 0.000 min
Lab File: V01200307A01.D
Acq: 7 Mar 2020 9:31 am

Tgt Ion:119 Resp: 155854

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 119 | 100 | | |
| 91 | 63.7 | 52.5 | 78.7 |
| 134 | 24.9 | 20.9 | 31.3 |

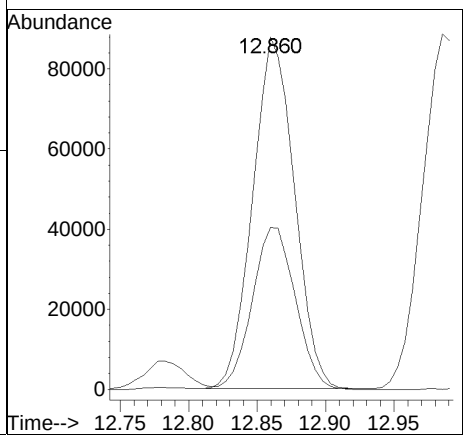


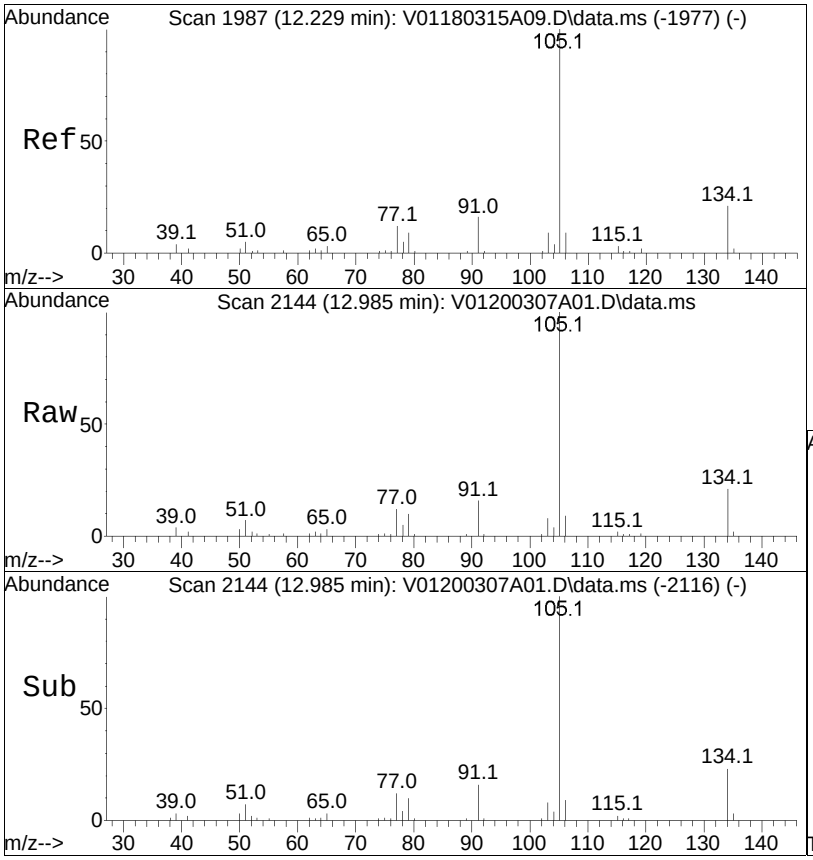



#97
1,2,4-Trimethylbenzene
Concen: 11.06 ug/L
RT: 12.860 min Scan# 2121
Delta R.T. -0.005 min
Lab File: V01200307A01.D
Acq: 7 Mar 2020 9:31 am

Tgt Ion:105 Resp: 185837

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 105 | 100 | | |
| 120 | 47.7 | 37.8 | 56.6 |

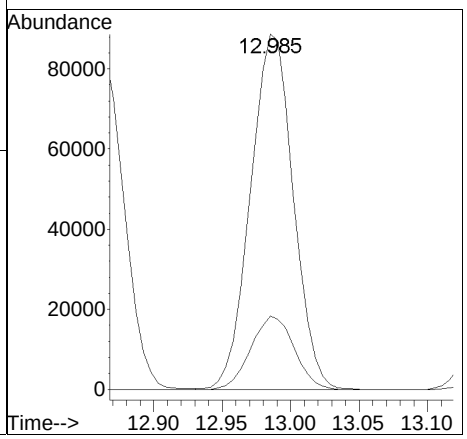


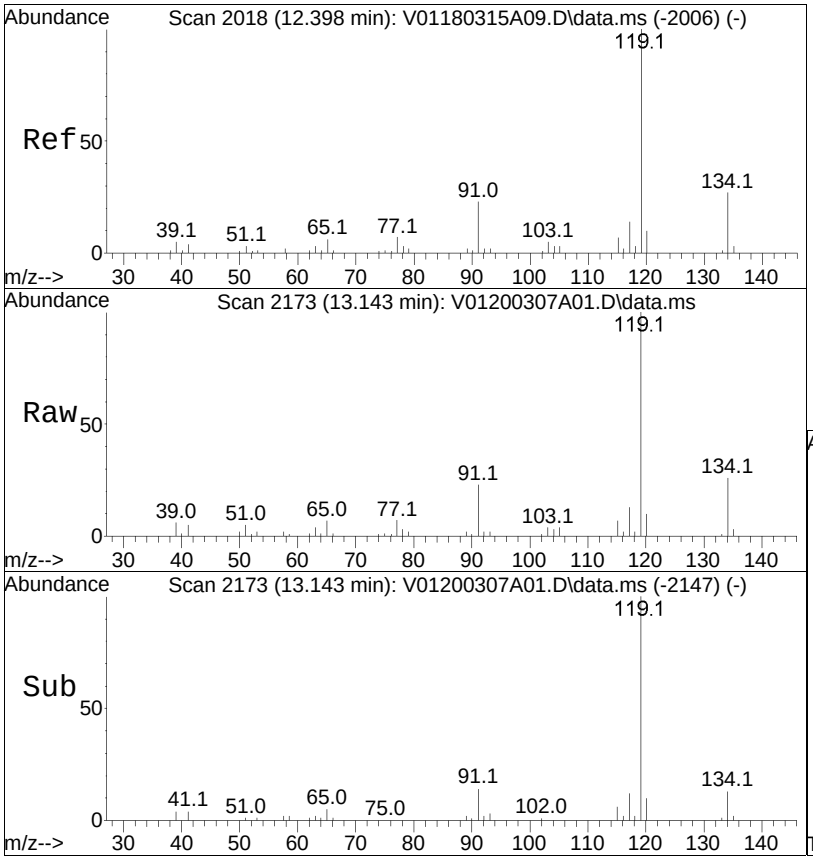



#98
sec-Butylbenzene
Concen: 10.74 ug/L
RT: 12.985 min Scan# 2144
Delta R.T. 0.000 min
Lab File: V01200307A01.D
Acq: 7 Mar 2020 9:31 am

Tgt Ion:105 Resp: 192927

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 105 | 100 | | |
| 134 | 20.7 | 14.0 | 29.0 |

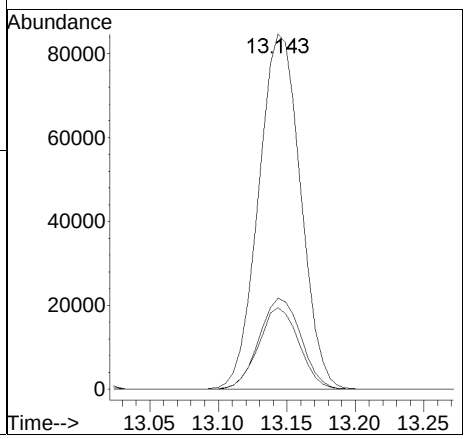


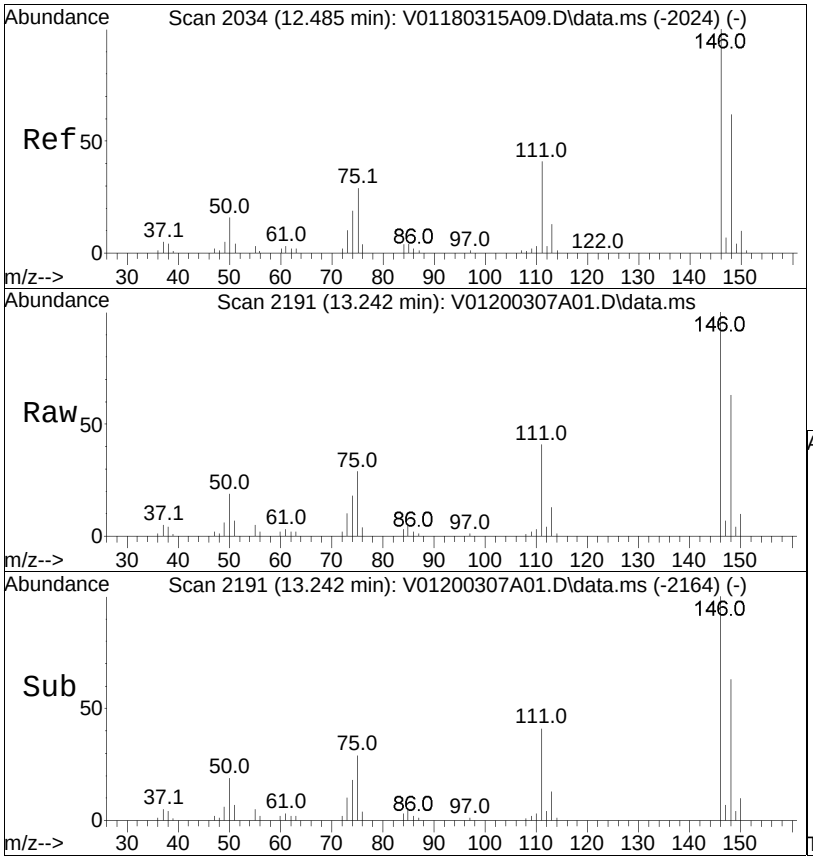



#99
p-Isopropyltoluene
Concen: 10.87 ug/L
RT: 13.143 min Scan# 2173
Delta R.T. -0.006 min
Lab File: V01200307A01.D
Acq: 7 Mar 2020 9:31 am

Tgt Ion:119 Resp: 180605

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 119 | 100 | | |
| 134 | 25.6 | 17.7 | 36.7 |
| 91 | 22.3 | 15.4 | 32.0 |

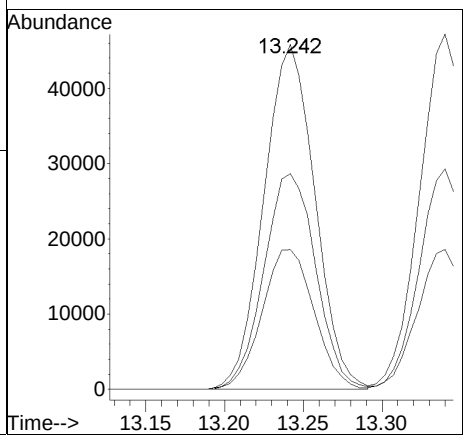


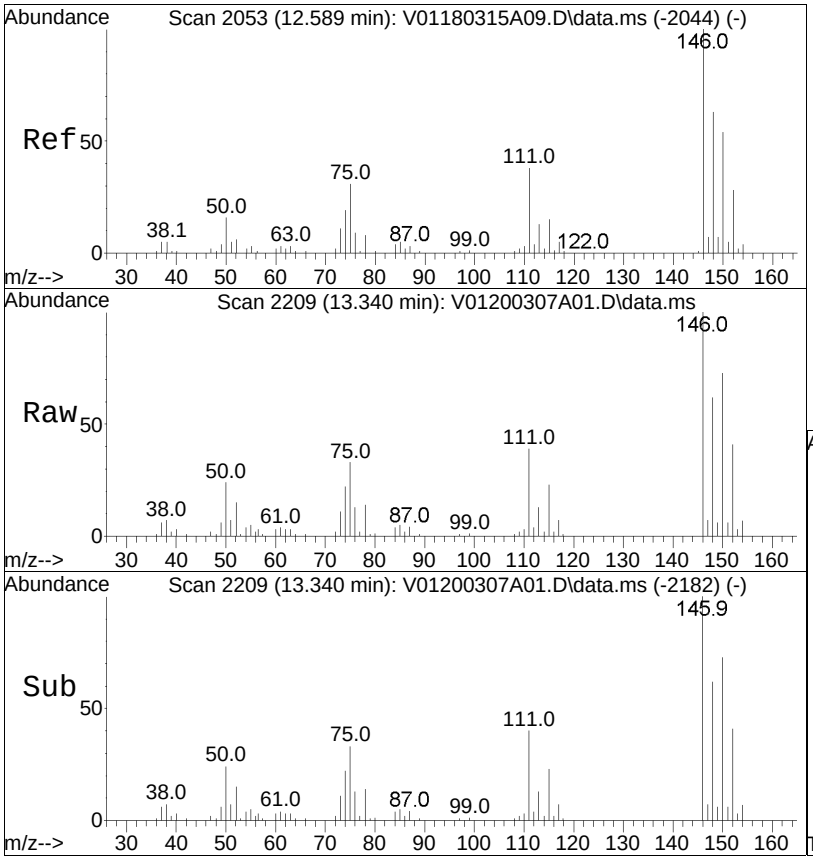



#100
1,3-Dichlorobenzene
Concen: 11.27 ug/L
RT: 13.242 min Scan# 2191
Delta R.T. -0.000 min
Lab File: V01200307A01.D
Acq: 7 Mar 2020 9:31 am

Tgt Ion:146 Resp: 103316

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 146 | 100 | | |
| 111 | 41.5 | 25.9 | 53.9 |
| 148 | 63.8 | 41.5 | 86.3 |

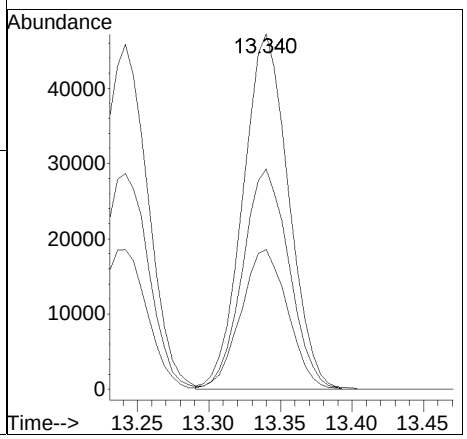


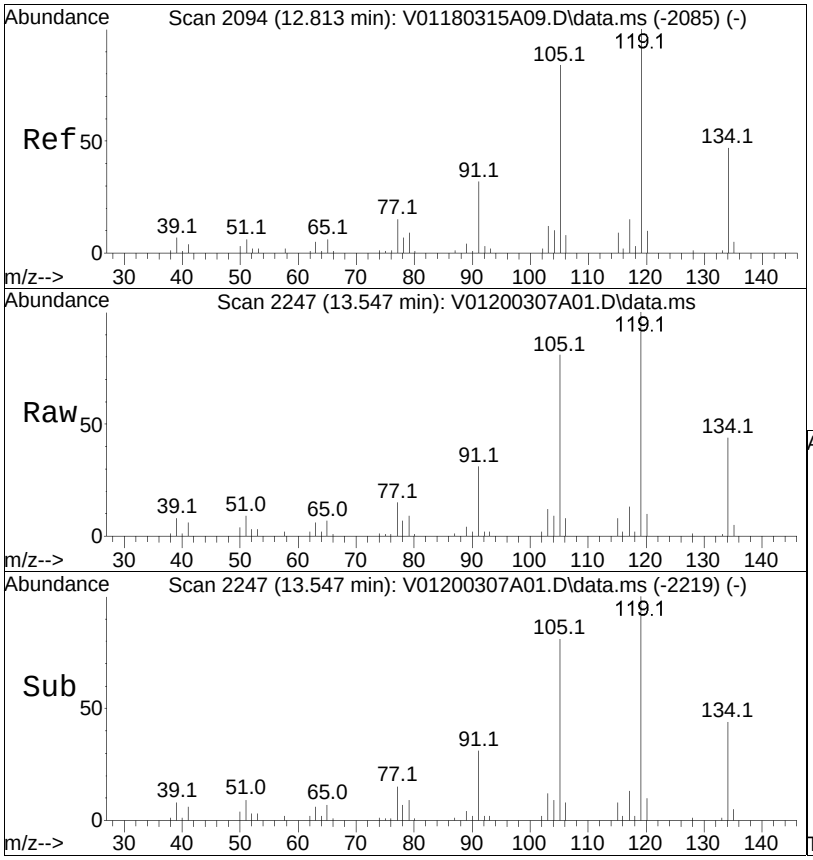



#101
1,4-Dichlorobenzene
Concen: 11.30 ug/L
RT: 13.340 min Scan# 2209
Delta R.T. -0.000 min
Lab File: V01200307A01.D
Acq: 7 Mar 2020 9:31 am

Tgt Ion:146 Resp: 104984

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 146 | 100 | | |
| 111 | 40.5 | 31.7 | 47.5 |
| 148 | 62.9 | 51.5 | 77.3 |

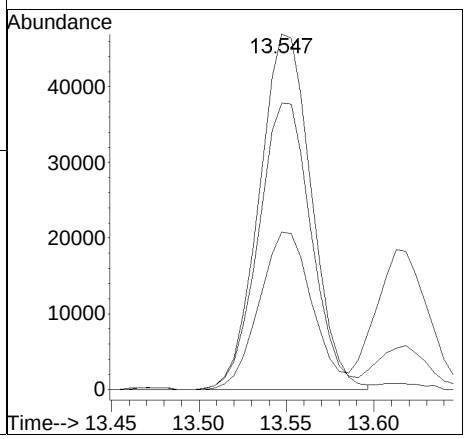


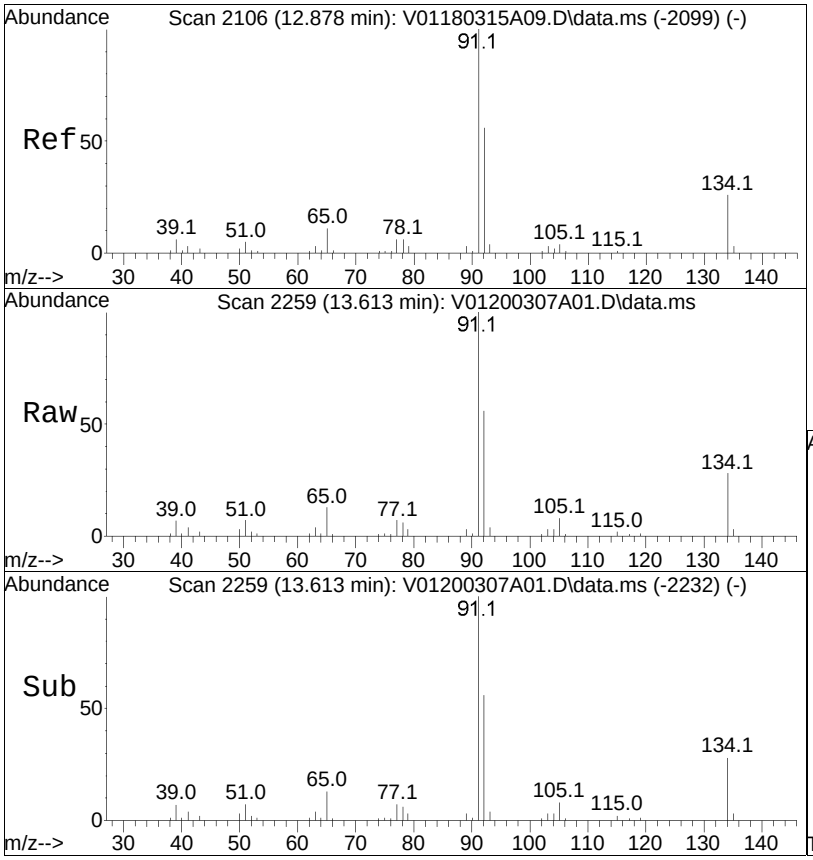



#102
p-Diethylbenzene
Concen: 10.95 ug/L
RT: 13.547 min Scan# 2247
Delta R.T. 0.000 min
Lab File: V01200307A01.D
Acq: 7 Mar 2020 9:31 am

Tgt Ion:119 Resp: 97496

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 119 | 100 | | |
| 105 | 81.8 | 54.1 | 112.3 |
| 134 | 45.1 | 31.5 | 65.3 |

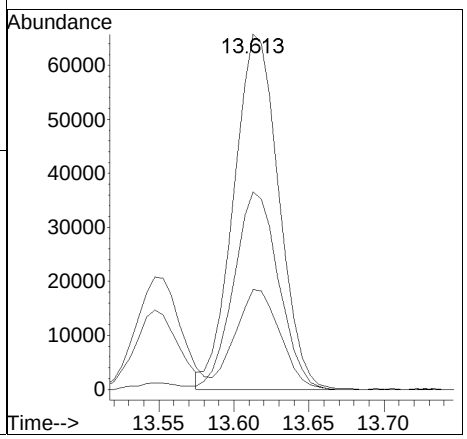


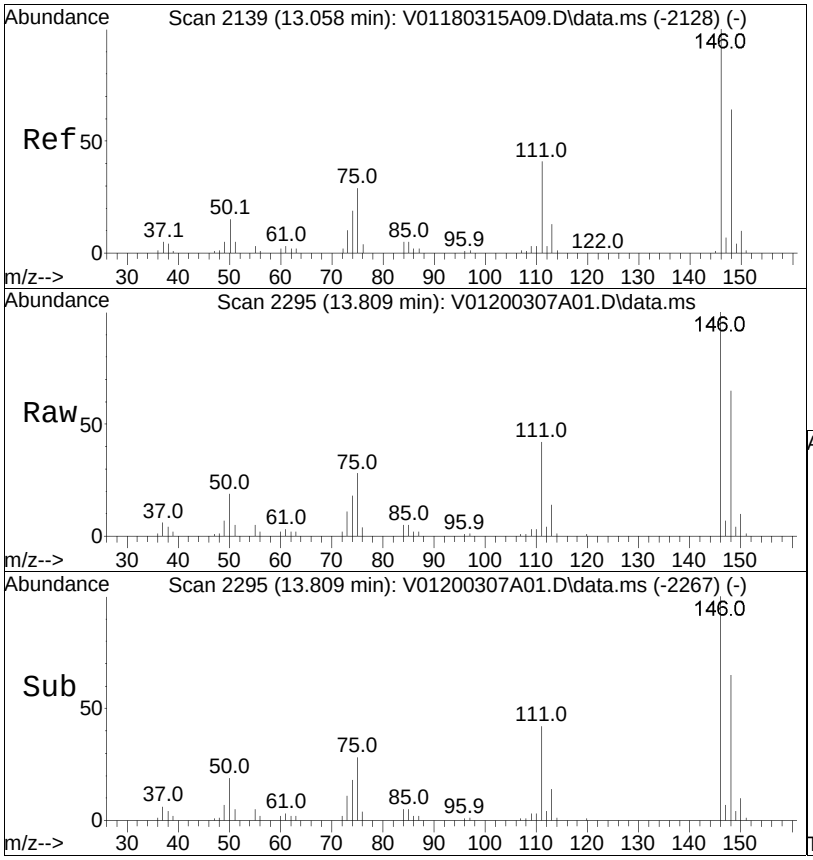



#103
n-Butylbenzene
Concen: 11.16 ug/L
RT: 13.613 min Scan# 2259
Delta R.T. -0.005 min
Lab File: V01200307A01.D
Acq: 7 Mar 2020 9:31 am

Tgt Ion: 91 Resp: 137427

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 91 | 100 | | |
| 92 | 55.5 | 43.7 | 65.5 |
| 134 | 27.6 | 22.1 | 33.1 |

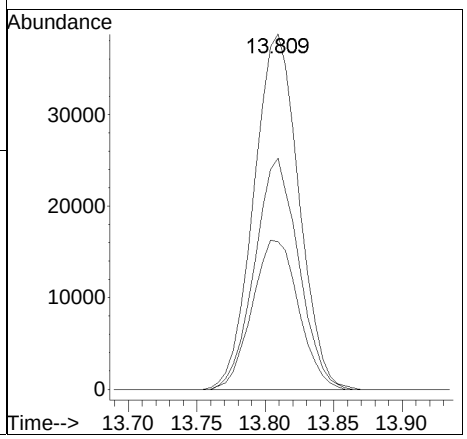


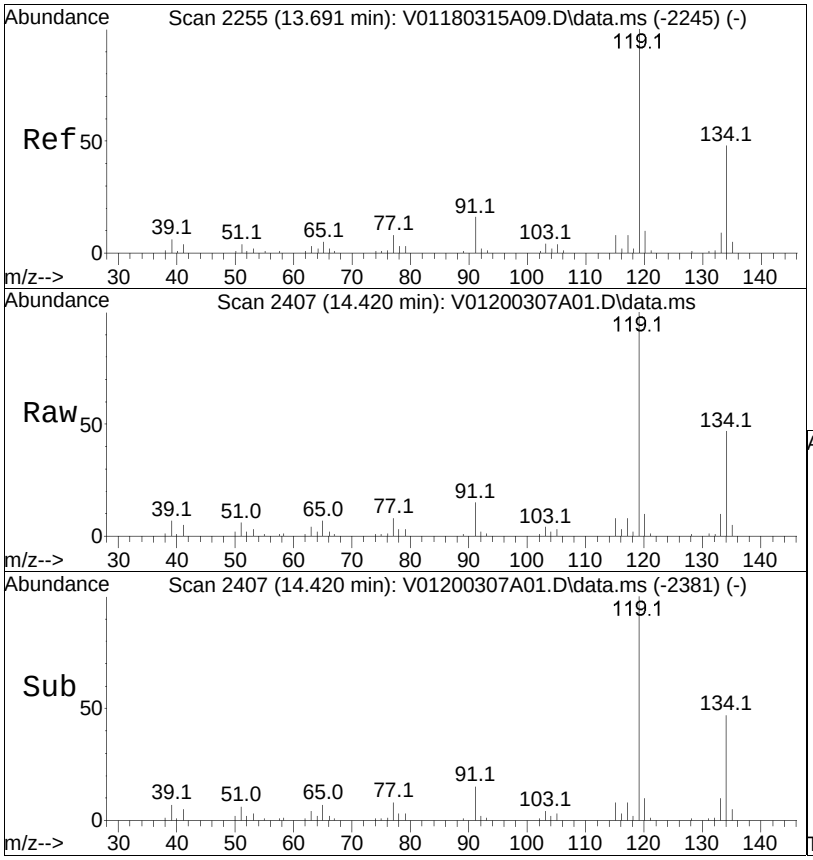



#104
1,2-Dichlorobenzene
Concen: 10.98 ug/L
RT: 13.809 min Scan# 2295
Delta R.T. 0.000 min
Lab File: V01200307A01.D
Acq: 7 Mar 2020 9:31 am

Tgt Ion:146 Resp: 88616

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 146 | 100 | | |
| 111 | 43.3 | 26.8 | 55.8 |
| 148 | 63.5 | 41.6 | 86.4 |

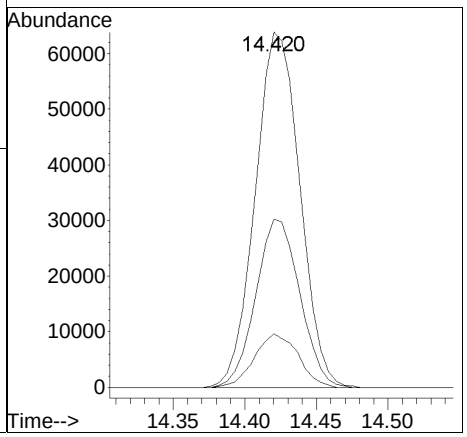


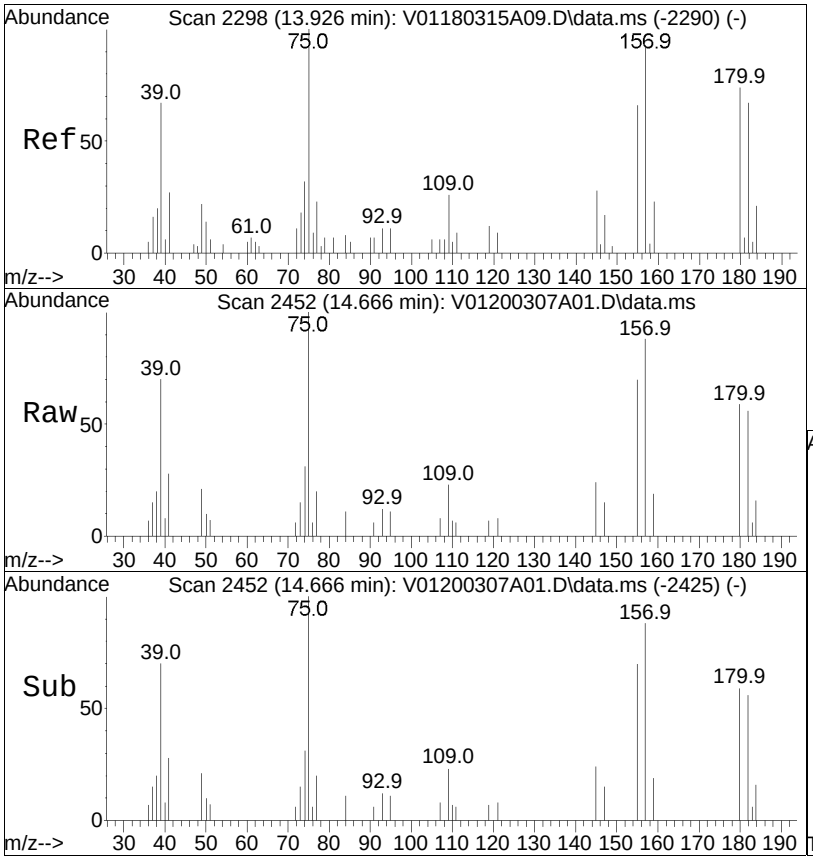



#105
1,2,4,5-Tetramethylbenzene
Concen: 10.30 ug/L
RT: 14.420 min Scan# 2407
Delta R.T. -0.006 min
Lab File: V01200307A01.D
Acq: 7 Mar 2020 9:31 am

Tgt Ion:119 Resp: 138194

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 119 | 100 | | |
| 134 | 46.7 | 31.9 | 66.1 |
| 91 | 14.9 | 10.3 | 21.5 |

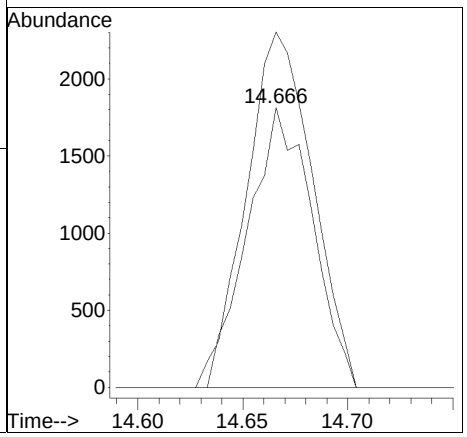


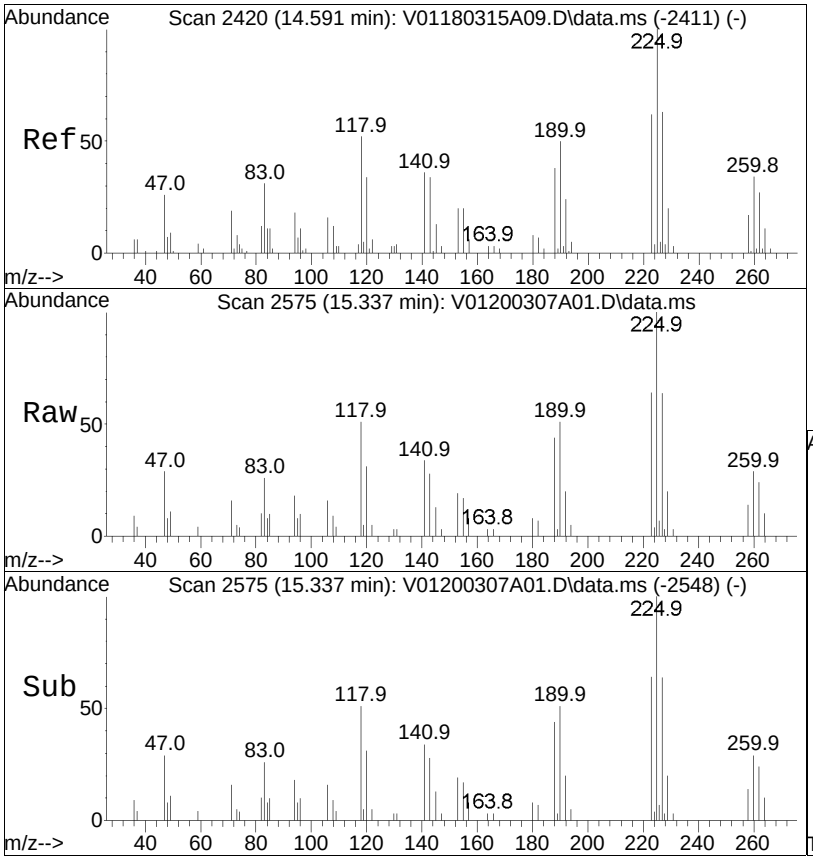



#106
1,2-Dibromo-3-chloropropane
Concen: 9.23 ug/L
RT: 14.666 min Scan# 2452
Delta R.T. -0.005 min
Lab File: V01200307A01.D
Acq: 7 Mar 2020 9:31 am

Tgt Ion:155 Resp: 3862

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 155 | 100 | | |
| 157 | 131.7 | 101.1 | 151.7 |

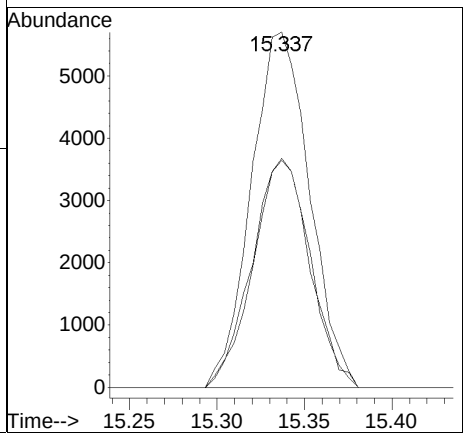


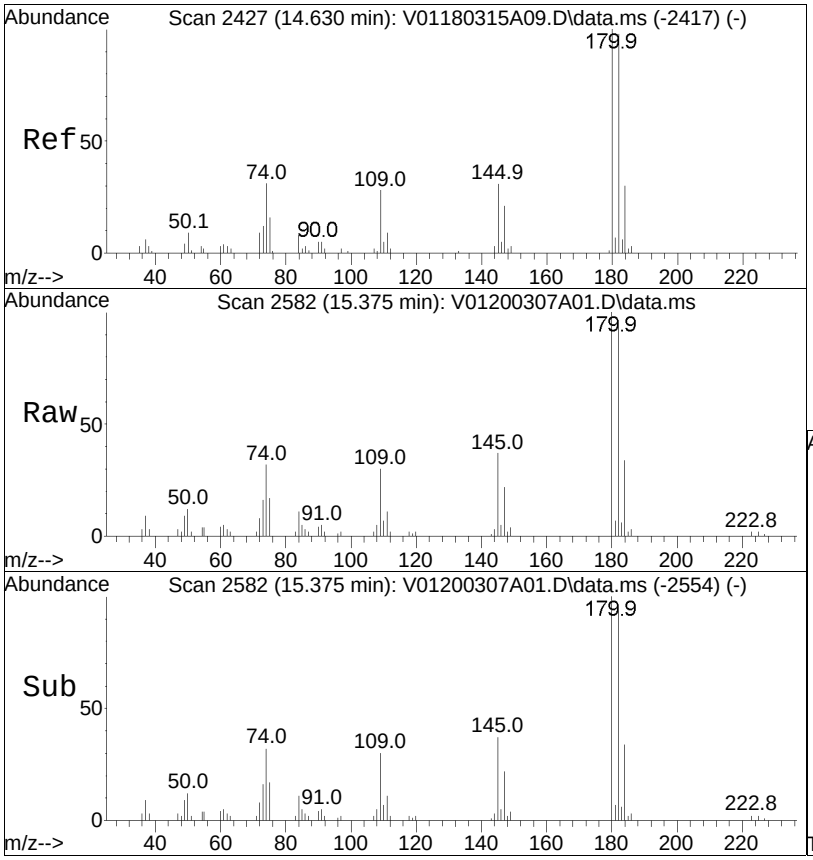



#108
Hexachlorobutadiene
Concen: 10.45 ug/L
RT: 15.337 min Scan# 2575
Delta R.T. -0.000 min
Lab File: V01200307A01.D
Acq: 7 Mar 2020 9:31 am

Tgt Ion:225 Resp: 13218

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 225 | 100 | | |
| 223 | 64.0 | 51.0 | 76.4 |
| 227 | 62.7 | 52.2 | 78.4 |

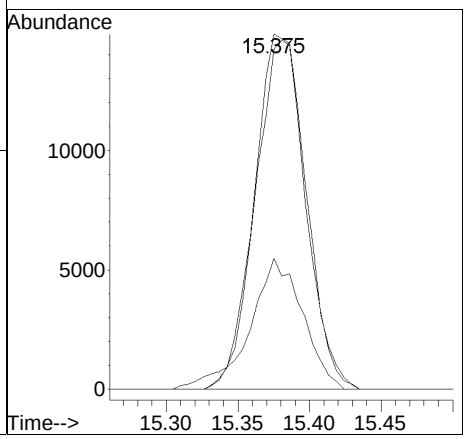


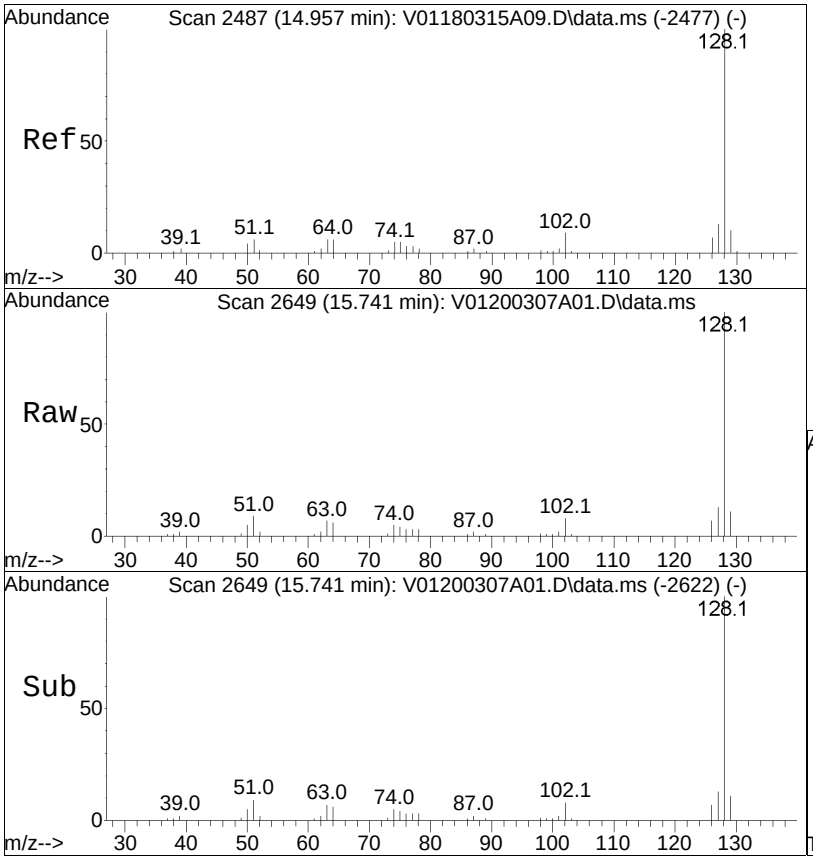



#109
1,2,4-Trichlorobenzene
Concen: 9.85 ug/L
RT: 15.375 min Scan# 2582
Delta R.T. 0.000 min
Lab File: V01200307A01.D
Acq: 7 Mar 2020 9:31 am

Tgt Ion:180 Resp: 37460

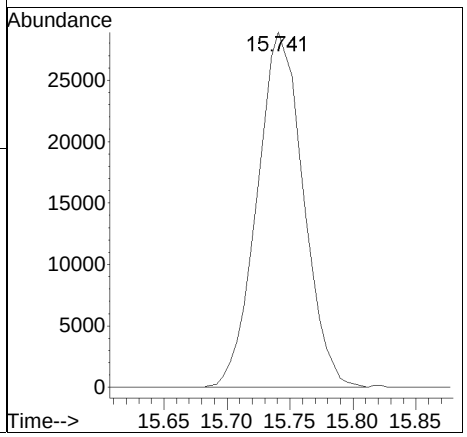
| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 180 | 100 | | |
| 182 | 94.7 | 75.8 | 113.8 |
| 145 | 37.6 | 26.1 | 39.1 |

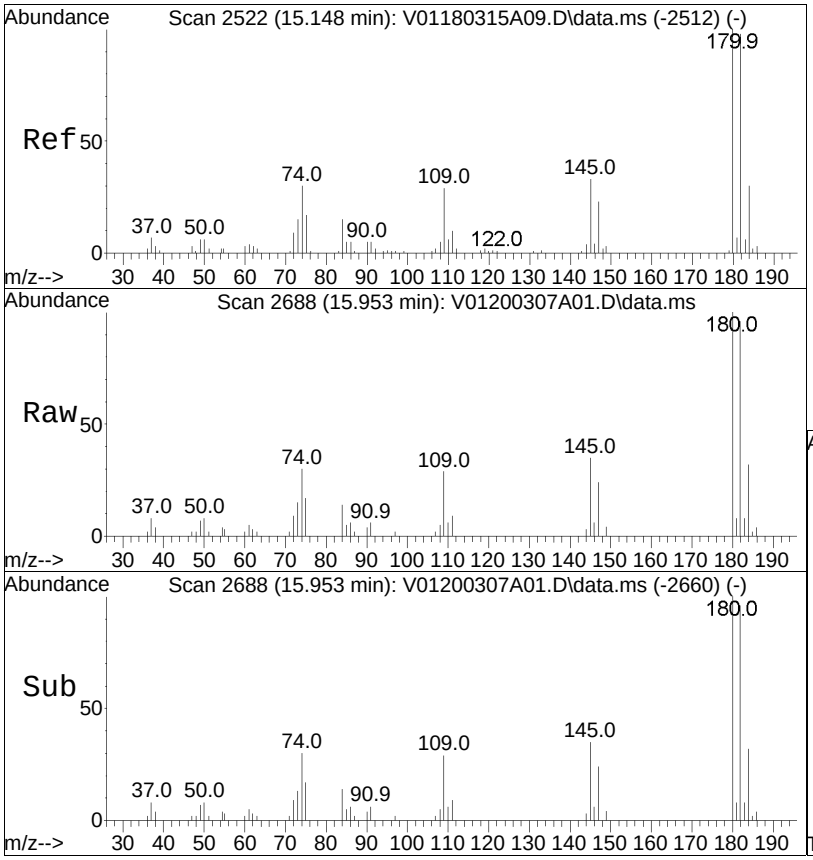





#110
Naphthalene
Concen: 8.76 ug/L
RT: 15.741 min Scan# 2649
Delta R.T. -0.000 min
Lab File: V01200307A01.D
Acq: 7 Mar 2020 9:31 am

Tgt Ion:128 Resp: 73889

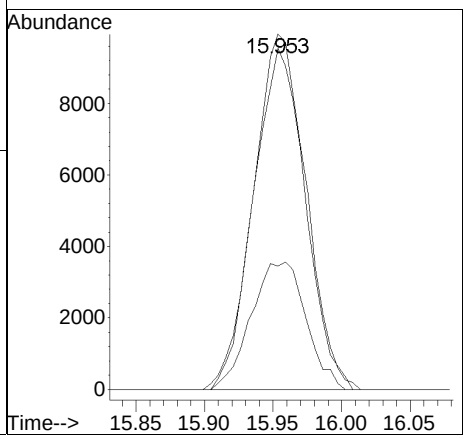





#111
1,2,3-Trichlorobenzene
Concen: 9.05 ug/L
RT: 15.953 min Scan# 2688
Delta R.T. 0.000 min
Lab File: V01200307A01.D
Acq: 7 Mar 2020 9:31 am

Tgt Ion:180 Resp: 26495

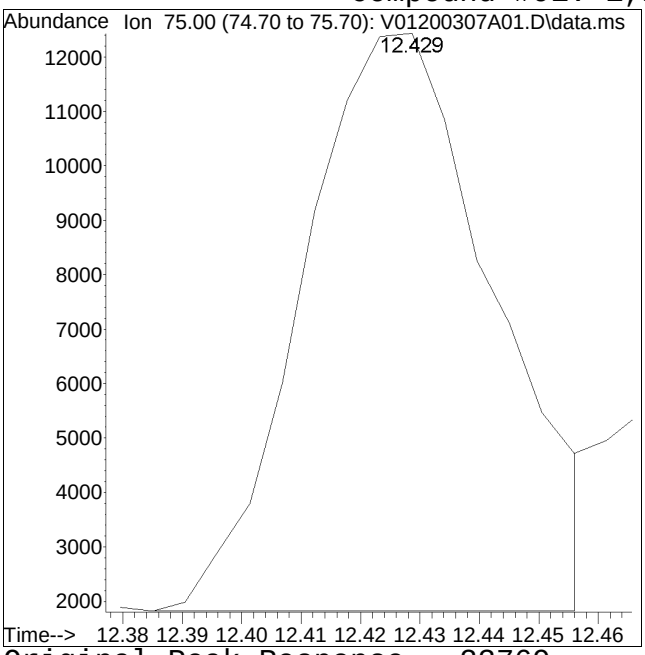
| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 180 | 100 | | |
| 182 | 94.3 | 75.4 | 113.0 |
| 145 | 37.4 | 25.0 | 37.6 |



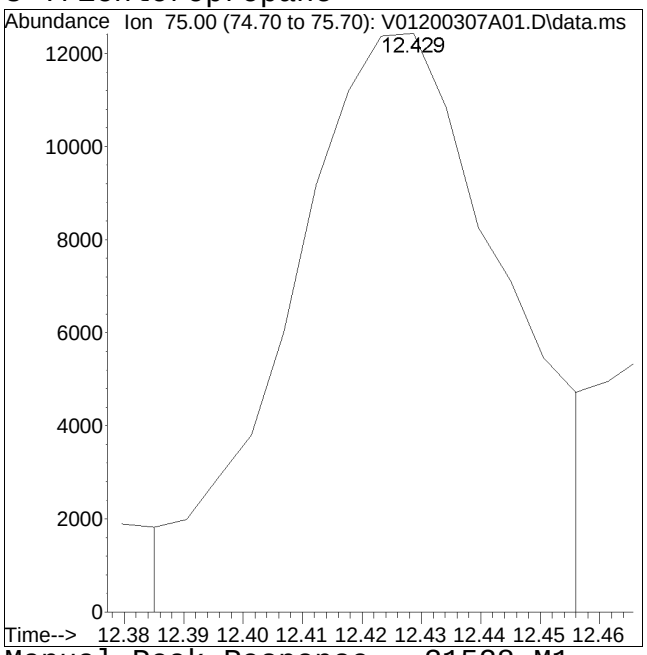
# Manual Integration Report

Data Path : I:\VOLATILES\VOA101\2020\2QMethod : V101_200219A_8260.m
Data File : V01200307A01.D Operator : VOA101:MKS
Date Inj'd : 3/7/2020 9:31 am Instrument : VOA 101
Sample : WG1348564-3,31,10,10 Quant Date : 3/7/2020 9:52 am

## Compound #91: 1,2,3-Trichloropropane




Original Peak Response = 23769




Manual Peak Response = 31528 M1

M1 = Split or tailing peak, auto integration stopped early resulting in false low area count.

Quantitation Report (QT Reviewed)

Data Path : I:\VOLATILES\VOA122\2020\200306A\
Data File : V22200306A02.D
Acq On : 06 Mar 2020 10:11 am
Operator : VOA122:PD
Sample : WG1348135-4,31,10,10 (Sig #1); 8260 CCAL (Sig #2)
Misc : WG1348135,ICAL16379 (Sig #1); WG,ICAL16379 (Sig #2)
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Mar 06 10:33:07 2020
Quant Method : I:\VOLATILES\VOA122\2020\200306A\V122_191219N_8260.m
Quant Title : VOLATILES BY GC/MS
QLast Update : Fri Dec 20 07:20:50 2019
Response via : Initial Calibration

CCAL FILE(s) : 1 - I:\VOLATILES\VOA122\2020\200306A\V22200306A01.D
Sub List : 8260-Curve - Megamix plus Diox

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| Internal Standards | | | | | | |
| 1) Fluorobenzene | 5.827 | 96 | 257345 | 10.000 | ug/L | 0.00 |
| Standard Area 1 = 254411 | | | Recovery = 101.15% | | | |
| 62) Chlorobenzene-d5 | 9.353 | 117 | 195420 | 10.000 | ug/L | 0.00 |
| Standard Area 1 = 187639 | | | Recovery = 104.15% | | | |
| 83) 1,4-Dichlorobenzene-d4 | 12.107 | 152 | 100925 | 10.000 | ug/L | 0.00 |
| Standard Area 1 = 100182 | | | Recovery = 100.74% | | | |
| System Monitoring Compounds | | | | | | |
| 38) Dibromofluoromethane | 5.018 | 113 | 70964 | 9.547 | ug/L | 0.00 |
| Spiked Amount 10.000 | Range 70 - 130 | | Recovery = 95.47% | | | |
| 46) 1,2-Dichloroethane-d4 | 5.541 | 65 | 105609 | 12.296 | ug/L | 0.00 |
| Spiked Amount 10.000 | Range 70 - 130 | | Recovery = 122.96% | | | |
| 63) Toluene-d8 | 7.519 | 98 | 263262 | 10.427 | ug/L | 0.00 |
| Spiked Amount 10.000 | Range 70 - 130 | | Recovery = 104.27% | | | |
| 87) 4-Bromofluorobenzene | 10.874 | 95 | 98273 | 9.916 | ug/L | 0.00 |
| Spiked Amount 10.000 | Range 70 - 130 | | Recovery = 99.16% | | | |
| Target Compounds | | | | | | Qvalue |
| 2) Dichlorodifluoromethane | 1.537 | 85 | 42693 | 9.644 | ug/L | 99 |
| 3) Chloromethane | 1.725 | 50 | 55458 | 9.486 | ug/L | 97 |
| 4) Vinyl chloride | 1.779 | 62 | 59200 | 9.021 | ug/L | 97 |
| 5) Bromomethane | 2.076 | 94 | 25196 | 4.393 | ug/L | 100 |
| 6) Chloroethane | 2.193 | 64 | 36296 | 7.665 | ug/L | 98 |
| 7) Trichlorofluoromethane | 2.325 | 101 | 101420 | 11.329 | ug/L | 98 |
| 8) Ethyl ether | 2.622 | 74 | 24927 | 9.424 | ug/L # | 1 |
| 10) 1,1-Dichloroethene | 2.809 | 96 | 49597 | 9.830 | ug/L # | 74 |
| 11) Carbon disulfide | 2.833 | 76 | 138828 | 10.538 | ug/L | 100 |
| 15) Methylene chloride | 3.348 | 84 | 53942 | 9.437 | ug/L | 85 |
| 17) Acetone | 3.395 | 43 | 10095 | 6.887 | ug/L | 97 |
| 18) trans-1,2-Dichloroethene | 3.496 | 96 | 52450 | 9.676 | ug/L | 85 |
| 21) Methyl tert-butyl ether | 3.598 | 73 | 136846 | 11.416 | ug/L | 95 |
| 25) 1,1-Dichloroethane | 4.074 | 63 | 111168 | 10.205 | ug/L | 97 |
| 27) Acrylonitrile | 4.121 | 53 | 11802 | 8.684 | ug/L | 95 |
| 29) Vinyl acetate | 4.308 | 43 | 108360 | 11.661 | ug/L | 95 |
| 30) cis-1,2-Dichloroethene | 4.581 | 96 | 64780 | 9.675 | ug/L # | 84 |
| 31) 2,2-Dichloropropane | 4.690 | 77 | 100141 | 15.916 | ug/L | 96 |
| 32) Bromochloromethane | 4.776 | 128 | 26859 | 9.673 | ug/L # | 83 |
| 34) Chloroform | 4.846 | 83 | 112183 | 10.488 | ug/L | 97 |

Data Path : I:\VOLATILES\VOA122\2020\200306A\
Data File : V22200306A02.D
Acq On : 06 Mar 2020 10:11 am
Operator : VOA122:PD
Sample : WG1348135-4,31,10,10 (Sig #1); 8260 CCAL (Sig #2)
Misc : WG1348135,ICAL16379 (Sig #1); WG,ICAL16379 (Sig #2)
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Mar 06 10:33:07 2020
Quant Method : I:\VOLATILES\VOA122\2020\200306A\V122_191219N_8260.m
Quant Title : VOLATILES BY GC/MS
QLast Update : Fri Dec 20 07:20:50 2019
Response via : Initial Calibration

CCAL FILE(s) : 1 - I:\VOLATILES\VOA122\2020\200306A\V22200306A01.D
Sub List : 8260-Curve - Megamix plus Diox

| Compound | R.T. | QIon | Response | Conc | Units | | Dev(Min) |
|---|---|---|---|---|---|---|---|
| 36) Carbon tetrachloride | 4.979 | 117 | 100885 | 11.078 | ug/L | | 98 |
| 39) 1,1,1-Trichloroethane | 5.049 | 97 | 109953 | 11.220 | ug/L | | 96 |
| 41) 2-Butanone | 5.143 | 43 | 14241 | 7.753 | ug/L | | 95 |
| 42) 1,1-Dichloropropene | 5.166 | 75 | 82538 | 10.065 | ug/L | | 93 |
| 44) Benzene | 5.416 | 78 | 224633 | 9.835 | ug/L | | 95 |
| 47) 1,2-Dichloroethane | 5.620 | 62 | 54101 | 9.360 | ug/L | | 98 |
| 51) Trichloroethene | 6.000 | 95 | 61259 | 9.480 | ug/L | | 90 |
| 53) Dibromomethane | 6.433 | 93 | 32526 | 9.415 | ug/L | # | 84 |
| 54) 1,2-Dichloropropane | 6.545 | 63 | 53433 | 8.746 | ug/L | | 94 |
| 57) Bromodichloromethane | 6.614 | 83 | 84523 | 10.368 | ug/L | | 98 |
| 60) 1,4-Dioxane | 6.830 | 88 | 16753 | 416.934 | ug/L | # | 78 |
| 61) cis-1,3-Dichloropropene | 7.306 | 75 | 105916 | 10.594 | ug/L | | 93 |
| 64) Toluene | 7.574 | 92 | 142720 | 10.159 | ug/L | | 100 |
| 65) 4-Methyl-2-pentanone | 8.011 | 58 | 13639 | 9.909 | ug/L | | 96 |
| 66) Tetrachloroethene | 8.018 | 166 | 68942 | 9.906 | ug/L | | 90 |
| 68) trans-1,3-Dichloropropene | 8.050 | 75 | 88452 | 11.677 | ug/L | | 93 |
| 71) 1,1,2-Trichloroethane | 8.237 | 83 | 35253 | 9.587 | ug/L | | 98 |
| 72) Chlorodibromomethane | 8.440 | 129 | 55539 | 10.214 | ug/L | | 98 |
| 73) 1,3-Dichloropropane | 8.557 | 76 | 77164 | 10.347 | ug/L | | 100 |
| 74) 1,2-Dibromoethane | 8.721 | 107 | 41903 | 9.378 | ug/L | | 100 |
| 76) 2-Hexanone | 9.017 | 43 | 21379 | 8.988 | ug/L | | 95 |
| 77) Chlorobenzene | 9.376 | 112 | 154296 | 9.772 | ug/L | | 97 |
| 78) Ethylbenzene | 9.415 | 91 | 285684 | 10.450 | ug/L | | 96 |
| 79) 1,1,1,2-Tetrachloroethane | 9.454 | 131 | 59192 | 10.211 | ug/L | | 94 |
| 80) p/m Xylene | 9.610 | 106 | 216994 | 19.714 | ug/L | | 89 |
| 81) o Xylene | 10.148 | 106 | 203130 | 19.604 | ug/L | | 86 |
| 82) Styrene | 10.219 | 104 | 336775 | 19.791 | ug/L | | 89 |
| 84) Bromoform | 10.234 | 173 | 36831 | 9.998 | ug/L | | 98 |
| 86) Isopropylbenzene | 10.546 | 105 | 326343 | 9.934 | ug/L | | 96 |
| 88) Bromobenzene | 10.984 | 156 | 67536 | 9.887 | ug/L | | 99 |
| 89) n-Propylbenzene | 11.038 | 91 | 347222 | 10.120 | ug/L | | 95 |
| 91) 1,1,2,2-Tetrachloroethane | 11.124 | 83 | 48732 | 9.598 | ug/L | | 100 |
| 92) 4-Ethyltoluene | 11.171 | 105 | 274469 | 10.277 | ug/L | | 96 |
| 93) 2-Chlorotoluene | 11.202 | 91 | 236203 | 10.778 | ug/L | | 93 |
| 94) 1,3,5-Trimethylbenzene | 11.272 | 105 | 237744 | 10.191 | ug/L | | 96 |
| 95) 1,2,3-Trichloropropane | 11.265 | 75 | 43835 | 10.065 | ug/L | | 97 |
| 96) trans-1,4-Dichloro-2-b... | 11.319 | 53 | 14759 | 10.222 | ug/L | | 84 |
| 97) 4-Chlorotoluene | 11.390 | 91 | 208007 | 10.452 | ug/L | | 95 |
| 98) tert-Butylbenzene | 11.616 | 119 | 200144 | 9.717 | ug/L | | 91 |

Data Path : I:\VOLATILES\VOA122\2020\200306A\
Data File : V22200306A02.D
Acq On : 06 Mar 2020 10:11 am
Operator : VOA122:PD
Sample : WG1348135-4,31,10,10 (Sig #1); 8260 CCAL (Sig #2)
Misc : WG1348135,ICAL16379 (Sig #1); WG,ICAL16379 (Sig #2)
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Mar 06 10:33:07 2020
Quant Method : I:\VOLATILES\VOA122\2020\200306A\V122_191219N_8260.m
Quant Title : VOLATILES BY GC/MS
QLast Update : Fri Dec 20 07:20:50 2019
Response via : Initial Calibration

CCAL FILE(s) : 1 - I:\VOLATILES\VOA122\2020\200306A\V22200306A01.D
Sub List : 8260-Curve - Megamix plus Diox

| | Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|---|
| 101) | 1,2,4-Trimethylbenzene | 11.694 | 105 | 238313 | 10.547 | ug/L | 95 |
| 102) | sec-Butylbenzene | 11.811 | 105 | 295349 | 10.035 | ug/L | 93 |
| 103) | p-Isopropyltoluene | 11.967 | 119 | 242610 | 9.493 | ug/L | 95 |
| 104) | 1,3-Dichlorobenzene | 12.023 | 146 | 130451 | 9.901 | ug/L | 98 |
| 105) | 1,4-Dichlorobenzene | 12.121 | 146 | 129733 | 10.002 | ug/L | 98 |
| 106) | p-Diethylbenzene | 12.343 | 119 | 131738 | 10.116 | ug/L | 96 |
| 107) | n-Butylbenzene | 12.406 | 91 | 208690 | 10.432 | ug/L | 96 |
| 108) | 1,2-Dichlorobenzene | 12.545 | 146 | 113576 | 9.698 | ug/L | 97 |
| 109) | 1,2,4,5-Tetramethylben... | 13.144 | 119 | 180155 | 10.346 | ug/L | 96 |
| 110) | 1,2-Dibromo-3-chloropr... | 13.332 | 155 | 7416 | 8.309 | ug/L | 91 |
| 112) | Hexachlorobutadiene | 13.944 | 225 | 29255 | 11.868 | ug/L | 98 |
| 113) | 1,2,4-Trichlorobenzene | 13.965 | 180 | 69598 | 10.358 | ug/L | 99 |
| 114) | Naphthalene | 14.265 | 128 | 141389 | 9.074 | ug/L | 100 |
| 115) | 1,2,3-Trichlorobenzene | 14.432 | 180 | 63039 | 10.230 | ug/L | 99 |

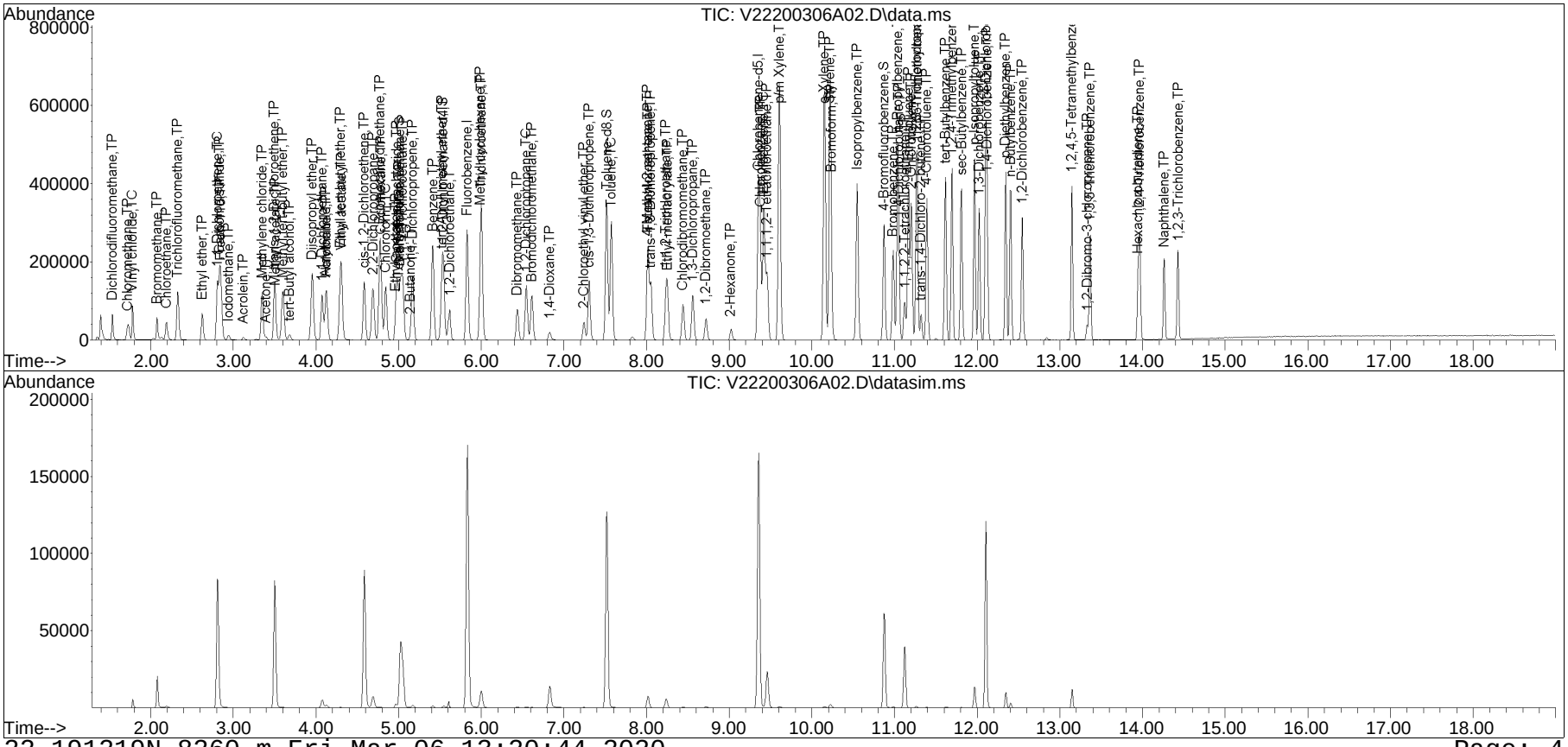
(#) = qualifier out of range (m) = manual integration (+) = signals summed

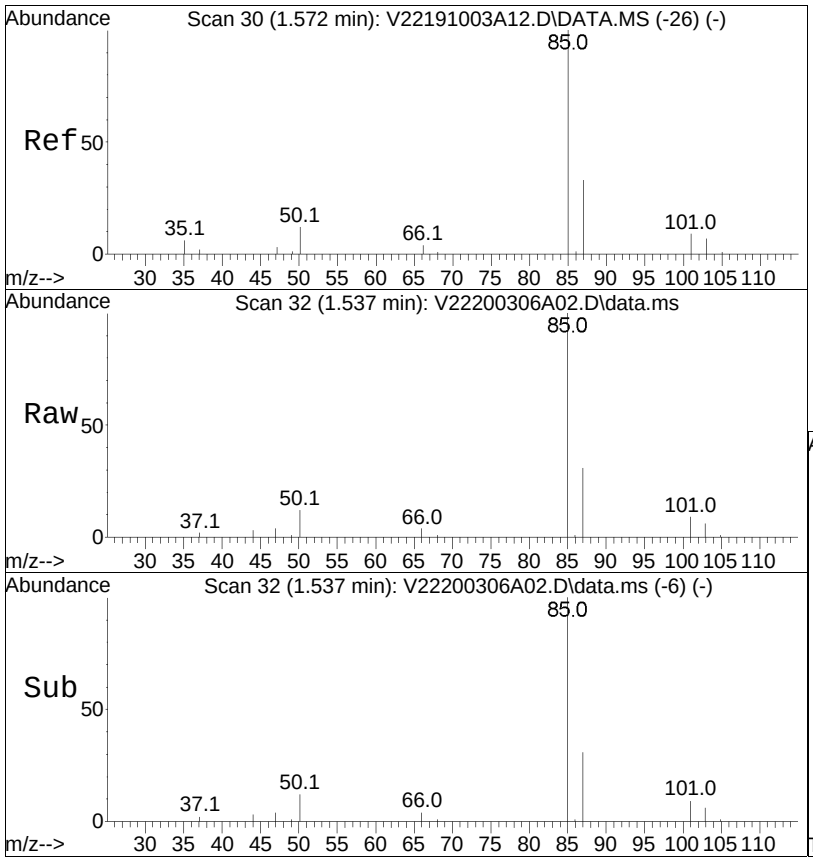
Quantitation Report (QT Reviewed)

Data Path : I:\VOLATILES\VOA122\2020\200306A\
Data File : V22200306A02.D
Acq On : 06 Mar 2020 10:11 am
Operator : VOA122:PD
Sample : WG1348135-4,31,10,10 (Sig #1); 8260 CCAL (Sig #2)
Misc : WG1348135,ICAL16379 (Sig #1); WG,ICAL16379 (Sig #2)
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Mar 06 10:33:07 2020
Quant Method : I:\VOLATILES\VOA122\2020\200306A\V122_191219N_8260.m
Quant Title : VOLATILES BY GC/MS
QLast Update : Fri Dec 20 07:20:50 2019
Response via : Initial Calibration

Sub List : 8260-Curve - Megamix plus Diox00306A\V22200306A01.D•

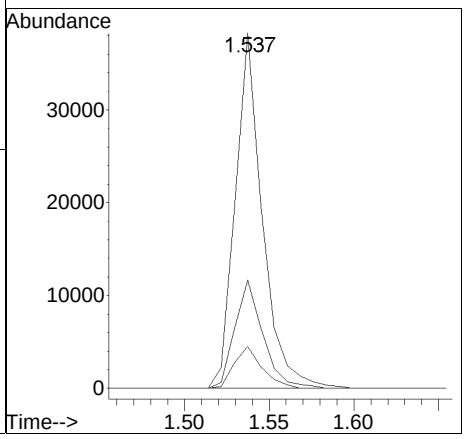


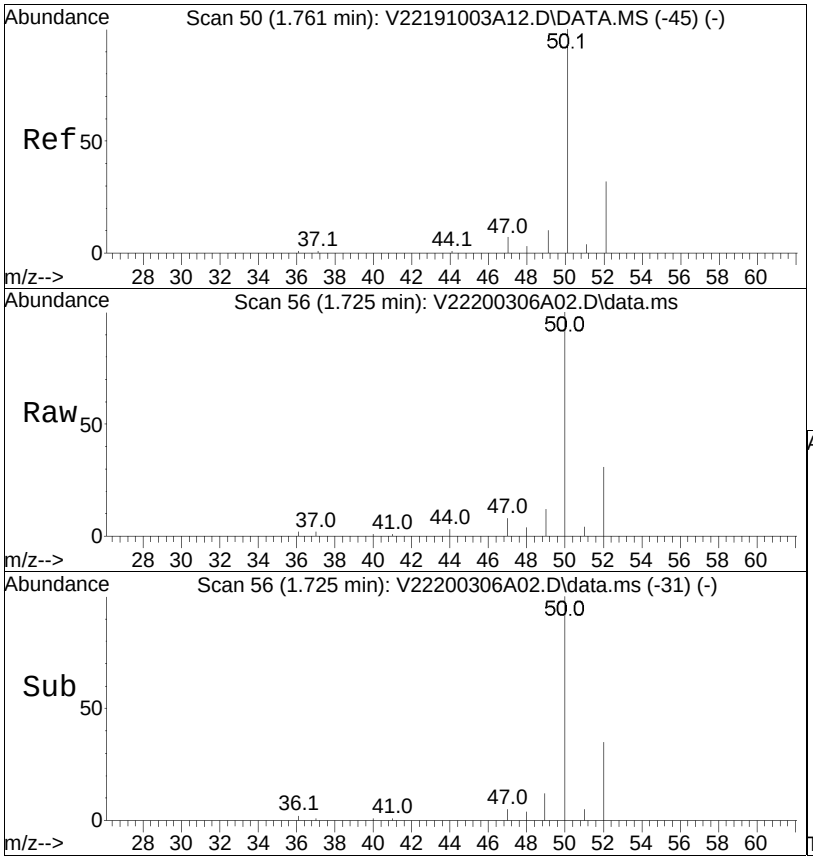



#2
Dichlorodifluoromethane
Concen: 9.64 ug/L
RT: 1.537 min Scan# 32
Delta R.T. 0.000 min
Lab File: V22200306A02.D
Acq: 06 Mar 2020 10:11 am

Tgt Ion: 85 Resp: 42693

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 85 | 100 | | |
| 87 | 31.6 | 20.7 | 42.9 |
| 50 | 12.2 | 6.8 | 14.2 |

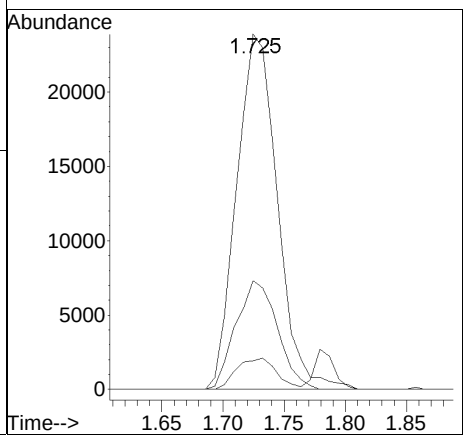


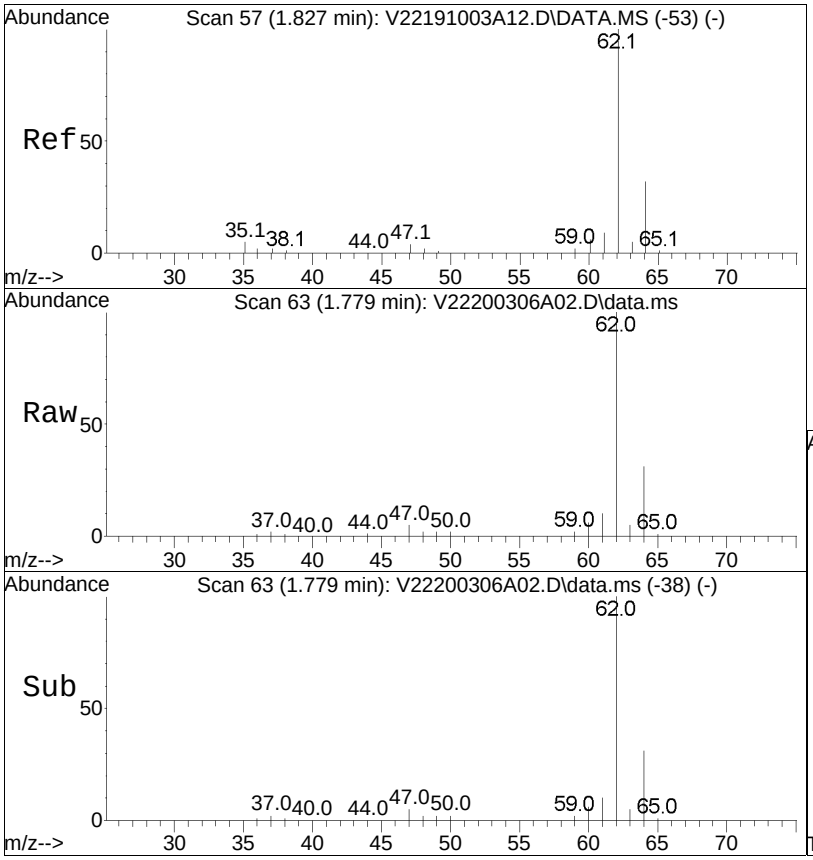



#3
Chloromethane
Concen: 9.49 ug/L
RT: 1.725 min Scan# 56
Delta R.T. -0.007 min
Lab File: V22200306A02.D
Acq: 06 Mar 2020 10:11 am

Tgt Ion: 50 Resp: 55458

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 50 | 100 | | |
| 52 | 31.1 | 12.8 | 52.8 |
| 47 | 8.7 | 0.0 | 30.0 |

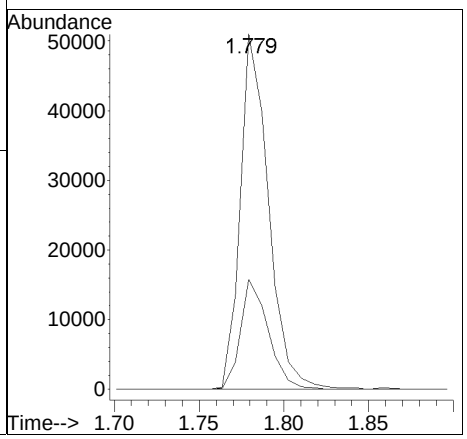


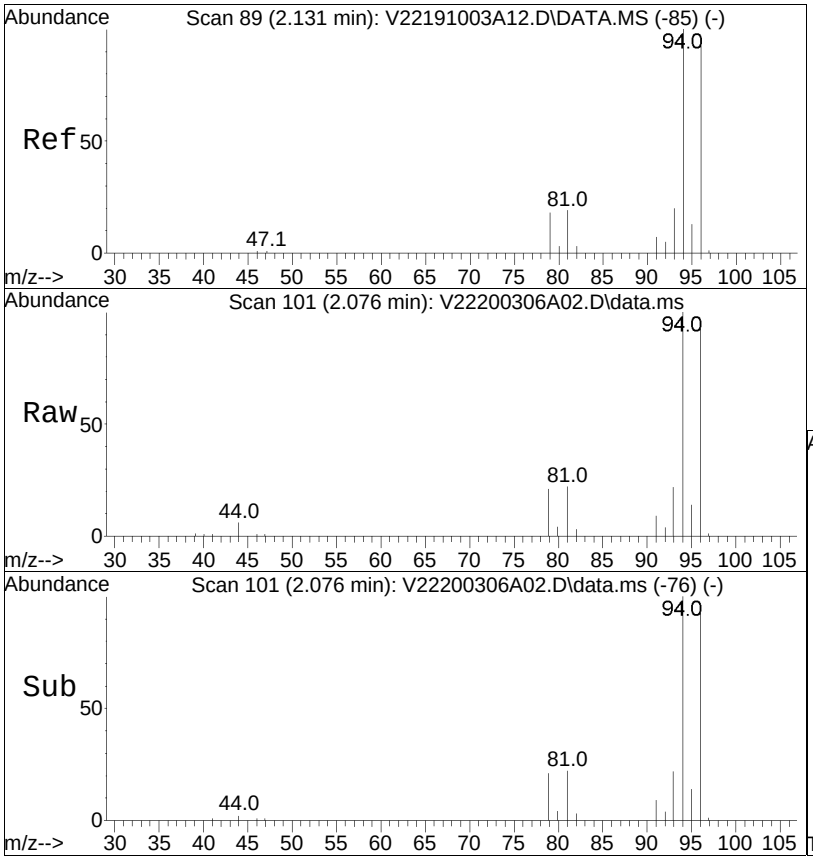



#4
Vinyl chloride
Concen: 9.02 ug/L
RT: 1.779 min Scan# 63
Delta R.T. -0.008 min
Lab File: V22200306A02.D
Acq: 06 Mar 2020 10:11 am

Tgt Ion: 62 Resp: 59200

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 62 | 100 | | |
| 64 | 30.5 | 12.0 | 52.0 |

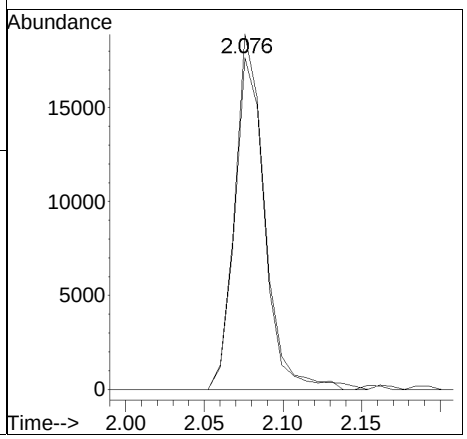


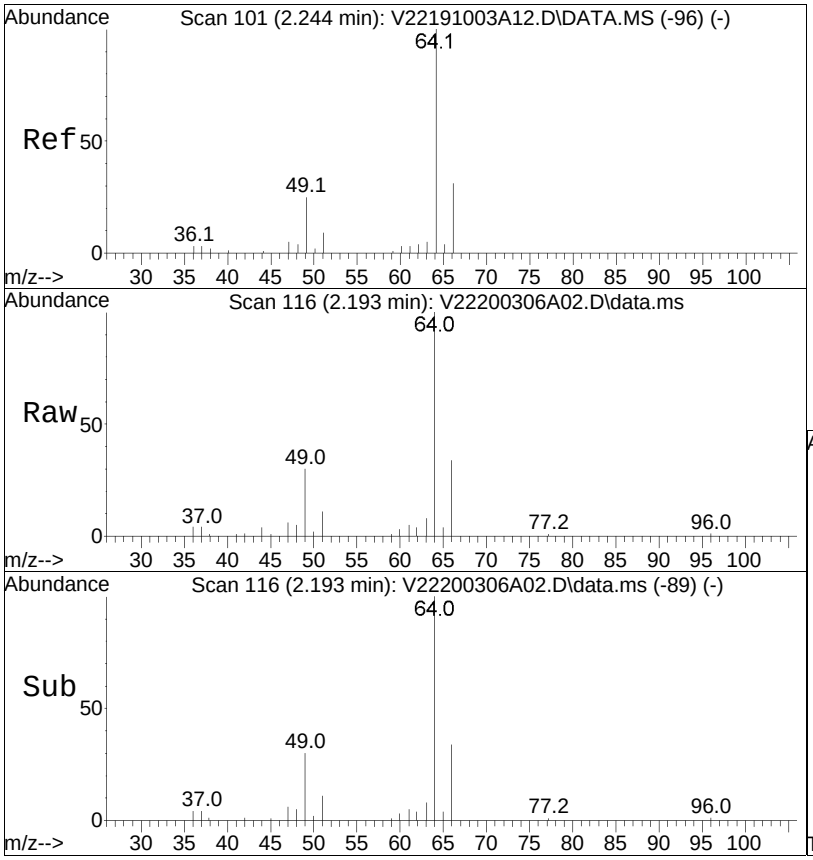



#5
Bromomethane
Concen: 4.39 ug/L
RT: 2.076 min Scan# 101
Delta R.T. -0.008 min
Lab File: V22200306A02.D
Acq: 06 Mar 2020 10:11 am

Tgt Ion: 94 Resp: 25196

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 94 | 100 | | |
| 96 | 93.0 | 72.8 | 112.8 |

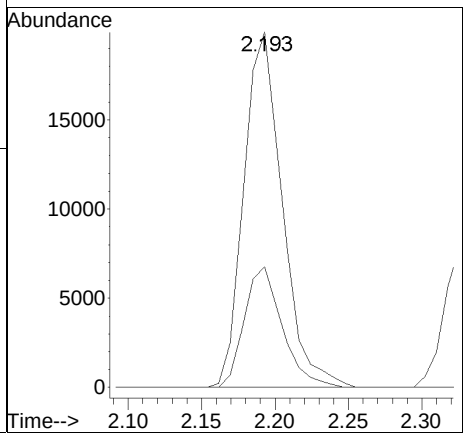


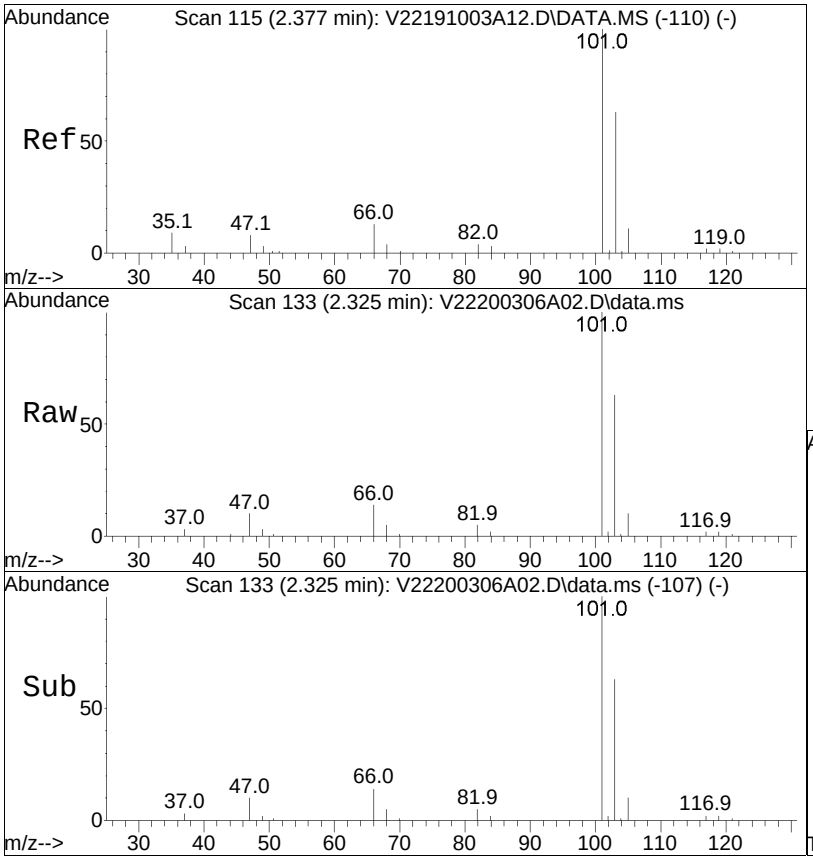



#6
Chloroethane
Concen: 7.66 ug/L
RT: 2.193 min Scan# 116
Delta R.T. 0.008 min
Lab File: V22200306A02.D
Acq: 06 Mar 2020 10:11 am

Tgt Ion: 64 Resp: 36296

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 64 | 100 | | |
| 66 | 33.5 | 12.2 | 52.2 |

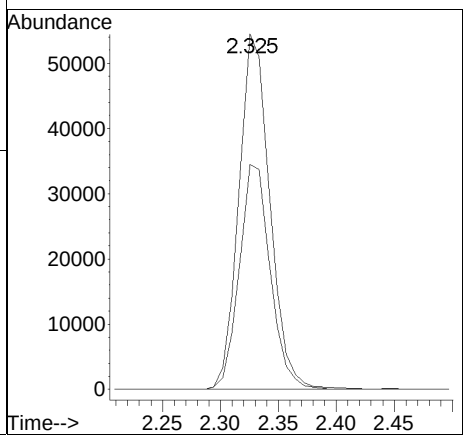


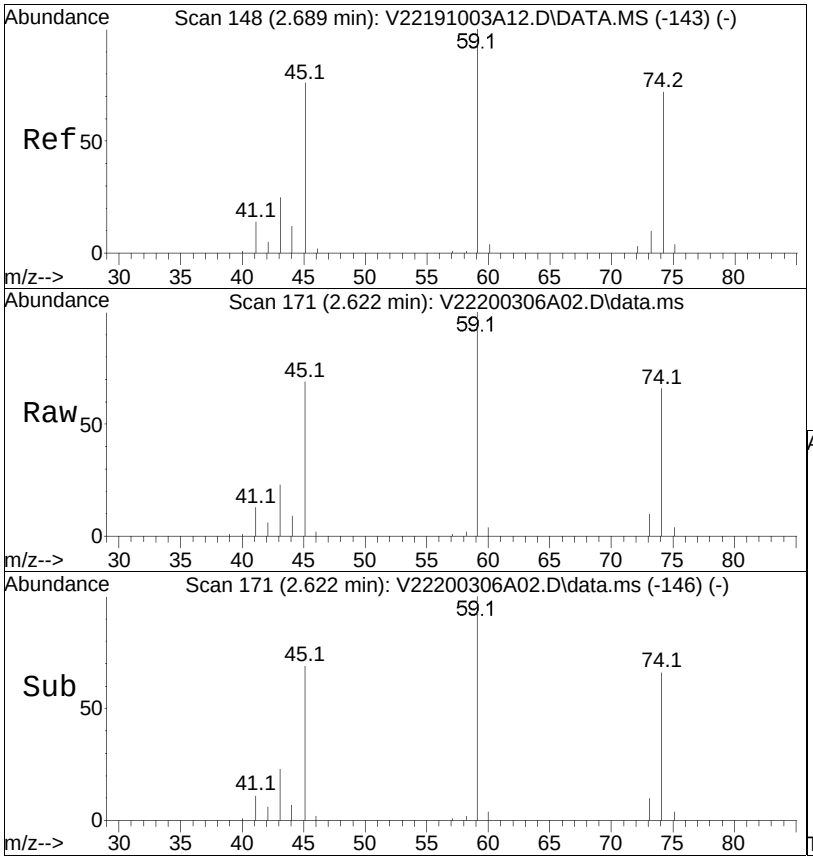



#7
Trichlorofluoromethane
Concen: 11.33 ug/L
RT: 2.325 min Scan# 133
Delta R.T. -0.001 min
Lab File: V22200306A02.D
Acq: 06 Mar 2020 10:11 am

Tgt Ion:101 Resp: 101420

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 101 | 100 | | |
| 103 | 63.3 | 51.6 | 77.4 |

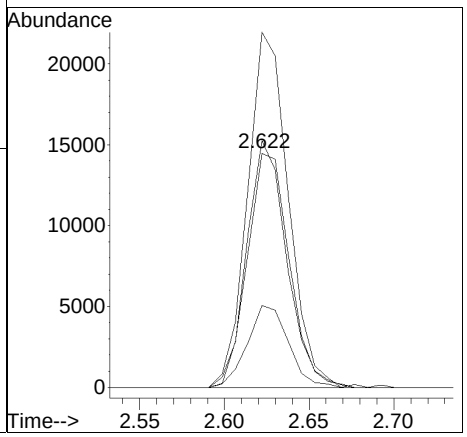


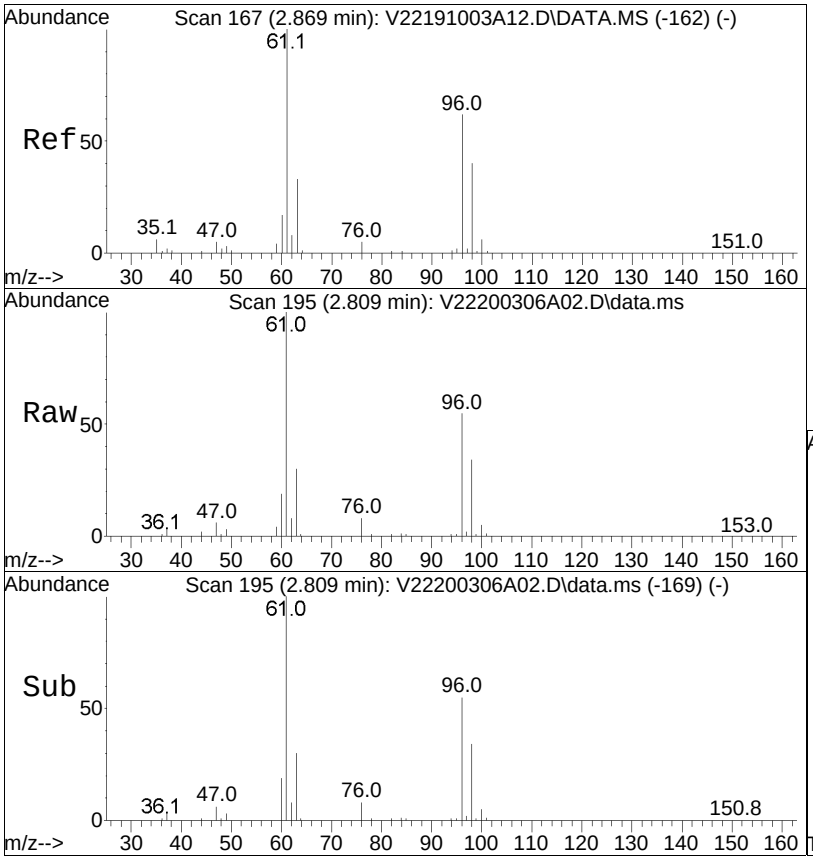



#8
Ethyl ether
Concen: 9.42 ug/L
RT: 2.622 min Scan# 171
Delta R.T. -0.008 min
Lab File: V22200306A02.D
Acq: 06 Mar 2020 10:11 am

Tgt Ion: 74 Resp: 24927

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 74 | 100 | | |
| 59 | 147.9 | 2122.4 | 4408.0# |
| 45 | 100.9 | 1435.1 | 2980.5# |
| 43 | 34.4 | 407.9 | 847.3# |

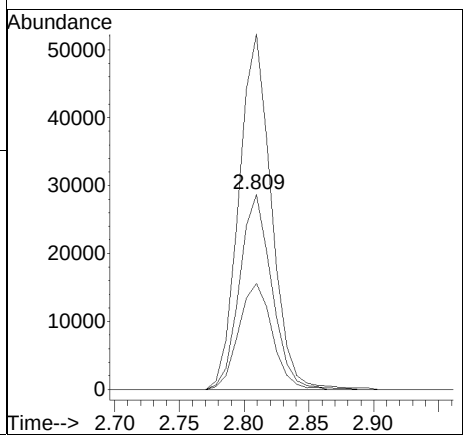


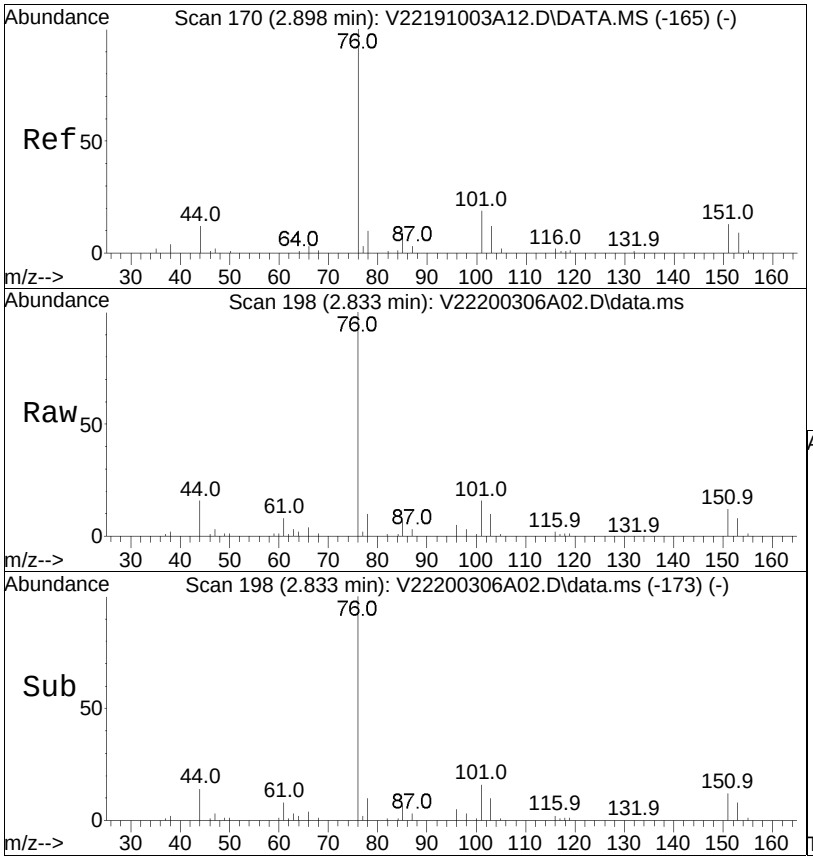



#10
1,1-Dichloroethene
Concen: 9.83 ug/L
RT: 2.809 min Scan# 195
Delta R.T. 0.000 min
Lab File: V22200306A02.D
Acq: 06 Mar 2020 10:11 am

Tgt Ion: 96 Resp: 49597

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 96 | 100 | | |
| 61 | 183.7 | 117.0 | 175.4# |
| 63 | 56.7 | 37.8 | 56.6# |

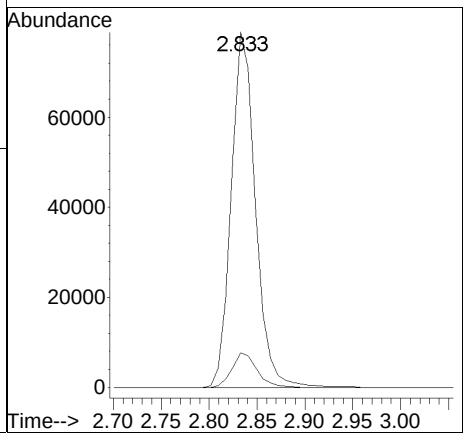


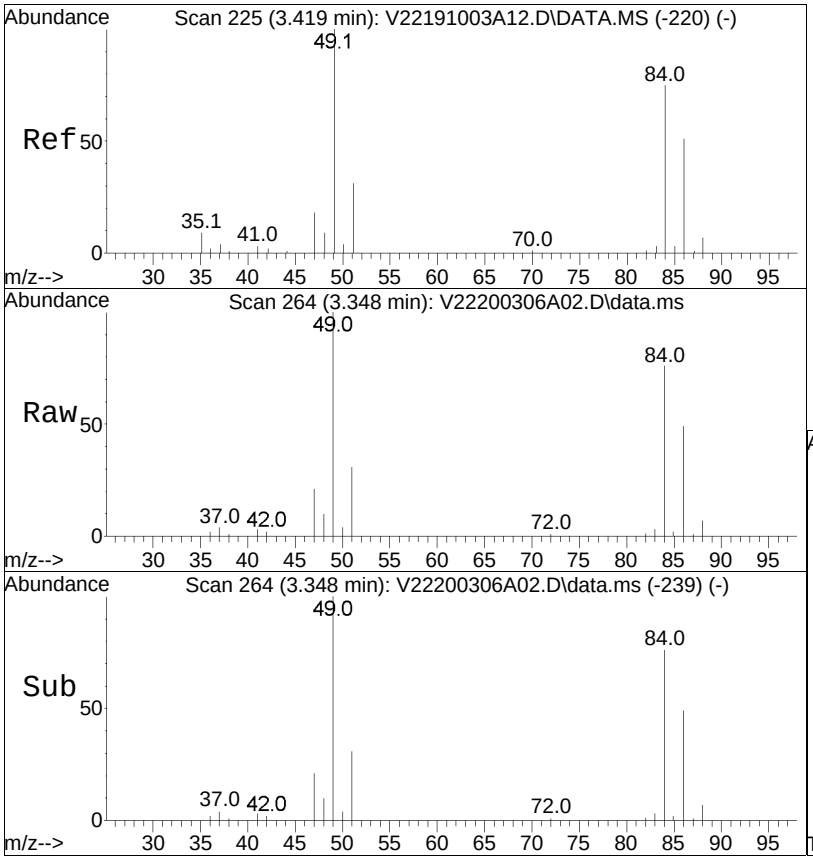



#11
Carbon disulfide
Concen: 10.54 ug/L
RT: 2.833 min Scan# 198
Delta R.T. -0.008 min
Lab File: V22200306A02.D
Acq: 06 Mar 2020 10:11 am

Tgt Ion: 76 Resp: 138828

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 76 | 100 | | |
| 78 | 10.0 | 6.4 | 13.4 |

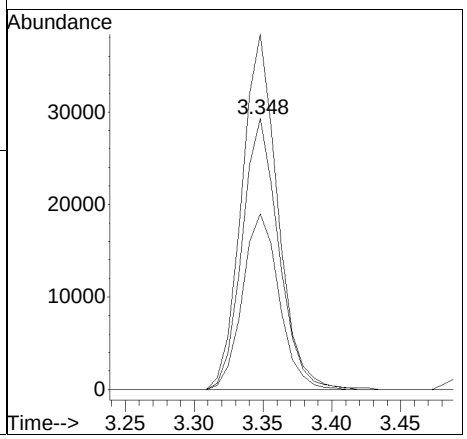


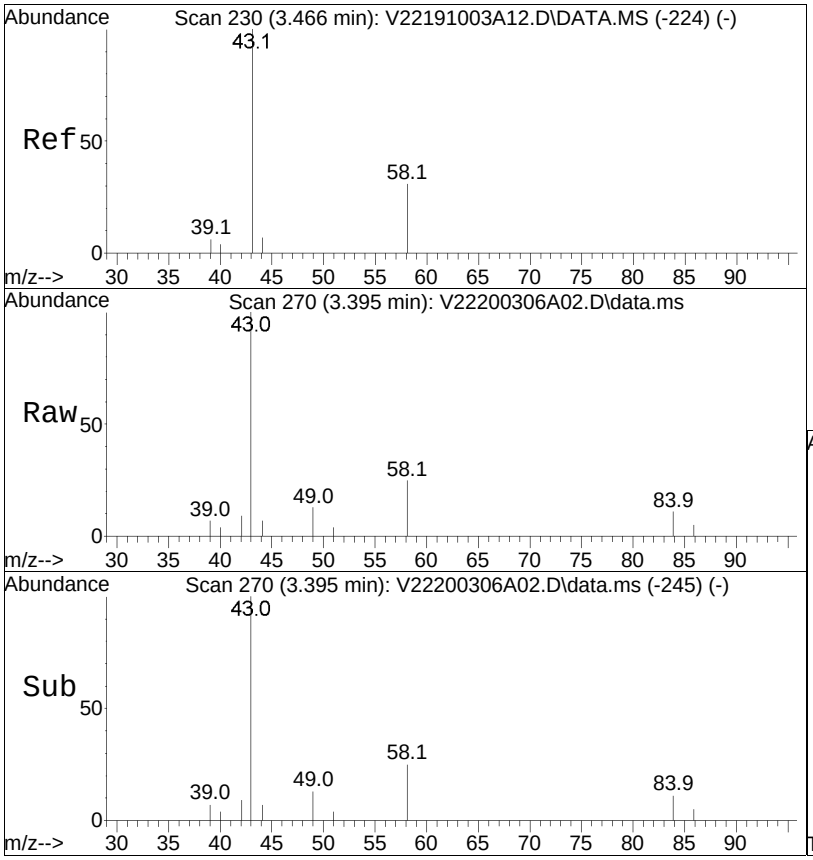



#15
Methylene chloride
Concen: 9.44 ug/L
RT: 3.348 min Scan# 264
Delta R.T. -0.008 min
Lab File: V22200306A02.D
Acq: 06 Mar 2020 10:11 am

Tgt Ion: 84 Resp: 53942

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 84 | 100 | | |
| 86 | 65.1 | 41.5 | 86.3 |
| 49 | 129.4 | 68.8 | 143.0 |

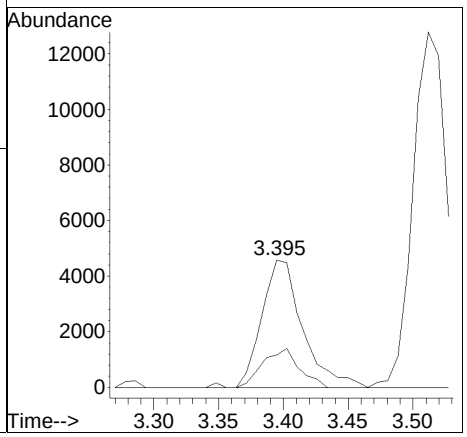


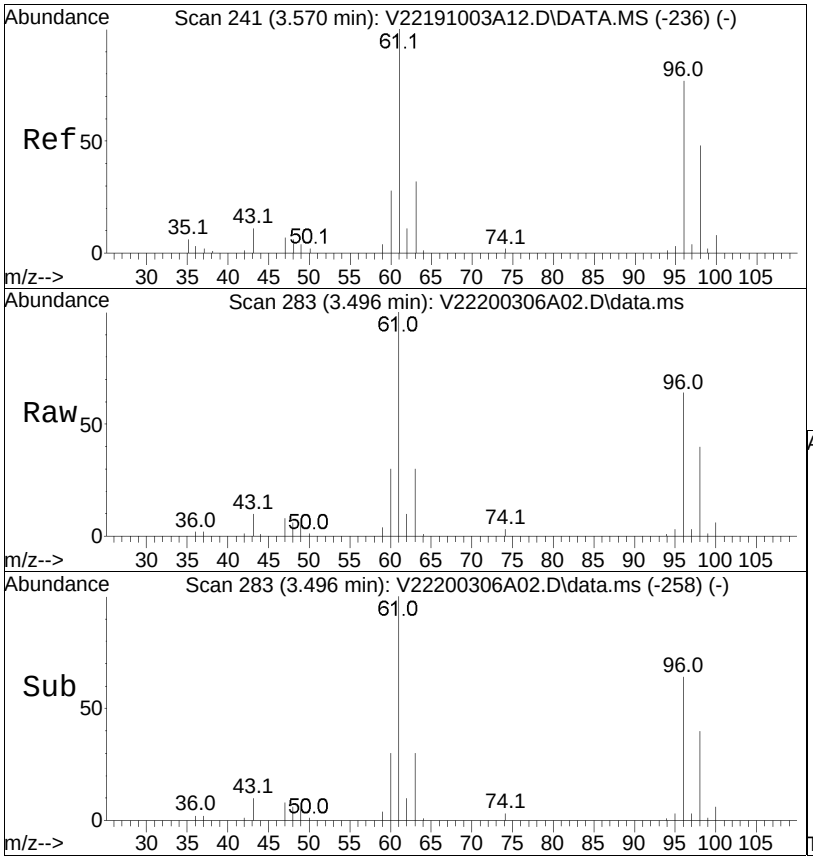



#17
Acetone
Concen: 6.89 ug/L
RT: 3.395 min Scan# 270
Delta R.T. -0.008 min
Lab File: V22200306A02.D
Acq: 06 Mar 2020 10:11 am

Tgt Ion: 43 Resp: 10095

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 43 | 100 | | |
| 58 | 27.1 | 23.1 | 34.7 |

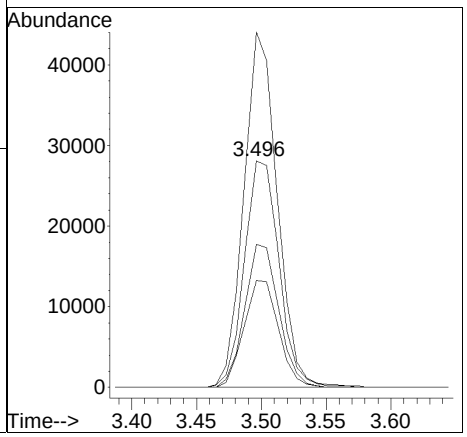


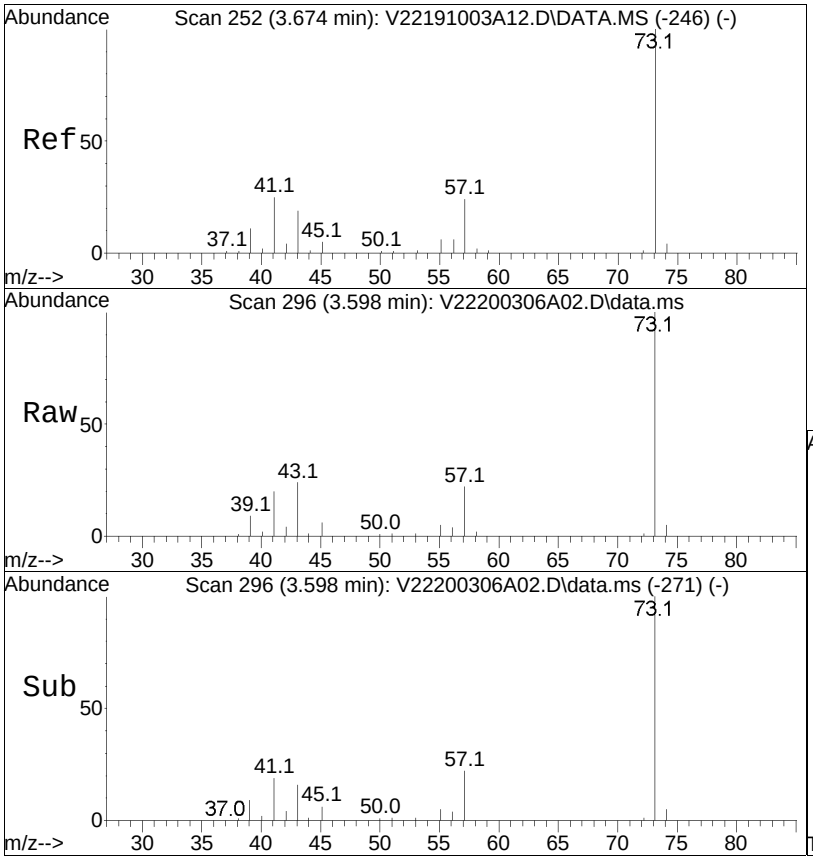



#18
trans-1,2-Dichloroethene
Concen: 9.68 ug/L
RT: 3.496 min Scan# 283
Delta R.T. -0.008 min
Lab File: V22200306A02.D
Acq: 06 Mar 2020 10:11 am

Tgt Ion: 96 Resp: 52450

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 96 | 100 | | |
| 61 | 150.8 | 81.6 | 169.6 |
| 98 | 62.0 | 41.8 | 86.8 |
| 63 | 47.1 | 26.3 | 54.7 |

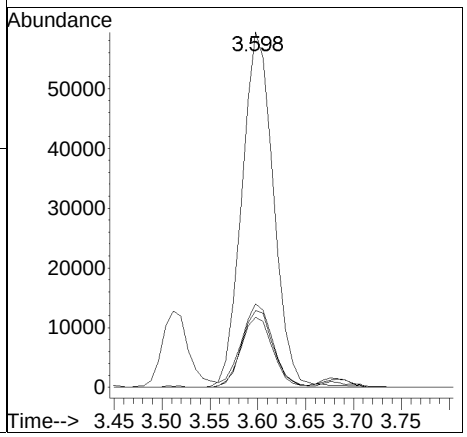


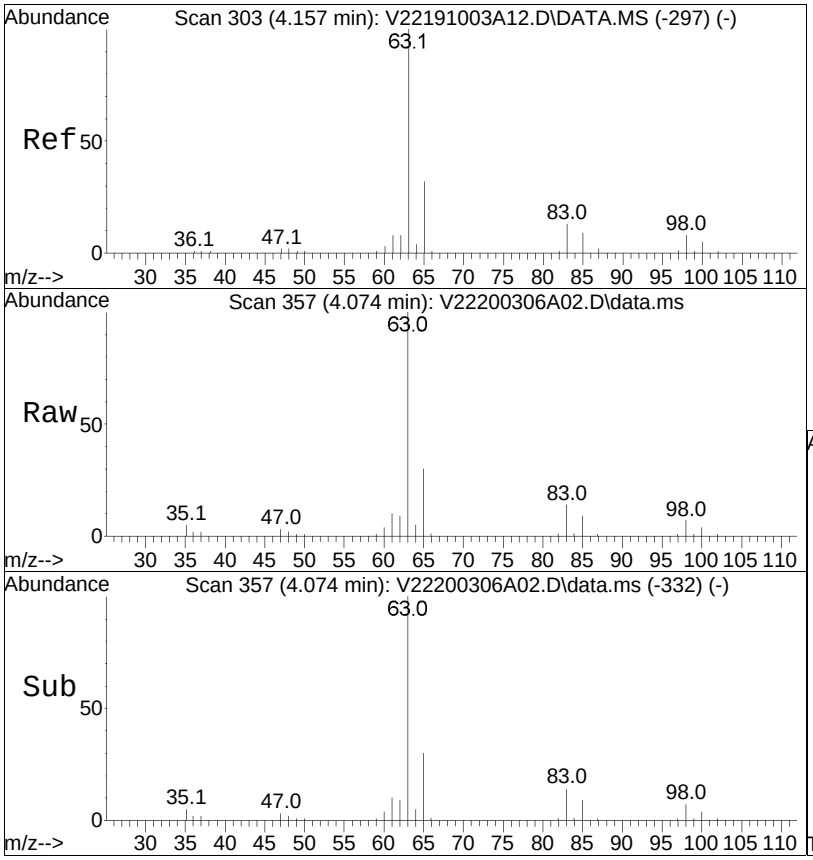



#21
Methyl tert-butyl ether
Concen: 11.42 ug/L
RT: 3.598 min Scan# 296
Delta R.T. -0.007 min
Lab File: V22200306A02.D
Acq: 06 Mar 2020 10:11 am

Tgt Ion: 73 Resp: 136846

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 73 | 100 | | |
| 57 | 21.7 | 13.6 | 28.2 |
| 43 | 23.4 | 12.7 | 26.5 |
| 41 | 19.7 | 11.4 | 23.8 |

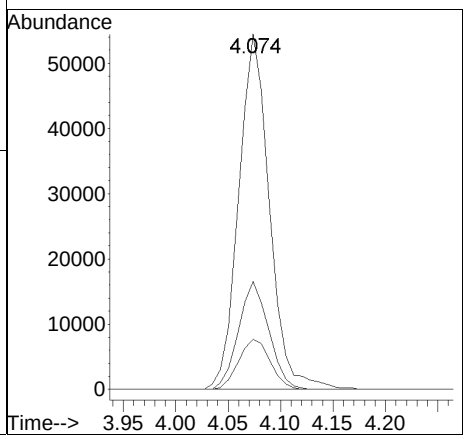


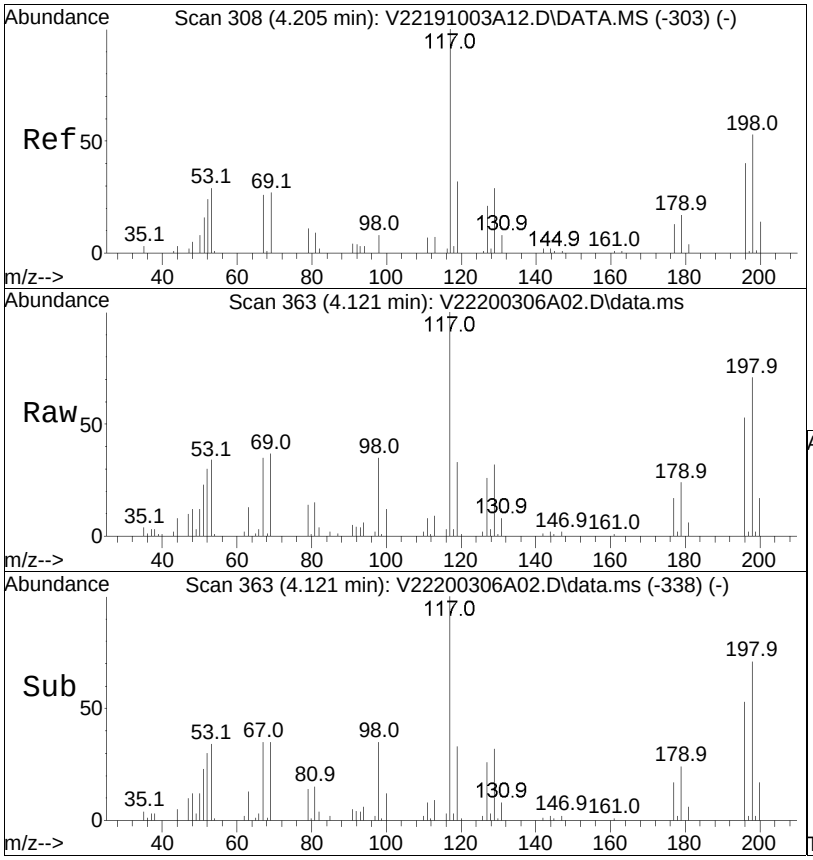



#25
1,1-Dichloroethane
Concen: 10.21 ug/L
RT: 4.074 min Scan# 357
Delta R.T. -0.008 min
Lab File: V22200306A02.D
Acq: 06 Mar 2020 10:11 am

Tgt Ion: 63 Resp: 111168

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 63 | 100 | | |
| 65 | 29.8 | 11.9 | 51.9 |
| 83 | 14.5 | 0.0 | 34.2 |

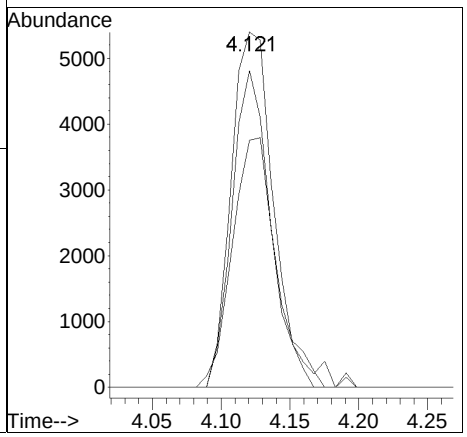


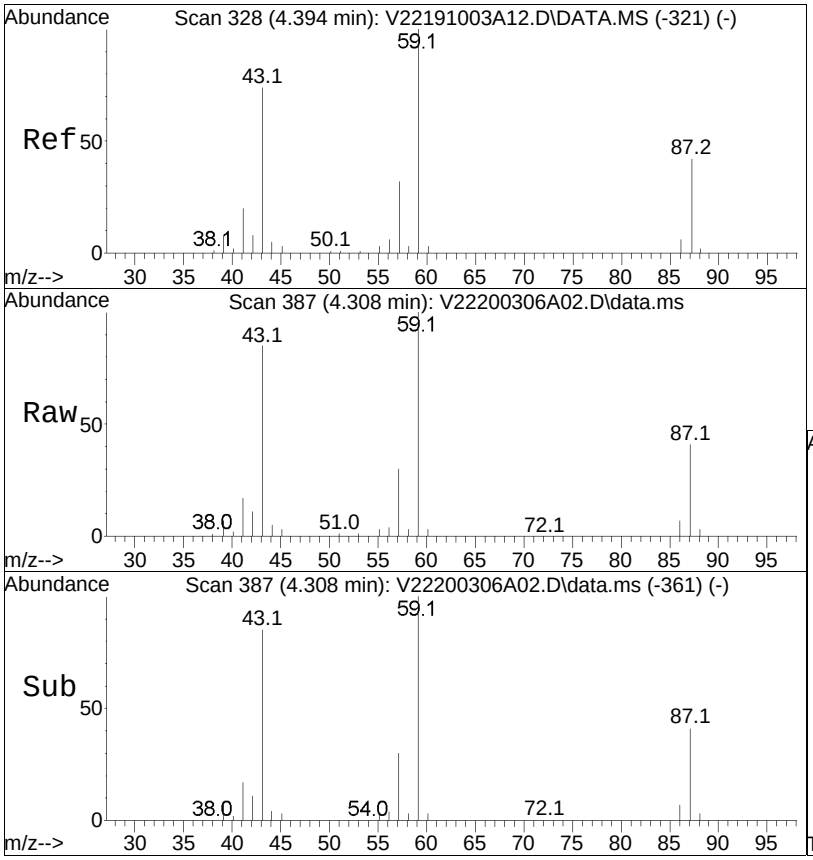



#27
Acrylonitrile
Concen: 8.68 ug/L
RT: 4.121 min Scan# 363
Delta R.T. -0.007 min
Lab File: V22200306A02.D
Acq: 06 Mar 2020 10:11 am

Tgt Ion: 53 Resp: 11802

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 53 | 100 | | |
| 52 | 82.0 | 63.8 | 95.8 |
| 51 | 68.9 | 50.2 | 75.4 |

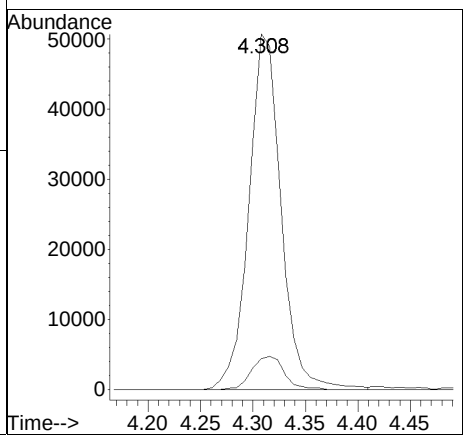


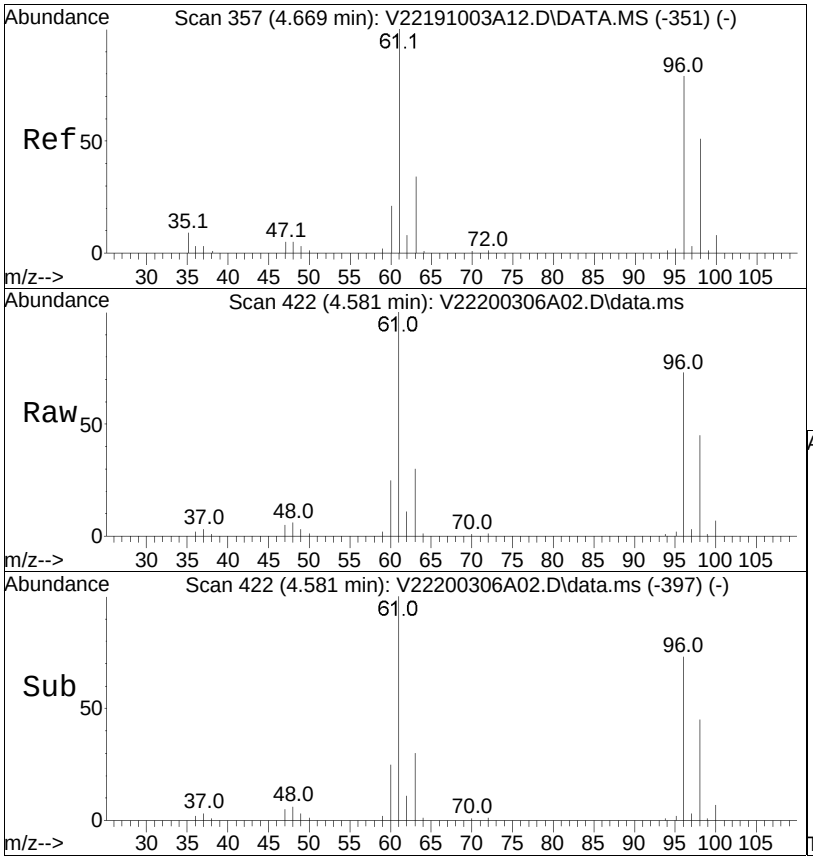



#29
Vinyl acetate
Concen: 11.66 ug/L
RT: 4.308 min Scan# 387
Delta R.T. -0.000 min
Lab File: V22200306A02.D
Acq: 06 Mar 2020 10:11 am

Tgt Ion: 43 Resp: 108360

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 43 | 100 | | |
| 86 | 9.3 | 8.9 | 13.3 |

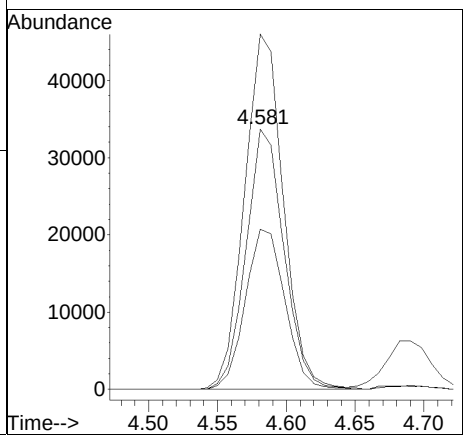


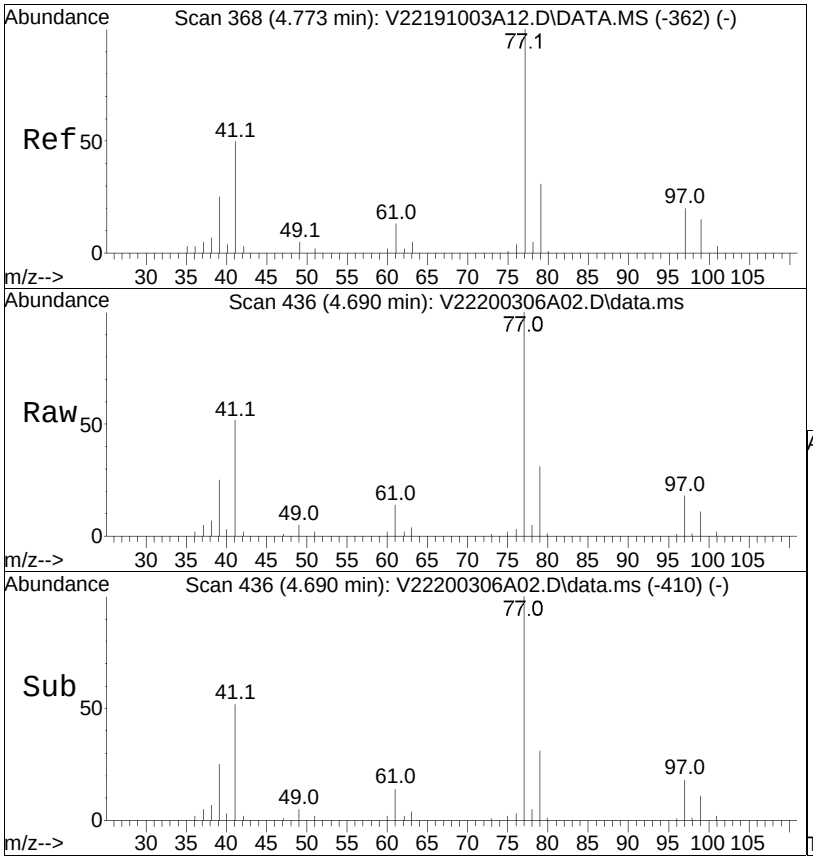



#30
cis-1,2-Dichloroethene
Concen: 9.67 ug/L
RT: 4.581 min Scan# 422
Delta R.T. -0.008 min
Lab File: V22200306A02.D
Acq: 06 Mar 2020 10:11 am

Tgt Ion: 96 Resp: 64780

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 96 | 100 | | |
| 61 | 139.4 | 90.3 | 135.5# |
| 98 | 64.3 | 50.8 | 76.2 |

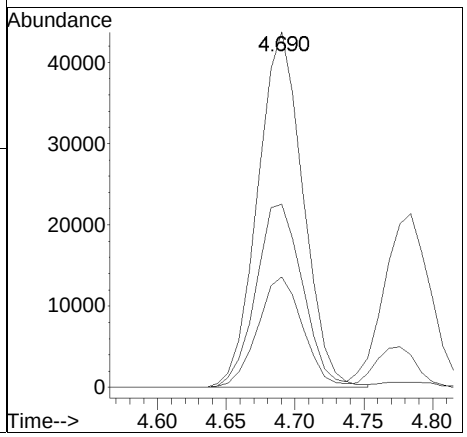


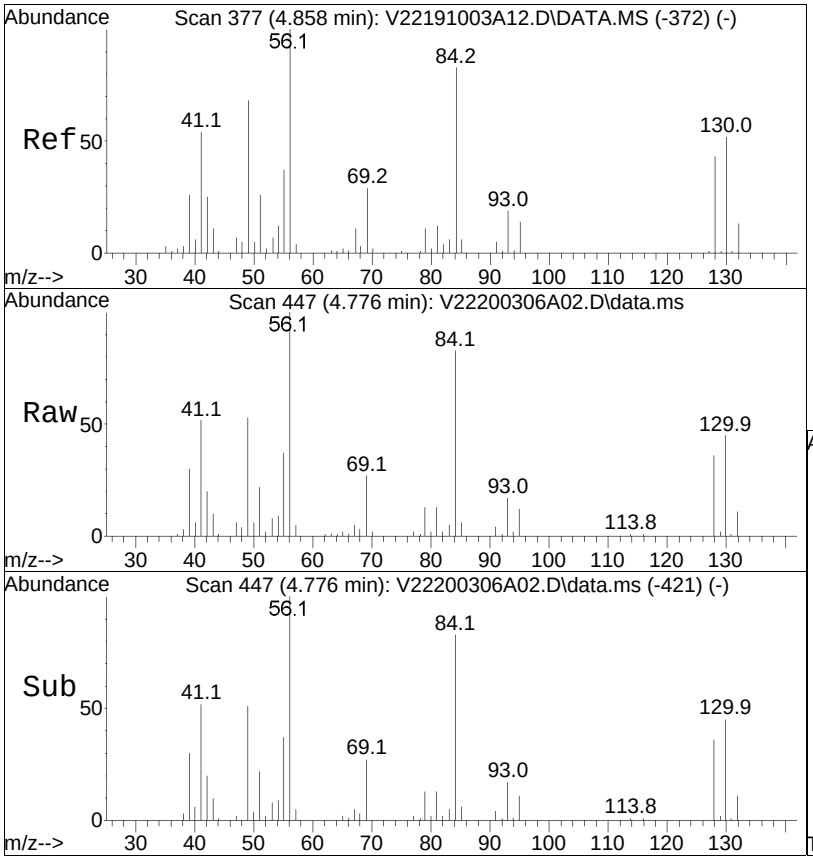



#31
2,2-Dichloropropane
Concen: 15.92 ug/L
RT: 4.690 min Scan# 436
Delta R.T. 0.000 min
Lab File: V22200306A02.D
Acq: 06 Mar 2020 10:11 am

Tgt Ion: 77 Resp: 100141

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 77 | 100 | | |
| 41 | 53.2 | 32.3 | 67.1 |
| 79 | 31.0 | 21.1 | 43.7 |

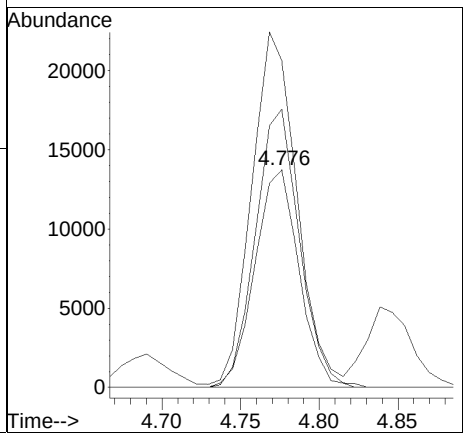


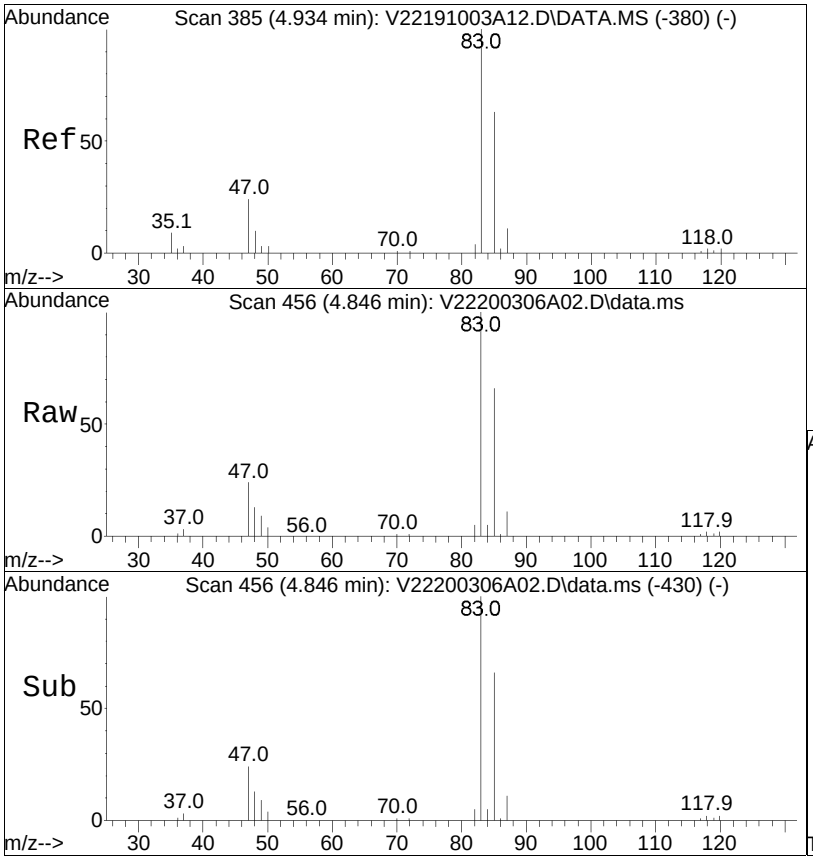



#32
Bromochloromethane
Concen: 9.67 ug/L
RT: 4.776 min Scan# 447
Delta R.T. 0.000 min
Lab File: V22200306A02.D
Acq: 06 Mar 2020 10:11 am

Tgt Ion:128 Resp: 26859

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 128 | 100 | | |
| 49 | 167.1 | 104.4 | 156.6# |
| 130 | 127.3 | 103.9 | 155.9 |

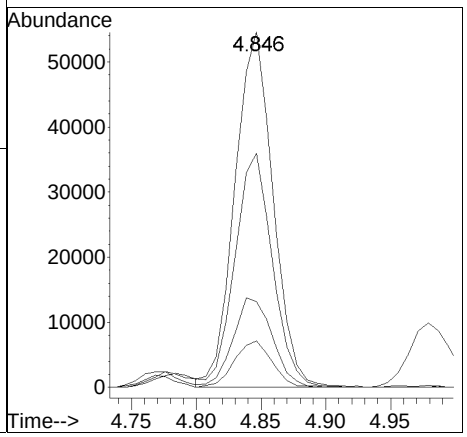


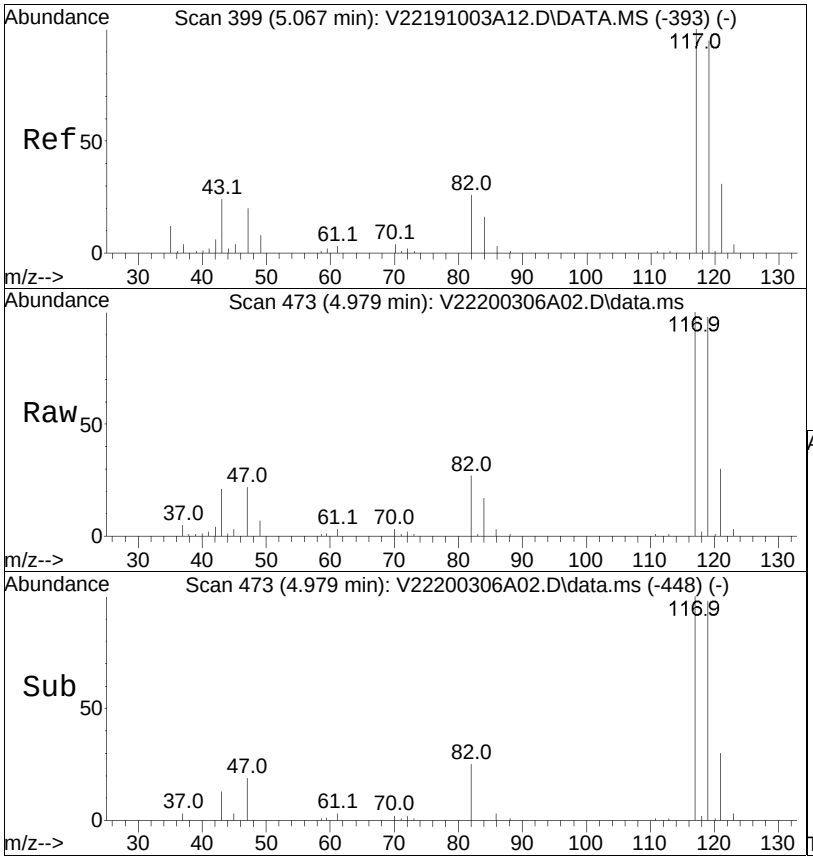



#34
Chloroform
Concen: 10.49 ug/L
RT: 4.846 min Scan# 456
Delta R.T. 0.000 min
Lab File: V22200306A02.D
Acq: 06 Mar 2020 10:11 am

Tgt Ion: 83 Resp: 112183

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 83 | 100 | | |
| 85 | 64.6 | 42.4 | 88.2 |
| 47 | 26.1 | 14.0 | 29.0 |
| 48 | 12.9 | 6.9 | 14.3 |

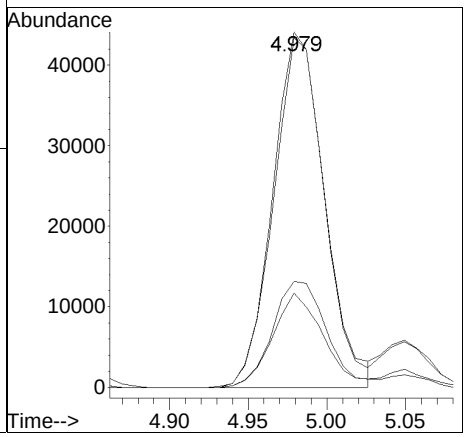


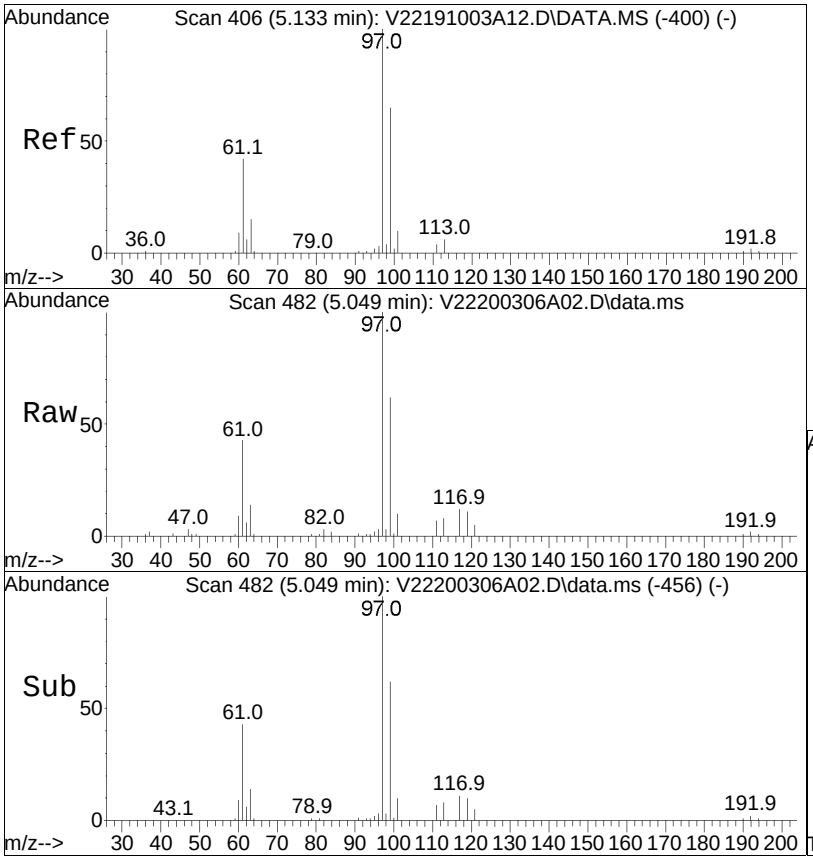



#36
Carbon tetrachloride
Concen: 11.08 ug/L
RT: 4.979 min Scan# 473
Delta R.T. -0.008 min
Lab File: V22200306A02.D
Acq: 06 Mar 2020 10:11 am

Tgt Ion:117 Resp: 100885

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 117 | 100 | | |
| 119 | 96.6 | 62.1 | 129.1 |
| 121 | 31.0 | 20.3 | 42.3 |
| 82 | 26.5 | 15.4 | 32.0 |

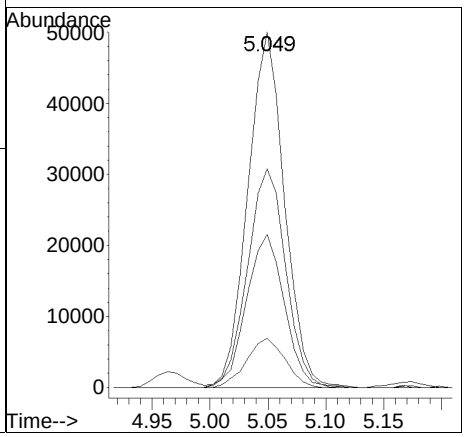


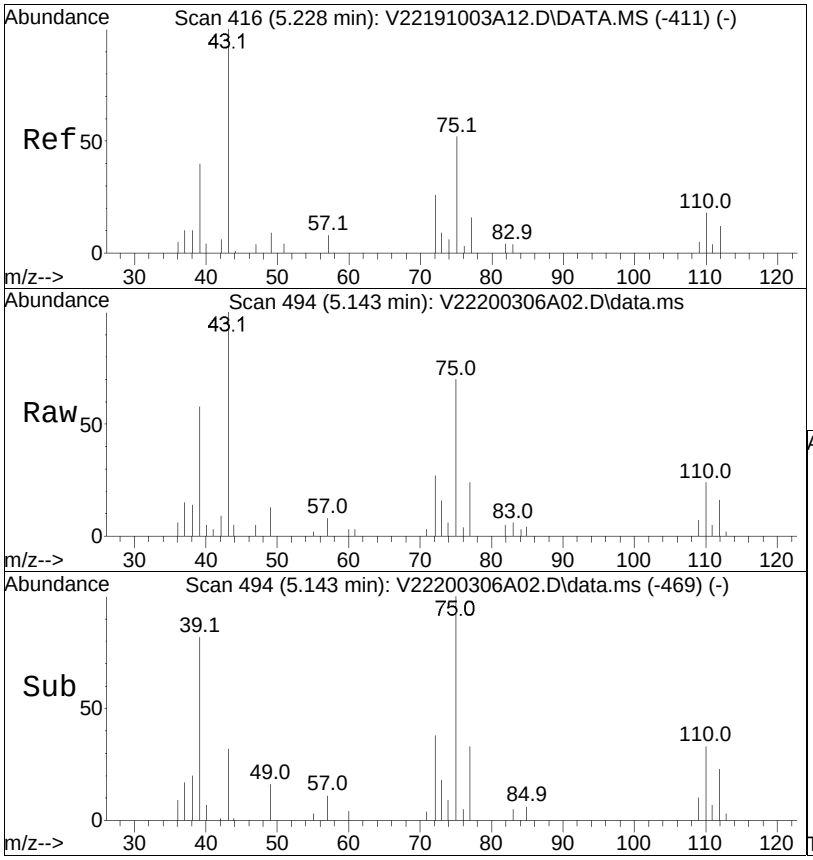



#39
1,1,1-Trichloroethane
Concen: 11.22 ug/L
RT: 5.049 min Scan# 482
Delta R.T. 0.000 min
Lab File: V22200306A02.D
Acq: 06 Mar 2020 10:11 am

Tgt Ion: 97 Resp: 109953

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 97 | 100 | | |
| 99 | 64.2 | 42.4 | 88.0 |
| 61 | 44.7 | 26.0 | 54.0 |
| 63 | 14.5 | 8.3 | 17.3 |

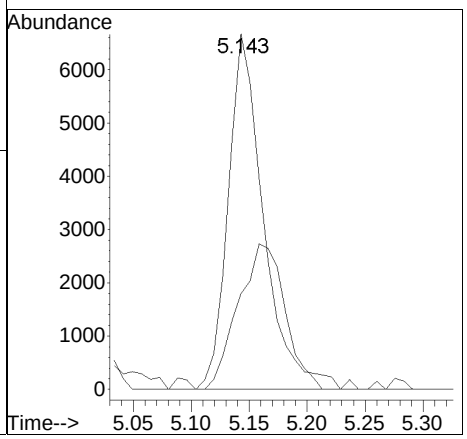


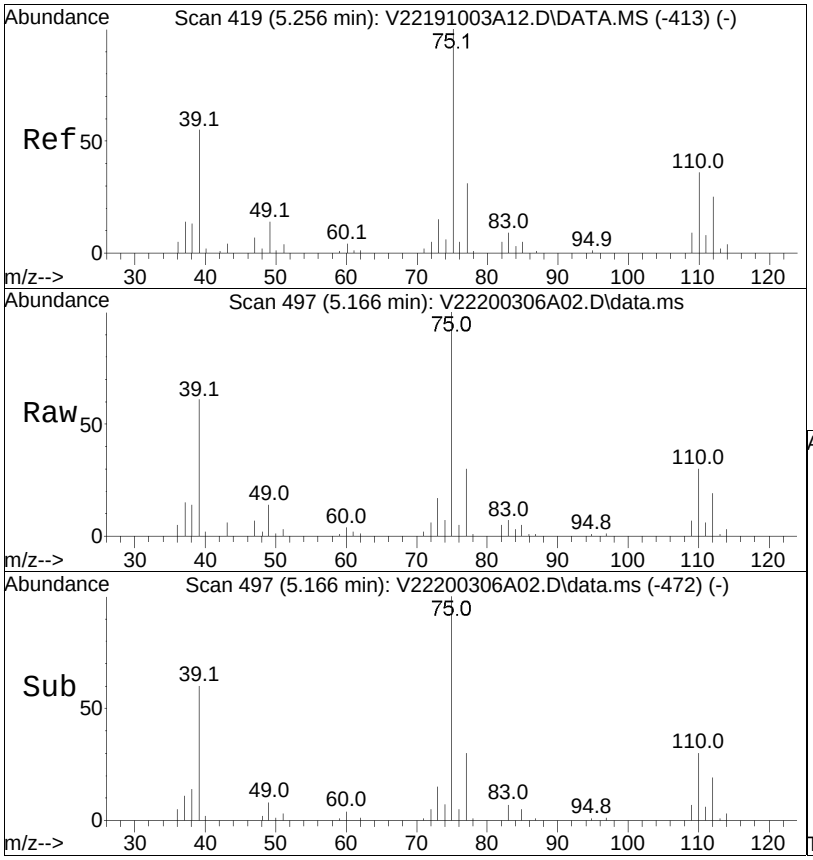



#41
2-Butanone
Concen: 7.75 ug/L
RT: 5.143 min Scan# 494
Delta R.T. -0.008 min
Lab File: V22200306A02.D
Acq: 06 Mar 2020 10:11 am

Tgt Ion: 43 Resp: 14241

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 43 | 100 | | |
| 72 | 53.6 | 45.8 | 68.8 |

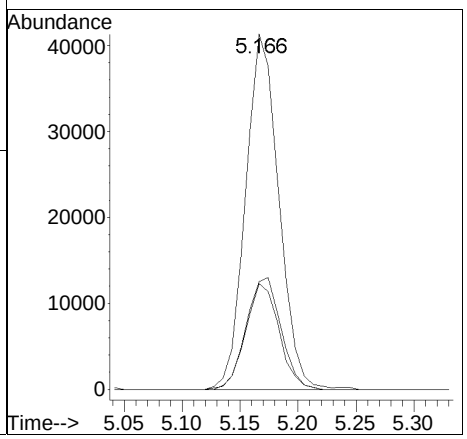


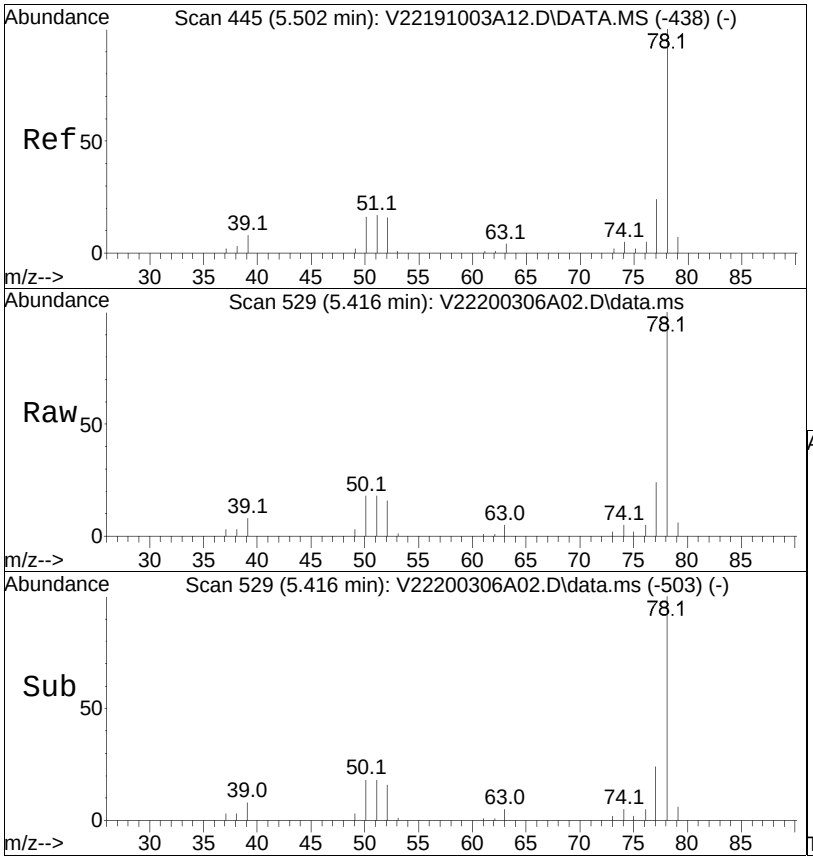



#42
1,1-Dichloropropene
Concen: 10.06 ug/L
RT: 5.166 min Scan# 497
Delta R.T. -0.008 min
Lab File: V22200306A02.D
Acq: 06 Mar 2020 10:11 am

Tgt Ion: 75 Resp: 82538

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 75 | 100 | | |
| 110 | 32.9 | 25.4 | 52.8 |
| 77 | 29.9 | 20.3 | 42.1 |

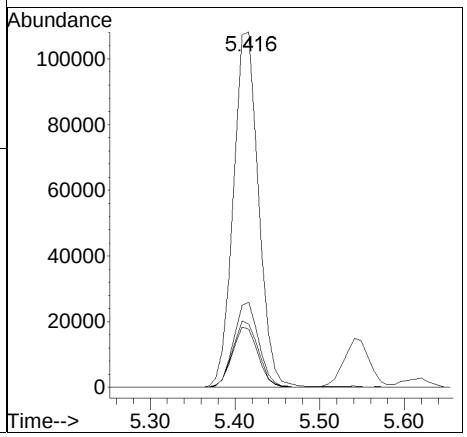


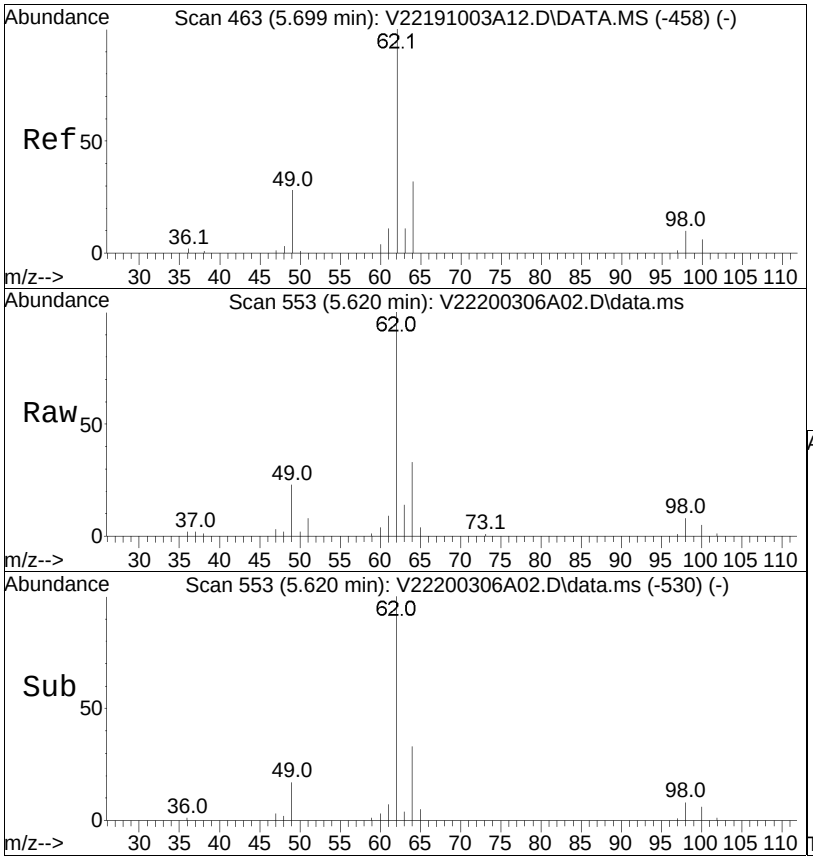



#44
Benzene
Concen: 9.83 ug/L
RT: 5.416 min Scan# 529
Delta R.T. 0.000 min
Lab File: V22200306A02.D
Acq: 06 Mar 2020 10:11 am

Tgt Ion: 78 Resp: 224633

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 78 | 100 | | |
| 77 | 23.9 | 15.4 | 32.0 |
| 51 | 19.0 | 9.8 | 20.4 |
| 52 | 17.2 | 9.2 | 19.2 |

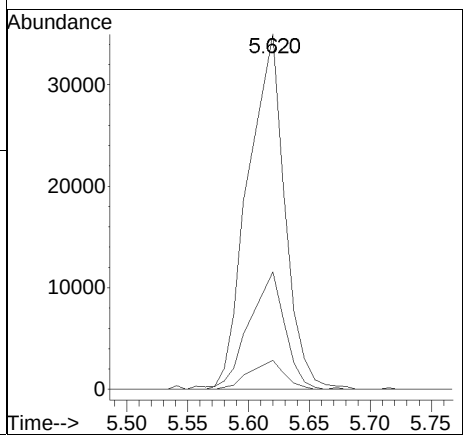


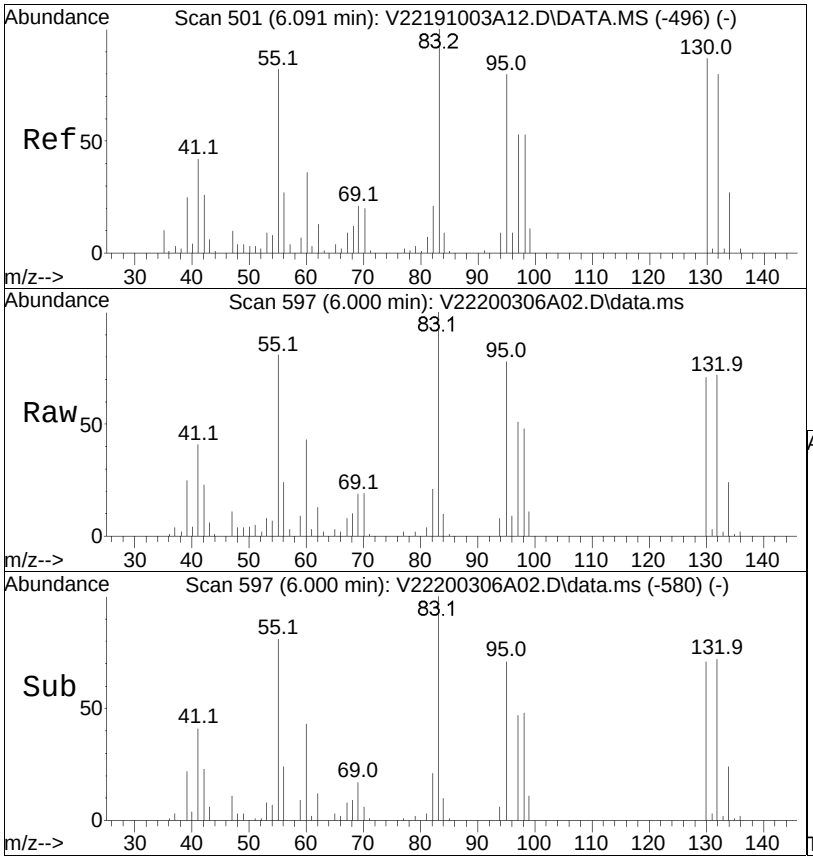



#47
1,2-Dichloroethane
Concen: 9.36 ug/L
RT: 5.620 min Scan# 553
Delta R.T. -0.000 min
Lab File: V22200306A02.D
Acq: 06 Mar 2020 10:11 am

Tgt Ion: 62 Resp: 54101

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 62 | 100 | | |
| 64 | 32.6 | 12.3 | 52.3 |
| 98 | 8.1 | 0.0 | 30.3 |

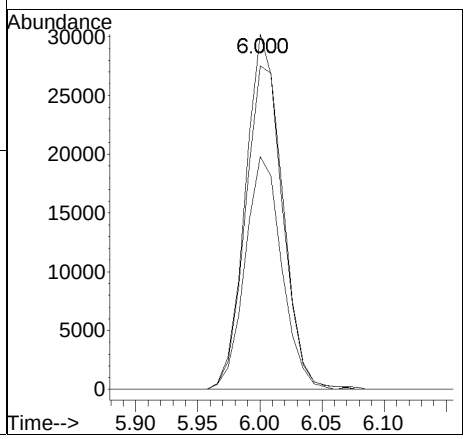


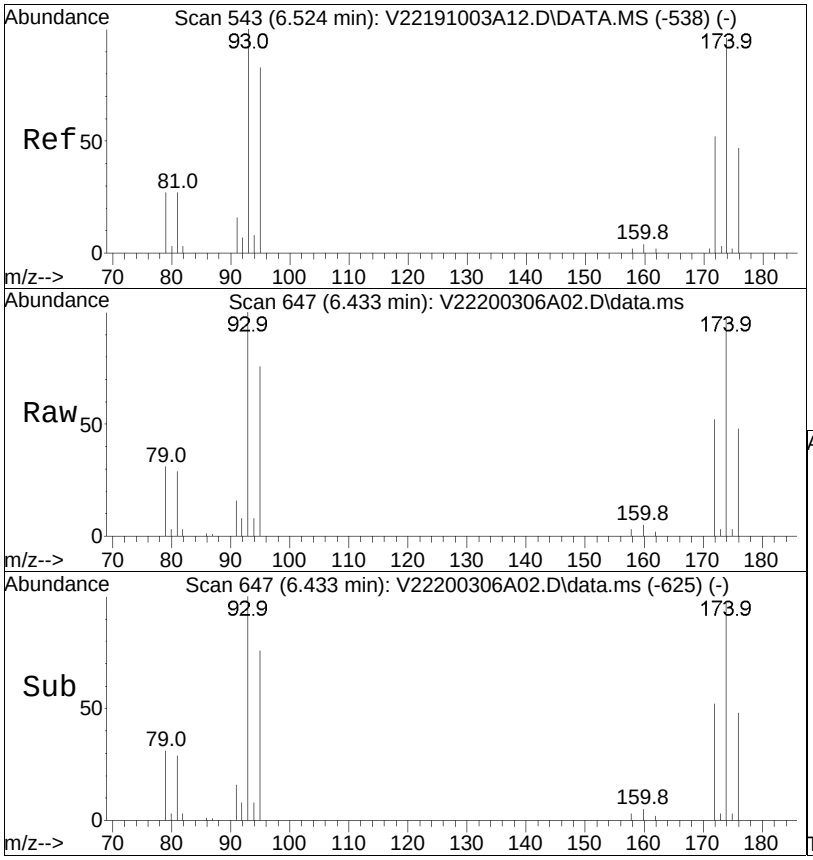



#51
Trichloroethene
Concen: 9.48 ug/L
RT: 6.000 min Scan# 597
Delta R.T. -0.009 min
Lab File: V22200306A02.D
Acq: 06 Mar 2020 10:11 am

Tgt Ion: 95 Resp: 61259

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 95 | 100 | | |
| 97 | 66.6 | 55.0 | 82.4 |
| 130 | 96.6 | 89.2 | 133.8 |

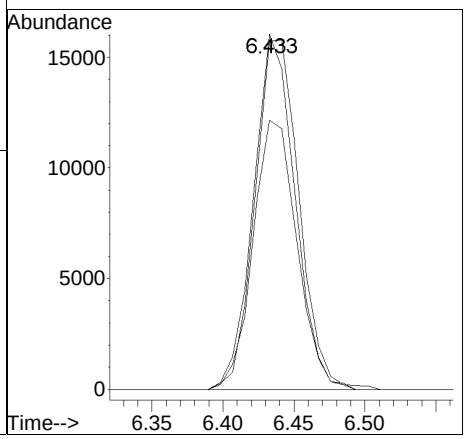


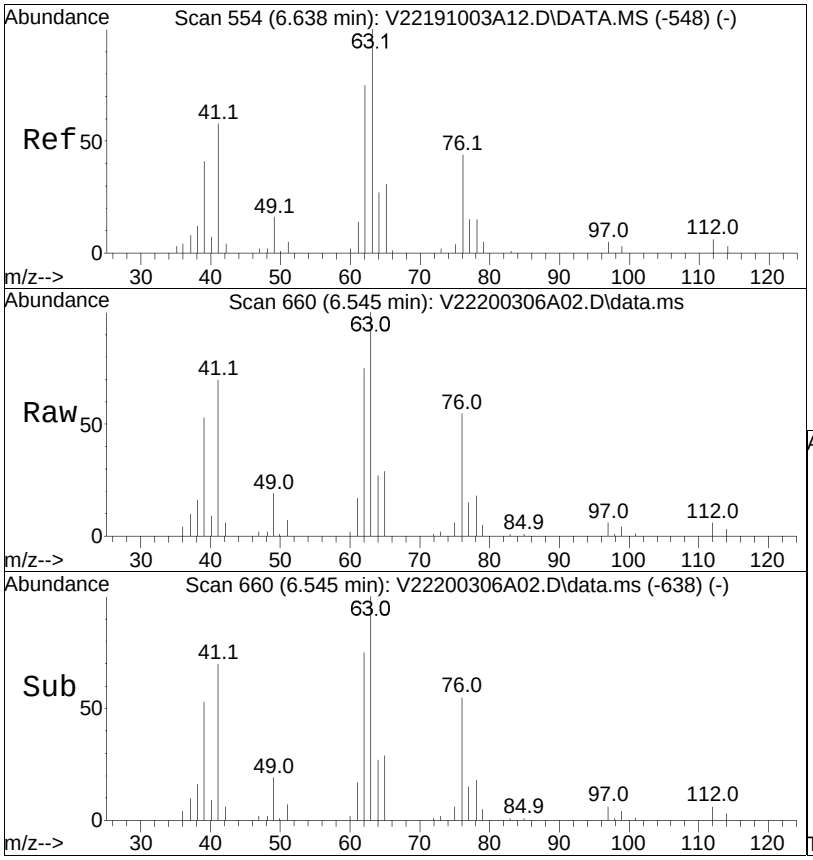



#53
Dibromomethane
Concen: 9.41 ug/L
RT: 6.433 min Scan# 647
Delta R.T. -0.008 min
Lab File: V22200306A02.D
Acq: 06 Mar 2020 10:11 am

Tgt Ion: 93 Resp: 32526

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 93 | 100 | | |
| 95 | 80.6 | 68.0 | 102.0 |
| 174 | 104.9 | 106.1 | 159.1# |

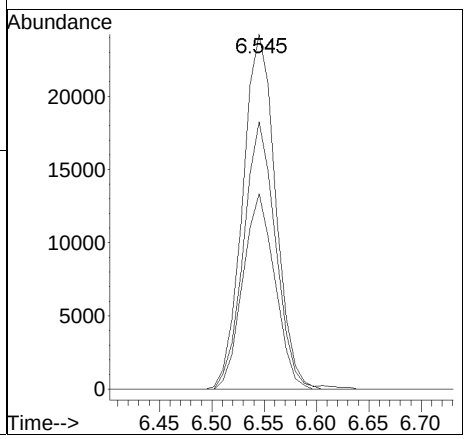


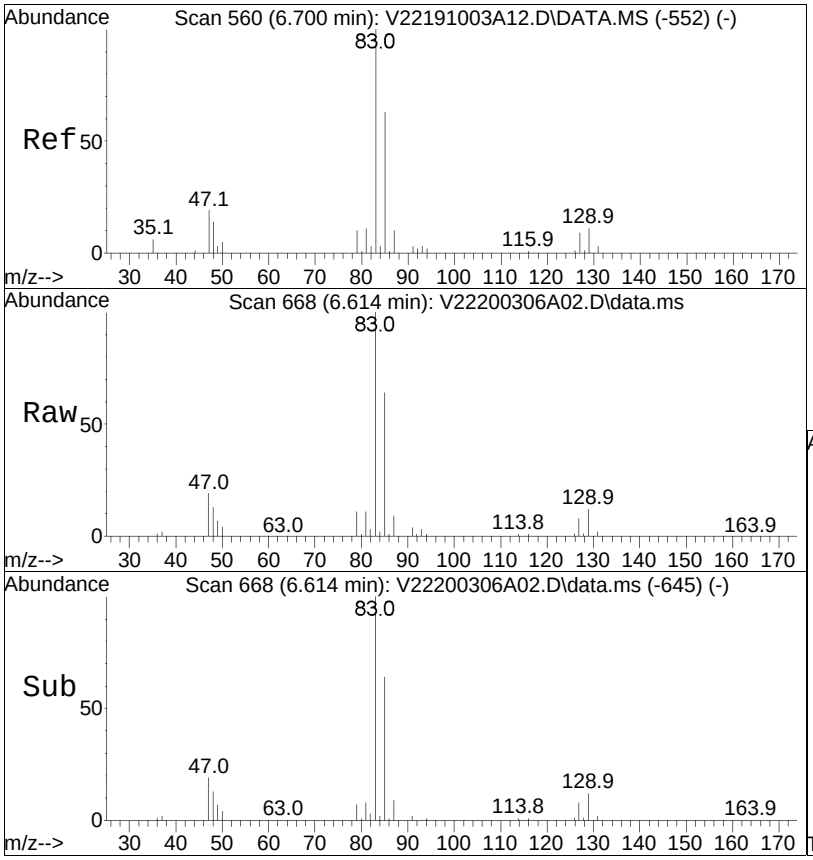



#54
1,2-Dichloropropane
Concen: 8.75 ug/L
RT: 6.545 min Scan# 660
Delta R.T. -0.009 min
Lab File: V22200306A02.D
Acq: 06 Mar 2020 10:11 am

Tgt Ion: 63 Resp: 53433

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 63 | 100 | | |
| 62 | 72.7 | 56.9 | 85.3 |
| 76 | 53.3 | 35.8 | 53.8 |

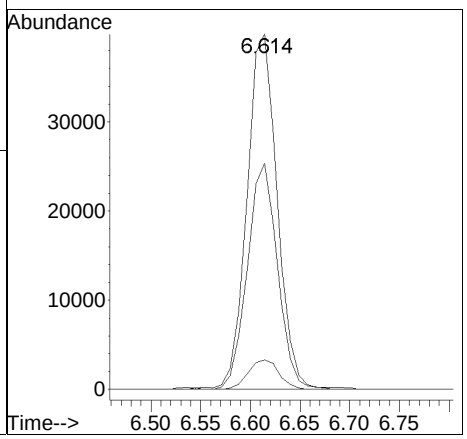


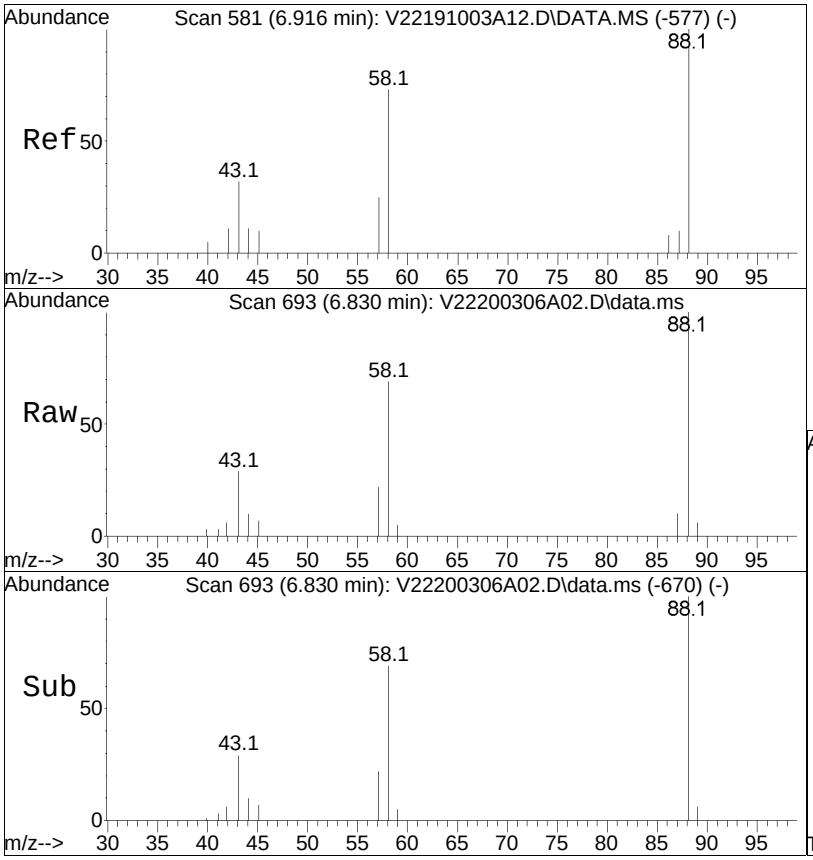



#57
Bromodichloromethane
Concen: 10.37 ug/L
RT: 6.614 min Scan# 668
Delta R.T. 0.000 min
Lab File: V22200306A02.D
Acq: 06 Mar 2020 10:11 am

Tgt Ion: 83 Resp: 84523

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 83 | 100 | | |
| 85 | 63.3 | 51.6 | 77.4 |
| 127 | 8.5 | 7.4 | 11.0 |

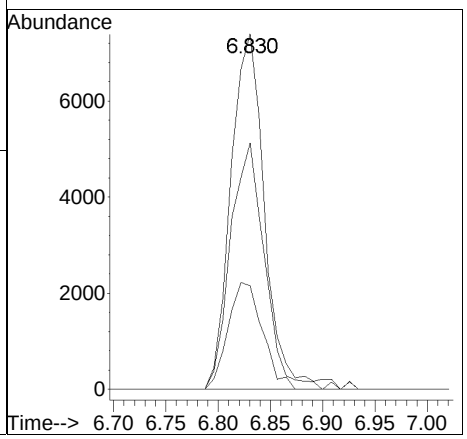


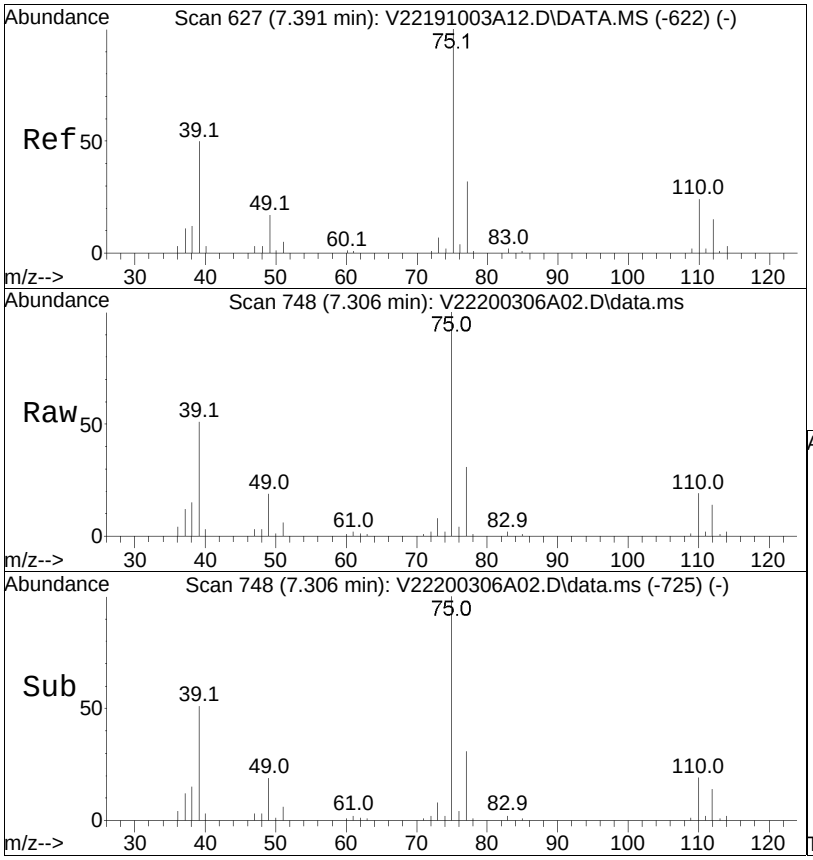



#60
1,4-Dioxane
Concen: 416.93 ug/L
RT: 6.830 min Scan# 693
Delta R.T. 0.000 min
Lab File: V22200306A02.D
Acq: 06 Mar 2020 10:11 am

Tgt Ion: 88 Resp: 16753

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 88 | 100 | | |
| 58 | 69.3 | 43.3 | 64.9# |
| 43 | 30.5 | 15.1 | 22.7# |

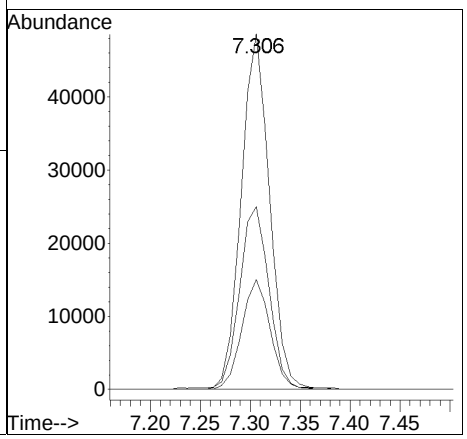


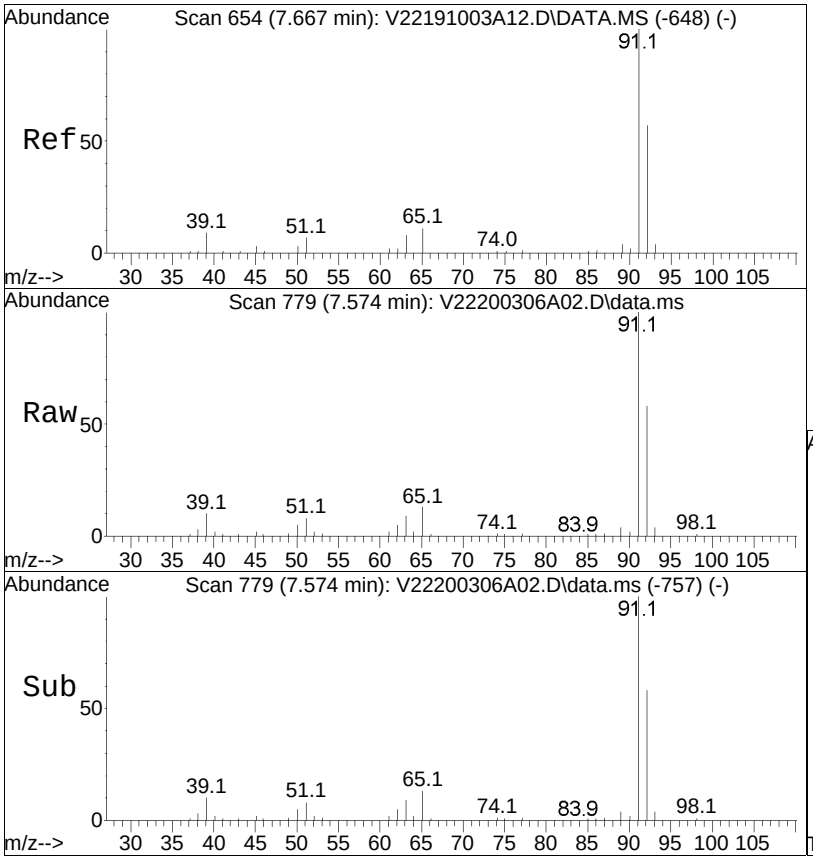



#61
cis-1,3-Dichloropropene
Concen: 10.59 ug/L
RT: 7.306 min Scan# 748
Delta R.T. -0.000 min
Lab File: V22200306A02.D
Acq: 06 Mar 2020 10:11 am

Tgt Ion: 75 Resp: 105916

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 75 | 100 | | |
| 77 | 28.2 | 25.6 | 38.4 |
| 39 | 48.9 | 35.4 | 53.0 |

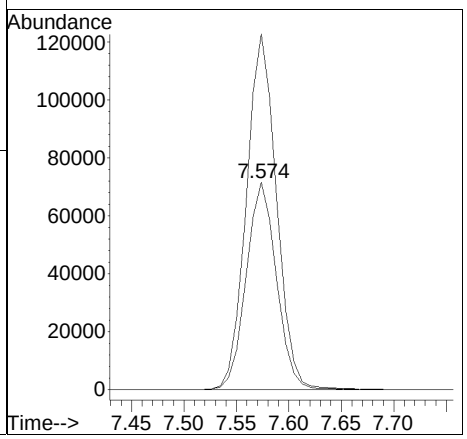


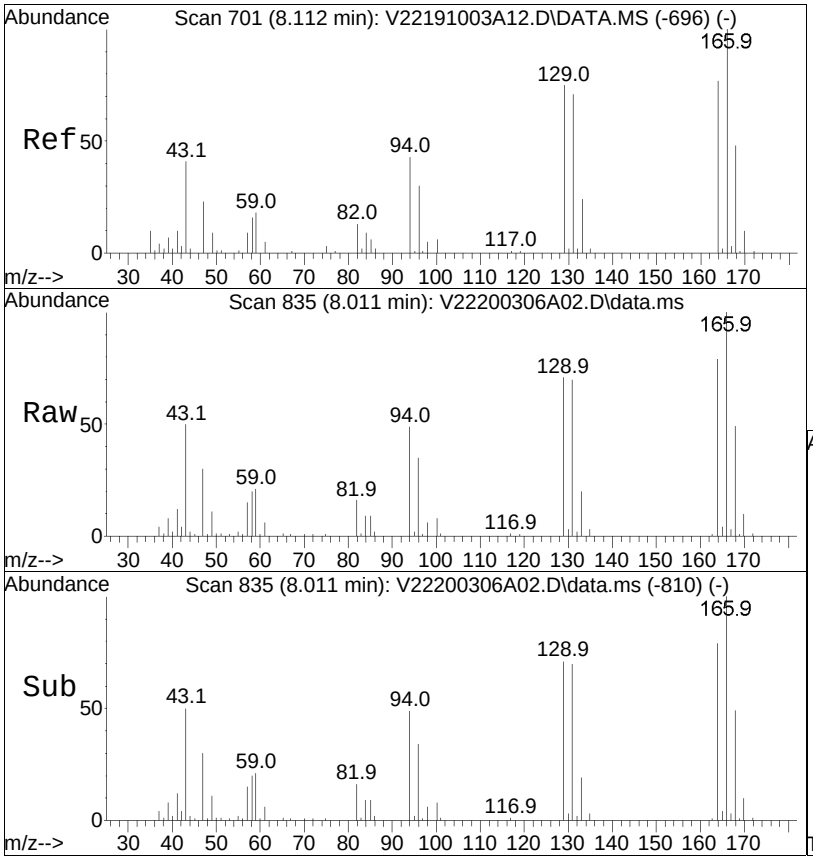



#64
Toluene
Concen: 10.16 ug/L
RT: 7.574 min Scan# 779
Delta R.T. -0.007 min
Lab File: V22200306A02.D
Acq: 06 Mar 2020 10:11 am

Tgt Ion: 92 Resp: 142720

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 92 | 100 | | |
| 91 | 171.3 | 137.0 | 205.6 |

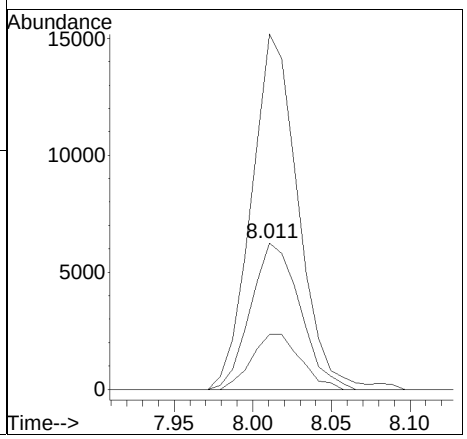


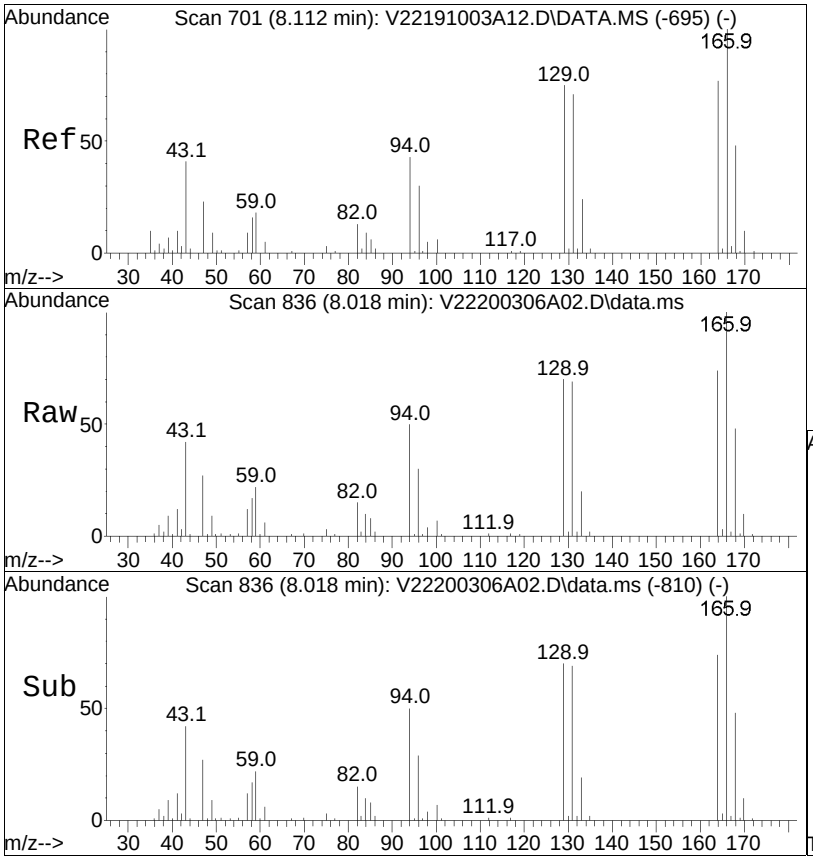



#65
4-Methyl-2-pentanone
Concen: 9.91 ug/L
RT: 8.011 min Scan# 835
Delta R.T. -0.007 min
Lab File: V22200306A02.D
Acq: 06 Mar 2020 10:11 am

Tgt Ion: 58 Resp: 13639

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 58 | 100 | | |
| 100 | 37.4 | 36.2 | 54.4 |
| 43 | 230.6 | 181.8 | 272.8 |

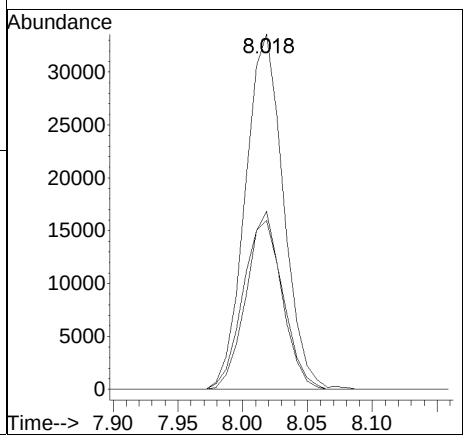


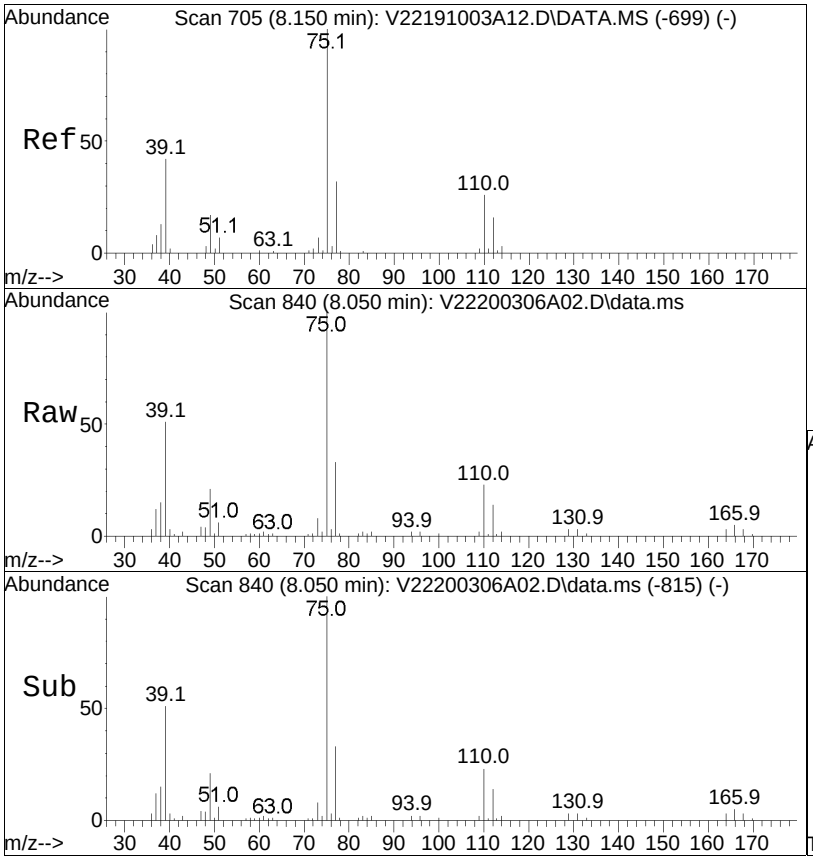



#66
Tetrachloroethene
Concen: 9.91 ug/L
RT: 8.018 min Scan# 836
Delta R.T. 0.000 min
Lab File: V22200306A02.D
Acq: 06 Mar 2020 10:11 am

Tgt Ion:166 Resp: 68942

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 166 | 100 | | |
| 168 | 47.2 | 27.8 | 67.8 |
| 94 | 49.6 | 16.7 | 56.7 |

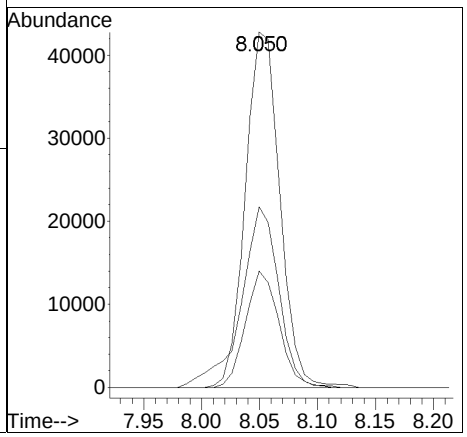


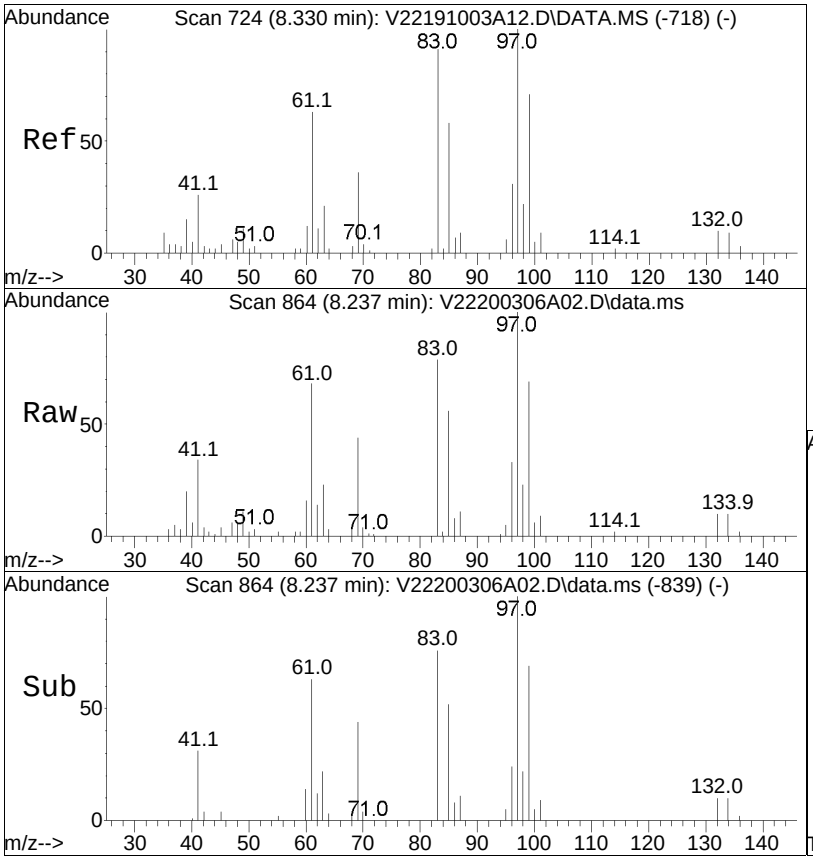



#68
trans-1,3-Dichloropropene
Concen: 11.68 ug/L
RT: 8.050 min Scan# 840
Delta R.T. -0.007 min
Lab File: V22200306A02.D
Acq: 06 Mar 2020 10:11 am

Tgt Ion: 75 Resp: 88452

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 75 | 100 | | |
| 77 | 31.8 | 11.9 | 51.9 |
| 39 | 55.3 | 27.4 | 67.4 |

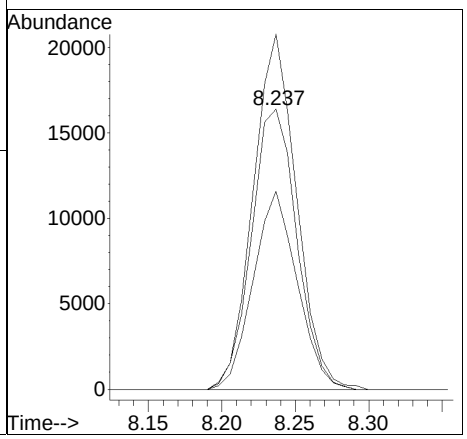


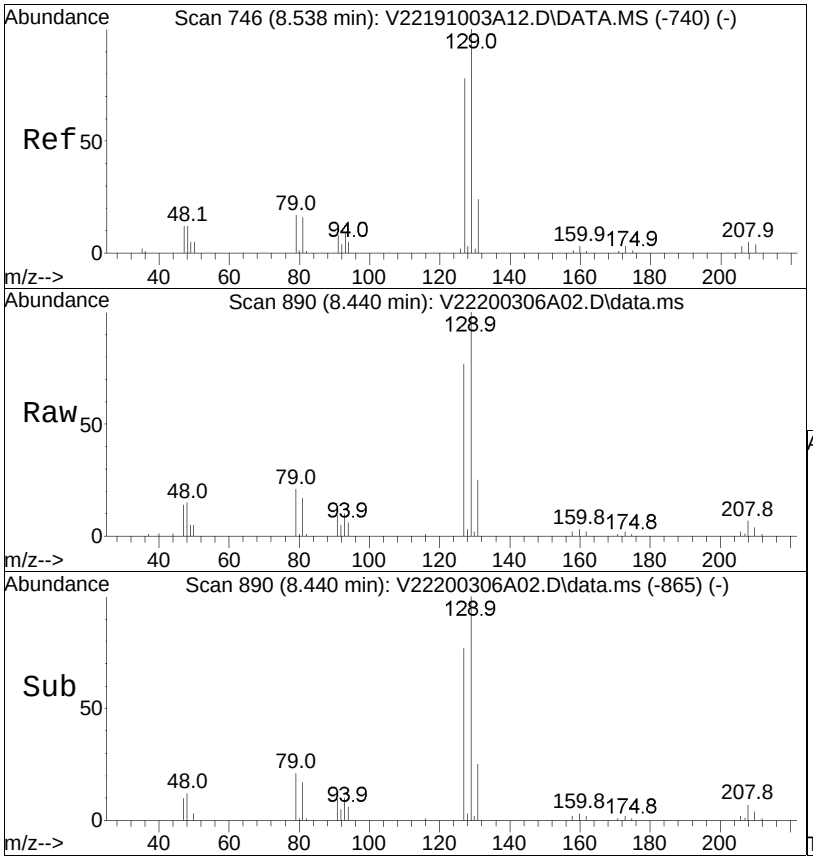



#71
1,1,2-Trichloroethane
Concen: 9.59 ug/L
RT: 8.237 min Scan# 864
Delta R.T. -0.008 min
Lab File: V22200306A02.D
Acq: 06 Mar 2020 10:11 am

Tgt Ion: 83 Resp: 35253

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 83 | 100 | | |
| 97 | 121.0 | 103.4 | 143.4 |
| 85 | 68.4 | 47.9 | 87.9 |

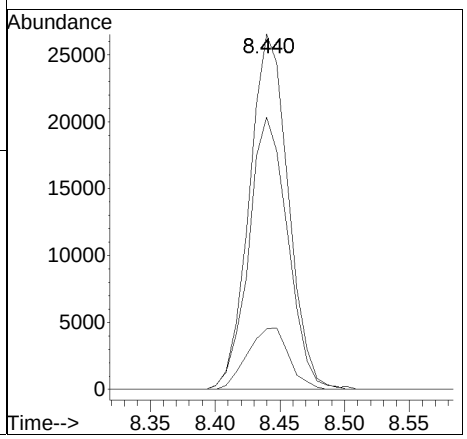


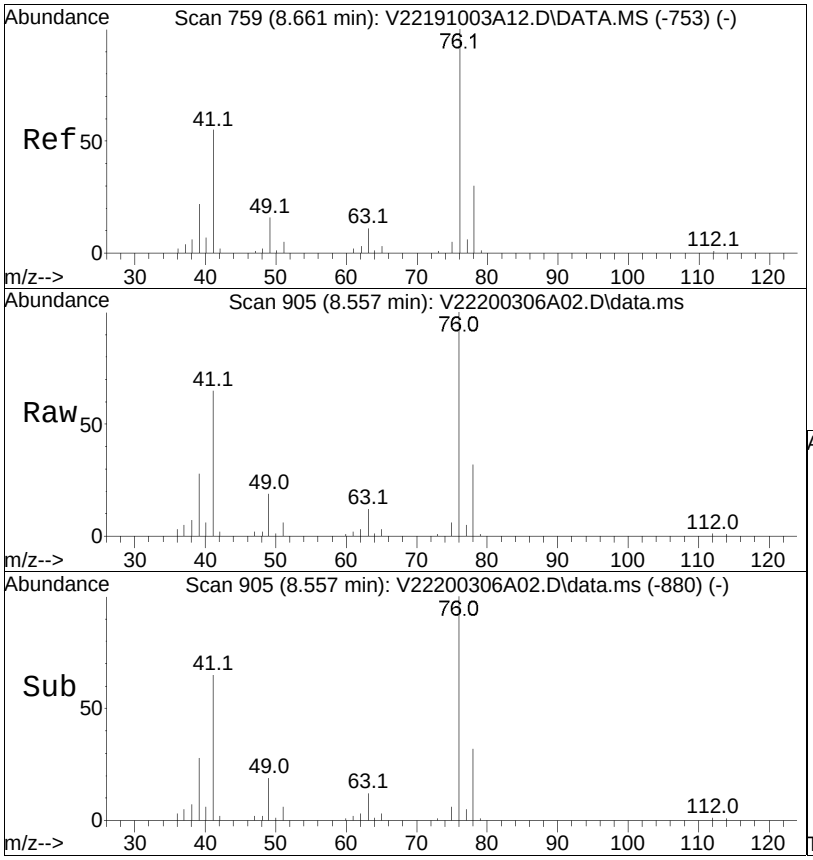



#72
Chlorodibromomethane
Concen: 10.21 ug/L
RT: 8.440 min Scan# 890
Delta R.T. -0.008 min
Lab File: V22200306A02.D
Acq: 06 Mar 2020 10:11 am

Tgt Ion:129 Resp: 55539

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 129 | 100 | | |
| 81 | 18.4 | 0.0 | 33.8 |
| 127 | 76.8 | 57.1 | 97.1 |

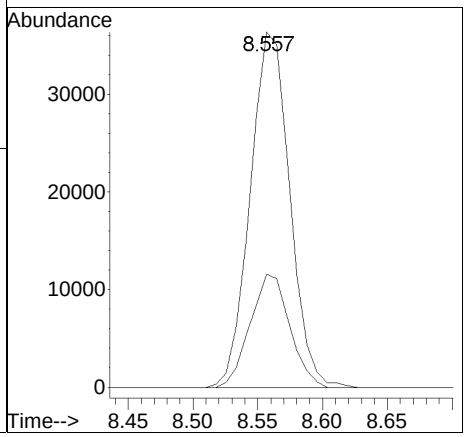


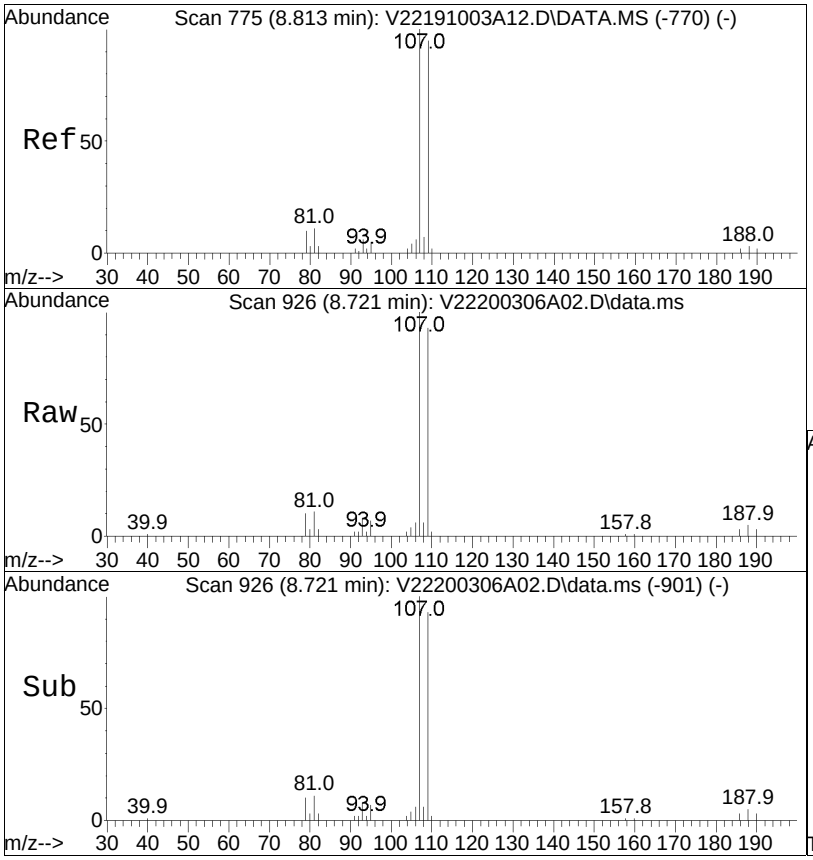



#73
1,3-Dichloropropane
Concen: 10.35 ug/L
RT: 8.557 min Scan# 905
Delta R.T. -0.008 min
Lab File: V22200306A02.D
Acq: 06 Mar 2020 10:11 am

Tgt Ion: 76 Resp: 77164

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 76 | 100 | | |
| 78 | 31.9 | 25.7 | 38.5 |

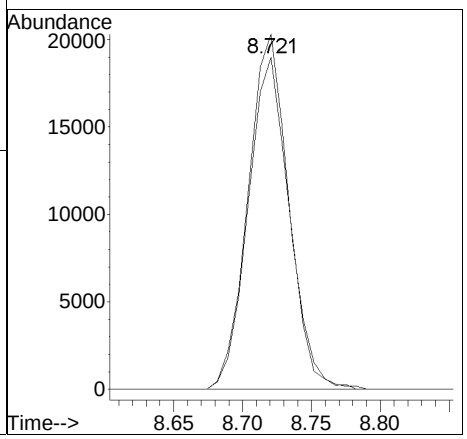


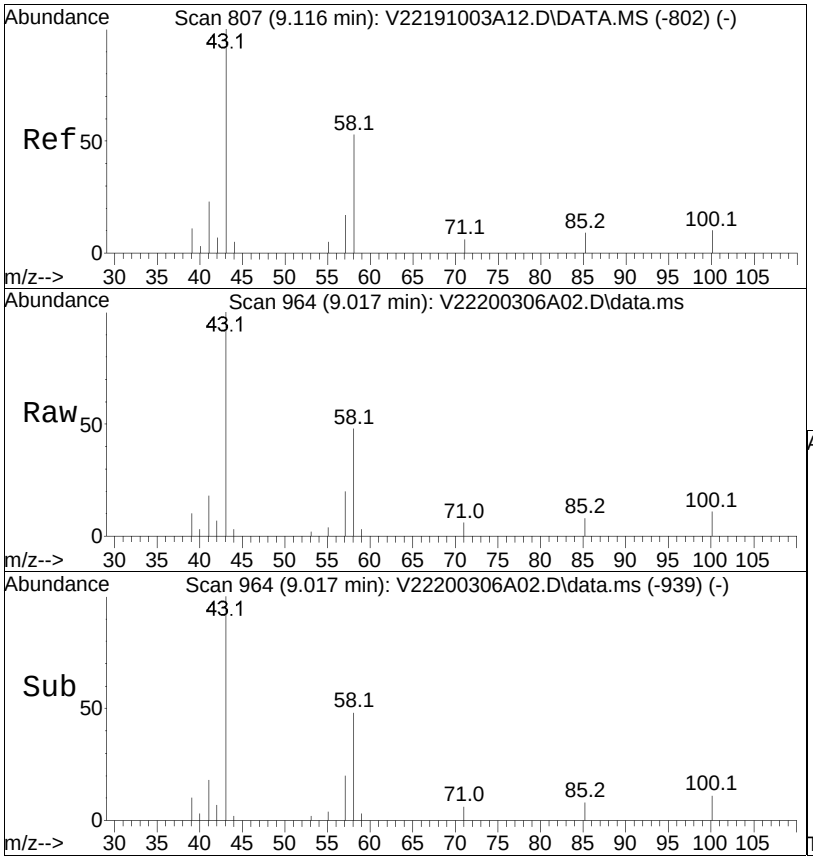



#74
1,2-Dibromoethane
Concen: 9.38 ug/L
RT: 8.721 min Scan# 926
Delta R.T. -0.007 min
Lab File: V22200306A02.D
Acq: 06 Mar 2020 10:11 am

Tgt Ion:107 Resp: 41903

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 107 | 100 | | |
| 109 | 93.8 | 75.1 | 112.7 |

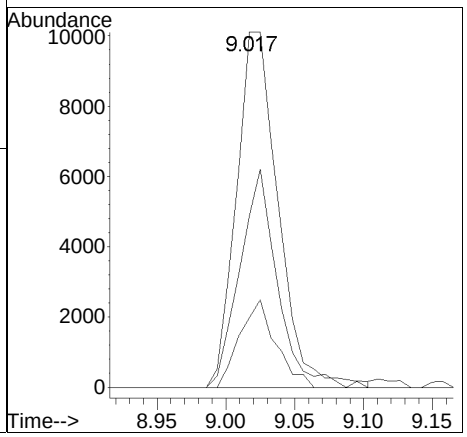


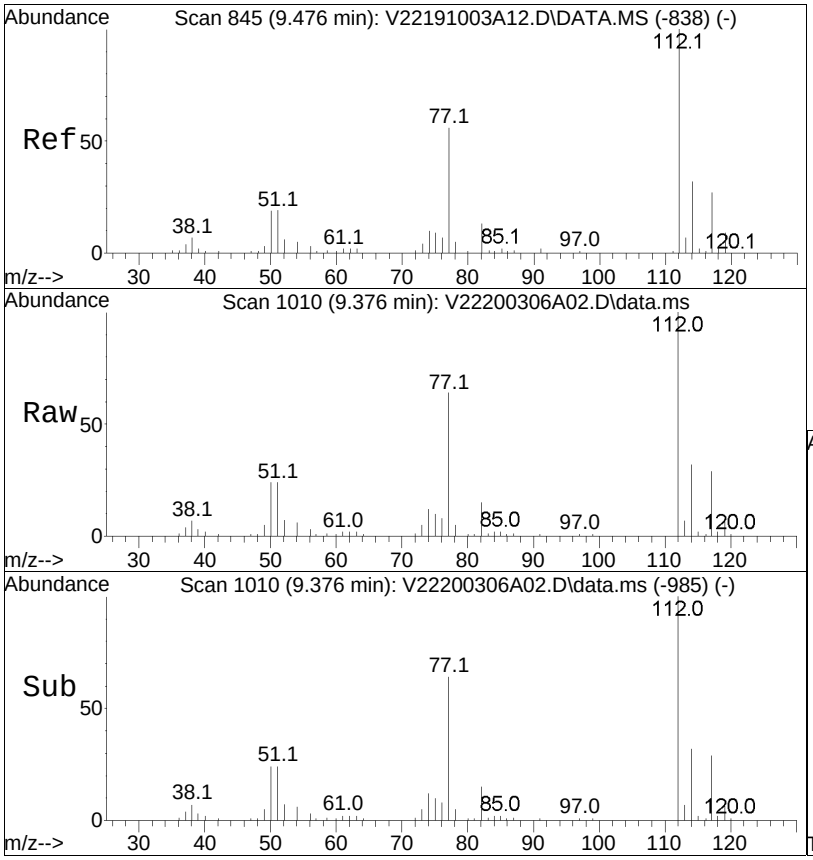



#76
2-Hexanone
Concen: 8.99 ug/L
RT: 9.017 min Scan# 964
Delta R.T. -0.008 min
Lab File: V22200306A02.D
Acq: 06 Mar 2020 10:11 am

Tgt Ion: 43 Resp: 21379

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 43 | 100 | | |
| 58 | 55.2 | 47.6 | 71.4 |
| 57 | 21.3 | 16.6 | 24.8 |

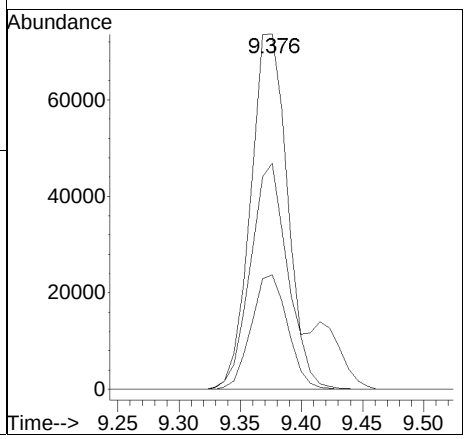


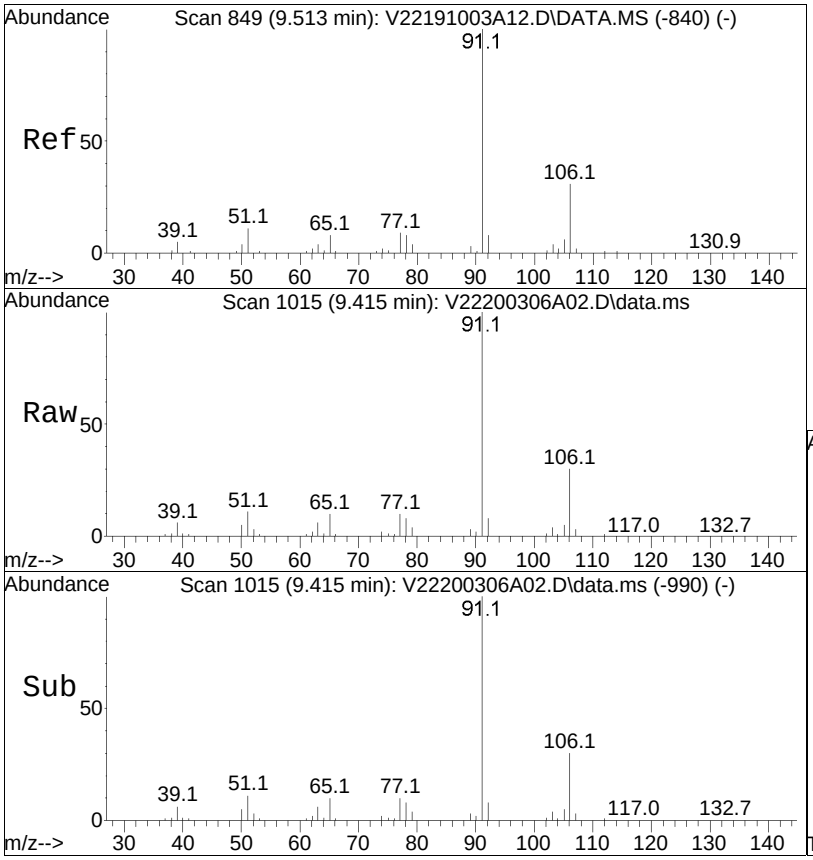



#77
Chlorobenzene
Concen: 9.77 ug/L
RT: 9.376 min Scan# 1010
Delta R.T. -0.008 min
Lab File: V22200306A02.D
Acq: 06 Mar 2020 10:11 am

Tgt Ion:112 Resp: 154296

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 112 | 100 | | |
| 77 | 66.7 | 55.4 | 83.0 |
| 114 | 31.9 | 26.2 | 39.4 |

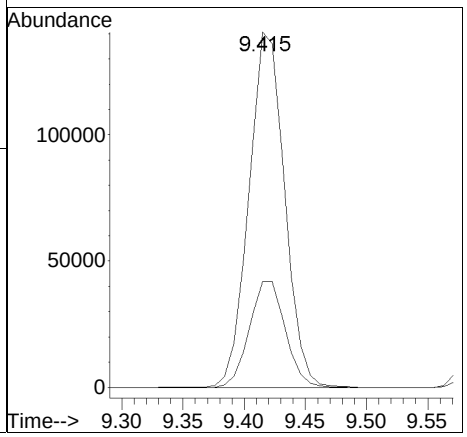


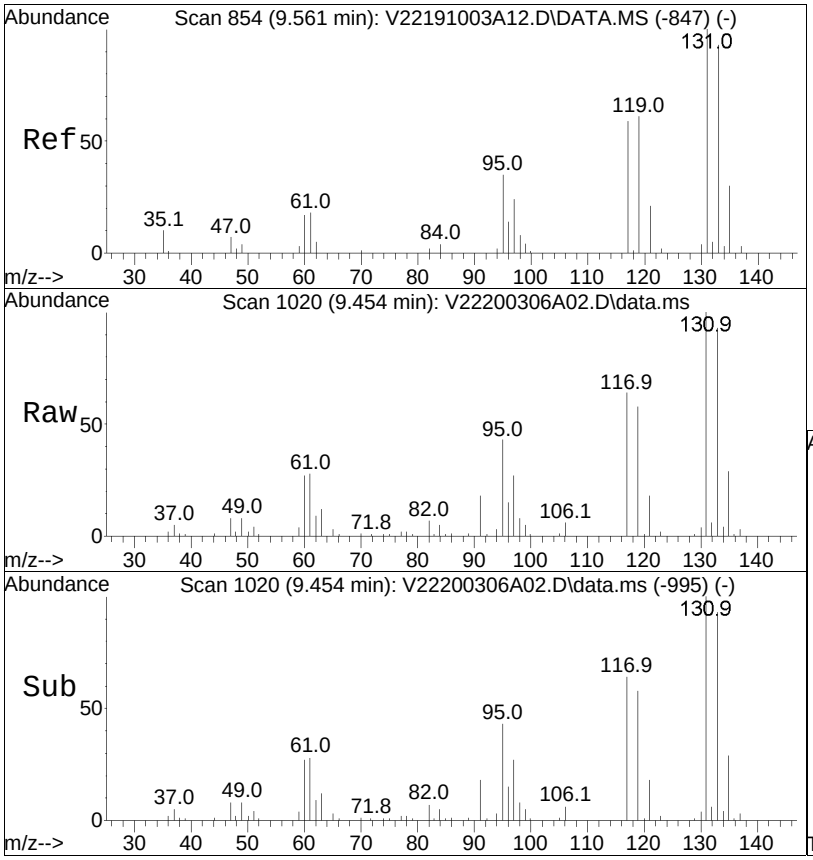



#78
Ethylbenzene
Concen: 10.45 ug/L
RT: 9.415 min Scan# 1015
Delta R.T. -0.008 min
Lab File: V22200306A02.D
Acq: 06 Mar 2020 10:11 am

Tgt Ion: 91 Resp: 285684

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 91 | 100 | | |
| 106 | 30.0 | 25.8 | 38.6 |

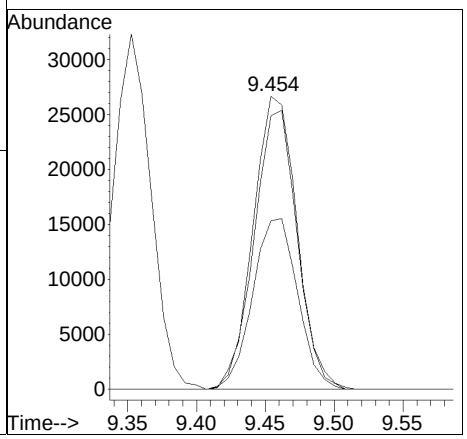


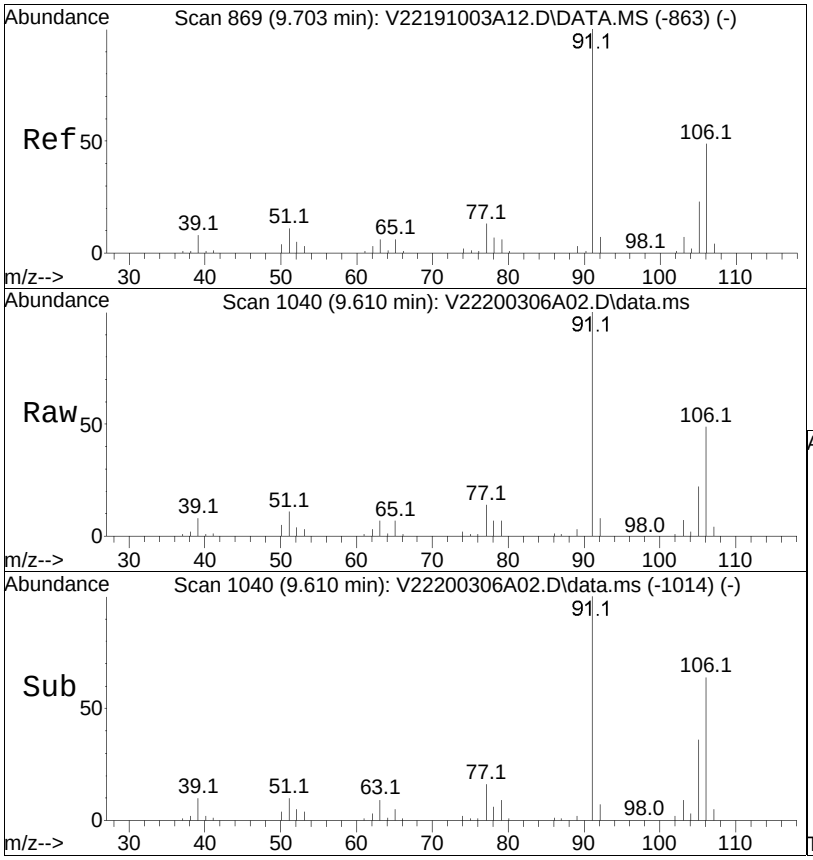



#79
1,1,1,2-Tetrachloroethane
Concen: 10.21 ug/L
RT: 9.454 min Scan# 1020
Delta R.T. -0.008 min
Lab File: V22200306A02.D
Acq: 06 Mar 2020 10:11 am

Tgt Ion:131 Resp: 59192

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 131 | 100 | | |
| 133 | 93.2 | 75.3 | 115.3 |
| 119 | 59.8 | 49.3 | 89.3 |

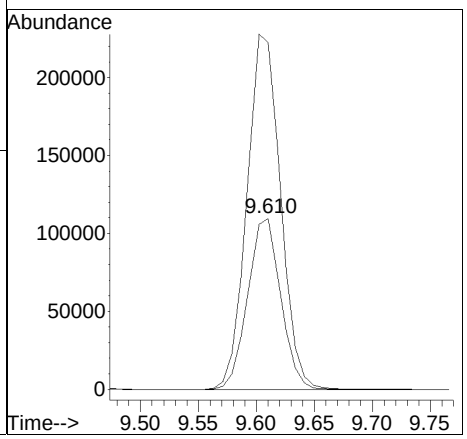


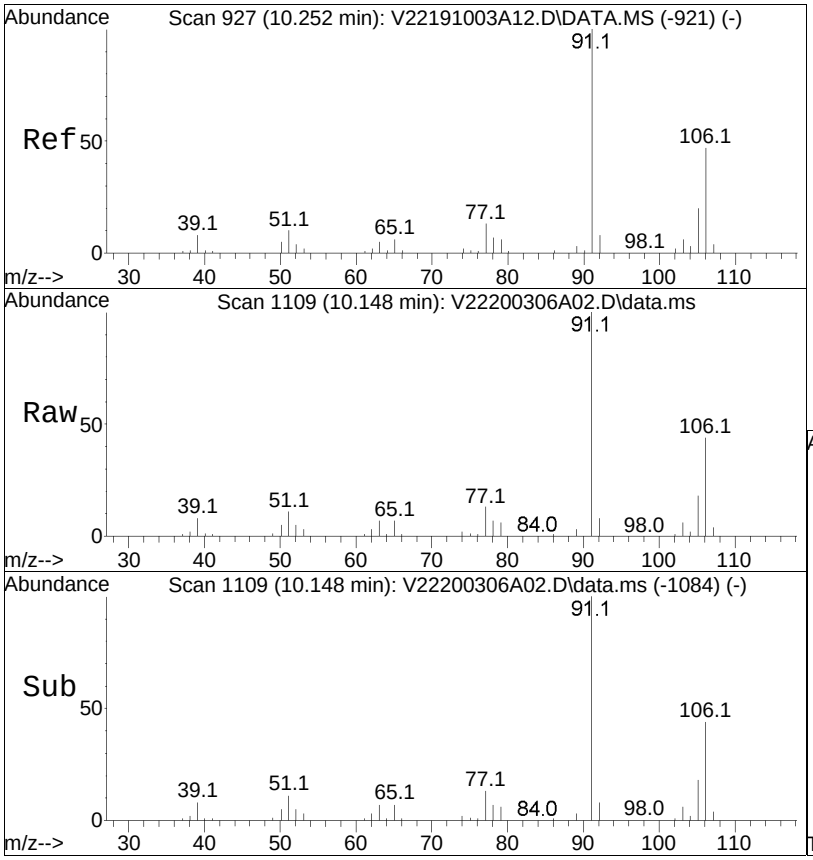



#80
p/m Xylene
Concen: 19.71 ug/L
RT: 9.610 min Scan# 1040
Delta R.T. 0.000 min
Lab File: V22200306A02.D
Acq: 06 Mar 2020 10:11 am

Tgt Ion:106 Resp: 216994

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 106 | 100 | | |
| 91 | 211.1 | 156.0 | 234.0 |

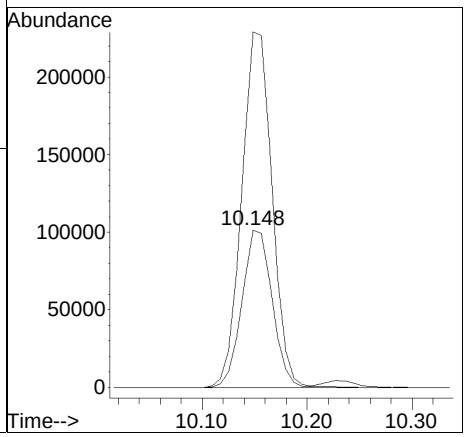


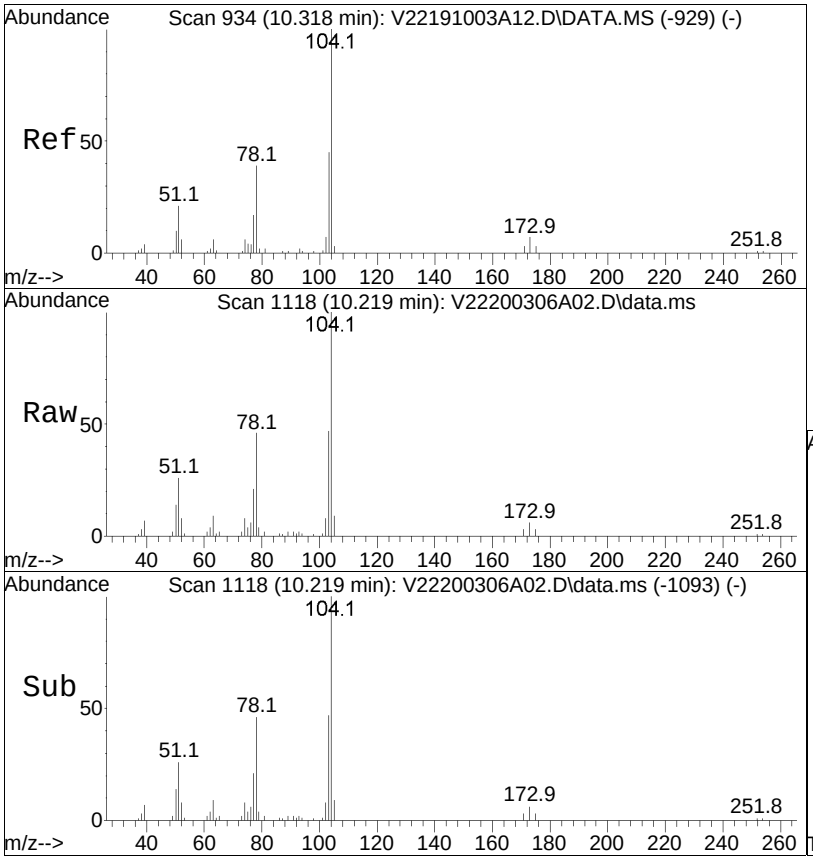



#81
o Xylene
Concen: 19.60 ug/L
RT: 10.148 min Scan# 1109
Delta R.T. -0.008 min
Lab File: V22200306A02.D
Acq: 06 Mar 2020 10:11 am

Tgt Ion:106 Resp: 203130

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 106 | 100 | | |
| 91 | 225.8 | 164.0 | 246.0 |

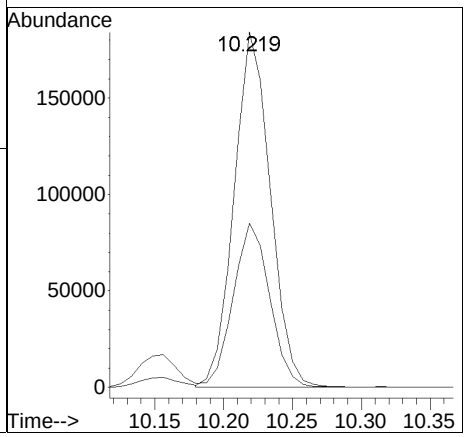


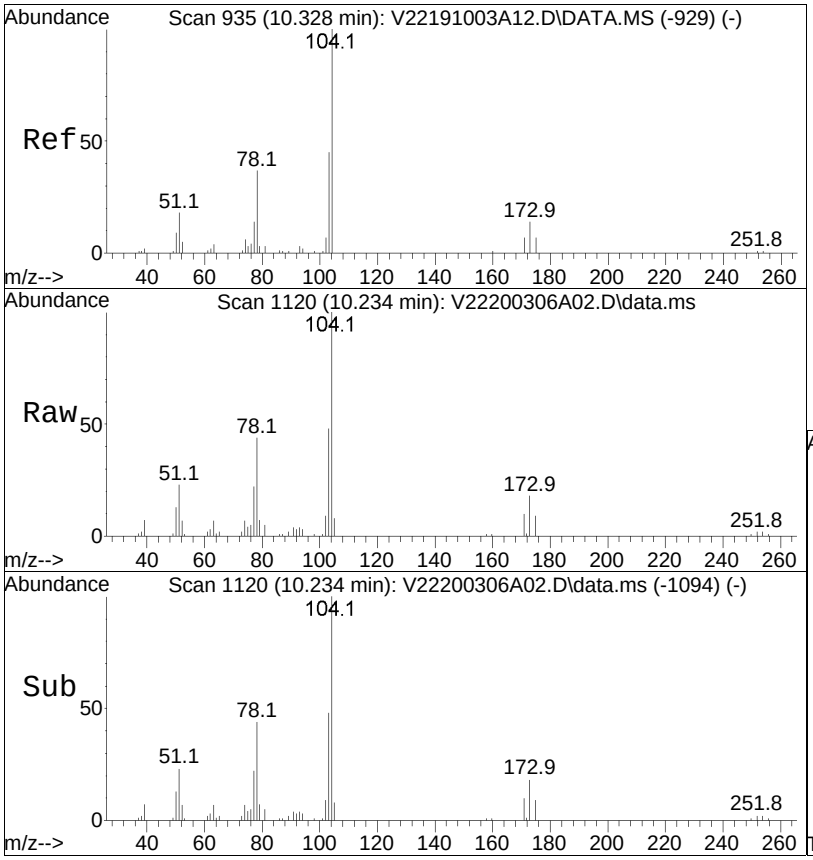



#82
Styrene
Concen: 19.79 ug/L
RT: 10.219 min Scan# 1118
Delta R.T. -0.008 min
Lab File: V22200306A02.D
Acq: 06 Mar 2020 10:11 am

Tgt Ion:104 Resp: 336775

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 104 | 100 | | |
| 78 | 46.8 | 32.1 | 48.1 |

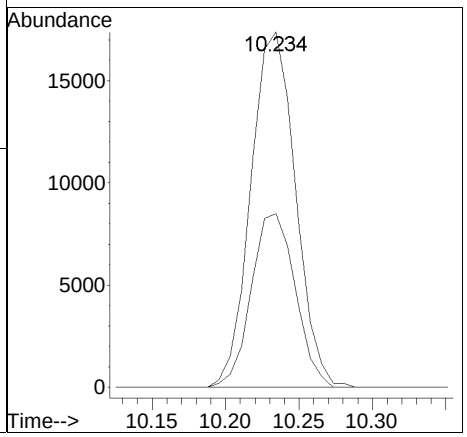


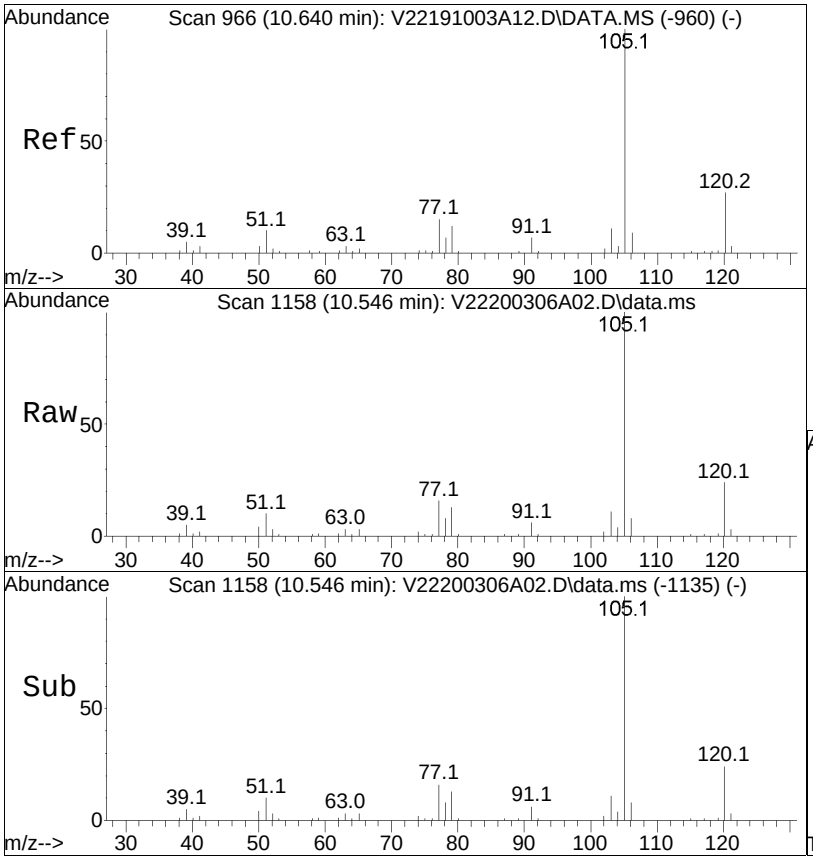



#84
Bromoform
Concen: 10.00 ug/L
RT: 10.234 min Scan# 1120
Delta R.T. 0.000 min
Lab File: V22200306A02.D
Acq: 06 Mar 2020 10:11 am

Tgt Ion:173 Resp: 36831

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 173 | 100 | | |
| 175 | 48.1 | 29.3 | 69.3 |

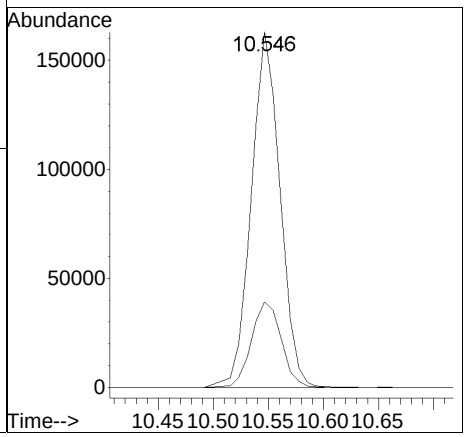


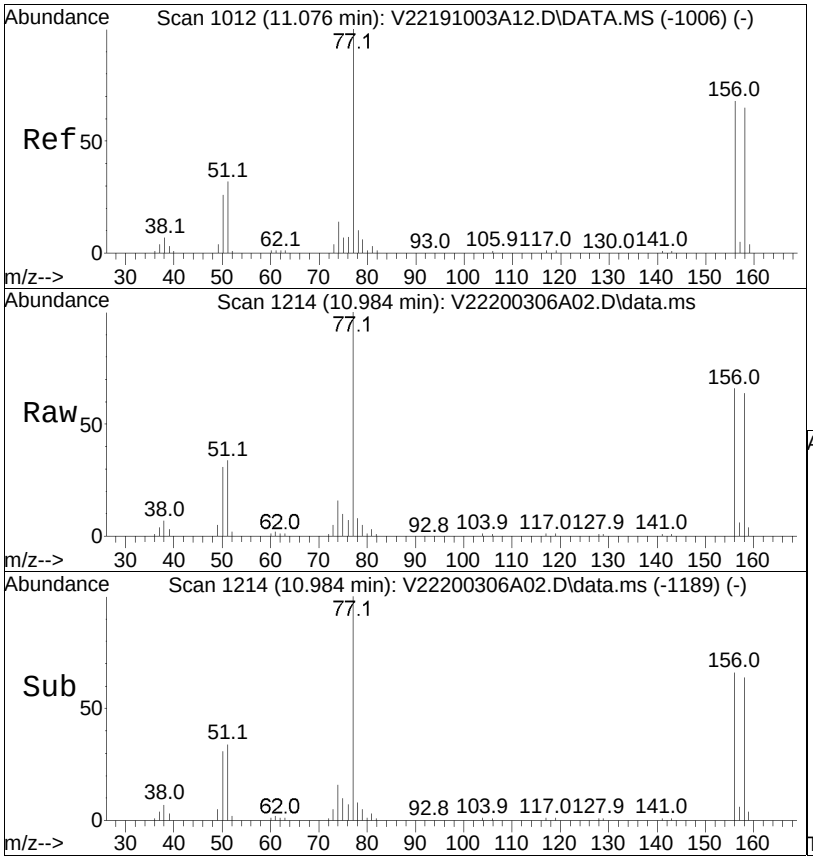



#86
Isopropylbenzene
Concen: 9.93 ug/L
RT: 10.546 min Scan# 1158
Delta R.T. -0.008 min
Lab File: V22200306A02.D
Acq: 06 Mar 2020 10:11 am

Tgt Ion:105 Resp: 326343

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 105 | 100 | | |
| 120 | 25.7 | 7.7 | 47.7 |

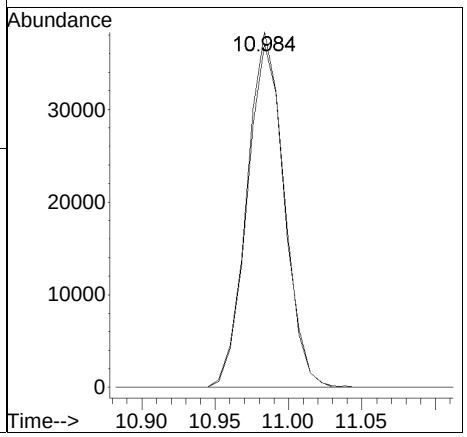


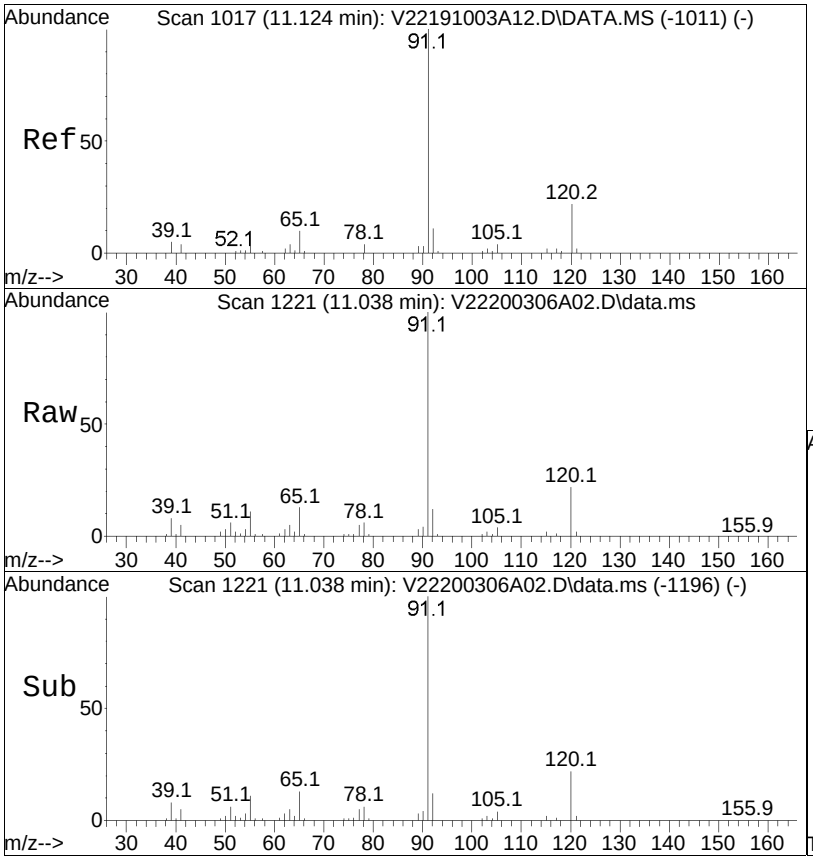



#88
Bromobenzene
Concen: 9.89 ug/L
RT: 10.984 min Scan# 1214
Delta R.T. -0.007 min
Lab File: V22200306A02.D
Acq: 06 Mar 2020 10:11 am

Tgt Ion:156 Resp: 67536

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 156 | 100 | | |
| 158 | 96.9 | 77.9 | 116.9 |

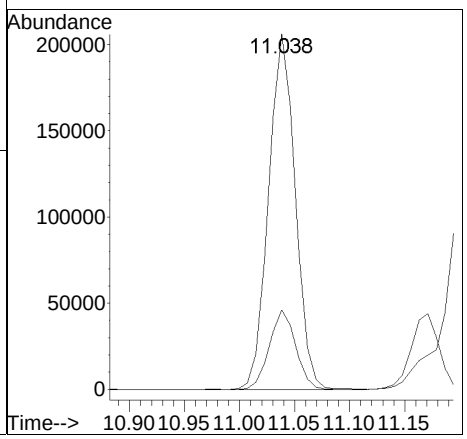


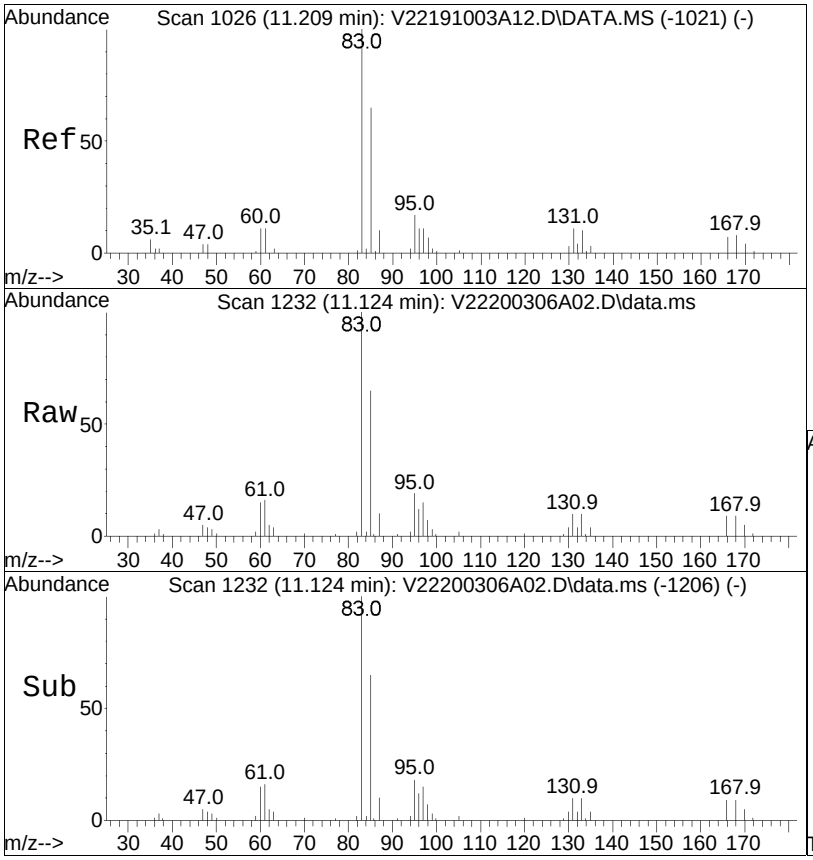



#89
n-Propylbenzene
Concen: 10.12 ug/L
RT: 11.038 min Scan# 1221
Delta R.T. -0.008 min
Lab File: V22200306A02.D
Acq: 06 Mar 2020 10:11 am

Tgt Ion: 91 Resp: 347222

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 91 | 100 | | |
| 120 | 21.9 | 19.5 | 29.3 |

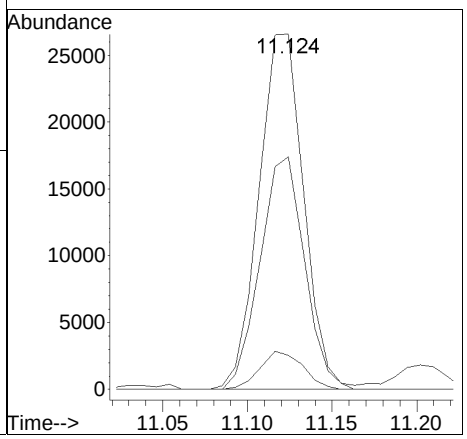


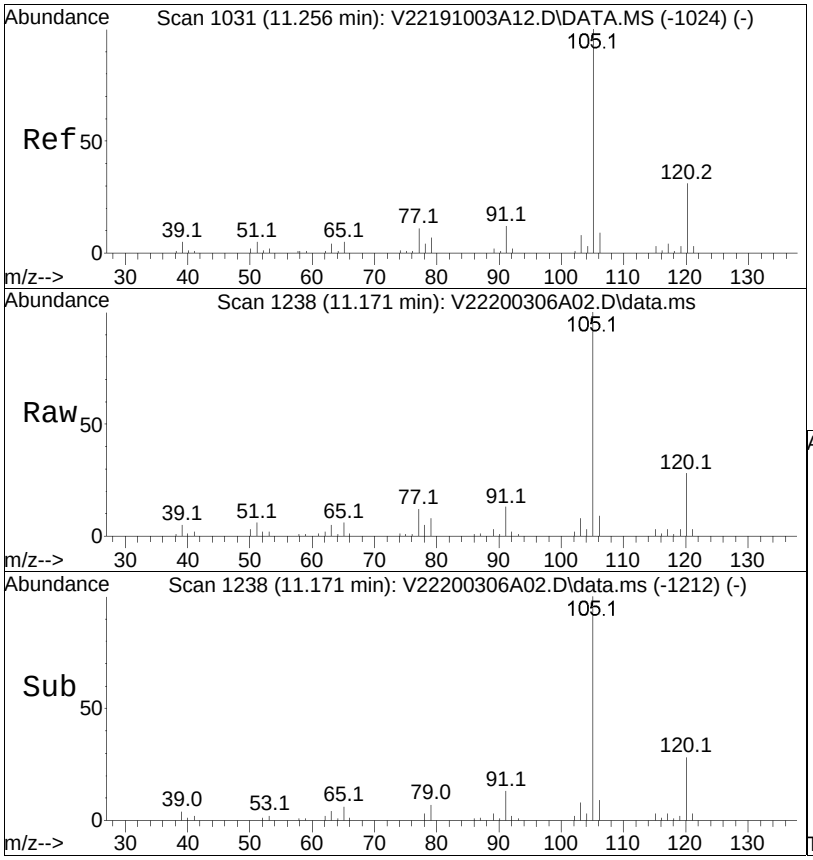



#91
1,1,2,2-Tetrachloroethane
Concen: 9.60 ug/L
RT: 11.124 min Scan# 1232
Delta R.T. 0.000 min
Lab File: V22200306A02.D
Acq: 06 Mar 2020 10:11 am

Tgt Ion: 83 Resp: 48732

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 83 | 100 | | |
| 131 | 10.4 | 0.0 | 30.8 |
| 85 | 65.6 | 45.4 | 85.4 |

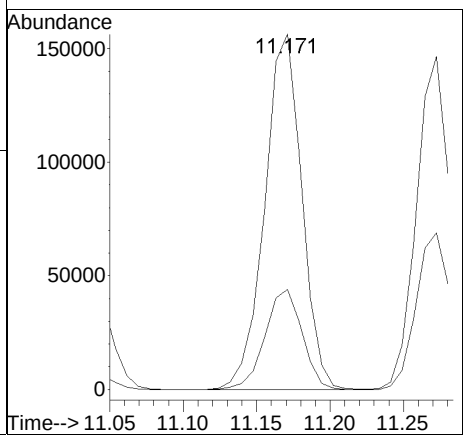


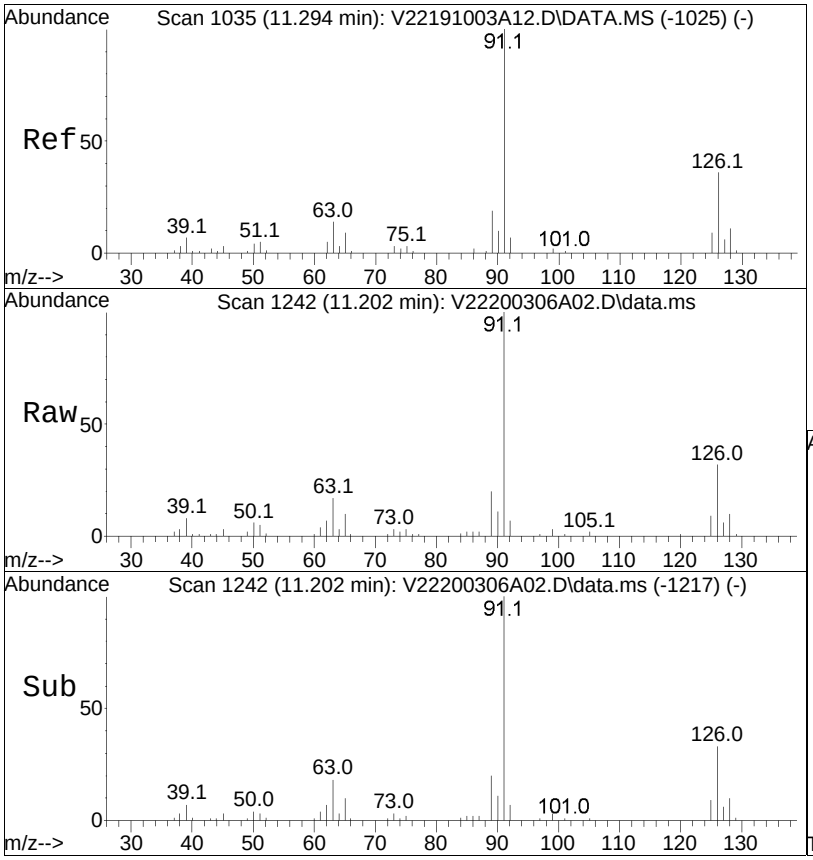



#92
4-Ethyltoluene
Concen: 10.28 ug/L
RT: 11.171 min Scan# 1238
Delta R.T. -0.000 min
Lab File: V22200306A02.D
Acq: 06 Mar 2020 10:11 am

Tgt Ion:105 Resp: 274469

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 105 | 100 | | |
| 120 | 28.1 | 19.8 | 41.0 |

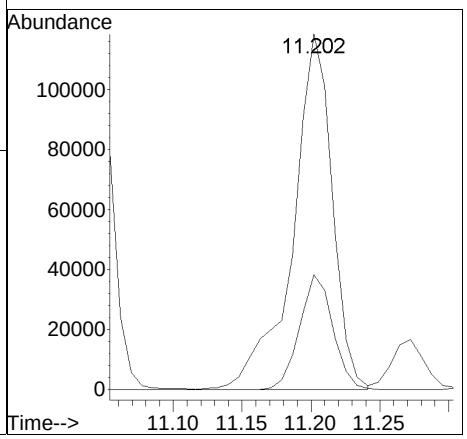


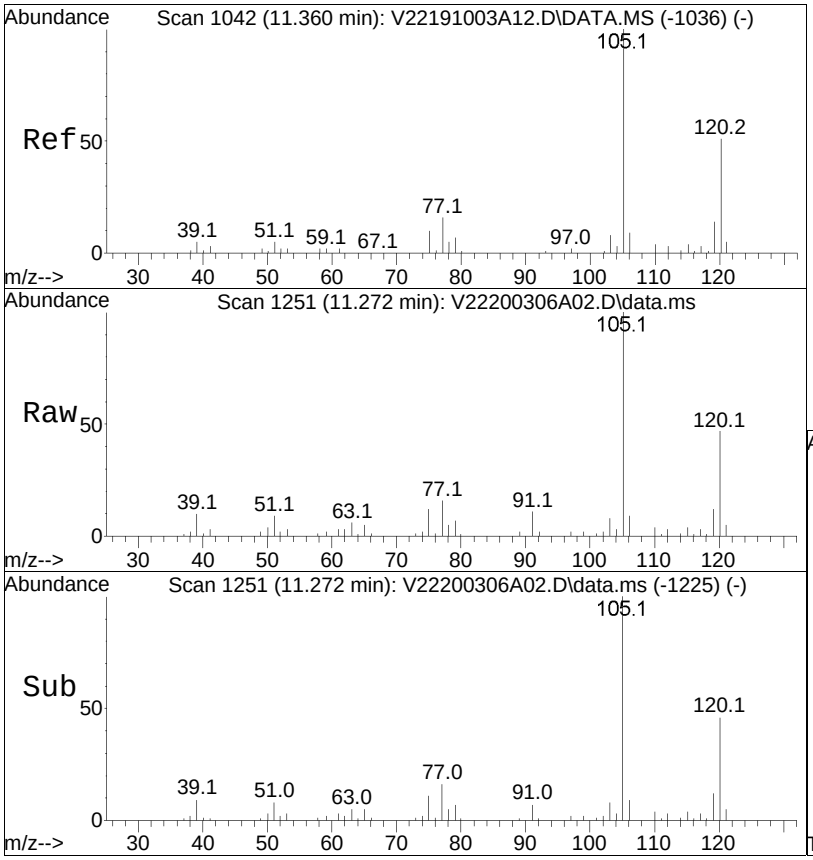



#93
2-Chlorotoluene
Concen: 10.78 ug/L
RT: 11.202 min Scan# 1242
Delta R.T. -0.008 min
Lab File: V22200306A02.D
Acq: 06 Mar 2020 10:11 am

Tgt Ion: 91 Resp: 236203

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 91 | 100 | | |
| 126 | 27.1 | 24.6 | 37.0 |

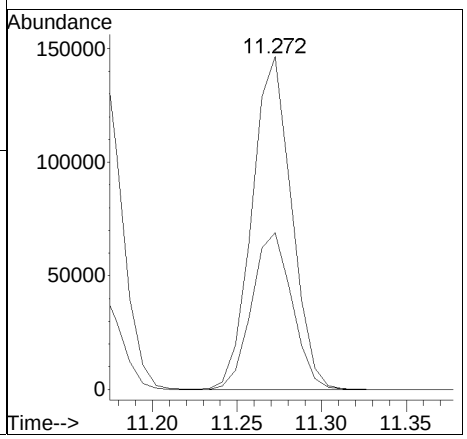


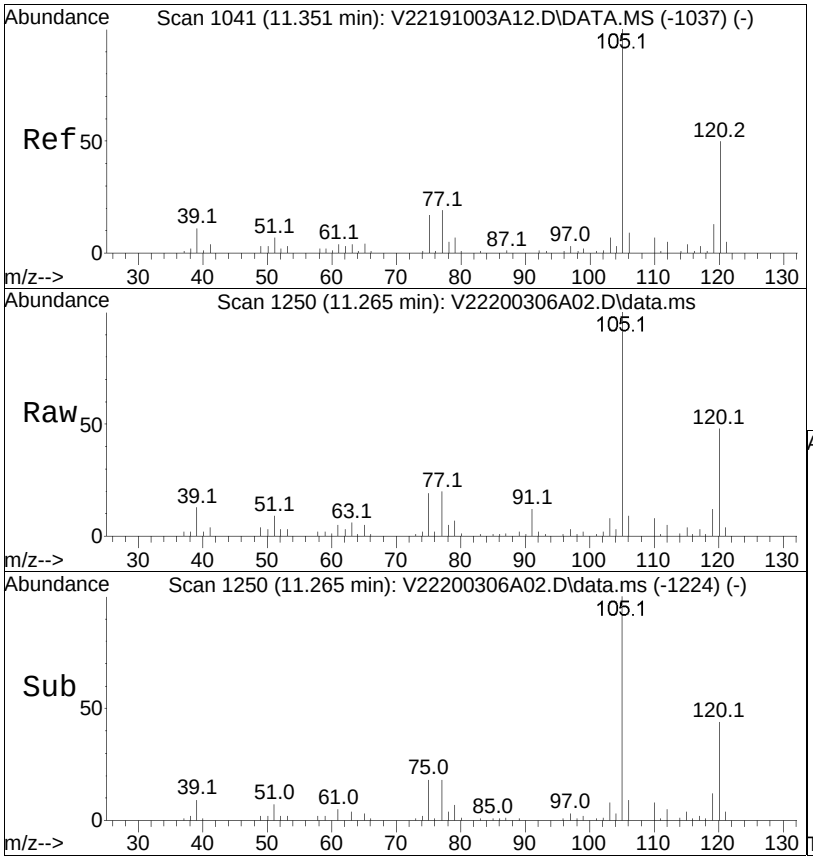



#94
1,3,5-Trimethylbenzene
Concen: 10.19 ug/L
RT: 11.272 min Scan# 1251
Delta R.T. 0.000 min
Lab File: V22200306A02.D
Acq: 06 Mar 2020 10:11 am

Tgt Ion:105 Resp: 237744

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 105 | 100 | | |
| 120 | 48.1 | 40.9 | 61.3 |

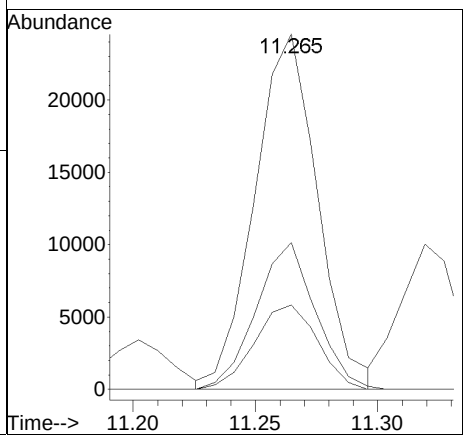


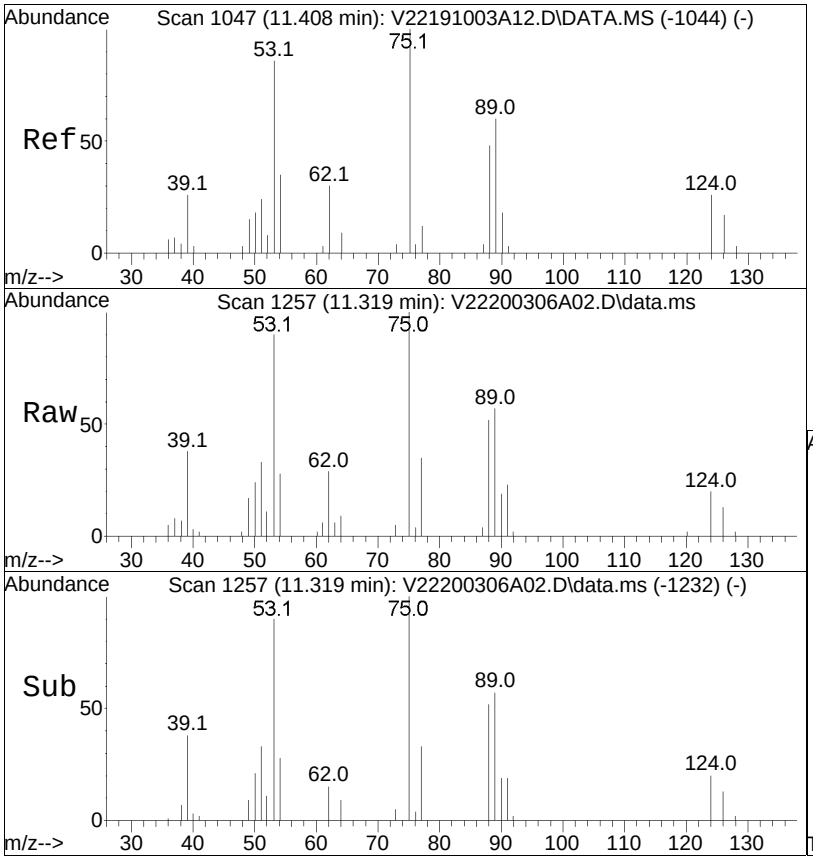



#95
1,2,3-Trichloropropane
Concen: 10.07 ug/L
RT: 11.265 min Scan# 1250
Delta R.T. -0.000 min
Lab File: V22200306A02.D
Acq: 06 Mar 2020 10:11 am

Tgt Ion: 75 Resp: 43835

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 75 | 100 | | |
| 110 | 39.1 | 26.3 | 54.7 |
| 112 | 23.9 | 16.8 | 35.0 |

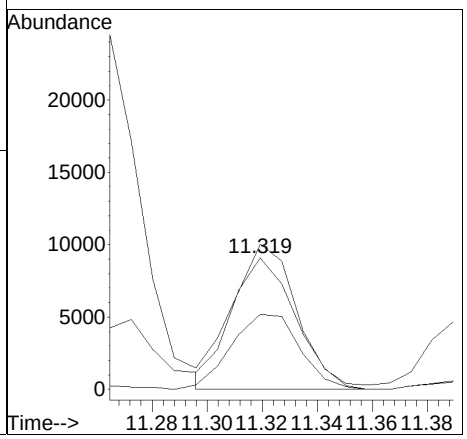


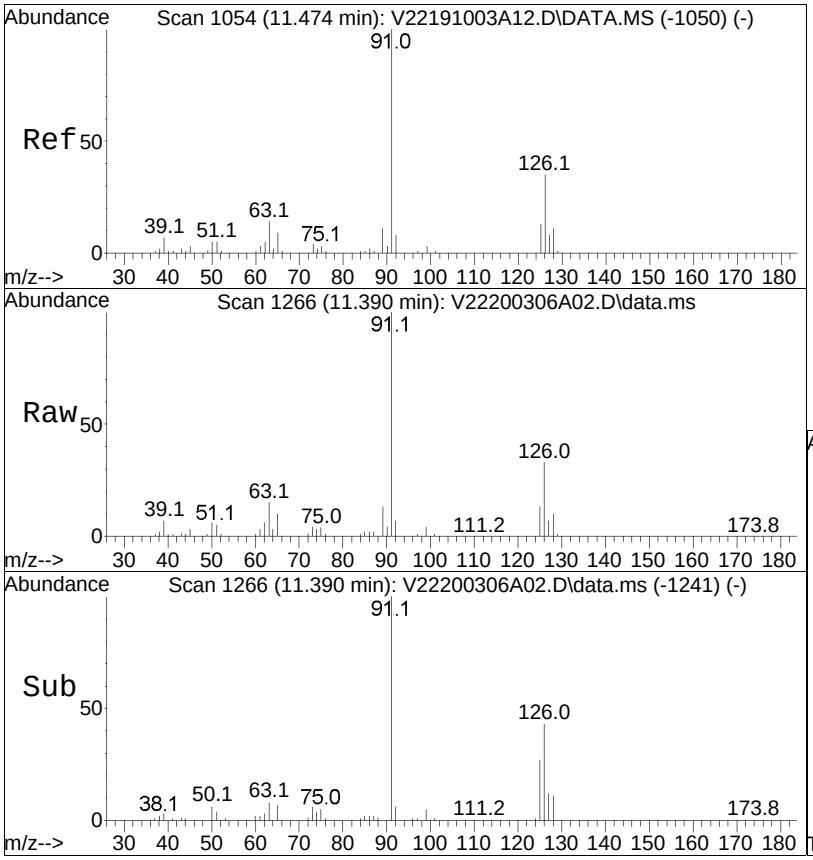



#96
trans-1,4-Dichloro-2-butene
Concen: 10.22 ug/L
RT: 11.319 min Scan# 1257
Delta R.T. -0.008 min
Lab File: V22200306A02.D
Acq: 06 Mar 2020 10:11 am

Tgt Ion: 53 Resp: 14759

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 53 | 100 | | |
| 88 | 61.2 | 46.3 | 69.5 |
| 75 | 110.7 | 109.0 | 163.4 |

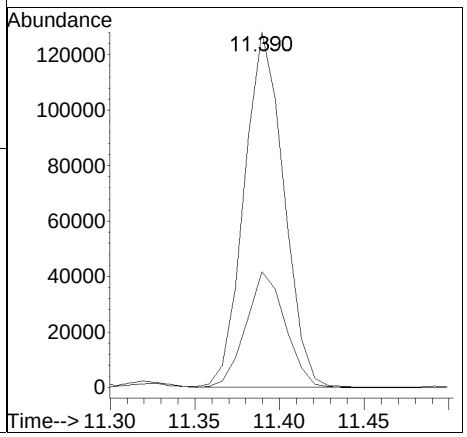


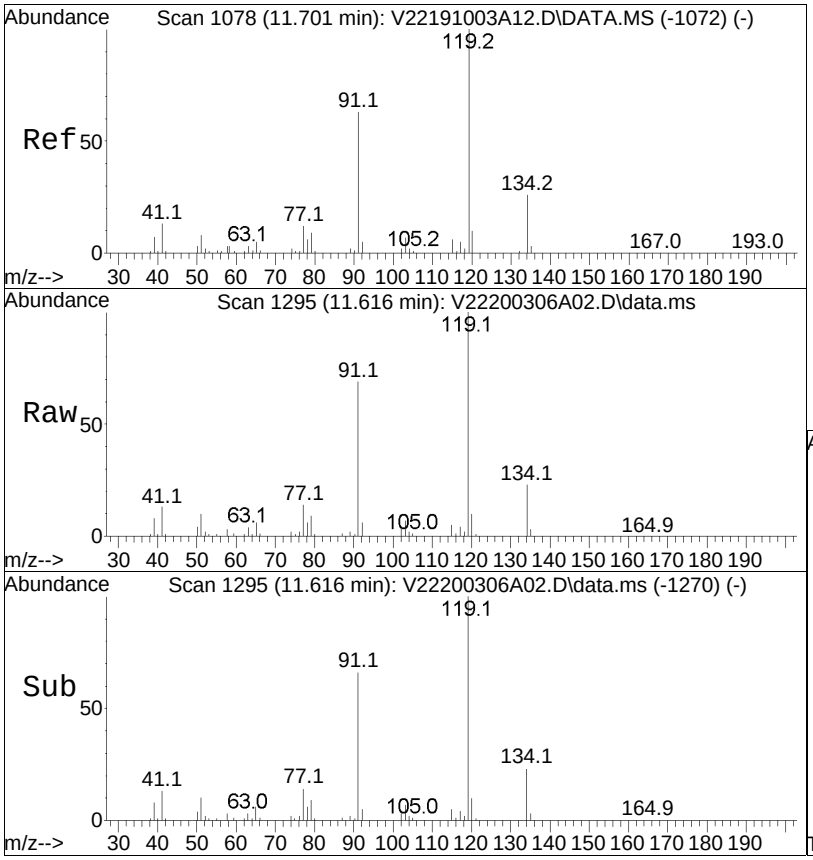



#97
4-Chlorotoluene
Concen: 10.45 ug/L
RT: 11.390 min Scan# 1266
Delta R.T. -0.007 min
Lab File: V22200306A02.D
Acq: 06 Mar 2020 10:11 am

Tgt Ion: 91 Resp: 208007

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 91 | 100 | | |
| 126 | 32.4 | 28.5 | 42.7 |

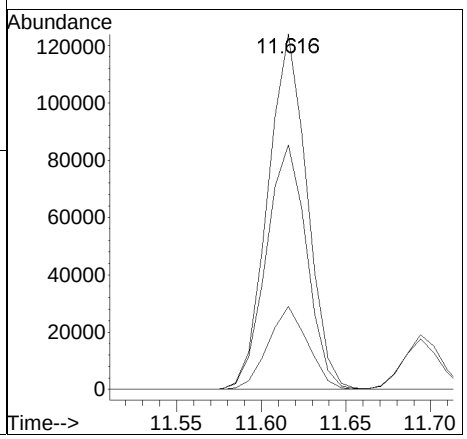


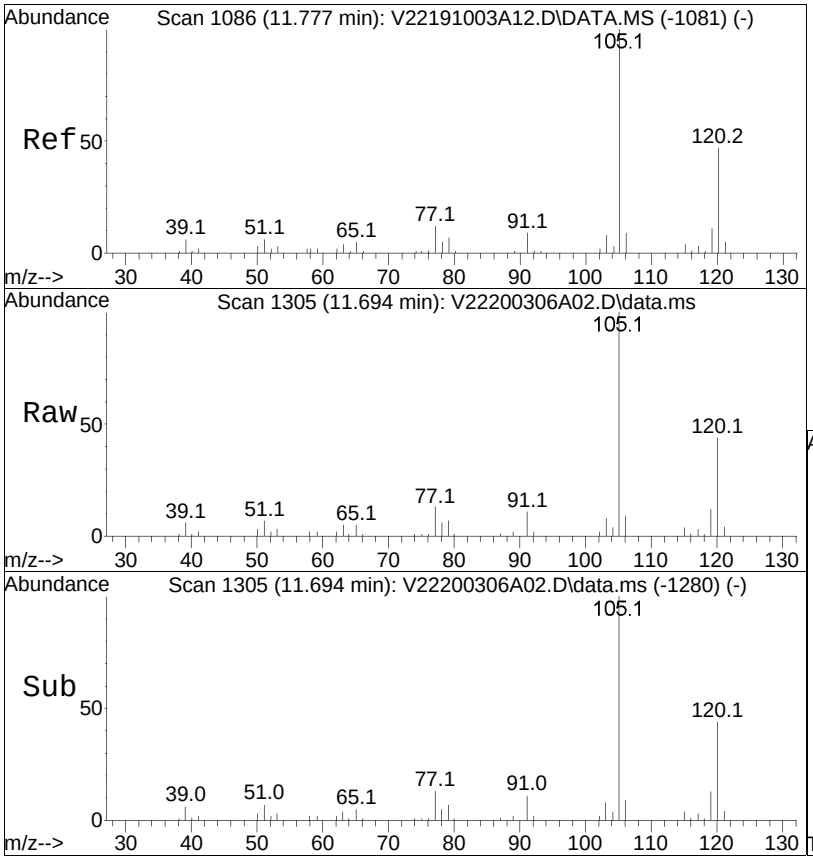



#98
tert-Butylbenzene
Concen: 9.72 ug/L
RT: 11.616 min Scan# 1295
Delta R.T. -0.008 min
Lab File: V22200306A02.D
Acq: 06 Mar 2020 10:11 am

Tgt Ion:119 Resp: 200144

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 119 | 100 | | |
| 91 | 71.1 | 50.2 | 75.4 |
| 134 | 23.5 | 20.8 | 31.2 |

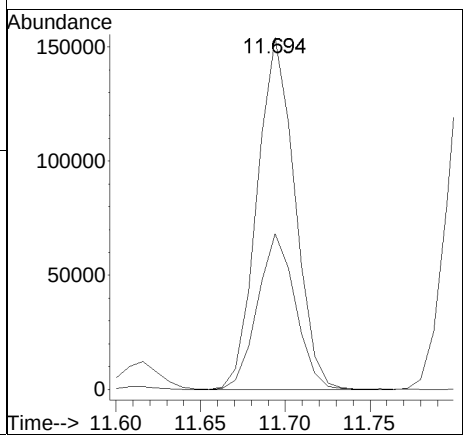


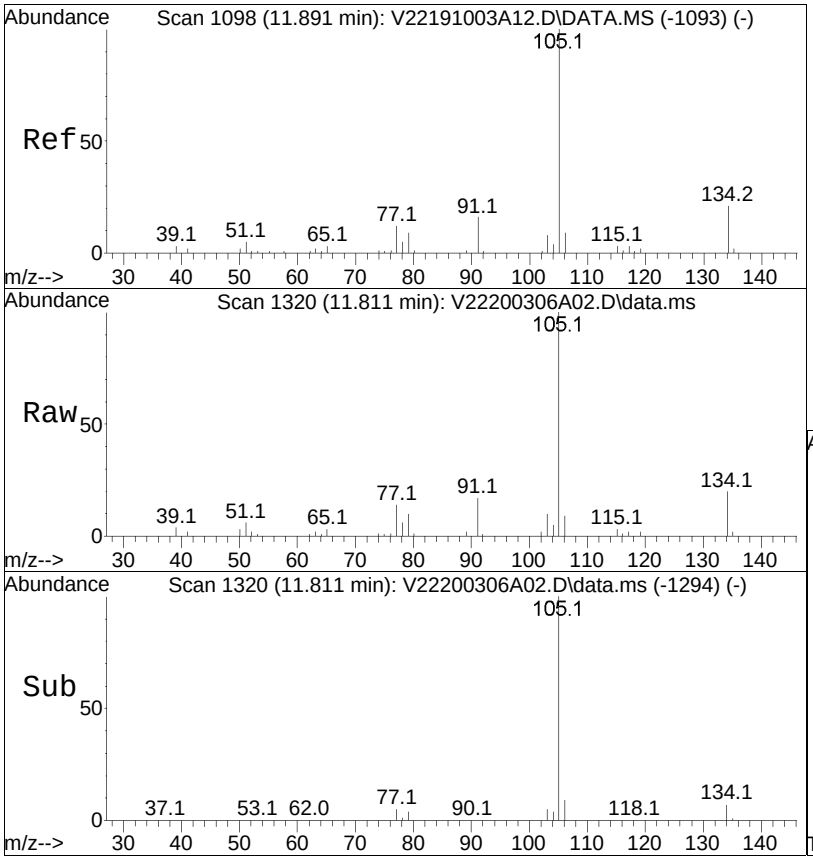



#101
1,2,4-Trimethylbenzene
Concen: 10.55 ug/L
RT: 11.694 min Scan# 1305
Delta R.T. -0.008 min
Lab File: V22200306A02.D
Acq: 06 Mar 2020 10:11 am

Tgt Ion:105 Resp: 238313

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 105 | 100 | | |
| 120 | 44.4 | 38.5 | 57.7 |

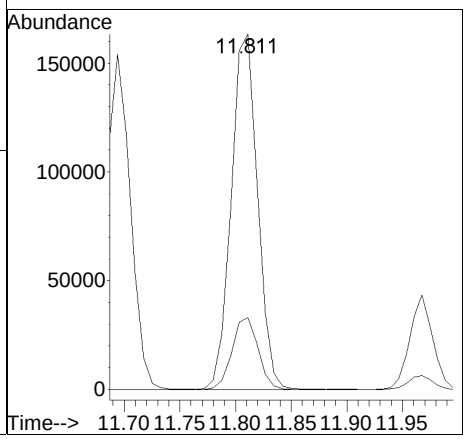


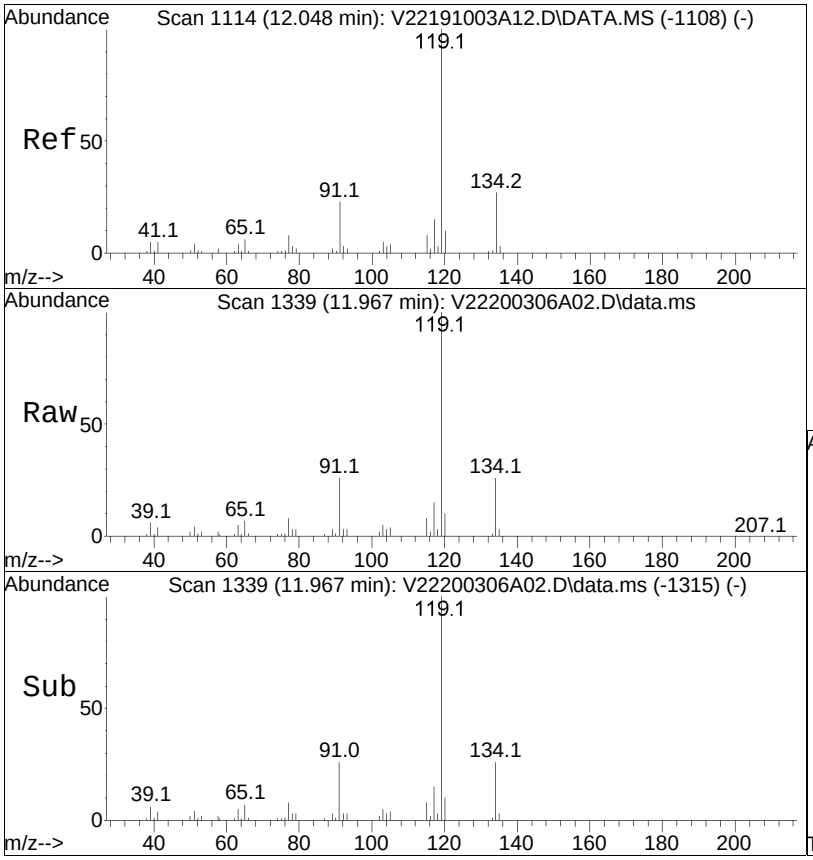



#102
sec-Butylbenzene
Concen: 10.03 ug/L
RT: 11.811 min Scan# 1320
Delta R.T. 0.000 min
Lab File: V22200306A02.D
Acq: 06 Mar 2020 10:11 am

Tgt Ion:105 Resp: 295349

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 105 | 100 | | |
| 134 | 18.1 | 13.9 | 28.9 |

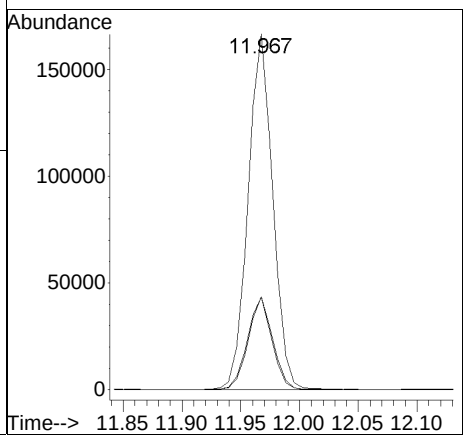


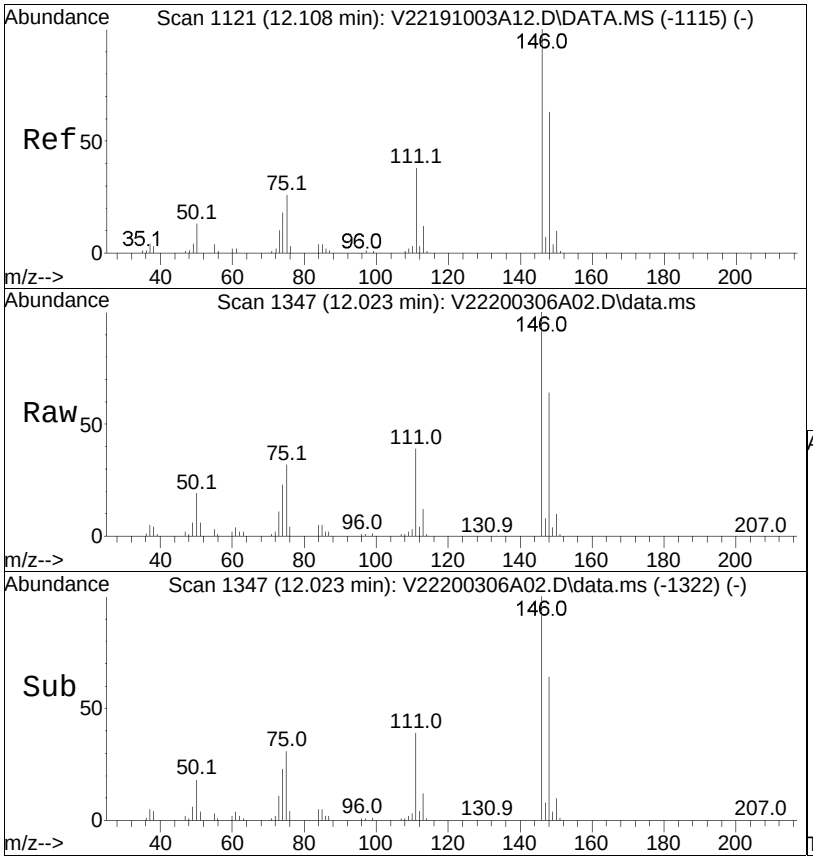



#103
p-Isopropyltoluene
Concen: 9.49 ug/L
RT: 11.967 min Scan# 1339
Delta R.T. -0.007 min
Lab File: V22200306A02.D
Acq: 06 Mar 2020 10:11 am

Tgt Ion:119 Resp: 242610

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 119 | 100 | | |
| 134 | 25.5 | 17.7 | 36.7 |
| 91 | 25.5 | 14.1 | 29.3 |

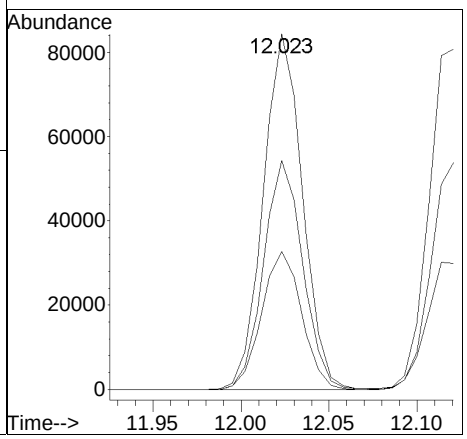


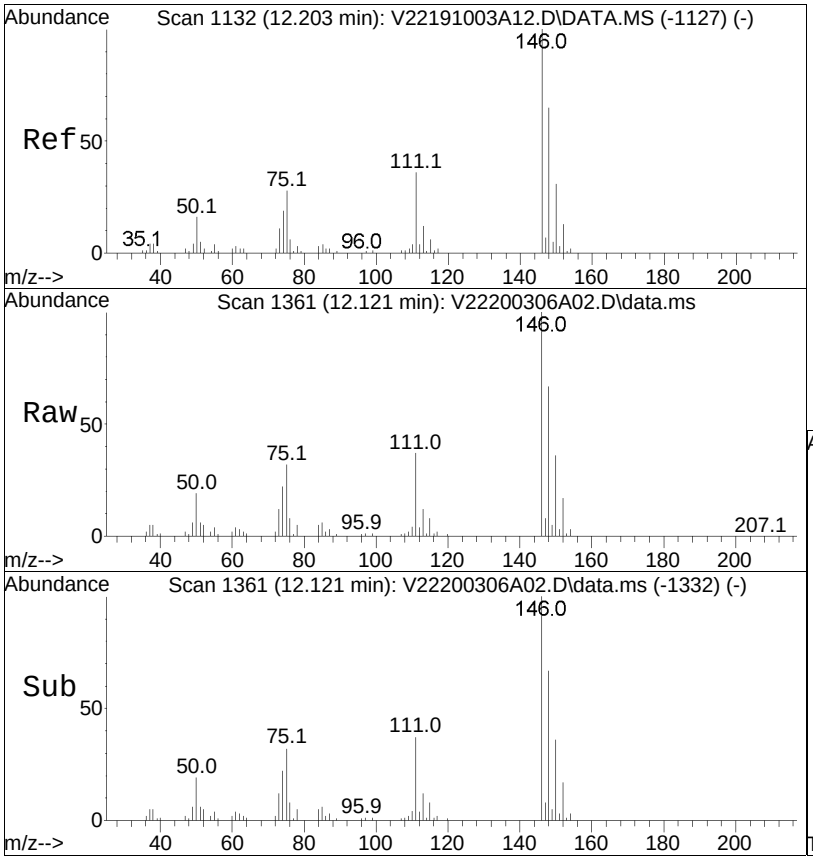



#104
1,3-Dichlorobenzene
Concen: 9.90 ug/L
RT: 12.023 min Scan# 1347
Delta R.T. -0.007 min
Lab File: V22200306A02.D
Acq: 06 Mar 2020 10:11 am

Tgt Ion:146 Resp: 130451

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 146 | 100 | | |
| 111 | 39.6 | 24.0 | 49.8 |
| 148 | 64.4 | 41.8 | 86.8 |

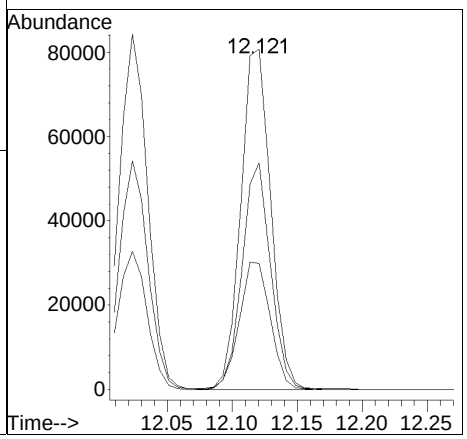


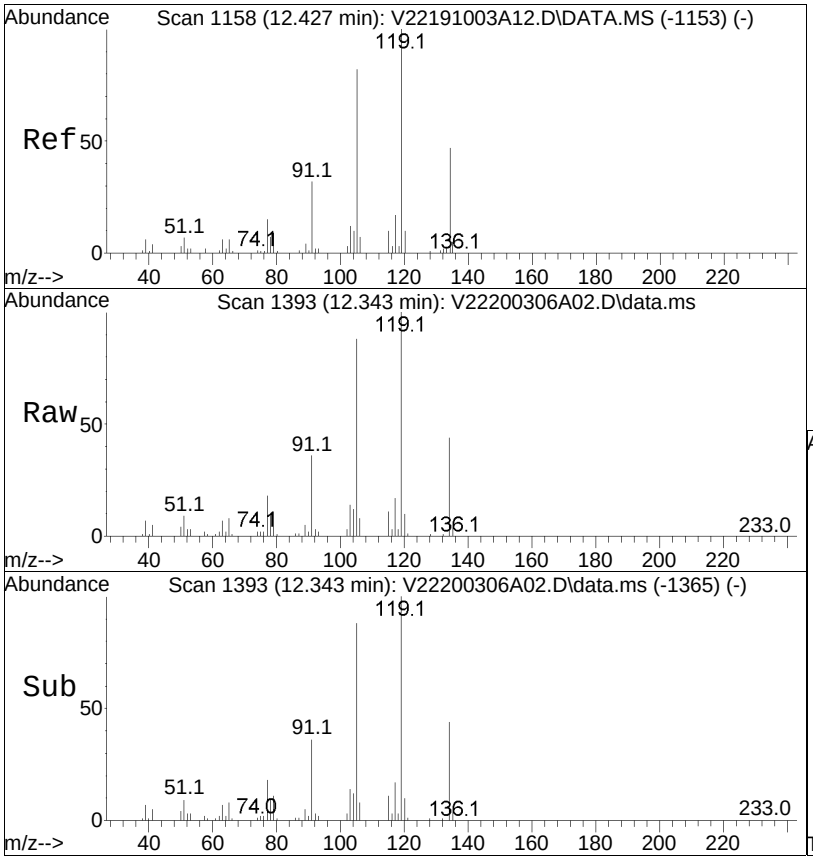



#105
1,4-Dichlorobenzene
Concen: 10.00 ug/L
RT: 12.121 min Scan# 1361
Delta R.T. -0.000 min
Lab File: V22200306A02.D
Acq: 06 Mar 2020 10:11 am

Tgt Ion:146 Resp: 129733

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 146 | 100 | | |
| 111 | 38.7 | 28.9 | 43.3 |
| 148 | 63.2 | 51.4 | 77.2 |

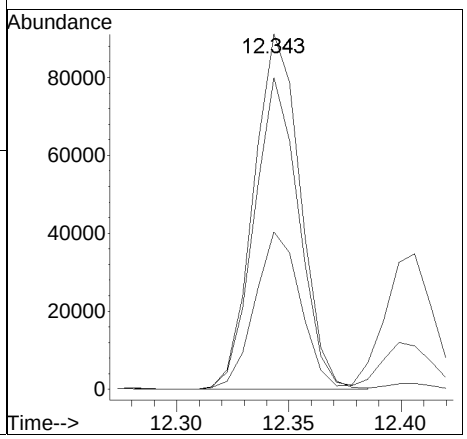


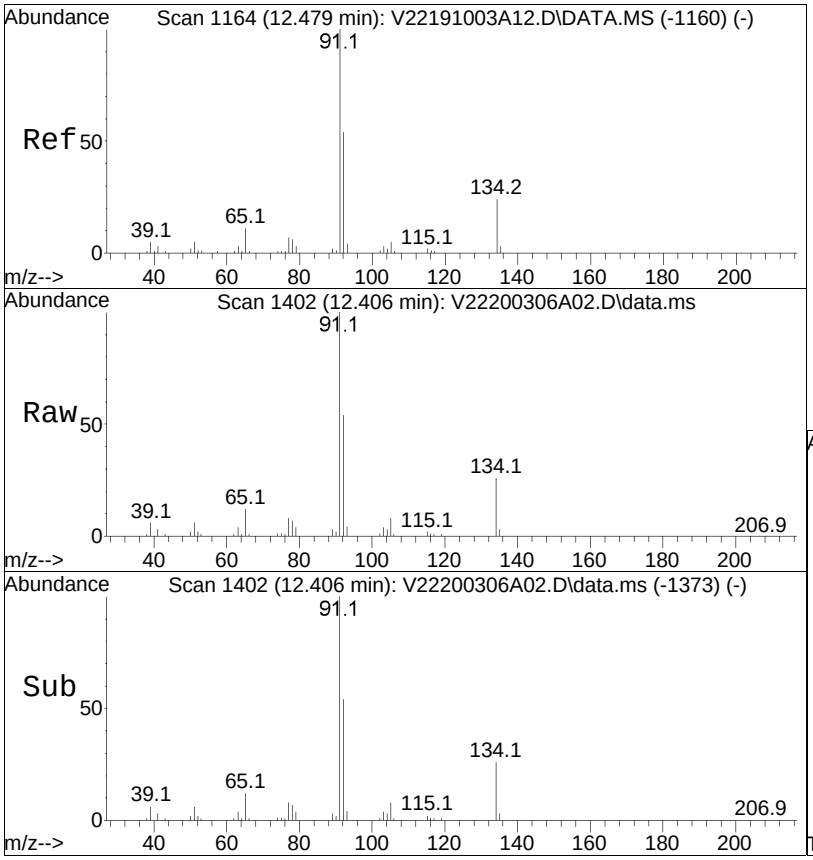



#106
p-Diethylbenzene
Concen: 10.12 ug/L
RT: 12.343 min Scan# 1393
Delta R.T. -0.007 min
Lab File: V22200306A02.D
Acq: 06 Mar 2020 10:11 am

Tgt Ion:119 Resp: 131738

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 119 | 100 | | |
| 105 | 84.4 | 53.4 | 110.8 |
| 134 | 43.5 | 30.9 | 64.1 |

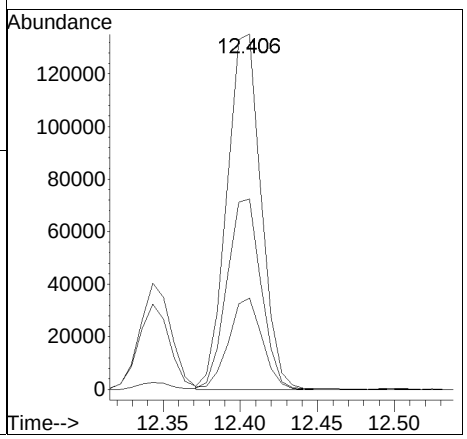


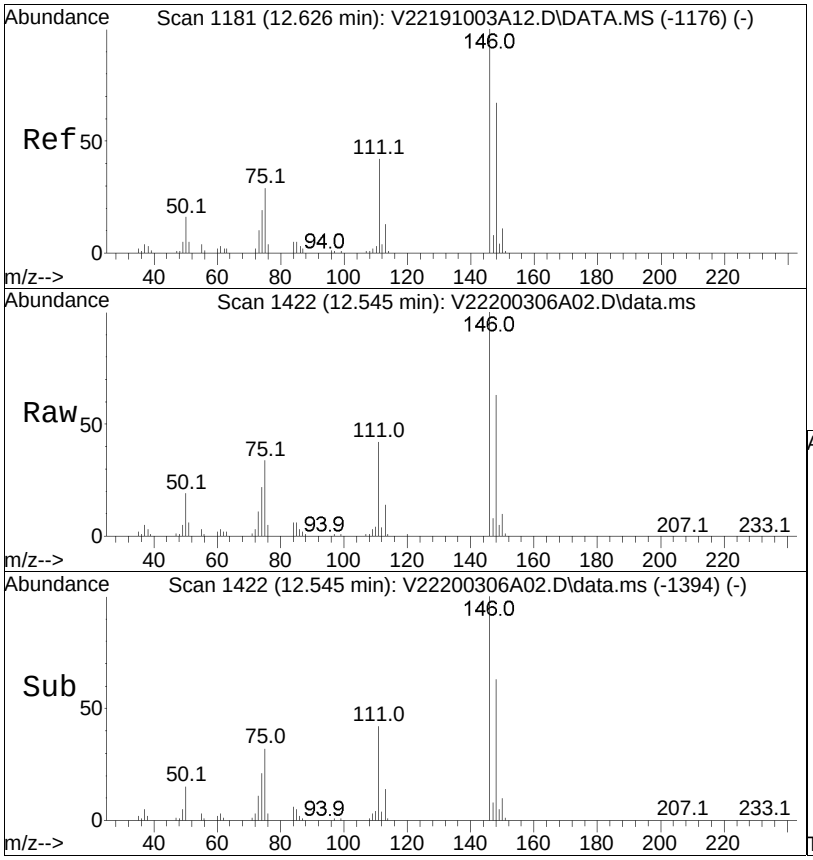



#107
n-Butylbenzene
Concen: 10.43 ug/L
RT: 12.406 min Scan# 1402
Delta R.T. -0.000 min
Lab File: V22200306A02.D
Acq: 06 Mar 2020 10:11 am

Tgt Ion: 91 Resp: 208690

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 91 | 100 | | |
| 92 | 53.6 | 44.6 | 66.8 |
| 134 | 25.1 | 22.9 | 34.3 |

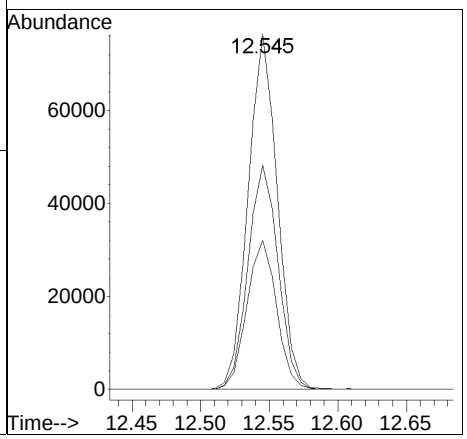


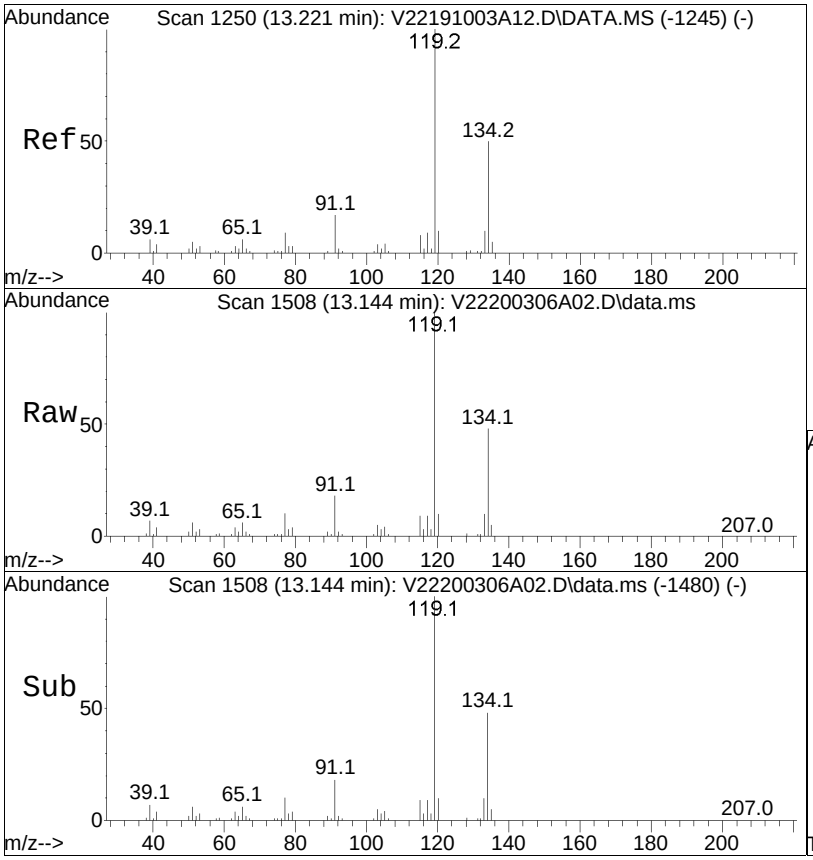



#108
1,2-Dichlorobenzene
Concen: 9.70 ug/L
RT: 12.545 min Scan# 1422
Delta R.T. -0.007 min
Lab File: V22200306A02.D
Acq: 06 Mar 2020 10:11 am

Tgt Ion:146 Resp: 113576

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 146 | 100 | | |
| 111 | 42.5 | 24.8 | 51.6 |
| 148 | 64.8 | 42.2 | 87.6 |

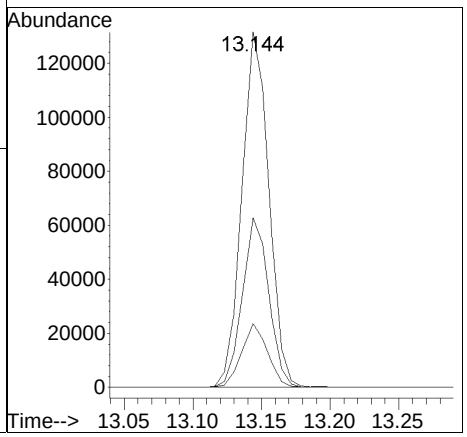


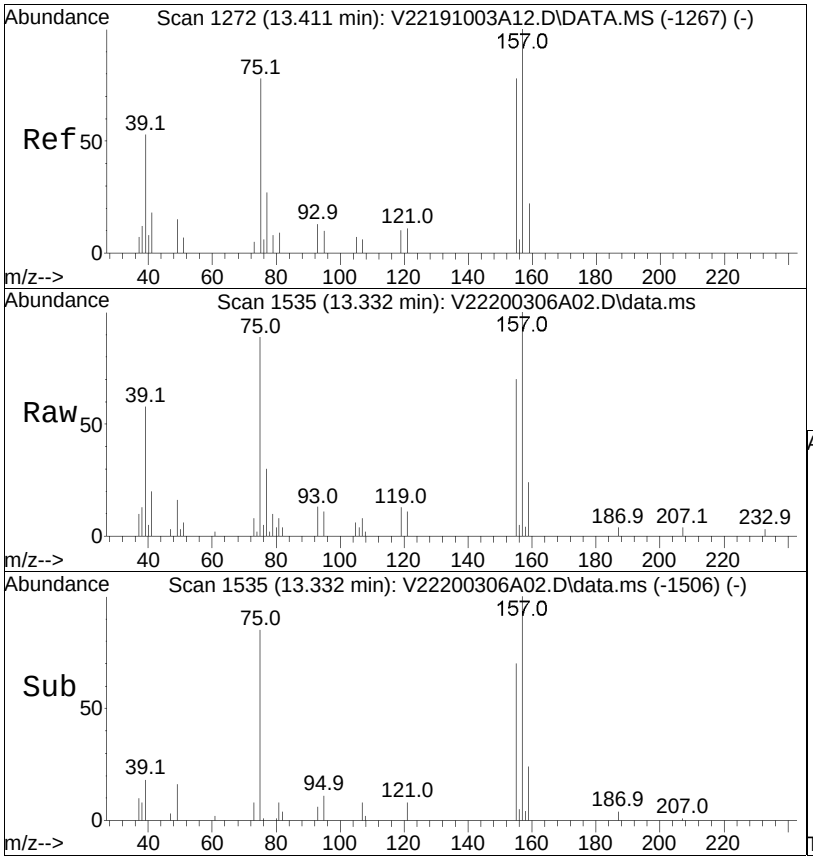



#109
1,2,4,5-Tetramethylbenzene
Concen: 10.35 ug/L
RT: 13.144 min Scan# 1508
Delta R.T. -0.007 min
Lab File: V22200306A02.D
Acq: 06 Mar 2020 10:11 am

Tgt Ion:119 Resp: 180155

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 119 | 100 | | |
| 134 | 46.8 | 31.9 | 66.1 |
| 91 | 17.3 | 9.8 | 20.3 |

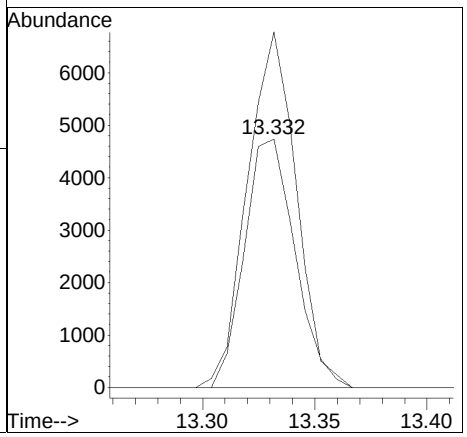


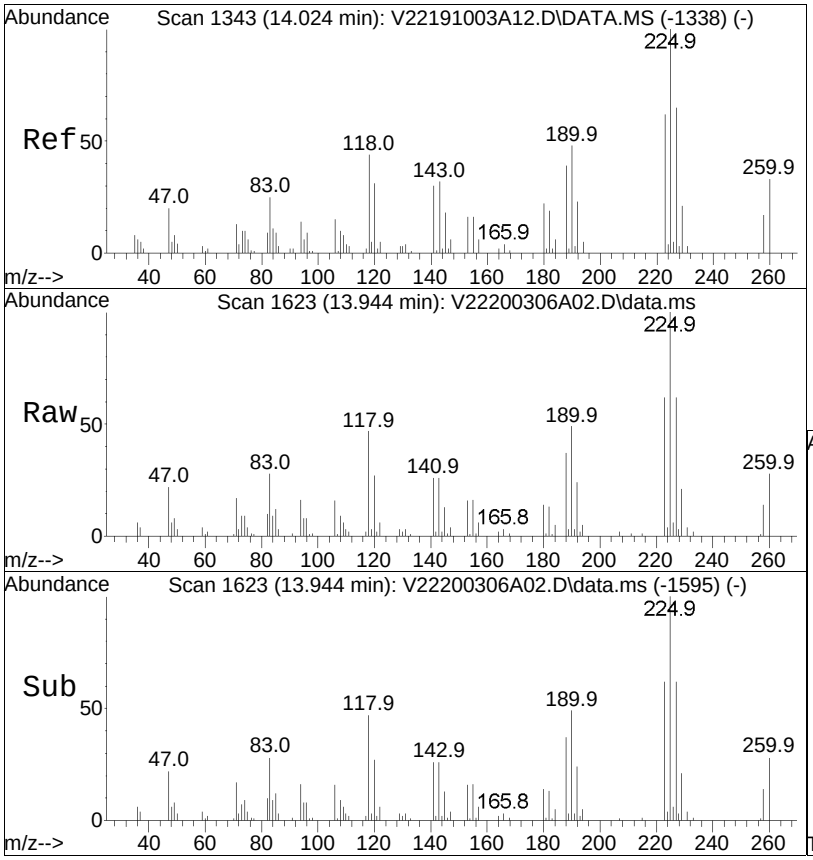



#110
1,2-Dibromo-3-chloropropane
Concen: 8.31 ug/L
RT: 13.332 min Scan# 1535
Delta R.T. -0.000 min
Lab File: V22200306A02.D
Acq: 06 Mar 2020 10:11 am

Tgt Ion:155 Resp: 7416

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 155 | 100 | | |
| 157 | 138.1 | 102.3 | 153.5 |

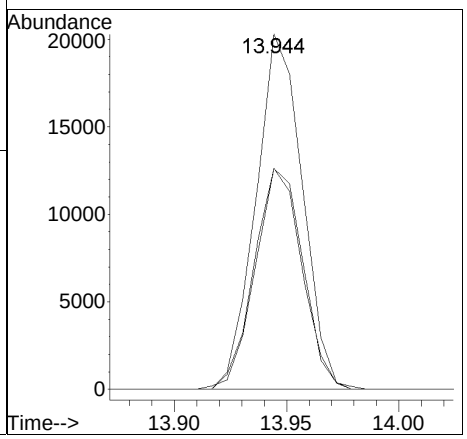


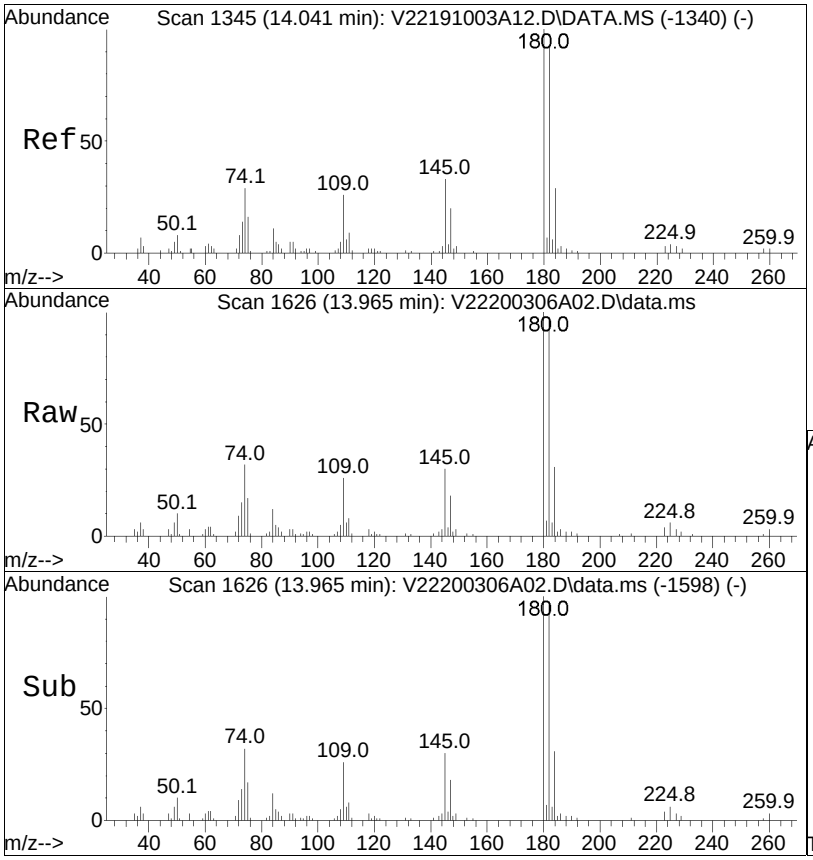



#112
Hexachlorobutadiene
Concen: 11.87 ug/L
RT: 13.944 min Scan# 1623
Delta R.T. -0.007 min
Lab File: V22200306A02.D
Acq: 06 Mar 2020 10:11 am

Tgt Ion:225 Resp: 29255

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 225 | 100 | | |
| 223 | 64.0 | 49.8 | 74.8 |
| 227 | 64.1 | 52.2 | 78.4 |

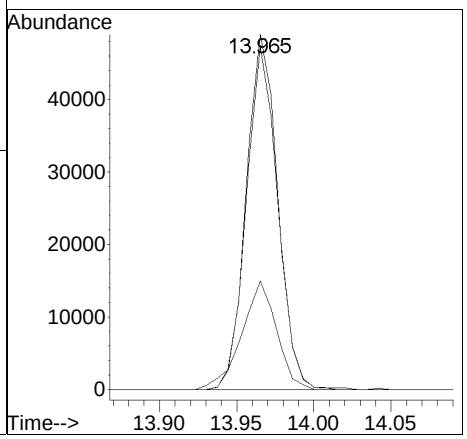


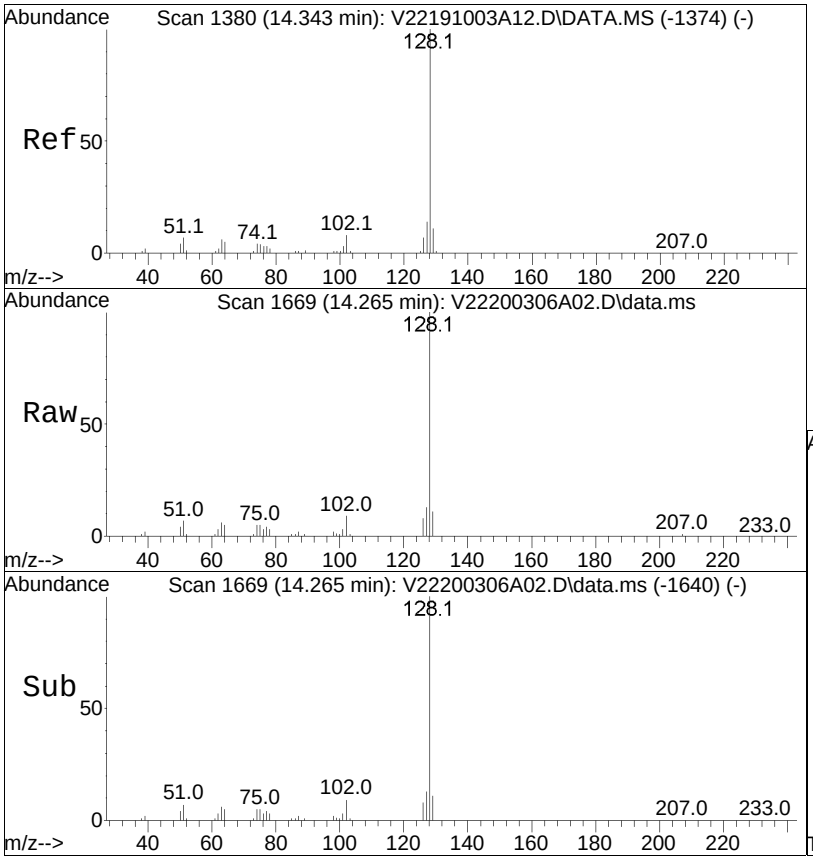



#113
1,2,4-Trichlorobenzene
Concen: 10.36 ug/L
RT: 13.965 min Scan# 1626
Delta R.T. -0.007 min
Lab File: V22200306A02.D
Acq: 06 Mar 2020 10:11 am

Tgt Ion:180 Resp: 69598

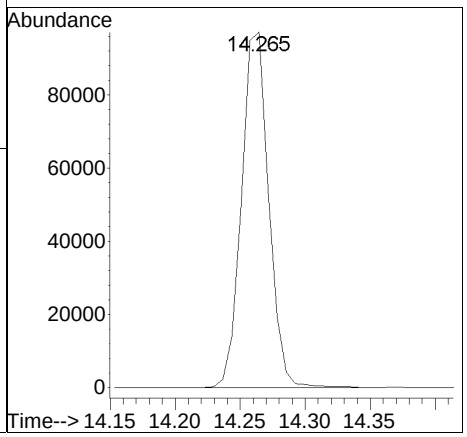
| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 180 | 100 | | |
| 182 | 95.8 | 76.6 | 114.8 |
| 145 | 33.6 | 25.5 | 38.3 |

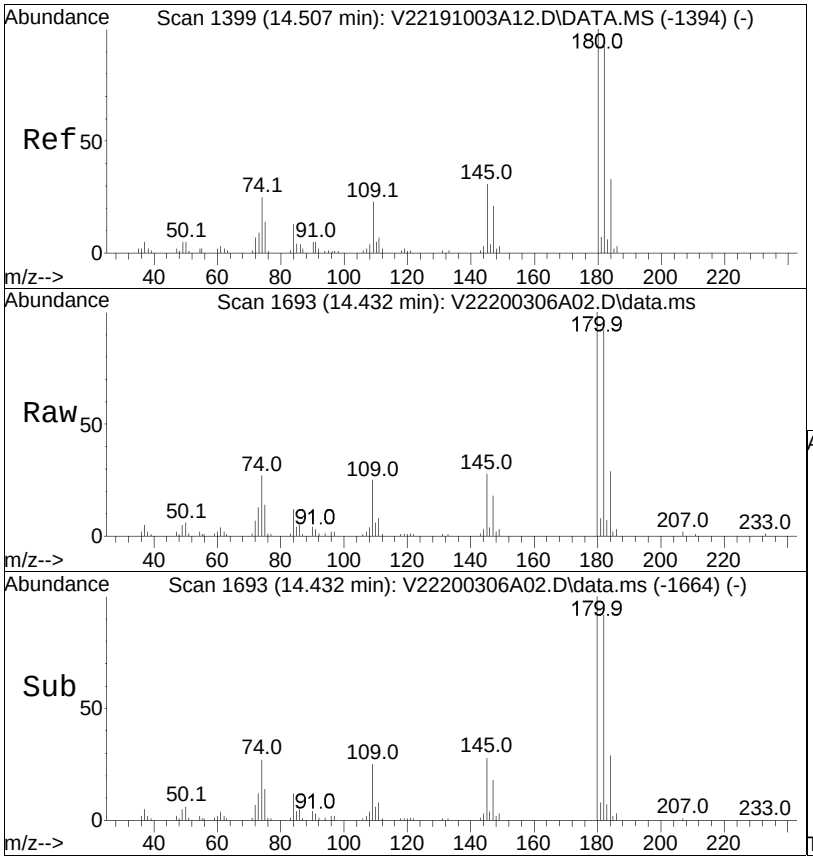





#114
Naphthalene
Concen: 9.07 ug/L
RT: 14.265 min Scan# 1669
Delta R.T. -0.001 min
Lab File: V22200306A02.D
Acq: 06 Mar 2020 10:11 am

Tgt Ion:128 Resp: 141389

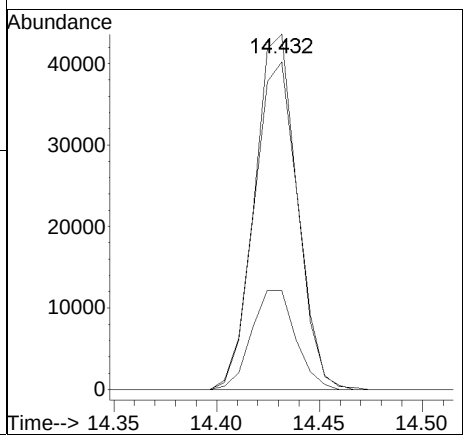





#115
1,2,3-Trichlorobenzene
Concen: 10.23 ug/L
RT: 14.432 min Scan# 1693
Delta R.T. -0.000 min
Lab File: V22200306A02.D
Acq: 06 Mar 2020 10:11 am

Tgt Ion:180 Resp: 63039

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 180 | 100 | | |
| 182 | 94.0 | 76.0 | 114.0 |
| 145 | 28.7 | 23.8 | 35.8 |



Quantitation Report (QT Reviewed)

Data Path : I:\VOLATILES\VOA101\2020\200307A\
Data File : V01200307A02.D
Acq On : 7 Mar 2020 9:55 am
Operator : VOA101:MKS
Sample : WG1348564-4,31,10,10
Misc : WG1348564,ICAL16539
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Mar 07 11:18:58 2020
Quant Method : I:\VOLATILES\VOA101\2020\200307A\V101_200219A_8260.m
Quant Title : VOLATILES BY GC/MS
QLast Update : Thu Feb 20 09:49:21 2020
Response via : Initial Calibration

CCAL FILE(s) : 1 - I:\VOLATILES\VOA101\2020\200307A\V01200307A01.D
Sub List : 8260-Curve - Megamix plus Diox

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| Internal Standards | | | | | | |
| 1) Fluorobenzene | 6.634 | 96 | 223803 | 10.000 | ug/L | 0.00 |
| Standard Area 1 = 235149 | | | Recovery = 95.17% | | | |
| 59) Chlorobenzene-d5 | 10.524 | 117 | 161802 | 10.000 | ug/L | 0.00 |
| Standard Area 1 = 168234 | | | Recovery = 96.18% | | | |
| 79) 1,4-Dichlorobenzene-d4 | 13.323 | 152 | 83096 | 10.000 | ug/L | 0.00 |
| Standard Area 1 = 84540 | | | Recovery = 98.29% | | | |
| System Monitoring Compounds | | | | | | |
| 36) Dibromofluoromethane | 5.745 | 113 | 56596 | 9.817 | ug/L | 0.00 |
| Spiked Amount 10.000 | | Range 70 - 130 | | Recovery = 98.17% | | |
| 43) 1,2-Dichloroethane-d4 | 6.323 | 65 | 61104 | 9.888 | ug/L | 0.00 |
| Spiked Amount 10.000 | | Range 70 - 130 | | Recovery = 98.88% | | |
| 60) Toluene-d8 | 8.495 | 98 | 224611 | 9.717 | ug/L | 0.00 |
| Spiked Amount 10.000 | | Range 70 - 130 | | Recovery = 97.17% | | |
| 83) 4-Bromofluorobenzene | 12.030 | 95 | 84165 | 9.396 | ug/L | 0.00 |
| Spiked Amount 10.000 | | Range 70 - 130 | | Recovery = 93.96% | | |
| Target Compounds | | | | | | Qvalue |
| 2) Dichlorodifluoromethane | 1.821 | 85 | 39162 | 9.716 | ug/L | 99 |
| 3) Chloromethane | 2.034 | 50 | 70223 | 11.513 | ug/L | 99 |
| 4) Vinyl chloride | 2.122 | 62 | 63567 | 11.149 | ug/L | 100 |
| 5) Bromomethane | 2.465 | 94 | 21683 | 9.358 | ug/L | 99 |
| 6) Chloroethane | 2.602 | 64 | 40525 | 12.253 | ug/L | 96 |
| 7) Trichlorofluoromethane | 2.754 | 101 | 76736 | 11.539 | ug/L | 98 |
| 8) Ethyl ether | 3.076 | 74 | 22782 | 12.005 | ug/L | 74 |
| 10) 1,1-Dichloroethene | 3.289 | 96 | 48012 | 11.806 | ug/L | 84 |
| 11) Carbon disulfide | 3.327 | 76 | 123929 | 11.246 | ug/L | 99 |
| 15) Methylene chloride | 3.889 | 84 | 50354 | 11.863 | ug/L | 81 |
| 17) Acetone | 3.933 | 43 | 10273 | 12.267 | ug/L | 93 |
| 18) trans-1,2-Dichloroethene | 4.059 | 96 | 50935 | 11.769 | ug/L | 87 |
| 20) Methyl tert-butyl ether | 4.162 | 73 | 106097 | 11.520 | ug/L | 91 |
| 23) 1,1-Dichloroethane | 4.697 | 63 | 111430 | 11.994 | ug/L | 98 |
| 25) Acrylonitrile | 4.741 | 53 | 12010 | 12.805 | ug/L | 96 |
| 27) Vinyl acetate | 4.942 | 43 | 114428 | 12.195 | ug/L | 96 |
| 28) cis-1,2-Dichloroethene | 5.264 | 96 | 60500 | 11.773 | ug/L | 86 |
| 29) 2,2-Dichloropropane | 5.373 | 77 | 82966 | 12.839 | ug/L | 96 |
| 30) Bromochloromethane | 5.472 | 128 | 24080 | 12.228 | ug/L # | 81 |
| 32) Chloroform | 5.548 | 83 | 95978 | 11.869 | ug/L | 96 |

Data Path : I:\VOLATILES\VOA101\2020\200307A\
Data File : V01200307A02.D
Acq On : 7 Mar 2020 9:55 am
Operator : VOA101:MKS
Sample : WG1348564-4,31,10,10
Misc : WG1348564,ICAL16539
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Mar 07 11:18:58 2020
Quant Method : I:\VOLATILES\VOA101\2020\200307A\V101_200219A_8260.m
Quant Title : VOLATILES BY GC/MS
QLast Update : Thu Feb 20 09:49:21 2020
Response via : Initial Calibration

CCAL FILE(s) : 1 - I:\VOLATILES\VOA101\2020\200307A\V01200307A01.D
Sub List : 8260-Curve - Megamix plus Diox

| Compound | R.T. | QIon | Response | Conc | Units | | Dev(Min) |
|---|---|---|---|---|---|---|---|
| 34) Carbon tetrachloride | 5.706 | 117 | 73417 | 11.255 | ug/L | | 97 |
| 37) 1,1,1-Trichloroethane | 5.777 | 97 | 85869 | 11.364 | ug/L | | 97 |
| 39) 2-Butanone | 5.865 | 43 | 14702 | 11.910 | ug/L | # | 41 |
| 40) 1,1-Dichloropropene | 5.908 | 75 | 74488 | 11.508 | ug/L | | 98 |
| 41) Benzene | 6.181 | 78 | 205112 | 11.471 | ug/L | | 93 |
| 44) 1,2-Dichloroethane | 6.405 | 62 | 66320 | 11.815 | ug/L | | 99 |
| 48) Trichloroethene | 6.830 | 95 | 55864 | 11.337 | ug/L | | 99 |
| 50) Dibromomethane | 7.316 | 93 | 24318 | 11.467 | ug/L | | 98 |
| 51) 1,2-Dichloropropane | 7.431 | 63 | 61128 | 12.017 | ug/L | | 95 |
| 54) Bromodichloromethane | 7.507 | 83 | 65042 | 11.106 | ug/L | | 98 |
| 57) 1,4-Dioxane | 7.725 | 88 | 15064 | 724.603 | ug/L | # | 82 |
| 58) cis-1,3-Dichloropropene | 8.265 | 75 | 81698 | 11.345 | ug/L | | 96 |
| 61) Toluene | 8.560 | 92 | 132607 | 11.355 | ug/L | | 96 |
| 62) 4-Methyl-2-pentanone | 9.024 | 58 | 12397 | 11.647 | ug/L | | 94 |
| 63) Tetrachloroethene | 9.057 | 166 | 56176 | 11.260 | ug/L | | 99 |
| 65) trans-1,3-Dichloropropene | 9.084 | 75 | 67488 | 11.008 | ug/L | | 94 |
| 68) 1,1,2-Trichloroethane | 9.291 | 83 | 30123 | 11.282 | ug/L | | 97 |
| 69) Chlorodibromomethane | 9.537 | 129 | 41723 | 10.647 | ug/L | | 97 |
| 70) 1,3-Dichloropropane | 9.657 | 76 | 62882 | 11.112 | ug/L | | 100 |
| 71) 1,2-Dibromoethane | 9.853 | 107 | 34247 | 11.091 | ug/L | | 97 |
| 72) 2-Hexanone | 10.131 | 43 | 21218 | 10.558 | ug/L | | 98 |
| 73) Chlorobenzene | 10.546 | 112 | 139357 | 11.161 | ug/L | | 99 |
| 74) Ethylbenzene | 10.573 | 91 | 246354 | 11.257 | ug/L | | 99 |
| 75) 1,1,1,2-Tetrachloroethane | 10.623 | 131 | 48716 | 10.714 | ug/L | | 98 |
| 76) p/m Xylene | 10.764 | 106 | 195565 | 23.022 | ug/L | | 96 |
| 77) o Xylene | 11.305 | 106 | 181774 | 22.879 | ug/L | | 97 |
| 78) Styrene | 11.370 | 104 | 298694 | 22.427 | ug/L | | 100 |
| 80) Bromoform | 11.403 | 173 | 21237 | 10.085 | ug/L | | 99 |
| 82) Isopropylbenzene | 11.687 | 105 | 237741 | 10.989 | ug/L | | 99 |
| 84) Bromobenzene | 12.156 | 156 | 53126 | 10.980 | ug/L | | 99 |
| 85) n-Propylbenzene | 12.183 | 91 | 262902 | 11.232 | ug/L | | 98 |
| 87) 1,1,2,2-Tetrachloroethane | 12.270 | 83 | 35531 | 10.816 | ug/L | | 98 |
| 88) 4-Ethyltoluene | 12.314 | 105 | 216303 | 11.300 | ug/L | | 100 |
| 89) 2-Chlorotoluene | 12.374 | 91 | 173235 | 11.148 | ug/L | | 93 |
| 90) 1,3,5-Trimethylbenzene | 12.412 | 105 | 187675 | 11.204 | ug/L | | 100 |
| 91) 1,2,3-Trichloropropane | 12.429 | 75 | 32653M1 | 10.555 | ug/L | | |
| 92) trans-1,4-Dichloro-2-b... | 12.472 | 53 | 11343 | 11.319 | ug/L | # | 15 |
| 93) 4-Chlorotoluene | 12.565 | 91 | 167529 | 11.283 | ug/L | | 96 |
| 94) tert-Butylbenzene | 12.783 | 119 | 157389 | 11.109 | ug/L | | 97 |

Data Path : I:\VOLATILES\VOA101\2020\200307A\
Data File : V01200307A02.D
Acq On : 7 Mar 2020 9:55 am
Operator : VOA101:MKS
Sample : WG1348564-4,31,10,10
Misc : WG1348564,ICAL16539
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Mar 07 11:18:58 2020
Quant Method : I:\VOLATILES\VOA101\2020\200307A\V101_200219A_8260.m
Quant Title : VOLATILES BY GC/MS
QLast Update : Thu Feb 20 09:49:21 2020
Response via : Initial Calibration

CCAL FILE(s) : 1 - I:\VOLATILES\VOA101\2020\200307A\V01200307A01.D
Sub List : 8260-Curve - Megamix plus Diox

| | Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|---|
| 97) | 1,2,4-Trimethylbenzene | 12.865 | 105 | 185451 | 11.233 | ug/L | 99 |
| 98) | sec-Butylbenzene | 12.985 | 105 | 197049 | 11.165 | ug/L | 98 |
| 99) | p-Isopropyltoluene | 13.143 | 119 | 182951 | 11.203 | ug/L | 97 |
| 100) | 1,3-Dichlorobenzene | 13.242 | 146 | 101356 | 11.246 | ug/L | 99 |
| 101) | 1,4-Dichlorobenzene | 13.340 | 146 | 102807 | 11.258 | ug/L | 99 |
| 102) | p-Diethylbenzene | 13.553 | 119 | 98475 | 11.252 | ug/L | 98 |
| 103) | n-Butylbenzene | 13.618 | 91 | 139556 | 11.527 | ug/L | 99 |
| 104) | 1,2-Dichlorobenzene | 13.809 | 146 | 89028 | 11.221 | ug/L | 99 |
| 105) | 1,2,4,5-Tetramethylben... | 14.426 | 119 | 143342 | 10.869 | ug/L | 96 |
| 106) | 1,2-Dibromo-3-chloropr... | 14.666 | 155 | 4235 | 10.180 | ug/L | 98 |
| 108) | Hexachlorobutadiene | 15.337 | 225 | 13688 | 11.008 | ug/L | 97 |
| 109) | 1,2,4-Trichlorobenzene | 15.375 | 180 | 39059 | 10.446 | ug/L | 97 |
| 110) | Naphthalene | 15.741 | 128 | 81366 | 9.816 | ug/L | 100 |
| 111) | 1,2,3-Trichlorobenzene | 15.953 | 180 | 28826 | 10.021 | ug/L | 97 |

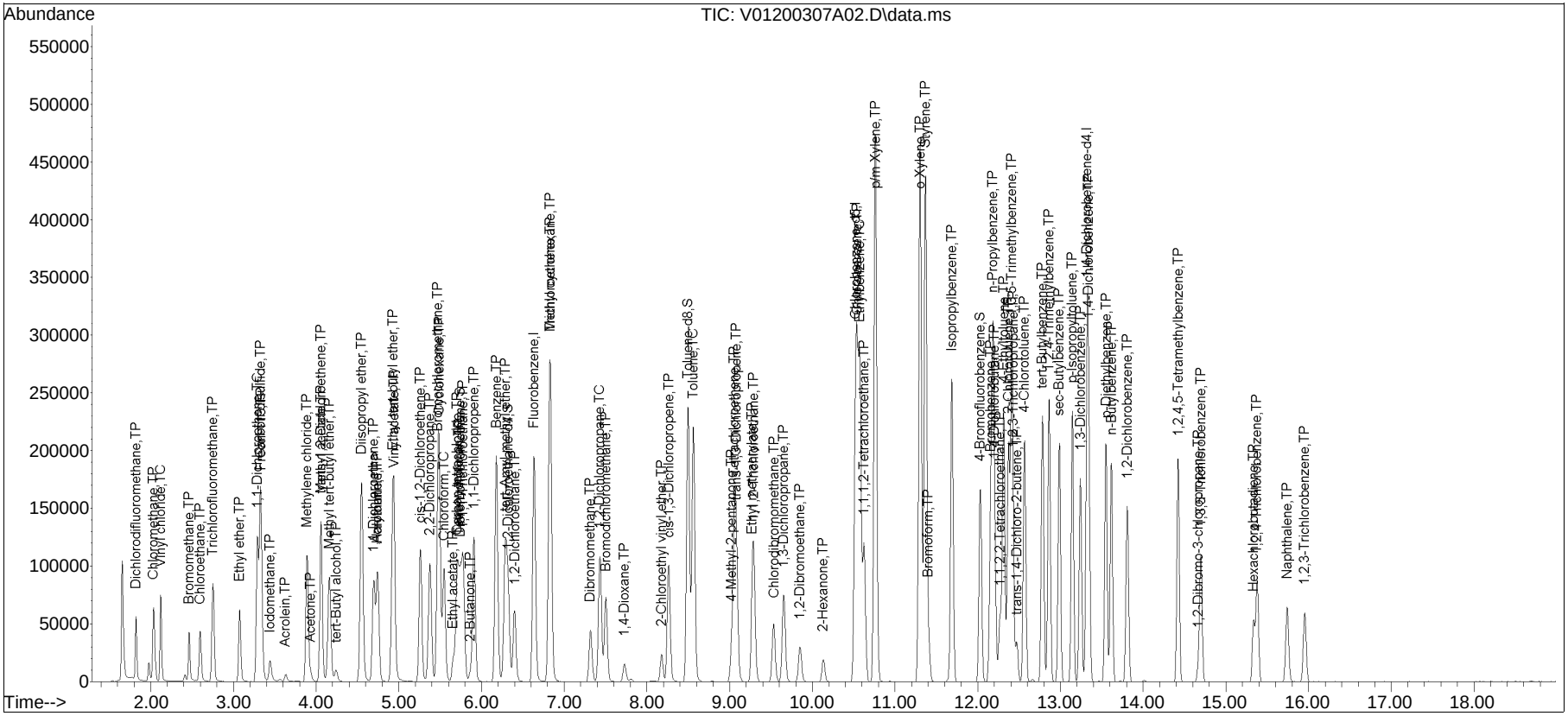
(#) = qualifier out of range (m) = manual integration (+) = signals summed

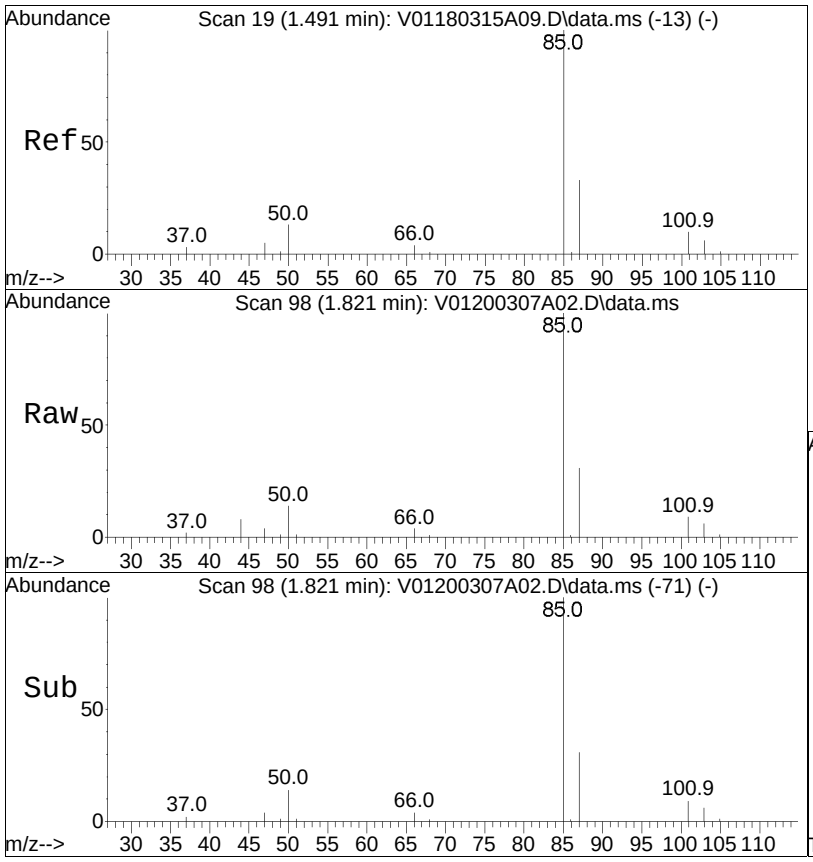
Quantitation Report (QT Reviewed)

Data Path : I:\VOLATILES\VOA101\2020\200307A\
Data File : V01200307A02.D
Acq On : 7 Mar 2020 9:55 am
Operator : VOA101:MKS
Sample : WG1348564-4,31,10,10
Misc : WG1348564,ICAL16539
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Mar 07 11:18:58 2020
Quant Method : I:\VOLATILES\VOA101\2020\200307A\V101_200219A_8260.m
Quant Title : VOLATILES BY GC/MS
QLast Update : Thu Feb 20 09:49:21 2020
Response via : Initial Calibration

Sub List : 8260-Curve - Megamix plus Diox00307A\V01200307A01.D•

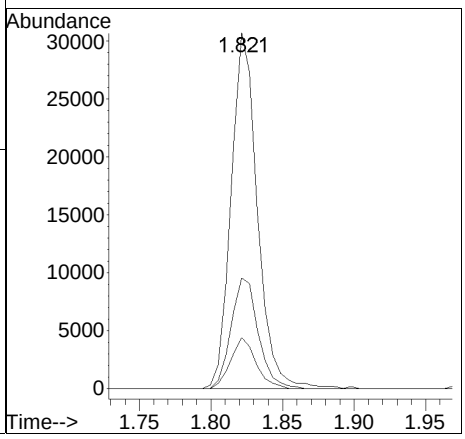


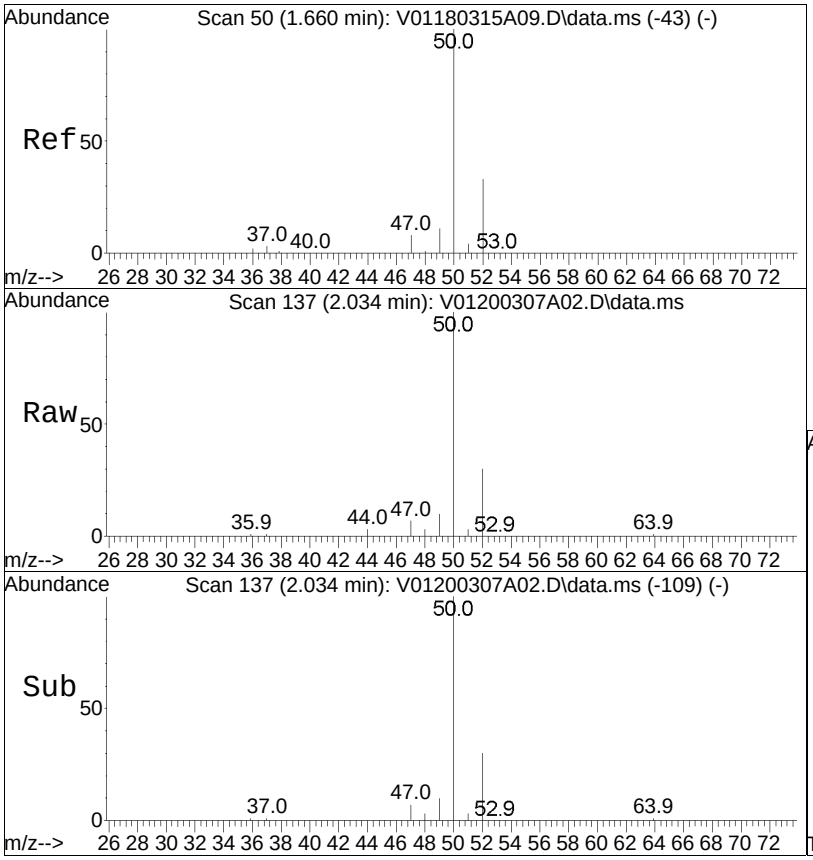



#2
Dichlorodifluoromethane
Concen: 9.72 ug/L
RT: 1.821 min Scan# 98
Delta R.T. 0.000 min
Lab File: V01200307A02.D
Acq: 7 Mar 2020 9:55 am

Tgt Ion: 85 Resp: 39162

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 85 | 100 | | |
| 87 | 31.9 | 20.9 | 43.5 |
| 50 | 13.7 | 9.1 | 18.9 |

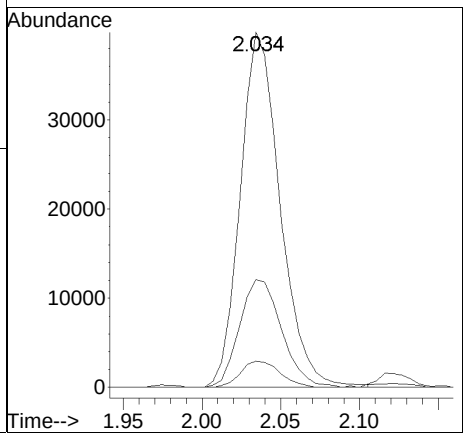


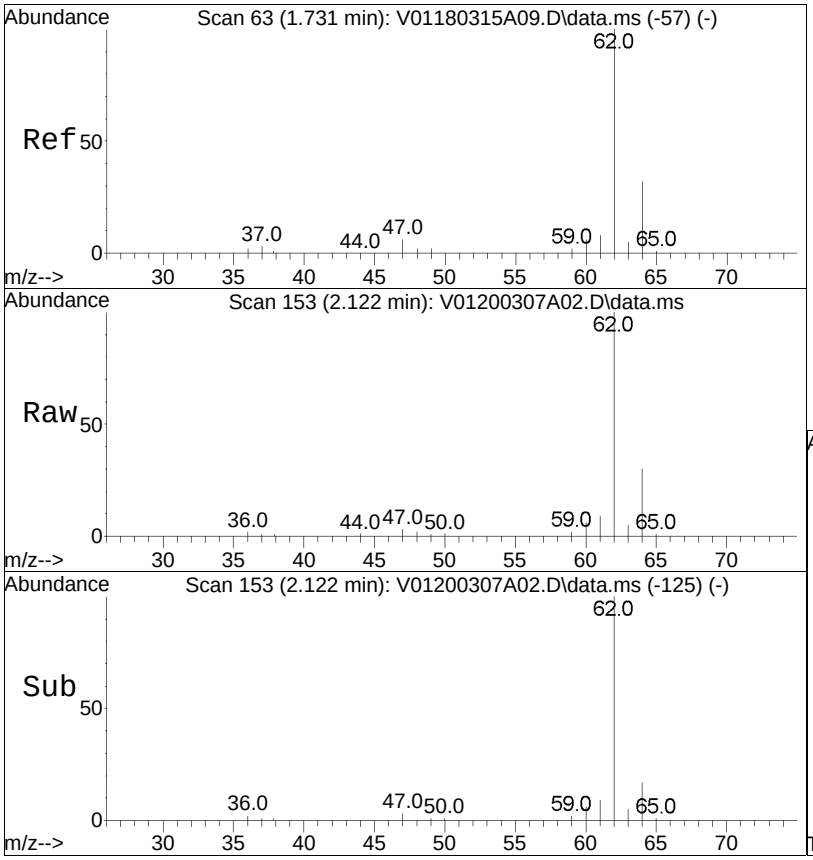



#3
Chloromethane
Concen: 11.51 ug/L
RT: 2.034 min Scan# 137
Delta R.T. 0.000 min
Lab File: V01200307A02.D
Acq: 7 Mar 2020 9:55 am

Tgt Ion: 50 Resp: 70223

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 50 | 100 | | |
| 52 | 32.1 | 12.8 | 52.8 |
| 47 | 7.4 | 0.0 | 28.3 |

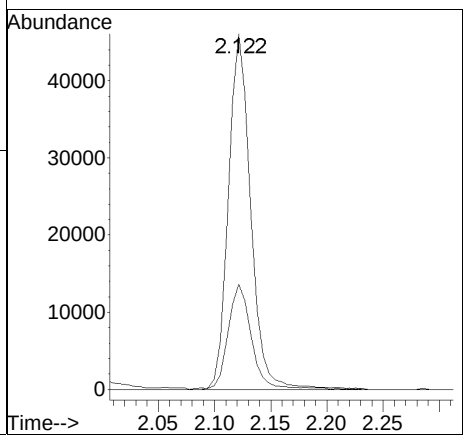


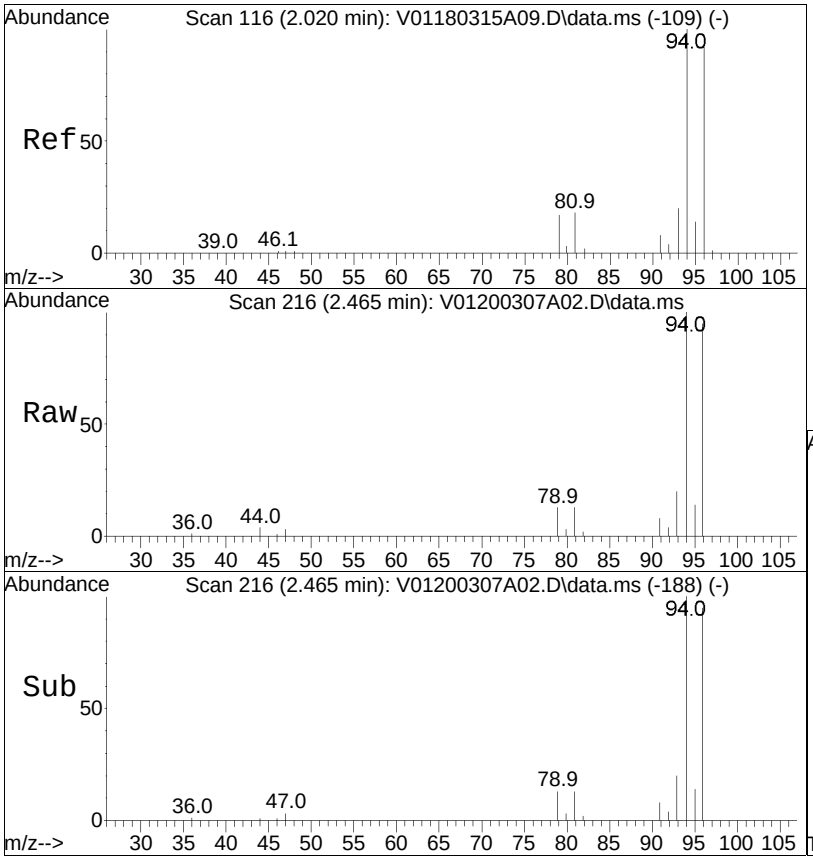



#4
Vinyl chloride
Concen: 11.15 ug/L
RT: 2.122 min Scan# 153
Delta R.T. 0.006 min
Lab File: V01200307A02.D
Acq: 7 Mar 2020 9:55 am

Tgt Ion: 62 Resp: 63567

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 62 | 100 | | |
| 64 | 30.9 | 10.8 | 50.8 |

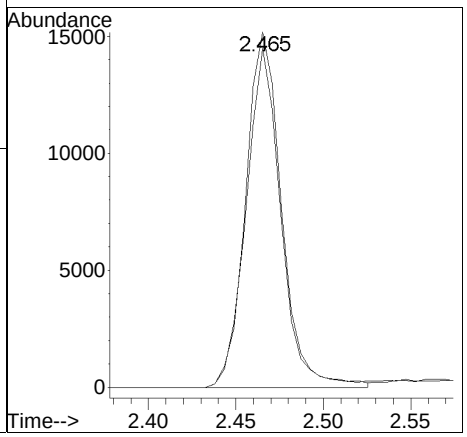


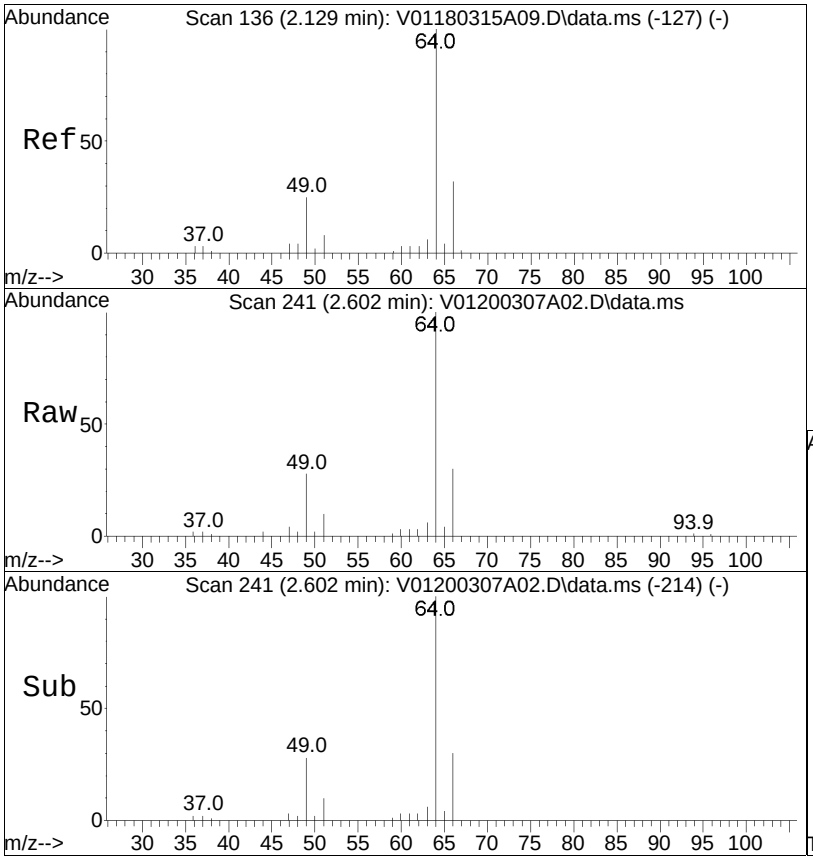



#5
Bromomethane
Concen: 9.36 ug/L
RT: 2.465 min Scan# 216
Delta R.T. 0.000 min
Lab File: V01200307A02.D
Acq: 7 Mar 2020 9:55 am

Tgt Ion: 94 Resp: 21683

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 94 | 100 | | |
| 96 | 92.2 | 73.6 | 113.6 |

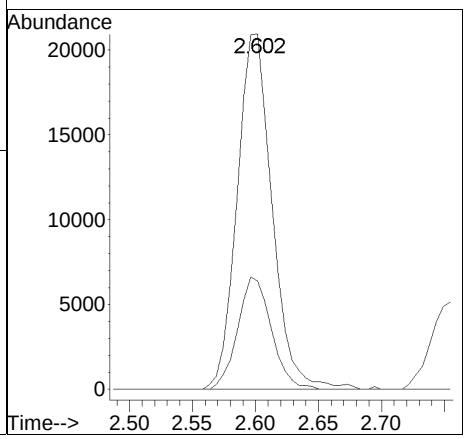


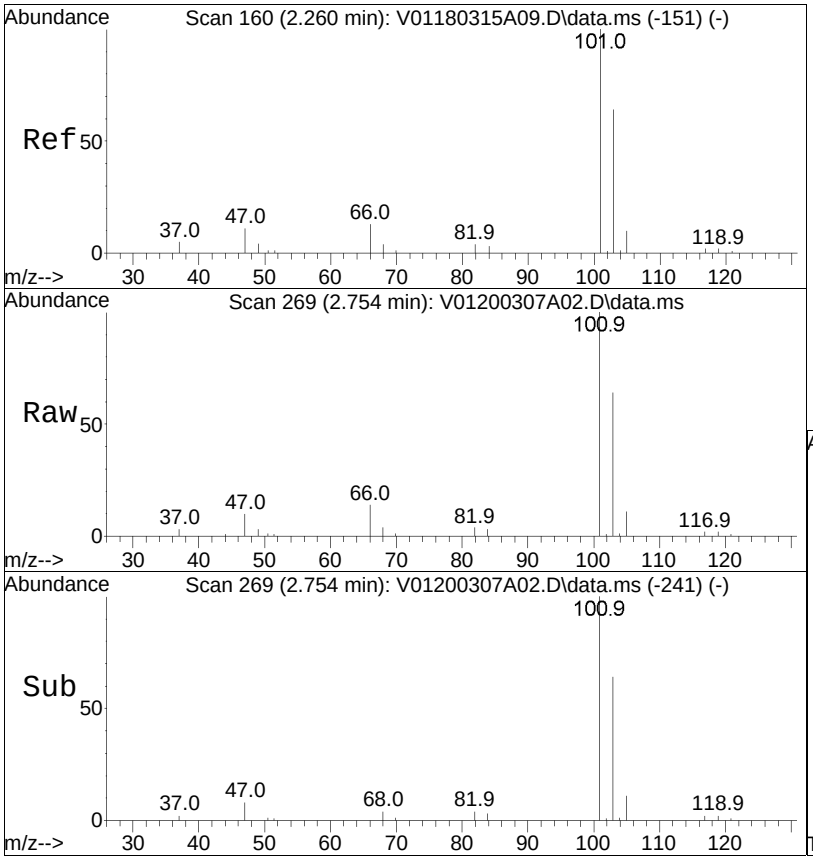



#6
Chloroethane
Concen: 12.25 ug/L
RT: 2.602 min Scan# 241
Delta R.T. -0.000 min
Lab File: V01200307A02.D
Acq: 7 Mar 2020 9:55 am

Tgt Ion: 64 Resp: 40525

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 64 | 100 | | |
| 66 | 30.4 | 12.7 | 52.7 |

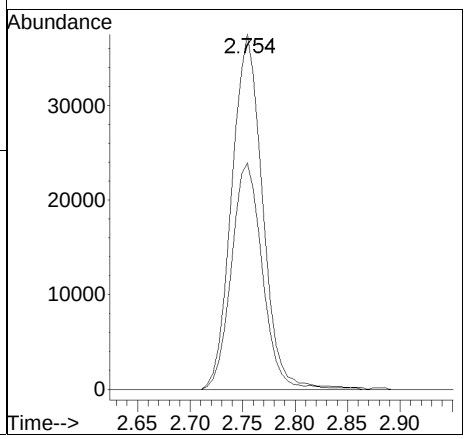


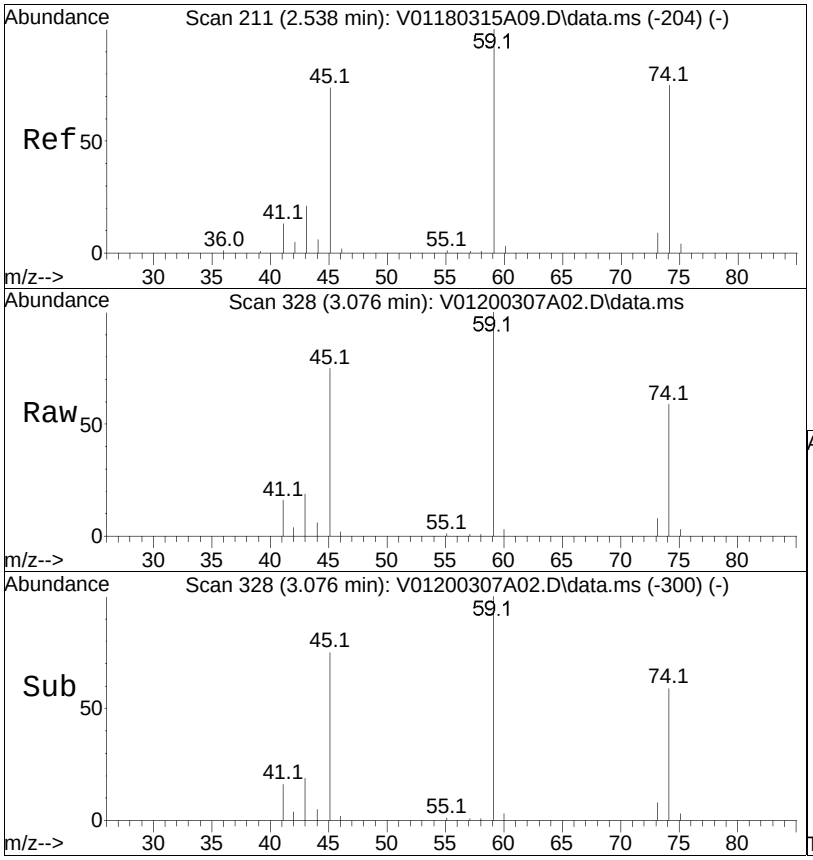



#7
Trichlorofluoromethane
Concen: 11.54 ug/L
RT: 2.754 min Scan# 269
Delta R.T. 0.000 min
Lab File: V01200307A02.D
Acq: 7 Mar 2020 9:55 am

Tgt Ion:101 Resp: 76736

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 101 | 100 | | |
| 103 | 64.1 | 52.3 | 78.5 |

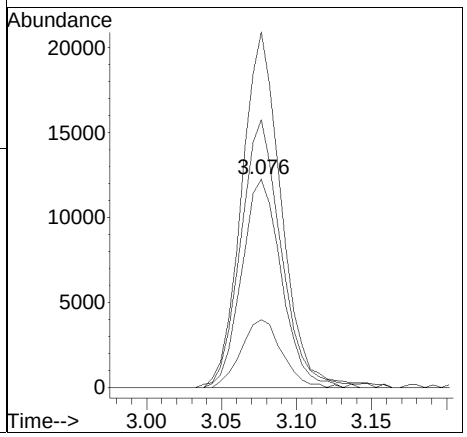


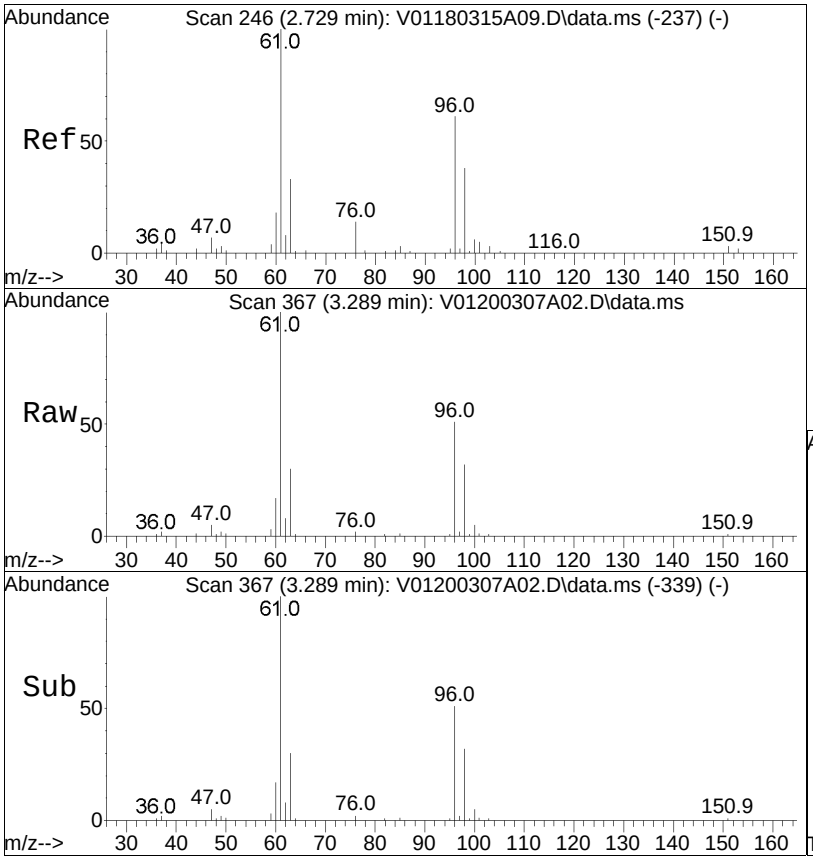



#8
Ethyl ether
Concen: 12.00 ug/L
RT: 3.076 min Scan# 328
Delta R.T. 0.000 min
Lab File: V01200307A02.D
Acq: 7 Mar 2020 9:55 am

Tgt Ion: 74 Resp: 22782

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 74 | 100 | | |
| 59 | 169.3 | 88.1 | 182.9 |
| 45 | 130.0 | 66.1 | 137.3 |
| 43 | 33.1 | 19.7 | 40.9 |

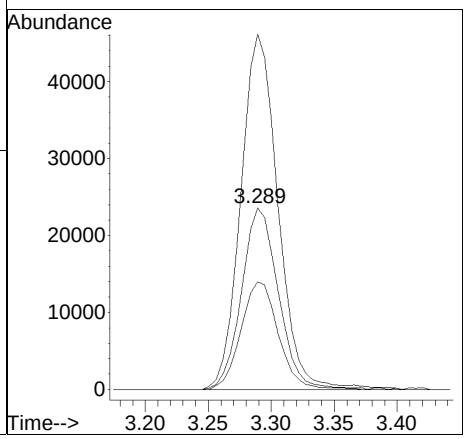


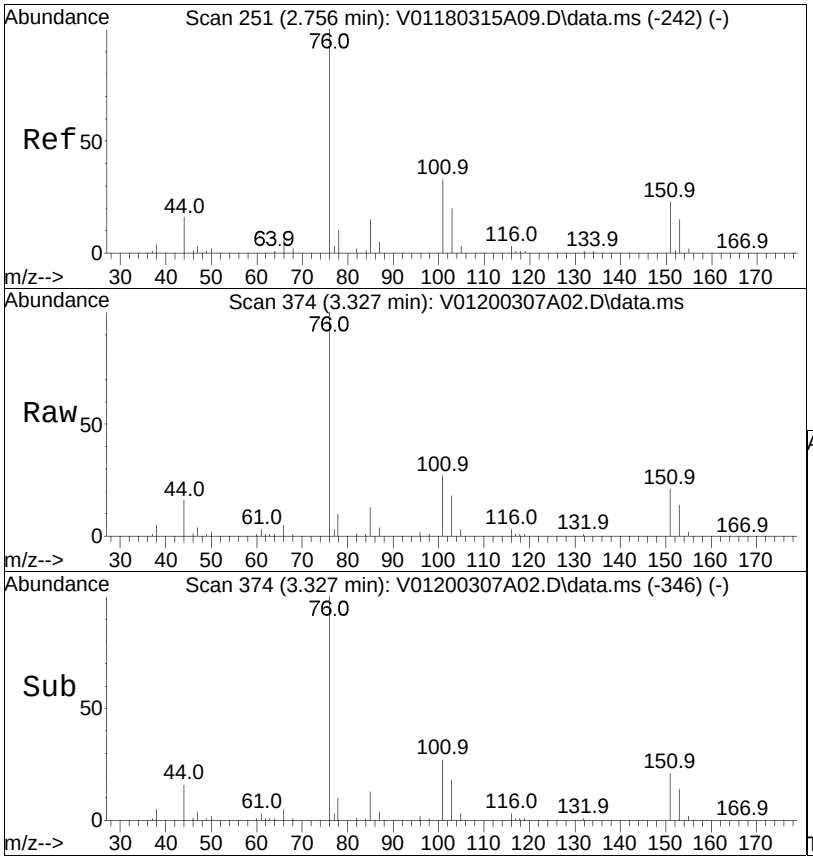



#10
1,1-Dichloroethene
Concen: 11.81 ug/L
RT: 3.289 min Scan# 367
Delta R.T. 0.000 min
Lab File: V01200307A02.D
Acq: 7 Mar 2020 9:55 am

Tgt Ion: 96 Resp: 48012

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 96 | 100 | | |
| 61 | 197.4 | 136.8 | 205.2 |
| 63 | 60.0 | 43.6 | 65.4 |

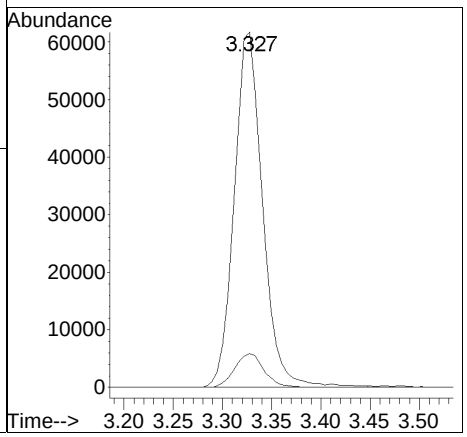


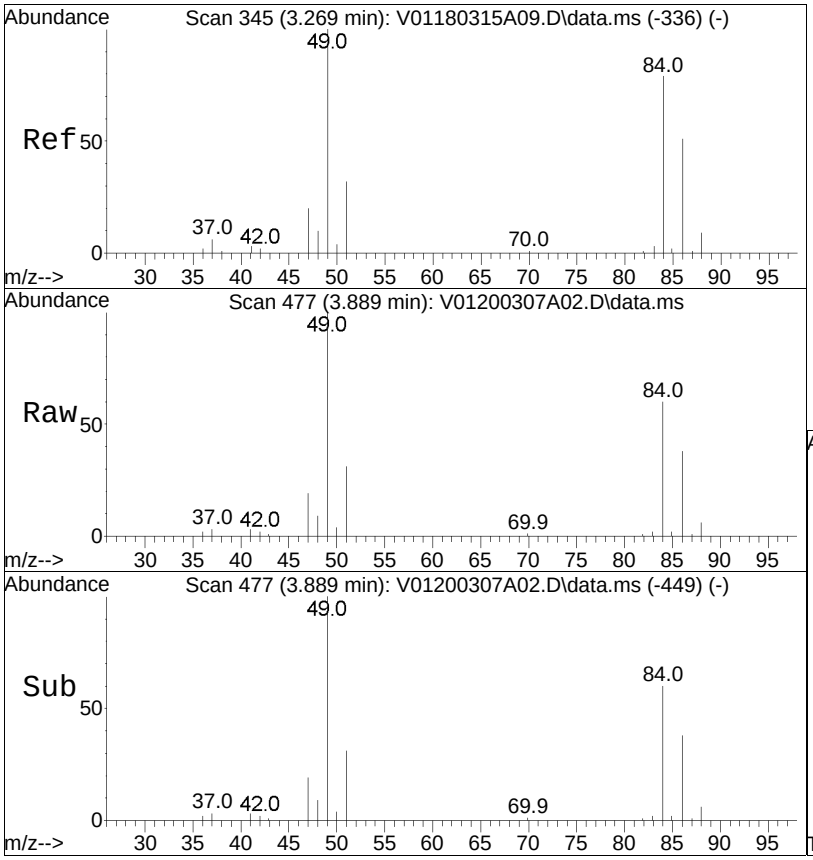



#11
Carbon disulfide
Concen: 11.25 ug/L
RT: 3.327 min Scan# 374
Delta R.T. 0.005 min
Lab File: V01200307A02.D
Acq: 7 Mar 2020 9:55 am

Tgt Ion: 76 Resp: 123929

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 76 | 100 | | |
| 78 | 9.8 | 6.6 | 13.8 |

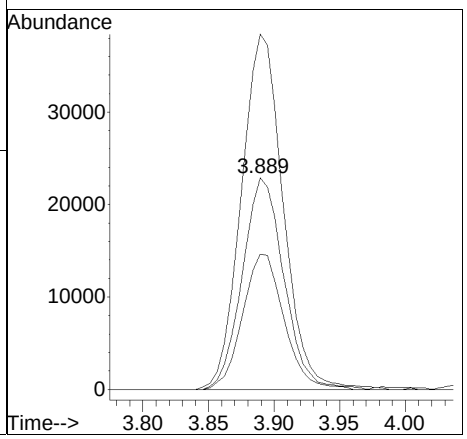


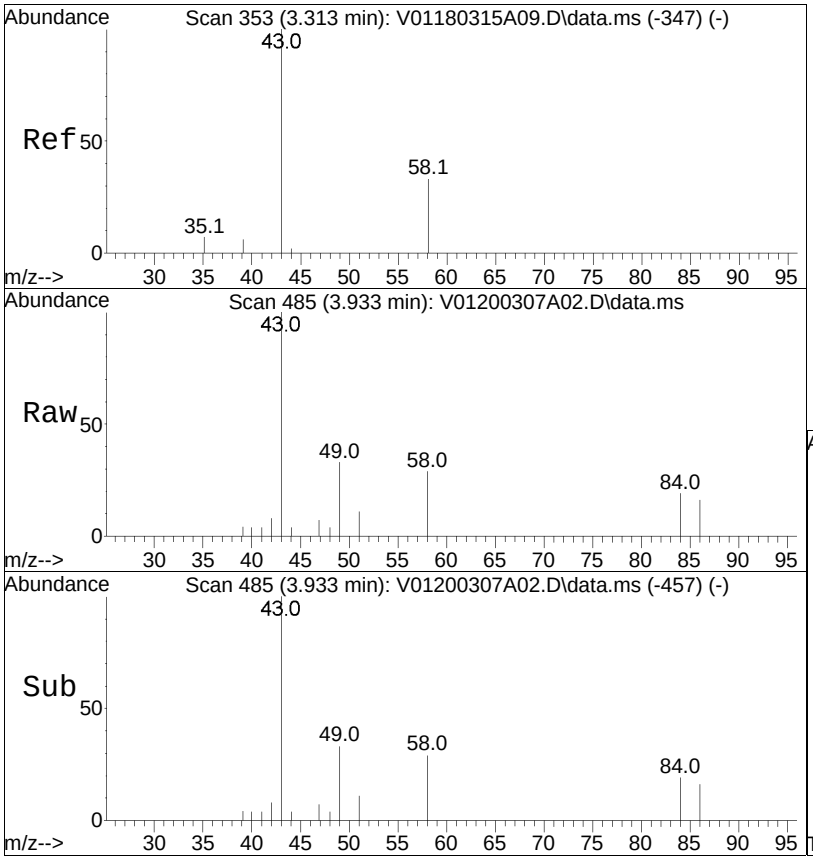



#15
Methylene chloride
Concen: 11.86 ug/L
RT: 3.889 min Scan# 477
Delta R.T. 0.000 min
Lab File: V01200307A02.D
Acq: 7 Mar 2020 9:55 am

Tgt Ion: 84 Resp: 50354

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 84 | 100 | | |
| 86 | 63.8 | 41.7 | 86.7 |
| 49 | 170.3 | 89.1 | 185.1 |

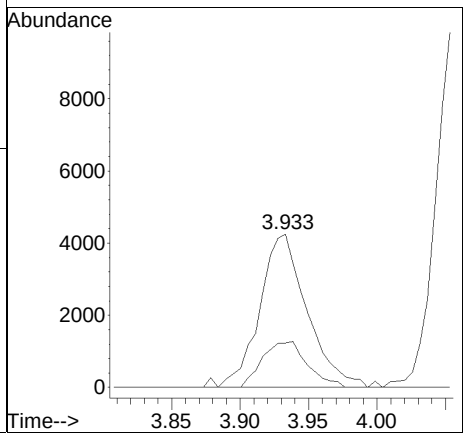


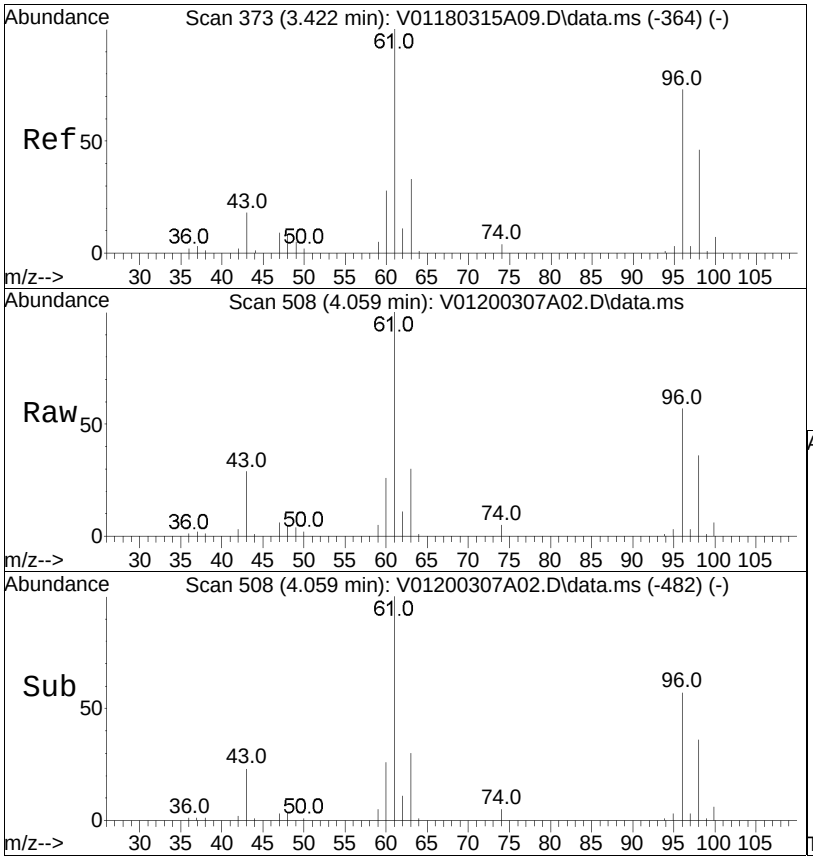



#17
Acetone
Concen: 12.27 ug/L
RT: 3.933 min Scan# 485
Delta R.T. 0.005 min
Lab File: V01200307A02.D
Acq: 7 Mar 2020 9:55 am

Tgt Ion: 43 Resp: 10273

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 43 | 100 | | |
| 58 | 28.3 | 25.9 | 38.9 |

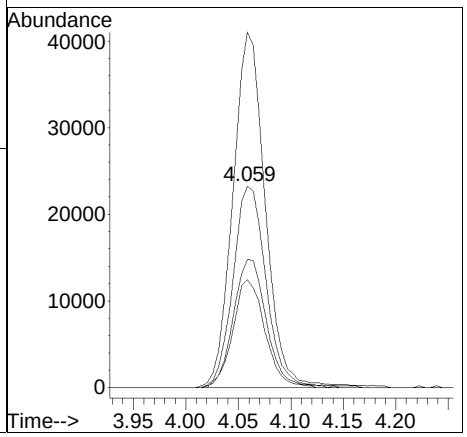


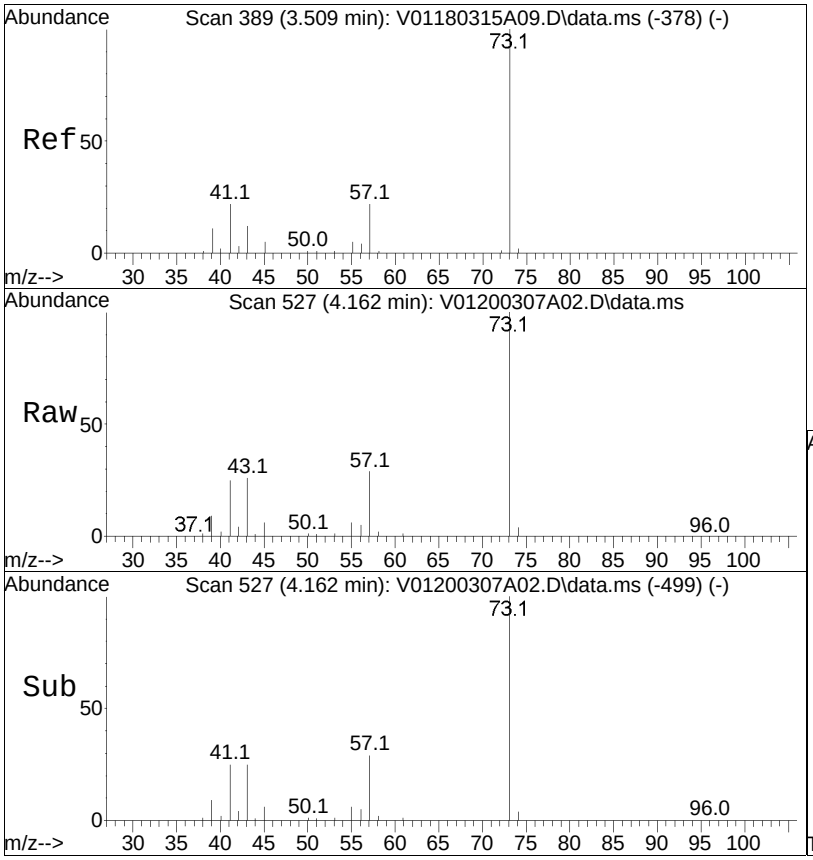



#18
trans-1,2-Dichloroethene
Concen: 11.77 ug/L
RT: 4.059 min Scan# 508
Delta R.T. -0.005 min
Lab File: V01200307A02.D
Acq: 7 Mar 2020 9:55 am

Tgt Ion: 96 Resp: 50935

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 96 | 100 | | |
| 61 | 172.5 | 95.3 | 197.9 |
| 98 | 63.5 | 41.0 | 85.2 |
| 63 | 51.7 | 30.2 | 62.6 |

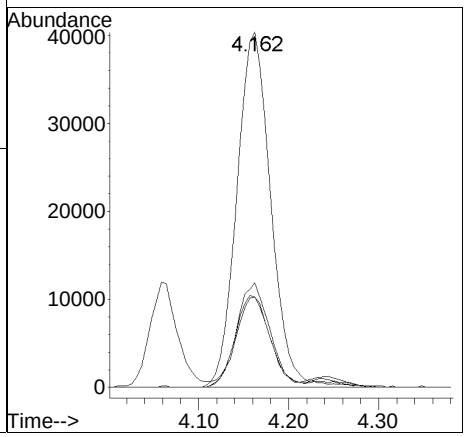


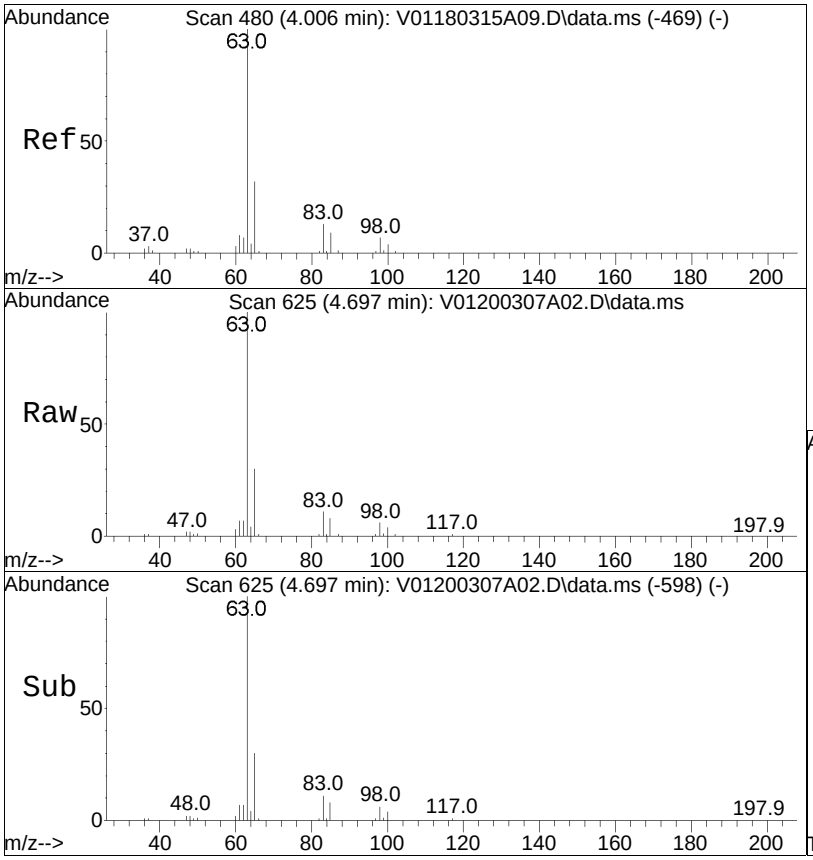



#20
Methyl tert-butyl ether
Concen: 11.52 ug/L
RT: 4.162 min Scan# 527
Delta R.T. 0.000 min
Lab File: V01200307A02.D
Acq: 7 Mar 2020 9:55 am

Tgt Ion: 73 Resp: 106097

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 73 | 100 | | |
| 57 | 29.0 | 14.8 | 30.6 |
| 43 | 25.4 | 15.5 | 32.3 |
| 41 | 26.4 | 14.1 | 29.3 |

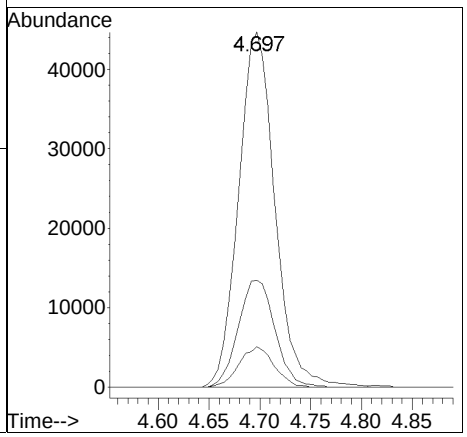


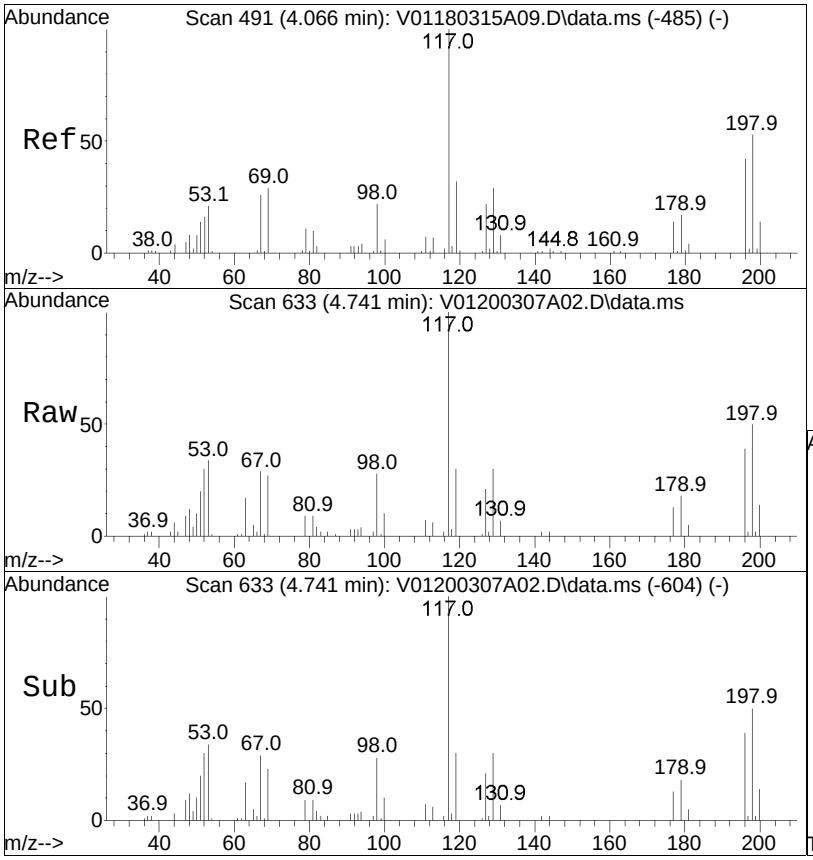



#23
1,1-Dichloroethane
Concen: 11.99 ug/L
RT: 4.697 min Scan# 625
Delta R.T. -0.000 min
Lab File: V01200307A02.D
Acq: 7 Mar 2020 9:55 am

Tgt Ion: 63 Resp: 111430

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 63 | 100 | | |
| 65 | 30.5 | 10.9 | 50.9 |
| 83 | 11.1 | 0.0 | 33.0 |

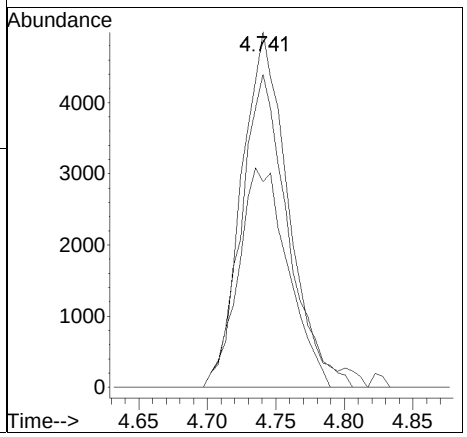


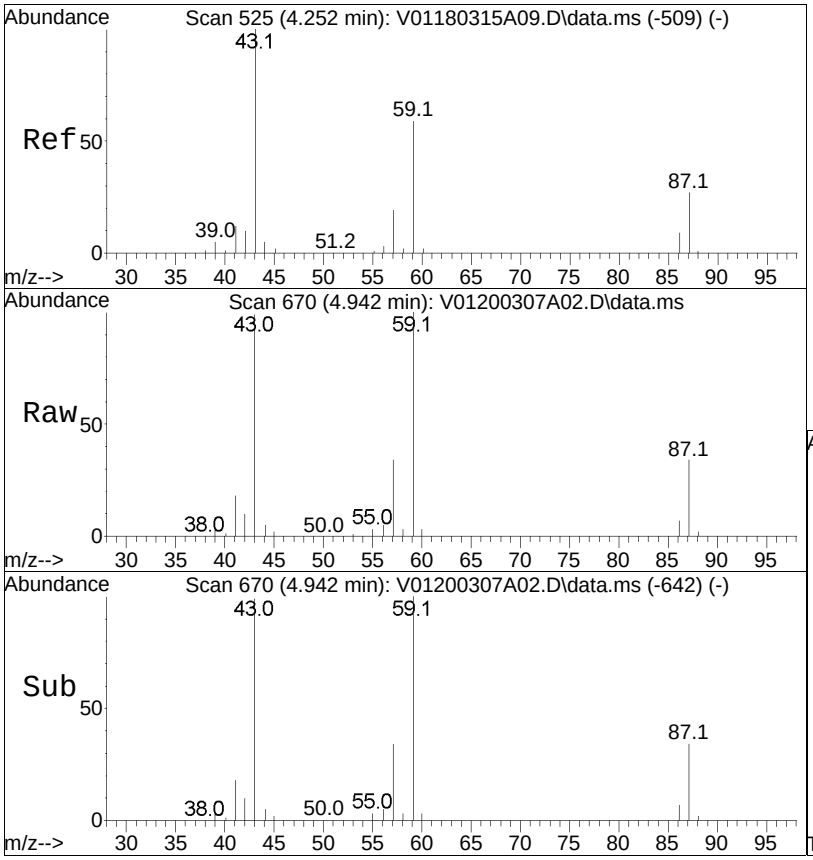



#25
Acrylonitrile
Concen: 12.81 ug/L
RT: 4.741 min Scan# 633
Delta R.T. 0.006 min
Lab File: V01200307A02.D
Acq: 7 Mar 2020 9:55 am

Tgt Ion: 53 Resp: 12010

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 53 | 100 | | |
| 52 | 86.7 | 69.1 | 103.7 |
| 51 | 65.1 | 58.3 | 87.5 |

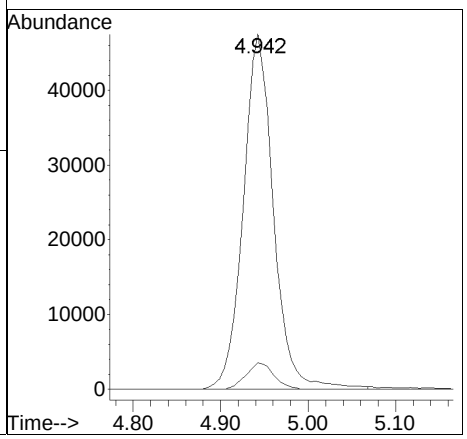


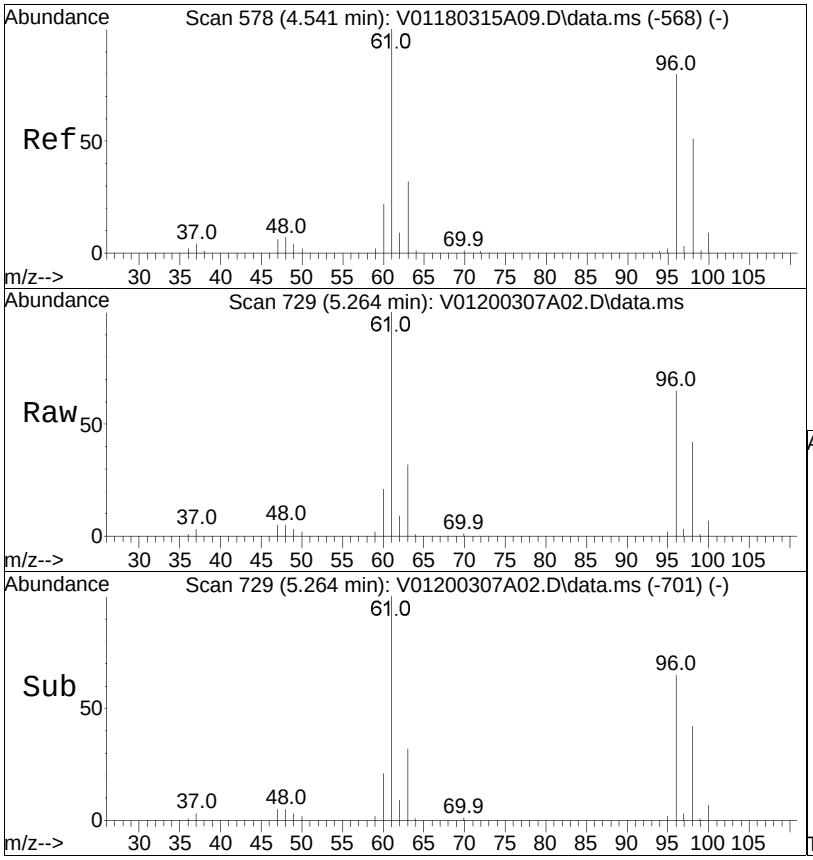



#27
Vinyl acetate
Concen: 12.20 ug/L
RT: 4.942 min Scan# 670
Delta R.T. 0.000 min
Lab File: V01200307A02.D
Acq: 7 Mar 2020 9:55 am

Tgt Ion: 43 Resp: 114428

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 43 | 100 | | |
| 86 | 6.9 | 6.6 | 9.8 |

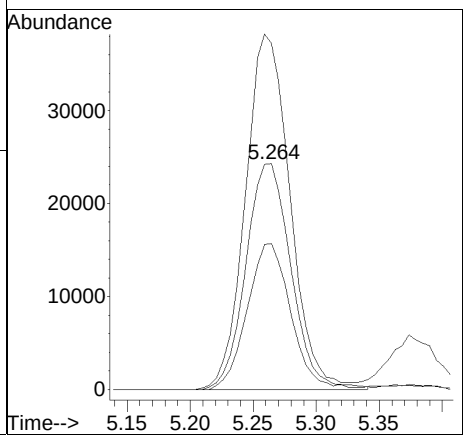


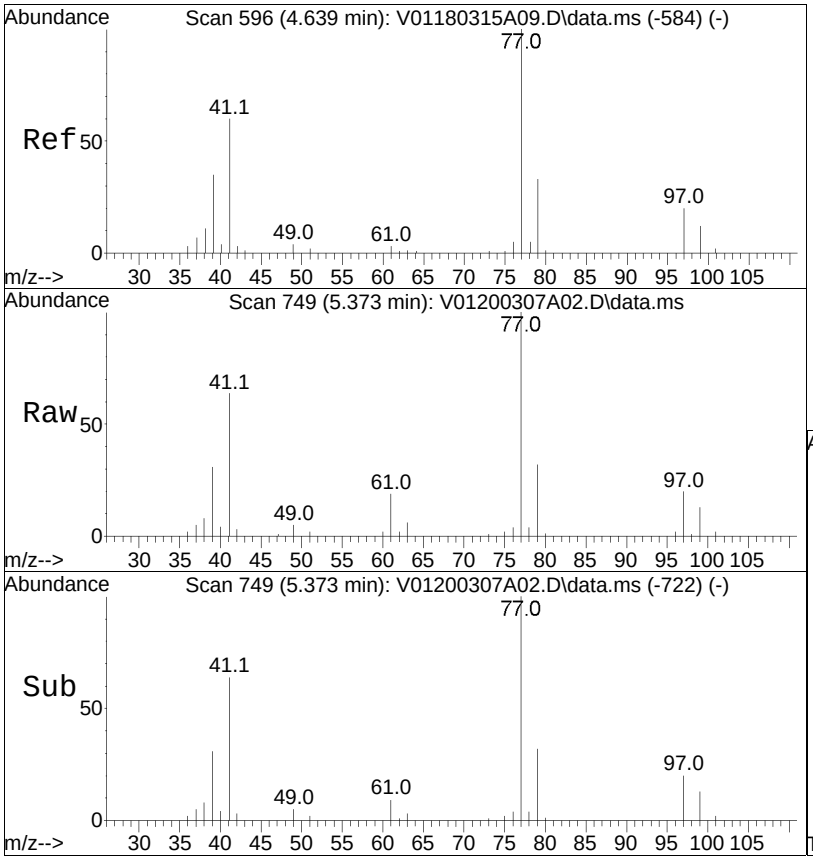



#28
cis-1,2-Dichloroethene
Concen: 11.77 ug/L
RT: 5.264 min Scan# 729
Delta R.T. 0.000 min
Lab File: V01200307A02.D
Acq: 7 Mar 2020 9:55 am

Tgt Ion: 96 Resp: 60500

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 96 | 100 | | |
| 61 | 155.4 | 105.8 | 158.6 |
| 98 | 62.1 | 51.1 | 76.7 |

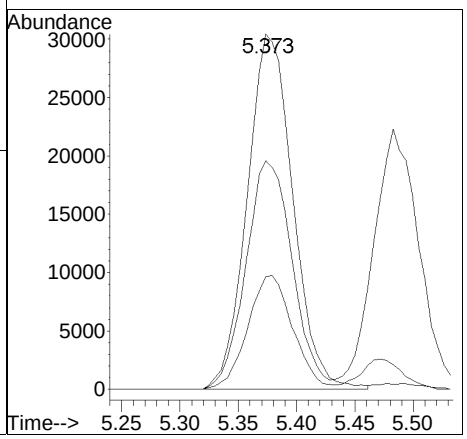


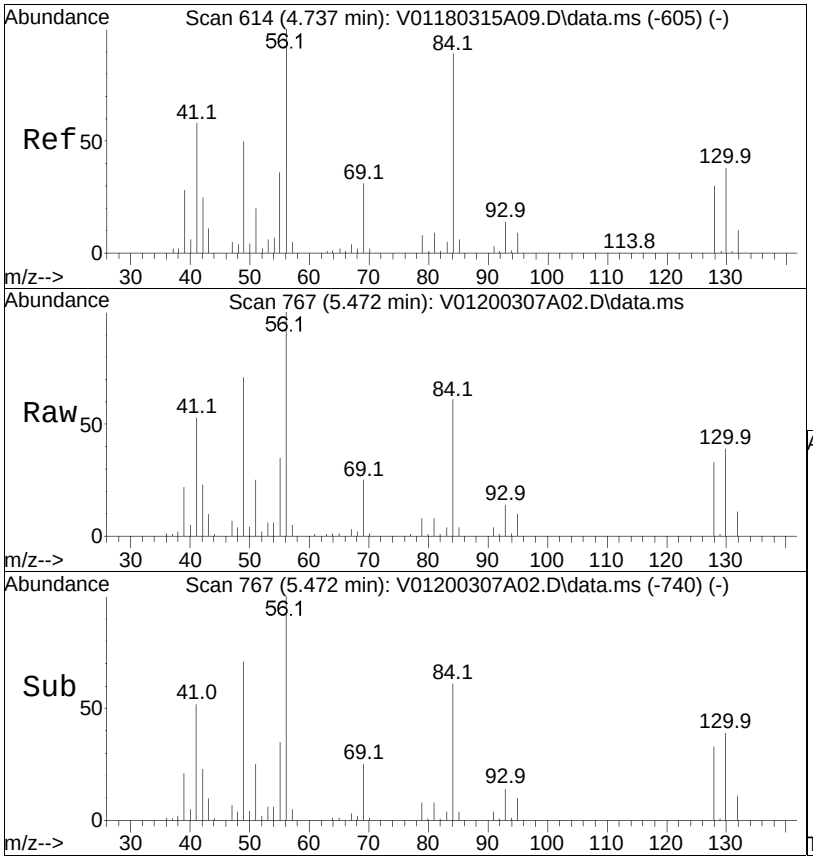



#29
2,2-Dichloropropane
Concen: 12.84 ug/L
RT: 5.373 min Scan# 749
Delta R.T. -0.000 min
Lab File: V01200307A02.D
Acq: 7 Mar 2020 9:55 am

Tgt Ion: 77 Resp: 82966

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 77 | 100 | | |
| 41 | 65.2 | 39.6 | 82.3 |
| 79 | 31.8 | 20.9 | 43.3 |

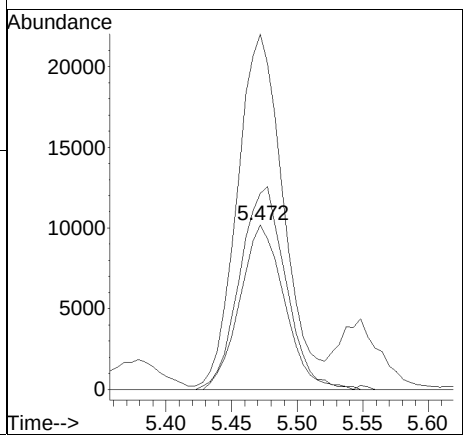


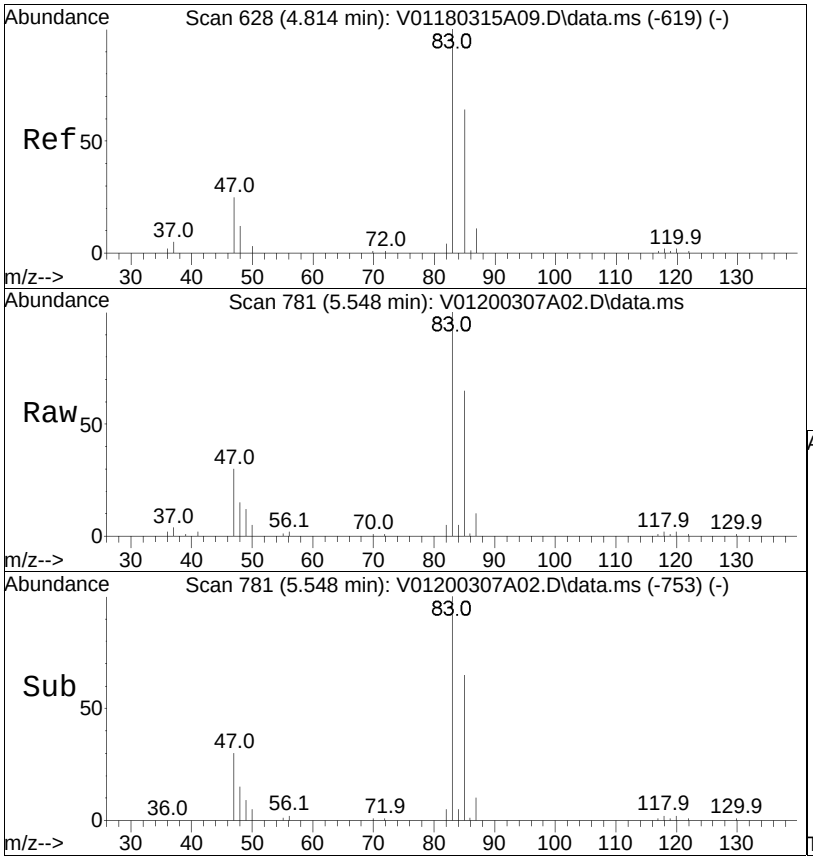



#30
Bromochloromethane
Concen: 12.23 ug/L
RT: 5.472 min Scan# 767
Delta R.T. -0.000 min
Lab File: V01200307A02.D
Acq: 7 Mar 2020 9:55 am

Tgt Ion:128 Resp: 24080

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 128 | 100 | | |
| 49 | 220.1 | 140.4 | 210.6# |
| 130 | 126.8 | 103.1 | 154.7 |

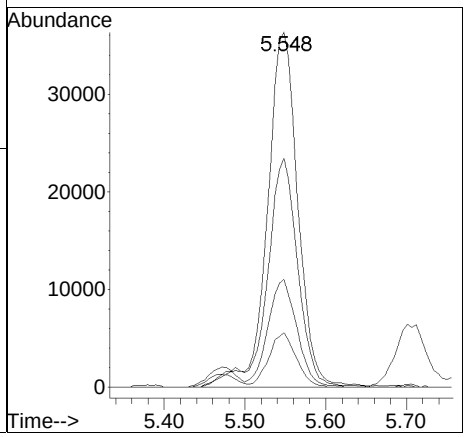


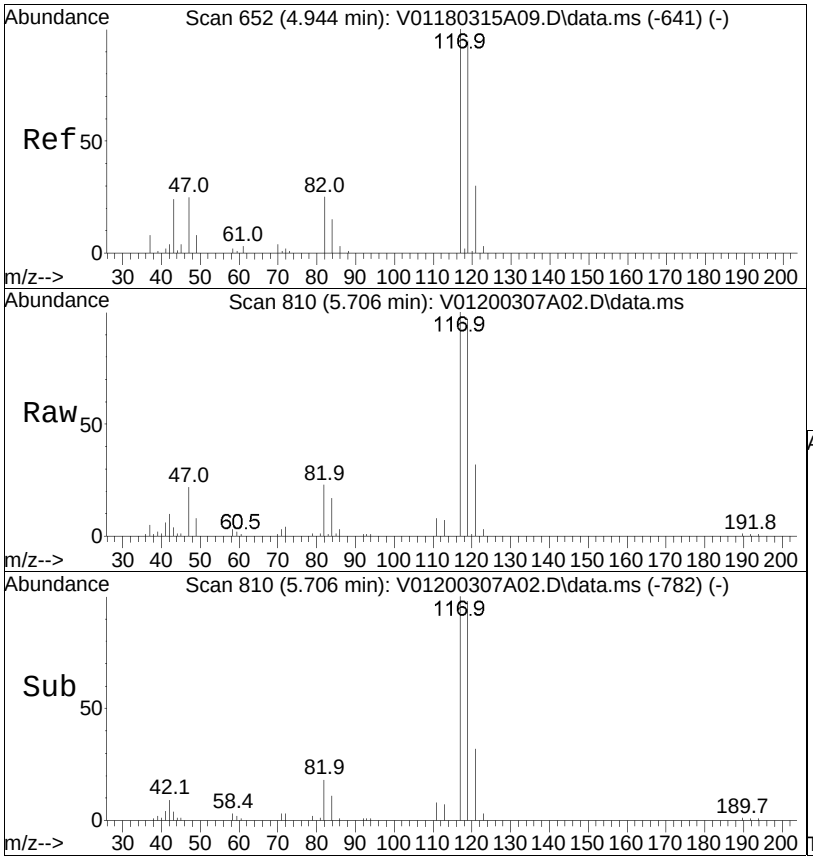



#32
Chloroform
Concen: 11.87 ug/L
RT: 5.548 min Scan# 781
Delta R.T. 0.000 min
Lab File: V01200307A02.D
Acq: 7 Mar 2020 9:55 am

Tgt Ion: 83 Resp: 95978

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 83 | 100 | | |
| 85 | 61.7 | 42.3 | 87.8 |
| 47 | 29.1 | 17.8 | 37.0 |
| 48 | 13.9 | 9.3 | 19.3 |

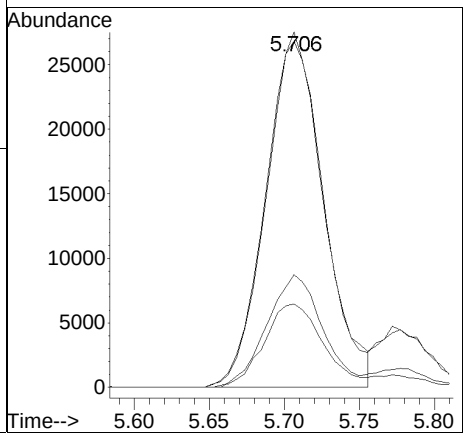


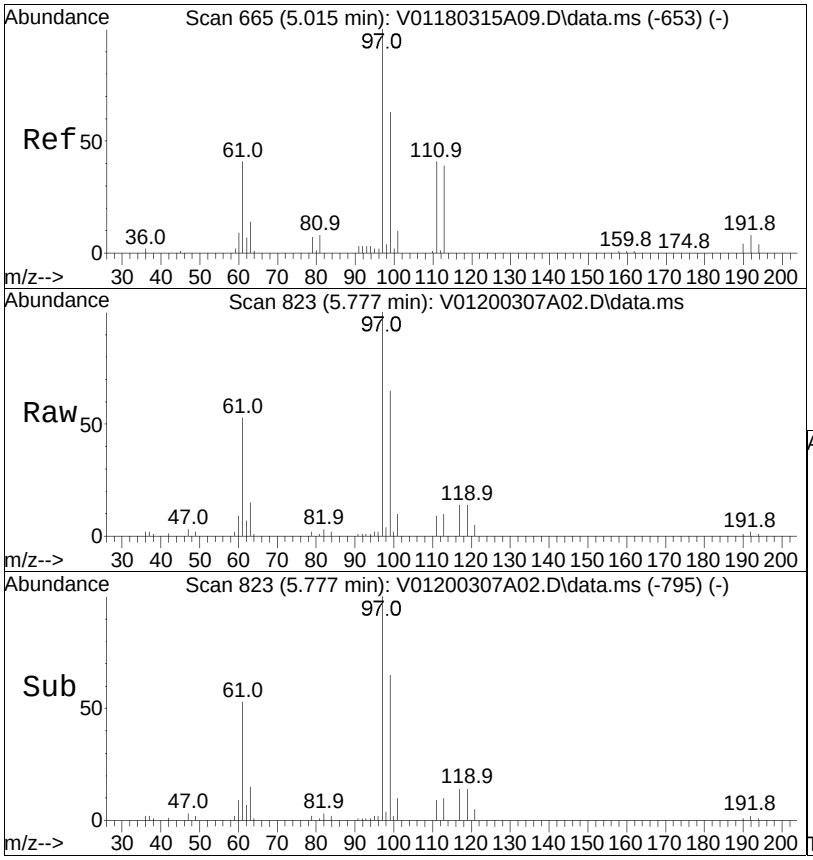



#34
Carbon tetrachloride
Concen: 11.26 ug/L
RT: 5.706 min Scan# 810
Delta R.T. 0.000 min
Lab File: V01200307A02.D
Acq: 7 Mar 2020 9:55 am

Tgt Ion:117 Resp: 73417

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 117 | 100 | | |
| 119 | 98.8 | 62.1 | 128.9 |
| 121 | 30.6 | 19.8 | 41.0 |
| 82 | 24.3 | 17.1 | 35.5 |

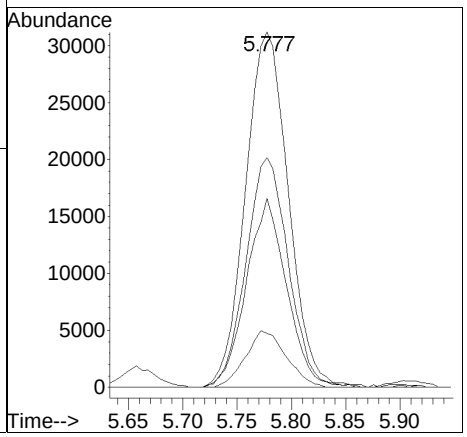


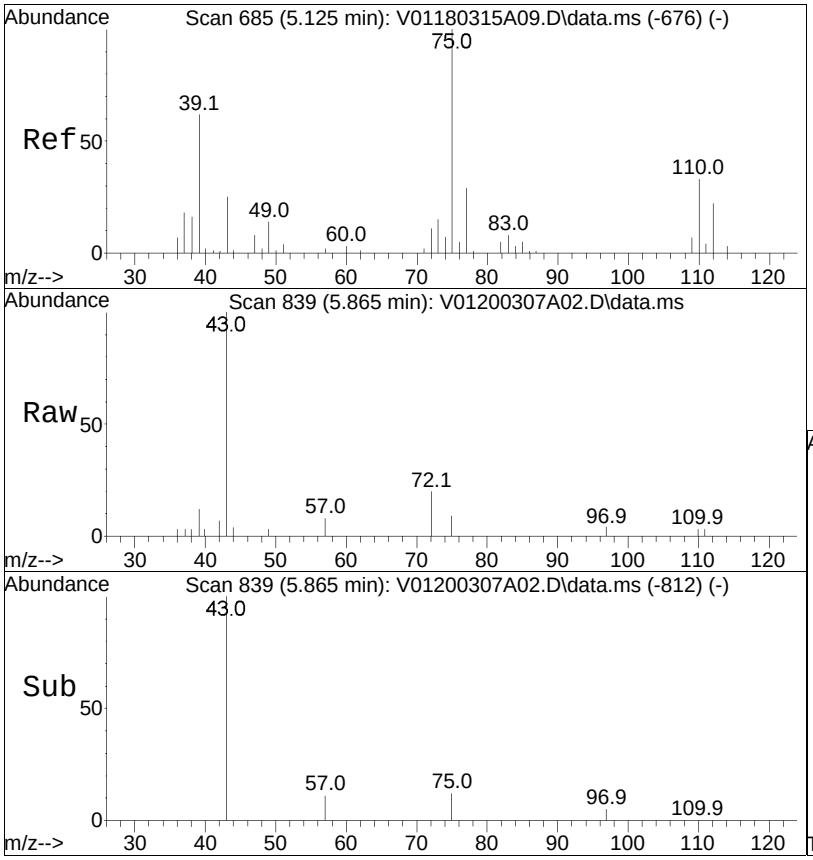



#37
1,1,1-Trichloroethane
Concen: 11.36 ug/L
RT: 5.777 min Scan# 823
Delta R.T. 0.000 min
Lab File: V01200307A02.D
Acq: 7 Mar 2020 9:55 am

Tgt Ion: 97 Resp: 85869

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 97 | 100 | | |
| 99 | 63.8 | 41.7 | 86.7 |
| 61 | 50.0 | 29.4 | 61.2 |
| 63 | 15.2 | 9.4 | 19.4 |

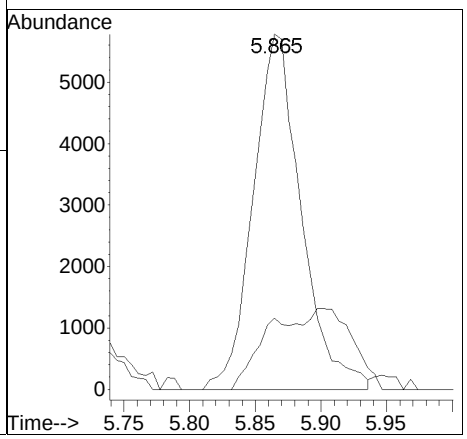


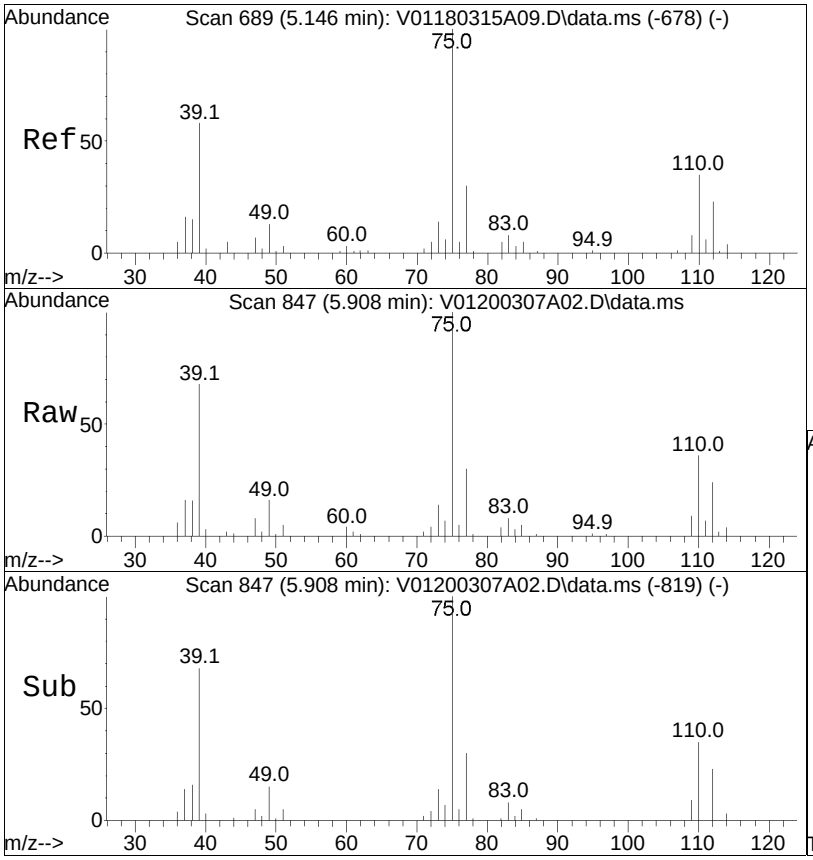



#39
2-Butanone
Concen: 11.91 ug/L
RT: 5.865 min Scan# 839
Delta R.T. -0.000 min
Lab File: V01200307A02.D
Acq: 7 Mar 2020 9:55 am

Tgt Ion: 43 Resp: 14702

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 43 | 100 | | |
| 72 | 13.7 | 45.8 | 68.6# |

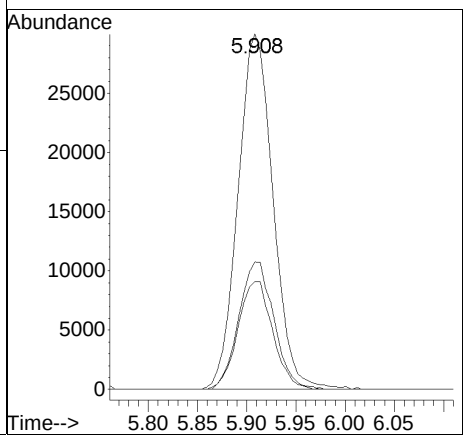


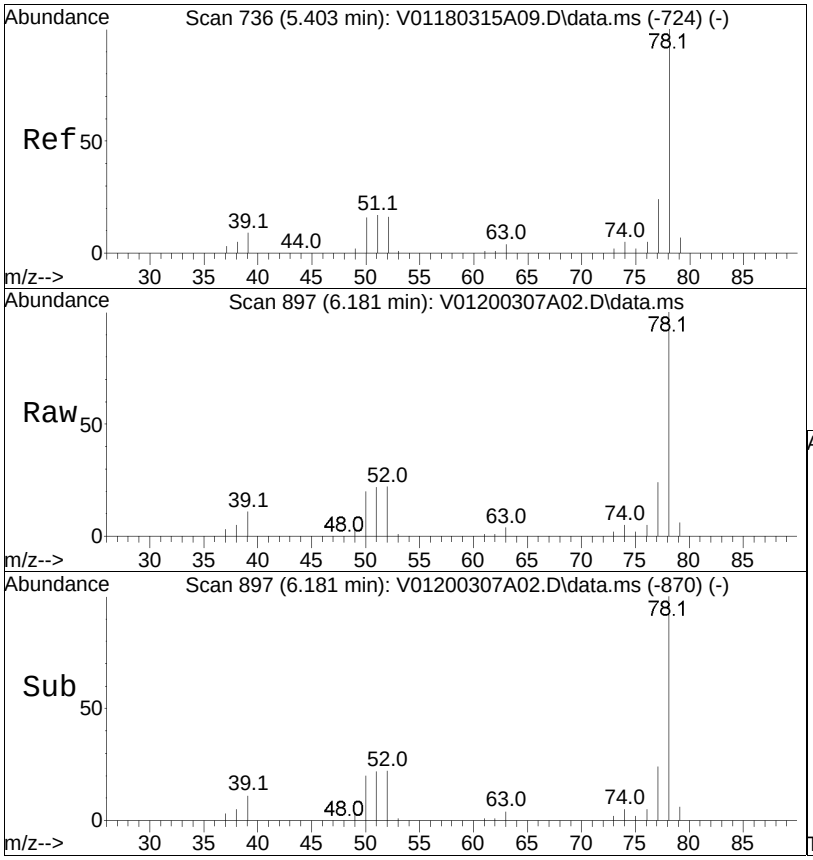



#40
1,1-Dichloropropene
Concen: 11.51 ug/L
RT: 5.908 min Scan# 847
Delta R.T. 0.000 min
Lab File: V01200307A02.D
Acq: 7 Mar 2020 9:55 am

Tgt Ion: 75 Resp: 74488

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 75 | 100 | | |
| 110 | 35.8 | 22.2 | 46.2 |
| 77 | 30.1 | 20.2 | 42.0 |

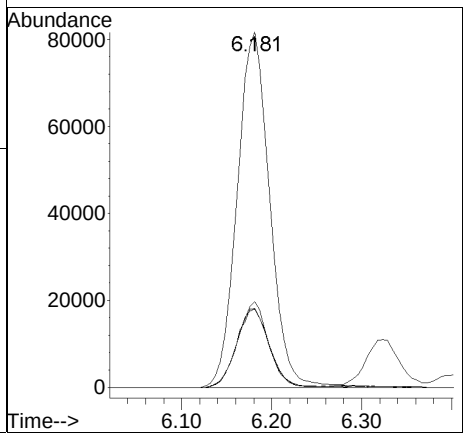


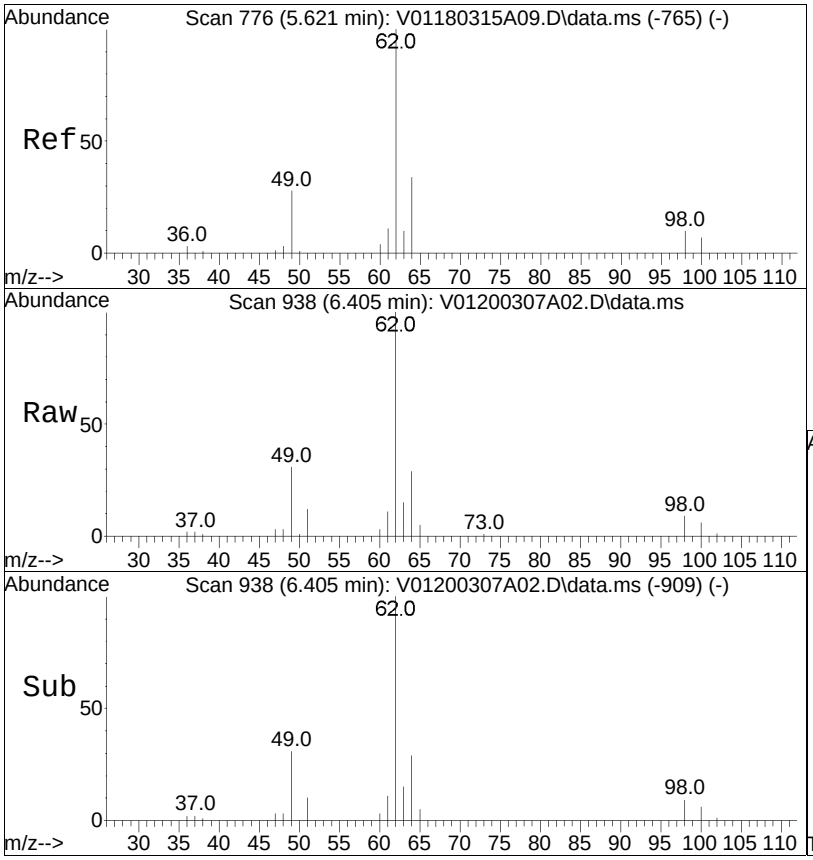



#41
Benzene
Concen: 11.47 ug/L
RT: 6.181 min Scan# 897
Delta R.T. 0.000 min
Lab File: V01200307A02.D
Acq: 7 Mar 2020 9:55 am

Tgt Ion: 78 Resp: 205112

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 78 | 100 | | |
| 77 | 23.2 | 15.7 | 32.5 |
| 51 | 22.2 | 11.6 | 24.2 |
| 52 | 22.1 | 10.9 | 22.5 |

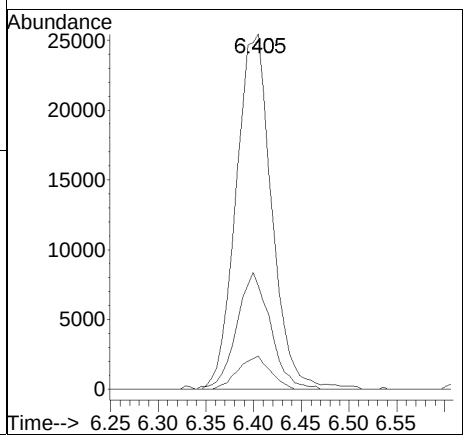


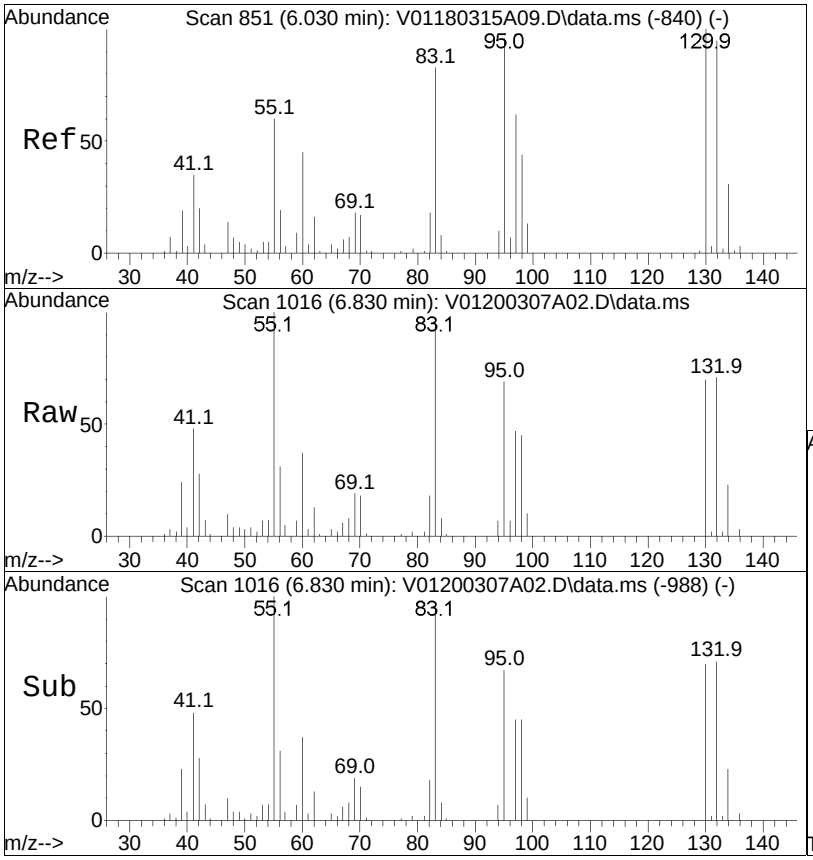



#44
1,2-Dichloroethane
Concen: 11.82 ug/L
RT: 6.405 min Scan# 938
Delta R.T. 0.006 min
Lab File: V01200307A02.D
Acq: 7 Mar 2020 9:55 am

Tgt Ion: 62 Resp: 66320

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 62 | 100 | | |
| 64 | 31.2 | 12.1 | 52.1 |
| 98 | 8.5 | 0.0 | 28.8 |

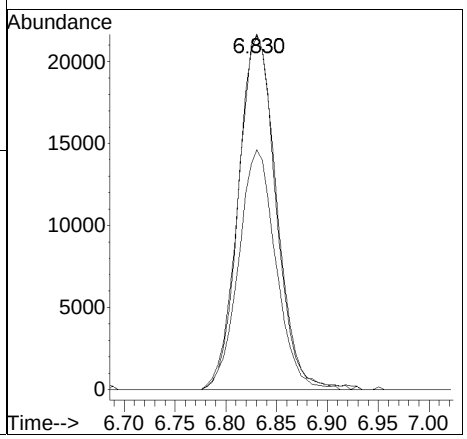


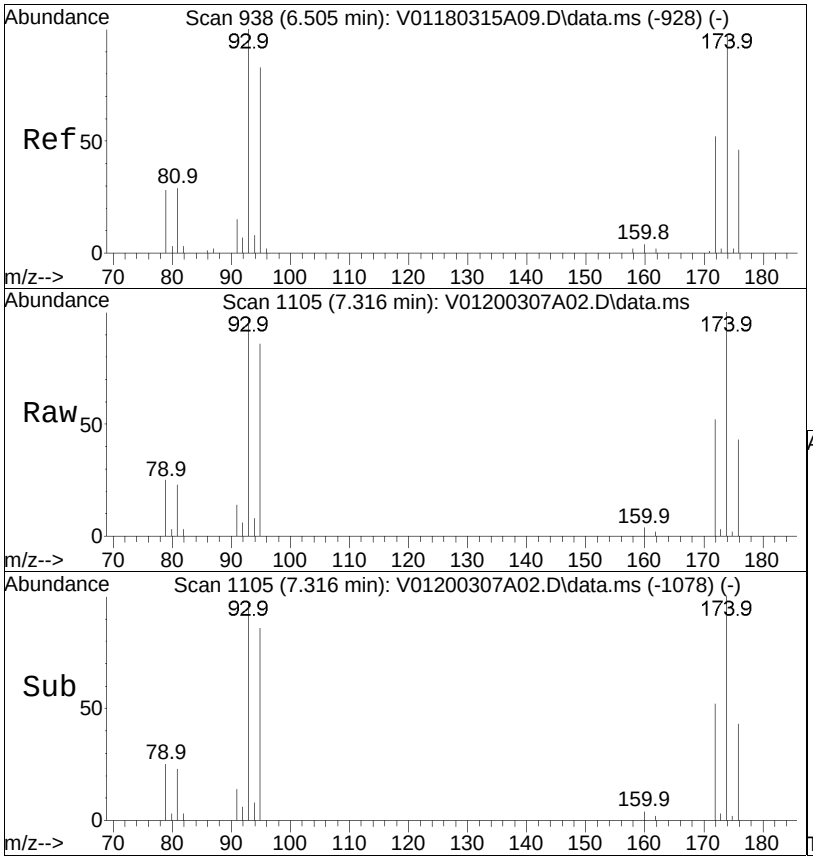



#48
Trichloroethene
Concen: 11.34 ug/L
RT: 6.830 min Scan# 1016
Delta R.T. 0.000 min
Lab File: V01200307A02.D
Acq: 7 Mar 2020 9:55 am

Tgt Ion: 95 Resp: 55864

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 95 | 100 | | |
| 97 | 66.8 | 54.4 | 81.6 |
| 130 | 100.0 | 80.6 | 120.8 |

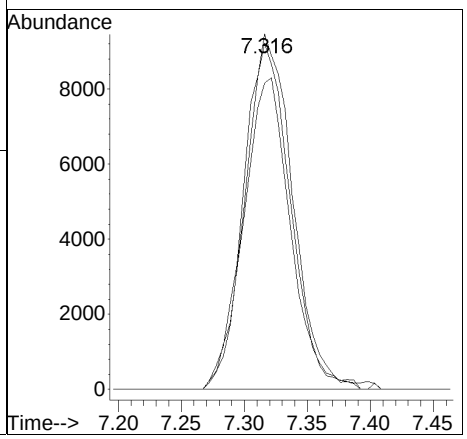


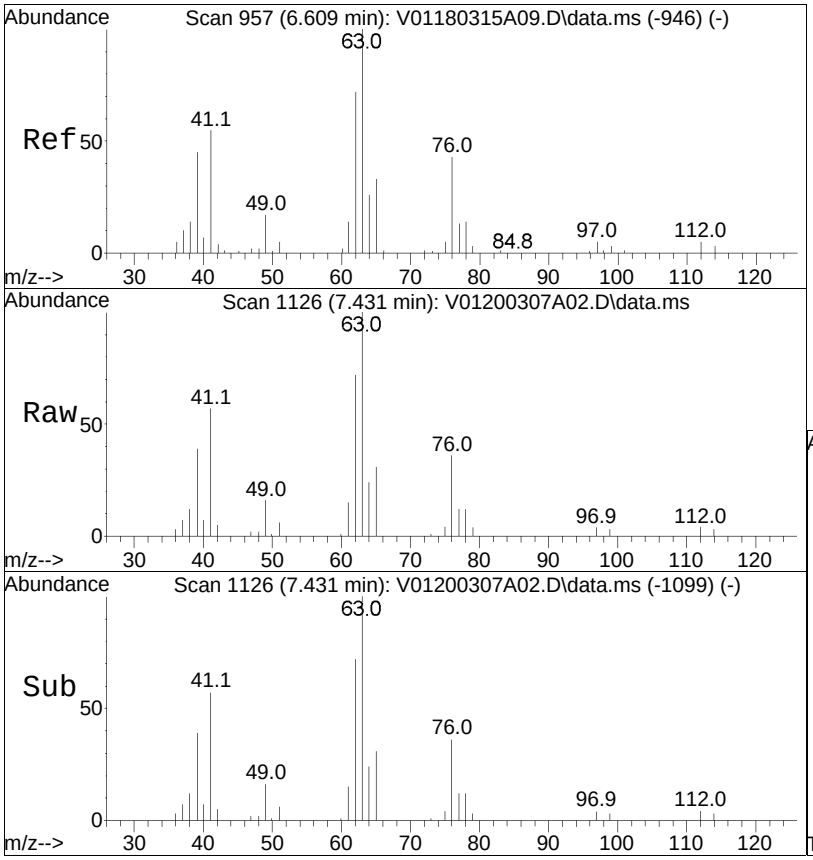



#50
Dibromomethane
Concen: 11.47 ug/L
RT: 7.316 min Scan# 1105
Delta R.T. -0.000 min
Lab File: V01200307A02.D
Acq: 7 Mar 2020 9:55 am

Tgt Ion: 93 Resp: 24318

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 93 | 100 | | |
| 95 | 88.0 | 68.6 | 102.8 |
| 174 | 102.8 | 80.5 | 120.7 |

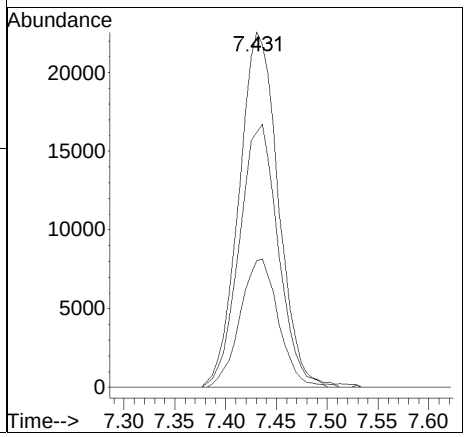


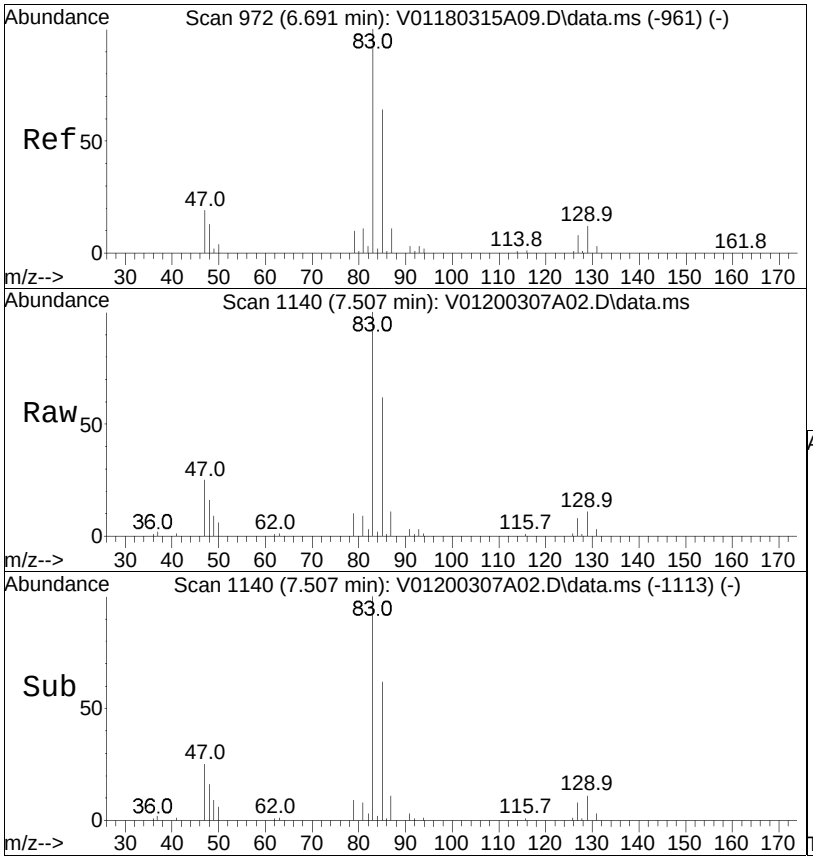



#51
1,2-Dichloropropane
Concen: 12.02 ug/L
RT: 7.431 min Scan# 1126
Delta R.T. -0.000 min
Lab File: V01200307A02.D
Acq: 7 Mar 2020 9:55 am

Tgt Ion: 63 Resp: 61128

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 63 | 100 | | |
| 62 | 73.2 | 57.2 | 85.8 |
| 76 | 35.0 | 33.6 | 50.4 |

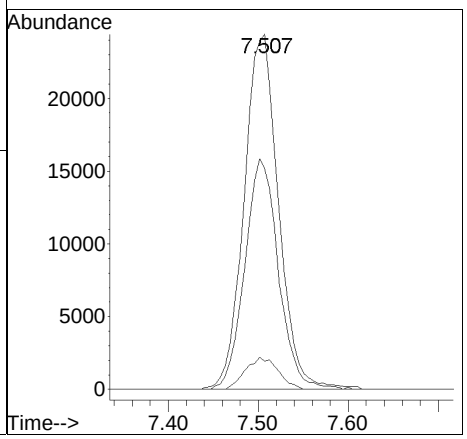


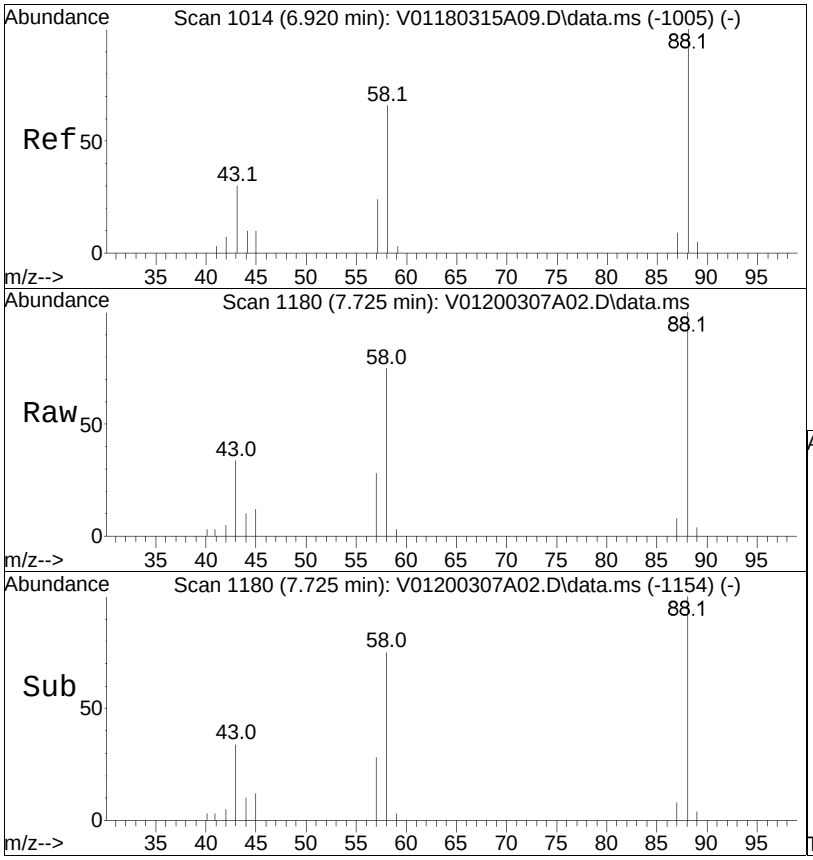



#54
Bromodichloromethane
Concen: 11.11 ug/L
RT: 7.507 min Scan# 1140
Delta R.T. -0.000 min
Lab File: V01200307A02.D
Acq: 7 Mar 2020 9:55 am

Tgt Ion: 83 Resp: 65042

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 83 | 100 | | |
| 85 | 63.4 | 52.2 | 78.4 |
| 127 | 8.6 | 6.9 | 10.3 |

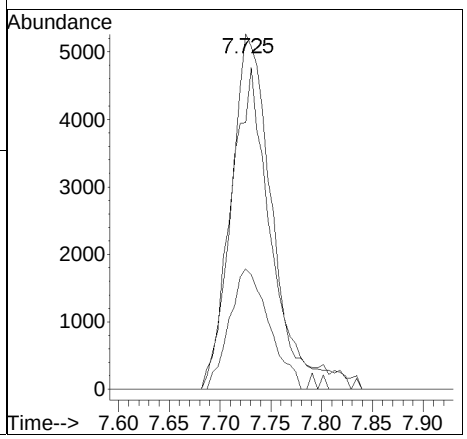


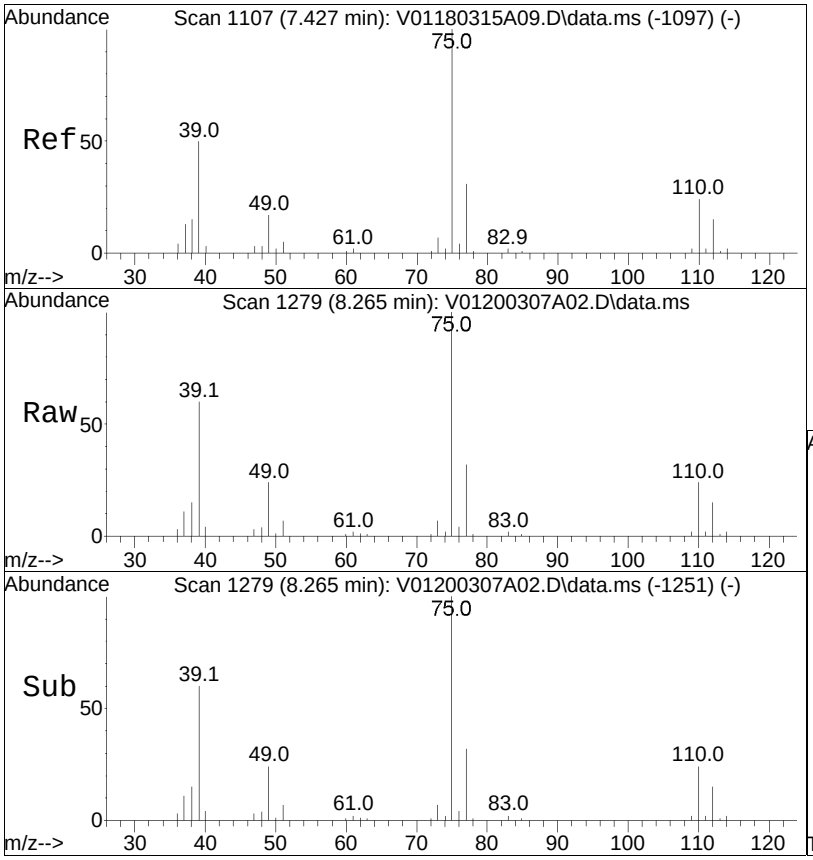



#57
1,4-Dioxane
Concen: 724.60 ug/L
RT: 7.725 min Scan# 1180
Delta R.T. -0.011 min
Lab File: V01200307A02.D
Acq: 7 Mar 2020 9:55 am

Tgt Ion: 88 Resp: 15064

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 88 | 100 | | |
| 58 | 87.4 | 54.8 | 82.2# |
| 43 | 32.2 | 29.3 | 43.9 |

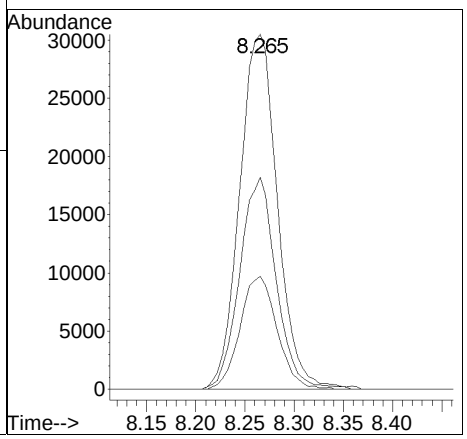


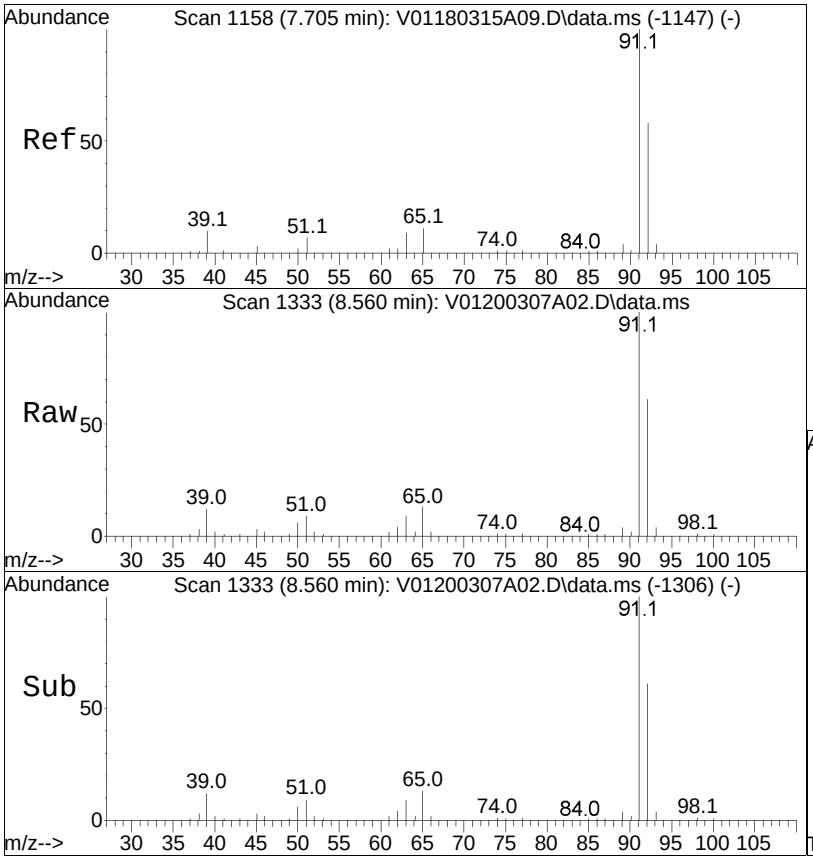



#58
cis-1,3-Dichloropropene
Concen: 11.34 ug/L
RT: 8.265 min Scan# 1279
Delta R.T. 0.000 min
Lab File: V01200307A02.D
Acq: 7 Mar 2020 9:55 am

Tgt Ion: 75 Resp: 81698

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 75 | 100 | | |
| 77 | 31.2 | 25.1 | 37.7 |
| 39 | 57.7 | 42.6 | 63.8 |

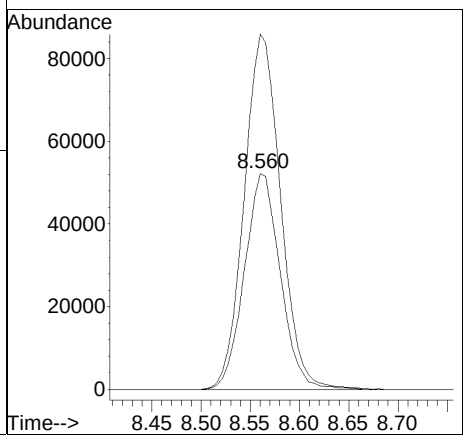


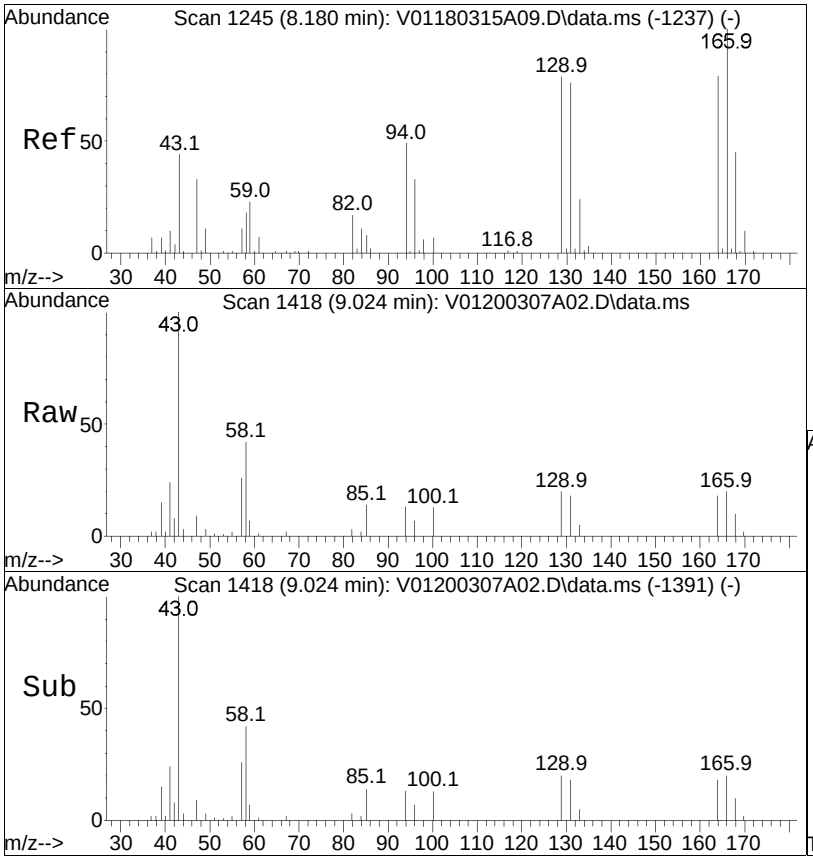



#61
Toluene
Concen: 11.36 ug/L
RT: 8.560 min Scan# 1333
Delta R.T. 0.000 min
Lab File: V01200307A02.D
Acq: 7 Mar 2020 9:55 am

Tgt Ion: 92 Resp: 132607

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 92 | 100 | | |
| 91 | 166.8 | 137.5 | 206.3 |

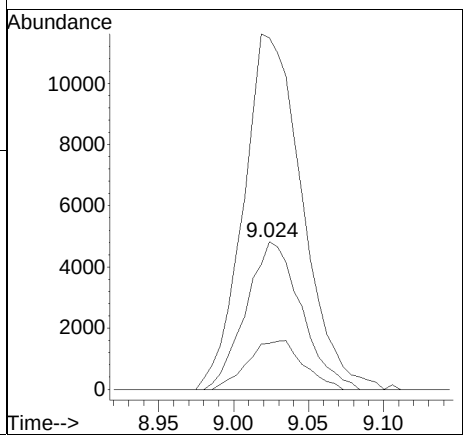


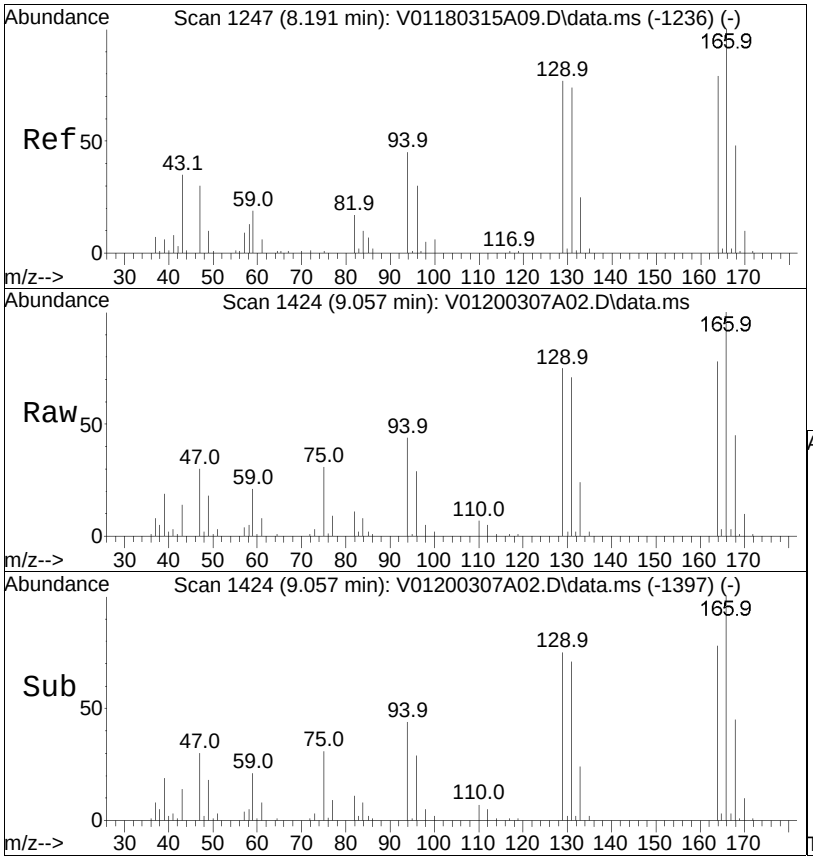



#62
4-Methyl-2-pentanone
Concen: 11.65 ug/L
RT: 9.024 min Scan# 1418
Delta R.T. -0.000 min
Lab File: V01200307A02.D
Acq: 7 Mar 2020 9:55 am

Tgt Ion: 58 Resp: 12397

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 58 | 100 | | |
| 100 | 33.1 | 31.8 | 47.6 |
| 43 | 255.1 | 212.5 | 318.7 |

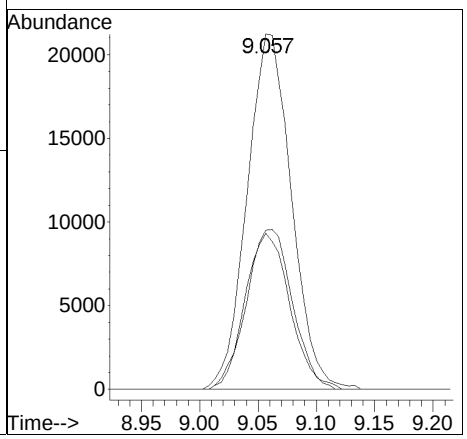


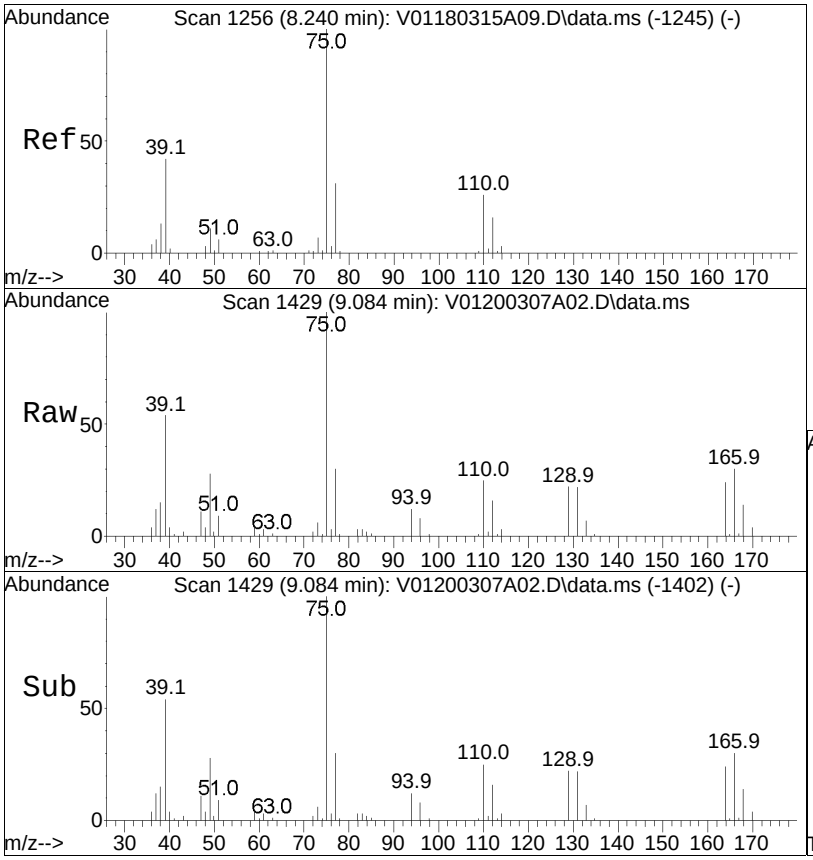



#63
Tetrachloroethene
Concen: 11.26 ug/L
RT: 9.057 min Scan# 1424
Delta R.T. -0.000 min
Lab File: V01200307A02.D
Acq: 7 Mar 2020 9:55 am

Tgt Ion:166 Resp: 56176

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 166 | 100 | | |
| 168 | 46.5 | 27.4 | 67.4 |
| 94 | 44.4 | 24.8 | 64.8 |

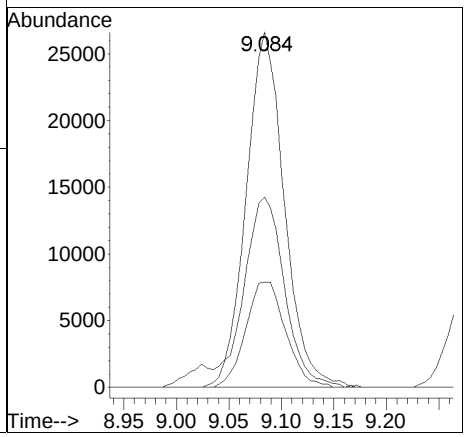


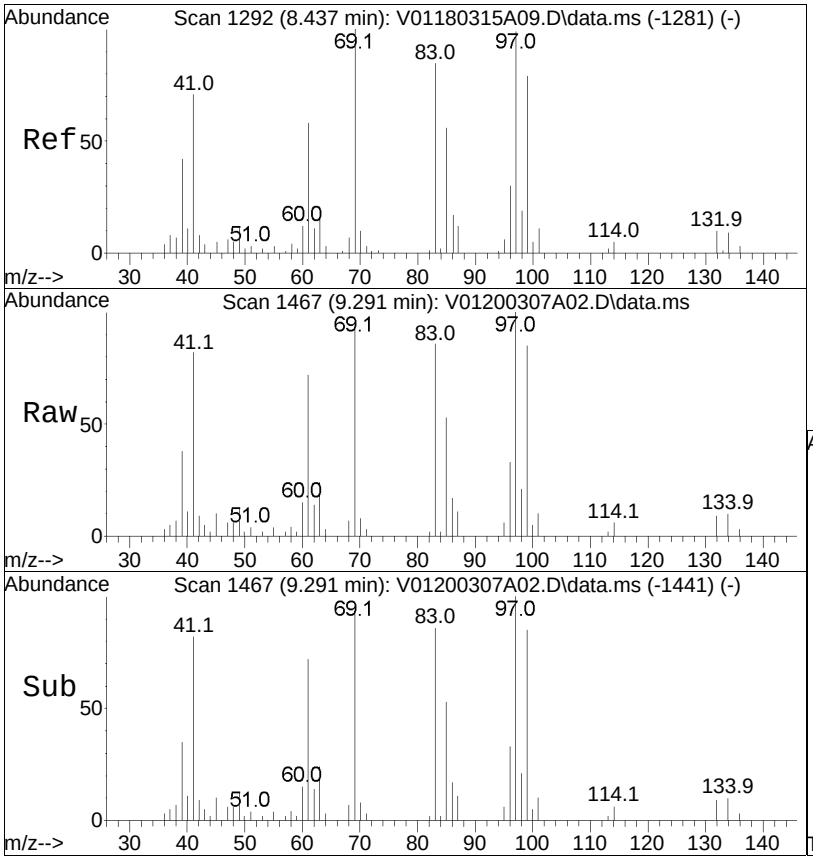



#65
trans-1,3-Dichloropropene
Concen: 11.01 ug/L
RT: 9.084 min Scan# 1429
Delta R.T. -0.000 min
Lab File: V01200307A02.D
Acq: 7 Mar 2020 9:55 am

Tgt Ion: 75 Resp: 67488

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 75 | 100 | | |
| 77 | 31.1 | 11.8 | 51.8 |
| 39 | 56.9 | 30.2 | 70.2 |

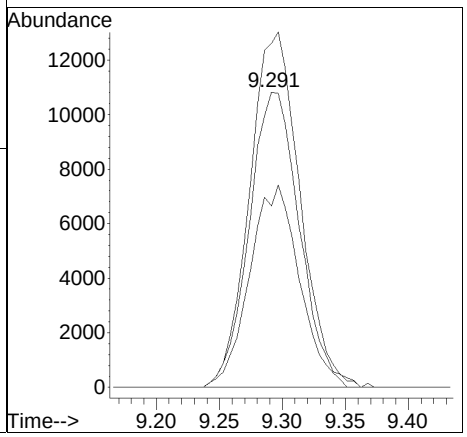


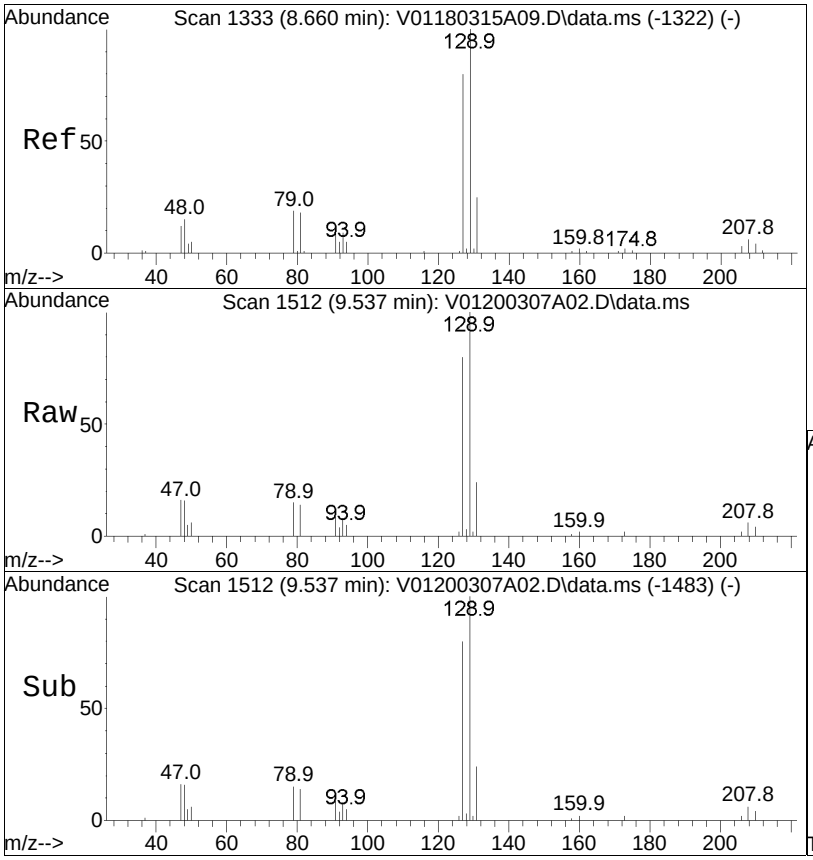



#68
1,1,2-Trichloroethane
Concen: 11.28 ug/L
RT: 9.291 min Scan# 1467
Delta R.T. -0.006 min
Lab File: V01200307A02.D
Acq: 7 Mar 2020 9:55 am

Tgt Ion: 83 Resp: 30123

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 83 | 100 | | |
| 97 | 120.5 | 96.7 | 136.7 |
| 85 | 67.7 | 45.3 | 85.3 |

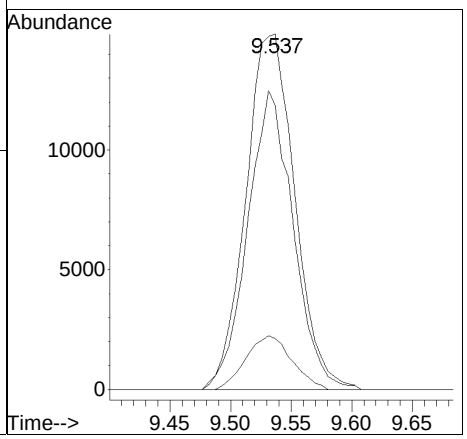


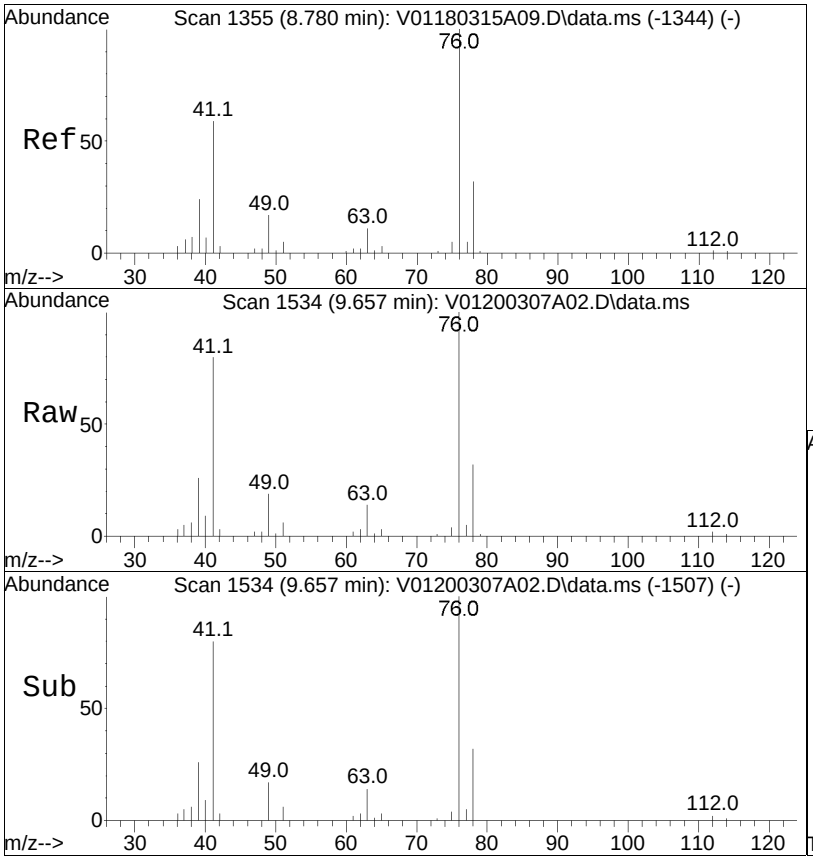



#69
Chlorodibromomethane
Concen: 10.65 ug/L
RT: 9.537 min Scan# 1512
Delta R.T. 0.006 min
Lab File: V01200307A02.D
Acq: 7 Mar 2020 9:55 am

Tgt Ion:129 Resp: 41723

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 129 | 100 | | |
| 81 | 14.2 | 0.0 | 37.9 |
| 127 | 78.1 | 56.6 | 96.6 |

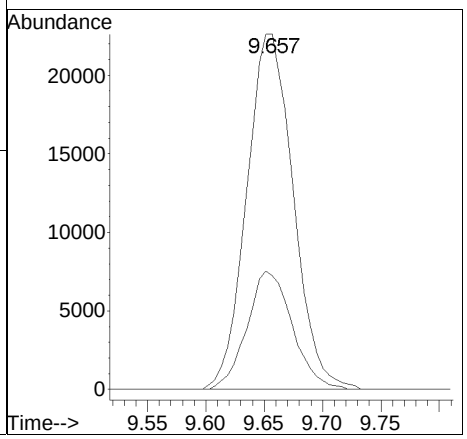


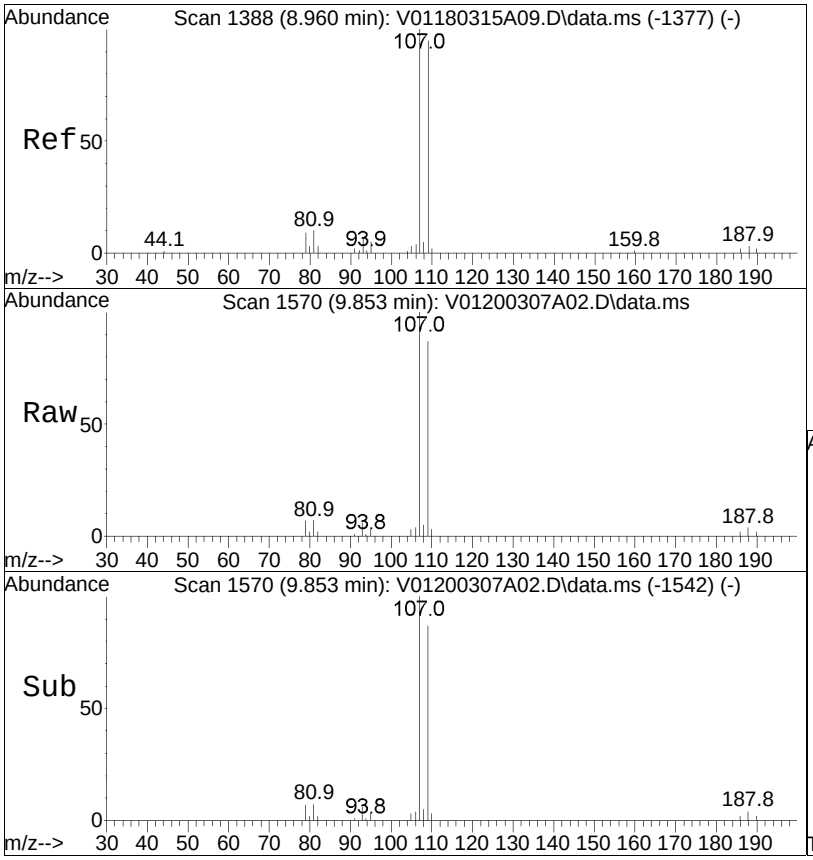



#70
1,3-Dichloropropane
Concen: 11.11 ug/L
RT: 9.657 min Scan# 1534
Delta R.T. -0.000 min
Lab File: V01200307A02.D
Acq: 7 Mar 2020 9:55 am

Tgt Ion: 76 Resp: 62882

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 76 | 100 | | |
| 78 | 32.3 | 25.8 | 38.8 |

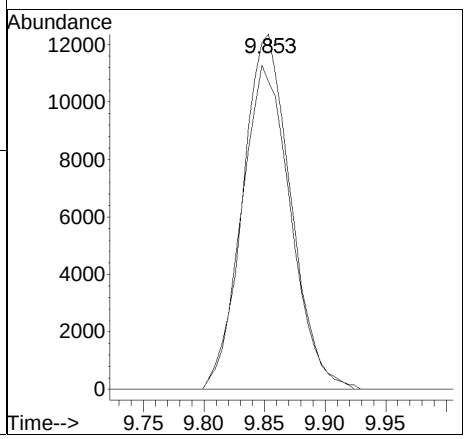


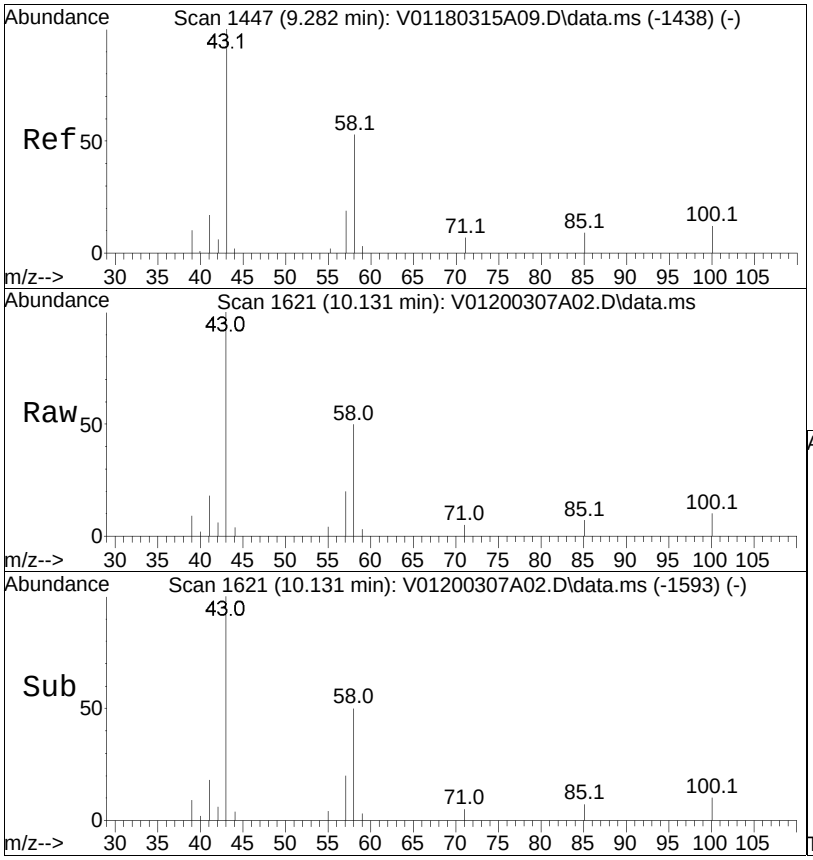



#71
1,2-Dibromoethane
Concen: 11.09 ug/L
RT: 9.853 min Scan# 1570
Delta R.T. 0.000 min
Lab File: V01200307A02.D
Acq: 7 Mar 2020 9:55 am

Tgt Ion:107 Resp: 34247

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 107 | 100 | | |
| 109 | 91.9 | 75.6 | 113.4 |

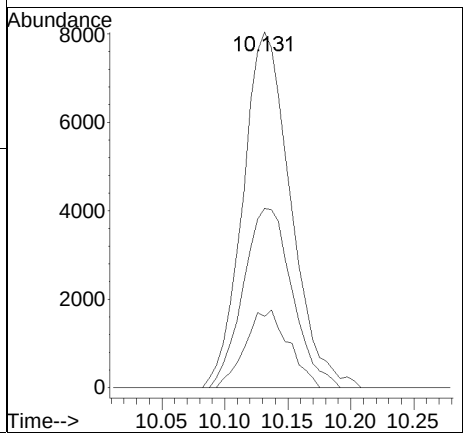


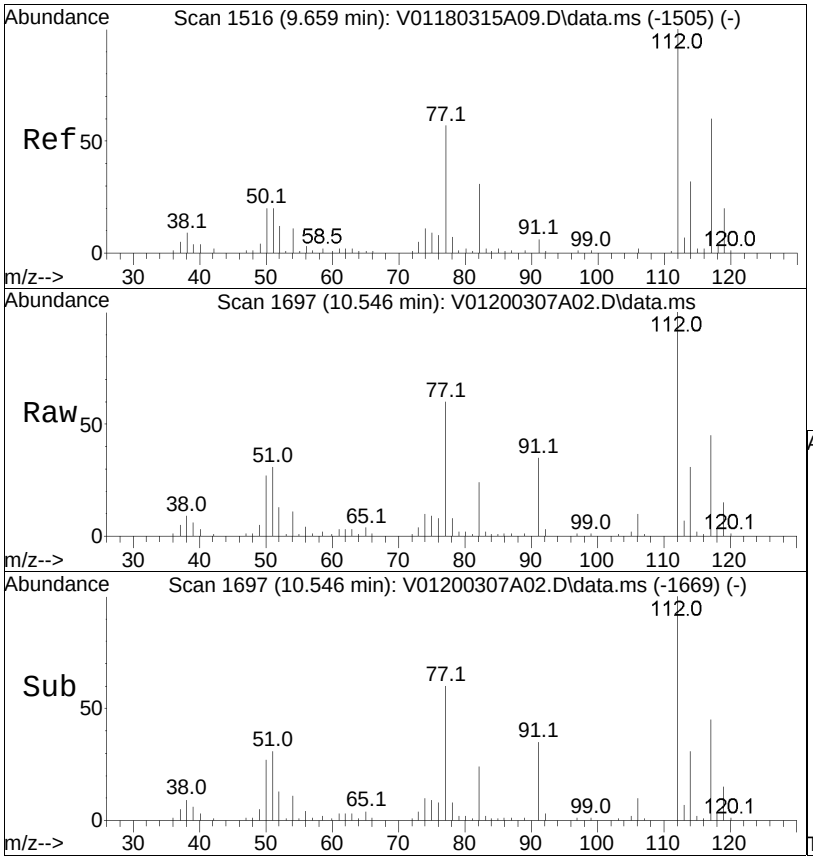



#72
2-Hexanone
Concen: 10.56 ug/L
RT: 10.131 min Scan# 1621
Delta R.T. 0.000 min
Lab File: V01200307A02.D
Acq: 7 Mar 2020 9:55 am

Tgt Ion: 43 Resp: 21218

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 43 | 100 | | |
| 58 | 51.6 | 40.8 | 61.2 |
| 57 | 19.7 | 14.2 | 21.4 |

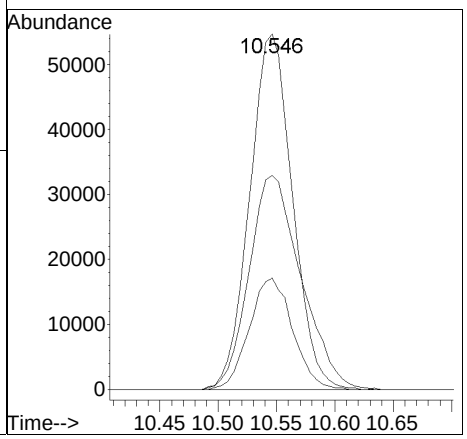


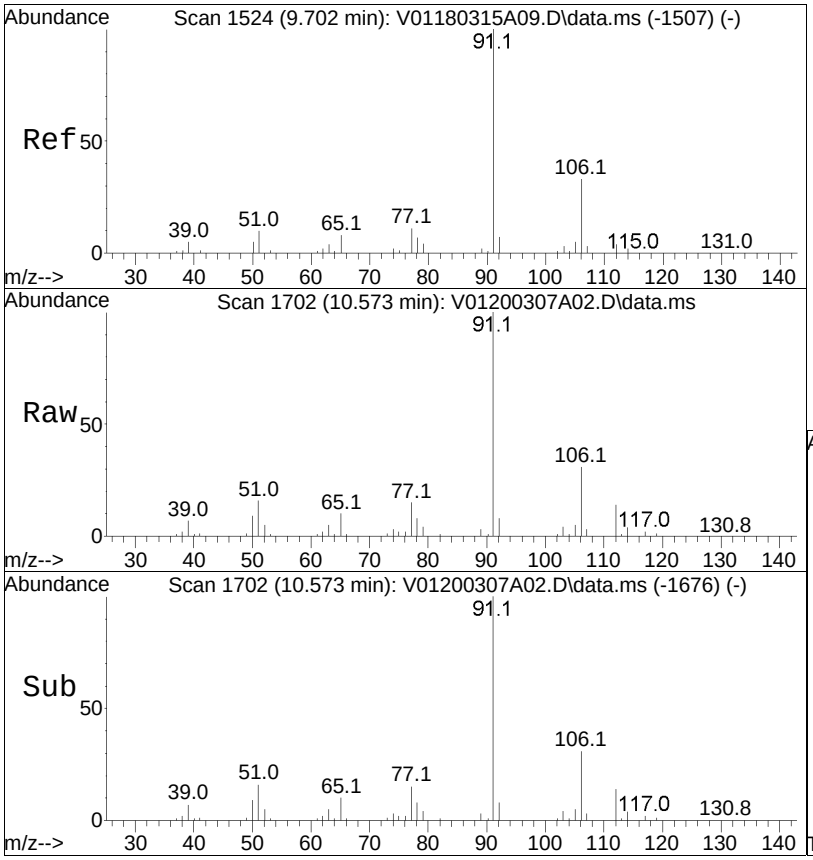



#73
Chlorobenzene
Concen: 11.16 ug/L
RT: 10.546 min Scan# 1697
Delta R.T. 0.000 min
Lab File: V01200307A02.D
Acq: 7 Mar 2020 9:55 am

Tgt Ion:112 Resp: 139357

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 112 | 100 | | |
| 77 | 73.1 | 59.8 | 89.6 |
| 114 | 31.7 | 25.4 | 38.2 |

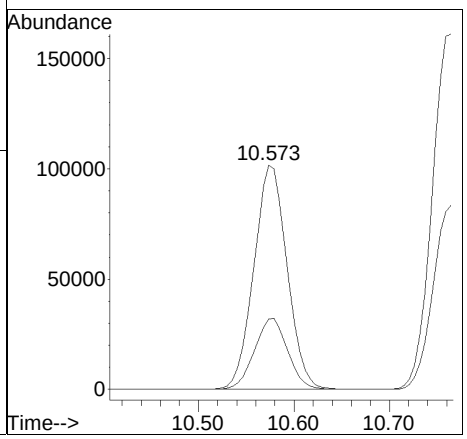


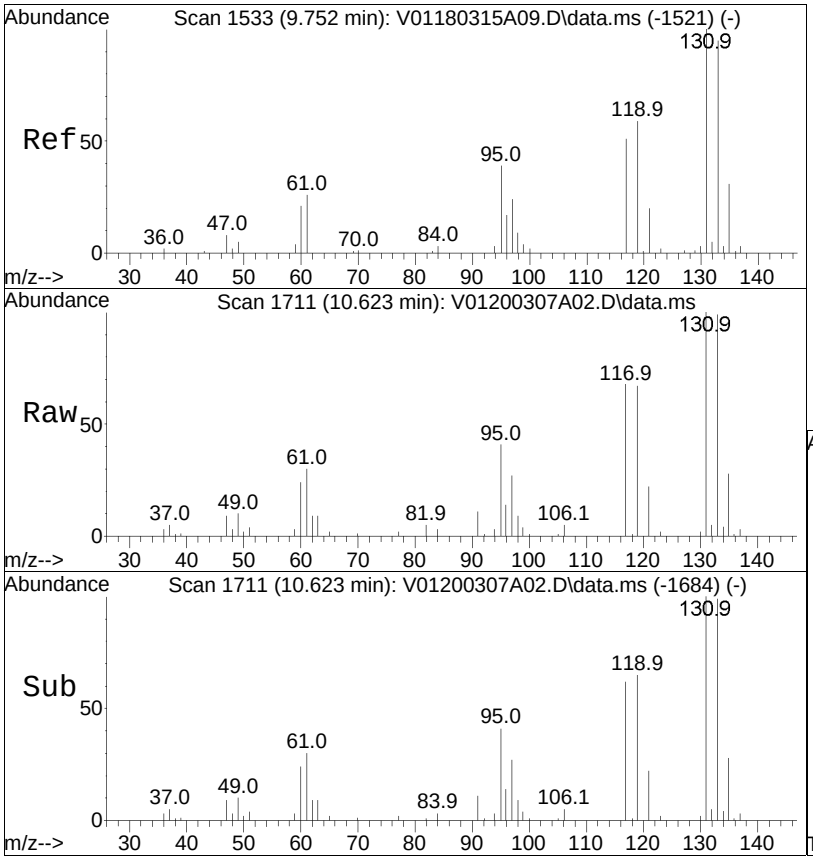



#74
Ethylbenzene
Concen: 11.26 ug/L
RT: 10.573 min Scan# 1702
Delta R.T. -0.006 min
Lab File: V01200307A02.D
Acq: 7 Mar 2020 9:55 am

Tgt Ion: 91 Resp: 246354

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 91 | 100 | | |
| 106 | 31.6 | 24.7 | 37.1 |

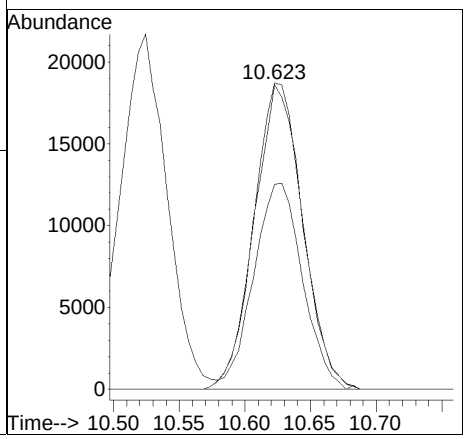


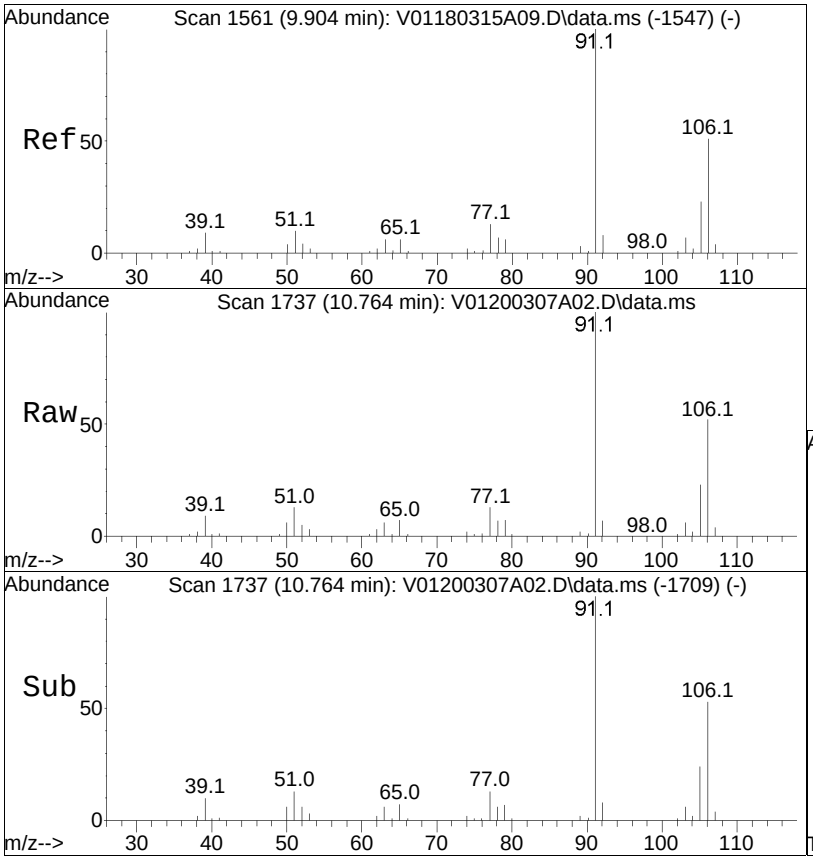



#75
1,1,1,2-Tetrachloroethane
Concen: 10.71 ug/L
RT: 10.623 min Scan# 1711
Delta R.T. -0.000 min
Lab File: V01200307A02.D
Acq: 7 Mar 2020 9:55 am

Tgt Ion:131 Resp: 48716

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 131 | 100 | | |
| 133 | 97.9 | 75.8 | 115.8 |
| 119 | 66.8 | 45.8 | 85.8 |

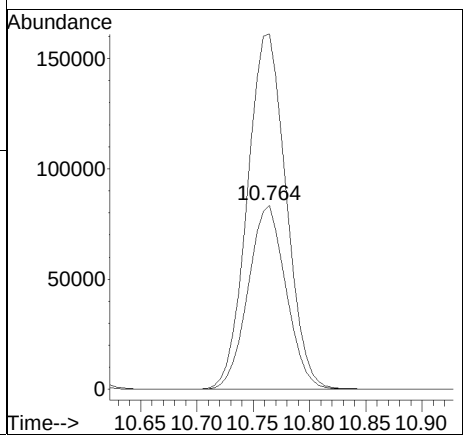


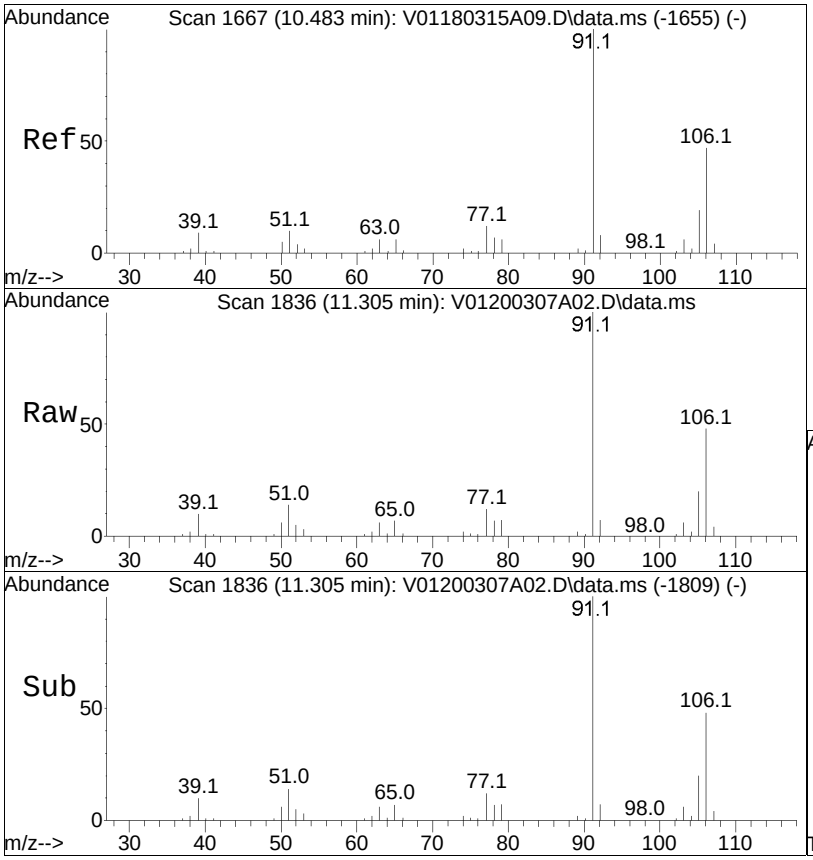



#76
p/m Xylene
Concen: 23.02 ug/L
RT: 10.764 min Scan# 1737
Delta R.T. 0.000 min
Lab File: V01200307A02.D
Acq: 7 Mar 2020 9:55 am

Tgt Ion:106 Resp: 195565

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 106 | 100 | | |
| 91 | 197.6 | 162.9 | 244.3 |

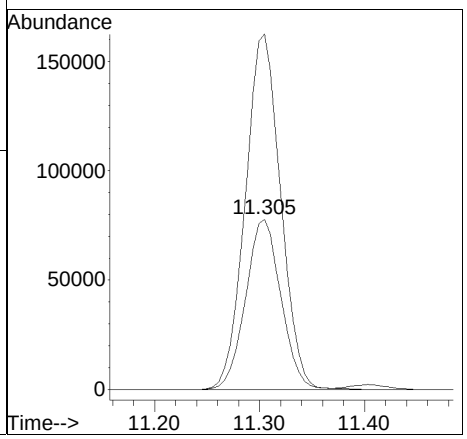


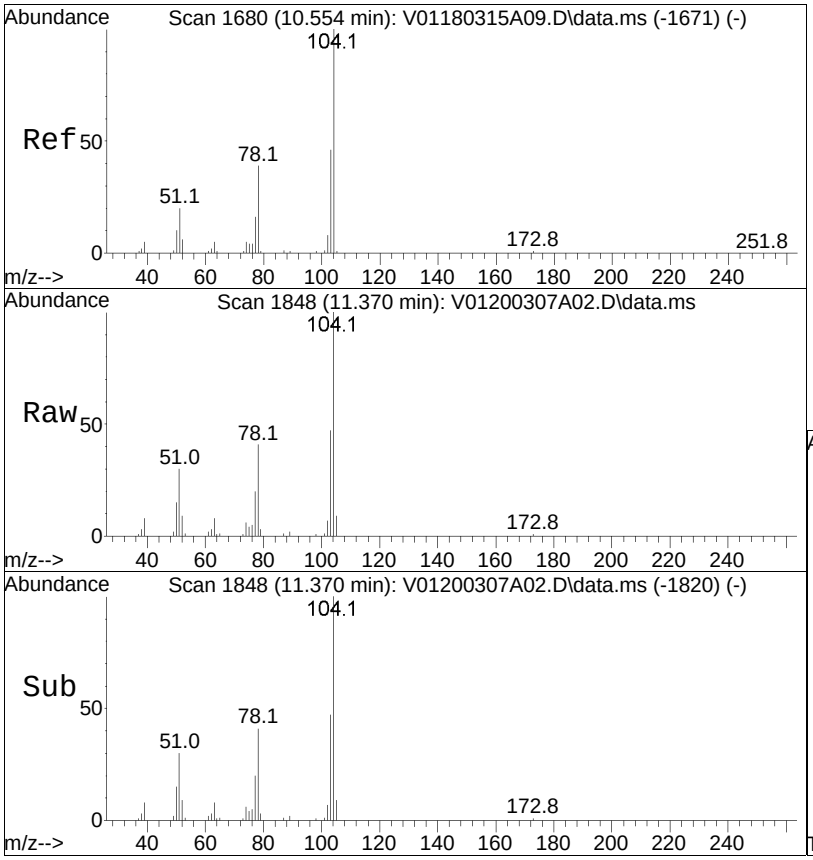



#77
o Xylene
Concen: 22.88 ug/L
RT: 11.305 min Scan# 1836
Delta R.T. -0.000 min
Lab File: V01200307A02.D
Acq: 7 Mar 2020 9:55 am

Tgt Ion:106 Resp: 181774

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 106 | 100 | | |
| 91 | 208.5 | 171.2 | 256.8 |

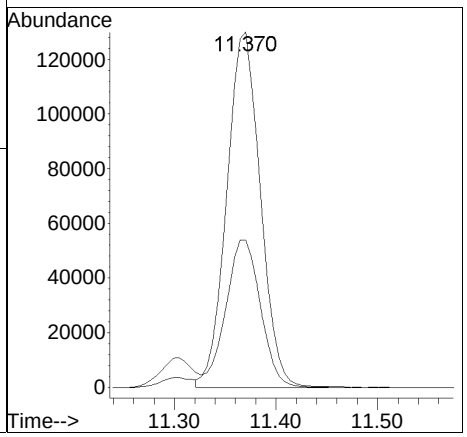


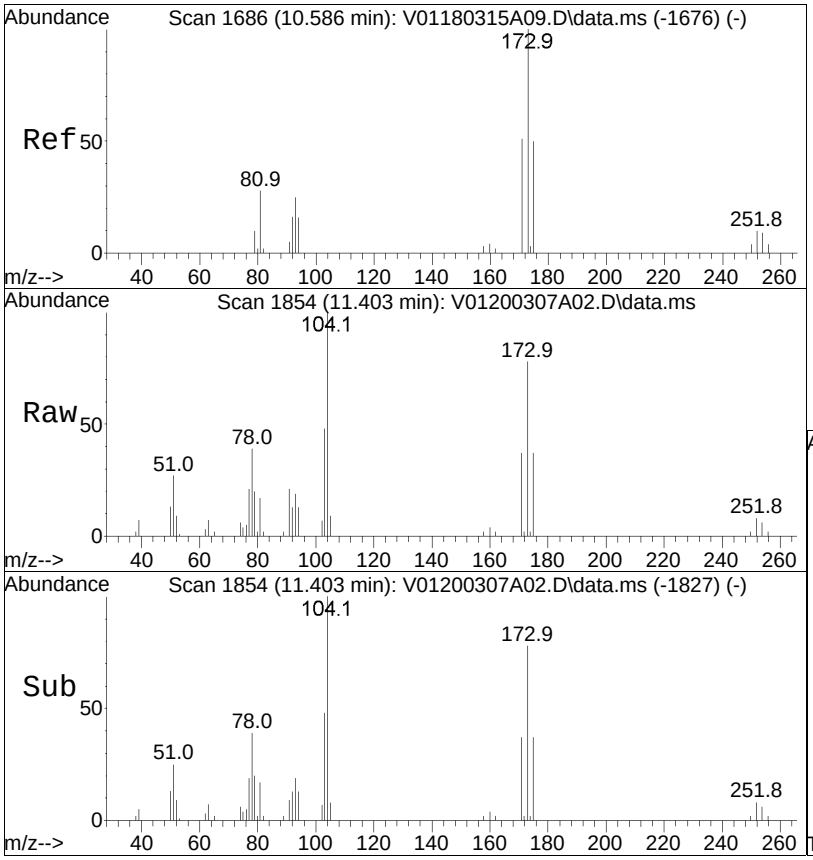



#78
Styrene
Concen:  22.43 ug/L
RT:  11.370 min  Scan# 1848
Delta R.T.  0.000 min
Lab File:  V01200307A02.D
Acq:  7 Mar 2020  9:55 am

Tgt Ion:104 Resp:  298694

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 104 | 100 | | |
| 78 | 42.8 | 34.2 | 51.4 |

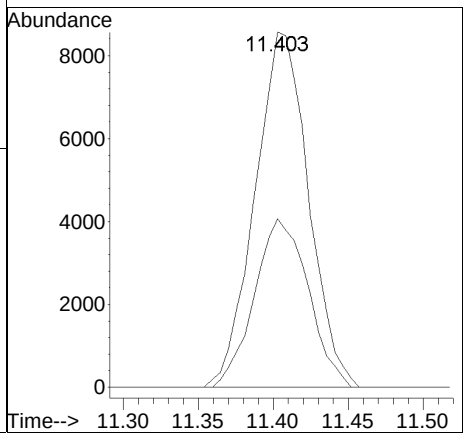


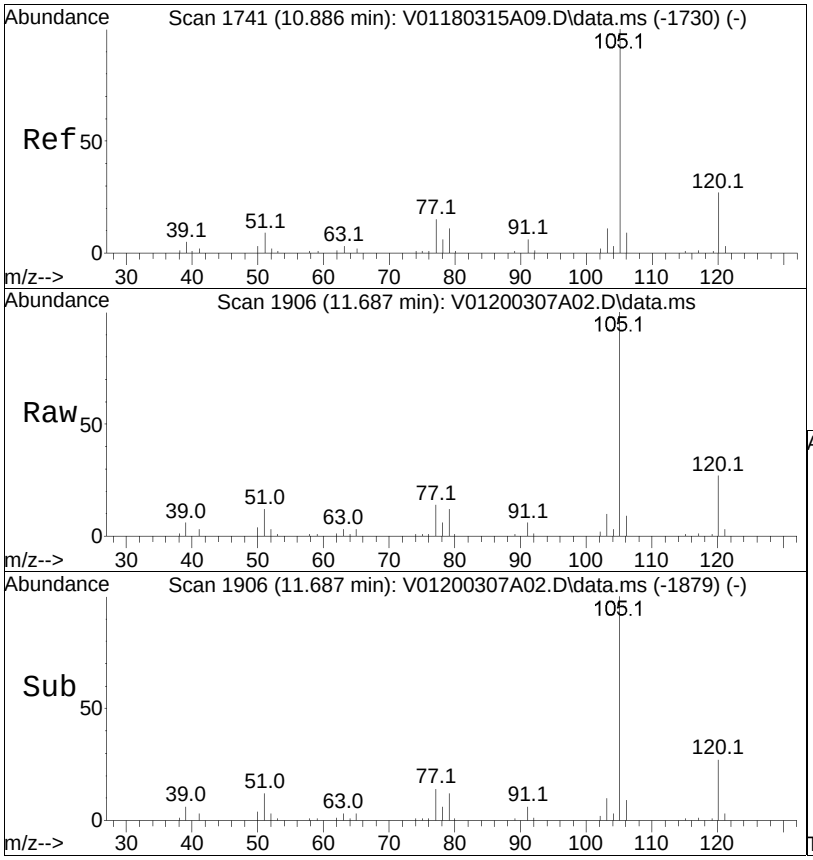



#80
Bromoform
Concen: 10.08 ug/L
RT: 11.403 min Scan# 1854
Delta R.T. -0.005 min
Lab File: V01200307A02.D
Acq: 7 Mar 2020 9:55 am

Tgt Ion:173 Resp: 21237

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 173 | 100 | | |
| 175 | 47.8 | 28.6 | 68.6 |

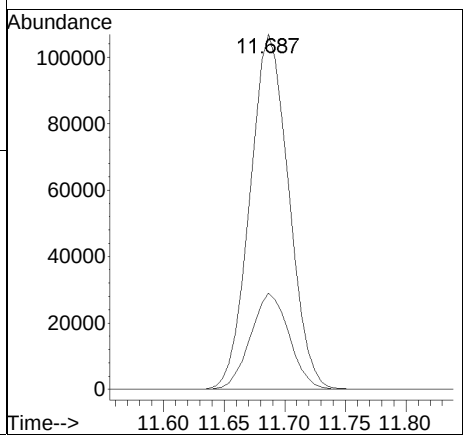


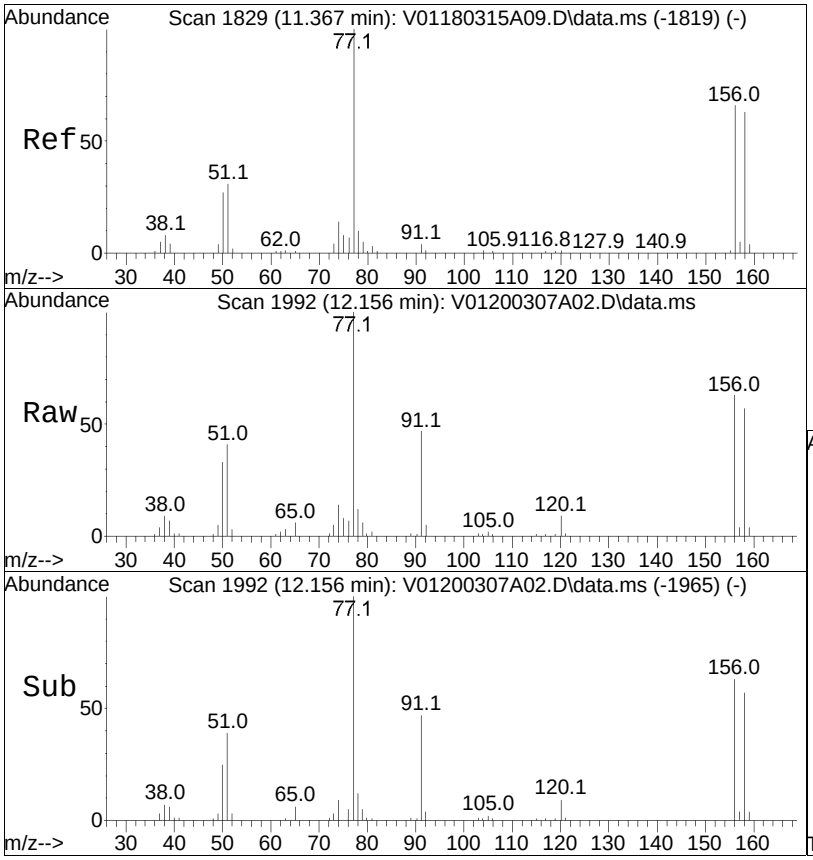



#82
Isopropylbenzene
Concen: 10.99 ug/L
RT: 11.687 min Scan# 1906
Delta R.T. -0.000 min
Lab File: V01200307A02.D
Acq: 7 Mar 2020 9:55 am

Tgt Ion:105 Resp: 237741

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 105 | 100 | | |
| 120 | 27.0 | 7.3 | 47.3 |

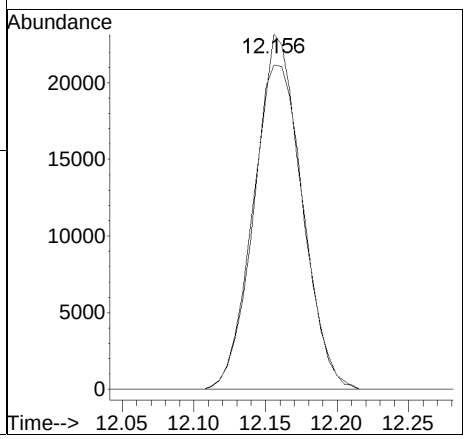


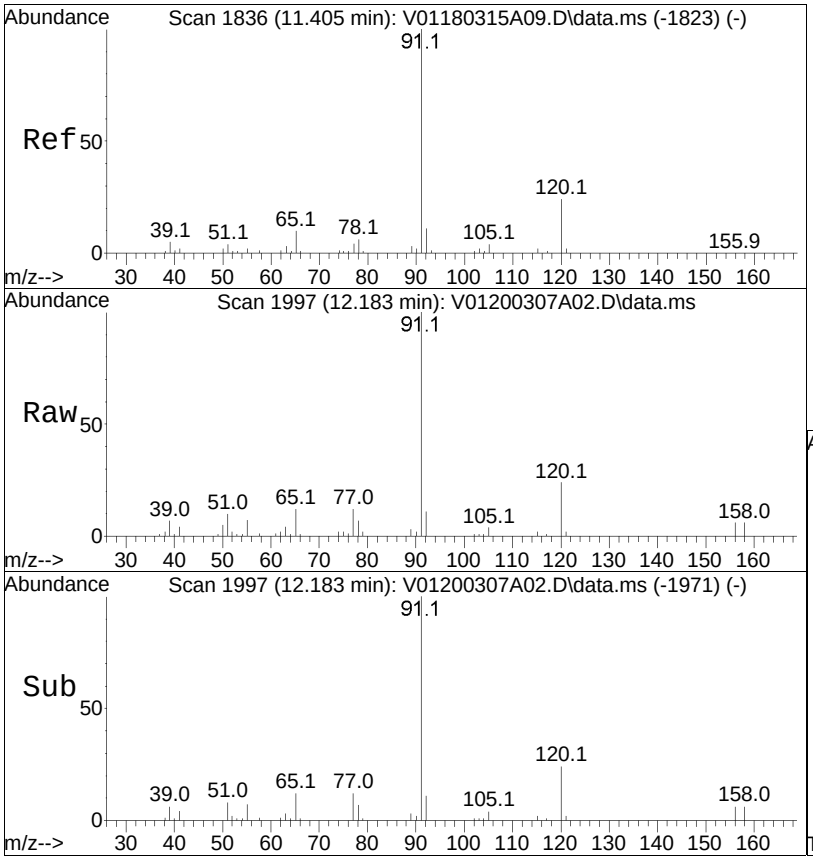



#84
Bromobenzene
Concen: 10.98 ug/L
RT: 12.156 min Scan# 1992
Delta R.T. -0.005 min
Lab File: V01200307A02.D
Acq: 7 Mar 2020 9:55 am

Tgt Ion:156 Resp: 53126

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 156 | 100 | | |
| 158 | 97.2 | 78.2 | 117.4 |

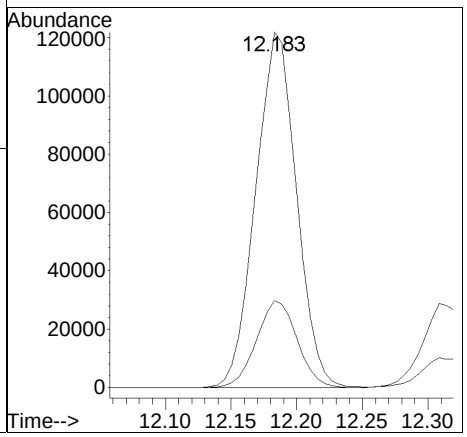


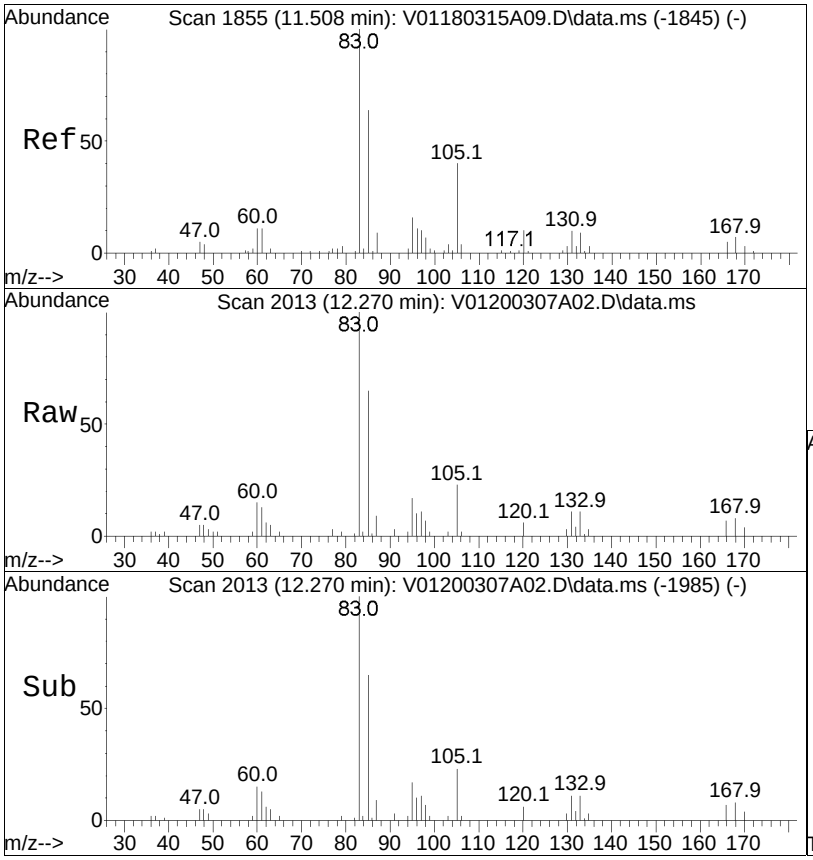



#85
n-Propylbenzene
Concen: 11.23 ug/L
RT: 12.183 min Scan# 1997
Delta R.T. -0.006 min
Lab File: V01200307A02.D
Acq: 7 Mar 2020 9:55 am

Tgt Ion: 91 Resp: 262902

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 91 | 100 | | |
| 120 | 24.2 | 18.6 | 28.0 |

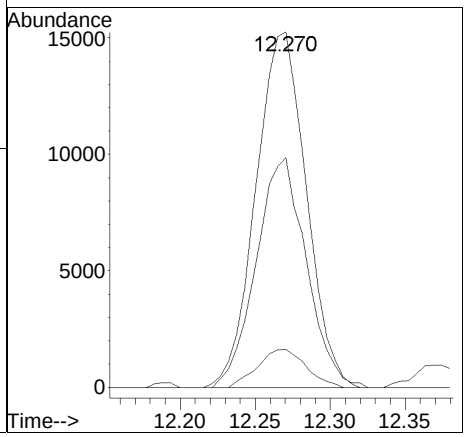


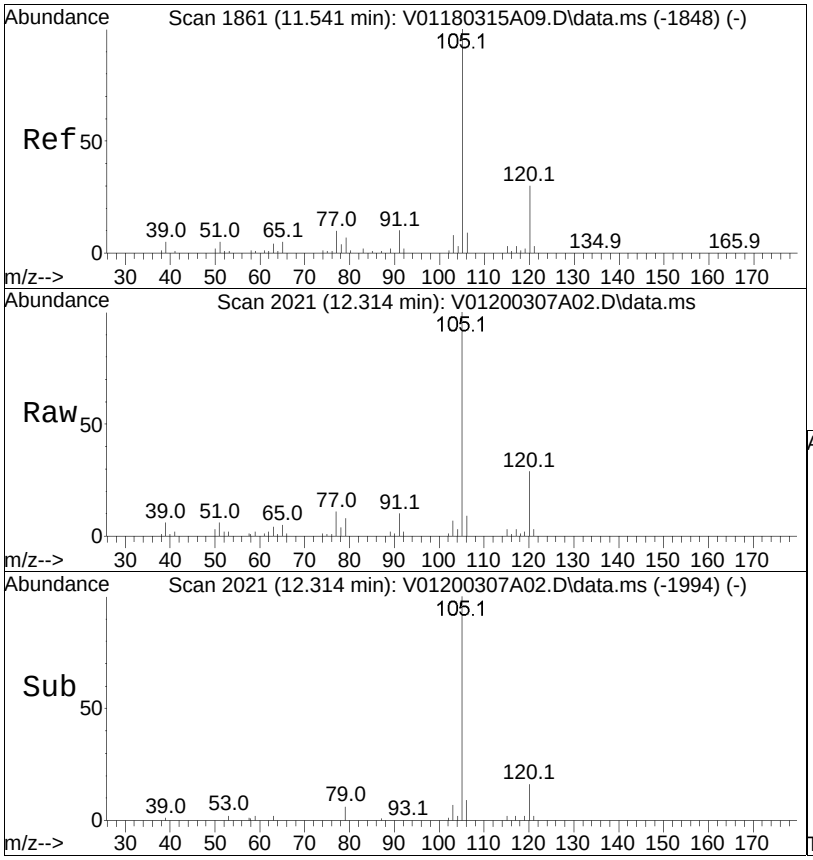



#87
1,1,2,2-Tetrachloroethane
Concen: 10.82 ug/L
RT: 12.270 min Scan# 2013
Delta R.T. 0.000 min
Lab File: V01200307A02.D
Acq: 7 Mar 2020 9:55 am

Tgt Ion: 83 Resp: 35531

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 83 | 100 | | |
| 131 | 10.3 | 0.0 | 30.1 |
| 85 | 64.4 | 45.8 | 85.8 |

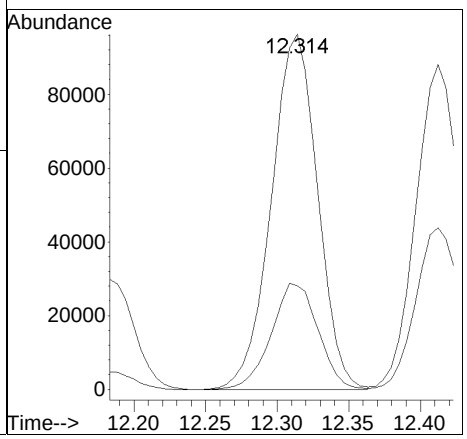


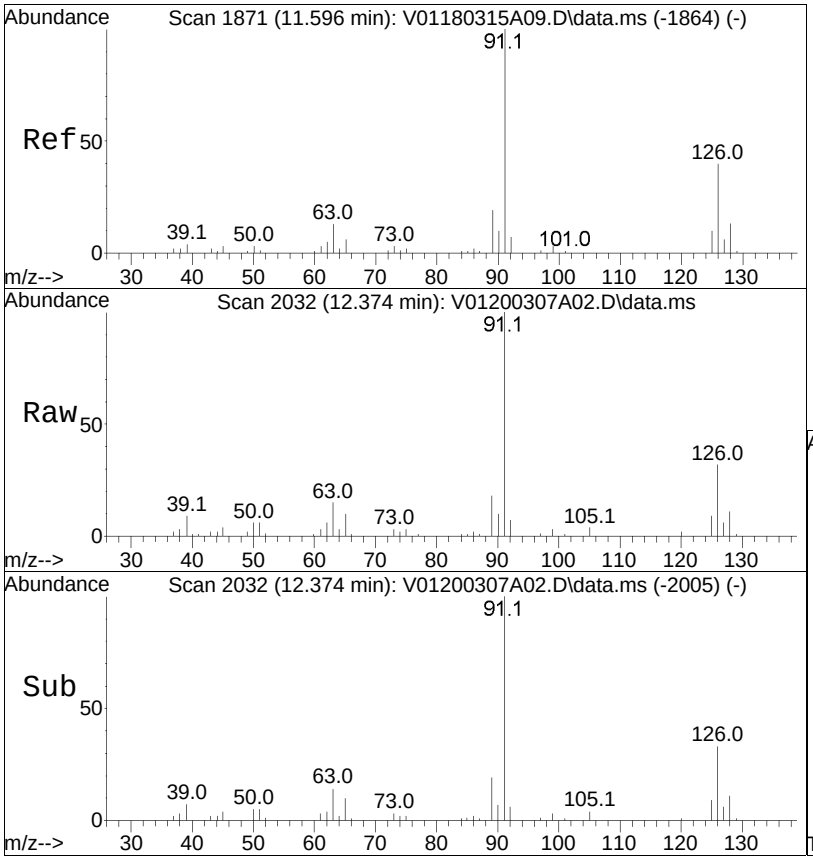



#88
4-Ethyltoluene
Concen: 11.30 ug/L
RT: 12.314 min Scan# 2021
Delta R.T. 0.000 min
Lab File: V01200307A02.D
Acq: 7 Mar 2020 9:55 am

Tgt Ion:105 Resp: 216303

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 105 | 100 | | |
| 120 | 30.2 | 19.8 | 41.0 |

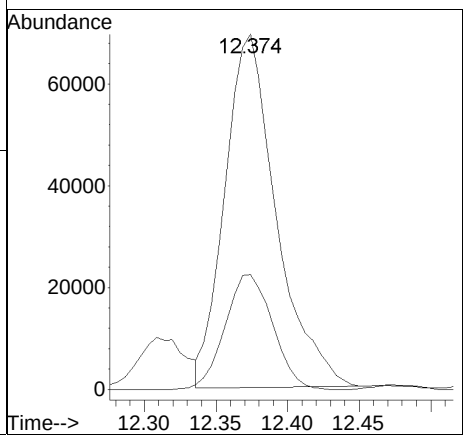


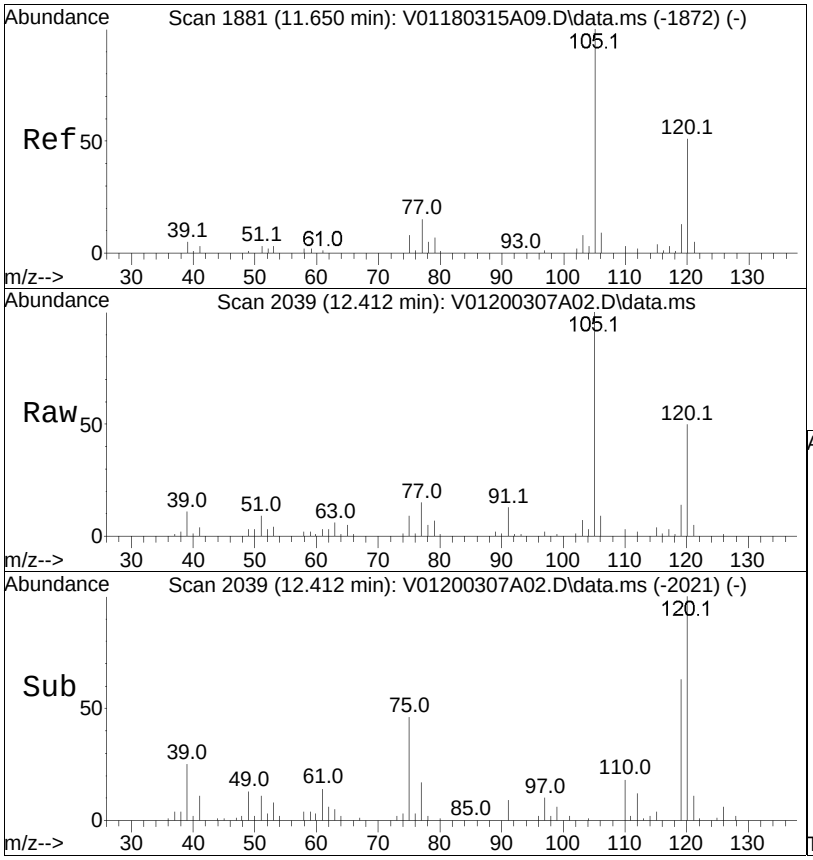



#89
2-Chlorotoluene
Concen: 11.15 ug/L
RT: 12.374 min Scan# 2032
Delta R.T. 0.000 min
Lab File: V01200307A02.D
Acq: 7 Mar 2020 9:55 am

Tgt Ion: 91 Resp: 173235

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 91 | 100 | | |
| 126 | 30.1 | 27.1 | 40.7 |

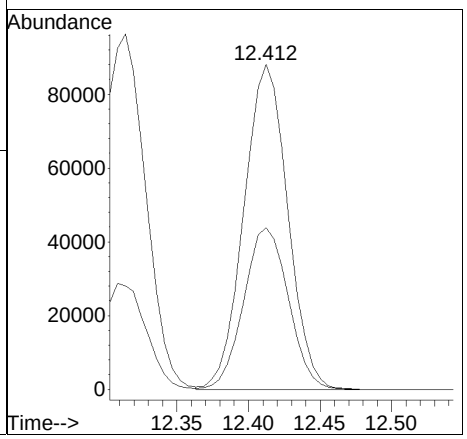


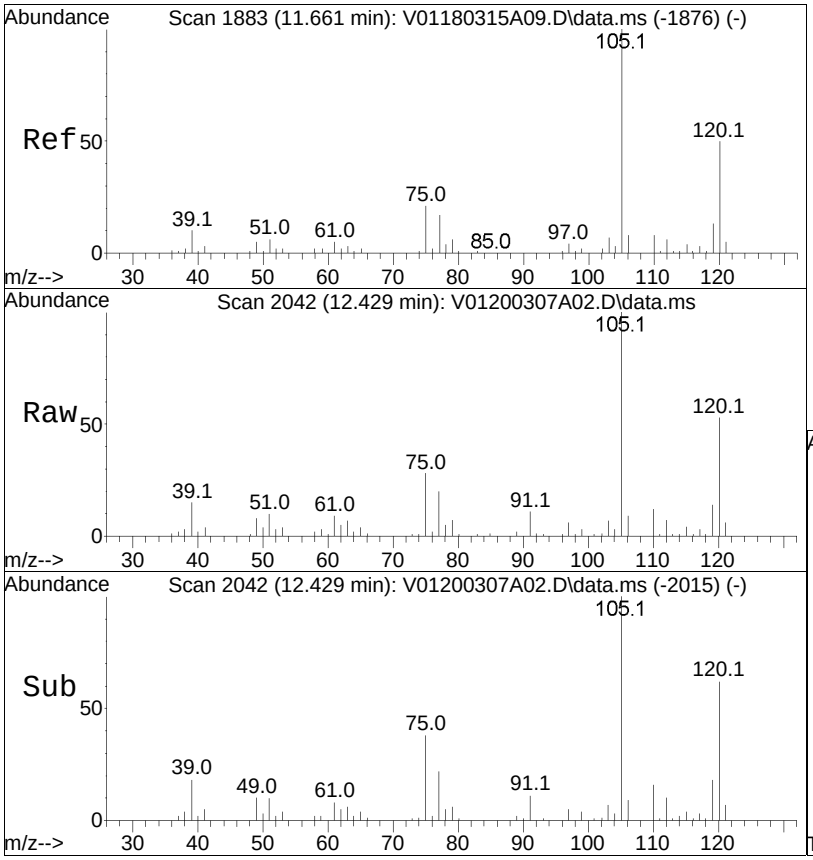



#90
1,3,5-Trimethylbenzene
Concen: 11.20 ug/L
RT: 12.412 min Scan# 2039
Delta R.T. 0.000 min
Lab File: V01200307A02.D
Acq: 7 Mar 2020 9:55 am

Tgt Ion:105 Resp: 187675

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 105 | 100 | | |
| 120 | 50.6 | 40.6 | 60.8 |

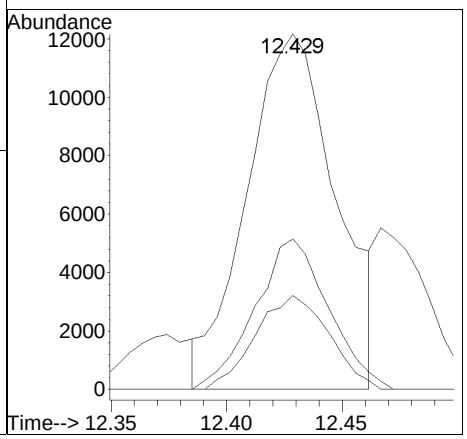


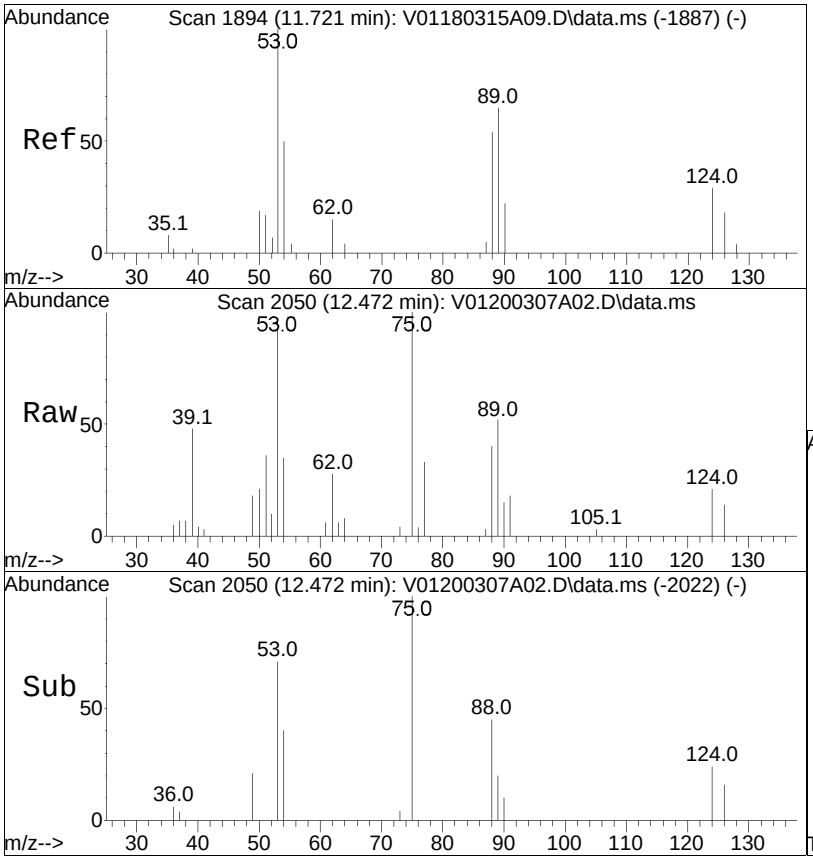



#91
1,2,3-Trichloropropane
Concen: 10.55 ug/L M1
RT: 12.429 min Scan# 2042
Delta R.T. -0.000 min
Lab File: V01200307A02.D
Acq: 7 Mar 2020 9:55 am

Tgt Ion: 75 Resp: 32653

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 75 | 100 | | |
| 110 | 35.0 | 26.5 | 54.9 |
| 112 | 21.9 | 17.0 | 35.2 |

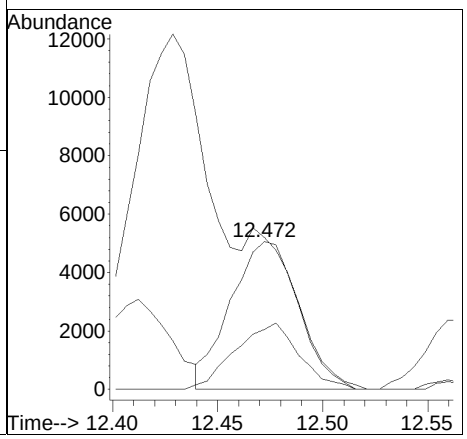


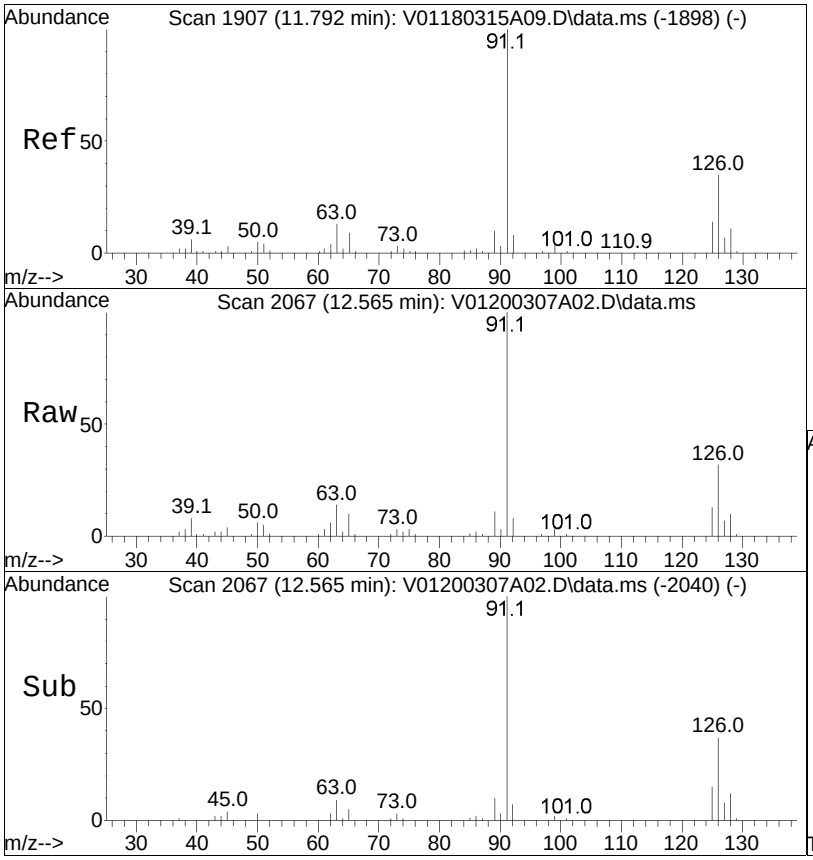



#92
trans-1,4-Dichloro-2-butene
Concen: 11.32 ug/L
RT: 12.472 min Scan# 2050
Delta R.T. 0.005 min
Lab File: V01200307A02.D
Acq: 7 Mar 2020 9:55 am

Tgt Ion: 53 Resp: 11343

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 53 | 100 | | |
| 88 | 42.5 | 46.0 | 69.0# |
| 75 | 0.0 | 107.0 | 160.4# |

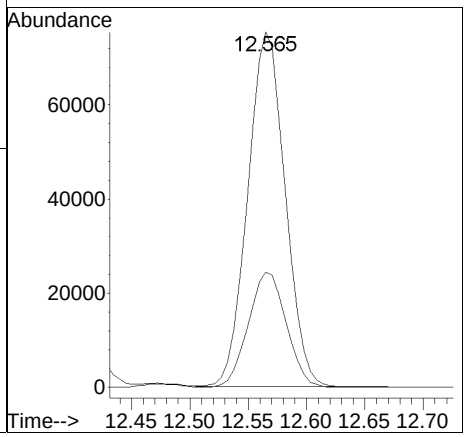


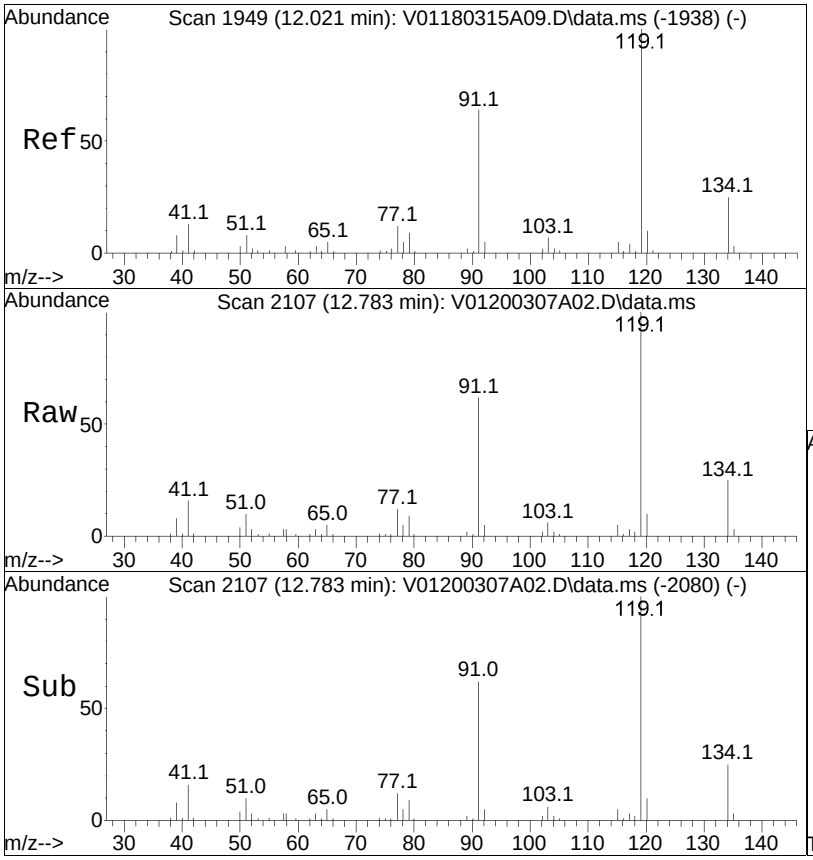



#93
4-Chlorotoluene
Concen: 11.28 ug/L
RT: 12.565 min Scan# 2067
Delta R.T. 0.000 min
Lab File: V01200307A02.D
Acq: 7 Mar 2020 9:55 am

Tgt Ion: 91 Resp: 167529

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 91 | 100 | | |
| 126 | 33.0 | 28.2 | 42.2 |

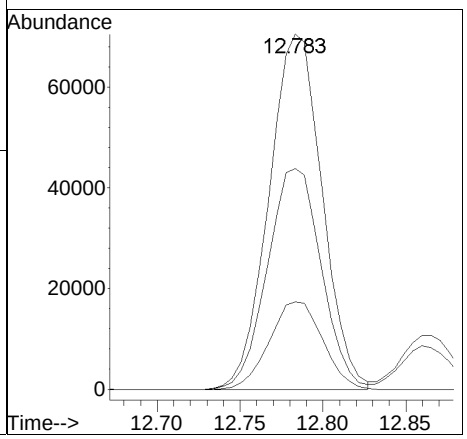


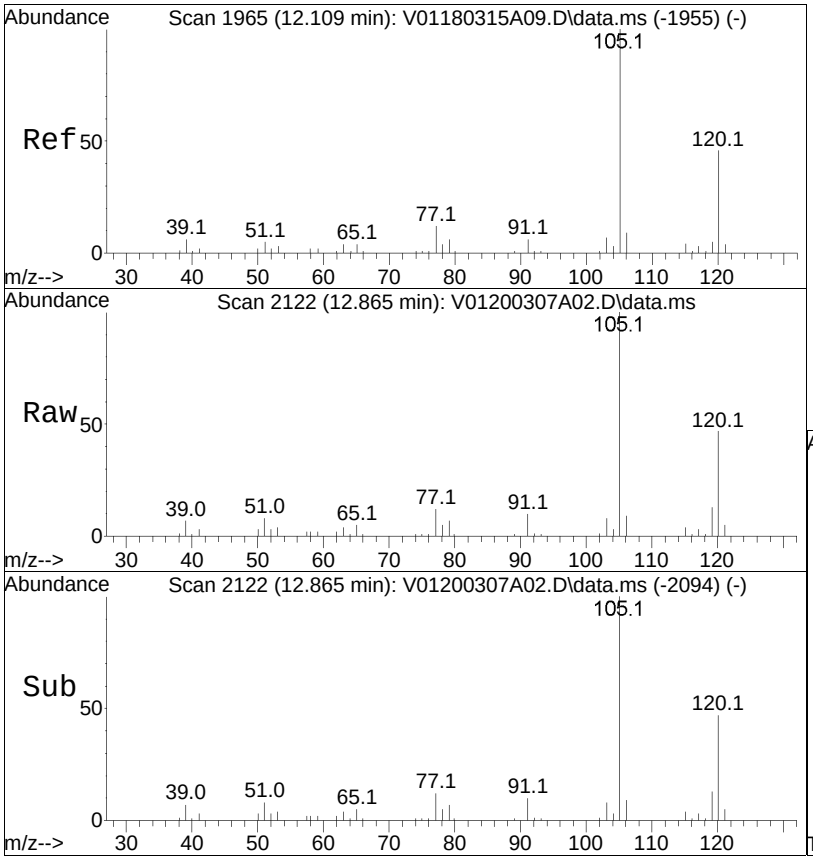



#94
tert-Butylbenzene
Concen: 11.11 ug/L
RT: 12.783 min Scan# 2107
Delta R.T. 0.000 min
Lab File: V01200307A02.D
Acq: 7 Mar 2020 9:55 am

Tgt Ion:119 Resp: 157389

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 119 | 100 | | |
| 91 | 63.0 | 52.5 | 78.7 |
| 134 | 24.8 | 20.9 | 31.3 |

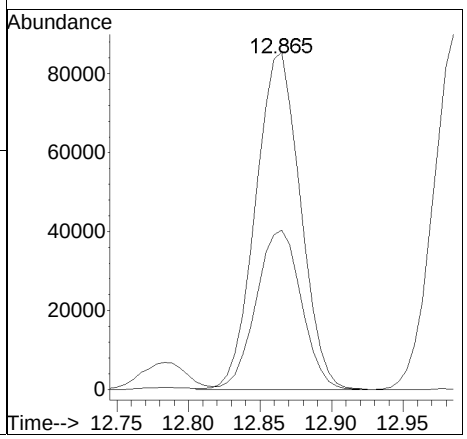


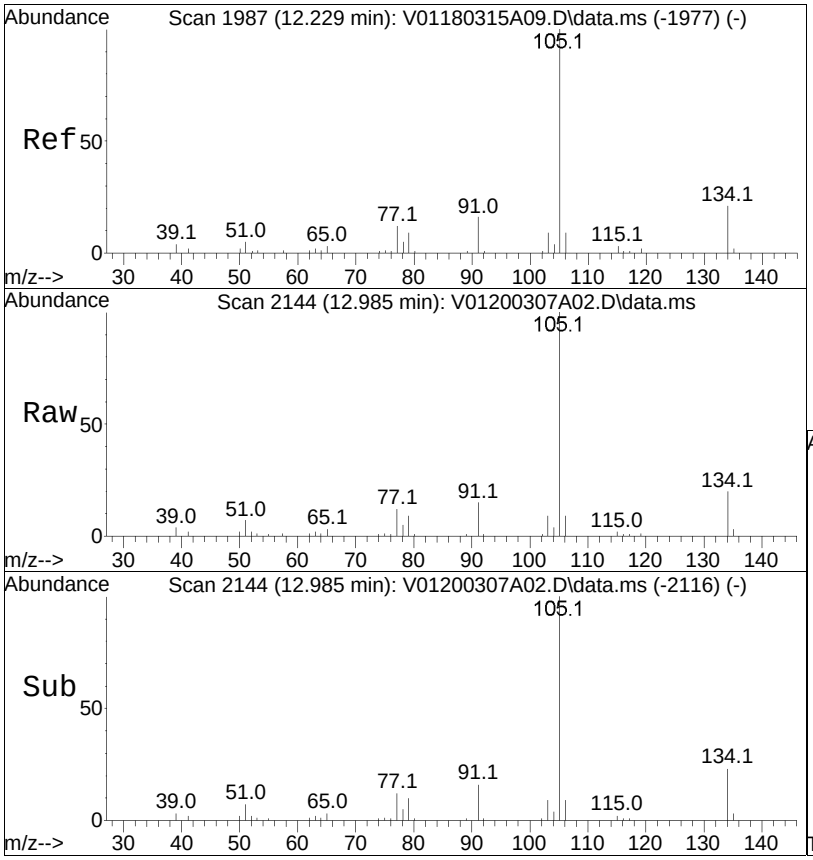



#97
1,2,4-Trimethylbenzene
Concen: 11.23 ug/L
RT: 12.865 min Scan# 2122
Delta R.T. 0.000 min
Lab File: V01200307A02.D
Acq: 7 Mar 2020 9:55 am

Tgt Ion:105 Resp: 185451

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 105 | 100 | | |
| 120 | 47.8 | 37.8 | 56.6 |

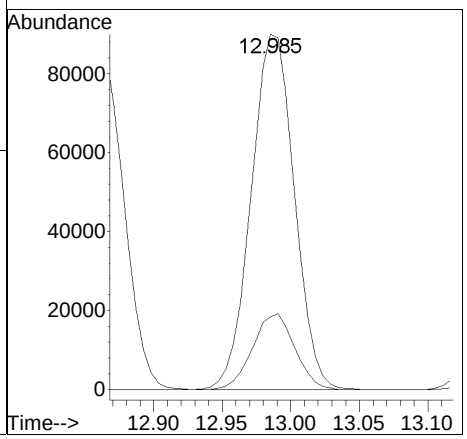


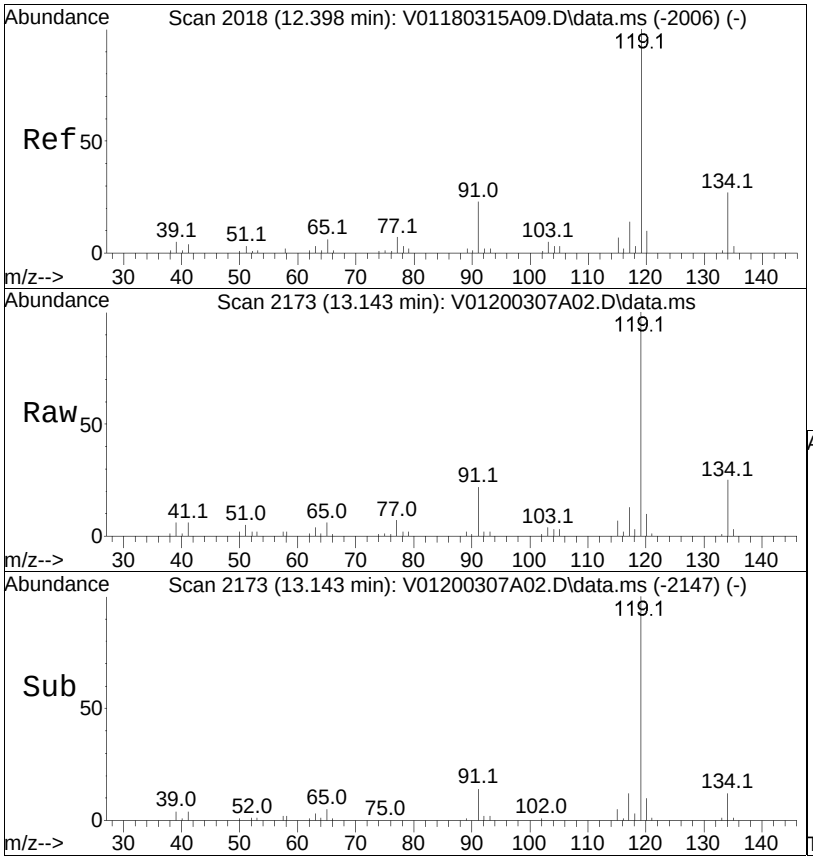



#98
sec-Butylbenzene
Concen: 11.16 ug/L
RT: 12.985 min Scan# 2144
Delta R.T. 0.000 min
Lab File: V01200307A02.D
Acq: 7 Mar 2020 9:55 am

Tgt Ion:105 Resp: 197049

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 105 | 100 | | |
| 134 | 20.8 | 14.0 | 29.0 |

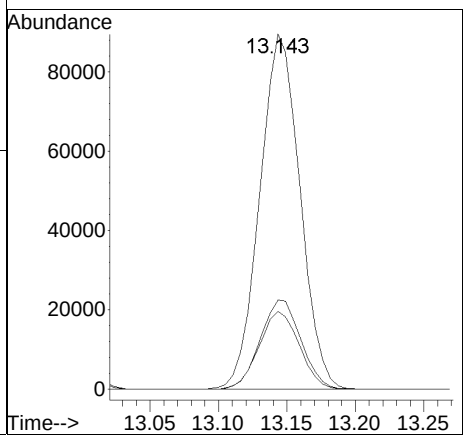


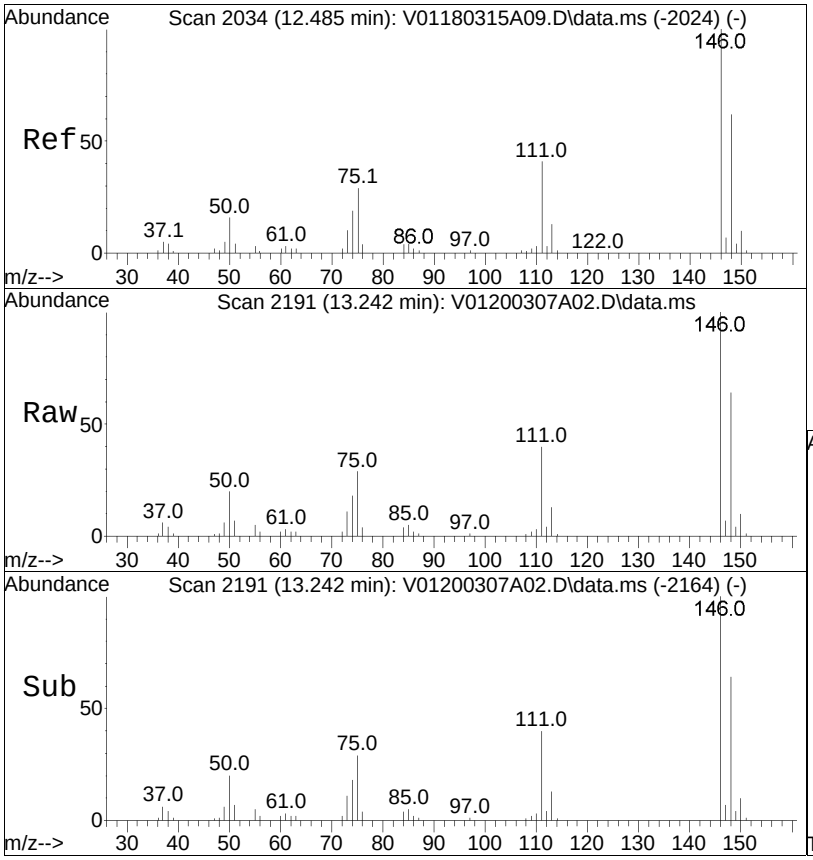



#99
p-Isopropyltoluene
Concen: 11.20 ug/L
RT: 13.143 min Scan# 2173
Delta R.T. -0.006 min
Lab File: V01200307A02.D
Acq: 7 Mar 2020 9:55 am

Tgt Ion:119 Resp: 182951

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 119 | 100 | | |
| 134 | 25.5 | 17.7 | 36.7 |
| 91 | 22.0 | 15.4 | 32.0 |

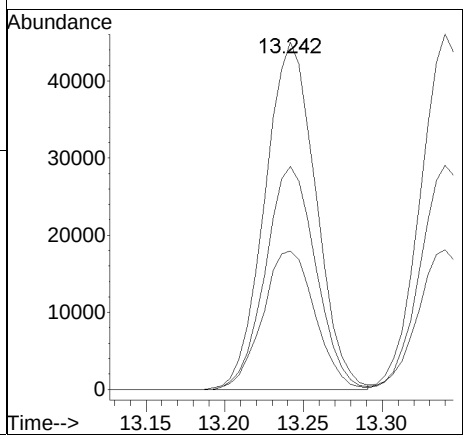


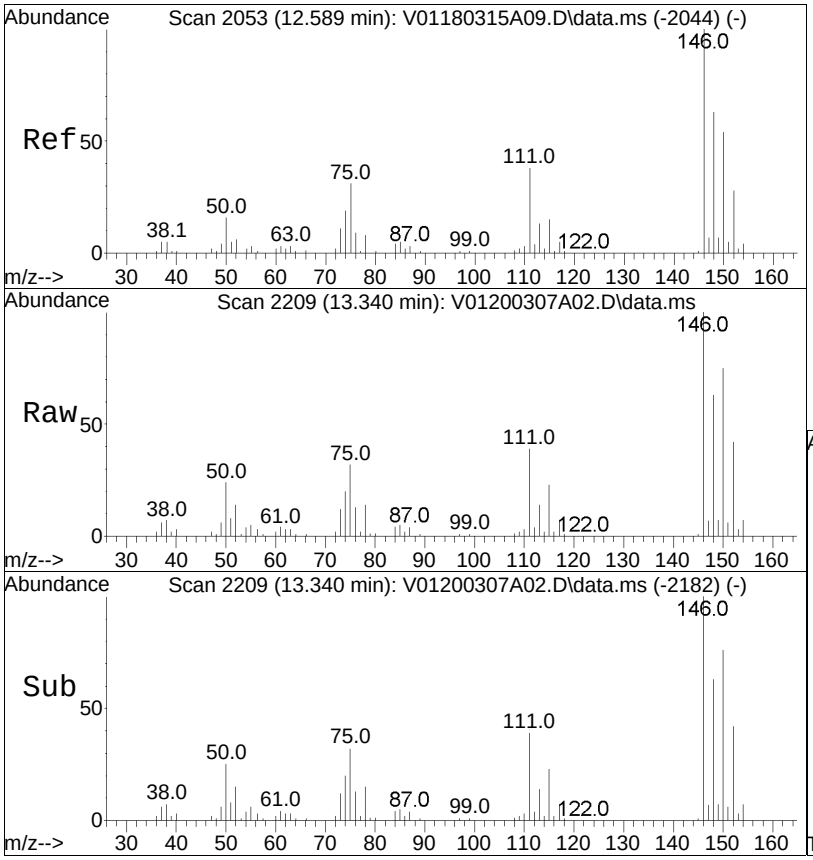



#100
1,3-Dichlorobenzene
Concen: 11.25 ug/L
RT: 13.242 min Scan# 2191
Delta R.T. -0.000 min
Lab File: V01200307A02.D
Acq: 7 Mar 2020 9:55 am

Tgt Ion:146 Resp: 101356

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 146 | 100 | | |
| 111 | 41.0 | 25.9 | 53.9 |
| 148 | 63.5 | 41.5 | 86.3 |

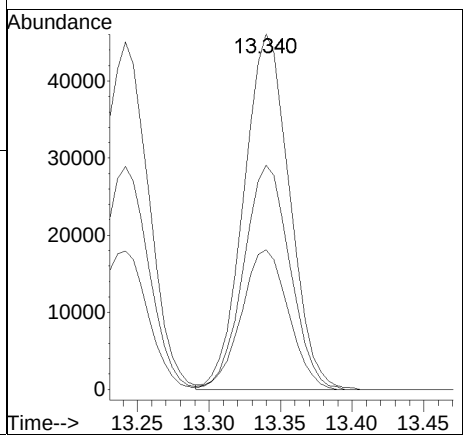


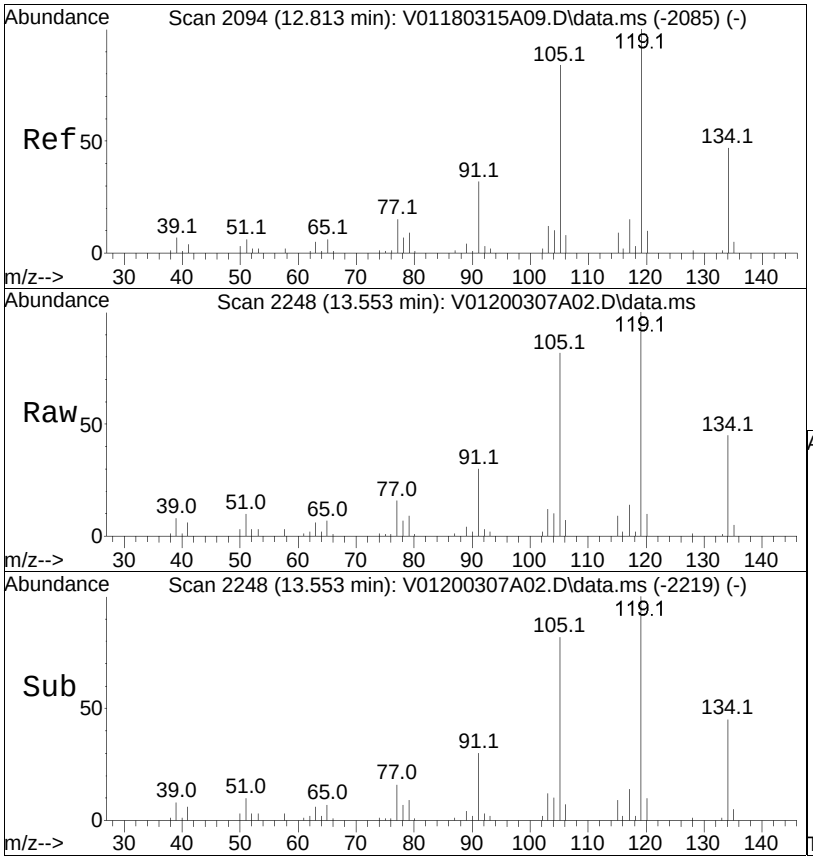



#101
1,4-Dichlorobenzene
Concen: 11.26 ug/L
RT: 13.340 min Scan# 2209
Delta R.T. -0.000 min
Lab File: V01200307A02.D
Acq: 7 Mar 2020 9:55 am

Tgt Ion:146 Resp: 102807

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 146 | 100 | | |
| 111 | 40.3 | 31.7 | 47.5 |
| 148 | 63.7 | 51.5 | 77.3 |

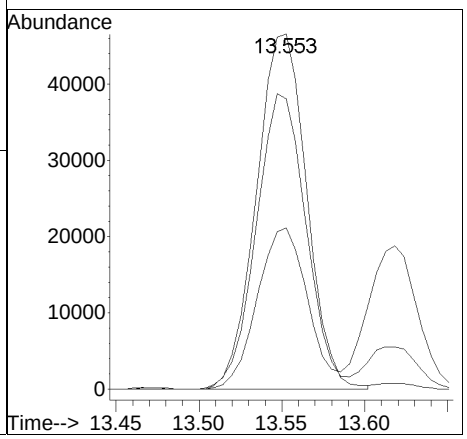


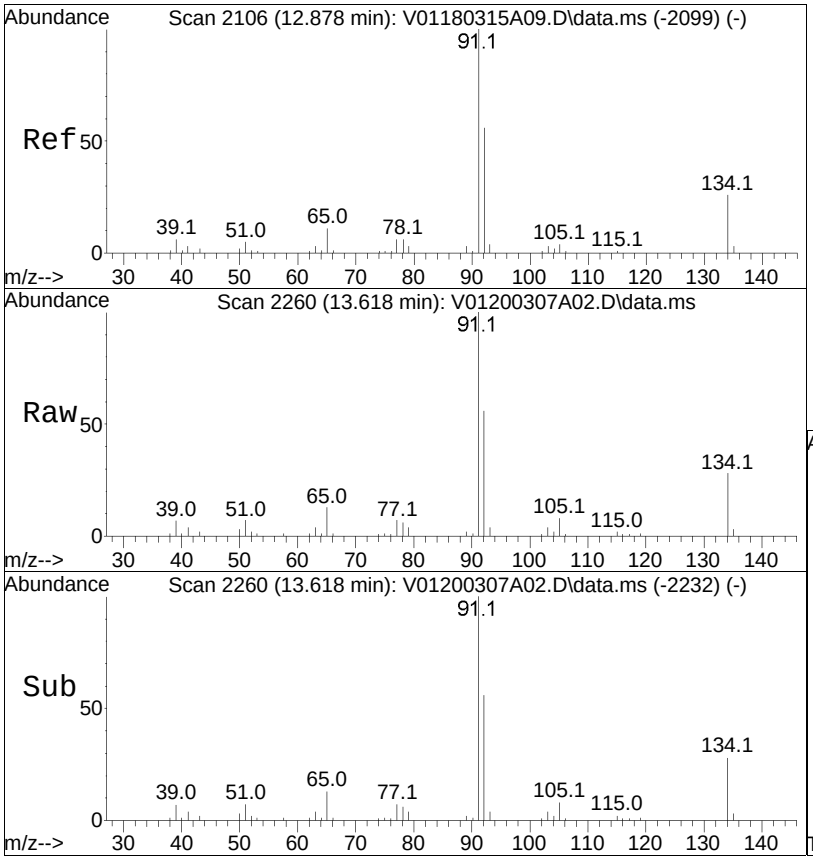



#102
p-Diethylbenzene
Concen: 11.25 ug/L
RT: 13.553 min Scan# 2248
Delta R.T. 0.006 min
Lab File: V01200307A02.D
Acq: 7 Mar 2020 9:55 am

Tgt Ion:119 Resp: 98475

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 119 | 100 | | |
| 105 | 82.5 | 54.1 | 112.3 |
| 134 | 45.6 | 31.5 | 65.3 |

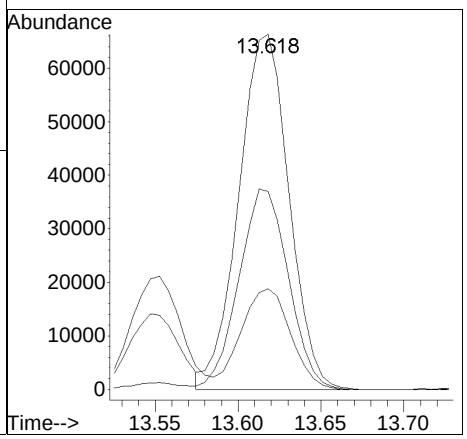


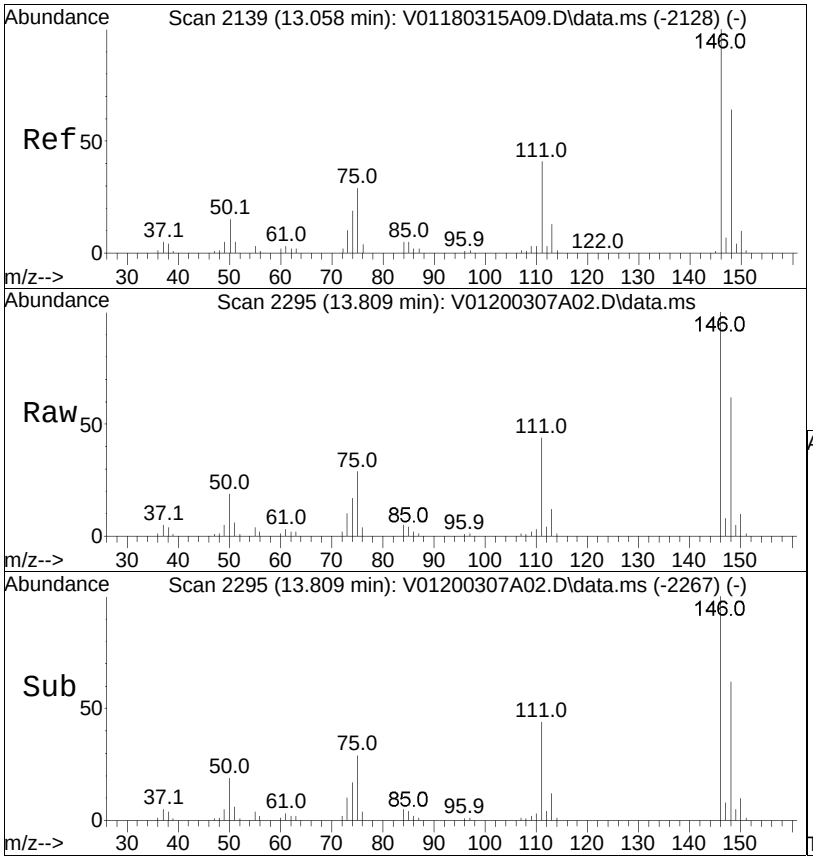



#103
n-Butylbenzene
Concen: 11.53 ug/L
RT: 13.618 min Scan# 2260
Delta R.T. 0.000 min
Lab File: V01200307A02.D
Acq: 7 Mar 2020 9:55 am

Tgt Ion: 91 Resp: 139556

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 91 | 100 | | |
| 92 | 55.7 | 43.7 | 65.5 |
| 134 | 27.9 | 22.1 | 33.1 |

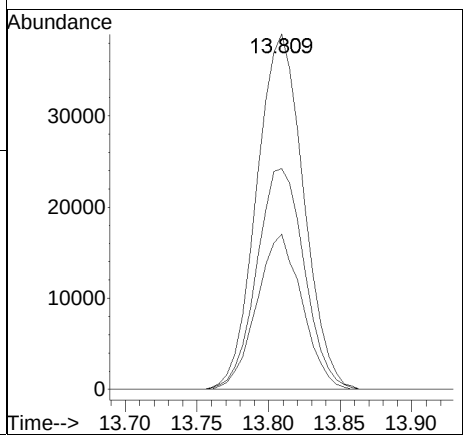


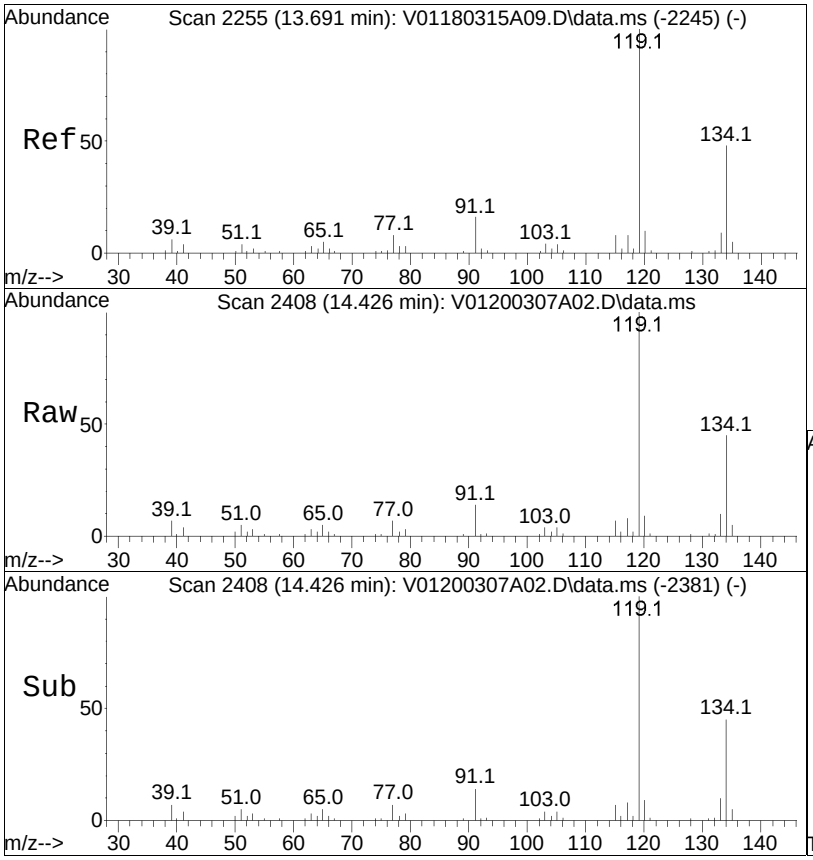



#104
1,2-Dichlorobenzene
Concen: 11.22 ug/L
RT: 13.809 min Scan# 2295
Delta R.T. 0.000 min
Lab File: V01200307A02.D
Acq: 7 Mar 2020 9:55 am

Tgt Ion:146 Resp: 89028

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 146 | 100 | | |
| 111 | 42.3 | 26.8 | 55.8 |
| 148 | 62.9 | 41.6 | 86.4 |

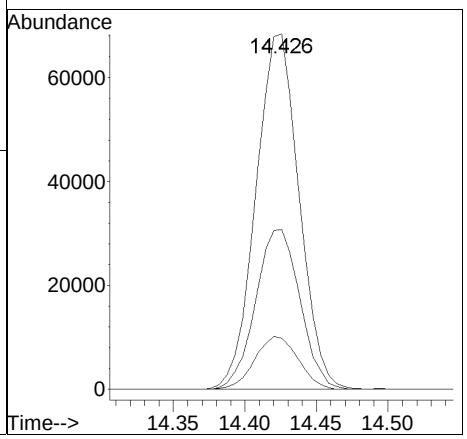


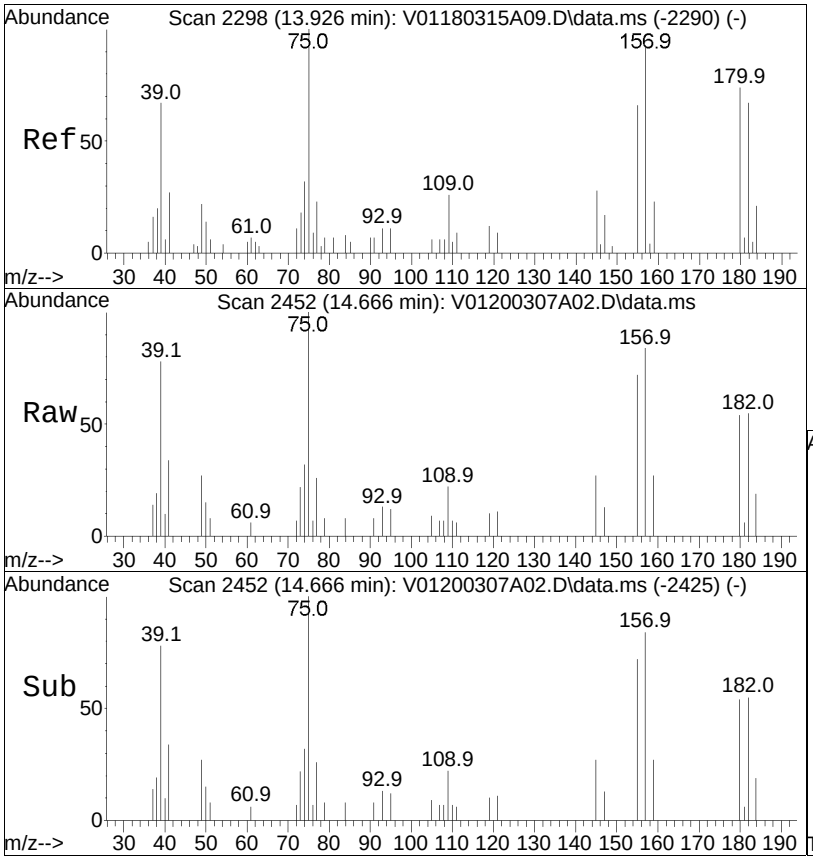



#105
1,2,4,5-Tetramethylbenzene
Concen: 10.87 ug/L
RT: 14.426 min Scan# 2408
Delta R.T. -0.000 min
Lab File: V01200307A02.D
Acq: 7 Mar 2020 9:55 am

Tgt Ion:119 Resp: 143342

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 119 | 100 | | |
| 134 | 46.3 | 31.9 | 66.1 |
| 91 | 15.0 | 10.3 | 21.5 |

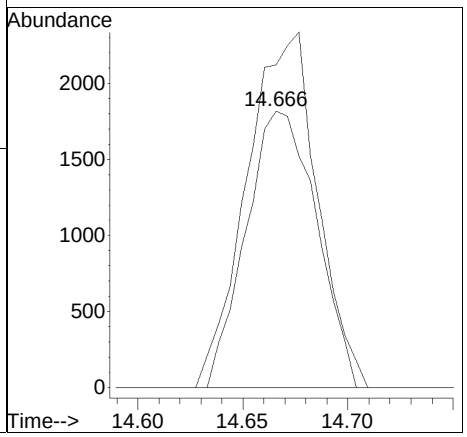


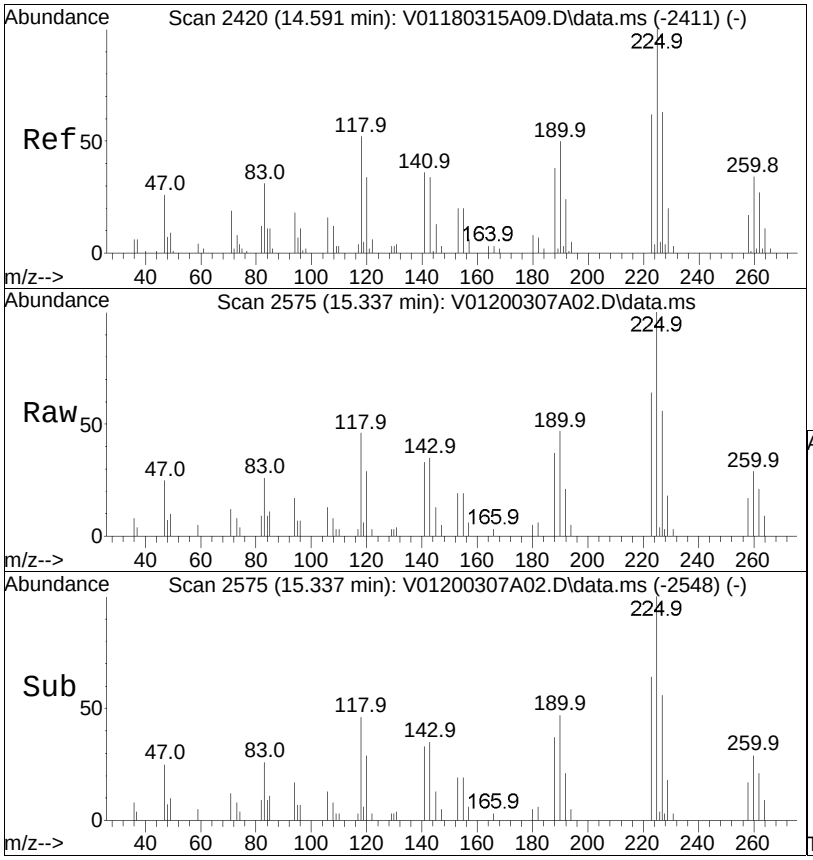



#106
1,2-Dibromo-3-chloropropane
Concen: 10.18 ug/L
RT: 14.666 min Scan# 2452
Delta R.T. -0.005 min
Lab File: V01200307A02.D
Acq: 7 Mar 2020 9:55 am

Tgt Ion:155 Resp: 4235

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 155 | 100 | | |
| 157 | 129.0 | 101.1 | 151.7 |

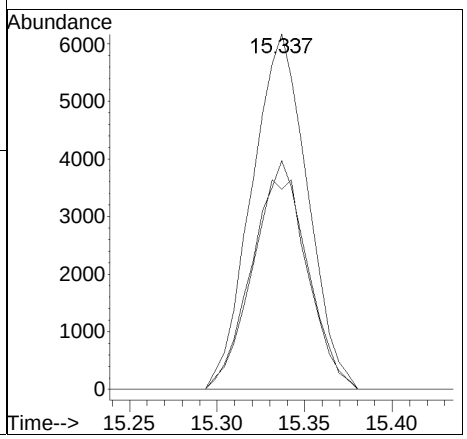


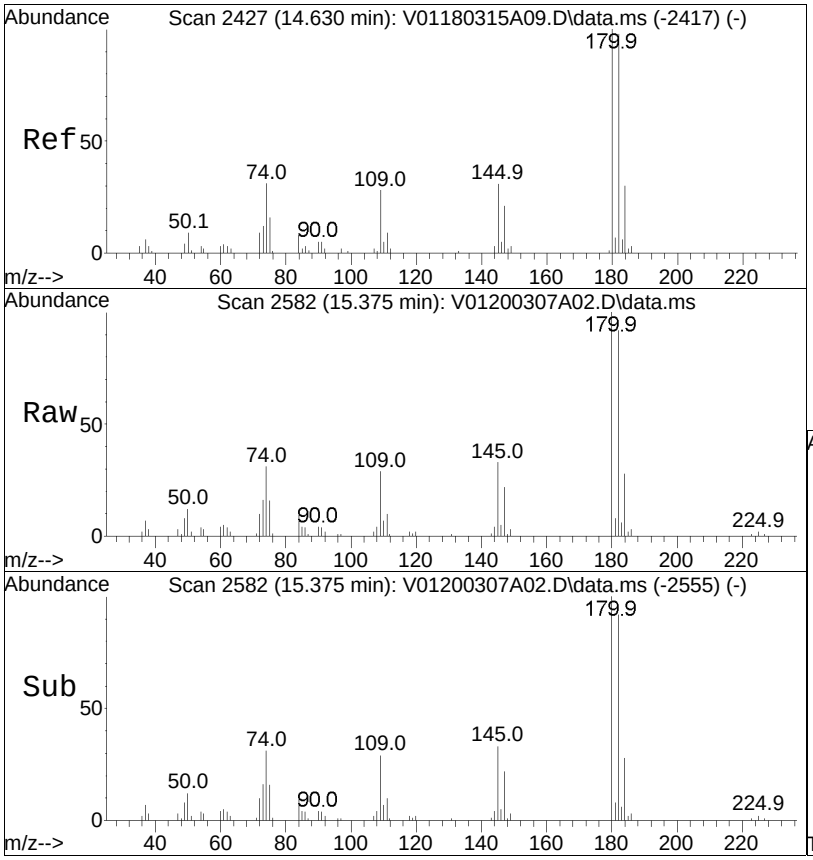



#108
Hexachlorobutadiene
Concen: 11.01 ug/L
RT: 15.337 min Scan# 2575
Delta R.T. -0.000 min
Lab File: V01200307A02.D
Acq: 7 Mar 2020 9:55 am

Tgt Ion:225 Resp: 13688

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 225 | 100 | | |
| 223 | 63.2 | 51.0 | 76.4 |
| 227 | 60.5 | 52.2 | 78.4 |

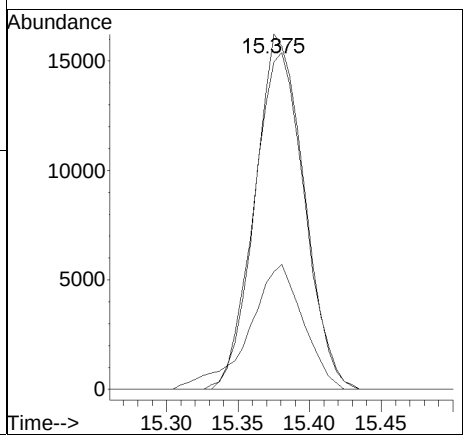


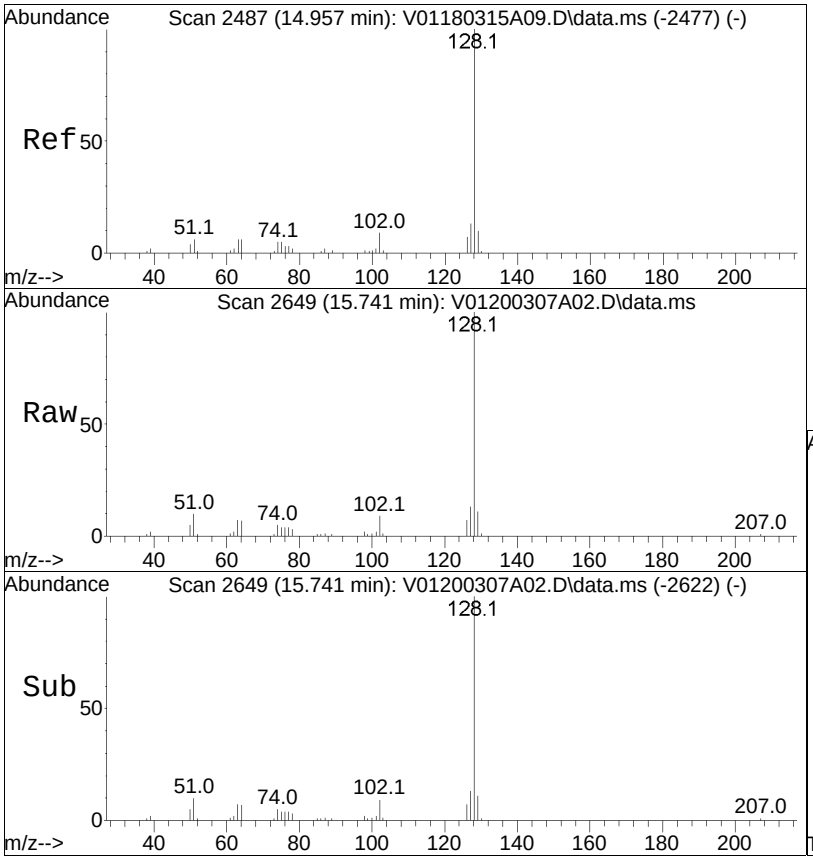



#109
1,2,4-Trichlorobenzene
Concen: 10.45 ug/L
RT: 15.375 min Scan# 2582
Delta R.T. 0.000 min
Lab File: V01200307A02.D
Acq: 7 Mar 2020 9:55 am

Tgt Ion:180 Resp: 39059

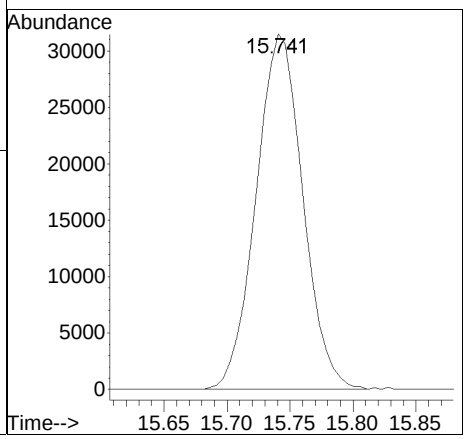
| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 180 | 100 | | |
| 182 | 95.5 | 75.8 | 113.8 |
| 145 | 38.5 | 26.1 | 39.1 |

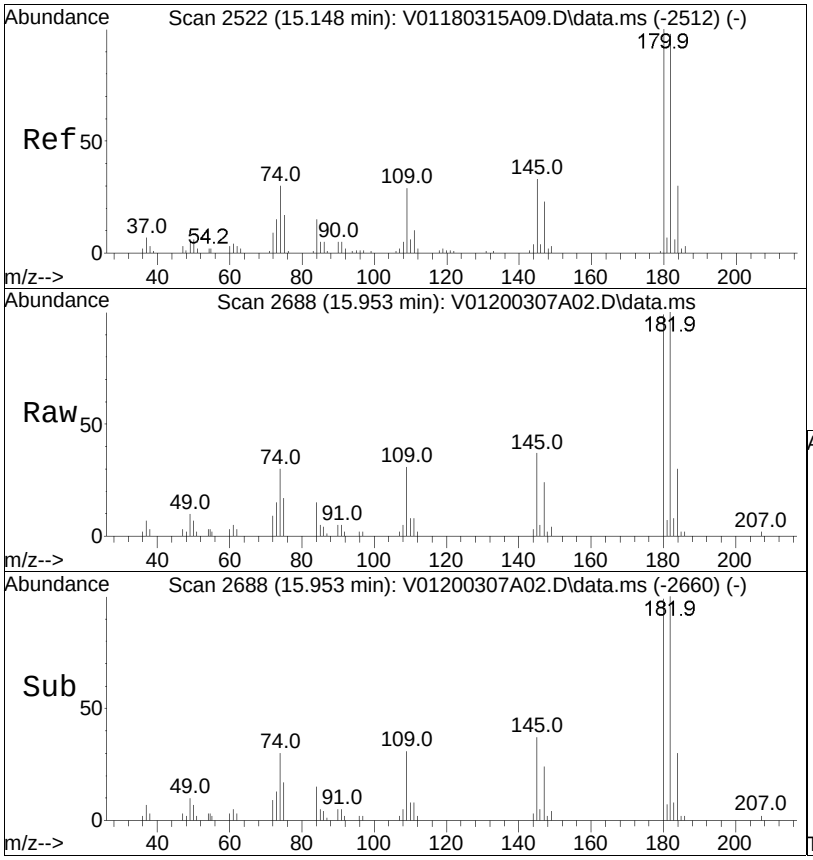





#110
Naphthalene
Concen: 9.82 ug/L
RT: 15.741 min Scan# 2649
Delta R.T. -0.000 min
Lab File: V01200307A02.D
Acq: 7 Mar 2020 9:55 am

Tgt Ion:128 Resp: 81366

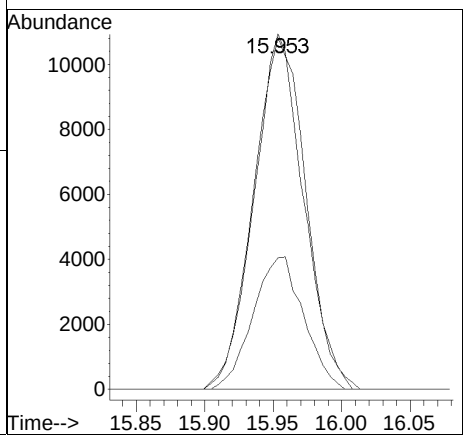





#111
1,2,3-Trichlorobenzene
Concen: 10.02 ug/L
RT: 15.953 min Scan# 2688
Delta R.T. 0.000 min
Lab File: V01200307A02.D
Acq: 7 Mar 2020 9:55 am

Tgt Ion:180 Resp: 28826

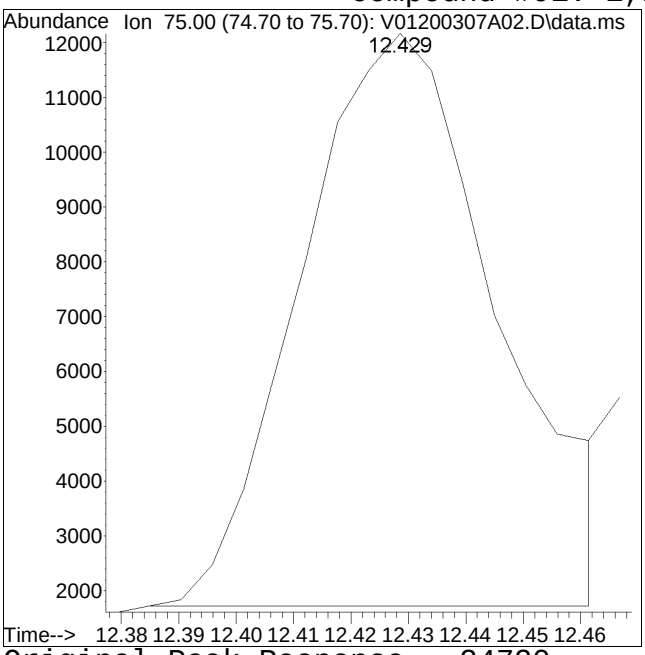
| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 180 | 100 | | |
| 182 | 95.1 | 75.4 | 113.0 |
| 145 | 36.4 | 25.0 | 37.6 |



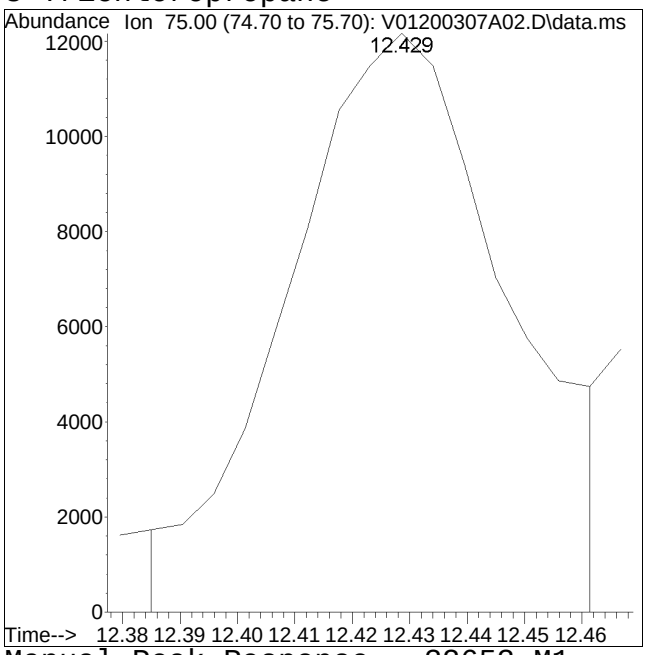
# Manual Integration Report

Data Path : I:\VOLATILES\VOA101\2020\2QMethod : V101_200219A_8260.m
Data File : V01200307A02.D Operator : VOA101:MKS
Date Inj'd : 3/7/2020 9:55 am Instrument : VOA 101
Sample : WG1348564-4,31,10,10 Quant Date : 3/7/2020 10:18 am

## Compound #91: 1,2,3-Trichloropropane




Original Peak Response = 24720




Manual Peak Response = 32653 M1

M1 = Split or tailing peak, auto integration stopped early resulting in false low area count.

# Calculation of Volatile Organic Compounds

Aqueous Concentration Formula: Amt * DF * Uf * (1/Vo)

Where:
DF = Dilution Factor
Vo = Sample Volume Purged (mL)
Uf = ng Unit Correction Factor (mL)

Soil Concentration Formula: Amt * DF * (1/Wt)

Where:
DF = Dilution Factor
Wt = Weight of Sample (g)

ALPHA ANALYTICAL LABORATORIES, INC.

Alpha WORK GROUP REPORT (wk02)

Mar 10 2020, 12:59 pm

Work Group: WG1348135  for Department: 31 GC/MS - Volatiles

Created: 06-MAR-20  Due:  Operator: PD

| Sample | Client ID | C | Product | Matrix | Stat | UA | HOLD | DUE | PR | Location |
|---|---|---|---|---|---|---|---|---|---|---|
| L2009296-13 | GW-2 | S | NYTCL-8260-R2 | WATER | DONE | U | 0316 | 0309 | S0 | Vial-B |
| L2009753-09 | TRIP BLANK | S | NYTCL-8260 | WATER | DONE | U | 0318 | 0311 | S0 | Vial-B |
| L2009760-04 | TRIP BLANK | S | NYTCL-8260 | WATER | DONE | U | 0317 | 0311 | S0 | Vial-B |
| L2009793-04 | TB | S | NYTCL-8260 | WATER | DONE | U | 0317 | 0311 | S0 | Vial-B |
| L2009799-07 | TB-01_030420 | S | NYTCL-8260 | WATER | DONE | U | 0318 | 0311 | S0 | Vial-B |
| L2009807-04 | MW-1 | S | NYTCL-8260 | WATER | DONE | U | 0318 | 0310 | S0 | Vial-B |
| WG1348135-1 | MS BFB Tune Standard | S | NYTCL-8260-R2 | WATER | DONE | U | | | | |
| WG1348135-1 | MS BFB Tune Standard | S | NYTCL-8260 | WATER | DONE | U | | | | |
| WG1348135-2 | Continuing Calibrati | S | NYTCL-8260 | WATER | DONE | U | | | | |
| WG1348135-2 | Continuing Calibrati | S | NYTCL-8260-R2 | WATER | DONE | U | | | | |
| WG1348135-3 | Laboratory Control S | S | NYTCL-8260-R2 | WATER | DACQ | U | | | | |
| WG1348135-3 | Laboratory Control S | S | NYTCL-8260 | WATER | DONE | U | | | | |
| WG1348135-4 | LCS Duplicate | S | NYTCL-8260-R2 | WATER | DACQ | U | | | | |
| WG1348135-4 | LCS Duplicate | S | NYTCL-8260 | WATER | DONE | U | | | | |
| WG1348135-5 | Laboratory Method Bl | S | NYTCL-8260-R2 | WATER | DACQ | U | | | | |
| WG1348135-5 | Laboratory Method Bl | S | NYTCL-8260 | WATER | DONE | U | | | | |

Comments:

WG1348135-4  WG1348135-3

ALPHA ANALYTICAL LABORATORIES, INC.

Alpha WORK GROUP REPORT (wk02)

Mar 10 2020, 12:59 pm

Work Group: WG1348564  for Department: 31 GC/MS - Volatiles

Created: 08-MAR-20  Due:  Operator: ajk

| Sample | Client ID | C | Product | Matrix | Stat | UA | HOLD | DUE | PR | Location |
|---|---|---|---|---|---|---|---|---|---|---|
| L2009739-07 | VES-TW-01 | S | NYTCL-8260 | WATER | DONE | U | 0318 | 0311 | S0 | Vial-B |
| L2009739-08 | VES-TW-02 | S | NYTCL-8260 | WATER | DONE | U | 0318 | 0311 | S0 | Vial-B |
| L2009739-09 | VES-TW-03 | S | NYTCL-8260 | WATER | DONE | U | 0318 | 0311 | S0 | Vial-B |
| L2009739-10 | VES-TW-04 | S | NYTCL-8260 | WATER | DONE | U | 0318 | 0311 | S0 | Vial-B |
| L2009739-11 | VES-TW-05 | S | NYTCL-8260 | WATER | DONE | U | 0318 | 0311 | S0 | Vial-B |
| L2009793-01 | MW-213 | S | NYTCL-8260 | WATER | DONE | U | 0318 | 0311 | S0 | Vial-B |
| L2009793-02 | MW-214 | S | NYTCL-8260 | WATER | DONE | U | 0318 | 0311 | S0 | Vial-B |
| L2009799-01 | MW-112_030420 | S | NYTCL-8260 | WATER | DONE | U | 0318 | 0311 | S0 | Vial-B |
| L2009799-02 | MW-118_030420 | S | NYTCL-8260 | WATER | DONE | U | 0318 | 0311 | S0 | Vial-B |
| L2009799-03 | MW-165_030420 | S | NYTCL-8260 | WATER | DONE | U | 0318 | 0311 | S0 | Vial-B |
| L2009799-04 | MW-166_030420 | S | NYTCL-8260 | WATER | DONE | U | 0318 | 0311 | S0 | Vial-B |
| L2009799-05 | MW-168_030420 | S | NYTCL-8260 | WATER | DONE | U | 0318 | 0311 | S0 | Vial-B |
| L2009799-06 | MW-169_030420 | S | NYTCL-8260 | WATER | DONE | U | 0318 | 0311 | S0 | Vial-B |
| L2009801-01 | MW-13 | C | NYTCL-8260 | WATER | DONE | U | 0318 | 0311 | S0 | Vial-B |
| L2009801-02 | MW-12B | C | NYTCL-8260 | WATER | DONE | U | 0318 | 0311 | S0 | Vial-B |
| L2009801-03 | MW-4C | C | NYTCL-8260 | WATER | DONE | U | 0318 | 0311 | S0 | Vial-B |
| L2009801-04 | MW-4D | C | NYTCL-8260 | WATER | DONE | U | 0318 | 0311 | S0 | Vial-B |
| L2009801-05 | MW-3C | C | NYTCL-8260 | WATER | DONE | U | 0318 | 0311 | S0 | Vial-B |
| L2009804-01 | MW12_030420 | S | NYTCL-8260 | WATER | DONE | U | 0318 | 0311 | S0 | Vial-B |
| L2009804-02 | MW13_030420 | S | NYTCL-8260 | WATER | DONE | U | 0318 | 0311 | S0 | Vial-B |
| WG1348564-1 | MS BFB Tune Standard | S | NYTCL-8260 | WATER | DONE | U | | | | |
| WG1348564-2 | Continuing Calibrati | S | NYTCL-8260 | WATER | DONE | U | | | | |
| WG1348564-3 | Laboratory Control S | S | NYTCL-8260 | WATER | DONE | U | | | | |
| WG1348564-4 | LCS Duplicate | S | NYTCL-8260 | WATER | DONE | U | | | | |
| WG1348564-5 | Laboratory Method Bl | S | NYTCL-8260 | WATER | DONE | U | | | | |

Comments:

WG1348564-4  WG1348564-3

Inst: VOA122 BFB: V7601 Method GC: 8260_WATER
Initials: JAL IS/SS: V7665 Autosampler: 8260WATER
Date: **12/19/19** ICAL: V7675,V7673B Concentrator: 8260
Run: **N** ICV: V7662,V7639,V7663,V7664,V7596,V7613 QC:___Seq:_____

| Vial | Data File | Sample |
|---|---|---|
| 1 | V22191219NBF1 | BFB TUNE |
| 1 | V22191219N01 | BLK |
| 2 | V22191219N02 | BLK |
| 3 | V22191219N03 | I8260STDL0.2PPB |
| 4 | V22191219N04 | I8260STDL0.5PPB |
| 5 | V22191219N05 | I8260STDL0.5PPB |
| 6 | V22191219N06 | I8260STDL2PPB |
| 7 | V22191219N07 | I8260STDL2PPB |
| 8 | V22191219N08 | I8260STDL10PPB |
| 9 | V22191219N09 | I8260STDL30PPB |
| 10 | V22191219N10 | I8260STDL80PPB |
| 11 | V22191219N11 | I8260STDL120PPB |
| 12 | V22191219N12 | I8260STDL200PPB |
| 13 | V22191219N13 | BLK |
| 14 | V22191219N14 | BLK |
| 15 | V22191219N15 | BLK |
| 16 | V22191219N16 | BLK |
| 17 | V22191219N17 | C8260STDL10PPB |
| 18 | V22191219N18 | C8260STDL10PPB |
| 19 | V22191219N19 | BLK |

Inst: VOA101
Initials: PD\KJD
Date: **02/19/20**
Run: **A**

BFB: V7683
IS/SS: V7748
ICAL: V7749,V7750B,V7693
ICV: V7722,V7724,V7737,V7738,V7751,V7694,V7691

Method
GC: 8260
Autosampler: 8260 liquid IS2
Concentrator: 8260water

QC:_____ Seq:_____

| Vial | Data File | Sample |
|---|---|---|
| 6 | V01200219ABF6 | BFB TUNE |
| 1 | V01200219A01 | BLK |
| 2 | V01200219A02 | BLK |
| 3 | V01200219A03 | I8260STD0.15PPB |
| 4 | V01200219A04 | I8260STD0.5PPB |
| 5 | V01200219A05 | I8260STD0.5PPB |
| 6 | V01200219A06 | I8260STD2.0PPB |
| 7 | V01200219A07 | I8260STD2.0PPB |
| 8 | V01200219A08 | I8260STD10PPB |
| 9 | V01200219A09 | I8260STD30PPB |
| 10 | V01200219A10 | I8260STD80PPB |
| 11 | V01200219A11 | I8260STD120PPB |
| 12 | V01200219A12 | I8260STD200PPB |
| 13 | V01200219A13 | BLK |
| 14 | V01200219A14 | BLK |
| 15 | V01200219A15 | BLK |
| 16 | V01200219A16 | BLK |
| 17 | V01200219A17 | BLK |
| 18 | V01200219A18 | I8260STD0.15PPB |
| 19 | V01200219A19 | I8260STD0.5PPB |
| 20 | V01200219A20 | C8260STD10PPB |
| 21 | V01200219A21 | C8260STD10PPB |
| 22 | V01200219A22 | BLK |

Inst: VOA101 BFB: V7752 Method GC: 8260
Initials: MKS IS/SS: V7771 Autosampler: 8260 liquid IS2
Date: **03/07/20** ICAL: V7775,V7750D Concentrator: 8260water
Run: **A** ICV: V7722,V7724,V7737,V7738,V7751,V7694,V7691

QC:_____ Seq:_____

| Vial | Data File | Sample | | |
|---|---|---|---|---|
| 1 | V01200307ABF1 | BFB TUNE | | |
| 1 | V01200307A01 | 8260 CCAL LCS | | |
| 2 | V01200307A02 | 8260 CCAL LCSD | | |
| 3 | V01200307A03 | 8260 CCAL | | |
| 4 | V01200307A04 | BLK | | |
| 5 | V01200307A05 | BLK | | |
| 6 | V01200307A06 | METHOD BLK | | |
| 7 | V01200307A07 | I2009739-08,31,10,10,,a | NYTCL | pH<2 |
| 8 | V01200307A08 | I2009799-01,31,10,10,,a | NYTCL | pH<2 |
| 9 | V01200307A09 | I2009799-03,31,10,10,,a | NYTCL | pH<2 |
| 10 | V01200307A10 | I2009739-11,31,10,10,,a | NYTCL | pH<2 |
| 11 | V01200307A11 | I2009793-01,31,10,10,,a | NYTCL+15 | pH<2 |
| 12 | V01200307A12 | I2009793-02,31,10,10,,a | NYTCL+15 | pH<2 |
| 13 | V01200307A13 | I2009801-01,31,10,10,,a | NYCURVE/IM | pH<2 |
| 14 | V01200307A14 | I2009801-02,31,10,10,,a | NYCURVE/IM | pH<2 |
| 15 | V01200307A15 | I2009801-03,31,10,10,,a | NYCURVE/IM | pH<2 |
| 16 | V01200307A16 | I2009801-04,31,10,10,,a | NYCURVE/IM | pH<2 |
| 17 | V01200307A17 | I2009801-05,31,10,10,,a | NYCURVE/IM | pH<2 |
| 18 | V01200307A18 | I2009804-01,31,10,10,,a | NYTCL | pH<2 |
| 19 | V01200307A19 | I2009804-02,31,10,10,,a | NYTCL | pH<2 |
| 20 | V01200307A20 | I2009739-09,31,10,10,,a | NYTCL | pH<2 |
| 21 | V01200307A21 | I2009739-10,31,10,10,,a | NYTCL | pH<2 |
| 22 | V01200307A22 | I2009799-02D,31,2,10,,a | NYTCL FOAM | pH>2 |
| 23 | V01200307A23 | I2009799-04,31,10,10,,a | NYTCL | pH<2 |
| 24 | V01200307A24 | I2009799-05D,31,4,10,,a | NYTCL FOAM | pH<2 |
| 25 | V01200307A25 | I2009799-06D,31,4,10,,a | NYTCL FOAM | pH<2 |
| 26 | V01200307A26 | I2009739-07D,31,2.5,10,,a | NYTCL | pH<2 |

Inst: VOA122 BFB: V7752 Method GC: 8260_WATER
Initials: PD IS/SS: V7771 Autosampler: 8260WATER
Date: **03/06/20** ICAL: V7775,V7711F Concentrator: 8260
Run: **A** ICV: V7662,V7639,V7663,V7664,V7596,V7613 QC:___Seq:_____

| Vial | Data File | Sample | | | |
|---|---|---|---|---|---|
| 1 | V22200306ABF1 | BFB TUNE 09:33 | | | |
| 1 | V22200306A01 | 8260 CCAL LCS | | | |
| 2 | V22200306A02 | 8260 CCAL LCSD | | | |
| 3 | V22200306A03 | 8260 CCAL | | | |
| 4 | V22200306A04 | BLK | | | |
| 5 | V22200306A05 | METHOD BLK | | | |
| 6 | V22200306A06 | I2009807-04,31,10,10,,a | NYTCL | | pH<2 |
| 7 | V22200306A07 | I2009296-13D,31,5,10,,c | NYCURVE | VERY OILY | pH<2 |
| 8 | V22200306A08 | I2008917-05,31,10,10,,a | 8260 | | pH<2 |
| 9 | V22200306A09 | I2008917-16,31,10,10,,a | 8260 | | pH<2 |
| 10 | V22200306A10 | I2008917-10D,31,4,10,,a | 8260 | | pH<2 |
| 11 | V22200306A11 | I2009823-09,31,10,10,,a | 8260/BTEX,VC | FB | pH<2 |
| 12 | V22200306A12 | I2009823-10,31,10,10,,a | 8260/BTEX,VC | TB | pH<2 |
| 13 | V22200306A13 | I2009753-09,31,10,10,,a | NYTCL | TB | pH<2 |
| 14 | V22200306A14 | I2009760-04,31,10,10,,a | NYTCL | TB | pH<2 |
| 15 | V22200306A15 | I2009793-04,31,10,10,,a | NYTCL/15 | TB | pH<2 |
| 16 | V22200306A16 | I2009799-07,31,10,10,,a | NYTCL | TB | pH<2 |
| 17 | V22200306A17 | I2009721-01,31,10,10,,a | NJ/15 | | pH<2 |
| 18 | V22200306A18 | I2009721-02,31,10,10,,a | NJ/15 | | pH<2 |
| 19 | V22200306A19 | I2009721-03,31,10,10,,a | NJ/15 | | pH<2 |
| 20 | V22200306A20 | I2009721-04,31,10,10,,a | NJ/15 | | pH<2 |
| 21 | V22200306A21 | I2009713-12,31,10,10,,a | 8260 | | pH>2 |
| 22 | V22200306A22 | I2009713-01,31,10,10,,a | 8260 | | pH<2 |
| 23 | V22200306A23 | I2009713-08,31,10,10,,a | 8260 | | pH>2 |
| 24 | V22200306A24 | I2009713-11,31,10,10,,a | 8260 | | pH>2 |
| 25 | V22200306A25 | I2009713-08MS,31,10,10,,a1 | 8260 | | pH>2 |
| 26 | V22200306A26 | I2009713-08MSD,31,10,10,,a2 | 8260 | | pH>2 |
| 27 | V22200306A27 | I2009713-11MS,31,10,10,,a1 | 8260 | | pH>2 |
| 28 | V22200306A28 | I2009713-11MSD,31,10,10,,a2 | 8260 | | pH>2 |

# PFAAs

# Semivolatiles QC Summary

# Surrogate (Extracted Internal Standard) Recovery Summary
# Form 2
# Semivolatiles

**Client: Soils Engineering Services, Inc.**
**Project Name: GROSSINGERS**

**Lab Number: L2009793**
**Project Number: 9313**
**Matrix: Water**

| CLIENT ID (LAB SAMPLE NO.) | S1 () | S2 () | S3 () | S4 () | S5 () | S6 () | S7 () |
|---|---|---|---|---|---|---|---|
| MW-213 (L2009793-01) | 99 | 90 | 91 | 72 | 84 | 98 | 99 |
| MW-214 (L2009793-02) | 92 | 82 | 82 | 66 | 78 | 87 | 89 |
| FB (L2009793-03) | 101 | 116 | 111 | 93 | 104 | 127 | 99 |
| WG1347919-1BLANK | 108 | 124 | 106 | 107 | 107 | 112 | 112 |
| WG1347919-2LCS | 101 | 115 | 103 | 97 | 98 | 111 | 102 |
| WG1347919-3LCSD | 101 | 114 | 103 | 99 | 100 | 112 | 104 |
| MW-213MS | 89 | 80 | 82 | 66 | 78 | 86 | 85 |
| MW-214DUP | 86 | 77 | 71 | 61 | 73 | 83 | 84 |

**QC LIMITS**

| | |
|---|---|
| (2-156) | S1 = PERFLUORO[13C4]BUTANOIC ACID (MPFBA) |
| (16-173) | S2 = PERFLUORO[13C5]PENTANOIC ACID (M5PFPEA) |
| (31-159) | S3 = PERFLUORO[2,3,4-13C3]BUTANESULFONIC ACID (M3PFBS) |
| (21-145) | S4 = PERFLUORO[1,2,3,4,6-13C5]HEXANOIC ACID (M5PFHXA) |
| (30-139) | S5 = PERFLUORO[1,2,3,4-13C4]HEPTANOIC ACID (M4PFHPA) |
| (47-153) | S6 = PERFLUORO[1,2,3-13C3]HEXANESULFONIC ACID (M3PFHXS) |
| (47-153) | S7 = PERFLUORO[13C8]OCTANOIC ACID (M8PFOA) |

*** Values outside of QC limits**

# Surrogate (Extracted Internal Standard) Recovery Summary
# Form 2
# Semivolatiles

**Client: Soils Engineering Services, Inc.**
**Project Name: GROSSINGERS**

**Lab Number: L2009793**
**Project Number: 9313**
**Matrix: Water**

| CLIENT ID (LAB SAMPLE NO.) | S8 () | S9 () | S10 () | S11 () | S12 () | S13 () | S14 () |
|---|---|---|---|---|---|---|---|
| MW-213 (L2009793-01) | 273* | 105 | 99 | 96 | 179* | 106 | 98 |
| MW-214 (L2009793-02) | 241 | 97 | 84 | 84 | 155 | 95 | 85 |
| FB (L2009793-03) | 154 | 101 | 110 | 92 | 117 | 101 | 104 |
| WG1347919-1BLANK | 115 | 115 | 112 | 107 | 123 | 106 | 117 |
| WG1347919-2LCS | 127 | 106 | 105 | 101 | 143 | 99 | 108 |
| WG1347919-3LCSD | 128 | 109 | 112 | 101 | 133 | 94 | 111 |
| MW-213MS | 238 | 94 | 90 | 79 | 141 | 90 | 83 |
| MW-214DUP | 228 | 95 | 79 | 76 | 136 | 96 | 84 |

**QC LIMITS**

(1-244) S8 = 1H,1H,2H,2H-PERFLUORO[1,2-13C2]OCTANESULFONIC ACID (M2-6:2FTS)
(34-146) S9 = PERFLUORO[13C9]NONANOIC ACID (M9PFNA)
(42-146) S10 = PERFLUORO[13C8]OCTANESULFONIC ACID (M8PFOS)
(38-144) S11 = PERFLUORO[1,2,3,4,5,6-13C6]DECANOIC ACID (M6PFDA)
(7-170) S12 = 1H,1H,2H,2H-PERFLUORO[1,2-13C2]DECANESULFONIC ACID (M2-8:2FTS)
(1-181) S13 = N-DEUTERIOMETHYLPERFLUORO-1-OCTANESULFONAMIDOACETIC ACID (D3-NMEFOSAA)
(1-181) S14 = PERFLUORO[1,2,3,4,5,6,7-13C7]UNDECANOIC ACID (M7-PFUDA)

*** Values outside of QC limits**

# Surrogate (Extracted Internal Standard) Recovery Summary
# Form 2
# Semivolatiles

**Client: Soils Engineering Services, Inc.**
**Project Name: GROSSINGERS**

**Lab Number: L2009793**
**Project Number: 9313**
**Matrix: Water**

| CLIENT ID (LAB SAMPLE NO.) | S15 () | S16 () | S17 () | S18 () | S19 () | S20 () | S21 () | TOT OUT |
|---|---|---|---|---|---|---|---|---|
| MW-213 (L2009793-01) | 37 | 96 | 84 | 80 | -- | -- | -- | 2 |
| MW-214 (L2009793-02) | 26 | 89 | 82 | 69 | -- | -- | -- | 0 |
| FB (L2009793-03) | 58 | 96 | 97 | 87 | -- | -- | -- | 0 |
| WG1347919-1BLANK | 61 | 92 | 105 | 99 | -- | -- | -- | 0 |
| WG1347919-2LCS | 50 | 89 | 100 | 92 | -- | -- | -- | 0 |
| WG1347919-3LCSD | 53 | 86 | 96 | 92 | -- | -- | -- | 0 |
| MW-213MS | 35 | 82 | 73 | 65 | -- | -- | -- | 0 |
| MW-214DUP | 24 | 90 | 73 | 68 | -- | -- | -- | 0 |

**QC LIMITS**

**(1-87)** **S15 = PERFLUORO[13C8]OCTANESULFONAMIDE (M8FOSA)**
**(23-146)** **S16 = N-DEUTERIOETHYLPERFLUORO-1-OCTANESULFONAMIDOACETIC ACID (D5-NETFOSAA)**
**(24-161)** **S17 = PERFLUORO[1,2-13C2]DODECANOIC ACID (MPFDOA)**
**(33-143)** **S18 = PERFLUORO[1,2-13C2]TETRADECANOIC ACID (M2PFTEDA)**

*** Values outside of QC limits**

# Lab Duplicate Sample Summary
# Form 3
# Semivolatiles

| | | | |
|---|---|---|---|
| **Client** | : Soils Engineering Services, Inc. | **Lab Number** | : L2009793 |
| **Project Name** | : GROSSINGERS | **Project Number** | : 9313 |
| **Client Sample ID** | : MW-214 | **Matrix** | : WATER |
| **Lab Sample ID** | : L2009793-02 | **Analysis Date** | : 03/09/20 15:40 |
| **Lab File ID** | : I19079 | **DUP File ID** | : I19080 |
| **Dup Sample ID** | : WG1347919-5 | **DUP Analysis Date** | : 03/09/20 15:56 |

| Parameter | Sample Concentration (ng/l) | Duplicate Concentration (ng/l) | RPD | RPD Limit |
|---|---|---|---|---|
| Perfluorobutanoic Acid (PFBA) | 10.9 | 11.4 | 4 | 30 |
| Perfluoropentanoic Acid (PFPeA) | 5.47 | 5.82 | 6 | 30 |
| Perfluorobutanesulfonic Acid (PFBS) | 3.88 | 4.27 | 10 | 30 |
| Perfluorohexanoic Acid (PFHxA) | 8.26 | 8.97 | 8 | 30 |
| Perfluoroheptanoic Acid (PFHpA) | 6.07 | 5.86 | 4 | 30 |
| Perfluorohexanesulfonic Acid (PFHxS) | 8.26 | 7.64 | 8 | 30 |
| Perfluorooctanoic Acid (PFOA) | 29.9 | 31.2 | 4 | 30 |
| 1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS) | ND | ND | NC | 30 |
| Perfluoroheptanesulfonic Acid (PFHpS) | 1.64J | ND | NC | 30 |
| Perfluorononanoic Acid (PFNA) | 1.08J | 1.06J | NC | 30 |
| Perfluorooctanesulfonic Acid (PFOS) | 47.3 | 42.9 | 10 | 30 |
| Perfluorodecanoic Acid (PFDA) | 0.849J | 0.538J | NC | 30 |
| 1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS) | ND | ND | NC | 30 |
| N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA) | ND | ND | NC | 30 |
| Perfluoroundecanoic Acid (PFUnA) | 0.260J | ND | NC | 30 |
| Perfluorodecanesulfonic Acid (PFDS) | ND | ND | NC | 30 |
| Perfluorooctanesulfonamide (FOSA) | ND | 0.785J | NC | 30 |
| N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA) | ND | ND | NC | 30 |
| Perfluorododecanoic Acid (PFDoA) | ND | ND | NC | 30 |
| Perfluorotridecanoic Acid (PFTrDA) | ND | ND | NC | 30 |
| Perfluorotetradecanoic Acid (PFTA) | ND | ND | NC | 30 |

# Laboratory Control Sample Summary
# Form 3
# Semivolatiles

| | | | |
|---|---|---|---|
| **Client** | : Soils Engineering Services, Inc. | **Lab Number** | : L2009793 |
| **Project Name** | : GROSSINGERS | **Project Number** | : 9313 |
| **Matrix** | : WATER | | |
| **LCS Sample ID** | : WG1347919-2 | **Analysis Date** : 03/11/20 02:54 | **File ID** : I20455 |
| **LCSD Sample ID** | : WG1347919-3 | **Analysis Date** : 03/11/20 03:10 | **File ID** : I20456 |

| | Laboratory Control Sample | | | Laboratory Control Duplicate | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Parameter | True (ng/l) | Found (ng/l) | %R | True (ng/l) | Found (ng/l) | %R | RPD | Recovery Limits | RPD Limit |
| Perfluorobutanoic Acid (PFBA) | 40 | 35.3 | 88 | 40 | 34.4 | 86 | 2 | 67-148 | 30 |
| Perfluoropentanoic Acid (PFPeA) | 40 | 36.6 | 92 | 40 | 36.2 | 91 | 1 | 63-161 | 30 |
| Perfluorobutanesulfonic Acid (PFBS) | 35.4 | 31.7 | 89 | 35.4 | 30.3 | 86 | 3 | 65-157 | 30 |
| Perfluorohexanoic Acid (PFHxA) | 40 | 35.2 | 88 | 40 | 34.0 | 85 | 3 | 69-168 | 30 |
| Perfluoroheptanoic Acid (PFHpA) | 40 | 36.4 | 91 | 40 | 34.3 | 86 | 6 | 58-159 | 30 |
| Perfluorohexanesulfonic Acid (PFHxS) | 36.5 | 32.1 | 88 | 36.5 | 29.0 | 80 | 10 | 69-177 | 30 |
| Perfluorooctanoic Acid (PFOA) | 40 | 36.3 | 91 | 40 | 34.8 | 87 | 4 | 63-159 | 30 |
| 1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS) | 38 | 38.4 | 101 | 38 | 36.1 | 95 | 6 | 49-187 | 30 |
| Perfluoroheptanesulfonic Acid (PFHpS) | 38 | 35.7 | 94 | 38 | 33.2 | 87 | 8 | 61-179 | 30 |
| Perfluorononanoic Acid (PFNA) | 40 | 35.8 | 90 | 40 | 34.6 | 87 | 3 | 68-171 | 30 |
| Perfluorooctanesulfonic Acid (PFOS) | 37 | 33.3 | 90 | 37 | 30.3 | 82 | 9 | 52-151 | 30 |
| Perfluorodecanoic Acid (PFDA) | 40 | 35.9 | 90 | 40 | 34.5 | 86 | 5 | 63-171 | 30 |
| 1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS) | 38.4 | 37.2 | 97 | 38.4 | 37.1 | 96 | 1 | 56-173 | 30 |

# Laboratory Control Sample Summary
# Form 3
# Semivolatiles

| | | | |
|---|---|---|---|
| **Client** | : Soils Engineering Services, Inc. | **Lab Number** | : L2009793 |
| **Project Name** | : GROSSINGERS | **Project Number** | : 9313 |
| **Matrix** | : WATER | | |
| **LCS Sample ID** | : WG1347919-2 | **Analysis Date** : 03/11/20 02:54 | **File ID** : I20455 |
| **LCSD Sample ID** | : WG1347919-3 | **Analysis Date** : 03/11/20 03:10 | **File ID** : I20456 |

| | Laboratory Control Sample | | | Laboratory Control Duplicate | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Parameter | True (ng/l) | Found (ng/l) | %R | True (ng/l) | Found (ng/l) | %R | RPD | Recovery Limits | RPD Limit |
| N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA) | 40 | 40.1 | 100 | 40 | 40.5 | 101 | 1 | 60-166 | 30 |
| Perfluoroundecanoic Acid (PFUnA) | 40 | 35.7 | 89 | 40 | 33.7 | 84 | 6 | 60-153 | 30 |
| Perfluorodecanesulfonic Acid (PFDS) | 38.6 | 37.1 | 96 | 38.6 | 33.9 | 88 | 9 | 38-156 | 30 |
| Perfluorooctanesulfonamide (FOSA) | 40 | 37.8 | 95 | 40 | 34.7 | 87 | 9 | 46-170 | 30 |
| N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA) | 40 | 34.1 | 85 | 40 | 36.6 | 92 | 8 | 45-170 | 30 |
| Perfluorododecanoic Acid (PFDoA) | 40 | 36.5 | 91 | 40 | 36.1 | 90 | 1 | 67-153 | 30 |
| Perfluorotridecanoic Acid (PFTrDA) | 40 | 40.2 | 100 | 40 | 40.9 | 102 | 2 | 48-158 | 30 |
| Perfluorotetradecanoic Acid (PFTA) | 40 | 36.9 | 92 | 40 | 36.3 | 91 | 1 | 59-182 | 30 |

# Matrix Spike Sample Summary
# Form 3
# Semivolatiles

| | | | |
|---|---|---|---|
| **Client** | : Soils Engineering Services, Inc. | **Lab Number** | : L2009793 |
| **Project Name** | : GROSSINGERS | **Project Number** | : 9313 |
| **Client Sample ID** | : MW-213 | **Matrix** | : WATER |
| **Lab Sample ID** | : L2009793-01 | **Analysis Date** | : 03/09/20 15:23 |
| **Matrix Spike** | : WG1347919-4 | **MS Analysis Date** | : 03/09/20 16:46 |
| **Matrix Spike Dup** | : | **MSD Analysis Date** | : |

| | | Matrix Spike Sample | | | Matrix Spike Duplicate | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Parameter** | **Sample Conc. (ng/l)** | **Spike Added (ng/l)** | **Spike Conc. (ng/l)** | **%R** | **Spike Added (ng/l)** | **Spike Conc. (ng/l)** | **%R** | **RPD** | **Recovery Limits** | **RPD Limit** |
| Perfluorobutanoic Acid (PFBA) | 12.8 | 39.7 | 55.3 | 107 | | | | | 67-148 | 30 |
| Perfluoropentanoic Acid (PFPeA) | 9.00 | 39.7 | 51.8 | 108 | | | | | 63-161 | 30 |
| Perfluorobutanesulfonic Acid (PFBS) | 2.97 | 35.2 | 40.0 | 105 | | | | | 65-157 | 30 |
| Perfluorohexanoic Acid (PFHxA) | 11.0 | 39.7 | 53.3 | 107 | | | | | 69-168 | 30 |
| Perfluoroheptanoic Acid (PFHpA) | 8.10 | 39.7 | 47.4 | 99 | | | | | 58-159 | 30 |
| Perfluorohexanesulfonic Acid (PFHxS) | 5.37 | 36.2 | 45.8 | 112 | | | | | 69-177 | 30 |
| Perfluorooctanoic Acid (PFOA) | 32.8 | 39.7 | 74.8 | 106 | | | | | 63-159 | 30 |
| 1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS) | ND | 37.7 | 40.4 | 107 | | | | | 49-187 | 30 |
| Perfluoroheptanesulfonic Acid (PFHpS) | 1.06J | 37.7 | 48.5 | 129 | | | | | 61-179 | 30 |
| Perfluorononanoic Acid (PFNA) | 3.45 | 39.7 | 43.5 | 101 | | | | | 68-171 | 30 |
| Perfluorooctanesulfonic Acid (PFOS) | 73.4 | 36.7 | 113 | 108 | | | | | 52-151 | 30 |
| Perfluorodecanoic Acid (PFDA) | 1.88J | 39.7 | 41.3 | 104 | | | | | 63-171 | 30 |
| 1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS) | ND | 38.1 | 48.5 | 127 | | | | | 56-173 | 30 |
| N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA) | ND | 39.7 | 42.1 | 106 | | | | | 60-166 | 30 |
| Perfluoroundecanoic Acid (PFUnA) | ND | 39.7 | 37.2 | 94 | | | | | 60-153 | 30 |

# Matrix Spike Sample Summary
# Form 3
# Semivolatiles

| | | | |
|---|---|---|---|
| **Client** | : Soils Engineering Services, Inc. | **Lab Number** | : L2009793 |
| **Project Name** | : GROSSINGERS | **Project Number** | : 9313 |
| **Client Sample ID** | : MW-213 | **Matrix** | : WATER |
| **Lab Sample ID** | : L2009793-01 | **Analysis Date** | : 03/09/20 15:23 |
| **Matrix Spike** | : WG1347919-4 | **MS Analysis Date** | : 03/09/20 16:46 |
| **Matrix Spike Dup** | : | **MSD Analysis Date** | : |

| | | Matrix Spike Sample | | | Matrix Spike Duplicate | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Parameter** | **Sample Conc. (ng/l)** | **Spike Added (ng/l)** | **Spike Conc. (ng/l)** | **%R** | **Spike Added (ng/l)** | **Spike Conc. (ng/l)** | **%R** | **RPD** | **Recovery Limits** | **RPD Limit** |
| Perfluorodecanesulfonic Acid (PFDS) | ND | 38.3 | 44.9 | 117 | | | | | 38-156 | 30 |
| Perfluorooctanesulfonamide (FOSA) | 1.42J | 39.7 | 42.8 | 108 | | | | | 46-170 | 30 |
| N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA) | 1.19J | 39.7 | 42.5 | 107 | | | | | 45-170 | 30 |
| Perfluorododecanoic Acid (PFDoA) | ND | 39.7 | 42.3 | 107 | | | | | 67-153 | 30 |
| Perfluorotridecanoic Acid (PFTrDA) | ND | 39.7 | 44.5 | 112 | | | | | 48-158 | 30 |
| Perfluorotetradecanoic Acid (PFTA) | ND | 39.7 | 44.3 | 112 | | | | | 59-182 | 30 |

# Method Blank Summary
# Form 4
# Semivolatiles

| | | | |
|---|---|---|---|
| **Client** | : Soils Engineering Services, Inc. | **Lab Number** | : L2009793 |
| **Project Name** | : GROSSINGERS | **Project Number** | : 9313 |
| **Lab Sample ID** | : WG1347919-1 | **Lab File ID** | : I20436 |
| **Instrument ID** | : LCMS02 | **Extraction Date** | : 03/06/20 |
| **Matrix** | : WATER | **Analysis Date** | : 03/10/20 21:37 |
| **Level** | : LOW | | |

| Client Sample No. | Lab Sample ID | Analysis Date |
|---|---|---|
| MW-213 | L2009793-01 | 03/09/20 15:23 |
| MW-214 | L2009793-02 | 03/09/20 15:40 |
| MW-214DUP | WG1347919-5 | 03/09/20 15:56 |
| MW-213MS | WG1347919-4 | 03/09/20 16:46 |
| FB | L2009793-03 | 03/09/20 17:36 |
| WG1347919-2LCS | WG1347919-2 | 03/11/20 02:54 |
| WG1347919-3LCSD | WG1347919-3 | 03/11/20 03:10 |

# Internal Standard Area and RT Summary
# Form 8a
# Semivolatiles

| | | | |
|---|---|---|---|
| **Client** | : Soils Engineering Services, Inc. | **Lab Number** | : L2009793 |
| **Project Name** | : GROSSINGERS | **Project Number** | : 9313 |
| **Instrument ID** | : LCMS01 | **Analysis Date** | : 03/09/20 12:48 |
| **Sample No** | : WG1348805-1 | **Lab File ID** | : I19069 |

| | M3PFBA | | M2PFOA | | M4PFOS | |
|---|---|---|---|---|---|---|
| | Area | RT | Area | RT | Area | RT |
| WG1348805-1 | 56400 | 2.21 | 132182 | 9.30 | 13777 | 10.09 |
| Upper Limit | 112800 | 2.71 | 264364 | 9.80 | 27554 | 10.59 |
| Lower Limit | 28200 | 1.71 | 66091 | 8.80 | 6889 | 9.59 |
| Sample ID | | | | | | |
| WG1348805-1 CCAL | 56400 | 2.21 | 132182 | 9.30 | 13777 | 10.09 |
| MW-213 | 38622 | 2.19 | 104551 | 9.31 | 9808 | 10.10 |
| MW-214 | 37569 | 2.19 | 103791 | 9.30 | 9912 | 10.10 |
| MW-214 DUP | 39483 | 2.19 | 107366 | 9.30 | 10843 | 10.10 |
| MW-213 MS | 41359 | 2.19 | 108960 | 9.29 | 10455 | 10.09 |

Area Upper Limit = +100% of internal standard area
Area Lower Limit = - 50% of internal standard area

RT Upper Limit = +0.50 minutes of internal standard RT
RT Lower Limit = -0.50 minutes of internal standard RT

* Values outside of QC limits

# Internal Standard Area and RT Summary
# Form 8a
# Semivolatiles

| | | | |
|---|---|---|---|
| **Client** | : Soils Engineering Services, Inc. | **Lab Number** | : L2009793 |
| **Project Name** | : GROSSINGERS | **Project Number** | : 9313 |
| **Instrument ID** | : LCMS01 | **Analysis Date** | : 03/09/20 12:48 |
| **Sample No** | : WG1348805-1 | **Lab File ID** | : I19069 |

| | M2PFDA | | | | | |
|---|---|---|---|---|---|---|
| | Area | RT | Area | RT | Area | RT |
| WG1348805-1 | 115096 | 10.66 | | | | |
| Upper Limit | 230192 | 11.16 | | | | |
| Lower Limit | 57548 | 10.16 | | | | |
| Sample ID | | | | | | |
| WG1348805-1 CCAL | 115096 | 10.66 | | | | |
| MW-213 | 99222 | 10.68 | | | | |
| MW-214 | 100487 | 10.68 | | | | |
| MW-214 DUP | 101287 | 10.67 | | | | |
| MW-213 MS | 100653 | 10.67 | | | | |

Area Upper Limit = +100% of internal standard area
Area Lower Limit = - 50% of internal standard area

RT Upper Limit = +0.50 minutes of internal standard RT
RT Lower Limit = -0.50 minutes of internal standard RT

* Values outside of QC limits

# Internal Standard Area and RT Summary
# Form 8a
# Semivolatiles

| | | | |
|---|---|---|---|
| **Client** | : Soils Engineering Services, Inc. | **Lab Number** | : L2009793 |
| **Project Name** | : GROSSINGERS | **Project Number** | : 9313 |
| **Instrument ID** | : LCMS01 | **Analysis Date** | : 03/09/20 17:03 |
| **Sample No** | : WG1348805-2 | **Lab File ID** | : I19084 |

| | M3PFBA | | M2PFOA | | M4PFOS | |
|---|---|---|---|---|---|---|
| | Area | RT | Area | RT | Area | RT |
| WG1348805-2 | 48546 | 2.21 | 126646 | 9.30 | 13369 | 10.09 |
| Upper Limit | 97092 | 2.71 | 253292 | 9.80 | 26738 | 10.59 |
| Lower Limit | 24273 | 1.71 | 63323 | 8.80 | 6685 | 9.59 |
| Sample ID | | | | | | |
| FB | 40588 | 2.21 | 106296 | 9.30 | 9500 | 10.09 |

Area Upper Limit = +100% of internal standard area
Area Lower Limit = - 50% of internal standard area

RT Upper Limit = +0.50 minutes of internal standard RT
RT Lower Limit = -0.50 minutes of internal standard RT

* Values outside of QC limits

# Internal Standard Area and RT Summary
# Form 8a
# Semivolatiles

| | | | |
|---|---|---|---|
| **Client** | : Soils Engineering Services, Inc. | **Lab Number** | : L2009793 |
| **Project Name** | : GROSSINGERS | **Project Number** | : 9313 |
| **Instrument ID** | : LCMS01 | **Analysis Date** | : 03/09/20 17:03 |
| **Sample No** | : WG1348805-2 | **Lab File ID** | : I19084 |

| | M2PFDA | | | | | |
|---|---|---|---|---|---|---|
| | Area | RT | Area | RT | Area | RT |
| WG1348805-2 | 107899 | 10.67 | | | | |
| Upper Limit | 215798 | 11.17 | | | | |
| Lower Limit | 53950 | 10.17 | | | | |
| Sample ID | | | | | | |
| FB | 94654 | 10.67 | | | | |

Area Upper Limit = +100% of internal standard area
Area Lower Limit = - 50% of internal standard area

RT Upper Limit = +0.50 minutes of internal standard RT
RT Lower Limit = -0.50 minutes of internal standard RT

* Values outside of QC limits

# Internal Standard Area and RT Summary
# Form 8a
# Semivolatiles

| | | | |
|---|---|---|---|
| **Client** | : Soils Engineering Services, Inc. | **Lab Number** | : L2009793 |
| **Project Name** | : GROSSINGERS | **Project Number** | : 9313 |
| **Instrument ID** | : LCMS02 | **Analysis Date** | : 03/10/20 10:15 |
| **Sample No** | : WG1348954-1 | **Lab File ID** | : I20398 |

| | M3PFBA | | M2PFOA | | M4PFOS | |
|---|---|---|---|---|---|---|
| | Area | RT | Area | RT | Area | RT |
| WG1348954-1 | 50181 | 2.20 | 122363 | 9.01 | 8804 | 9.82 |
| Upper Limit | 100362 | 2.70 | 244726 | 9.51 | 17608 | 10.32 |
| Lower Limit | 25091 | 1.70 | 61182 | 8.51 | 4402 | 9.32 |
| **Sample ID** | | | | | | |
| WG1348954-1 CCAL | 50181 | 2.20 | 122363 | 9.01 | 8804 | 9.82 |

Area Upper Limit = +100% of internal standard area
Area Lower Limit = - 50% of internal standard area

RT Upper Limit = +0.50 minutes of internal standard RT
RT Lower Limit = -0.50 minutes of internal standard RT

* Values outside of QC limits

# Internal Standard Area and RT Summary
# Form 8a
# Semivolatiles

| | | | |
|---|---|---|---|
| **Client** | : Soils Engineering Services, Inc. | **Lab Number** | : L2009793 |
| **Project Name** | : GROSSINGERS | **Project Number** | : 9313 |
| **Instrument ID** | : LCMS02 | **Analysis Date** | : 03/10/20 10:15 |
| **Sample No** | : WG1348954-1 | **Lab File ID** | : I20398 |

| | M2PFDA | | | | | |
|---|---|---|---|---|---|---|
| | Area | RT | Area | RT | Area | RT |
| WG1348954-1 | 116641 | 10.40 | | | | |
| Upper Limit | 233282 | 10.90 | | | | |
| Lower Limit | 58321 | 9.90 | | | | |
| **Sample ID** | | | | | | |
| WG1348954-1 CCAL | 116641 | 10.40 | | | | |

Area Upper Limit = +100% of internal standard area
Area Lower Limit = - 50% of internal standard area

RT Upper Limit = +0.50 minutes of internal standard RT
RT Lower Limit = -0.50 minutes of internal standard RT

* Values outside of QC limits

# Internal Standard Area and RT Summary
# Form 8a
# Semivolatiles

| | | | |
|---|---|---|---|
| **Client** | : Soils Engineering Services, Inc. | **Lab Number** | : L2009793 |
| **Project Name** | : GROSSINGERS | **Project Number** | : 9313 |
| **Instrument ID** | : LCMS02 | **Analysis Date** | : 03/10/20 21:04 |
| **Sample No** | : WG1348954-3 | **Lab File ID** | : I20434 |

| | M3PFBA | | M2PFOA | | M4PFOS | |
|---|---|---|---|---|---|---|
| | Area | RT | Area | RT | Area | RT |
| WG1348954-3 | 50678 | 2.18 | 132183 | 9.09 | 8684 | 9.89 |
| Upper Limit | 101356 | 2.68 | 264366 | 9.59 | 17368 | 10.39 |
| Lower Limit | 25339 | 1.68 | 66092 | 8.59 | 4342 | 9.39 |
| Sample ID | | | | | | |
| WG1348954-3 CCAL | 50678 | 2.18 | 132183 | 9.09 | 8684 | 9.89 |
| WG1347919-1 BLANK | 50586 | 2.18 | 135568 | 9.07 | 8712 | 9.87 |

Area Upper Limit = +100% of internal standard area
Area Lower Limit = - 50% of internal standard area

RT Upper Limit = +0.50 minutes of internal standard RT
RT Lower Limit = -0.50 minutes of internal standard RT

* Values outside of QC limits

# Internal Standard Area and RT Summary
# Form 8a
# Semivolatiles

| | | | |
|---|---|---|---|
| **Client** | : Soils Engineering Services, Inc. | **Lab Number** | : L2009793 |
| **Project Name** | : GROSSINGERS | **Project Number** | : 9313 |
| **Instrument ID** | : LCMS02 | **Analysis Date** | : 03/10/20 21:04 |
| **Sample No** | : WG1348954-3 | **Lab File ID** | : I20434 |

| | M2PFDA | | | | | |
|---|---|---|---|---|---|---|
| | Area | RT | Area | RT | Area | RT |
| WG1348954-3 | 123646 | 10.49 | | | | |
| Upper Limit | 247292 | 10.99 | | | | |
| Lower Limit | 61823 | 9.99 | | | | |
| **Sample ID** | | | | | | |
| WG1348954-3 CCAL | 123646 | 10.49 | | | | |
| WG1347919-1 BLANK | 124385 | 10.46 | | | | |

Area Upper Limit = +100% of internal standard area
Area Lower Limit = - 50% of internal standard area

RT Upper Limit = +0.50 minutes of internal standard RT
RT Lower Limit = -0.50 minutes of internal standard RT

* Values outside of QC limits

# Internal Standard Area and RT Summary
# Form 8a
# Semivolatiles

| | | | |
|---|---|---|---|
| **Client** | : Soils Engineering Services, Inc. | **Lab Number** | : L2009793 |
| **Project Name** | : GROSSINGERS | **Project Number** | : 9313 |
| **Instrument ID** | : LCMS02 | **Analysis Date** | : 03/10/20 23:50 |
| **Sample No** | : WG1348954-4 | **Lab File ID** | : I20444 |

| | M3PFBA | | M2PFOA | | M4PFOS | |
|---|---|---|---|---|---|---|
| | Area | RT | Area | RT | Area | RT |
| WG1348954-4 | 50692 | 2.18 | 128707 | 9.07 | 7917 | 9.87 |
| Upper Limit | 101384 | 2.68 | 257414 | 9.57 | 15834 | 10.37 |
| Lower Limit | 25346 | 1.68 | 64354 | 8.57 | 3959 | 9.37 |
| Sample ID | | | | | | |
| WG1347919-2 LCS | 55060 | 2.18 | 146720 | 9.04 | 8701 | 9.84 |
| WG1347919-3 LCSD | 56014 | 2.18 | 146724 | 9.06 | 8947 | 9.86 |

Area Upper Limit = +100% of internal standard area
Area Lower Limit = - 50% of internal standard area

RT Upper Limit = +0.50 minutes of internal standard RT
RT Lower Limit = -0.50 minutes of internal standard RT

* Values outside of QC limits

# Internal Standard Area and RT Summary
# Form 8a
# Semivolatiles

| | | | |
|---|---|---|---|
| **Client** | : Soils Engineering Services, Inc. | **Lab Number** | : L2009793 |
| **Project Name** | : GROSSINGERS | **Project Number** | : 9313 |
| **Instrument ID** | : LCMS02 | **Analysis Date** | : 03/10/20 23:50 |
| **Sample No** | : WG1348954-4 | **Lab File ID** | : I20444 |

| | M2PFDA | | | | | |
|---|---|---|---|---|---|---|
| | Area | RT | Area | RT | Area | RT |
| WG1348954-4 | 120268 | 10.46 | | | | |
| Upper Limit | 240536 | 10.96 | | | | |
| Lower Limit | 60134 | 9.96 | | | | |
| Sample ID | | | | | | |
| WG1347919-2 LCS | 133103 | 10.43 | | | | |
| WG1347919-3 LCSD | 136498 | 10.45 | | | | |

Area Upper Limit = +100% of internal standard area
Area Lower Limit = - 50% of internal standard area

RT Upper Limit = +0.50 minutes of internal standard RT
RT Lower Limit = -0.50 minutes of internal standard RT

* Values outside of QC limits

**Date Created:** 05/20/19
**Created By:** Jason Hebert
**File:** PM6682-1
**Page:** 1

**PFAAs via EPA 537(M)-Isotope Dilution (WATER)**

**Holding Time:** 14 days
**Container/Sample Preservation:** 1 - 2 Plastic/1 Plastic/1 H20 Plastic

| Analyte | CAS # | RL | MDL | Units | LCS Criteria | LCS RPD | MS Criteria | MS RPD | Duplicate RPD | Surrogate Criteria | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Perfluorobutanoic Acid (PFBA) | 375-22-4 | 2 | 0.408 | ng/l | 67-148 | 30 | 67-148 | 30 | 30 | | | |
| Perfluoropentanoic Acid (PFPeA) | 2706-90-3 | 2 | 0.396 | ng/l | 63-161 | 30 | 63-161 | 30 | 30 | | | |
| Perfluorobutanesulfonic Acid (PFBS) | 375-73-5 | 2 | 0.238 | ng/l | 65-157 | 30 | 65-157 | 30 | 30 | | | |
| 1H,1H,2H,2H-Perfluorohexanesulfonic Acid (4:2FTS) | NONE | 2 | 0.452 | ng/l | 37-219 | 30 | 37-219 | 30 | 30 | | | |
| Perfluorohexanoic Acid (PFHxA) | 307-24-4 | 2 | 0.328 | ng/l | 69-168 | 30 | 69-168 | 30 | 30 | | | |
| Perfluoropentanesulfonic Acid (PFPeS) | 2706-91-4 | 2 | 0.2452 | ng/l | 52-156 | 30 | 52-156 | 30 | 30 | | | |
| Perfluoroheptanoic Acid (PFHpA) | 375-85-9 | 2 | 0.2252 | ng/l | 58-159 | 30 | 58-159 | 30 | 30 | | | |
| Perfluorohexanesulfonic Acid (PFHxS) | 355-46-4 | 2 | 0.376 | ng/l | 69-177 | 30 | 69-177 | 30 | 30 | | | |
| Perfluorooctanoic Acid (PFOA) | 335-67-1 | 2 | 0.236 | ng/l | 63-159 | 30 | 63-159 | 30 | 30 | | | |
| 1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS) | 27619-97-2 | 2 | 1.332 | ng/l | 49-187 | 30 | 49-187 | 30 | 30 | | | |
| Perfluoroheptanesulfonic Acid (PFHpS) | 375-92-8 | 2 | 0.688 | ng/l | 61-179 | 30 | 61-179 | 30 | 30 | | | |
| Perfluorononanoic Acid (PFNA) | 375-95-1 | 2 | 0.312 | ng/l | 68-171 | 30 | 68-171 | 30 | 30 | | | |
| Perfluorooctanesulfonic Acid (PFOS) | 1763-23-1 | 2 | 0.504 | ng/l | 52-151 | 30 | 52-151 | 30 | 30 | | | |
| Perfluorodecanoic Acid (PFDA) | 335-76-2 | 2 | 0.304 | ng/l | 63-171 | 30 | 63-171 | 30 | 30 | | | |
| 1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS) | 39108-34-4 | 2 | 1.212 | ng/l | 56-173 | 30 | 56-173 | 30 | 30 | | | |
| Perfluorononanesulfonic Acid (PFNS) | 68259-12-1 | 2 | 1.12 | ng/l | 48-150 | 30 | 48-150 | 30 | 30 | | | |
| N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSA | 2355-31-9 | 2 | 0.648 | ng/l | 60-166 | 30 | 60-166 | 30 | 30 | | | |
| Perfluoroundecanoic Acid (PFUnA) | 2058-94-8 | 2 | 0.26 | ng/l | 60-153 | 30 | 60-153 | 30 | 30 | | | |
| Perfluorodecanesulfonic Acid (PFDS) | 335-77-3 | 2 | 0.98 | ng/l | 38-156 | 30 | 38-156 | 30 | 30 | | | |
| Perfluorooctanesulfonamide (FOSA) | 754-91-6 | 2 | 0.58 | ng/l | 46-170 | 30 | 46-170 | 30 | 30 | | | |
| N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA) | 2991-50-6 | 2 | 0.804 | ng/l | 45-170 | 30 | 45-170 | 30 | 30 | | | |
| Perfluorododecanoic Acid (PFDoA) | 307-55-1 | 2 | 0.372 | ng/l | 67-153 | 30 | 67-153 | 30 | 30 | | | |
| Perfluorotridecanoic Acid (PFTrDA) | 72629-94-8 | 2 | 0.3272 | ng/l | 48-158 | 30 | 48-158 | 30 | 30 | | | |
| Perfluorotetradecanoic Acid (PFTA) | 376-06-7 | 2 | 0.248 | ng/l | 59-182 | 30 | 59-182 | 30 | 30 | | | |
| 2,3,3,3-Tetrafluoro-2-[1,1,2,2,3,3,3-Heptafluoropropoxy]-Pr | 13252-13-6 | 50 | 22.7 | ng/l | 50-150 | 30 | 50-150 | 30 | 30 | | | |
| 4,8-Dioxa-3h-Perfluorononanoic Acid (ADONA) | 919005-14-4 | 2 | 0.336 | ng/l | 50-150 | 30 | 50-150 | 30 | 30 | | | |
| Perfluorohexadecanoic Acid (PFHxDA) | 67905-19-5 | 4 | 1.24 | ng/l | 50-150 | 30 | 50-150 | 30 | 30 | | | |
| Perfluorooctadecanoic Acid (PFODA) | 16517-11-6 | 4 | 1.148 | ng/l | 50-150 | 30 | 50-150 | 30 | 30 | | | |
| Perfluorododecane Sulfonic Acid (PFDoDS) | 79780-39-5 | 2 | 0.616 | ng/l | 50-150 | 30 | 50-150 | 30 | 30 | | | |
| 1H,1H,2H,2H-Perfluorododecanesulfonic Acid (10:2FTS) | 120226-60-0 | 5 | 2.02 | ng/l | 50-150 | 30 | 50-150 | 30 | 30 | | | |
| 9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid (9Cl-PF | 756426-58-1 | 2 | 0.2768 | ng/l | 50-150 | 30 | 50-150 | 30 | 30 | | | |
| 11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl | 763051-92-9 | 2 | 0.2932 | ng/l | 50-150 | 30 | 50-150 | 30 | 30 | | | |
| PFOA/PFOS, Total | | 2 | 0.236 | ng/l | | | | 30 | 30 | | | |
| PFAS, Total (5) | | 2 | 0.2252 | ng/l | | | | 30 | 30 | | | |
| *Perfluoro[13C4]Butanoic Acid (MPFBA)* | *NONE* | | | | | | | | | *2-156* | | |
| *Perfluoro[13C5]Pentanoic Acid (M5PFPEA)* | *NONE* | | | | | | | | | *16-173* | | |
| *Perfluoro[2,3,4-13C3]Butanesulfonic Acid (M3PFBS)* | *NONE* | | | | | | | | | *31-159* | | |
| *1H,1H,2H,2H-Perfluoro[1,2-13C2]Hexanesulfonic Acid (M2-* | *NONE* | | | | | | | | | *1-313* | | |
| *Perfluoro[1,2,3,4,6-13C5]Hexanoic Acid (M5PFHxA)* | *NONE* | | | | | | | | | *21-145* | | |
| *Perfluoro[1,2,3,4-13C4]Heptanoic Acid (M4PFHpA)* | *NONE* | | | | | | | | | *30-139* | | |
| *Perfluoro[1,2,3-13C3]Hexanesulfonic Acid (M3PFHxS)* | *NONE* | | | | | | | | | *47-153* | | |
| *Perfluoro[13C8]Octanoic Acid (M8PFOA)* | *NONE* | | | | | | | | | *36-149* | | |

***Please Note that the RL information provided in this table is calculated using a 100% Solids factor. (Soil/Solids only)***
***Please Note that the information provided in this table is subject to change at anytime at the discretion of Alpha Analytical, Inc.***

**PFAAs via EPA 537(M)-Isotope Dilution (WATER)**

**Holding Time:** 14 days
**Container/Sample Preservation:** 1 - 2 Plastic/1 Plastic/1 H20 Plastic

| Analyte | CAS # | RL | MDL | Units | LCS Criteria | LCS RPD | MS Criteria | MS RPD | Duplicate RPD | Surrogate Criteria | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *1H,1H,2H,2H-Perfluoro[1,2-13C2]Octanesulfonic Acid (M2-6* | *NONE* | | | | | | | | | *1-244* | | |
| *Perfluoro[13C9]Nonanoic Acid (M9PFNA)* | *NONE* | | | | | | | | | *34-146* | | |
| *Perfluoro[13C8]Octanesulfonic Acid (M8PFOS)* | *NONE* | | | | | | | | | *42-146* | | |
| *Perfluoro[1,2,3,4,5,6-13C6]Decanoic Acid (M6PFDA)* | *NONE* | | | | | | | | | *38-144* | | |
| *1H,1H,2H,2H-Perfluoro[1,2-13C2]Decanesulfonic Acid (M2-8* | *NONE* | | | | | | | | | *7-170* | | |
| *N-Deuteriomethylperfluoro-1-octanesulfonamidoacetic Acid* | *NONE* | | | | | | | | | *1-181* | | |
| *Perfluoro[1,2,3,4,5,6,7-13C7]Undecanoic Acid (M7-PFUDA)* | *NONE* | | | | | | | | | *40-144* | | |
| *Perfluoro[13C8]Octanesulfonamide (M8FOSA)* | *NONE* | | | | | | | | | *1-87* | | |
| *N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d* | *NONE* | | | | | | | | | *23-146* | | |
| *Perfluoro[1,2-13C2]Dodecanoic Acid (MPFDOA)* | *NONE* | | | | | | | | | *24-161* | | |
| *Perfluoro[1,2-13C2]Tetradecanoic Acid (M2PFTEDA)* | *NONE* | | | | | | | | | *33-143* | | |
| *2,3,3,3-Tetrafluoro-2-[1,1,2,2,3,3,3-Heptafluoropropoxy]-13* | *NONE* | | | | | | | | | *50-150* | | |
| *Perfluoro[13C2]Hexadecanoic Acid (M2PFHxDA)* | *NONE* | | | | | | | | | *50-150* | | |

***Please Note that the RL information provided in this table is calculated using a 100% Solids factor.*** ***(Soil/Solids only)***
***Please Note that the information provided in this table is subject to change at anytime at the discretion of Alpha Analytical, Inc.***

**Date Created:** 05/20/19
**Created By:** Jason Hebert
**File:** PM6683-1
**Page:** 1

**PFAAs via EPA 537(M)-Isotope Dilution (SOIL)**

**Holding Time:** 28 days
**Container/Sample Preservation:** 1 - Plastic 8oz unpreserved

| Analyte | CAS # | RL | MDL | Units | LCS Criteria | LCS RPD | MS Criteria | MS RPD | Duplicate RPD | Surrogate Criteria | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Perfluorobutanoic Acid (PFBA) | 375-22-4 | 1 | 0.0227 | ng/g | 71-135 | 30 | 71-135 | 30 | 30 | | | |
| Perfluoropentanoic Acid (PFPeA) | 2706-90-3 | 1 | 0.046 | ng/g | 69-132 | 30 | 69-132 | 30 | 30 | | | |
| Perfluorobutanesulfonic Acid (PFBS) | 375-73-5 | 1 | 0.039 | ng/g | 72-128 | 30 | 72-128 | 30 | 30 | | | |
| 1H,1H,2H,2H-Perfluorohexanesulfonic Acid (4:2FTS) | NONE | 1 | 0.0645 | ng/g | 62-145 | 30 | 62-145 | 30 | 30 | | | |
| Perfluorohexanoic Acid (PFHxA) | 307-24-4 | 1 | 0.0525 | ng/g | 70-132 | 30 | 70-132 | 30 | 30 | | | |
| Perfluoropentanesulfonic Acid (PFPeS) | 2706-91-4 | 1 | 0.0835 | ng/g | 73-123 | 30 | 73-123 | 30 | 30 | | | |
| Perfluoroheptanoic Acid (PFHpA) | 375-85-9 | 1 | 0.0451 | ng/g | 71-131 | 30 | 71-131 | 30 | 30 | | | |
| Perfluorohexanesulfonic Acid (PFHxS) | 355-46-4 | 1 | 0.0605 | ng/g | 67-130 | 30 | 67-130 | 30 | 30 | | | |
| Perfluorooctanoic Acid (PFOA) | 335-67-1 | 1 | 0.0419 | ng/g | 69-133 | 30 | 69-133 | 30 | 30 | | | |
| 1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS) | 27619-97-2 | 1 | 0.1795 | ng/g | 64-140 | 30 | 64-140 | 30 | 30 | | | |
| Perfluoroheptanesulfonic Acid (PFHpS) | 375-92-8 | 1 | 0.1365 | ng/g | 70-132 | 30 | 70-132 | 30 | 30 | | | |
| Perfluorononanoic Acid (PFNA) | 375-95-1 | 1 | 0.075 | ng/g | 72-129 | 30 | 72-129 | 30 | 30 | | | |
| Perfluorooctanesulfonic Acid (PFOS) | 1763-23-1 | 1 | 0.13 | ng/g | 68-136 | 30 | 68-136 | 30 | 30 | | | |
| Perfluorodecanoic Acid (PFDA) | 335-76-2 | 1 | 0.067 | ng/g | 69-133 | 30 | 69-133 | 30 | 30 | | | |
| 1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS) | 39108-34-4 | 1 | 0.287 | ng/g | 65-137 | 30 | 65-137 | 30 | 30 | | | |
| Perfluorononanesulfonic Acid (PFNS) | 68259-12-1 | 1 | 0.299 | ng/g | 69-125 | 30 | 69-125 | 30 | 30 | | | |
| N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSA | 2355-31-9 | 1 | 0.2015 | ng/g | 63-144 | 30 | 63-144 | 30 | 30 | | | |
| Perfluoroundecanoic Acid (PFUnA) | 2058-94-8 | 1 | 0.0468 | ng/g | 64-136 | 30 | 64-136 | 30 | 30 | | | |
| Perfluorodecanesulfonic Acid (PFDS) | 335-77-3 | 1 | 0.153 | ng/g | 59-134 | 30 | 59-134 | 30 | 30 | | | |
| Perfluorooctanesulfonamide (FOSA) | 754-91-6 | 1 | 0.098 | ng/g | 67-137 | 30 | 67-137 | 30 | 30 | | | |
| N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA) | 2991-50-6 | 1 | 0.0845 | ng/g | 61-139 | 30 | 61-139 | 30 | 30 | | | |
| Perfluorododecanoic Acid (PFDoA) | 307-55-1 | 1 | 0.07 | ng/g | 69-135 | 30 | 69-135 | 30 | 30 | | | |
| Perfluorotridecanoic Acid (PFTrDA) | 72629-94-8 | 1 | 0.2045 | ng/g | 66-139 | 30 | 66-139 | 30 | 30 | | | |
| Perfluorotetradecanoic Acid (PFTA) | 376-06-7 | 1 | 0.054 | ng/g | 69-133 | 30 | 69-133 | 30 | 30 | | | |
| 2,3,3,3-Tetrafluoro-2-[1,1,2,2,3,3,3-Heptafluoropropoxy]-Pr | 13252-13-6 | 10 | 3.81 | ng/g | 50-150 | 30 | 50-150 | 30 | 30 | | | |
| 4,8-Dioxa-3h-Perfluorononanoic Acid (ADONA) | 919005-14-4 | 1 | 0.0413 | ng/g | 50-150 | 30 | 50-150 | 30 | 30 | | | |
| Perfluorohexadecanoic Acid (PFHxDA) | 67905-19-5 | 1 | 0.12 | ng/g | 50-150 | 30 | 50-150 | 30 | 30 | | | |
| Perfluorooctadecanoic Acid (PFODA) | 16517-11-6 | 1 | 0.171 | ng/g | 50-150 | 30 | 50-150 | 30 | 30 | | | |
| PFOA/PFOS, Total | | 1 | 0.0419 | ng/g | | | | 30 | 30 | | | |
| PFAS, Total (5) | | 1 | 0.0419 | ng/g | | | | 30 | 30 | | | |
| *Perfluoro[13C4]Butanoic Acid (M4PFBA)* | *NONE* | | | | | | | | | *60-153* | | |
| *Perfluoro[13C5]Pentanoic Acid (M5PFPEA)* | *NONE* | | | | | | | | | *65-182* | | |
| *Perfluoro[2,3,4-13C3]Butanesulfonic Acid (M3PFBS)* | *NONE* | | | | | | | | | *70-151* | | |
| *1H,1H,2H,2H-Perfluoro[1,2-13C2]Hexanesulfonic Acid (M2-4* | *NONE* | | | | | | | | | *56-138* | | |
| *Perfluoro[1,2,3,4,6-13C5]Hexanoic Acid (M5PFHxA)* | *NONE* | | | | | | | | | *61-147* | | |
| *Perfluoro[1,2,3,4-13C4]Heptanoic Acid (M4PFHpA)* | *NONE* | | | | | | | | | *62-149* | | |
| *Perfluoro[1,2,3-13C3]Hexanesulfonic Acid (M3PFHxS)* | *NONE* | | | | | | | | | *63-166* | | |
| *Perfluoro[13C8]Octanoic Acid (M8PFOA)* | *NONE* | | | | | | | | | *62-152* | | |
| *1H,1H,2H,2H-Perfluoro[1,2-13C2]Octanesulfonic Acid (M2-6* | *NONE* | | | | | | | | | *32-182* | | |
| *Perfluoro[13C9]Nonanoic Acid (M9PFNA)* | *NONE* | | | | | | | | | *61-154* | | |
| *Perfluoro[13C8]Octanesulfonic Acid (M8PFOS)* | *NONE* | | | | | | | | | *65-151* | | |
| *Perfluoro[1,2,3,4,5,6-13C6]Decanoic Acid (M6PFDA)* | *NONE* | | | | | | | | | *65-150* | | |

***Please Note that the RL information provided in this table is calculated using a 100% Solids factor.*** ***(Soil/Solids only)***
***Please Note that the information provided in this table is subject to change at anytime at the discretion of Alpha Analytical, Inc.***

**PFAAs via EPA 537(M)-Isotope Dilution (SOIL)**

**Holding Time:** 28 days
**Container/Sample Preservation:** 1 - Plastic 8oz unpreserved

| Analyte | CAS # | RL | MDL | Units | LCS Criteria | LCS RPD | MS Criteria | MS RPD | Duplicate RPD | Surrogate Criteria | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *1H,1H,2H,2H-Perfluoro[1,2-13C2]Decanesulfonic Acid (M2-8* | *NONE* | | | | | | | | | *25-186* | | |
| *N-Deuteriomethylperfluoro-1-octanesulfonamidoacetic Acid* | *NONE* | | | | | | | | | *45-137* | | |
| *Perfluoro[1,2,3,4,5,6,7-13C7]Undecanoic Acid (M7-PFUDA)* | *NONE* | | | | | | | | | *64-158* | | |
| *Perfluoro[13C8]Octanesulfonamide (M8FOSA)* | *NONE* | | | | | | | | | *1-125* | | |
| *N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d* | *NONE* | | | | | | | | | *42-136* | | |
| *Perfluoro[1,2-13C2]Dodecanoic Acid (MPFDOA)* | *NONE* | | | | | | | | | *56-148* | | |
| *Perfluoro[1,2-13C2]Tetradecanoic Acid (M2PFTEDA)* | *NONE* | | | | | | | | | *26-160* | | |
| *2,3,3,3-Tetrafluoro-2-[1,1,2,2,3,3,3-Heptafluoropropoxy]-13* | *NONE* | | | | | | | | | *50-150* | | |
| *Perfluoro[13C2]Hexadecanoic Acid (M2PFHxDA)* | *NONE* | | | | | | | | | *50-150* | | |

***Please Note that the RL information provided in this table is calculated using a 100% Solids factor.*** ***(Soil/Solids only)***
***Please Note that the information provided in this table is subject to change at anytime at the discretion of Alpha Analytical, Inc.***

# Semivolatile Sample Data

# Results Summary
# Form 1
# Perfluorinated Alkyl Acids by Isotope Dilution

| | | | |
|---|---|---|---|
| **Client** | : Soils Engineering Services, Inc. | **Lab Number** | : L2009793 |
| **Project Name** | : GROSSINGERS | **Project Number** | : 9313 |
| **Lab ID** | : L2009793-01 | **Date Collected** | : 03/04/20 14:30 |
| **Client ID** | : MW-213 | **Date Received** | : 03/04/20 |
| **Sample Location** | : LIBERTY, NY | **Date Analyzed** | : 03/09/20 15:23 |
| **Sample Matrix** | : WATER | **Date Extracted** | : 03/06/20 |
| **Analytical Method** | : 134,LCMSMS-ID | **Dilution Factor** | : 1 |
| **Lab File ID** | : I19078 | **Analyst** | : JW |
| **Sample Amount** | : 261 g | **Instrument ID** | : LCMS01 |
| **Extraction Method** | : ALPHA 23528 | **GC Column** | : Acquity UPLC BEH C18 |
| **Extract Volume** | : 1000 uL | **%Solids** | : N/A |
| **GPC Cleanup** | : N | **Injection Volume** | : 3 uL |

| | | ng/l | | | |
|---|---|---|---|---|---|
| **CAS NO.** | **Parameter** | **Results** | **RL** | **MDL** | **Qualifier** |
| 375-22-4 | Perfluorobutanoic Acid (PFBA) | 12.8 | 1.92 | 0.391 | |
| 2706-90-3 | Perfluoropentanoic Acid (PFPeA) | 9.00 | 1.92 | 0.379 | |
| 375-73-5 | Perfluorobutanesulfonic Acid (PFBS) | 2.97 | 1.92 | 0.228 | |
| 307-24-4 | Perfluorohexanoic Acid (PFHxA) | 11.0 | 1.92 | 0.314 | |
| 375-85-9 | Perfluoroheptanoic Acid (PFHpA) | 8.10 | 1.92 | 0.216 | |
| 355-46-4 | Perfluorohexanesulfonic Acid (PFHxS) | 5.37 | 1.92 | 0.360 | |
| 335-67-1 | Perfluorooctanoic Acid (PFOA) | 32.8 | 1.92 | 0.226 | |
| 27619-97-2 | 1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS) | ND | 1.92 | 1.28 | U |
| 375-92-8 | Perfluoroheptanesulfonic Acid (PFHpS) | 1.06 | 1.92 | 0.659 | J |
| 375-95-1 | Perfluorononanoic Acid (PFNA) | 3.45 | 1.92 | 0.299 | |
| 1763-23-1 | Perfluorooctanesulfonic Acid (PFOS) | 73.4 | 1.92 | 0.483 | |
| 335-76-2 | Perfluorodecanoic Acid (PFDA) | 1.88 | 1.92 | 0.291 | J |
| 39108-34-4 | 1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS) | ND | 1.92 | 1.16 | U |
| 2355-31-9 | N-Methyl Perfluorooctanesulfonamidoaceti c Acid (NMeFOSAA) | ND | 1.92 | 0.621 | U |
| 2058-94-8 | Perfluoroundecanoic Acid (PFUnA) | ND | 1.92 | 0.249 | U |
| 335-77-3 | Perfluorodecanesulfonic Acid (PFDS) | ND | 1.92 | 0.939 | U |
| 754-91-6 | Perfluorooctanesulfonamide (FOSA) | 1.42 | 1.92 | 0.556 | J |
| 2991-50-6 | N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA) | 1.19 | 1.92 | 0.770 | J |

# Results Summary
# Form 1
# Perfluorinated Alkyl Acids by Isotope Dilution

| | | | |
|---|---|---|---|
| **Client** | : Soils Engineering Services, Inc. | **Lab Number** | : L2009793 |
| **Project Name** | : GROSSINGERS | **Project Number** | : 9313 |
| **Lab ID** | : L2009793-01 | **Date Collected** | : 03/04/20 14:30 |
| **Client ID** | : MW-213 | **Date Received** | : 03/04/20 |
| **Sample Location** | : LIBERTY, NY | **Date Analyzed** | : 03/09/20 15:23 |
| **Sample Matrix** | : WATER | **Date Extracted** | : 03/06/20 |
| **Analytical Method** | : 134,LCMSMS-ID | **Dilution Factor** | : 1 |
| **Lab File ID** | : I19078 | **Analyst** | : JW |
| **Sample Amount** | : 261 g | **Instrument ID** | : LCMS01 |
| **Extraction Method** | : ALPHA 23528 | **GC Column** | : Acquity UPLC BEH C18 |
| **Extract Volume** | : 1000 uL | **%Solids** | : N/A |
| **GPC Cleanup** | : N | **Injection Volume** | : 3 uL |

| | | ng/l | | | |
|---|---|---|---|---|---|
| **CAS NO.** | **Parameter** | **Results** | **RL** | **MDL** | **Qualifier** |
| 307-55-1 | Perfluorododecanoic Acid (PFDoA) | ND | 1.92 | 0.356 | U |
| 72629-94-8 | Perfluorotridecanoic Acid (PFTrDA) | ND | 1.92 | 0.313 | U |
| 376-06-7 | Perfluorotetradecanoic Acid (PFTA) | ND | 1.92 | 0.238 | U |
| NONE | PFOA/PFOS, Total | 106 | 1.92 | 0.226 | |

# Results Summary
# Form 1
# Perfluorinated Alkyl Acids by Isotope Dilution

| | | | |
|---|---|---|---|
| **Client** | : Soils Engineering Services, Inc. | **Lab Number** | : L2009793 |
| **Project Name** | : GROSSINGERS | **Project Number** | : 9313 |
| **Lab ID** | : L2009793-02 | **Date Collected** | : 03/04/20 10:30 |
| **Client ID** | : MW-214 | **Date Received** | : 03/04/20 |
| **Sample Location** | : LIBERTY, NY | **Date Analyzed** | : 03/09/20 15:40 |
| **Sample Matrix** | : WATER | **Date Extracted** | : 03/06/20 |
| **Analytical Method** | : 134,LCMSMS-ID | **Dilution Factor** | : 1 |
| **Lab File ID** | : I19079 | **Analyst** | : JW |
| **Sample Amount** | : 258 g | **Instrument ID** | : LCMS01 |
| **Extraction Method** | : ALPHA 23528 | **GC Column** | : Acquity UPLC BEH C18 |
| **Extract Volume** | : 1000 uL | **%Solids** | : N/A |
| **GPC Cleanup** | : N | **Injection Volume** | : 3 uL |

| | | ng/l | | | |
|---|---|---|---|---|---|
| **CAS NO.** | **Parameter** | **Results** | **RL** | **MDL** | **Qualifier** |
| 375-22-4 | Perfluorobutanoic Acid (PFBA) | 10.9 | 1.94 | 0.395 | |
| 2706-90-3 | Perfluoropentanoic Acid (PFPeA) | 5.47 | 1.94 | 0.384 | |
| 375-73-5 | Perfluorobutanesulfonic Acid (PFBS) | 3.88 | 1.94 | 0.231 | |
| 307-24-4 | Perfluorohexanoic Acid (PFHxA) | 8.26 | 1.94 | 0.318 | |
| 375-85-9 | Perfluoroheptanoic Acid (PFHpA) | 6.07 | 1.94 | 0.218 | |
| 355-46-4 | Perfluorohexanesulfonic Acid (PFHxS) | 8.26 | 1.94 | 0.364 | |
| 335-67-1 | Perfluorooctanoic Acid (PFOA) | 29.9 | 1.94 | 0.229 | |
| 27619-97-2 | 1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS) | ND | 1.94 | 1.29 | U |
| 375-92-8 | Perfluoroheptanesulfonic Acid (PFHpS) | 1.64 | 1.94 | 0.667 | J |
| 375-95-1 | Perfluorononanoic Acid (PFNA) | 1.08 | 1.94 | 0.302 | J |
| 1763-23-1 | Perfluorooctanesulfonic Acid (PFOS) | 47.3 | 1.94 | 0.488 | |
| 335-76-2 | Perfluorodecanoic Acid (PFDA) | 0.849 | 1.94 | 0.294 | J |
| 39108-34-4 | 1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS) | ND | 1.94 | 1.17 | U |
| 2355-31-9 | N-Methyl Perfluorooctanesulfonamidoaceti c Acid (NMeFOSAA) | ND | 1.94 | 0.628 | U |
| 2058-94-8 | Perfluoroundecanoic Acid (PFUnA) | 0.260 | 1.94 | 0.252 | J |
| 335-77-3 | Perfluorodecanesulfonic Acid (PFDS) | ND | 1.94 | 0.950 | U |
| 754-91-6 | Perfluorooctanesulfonamide (FOSA) | ND | 1.94 | 0.562 | U |
| 2991-50-6 | N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA) | ND | 1.94 | 0.779 | U |

# Results Summary
# Form 1
# Perfluorinated Alkyl Acids by Isotope Dilution

| | | | |
|---|---|---|---|
| **Client** | : Soils Engineering Services, Inc. | **Lab Number** | : L2009793 |
| **Project Name** | : GROSSINGERS | **Project Number** | : 9313 |
| **Lab ID** | : L2009793-02 | **Date Collected** | : 03/04/20 10:30 |
| **Client ID** | : MW-214 | **Date Received** | : 03/04/20 |
| **Sample Location** | : LIBERTY, NY | **Date Analyzed** | : 03/09/20 15:40 |
| **Sample Matrix** | : WATER | **Date Extracted** | : 03/06/20 |
| **Analytical Method** | : 134,LCMSMS-ID | **Dilution Factor** | : 1 |
| **Lab File ID** | : I19079 | **Analyst** | : JW |
| **Sample Amount** | : 258 g | **Instrument ID** | : LCMS01 |
| **Extraction Method** | : ALPHA 23528 | **GC Column** | : Acquity UPLC BEH C18 |
| **Extract Volume** | : 1000 uL | **%Solids** | : N/A |
| **GPC Cleanup** | : N | **Injection Volume** | : 3 uL |

| | | ng/l | | | |
|---|---|---|---|---|---|
| **CAS NO.** | **Parameter** | **Results** | **RL** | **MDL** | **Qualifier** |
| 307-55-1 | Perfluorododecanoic Acid (PFDoA) | ND | 1.94 | 0.360 | U |
| 72629-94-8 | Perfluorotridecanoic Acid (PFTrDA) | ND | 1.94 | 0.317 | U |
| 376-06-7 | Perfluorotetradecanoic Acid (PFTA) | ND | 1.94 | 0.240 | U |
| NONE | PFOA/PFOS, Total | 77.2 | 1.94 | 0.229 | |

# Results Summary
# Form 1
# Perfluorinated Alkyl Acids by Isotope Dilution

| | | | |
|---|---|---|---|
| **Client** | : Soils Engineering Services, Inc. | **Lab Number** | : L2009793 |
| **Project Name** | : GROSSINGERS | **Project Number** | : 9313 |
| **Lab ID** | : L2009793-03 | **Date Collected** | : 03/04/20 15:00 |
| **Client ID** | : FB | **Date Received** | : 03/04/20 |
| **Sample Location** | : LIBERTY, NY | **Date Analyzed** | : 03/09/20 17:36 |
| **Sample Matrix** | : WATER | **Date Extracted** | : 03/06/20 |
| **Analytical Method** | : 134,LCMSMS-ID | **Dilution Factor** | : 1 |
| **Lab File ID** | : I19086 | **Analyst** | : JW |
| **Sample Amount** | : 268 g | **Instrument ID** | : LCMS01 |
| **Extraction Method** | : ALPHA 23528 | **GC Column** | : Acquity UPLC BEH C18 |
| **Extract Volume** | : 1000 uL | **%Solids** | : N/A |
| **GPC Cleanup** | : N | **Injection Volume** | : 3 uL |

| | | ng/l | | | |
|---|---|---|---|---|---|
| **CAS NO.** | **Parameter** | **Results** | **RL** | **MDL** | **Qualifier** |
| 375-22-4 | Perfluorobutanoic Acid (PFBA) | ND | 1.86 | 0.380 | U |
| 2706-90-3 | Perfluoropentanoic Acid (PFPeA) | 0.396 | 1.86 | 0.369 | J |
| 375-73-5 | Perfluorobutanesulfonic Acid (PFBS) | ND | 1.86 | 0.222 | U |
| 307-24-4 | Perfluorohexanoic Acid (PFHxA) | 0.366 | 1.86 | 0.306 | J |
| 375-85-9 | Perfluoroheptanoic Acid (PFHpA) | ND | 1.86 | 0.210 | U |
| 355-46-4 | Perfluorohexanesulfonic Acid (PFHxS) | ND | 1.86 | 0.351 | U |
| 335-67-1 | Perfluorooctanoic Acid (PFOA) | ND | 1.86 | 0.220 | U |
| 27619-97-2 | 1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS) | ND | 1.86 | 1.24 | U |
| 375-92-8 | Perfluoroheptanesulfonic Acid (PFHpS) | ND | 1.86 | 0.642 | U |
| 375-95-1 | Perfluorononanoic Acid (PFNA) | ND | 1.86 | 0.291 | U |
| 1763-23-1 | Perfluorooctanesulfonic Acid (PFOS) | ND | 1.86 | 0.470 | U |
| 335-76-2 | Perfluorodecanoic Acid (PFDA) | ND | 1.86 | 0.284 | U |
| 39108-34-4 | 1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS) | ND | 1.86 | 1.13 | U |
| 2355-31-9 | N-Methyl Perfluorooctanesulfonamidoaceti c Acid (NMeFOSAA) | ND | 1.86 | 0.604 | U |
| 2058-94-8 | Perfluoroundecanoic Acid (PFUnA) | ND | 1.86 | 0.242 | U |
| 335-77-3 | Perfluorodecanesulfonic Acid (PFDS) | ND | 1.86 | 0.914 | U |
| 754-91-6 | Perfluorooctanesulfonamide (FOSA) | ND | 1.86 | 0.541 | U |
| 2991-50-6 | N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA) | ND | 1.86 | 0.750 | U |

# Results Summary
# Form 1
# Perfluorinated Alkyl Acids by Isotope Dilution

| | | | |
|---|---|---|---|
| **Client** | : Soils Engineering Services, Inc. | **Lab Number** | : L2009793 |
| **Project Name** | : GROSSINGERS | **Project Number** | : 9313 |
| **Lab ID** | : L2009793-03 | **Date Collected** | : 03/04/20 15:00 |
| **Client ID** | : FB | **Date Received** | : 03/04/20 |
| **Sample Location** | : LIBERTY, NY | **Date Analyzed** | : 03/09/20 17:36 |
| **Sample Matrix** | : WATER | **Date Extracted** | : 03/06/20 |
| **Analytical Method** | : 134,LCMSMS-ID | **Dilution Factor** | : 1 |
| **Lab File ID** | : I19086 | **Analyst** | : JW |
| **Sample Amount** | : 268 g | **Instrument ID** | : LCMS01 |
| **Extraction Method** | : ALPHA 23528 | **GC Column** | : Acquity UPLC BEH C18 |
| **Extract Volume** | : 1000 uL | **%Solids** | : N/A |
| **GPC Cleanup** | : N | **Injection Volume** | : 3 uL |

| | | ng/l | | | |
|---|---|---|---|---|---|
| **CAS NO.** | **Parameter** | **Results** | **RL** | **MDL** | **Qualifier** |
| 307-55-1 | Perfluorododecanoic Acid (PFDoA) | ND | 1.86 | 0.347 | U |
| 72629-94-8 | Perfluorotridecanoic Acid (PFTrDA) | ND | 1.86 | 0.305 | U |
| 376-06-7 | Perfluorotetradecanoic Acid (PFTA) | ND | 1.86 | 0.231 | U |
| NONE | PFOA/PFOS, Total | ND | 1.86 | 0.220 | U |

# Results Summary
# Form 1
# Perfluorinated Alkyl Acids by Isotope Dilution

| | | | |
|---|---|---|---|
| **Client** | : Soils Engineering Services, Inc. | **Lab Number** | : L2009793 |
| **Project Name** | : GROSSINGERS | **Project Number** | : 9313 |
| **Lab ID** | : WG1347919-1 | **Date Collected** | : NA |
| **Client ID** | : WG1347919-1BLANK | **Date Received** | : NA |
| **Sample Location** | : | **Date Analyzed** | : 03/10/20 21:37 |
| **Sample Matrix** | : WATER | **Date Extracted** | : 03/06/20 |
| **Analytical Method** | : 134,LCMSMS-ID | **Dilution Factor** | : 1 |
| **Lab File ID** | : I20436 | **Analyst** | : RS |
| **Sample Amount** | : 250 g | **Instrument ID** | : LCMS02 |
| **Extraction Method** | : ALPHA 23528 | **GC Column** | : Acquity UPLC BEH C18 |
| **Extract Volume** | : 1000 uL | **%Solids** | : N/A |
| **GPC Cleanup** | : N | **Injection Volume** | : 3 uL |

| | | ng/l | | | |
|---|---|---|---|---|---|
| **CAS NO.** | **Parameter** | **Results** | **RL** | **MDL** | **Qualifier** |
| 375-22-4 | Perfluorobutanoic Acid (PFBA) | ND | 2.00 | 0.408 | U |
| 2706-90-3 | Perfluoropentanoic Acid (PFPeA) | ND | 2.00 | 0.396 | U |
| 375-73-5 | Perfluorobutanesulfonic Acid (PFBS) | ND | 2.00 | 0.238 | U |
| 307-24-4 | Perfluorohexanoic Acid (PFHxA) | ND | 2.00 | 0.328 | U |
| 375-85-9 | Perfluoroheptanoic Acid (PFHpA) | ND | 2.00 | 0.225 | U |
| 355-46-4 | Perfluorohexanesulfonic Acid (PFHxS) | ND | 2.00 | 0.376 | U |
| 335-67-1 | Perfluorooctanoic Acid (PFOA) | ND | 2.00 | 0.236 | U |
| 27619-97-2 | 1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS) | ND | 2.00 | 1.33 | U |
| 375-92-8 | Perfluoroheptanesulfonic Acid (PFHpS) | ND | 2.00 | 0.688 | U |
| 375-95-1 | Perfluorononanoic Acid (PFNA) | ND | 2.00 | 0.312 | U |
| 1763-23-1 | Perfluorooctanesulfonic Acid (PFOS) | ND | 2.00 | 0.504 | U |
| 335-76-2 | Perfluorodecanoic Acid (PFDA) | ND | 2.00 | 0.304 | U |
| 39108-34-4 | 1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS) | ND | 2.00 | 1.21 | U |
| 2355-31-9 | N-Methyl Perfluorooctanesulfonamidoaceti c Acid (NMeFOSAA) | ND | 2.00 | 0.648 | U |
| 2058-94-8 | Perfluoroundecanoic Acid (PFUnA) | ND | 2.00 | 0.260 | U |
| 335-77-3 | Perfluorodecanesulfonic Acid (PFDS) | ND | 2.00 | 0.980 | U |
| 754-91-6 | Perfluorooctanesulfonamide (FOSA) | ND | 2.00 | 0.580 | U |
| 2991-50-6 | N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA) | ND | 2.00 | 0.804 | U |

# Results Summary
# Form 1
# Perfluorinated Alkyl Acids by Isotope Dilution

| | | | |
|---|---|---|---|
| **Client** | : Soils Engineering Services, Inc. | **Lab Number** | : L2009793 |
| **Project Name** | : GROSSINGERS | **Project Number** | : 9313 |
| **Lab ID** | : WG1347919-1 | **Date Collected** | : NA |
| **Client ID** | : WG1347919-1BLANK | **Date Received** | : NA |
| **Sample Location** | : | **Date Analyzed** | : 03/10/20 21:37 |
| **Sample Matrix** | : WATER | **Date Extracted** | : 03/06/20 |
| **Analytical Method** | : 134,LCMSMS-ID | **Dilution Factor** | : 1 |
| **Lab File ID** | : I20436 | **Analyst** | : RS |
| **Sample Amount** | : 250 g | **Instrument ID** | : LCMS02 |
| **Extraction Method** | : ALPHA 23528 | **GC Column** | : Acquity UPLC BEH C18 |
| **Extract Volume** | : 1000 uL | **%Solids** | : N/A |
| **GPC Cleanup** | : N | **Injection Volume** | : 3 uL |

| | | ng/l | | | |
|---|---|---|---|---|---|
| **CAS NO.** | **Parameter** | **Results** | **RL** | **MDL** | **Qualifier** |
| 307-55-1 | Perfluorododecanoic Acid (PFDoA) | ND | 2.00 | 0.372 | U |
| 72629-94-8 | Perfluorotridecanoic Acid (PFTrDA) | ND | 2.00 | 0.327 | U |
| 376-06-7 | Perfluorotetradecanoic Acid (PFTA) | ND | 2.00 | 0.248 | U |
| NONE | PFOA/PFOS, Total | ND | 2.00 | 0.236 | U |

# Results Summary
# Form 1
# Perfluorinated Alkyl Acids by Isotope Dilution

| | | | |
|---|---|---|---|
| **Client** | : Soils Engineering Services, Inc. | **Lab Number** | : L2009793 |
| **Project Name** | : GROSSINGERS | **Project Number** | : 9313 |
| **Lab ID** | : WG1347919-5 | **Date Collected** | : 03/04/20 10:30 |
| **Client ID** | : MW-214DUP | **Date Received** | : 03/04/20 |
| **Sample Location** | : | **Date Analyzed** | : 03/09/20 15:56 |
| **Sample Matrix** | : WATER | **Date Extracted** | : 03/06/20 |
| **Analytical Method** | : 134,LCMSMS-ID | **Dilution Factor** | : 1 |
| **Lab File ID** | : I19080 | **Analyst** | : JW |
| **Sample Amount** | : 251 g | **Instrument ID** | : LCMS01 |
| **Extraction Method** | : ALPHA 23528 | **GC Column** | : Acquity UPLC BEH C18 |
| **Extract Volume** | : 1000 uL | **%Solids** | : N/A |
| **GPC Cleanup** | : N | **Injection Volume** | : 3 uL |

| | | ng/l | | | |
|---|---|---|---|---|---|
| **CAS NO.** | **Parameter** | **Results** | **RL** | **MDL** | **Qualifier** |
| 375-22-4 | Perfluorobutanoic Acid (PFBA) | 11.4 | 1.99 | 0.406 | |
| 2706-90-3 | Perfluoropentanoic Acid (PFPeA) | 5.82 | 1.99 | 0.394 | |
| 375-73-5 | Perfluorobutanesulfonic Acid (PFBS) | 4.27 | 1.99 | 0.237 | |
| 307-24-4 | Perfluorohexanoic Acid (PFHxA) | 8.97 | 1.99 | 0.327 | |
| 375-85-9 | Perfluoroheptanoic Acid (PFHpA) | 5.86 | 1.99 | 0.224 | |
| 355-46-4 | Perfluorohexanesulfonic Acid (PFHxS) | 7.64 | 1.99 | 0.374 | |
| 335-67-1 | Perfluorooctanoic Acid (PFOA) | 31.2 | 1.99 | 0.235 | |
| 27619-97-2 | 1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS) | ND | 1.99 | 1.33 | U |
| 375-92-8 | Perfluoroheptanesulfonic Acid (PFHpS) | ND | 1.99 | 0.685 | U |
| 375-95-1 | Perfluorononanoic Acid (PFNA) | 1.06 | 1.99 | 0.311 | J |
| 1763-23-1 | Perfluorooctanesulfonic Acid (PFOS) | 42.9 | 1.99 | 0.502 | |
| 335-76-2 | Perfluorodecanoic Acid (PFDA) | 0.538 | 1.99 | 0.303 | J |
| 39108-34-4 | 1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS) | ND | 1.99 | 1.21 | U |
| 2355-31-9 | N-Methyl Perfluorooctanesulfonamidoaceti c Acid (NMeFOSAA) | ND | 1.99 | 0.645 | U |
| 2058-94-8 | Perfluoroundecanoic Acid (PFUnA) | ND | 1.99 | 0.259 | U |
| 335-77-3 | Perfluorodecanesulfonic Acid (PFDS) | ND | 1.99 | 0.976 | U |
| 754-91-6 | Perfluorooctanesulfonamide (FOSA) | 0.785 | 1.99 | 0.578 | J |
| 2991-50-6 | N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA) | ND | 1.99 | 0.801 | U |

# Results Summary
# Form 1
# Perfluorinated Alkyl Acids by Isotope Dilution

| | | | |
|---|---|---|---|
| **Client** | : Soils Engineering Services, Inc. | **Lab Number** | : L2009793 |
| **Project Name** | : GROSSINGERS | **Project Number** | : 9313 |
| **Lab ID** | : WG1347919-5 | **Date Collected** | : 03/04/20 10:30 |
| **Client ID** | : MW-214DUP | **Date Received** | : 03/04/20 |
| **Sample Location** | : | **Date Analyzed** | : 03/09/20 15:56 |
| **Sample Matrix** | : WATER | **Date Extracted** | : 03/06/20 |
| **Analytical Method** | : 134,LCMSMS-ID | **Dilution Factor** | : 1 |
| **Lab File ID** | : I19080 | **Analyst** | : JW |
| **Sample Amount** | : 251 g | **Instrument ID** | : LCMS01 |
| **Extraction Method** | : ALPHA 23528 | **GC Column** | : Acquity UPLC BEH C18 |
| **Extract Volume** | : 1000 uL | **%Solids** | : N/A |
| **GPC Cleanup** | : N | **Injection Volume** | : 3 uL |

| | | ng/l | | | |
|---|---|---|---|---|---|
| **CAS NO.** | **Parameter** | **Results** | **RL** | **MDL** | **Qualifier** |
| 307-55-1 | Perfluorododecanoic Acid (PFDoA) | ND | 1.99 | 0.370 | U |
| 72629-94-8 | Perfluorotridecanoic Acid (PFTrDA) | ND | 1.99 | 0.326 | U |
| 376-06-7 | Perfluorotetradecanoic Acid (PFTA) | ND | 1.99 | 0.247 | U |

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200309_537ISO.PRO\Data\WG1348805A.qld
Last Altered: Tuesday, March 17, 2020 11:30:27 Eastern Daylight Time
Printed: Tuesday, March 17, 2020 11:30:55 Eastern Daylight Time

**Method: C:\MassLynx\Data\200309_537ISO.PRO\MethDB\537ISO_Q_200227 .mdb 28 Feb 2020 10:16:06**
**Calibration: C:\MassLynx\Data\200309_537ISO.PRO\CurveDB\200227_537ISO_ICAL.cdb 28 Feb 2020 10:12:40**

**ID: L2009793-01**
**Name: I19078**
**Date: 09-Mar-2020**
**Time: 15:23:29**
**Description: WG1348805,WG1347919,ICAL16567**
**Instrument: XEVO-TQSmicro#QEA0276**
**User: LCMS01:JW**
**Inlet Method Name: C:\MassLynx\Data\200309_537ISO.PRO\ACQUDB\LCMS_537_ISO_MeOH**
**Tune Method Name: C:\MassLynx\Data\200309_537ISO.PRO\ACQUDB\190709_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\200309_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

| | Name | CAS | RT | Trace | Area | M Flag | Conc (ng/mL) | Ion Ratio | Ratio Flag | %Rec |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | PFBA | 375-22-4 | 2.19 | 212.926 > 169.111 | 10571 | | 3.349 | | na | |
| 2 | M3PFBA | INT STD | 2.19 | 215.926 > 172.122 | 38622 | | 9.822 | | na | 98.2 |
| 3 | MPFBA | INT STD | 2.20 | 216.926 > 172.137 | 43628 | | 9.858 | | na | 98.6 |
| 4 | PFPeA | 2706-90-3 | 5.16 | 262.926 > 219.002 | 8605 | M4 | 2.349 | | na | |
| 5 | M5PFPEA | INT STD | 5.16 | 267.989 > 223.081 | 52664 | | 8.969 | | na | 89.7 |
| 6 | PFBS | 375-73-5 | 5.83 | 298.926 > 79.923 | 747 | | 0.775 | 2.29 | NO | |
| 7 | M3PFBS | INT STD | 5.83 | 301.989 > 80.254 | 10673 | | 8.483 | | na | 84.8 |
| 8 | 4:2FTS | 757124-72-4 | | 326.926 > 306.957 | | | ND | | YES | |
| 9 | M2-4:2FTS | INT STD | 7.00 | 329.117 > 309.079 | 11285 | | 17.215 | | na | 172.2 |
| 10 | PFHxA | 307-24-4 | 7.09 | 312.989 > 269.028 | 14512 | | 2.860 | 17.82 | NO | |
| 11 | M5PFHxA | INT STD | 7.09 | 317.989 > 273.045 | 61224 | | 7.153 | | na | 71.5 |
| 12 | PFPeS | 2706-91-4 | 7.40 | 348.926 > 80.251 | 427 | | 0.429 | 4.19 | YES | |
| 13 | PFHpA | 375-85-9 | 8.36 | 362.926 > 319.014 | 16088 | m4 | 2.114 | 5.64 | NO | |
| 14 | M4PFHpA | INT STD | 8.36 | 366.926 > 321.979 | 82985 | | 8.357 | | na | 83.6 |
| 15 | br-PFHxS | 355-46-4 | 8.28 | 398.904 > 79.915 | 166 | M2 | 0.215 | | YES | |
| 16 | L-PFHxS | 355-46-4 | 8.52 | 398.904 > 79.915 | 920 | | 1.186 | 1.95 | NO | |
| 17 | PFHxS | 355-46-4 | | 398.904 > 79.915 | 1086 | | 1.401 | | na | |
| 18 | M3PFHxS | INT STD | 8.52 | 401.926 > 80.317 | 10490 | | 9.305 | | na | 93.1 |
| 19 | br-PFOA | 335-67-1 | 9.08 | 412.989 > 368.9 | 10150 | M5 | 1.192 | 25.12 | NO | |
| 20 | L-PFOA | 335-67-1 | 9.31 | 412.989 > 368.9 | 62699 | | 7.370 | 8.34 | NO | |
| 21 | M2PFOA | INT STD | 9.31 | 415.032 > 369.968 | 104551 | | 12.427 | | na | 124.3 |
| 22 | PFOA | 335-67-1 | | 412.989 > 368.9 | 72849 | | 8.562 | | na | |
| 23 | M8PFOA | INT STD | 9.31 | 420.989 > 375.979 | 98974 | | 9.927 | | na | 99.3 |
| 24 | 6:2FTS | 27619-97-2 | 9.27 | 426.989 > 406.921 | 70 | | 0.280 | 0.71 | NO | |
| 25 | M2-6:2FTS | INT STD | 9.26 | 428.989 > 408.917 | 10550 | | 25.864 | | na | 258.6 |
| 26 | PFHpS | 375-92-8 | 9.39 | 448.926 > 80.257 | 150 | | 0.278 | 1.28 | NO | |
| 27 | PFNA | 375-95-1 | 10.05 | 462.989 > 418.931 | 6856 | | 0.901 | 6.95 | YES | |
| 28 | M9PFNA | INT STD | 10.05 | 472.053 > 426.947 | 102266 | | 10.492 | | na | 104.9 |
| 29 | br-PFOS | 1763-23-1 | 9.86 | 498.968 > 79.918 | 4772 | M5 | 5.685 | 4.29 | NO | |
| 30 | L-PFOS | 1763-23-1 | 10.10 | 498.968 > 79.918 | 7886 | | 13.474 | 1.33 | NO | |
| 31 | PFOS | 1763-23-1 | | 498.968 > 79.918 | 12657 | | 19.159 | | na | |
| 32 | M4PFOS | INT STD | 10.10 | 503.032 > 80.306 | 9808 | | 11.547 | | na | 115.5 |
| 33 | M8PFOS | INT STD | 10.10 | 507.053 > 80.294 | 10775 | | 9.460 | | na | 94.6 |
| 34 | PFDA | 335-76-2 | 10.68 | 513.053 > 468.906 | 3917 | M4 | 0.490 | 7.53 | NO | |
| 35 | M2PFDA | INT STD | 10.68 | 515.053 > 469.934 | 99222 | | 15.000 | | na | 150.0 |
| 36 | M6PFDA | INT STD | 10.68 | 519.053 > 473.931 | 104279 | | 9.552 | | na | 95.5 |
| 37 | 8:2FTS | 39108-34-4 | | 527.032 > 507.079 | | | ND | | YES | |
| 38 | M2-8:2FTS | INT STD | 10.67 | 529.053 > 508.945 | 4218 | | 17.101 | | na | 171.0 |
| 39 | PFNS | 68259-12-1 | | 548.989 > 80.249 | | | ND | | YES | |


all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200309_537ISO.PRO\Data\WG1348805A.qld
Last Altered: Tuesday, March 17, 2020 11:30:27 Eastern Daylight Time
Printed: Tuesday, March 17, 2020 11:30:55 Eastern Daylight Time

**ID: L2009793-01**
**Name: I19078**
**Date: 09-Mar-2020**
**Time: 15:23:29**
**Description: WG1348805,WG1347919,ICAL16567**
**Instrument: XEVO-TQSmicro#QEA0276**
**User: LCMS01:JW**
**Inlet Method Name: C:\MassLynx\Data\200309_537ISO.PRO\ACQUDB\LCMS_537_ISO_MeOH**
**Tune Method Name: C:\MassLynx\Data\200309_537ISO.PRO\ACQUDB\190709_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\200309_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

| | Name | CAS | RT | Trace | Area | M Flag | Conc (ng/mL) | Ion Ratio | Ratio Flag | %Rec |
|---|---|---|---|---|---|---|---|---|---|---|
| 40 | d3-NMeFOSAA | INT STD | 11.06 | 573.096 > 418.987 | 15328 | | 10.599 | | na | 106.0 |
| 41 | NMeFOSAA | 2355-31-9 | 11.06 | 570.053 > 418.917 | 103 | m5 | 0.112 | | YES | |
| 42 | PFUnA | 2058-94-8 | 11.21 | 562.989 > 518.903 | 298 | | 0.034 | | YES | |
| 43 | M7-PFUDA | INT STD | 11.21 | 570.053 > 524.923 | 93876 | | 9.786 | | na | 97.9 |
| 44 | PFDS | 335-77-3 | | 598.926 > 80.314 | | | ND | | YES | |
| 45 | FOSA | 754-91-6 | 11.11 | 497.989 > 78.245 | 490 | | 0.370 | | YES | |
| 46 | M8FOSA | INT STD | 11.11 | 506.053 > 78.286 | 16053 | | 3.669 | | na | 36.7 |
| 47 | d5-NEtFOSAA | INT STD | 11.35 | 589.117 > 418.929 | 10175 | | 9.648 | | na | 96.5 |
| 48 | NEtFOSAA | 2991-50-6 | 11.35 | 583.989 > 418.927 | 270 | m5 | 0.311 | 7.88 | YES | |
| 49 | PFDoA | 307-55-1 | 11.69 | 612.989 > 568.967 | 122 | | 0.016 | | YES | |
| 50 | MPFDOA | INT STD | 11.68 | 614.989 > 569.92 | 86775 | | 8.414 | | na | 84.1 |
| 51 | PFTrDA | 72629-94-8 | | 663.053 > 618.969 | | | ND | | YES | |
| 52 | PFTA | 376-06-7 | | 713.053 > 668.976 | | | ND | | YES | |
| 53 | M2PFTEDA | INT STD | 12.44 | 715.053 > 669.945 | 92776 | | 7.981 | | na | 79.8 |

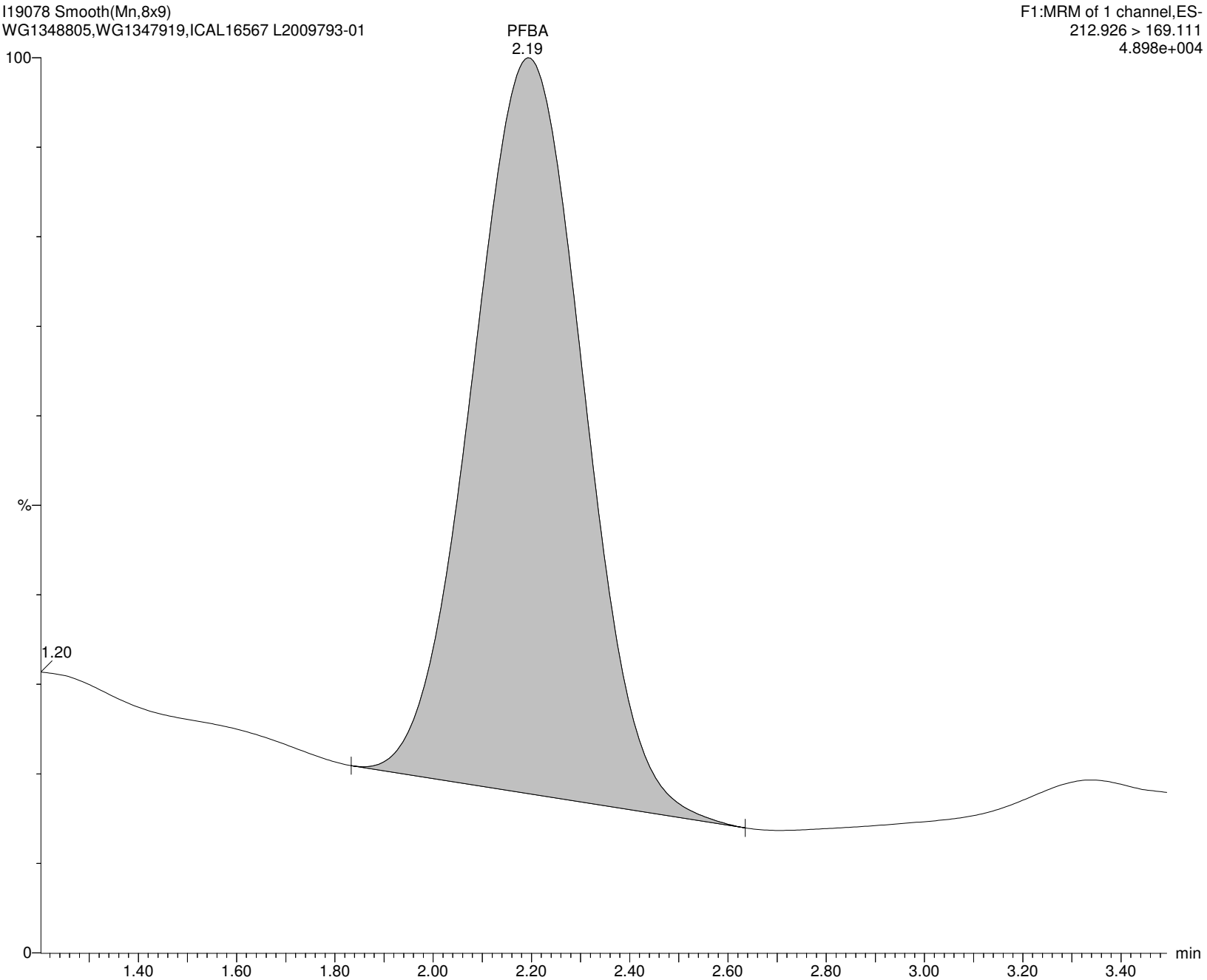

all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200309_537ISO.PRO\Data\WG1348805A.qld
Last Altered: Tuesday, March 17, 2020 11:30:27 Eastern Daylight Time
Printed: Tuesday, March 17, 2020 11:30:55 Eastern Daylight Time

**Method: C:\MassLynx\Data\200309_537ISO.PRO\MethDB\537ISO_Q_200227 .mdb 28 Feb 2020 10:16:06**
**Calibration: C:\MassLynx\Data\200309_537ISO.PRO\CurveDB\200227_537ISO_ICAL.cdb 28 Feb 2020 10:12:40**

**Name: I19078**
**ID: L2009793-01**
**Date: 09-Mar-2020**
**Time: 15:23:29**
**Description: WG1348805,WG1347919,ICAL16567**
**User: LCMS01:JW**
**Vial: 1:C,1**
**Instrument: XEVO-TQSmicro#QEA0276**
**Inlet Method Name: C:\MassLynx\Data\200309_537ISO.PRO\ACQUDB\LCMS_537_ISO_MeOH**
**Tune Method Name: C:\MassLynx\Data\200309_537ISO.PRO\ACQUDB\190709_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\200309_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**PFBA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200309_537ISO.PRO\Data\WG1348805A.qld
Last Altered: Tuesday, March 17, 2020 11:30:27 Eastern Daylight Time
Printed: Tuesday, March 17, 2020 11:30:55 Eastern Daylight Time

**Name: I19078**
**ID: L2009793-01**
**Date: 09-Mar-2020**
**Time: 15:23:29**
**Description: WG1348805,WG1347919,ICAL16567**
**User: LCMS01:JW**
**Vial: 1:C,1**
**Instrument: XEVO-TQSmicro#QEA0276**
**Inlet Method Name: C:\MassLynx\Data\200309_537ISO.PRO\ACQUDB\LCMS_537_ISO_MeOH**
**Tune Method Name: C:\MassLynx\Data\200309_537ISO.PRO\ACQUDB\190709_TUNE.IPR**
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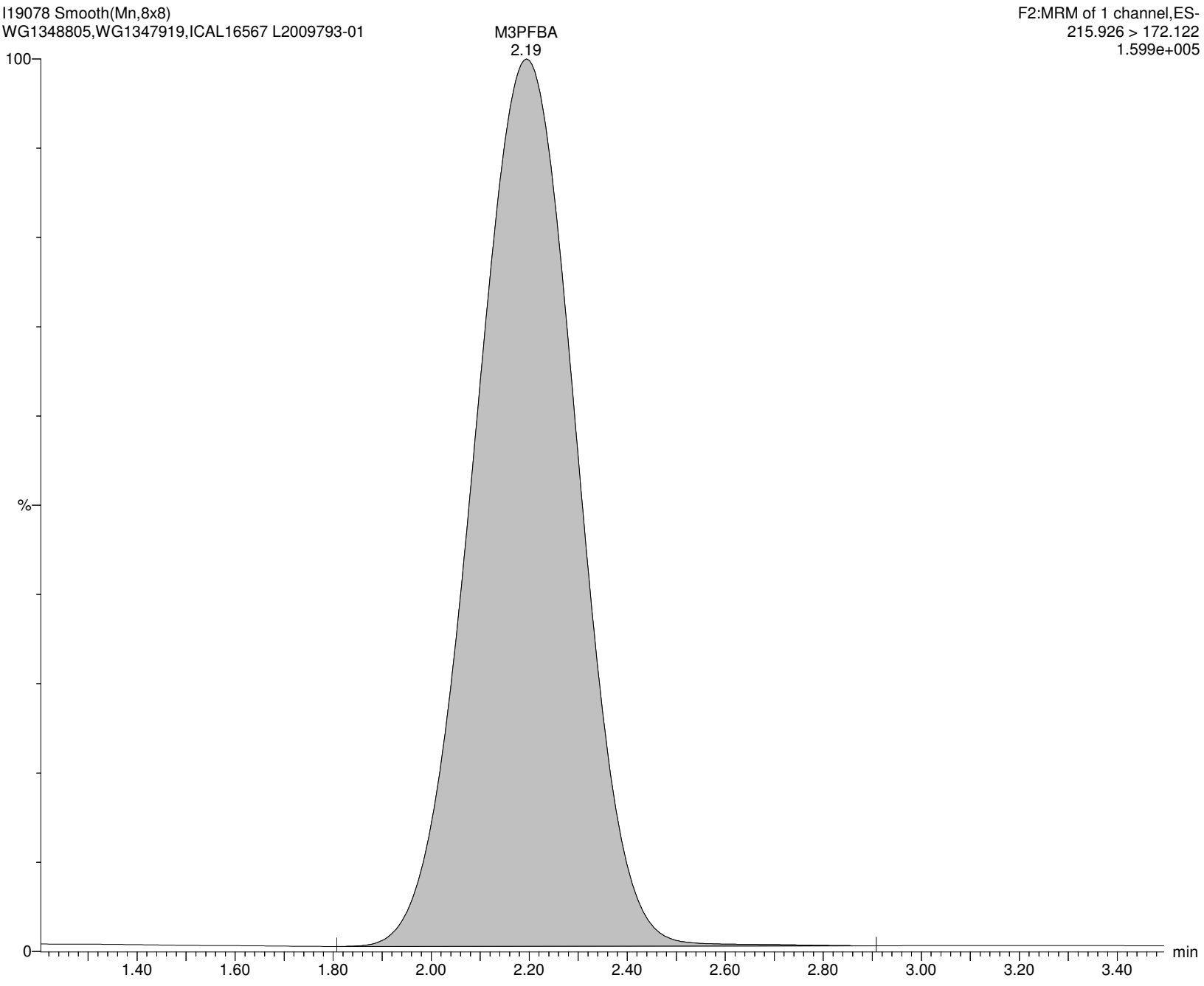



all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200309_537ISO.PRO\Data\WG1348805A.qld
Last Altered: Tuesday, March 17, 2020 11:30:27 Eastern Daylight Time
Printed: Tuesday, March 17, 2020 11:30:55 Eastern Daylight Time

**Name: I19078**
**ID: L2009793-01**
**Date: 09-Mar-2020**
**Time: 15:23:29**
**Description: WG1348805,WG1347919,ICAL16567**
**User: LCMS01:JW**
**Vial: 1:C,1**
**Instrument: XEVO-TQSmicro#QEA0276**
**Inlet Method Name: C:\MassLynx\Data\200309_537ISO.PRO\ACQUDB\LCMS_537_ISO_MeOH**
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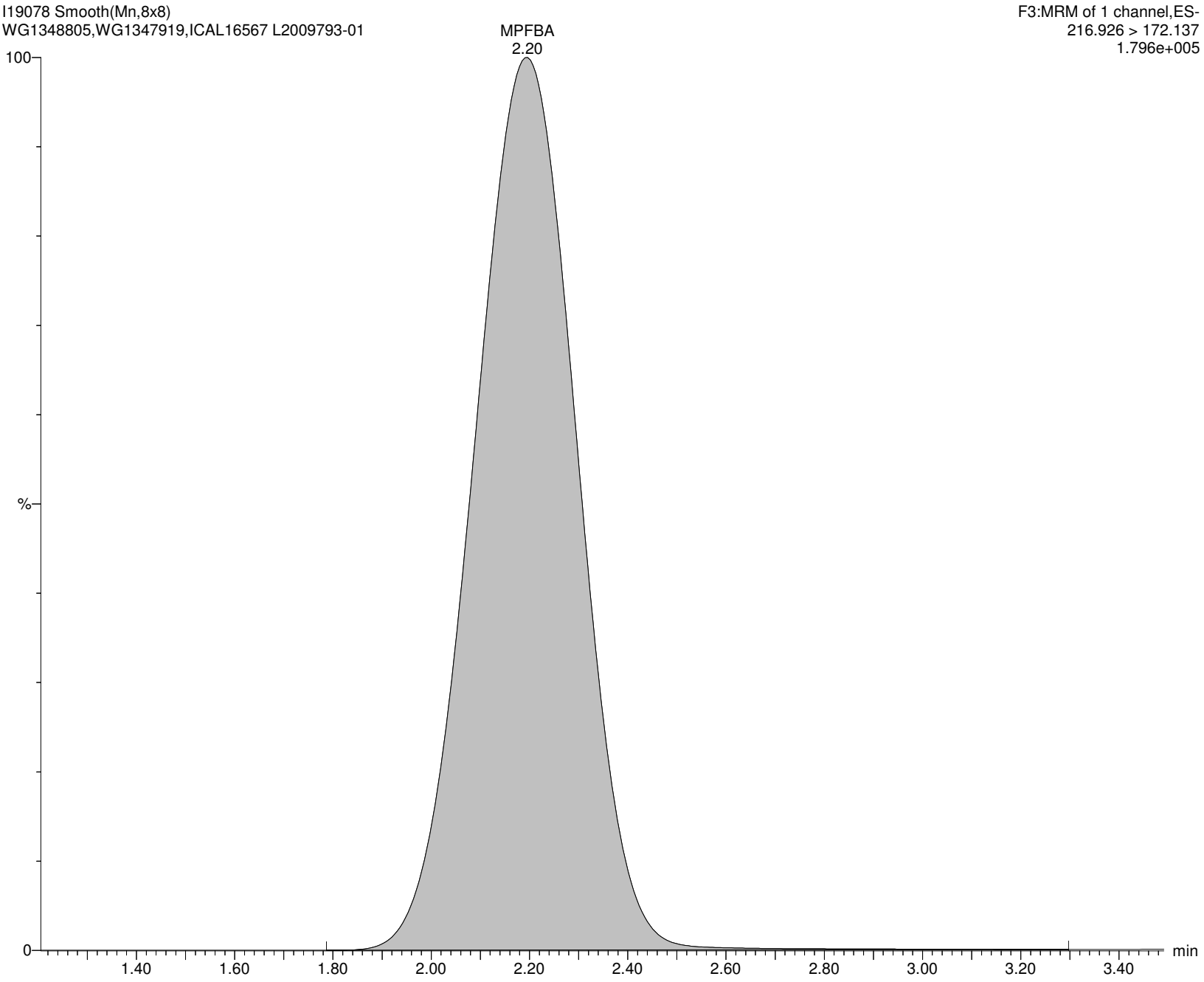
**MPFBA**





all concentration units in (ng/mL)

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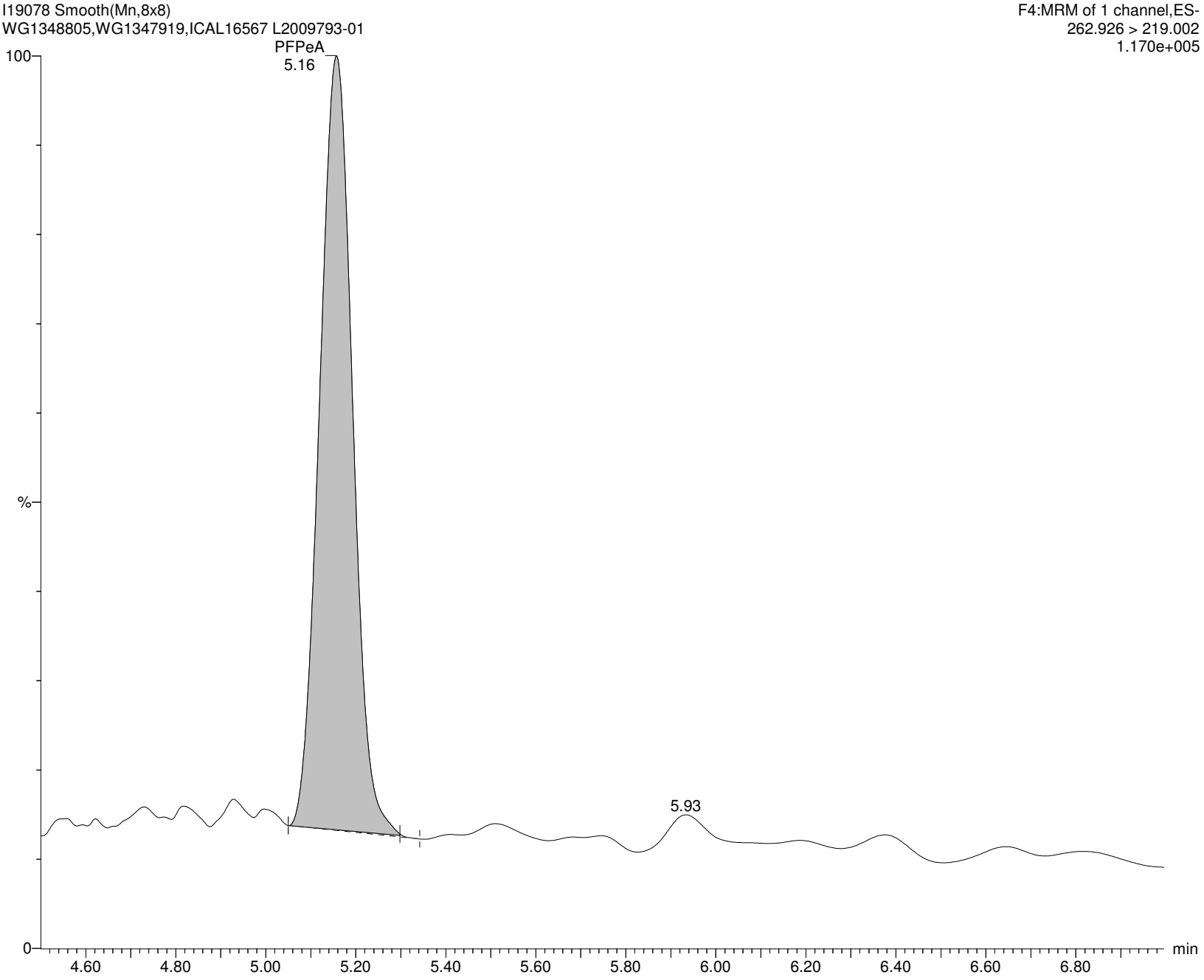



all concentration units in (ng/mL)

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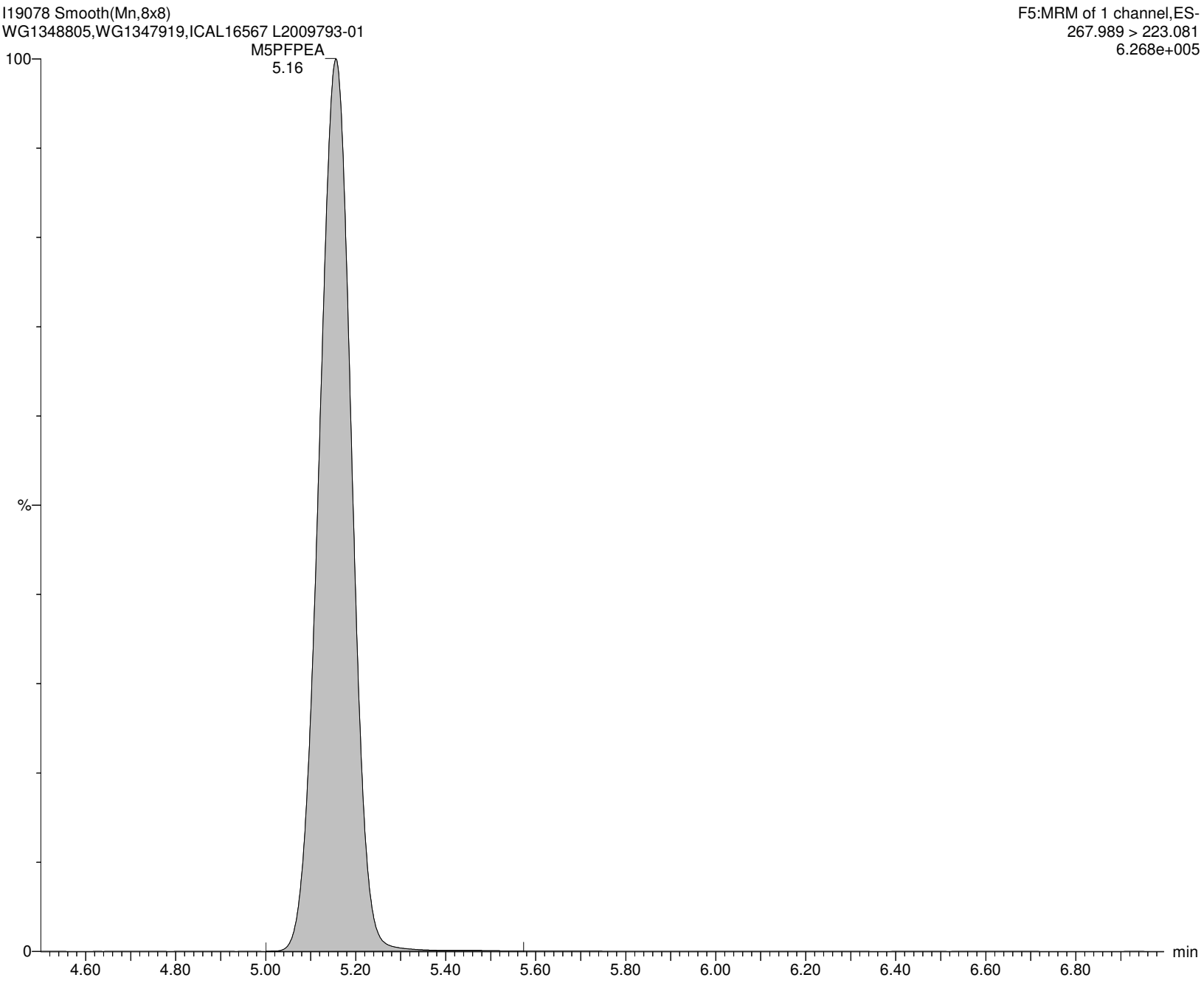
**M5PFPEA**





all concentration units in (ng/mL)

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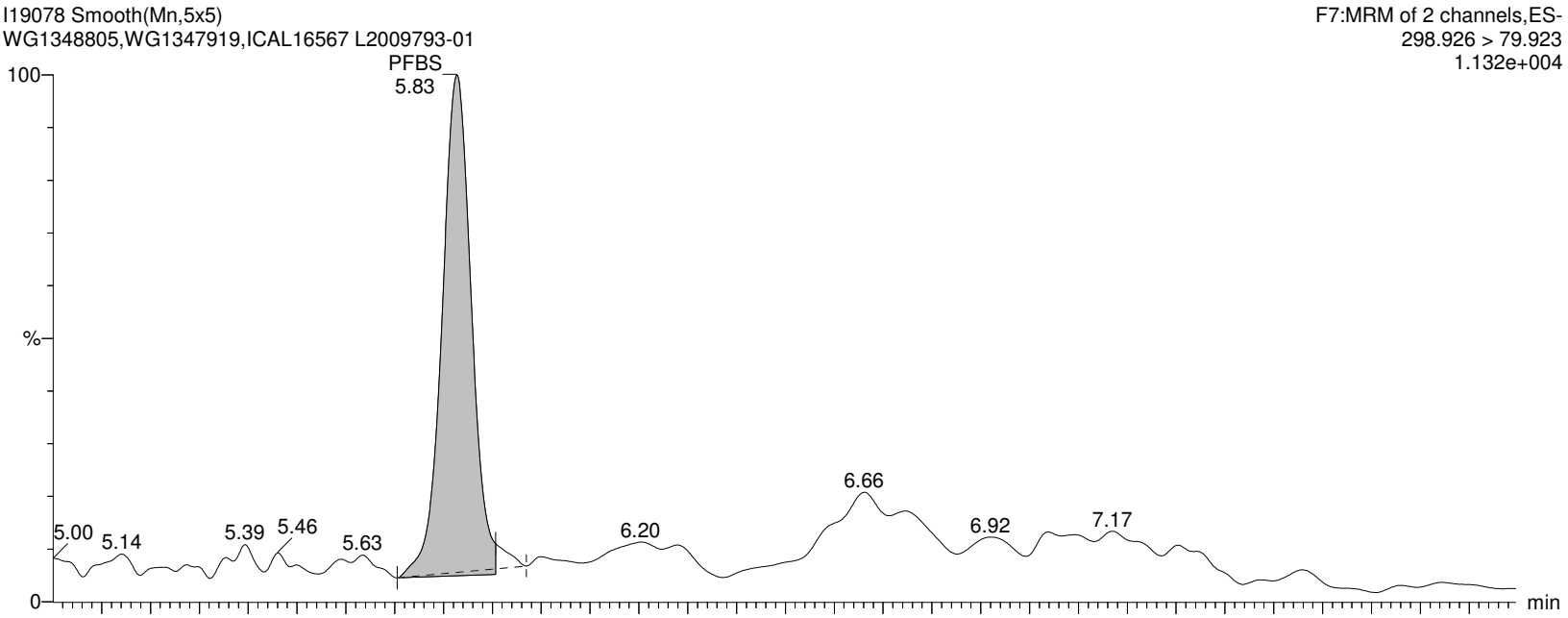
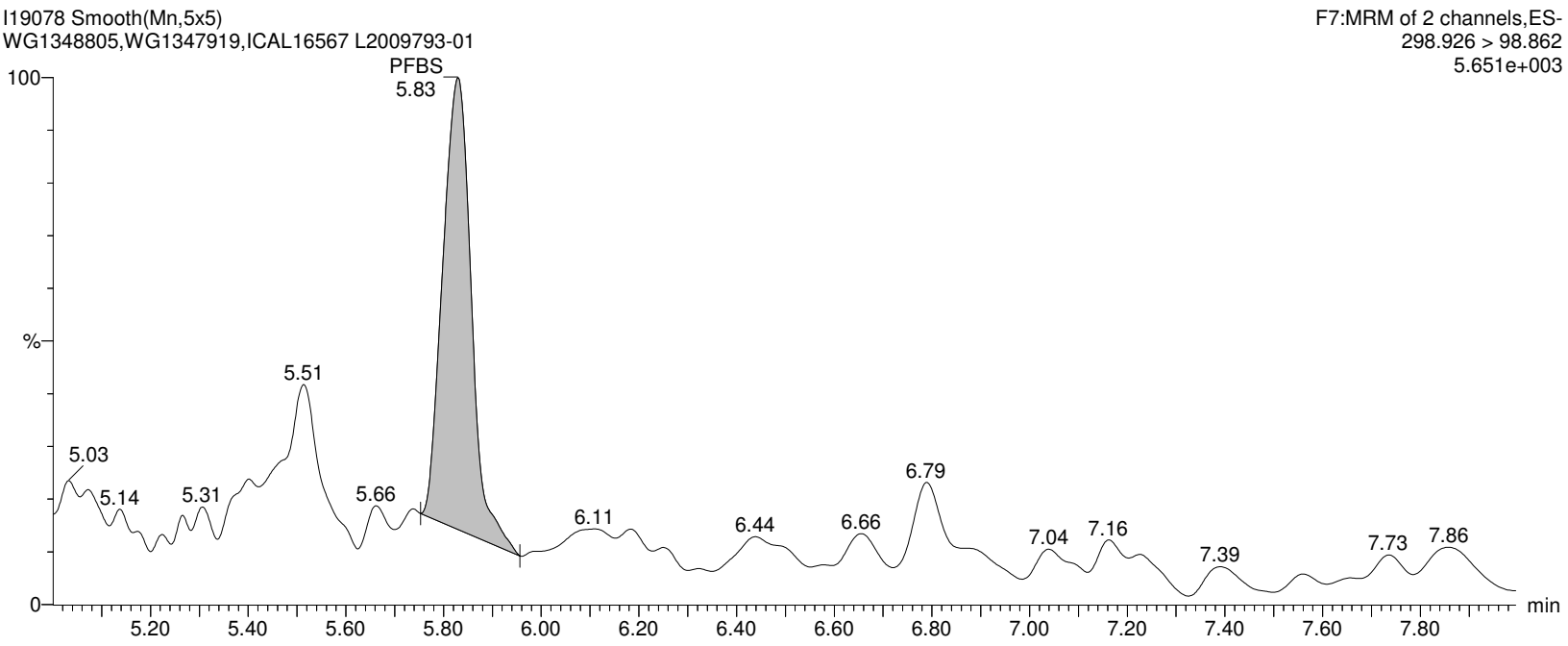
**MS Method Name: C:\MassLynx\Data\200309_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**PFBS**





all concentration units in (ng/mL)

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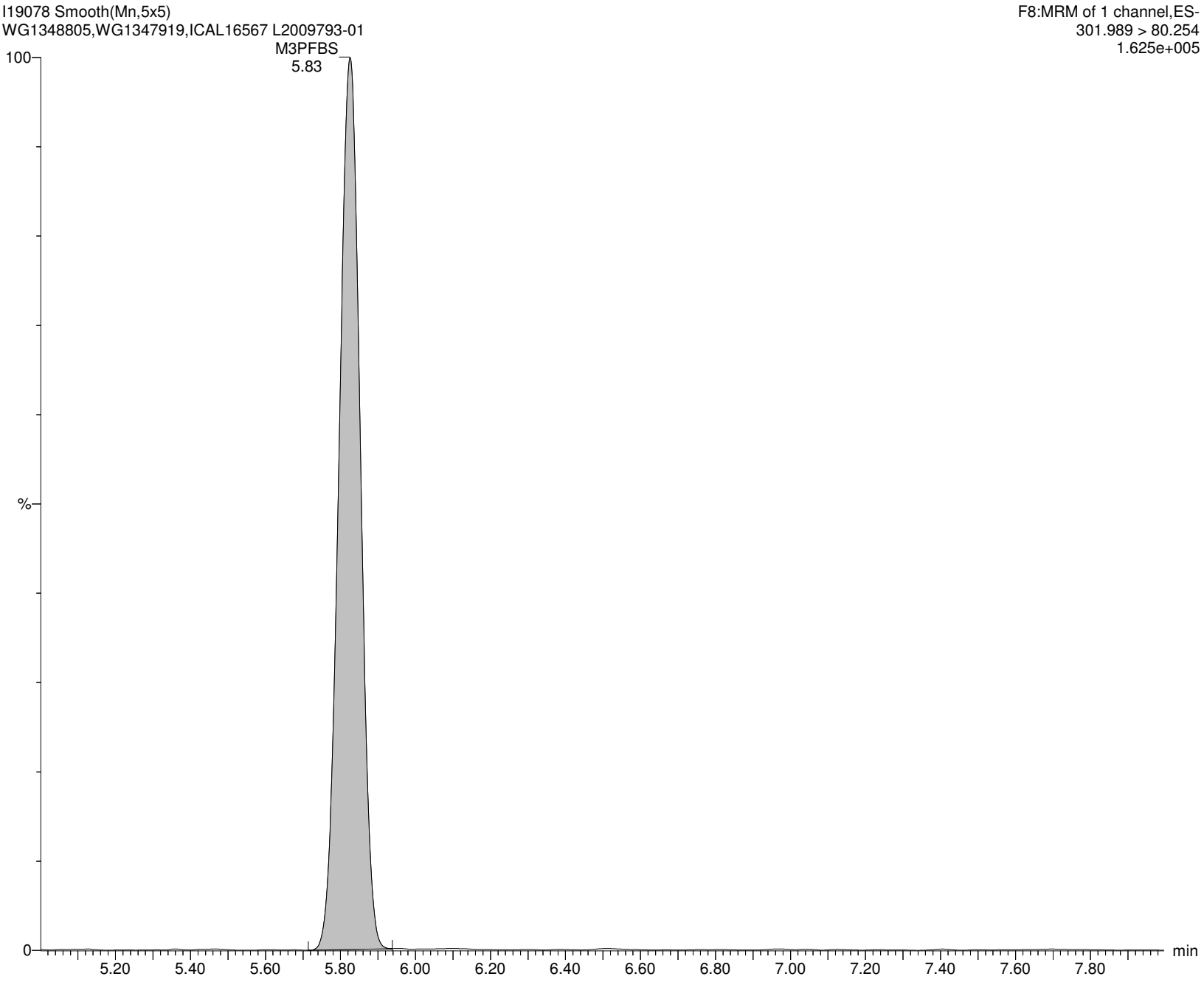
**M3PFBS**





all concentration units in (ng/mL)

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**Instrument: XEVO-TQSmicro#QEA0276**
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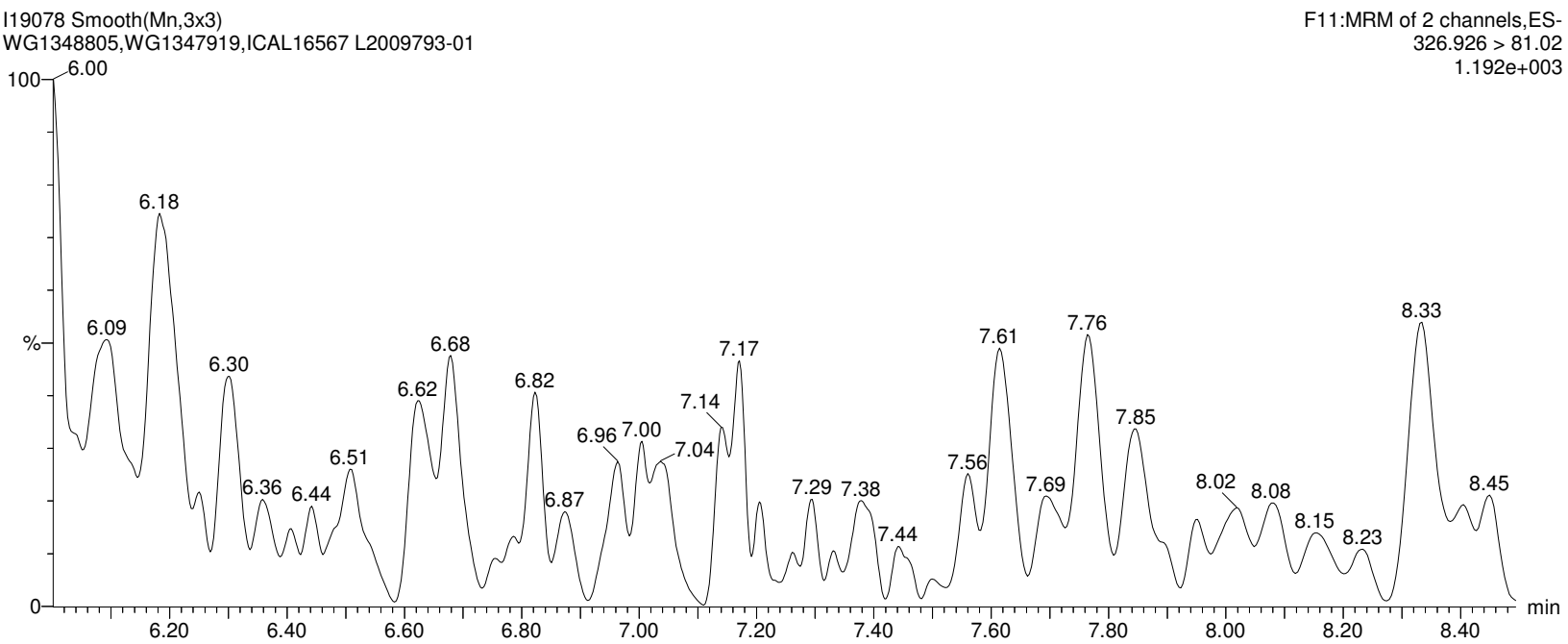
**4:2FTS**





all concentration units in (ng/mL)

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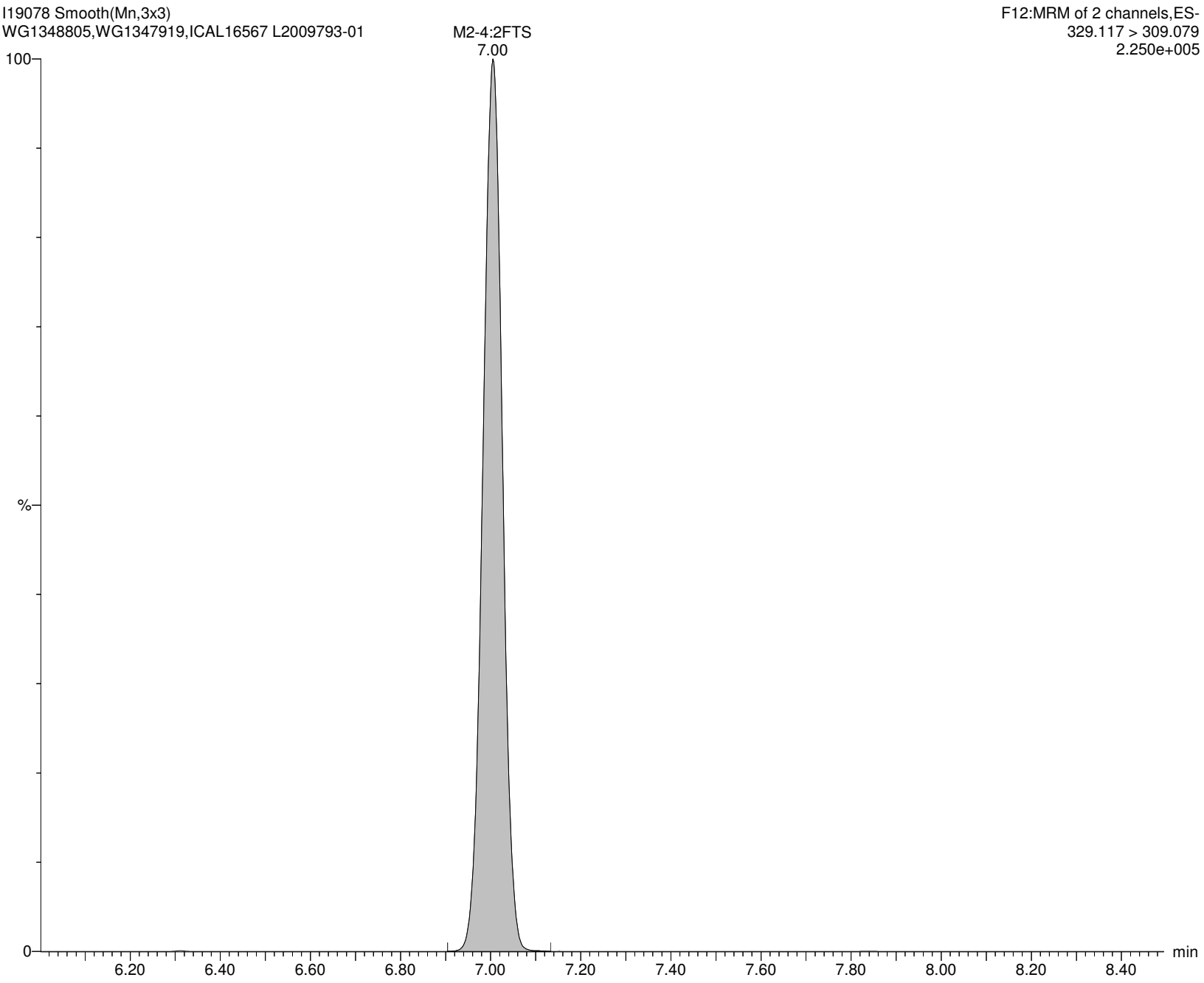
**M2-4:2FTS**





all concentration units in (ng/mL)

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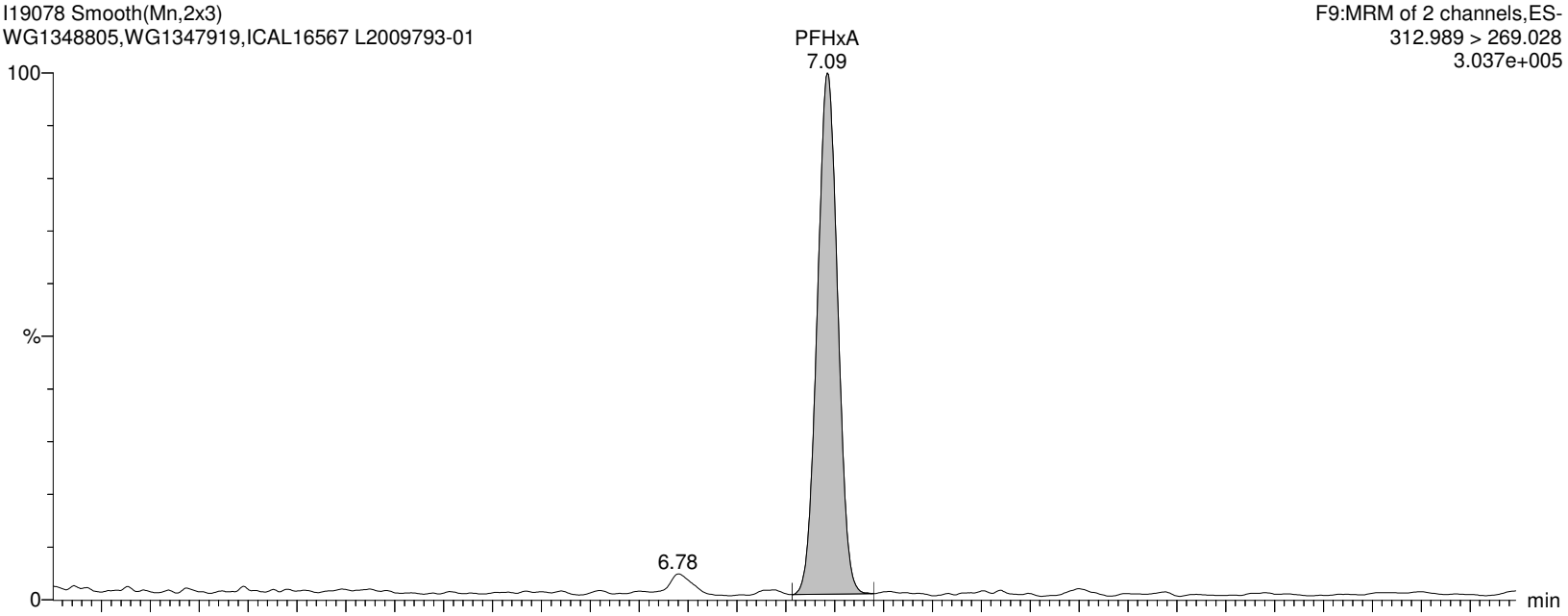
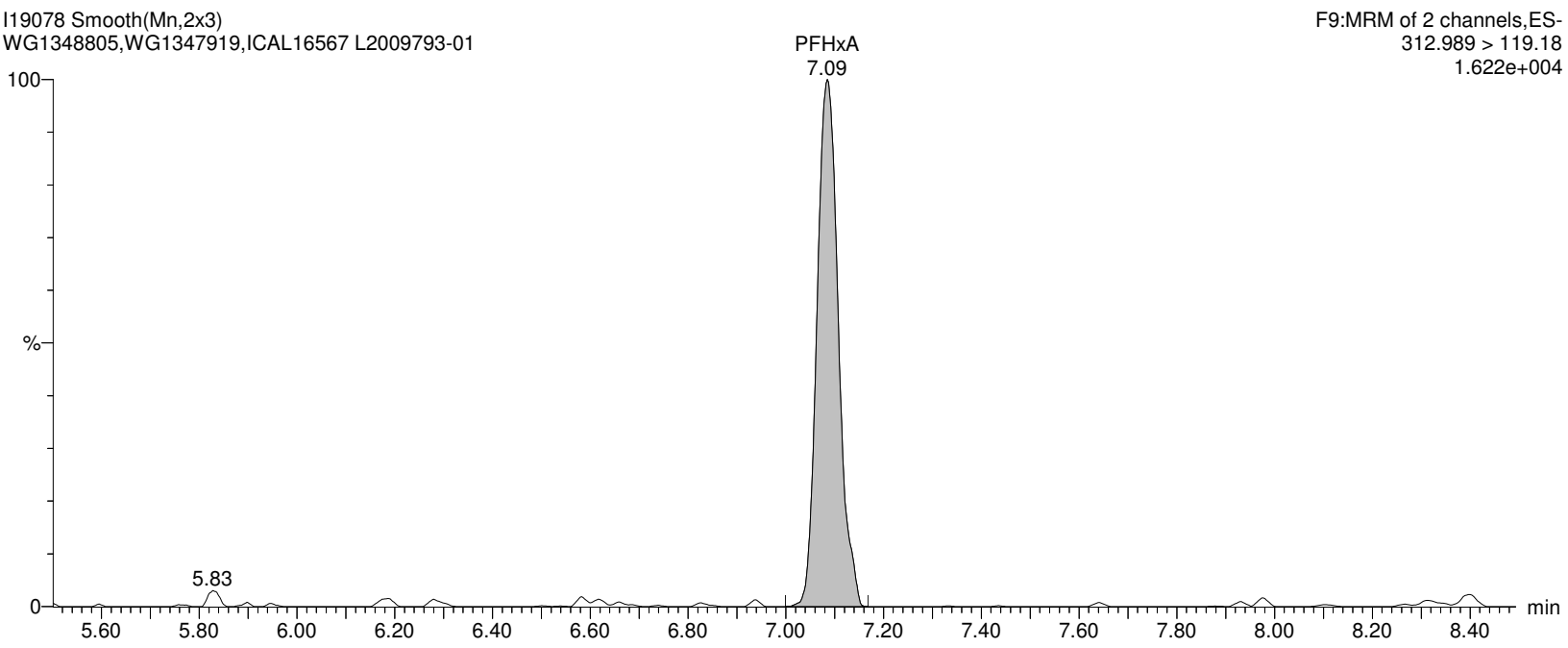
**PFHxA**





all concentration units in (ng/mL)

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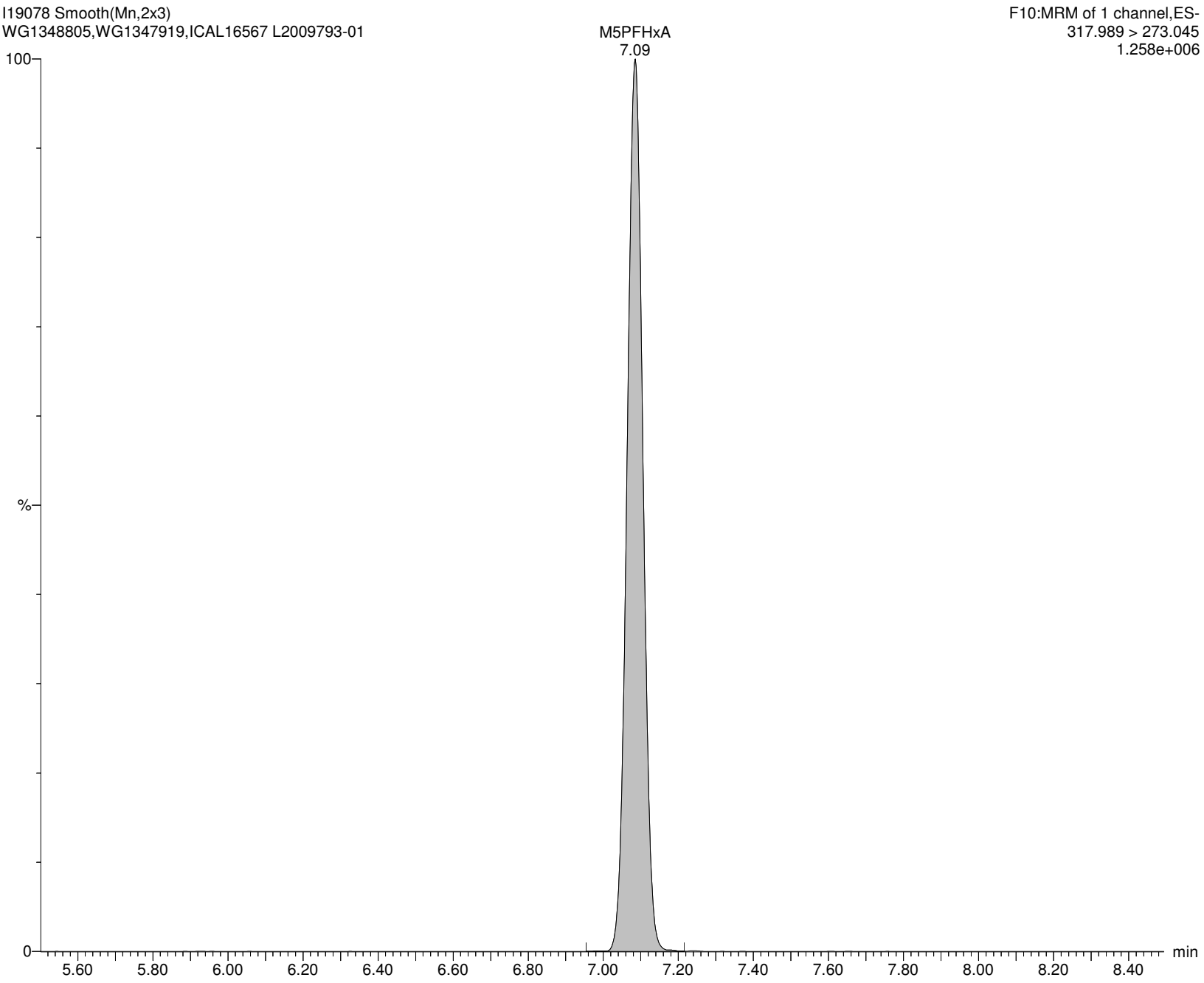
**M5PFHxA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
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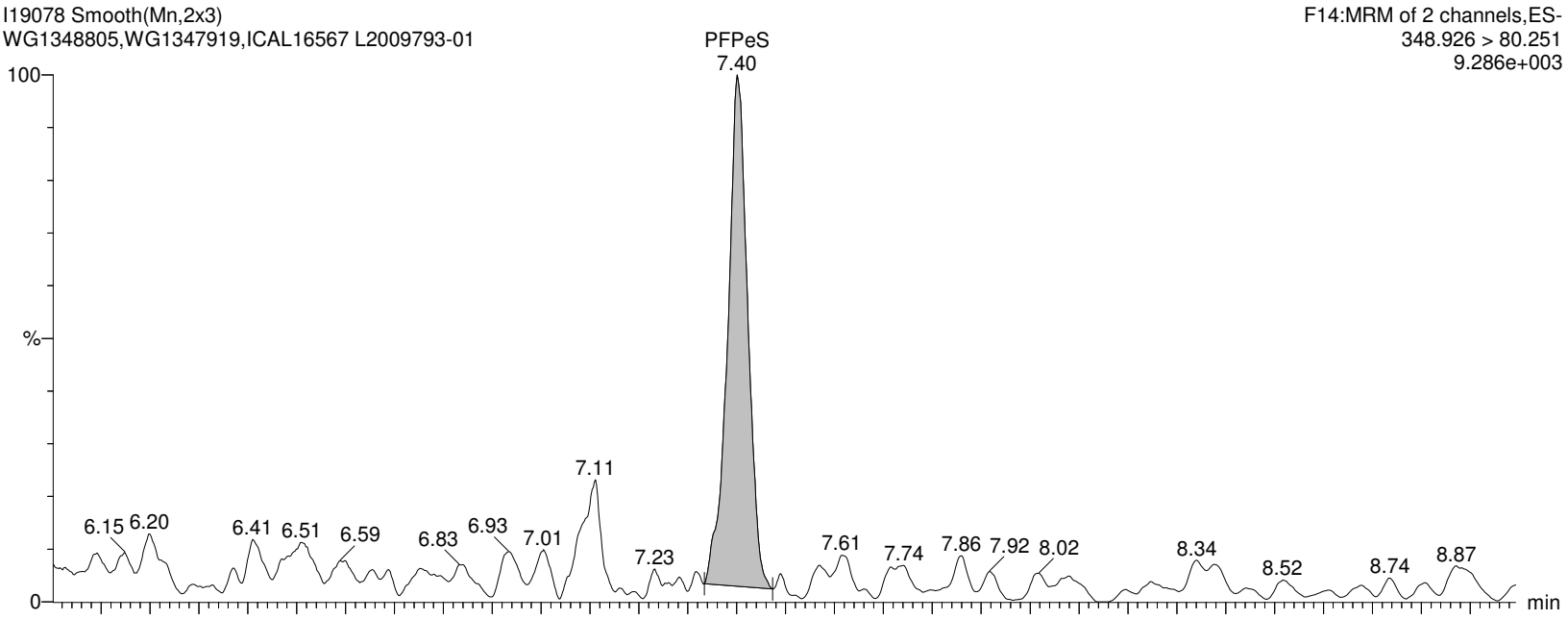


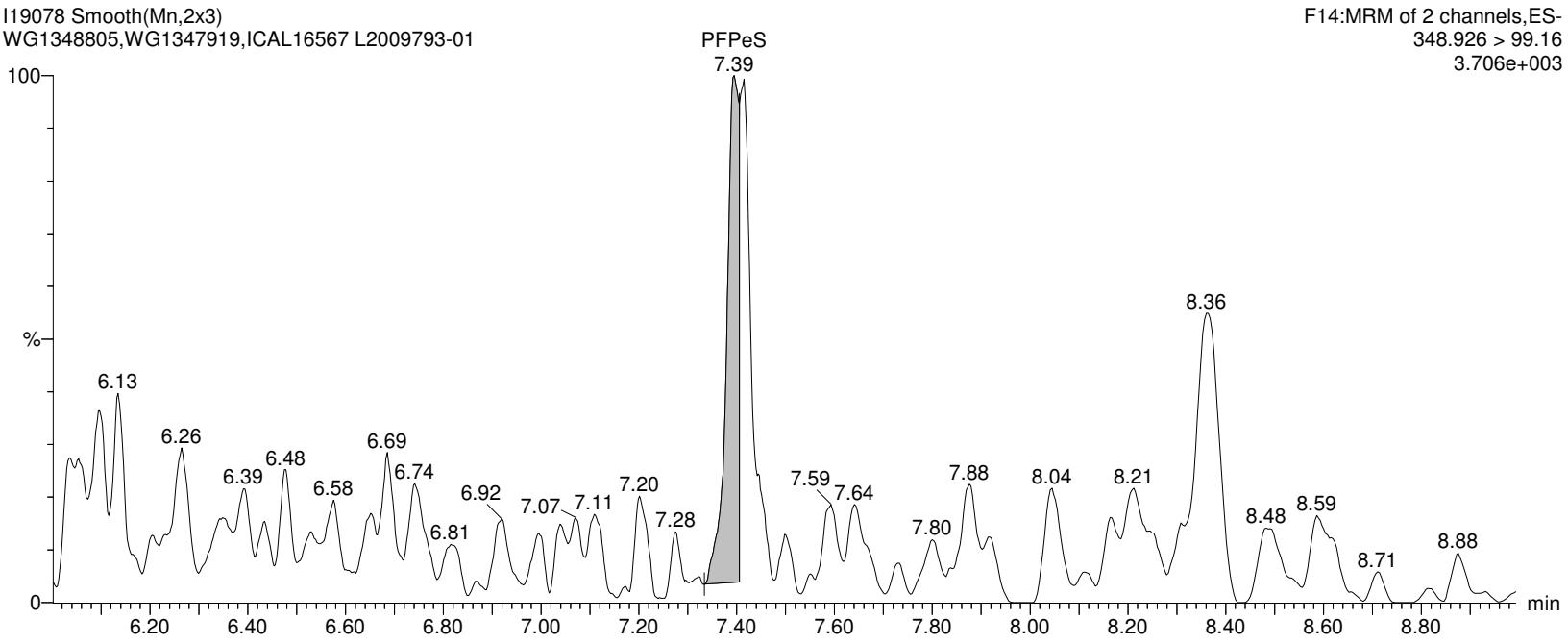



all concentration units in (ng/mL)

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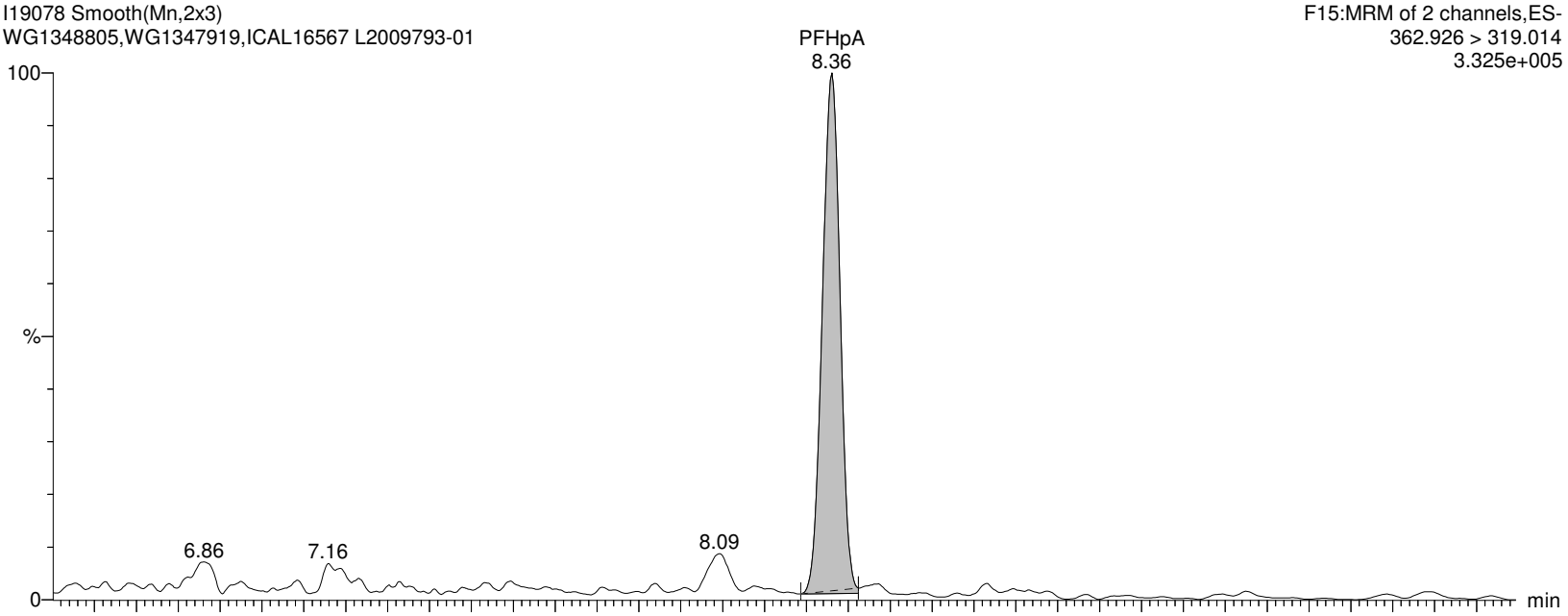
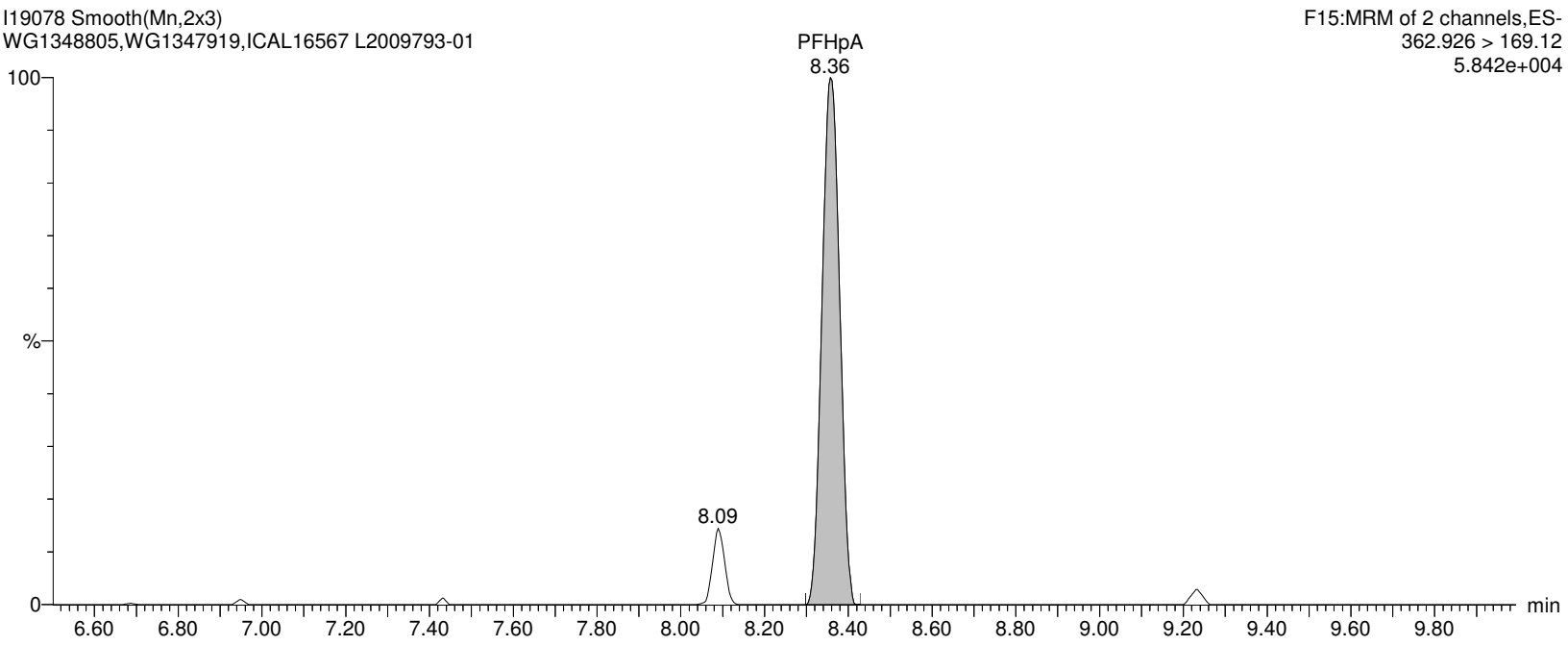
**PFHpA**





all concentration units in (ng/mL)

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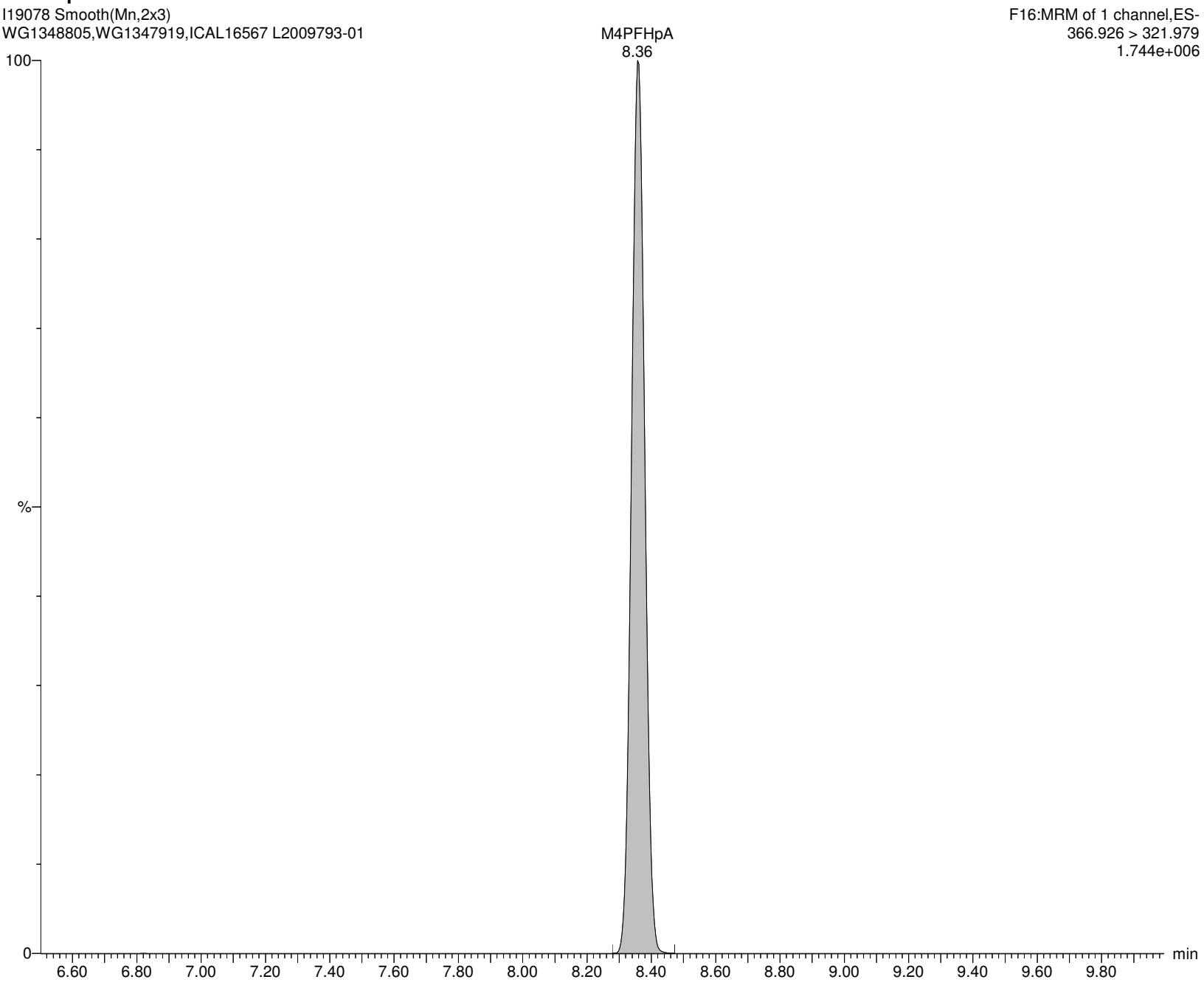
**M4PFHpA**





all concentration units in (ng/mL)

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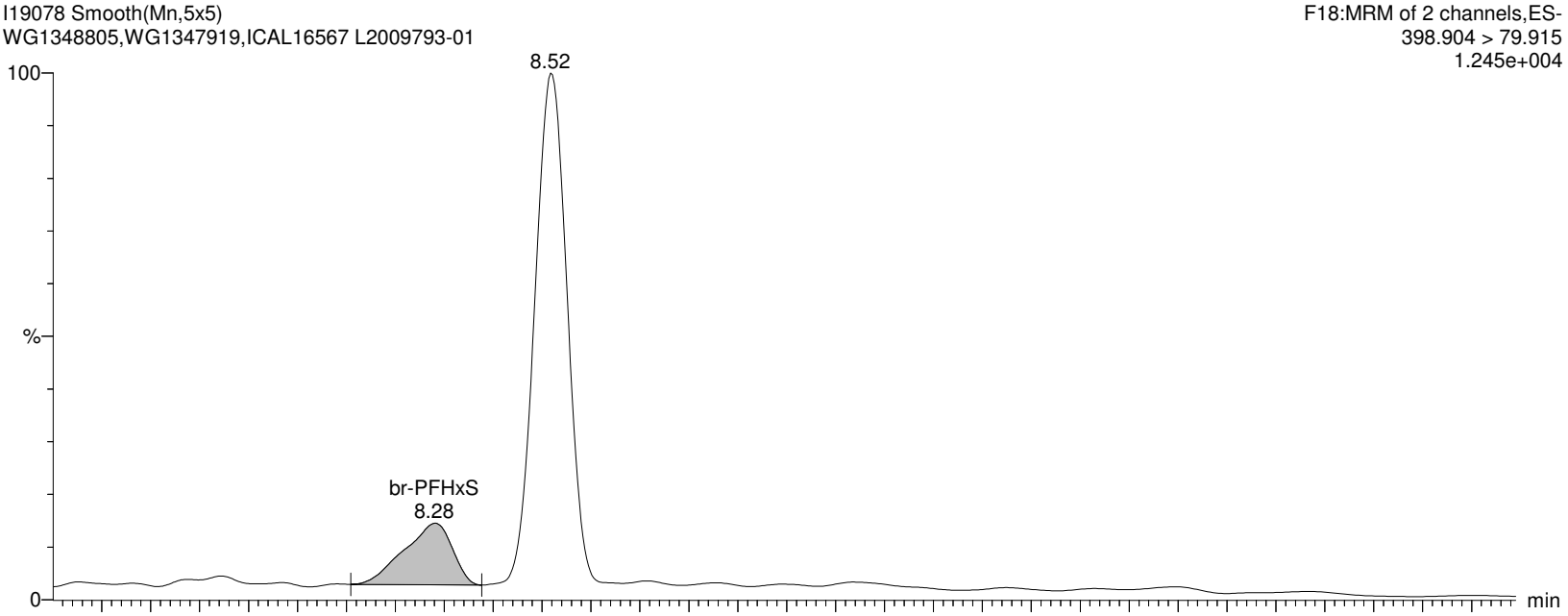
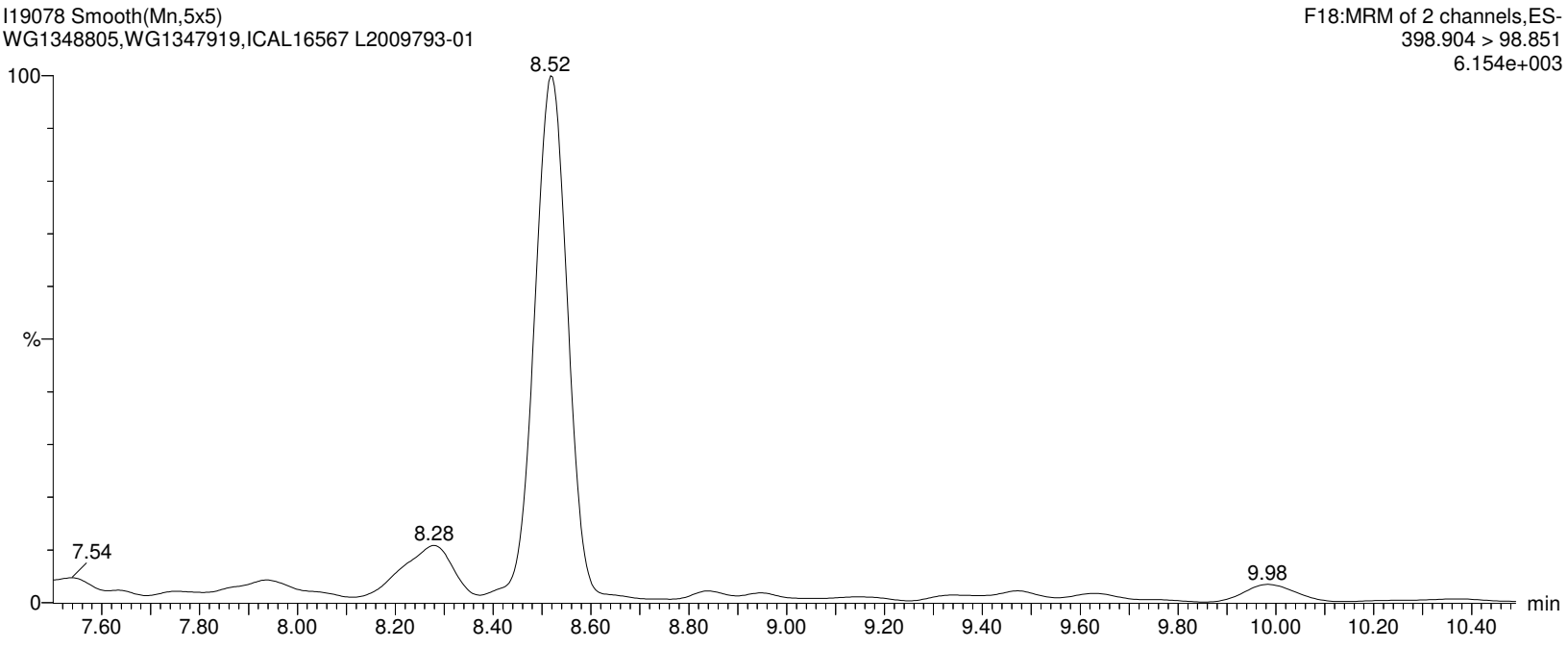
**br-PFHxS**





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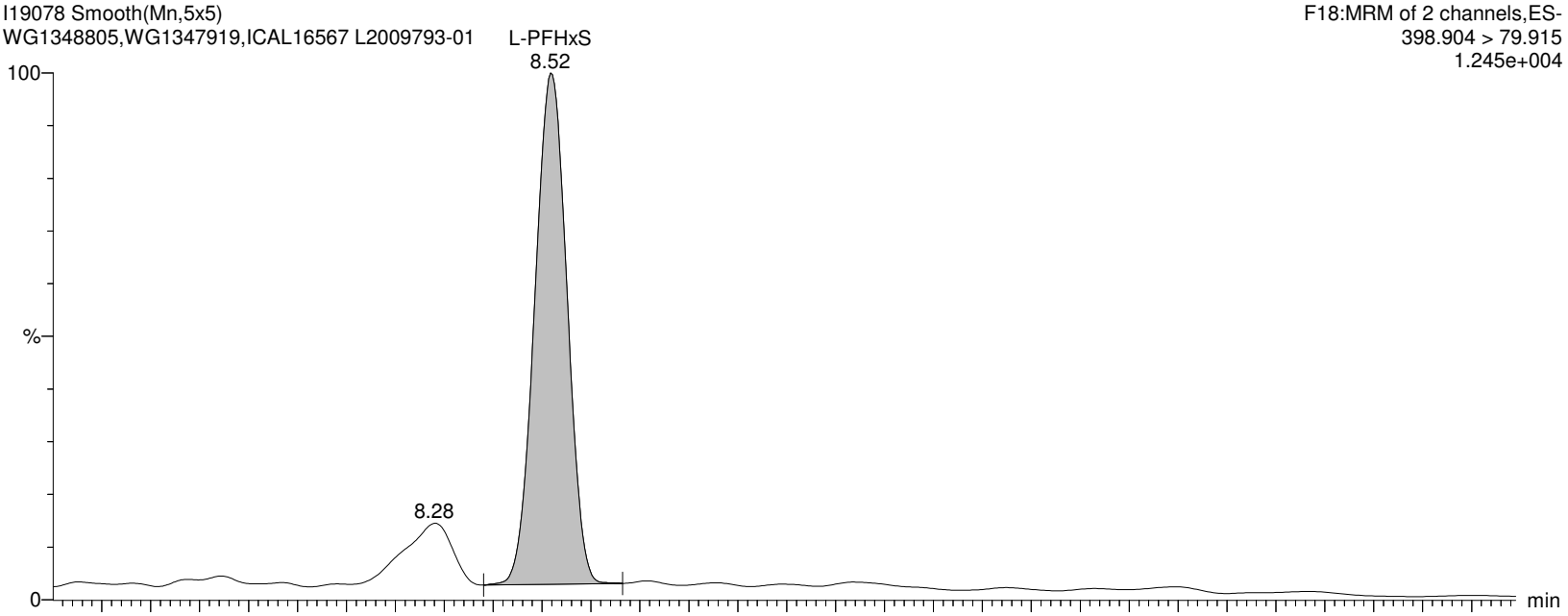
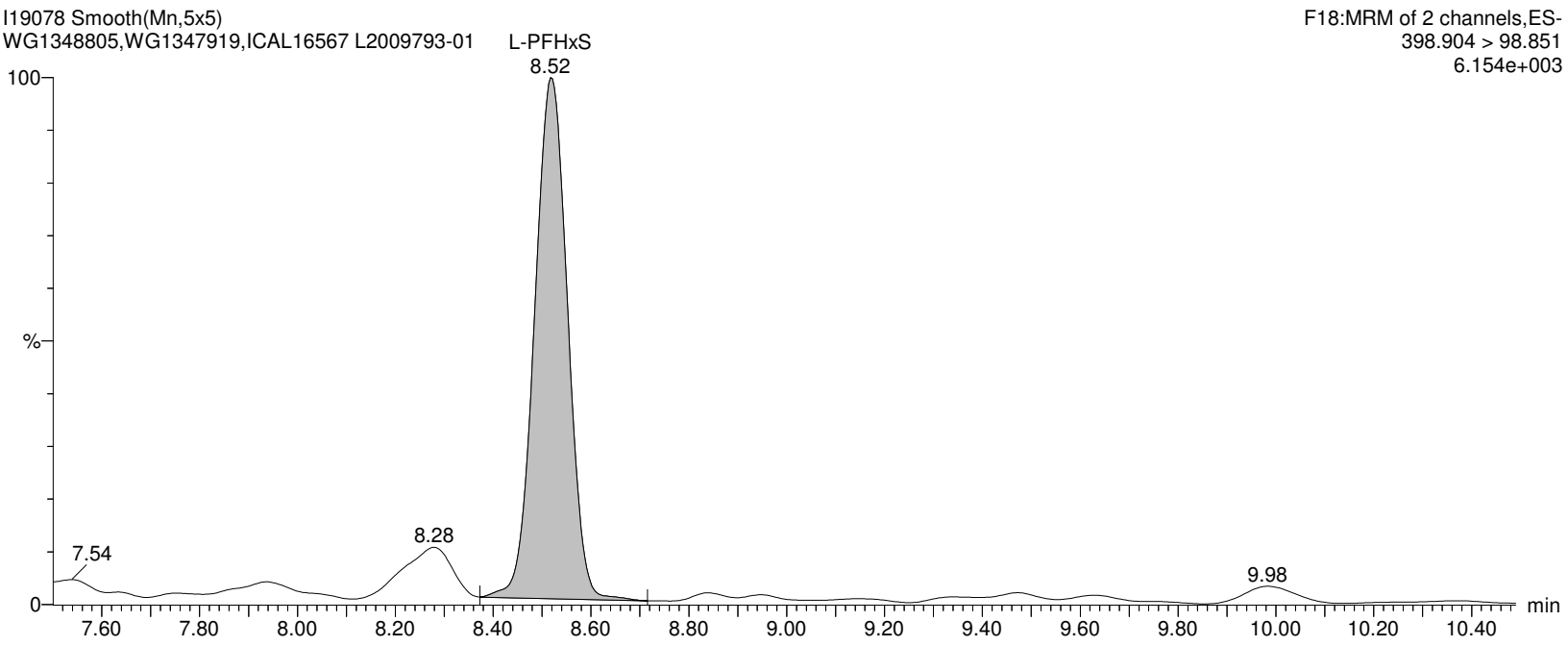
**L-PFHxS**





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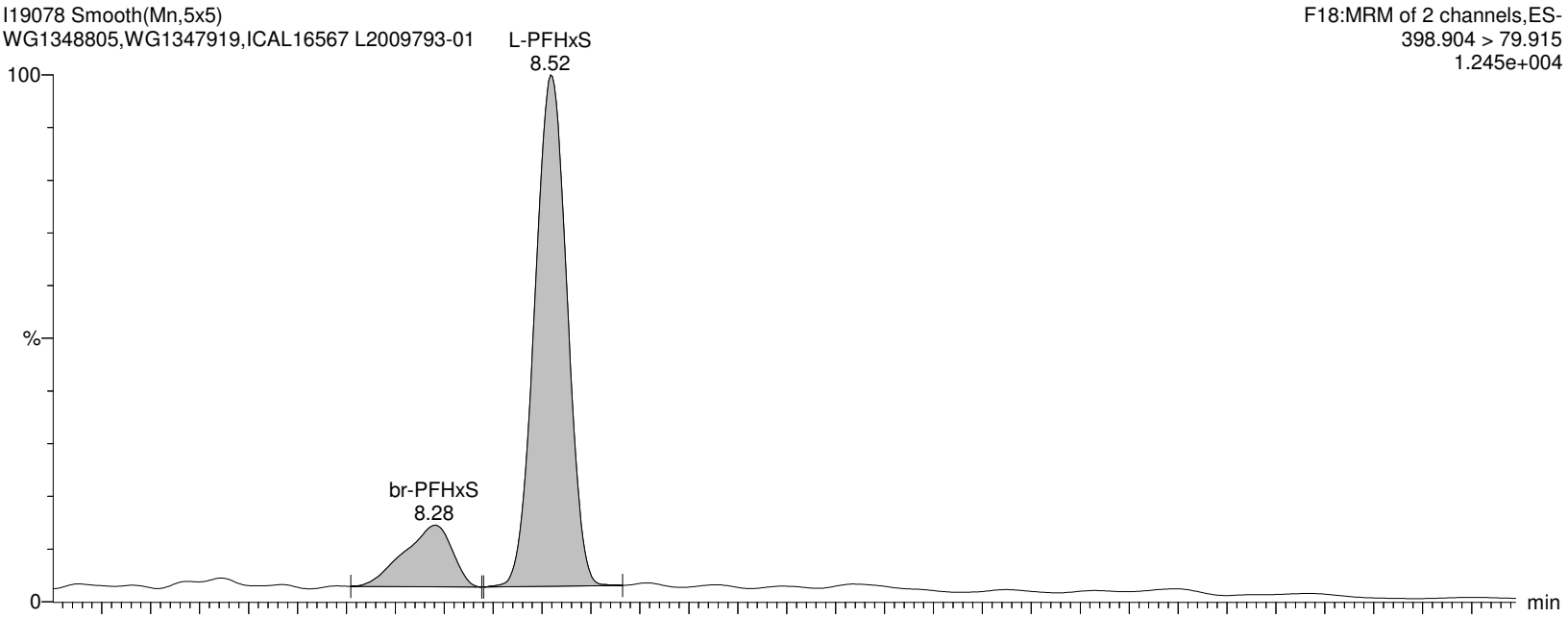
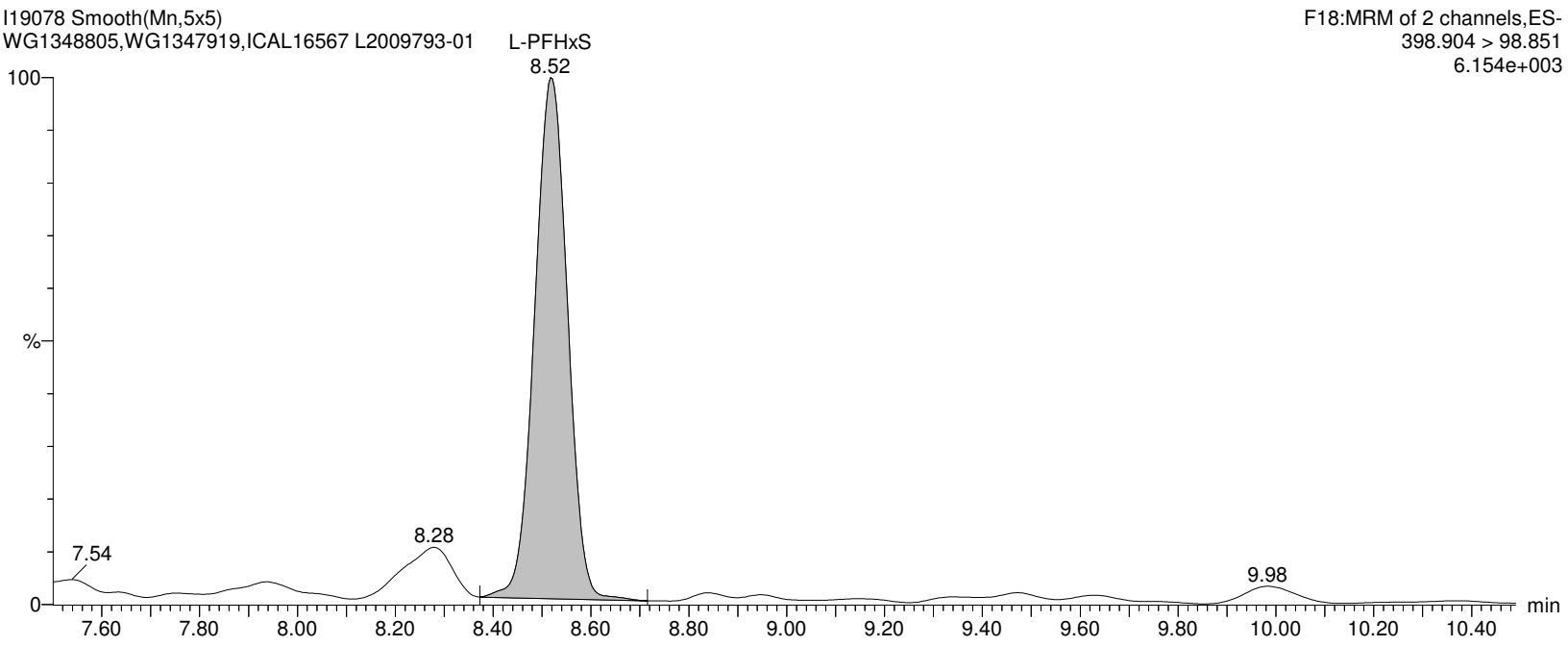
**PFHxS**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200309_537ISO.PRO\Data\WG1348805A.qld
Last Altered: Tuesday, March 17, 2020 11:30:27 Eastern Daylight Time
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**Name: I19078**
**ID: L2009793-01**
**Date: 09-Mar-2020**
**Time: 15:23:29**
**Description: WG1348805,WG1347919,ICAL16567**
**User: LCMS01:JW**
**Vial: 1:C,1**
**Instrument: XEVO-TQSmicro#QEA0276**
**Inlet Method Name: C:\MassLynx\Data\200309_537ISO.PRO\ACQUDB\LCMS_537_ISO_MeOH**
**Tune Method Name: C:\MassLynx\Data\200309_537ISO.PRO\ACQUDB\190709_TUNE.IPR**
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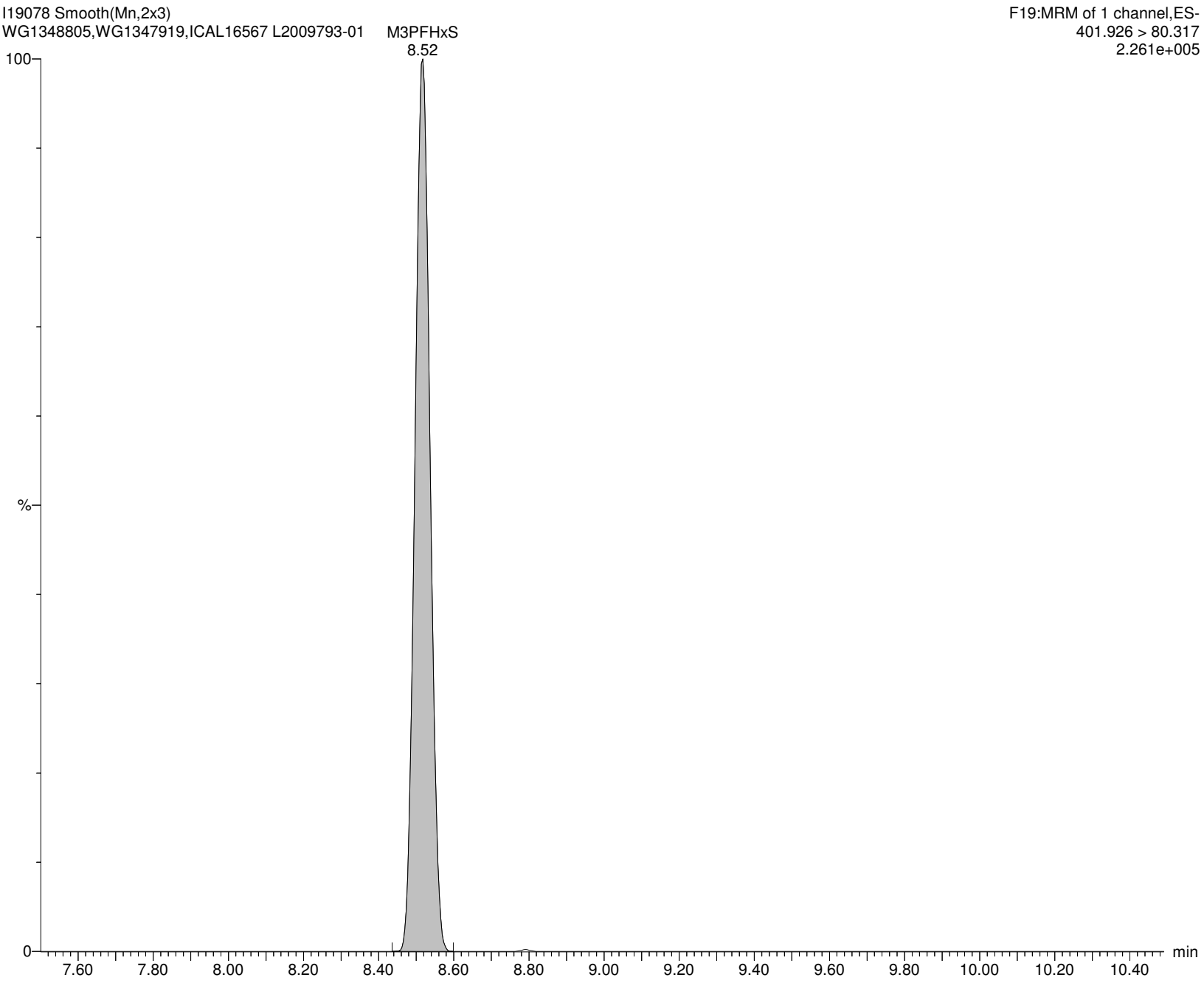
**M3PFHxS**





all concentration units in (ng/mL)

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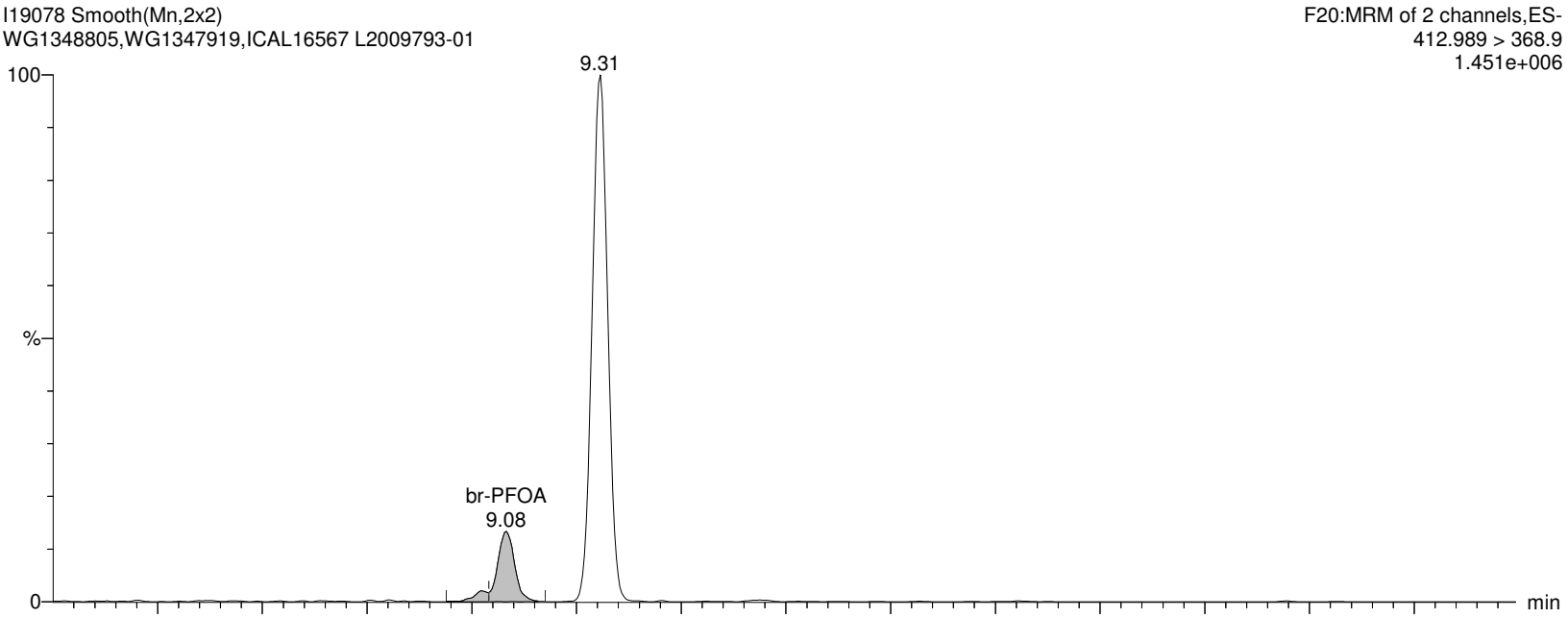


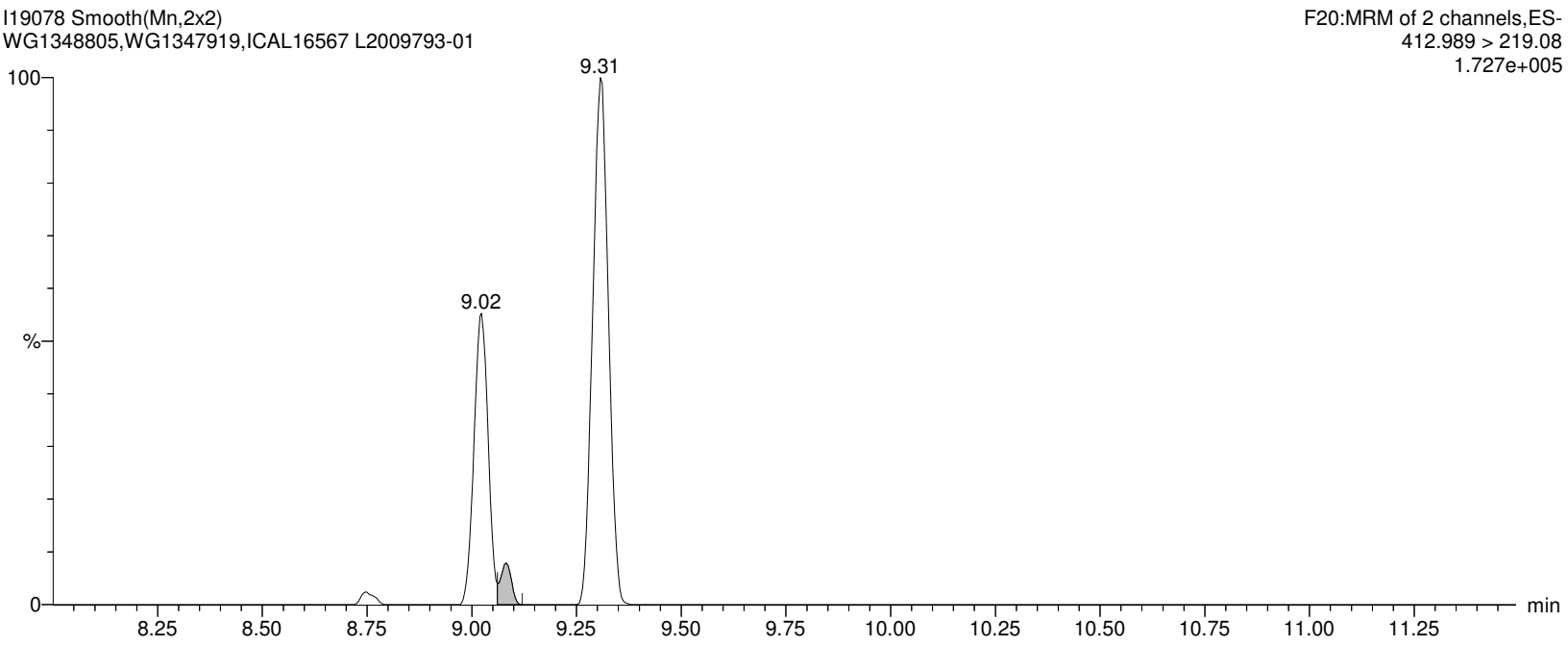



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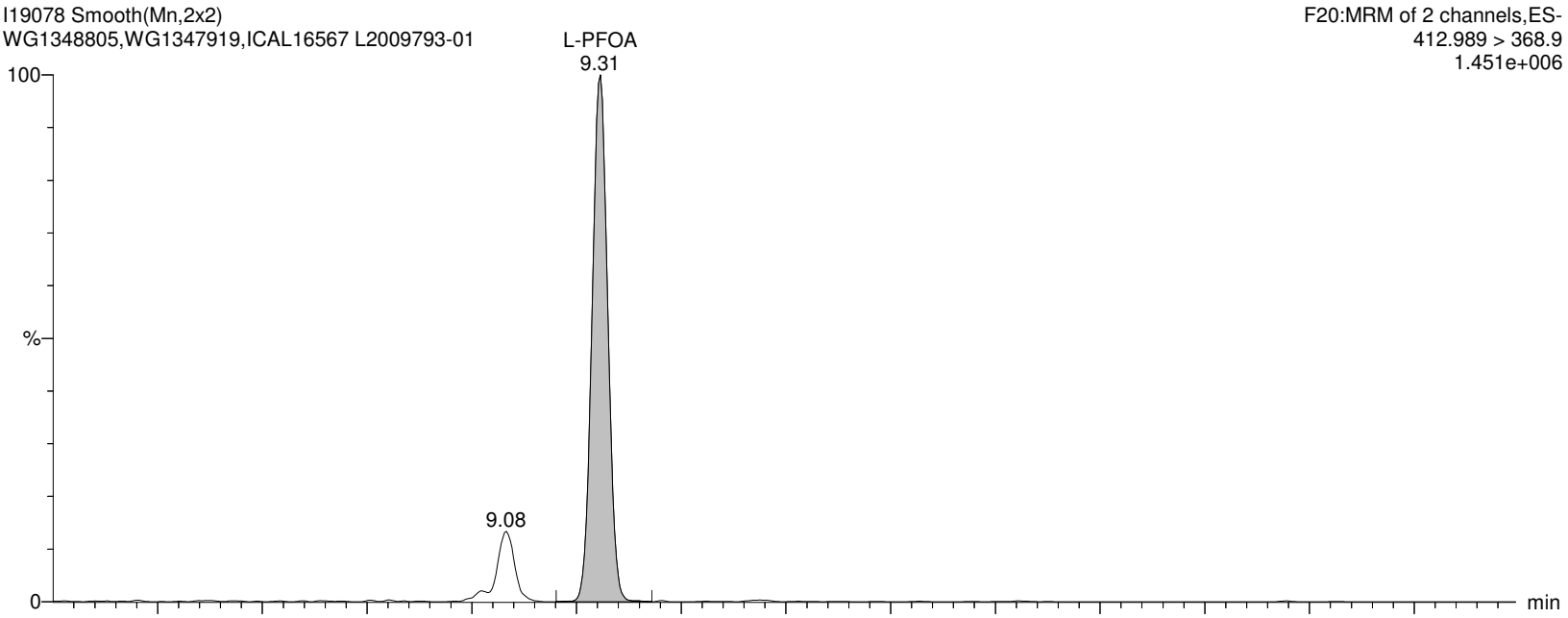


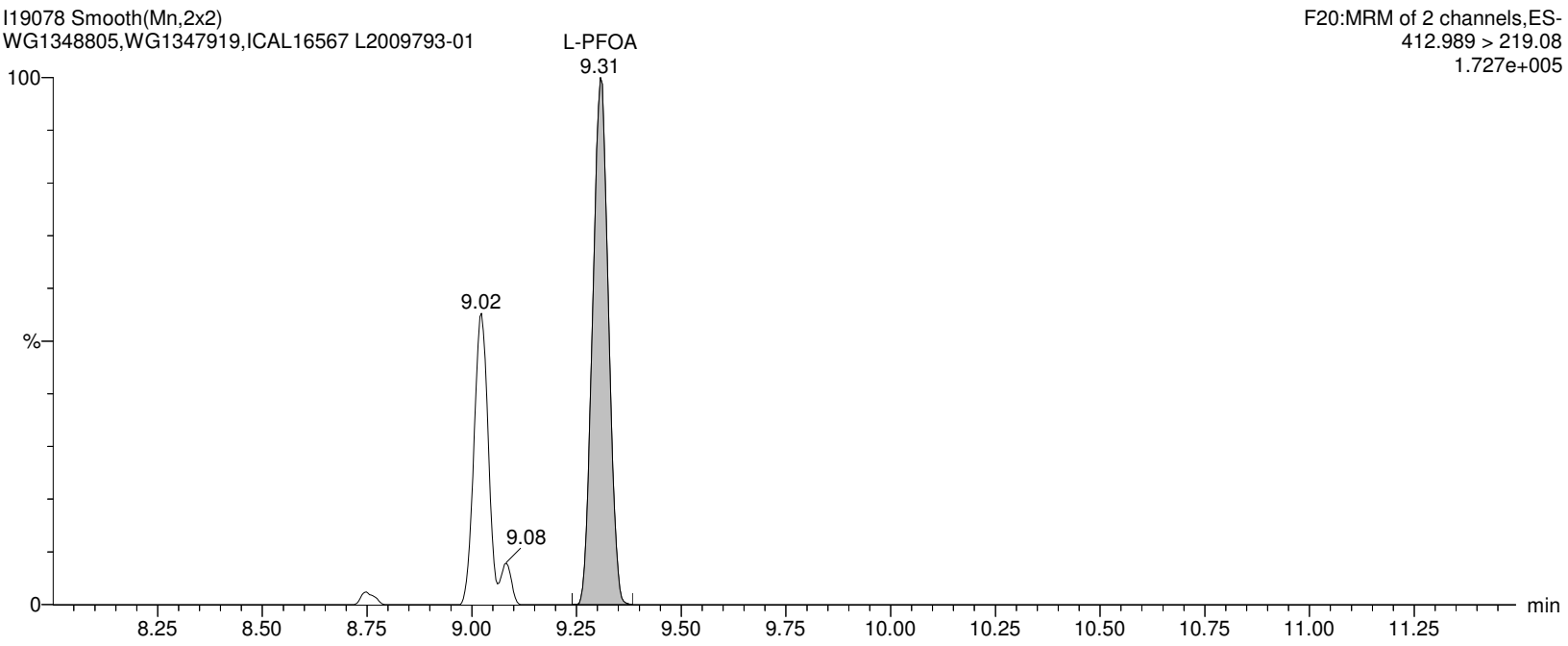



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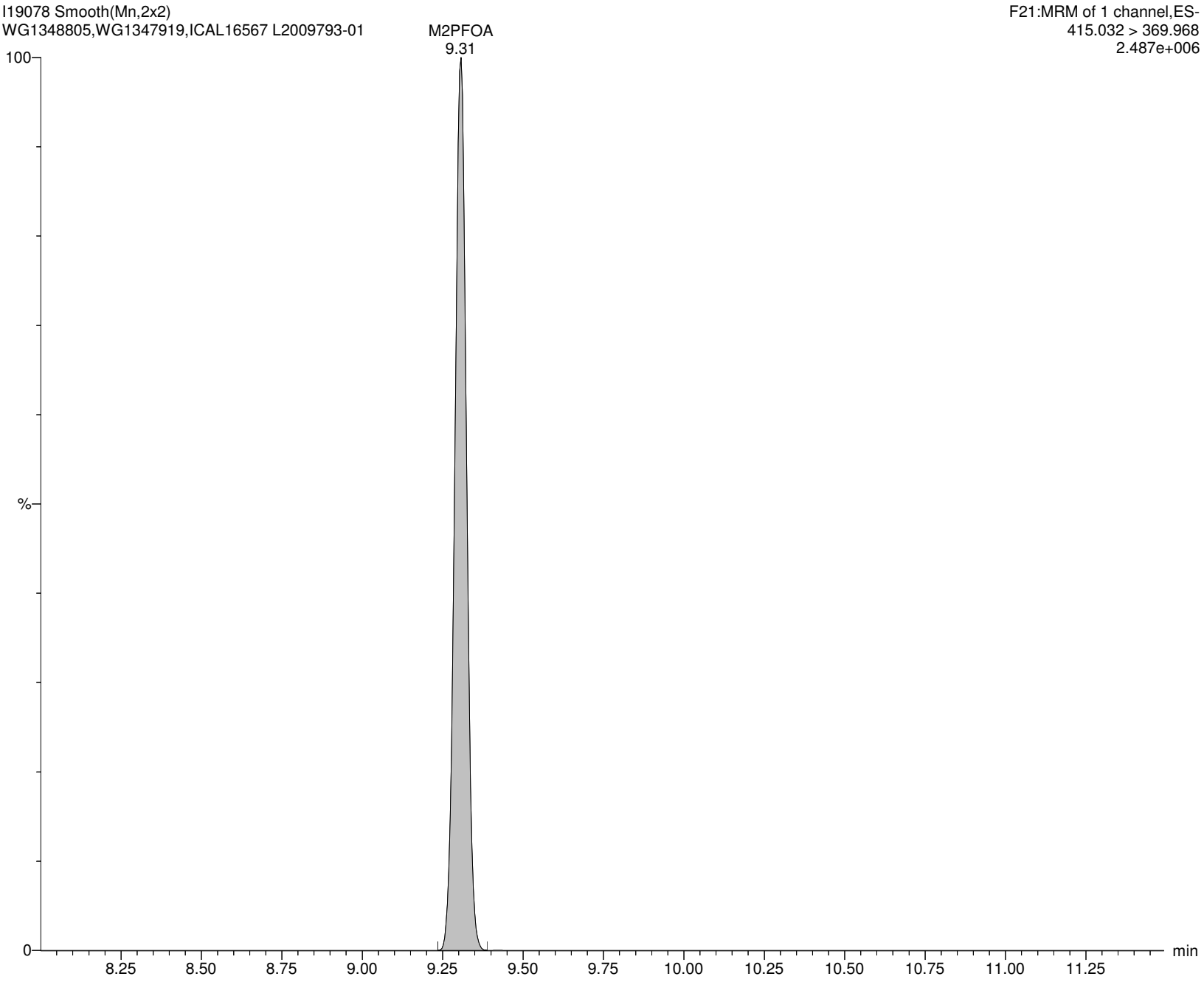
**M2PFOA**





all concentration units in (ng/mL)

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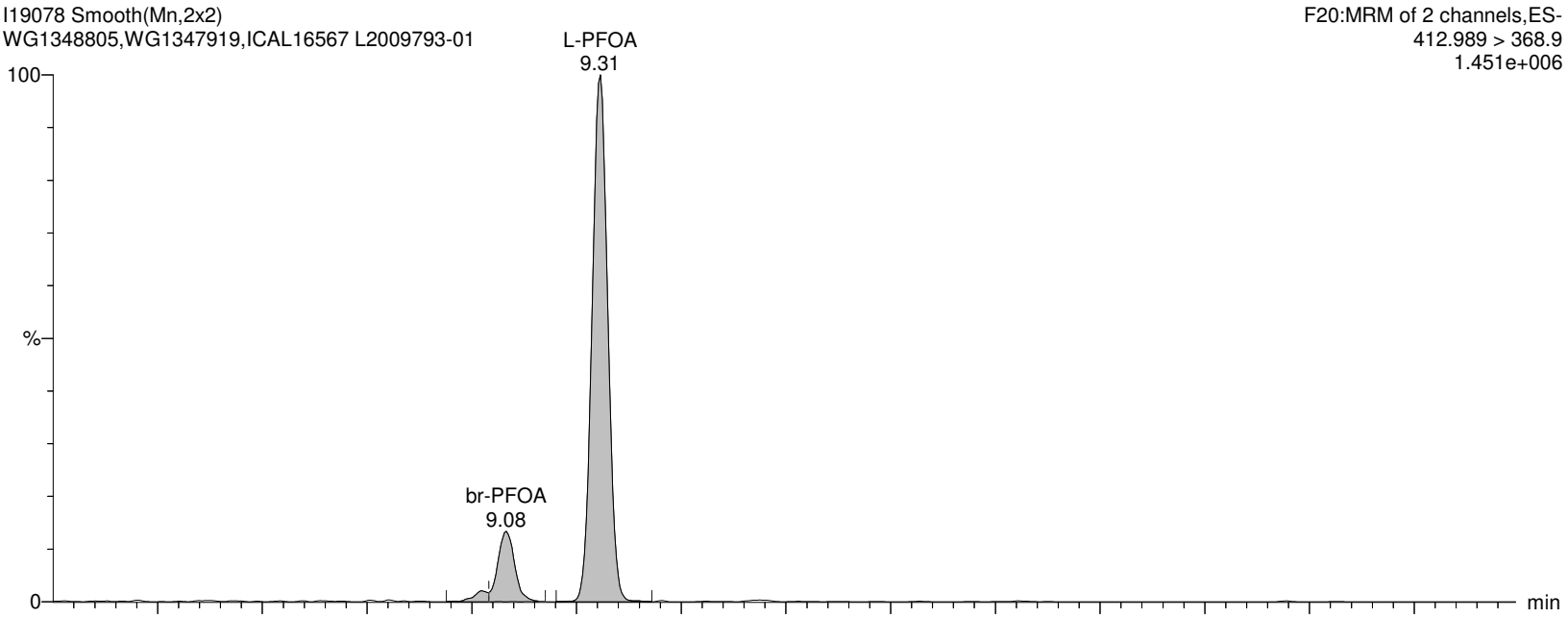
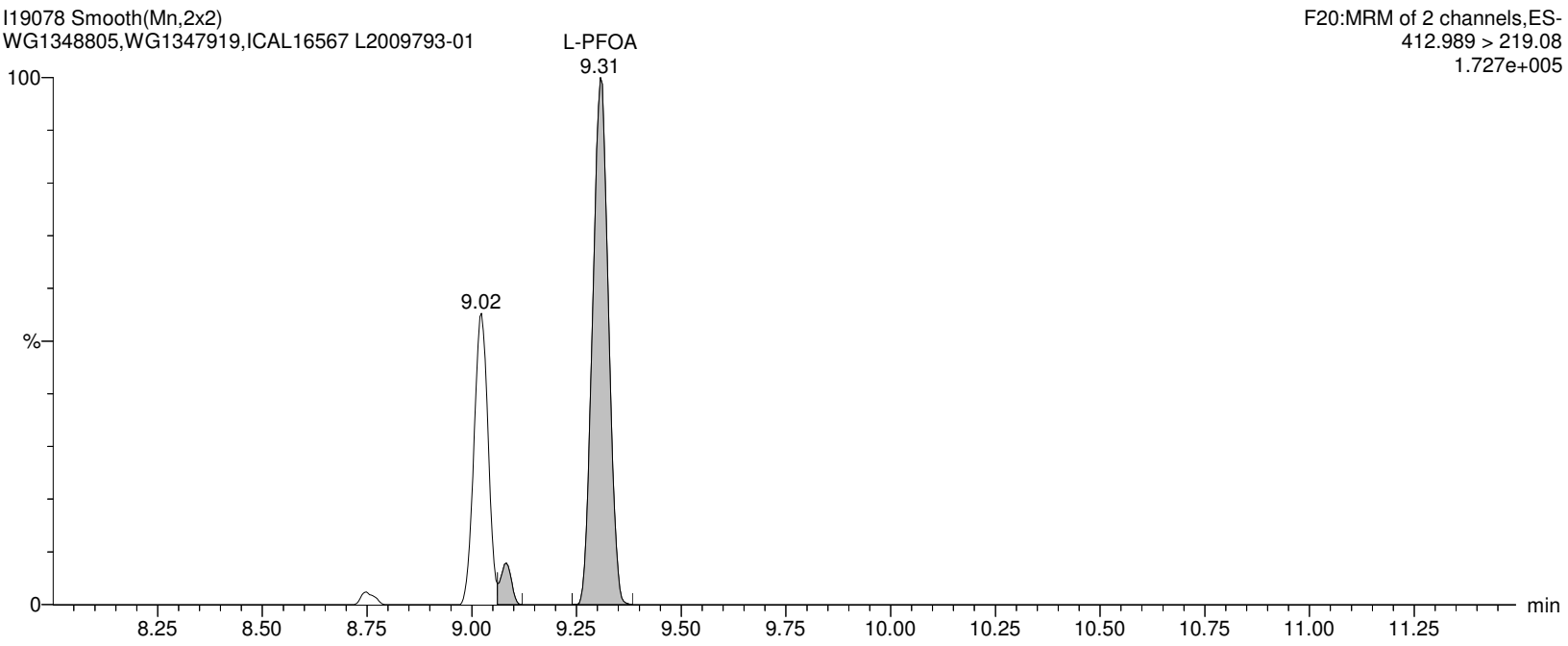
**PFOA**





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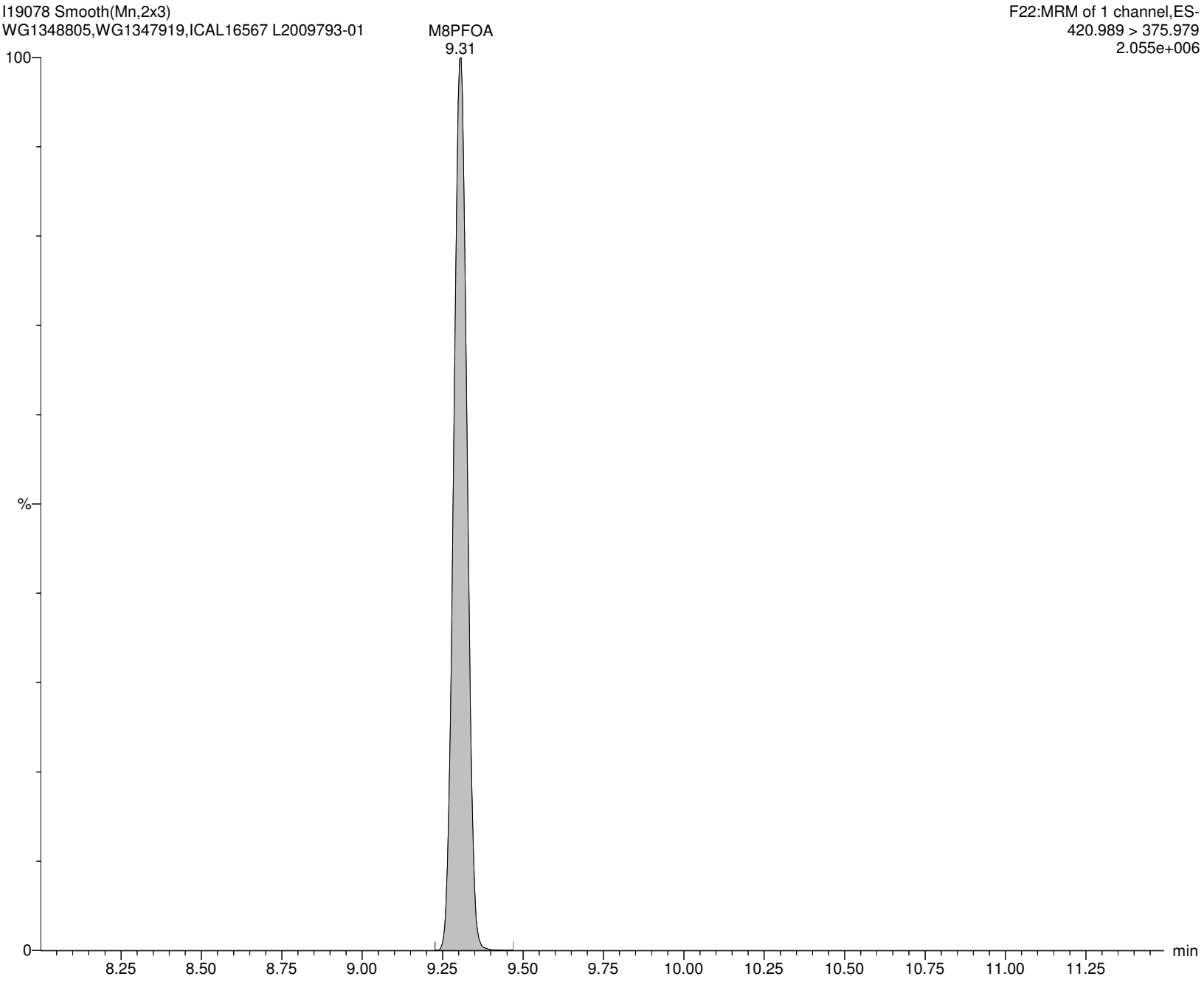
**M8PFOA**





all concentration units in (ng/mL)

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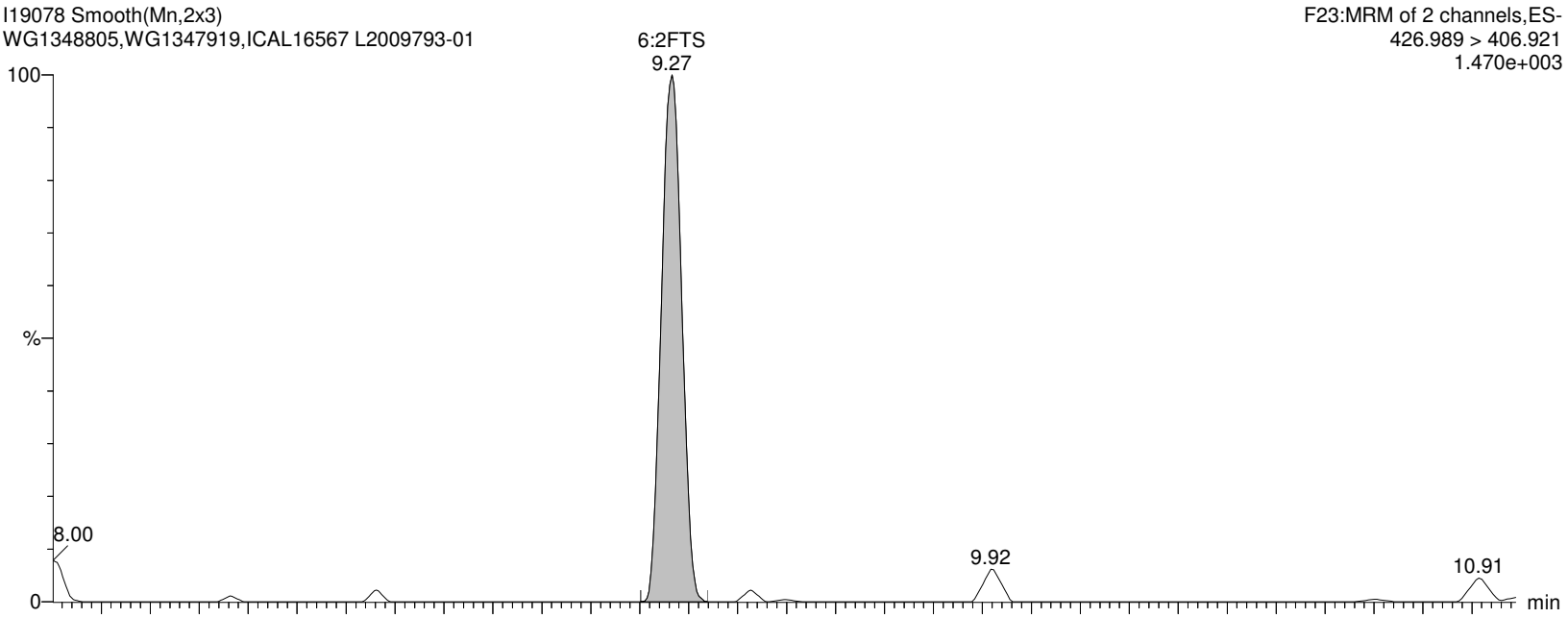
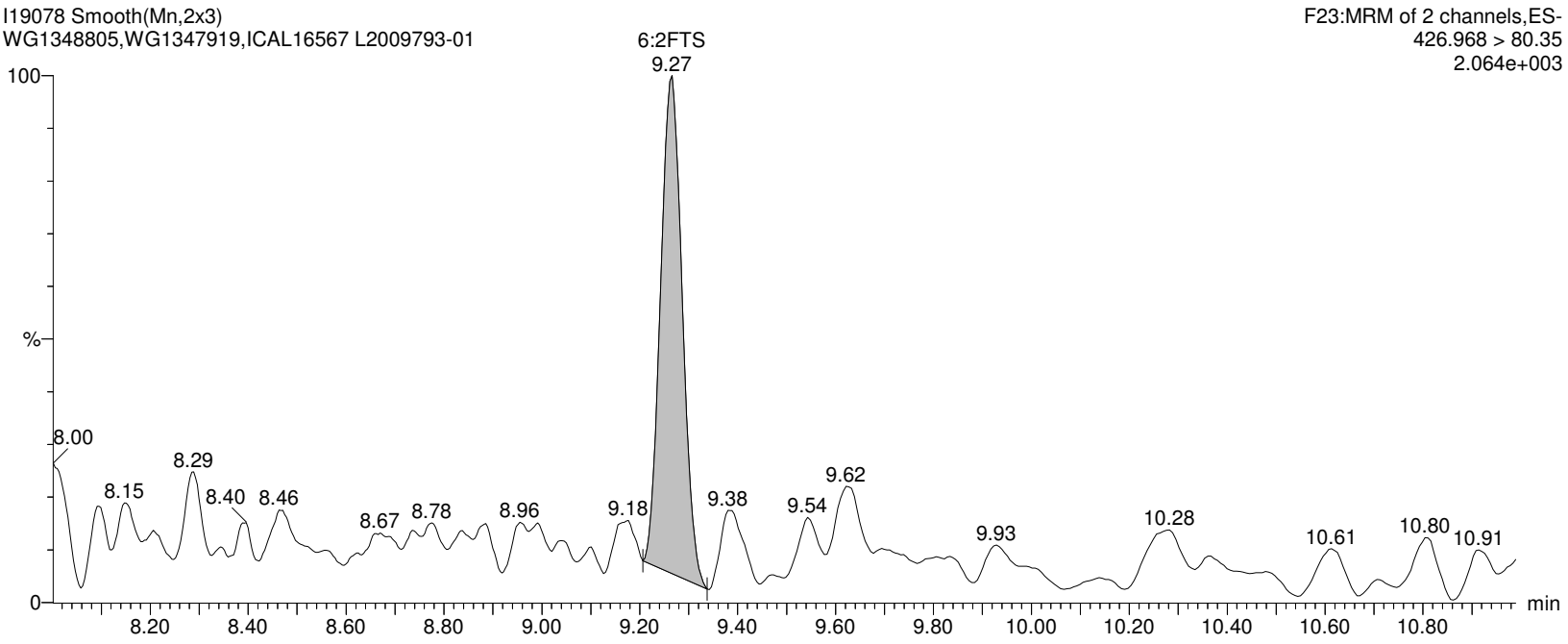
**6:2FTS**





all concentration units in (ng/mL)

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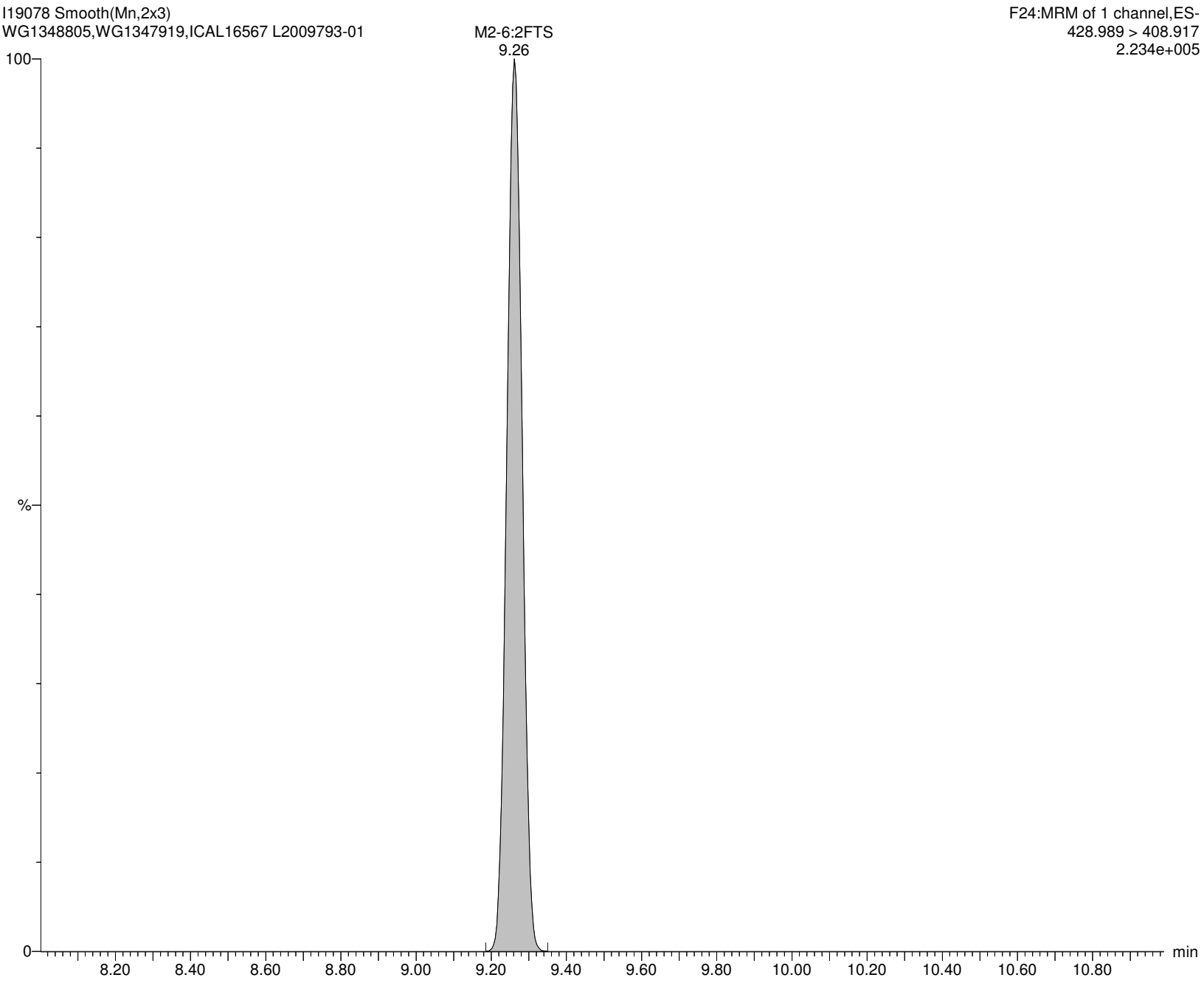
**M2-6:2FTS**





all concentration units in (ng/mL)

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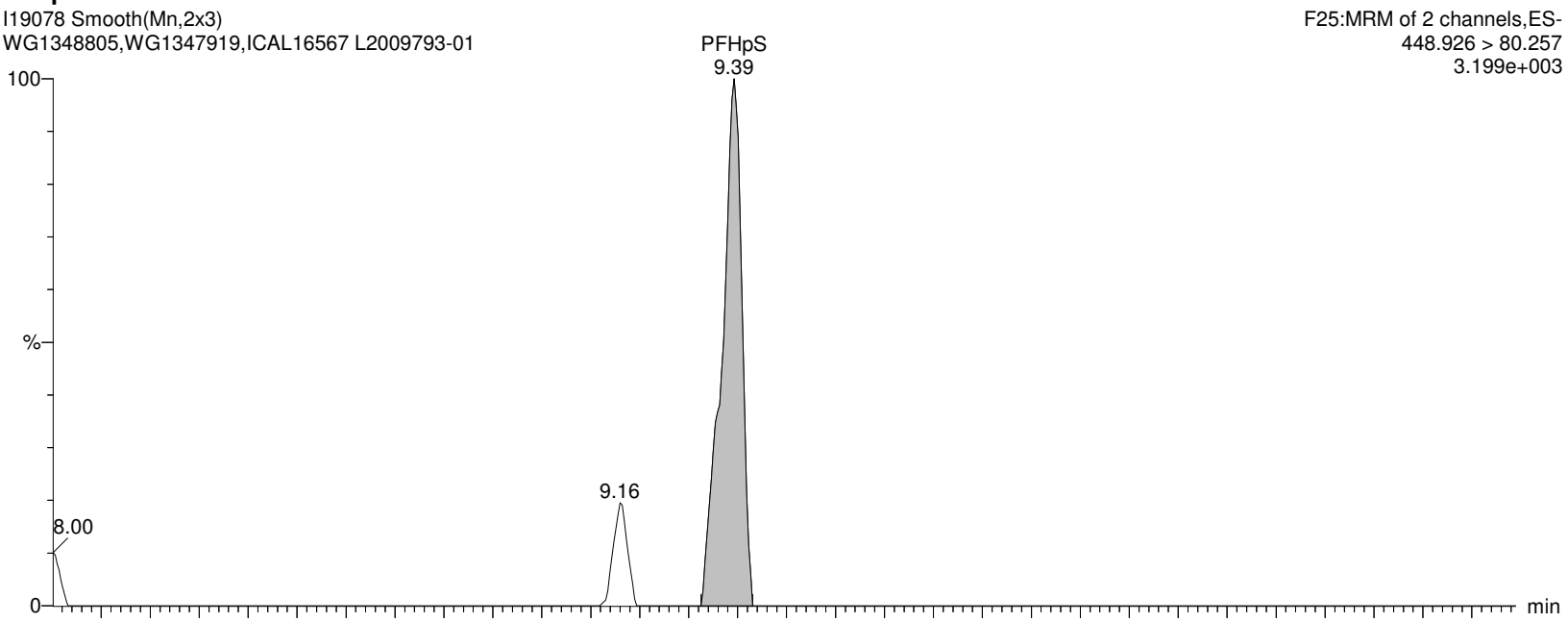
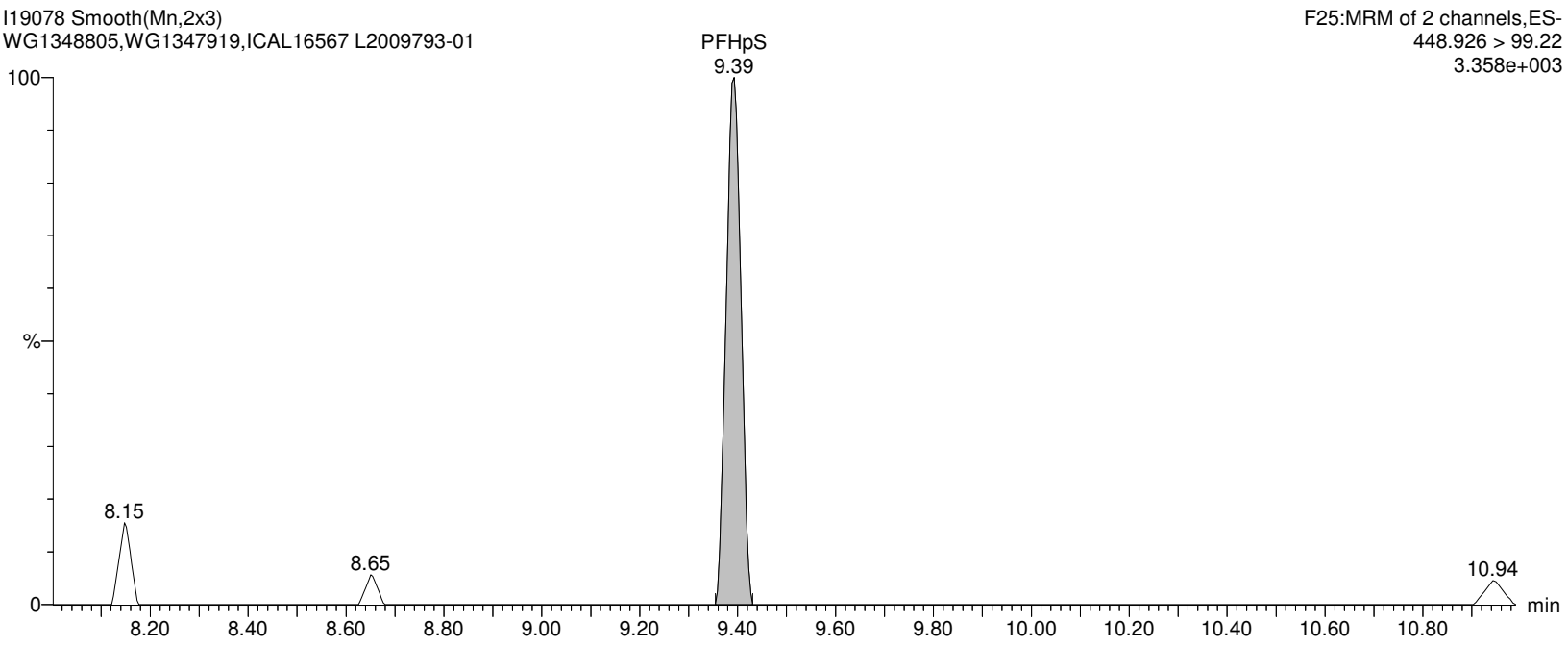
**PFHpS**





all concentration units in (ng/mL)

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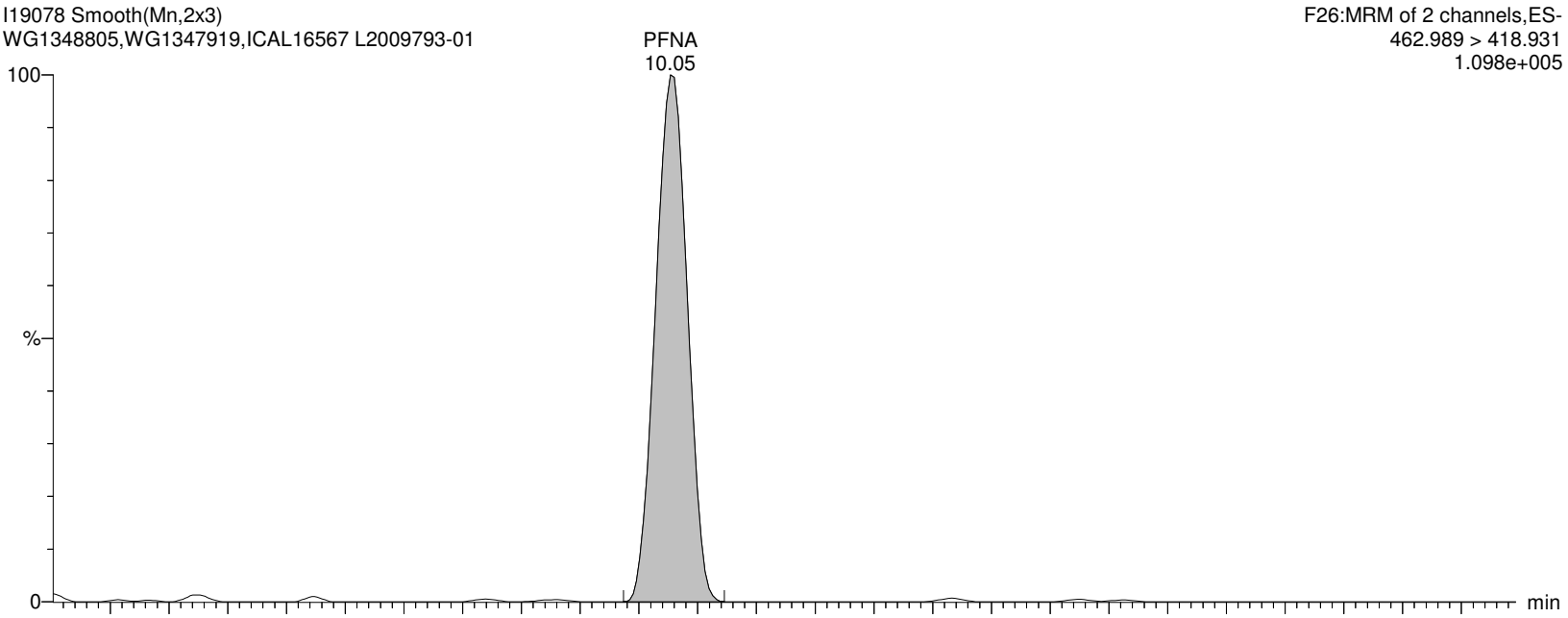


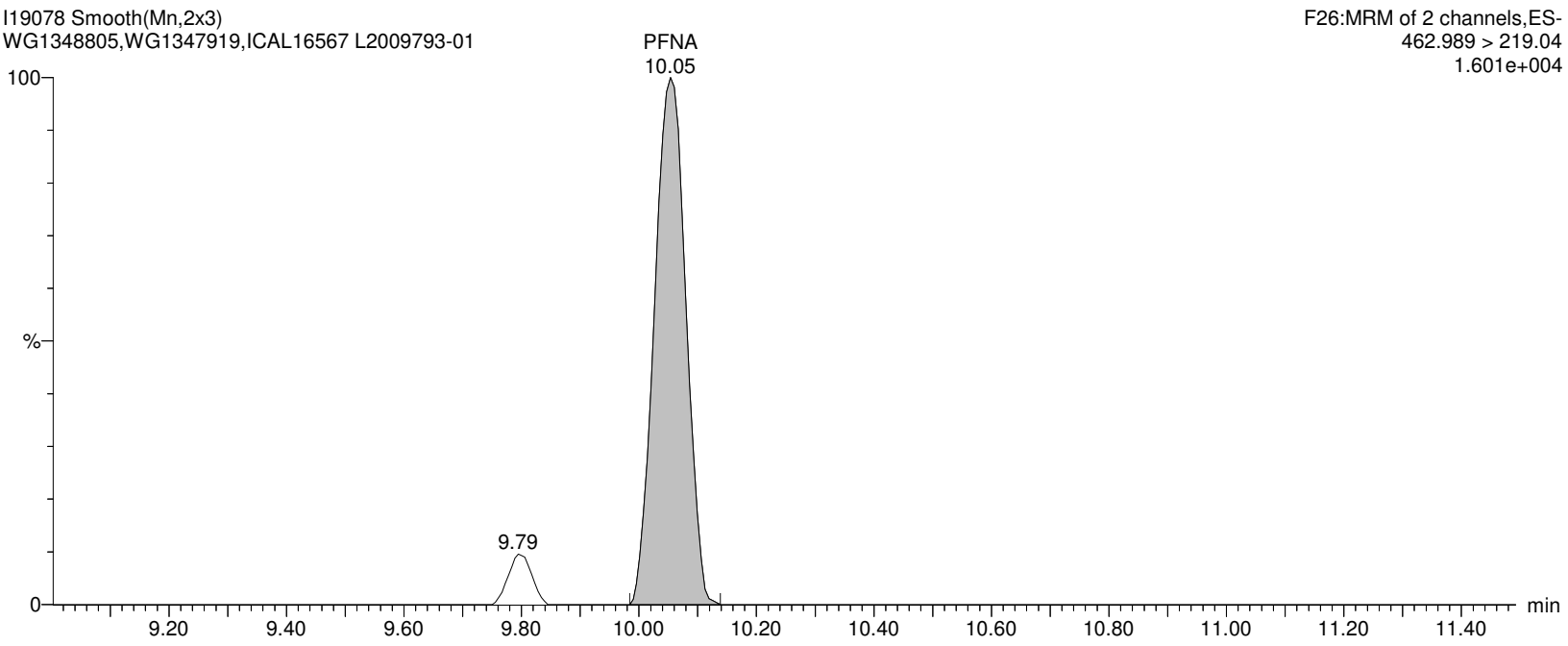



all concentration units in (ng/mL)

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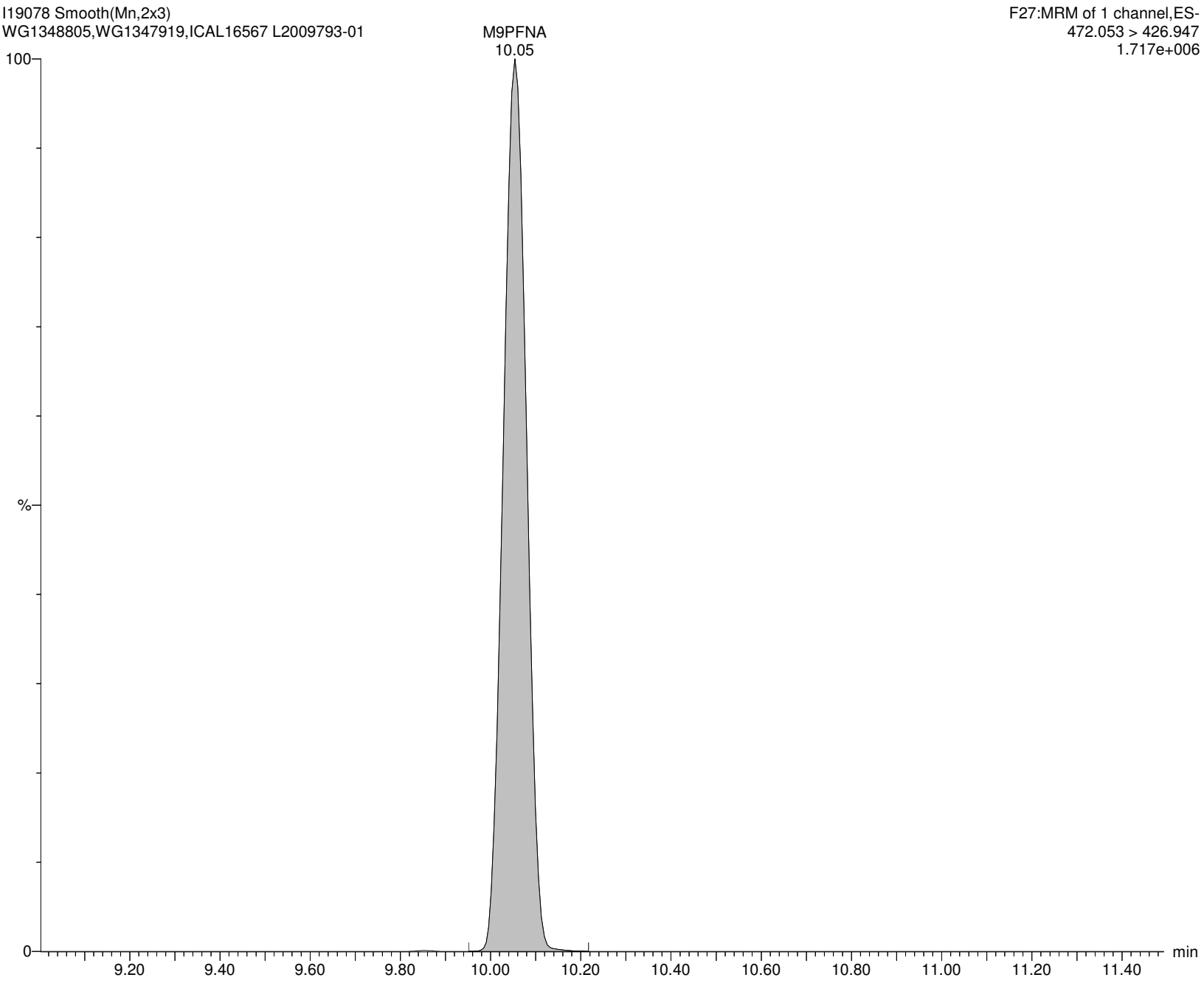
**M9PFNA**





all concentration units in (ng/mL)

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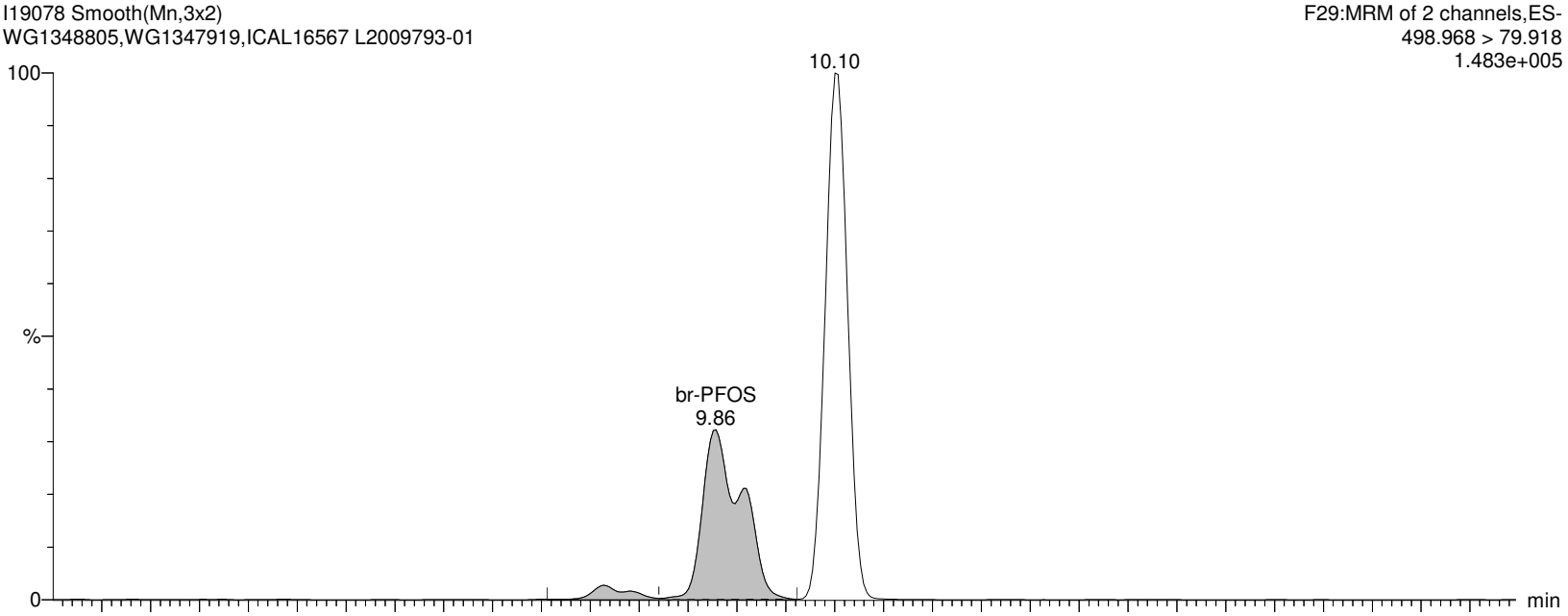
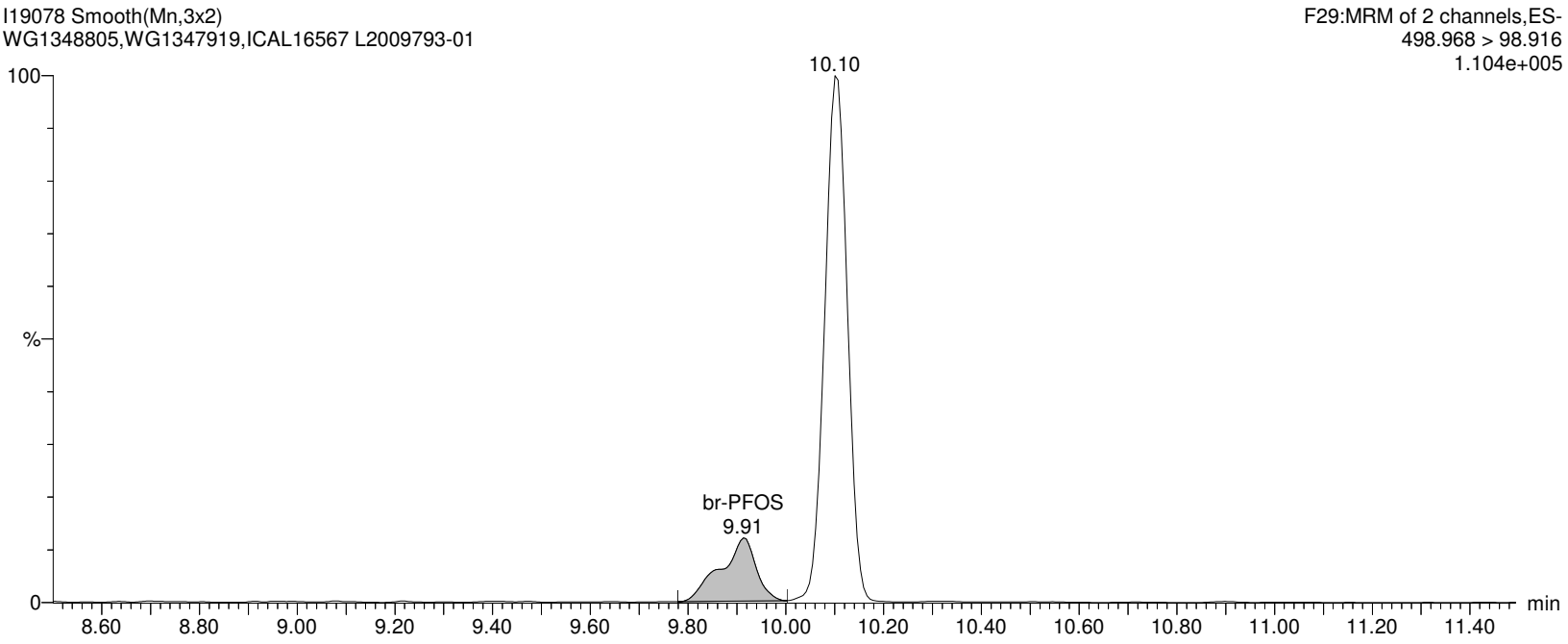
**br-PFOS**





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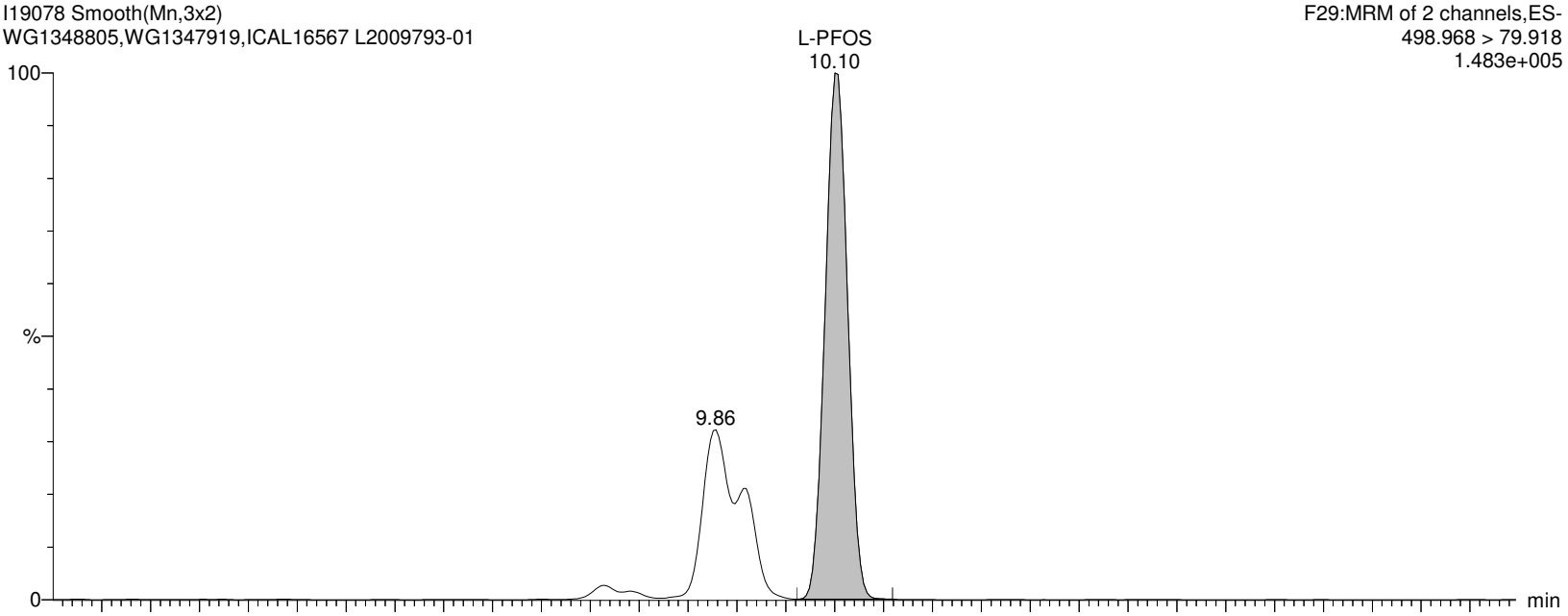


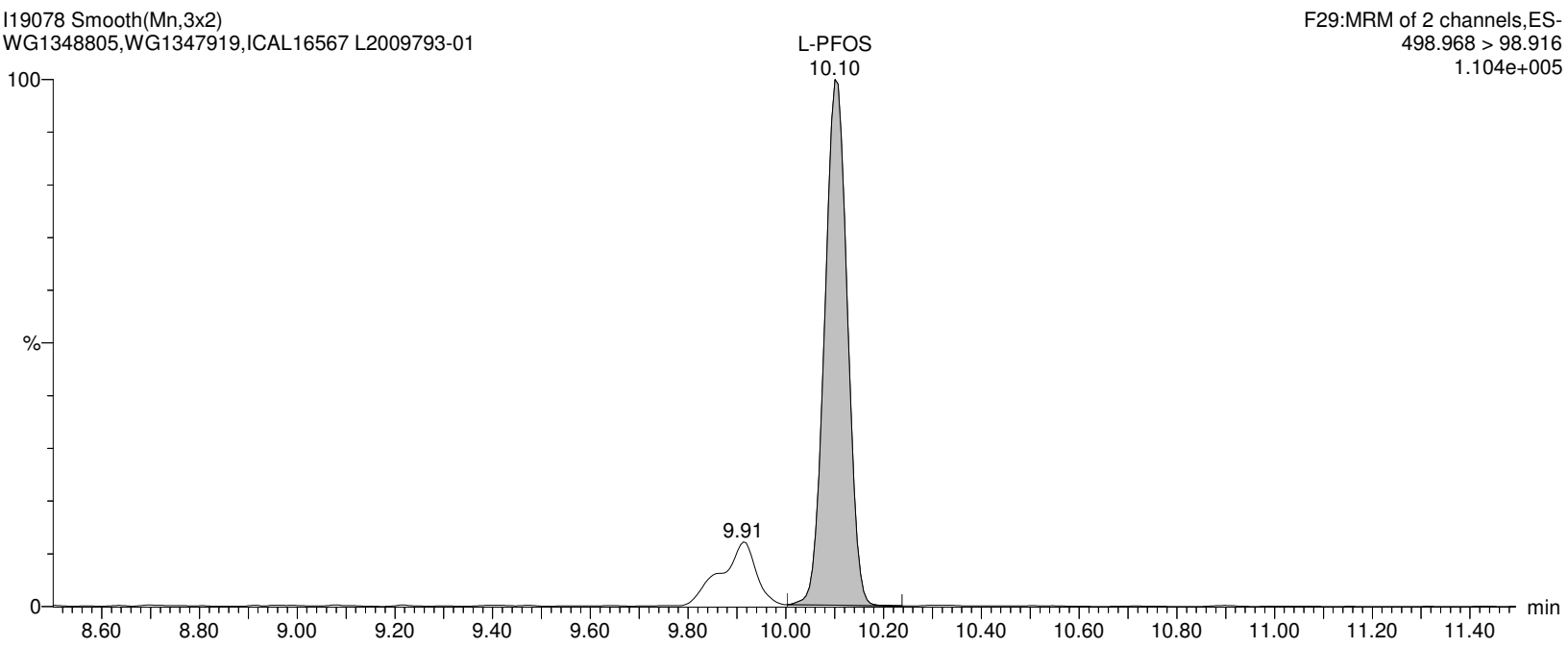



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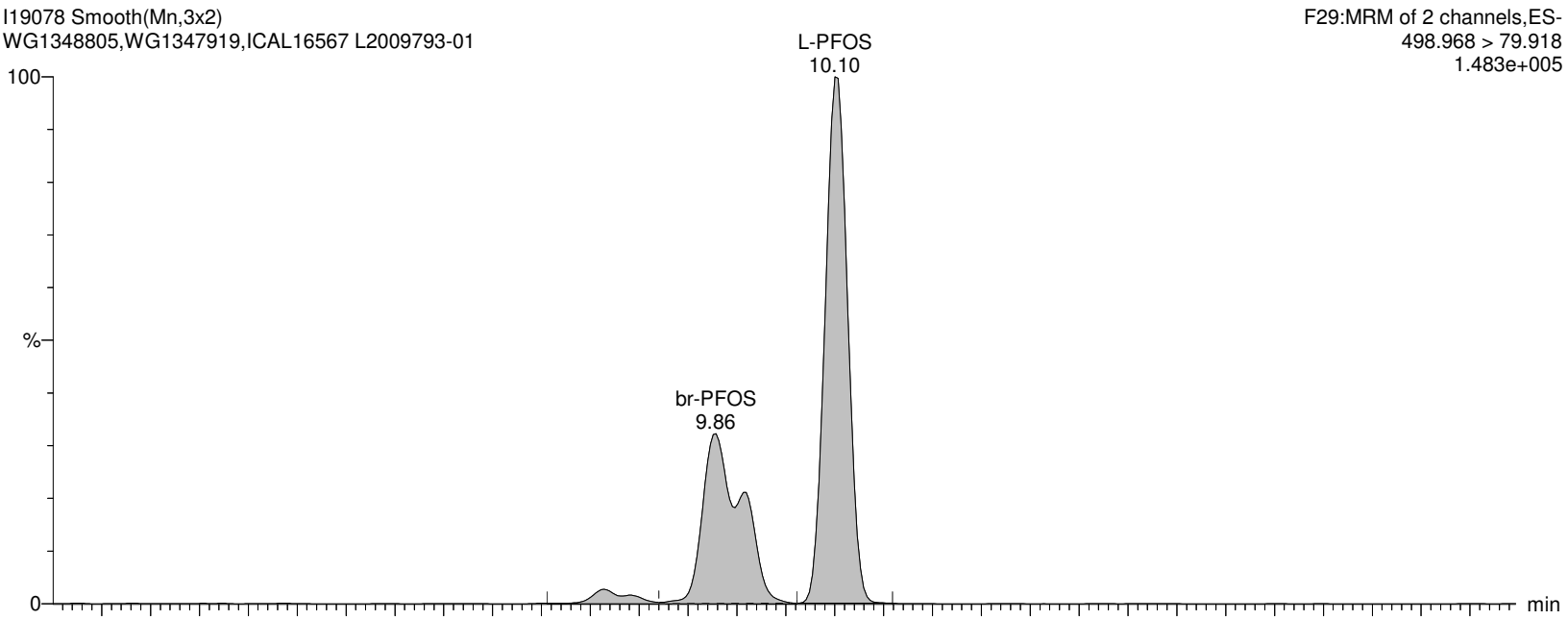
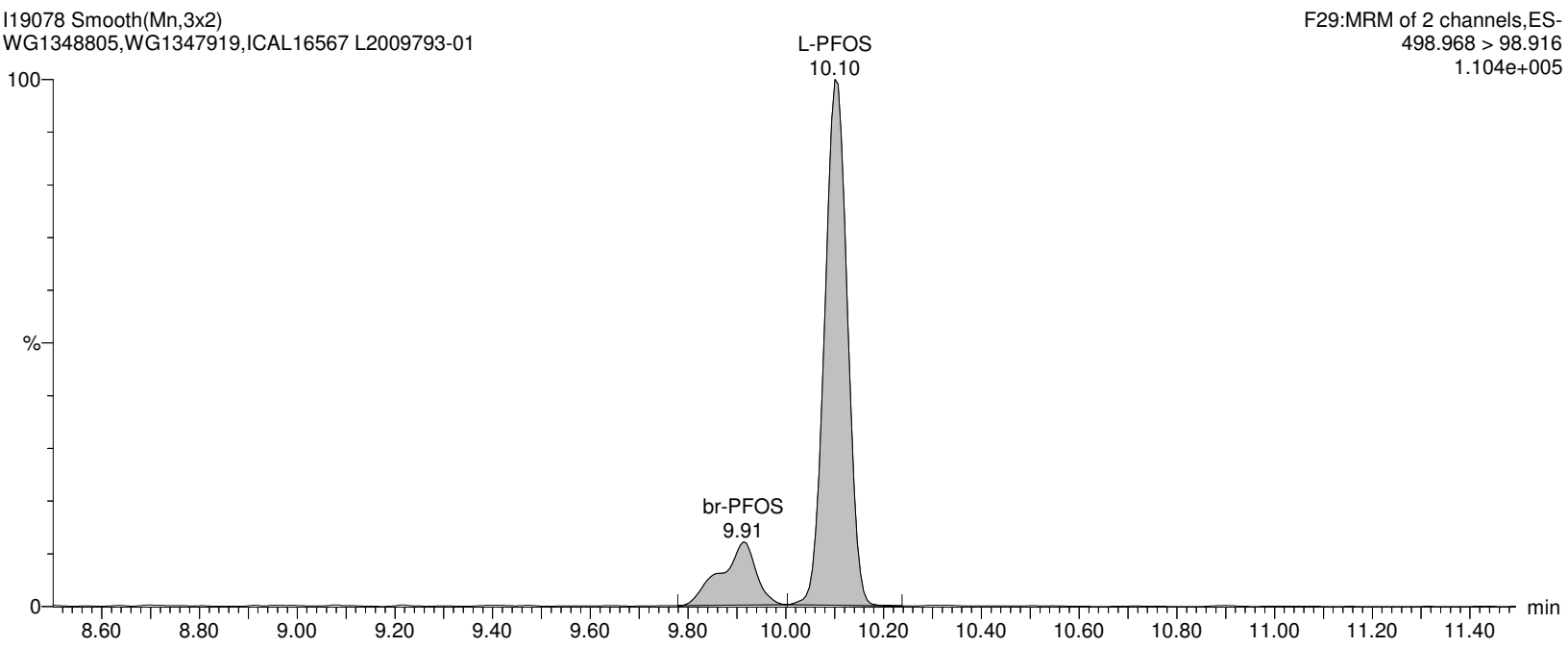
**PFOS**





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**Date: 09-Mar-2020**
**Time: 15:23:29**
**Description: WG1348805,WG1347919,ICAL16567**
**User: LCMS01:JW**
**Vial: 1:C,1**
**Instrument: XEVO-TQSmicro#QEA0276**
**Inlet Method Name: C:\MassLynx\Data\200309_537ISO.PRO\ACQUDB\LCMS_537_ISO_MeOH**
**Tune Method Name: C:\MassLynx\Data\200309_537ISO.PRO\ACQUDB\190709_TUNE.IPR**
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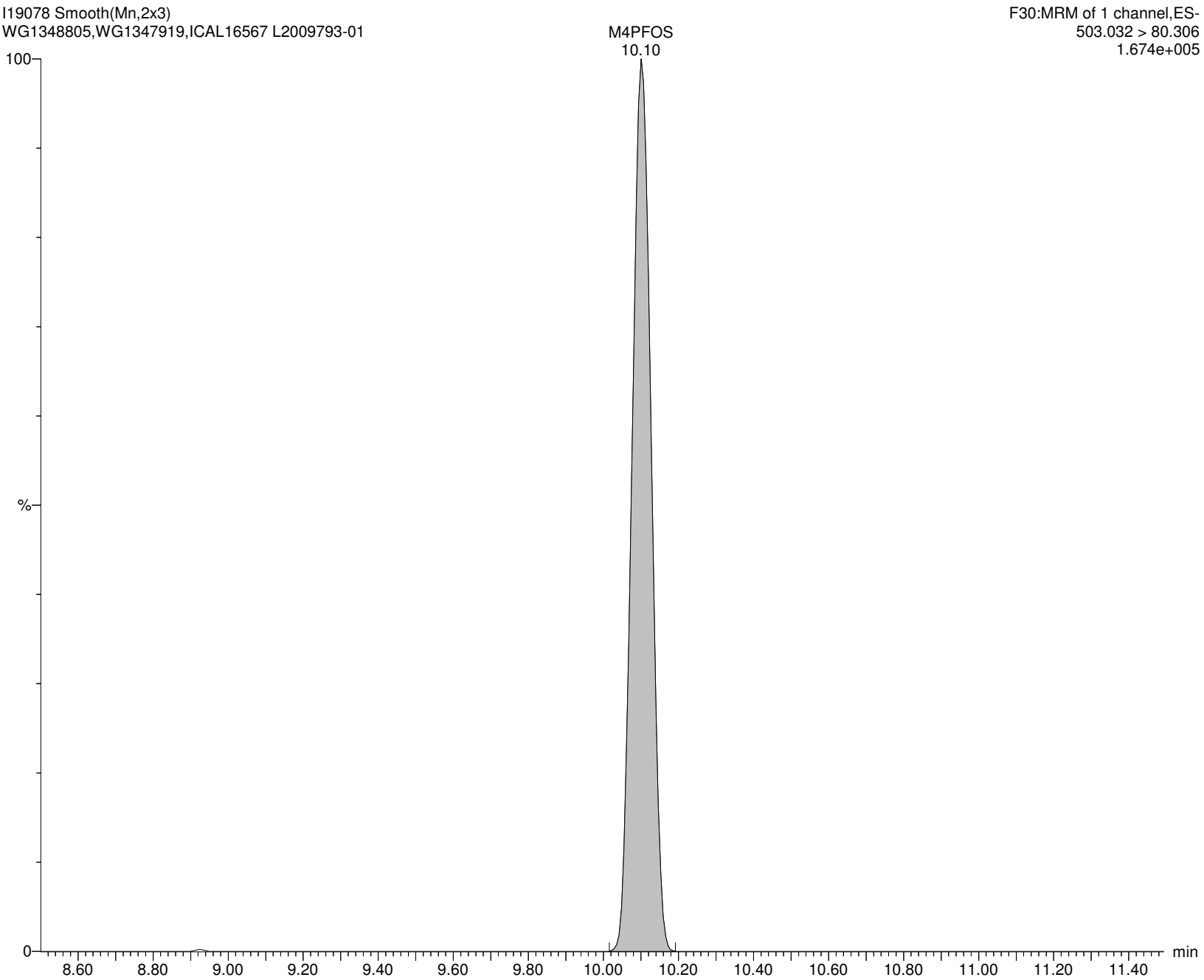



all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200309_537ISO.PRO\Data\WG1348805A.qld
Last Altered: Tuesday, March 17, 2020 11:30:27 Eastern Daylight Time
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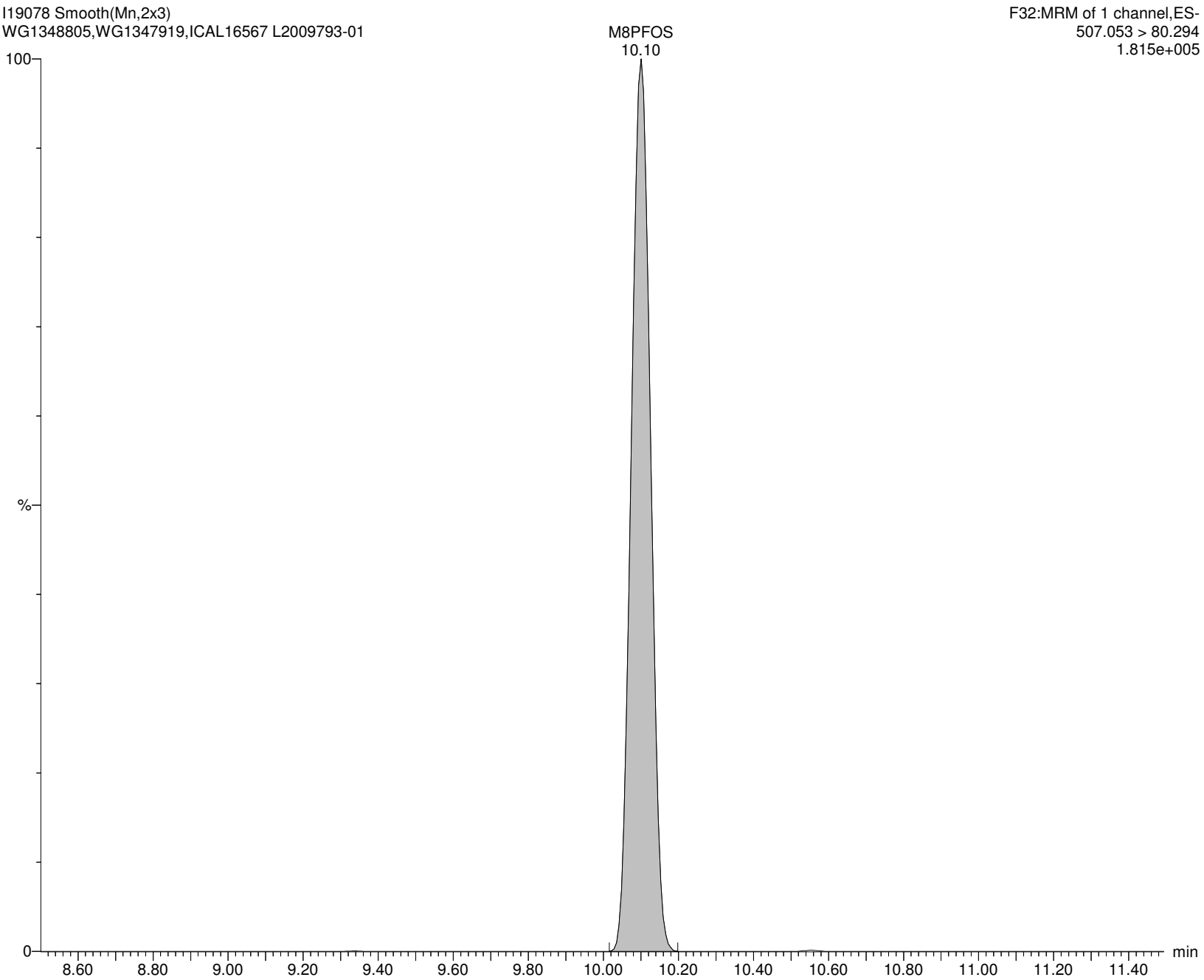



all concentration units in (ng/mL)

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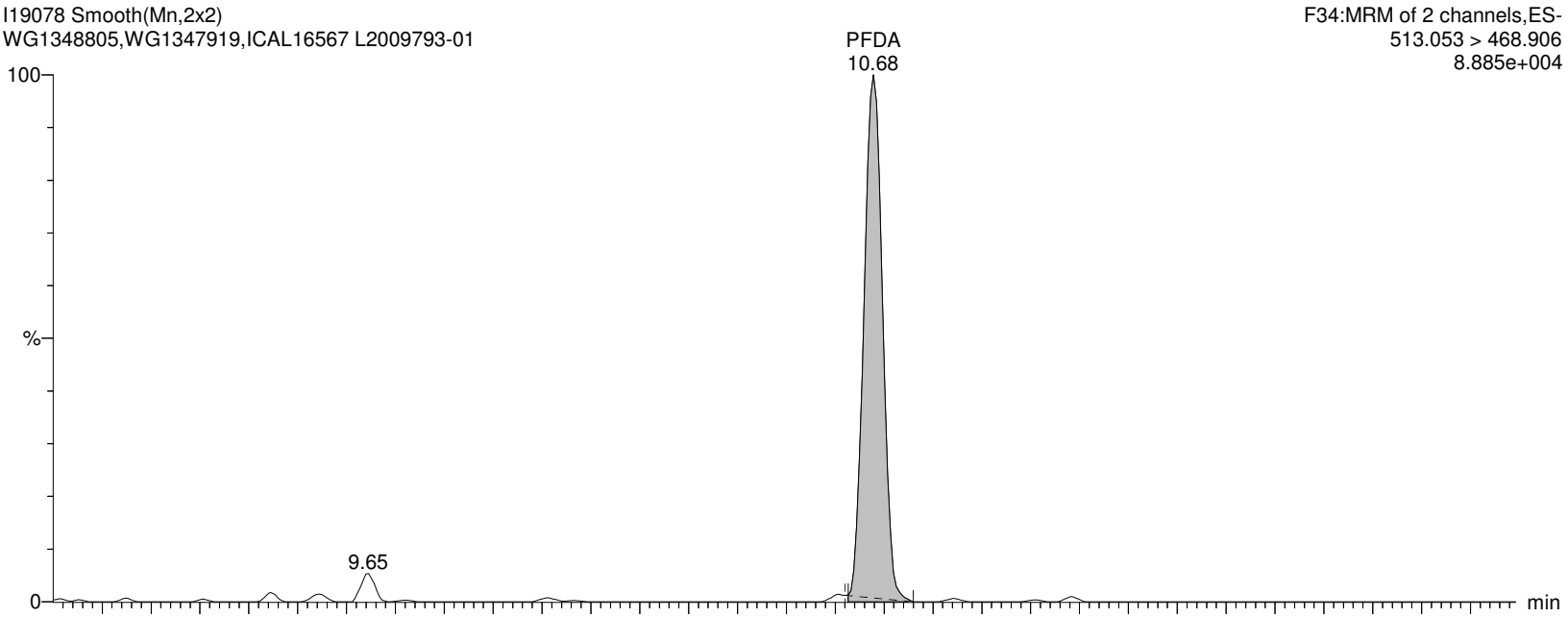


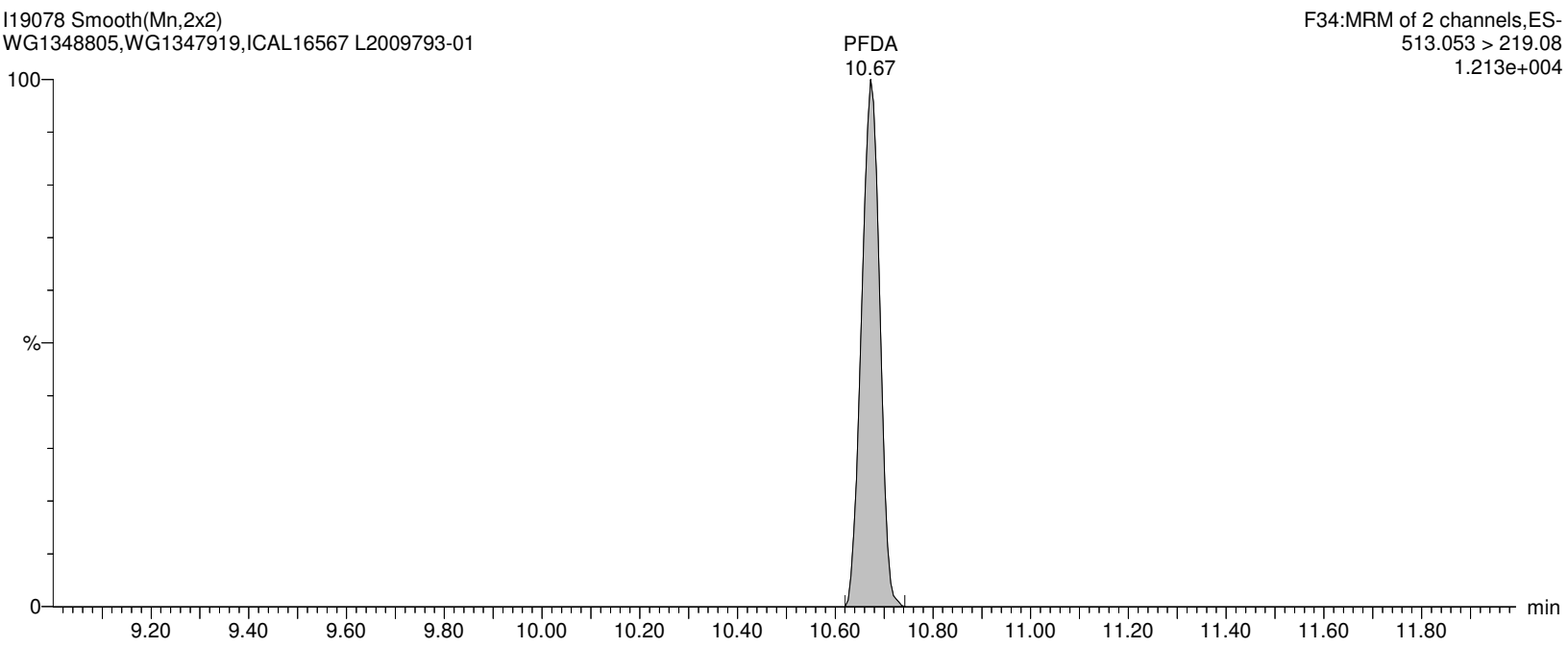



all concentration units in (ng/mL)

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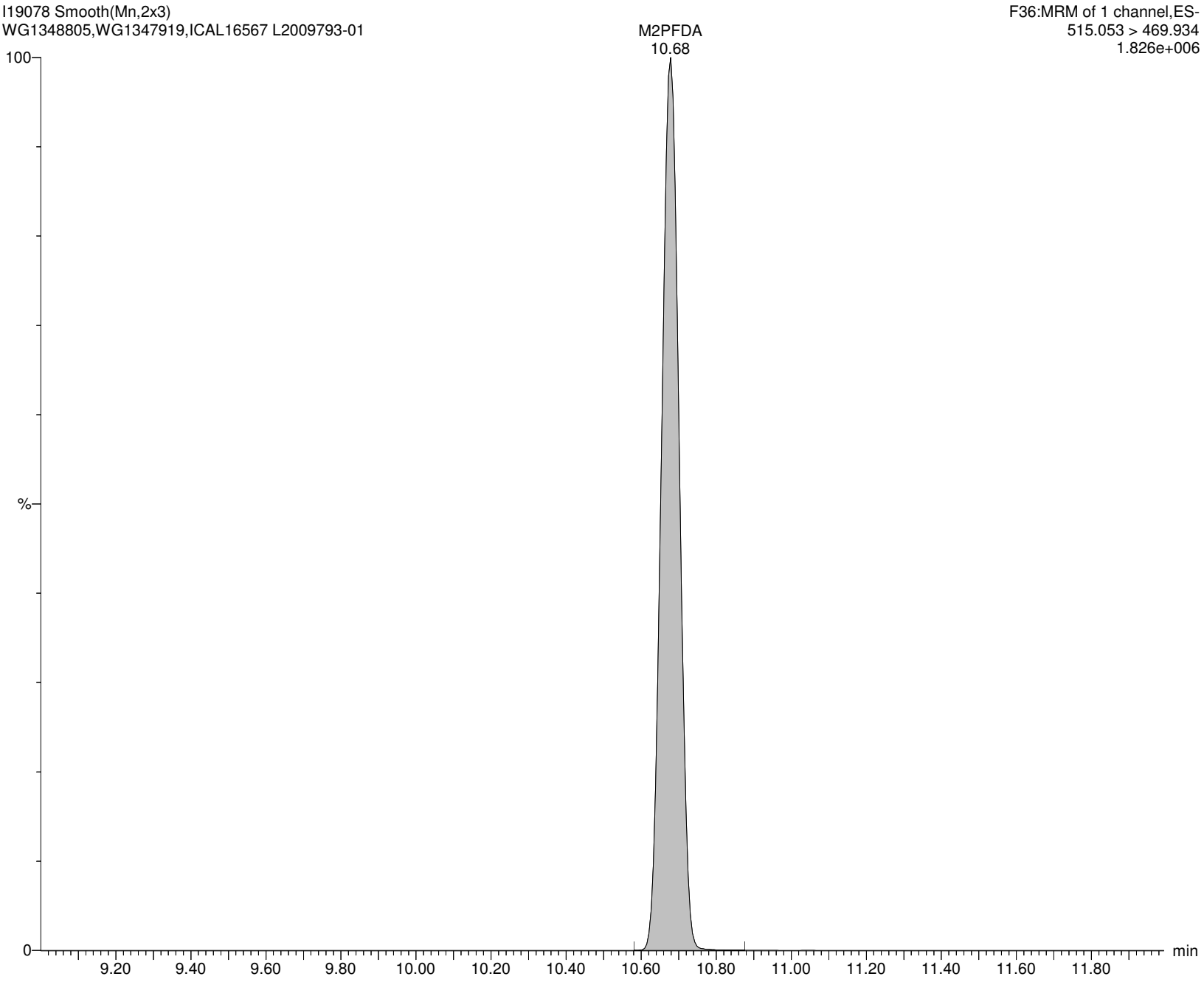



all concentration units in (ng/mL)

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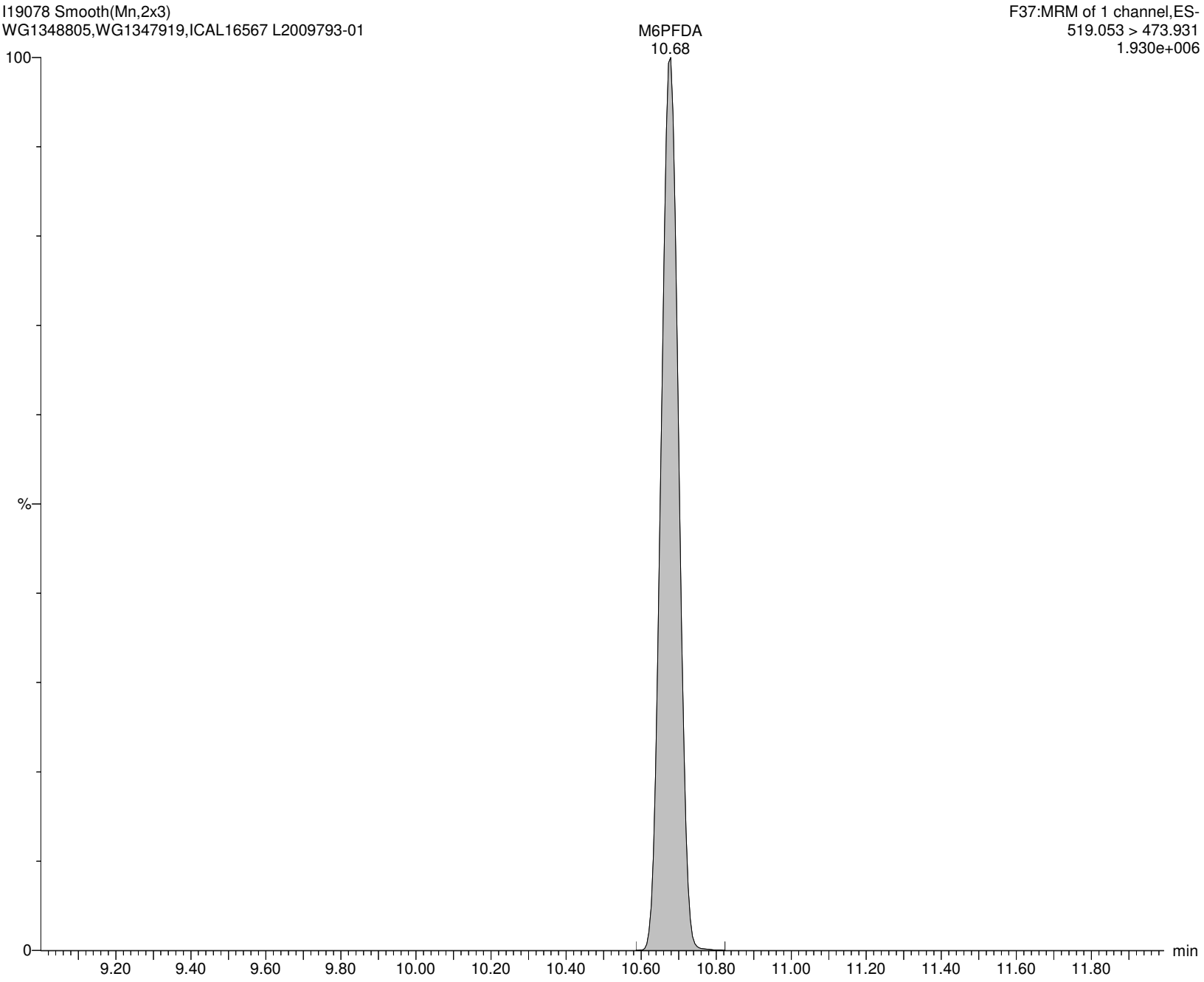
**M6PFDA**





all concentration units in (ng/mL)

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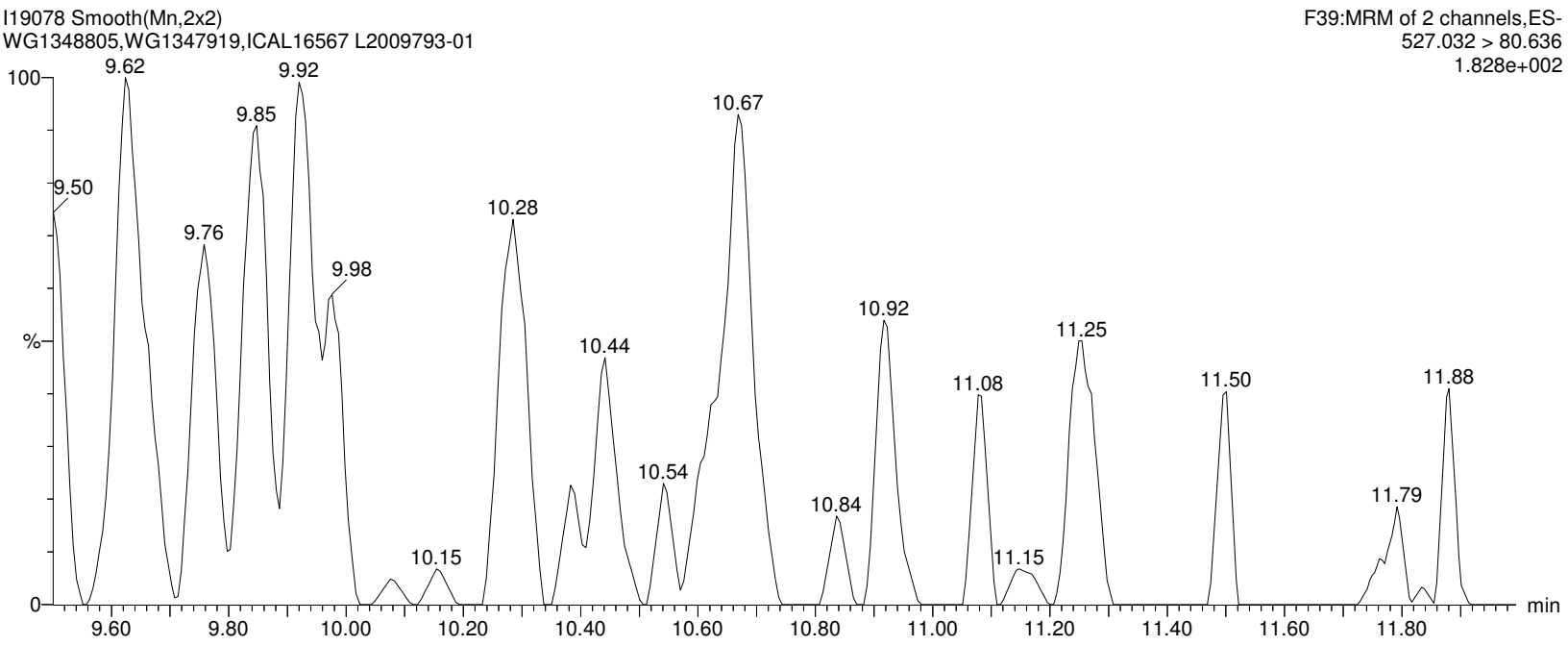
**8:2FTS**





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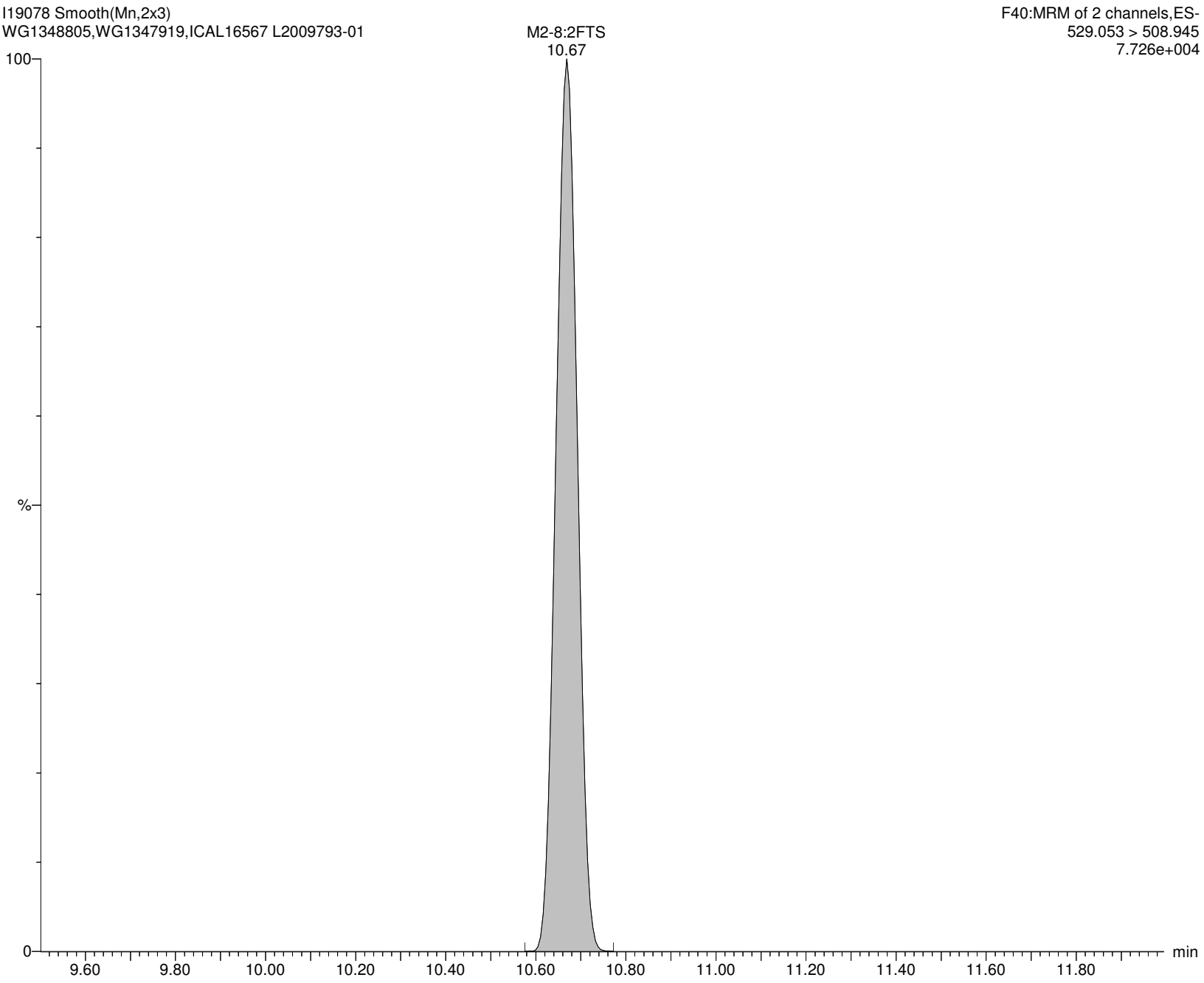
**M2-8:2FTS**





all concentration units in (ng/mL)

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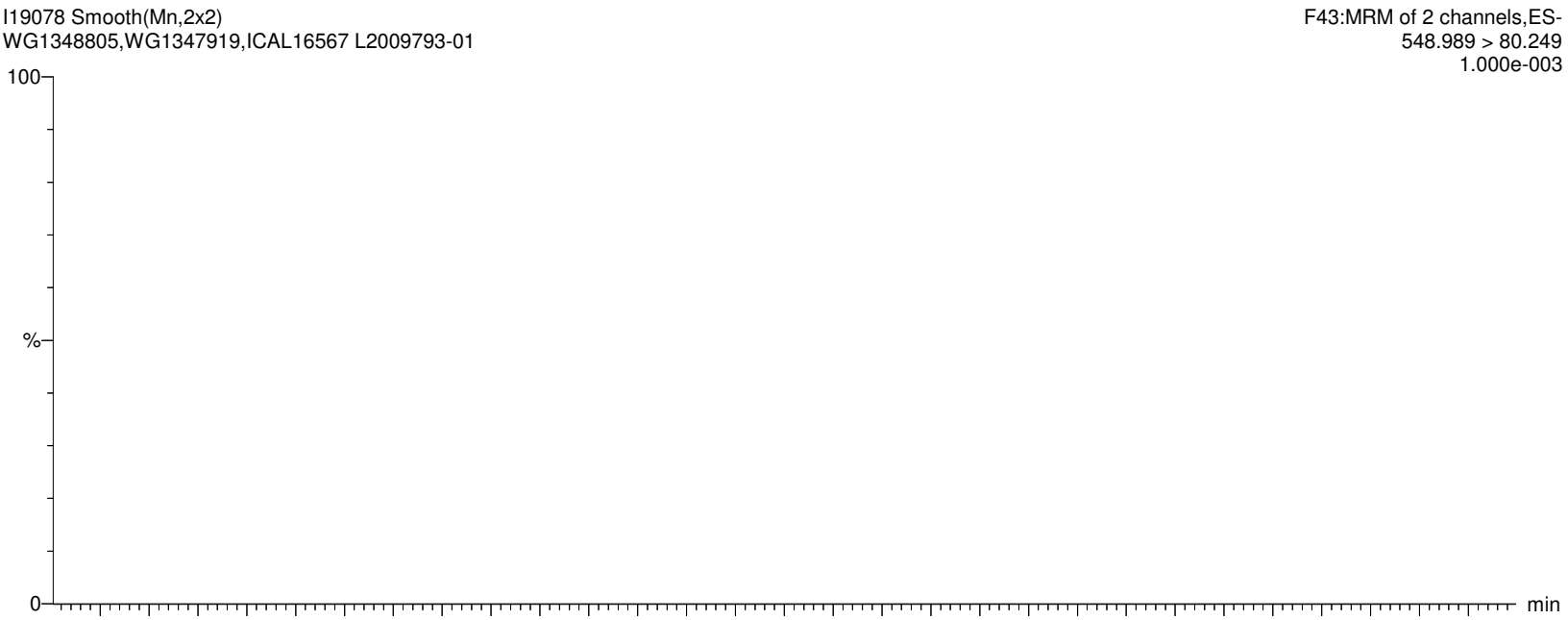
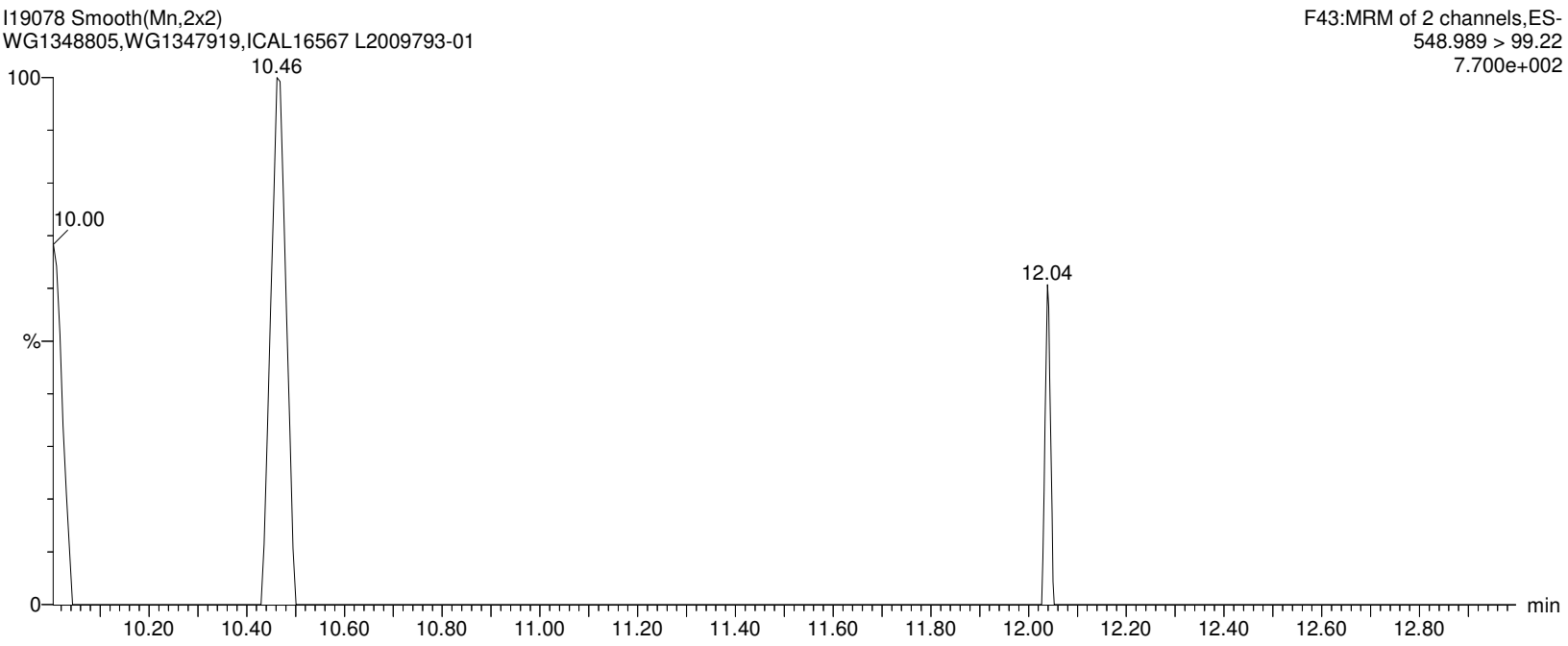
**PFNS**





all concentration units in (ng/mL)

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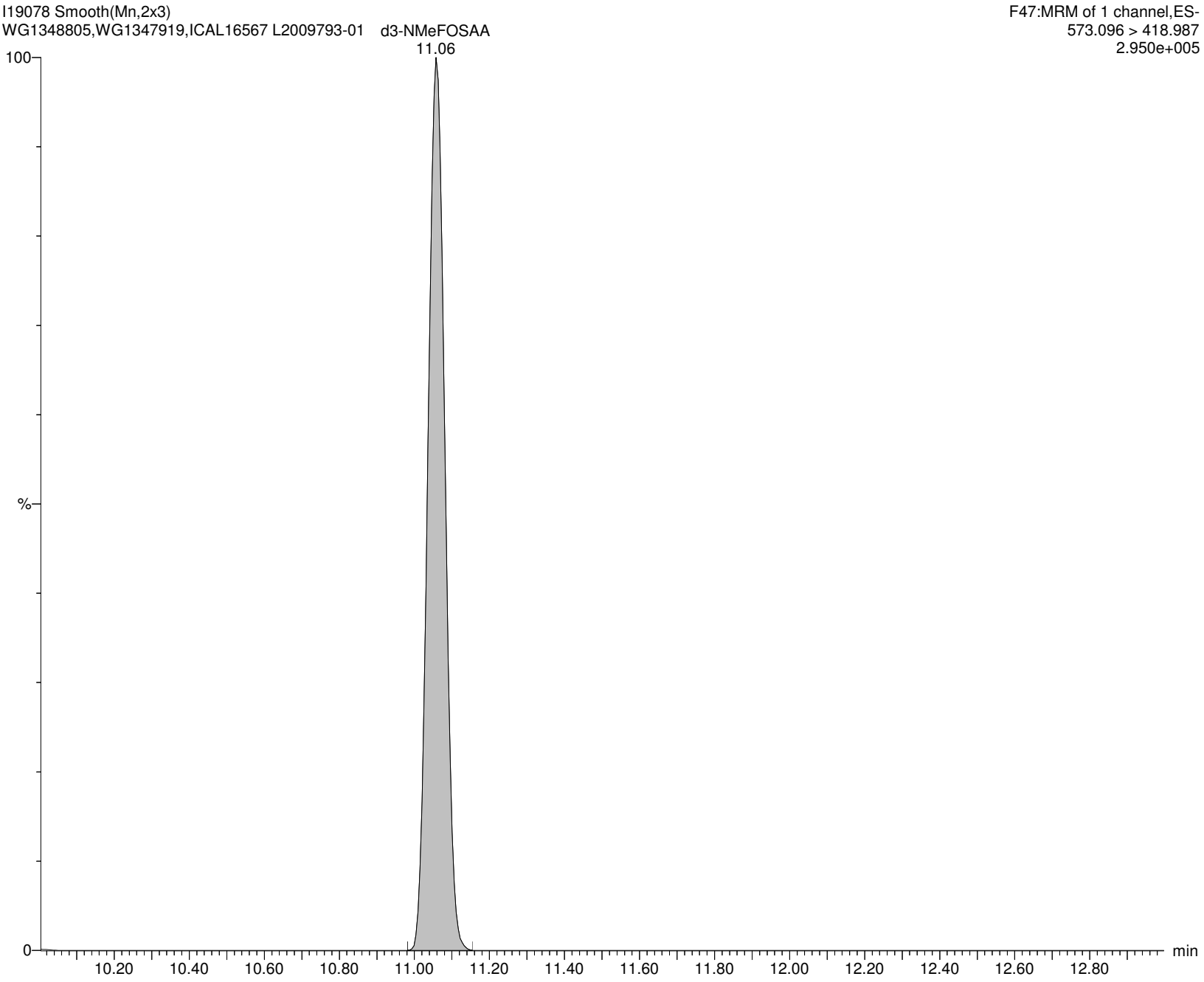
**d3-NMeFOSAA**





all concentration units in (ng/mL)

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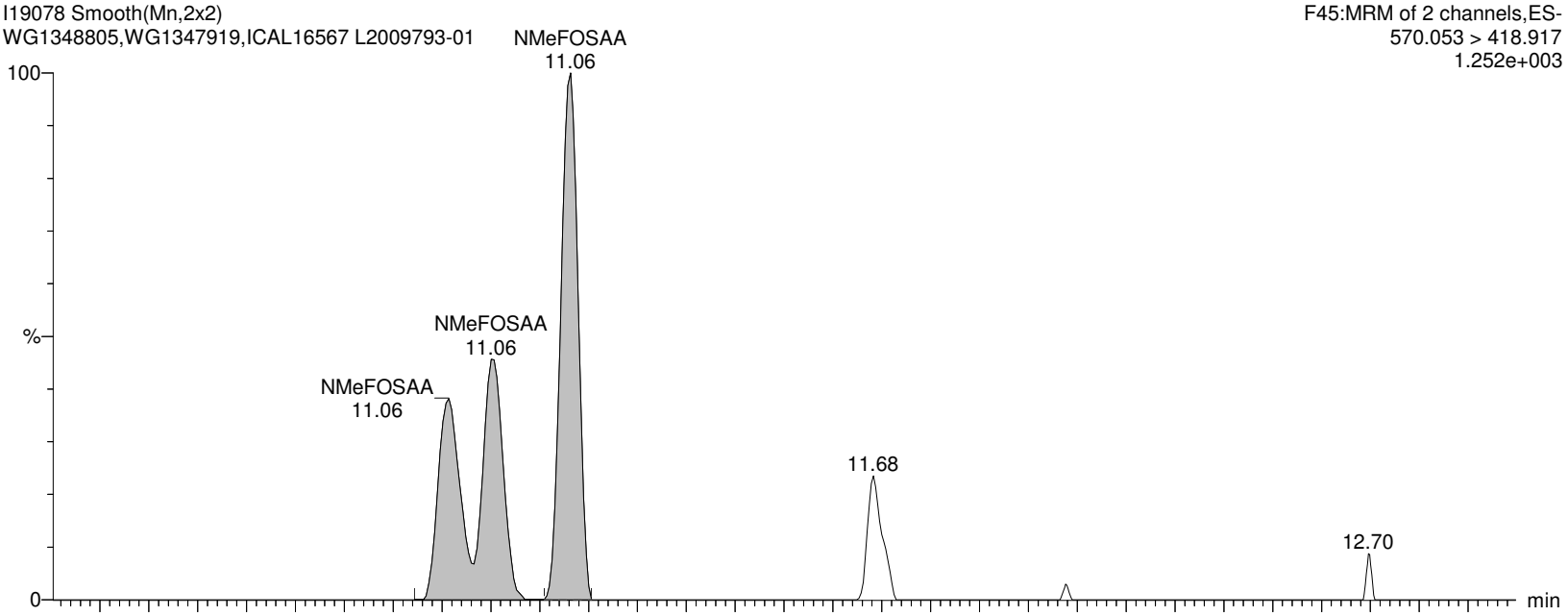
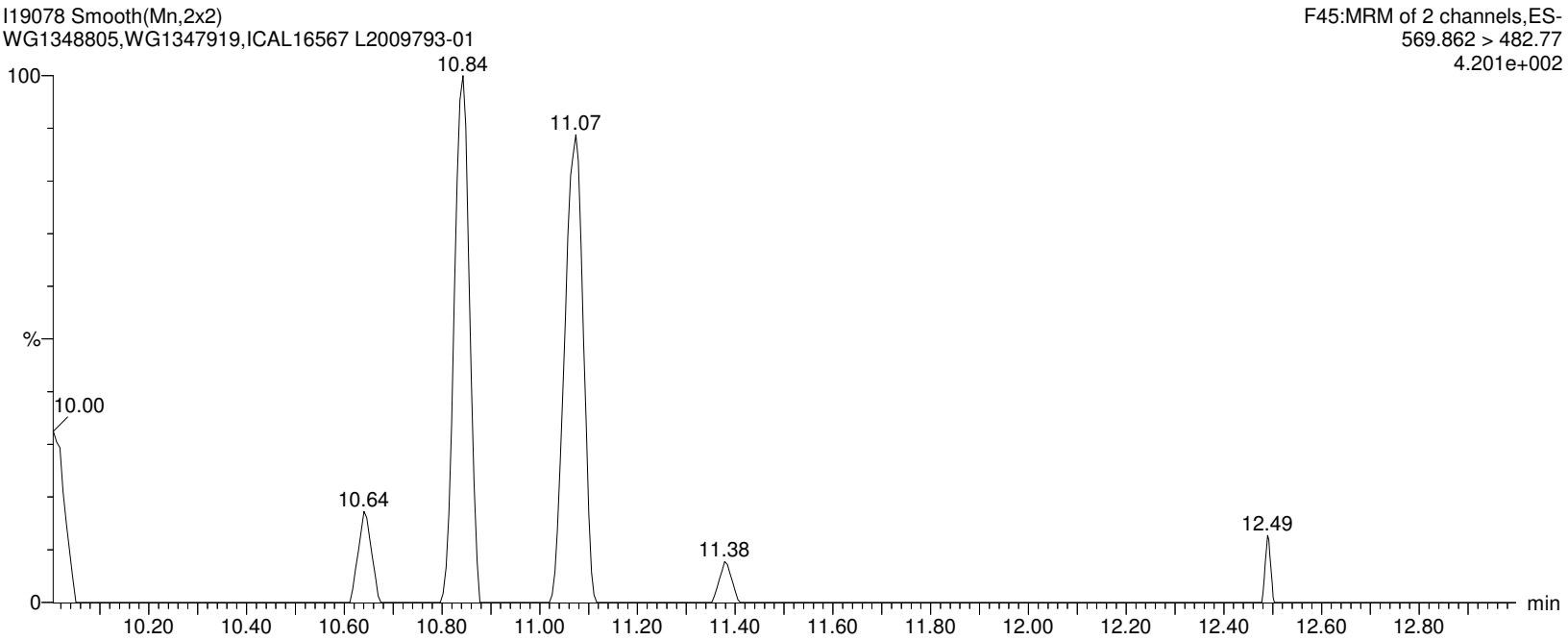
**NMeFOSAA**





all concentration units in (ng/mL)

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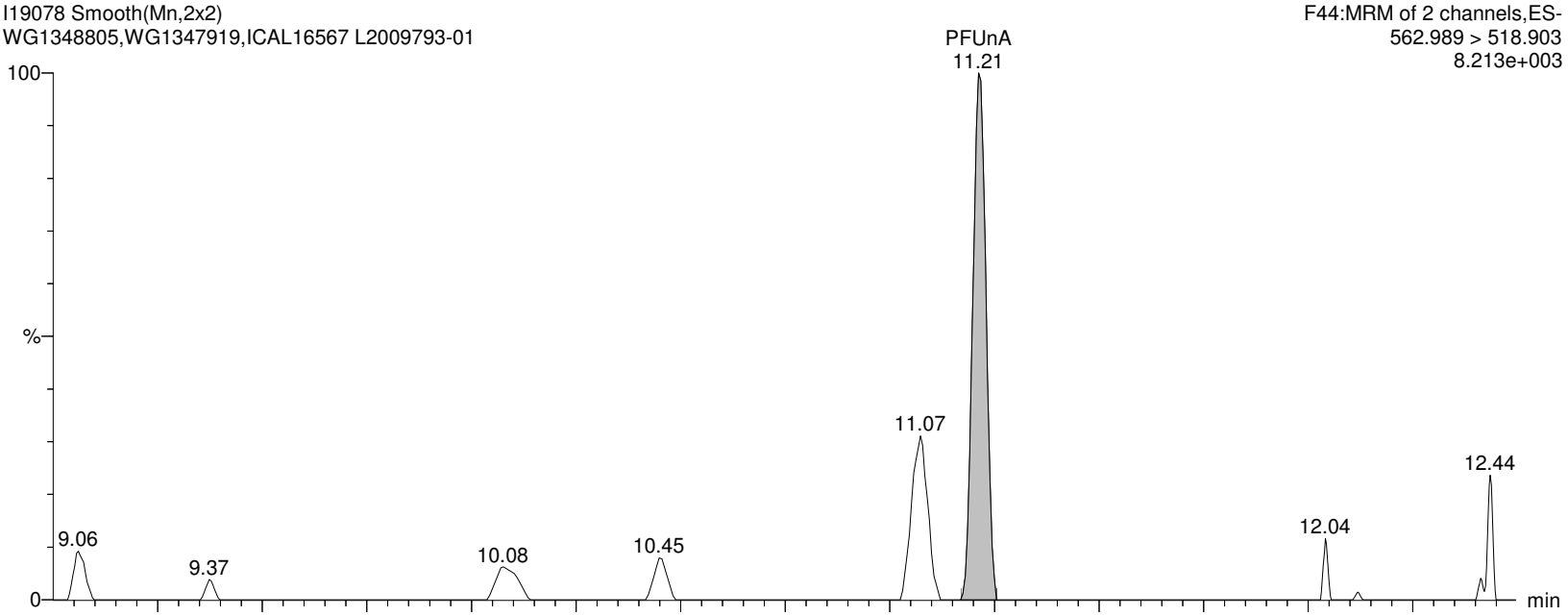


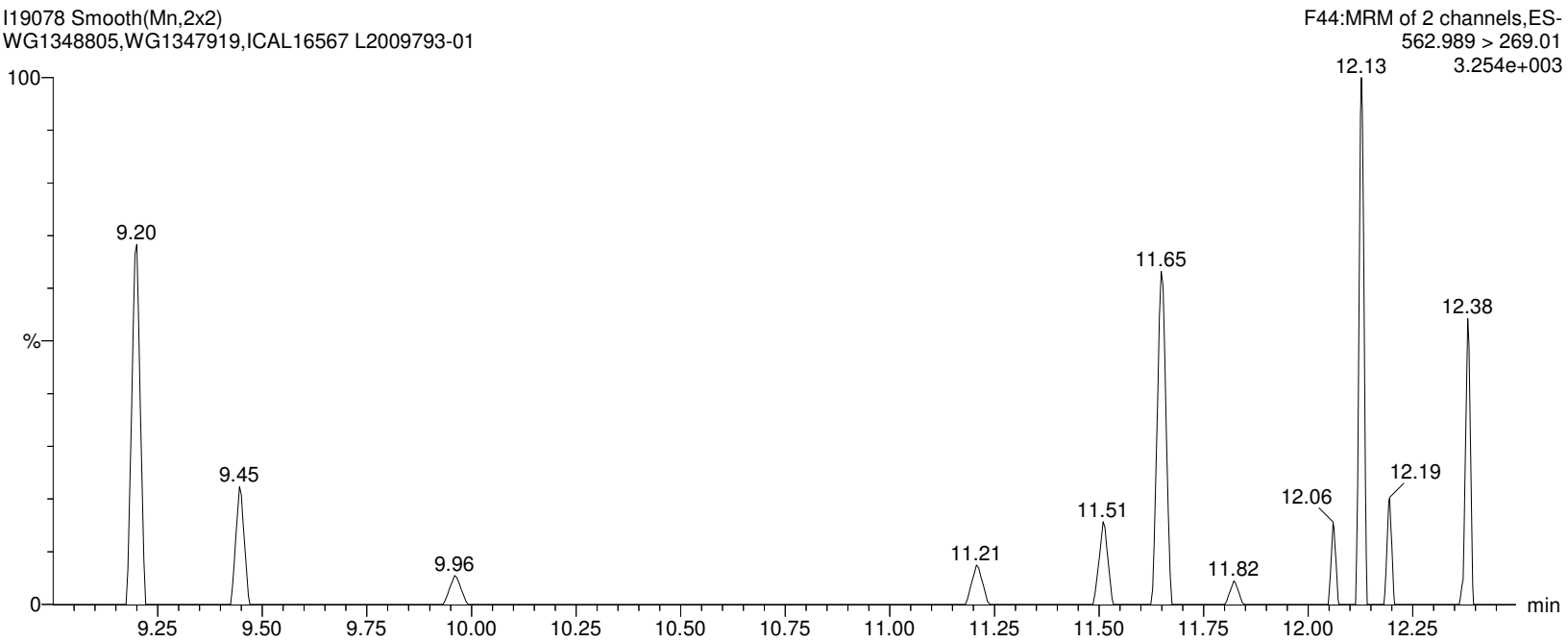



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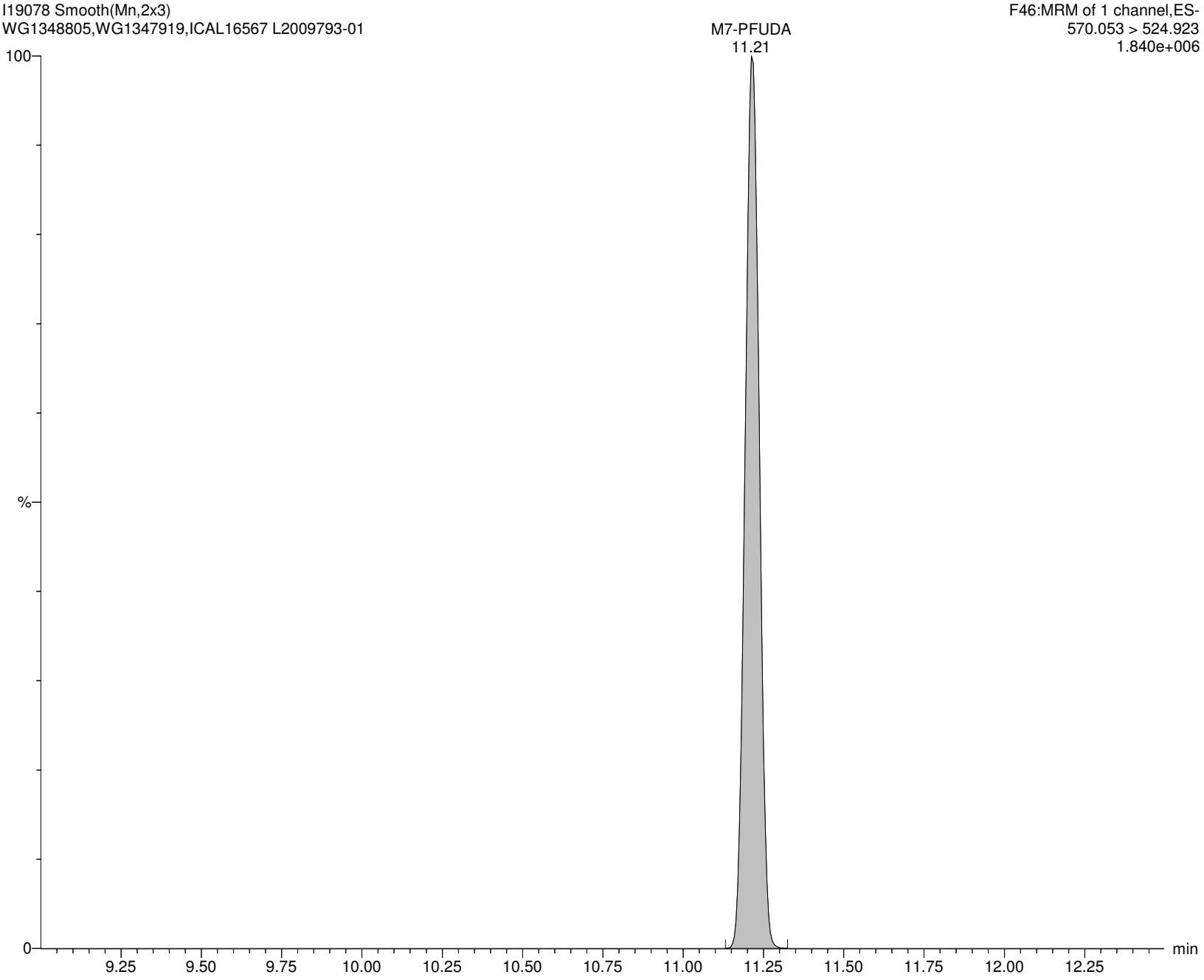
**M7-PFUDA**





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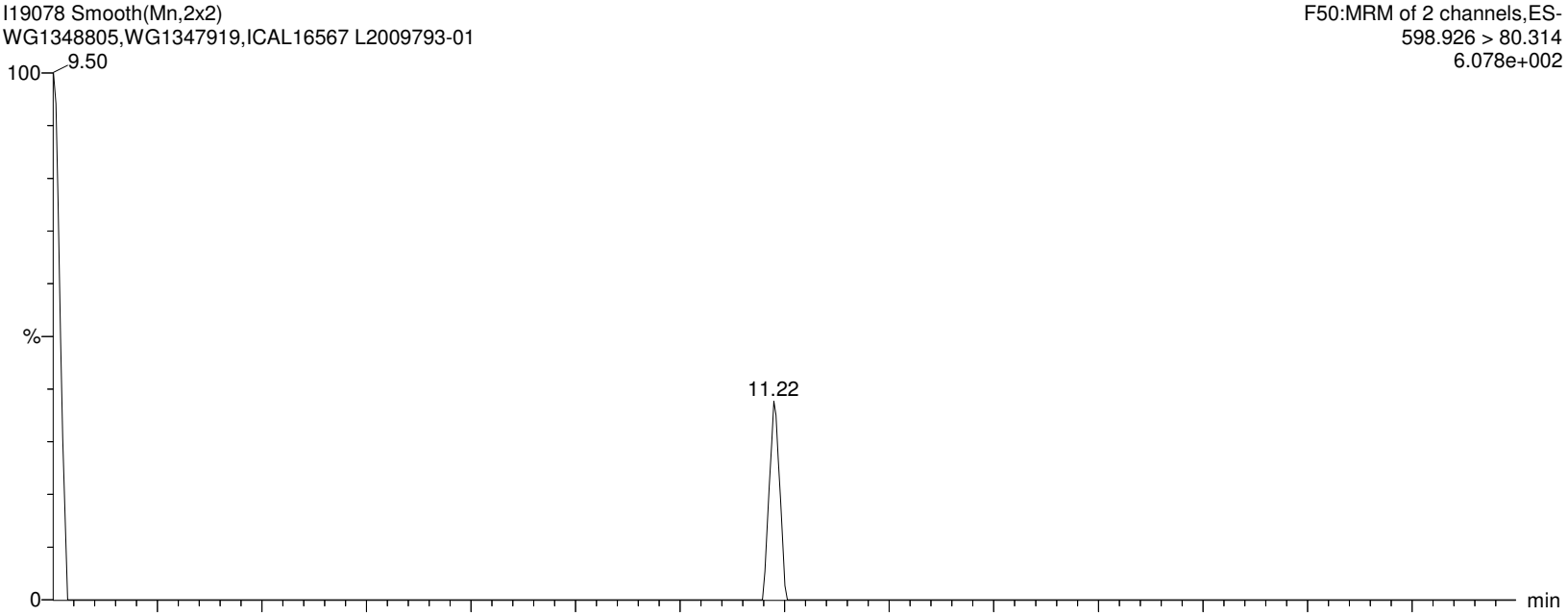


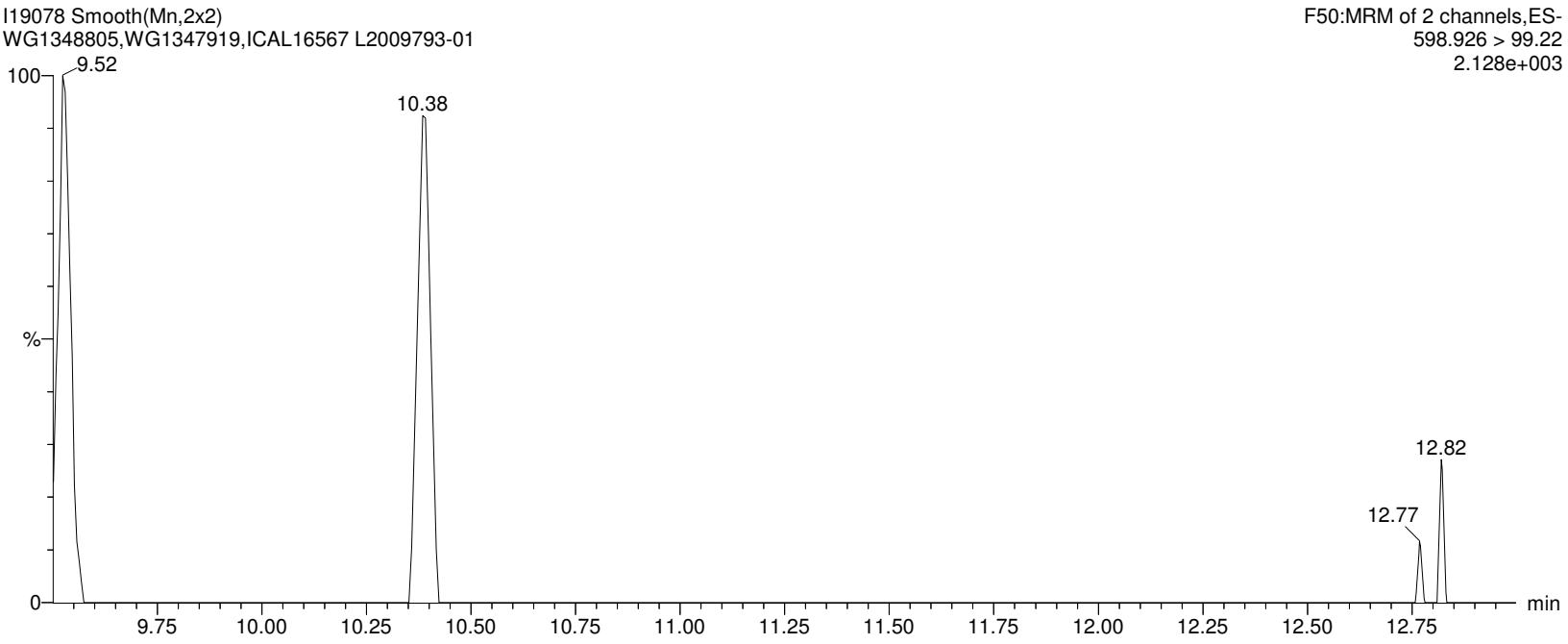



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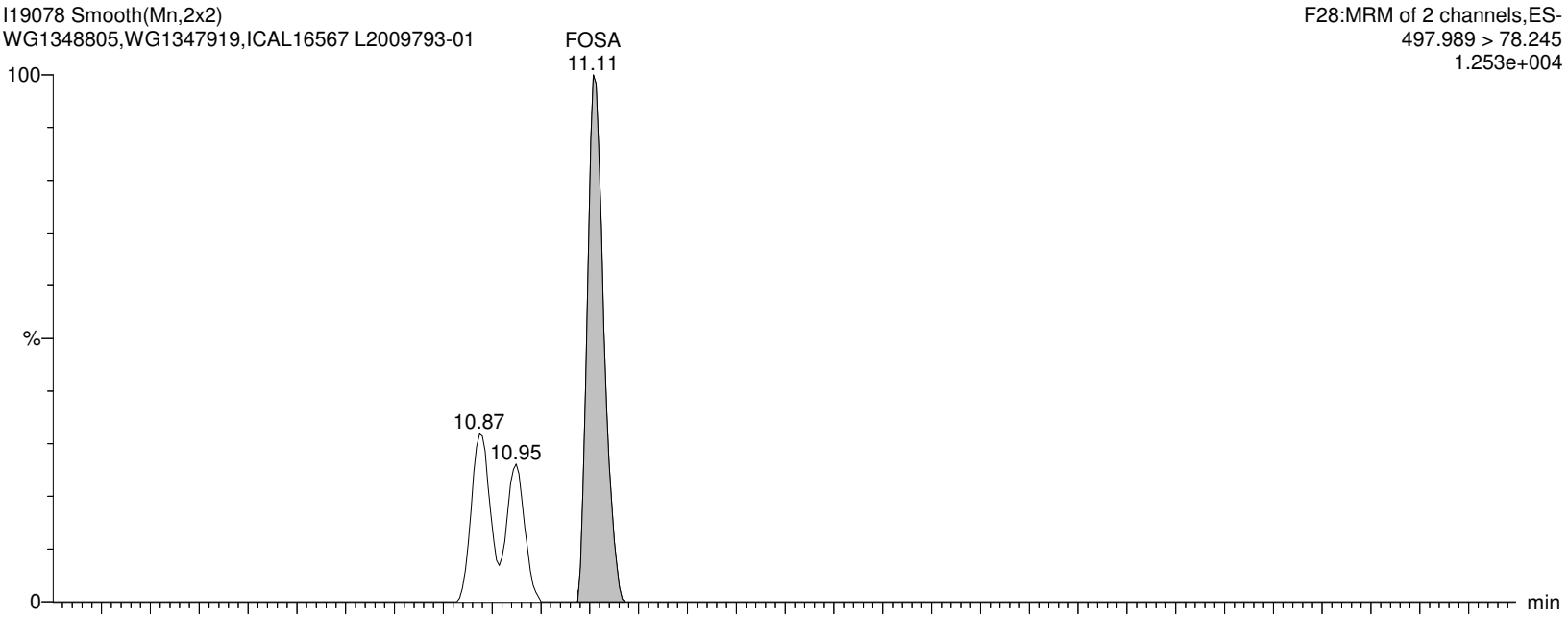
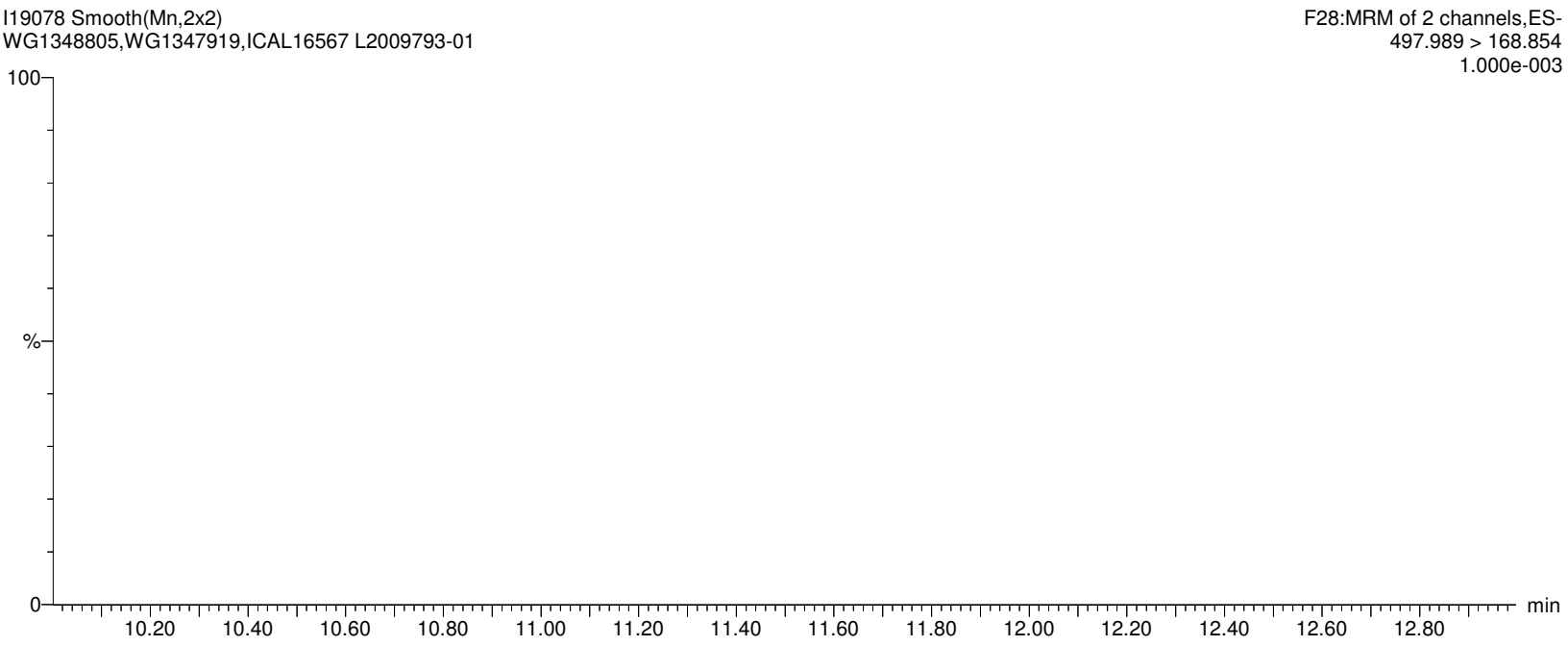
**FOSA**





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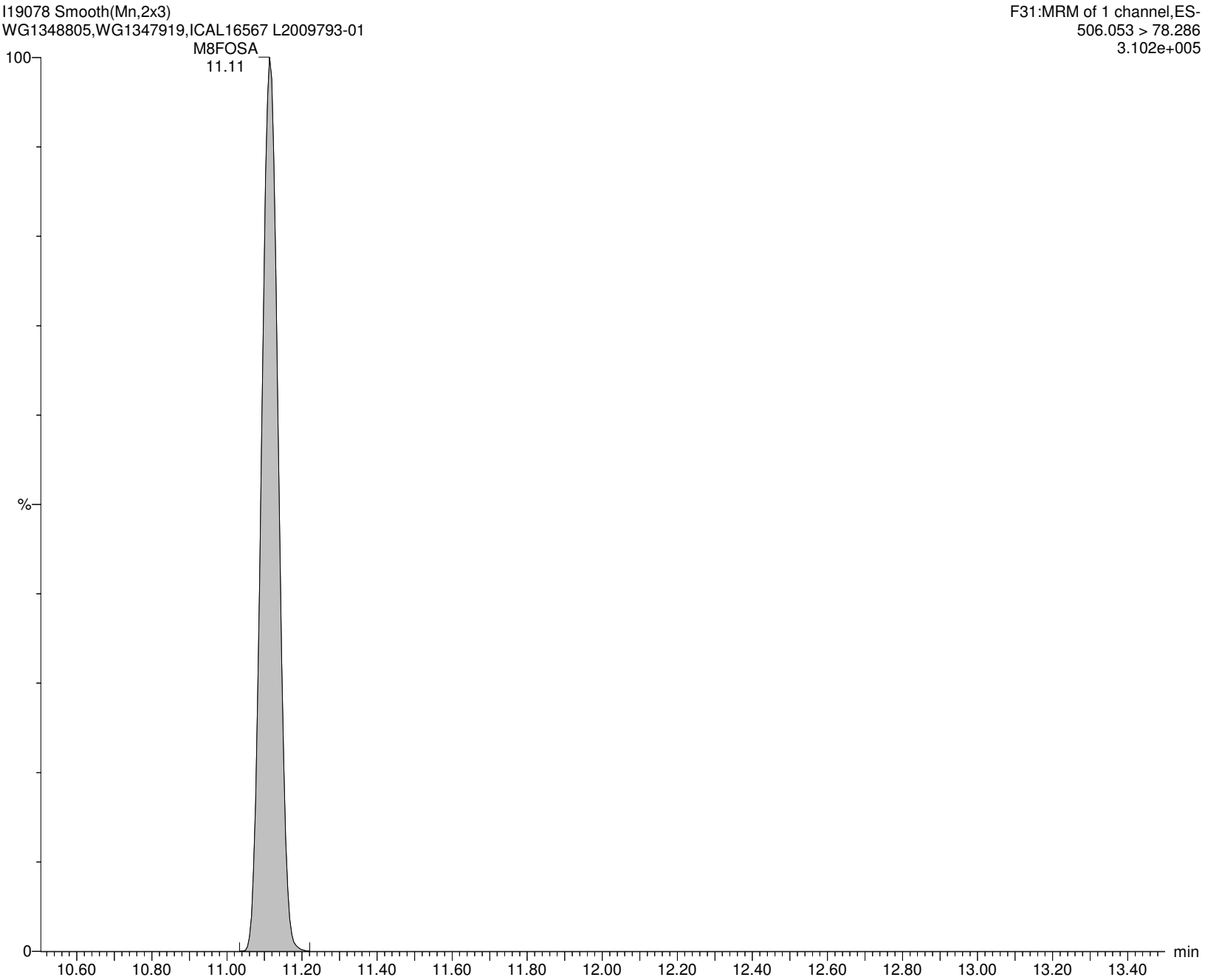
**M8FOSA**





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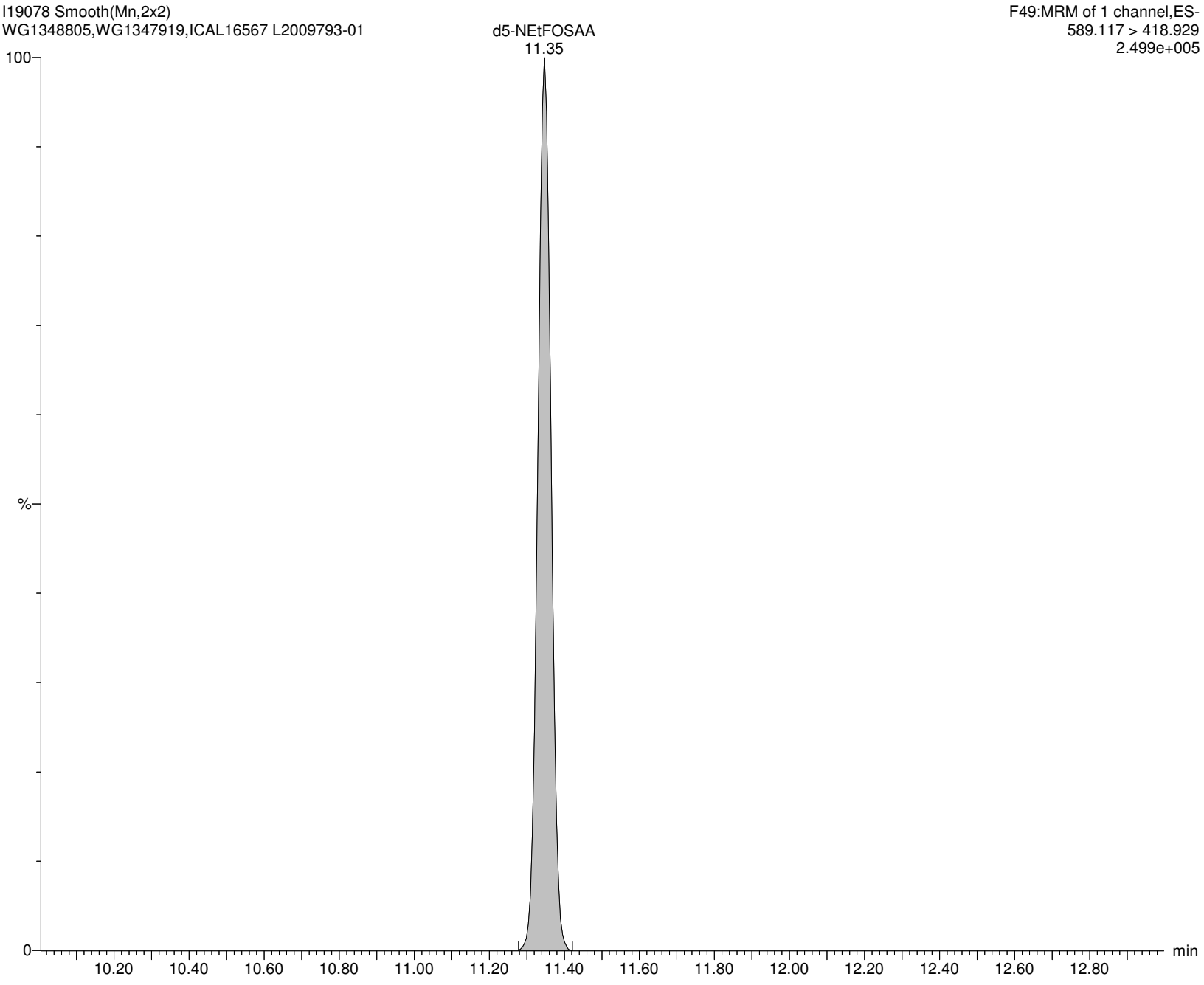
**d5-NEtFOSAA**



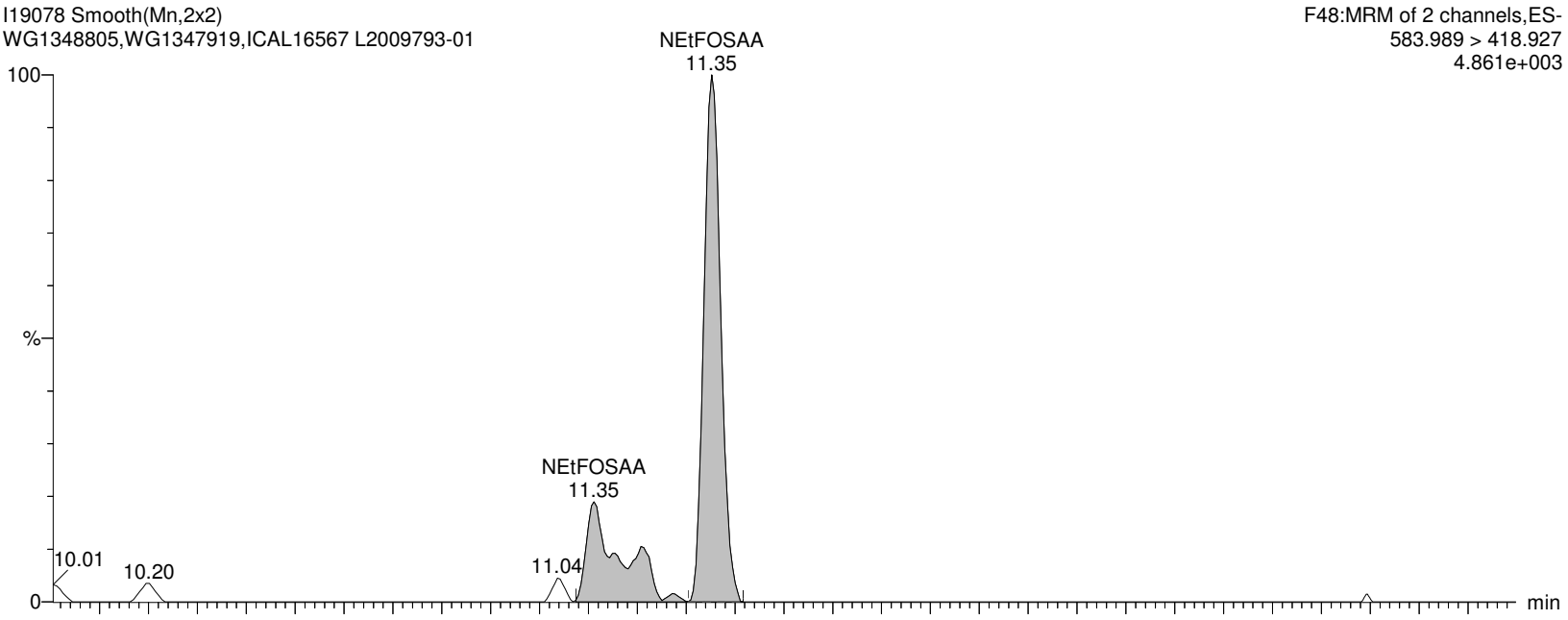


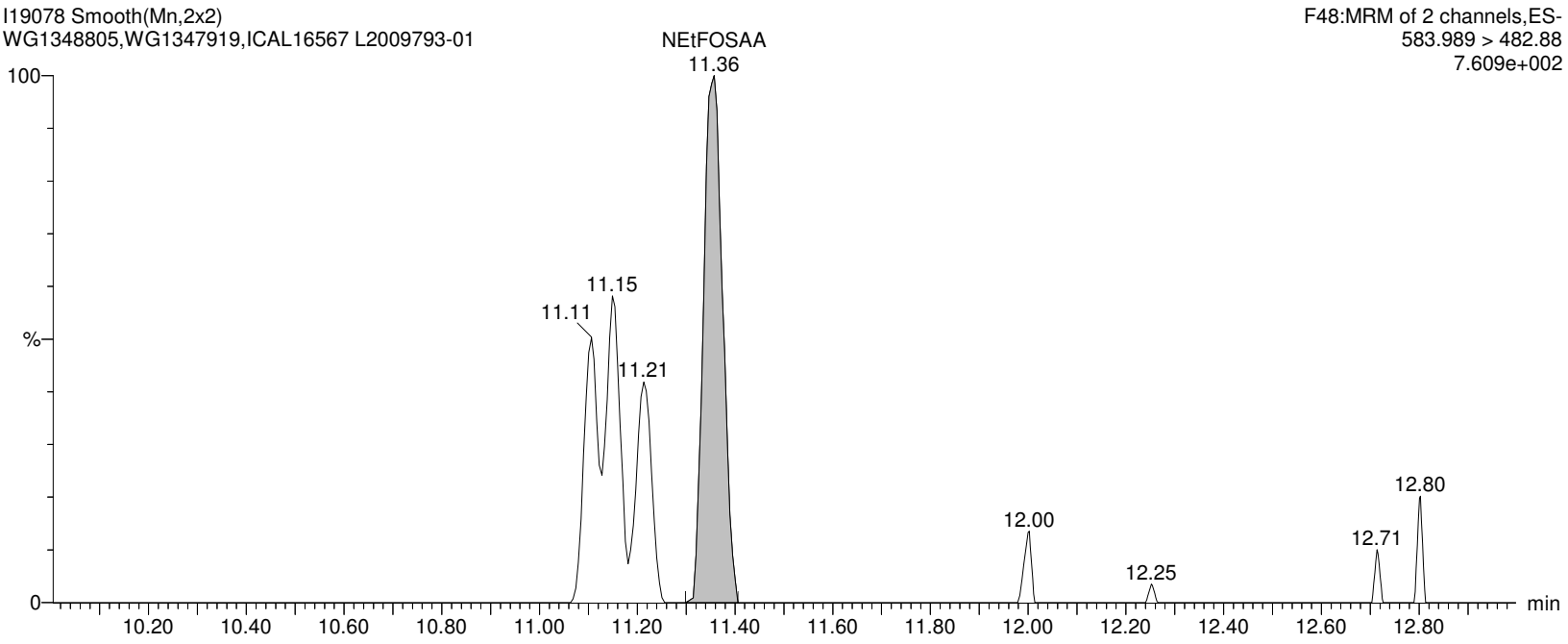
all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200309_537ISO.PRO\Data\WG1348805A.qld
Last Altered: Tuesday, March 17, 2020 11:30:27 Eastern Daylight Time
Printed: Tuesday, March 17, 2020 11:30:55 Eastern Daylight Time

**Name: I19078**
**ID: L2009793-01**
**Date: 09-Mar-2020**
**Time: 15:23:29**
**Description: WG1348805,WG1347919,ICAL16567**
**User: LCMS01:JW**
**Vial: 1:C,1**
**Instrument: XEVO-TQSmicro#QEA0276**
**Inlet Method Name: C:\MassLynx\Data\200309_537ISO.PRO\ACQUDB\LCMS_537_ISO_MeOH**
**Tune Method Name: C:\MassLynx\Data\200309_537ISO.PRO\ACQUDB\190709_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\200309_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**NEtFOSAA**





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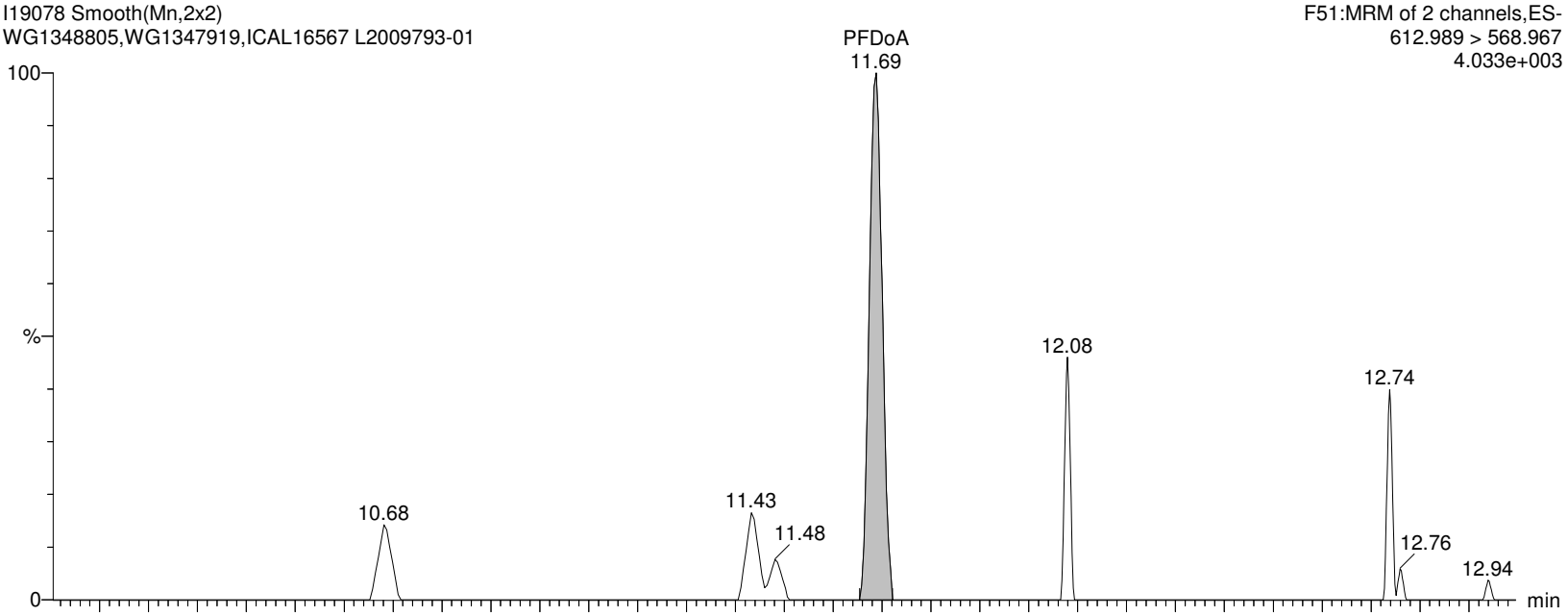
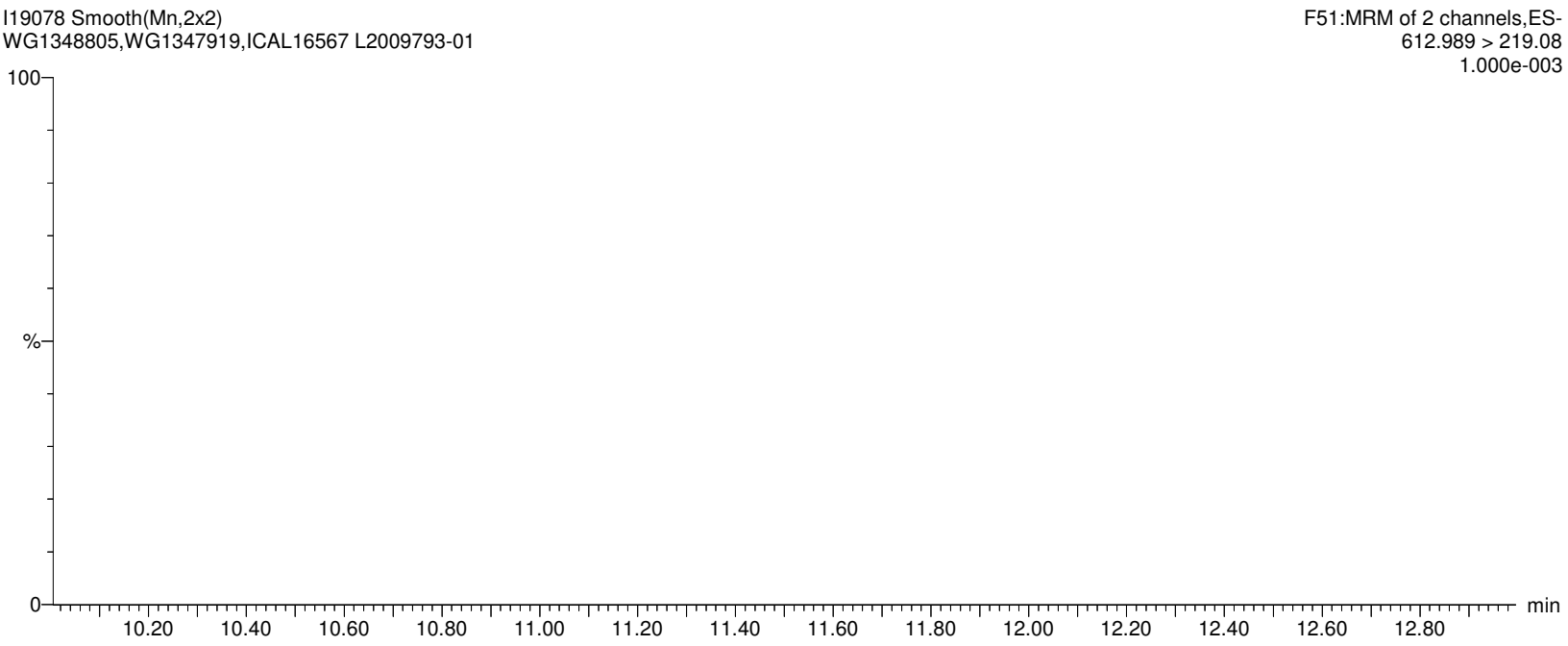
**MS Method Name: C:\MassLynx\Data\200309_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**PFDoA**





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**MS Method Name: C:\MassLynx\Data\200309_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

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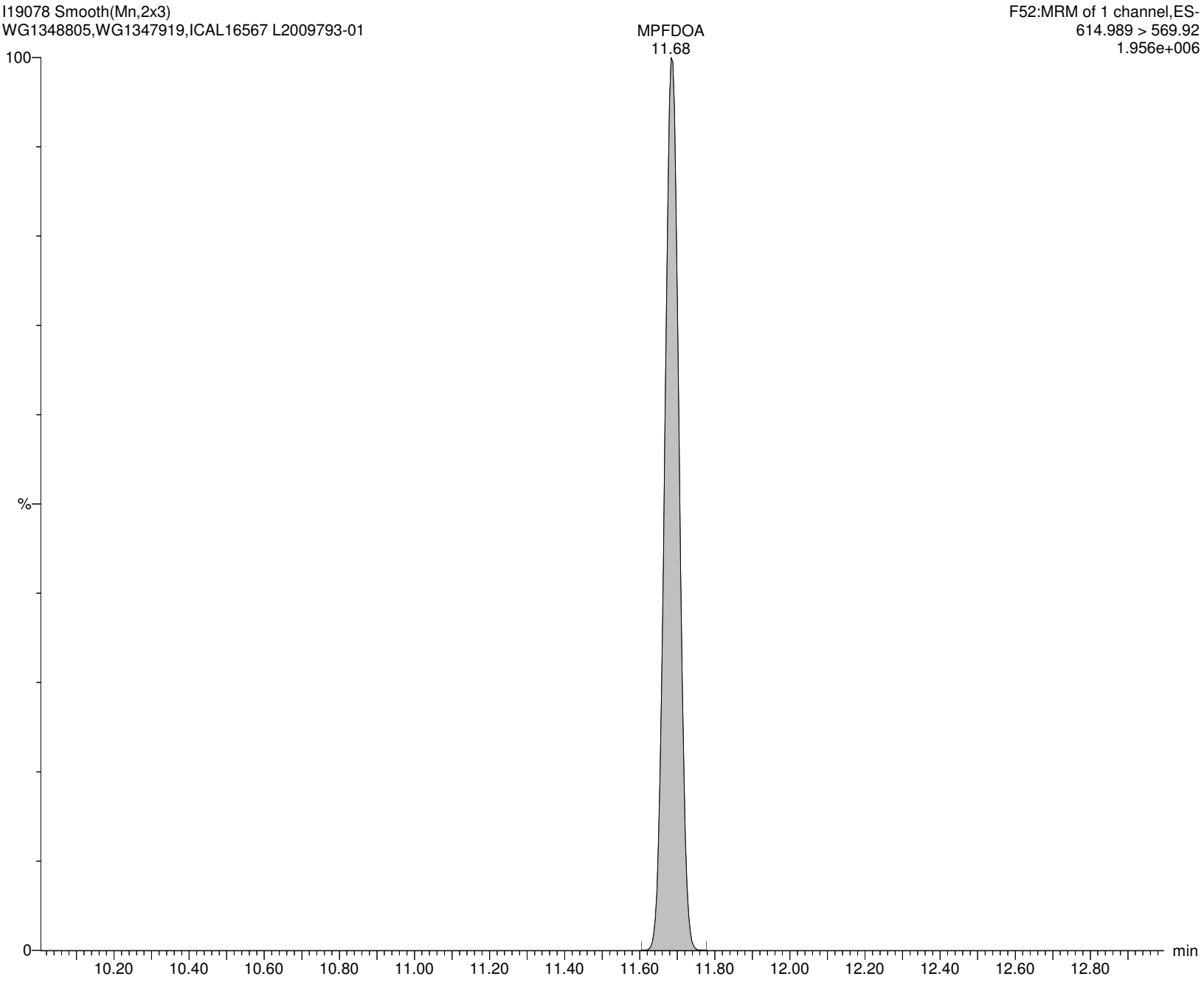



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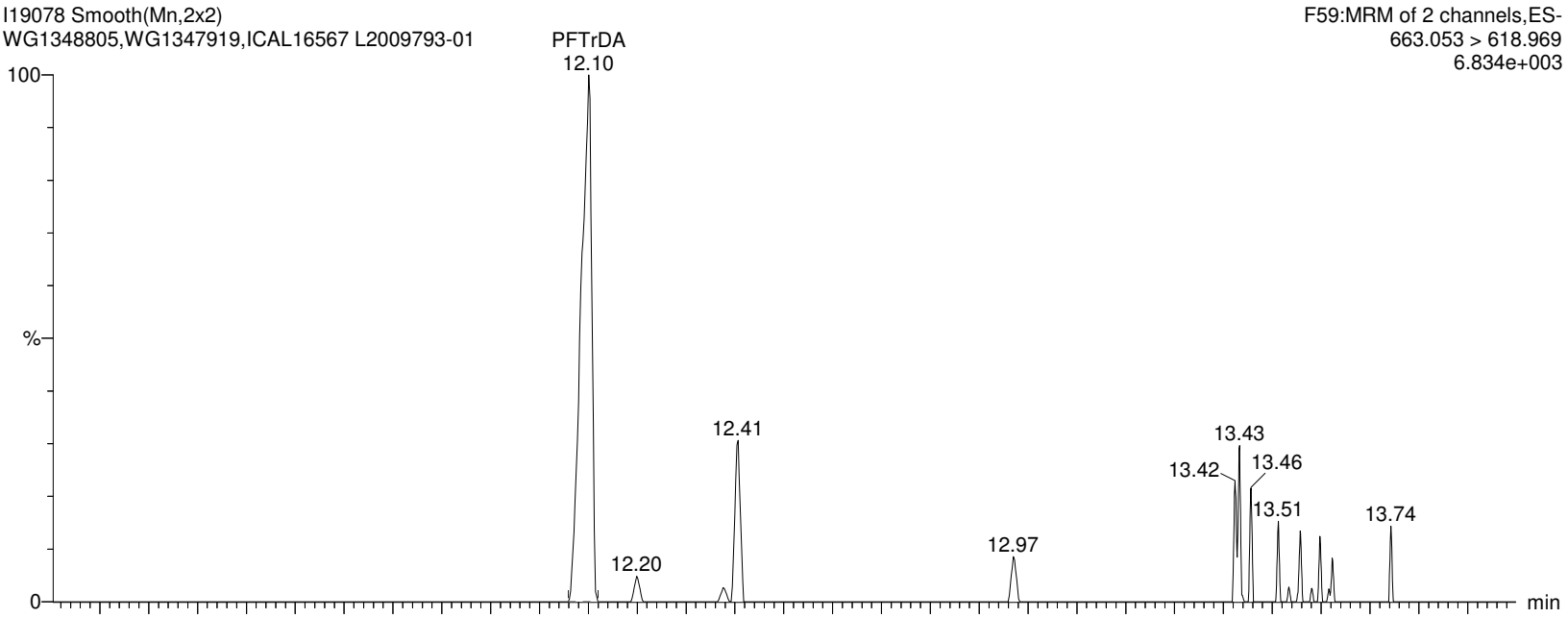


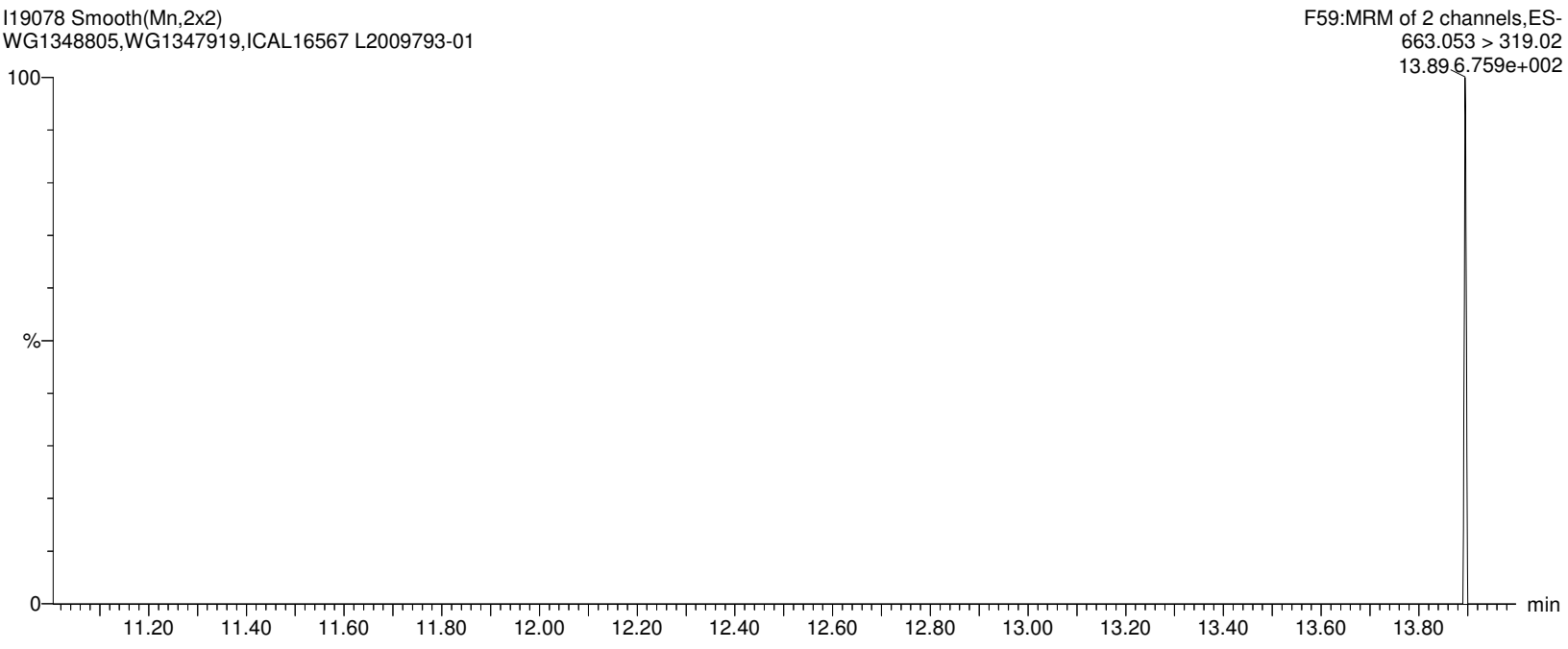



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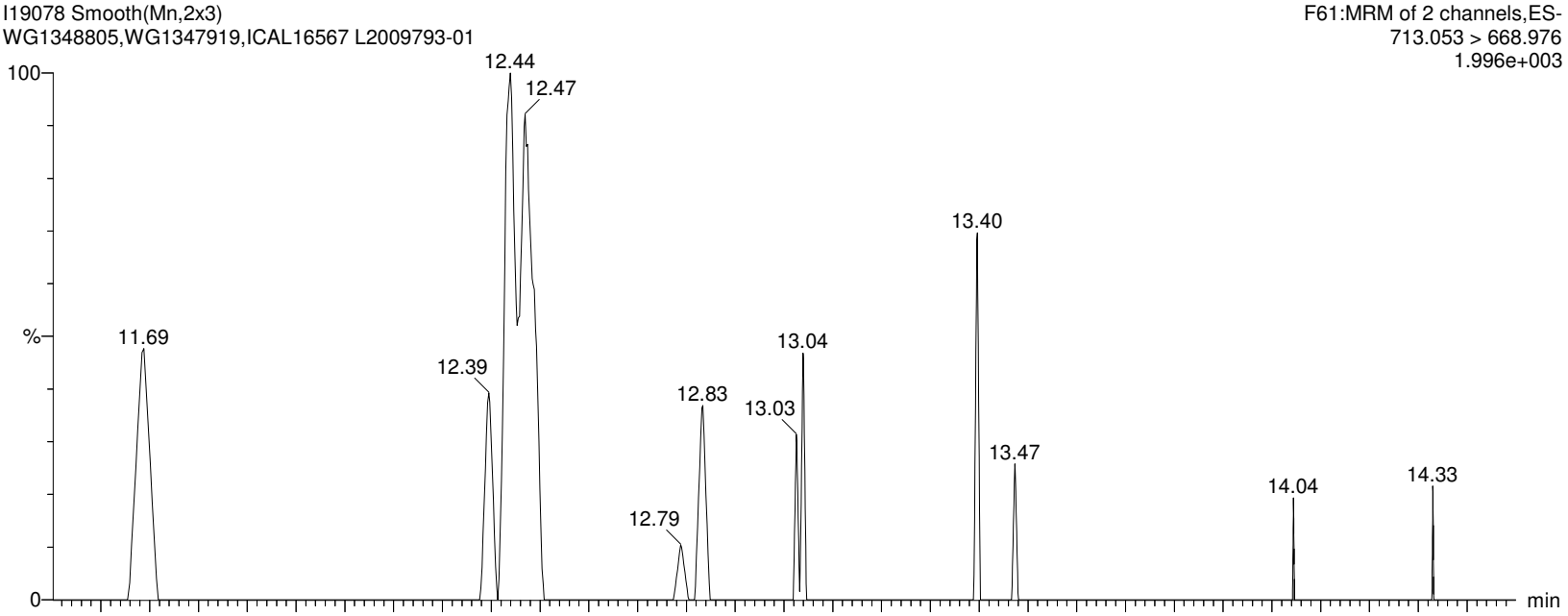
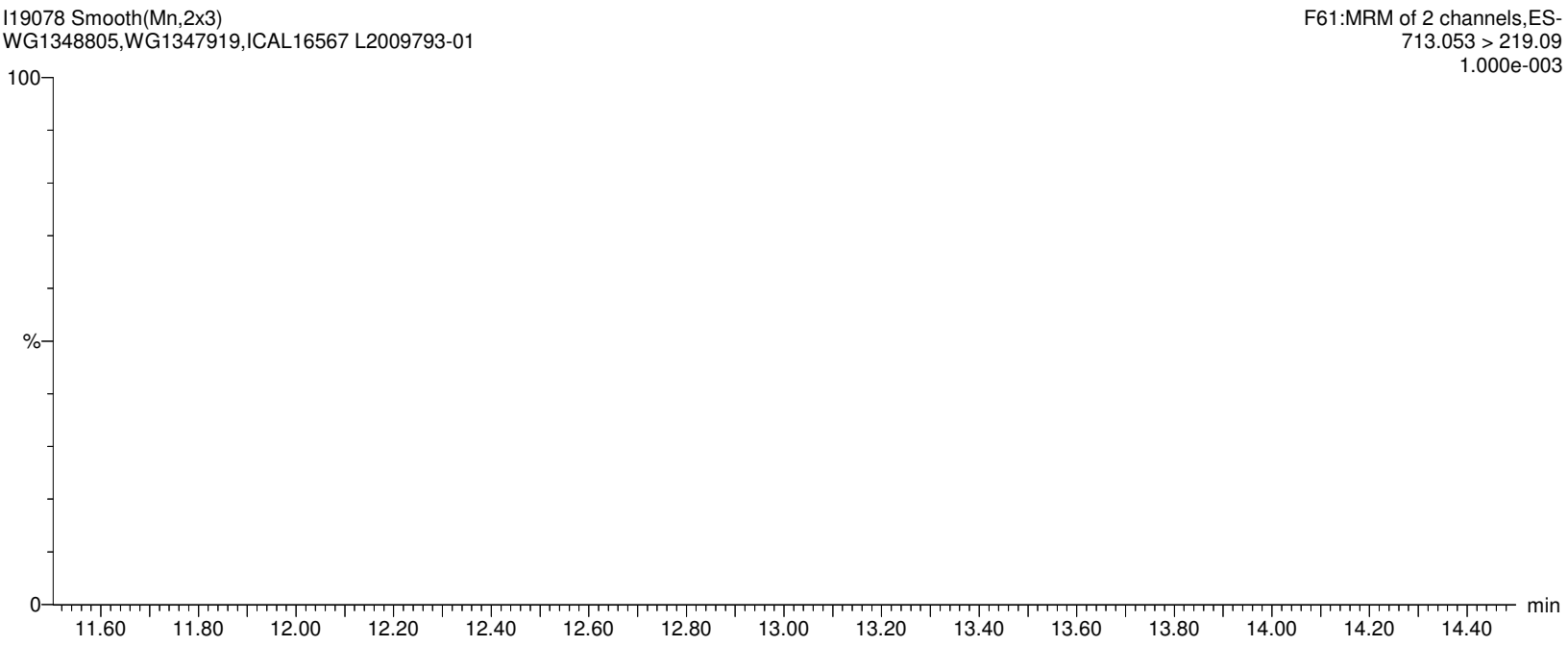
**MS Method Name: C:\MassLynx\Data\200309_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**PFTA**





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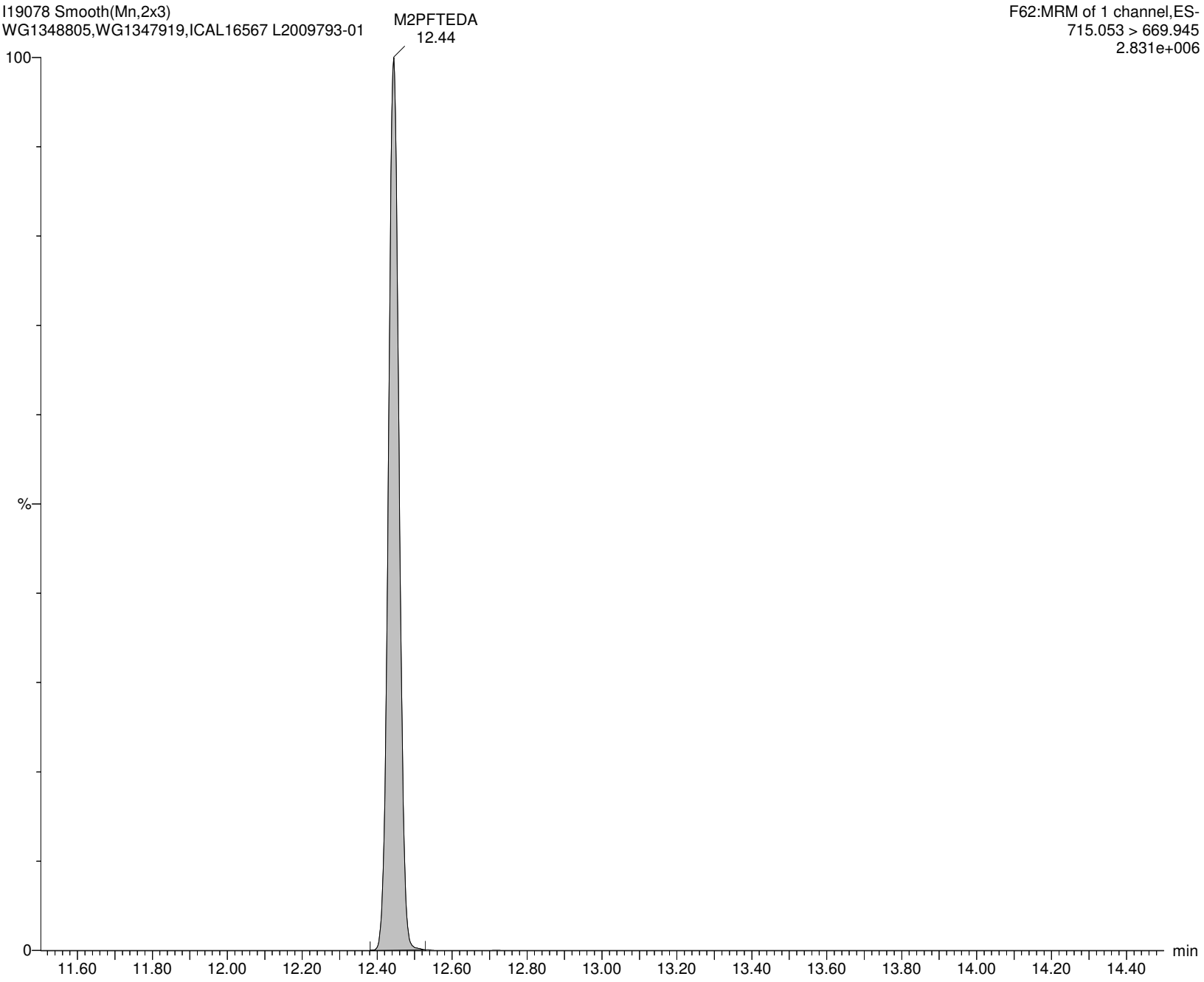
**MS Method Name: C:\MassLynx\Data\200309_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**M2PFTEDA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200309_537ISO.PRO\Data\WG1348805A.qld
Last Altered: Tuesday, March 17, 2020 11:34:11 Eastern Daylight Time
Printed: Tuesday, March 17, 2020 11:34:30 Eastern Daylight Time

**Method: C:\MassLynx\Data\200309_537ISO.PRO\MethDB\537ISO_Q_200227 .mdb 28 Feb 2020 10:16:06**
**Calibration: C:\MassLynx\Data\200309_537ISO.PRO\CurveDB\200227_537ISO_ICAL.cdb 28 Feb 2020 10:12:40**

**ID: L2009793-02**
**Name: I19079**
**Date: 09-Mar-2020**
**Time: 15:40:07**
**Description: WG1348805,WG1347919,ICAL16567**
**Instrument: XEVO-TQSmicro#QEA0276**
**User: LCMS01:JW**
**Inlet Method Name: C:\MassLynx\Data\200309_537ISO.PRO\ACQUDB\LCMS_537_ISO_MeOH**
**Tune Method Name: C:\MassLynx\Data\200309_537ISO.PRO\ACQUDB\190709_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\200309_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

| | Name | CAS | RT | Trace | Area | M Flag | Conc (ng/mL) | Ion Ratio | Ratio Flag | %Rec |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | PFBA | 375-22-4 | 2.19 | 212.926 > 169.111 | 8059 | m4 | 2.823 | | na | |
| 2 | M3PFBA | INT STD | 2.19 | 215.926 > 172.122 | 37569 | | 9.554 | | na | 95.5 |
| 3 | MPFBA | INT STD | 2.19 | 216.926 > 172.137 | 39455 | | 9.165 | | na | 91.7 |
| 4 | PFPeA | 2706-90-3 | 5.16 | 262.926 > 219.002 | 4619 | m4 | 1.412 | | na | |
| 5 | M5PFPEA | INT STD | 5.16 | 267.989 > 223.081 | 47016 | | 8.232 | | na | 82.3 |
| 6 | PFBS | 375-73-5 | 5.83 | 298.926 > 79.923 | 872 | m4 | 1.002 | 2.04 | NO | |
| 7 | M3PFBS | INT STD | 5.83 | 301.989 > 80.254 | 9643 | | 7.584 | | na | 75.8 |
| 8 | 4:2FTS | 757124-72-4 | | 326.926 > 306.957 | | | ND | | YES | |
| 9 | M2-4:2FTS | INT STD | 7.01 | 329.117 > 309.079 | 10264 | | 15.494 | | na | 154.9 |
| 10 | PFHxA | 307-24-4 | 7.09 | 312.989 > 269.028 | 9845 | | 2.131 | 16.46 | NO | |
| 11 | M5PFHxA | INT STD | 7.09 | 317.989 > 273.045 | 55735 | | 6.559 | | na | 65.6 |
| 12 | PFPeS | 2706-91-4 | 7.40 | 348.926 > 80.251 | 466 | | 0.524 | 2.20 | NO | |
| 13 | PFHpA | 375-85-9 | 8.36 | 362.926 > 319.014 | 11082 | | 1.567 | 5.13 | NO | |
| 14 | M4PFHpA | INT STD | 8.36 | 366.926 > 321.979 | 77090 | | 7.820 | | na | 78.2 |
| 15 | br-PFHxS | 355-46-4 | 8.28 | 398.904 > 79.915 | 273 | M2 | 0.396 | | YES | |
| 16 | L-PFHxS | 355-46-4 | 8.52 | 398.904 > 79.915 | 1204 | | 1.736 | 2.22 | NO | |
| 17 | PFHxS | 355-46-4 | | 398.904 > 79.915 | 1477 | | 2.132 | | na | |
| 18 | M3PFHxS | INT STD | 8.52 | 401.926 > 80.317 | 9378 | | 8.232 | | na | 82.3 |
| 19 | br-PFOA | 335-67-1 | 9.08 | 412.989 > 368.9 | 10950 | M5 | 1.445 | 2.35 | NO | |
| 20 | L-PFOA | 335-67-1 | 9.31 | 412.989 > 368.9 | 47418 | | 6.260 | 8.72 | NO | |
| 21 | M2PFOA | INT STD | 9.30 | 415.032 > 369.968 | 103791 | | 12.337 | | na | 123.4 |
| 22 | PFOA | 335-67-1 | | 412.989 > 368.9 | 58368 | | 7.705 | | na | |
| 23 | M8PFOA | INT STD | 9.30 | 420.989 > 375.979 | 88106 | | 8.902 | | na | 89.0 |
| 24 | 6:2FTS | 27619-97-2 | | 426.989 > 406.921 | | | ND | | YES | |
| 25 | M2-6:2FTS | INT STD | 9.26 | 428.989 > 408.917 | 9443 | | 22.909 | | na | 229.1 |
| 26 | PFHpS | 375-92-8 | 9.39 | 448.926 > 80.257 | 195 | | 0.423 | | YES | |
| 27 | PFNA | 375-95-1 | 10.05 | 462.989 > 418.931 | 1946 | | 0.279 | 4.38 | NO | |
| 28 | M9PFNA | INT STD | 10.05 | 472.053 > 426.947 | 93920 | | 9.706 | | na | 97.1 |
| 29 | br-PFOS | 1763-23-1 | 9.85 | 498.968 > 79.918 | 3863 | M5 | 5.401 | 4.39 | NO | |
| 30 | L-PFOS | 1763-23-1 | 10.10 | 498.968 > 79.918 | 3391 | | 6.811 | 1.36 | NO | |
| 31 | PFOS | 1763-23-1 | | 498.968 > 79.918 | 7254 | | 12.212 | | na | |
| 32 | M4PFOS | INT STD | 10.10 | 503.032 > 80.306 | 9912 | | 11.669 | | na | 116.7 |
| 33 | M8PFOS | INT STD | 10.10 | 507.053 > 80.294 | 9207 | | 7.999 | | na | 80.0 |
| 34 | PFDA | 335-76-2 | 10.68 | 513.053 > 468.906 | 1560 | | 0.219 | | YES | |
| 35 | M2PFDA | INT STD | 10.68 | 515.053 > 469.934 | 100487 | | 15.191 | | na | 151.9 |
| 36 | M6PFDA | INT STD | 10.68 | 519.053 > 473.931 | 92777 | | 8.392 | | na | 83.9 |
| 37 | 8:2FTS | 39108-34-4 | | 527.032 > 507.079 | | | ND | | YES | |
| 38 | M2-8:2FTS | INT STD | 10.67 | 529.053 > 508.945 | 3694 | | 14.818 | | na | 148.2 |
| 39 | PFNS | 68259-12-1 | | 548.989 > 80.249 | | | ND | | YES | |


all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200309_537ISO.PRO\Data\WG1348805A.qld
Last Altered: Tuesday, March 17, 2020 11:34:11 Eastern Daylight Time
Printed: Tuesday, March 17, 2020 11:34:30 Eastern Daylight Time

**ID: L2009793-02**
**Name: I19079**
**Date: 09-Mar-2020**
**Time: 15:40:07**
**Description: WG1348805,WG1347919,ICAL16567**
**Instrument: XEVO-TQSmicro#QEA0276**
**User: LCMS01:JW**
**Inlet Method Name: C:\MassLynx\Data\200309_537ISO.PRO\ACQUDB\LCMS_537_ISO_MeOH**
**Tune Method Name: C:\MassLynx\Data\200309_537ISO.PRO\ACQUDB\190709_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\200309_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

| | Name | CAS | RT | Trace | Area | M Flag | Conc (ng/mL) | Ion Ratio | Ratio Flag | %Rec |
|---|---|---|---|---|---|---|---|---|---|---|
| 40 | d3-NMeFOSAA | INT STD | 11.06 | 573.096 > 418.987 | 13842 | | 9.451 | | na | 94.5 |
| 41 | NMeFOSAA | 2355-31-9 | 11.06 | 570.053 > 418.917 | 106 | m5 | 0.129 | | YES | |
| 42 | PFUnA | 2058-94-8 | 11.23 | 562.989 > 518.903 | 514 | | 0.067 | 11.34 | YES | |
| 43 | M7-PFUDA | INT STD | 11.21 | 570.053 > 524.923 | 82664 | | 8.509 | | na | 85.1 |
| 44 | PFDS | 335-77-3 | | 598.926 > 80.314 | | | ND | | YES | |
| 45 | FOSA | 754-91-6 | 11.11 | 497.989 > 78.245 | 74 | | 0.076 | | YES | |
| 46 | M8FOSA | INT STD | 11.11 | 506.053 > 78.286 | 11721 | | 2.645 | | na | 26.5 |
| 47 | d5-NEtFOSAA | INT STD | 11.35 | 589.117 > 418.929 | 9482 | | 8.878 | | na | 88.8 |
| 48 | NEtFOSAA | 2991-50-6 | 11.36 | 583.989 > 418.927 | 140 | m5 | 0.173 | | YES | |
| 49 | PFDoA | 307-55-1 | 11.69 | 612.989 > 568.967 | 322 | | 0.041 | | YES | |
| 50 | MPFDOA | INT STD | 11.68 | 614.989 > 569.92 | 85988 | | 8.233 | | na | 82.3 |
| 51 | PFTrDA | 72629-94-8 | | 663.053 > 618.969 | | | ND | | YES | |
| 52 | PFTA | 376-06-7 | | 713.053 > 668.976 | | | ND | | YES | |
| 53 | M2PFTEDA | INT STD | 12.44 | 715.053 > 669.945 | 81668 | | 6.937 | | na | 69.4 |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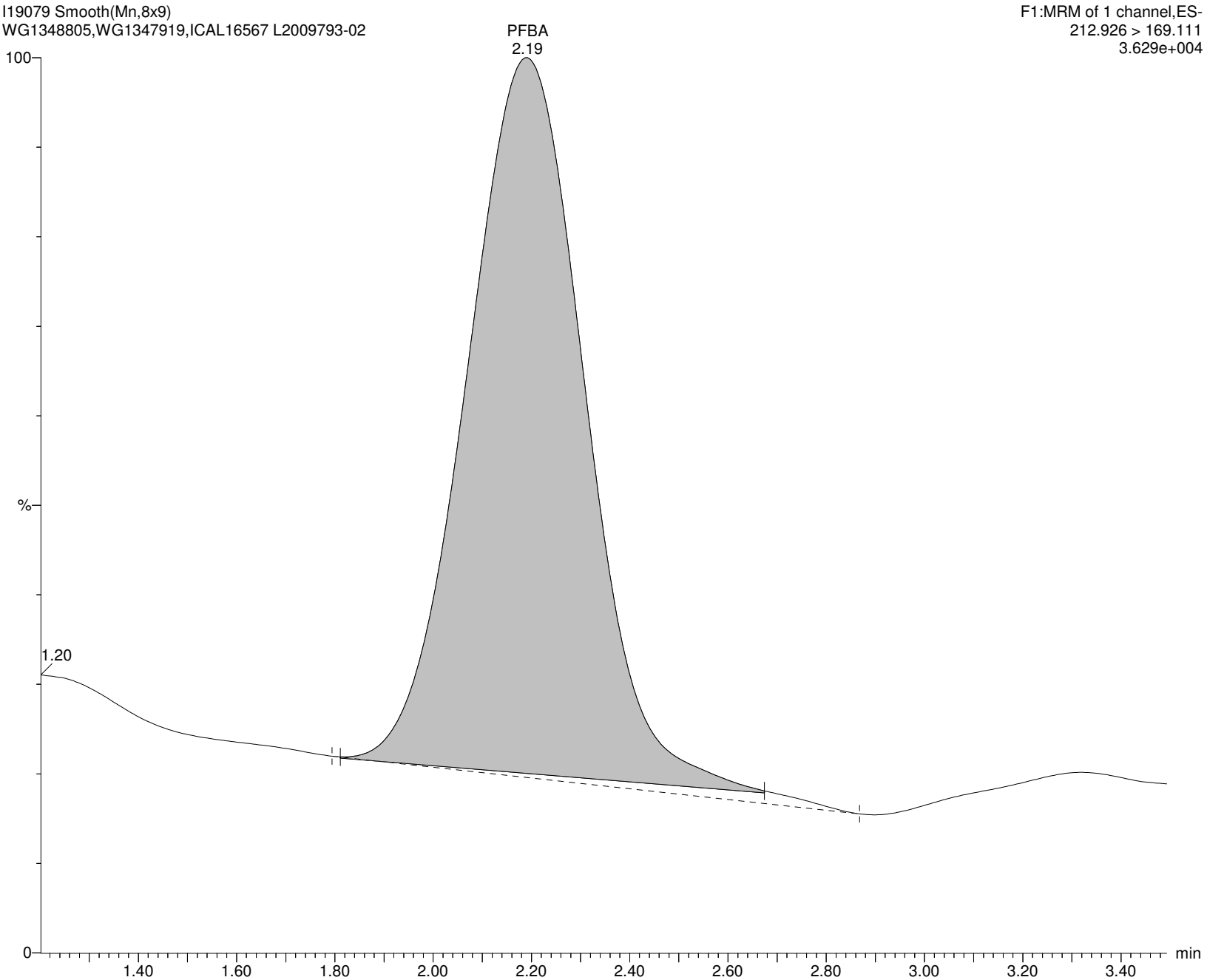
**PFBA**





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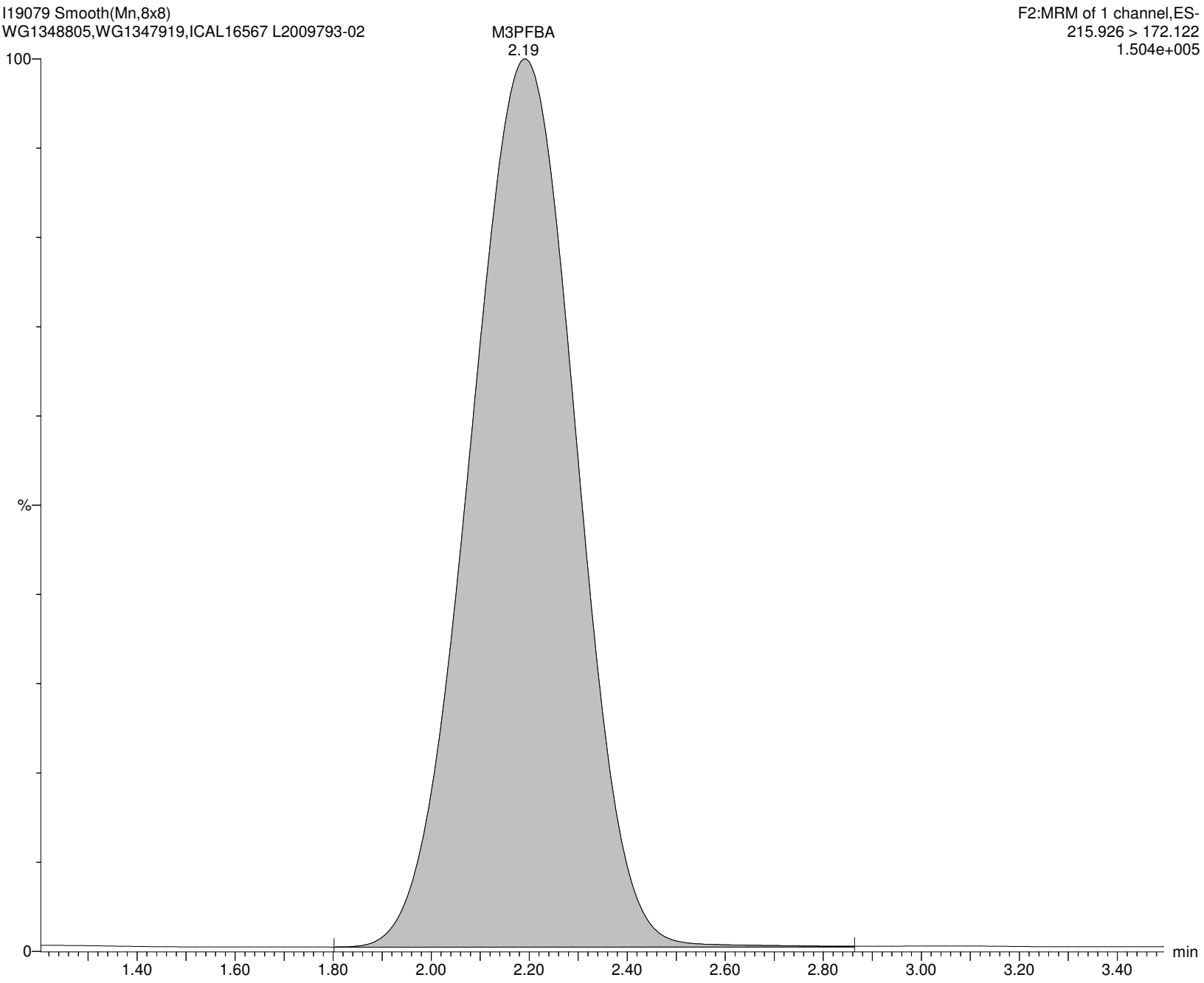
**M3PFBA**





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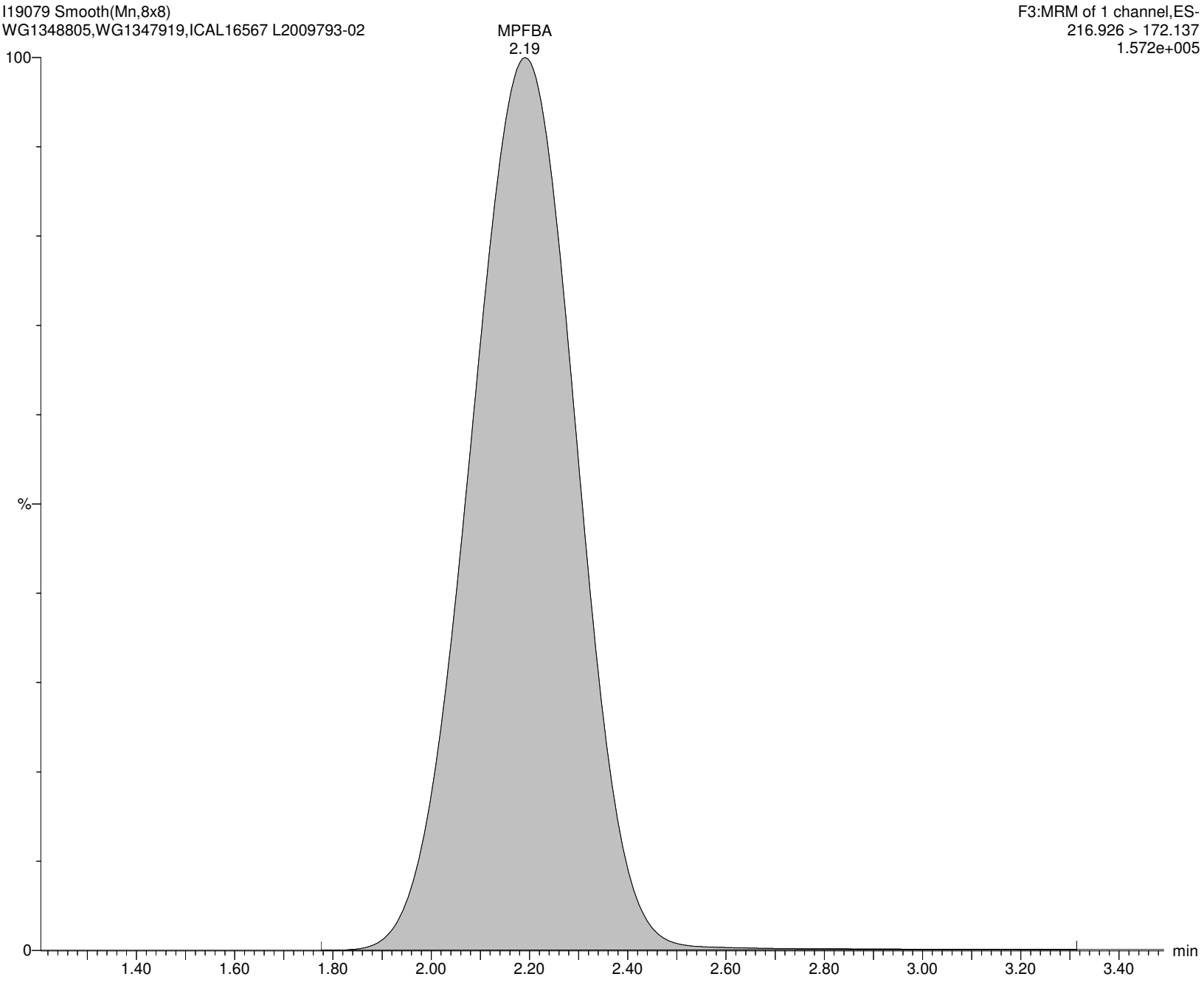
**MPFBA**





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**Description: WG1348805,WG1347919,ICAL16567**
**User: LCMS01:JW**
**Vial: 1:C,2**
**Instrument: XEVO-TQSmicro#QEA0276**
**Inlet Method Name: C:\MassLynx\Data\200309_537ISO.PRO\ACQUDB\LCMS_537_ISO_MeOH**
**Tune Method Name: C:\MassLynx\Data\200309_537ISO.PRO\ACQUDB\190709_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\200309_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

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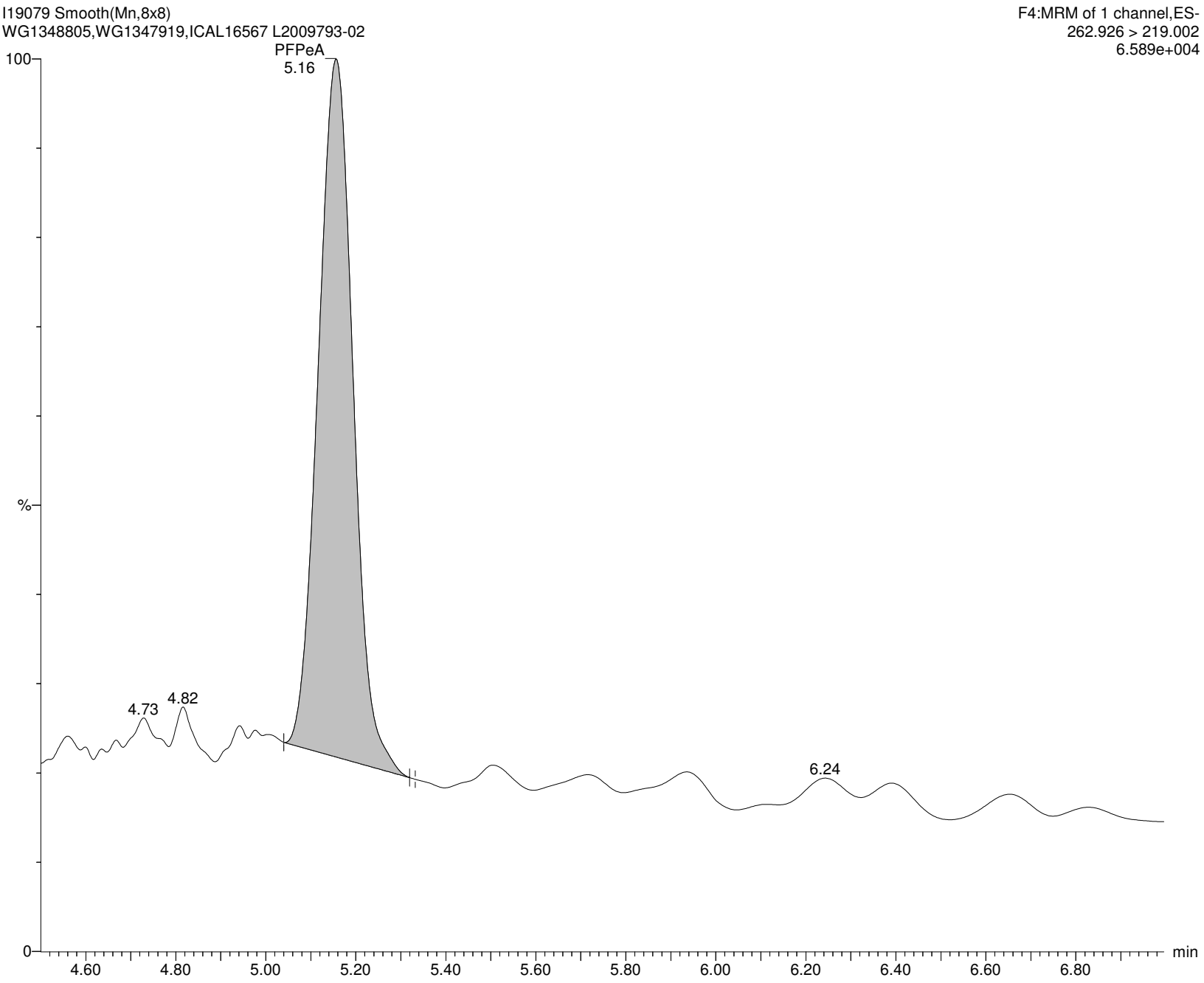



all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200309_537ISO.PRO\Data\WG1348805A.qld
Last Altered: Tuesday, March 17, 2020 11:34:11 Eastern Daylight Time
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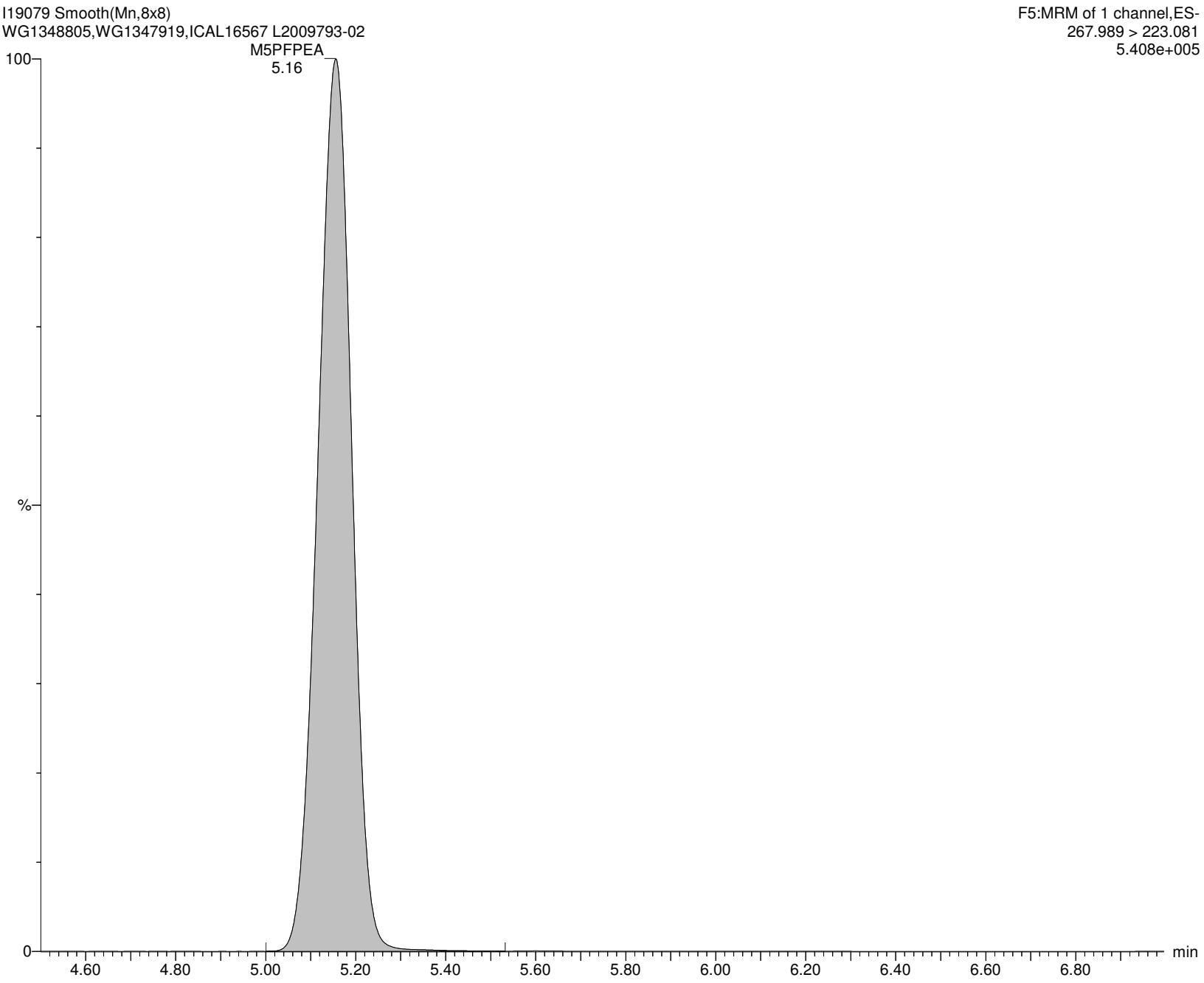
**M5PFPEA**





all concentration units in (ng/mL)

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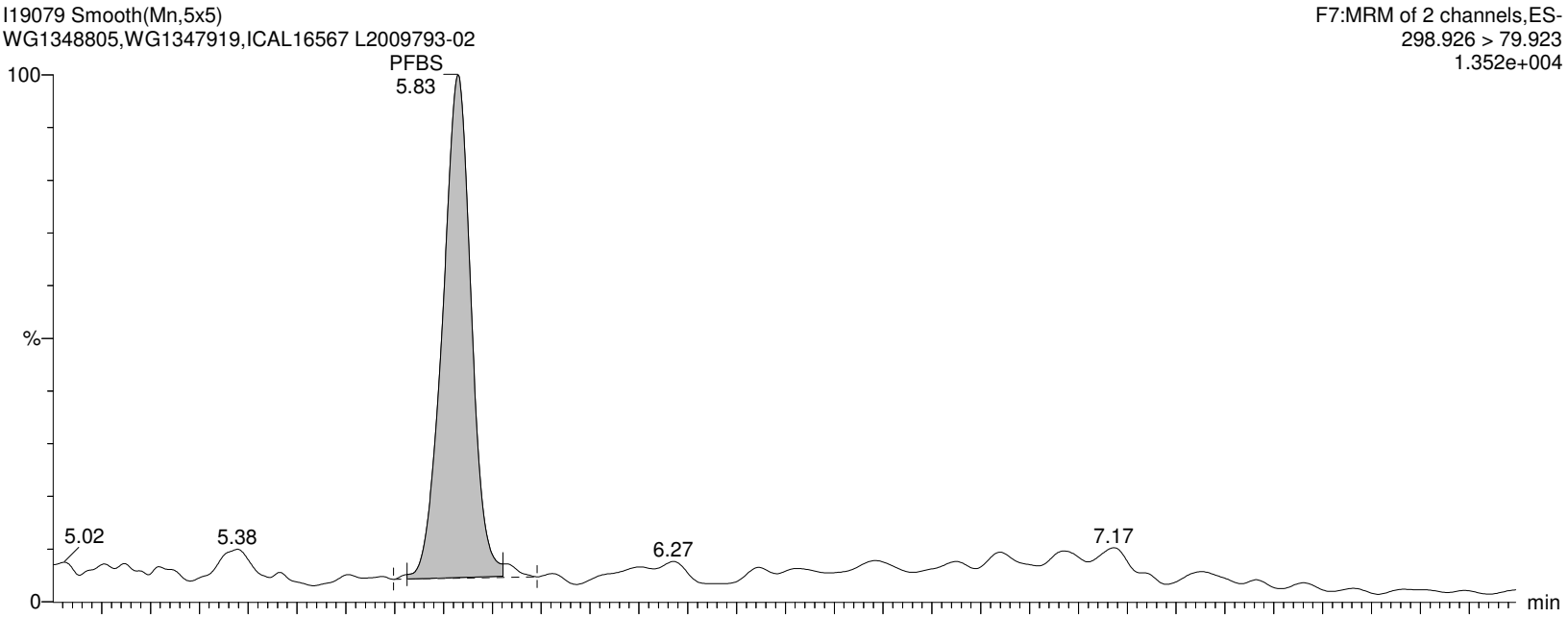


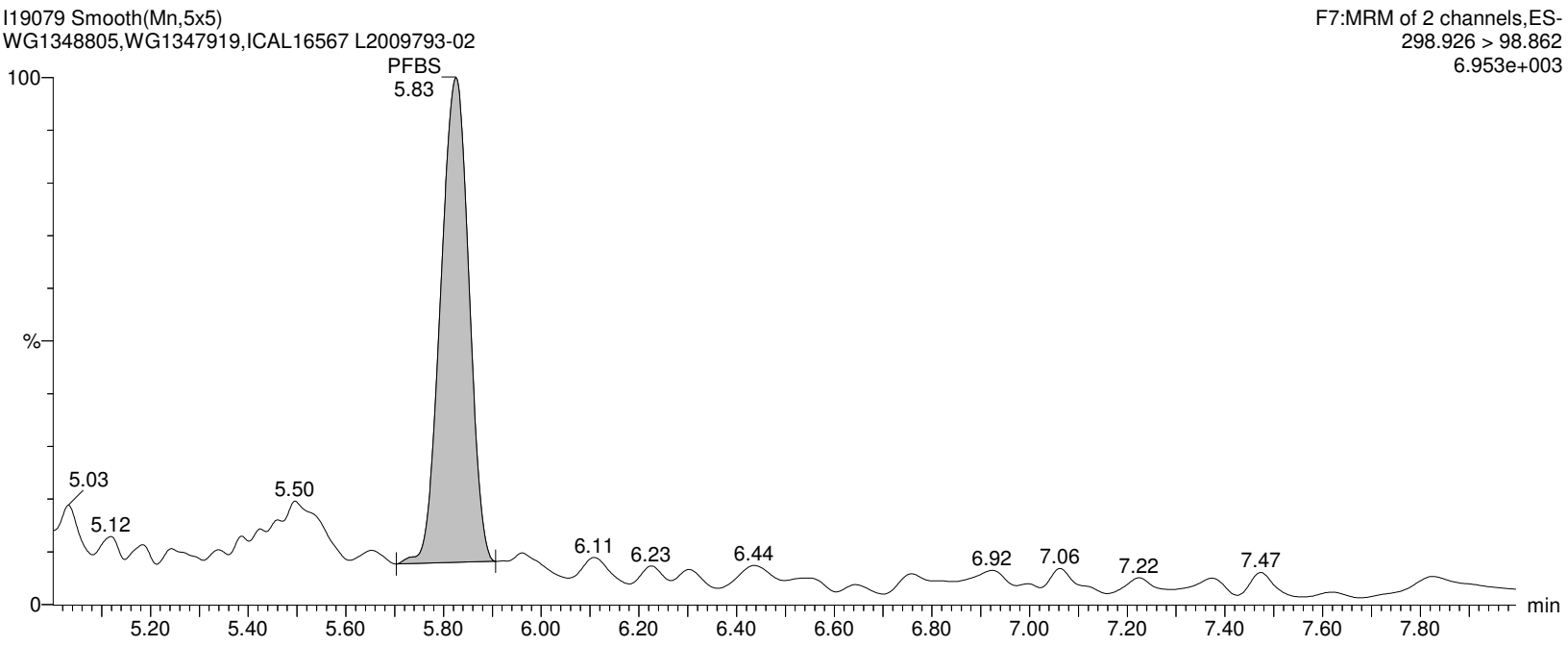



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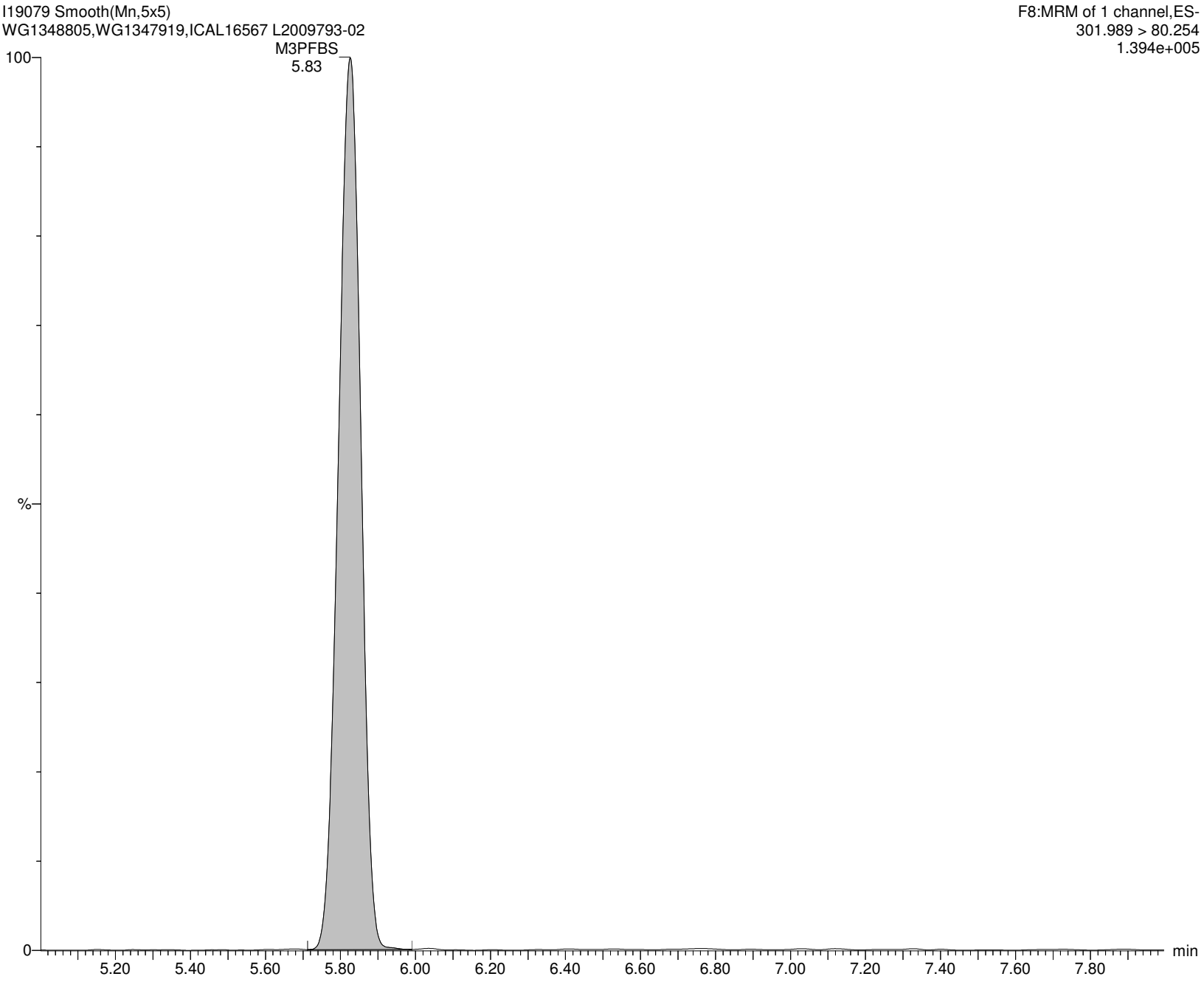
**M3PFBS**





all concentration units in (ng/mL)

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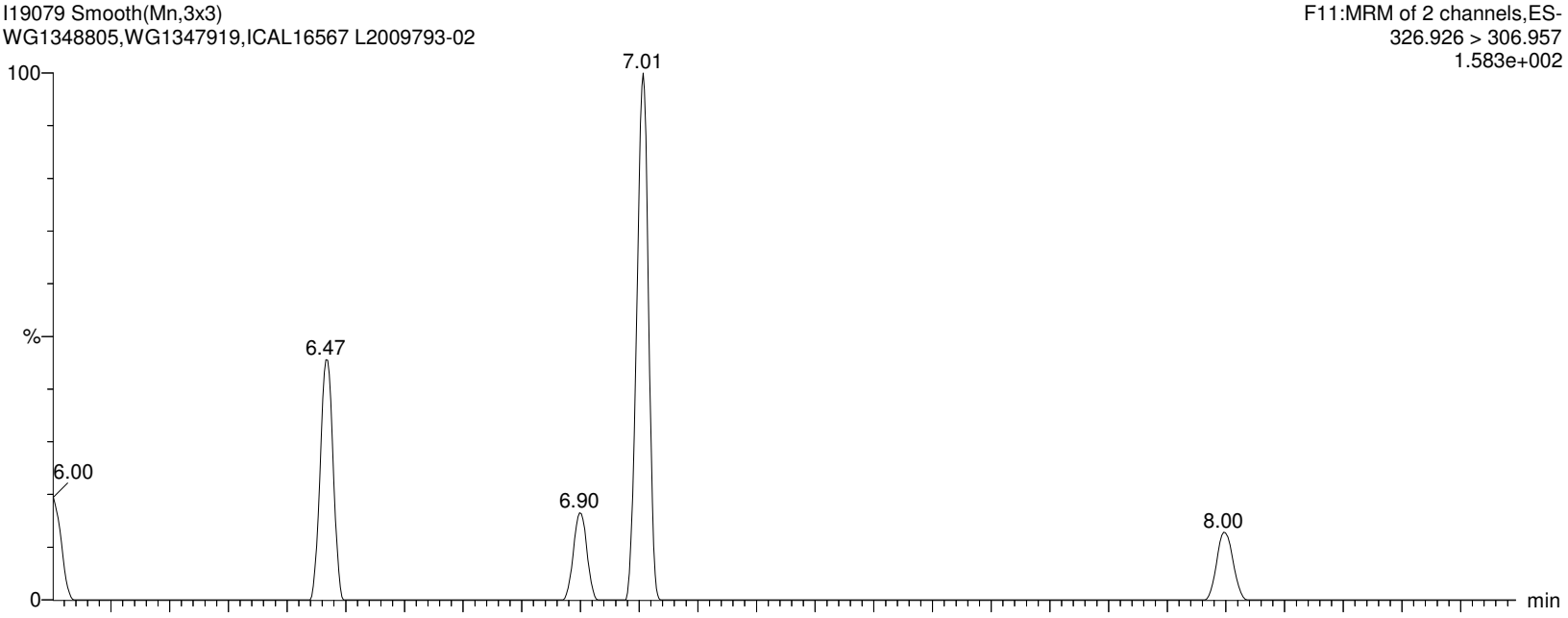
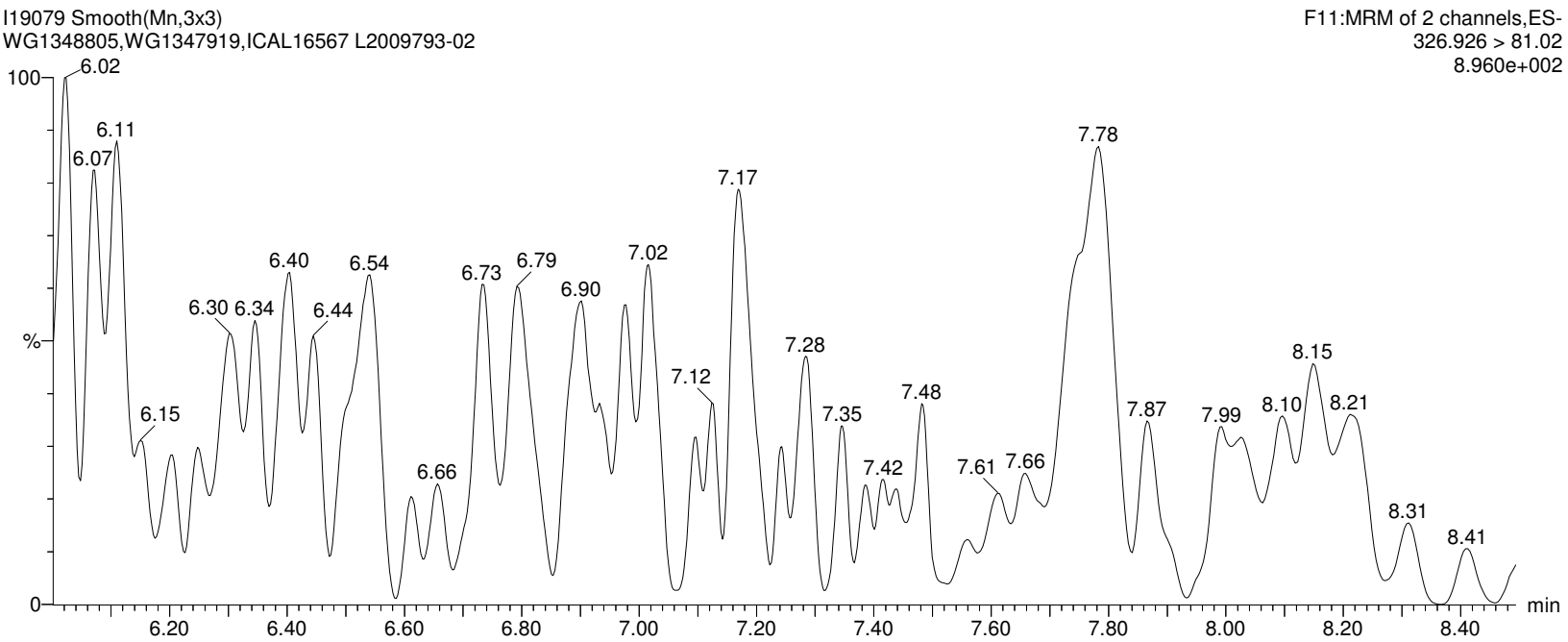
**4:2FTS**





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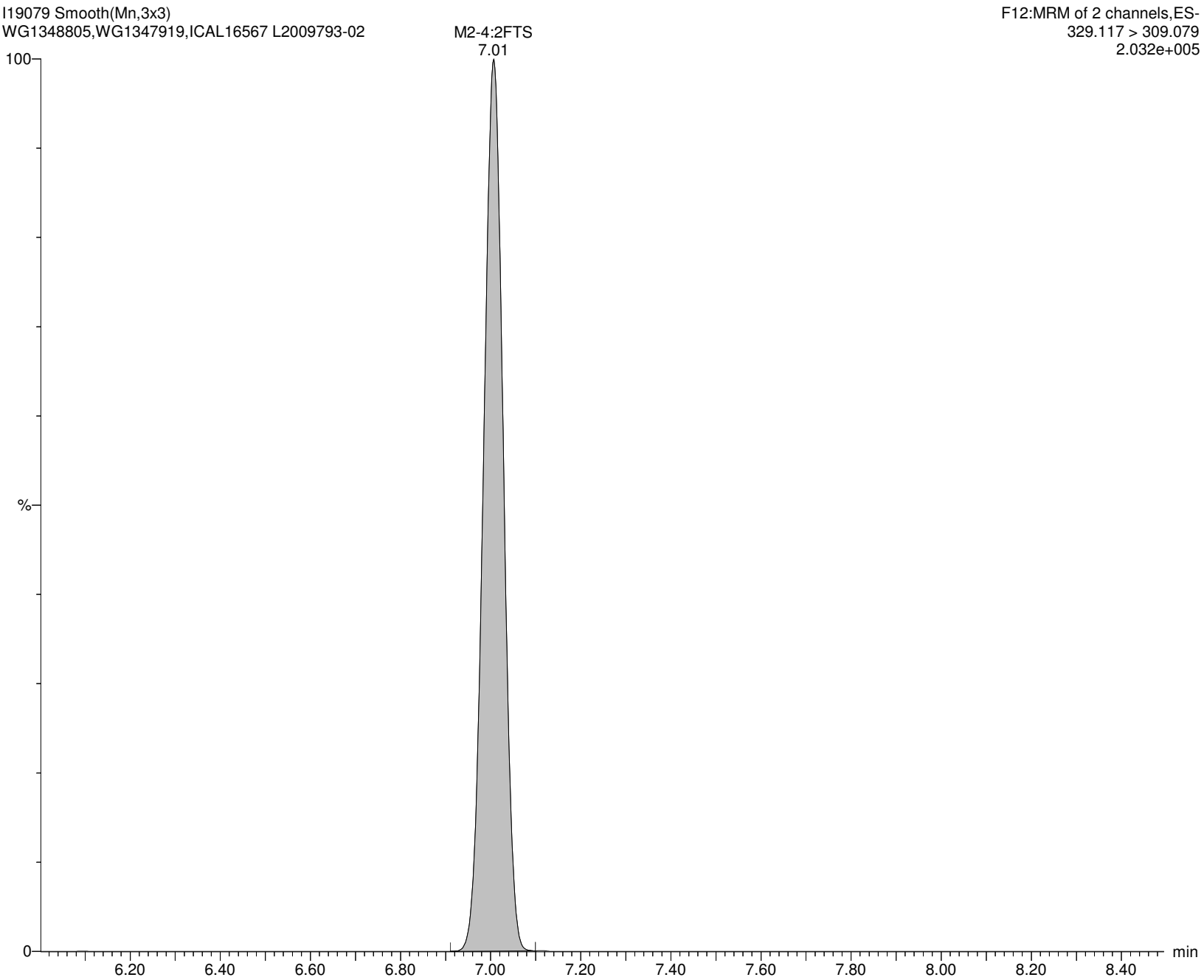
**M2-4:2FTS**





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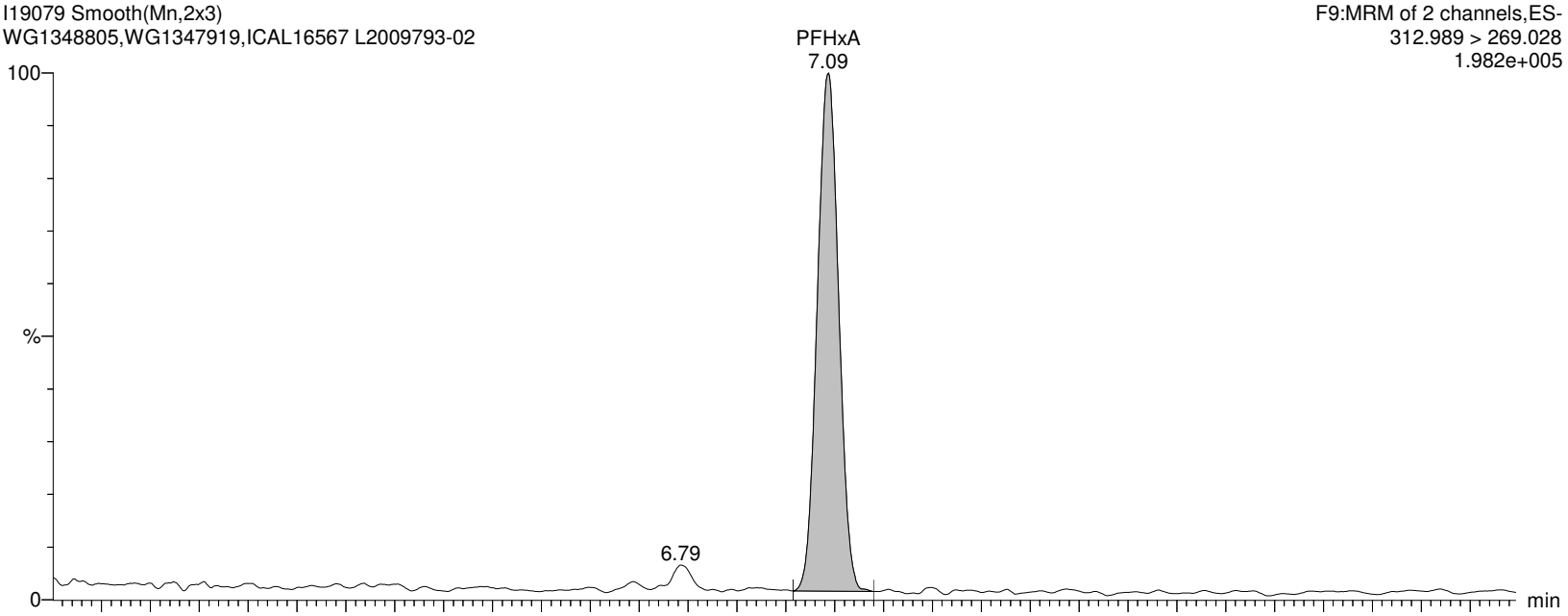
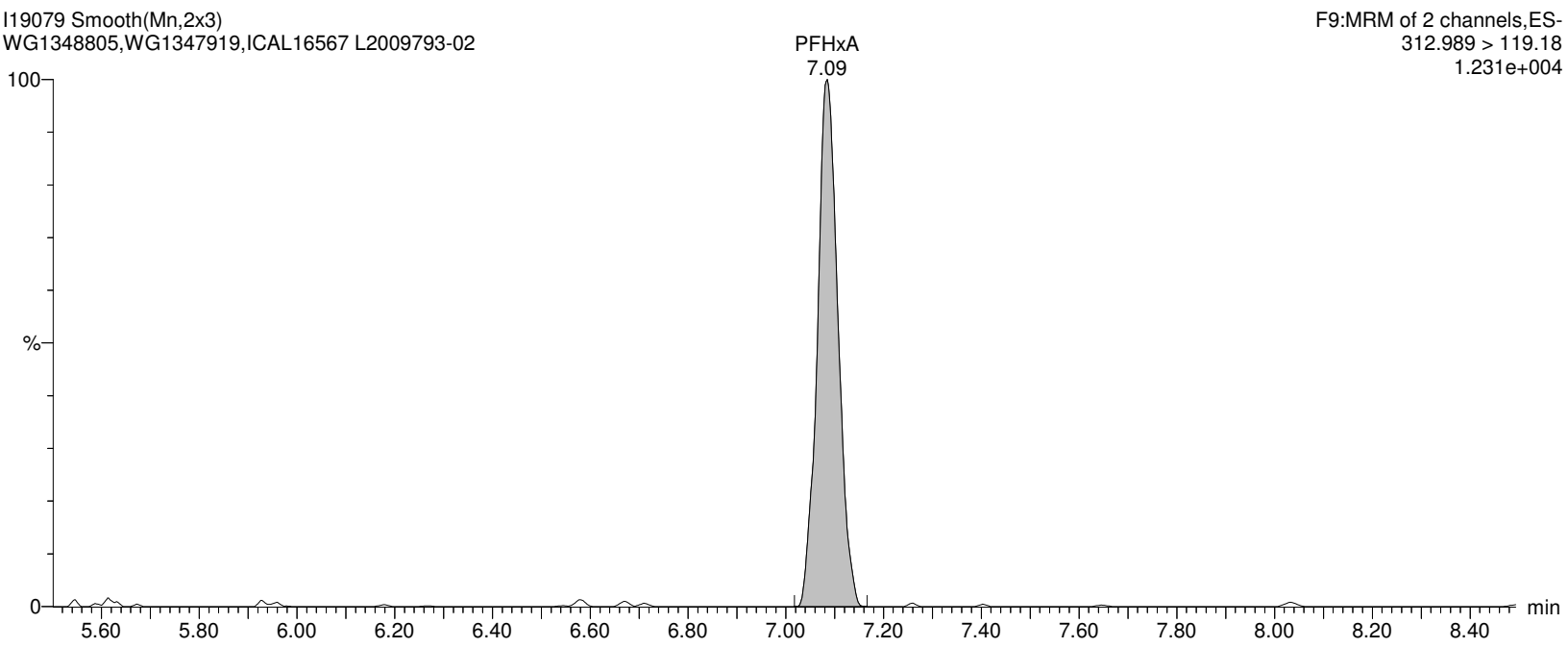
**PFHxA**





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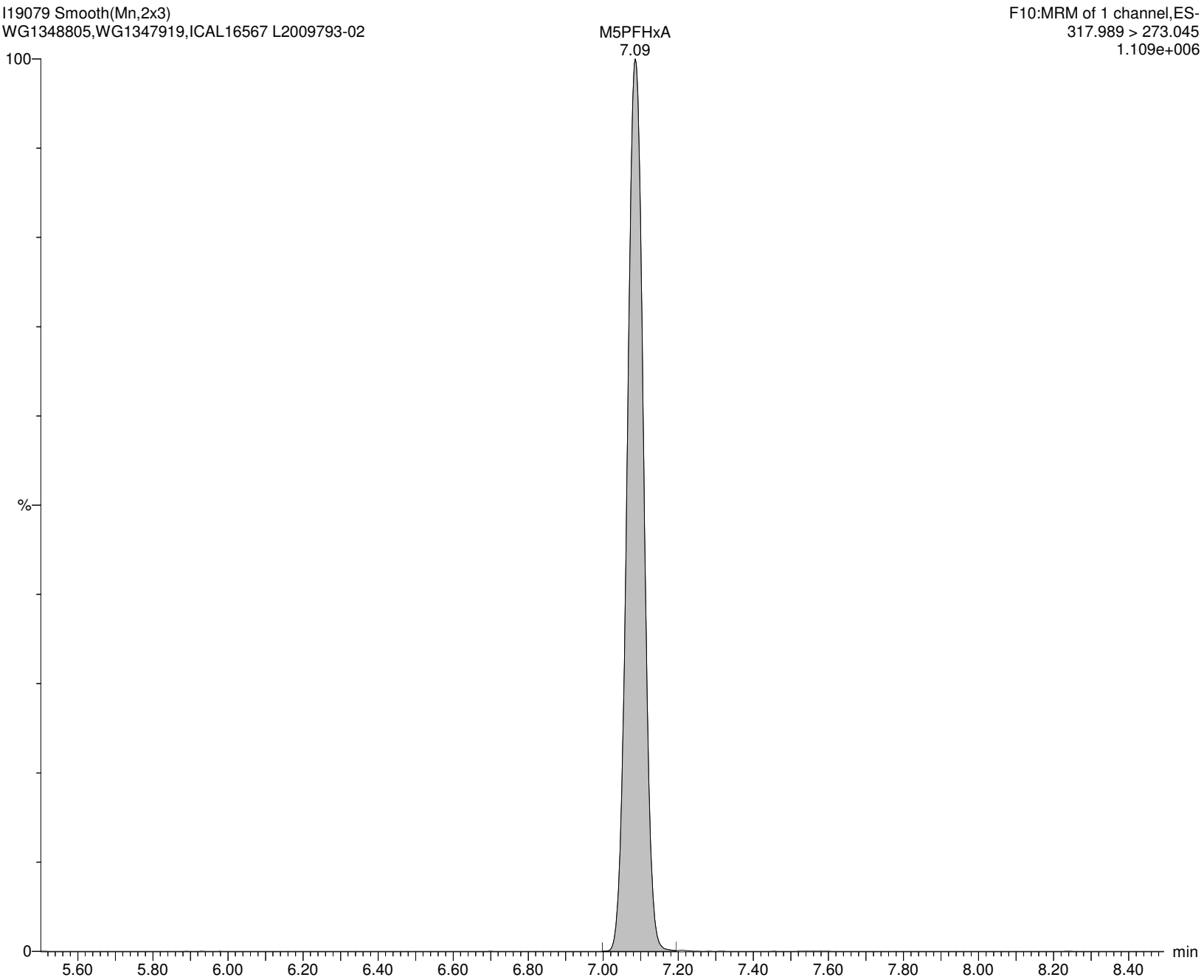
**M5PFHxA**





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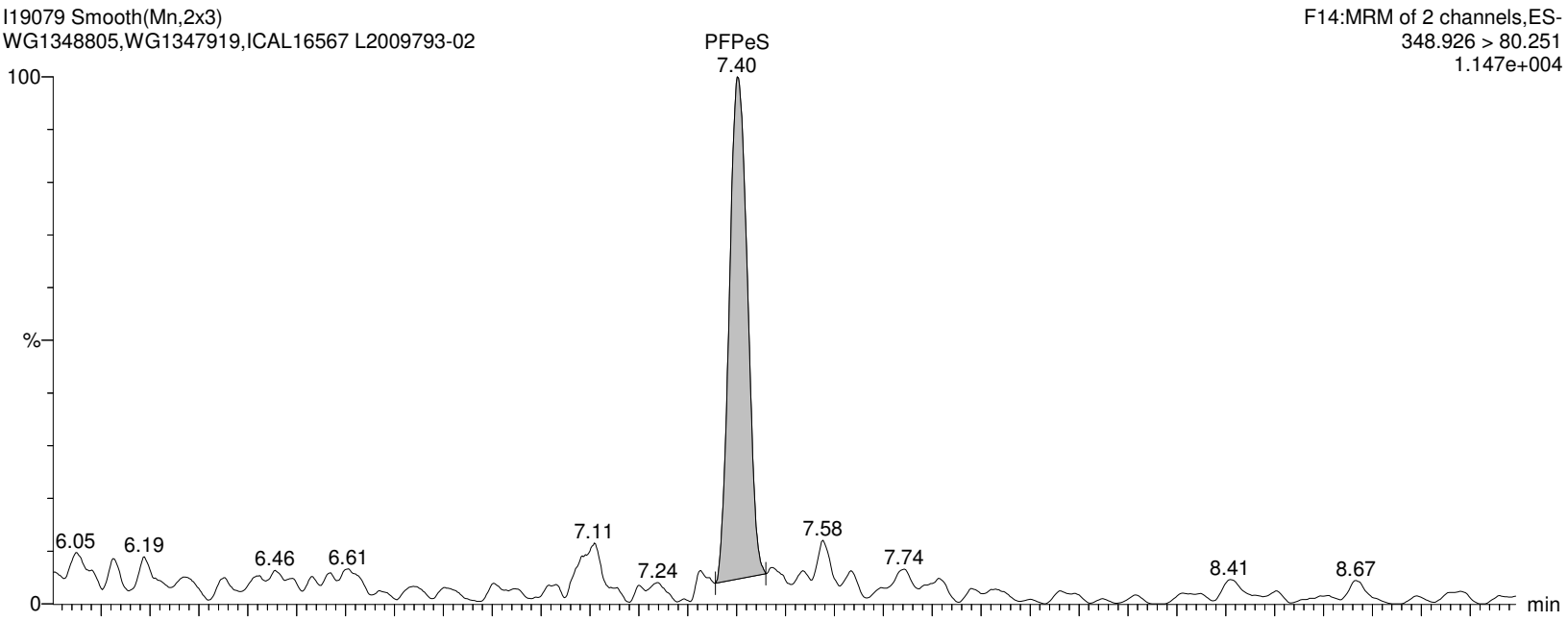


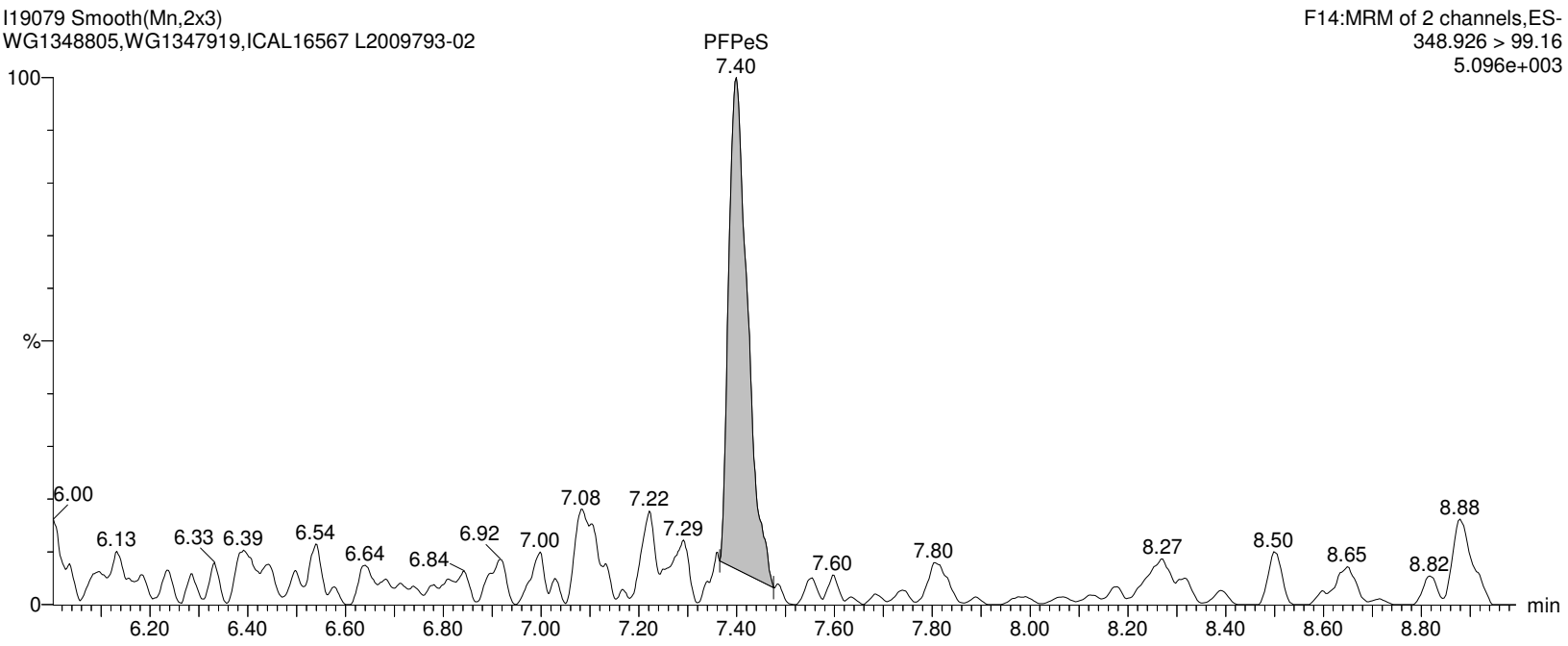



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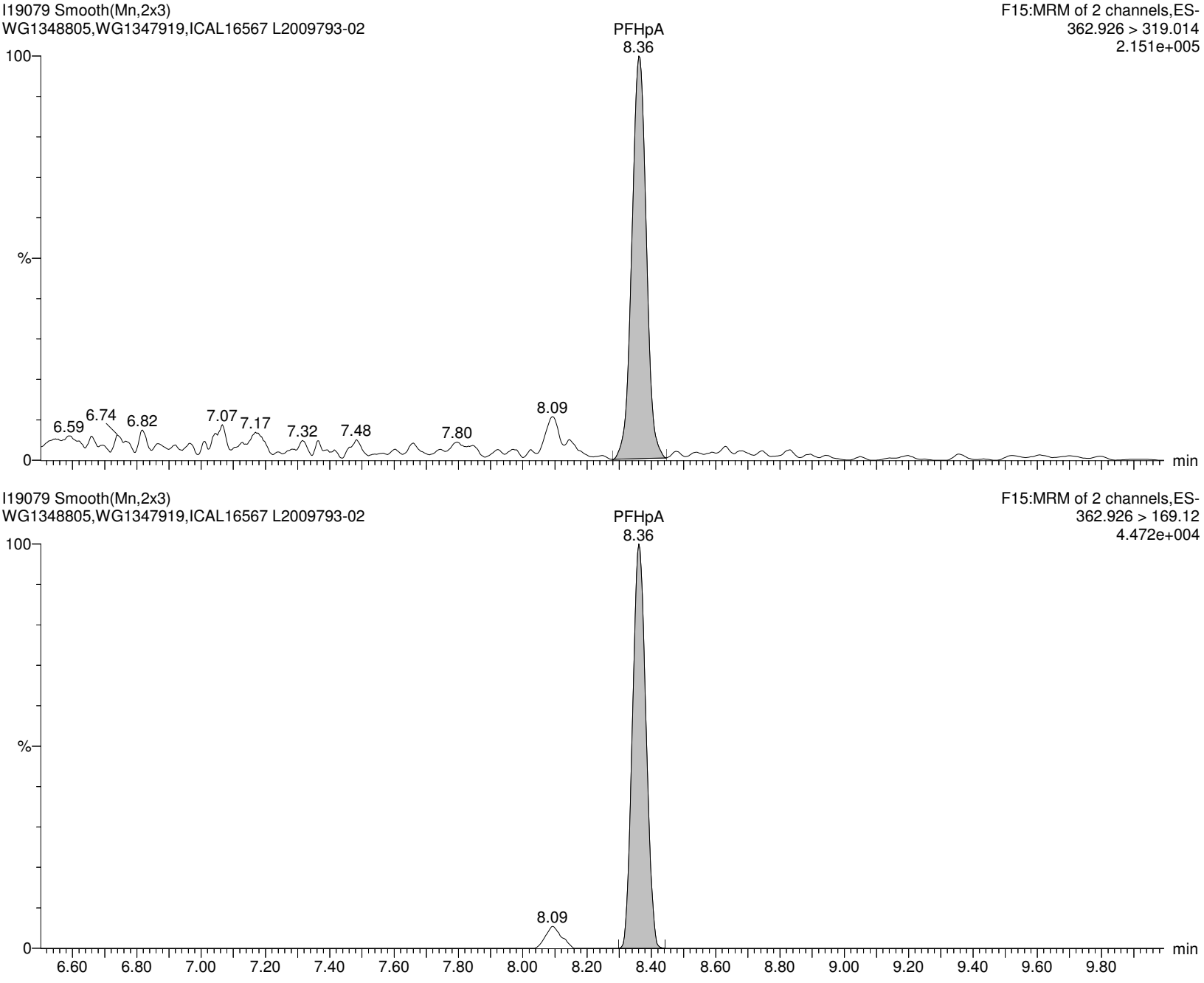
**PFHpA**





all concentration units in (ng/mL)

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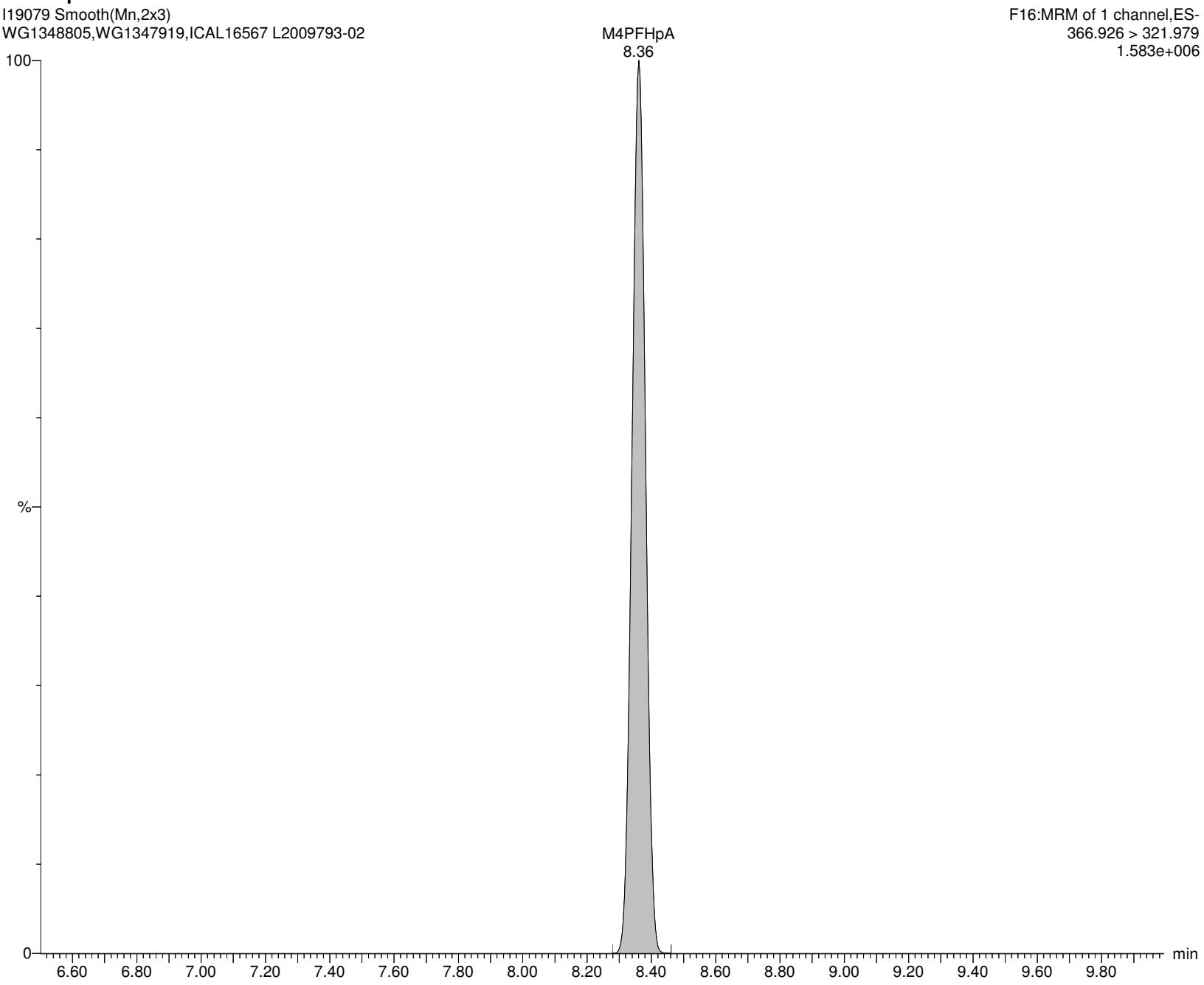
**M4PFHpA**





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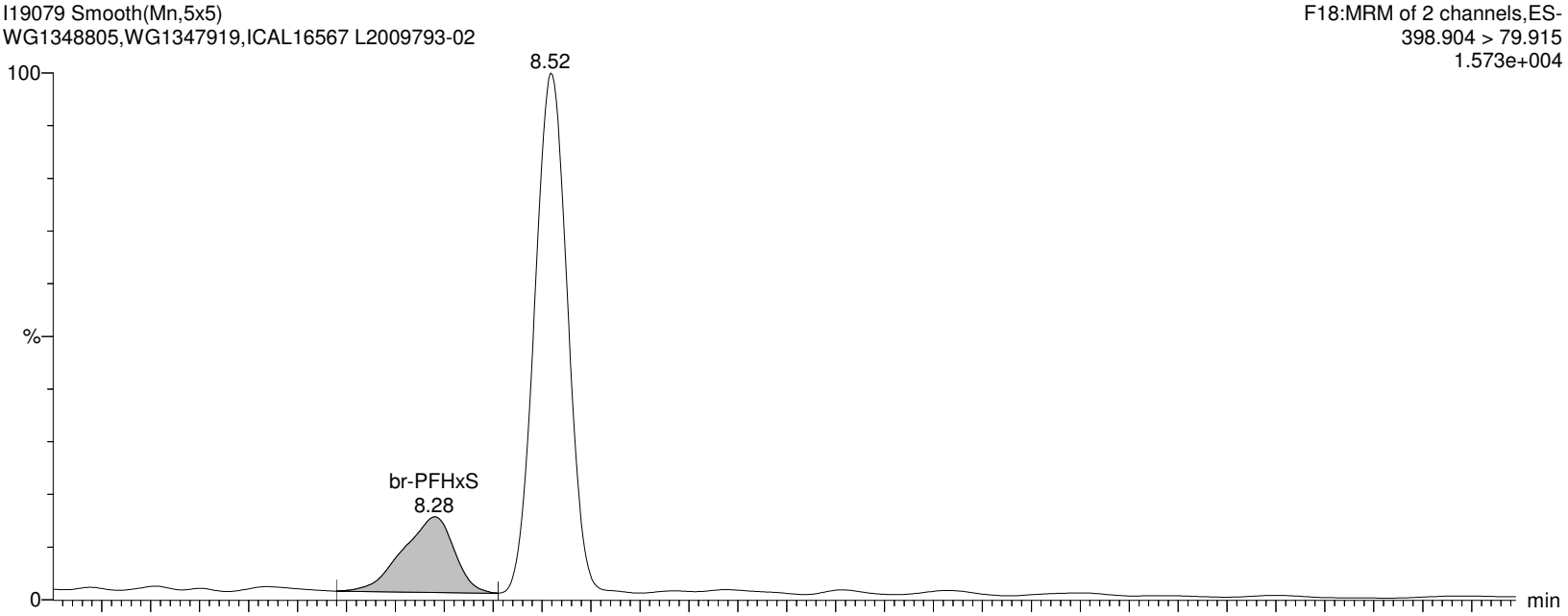


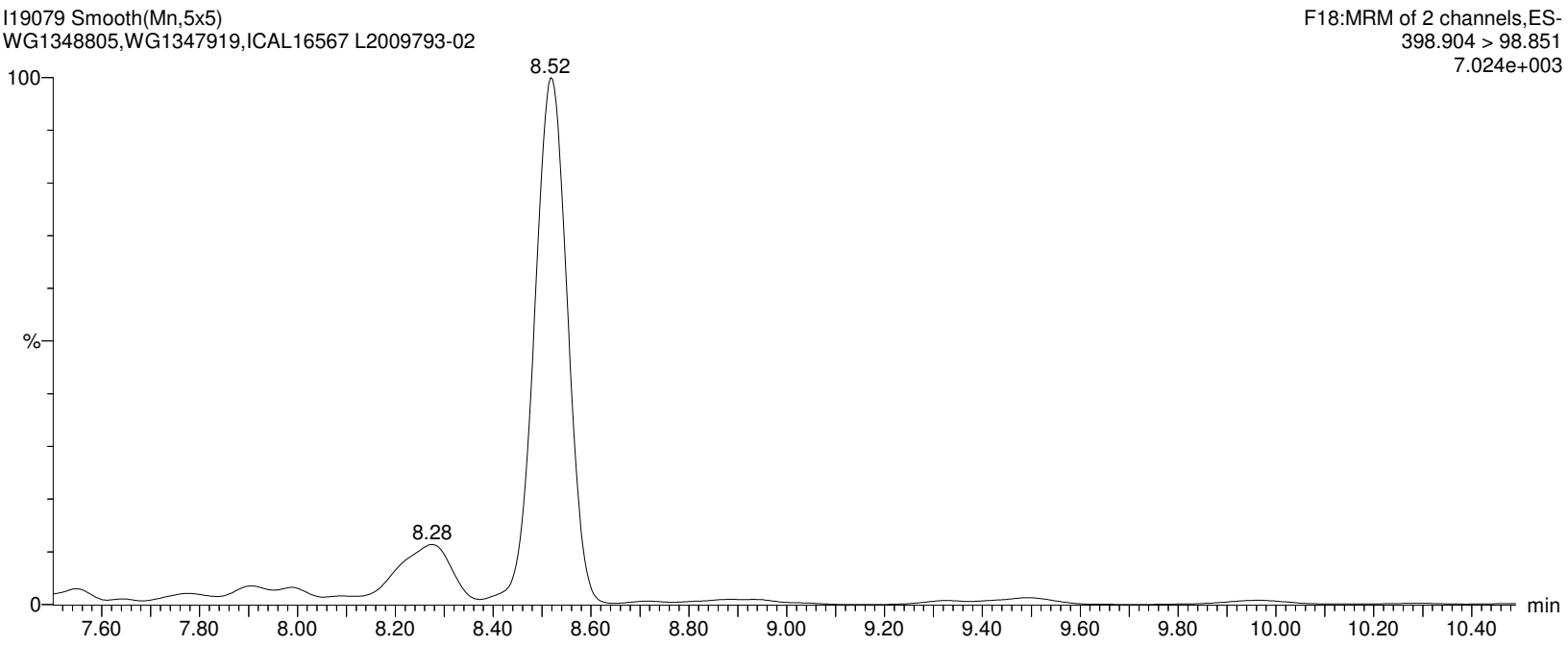



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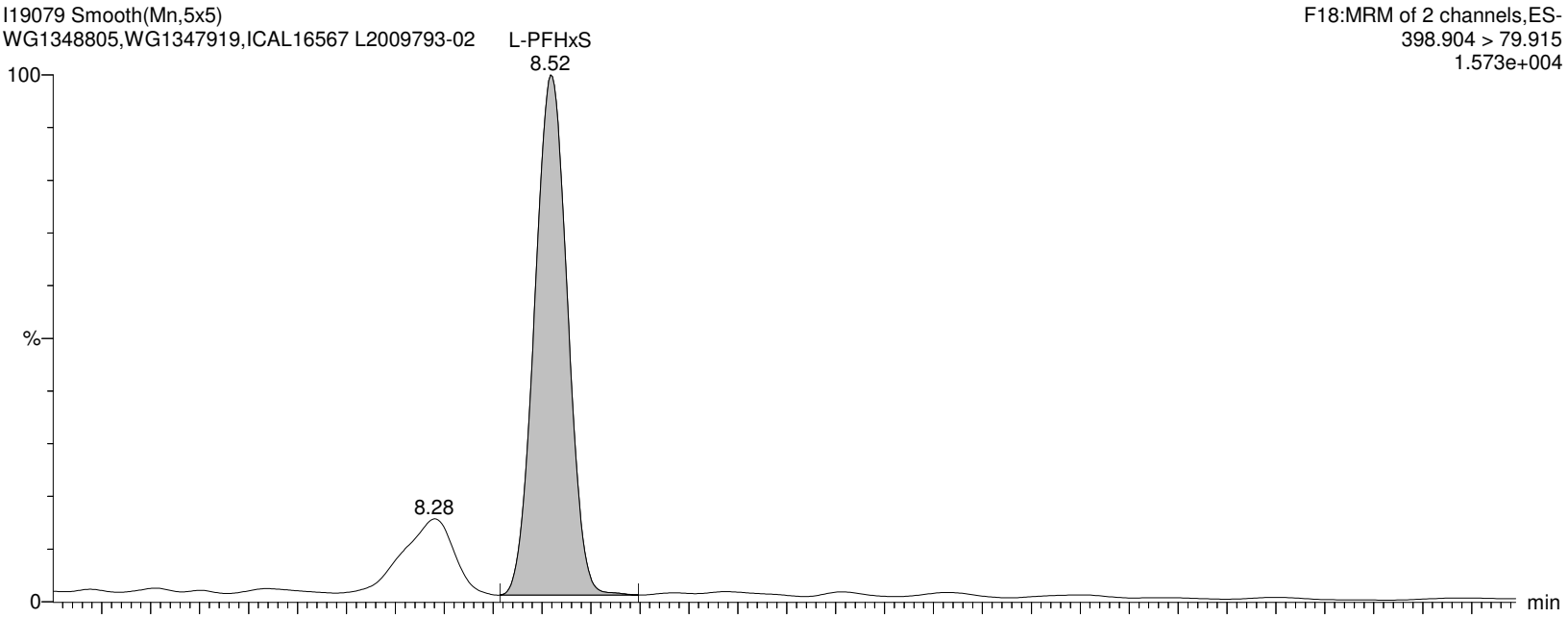


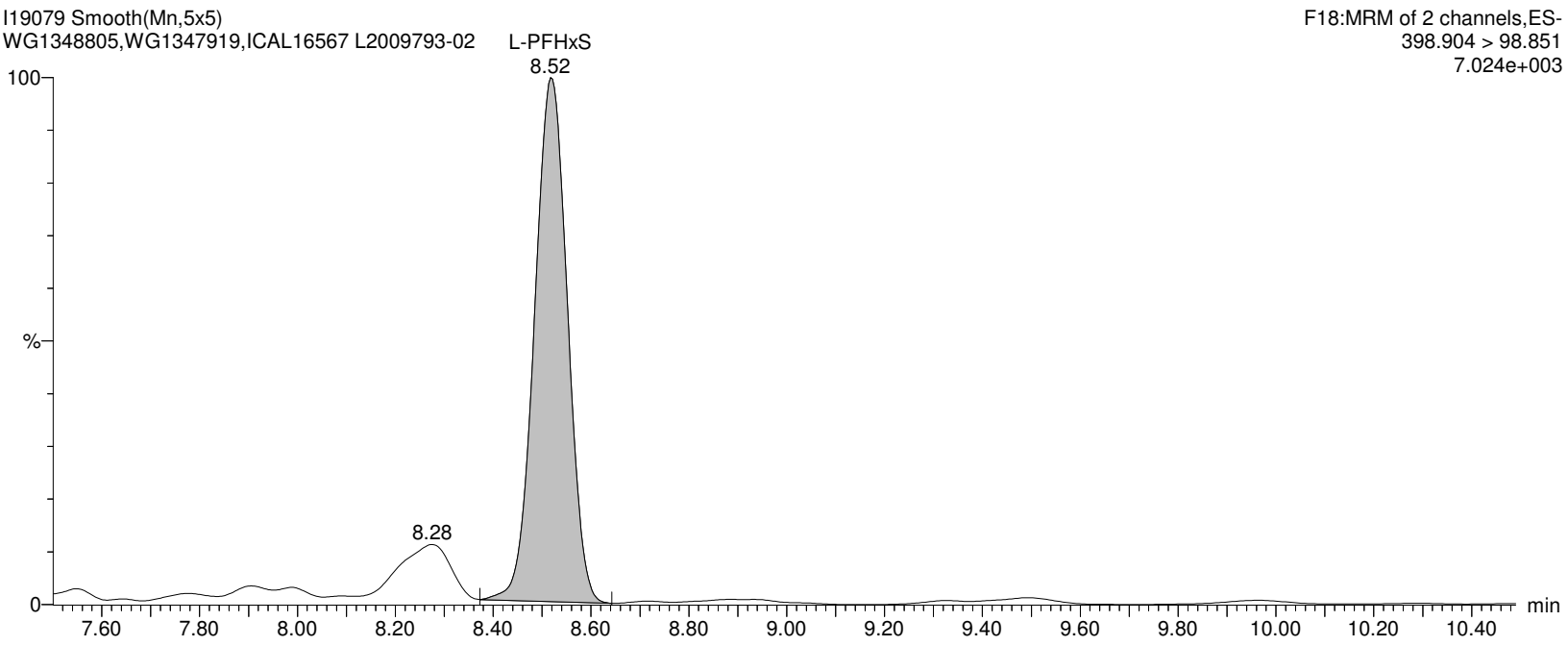



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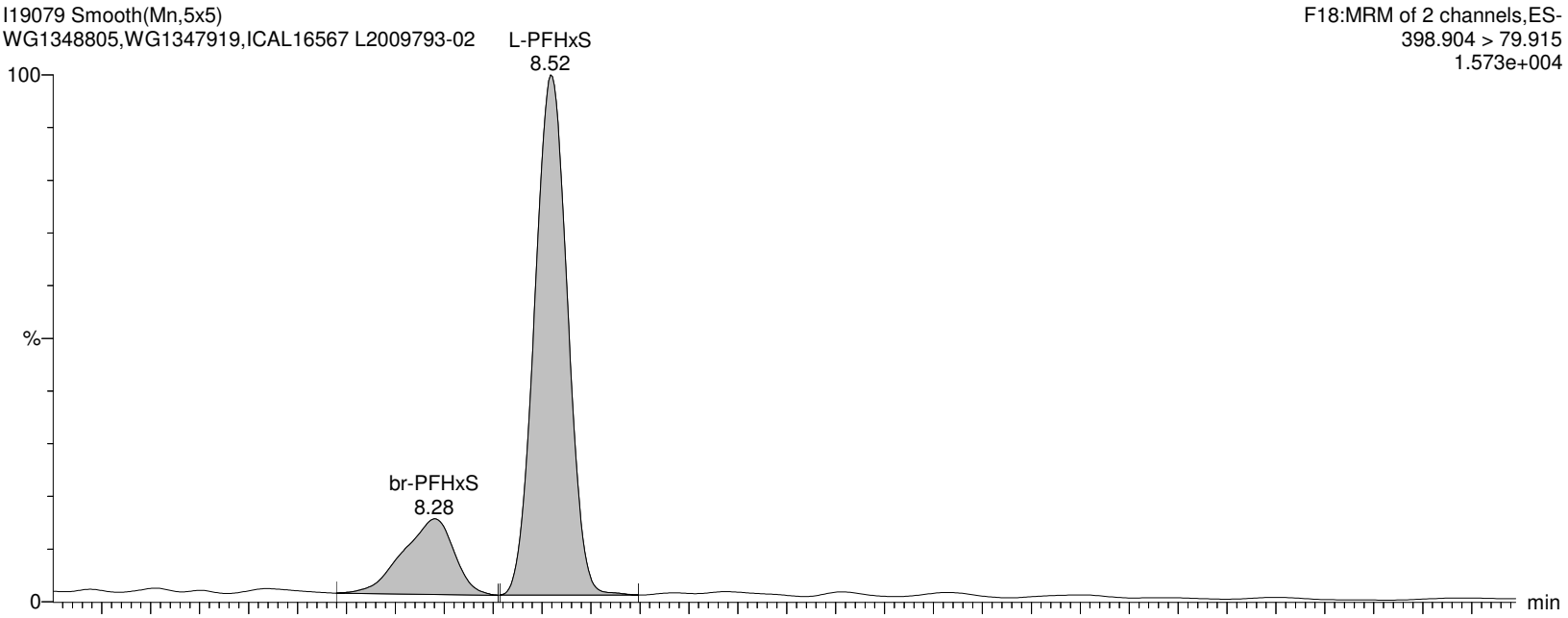


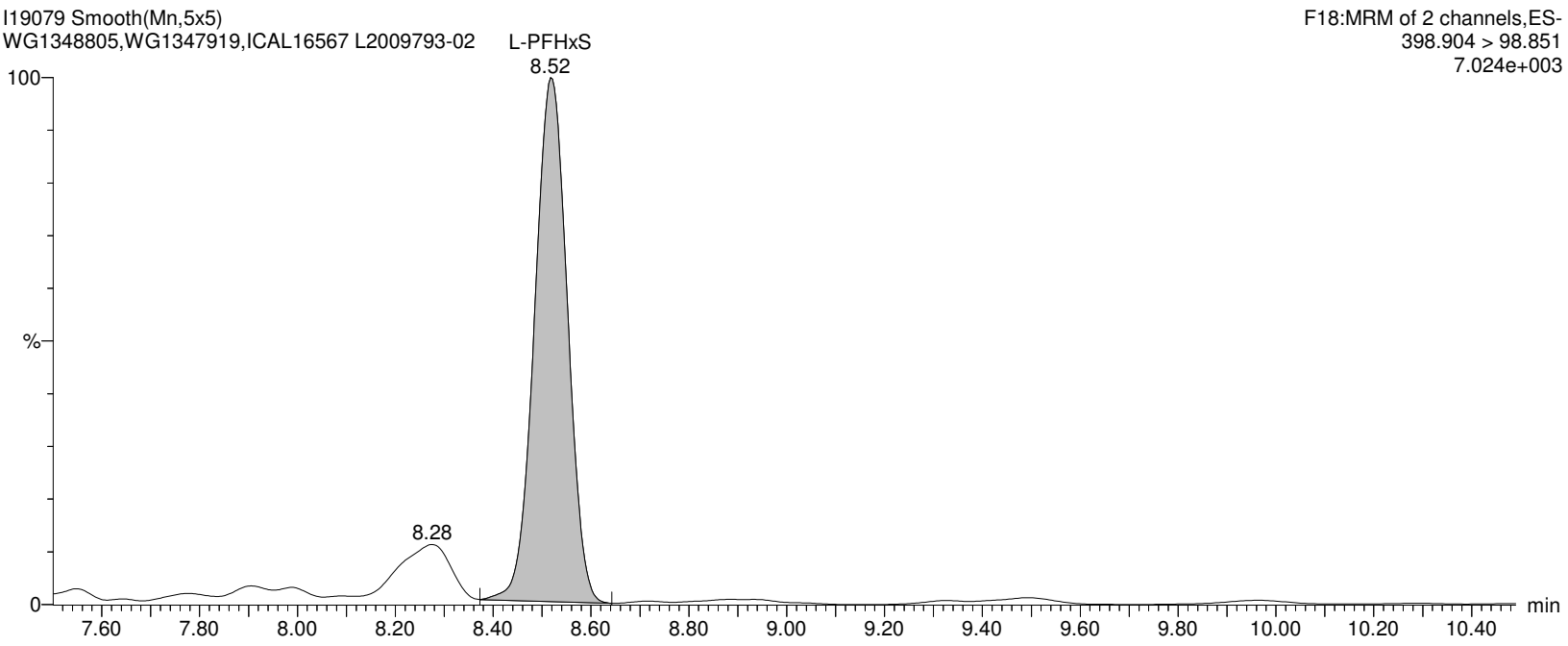



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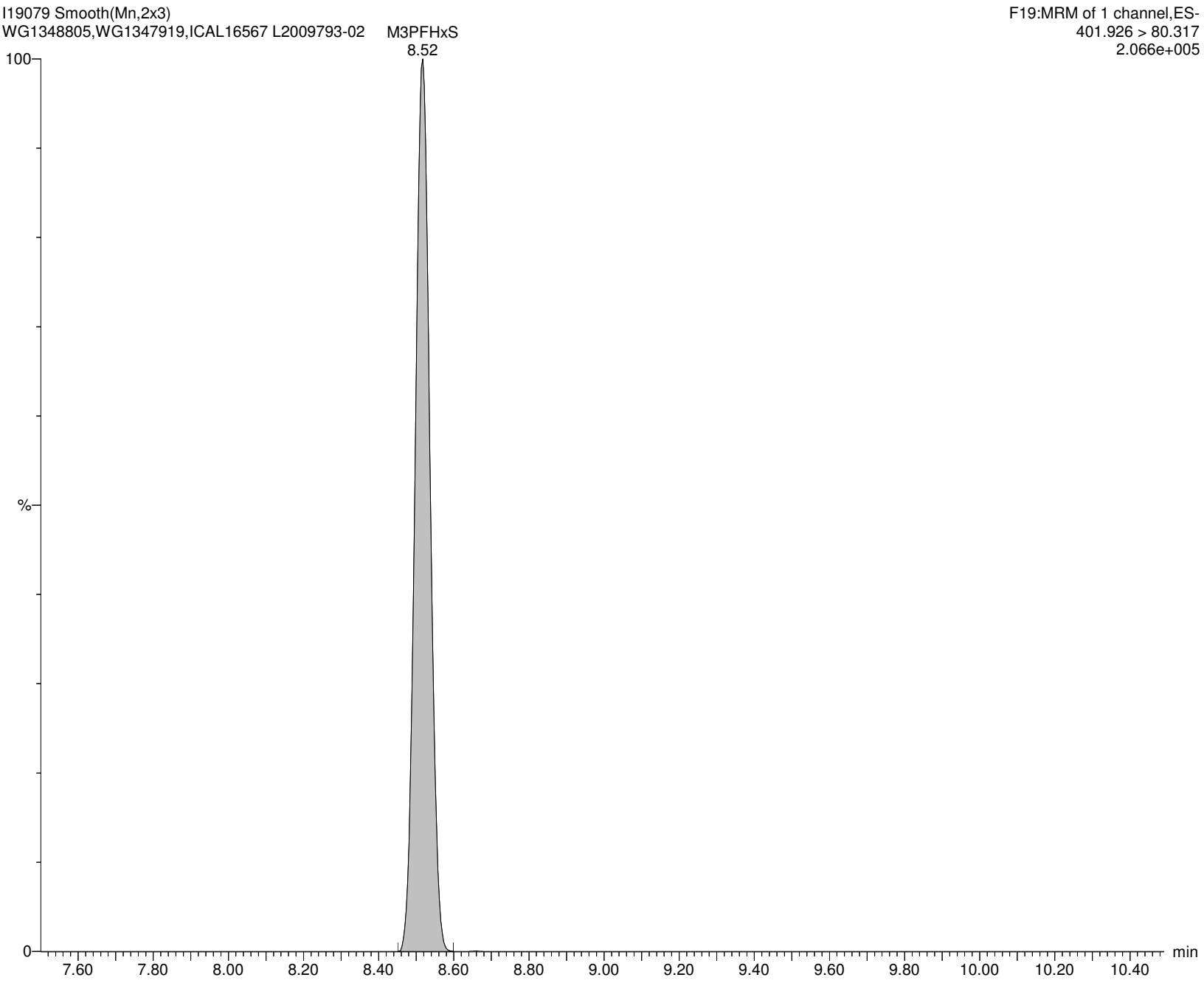



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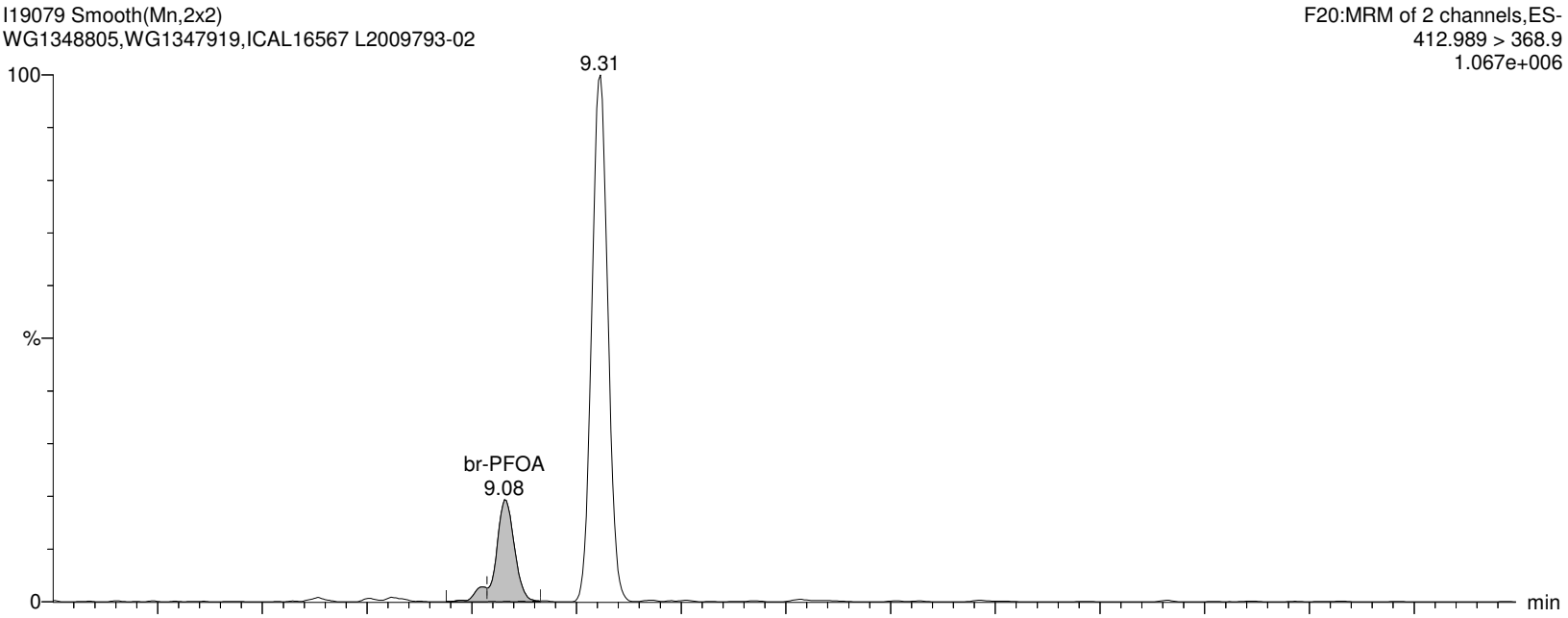
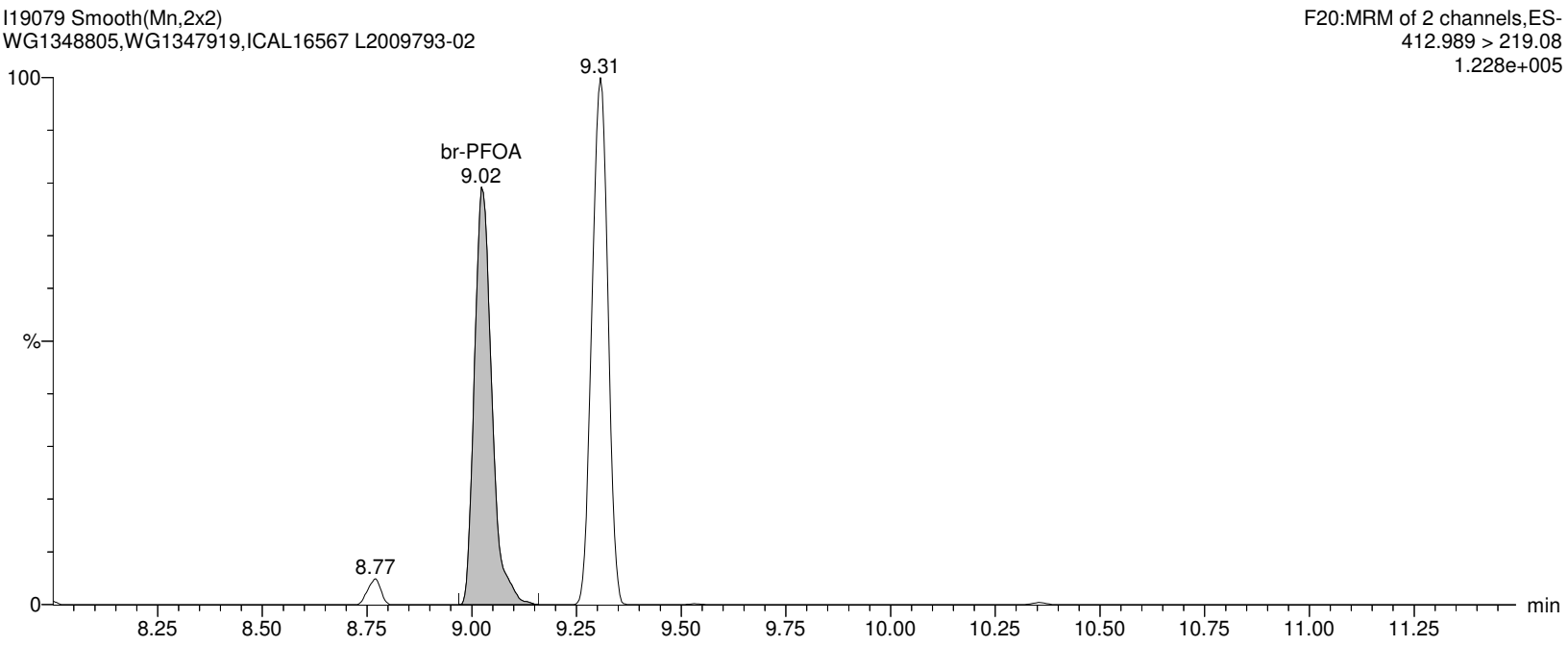
**br-PFOA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200309_537ISO.PRO\Data\WG1348805A.qld
Last Altered: Tuesday, March 17, 2020 11:34:11 Eastern Daylight Time
Printed: Tuesday, March 17, 2020 11:34:30 Eastern Daylight Time

**Name: I19079**
**ID: L2009793-02**
**Date: 09-Mar-2020**
**Time: 15:40:07**
**Description: WG1348805,WG1347919,ICAL16567**
**User: LCMS01:JW**
**Vial: 1:C,2**
**Instrument: XEVO-TQSmicro#QEA0276**
**Inlet Method Name: C:\MassLynx\Data\200309_537ISO.PRO\ACQUDB\LCMS_537_ISO_MeOH**
**Tune Method Name: C:\MassLynx\Data\200309_537ISO.PRO\ACQUDB\190709_TUNE.IPR**
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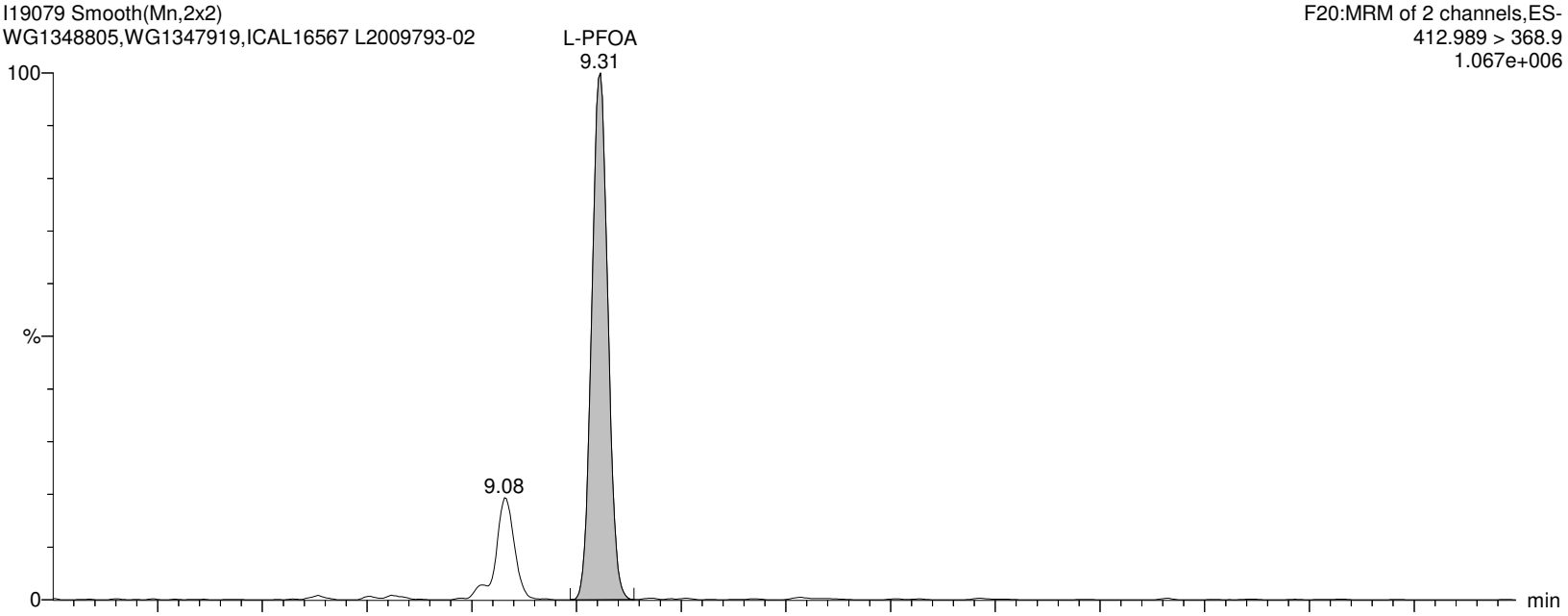
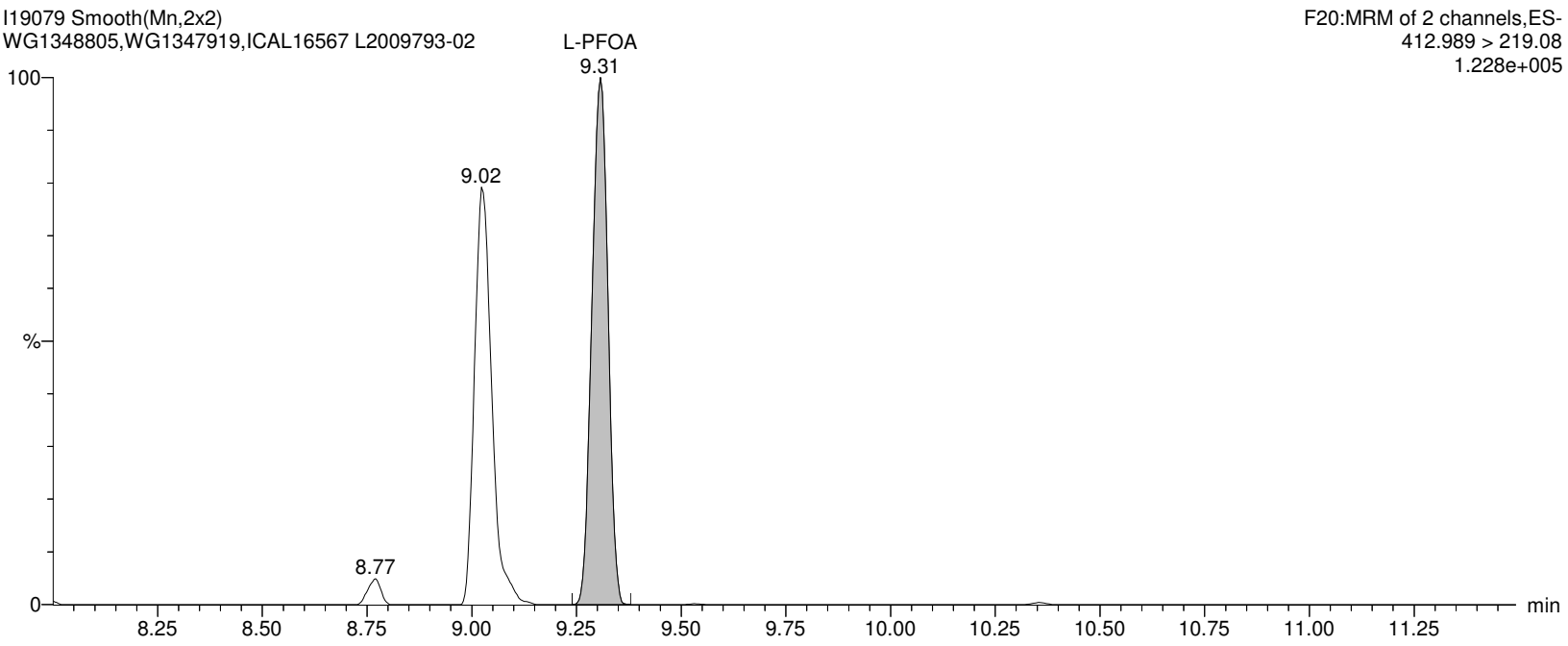
**L-PFOA**





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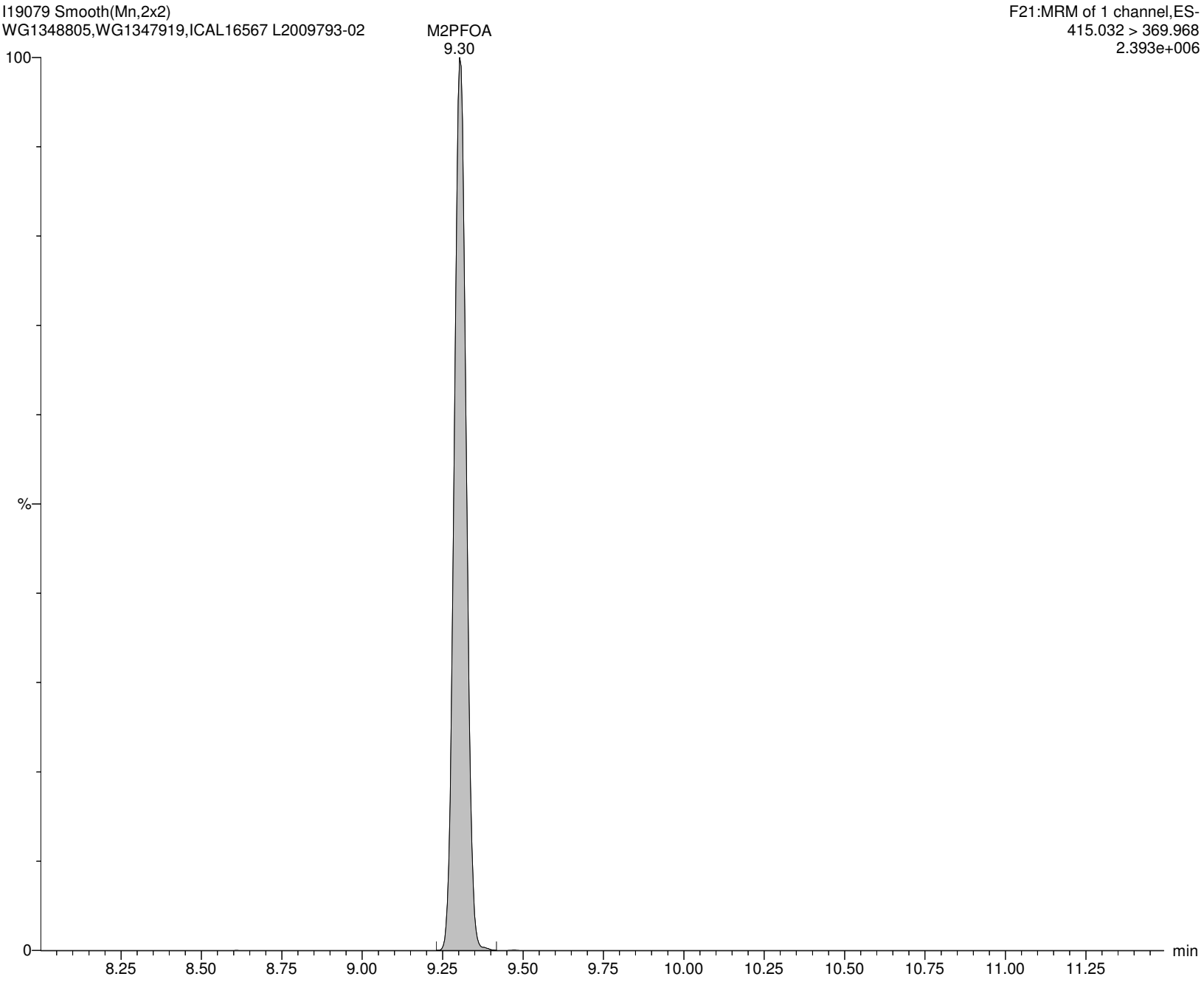



all concentration units in (ng/mL)

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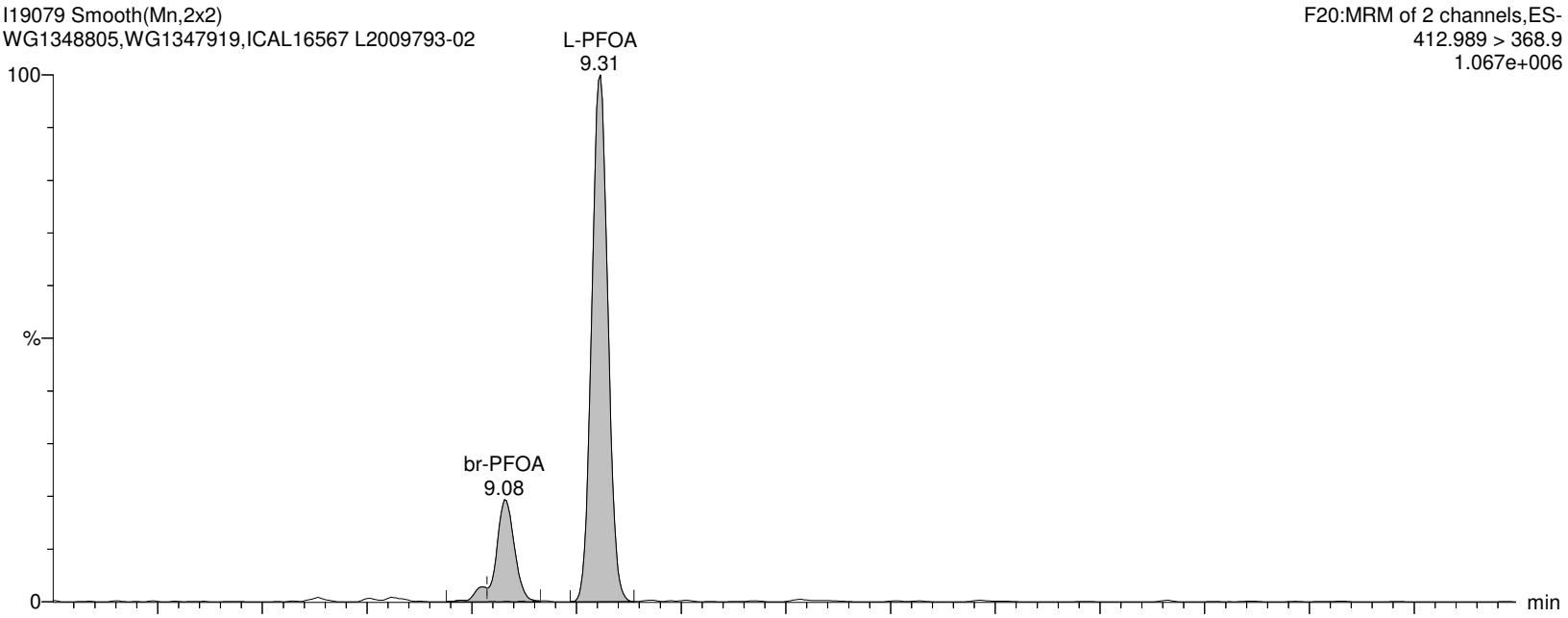


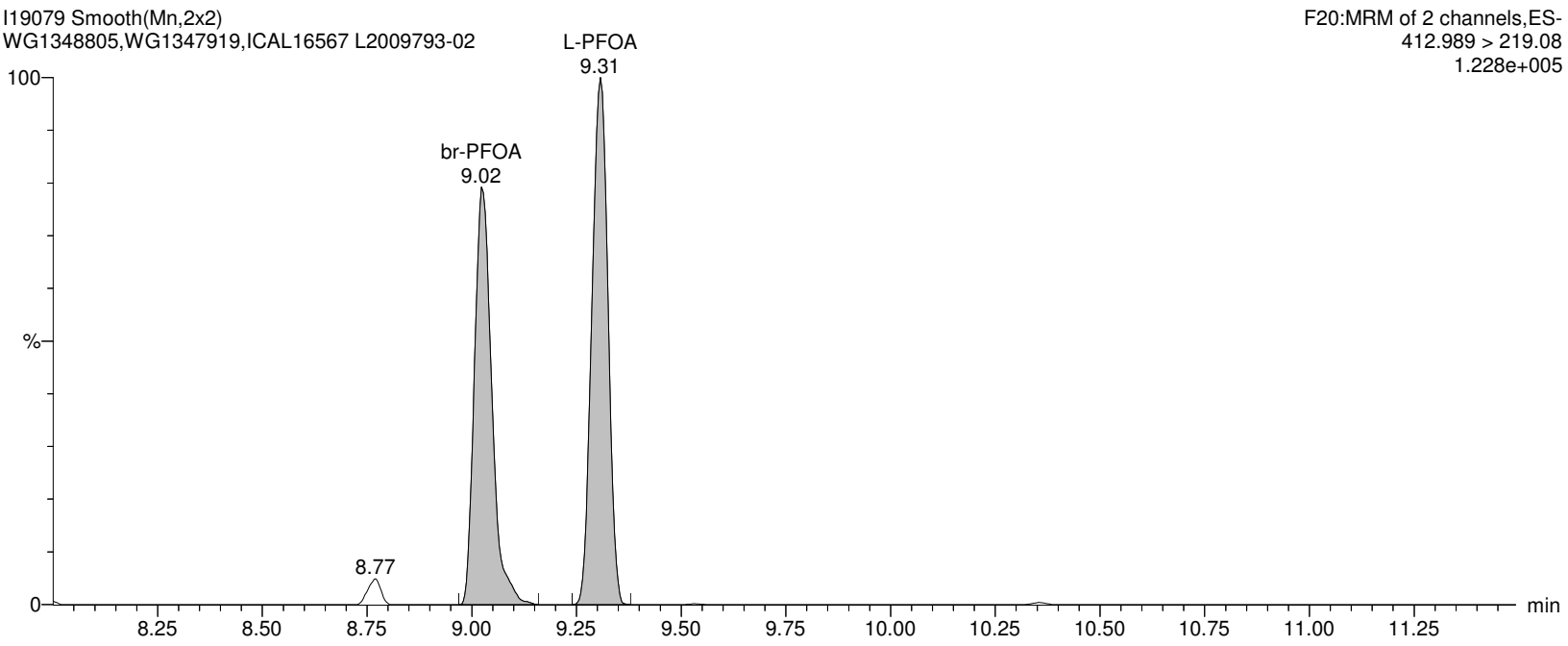



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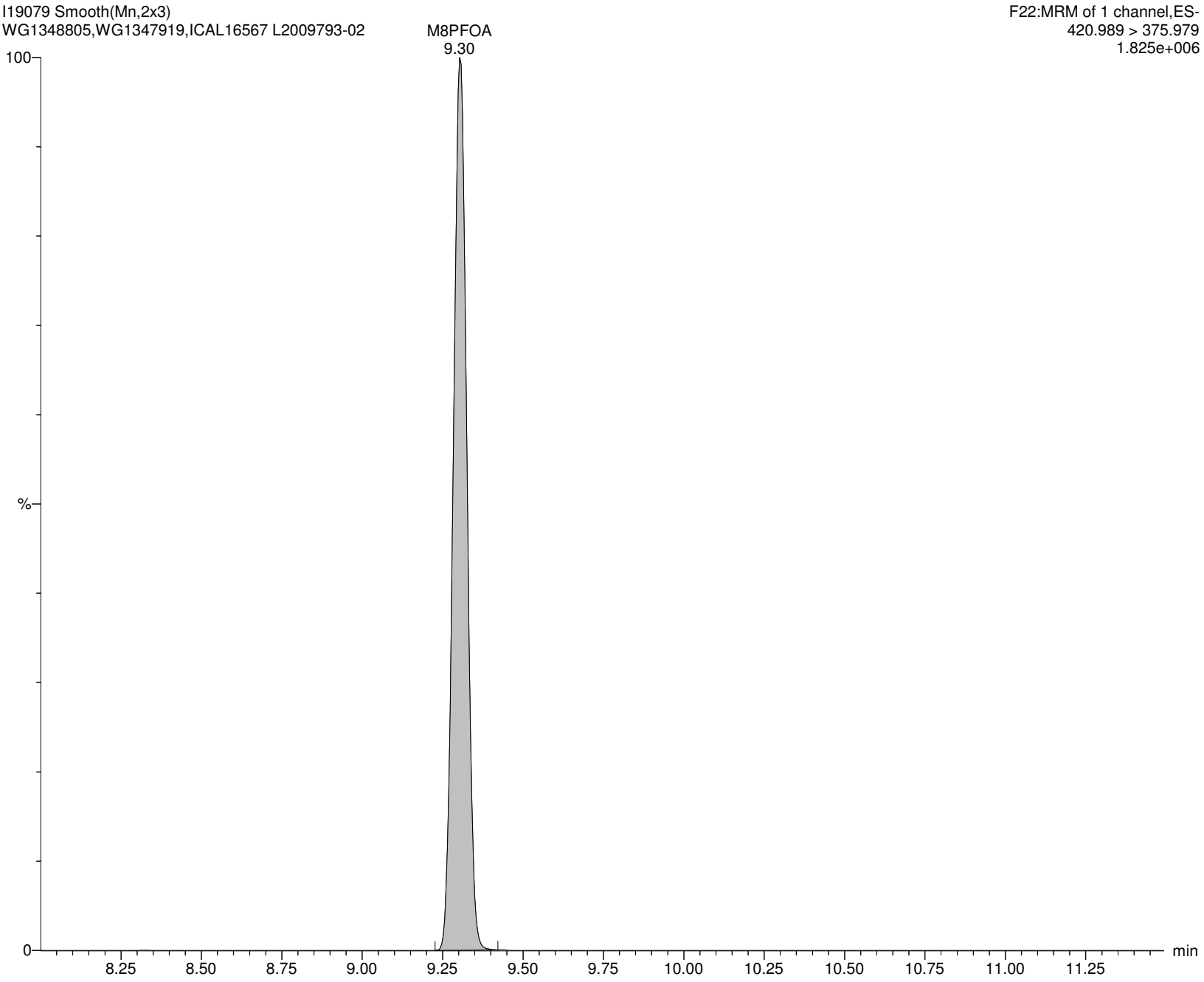
**M8PFOA**





all concentration units in (ng/mL)

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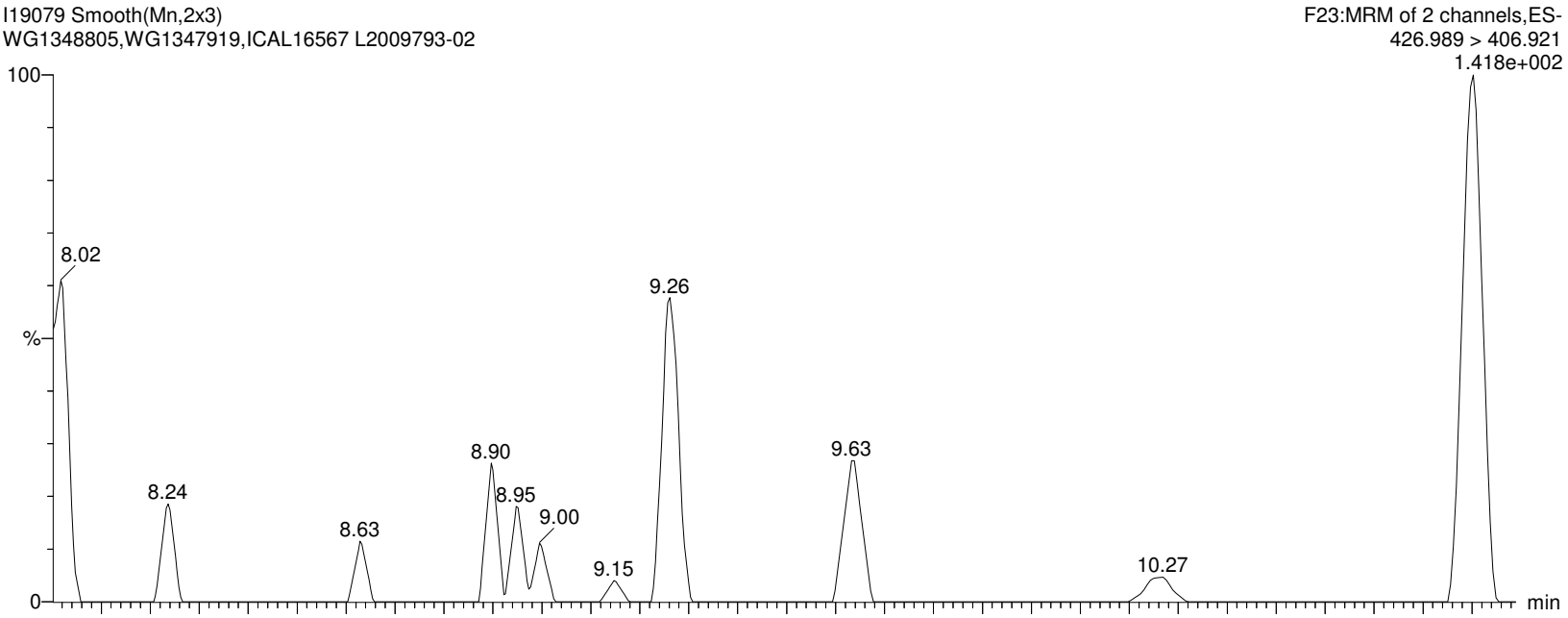
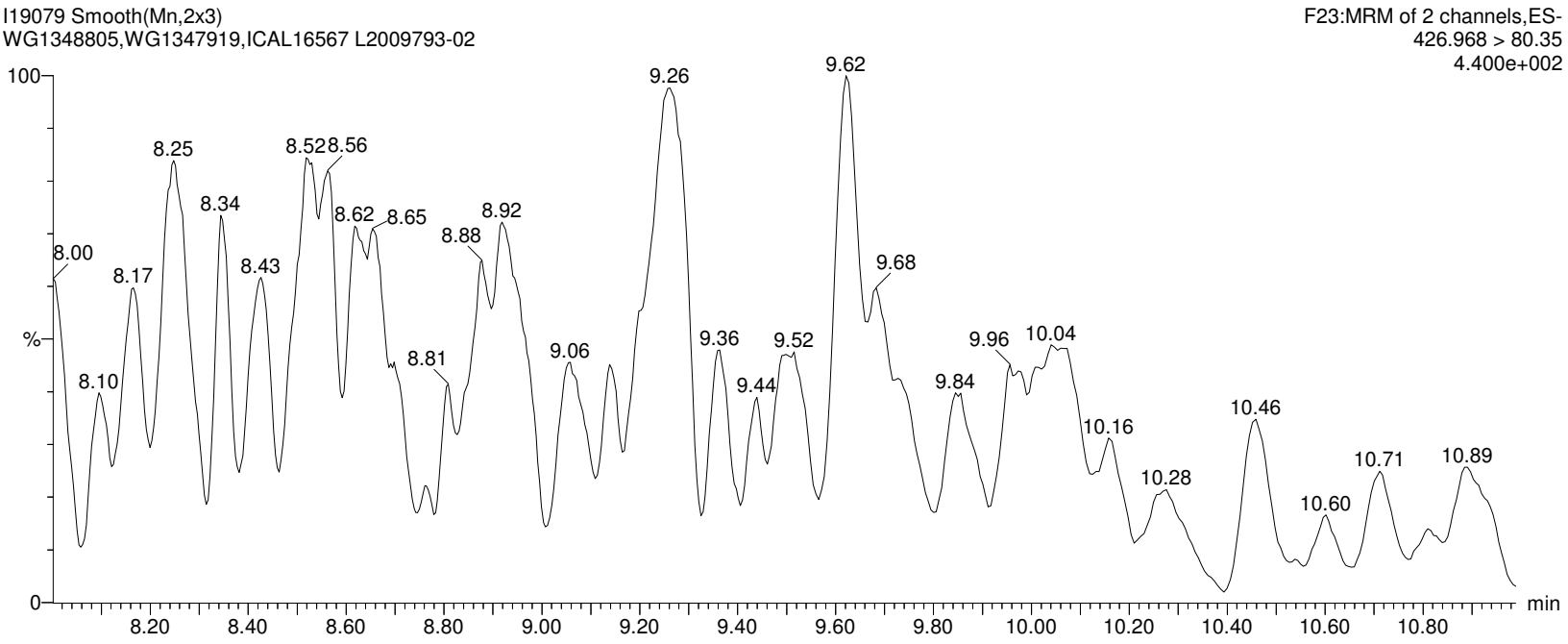
**6:2FTS**





all concentration units in (ng/mL)

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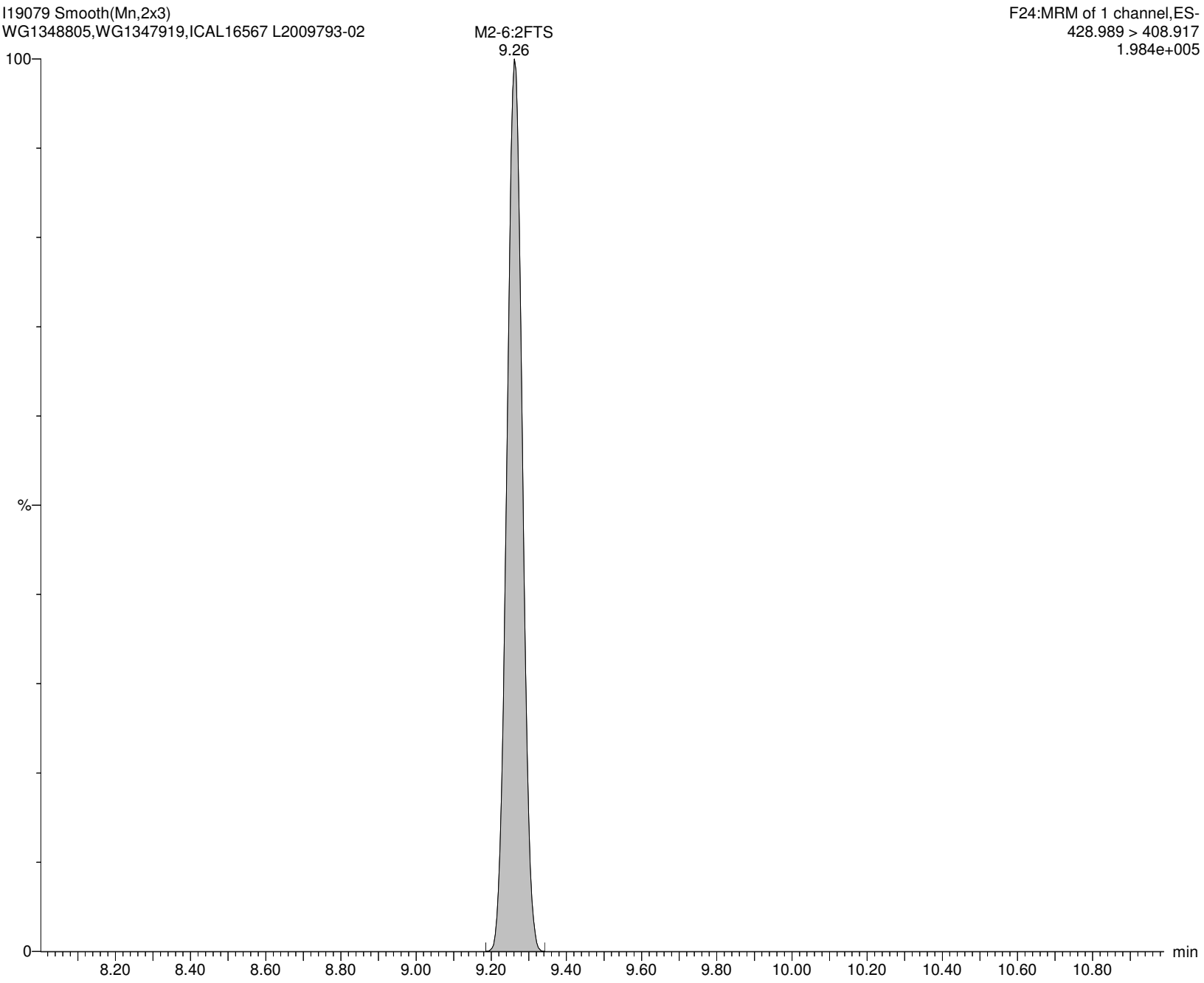
**M2-6:2FTS**





all concentration units in (ng/mL)

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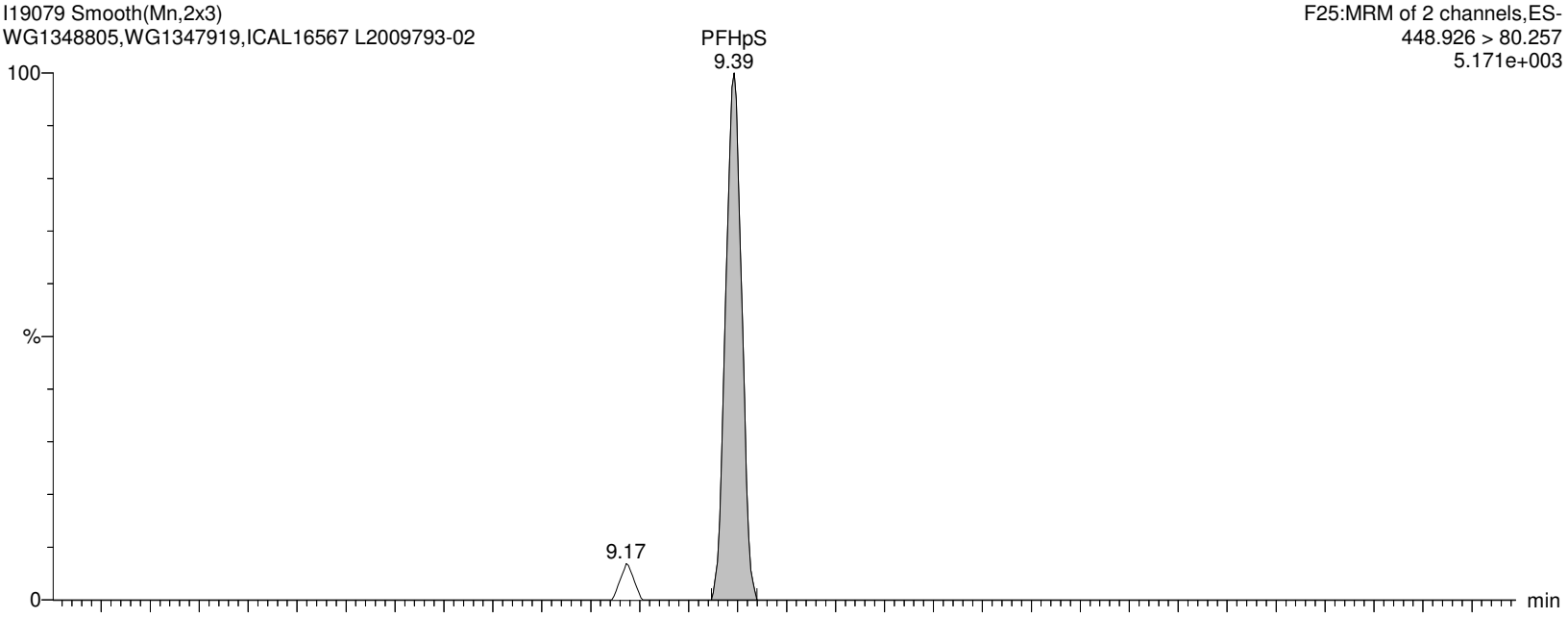
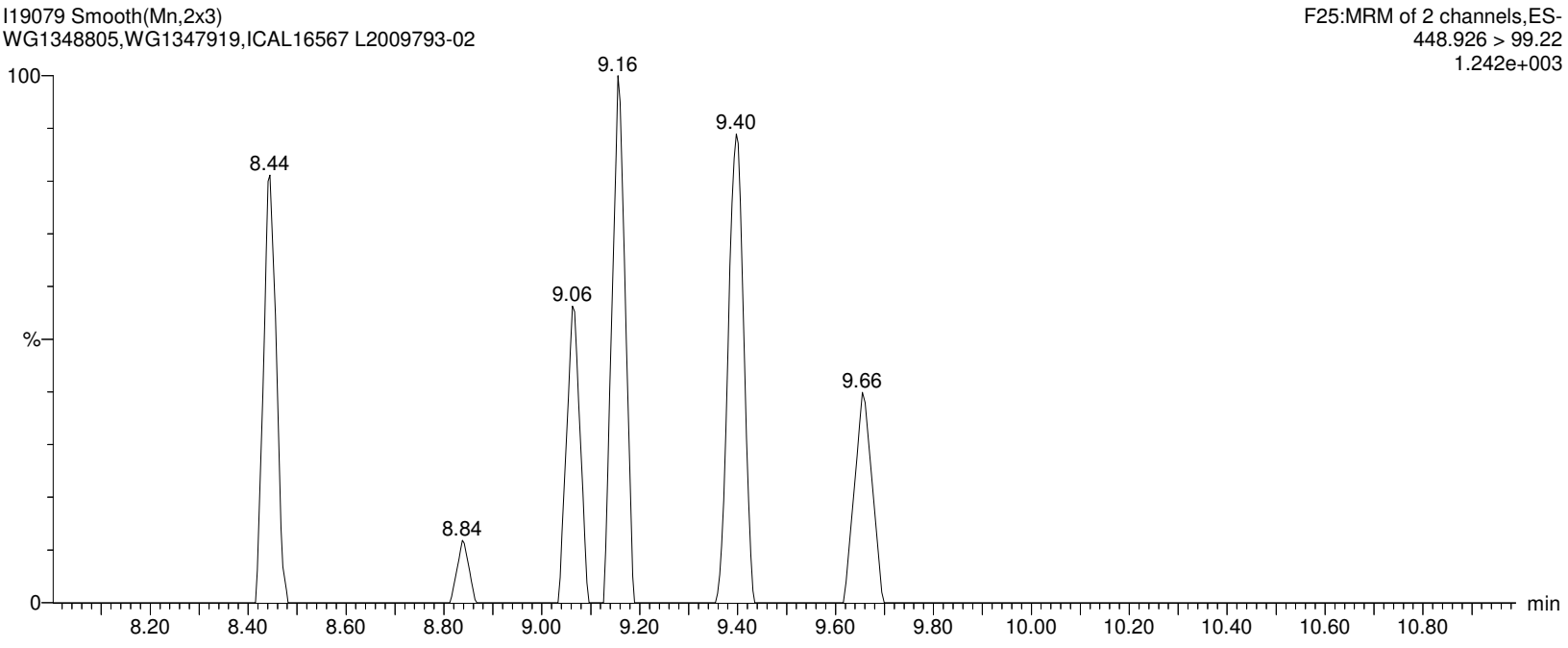
**PFHpS**





all concentration units in (ng/mL)

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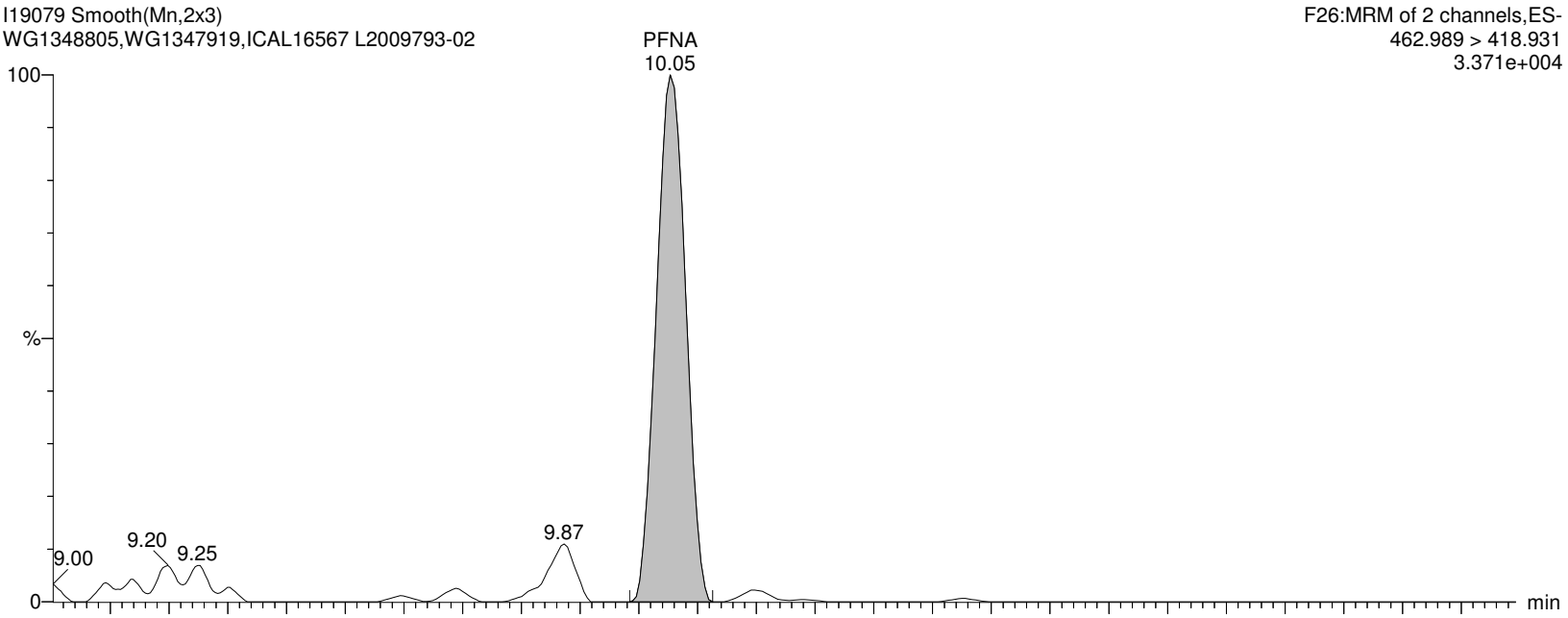


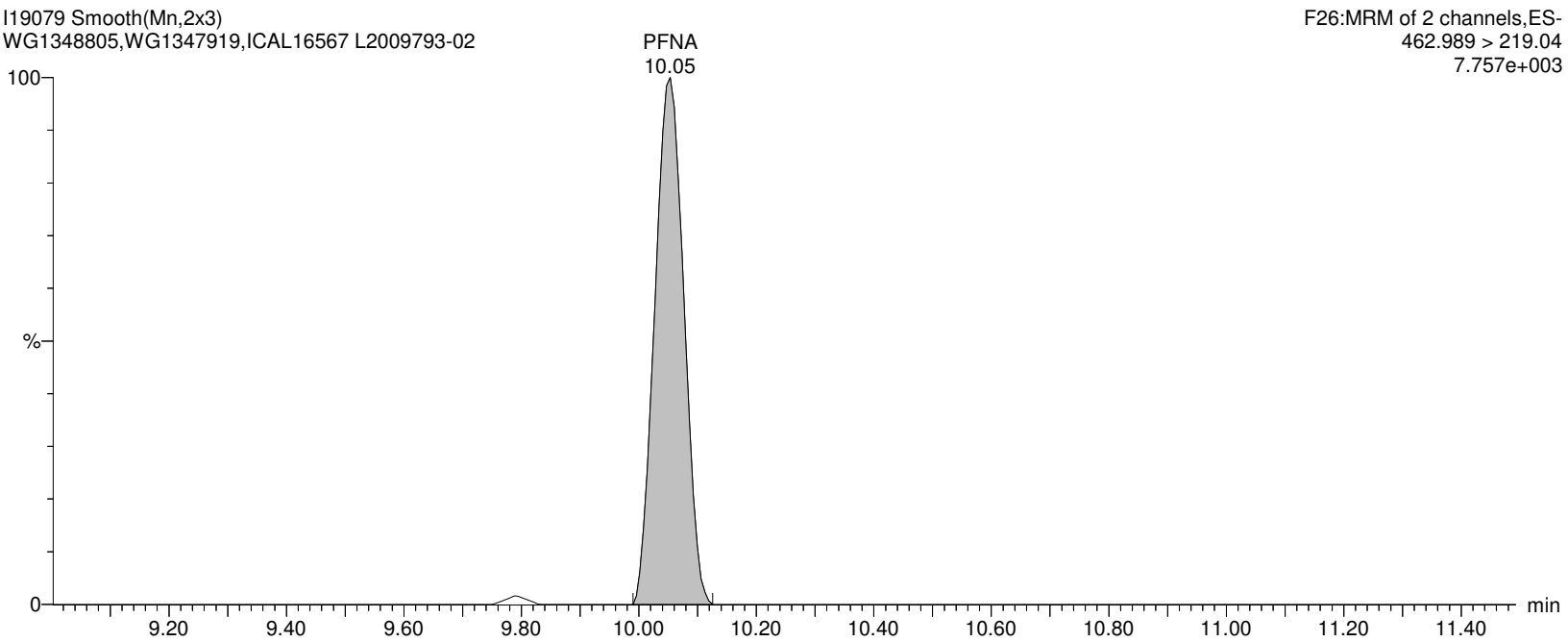



all concentration units in (ng/mL)

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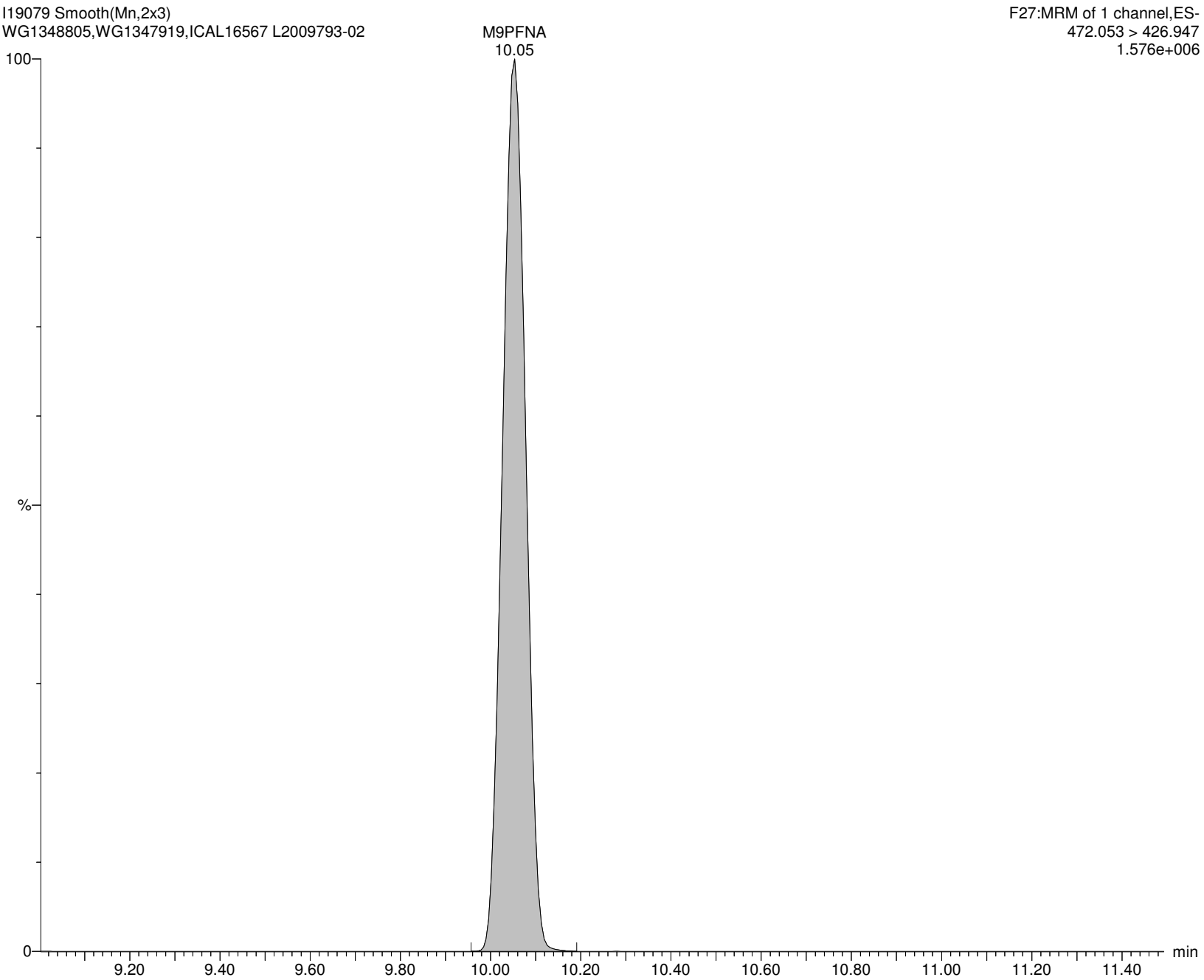



all concentration units in (ng/mL)

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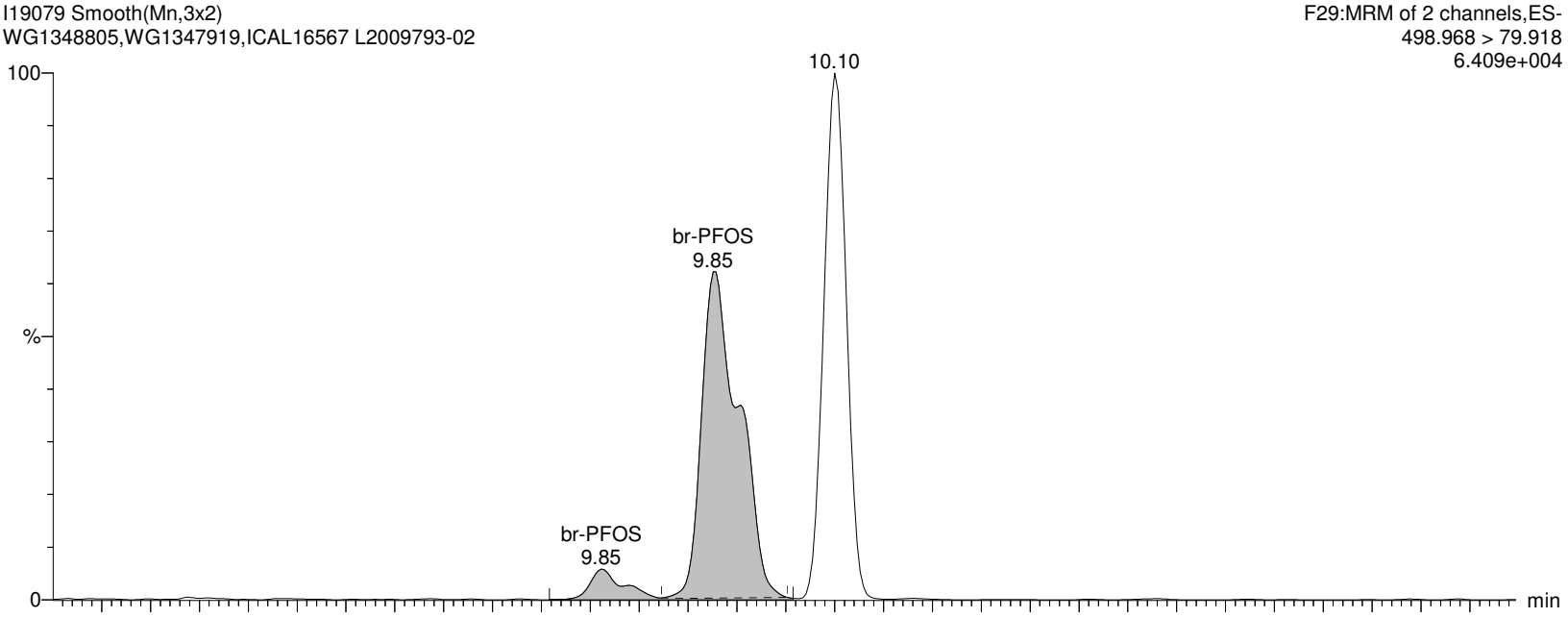
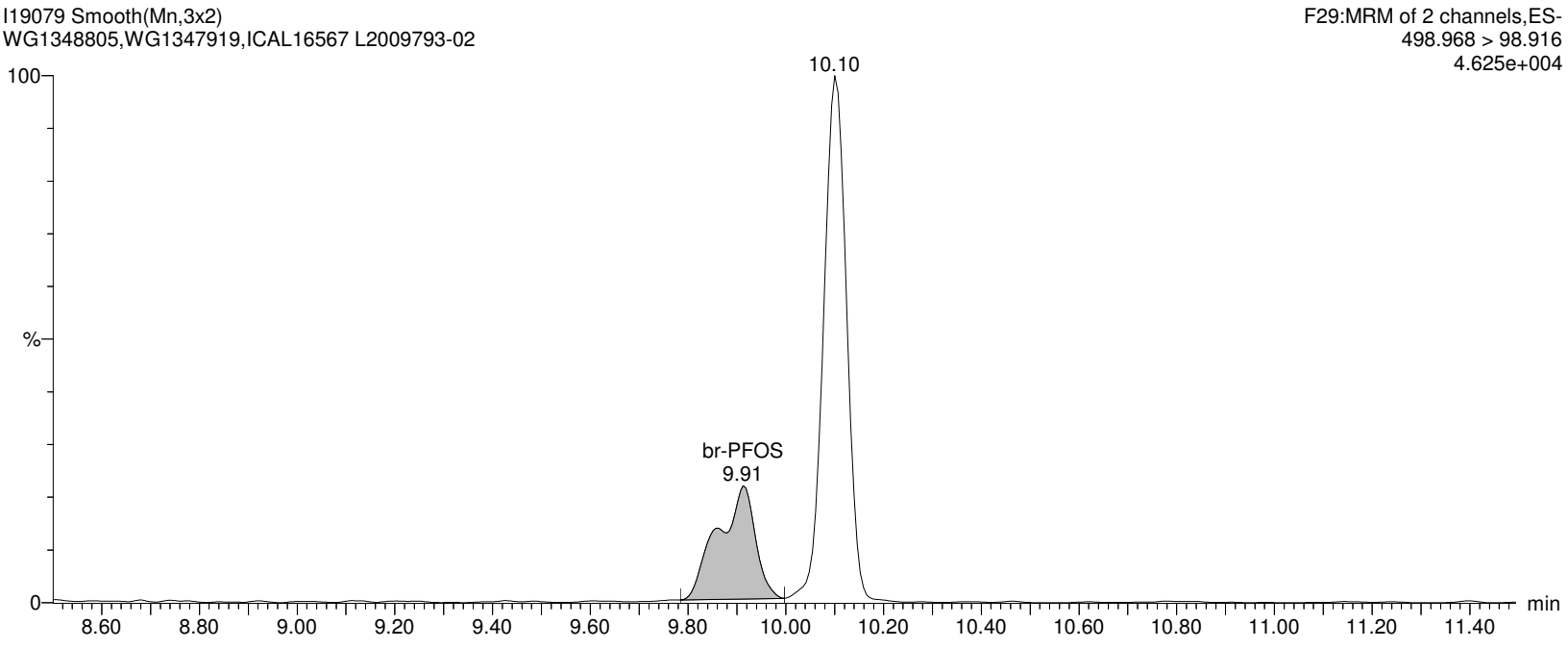
**br-PFOS**





all concentration units in (ng/mL)

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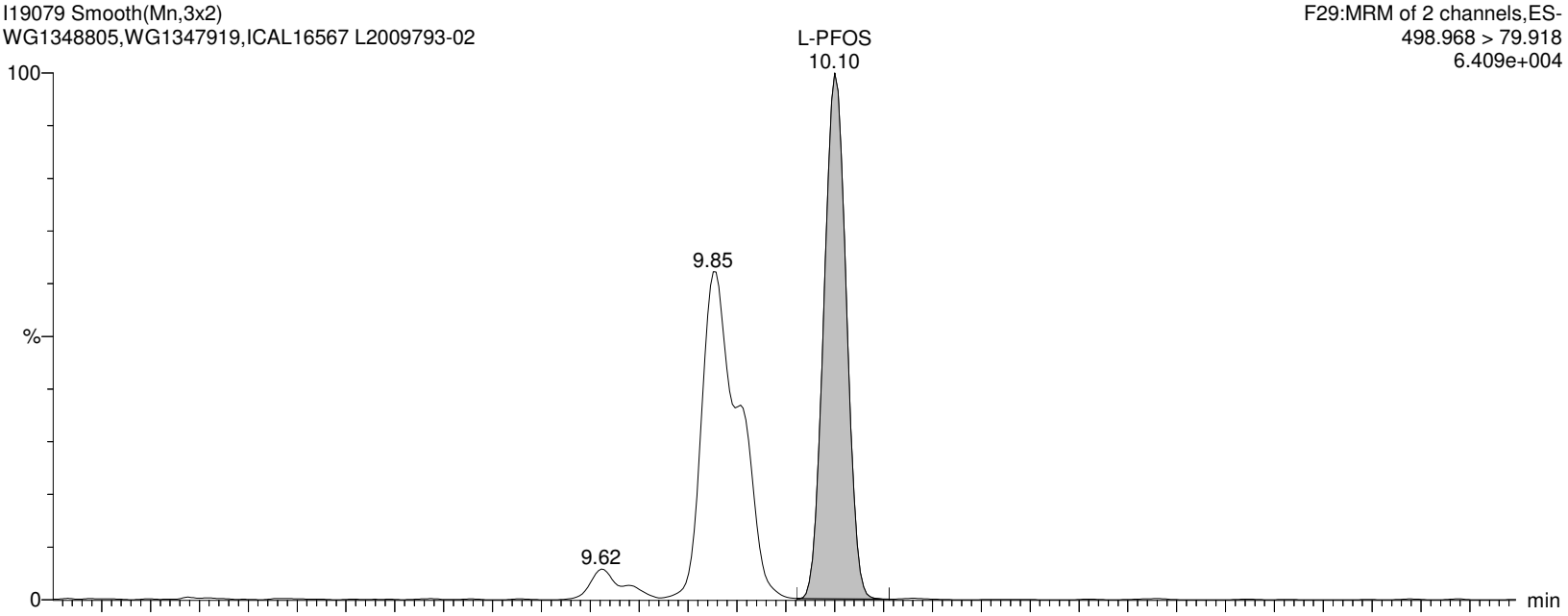
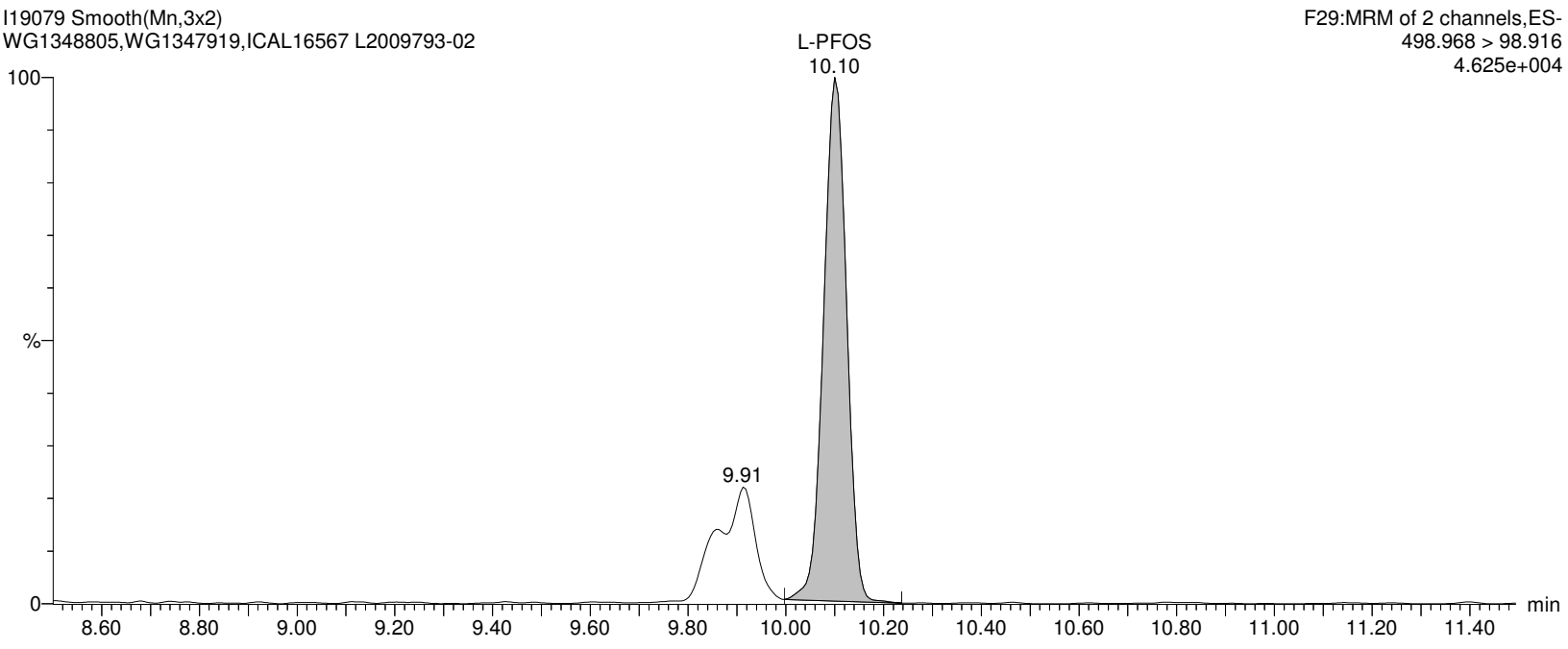
**L-PFOS**





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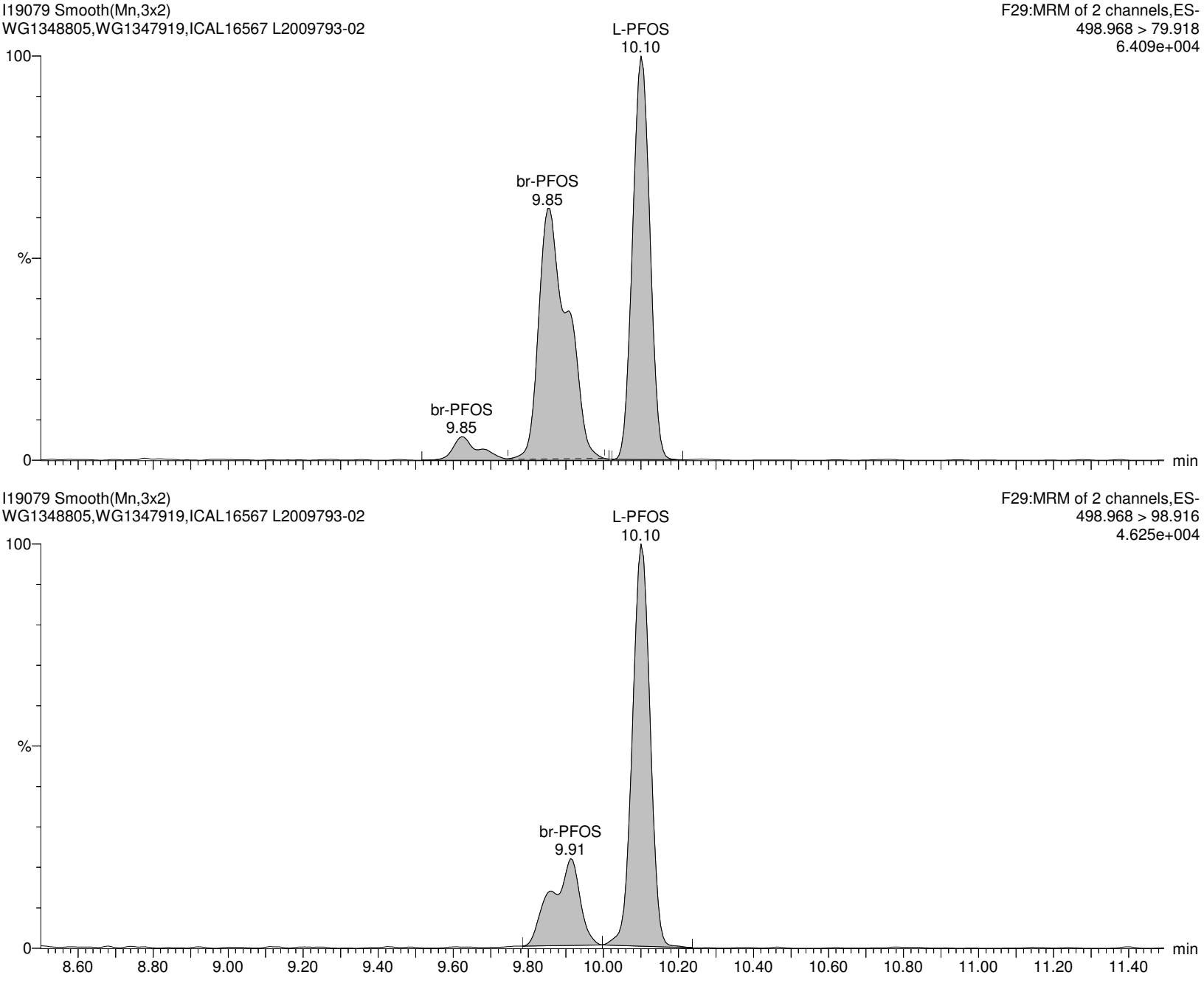
**PFOS**





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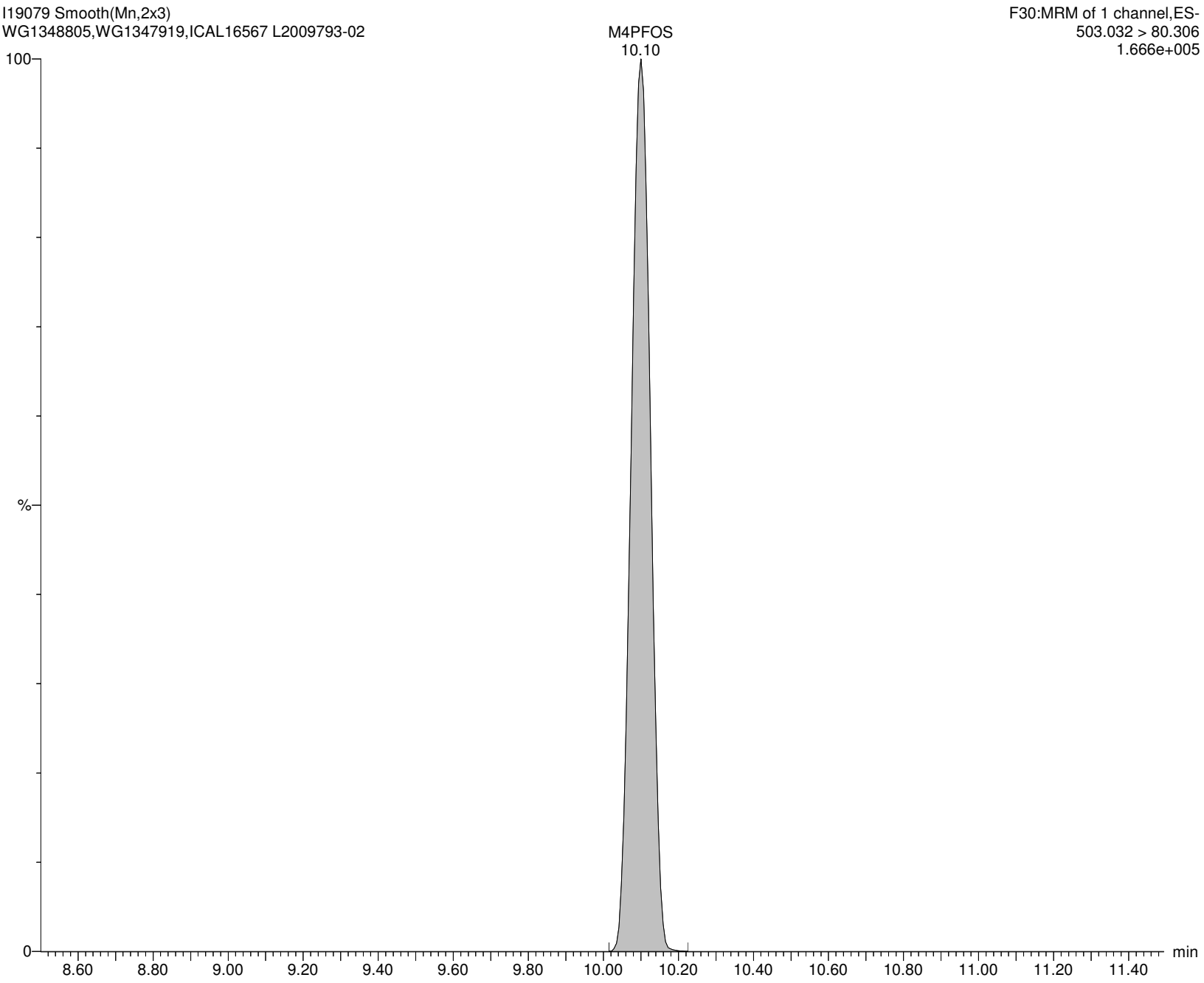
**M4PFOS**





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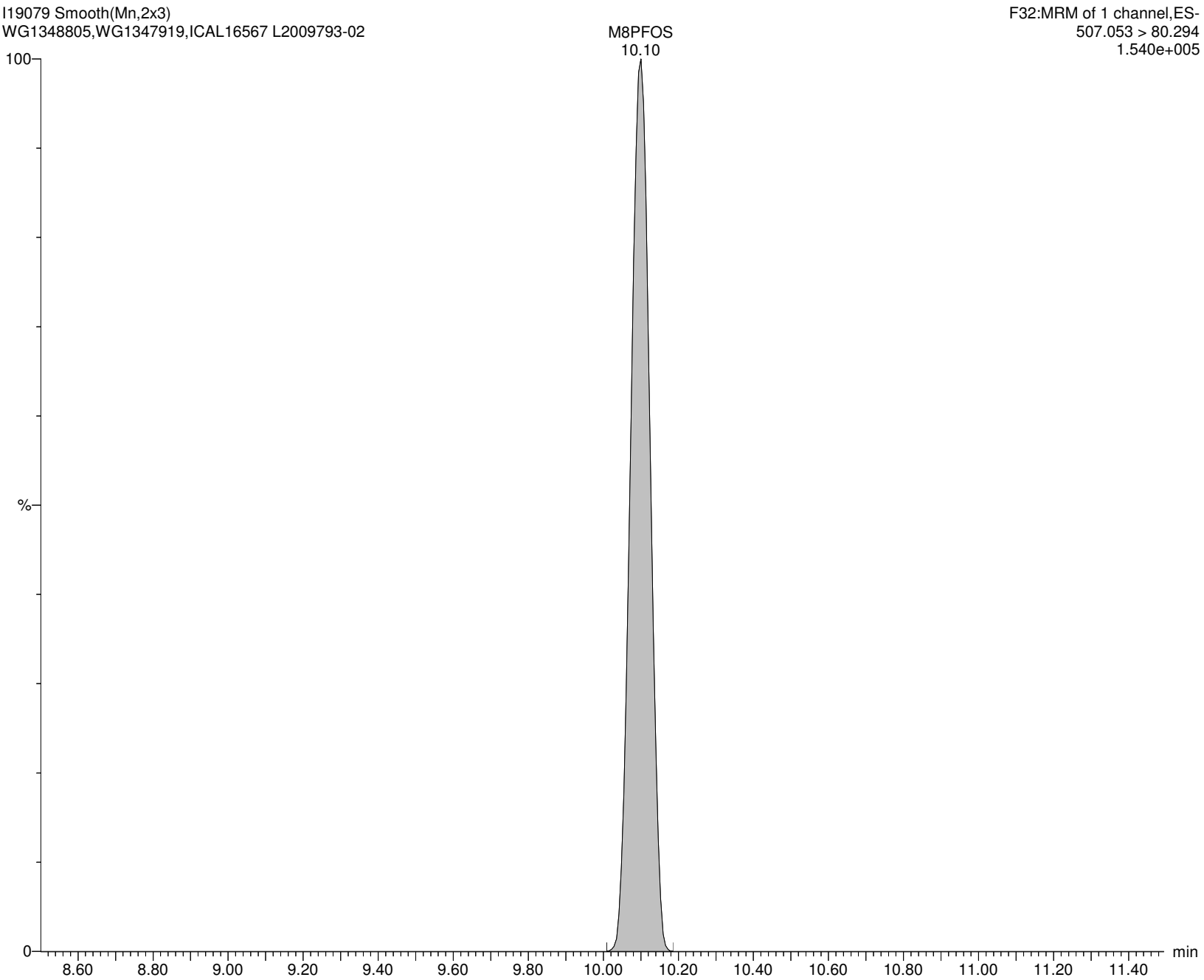
**M8PFOS**





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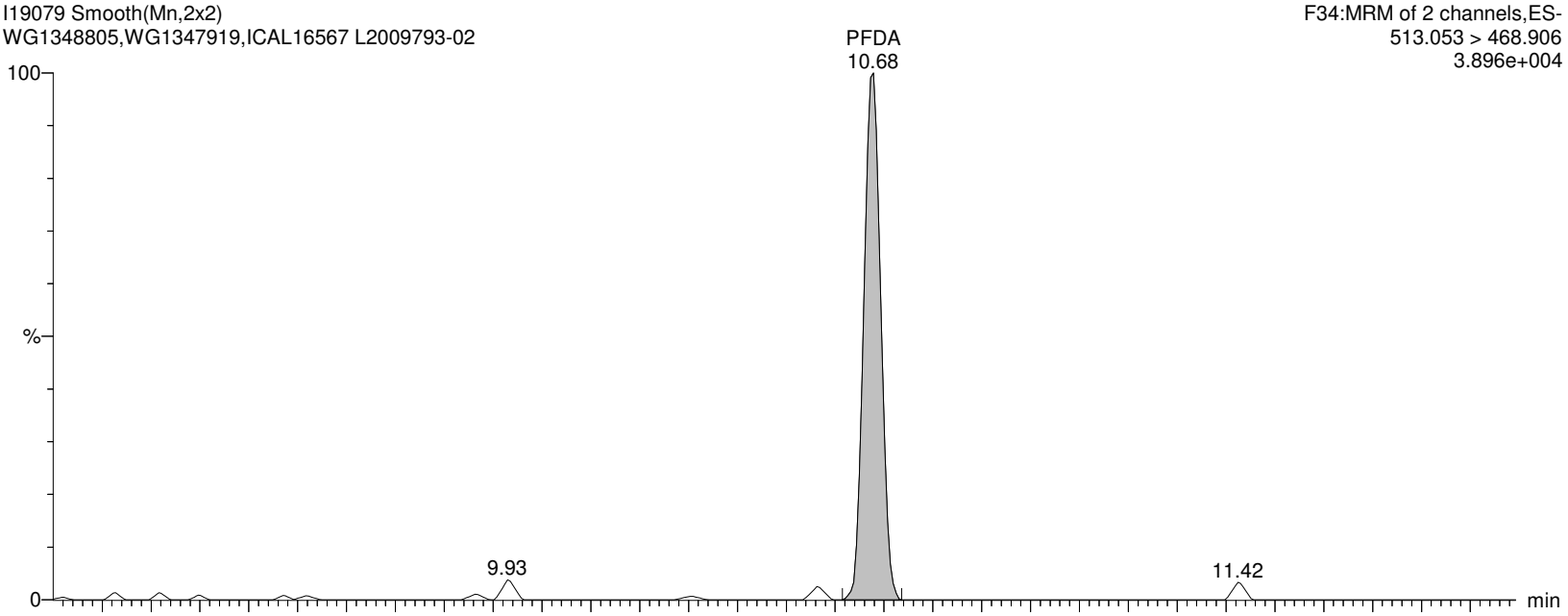
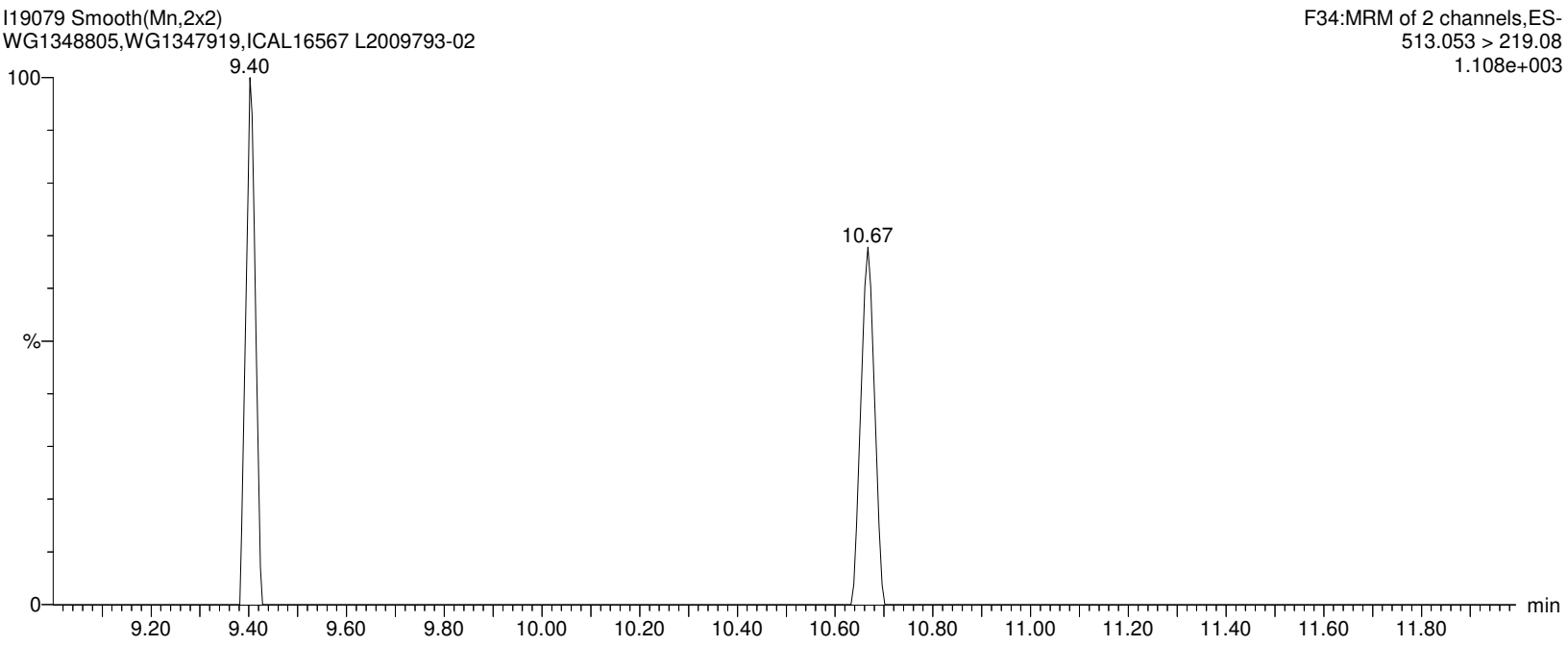
**PFDA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200309_537ISO.PRO\Data\WG1348805A.qld
Last Altered: Tuesday, March 17, 2020 11:34:11 Eastern Daylight Time
Printed: Tuesday, March 17, 2020 11:34:30 Eastern Daylight Time

**Name: I19079**
**ID: L2009793-02**
**Date: 09-Mar-2020**
**Time: 15:40:07**
**Description: WG1348805,WG1347919,ICAL16567**
**User: LCMS01:JW**
**Vial: 1:C,2**
**Instrument: XEVO-TQSmicro#QEA0276**
**Inlet Method Name: C:\MassLynx\Data\200309_537ISO.PRO\ACQUDB\LCMS_537_ISO_MeOH**
**Tune Method Name: C:\MassLynx\Data\200309_537ISO.PRO\ACQUDB\190709_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\200309_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

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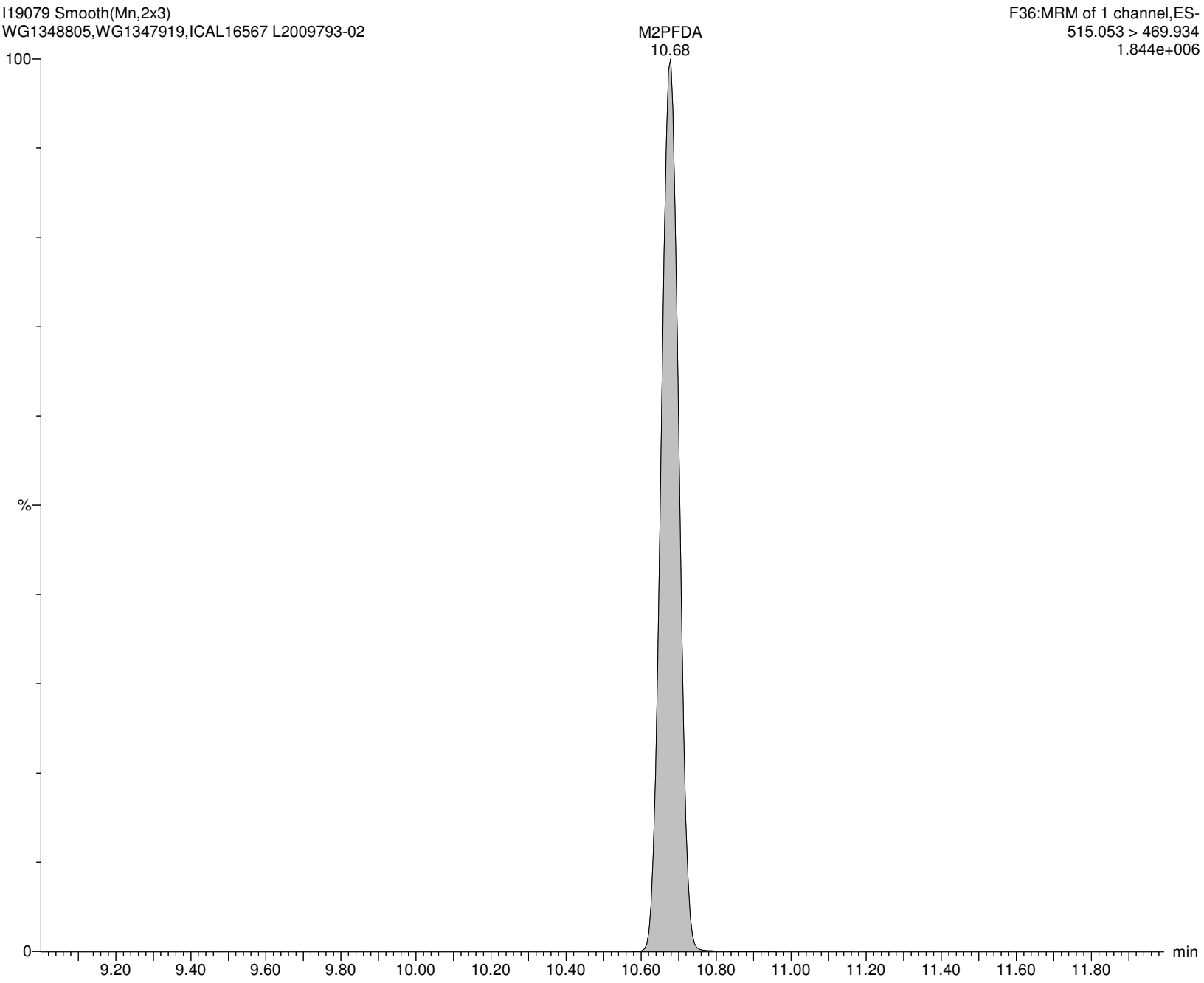



all concentration units in (ng/mL)

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**MS Method Name: C:\MassLynx\Data\200309_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

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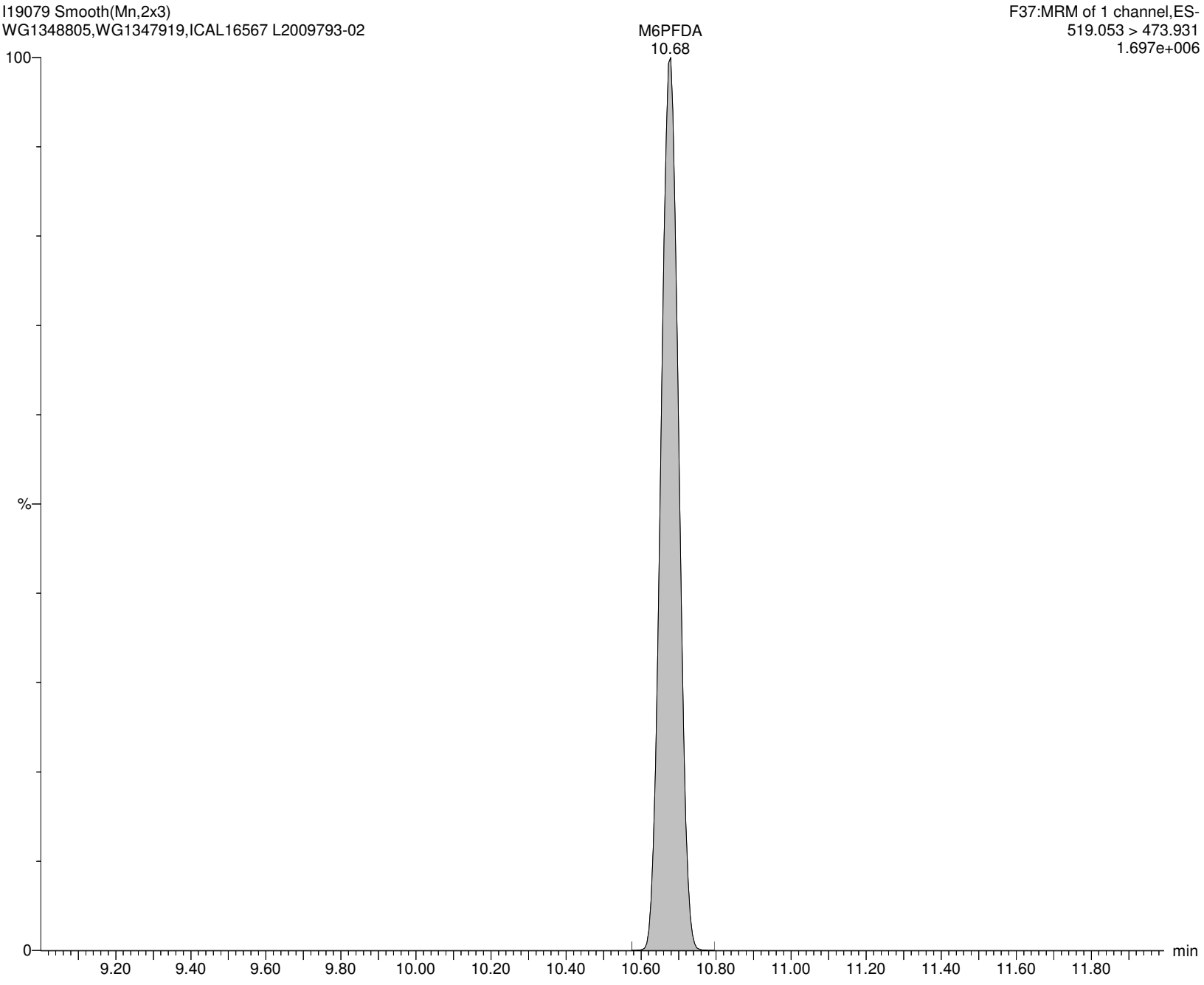



all concentration units in (ng/mL)

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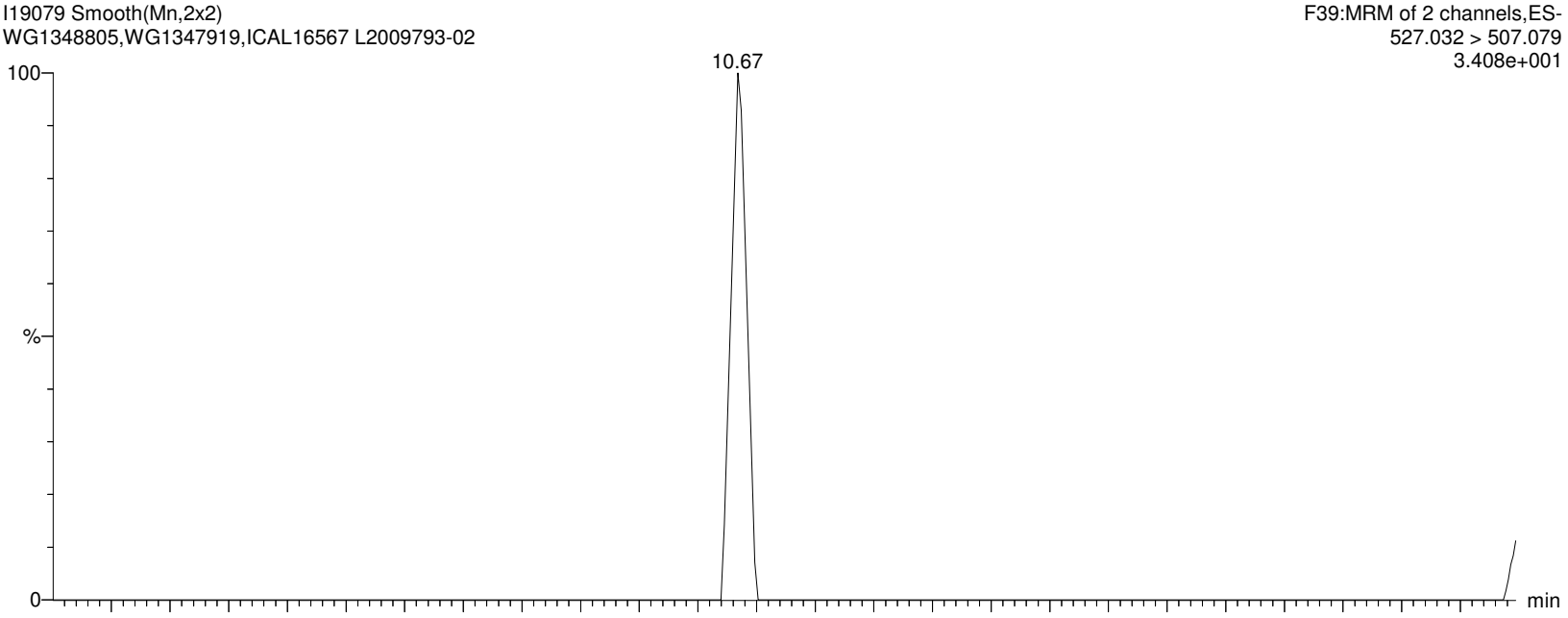
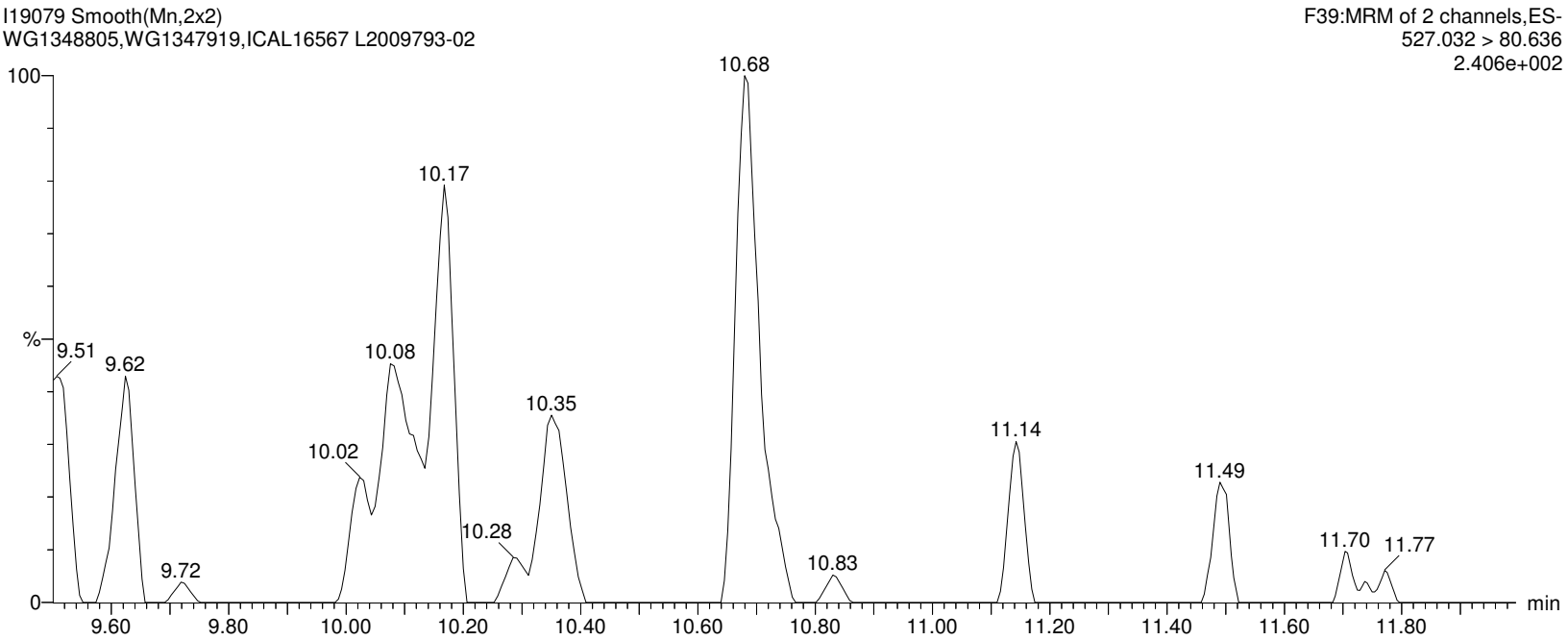
**8:2FTS**





all concentration units in (ng/mL)

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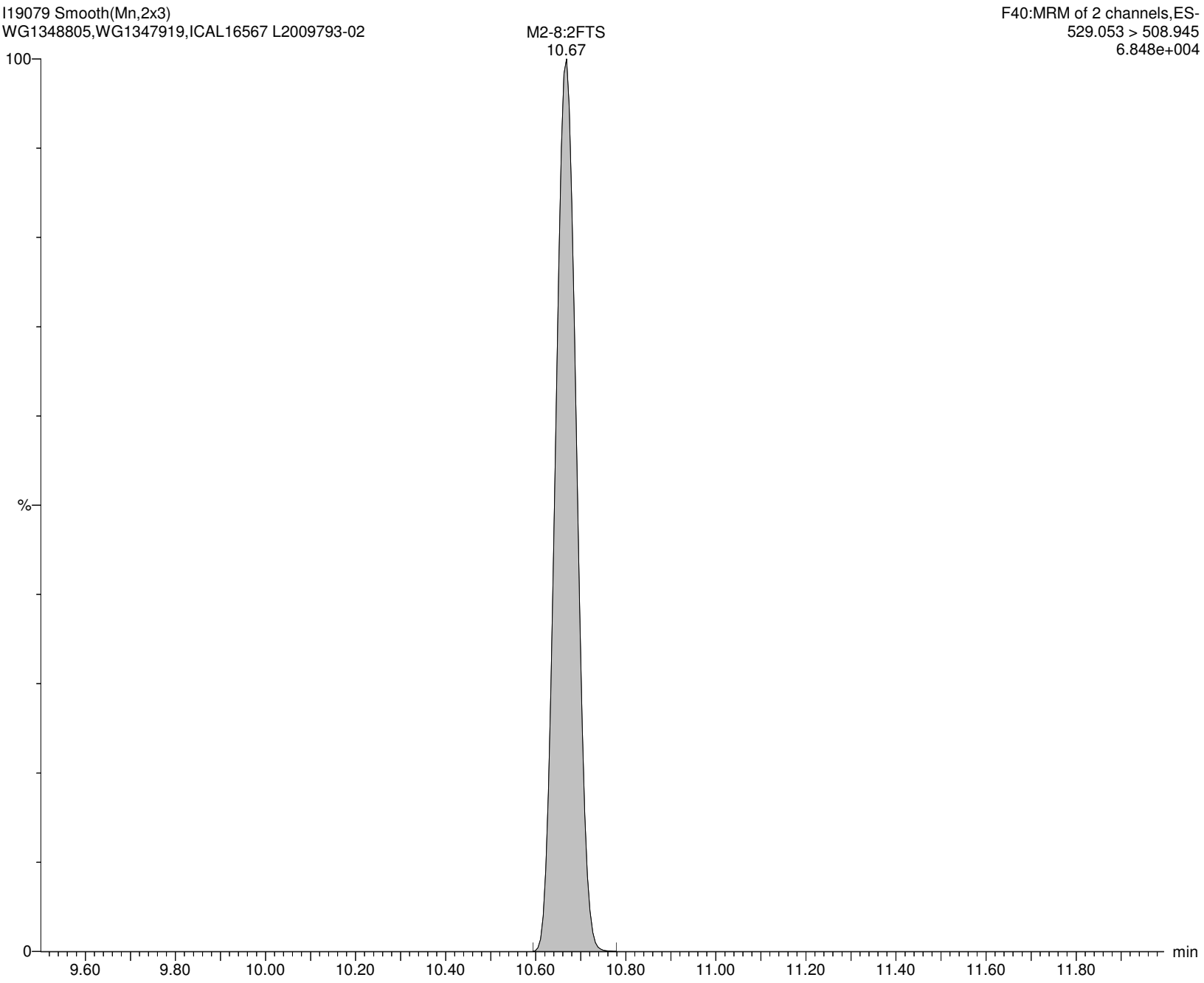
**M2-8:2FTS**





all concentration units in (ng/mL)

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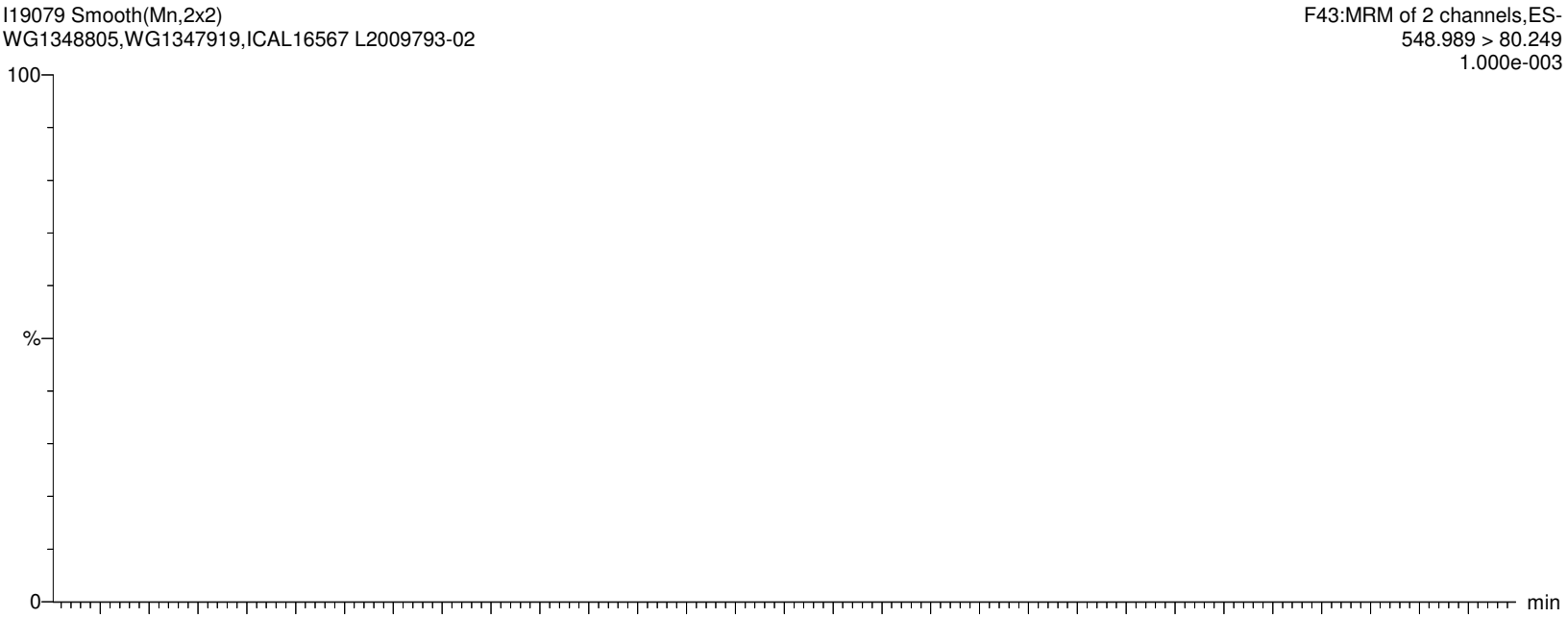


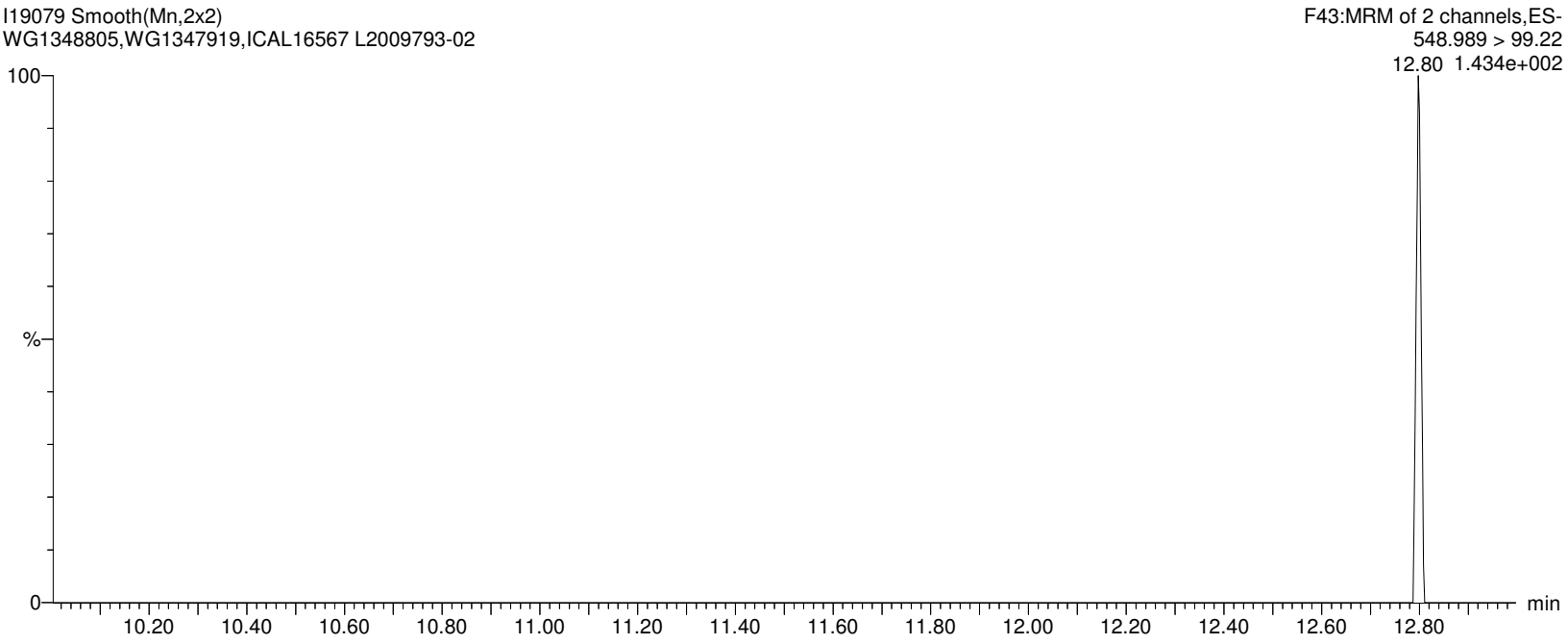



all concentration units in (ng/mL)

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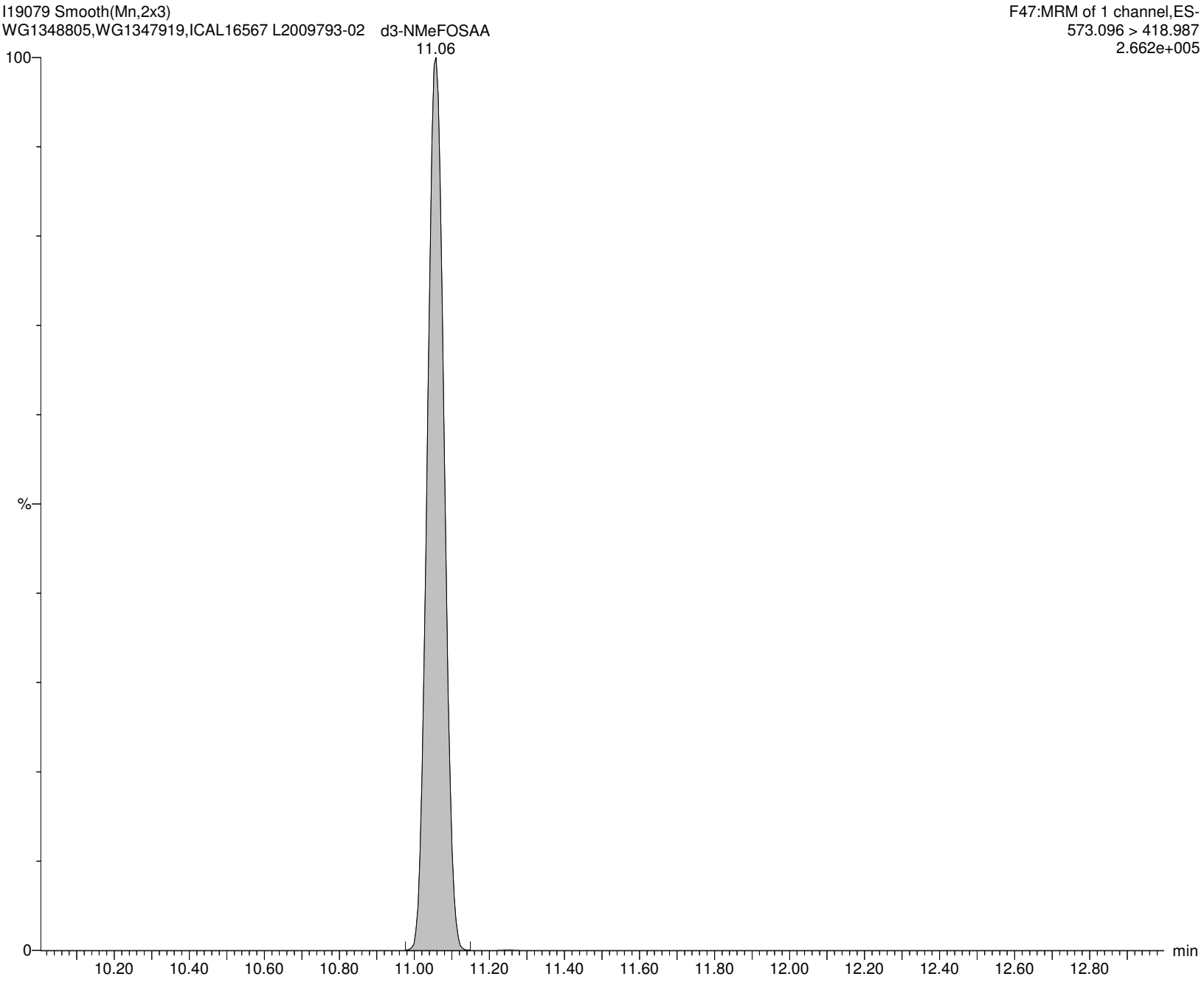
**d3-NMeFOSAA**





all concentration units in (ng/mL)

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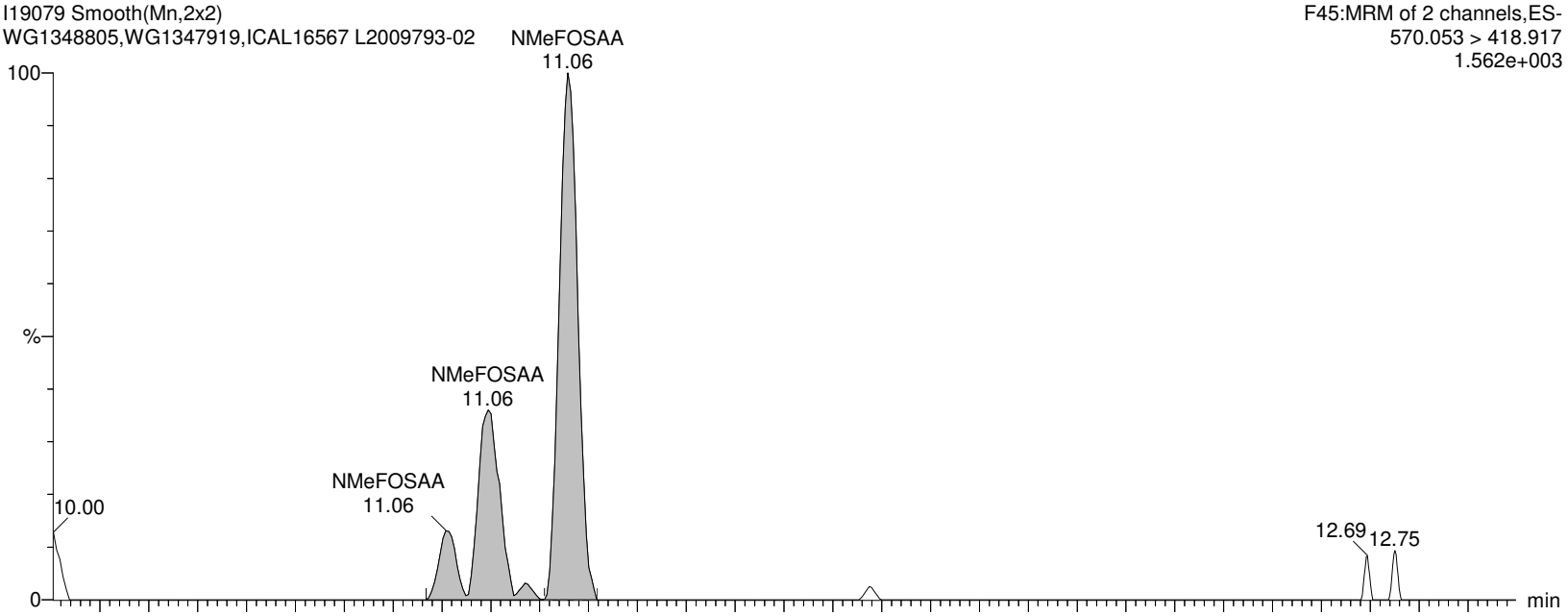
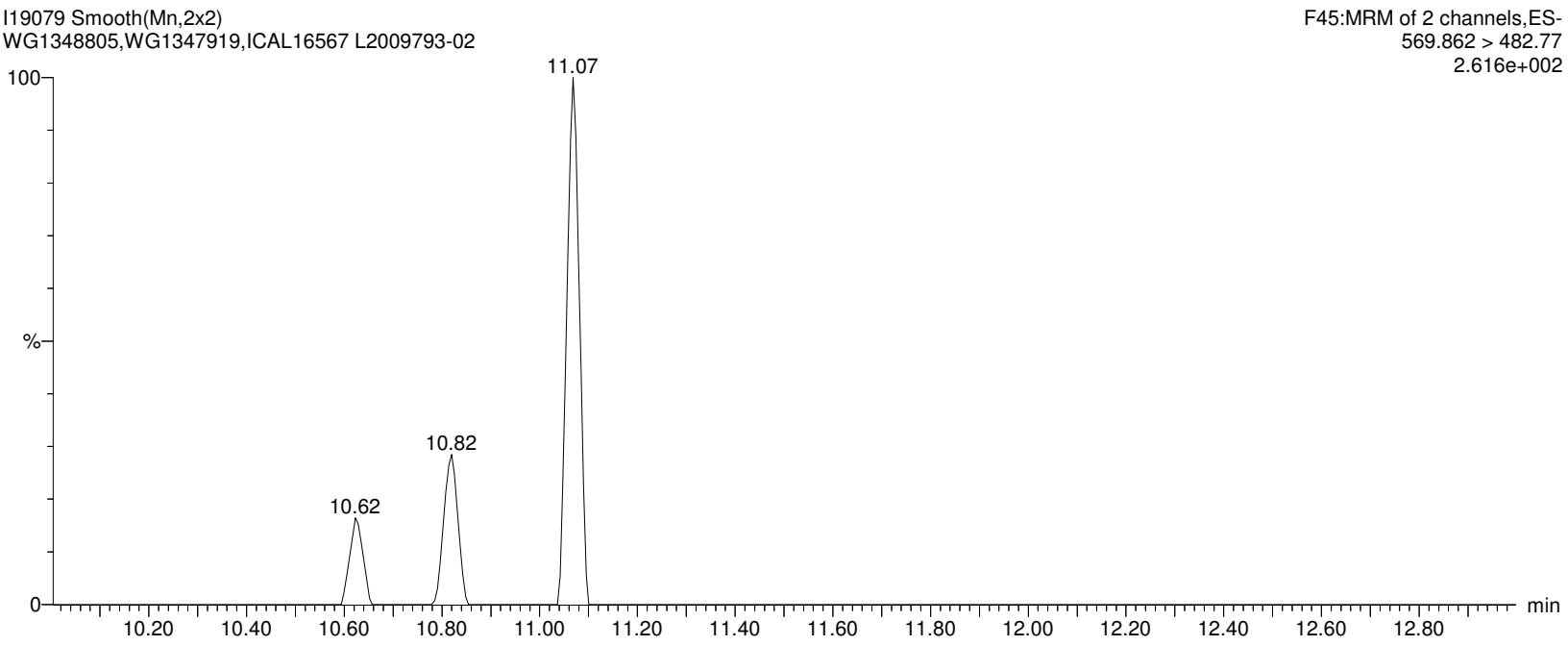
**NMeFOSAA**





all concentration units in (ng/mL)

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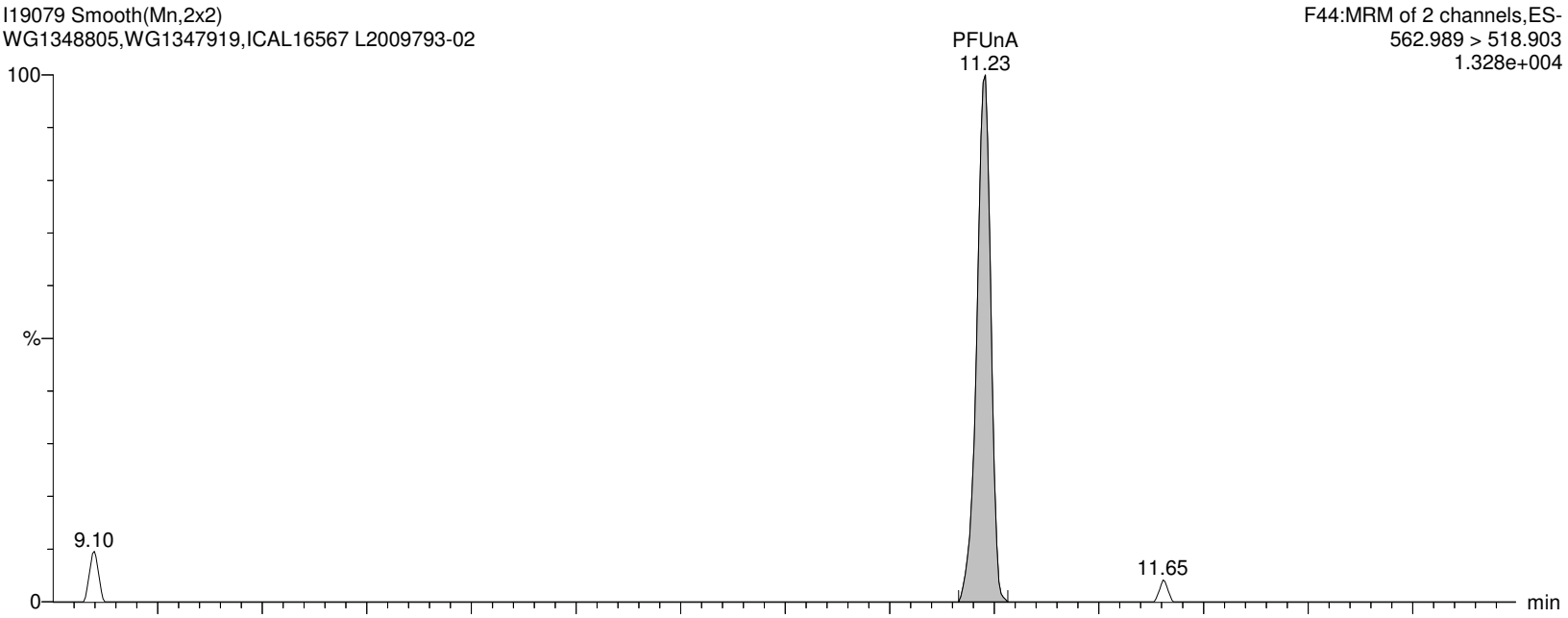
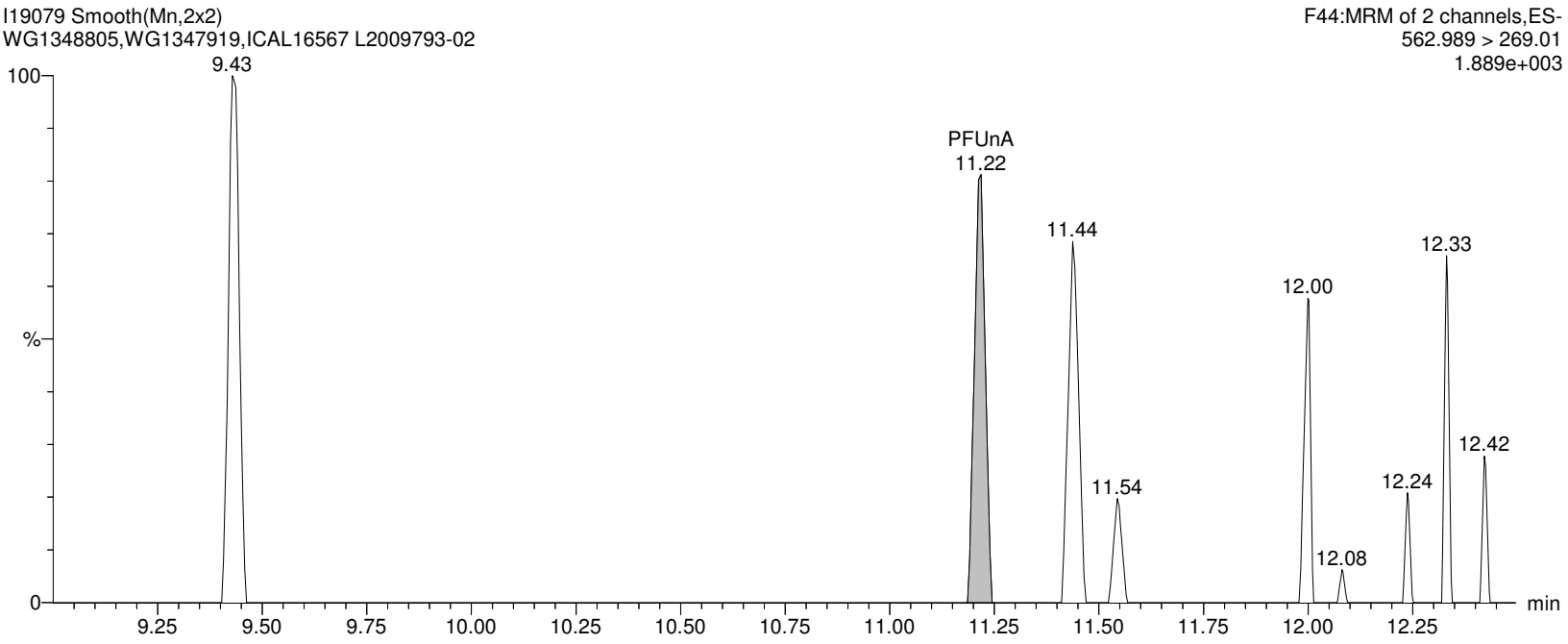
**PFUnA**





all concentration units in (ng/mL)

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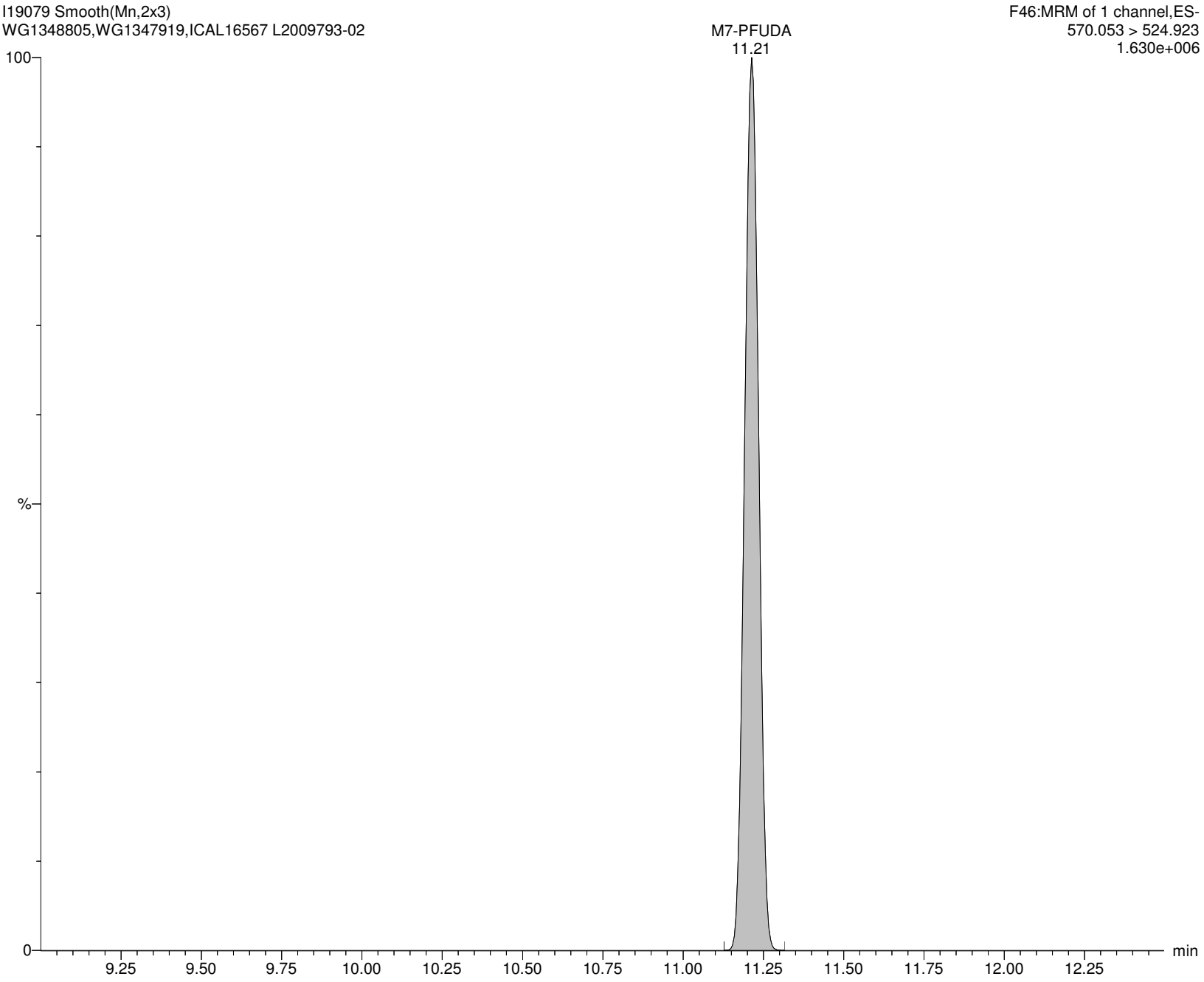
**M7-PFUDA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
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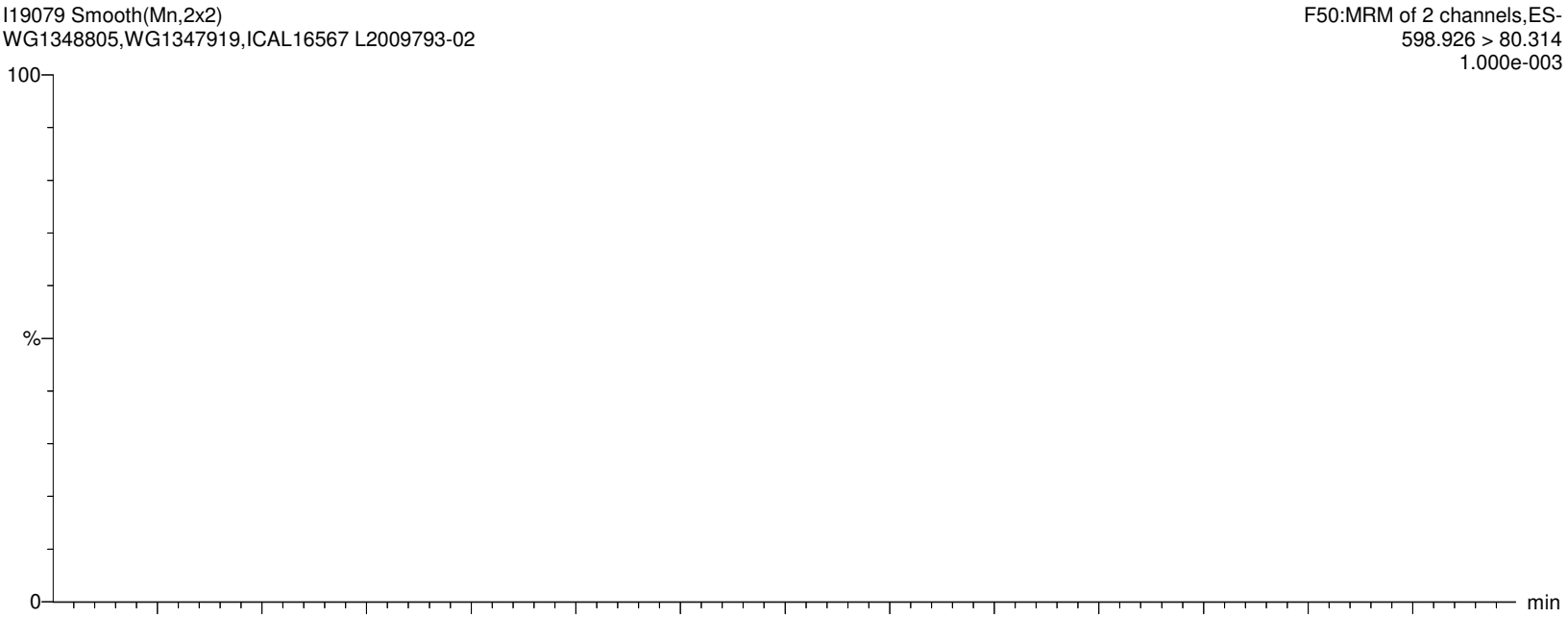
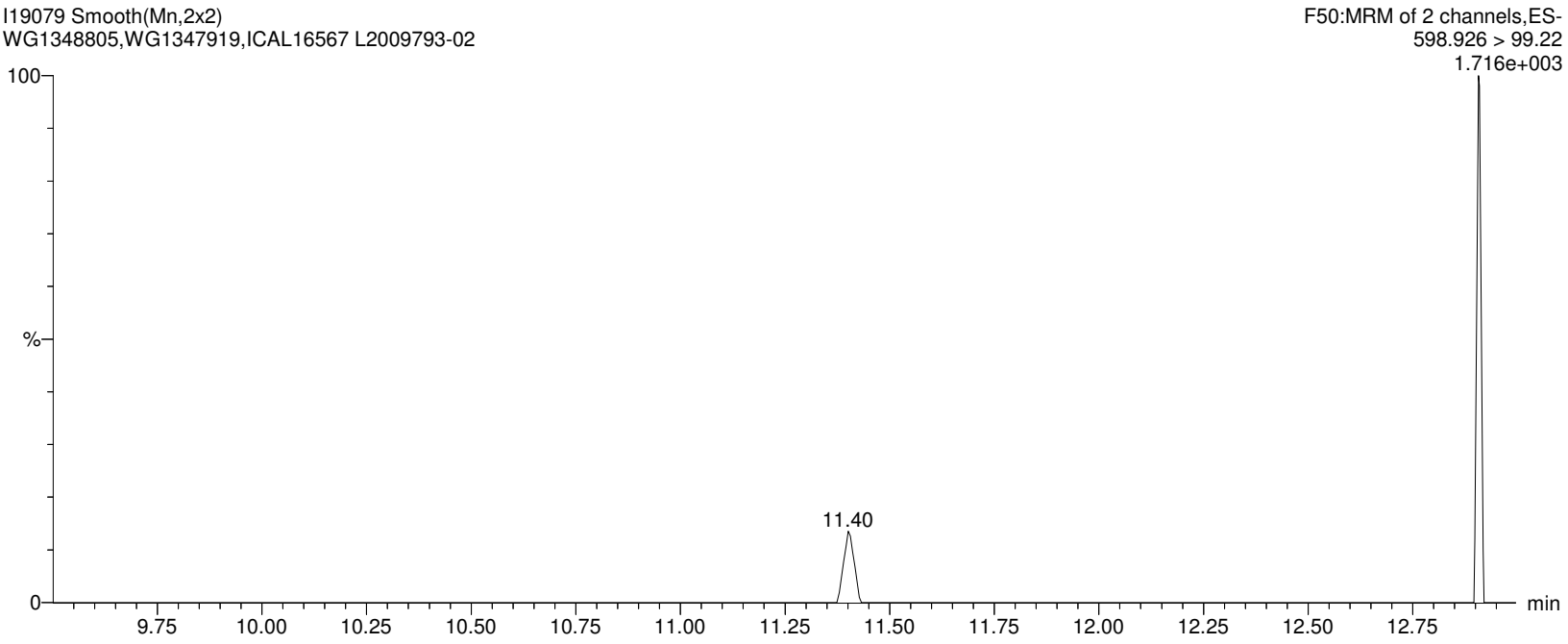
**PFDS**





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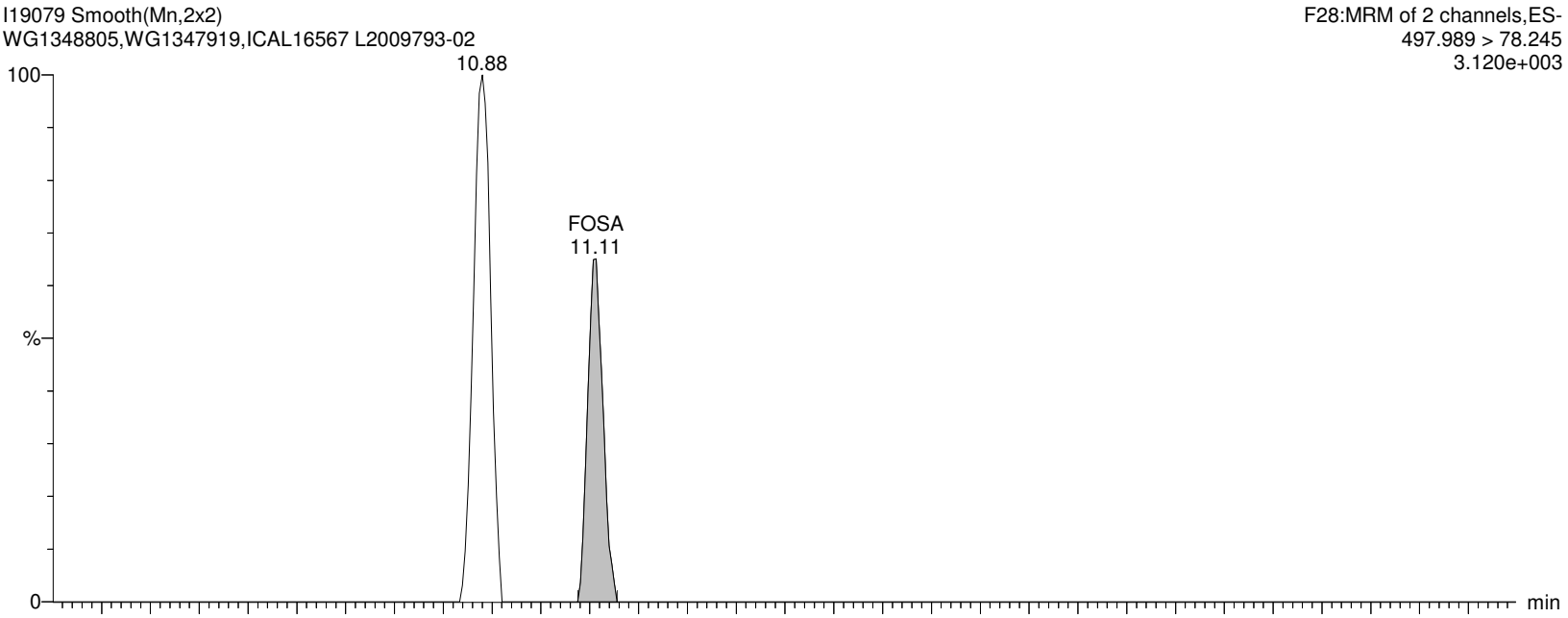
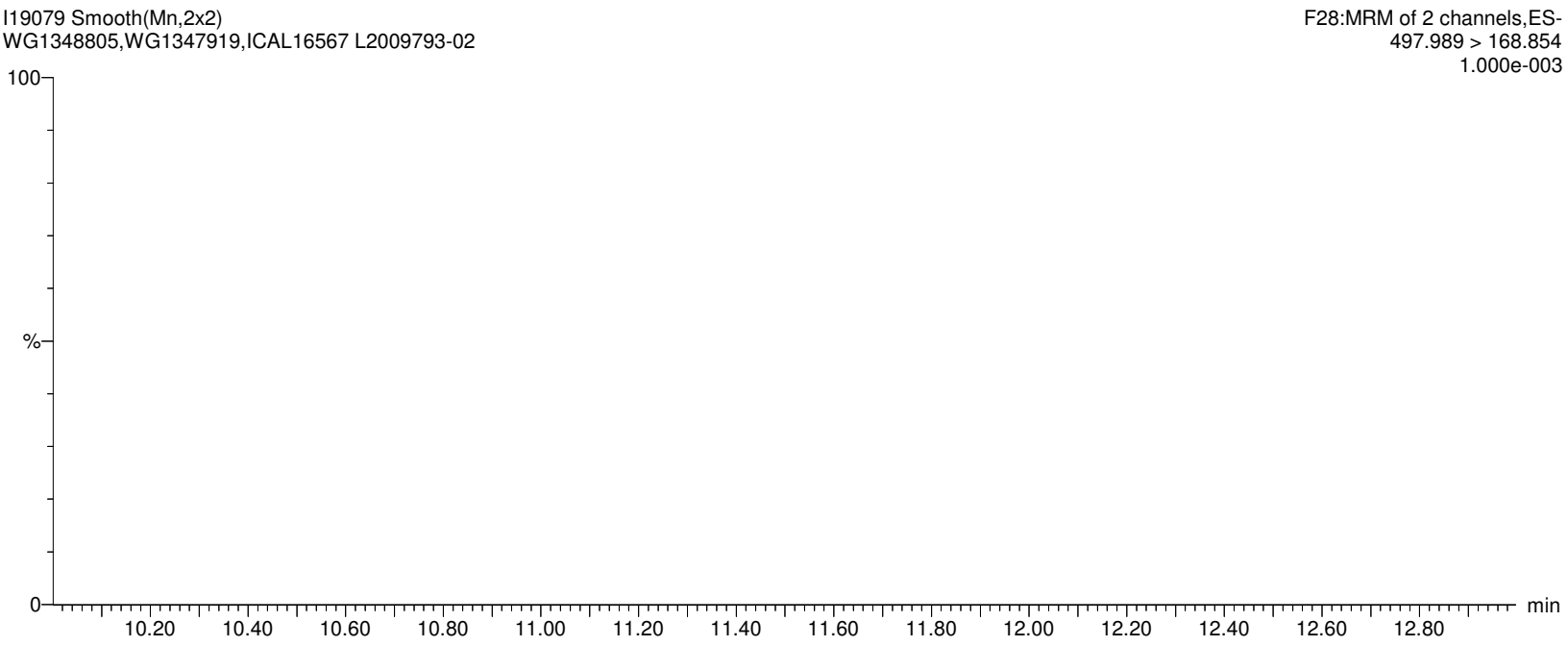
**FOSA**





all concentration units in (ng/mL)

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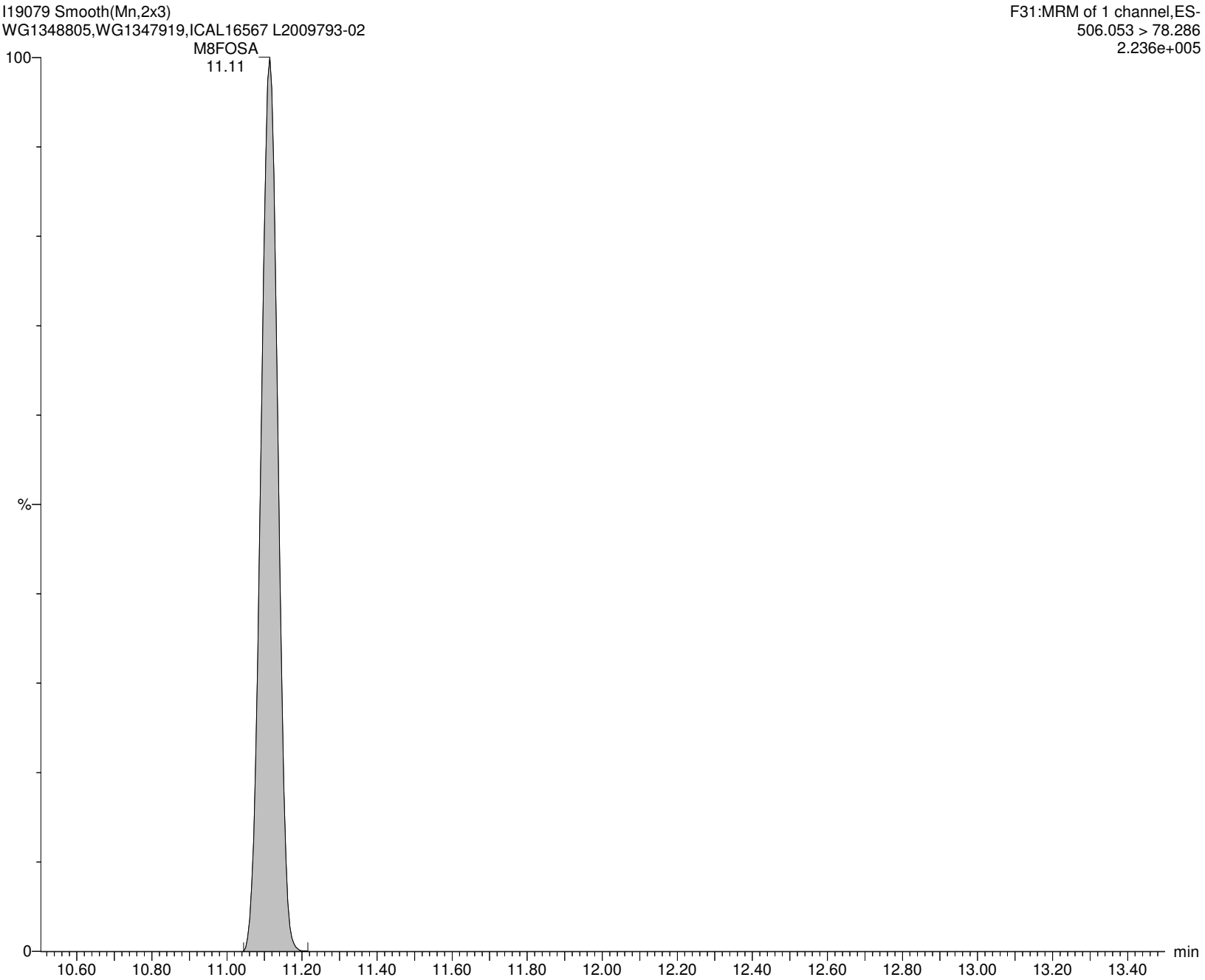
**M8FOSA**





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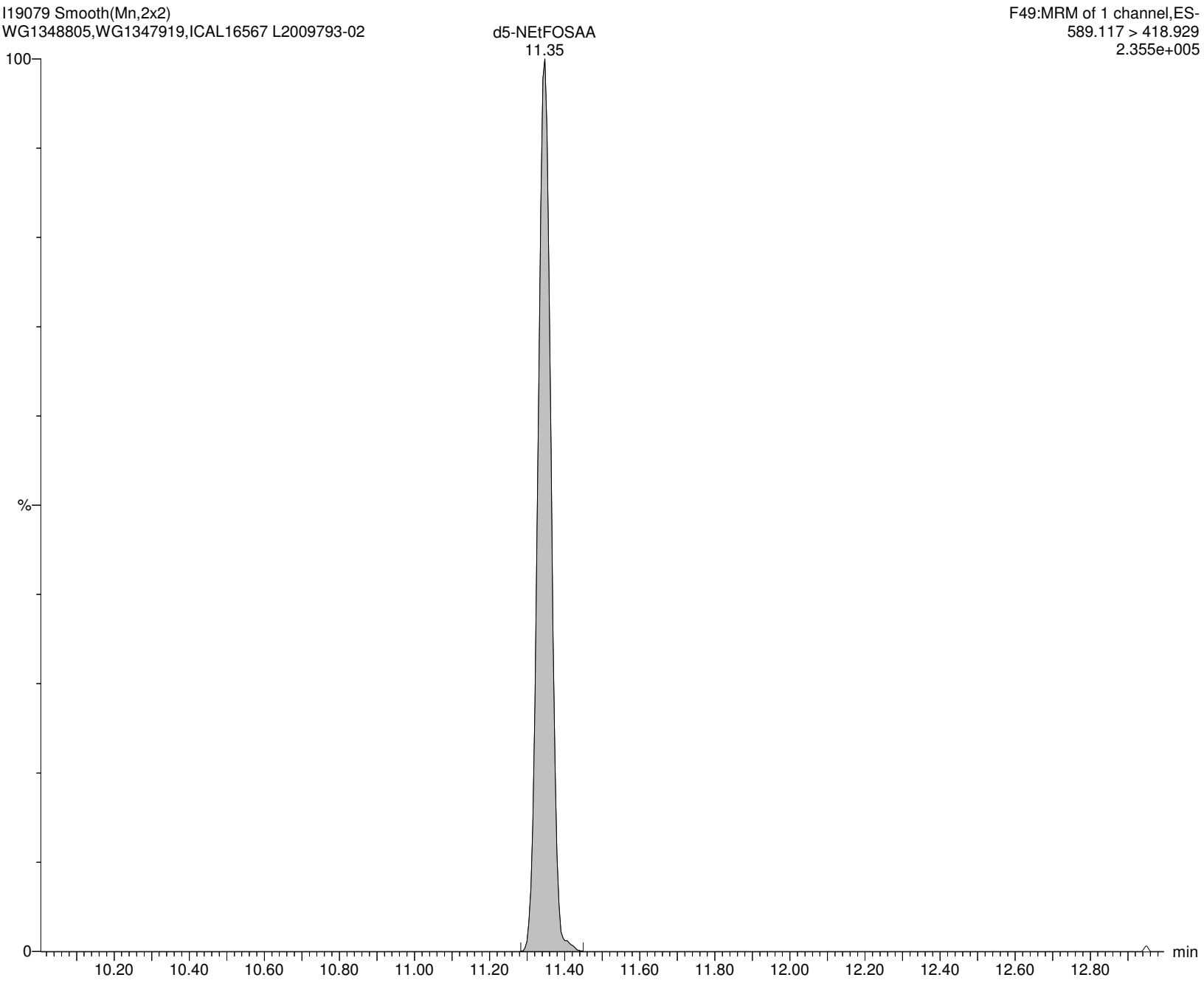



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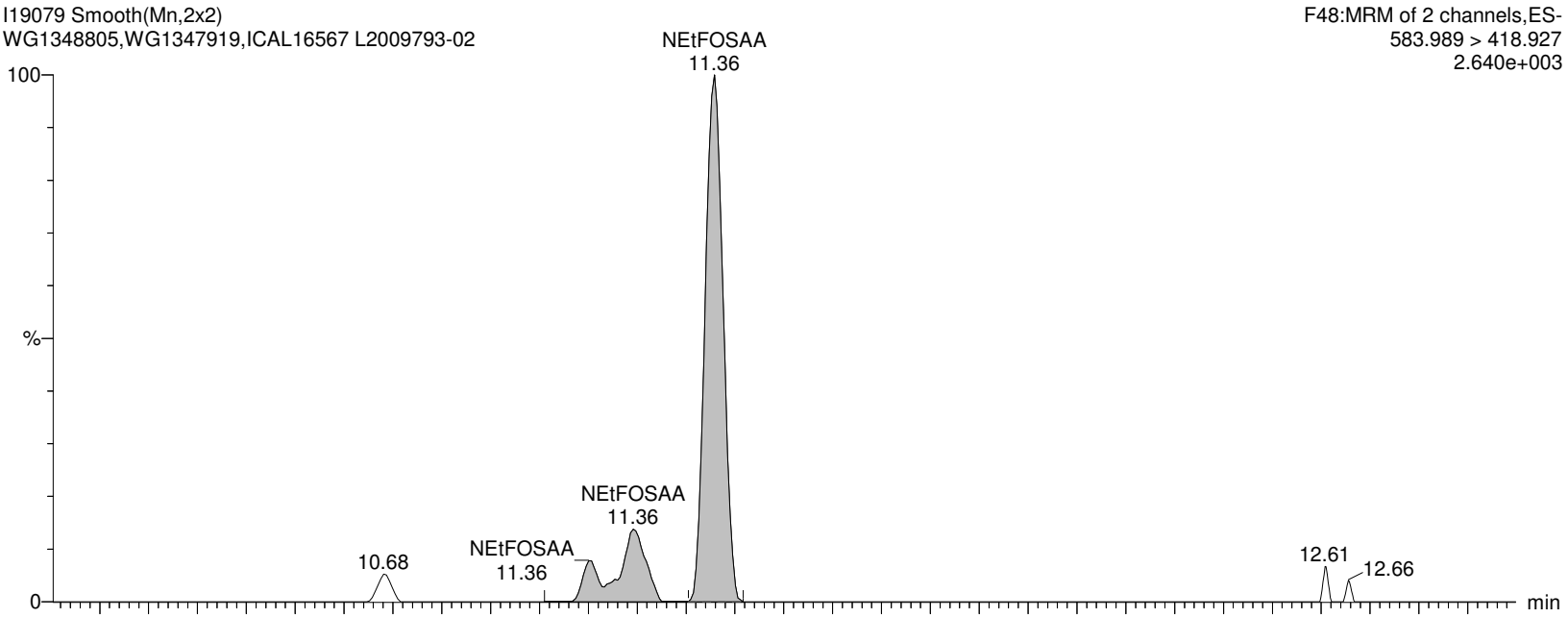
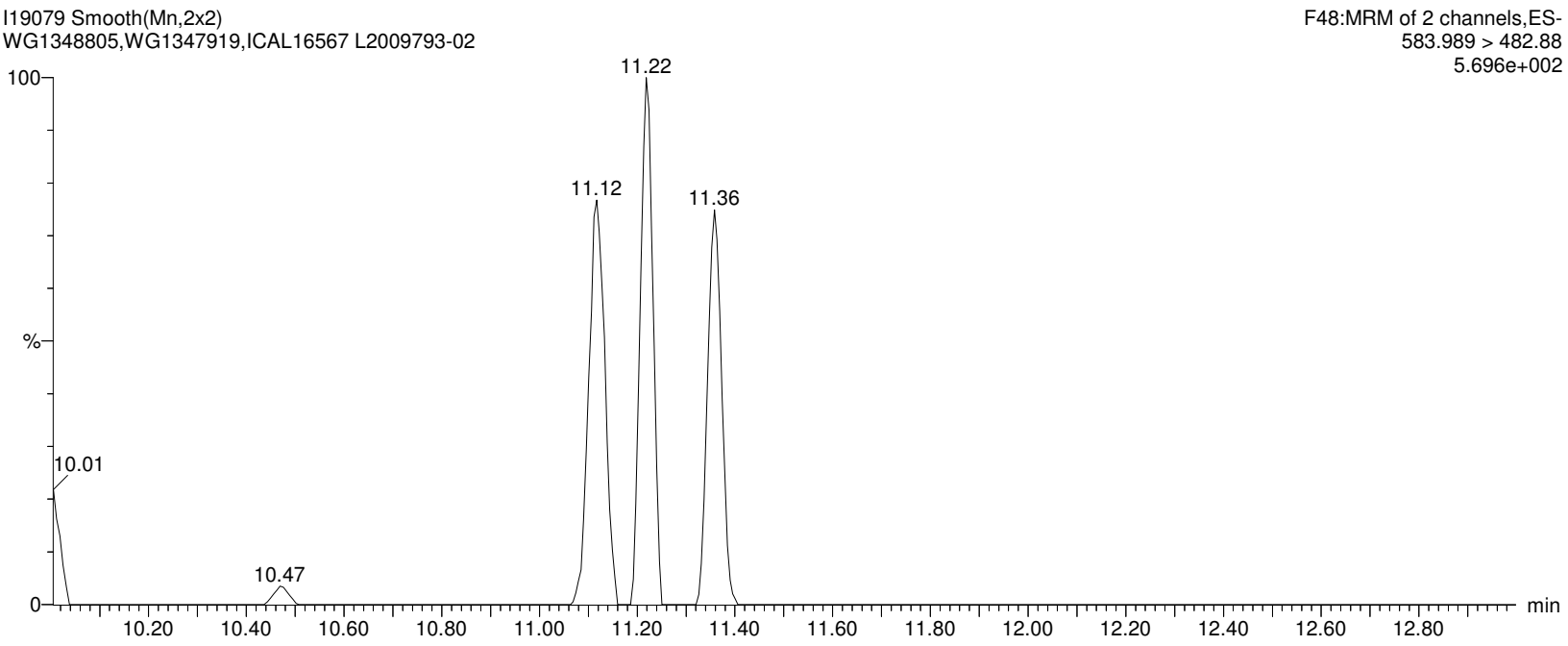
**NEtFOSAA**





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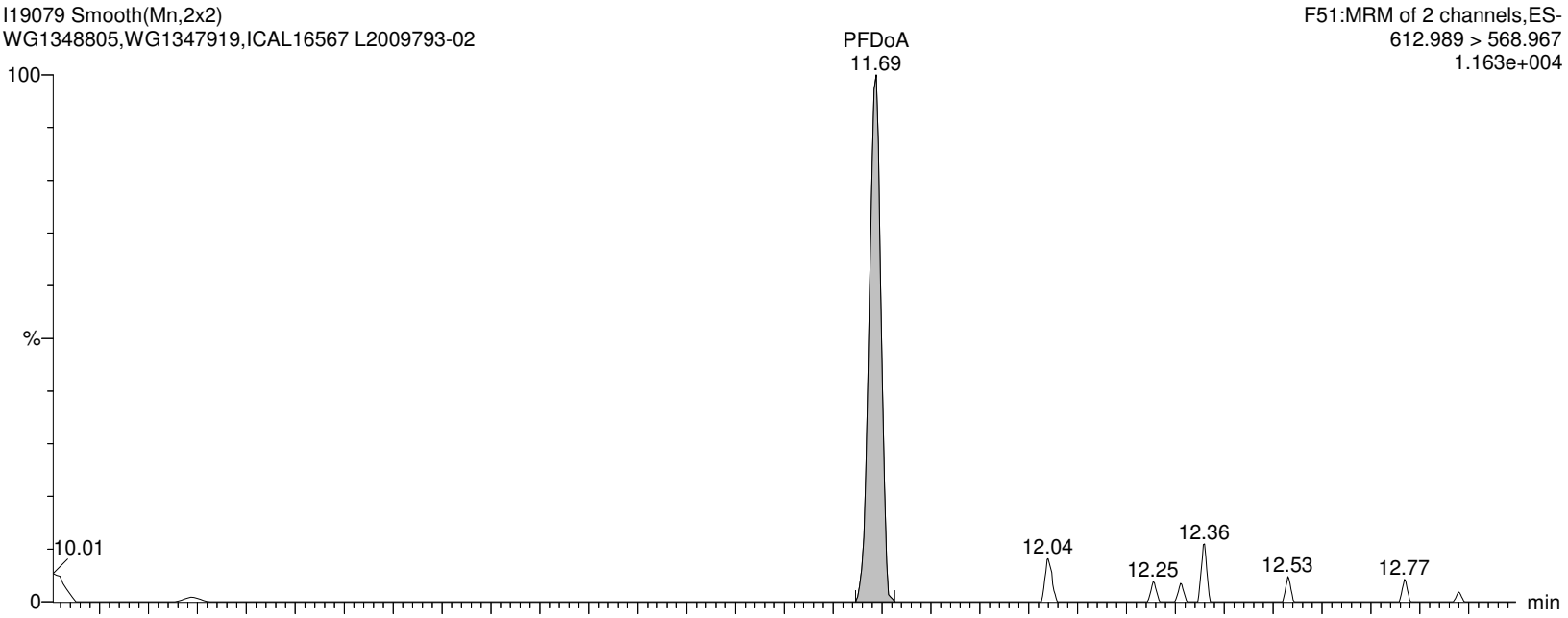
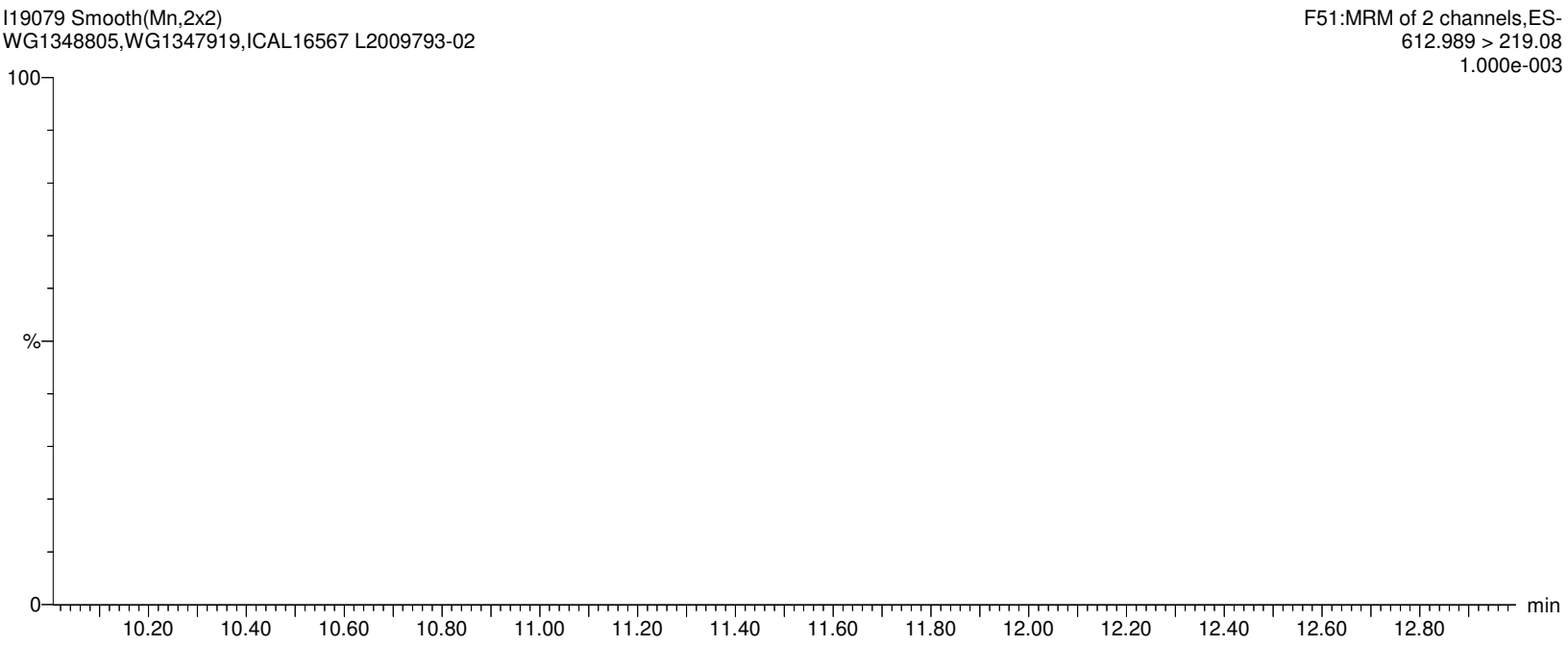
**PFDoA**



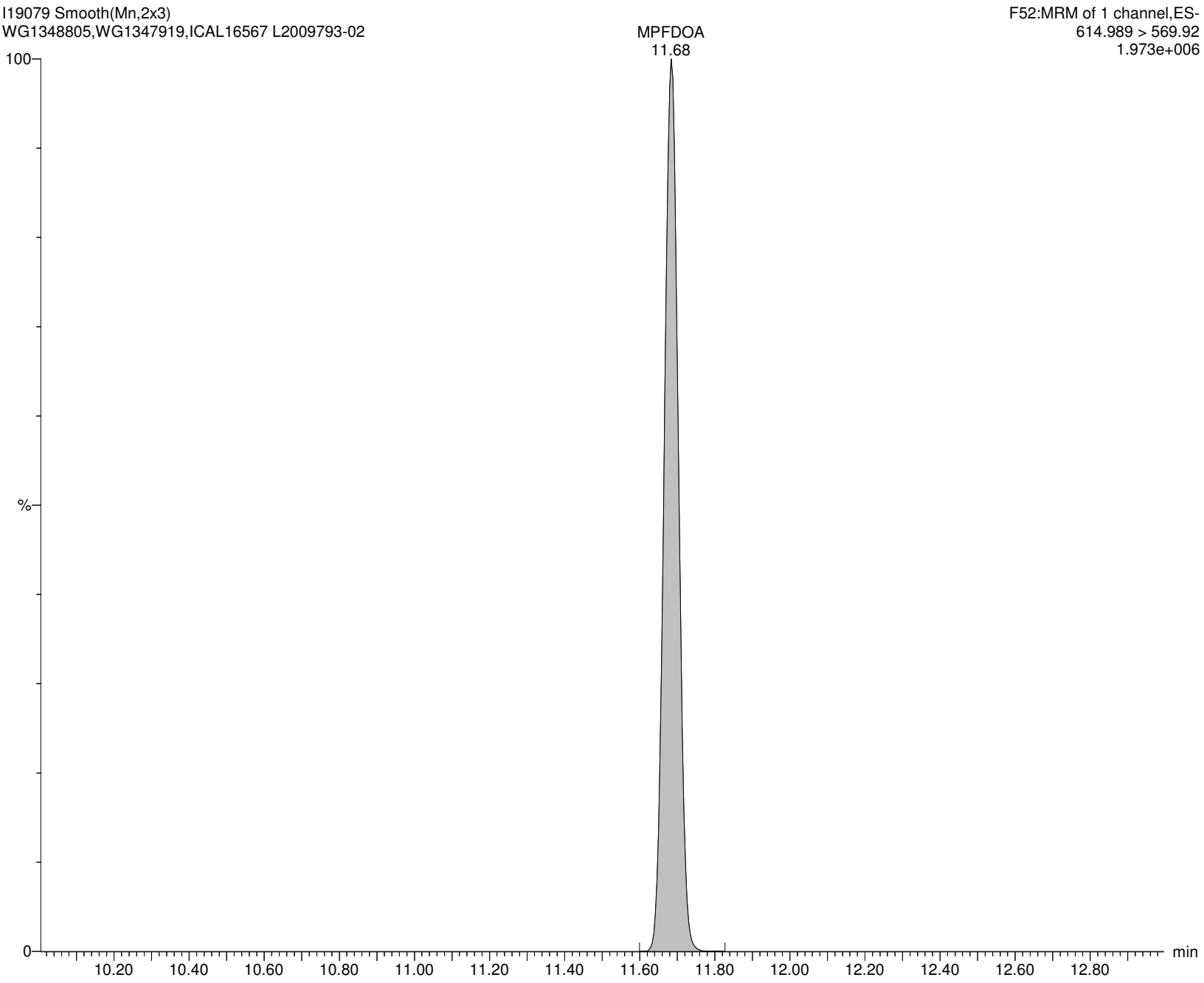


all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200309_537ISO.PRO\Data\WG1348805A.qld
Last Altered: Tuesday, March 17, 2020 11:34:11 Eastern Daylight Time
Printed: Tuesday, March 17, 2020 11:34:30 Eastern Daylight Time

**Name: I19079**
**ID: L2009793-02**
**Date: 09-Mar-2020**
**Time: 15:40:07**
**Description: WG1348805,WG1347919,ICAL16567**
**User: LCMS01:JW**
**Vial: 1:C,2**
**Instrument: XEVO-TQSmicro#QEA0276**
**Inlet Method Name: C:\MassLynx\Data\200309_537ISO.PRO\ACQUDB\LCMS_537_ISO_MeOH**
**Tune Method Name: C:\MassLynx\Data\200309_537ISO.PRO\ACQUDB\190709_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\200309_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**MPFDOA**





all concentration units in (ng/mL)

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**Tune Method Name: C:\MassLynx\Data\200309_537ISO.PRO\ACQUDB\190709_TUNE.IPR**
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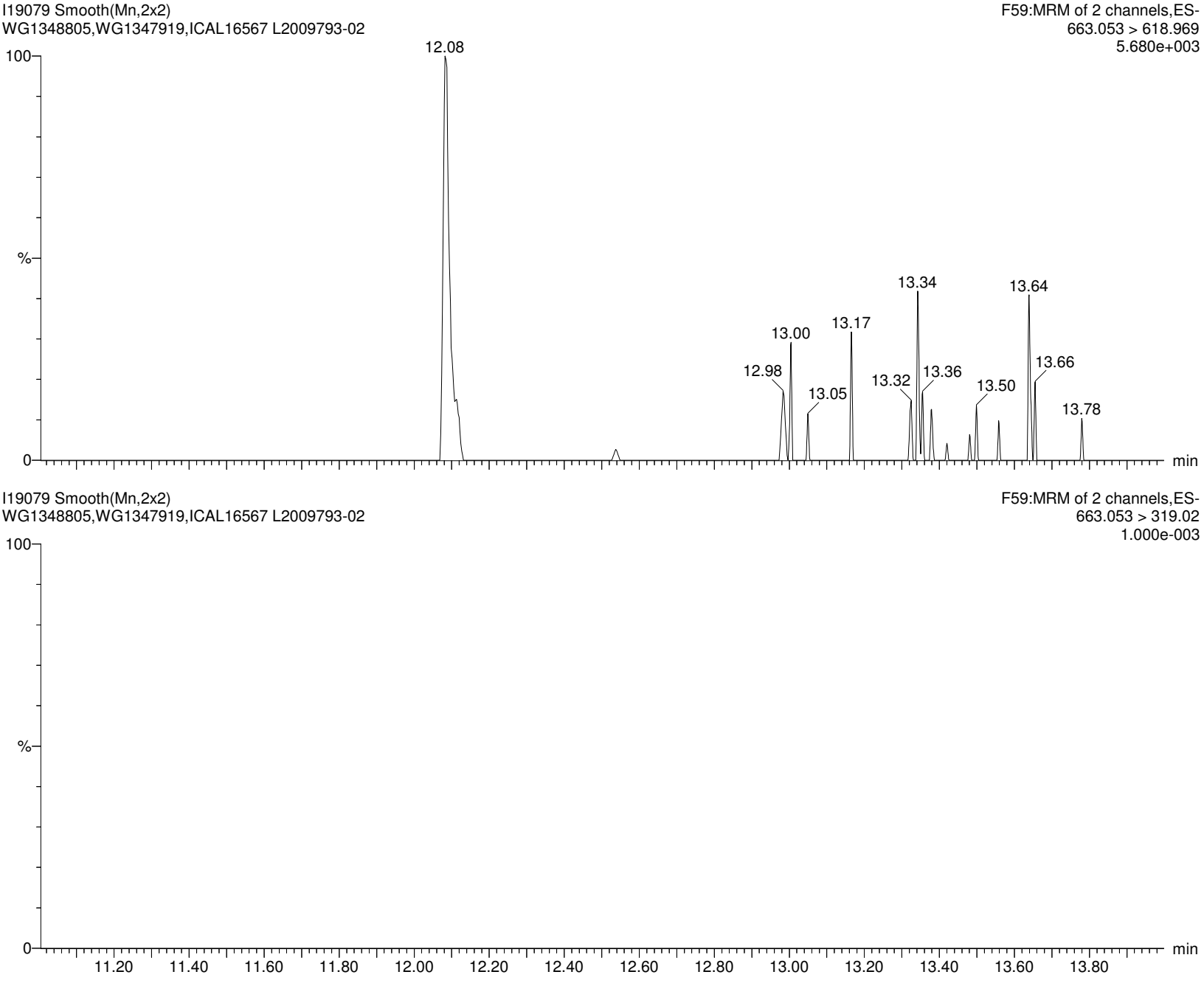
**PFTrDA**





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**Vial: 1:C,2**
**Instrument: XEVO-TQSmicro#QEA0276**
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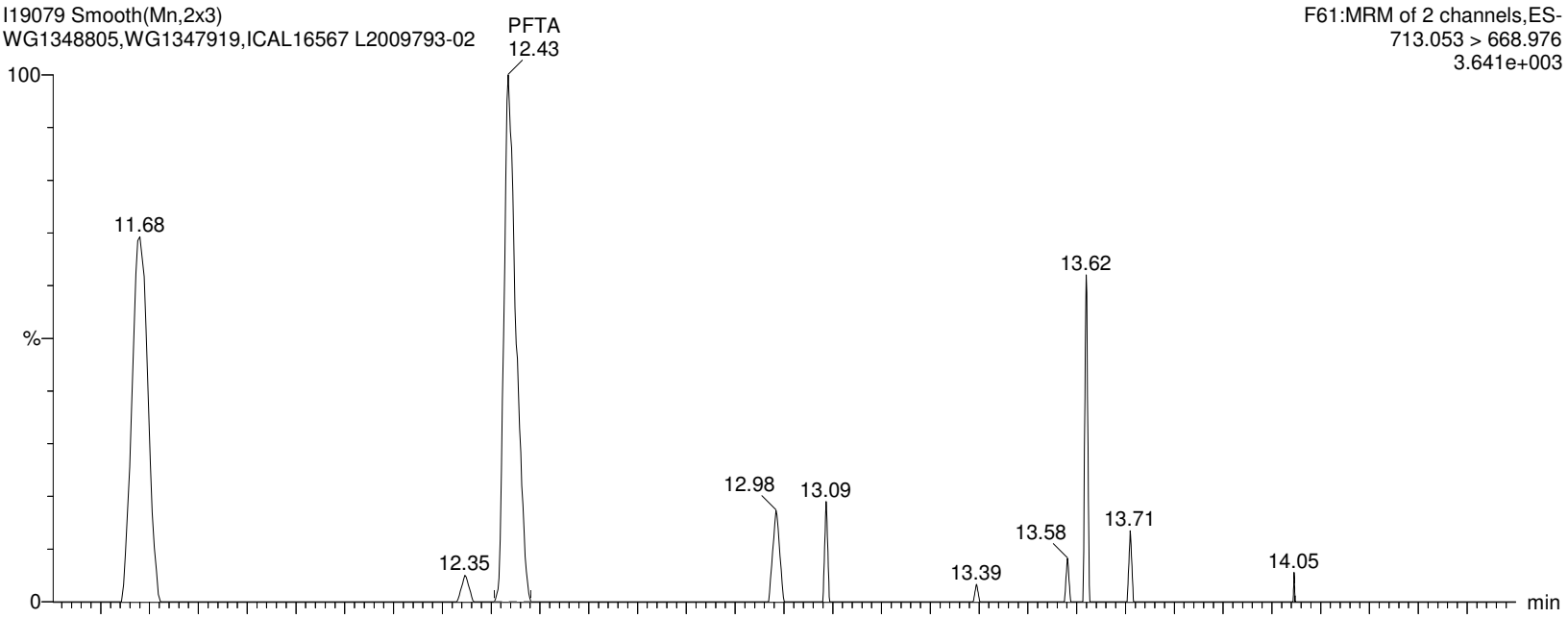
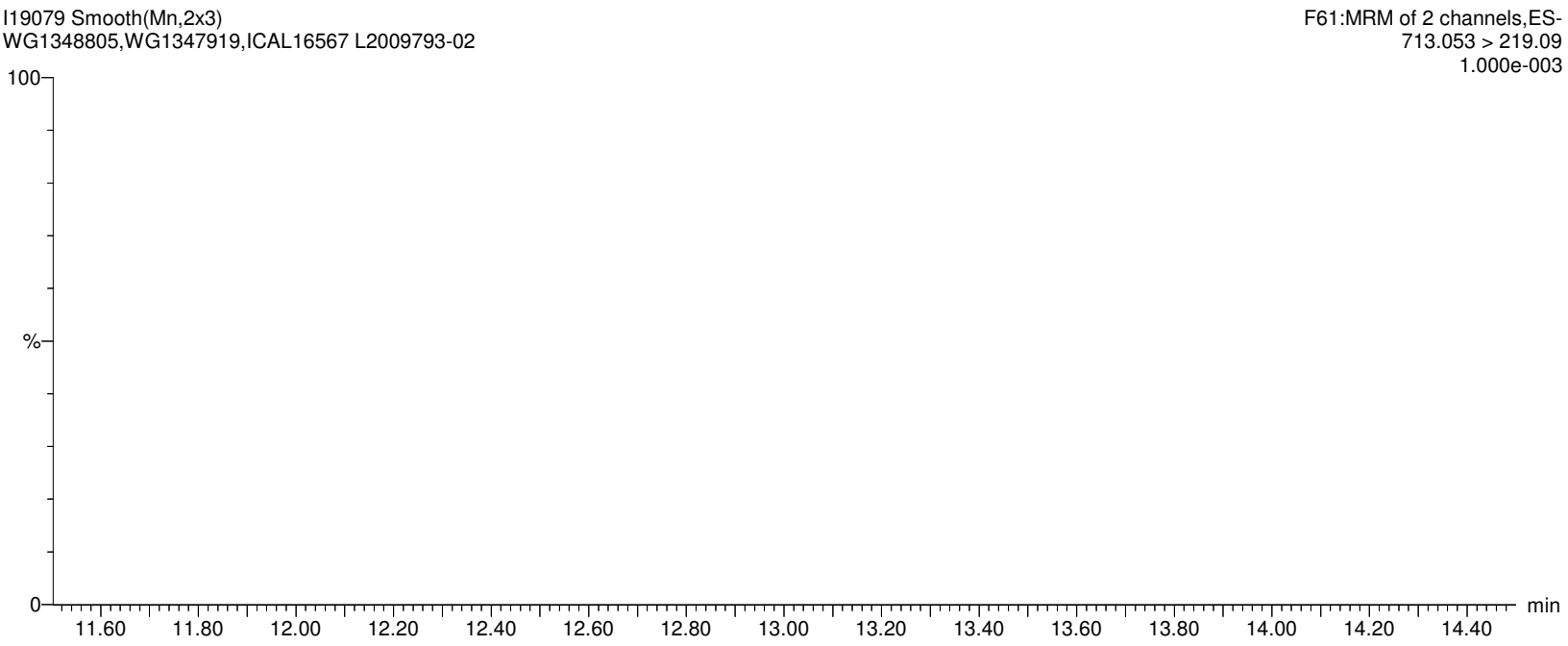
**MS Method Name: C:\MassLynx\Data\200309_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**PFTA**





all concentration units in (ng/mL)

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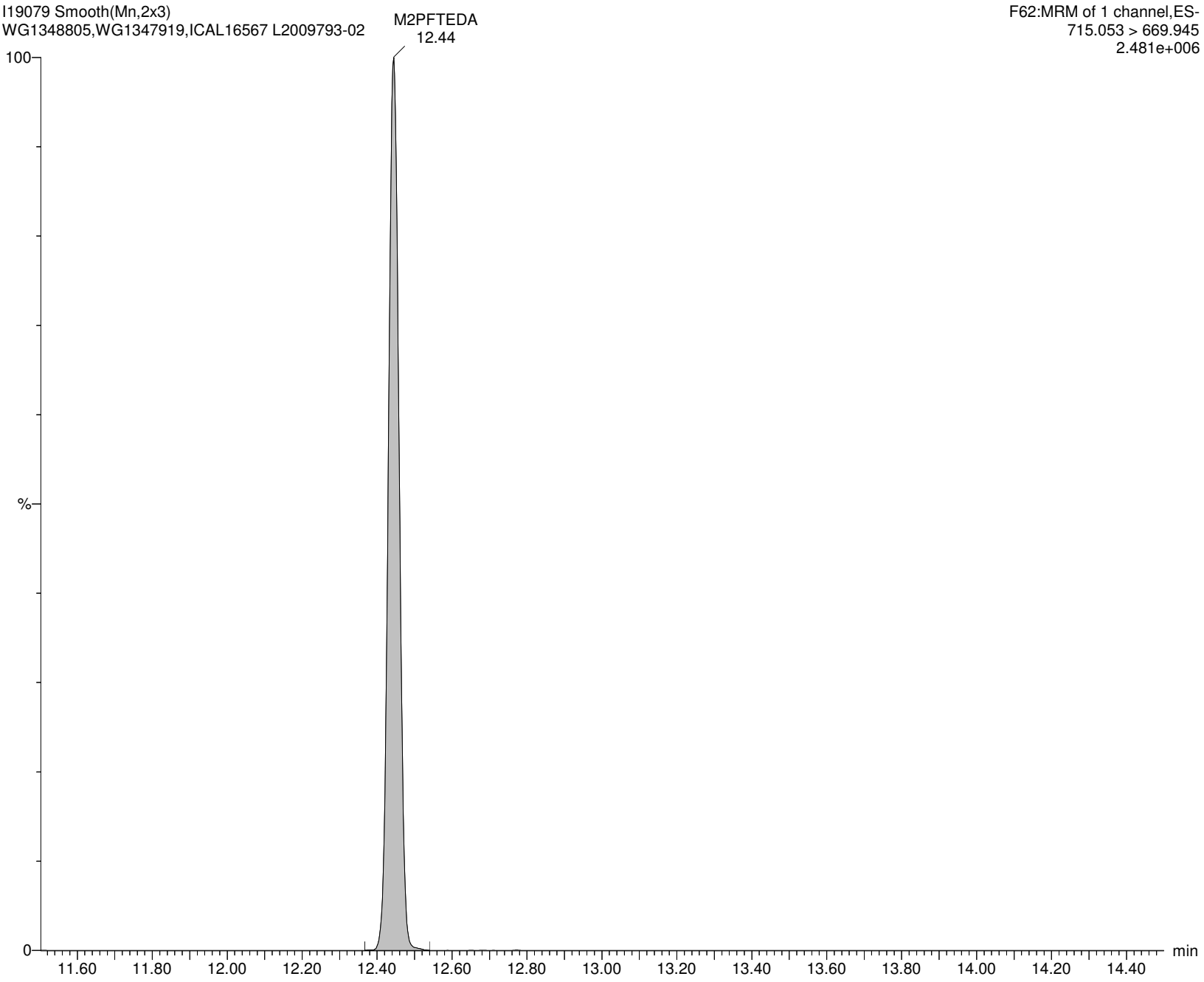
**Tune Method Name: C:\MassLynx\Data\200309_537ISO.PRO\ACQUDB\190709_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\200309_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**M2PFTEDA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200309_537ISO.PRO\Data\WG1348805B.qld
Last Altered: Tuesday, March 17, 2020 11:14:29 Eastern Daylight Time
Printed: Tuesday, March 17, 2020 11:14:52 Eastern Daylight Time

**Method: C:\MassLynx\Data\200309_537ISO.PRO\MethDB\537ISO_Q_200227 .mdb 28 Feb 2020 10:16:06**
**Calibration: C:\MassLynx\Data\200309_537ISO.PRO\CurveDB\200227_537ISO_ICAL.cdb 28 Feb 2020 10:12:40**

**ID: L2009793-03**
**Name: I19086**
**Date: 09-Mar-2020**
**Time: 17:36:11**
**Description: WG1348805,WG1347919,ICAL16567**
**Instrument: XEVO-TQSmicro#QEA0276**
**User: LCMS01:JW**
**Inlet Method Name: C:\MassLynx\Data\200309_537ISO.PRO\ACQUDB\LCMS_537_ISO_MeOH**
**Tune Method Name: C:\MassLynx\Data\200309_537ISO.PRO\ACQUDB\190709_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\200309_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

| | Name | CAS | RT | Trace | Area | M Flag | Conc (ng/mL) | Ion Ratio | Ratio Flag | %Rec |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | PFBA | 375-22-4 | 2.19 | 212.926 > 169.111 | 27 | M2 | 0.008 | | na | |
| 2 | M3PFBA | INT STD | 2.21 | 215.926 > 172.122 | 40588 | | 10.322 | | na | 103.2 |
| 3 | MPFBA | INT STD | 2.21 | 216.926 > 172.137 | 47190 | | 10.147 | | na | 101.5 |
| 4 | PFPeA | 2706-90-3 | 5.15 | 262.926 > 219.002 | 528 | m4 | 0.106 | | na | |
| 5 | M5PFPEA | INT STD | 5.17 | 267.989 > 223.081 | 71824 | | 11.640 | | na | 116.4 |
| 6 | PFBS | 375-73-5 | | 298.926 > 79.923 | | | ND | | YES | |
| 7 | M3PFBS | INT STD | 5.83 | 301.989 > 80.254 | 12615 | | 10.351 | | na | 103.5 |
| 8 | 4:2FTS | 757124-72-4 | | 326.926 > 306.957 | | | ND | | YES | |
| 9 | M2-4:2FTS | INT STD | 7.01 | 329.117 > 309.079 | 5686 | | 8.955 | | na | 89.6 |
| 10 | PFHxA | 307-24-4 | 7.10 | 312.989 > 269.028 | 655 | m4 | 0.098 | | YES | |
| 11 | M5PFHxA | INT STD | 7.09 | 317.989 > 273.045 | 80785 | | 9.283 | | na | 92.8 |
| 12 | PFPeS | 2706-91-4 | | 348.926 > 80.251 | | | ND | | YES | |
| 13 | PFHpA | 375-85-9 | | 362.926 > 319.014 | | | ND | | YES | |
| 14 | M4PFHpA | INT STD | 8.36 | 366.926 > 321.979 | 104622 | | 10.362 | | na | 103.6 |
| 15 | br-PFHxS | 355-46-4 | | 398.904 > 79.915 | | | ND | | YES | |
| 16 | L-PFHxS | 355-46-4 | | 398.904 > 79.915 | | | ND | | YES | |
| 17 | PFHxS | 355-46-4 | | 398.904 > 79.915 | 0 | | ND | | na | |
| 18 | M3PFHxS | INT STD | 8.52 | 401.926 > 80.317 | 13106 | | 12.004 | | na | 120.0 |
| 19 | br-PFOA | 335-67-1 | | 412.989 > 368.9 | | | ND | | YES | |
| 20 | L-PFOA | 335-67-1 | | 412.989 > 368.9 | | | ND | | YES | |
| 21 | M2PFOA | INT STD | 9.30 | 415.032 > 369.968 | 106296 | | 12.634 | | na | 126.3 |
| 22 | PFOA | 335-67-1 | | 412.989 > 368.9 | 0 | | ND | | na | |
| 23 | M8PFOA | INT STD | 9.30 | 420.989 > 375.979 | 100767 | | 9.941 | | na | 99.4 |
| 24 | 6:2FTS | 27619-97-2 | | 426.989 > 406.921 | | | ND | | YES | |
| 25 | M2-6:2FTS | INT STD | 9.26 | 428.989 > 408.917 | 5761 | | 14.582 | | na | 145.8 |
| 26 | PFHpS | 375-92-8 | | 448.926 > 80.257 | | | ND | | YES | |
| 27 | PFNA | 375-95-1 | | 462.989 > 418.931 | | | ND | | YES | |
| 28 | M9PFNA | INT STD | 10.05 | 472.053 > 426.947 | 100423 | | 10.134 | | na | 101.3 |
| 29 | br-PFOS | 1763-23-1 | 9.91 | 498.968 > 79.918 | 24 | | 0.029 | 3.39 | NO | |
| 30 | L-PFOS | 1763-23-1 | 10.09 | 498.968 > 79.918 | 34 | | 0.055 | 1.63 | NO | |
| 31 | PFOS | 1763-23-1 | | 498.968 > 79.918 | 59 | | 0.084 | | na | |
| 32 | M4PFOS | INT STD | 10.09 | 503.032 > 80.306 | 9500 | | 11.184 | | na | 111.8 |
| 33 | M8PFOS | INT STD | 10.09 | 507.053 > 80.294 | 11584 | | 10.500 | | na | 105.0 |
| 34 | PFDA | 335-76-2 | | 513.053 > 468.906 | | | ND | | YES | |
| 35 | M2PFDA | INT STD | 10.67 | 515.053 > 469.934 | 94654 | | 14.309 | | na | 143.1 |
| 36 | M6PFDA | INT STD | 10.67 | 519.053 > 473.931 | 95986 | | 9.217 | | na | 92.2 |
| 37 | 8:2FTS | 39108-34-4 | | 527.032 > 507.079 | | | ND | | YES | |
| 38 | M2-8:2FTS | INT STD | 10.66 | 529.053 > 508.945 | 2677 | | 11.207 | | na | 112.1 |
| 39 | PFNS | 68259-12-1 | | 548.989 > 80.249 | | | ND | | YES | |


all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200309_537ISO.PRO\Data\WG1348805B.qld
Last Altered: Tuesday, March 17, 2020 11:14:29 Eastern Daylight Time
Printed: Tuesday, March 17, 2020 11:14:52 Eastern Daylight Time

**ID: L2009793-03**
**Name: I19086**
**Date: 09-Mar-2020**
**Time: 17:36:11**
**Description: WG1348805,WG1347919,ICAL16567**
**Instrument: XEVO-TQSmicro#QEA0276**
**User: LCMS01:JW**
**Inlet Method Name: C:\MassLynx\Data\200309_537ISO.PRO\ACQUDB\LCMS_537_ISO_MeOH**
**Tune Method Name: C:\MassLynx\Data\200309_537ISO.PRO\ACQUDB\190709_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\200309_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

| | Name | CAS | RT | Trace | Area | M Flag | Conc (ng/mL) | Ion Ratio | Ratio Flag | %Rec |
|---|---|---|---|---|---|---|---|---|---|---|
| 40 | d3-NMeFOSAA | INT STD | 11.05 | 573.096 > 418.987 | 13877 | | 10.059 | | na | 100.6 |
| 41 | NMeFOSAA | 2355-31-9 | | 570.053 > 418.917 | | | ND | | YES | |
| 42 | PFUnA | 2058-94-8 | | 562.989 > 518.903 | | | ND | | YES | |
| 43 | M7-PFUDA | INT STD | 11.21 | 570.053 > 524.923 | 95332 | | 10.417 | | na | 104.2 |
| 44 | PFDS | 335-77-3 | | 598.926 > 80.314 | | | ND | | YES | |
| 45 | FOSA | 754-91-6 | | 497.989 > 78.245 | | | ND | | YES | |
| 46 | M8FOSA | INT STD | 11.10 | 506.053 > 78.286 | 24346 | | 5.834 | | na | 58.3 |
| 47 | d5-NEtFOSAA | INT STD | 11.34 | 589.117 > 418.929 | 9634 | | 9.576 | | na | 95.8 |
| 48 | NEtFOSAA | 2991-50-6 | 11.35 | 583.989 > 418.927 | 14 | M2 | 0.018 | | YES | |
| 49 | PFDoA | 307-55-1 | | 612.989 > 568.967 | | | ND | | YES | |
| 50 | MPFDOA | INT STD | 11.68 | 614.989 > 569.92 | 95514 | | 9.708 | | na | 97.1 |
| 51 | PFTrDA | 72629-94-8 | | 663.053 > 618.969 | | | ND | | YES | |
| 52 | PFTA | 376-06-7 | | 713.053 > 668.976 | | | ND | | YES | |
| 53 | M2PFTEDA | INT STD | 12.44 | 715.053 > 669.945 | 96359 | | 8.690 | | na | 86.9 |


all concentration units in (ng/mL)

Alpha Analytical Inc.
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Printed: Tuesday, March 17, 2020 11:14:52 Eastern Daylight Time

**Method: C:\MassLynx\Data\200309_537ISO.PRO\MethDB\537ISO_Q_200227 .mdb 28 Feb 2020 10:16:06**
**Calibration: C:\MassLynx\Data\200309_537ISO.PRO\CurveDB\200227_537ISO_ICAL.cdb 28 Feb 2020 10:12:40**

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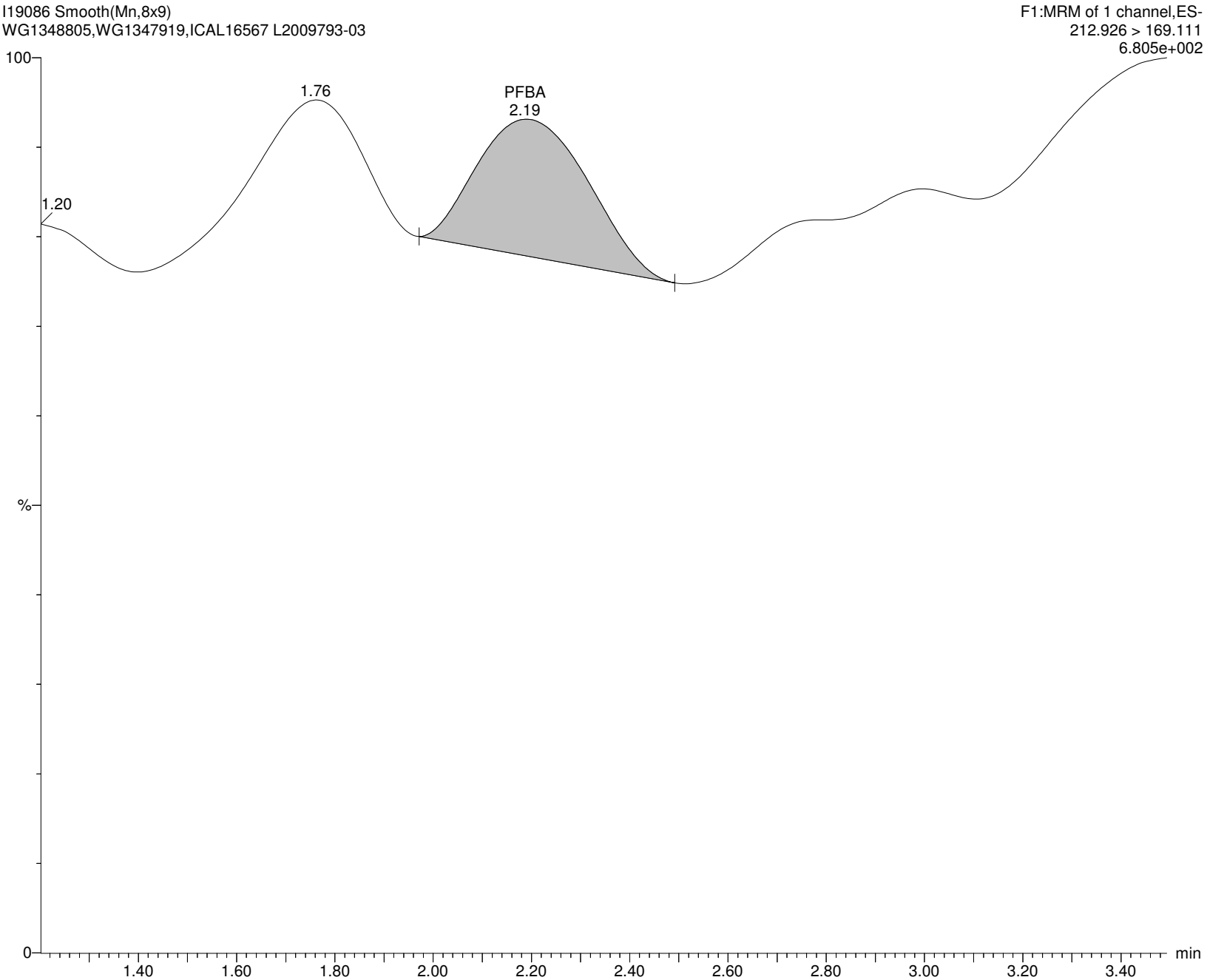
**Date: 09-Mar-2020**
**Time: 17:36:11**
**Description: WG1348805,WG1347919,ICAL16567**
**User: LCMS01:JW**
**Vial: 1:C,7**
**Instrument: XEVO-TQSmicro#QEA0276**
**Inlet Method Name: C:\MassLynx\Data\200309_537ISO.PRO\ACQUDB\LCMS_537_ISO_MeOH**
**Tune Method Name: C:\MassLynx\Data\200309_537ISO.PRO\ACQUDB\190709_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\200309_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**PFBA**





all concentration units in (ng/mL)

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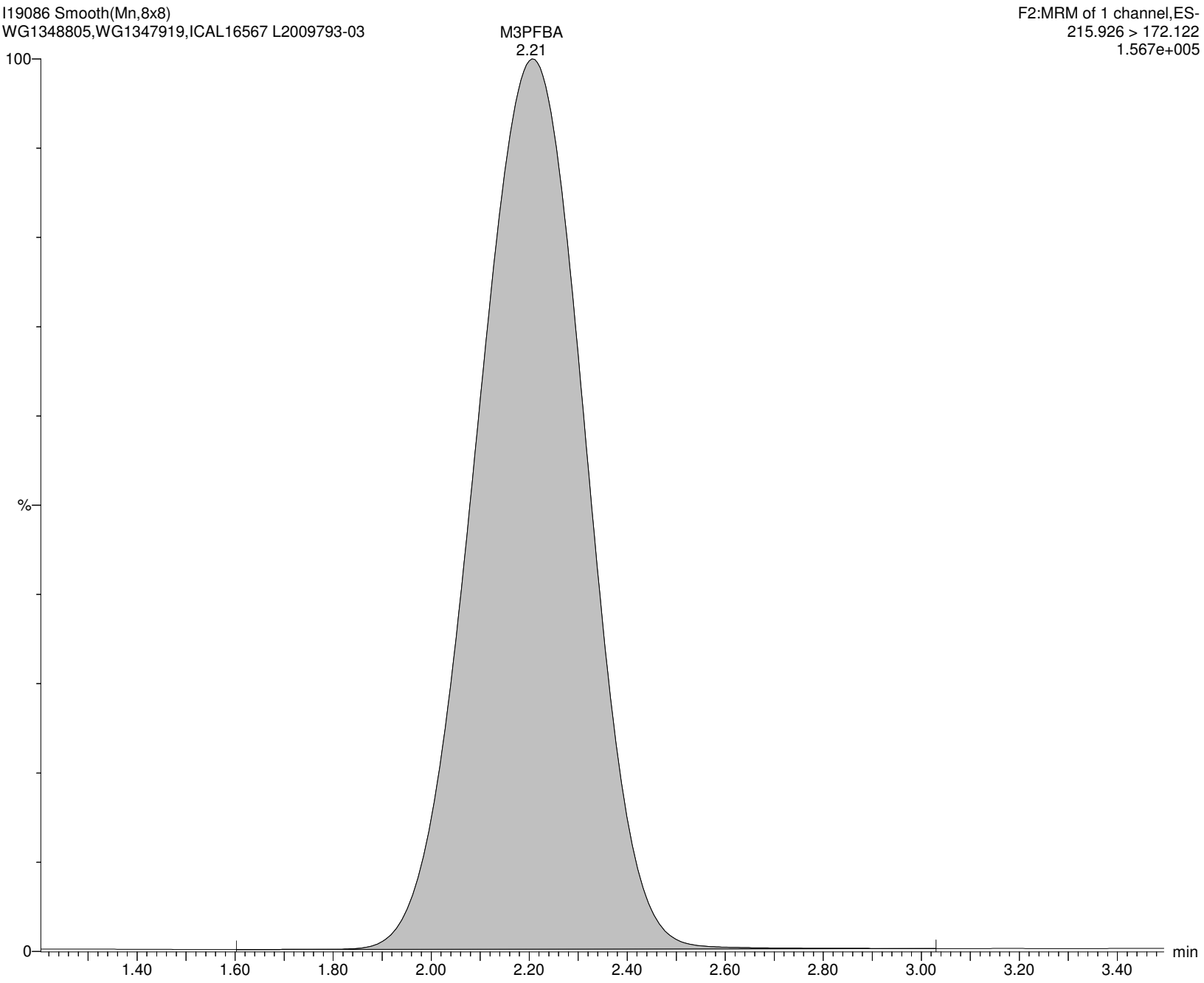
**M3PFBA**





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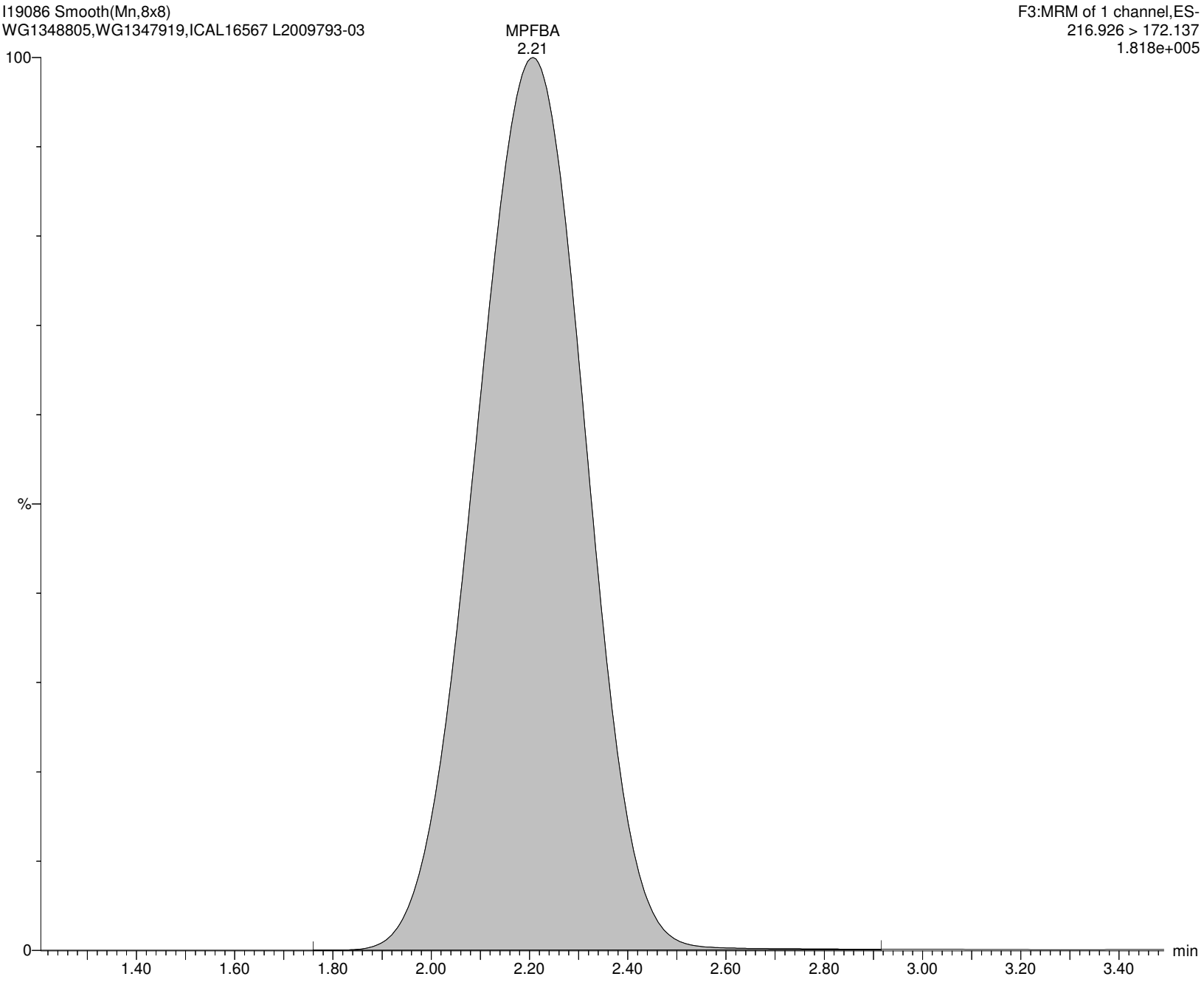
**MPFBA**





all concentration units in (ng/mL)

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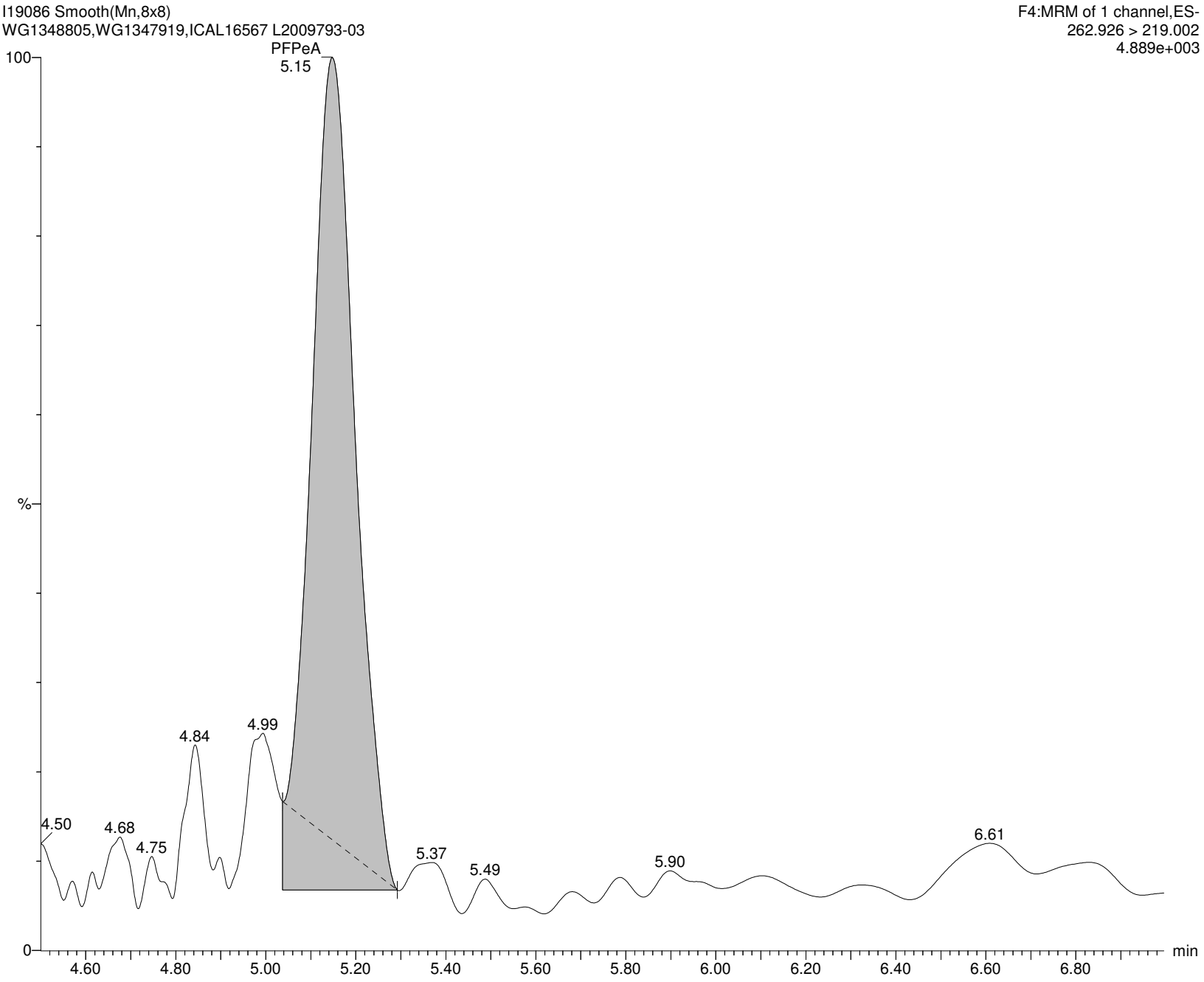
**PFPeA**





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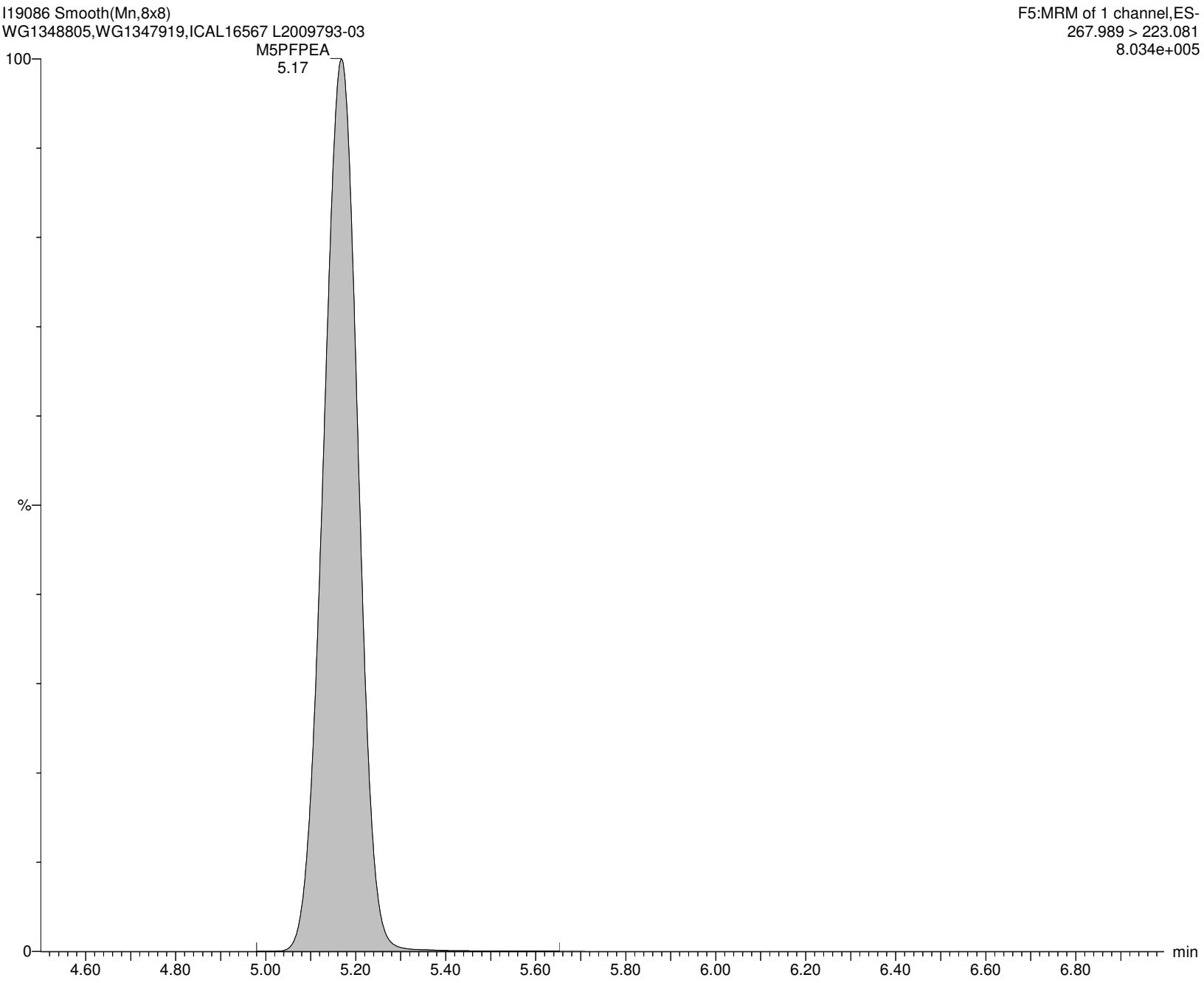
**Instrument: XEVO-TQSmicro#QEA0276**
**Inlet Method Name: C:\MassLynx\Data\200309_537ISO.PRO\ACQUDB\LCMS_537_ISO_MeOH**
**Tune Method Name: C:\MassLynx\Data\200309_537ISO.PRO\ACQUDB\190709_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\200309_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**M5PFPEA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
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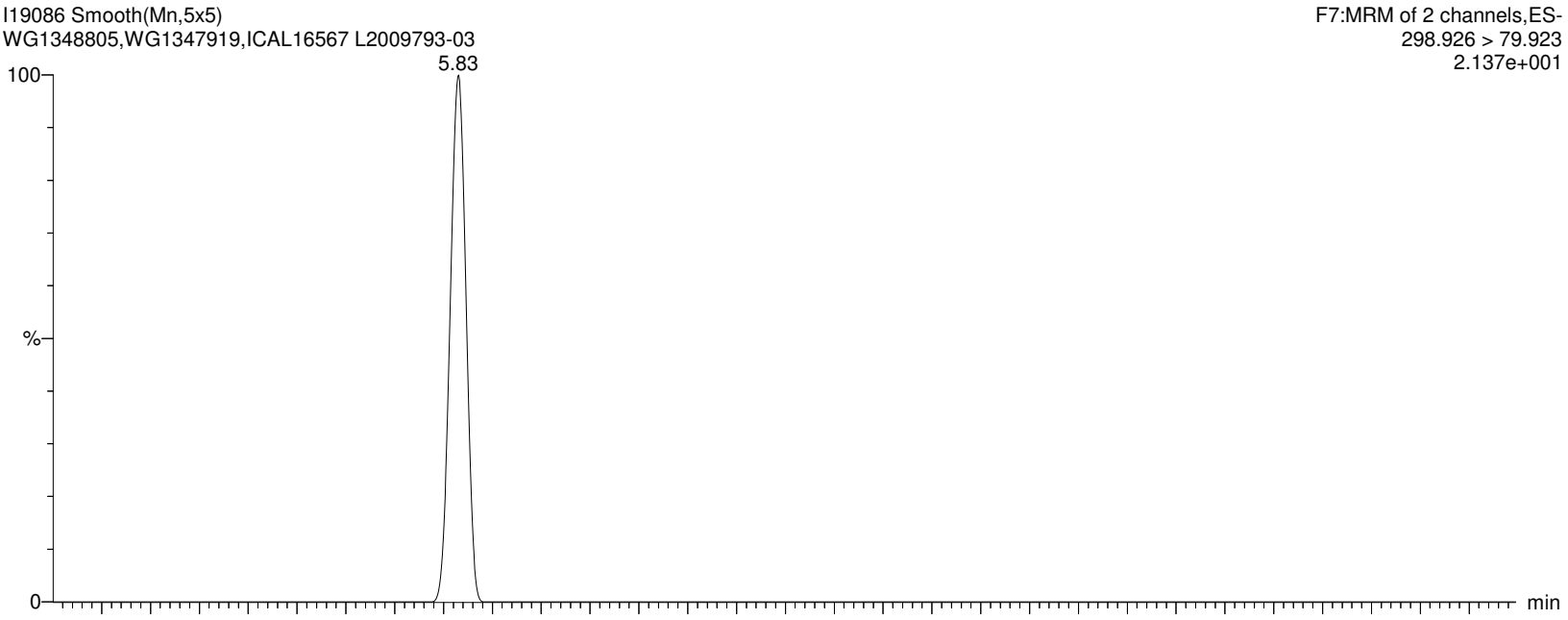
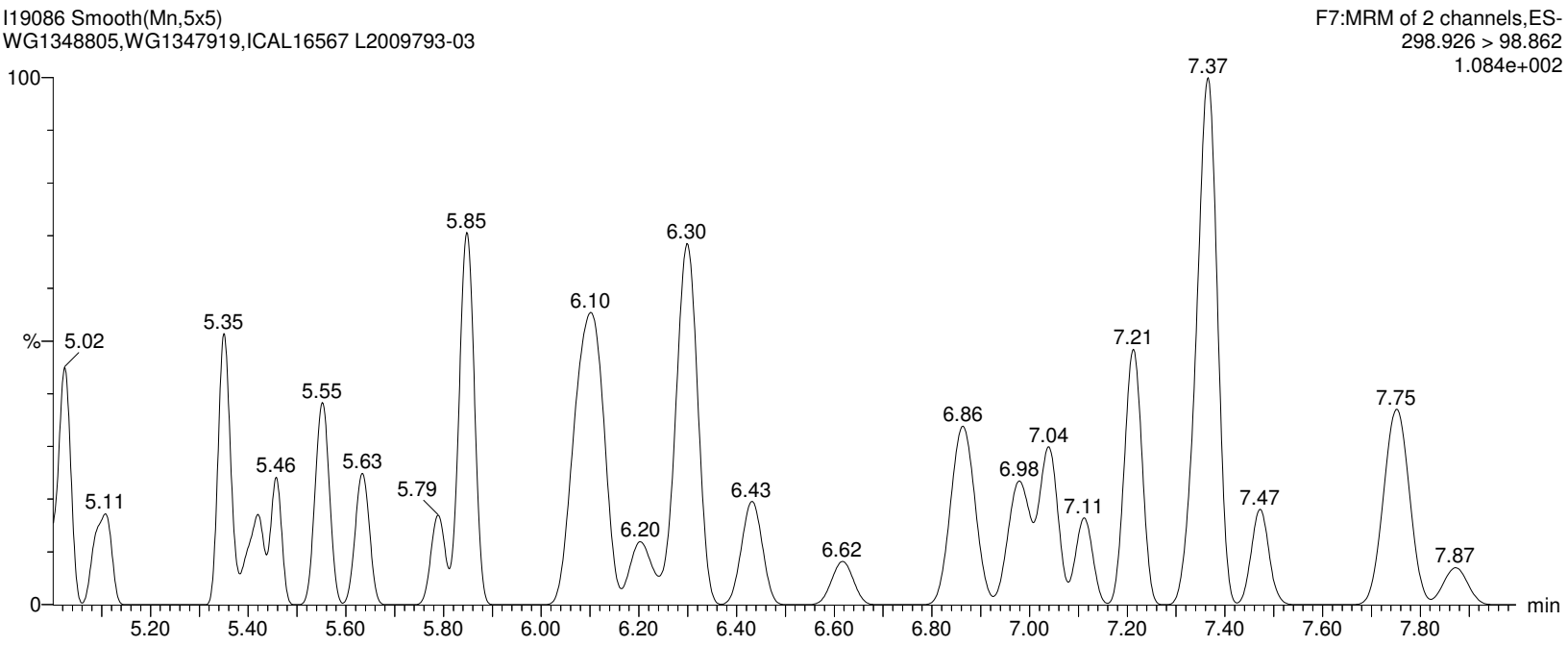
**MS Method Name: C:\MassLynx\Data\200309_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**PFBS**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200309_537ISO.PRO\Data\WG1348805B.qld
Last Altered: Tuesday, March 17, 2020 11:14:29 Eastern Daylight Time
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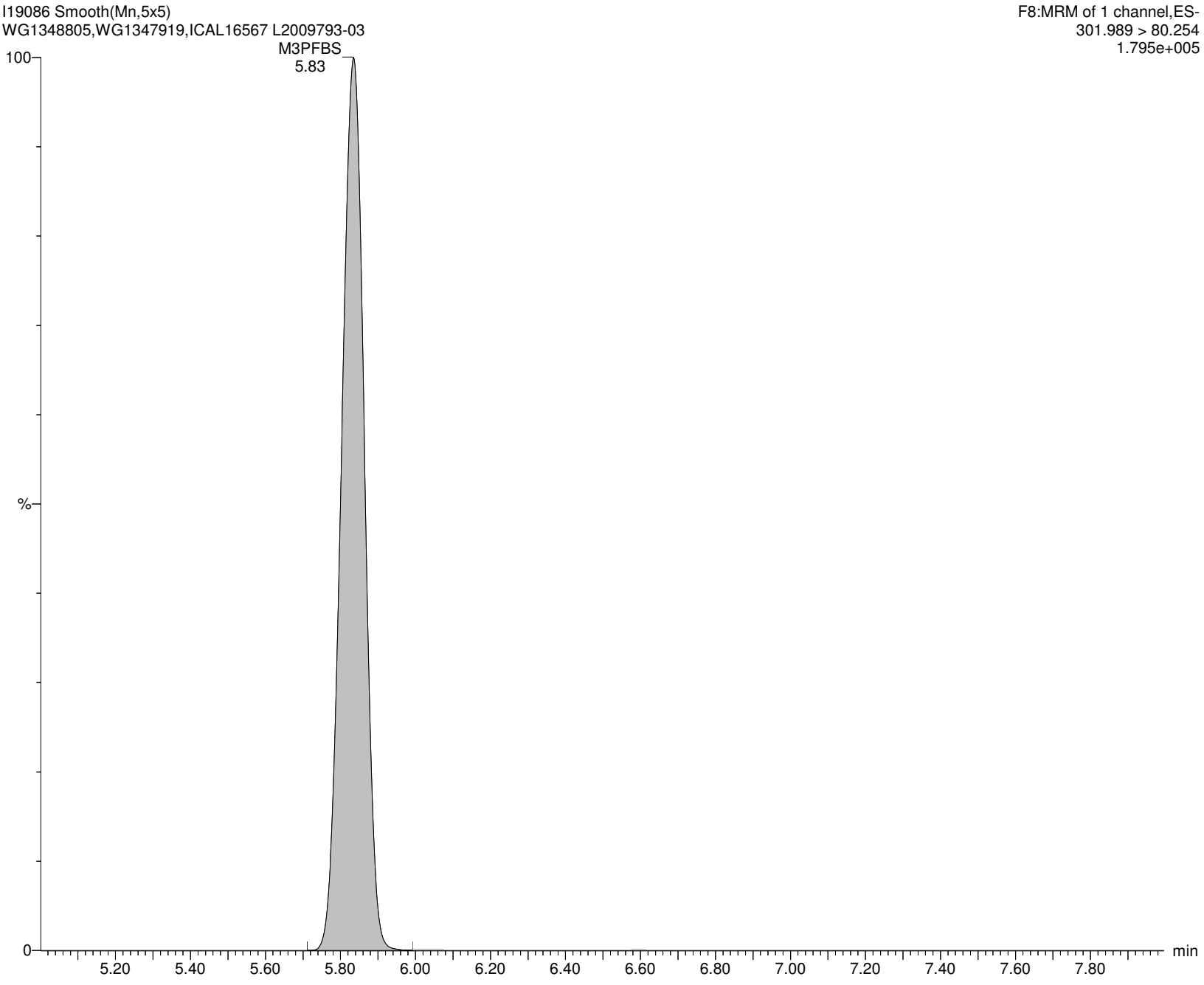
**Name: I19086**
**ID: L2009793-03**
**Date: 09-Mar-2020**
**Time: 17:36:11**
**Description: WG1348805,WG1347919,ICAL16567**
**User: LCMS01:JW**
**Vial: 1:C,7**
**Instrument: XEVO-TQSmicro#QEA0276**
**Inlet Method Name: C:\MassLynx\Data\200309_537ISO.PRO\ACQUDB\LCMS_537_ISO_MeOH**
**Tune Method Name: C:\MassLynx\Data\200309_537ISO.PRO\ACQUDB\190709_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\200309_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**M3PFBS**





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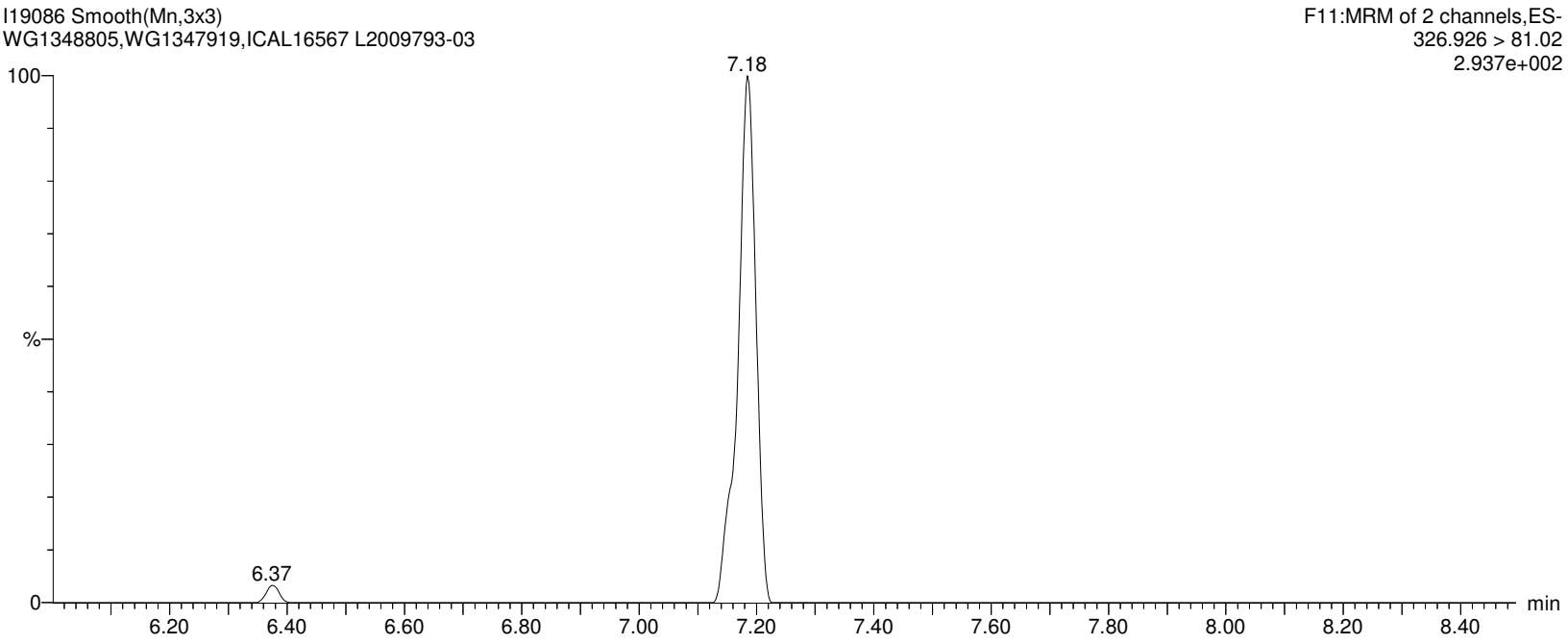
**4:2FTS**





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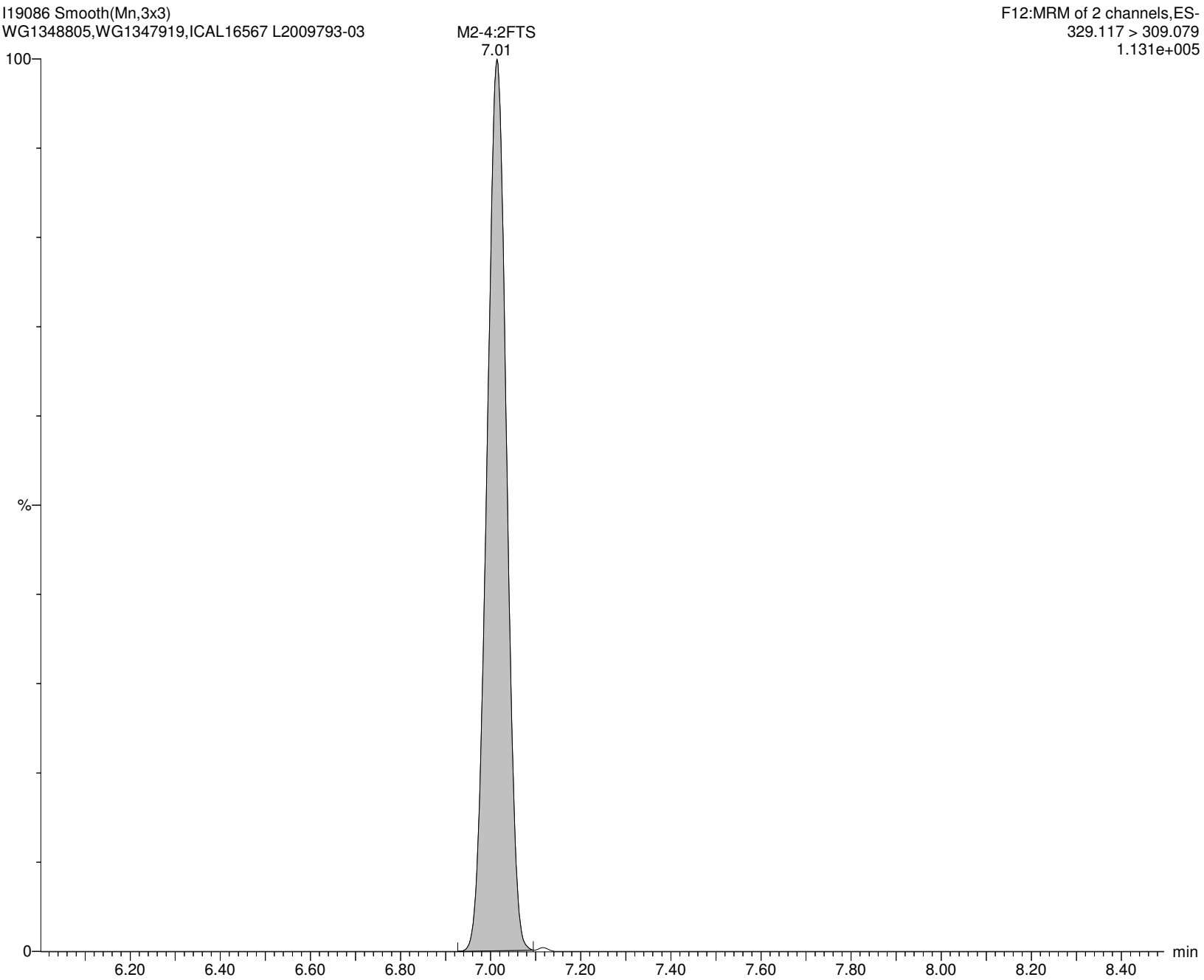
**M2-4:2FTS**





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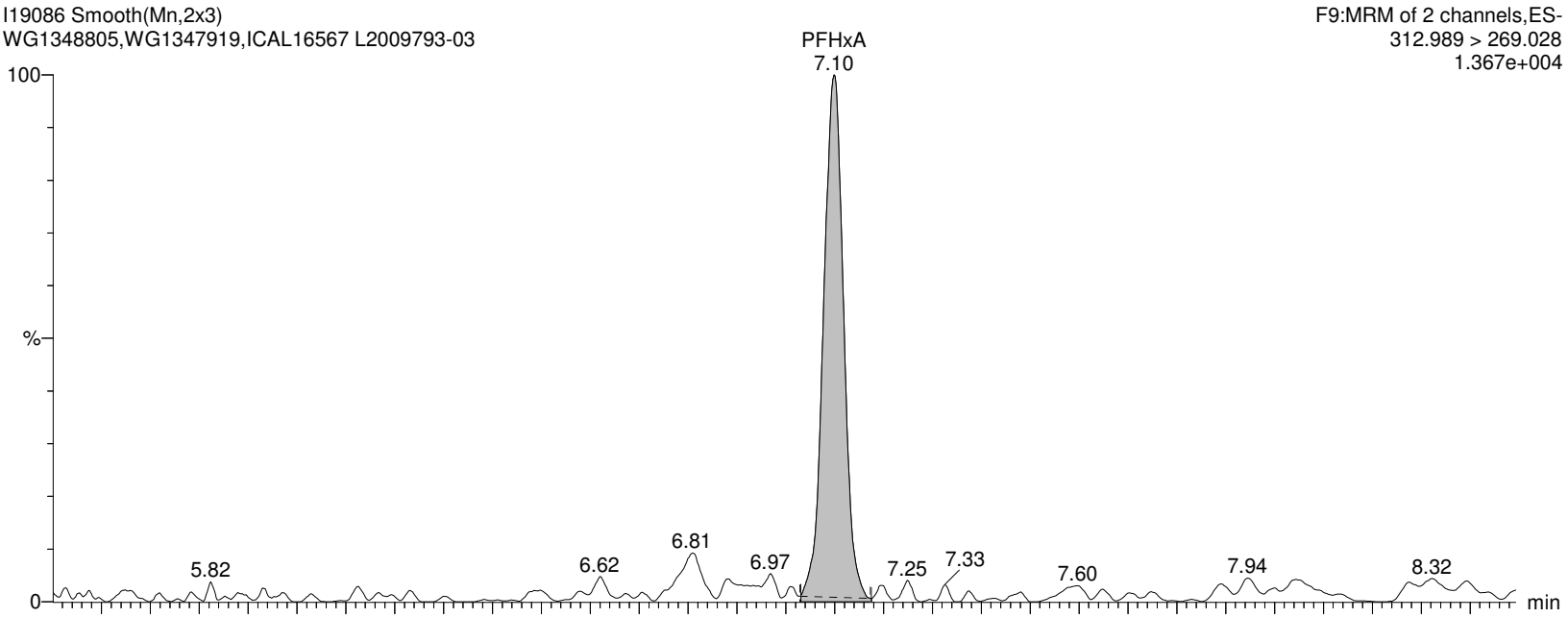
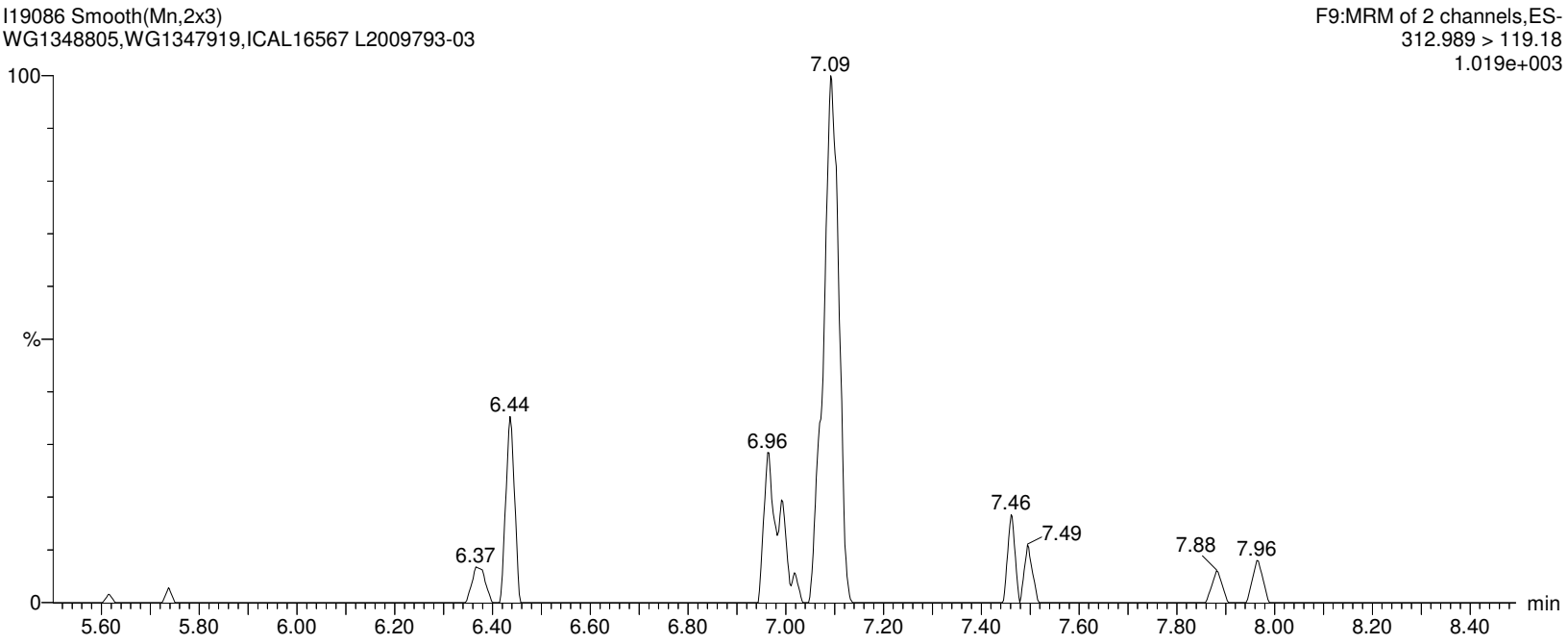
**PFHxA**





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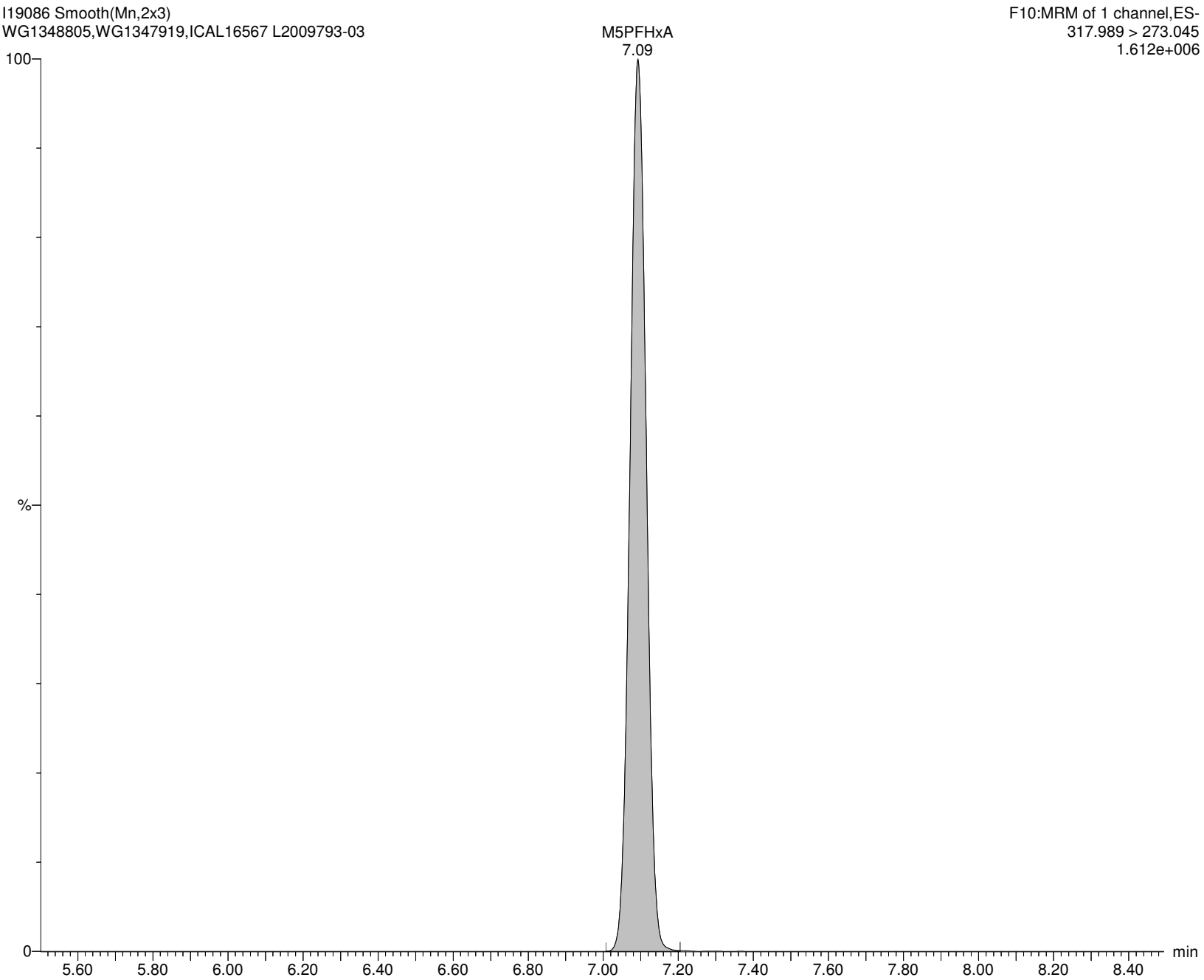
**M5PFHxA**





all concentration units in (ng/mL)

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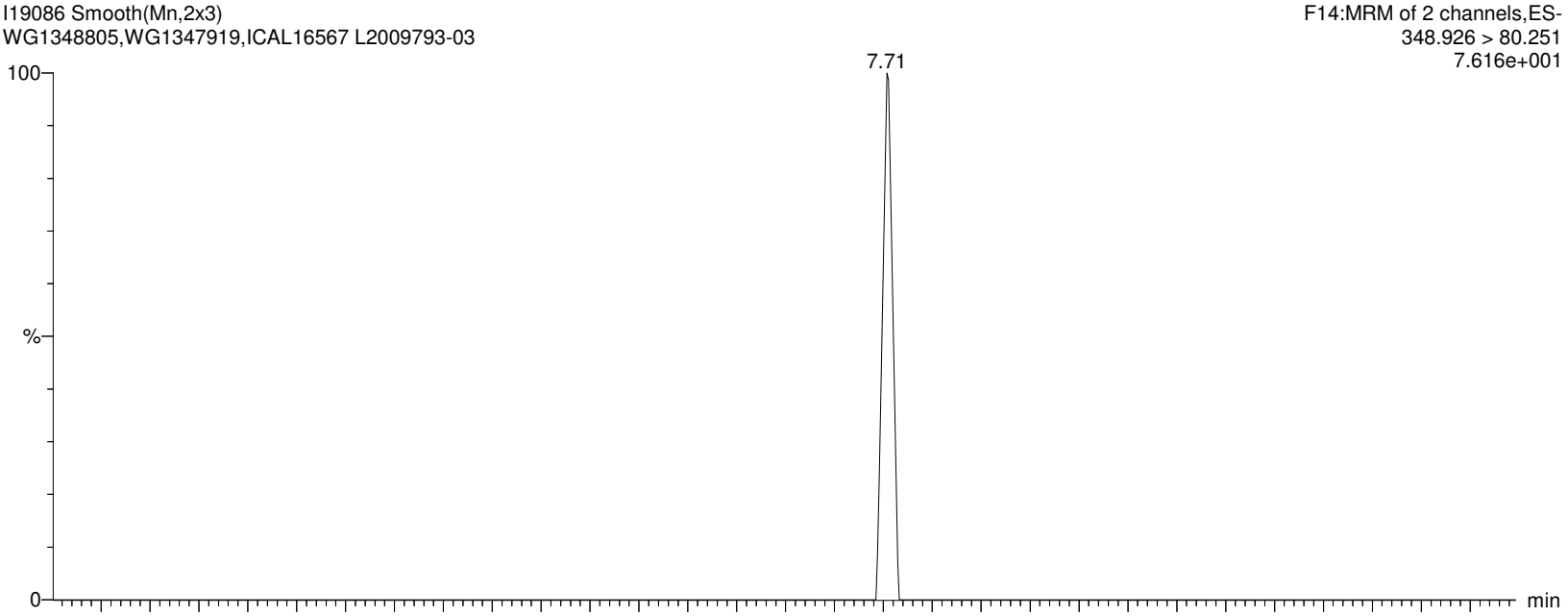


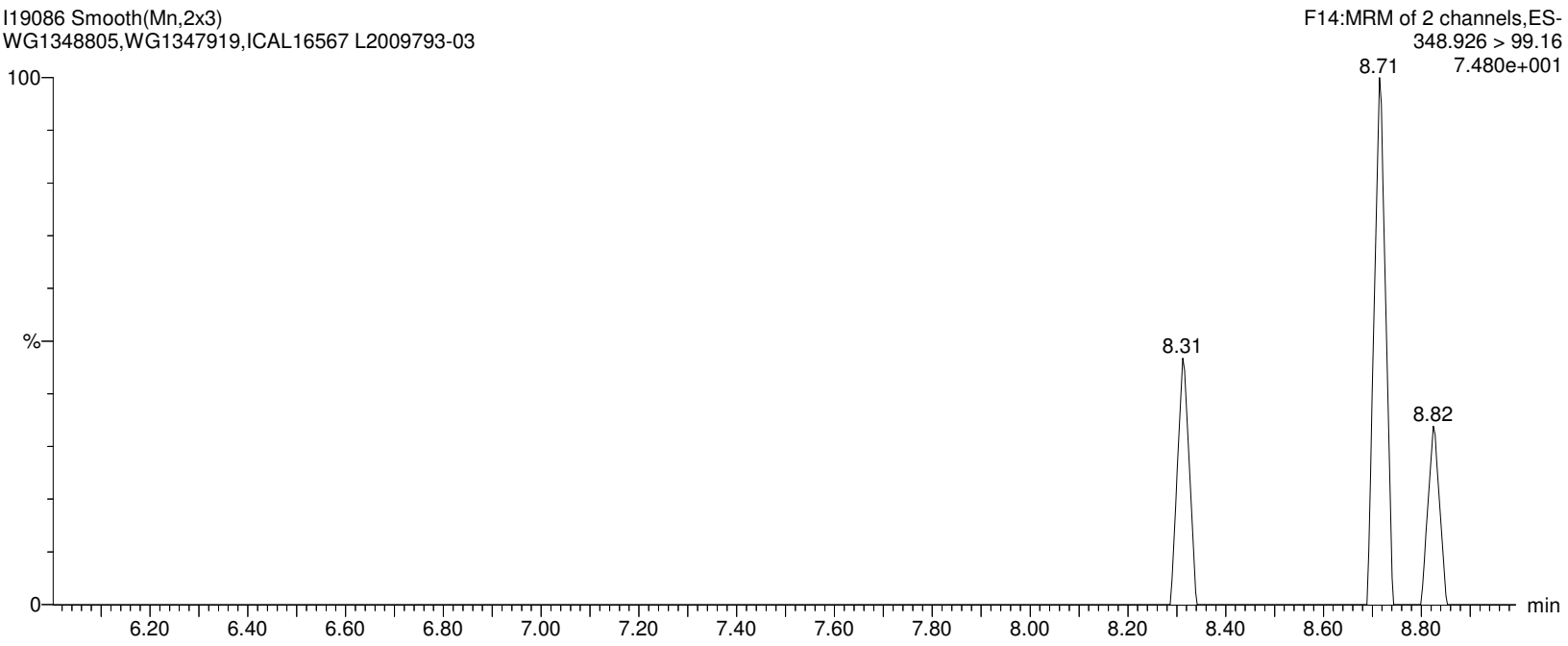



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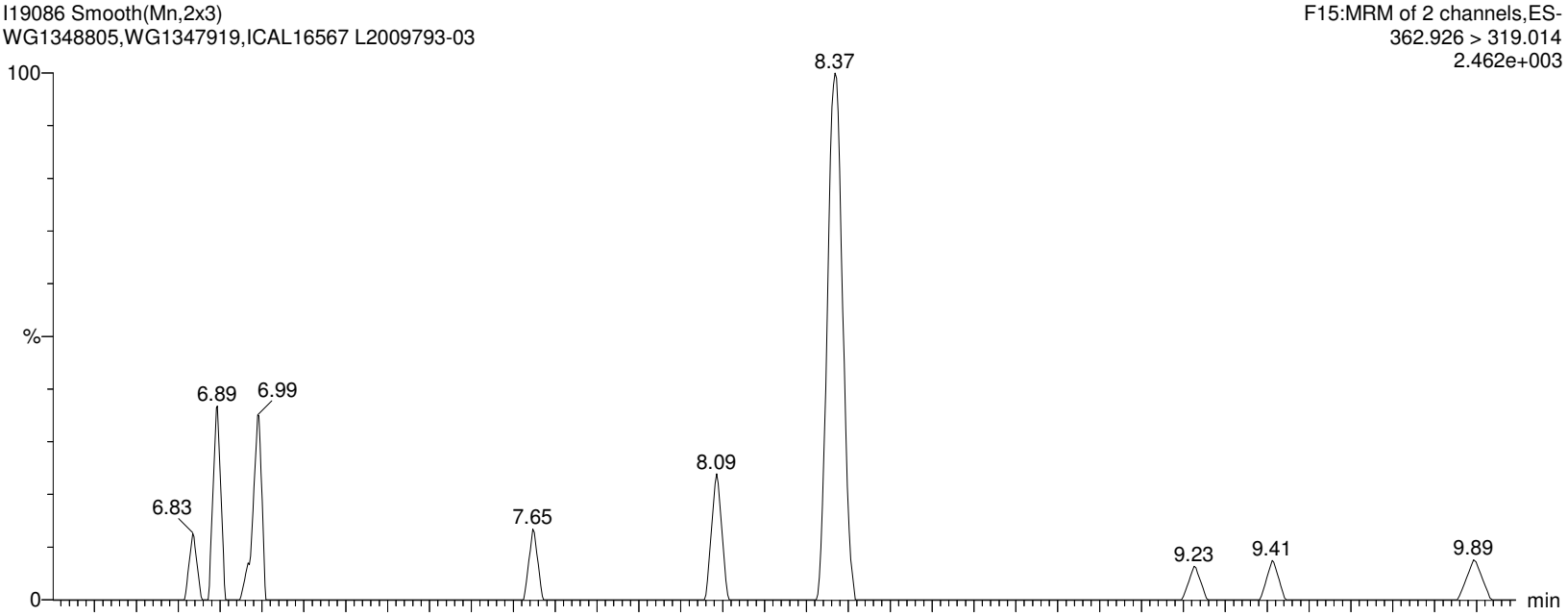
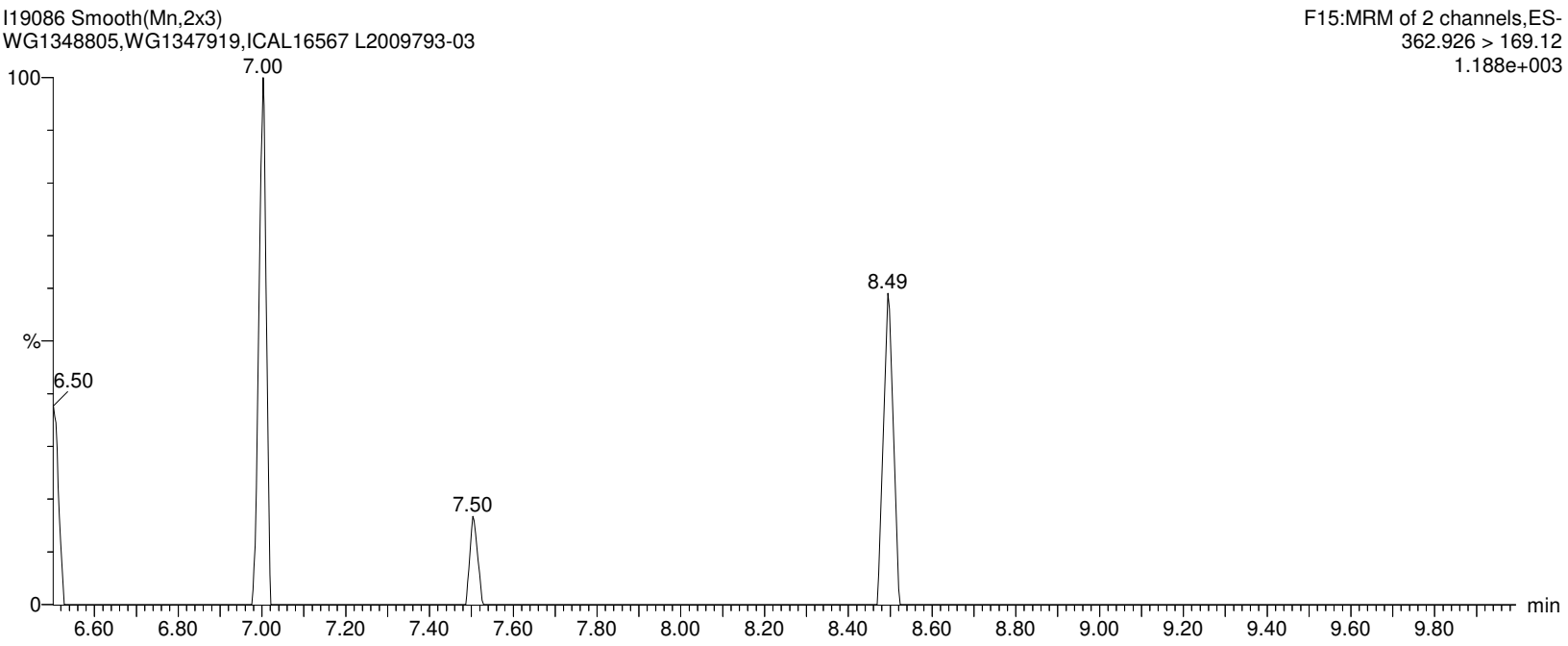
**PFHpA**





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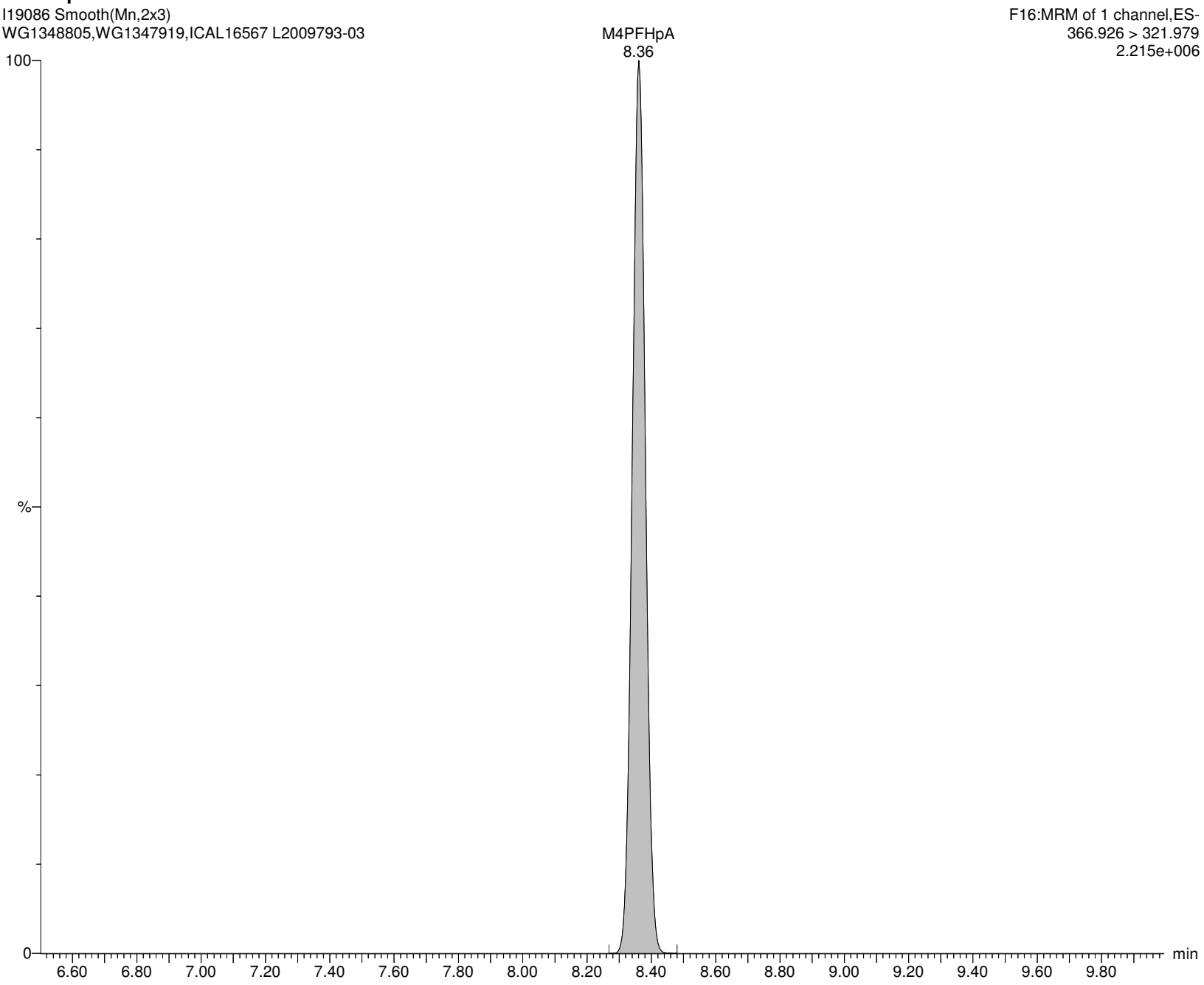
**M4PFHpA**





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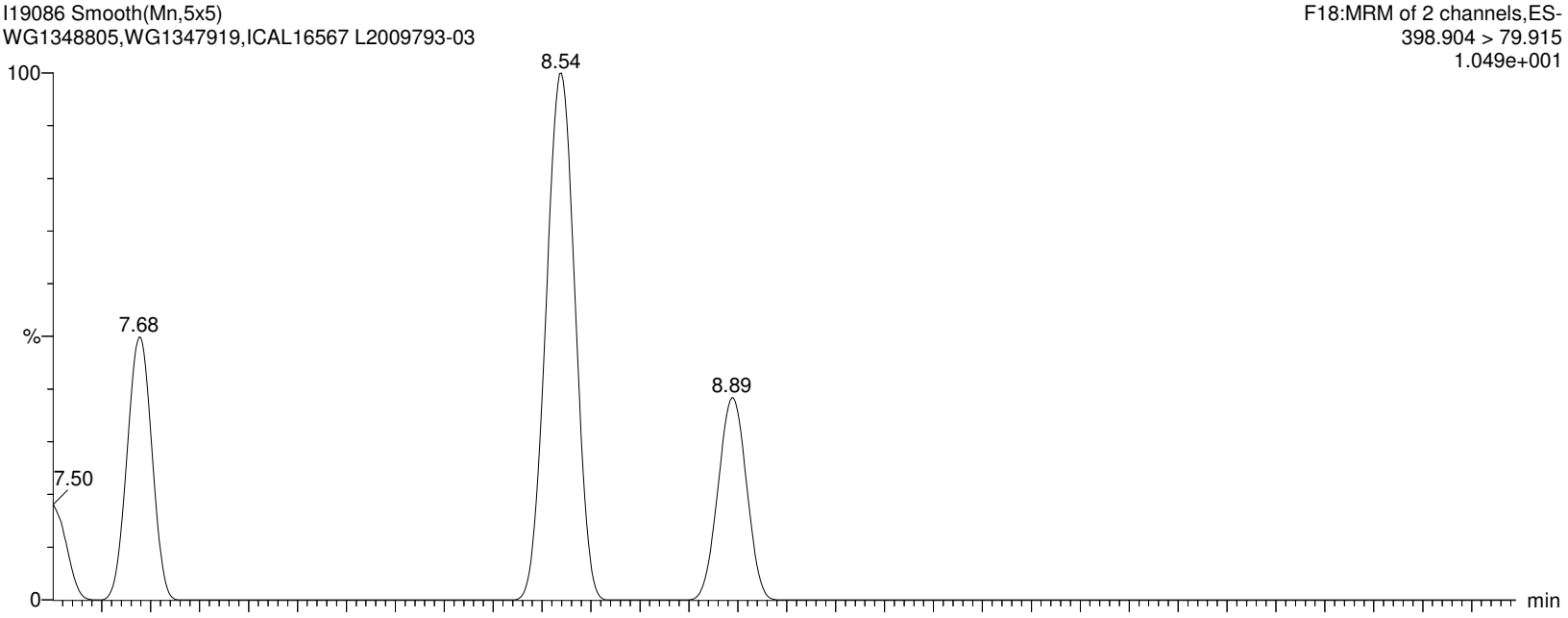
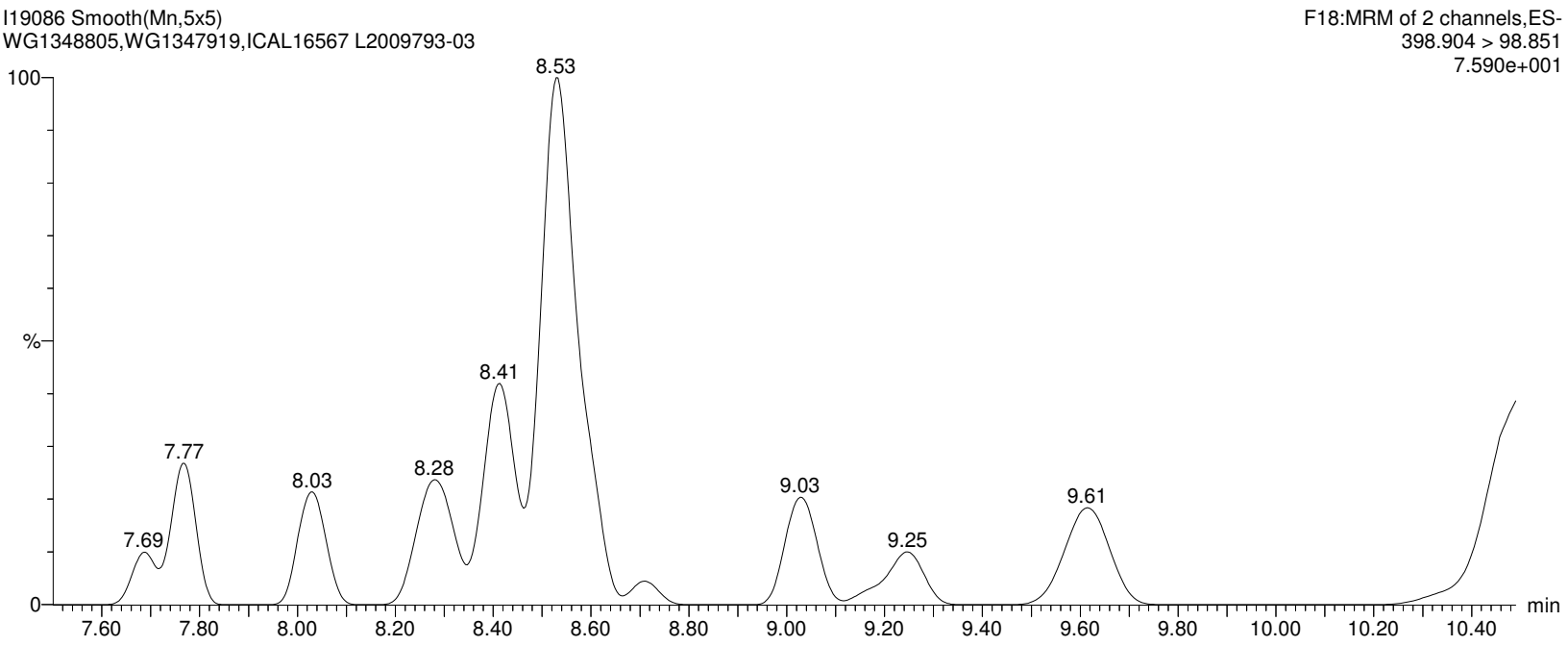
**br-PFHxS**





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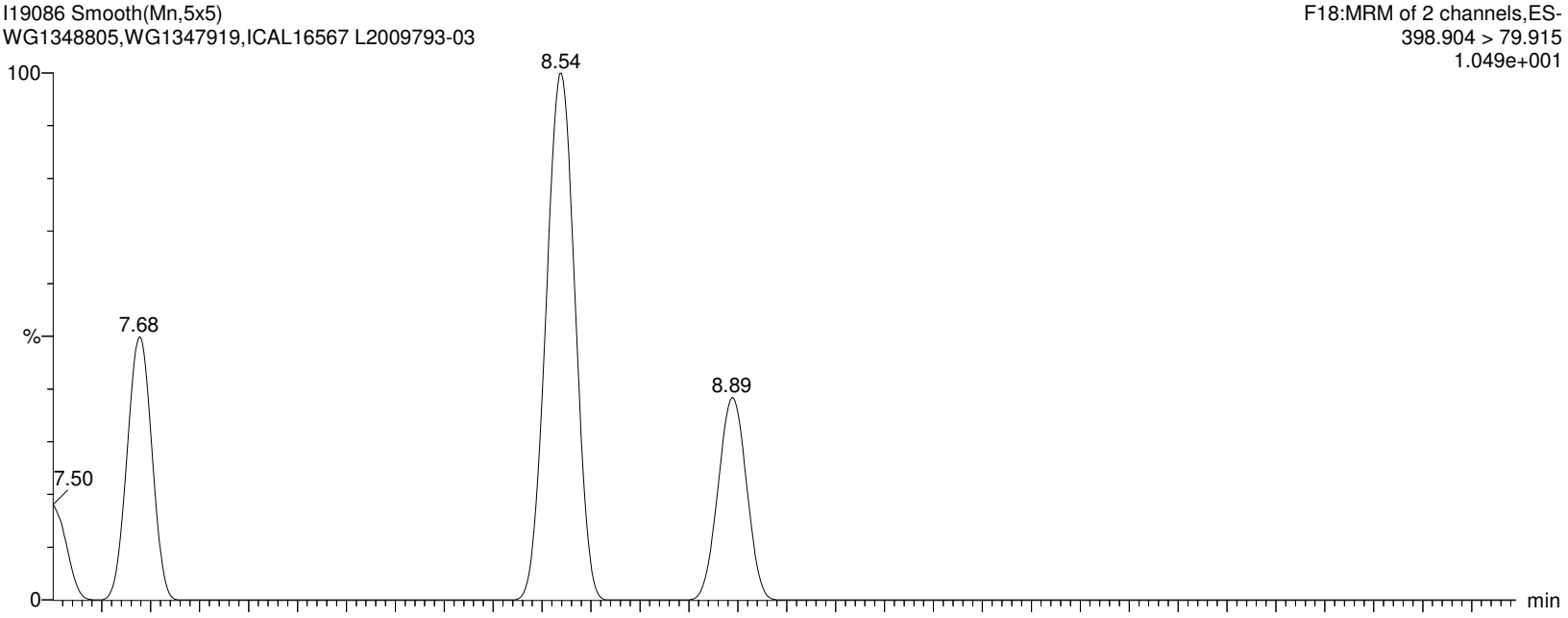


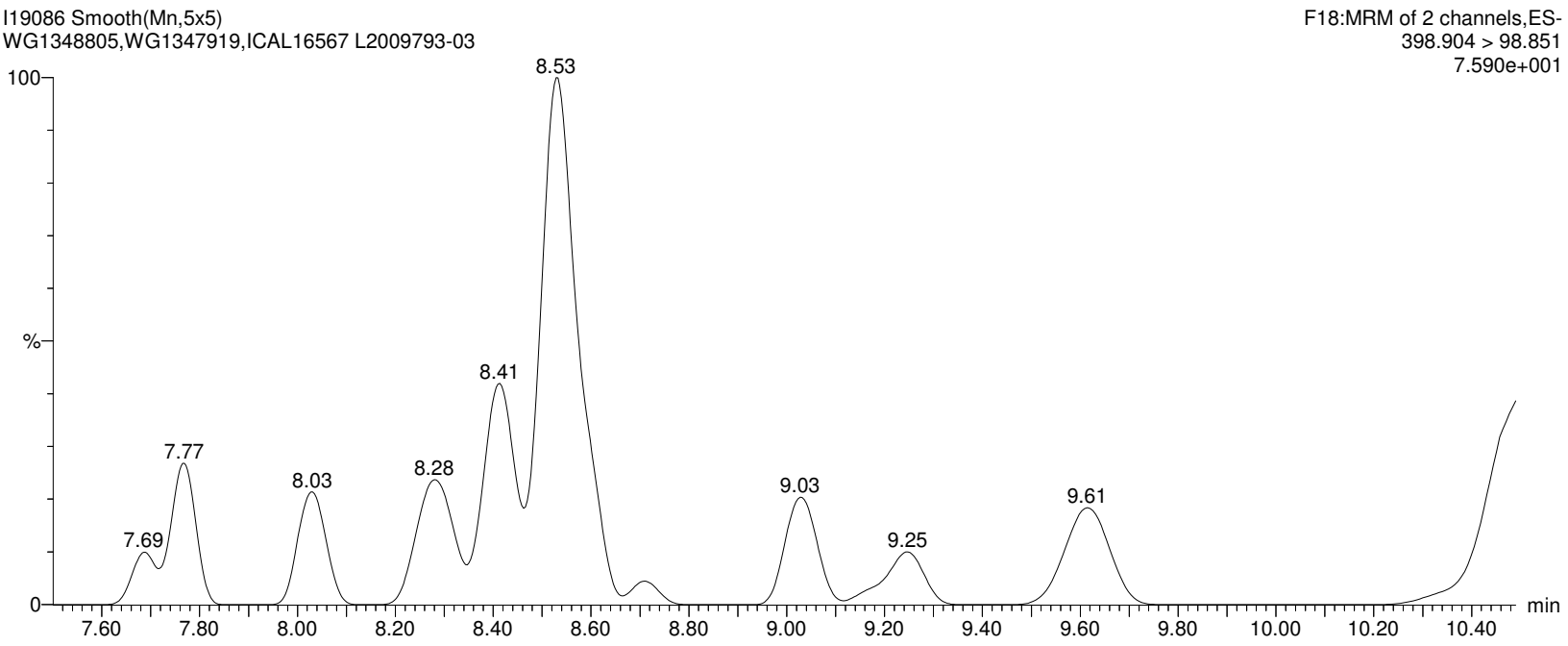



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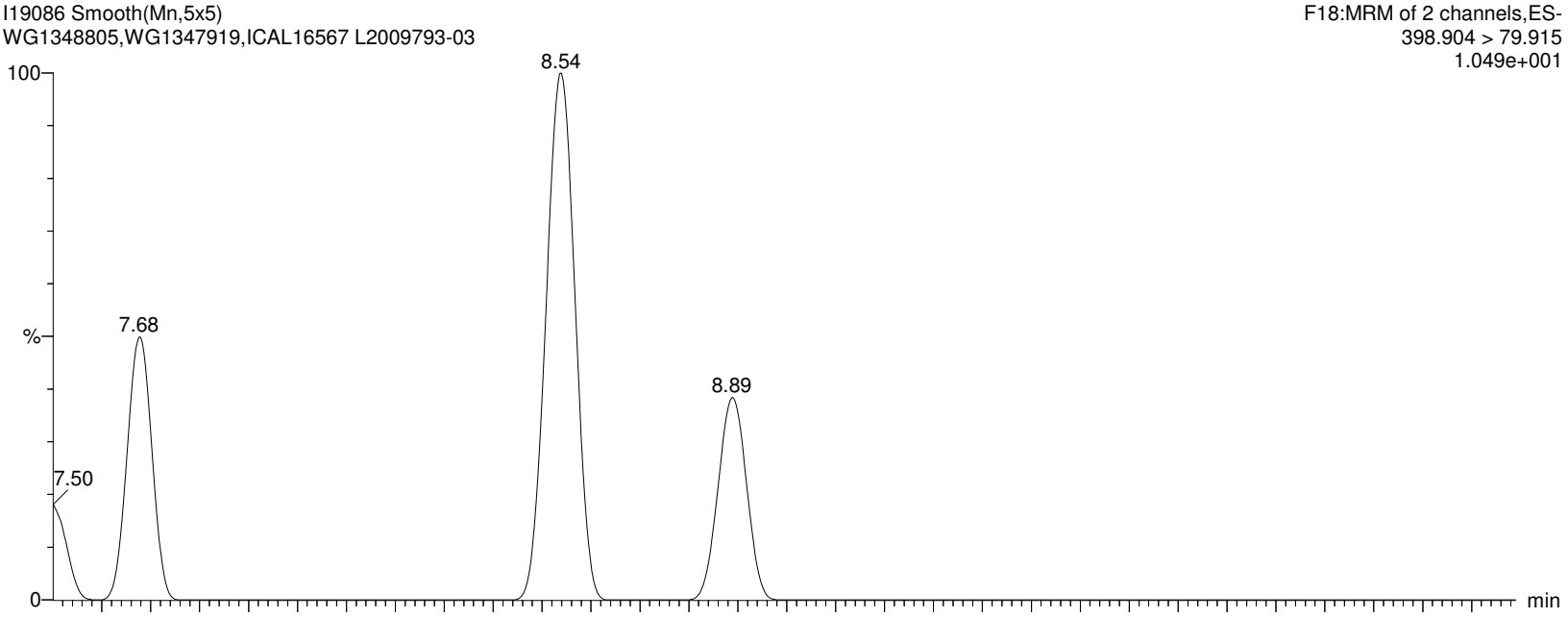
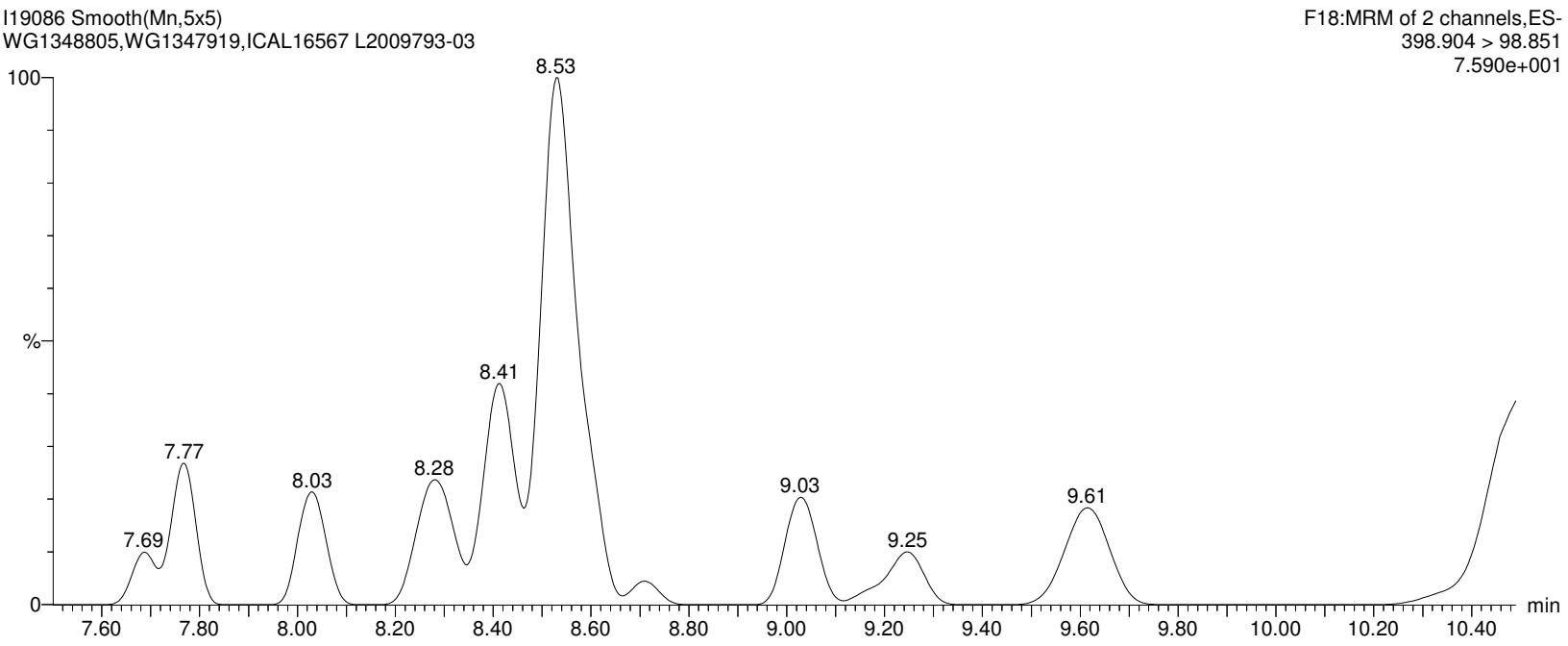
**PFHxS**





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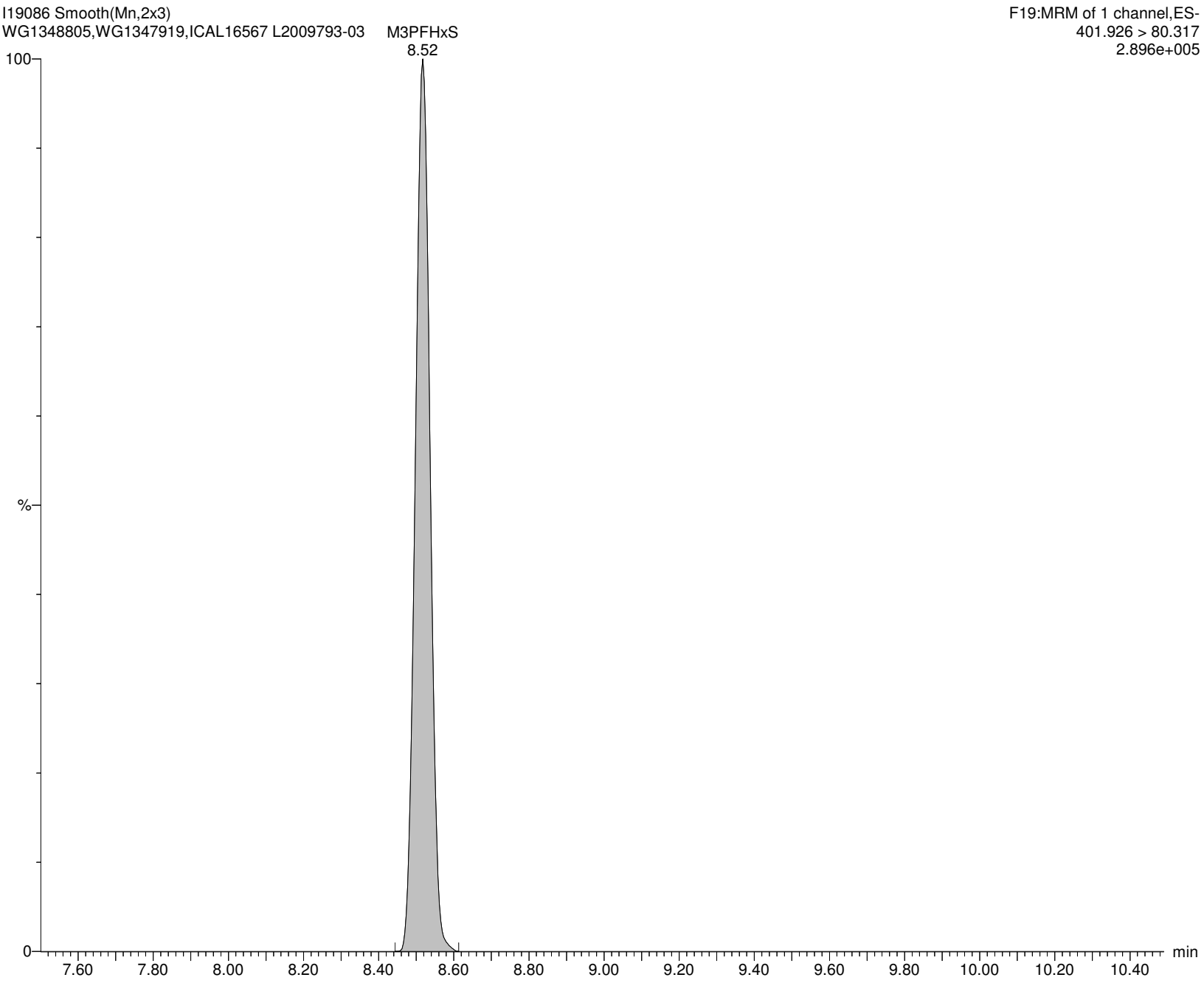
**M3PFHxS**





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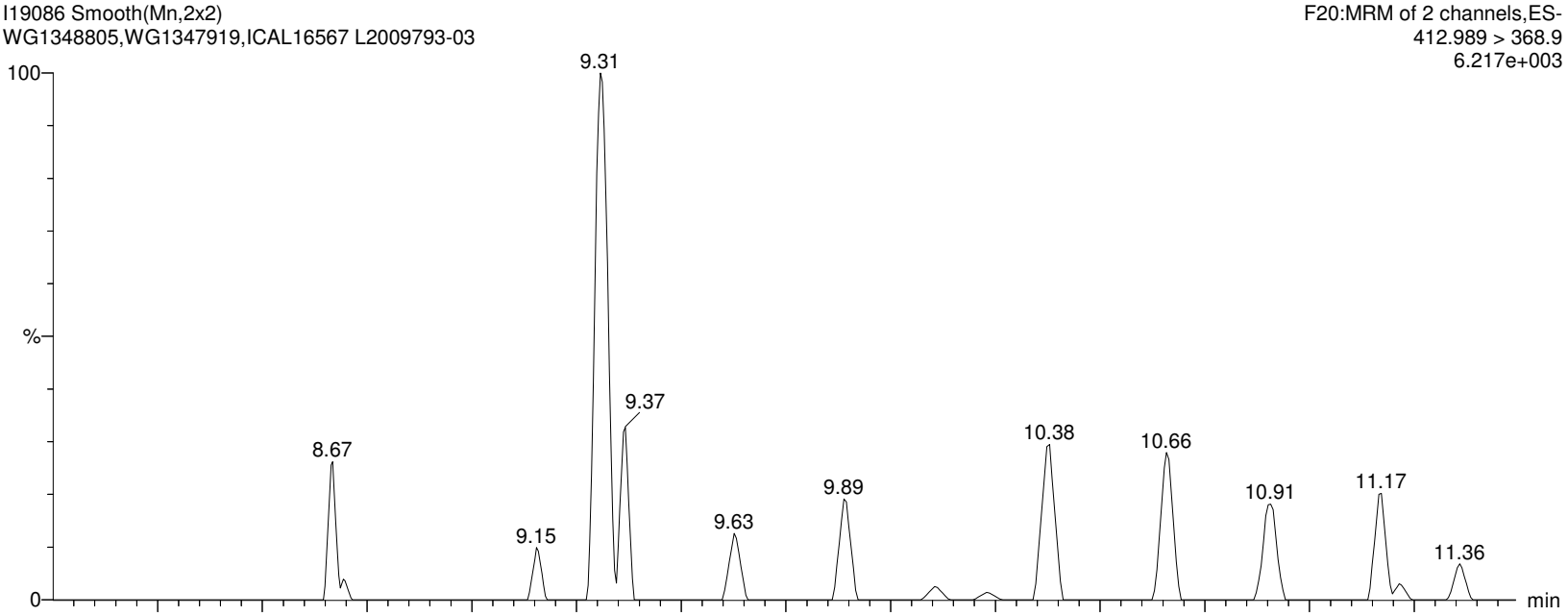


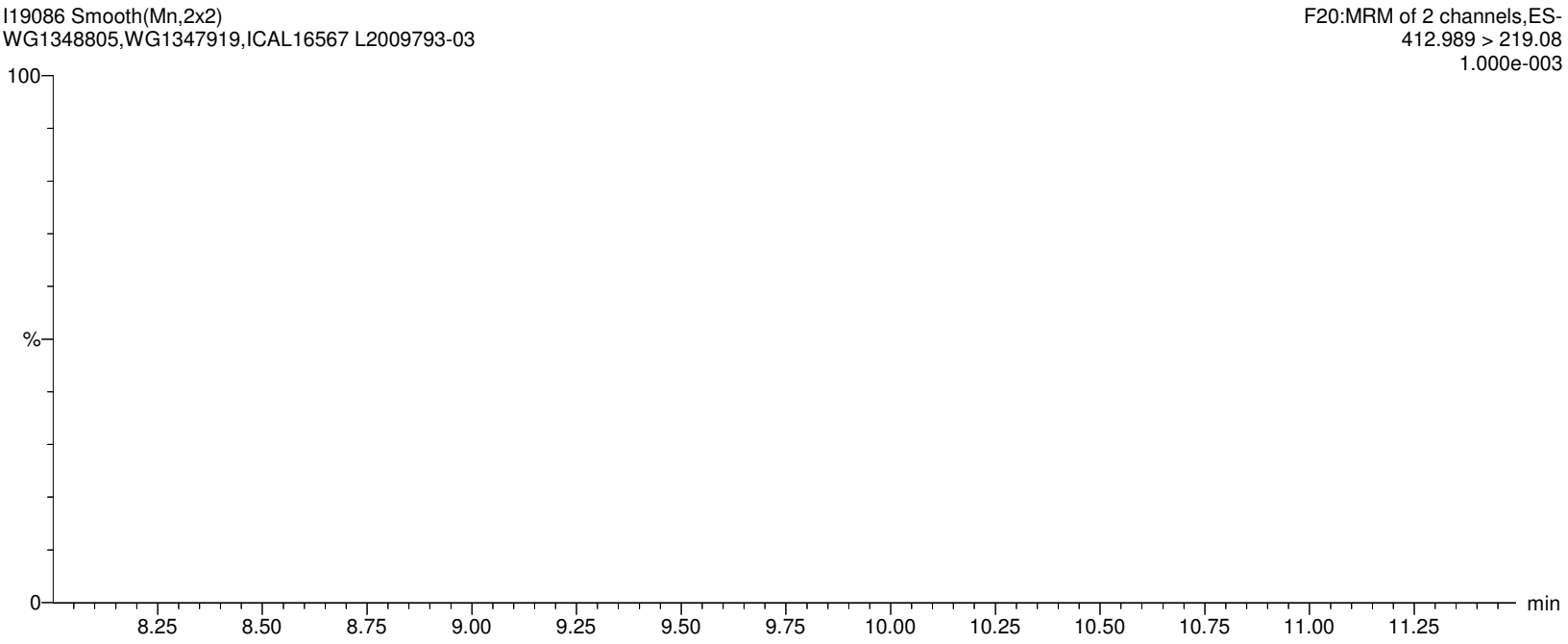



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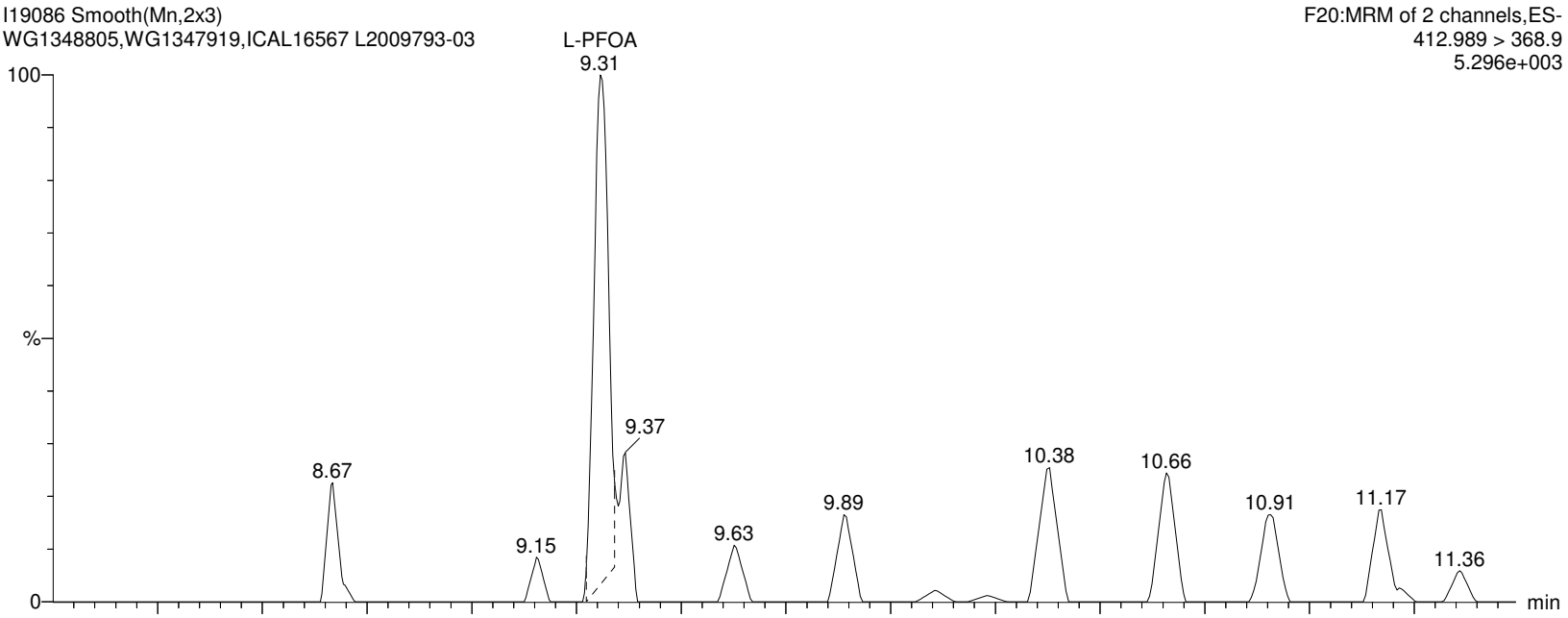
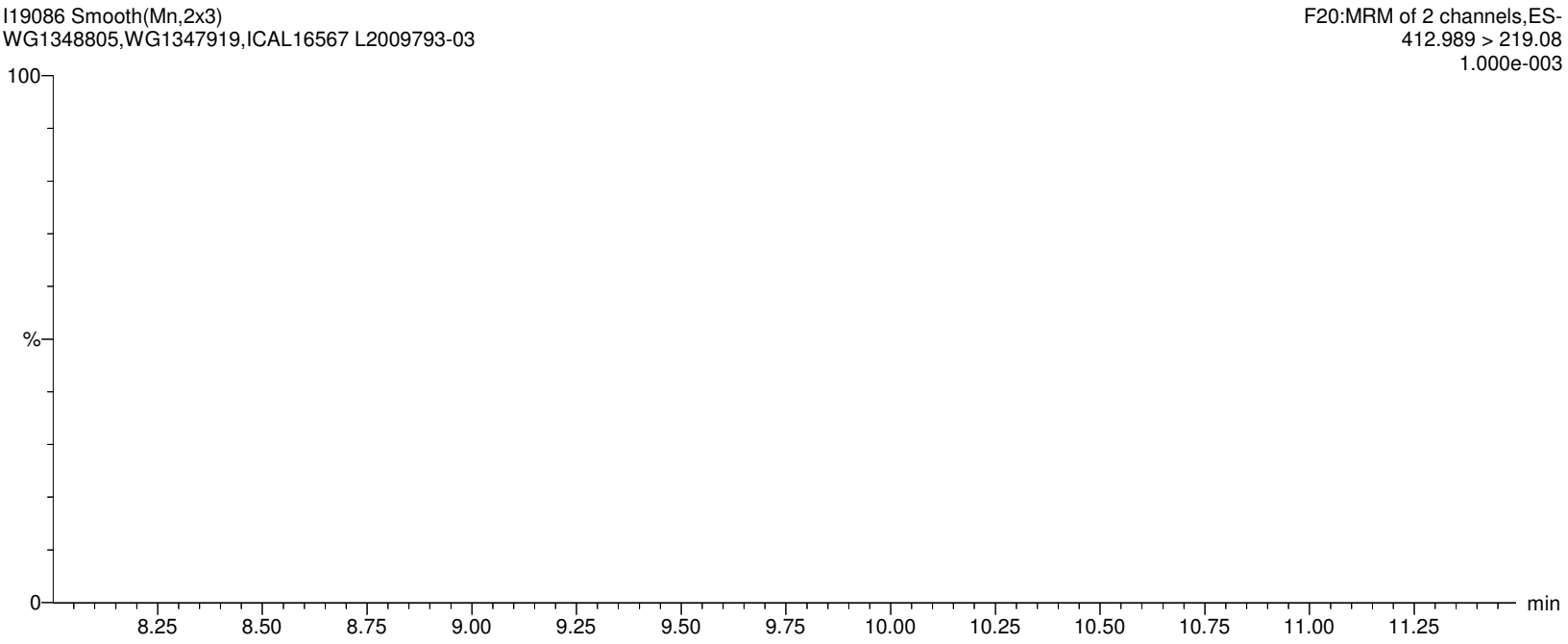
**L-PFOA**





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**Tune Method Name: C:\MassLynx\Data\200309_537ISO.PRO\ACQUDB\190709_TUNE.IPR**
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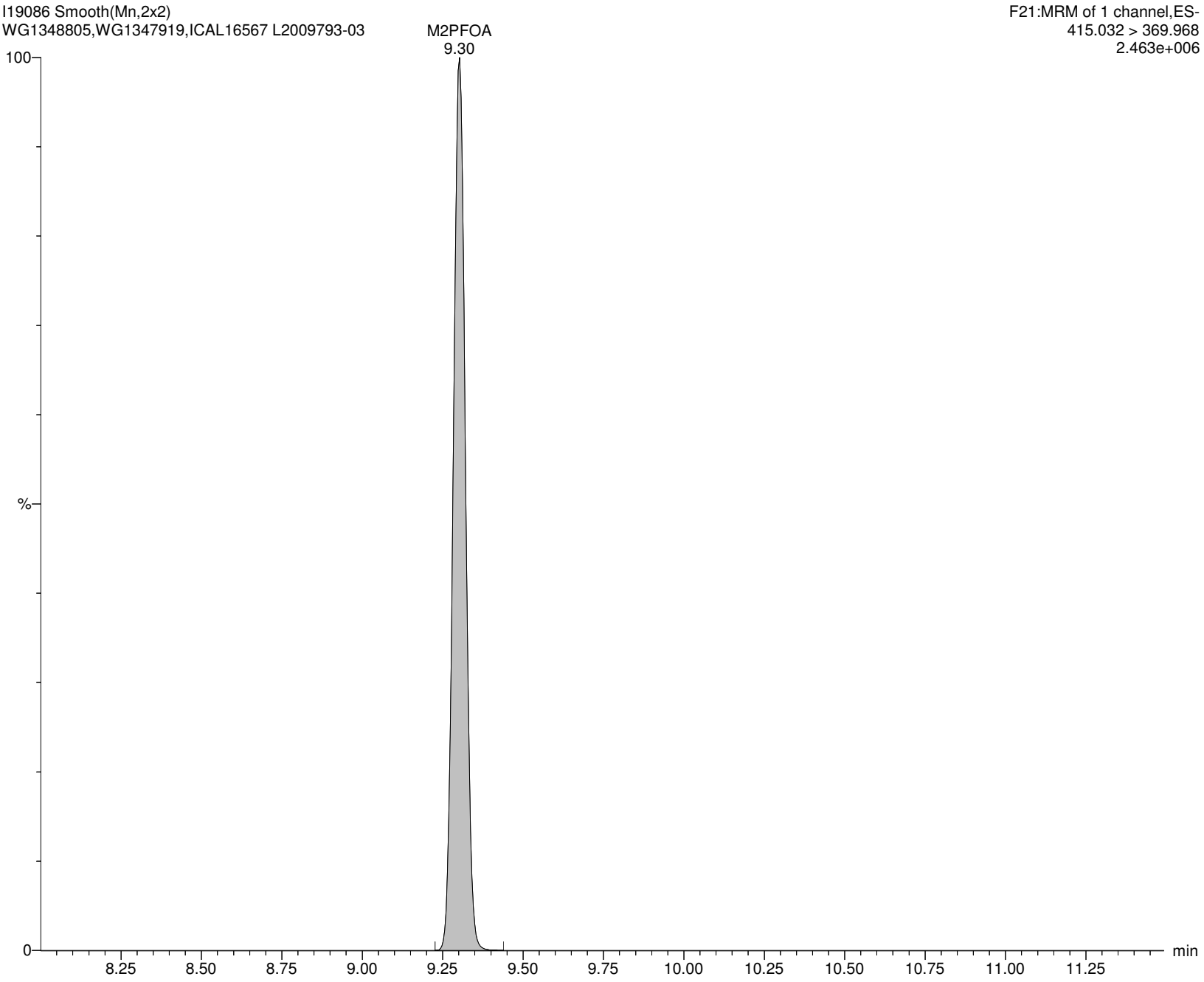



all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200309_537ISO.PRO\Data\WG1348805B.qld
Last Altered: Tuesday, March 17, 2020 11:14:29 Eastern Daylight Time
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**Name: I19086**
**ID: L2009793-03**
**Date: 09-Mar-2020**
**Time: 17:36:11**
**Description: WG1348805,WG1347919,ICAL16567**
**User: LCMS01:JW**
**Vial: 1:C,7**
**Instrument: XEVO-TQSmicro#QEA0276**
**Inlet Method Name: C:\MassLynx\Data\200309_537ISO.PRO\ACQUDB\LCMS_537_ISO_MeOH**
**Tune Method Name: C:\MassLynx\Data\200309_537ISO.PRO\ACQUDB\190709_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\200309_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

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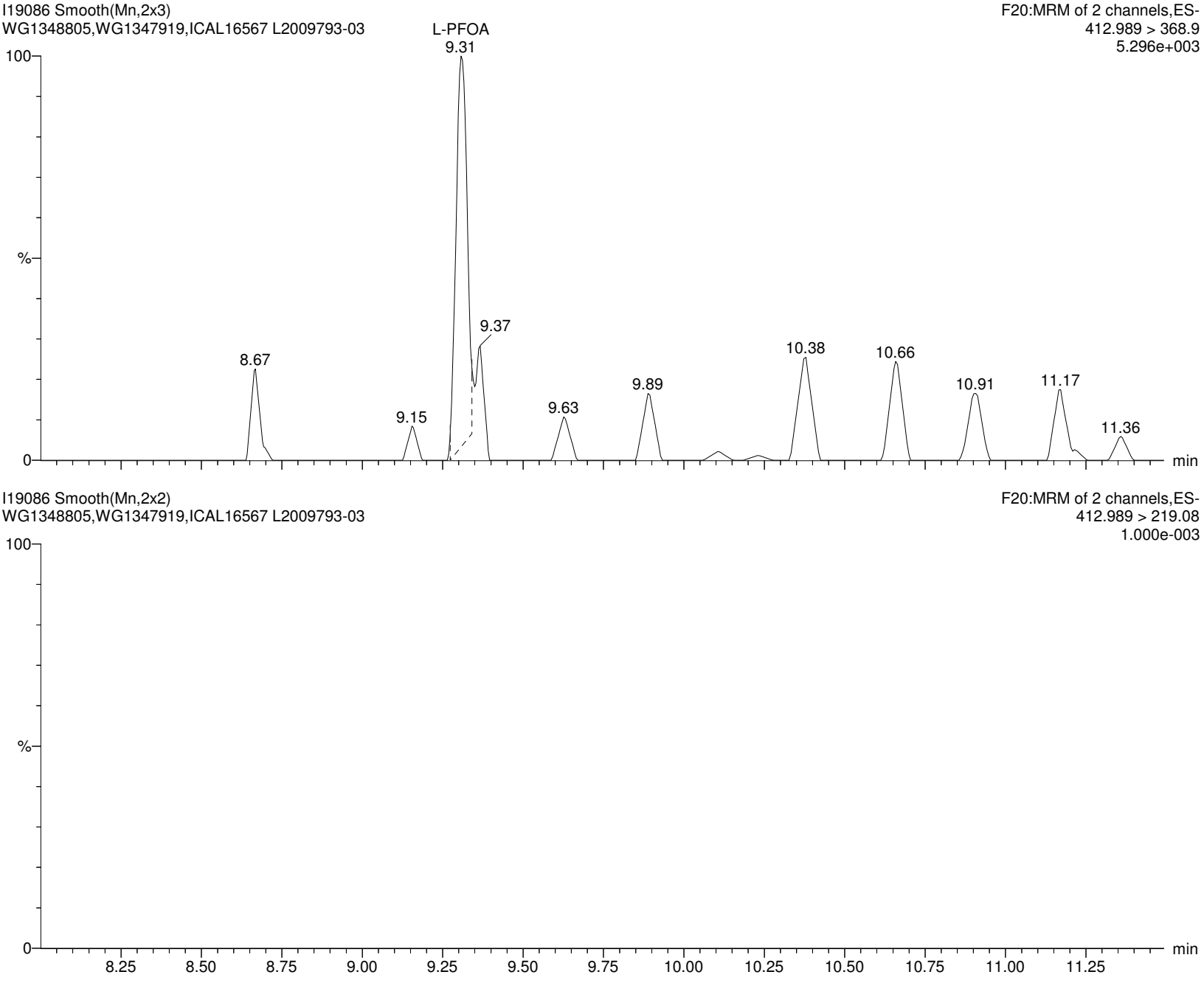



all concentration units in (ng/mL)

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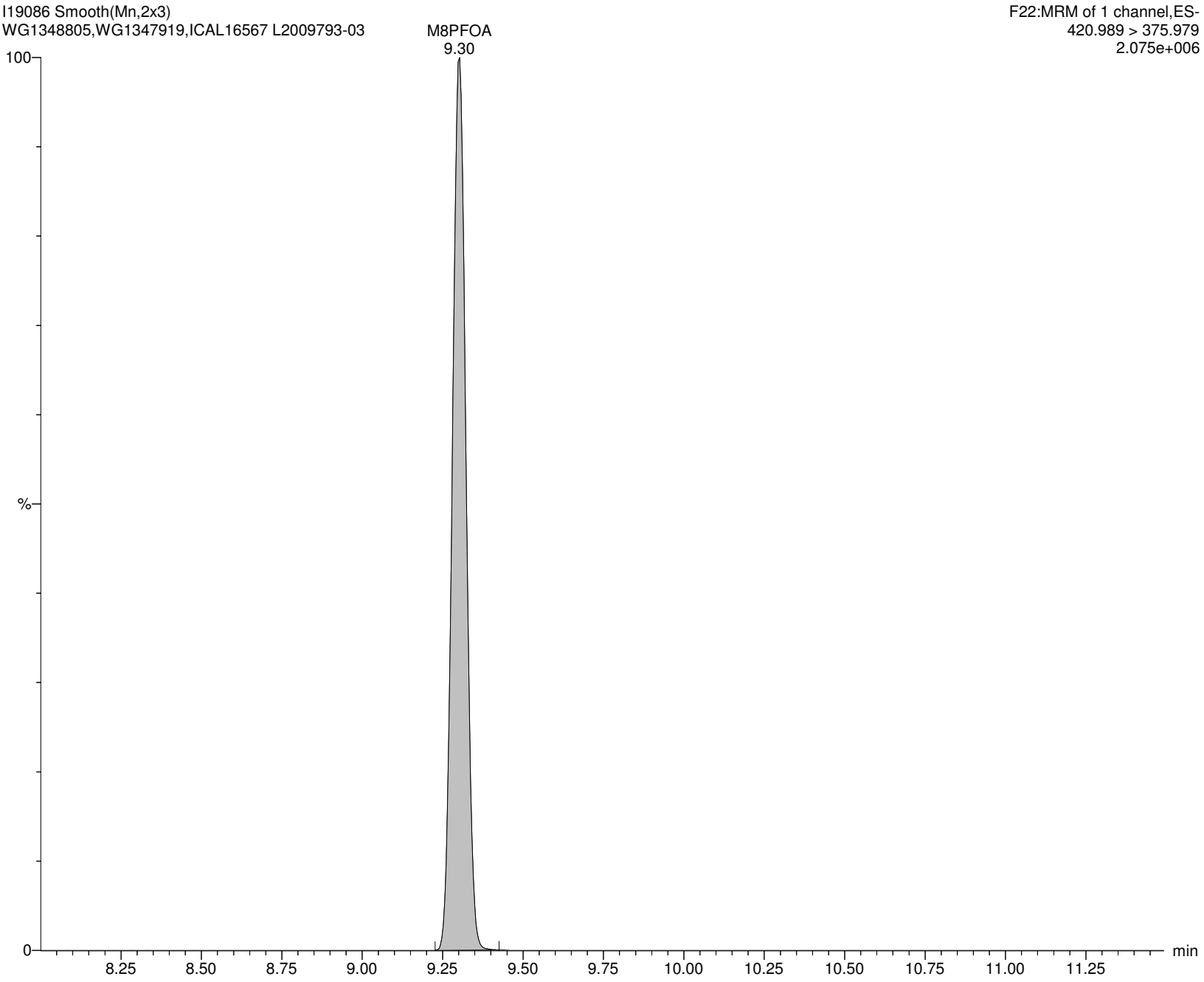
**M8PFOA**





all concentration units in (ng/mL)

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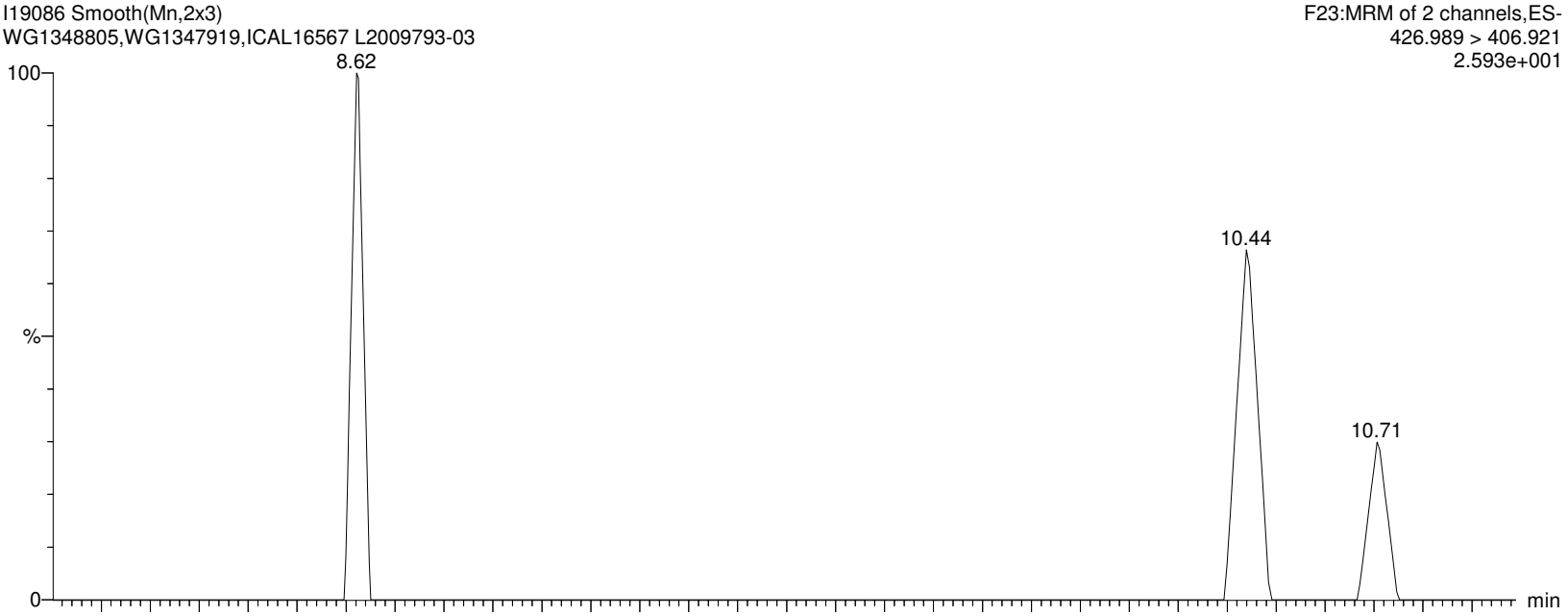
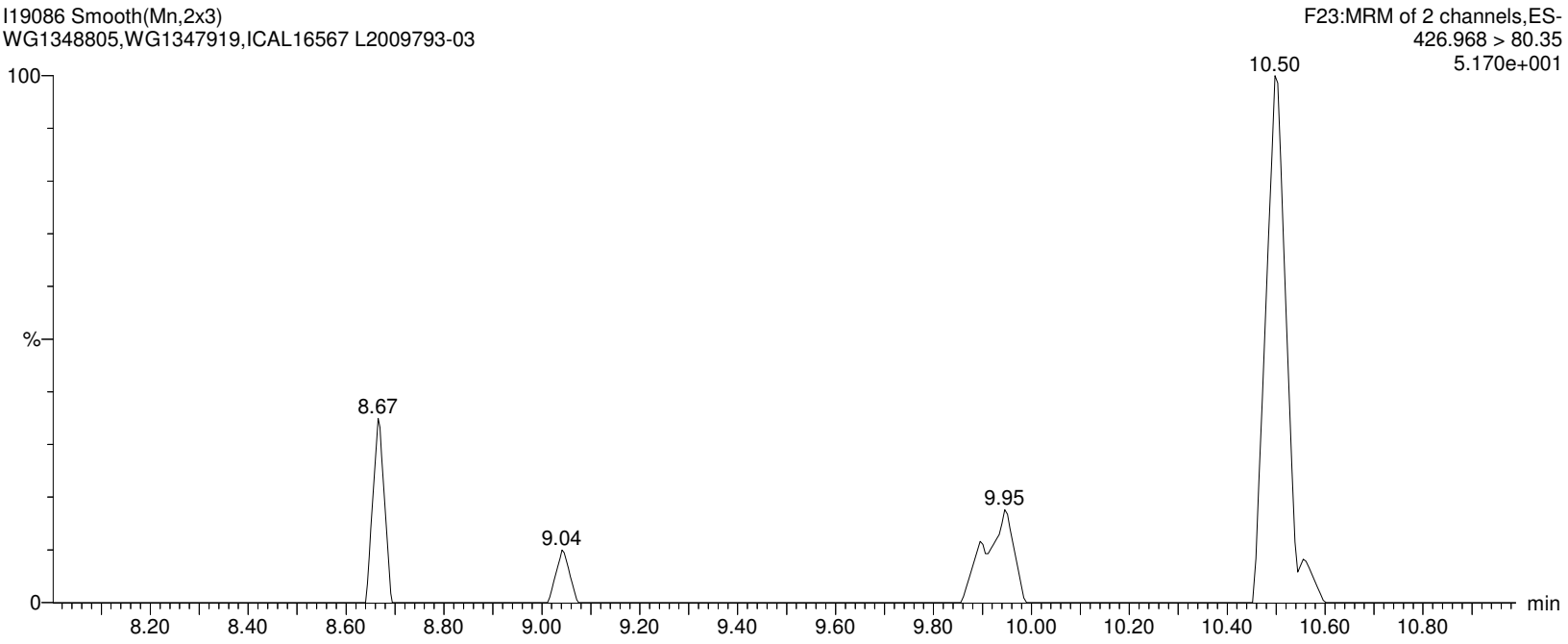
**6:2FTS**





all concentration units in (ng/mL)

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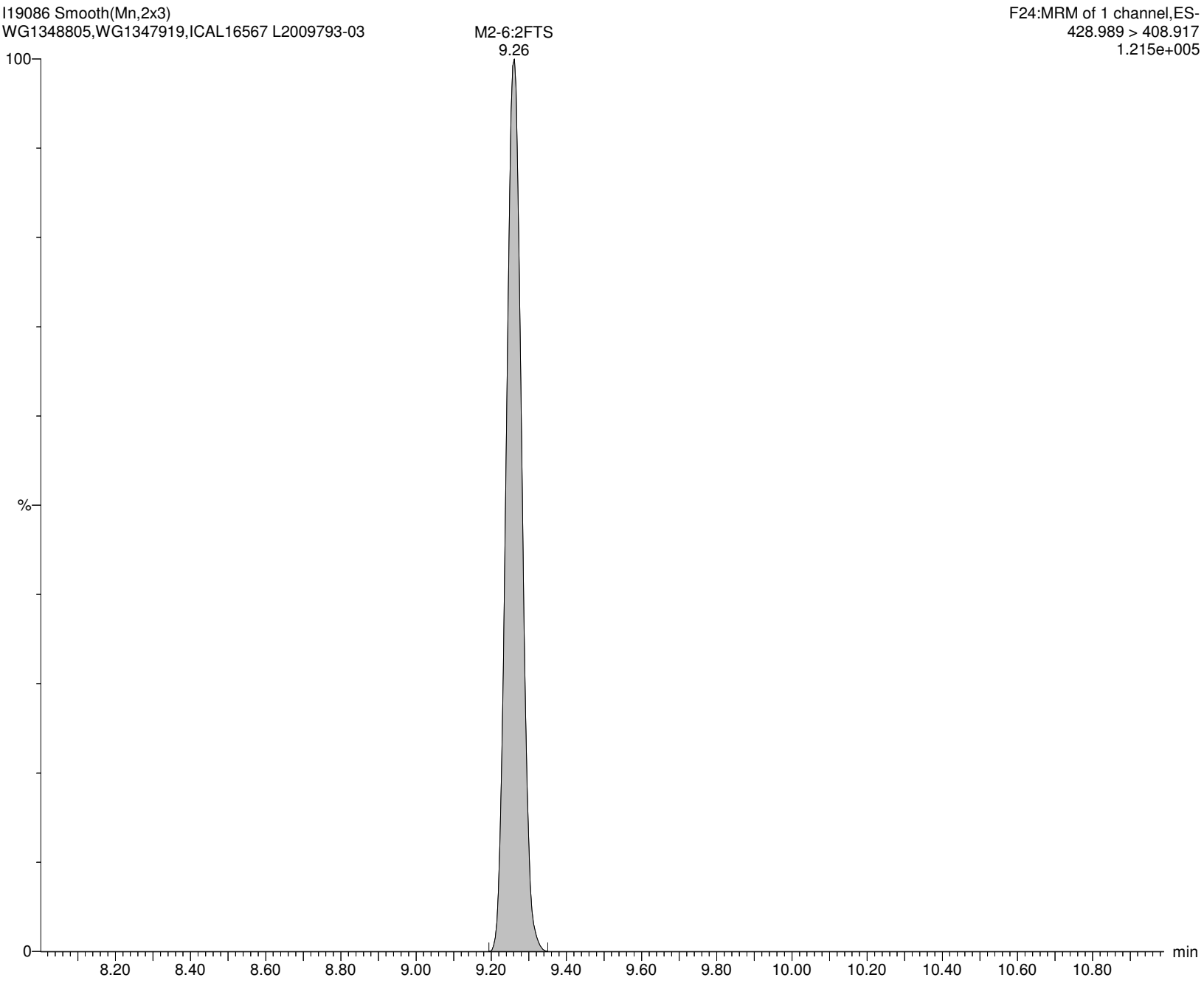
**M2-6:2FTS**





all concentration units in (ng/mL)

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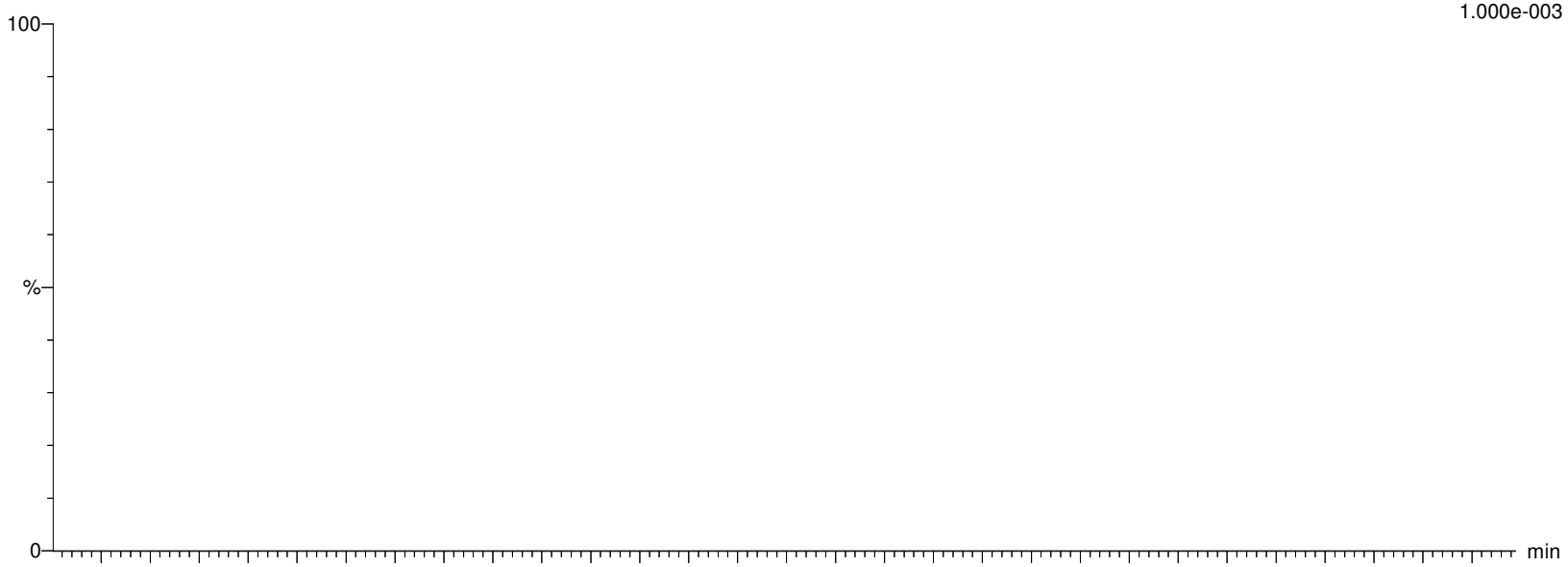
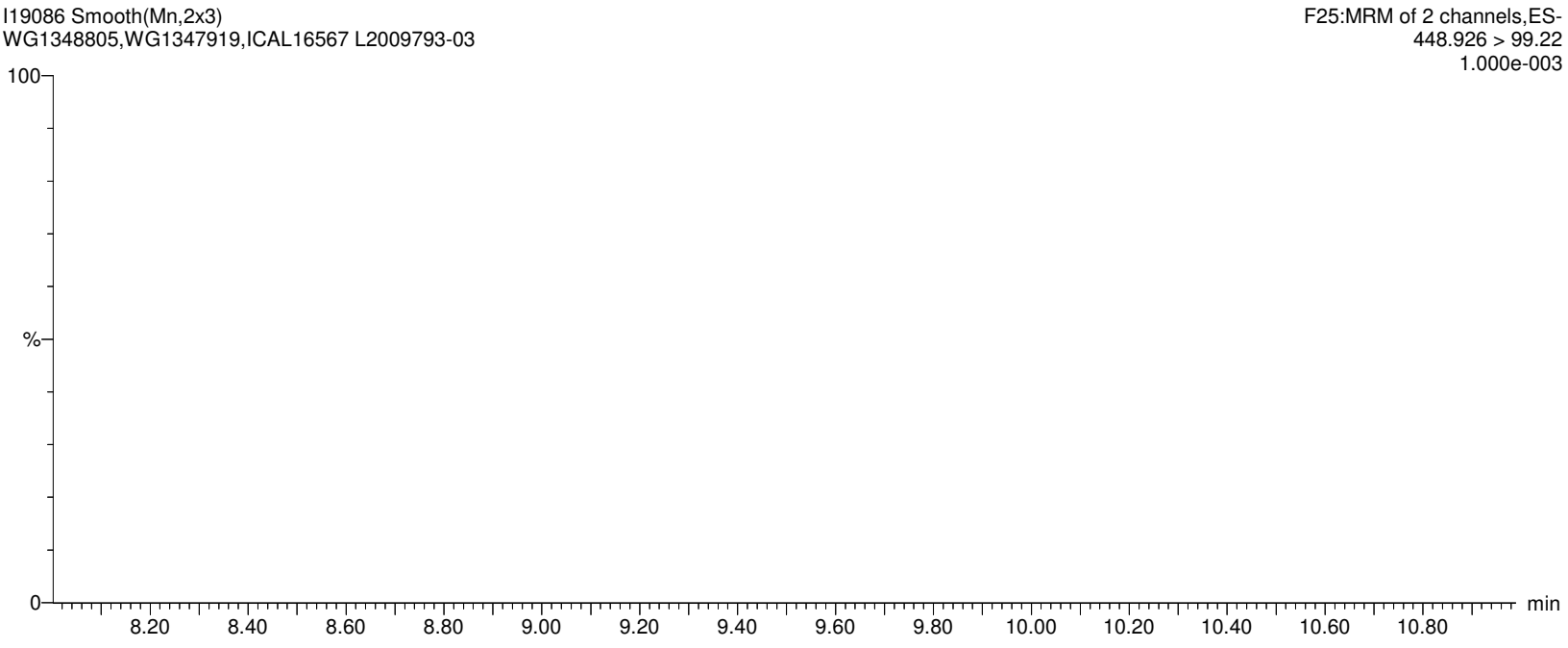
**PFHpS**





all concentration units in (ng/mL)

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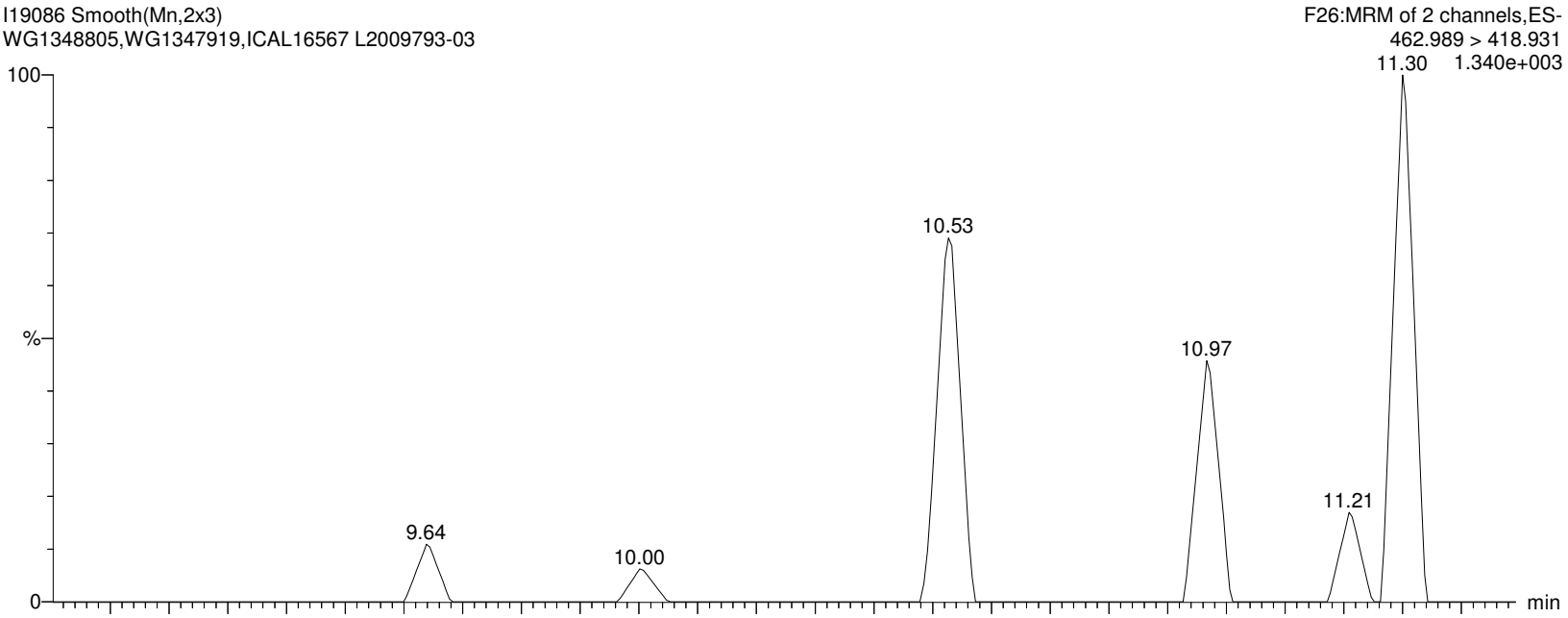
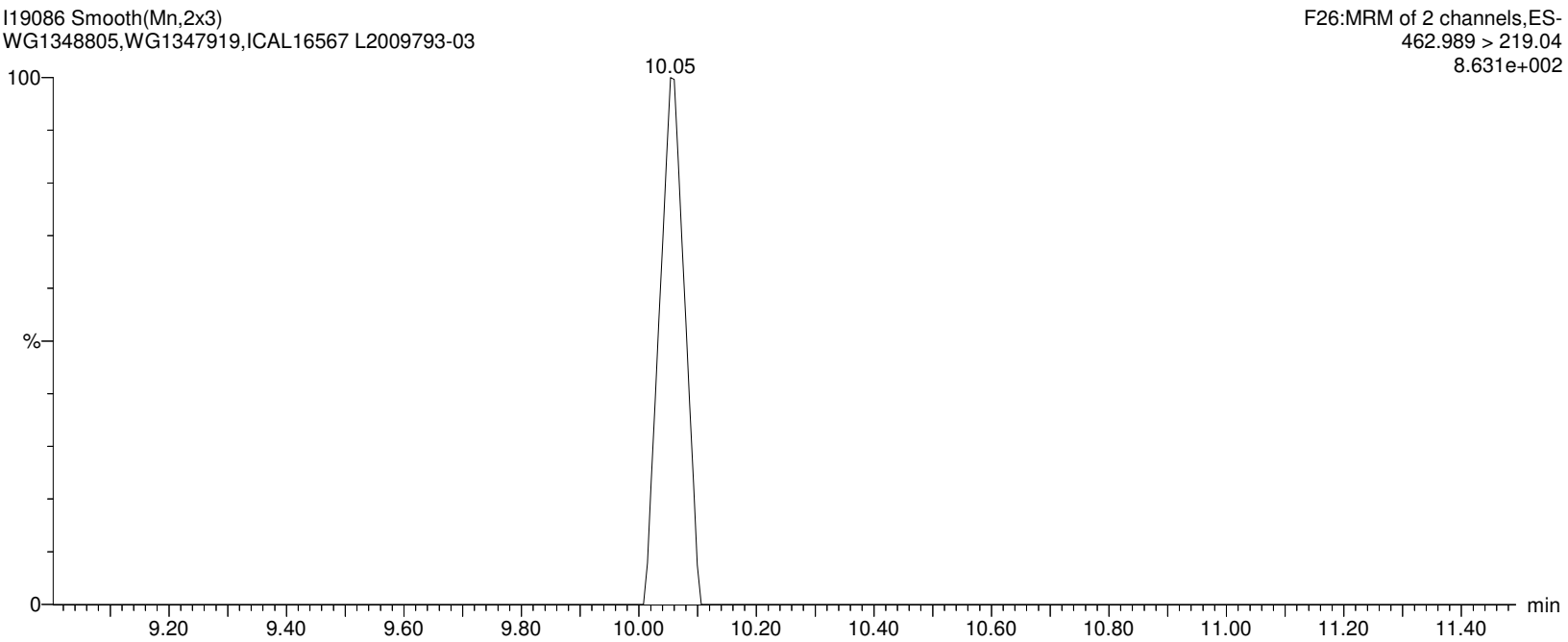
**PFNA**





all concentration units in (ng/mL)

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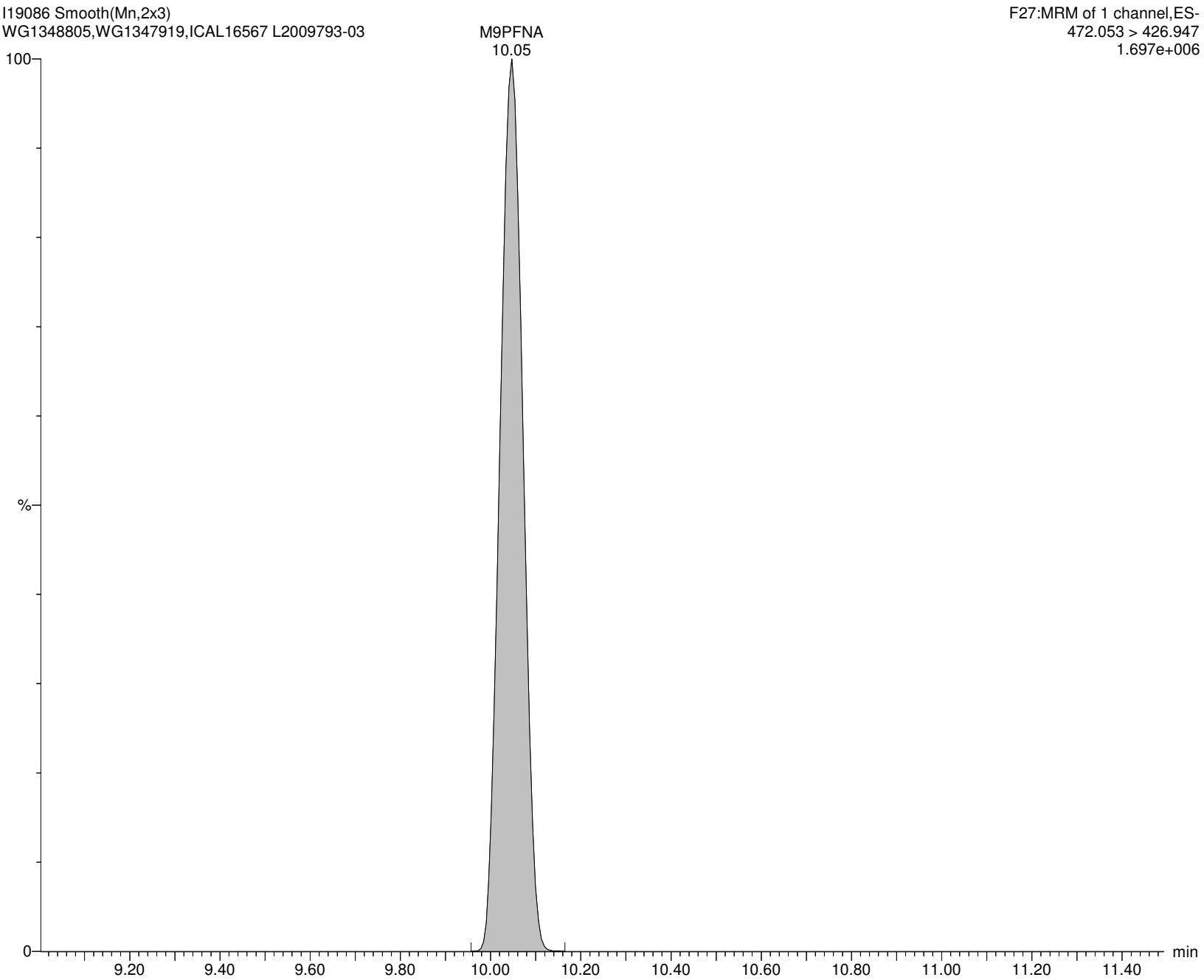
**M9PFNA**





all concentration units in (ng/mL)

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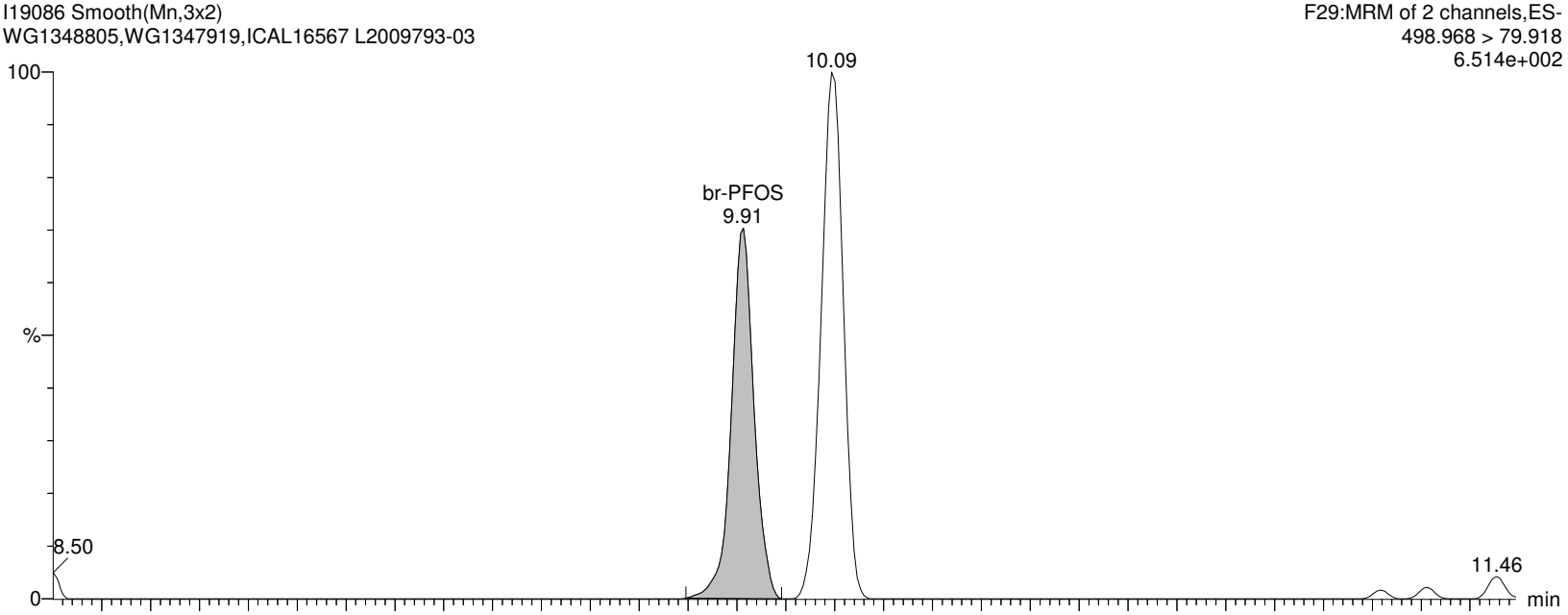
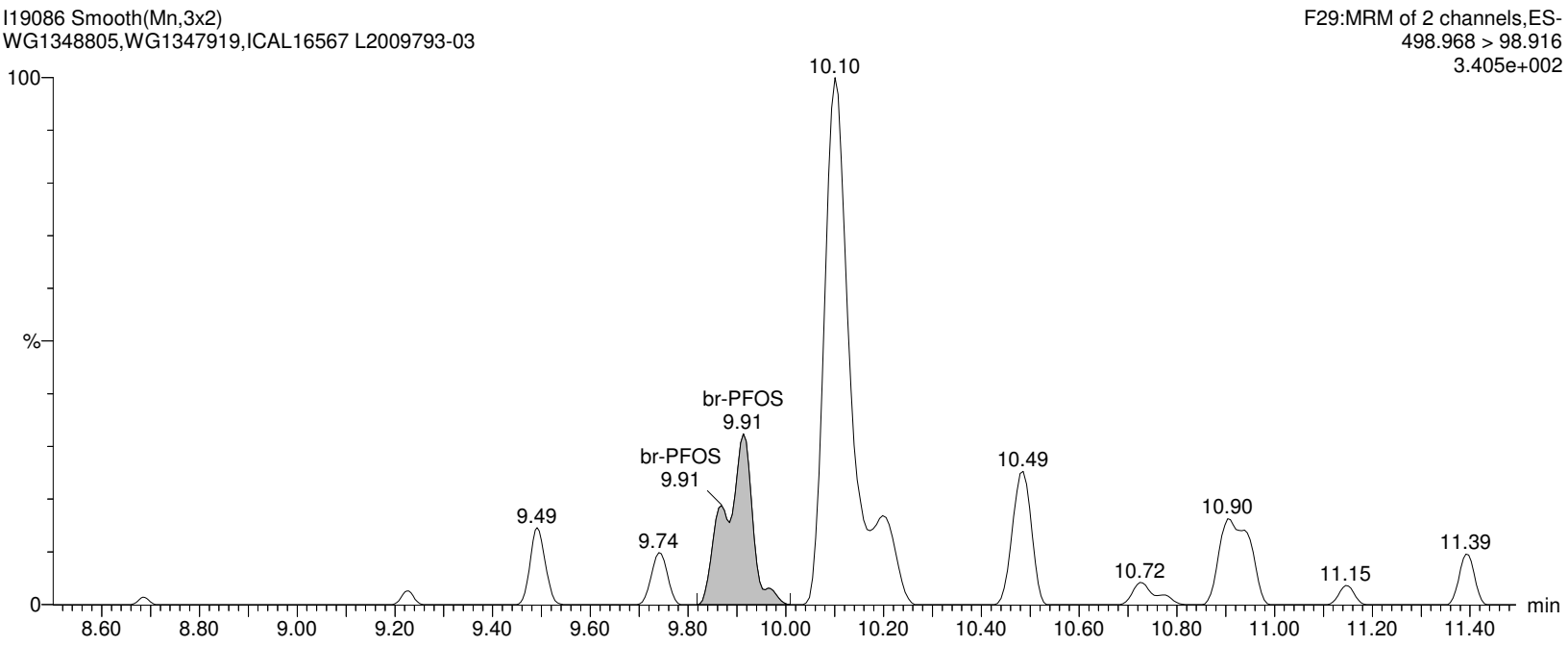
**br-PFOS**





all concentration units in (ng/mL)

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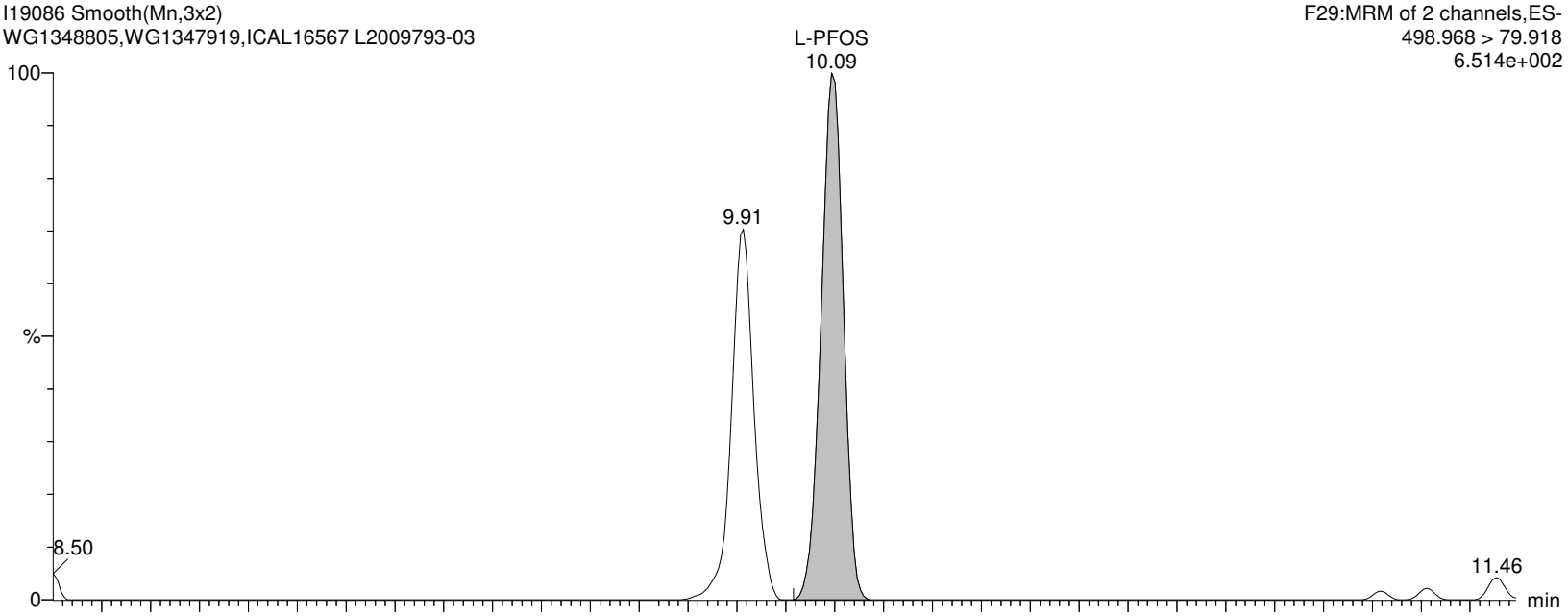
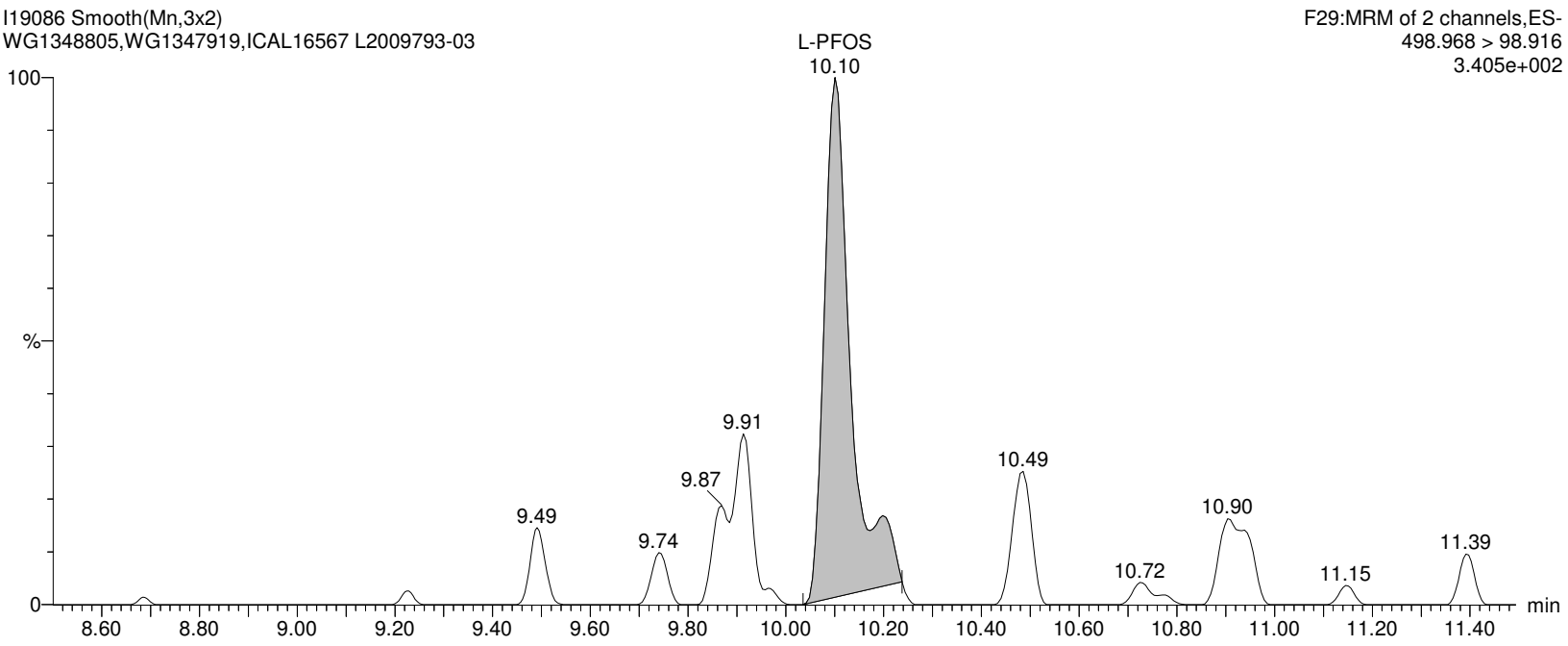
**L-PFOS**





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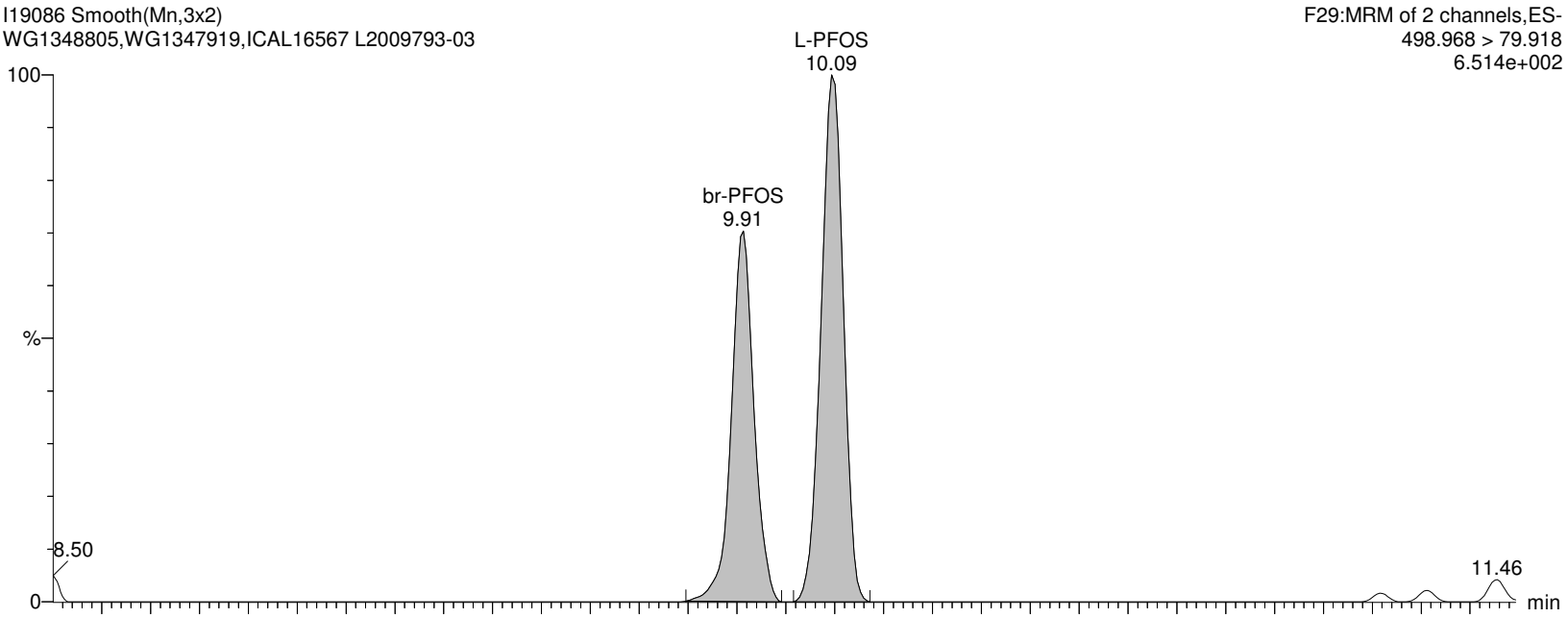


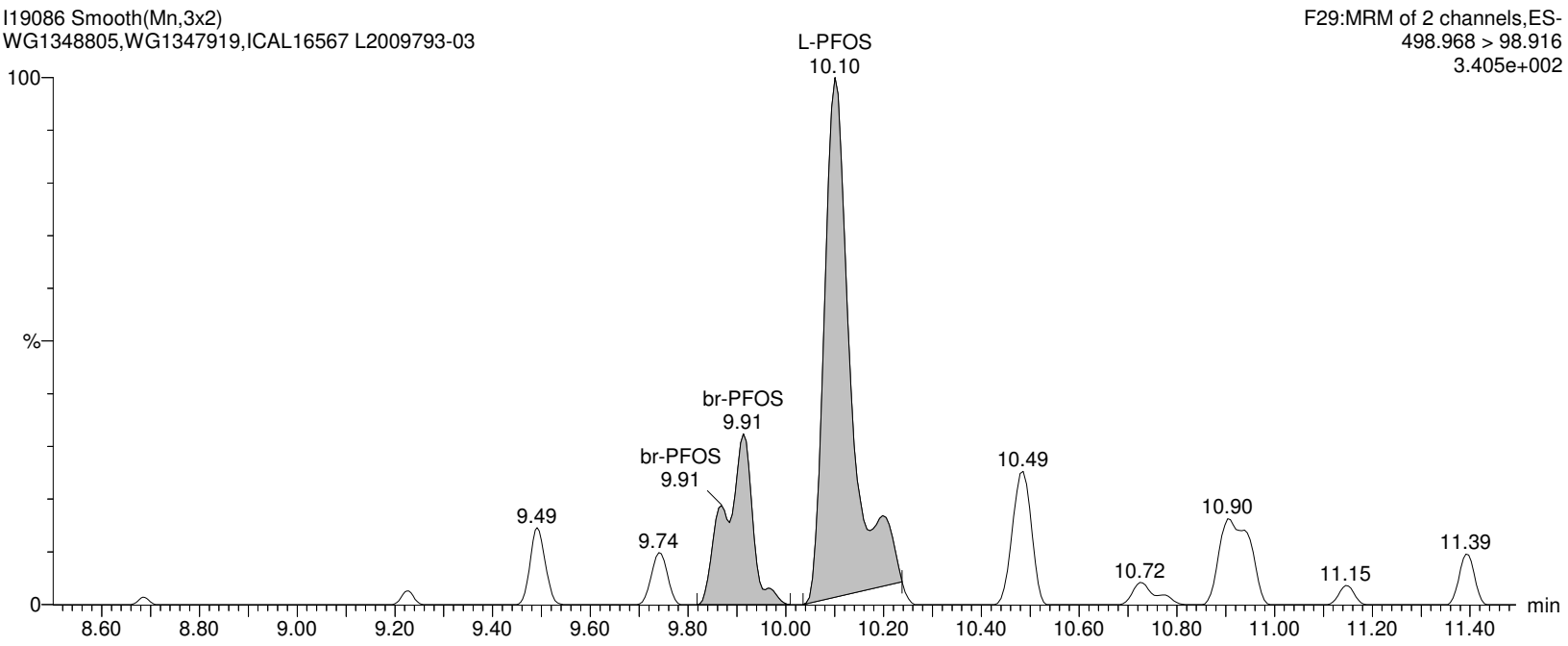



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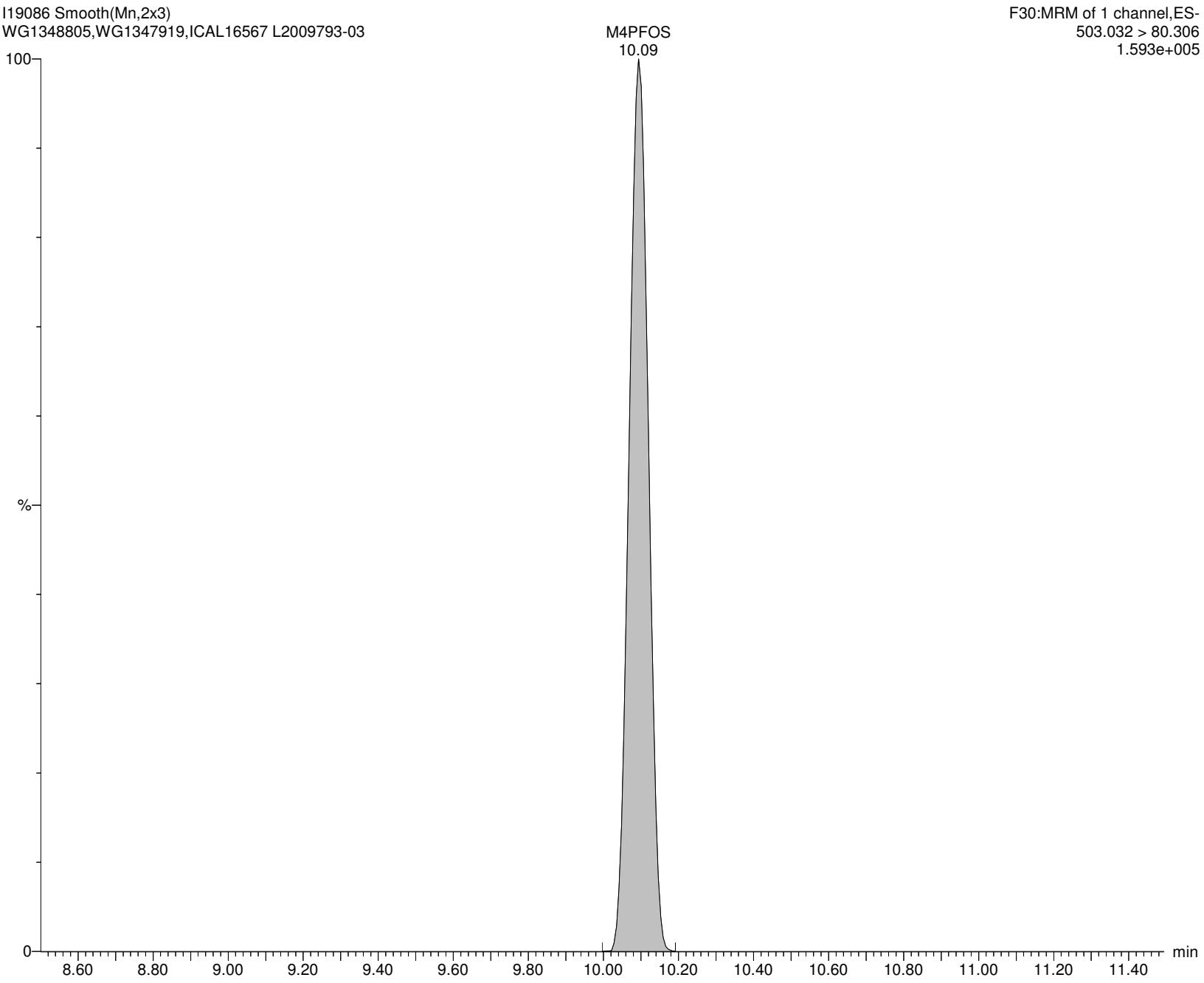
**M4PFOS**





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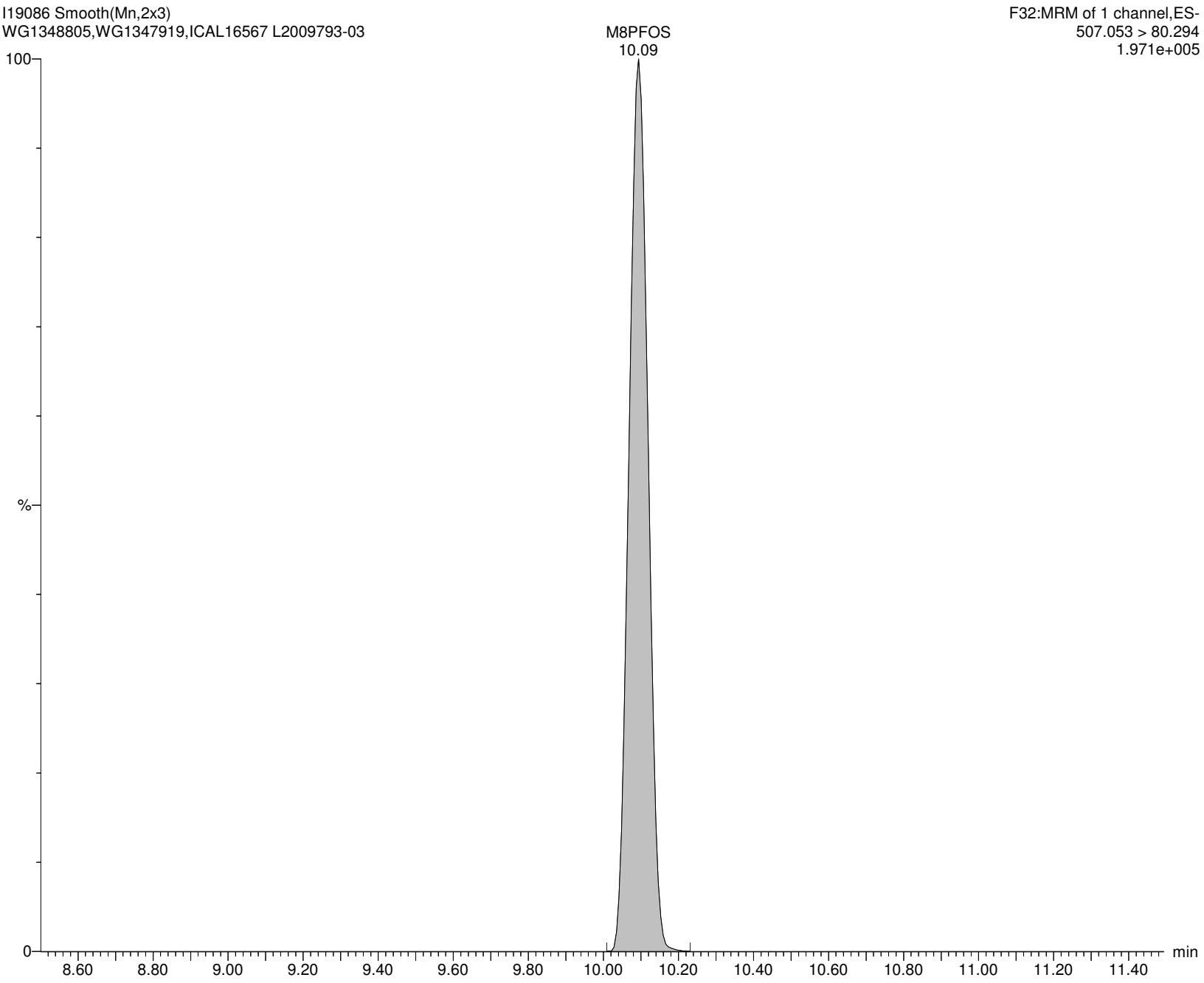



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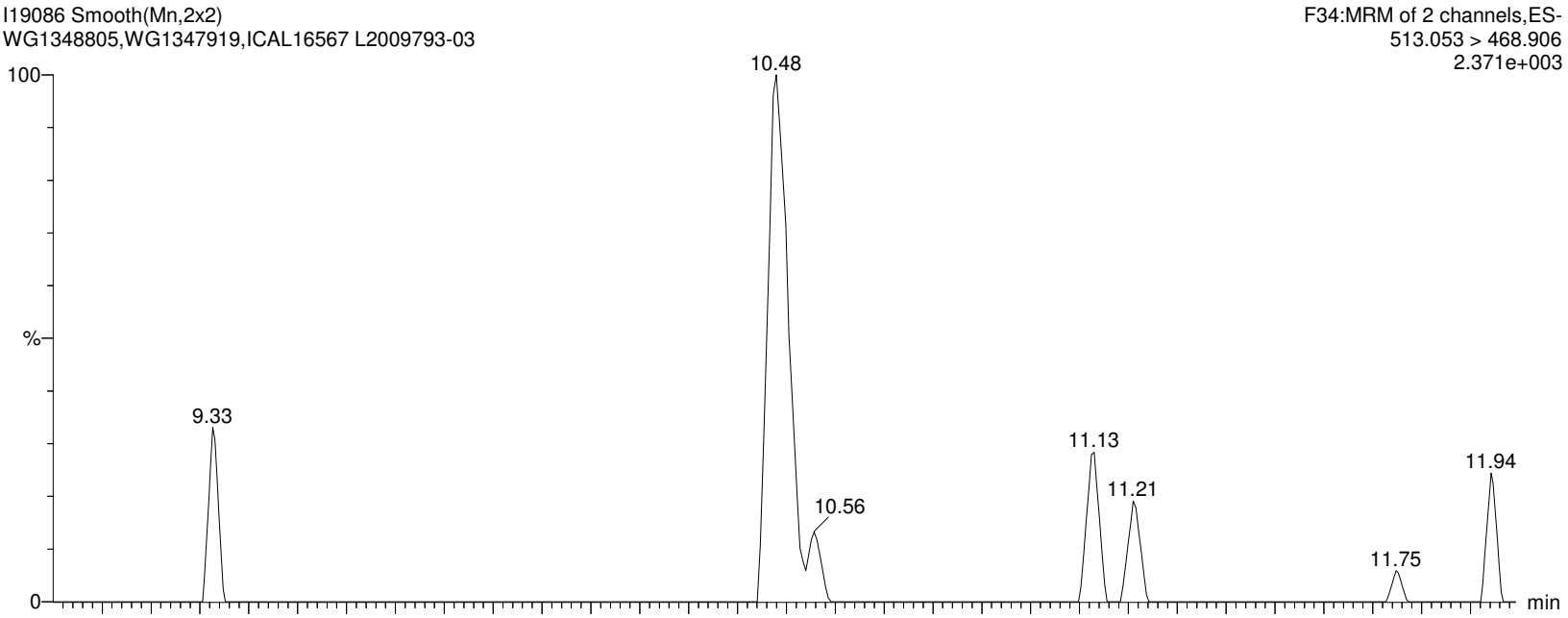


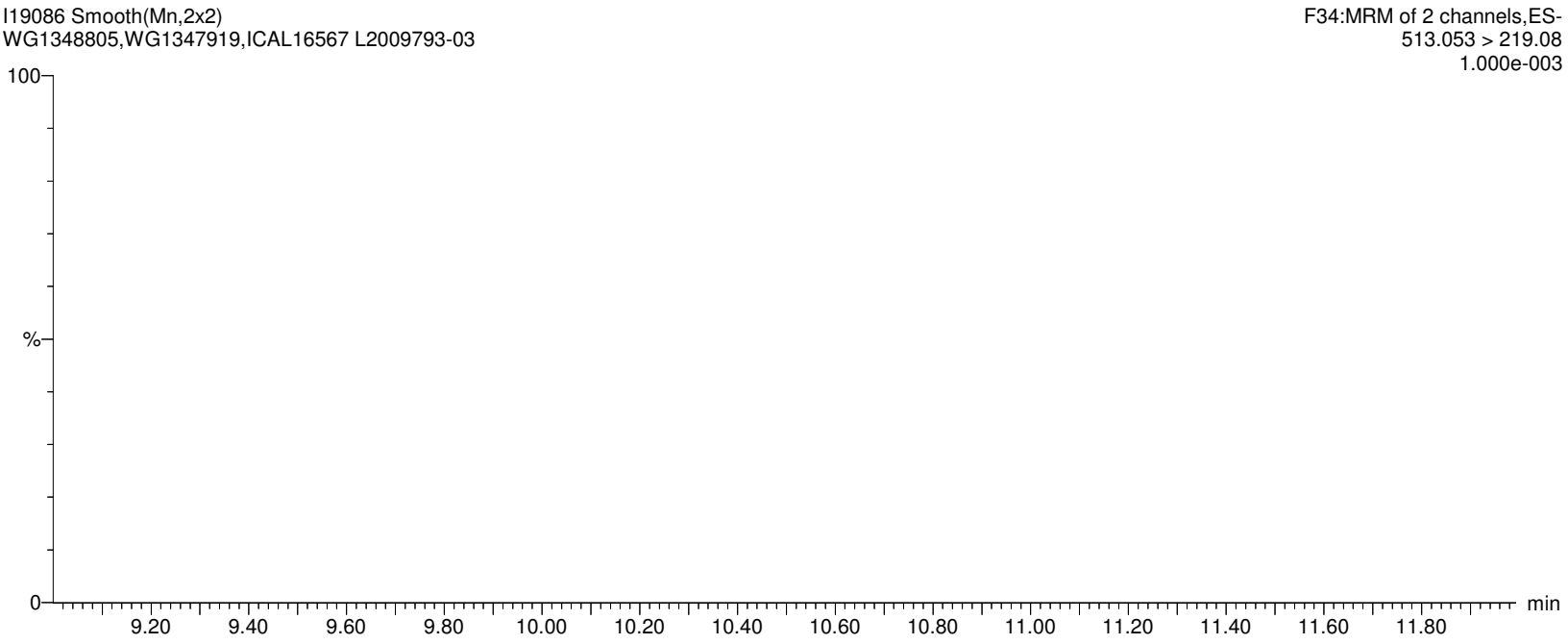



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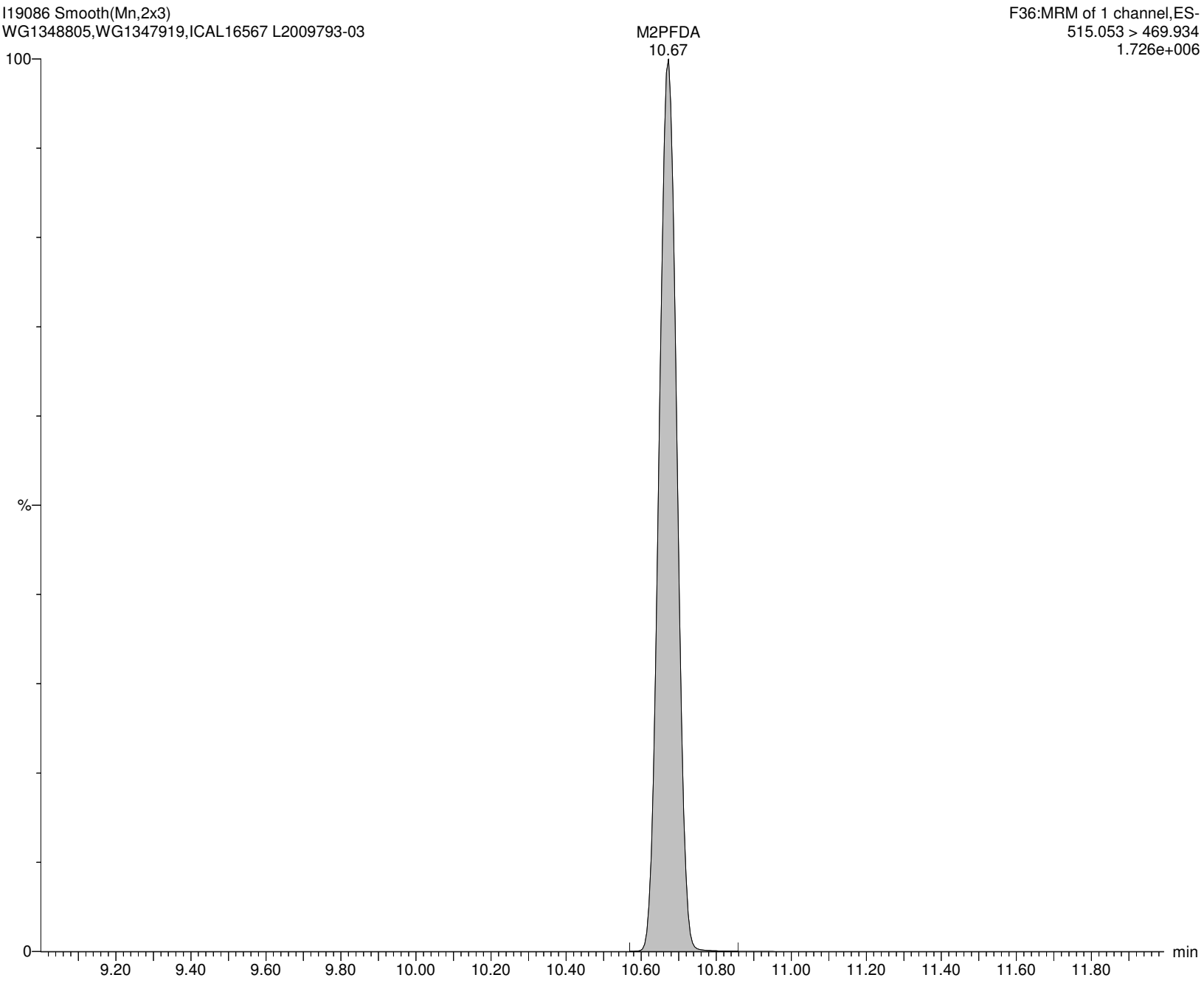



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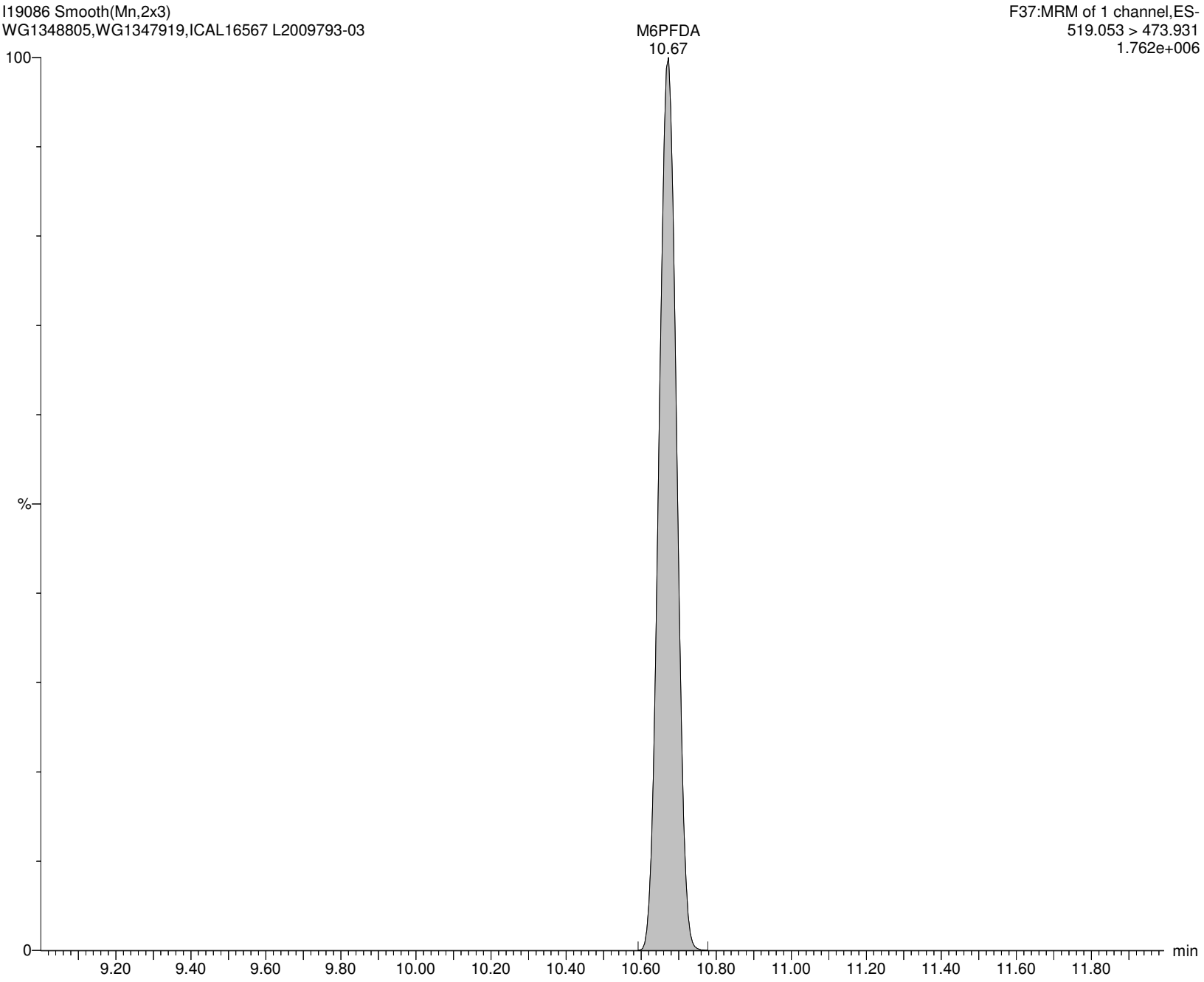
**M6PFDA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200309_537ISO.PRO\Data\WG1348805B.qld
Last Altered: Tuesday, March 17, 2020 11:14:29 Eastern Daylight Time
Printed: Tuesday, March 17, 2020 11:14:52 Eastern Daylight Time

**Name: I19086**
**ID: L2009793-03**
**Date: 09-Mar-2020**
**Time: 17:36:11**
**Description: WG1348805,WG1347919,ICAL16567**
**User: LCMS01:JW**
**Vial: 1:C,7**
**Instrument: XEVO-TQSmicro#QEA0276**
**Inlet Method Name: C:\MassLynx\Data\200309_537ISO.PRO\ACQUDB\LCMS_537_ISO_MeOH**
**Tune Method Name: C:\MassLynx\Data\200309_537ISO.PRO\ACQUDB\190709_TUNE.IPR**
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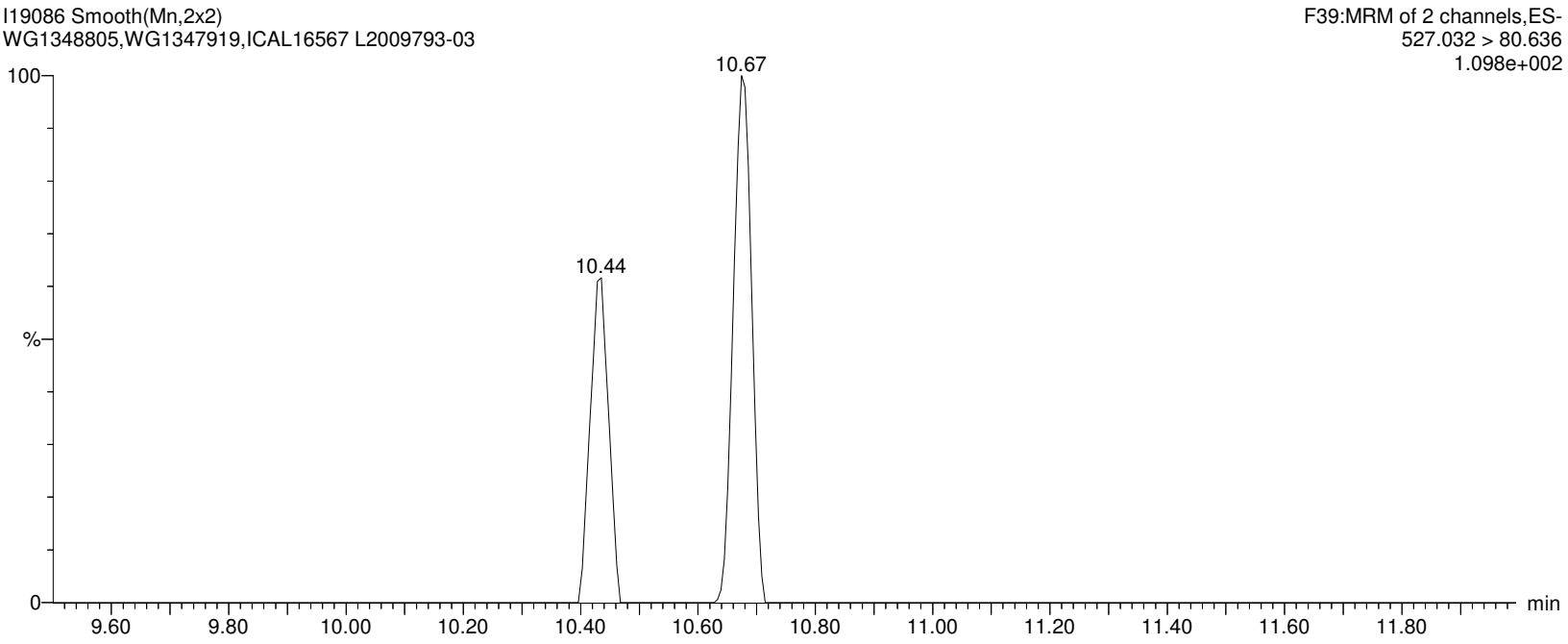
**8:2FTS**





all concentration units in (ng/mL)

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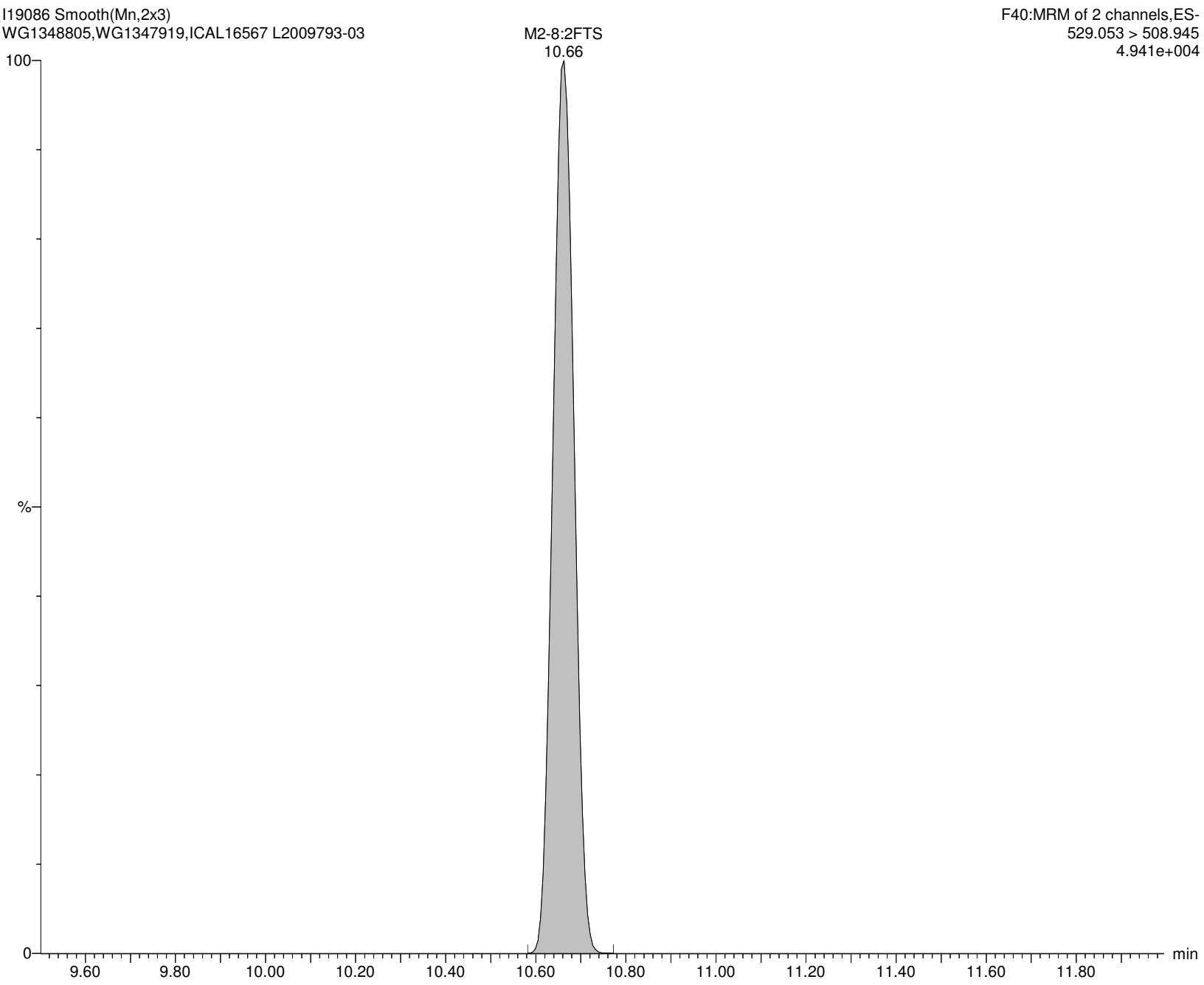
**M2-8:2FTS**





all concentration units in (ng/mL)

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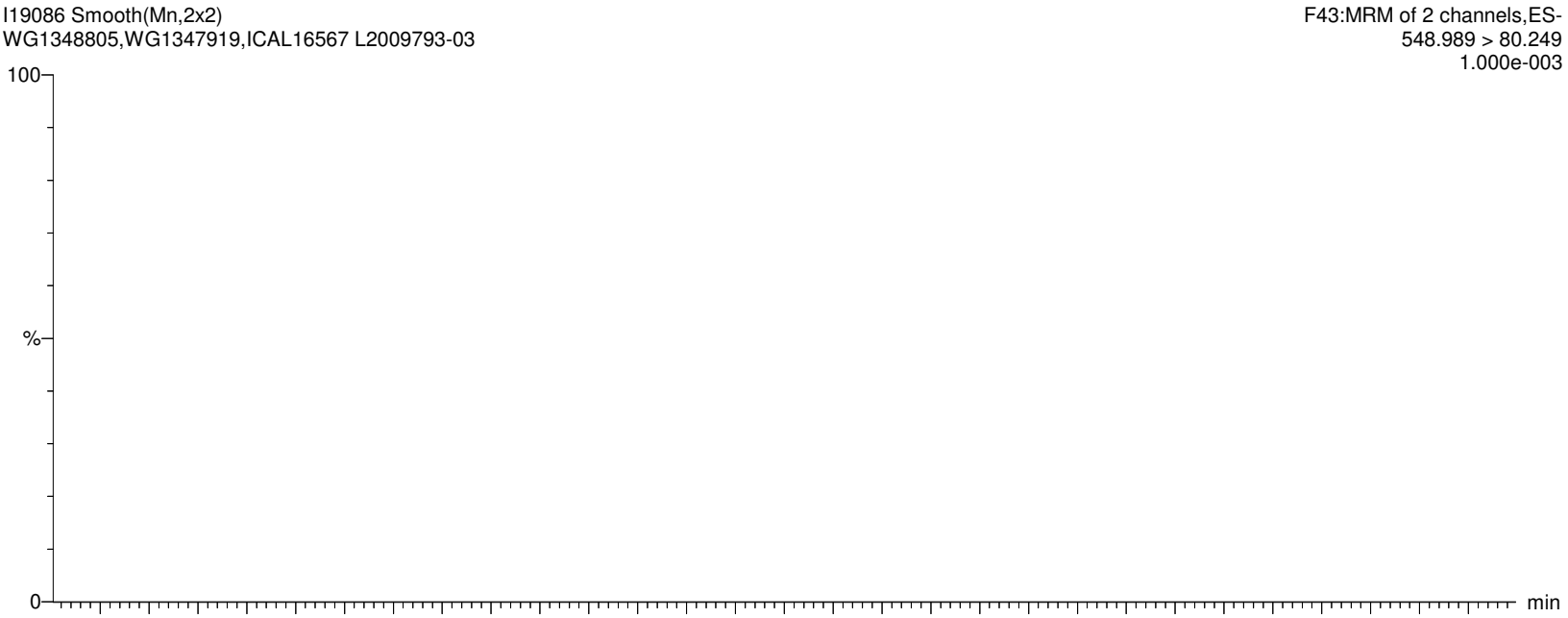
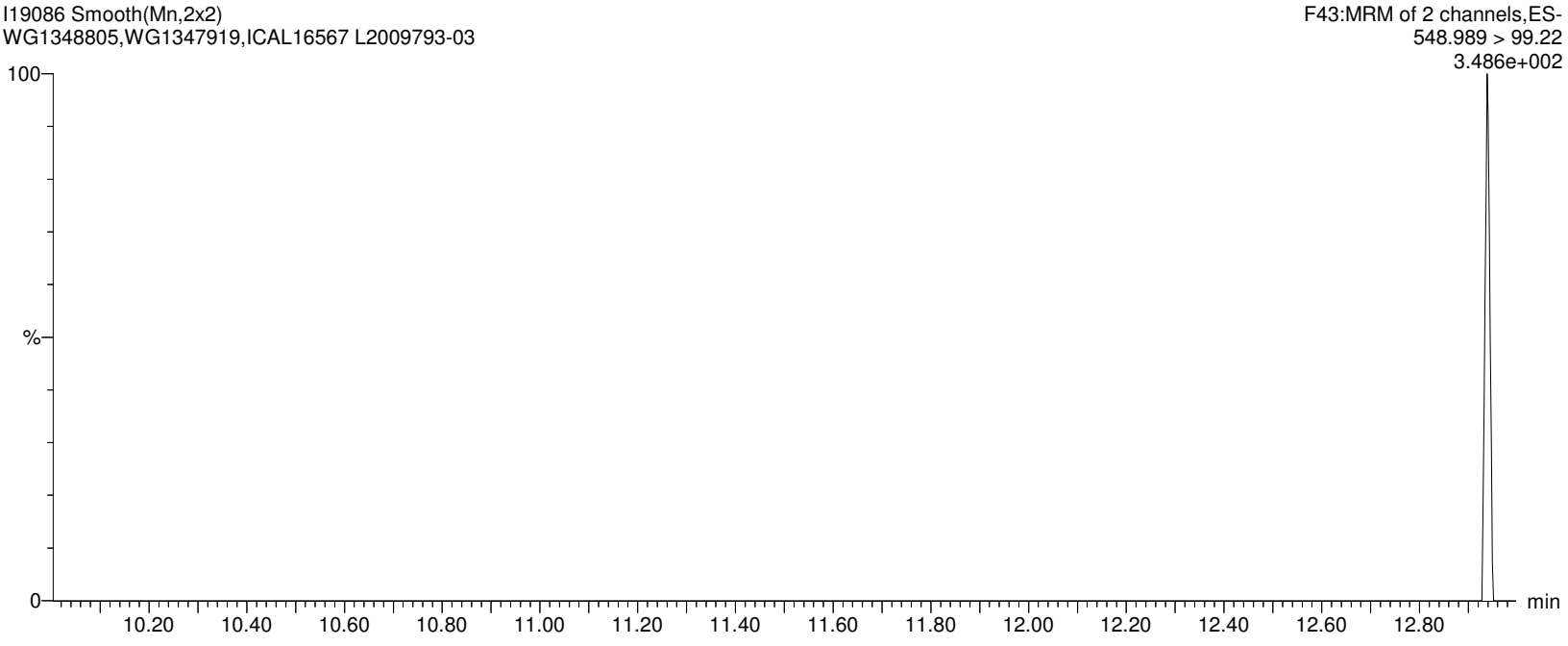
**PFNS**





all concentration units in (ng/mL)

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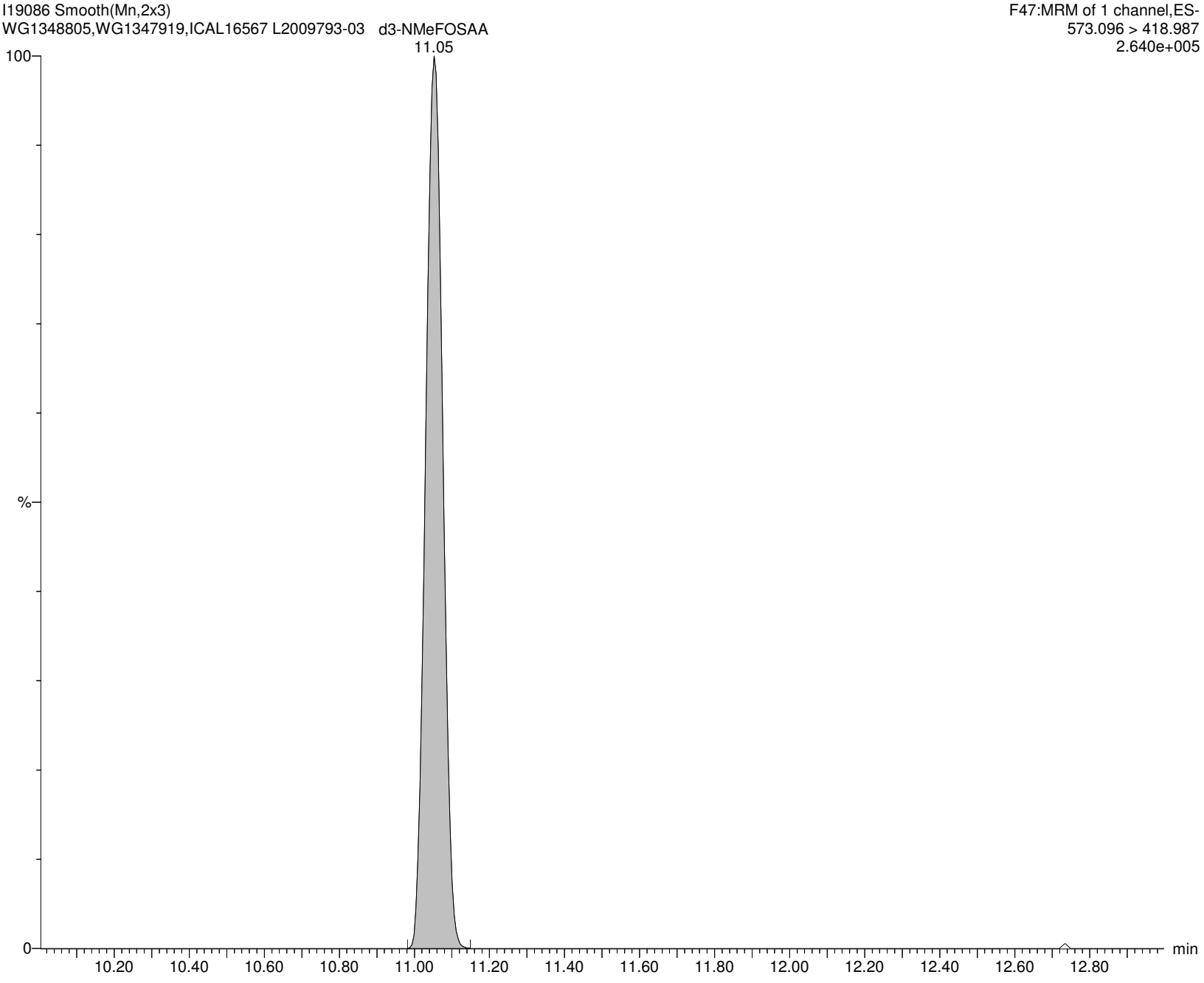
**d3-NMeFOSAA**





all concentration units in (ng/mL)

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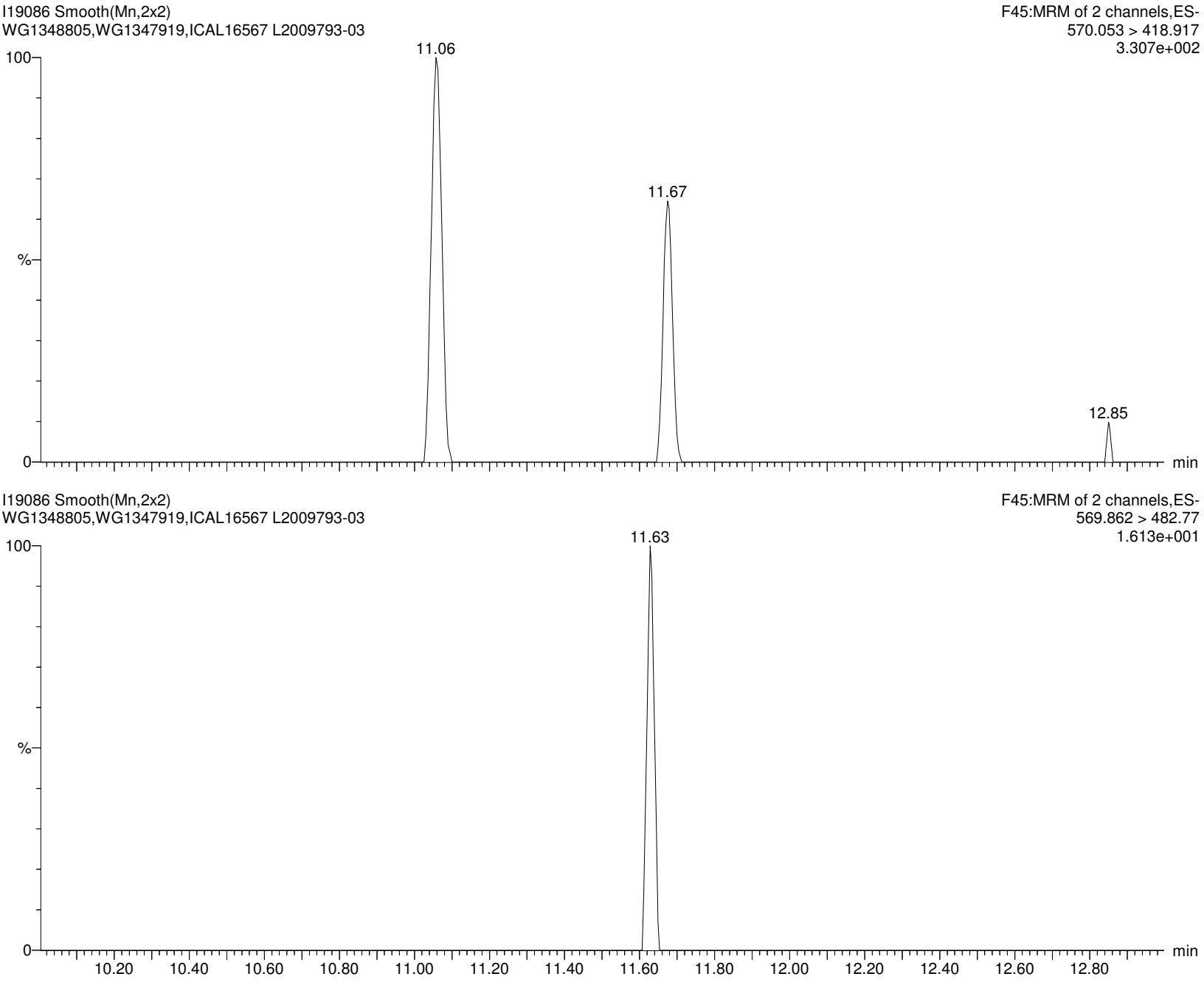
**NMeFOSAA**





all concentration units in (ng/mL)

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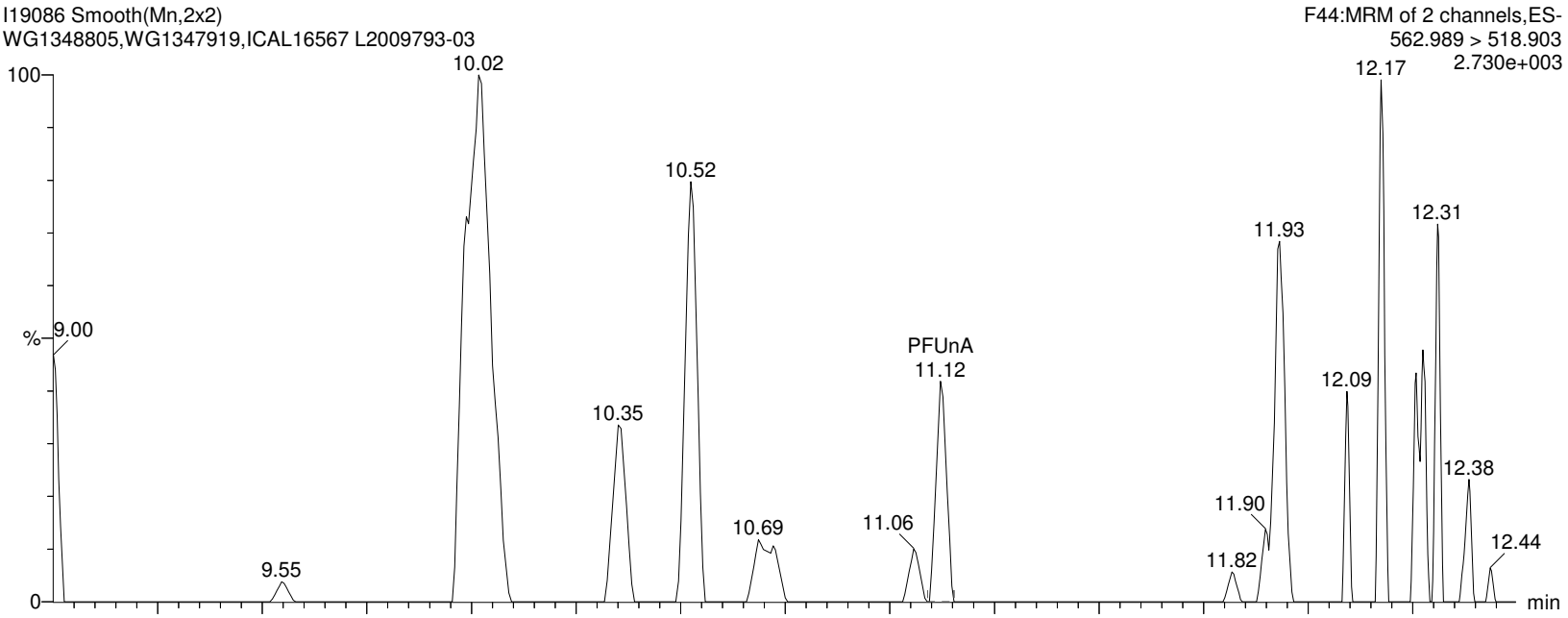
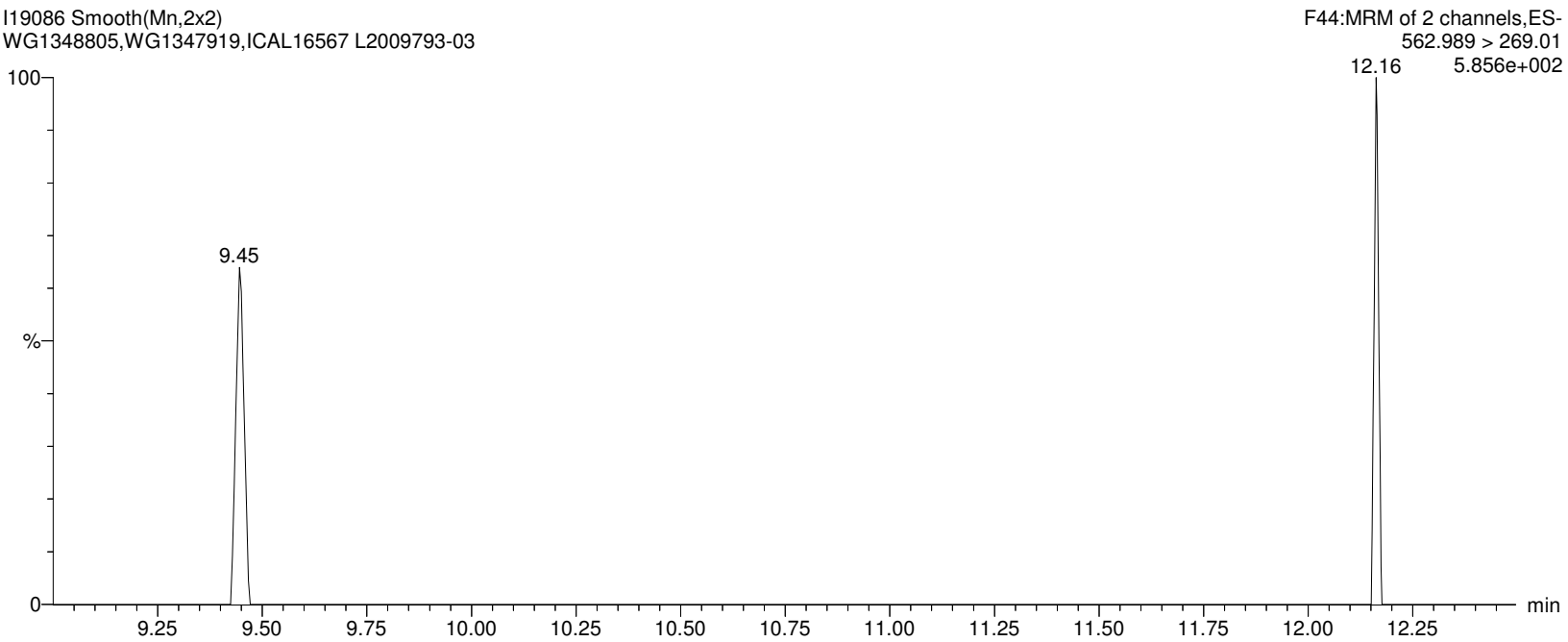
**PFUnA**





all concentration units in (ng/mL)

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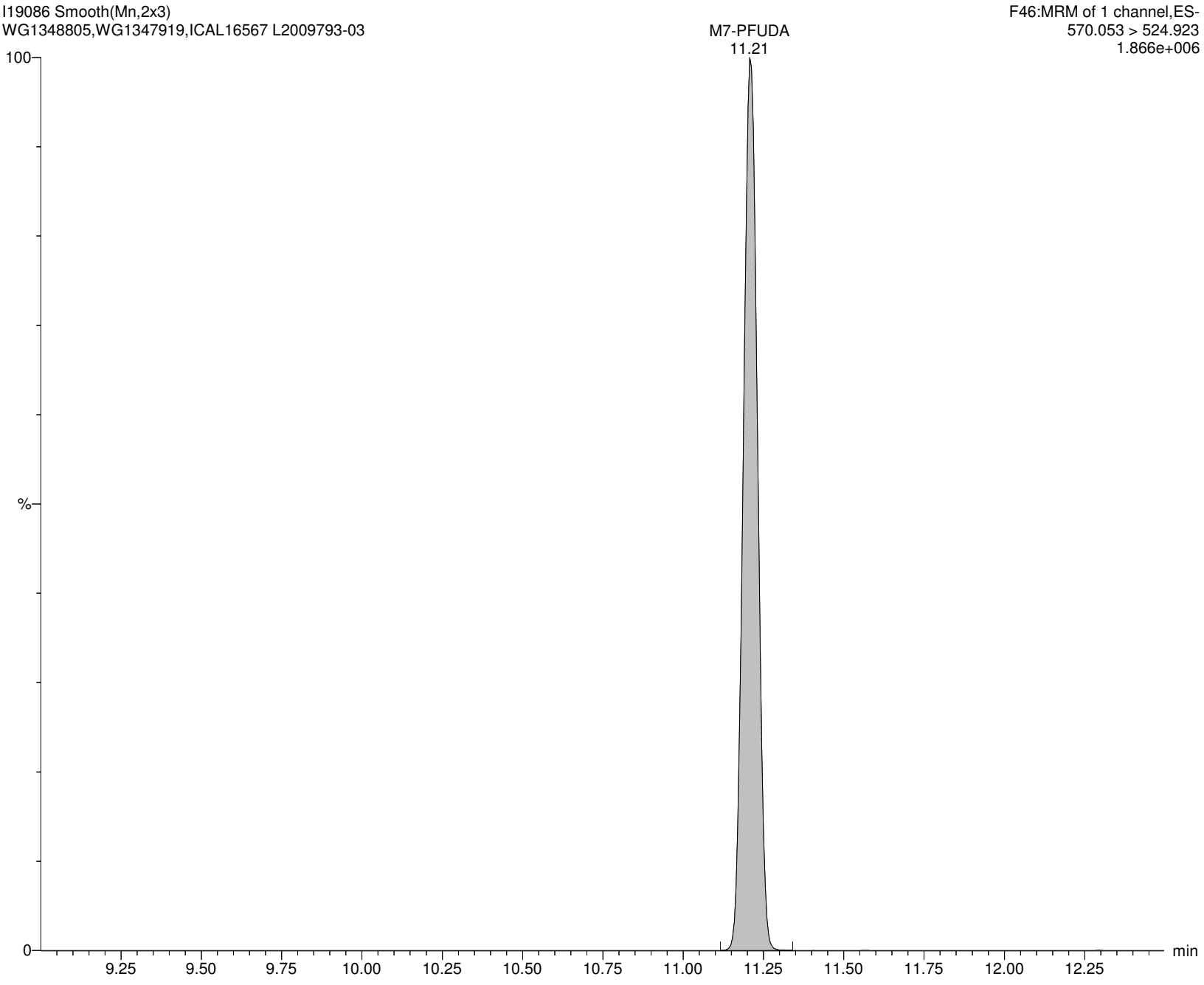
**M7-PFUDA**





all concentration units in (ng/mL)

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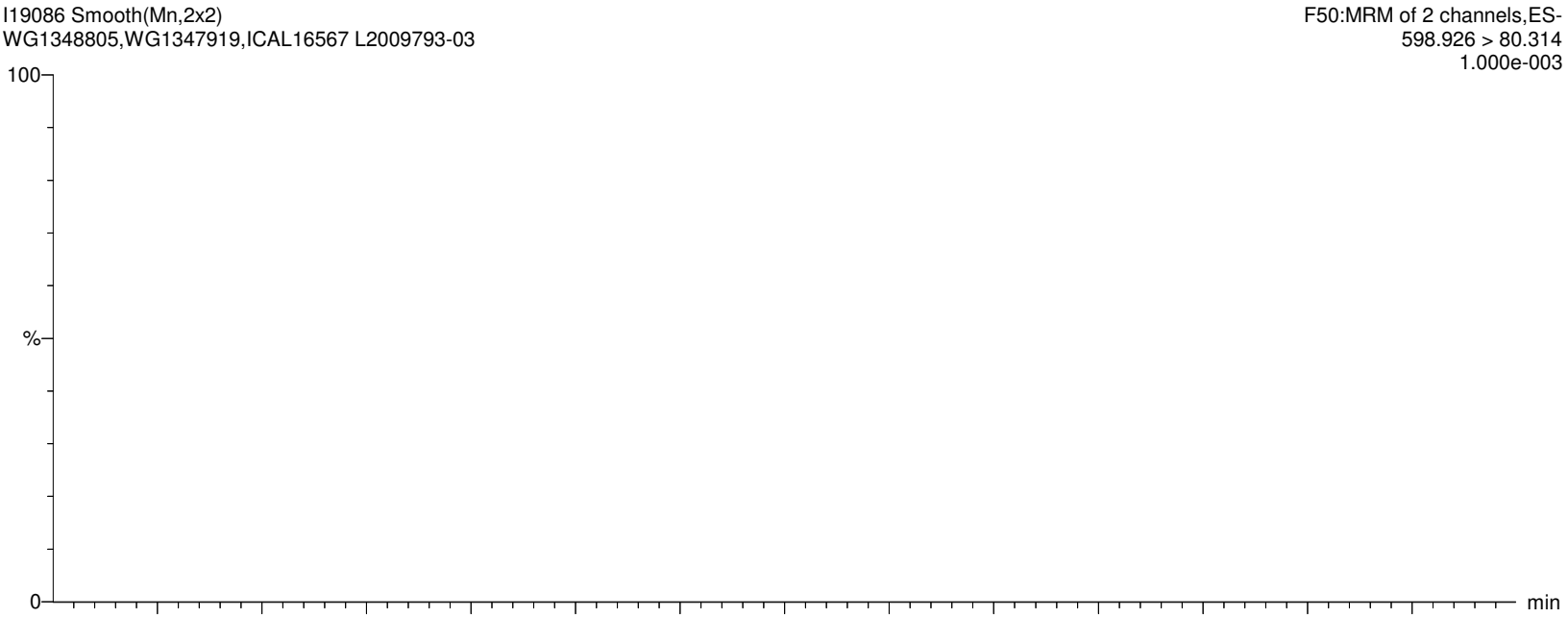


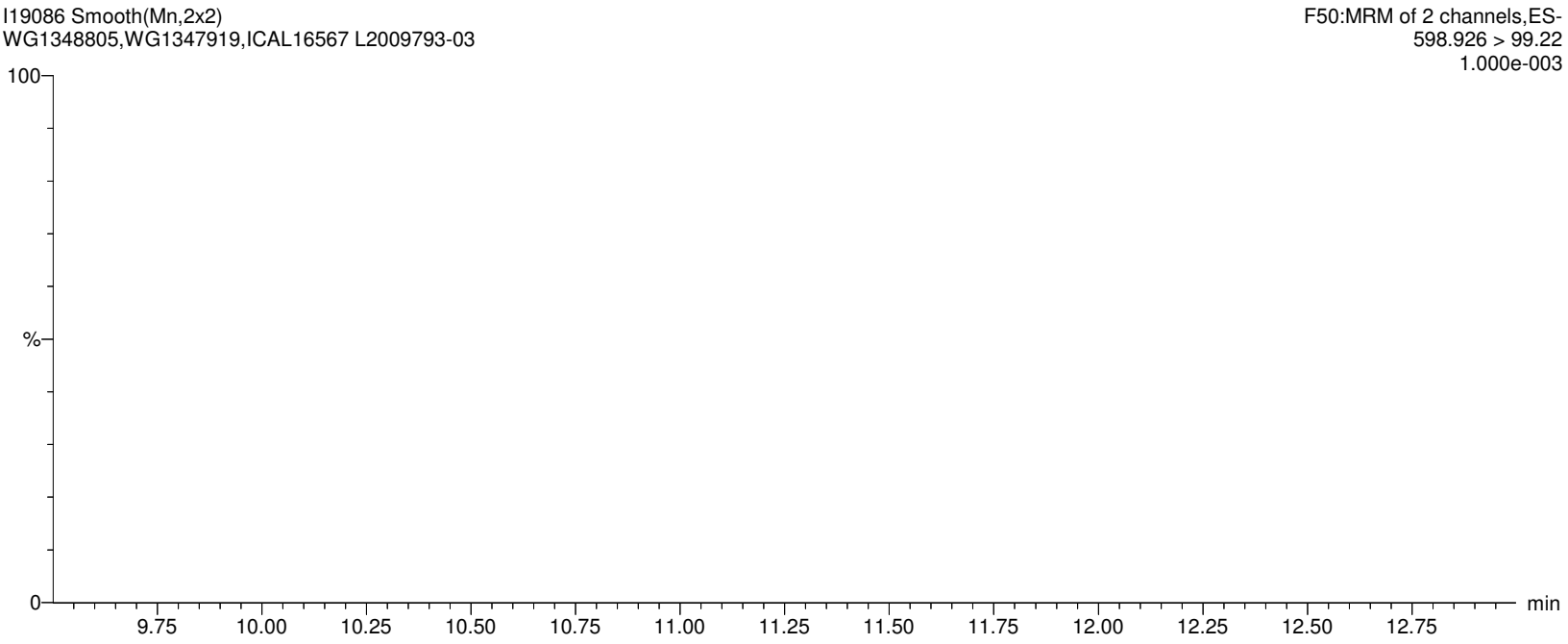



all concentration units in (ng/mL)

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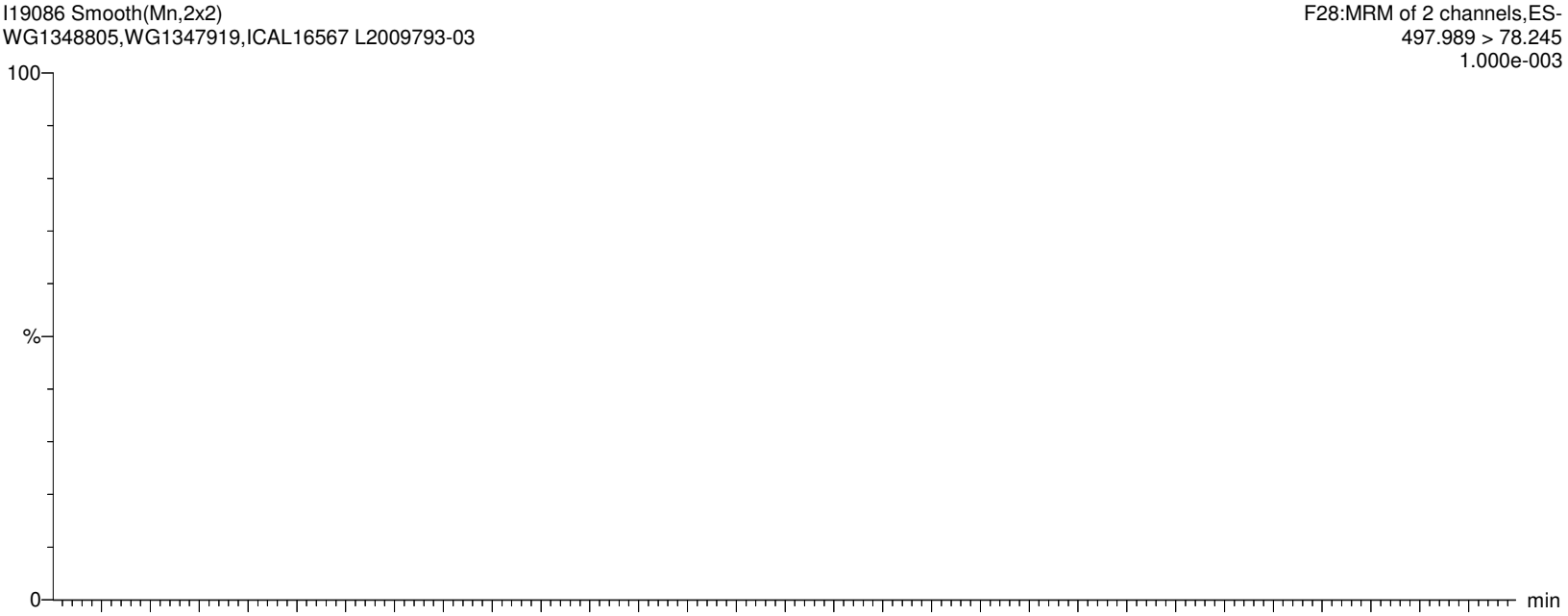
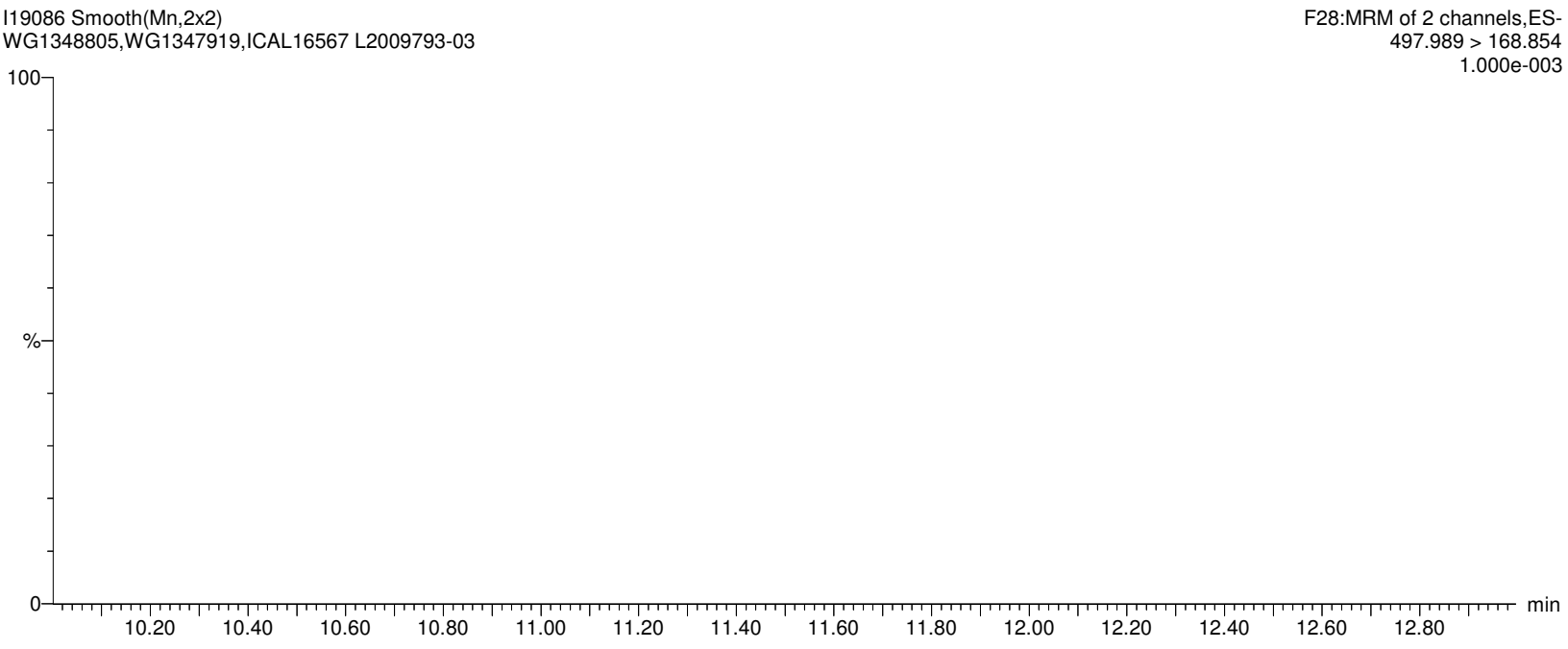
**FOSA**





all concentration units in (ng/mL)

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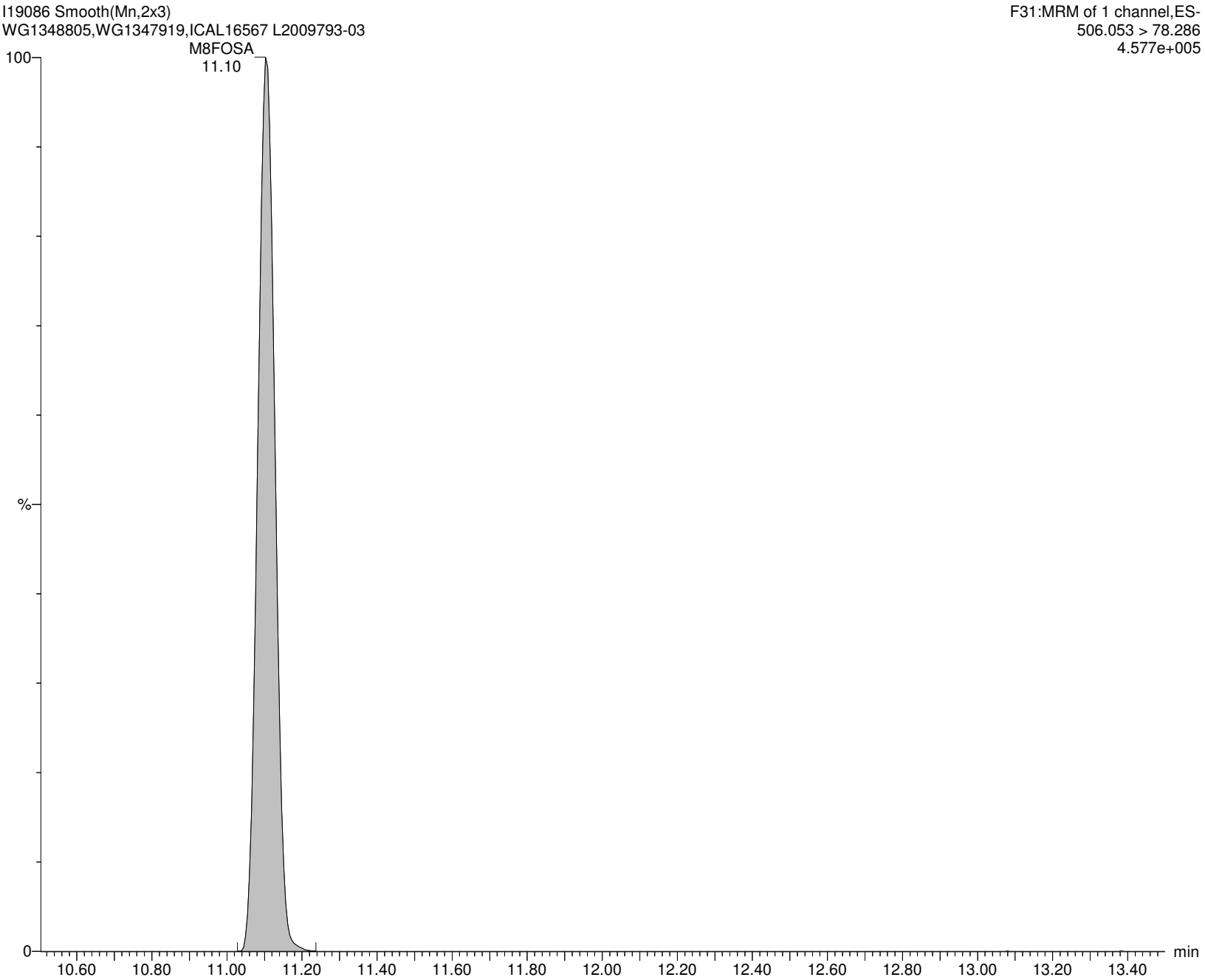



all concentration units in (ng/mL)

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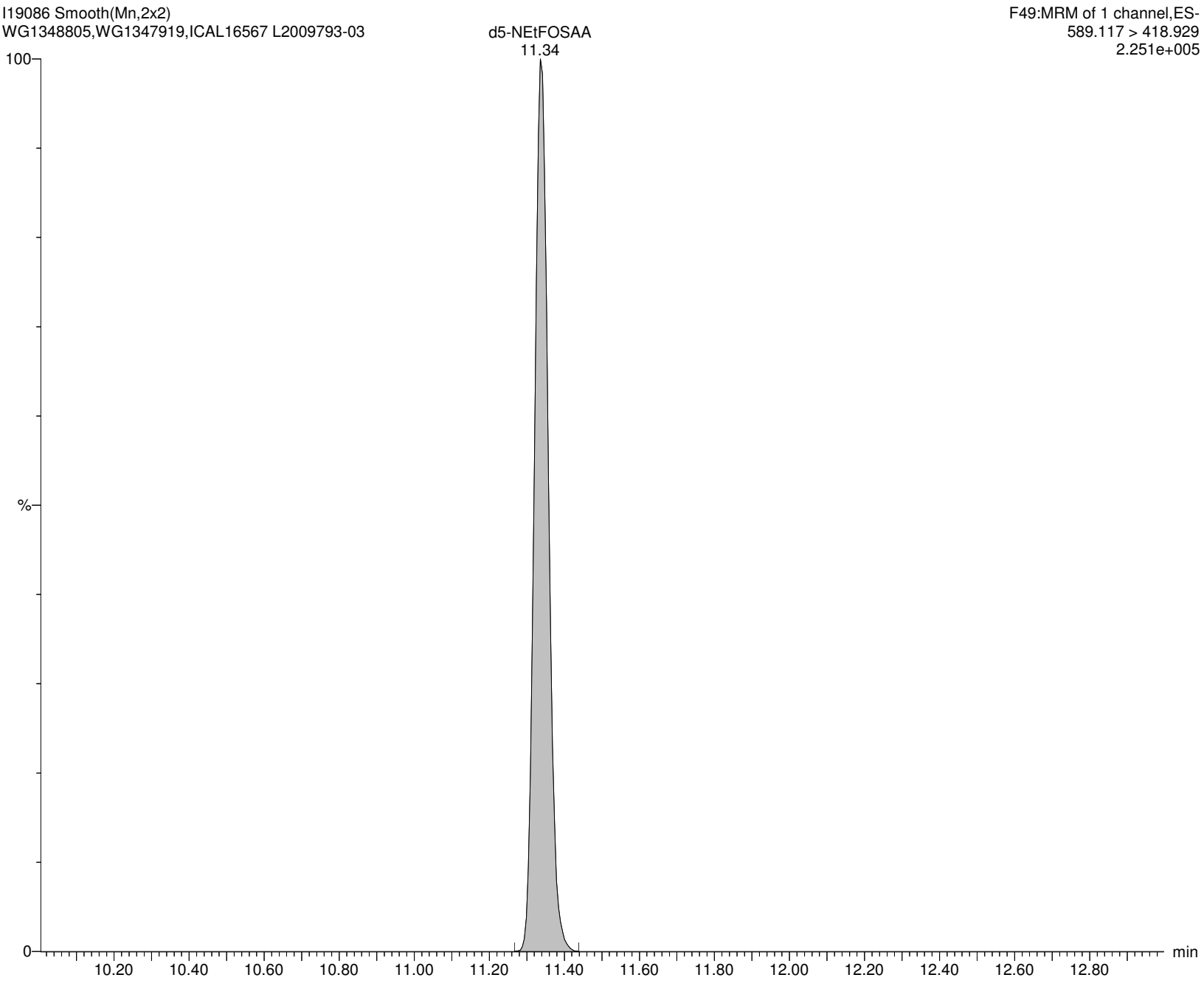
**d5-NEtFOSAA**





all concentration units in (ng/mL)

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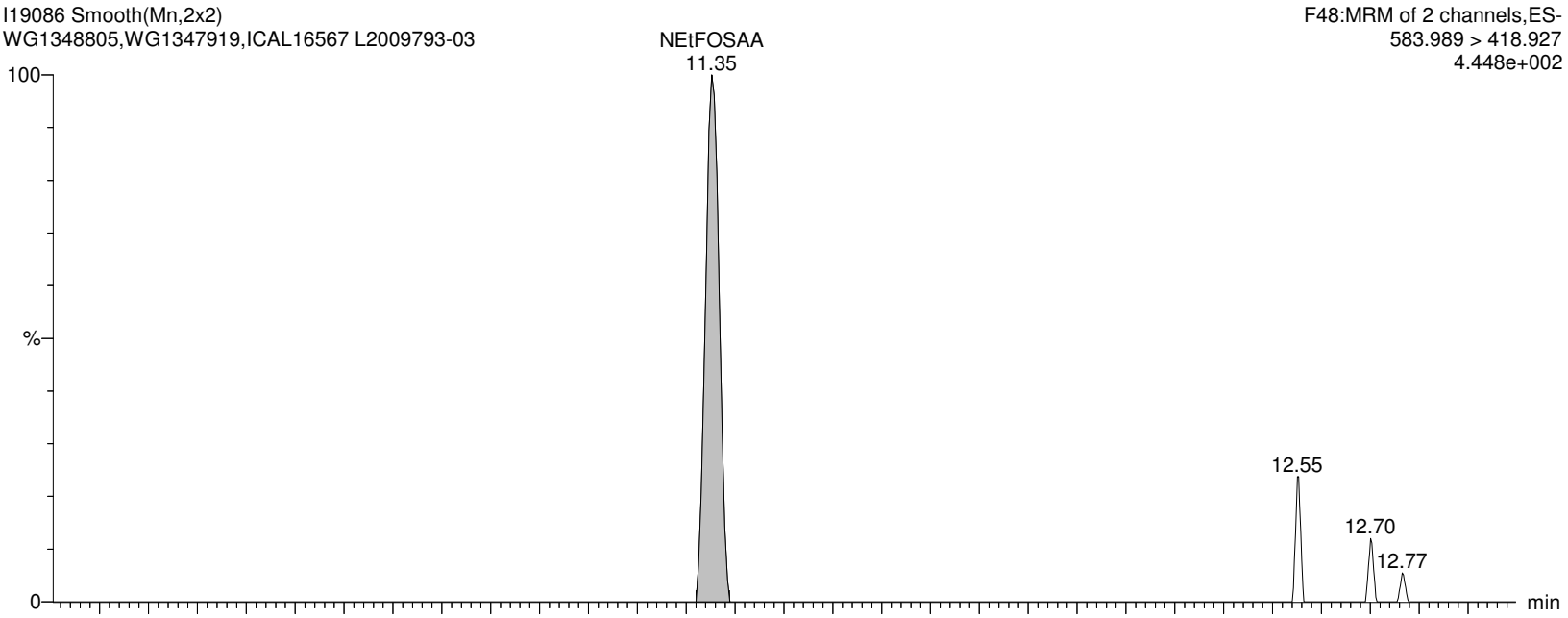
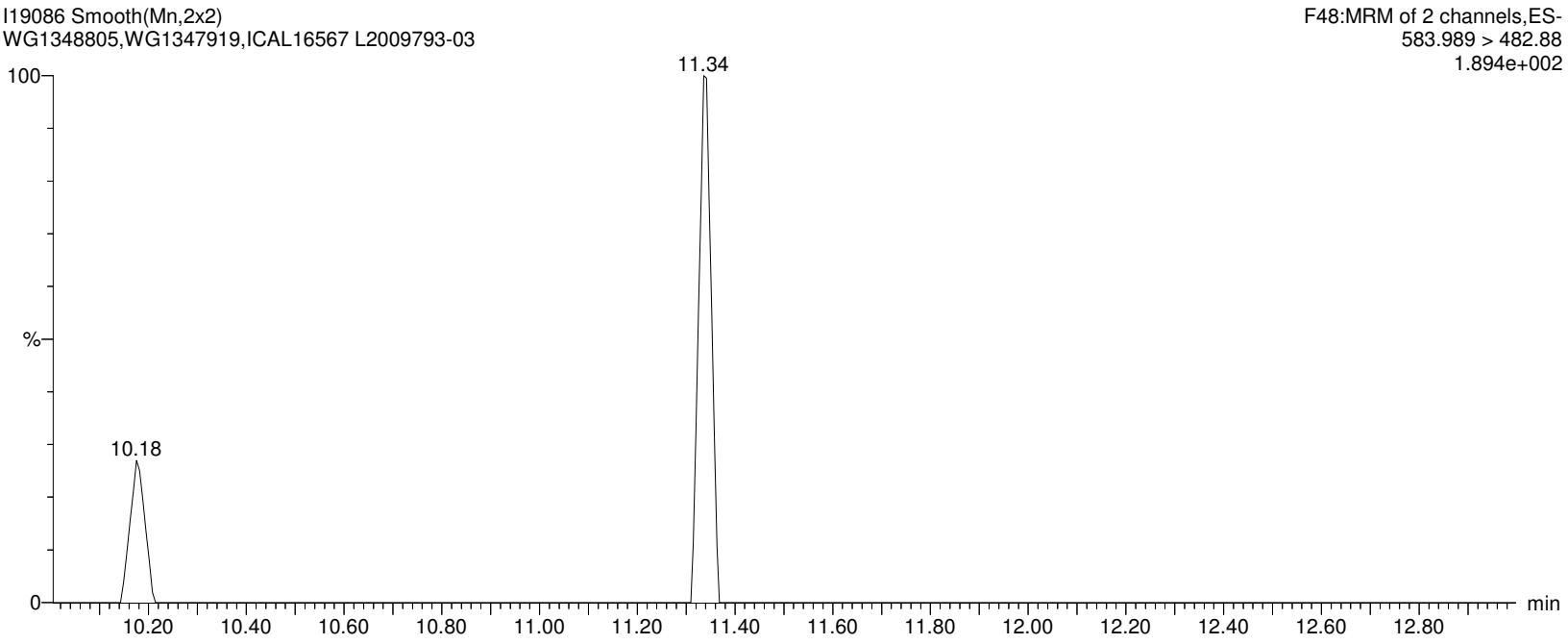
**NEtFOSAA**





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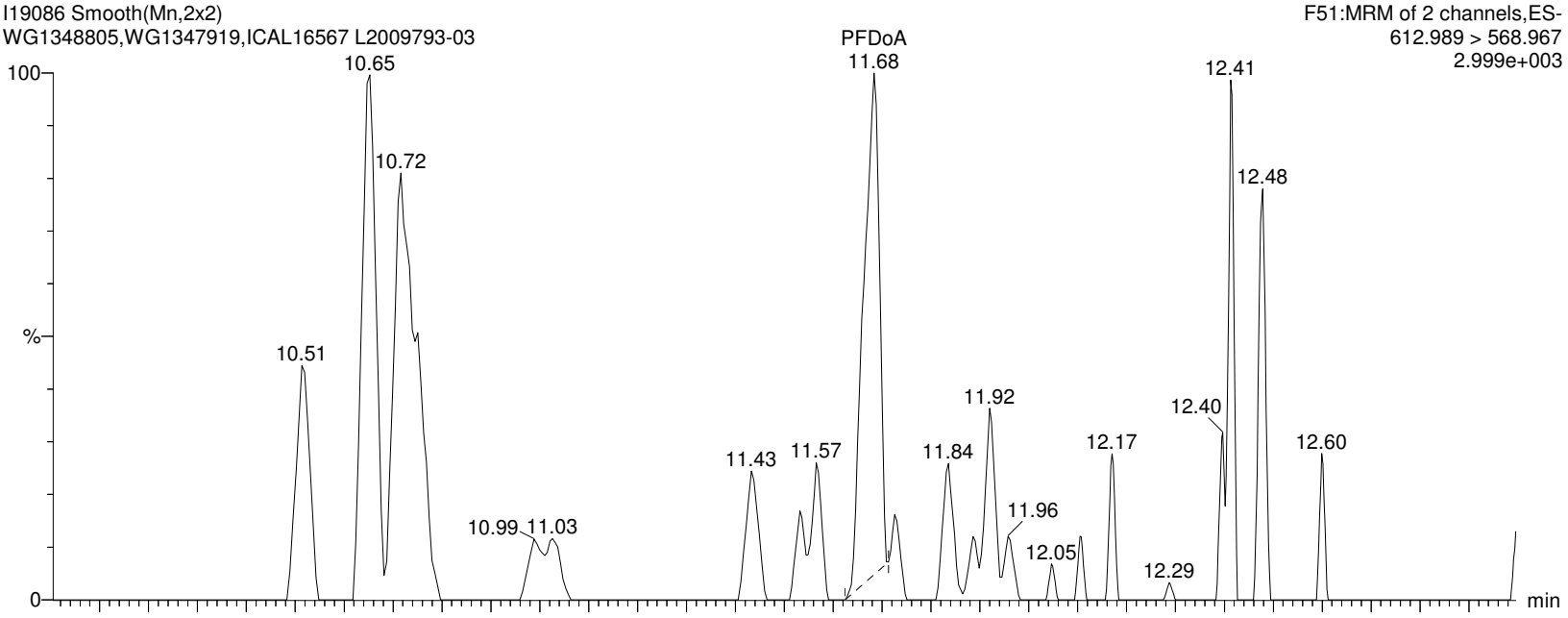
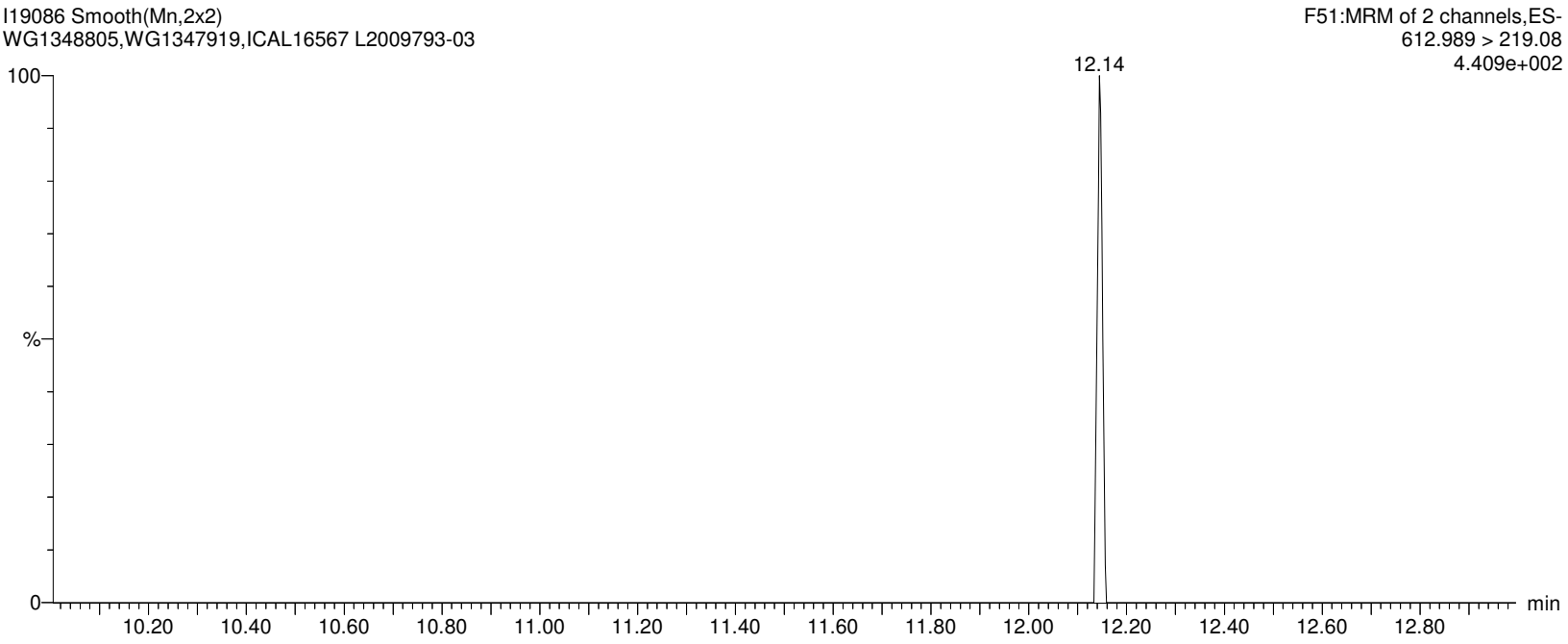
**PFDoA**





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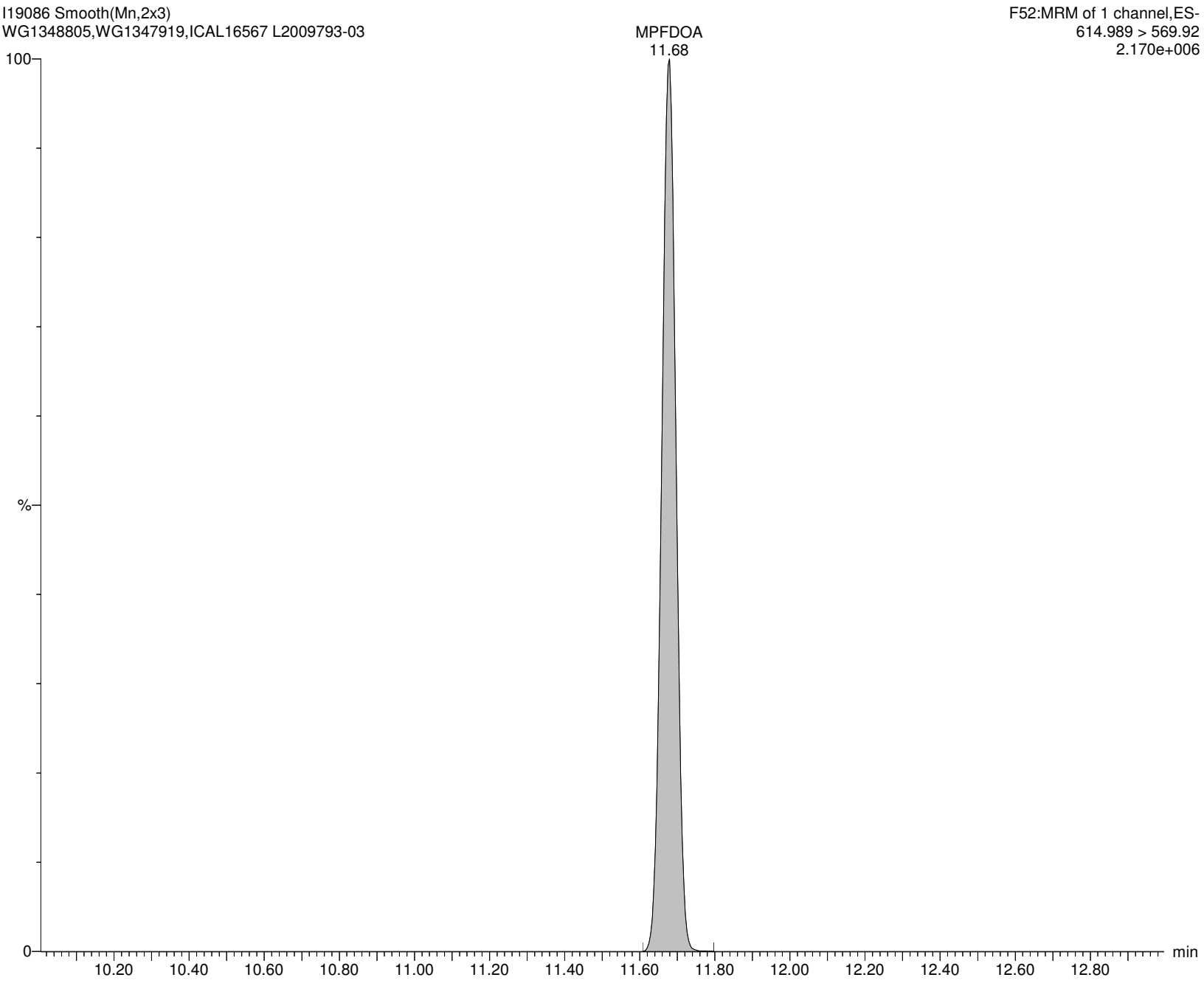



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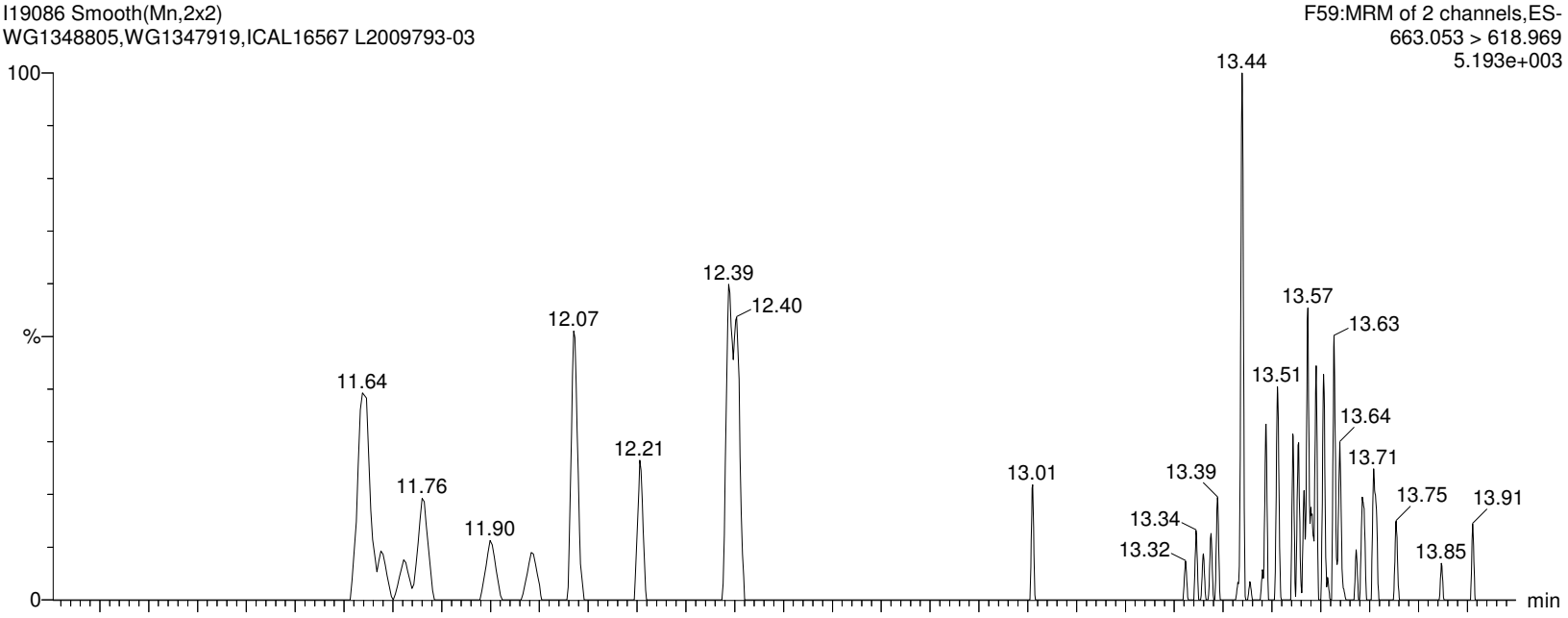
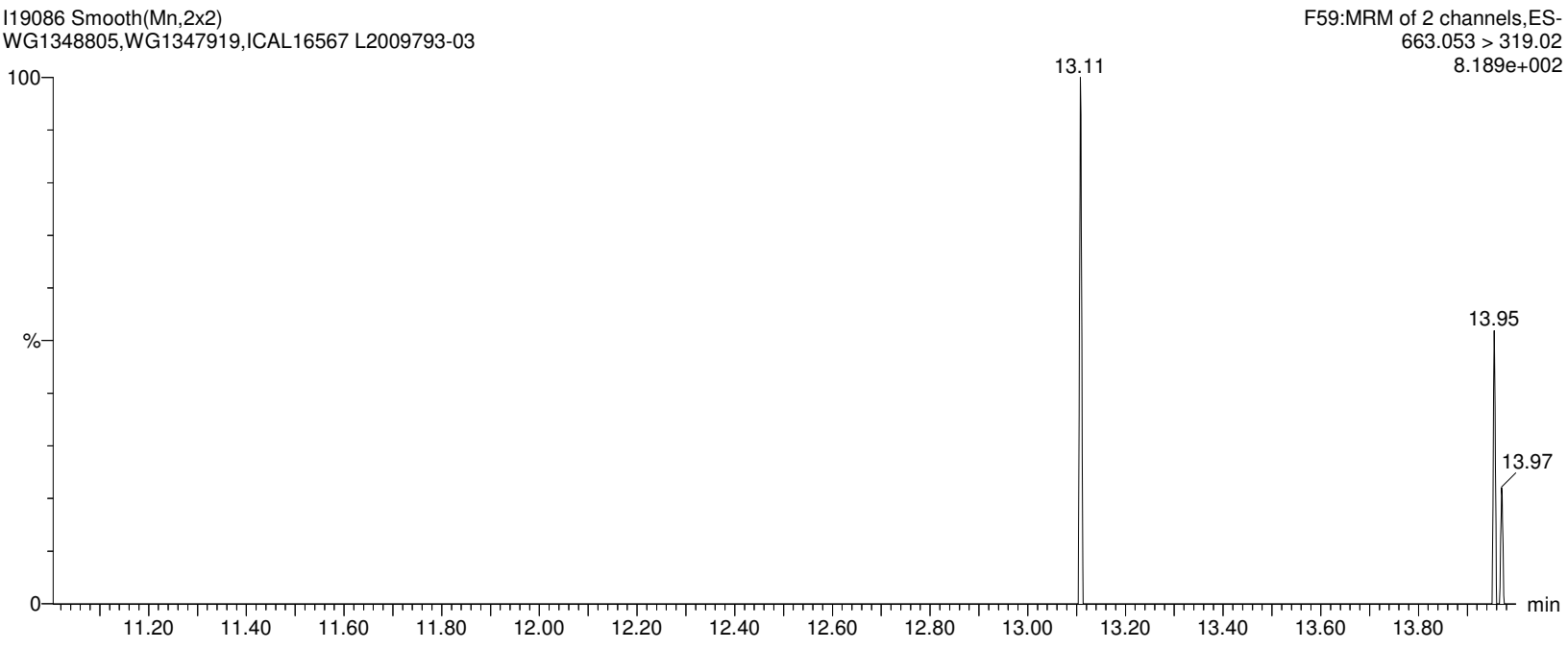
**PFTrDA**



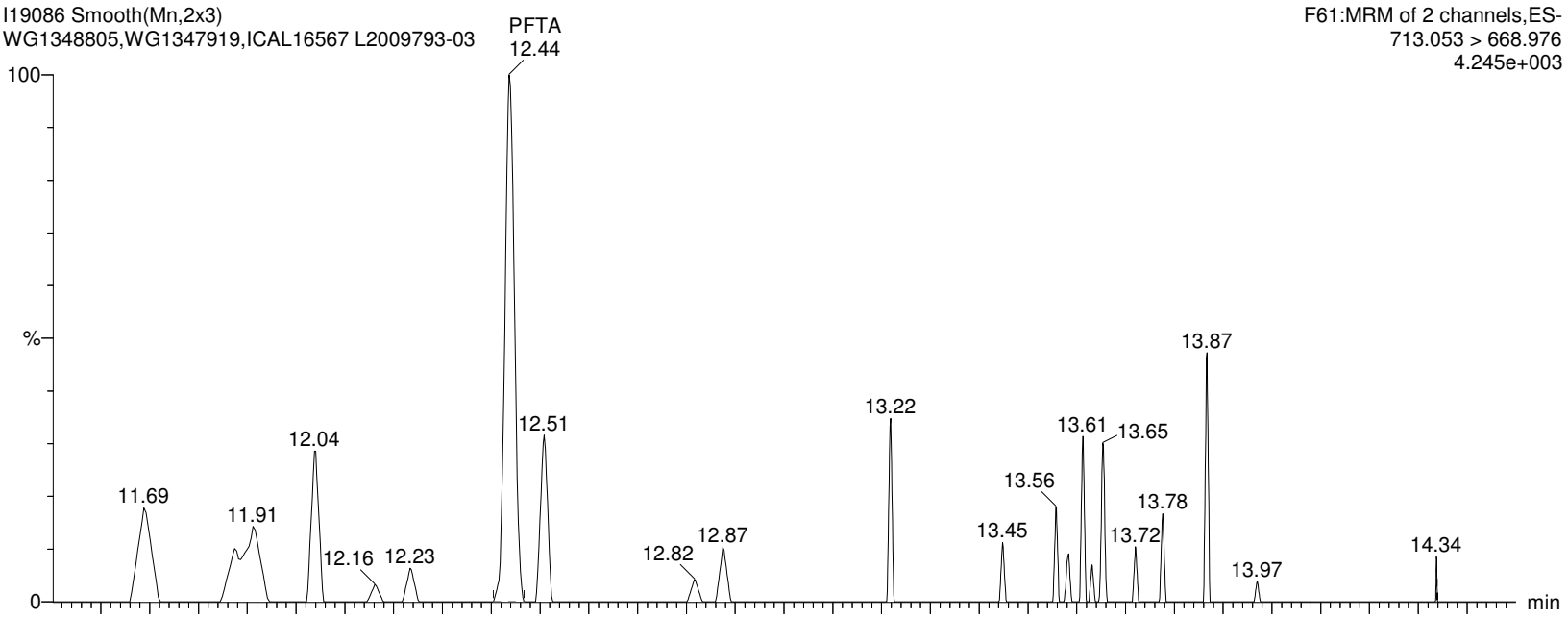


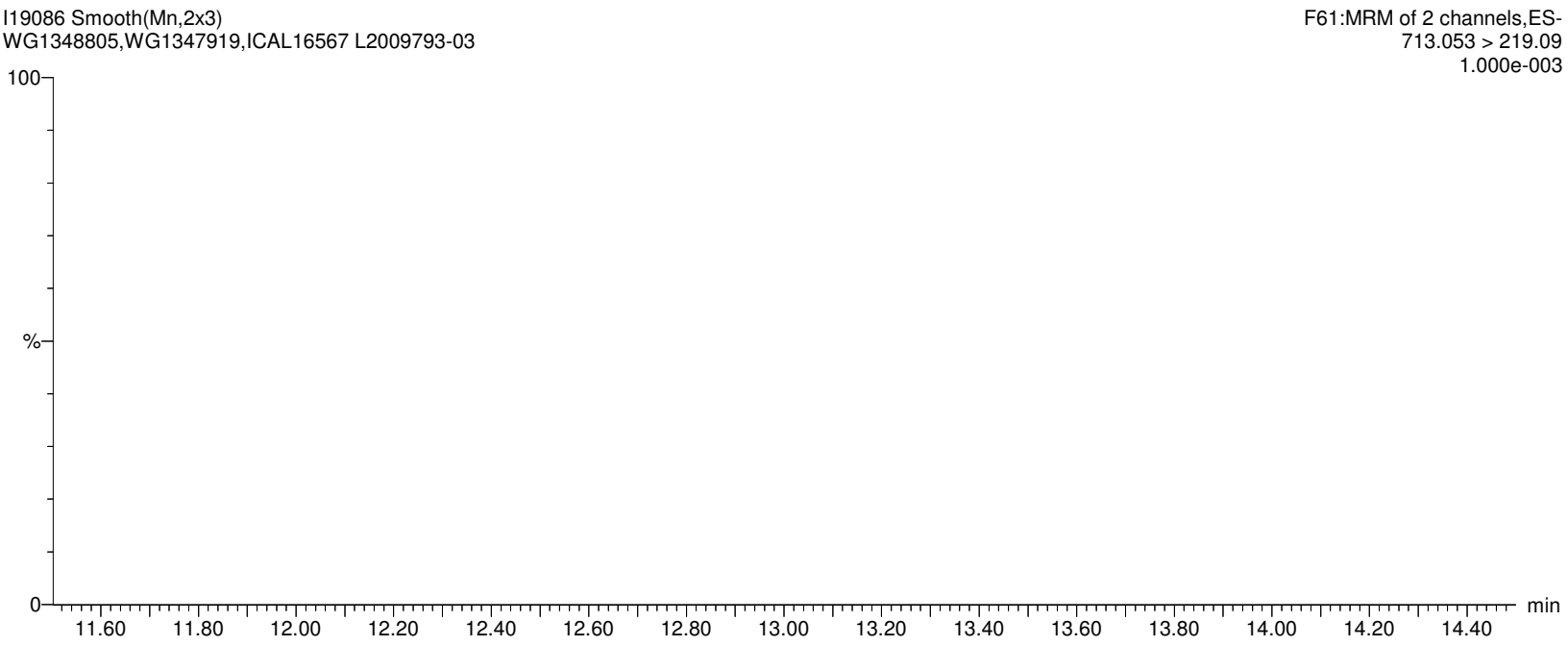
all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200309_537ISO.PRO\Data\WG1348805B.qld
Last Altered: Tuesday, March 17, 2020 11:14:29 Eastern Daylight Time
Printed: Tuesday, March 17, 2020 11:14:52 Eastern Daylight Time

**Name: I19086**
**ID: L2009793-03**
**Date: 09-Mar-2020**
**Time: 17:36:11**
**Description: WG1348805,WG1347919,ICAL16567**
**User: LCMS01:JW**
**Vial: 1:C,7**
**Instrument: XEVO-TQSmicro#QEA0276**
**Inlet Method Name: C:\MassLynx\Data\200309_537ISO.PRO\ACQUDB\LCMS_537_ISO_MeOH**
**Tune Method Name: C:\MassLynx\Data\200309_537ISO.PRO\ACQUDB\190709_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\200309_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**PFTA**



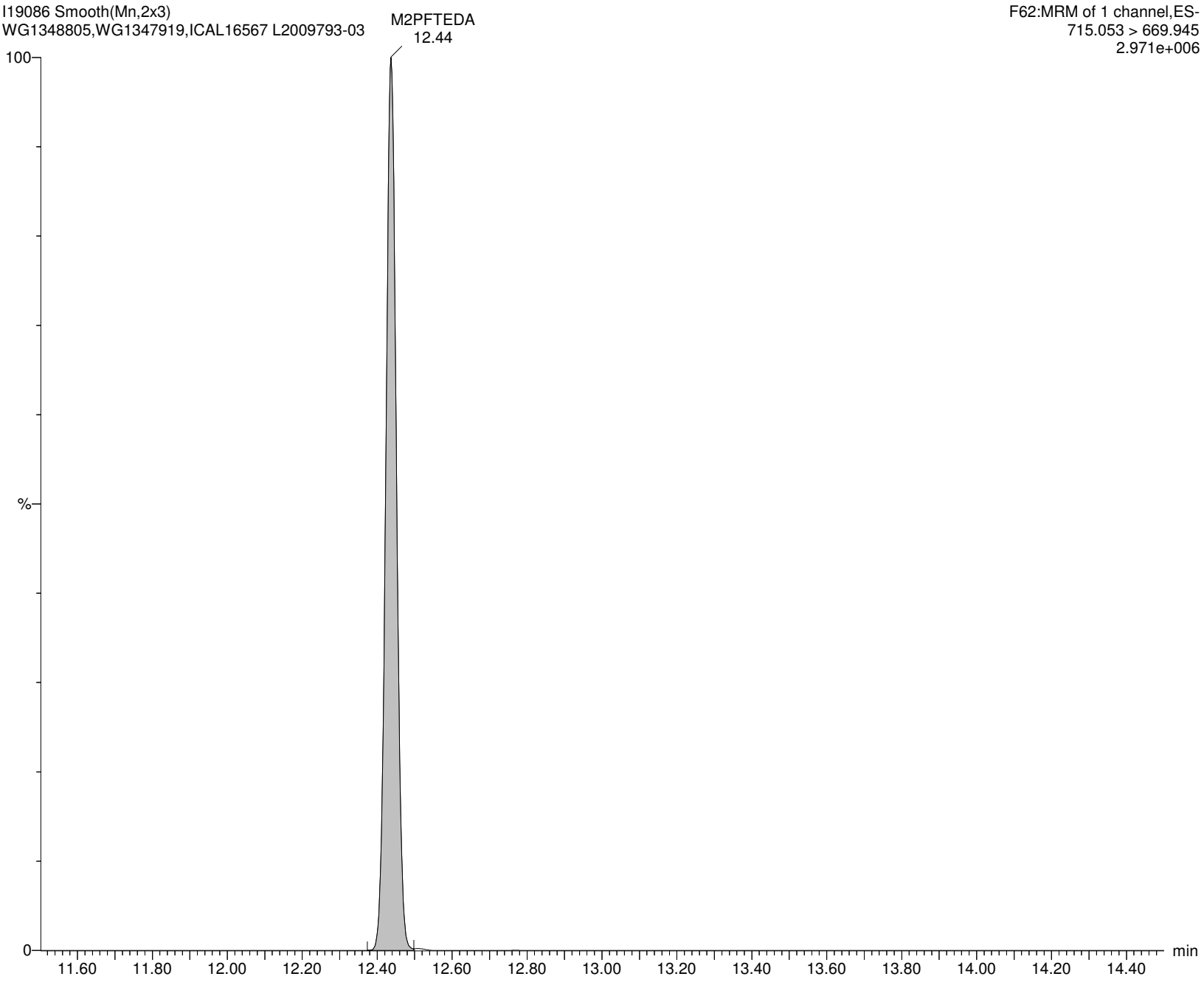


all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200309_537ISO.PRO\Data\WG1348805B.qld
Last Altered: Tuesday, March 17, 2020 11:14:29 Eastern Daylight Time
Printed: Tuesday, March 17, 2020 11:14:52 Eastern Daylight Time

**Name: I19086**
**ID: L2009793-03**
**Date: 09-Mar-2020**
**Time: 17:36:11**
**Description: WG1348805,WG1347919,ICAL16567**
**User: LCMS01:JW**
**Vial: 1:C,7**
**Instrument: XEVO-TQSmicro#QEA0276**
**Inlet Method Name: C:\MassLynx\Data\200309_537ISO.PRO\ACQUDB\LCMS_537_ISO_MeOH**
**Tune Method Name: C:\MassLynx\Data\200309_537ISO.PRO\ACQUDB\190709_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\200309_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**M2PFTEDA**





all concentration units in (ng/mL)

# Semivolatiles Standards Data

# Initial Calibration

# Initial Calibration Summary
# Form 6
# Semivolatiles

| | | | | | |
|---|---|---|---|---|---|
| Client | : | Soils Engineering Services, Inc. | Lab Number | : | L2009793 |
| Project Name | : | GROSSINGERS | Project Number | : | 9313 |
| Instrument ID | : | LCMS02 | Ical Ref | : | ICAL16305 |
| Calibration dates | : | 11/18/19 10:24 11/18/19 12:49 | | | |

**Quantify Compound Summary Report** **MassLynx V4.2 SCN977** 

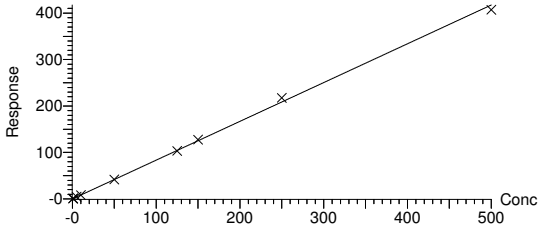
Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
Printed: Monday, November 18, 2019 13:47:36 Eastern Standard Time

**Method: C:\MassLynx\Data\2019\191118_537ISO.PRO\MethDB\537ISO_Q_191118_DOD .mdb 18 Nov 2019 13:05:34**
**Calibration: C:\MassLynx\Data\2019\191118_537ISO.PRO\CurveDB\191118_ISO_ICAL.cdb 18 Nov 2019 13:41:42**

**Compound name: PFBA**

| | Name | ID | Acq.Date | Acq.Time | RT | IS Area | Area | Conc (ng... | %Rec | RRF | 1º S/N | 2º S/N | (b/a) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | I13434 | IA2-537STD0.5 | 18-Nov-19 | 10:24:43 | 2.202 | 52425.441 | 2022.401 | 0.462 | 92.4 | 0.772 | 427 | | 0.85 |
| 2 | I13435 | IA2-537STD1.0 | 18-Nov-19 | 10:53:49 | 2.235 | 52304.957 | 4649.223 | 1.065 | 106.5 | 0.889 | 1276 | | 0.88 |
| 3 | I13436 | IA2-537STD5.0 | 18-Nov-19 | 11:10:20 | 2.197 | 52211.477 | 24281.963 | 5.570 | 111.4 | 0.930 | 3246 | | 0.84 |
| 4 | I13437 | IA2-537STD10.0 | 18-Nov-19 | 11:26:51 | 2.197 | 51444.141 | 42612.859 | 9.920 | 99.2 | 0.828 | 10768 | | 0.86 |
| 5 | I13438 | IA2-537STD50.0 | 18-Nov-19 | 11:43:24 | 2.197 | 50772.324 | 211671.219 | 49.930 | 99.9 | 0.834 | 135752 | | 0.86 |
| 6 | I13439 | IA2-537STD125 | 18-Nov-19 | 12:00:10 | 2.197 | 48226.301 | 497630.500 | 123.580 | 98.9 | 0.825 | 40939 | | 0.81 |
| 7 | I13440 | IA2-537STD150 | 18-Nov-19 | 12:16:43 | 2.197 | 49131.746 | 626725.063 | 152.770 | 101.8 | 0.850 | 74744 | | 0.79 |
| 8 | I13441 | IA2-537STD250 | 18-Nov-19 | 12:33:16 | 2.197 | 48443.484 | 1053096.500 | 260.349 | 104.1 | 0.870 | 107293 | | 0.74 |
| 9 | I13442 | IA2-537STD500 | 18-Nov-19 | 12:49:53 | 2.202 | 48827.039 | 1988962.500 | 487.854 | 97.6 | 0.815 | 207926 | | 0.63 |

Compound name: PFBA
Coefficient of Determination: R^2 = 0.999191
Calibration curve: 0.83498 * x
Response type: Internal Std ( Ref 3 ), Area * ( IS Conc. / IS Area )
Curve type: Linear, Origin: Force, Weighting: 1/x, Axis trans: None



# Initial Calibration Summary
# Form 6
# Semivolatiles

| | | | | | |
|---|---|---|---|---|---|
| Client | : | Soils Engineering Services, Inc. | Lab Number | : | L2009793 |
| Project Name | : | GROSSINGERS | Project Number | : | 9313 |
| Instrument ID | : | LCMS02 | Ical Ref | : | ICAL16305 |
| Calibration dates | : | 11/18/19 10:24 11/18/19 12:49 | | | |

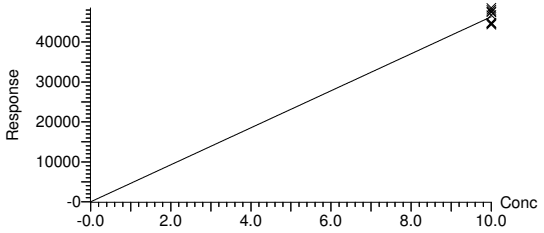


Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
Printed: Monday, November 18, 2019 13:47:36 Eastern Standard Time

**Compound name: M3PFBA**

| | Name | ID | Acq.Date | Acq.Time | RT | IS Area | Area | Conc (ng... | %Rec | RRF | 1º S/N | 2º S/N | (b/a) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | I13434 | IA2-537STD0.5 | 18-Nov-19 | 10:24:43 | 2.198 | | 48556.770 | 10.479 | 104.8 | 4855.677 | 17539 | | 0.88 |
| 2 | I13435 | IA2-537STD1.0 | 18-Nov-19 | 10:53:49 | 2.232 | | 47672.914 | 10.289 | 102.9 | 4767.291 | 19716 | | 0.90 |
| 3 | I13436 | IA2-537STD5.0 | 18-Nov-19 | 11:10:20 | 2.198 | | 48104.082 | 10.382 | 103.8 | 4810.408 | 25209 | | 0.84 |
| 4 | I13437 | IA2-537STD10.0 | 18-Nov-19 | 11:26:51 | 2.193 | | 47491.551 | 10.249 | 102.5 | 4749.155 | 13908 | | 0.88 |
| 5 | I13438 | IA2-537STD50.0 | 18-Nov-19 | 11:43:24 | 2.193 | | 46737.883 | 10.087 | 100.9 | 4673.788 | 22328 | | 0.87 |
| 6 | I13439 | IA2-537STD125 | 18-Nov-19 | 12:00:10 | 2.193 | | 44596.996 | 9.625 | 96.2 | 4459.700 | 42998 | | 0.82 |
| 7 | I13440 | IA2-537STD150 | 18-Nov-19 | 12:16:43 | 2.193 | | 44320.668 | 9.565 | 95.7 | 4432.067 | 11982 | | 0.80 |
| 8 | I13441 | IA2-537STD250 | 18-Nov-19 | 12:33:16 | 2.193 | | 44854.523 | 9.680 | 96.8 | 4485.452 | 19567 | | 0.75 |
| 9 | I13442 | IA2-537STD500 | 18-Nov-19 | 12:49:53 | 2.198 | | 44687.082 | 9.644 | 96.4 | 4468.708 | 11830 | | 0.63 |

Compound name: M3PFBA
Response Factor: 4633.58
RRF SD: 170.812, % Relative SD: 3.6864
Response type: External Std, Area
Curve type: RF



# Initial Calibration Summary
# Form 6
# Semivolatiles

| | | | | | |
|---|---|---|---|---|---|
| Client | : | Soils Engineering Services, Inc. | Lab Number | : | L2009793 |
| Project Name | : | GROSSINGERS | Project Number | : | 9313 |
| Instrument ID | : | LCMS02 | Ical Ref | : | ICAL16305 |
| Calibration dates | : | 11/18/19 10:24 11/18/19 12:49 | | | |

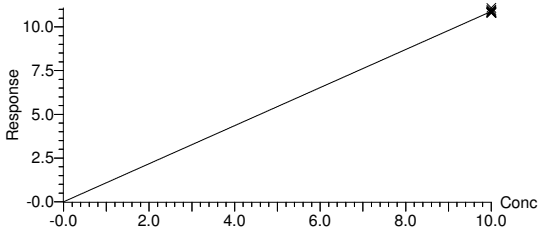


Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
Printed: Monday, November 18, 2019 13:47:36 Eastern Standard Time

**Compound name: MPFBA**

| | Name | ID | Acq.Date | Acq.Time | RT | IS Area | Area | Conc (ng... | %Rec | RRF | 1º S/N | 2º S/N | (b/a) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | I13434 | IA2-537STD0.5 | 18-Nov-19 | 10:24:43 | 2.200 | 48556.770 | 52425.441 | 9.921 | 99.2 | 1.080 | 83214 | | 0.88 |
| 2 | I13435 | IA2-537STD1.0 | 18-Nov-19 | 10:53:49 | 2.234 | 47672.914 | 52304.957 | 10.082 | 100.8 | 1.097 | 21701 | | 0.89 |
| 3 | I13436 | IA2-537STD5.0 | 18-Nov-19 | 11:10:20 | 2.195 | 48104.082 | 52211.477 | 9.974 | 99.7 | 1.085 | 42882 | | 0.85 |
| 4 | I13437 | IA2-537STD10.0 | 18-Nov-19 | 11:26:51 | 2.195 | 47491.551 | 51444.141 | 9.954 | 99.5 | 1.083 | 27822 | | 0.87 |
| 5 | I13438 | IA2-537STD50.0 | 18-Nov-19 | 11:43:24 | 2.195 | 46737.883 | 50772.324 | 9.982 | 99.8 | 1.086 | 6123 | | 0.86 |
| 6 | I13439 | IA2-537STD125 | 18-Nov-19 | 12:00:10 | 2.195 | 44596.996 | 48226.301 | 9.937 | 99.4 | 1.081 | 27458 | | 0.81 |
| 7 | I13440 | IA2-537STD150 | 18-Nov-19 | 12:16:43 | 2.195 | 44320.668 | 49131.746 | 10.186 | 101.9 | 1.109 | 41537 | | 0.79 |
| 8 | I13441 | IA2-537STD250 | 18-Nov-19 | 12:33:16 | 2.195 | 44854.523 | 48443.484 | 9.924 | 99.2 | 1.080 | 16769 | | 0.75 |
| 9 | I13442 | IA2-537STD500 | 18-Nov-19 | 12:49:53 | 2.200 | 44687.082 | 48827.039 | 10.040 | 100.4 | 1.093 | 4654 | | 0.63 |

Compound name: MPFBA
Response Factor: 1.08826
RRF SD: 0.00959591, % Relative SD: 0.881764
Response type: Internal Std ( Ref 2 ), Area * ( IS Conc. / IS Area )
Curve type: RF



# Initial Calibration Summary
# Form 6
# Semivolatiles

| | | | | | |
|---|---|---|---|---|---|
| Client | : | Soils Engineering Services, Inc. | Lab Number | : | L2009793 |
| Project Name | : | GROSSINGERS | Project Number | : | 9313 |
| Instrument ID | : | LCMS02 | Ical Ref | : | ICAL16305 |
| Calibration dates | : | 11/18/19 10:24 11/18/19 12:49 | | | |

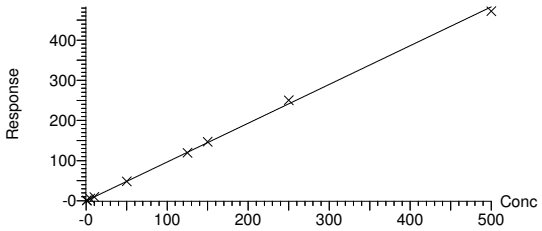


Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
Printed: Monday, November 18, 2019 13:47:36 Eastern Standard Time

**Compound name: PFPeA**

| | Name | ID | Acq.Date | Acq.Time | RT | IS Area | Area | Conc (ng... | %Rec | RRF | 1º S/N | 2º S/N | (b/a) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | I13434 | IA2-537STD0.5 | 18-Nov-19 | 10:24:43 | 5.103 | 76105.172 | 3492.261 | 0.475 | 95.0 | 0.918 | 637 | | 0.85 |
| 2 | I13435 | IA2-537STD1.0 | 18-Nov-19 | 10:53:49 | 5.136 | 77263.586 | 7746.430 | 1.038 | 103.8 | 1.003 | 1599 | | 0.87 |
| 3 | I13436 | IA2-537STD5.0 | 18-Nov-19 | 11:10:20 | 5.100 | 75572.102 | 40899.605 | 5.604 | 112.1 | 1.082 | 11510 | | 0.81 |
| 4 | I13437 | IA2-537STD10.0 | 18-Nov-19 | 11:26:51 | 5.098 | 75017.859 | 70842.992 | 9.778 | 97.8 | 0.944 | 3098 | | 0.83 |
| 5 | I13438 | IA2-537STD50.0 | 18-Nov-19 | 11:43:24 | 5.097 | 72241.625 | 350630.375 | 50.254 | 100.5 | 0.971 | 41095 | | 0.82 |
| 6 | I13439 | IA2-537STD125 | 18-Nov-19 | 12:00:10 | 5.095 | 67687.656 | 808328.813 | 123.649 | 98.9 | 0.955 | 118382 | | 0.75 |
| 7 | I13440 | IA2-537STD150 | 18-Nov-19 | 12:16:43 | 5.094 | 69048.016 | 1014589.375 | 152.143 | 101.4 | 0.980 | 86534 | | 0.75 |
| 8 | I13441 | IA2-537STD250 | 18-Nov-19 | 12:33:16 | 5.094 | 66395.219 | 1664293.750 | 259.541 | 103.8 | 1.003 | 278059 | | 0.71 |
| 9 | I13442 | IA2-537STD500 | 18-Nov-19 | 12:49:53 | 5.095 | 64857.230 | 3063171.750 | 489.018 | 97.8 | 0.945 | 1134 | | 0.59 |

Compound name: PFPeA
Coefficient of Determination: R^2 = 0.999314
Calibration curve: 0.965801 * x
Response type: Internal Std ( Ref 5 ), Area * ( IS Conc. / IS Area )
Curve type: Linear, Origin: Force, Weighting: 1/x, Axis trans: None



# Initial Calibration Summary
# Form 6
# Semivolatiles

| | | | | | |
|---|---|---|---|---|---|
| Client | : | Soils Engineering Services, Inc. | Lab Number | : | L2009793 |
| Project Name | : | GROSSINGERS | Project Number | : | 9313 |
| Instrument ID | : | LCMS02 | Ical Ref | : | ICAL16305 |
| Calibration dates | : | 11/18/19 10:24 11/18/19 12:49 | | | |

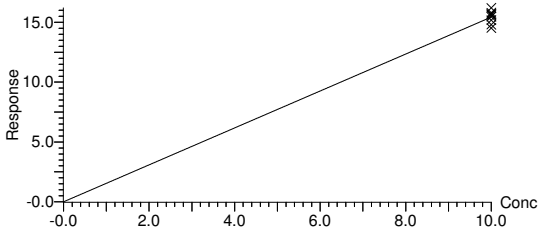


Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
Printed: Monday, November 18, 2019 13:47:36 Eastern Standard Time

**Compound name: M5PFPEA**

| | Name | ID | Acq.Date | Acq.Time | RT | IS Area | Area | Conc (ng... | %Rec | RRF | 1º S/N | 2º S/N | (b/a) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | I13434 | IA2-537STD0.5 | 18-Nov-19 | 10:24:43 | 5.098 | 48556.770 | 76105.172 | 10.154 | 101.5 | 1.567 | 15613 | | 0.94 |
| 2 | I13435 | IA2-537STD1.0 | 18-Nov-19 | 10:53:49 | 5.131 | 47672.914 | 77263.586 | 10.500 | 105.0 | 1.621 | 18535 | | 0.95 |
| 3 | I13436 | IA2-537STD5.0 | 18-Nov-19 | 11:10:20 | 5.095 | 48104.082 | 75572.102 | 10.178 | 101.8 | 1.571 | 27622 | | 0.92 |
| 4 | I13437 | IA2-537STD10.0 | 18-Nov-19 | 11:26:51 | 5.092 | 47491.551 | 75017.859 | 10.234 | 102.3 | 1.580 | 23941 | | 0.96 |
| 5 | I13438 | IA2-537STD50.0 | 18-Nov-19 | 11:43:24 | 5.092 | 46737.883 | 72241.625 | 10.014 | 100.1 | 1.546 | 17064 | | 0.94 |
| 6 | I13439 | IA2-537STD125 | 18-Nov-19 | 12:00:10 | 5.089 | 44596.996 | 67687.656 | 9.833 | 98.3 | 1.518 | 16990 | | 0.91 |
| 7 | I13440 | IA2-537STD150 | 18-Nov-19 | 12:16:43 | 5.088 | 44320.668 | 69048.016 | 10.093 | 100.9 | 1.558 | 16815 | | 0.91 |
| 8 | I13441 | IA2-537STD250 | 18-Nov-19 | 12:33:16 | 5.088 | 44854.523 | 66395.219 | 9.590 | 95.9 | 1.480 | 10808 | | 0.87 |
| 9 | I13442 | IA2-537STD500 | 18-Nov-19 | 12:49:53 | 5.086 | 44687.082 | 64857.230 | 9.403 | 94.0 | 1.451 | 13250 | | 0.76 |

Compound name: M5PFPEA
Response Factor: 1.54351
RRF SD: 0.0523876, % Relative SD: 3.39405
Response type: Internal Std ( Ref 2 ), Area * ( IS Conc. / IS Area )
Curve type: RF



# Initial Calibration Summary
# Form 6
# Semivolatiles

| | | | |
|---|---|---|---|
| Client | : Soils Engineering Services, Inc. | Lab Number | : L2009793 |
| Project Name | : GROSSINGERS | Project Number | : 9313 |
| Instrument ID | : LCMS02 | Ical Ref | : ICAL16305 |
| Calibration dates | : 11/18/19 10:24 11/18/19 12:49 | | |

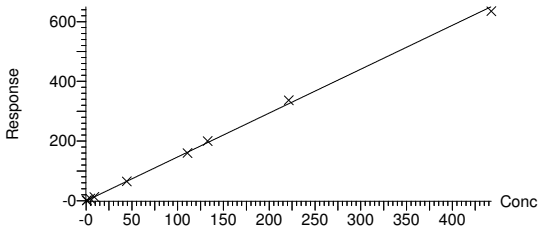


Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
Printed: Monday, November 18, 2019 13:47:36 Eastern Standard Time

**Compound name: PFBS**

| | Name | ID | Acq.Date | Acq.Time | RT | IS Area | Area | Conc (ng... | %Rec | RRF | 1º S/N | 2º S/N | (b/a) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | I13434 | IA2-537STD0.5 | 18-Nov-19 | 10:24:43 | 5.750 | 10365.686 | 654.601 | 0.430 | 97.1 | 1.427 | 198 | 44 | 0.98 |
| 2 | I13435 | IA2-537STD1.0 | 18-Nov-19 | 10:53:49 | 5.775 | 10629.898 | 1391.914 | 0.891 | 100.7 | 1.480 | 209 | 151 | 0.98 |
| 3 | I13436 | IA2-537STD5.0 | 18-Nov-19 | 11:10:20 | 5.748 | 10509.768 | 7652.497 | 4.956 | 112.0 | 1.645 | 1592 | 1720 | 0.96 |
| 4 | I13437 | IA2-537STD10.0 | 18-Nov-19 | 11:26:51 | 5.746 | 10088.863 | 13152.148 | 8.873 | 100.3 | 1.473 | 1587 | 2749 | 0.97 |
| 5 | I13438 | IA2-537STD50.0 | 18-Nov-19 | 11:43:24 | 5.744 | 9965.561 | 64765.324 | 44.235 | 100.0 | 1.469 | 6525 | 6660 | 0.98 |
| 6 | I13439 | IA2-537STD125 | 18-Nov-19 | 12:00:10 | 5.740 | 9225.293 | 147915.531 | 109.133 | 98.7 | 1.449 | 51313 | 65736 | 0.95 |
| 7 | I13440 | IA2-537STD150 | 18-Nov-19 | 12:16:43 | 5.740 | 9189.132 | 183932.656 | 136.241 | 102.6 | 1.508 | 29989 | 10666 | 0.95 |
| 8 | I13441 | IA2-537STD250 | 18-Nov-19 | 12:33:16 | 5.738 | 8779.142 | 295488.219 | 229.092 | 103.5 | 1.521 | 51166 | 10003 | 0.93 |
| 9 | I13442 | IA2-537STD500 | 18-Nov-19 | 12:49:53 | 5.733 | 8395.982 | 533039.500 | 432.126 | 97.7 | 1.435 | 86634 | 7042 | 0.89 |

Compound name: PFBS
Coefficient of Determination: R^2 = 0.999262
Calibration curve: 1.46919 * x
Response type: Internal Std ( Ref 7 ), Area * ( IS Conc. / IS Area )
Curve type: Linear, Origin: Force, Weighting: 1/x, Axis trans: None



# Initial Calibration Summary
# Form 6
# Semivolatiles

| | | | |
|---|---|---|---|
| Client | : Soils Engineering Services, Inc. | Lab Number | : L2009793 |
| Project Name | : GROSSINGERS | Project Number | : 9313 |
| Instrument ID | : LCMS02 | Ical Ref | : ICAL16305 |
| Calibration dates | : 11/18/19 10:24 11/18/19 12:49 | | |

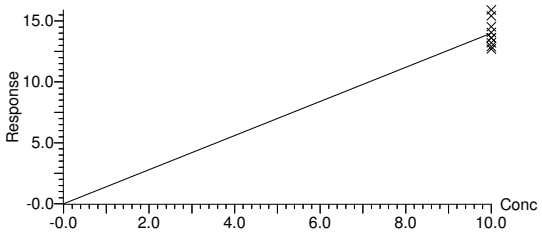


Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
Printed: Monday, November 18, 2019 13:47:36 Eastern Standard Time

**Compound name: M3PFBS**

| | Name | ID | Acq.Date | Acq.Time | RT | IS Area | Area | Conc (ng... | %Rec | RRF | 1º S/N | 2º S/N | (b/a) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | I13434 | IA2-537STD0.5 | 18-Nov-19 | 10:24:43 | 5.750 | 7620.767 | 10365.686 | 9.717 | 97.2 | 1.360 | 3560 | | 0.90 |
| 2 | I13435 | IA2-537STD1.0 | 18-Nov-19 | 10:53:49 | 5.773 | 7797.159 | 10629.898 | 9.740 | 97.4 | 1.363 | 6733 | | 0.93 |
| 3 | I13436 | IA2-537STD5.0 | 18-Nov-19 | 11:10:20 | 5.748 | 8269.742 | 10509.768 | 9.079 | 90.8 | 1.271 | 123 | | 0.87 |
| 4 | I13437 | IA2-537STD10.0 | 18-Nov-19 | 11:26:51 | 5.746 | 7629.751 | 10088.863 | 9.447 | 94.5 | 1.322 | 2544 | | 0.90 |
| 5 | I13438 | IA2-537STD50.0 | 18-Nov-19 | 11:43:24 | 5.746 | 7090.403 | 9965.561 | 10.041 | 100.4 | 1.405 | 1311 | | 0.87 |
| 6 | I13439 | IA2-537STD125 | 18-Nov-19 | 12:00:10 | 5.742 | 7149.182 | 9225.293 | 9.219 | 92.2 | 1.290 | 2600 | | 0.82 |
| 7 | I13440 | IA2-537STD150 | 18-Nov-19 | 12:16:43 | 5.742 | 6324.697 | 9189.132 | 10.380 | 103.8 | 1.453 | 5278 | | 0.81 |
| 8 | I13441 | IA2-537STD250 | 18-Nov-19 | 12:33:16 | 5.742 | 5696.930 | 8779.142 | 11.009 | 110.1 | 1.541 | 3031 | | 0.74 |
| 9 | I13442 | IA2-537STD500 | 18-Nov-19 | 12:49:53 | 5.742 | 5276.689 | 8395.982 | 11.367 | 113.7 | 1.591 | 2580 | | 0.64 |

Compound name: M3PFBS
Response Factor: 1.39974
RRF SD: 0.110062, % Relative SD: 7.86304
Response type: Internal Std ( Ref 32 ), Area * ( IS Conc. / IS Area )
Curve type: RF



# Initial Calibration Summary
# Form 6
# Semivolatiles

| | | | | | |
|---|---|---|---|---|---|
| Client | : | Soils Engineering Services, Inc. | Lab Number | : | L2009793 |
| Project Name | : | GROSSINGERS | Project Number | : | 9313 |
| Instrument ID | : | LCMS02 | Ical Ref | : | ICAL16305 |
| Calibration dates | : | 11/18/19 10:24 11/18/19 12:49 | | | |

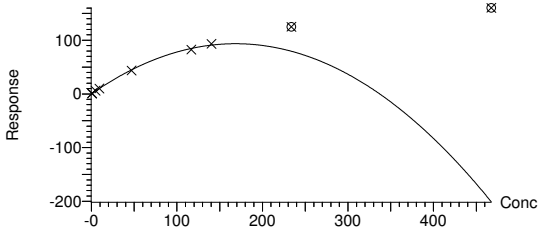


Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
Printed: Monday, November 18, 2019 13:47:36 Eastern Standard Time

**Compound name: 4:2FTS**

| | Name | ID | Acq.Date | Acq.Time | RT | IS Area | Area | Conc (ng... | %Rec | RRF | 1º S/N | 2º S/N | (b/a) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | I13434 | IA2-537STD0.5 | 18-Nov-19 | 10:24:43 | 6.923 | 5031.747 | 265.139 | 0.475 | 101.7 | 1.127 | 4336 | 27 | 0.87 |
| 2 | I13435 | IA2-537STD1.0 | 18-Nov-19 | 10:53:49 | 6.933 | 5701.004 | 638.102 | 1.011 | 108.2 | 1.197 | 305 | 8 | 0.98 |
| 3 | I13436 | IA2-537STD5.0 | 18-Nov-19 | 11:10:20 | 6.916 | 5712.227 | 3446.212 | 5.526 | 118.2 | 1.290 | 1288 | 329 | 0.99 |
| 4 | I13437 | IA2-537STD10.0 | 18-Nov-19 | 11:26:51 | 6.916 | 5560.028 | 5683.588 | 9.476 | 101.3 | 1.093 | 2549 | 351 | 1.00 |
| 5 | I13438 | IA2-537STD50.0 | 18-Nov-19 | 11:43:24 | 6.916 | 6681.914 | 29143.561 | 45.413 | 97.1 | 0.933 | 20705 | 2396 | 0.95 |
| 6 | I13439 | IA2-537STD125 | 18-Nov-19 | 12:00:10 | 6.909 | 8099.027 | 66775.891 | 110.524 | 94.6 | 0.705 | 15168 | 462 | 0.97 |
| 7 | I13440 | IA2-537STD150 | 18-Nov-19 | 12:16:43 | 6.909 | 9331.077 | 86895.203 | 157.479 | 112.3 | 0.664 | 12484 | 26719 | 0.98 |
| 8 | I13441 | IA2-537STD250 | 18-Nov-19 | 12:33:16 | 6.905 | 11231.326 | 140203.016 | | | 0.534 | 13232 | 4927 | 0.98 |
| 9 | I13442 | IA2-537STD500 | 18-Nov-19 | 12:49:53 | 6.905 | 16745.953 | 268377.688 | | | 0.343 | 35566 | 10844 | 0.86 |

Compound name: 4:2FTS
Coefficient of Determination: R^2 = 0.998246
Calibration curve: -0.00329334 * x^2 + 1.10998 * x
Response type: Internal Std ( Ref 9 ), Area * ( IS Conc. / IS Area )
Curve type: 2nd Order, Origin: Force, Weighting: 1/x, Axis trans: None



# Initial Calibration Summary
# Form 6
# Semivolatiles

| | | | | | |
|---|---|---|---|---|---|
| Client | : | Soils Engineering Services, Inc. | Lab Number | : | L2009793 |
| Project Name | : | GROSSINGERS | Project Number | : | 9313 |
| Instrument ID | : | LCMS02 | Ical Ref | : | ICAL16305 |
| Calibration dates | : | 11/18/19 10:24 11/18/19 12:49 | | | |

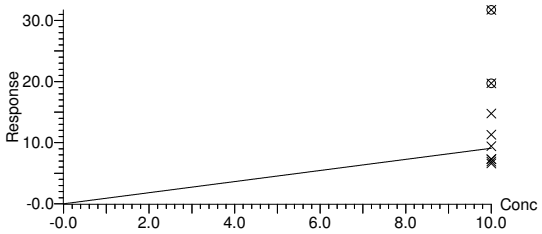


Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
Printed: Monday, November 18, 2019 13:47:36 Eastern Standard Time

**Compound name: M2-4:2FTS**

| | Name | ID | Acq.Date | Acq.Time | RT | IS Area | Area | Conc (ng... | %Rec | RRF | 1º S/N | 2º S/N | (b/a) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | I13434 | IA2-537STD0.5 | 18-Nov-19 | 10:24:43 | 6.919 | 7620.767 | 5031.747 | 7.265 | 72.7 | 0.660 | 93122 | | 0.96 |
| 2 | I13435 | IA2-537STD1.0 | 18-Nov-19 | 10:53:49 | 6.933 | 7797.159 | 5701.004 | 8.046 | 80.5 | 0.731 | 104927 | | 1.00 |
| 3 | I13436 | IA2-537STD5.0 | 18-Nov-19 | 11:10:20 | 6.916 | 8269.742 | 5712.227 | 7.601 | 76.0 | 0.691 | 1035 | | 1.03 |
| 4 | I13437 | IA2-537STD10.0 | 18-Nov-19 | 11:26:51 | 6.916 | 7629.751 | 5560.028 | 8.019 | 80.2 | 0.729 | 541 | | 0.94 |
| 5 | I13438 | IA2-537STD50.0 | 18-Nov-19 | 11:43:24 | 6.913 | 7090.403 | 6681.914 | 10.370 | 103.7 | 0.942 | 4239 | | 1.03 |
| 6 | I13439 | IA2-537STD125 | 18-Nov-19 | 12:00:10 | 6.909 | 7149.182 | 8099.027 | 12.466 | 124.7 | 1.133 | 1149 | | 0.93 |
| 7 | I13440 | IA2-537STD150 | 18-Nov-19 | 12:16:43 | 6.909 | 6324.697 | 9331.077 | 16.234 | 162.3 | 1.475 | 163851 | | 0.99 |
| 8 | I13441 | IA2-537STD250 | 18-Nov-19 | 12:33:16 | 6.909 | 5696.930 | 11231.326 | 21.693 | 216.9 | 1.971 | 1244 | | 0.85 |
| 9 | I13442 | IA2-537STD500 | 18-Nov-19 | 12:49:53 | 6.906 | 5276.689 | 16745.953 | 34.921 | 349.2 | 3.174 | 4689 | | 0.84 |

Compound name: M2-4:2FTS
Response Factor: 0.908784
RRF SD: 0.301551, % Relative SD: 33.1818
Response type: Internal Std ( Ref 32 ), Area * ( IS Conc. / IS Area )
Curve type: RF



# Initial Calibration Summary
# Form 6
# Semivolatiles

| | | | |
|---|---|---|---|
| Client | : Soils Engineering Services, Inc. | Lab Number | : L2009793 |
| Project Name | : GROSSINGERS | Project Number | : 9313 |
| Instrument ID | : LCMS02 | Ical Ref | : ICAL16305 |
| Calibration dates | : 11/18/19 10:24 11/18/19 12:49 | | |

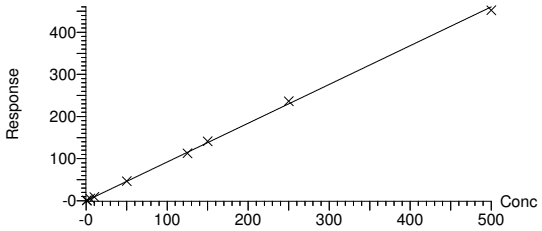


Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
Printed: Monday, November 18, 2019 13:47:36 Eastern Standard Time

**Compound name: PFHxA**

| | Name | ID | Acq.Date | Acq.Time | RT | IS Area | Area | Conc (ng... | %Rec | RRF | 1º S/N | 2º S/N | (b/a) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | I13434 | IA2-537STD0.5 | 18-Nov-19 | 10:24:43 | 6.997 | 86318.461 | 4783.421 | 0.602 | 120.4 | 1.108 | 372 | 13 | 1.03 |
| 2 | I13435 | IA2-537STD1.0 | 18-Nov-19 | 10:53:49 | 7.014 | 89049.195 | 9448.923 | 1.153 | 115.3 | 1.061 | 775 | 72 | 0.96 |
| 3 | I13436 | IA2-537STD5.0 | 18-Nov-19 | 11:10:20 | 6.997 | 87051.219 | 45761.648 | 5.710 | 114.2 | 1.051 | 3188 | 257 | 0.98 |
| 4 | I13437 | IA2-537STD10.0 | 18-Nov-19 | 11:26:51 | 6.997 | 85937.961 | 78643.000 | 9.941 | 99.4 | 0.915 | 3968 | 450 | 0.93 |
| 5 | I13438 | IA2-537STD50.0 | 18-Nov-19 | 11:43:24 | 6.994 | 82847.523 | 385143.969 | 50.500 | 101.0 | 0.930 | 25319 | 2529 | 0.99 |
| 6 | I13439 | IA2-537STD125 | 18-Nov-19 | 12:00:10 | 6.990 | 77004.234 | 867096.500 | 122.320 | 97.9 | 0.901 | 44217 | 4573 | 0.93 |
| 7 | I13440 | IA2-537STD150 | 18-Nov-19 | 12:16:43 | 6.990 | 76551.578 | 1081576.375 | 153.479 | 102.3 | 0.942 | 40523 | 6533 | 0.98 |
| 8 | I13441 | IA2-537STD250 | 18-Nov-19 | 12:33:16 | 6.987 | 73381.758 | 1733137.375 | 256.561 | 102.6 | 0.945 | 53786 | 10812 | 0.97 |
| 9 | I13442 | IA2-537STD500 | 18-Nov-19 | 12:49:53 | 6.983 | 69255.578 | 3131820.000 | 491.234 | 98.2 | 0.904 | 91196 | 7077 | 0.93 |

Compound name: PFHxA
Coefficient of Determination: R^2 = 0.999423
Calibration curve: 0.920564 * x
Response type: Internal Std ( Ref 11 ), Area * ( IS Conc. / IS Area )
Curve type: Linear, Origin: Force, Weighting: 1/x, Axis trans: None



# Initial Calibration Summary
# Form 6
# Semivolatiles

| | | | |
|---|---|---|---|
| Client | : Soils Engineering Services, Inc. | Lab Number | : L2009793 |
| Project Name | : GROSSINGERS | Project Number | : 9313 |
| Instrument ID | : LCMS02 | Ical Ref | : ICAL16305 |
| Calibration dates | : 11/18/19 10:24 11/18/19 12:49 | | |

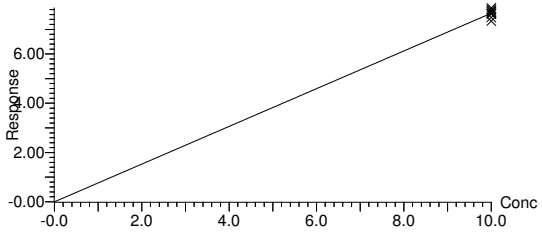


Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
Printed: Monday, November 18, 2019 13:47:36 Eastern Standard Time

**Compound name: M5PFHxA**

| | Name | ID | Acq.Date | Acq.Time | RT | IS Area | Area | Conc (ng... | %Rec | RRF | 1º S/N | 2º S/N | (b/a) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | I13434 | IA2-537STD0.5 | 18-Nov-19 | 10:24:43 | 6.997 | 117636.820 | 86318.461 | 9.586 | 95.9 | 0.734 | 11836 | | 0.99 |
| 2 | I13435 | IA2-537STD1.0 | 18-Nov-19 | 10:53:49 | 7.010 | 114802.125 | 89049.195 | 10.133 | 101.3 | 0.776 | 7997 | | 1.00 |
| 3 | I13436 | IA2-537STD5.0 | 18-Nov-19 | 11:10:20 | 6.997 | 113627.328 | 87051.219 | 10.008 | 100.1 | 0.766 | 10533 | | 0.96 |
| 4 | I13437 | IA2-537STD10.0 | 18-Nov-19 | 11:26:51 | 6.994 | 114891.016 | 85937.961 | 9.771 | 97.7 | 0.748 | 14012 | | 0.99 |
| 5 | I13438 | IA2-537STD50.0 | 18-Nov-19 | 11:43:24 | 6.994 | 107343.031 | 82847.523 | 10.082 | 100.8 | 0.772 | 9464 | | 0.96 |
| 6 | I13439 | IA2-537STD125 | 18-Nov-19 | 12:00:10 | 6.987 | 101103.344 | 77004.234 | 9.950 | 99.5 | 0.762 | 11330 | | 0.97 |
| 7 | I13440 | IA2-537STD150 | 18-Nov-19 | 12:16:43 | 6.987 | 97990.719 | 76551.578 | 10.205 | 102.1 | 0.781 | 9373 | | 1.01 |
| 8 | I13441 | IA2-537STD250 | 18-Nov-19 | 12:33:16 | 6.987 | 96048.547 | 73381.758 | 9.981 | 99.8 | 0.764 | 11032 | | 0.94 |
| 9 | I13442 | IA2-537STD500 | 18-Nov-19 | 12:49:53 | 6.984 | 87971.789 | 69255.578 | 10.284 | 102.8 | 0.787 | 6283 | | 0.93 |

Compound name: M5PFHxA
Response Factor: 0.765496
RRF SD: 0.0165596, % Relative SD: 2.16325
Response type: Internal Std ( Ref 23 ), Area * ( IS Conc. / IS Area )
Curve type: RF



# Initial Calibration Summary
# Form 6
# Semivolatiles

| | | | |
|---|---|---|---|
| Client | : Soils Engineering Services, Inc. | Lab Number | : L2009793 |
| Project Name | : GROSSINGERS | Project Number | : 9313 |
| Instrument ID | : LCMS02 | Ical Ref | : ICAL16305 |
| Calibration dates | : 11/18/19 10:24 11/18/19 12:49 | | |

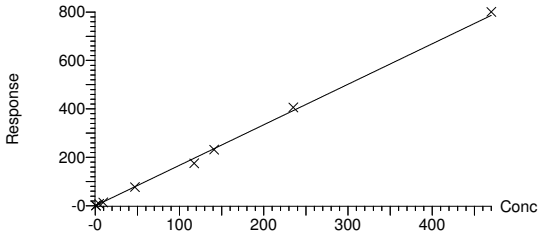


Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
Printed: Monday, November 18, 2019 13:47:36 Eastern Standard Time

**Compound name: PFPeS**

| | Name | ID | Acq.Date | Acq.Time | RT | IS Area | Area | Conc (ng... | %Rec | RRF | 1º S/N | 2º S/N | (b/a) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | I13434 | IA2-537STD0.5 | 18-Nov-19 | 10:24:43 | 7.309 | 6305.094 | 446.562 | 0.423 | 90.1 | 1.507 | 284 | 33 | 1.13 |
| 2 | I13435 | IA2-537STD1.0 | 18-Nov-19 | 10:53:49 | 7.322 | 6708.928 | 946.722 | 0.844 | 89.8 | 1.501 | 14 | 62 | 0.97 |
| 3 | I13436 | IA2-537STD5.0 | 18-Nov-19 | 11:10:20 | 7.309 | 6466.852 | 5126.527 | 4.740 | 100.9 | 1.687 | 494 | 60990 | 1.00 |
| 4 | I13437 | IA2-537STD10.0 | 18-Nov-19 | 11:26:51 | 7.306 | 6314.215 | 9042.376 | 8.563 | 91.1 | 1.523 | 5665 | 2677 | 1.08 |
| 5 | I13438 | IA2-537STD50.0 | 18-Nov-19 | 11:43:24 | 7.306 | 5737.190 | 44566.102 | 46.448 | 98.8 | 1.653 | 8476 | 3548 | 1.00 |
| 6 | I13439 | IA2-537STD125 | 18-Nov-19 | 12:00:10 | 7.296 | 5547.521 | 97344.078 | 104.923 | 89.3 | 1.493 | 14960 | 14826 | 1.08 |
| 7 | I13440 | IA2-537STD150 | 18-Nov-19 | 12:16:43 | 7.299 | 5231.039 | 121259.477 | 138.608 | 98.3 | 1.644 | 13032 | 18913 | 1.04 |
| 8 | I13441 | IA2-537STD250 | 18-Nov-19 | 12:33:16 | 7.293 | 4621.618 | 187634.234 | 242.760 | 103.3 | 1.728 | 19754 | 14066 | 1.07 |
| 9 | I13442 | IA2-537STD500 | 18-Nov-19 | 12:49:53 | 7.283 | 3959.817 | 317014.781 | 478.701 | 101.9 | 1.703 | 34657 | 20744 | 1.11 |

Compound name: PFPeS
Coefficient of Determination: R^2 = 0.998113
Calibration curve: 1.6724 * x
Response type: Internal Std ( Ref 18 ), Area * ( IS Conc. / IS Area )
Curve type: Linear, Origin: Force, Weighting: 1/x, Axis trans: None



# Initial Calibration Summary
# Form 6
# Semivolatiles

| | | | | | |
|---|---|---|---|---|---|
| Client | : | Soils Engineering Services, Inc. | Lab Number | : | L2009793 |
| Project Name | : | GROSSINGERS | Project Number | : | 9313 |
| Instrument ID | : | LCMS02 | Ical Ref | : | ICAL16305 |
| Calibration dates | : | 11/18/19 10:24 11/18/19 12:49 | | | |

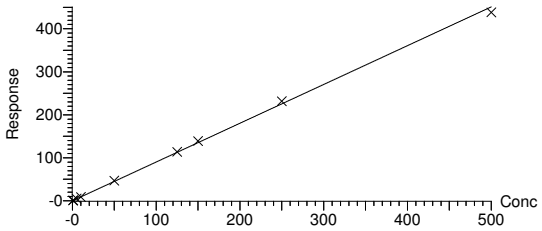


Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
Printed: Monday, November 18, 2019 13:47:36 Eastern Standard Time

**Compound name: PFHpA**

| | Name | ID | Acq.Date | Acq.Time | RT | IS Area | Area | Conc (ng... | %Rec | RRF | 1º S/N | 2º S/N | (b/a) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | I13434 | IA2-537STD0.5 | 18-Nov-19 | 10:24:43 | 8.261 | 117836.461 | 5195.347 | 0.489 | 97.8 | 0.882 | 360 | 77 | 1.06 |
| 2 | I13435 | IA2-537STD1.0 | 18-Nov-19 | 10:53:49 | 8.267 | 121641.055 | 11592.057 | 1.056 | 105.6 | 0.953 | 652 | 108 | 1.08 |
| 3 | I13436 | IA2-537STD5.0 | 18-Nov-19 | 11:10:20 | 8.257 | 117691.789 | 60757.566 | 5.723 | 114.5 | 1.032 | 4284 | 937 | 1.06 |
| 4 | I13437 | IA2-537STD10.0 | 18-Nov-19 | 11:26:51 | 8.257 | 116421.445 | 103796.039 | 9.884 | 98.8 | 0.892 | 6673 | 1168 | 0.99 |
| 5 | I13438 | IA2-537STD50.0 | 18-Nov-19 | 11:43:24 | 8.261 | 108576.563 | 506166.594 | 51.681 | 103.4 | 0.932 | 17764 | 6528 | 1.07 |
| 6 | I13439 | IA2-537STD125 | 18-Nov-19 | 12:00:10 | 8.254 | 101436.859 | 1153905.625 | 126.109 | 100.9 | 0.910 | 37952 | 13087 | 1.06 |
| 7 | I13440 | IA2-537STD150 | 18-Nov-19 | 12:16:43 | 8.254 | 102764.422 | 1427443.125 | 153.988 | 102.7 | 0.926 | 61661 | 14704 | 1.05 |
| 8 | I13441 | IA2-537STD250 | 18-Nov-19 | 12:33:16 | 8.257 | 95052.969 | 2202072.500 | 256.824 | 102.7 | 0.927 | 61936 | 17126 | 1.07 |
| 9 | I13442 | IA2-537STD500 | 18-Nov-19 | 12:49:53 | 8.254 | 89172.406 | 3907235.500 | 485.746 | 97.1 | 0.876 | 58138 | 28566 | 1.10 |

Compound name: PFHpA
Coefficient of Determination: R^2 = 0.999180
Calibration curve: 0.902048 * x
Response type: Internal Std ( Ref 14 ), Area * ( IS Conc. / IS Area )
Curve type: Linear, Origin: Force, Weighting: 1/x, Axis trans: None



# Initial Calibration Summary
# Form 6
# Semivolatiles

| | | | | | |
|---|---|---|---|---|---|
| Client | : | Soils Engineering Services, Inc. | Lab Number | : | L2009793 |
| Project Name | : | GROSSINGERS | Project Number | : | 9313 |
| Instrument ID | : | LCMS02 | Ical Ref | : | ICAL16305 |
| Calibration dates | : | 11/18/19 10:24 11/18/19 12:49 | | | |

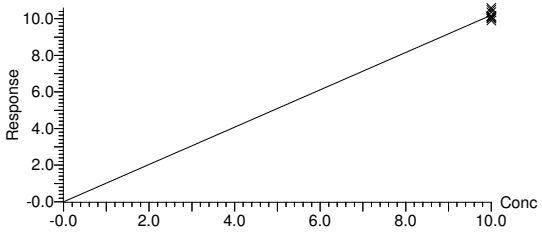


Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
Printed: Monday, November 18, 2019 13:47:36 Eastern Standard Time

**Compound name: M4PFHpA**

| | Name | ID | Acq.Date | Acq.Time | RT | IS Area | Area | Conc (ng... | %Rec | RRF | 1º S/N | 2º S/N | (b/a) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | I13434 | IA2-537STD0.5 | 18-Nov-19 | 10:24:43 | 8.261 | 117636.820 | 117836.461 | 9.824 | 98.2 | 1.002 | 9958 | | 1.03 |
| 2 | I13435 | IA2-537STD1.0 | 18-Nov-19 | 10:53:49 | 8.267 | 114802.125 | 121641.055 | 10.391 | 103.9 | 1.060 | 6274 | | 1.06 |
| 3 | I13436 | IA2-537STD5.0 | 18-Nov-19 | 11:10:20 | 8.257 | 113627.328 | 117691.789 | 10.158 | 101.6 | 1.036 | 16862 | | 1.05 |
| 4 | I13437 | IA2-537STD10.0 | 18-Nov-19 | 11:26:51 | 8.254 | 114891.016 | 116421.445 | 9.938 | 99.4 | 1.013 | 7116 | | 1.08 |
| 5 | I13438 | IA2-537STD50.0 | 18-Nov-19 | 11:43:24 | 8.261 | 107343.031 | 108576.563 | 9.920 | 99.2 | 1.011 | 8349 | | 1.03 |
| 6 | I13439 | IA2-537STD125 | 18-Nov-19 | 12:00:10 | 8.254 | 101103.344 | 101436.859 | 9.839 | 98.4 | 1.003 | 7911 | | 1.04 |
| 7 | I13440 | IA2-537STD150 | 18-Nov-19 | 12:16:43 | 8.254 | 97990.719 | 102764.422 | 10.285 | 102.8 | 1.049 | 4929 | | 1.05 |
| 8 | I13441 | IA2-537STD250 | 18-Nov-19 | 12:33:16 | 8.257 | 96048.547 | 95052.969 | 9.705 | 97.1 | 0.990 | 7797 | | 1.05 |
| 9 | I13442 | IA2-537STD500 | 18-Nov-19 | 12:49:53 | 8.254 | 87971.789 | 89172.406 | 9.941 | 99.4 | 1.014 | 4562 | | 1.09 |

Compound name: M4PFHpA
Response Factor: 1.01968
RRF SD: 0.0232692, % Relative SD: 2.282
Response type: Internal Std ( Ref 23 ), Area * ( IS Conc. / IS Area )
Curve type: RF



# Initial Calibration Summary
# Form 6
# Semivolatiles

| | | | |
|---|---|---|---|
| Client | : Soils Engineering Services, Inc. | Lab Number | : L2009793 |
| Project Name | : GROSSINGERS | Project Number | : 9313 |
| Instrument ID | : LCMS02 | Ical Ref | : ICAL16305 |
| Calibration dates | : 11/18/19 10:24 11/18/19 12:49 | | |

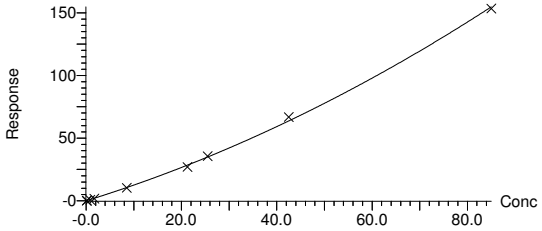


Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
Printed: Monday, November 18, 2019 13:47:36 Eastern Standard Time

**Compound name: br-PFHxS**

| | Name | ID | Acq.Date | Acq.Time | RT | IS Area | Area | Conc (ng... | %Rec | RRF | 1º S/N | 2º S/N | (b/a) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | I13434 | IA2-537STD0.5 | 18-Nov-19 | 10:24:43 | 8.185 | 6305.094 | 11.237 | 0.015 | 17.8 | 0.210 | 1 | | 0.26 |
| 2 | I13435 | IA2-537STD1.0 | 18-Nov-19 | 10:53:49 | 8.135 | 6708.928 | 71.949 | 0.091 | 53.5 | 0.631 | 6 | 3 | 4.56 |
| 3 | I13436 | IA2-537STD5.0 | 18-Nov-19 | 11:10:20 | 8.178 | 6466.852 | 518.690 | 0.678 | 79.8 | 0.944 | 16 | 7 | 0.47 |
| 4 | I13437 | IA2-537STD10.0 | 18-Nov-19 | 11:26:51 | 8.185 | 6314.215 | 1050.500 | 1.400 | 82.4 | 0.979 | 63 | 33 | 0.42 |
| 5 | I13438 | IA2-537STD50.0 | 18-Nov-19 | 11:43:24 | 8.185 | 5737.190 | 5931.751 | 8.333 | 98.0 | 1.216 | 185 | 73 | 0.45 |
| 6 | I13439 | IA2-537STD125 | 18-Nov-19 | 12:00:10 | 8.178 | 5547.521 | 14988.256 | 20.296 | 95.5 | 1.271 | 1100 | 514 | 0.44 |
| 7 | I13440 | IA2-537STD150 | 18-Nov-19 | 12:16:43 | 8.178 | 5231.039 | 18595.721 | 25.883 | 101.5 | 1.394 | 2530 | 273 | 0.46 |
| 8 | I13441 | IA2-537STD250 | 18-Nov-19 | 12:33:16 | 8.181 | 4621.618 | 30899.139 | 44.216 | 104.0 | 1.573 | 868 | 707 | 0.44 |
| 9 | I13442 | IA2-537STD500 | 18-Nov-19 | 12:49:53 | 8.181 | 3959.817 | 60734.234 | 84.444 | 99.3 | 1.804 | 4667 | 831 | 0.44 |

Compound name: br-PFHxS
Coefficient of Determination: R^2 = 0.998684
Calibration curve: 0.00756262 * x^2 + 1.17768 * x
Response type: Internal Std ( Ref 18 ), Area * ( IS Conc. / IS Area )
Curve type: 2nd Order, Origin: Force, Weighting: 1/x, Axis trans: None



# Initial Calibration Summary
# Form 6
# Semivolatiles

| | | | | | |
|---|---|---|---|---|---|
| Client | : | Soils Engineering Services, Inc. | Lab Number | : | L2009793 |
| Project Name | : | GROSSINGERS | Project Number | : | 9313 |
| Instrument ID | : | LCMS02 | Ical Ref | : | ICAL16305 |
| Calibration dates | : | 11/18/19 10:24 11/18/19 12:49 | | | |

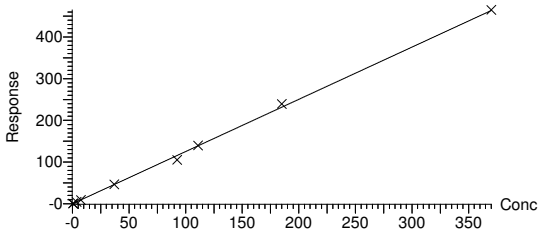


Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
Printed: Monday, November 18, 2019 13:47:36 Eastern Standard Time

**Compound name: L-PFHxS**

| | Name | ID | Acq.Date | Acq.Time | RT | IS Area | Area | Conc (ng... | %Rec | RRF | 1º S/N | 2º S/N | (b/a) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | I13434 | IA2-537STD0.5 | 18-Nov-19 | 10:24:43 | 8.424 | 6305.094 | 259.238 | 0.328 | 88.7 | 1.111 | 20 | 15 | 0.68 |
| 2 | I13435 | IA2-537STD1.0 | 18-Nov-19 | 10:53:49 | 8.420 | 6708.928 | 470.828 | 0.560 | 75.7 | 0.948 | 53 | 37 | 1.13 |
| 3 | I13436 | IA2-537STD5.0 | 18-Nov-19 | 11:10:20 | 8.414 | 6466.852 | 3162.710 | 3.904 | 105.5 | 1.322 | 159 | 90 | 0.97 |
| 4 | I13437 | IA2-537STD10.0 | 18-Nov-19 | 11:26:51 | 8.410 | 6314.215 | 5750.373 | 7.270 | 98.2 | 1.231 | 597 | 350 | 1.03 |
| 5 | I13438 | IA2-537STD50.0 | 18-Nov-19 | 11:43:24 | 8.417 | 5737.190 | 26815.008 | 37.313 | 100.8 | 1.263 | 1314 | 700 | 1.04 |
| 6 | I13439 | IA2-537STD125 | 18-Nov-19 | 12:00:10 | 8.410 | 5547.521 | 58360.066 | 83.984 | 90.8 | 1.137 | 6939 | 4653 | 1.08 |
| 7 | I13440 | IA2-537STD150 | 18-Nov-19 | 12:16:43 | 8.410 | 5231.039 | 73279.281 | 111.834 | 100.8 | 1.262 | 15404 | 2385 | 1.06 |
| 8 | I13441 | IA2-537STD250 | 18-Nov-19 | 12:33:16 | 8.414 | 4621.618 | 110741.648 | 191.292 | 103.4 | 1.295 | 4739 | 5075 | 1.07 |
| 9 | I13442 | IA2-537STD500 | 18-Nov-19 | 12:49:53 | 8.407 | 3959.817 | 184133.313 | 371.225 | 100.3 | 1.257 | 21995 | 5050 | 1.25 |

Compound name: L-PFHxS
Coefficient of Determination: R^2 = 0.998646
Calibration curve: 1.25262 * x
Response type: Internal Std ( Ref 18 ), Area * ( IS Conc. / IS Area )
Curve type: Linear, Origin: Force, Weighting: 1/x, Axis trans: None



# Initial Calibration Summary
# Form 6
# Semivolatiles

| | | | | | |
|---|---|---|---|---|---|
| Client | : | Soils Engineering Services, Inc. | Lab Number | : | L2009793 |
| Project Name | : | GROSSINGERS | Project Number | : | 9313 |
| Instrument ID | : | LCMS02 | Ical Ref | : | ICAL16305 |
| Calibration dates | : | 11/18/19 10:24 11/18/19 12:49 | | | |

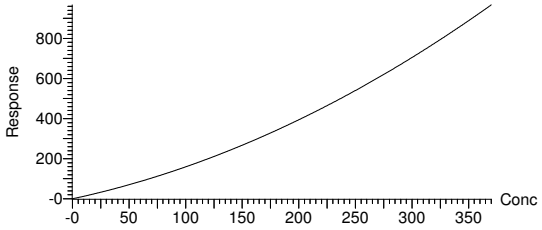


Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
Printed: Monday, November 18, 2019 13:47:36 Eastern Standard Time

**Compound name: PFHxS**

| | Name | ID | Acq.Date | Acq.Time | RT | IS Area | Area | ng/mL | %Rec | RRF | 1º S/N | 2º S/N | (b/a) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | I13434 | IA2-537STD0.5 | 18-Nov-19 | 10:24:43 | | 6305.094 | 270.475 | 0.343 | | | | | |
| 2 | I13435 | IA2-537STD1.0 | 18-Nov-19 | 10:53:49 | | 6708.928 | 542.777 | 0.651 | | | | | |
| 3 | I13436 | IA2-537STD5.0 | 18-Nov-19 | 11:10:20 | | 6466.852 | 3681.400 | 4.582 | | | | | |
| 4 | I13437 | IA2-537STD10.0 | 18-Nov-19 | 11:26:51 | | 6314.215 | 6800.873 | 8.670 | | | | | |
| 5 | I13438 | IA2-537STD50.0 | 18-Nov-19 | 11:43:24 | | 5737.190 | 32746.759 | 45.646 | | | | | |
| 6 | I13439 | IA2-537STD125 | 18-Nov-19 | 12:00:10 | | 5547.521 | 73348.322 | 104.280 | | | | | |
| 7 | I13440 | IA2-537STD150 | 18-Nov-19 | 12:16:43 | | 5231.039 | 91875.002 | 137.717 | | | | | |
| 8 | I13441 | IA2-537STD250 | 18-Nov-19 | 12:33:16 | | 4621.618 | 141640.787 | 235.508 | | | | | |
| 9 | I13442 | IA2-537STD500 | 18-Nov-19 | 12:49:53 | | 3959.817 | 244867.547 | 455.669 | | | | | |

Compound name: PFHxS
Coefficient of Determination: 0.000000
Calibration curve: 1.21515 * x
Response type: Internal Std ( Ref 18 ), Area * ( IS Conc. / IS Area )
Curve type: Linear, Origin: Force, Weighting: 1/x, Axis trans: None



# Initial Calibration Summary
# Form 6
# Semivolatiles

| | | | |
|---|---|---|---|
| Client | : Soils Engineering Services, Inc. | Lab Number | : L2009793 |
| Project Name | : GROSSINGERS | Project Number | : 9313 |
| Instrument ID | : LCMS02 | Ical Ref | : ICAL16305 |
| Calibration dates | : 11/18/19 10:24 11/18/19 12:49 | | |

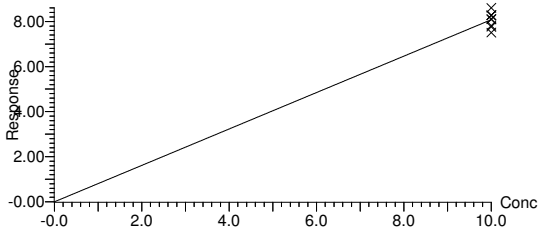


Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
Printed: Monday, November 18, 2019 13:47:36 Eastern Standard Time

**Compound name: M3PFHxS**

| | Name | ID | Acq.Date | Acq.Time | RT | IS Area | Area | Conc (ng... | %Rec | RRF | 1º S/N | 2º S/N | (b/a) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | I13434 | IA2-537STD0.5 | 18-Nov-19 | 10:24:43 | 8.414 | 7620.767 | 6305.094 | 10.241 | 102.4 | 0.827 | 136293 | | 1.11 |
| 2 | I13435 | IA2-537STD1.0 | 18-Nov-19 | 10:53:49 | 8.424 | 7797.159 | 6708.928 | 10.650 | 106.5 | 0.860 | 144053 | | 1.00 |
| 3 | I13436 | IA2-537STD5.0 | 18-Nov-19 | 11:10:20 | 8.414 | 8269.742 | 6466.852 | 9.679 | 96.8 | 0.782 | 138118 | | 1.01 |
| 4 | I13437 | IA2-537STD10.0 | 18-Nov-19 | 11:26:51 | 8.410 | 7629.751 | 6314.215 | 10.243 | 102.4 | 0.828 | 1886 | | 1.08 |
| 5 | I13438 | IA2-537STD50.0 | 18-Nov-19 | 11:43:24 | 8.414 | 7090.403 | 5737.190 | 10.015 | 100.2 | 0.809 | 700 | | 1.19 |
| 6 | I13439 | IA2-537STD125 | 18-Nov-19 | 12:00:10 | 8.410 | 7149.182 | 5547.521 | 9.605 | 96.0 | 0.776 | 12 | | 1.10 |
| 7 | I13440 | IA2-537STD150 | 18-Nov-19 | 12:16:43 | 8.407 | 6324.697 | 5231.039 | 10.237 | 102.4 | 0.827 | 648 | | 1.16 |
| 8 | I13441 | IA2-537STD250 | 18-Nov-19 | 12:33:16 | 8.410 | 5696.930 | 4621.618 | 10.041 | 100.4 | 0.811 | 203 | | 1.16 |
| 9 | I13442 | IA2-537STD500 | 18-Nov-19 | 12:49:53 | 8.407 | 5276.689 | 3959.817 | 9.289 | 92.9 | 0.750 | 385 | | 1.17 |

Compound name: M3PFHxS
Response Factor: 0.807915
RRF SD: 0.033353, % Relative SD: 4.12828
Response type: Internal Std ( Ref 32 ), Area * ( IS Conc. / IS Area )
Curve type: RF



# Initial Calibration Summary
# Form 6
# Semivolatiles

| | | | |
|---|---|---|---|
| Client | : Soils Engineering Services, Inc. | Lab Number | : L2009793 |
| Project Name | : GROSSINGERS | Project Number | : 9313 |
| Instrument ID | : LCMS02 | Ical Ref | : ICAL16305 |
| Calibration dates | : 11/18/19 10:24 11/18/19 12:49 | | |

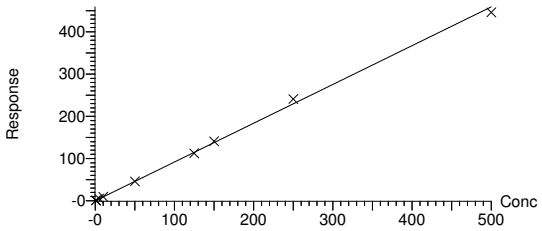


Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
Printed: Monday, November 18, 2019 13:47:36 Eastern Standard Time

**Compound name: br-PFOA**

| | Name | ID | Acq.Date | Acq.Time | RT | IS Area | Area | ng/mL | %Rec | RRF | 1º S/N | 2º S/N | (b/a) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | I13434 | IA2-537STD0.5 | 18-Nov-19 | 10:24:43 | | 114742.953 | | | | | | | |
| 2 | I13435 | IA2-537STD1.0 | 18-Nov-19 | 10:53:49 | | 115929.242 | | | | | | | |
| 3 | I13436 | IA2-537STD5.0 | 18-Nov-19 | 11:10:20 | | 112562.227 | | | | | | | |
| 4 | I13437 | IA2-537STD10.0 | 18-Nov-19 | 11:26:51 | | 109470.945 | | | | | | | |
| 5 | I13438 | IA2-537STD50.0 | 18-Nov-19 | 11:43:24 | | 106781.555 | | | | | | | |
| 6 | I13439 | IA2-537STD125 | 18-Nov-19 | 12:00:10 | | 98244.656 | | | | | | | |
| 7 | I13440 | IA2-537STD150 | 18-Nov-19 | 12:16:43 | | 98053.172 | | | | | | | |
| 8 | I13441 | IA2-537STD250 | 18-Nov-19 | 12:33:16 | | 90653.047 | | | | | | 3 | |
| 9 | I13442 | IA2-537STD500 | 18-Nov-19 | 12:49:53 | | 85048.031 | | | | | | 2 | |

Compound name: L-PFOA
Coefficient of Determination: R^2 = 0.998806
Calibration curve: 0.918228 * x
Response type: Internal Std ( Ref 22 ), Area * ( IS Conc. / IS Area )
Curve type: Linear, Origin: Force, Weighting: 1/x, Axis trans: None



# Initial Calibration Summary
# Form 6
# Semivolatiles

| | | | |
|---|---|---|---|
| Client | : Soils Engineering Services, Inc. | Lab Number | : L2009793 |
| Project Name | : GROSSINGERS | Project Number | : 9313 |
| Instrument ID | : LCMS02 | Ical Ref | : ICAL16305 |
| Calibration dates | : 11/18/19 10:24 11/18/19 12:49 | | |

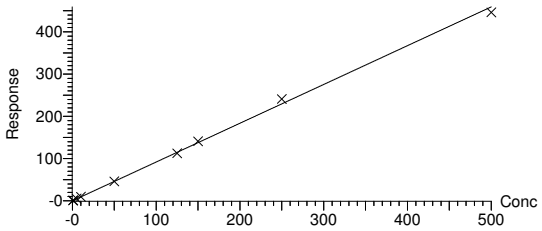


Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
Printed: Monday, November 18, 2019 13:47:36 Eastern Standard Time

**Compound name: L-PFOA**

| | Name | ID | Acq.Date | Acq.Time | RT | IS Area | Area | Conc (ng... | %Rec | RRF | 1º S/N | 2º S/N | (b/a) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | I13434 | IA2-537STD0.5 | 18-Nov-19 | 10:24:43 | 9.195 | 114742.953 | 5268.463 | 0.500 | 100.0 | 0.918 | 138 | 61 | 1.06 |
| 2 | I13435 | IA2-537STD1.0 | 18-Nov-19 | 10:53:49 | 9.201 | 115929.242 | 11899.890 | 1.118 | 111.8 | 1.026 | 324 | 80 | 1.08 |
| 3 | I13436 | IA2-537STD5.0 | 18-Nov-19 | 11:10:20 | 9.192 | 112562.227 | 58197.820 | 5.631 | 112.6 | 1.034 | 1597 | 182 | 1.01 |
| 4 | I13437 | IA2-537STD10.0 | 18-Nov-19 | 11:26:51 | 9.192 | 109470.945 | 105110.031 | 10.457 | 104.6 | 0.960 | 3137 | 231297 | 1.08 |
| 5 | I13438 | IA2-537STD50.0 | 18-Nov-19 | 11:43:24 | 9.198 | 106781.555 | 491336.344 | 50.111 | 100.2 | 0.920 | 13186 | 348 | 1.11 |
| 6 | I13439 | IA2-537STD125 | 18-Nov-19 | 12:00:10 | 9.192 | 98244.656 | 1104013.250 | 122.381 | 97.9 | 0.899 | 25245 | 15685 | 1.10 |
| 7 | I13440 | IA2-537STD150 | 18-Nov-19 | 12:16:43 | 9.189 | 98053.172 | 1380425.125 | 153.321 | 102.2 | 0.939 | 34514 | 5127 | 1.12 |
| 8 | I13441 | IA2-537STD250 | 18-Nov-19 | 12:33:16 | 9.195 | 90653.047 | 2184240.000 | 262.402 | 105.0 | 0.964 | 28539 | 12915 | 1.10 |
| 9 | I13442 | IA2-537STD500 | 18-Nov-19 | 12:49:53 | 9.195 | 85048.031 | 3792057.500 | 485.579 | 97.1 | 0.892 | 73682 | 13446 | 1.15 |

Compound name: L-PFOA
Coefficient of Determination: R^2 = 0.998806
Calibration curve: 0.918228 * x
Response type: Internal Std ( Ref 22 ), Area * ( IS Conc. / IS Area )
Curve type: Linear, Origin: Force, Weighting: 1/x, Axis trans: None



# Initial Calibration Summary
# Form 6
# Semivolatiles

| | | | | | |
|---|---|---|---|---|---|
| Client | : | Soils Engineering Services, Inc. | Lab Number | : | L2009793 |
| Project Name | : | GROSSINGERS | Project Number | : | 9313 |
| Instrument ID | : | LCMS02 | Ical Ref | : | ICAL16305 |
| Calibration dates | : | 11/18/19 10:24 11/18/19 12:49 | | | |

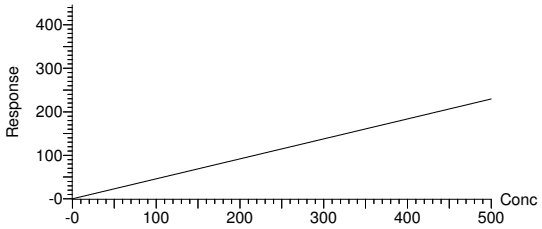


Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
Printed: Monday, November 18, 2019 13:47:36 Eastern Standard Time

**Compound name: PFOA**

| | Name | ID | Acq.Date | Acq.Time | RT | IS Area | Area | ng/mL | %Rec | RRF | 1º S/N | 2º S/N | (b/a) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | I13434 | IA2-537STD0.5 | 18-Nov-19 | 10:24:43 | | 114742.953 | 5268.463 | 0.500 | | | | | |
| 2 | I13435 | IA2-537STD1.0 | 18-Nov-19 | 10:53:49 | | 115929.242 | 11899.890 | 1.118 | | | | | |
| 3 | I13436 | IA2-537STD5.0 | 18-Nov-19 | 11:10:20 | | 112562.227 | 58197.820 | 5.631 | | | | | |
| 4 | I13437 | IA2-537STD10.0 | 18-Nov-19 | 11:26:51 | | 109470.945 | 105110.031 | 10.457 | | | | | |
| 5 | I13438 | IA2-537STD50.0 | 18-Nov-19 | 11:43:24 | | 106781.555 | 491336.344 | 50.111 | | | | | |
| 6 | I13439 | IA2-537STD125 | 18-Nov-19 | 12:00:10 | | 98244.656 | 1104013.250 | 122.381 | | | | | |
| 7 | I13440 | IA2-537STD150 | 18-Nov-19 | 12:16:43 | | 98053.172 | 1380425.125 | 153.321 | | | | | |
| 8 | I13441 | IA2-537STD250 | 18-Nov-19 | 12:33:16 | | 90653.047 | 2184240.000 | 262.402 | | | | | |
| 9 | I13442 | IA2-537STD500 | 18-Nov-19 | 12:49:53 | | 85048.031 | 3792057.500 | 485.579 | | | | | |

Compound name: PFOA
Coefficient of Determination: 0.000000
Calibration curve: 0.459114 * x
Response type: Internal Std ( Ref 22 ), Area * ( IS Conc. / IS Area )
Curve type: Linear, Origin: Force, Weighting: 1/x, Axis trans: None



# Initial Calibration Summary
# Form 6
# Semivolatiles

| | | | | | |
|---|---|---|---|---|---|
| Client | : | Soils Engineering Services, Inc. | Lab Number | : | L2009793 |
| Project Name | : | GROSSINGERS | Project Number | : | 9313 |
| Instrument ID | : | LCMS02 | Ical Ref | : | ICAL16305 |
| Calibration dates | : | 11/18/19 10:24 11/18/19 12:49 | | | |

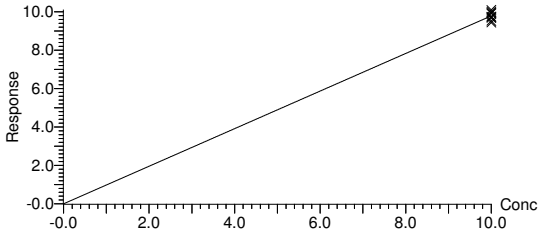


Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
Printed: Monday, November 18, 2019 13:47:36 Eastern Standard Time

**Compound name: M8PFOA**

| | Name | ID | Acq.Date | Acq.Time | RT | IS Area | Area | Conc (ng... | %Rec | RRF | 1º S/N | 2º S/N | (b/a) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | I13434 | IA2-537STD0.5 | 18-Nov-19 | 10:24:43 | 9.195 | 117636.820 | 114742.953 | 9.968 | 99.7 | 0.975 | 6801 | | 1.02 |
| 2 | I13435 | IA2-537STD1.0 | 18-Nov-19 | 10:53:49 | 9.201 | 114802.125 | 115929.242 | 10.320 | 103.2 | 1.010 | 11747 | | 1.01 |
| 3 | I13436 | IA2-537STD5.0 | 18-Nov-19 | 11:10:20 | 9.189 | 113627.328 | 112562.227 | 10.124 | 101.2 | 0.991 | 2472767 | | 1.08 |
| 4 | I13437 | IA2-537STD10.0 | 18-Nov-19 | 11:26:51 | 9.189 | 114891.016 | 109470.945 | 9.738 | 97.4 | 0.953 | 2330920 | | 1.11 |
| 5 | I13438 | IA2-537STD50.0 | 18-Nov-19 | 11:43:24 | 9.198 | 107343.031 | 106781.555 | 10.166 | 101.7 | 0.995 | 7478 | | 1.04 |
| 6 | I13439 | IA2-537STD125 | 18-Nov-19 | 12:00:10 | 9.192 | 101103.344 | 98244.656 | 9.931 | 99.3 | 0.972 | 11749 | | 1.04 |
| 7 | I13440 | IA2-537STD150 | 18-Nov-19 | 12:16:43 | 9.189 | 97990.719 | 98053.172 | 10.226 | 102.3 | 1.001 | 32823 | | 1.07 |
| 8 | I13441 | IA2-537STD250 | 18-Nov-19 | 12:33:16 | 9.195 | 96048.547 | 90653.047 | 9.646 | 96.5 | 0.944 | 4405 | | 1.03 |
| 9 | I13442 | IA2-537STD500 | 18-Nov-19 | 12:49:53 | 9.195 | 87971.789 | 85048.031 | 9.880 | 98.8 | 0.967 | 2298 | | 1.09 |

Compound name: M8PFOA
Response Factor: 0.978488
RRF SD: 0.0221851, % Relative SD: 2.26728
Response type: Internal Std ( Ref 23 ), Area * ( IS Conc. / IS Area )
Curve type: RF



# Initial Calibration Summary
# Form 6
# Semivolatiles

| | | | |
|---|---|---|---|
| Client | : Soils Engineering Services, Inc. | Lab Number | : L2009793 |
| Project Name | : GROSSINGERS | Project Number | : 9313 |
| Instrument ID | : LCMS02 | Ical Ref | : ICAL16305 |
| Calibration dates | : 11/18/19 10:24 11/18/19 12:49 | | |

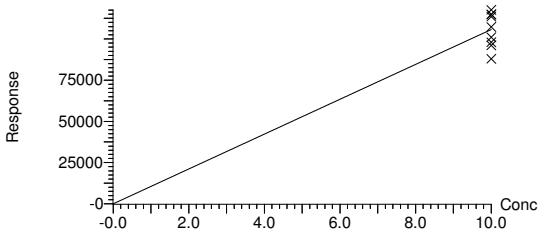


Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
Printed: Monday, November 18, 2019 13:47:36 Eastern Standard Time

**Compound name: M2PFOA**

| | Name | ID | Acq.Date | Acq.Time | RT | IS Area | Area | ng/mL | %Rec | RRF | 1º S/N | 2º S/N | (b/a) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | I13434 | IA2-537STD0.5 | 18-Nov-19 | 10:24:43 | 9.195 | | 117636.820 | 11.128 | 111.3 | 11763.682 | 9674 | | 1.05 |
| 2 | I13435 | IA2-537STD1.0 | 18-Nov-19 | 10:53:49 | 9.201 | | 114802.125 | 10.860 | 108.6 | 11480.213 | 11792 | | 1.07 |
| 3 | I13436 | IA2-537STD5.0 | 18-Nov-19 | 11:10:20 | 9.192 | | 113627.328 | 10.749 | 107.5 | 11362.733 | 8335 | | 1.01 |
| 4 | I13437 | IA2-537STD10.0 | 18-Nov-19 | 11:26:51 | 9.192 | | 114891.016 | 10.868 | 108.7 | 11489.102 | 6316 | | 1.04 |
| 5 | I13438 | IA2-537STD50.0 | 18-Nov-19 | 11:43:24 | 9.198 | | 107343.031 | 10.154 | 101.5 | 10734.303 | 6504 | | 1.07 |
| 6 | I13439 | IA2-537STD125 | 18-Nov-19 | 12:00:10 | 9.192 | | 101103.344 | 9.564 | 95.6 | 10110.334 | 13673 | | 1.08 |
| 7 | I13440 | IA2-537STD150 | 18-Nov-19 | 12:16:43 | 9.189 | | 97990.719 | 9.270 | 92.7 | 9799.072 | 15591 | | 1.13 |
| 8 | I13441 | IA2-537STD250 | 18-Nov-19 | 12:33:16 | 9.195 | | 96048.547 | 9.086 | 90.9 | 9604.855 | 6987 | | 1.12 |
| 9 | I13442 | IA2-537STD500 | 18-Nov-19 | 12:49:53 | 9.195 | | 87971.789 | 8.322 | 83.2 | 8797.179 | 7087 | | 1.17 |

Compound name: M2PFOA
Response Factor: 10571.3
RRF SD: 1038.84, % Relative SD: 9.82703
Response type: External Std, Area
Curve type: RF



# Initial Calibration Summary
# Form 6
# Semivolatiles

| | | | | | |
|---|---|---|---|---|---|
| Client | : | Soils Engineering Services, Inc. | Lab Number | : | L2009793 |
| Project Name | : | GROSSINGERS | Project Number | : | 9313 |
| Instrument ID | : | LCMS02 | Ical Ref | : | ICAL16305 |
| Calibration dates | : | 11/18/19 10:24 11/18/19 12:49 | | | |

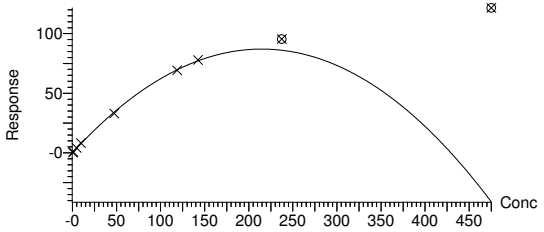


Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
Printed: Monday, November 18, 2019 13:47:36 Eastern Standard Time

**Compound name: 6:2FTS**

| | Name | ID | Acq.Date | Acq.Time | RT | IS Area | Area | Conc (ng... | %Rec | RRF | 1º S/N | 2º S/N | (b/a) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | I13434 | IA2-537STD0.5 | 18-Nov-19 | 10:24:43 | 9.151 | 5244.259 | 136.521 | 0.321 | 67.6 | 0.548 | 43 | | 1.18 |
| 2 | I13435 | IA2-537STD1.0 | 18-Nov-19 | 10:53:49 | 9.160 | 5793.605 | 472.065 | 1.007 | 106.0 | 0.858 | 11270 | | 1.09 |
| 3 | I13436 | IA2-537STD5.0 | 18-Nov-19 | 11:10:20 | 9.154 | 5686.892 | 2364.637 | 5.188 | 109.2 | 0.875 | 2595 | 2922 | 1.04 |
| 4 | I13437 | IA2-537STD10.0 | 18-Nov-19 | 11:26:51 | 9.151 | 5537.379 | 4543.102 | 10.363 | 109.1 | 0.864 | 90 | 10198 | 1.08 |
| 5 | I13438 | IA2-537STD50.0 | 18-Nov-19 | 11:43:24 | 9.157 | 6923.649 | 22887.639 | 45.588 | 96.0 | 0.696 | 2509 | 49281 | 1.05 |
| 6 | I13439 | IA2-537STD125 | 18-Nov-19 | 12:00:10 | 9.151 | 7531.343 | 52169.430 | 117.597 | 99.0 | 0.583 | 24000 | 105127 | 1.11 |
| 7 | I13440 | IA2-537STD150 | 18-Nov-19 | 12:16:43 | 9.147 | 8490.607 | 66168.844 | 145.112 | 101.8 | 0.547 | 9501 | 143411 | 1.07 |
| 8 | I13441 | IA2-537STD250 | 18-Nov-19 | 12:33:16 | 9.154 | 11016.425 | 105134.914 | | | 0.402 | 8557 | 244179 | 1.04 |
| 9 | I13442 | IA2-537STD500 | 18-Nov-19 | 12:49:53 | 9.154 | 16172.786 | 196700.500 | | | 0.256 | 9005 | 445042 | 1.05 |

Compound name: 6:2FTS
Coefficient of Determination: R^2 = 0.998705
Calibration curve: -0.00188986 * x^2 + 0.811287 * x
Response type: Internal Std ( Ref 25 ), Area * ( IS Conc. / IS Area )
Curve type: 2nd Order, Origin: Force, Weighting: 1/x, Axis trans: None



# Initial Calibration Summary
# Form 6
# Semivolatiles

| | | | |
|---|---|---|---|
| Client | : Soils Engineering Services, Inc. | Lab Number | : L2009793 |
| Project Name | : GROSSINGERS | Project Number | : 9313 |
| Instrument ID | : LCMS02 | Ical Ref | : ICAL16305 |
| Calibration dates | : 11/18/19 10:24 11/18/19 12:49 | | |

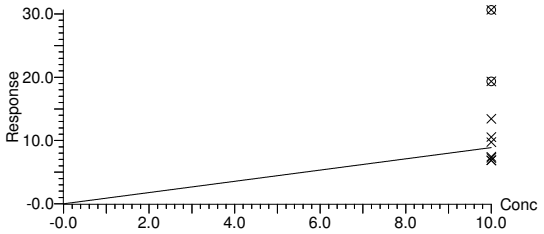


Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
Printed: Monday, November 18, 2019 13:47:36 Eastern Standard Time

**Compound name: M2-6:2FTS**

| | Name | ID | Acq.Date | Acq.Time | RT | IS Area | Area | Conc (ng... | %Rec | RRF | 1º S/N | 2º S/N | (b/a) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | I13434 | IA2-537STD0.5 | 18-Nov-19 | 10:24:43 | 9.154 | 7620.767 | 5244.259 | 7.748 | 77.5 | 0.688 | 1856 | | 1.08 |
| 2 | I13435 | IA2-537STD1.0 | 18-Nov-19 | 10:53:49 | 9.163 | 7797.159 | 5793.605 | 8.366 | 83.7 | 0.743 | 130134 | | 0.95 |
| 3 | I13436 | IA2-537STD5.0 | 18-Nov-19 | 11:10:20 | 9.151 | 8269.742 | 5686.892 | 7.743 | 77.4 | 0.688 | 1728 | | 1.07 |
| 4 | I13437 | IA2-537STD10.0 | 18-Nov-19 | 11:26:51 | 9.151 | 7629.751 | 5537.379 | 8.172 | 81.7 | 0.726 | 128419 | | 1.04 |
| 5 | I13438 | IA2-537STD50.0 | 18-Nov-19 | 11:43:24 | 9.160 | 7090.403 | 6923.649 | 10.995 | 109.9 | 0.976 | 3006 | | 0.94 |
| 6 | I13439 | IA2-537STD125 | 18-Nov-19 | 12:00:10 | 9.154 | 7149.182 | 7531.343 | 11.861 | 118.6 | 1.053 | 173852 | | 0.97 |
| 7 | I13440 | IA2-537STD150 | 18-Nov-19 | 12:16:43 | 9.151 | 6324.697 | 8490.607 | 15.115 | 151.2 | 1.342 | 866 | | 0.96 |
| 8 | I13441 | IA2-537STD250 | 18-Nov-19 | 12:33:16 | 9.154 | 5696.930 | 11016.425 | 21.773 | 217.7 | 1.934 | 251479 | | 1.05 |
| 9 | I13442 | IA2-537STD500 | 18-Nov-19 | 12:49:53 | 9.154 | 5276.689 | 16172.786 | 34.510 | 345.1 | 3.065 | 3544 | | 1.05 |

Compound name: M2-6:2FTS
Response Factor: 0.888146
RRF SD: 0.248037, % Relative SD: 27.9275
Response type: Internal Std ( Ref 32 ), Area * ( IS Conc. / IS Area )
Curve type: RF



# Initial Calibration Summary
# Form 6
# Semivolatiles

| | | | |
|---|---|---|---|
| Client | : Soils Engineering Services, Inc. | Lab Number | : L2009793 |
| Project Name | : GROSSINGERS | Project Number | : 9313 |
| Instrument ID | : LCMS02 | Ical Ref | : ICAL16305 |
| Calibration dates | : 11/18/19 10:24 11/18/19 12:49 | | |

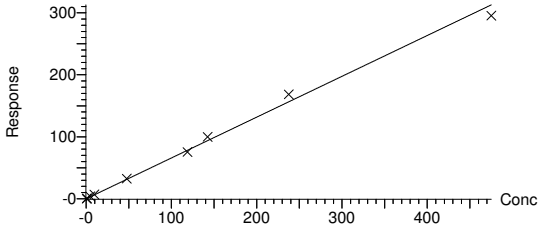


Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
Printed: Monday, November 18, 2019 13:47:36 Eastern Standard Time

**Compound name: PFHpS**

| | Name | ID | Acq.Date | Acq.Time | RT | IS Area | Area | Conc (ng... | %Rec | RRF | 1º S/N | 2º S/N | (b/a) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | I13434 | IA2-537STD0.5 | 18-Nov-19 | 10:24:43 | 9.288 | 7863.209 | 144.360 | 0.279 | 58.7 | 0.387 | 221 | 10 | 0.78 |
| 2 | I13435 | IA2-537STD1.0 | 18-Nov-19 | 10:53:49 | 9.288 | 8337.590 | 621.729 | 1.132 | 119.2 | 0.785 | 155 | 101 | 1.04 |
| 3 | I13436 | IA2-537STD5.0 | 18-Nov-19 | 11:10:20 | 9.279 | 7856.718 | 2920.696 | 5.646 | 118.9 | 0.783 | 797 | 309 | 1.12 |
| 4 | I13437 | IA2-537STD10.0 | 18-Nov-19 | 11:26:51 | 9.282 | 7611.157 | 5201.360 | 10.378 | 109.2 | 0.719 | 12 | 669 | 0.98 |
| 5 | I13438 | IA2-537STD50.0 | 18-Nov-19 | 11:43:24 | 9.288 | 7647.324 | 24823.602 | 49.296 | 103.8 | 0.683 | 4812 | 2802 | 1.04 |
| 6 | I13439 | IA2-537STD125 | 18-Nov-19 | 12:00:10 | 9.282 | 6866.474 | 51706.141 | 114.358 | 96.3 | 0.634 | 1116814 | 5891 | 1.05 |
| 7 | I13440 | IA2-537STD150 | 18-Nov-19 | 12:16:43 | 9.279 | 6560.688 | 65508.563 | 151.638 | 106.4 | 0.701 | 6932 | 3799 | 1.06 |
| 8 | I13441 | IA2-537STD250 | 18-Nov-19 | 12:33:16 | 9.285 | 5910.273 | 99602.891 | 255.931 | 107.8 | 0.710 | 1917 | 10570 | 1.08 |
| 9 | I13442 | IA2-537STD500 | 18-Nov-19 | 12:49:53 | 9.285 | 5658.023 | 167009.734 | 448.266 | 94.4 | 0.621 | 17852 | 20289 | 1.15 |

Compound name: PFHpS
Coefficient of Determination: R^2 = 0.995952
Calibration curve: 0.658478 * x
Response type: Internal Std ( Ref 33 ), Area * ( IS Conc. / IS Area )
Curve type: Linear, Origin: Force, Weighting: 1/x, Axis trans: None



# Initial Calibration Summary
# Form 6
# Semivolatiles

| | | | |
|---|---|---|---|
| Client | : Soils Engineering Services, Inc. | Lab Number | : L2009793 |
| Project Name | : GROSSINGERS | Project Number | : 9313 |
| Instrument ID | : LCMS02 | Ical Ref | : ICAL16305 |
| Calibration dates | : 11/18/19 10:24 11/18/19 12:49 | | |

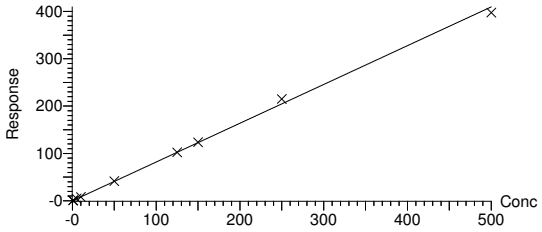


Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
Printed: Monday, November 18, 2019 13:47:36 Eastern Standard Time

**Compound name: PFNA**

| | Name | ID | Acq.Date | Acq.Time | RT | IS Area | Area | Conc (ng... | %Rec | RRF | 1º S/N | 2º S/N | (b/a) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | I13434 | IA2-537STD0.5 | 18-Nov-19 | 10:24:43 | 9.946 | 114401.953 | 4410.776 | 0.471 | 94.1 | 0.771 | 122 | 301 | 1.04 |
| 2 | I13435 | IA2-537STD1.0 | 18-Nov-19 | 10:53:49 | 9.950 | 113246.805 | 10939.968 | 1.179 | 117.9 | 0.966 | 299 | 51723 | 0.99 |
| 3 | I13436 | IA2-537STD5.0 | 18-Nov-19 | 11:10:20 | 9.941 | 112215.648 | 52307.785 | 5.690 | 113.8 | 0.932 | 1092 | 243154 | 1.01 |
| 4 | I13437 | IA2-537STD10.0 | 18-Nov-19 | 11:26:51 | 9.941 | 112653.875 | 90734.125 | 9.831 | 98.3 | 0.805 | 2463 | 708 | 1.03 |
| 5 | I13438 | IA2-537STD50.0 | 18-Nov-19 | 11:43:24 | 9.950 | 104182.664 | 434642.250 | 50.925 | 101.8 | 0.834 | 10328 | 7740 | 0.98 |
| 6 | I13439 | IA2-537STD125 | 18-Nov-19 | 12:00:10 | 9.946 | 94452.336 | 964953.875 | 124.705 | 99.8 | 0.817 | 30563 | 8818 | 0.97 |
| 7 | I13440 | IA2-537STD150 | 18-Nov-19 | 12:16:43 | 9.941 | 96585.883 | 1196780.250 | 151.249 | 100.8 | 0.826 | 30019 | 13273 | 1.00 |
| 8 | I13441 | IA2-537STD250 | 18-Nov-19 | 12:33:16 | 9.946 | 87852.000 | 1887084.875 | 262.199 | 104.9 | 0.859 | 40376 | 21285 | 1.03 |
| 9 | I13442 | IA2-537STD500 | 18-Nov-19 | 12:49:53 | 9.946 | 82060.539 | 3262201.750 | 485.252 | 97.1 | 0.795 | 81231 | 41203 | 1.06 |

Compound name: PFNA
Coefficient of Determination: R^2 = 0.998884
Calibration curve: 0.819236 * x
Response type: Internal Std ( Ref 28 ), Area * ( IS Conc. / IS Area )
Curve type: Linear, Origin: Force, Weighting: 1/x, Axis trans: None



# Initial Calibration Summary
# Form 6
# Semivolatiles

| | | | | | |
|---|---|---|---|---|---|
| Client | : | Soils Engineering Services, Inc. | Lab Number | : | L2009793 |
| Project Name | : | GROSSINGERS | Project Number | : | 9313 |
| Instrument ID | : | LCMS02 | Ical Ref | : | ICAL16305 |
| Calibration dates | : | 11/18/19 10:24 11/18/19 12:49 | | | |

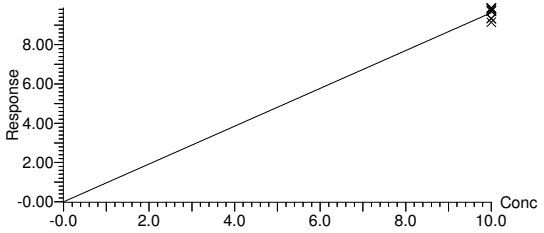


Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
Printed: Monday, November 18, 2019 13:47:36 Eastern Standard Time

**Compound name: M9PFNA**

| | Name | ID | Acq.Date | Acq.Time | RT | IS Area | Area | Conc (ng... | %Rec | RRF | 1º S/N | 2º S/N | (b/a) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | I13434 | IA2-537STD0.5 | 18-Nov-19 | 10:24:43 | 9.946 | 117636.820 | 114401.953 | 10.101 | 101.0 | 0.973 | 16011 | | 0.99 |
| 2 | I13435 | IA2-537STD1.0 | 18-Nov-19 | 10:53:49 | 9.950 | 114802.125 | 113246.805 | 10.246 | 102.5 | 0.986 | 34666 | | 1.00 |
| 3 | I13436 | IA2-537STD5.0 | 18-Nov-19 | 11:10:20 | 9.941 | 113627.328 | 112215.648 | 10.258 | 102.6 | 0.988 | 11385 | | 0.99 |
| 4 | I13437 | IA2-537STD10.0 | 18-Nov-19 | 11:26:51 | 9.941 | 114891.016 | 112653.875 | 10.184 | 101.8 | 0.981 | 12874 | | 1.01 |
| 5 | I13438 | IA2-537STD50.0 | 18-Nov-19 | 11:43:24 | 9.946 | 107343.031 | 104182.664 | 10.081 | 100.8 | 0.971 | 6038 | | 1.05 |
| 6 | I13439 | IA2-537STD125 | 18-Nov-19 | 12:00:10 | 9.941 | 101103.344 | 94452.336 | 9.703 | 97.0 | 0.934 | 462 | | 1.05 |
| 7 | I13440 | IA2-537STD150 | 18-Nov-19 | 12:16:43 | 9.941 | 97990.719 | 96585.883 | 10.238 | 102.4 | 0.986 | 2951 | | 1.00 |
| 8 | I13441 | IA2-537STD250 | 18-Nov-19 | 12:33:16 | 9.946 | 96048.547 | 87852.000 | 9.500 | 95.0 | 0.915 | 4214 | | 1.00 |
| 9 | I13442 | IA2-537STD500 | 18-Nov-19 | 12:49:53 | 9.946 | 87971.789 | 82060.539 | 9.689 | 96.9 | 0.933 | 8159 | | 1.04 |

Compound name: M9PFNA
Response Factor: 0.962774
RRF SD: 0.0278357, % Relative SD: 2.89119
Response type: Internal Std ( Ref 23 ), Area * ( IS Conc. / IS Area )
Curve type: RF



# Initial Calibration Summary
# Form 6
# Semivolatiles

| | | | |
|---|---|---|---|
| Client | : Soils Engineering Services, Inc. | Lab Number | : L2009793 |
| Project Name | : GROSSINGERS | Project Number | : 9313 |
| Instrument ID | : LCMS02 | Ical Ref | : ICAL16305 |
| Calibration dates | : 11/18/19 10:24 11/18/19 12:49 | | |

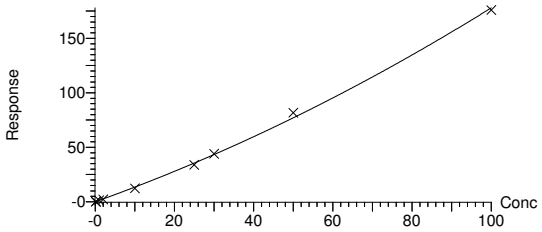


Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
Printed: Monday, November 18, 2019 13:47:36 Eastern Standard Time

**Compound name: br-PFOS**

| | Name | ID | Acq.Date | Acq.Time | RT | IS Area | Area | Conc (ng... | %Rec | RRF | 1º S/N | 2º S/N | (b/a) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | I13434 | IA2-537STD0.5 | 18-Nov-19 | 10:24:43 | 9.724 | 7863.209 | 63.022 | 0.062 | 61.5 | 0.801 | 1 | | 4.31 |
| 2 | I13435 | IA2-537STD1.0 | 18-Nov-19 | 10:53:49 | 9.809 | 8337.590 | 144.024 | 0.133 | 66.3 | 0.864 | 7 | 5 | 0.44 |
| 3 | I13436 | IA2-537STD5.0 | 18-Nov-19 | 11:10:20 | 9.801 | 7856.718 | 1018.896 | 0.992 | 99.2 | 1.297 | 66 | 8 | 0.38 |
| 4 | I13437 | IA2-537STD10.0 | 18-Nov-19 | 11:26:51 | 9.801 | 7611.157 | 1719.872 | 1.724 | 86.2 | 1.130 | 60 | 50 | 0.47 |
| 5 | I13438 | IA2-537STD50.0 | 18-Nov-19 | 11:43:24 | 9.809 | 7647.324 | 9374.953 | 9.110 | 91.1 | 1.226 | 206 | 58 | 0.37 |
| 6 | I13439 | IA2-537STD125 | 18-Nov-19 | 12:00:10 | 9.805 | 6866.474 | 23335.752 | 23.990 | 96.0 | 1.359 | 254 | 146 | 0.38 |
| 7 | I13440 | IA2-537STD150 | 18-Nov-19 | 12:16:43 | 9.801 | 6560.688 | 28882.205 | 30.417 | 101.4 | 1.467 | 969 | 130741 | 0.41 |
| 8 | I13441 | IA2-537STD250 | 18-Nov-19 | 12:33:16 | 9.809 | 5910.273 | 48275.703 | 52.590 | 105.2 | 1.634 | 1207 | 725 | 0.38 |
| 9 | I13442 | IA2-537STD500 | 18-Nov-19 | 12:49:53 | 9.809 | 5658.023 | 99553.039 | 99.112 | 99.1 | 1.760 | 64 | 1430 | 0.39 |

Compound name: br-PFOS
Coefficient of Determination: R^2 = 0.998470
Calibration curve: 0.0047735 * x^2 + 1.30214 * x
Response type: Internal Std ( Ref 33 ), Area * ( IS Conc. / IS Area )
Curve type: 2nd Order, Origin: Force, Weighting: 1/x, Axis trans: None



# Initial Calibration Summary
# Form 6
# Semivolatiles

| | | | | | |
|---|---|---|---|---|---|
| Client | : | Soils Engineering Services, Inc. | Lab Number | : | L2009793 |
| Project Name | : | GROSSINGERS | Project Number | : | 9313 |
| Instrument ID | : | LCMS02 | Ical Ref | : | ICAL16305 |
| Calibration dates | : | 11/18/19 10:24 11/18/19 12:49 | | | |

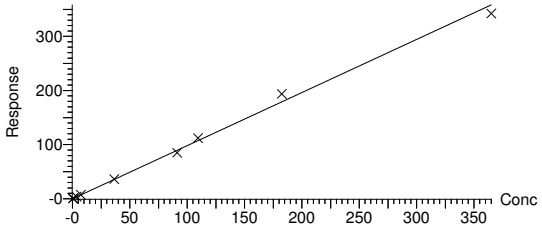


Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
Printed: Monday, November 18, 2019 13:47:36 Eastern Standard Time

**Compound name: L-PFOS**

| | Name | ID | Acq.Date | Acq.Time | RT | IS Area | Area | Conc (ng... | %Rec | RRF | 1º S/N | 2º S/N | (b/a) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | I13434 | IA2-537STD0.5 | 18-Nov-19 | 10:24:43 | 10.0... | 7863.209 | 210.105 | 0.272 | 74.6 | 0.732 | 7 | 5455 | 0.73 |
| 2 | I13435 | IA2-537STD1.0 | 18-Nov-19 | 10:53:49 | 10.0... | 8337.590 | 646.229 | 0.790 | 108.2 | 1.062 | 57 | 38 | 1.09 |
| 3 | I13436 | IA2-537STD5.0 | 18-Nov-19 | 11:10:20 | 9.993 | 7856.718 | 3141.077 | 4.074 | 111.6 | 1.095 | 356 | 84 | 0.93 |
| 4 | I13437 | IA2-537STD10.0 | 18-Nov-19 | 11:26:51 | 9.993 | 7611.157 | 5686.805 | 7.613 | 104.3 | 1.024 | 417 | 466 | 0.94 |
| 5 | I13438 | IA2-537STD50.0 | 18-Nov-19 | 11:43:24 | 9.997 | 7647.324 | 27678.270 | 36.880 | 101.0 | 0.992 | 1273 | 545 | 1.03 |
| 6 | I13439 | IA2-537STD125 | 18-Nov-19 | 12:00:10 | 9.993 | 6866.474 | 58381.578 | 86.636 | 94.9 | 0.932 | 1365 | 1277 | 1.01 |
| 7 | I13440 | IA2-537STD150 | 18-Nov-19 | 12:16:43 | 9.993 | 6560.688 | 73590.516 | 114.296 | 104.4 | 1.024 | 5274 | 1018150 | 0.99 |
| 8 | I13441 | IA2-537STD250 | 18-Nov-19 | 12:33:16 | 9.997 | 5910.273 | 114601.617 | 197.579 | 108.3 | 1.062 | 5829 | 5448 | 1.02 |
| 9 | I13442 | IA2-537STD500 | 18-Nov-19 | 12:49:53 | 9.997 | 5658.023 | 193598.438 | 348.655 | 95.5 | 0.937 | 263 | 8522 | 1.08 |

Compound name: L-PFOS
Coefficient of Determination: R^2 = 0.996780
Calibration curve: 0.98139 * x
Response type: Internal Std ( Ref 33 ), Area * ( IS Conc. / IS Area )
Curve type: Linear, Origin: Force, Weighting: 1/x, Axis trans: None



# Initial Calibration Summary
# Form 6
# Semivolatiles

| | | | |
|---|---|---|---|
| Client | : Soils Engineering Services, Inc. | Lab Number | : L2009793 |
| Project Name | : GROSSINGERS | Project Number | : 9313 |
| Instrument ID | : LCMS02 | Ical Ref | : ICAL16305 |
| Calibration dates | : 11/18/19 10:24 11/18/19 12:49 | | |

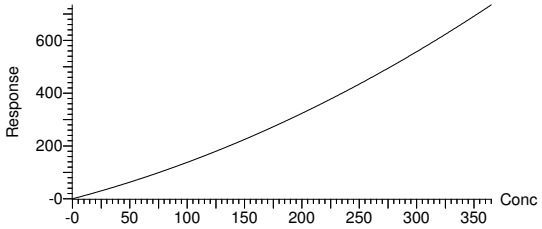


Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
Printed: Monday, November 18, 2019 13:47:36 Eastern Standard Time

**Compound name: PFOS**

| | Name | ID | Acq.Date | Acq.Time | RT | IS Area | Area | ng/mL | %Rec | RRF | 1º S/N | 2º S/N | (b/a) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | I13434 | IA2-537STD0.5 | 18-Nov-19 | 10:24:43 | | 7863.209 | 273.127 | 0.334 | | | | | |
| 2 | I13435 | IA2-537STD1.0 | 18-Nov-19 | 10:53:49 | | 8337.590 | 790.253 | 0.922 | | | | | |
| 3 | I13436 | IA2-537STD5.0 | 18-Nov-19 | 11:10:20 | | 7856.718 | 4159.973 | 5.066 | | | | | |
| 4 | I13437 | IA2-537STD10.0 | 18-Nov-19 | 11:26:51 | | 7611.157 | 7406.677 | 9.338 | | | | | |
| 5 | I13438 | IA2-537STD50.0 | 18-Nov-19 | 11:43:24 | | 7647.324 | 37053.223 | 45.990 | | | | | |
| 6 | I13439 | IA2-537STD125 | 18-Nov-19 | 12:00:10 | | 6866.474 | 81717.330 | 110.626 | | | | | |
| 7 | I13440 | IA2-537STD150 | 18-Nov-19 | 12:16:43 | | 6560.688 | 102472.721 | 144.713 | | | | | |
| 8 | I13441 | IA2-537STD250 | 18-Nov-19 | 12:33:16 | | 5910.273 | 162877.320 | 250.169 | | | | | |
| 9 | I13442 | IA2-537STD500 | 18-Nov-19 | 12:49:53 | | 5658.023 | 293151.477 | 447.767 | | | | | |

Compound name: PFOS
Coefficient of Determination: 0.000000
Calibration curve: 1.14177 * x
Response type: Internal Std ( Ref 33 ), Area * ( IS Conc. / IS Area )
Curve type: Linear, Origin: Force, Weighting: 1/x, Axis trans: None



# Initial Calibration Summary
# Form 6
# Semivolatiles

| | | | |
|---|---|---|---|
| Client | : Soils Engineering Services, Inc. | Lab Number | : L2009793 |
| Project Name | : GROSSINGERS | Project Number | : 9313 |
| Instrument ID | : LCMS02 | Ical Ref | : ICAL16305 |
| Calibration dates | : 11/18/19 10:24 11/18/19 12:49 | | |

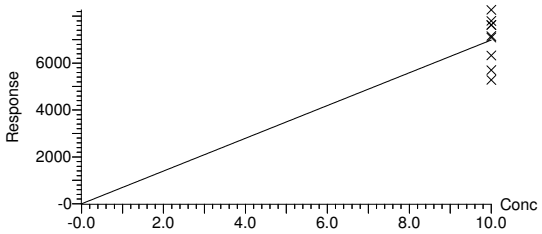


Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
Printed: Monday, November 18, 2019 13:47:36 Eastern Standard Time

**Compound name: M4PFOS**

| | Name | ID | Acq.Date | Acq.Time | RT | IS Area | Area | Conc (ng... | %Rec | RRF | 1º S/N | 2º S/N | (b/a) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | I13434 | IA2-537STD0.5 | 18-Nov-19 | 10:24:43 | 9.997 | | 7620.767 | 10.912 | 109.1 | 762.077 | 157037 | | 0.93 |
| 2 | I13435 | IA2-537STD1.0 | 18-Nov-19 | 10:53:49 | 10.0... | | 7797.159 | 11.164 | 111.6 | 779.716 | 167149 | | 0.90 |
| 3 | I13436 | IA2-537STD5.0 | 18-Nov-19 | 11:10:20 | 9.989 | | 8269.742 | 11.841 | 118.4 | 826.974 | 177403 | | 1.03 |
| 4 | I13437 | IA2-537STD10.0 | 18-Nov-19 | 11:26:51 | 9.993 | | 7629.751 | 10.925 | 109.2 | 762.975 | 159530 | | 0.97 |
| 5 | I13438 | IA2-537STD50.0 | 18-Nov-19 | 11:43:24 | 9.997 | | 7090.403 | 10.152 | 101.5 | 709.040 | 146923 | | 0.99 |
| 6 | I13439 | IA2-537STD125 | 18-Nov-19 | 12:00:10 | 9.993 | | 7149.182 | 10.237 | 102.4 | 714.918 | 1645 | | 1.01 |
| 7 | I13440 | IA2-537STD150 | 18-Nov-19 | 12:16:43 | 9.993 | | 6324.697 | 9.056 | 90.6 | 632.470 | 128909 | | 0.95 |
| 8 | I13441 | IA2-537STD250 | 18-Nov-19 | 12:33:16 | 9.997 | | 5696.930 | 8.157 | 81.6 | 569.693 | 1209 | | 0.98 |
| 9 | I13442 | IA2-537STD500 | 18-Nov-19 | 12:49:53 | 9.997 | | 5276.689 | 7.555 | 75.6 | 527.669 | 101650 | | 1.07 |

Compound name: M4PFOS
Response Factor: 698.392
RRF SD: 101.128, % Relative SD: 14.4802
Response type: External Std, Area
Curve type: RF



# Initial Calibration Summary
# Form 6
# Semivolatiles

| | | | |
|---|---|---|---|
| Client | : Soils Engineering Services, Inc. | Lab Number | : L2009793 |
| Project Name | : GROSSINGERS | Project Number | : 9313 |
| Instrument ID | : LCMS02 | Ical Ref | : ICAL16305 |
| Calibration dates | : 11/18/19 10:24 11/18/19 12:49 | | |

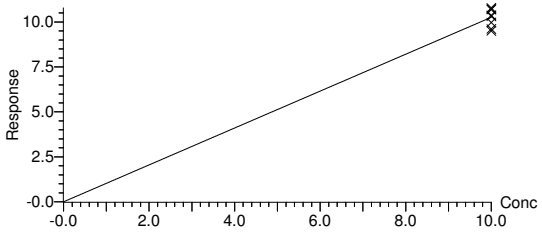


Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
Printed: Monday, November 18, 2019 13:47:36 Eastern Standard Time

**Compound name: M8PFOS**

| | Name | ID | Acq.Date | Acq.Time | RT | IS Area | Area | Conc (ng... | %Rec | RRF | 1º S/N | 2º S/N | (b/a) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | I13434 | IA2-537STD0.5 | 18-Nov-19 | 10:24:43 | 9.993 | 7620.767 | 7863.209 | 10.056 | 100.6 | 1.032 | 165326 | | 1.01 |
| 2 | I13435 | IA2-537STD1.0 | 18-Nov-19 | 10:53:49 | 9.998 | 7797.159 | 8337.590 | 10.421 | 104.2 | 1.069 | 174045 | | 1.05 |
| 3 | I13436 | IA2-537STD5.0 | 18-Nov-19 | 11:10:20 | 9.989 | 8269.742 | 7856.718 | 9.259 | 92.6 | 0.950 | 4400 | | 0.99 |
| 4 | I13437 | IA2-537STD10.0 | 18-Nov-19 | 11:26:51 | 9.993 | 7629.751 | 7611.157 | 9.722 | 97.2 | 0.998 | 1249 | | 0.96 |
| 5 | I13438 | IA2-537STD50.0 | 18-Nov-19 | 11:43:24 | 9.998 | 7090.403 | 7647.324 | 10.511 | 105.1 | 1.079 | 1059 | | 1.00 |
| 6 | I13439 | IA2-537STD125 | 18-Nov-19 | 12:00:10 | 9.993 | 7149.182 | 6866.474 | 9.360 | 93.6 | 0.960 | 317 | | 1.01 |
| 7 | I13440 | IA2-537STD150 | 18-Nov-19 | 12:16:43 | 9.993 | 6324.697 | 6560.688 | 10.109 | 101.1 | 1.037 | 667 | | 0.91 |
| 8 | I13441 | IA2-537STD250 | 18-Nov-19 | 12:33:16 | 9.998 | 5696.930 | 5910.273 | 10.111 | 101.1 | 1.037 | 412 | | 0.96 |
| 9 | I13442 | IA2-537STD500 | 18-Nov-19 | 12:49:53 | 9.998 | 5276.689 | 5658.023 | 10.450 | 104.5 | 1.072 | 376 | | 1.04 |

Compound name: M8PFOS
Response Factor: 1.02609
RRF SD: 0.0473585, % Relative SD: 4.61545
Response type: Internal Std ( Ref 32 ), Area * ( IS Conc. / IS Area )
Curve type: RF



# Initial Calibration Summary
# Form 6
# Semivolatiles

| | | | |
|---|---|---|---|
| Client | : Soils Engineering Services, Inc. | Lab Number | : L2009793 |
| Project Name | : GROSSINGERS | Project Number | : 9313 |
| Instrument ID | : LCMS02 | Ical Ref | : ICAL16305 |
| Calibration dates | : 11/18/19 10:24 11/18/19 12:49 | | |

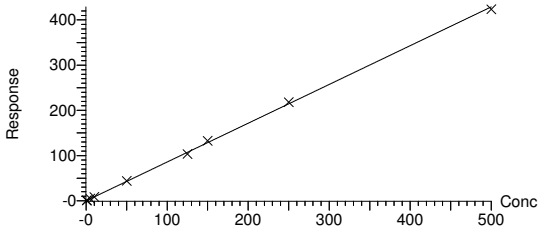


Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
Printed: Monday, November 18, 2019 13:47:36 Eastern Standard Time

**Compound name: PFDA**

| | Name | ID | Acq.Date | Acq.Time | RT | IS Area | Area | Conc (ng... | %Rec | RRF | 1º S/N | 2º S/N | (b/a) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | I13434 | IA2-537STD0.5 | 18-Nov-19 | 10:24:43 | 10.5... | 105486.805 | 4685.706 | 0.518 | 103.6 | 0.888 | 152 | 14 | 1.17 |
| 2 | I13435 | IA2-537STD1.0 | 18-Nov-19 | 10:53:49 | 10.5... | 109985.242 | 9944.646 | 1.054 | 105.4 | 0.904 | 358 | 39777 | 1.15 |
| 3 | I13436 | IA2-537STD5.0 | 18-Nov-19 | 11:10:20 | 10.5... | 104239.750 | 49945.277 | 5.585 | 111.7 | 0.958 | 1959 | 1493 | 1.04 |
| 4 | I13437 | IA2-537STD10.0 | 18-Nov-19 | 11:26:51 | 10.5... | 101094.977 | 86872.859 | 10.017 | 100.2 | 0.859 | 2485 | 3214 | 0.99 |
| 5 | I13438 | IA2-537STD50.0 | 18-Nov-19 | 11:43:24 | 10.5... | 92826.750 | 409066.531 | 51.371 | 102.7 | 0.881 | 9042 | 2580 | 1.00 |
| 6 | I13439 | IA2-537STD125 | 18-Nov-19 | 12:00:10 | 10.5... | 84901.406 | 877900.563 | 120.538 | 96.4 | 0.827 | 16762 | 6535 | 1.00 |
| 7 | I13440 | IA2-537STD150 | 18-Nov-19 | 12:16:43 | 10.5... | 82198.586 | 1090370.000 | 154.634 | 103.1 | 0.884 | 26036 | 15544 | 1.05 |
| 8 | I13441 | IA2-537STD250 | 18-Nov-19 | 12:33:16 | 10.5... | 74923.039 | 1633247.125 | 254.115 | 101.6 | 0.872 | 18176 | 5568 | 1.01 |
| 9 | I13442 | IA2-537STD500 | 18-Nov-19 | 12:49:53 | 10.5... | 66209.734 | 2803895.000 | 493.667 | 98.7 | 0.847 | 52614 | 17537 | 1.06 |

Compound name: PFDA
Coefficient of Determination: R^2 = 0.999475
Calibration curve: 0.857838 * x
Response type: Internal Std ( Ref 36 ), Area * ( IS Conc. / IS Area )
Curve type: Linear, Origin: Force, Weighting: 1/x, Axis trans: None



# Initial Calibration Summary
# Form 6
# Semivolatiles

| | | | | | |
|---|---|---|---|---|---|
| Client | : | Soils Engineering Services, Inc. | Lab Number | : | L2009793 |
| Project Name | : | GROSSINGERS | Project Number | : | 9313 |
| Instrument ID | : | LCMS02 | Ical Ref | : | ICAL16305 |
| Calibration dates | : | 11/18/19 10:24 11/18/19 12:49 | | | |

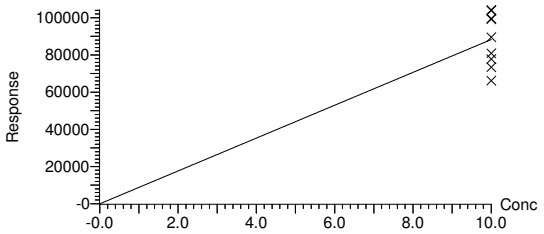


Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
Printed: Monday, November 18, 2019 13:47:36 Eastern Standard Time

**Compound name: M2PFDA**

| | Name | ID | Acq.Date | Acq.Time | RT | IS Area | Area | Conc (ng... | %Rec | RRF | 1º S/N | 2º S/N | (b/a) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | I13434 | IA2-537STD0.5 | 18-Nov-19 | 10:24:43 | 10.5... | | 103829.906 | 11.760 | 117.6 | 10382.991 | 16120 | | 0.96 |
| 2 | I13435 | IA2-537STD1.0 | 18-Nov-19 | 10:53:49 | 10.5... | | 104230.492 | 11.805 | 118.1 | 10423.049 | 27028 | | 0.95 |
| 3 | I13436 | IA2-537STD5.0 | 18-Nov-19 | 11:10:20 | 10.5... | | 99527.453 | 11.273 | 112.7 | 9952.745 | 19482 | | 1.01 |
| 4 | I13437 | IA2-537STD10.0 | 18-Nov-19 | 11:26:51 | 10.5... | | 99233.398 | 11.239 | 112.4 | 9923.340 | 36690 | | 0.99 |
| 5 | I13438 | IA2-537STD50.0 | 18-Nov-19 | 11:43:24 | 10.5... | | 89579.898 | 10.146 | 101.5 | 8957.990 | 34795 | | 0.98 |
| 6 | I13439 | IA2-537STD125 | 18-Nov-19 | 12:00:10 | 10.5... | | 80832.117 | 9.155 | 91.6 | 8083.212 | 33177 | | 0.99 |
| 7 | I13440 | IA2-537STD150 | 18-Nov-19 | 12:16:43 | 10.5... | | 77816.188 | 8.814 | 88.1 | 7781.619 | 19275 | | 1.03 |
| 8 | I13441 | IA2-537STD250 | 18-Nov-19 | 12:33:16 | 10.5... | | 73446.680 | 8.319 | 83.2 | 7344.668 | 25437 | | 0.99 |
| 9 | I13442 | IA2-537STD500 | 18-Nov-19 | 12:49:53 | 10.5... | | 66126.813 | 7.490 | 74.9 | 6612.681 | 16215 | | 1.03 |

Compound name: M2PFDA
Response Factor: 8829.14
RRF SD: 1423.09, % Relative SD: 16.1181
Response type: External Std, Area
Curve type: RF



# Initial Calibration Summary
# Form 6
# Semivolatiles

| | | | | | |
|---|---|---|---|---|---|
| Client | : | Soils Engineering Services, Inc. | Lab Number | : | L2009793 |
| Project Name | : | GROSSINGERS | Project Number | : | 9313 |
| Instrument ID | : | LCMS02 | Ical Ref | : | ICAL16305 |
| Calibration dates | : | 11/18/19 10:24 11/18/19 12:49 | | | |

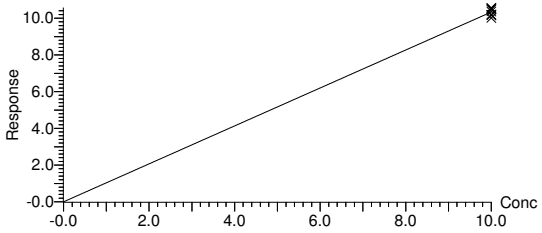


Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
Printed: Monday, November 18, 2019 13:47:36 Eastern Standard Time

**Compound name: M6PFDA**

| | Name | ID | Acq.Date | Acq.Time | RT | IS Area | Area | Conc (ng... | %Rec | RRF | 1º S/N | 2º S/N | (b/a) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | I13434 | IA2-537STD0.5 | 18-Nov-19 | 10:24:43 | 10.5... | 103829.906 | 105486.805 | 9.830 | 98.3 | 1.016 | 4853 | | 1.06 |
| 2 | I13435 | IA2-537STD1.0 | 18-Nov-19 | 10:53:49 | 10.5... | 104230.492 | 109985.242 | 10.210 | 102.1 | 1.055 | 6939 | | 1.06 |
| 3 | I13436 | IA2-537STD5.0 | 18-Nov-19 | 11:10:20 | 10.5... | 99527.453 | 104239.750 | 10.134 | 101.3 | 1.047 | 6601 | | 0.99 |
| 4 | I13437 | IA2-537STD10.0 | 18-Nov-19 | 11:26:51 | 10.5... | 99233.398 | 101094.977 | 9.857 | 98.6 | 1.019 | 19676 | | 0.98 |
| 5 | I13438 | IA2-537STD50.0 | 18-Nov-19 | 11:43:24 | 10.5... | 89579.898 | 92826.750 | 10.027 | 100.3 | 1.036 | 15009 | | 0.95 |
| 6 | I13439 | IA2-537STD125 | 18-Nov-19 | 12:00:10 | 10.5... | 80832.117 | 84901.406 | 10.163 | 101.6 | 1.050 | 1747 | | 0.97 |
| 7 | I13440 | IA2-537STD150 | 18-Nov-19 | 12:16:43 | 10.5... | 77816.188 | 82198.586 | 10.221 | 102.2 | 1.056 | 7076 | | 1.03 |
| 8 | I13441 | IA2-537STD250 | 18-Nov-19 | 12:33:16 | 10.5... | 73446.680 | 74923.039 | 9.870 | 98.7 | 1.020 | 14482 | | 0.98 |
| 9 | I13442 | IA2-537STD500 | 18-Nov-19 | 12:49:53 | 10.5... | 66126.813 | 66209.734 | 9.688 | 96.9 | 1.001 | 3663 | | 1.02 |

Compound name: M6PFDA
Response Factor: 1.0335
RRF SD: 0.0200603, % Relative SD: 1.94099
Response type: Internal Std ( Ref 35 ), Area * ( IS Conc. / IS Area )
Curve type: RF



# Initial Calibration Summary
# Form 6
# Semivolatiles

| | | | | | |
|---|---|---|---|---|---|
| Client | : | Soils Engineering Services, Inc. | Lab Number | : | L2009793 |
| Project Name | : | GROSSINGERS | Project Number | : | 9313 |
| Instrument ID | : | LCMS02 | Ical Ref | : | ICAL16305 |
| Calibration dates | : | 11/18/19 10:24 11/18/19 12:49 | | | |

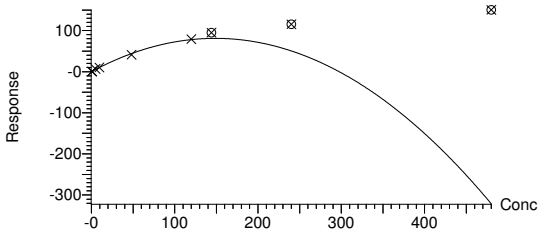


Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
Printed: Monday, November 18, 2019 13:47:36 Eastern Standard Time

**Compound name: 8:2FTS**

| | Name | ID | Acq.Date | Acq.Time | RT | IS Area | Area | Conc (ng... | %Rec | RRF | 1º S/N | 2º S/N | (b/a) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | I13434 | IA2-537STD0.5 | 18-Nov-19 | 10:24:43 | 10.5... | 3535.170 | 206.802 | 0.538 | 112.0 | 1.219 | 54 | | 1.30 |
| 2 | I13435 | IA2-537STD1.0 | 18-Nov-19 | 10:53:49 | 10.5... | 3740.494 | 354.823 | 0.873 | 90.9 | 0.988 | 60 | | 1.18 |
| 3 | I13436 | IA2-537STD5.0 | 18-Nov-19 | 11:10:20 | 10.5... | 3681.261 | 2398.694 | 6.103 | 127.1 | 1.357 | 55942 | | 1.05 |
| 4 | I13437 | IA2-537STD10.0 | 18-Nov-19 | 11:26:51 | 10.5... | 3572.389 | 3723.282 | 9.890 | 103.0 | 1.086 | 88711 | | 1.08 |
| 5 | I13438 | IA2-537STD50.0 | 18-Nov-19 | 11:43:24 | 10.5... | 4282.424 | 17680.184 | 44.549 | 92.8 | 0.860 | 408290 | | 1.04 |
| 6 | I13439 | IA2-537STD125 | 18-Nov-19 | 12:00:10 | 10.5... | 4755.468 | 37557.445 | 124.992 | 104.2 | 0.658 | 855186 | | 1.07 |
| 7 | I13440 | IA2-537STD150 | 18-Nov-19 | 12:16:43 | 10.5... | 4958.818 | 47138.504 | | | 0.660 | 22817 | | 1.11 |
| 8 | I13441 | IA2-537STD250 | 18-Nov-19 | 12:33:16 | 10.5... | 6317.642 | 72996.211 | | | 0.481 | 5819 | | 1.02 |
| 9 | I13442 | IA2-537STD500 | 18-Nov-19 | 12:49:53 | 10.5... | 8145.643 | 122449.109 | | | 0.313 | 4892 | | 1.11 |

Compound name: 8:2FTS
Coefficient of Determination: R^2 = 0.994263
Calibration curve: -0.00366564 * x^2 + 1.09004 * x
Response type: Internal Std ( Ref 38 ), Area * ( IS Conc. / IS Area )
Curve type: 2nd Order, Origin: Force, Weighting: 1/x, Axis trans: None



# Initial Calibration Summary
# Form 6
# Semivolatiles

| | | | |
|---|---|---|---|
| Client | : Soils Engineering Services, Inc. | Lab Number | : L2009793 |
| Project Name | : GROSSINGERS | Project Number | : 9313 |
| Instrument ID | : LCMS02 | Ical Ref | : ICAL16305 |
| Calibration dates | : 11/18/19 10:24 11/18/19 12:49 | | |

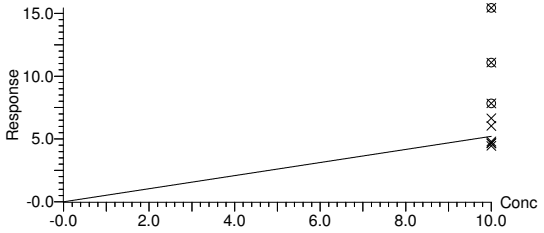


Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
Printed: Monday, November 18, 2019 13:47:36 Eastern Standard Time

**Compound name: M2-8:2FTS**

| | Name | ID | Acq.Date | Acq.Time | RT | IS Area | Area | Conc (ng... | %Rec | RRF | 1º S/N | 2º S/N | (b/a) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | I13434 | IA2-537STD0.5 | 18-Nov-19 | 10:24:43 | 10.5... | 7620.767 | 3535.170 | 8.903 | 89.0 | 0.464 | 69325 | | 1.02 |
| 2 | I13435 | IA2-537STD1.0 | 18-Nov-19 | 10:53:49 | 10.5... | 7797.159 | 3740.494 | 9.207 | 92.1 | 0.480 | 291 | | 0.95 |
| 3 | I13436 | IA2-537STD5.0 | 18-Nov-19 | 11:10:20 | 10.5... | 8269.742 | 3681.261 | 8.544 | 85.4 | 0.445 | 405 | | 1.05 |
| 4 | I13437 | IA2-537STD10.0 | 18-Nov-19 | 11:26:51 | 10.5... | 7629.751 | 3572.389 | 8.987 | 89.9 | 0.468 | 1911 | | 0.97 |
| 5 | I13438 | IA2-537STD50.0 | 18-Nov-19 | 11:43:24 | 10.5... | 7090.403 | 4282.424 | 11.592 | 115.9 | 0.604 | 83195 | | 1.04 |
| 6 | I13439 | IA2-537STD125 | 18-Nov-19 | 12:00:10 | 10.5... | 7149.182 | 4755.468 | 12.767 | 127.7 | 0.665 | 891 | | 0.99 |
| 7 | I13440 | IA2-537STD150 | 18-Nov-19 | 12:16:43 | 10.5... | 6324.697 | 4958.818 | 15.048 | 150.5 | 0.784 | 100651 | | 1.07 |
| 8 | I13441 | IA2-537STD250 | 18-Nov-19 | 12:33:16 | 10.5... | 5696.930 | 6317.642 | 21.284 | 212.8 | 1.109 | 129365 | | 1.03 |
| 9 | I13442 | IA2-537STD500 | 18-Nov-19 | 12:49:53 | 10.5... | 5276.689 | 8145.643 | 29.628 | 296.3 | 1.544 | 164641 | | 1.03 |

Compound name: M2-8:2FTS
Response Factor: 0.521022
RRF SD: 0.0907487, % Relative SD: 17.4175
Response type: Internal Std ( Ref 32 ), Area * ( IS Conc. / IS Area )
Curve type: RF



# Initial Calibration Summary
# Form 6
# Semivolatiles

| | | | |
|---|---|---|---|
| Client | : Soils Engineering Services, Inc. | Lab Number | : L2009793 |
| Project Name | : GROSSINGERS | Project Number | : 9313 |
| Instrument ID | : LCMS02 | Ical Ref | : ICAL16305 |
| Calibration dates | : 11/18/19 10:24 11/18/19 12:49 | | |

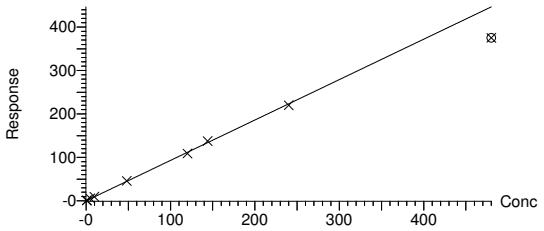


Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
Printed: Monday, November 18, 2019 13:47:36 Eastern Standard Time

**Compound name: PFNS**

| | Name | ID | Acq.Date | Acq.Time | RT | IS Area | Area | Conc (ng... | %Rec | RRF | 1º S/N | 2º S/N | (b/a) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | I13434 | IA2-537STD0.5 | 18-Nov-19 | 10:24:43 | 10.6... | 7863.209 | 306.160 | 0.419 | 87.2 | 0.811 | 12 | 8899 | 1.15 |
| 2 | I13435 | IA2-537STD1.0 | 18-Nov-19 | 10:53:49 | 10.6... | 8337.590 | 842.429 | 1.086 | 113.1 | 1.052 | 70 | 256 | 1.40 |
| 3 | I13436 | IA2-537STD5.0 | 18-Nov-19 | 11:10:20 | 10.6... | 7856.718 | 4373.127 | 5.984 | 124.7 | 1.160 | 2375 | 78894 | 0.92 |
| 4 | I13437 | IA2-537STD10.0 | 18-Nov-19 | 11:26:51 | 10.6... | 7611.157 | 7010.277 | 9.902 | 103.1 | 0.959 | 160780 | 136329 | 0.94 |
| 5 | I13438 | IA2-537STD50.0 | 18-Nov-19 | 11:43:24 | 10.6... | 7647.324 | 34940.902 | 49.120 | 102.3 | 0.952 | 4532 | 1399 | 0.94 |
| 6 | I13439 | IA2-537STD125 | 18-Nov-19 | 12:00:10 | 10.6... | 6866.474 | 74579.766 | 116.767 | 97.3 | 0.905 | 5435 | 9027 | 0.99 |
| 7 | I13440 | IA2-537STD150 | 18-Nov-19 | 12:16:43 | 10.5... | 6560.688 | 90355.602 | 148.060 | 102.8 | 0.956 | 27749 | 1627883 | 1.06 |
| 8 | I13441 | IA2-537STD250 | 18-Nov-19 | 12:33:16 | 10.6... | 5910.273 | 130020.867 | 236.503 | 98.5 | 0.917 | 17714 | 4054 | 1.07 |
| 9 | I13442 | IA2-537STD500 | 18-Nov-19 | 12:49:53 | 10.6... | 5658.023 | 212194.906 | 403.183 | 84.0 | 0.781 | 21595 | 23707 | 1.02 |

Compound name: PFNS
Coefficient of Determination: R^2 = 0.998898
Calibration curve: 0.930183 * x
Response type: Internal Std ( Ref 33 ), Area * ( IS Conc. / IS Area )
Curve type: Linear, Origin: Force, Weighting: 1/x, Axis trans: None



# Initial Calibration Summary
# Form 6
# Semivolatiles

| | | | | | |
|---|---|---|---|---|---|
| Client | : | Soils Engineering Services, Inc. | Lab Number | : | L2009793 |
| Project Name | : | GROSSINGERS | Project Number | : | 9313 |
| Instrument ID | : | LCMS02 | Ical Ref | : | ICAL16305 |
| Calibration dates | : | 11/18/19 10:24 11/18/19 12:49 | | | |

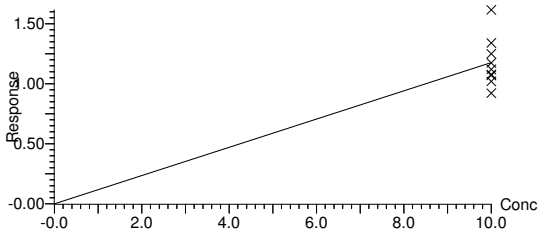


Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
Printed: Monday, November 18, 2019 13:47:36 Eastern Standard Time

**Compound name: d3-NMeFOSAA**

| | Name | ID | Acq.Date | Acq.Time | RT | IS Area | Area | Conc (ng... | %Rec | RRF | 1º S/N | 2º S/N | (b/a) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | I13434 | IA2-537STD0.5 | 18-Nov-19 | 10:24:43 | 10.9... | 103829.906 | 9575.763 | 7.836 | 78.4 | 0.092 | 308 | | 0.96 |
| 2 | I13435 | IA2-537STD1.0 | 18-Nov-19 | 10:53:49 | 10.9... | 104230.492 | 11161.044 | 9.098 | 91.0 | 0.107 | 219724 | | 0.97 |
| 3 | I13436 | IA2-537STD5.0 | 18-Nov-19 | 11:10:20 | 10.9... | 99527.453 | 10155.847 | 8.669 | 86.7 | 0.102 | 3683 | | 1.02 |
| 4 | I13437 | IA2-537STD10.0 | 18-Nov-19 | 11:26:51 | 10.9... | 99233.398 | 10699.074 | 9.160 | 91.6 | 0.108 | 1878 | | 0.98 |
| 5 | I13438 | IA2-537STD50.0 | 18-Nov-19 | 11:43:24 | 10.9... | 89579.898 | 10035.015 | 9.518 | 95.2 | 0.112 | 566 | | 1.02 |
| 6 | I13439 | IA2-537STD125 | 18-Nov-19 | 12:00:10 | 10.9... | 80832.117 | 9496.166 | 9.981 | 99.8 | 0.117 | 188703 | | 0.98 |
| 7 | I13440 | IA2-537STD150 | 18-Nov-19 | 12:16:43 | 10.9... | 77816.188 | 9724.458 | 10.617 | 106.2 | 0.125 | 192845 | | 0.98 |
| 8 | I13441 | IA2-537STD250 | 18-Nov-19 | 12:33:16 | 10.9... | 73446.680 | 9845.680 | 11.389 | 113.9 | 0.134 | 2041 | | 1.01 |
| 9 | I13442 | IA2-537STD500 | 18-Nov-19 | 12:49:53 | 10.9... | 66126.813 | 10688.211 | 13.732 | 137.3 | 0.162 | 1840 | | 0.99 |

Compound name: d3-NMeFOSAA
Response Factor: 0.117702
RRF SD: 0.0205764, % Relative SD: 17.4818
Response type: Internal Std ( Ref 35 ), Area * ( IS Conc. / IS Area )
Curve type: RF



# Initial Calibration Summary
# Form 6
# Semivolatiles

| | | | |
|---|---|---|---|
| Client | : Soils Engineering Services, Inc. | Lab Number | : L2009793 |
| Project Name | : GROSSINGERS | Project Number | : 9313 |
| Instrument ID | : LCMS02 | Ical Ref | : ICAL16305 |
| Calibration dates | : 11/18/19 10:24 11/18/19 12:49 | | |

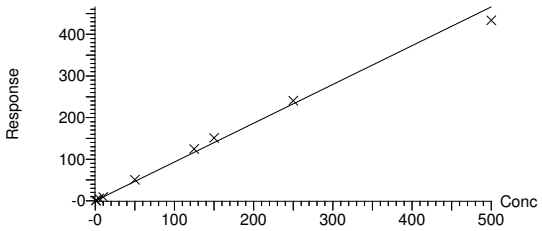


Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
Printed: Monday, November 18, 2019 13:47:36 Eastern Standard Time

**Compound name: br-NMeFOSAA**

| | Name | ID | Acq.Date | Acq.Time | RT | IS Area | Area | Conc (ng... | %Rec | RRF | 1º S/N | 2º S/N | (b/a) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | I13434 | IA2-537STD0.5 | 18-Nov-19 | 10:24:43 | | 9575.763 | | | | | | | |
| 2 | I13435 | IA2-537STD1.0 | 18-Nov-19 | 10:53:49 | | 11161.044 | | | | | | | |
| 3 | I13436 | IA2-537STD5.0 | 18-Nov-19 | 11:10:20 | | 10155.847 | | | | | | | |
| 4 | I13437 | IA2-537STD10.0 | 18-Nov-19 | 11:26:51 | | 10699.074 | | | | | | | |
| 5 | I13438 | IA2-537STD50.0 | 18-Nov-19 | 11:43:24 | | 10035.015 | | | | | | | |
| 6 | I13439 | IA2-537STD125 | 18-Nov-19 | 12:00:10 | | 9496.166 | | | | | | | |
| 7 | I13440 | IA2-537STD150 | 18-Nov-19 | 12:16:43 | | 9724.458 | | | | | | | |
| 8 | I13441 | IA2-537STD250 | 18-Nov-19 | 12:33:16 | | 9845.680 | | | | | | | |
| 9 | I13442 | IA2-537STD500 | 18-Nov-19 | 12:49:53 | | 10688.211 | | | | | | 2 | |

Compound name: L-NMeFOSAA
Coefficient of Determination: R^2 = 0.995480
Calibration curve: 0.931991 * x
Response type: Internal Std ( Ref 40 ), Area * ( IS Conc. / IS Area )
Curve type: Linear, Origin: Force, Weighting: 1/x, Axis trans: None



# Initial Calibration Summary
# Form 6
# Semivolatiles

| | | | |
|---|---|---|---|
| Client | : Soils Engineering Services, Inc. | Lab Number | : L2009793 |
| Project Name | : GROSSINGERS | Project Number | : 9313 |
| Instrument ID | : LCMS02 | Ical Ref | : ICAL16305 |
| Calibration dates | : 11/18/19 10:24 11/18/19 12:49 | | |

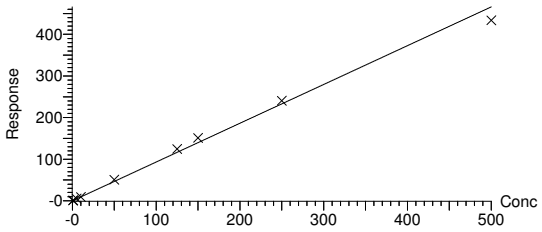


Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
Printed: Monday, November 18, 2019 13:47:36 Eastern Standard Time

**Compound name: L-NMeFOSAA**

| | Name | ID | Acq.Date | Acq.Time | RT | IS Area | Area | Conc (ng... | %Rec | RRF | 1º S/N | 2º S/N | (b/a) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | I13434 | IA2-537STD0.5 | 18-Nov-19 | 10:24:43 | 10.9... | 9575.763 | 324.541 | 0.364 | 72.7 | 0.678 | 7 | 22 | 1.05 |
| 2 | I13435 | IA2-537STD1.0 | 18-Nov-19 | 10:53:49 | 10.9... | 11161.044 | 1166.739 | 1.122 | 112.2 | 1.045 | 17132 | 8 | 0.98 |
| 3 | I13436 | IA2-537STD5.0 | 18-Nov-19 | 11:10:20 | 10.9... | 10155.847 | 5530.176 | 5.843 | 116.9 | 1.089 | 1686 | 28880 | 1.03 |
| 4 | I13437 | IA2-537STD10.0 | 18-Nov-19 | 11:26:51 | 10.9... | 10699.074 | 9818.126 | 9.846 | 98.5 | 0.918 | 2994 | 52535 | 0.98 |
| 5 | I13438 | IA2-537STD50.0 | 18-Nov-19 | 11:43:24 | 10.9... | 10035.015 | 51048.320 | 54.582 | 109.2 | 1.017 | 2351 | 487 | 0.99 |
| 6 | I13439 | IA2-537STD125 | 18-Nov-19 | 12:00:10 | 10.9... | 9496.166 | 118338.813 | 133.711 | 107.0 | 0.997 | 4519 | 15054 | 1.00 |
| 7 | I13440 | IA2-537STD150 | 18-Nov-19 | 12:16:43 | 10.9... | 9724.458 | 146964.844 | 162.157 | 108.1 | 1.008 | 4558 | 447 | 0.99 |
| 8 | I13441 | IA2-537STD250 | 18-Nov-19 | 12:33:16 | 10.9... | 9845.680 | 236955.250 | 258.231 | 103.3 | 0.963 | 7059 | 10078 | 1.01 |
| 9 | I13442 | IA2-537STD500 | 18-Nov-19 | 12:49:53 | 10.9... | 10688.211 | 463842.188 | 465.644 | 93.1 | 0.868 | 11998 | 6925 | 0.96 |

Compound name: L-NMeFOSAA
Coefficient of Determination: R^2 = 0.995480
Calibration curve: 0.931991 * x
Response type: Internal Std ( Ref 40 ), Area * ( IS Conc. / IS Area )
Curve type: Linear, Origin: Force, Weighting: 1/x, Axis trans: None



# Initial Calibration Summary
# Form 6
# Semivolatiles

| | | | | | |
|---|---|---|---|---|---|
| Client | : | Soils Engineering Services, Inc. | Lab Number | : | L2009793 |
| Project Name | : | GROSSINGERS | Project Number | : | 9313 |
| Instrument ID | : | LCMS02 | Ical Ref | : | ICAL16305 |
| Calibration dates | : | 11/18/19 10:24 11/18/19 12:49 | | | |

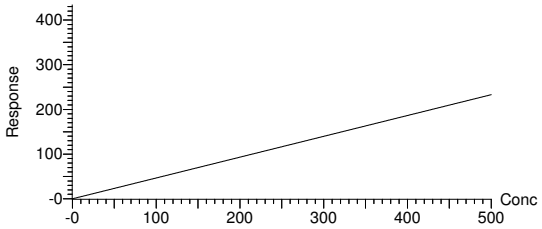


Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
Printed: Monday, November 18, 2019 13:47:36 Eastern Standard Time

**Compound name: NMeFOSAA**

| | Name | ID | Acq.Date | Acq.Time | RT | IS Area | Area | Conc (ng... | %Rec | RRF | 1º S/N | 2º S/N | (b/a) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | I13434 | IA2-537STD0.5 | 18-Nov-19 | 10:24:43 | | 9575.763 | 324.541 | 0.364 | | | | | |
| 2 | I13435 | IA2-537STD1.0 | 18-Nov-19 | 10:53:49 | | 11161.044 | 1166.739 | 1.122 | | | | | |
| 3 | I13436 | IA2-537STD5.0 | 18-Nov-19 | 11:10:20 | | 10155.847 | 5530.176 | 5.843 | | | | | |
| 4 | I13437 | IA2-537STD10.0 | 18-Nov-19 | 11:26:51 | | 10699.074 | 9818.126 | 9.846 | | | | | |
| 5 | I13438 | IA2-537STD50.0 | 18-Nov-19 | 11:43:24 | | 10035.015 | 51048.320 | 54.582 | | | | | |
| 6 | I13439 | IA2-537STD125 | 18-Nov-19 | 12:00:10 | | 9496.166 | 118338.813 | 133.711 | | | | | |
| 7 | I13440 | IA2-537STD150 | 18-Nov-19 | 12:16:43 | | 9724.458 | 146964.844 | 162.157 | | | | | |
| 8 | I13441 | IA2-537STD250 | 18-Nov-19 | 12:33:16 | | 9845.680 | 236955.250 | 258.231 | | | | | |
| 9 | I13442 | IA2-537STD500 | 18-Nov-19 | 12:49:53 | | 10688.211 | 463842.188 | 465.644 | | | | | |

Compound name: NMeFOSAA
Coefficient of Determination: 0.000000
Calibration curve: 0.465995 * x
Response type: Internal Std ( Ref 40 ), Area * ( IS Conc. / IS Area )
Curve type: Linear, Origin: Force, Weighting: 1/x, Axis trans: None



# Initial Calibration Summary
# Form 6
# Semivolatiles

| | | | |
|---|---|---|---|
| Client | : Soils Engineering Services, Inc. | Lab Number | : L2009793 |
| Project Name | : GROSSINGERS | Project Number | : 9313 |
| Instrument ID | : LCMS02 | Ical Ref | : ICAL16305 |
| Calibration dates | : 11/18/19 10:24 11/18/19 12:49 | | |

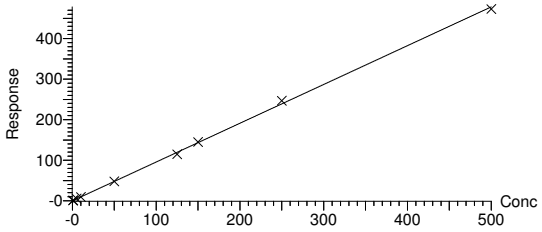


Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
Printed: Monday, November 18, 2019 13:47:36 Eastern Standard Time

**Compound name: PFUnA**

| | Name | ID | Acq.Date | Acq.Time | RT | IS Area | Area | Conc (ng... | %Rec | RRF | 1º S/N | 2º S/N | (b/a) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | I13434 | IA2-537STD0.5 | 18-Nov-19 | 10:24:43 | 11.117 | 101992.055 | 4611.769 | 0.473 | 94.6 | 0.904 | 115 | 10041 | 1.03 |
| 2 | I13435 | IA2-537STD1.0 | 18-Nov-19 | 10:53:49 | 11.122 | 101388.047 | 10026.410 | 1.034 | 103.4 | 0.989 | 330 | 35178 | 1.07 |
| 3 | I13436 | IA2-537STD5.0 | 18-Nov-19 | 11:10:20 | 11.117 | 97997.672 | 51117.012 | 5.455 | 109.1 | 1.043 | 1178 | 398 | 0.98 |
| 4 | I13437 | IA2-537STD10.0 | 18-Nov-19 | 11:26:51 | 11.112 | 93371.281 | 88904.188 | 9.957 | 99.6 | 0.952 | 2037 | 251288 | 1.07 |
| 5 | I13438 | IA2-537STD50.0 | 18-Nov-19 | 11:43:24 | 11.117 | 82849.375 | 396062.781 | 49.990 | 100.0 | 0.956 | 10506 | 24547 | 1.05 |
| 6 | I13439 | IA2-537STD125 | 18-Nov-19 | 12:00:10 | 11.112 | 71788.461 | 824707.938 | 120.130 | 96.1 | 0.919 | 19883 | 2311444 | 1.09 |
| 7 | I13440 | IA2-537STD150 | 18-Nov-19 | 12:16:43 | 11.112 | 69882.930 | 1013266.063 | 151.620 | 101.1 | 0.967 | 26453 | 21061 | 1.06 |
| 8 | I13441 | IA2-537STD250 | 18-Nov-19 | 12:33:16 | 11.112 | 61087.184 | 1508727.250 | 258.265 | 103.3 | 0.988 | 32170 | 8460 | 1.09 |
| 9 | I13442 | IA2-537STD500 | 18-Nov-19 | 12:49:53 | 11.112 | 54794.387 | 2591577.000 | 494.577 | 98.9 | 0.946 | 37276 | 9772 | 1.14 |

Compound name: PFUnA
Coefficient of Determination: R^2 = 0.999453
Calibration curve: 0.956301 * x
Response type: Internal Std ( Ref 45 ), Area * ( IS Conc. / IS Area )
Curve type: Linear, Origin: Force, Weighting: 1/x, Axis trans: None



# Initial Calibration Summary
# Form 6
# Semivolatiles

| | | | |
|---|---|---|---|
| Client | : Soils Engineering Services, Inc. | Lab Number | : L2009793 |
| Project Name | : GROSSINGERS | Project Number | : 9313 |
| Instrument ID | : LCMS02 | Ical Ref | : ICAL16305 |
| Calibration dates | : 11/18/19 10:24 11/18/19 12:49 | | |

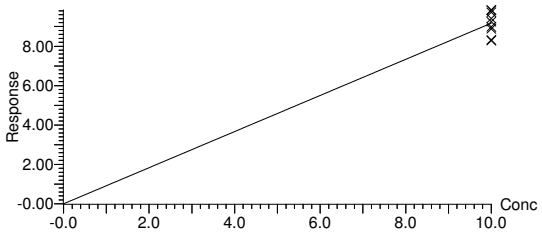


Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
Printed: Monday, November 18, 2019 13:47:36 Eastern Standard Time

**Compound name: M7-PFUDA**

| | Name | ID | Acq.Date | Acq.Time | RT | IS Area | Area | Conc (ng... | %Rec | RRF | 1º S/N | 2º S/N | (b/a) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | I13434 | IA2-537STD0.5 | 18-Nov-19 | 10:24:43 | 11.118 | 103829.906 | 101992.055 | 10.713 | 107.1 | 0.982 | 3734 | | 0.99 |
| 2 | I13435 | IA2-537STD1.0 | 18-Nov-19 | 10:53:49 | 11.123 | 104230.492 | 101388.047 | 10.609 | 106.1 | 0.973 | 6468 | | 1.03 |
| 3 | I13436 | IA2-537STD5.0 | 18-Nov-19 | 11:10:20 | 11.113 | 99527.453 | 97997.672 | 10.739 | 107.4 | 0.985 | 3765 | | 1.07 |
| 4 | I13437 | IA2-537STD10.0 | 18-Nov-19 | 11:26:51 | 11.113 | 99233.398 | 93371.281 | 10.262 | 102.6 | 0.941 | 16231 | | 1.03 |
| 5 | I13438 | IA2-537STD50.0 | 18-Nov-19 | 11:43:24 | 11.118 | 89579.898 | 82849.375 | 10.087 | 100.9 | 0.925 | 5955 | | 1.02 |
| 6 | I13439 | IA2-537STD125 | 18-Nov-19 | 12:00:10 | 11.113 | 80832.117 | 71788.461 | 9.686 | 96.9 | 0.888 | 1384858 | | 1.05 |
| 7 | I13440 | IA2-537STD150 | 18-Nov-19 | 12:16:43 | 11.113 | 77816.188 | 69882.930 | 9.795 | 97.9 | 0.898 | 2851 | | 1.04 |
| 8 | I13441 | IA2-537STD250 | 18-Nov-19 | 12:33:16 | 11.113 | 73446.680 | 61087.184 | 9.071 | 90.7 | 0.832 | 2216 | | 1.03 |
| 9 | I13442 | IA2-537STD500 | 18-Nov-19 | 12:49:53 | 11.113 | 66126.813 | 54794.387 | 9.037 | 90.4 | 0.829 | 2563 | | 1.08 |

Compound name: M7-PFUDA
Response Factor: 0.916885
RRF SD: 0.0600555, % Relative SD: 6.54995
Response type: Internal Std ( Ref 35 ), Area * ( IS Conc. / IS Area )
Curve type: RF



# Initial Calibration Summary
# Form 6
# Semivolatiles

| | | | | | |
|---|---|---|---|---|---|
| Client | : | Soils Engineering Services, Inc. | Lab Number | : | L2009793 |
| Project Name | : | GROSSINGERS | Project Number | : | 9313 |
| Instrument ID | : | LCMS02 | Ical Ref | : | ICAL16305 |
| Calibration dates | : | 11/18/19 10:24 11/18/19 12:49 | | | |

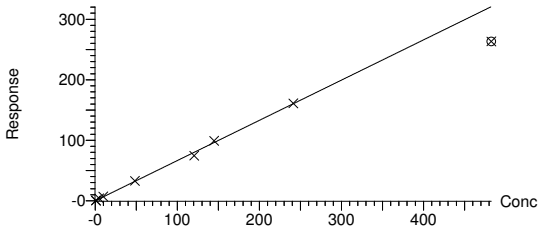


Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
Printed: Monday, November 18, 2019 13:47:36 Eastern Standard Time

**Compound name: PFDS**

| | Name | ID | Acq.Date | Acq.Time | RT | IS Area | Area | Conc (ng... | %Rec | RRF | 1º S/N | 2º S/N | (b/a) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | I13434 | IA2-537STD0.5 | 18-Nov-19 | 10:24:43 | 11.123 | 7863.209 | 242.685 | 0.464 | 96.2 | 0.640 | 5894 | 6 | 1.58 |
| 2 | I13435 | IA2-537STD1.0 | 18-Nov-19 | 10:53:49 | 11.133 | 8337.590 | 482.343 | 0.870 | 90.2 | 0.599 | 35 | 132 | 1.25 |
| 3 | I13436 | IA2-537STD5.0 | 18-Nov-19 | 11:10:20 | 11.128 | 7856.718 | 3124.329 | 5.981 | 124.0 | 0.824 | 73500 | 81546 | 0.97 |
| 4 | I13437 | IA2-537STD10.0 | 18-Nov-19 | 11:26:51 | 11.123 | 7611.157 | 5332.887 | 10.538 | 109.2 | 0.726 | 124985 | 1343 | 1.08 |
| 5 | I13438 | IA2-537STD50.0 | 18-Nov-19 | 11:43:24 | 11.128 | 7647.324 | 25123.271 | 49.411 | 102.4 | 0.681 | 1473 | 1913 | 1.05 |
| 6 | I13439 | IA2-537STD125 | 18-Nov-19 | 12:00:10 | 11.123 | 6866.474 | 51137.266 | 112.012 | 92.9 | 0.617 | 44971 | 2446 | 1.10 |
| 7 | I13440 | IA2-537STD150 | 18-Nov-19 | 12:16:43 | 11.123 | 6560.688 | 65178.430 | 149.422 | 103.2 | 0.686 | 3491 | 1062 | 1.06 |
| 8 | I13441 | IA2-537STD250 | 18-Nov-19 | 12:33:16 | 11.123 | 5910.273 | 95134.438 | 242.098 | 100.4 | 0.667 | 7675 | 3091 | 1.08 |
| 9 | I13442 | IA2-537STD500 | 18-Nov-19 | 12:49:53 | 11.128 | 5658.023 | 148916.188 | 395.857 | 82.0 | 0.545 | 9282 | 21096 | 1.02 |

Compound name: PFDS
Coefficient of Determination: R^2 = 0.997891
Calibration curve: 0.664874 * x
Response type: Internal Std ( Ref 33 ), Area * ( IS Conc. / IS Area )
Curve type: Linear, Origin: Force, Weighting: 1/x, Axis trans: None



# Initial Calibration Summary
# Form 6
# Semivolatiles

| | | | |
|---|---|---|---|
| Client | : Soils Engineering Services, Inc. | Lab Number | : L2009793 |
| Project Name | : GROSSINGERS | Project Number | : 9313 |
| Instrument ID | : LCMS02 | Ical Ref | : ICAL16305 |
| Calibration dates | : 11/18/19 10:24 11/18/19 12:49 | | |

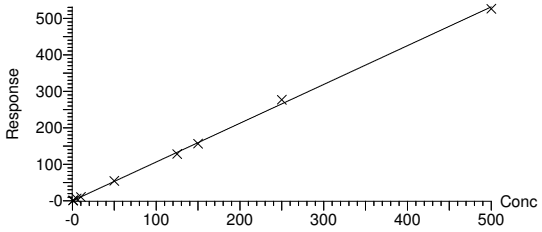


Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
Printed: Monday, November 18, 2019 13:47:36 Eastern Standard Time

**Compound name: FOSA**

| | Name | ID | Acq.Date | Acq.Time | RT | IS Area | Area | Conc (ng... | %Rec | RRF | 1º S/N | 2º S/N | (b/a) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | I13434 | IA2-537STD0.5 | 18-Nov-19 | 10:24:43 | 11.011 | 22949.115 | 942.301 | 0.386 | 77.3 | 0.821 | 22594 | | 0.94 |
| 2 | I13435 | IA2-537STD1.0 | 18-Nov-19 | 10:53:49 | 11.011 | 22475.113 | 2798.189 | 1.172 | 117.2 | 1.245 | 908 | | 1.21 |
| 3 | I13436 | IA2-537STD5.0 | 18-Nov-19 | 11:10:20 | 11.006 | 22388.170 | 12992.135 | 5.461 | 109.2 | 1.161 | 2604 | 22 | 1.02 |
| 4 | I13437 | IA2-537STD10.0 | 18-Nov-19 | 11:26:51 | 11.006 | 23068.303 | 23946.777 | 9.769 | 97.7 | 1.038 | 7062 | 25 | 1.02 |
| 5 | I13438 | IA2-537STD50.0 | 18-Nov-19 | 11:43:24 | 11.011 | 21401.279 | 116432.289 | 51.200 | 102.4 | 1.088 | 4222 | 115 | 1.06 |
| 6 | I13439 | IA2-537STD125 | 18-Nov-19 | 12:00:10 | 11.005 | 20660.598 | 264460.531 | 120.464 | 96.4 | 1.024 | 8490 | 57 | 1.08 |
| 7 | I13440 | IA2-537STD150 | 18-Nov-19 | 12:16:43 | 11.006 | 21330.230 | 333811.938 | 147.280 | 98.2 | 1.043 | 9509 | 58640 | 1.08 |
| 8 | I13441 | IA2-537STD250 | 18-Nov-19 | 12:33:16 | 11.010 | 19354.936 | 535815.375 | 260.532 | 104.2 | 1.107 | 9601 | 143 | 1.01 |
| 9 | I13442 | IA2-537STD500 | 18-Nov-19 | 12:49:53 | 11.010 | 18051.570 | 949921.375 | 495.235 | 99.0 | 1.052 | 9851 | 157929 | 1.11 |

Compound name: FOSA
Coefficient of Determination: R^2 = 0.999218
Calibration curve: 1.06258 * x
Response type: Internal Std ( Ref 48 ), Area * ( IS Conc. / IS Area )
Curve type: Linear, Origin: Force, Weighting: 1/x, Axis trans: None



# Initial Calibration Summary
# Form 6
# Semivolatiles

| | | | | | |
|---|---|---|---|---|---|
| Client | : | Soils Engineering Services, Inc. | Lab Number | : | L2009793 |
| Project Name | : | GROSSINGERS | Project Number | : | 9313 |
| Instrument ID | : | LCMS02 | Ical Ref | : | ICAL16305 |
| Calibration dates | : | 11/18/19 10:24 11/18/19 12:49 | | | |

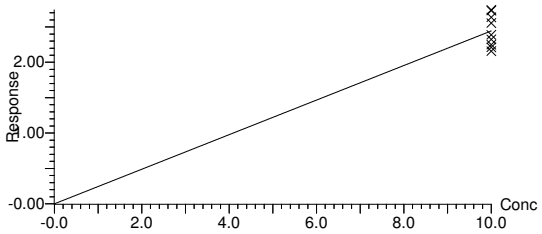


Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
Printed: Monday, November 18, 2019 13:47:36 Eastern Standard Time

**Compound name: M8FOSA**

| | Name | ID | Acq.Date | Acq.Time | RT | IS Area | Area | Conc (ng... | %Rec | RRF | 1º S/N | 2º S/N | (b/a) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | I13434 | IA2-537STD0.5 | 18-Nov-19 | 10:24:43 | 11.006 | 103829.906 | 22949.115 | 9.045 | 90.5 | 0.221 | 1034 | | 1.07 |
| 2 | I13435 | IA2-537STD1.0 | 18-Nov-19 | 10:53:49 | 11.011 | 104230.492 | 22475.113 | 8.824 | 88.2 | 0.216 | 3033 | | 1.03 |
| 3 | I13436 | IA2-537STD5.0 | 18-Nov-19 | 11:10:20 | 11.006 | 99527.453 | 22388.170 | 9.206 | 92.1 | 0.225 | 1670 | | 0.98 |
| 4 | I13437 | IA2-537STD10.0 | 18-Nov-19 | 11:26:51 | 11.006 | 99233.398 | 23068.303 | 9.513 | 95.1 | 0.232 | 946 | | 1.00 |
| 5 | I13438 | IA2-537STD50.0 | 18-Nov-19 | 11:43:24 | 11.011 | 89579.898 | 21401.279 | 9.777 | 97.8 | 0.239 | 1986 | | 1.03 |
| 6 | I13439 | IA2-537STD125 | 18-Nov-19 | 12:00:10 | 11.006 | 80832.117 | 20660.598 | 10.460 | 104.6 | 0.256 | 872 | | 1.03 |
| 7 | I13440 | IA2-537STD150 | 18-Nov-19 | 12:16:43 | 11.006 | 77816.188 | 21330.230 | 11.218 | 112.2 | 0.274 | 4434 | | 1.05 |
| 8 | I13441 | IA2-537STD250 | 18-Nov-19 | 12:33:16 | 11.006 | 73446.680 | 19354.936 | 10.784 | 107.8 | 0.264 | 361072 | | 1.08 |
| 9 | I13442 | IA2-537STD500 | 18-Nov-19 | 12:49:53 | 11.011 | 66126.813 | 18051.570 | 11.172 | 111.7 | 0.273 | 4636 | | 1.06 |

Compound name: M8FOSA
Response Factor: 0.244354
RRF SD: 0.0226829, % Relative SD: 9.28279
Response type: Internal Std ( Ref 35 ), Area * ( IS Conc. / IS Area )
Curve type: RF



# Initial Calibration Summary
# Form 6
# Semivolatiles

| | | | |
|---|---|---|---|
| Client | : Soils Engineering Services, Inc. | Lab Number | : L2009793 |
| Project Name | : GROSSINGERS | Project Number | : 9313 |
| Instrument ID | : LCMS02 | Ical Ref | : ICAL16305 |
| Calibration dates | : 11/18/19 10:24 11/18/19 12:49 | | |

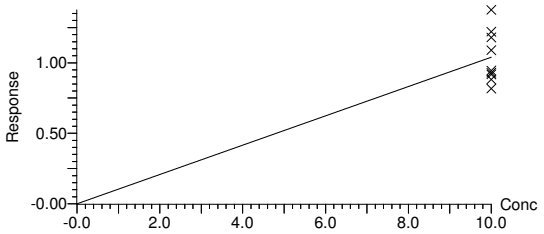


Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
Printed: Monday, November 18, 2019 13:47:36 Eastern Standard Time

**Compound name: d5-NEtFOSAA**

| | Name | ID | Acq.Date | Acq.Time | RT | IS Area | Area | Conc (ng... | %Rec | RRF | 1º S/N | 2º S/N | (b/a) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | I13434 | IA2-537STD0.5 | 18-Nov-19 | 10:24:43 | 11.248 | 103829.906 | 8483.435 | 7.858 | 78.6 | 0.082 | 1030 | | 1.03 |
| 2 | I13435 | IA2-537STD1.0 | 18-Nov-19 | 10:53:49 | 11.252 | 104230.492 | 9857.291 | 9.096 | 91.0 | 0.095 | 3828 | | 1.05 |
| 3 | I13436 | IA2-537STD5.0 | 18-Nov-19 | 11:10:20 | 11.243 | 99527.453 | 9136.918 | 8.829 | 88.3 | 0.092 | 1068 | | 1.15 |
| 4 | I13437 | IA2-537STD10.0 | 18-Nov-19 | 11:26:51 | 11.243 | 99233.398 | 9223.351 | 8.939 | 89.4 | 0.093 | 1583 | | 1.06 |
| 5 | I13438 | IA2-537STD50.0 | 18-Nov-19 | 11:43:24 | 11.248 | 89579.898 | 7892.435 | 8.474 | 84.7 | 0.088 | 178651 | | 1.04 |
| 6 | I13439 | IA2-537STD125 | 18-Nov-19 | 12:00:10 | 11.243 | 80832.117 | 8802.899 | 10.474 | 104.7 | 0.109 | 1769 | | 1.10 |
| 7 | I13440 | IA2-537STD150 | 18-Nov-19 | 12:16:43 | 11.243 | 77816.188 | 9185.745 | 11.353 | 113.5 | 0.118 | 1731 | | 1.10 |
| 8 | I13441 | IA2-537STD250 | 18-Nov-19 | 12:33:16 | 11.243 | 73446.680 | 8969.788 | 11.746 | 117.5 | 0.122 | 710 | | 1.10 |
| 9 | I13442 | IA2-537STD500 | 18-Nov-19 | 12:49:53 | 11.248 | 66126.813 | 9096.541 | 13.230 | 132.3 | 0.138 | 693 | | 1.08 |

Compound name: d5-NEtFOSAA
Response Factor: 0.103974
RRF SD: 0.0186608, % Relative SD: 17.9476
Response type: Internal Std ( Ref 35 ), Area * ( IS Conc. / IS Area )
Curve type: RF



# Initial Calibration Summary
# Form 6
# Semivolatiles

| | | | |
|---|---|---|---|
| Client | : Soils Engineering Services, Inc. | Lab Number | : L2009793 |
| Project Name | : GROSSINGERS | Project Number | : 9313 |
| Instrument ID | : LCMS02 | Ical Ref | : ICAL16305 |
| Calibration dates | : 11/18/19 10:24 11/18/19 12:49 | | |

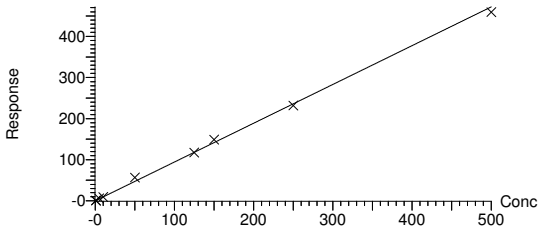


Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
Printed: Monday, November 18, 2019 13:47:36 Eastern Standard Time

**Compound name: br-NEtFOSAA**

| | Name | ID | Acq.Date | Acq.Time | RT | IS Area | Area | Conc (ng... | %Rec | RRF | 1º S/N | 2º S/N | (b/a) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | I13434 | IA2-537STD0.5 | 18-Nov-19 | 10:24:43 | | 8483.435 | | | | | | | |
| 2 | I13435 | IA2-537STD1.0 | 18-Nov-19 | 10:53:49 | | 9857.291 | | | | | | | |
| 3 | I13436 | IA2-537STD5.0 | 18-Nov-19 | 11:10:20 | | 9136.918 | | | | | | | |
| 4 | I13437 | IA2-537STD10.0 | 18-Nov-19 | 11:26:51 | | 9223.351 | | | | | | | |
| 5 | I13438 | IA2-537STD50.0 | 18-Nov-19 | 11:43:24 | | 7892.435 | | | | | | | |
| 6 | I13439 | IA2-537STD125 | 18-Nov-19 | 12:00:10 | | 8802.899 | | | | | | | |
| 7 | I13440 | IA2-537STD150 | 18-Nov-19 | 12:16:43 | | 9185.745 | | | | | | 3 | |
| 8 | I13441 | IA2-537STD250 | 18-Nov-19 | 12:33:16 | | 8969.788 | | | | | | 2 | |
| 9 | I13442 | IA2-537STD500 | 18-Nov-19 | 12:49:53 | | 9096.541 | | | | | | | |

Compound name: L-NEtFOSAA
Coefficient of Determination: R^2 = 0.997234
Calibration curve: 0.944028 * x
Response type: Internal Std ( Ref 49 ), Area * ( IS Conc. / IS Area )
Curve type: Linear, Origin: Force, Weighting: 1/x, Axis trans: None



# Initial Calibration Summary
# Form 6
# Semivolatiles

| | | | |
|---|---|---|---|
| Client | : Soils Engineering Services, Inc. | Lab Number | : L2009793 |
| Project Name | : GROSSINGERS | Project Number | : 9313 |
| Instrument ID | : LCMS02 | Ical Ref | : ICAL16305 |
| Calibration dates | : 11/18/19 10:24 11/18/19 12:49 | | |

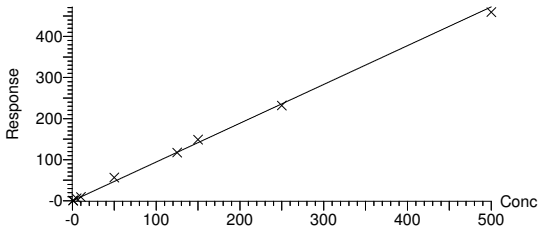


Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
Printed: Monday, November 18, 2019 13:47:36 Eastern Standard Time

**Compound name: L-NEtFOSAA**

| | Name | ID | Acq.Date | Acq.Time | RT | IS Area | Area | Conc (ng... | %Rec | RRF | 1º S/N | 2º S/N | (b/a) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | I13434 | IA2-537STD0.5 | 18-Nov-19 | 10:24:43 | 11.257 | 8483.435 | 426.209 | 0.532 | 106.4 | 1.005 | 62 | 2747 | 0.87 |
| 2 | I13435 | IA2-537STD1.0 | 18-Nov-19 | 10:53:49 | 11.262 | 9857.291 | 836.497 | 0.899 | 89.9 | 0.849 | 34 | 8746 | 1.04 |
| 3 | I13436 | IA2-537STD5.0 | 18-Nov-19 | 11:10:20 | 11.252 | 9136.918 | 5153.751 | 5.975 | 119.5 | 1.128 | 1752 | 345 | 1.16 |
| 4 | I13437 | IA2-537STD10.0 | 18-Nov-19 | 11:26:51 | 11.252 | 9223.351 | 8885.692 | 10.205 | 102.1 | 0.963 | 687 | 385 | 0.95 |
| 5 | I13438 | IA2-537STD50.0 | 18-Nov-19 | 11:43:24 | 11.257 | 7892.435 | 44566.316 | 59.815 | 119.6 | 1.129 | 1964 | 400594 | 1.00 |
| 6 | I13439 | IA2-537STD125 | 18-Nov-19 | 12:00:10 | 11.252 | 8802.899 | 103539.305 | 124.593 | 99.7 | 0.941 | 4441 | 1784 | 1.00 |
| 7 | I13440 | IA2-537STD150 | 18-Nov-19 | 12:16:43 | 11.252 | 9185.745 | 136568.641 | 157.490 | 105.0 | 0.991 | 5806 | 2187 | 1.02 |
| 8 | I13441 | IA2-537STD250 | 18-Nov-19 | 12:33:16 | 11.252 | 8969.788 | 207895.938 | 245.516 | 98.2 | 0.927 | 6928 | 3432 | 1.05 |
| 9 | I13442 | IA2-537STD500 | 18-Nov-19 | 12:49:53 | 11.252 | 9096.541 | 417755.188 | 486.475 | 97.3 | 0.918 | 10854 | 4433 | 1.14 |

Compound name: L-NEtFOSAA
Coefficient of Determination: R^2 = 0.997234
Calibration curve: 0.944028 * x
Response type: Internal Std ( Ref 49 ), Area * ( IS Conc. / IS Area )
Curve type: Linear, Origin: Force, Weighting: 1/x, Axis trans: None



# Initial Calibration Summary
# Form 6
# Semivolatiles

| | | | | | |
|---|---|---|---|---|---|
| Client | : | Soils Engineering Services, Inc. | Lab Number | : | L2009793 |
| Project Name | : | GROSSINGERS | Project Number | : | 9313 |
| Instrument ID | : | LCMS02 | Ical Ref | : | ICAL16305 |
| Calibration dates | : | 11/18/19 10:24 11/18/19 12:49 | | | |

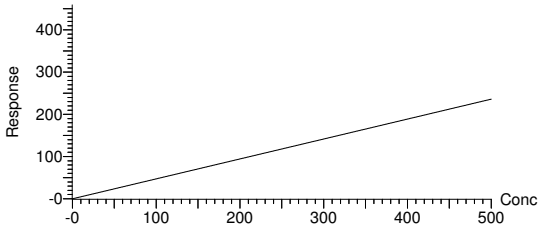


Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
Printed: Monday, November 18, 2019 13:47:36 Eastern Standard Time

**Compound name: NEtFOSAA**

| | Name | ID | Acq.Date | Acq.Time | RT | IS Area | Area | Conc (ng... | %Rec | RRF | 1º S/N | 2º S/N | (b/a) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | I13434 | IA2-537STD0.5 | 18-Nov-19 | 10:24:43 | | 8483.435 | 426.209 | 0.532 | | | | | |
| 2 | I13435 | IA2-537STD1.0 | 18-Nov-19 | 10:53:49 | | 9857.291 | 836.497 | 0.899 | | | | | |
| 3 | I13436 | IA2-537STD5.0 | 18-Nov-19 | 11:10:20 | | 9136.918 | 5153.751 | 5.975 | | | | | |
| 4 | I13437 | IA2-537STD10.0 | 18-Nov-19 | 11:26:51 | | 9223.351 | 8885.692 | 10.205 | | | | | |
| 5 | I13438 | IA2-537STD50.0 | 18-Nov-19 | 11:43:24 | | 7892.435 | 44566.316 | 59.815 | | | | | |
| 6 | I13439 | IA2-537STD125 | 18-Nov-19 | 12:00:10 | | 8802.899 | 103539.305 | 124.593 | | | | | |
| 7 | I13440 | IA2-537STD150 | 18-Nov-19 | 12:16:43 | | 9185.745 | 136568.641 | 157.490 | | | | | |
| 8 | I13441 | IA2-537STD250 | 18-Nov-19 | 12:33:16 | | 8969.788 | 207895.938 | 245.516 | | | | | |
| 9 | I13442 | IA2-537STD500 | 18-Nov-19 | 12:49:53 | | 9096.541 | 417755.188 | 486.475 | | | | | |

Compound name: NEtFOSAA
Coefficient of Determination: 0.000000
Calibration curve: 0.472014 * x
Response type: Internal Std ( Ref 49 ), Area * ( IS Conc. / IS Area )
Curve type: Linear, Origin: Force, Weighting: 1/x, Axis trans: None



# Initial Calibration Summary
# Form 6
# Semivolatiles

| | | | |
|---|---|---|---|
| Client | : Soils Engineering Services, Inc. | Lab Number | : L2009793 |
| Project Name | : GROSSINGERS | Project Number | : 9313 |
| Instrument ID | : LCMS02 | Ical Ref | : ICAL16305 |
| Calibration dates | : 11/18/19 10:24 11/18/19 12:49 | | |

**Quantify Compound Summary Report** **MassLynx V4.2 SCN977**

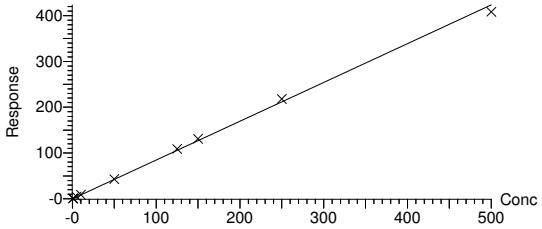


Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
Printed: Monday, November 18, 2019 13:47:36 Eastern Standard Time

**Compound name: PFDoA**

| | Name | ID | Acq.Date | Acq.Time | RT | IS Area | Area | Conc (ng... | %Rec | RRF | 1º S/N | 2º S/N | (b/a) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | I13434 | IA2-537STD0.5 | 18-Nov-19 | 10:24:43 | 11.593 | 103376.742 | 4841.695 | 0.553 | 110.6 | 0.937 | 139 | 7515 | 1.07 |
| 2 | I13435 | IA2-537STD1.0 | 18-Nov-19 | 10:53:49 | 11.598 | 103352.375 | 9531.423 | 1.089 | 108.9 | 0.922 | 278 | 18864 | 0.95 |
| 3 | I13436 | IA2-537STD5.0 | 18-Nov-19 | 11:10:20 | 11.589 | 103349.367 | 48924.336 | 5.589 | 111.8 | 0.947 | 1385 | 869 | 1.07 |
| 4 | I13437 | IA2-537STD10.0 | 18-Nov-19 | 11:26:51 | 11.589 | 96274.898 | 85750.094 | 10.516 | 105.2 | 0.891 | 2452 | 3838 | 0.97 |
| 5 | I13438 | IA2-537STD50.0 | 18-Nov-19 | 11:43:24 | 11.589 | 95651.234 | 409028.406 | 50.488 | 101.0 | 0.855 | 11691 | 724138 | 1.11 |
| 6 | I13439 | IA2-537STD125 | 18-Nov-19 | 12:00:10 | 11.585 | 81334.875 | 888518.938 | 128.977 | 103.2 | 0.874 | 14901 | 1941 | 1.06 |
| 7 | I13440 | IA2-537STD150 | 18-Nov-19 | 12:16:43 | 11.585 | 83380.609 | 1093507.375 | 154.839 | 103.2 | 0.874 | 23865 | 8361 | 1.09 |
| 8 | I13441 | IA2-537STD250 | 18-Nov-19 | 12:33:16 | 11.585 | 76995.367 | 1677289.500 | 257.198 | 102.9 | 0.871 | 31976 | 13513 | 1.09 |
| 9 | I13442 | IA2-537STD500 | 18-Nov-19 | 12:49:53 | 11.585 | 70623.688 | 2884692.250 | 482.251 | 96.5 | 0.817 | 56108 | 4560 | 1.12 |

Compound name: PFDoA
Coefficient of Determination: R^2 = 0.998842
Calibration curve: 0.846986 * x
Response type: Internal Std ( Ref 54 ), Area * ( IS Conc. / IS Area )
Curve type: Linear, Origin: Force, Weighting: 1/x, Axis trans: None



# Initial Calibration Summary
# Form 6
# Semivolatiles

| | | | | | |
|---|---|---|---|---|---|
| Client | : | Soils Engineering Services, Inc. | Lab Number | : | L2009793 |
| Project Name | : | GROSSINGERS | Project Number | : | 9313 |
| Instrument ID | : | LCMS02 | Ical Ref | : | ICAL16305 |
| Calibration dates | : | 11/18/19 10:24 11/18/19 12:49 | | | |

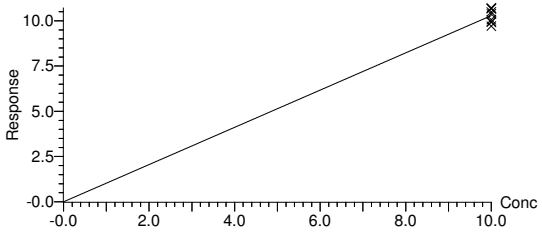


Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
Printed: Monday, November 18, 2019 13:47:36 Eastern Standard Time

**Compound name: MPFDOA**

| | Name | ID | Acq.Date | Acq.Time | RT | IS Area | Area | Conc (ng... | %Rec | RRF | 1º S/N | 2º S/N | (b/a) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | I13434 | IA2-537STD0.5 | 18-Nov-19 | 10:24:43 | 11.594 | 103829.906 | 103376.742 | 9.679 | 96.8 | 0.996 | 4969 | | 1.00 |
| 2 | I13435 | IA2-537STD1.0 | 18-Nov-19 | 10:53:49 | 11.598 | 104230.492 | 103352.375 | 9.640 | 96.4 | 0.992 | 8544 | | 0.98 |
| 3 | I13436 | IA2-537STD5.0 | 18-Nov-19 | 11:10:20 | 11.589 | 99527.453 | 103349.367 | 10.095 | 101.0 | 1.038 | 5335 | | 1.00 |
| 4 | I13437 | IA2-537STD10.0 | 18-Nov-19 | 11:26:51 | 11.589 | 99233.398 | 96274.898 | 9.432 | 94.3 | 0.970 | 5623 | | 0.96 |
| 5 | I13438 | IA2-537STD50.0 | 18-Nov-19 | 11:43:24 | 11.589 | 89579.898 | 95651.234 | 10.381 | 103.8 | 1.068 | 6934 | | 1.08 |
| 6 | I13439 | IA2-537STD125 | 18-Nov-19 | 12:00:10 | 11.585 | 80832.117 | 81334.875 | 9.782 | 97.8 | 1.006 | 4941 | | 1.02 |
| 7 | I13440 | IA2-537STD150 | 18-Nov-19 | 12:16:43 | 11.585 | 77816.188 | 83380.609 | 10.417 | 104.2 | 1.072 | 6682 | | 1.04 |
| 8 | I13441 | IA2-537STD250 | 18-Nov-19 | 12:33:16 | 11.585 | 73446.680 | 76995.367 | 10.191 | 101.9 | 1.048 | 1088 | | 1.05 |
| 9 | I13442 | IA2-537STD500 | 18-Nov-19 | 12:49:53 | 11.585 | 66126.813 | 70623.688 | 10.383 | 103.8 | 1.068 | 5402 | | 1.08 |

Compound name: MPFDOA
Response Factor: 1.02862
RRF SD: 0.0383792, % Relative SD: 3.73112
Response type: Internal Std ( Ref 35 ), Area * ( IS Conc. / IS Area )
Curve type: RF



# Initial Calibration Summary
# Form 6
# Semivolatiles

| | | | | | |
|---|---|---|---|---|---|
| Client | : | Soils Engineering Services, Inc. | Lab Number | : | L2009793 |
| Project Name | : | GROSSINGERS | Project Number | : | 9313 |
| Instrument ID | : | LCMS02 | Ical Ref | : | ICAL16305 |
| Calibration dates | : | 11/18/19 10:24 11/18/19 12:49 | | | |

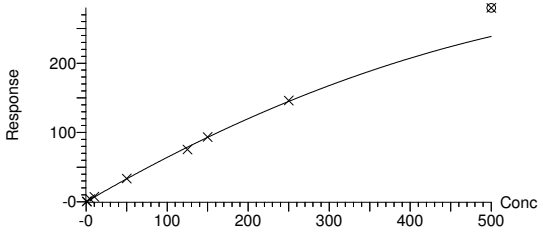


Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
Printed: Monday, November 18, 2019 13:47:36 Eastern Standard Time

**Compound name: PFTrDA**

| | Name | ID | Acq.Date | Acq.Time | RT | IS Area | Area | Conc (ng... | %Rec | RRF | 1º S/N | 2º S/N | (b/a) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | I13434 | IA2-537STD0.5 | 18-Nov-19 | 10:24:43 | 12.0... | 103376.742 | 3858.038 | 0.548 | 109.5 | 0.746 | 123 | 39 | 1.09 |
| 2 | I13435 | IA2-537STD1.0 | 18-Nov-19 | 10:53:49 | 12.0... | 103352.375 | 8870.826 | 1.260 | 126.0 | 0.858 | 278 | 40 | 0.93 |
| 3 | I13436 | IA2-537STD5.0 | 18-Nov-19 | 11:10:20 | 12.0... | 103349.367 | 40715.777 | 5.800 | 116.0 | 0.788 | 999 | 458 | 0.90 |
| 4 | I13437 | IA2-537STD10.0 | 18-Nov-19 | 11:26:51 | 12.0... | 96274.898 | 69474.719 | 10.654 | 106.5 | 0.722 | 2464 | 783 | 0.90 |
| 5 | I13438 | IA2-537STD50.0 | 18-Nov-19 | 11:43:24 | 12.0... | 95651.234 | 320247.500 | 50.655 | 101.3 | 0.670 | 7284 | 2277 | 0.97 |
| 6 | I13439 | IA2-537STD125 | 18-Nov-19 | 12:00:10 | 12.0... | 81334.875 | 612946.750 | 119.054 | 95.2 | 0.603 | 13464 | 3496 | 0.91 |
| 7 | I13440 | IA2-537STD150 | 18-Nov-19 | 12:16:43 | 12.0... | 83380.609 | 780708.688 | 151.037 | 100.7 | 0.624 | 17843 | 4869 | 0.94 |
| 8 | I13441 | IA2-537STD250 | 18-Nov-19 | 12:33:16 | 12.0... | 76995.367 | 1125203.250 | 252.665 | 101.1 | 0.585 | 24166 | 5063 | 0.97 |
| 9 | I13442 | IA2-537STD500 | 18-Nov-19 | 12:49:53 | 12.0... | 70623.688 | 1976668.125 | 730.913 | 146.2 | 0.560 | 38522 | 10063 | 0.97 |

Compound name: PFTrDA
Coefficient of Determination: R^2 = 0.998963
Calibration curve: -0.000408704 * x^2 + 0.681656 * x
Response type: Internal Std ( Ref 54 ), Area * ( IS Conc. / IS Area )
Curve type: 2nd Order, Origin: Force, Weighting: 1/x, Axis trans: None



# Initial Calibration Summary
# Form 6
# Semivolatiles

| | | | | | |
|---|---|---|---|---|---|
| Client | : | Soils Engineering Services, Inc. | Lab Number | : | L2009793 |
| Project Name | : | GROSSINGERS | Project Number | : | 9313 |
| Instrument ID | : | LCMS02 | Ical Ref | : | ICAL16305 |
| Calibration dates | : | 11/18/19 10:24 11/18/19 12:49 | | | |

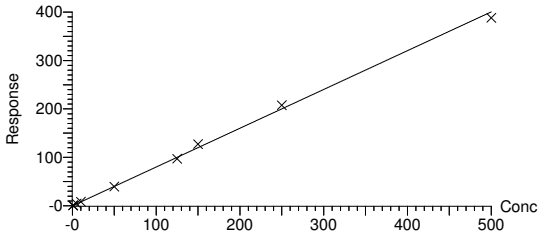


Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
Printed: Monday, November 18, 2019 13:47:36 Eastern Standard Time

**Compound name: PFTA**

| | Name | ID | Acq.Date | Acq.Time | RT | IS Area | Area | Conc (ng... | %Rec | RRF | 1º S/N | 2º S/N | (b/a) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | I13434 | IA2-537STD0.5 | 18-Nov-19 | 10:24:43 | 12.3... | 84304.094 | 3678.555 | 0.545 | 109.0 | 0.873 | 142 | 38 | 1.09 |
| 2 | I13435 | IA2-537STD1.0 | 18-Nov-19 | 10:53:49 | 12.3... | 83480.063 | 7615.251 | 1.139 | 113.9 | 0.912 | 284 | 23020 | 1.09 |
| 3 | I13436 | IA2-537STD5.0 | 18-Nov-19 | 11:10:20 | 12.3... | 79194.773 | 35875.270 | 5.657 | 113.1 | 0.906 | 1214 | 612 | 1.00 |
| 4 | I13437 | IA2-537STD10.0 | 18-Nov-19 | 11:26:51 | 12.3... | 75865.328 | 63347.266 | 10.427 | 104.3 | 0.835 | 2110 | 173581 | 1.08 |
| 5 | I13438 | IA2-537STD50.0 | 18-Nov-19 | 11:43:24 | 12.3... | 73974.609 | 294391.063 | 49.694 | 99.4 | 0.796 | 7502 | 4351 | 1.12 |
| 6 | I13439 | IA2-537STD125 | 18-Nov-19 | 12:00:10 | 12.3... | 66841.781 | 649347.938 | 121.308 | 97.0 | 0.777 | 20638 | 2554 | 1.04 |
| 7 | I13440 | IA2-537STD150 | 18-Nov-19 | 12:16:43 | 12.3... | 65493.922 | 832831.875 | 158.787 | 105.9 | 0.848 | 20542 | 10693 | 1.07 |
| 8 | I13441 | IA2-537STD250 | 18-Nov-19 | 12:33:16 | 12.3... | 60380.074 | 1254325.750 | 259.404 | 103.8 | 0.831 | 29832 | 9847 | 1.07 |
| 9 | I13442 | IA2-537STD500 | 18-Nov-19 | 12:49:53 | 12.3... | 57111.117 | 2216106.000 | 484.540 | 96.9 | 0.776 | 46140 | 13707 | 1.12 |

Compound name: PFTA
Coefficient of Determination: R^2 = 0.998513
Calibration curve: 0.80083 * x
Response type: Internal Std ( Ref 57 ), Area * ( IS Conc. / IS Area )
Curve type: Linear, Origin: Force, Weighting: 1/x, Axis trans: None



# Initial Calibration Summary
# Form 6
# Semivolatiles

| | | | |
|---|---|---|---|
| Client | : Soils Engineering Services, Inc. | Lab Number | : L2009793 |
| Project Name | : GROSSINGERS | Project Number | : 9313 |
| Instrument ID | : LCMS02 | Ical Ref | : ICAL16305 |
| Calibration dates | : 11/18/19 10:24 11/18/19 12:49 | | |

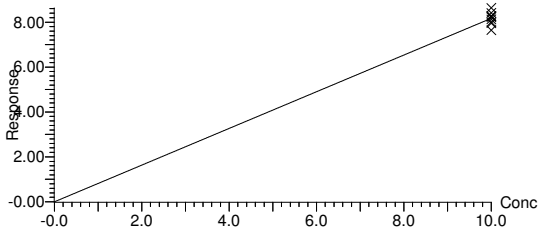


Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
Printed: Monday, November 18, 2019 13:47:36 Eastern Standard Time

**Compound name: M2PFTEDA**

| | Name | ID | Acq.Date | Acq.Time | RT | IS Area | Area | Conc (ng... | %Rec | RRF | 1º S/N | 2º S/N | (b/a) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | I13434 | IA2-537STD0.5 | 18-Nov-19 | 10:24:43 | 12.3... | 103829.906 | 84304.094 | 9.938 | 99.4 | 0.812 | 5616 | | 1.07 |
| 2 | I13435 | IA2-537STD1.0 | 18-Nov-19 | 10:53:49 | 12.3... | 104230.492 | 83480.063 | 9.803 | 98.0 | 0.801 | 11763 | | 1.11 |
| 3 | I13436 | IA2-537STD5.0 | 18-Nov-19 | 11:10:20 | 12.3... | 99527.453 | 79194.773 | 9.739 | 97.4 | 0.796 | 8009 | | 1.09 |
| 4 | I13437 | IA2-537STD10.0 | 18-Nov-19 | 11:26:51 | 12.3... | 99233.398 | 75865.328 | 9.357 | 93.6 | 0.765 | 3451 | | 1.10 |
| 5 | I13438 | IA2-537STD50.0 | 18-Nov-19 | 11:43:24 | 12.3... | 89579.898 | 73974.609 | 10.107 | 101.1 | 0.826 | 4377 | | 1.00 |
| 6 | I13439 | IA2-537STD125 | 18-Nov-19 | 12:00:10 | 12.3... | 80832.117 | 66841.781 | 10.121 | 101.2 | 0.827 | 1339 | | 1.04 |
| 7 | I13440 | IA2-537STD150 | 18-Nov-19 | 12:16:43 | 12.3... | 77816.188 | 65493.922 | 10.301 | 103.0 | 0.842 | 18247 | | 1.08 |
| 8 | I13441 | IA2-537STD250 | 18-Nov-19 | 12:33:16 | 12.3... | 73446.680 | 60380.074 | 10.062 | 100.6 | 0.822 | 11843 | | 1.06 |
| 9 | I13442 | IA2-537STD500 | 18-Nov-19 | 12:49:53 | 12.3... | 66126.813 | 57111.117 | 10.571 | 105.7 | 0.864 | 13106 | | 1.10 |

Compound name: M2PFTEDA
Response Factor: 0.817023
RRF SD: 0.0284579, % Relative SD: 3.48313
Response type: Internal Std ( Ref 35 ), Area * ( IS Conc. / IS Area )
Curve type: RF



# Initial Calibration Summary
# Form 6
# Semivolatiles

| | | | |
|---|---|---|---|
| Client | : Soils Engineering Services, Inc. | Lab Number | : L2009793 |
| Project Name | : GROSSINGERS | Project Number | : 9313 |
| Instrument ID | : LCMS02 | Ical Ref | : ICAL16305 |
| Calibration dates | : 11/18/19 10:24 11/18/19 12:49 | | |

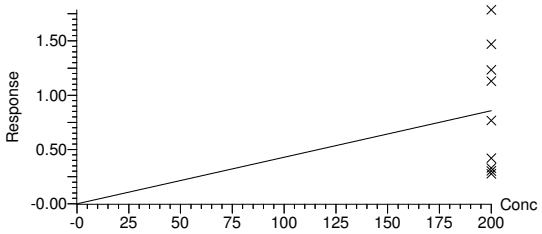


Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
Printed: Monday, November 18, 2019 13:47:36 Eastern Standard Time

**Compound name: M3HFPO-DA**

| | Name | ID | Acq.Date | Acq.Time | RT | IS Area | Area | Conc (ng... | %Rec | RRF | 1º S/N | 2º S/N | (b/a) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | I13434 | IA2-537STD0.5 | 18-Nov-19 | 10:24:43 | 7.426 | 117636.820 | 3251.888 | 64.481 | 32.2 | 0.001 | 973 | | 1.04 |
| 2 | I13435 | IA2-537STD1.0 | 18-Nov-19 | 10:53:49 | 7.436 | 114802.125 | 3469.083 | 70.486 | 35.2 | 0.002 | 70952 | | 0.99 |
| 3 | I13436 | IA2-537STD5.0 | 18-Nov-19 | 11:10:20 | 7.423 | 113627.328 | 3737.527 | 76.726 | 38.4 | 0.002 | 93 | | 0.98 |
| 4 | I13437 | IA2-537STD10.0 | 18-Nov-19 | 11:26:51 | 7.423 | 114891.016 | 4822.583 | 97.911 | 49.0 | 0.002 | 99973 | | 0.97 |
| 5 | I13438 | IA2-537STD50.0 | 18-Nov-19 | 11:43:24 | 7.417 | 107343.031 | 8242.578 | 179.113 | 89.6 | 0.004 | 5169 | | 1.10 |
| 6 | I13439 | IA2-537STD125 | 18-Nov-19 | 12:00:10 | 7.403 | 101103.344 | 11428.816 | 263.678 | 131.8 | 0.006 | 222317 | | 1.18 |
| 7 | I13440 | IA2-537STD150 | 18-Nov-19 | 12:16:43 | 7.403 | 97990.719 | 12096.718 | 287.953 | 144.0 | 0.006 | 228130 | | 1.17 |
| 8 | I13441 | IA2-537STD250 | 18-Nov-19 | 12:33:16 | 7.393 | 96048.547 | 14124.396 | 343.019 | 171.5 | 0.007 | 244179 | | 1.27 |
| 9 | I13442 | IA2-537STD500 | 18-Nov-19 | 12:49:53 | 7.371 | 87971.789 | 15712.972 | 416.633 | 208.3 | 0.009 | 984 | | 1.69 |

Compound name: M3HFPO-DA
Response Factor: 0.00428708
RRF SD: 0.00283937, % Relative SD: 66.2309
Response type: Internal Std ( Ref 23 ), Area * ( IS Conc. / IS Area )
Curve type: RF



# Initial Calibration Summary
# Form 6
# Semivolatiles

| | | | |
|---|---|---|---|
| Client | : Soils Engineering Services, Inc. | Lab Number | : L2009793 |
| Project Name | : GROSSINGERS | Project Number | : 9313 |
| Instrument ID | : LCMS02 | Ical Ref | : ICAL16305 |
| Calibration dates | : 11/18/19 10:24 11/18/19 12:49 | | |

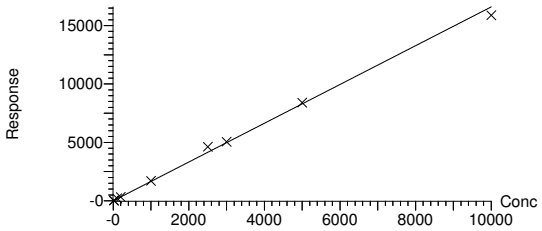


Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
Printed: Monday, November 18, 2019 13:47:36 Eastern Standard Time

**Compound name: HFPO-DA**

| | Name | ID | Acq.Date | Acq.Time | RT | IS Area | Area | Conc (ng... | %Rec | RRF | 1º S/N | 2º S/N | (b/a) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | I13434 | IA2-537STD0.5 | 18-Nov-19 | 10:24:43 | 7.427 | 3251.888 | 238.749 | 8.842 | 88.4 | 1.468 | 3 | 1148 | 0.96 |
| 2 | I13435 | IA2-537STD1.0 | 18-Nov-19 | 10:53:49 | 7.444 | 3469.083 | 409.914 | 14.231 | 71.2 | 1.182 | 9322 | 19 | 0.72 |
| 3 | I13436 | IA2-537STD5.0 | 18-Nov-19 | 11:10:20 | 7.424 | 3737.527 | 3728.507 | 120.149 | 120.1 | 1.995 | 2114 | 27395 | 1.04 |
| 4 | I13437 | IA2-537STD10.0 | 18-Nov-19 | 11:26:51 | 7.421 | 4822.583 | 8056.205 | 201.196 | 100.6 | 1.671 | 1404 | 69032 | 1.01 |
| 5 | I13438 | IA2-537STD50.0 | 18-Nov-19 | 11:43:24 | 7.418 | 8242.578 | 69989.242 | 1022.673 | 102.3 | 1.698 | 1569559 | 571683 | 1.05 |
| 6 | I13439 | IA2-537STD125 | 18-Nov-19 | 12:00:10 | 7.405 | 11428.816 | 264458.719 | 2786.926 | 111.5 | 1.851 | 45709 | 2048472 | 1.17 |
| 7 | I13440 | IA2-537STD150 | 18-Nov-19 | 12:16:43 | 7.405 | 12096.718 | 306093.281 | 3047.579 | 101.6 | 1.687 | 23988 | 18756 | 1.20 |
| 8 | I13441 | IA2-537STD250 | 18-Nov-19 | 12:33:16 | 7.391 | 14124.396 | 593297.063 | 5059.075 | 101.2 | 1.680 | 210742 | 3997418 | 1.44 |
| 9 | I13442 | IA2-537STD500 | 18-Nov-19 | 12:49:53 | 7.372 | 15712.972 | 1248449.625 | 9569.328 | 95.7 | 1.589 | 77760 | 7046169 | 1.78 |

Compound name: HFPO-DA
Coefficient of Determination: R^2 = 0.997230
Calibration curve: 1.66059 * x
Response type: Internal Std ( Ref 58 ), Area * ( IS Conc. / IS Area )
Curve type: Linear, Origin: Force, Weighting: 1/x, Axis trans: None



# Initial Calibration Summary
# Form 6
# Semivolatiles

| | | | |
|---|---|---|---|
| Client | : Soils Engineering Services, Inc. | Lab Number | : L2009793 |
| Project Name | : GROSSINGERS | Project Number | : 9313 |
| Instrument ID | : LCMS02 | Ical Ref | : ICAL16305 |
| Calibration dates | : 11/18/19 10:24 11/18/19 12:49 | | |

**Quantify Compound Summary Report** **MassLynx V4.2 SCN977**

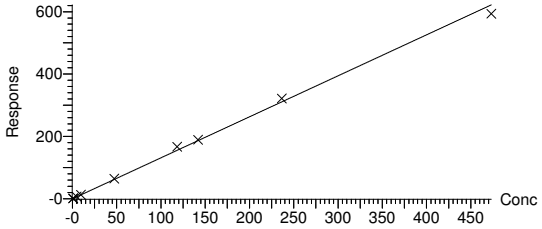


Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
Printed: Monday, November 18, 2019 13:47:36 Eastern Standard Time

**Compound name: ADONA**

| | Name | ID | Acq.Date | Acq.Time | RT | IS Area | Area | Conc (ng... | %Rec | RRF | 1º S/N | 2º S/N | (b/a) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | I13434 | IA2-537STD0.5 | 18-Nov-19 | 10:24:43 | 8.437 | 114742.953 | 6287.492 | 0.417 | 88.1 | 1.158 | 1172 | | 1.00 |
| 2 | I13435 | IA2-537STD1.0 | 18-Nov-19 | 10:53:49 | 8.447 | 115929.242 | 15121.663 | 0.992 | 104.9 | 1.379 | 2464 | | 1.02 |
| 3 | I13436 | IA2-537STD5.0 | 18-Nov-19 | 11:10:20 | 8.433 | 112562.227 | 76970.492 | 5.201 | 109.9 | 1.445 | 2596 | | 1.06 |
| 4 | I13437 | IA2-537STD10.0 | 18-Nov-19 | 11:26:51 | 8.433 | 109470.945 | 142938.625 | 9.932 | 105.0 | 1.380 | 10601 | | 1.01 |
| 5 | I13438 | IA2-537STD50.0 | 18-Nov-19 | 11:43:24 | 8.440 | 106781.555 | 687811.313 | 48.997 | 103.6 | 1.362 | 19504 | | 0.99 |
| 6 | I13439 | IA2-537STD125 | 18-Nov-19 | 12:00:10 | 8.433 | 98244.656 | 1641867.125 | 127.123 | 107.5 | 1.413 | 55292 | | 1.03 |
| 7 | I13440 | IA2-537STD150 | 18-Nov-19 | 12:16:43 | 8.433 | 98053.172 | 1853079.125 | 143.757 | 101.3 | 1.332 | 72891 | | 1.02 |
| 8 | I13441 | IA2-537STD250 | 18-Nov-19 | 12:33:16 | 8.437 | 90653.047 | 2918572.000 | 244.897 | 103.5 | 1.361 | 74345 | | 1.03 |
| 9 | I13442 | IA2-537STD500 | 18-Nov-19 | 12:49:53 | 8.433 | 85048.031 | 5047635.000 | 451.460 | 95.4 | 1.255 | 47725 | | 1.09 |

Compound name: ADONA
Coefficient of Determination: R^2 = 0.997914
Calibration curve: 1.31463 * x
Response type: Internal Std ( Ref 22 ), Area * ( IS Conc. / IS Area )
Curve type: Linear, Origin: Force, Weighting: 1/x, Axis trans: None



# Initial Calibration Summary
# Form 6
# Semivolatiles

| | | | | | |
|---|---|---|---|---|---|
| Client | : | Soils Engineering Services, Inc. | Lab Number | : | L2009793 |
| Project Name | : | GROSSINGERS | Project Number | : | 9313 |
| Instrument ID | : | LCMS02 | Ical Ref | : | ICAL16305 |
| Calibration dates | : | 11/18/19 10:24 11/18/19 12:49 | | | |

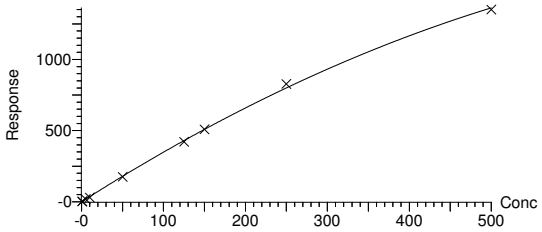


Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
Printed: Monday, November 18, 2019 13:47:36 Eastern Standard Time

**Compound name: PFHxDA**

| | Name | ID | Acq.Date | Acq.Time | RT | IS Area | Area | Conc (ng... | %Rec | RRF | 1º S/N | 2º S/N | (b/a) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | I13434 | IA2-537STD0.5 | 18-Nov-19 | 10:24:43 | 12.7... | 18213.158 | 3366.715 | 0.503 | 100.6 | 3.697 | 505 | | 1.05 |
| 2 | I13435 | IA2-537STD1.0 | 18-Nov-19 | 10:53:49 | 12.7... | 17328.859 | 6644.953 | 1.044 | 104.4 | 3.835 | 928 | | 1.21 |
| 3 | I13436 | IA2-537STD5.0 | 18-Nov-19 | 11:10:20 | 12.7... | 16612.740 | 31167.045 | 5.116 | 102.3 | 3.752 | 3623 | | 1.30 |
| 4 | I13437 | IA2-537STD10.0 | 18-Nov-19 | 11:26:51 | 12.7... | 19278.168 | 56900.813 | 8.061 | 80.6 | 2.952 | 6732 | | 1.20 |
| 5 | I13438 | IA2-537STD50.0 | 18-Nov-19 | 11:43:24 | 12.7... | 15306.165 | 269633.094 | 49.164 | 98.3 | 3.523 | 29792 | | 1.14 |
| 6 | I13439 | IA2-537STD125 | 18-Nov-19 | 12:00:10 | 12.7... | 13694.694 | 578244.250 | 122.629 | 98.1 | 3.378 | 52689 | | 1.26 |
| 7 | I13440 | IA2-537STD150 | 18-Nov-19 | 12:16:43 | 12.7... | 13524.559 | 689195.813 | 150.297 | 100.2 | 3.397 | 73549 | | 1.18 |
| 8 | I13441 | IA2-537STD250 | 18-Nov-19 | 12:33:16 | 12.7... | 12594.792 | 1043086.625 | 260.356 | 104.1 | 3.313 | 94086 | | 1.22 |
| 9 | I13442 | IA2-537STD500 | 18-Nov-19 | 12:49:53 | 12.7... | 11692.363 | 1578940.250 | 493.304 | 98.7 | 2.701 | 166713 | | 1.17 |

Compound name: PFHxDA
Coefficient of Determination: R^2 = 0.999095
Calibration curve: -0.00190397 * x^2 + 3.6767 * x
Response type: Internal Std ( Ref 63 ), Area * ( IS Conc. / IS Area )
Curve type: 2nd Order, Origin: Force, Weighting: 1/x, Axis trans: None



# Initial Calibration Summary
# Form 6
# Semivolatiles

| | | | | | |
|---|---|---|---|---|---|
| Client | : | Soils Engineering Services, Inc. | Lab Number | : | L2009793 |
| Project Name | : | GROSSINGERS | Project Number | : | 9313 |
| Instrument ID | : | LCMS02 | Ical Ref | : | ICAL16305 |
| Calibration dates | : | 11/18/19 10:24 11/18/19 12:49 | | | |

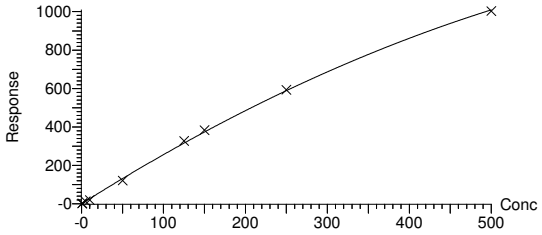


Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
Printed: Monday, November 18, 2019 13:47:36 Eastern Standard Time

**Compound name: PFODA**

| | Name | ID | Acq.Date | Acq.Time | RT | IS Area | Area | Conc (ng... | %Rec | RRF | 1º S/N | 2º S/N | (b/a) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | I13434 | IA2-537STD0.5 | 18-Nov-19 | 10:24:43 | 12.9... | 18213.158 | 1986.248 | 0.405 | 81.0 | 2.181 | 233 | | 0.97 |
| 2 | I13435 | IA2-537STD1.0 | 18-Nov-19 | 10:53:49 | 12.9... | 17328.859 | 4022.923 | 0.862 | 86.2 | 2.322 | 398 | | 1.09 |
| 3 | I13436 | IA2-537STD5.0 | 18-Nov-19 | 11:10:20 | 12.9... | 16612.740 | 20393.104 | 4.568 | 91.4 | 2.455 | 1868 | | 1.12 |
| 4 | I13437 | IA2-537STD10.0 | 18-Nov-19 | 11:26:51 | 12.9... | 19278.168 | 38946.125 | 7.529 | 75.3 | 2.020 | 3365 | | 1.16 |
| 5 | I13438 | IA2-537STD50.0 | 18-Nov-19 | 11:43:24 | 12.9... | 15306.165 | 185708.469 | 46.110 | 92.2 | 2.427 | 18932 | | 1.21 |
| 6 | I13439 | IA2-537STD125 | 18-Nov-19 | 12:00:10 | 12.9... | 13694.694 | 447829.469 | 129.854 | 103.9 | 2.616 | 34969 | | 0.96 |
| 7 | I13440 | IA2-537STD150 | 18-Nov-19 | 12:16:43 | 12.9... | 13524.559 | 517897.969 | 154.059 | 102.7 | 2.553 | 44245 | | 1.09 |
| 8 | I13441 | IA2-537STD250 | 18-Nov-19 | 12:33:16 | 12.9... | 12594.792 | 747346.625 | 252.158 | 100.9 | 2.374 | 68089 | | 1.14 |
| 9 | I13442 | IA2-537STD500 | 18-Nov-19 | 12:49:53 | 12.9... | 11692.363 | 1172348.500 | 495.065 | 99.0 | 2.005 | 1863 | | 1.27 |

Compound name: PFODA
Coefficient of Determination: R^2 = 0.998424
Calibration curve: -0.00134983 * x^2 + 2.69357 * x
Response type: Internal Std ( Ref 63 ), Area * ( IS Conc. / IS Area )
Curve type: 2nd Order, Origin: Force, Weighting: 1/x, Axis trans: None



# Initial Calibration Summary
# Form 6
# Semivolatiles

| | | | |
|---|---|---|---|
| Client | : Soils Engineering Services, Inc. | Lab Number | : L2009793 |
| Project Name | : GROSSINGERS | Project Number | : 9313 |
| Instrument ID | : LCMS02 | Ical Ref | : ICAL16305 |
| Calibration dates | : 11/18/19 10:24 11/18/19 12:49 | | |

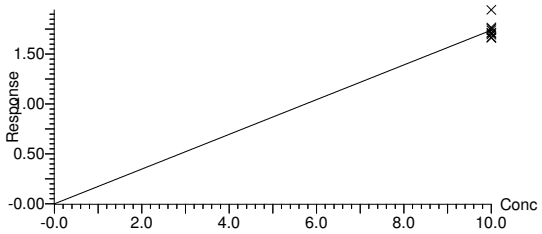


Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
Printed: Monday, November 18, 2019 13:47:36 Eastern Standard Time

**Compound name: M2PFHxDA**

| | Name | ID | Acq.Date | Acq.Time | RT | IS Area | Area | Conc (ng... | %Rec | RRF | 1º S/N | 2º S/N | (b/a) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | I13434 | IA2-537STD0.5 | 18-Nov-19 | 10:24:43 | 12.7... | 103829.906 | 18213.158 | 10.086 | 100.9 | 0.175 | 5928 | | 1.19 |
| 2 | I13435 | IA2-537STD1.0 | 18-Nov-19 | 10:53:49 | 12.7... | 104230.492 | 17328.859 | 9.560 | 95.6 | 0.166 | 22620 | | 1.19 |
| 3 | I13436 | IA2-537STD5.0 | 18-Nov-19 | 11:10:20 | 12.7... | 99527.453 | 16612.740 | 9.598 | 96.0 | 0.167 | 4836 | | 1.15 |
| 4 | I13437 | IA2-537STD10.0 | 18-Nov-19 | 11:26:51 | 12.7... | 99233.398 | 19278.168 | 11.170 | 111.7 | 0.194 | 15355 | | 1.24 |
| 5 | I13438 | IA2-537STD50.0 | 18-Nov-19 | 11:43:24 | 12.7... | 89579.898 | 15306.165 | 9.825 | 98.2 | 0.171 | 2825 | | 1.12 |
| 6 | I13439 | IA2-537STD125 | 18-Nov-19 | 12:00:10 | 12.7... | 80832.117 | 13694.694 | 9.742 | 97.4 | 0.169 | 7300 | | 1.26 |
| 7 | I13440 | IA2-537STD150 | 18-Nov-19 | 12:16:43 | 12.7... | 77816.188 | 13524.559 | 9.993 | 99.9 | 0.174 | 28 | | 1.16 |
| 8 | I13441 | IA2-537STD250 | 18-Nov-19 | 12:33:16 | 12.7... | 73446.680 | 12594.792 | 9.860 | 98.6 | 0.171 | 7852 | | 1.17 |
| 9 | I13442 | IA2-537STD500 | 18-Nov-19 | 12:49:53 | 12.7... | 66126.813 | 11692.363 | 10.167 | 101.7 | 0.177 | 2573 | | 1.22 |

Compound name: M2PFHxDA
Response Factor: 0.173916
RRF SD: 0.00842697, % Relative SD: 4.84542
Response type: Internal Std ( Ref 35 ), Area * ( IS Conc. / IS Area )
Curve type: RF



# Initial Calibration Summary
# Form 6
# Semivolatiles

| | | | |
|---|---|---|---|
| Client | : Soils Engineering Services, Inc. | Lab Number | : L2009793 |
| Project Name | : GROSSINGERS | Project Number | : 9313 |
| Instrument ID | : LCMS02 | Ical Ref | : ICAL16305 |
| Calibration dates | : 11/18/19 10:24 11/18/19 12:49 | | |

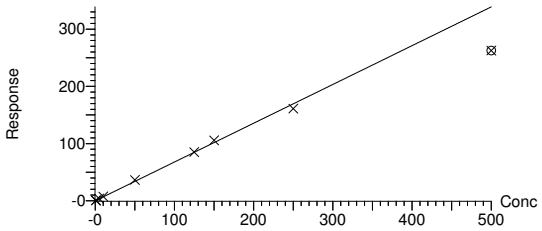


Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
Printed: Monday, November 18, 2019 13:47:36 Eastern Standard Time

**Compound name: PFDoS**

| | Name | ID | Acq.Date | Acq.Time | RT | IS Area | Area | Conc (ng... | %Rec | RRF | 1º S/N | 2º S/N | (b/a) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | I13434 | IA2-537STD0.5 | 18-Nov-19 | 10:24:43 | 11.997 | 7863.209 | 278.948 | 0.523 | 104.7 | 0.710 | 93 | 30 | 0.75 |
| 2 | I13435 | IA2-537STD1.0 | 18-Nov-19 | 10:53:49 | 12.0... | 8337.590 | 611.248 | 1.082 | 108.2 | 0.733 | 11908 | 94 | 0.73 |
| 3 | I13436 | IA2-537STD5.0 | 18-Nov-19 | 11:10:20 | 11.993 | 7856.718 | 2929.418 | 5.501 | 110.0 | 0.746 | 52599 | 28916 | 0.85 |
| 4 | I13437 | IA2-537STD10.0 | 18-Nov-19 | 11:26:51 | 11.993 | 7611.157 | 5766.223 | 11.178 | 111.8 | 0.758 | 103350 | 54427 | 0.80 |
| 5 | I13438 | IA2-537STD50.0 | 18-Nov-19 | 11:43:24 | 11.997 | 7647.324 | 28014.129 | 54.048 | 108.1 | 0.733 | 402 | 416 | 0.78 |
| 6 | I13439 | IA2-537STD125 | 18-Nov-19 | 12:00:10 | 11.989 | 6866.474 | 58473.602 | 125.644 | 100.5 | 0.681 | 3172 | 1156 | 0.85 |
| 7 | I13440 | IA2-537STD150 | 18-Nov-19 | 12:16:43 | 11.989 | 6560.688 | 69331.211 | 155.917 | 103.9 | 0.705 | 8238 | 1521 | 0.87 |
| 8 | I13441 | IA2-537STD250 | 18-Nov-19 | 12:33:16 | 11.989 | 5910.273 | 95180.961 | 237.606 | 95.0 | 0.644 | 9536 | 5126 | 0.87 |
| 9 | I13442 | IA2-537STD500 | 18-Nov-19 | 12:49:53 | 11.989 | 5658.023 | 148644.109 | 387.613 | 77.5 | 0.525 | 9737 | 3816 | 0.88 |

Compound name: PFDoS
Coefficient of Determination: R^2 = 0.997593
Calibration curve: 0.677774 * x
Response type: Internal Std ( Ref 33 ), Area * ( IS Conc. / IS Area )
Curve type: Linear, Origin: Force, Weighting: 1/x, Axis trans: None



# Initial Calibration Summary
# Form 6
# Semivolatiles

| | | | | | |
|---|---|---|---|---|---|
| Client | : | Soils Engineering Services, Inc. | Lab Number | : | L2009793 |
| Project Name | : | GROSSINGERS | Project Number | : | 9313 |
| Instrument ID | : | LCMS02 | Ical Ref | : | ICAL16305 |
| Calibration dates | : | 11/18/19 10:24 11/18/19 12:49 | | | |

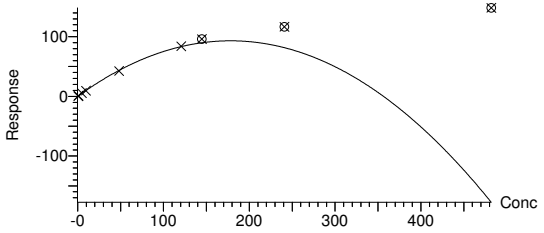


Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
Printed: Monday, November 18, 2019 13:47:36 Eastern Standard Time

**Compound name: 10:2FTS**

| | Name | ID | Acq.Date | Acq.Time | RT | IS Area | Area | Conc (ng... | %Rec | RRF | 1º S/N | 2º S/N | (b/a) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | I13434 | IA2-537STD0.5 | 18-Nov-19 | 10:24:43 | 11.610 | 3535.170 | 161.659 | 0.438 | 90.9 | 0.949 | 4 | | 0.93 |
| 2 | I13435 | IA2-537STD1.0 | 18-Nov-19 | 10:53:49 | 11.615 | 3740.494 | 464.091 | 1.191 | 123.5 | 1.287 | 92 | | 1.00 |
| 3 | I13436 | IA2-537STD5.0 | 18-Nov-19 | 11:10:20 | 11.602 | 3681.261 | 2106.882 | 5.561 | 115.4 | 1.187 | 40717 | | 0.96 |
| 4 | I13437 | IA2-537STD10.0 | 18-Nov-19 | 11:26:51 | 11.602 | 3572.389 | 3399.108 | 9.346 | 96.9 | 0.987 | 152 | | 1.02 |
| 5 | I13438 | IA2-537STD50.0 | 18-Nov-19 | 11:43:24 | 11.606 | 4282.424 | 18204.355 | 46.805 | 97.1 | 0.882 | 2155 | | 0.96 |
| 6 | I13439 | IA2-537STD125 | 18-Nov-19 | 12:00:10 | 11.602 | 4755.468 | 39855.957 | 121.752 | 101.0 | 0.696 | 749660 | | 0.93 |
| 7 | I13440 | IA2-537STD150 | 18-Nov-19 | 12:16:43 | 11.602 | 4958.818 | 47687.137 | | | 0.665 | 638 | | 0.97 |
| 8 | I13441 | IA2-537STD250 | 18-Nov-19 | 12:33:16 | 11.602 | 6317.642 | 73627.555 | | | 0.484 | 1060 | | 0.98 |
| 9 | I13442 | IA2-537STD500 | 18-Nov-19 | 12:49:53 | 11.602 | 8145.643 | 120840.695 | | | 0.308 | 46485 | | 0.98 |

Compound name: 10:2FTS
Coefficient of Determination: R^2 = 0.997942
Calibration curve: -0.00293343 * x^2 + 1.04552 * x
Response type: Internal Std ( Ref 38 ), Area * ( IS Conc. / IS Area )
Curve type: 2nd Order, Origin: Force, Weighting: 1/x, Axis trans: None



# Initial Calibration Summary
# Form 6
# Semivolatiles

| | | | | | |
|---|---|---|---|---|---|
| Client | : | Soils Engineering Services, Inc. | Lab Number | : | L2009793 |
| Project Name | : | GROSSINGERS | Project Number | : | 9313 |
| Instrument ID | : | LCMS02 | Ical Ref | : | ICAL16305 |
| Calibration dates | : | 11/18/19 10:24 11/18/19 12:49 | | | |

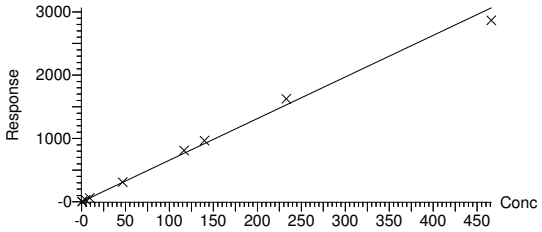


Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
Printed: Monday, November 18, 2019 13:47:36 Eastern Standard Time

**Compound name: 9CL-PF3ONS**

| | Name | ID | Acq.Date | Acq.Time | RT | IS Area | Area | Conc (ng... | %Rec | RRF | 1º S/N | 2º S/N | (b/a) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | I13434 | IA2-537STD0.5 | 18-Nov-19 | 10:24:43 | 10.3... | 7863.209 | 2189.338 | 0.424 | 90.9 | 5.975 | 105 | | 1.04 |
| 2 | I13435 | IA2-537STD1.0 | 18-Nov-19 | 10:53:49 | 10.3... | 8337.590 | 4366.216 | 0.797 | 85.5 | 5.619 | 164 | | 0.99 |
| 3 | I13436 | IA2-537STD5.0 | 18-Nov-19 | 11:10:20 | 10.3... | 7856.718 | 25231.883 | 4.887 | 104.9 | 6.892 | 1198 | | 0.99 |
| 4 | I13437 | IA2-537STD10.0 | 18-Nov-19 | 11:26:51 | 10.3... | 7611.157 | 47425.988 | 9.481 | 101.7 | 6.686 | 2295 | | 0.98 |
| 5 | I13438 | IA2-537STD50.0 | 18-Nov-19 | 11:43:24 | 10.3... | 7647.324 | 237445.078 | 47.245 | 101.4 | 6.663 | 14849 | | 0.99 |
| 6 | I13439 | IA2-537STD125 | 18-Nov-19 | 12:00:10 | 10.3... | 6866.474 | 556615.500 | 123.346 | 105.9 | 6.958 | 24367 | | 1.00 |
| 7 | I13440 | IA2-537STD150 | 18-Nov-19 | 12:16:43 | 10.3... | 6560.688 | 635029.375 | 147.281 | 105.4 | 6.924 | 29977 | | 1.04 |
| 8 | I13441 | IA2-537STD250 | 18-Nov-19 | 12:33:16 | 10.3... | 5910.273 | 962077.688 | 247.688 | 106.3 | 6.986 | 41908 | | 0.98 |
| 9 | I13442 | IA2-537STD500 | 18-Nov-19 | 12:49:53 | 10.3... | 5658.023 | 1621731.250 | 436.130 | 93.6 | 6.151 | 51120 | | 1.03 |

Compound name: 9CL-PF3ONS
Coefficient of Determination: R^2 = 0.996306
Calibration curve: 6.57201 * x
Response type: Internal Std ( Ref 33 ), Area * ( IS Conc. / IS Area )
Curve type: Linear, Origin: Force, Weighting: 1/x, Axis trans: None



# Initial Calibration Summary
# Form 6
# Semivolatiles

| | | | |
|---|---|---|---|
| Client | : Soils Engineering Services, Inc. | Lab Number | : L2009793 |
| Project Name | : GROSSINGERS | Project Number | : 9313 |
| Instrument ID | : LCMS02 | Ical Ref | : ICAL16305 |
| Calibration dates | : 11/18/19 10:24 11/18/19 12:49 | | |

**Quantify Compound Summary Report** **MassLynx V4.2 SCN977**

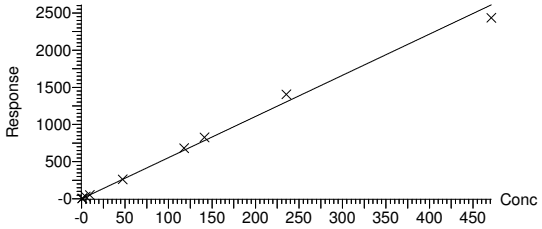


Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
Printed: Monday, November 18, 2019 13:47:36 Eastern Standard Time

**Compound name: 11CL-PFOUdS**

| | Name | ID | Acq.Date | Acq.Time | RT | IS Area | Area | Conc (ng... | %Rec | RRF | 1º S/N | 2º S/N | (b/a) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | I13434 | IA2-537STD0.5 | 18-Nov-19 | 10:24:43 | 11.388 | 7863.209 | 1756.393 | 0.403 | 85.6 | 4.742 | 25984 | | 1.00 |
| 2 | I13435 | IA2-537STD1.0 | 18-Nov-19 | 10:53:49 | 11.393 | 8337.590 | 4417.228 | 0.956 | 101.5 | 5.624 | 65545 | | 0.98 |
| 3 | I13436 | IA2-537STD5.0 | 18-Nov-19 | 11:10:20 | 11.383 | 7856.718 | 21642.189 | 4.972 | 105.6 | 5.848 | 2548 | | 1.02 |
| 4 | I13437 | IA2-537STD10.0 | 18-Nov-19 | 11:26:51 | 11.383 | 7611.157 | 39059.797 | 9.263 | 98.3 | 5.448 | 8974 | | 1.00 |
| 5 | I13438 | IA2-537STD50.0 | 18-Nov-19 | 11:43:24 | 11.388 | 7647.324 | 200296.078 | 47.274 | 100.4 | 5.561 | 12642 | | 0.99 |
| 6 | I13439 | IA2-537STD125 | 18-Nov-19 | 12:00:10 | 11.383 | 6866.474 | 466932.875 | 122.738 | 104.2 | 5.775 | 9285 | | 0.99 |
| 7 | I13440 | IA2-537STD150 | 18-Nov-19 | 12:16:43 | 11.383 | 6560.688 | 542068.938 | 149.130 | 105.5 | 5.847 | 21115 | | 1.00 |
| 8 | I13441 | IA2-537STD250 | 18-Nov-19 | 12:33:16 | 11.383 | 5910.273 | 830742.500 | 253.699 | 107.7 | 5.969 | 41063 | | 1.01 |
| 9 | I13442 | IA2-537STD500 | 18-Nov-19 | 12:49:53 | 11.388 | 5658.023 | 1378541.500 | 439.759 | 93.4 | 5.173 | 33235 | | 0.96 |

Compound name: 11CL-PFOUdS
Coefficient of Determination: R^2 = 0.995887
Calibration curve: 5.5404 * x
Response type: Internal Std ( Ref 33 ), Area * ( IS Conc. / IS Area )
Curve type: Linear, Origin: Force, Weighting: 1/x, Axis trans: None



# Initial Calibration Summary
# Form 6
# Semivolatiles

| | | | |
|---|---|---|---|
| Client | : Soils Engineering Services, Inc. | Lab Number | : L2009793 |
| Project Name | : GROSSINGERS | Project Number | : 9313 |
| Instrument ID | : LCMS02 | Ical Ref | : ICAL16305 |
| Calibration dates | : 11/18/19 10:24 11/18/19 12:49 | | |

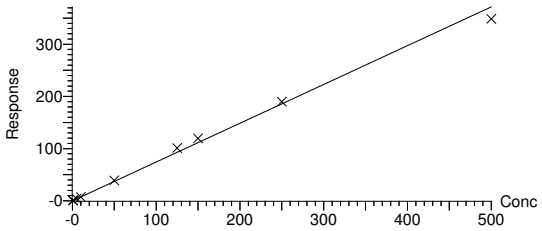


Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
Printed: Monday, November 18, 2019 13:47:36 Eastern Standard Time

**Compound name: NMeFOSA**

| | Name | ID | Acq.Date | Acq.Time | RT | IS Area | Area | Conc (ng... | %Rec | RRF | 1º S/N | 2º S/N | (b/a) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | I13434 | IA2-537STD0.5 | 18-Nov-19 | 10:24:43 | 11.628 | 10818.715 | 384.162 | 0.478 | 95.6 | 0.710 | 125 | 68 | 0.95 |
| 2 | I13435 | IA2-537STD1.0 | 18-Nov-19 | 10:53:49 | 11.624 | 10918.389 | 820.677 | 1.011 | 101.1 | 0.752 | 195 | 9328 | 1.04 |
| 3 | I13436 | IA2-537STD5.0 | 18-Nov-19 | 11:10:20 | 11.620 | 10805.029 | 4555.991 | 5.673 | 113.5 | 0.843 | 1070 | 53071 | 1.03 |
| 4 | I13437 | IA2-537STD10.0 | 18-Nov-19 | 11:26:51 | 11.620 | 11452.094 | 8668.560 | 10.184 | 101.8 | 0.757 | 527 | 1214 | 1.04 |
| 5 | I13438 | IA2-537STD50.0 | 18-Nov-19 | 11:43:24 | 11.624 | 11659.144 | 45476.523 | 52.480 | 105.0 | 0.780 | 2752 | 2221 | 1.05 |
| 6 | I13439 | IA2-537STD125 | 18-Nov-19 | 12:00:10 | 11.620 | 10937.316 | 110688.570 | 136.165 | 108.9 | 0.810 | 4013 | 2943 | 1.04 |
| 7 | I13440 | IA2-537STD150 | 18-Nov-19 | 12:16:43 | 11.624 | 10578.706 | 126611.172 | 161.032 | 107.4 | 0.798 | 3996 | 2301 | 0.99 |
| 8 | I13441 | IA2-537STD250 | 18-Nov-19 | 12:33:16 | 11.624 | 10789.468 | 204880.891 | 255.491 | 102.2 | 0.760 | 6232 | 5461 | 1.02 |
| 9 | I13442 | IA2-537STD500 | 18-Nov-19 | 12:49:53 | 11.628 | 10956.525 | 381907.094 | 468.985 | 93.8 | 0.697 | 6666 | 9403 | 0.99 |

Compound name: NMeFOSA
Coefficient of Determination: R^2 = 0.996194
Calibration curve: 0.743235 * x
Response type: Internal Std ( Ref 69 ), Area * ( IS Conc. / IS Area )
Curve type: Linear, Origin: Force, Weighting: 1/x, Axis trans: None



# Initial Calibration Summary
# Form 6
# Semivolatiles

| | | | |
|---|---|---|---|
| Client | : Soils Engineering Services, Inc. | Lab Number | : L2009793 |
| Project Name | : GROSSINGERS | Project Number | : 9313 |
| Instrument ID | : LCMS02 | Ical Ref | : ICAL16305 |
| Calibration dates | : 11/18/19 10:24 11/18/19 12:49 | | |

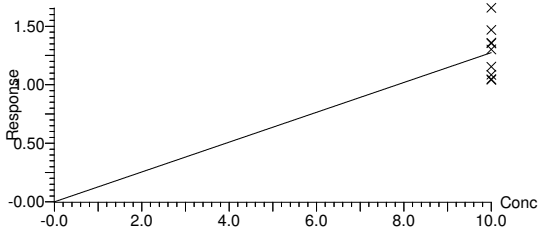


Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
Printed: Monday, November 18, 2019 13:47:36 Eastern Standard Time

**Compound name: d3-NMeFOSA**

| | Name | ID | Acq.Date | Acq.Time | RT | IS Area | Area | Conc (ng... | %Rec | RRF | 1º S/N | 2º S/N | (b/a) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | I13434 | IA2-537STD0.5 | 18-Nov-19 | 10:24:43 | 11.616 | 103829.906 | 10818.715 | 8.176 | 81.8 | 0.104 | 981 | | 1.03 |
| 2 | I13435 | IA2-537STD1.0 | 18-Nov-19 | 10:53:49 | 11.620 | 104230.492 | 10918.389 | 8.220 | 82.2 | 0.105 | 418 | | 0.99 |
| 3 | I13436 | IA2-537STD5.0 | 18-Nov-19 | 11:10:20 | 11.612 | 99527.453 | 10805.029 | 8.519 | 85.2 | 0.109 | 789 | | 1.08 |
| 4 | I13437 | IA2-537STD10.0 | 18-Nov-19 | 11:26:51 | 11.616 | 99233.398 | 11452.094 | 9.056 | 90.6 | 0.115 | 1426 | | 0.98 |
| 5 | I13438 | IA2-537STD50.0 | 18-Nov-19 | 11:43:24 | 11.620 | 89579.898 | 11659.144 | 10.213 | 102.1 | 0.130 | 1008 | | 0.96 |
| 6 | I13439 | IA2-537STD125 | 18-Nov-19 | 12:00:10 | 11.616 | 80832.117 | 10937.316 | 10.618 | 106.2 | 0.135 | 479 | | 0.98 |
| 7 | I13440 | IA2-537STD150 | 18-Nov-19 | 12:16:43 | 11.616 | 77816.188 | 10578.706 | 10.668 | 106.7 | 0.136 | 2667 | | 0.98 |
| 8 | I13441 | IA2-537STD250 | 18-Nov-19 | 12:33:16 | 11.616 | 73446.680 | 10789.468 | 11.528 | 115.3 | 0.147 | 813 | | 1.05 |
| 9 | I13442 | IA2-537STD500 | 18-Nov-19 | 12:49:53 | 11.620 | 66126.813 | 10956.525 | 13.002 | 130.0 | 0.166 | 989 | | 1.02 |

Compound name: d3-NMeFOSA
Response Factor: 0.127435
RRF SD: 0.0210344, % Relative SD: 16.5059
Response type: Internal Std ( Ref 35 ), Area * ( IS Conc. / IS Area )
Curve type: RF



# Initial Calibration Summary
# Form 6
# Semivolatiles

| | | | |
|---|---|---|---|
| Client | : Soils Engineering Services, Inc. | Lab Number | : L2009793 |
| Project Name | : GROSSINGERS | Project Number | : 9313 |
| Instrument ID | : LCMS02 | Ical Ref | : ICAL16305 |
| Calibration dates | : 11/18/19 10:24 11/18/19 12:49 | | |

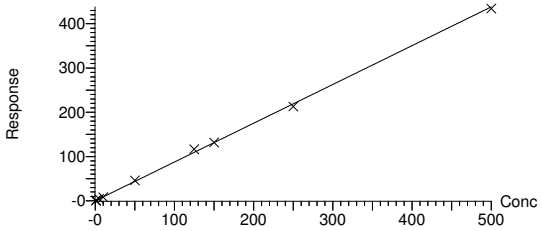


Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
Printed: Monday, November 18, 2019 13:47:36 Eastern Standard Time

**Compound name: NEtFOSA**

| | Name | ID | Acq.Date | Acq.Time | RT | IS Area | Area | Conc (ng... | %Rec | RRF | 1º S/N | 2º S/N | (b/a) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | I13434 | IA2-537STD0.5 | 18-Nov-19 | 10:24:43 | 11.916 | 11992.311 | 291.889 | 0.278 | 55.6 | 0.487 | 35 | 8 | 1.23 |
| 2 | I13435 | IA2-537STD1.0 | 18-Nov-19 | 10:53:49 | 11.924 | 10513.078 | 950.658 | 1.032 | 103.2 | 0.904 | 16167 | 2464 | 1.00 |
| 3 | I13436 | IA2-537STD5.0 | 18-Nov-19 | 11:10:20 | 11.920 | 10840.465 | 4897.970 | 5.157 | 103.1 | 0.904 | 826 | 162 | 1.02 |
| 4 | I13437 | IA2-537STD10.0 | 18-Nov-19 | 11:26:51 | 11.920 | 11690.228 | 9820.464 | 9.587 | 95.9 | 0.840 | 1432 | 25080 | 1.04 |
| 5 | I13438 | IA2-537STD50.0 | 18-Nov-19 | 11:43:24 | 11.924 | 10655.923 | 49116.805 | 52.606 | 105.2 | 0.922 | 2351 | 562 | 1.03 |
| 6 | I13439 | IA2-537STD125 | 18-Nov-19 | 12:00:10 | 11.920 | 10271.625 | 119958.141 | 133.286 | 106.6 | 0.934 | 4025 | 1054 | 1.01 |
| 7 | I13440 | IA2-537STD150 | 18-Nov-19 | 12:16:43 | 11.920 | 10793.446 | 142438.000 | 150.612 | 100.4 | 0.880 | 5314 | 4771 | 1.03 |
| 8 | I13441 | IA2-537STD250 | 18-Nov-19 | 12:33:16 | 11.920 | 10700.851 | 228133.797 | 243.312 | 97.3 | 0.853 | 6235 | 1669 | 1.05 |
| 9 | I13442 | IA2-537STD500 | 18-Nov-19 | 12:49:53 | 11.924 | 9807.835 | 425931.281 | 495.631 | 99.1 | 0.869 | 10705 | 3724 | 1.00 |

Compound name: NEtFOSA
Coefficient of Determination: R^2 = 0.999041
Calibration curve: 0.876209 * x
Response type: Internal Std ( Ref 71 ), Area * ( IS Conc. / IS Area )
Curve type: Linear, Origin: Force, Weighting: 1/x, Axis trans: None



# Initial Calibration Summary
# Form 6
# Semivolatiles

| | | | | | |
|---|---|---|---|---|---|
| Client | : | Soils Engineering Services, Inc. | Lab Number | : | L2009793 |
| Project Name | : | GROSSINGERS | Project Number | : | 9313 |
| Instrument ID | : | LCMS02 | Ical Ref | : | ICAL16305 |
| Calibration dates | : | 11/18/19 10:24 11/18/19 12:49 | | | |

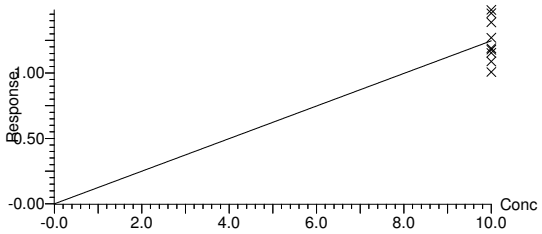


Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
Printed: Monday, November 18, 2019 13:47:36 Eastern Standard Time

**Compound name: d5-NEtFOSA**

| | Name | ID | Acq.Date | Acq.Time | RT | IS Area | Area | Conc (ng... | %Rec | RRF | 1º S/N | 2º S/N | (b/a) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | I13434 | IA2-537STD0.5 | 18-Nov-19 | 10:24:43 | 11.912 | 103829.906 | 11992.311 | 9.266 | 92.7 | 0.115 | 896 | | 1.04 |
| 2 | I13435 | IA2-537STD1.0 | 18-Nov-19 | 10:53:49 | 11.916 | 104230.492 | 10513.078 | 8.092 | 80.9 | 0.101 | 343 | | 1.01 |
| 3 | I13436 | IA2-537STD5.0 | 18-Nov-19 | 11:10:20 | 11.912 | 99527.453 | 10840.465 | 8.738 | 87.4 | 0.109 | 567 | | 0.95 |
| 4 | I13437 | IA2-537STD10.0 | 18-Nov-19 | 11:26:51 | 11.912 | 99233.398 | 11690.228 | 9.451 | 94.5 | 0.118 | 1110 | | 1.01 |
| 5 | I13438 | IA2-537STD50.0 | 18-Nov-19 | 11:43:24 | 11.912 | 89579.898 | 10655.923 | 9.543 | 95.4 | 0.119 | 1698 | | 1.02 |
| 6 | I13439 | IA2-537STD125 | 18-Nov-19 | 12:00:10 | 11.908 | 80832.117 | 10271.625 | 10.195 | 101.9 | 0.127 | 780 | | 1.05 |
| 7 | I13440 | IA2-537STD150 | 18-Nov-19 | 12:16:43 | 11.908 | 77816.188 | 10793.446 | 11.128 | 111.3 | 0.139 | 283 | | 1.07 |
| 8 | I13441 | IA2-537STD250 | 18-Nov-19 | 12:33:16 | 11.912 | 73446.680 | 10700.851 | 11.689 | 116.9 | 0.146 | 396 | | 0.97 |
| 9 | I13442 | IA2-537STD500 | 18-Nov-19 | 12:49:53 | 11.912 | 66126.813 | 9807.835 | 11.899 | 119.0 | 0.148 | 2196 | | 1.03 |

Compound name: d5-NEtFOSA
Response Factor: 0.124648
RRF SD: 0.0165181, % Relative SD: 13.2517
Response type: Internal Std ( Ref 35 ), Area * ( IS Conc. / IS Area )
Curve type: RF



# Initial Calibration Summary
# Form 6
# Semivolatiles

| | | | | | |
|---|---|---|---|---|---|
| Client | : | Soils Engineering Services, Inc. | Lab Number | : | L2009793 |
| Project Name | : | GROSSINGERS | Project Number | : | 9313 |
| Instrument ID | : | LCMS02 | Ical Ref | : | ICAL16305 |
| Calibration dates | : | 11/18/19 10:24 11/18/19 12:49 | | | |

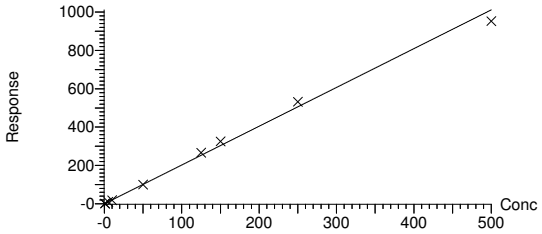


Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
Printed: Monday, November 18, 2019 13:47:36 Eastern Standard Time

**Compound name: NMeFOSE**

| | Name | ID | Acq.Date | Acq.Time | RT | IS Area | Area | Conc (ng... | %Rec | RRF | 1º S/N | 2º S/N | (b/a) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | I13434 | IA2-537STD0.5 | 18-Nov-19 | 10:24:43 | 11.627 | 6181.065 | 439.839 | 0.352 | 70.4 | 1.423 | 42 | | 1.03 |
| 2 | I13435 | IA2-537STD1.0 | 18-Nov-19 | 10:53:49 | 11.631 | 5601.364 | 847.873 | 0.748 | 74.8 | 1.514 | 70 | | 0.99 |
| 3 | I13436 | IA2-537STD5.0 | 18-Nov-19 | 11:10:20 | 11.623 | 5583.996 | 5940.177 | 5.259 | 105.2 | 2.128 | 542 | | 1.02 |
| 4 | I13437 | IA2-537STD10.0 | 18-Nov-19 | 11:26:51 | 11.623 | 5732.216 | 10782.405 | 9.298 | 93.0 | 1.881 | 746 | | 1.03 |
| 5 | I13438 | IA2-537STD50.0 | 18-Nov-19 | 11:43:24 | 11.627 | 5433.837 | 54087.008 | 49.204 | 98.4 | 1.991 | 2768 | | 1.01 |
| 6 | I13439 | IA2-537STD125 | 18-Nov-19 | 12:00:10 | 11.623 | 4843.435 | 128959.344 | 131.619 | 105.3 | 2.130 | 2932 | | 1.02 |
| 7 | I13440 | IA2-537STD150 | 18-Nov-19 | 12:16:43 | 11.623 | 4724.134 | 153741.500 | 160.875 | 107.2 | 2.170 | 6049 | | 1.05 |
| 8 | I13441 | IA2-537STD250 | 18-Nov-19 | 12:33:16 | 11.627 | 4616.492 | 245769.922 | 263.169 | 105.3 | 2.129 | 9707 | | 1.00 |
| 9 | I13442 | IA2-537STD500 | 18-Nov-19 | 12:49:53 | 11.631 | 4357.240 | 415137.313 | 470.976 | 94.2 | 1.906 | 5246 | | 0.97 |

Compound name: NMeFOSE
Coefficient of Determination: R^2 = 0.996553
Calibration curve: 2.02293 * x
Response type: Internal Std ( Ref 73 ), Area * ( IS Conc. / IS Area )
Curve type: Linear, Origin: Force, Weighting: 1/x, Axis trans: None



# Initial Calibration Summary
# Form 6
# Semivolatiles

| | | | | | |
|---|---|---|---|---|---|
| Client | : Soils Engineering Services, Inc. | | Lab Number | : L2009793 | |
| Project Name | : GROSSINGERS | | Project Number | : 9313 | |
| Instrument ID | : LCMS02 | | Ical Ref | : ICAL16305 | |
| Calibration dates | : 11/18/19 10:24 | 11/18/19 12:49 | | | |

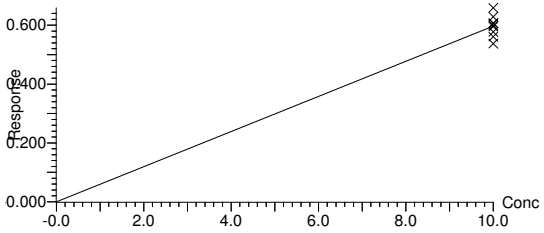


Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
Printed: Monday, November 18, 2019 13:47:36 Eastern Standard Time

**Compound name: d7-NMeFOSE**

| | Name | ID | Acq.Date | Acq.Time | RT | IS Area | Area | Conc (ng... | %Rec | RRF | 1º S/N | 2º S/N | (b/a) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | I13434 | IA2-537STD0.5 | 18-Nov-19 | 10:24:43 | 11.610 | 103829.906 | 6181.065 | 9.974 | 99.7 | 0.060 | 246 | | 1.06 |
| 2 | I13435 | IA2-537STD1.0 | 18-Nov-19 | 10:53:49 | 11.610 | 104230.492 | 5601.364 | 9.004 | 90.0 | 0.054 | 196 | | 1.07 |
| 3 | I13436 | IA2-537STD5.0 | 18-Nov-19 | 11:10:20 | 11.606 | 99527.453 | 5583.996 | 9.400 | 94.0 | 0.056 | 229 | | 1.06 |
| 4 | I13437 | IA2-537STD10.0 | 18-Nov-19 | 11:26:51 | 11.606 | 99233.398 | 5732.216 | 9.678 | 96.8 | 0.058 | 271 | | 1.04 |
| 5 | I13438 | IA2-537STD50.0 | 18-Nov-19 | 11:43:24 | 11.610 | 89579.898 | 5433.837 | 10.163 | 101.6 | 0.061 | 271 | | 1.06 |
| 6 | I13439 | IA2-537STD125 | 18-Nov-19 | 12:00:10 | 11.606 | 80832.117 | 4843.435 | 10.039 | 100.4 | 0.060 | 248 | | 1.03 |
| 7 | I13440 | IA2-537STD150 | 18-Nov-19 | 12:16:43 | 11.606 | 77816.188 | 4724.134 | 10.171 | 101.7 | 0.061 | 201 | | 1.03 |
| 8 | I13441 | IA2-537STD250 | 18-Nov-19 | 12:33:16 | 11.610 | 73446.680 | 4616.492 | 10.531 | 105.3 | 0.063 | 294 | | 1.03 |
| 9 | I13442 | IA2-537STD500 | 18-Nov-19 | 12:49:53 | 11.610 | 66126.813 | 4357.240 | 11.040 | 110.4 | 0.066 | 262 | | 1.07 |

Compound name: d7-NMeFOSE
Response Factor: 0.0596862
RRF SD: 0.00357941, % Relative SD: 5.99705
Response type: Internal Std ( Ref 35 ), Area * ( IS Conc. / IS Area )
Curve type: RF



# Initial Calibration Summary
# Form 6
# Semivolatiles

| | | | |
|---|---|---|---|
| Client | : Soils Engineering Services, Inc. | Lab Number | : L2009793 |
| Project Name | : GROSSINGERS | Project Number | : 9313 |
| Instrument ID | : LCMS02 | Ical Ref | : ICAL16305 |
| Calibration dates | : 11/18/19 10:24 11/18/19 12:49 | | |

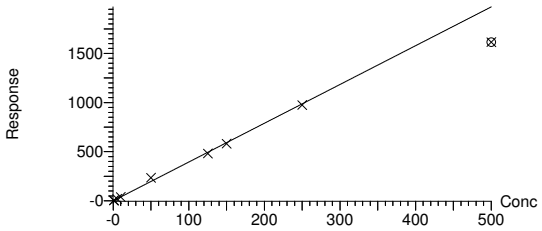


Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
Printed: Monday, November 18, 2019 13:47:36 Eastern Standard Time

**Compound name: NEtFOSE**

| | Name | ID | Acq.Date | Acq.Time | RT | IS Area | Area | Conc (ng... | %Rec | RRF | 1º S/N | 2º S/N | (b/a) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | I13434 | IA2-537STD0.5 | 18-Nov-19 | 10:24:43 | 11.913 | 3594.417 | 567.950 | 0.400 | 80.1 | 3.160 | 9582 | | 0.99 |
| 2 | I13435 | IA2-537STD1.0 | 18-Nov-19 | 10:53:49 | 11.913 | 3264.972 | 1238.596 | 0.961 | 96.1 | 3.794 | 19982 | | 1.04 |
| 3 | I13436 | IA2-537STD5.0 | 18-Nov-19 | 11:10:20 | 11.909 | 3288.860 | 6476.007 | 4.988 | 99.8 | 3.938 | 750 | | 1.01 |
| 4 | I13437 | IA2-537STD10.0 | 18-Nov-19 | 11:26:51 | 11.909 | 3120.817 | 12372.700 | 10.043 | 100.4 | 3.965 | 783 | | 1.04 |
| 5 | I13438 | IA2-537STD50.0 | 18-Nov-19 | 11:43:24 | 11.913 | 2782.245 | 65148.242 | 59.318 | 118.6 | 4.683 | 2943 | | 1.00 |
| 6 | I13439 | IA2-537STD125 | 18-Nov-19 | 12:00:10 | 11.909 | 3094.809 | 148854.578 | 121.844 | 97.5 | 3.848 | 4737 | | 0.99 |
| 7 | I13440 | IA2-537STD150 | 18-Nov-19 | 12:16:43 | 11.909 | 3077.430 | 178591.047 | 147.011 | 98.0 | 3.869 | 6366 | | 1.00 |
| 8 | I13441 | IA2-537STD250 | 18-Nov-19 | 12:33:16 | 11.909 | 2927.529 | 285368.000 | 246.934 | 98.8 | 3.899 | 5042 | | 1.03 |
| 9 | I13442 | IA2-537STD500 | 18-Nov-19 | 12:49:53 | 11.909 | 3114.293 | 502556.594 | 408.793 | 81.8 | 3.227 | 14003 | | 1.06 |

Compound name: NEtFOSE
Coefficient of Determination: R^2 = 0.996634
Calibration curve: 3.9475 * x
Response type: Internal Std ( Ref 75 ), Area * ( IS Conc. / IS Area )
Curve type: Linear, Origin: Force, Weighting: 1/x, Axis trans: None



# Initial Calibration Summary
# Form 6
# Semivolatiles

| | | | | | |
|---|---|---|---|---|---|
| Client | : Soils Engineering Services, Inc. | | Lab Number | : L2009793 | |
| Project Name | : GROSSINGERS | | Project Number | : 9313 | |
| Instrument ID | : LCMS02 | | Ical Ref | : ICAL16305 | |
| Calibration dates | : 11/18/19 10:24 | 11/18/19 12:49 | | | |

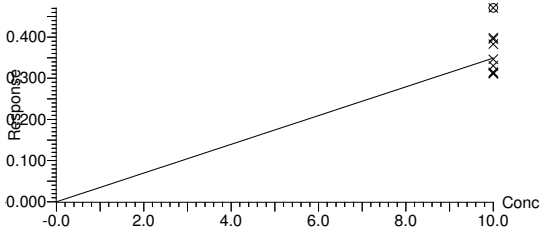


Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
Printed: Monday, November 18, 2019 13:47:36 Eastern Standard Time

**Compound name: d9-NEtFOSE**

| | Name | ID | Acq.Date | Acq.Time | RT | IS Area | Area | Conc (ng... | %Rec | RRF | 1º S/N | 2º S/N | (b/a) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | I13434 | IA2-537STD0.5 | 18-Nov-19 | 10:24:43 | 11.893 | 103829.906 | 3594.417 | 9.920 | 99.2 | 0.035 | 301 | | 1.04 |
| 2 | I13435 | IA2-537STD1.0 | 18-Nov-19 | 10:53:49 | 11.897 | 104230.492 | 3264.972 | 8.976 | 89.8 | 0.031 | 178 | | 0.98 |
| 3 | I13436 | IA2-537STD5.0 | 18-Nov-19 | 11:10:20 | 11.889 | 99527.453 | 3288.860 | 9.469 | 94.7 | 0.033 | 211 | | 1.07 |
| 4 | I13437 | IA2-537STD10.0 | 18-Nov-19 | 11:26:51 | 11.893 | 99233.398 | 3120.817 | 9.012 | 90.1 | 0.031 | 173 | | 0.98 |
| 5 | I13438 | IA2-537STD50.0 | 18-Nov-19 | 11:43:24 | 11.893 | 89579.898 | 2782.245 | 8.900 | 89.0 | 0.031 | 135 | | 1.03 |
| 6 | I13439 | IA2-537STD125 | 18-Nov-19 | 12:00:10 | 11.889 | 80832.117 | 3094.809 | 10.971 | 109.7 | 0.038 | 197 | | 1.03 |
| 7 | I13440 | IA2-537STD150 | 18-Nov-19 | 12:16:43 | 11.893 | 77816.188 | 3077.430 | 11.332 | 113.3 | 0.040 | 198 | | 0.95 |
| 8 | I13441 | IA2-537STD250 | 18-Nov-19 | 12:33:16 | 11.889 | 73446.680 | 2927.529 | 11.421 | 114.2 | 0.040 | 137 | | 1.02 |
| 9 | I13442 | IA2-537STD500 | 18-Nov-19 | 12:49:53 | 11.893 | 66126.813 | 3114.293 | 13.495 | 135.0 | 0.047 | 162 | | 1.01 |

Compound name: d9-NEtFOSE
Response Factor: 0.0348987
RRF SD: 0.00379155, % Relative SD: 10.8645
Response type: Internal Std ( Ref 35 ), Area * ( IS Conc. / IS Area )
Curve type: RF



# Initial Calibration Summary
# Form 6
# Semivolatiles

| | | | | | |
|---|---|---|---|---|---|
| Client | : | Soils Engineering Services, Inc. | Lab Number | : | L2009793 |
| Project Name | : | GROSSINGERS | Project Number | : | 9313 |
| Instrument ID | : | LCMS01 | Ical Ref | : | ICAL16567 |
| Calibration dates | : | 02/27/20 14:02 02/27/20 17:04 | | | |



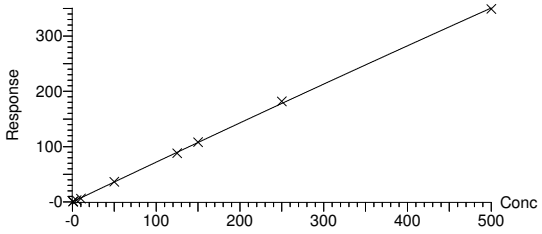
Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICAL_A.qld
Last Altered: Friday, February 28, 2020 09:12:40 Eastern Standard Time
Printed: Friday, February 28, 2020 09:28:57 Eastern Standard Time

**Method: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\MethDB\537ISO_Q_200227 .mdb 27 Feb 2020 12:38:15**
**Calibration: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\CurveDB\200227_537ISO_ICAL.cdb 28 Feb 2020 09:12:40**

**Compound name: PFBA**

| | Name | ID | Acq.Date | Acq.Time | RT | IS Area | Area | Conc (ng... | %Rec | RRF | 1º S/N | 2º S/N | (b/a) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | I18529 | IA2-537STD5.0 | 27-Feb-20 | 14:02:18 | 2.253 | 48319.531 | 14811.046 | 4.236 | 84.7 | 0.613 | 7841 | | 0.97 |
| 2 | I18530 | IA2-537STD10.0 | 27-Feb-20 | 14:18:52 | 2.248 | 48815.305 | 30644.713 | 8.679 | 86.8 | 0.628 | 14887 | | 0.98 |
| 3 | I18531 | IA2-537STD50.0 | 27-Feb-20 | 14:35:26 | 2.242 | 45938.719 | 167812.766 | 50.630 | 101.3 | 0.731 | 47049 | | 0.97 |
| 4 | I18532 | IA2-537STD125 | 27-Feb-20 | 14:51:56 | 2.237 | 44301.992 | 391222.625 | 122.941 | 98.4 | 0.706 | 73888 | | 0.92 |
| 5 | I18533 | IA2-537STD150 | 27-Feb-20 | 15:08:31 | 2.237 | 43835.754 | 473301.906 | 150.573 | 100.4 | 0.720 | 94877 | | 0.88 |
| 6 | I18534 | IA2-537STD250 | 27-Feb-20 | 15:25:04 | 2.231 | 42043.367 | 765723.938 | 255.646 | 102.3 | 0.729 | 148464 | | 0.85 |
| 7 | I18535 | IA2-537STD500 | 27-Feb-20 | 15:41:35 | 2.237 | 41222.156 | 1438832.625 | 497.417 | 99.5 | 0.698 | 91452 | | 0.70 |
| 8 | I18539 | IA2-537STD0.5 | 27-Feb-20 | 16:47:48 | 2.242 | 45001.730 | 1544.153 | 0.474 | 94.8 | 0.686 | 670 | | 0.88 |
| 9 | I18540 | IA2-537STD1.0 | 27-Feb-20 | 17:04:20 | 2.243 | 45026.121 | 2940.648 | 0.902 | 90.2 | 0.653 | 1666 | | 0.89 |

Compound name: PFBA
Coefficient of Determination: R^2 = 0.999537
Calibration curve: -4.42845e-005 * x^2 + 0.723741 * x
Response type: Internal Std ( Ref 3 ), Area * ( IS Conc. / IS Area )
Curve type: 2nd Order, Origin: Force, Weighting: 1/x, Axis trans: None



# Initial Calibration Summary
# Form 6
# Semivolatiles

| | | | | | |
|---|---|---|---|---|---|
| Client | : | Soils Engineering Services, Inc. | Lab Number | : | L2009793 |
| Project Name | : | GROSSINGERS | Project Number | : | 9313 |
| Instrument ID | : | LCMS01 | Ical Ref | : | ICAL16567 |
| Calibration dates | : | 02/27/20 14:02 02/27/20 17:04 | | | |

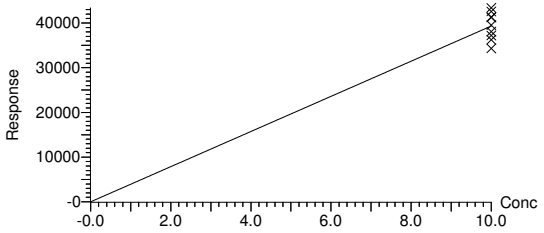


Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICAL_A.qld
Last Altered: Friday, February 28, 2020 09:12:40 Eastern Standard Time
Printed: Friday, February 28, 2020 09:28:57 Eastern Standard Time

**Compound name: M3PFBA**

| | Name | ID | Acq.Date | Acq.Time | RT | IS Area | Area | Conc (ng... | %Rec | RRF | 1º S/N | 2º S/N | (b/a) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | I18529 | IA2-537STD5.0 | 27-Feb-20 | 14:02:18 | 2.250 | | 41335.754 | 10.512 | 105.1 | 4133.575 | 7214 | | 0.97 |
| 2 | I18530 | IA2-537STD10.0 | 27-Feb-20 | 14:18:52 | 2.244 | | 41232.234 | 10.486 | 104.9 | 4123.223 | 3676 | | 0.98 |
| 3 | I18531 | IA2-537STD50.0 | 27-Feb-20 | 14:35:26 | 2.244 | | 39499.469 | 10.045 | 100.5 | 3949.947 | 6575 | | 0.95 |
| 4 | I18532 | IA2-537STD125 | 27-Feb-20 | 14:51:56 | 2.239 | | 38059.477 | 9.679 | 96.8 | 3805.948 | 18435 | | 0.88 |
| 5 | I18533 | IA2-537STD150 | 27-Feb-20 | 15:08:31 | 2.239 | | 37209.055 | 9.463 | 94.6 | 3720.905 | 13815 | | 0.84 |
| 6 | I18534 | IA2-537STD250 | 27-Feb-20 | 15:25:04 | 2.239 | | 36271.582 | 9.224 | 92.2 | 3627.158 | 10472 | | 0.79 |
| 7 | I18535 | IA2-537STD500 | 27-Feb-20 | 15:41:35 | 2.250 | | 34339.520 | 8.733 | 87.3 | 3433.952 | 2929 | | 0.63 |
| 8 | I18539 | IA2-537STD0.5 | 27-Feb-20 | 16:47:48 | 2.244 | | 42560.504 | 10.824 | 108.2 | 4256.050 | 26624 | | 0.87 |
| 9 | I18540 | IA2-537STD1.0 | 27-Feb-20 | 17:04:20 | 2.244 | | 43387.879 | 11.034 | 110.3 | 4338.788 | 34328 | | 0.85 |

Compound name: M3PFBA
Response Factor: 3932.17
RRF SD: 306.071, % Relative SD: 7.78377
Response type: External Std, Area
Curve type: RF



# Initial Calibration Summary
# Form 6
# Semivolatiles

| | | | | | |
|---|---|---|---|---|---|
| Client | : | Soils Engineering Services, Inc. | Lab Number | : | L2009793 |
| Project Name | : | GROSSINGERS | Project Number | : | 9313 |
| Instrument ID | : | LCMS01 | Ical Ref | : | ICAL16567 |
| Calibration dates | : | 02/27/20 14:02 02/27/20 17:04 | | | |

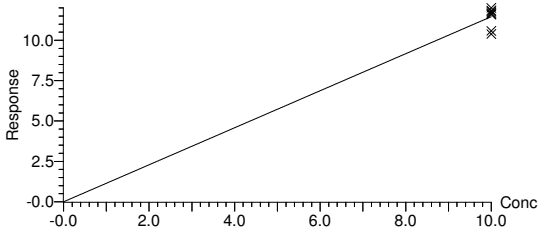


Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICAL_A.qld
Last Altered: Friday, February 28, 2020 09:12:40 Eastern Standard Time
Printed: Friday, February 28, 2020 09:28:57 Eastern Standard Time

**Compound name: MPFBA**

| | Name | ID | Acq.Date | Acq.Time | RT | IS Area | Area | Conc (ng... | %Rec | RRF | 1º S/N | 2º S/N | (b/a) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | I18529 | IA2-537STD5.0 | 27-Feb-20 | 14:02:18 | 2.252 | 41335.754 | 48319.531 | 10.202 | 102.0 | 1.169 | 23733 | | 0.96 |
| 2 | I18530 | IA2-537STD10.0 | 27-Feb-20 | 14:18:52 | 2.246 | 41232.234 | 48815.305 | 10.332 | 103.3 | 1.184 | 148389 | | 0.97 |
| 3 | I18531 | IA2-537STD50.0 | 27-Feb-20 | 14:35:26 | 2.241 | 39499.469 | 45938.719 | 10.150 | 101.5 | 1.163 | 15967 | | 0.97 |
| 4 | I18532 | IA2-537STD125 | 27-Feb-20 | 14:51:56 | 2.241 | 38059.477 | 44301.992 | 10.159 | 101.6 | 1.164 | 56598 | | 0.87 |
| 5 | I18533 | IA2-537STD150 | 27-Feb-20 | 15:08:31 | 2.241 | 37209.055 | 43835.754 | 10.281 | 102.8 | 1.178 | 30312 | | 0.83 |
| 6 | I18534 | IA2-537STD250 | 27-Feb-20 | 15:25:04 | 2.235 | 36271.582 | 42043.367 | 10.116 | 101.2 | 1.159 | 16177 | | 0.80 |
| 7 | I18535 | IA2-537STD500 | 27-Feb-20 | 15:41:35 | 2.246 | 34339.520 | 41222.156 | 10.476 | 104.8 | 1.200 | 24887 | | 0.63 |
| 8 | I18539 | IA2-537STD0.5 | 27-Feb-20 | 16:47:48 | 2.241 | 42560.504 | 45001.730 | 9.228 | 92.3 | 1.057 | 45632 | | 0.88 |
| 9 | I18540 | IA2-537STD1.0 | 27-Feb-20 | 17:04:20 | 2.241 | 43387.879 | 45026.121 | 9.057 | 90.6 | 1.038 | 65718 | | 0.87 |

Compound name: MPFBA
Response Factor: 1.14585
RRF SD: 0.0573549, % Relative SD: 5.00544
Response type: Internal Std ( Ref 2 ), Area * ( IS Conc. / IS Area )
Curve type: RF



# Initial Calibration Summary
# Form 6
# Semivolatiles

| | | | | | |
|---|---|---|---|---|---|
| Client | : | Soils Engineering Services, Inc. | Lab Number | : | L2009793 |
| Project Name | : | GROSSINGERS | Project Number | : | 9313 |
| Instrument ID | : | LCMS01 | Ical Ref | : | ICAL16567 |
| Calibration dates | : | 02/27/20 14:02 02/27/20 17:04 | | | |

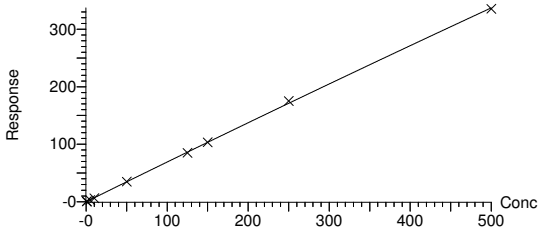


Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICAL_A.qld
Last Altered: Friday, February 28, 2020 09:12:40 Eastern Standard Time
Printed: Friday, February 28, 2020 09:28:57 Eastern Standard Time

**Compound name: PFPeA**

| | Name | ID | Acq.Date | Acq.Time | RT | IS Area | Area | Conc (ng... | %Rec | RRF | 1º S/N | 2º S/N | (b/a) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | I18529 | IA2-537STD5.0 | 27-Feb-20 | 14:02:18 | 5.214 | 66965.297 | 19873.592 | 4.267 | 85.3 | 0.594 | 5136 | | 0.97 |
| 2 | I18530 | IA2-537STD10.0 | 27-Feb-20 | 14:18:52 | 5.209 | 66535.883 | 40988.703 | 8.861 | 88.6 | 0.616 | 11094 | | 0.98 |
| 3 | I18531 | IA2-537STD50.0 | 27-Feb-20 | 14:35:26 | 5.207 | 61818.520 | 216821.125 | 50.578 | 101.2 | 0.701 | 59009 | | 0.96 |
| 4 | I18532 | IA2-537STD125 | 27-Feb-20 | 14:51:56 | 5.206 | 58331.801 | 496161.094 | 123.213 | 98.6 | 0.680 | 107836 | | 0.88 |
| 5 | I18533 | IA2-537STD150 | 27-Feb-20 | 15:08:31 | 5.207 | 57217.777 | 591135.188 | 149.905 | 99.9 | 0.689 | 135936 | | 0.80 |
| 6 | I18534 | IA2-537STD250 | 27-Feb-20 | 15:25:04 | 5.207 | 53491.770 | 936502.688 | 255.715 | 102.3 | 0.700 | 95057 | | 0.75 |
| 7 | I18535 | IA2-537STD500 | 27-Feb-20 | 15:41:35 | 5.207 | 50735.574 | 1701958.750 | 497.520 | 99.5 | 0.671 | 185285 | | 0.59 |
| 8 | I18539 | IA2-537STD0.5 | 27-Feb-20 | 16:47:48 | 5.204 | 61408.227 | 2211.104 | 0.518 | 103.5 | 0.720 | 485 | | 0.90 |
| 9 | I18540 | IA2-537STD1.0 | 27-Feb-20 | 17:04:20 | 5.209 | 61539.512 | 3950.195 | 0.923 | 92.3 | 0.642 | 1262 | | 0.81 |

Compound name: PFPeA
Coefficient of Determination: R^2 = 0.999602
Calibration curve: -4.29631e-005 * x^2 + 0.695633 * x
Response type: Internal Std ( Ref 5 ), Area * ( IS Conc. / IS Area )
Curve type: 2nd Order, Origin: Force, Weighting: 1/x, Axis trans: None



# Initial Calibration Summary
# Form 6
# Semivolatiles

| | | | | | |
|---|---|---|---|---|---|
| Client | : | Soils Engineering Services, Inc. | Lab Number | : | L2009793 |
| Project Name | : | GROSSINGERS | Project Number | : | 9313 |
| Instrument ID | : | LCMS01 | Ical Ref | : | ICAL16567 |
| Calibration dates | : | 02/27/20 14:02 02/27/20 17:04 | | | |

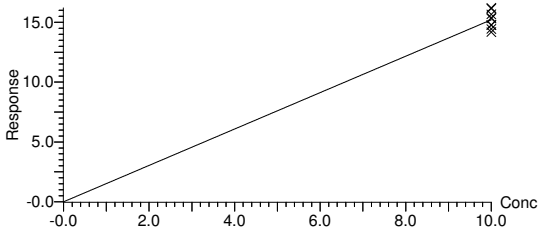


Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICAL_A.qld
Last Altered: Friday, February 28, 2020 09:12:40 Eastern Standard Time
Printed: Friday, February 28, 2020 09:28:57 Eastern Standard Time

**Compound name: M5PFPEA**

| | Name | ID | Acq.Date | Acq.Time | RT | IS Area | Area | Conc (ng... | %Rec | RRF | 1º S/N | 2º S/N | (b/a) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | I18529 | IA2-537STD5.0 | 27-Feb-20 | 14:02:18 | 5.212 | 41335.754 | 66965.297 | 10.656 | 106.6 | 1.620 | 11354 | | 0.99 |
| 2 | I18530 | IA2-537STD10.0 | 27-Feb-20 | 14:18:52 | 5.208 | 41232.234 | 66535.883 | 10.614 | 106.1 | 1.614 | 11899 | | 0.97 |
| 3 | I18531 | IA2-537STD50.0 | 27-Feb-20 | 14:35:26 | 5.205 | 39499.469 | 61818.520 | 10.294 | 102.9 | 1.565 | 11409 | | 0.97 |
| 4 | I18532 | IA2-537STD125 | 27-Feb-20 | 14:51:56 | 5.205 | 38059.477 | 58331.801 | 10.081 | 100.8 | 1.533 | 796 | | 0.88 |
| 5 | I18533 | IA2-537STD150 | 27-Feb-20 | 15:08:31 | 5.206 | 37209.055 | 57217.777 | 10.115 | 101.1 | 1.538 | 13622 | | 0.80 |
| 6 | I18534 | IA2-537STD250 | 27-Feb-20 | 15:25:04 | 5.206 | 36271.582 | 53491.770 | 9.701 | 97.0 | 1.475 | 5666 | | 0.74 |
| 7 | I18535 | IA2-537STD500 | 27-Feb-20 | 15:41:35 | 5.205 | 34339.520 | 50735.574 | 9.718 | 97.2 | 1.477 | 7455 | | 0.61 |
| 8 | I18539 | IA2-537STD0.5 | 27-Feb-20 | 16:47:48 | 5.205 | 42560.504 | 61408.227 | 9.491 | 94.9 | 1.443 | 6947 | | 0.85 |
| 9 | I18540 | IA2-537STD1.0 | 27-Feb-20 | 17:04:20 | 5.206 | 43387.879 | 61539.512 | 9.330 | 93.3 | 1.418 | 15985 | | 0.84 |

Compound name: M5PFPEA
Response Factor: 1.52029
RRF SD: 0.0719607, % Relative SD: 4.73336
Response type: Internal Std ( Ref 2 ), Area * ( IS Conc. / IS Area )
Curve type: RF



# Initial Calibration Summary
# Form 6
# Semivolatiles

| | | | | | |
|---|---|---|---|---|---|
| Client | : Soils Engineering Services, Inc. | | Lab Number | : L2009793 | |
| Project Name | : GROSSINGERS | | Project Number | : 9313 | |
| Instrument ID | : LCMS01 | | Ical Ref | : ICAL16567 | |
| Calibration dates | : 02/27/20 14:02 | 02/27/20 17:04 | | | |

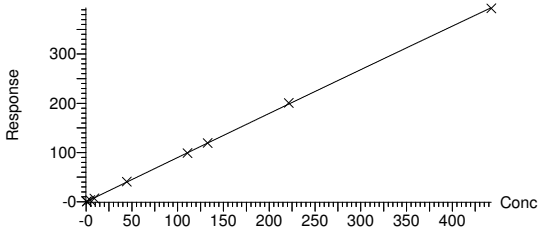


Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICAL_A.qld
Last Altered: Friday, February 28, 2020 09:12:40 Eastern Standard Time
Printed: Friday, February 28, 2020 09:28:57 Eastern Standard Time

**Compound name: PFBS**

| | Name | ID | Acq.Date | Acq.Time | RT | IS Area | Area | Conc (ng... | %Rec | RRF | 1º S/N | 2º S/N | (b/a) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | I18529 | IA2-537STD5.0 | 27-Feb-20 | 14:02:18 | 5.879 | 11904.475 | 3950.326 | 3.678 | 83.1 | 0.750 | 32 | 896 | 0.94 |
| 2 | I18530 | IA2-537STD10.0 | 27-Feb-20 | 14:18:52 | 5.872 | 11938.699 | 8430.388 | 7.828 | 88.5 | 0.798 | 4212 | 2319 | 0.98 |
| 3 | I18531 | IA2-537STD50.0 | 27-Feb-20 | 14:35:26 | 5.871 | 10926.120 | 44614.742 | 45.316 | 102.4 | 0.923 | 45541 | 6184 | 0.95 |
| 4 | I18532 | IA2-537STD125 | 27-Feb-20 | 14:51:56 | 5.870 | 10327.150 | 102270.000 | 110.111 | 99.5 | 0.895 | 19205 | 10965 | 0.86 |
| 5 | I18533 | IA2-537STD150 | 27-Feb-20 | 15:08:31 | 5.872 | 10162.224 | 121367.359 | 132.882 | 100.1 | 0.900 | 23094 | 13425 | 0.77 |
| 6 | I18534 | IA2-537STD250 | 27-Feb-20 | 15:25:04 | 5.872 | 9545.156 | 191488.766 | 223.808 | 101.2 | 0.907 | 10197 | 18037 | 0.72 |
| 7 | I18535 | IA2-537STD500 | 27-Feb-20 | 15:41:35 | 5.871 | 8726.213 | 342903.594 | 441.215 | 99.7 | 0.888 | 58178 | 26974 | 0.56 |
| 8 | I18539 | IA2-537STD0.5 | 27-Feb-20 | 16:47:48 | 5.866 | 10848.066 | 376.407 | 0.385 | 86.9 | 0.784 | 114 | 43 | 1.01 |
| 9 | I18540 | IA2-537STD1.0 | 27-Feb-20 | 17:04:20 | 5.874 | 11021.960 | 750.290 | 0.754 | 85.3 | 0.769 | 108 | 125 | 0.76 |

Compound name: PFBS
Coefficient of Determination: R^2 = 0.999644
Calibration curve: -2.63872e-005 * x^2 + 0.902271 * x
Response type: Internal Std ( Ref 7 ), Area * ( IS Conc. / IS Area )
Curve type: 2nd Order, Origin: Force, Weighting: 1/x, Axis trans: None



# Initial Calibration Summary
# Form 6
# Semivolatiles

| | | | |
|---|---|---|---|
| Client | : Soils Engineering Services, Inc. | Lab Number | : L2009793 |
| Project Name | : GROSSINGERS | Project Number | : 9313 |
| Instrument ID | : LCMS01 | Ical Ref | : ICAL16567 |
| Calibration dates | : 02/27/20 14:02 02/27/20 17:04 | | |

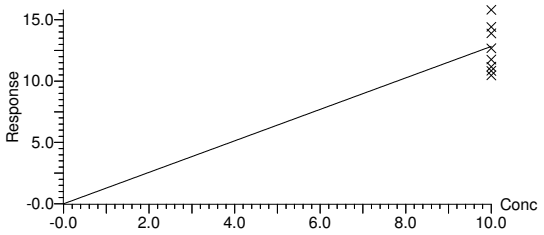


Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICAL_A.qld
Last Altered: Friday, February 28, 2020 09:12:40 Eastern Standard Time
Printed: Friday, February 28, 2020 09:28:57 Eastern Standard Time

**Compound name: M3PFBS**

| | Name | ID | Acq.Date | Acq.Time | RT | IS Area | Area | Conc (ng... | %Rec | RRF | 1º S/N | 2º S/N | (b/a) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | I18529 | IA2-537STD5.0 | 27-Feb-20 | 14:02:18 | 5.875 | 9391.129 | 11904.475 | 9.881 | 98.8 | 1.268 | 3549 | | 1.01 |
| 2 | I18530 | IA2-537STD10.0 | 27-Feb-20 | 14:18:52 | 5.872 | 10693.415 | 11938.699 | 8.703 | 87.0 | 1.116 | 2354 | | 0.96 |
| 3 | I18531 | IA2-537STD50.0 | 27-Feb-20 | 14:35:26 | 5.870 | 7867.362 | 10926.120 | 10.826 | 108.3 | 1.389 | 4067 | | 0.96 |
| 4 | I18532 | IA2-537STD125 | 27-Feb-20 | 14:51:56 | 5.870 | 8781.861 | 10327.150 | 9.167 | 91.7 | 1.176 | 622 | | 0.83 |
| 5 | I18533 | IA2-537STD150 | 27-Feb-20 | 15:08:31 | 5.872 | 7044.307 | 10162.224 | 11.245 | 112.5 | 1.443 | 3115 | | 0.75 |
| 6 | I18534 | IA2-537STD250 | 27-Feb-20 | 15:25:04 | 5.872 | 6617.794 | 9545.156 | 11.243 | 112.4 | 1.442 | 1820 | | 0.70 |
| 7 | I18535 | IA2-537STD500 | 27-Feb-20 | 15:41:35 | 5.870 | 5519.950 | 8726.213 | 12.323 | 123.2 | 1.581 | 533 | | 0.57 |
| 8 | I18539 | IA2-537STD0.5 | 27-Feb-20 | 16:47:48 | 5.868 | 10009.636 | 10848.066 | 8.448 | 84.5 | 1.084 | 1523 | | 0.84 |
| 9 | I18540 | IA2-537STD1.0 | 27-Feb-20 | 17:04:20 | 5.870 | 10521.385 | 11021.960 | 8.166 | 81.7 | 1.048 | 6602 | | 0.82 |

Compound name: M3PFBS
Response Factor: 1.28289
RRF SD: 0.188854, % Relative SD: 14.721
Response type: Internal Std ( Ref 32 ), Area * ( IS Conc. / IS Area )
Curve type: RF



# Initial Calibration Summary
# Form 6
# Semivolatiles

| | | | | | |
|---|---|---|---|---|---|
| Client | : | Soils Engineering Services, Inc. | Lab Number | : | L2009793 |
| Project Name | : | GROSSINGERS | Project Number | : | 9313 |
| Instrument ID | : | LCMS01 | Ical Ref | : | ICAL16567 |
| Calibration dates | : | 02/27/20 14:02 02/27/20 17:04 | | | |

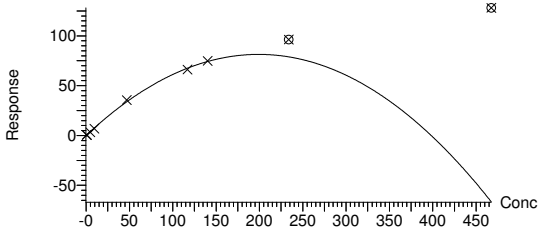


Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICAL_A.qld
Last Altered: Friday, February 28, 2020 09:12:40 Eastern Standard Time
Printed: Friday, February 28, 2020 09:28:57 Eastern Standard Time

**Compound name: 4:2FTS**

| | Name | ID | Acq.Date | Acq.Time | RT | IS Area | Area | Conc (ng... | %Rec | RRF | 1º S/N | 2º S/N | (b/a) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | I18529 | IA2-537STD5.0 | 27-Feb-20 | 14:02:18 | 7.054 | 5134.135 | 1758.998 | 4.234 | 90.6 | 0.733 | 115 | 97 | 0.99 |
| 2 | I18530 | IA2-537STD10.0 | 27-Feb-20 | 14:18:52 | 7.047 | 5498.780 | 3755.704 | 8.534 | 91.3 | 0.730 | 76365 | 410 | 1.16 |
| 3 | I18531 | IA2-537STD50.0 | 27-Feb-20 | 14:35:26 | 7.047 | 5880.164 | 20977.158 | 49.864 | 106.7 | 0.763 | 36776 | 372 | 1.04 |
| 4 | I18532 | IA2-537STD125 | 27-Feb-20 | 14:51:56 | 7.047 | 7283.949 | 48273.207 | 113.234 | 96.9 | 0.567 | 4792 | 5865 | 0.96 |
| 5 | I18533 | IA2-537STD150 | 27-Feb-20 | 15:08:31 | 7.047 | 7855.275 | 58728.438 | 142.184 | 101.4 | 0.533 | 10048 | 2917 | 0.98 |
| 6 | I18534 | IA2-537STD250 | 27-Feb-20 | 15:25:04 | 7.044 | 9988.708 | 96127.430 | | | 0.412 | 12322 | 15570 | 0.93 |
| 7 | I18535 | IA2-537STD500 | 27-Feb-20 | 15:41:35 | 7.036 | 13942.268 | 178618.781 | | | 0.274 | 36539 | 11504 | 0.86 |
| 8 | I18539 | IA2-537STD0.5 | 27-Feb-20 | 16:47:48 | 7.047 | 4735.668 | 182.277 | 0.471 | 100.8 | 0.823 | 14 | 9 | 1.01 |
| 9 | I18540 | IA2-537STD1.0 | 27-Feb-20 | 17:04:20 | 7.047 | 4760.724 | 294.253 | 0.757 | 81.0 | 0.661 | 25 | 187 | 1.13 |

Compound name: 4:2FTS
Coefficient of Determination: R^2 = 0.998242
Calibration curve: -0.0020539 * x^2 + 0.817851 * x
Response type: Internal Std ( Ref 9 ), Area * ( IS Conc. / IS Area )
Curve type: 2nd Order, Origin: Force, Weighting: 1/x, Axis trans: None



# Initial Calibration Summary
# Form 6
# Semivolatiles

| | | | |
|---|---|---|---|
| Client | : Soils Engineering Services, Inc. | Lab Number | : L2009793 |
| Project Name | : GROSSINGERS | Project Number | : 9313 |
| Instrument ID | : LCMS01 | Ical Ref | : ICAL16567 |
| Calibration dates | : 02/27/20 14:02 02/27/20 17:04 | | |

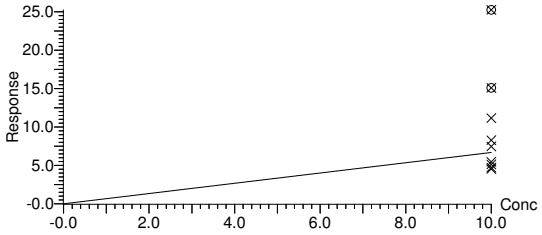


Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICAL_A.qld
Last Altered: Friday, February 28, 2020 09:12:40 Eastern Standard Time
Printed: Friday, February 28, 2020 09:28:57 Eastern Standard Time

**Compound name: M2-4:2FTS**

| | Name | ID | Acq.Date | Acq.Time | RT | IS Area | Area | Conc (ng... | %Rec | RRF | 1º S/N | 2º S/N | (b/a) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | I18529 | IA2-537STD5.0 | 27-Feb-20 | 14:02:18 | 7.054 | 9391.129 | 5134.135 | 8.180 | 81.8 | 0.547 | 2385 | | 1.08 |
| 2 | I18530 | IA2-537STD10.0 | 27-Feb-20 | 14:18:52 | 7.049 | 10693.415 | 5498.780 | 7.694 | 76.9 | 0.514 | 1125 | | 0.97 |
| 3 | I18531 | IA2-537STD50.0 | 27-Feb-20 | 14:35:26 | 7.050 | 7867.362 | 5880.164 | 11.183 | 111.8 | 0.747 | 117849 | | 0.95 |
| 4 | I18532 | IA2-537STD125 | 27-Feb-20 | 14:51:56 | 7.045 | 8781.861 | 7283.949 | 12.410 | 124.1 | 0.829 | 2128 | | 0.99 |
| 5 | I18533 | IA2-537STD150 | 27-Feb-20 | 15:08:31 | 7.049 | 7044.307 | 7855.275 | 16.685 | 166.8 | 1.115 | 589 | | 0.92 |
| 6 | I18534 | IA2-537STD250 | 27-Feb-20 | 15:25:04 | 7.044 | 6617.794 | 9988.708 | 22.583 | 225.8 | 1.509 | 25 | | 0.92 |
| 7 | I18535 | IA2-537STD500 | 27-Feb-20 | 15:41:35 | 7.039 | 5519.950 | 13942.268 | 37.791 | 377.9 | 2.526 | 3356 | | 0.82 |
| 8 | I18539 | IA2-537STD0.5 | 27-Feb-20 | 16:47:48 | 7.043 | 10009.636 | 4735.668 | 7.079 | 70.8 | 0.473 | 1947 | | 1.09 |
| 9 | I18540 | IA2-537STD1.0 | 27-Feb-20 | 17:04:20 | 7.044 | 10521.385 | 4760.724 | 6.770 | 67.7 | 0.452 | 89921 | | 1.03 |

Compound name: M2-4:2FTS
Response Factor: 0.668354
RRF SD: 0.243268, % Relative SD: 36.3981
Response type: Internal Std ( Ref 32 ), Area * ( IS Conc. / IS Area )
Curve type: RF



# Initial Calibration Summary
# Form 6
# Semivolatiles

| | | | | | |
|---|---|---|---|---|---|
| Client | : | Soils Engineering Services, Inc. | Lab Number | : | L2009793 |
| Project Name | : | GROSSINGERS | Project Number | : | 9313 |
| Instrument ID | : | LCMS01 | Ical Ref | : | ICAL16567 |
| Calibration dates | : | 02/27/20 14:02 02/27/20 17:04 | | | |

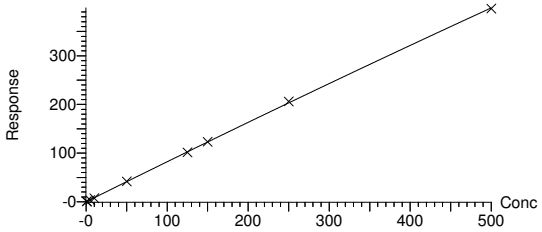


Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICAL_A.qld
Last Altered: Friday, February 28, 2020 09:12:40 Eastern Standard Time
Printed: Friday, February 28, 2020 09:28:57 Eastern Standard Time

**Compound name: PFHxA**

| | Name | ID | Acq.Date | Acq.Time | RT | IS Area | Area | Conc (ng... | %Rec | RRF | 1º S/N | 2º S/N | (b/a) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | I18529 | IA2-537STD5.0 | 27-Feb-20 | 14:02:18 | 7.135 | 76999.281 | 27586.533 | 4.323 | 86.5 | 0.717 | 919 | 55 | 1.04 |
| 2 | I18530 | IA2-537STD10.0 | 27-Feb-20 | 14:18:52 | 7.127 | 78150.375 | 57574.105 | 8.893 | 88.9 | 0.737 | 2491 | 274 | 1.05 |
| 3 | I18531 | IA2-537STD50.0 | 27-Feb-20 | 14:35:26 | 7.128 | 71174.070 | 298865.250 | 50.854 | 101.7 | 0.840 | 9760 | 1002 | 1.07 |
| 4 | I18532 | IA2-537STD125 | 27-Feb-20 | 14:51:56 | 7.126 | 65382.211 | 663067.563 | 123.517 | 98.8 | 0.811 | 17489 | 2422 | 1.04 |
| 5 | I18533 | IA2-537STD150 | 27-Feb-20 | 15:08:31 | 7.129 | 63412.773 | 781257.250 | 150.369 | 100.2 | 0.821 | 21067 | 1471 | 0.96 |
| 6 | I18534 | IA2-537STD250 | 27-Feb-20 | 15:25:04 | 7.125 | 59290.266 | 1222655.750 | 253.744 | 101.5 | 0.825 | 39226 | 4847 | 0.98 |
| 7 | I18535 | IA2-537STD500 | 27-Feb-20 | 15:41:35 | 7.117 | 53405.371 | 2120807.250 | 498.267 | 99.7 | 0.794 | 44683 | 9874 | 0.92 |
| 8 | I18539 | IA2-537STD0.5 | 27-Feb-20 | 16:47:48 | 7.126 | 72987.602 | 3317.243 | 0.548 | 109.7 | 0.909 | 185 | | 1.00 |
| 9 | I18540 | IA2-537STD1.0 | 27-Feb-20 | 17:04:20 | 7.125 | 73498.398 | 5980.390 | 0.982 | 98.2 | 0.814 | 343 | 37 | 1.04 |

Compound name: PFHxA
Coefficient of Determination: R^2 = 0.999697
Calibration curve: -6.42018e-005 * x^2 + 0.828982 * x
Response type: Internal Std ( Ref 11 ), Area * ( IS Conc. / IS Area )
Curve type: 2nd Order, Origin: Force, Weighting: 1/x, Axis trans: None



# Initial Calibration Summary
# Form 6
# Semivolatiles

| | | | | | |
|---|---|---|---|---|---|
| Client | : | Soils Engineering Services, Inc. | Lab Number | : | L2009793 |
| Project Name | : | GROSSINGERS | Project Number | : | 9313 |
| Instrument ID | : | LCMS01 | Ical Ref | : | ICAL16567 |
| Calibration dates | : | 02/27/20 14:02 02/27/20 17:04 | | | |

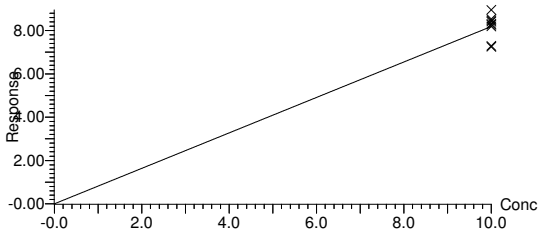


Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICAL_A.qld
Last Altered: Friday, February 28, 2020 09:12:40 Eastern Standard Time
Printed: Friday, February 28, 2020 09:28:57 Eastern Standard Time

**Compound name: M5PFHxA**

| | Name | ID | Acq.Date | Acq.Time | RT | IS Area | Area | Conc (ng... | %Rec | RRF | 1º S/N | 2º S/N | (b/a) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | I18529 | IA2-537STD5.0 | 27-Feb-20 | 14:02:18 | 7.135 | 93068.188 | 76999.281 | 10.105 | 101.1 | 0.827 | 24396 | | 1.00 |
| 2 | I18530 | IA2-537STD10.0 | 27-Feb-20 | 14:18:52 | 7.127 | 95398.117 | 78150.375 | 10.006 | 100.1 | 0.819 | 8457 | | 0.99 |
| 3 | I18531 | IA2-537STD50.0 | 27-Feb-20 | 14:35:26 | 7.128 | 84037.695 | 71174.070 | 10.345 | 103.4 | 0.847 | 14066 | | 1.00 |
| 4 | I18532 | IA2-537STD125 | 27-Feb-20 | 14:51:56 | 7.126 | 78699.977 | 65382.211 | 10.147 | 101.5 | 0.831 | 7348 | | 1.00 |
| 5 | I18533 | IA2-537STD150 | 27-Feb-20 | 15:08:31 | 7.127 | 75403.938 | 63412.773 | 10.272 | 102.7 | 0.841 | 1441 | | 0.99 |
| 6 | I18534 | IA2-537STD250 | 27-Feb-20 | 15:25:04 | 7.123 | 69458.313 | 59290.266 | 10.426 | 104.3 | 0.854 | 4428 | | 1.03 |
| 7 | I18535 | IA2-537STD500 | 27-Feb-20 | 15:41:35 | 7.117 | 59631.082 | 53405.371 | 10.939 | 109.4 | 0.896 | 2816 | | 0.92 |
| 8 | I18539 | IA2-537STD0.5 | 27-Feb-20 | 16:47:48 | 7.126 | 100127.297 | 72987.602 | 8.904 | 89.0 | 0.729 | 17513 | | 0.99 |
| 9 | I18540 | IA2-537STD1.0 | 27-Feb-20 | 17:04:20 | 7.125 | 101367.383 | 73498.398 | 8.856 | 88.6 | 0.725 | 17149 | | 0.96 |

Compound name: M5PFHxA
Response Factor: 0.818717
RRF SD: 0.0564222, % Relative SD: 6.89154
Response type: Internal Std ( Ref 21 ), Area * ( IS Conc. / IS Area )
Curve type: RF



# Initial Calibration Summary
# Form 6
# Semivolatiles

| | | | | | |
|---|---|---|---|---|---|
| Client | : | Soils Engineering Services, Inc. | Lab Number | : | L2009793 |
| Project Name | : | GROSSINGERS | Project Number | : | 9313 |
| Instrument ID | : | LCMS01 | Ical Ref | : | ICAL16567 |
| Calibration dates | : | 02/27/20 14:02 02/27/20 17:04 | | | |

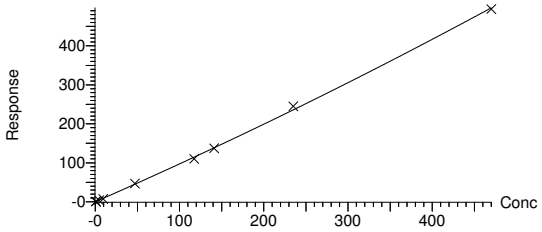


Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICAL_A.qld
Last Altered: Friday, February 28, 2020 09:12:40 Eastern Standard Time
Printed: Friday, February 28, 2020 09:28:57 Eastern Standard Time

**Compound name: PFPeS**

| | Name | ID | Acq.Date | Acq.Time | RT | IS Area | Area | Conc (ng... | %Rec | RRF | 1º S/N | 2º S/N | (b/a) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | I18529 | IA2-537STD5.0 | 27-Feb-20 | 14:02:18 | 7.451 | 11194.032 | 4435.511 | 4.172 | 88.8 | 0.843 | 95754 | 872 | 1.01 |
| 2 | I18530 | IA2-537STD10.0 | 27-Feb-20 | 14:18:52 | 7.441 | 12271.508 | 9210.342 | 7.896 | 84.0 | 0.798 | 3106 | 151 | 1.00 |
| 3 | I18531 | IA2-537STD50.0 | 27-Feb-20 | 14:35:26 | 7.439 | 10437.030 | 48996.762 | 48.892 | 104.0 | 0.999 | 8232 | 457748 | 1.08 |
| 4 | I18532 | IA2-537STD125 | 27-Feb-20 | 14:51:56 | 7.437 | 9613.386 | 106015.398 | 113.087 | 96.2 | 0.939 | 28573 | 5943 | 1.03 |
| 5 | I18533 | IA2-537STD150 | 27-Feb-20 | 15:08:31 | 7.436 | 9204.258 | 126270.188 | 139.785 | 99.1 | 0.973 | 30887 | 18302 | 1.06 |
| 6 | I18534 | IA2-537STD250 | 27-Feb-20 | 15:25:04 | 7.430 | 7778.292 | 190569.000 | 243.620 | 103.7 | 1.043 | 22300 | 49239 | 1.13 |
| 7 | I18535 | IA2-537STD500 | 27-Feb-20 | 15:41:35 | 7.415 | 6310.149 | 311894.594 | 467.221 | 99.4 | 1.052 | 37974 | 12514 | 1.16 |
| 8 | I18539 | IA2-537STD0.5 | 27-Feb-20 | 16:47:48 | 7.442 | 9377.617 | 449.997 | 0.506 | 107.6 | 1.021 | 5 | 3559 | 1.19 |
| 9 | I18540 | IA2-537STD1.0 | 27-Feb-20 | 17:04:20 | 7.434 | 10742.247 | 768.857 | 0.754 | 80.2 | 0.761 | 33 | 30 | 1.16 |

Compound name: PFPeS
Coefficient of Determination: R^2 = 0.999109
Calibration curve: 0.000233612 * x^2 + 0.948755 * x
Response type: Internal Std ( Ref 18 ), Area * ( IS Conc. / IS Area )
Curve type: 2nd Order, Origin: Force, Weighting: 1/x, Axis trans: None



# Initial Calibration Summary
# Form 6
# Semivolatiles

| | | | | | |
|---|---|---|---|---|---|
| Client | : | Soils Engineering Services, Inc. | Lab Number | : | L2009793 |
| Project Name | : | GROSSINGERS | Project Number | : | 9313 |
| Instrument ID | : | LCMS01 | Ical Ref | : | ICAL16567 |
| Calibration dates | : | 02/27/20 14:02 02/27/20 17:04 | | | |

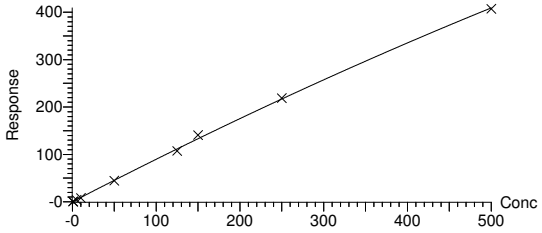


Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICAL_A.qld
Last Altered: Friday, February 28, 2020 09:12:40 Eastern Standard Time
Printed: Friday, February 28, 2020 09:28:57 Eastern Standard Time

**Compound name: PFHpA**

| | Name | ID | Acq.Date | Acq.Time | RT | IS Area | Area | Conc (ng... | %Rec | RRF | 1º S/N | 2º S/N | (b/a) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | I18529 | IA2-537STD5.0 | 27-Feb-20 | 14:02:18 | 8.409 | 90960.586 | 34572.805 | 4.147 | 82.9 | 0.760 | 362 | 225 | 0.97 |
| 2 | I18530 | IA2-537STD10.0 | 27-Feb-20 | 14:18:52 | 8.399 | 91953.430 | 73250.313 | 8.699 | 87.0 | 0.797 | 764 | 294631 | 1.02 |
| 3 | I18531 | IA2-537STD50.0 | 27-Feb-20 | 14:35:26 | 8.405 | 84239.859 | 374813.000 | 49.015 | 98.0 | 0.890 | 5586 | 643 | 0.94 |
| 4 | I18532 | IA2-537STD125 | 27-Feb-20 | 14:51:56 | 8.398 | 74685.898 | 801285.875 | 120.050 | 96.0 | 0.858 | 9545 | 1798 | 1.05 |
| 5 | I18533 | IA2-537STD150 | 27-Feb-20 | 15:08:31 | 8.403 | 69870.023 | 983604.688 | 158.889 | 105.9 | 0.939 | 12436 | 14428 | 1.03 |
| 6 | I18534 | IA2-537STD250 | 27-Feb-20 | 15:25:04 | 8.399 | 67410.773 | 1473721.125 | 251.986 | 100.8 | 0.874 | 14020 | 40878 | 1.01 |
| 7 | I18535 | IA2-537STD500 | 27-Feb-20 | 15:41:35 | 8.394 | 59526.586 | 2424789.250 | 497.361 | 99.5 | 0.815 | 23041 | 4179 | 1.01 |
| 8 | I18539 | IA2-537STD0.5 | 27-Feb-20 | 16:47:48 | 8.398 | 88785.359 | 4136.330 | 0.508 | 101.6 | 0.932 | 52 | 19371 | 1.09 |
| 9 | I18540 | IA2-537STD1.0 | 27-Feb-20 | 17:04:20 | 8.392 | 88560.258 | 6461.678 | 0.795 | 79.5 | 0.730 | 108 | 5 | 0.97 |

Compound name: PFHpA
Coefficient of Determination: R^2 = 0.998889
Calibration curve: -0.000197922 * x^2 + 0.917453 * x
Response type: Internal Std ( Ref 14 ), Area * ( IS Conc. / IS Area )
Curve type: 2nd Order, Origin: Force, Weighting: 1/x, Axis trans: None



# Initial Calibration Summary
# Form 6
# Semivolatiles

| | | | |
|---|---|---|---|
| Client | : Soils Engineering Services, Inc. | Lab Number | : L2009793 |
| Project Name | : GROSSINGERS | Project Number | : 9313 |
| Instrument ID | : LCMS01 | Ical Ref | : ICAL16567 |
| Calibration dates | : 02/27/20 14:02 02/27/20 17:04 | | |

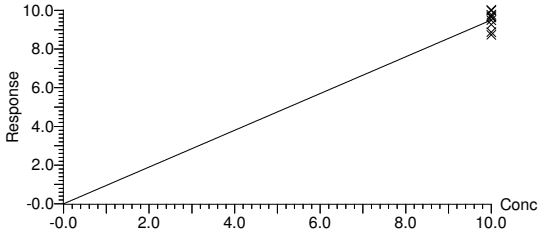


Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICAL_A.qld
Last Altered: Friday, February 28, 2020 09:12:40 Eastern Standard Time
Printed: Friday, February 28, 2020 09:28:57 Eastern Standard Time

**Compound name: M4PFHpA**

| | Name | ID | Acq.Date | Acq.Time | RT | IS Area | Area | Conc (ng... | %Rec | RRF | 1º S/N | 2º S/N | (b/a) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | I18529 | IA2-537STD5.0 | 27-Feb-20 | 14:02:18 | 8.405 | 93068.188 | 90960.586 | 10.290 | 102.9 | 0.977 | 23378 | | 1.02 |
| 2 | I18530 | IA2-537STD10.0 | 27-Feb-20 | 14:18:52 | 8.399 | 95398.117 | 91953.430 | 10.148 | 101.5 | 0.964 | 11553 | | 0.99 |
| 3 | I18531 | IA2-537STD50.0 | 27-Feb-20 | 14:35:26 | 8.402 | 84037.695 | 84239.859 | 10.554 | 105.5 | 1.002 | 1739164 | | 1.03 |
| 4 | I18532 | IA2-537STD125 | 27-Feb-20 | 14:51:56 | 8.398 | 78699.977 | 74685.898 | 9.991 | 99.9 | 0.949 | 1341 | | 1.00 |
| 5 | I18533 | IA2-537STD150 | 27-Feb-20 | 15:08:31 | 8.403 | 75403.938 | 69870.023 | 9.756 | 97.6 | 0.927 | 1392474 | | 1.02 |
| 6 | I18534 | IA2-537STD250 | 27-Feb-20 | 15:25:04 | 8.396 | 69458.313 | 67410.773 | 10.218 | 102.2 | 0.971 | 1304093 | | 1.11 |
| 7 | I18535 | IA2-537STD500 | 27-Feb-20 | 15:41:35 | 8.391 | 59631.082 | 59526.586 | 10.510 | 105.1 | 0.998 | 968 | | 1.08 |
| 8 | I18539 | IA2-537STD0.5 | 27-Feb-20 | 16:47:48 | 8.398 | 100127.297 | 88785.359 | 9.336 | 93.4 | 0.887 | 7137 | | 1.05 |
| 9 | I18540 | IA2-537STD1.0 | 27-Feb-20 | 17:04:20 | 8.392 | 101367.383 | 88560.258 | 9.198 | 92.0 | 0.874 | 2505 | | 1.00 |

Compound name: M4PFHpA
Response Factor: 0.949823
RRF SD: 0.0458482, % Relative SD: 4.82703
Response type: Internal Std ( Ref 21 ), Area * ( IS Conc. / IS Area )
Curve type: RF



# Initial Calibration Summary
# Form 6
# Semivolatiles

| | | | |
|---|---|---|---|
| Client | : Soils Engineering Services, Inc. | Lab Number | : L2009793 |
| Project Name | : GROSSINGERS | Project Number | : 9313 |
| Instrument ID | : LCMS01 | Ical Ref | : ICAL16567 |
| Calibration dates | : 02/27/20 14:02 02/27/20 17:04 | | |

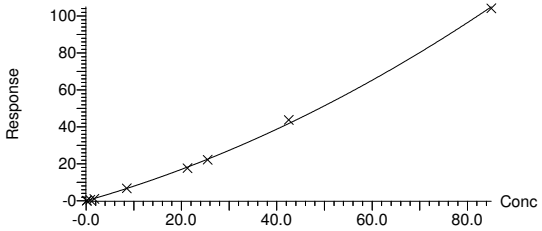


Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICAL_A.qld
Last Altered: Friday, February 28, 2020 09:12:40 Eastern Standard Time
Printed: Friday, February 28, 2020 09:28:57 Eastern Standard Time

**Compound name: br-PFHxS**

| | Name | ID | Acq.Date | Acq.Time | RT | IS Area | Area | Conc (ng... | %Rec | RRF | 1º S/N | 2º S/N | (b/a) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | I18529 | IA2-537STD5.0 | 27-Feb-20 | 14:02:18 | 8.328 | 11194.032 | 559.837 | 0.679 | 79.8 | 0.588 | 71 | | 0.58 |
| 2 | I18530 | IA2-537STD10.0 | 27-Feb-20 | 14:18:52 | 8.319 | 12271.508 | 1270.581 | 1.397 | 82.2 | 0.609 | 304 | | 0.60 |
| 3 | I18531 | IA2-537STD50.0 | 27-Feb-20 | 14:35:26 | 8.325 | 10437.030 | 6982.396 | 8.540 | 100.5 | 0.787 | 390 | 877 | 0.58 |
| 4 | I18532 | IA2-537STD125 | 27-Feb-20 | 14:51:56 | 8.321 | 9613.386 | 16964.984 | 20.643 | 97.1 | 0.830 | 1444 | 1017 | 0.59 |
| 5 | I18533 | IA2-537STD150 | 27-Feb-20 | 15:08:31 | 8.322 | 9204.258 | 20468.014 | 25.216 | 98.9 | 0.872 | 9263 | 521 | 0.61 |
| 6 | I18534 | IA2-537STD250 | 27-Feb-20 | 15:25:04 | 8.318 | 7778.292 | 34080.543 | 44.106 | 103.8 | 1.031 | 9050 | 1561 | 0.60 |
| 7 | I18535 | IA2-537STD500 | 27-Feb-20 | 15:41:35 | 8.313 | 6310.149 | 65752.359 | 84.562 | 99.5 | 1.226 | 7218 | 2159 | 0.60 |
| 8 | I18539 | IA2-537STD0.5 | 27-Feb-20 | 16:47:48 | 8.325 | 9377.617 | 52.373 | 0.076 | 89.6 | 0.657 | 80 | | 0.53 |
| 9 | I18540 | IA2-537STD1.0 | 27-Feb-20 | 17:04:20 | 8.315 | 10742.247 | 110.327 | 0.140 | 82.3 | 0.604 | 64 | | 0.63 |

Compound name: br-PFHxS
Coefficient of Determination: R^2 = 0.999175
Calibration curve: 0.00590398 * x^2 + 0.732997 * x
Response type: Internal Std ( Ref 18 ), Area * ( IS Conc. / IS Area )
Curve type: 2nd Order, Origin: Force, Weighting: 1/x, Axis trans: None



# Initial Calibration Summary
# Form 6
# Semivolatiles

| | | | | | |
|---|---|---|---|---|---|
| Client | : | Soils Engineering Services, Inc. | Lab Number | : | L2009793 |
| Project Name | : | GROSSINGERS | Project Number | : | 9313 |
| Instrument ID | : | LCMS01 | Ical Ref | : | ICAL16567 |
| Calibration dates | : | 02/27/20 14:02 02/27/20 17:04 | | | |

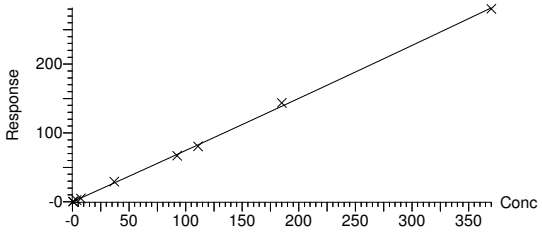


Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICAL_A.qld
Last Altered: Friday, February 28, 2020 09:12:40 Eastern Standard Time
Printed: Friday, February 28, 2020 09:28:57 Eastern Standard Time

**Compound name: L-PFHxS**

| | Name | ID | Acq.Date | Acq.Time | RT | IS Area | Area | Conc (ng... | %Rec | RRF | 1º S/N | 2º S/N | (b/a) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | I18529 | IA2-537STD5.0 | 27-Feb-20 | 14:02:18 | 8.565 | 11194.032 | 2784.762 | 3.364 | 90.9 | 0.672 | 532 | 181 | 0.98 |
| 2 | I18530 | IA2-537STD10.0 | 27-Feb-20 | 14:18:52 | 8.556 | 12271.508 | 5887.751 | 6.487 | 87.7 | 0.648 | 2217 | 1560 | 1.00 |
| 3 | I18531 | IA2-537STD50.0 | 27-Feb-20 | 14:35:26 | 8.562 | 10437.030 | 30587.240 | 39.517 | 106.8 | 0.792 | 2584 | 7938 | 0.97 |
| 4 | I18532 | IA2-537STD125 | 27-Feb-20 | 14:51:56 | 8.554 | 9613.386 | 64287.277 | 89.807 | 97.1 | 0.723 | 8299 | 8158 | 1.00 |
| 5 | I18533 | IA2-537STD150 | 27-Feb-20 | 15:08:31 | 8.559 | 9204.258 | 74057.070 | 107.897 | 97.2 | 0.725 | 50570 | 3897 | 1.01 |
| 6 | I18534 | IA2-537STD250 | 27-Feb-20 | 15:25:04 | 8.556 | 7778.292 | 111633.836 | 191.185 | 103.3 | 0.776 | 44077 | 10485 | 0.98 |
| 7 | I18535 | IA2-537STD500 | 27-Feb-20 | 15:41:35 | 8.547 | 6310.149 | 176928.781 | 368.313 | 99.5 | 0.758 | 29050 | 11721 | 1.02 |
| 8 | I18539 | IA2-537STD0.5 | 27-Feb-20 | 16:47:48 | 8.554 | 9377.617 | 324.156 | 0.468 | 126.4 | 0.934 | 836 | | 1.01 |
| 9 | I18540 | IA2-537STD1.0 | 27-Feb-20 | 17:04:20 | 8.552 | 10742.247 | 527.956 | 0.665 | 89.8 | 0.664 | 393 | | 0.95 |

Compound name: L-PFHxS
Coefficient of Determination: R^2 = 0.999089
Calibration curve: 5.97876e-005 * x^2 + 0.739255 * x
Response type: Internal Std ( Ref 18 ), Area * ( IS Conc. / IS Area )
Curve type: 2nd Order, Origin: Force, Weighting: 1/x, Axis trans: None



# Initial Calibration Summary
# Form 6
# Semivolatiles

| | | | | | |
|---|---|---|---|---|---|
| Client | : | Soils Engineering Services, Inc. | Lab Number | : | L2009793 |
| Project Name | : | GROSSINGERS | Project Number | : | 9313 |
| Instrument ID | : | LCMS01 | Ical Ref | : | ICAL16567 |
| Calibration dates | : | 02/27/20 14:02 02/27/20 17:04 | | | |

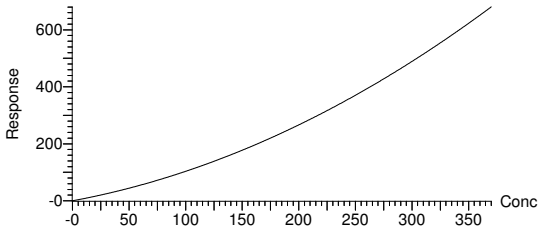


Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICAL_A.qld
Last Altered: Friday, February 28, 2020 09:12:40 Eastern Standard Time
Printed: Friday, February 28, 2020 09:28:57 Eastern Standard Time

**Compound name: PFHxS**

| | Name | ID | Acq.Date | Acq.Time | RT | IS Area | Area | ng/mL | %Rec | RRF | 1º S/N | 2º S/N | (b/a) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | I18529 | IA2-537STD5.0 | 27-Feb-20 | 14:02:18 | | 11194.032 | 3344.599 | 4.043 | | | | | |
| 2 | I18530 | IA2-537STD10.0 | 27-Feb-20 | 14:18:52 | | 12271.508 | 7158.332 | 7.884 | | | | | |
| 3 | I18531 | IA2-537STD50.0 | 27-Feb-20 | 14:35:26 | | 10437.030 | 37569.636 | 48.057 | | | | | |
| 4 | I18532 | IA2-537STD125 | 27-Feb-20 | 14:51:56 | | 9613.386 | 81252.261 | 110.450 | | | | | |
| 5 | I18533 | IA2-537STD150 | 27-Feb-20 | 15:08:31 | | 9204.258 | 94525.084 | 133.113 | | | | | |
| 6 | I18534 | IA2-537STD250 | 27-Feb-20 | 15:25:04 | | 7778.292 | 145714.379 | 235.291 | | | | | |
| 7 | I18535 | IA2-537STD500 | 27-Feb-20 | 15:41:35 | | 6310.149 | 242681.140 | 452.875 | | | | | |
| 8 | I18539 | IA2-537STD0.5 | 27-Feb-20 | 16:47:48 | | 9377.617 | 376.529 | 0.544 | | | | | |
| 9 | I18540 | IA2-537STD1.0 | 27-Feb-20 | 17:04:20 | | 10742.247 | 638.283 | 0.805 | | | | | |

Compound name: PFHxS
Coefficient of Determination: 0.000000
Calibration curve: 0.736126 * x
Response type: Internal Std ( Ref 18 ), Area * ( IS Conc. / IS Area )
Curve type: Linear, Origin: Force, Weighting: 1/x, Axis trans: None



# Initial Calibration Summary
# Form 6
# Semivolatiles

| | | | | | |
|---|---|---|---|---|---|
| Client | : | Soils Engineering Services, Inc. | Lab Number | : | L2009793 |
| Project Name | : | GROSSINGERS | Project Number | : | 9313 |
| Instrument ID | : | LCMS01 | Ical Ref | : | ICAL16567 |
| Calibration dates | : | 02/27/20 14:02 02/27/20 17:04 | | | |

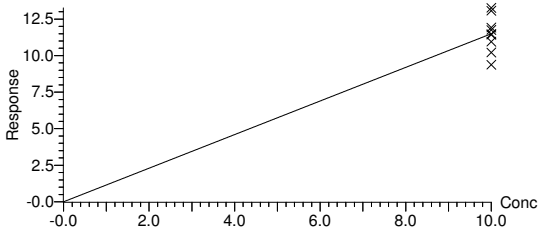


Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICAL_A.qld
Last Altered: Friday, February 28, 2020 09:12:40 Eastern Standard Time
Printed: Friday, February 28, 2020 09:28:57 Eastern Standard Time

**Compound name: M3PFHxS**

| | Name | ID | Acq.Date | Acq.Time | RT | IS Area | Area | Conc (ng... | %Rec | RRF | 1º S/N | 2º S/N | (b/a) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | I18529 | IA2-537STD5.0 | 27-Feb-20 | 14:02:18 | 8.565 | 9391.129 | 11194.032 | 10.371 | 103.7 | 1.192 | 243467 | | 0.93 |
| 2 | I18530 | IA2-537STD10.0 | 27-Feb-20 | 14:18:52 | 8.556 | 10693.415 | 12271.508 | 9.985 | 99.8 | 1.148 | 7 | | 0.96 |
| 3 | I18531 | IA2-537STD50.0 | 27-Feb-20 | 14:35:26 | 8.558 | 7867.362 | 10437.030 | 11.543 | 115.4 | 1.327 | 985 | | 1.08 |
| 4 | I18532 | IA2-537STD125 | 27-Feb-20 | 14:51:56 | 8.554 | 8781.861 | 9613.386 | 9.525 | 95.2 | 1.095 | 204538 | | 1.07 |
| 5 | I18533 | IA2-537STD150 | 27-Feb-20 | 15:08:31 | 8.556 | 7044.307 | 9204.258 | 11.369 | 113.7 | 1.307 | 165 | | 1.27 |
| 6 | I18534 | IA2-537STD250 | 27-Feb-20 | 15:25:04 | 8.552 | 6617.794 | 7778.292 | 10.227 | 102.3 | 1.175 | 316 | | 1.11 |
| 7 | I18535 | IA2-537STD500 | 27-Feb-20 | 15:41:35 | 8.551 | 5519.950 | 6310.149 | 9.946 | 99.5 | 1.143 | 95 | | 0.92 |
| 8 | I18539 | IA2-537STD0.5 | 27-Feb-20 | 16:47:48 | 8.558 | 10009.636 | 9377.617 | 8.151 | 81.5 | 0.937 | 306 | | 0.86 |
| 9 | I18540 | IA2-537STD1.0 | 27-Feb-20 | 17:04:20 | 8.548 | 10521.385 | 10742.247 | 8.883 | 88.8 | 1.021 | 166 | | 0.98 |

Compound name: M3PFHxS
Response Factor: 1.14932
RRF SD: 0.124153, % Relative SD: 10.8024
Response type: Internal Std ( Ref 32 ), Area * ( IS Conc. / IS Area )
Curve type: RF



# Initial Calibration Summary
# Form 6
# Semivolatiles

| | | | | | |
|---|---|---|---|---|---|
| Client | : | Soils Engineering Services, Inc. | Lab Number | : | L2009793 |
| Project Name | : | GROSSINGERS | Project Number | : | 9313 |
| Instrument ID | : | LCMS01 | Ical Ref | : | ICAL16567 |
| Calibration dates | : | 02/27/20 14:02 02/27/20 17:04 | | | |

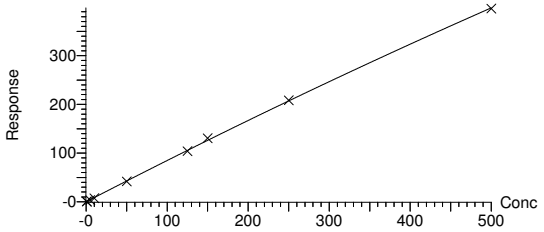


Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICAL_A.qld
Last Altered: Friday, February 28, 2020 09:12:40 Eastern Standard Time
Printed: Friday, February 28, 2020 09:28:57 Eastern Standard Time

**Compound name: br-PFOA**

| | Name | ID | Acq.Date | Acq.Time | RT | IS Area | Area | ng/mL | %Rec | RRF | 1º S/N | 2º S/N | (b/a) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | I18529 | IA2-537STD5.0 | 27-Feb-20 | 14:02:18 | | 92378.477 | | | | | | | |
| 2 | I18530 | IA2-537STD10.0 | 27-Feb-20 | 14:18:52 | | 93629.484 | | | | | | | |
| 3 | I18531 | IA2-537STD50.0 | 27-Feb-20 | 14:35:26 | | 83420.031 | | | | | | | |
| 4 | I18532 | IA2-537STD125 | 27-Feb-20 | 14:51:56 | | 75622.828 | | | | | | | |
| 5 | I18533 | IA2-537STD150 | 27-Feb-20 | 15:08:31 | | 72165.484 | | | | | | | |
| 6 | I18534 | IA2-537STD250 | 27-Feb-20 | 15:25:04 | | 67823.211 | | | | | | 1 | |
| 7 | I18535 | IA2-537STD500 | 27-Feb-20 | 15:41:35 | | 60240.891 | | | | | | | |
| 8 | I18539 | IA2-537STD0.5 | 27-Feb-20 | 16:47:48 | | 85646.797 | | | | | | | |
| 9 | I18540 | IA2-537STD1.0 | 27-Feb-20 | 17:04:20 | | 86720.586 | | | | | | | |

Compound name: L-PFOA
Coefficient of Determination: R^2 = 0.999473
Calibration curve: -0.000128513 * x^2 + 0.860482 * x
Response type: Internal Std ( Ref 23 ), Area * ( IS Conc. / IS Area )
Curve type: 2nd Order, Origin: Force, Weighting: 1/x, Axis trans: None



# Initial Calibration Summary
# Form 6
# Semivolatiles

| | | | |
|---|---|---|---|
| Client | : Soils Engineering Services, Inc. | Lab Number | : L2009793 |
| Project Name | : GROSSINGERS | Project Number | : 9313 |
| Instrument ID | : LCMS01 | Ical Ref | : ICAL16567 |
| Calibration dates | : 02/27/20 14:02 02/27/20 17:04 | | |

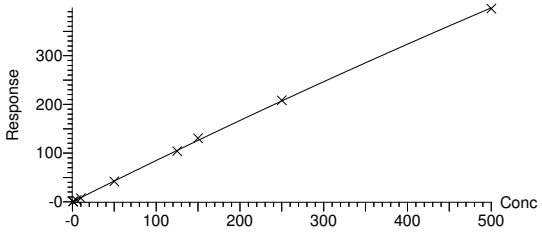


Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICAL_A.qld
Last Altered: Friday, February 28, 2020 09:12:40 Eastern Standard Time
Printed: Friday, February 28, 2020 09:28:57 Eastern Standard Time

**Compound name: L-PFOA**

| | Name | ID | Acq.Date | Acq.Time | RT | IS Area | Area | Conc (ng... | %Rec | RRF | 1º S/N | 2º S/N | (b/a) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | I18529 | IA2-537STD5.0 | 27-Feb-20 | 14:02:18 | 9.354 | 92378.477 | 33626.664 | 4.233 | 84.7 | 0.728 | 367 | 3 | 0.96 |
| 2 | I18530 | IA2-537STD10.0 | 27-Feb-20 | 14:18:52 | 9.347 | 93629.484 | 71443.797 | 8.879 | 88.8 | 0.763 | 652 | 230 | 0.98 |
| 3 | I18531 | IA2-537STD50.0 | 27-Feb-20 | 14:35:26 | 9.349 | 83420.031 | 350745.688 | 49.225 | 98.4 | 0.841 | 4181 | 900321 | 1.01 |
| 4 | I18532 | IA2-537STD125 | 27-Feb-20 | 14:51:56 | 9.341 | 75622.828 | 784709.063 | 122.845 | 98.3 | 0.830 | 10105 | 3202 | 1.05 |
| 5 | I18533 | IA2-537STD150 | 27-Feb-20 | 15:08:31 | 9.351 | 72165.484 | 941813.500 | 155.269 | 103.5 | 0.870 | 12020 | 3339 | 1.02 |
| 6 | I18534 | IA2-537STD250 | 27-Feb-20 | 15:25:04 | 9.342 | 67823.211 | 1412851.375 | 251.540 | 100.6 | 0.833 | 11766 | 2234 | 1.07 |
| 7 | I18535 | IA2-537STD500 | 27-Feb-20 | 15:41:35 | 9.341 | 60240.891 | 2389997.000 | 498.126 | 99.6 | 0.793 | 21642 | 8721 | 1.02 |
| 8 | I18539 | IA2-537STD0.5 | 27-Feb-20 | 16:47:48 | 9.345 | 85646.797 | 4059.672 | 0.551 | 110.2 | 0.948 | 65 | 1645 | 1.24 |
| 9 | I18540 | IA2-537STD1.0 | 27-Feb-20 | 17:04:20 | 9.334 | 86720.586 | 6073.813 | 0.814 | 81.4 | 0.700 | 78 | 20462 | 1.32 |

Compound name: L-PFOA
Coefficient of Determination: R^2 = 0.999473
Calibration curve: -0.000128513 * x^2 + 0.860482 * x
Response type: Internal Std ( Ref 23 ), Area * ( IS Conc. / IS Area )
Curve type: 2nd Order, Origin: Force, Weighting: 1/x, Axis trans: None



# Initial Calibration Summary
# Form 6
# Semivolatiles

| | | | |
|---|---|---|---|
| Client | : Soils Engineering Services, Inc. | Lab Number | : L2009793 |
| Project Name | : GROSSINGERS | Project Number | : 9313 |
| Instrument ID | : LCMS01 | Ical Ref | : ICAL16567 |
| Calibration dates | : 02/27/20 14:02 02/27/20 17:04 | | |

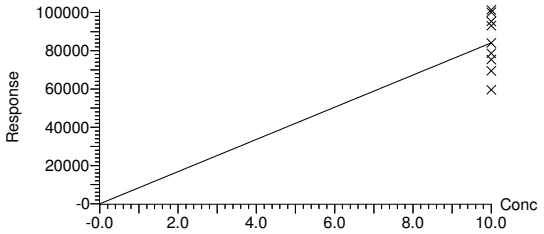


Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICAL_A.qld
Last Altered: Friday, February 28, 2020 09:12:40 Eastern Standard Time
Printed: Friday, February 28, 2020 09:28:57 Eastern Standard Time

**Compound name: M2PFOA**

| | Name | ID | Acq.Date | Acq.Time | RT | IS Area | Area | ng/mL | %Rec | RRF | 1º S/N | 2º S/N | (b/a) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | I18529 | IA2-537STD5.0 | 27-Feb-20 | 14:02:18 | 9.354 | | 93068.188 | 11.062 | 110.6 | 9306.819 | 661 | | 0.97 |
| 2 | I18530 | IA2-537STD10.0 | 27-Feb-20 | 14:18:52 | 9.347 | | 95398.117 | 11.339 | 113.4 | 9539.812 | 1112 | | 0.95 |
| 3 | I18531 | IA2-537STD50.0 | 27-Feb-20 | 14:35:26 | 9.349 | | 84037.695 | 9.989 | 99.9 | 8403.770 | 94245 | | 1.04 |
| 4 | I18532 | IA2-537STD125 | 27-Feb-20 | 14:51:56 | 9.341 | | 78699.977 | 9.354 | 93.5 | 7869.998 | 966 | | 1.05 |
| 5 | I18533 | IA2-537STD150 | 27-Feb-20 | 15:08:31 | 9.351 | | 75403.938 | 8.963 | 89.6 | 7540.394 | 2509 | | 1.01 |
| 6 | I18534 | IA2-537STD250 | 27-Feb-20 | 15:25:04 | 9.347 | | 69458.313 | 8.256 | 82.6 | 6945.831 | 4163 | | 0.95 |
| 7 | I18535 | IA2-537STD500 | 27-Feb-20 | 15:41:35 | 9.337 | | 59631.082 | 7.088 | 70.9 | 5963.108 | 6090 | | 1.14 |
| 8 | I18539 | IA2-537STD0.5 | 27-Feb-20 | 16:47:48 | 9.345 | | 100127.297 | 11.901 | 119.0 | 10012.730 | 2353753 | | 1.02 |
| 9 | I18540 | IA2-537STD1.0 | 27-Feb-20 | 17:04:20 | 9.338 | | 101367.383 | 12.049 | 120.5 | 10136.738 | 2376850 | | 0.97 |

Compound name: M2PFOA
Response Factor: 8413.24
RRF SD: 1449.57, % Relative SD: 17.2296
Response type: External Std, Area
Curve type: RF



# Initial Calibration Summary
# Form 6
# Semivolatiles

| | | | | | |
|---|---|---|---|---|---|
| Client | : | Soils Engineering Services, Inc. | Lab Number | : | L2009793 |
| Project Name | : | GROSSINGERS | Project Number | : | 9313 |
| Instrument ID | : | LCMS01 | Ical Ref | : | ICAL16567 |
| Calibration dates | : | 02/27/20 14:02 02/27/20 17:04 | | | |

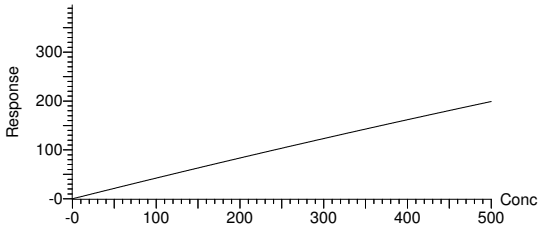


Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICAL_A.qld
Last Altered: Friday, February 28, 2020 09:12:40 Eastern Standard Time
Printed: Friday, February 28, 2020 09:28:57 Eastern Standard Time

**Compound name: PFOA**

| | Name | ID | Acq.Date | Acq.Time | RT | IS Area | Area | ng/mL | %Rec | RRF | 1º S/N | 2º S/N | (b/a) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | I18529 | IA2-537STD5.0 | 27-Feb-20 | 14:02:18 | | 92378.477 | 33626.664 | 4.233 | | | | | |
| 2 | I18530 | IA2-537STD10.0 | 27-Feb-20 | 14:18:52 | | 93629.484 | 71443.797 | 8.879 | | | | | |
| 3 | I18531 | IA2-537STD50.0 | 27-Feb-20 | 14:35:26 | | 83420.031 | 350745.688 | 49.225 | | | | | |
| 4 | I18532 | IA2-537STD125 | 27-Feb-20 | 14:51:56 | | 75622.828 | 784709.063 | 122.845 | | | | | |
| 5 | I18533 | IA2-537STD150 | 27-Feb-20 | 15:08:31 | | 72165.484 | 941813.500 | 155.269 | | | | | |
| 6 | I18534 | IA2-537STD250 | 27-Feb-20 | 15:25:04 | | 67823.211 | 1412851.375 | 251.540 | | | | | |
| 7 | I18535 | IA2-537STD500 | 27-Feb-20 | 15:41:35 | | 60240.891 | 2389997.000 | 498.126 | | | | | |
| 8 | I18539 | IA2-537STD0.5 | 27-Feb-20 | 16:47:48 | | 85646.797 | 4059.672 | 0.551 | | | | | |
| 9 | I18540 | IA2-537STD1.0 | 27-Feb-20 | 17:04:20 | | 86720.586 | 6073.813 | 0.814 | | | | | |

Compound name: PFOA
Coefficient of Determination: 0.000000
Calibration curve: 0.430241 * x
Response type: Internal Std ( Ref 23 ), Area * ( IS Conc. / IS Area )
Curve type: Linear, Origin: Force, Weighting: 1/x, Axis trans: None



# Initial Calibration Summary
# Form 6
# Semivolatiles

| | | | |
|---|---|---|---|
| Client | : Soils Engineering Services, Inc. | Lab Number | : L2009793 |
| Project Name | : GROSSINGERS | Project Number | : 9313 |
| Instrument ID | : LCMS01 | Ical Ref | : ICAL16567 |
| Calibration dates | : 02/27/20 14:02 02/27/20 17:04 | | |

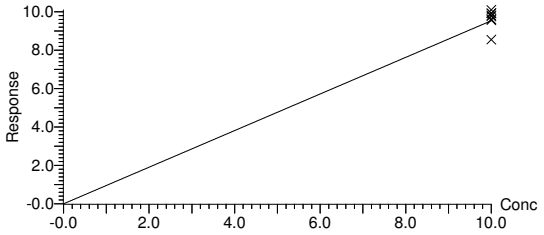


Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICAL_A.qld
Last Altered: Friday, February 28, 2020 09:12:40 Eastern Standard Time
Printed: Friday, February 28, 2020 09:28:57 Eastern Standard Time

**Compound name: M8PFOA**

| | Name | ID | Acq.Date | Acq.Time | RT | IS Area | Area | Conc (ng... | %Rec | RRF | 1º S/N | 2º S/N | (b/a) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | I18529 | IA2-537STD5.0 | 27-Feb-20 | 14:02:18 | 9.354 | 93068.188 | 92378.477 | 10.409 | 104.1 | 0.993 | 1937489 | | 0.94 |
| 2 | I18530 | IA2-537STD10.0 | 27-Feb-20 | 14:18:52 | 9.347 | 95398.117 | 93629.484 | 10.292 | 102.9 | 0.981 | 5075 | | 0.98 |
| 3 | I18531 | IA2-537STD50.0 | 27-Feb-20 | 14:35:26 | 9.349 | 84037.695 | 83420.031 | 10.410 | 104.1 | 0.993 | 1708300 | | 0.98 |
| 4 | I18532 | IA2-537STD125 | 27-Feb-20 | 14:51:56 | 9.341 | 78699.977 | 75622.828 | 10.077 | 100.8 | 0.961 | 1493437 | | 1.03 |
| 5 | I18533 | IA2-537STD150 | 27-Feb-20 | 15:08:31 | 9.351 | 75403.938 | 72165.484 | 10.036 | 100.4 | 0.957 | 1443650 | | 1.00 |
| 6 | I18534 | IA2-537STD250 | 27-Feb-20 | 15:25:04 | 9.343 | 69458.313 | 67823.211 | 10.240 | 102.4 | 0.976 | 1308445 | | 1.09 |
| 7 | I18535 | IA2-537STD500 | 27-Feb-20 | 15:41:35 | 9.337 | 59631.082 | 60240.891 | 10.594 | 105.9 | 1.010 | 1615 | | 1.03 |
| 8 | I18539 | IA2-537STD0.5 | 27-Feb-20 | 16:47:48 | 9.345 | 100127.297 | 85646.797 | 8.970 | 89.7 | 0.855 | 1757151 | | 0.96 |
| 9 | I18540 | IA2-537STD1.0 | 27-Feb-20 | 17:04:20 | 9.338 | 101367.383 | 86720.586 | 8.972 | 89.7 | 0.856 | 1742526 | | 0.97 |

Compound name: M8PFOA
Response Factor: 0.953581
RRF SD: 0.0579709, % Relative SD: 6.07929
Response type: Internal Std ( Ref 21 ), Area * ( IS Conc. / IS Area )
Curve type: RF



# Initial Calibration Summary
# Form 6
# Semivolatiles

| | | | | | |
|---|---|---|---|---|---|
| Client | : | Soils Engineering Services, Inc. | Lab Number | : | L2009793 |
| Project Name | : | GROSSINGERS | Project Number | : | 9313 |
| Instrument ID | : | LCMS01 | Ical Ref | : | ICAL16567 |
| Calibration dates | : | 02/27/20 14:02 02/27/20 17:04 | | | |

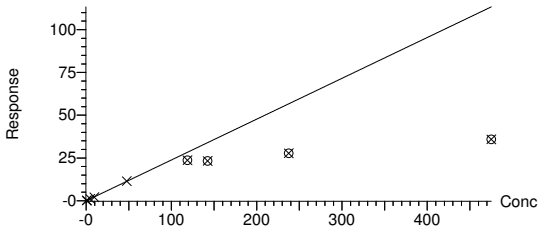


Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICAL_A.qld
Last Altered: Friday, February 28, 2020 09:12:40 Eastern Standard Time
Printed: Friday, February 28, 2020 09:28:57 Eastern Standard Time

**Compound name: 6:2FTS**

| | Name | ID | Acq.Date | Acq.Time | RT | IS Area | Area | Conc (ng... | %Rec | RRF | 1º S/N | 2º S/N | (b/a) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | I18529 | IA2-537STD5.0 | 27-Feb-20 | 14:02:18 | 9.312 | 3563.207 | 407.566 | 4.795 | 100.9 | 0.241 | 1648 | 714 | 1.00 |
| 2 | I18530 | IA2-537STD10.0 | 27-Feb-20 | 14:18:52 | 9.305 | 4355.449 | 908.136 | 8.740 | 92.0 | 0.219 | 19043 | 28471 | 0.93 |
| 3 | I18531 | IA2-537STD50.0 | 27-Feb-20 | 14:35:26 | 9.308 | 4256.029 | 4878.899 | 48.052 | 101.2 | 0.241 | 2258 | 4558 | 0.99 |
| 4 | I18532 | IA2-537STD125 | 27-Feb-20 | 14:51:56 | 9.300 | 4596.429 | 10866.652 | 99.099 | 83.5 | 0.199 | 2758 | 8612 | 0.99 |
| 5 | I18533 | IA2-537STD150 | 27-Feb-20 | 15:08:31 | 9.310 | 5548.471 | 12931.055 | 97.691 | 68.6 | 0.164 | 2700 | 4395 | 0.96 |
| 6 | I18534 | IA2-537STD250 | 27-Feb-20 | 15:25:04 | 9.301 | 7645.305 | 21260.941 | 116.569 | 49.1 | 0.117 | 13709 | 7994 | 0.99 |
| 7 | I18535 | IA2-537STD500 | 27-Feb-20 | 15:41:35 | 9.295 | 10648.935 | 38207.949 | 150.398 | 31.7 | 0.076 | 11971 | 8854 | 1.03 |
| 8 | I18539 | IA2-537STD0.5 | 27-Feb-20 | 16:47:48 | 9.316 | 4064.310 | 42.286 | 0.436 | 91.8 | 0.219 | 31 | 15 | 0.71 |
| 9 | I18540 | IA2-537STD1.0 | 27-Feb-20 | 17:04:20 | 9.297 | 3636.959 | 99.960 | 1.152 | 121.3 | 0.289 | 6 | 72 | 1.00 |

Compound name: 6:2FTS
Coefficient of Determination: R^2 = 0.997965
Calibration curve: 0.238564 * x
Response type: Internal Std ( Ref 25 ), Area * ( IS Conc. / IS Area )
Curve type: Linear, Origin: Force, Weighting: 1/x, Axis trans: None



# Initial Calibration Summary
# Form 6
# Semivolatiles

| | | | | | |
|---|---|---|---|---|---|
| Client | : | Soils Engineering Services, Inc. | Lab Number | : | L2009793 |
| Project Name | : | GROSSINGERS | Project Number | : | 9313 |
| Instrument ID | : | LCMS01 | Ical Ref | : | ICAL16567 |
| Calibration dates | : | 02/27/20 14:02 02/27/20 17:04 | | | |

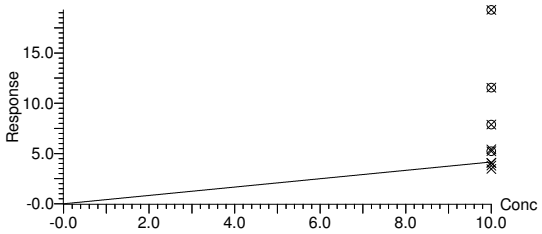


Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICAL_A.qld
Last Altered: Friday, February 28, 2020 09:12:40 Eastern Standard Time
Printed: Friday, February 28, 2020 09:28:57 Eastern Standard Time

**Compound name: M2-6:2FTS**

| | Name | ID | Acq.Date | Acq.Time | RT | IS Area | Area | Conc (ng... | %Rec | RRF | 1º S/N | 2º S/N | (b/a) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | I18529 | IA2-537STD5.0 | 27-Feb-20 | 14:02:18 | 9.308 | 9391.129 | 3563.207 | 9.123 | 91.2 | 0.379 | 292 | | 1.08 |
| 2 | I18530 | IA2-537STD10.0 | 27-Feb-20 | 14:18:52 | 9.305 | 10693.415 | 4355.449 | 9.794 | 97.9 | 0.407 | 93724 | | 0.99 |
| 3 | I18531 | IA2-537STD50.0 | 27-Feb-20 | 14:35:26 | 9.308 | 7867.362 | 4256.029 | 13.008 | 130.1 | 0.541 | 90984 | | 0.92 |
| 4 | I18532 | IA2-537STD125 | 27-Feb-20 | 14:51:56 | 9.304 | 8781.861 | 4596.429 | 12.585 | 125.9 | 0.523 | 97200 | | 0.79 |
| 5 | I18533 | IA2-537STD150 | 27-Feb-20 | 15:08:31 | 9.310 | 7044.307 | 5548.471 | 18.939 | 189.4 | 0.788 | 328 | | 1.01 |
| 6 | I18534 | IA2-537STD250 | 27-Feb-20 | 15:25:04 | 9.301 | 6617.794 | 7645.305 | 27.779 | 277.8 | 1.155 | 160134 | | 1.00 |
| 7 | I18535 | IA2-537STD500 | 27-Feb-20 | 15:41:35 | 9.295 | 5519.950 | 10648.935 | 46.387 | 463.9 | 1.929 | 221970 | | 1.05 |
| 8 | I18539 | IA2-537STD0.5 | 27-Feb-20 | 16:47:48 | 9.304 | 10009.636 | 4064.310 | 9.763 | 97.6 | 0.406 | 85639 | | 0.96 |
| 9 | I18540 | IA2-537STD1.0 | 27-Feb-20 | 17:04:20 | 9.297 | 10521.385 | 3636.959 | 8.312 | 83.1 | 0.346 | 40 | | 0.99 |

Compound name: M2-6:2FTS
Response Factor: 0.415882
RRF SD: 0.0742913, % Relative SD: 17.8635
Response type: Internal Std ( Ref 32 ), Area * ( IS Conc. / IS Area )
Curve type: RF



# Initial Calibration Summary
# Form 6
# Semivolatiles

| | | | | | |
|---|---|---|---|---|---|
| Client | : | Soils Engineering Services, Inc. | Lab Number | : | L2009793 |
| Project Name | : | GROSSINGERS | Project Number | : | 9313 |
| Instrument ID | : | LCMS01 | Ical Ref | : | ICAL16567 |
| Calibration dates | : | 02/27/20 14:02 02/27/20 17:04 | | | |

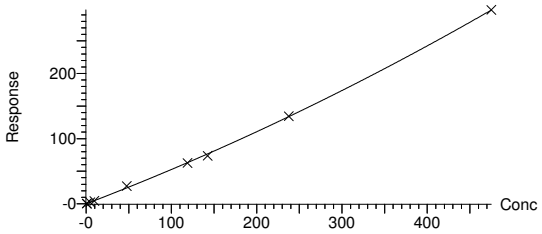


Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICAL_A.qld
Last Altered: Friday, February 28, 2020 09:12:40 Eastern Standard Time
Printed: Friday, February 28, 2020 09:28:57 Eastern Standard Time

**Compound name: PFHpS**

| | Name | ID | Acq.Date | Acq.Time | RT | IS Area | Area | Conc (ng... | %Rec | RRF | 1º S/N | 2º S/N | (b/a) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | I18529 | IA2-537STD5.0 | 27-Feb-20 | 14:02:18 | 9.435 | 11718.485 | 2526.212 | 4.300 | 90.5 | 0.454 | 54248 | 45543 | 1.27 |
| 2 | I18530 | IA2-537STD10.0 | 27-Feb-20 | 14:18:52 | 9.437 | 11646.159 | 5058.142 | 8.644 | 91.0 | 0.457 | 108221 | 108101 | 0.93 |
| 3 | I18531 | IA2-537STD50.0 | 27-Feb-20 | 14:35:26 | 9.439 | 10818.837 | 29451.385 | 52.941 | 111.5 | 0.573 | 11441 | 574035 | 0.97 |
| 4 | I18532 | IA2-537STD125 | 27-Feb-20 | 14:51:56 | 9.431 | 9250.913 | 58092.289 | 118.157 | 99.5 | 0.529 | 5013 | 16385 | 1.02 |
| 5 | I18533 | IA2-537STD150 | 27-Feb-20 | 15:08:31 | 9.441 | 9727.753 | 71784.641 | 137.523 | 96.5 | 0.518 | 1456090 | 953 | 0.98 |
| 6 | I18534 | IA2-537STD250 | 27-Feb-20 | 15:25:04 | 9.432 | 7525.810 | 101142.914 | 238.568 | 100.4 | 0.566 | 7659 | 12117 | 1.04 |
| 7 | I18535 | IA2-537STD500 | 27-Feb-20 | 15:41:35 | 9.431 | 5671.231 | 168801.906 | 475.440 | 100.1 | 0.627 | 2099 | 7713 | 1.01 |
| 8 | I18539 | IA2-537STD0.5 | 27-Feb-20 | 16:47:48 | 9.431 | 12059.226 | 292.711 | 0.485 | 102.1 | 0.511 | 6924 | 33 | 1.00 |
| 9 | I18540 | IA2-537STD1.0 | 27-Feb-20 | 17:04:20 | 9.420 | 9845.821 | 448.124 | 0.910 | 95.7 | 0.479 | 10216 | 11 | 1.05 |

Compound name: PFHpS
Coefficient of Determination: R^2 = 0.999237
Calibration curve: 0.000264716 * x^2 + 0.500186 * x
Response type: Internal Std ( Ref 33 ), Area * ( IS Conc. / IS Area )
Curve type: 2nd Order, Origin: Force, Weighting: 1/x, Axis trans: None



# Initial Calibration Summary
# Form 6
# Semivolatiles

| | | | | | |
|---|---|---|---|---|---|
| Client | : | Soils Engineering Services, Inc. | Lab Number | : | L2009793 |
| Project Name | : | GROSSINGERS | Project Number | : | 9313 |
| Instrument ID | : | LCMS01 | Ical Ref | : | ICAL16567 |
| Calibration dates | : | 02/27/20 14:02 02/27/20 17:04 | | | |

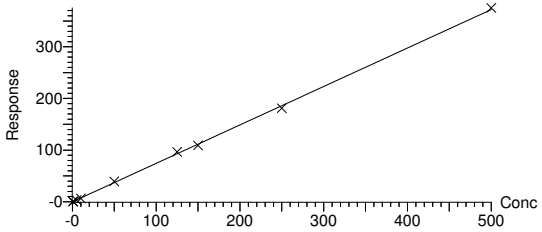


Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICAL_A.qld
Last Altered: Friday, February 28, 2020 09:12:40 Eastern Standard Time
Printed: Friday, February 28, 2020 09:28:57 Eastern Standard Time

**Compound name: PFNA**

| | Name | ID | Acq.Date | Acq.Time | RT | IS Area | Area | Conc (ng... | %Rec | RRF | 1º S/N | 2º S/N | (b/a) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | I18529 | IA2-537STD5.0 | 27-Feb-20 | 14:02:18 | 10.0... | 95964.969 | 31433.725 | 4.402 | 88.0 | 0.655 | 469 | 124798 | 0.95 |
| 2 | I18530 | IA2-537STD10.0 | 27-Feb-20 | 14:18:52 | 10.0... | 93872.930 | 62461.043 | 8.943 | 89.4 | 0.665 | 862 | 267286 | 0.92 |
| 3 | I18531 | IA2-537STD50.0 | 27-Feb-20 | 14:35:26 | 10.0... | 83156.852 | 327237.781 | 52.888 | 105.8 | 0.787 | 1813 | 5879 | 1.02 |
| 4 | I18532 | IA2-537STD125 | 27-Feb-20 | 14:51:56 | 10.0... | 71523.797 | 690355.500 | 129.723 | 103.8 | 0.772 | 7776 | 2698175 | 0.92 |
| 5 | I18533 | IA2-537STD150 | 27-Feb-20 | 15:08:31 | 10.1... | 71577.570 | 780272.625 | 146.509 | 97.7 | 0.727 | 13031 | 5605 | 0.90 |
| 6 | I18534 | IA2-537STD250 | 27-Feb-20 | 15:25:04 | 10.0... | 66425.828 | 1202890.625 | 243.380 | 97.4 | 0.724 | 16961 | 5077908 | 1.00 |
| 7 | I18535 | IA2-537STD500 | 27-Feb-20 | 15:41:35 | 10.0... | 51921.512 | 1948726.750 | 504.428 | 100.9 | 0.751 | 18476 | 34462 | 0.99 |
| 8 | I18539 | IA2-537STD0.5 | 27-Feb-20 | 16:47:48 | 10.0... | 84464.977 | 2719.855 | 0.433 | 86.6 | 0.644 | 38 | 17919 | 1.07 |
| 9 | I18540 | IA2-537STD1.0 | 27-Feb-20 | 17:04:20 | 10.0... | 86878.703 | 5135.311 | 0.794 | 79.4 | 0.591 | 60 | 31 | 1.00 |

Compound name: PFNA
Coefficient of Determination: R^2 = 0.999182
Calibration curve: 0.744055 * x
Response type: Internal Std ( Ref 28 ), Area * ( IS Conc. / IS Area )
Curve type: Linear, Origin: Force, Weighting: 1/x, Axis trans: None



# Initial Calibration Summary
# Form 6
# Semivolatiles

| | | | |
|---|---|---|---|
| Client | : Soils Engineering Services, Inc. | Lab Number | : L2009793 |
| Project Name | : GROSSINGERS | Project Number | : 9313 |
| Instrument ID | : LCMS01 | Ical Ref | : ICAL16567 |
| Calibration dates | : 02/27/20 14:02 02/27/20 17:04 | | |

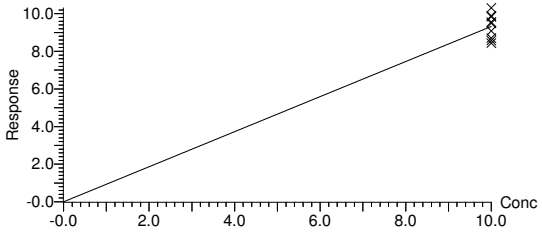


Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICAL_A.qld
Last Altered: Friday, February 28, 2020 09:12:40 Eastern Standard Time
Printed: Friday, February 28, 2020 09:28:57 Eastern Standard Time

**Compound name: M9PFNA**

| | Name | ID | Acq.Date | Acq.Time | RT | IS Area | Area | Conc (ng... | %Rec | RRF | 1º S/N | 2º S/N | (b/a) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | I18529 | IA2-537STD5.0 | 27-Feb-20 | 14:02:18 | 10.0... | 93068.188 | 95964.969 | 11.060 | 110.6 | 1.031 | 1602935 | | 0.90 |
| 2 | I18530 | IA2-537STD10.0 | 27-Feb-20 | 14:18:52 | 10.0... | 95398.117 | 93872.930 | 10.555 | 105.6 | 0.984 | 1560678 | | 0.92 |
| 3 | I18531 | IA2-537STD50.0 | 27-Feb-20 | 14:35:26 | 10.0... | 84037.695 | 83156.852 | 10.614 | 106.1 | 0.990 | 5320 | | 1.00 |
| 4 | I18532 | IA2-537STD125 | 27-Feb-20 | 14:51:56 | 10.0... | 78699.977 | 71523.797 | 9.748 | 97.5 | 0.909 | 2887 | | 0.91 |
| 5 | I18533 | IA2-537STD150 | 27-Feb-20 | 15:08:31 | 10.0... | 75403.938 | 71577.570 | 10.182 | 101.8 | 0.949 | 1201 | | 1.00 |
| 6 | I18534 | IA2-537STD250 | 27-Feb-20 | 15:25:04 | 10.0... | 69458.313 | 66425.828 | 10.258 | 102.6 | 0.956 | 1094826 | | 0.98 |
| 7 | I18535 | IA2-537STD500 | 27-Feb-20 | 15:41:35 | 10.0... | 59631.082 | 51921.512 | 9.340 | 93.4 | 0.871 | 4482 | | 0.96 |
| 8 | I18539 | IA2-537STD0.5 | 27-Feb-20 | 16:47:48 | 10.0... | 100127.297 | 84464.977 | 9.049 | 90.5 | 0.844 | 1391714 | | 0.92 |
| 9 | I18540 | IA2-537STD1.0 | 27-Feb-20 | 17:04:20 | 10.0... | 101367.383 | 86878.703 | 9.193 | 91.9 | 0.857 | 1468898 | | 0.96 |

Compound name: M9PFNA
Response Factor: 0.932269
RRF SD: 0.0656282, % Relative SD: 7.03961
Response type: Internal Std ( Ref 21 ), Area * ( IS Conc. / IS Area )
Curve type: RF



# Initial Calibration Summary
# Form 6
# Semivolatiles

| | | | |
|---|---|---|---|
| Client | : Soils Engineering Services, Inc. | Lab Number | : L2009793 |
| Project Name | : GROSSINGERS | Project Number | : 9313 |
| Instrument ID | : LCMS01 | Ical Ref | : ICAL16567 |
| Calibration dates | : 02/27/20 14:02 02/27/20 17:04 | | |

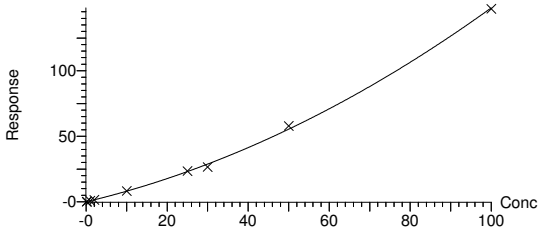


Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICAL_A.qld
Last Altered: Friday, February 28, 2020 09:12:40 Eastern Standard Time
Printed: Friday, February 28, 2020 09:28:57 Eastern Standard Time

**Compound name: br-PFOS**

| | Name | ID | Acq.Date | Acq.Time | RT | IS Area | Area | Conc (ng... | %Rec | RRF | 1º S/N | 2º S/N | (b/a) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | I18529 | IA2-537STD5.0 | 27-Feb-20 | 14:02:18 | 9.958 | 11718.485 | 783.779 | 0.900 | 90.0 | 0.669 | 105 | 2970 | 0.41 |
| 2 | I18530 | IA2-537STD10.0 | 27-Feb-20 | 14:18:52 | 9.887 | 11646.159 | 1640.697 | 1.877 | 93.8 | 0.704 | 519 | 38 | 2.43 |
| 3 | I18531 | IA2-537STD50.0 | 27-Feb-20 | 14:35:26 | 9.958 | 10818.837 | 8975.997 | 10.210 | 102.1 | 0.830 | 4011 | 195 | 0.40 |
| 4 | I18532 | IA2-537STD125 | 27-Feb-20 | 14:51:56 | 9.952 | 9250.913 | 21667.051 | 25.323 | 101.3 | 0.937 | 2924 | 2166 | 0.39 |
| 5 | I18533 | IA2-537STD150 | 27-Feb-20 | 15:08:31 | 9.959 | 9727.753 | 25841.545 | 28.096 | 93.7 | 0.885 | 3885 | 2088 | 0.41 |
| 6 | I18534 | IA2-537STD250 | 27-Feb-20 | 15:25:04 | 9.953 | 7525.810 | 43614.066 | 51.700 | 103.4 | 1.159 | 7922 | 2028 | 0.39 |
| 7 | I18535 | IA2-537STD500 | 27-Feb-20 | 15:41:35 | 9.952 | 5671.231 | 83526.133 | 99.682 | 99.7 | 1.473 | 8227 | 2878 | 0.40 |
| 8 | I18539 | IA2-537STD0.5 | 27-Feb-20 | 16:47:48 | 9.952 | 12059.226 | 99.985 | 0.112 | 112.4 | 0.829 | 1082 | 4 | 0.38 |
| 9 | I18540 | IA2-537STD1.0 | 27-Feb-20 | 17:04:20 | 9.942 | 9845.821 | 154.865 | 0.213 | 106.5 | 0.786 | 7 | 4 | 0.36 |

Compound name: br-PFOS
Coefficient of Determination: R^2 = 0.999045
Calibration curve: 0.00743162 * x^2 + 0.736714 * x
Response type: Internal Std ( Ref 33 ), Area * ( IS Conc. / IS Area )
Curve type: 2nd Order, Origin: Force, Weighting: 1/x, Axis trans: None



# Initial Calibration Summary
# Form 6
# Semivolatiles

| | | | | | |
|---|---|---|---|---|---|
| Client | : | Soils Engineering Services, Inc. | Lab Number | : | L2009793 |
| Project Name | : | GROSSINGERS | Project Number | : | 9313 |
| Instrument ID | : | LCMS01 | Ical Ref | : | ICAL16567 |
| Calibration dates | : | 02/27/20 14:02 02/27/20 17:04 | | | |

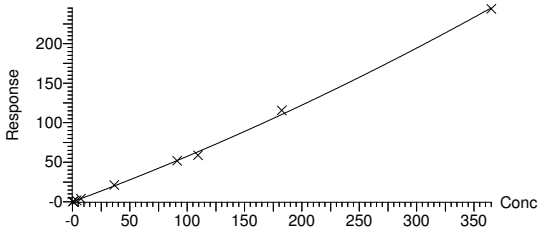


Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICAL_A.qld
Last Altered: Friday, February 28, 2020 09:12:40 Eastern Standard Time
Printed: Friday, February 28, 2020 09:28:57 Eastern Standard Time

**Compound name: L-PFOS**

| | Name | ID | Acq.Date | Acq.Time | RT | IS Area | Area | Conc (ng... | %Rec | RRF | 1º S/N | 2º S/N | (b/a) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | I18529 | IA2-537STD5.0 | 27-Feb-20 | 14:02:18 | 10.1... | 11718.485 | 2167.418 | 3.428 | 93.9 | 0.507 | 621 | 28154 | 0.93 |
| 2 | I18530 | IA2-537STD10.0 | 27-Feb-20 | 14:18:52 | 10.1... | 11646.159 | 4483.462 | 7.118 | 97.5 | 0.527 | 2820 | 339 | 0.92 |
| 3 | I18531 | IA2-537STD50.0 | 27-Feb-20 | 14:35:26 | 10.1... | 10818.837 | 22900.135 | 38.328 | 105.0 | 0.580 | 20112 | 1605 | 0.90 |
| 4 | I18532 | IA2-537STD125 | 27-Feb-20 | 14:51:56 | 10.1... | 9250.913 | 48143.723 | 91.054 | 99.8 | 0.570 | 12901 | 16620 | 0.96 |
| 5 | I18533 | IA2-537STD150 | 27-Feb-20 | 15:08:31 | 10.1... | 9727.753 | 57190.742 | 102.137 | 93.3 | 0.537 | 16869 | 14984 | 0.94 |
| 6 | I18534 | IA2-537STD250 | 27-Feb-20 | 15:25:04 | 10.1... | 7525.810 | 86943.906 | 190.076 | 104.2 | 0.633 | 30872 | 13362 | 0.92 |
| 7 | I18535 | IA2-537STD500 | 27-Feb-20 | 15:41:35 | 10.1... | 5671.231 | 138349.719 | 363.427 | 99.6 | 0.668 | 27041 | 15729 | 0.93 |
| 8 | I18539 | IA2-537STD0.5 | 27-Feb-20 | 16:47:48 | 10.1... | 12059.226 | 207.903 | 0.320 | 87.7 | 0.472 | 3885 | 60 | 0.93 |
| 9 | I18540 | IA2-537STD1.0 | 27-Feb-20 | 17:04:20 | 10.1... | 9845.821 | 402.574 | 0.759 | 104.0 | 0.560 | 29 | 30 | 0.90 |

Compound name: L-PFOS
Coefficient of Determination: R^2 = 0.998790
Calibration curve: 0.000366026 * x^2 + 0.538225 * x
Response type: Internal Std ( Ref 33 ), Area * ( IS Conc. / IS Area )
Curve type: 2nd Order, Origin: Force, Weighting: 1/x, Axis trans: None



# Initial Calibration Summary
# Form 6
# Semivolatiles

| | | | | | |
|---|---|---|---|---|---|
| Client | : | Soils Engineering Services, Inc. | Lab Number | : | L2009793 |
| Project Name | : | GROSSINGERS | Project Number | : | 9313 |
| Instrument ID | : | LCMS01 | Ical Ref | : | ICAL16567 |
| Calibration dates | : | 02/27/20 14:02 02/27/20 17:04 | | | |

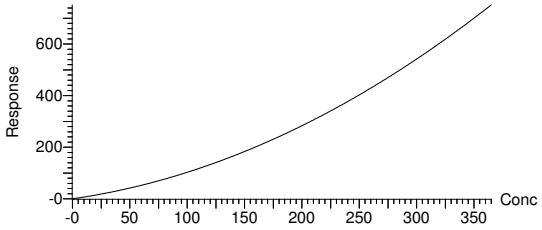


Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICAL_A.qld
Last Altered: Friday, February 28, 2020 09:12:40 Eastern Standard Time
Printed: Friday, February 28, 2020 09:28:57 Eastern Standard Time

**Compound name: PFOS**

| | Name | ID | Acq.Date | Acq.Time | RT | IS Area | Area | ng/mL | %Rec | RRF | 1º S/N | 2º S/N | (b/a) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | I18529 | IA2-537STD5.0 | 27-Feb-20 | 14:02:18 | | 11718.485 | 2951.197 | 4.328 | | | | | |
| 2 | I18530 | IA2-537STD10.0 | 27-Feb-20 | 14:18:52 | | 11646.159 | 6124.159 | 8.995 | | | | | |
| 3 | I18531 | IA2-537STD50.0 | 27-Feb-20 | 14:35:26 | | 10818.837 | 31876.132 | 48.538 | | | | | |
| 4 | I18532 | IA2-537STD125 | 27-Feb-20 | 14:51:56 | | 9250.913 | 69810.774 | 116.377 | | | | | |
| 5 | I18533 | IA2-537STD150 | 27-Feb-20 | 15:08:31 | | 9727.753 | 83032.287 | 130.233 | | | | | |
| 6 | I18534 | IA2-537STD250 | 27-Feb-20 | 15:25:04 | | 7525.810 | 130557.972 | 241.776 | | | | | |
| 7 | I18535 | IA2-537STD500 | 27-Feb-20 | 15:41:35 | | 5671.231 | 221875.852 | 463.109 | | | | | |
| 8 | I18539 | IA2-537STD0.5 | 27-Feb-20 | 16:47:48 | | 12059.226 | 307.888 | 0.433 | | | | | |
| 9 | I18540 | IA2-537STD1.0 | 27-Feb-20 | 17:04:20 | | 9845.821 | 557.439 | 0.972 | | | | | |

Compound name: PFOS
Coefficient of Determination: 0.000000
Calibration curve: 0.63747 * x
Response type: Internal Std ( Ref 33 ), Area * ( IS Conc. / IS Area )
Curve type: Linear, Origin: Force, Weighting: 1/x, Axis trans: None



# Initial Calibration Summary
# Form 6
# Semivolatiles

| | | | | | |
|---|---|---|---|---|---|
| Client | : | Soils Engineering Services, Inc. | Lab Number | : | L2009793 |
| Project Name | : | GROSSINGERS | Project Number | : | 9313 |
| Instrument ID | : | LCMS01 | Ical Ref | : | ICAL16567 |
| Calibration dates | : | 02/27/20 14:02 02/27/20 17:04 | | | |

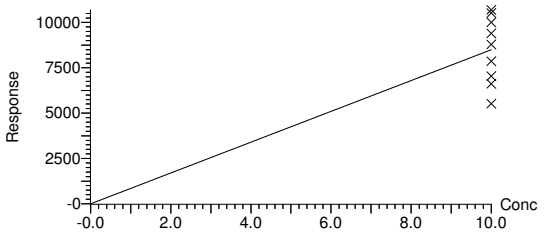


Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICAL_A.qld
Last Altered: Friday, February 28, 2020 09:12:40 Eastern Standard Time
Printed: Friday, February 28, 2020 09:28:57 Eastern Standard Time

**Compound name: M4PFOS**

| | Name | ID | Acq.Date | Acq.Time | RT | IS Area | Area | Conc (ng... | %Rec | RRF | 1º S/N | 2º S/N | (b/a) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | I18529 | IA2-537STD5.0 | 27-Feb-20 | 14:02:18 | 10.1... | | 9391.129 | 11.056 | 110.6 | 939.113 | 1378 | | 0.91 |
| 2 | I18530 | IA2-537STD10.0 | 27-Feb-20 | 14:18:52 | 10.1... | | 10693.415 | 12.589 | 125.9 | 1069.342 | 615 | | 0.95 |
| 3 | I18531 | IA2-537STD50.0 | 27-Feb-20 | 14:35:26 | 10.1... | | 7867.362 | 9.262 | 92.6 | 786.736 | 128486 | | 0.93 |
| 4 | I18532 | IA2-537STD125 | 27-Feb-20 | 14:51:56 | 10.1... | | 8781.861 | 10.339 | 103.4 | 878.186 | 621 | | 0.96 |
| 5 | I18533 | IA2-537STD150 | 27-Feb-20 | 15:08:31 | 10.1... | | 7044.307 | 8.293 | 82.9 | 704.431 | 114994 | | 0.94 |
| 6 | I18534 | IA2-537STD250 | 27-Feb-20 | 15:25:04 | 10.1... | | 6617.794 | 7.791 | 77.9 | 661.779 | 108137 | | 1.02 |
| 7 | I18535 | IA2-537STD500 | 27-Feb-20 | 15:41:35 | 10.1... | | 5519.950 | 6.499 | 65.0 | 551.995 | 88952 | | 0.94 |
| 8 | I18539 | IA2-537STD0.5 | 27-Feb-20 | 16:47:48 | 10.1... | | 10009.636 | 11.784 | 117.8 | 1000.964 | 170952 | | 0.91 |
| 9 | I18540 | IA2-537STD1.0 | 27-Feb-20 | 17:04:20 | 10.1... | | 10521.385 | 12.387 | 123.9 | 1052.139 | 918 | | 0.95 |

Compound name: M4PFOS
Response Factor: 849.409
RRF SD: 183.684, % Relative SD: 21.625
Response type: External Std, Area
Curve type: RF



# Initial Calibration Summary
# Form 6
# Semivolatiles

| | | | | | |
|---|---|---|---|---|---|
| Client | : | Soils Engineering Services, Inc. | Lab Number | : | L2009793 |
| Project Name | : | GROSSINGERS | Project Number | : | 9313 |
| Instrument ID | : | LCMS01 | Ical Ref | : | ICAL16567 |
| Calibration dates | : | 02/27/20 14:02 02/27/20 17:04 | | | |

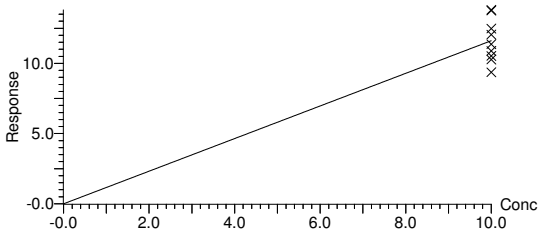


Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICAL_A.qld
Last Altered: Friday, February 28, 2020 09:12:40 Eastern Standard Time
Printed: Friday, February 28, 2020 09:28:57 Eastern Standard Time

**Compound name: M8PFOS**

| | Name | ID | Acq.Date | Acq.Time | RT | IS Area | Area | Conc (ng... | %Rec | RRF | 1º S/N | 2º S/N | (b/a) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | I18529 | IA2-537STD5.0 | 27-Feb-20 | 14:02:18 | 10.1... | 9391.129 | 11718.485 | 10.745 | 107.5 | 1.248 | 204497 | | 0.88 |
| 2 | I18530 | IA2-537STD10.0 | 27-Feb-20 | 14:18:52 | 10.1... | 10693.415 | 11646.159 | 9.378 | 93.8 | 1.089 | 719 | | 0.94 |
| 3 | I18531 | IA2-537STD50.0 | 27-Feb-20 | 14:35:26 | 10.1... | 7867.362 | 10818.837 | 11.842 | 118.4 | 1.375 | 397 | | 1.02 |
| 4 | I18532 | IA2-537STD125 | 27-Feb-20 | 14:51:56 | 10.1... | 8781.861 | 9250.913 | 9.071 | 90.7 | 1.053 | 150755 | | 0.94 |
| 5 | I18533 | IA2-537STD150 | 27-Feb-20 | 15:08:31 | 10.1... | 7044.307 | 9727.753 | 11.891 | 118.9 | 1.381 | 176 | | 0.94 |
| 6 | I18534 | IA2-537STD250 | 27-Feb-20 | 15:25:04 | 10.1... | 6617.794 | 7525.810 | 9.793 | 97.9 | 1.137 | 121071 | | 1.03 |
| 7 | I18535 | IA2-537STD500 | 27-Feb-20 | 15:41:35 | 10.1... | 5519.950 | 5671.231 | 8.847 | 88.5 | 1.027 | 312 | | 1.05 |
| 8 | I18539 | IA2-537STD0.5 | 27-Feb-20 | 16:47:48 | 10.1... | 10009.636 | 12059.226 | 10.374 | 103.7 | 1.205 | 722 | | 0.94 |
| 9 | I18540 | IA2-537STD1.0 | 27-Feb-20 | 17:04:20 | 10.1... | 10521.385 | 9845.821 | 8.058 | 80.6 | 0.936 | 160598 | | 0.86 |

Compound name: M8PFOS
Response Factor: 1.16129
RRF SD: 0.153934, % Relative SD: 13.2555
Response type: Internal Std ( Ref 32 ), Area * ( IS Conc. / IS Area )
Curve type: RF



# Initial Calibration Summary
# Form 6
# Semivolatiles

| | | | | | |
|---|---|---|---|---|---|
| Client | : | Soils Engineering Services, Inc. | Lab Number | : | L2009793 |
| Project Name | : | GROSSINGERS | Project Number | : | 9313 |
| Instrument ID | : | LCMS01 | Ical Ref | : | ICAL16567 |
| Calibration dates | : | 02/27/20 14:02 02/27/20 17:04 | | | |

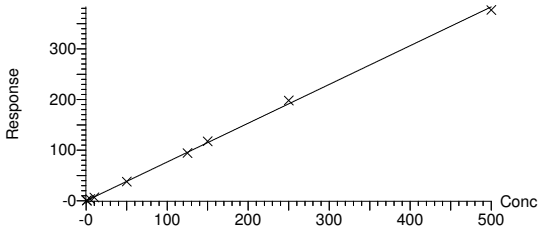


Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICAL_A.qld
Last Altered: Friday, February 28, 2020 09:12:40 Eastern Standard Time
Printed: Friday, February 28, 2020 09:28:57 Eastern Standard Time

**Compound name: PFDA**

| | Name | ID | Acq.Date | Acq.Time | RT | IS Area | Area | Conc (ng... | %Rec | RRF | 1º S/N | 2º S/N | (b/a) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | I18529 | IA2-537STD5.0 | 27-Feb-20 | 14:02:18 | 10.7... | 88966.984 | 28374.779 | 4.164 | 83.3 | 0.638 | 983 | 152 | 0.94 |
| 2 | I18530 | IA2-537STD10.0 | 27-Feb-20 | 14:18:52 | 10.7... | 88326.609 | 58492.285 | 8.646 | 86.5 | 0.662 | 2628 | 238367 | 0.87 |
| 3 | I18531 | IA2-537STD50.0 | 27-Feb-20 | 14:35:26 | 10.7... | 79103.945 | 301249.438 | 49.719 | 99.4 | 0.762 | 4184 | 1023 | 0.94 |
| 4 | I18532 | IA2-537STD125 | 27-Feb-20 | 14:51:56 | 10.7... | 65619.195 | 617393.063 | 122.835 | 98.3 | 0.753 | 7264 | 1641 | 0.93 |
| 5 | I18533 | IA2-537STD150 | 27-Feb-20 | 15:08:31 | 10.7... | 61123.406 | 719876.125 | 153.759 | 102.5 | 0.785 | 5129 | 4683 | 0.94 |
| 6 | I18534 | IA2-537STD250 | 27-Feb-20 | 15:25:04 | 10.7... | 53262.887 | 1056450.125 | 258.950 | 103.6 | 0.793 | 11616 | 4157687 | 1.05 |
| 7 | I18535 | IA2-537STD500 | 27-Feb-20 | 15:41:35 | 10.7... | 45589.348 | 1718521.000 | 492.133 | 98.4 | 0.754 | 15026 | 3396 | 0.97 |
| 8 | I18539 | IA2-537STD0.5 | 27-Feb-20 | 16:47:48 | 10.7... | 85360.250 | 3119.056 | 0.477 | 95.4 | 0.731 | 75 | 15236 | 0.97 |
| 9 | I18540 | IA2-537STD1.0 | 27-Feb-20 | 17:04:20 | 10.7... | 86921.727 | 5443.025 | 0.818 | 81.8 | 0.626 | 74 | 22569 | 0.94 |

Compound name: PFDA
Coefficient of Determination: R^2 = 0.999127
Calibration curve: 0.765965 * x
Response type: Internal Std ( Ref 36 ), Area * ( IS Conc. / IS Area )
Curve type: Linear, Origin: Force, Weighting: 1/x, Axis trans: None



# Initial Calibration Summary
# Form 6
# Semivolatiles

| | | | |
|---|---|---|---|
| Client | : Soils Engineering Services, Inc. | Lab Number | : L2009793 |
| Project Name | : GROSSINGERS | Project Number | : 9313 |
| Instrument ID | : LCMS01 | Ical Ref | : ICAL16567 |
| Calibration dates | : 02/27/20 14:02 02/27/20 17:04 | | |

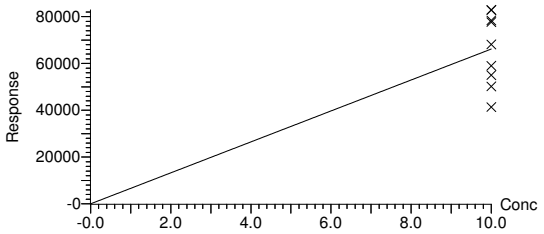


Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICAL_A.qld
Last Altered: Friday, February 28, 2020 09:12:40 Eastern Standard Time
Printed: Friday, February 28, 2020 09:28:57 Eastern Standard Time

**Compound name: M2PFDA**

| | Name | ID | Acq.Date | Acq.Time | RT | IS Area | Area | Conc (ng... | %Rec | RRF | 1º S/N | 2º S/N | (b/a) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | I18529 | IA2-537STD5.0 | 27-Feb-20 | 14:02:18 | 10.7... | | 77657.359 | 11.740 | 117.4 | 7765.736 | 17676 | | 0.96 |
| 2 | I18530 | IA2-537STD10.0 | 27-Feb-20 | 14:18:52 | 10.7... | | 78374.711 | 11.848 | 118.5 | 7837.471 | 15988 | | 1.01 |
| 3 | I18531 | IA2-537STD50.0 | 27-Feb-20 | 14:35:26 | 10.7... | | 68134.172 | 10.300 | 103.0 | 6813.417 | 15667 | | 0.95 |
| 4 | I18532 | IA2-537STD125 | 27-Feb-20 | 14:51:56 | 10.7... | | 59026.023 | 8.923 | 89.2 | 5902.602 | 14305 | | 0.93 |
| 5 | I18533 | IA2-537STD150 | 27-Feb-20 | 15:08:31 | 10.7... | | 54996.473 | 8.314 | 83.1 | 5499.647 | 13758 | | 0.94 |
| 6 | I18534 | IA2-537STD250 | 27-Feb-20 | 15:25:04 | 10.7... | | 50150.867 | 7.582 | 75.8 | 5015.087 | 10378 | | 1.03 |
| 7 | I18535 | IA2-537STD500 | 27-Feb-20 | 15:41:35 | 10.7... | | 41307.793 | 6.245 | 62.4 | 4130.779 | 9403 | | 0.97 |
| 8 | I18539 | IA2-537STD0.5 | 27-Feb-20 | 16:47:48 | 10.7... | | 82886.930 | 12.530 | 125.3 | 8288.693 | 13655 | | 0.98 |
| 9 | I18540 | IA2-537STD1.0 | 27-Feb-20 | 17:04:20 | 10.7... | | 82804.273 | 12.518 | 125.2 | 8280.427 | 11882 | | 0.96 |

Compound name: M2PFDA
Response Factor: 6614.87
RRF SD: 1537.67, % Relative SD: 23.2457
Response type: External Std, Area
Curve type: RF



# Initial Calibration Summary
# Form 6
# Semivolatiles

| | | | | | |
|---|---|---|---|---|---|
| Client | : | Soils Engineering Services, Inc. | Lab Number | : | L2009793 |
| Project Name | : | GROSSINGERS | Project Number | : | 9313 |
| Instrument ID | : | LCMS01 | Ical Ref | : | ICAL16567 |
| Calibration dates | : | 02/27/20 14:02 02/27/20 17:04 | | | |

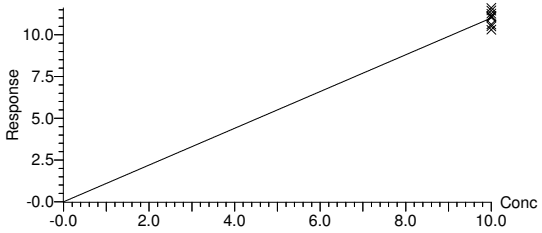


Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICAL_A.qld
Last Altered: Friday, February 28, 2020 09:12:40 Eastern Standard Time
Printed: Friday, February 28, 2020 09:28:57 Eastern Standard Time

**Compound name: M6PFDA**

| | Name | ID | Acq.Date | Acq.Time | RT | IS Area | Area | Conc (ng... | %Rec | RRF | 1º S/N | 2º S/N | (b/a) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | I18529 | IA2-537STD5.0 | 27-Feb-20 | 14:02:18 | 10.7... | 77657.359 | 88966.984 | 10.413 | 104.1 | 1.146 | 1653693 | | 0.96 |
| 2 | I18530 | IA2-537STD10.0 | 27-Feb-20 | 14:18:52 | 10.7... | 78374.711 | 88326.609 | 10.243 | 102.4 | 1.127 | 2058 | | 1.01 |
| 3 | I18531 | IA2-537STD50.0 | 27-Feb-20 | 14:35:26 | 10.7... | 68134.172 | 79103.945 | 10.552 | 105.5 | 1.161 | 8096 | | 0.93 |
| 4 | I18532 | IA2-537STD125 | 27-Feb-20 | 14:51:56 | 10.7... | 59026.023 | 65619.195 | 10.104 | 101.0 | 1.112 | 7804 | | 0.90 |
| 5 | I18533 | IA2-537STD150 | 27-Feb-20 | 15:08:31 | 10.7... | 54996.473 | 61123.406 | 10.102 | 101.0 | 1.111 | 1105754 | | 0.92 |
| 6 | I18534 | IA2-537STD250 | 27-Feb-20 | 15:25:04 | 10.7... | 50150.867 | 53262.887 | 9.653 | 96.5 | 1.062 | 980 | | 1.02 |
| 7 | I18535 | IA2-537STD500 | 27-Feb-20 | 15:41:35 | 10.7... | 41307.793 | 45589.348 | 10.031 | 100.3 | 1.104 | 826126 | | 0.98 |
| 8 | I18539 | IA2-537STD0.5 | 27-Feb-20 | 16:47:48 | 10.7... | 82886.930 | 85360.250 | 9.360 | 93.6 | 1.030 | 6398 | | 0.97 |
| 9 | I18540 | IA2-537STD1.0 | 27-Feb-20 | 17:04:20 | 10.7... | 82804.273 | 86921.727 | 9.541 | 95.4 | 1.050 | 4204 | | 0.97 |

Compound name: M6PFDA
Response Factor: 1.10022
RRF SD: 0.0443023, % Relative SD: 4.02667
Response type: Internal Std ( Ref 35 ), Area * ( IS Conc. / IS Area )
Curve type: RF



# Initial Calibration Summary
# Form 6
# Semivolatiles

| | | | | | |
|---|---|---|---|---|---|
| Client | : | Soils Engineering Services, Inc. | Lab Number | : | L2009793 |
| Project Name | : | GROSSINGERS | Project Number | : | 9313 |
| Instrument ID | : | LCMS01 | Ical Ref | : | ICAL16567 |
| Calibration dates | : | 02/27/20 14:02 02/27/20 17:04 | | | |

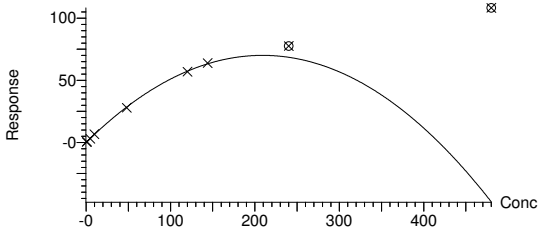


Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICAL_A.qld
Last Altered: Friday, February 28, 2020 09:12:40 Eastern Standard Time
Printed: Friday, February 28, 2020 09:28:57 Eastern Standard Time

**Compound name: 8:2FTS**

| | Name | ID | Acq.Date | Acq.Time | RT | IS Area | Area | Conc (ng... | %Rec | RRF | 1º S/N | 2º S/N | (b/a) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | I18529 | IA2-537STD5.0 | 27-Feb-20 | 14:02:18 | 10.7... | 2127.701 | 650.963 | 4.613 | 96.1 | 0.637 | 14177 | 510 | 1.03 |
| 2 | I18530 | IA2-537STD10.0 | 27-Feb-20 | 14:18:52 | 10.711 | 2138.415 | 1436.721 | 10.272 | 107.0 | 0.700 | 1196 | 538 | 0.95 |
| 3 | I18531 | IA2-537STD50.0 | 27-Feb-20 | 14:35:26 | 10.7... | 2351.443 | 6599.380 | 47.176 | 98.3 | 0.585 | 145218 | 1549 | 1.03 |
| 4 | I18532 | IA2-537STD125 | 27-Feb-20 | 14:51:56 | 10.7... | 2492.435 | 14184.246 | 118.395 | 98.7 | 0.474 | 7881 | 7934 | 0.99 |
| 5 | I18533 | IA2-537STD150 | 27-Feb-20 | 15:08:31 | 10.711 | 2549.115 | 16264.744 | 146.456 | 101.7 | 0.443 | 11566 | 218287 | 1.00 |
| 6 | I18534 | IA2-537STD250 | 27-Feb-20 | 15:25:04 | 10.7... | 3225.862 | 25025.311 | | | 0.323 | 8458 | 3760 | 0.96 |
| 7 | I18535 | IA2-537STD500 | 27-Feb-20 | 15:41:35 | 10.6... | 3821.055 | 41377.727 | | | 0.226 | 5174 | 10615 | 1.03 |
| 8 | I18539 | IA2-537STD0.5 | 27-Feb-20 | 16:47:48 | 10.7... | 1976.099 | 69.515 | 0.525 | 109.4 | 0.733 | 139 | 10 | 0.81 |
| 9 | I18540 | IA2-537STD1.0 | 27-Feb-20 | 17:04:20 | 10.7... | 2019.154 | 139.744 | 1.035 | 107.8 | 0.721 | 2970 | 1681 | 1.13 |

Compound name: 8:2FTS
Coefficient of Determination: R^2 = 0.999538
Calibration curve: -0.001604 * x^2 + 0.670578 * x
Response type: Internal Std ( Ref 38 ), Area * ( IS Conc. / IS Area )
Curve type: 2nd Order, Origin: Force, Weighting: 1/x, Axis trans: None



# Initial Calibration Summary
# Form 6
# Semivolatiles

| | | | |
|---|---|---|---|
| Client | : Soils Engineering Services, Inc. | Lab Number | : L2009793 |
| Project Name | : GROSSINGERS | Project Number | : 9313 |
| Instrument ID | : LCMS01 | Ical Ref | : ICAL16567 |
| Calibration dates | : 02/27/20 14:02 02/27/20 17:04 | | |

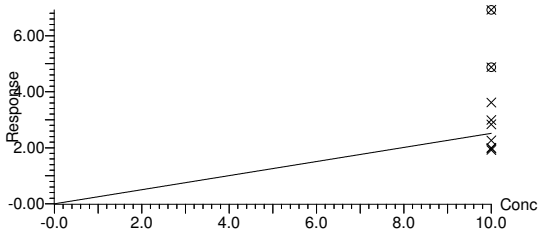


Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICAL_A.qld
Last Altered: Friday, February 28, 2020 09:12:40 Eastern Standard Time
Printed: Friday, February 28, 2020 09:28:57 Eastern Standard Time

**Compound name: M2-8:2FTS**

| | Name | ID | Acq.Date | Acq.Time | RT | IS Area | Area | Conc (ng... | %Rec | RRF | 1º S/N | 2º S/N | (b/a) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | I18529 | IA2-537STD5.0 | 27-Feb-20 | 14:02:18 | 10.7... | 9391.129 | 2127.701 | 9.009 | 90.1 | 0.227 | 39119 | | 0.89 |
| 2 | I18530 | IA2-537STD10.0 | 27-Feb-20 | 14:18:52 | 10.7... | 10693.415 | 2138.415 | 7.952 | 79.5 | 0.200 | 38513 | | 0.96 |
| 3 | I18531 | IA2-537STD50.0 | 27-Feb-20 | 14:35:26 | 10.7... | 7867.362 | 2351.443 | 11.885 | 118.8 | 0.299 | 42023 | | 1.03 |
| 4 | I18532 | IA2-537STD125 | 27-Feb-20 | 14:51:56 | 10.7... | 8781.861 | 2492.435 | 11.285 | 112.9 | 0.284 | 332 | | 1.02 |
| 5 | I18533 | IA2-537STD150 | 27-Feb-20 | 15:08:31 | 10.7... | 7044.307 | 2549.115 | 14.389 | 143.9 | 0.362 | 839 | | 1.01 |
| 6 | I18534 | IA2-537STD250 | 27-Feb-20 | 15:25:04 | 10.7... | 6617.794 | 3225.862 | 19.382 | 193.8 | 0.487 | 529 | | 0.95 |
| 7 | I18535 | IA2-537STD500 | 27-Feb-20 | 15:41:35 | 10.6... | 5519.950 | 3821.055 | 27.525 | 275.2 | 0.692 | 328 | | 1.01 |
| 8 | I18539 | IA2-537STD0.5 | 27-Feb-20 | 16:47:48 | 10.7... | 10009.636 | 1976.099 | 7.850 | 78.5 | 0.197 | 35453 | | 1.02 |
| 9 | I18540 | IA2-537STD1.0 | 27-Feb-20 | 17:04:20 | 10.7... | 10521.385 | 2019.154 | 7.631 | 76.3 | 0.192 | 424 | | 1.02 |

Compound name: M2-8:2FTS
Response Factor: 0.251491
RRF SD: 0.0648374, % Relative SD: 25.7812
Response type: Internal Std ( Ref 32 ), Area * ( IS Conc. / IS Area )
Curve type: RF



# Initial Calibration Summary
# Form 6
# Semivolatiles

| | | | | | |
|---|---|---|---|---|---|
| Client | : | Soils Engineering Services, Inc. | Lab Number | : | L2009793 |
| Project Name | : | GROSSINGERS | Project Number | : | 9313 |
| Instrument ID | : | LCMS01 | Ical Ref | : | ICAL16567 |
| Calibration dates | : | 02/27/20 14:02 02/27/20 17:04 | | | |

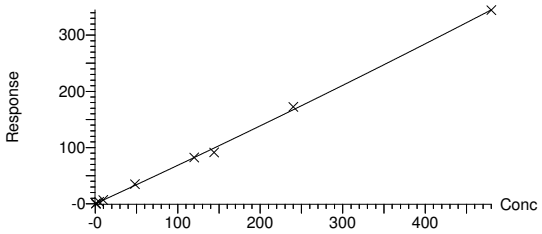


Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICAL_A.qld
Last Altered: Friday, February 28, 2020 09:12:40 Eastern Standard Time
Printed: Friday, February 28, 2020 09:28:57 Eastern Standard Time

**Compound name: PFNS**

| | Name | ID | Acq.Date | Acq.Time | RT | IS Area | Area | Conc (ng... | %Rec | RRF | 1º S/N | 2º S/N | (b/a) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | I18529 | IA2-537STD5.0 | 27-Feb-20 | 14:02:18 | 10.7... | 11718.485 | 4233.052 | 5.343 | 111.3 | 0.753 | 99222 | 53746 | 0.92 |
| 2 | I18530 | IA2-537STD10.0 | 27-Feb-20 | 14:18:52 | 10.7... | 11646.159 | 7887.980 | 10.013 | 104.3 | 0.706 | 182853 | 119099 | 0.86 |
| 3 | I18531 | IA2-537STD50.0 | 27-Feb-20 | 14:35:26 | 10.7... | 10818.837 | 38100.289 | 51.774 | 107.9 | 0.734 | 840530 | 2476 | 0.96 |
| 4 | I18532 | IA2-537STD125 | 27-Feb-20 | 14:51:56 | 10.7... | 9250.913 | 76053.859 | 119.787 | 99.8 | 0.685 | 1652081 | 2086 | 0.95 |
| 5 | I18533 | IA2-537STD150 | 27-Feb-20 | 15:08:31 | 10.7... | 9727.753 | 88918.977 | 132.956 | 92.3 | 0.635 | 1242 | 1405348 | 0.99 |
| 6 | I18534 | IA2-537STD250 | 27-Feb-20 | 15:25:04 | 10.7... | 7525.810 | 129895.969 | 247.351 | 103.1 | 0.719 | 773 | 9635 | 0.98 |
| 7 | I18535 | IA2-537STD500 | 27-Feb-20 | 15:41:35 | 10.7... | 5671.231 | 195337.875 | 479.273 | 99.8 | 0.718 | 2319 | 5039 | 0.99 |
| 8 | I18539 | IA2-537STD0.5 | 27-Feb-20 | 16:47:48 | 10.7... | 12059.226 | 220.333 | 0.270 | 56.3 | 0.381 | 6297 | 17 | 0.98 |
| 9 | I18540 | IA2-537STD1.0 | 27-Feb-20 | 17:04:20 | 10.7... | 9845.821 | 698.416 | 1.050 | 109.4 | 0.739 | 89 | 3 | 1.05 |

Compound name: PFNS
Coefficient of Determination: R^2 = 0.998519
Calibration curve: 8.99799e-005 * x^2 + 0.67554 * x
Response type: Internal Std ( Ref 33 ), Area * ( IS Conc. / IS Area )
Curve type: 2nd Order, Origin: Force, Weighting: 1/x, Axis trans: None



# Initial Calibration Summary
# Form 6
# Semivolatiles

| | | | | | |
|---|---|---|---|---|---|
| Client | : | Soils Engineering Services, Inc. | Lab Number | : | L2009793 |
| Project Name | : | GROSSINGERS | Project Number | : | 9313 |
| Instrument ID | : | LCMS01 | Ical Ref | : | ICAL16567 |
| Calibration dates | : | 02/27/20 14:02 02/27/20 17:04 | | | |

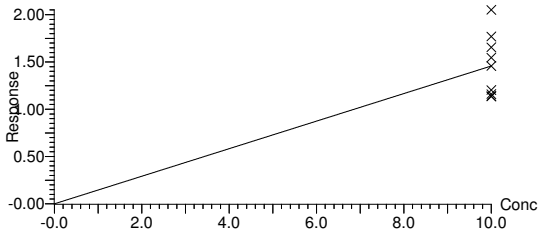


Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICAL_A.qld
Last Altered: Friday, February 28, 2020 09:12:40 Eastern Standard Time
Printed: Friday, February 28, 2020 09:28:57 Eastern Standard Time

**Compound name: d3-NMeFOSAA**

| | Name | ID | Acq.Date | Acq.Time | RT | IS Area | Area | Conc (ng... | %Rec | RRF | 1º S/N | 2º S/N | (b/a) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | I18529 | IA2-537STD5.0 | 27-Feb-20 | 14:02:18 | 11.085 | 77657.359 | 9001.986 | 7.953 | 79.5 | 0.116 | 430 | | 0.94 |
| 2 | I18530 | IA2-537STD10.0 | 27-Feb-20 | 14:18:52 | 11.087 | 78374.711 | 9429.717 | 8.255 | 82.5 | 0.120 | 180 | | 0.93 |
| 3 | I18531 | IA2-537STD50.0 | 27-Feb-20 | 14:35:26 | 11.084 | 68134.172 | 9927.184 | 9.996 | 100.0 | 0.146 | 625 | | 1.01 |
| 4 | I18532 | IA2-537STD125 | 27-Feb-20 | 14:51:56 | 11.079 | 59026.023 | 9126.865 | 10.609 | 106.1 | 0.155 | 171592 | | 0.88 |
| 5 | I18533 | IA2-537STD150 | 27-Feb-20 | 15:08:31 | 11.087 | 54996.473 | 9105.276 | 11.359 | 113.6 | 0.166 | 974 | | 0.98 |
| 6 | I18534 | IA2-537STD250 | 27-Feb-20 | 15:25:04 | 11.082 | 50150.867 | 8871.647 | 12.137 | 121.4 | 0.177 | 174469 | | 0.91 |
| 7 | I18535 | IA2-537STD500 | 27-Feb-20 | 15:41:35 | 11.079 | 41307.793 | 8472.627 | 14.073 | 140.7 | 0.205 | 160634 | | 0.95 |
| 8 | I18539 | IA2-537STD0.5 | 27-Feb-20 | 16:47:48 | 11.079 | 82886.930 | 9412.311 | 7.791 | 77.9 | 0.114 | 431 | | 0.98 |
| 9 | I18540 | IA2-537STD1.0 | 27-Feb-20 | 17:04:20 | 11.082 | 82804.273 | 9446.208 | 7.827 | 78.3 | 0.114 | 186025 | | 0.89 |

Compound name: d3-NMeFOSAA
Response Factor: 0.145752
RRF SD: 0.0326752, % Relative SD: 22.4184
Response type: Internal Std ( Ref 35 ), Area * ( IS Conc. / IS Area )
Curve type: RF



# Initial Calibration Summary
# Form 6
# Semivolatiles

| | | | |
|---|---|---|---|
| Client | : Soils Engineering Services, Inc. | Lab Number | : L2009793 |
| Project Name | : GROSSINGERS | Project Number | : 9313 |
| Instrument ID | : LCMS01 | Ical Ref | : ICAL16567 |
| Calibration dates | : 02/27/20 14:02 02/27/20 17:04 | | |

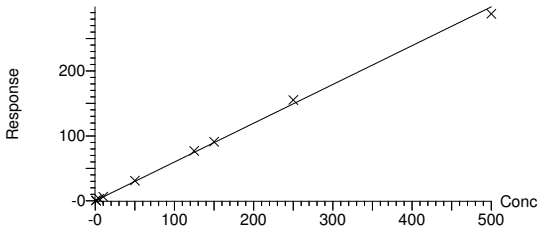


Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICAL_A.qld
Last Altered: Friday, February 28, 2020 09:12:40 Eastern Standard Time
Printed: Friday, February 28, 2020 09:28:57 Eastern Standard Time

**Compound name: NMeFOSAA**

| | Name | ID | Acq.Date | Acq.Time | RT | IS Area | Area | Conc (ng... | %Rec | RRF | 1º S/N | 2º S/N | (b/a) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | I18529 | IA2-537STD5.0 | 27-Feb-20 | 14:02:18 | 11.090 | 9001.986 | 2728.754 | 5.072 | 101.4 | 0.606 | 381 | 194 | 0.99 |
| 2 | I18530 | IA2-537STD10.0 | 27-Feb-20 | 14:18:52 | 11.087 | 9429.717 | 5986.672 | 10.623 | 106.2 | 0.635 | 1017 | 748 | 1.06 |
| 3 | I18531 | IA2-537STD50.0 | 27-Feb-20 | 14:35:26 | 11.090 | 9927.184 | 30740.287 | 51.815 | 103.6 | 0.619 | 2831 | 2718 | 0.96 |
| 4 | I18532 | IA2-537STD125 | 27-Feb-20 | 14:51:56 | 11.085 | 9126.865 | 70059.523 | 128.446 | 102.8 | 0.614 | 6843 | 3412 | 0.92 |
| 5 | I18533 | IA2-537STD150 | 27-Feb-20 | 15:08:31 | 11.092 | 9105.276 | 82880.930 | 152.312 | 101.5 | 0.607 | 9270 | 4240 | 0.98 |
| 6 | I18534 | IA2-537STD250 | 27-Feb-20 | 15:25:04 | 11.087 | 8871.647 | 137711.047 | 259.740 | 103.9 | 0.621 | 8677 | 4416 | 0.92 |
| 7 | I18535 | IA2-537STD500 | 27-Feb-20 | 15:41:35 | 11.079 | 8472.627 | 244027.031 | 481.941 | 96.4 | 0.576 | 9247 | 4715 | 1.05 |
| 8 | I18539 | IA2-537STD0.5 | 27-Feb-20 | 16:47:48 | 11.090 | 9412.311 | 298.161 | 0.530 | 106.0 | 0.634 | 62 | 10 | 0.94 |
| 9 | I18540 | IA2-537STD1.0 | 27-Feb-20 | 17:04:20 | 11.087 | 9446.208 | 576.220 | 1.021 | 102.1 | 0.610 | 75 | 99 | 1.04 |

Compound name: NMeFOSAA
Coefficient of Determination: R^2 = 0.998810
Calibration curve: 0.597621 * x
Response type: Internal Std ( Ref 40 ), Area * ( IS Conc. / IS Area )
Curve type: Linear, Origin: Force, Weighting: 1/x, Axis trans: None



# Initial Calibration Summary
# Form 6
# Semivolatiles

| | | | | | |
|---|---|---|---|---|---|
| Client | : | Soils Engineering Services, Inc. | Lab Number | : | L2009793 |
| Project Name | : | GROSSINGERS | Project Number | : | 9313 |
| Instrument ID | : | LCMS01 | Ical Ref | : | ICAL16567 |
| Calibration dates | : | 02/27/20 14:02 02/27/20 17:04 | | | |

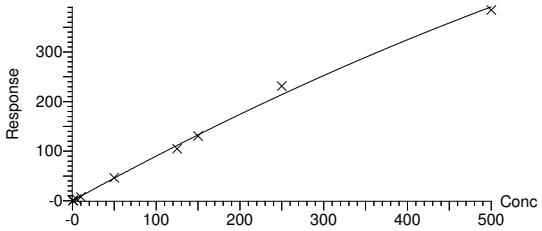


Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICAL_A.qld
Last Altered: Friday, February 28, 2020 09:12:40 Eastern Standard Time
Printed: Friday, February 28, 2020 09:28:57 Eastern Standard Time

**Compound name: PFUnA**

| | Name | ID | Acq.Date | Acq.Time | RT | IS Area | Area | Conc (ng... | %Rec | RRF | 1º S/N | 2º S/N | (b/a) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | I18529 | IA2-537STD5.0 | 27-Feb-20 | 14:02:18 | 11.255 | 83099.617 | 29479.420 | 3.814 | 76.3 | 0.709 | 614 | 92844 | 0.95 |
| 2 | I18530 | IA2-537STD10.0 | 27-Feb-20 | 14:18:52 | 11.252 | 79021.750 | 62609.438 | 8.532 | 85.3 | 0.792 | 1490 | 801 | 1.03 |
| 3 | I18531 | IA2-537STD50.0 | 27-Feb-20 | 14:35:26 | 11.255 | 64158.406 | 299291.375 | 50.928 | 101.9 | 0.933 | 6978 | 8868 | 0.96 |
| 4 | I18532 | IA2-537STD125 | 27-Feb-20 | 14:51:56 | 11.245 | 56477.063 | 593038.000 | 117.168 | 93.7 | 0.840 | 8003 | 4019 | 1.08 |
| 5 | I18533 | IA2-537STD150 | 27-Feb-20 | 15:08:31 | 11.258 | 52988.070 | 693444.688 | 147.520 | 98.3 | 0.872 | 12339 | 1078 | 0.99 |
| 6 | I18534 | IA2-537STD250 | 27-Feb-20 | 15:25:04 | 11.247 | 42395.594 | 979807.625 | 271.907 | 108.8 | 0.924 | 22013 | 855 | 1.13 |
| 7 | I18535 | IA2-537STD500 | 27-Feb-20 | 15:41:35 | 11.244 | 40741.063 | 1567241.750 | 490.197 | 98.0 | 0.769 | 12920 | 1409 | 1.06 |
| 8 | I18539 | IA2-537STD0.5 | 27-Feb-20 | 16:47:48 | 11.250 | 78990.391 | 2866.169 | 0.390 | 77.9 | 0.726 | 56 | 16246 | 0.94 |
| 9 | I18540 | IA2-537STD1.0 | 27-Feb-20 | 17:04:20 | 11.252 | 80848.156 | 5800.123 | 0.771 | 77.1 | 0.717 | 78 | 19925 | 0.99 |

Compound name: PFUnA
Coefficient of Determination: R^2 = 0.997157
Calibration curve: -0.000298734 * x^2 + 0.931191 * x
Response type: Internal Std ( Ref 43 ), Area * ( IS Conc. / IS Area )
Curve type: 2nd Order, Origin: Force, Weighting: 1/x, Axis trans: None



# Initial Calibration Summary
# Form 6
# Semivolatiles

| | | | |
|---|---|---|---|
| Client | : Soils Engineering Services, Inc. | Lab Number | : L2009793 |
| Project Name | : GROSSINGERS | Project Number | : 9313 |
| Instrument ID | : LCMS01 | Ical Ref | : ICAL16567 |
| Calibration dates | : 02/27/20 14:02 02/27/20 17:04 | | |

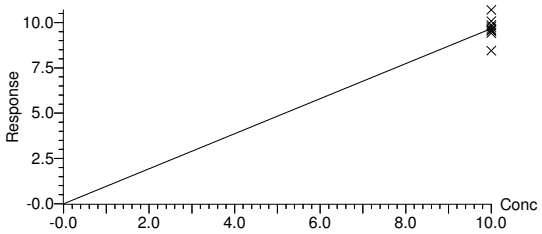


Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICAL_A.qld
Last Altered: Friday, February 28, 2020 09:12:40 Eastern Standard Time
Printed: Friday, February 28, 2020 09:28:57 Eastern Standard Time

**Compound name: M7-PFUDA**

| | Name | ID | Acq.Date | Acq.Time | RT | IS Area | Area | Conc (ng... | %Rec | RRF | 1º S/N | 2º S/N | (b/a) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | I18529 | IA2-537STD5.0 | 27-Feb-20 | 14:02:18 | 11.256 | 77657.359 | 83099.617 | 11.068 | 110.7 | 1.070 | 1273 | | 0.96 |
| 2 | I18530 | IA2-537STD10.0 | 27-Feb-20 | 14:18:52 | 11.253 | 78374.711 | 79021.750 | 10.429 | 104.3 | 1.008 | 1541792 | | 1.01 |
| 3 | I18531 | IA2-537STD50.0 | 27-Feb-20 | 14:35:26 | 11.255 | 68134.172 | 64158.406 | 9.740 | 97.4 | 0.942 | 1197830 | | 0.95 |
| 4 | I18532 | IA2-537STD125 | 27-Feb-20 | 14:51:56 | 11.245 | 59026.023 | 56477.063 | 9.897 | 99.0 | 0.957 | 1073319 | | 1.02 |
| 5 | I18533 | IA2-537STD150 | 27-Feb-20 | 15:08:31 | 11.253 | 54996.473 | 52988.070 | 9.966 | 99.7 | 0.963 | 1501 | | 1.07 |
| 6 | I18534 | IA2-537STD250 | 27-Feb-20 | 15:25:04 | 11.248 | 50150.867 | 42395.594 | 8.744 | 87.4 | 0.845 | 781839 | | 1.08 |
| 7 | I18535 | IA2-537STD500 | 27-Feb-20 | 15:41:35 | 11.245 | 41307.793 | 40741.063 | 10.201 | 102.0 | 0.986 | 6905 | | 1.01 |
| 8 | I18539 | IA2-537STD0.5 | 27-Feb-20 | 16:47:48 | 11.250 | 82886.930 | 78990.391 | 9.857 | 98.6 | 0.953 | 1543083 | | 0.95 |
| 9 | I18540 | IA2-537STD1.0 | 27-Feb-20 | 17:04:20 | 11.248 | 82804.273 | 80848.156 | 10.099 | 101.0 | 0.976 | 1582007 | | 1.04 |

Compound name: M7-PFUDA
Response Factor: 0.96681
RRF SD: 0.0597265, % Relative SD: 6.17769
Response type: Internal Std ( Ref 35 ), Area * ( IS Conc. / IS Area )
Curve type: RF



# Initial Calibration Summary
# Form 6
# Semivolatiles

| | | | | | |
|---|---|---|---|---|---|
| Client | : | Soils Engineering Services, Inc. | Lab Number | : | L2009793 |
| Project Name | : | GROSSINGERS | Project Number | : | 9313 |
| Instrument ID | : | LCMS01 | Ical Ref | : | ICAL16567 |
| Calibration dates | : | 02/27/20 14:02 02/27/20 17:04 | | | |

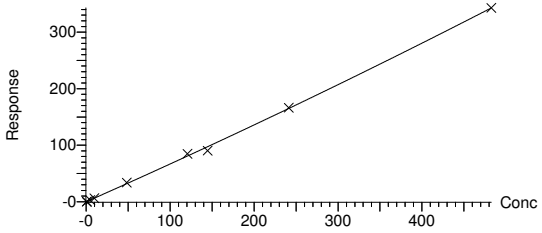


Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICAL_A.qld
Last Altered: Friday, February 28, 2020 09:12:40 Eastern Standard Time
Printed: Friday, February 28, 2020 09:28:57 Eastern Standard Time

**Compound name: PFDS**

| | Name | ID | Acq.Date | Acq.Time | RT | IS Area | Area | Conc (ng... | %Rec | RRF | 1º S/N | 2º S/N | (b/a) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | I18529 | IA2-537STD5.0 | 27-Feb-20 | 14:02:18 | 11.267 | 11718.485 | 3251.090 | 4.216 | 87.4 | 0.575 | 75644 | 50573 | 0.87 |
| 2 | I18530 | IA2-537STD10.0 | 27-Feb-20 | 14:18:52 | 11.264 | 11646.159 | 7533.778 | 9.822 | 101.8 | 0.670 | 179948 | 101257 | 0.90 |
| 3 | I18531 | IA2-537STD50.0 | 27-Feb-20 | 14:35:26 | 11.261 | 10818.837 | 36514.367 | 50.898 | 105.5 | 0.699 | 841804 | 10505 | 0.97 |
| 4 | I18532 | IA2-537STD125 | 27-Feb-20 | 14:51:56 | 11.256 | 9250.913 | 78685.211 | 126.685 | 105.0 | 0.705 | 1807037 | 918 | 0.95 |
| 5 | I18533 | IA2-537STD150 | 27-Feb-20 | 15:08:31 | 11.264 | 9727.753 | 87935.875 | 134.469 | 92.9 | 0.625 | 1973297 | 8626 | 1.03 |
| 6 | I18534 | IA2-537STD250 | 27-Feb-20 | 15:25:04 | 11.259 | 7525.810 | 125274.078 | 243.305 | 100.9 | 0.690 | 7166 | 1699592 | 0.99 |
| 7 | I18535 | IA2-537STD500 | 27-Feb-20 | 15:41:35 | 11.256 | 5671.231 | 194472.438 | 482.736 | 100.0 | 0.711 | 1798 | 6305 | 0.99 |
| 8 | I18539 | IA2-537STD0.5 | 27-Feb-20 | 16:47:48 | 11.272 | 12059.226 | 243.935 | 0.308 | 63.8 | 0.419 | 6648 | 7779 | 0.75 |
| 9 | I18540 | IA2-537STD1.0 | 27-Feb-20 | 17:04:20 | 11.259 | 9845.821 | 544.235 | 0.841 | 87.1 | 0.573 | 13163 | 3 | 1.09 |

Compound name: PFDS
Coefficient of Determination: R^2 = 0.998726
Calibration curve: 0.000109385 * x^2 + 0.657544 * x
Response type: Internal Std ( Ref 33 ), Area * ( IS Conc. / IS Area )
Curve type: 2nd Order, Origin: Force, Weighting: 1/x, Axis trans: None



# Initial Calibration Summary
# Form 6
# Semivolatiles

| | | | | | |
|---|---|---|---|---|---|
| Client | : | Soils Engineering Services, Inc. | Lab Number | : | L2009793 |
| Project Name | : | GROSSINGERS | Project Number | : | 9313 |
| Instrument ID | : | LCMS01 | Ical Ref | : | ICAL16567 |
| Calibration dates | : | 02/27/20 14:02 02/27/20 17:04 | | | |

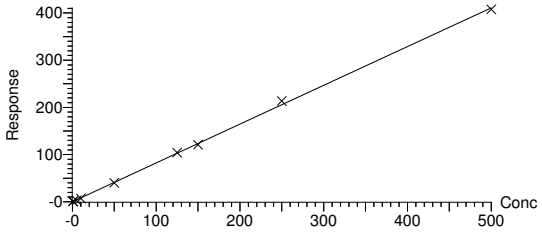


Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICAL_A.qld
Last Altered: Friday, February 28, 2020 09:12:40 Eastern Standard Time
Printed: Friday, February 28, 2020 09:28:57 Eastern Standard Time

**Compound name: FOSA**

| | Name | ID | Acq.Date | Acq.Time | RT | IS Area | Area | Conc (ng... | %Rec | RRF | 1º S/N | 2º S/N | (b/a) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | I18529 | IA2-537STD5.0 | 27-Feb-20 | 14:02:18 | 11.124 | 34159.688 | 10579.771 | 3.759 | 75.2 | 0.619 | 234727 | | 0.97 |
| 2 | I18530 | IA2-537STD10.0 | 27-Feb-20 | 14:18:52 | 11.121 | 32409.621 | 23803.600 | 8.913 | 89.1 | 0.734 | 535632 | | 1.07 |
| 3 | I18531 | IA2-537STD50.0 | 27-Feb-20 | 14:35:26 | 11.123 | 30321.623 | 122439.266 | 49.017 | 98.0 | 0.808 | 3630 | 14139 | 1.00 |
| 4 | I18532 | IA2-537STD125 | 27-Feb-20 | 14:51:56 | 11.118 | 26596.314 | 276516.375 | 126.264 | 101.0 | 0.832 | 4268 | 30995 | 0.95 |
| 5 | I18533 | IA2-537STD150 | 27-Feb-20 | 15:08:31 | 11.126 | 27181.514 | 328541.656 | 146.808 | 97.9 | 0.806 | 4819 | 25205 | 1.05 |
| 6 | I18534 | IA2-537STD250 | 27-Feb-20 | 15:25:04 | 11.121 | 23742.172 | 506613.313 | 259.349 | 103.7 | 0.854 | 4768 | 368 | 1.03 |
| 7 | I18535 | IA2-537STD500 | 27-Feb-20 | 15:41:35 | 11.118 | 21359.803 | 870578.125 | 496.089 | 99.2 | 0.815 | 6846 | 99852 | 1.03 |
| 8 | I18539 | IA2-537STD0.5 | 27-Feb-20 | 16:47:48 | 11.118 | 31314.320 | 918.424 | 0.356 | 71.2 | 0.587 | 37 | | 1.23 |
| 9 | I18540 | IA2-537STD1.0 | 27-Feb-20 | 17:04:20 | 11.121 | 29538.127 | 2302.018 | 0.946 | 94.6 | 0.779 | 55789 | | 1.09 |

Compound name: FOSA
Coefficient of Determination: R^2 = 0.999112
Calibration curve: -4.96794e-006 * x^2 + 0.824046 * x
Response type: Internal Std ( Ref 46 ), Area * ( IS Conc. / IS Area )
Curve type: 2nd Order, Origin: Force, Weighting: 1/x, Axis trans: None



# Initial Calibration Summary
# Form 6
# Semivolatiles

| | | | | | |
|---|---|---|---|---|---|
| Client | : | Soils Engineering Services, Inc. | Lab Number | : | L2009793 |
| Project Name | : | GROSSINGERS | Project Number | : | 9313 |
| Instrument ID | : | LCMS01 | Ical Ref | : | ICAL16567 |
| Calibration dates | : | 02/27/20 14:02 02/27/20 17:04 | | | |

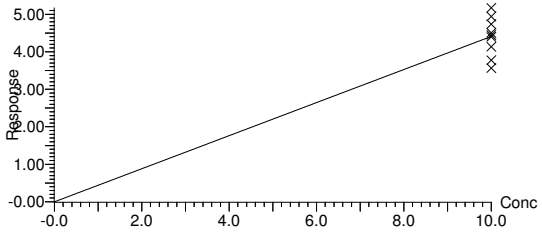


Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICAL_A.qld
Last Altered: Friday, February 28, 2020 09:12:40 Eastern Standard Time
Printed: Friday, February 28, 2020 09:28:57 Eastern Standard Time

**Compound name: M8FOSA**

| | Name | ID | Acq.Date | Acq.Time | RT | IS Area | Area | Conc (ng... | %Rec | RRF | 1º S/N | 2º S/N | (b/a) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | I18529 | IA2-537STD5.0 | 27-Feb-20 | 14:02:18 | 11.125 | 77657.359 | 34159.688 | 9.976 | 99.8 | 0.440 | 649746 | | 0.90 |
| 2 | I18530 | IA2-537STD10.0 | 27-Feb-20 | 14:18:52 | 11.122 | 78374.711 | 32409.621 | 9.379 | 93.8 | 0.414 | 3106 | | 0.98 |
| 3 | I18531 | IA2-537STD50.0 | 27-Feb-20 | 14:35:26 | 11.124 | 68134.172 | 30321.623 | 10.093 | 100.9 | 0.445 | 570515 | | 0.90 |
| 4 | I18532 | IA2-537STD125 | 27-Feb-20 | 14:51:56 | 11.114 | 59026.023 | 26596.314 | 10.219 | 102.2 | 0.451 | 498617 | | 1.03 |
| 5 | I18533 | IA2-537STD150 | 27-Feb-20 | 15:08:31 | 11.127 | 54996.473 | 27181.514 | 11.209 | 112.1 | 0.494 | 814 | | 0.98 |
| 6 | I18534 | IA2-537STD250 | 27-Feb-20 | 15:25:04 | 11.122 | 50150.867 | 23742.172 | 10.737 | 107.4 | 0.473 | 1051 | | 0.96 |
| 7 | I18535 | IA2-537STD500 | 27-Feb-20 | 15:41:35 | 11.119 | 41307.793 | 21359.803 | 11.728 | 117.3 | 0.517 | 393893 | | 0.98 |
| 8 | I18539 | IA2-537STD0.5 | 27-Feb-20 | 16:47:48 | 11.119 | 82886.930 | 31314.320 | 8.568 | 85.7 | 0.378 | 2169 | | 0.96 |
| 9 | I18540 | IA2-537STD1.0 | 27-Feb-20 | 17:04:20 | 11.116 | 82804.273 | 29538.127 | 8.090 | 80.9 | 0.357 | 560878 | | 1.02 |

Compound name: M8FOSA
Response Factor: 0.44092
RRF SD: 0.0520058, % Relative SD: 11.7948
Response type: Internal Std ( Ref 35 ), Area * ( IS Conc. / IS Area )
Curve type: RF



# Initial Calibration Summary
# Form 6
# Semivolatiles

| | | | |
|---|---|---|---|
| Client | : Soils Engineering Services, Inc. | Lab Number | : L2009793 |
| Project Name | : GROSSINGERS | Project Number | : 9313 |
| Instrument ID | : LCMS01 | Ical Ref | : ICAL16567 |
| Calibration dates | : 02/27/20 14:02 02/27/20 17:04 | | |

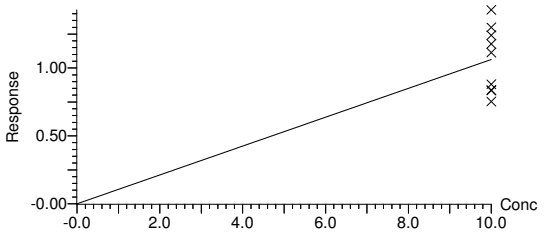


Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICAL_A.qld
Last Altered: Friday, February 28, 2020 09:12:40 Eastern Standard Time
Printed: Friday, February 28, 2020 09:28:57 Eastern Standard Time

**Compound name: d5-NEtFOSAA**

| | Name | ID | Acq.Date | Acq.Time | RT | IS Area | Area | Conc (ng... | %Rec | RRF | 1º S/N | 2º S/N | (b/a) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | I18529 | IA2-537STD5.0 | 27-Feb-20 | 14:02:18 | 11.374 | 77657.359 | 6482.268 | 7.854 | 78.5 | 0.083 | 2016 | | 0.84 |
| 2 | I18530 | IA2-537STD10.0 | 27-Feb-20 | 14:18:52 | 11.371 | 78374.711 | 6561.655 | 7.877 | 78.8 | 0.084 | 153389 | | 0.99 |
| 3 | I18531 | IA2-537STD50.0 | 27-Feb-20 | 14:35:26 | 11.368 | 68134.172 | 8024.498 | 11.081 | 110.8 | 0.118 | 234 | | 1.09 |
| 4 | I18532 | IA2-537STD125 | 27-Feb-20 | 14:51:56 | 11.363 | 59026.023 | 6574.735 | 10.480 | 104.8 | 0.111 | 852 | | 1.08 |
| 5 | I18533 | IA2-537STD150 | 27-Feb-20 | 15:08:31 | 11.376 | 54996.473 | 7148.122 | 12.229 | 122.3 | 0.130 | 160684 | | 0.89 |
| 6 | I18534 | IA2-537STD250 | 27-Feb-20 | 15:25:04 | 11.366 | 50150.867 | 6221.618 | 11.672 | 116.7 | 0.124 | 201 | | 1.11 |
| 7 | I18535 | IA2-537STD500 | 27-Feb-20 | 15:41:35 | 11.363 | 41307.793 | 5899.686 | 13.438 | 134.4 | 0.143 | 129545 | | 0.98 |
| 8 | I18539 | IA2-537STD0.5 | 27-Feb-20 | 16:47:48 | 11.363 | 82886.930 | 6238.703 | 7.082 | 70.8 | 0.075 | 284 | | 1.01 |
| 9 | I18540 | IA2-537STD1.0 | 27-Feb-20 | 17:04:20 | 11.371 | 82804.273 | 7293.184 | 8.287 | 82.9 | 0.088 | 178992 | | 0.91 |

Compound name: d5-NEtFOSAA
Response Factor: 0.106284
RRF SD: 0.0242209, % Relative SD: 22.7888
Response type: Internal Std ( Ref 35 ), Area * ( IS Conc. / IS Area )
Curve type: RF



# Initial Calibration Summary
# Form 6
# Semivolatiles

| | | | |
|---|---|---|---|
| Client | : Soils Engineering Services, Inc. | Lab Number | : L2009793 |
| Project Name | : GROSSINGERS | Project Number | : 9313 |
| Instrument ID | : LCMS01 | Ical Ref | : ICAL16567 |
| Calibration dates | : 02/27/20 14:02 02/27/20 17:04 | | |

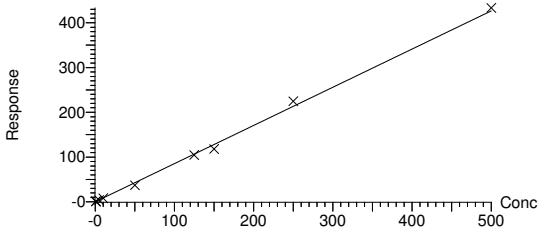


Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICAL_A.qld
Last Altered: Friday, February 28, 2020 09:12:40 Eastern Standard Time
Printed: Friday, February 28, 2020 09:28:57 Eastern Standard Time

**Compound name: NEtFOSAA**

| | Name | ID | Acq.Date | Acq.Time | RT | IS Area | Area | Conc (ng... | %Rec | RRF | 1º S/N | 2º S/N | (b/a) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | I18529 | IA2-537STD5.0 | 27-Feb-20 | 14:02:18 | 11.379 | 6482.268 | 2601.915 | 4.705 | 94.1 | 0.803 | 353 | 317 | 1.01 |
| 2 | I18530 | IA2-537STD10.0 | 27-Feb-20 | 14:18:52 | 11.376 | 6561.655 | 5451.490 | 9.739 | 97.4 | 0.831 | 653 | 40654 | 1.03 |
| 3 | I18531 | IA2-537STD50.0 | 27-Feb-20 | 14:35:26 | 11.379 | 8024.498 | 29531.371 | 43.142 | 86.3 | 0.736 | 3186 | 143 | 0.99 |
| 4 | I18532 | IA2-537STD125 | 27-Feb-20 | 14:51:56 | 11.374 | 6574.735 | 68870.625 | 122.796 | 98.2 | 0.838 | 5270 | 3013 | 0.95 |
| 5 | I18533 | IA2-537STD150 | 27-Feb-20 | 15:08:31 | 11.382 | 7148.122 | 84147.008 | 137.999 | 92.0 | 0.785 | 8278 | 3339 | 0.98 |
| 6 | I18534 | IA2-537STD250 | 27-Feb-20 | 15:25:04 | 11.376 | 6221.618 | 139937.203 | 263.670 | 105.5 | 0.900 | 10536 | 3915 | 1.02 |
| 7 | I18535 | IA2-537STD500 | 27-Feb-20 | 15:41:35 | 11.374 | 5899.686 | 255610.016 | 507.901 | 101.6 | 0.867 | 17562 | 4997 | 0.98 |
| 8 | I18539 | IA2-537STD0.5 | 27-Feb-20 | 16:47:48 | 11.379 | 6238.703 | 320.936 | 0.603 | 120.6 | 1.029 | 40 | 6 | 0.86 |
| 9 | I18540 | IA2-537STD1.0 | 27-Feb-20 | 17:04:20 | 11.376 | 7293.184 | 587.363 | 0.944 | 94.4 | 0.805 | 64 | 48 | 0.95 |

Compound name: NEtFOSAA
Coefficient of Determination: R^2 = 0.997328
Calibration curve: 0.853041 * x
Response type: Internal Std ( Ref 47 ), Area * ( IS Conc. / IS Area )
Curve type: Linear, Origin: Force, Weighting: 1/x, Axis trans: None



# Initial Calibration Summary
# Form 6
# Semivolatiles

| | | | | | |
|---|---|---|---|---|---|
| Client | : | Soils Engineering Services, Inc. | Lab Number | : | L2009793 |
| Project Name | : | GROSSINGERS | Project Number | : | 9313 |
| Instrument ID | : | LCMS01 | Ical Ref | : | ICAL16567 |
| Calibration dates | : | 02/27/20 14:02 02/27/20 17:04 | | | |

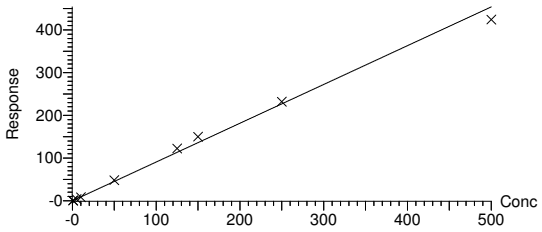


Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICAL_A.qld
Last Altered: Friday, February 28, 2020 09:12:40 Eastern Standard Time
Printed: Friday, February 28, 2020 09:28:57 Eastern Standard Time

**Compound name: PFDoA**

| | Name | ID | Acq.Date | Acq.Time | RT | IS Area | Area | Conc (ng... | %Rec | RRF | 1º S/N | 2º S/N | (b/a) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | I18529 | IA2-537STD5.0 | 27-Feb-20 | 14:02:18 | 11.722 | 81236.000 | 32628.197 | 4.424 | 88.5 | 0.803 | 616 | 142 | 1.12 |
| 2 | I18530 | IA2-537STD10.0 | 27-Feb-20 | 14:18:52 | 11.723 | 81836.984 | 70172.727 | 9.445 | 94.4 | 0.857 | 1746 | 446 | 0.95 |
| 3 | I18531 | IA2-537STD50.0 | 27-Feb-20 | 14:35:26 | 11.722 | 71010.172 | 342918.719 | 53.190 | 106.4 | 0.966 | 7607 | 620115 | 1.07 |
| 4 | I18532 | IA2-537STD125 | 27-Feb-20 | 14:51:56 | 11.718 | 58892.871 | 721807.313 | 134.996 | 108.0 | 0.981 | 10137 | 769 | 1.01 |
| 5 | I18533 | IA2-537STD150 | 27-Feb-20 | 15:08:31 | 11.723 | 57896.809 | 869214.063 | 165.361 | 110.2 | 1.001 | 10995 | 539 | 1.05 |
| 6 | I18534 | IA2-537STD250 | 27-Feb-20 | 15:25:04 | 11.719 | 55620.824 | 1291296.375 | 255.712 | 102.3 | 0.929 | 14424 | 9133 | 1.14 |
| 7 | I18535 | IA2-537STD500 | 27-Feb-20 | 15:41:35 | 11.713 | 47330.496 | 2006536.125 | 466.947 | 93.4 | 0.848 | 16882 | 4080 | 1.12 |
| 8 | I18539 | IA2-537STD0.5 | 27-Feb-20 | 16:47:48 | 11.717 | 77519.445 | 3773.728 | 0.536 | 107.2 | 0.974 | 64 | 5022 | 1.09 |
| 9 | I18540 | IA2-537STD1.0 | 27-Feb-20 | 17:04:20 | 11.723 | 81292.922 | 6560.292 | 0.889 | 88.9 | 0.807 | 154 | 4 | 1.02 |

Compound name: PFDoA
Coefficient of Determination: R^2 = 0.995334
Calibration curve: 0.9079 * x
Response type: Internal Std ( Ref 50 ), Area * ( IS Conc. / IS Area )
Curve type: Linear, Origin: Force, Weighting: 1/x, Axis trans: None



# Initial Calibration Summary
# Form 6
# Semivolatiles

| | | | | | |
|---|---|---|---|---|---|
| Client | : | Soils Engineering Services, Inc. | Lab Number | : | L2009793 |
| Project Name | : | GROSSINGERS | Project Number | : | 9313 |
| Instrument ID | : | LCMS01 | Ical Ref | : | ICAL16567 |
| Calibration dates | : | 02/27/20 14:02 02/27/20 17:04 | | | |

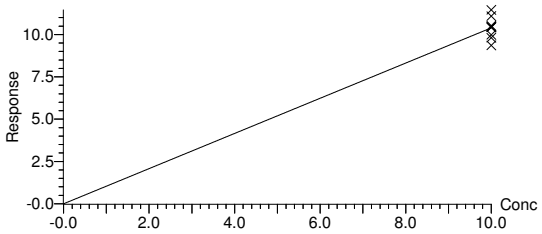


Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICAL_A.qld
Last Altered: Friday, February 28, 2020 09:12:40 Eastern Standard Time
Printed: Friday, February 28, 2020 09:28:57 Eastern Standard Time

**Compound name: MPFDOA**

| | Name | ID | Acq.Date | Acq.Time | RT | IS Area | Area | Conc (ng... | %Rec | RRF | 1º S/N | 2º S/N | (b/a) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | I18529 | IA2-537STD5.0 | 27-Feb-20 | 14:02:18 | 11.726 | 77657.359 | 81236.000 | 10.064 | 100.6 | 1.046 | 2241 | | 0.95 |
| 2 | I18530 | IA2-537STD10.0 | 27-Feb-20 | 14:18:52 | 11.723 | 78374.711 | 81836.984 | 10.046 | 100.5 | 1.044 | 674 | | 0.94 |
| 3 | I18531 | IA2-537STD50.0 | 27-Feb-20 | 14:35:26 | 11.722 | 68134.172 | 71010.172 | 10.027 | 100.3 | 1.042 | 1910 | | 1.06 |
| 4 | I18532 | IA2-537STD125 | 27-Feb-20 | 14:51:56 | 11.718 | 59026.023 | 58892.871 | 9.599 | 96.0 | 0.998 | 1444 | | 0.97 |
| 5 | I18533 | IA2-537STD150 | 27-Feb-20 | 15:08:31 | 11.723 | 54996.473 | 57896.809 | 10.128 | 101.3 | 1.053 | 1751 | | 1.01 |
| 6 | I18534 | IA2-537STD250 | 27-Feb-20 | 15:25:04 | 11.719 | 50150.867 | 55620.824 | 10.670 | 106.7 | 1.109 | 8340 | | 1.10 |
| 7 | I18535 | IA2-537STD500 | 27-Feb-20 | 15:41:35 | 11.713 | 41307.793 | 47330.496 | 11.023 | 110.2 | 1.146 | 986956 | | 1.12 |
| 8 | I18539 | IA2-537STD0.5 | 27-Feb-20 | 16:47:48 | 11.717 | 82886.930 | 77519.445 | 8.998 | 90.0 | 0.935 | 1780140 | | 0.99 |
| 9 | I18540 | IA2-537STD1.0 | 27-Feb-20 | 17:04:20 | 11.723 | 82804.273 | 81292.922 | 9.445 | 94.5 | 0.982 | 1865449 | | 0.94 |

Compound name: MPFDOA
Response Factor: 1.03942
RRF SD: 0.0635766, % Relative SD: 6.11652
Response type: Internal Std ( Ref 35 ), Area * ( IS Conc. / IS Area )
Curve type: RF



# Initial Calibration Summary
# Form 6
# Semivolatiles

| | | | |
|---|---|---|---|
| Client | : Soils Engineering Services, Inc. | Lab Number | : L2009793 |
| Project Name | : GROSSINGERS | Project Number | : 9313 |
| Instrument ID | : LCMS01 | Ical Ref | : ICAL16567 |
| Calibration dates | : 02/27/20 14:02 02/27/20 17:04 | | |

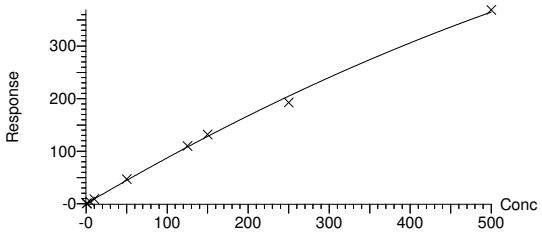


Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICAL_A.qld
Last Altered: Friday, February 28, 2020 09:12:40 Eastern Standard Time
Printed: Friday, February 28, 2020 09:28:57 Eastern Standard Time

**Compound name: PFTrDA**

| | Name | ID | Acq.Date | Acq.Time | RT | IS Area | Area | Conc (ng... | %Rec | RRF | 1º S/N | 2º S/N | (b/a) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | I18529 | IA2-537STD5.0 | 27-Feb-20 | 14:02:18 | 12.1... | 81236.000 | 33142.918 | 4.496 | 89.9 | 0.816 | 772 | 536 | 1.00 |
| 2 | I18530 | IA2-537STD10.0 | 27-Feb-20 | 14:18:52 | 12.1... | 81836.984 | 74049.422 | 9.993 | 99.9 | 0.905 | 1251 | 203 | 1.13 |
| 3 | I18531 | IA2-537STD50.0 | 27-Feb-20 | 14:35:26 | 12.1... | 71010.172 | 333977.594 | 52.841 | 105.7 | 0.941 | 6822 | 1567 | 0.98 |
| 4 | I18532 | IA2-537STD125 | 27-Feb-20 | 14:51:56 | 12.1... | 58892.871 | 648499.688 | 127.558 | 102.0 | 0.881 | 9640 | 8914 | 1.00 |
| 5 | I18533 | IA2-537STD150 | 27-Feb-20 | 15:08:31 | 12.1... | 57896.809 | 765332.750 | 154.889 | 103.3 | 0.881 | 8041 | 1462 | 0.97 |
| 6 | I18534 | IA2-537STD250 | 27-Feb-20 | 15:25:04 | 12.1... | 55620.824 | 1070954.250 | 233.305 | 93.3 | 0.770 | 298 | 3241 | 0.98 |
| 7 | I18535 | IA2-537STD500 | 27-Feb-20 | 15:41:35 | 12.1... | 47330.496 | 1746415.250 | 507.675 | 101.5 | 0.738 | 17884 | 7296 | 1.09 |
| 8 | I18539 | IA2-537STD0.5 | 27-Feb-20 | 16:47:48 | 12.1... | 77519.445 | 4260.305 | 0.605 | 120.9 | 1.099 | 64 | 93 | 0.94 |
| 9 | I18540 | IA2-537STD1.0 | 27-Feb-20 | 17:04:20 | 12.1... | 81292.922 | 7109.269 | 0.962 | 96.2 | 0.875 | 79 | 126 | 1.34 |

Compound name: PFTrDA
Coefficient of Determination: R^2 = 0.998574
Calibration curve: -0.000358951 * x^2 + 0.90904 * x
Response type: Internal Std ( Ref 50 ), Area * ( IS Conc. / IS Area )
Curve type: 2nd Order, Origin: Force, Weighting: 1/x, Axis trans: None



# Initial Calibration Summary
# Form 6
# Semivolatiles

| | | | | | |
|---|---|---|---|---|---|
| Client | : Soils Engineering Services, Inc. | | Lab Number | : L2009793 | |
| Project Name | : GROSSINGERS | | Project Number | : 9313 | |
| Instrument ID | : LCMS01 | | Ical Ref | : ICAL16567 | |
| Calibration dates | : 02/27/20 14:02 | 02/27/20 17:04 | | | |

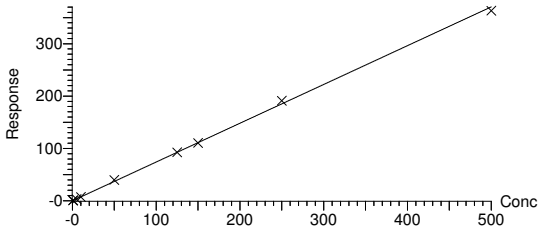


Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICAL_A.qld
Last Altered: Friday, February 28, 2020 09:12:40 Eastern Standard Time
Printed: Friday, February 28, 2020 09:28:57 Eastern Standard Time

**Compound name: PFTA**

| | Name | ID | Acq.Date | Acq.Time | RT | IS Area | Area | Conc (ng... | %Rec | RRF | 1º S/N | 2º S/N | (b/a) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | I18529 | IA2-537STD5.0 | 27-Feb-20 | 14:02:18 | 12.4... | 87989.719 | 30204.764 | 4.633 | 92.7 | 0.687 | 928 | 44 | 1.11 |
| 2 | I18530 | IA2-537STD10.0 | 27-Feb-20 | 14:18:52 | 12.4... | 89896.859 | 65072.117 | 9.770 | 97.7 | 0.724 | 2328 | 2 | 1.07 |
| 3 | I18531 | IA2-537STD50.0 | 27-Feb-20 | 14:35:26 | 12.4... | 81471.898 | 324915.094 | 53.825 | 107.7 | 0.798 | 8968 | 1510 | 1.06 |
| 4 | I18532 | IA2-537STD125 | 27-Feb-20 | 14:51:56 | 12.4... | 73635.820 | 680591.875 | 124.745 | 99.8 | 0.739 | 16363 | 3972 | 1.03 |
| 5 | I18533 | IA2-537STD150 | 27-Feb-20 | 15:08:31 | 12.4... | 69408.695 | 766911.938 | 149.127 | 99.4 | 0.737 | 23210 | 7647 | 1.02 |
| 6 | I18534 | IA2-537STD250 | 27-Feb-20 | 15:25:04 | 12.4... | 61592.461 | 1176527.250 | 257.810 | 103.1 | 0.764 | 34557 | 3587 | 1.05 |
| 7 | I18535 | IA2-537STD500 | 27-Feb-20 | 15:41:35 | 12.4... | 52678.184 | 1913145.000 | 490.164 | 98.0 | 0.726 | 50430 | 11549 | 1.07 |
| 8 | I18539 | IA2-537STD0.5 | 27-Feb-20 | 16:47:48 | 12.4... | 88012.680 | 3156.608 | 0.484 | 96.8 | 0.717 | 116 | 163 | 1.17 |
| 9 | I18540 | IA2-537STD1.0 | 27-Feb-20 | 17:04:20 | 12.4... | 82218.711 | 5741.126 | 0.942 | 94.2 | 0.698 | 277 | 11 | 1.06 |

Compound name: PFTA
Coefficient of Determination: R^2 = 0.999278
Calibration curve: 0.740927 * x
Response type: Internal Std ( Ref 53 ), Area * ( IS Conc. / IS Area )
Curve type: Linear, Origin: Force, Weighting: 1/x, Axis trans: None



# Initial Calibration Summary
# Form 6
# Semivolatiles

| | | | |
|---|---|---|---|
| Client | : Soils Engineering Services, Inc. | Lab Number | : L2009793 |
| Project Name | : GROSSINGERS | Project Number | : 9313 |
| Instrument ID | : LCMS01 | Ical Ref | : ICAL16567 |
| Calibration dates | : 02/27/20 14:02 02/27/20 17:04 | | |

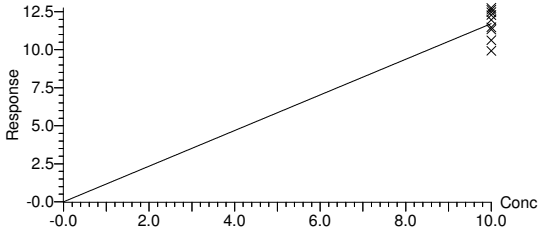


Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICAL_A.qld
Last Altered: Friday, February 28, 2020 09:12:40 Eastern Standard Time
Printed: Friday, February 28, 2020 09:28:57 Eastern Standard Time

**Compound name: M2PFTEDA**

| | Name | ID | Acq.Date | Acq.Time | RT | IS Area | Area | Conc (ng... | %Rec | RRF | 1º S/N | 2º S/N | (b/a) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | I18529 | IA2-537STD5.0 | 27-Feb-20 | 14:02:18 | 12.4... | 77657.359 | 87989.719 | 9.672 | 96.7 | 1.133 | 10474 | | 1.08 |
| 2 | I18530 | IA2-537STD10.0 | 27-Feb-20 | 14:18:52 | 12.4... | 78374.711 | 89896.859 | 9.791 | 97.9 | 1.147 | 5759 | | 1.04 |
| 3 | I18531 | IA2-537STD50.0 | 27-Feb-20 | 14:35:26 | 12.4... | 68134.172 | 81471.898 | 10.207 | 102.1 | 1.196 | 8161 | | 1.05 |
| 4 | I18532 | IA2-537STD125 | 27-Feb-20 | 14:51:56 | 12.4... | 59026.023 | 73635.820 | 10.649 | 106.5 | 1.248 | 2690 | | 1.07 |
| 5 | I18533 | IA2-537STD150 | 27-Feb-20 | 15:08:31 | 12.4... | 54996.473 | 69408.695 | 10.773 | 107.7 | 1.262 | 7 | | 0.99 |
| 6 | I18534 | IA2-537STD250 | 27-Feb-20 | 15:25:04 | 12.4... | 50150.867 | 61592.461 | 10.483 | 104.8 | 1.228 | 3698 | | 1.08 |
| 7 | I18535 | IA2-537STD500 | 27-Feb-20 | 15:41:35 | 12.4... | 41307.793 | 52678.184 | 10.886 | 108.9 | 1.275 | 1670 | | 0.94 |
| 8 | I18539 | IA2-537STD0.5 | 27-Feb-20 | 16:47:48 | 12.4... | 82886.930 | 88012.680 | 9.064 | 90.6 | 1.062 | 8729 | | 1.03 |
| 9 | I18540 | IA2-537STD1.0 | 27-Feb-20 | 17:04:20 | 12.4... | 82804.273 | 82218.711 | 8.476 | 84.8 | 0.993 | 16052 | | 1.04 |

Compound name: M2PFTEDA
Response Factor: 1.17151
RRF SD: 0.0965226, % Relative SD: 8.23918
Response type: Internal Std ( Ref 35 ), Area * ( IS Conc. / IS Area )
Curve type: RF



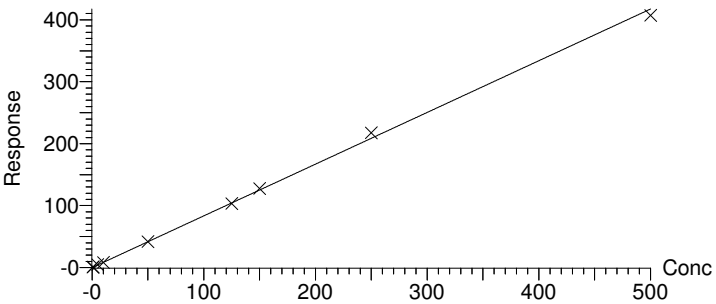
Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
Printed: Monday, November 18, 2019 13:47:36 Eastern Standard Time

**Method: C:\MassLynx\Data\2019\191118_537ISO.PRO\MethDB\537ISO_Q_191118_DOD .mdb 18 Nov 2019 13:05:34**
**Calibration: C:\MassLynx\Data\2019\191118_537ISO.PRO\CurveDB\191118_ISO_ICAL.cdb 18 Nov 2019 13:41:42**

**Compound name: PFBA**

| | Name | ID | Acq.Date | Acq.Time | RT | IS Area | Area | Conc (ng... | %Rec | RRF | 1º S/N | 2º S/N | (b/a) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | I13434 | IA2-537STD0.5 | 18-Nov-19 | 10:24:43 | 2.202 | 52425.441 | 2022.401 | 0.462 | 92.4 | 0.772 | 427 | | 0.85 |
| 2 | I13435 | IA2-537STD1.0 | 18-Nov-19 | 10:53:49 | 2.235 | 52304.957 | 4649.223 | 1.065 | 106.5 | 0.889 | 1276 | | 0.88 |
| 3 | I13436 | IA2-537STD5.0 | 18-Nov-19 | 11:10:20 | 2.197 | 52211.477 | 24281.963 | 5.570 | 111.4 | 0.930 | 3246 | | 0.84 |
| 4 | I13437 | IA2-537STD10.0 | 18-Nov-19 | 11:26:51 | 2.197 | 51444.141 | 42612.859 | 9.920 | 99.2 | 0.828 | 10768 | | 0.86 |
| 5 | I13438 | IA2-537STD50.0 | 18-Nov-19 | 11:43:24 | 2.197 | 50772.324 | 211671.219 | 49.930 | 99.9 | 0.834 | 135752 | | 0.86 |
| 6 | I13439 | IA2-537STD125 | 18-Nov-19 | 12:00:10 | 2.197 | 48226.301 | 497630.500 | 123.580 | 98.9 | 0.825 | 40939 | | 0.81 |
| 7 | I13440 | IA2-537STD150 | 18-Nov-19 | 12:16:43 | 2.197 | 49131.746 | 626725.063 | 152.770 | 101.8 | 0.850 | 74744 | | 0.79 |
| 8 | I13441 | IA2-537STD250 | 18-Nov-19 | 12:33:16 | 2.197 | 48443.484 | 1053096.500 | 260.349 | 104.1 | 0.870 | 107293 | | 0.74 |
| 9 | I13442 | IA2-537STD500 | 18-Nov-19 | 12:49:53 | 2.202 | 48827.039 | 1988962.500 | 487.854 | 97.6 | 0.815 | 207926 | | 0.63 |

Compound name: PFBA
Coefficient of Determination: R^2 = 0.999191
Calibration curve: 0.83498 * x
Response type: Internal Std ( Ref 3 ), Area * ( IS Conc. / IS Area )
Curve type: Linear, Origin: Force, Weighting: 1/x, Axis trans: None





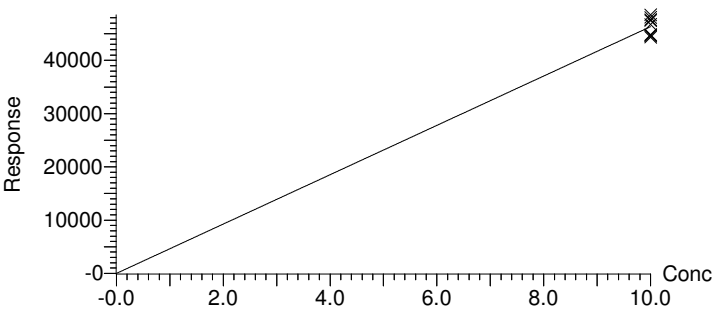
all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
Printed: Monday, November 18, 2019 13:47:36 Eastern Standard Time

**Compound name: M3PFBA**

| | Name | ID | Acq.Date | Acq.Time | RT | IS Area | Area | Conc (ng... | %Rec | RRF | 1º S/N | 2º S/N | (b/a) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | I13434 | IA2-537STD0.5 | 18-Nov-19 | 10:24:43 | 2.198 | | 48556.770 | 10.479 | 104.8 | 4855.677 | 17539 | | 0.88 |
| 2 | I13435 | IA2-537STD1.0 | 18-Nov-19 | 10:53:49 | 2.232 | | 47672.914 | 10.289 | 102.9 | 4767.291 | 19716 | | 0.90 |
| 3 | I13436 | IA2-537STD5.0 | 18-Nov-19 | 11:10:20 | 2.198 | | 48104.082 | 10.382 | 103.8 | 4810.408 | 25209 | | 0.84 |
| 4 | I13437 | IA2-537STD10.0 | 18-Nov-19 | 11:26:51 | 2.193 | | 47491.551 | 10.249 | 102.5 | 4749.155 | 13908 | | 0.88 |
| 5 | I13438 | IA2-537STD50.0 | 18-Nov-19 | 11:43:24 | 2.193 | | 46737.883 | 10.087 | 100.9 | 4673.788 | 22328 | | 0.87 |
| 6 | I13439 | IA2-537STD125 | 18-Nov-19 | 12:00:10 | 2.193 | | 44596.996 | 9.625 | 96.2 | 4459.700 | 42998 | | 0.82 |
| 7 | I13440 | IA2-537STD150 | 18-Nov-19 | 12:16:43 | 2.193 | | 44320.668 | 9.565 | 95.7 | 4432.067 | 11982 | | 0.80 |
| 8 | I13441 | IA2-537STD250 | 18-Nov-19 | 12:33:16 | 2.193 | | 44854.523 | 9.680 | 96.8 | 4485.452 | 19567 | | 0.75 |
| 9 | I13442 | IA2-537STD500 | 18-Nov-19 | 12:49:53 | 2.198 | | 44687.082 | 9.644 | 96.4 | 4468.708 | 11830 | | 0.63 |

Compound name: M3PFBA
Response Factor: 4633.58
RRF SD: 170.812, % Relative SD: 3.6864
Response type: External Std, Area
Curve type: RF





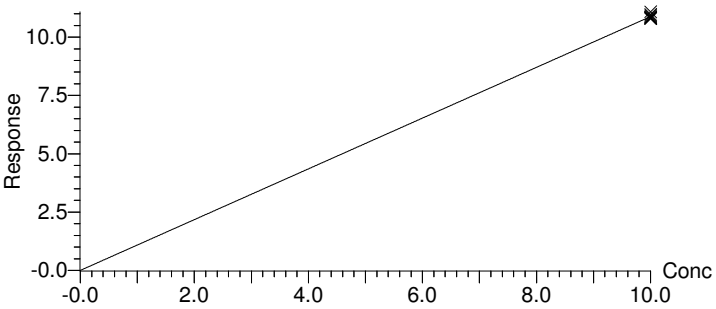
all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
Printed: Monday, November 18, 2019 13:47:36 Eastern Standard Time

**Compound name: MPFBA**

| | Name | ID | Acq.Date | Acq.Time | RT | IS Area | Area | Conc (ng... | %Rec | RRF | 1º S/N | 2º S/N | (b/a) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | I13434 | IA2-537STD0.5 | 18-Nov-19 | 10:24:43 | 2.200 | 48556.770 | 52425.441 | 9.921 | 99.2 | 1.080 | 83214 | | 0.88 |
| 2 | I13435 | IA2-537STD1.0 | 18-Nov-19 | 10:53:49 | 2.234 | 47672.914 | 52304.957 | 10.082 | 100.8 | 1.097 | 21701 | | 0.89 |
| 3 | I13436 | IA2-537STD5.0 | 18-Nov-19 | 11:10:20 | 2.195 | 48104.082 | 52211.477 | 9.974 | 99.7 | 1.085 | 42882 | | 0.85 |
| 4 | I13437 | IA2-537STD10.0 | 18-Nov-19 | 11:26:51 | 2.195 | 47491.551 | 51444.141 | 9.954 | 99.5 | 1.083 | 27822 | | 0.87 |
| 5 | I13438 | IA2-537STD50.0 | 18-Nov-19 | 11:43:24 | 2.195 | 46737.883 | 50772.324 | 9.982 | 99.8 | 1.086 | 6123 | | 0.86 |
| 6 | I13439 | IA2-537STD125 | 18-Nov-19 | 12:00:10 | 2.195 | 44596.996 | 48226.301 | 9.937 | 99.4 | 1.081 | 27458 | | 0.81 |
| 7 | I13440 | IA2-537STD150 | 18-Nov-19 | 12:16:43 | 2.195 | 44320.668 | 49131.746 | 10.186 | 101.9 | 1.109 | 41537 | | 0.79 |
| 8 | I13441 | IA2-537STD250 | 18-Nov-19 | 12:33:16 | 2.195 | 44854.523 | 48443.484 | 9.924 | 99.2 | 1.080 | 16769 | | 0.75 |
| 9 | I13442 | IA2-537STD500 | 18-Nov-19 | 12:49:53 | 2.200 | 44687.082 | 48827.039 | 10.040 | 100.4 | 1.093 | 4654 | | 0.63 |

Compound name: MPFBA
Response Factor: 1.08826
RRF SD: 0.00959591, % Relative SD: 0.881764
Response type: Internal Std ( Ref 2 ), Area * ( IS Conc. / IS Area )
Curve type: RF





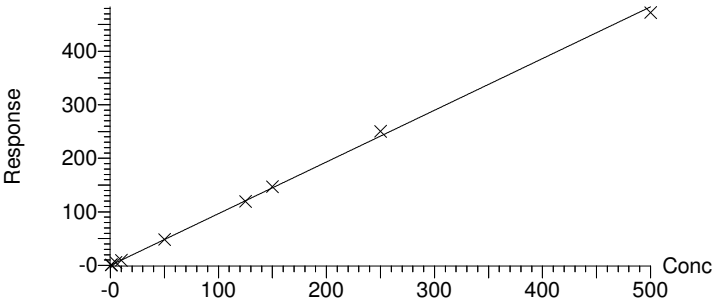
all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
Printed: Monday, November 18, 2019 13:47:36 Eastern Standard Time

**Compound name: PFPeA**

| | Name | ID | Acq.Date | Acq.Time | RT | IS Area | Area | Conc (ng... | %Rec | RRF | 1º S/N | 2º S/N | (b/a) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | I13434 | IA2-537STD0.5 | 18-Nov-19 | 10:24:43 | 5.103 | 76105.172 | 3492.261 | 0.475 | 95.0 | 0.918 | 637 | | 0.85 |
| 2 | I13435 | IA2-537STD1.0 | 18-Nov-19 | 10:53:49 | 5.136 | 77263.586 | 7746.430 | 1.038 | 103.8 | 1.003 | 1599 | | 0.87 |
| 3 | I13436 | IA2-537STD5.0 | 18-Nov-19 | 11:10:20 | 5.100 | 75572.102 | 40899.605 | 5.604 | 112.1 | 1.082 | 11510 | | 0.81 |
| 4 | I13437 | IA2-537STD10.0 | 18-Nov-19 | 11:26:51 | 5.098 | 75017.859 | 70842.992 | 9.778 | 97.8 | 0.944 | 3098 | | 0.83 |
| 5 | I13438 | IA2-537STD50.0 | 18-Nov-19 | 11:43:24 | 5.097 | 72241.625 | 350630.375 | 50.254 | 100.5 | 0.971 | 41095 | | 0.82 |
| 6 | I13439 | IA2-537STD125 | 18-Nov-19 | 12:00:10 | 5.095 | 67687.656 | 808328.813 | 123.649 | 98.9 | 0.955 | 118382 | | 0.75 |
| 7 | I13440 | IA2-537STD150 | 18-Nov-19 | 12:16:43 | 5.094 | 69048.016 | 1014589.375 | 152.143 | 101.4 | 0.980 | 86534 | | 0.75 |
| 8 | I13441 | IA2-537STD250 | 18-Nov-19 | 12:33:16 | 5.094 | 66395.219 | 1664293.750 | 259.541 | 103.8 | 1.003 | 278059 | | 0.71 |
| 9 | I13442 | IA2-537STD500 | 18-Nov-19 | 12:49:53 | 5.095 | 64857.230 | 3063171.750 | 489.018 | 97.8 | 0.945 | 1134 | | 0.59 |

Compound name: PFPeA
Coefficient of Determination: R^2 = 0.999314
Calibration curve: 0.965801 * x
Response type: Internal Std ( Ref 5 ), Area * ( IS Conc. / IS Area )
Curve type: Linear, Origin: Force, Weighting: 1/x, Axis trans: None





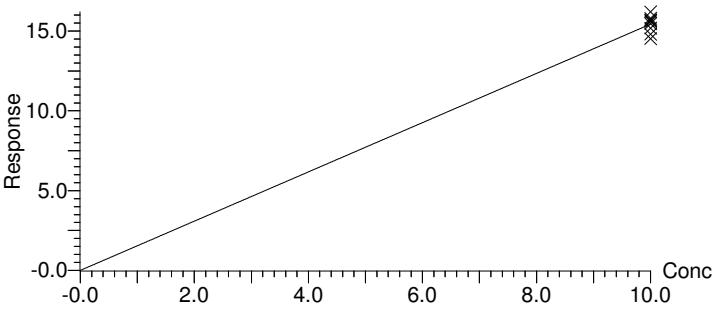
all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
Printed: Monday, November 18, 2019 13:47:36 Eastern Standard Time

**Compound name: M5PFPEA**

| | Name | ID | Acq.Date | Acq.Time | RT | IS Area | Area | Conc (ng... | %Rec | RRF | 1º S/N | 2º S/N | (b/a) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | I13434 | IA2-537STD0.5 | 18-Nov-19 | 10:24:43 | 5.098 | 48556.770 | 76105.172 | 10.154 | 101.5 | 1.567 | 15613 | | 0.94 |
| 2 | I13435 | IA2-537STD1.0 | 18-Nov-19 | 10:53:49 | 5.131 | 47672.914 | 77263.586 | 10.500 | 105.0 | 1.621 | 18535 | | 0.95 |
| 3 | I13436 | IA2-537STD5.0 | 18-Nov-19 | 11:10:20 | 5.095 | 48104.082 | 75572.102 | 10.178 | 101.8 | 1.571 | 27622 | | 0.92 |
| 4 | I13437 | IA2-537STD10.0 | 18-Nov-19 | 11:26:51 | 5.092 | 47491.551 | 75017.859 | 10.234 | 102.3 | 1.580 | 23941 | | 0.96 |
| 5 | I13438 | IA2-537STD50.0 | 18-Nov-19 | 11:43:24 | 5.092 | 46737.883 | 72241.625 | 10.014 | 100.1 | 1.546 | 17064 | | 0.94 |
| 6 | I13439 | IA2-537STD125 | 18-Nov-19 | 12:00:10 | 5.089 | 44596.996 | 67687.656 | 9.833 | 98.3 | 1.518 | 16990 | | 0.91 |
| 7 | I13440 | IA2-537STD150 | 18-Nov-19 | 12:16:43 | 5.088 | 44320.668 | 69048.016 | 10.093 | 100.9 | 1.558 | 16815 | | 0.91 |
| 8 | I13441 | IA2-537STD250 | 18-Nov-19 | 12:33:16 | 5.088 | 44854.523 | 66395.219 | 9.590 | 95.9 | 1.480 | 10808 | | 0.87 |
| 9 | I13442 | IA2-537STD500 | 18-Nov-19 | 12:49:53 | 5.086 | 44687.082 | 64857.230 | 9.403 | 94.0 | 1.451 | 13250 | | 0.76 |

Compound name: M5PFPEA
Response Factor: 1.54351
RRF SD: 0.0523876, % Relative SD: 3.39405
Response type: Internal Std ( Ref 2 ), Area * ( IS Conc. / IS Area )
Curve type: RF





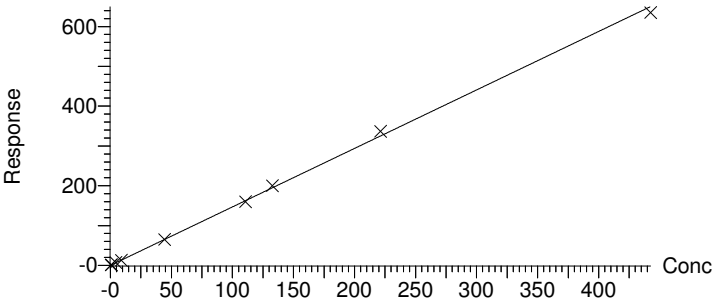
all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
Printed: Monday, November 18, 2019 13:47:36 Eastern Standard Time

**Compound name: PFBS**

| | Name | ID | Acq.Date | Acq.Time | RT | IS Area | Area | Conc (ng... | %Rec | RRF | 1º S/N | 2º S/N | (b/a) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | I13434 | IA2-537STD0.5 | 18-Nov-19 | 10:24:43 | 5.750 | 10365.686 | 654.601 | 0.430 | 97.1 | 1.427 | 198 | 44 | 0.98 |
| 2 | I13435 | IA2-537STD1.0 | 18-Nov-19 | 10:53:49 | 5.775 | 10629.898 | 1391.914 | 0.891 | 100.7 | 1.480 | 209 | 151 | 0.98 |
| 3 | I13436 | IA2-537STD5.0 | 18-Nov-19 | 11:10:20 | 5.748 | 10509.768 | 7652.497 | 4.956 | 112.0 | 1.645 | 1592 | 1720 | 0.96 |
| 4 | I13437 | IA2-537STD10.0 | 18-Nov-19 | 11:26:51 | 5.746 | 10088.863 | 13152.148 | 8.873 | 100.3 | 1.473 | 1587 | 2749 | 0.97 |
| 5 | I13438 | IA2-537STD50.0 | 18-Nov-19 | 11:43:24 | 5.744 | 9965.561 | 64765.324 | 44.235 | 100.0 | 1.469 | 6525 | 6660 | 0.98 |
| 6 | I13439 | IA2-537STD125 | 18-Nov-19 | 12:00:10 | 5.740 | 9225.293 | 147915.531 | 109.133 | 98.7 | 1.449 | 51313 | 65736 | 0.95 |
| 7 | I13440 | IA2-537STD150 | 18-Nov-19 | 12:16:43 | 5.740 | 9189.132 | 183932.656 | 136.241 | 102.6 | 1.508 | 29989 | 10666 | 0.95 |
| 8 | I13441 | IA2-537STD250 | 18-Nov-19 | 12:33:16 | 5.738 | 8779.142 | 295488.219 | 229.092 | 103.5 | 1.521 | 51166 | 10003 | 0.93 |
| 9 | I13442 | IA2-537STD500 | 18-Nov-19 | 12:49:53 | 5.733 | 8395.982 | 533039.500 | 432.126 | 97.7 | 1.435 | 86634 | 7042 | 0.89 |

Compound name: PFBS
Coefficient of Determination: R^2 = 0.999262
Calibration curve: 1.46919 * x
Response type: Internal Std ( Ref 7 ), Area * ( IS Conc. / IS Area )
Curve type: Linear, Origin: Force, Weighting: 1/x, Axis trans: None





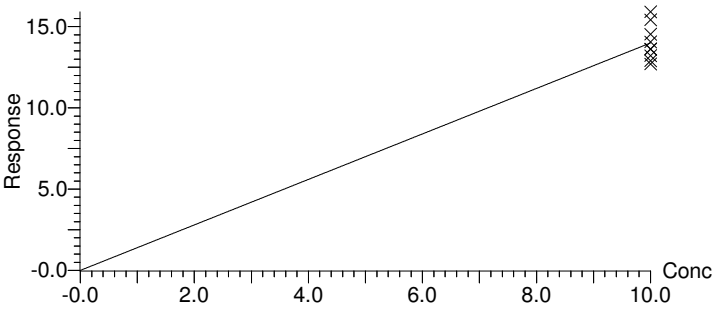
all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
Printed: Monday, November 18, 2019 13:47:36 Eastern Standard Time

**Compound name: M3PFBS**

| | Name | ID | Acq.Date | Acq.Time | RT | IS Area | Area | Conc (ng... | %Rec | RRF | 1º S/N | 2º S/N | (b/a) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | I13434 | IA2-537STD0.5 | 18-Nov-19 | 10:24:43 | 5.750 | 7620.767 | 10365.686 | 9.717 | 97.2 | 1.360 | 3560 | | 0.90 |
| 2 | I13435 | IA2-537STD1.0 | 18-Nov-19 | 10:53:49 | 5.773 | 7797.159 | 10629.898 | 9.740 | 97.4 | 1.363 | 6733 | | 0.93 |
| 3 | I13436 | IA2-537STD5.0 | 18-Nov-19 | 11:10:20 | 5.748 | 8269.742 | 10509.768 | 9.079 | 90.8 | 1.271 | 123 | | 0.87 |
| 4 | I13437 | IA2-537STD10.0 | 18-Nov-19 | 11:26:51 | 5.746 | 7629.751 | 10088.863 | 9.447 | 94.5 | 1.322 | 2544 | | 0.90 |
| 5 | I13438 | IA2-537STD50.0 | 18-Nov-19 | 11:43:24 | 5.746 | 7090.403 | 9965.561 | 10.041 | 100.4 | 1.405 | 1311 | | 0.87 |
| 6 | I13439 | IA2-537STD125 | 18-Nov-19 | 12:00:10 | 5.742 | 7149.182 | 9225.293 | 9.219 | 92.2 | 1.290 | 2600 | | 0.82 |
| 7 | I13440 | IA2-537STD150 | 18-Nov-19 | 12:16:43 | 5.742 | 6324.697 | 9189.132 | 10.380 | 103.8 | 1.453 | 5278 | | 0.81 |
| 8 | I13441 | IA2-537STD250 | 18-Nov-19 | 12:33:16 | 5.742 | 5696.930 | 8779.142 | 11.009 | 110.1 | 1.541 | 3031 | | 0.74 |
| 9 | I13442 | IA2-537STD500 | 18-Nov-19 | 12:49:53 | 5.742 | 5276.689 | 8395.982 | 11.367 | 113.7 | 1.591 | 2580 | | 0.64 |

Compound name: M3PFBS
Response Factor: 1.39974
RRF SD: 0.110062, % Relative SD: 7.86304
Response type: Internal Std ( Ref 32 ), Area * ( IS Conc. / IS Area )
Curve type: RF





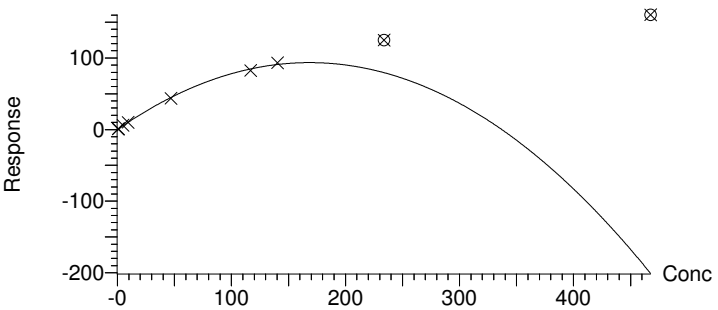
all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
Printed: Monday, November 18, 2019 13:47:36 Eastern Standard Time

**Compound name: 4:2FTS**

| | Name | ID | Acq.Date | Acq.Time | RT | IS Area | Area | Conc (ng... | %Rec | RRF | 1º S/N | 2º S/N | (b/a) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | I13434 | IA2-537STD0.5 | 18-Nov-19 | 10:24:43 | 6.923 | 5031.747 | 265.139 | 0.475 | 101.7 | 1.127 | 4336 | 27 | 0.87 |
| 2 | I13435 | IA2-537STD1.0 | 18-Nov-19 | 10:53:49 | 6.933 | 5701.004 | 638.102 | 1.011 | 108.2 | 1.197 | 305 | 8 | 0.98 |
| 3 | I13436 | IA2-537STD5.0 | 18-Nov-19 | 11:10:20 | 6.916 | 5712.227 | 3446.212 | 5.526 | 118.2 | 1.290 | 1288 | 329 | 0.99 |
| 4 | I13437 | IA2-537STD10.0 | 18-Nov-19 | 11:26:51 | 6.916 | 5560.028 | 5683.588 | 9.476 | 101.3 | 1.093 | 2549 | 351 | 1.00 |
| 5 | I13438 | IA2-537STD50.0 | 18-Nov-19 | 11:43:24 | 6.916 | 6681.914 | 29143.561 | 45.413 | 97.1 | 0.933 | 20705 | 2396 | 0.95 |
| 6 | I13439 | IA2-537STD125 | 18-Nov-19 | 12:00:10 | 6.909 | 8099.027 | 66775.891 | 110.524 | 94.6 | 0.705 | 15168 | 462 | 0.97 |
| 7 | I13440 | IA2-537STD150 | 18-Nov-19 | 12:16:43 | 6.909 | 9331.077 | 86895.203 | 157.479 | 112.3 | 0.664 | 12484 | 26719 | 0.98 |
| 8 | I13441 | IA2-537STD250 | 18-Nov-19 | 12:33:16 | 6.905 | 11231.326 | 140203.016 | | | 0.534 | 13232 | 4927 | 0.98 |
| 9 | I13442 | IA2-537STD500 | 18-Nov-19 | 12:49:53 | 6.905 | 16745.953 | 268377.688 | | | 0.343 | 35566 | 10844 | 0.86 |

Compound name: 4:2FTS
Coefficient of Determination: R^2 = 0.998246
Calibration curve: -0.00329334 * x^2 + 1.10998 * x
Response type: Internal Std ( Ref 9 ), Area * ( IS Conc. / IS Area )
Curve type: 2nd Order, Origin: Force, Weighting: 1/x, Axis trans: None





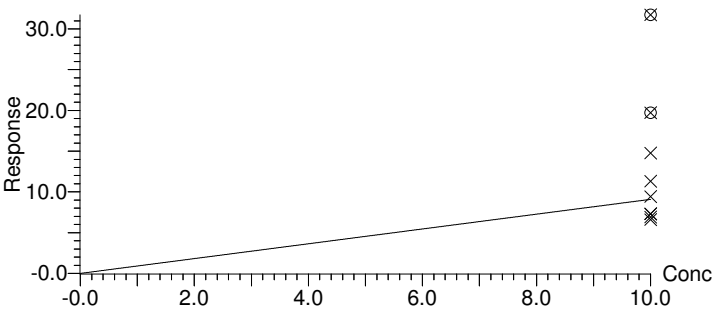
all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
Printed: Monday, November 18, 2019 13:47:36 Eastern Standard Time

**Compound name: M2-4:2FTS**

| | Name | ID | Acq.Date | Acq.Time | RT | IS Area | Area | Conc (ng... | %Rec | RRF | 1º S/N | 2º S/N | (b/a) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | I13434 | IA2-537STD0.5 | 18-Nov-19 | 10:24:43 | 6.919 | 7620.767 | 5031.747 | 7.265 | 72.7 | 0.660 | 93122 | | 0.96 |
| 2 | I13435 | IA2-537STD1.0 | 18-Nov-19 | 10:53:49 | 6.933 | 7797.159 | 5701.004 | 8.046 | 80.5 | 0.731 | 104927 | | 1.00 |
| 3 | I13436 | IA2-537STD5.0 | 18-Nov-19 | 11:10:20 | 6.916 | 8269.742 | 5712.227 | 7.601 | 76.0 | 0.691 | 1035 | | 1.03 |
| 4 | I13437 | IA2-537STD10.0 | 18-Nov-19 | 11:26:51 | 6.916 | 7629.751 | 5560.028 | 8.019 | 80.2 | 0.729 | 541 | | 0.94 |
| 5 | I13438 | IA2-537STD50.0 | 18-Nov-19 | 11:43:24 | 6.913 | 7090.403 | 6681.914 | 10.370 | 103.7 | 0.942 | 4239 | | 1.03 |
| 6 | I13439 | IA2-537STD125 | 18-Nov-19 | 12:00:10 | 6.909 | 7149.182 | 8099.027 | 12.466 | 124.7 | 1.133 | 1149 | | 0.93 |
| 7 | I13440 | IA2-537STD150 | 18-Nov-19 | 12:16:43 | 6.909 | 6324.697 | 9331.077 | 16.234 | 162.3 | 1.475 | 163851 | | 0.99 |
| 8 | I13441 | IA2-537STD250 | 18-Nov-19 | 12:33:16 | 6.909 | 5696.930 | 11231.326 | 21.693 | 216.9 | 1.971 | 1244 | | 0.85 |
| 9 | I13442 | IA2-537STD500 | 18-Nov-19 | 12:49:53 | 6.906 | 5276.689 | 16745.953 | 34.921 | 349.2 | 3.174 | 4689 | | 0.84 |

Compound name: M2-4:2FTS
Response Factor: 0.908784
RRF SD: 0.301551, % Relative SD: 33.1818
Response type: Internal Std ( Ref 32 ), Area * ( IS Conc. / IS Area )
Curve type: RF





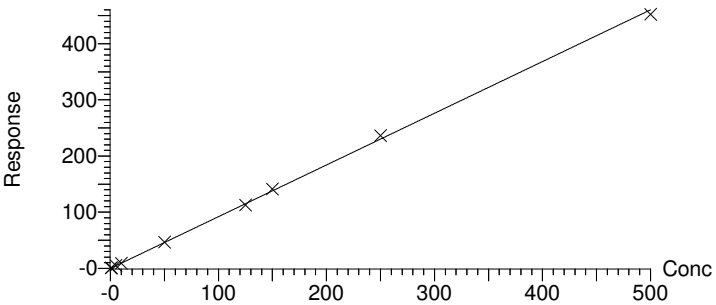
all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
Printed: Monday, November 18, 2019 13:47:36 Eastern Standard Time

**Compound name: PFHxA**

| | Name | ID | Acq.Date | Acq.Time | RT | IS Area | Area | Conc (ng... | %Rec | RRF | 1º S/N | 2º S/N | (b/a) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | I13434 | IA2-537STD0.5 | 18-Nov-19 | 10:24:43 | 6.997 | 86318.461 | 4783.421 | 0.602 | 120.4 | 1.108 | 372 | 13 | 1.03 |
| 2 | I13435 | IA2-537STD1.0 | 18-Nov-19 | 10:53:49 | 7.014 | 89049.195 | 9448.923 | 1.153 | 115.3 | 1.061 | 775 | 72 | 0.96 |
| 3 | I13436 | IA2-537STD5.0 | 18-Nov-19 | 11:10:20 | 6.997 | 87051.219 | 45761.648 | 5.710 | 114.2 | 1.051 | 3188 | 257 | 0.98 |
| 4 | I13437 | IA2-537STD10.0 | 18-Nov-19 | 11:26:51 | 6.997 | 85937.961 | 78643.000 | 9.941 | 99.4 | 0.915 | 3968 | 450 | 0.93 |
| 5 | I13438 | IA2-537STD50.0 | 18-Nov-19 | 11:43:24 | 6.994 | 82847.523 | 385143.969 | 50.500 | 101.0 | 0.930 | 25319 | 2529 | 0.99 |
| 6 | I13439 | IA2-537STD125 | 18-Nov-19 | 12:00:10 | 6.990 | 77004.234 | 867096.500 | 122.320 | 97.9 | 0.901 | 44217 | 4573 | 0.93 |
| 7 | I13440 | IA2-537STD150 | 18-Nov-19 | 12:16:43 | 6.990 | 76551.578 | 1081576.375 | 153.479 | 102.3 | 0.942 | 40523 | 6533 | 0.98 |
| 8 | I13441 | IA2-537STD250 | 18-Nov-19 | 12:33:16 | 6.987 | 73381.758 | 1733137.375 | 256.561 | 102.6 | 0.945 | 53786 | 10812 | 0.97 |
| 9 | I13442 | IA2-537STD500 | 18-Nov-19 | 12:49:53 | 6.983 | 69255.578 | 3131820.000 | 491.234 | 98.2 | 0.904 | 91196 | 7077 | 0.93 |

Compound name: PFHxA
Coefficient of Determination: R^2 = 0.999423
Calibration curve: 0.920564 * x
Response type: Internal Std ( Ref 11 ), Area * ( IS Conc. / IS Area )
Curve type: Linear, Origin: Force, Weighting: 1/x, Axis trans: None





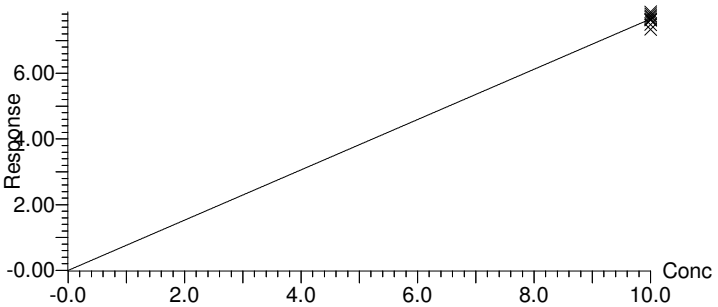
all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
Printed: Monday, November 18, 2019 13:47:36 Eastern Standard Time

**Compound name: M5PFHxA**

| | Name | ID | Acq.Date | Acq.Time | RT | IS Area | Area | Conc (ng... | %Rec | RRF | 1º S/N | 2º S/N | (b/a) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | I13434 | IA2-537STD0.5 | 18-Nov-19 | 10:24:43 | 6.997 | 117636.820 | 86318.461 | 9.586 | 95.9 | 0.734 | 11836 | | 0.99 |
| 2 | I13435 | IA2-537STD1.0 | 18-Nov-19 | 10:53:49 | 7.010 | 114802.125 | 89049.195 | 10.133 | 101.3 | 0.776 | 7997 | | 1.00 |
| 3 | I13436 | IA2-537STD5.0 | 18-Nov-19 | 11:10:20 | 6.997 | 113627.328 | 87051.219 | 10.008 | 100.1 | 0.766 | 10533 | | 0.96 |
| 4 | I13437 | IA2-537STD10.0 | 18-Nov-19 | 11:26:51 | 6.994 | 114891.016 | 85937.961 | 9.771 | 97.7 | 0.748 | 14012 | | 0.99 |
| 5 | I13438 | IA2-537STD50.0 | 18-Nov-19 | 11:43:24 | 6.994 | 107343.031 | 82847.523 | 10.082 | 100.8 | 0.772 | 9464 | | 0.96 |
| 6 | I13439 | IA2-537STD125 | 18-Nov-19 | 12:00:10 | 6.987 | 101103.344 | 77004.234 | 9.950 | 99.5 | 0.762 | 11330 | | 0.97 |
| 7 | I13440 | IA2-537STD150 | 18-Nov-19 | 12:16:43 | 6.987 | 97990.719 | 76551.578 | 10.205 | 102.1 | 0.781 | 9373 | | 1.01 |
| 8 | I13441 | IA2-537STD250 | 18-Nov-19 | 12:33:16 | 6.987 | 96048.547 | 73381.758 | 9.981 | 99.8 | 0.764 | 11032 | | 0.94 |
| 9 | I13442 | IA2-537STD500 | 18-Nov-19 | 12:49:53 | 6.984 | 87971.789 | 69255.578 | 10.284 | 102.8 | 0.787 | 6283 | | 0.93 |

Compound name: M5PFHxA
Response Factor: 0.765496
RRF SD: 0.0165596, % Relative SD: 2.16325
Response type: Internal Std ( Ref 23 ), Area * ( IS Conc. / IS Area )
Curve type: RF





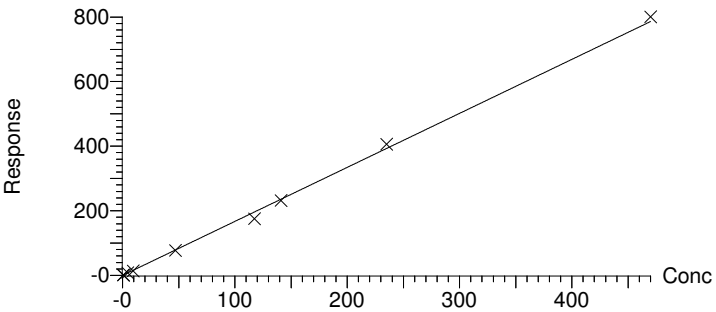
all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
Printed: Monday, November 18, 2019 13:47:36 Eastern Standard Time

**Compound name: PFPeS**

| | Name | ID | Acq.Date | Acq.Time | RT | IS Area | Area | Conc (ng... | %Rec | RRF | 1º S/N | 2º S/N | (b/a) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | I13434 | IA2-537STD0.5 | 18-Nov-19 | 10:24:43 | 7.309 | 6305.094 | 446.562 | 0.423 | 90.1 | 1.507 | 284 | 33 | 1.13 |
| 2 | I13435 | IA2-537STD1.0 | 18-Nov-19 | 10:53:49 | 7.322 | 6708.928 | 946.722 | 0.844 | 89.8 | 1.501 | 14 | 62 | 0.97 |
| 3 | I13436 | IA2-537STD5.0 | 18-Nov-19 | 11:10:20 | 7.309 | 6466.852 | 5126.527 | 4.740 | 100.9 | 1.687 | 494 | 60990 | 1.00 |
| 4 | I13437 | IA2-537STD10.0 | 18-Nov-19 | 11:26:51 | 7.306 | 6314.215 | 9042.376 | 8.563 | 91.1 | 1.523 | 5665 | 2677 | 1.08 |
| 5 | I13438 | IA2-537STD50.0 | 18-Nov-19 | 11:43:24 | 7.306 | 5737.190 | 44566.102 | 46.448 | 98.8 | 1.653 | 8476 | 3548 | 1.00 |
| 6 | I13439 | IA2-537STD125 | 18-Nov-19 | 12:00:10 | 7.296 | 5547.521 | 97344.078 | 104.923 | 89.3 | 1.493 | 14960 | 14826 | 1.08 |
| 7 | I13440 | IA2-537STD150 | 18-Nov-19 | 12:16:43 | 7.299 | 5231.039 | 121259.477 | 138.608 | 98.3 | 1.644 | 13032 | 18913 | 1.04 |
| 8 | I13441 | IA2-537STD250 | 18-Nov-19 | 12:33:16 | 7.293 | 4621.618 | 187634.234 | 242.760 | 103.3 | 1.728 | 19754 | 14066 | 1.07 |
| 9 | I13442 | IA2-537STD500 | 18-Nov-19 | 12:49:53 | 7.283 | 3959.817 | 317014.781 | 478.701 | 101.9 | 1.703 | 34657 | 20744 | 1.11 |

Compound name: PFPeS
Coefficient of Determination: R^2 = 0.998113
Calibration curve: 1.6724 * x
Response type: Internal Std ( Ref 18 ), Area * ( IS Conc. / IS Area )
Curve type: Linear, Origin: Force, Weighting: 1/x, Axis trans: None





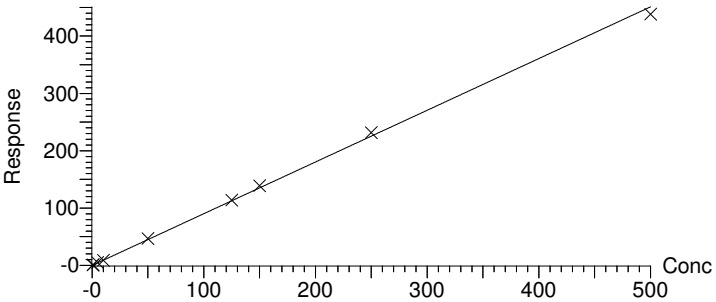
all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
Printed: Monday, November 18, 2019 13:47:36 Eastern Standard Time

**Compound name: PFHpA**

| | Name | ID | Acq.Date | Acq.Time | RT | IS Area | Area | Conc (ng... | %Rec | RRF | 1º S/N | 2º S/N | (b/a) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | I13434 | IA2-537STD0.5 | 18-Nov-19 | 10:24:43 | 8.261 | 117836.461 | 5195.347 | 0.489 | 97.8 | 0.882 | 360 | 77 | 1.06 |
| 2 | I13435 | IA2-537STD1.0 | 18-Nov-19 | 10:53:49 | 8.267 | 121641.055 | 11592.057 | 1.056 | 105.6 | 0.953 | 652 | 108 | 1.08 |
| 3 | I13436 | IA2-537STD5.0 | 18-Nov-19 | 11:10:20 | 8.257 | 117691.789 | 60757.566 | 5.723 | 114.5 | 1.032 | 4284 | 937 | 1.06 |
| 4 | I13437 | IA2-537STD10.0 | 18-Nov-19 | 11:26:51 | 8.257 | 116421.445 | 103796.039 | 9.884 | 98.8 | 0.892 | 6673 | 1168 | 0.99 |
| 5 | I13438 | IA2-537STD50.0 | 18-Nov-19 | 11:43:24 | 8.261 | 108576.563 | 506166.594 | 51.681 | 103.4 | 0.932 | 17764 | 6528 | 1.07 |
| 6 | I13439 | IA2-537STD125 | 18-Nov-19 | 12:00:10 | 8.254 | 101436.859 | 1153905.625 | 126.109 | 100.9 | 0.910 | 37952 | 13087 | 1.06 |
| 7 | I13440 | IA2-537STD150 | 18-Nov-19 | 12:16:43 | 8.254 | 102764.422 | 1427443.125 | 153.988 | 102.7 | 0.926 | 61661 | 14704 | 1.05 |
| 8 | I13441 | IA2-537STD250 | 18-Nov-19 | 12:33:16 | 8.257 | 95052.969 | 2202072.500 | 256.824 | 102.7 | 0.927 | 61936 | 17126 | 1.07 |
| 9 | I13442 | IA2-537STD500 | 18-Nov-19 | 12:49:53 | 8.254 | 89172.406 | 3907235.500 | 485.746 | 97.1 | 0.876 | 58138 | 28566 | 1.10 |

Compound name: PFHpA
Coefficient of Determination: R^2 = 0.999180
Calibration curve: 0.902048 * x
Response type: Internal Std ( Ref 14 ), Area * ( IS Conc. / IS Area )
Curve type: Linear, Origin: Force, Weighting: 1/x, Axis trans: None





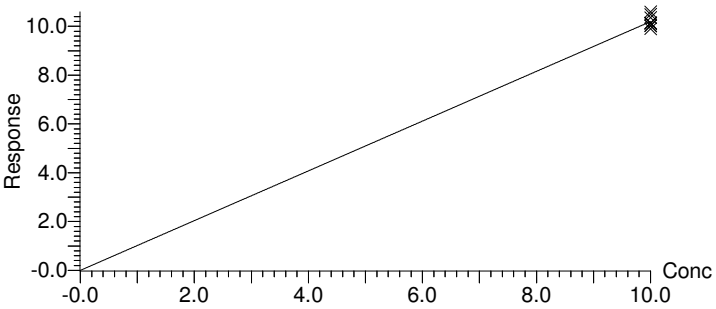
all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
Printed: Monday, November 18, 2019 13:47:36 Eastern Standard Time

**Compound name: M4PFHpA**

| | Name | ID | Acq.Date | Acq.Time | RT | IS Area | Area | Conc (ng... | %Rec | RRF | 1º S/N | 2º S/N | (b/a) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | I13434 | IA2-537STD0.5 | 18-Nov-19 | 10:24:43 | 8.261 | 117636.820 | 117836.461 | 9.824 | 98.2 | 1.002 | 9958 | | 1.03 |
| 2 | I13435 | IA2-537STD1.0 | 18-Nov-19 | 10:53:49 | 8.267 | 114802.125 | 121641.055 | 10.391 | 103.9 | 1.060 | 6274 | | 1.06 |
| 3 | I13436 | IA2-537STD5.0 | 18-Nov-19 | 11:10:20 | 8.257 | 113627.328 | 117691.789 | 10.158 | 101.6 | 1.036 | 16862 | | 1.05 |
| 4 | I13437 | IA2-537STD10.0 | 18-Nov-19 | 11:26:51 | 8.254 | 114891.016 | 116421.445 | 9.938 | 99.4 | 1.013 | 7116 | | 1.08 |
| 5 | I13438 | IA2-537STD50.0 | 18-Nov-19 | 11:43:24 | 8.261 | 107343.031 | 108576.563 | 9.920 | 99.2 | 1.011 | 8349 | | 1.03 |
| 6 | I13439 | IA2-537STD125 | 18-Nov-19 | 12:00:10 | 8.254 | 101103.344 | 101436.859 | 9.839 | 98.4 | 1.003 | 7911 | | 1.04 |
| 7 | I13440 | IA2-537STD150 | 18-Nov-19 | 12:16:43 | 8.254 | 97990.719 | 102764.422 | 10.285 | 102.8 | 1.049 | 4929 | | 1.05 |
| 8 | I13441 | IA2-537STD250 | 18-Nov-19 | 12:33:16 | 8.257 | 96048.547 | 95052.969 | 9.705 | 97.1 | 0.990 | 7797 | | 1.05 |
| 9 | I13442 | IA2-537STD500 | 18-Nov-19 | 12:49:53 | 8.254 | 87971.789 | 89172.406 | 9.941 | 99.4 | 1.014 | 4562 | | 1.09 |

Compound name: M4PFHpA
Response Factor: 1.01968
RRF SD: 0.0232692, % Relative SD: 2.282
Response type: Internal Std ( Ref 23 ), Area * ( IS Conc. / IS Area )
Curve type: RF





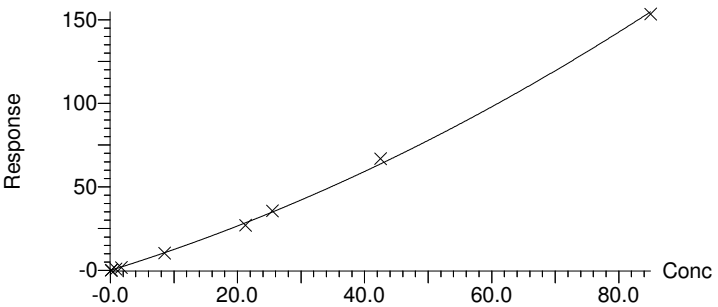
all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
Printed: Monday, November 18, 2019 13:47:36 Eastern Standard Time

**Compound name: br-PFHxS**

| | Name | ID | Acq.Date | Acq.Time | RT | IS Area | Area | Conc (ng... | %Rec | RRF | 1º S/N | 2º S/N | (b/a) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | I13434 | IA2-537STD0.5 | 18-Nov-19 | 10:24:43 | 8.185 | 6305.094 | 11.237 | 0.015 | 17.8 | 0.210 | 1 | | 0.26 |
| 2 | I13435 | IA2-537STD1.0 | 18-Nov-19 | 10:53:49 | 8.135 | 6708.928 | 71.949 | 0.091 | 53.5 | 0.631 | 6 | 3 | 4.56 |
| 3 | I13436 | IA2-537STD5.0 | 18-Nov-19 | 11:10:20 | 8.178 | 6466.852 | 518.690 | 0.678 | 79.8 | 0.944 | 16 | 7 | 0.47 |
| 4 | I13437 | IA2-537STD10.0 | 18-Nov-19 | 11:26:51 | 8.185 | 6314.215 | 1050.500 | 1.400 | 82.4 | 0.979 | 63 | 33 | 0.42 |
| 5 | I13438 | IA2-537STD50.0 | 18-Nov-19 | 11:43:24 | 8.185 | 5737.190 | 5931.751 | 8.333 | 98.0 | 1.216 | 185 | 73 | 0.45 |
| 6 | I13439 | IA2-537STD125 | 18-Nov-19 | 12:00:10 | 8.178 | 5547.521 | 14988.256 | 20.296 | 95.5 | 1.271 | 1100 | 514 | 0.44 |
| 7 | I13440 | IA2-537STD150 | 18-Nov-19 | 12:16:43 | 8.178 | 5231.039 | 18595.721 | 25.883 | 101.5 | 1.394 | 2530 | 273 | 0.46 |
| 8 | I13441 | IA2-537STD250 | 18-Nov-19 | 12:33:16 | 8.181 | 4621.618 | 30899.139 | 44.216 | 104.0 | 1.573 | 868 | 707 | 0.44 |
| 9 | I13442 | IA2-537STD500 | 18-Nov-19 | 12:49:53 | 8.181 | 3959.817 | 60734.234 | 84.444 | 99.3 | 1.804 | 4667 | 831 | 0.44 |

Compound name: br-PFHxS
Coefficient of Determination: R^2 = 0.998684
Calibration curve: 0.00756262 * x^2 + 1.17768 * x
Response type: Internal Std ( Ref 18 ), Area * ( IS Conc. / IS Area )
Curve type: 2nd Order, Origin: Force, Weighting: 1/x, Axis trans: None





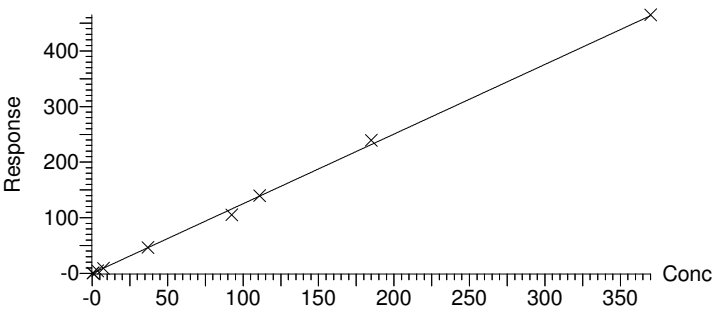
all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
Printed: Monday, November 18, 2019 13:47:36 Eastern Standard Time

**Compound name: L-PFHxS**

| | Name | ID | Acq.Date | Acq.Time | RT | IS Area | Area | Conc (ng... | %Rec | RRF | 1º S/N | 2º S/N | (b/a) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | I13434 | IA2-537STD0.5 | 18-Nov-19 | 10:24:43 | 8.424 | 6305.094 | 259.238 | 0.328 | 88.7 | 1.111 | 20 | 15 | 0.68 |
| 2 | I13435 | IA2-537STD1.0 | 18-Nov-19 | 10:53:49 | 8.420 | 6708.928 | 470.828 | 0.560 | 75.7 | 0.948 | 53 | 37 | 1.13 |
| 3 | I13436 | IA2-537STD5.0 | 18-Nov-19 | 11:10:20 | 8.414 | 6466.852 | 3162.710 | 3.904 | 105.5 | 1.322 | 159 | 90 | 0.97 |
| 4 | I13437 | IA2-537STD10.0 | 18-Nov-19 | 11:26:51 | 8.410 | 6314.215 | 5750.373 | 7.270 | 98.2 | 1.231 | 597 | 350 | 1.03 |
| 5 | I13438 | IA2-537STD50.0 | 18-Nov-19 | 11:43:24 | 8.417 | 5737.190 | 26815.008 | 37.313 | 100.8 | 1.263 | 1314 | 700 | 1.04 |
| 6 | I13439 | IA2-537STD125 | 18-Nov-19 | 12:00:10 | 8.410 | 5547.521 | 58360.066 | 83.984 | 90.8 | 1.137 | 6939 | 4653 | 1.08 |
| 7 | I13440 | IA2-537STD150 | 18-Nov-19 | 12:16:43 | 8.410 | 5231.039 | 73279.281 | 111.834 | 100.8 | 1.262 | 15404 | 2385 | 1.06 |
| 8 | I13441 | IA2-537STD250 | 18-Nov-19 | 12:33:16 | 8.414 | 4621.618 | 110741.648 | 191.292 | 103.4 | 1.295 | 4739 | 5075 | 1.07 |
| 9 | I13442 | IA2-537STD500 | 18-Nov-19 | 12:49:53 | 8.407 | 3959.817 | 184133.313 | 371.225 | 100.3 | 1.257 | 21995 | 5050 | 1.25 |

Compound name: L-PFHxS
Coefficient of Determination: R^2 = 0.998646
Calibration curve: 1.25262 * x
Response type: Internal Std ( Ref 18 ), Area * ( IS Conc. / IS Area )
Curve type: Linear, Origin: Force, Weighting: 1/x, Axis trans: None





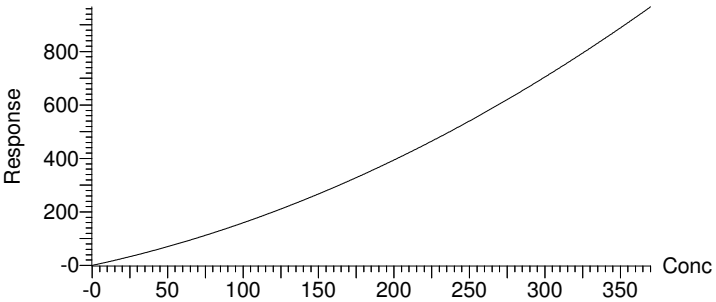
all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
Printed: Monday, November 18, 2019 13:47:36 Eastern Standard Time

**Compound name: PFHxS**

| | Name | ID | Acq.Date | Acq.Time | RT | IS Area | Area | ng/mL | %Rec | RRF | 1º S/N | 2º S/N | (b/a) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | I13434 | IA2-537STD0.5 | 18-Nov-19 | 10:24:43 | | 6305.094 | 270.475 | 0.343 | | | | | |
| 2 | I13435 | IA2-537STD1.0 | 18-Nov-19 | 10:53:49 | | 6708.928 | 542.777 | 0.651 | | | | | |
| 3 | I13436 | IA2-537STD5.0 | 18-Nov-19 | 11:10:20 | | 6466.852 | 3681.400 | 4.582 | | | | | |
| 4 | I13437 | IA2-537STD10.0 | 18-Nov-19 | 11:26:51 | | 6314.215 | 6800.873 | 8.670 | | | | | |
| 5 | I13438 | IA2-537STD50.0 | 18-Nov-19 | 11:43:24 | | 5737.190 | 32746.759 | 45.646 | | | | | |
| 6 | I13439 | IA2-537STD125 | 18-Nov-19 | 12:00:10 | | 5547.521 | 73348.322 | 104.280 | | | | | |
| 7 | I13440 | IA2-537STD150 | 18-Nov-19 | 12:16:43 | | 5231.039 | 91875.002 | 137.717 | | | | | |
| 8 | I13441 | IA2-537STD250 | 18-Nov-19 | 12:33:16 | | 4621.618 | 141640.787 | 235.508 | | | | | |
| 9 | I13442 | IA2-537STD500 | 18-Nov-19 | 12:49:53 | | 3959.817 | 244867.547 | 455.669 | | | | | |

Compound name: PFHxS
Coefficient of Determination: 0.000000
Calibration curve: 1.21515 * x
Response type: Internal Std ( Ref 18 ), Area * ( IS Conc. / IS Area )
Curve type: Linear, Origin: Force, Weighting: 1/x, Axis trans: None





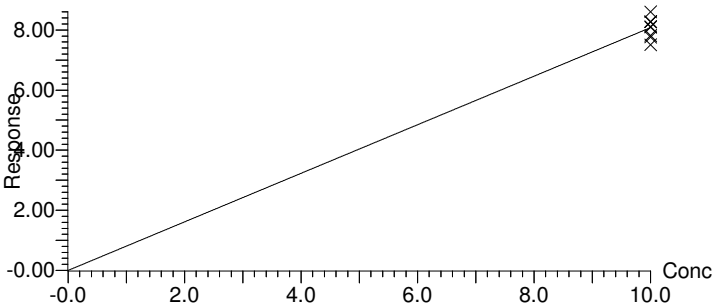
all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
Printed: Monday, November 18, 2019 13:47:36 Eastern Standard Time

**Compound name: M3PFHxS**

| | Name | ID | Acq.Date | Acq.Time | RT | IS Area | Area | Conc (ng... | %Rec | RRF | 1º S/N | 2º S/N | (b/a) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | I13434 | IA2-537STD0.5 | 18-Nov-19 | 10:24:43 | 8.414 | 7620.767 | 6305.094 | 10.241 | 102.4 | 0.827 | 136293 | | 1.11 |
| 2 | I13435 | IA2-537STD1.0 | 18-Nov-19 | 10:53:49 | 8.424 | 7797.159 | 6708.928 | 10.650 | 106.5 | 0.860 | 144053 | | 1.00 |
| 3 | I13436 | IA2-537STD5.0 | 18-Nov-19 | 11:10:20 | 8.414 | 8269.742 | 6466.852 | 9.679 | 96.8 | 0.782 | 138118 | | 1.01 |
| 4 | I13437 | IA2-537STD10.0 | 18-Nov-19 | 11:26:51 | 8.410 | 7629.751 | 6314.215 | 10.243 | 102.4 | 0.828 | 1886 | | 1.08 |
| 5 | I13438 | IA2-537STD50.0 | 18-Nov-19 | 11:43:24 | 8.414 | 7090.403 | 5737.190 | 10.015 | 100.2 | 0.809 | 700 | | 1.19 |
| 6 | I13439 | IA2-537STD125 | 18-Nov-19 | 12:00:10 | 8.410 | 7149.182 | 5547.521 | 9.605 | 96.0 | 0.776 | 12 | | 1.10 |
| 7 | I13440 | IA2-537STD150 | 18-Nov-19 | 12:16:43 | 8.407 | 6324.697 | 5231.039 | 10.237 | 102.4 | 0.827 | 648 | | 1.16 |
| 8 | I13441 | IA2-537STD250 | 18-Nov-19 | 12:33:16 | 8.410 | 5696.930 | 4621.618 | 10.041 | 100.4 | 0.811 | 203 | | 1.16 |
| 9 | I13442 | IA2-537STD500 | 18-Nov-19 | 12:49:53 | 8.407 | 5276.689 | 3959.817 | 9.289 | 92.9 | 0.750 | 385 | | 1.17 |

Compound name: M3PFHxS
Response Factor: 0.807915
RRF SD: 0.033353, % Relative SD: 4.12828
Response type: Internal Std ( Ref 32 ), Area * ( IS Conc. / IS Area )
Curve type: RF





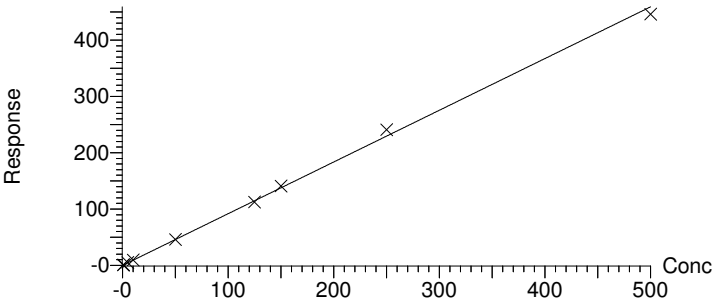
all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
Printed: Monday, November 18, 2019 13:47:36 Eastern Standard Time

**Compound name: br-PFOA**

| | Name | ID | Acq.Date | Acq.Time | RT | IS Area | Area | ng/mL | %Rec | RRF | 1º S/N | 2º S/N | (b/a) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | I13434 | IA2-537STD0.5 | 18-Nov-19 | 10:24:43 | | 114742.953 | | | | | | | |
| 2 | I13435 | IA2-537STD1.0 | 18-Nov-19 | 10:53:49 | | 115929.242 | | | | | | | |
| 3 | I13436 | IA2-537STD5.0 | 18-Nov-19 | 11:10:20 | | 112562.227 | | | | | | | |
| 4 | I13437 | IA2-537STD10.0 | 18-Nov-19 | 11:26:51 | | 109470.945 | | | | | | | |
| 5 | I13438 | IA2-537STD50.0 | 18-Nov-19 | 11:43:24 | | 106781.555 | | | | | | | |
| 6 | I13439 | IA2-537STD125 | 18-Nov-19 | 12:00:10 | | 98244.656 | | | | | | | |
| 7 | I13440 | IA2-537STD150 | 18-Nov-19 | 12:16:43 | | 98053.172 | | | | | | | |
| 8 | I13441 | IA2-537STD250 | 18-Nov-19 | 12:33:16 | | 90653.047 | | | | | | 3 | |
| 9 | I13442 | IA2-537STD500 | 18-Nov-19 | 12:49:53 | | 85048.031 | | | | | | 2 | |

Compound name: L-PFOA
Coefficient of Determination: R^2 = 0.998806
Calibration curve: 0.918228 * x
Response type: Internal Std ( Ref 22 ), Area * ( IS Conc. / IS Area )
Curve type: Linear, Origin: Force, Weighting: 1/x, Axis trans: None





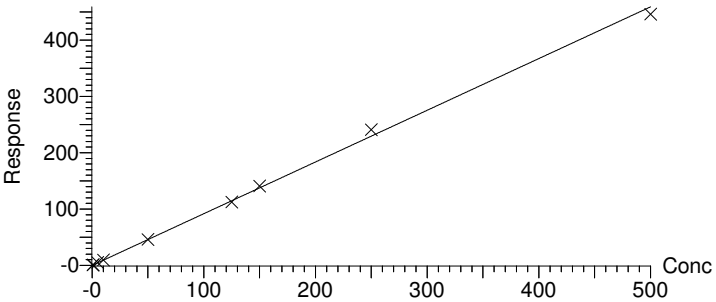
all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
Printed: Monday, November 18, 2019 13:47:36 Eastern Standard Time

**Compound name: L-PFOA**

| | Name | ID | Acq.Date | Acq.Time | RT | IS Area | Area | Conc (ng... | %Rec | RRF | 1º S/N | 2º S/N | (b/a) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | I13434 | IA2-537STD0.5 | 18-Nov-19 | 10:24:43 | 9.195 | 114742.953 | 5268.463 | 0.500 | 100.0 | 0.918 | 138 | 61 | 1.06 |
| 2 | I13435 | IA2-537STD1.0 | 18-Nov-19 | 10:53:49 | 9.201 | 115929.242 | 11899.890 | 1.118 | 111.8 | 1.026 | 324 | 80 | 1.08 |
| 3 | I13436 | IA2-537STD5.0 | 18-Nov-19 | 11:10:20 | 9.192 | 112562.227 | 58197.820 | 5.631 | 112.6 | 1.034 | 1597 | 182 | 1.01 |
| 4 | I13437 | IA2-537STD10.0 | 18-Nov-19 | 11:26:51 | 9.192 | 109470.945 | 105110.031 | 10.457 | 104.6 | 0.960 | 3137 | 231297 | 1.08 |
| 5 | I13438 | IA2-537STD50.0 | 18-Nov-19 | 11:43:24 | 9.198 | 106781.555 | 491336.344 | 50.111 | 100.2 | 0.920 | 13186 | 348 | 1.11 |
| 6 | I13439 | IA2-537STD125 | 18-Nov-19 | 12:00:10 | 9.192 | 98244.656 | 1104013.250 | 122.381 | 97.9 | 0.899 | 25245 | 15685 | 1.10 |
| 7 | I13440 | IA2-537STD150 | 18-Nov-19 | 12:16:43 | 9.189 | 98053.172 | 1380425.125 | 153.321 | 102.2 | 0.939 | 34514 | 5127 | 1.12 |
| 8 | I13441 | IA2-537STD250 | 18-Nov-19 | 12:33:16 | 9.195 | 90653.047 | 2184240.000 | 262.402 | 105.0 | 0.964 | 28539 | 12915 | 1.10 |
| 9 | I13442 | IA2-537STD500 | 18-Nov-19 | 12:49:53 | 9.195 | 85048.031 | 3792057.500 | 485.579 | 97.1 | 0.892 | 73682 | 13446 | 1.15 |

Compound name: L-PFOA
Coefficient of Determination: R^2 = 0.998806
Calibration curve: 0.918228 * x
Response type: Internal Std ( Ref 22 ), Area * ( IS Conc. / IS Area )
Curve type: Linear, Origin: Force, Weighting: 1/x, Axis trans: None





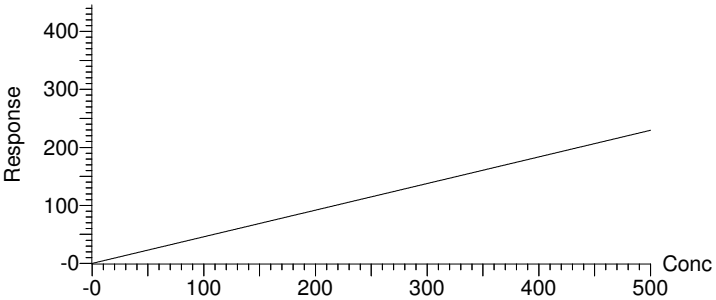
all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
Printed: Monday, November 18, 2019 13:47:36 Eastern Standard Time

**Compound name: PFOA**

| | Name | ID | Acq.Date | Acq.Time | RT | IS Area | Area | ng/mL | %Rec | RRF | 1º S/N | 2º S/N | (b/a) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | I13434 | IA2-537STD0.5 | 18-Nov-19 | 10:24:43 | | 114742.953 | 5268.463 | 0.500 | | | | | |
| 2 | I13435 | IA2-537STD1.0 | 18-Nov-19 | 10:53:49 | | 115929.242 | 11899.890 | 1.118 | | | | | |
| 3 | I13436 | IA2-537STD5.0 | 18-Nov-19 | 11:10:20 | | 112562.227 | 58197.820 | 5.631 | | | | | |
| 4 | I13437 | IA2-537STD10.0 | 18-Nov-19 | 11:26:51 | | 109470.945 | 105110.031 | 10.457 | | | | | |
| 5 | I13438 | IA2-537STD50.0 | 18-Nov-19 | 11:43:24 | | 106781.555 | 491336.344 | 50.111 | | | | | |
| 6 | I13439 | IA2-537STD125 | 18-Nov-19 | 12:00:10 | | 98244.656 | 1104013.250 | 122.381 | | | | | |
| 7 | I13440 | IA2-537STD150 | 18-Nov-19 | 12:16:43 | | 98053.172 | 1380425.125 | 153.321 | | | | | |
| 8 | I13441 | IA2-537STD250 | 18-Nov-19 | 12:33:16 | | 90653.047 | 2184240.000 | 262.402 | | | | | |
| 9 | I13442 | IA2-537STD500 | 18-Nov-19 | 12:49:53 | | 85048.031 | 3792057.500 | 485.579 | | | | | |

Compound name: PFOA
Coefficient of Determination: 0.000000
Calibration curve: 0.459114 * x
Response type: Internal Std ( Ref 22 ), Area * ( IS Conc. / IS Area )
Curve type: Linear, Origin: Force, Weighting: 1/x, Axis trans: None





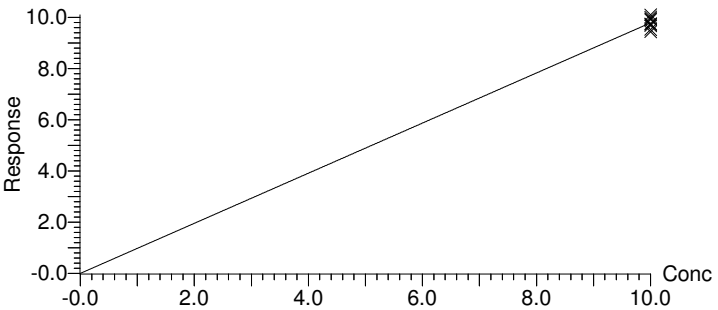
all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
Printed: Monday, November 18, 2019 13:47:36 Eastern Standard Time

**Compound name: M8PFOA**

| | Name | ID | Acq.Date | Acq.Time | RT | IS Area | Area | Conc (ng... | %Rec | RRF | 1º S/N | 2º S/N | (b/a) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | I13434 | IA2-537STD0.5 | 18-Nov-19 | 10:24:43 | 9.195 | 117636.820 | 114742.953 | 9.968 | 99.7 | 0.975 | 6801 | | 1.02 |
| 2 | I13435 | IA2-537STD1.0 | 18-Nov-19 | 10:53:49 | 9.201 | 114802.125 | 115929.242 | 10.320 | 103.2 | 1.010 | 11747 | | 1.01 |
| 3 | I13436 | IA2-537STD5.0 | 18-Nov-19 | 11:10:20 | 9.189 | 113627.328 | 112562.227 | 10.124 | 101.2 | 0.991 | 2472767 | | 1.08 |
| 4 | I13437 | IA2-537STD10.0 | 18-Nov-19 | 11:26:51 | 9.189 | 114891.016 | 109470.945 | 9.738 | 97.4 | 0.953 | 2330920 | | 1.11 |
| 5 | I13438 | IA2-537STD50.0 | 18-Nov-19 | 11:43:24 | 9.198 | 107343.031 | 106781.555 | 10.166 | 101.7 | 0.995 | 7478 | | 1.04 |
| 6 | I13439 | IA2-537STD125 | 18-Nov-19 | 12:00:10 | 9.192 | 101103.344 | 98244.656 | 9.931 | 99.3 | 0.972 | 11749 | | 1.04 |
| 7 | I13440 | IA2-537STD150 | 18-Nov-19 | 12:16:43 | 9.189 | 97990.719 | 98053.172 | 10.226 | 102.3 | 1.001 | 32823 | | 1.07 |
| 8 | I13441 | IA2-537STD250 | 18-Nov-19 | 12:33:16 | 9.195 | 96048.547 | 90653.047 | 9.646 | 96.5 | 0.944 | 4405 | | 1.03 |
| 9 | I13442 | IA2-537STD500 | 18-Nov-19 | 12:49:53 | 9.195 | 87971.789 | 85048.031 | 9.880 | 98.8 | 0.967 | 2298 | | 1.09 |

Compound name: M8PFOA
Response Factor: 0.978488
RRF SD: 0.0221851, % Relative SD: 2.26728
Response type: Internal Std ( Ref 23 ), Area * ( IS Conc. / IS Area )
Curve type: RF





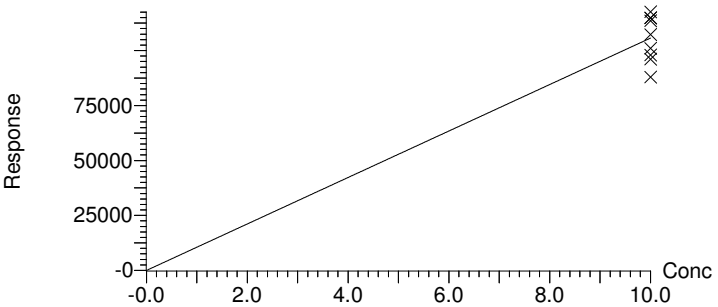
all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
Printed: Monday, November 18, 2019 13:47:36 Eastern Standard Time

**Compound name: M2PFOA**

| | Name | ID | Acq.Date | Acq.Time | RT | IS Area | Area | ng/mL | %Rec | RRF | 1º S/N | 2º S/N | (b/a) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | I13434 | IA2-537STD0.5 | 18-Nov-19 | 10:24:43 | 9.195 | | 117636.820 | 11.128 | 111.3 | 11763.682 | 9674 | | 1.05 |
| 2 | I13435 | IA2-537STD1.0 | 18-Nov-19 | 10:53:49 | 9.201 | | 114802.125 | 10.860 | 108.6 | 11480.213 | 11792 | | 1.07 |
| 3 | I13436 | IA2-537STD5.0 | 18-Nov-19 | 11:10:20 | 9.192 | | 113627.328 | 10.749 | 107.5 | 11362.733 | 8335 | | 1.01 |
| 4 | I13437 | IA2-537STD10.0 | 18-Nov-19 | 11:26:51 | 9.192 | | 114891.016 | 10.868 | 108.7 | 11489.102 | 6316 | | 1.04 |
| 5 | I13438 | IA2-537STD50.0 | 18-Nov-19 | 11:43:24 | 9.198 | | 107343.031 | 10.154 | 101.5 | 10734.303 | 6504 | | 1.07 |
| 6 | I13439 | IA2-537STD125 | 18-Nov-19 | 12:00:10 | 9.192 | | 101103.344 | 9.564 | 95.6 | 10110.334 | 13673 | | 1.08 |
| 7 | I13440 | IA2-537STD150 | 18-Nov-19 | 12:16:43 | 9.189 | | 97990.719 | 9.270 | 92.7 | 9799.072 | 15591 | | 1.13 |
| 8 | I13441 | IA2-537STD250 | 18-Nov-19 | 12:33:16 | 9.195 | | 96048.547 | 9.086 | 90.9 | 9604.855 | 6987 | | 1.12 |
| 9 | I13442 | IA2-537STD500 | 18-Nov-19 | 12:49:53 | 9.195 | | 87971.789 | 8.322 | 83.2 | 8797.179 | 7087 | | 1.17 |

Compound name: M2PFOA
Response Factor: 10571.3
RRF SD: 1038.84, % Relative SD: 9.82703
Response type: External Std, Area
Curve type: RF





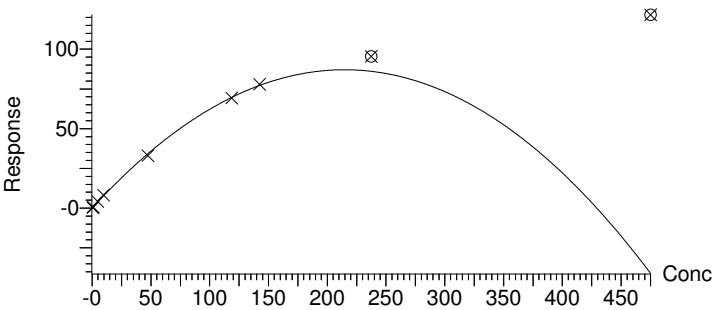
all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
Printed: Monday, November 18, 2019 13:47:36 Eastern Standard Time

**Compound name: 6:2FTS**

| | Name | ID | Acq.Date | Acq.Time | RT | IS Area | Area | Conc (ng... | %Rec | RRF | 1º S/N | 2º S/N | (b/a) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | I13434 | IA2-537STD0.5 | 18-Nov-19 | 10:24:43 | 9.151 | 5244.259 | 136.521 | 0.321 | 67.6 | 0.548 | 43 | | 1.18 |
| 2 | I13435 | IA2-537STD1.0 | 18-Nov-19 | 10:53:49 | 9.160 | 5793.605 | 472.065 | 1.007 | 106.0 | 0.858 | 11270 | | 1.09 |
| 3 | I13436 | IA2-537STD5.0 | 18-Nov-19 | 11:10:20 | 9.154 | 5686.892 | 2364.637 | 5.188 | 109.2 | 0.875 | 2595 | 2922 | 1.04 |
| 4 | I13437 | IA2-537STD10.0 | 18-Nov-19 | 11:26:51 | 9.151 | 5537.379 | 4543.102 | 10.363 | 109.1 | 0.864 | 90 | 10198 | 1.08 |
| 5 | I13438 | IA2-537STD50.0 | 18-Nov-19 | 11:43:24 | 9.157 | 6923.649 | 22887.639 | 45.588 | 96.0 | 0.696 | 2509 | 49281 | 1.05 |
| 6 | I13439 | IA2-537STD125 | 18-Nov-19 | 12:00:10 | 9.151 | 7531.343 | 52169.430 | 117.597 | 99.0 | 0.583 | 24000 | 105127 | 1.11 |
| 7 | I13440 | IA2-537STD150 | 18-Nov-19 | 12:16:43 | 9.147 | 8490.607 | 66168.844 | 145.112 | 101.8 | 0.547 | 9501 | 143411 | 1.07 |
| 8 | I13441 | IA2-537STD250 | 18-Nov-19 | 12:33:16 | 9.154 | 11016.425 | 105134.914 | | | 0.402 | 8557 | 244179 | 1.04 |
| 9 | I13442 | IA2-537STD500 | 18-Nov-19 | 12:49:53 | 9.154 | 16172.786 | 196700.500 | | | 0.256 | 9005 | 445042 | 1.05 |

Compound name: 6:2FTS
Coefficient of Determination: R^2 = 0.998705
Calibration curve: -0.00188986 * x^2 + 0.811287 * x
Response type: Internal Std ( Ref 25 ), Area * ( IS Conc. / IS Area )
Curve type: 2nd Order, Origin: Force, Weighting: 1/x, Axis trans: None





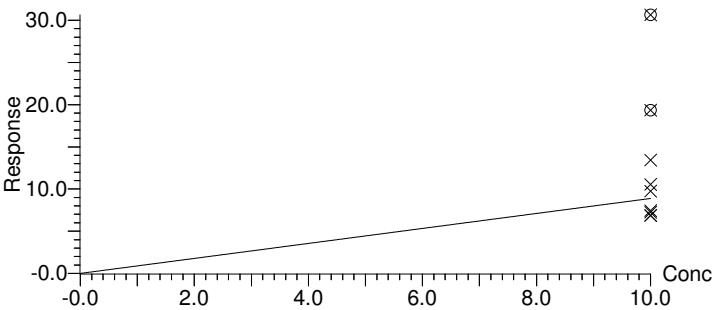
all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
Printed: Monday, November 18, 2019 13:47:36 Eastern Standard Time

**Compound name: M2-6:2FTS**

| | Name | ID | Acq.Date | Acq.Time | RT | IS Area | Area | Conc (ng... | %Rec | RRF | 1º S/N | 2º S/N | (b/a) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | I13434 | IA2-537STD0.5 | 18-Nov-19 | 10:24:43 | 9.154 | 7620.767 | 5244.259 | 7.748 | 77.5 | 0.688 | 1856 | | 1.08 |
| 2 | I13435 | IA2-537STD1.0 | 18-Nov-19 | 10:53:49 | 9.163 | 7797.159 | 5793.605 | 8.366 | 83.7 | 0.743 | 130134 | | 0.95 |
| 3 | I13436 | IA2-537STD5.0 | 18-Nov-19 | 11:10:20 | 9.151 | 8269.742 | 5686.892 | 7.743 | 77.4 | 0.688 | 1728 | | 1.07 |
| 4 | I13437 | IA2-537STD10.0 | 18-Nov-19 | 11:26:51 | 9.151 | 7629.751 | 5537.379 | 8.172 | 81.7 | 0.726 | 128419 | | 1.04 |
| 5 | I13438 | IA2-537STD50.0 | 18-Nov-19 | 11:43:24 | 9.160 | 7090.403 | 6923.649 | 10.995 | 109.9 | 0.976 | 3006 | | 0.94 |
| 6 | I13439 | IA2-537STD125 | 18-Nov-19 | 12:00:10 | 9.154 | 7149.182 | 7531.343 | 11.861 | 118.6 | 1.053 | 173852 | | 0.97 |
| 7 | I13440 | IA2-537STD150 | 18-Nov-19 | 12:16:43 | 9.151 | 6324.697 | 8490.607 | 15.115 | 151.2 | 1.342 | 866 | | 0.96 |
| 8 | I13441 | IA2-537STD250 | 18-Nov-19 | 12:33:16 | 9.154 | 5696.930 | 11016.425 | 21.773 | 217.7 | 1.934 | 251479 | | 1.05 |
| 9 | I13442 | IA2-537STD500 | 18-Nov-19 | 12:49:53 | 9.154 | 5276.689 | 16172.786 | 34.510 | 345.1 | 3.065 | 3544 | | 1.05 |

Compound name: M2-6:2FTS
Response Factor: 0.888146
RRF SD: 0.248037, % Relative SD: 27.9275
Response type: Internal Std ( Ref 32 ), Area * ( IS Conc. / IS Area )
Curve type: RF





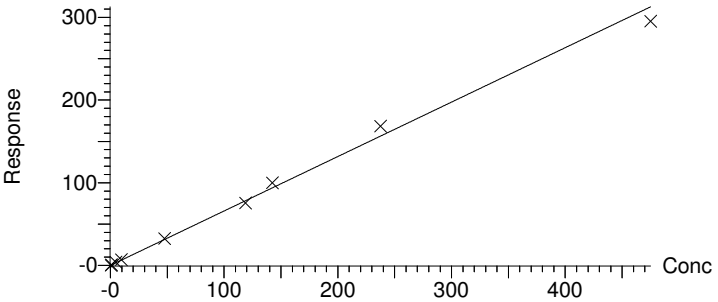
all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
Printed: Monday, November 18, 2019 13:47:36 Eastern Standard Time

**Compound name: PFHpS**

| | Name | ID | Acq.Date | Acq.Time | RT | IS Area | Area | Conc (ng... | %Rec | RRF | 1º S/N | 2º S/N | (b/a) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | I13434 | IA2-537STD0.5 | 18-Nov-19 | 10:24:43 | 9.288 | 7863.209 | 144.360 | 0.279 | 58.7 | 0.387 | 221 | 10 | 0.78 |
| 2 | I13435 | IA2-537STD1.0 | 18-Nov-19 | 10:53:49 | 9.288 | 8337.590 | 621.729 | 1.132 | 119.2 | 0.785 | 155 | 101 | 1.04 |
| 3 | I13436 | IA2-537STD5.0 | 18-Nov-19 | 11:10:20 | 9.279 | 7856.718 | 2920.696 | 5.646 | 118.9 | 0.783 | 797 | 309 | 1.12 |
| 4 | I13437 | IA2-537STD10.0 | 18-Nov-19 | 11:26:51 | 9.282 | 7611.157 | 5201.360 | 10.378 | 109.2 | 0.719 | 12 | 669 | 0.98 |
| 5 | I13438 | IA2-537STD50.0 | 18-Nov-19 | 11:43:24 | 9.288 | 7647.324 | 24823.602 | 49.296 | 103.8 | 0.683 | 4812 | 2802 | 1.04 |
| 6 | I13439 | IA2-537STD125 | 18-Nov-19 | 12:00:10 | 9.282 | 6866.474 | 51706.141 | 114.358 | 96.3 | 0.634 | 1116814 | 5891 | 1.05 |
| 7 | I13440 | IA2-537STD150 | 18-Nov-19 | 12:16:43 | 9.279 | 6560.688 | 65508.563 | 151.638 | 106.4 | 0.701 | 6932 | 3799 | 1.06 |
| 8 | I13441 | IA2-537STD250 | 18-Nov-19 | 12:33:16 | 9.285 | 5910.273 | 99602.891 | 255.931 | 107.8 | 0.710 | 1917 | 10570 | 1.08 |
| 9 | I13442 | IA2-537STD500 | 18-Nov-19 | 12:49:53 | 9.285 | 5658.023 | 167009.734 | 448.266 | 94.4 | 0.621 | 17852 | 20289 | 1.15 |

Compound name: PFHpS
Coefficient of Determination: R^2 = 0.995952
Calibration curve: 0.658478 * x
Response type: Internal Std ( Ref 33 ), Area * ( IS Conc. / IS Area )
Curve type: Linear, Origin: Force, Weighting: 1/x, Axis trans: None





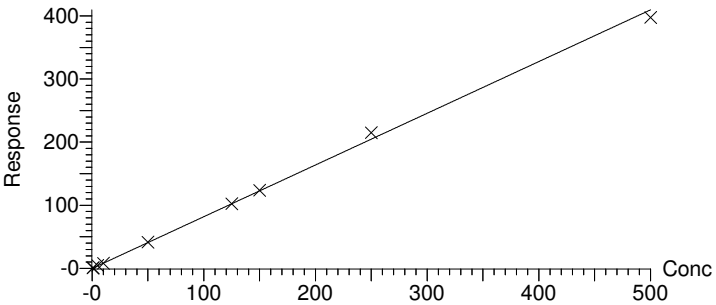
all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
Printed: Monday, November 18, 2019 13:47:36 Eastern Standard Time

**Compound name: PFNA**

| | Name | ID | Acq.Date | Acq.Time | RT | IS Area | Area | Conc (ng... | %Rec | RRF | 1º S/N | 2º S/N | (b/a) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | I13434 | IA2-537STD0.5 | 18-Nov-19 | 10:24:43 | 9.946 | 114401.953 | 4410.776 | 0.471 | 94.1 | 0.771 | 122 | 301 | 1.04 |
| 2 | I13435 | IA2-537STD1.0 | 18-Nov-19 | 10:53:49 | 9.950 | 113246.805 | 10939.968 | 1.179 | 117.9 | 0.966 | 299 | 51723 | 0.99 |
| 3 | I13436 | IA2-537STD5.0 | 18-Nov-19 | 11:10:20 | 9.941 | 112215.648 | 52307.785 | 5.690 | 113.8 | 0.932 | 1092 | 243154 | 1.01 |
| 4 | I13437 | IA2-537STD10.0 | 18-Nov-19 | 11:26:51 | 9.941 | 112653.875 | 90734.125 | 9.831 | 98.3 | 0.805 | 2463 | 708 | 1.03 |
| 5 | I13438 | IA2-537STD50.0 | 18-Nov-19 | 11:43:24 | 9.950 | 104182.664 | 434642.250 | 50.925 | 101.8 | 0.834 | 10328 | 7740 | 0.98 |
| 6 | I13439 | IA2-537STD125 | 18-Nov-19 | 12:00:10 | 9.946 | 94452.336 | 964953.875 | 124.705 | 99.8 | 0.817 | 30563 | 8818 | 0.97 |
| 7 | I13440 | IA2-537STD150 | 18-Nov-19 | 12:16:43 | 9.941 | 96585.883 | 1196780.250 | 151.249 | 100.8 | 0.826 | 30019 | 13273 | 1.00 |
| 8 | I13441 | IA2-537STD250 | 18-Nov-19 | 12:33:16 | 9.946 | 87852.000 | 1887084.875 | 262.199 | 104.9 | 0.859 | 40376 | 21285 | 1.03 |
| 9 | I13442 | IA2-537STD500 | 18-Nov-19 | 12:49:53 | 9.946 | 82060.539 | 3262201.750 | 485.252 | 97.1 | 0.795 | 81231 | 41203 | 1.06 |

Compound name: PFNA
Coefficient of Determination: R^2 = 0.998884
Calibration curve: 0.819236 * x
Response type: Internal Std ( Ref 28 ), Area * ( IS Conc. / IS Area )
Curve type: Linear, Origin: Force, Weighting: 1/x, Axis trans: None





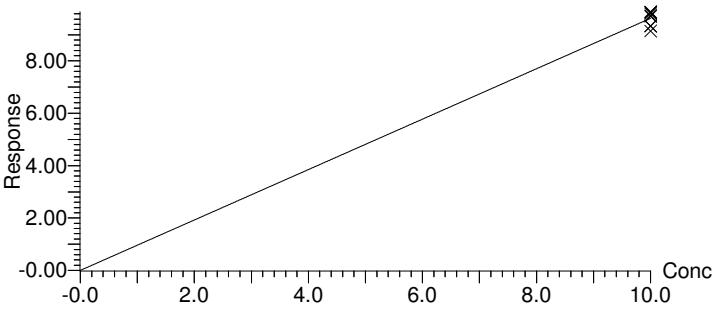
all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
Printed: Monday, November 18, 2019 13:47:36 Eastern Standard Time

**Compound name: M9PFNA**

| | Name | ID | Acq.Date | Acq.Time | RT | IS Area | Area | Conc (ng... | %Rec | RRF | 1º S/N | 2º S/N | (b/a) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | I13434 | IA2-537STD0.5 | 18-Nov-19 | 10:24:43 | 9.946 | 117636.820 | 114401.953 | 10.101 | 101.0 | 0.973 | 16011 | | 0.99 |
| 2 | I13435 | IA2-537STD1.0 | 18-Nov-19 | 10:53:49 | 9.950 | 114802.125 | 113246.805 | 10.246 | 102.5 | 0.986 | 34666 | | 1.00 |
| 3 | I13436 | IA2-537STD5.0 | 18-Nov-19 | 11:10:20 | 9.941 | 113627.328 | 112215.648 | 10.258 | 102.6 | 0.988 | 11385 | | 0.99 |
| 4 | I13437 | IA2-537STD10.0 | 18-Nov-19 | 11:26:51 | 9.941 | 114891.016 | 112653.875 | 10.184 | 101.8 | 0.981 | 12874 | | 1.01 |
| 5 | I13438 | IA2-537STD50.0 | 18-Nov-19 | 11:43:24 | 9.946 | 107343.031 | 104182.664 | 10.081 | 100.8 | 0.971 | 6038 | | 1.05 |
| 6 | I13439 | IA2-537STD125 | 18-Nov-19 | 12:00:10 | 9.941 | 101103.344 | 94452.336 | 9.703 | 97.0 | 0.934 | 462 | | 1.05 |
| 7 | I13440 | IA2-537STD150 | 18-Nov-19 | 12:16:43 | 9.941 | 97990.719 | 96585.883 | 10.238 | 102.4 | 0.986 | 2951 | | 1.00 |
| 8 | I13441 | IA2-537STD250 | 18-Nov-19 | 12:33:16 | 9.946 | 96048.547 | 87852.000 | 9.500 | 95.0 | 0.915 | 4214 | | 1.00 |
| 9 | I13442 | IA2-537STD500 | 18-Nov-19 | 12:49:53 | 9.946 | 87971.789 | 82060.539 | 9.689 | 96.9 | 0.933 | 8159 | | 1.04 |

Compound name: M9PFNA
Response Factor: 0.962774
RRF SD: 0.0278357, % Relative SD: 2.89119
Response type: Internal Std ( Ref 23 ), Area * ( IS Conc. / IS Area )
Curve type: RF





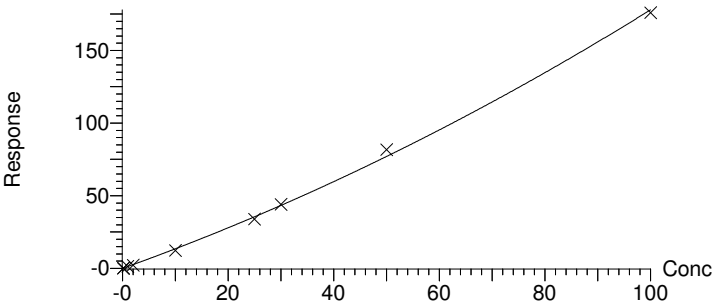
all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
Printed: Monday, November 18, 2019 13:47:36 Eastern Standard Time

**Compound name: br-PFOS**

| | Name | ID | Acq.Date | Acq.Time | RT | IS Area | Area | Conc (ng... | %Rec | RRF | 1º S/N | 2º S/N | (b/a) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | I13434 | IA2-537STD0.5 | 18-Nov-19 | 10:24:43 | 9.724 | 7863.209 | 63.022 | 0.062 | 61.5 | 0.801 | 1 | | 4.31 |
| 2 | I13435 | IA2-537STD1.0 | 18-Nov-19 | 10:53:49 | 9.809 | 8337.590 | 144.024 | 0.133 | 66.3 | 0.864 | 7 | 5 | 0.44 |
| 3 | I13436 | IA2-537STD5.0 | 18-Nov-19 | 11:10:20 | 9.801 | 7856.718 | 1018.896 | 0.992 | 99.2 | 1.297 | 66 | 8 | 0.38 |
| 4 | I13437 | IA2-537STD10.0 | 18-Nov-19 | 11:26:51 | 9.801 | 7611.157 | 1719.872 | 1.724 | 86.2 | 1.130 | 60 | 50 | 0.47 |
| 5 | I13438 | IA2-537STD50.0 | 18-Nov-19 | 11:43:24 | 9.809 | 7647.324 | 9374.953 | 9.110 | 91.1 | 1.226 | 206 | 58 | 0.37 |
| 6 | I13439 | IA2-537STD125 | 18-Nov-19 | 12:00:10 | 9.805 | 6866.474 | 23335.752 | 23.990 | 96.0 | 1.359 | 254 | 146 | 0.38 |
| 7 | I13440 | IA2-537STD150 | 18-Nov-19 | 12:16:43 | 9.801 | 6560.688 | 28882.205 | 30.417 | 101.4 | 1.467 | 969 | 130741 | 0.41 |
| 8 | I13441 | IA2-537STD250 | 18-Nov-19 | 12:33:16 | 9.809 | 5910.273 | 48275.703 | 52.590 | 105.2 | 1.634 | 1207 | 725 | 0.38 |
| 9 | I13442 | IA2-537STD500 | 18-Nov-19 | 12:49:53 | 9.809 | 5658.023 | 99553.039 | 99.112 | 99.1 | 1.760 | 64 | 1430 | 0.39 |

Compound name: br-PFOS
Coefficient of Determination: R^2 = 0.998470
Calibration curve: 0.0047735 * x^2 + 1.30214 * x
Response type: Internal Std ( Ref 33 ), Area * ( IS Conc. / IS Area )
Curve type: 2nd Order, Origin: Force, Weighting: 1/x, Axis trans: None





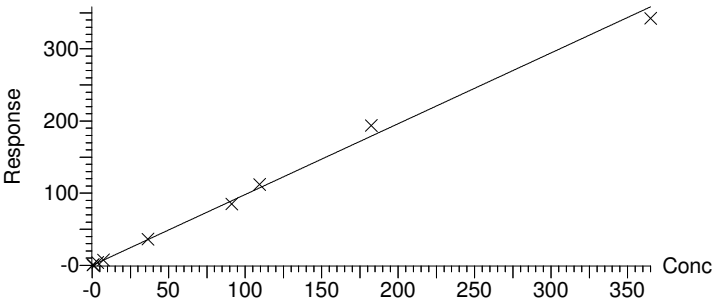
all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
Printed: Monday, November 18, 2019 13:47:36 Eastern Standard Time

**Compound name: L-PFOS**

| | Name | ID | Acq.Date | Acq.Time | RT | IS Area | Area | Conc (ng... | %Rec | RRF | 1º S/N | 2º S/N | (b/a) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | I13434 | IA2-537STD0.5 | 18-Nov-19 | 10:24:43 | 10.0... | 7863.209 | 210.105 | 0.272 | 74.6 | 0.732 | 7 | 5455 | 0.73 |
| 2 | I13435 | IA2-537STD1.0 | 18-Nov-19 | 10:53:49 | 10.0... | 8337.590 | 646.229 | 0.790 | 108.2 | 1.062 | 57 | 38 | 1.09 |
| 3 | I13436 | IA2-537STD5.0 | 18-Nov-19 | 11:10:20 | 9.993 | 7856.718 | 3141.077 | 4.074 | 111.6 | 1.095 | 356 | 84 | 0.93 |
| 4 | I13437 | IA2-537STD10.0 | 18-Nov-19 | 11:26:51 | 9.993 | 7611.157 | 5686.805 | 7.613 | 104.3 | 1.024 | 417 | 466 | 0.94 |
| 5 | I13438 | IA2-537STD50.0 | 18-Nov-19 | 11:43:24 | 9.997 | 7647.324 | 27678.270 | 36.880 | 101.0 | 0.992 | 1273 | 545 | 1.03 |
| 6 | I13439 | IA2-537STD125 | 18-Nov-19 | 12:00:10 | 9.993 | 6866.474 | 58381.578 | 86.636 | 94.9 | 0.932 | 1365 | 1277 | 1.01 |
| 7 | I13440 | IA2-537STD150 | 18-Nov-19 | 12:16:43 | 9.993 | 6560.688 | 73590.516 | 114.296 | 104.4 | 1.024 | 5274 | 1018150 | 0.99 |
| 8 | I13441 | IA2-537STD250 | 18-Nov-19 | 12:33:16 | 9.997 | 5910.273 | 114601.617 | 197.579 | 108.3 | 1.062 | 5829 | 5448 | 1.02 |
| 9 | I13442 | IA2-537STD500 | 18-Nov-19 | 12:49:53 | 9.997 | 5658.023 | 193598.438 | 348.655 | 95.5 | 0.937 | 263 | 8522 | 1.08 |

Compound name: L-PFOS
Coefficient of Determination: R^2 = 0.996780
Calibration curve: 0.98139 * x
Response type: Internal Std ( Ref 33 ), Area * ( IS Conc. / IS Area )
Curve type: Linear, Origin: Force, Weighting: 1/x, Axis trans: None





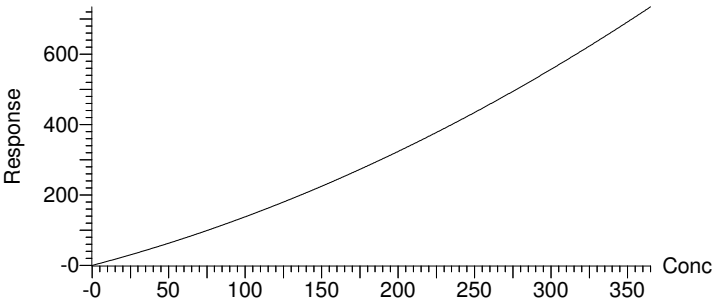
all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
Printed: Monday, November 18, 2019 13:47:36 Eastern Standard Time

**Compound name: PFOS**

| | Name | ID | Acq.Date | Acq.Time | RT | IS Area | Area | ng/mL | %Rec | RRF | 1º S/N | 2º S/N | (b/a) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | I13434 | IA2-537STD0.5 | 18-Nov-19 | 10:24:43 | | 7863.209 | 273.127 | 0.334 | | | | | |
| 2 | I13435 | IA2-537STD1.0 | 18-Nov-19 | 10:53:49 | | 8337.590 | 790.253 | 0.922 | | | | | |
| 3 | I13436 | IA2-537STD5.0 | 18-Nov-19 | 11:10:20 | | 7856.718 | 4159.973 | 5.066 | | | | | |
| 4 | I13437 | IA2-537STD10.0 | 18-Nov-19 | 11:26:51 | | 7611.157 | 7406.677 | 9.338 | | | | | |
| 5 | I13438 | IA2-537STD50.0 | 18-Nov-19 | 11:43:24 | | 7647.324 | 37053.223 | 45.990 | | | | | |
| 6 | I13439 | IA2-537STD125 | 18-Nov-19 | 12:00:10 | | 6866.474 | 81717.330 | 110.626 | | | | | |
| 7 | I13440 | IA2-537STD150 | 18-Nov-19 | 12:16:43 | | 6560.688 | 102472.721 | 144.713 | | | | | |
| 8 | I13441 | IA2-537STD250 | 18-Nov-19 | 12:33:16 | | 5910.273 | 162877.320 | 250.169 | | | | | |
| 9 | I13442 | IA2-537STD500 | 18-Nov-19 | 12:49:53 | | 5658.023 | 293151.477 | 447.767 | | | | | |

Compound name: PFOS
Coefficient of Determination: 0.000000
Calibration curve: 1.14177 * x
Response type: Internal Std ( Ref 33 ), Area * ( IS Conc. / IS Area )
Curve type: Linear, Origin: Force, Weighting: 1/x, Axis trans: None





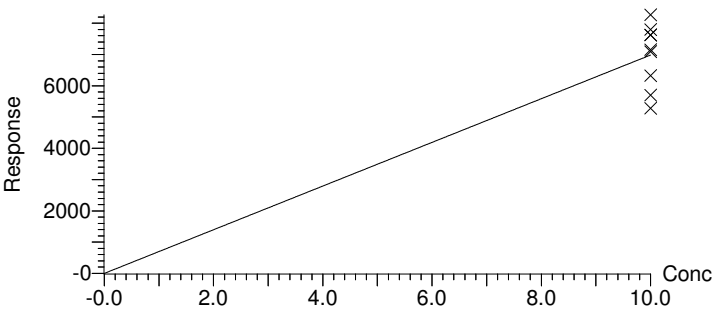
all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
Printed: Monday, November 18, 2019 13:47:36 Eastern Standard Time

**Compound name: M4PFOS**

| | Name | ID | Acq.Date | Acq.Time | RT | IS Area | Area | Conc (ng... | %Rec | RRF | 1º S/N | 2º S/N | (b/a) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | I13434 | IA2-537STD0.5 | 18-Nov-19 | 10:24:43 | 9.997 | | 7620.767 | 10.912 | 109.1 | 762.077 | 157037 | | 0.93 |
| 2 | I13435 | IA2-537STD1.0 | 18-Nov-19 | 10:53:49 | 10.0... | | 7797.159 | 11.164 | 111.6 | 779.716 | 167149 | | 0.90 |
| 3 | I13436 | IA2-537STD5.0 | 18-Nov-19 | 11:10:20 | 9.989 | | 8269.742 | 11.841 | 118.4 | 826.974 | 177403 | | 1.03 |
| 4 | I13437 | IA2-537STD10.0 | 18-Nov-19 | 11:26:51 | 9.993 | | 7629.751 | 10.925 | 109.2 | 762.975 | 159530 | | 0.97 |
| 5 | I13438 | IA2-537STD50.0 | 18-Nov-19 | 11:43:24 | 9.997 | | 7090.403 | 10.152 | 101.5 | 709.040 | 146923 | | 0.99 |
| 6 | I13439 | IA2-537STD125 | 18-Nov-19 | 12:00:10 | 9.993 | | 7149.182 | 10.237 | 102.4 | 714.918 | 1645 | | 1.01 |
| 7 | I13440 | IA2-537STD150 | 18-Nov-19 | 12:16:43 | 9.993 | | 6324.697 | 9.056 | 90.6 | 632.470 | 128909 | | 0.95 |
| 8 | I13441 | IA2-537STD250 | 18-Nov-19 | 12:33:16 | 9.997 | | 5696.930 | 8.157 | 81.6 | 569.693 | 1209 | | 0.98 |
| 9 | I13442 | IA2-537STD500 | 18-Nov-19 | 12:49:53 | 9.997 | | 5276.689 | 7.555 | 75.6 | 527.669 | 101650 | | 1.07 |

Compound name: M4PFOS
Response Factor: 698.392
RRF SD: 101.128, % Relative SD: 14.4802
Response type: External Std, Area
Curve type: RF





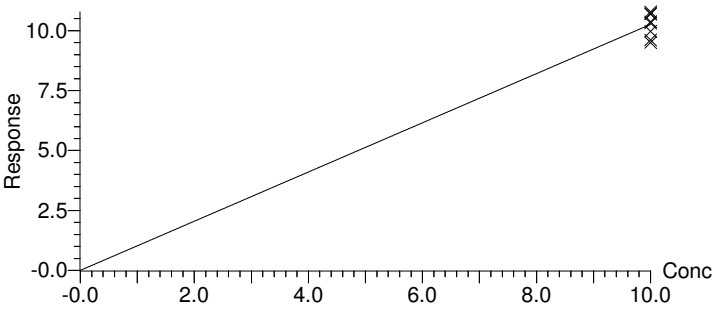
all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
Printed: Monday, November 18, 2019 13:47:36 Eastern Standard Time

**Compound name: M8PFOS**

| | Name | ID | Acq.Date | Acq.Time | RT | IS Area | Area | Conc (ng... | %Rec | RRF | 1º S/N | 2º S/N | (b/a) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | I13434 | IA2-537STD0.5 | 18-Nov-19 | 10:24:43 | 9.993 | 7620.767 | 7863.209 | 10.056 | 100.6 | 1.032 | 165326 | | 1.01 |
| 2 | I13435 | IA2-537STD1.0 | 18-Nov-19 | 10:53:49 | 9.998 | 7797.159 | 8337.590 | 10.421 | 104.2 | 1.069 | 174045 | | 1.05 |
| 3 | I13436 | IA2-537STD5.0 | 18-Nov-19 | 11:10:20 | 9.989 | 8269.742 | 7856.718 | 9.259 | 92.6 | 0.950 | 4400 | | 0.99 |
| 4 | I13437 | IA2-537STD10.0 | 18-Nov-19 | 11:26:51 | 9.993 | 7629.751 | 7611.157 | 9.722 | 97.2 | 0.998 | 1249 | | 0.96 |
| 5 | I13438 | IA2-537STD50.0 | 18-Nov-19 | 11:43:24 | 9.998 | 7090.403 | 7647.324 | 10.511 | 105.1 | 1.079 | 1059 | | 1.00 |
| 6 | I13439 | IA2-537STD125 | 18-Nov-19 | 12:00:10 | 9.993 | 7149.182 | 6866.474 | 9.360 | 93.6 | 0.960 | 317 | | 1.01 |
| 7 | I13440 | IA2-537STD150 | 18-Nov-19 | 12:16:43 | 9.993 | 6324.697 | 6560.688 | 10.109 | 101.1 | 1.037 | 667 | | 0.91 |
| 8 | I13441 | IA2-537STD250 | 18-Nov-19 | 12:33:16 | 9.998 | 5696.930 | 5910.273 | 10.111 | 101.1 | 1.037 | 412 | | 0.96 |
| 9 | I13442 | IA2-537STD500 | 18-Nov-19 | 12:49:53 | 9.998 | 5276.689 | 5658.023 | 10.450 | 104.5 | 1.072 | 376 | | 1.04 |

Compound name: M8PFOS
Response Factor: 1.02609
RRF SD: 0.0473585, % Relative SD: 4.61545
Response type: Internal Std ( Ref 32 ), Area * ( IS Conc. / IS Area )
Curve type: RF





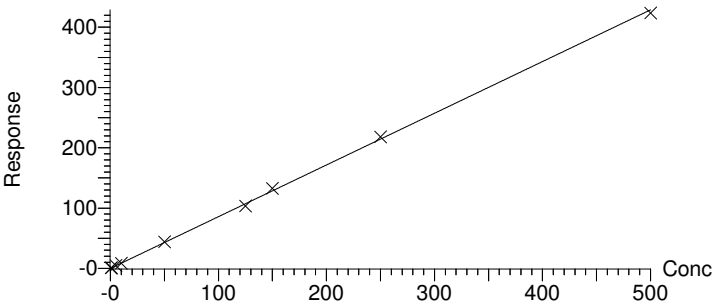
all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
Printed: Monday, November 18, 2019 13:47:36 Eastern Standard Time

**Compound name: PFDA**

| | Name | ID | Acq.Date | Acq.Time | RT | IS Area | Area | Conc (ng... | %Rec | RRF | 1º S/N | 2º S/N | (b/a) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | I13434 | IA2-537STD0.5 | 18-Nov-19 | 10:24:43 | 10.5... | 105486.805 | 4685.706 | 0.518 | 103.6 | 0.888 | 152 | 14 | 1.17 |
| 2 | I13435 | IA2-537STD1.0 | 18-Nov-19 | 10:53:49 | 10.5... | 109985.242 | 9944.646 | 1.054 | 105.4 | 0.904 | 358 | 39777 | 1.15 |
| 3 | I13436 | IA2-537STD5.0 | 18-Nov-19 | 11:10:20 | 10.5... | 104239.750 | 49945.277 | 5.585 | 111.7 | 0.958 | 1959 | 1493 | 1.04 |
| 4 | I13437 | IA2-537STD10.0 | 18-Nov-19 | 11:26:51 | 10.5... | 101094.977 | 86872.859 | 10.017 | 100.2 | 0.859 | 2485 | 3214 | 0.99 |
| 5 | I13438 | IA2-537STD50.0 | 18-Nov-19 | 11:43:24 | 10.5... | 92826.750 | 409066.531 | 51.371 | 102.7 | 0.881 | 9042 | 2580 | 1.00 |
| 6 | I13439 | IA2-537STD125 | 18-Nov-19 | 12:00:10 | 10.5... | 84901.406 | 877900.563 | 120.538 | 96.4 | 0.827 | 16762 | 6535 | 1.00 |
| 7 | I13440 | IA2-537STD150 | 18-Nov-19 | 12:16:43 | 10.5... | 82198.586 | 1090370.000 | 154.634 | 103.1 | 0.884 | 26036 | 15544 | 1.05 |
| 8 | I13441 | IA2-537STD250 | 18-Nov-19 | 12:33:16 | 10.5... | 74923.039 | 1633247.125 | 254.115 | 101.6 | 0.872 | 18176 | 5568 | 1.01 |
| 9 | I13442 | IA2-537STD500 | 18-Nov-19 | 12:49:53 | 10.5... | 66209.734 | 2803895.000 | 493.667 | 98.7 | 0.847 | 52614 | 17537 | 1.06 |

Compound name: PFDA
Coefficient of Determination: R^2 = 0.999475
Calibration curve: 0.857838 * x
Response type: Internal Std ( Ref 36 ), Area * ( IS Conc. / IS Area )
Curve type: Linear, Origin: Force, Weighting: 1/x, Axis trans: None





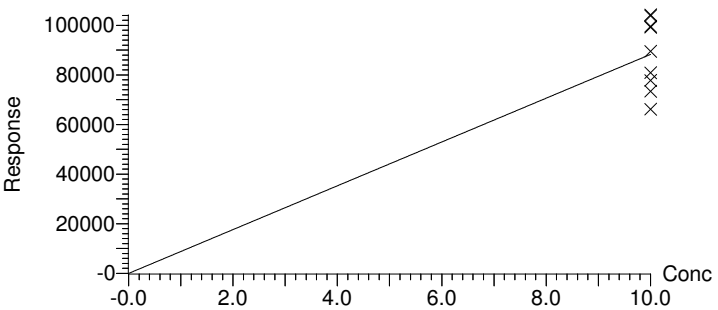
all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
Printed: Monday, November 18, 2019 13:47:36 Eastern Standard Time

**Compound name: M2PFDA**

| | Name | ID | Acq.Date | Acq.Time | RT | IS Area | Area | Conc (ng... | %Rec | RRF | 1º S/N | 2º S/N | (b/a) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | I13434 | IA2-537STD0.5 | 18-Nov-19 | 10:24:43 | 10.5... | | 103829.906 | 11.760 | 117.6 | 10382.991 | 16120 | | 0.96 |
| 2 | I13435 | IA2-537STD1.0 | 18-Nov-19 | 10:53:49 | 10.5... | | 104230.492 | 11.805 | 118.1 | 10423.049 | 27028 | | 0.95 |
| 3 | I13436 | IA2-537STD5.0 | 18-Nov-19 | 11:10:20 | 10.5... | | 99527.453 | 11.273 | 112.7 | 9952.745 | 19482 | | 1.01 |
| 4 | I13437 | IA2-537STD10.0 | 18-Nov-19 | 11:26:51 | 10.5... | | 99233.398 | 11.239 | 112.4 | 9923.340 | 36690 | | 0.99 |
| 5 | I13438 | IA2-537STD50.0 | 18-Nov-19 | 11:43:24 | 10.5... | | 89579.898 | 10.146 | 101.5 | 8957.990 | 34795 | | 0.98 |
| 6 | I13439 | IA2-537STD125 | 18-Nov-19 | 12:00:10 | 10.5... | | 80832.117 | 9.155 | 91.6 | 8083.212 | 33177 | | 0.99 |
| 7 | I13440 | IA2-537STD150 | 18-Nov-19 | 12:16:43 | 10.5... | | 77816.188 | 8.814 | 88.1 | 7781.619 | 19275 | | 1.03 |
| 8 | I13441 | IA2-537STD250 | 18-Nov-19 | 12:33:16 | 10.5... | | 73446.680 | 8.319 | 83.2 | 7344.668 | 25437 | | 0.99 |
| 9 | I13442 | IA2-537STD500 | 18-Nov-19 | 12:49:53 | 10.5... | | 66126.813 | 7.490 | 74.9 | 6612.681 | 16215 | | 1.03 |

Compound name: M2PFDA
Response Factor: 8829.14
RRF SD: 1423.09, % Relative SD: 16.1181
Response type: External Std, Area
Curve type: RF





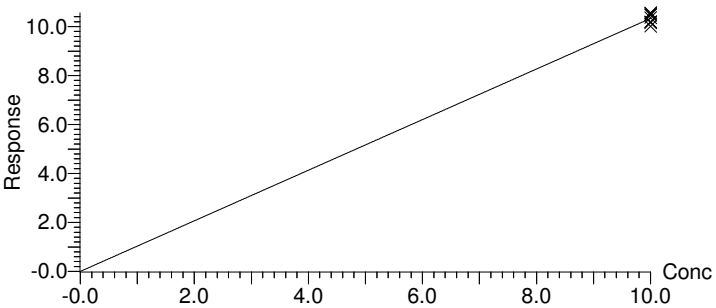
all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
Printed: Monday, November 18, 2019 13:47:36 Eastern Standard Time

**Compound name: M6PFDA**

| | Name | ID | Acq.Date | Acq.Time | RT | IS Area | Area | Conc (ng... | %Rec | RRF | 1º S/N | 2º S/N | (b/a) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | I13434 | IA2-537STD0.5 | 18-Nov-19 | 10:24:43 | 10.5... | 103829.906 | 105486.805 | 9.830 | 98.3 | 1.016 | 4853 | | 1.06 |
| 2 | I13435 | IA2-537STD1.0 | 18-Nov-19 | 10:53:49 | 10.5... | 104230.492 | 109985.242 | 10.210 | 102.1 | 1.055 | 6939 | | 1.06 |
| 3 | I13436 | IA2-537STD5.0 | 18-Nov-19 | 11:10:20 | 10.5... | 99527.453 | 104239.750 | 10.134 | 101.3 | 1.047 | 6601 | | 0.99 |
| 4 | I13437 | IA2-537STD10.0 | 18-Nov-19 | 11:26:51 | 10.5... | 99233.398 | 101094.977 | 9.857 | 98.6 | 1.019 | 19676 | | 0.98 |
| 5 | I13438 | IA2-537STD50.0 | 18-Nov-19 | 11:43:24 | 10.5... | 89579.898 | 92826.750 | 10.027 | 100.3 | 1.036 | 15009 | | 0.95 |
| 6 | I13439 | IA2-537STD125 | 18-Nov-19 | 12:00:10 | 10.5... | 80832.117 | 84901.406 | 10.163 | 101.6 | 1.050 | 1747 | | 0.97 |
| 7 | I13440 | IA2-537STD150 | 18-Nov-19 | 12:16:43 | 10.5... | 77816.188 | 82198.586 | 10.221 | 102.2 | 1.056 | 7076 | | 1.03 |
| 8 | I13441 | IA2-537STD250 | 18-Nov-19 | 12:33:16 | 10.5... | 73446.680 | 74923.039 | 9.870 | 98.7 | 1.020 | 14482 | | 0.98 |
| 9 | I13442 | IA2-537STD500 | 18-Nov-19 | 12:49:53 | 10.5... | 66126.813 | 66209.734 | 9.688 | 96.9 | 1.001 | 3663 | | 1.02 |

Compound name: M6PFDA
Response Factor: 1.0335
RRF SD: 0.0200603, % Relative SD: 1.94099
Response type: Internal Std ( Ref 35 ), Area * ( IS Conc. / IS Area )
Curve type: RF





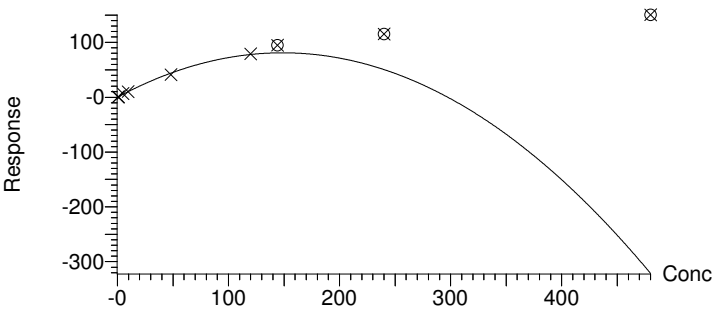
all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
Printed: Monday, November 18, 2019 13:47:36 Eastern Standard Time

**Compound name: 8:2FTS**

| | Name | ID | Acq.Date | Acq.Time | RT | IS Area | Area | Conc (ng... | %Rec | RRF | 1º S/N | 2º S/N | (b/a) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | I13434 | IA2-537STD0.5 | 18-Nov-19 | 10:24:43 | 10.5... | 3535.170 | 206.802 | 0.538 | 112.0 | 1.219 | 54 | | 1.30 |
| 2 | I13435 | IA2-537STD1.0 | 18-Nov-19 | 10:53:49 | 10.5... | 3740.494 | 354.823 | 0.873 | 90.9 | 0.988 | 60 | | 1.18 |
| 3 | I13436 | IA2-537STD5.0 | 18-Nov-19 | 11:10:20 | 10.5... | 3681.261 | 2398.694 | 6.103 | 127.1 | 1.357 | 55942 | | 1.05 |
| 4 | I13437 | IA2-537STD10.0 | 18-Nov-19 | 11:26:51 | 10.5... | 3572.389 | 3723.282 | 9.890 | 103.0 | 1.086 | 88711 | | 1.08 |
| 5 | I13438 | IA2-537STD50.0 | 18-Nov-19 | 11:43:24 | 10.5... | 4282.424 | 17680.184 | 44.549 | 92.8 | 0.860 | 408290 | | 1.04 |
| 6 | I13439 | IA2-537STD125 | 18-Nov-19 | 12:00:10 | 10.5... | 4755.468 | 37557.445 | 124.992 | 104.2 | 0.658 | 855186 | | 1.07 |
| 7 | I13440 | IA2-537STD150 | 18-Nov-19 | 12:16:43 | 10.5... | 4958.818 | 47138.504 | | | 0.660 | 22817 | | 1.11 |
| 8 | I13441 | IA2-537STD250 | 18-Nov-19 | 12:33:16 | 10.5... | 6317.642 | 72996.211 | | | 0.481 | 5819 | | 1.02 |
| 9 | I13442 | IA2-537STD500 | 18-Nov-19 | 12:49:53 | 10.5... | 8145.643 | 122449.109 | | | 0.313 | 4892 | | 1.11 |

Compound name: 8:2FTS
Coefficient of Determination: R^2 = 0.994263
Calibration curve: -0.00366564 * x^2 + 1.09004 * x
Response type: Internal Std ( Ref 38 ), Area * ( IS Conc. / IS Area )
Curve type: 2nd Order, Origin: Force, Weighting: 1/x, Axis trans: None





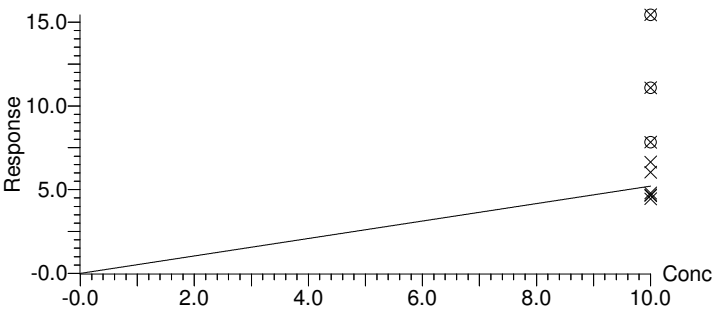
all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
Printed: Monday, November 18, 2019 13:47:36 Eastern Standard Time

**Compound name: M2-8:2FTS**

| | Name | ID | Acq.Date | Acq.Time | RT | IS Area | Area | Conc (ng... | %Rec | RRF | 1º S/N | 2º S/N | (b/a) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | I13434 | IA2-537STD0.5 | 18-Nov-19 | 10:24:43 | 10.5... | 7620.767 | 3535.170 | 8.903 | 89.0 | 0.464 | 69325 | | 1.02 |
| 2 | I13435 | IA2-537STD1.0 | 18-Nov-19 | 10:53:49 | 10.5... | 7797.159 | 3740.494 | 9.207 | 92.1 | 0.480 | 291 | | 0.95 |
| 3 | I13436 | IA2-537STD5.0 | 18-Nov-19 | 11:10:20 | 10.5... | 8269.742 | 3681.261 | 8.544 | 85.4 | 0.445 | 405 | | 1.05 |
| 4 | I13437 | IA2-537STD10.0 | 18-Nov-19 | 11:26:51 | 10.5... | 7629.751 | 3572.389 | 8.987 | 89.9 | 0.468 | 1911 | | 0.97 |
| 5 | I13438 | IA2-537STD50.0 | 18-Nov-19 | 11:43:24 | 10.5... | 7090.403 | 4282.424 | 11.592 | 115.9 | 0.604 | 83195 | | 1.04 |
| 6 | I13439 | IA2-537STD125 | 18-Nov-19 | 12:00:10 | 10.5... | 7149.182 | 4755.468 | 12.767 | 127.7 | 0.665 | 891 | | 0.99 |
| 7 | I13440 | IA2-537STD150 | 18-Nov-19 | 12:16:43 | 10.5... | 6324.697 | 4958.818 | 15.048 | 150.5 | 0.784 | 100651 | | 1.07 |
| 8 | I13441 | IA2-537STD250 | 18-Nov-19 | 12:33:16 | 10.5... | 5696.930 | 6317.642 | 21.284 | 212.8 | 1.109 | 129365 | | 1.03 |
| 9 | I13442 | IA2-537STD500 | 18-Nov-19 | 12:49:53 | 10.5... | 5276.689 | 8145.643 | 29.628 | 296.3 | 1.544 | 164641 | | 1.03 |

Compound name: M2-8:2FTS
Response Factor: 0.521022
RRF SD: 0.0907487, % Relative SD: 17.4175
Response type: Internal Std ( Ref 32 ), Area * ( IS Conc. / IS Area )
Curve type: RF





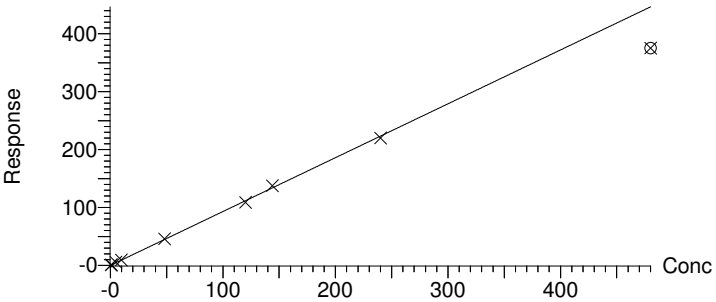
all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
Printed: Monday, November 18, 2019 13:47:36 Eastern Standard Time

**Compound name: PFNS**

| | Name | ID | Acq.Date | Acq.Time | RT | IS Area | Area | Conc (ng... | %Rec | RRF | 1º S/N | 2º S/N | (b/a) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | I13434 | IA2-537STD0.5 | 18-Nov-19 | 10:24:43 | 10.6... | 7863.209 | 306.160 | 0.419 | 87.2 | 0.811 | 12 | 8899 | 1.15 |
| 2 | I13435 | IA2-537STD1.0 | 18-Nov-19 | 10:53:49 | 10.6... | 8337.590 | 842.429 | 1.086 | 113.1 | 1.052 | 70 | 256 | 1.40 |
| 3 | I13436 | IA2-537STD5.0 | 18-Nov-19 | 11:10:20 | 10.6... | 7856.718 | 4373.127 | 5.984 | 124.7 | 1.160 | 2375 | 78894 | 0.92 |
| 4 | I13437 | IA2-537STD10.0 | 18-Nov-19 | 11:26:51 | 10.6... | 7611.157 | 7010.277 | 9.902 | 103.1 | 0.959 | 160780 | 136329 | 0.94 |
| 5 | I13438 | IA2-537STD50.0 | 18-Nov-19 | 11:43:24 | 10.6... | 7647.324 | 34940.902 | 49.120 | 102.3 | 0.952 | 4532 | 1399 | 0.94 |
| 6 | I13439 | IA2-537STD125 | 18-Nov-19 | 12:00:10 | 10.6... | 6866.474 | 74579.766 | 116.767 | 97.3 | 0.905 | 5435 | 9027 | 0.99 |
| 7 | I13440 | IA2-537STD150 | 18-Nov-19 | 12:16:43 | 10.5... | 6560.688 | 90355.602 | 148.060 | 102.8 | 0.956 | 27749 | 1627883 | 1.06 |
| 8 | I13441 | IA2-537STD250 | 18-Nov-19 | 12:33:16 | 10.6... | 5910.273 | 130020.867 | 236.503 | 98.5 | 0.917 | 17714 | 4054 | 1.07 |
| 9 | I13442 | IA2-537STD500 | 18-Nov-19 | 12:49:53 | 10.6... | 5658.023 | 212194.906 | 403.183 | 84.0 | 0.781 | 21595 | 23707 | 1.02 |

Compound name: PFNS
Coefficient of Determination: R^2 = 0.998898
Calibration curve: 0.930183 * x
Response type: Internal Std ( Ref 33 ), Area * ( IS Conc. / IS Area )
Curve type: Linear, Origin: Force, Weighting: 1/x, Axis trans: None





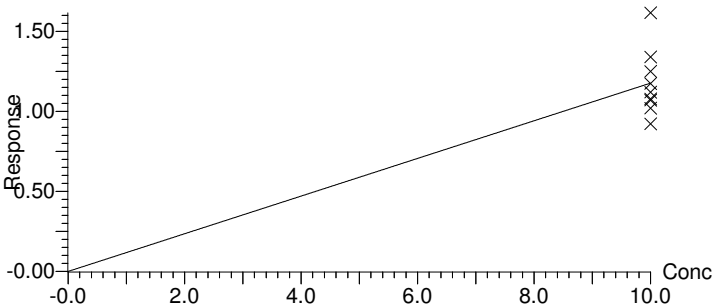
all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
Printed: Monday, November 18, 2019 13:47:36 Eastern Standard Time

**Compound name: d3-NMeFOSAA**

| | Name | ID | Acq.Date | Acq.Time | RT | IS Area | Area | Conc (ng... | %Rec | RRF | 1º S/N | 2º S/N | (b/a) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | I13434 | IA2-537STD0.5 | 18-Nov-19 | 10:24:43 | 10.9... | 103829.906 | 9575.763 | 7.836 | 78.4 | 0.092 | 308 | | 0.96 |
| 2 | I13435 | IA2-537STD1.0 | 18-Nov-19 | 10:53:49 | 10.9... | 104230.492 | 11161.044 | 9.098 | 91.0 | 0.107 | 219724 | | 0.97 |
| 3 | I13436 | IA2-537STD5.0 | 18-Nov-19 | 11:10:20 | 10.9... | 99527.453 | 10155.847 | 8.669 | 86.7 | 0.102 | 3683 | | 1.02 |
| 4 | I13437 | IA2-537STD10.0 | 18-Nov-19 | 11:26:51 | 10.9... | 99233.398 | 10699.074 | 9.160 | 91.6 | 0.108 | 1878 | | 0.98 |
| 5 | I13438 | IA2-537STD50.0 | 18-Nov-19 | 11:43:24 | 10.9... | 89579.898 | 10035.015 | 9.518 | 95.2 | 0.112 | 566 | | 1.02 |
| 6 | I13439 | IA2-537STD125 | 18-Nov-19 | 12:00:10 | 10.9... | 80832.117 | 9496.166 | 9.981 | 99.8 | 0.117 | 188703 | | 0.98 |
| 7 | I13440 | IA2-537STD150 | 18-Nov-19 | 12:16:43 | 10.9... | 77816.188 | 9724.458 | 10.617 | 106.2 | 0.125 | 192845 | | 0.98 |
| 8 | I13441 | IA2-537STD250 | 18-Nov-19 | 12:33:16 | 10.9... | 73446.680 | 9845.680 | 11.389 | 113.9 | 0.134 | 2041 | | 1.01 |
| 9 | I13442 | IA2-537STD500 | 18-Nov-19 | 12:49:53 | 10.9... | 66126.813 | 10688.211 | 13.732 | 137.3 | 0.162 | 1840 | | 0.99 |

Compound name: d3-NMeFOSAA
Response Factor: 0.117702
RRF SD: 0.0205764, % Relative SD: 17.4818
Response type: Internal Std ( Ref 35 ), Area * ( IS Conc. / IS Area )
Curve type: RF





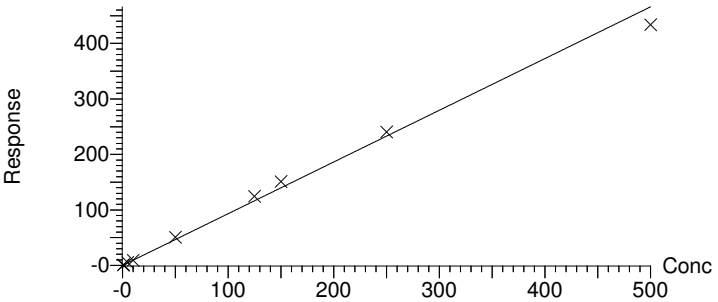
all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
Printed: Monday, November 18, 2019 13:47:36 Eastern Standard Time

**Compound name: br-NMeFOSAA**

| | Name | ID | Acq.Date | Acq.Time | RT | IS Area | Area | Conc (ng... | %Rec | RRF | 1º S/N | 2º S/N | (b/a) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | I13434 | IA2-537STD0.5 | 18-Nov-19 | 10:24:43 | | 9575.763 | | | | | | | |
| 2 | I13435 | IA2-537STD1.0 | 18-Nov-19 | 10:53:49 | | 11161.044 | | | | | | | |
| 3 | I13436 | IA2-537STD5.0 | 18-Nov-19 | 11:10:20 | | 10155.847 | | | | | | | |
| 4 | I13437 | IA2-537STD10.0 | 18-Nov-19 | 11:26:51 | | 10699.074 | | | | | | | |
| 5 | I13438 | IA2-537STD50.0 | 18-Nov-19 | 11:43:24 | | 10035.015 | | | | | | | |
| 6 | I13439 | IA2-537STD125 | 18-Nov-19 | 12:00:10 | | 9496.166 | | | | | | | |
| 7 | I13440 | IA2-537STD150 | 18-Nov-19 | 12:16:43 | | 9724.458 | | | | | | | |
| 8 | I13441 | IA2-537STD250 | 18-Nov-19 | 12:33:16 | | 9845.680 | | | | | | | |
| 9 | I13442 | IA2-537STD500 | 18-Nov-19 | 12:49:53 | | 10688.211 | | | | | | 2 | |

Compound name: L-NMeFOSAA
Coefficient of Determination: R^2 = 0.995480
Calibration curve: 0.931991 * x
Response type: Internal Std ( Ref 40 ), Area * ( IS Conc. / IS Area )
Curve type: Linear, Origin: Force, Weighting: 1/x, Axis trans: None





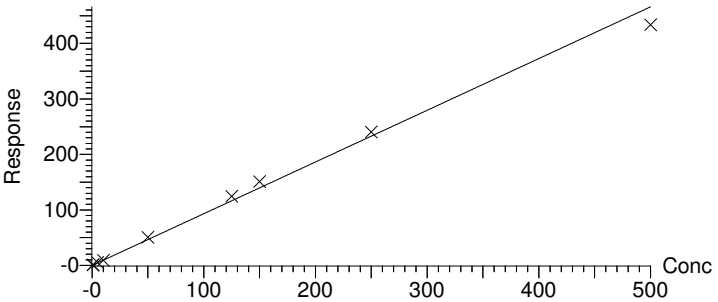
all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
Printed: Monday, November 18, 2019 13:47:36 Eastern Standard Time

**Compound name: L-NMeFOSAA**

| | Name | ID | Acq.Date | Acq.Time | RT | IS Area | Area | Conc (ng... | %Rec | RRF | 1º S/N | 2º S/N | (b/a) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | I13434 | IA2-537STD0.5 | 18-Nov-19 | 10:24:43 | 10.9... | 9575.763 | 324.541 | 0.364 | 72.7 | 0.678 | 7 | 22 | 1.05 |
| 2 | I13435 | IA2-537STD1.0 | 18-Nov-19 | 10:53:49 | 10.9... | 11161.044 | 1166.739 | 1.122 | 112.2 | 1.045 | 17132 | 8 | 0.98 |
| 3 | I13436 | IA2-537STD5.0 | 18-Nov-19 | 11:10:20 | 10.9... | 10155.847 | 5530.176 | 5.843 | 116.9 | 1.089 | 1686 | 28880 | 1.03 |
| 4 | I13437 | IA2-537STD10.0 | 18-Nov-19 | 11:26:51 | 10.9... | 10699.074 | 9818.126 | 9.846 | 98.5 | 0.918 | 2994 | 52535 | 0.98 |
| 5 | I13438 | IA2-537STD50.0 | 18-Nov-19 | 11:43:24 | 10.9... | 10035.015 | 51048.320 | 54.582 | 109.2 | 1.017 | 2351 | 487 | 0.99 |
| 6 | I13439 | IA2-537STD125 | 18-Nov-19 | 12:00:10 | 10.9... | 9496.166 | 118338.813 | 133.711 | 107.0 | 0.997 | 4519 | 15054 | 1.00 |
| 7 | I13440 | IA2-537STD150 | 18-Nov-19 | 12:16:43 | 10.9... | 9724.458 | 146964.844 | 162.157 | 108.1 | 1.008 | 4558 | 447 | 0.99 |
| 8 | I13441 | IA2-537STD250 | 18-Nov-19 | 12:33:16 | 10.9... | 9845.680 | 236955.250 | 258.231 | 103.3 | 0.963 | 7059 | 10078 | 1.01 |
| 9 | I13442 | IA2-537STD500 | 18-Nov-19 | 12:49:53 | 10.9... | 10688.211 | 463842.188 | 465.644 | 93.1 | 0.868 | 11998 | 6925 | 0.96 |

Compound name: L-NMeFOSAA
Coefficient of Determination: R^2 = 0.995480
Calibration curve: 0.931991 * x
Response type: Internal Std ( Ref 40 ), Area * ( IS Conc. / IS Area )
Curve type: Linear, Origin: Force, Weighting: 1/x, Axis trans: None





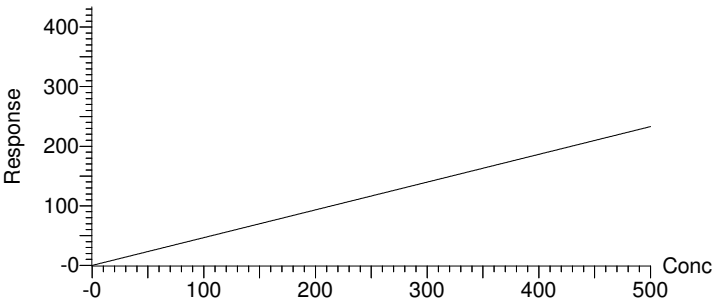
all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
Printed: Monday, November 18, 2019 13:47:36 Eastern Standard Time

**Compound name: NMeFOSAA**

| | Name | ID | Acq.Date | Acq.Time | RT | IS Area | Area | Conc (ng... | %Rec | RRF | 1º S/N | 2º S/N | (b/a) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | I13434 | IA2-537STD0.5 | 18-Nov-19 | 10:24:43 | | 9575.763 | 324.541 | 0.364 | | | | | |
| 2 | I13435 | IA2-537STD1.0 | 18-Nov-19 | 10:53:49 | | 11161.044 | 1166.739 | 1.122 | | | | | |
| 3 | I13436 | IA2-537STD5.0 | 18-Nov-19 | 11:10:20 | | 10155.847 | 5530.176 | 5.843 | | | | | |
| 4 | I13437 | IA2-537STD10.0 | 18-Nov-19 | 11:26:51 | | 10699.074 | 9818.126 | 9.846 | | | | | |
| 5 | I13438 | IA2-537STD50.0 | 18-Nov-19 | 11:43:24 | | 10035.015 | 51048.320 | 54.582 | | | | | |
| 6 | I13439 | IA2-537STD125 | 18-Nov-19 | 12:00:10 | | 9496.166 | 118338.813 | 133.711 | | | | | |
| 7 | I13440 | IA2-537STD150 | 18-Nov-19 | 12:16:43 | | 9724.458 | 146964.844 | 162.157 | | | | | |
| 8 | I13441 | IA2-537STD250 | 18-Nov-19 | 12:33:16 | | 9845.680 | 236955.250 | 258.231 | | | | | |
| 9 | I13442 | IA2-537STD500 | 18-Nov-19 | 12:49:53 | | 10688.211 | 463842.188 | 465.644 | | | | | |

Compound name: NMeFOSAA
Coefficient of Determination: 0.000000
Calibration curve: 0.465995 * x
Response type: Internal Std ( Ref 40 ), Area * ( IS Conc. / IS Area )
Curve type: Linear, Origin: Force, Weighting: 1/x, Axis trans: None





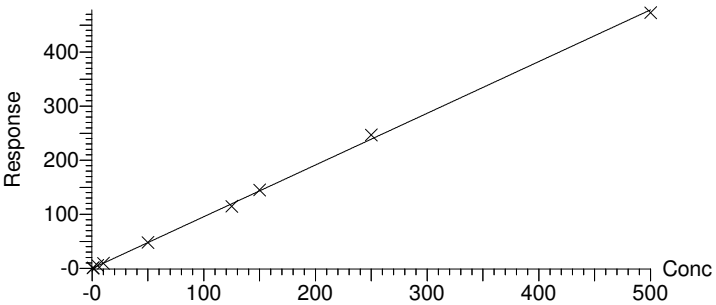
all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
Printed: Monday, November 18, 2019 13:47:36 Eastern Standard Time

**Compound name: PFUnA**

| | Name | ID | Acq.Date | Acq.Time | RT | IS Area | Area | Conc (ng... | %Rec | RRF | 1º S/N | 2º S/N | (b/a) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | I13434 | IA2-537STD0.5 | 18-Nov-19 | 10:24:43 | 11.117 | 101992.055 | 4611.769 | 0.473 | 94.6 | 0.904 | 115 | 10041 | 1.03 |
| 2 | I13435 | IA2-537STD1.0 | 18-Nov-19 | 10:53:49 | 11.122 | 101388.047 | 10026.410 | 1.034 | 103.4 | 0.989 | 330 | 35178 | 1.07 |
| 3 | I13436 | IA2-537STD5.0 | 18-Nov-19 | 11:10:20 | 11.117 | 97997.672 | 51117.012 | 5.455 | 109.1 | 1.043 | 1178 | 398 | 0.98 |
| 4 | I13437 | IA2-537STD10.0 | 18-Nov-19 | 11:26:51 | 11.112 | 93371.281 | 88904.188 | 9.957 | 99.6 | 0.952 | 2037 | 251288 | 1.07 |
| 5 | I13438 | IA2-537STD50.0 | 18-Nov-19 | 11:43:24 | 11.117 | 82849.375 | 396062.781 | 49.990 | 100.0 | 0.956 | 10506 | 24547 | 1.05 |
| 6 | I13439 | IA2-537STD125 | 18-Nov-19 | 12:00:10 | 11.112 | 71788.461 | 824707.938 | 120.130 | 96.1 | 0.919 | 19883 | 2311444 | 1.09 |
| 7 | I13440 | IA2-537STD150 | 18-Nov-19 | 12:16:43 | 11.112 | 69882.930 | 1013266.063 | 151.620 | 101.1 | 0.967 | 26453 | 21061 | 1.06 |
| 8 | I13441 | IA2-537STD250 | 18-Nov-19 | 12:33:16 | 11.112 | 61087.184 | 1508727.250 | 258.265 | 103.3 | 0.988 | 32170 | 8460 | 1.09 |
| 9 | I13442 | IA2-537STD500 | 18-Nov-19 | 12:49:53 | 11.112 | 54794.387 | 2591577.000 | 494.577 | 98.9 | 0.946 | 37276 | 9772 | 1.14 |

Compound name: PFUnA
Coefficient of Determination: R^2 = 0.999453
Calibration curve: 0.956301 * x
Response type: Internal Std ( Ref 45 ), Area * ( IS Conc. / IS Area )
Curve type: Linear, Origin: Force, Weighting: 1/x, Axis trans: None





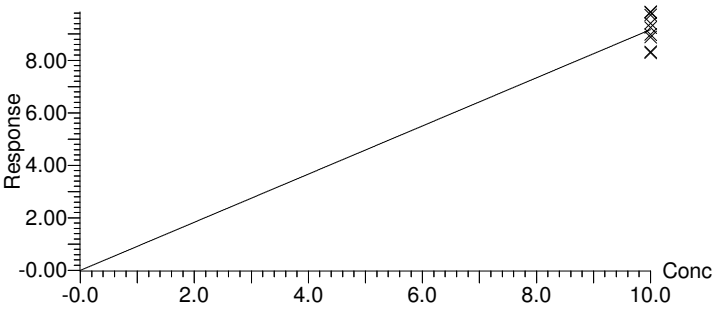
all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
Printed: Monday, November 18, 2019 13:47:36 Eastern Standard Time

**Compound name: M7-PFUDA**

| | Name | ID | Acq.Date | Acq.Time | RT | IS Area | Area | Conc (ng... | %Rec | RRF | 1º S/N | 2º S/N | (b/a) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | I13434 | IA2-537STD0.5 | 18-Nov-19 | 10:24:43 | 11.118 | 103829.906 | 101992.055 | 10.713 | 107.1 | 0.982 | 3734 | | 0.99 |
| 2 | I13435 | IA2-537STD1.0 | 18-Nov-19 | 10:53:49 | 11.123 | 104230.492 | 101388.047 | 10.609 | 106.1 | 0.973 | 6468 | | 1.03 |
| 3 | I13436 | IA2-537STD5.0 | 18-Nov-19 | 11:10:20 | 11.113 | 99527.453 | 97997.672 | 10.739 | 107.4 | 0.985 | 3765 | | 1.07 |
| 4 | I13437 | IA2-537STD10.0 | 18-Nov-19 | 11:26:51 | 11.113 | 99233.398 | 93371.281 | 10.262 | 102.6 | 0.941 | 16231 | | 1.03 |
| 5 | I13438 | IA2-537STD50.0 | 18-Nov-19 | 11:43:24 | 11.118 | 89579.898 | 82849.375 | 10.087 | 100.9 | 0.925 | 5955 | | 1.02 |
| 6 | I13439 | IA2-537STD125 | 18-Nov-19 | 12:00:10 | 11.113 | 80832.117 | 71788.461 | 9.686 | 96.9 | 0.888 | 1384858 | | 1.05 |
| 7 | I13440 | IA2-537STD150 | 18-Nov-19 | 12:16:43 | 11.113 | 77816.188 | 69882.930 | 9.795 | 97.9 | 0.898 | 2851 | | 1.04 |
| 8 | I13441 | IA2-537STD250 | 18-Nov-19 | 12:33:16 | 11.113 | 73446.680 | 61087.184 | 9.071 | 90.7 | 0.832 | 2216 | | 1.03 |
| 9 | I13442 | IA2-537STD500 | 18-Nov-19 | 12:49:53 | 11.113 | 66126.813 | 54794.387 | 9.037 | 90.4 | 0.829 | 2563 | | 1.08 |

Compound name: M7-PFUDA
Response Factor: 0.916885
RRF SD: 0.0600555, % Relative SD: 6.54995
Response type: Internal Std ( Ref 35 ), Area * ( IS Conc. / IS Area )
Curve type: RF





all concentration units in (ng/mL)

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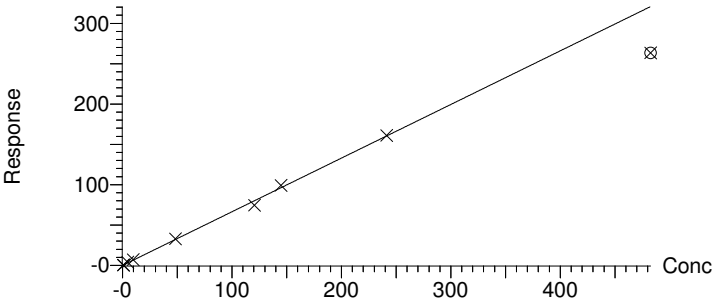
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
Printed: Monday, November 18, 2019 13:47:36 Eastern Standard Time

**Compound name: PFDS**

| | Name | ID | Acq.Date | Acq.Time | RT | IS Area | Area | Conc (ng... | %Rec | RRF | 1º S/N | 2º S/N | (b/a) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | I13434 | IA2-537STD0.5 | 18-Nov-19 | 10:24:43 | 11.123 | 7863.209 | 242.685 | 0.464 | 96.2 | 0.640 | 5894 | 6 | 1.58 |
| 2 | I13435 | IA2-537STD1.0 | 18-Nov-19 | 10:53:49 | 11.133 | 8337.590 | 482.343 | 0.870 | 90.2 | 0.599 | 35 | 132 | 1.25 |
| 3 | I13436 | IA2-537STD5.0 | 18-Nov-19 | 11:10:20 | 11.128 | 7856.718 | 3124.329 | 5.981 | 124.0 | 0.824 | 73500 | 81546 | 0.97 |
| 4 | I13437 | IA2-537STD10.0 | 18-Nov-19 | 11:26:51 | 11.123 | 7611.157 | 5332.887 | 10.538 | 109.2 | 0.726 | 124985 | 1343 | 1.08 |
| 5 | I13438 | IA2-537STD50.0 | 18-Nov-19 | 11:43:24 | 11.128 | 7647.324 | 25123.271 | 49.411 | 102.4 | 0.681 | 1473 | 1913 | 1.05 |
| 6 | I13439 | IA2-537STD125 | 18-Nov-19 | 12:00:10 | 11.123 | 6866.474 | 51137.266 | 112.012 | 92.9 | 0.617 | 44971 | 2446 | 1.10 |
| 7 | I13440 | IA2-537STD150 | 18-Nov-19 | 12:16:43 | 11.123 | 6560.688 | 65178.430 | 149.422 | 103.2 | 0.686 | 3491 | 1062 | 1.06 |
| 8 | I13441 | IA2-537STD250 | 18-Nov-19 | 12:33:16 | 11.123 | 5910.273 | 95134.438 | 242.098 | 100.4 | 0.667 | 7675 | 3091 | 1.08 |
| 9 | I13442 | IA2-537STD500 | 18-Nov-19 | 12:49:53 | 11.128 | 5658.023 | 148916.188 | 395.857 | 82.0 | 0.545 | 9282 | 21096 | 1.02 |

Compound name: PFDS
Coefficient of Determination: R^2 = 0.997891
Calibration curve: 0.664874 * x
Response type: Internal Std ( Ref 33 ), Area * ( IS Conc. / IS Area )
Curve type: Linear, Origin: Force, Weighting: 1/x, Axis trans: None





all concentration units in (ng/mL)

Alpha Analytical Inc.
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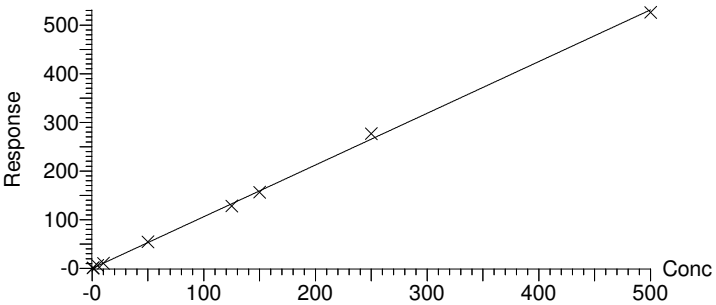
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
Printed: Monday, November 18, 2019 13:47:36 Eastern Standard Time

**Compound name: FOSA**

| | Name | ID | Acq.Date | Acq.Time | RT | IS Area | Area | Conc (ng... | %Rec | RRF | 1º S/N | 2º S/N | (b/a) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | I13434 | IA2-537STD0.5 | 18-Nov-19 | 10:24:43 | 11.011 | 22949.115 | 942.301 | 0.386 | 77.3 | 0.821 | 22594 | | 0.94 |
| 2 | I13435 | IA2-537STD1.0 | 18-Nov-19 | 10:53:49 | 11.011 | 22475.113 | 2798.189 | 1.172 | 117.2 | 1.245 | 908 | | 1.21 |
| 3 | I13436 | IA2-537STD5.0 | 18-Nov-19 | 11:10:20 | 11.006 | 22388.170 | 12992.135 | 5.461 | 109.2 | 1.161 | 2604 | 22 | 1.02 |
| 4 | I13437 | IA2-537STD10.0 | 18-Nov-19 | 11:26:51 | 11.006 | 23068.303 | 23946.777 | 9.769 | 97.7 | 1.038 | 7062 | 25 | 1.02 |
| 5 | I13438 | IA2-537STD50.0 | 18-Nov-19 | 11:43:24 | 11.011 | 21401.279 | 116432.289 | 51.200 | 102.4 | 1.088 | 4222 | 115 | 1.06 |
| 6 | I13439 | IA2-537STD125 | 18-Nov-19 | 12:00:10 | 11.005 | 20660.598 | 264460.531 | 120.464 | 96.4 | 1.024 | 8490 | 57 | 1.08 |
| 7 | I13440 | IA2-537STD150 | 18-Nov-19 | 12:16:43 | 11.006 | 21330.230 | 333811.938 | 147.280 | 98.2 | 1.043 | 9509 | 58640 | 1.08 |
| 8 | I13441 | IA2-537STD250 | 18-Nov-19 | 12:33:16 | 11.010 | 19354.936 | 535815.375 | 260.532 | 104.2 | 1.107 | 9601 | 143 | 1.01 |
| 9 | I13442 | IA2-537STD500 | 18-Nov-19 | 12:49:53 | 11.010 | 18051.570 | 949921.375 | 495.235 | 99.0 | 1.052 | 9851 | 157929 | 1.11 |

Compound name: FOSA
Coefficient of Determination: R^2 = 0.999218
Calibration curve: 1.06258 * x
Response type: Internal Std ( Ref 48 ), Area * ( IS Conc. / IS Area )
Curve type: Linear, Origin: Force, Weighting: 1/x, Axis trans: None





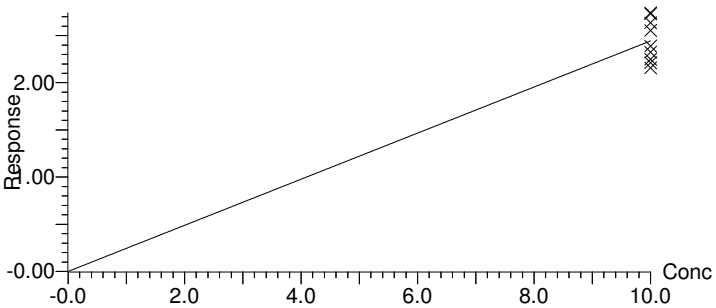
all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
Printed: Monday, November 18, 2019 13:47:36 Eastern Standard Time

**Compound name: M8FOSA**

| | Name | ID | Acq.Date | Acq.Time | RT | IS Area | Area | Conc (ng... | %Rec | RRF | 1º S/N | 2º S/N | (b/a) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | I13434 | IA2-537STD0.5 | 18-Nov-19 | 10:24:43 | 11.006 | 103829.906 | 22949.115 | 9.045 | 90.5 | 0.221 | 1034 | | 1.07 |
| 2 | I13435 | IA2-537STD1.0 | 18-Nov-19 | 10:53:49 | 11.011 | 104230.492 | 22475.113 | 8.824 | 88.2 | 0.216 | 3033 | | 1.03 |
| 3 | I13436 | IA2-537STD5.0 | 18-Nov-19 | 11:10:20 | 11.006 | 99527.453 | 22388.170 | 9.206 | 92.1 | 0.225 | 1670 | | 0.98 |
| 4 | I13437 | IA2-537STD10.0 | 18-Nov-19 | 11:26:51 | 11.006 | 99233.398 | 23068.303 | 9.513 | 95.1 | 0.232 | 946 | | 1.00 |
| 5 | I13438 | IA2-537STD50.0 | 18-Nov-19 | 11:43:24 | 11.011 | 89579.898 | 21401.279 | 9.777 | 97.8 | 0.239 | 1986 | | 1.03 |
| 6 | I13439 | IA2-537STD125 | 18-Nov-19 | 12:00:10 | 11.006 | 80832.117 | 20660.598 | 10.460 | 104.6 | 0.256 | 872 | | 1.03 |
| 7 | I13440 | IA2-537STD150 | 18-Nov-19 | 12:16:43 | 11.006 | 77816.188 | 21330.230 | 11.218 | 112.2 | 0.274 | 4434 | | 1.05 |
| 8 | I13441 | IA2-537STD250 | 18-Nov-19 | 12:33:16 | 11.006 | 73446.680 | 19354.936 | 10.784 | 107.8 | 0.264 | 361072 | | 1.08 |
| 9 | I13442 | IA2-537STD500 | 18-Nov-19 | 12:49:53 | 11.011 | 66126.813 | 18051.570 | 11.172 | 111.7 | 0.273 | 4636 | | 1.06 |

Compound name: M8FOSA
Response Factor: 0.244354
RRF SD: 0.0226829, % Relative SD: 9.28279
Response type: Internal Std ( Ref 35 ), Area * ( IS Conc. / IS Area )
Curve type: RF





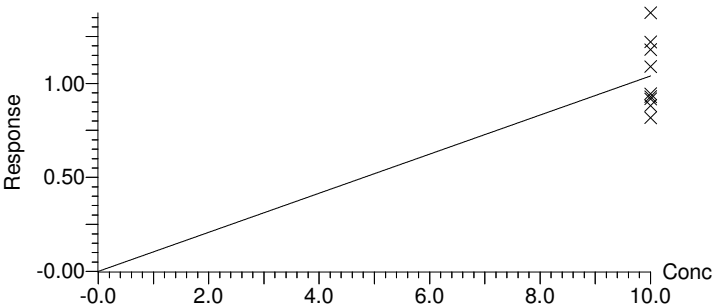
all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
Printed: Monday, November 18, 2019 13:47:36 Eastern Standard Time

**Compound name: d5-NEtFOSAA**

| | Name | ID | Acq.Date | Acq.Time | RT | IS Area | Area | Conc (ng... | %Rec | RRF | 1º S/N | 2º S/N | (b/a) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | I13434 | IA2-537STD0.5 | 18-Nov-19 | 10:24:43 | 11.248 | 103829.906 | 8483.435 | 7.858 | 78.6 | 0.082 | 1030 | | 1.03 |
| 2 | I13435 | IA2-537STD1.0 | 18-Nov-19 | 10:53:49 | 11.252 | 104230.492 | 9857.291 | 9.096 | 91.0 | 0.095 | 3828 | | 1.05 |
| 3 | I13436 | IA2-537STD5.0 | 18-Nov-19 | 11:10:20 | 11.243 | 99527.453 | 9136.918 | 8.829 | 88.3 | 0.092 | 1068 | | 1.15 |
| 4 | I13437 | IA2-537STD10.0 | 18-Nov-19 | 11:26:51 | 11.243 | 99233.398 | 9223.351 | 8.939 | 89.4 | 0.093 | 1583 | | 1.06 |
| 5 | I13438 | IA2-537STD50.0 | 18-Nov-19 | 11:43:24 | 11.248 | 89579.898 | 7892.435 | 8.474 | 84.7 | 0.088 | 178651 | | 1.04 |
| 6 | I13439 | IA2-537STD125 | 18-Nov-19 | 12:00:10 | 11.243 | 80832.117 | 8802.899 | 10.474 | 104.7 | 0.109 | 1769 | | 1.10 |
| 7 | I13440 | IA2-537STD150 | 18-Nov-19 | 12:16:43 | 11.243 | 77816.188 | 9185.745 | 11.353 | 113.5 | 0.118 | 1731 | | 1.10 |
| 8 | I13441 | IA2-537STD250 | 18-Nov-19 | 12:33:16 | 11.243 | 73446.680 | 8969.788 | 11.746 | 117.5 | 0.122 | 710 | | 1.10 |
| 9 | I13442 | IA2-537STD500 | 18-Nov-19 | 12:49:53 | 11.248 | 66126.813 | 9096.541 | 13.230 | 132.3 | 0.138 | 693 | | 1.08 |

Compound name: d5-NEtFOSAA
Response Factor: 0.103974
RRF SD: 0.0186608, % Relative SD: 17.9476
Response type: Internal Std ( Ref 35 ), Area * ( IS Conc. / IS Area )
Curve type: RF





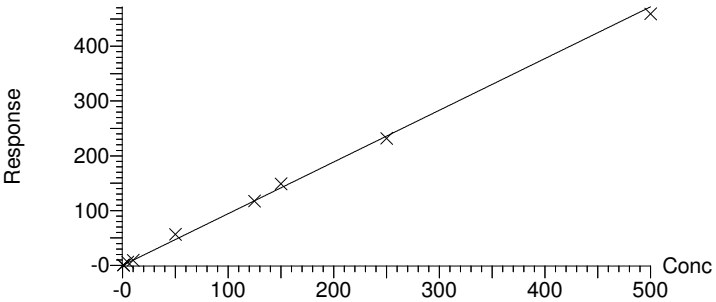
all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
Printed: Monday, November 18, 2019 13:47:36 Eastern Standard Time

**Compound name: br-NEtFOSAA**

| | Name | ID | Acq.Date | Acq.Time | RT | IS Area | Area | Conc (ng... | %Rec | RRF | 1º S/N | 2º S/N | (b/a) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | I13434 | IA2-537STD0.5 | 18-Nov-19 | 10:24:43 | | 8483.435 | | | | | | | |
| 2 | I13435 | IA2-537STD1.0 | 18-Nov-19 | 10:53:49 | | 9857.291 | | | | | | | |
| 3 | I13436 | IA2-537STD5.0 | 18-Nov-19 | 11:10:20 | | 9136.918 | | | | | | | |
| 4 | I13437 | IA2-537STD10.0 | 18-Nov-19 | 11:26:51 | | 9223.351 | | | | | | | |
| 5 | I13438 | IA2-537STD50.0 | 18-Nov-19 | 11:43:24 | | 7892.435 | | | | | | | |
| 6 | I13439 | IA2-537STD125 | 18-Nov-19 | 12:00:10 | | 8802.899 | | | | | | | |
| 7 | I13440 | IA2-537STD150 | 18-Nov-19 | 12:16:43 | | 9185.745 | | | | | | 3 | |
| 8 | I13441 | IA2-537STD250 | 18-Nov-19 | 12:33:16 | | 8969.788 | | | | | | 2 | |
| 9 | I13442 | IA2-537STD500 | 18-Nov-19 | 12:49:53 | | 9096.541 | | | | | | | |

Compound name: L-NEtFOSAA
Coefficient of Determination: R^2 = 0.997234
Calibration curve: 0.944028 * x
Response type: Internal Std ( Ref 49 ), Area * ( IS Conc. / IS Area )
Curve type: Linear, Origin: Force, Weighting: 1/x, Axis trans: None





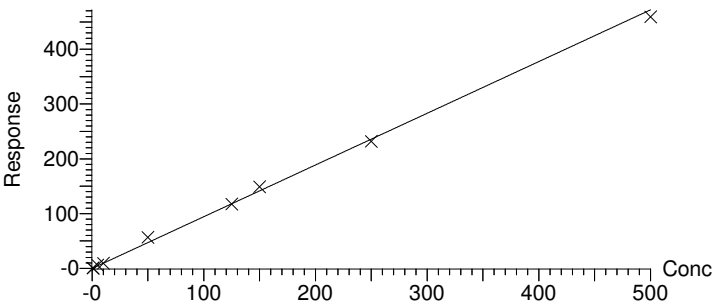
all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
Printed: Monday, November 18, 2019 13:47:36 Eastern Standard Time

**Compound name: L-NEtFOSAA**

| | Name | ID | Acq.Date | Acq.Time | RT | IS Area | Area | Conc (ng... | %Rec | RRF | 1º S/N | 2º S/N | (b/a) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | I13434 | IA2-537STD0.5 | 18-Nov-19 | 10:24:43 | 11.257 | 8483.435 | 426.209 | 0.532 | 106.4 | 1.005 | 62 | 2747 | 0.87 |
| 2 | I13435 | IA2-537STD1.0 | 18-Nov-19 | 10:53:49 | 11.262 | 9857.291 | 836.497 | 0.899 | 89.9 | 0.849 | 34 | 8746 | 1.04 |
| 3 | I13436 | IA2-537STD5.0 | 18-Nov-19 | 11:10:20 | 11.252 | 9136.918 | 5153.751 | 5.975 | 119.5 | 1.128 | 1752 | 345 | 1.16 |
| 4 | I13437 | IA2-537STD10.0 | 18-Nov-19 | 11:26:51 | 11.252 | 9223.351 | 8885.692 | 10.205 | 102.1 | 0.963 | 687 | 385 | 0.95 |
| 5 | I13438 | IA2-537STD50.0 | 18-Nov-19 | 11:43:24 | 11.257 | 7892.435 | 44566.316 | 59.815 | 119.6 | 1.129 | 1964 | 400594 | 1.00 |
| 6 | I13439 | IA2-537STD125 | 18-Nov-19 | 12:00:10 | 11.252 | 8802.899 | 103539.305 | 124.593 | 99.7 | 0.941 | 4441 | 1784 | 1.00 |
| 7 | I13440 | IA2-537STD150 | 18-Nov-19 | 12:16:43 | 11.252 | 9185.745 | 136568.641 | 157.490 | 105.0 | 0.991 | 5806 | 2187 | 1.02 |
| 8 | I13441 | IA2-537STD250 | 18-Nov-19 | 12:33:16 | 11.252 | 8969.788 | 207895.938 | 245.516 | 98.2 | 0.927 | 6928 | 3432 | 1.05 |
| 9 | I13442 | IA2-537STD500 | 18-Nov-19 | 12:49:53 | 11.252 | 9096.541 | 417755.188 | 486.475 | 97.3 | 0.918 | 10854 | 4433 | 1.14 |

Compound name: L-NEtFOSAA
Coefficient of Determination: R^2 = 0.997234
Calibration curve: 0.944028 * x
Response type: Internal Std ( Ref 49 ), Area * ( IS Conc. / IS Area )
Curve type: Linear, Origin: Force, Weighting: 1/x, Axis trans: None





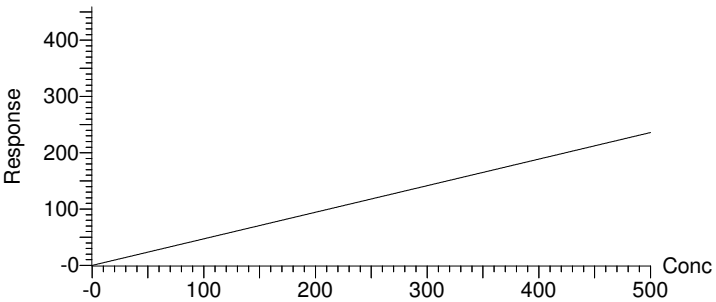
all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
Printed: Monday, November 18, 2019 13:47:36 Eastern Standard Time

**Compound name: NEtFOSAA**

| | Name | ID | Acq.Date | Acq.Time | RT | IS Area | Area | Conc (ng... | %Rec | RRF | 1º S/N | 2º S/N | (b/a) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | I13434 | IA2-537STD0.5 | 18-Nov-19 | 10:24:43 | | 8483.435 | 426.209 | 0.532 | | | | | |
| 2 | I13435 | IA2-537STD1.0 | 18-Nov-19 | 10:53:49 | | 9857.291 | 836.497 | 0.899 | | | | | |
| 3 | I13436 | IA2-537STD5.0 | 18-Nov-19 | 11:10:20 | | 9136.918 | 5153.751 | 5.975 | | | | | |
| 4 | I13437 | IA2-537STD10.0 | 18-Nov-19 | 11:26:51 | | 9223.351 | 8885.692 | 10.205 | | | | | |
| 5 | I13438 | IA2-537STD50.0 | 18-Nov-19 | 11:43:24 | | 7892.435 | 44566.316 | 59.815 | | | | | |
| 6 | I13439 | IA2-537STD125 | 18-Nov-19 | 12:00:10 | | 8802.899 | 103539.305 | 124.593 | | | | | |
| 7 | I13440 | IA2-537STD150 | 18-Nov-19 | 12:16:43 | | 9185.745 | 136568.641 | 157.490 | | | | | |
| 8 | I13441 | IA2-537STD250 | 18-Nov-19 | 12:33:16 | | 8969.788 | 207895.938 | 245.516 | | | | | |
| 9 | I13442 | IA2-537STD500 | 18-Nov-19 | 12:49:53 | | 9096.541 | 417755.188 | 486.475 | | | | | |

Compound name: NEtFOSAA
Coefficient of Determination: 0.000000
Calibration curve: 0.472014 * x
Response type: Internal Std ( Ref 49 ), Area * ( IS Conc. / IS Area )
Curve type: Linear, Origin: Force, Weighting: 1/x, Axis trans: None





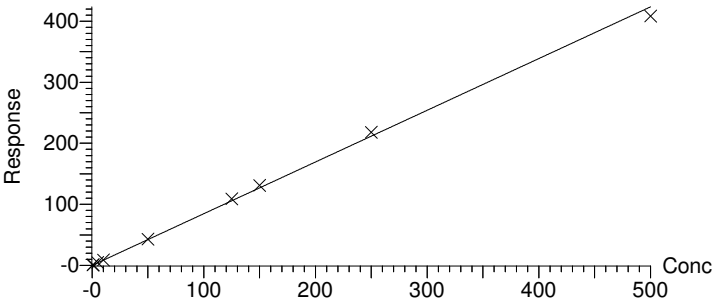
all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
Printed: Monday, November 18, 2019 13:47:36 Eastern Standard Time

**Compound name: PFDoA**

| | Name | ID | Acq.Date | Acq.Time | RT | IS Area | Area | Conc (ng... | %Rec | RRF | 1º S/N | 2º S/N | (b/a) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | I13434 | IA2-537STD0.5 | 18-Nov-19 | 10:24:43 | 11.593 | 103376.742 | 4841.695 | 0.553 | 110.6 | 0.937 | 139 | 7515 | 1.07 |
| 2 | I13435 | IA2-537STD1.0 | 18-Nov-19 | 10:53:49 | 11.598 | 103352.375 | 9531.423 | 1.089 | 108.9 | 0.922 | 278 | 18864 | 0.95 |
| 3 | I13436 | IA2-537STD5.0 | 18-Nov-19 | 11:10:20 | 11.589 | 103349.367 | 48924.336 | 5.589 | 111.8 | 0.947 | 1385 | 869 | 1.07 |
| 4 | I13437 | IA2-537STD10.0 | 18-Nov-19 | 11:26:51 | 11.589 | 96274.898 | 85750.094 | 10.516 | 105.2 | 0.891 | 2452 | 3838 | 0.97 |
| 5 | I13438 | IA2-537STD50.0 | 18-Nov-19 | 11:43:24 | 11.589 | 95651.234 | 409028.406 | 50.488 | 101.0 | 0.855 | 11691 | 724138 | 1.11 |
| 6 | I13439 | IA2-537STD125 | 18-Nov-19 | 12:00:10 | 11.585 | 81334.875 | 888518.938 | 128.977 | 103.2 | 0.874 | 14901 | 1941 | 1.06 |
| 7 | I13440 | IA2-537STD150 | 18-Nov-19 | 12:16:43 | 11.585 | 83380.609 | 1093507.375 | 154.839 | 103.2 | 0.874 | 23865 | 8361 | 1.09 |
| 8 | I13441 | IA2-537STD250 | 18-Nov-19 | 12:33:16 | 11.585 | 76995.367 | 1677289.500 | 257.198 | 102.9 | 0.871 | 31976 | 13513 | 1.09 |
| 9 | I13442 | IA2-537STD500 | 18-Nov-19 | 12:49:53 | 11.585 | 70623.688 | 2884692.250 | 482.251 | 96.5 | 0.817 | 56108 | 4560 | 1.12 |

Compound name: PFDoA
Coefficient of Determination: R^2 = 0.998842
Calibration curve: 0.846986 * x
Response type: Internal Std ( Ref 54 ), Area * ( IS Conc. / IS Area )
Curve type: Linear, Origin: Force, Weighting: 1/x, Axis trans: None





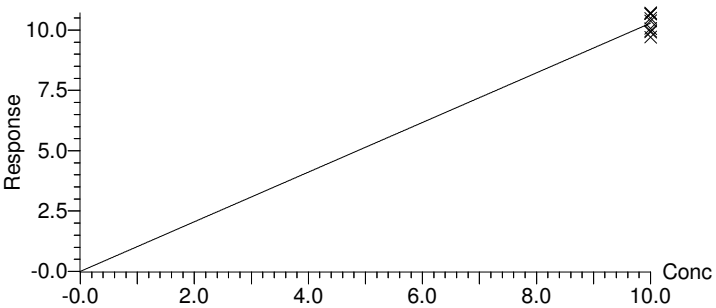
all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
Printed: Monday, November 18, 2019 13:47:36 Eastern Standard Time

**Compound name: MPFDOA**

| | Name | ID | Acq.Date | Acq.Time | RT | IS Area | Area | Conc (ng... | %Rec | RRF | 1º S/N | 2º S/N | (b/a) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | I13434 | IA2-537STD0.5 | 18-Nov-19 | 10:24:43 | 11.594 | 103829.906 | 103376.742 | 9.679 | 96.8 | 0.996 | 4969 | | 1.00 |
| 2 | I13435 | IA2-537STD1.0 | 18-Nov-19 | 10:53:49 | 11.598 | 104230.492 | 103352.375 | 9.640 | 96.4 | 0.992 | 8544 | | 0.98 |
| 3 | I13436 | IA2-537STD5.0 | 18-Nov-19 | 11:10:20 | 11.589 | 99527.453 | 103349.367 | 10.095 | 101.0 | 1.038 | 5335 | | 1.00 |
| 4 | I13437 | IA2-537STD10.0 | 18-Nov-19 | 11:26:51 | 11.589 | 99233.398 | 96274.898 | 9.432 | 94.3 | 0.970 | 5623 | | 0.96 |
| 5 | I13438 | IA2-537STD50.0 | 18-Nov-19 | 11:43:24 | 11.589 | 89579.898 | 95651.234 | 10.381 | 103.8 | 1.068 | 6934 | | 1.08 |
| 6 | I13439 | IA2-537STD125 | 18-Nov-19 | 12:00:10 | 11.585 | 80832.117 | 81334.875 | 9.782 | 97.8 | 1.006 | 4941 | | 1.02 |
| 7 | I13440 | IA2-537STD150 | 18-Nov-19 | 12:16:43 | 11.585 | 77816.188 | 83380.609 | 10.417 | 104.2 | 1.072 | 6682 | | 1.04 |
| 8 | I13441 | IA2-537STD250 | 18-Nov-19 | 12:33:16 | 11.585 | 73446.680 | 76995.367 | 10.191 | 101.9 | 1.048 | 1088 | | 1.05 |
| 9 | I13442 | IA2-537STD500 | 18-Nov-19 | 12:49:53 | 11.585 | 66126.813 | 70623.688 | 10.383 | 103.8 | 1.068 | 5402 | | 1.08 |

Compound name: MPFDOA
Response Factor: 1.02862
RRF SD: 0.0383792, % Relative SD: 3.73112
Response type: Internal Std ( Ref 35 ), Area * ( IS Conc. / IS Area )
Curve type: RF





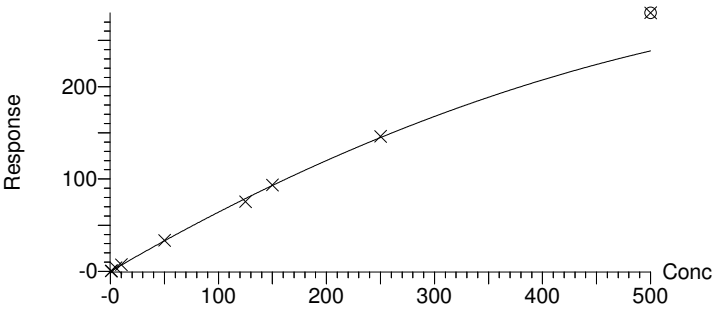
all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
Printed: Monday, November 18, 2019 13:47:36 Eastern Standard Time

**Compound name: PFTrDA**

| | Name | ID | Acq.Date | Acq.Time | RT | IS Area | Area | Conc (ng... | %Rec | RRF | 1º S/N | 2º S/N | (b/a) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | I13434 | IA2-537STD0.5 | 18-Nov-19 | 10:24:43 | 12.0... | 103376.742 | 3858.038 | 0.548 | 109.5 | 0.746 | 123 | 39 | 1.09 |
| 2 | I13435 | IA2-537STD1.0 | 18-Nov-19 | 10:53:49 | 12.0... | 103352.375 | 8870.826 | 1.260 | 126.0 | 0.858 | 278 | 40 | 0.93 |
| 3 | I13436 | IA2-537STD5.0 | 18-Nov-19 | 11:10:20 | 12.0... | 103349.367 | 40715.777 | 5.800 | 116.0 | 0.788 | 999 | 458 | 0.90 |
| 4 | I13437 | IA2-537STD10.0 | 18-Nov-19 | 11:26:51 | 12.0... | 96274.898 | 69474.719 | 10.654 | 106.5 | 0.722 | 2464 | 783 | 0.90 |
| 5 | I13438 | IA2-537STD50.0 | 18-Nov-19 | 11:43:24 | 12.0... | 95651.234 | 320247.500 | 50.655 | 101.3 | 0.670 | 7284 | 2277 | 0.97 |
| 6 | I13439 | IA2-537STD125 | 18-Nov-19 | 12:00:10 | 12.0... | 81334.875 | 612946.750 | 119.054 | 95.2 | 0.603 | 13464 | 3496 | 0.91 |
| 7 | I13440 | IA2-537STD150 | 18-Nov-19 | 12:16:43 | 12.0... | 83380.609 | 780708.688 | 151.037 | 100.7 | 0.624 | 17843 | 4869 | 0.94 |
| 8 | I13441 | IA2-537STD250 | 18-Nov-19 | 12:33:16 | 12.0... | 76995.367 | 1125203.250 | 252.665 | 101.1 | 0.585 | 24166 | 5063 | 0.97 |
| 9 | I13442 | IA2-537STD500 | 18-Nov-19 | 12:49:53 | 12.0... | 70623.688 | 1976668.125 | 730.913 | 146.2 | 0.560 | 38522 | 10063 | 0.97 |

Compound name: PFTrDA
Coefficient of Determination: R^2 = 0.998963
Calibration curve: -0.000408704 * x^2 + 0.681656 * x
Response type: Internal Std ( Ref 54 ), Area * ( IS Conc. / IS Area )
Curve type: 2nd Order, Origin: Force, Weighting: 1/x, Axis trans: None





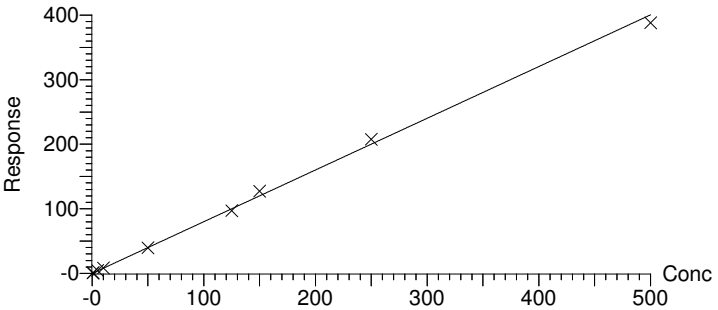
all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
Printed: Monday, November 18, 2019 13:47:36 Eastern Standard Time

**Compound name: PFTA**

| | Name | ID | Acq.Date | Acq.Time | RT | IS Area | Area | Conc (ng... | %Rec | RRF | 1º S/N | 2º S/N | (b/a) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | I13434 | IA2-537STD0.5 | 18-Nov-19 | 10:24:43 | 12.3... | 84304.094 | 3678.555 | 0.545 | 109.0 | 0.873 | 142 | 38 | 1.09 |
| 2 | I13435 | IA2-537STD1.0 | 18-Nov-19 | 10:53:49 | 12.3... | 83480.063 | 7615.251 | 1.139 | 113.9 | 0.912 | 284 | 23020 | 1.09 |
| 3 | I13436 | IA2-537STD5.0 | 18-Nov-19 | 11:10:20 | 12.3... | 79194.773 | 35875.270 | 5.657 | 113.1 | 0.906 | 1214 | 612 | 1.00 |
| 4 | I13437 | IA2-537STD10.0 | 18-Nov-19 | 11:26:51 | 12.3... | 75865.328 | 63347.266 | 10.427 | 104.3 | 0.835 | 2110 | 173581 | 1.08 |
| 5 | I13438 | IA2-537STD50.0 | 18-Nov-19 | 11:43:24 | 12.3... | 73974.609 | 294391.063 | 49.694 | 99.4 | 0.796 | 7502 | 4351 | 1.12 |
| 6 | I13439 | IA2-537STD125 | 18-Nov-19 | 12:00:10 | 12.3... | 66841.781 | 649347.938 | 121.308 | 97.0 | 0.777 | 20638 | 2554 | 1.04 |
| 7 | I13440 | IA2-537STD150 | 18-Nov-19 | 12:16:43 | 12.3... | 65493.922 | 832831.875 | 158.787 | 105.9 | 0.848 | 20542 | 10693 | 1.07 |
| 8 | I13441 | IA2-537STD250 | 18-Nov-19 | 12:33:16 | 12.3... | 60380.074 | 1254325.750 | 259.404 | 103.8 | 0.831 | 29832 | 9847 | 1.07 |
| 9 | I13442 | IA2-537STD500 | 18-Nov-19 | 12:49:53 | 12.3... | 57111.117 | 2216106.000 | 484.540 | 96.9 | 0.776 | 46140 | 13707 | 1.12 |

Compound name: PFTA
Coefficient of Determination: R^2 = 0.998513
Calibration curve: 0.80083 * x
Response type: Internal Std ( Ref 57 ), Area * ( IS Conc. / IS Area )
Curve type: Linear, Origin: Force, Weighting: 1/x, Axis trans: None





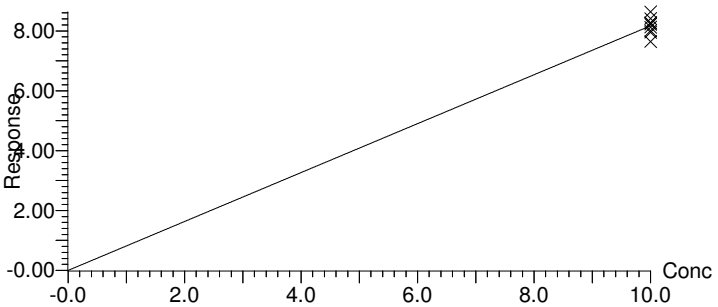
all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
Printed: Monday, November 18, 2019 13:47:36 Eastern Standard Time

**Compound name: M2PFTEDA**

| | Name | ID | Acq.Date | Acq.Time | RT | IS Area | Area | Conc (ng... | %Rec | RRF | 1º S/N | 2º S/N | (b/a) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | I13434 | IA2-537STD0.5 | 18-Nov-19 | 10:24:43 | 12.3... | 103829.906 | 84304.094 | 9.938 | 99.4 | 0.812 | 5616 | | 1.07 |
| 2 | I13435 | IA2-537STD1.0 | 18-Nov-19 | 10:53:49 | 12.3... | 104230.492 | 83480.063 | 9.803 | 98.0 | 0.801 | 11763 | | 1.11 |
| 3 | I13436 | IA2-537STD5.0 | 18-Nov-19 | 11:10:20 | 12.3... | 99527.453 | 79194.773 | 9.739 | 97.4 | 0.796 | 8009 | | 1.09 |
| 4 | I13437 | IA2-537STD10.0 | 18-Nov-19 | 11:26:51 | 12.3... | 99233.398 | 75865.328 | 9.357 | 93.6 | 0.765 | 3451 | | 1.10 |
| 5 | I13438 | IA2-537STD50.0 | 18-Nov-19 | 11:43:24 | 12.3... | 89579.898 | 73974.609 | 10.107 | 101.1 | 0.826 | 4377 | | 1.00 |
| 6 | I13439 | IA2-537STD125 | 18-Nov-19 | 12:00:10 | 12.3... | 80832.117 | 66841.781 | 10.121 | 101.2 | 0.827 | 1339 | | 1.04 |
| 7 | I13440 | IA2-537STD150 | 18-Nov-19 | 12:16:43 | 12.3... | 77816.188 | 65493.922 | 10.301 | 103.0 | 0.842 | 18247 | | 1.08 |
| 8 | I13441 | IA2-537STD250 | 18-Nov-19 | 12:33:16 | 12.3... | 73446.680 | 60380.074 | 10.062 | 100.6 | 0.822 | 11843 | | 1.06 |
| 9 | I13442 | IA2-537STD500 | 18-Nov-19 | 12:49:53 | 12.3... | 66126.813 | 57111.117 | 10.571 | 105.7 | 0.864 | 13106 | | 1.10 |

Compound name: M2PFTEDA
Response Factor: 0.817023
RRF SD: 0.0284579, % Relative SD: 3.48313
Response type: Internal Std ( Ref 35 ), Area * ( IS Conc. / IS Area )
Curve type: RF





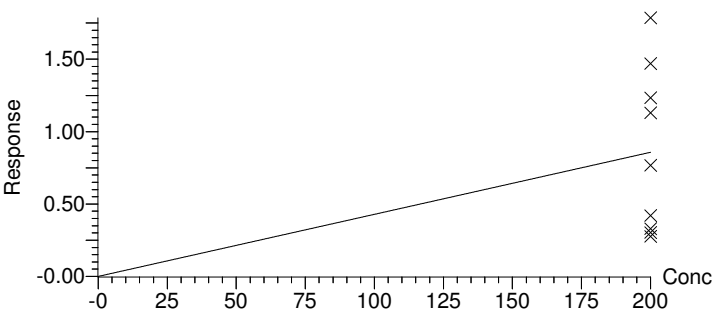
all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
Printed: Monday, November 18, 2019 13:47:36 Eastern Standard Time

**Compound name: M3HFPO-DA**

| | Name | ID | Acq.Date | Acq.Time | RT | IS Area | Area | Conc (ng... | %Rec | RRF | 1º S/N | 2º S/N | (b/a) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | I13434 | IA2-537STD0.5 | 18-Nov-19 | 10:24:43 | 7.426 | 117636.820 | 3251.888 | 64.481 | 32.2 | 0.001 | 973 | | 1.04 |
| 2 | I13435 | IA2-537STD1.0 | 18-Nov-19 | 10:53:49 | 7.436 | 114802.125 | 3469.083 | 70.486 | 35.2 | 0.002 | 70952 | | 0.99 |
| 3 | I13436 | IA2-537STD5.0 | 18-Nov-19 | 11:10:20 | 7.423 | 113627.328 | 3737.527 | 76.726 | 38.4 | 0.002 | 93 | | 0.98 |
| 4 | I13437 | IA2-537STD10.0 | 18-Nov-19 | 11:26:51 | 7.423 | 114891.016 | 4822.583 | 97.911 | 49.0 | 0.002 | 99973 | | 0.97 |
| 5 | I13438 | IA2-537STD50.0 | 18-Nov-19 | 11:43:24 | 7.417 | 107343.031 | 8242.578 | 179.113 | 89.6 | 0.004 | 5169 | | 1.10 |
| 6 | I13439 | IA2-537STD125 | 18-Nov-19 | 12:00:10 | 7.403 | 101103.344 | 11428.816 | 263.678 | 131.8 | 0.006 | 222317 | | 1.18 |
| 7 | I13440 | IA2-537STD150 | 18-Nov-19 | 12:16:43 | 7.403 | 97990.719 | 12096.718 | 287.953 | 144.0 | 0.006 | 228130 | | 1.17 |
| 8 | I13441 | IA2-537STD250 | 18-Nov-19 | 12:33:16 | 7.393 | 96048.547 | 14124.396 | 343.019 | 171.5 | 0.007 | 244179 | | 1.27 |
| 9 | I13442 | IA2-537STD500 | 18-Nov-19 | 12:49:53 | 7.371 | 87971.789 | 15712.972 | 416.633 | 208.3 | 0.009 | 984 | | 1.69 |

Compound name: M3HFPO-DA
Response Factor: 0.00428708
RRF SD: 0.00283937, % Relative SD: 66.2309
Response type: Internal Std ( Ref 23 ), Area * ( IS Conc. / IS Area )
Curve type: RF





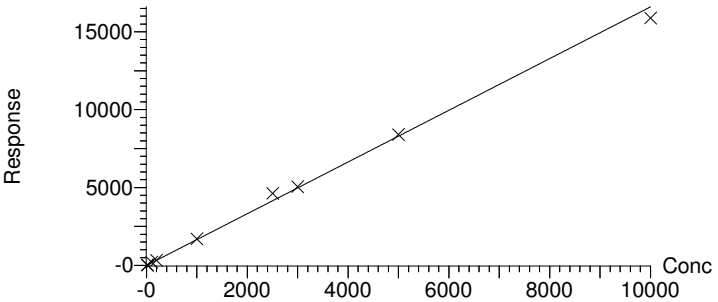
all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
Printed: Monday, November 18, 2019 13:47:36 Eastern Standard Time

**Compound name: HFPO-DA**

| | Name | ID | Acq.Date | Acq.Time | RT | IS Area | Area | Conc (ng... | %Rec | RRF | 1º S/N | 2º S/N | (b/a) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | I13434 | IA2-537STD0.5 | 18-Nov-19 | 10:24:43 | 7.427 | 3251.888 | 238.749 | 8.842 | 88.4 | 1.468 | 3 | 1148 | 0.96 |
| 2 | I13435 | IA2-537STD1.0 | 18-Nov-19 | 10:53:49 | 7.444 | 3469.083 | 409.914 | 14.231 | 71.2 | 1.182 | 9322 | 19 | 0.72 |
| 3 | I13436 | IA2-537STD5.0 | 18-Nov-19 | 11:10:20 | 7.424 | 3737.527 | 3728.507 | 120.149 | 120.1 | 1.995 | 2114 | 27395 | 1.04 |
| 4 | I13437 | IA2-537STD10.0 | 18-Nov-19 | 11:26:51 | 7.421 | 4822.583 | 8056.205 | 201.196 | 100.6 | 1.671 | 1404 | 69032 | 1.01 |
| 5 | I13438 | IA2-537STD50.0 | 18-Nov-19 | 11:43:24 | 7.418 | 8242.578 | 69989.242 | 1022.673 | 102.3 | 1.698 | 1569559 | 571683 | 1.05 |
| 6 | I13439 | IA2-537STD125 | 18-Nov-19 | 12:00:10 | 7.405 | 11428.816 | 264458.719 | 2786.926 | 111.5 | 1.851 | 45709 | 2048472 | 1.17 |
| 7 | I13440 | IA2-537STD150 | 18-Nov-19 | 12:16:43 | 7.405 | 12096.718 | 306093.281 | 3047.579 | 101.6 | 1.687 | 23988 | 18756 | 1.20 |
| 8 | I13441 | IA2-537STD250 | 18-Nov-19 | 12:33:16 | 7.391 | 14124.396 | 593297.063 | 5059.075 | 101.2 | 1.680 | 210742 | 3997418 | 1.44 |
| 9 | I13442 | IA2-537STD500 | 18-Nov-19 | 12:49:53 | 7.372 | 15712.972 | 1248449.625 | 9569.328 | 95.7 | 1.589 | 77760 | 7046169 | 1.78 |

Compound name: HFPO-DA
Coefficient of Determination: R^2 = 0.997230
Calibration curve: 1.66059 * x
Response type: Internal Std ( Ref 58 ), Area * ( IS Conc. / IS Area )
Curve type: Linear, Origin: Force, Weighting: 1/x, Axis trans: None





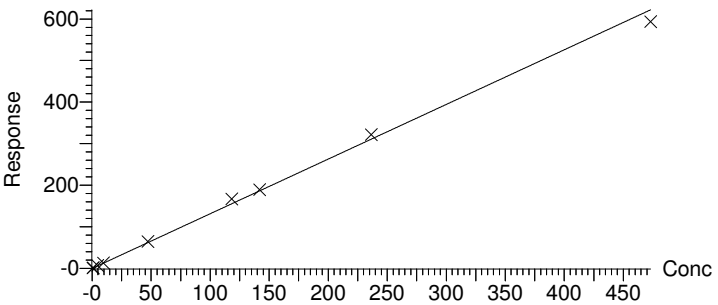
all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
Printed: Monday, November 18, 2019 13:47:36 Eastern Standard Time

**Compound name: ADONA**

| | Name | ID | Acq.Date | Acq.Time | RT | IS Area | Area | Conc (ng... | %Rec | RRF | 1º S/N | 2º S/N | (b/a) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | I13434 | IA2-537STD0.5 | 18-Nov-19 | 10:24:43 | 8.437 | 114742.953 | 6287.492 | 0.417 | 88.1 | 1.158 | 1172 | | 1.00 |
| 2 | I13435 | IA2-537STD1.0 | 18-Nov-19 | 10:53:49 | 8.447 | 115929.242 | 15121.663 | 0.992 | 104.9 | 1.379 | 2464 | | 1.02 |
| 3 | I13436 | IA2-537STD5.0 | 18-Nov-19 | 11:10:20 | 8.433 | 112562.227 | 76970.492 | 5.201 | 109.9 | 1.445 | 2596 | | 1.06 |
| 4 | I13437 | IA2-537STD10.0 | 18-Nov-19 | 11:26:51 | 8.433 | 109470.945 | 142938.625 | 9.932 | 105.0 | 1.380 | 10601 | | 1.01 |
| 5 | I13438 | IA2-537STD50.0 | 18-Nov-19 | 11:43:24 | 8.440 | 106781.555 | 687811.313 | 48.997 | 103.6 | 1.362 | 19504 | | 0.99 |
| 6 | I13439 | IA2-537STD125 | 18-Nov-19 | 12:00:10 | 8.433 | 98244.656 | 1641867.125 | 127.123 | 107.5 | 1.413 | 55292 | | 1.03 |
| 7 | I13440 | IA2-537STD150 | 18-Nov-19 | 12:16:43 | 8.433 | 98053.172 | 1853079.125 | 143.757 | 101.3 | 1.332 | 72891 | | 1.02 |
| 8 | I13441 | IA2-537STD250 | 18-Nov-19 | 12:33:16 | 8.437 | 90653.047 | 2918572.000 | 244.897 | 103.5 | 1.361 | 74345 | | 1.03 |
| 9 | I13442 | IA2-537STD500 | 18-Nov-19 | 12:49:53 | 8.433 | 85048.031 | 5047635.000 | 451.460 | 95.4 | 1.255 | 47725 | | 1.09 |

Compound name: ADONA
Coefficient of Determination: R^2 = 0.997914
Calibration curve: 1.31463 * x
Response type: Internal Std ( Ref 22 ), Area * ( IS Conc. / IS Area )
Curve type: Linear, Origin: Force, Weighting: 1/x, Axis trans: None





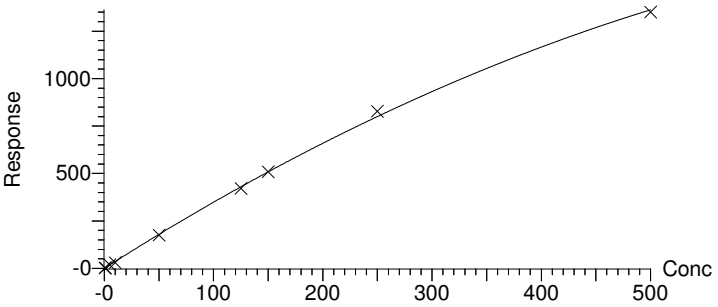
all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
Printed: Monday, November 18, 2019 13:47:36 Eastern Standard Time

**Compound name: PFHxDA**

| | Name | ID | Acq.Date | Acq.Time | RT | IS Area | Area | Conc (ng... | %Rec | RRF | 1º S/N | 2º S/N | (b/a) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | I13434 | IA2-537STD0.5 | 18-Nov-19 | 10:24:43 | 12.7... | 18213.158 | 3366.715 | 0.503 | 100.6 | 3.697 | 505 | | 1.05 |
| 2 | I13435 | IA2-537STD1.0 | 18-Nov-19 | 10:53:49 | 12.7... | 17328.859 | 6644.953 | 1.044 | 104.4 | 3.835 | 928 | | 1.21 |
| 3 | I13436 | IA2-537STD5.0 | 18-Nov-19 | 11:10:20 | 12.7... | 16612.740 | 31167.045 | 5.116 | 102.3 | 3.752 | 3623 | | 1.30 |
| 4 | I13437 | IA2-537STD10.0 | 18-Nov-19 | 11:26:51 | 12.7... | 19278.168 | 56900.813 | 8.061 | 80.6 | 2.952 | 6732 | | 1.20 |
| 5 | I13438 | IA2-537STD50.0 | 18-Nov-19 | 11:43:24 | 12.7... | 15306.165 | 269633.094 | 49.164 | 98.3 | 3.523 | 29792 | | 1.14 |
| 6 | I13439 | IA2-537STD125 | 18-Nov-19 | 12:00:10 | 12.7... | 13694.694 | 578244.250 | 122.629 | 98.1 | 3.378 | 52689 | | 1.26 |
| 7 | I13440 | IA2-537STD150 | 18-Nov-19 | 12:16:43 | 12.7... | 13524.559 | 689195.813 | 150.297 | 100.2 | 3.397 | 73549 | | 1.18 |
| 8 | I13441 | IA2-537STD250 | 18-Nov-19 | 12:33:16 | 12.7... | 12594.792 | 1043086.625 | 260.356 | 104.1 | 3.313 | 94086 | | 1.22 |
| 9 | I13442 | IA2-537STD500 | 18-Nov-19 | 12:49:53 | 12.7... | 11692.363 | 1578940.250 | 493.304 | 98.7 | 2.701 | 166713 | | 1.17 |

Compound name: PFHxDA
Coefficient of Determination: R^2 = 0.999095
Calibration curve: -0.00190397 * x^2 + 3.6767 * x
Response type: Internal Std ( Ref 63 ), Area * ( IS Conc. / IS Area )
Curve type: 2nd Order, Origin: Force, Weighting: 1/x, Axis trans: None





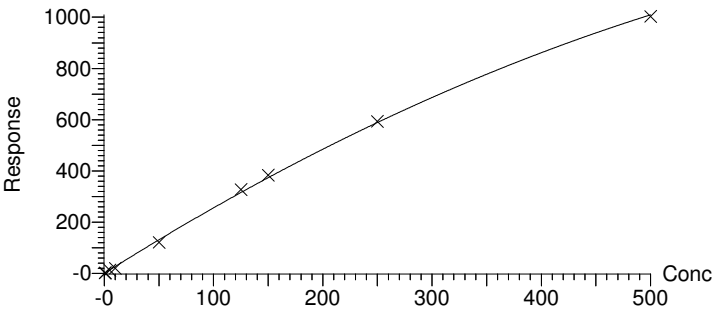
all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
Printed: Monday, November 18, 2019 13:47:36 Eastern Standard Time

**Compound name: PFODA**

| | Name | ID | Acq.Date | Acq.Time | RT | IS Area | Area | Conc (ng... | %Rec | RRF | 1º S/N | 2º S/N | (b/a) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | I13434 | IA2-537STD0.5 | 18-Nov-19 | 10:24:43 | 12.9... | 18213.158 | 1986.248 | 0.405 | 81.0 | 2.181 | 233 | | 0.97 |
| 2 | I13435 | IA2-537STD1.0 | 18-Nov-19 | 10:53:49 | 12.9... | 17328.859 | 4022.923 | 0.862 | 86.2 | 2.322 | 398 | | 1.09 |
| 3 | I13436 | IA2-537STD5.0 | 18-Nov-19 | 11:10:20 | 12.9... | 16612.740 | 20393.104 | 4.568 | 91.4 | 2.455 | 1868 | | 1.12 |
| 4 | I13437 | IA2-537STD10.0 | 18-Nov-19 | 11:26:51 | 12.9... | 19278.168 | 38946.125 | 7.529 | 75.3 | 2.020 | 3365 | | 1.16 |
| 5 | I13438 | IA2-537STD50.0 | 18-Nov-19 | 11:43:24 | 12.9... | 15306.165 | 185708.469 | 46.110 | 92.2 | 2.427 | 18932 | | 1.21 |
| 6 | I13439 | IA2-537STD125 | 18-Nov-19 | 12:00:10 | 12.9... | 13694.694 | 447829.469 | 129.854 | 103.9 | 2.616 | 34969 | | 0.96 |
| 7 | I13440 | IA2-537STD150 | 18-Nov-19 | 12:16:43 | 12.9... | 13524.559 | 517897.969 | 154.059 | 102.7 | 2.553 | 44245 | | 1.09 |
| 8 | I13441 | IA2-537STD250 | 18-Nov-19 | 12:33:16 | 12.9... | 12594.792 | 747346.625 | 252.158 | 100.9 | 2.374 | 68089 | | 1.14 |
| 9 | I13442 | IA2-537STD500 | 18-Nov-19 | 12:49:53 | 12.9... | 11692.363 | 1172348.500 | 495.065 | 99.0 | 2.005 | 1863 | | 1.27 |

Compound name: PFODA
Coefficient of Determination: R^2 = 0.998424
Calibration curve: -0.00134983 * x^2 + 2.69357 * x
Response type: Internal Std ( Ref 63 ), Area * ( IS Conc. / IS Area )
Curve type: 2nd Order, Origin: Force, Weighting: 1/x, Axis trans: None





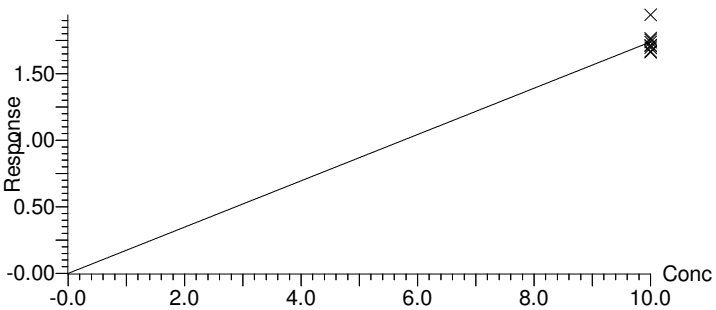
all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
Printed: Monday, November 18, 2019 13:47:36 Eastern Standard Time

**Compound name: M2PFHxDA**

| | Name | ID | Acq.Date | Acq.Time | RT | IS Area | Area | Conc (ng... | %Rec | RRF | 1º S/N | 2º S/N | (b/a) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | I13434 | IA2-537STD0.5 | 18-Nov-19 | 10:24:43 | 12.7... | 103829.906 | 18213.158 | 10.086 | 100.9 | 0.175 | 5928 | | 1.19 |
| 2 | I13435 | IA2-537STD1.0 | 18-Nov-19 | 10:53:49 | 12.7... | 104230.492 | 17328.859 | 9.560 | 95.6 | 0.166 | 22620 | | 1.19 |
| 3 | I13436 | IA2-537STD5.0 | 18-Nov-19 | 11:10:20 | 12.7... | 99527.453 | 16612.740 | 9.598 | 96.0 | 0.167 | 4836 | | 1.15 |
| 4 | I13437 | IA2-537STD10.0 | 18-Nov-19 | 11:26:51 | 12.7... | 99233.398 | 19278.168 | 11.170 | 111.7 | 0.194 | 15355 | | 1.24 |
| 5 | I13438 | IA2-537STD50.0 | 18-Nov-19 | 11:43:24 | 12.7... | 89579.898 | 15306.165 | 9.825 | 98.2 | 0.171 | 2825 | | 1.12 |
| 6 | I13439 | IA2-537STD125 | 18-Nov-19 | 12:00:10 | 12.7... | 80832.117 | 13694.694 | 9.742 | 97.4 | 0.169 | 7300 | | 1.26 |
| 7 | I13440 | IA2-537STD150 | 18-Nov-19 | 12:16:43 | 12.7... | 77816.188 | 13524.559 | 9.993 | 99.9 | 0.174 | 28 | | 1.16 |
| 8 | I13441 | IA2-537STD250 | 18-Nov-19 | 12:33:16 | 12.7... | 73446.680 | 12594.792 | 9.860 | 98.6 | 0.171 | 7852 | | 1.17 |
| 9 | I13442 | IA2-537STD500 | 18-Nov-19 | 12:49:53 | 12.7... | 66126.813 | 11692.363 | 10.167 | 101.7 | 0.177 | 2573 | | 1.22 |

Compound name: M2PFHxDA
Response Factor: 0.173916
RRF SD: 0.00842697, % Relative SD: 4.84542
Response type: Internal Std ( Ref 35 ), Area * ( IS Conc. / IS Area )
Curve type: RF





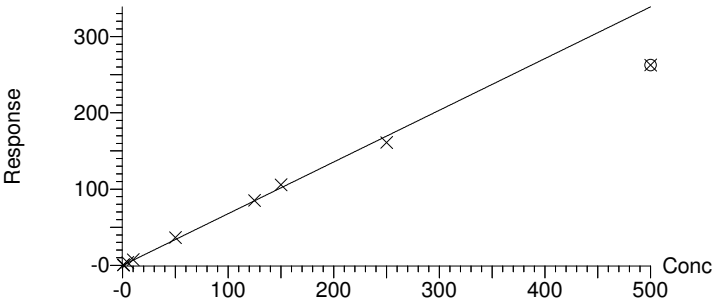
all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
Printed: Monday, November 18, 2019 13:47:36 Eastern Standard Time

**Compound name: PFDoS**

| | Name | ID | Acq.Date | Acq.Time | RT | IS Area | Area | Conc (ng... | %Rec | RRF | 1º S/N | 2º S/N | (b/a) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | I13434 | IA2-537STD0.5 | 18-Nov-19 | 10:24:43 | 11.997 | 7863.209 | 278.948 | 0.523 | 104.7 | 0.710 | 93 | 30 | 0.75 |
| 2 | I13435 | IA2-537STD1.0 | 18-Nov-19 | 10:53:49 | 12.0... | 8337.590 | 611.248 | 1.082 | 108.2 | 0.733 | 11908 | 94 | 0.73 |
| 3 | I13436 | IA2-537STD5.0 | 18-Nov-19 | 11:10:20 | 11.993 | 7856.718 | 2929.418 | 5.501 | 110.0 | 0.746 | 52599 | 28916 | 0.85 |
| 4 | I13437 | IA2-537STD10.0 | 18-Nov-19 | 11:26:51 | 11.993 | 7611.157 | 5766.223 | 11.178 | 111.8 | 0.758 | 103350 | 54427 | 0.80 |
| 5 | I13438 | IA2-537STD50.0 | 18-Nov-19 | 11:43:24 | 11.997 | 7647.324 | 28014.129 | 54.048 | 108.1 | 0.733 | 402 | 416 | 0.78 |
| 6 | I13439 | IA2-537STD125 | 18-Nov-19 | 12:00:10 | 11.989 | 6866.474 | 58473.602 | 125.644 | 100.5 | 0.681 | 3172 | 1156 | 0.85 |
| 7 | I13440 | IA2-537STD150 | 18-Nov-19 | 12:16:43 | 11.989 | 6560.688 | 69331.211 | 155.917 | 103.9 | 0.705 | 8238 | 1521 | 0.87 |
| 8 | I13441 | IA2-537STD250 | 18-Nov-19 | 12:33:16 | 11.989 | 5910.273 | 95180.961 | 237.606 | 95.0 | 0.644 | 9536 | 5126 | 0.87 |
| 9 | I13442 | IA2-537STD500 | 18-Nov-19 | 12:49:53 | 11.989 | 5658.023 | 148644.109 | 387.613 | 77.5 | 0.525 | 9737 | 3816 | 0.88 |

Compound name: PFDoS
Coefficient of Determination: R^2 = 0.997593
Calibration curve: 0.677774 * x
Response type: Internal Std ( Ref 33 ), Area * ( IS Conc. / IS Area )
Curve type: Linear, Origin: Force, Weighting: 1/x, Axis trans: None





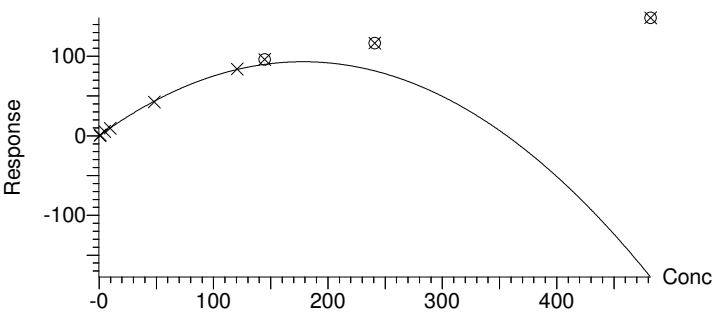
all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
Printed: Monday, November 18, 2019 13:47:36 Eastern Standard Time

**Compound name: 10:2FTS**

| | Name | ID | Acq.Date | Acq.Time | RT | IS Area | Area | Conc (ng... | %Rec | RRF | 1º S/N | 2º S/N | (b/a) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | I13434 | IA2-537STD0.5 | 18-Nov-19 | 10:24:43 | 11.610 | 3535.170 | 161.659 | 0.438 | 90.9 | 0.949 | 4 | | 0.93 |
| 2 | I13435 | IA2-537STD1.0 | 18-Nov-19 | 10:53:49 | 11.615 | 3740.494 | 464.091 | 1.191 | 123.5 | 1.287 | 92 | | 1.00 |
| 3 | I13436 | IA2-537STD5.0 | 18-Nov-19 | 11:10:20 | 11.602 | 3681.261 | 2106.882 | 5.561 | 115.4 | 1.187 | 40717 | | 0.96 |
| 4 | I13437 | IA2-537STD10.0 | 18-Nov-19 | 11:26:51 | 11.602 | 3572.389 | 3399.108 | 9.346 | 96.9 | 0.987 | 152 | | 1.02 |
| 5 | I13438 | IA2-537STD50.0 | 18-Nov-19 | 11:43:24 | 11.606 | 4282.424 | 18204.355 | 46.805 | 97.1 | 0.882 | 2155 | | 0.96 |
| 6 | I13439 | IA2-537STD125 | 18-Nov-19 | 12:00:10 | 11.602 | 4755.468 | 39855.957 | 121.752 | 101.0 | 0.696 | 749660 | | 0.93 |
| 7 | I13440 | IA2-537STD150 | 18-Nov-19 | 12:16:43 | 11.602 | 4958.818 | 47687.137 | | | 0.665 | 638 | | 0.97 |
| 8 | I13441 | IA2-537STD250 | 18-Nov-19 | 12:33:16 | 11.602 | 6317.642 | 73627.555 | | | 0.484 | 1060 | | 0.98 |
| 9 | I13442 | IA2-537STD500 | 18-Nov-19 | 12:49:53 | 11.602 | 8145.643 | 120840.695 | | | 0.308 | 46485 | | 0.98 |

Compound name: 10:2FTS
Coefficient of Determination: R^2 = 0.997942
Calibration curve: -0.00293343 * x^2 + 1.04552 * x
Response type: Internal Std ( Ref 38 ), Area * ( IS Conc. / IS Area )
Curve type: 2nd Order, Origin: Force, Weighting: 1/x, Axis trans: None





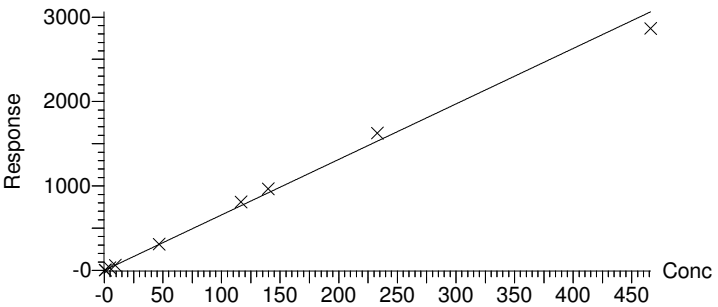
all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
Printed: Monday, November 18, 2019 13:47:36 Eastern Standard Time

**Compound name: 9CL-PF3ONS**

| | Name | ID | Acq.Date | Acq.Time | RT | IS Area | Area | Conc (ng... | %Rec | RRF | 1º S/N | 2º S/N | (b/a) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | I13434 | IA2-537STD0.5 | 18-Nov-19 | 10:24:43 | 10.3... | 7863.209 | 2189.338 | 0.424 | 90.9 | 5.975 | 105 | | 1.04 |
| 2 | I13435 | IA2-537STD1.0 | 18-Nov-19 | 10:53:49 | 10.3... | 8337.590 | 4366.216 | 0.797 | 85.5 | 5.619 | 164 | | 0.99 |
| 3 | I13436 | IA2-537STD5.0 | 18-Nov-19 | 11:10:20 | 10.3... | 7856.718 | 25231.883 | 4.887 | 104.9 | 6.892 | 1198 | | 0.99 |
| 4 | I13437 | IA2-537STD10.0 | 18-Nov-19 | 11:26:51 | 10.3... | 7611.157 | 47425.988 | 9.481 | 101.7 | 6.686 | 2295 | | 0.98 |
| 5 | I13438 | IA2-537STD50.0 | 18-Nov-19 | 11:43:24 | 10.3... | 7647.324 | 237445.078 | 47.245 | 101.4 | 6.663 | 14849 | | 0.99 |
| 6 | I13439 | IA2-537STD125 | 18-Nov-19 | 12:00:10 | 10.3... | 6866.474 | 556615.500 | 123.346 | 105.9 | 6.958 | 24367 | | 1.00 |
| 7 | I13440 | IA2-537STD150 | 18-Nov-19 | 12:16:43 | 10.3... | 6560.688 | 635029.375 | 147.281 | 105.4 | 6.924 | 29977 | | 1.04 |
| 8 | I13441 | IA2-537STD250 | 18-Nov-19 | 12:33:16 | 10.3... | 5910.273 | 962077.688 | 247.688 | 106.3 | 6.986 | 41908 | | 0.98 |
| 9 | I13442 | IA2-537STD500 | 18-Nov-19 | 12:49:53 | 10.3... | 5658.023 | 1621731.250 | 436.130 | 93.6 | 6.151 | 51120 | | 1.03 |

Compound name: 9CL-PF3ONS
Coefficient of Determination: R^2 = 0.996306
Calibration curve: 6.57201 * x
Response type: Internal Std ( Ref 33 ), Area * ( IS Conc. / IS Area )
Curve type: Linear, Origin: Force, Weighting: 1/x, Axis trans: None





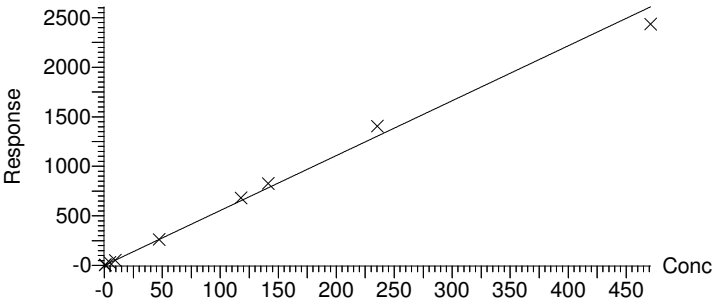
all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
Printed: Monday, November 18, 2019 13:47:36 Eastern Standard Time

**Compound name: 11CL-PFOUdS**

| | Name | ID | Acq.Date | Acq.Time | RT | IS Area | Area | Conc (ng... | %Rec | RRF | 1º S/N | 2º S/N | (b/a) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | I13434 | IA2-537STD0.5 | 18-Nov-19 | 10:24:43 | 11.388 | 7863.209 | 1756.393 | 0.403 | 85.6 | 4.742 | 25984 | | 1.00 |
| 2 | I13435 | IA2-537STD1.0 | 18-Nov-19 | 10:53:49 | 11.393 | 8337.590 | 4417.228 | 0.956 | 101.5 | 5.624 | 65545 | | 0.98 |
| 3 | I13436 | IA2-537STD5.0 | 18-Nov-19 | 11:10:20 | 11.383 | 7856.718 | 21642.189 | 4.972 | 105.6 | 5.848 | 2548 | | 1.02 |
| 4 | I13437 | IA2-537STD10.0 | 18-Nov-19 | 11:26:51 | 11.383 | 7611.157 | 39059.797 | 9.263 | 98.3 | 5.448 | 8974 | | 1.00 |
| 5 | I13438 | IA2-537STD50.0 | 18-Nov-19 | 11:43:24 | 11.388 | 7647.324 | 200296.078 | 47.274 | 100.4 | 5.561 | 12642 | | 0.99 |
| 6 | I13439 | IA2-537STD125 | 18-Nov-19 | 12:00:10 | 11.383 | 6866.474 | 466932.875 | 122.738 | 104.2 | 5.775 | 9285 | | 0.99 |
| 7 | I13440 | IA2-537STD150 | 18-Nov-19 | 12:16:43 | 11.383 | 6560.688 | 542068.938 | 149.130 | 105.5 | 5.847 | 21115 | | 1.00 |
| 8 | I13441 | IA2-537STD250 | 18-Nov-19 | 12:33:16 | 11.383 | 5910.273 | 830742.500 | 253.699 | 107.7 | 5.969 | 41063 | | 1.01 |
| 9 | I13442 | IA2-537STD500 | 18-Nov-19 | 12:49:53 | 11.388 | 5658.023 | 1378541.500 | 439.759 | 93.4 | 5.173 | 33235 | | 0.96 |

Compound name: 11CL-PFOUdS
Coefficient of Determination: R^2 = 0.995887
Calibration curve: 5.5404 * x
Response type: Internal Std ( Ref 33 ), Area * ( IS Conc. / IS Area )
Curve type: Linear, Origin: Force, Weighting: 1/x, Axis trans: None





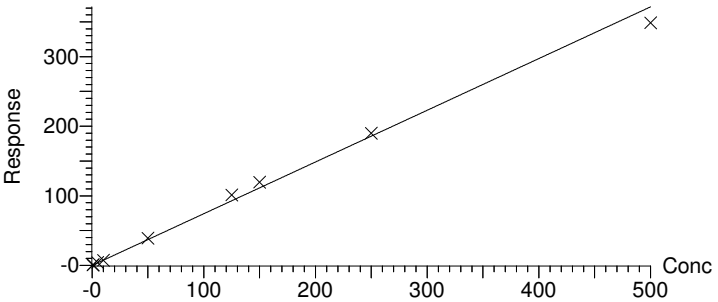
all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
Printed: Monday, November 18, 2019 13:47:36 Eastern Standard Time

**Compound name: NMeFOSA**

| | Name | ID | Acq.Date | Acq.Time | RT | IS Area | Area | Conc (ng... | %Rec | RRF | 1º S/N | 2º S/N | (b/a) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | I13434 | IA2-537STD0.5 | 18-Nov-19 | 10:24:43 | 11.628 | 10818.715 | 384.162 | 0.478 | 95.6 | 0.710 | 125 | 68 | 0.95 |
| 2 | I13435 | IA2-537STD1.0 | 18-Nov-19 | 10:53:49 | 11.624 | 10918.389 | 820.677 | 1.011 | 101.1 | 0.752 | 195 | 9328 | 1.04 |
| 3 | I13436 | IA2-537STD5.0 | 18-Nov-19 | 11:10:20 | 11.620 | 10805.029 | 4555.991 | 5.673 | 113.5 | 0.843 | 1070 | 53071 | 1.03 |
| 4 | I13437 | IA2-537STD10.0 | 18-Nov-19 | 11:26:51 | 11.620 | 11452.094 | 8668.560 | 10.184 | 101.8 | 0.757 | 527 | 1214 | 1.04 |
| 5 | I13438 | IA2-537STD50.0 | 18-Nov-19 | 11:43:24 | 11.624 | 11659.144 | 45476.523 | 52.480 | 105.0 | 0.780 | 2752 | 2221 | 1.05 |
| 6 | I13439 | IA2-537STD125 | 18-Nov-19 | 12:00:10 | 11.620 | 10937.316 | 110688.570 | 136.165 | 108.9 | 0.810 | 4013 | 2943 | 1.04 |
| 7 | I13440 | IA2-537STD150 | 18-Nov-19 | 12:16:43 | 11.624 | 10578.706 | 126611.172 | 161.032 | 107.4 | 0.798 | 3996 | 2301 | 0.99 |
| 8 | I13441 | IA2-537STD250 | 18-Nov-19 | 12:33:16 | 11.624 | 10789.468 | 204880.891 | 255.491 | 102.2 | 0.760 | 6232 | 5461 | 1.02 |
| 9 | I13442 | IA2-537STD500 | 18-Nov-19 | 12:49:53 | 11.628 | 10956.525 | 381907.094 | 468.985 | 93.8 | 0.697 | 6666 | 9403 | 0.99 |

Compound name: NMeFOSA
Coefficient of Determination: R^2 = 0.996194
Calibration curve: 0.743235 * x
Response type: Internal Std ( Ref 69 ), Area * ( IS Conc. / IS Area )
Curve type: Linear, Origin: Force, Weighting: 1/x, Axis trans: None





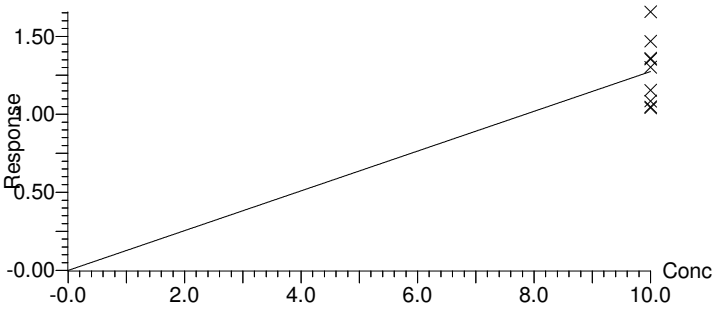
all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
Printed: Monday, November 18, 2019 13:47:36 Eastern Standard Time

**Compound name: d3-NMeFOSA**

| | Name | ID | Acq.Date | Acq.Time | RT | IS Area | Area | Conc (ng... | %Rec | RRF | 1º S/N | 2º S/N | (b/a) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | I13434 | IA2-537STD0.5 | 18-Nov-19 | 10:24:43 | 11.616 | 103829.906 | 10818.715 | 8.176 | 81.8 | 0.104 | 981 | | 1.03 |
| 2 | I13435 | IA2-537STD1.0 | 18-Nov-19 | 10:53:49 | 11.620 | 104230.492 | 10918.389 | 8.220 | 82.2 | 0.105 | 418 | | 0.99 |
| 3 | I13436 | IA2-537STD5.0 | 18-Nov-19 | 11:10:20 | 11.612 | 99527.453 | 10805.029 | 8.519 | 85.2 | 0.109 | 789 | | 1.08 |
| 4 | I13437 | IA2-537STD10.0 | 18-Nov-19 | 11:26:51 | 11.616 | 99233.398 | 11452.094 | 9.056 | 90.6 | 0.115 | 1426 | | 0.98 |
| 5 | I13438 | IA2-537STD50.0 | 18-Nov-19 | 11:43:24 | 11.620 | 89579.898 | 11659.144 | 10.213 | 102.1 | 0.130 | 1008 | | 0.96 |
| 6 | I13439 | IA2-537STD125 | 18-Nov-19 | 12:00:10 | 11.616 | 80832.117 | 10937.316 | 10.618 | 106.2 | 0.135 | 479 | | 0.98 |
| 7 | I13440 | IA2-537STD150 | 18-Nov-19 | 12:16:43 | 11.616 | 77816.188 | 10578.706 | 10.668 | 106.7 | 0.136 | 2667 | | 0.98 |
| 8 | I13441 | IA2-537STD250 | 18-Nov-19 | 12:33:16 | 11.616 | 73446.680 | 10789.468 | 11.528 | 115.3 | 0.147 | 813 | | 1.05 |
| 9 | I13442 | IA2-537STD500 | 18-Nov-19 | 12:49:53 | 11.620 | 66126.813 | 10956.525 | 13.002 | 130.0 | 0.166 | 989 | | 1.02 |

Compound name: d3-NMeFOSA
Response Factor: 0.127435
RRF SD: 0.0210344, % Relative SD: 16.5059
Response type: Internal Std ( Ref 35 ), Area * ( IS Conc. / IS Area )
Curve type: RF





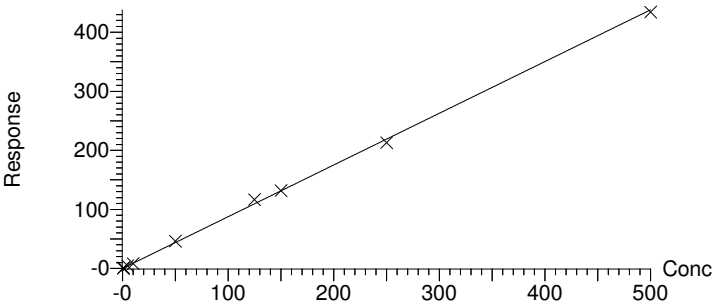
all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
Printed: Monday, November 18, 2019 13:47:36 Eastern Standard Time

**Compound name: NEtFOSA**

| | Name | ID | Acq.Date | Acq.Time | RT | IS Area | Area | Conc (ng... | %Rec | RRF | 1º S/N | 2º S/N | (b/a) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | I13434 | IA2-537STD0.5 | 18-Nov-19 | 10:24:43 | 11.916 | 11992.311 | 291.889 | 0.278 | 55.6 | 0.487 | 35 | 8 | 1.23 |
| 2 | I13435 | IA2-537STD1.0 | 18-Nov-19 | 10:53:49 | 11.924 | 10513.078 | 950.658 | 1.032 | 103.2 | 0.904 | 16167 | 2464 | 1.00 |
| 3 | I13436 | IA2-537STD5.0 | 18-Nov-19 | 11:10:20 | 11.920 | 10840.465 | 4897.970 | 5.157 | 103.1 | 0.904 | 826 | 162 | 1.02 |
| 4 | I13437 | IA2-537STD10.0 | 18-Nov-19 | 11:26:51 | 11.920 | 11690.228 | 9820.464 | 9.587 | 95.9 | 0.840 | 1432 | 25080 | 1.04 |
| 5 | I13438 | IA2-537STD50.0 | 18-Nov-19 | 11:43:24 | 11.924 | 10655.923 | 49116.805 | 52.606 | 105.2 | 0.922 | 2351 | 562 | 1.03 |
| 6 | I13439 | IA2-537STD125 | 18-Nov-19 | 12:00:10 | 11.920 | 10271.625 | 119958.141 | 133.286 | 106.6 | 0.934 | 4025 | 1054 | 1.01 |
| 7 | I13440 | IA2-537STD150 | 18-Nov-19 | 12:16:43 | 11.920 | 10793.446 | 142438.000 | 150.612 | 100.4 | 0.880 | 5314 | 4771 | 1.03 |
| 8 | I13441 | IA2-537STD250 | 18-Nov-19 | 12:33:16 | 11.920 | 10700.851 | 228133.797 | 243.312 | 97.3 | 0.853 | 6235 | 1669 | 1.05 |
| 9 | I13442 | IA2-537STD500 | 18-Nov-19 | 12:49:53 | 11.924 | 9807.835 | 425931.281 | 495.631 | 99.1 | 0.869 | 10705 | 3724 | 1.00 |

Compound name: NEtFOSA
Coefficient of Determination: R^2 = 0.999041
Calibration curve: 0.876209 * x
Response type: Internal Std ( Ref 71 ), Area * ( IS Conc. / IS Area )
Curve type: Linear, Origin: Force, Weighting: 1/x, Axis trans: None





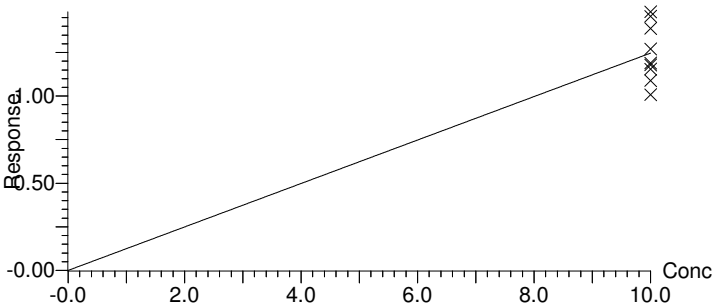
all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
Printed: Monday, November 18, 2019 13:47:36 Eastern Standard Time

**Compound name: d5-NEtFOSA**

| | Name | ID | Acq.Date | Acq.Time | RT | IS Area | Area | Conc (ng... | %Rec | RRF | 1º S/N | 2º S/N | (b/a) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | I13434 | IA2-537STD0.5 | 18-Nov-19 | 10:24:43 | 11.912 | 103829.906 | 11992.311 | 9.266 | 92.7 | 0.115 | 896 | | 1.04 |
| 2 | I13435 | IA2-537STD1.0 | 18-Nov-19 | 10:53:49 | 11.916 | 104230.492 | 10513.078 | 8.092 | 80.9 | 0.101 | 343 | | 1.01 |
| 3 | I13436 | IA2-537STD5.0 | 18-Nov-19 | 11:10:20 | 11.912 | 99527.453 | 10840.465 | 8.738 | 87.4 | 0.109 | 567 | | 0.95 |
| 4 | I13437 | IA2-537STD10.0 | 18-Nov-19 | 11:26:51 | 11.912 | 99233.398 | 11690.228 | 9.451 | 94.5 | 0.118 | 1110 | | 1.01 |
| 5 | I13438 | IA2-537STD50.0 | 18-Nov-19 | 11:43:24 | 11.912 | 89579.898 | 10655.923 | 9.543 | 95.4 | 0.119 | 1698 | | 1.02 |
| 6 | I13439 | IA2-537STD125 | 18-Nov-19 | 12:00:10 | 11.908 | 80832.117 | 10271.625 | 10.195 | 101.9 | 0.127 | 780 | | 1.05 |
| 7 | I13440 | IA2-537STD150 | 18-Nov-19 | 12:16:43 | 11.908 | 77816.188 | 10793.446 | 11.128 | 111.3 | 0.139 | 283 | | 1.07 |
| 8 | I13441 | IA2-537STD250 | 18-Nov-19 | 12:33:16 | 11.912 | 73446.680 | 10700.851 | 11.689 | 116.9 | 0.146 | 396 | | 0.97 |
| 9 | I13442 | IA2-537STD500 | 18-Nov-19 | 12:49:53 | 11.912 | 66126.813 | 9807.835 | 11.899 | 119.0 | 0.148 | 2196 | | 1.03 |

Compound name: d5-NEtFOSA
Response Factor: 0.124648
RRF SD: 0.0165181, % Relative SD: 13.2517
Response type: Internal Std ( Ref 35 ), Area * ( IS Conc. / IS Area )
Curve type: RF





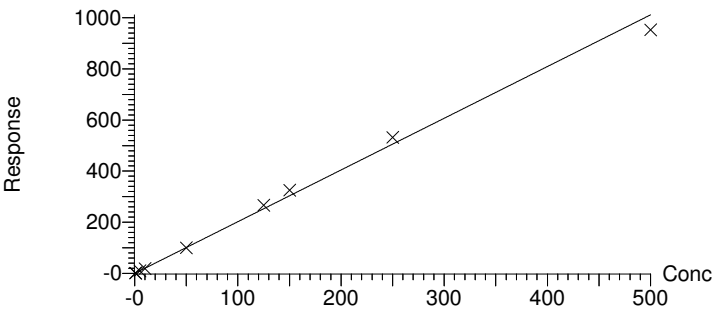
all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
Printed: Monday, November 18, 2019 13:47:36 Eastern Standard Time

**Compound name: NMeFOSE**

| | Name | ID | Acq.Date | Acq.Time | RT | IS Area | Area | Conc (ng... | %Rec | RRF | 1º S/N | 2º S/N | (b/a) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | I13434 | IA2-537STD0.5 | 18-Nov-19 | 10:24:43 | 11.627 | 6181.065 | 439.839 | 0.352 | 70.4 | 1.423 | 42 | | 1.03 |
| 2 | I13435 | IA2-537STD1.0 | 18-Nov-19 | 10:53:49 | 11.631 | 5601.364 | 847.873 | 0.748 | 74.8 | 1.514 | 70 | | 0.99 |
| 3 | I13436 | IA2-537STD5.0 | 18-Nov-19 | 11:10:20 | 11.623 | 5583.996 | 5940.177 | 5.259 | 105.2 | 2.128 | 542 | | 1.02 |
| 4 | I13437 | IA2-537STD10.0 | 18-Nov-19 | 11:26:51 | 11.623 | 5732.216 | 10782.405 | 9.298 | 93.0 | 1.881 | 746 | | 1.03 |
| 5 | I13438 | IA2-537STD50.0 | 18-Nov-19 | 11:43:24 | 11.627 | 5433.837 | 54087.008 | 49.204 | 98.4 | 1.991 | 2768 | | 1.01 |
| 6 | I13439 | IA2-537STD125 | 18-Nov-19 | 12:00:10 | 11.623 | 4843.435 | 128959.344 | 131.619 | 105.3 | 2.130 | 2932 | | 1.02 |
| 7 | I13440 | IA2-537STD150 | 18-Nov-19 | 12:16:43 | 11.623 | 4724.134 | 153741.500 | 160.875 | 107.2 | 2.170 | 6049 | | 1.05 |
| 8 | I13441 | IA2-537STD250 | 18-Nov-19 | 12:33:16 | 11.627 | 4616.492 | 245769.922 | 263.169 | 105.3 | 2.129 | 9707 | | 1.00 |
| 9 | I13442 | IA2-537STD500 | 18-Nov-19 | 12:49:53 | 11.631 | 4357.240 | 415137.313 | 470.976 | 94.2 | 1.906 | 5246 | | 0.97 |

Compound name: NMeFOSE
Coefficient of Determination: R^2 = 0.996553
Calibration curve: 2.02293 * x
Response type: Internal Std ( Ref 73 ), Area * ( IS Conc. / IS Area )
Curve type: Linear, Origin: Force, Weighting: 1/x, Axis trans: None





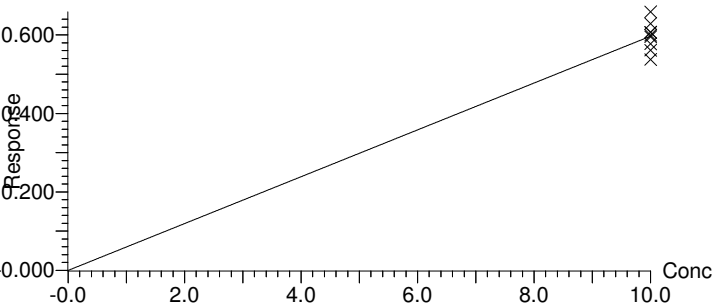
all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
Printed: Monday, November 18, 2019 13:47:36 Eastern Standard Time

**Compound name: d7-NMeFOSE**

| | Name | ID | Acq.Date | Acq.Time | RT | IS Area | Area | Conc (ng... | %Rec | RRF | 1º S/N | 2º S/N | (b/a) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | I13434 | IA2-537STD0.5 | 18-Nov-19 | 10:24:43 | 11.610 | 103829.906 | 6181.065 | 9.974 | 99.7 | 0.060 | 246 | | 1.06 |
| 2 | I13435 | IA2-537STD1.0 | 18-Nov-19 | 10:53:49 | 11.610 | 104230.492 | 5601.364 | 9.004 | 90.0 | 0.054 | 196 | | 1.07 |
| 3 | I13436 | IA2-537STD5.0 | 18-Nov-19 | 11:10:20 | 11.606 | 99527.453 | 5583.996 | 9.400 | 94.0 | 0.056 | 229 | | 1.06 |
| 4 | I13437 | IA2-537STD10.0 | 18-Nov-19 | 11:26:51 | 11.606 | 99233.398 | 5732.216 | 9.678 | 96.8 | 0.058 | 271 | | 1.04 |
| 5 | I13438 | IA2-537STD50.0 | 18-Nov-19 | 11:43:24 | 11.610 | 89579.898 | 5433.837 | 10.163 | 101.6 | 0.061 | 271 | | 1.06 |
| 6 | I13439 | IA2-537STD125 | 18-Nov-19 | 12:00:10 | 11.606 | 80832.117 | 4843.435 | 10.039 | 100.4 | 0.060 | 248 | | 1.03 |
| 7 | I13440 | IA2-537STD150 | 18-Nov-19 | 12:16:43 | 11.606 | 77816.188 | 4724.134 | 10.171 | 101.7 | 0.061 | 201 | | 1.03 |
| 8 | I13441 | IA2-537STD250 | 18-Nov-19 | 12:33:16 | 11.610 | 73446.680 | 4616.492 | 10.531 | 105.3 | 0.063 | 294 | | 1.03 |
| 9 | I13442 | IA2-537STD500 | 18-Nov-19 | 12:49:53 | 11.610 | 66126.813 | 4357.240 | 11.040 | 110.4 | 0.066 | 262 | | 1.07 |

Compound name: d7-NMeFOSE
Response Factor: 0.0596862
RRF SD: 0.00357941, % Relative SD: 5.99705
Response type: Internal Std ( Ref 35 ), Area * ( IS Conc. / IS Area )
Curve type: RF





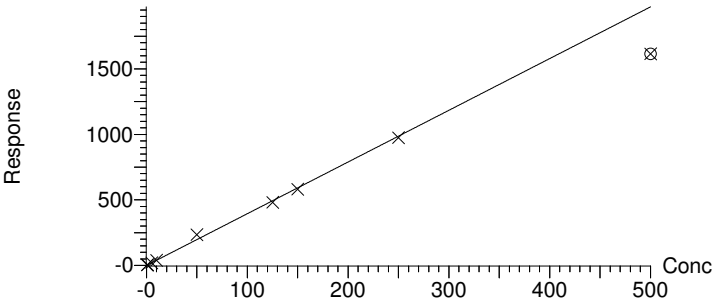
all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
Printed: Monday, November 18, 2019 13:47:36 Eastern Standard Time

**Compound name: NEtFOSE**

| | Name | ID | Acq.Date | Acq.Time | RT | IS Area | Area | Conc (ng... | %Rec | RRF | 1º S/N | 2º S/N | (b/a) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | I13434 | IA2-537STD0.5 | 18-Nov-19 | 10:24:43 | 11.913 | 3594.417 | 567.950 | 0.400 | 80.1 | 3.160 | 9582 | | 0.99 |
| 2 | I13435 | IA2-537STD1.0 | 18-Nov-19 | 10:53:49 | 11.913 | 3264.972 | 1238.596 | 0.961 | 96.1 | 3.794 | 19982 | | 1.04 |
| 3 | I13436 | IA2-537STD5.0 | 18-Nov-19 | 11:10:20 | 11.909 | 3288.860 | 6476.007 | 4.988 | 99.8 | 3.938 | 750 | | 1.01 |
| 4 | I13437 | IA2-537STD10.0 | 18-Nov-19 | 11:26:51 | 11.909 | 3120.817 | 12372.700 | 10.043 | 100.4 | 3.965 | 783 | | 1.04 |
| 5 | I13438 | IA2-537STD50.0 | 18-Nov-19 | 11:43:24 | 11.913 | 2782.245 | 65148.242 | 59.318 | 118.6 | 4.683 | 2943 | | 1.00 |
| 6 | I13439 | IA2-537STD125 | 18-Nov-19 | 12:00:10 | 11.909 | 3094.809 | 148854.578 | 121.844 | 97.5 | 3.848 | 4737 | | 0.99 |
| 7 | I13440 | IA2-537STD150 | 18-Nov-19 | 12:16:43 | 11.909 | 3077.430 | 178591.047 | 147.011 | 98.0 | 3.869 | 6366 | | 1.00 |
| 8 | I13441 | IA2-537STD250 | 18-Nov-19 | 12:33:16 | 11.909 | 2927.529 | 285368.000 | 246.934 | 98.8 | 3.899 | 5042 | | 1.03 |
| 9 | I13442 | IA2-537STD500 | 18-Nov-19 | 12:49:53 | 11.909 | 3114.293 | 502556.594 | 408.793 | 81.8 | 3.227 | 14003 | | 1.06 |

Compound name: NEtFOSE
Coefficient of Determination: R^2 = 0.996634
Calibration curve: 3.9475 * x
Response type: Internal Std ( Ref 75 ), Area * ( IS Conc. / IS Area )
Curve type: Linear, Origin: Force, Weighting: 1/x, Axis trans: None





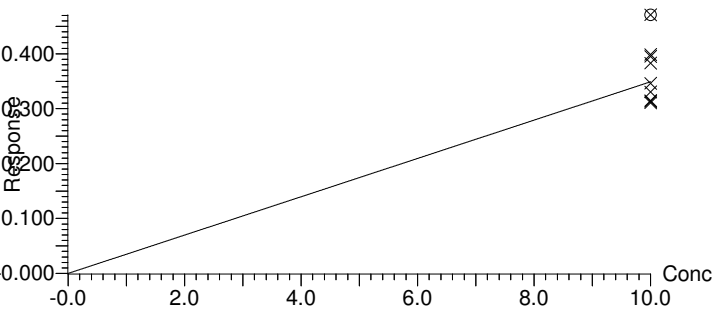
all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
Printed: Monday, November 18, 2019 13:47:36 Eastern Standard Time

**Compound name: d9-NEtFOSE**

| | Name | ID | Acq.Date | Acq.Time | RT | IS Area | Area | Conc (ng... | %Rec | RRF | 1º S/N | 2º S/N | (b/a) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | I13434 | IA2-537STD0.5 | 18-Nov-19 | 10:24:43 | 11.893 | 103829.906 | 3594.417 | 9.920 | 99.2 | 0.035 | 301 | | 1.04 |
| 2 | I13435 | IA2-537STD1.0 | 18-Nov-19 | 10:53:49 | 11.897 | 104230.492 | 3264.972 | 8.976 | 89.8 | 0.031 | 178 | | 0.98 |
| 3 | I13436 | IA2-537STD5.0 | 18-Nov-19 | 11:10:20 | 11.889 | 99527.453 | 3288.860 | 9.469 | 94.7 | 0.033 | 211 | | 1.07 |
| 4 | I13437 | IA2-537STD10.0 | 18-Nov-19 | 11:26:51 | 11.893 | 99233.398 | 3120.817 | 9.012 | 90.1 | 0.031 | 173 | | 0.98 |
| 5 | I13438 | IA2-537STD50.0 | 18-Nov-19 | 11:43:24 | 11.893 | 89579.898 | 2782.245 | 8.900 | 89.0 | 0.031 | 135 | | 1.03 |
| 6 | I13439 | IA2-537STD125 | 18-Nov-19 | 12:00:10 | 11.889 | 80832.117 | 3094.809 | 10.971 | 109.7 | 0.038 | 197 | | 1.03 |
| 7 | I13440 | IA2-537STD150 | 18-Nov-19 | 12:16:43 | 11.893 | 77816.188 | 3077.430 | 11.332 | 113.3 | 0.040 | 198 | | 0.95 |
| 8 | I13441 | IA2-537STD250 | 18-Nov-19 | 12:33:16 | 11.889 | 73446.680 | 2927.529 | 11.421 | 114.2 | 0.040 | 137 | | 1.02 |
| 9 | I13442 | IA2-537STD500 | 18-Nov-19 | 12:49:53 | 11.893 | 66126.813 | 3114.293 | 13.495 | 135.0 | 0.047 | 162 | | 1.01 |

Compound name: d9-NEtFOSE
Response Factor: 0.0348987
RRF SD: 0.00379155, % Relative SD: 10.8645
Response type: Internal Std ( Ref 35 ), Area * ( IS Conc. / IS Area )
Curve type: RF





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
Printed: Monday, November 18, 2019 13:42:48 Eastern Standard Time

**Method: C:\MassLynx\Data\2019\191118_537ISO.PRO\MethDB\537ISO_Q_191118_DOD .mdb 18 Nov 2019 13:05:34**
**Calibration: C:\MassLynx\Data\2019\191118_537ISO.PRO\CurveDB\191118_ISO_ICAL.cdb 18 Nov 2019 13:41:42**

**ID: IA2-537STD0.5**
**Name: I13434**
**Date: 18-Nov-2019**
**Time: 10:24:43**
**Description: WG1310082,,537_190904_1**
**Instrument: XEVO-TQSmicro#QEB0050**
**User: LCMS02:JW**
**Inlet Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\LCMS_537_ISO_B**
**Tune Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\181009_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

| | Name | CAS | RT | Trace | Area | M Flag | Conc (ng/mL) | Ion Ratio | Ratio Flag | %Rec |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | PFBA | 375-22-4 | 2.20 | 212.926 > 169.111 | 2022 | | 0.462 | | na | 92.4 |
| 2 | M3PFBA | INT STD | 2.20 | 215.926 > 172.122 | 48557 | | 10.479 | | na | 104.8 |
| 3 | MPFBA | INT STD | 2.20 | 216.926 > 172.137 | 52425 | | 9.921 | | na | 99.2 |
| 4 | PFPeA | 2706-90-3 | 5.10 | 262.926 > 219.002 | 3492 | | 0.475 | | na | 95.0 |
| 5 | M5PFPEA | INT STD | 5.10 | 267.989 > 223.081 | 76105 | | 10.154 | | na | 101.5 |
| 6 | PFBS | 375-73-5 | 5.75 | 298.926 > 79.923 | 655 | | 0.430 | 2.16 | NO | 97.1 |
| 7 | M3PFBS | INT STD | 5.75 | 301.989 > 80.254 | 10366 | | 9.717 | | na | 97.2 |
| 8 | 4:2FTS | 757124-72-4 | 6.92 | 326.926 > 306.957 | 265 | | 0.475 | 1.86 | NO | 101.7 |
| 9 | M2-4:2FTS | INT STD | 6.92 | 329.117 > 309.079 | 5032 | | 7.265 | | na | 72.7 |
| 10 | PFHxA | 307-24-4 | 7.00 | 312.989 > 269.028 | 4783 | | 0.602 | 21.03 | NO | 120.4 |
| 11 | M5PFHxA | INT STD | 7.00 | 317.989 > 273.045 | 86318 | | 9.586 | | na | 95.9 |
| 12 | PFPeS | 2706-91-4 | 7.31 | 348.926 > 80.251 | 447 | | 0.423 | 1.69 | NO | 90.1 |
| 13 | PFHpA | 375-85-9 | 8.26 | 362.926 > 319.014 | 5195 | | 0.489 | 6.15 | NO | 97.8 |
| 14 | M4PFHpA | INT STD | 8.26 | 366.926 > 321.979 | 117836 | | 9.824 | | na | 98.2 |
| 15 | br-PFHxS | 355-46-4 | 8.18 | 398.926 > 80.295 | 11 | M5 | 0.015 | | YES | 17.8 |
| 16 | L-PFHxS | 355-46-4 | 8.42 | 398.926 > 80.295 | 259 | | 0.328 | 1.26 | NO | 88.7 |
| 17 | PFHxS | 355-46-4 | | 398.926 > 80.295 | 270 | | 0.343 | | na | |
| 18 | M3PFHxS | INT STD | 8.41 | 401.926 > 80.317 | 6305 | | 10.241 | | na | 102.4 |
| 19 | br-PFOA | 335-67-1 | | 412.989 > 368.9 | | | ND | | YES | |
| 20 | L-PFOA | 335-67-1 | 9.19 | 412.989 > 368.9 | 5268 | | 0.500 | 12.88 | NO | 100.0 |
| 21 | PFOA | 335-67-1 | | 412.989 > 368.9 | 5268 | | 0.500 | | na | |
| 22 | M8PFOA | INT STD | 9.20 | 420.989 > 375.979 | 114743 | | 9.968 | | na | 99.7 |
| 23 | M2PFOA | INT STD | 9.19 | 415.032 > 369.968 | 117637 | | 11.128 | | na | 111.3 |
| 24 | 6:2FTS | 27619-97-2 | 9.15 | 426.989 > 406.921 | 137 | | 0.321 | | YES | 67.6 |
| 25 | M2-6:2FTS | INT STD | 9.15 | 428.989 > 408.917 | 5244 | | 7.748 | | na | 77.5 |
| 26 | PFHpS | 375-92-8 | 9.29 | 448.926 > 80.257 | 144 | | 0.279 | 0.56 | NO | 58.7 |
| 27 | PFNA | 375-95-1 | 9.95 | 462.989 > 418.931 | 4411 | | 0.471 | 5.33 | NO | 94.1 |
| 28 | M9PFNA | INT STD | 9.95 | 472.053 > 426.947 | 114402 | | 10.101 | | na | 101.0 |
| 29 | br-PFOS | 1763-23-1 | 9.72 | 498.989 > 80.294 | 63 | M5 | 0.062 | | YES | 61.5 |
| 30 | L-PFOS | 1763-23-1 | 10.00 | 498.989 > 80.294 | 210 | | 0.272 | 0.98 | NO | 74.6 |
| 31 | PFOS | 1763-23-1 | | 498.989 > 80.294 | 273 | | 0.334 | | na | |
| 32 | M4PFOS | INT STD | 10.00 | 503.032 > 80.306 | 7621 | | 10.912 | | na | 109.1 |
| 33 | M8PFOS | INT STD | 9.99 | 507.053 > 80.294 | 7863 | | 10.056 | | na | 100.6 |
| 34 | PFDA | 335-76-2 | 10.57 | 513.053 > 468.906 | 4686 | | 0.518 | 7.93 | NO | 103.6 |
| 35 | M2PFDA | INT STD | 10.58 | 515.053 > 469.934 | 103830 | | 11.760 | | na | 117.6 |
| 36 | M6PFDA | INT STD | 10.57 | 519.053 > 473.931 | 105487 | | 9.830 | | na | 98.3 |
| 37 | 8:2FTS | 39108-34-4 | 10.56 | 526.926 > 506.818 | 207 | | 0.538 | | na | 112.0 |
| 38 | M2-8:2FTS | INT STD | 10.57 | 529.053 > 508.945 | 3535 | | 8.903 | | na | 89.0 |
| 39 | PFNS | 68259-12-1 | 10.60 | 548.989 > 80.249 | 306 | | 0.419 | 0.90 | NO | 87.2 |


all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
Printed: Monday, November 18, 2019 13:42:48 Eastern Standard Time

**ID: IA2-537STD0.5**
**Name: I13434**
**Date: 18-Nov-2019**
**Time: 10:24:43**
**Description: WG1310082,,537_190904_1**
**Instrument: XEVO-TQSmicro#QEB0050**
**User: LCMS02:JW**
**Inlet Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\LCMS_537_ISO_B**
**Tune Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\181009_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

| | Name | CAS | RT | Trace | Area | M Flag | Conc (ng/mL) | Ion Ratio | Ratio Flag | %Rec |
|---|---|---|---|---|---|---|---|---|---|---|
| 40 | d3-NMeFOSAA | INT STD | 10.96 | 573.096 > 418.987 | 9576 | | 7.836 | | na | 78.4 |
| 41 | br-NMeFOSAA | 2355-31-9 | | 570.053 > 418.917 | | | ND | | YES | |
| 42 | L-NMeFOSAA | 2355-31-9 | 10.96 | 570.053 > 418.917 | 325 | | 0.364 | 2.10 | NO | 72.7 |
| 43 | NMeFOSAA | 2355-31-9 | | 570.053 > 418.917 | 325 | | 0.364 | | na | |
| 44 | PFUnA | 2058-94-8 | 11.12 | 562.989 > 518.903 | 4612 | | 0.473 | 10.10 | NO | 94.6 |
| 45 | M7-PFUDA | INT STD | 11.12 | 570.053 > 524.923 | 101992 | | 10.713 | | na | 107.1 |
| 46 | PFDS | 335-77-3 | 11.12 | 598.926 > 80.314 | 243 | | 0.464 | 1.04 | NO | 96.2 |
| 47 | FOSA | 754-91-6 | 11.01 | 497.989 > 78.245 | 942 | | 0.386 | | YES | 77.3 |
| 48 | M8FOSA | INT STD | 11.01 | 506.053 > 78.286 | 22949 | | 9.045 | | na | 90.5 |
| 49 | d5-NEtFOSAA | INT STD | 11.25 | 589.117 > 418.929 | 8483 | | 7.858 | | na | 78.6 |
| 50 | br-NEtFOSAA | 2991-50-6 | | 583.989 > 418.927 | | | ND | | YES | |
| 51 | L-NEtFOSAA | 2991-50-6 | 11.26 | 583.989 > 418.927 | 426 | | 0.532 | 3.84 | NO | 106.4 |
| 52 | NEtFOSAA | 2991-50-6 | | 583.989 > 418.927 | 426 | | 0.532 | | na | |
| 53 | PFDoA | 307-55-1 | 11.59 | 612.989 > 568.967 | 4842 | | 0.553 | 17.72 | NO | 110.6 |
| 54 | MPFDOA | INT STD | 11.59 | 614.989 > 569.92 | 103377 | | 9.679 | | na | 96.8 |
| 55 | PFTrDA | 72629-94-8 | 12.00 | 663.053 > 618.969 | 3858 | | 0.548 | 9.96 | NO | 109.5 |
| 56 | PFTA | 376-06-7 | 12.36 | 713.053 > 668.976 | 3679 | | 0.545 | 13.27 | NO | 109.0 |
| 57 | M2PFTEDA | INT STD | 12.36 | 715.053 > 669.945 | 84304 | | 9.938 | | na | 99.4 |
| 58 | M3HFPO-DA | INT STD | 7.43 | 331.989 > 286.995 | 3252 | | 64.481 | | na | 32.2 |
| 59 | HFPO-DA | 13252-13-6 | 7.43 | 284.819 > 169.094 | 239 | | 8.842 | 5.42 | NO | 88.4 |
| 60 | ADONA | 958445-44-8 | 8.44 | 376.926 > 251.005 | 6287 | | 0.417 | | na | 88.1 |
| 61 | PFHxDA | | 12.79 | 813.053 > 769.005 | 3367 | | 0.503 | | na | 100.6 |
| 62 | PFODA | | 12.99 | 912.989 > 869.032 | 1986 | | 0.405 | | na | 81.0 |
| 63 | M2PFHxDA | | 12.78 | 815.372 > 770.158 | 18213 | | 10.086 | | na | 100.9 |
| 64 | PFDoS | | 12.00 | 698.649 > 79.853 | 279 | | 0.523 | 3.32 | NO | 104.7 |
| 65 | 10:2FTS | | 11.61 | 626.862 > 606.896 | 162 | M2 | 0.438 | | na | 90.9 |
| 66 | 9CL-PF3ONS | | 10.34 | 530.862 > 350.843 | 2189 | | 0.424 | | na | 90.9 |
| 67 | 11CL-PFOUdS | | 11.39 | 630.862 > 450.854 | 1756 | | 0.403 | | na | 85.6 |
| 68 | NMeFOSA | | 11.63 | 511.804 > 168.906 | 384 | | 0.478 | 1.58 | NO | 95.6 |
| 69 | d3-NMeFOSA | | 11.62 | 514.84 > 168.917 | 10819 | | 8.176 | | na | 81.8 |
| 70 | NEtFOSA | | 11.92 | 525.84 > 168.92 | 292 | | 0.278 | 5.11 | NO | 55.6 |
| 71 | d5-NEtFOSA | | 11.91 | 530.904 > 168.919 | 11992 | | 9.266 | | na | 92.7 |
| 72 | NMeFOSE | | 11.63 | 615.862 > 58.9 | 440 | | 0.352 | | na | 70.4 |
| 73 | d7-NMeFOSE | | 11.61 | 622.84 > 58.964 | 6181 | | 9.974 | | na | 99.7 |
| 74 | NEtFOSE | | 11.91 | 629.862 > 58.899 | 568 | | 0.400 | | na | 80.1 |
| 75 | d9-NEtFOSE | | 11.89 | 638.734 > 58.964 | 3594 | | 9.920 | | na | 99.2 |

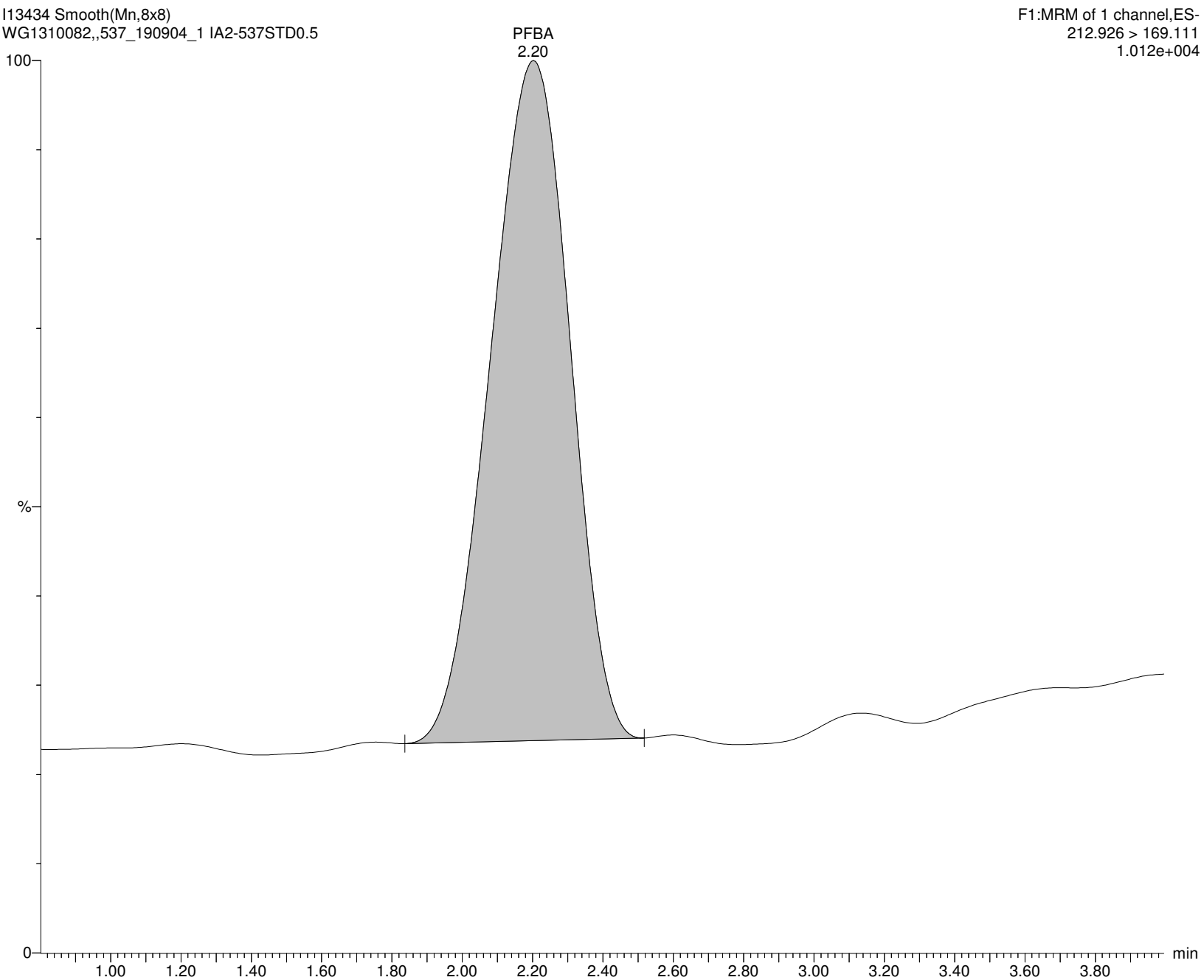

all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
Printed: Monday, November 18, 2019 13:42:48 Eastern Standard Time

**Method: C:\MassLynx\Data\2019\191118_537ISO.PRO\MethDB\537ISO_Q_191118_DOD .mdb 18 Nov 2019 13:05:34**
**Calibration: C:\MassLynx\Data\2019\191118_537ISO.PRO\CurveDB\191118_ISO_ICAL.cdb 18 Nov 2019 13:41:42**

**Name: I13434**
**ID: IA2-537STD0.5**
**Date: 18-Nov-2019**
**Time: 10:24:43**
**Description: WG1310082,,537_190904_1**
**User: LCMS02:JW**
**Vial: 1:A,2**
**Instrument: XEVO-TQSmicro#QEB0050**
**Inlet Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\LCMS_537_ISO_B**
**Tune Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\181009_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**PFBA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
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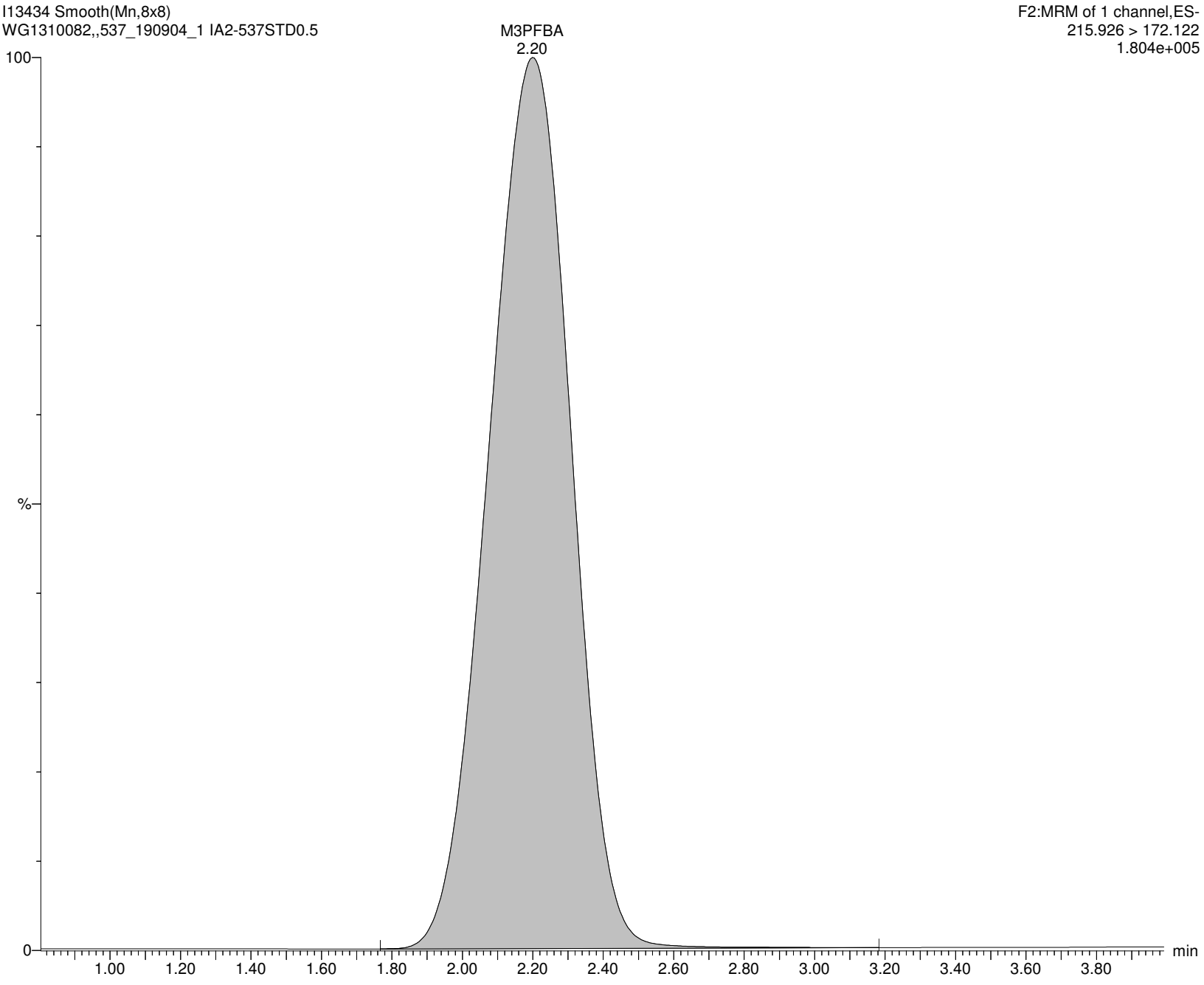
**ID: IA2-537STD0.5**
**Date: 18-Nov-2019**
**Time: 10:24:43**
**Description: WG1310082,,537_190904_1**
**User: LCMS02:JW**
**Vial: 1:A,2**
**Instrument: XEVO-TQSmicro#QEB0050**
**Inlet Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\LCMS_537_ISO_B**
**Tune Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\181009_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**M3PFBA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
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Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
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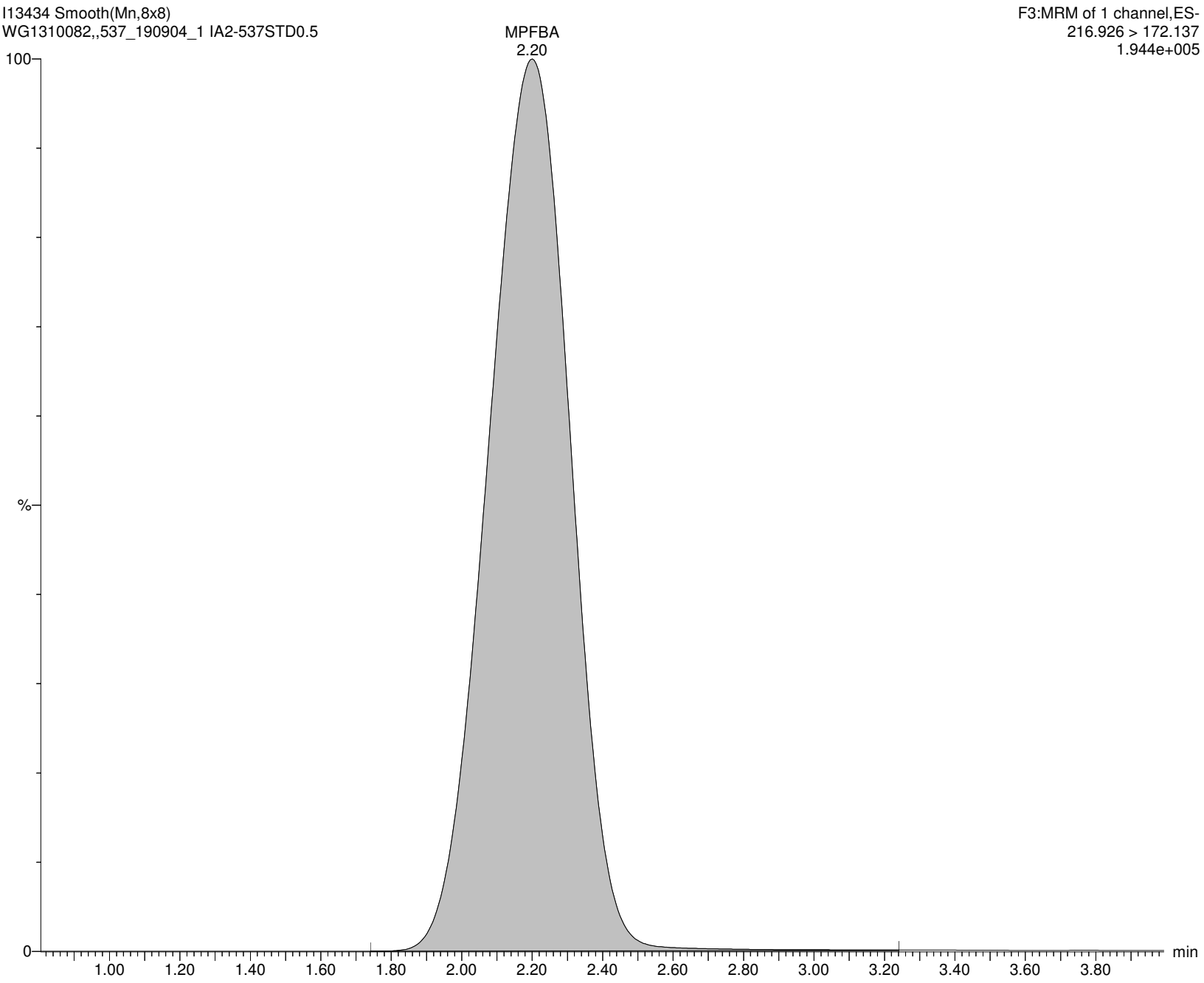
**Name: I13434**
**ID: IA2-537STD0.5**
**Date: 18-Nov-2019**
**Time: 10:24:43**
**Description: WG1310082,,537_190904_1**
**User: LCMS02:JW**
**Vial: 1:A,2**
**Instrument: XEVO-TQSmicro#QEB0050**
**Inlet Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\LCMS_537_ISO_B**
**Tune Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\181009_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**MPFBA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
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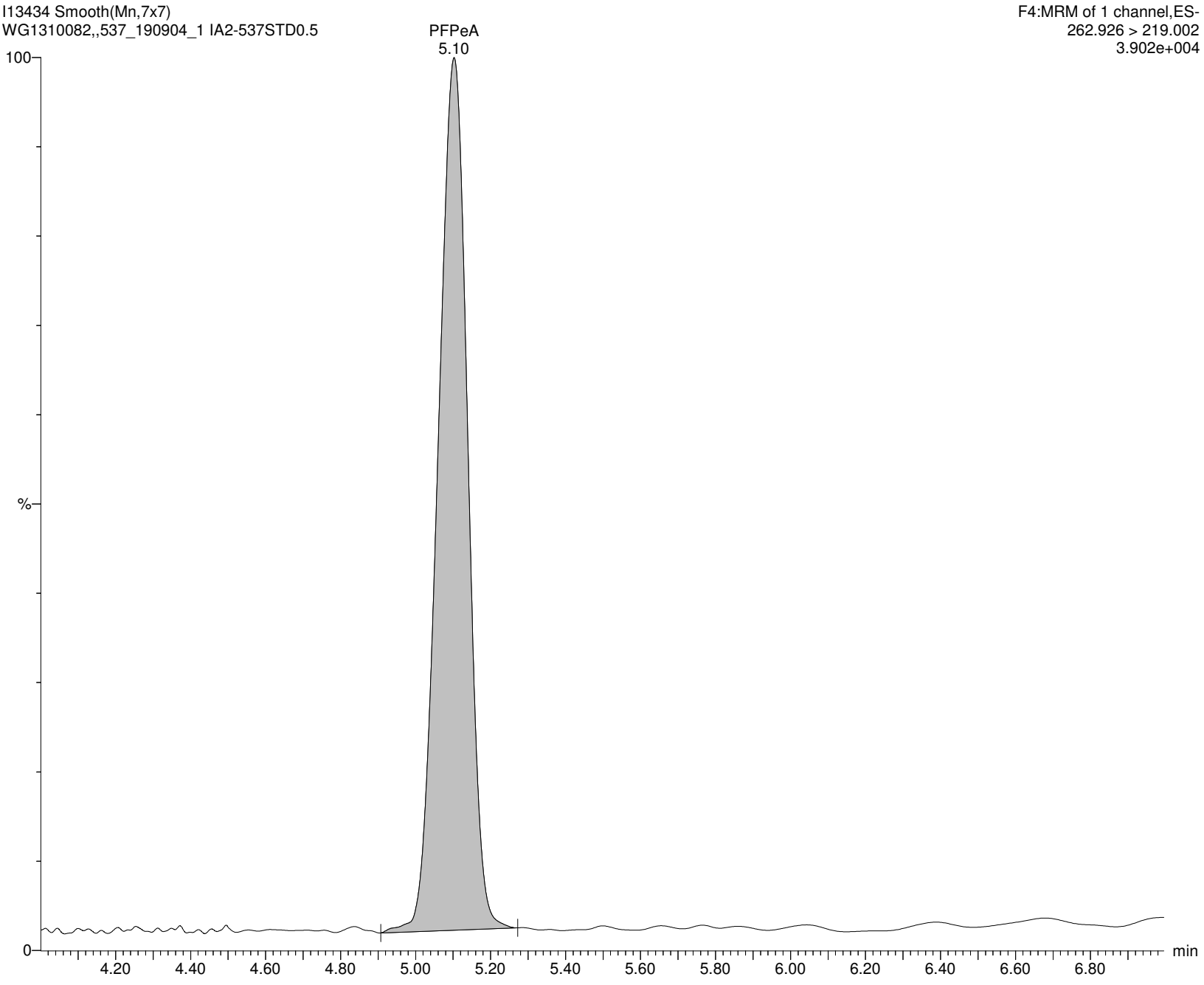
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
Printed: Monday, November 18, 2019 13:42:48 Eastern Standard Time

**Name: I13434**
**ID: IA2-537STD0.5**
**Date: 18-Nov-2019**
**Time: 10:24:43**
**Description: WG1310082,,537_190904_1**
**User: LCMS02:JW**
**Vial: 1:A,2**
**Instrument: XEVO-TQSmicro#QEB0050**
**Inlet Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\LCMS_537_ISO_B**
**Tune Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\181009_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**PFPeA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
Printed: Monday, November 18, 2019 13:42:48 Eastern Standard Time

**Name: I13434**
**ID: IA2-537STD0.5**
**Date: 18-Nov-2019**
**Time: 10:24:43**
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**Vial: 1:A,2**
**Instrument: XEVO-TQSmicro#QEB0050**
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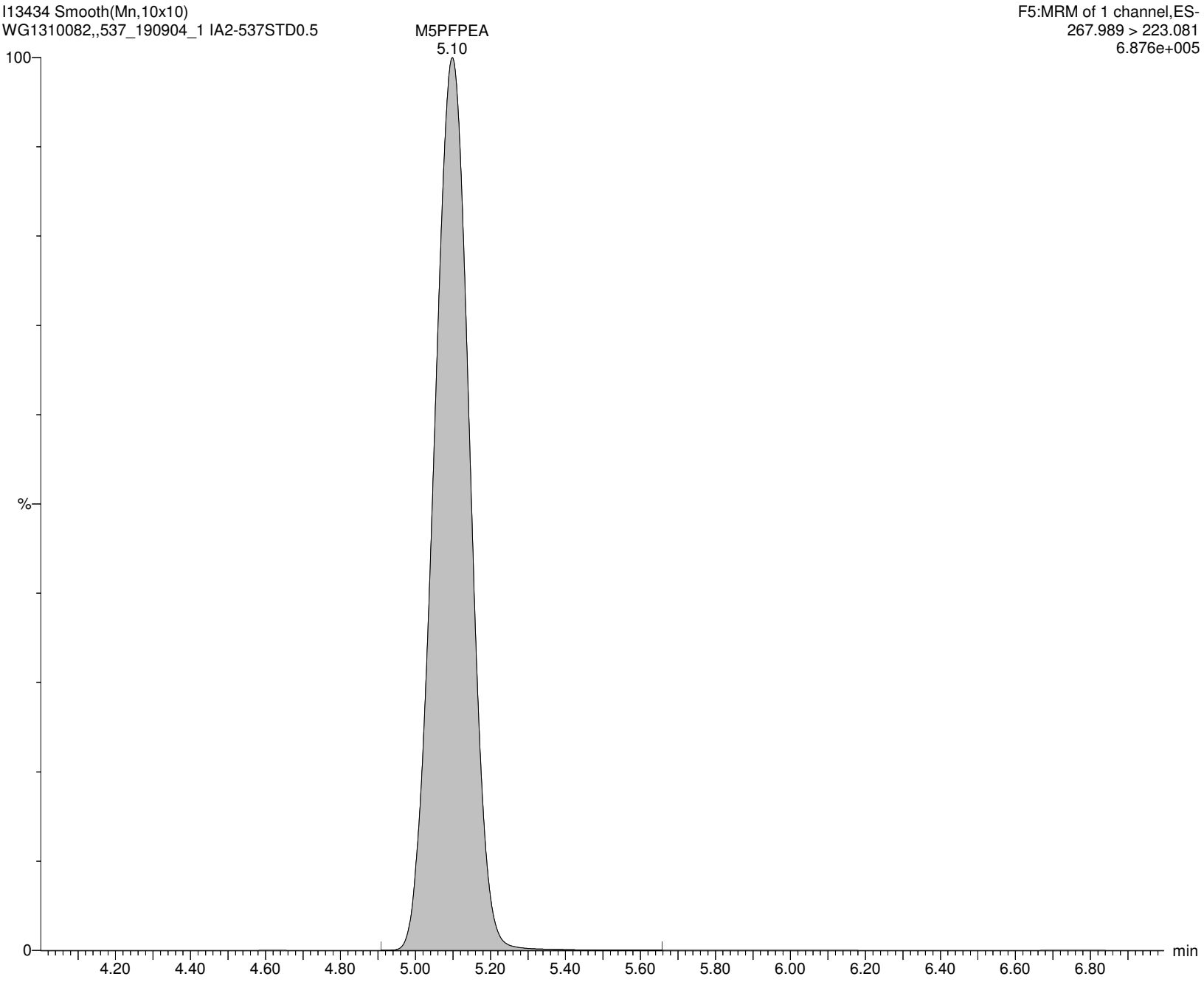
**Tune Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\181009_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**M5PFPEA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
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Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
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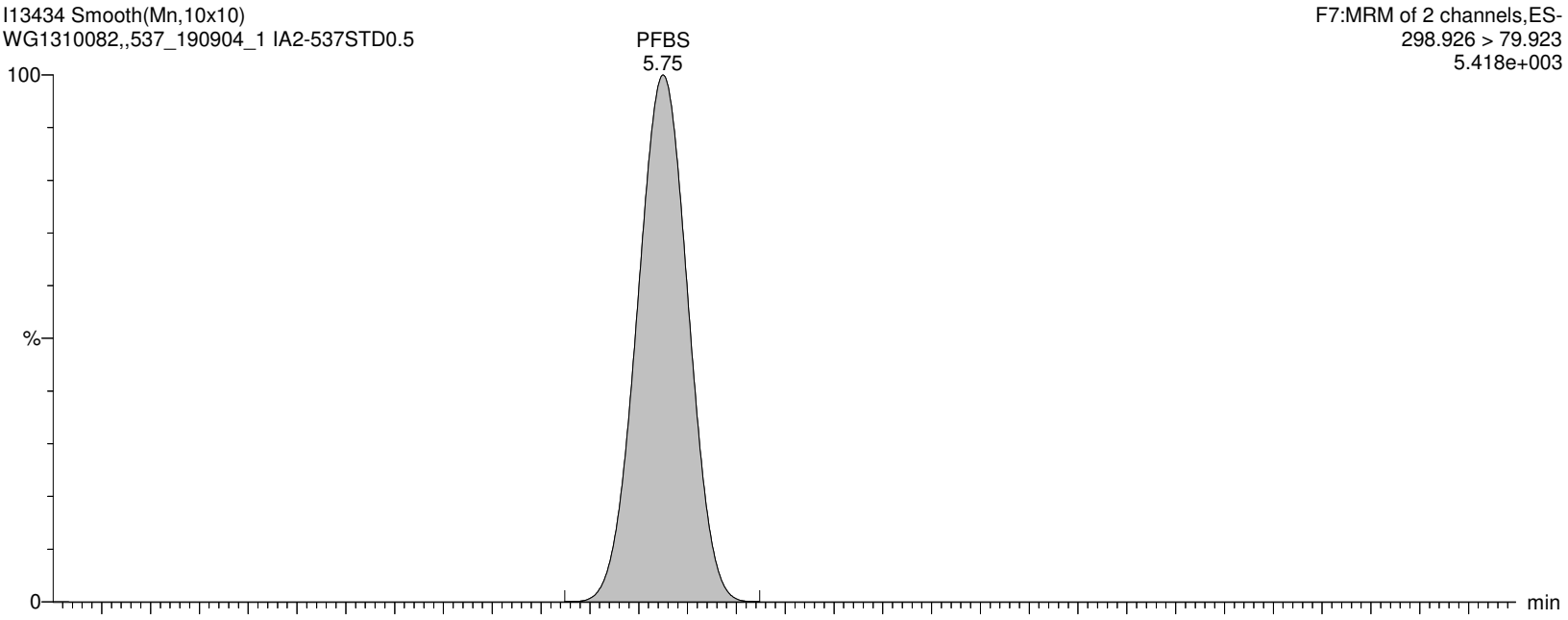
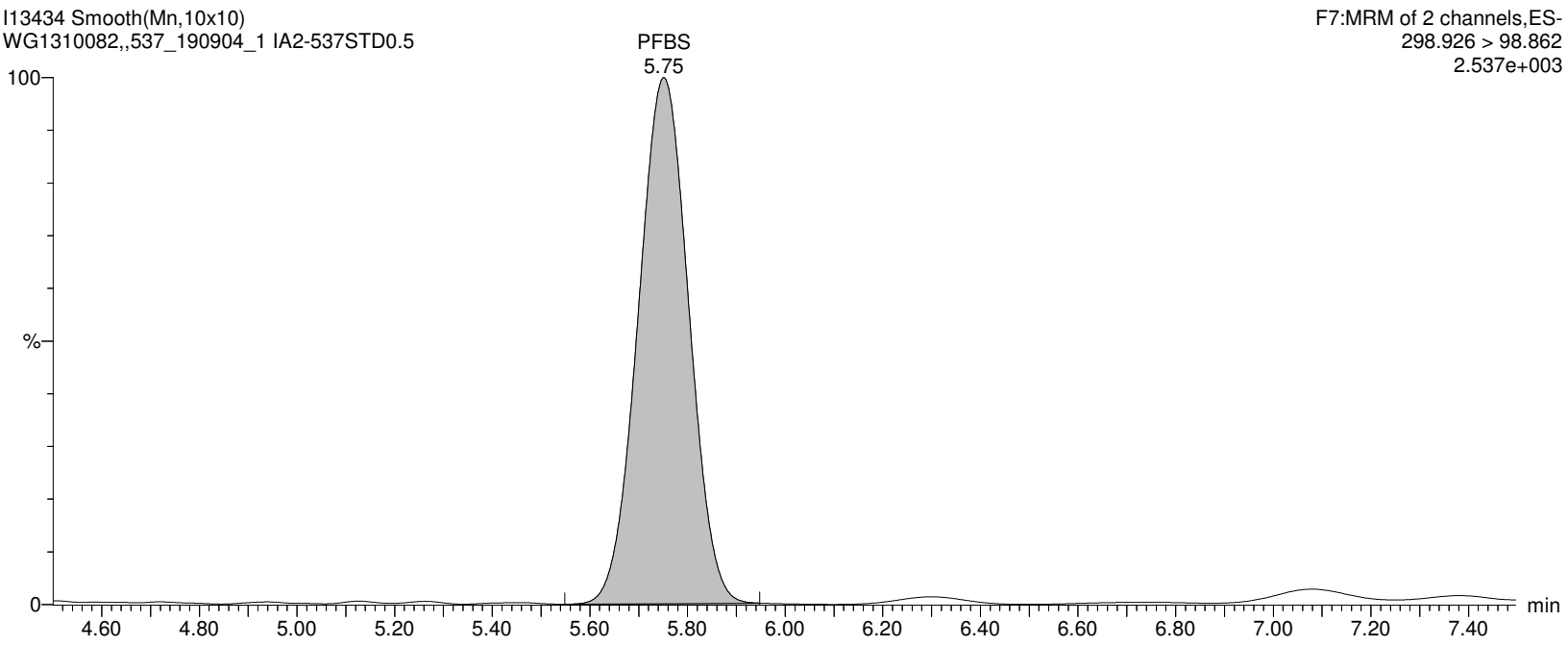
**PFBS**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
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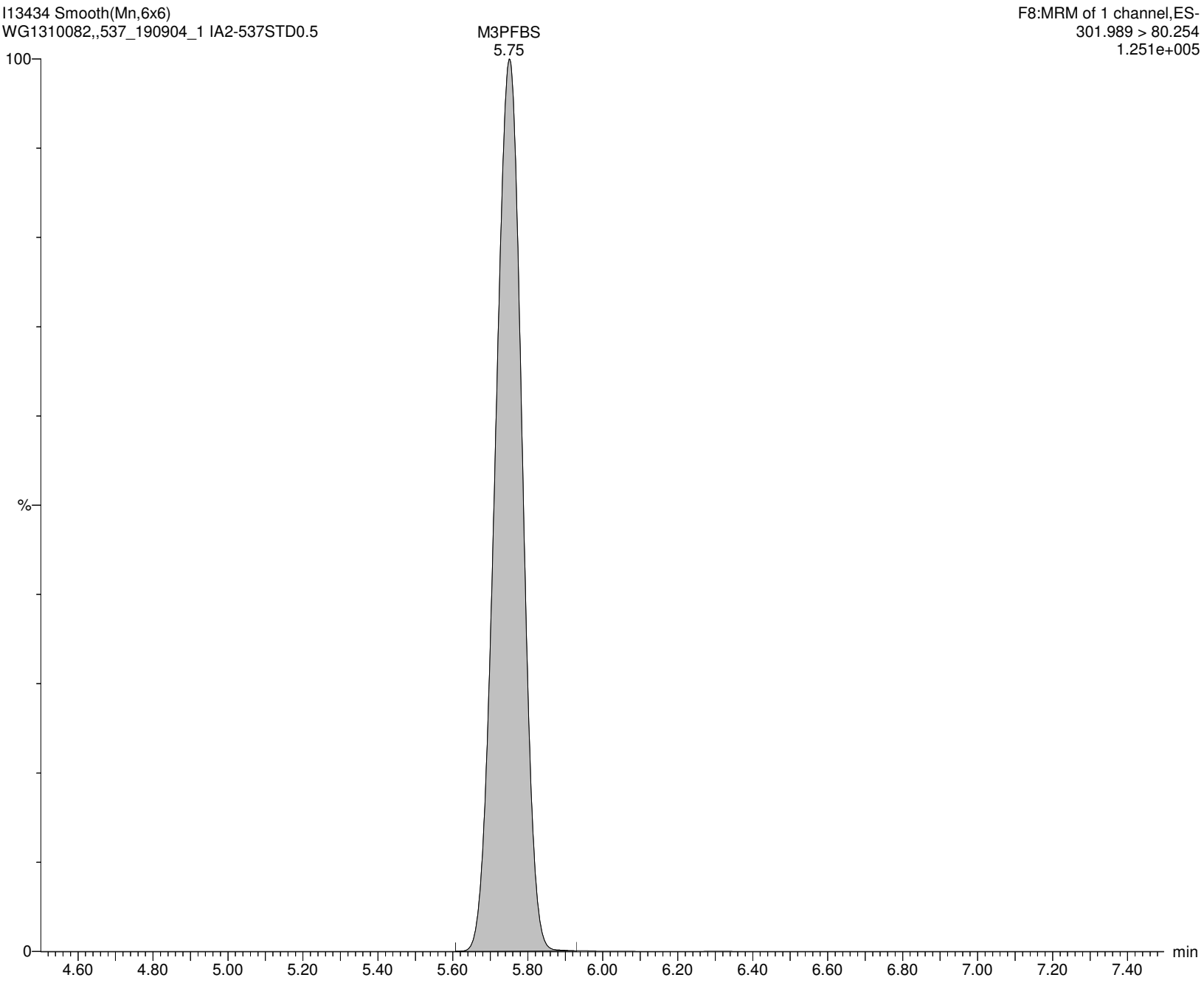
**M3PFBS**





all concentration units in (ng/mL)

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Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
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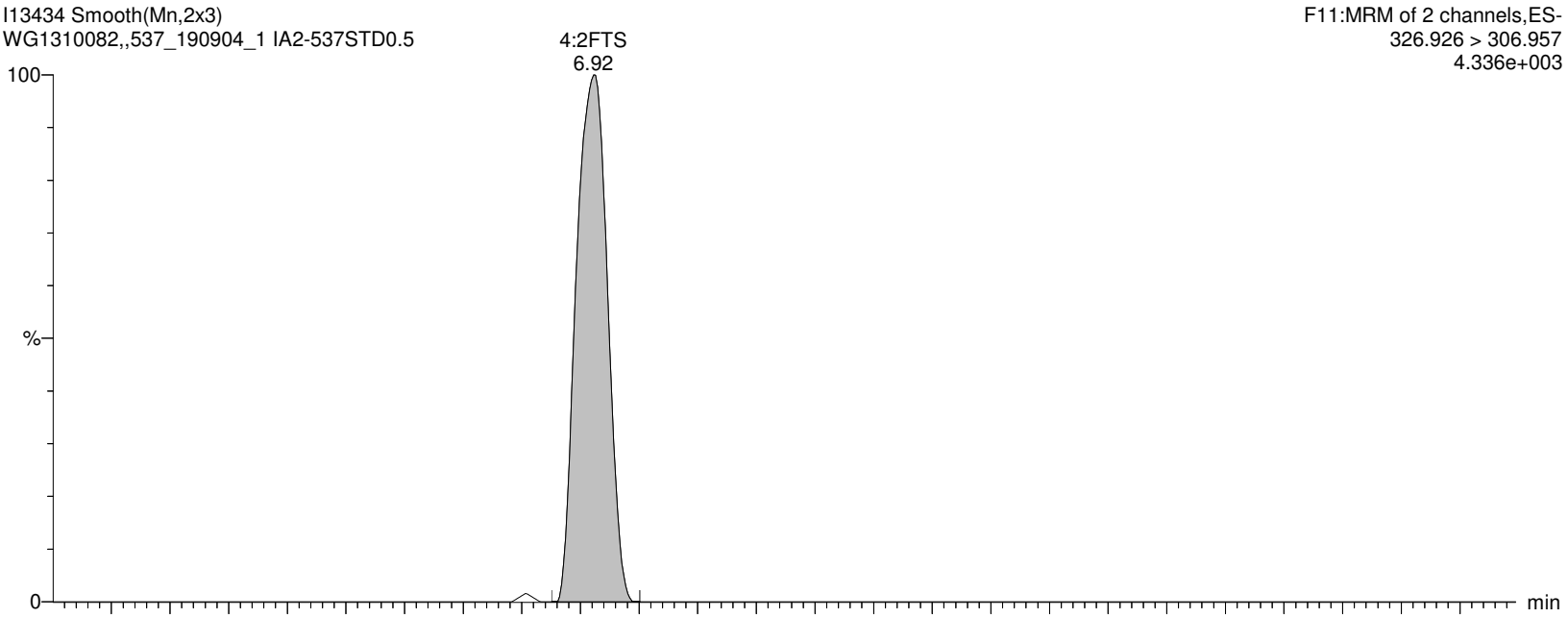
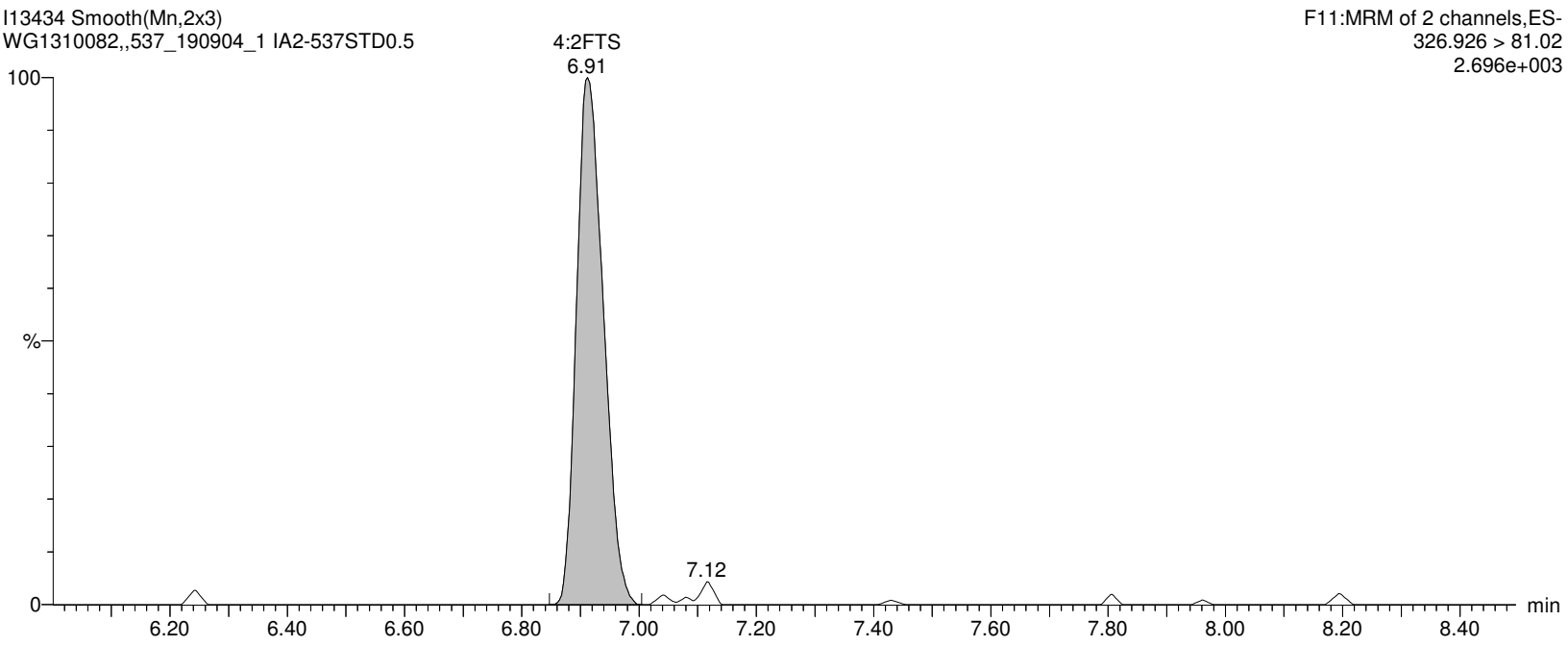
**4:2FTS**





all concentration units in (ng/mL)

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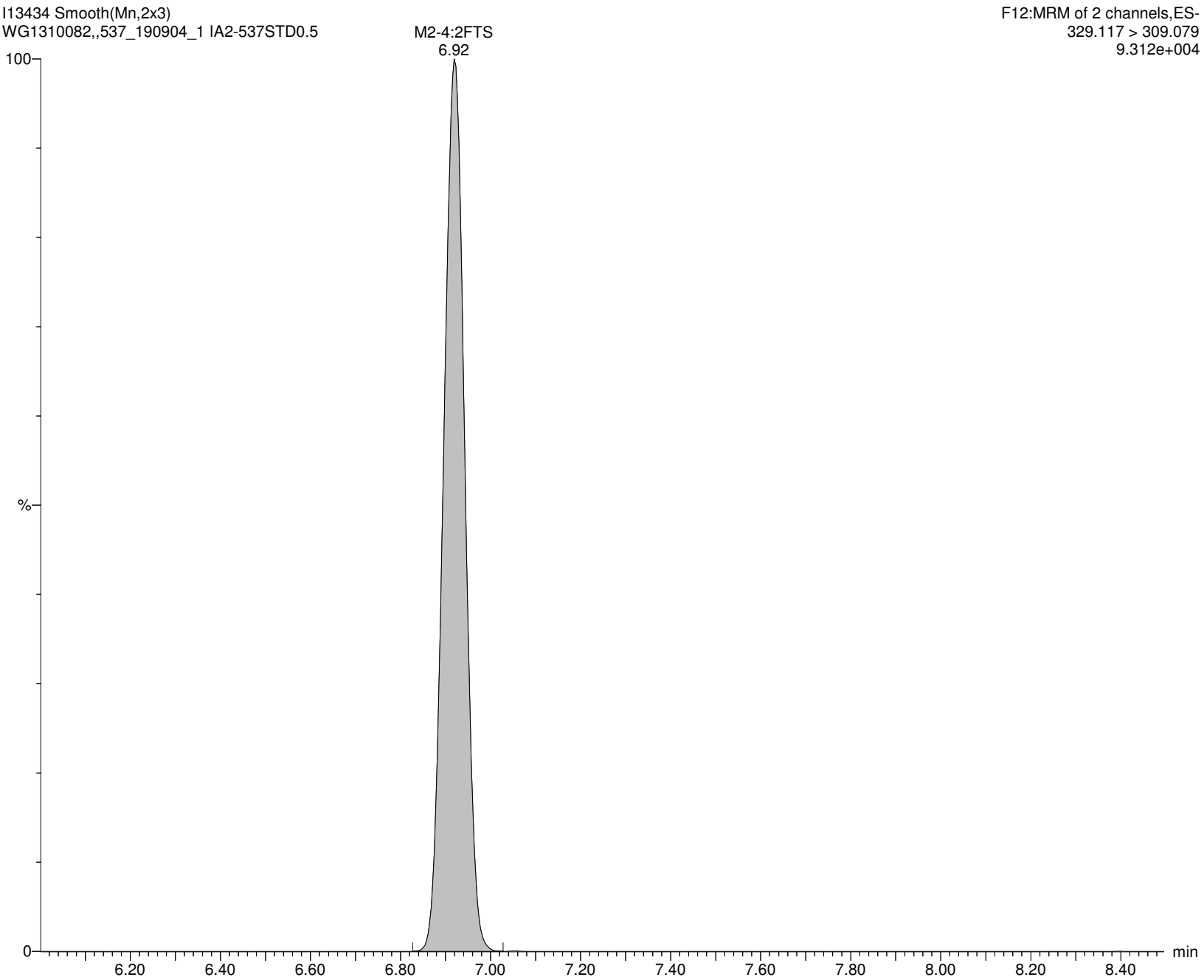
**M2-4:2FTS**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
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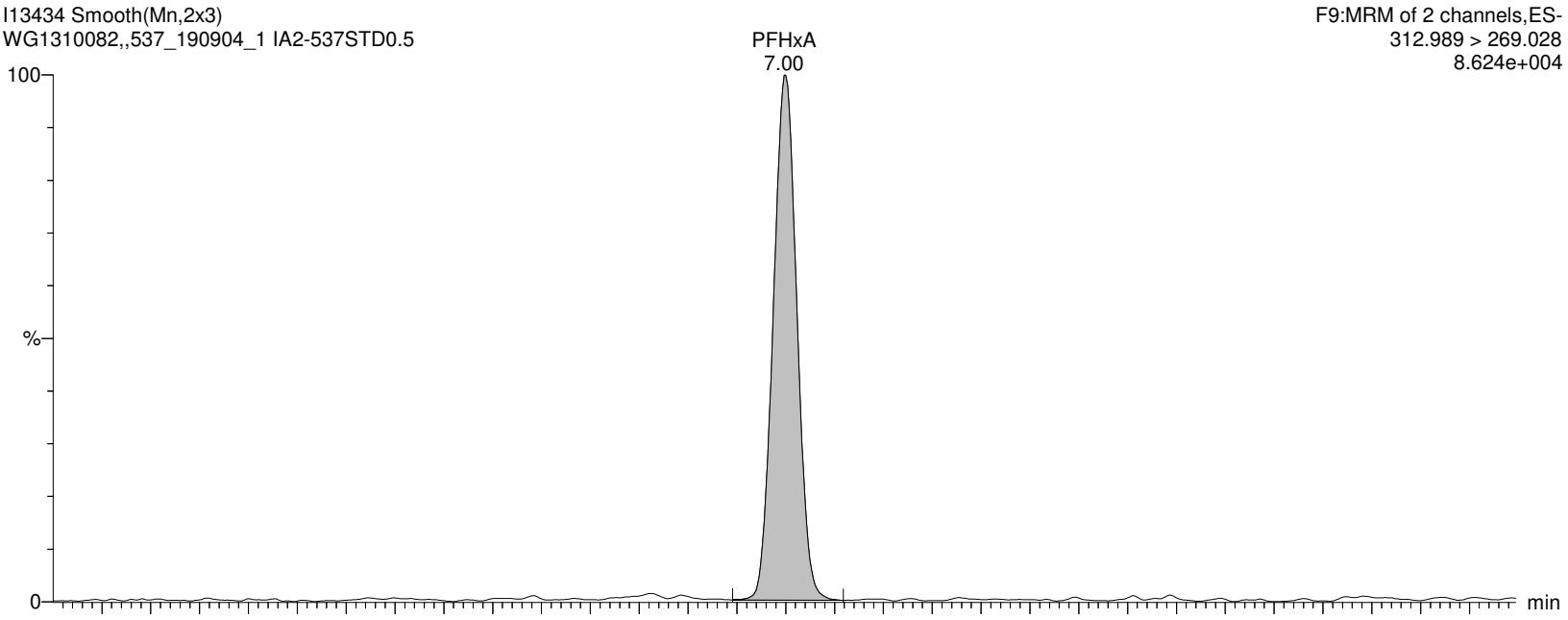
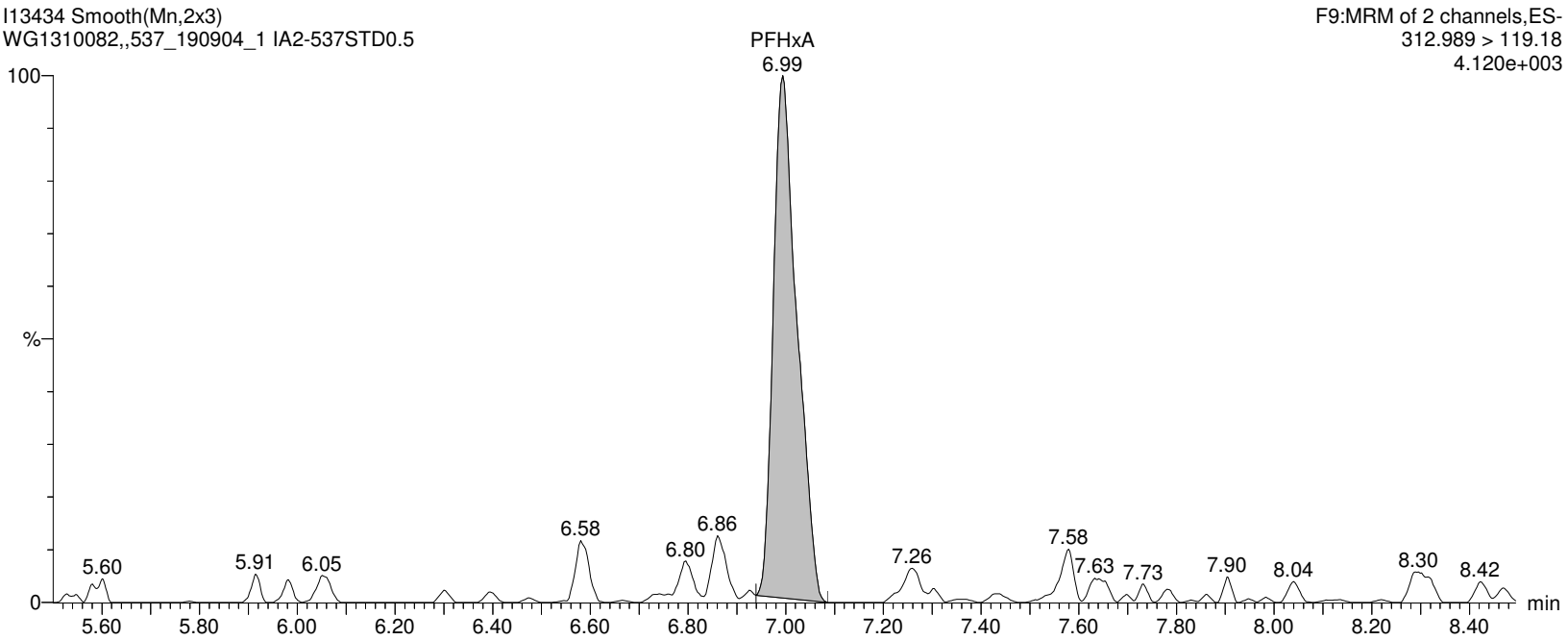
**PFHxA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
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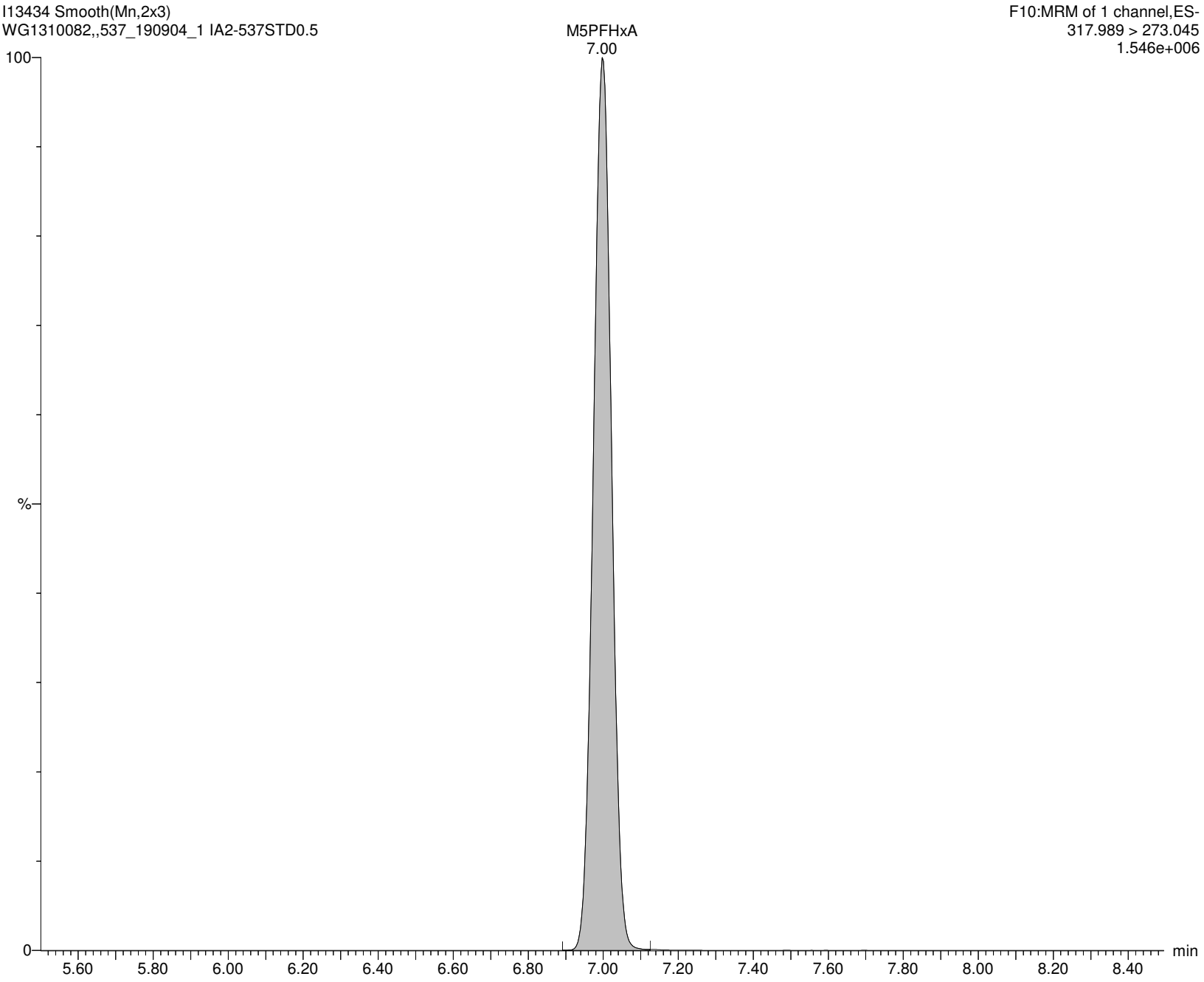
**M5PFHxA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
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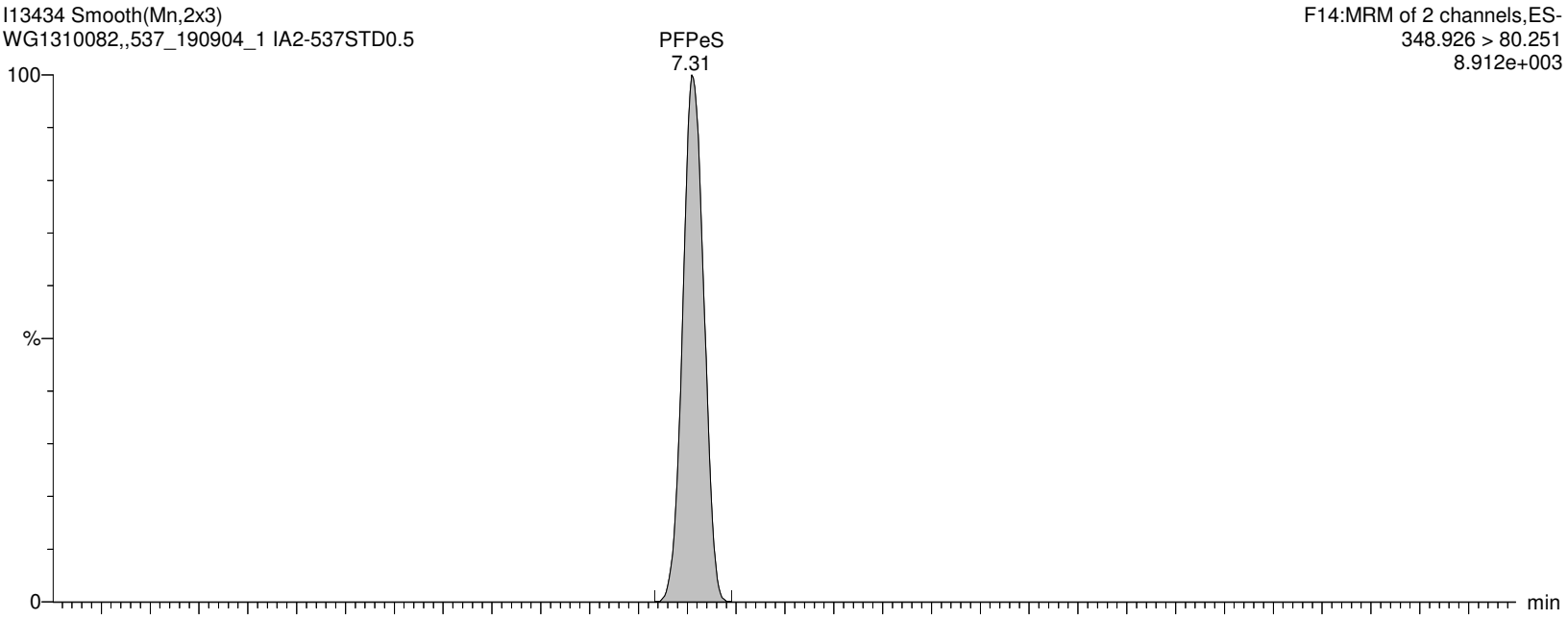
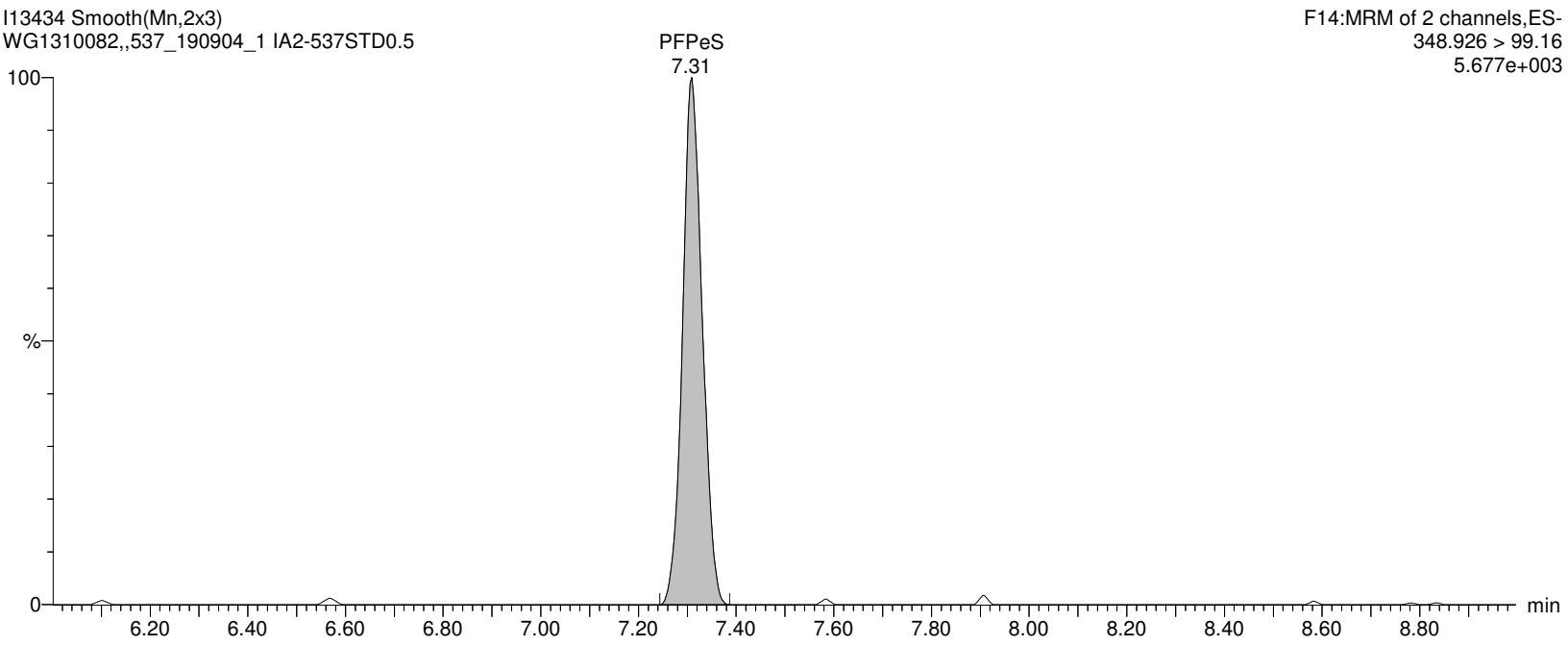
**PFPeS**





all concentration units in (ng/mL)

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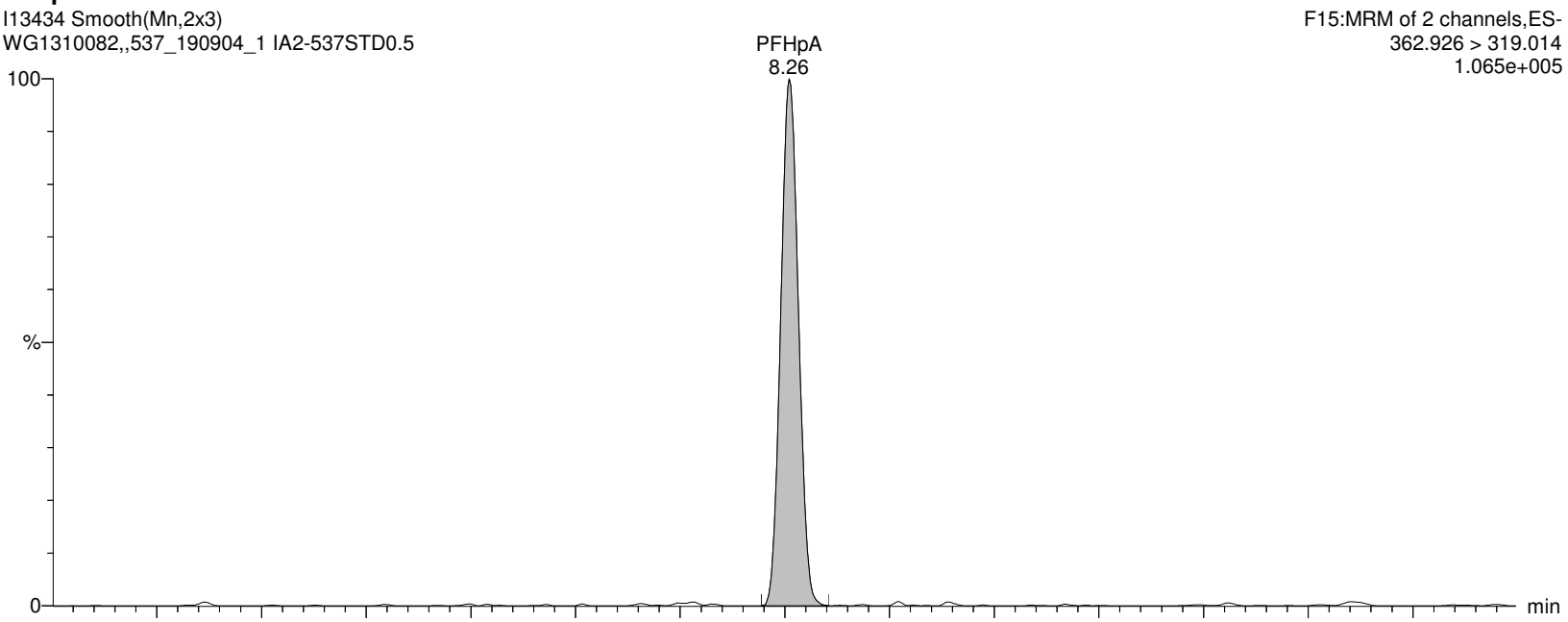
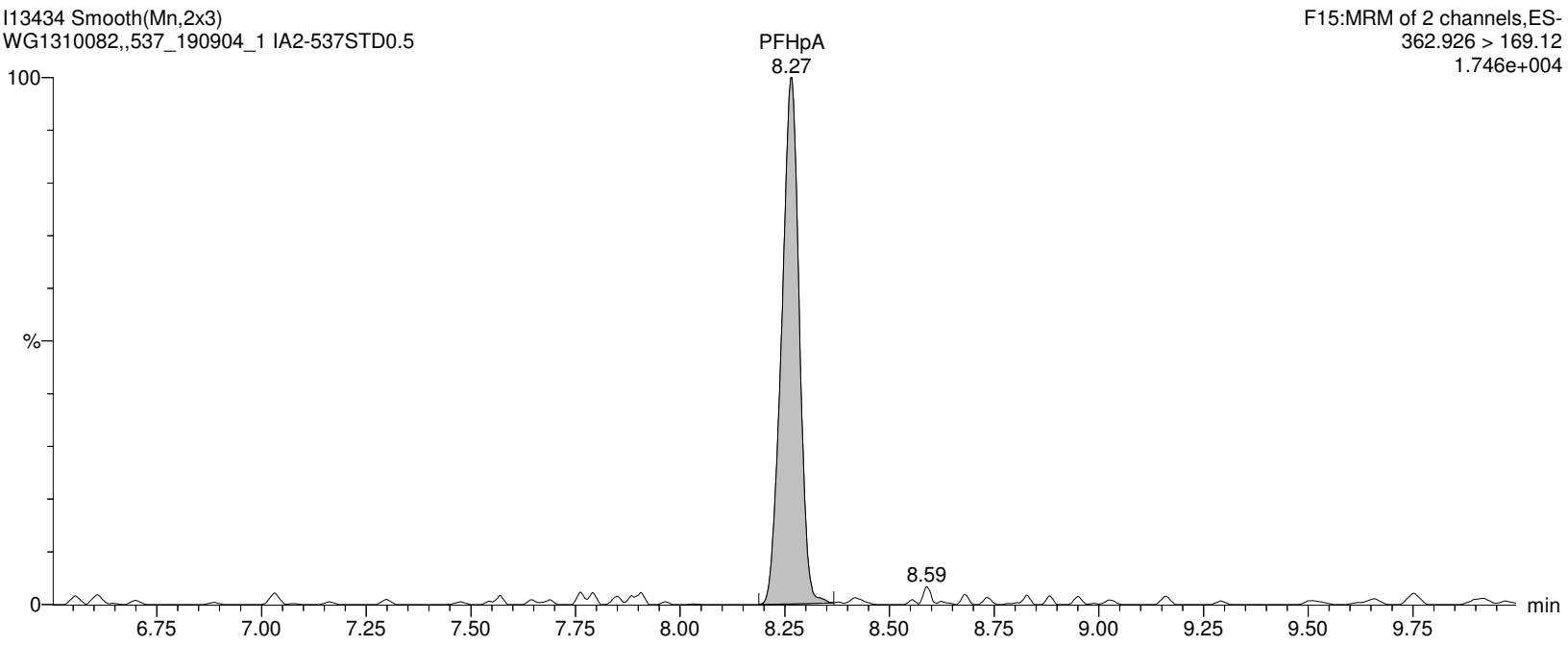
**PFHpA**





all concentration units in (ng/mL)

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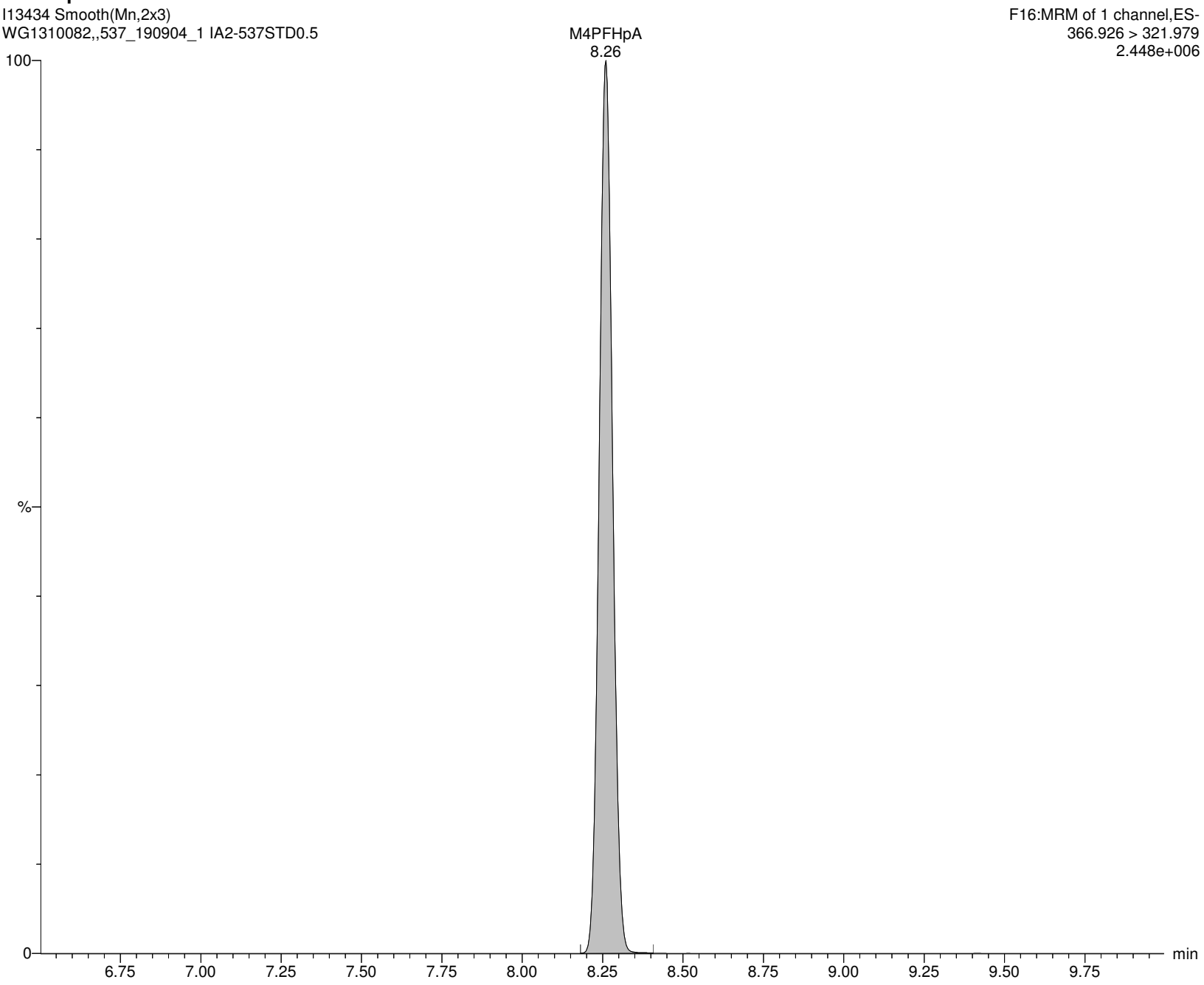
**M4PFHpA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
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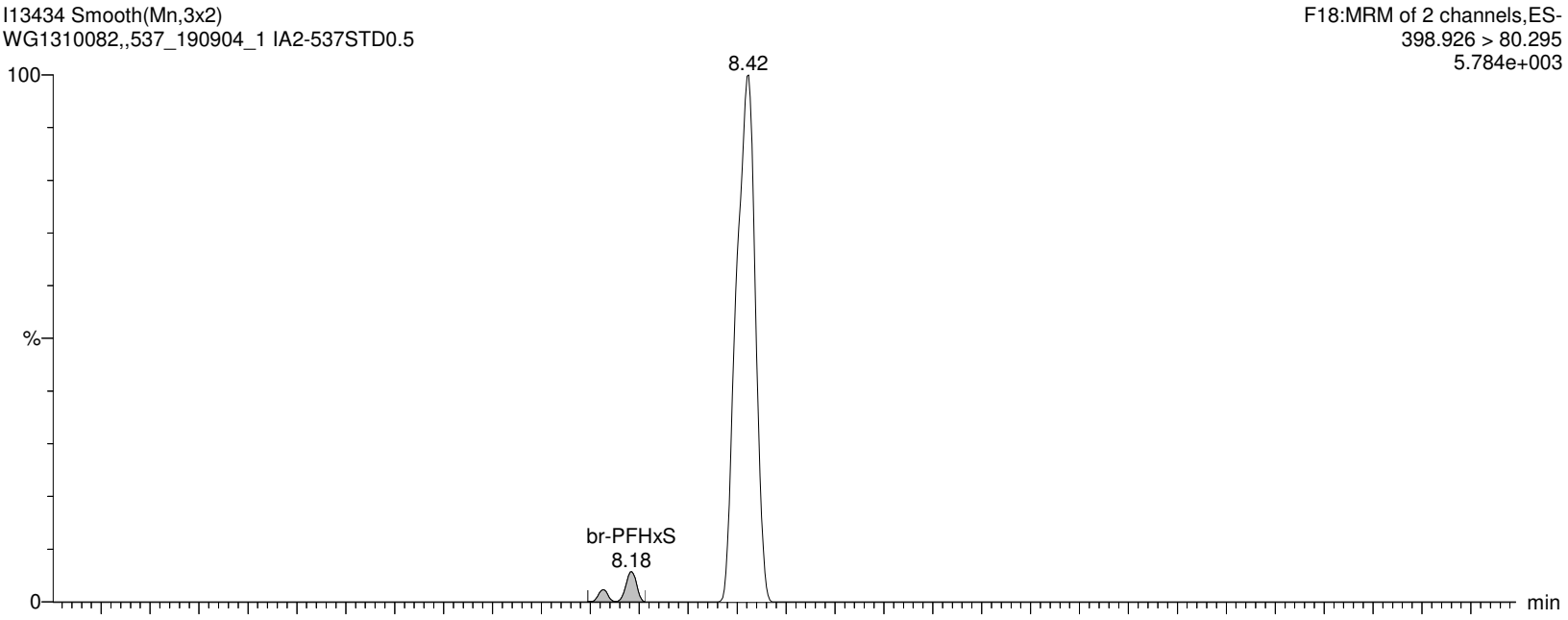
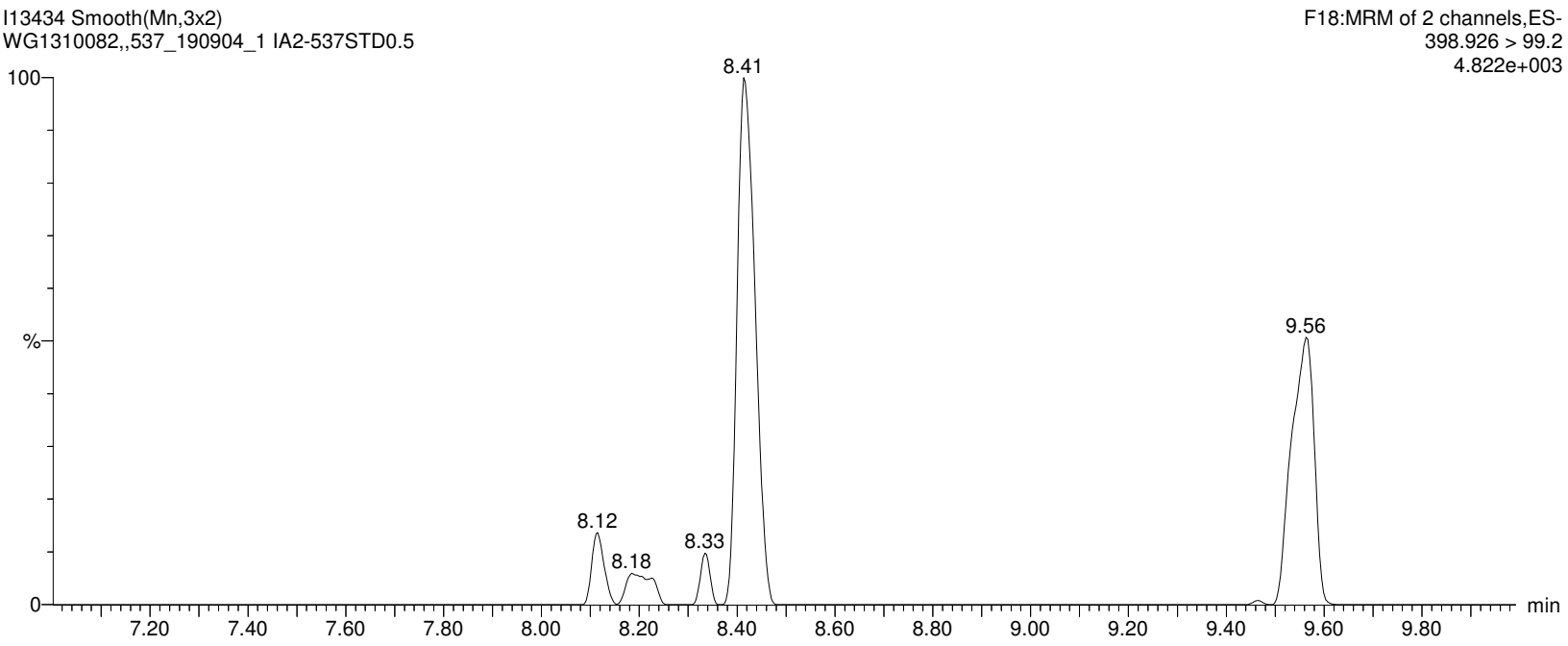
**br-PFHxS**





all concentration units in (ng/mL)

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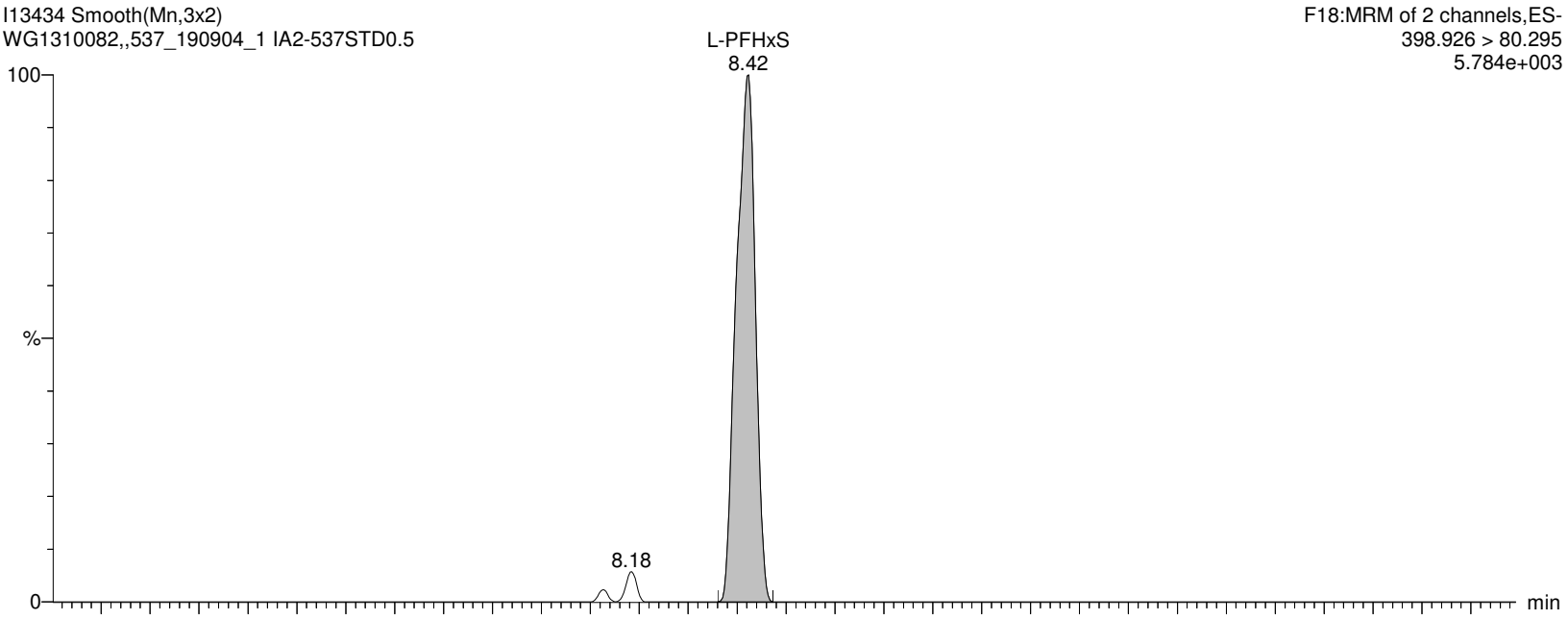
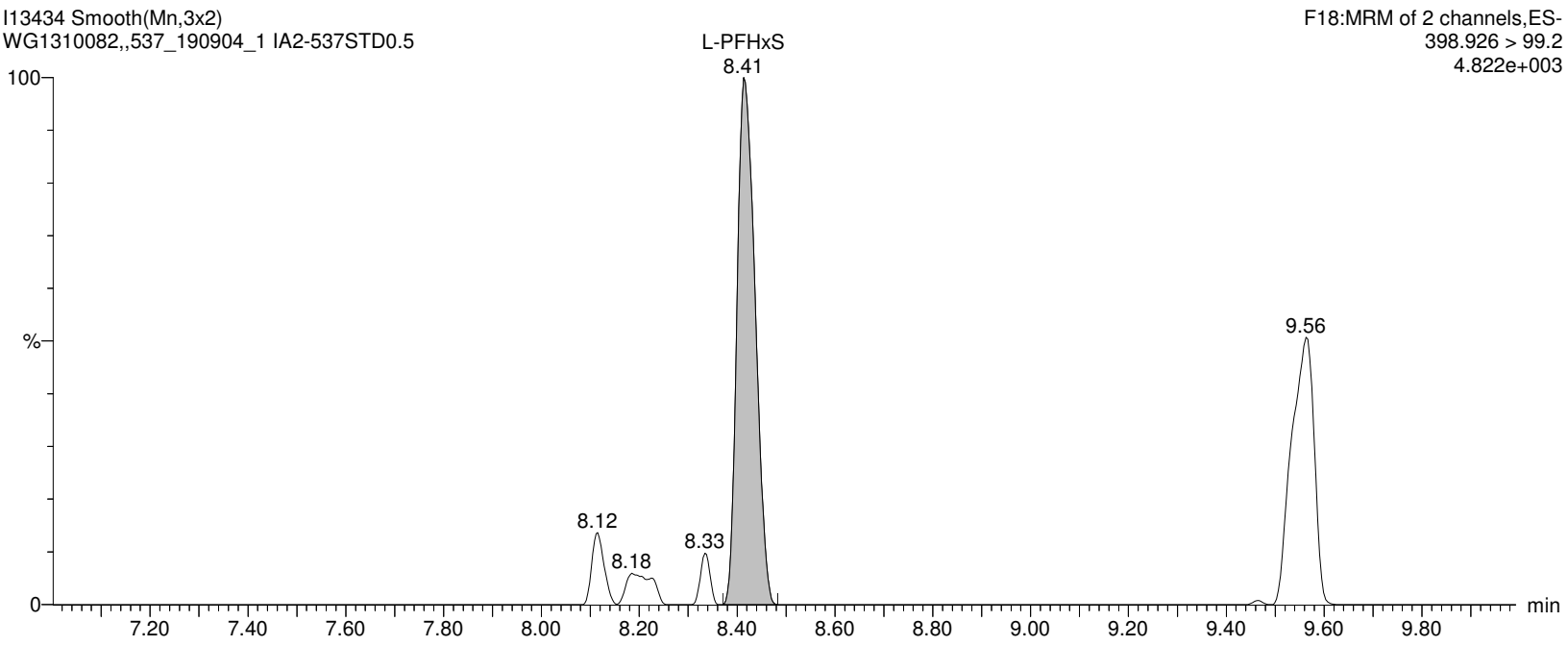
**L-PFHxS**





all concentration units in (ng/mL)

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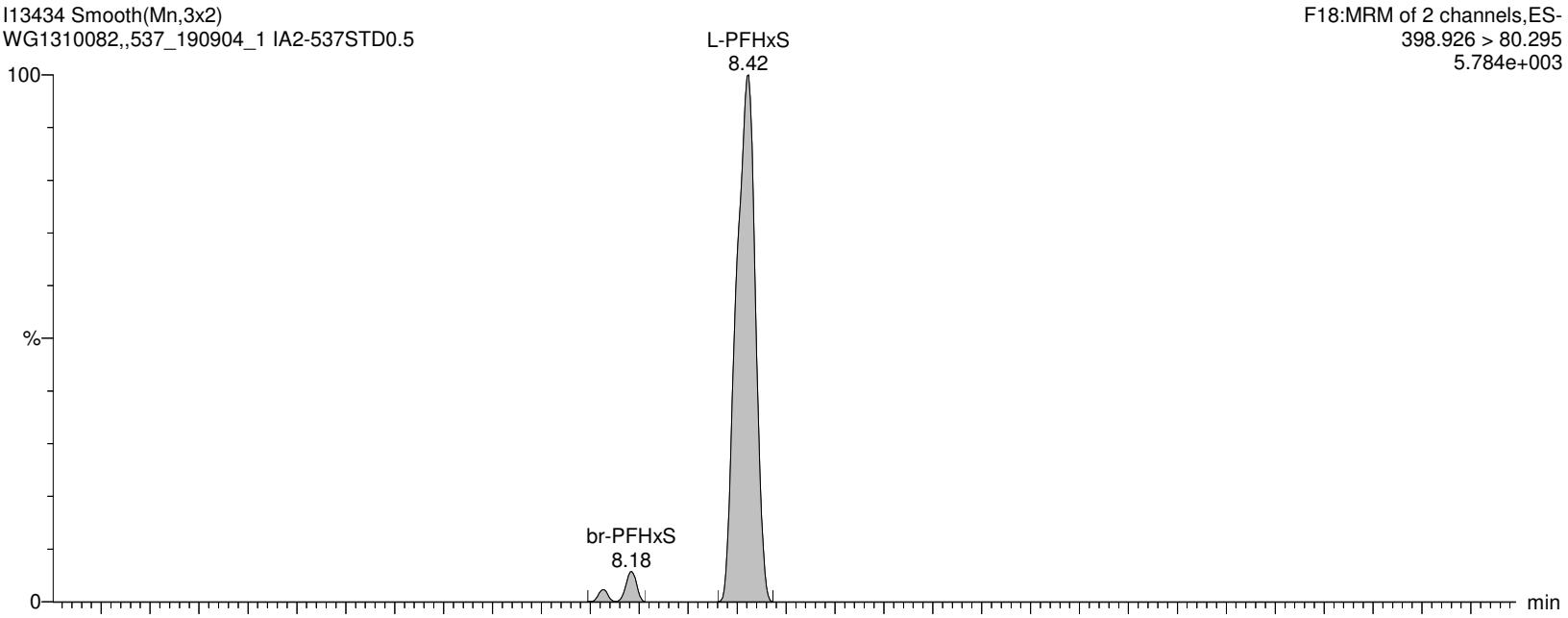
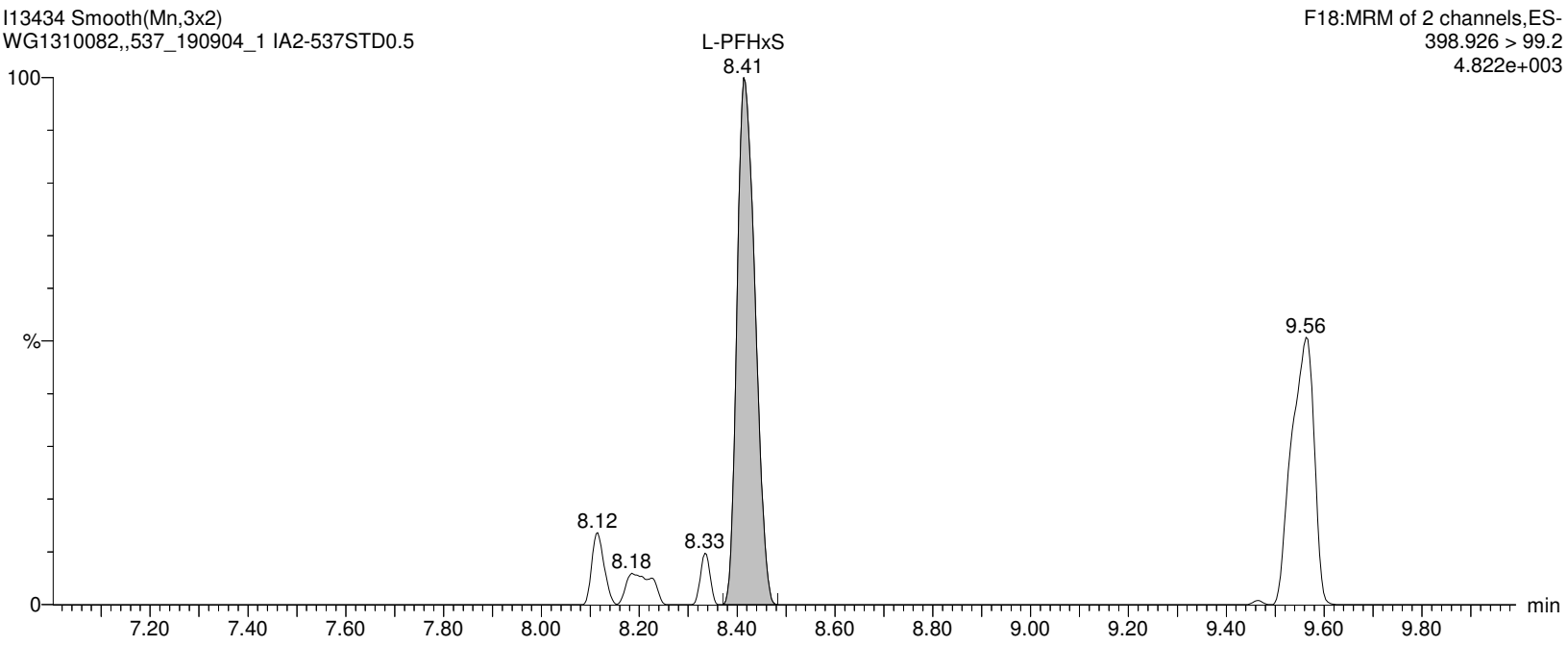
**PFHxS**





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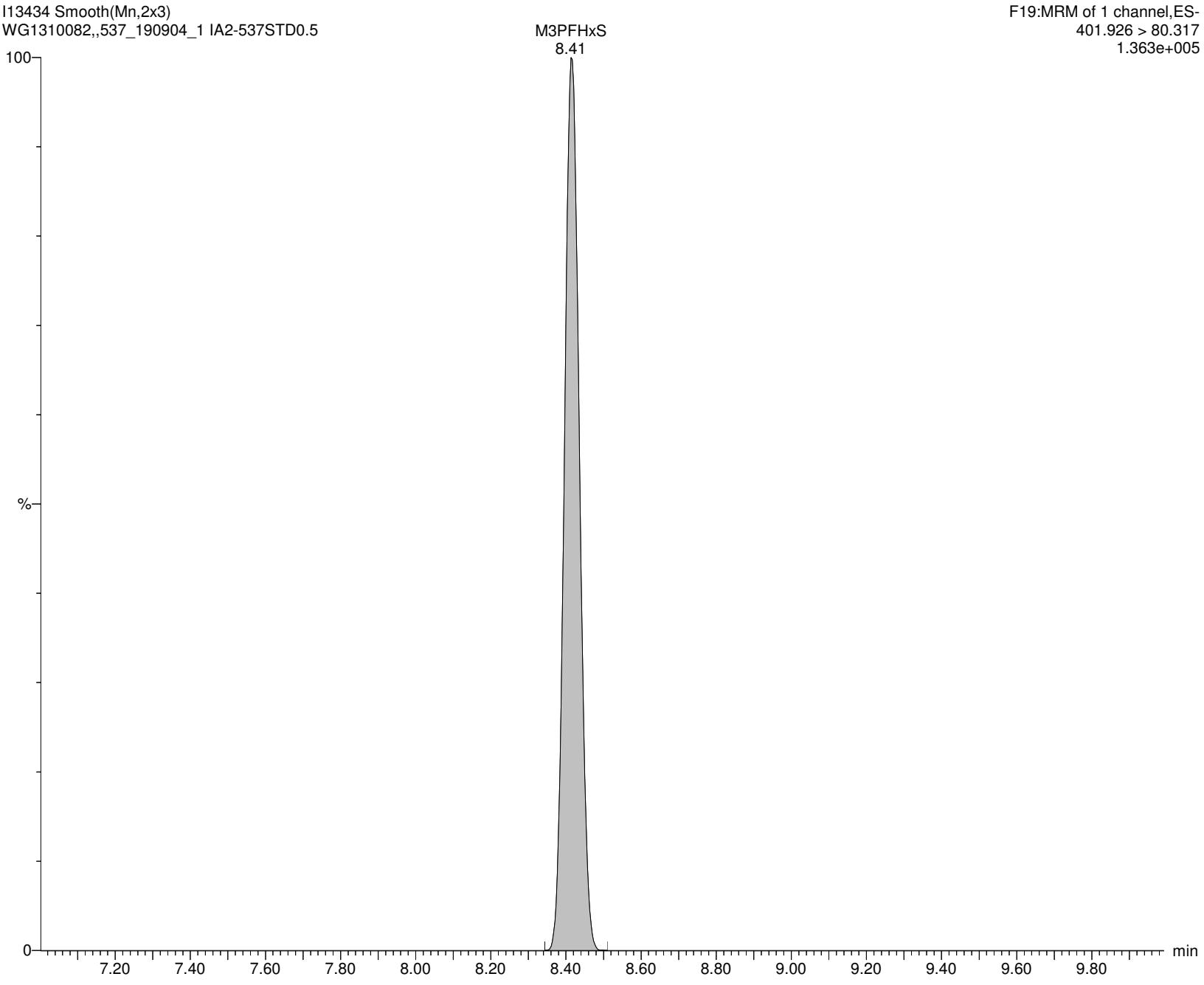
**M3PFHxS**





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Printed: Monday, November 18, 2019 13:42:48 Eastern Standard Time

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**ID: IA2-537STD0.5**
**Date: 18-Nov-2019**
**Time: 10:24:43**
**Description: WG1310082,,537_190904_1**
**User: LCMS02:JW**
**Vial: 1:A,2**
**Instrument: XEVO-TQSmicro#QEB0050**
**Inlet Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\LCMS_537_ISO_B**
**Tune Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\181009_TUNE.IPR**
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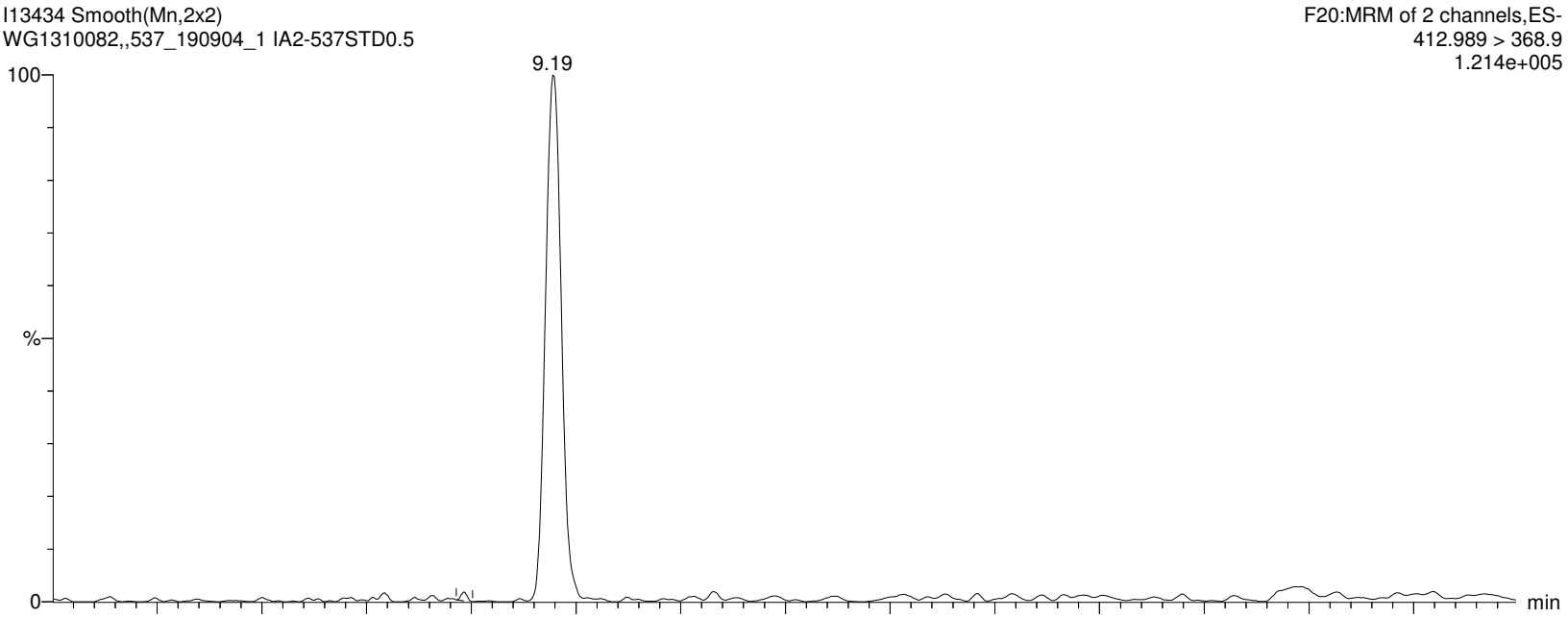


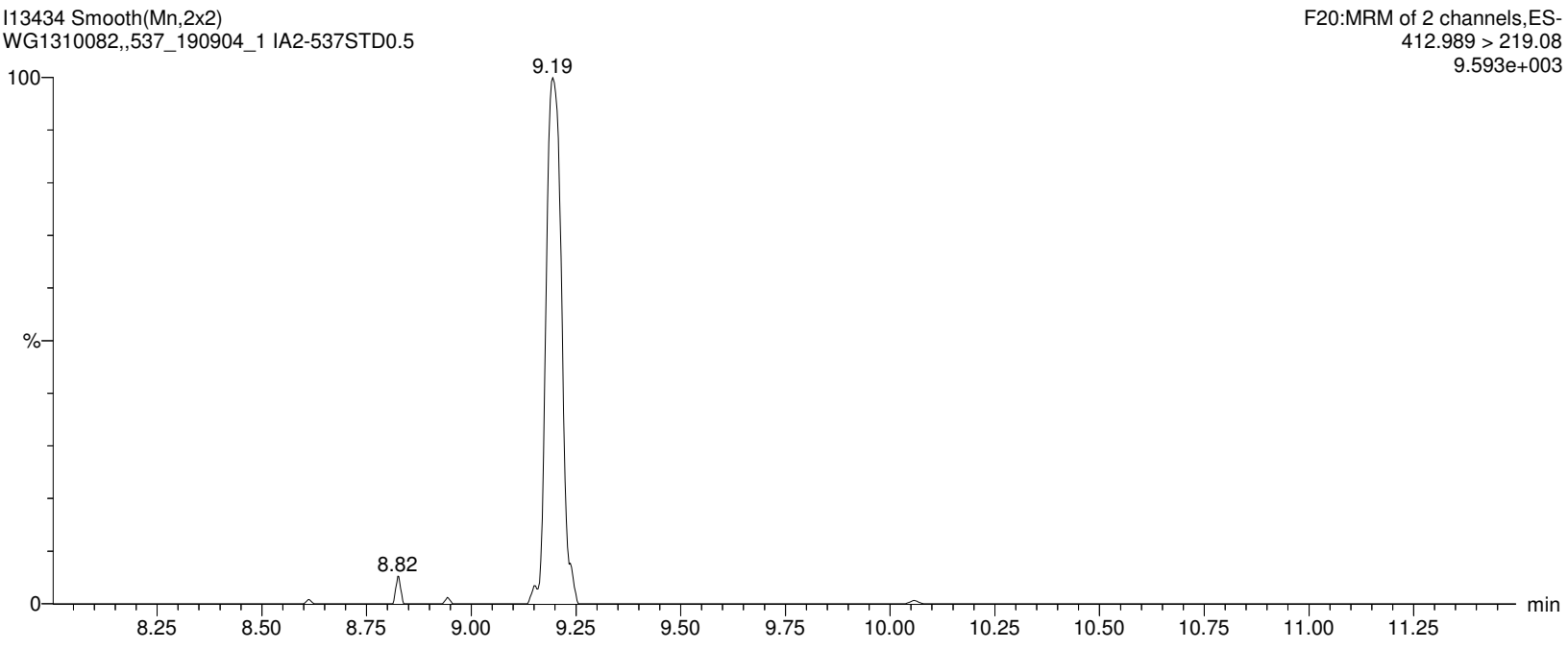



all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
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**ID: IA2-537STD0.5**
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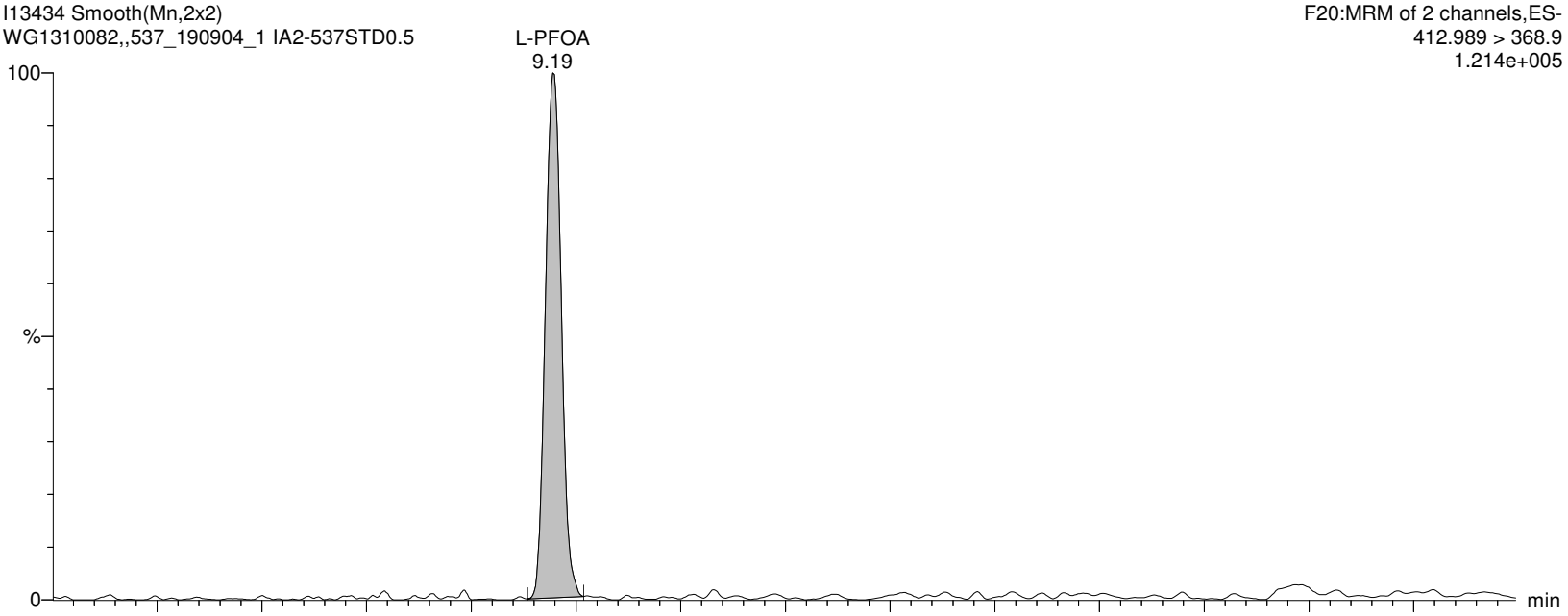


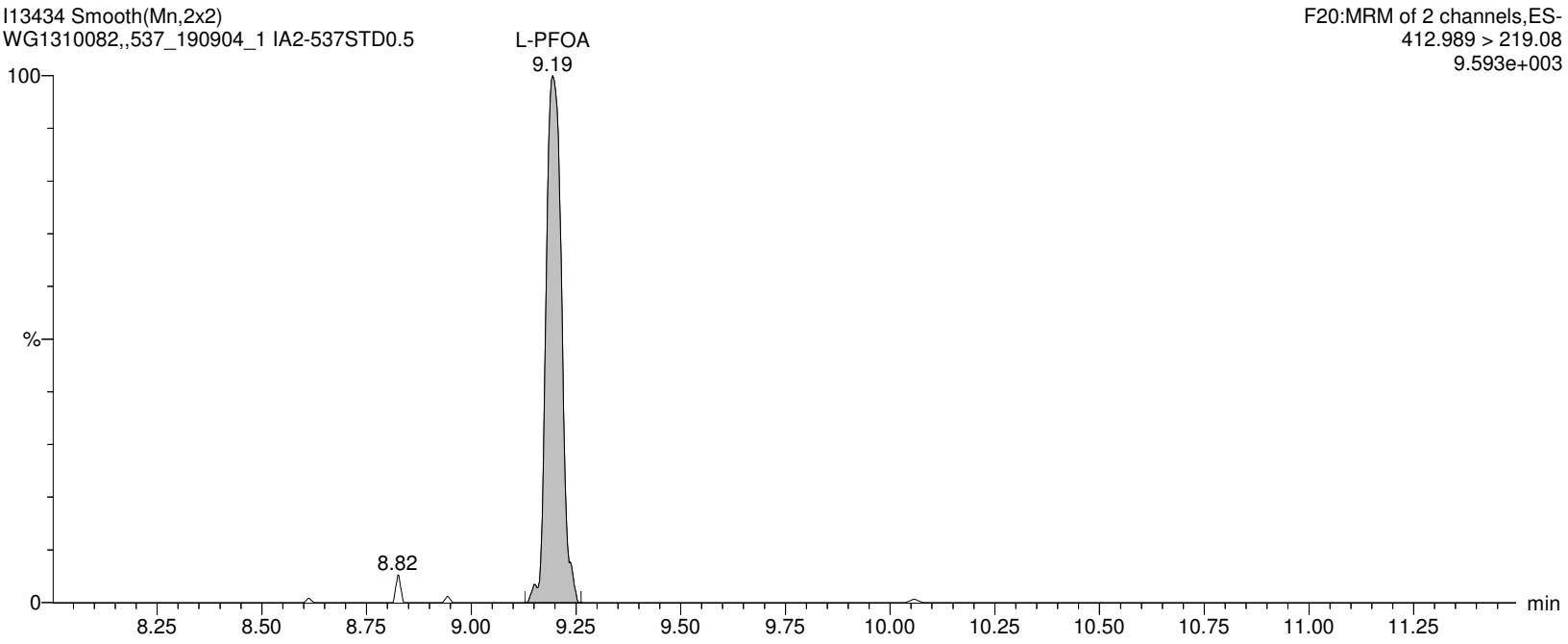



all concentration units in (ng/mL)

Alpha Analytical Inc.
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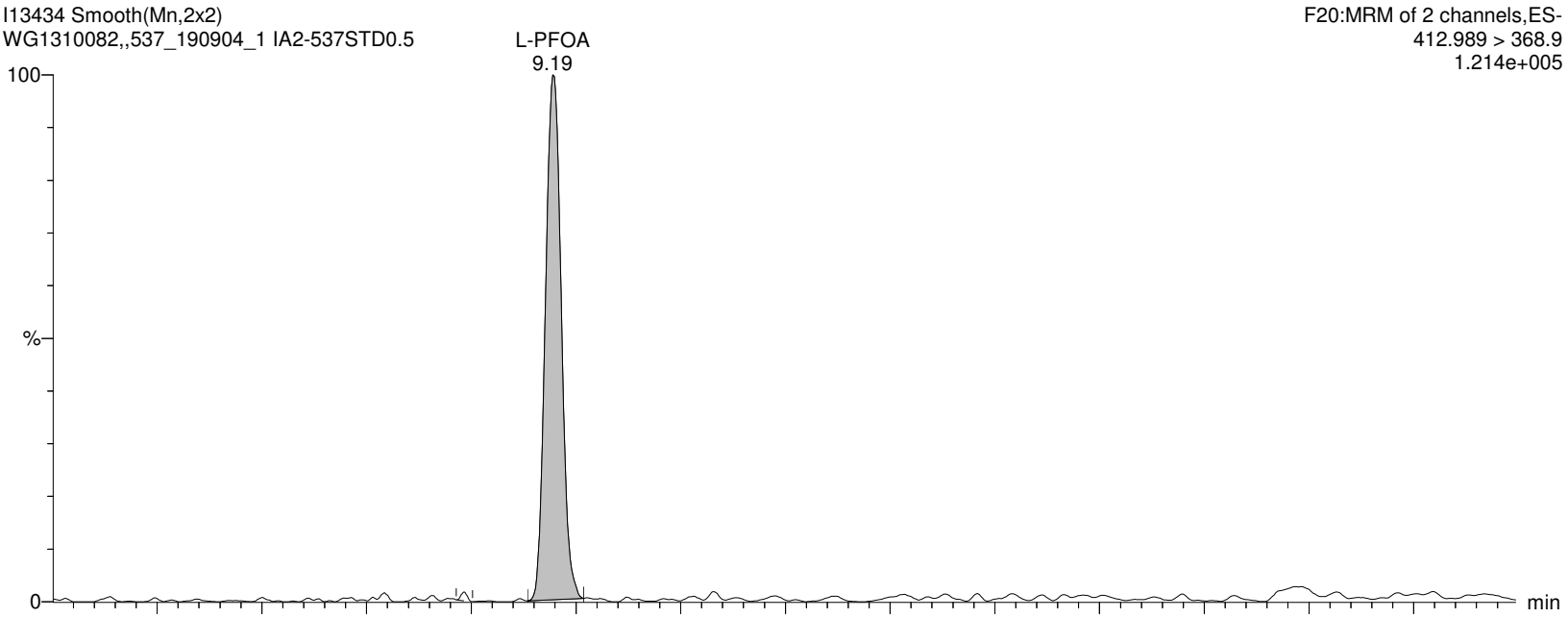


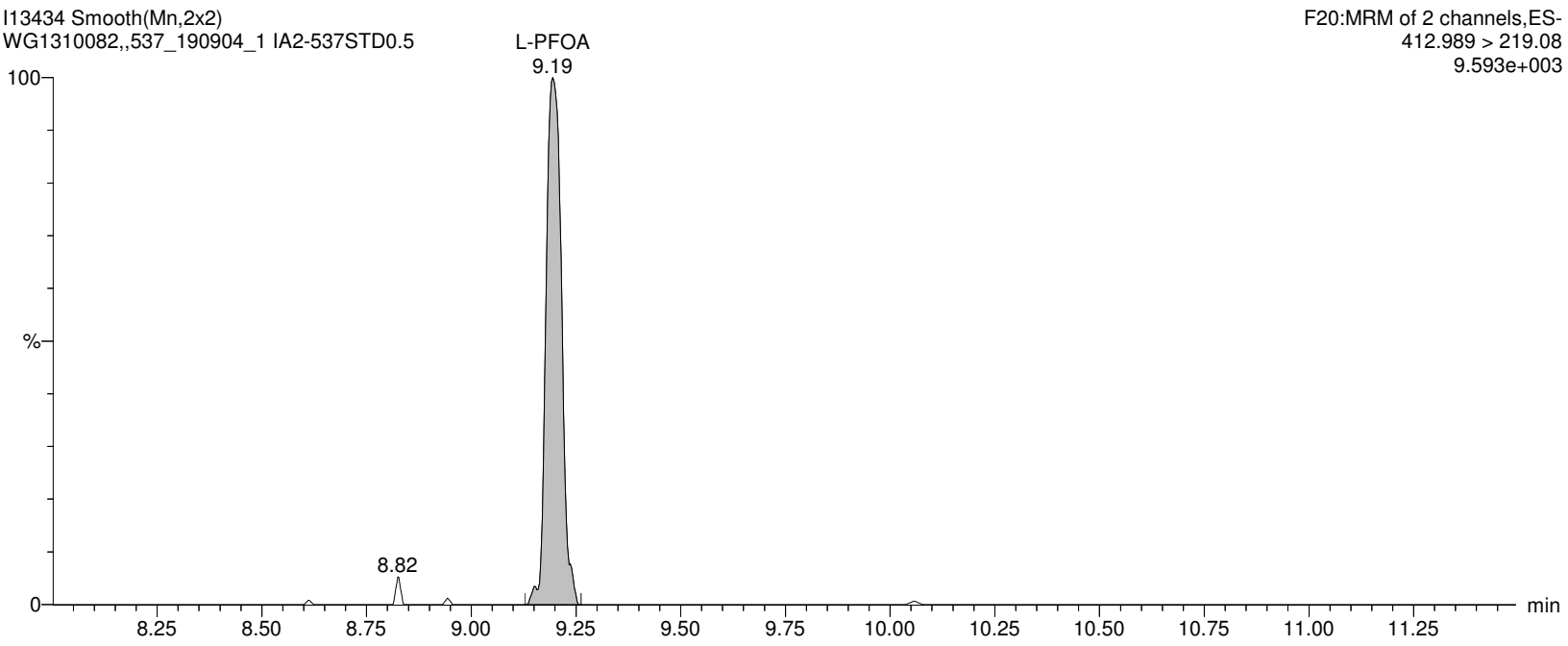



all concentration units in (ng/mL)

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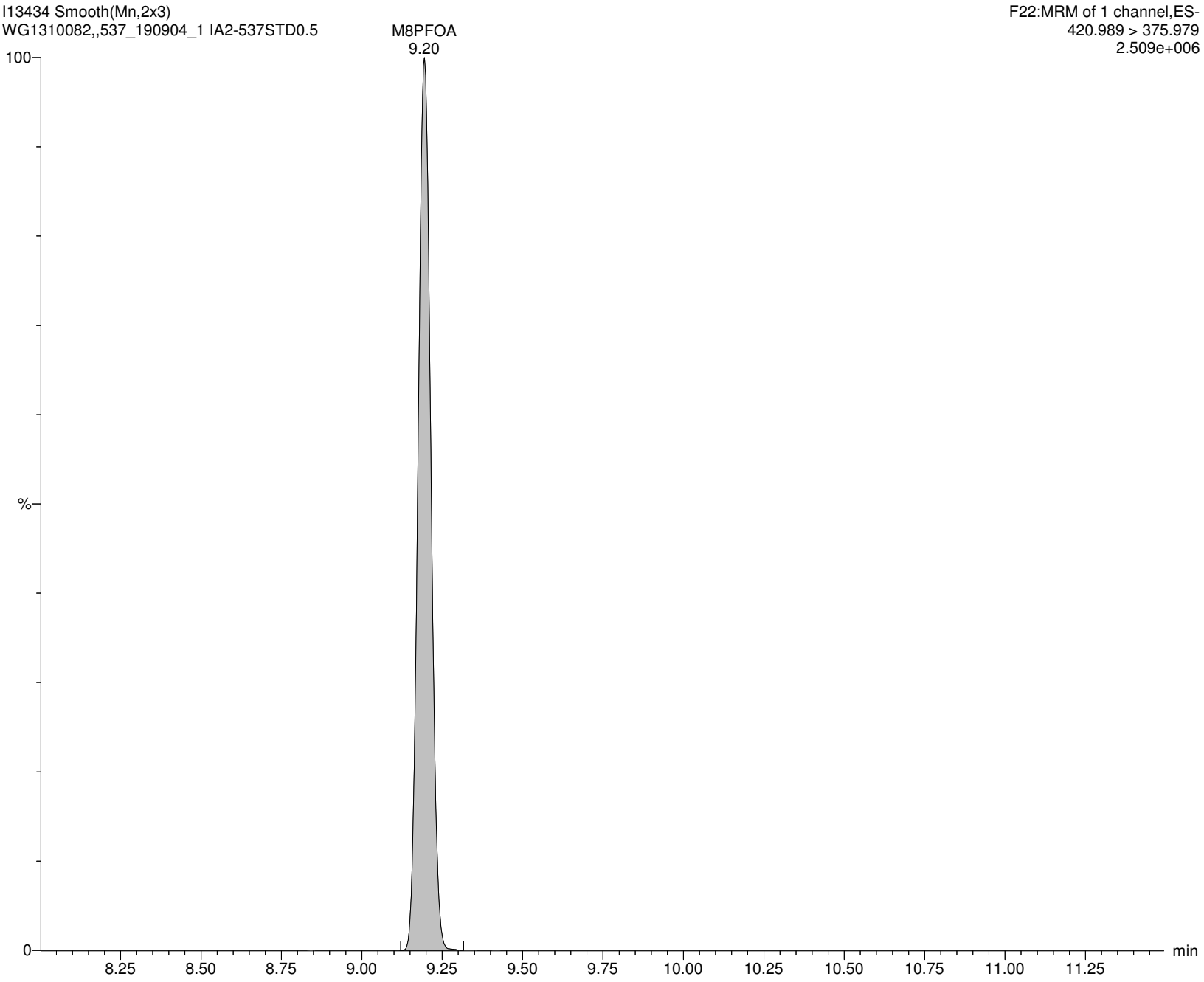
**M8PFOA**





all concentration units in (ng/mL)

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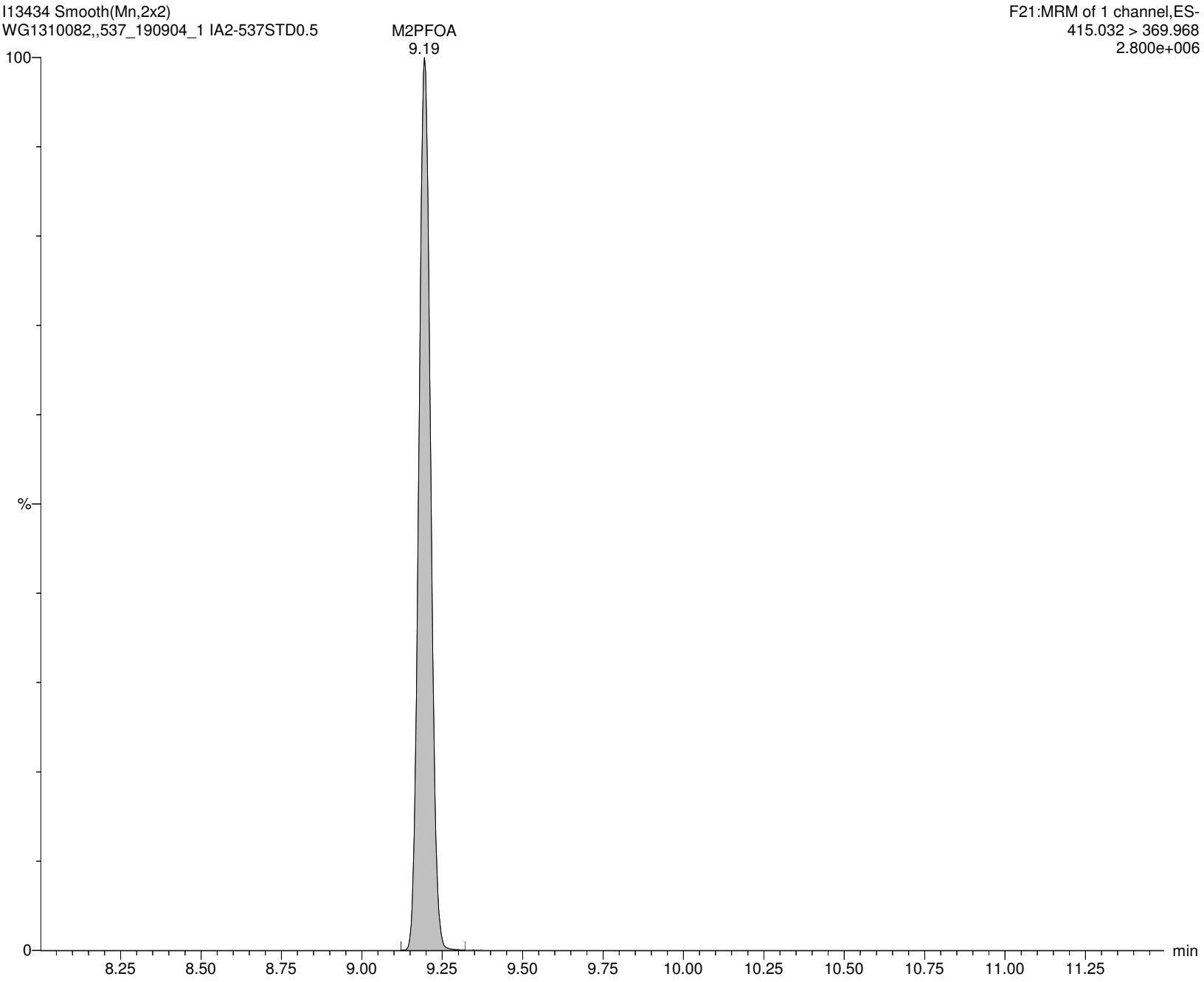



all concentration units in (ng/mL)

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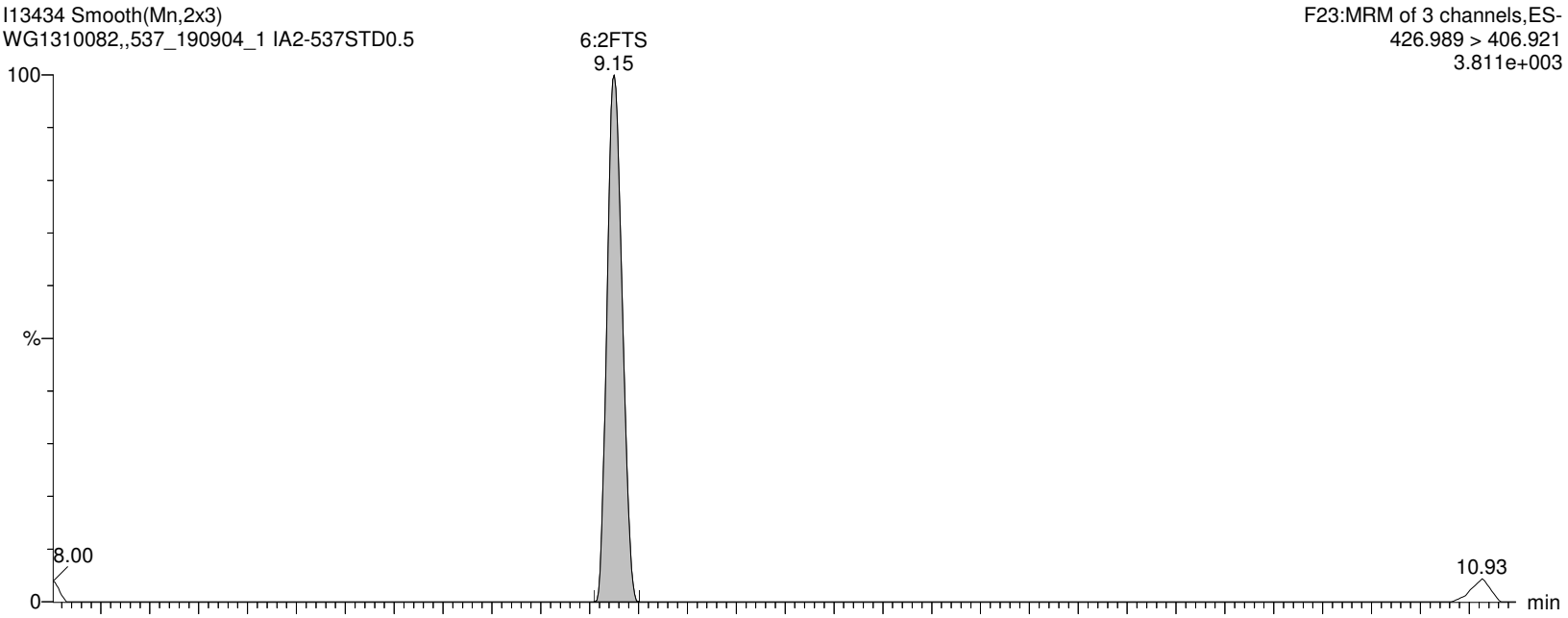
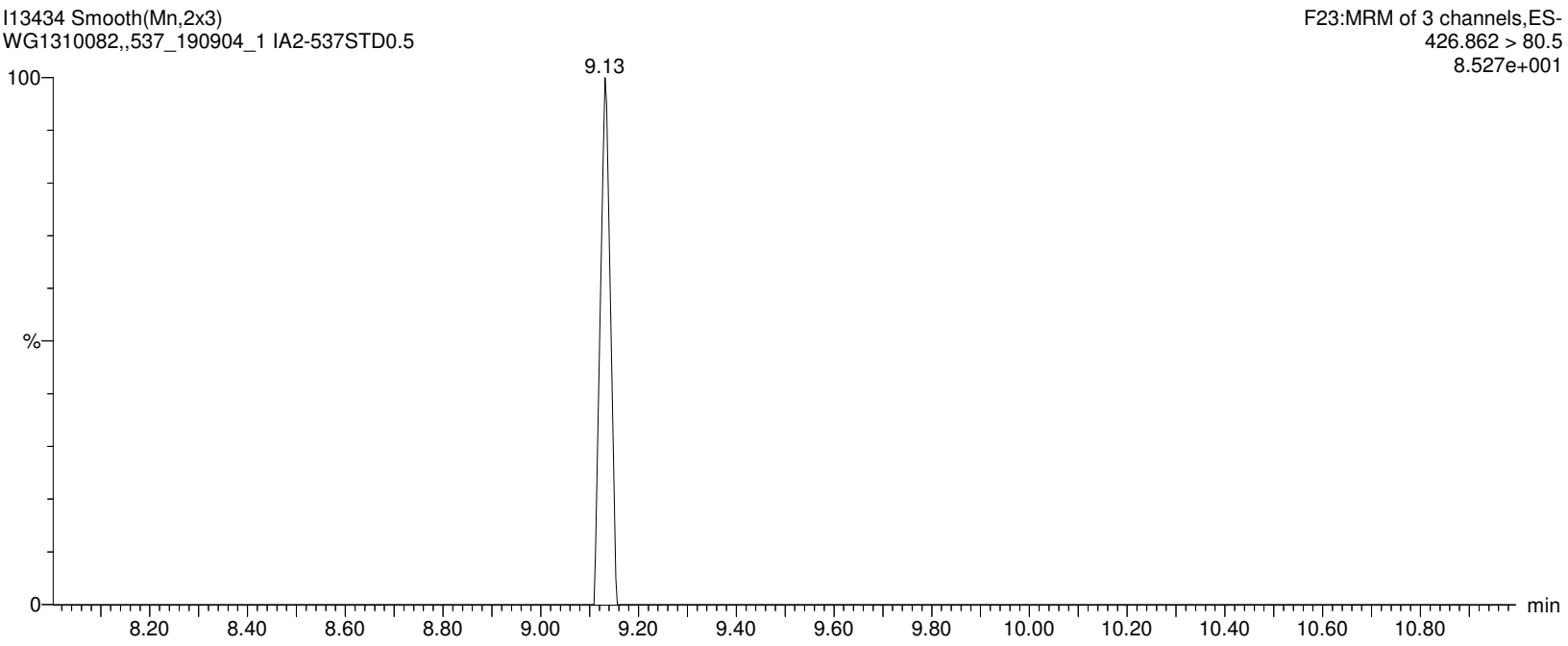
**6:2FTS**





all concentration units in (ng/mL)

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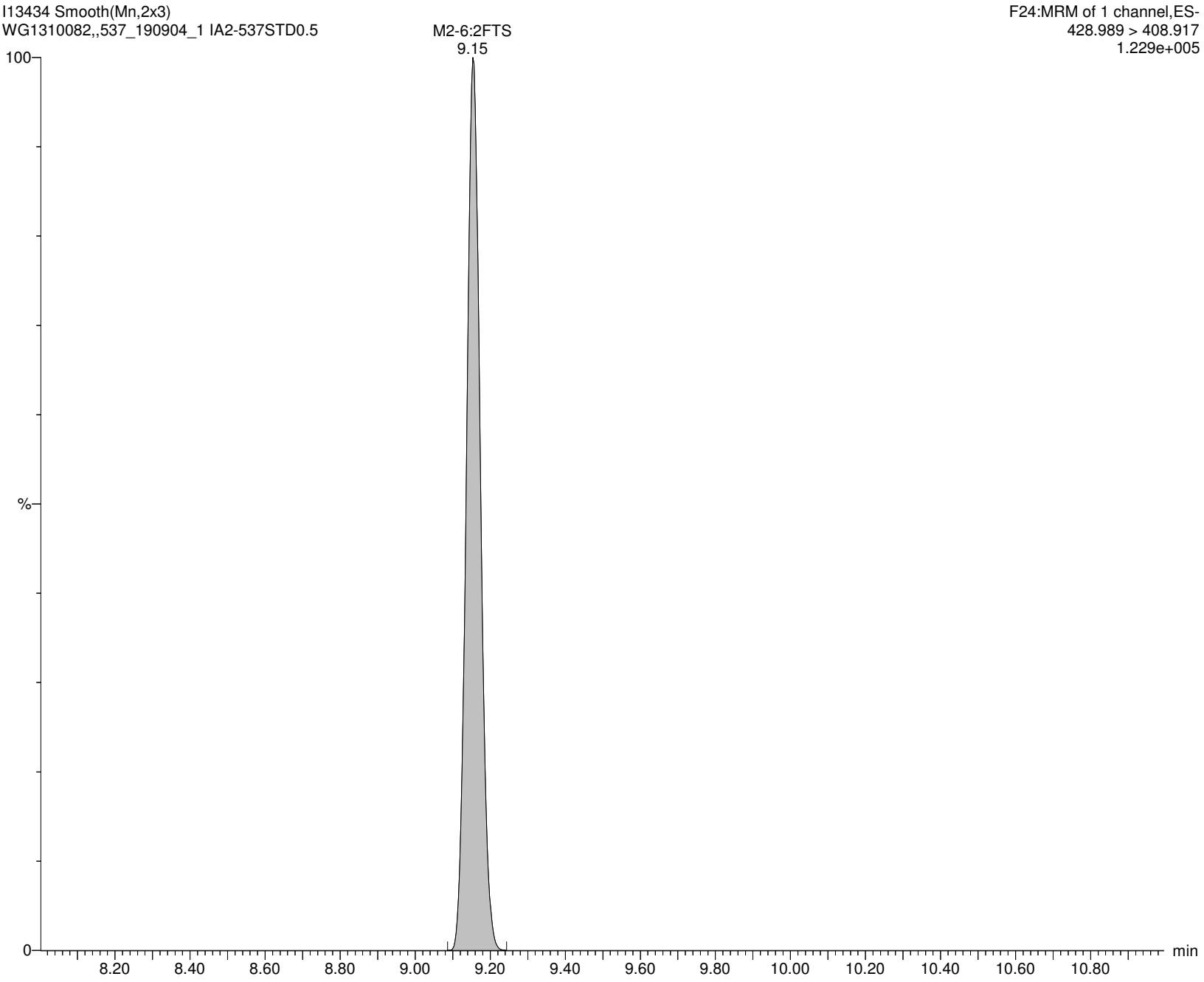
**M2-6:2FTS**





all concentration units in (ng/mL)

Alpha Analytical Inc.
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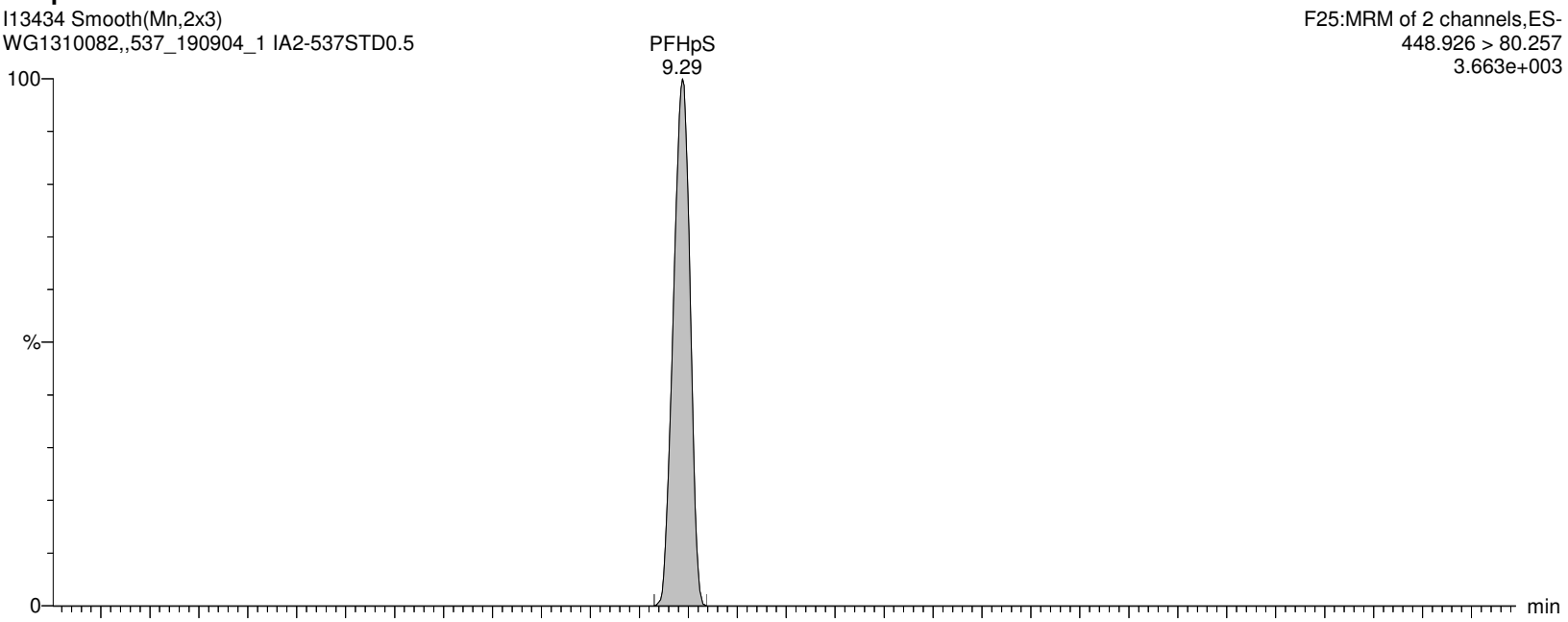


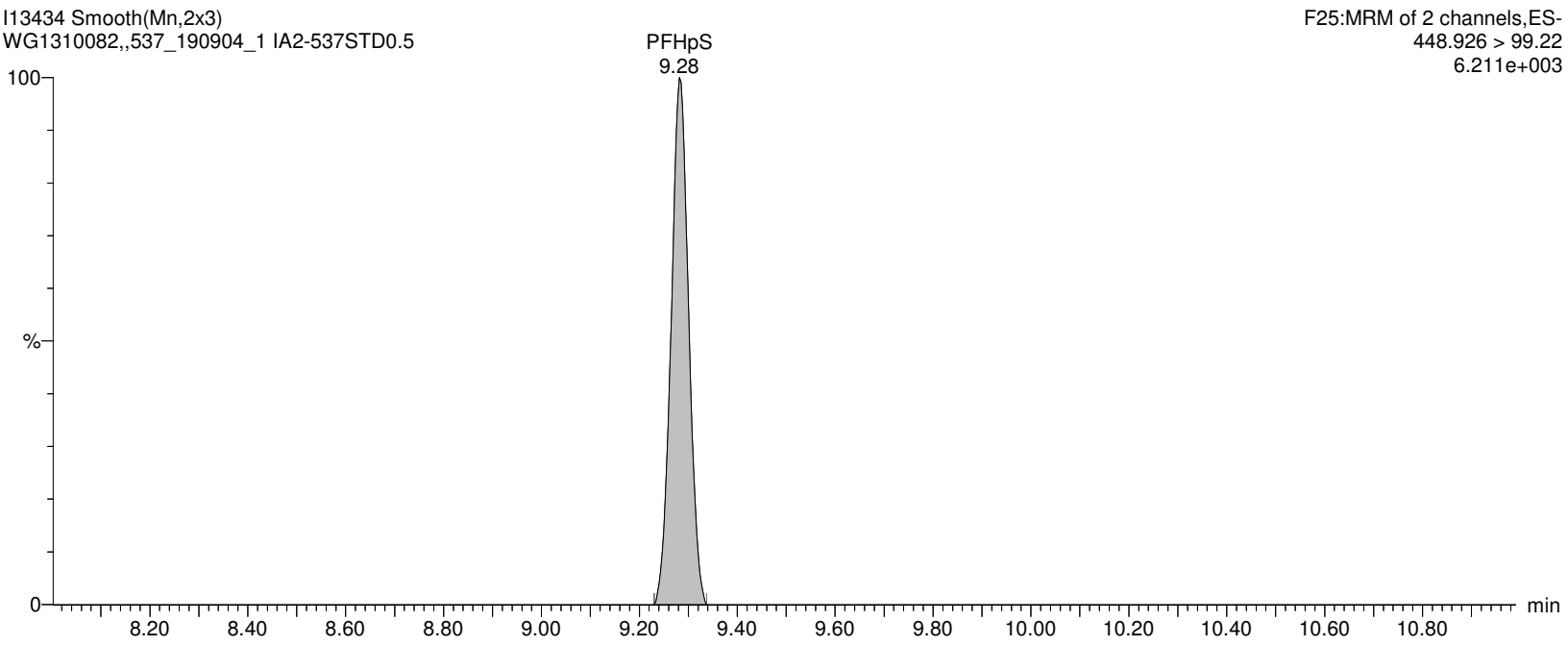



all concentration units in (ng/mL)

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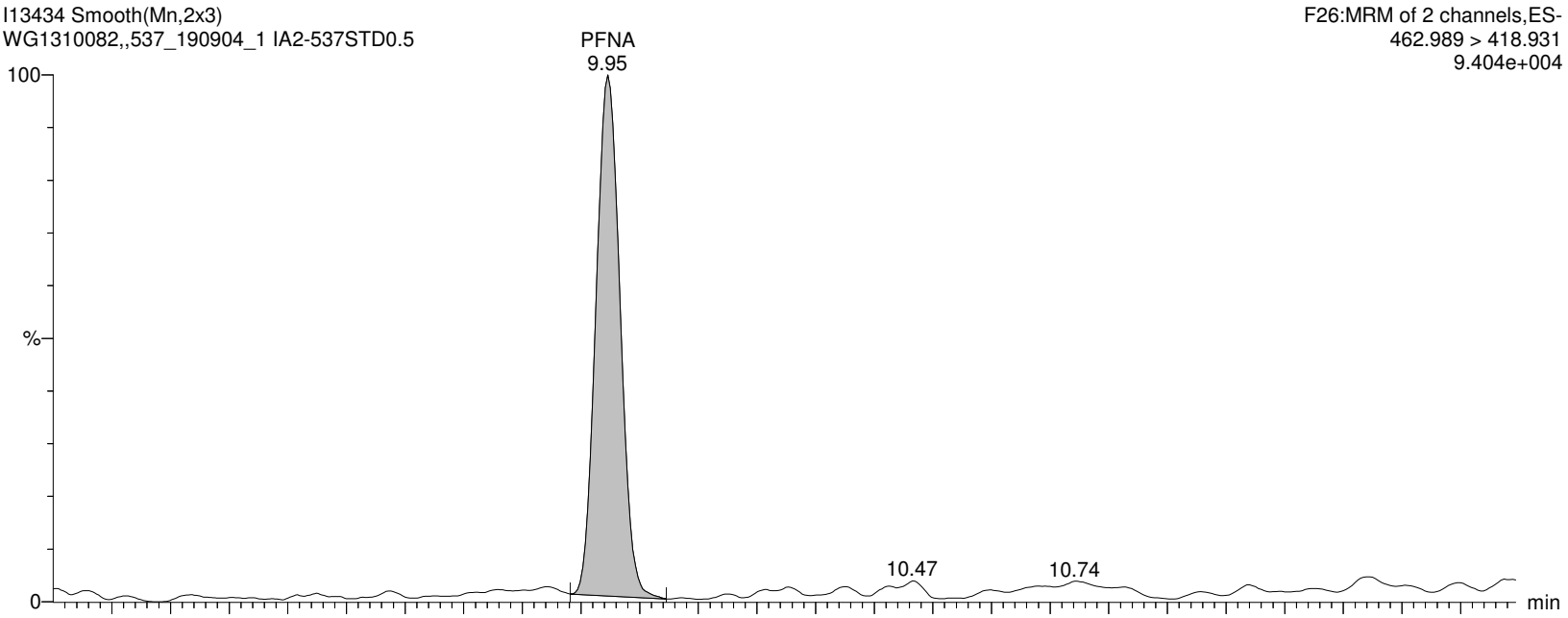


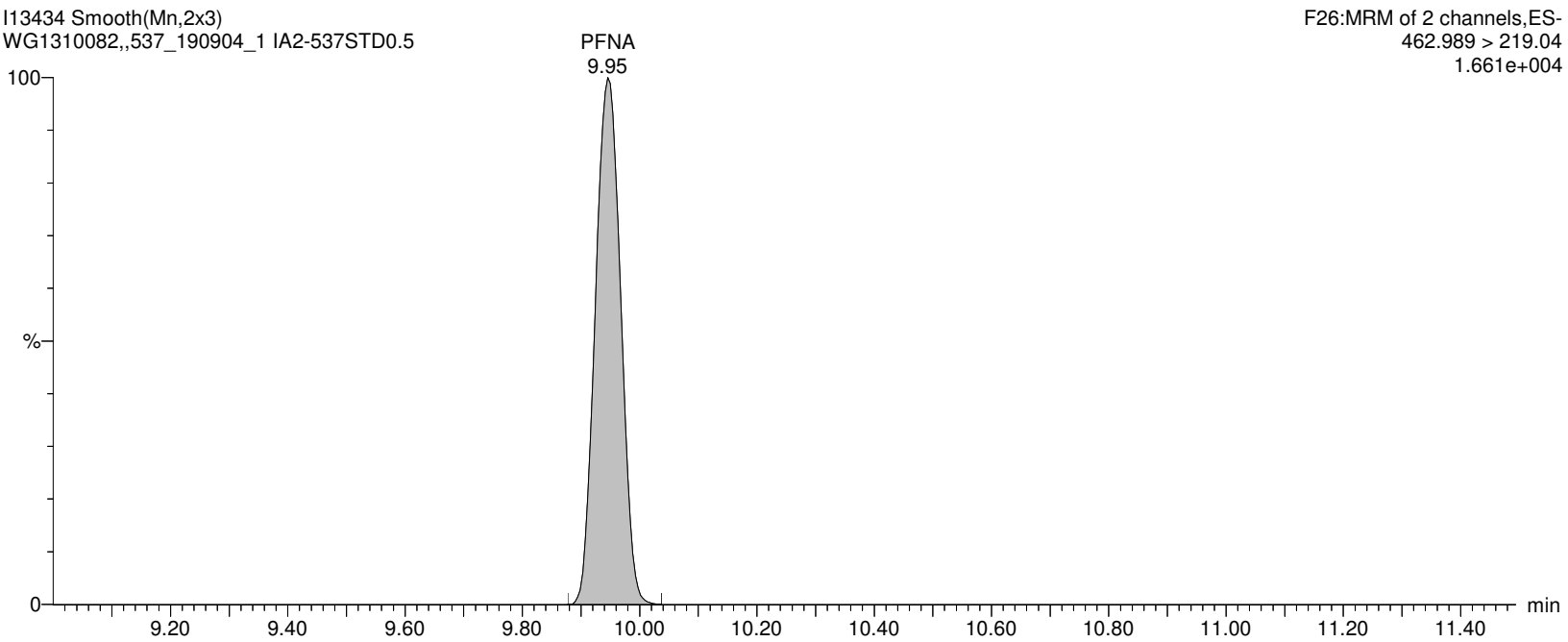



all concentration units in (ng/mL)

Alpha Analytical Inc.
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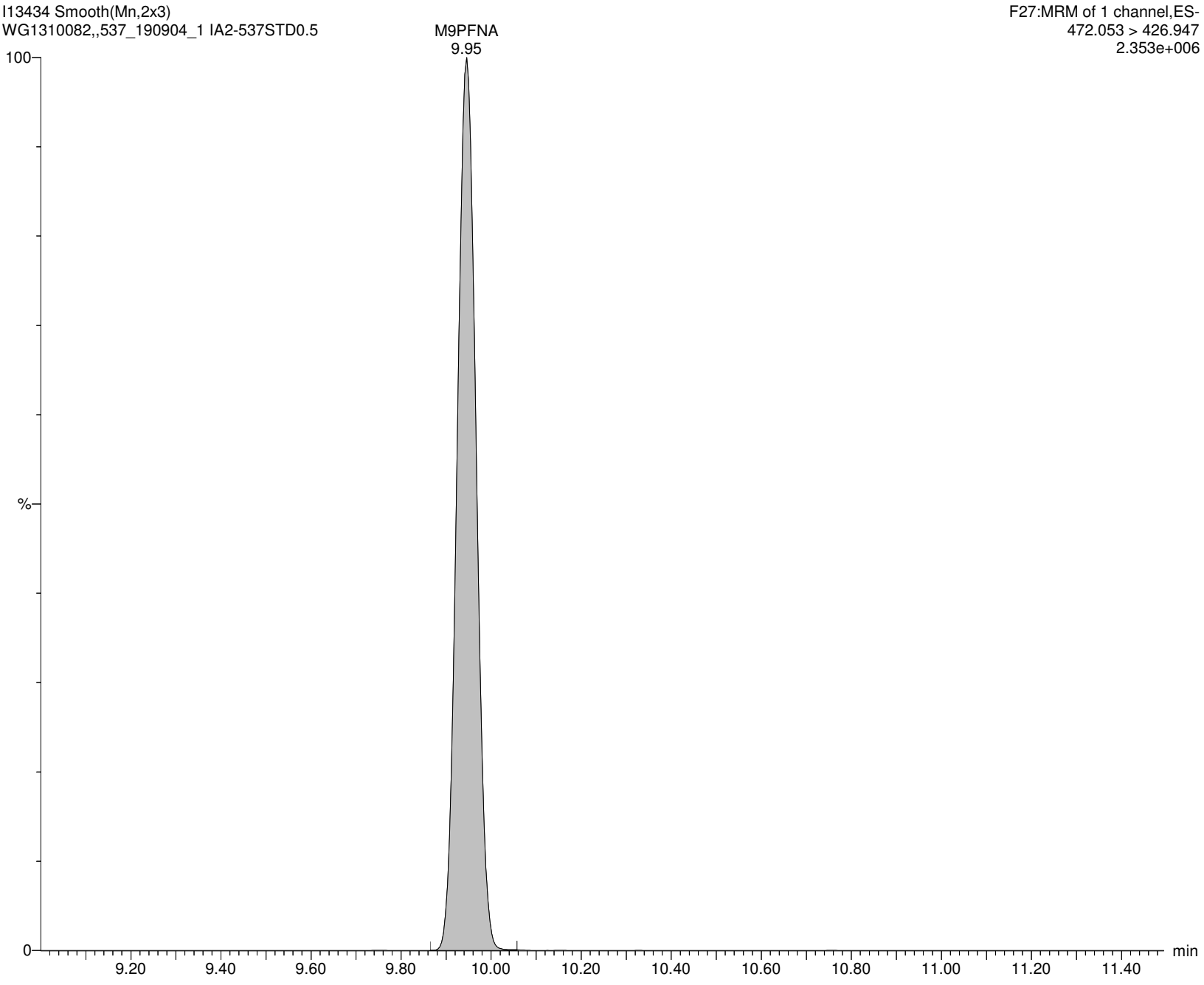



all concentration units in (ng/mL)

Alpha Analytical Inc.
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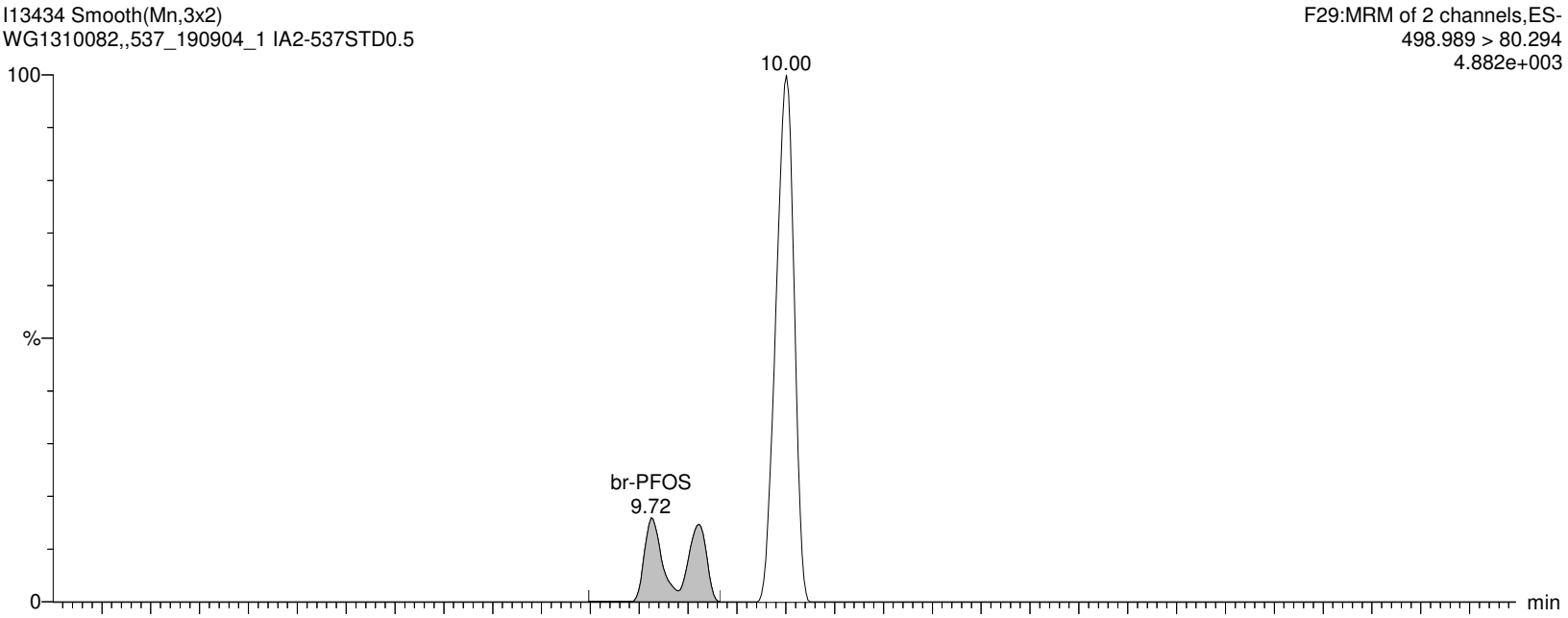
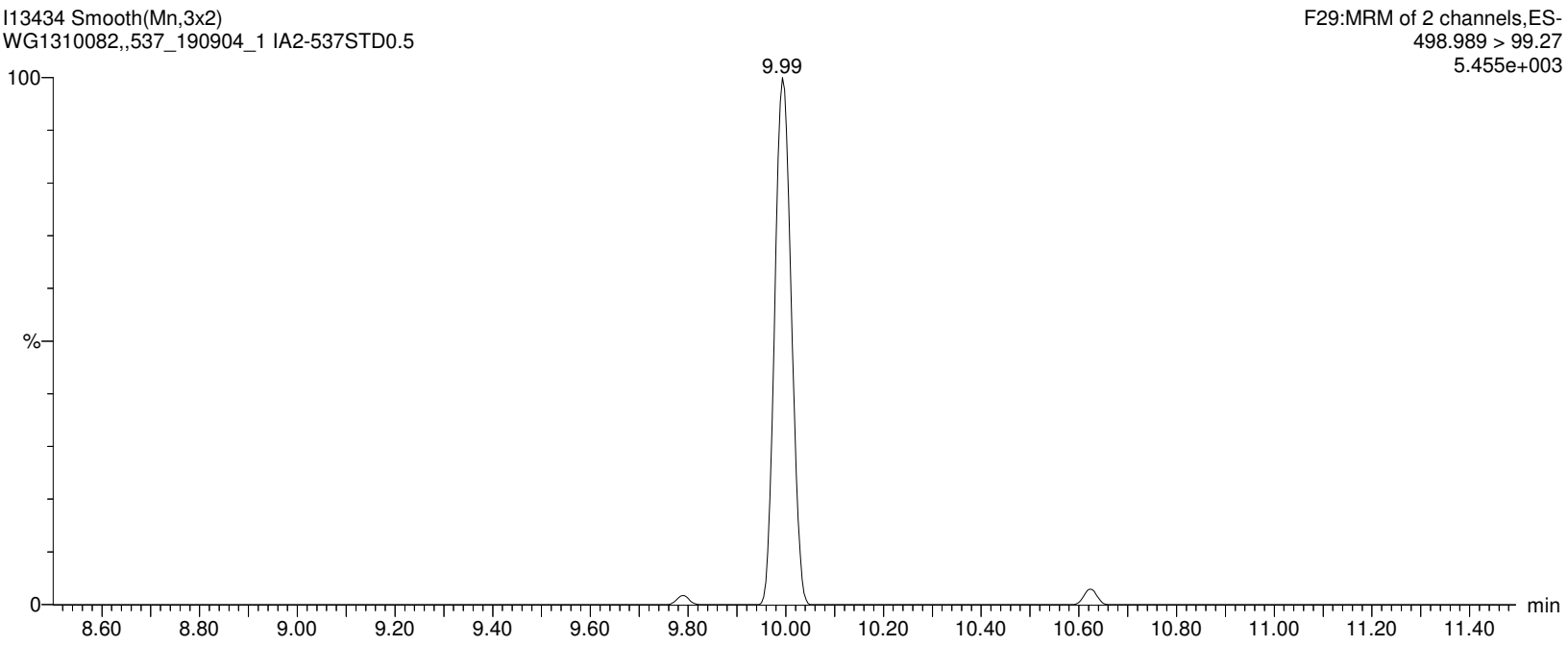
**br-PFOS**





all concentration units in (ng/mL)

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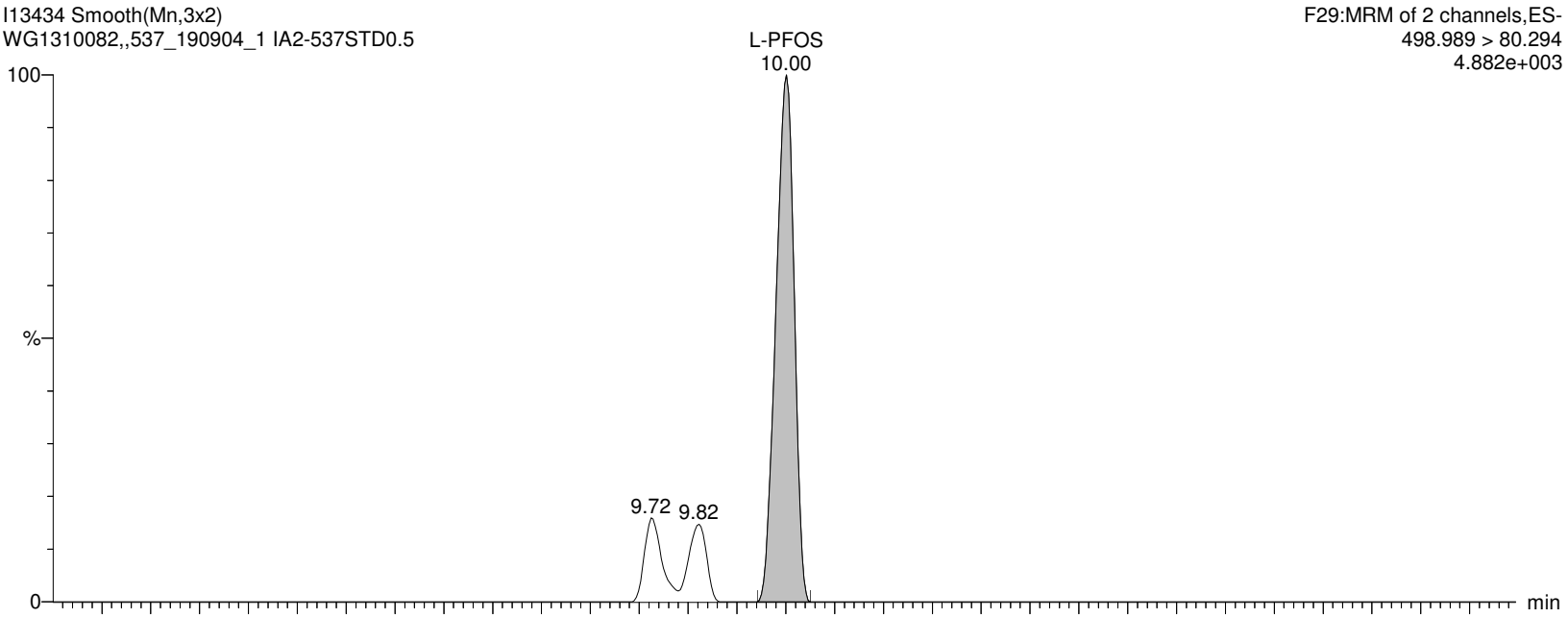
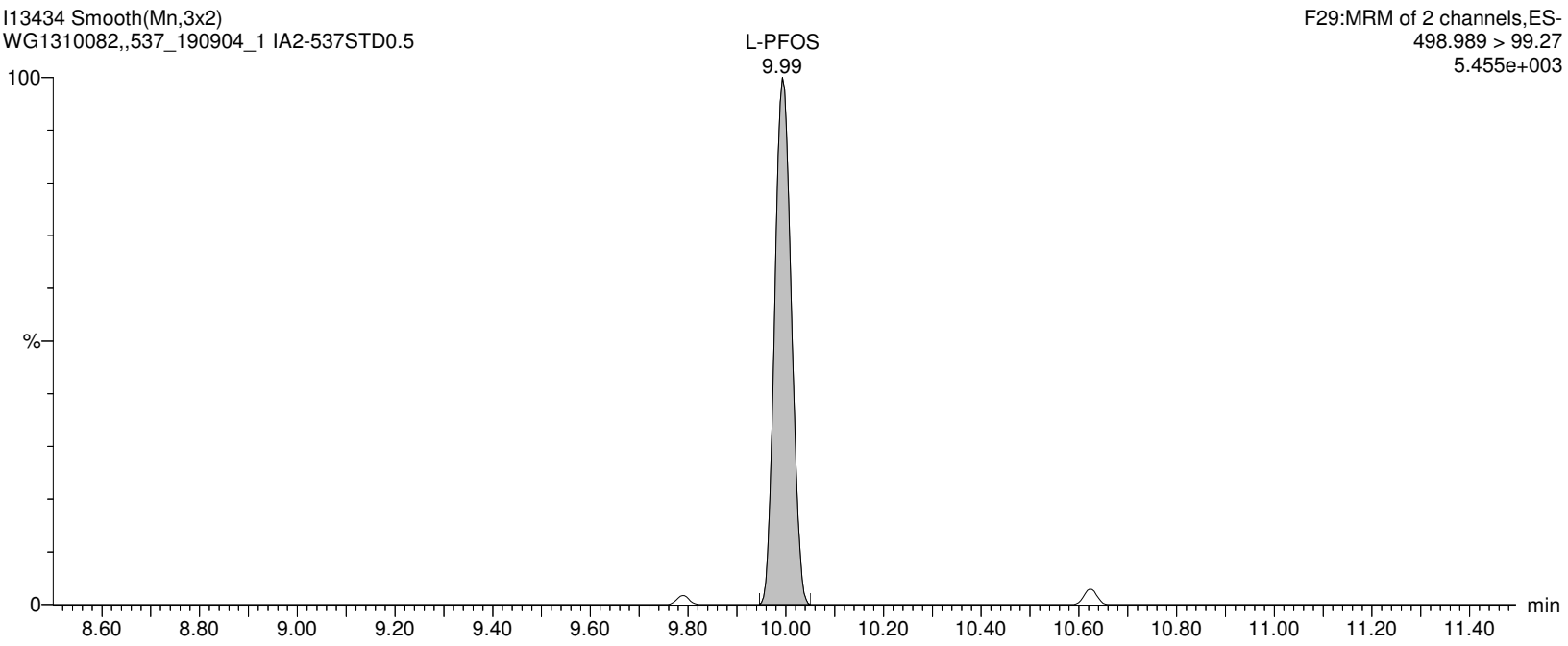
**L-PFOS**





all concentration units in (ng/mL)

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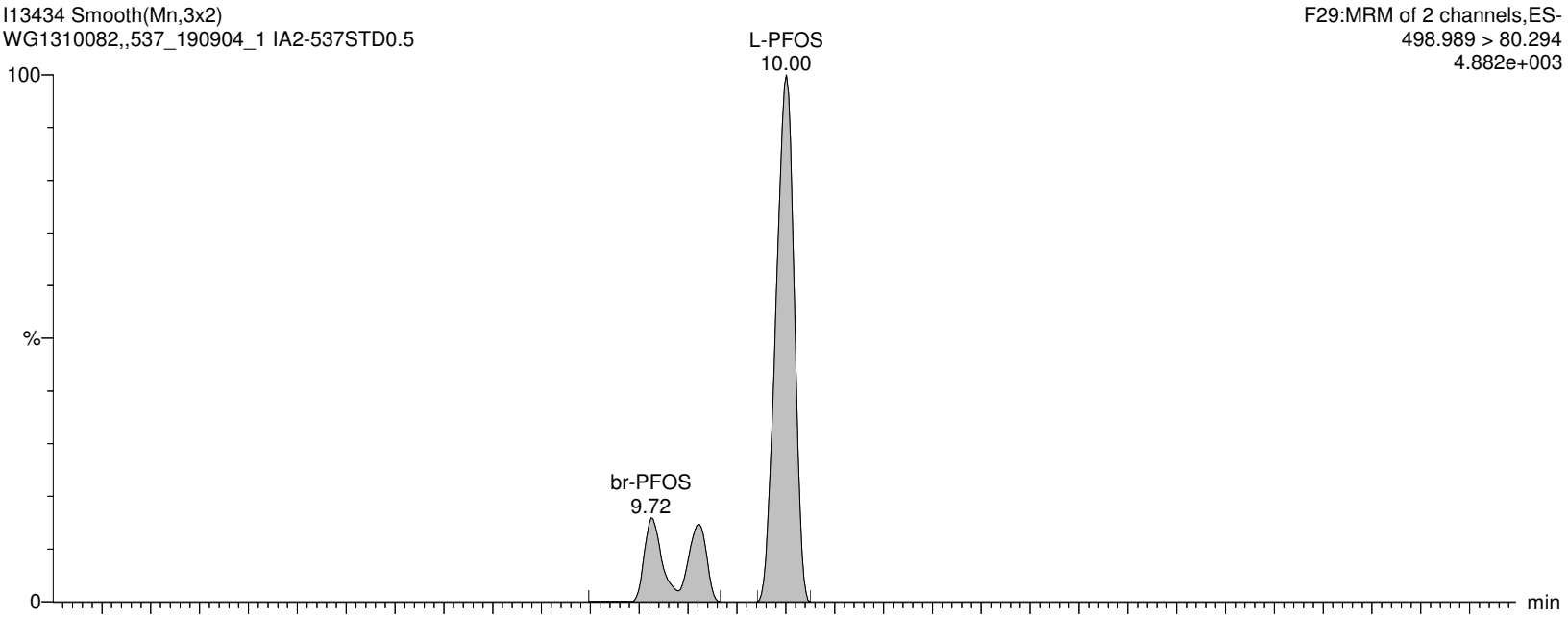
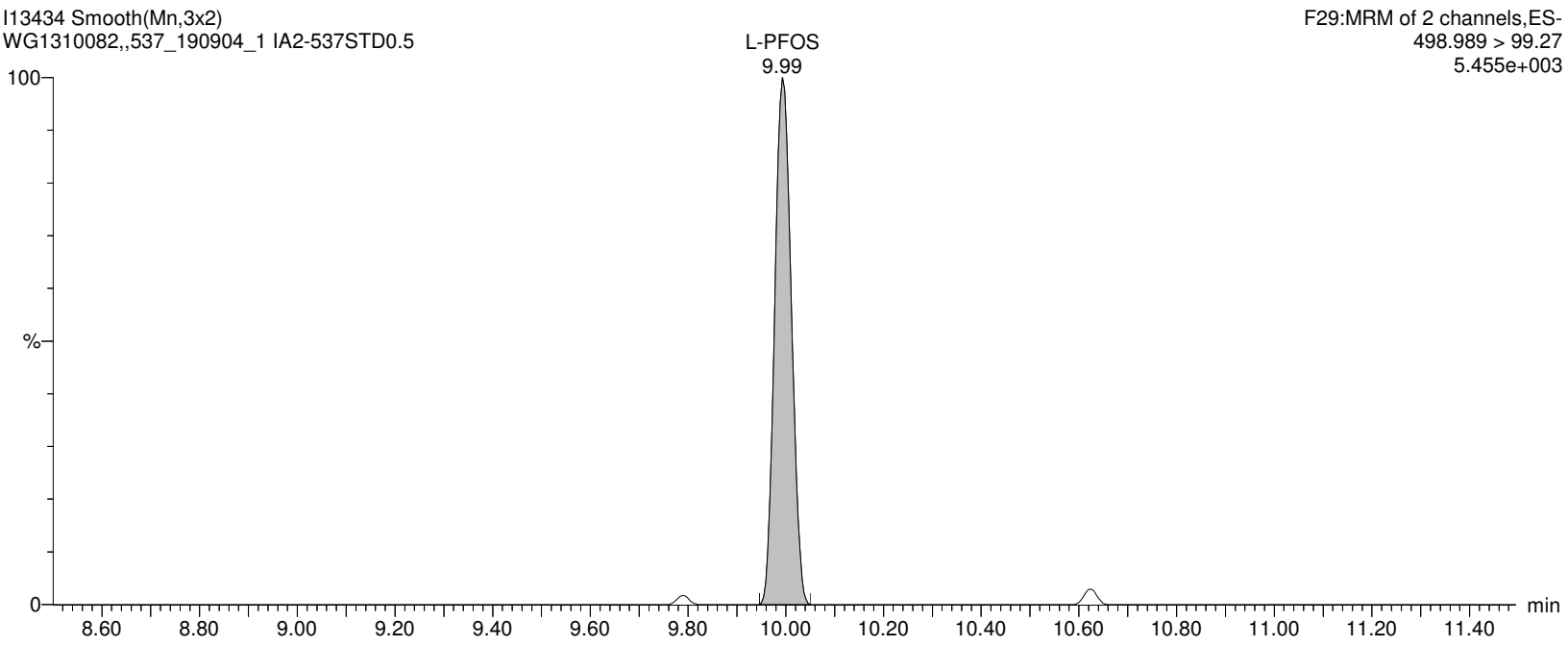
**PFOS**





all concentration units in (ng/mL)

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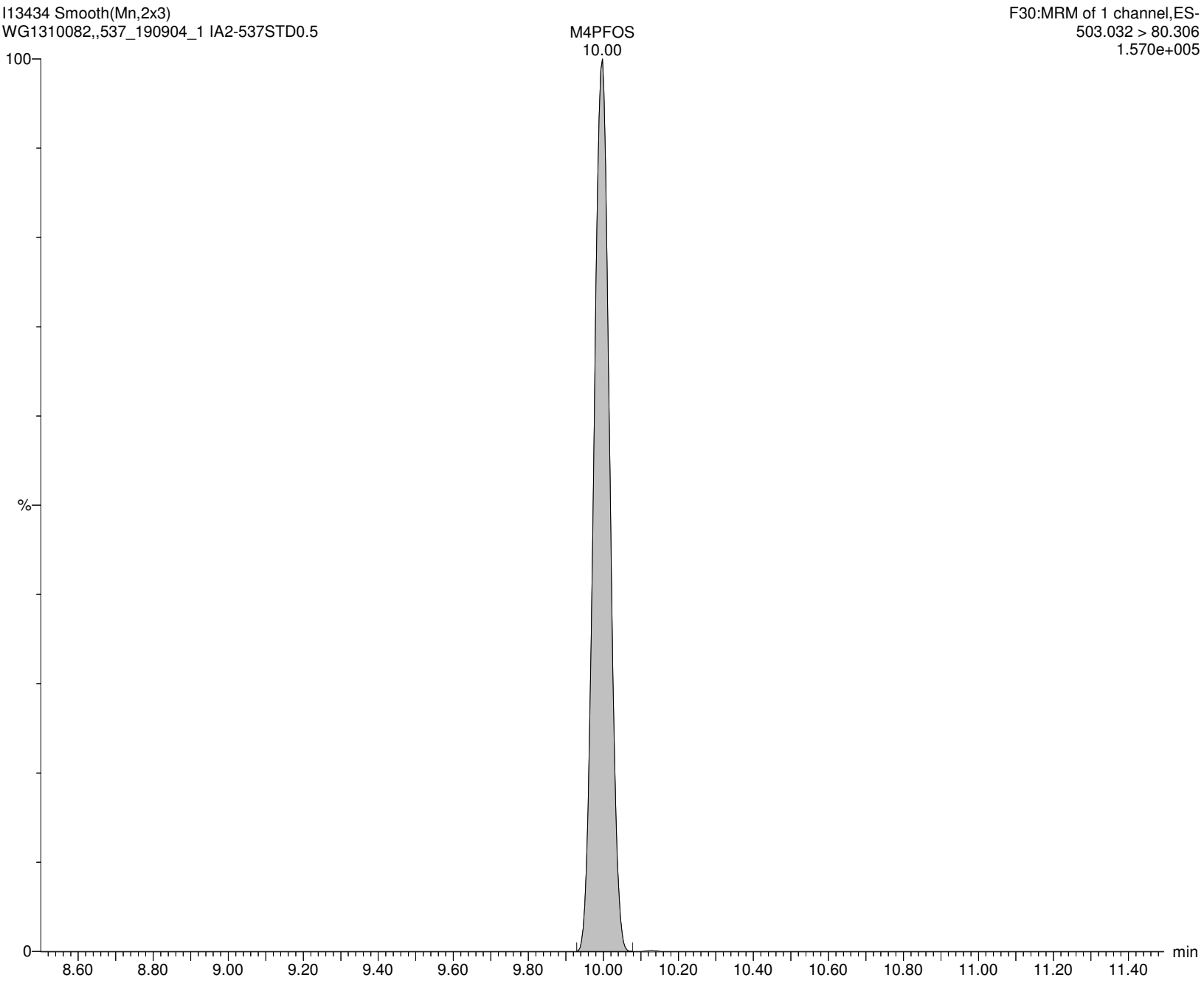
**M4PFOS**





all concentration units in (ng/mL)

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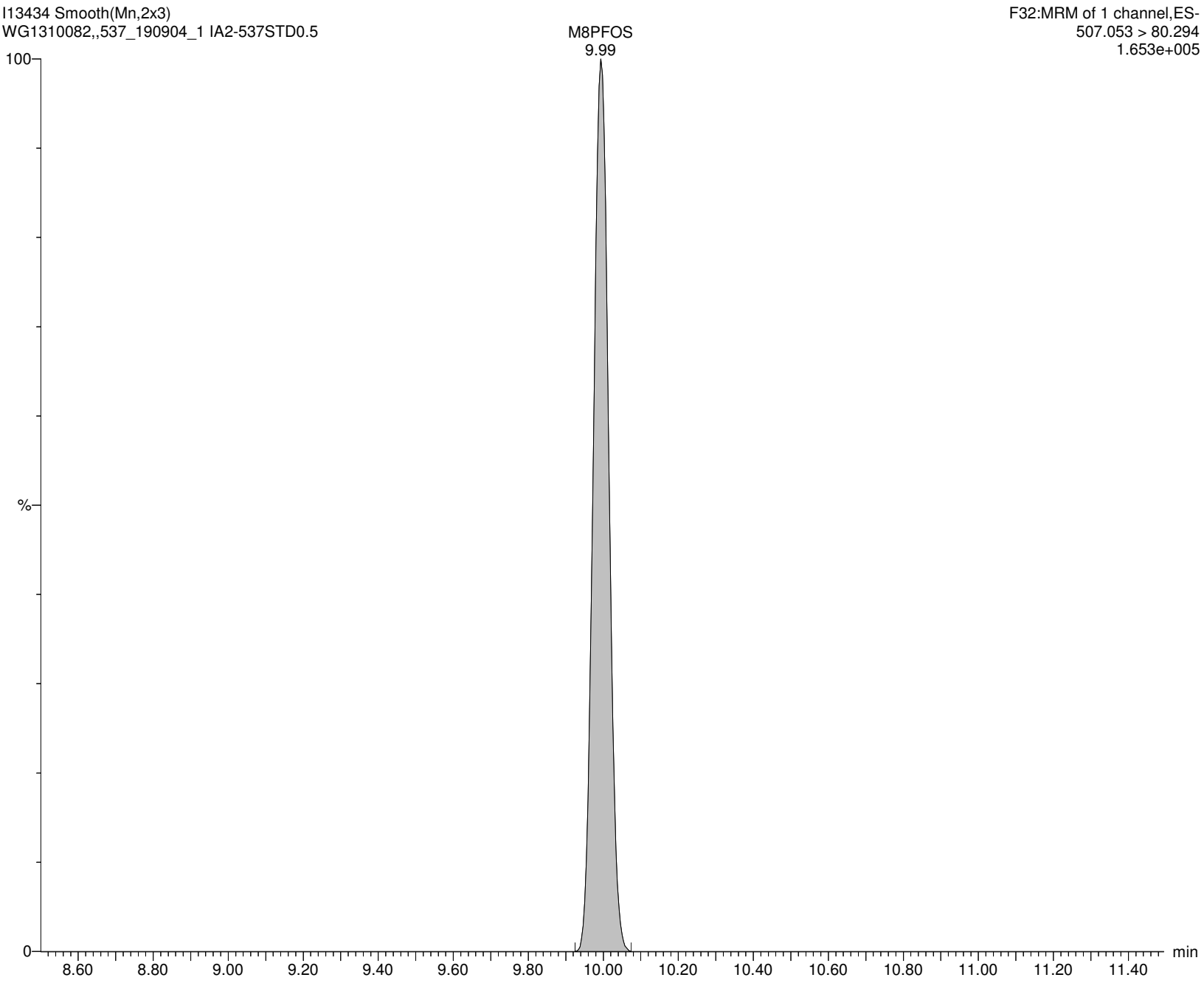
**M8PFOS**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
Printed: Monday, November 18, 2019 13:42:48 Eastern Standard Time

**Name: I13434**
**ID: IA2-537STD0.5**
**Date: 18-Nov-2019**
**Time: 10:24:43**
**Description: WG1310082,,537_190904_1**
**User: LCMS02:JW**
**Vial: 1:A,2**
**Instrument: XEVO-TQSmicro#QEB0050**
**Inlet Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\LCMS_537_ISO_B**
**Tune Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\181009_TUNE.IPR**
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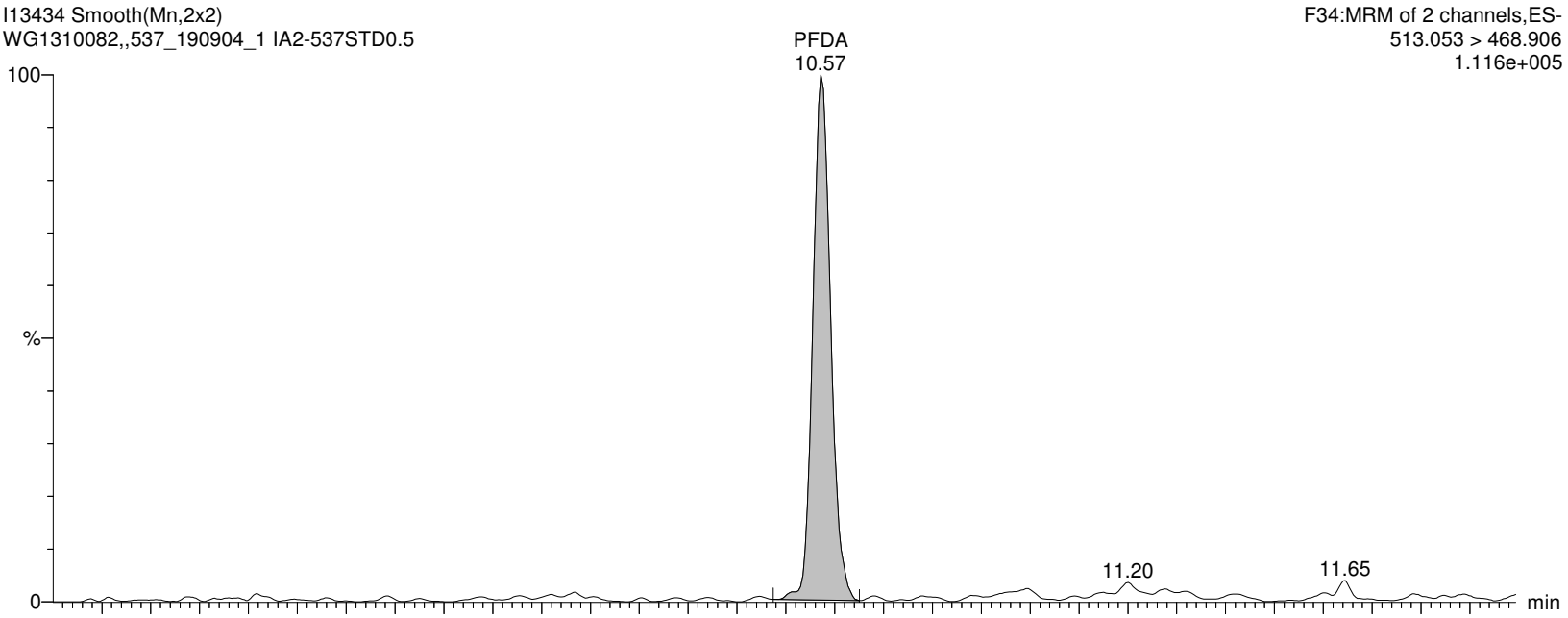


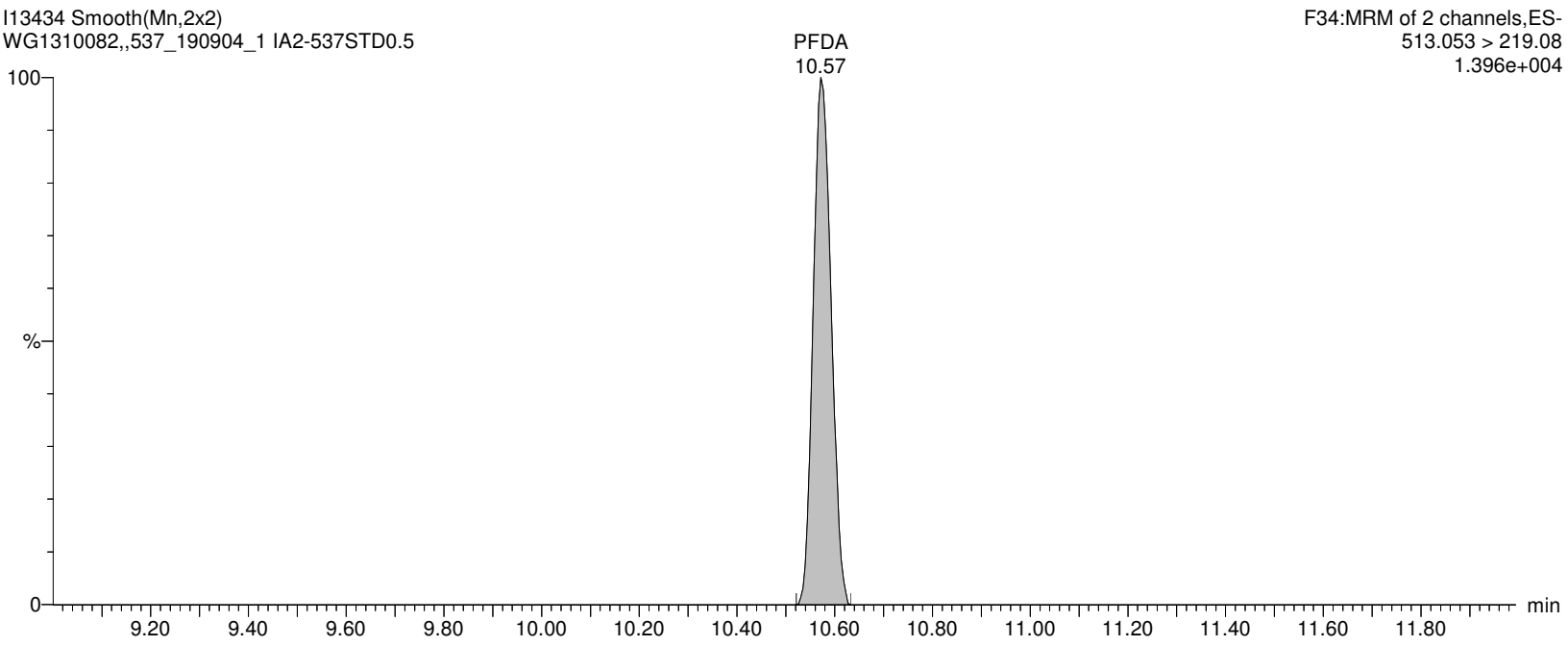



all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
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**Vial: 1:A,2**
**Instrument: XEVO-TQSmicro#QEB0050**
**Inlet Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\LCMS_537_ISO_B**
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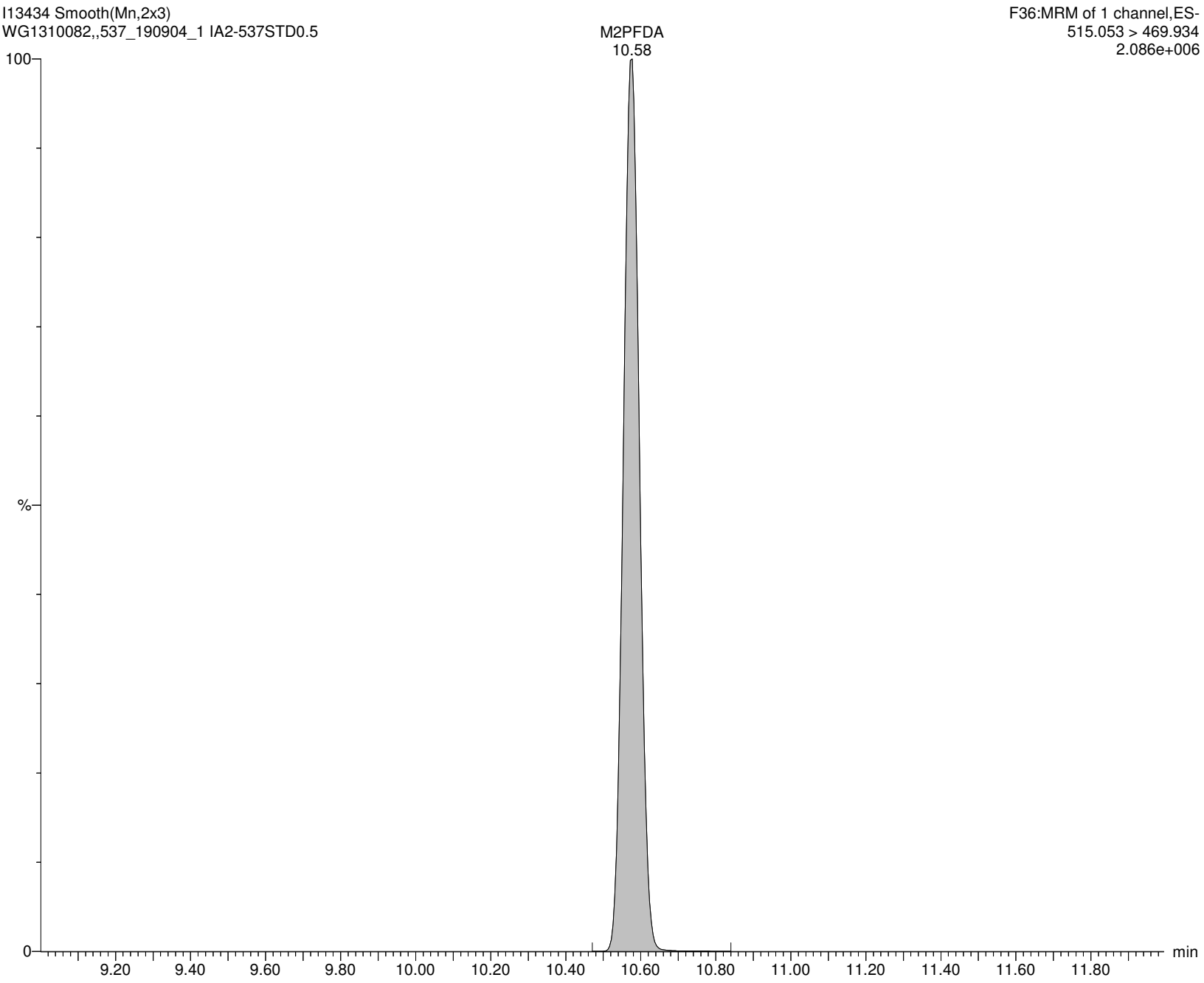



all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
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**User: LCMS02:JW**
**Vial: 1:A,2**
**Instrument: XEVO-TQSmicro#QEB0050**
**Inlet Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\LCMS_537_ISO_B**
**Tune Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\181009_TUNE.IPR**
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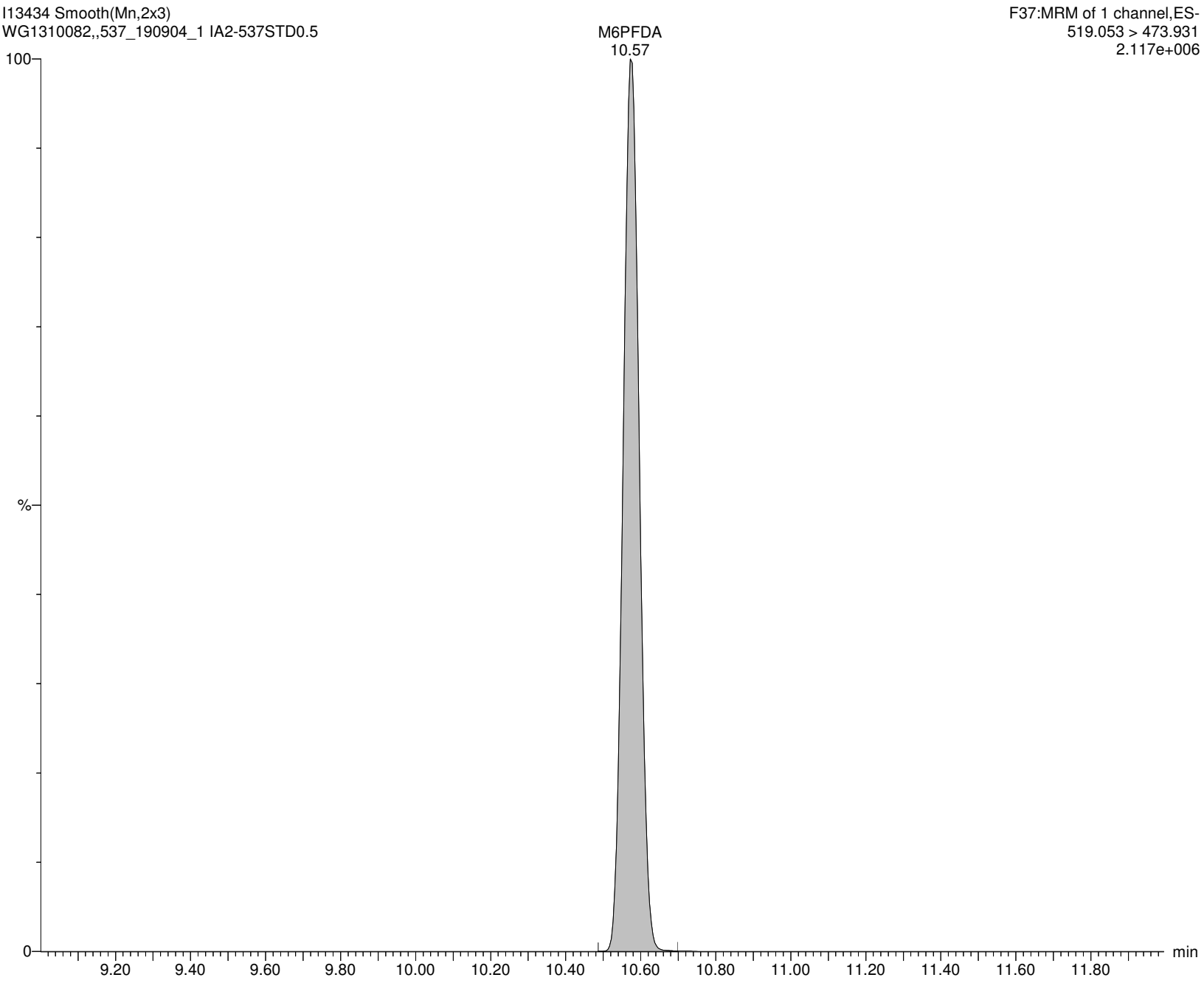



all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
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**Date: 18-Nov-2019**
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**Vial: 1:A,2**
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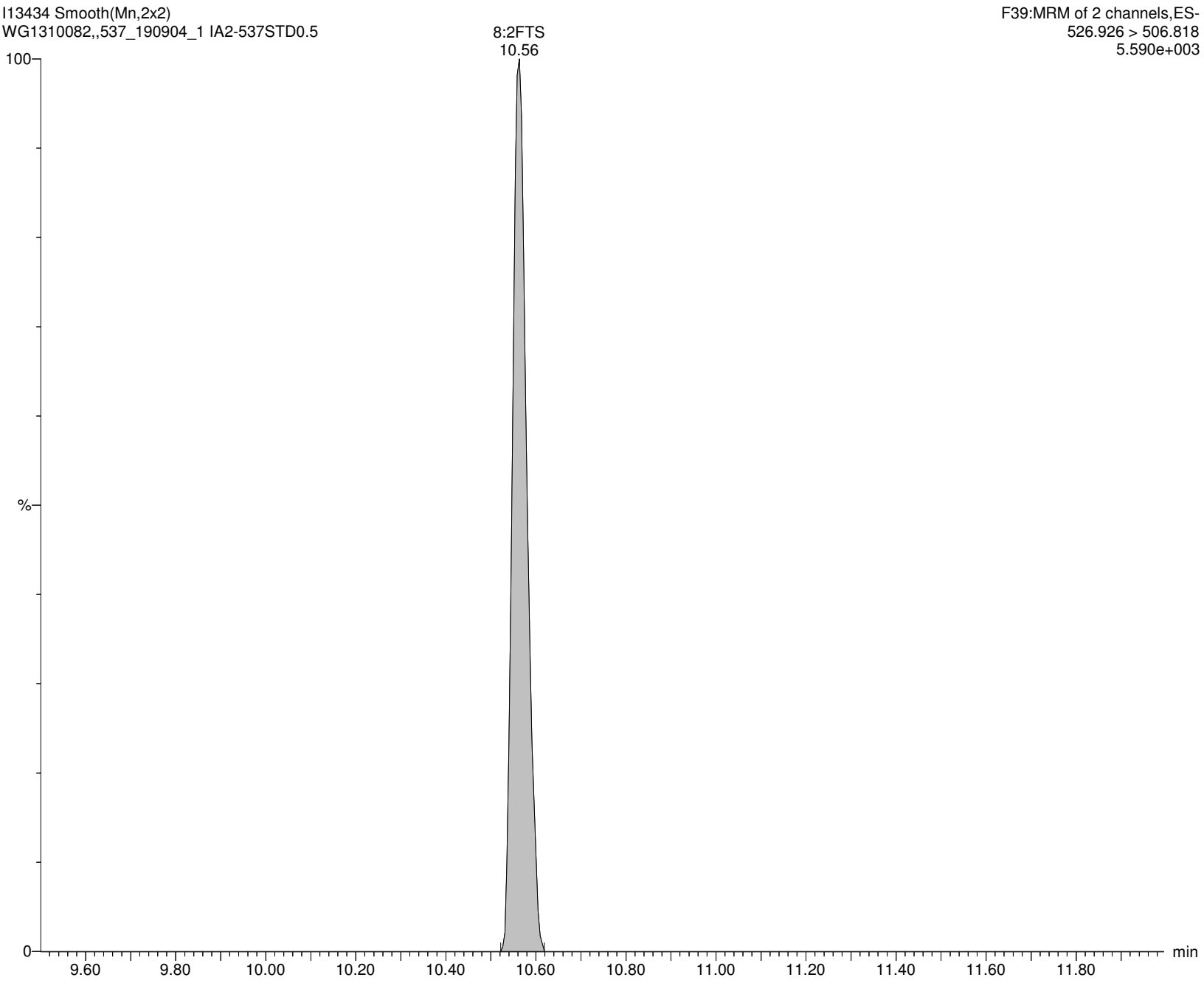
**8:2FTS**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
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**Time: 10:24:43**
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**Vial: 1:A,2**
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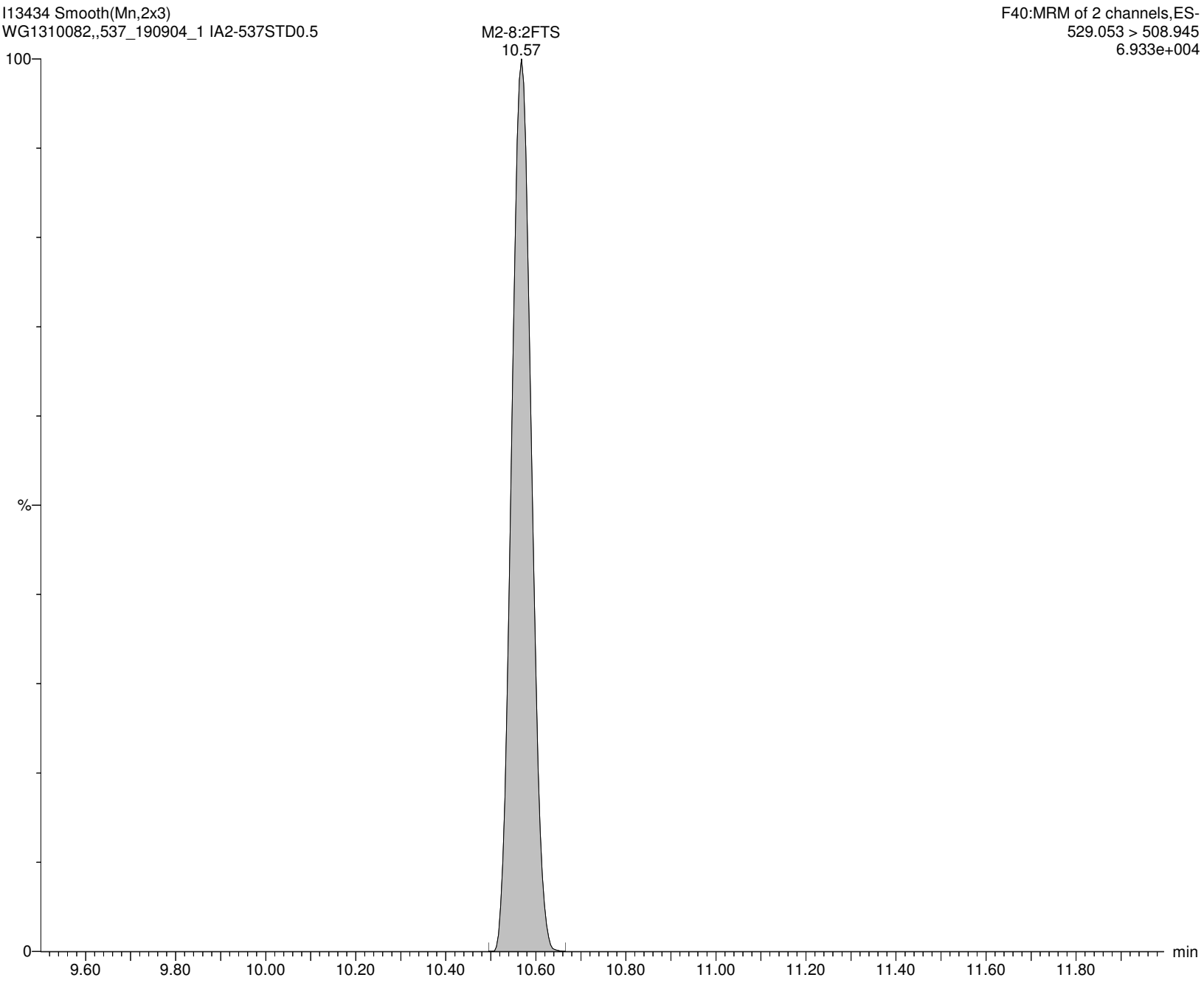
**MS Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**M2-8:2FTS**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
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**Vial: 1:A,2**
**Instrument: XEVO-TQSmicro#QEB0050**
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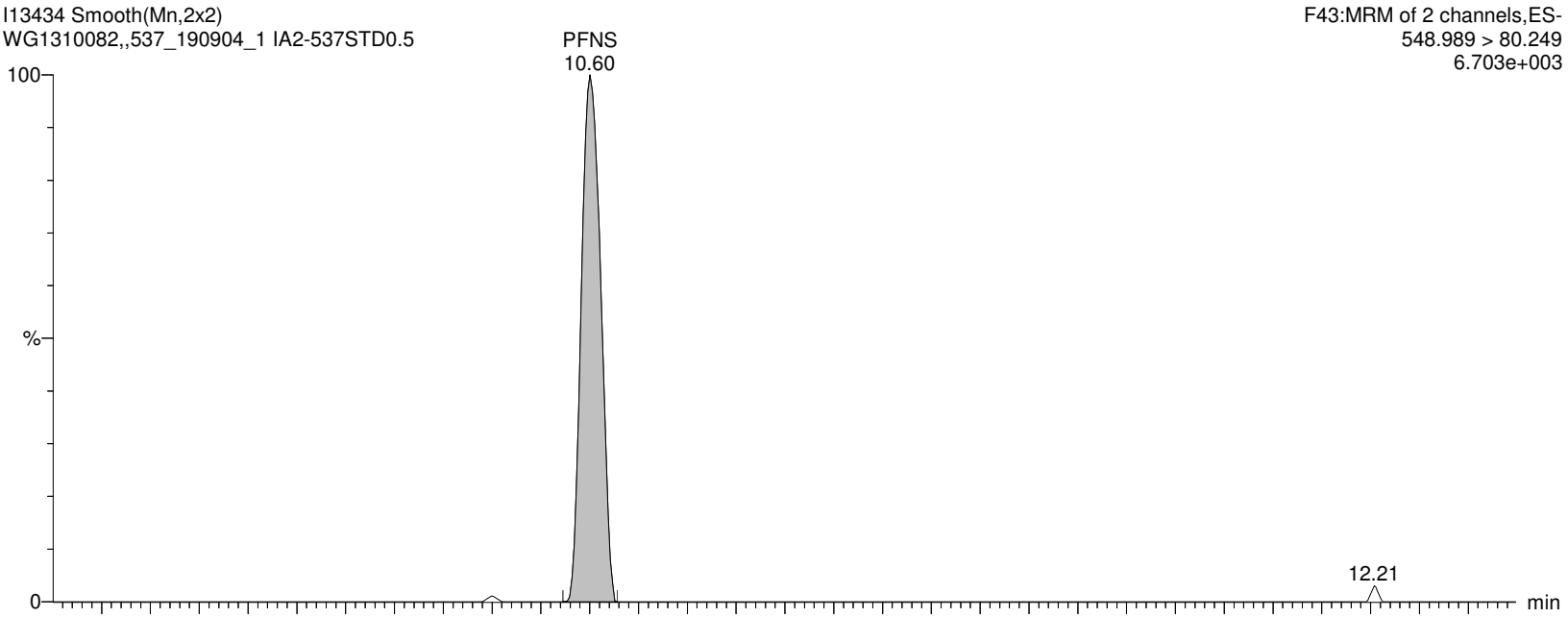
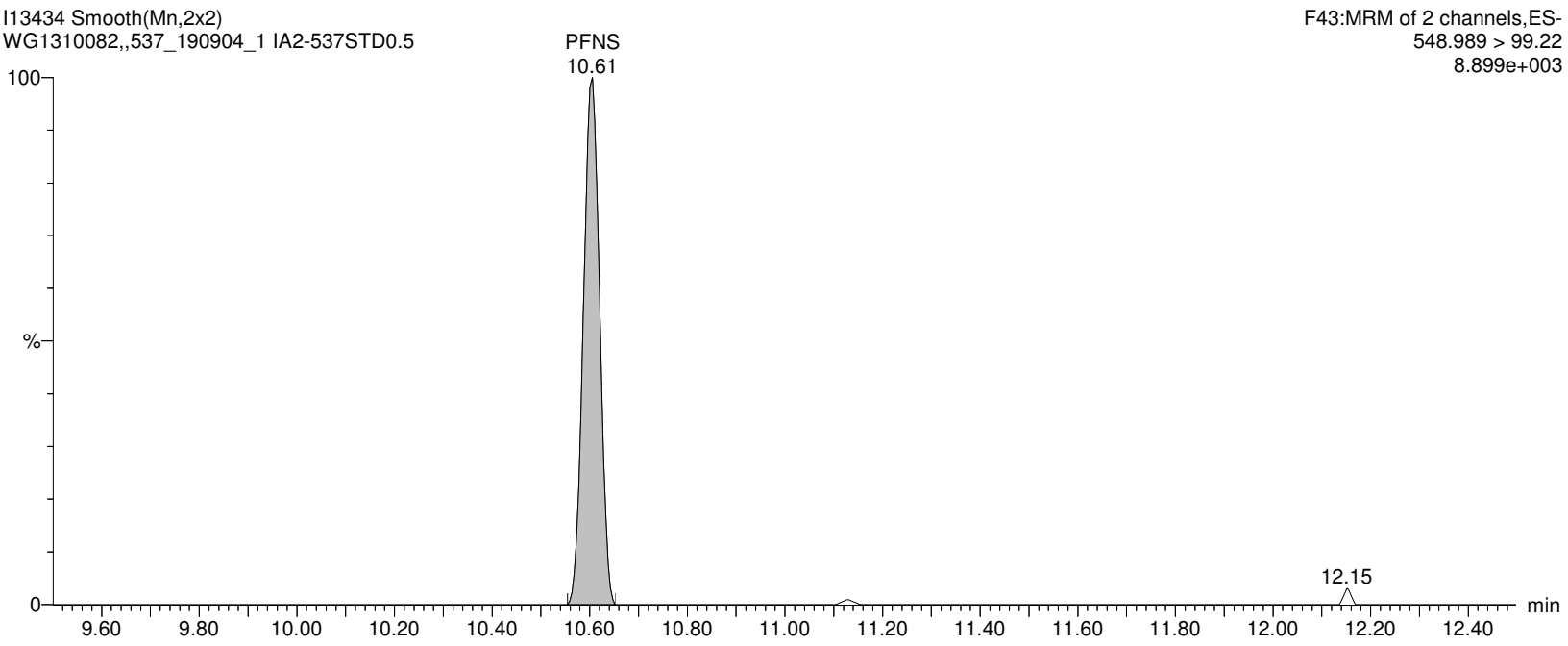
**PFNS**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
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**Vial: 1:A,2**
**Instrument: XEVO-TQSmicro#QEB0050**
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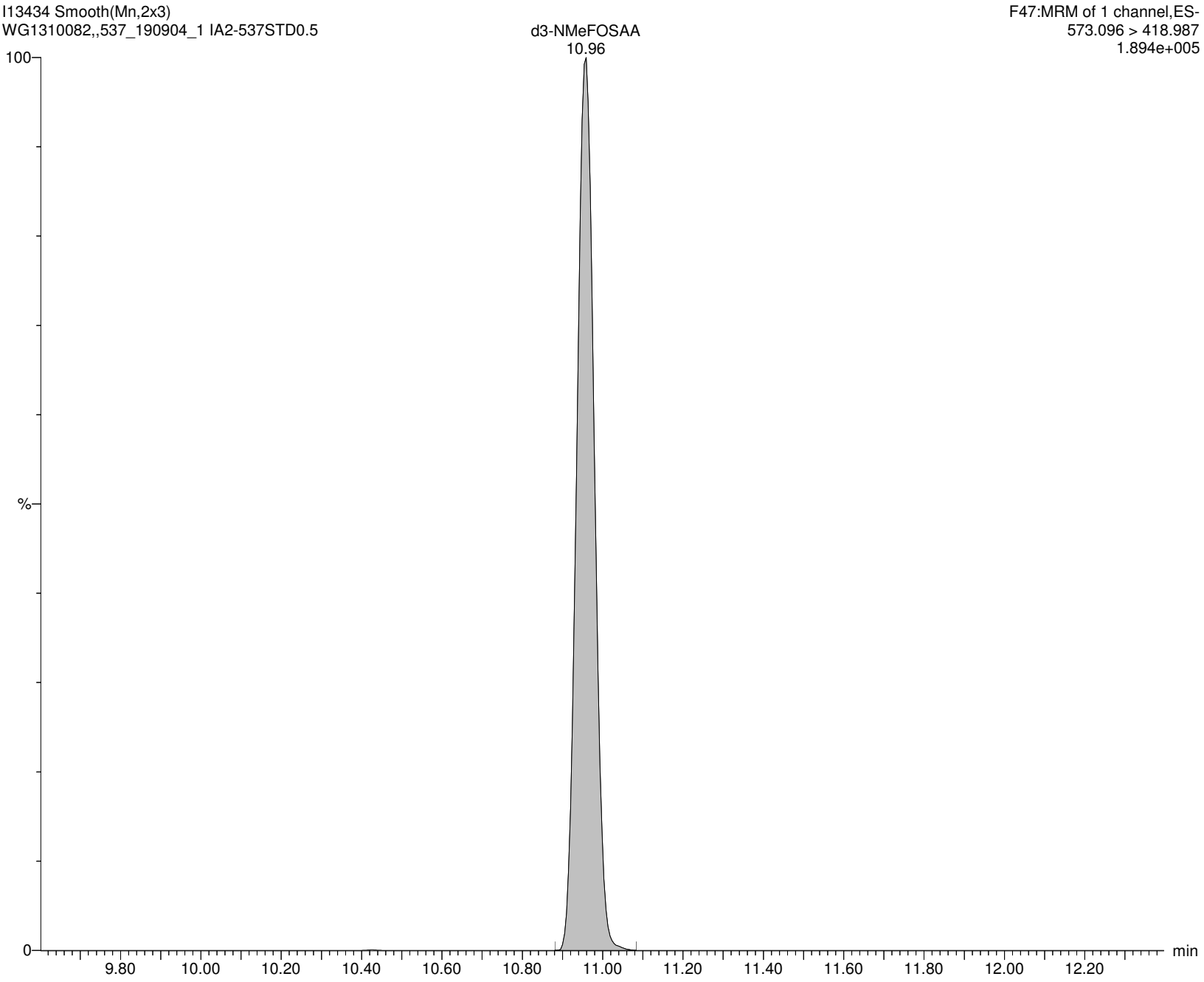
**d3-NMeFOSAA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
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**User: LCMS02:JW**
**Vial: 1:A,2**
**Instrument: XEVO-TQSmicro#QEB0050**
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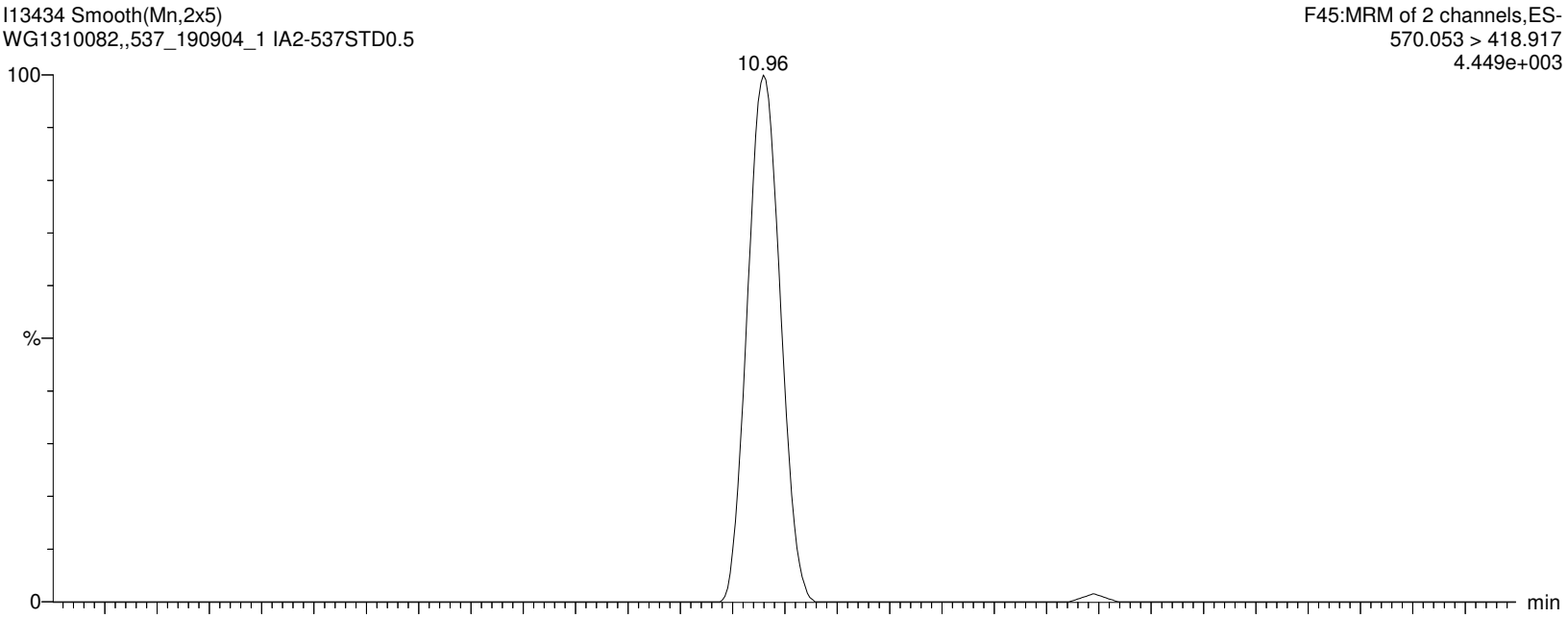
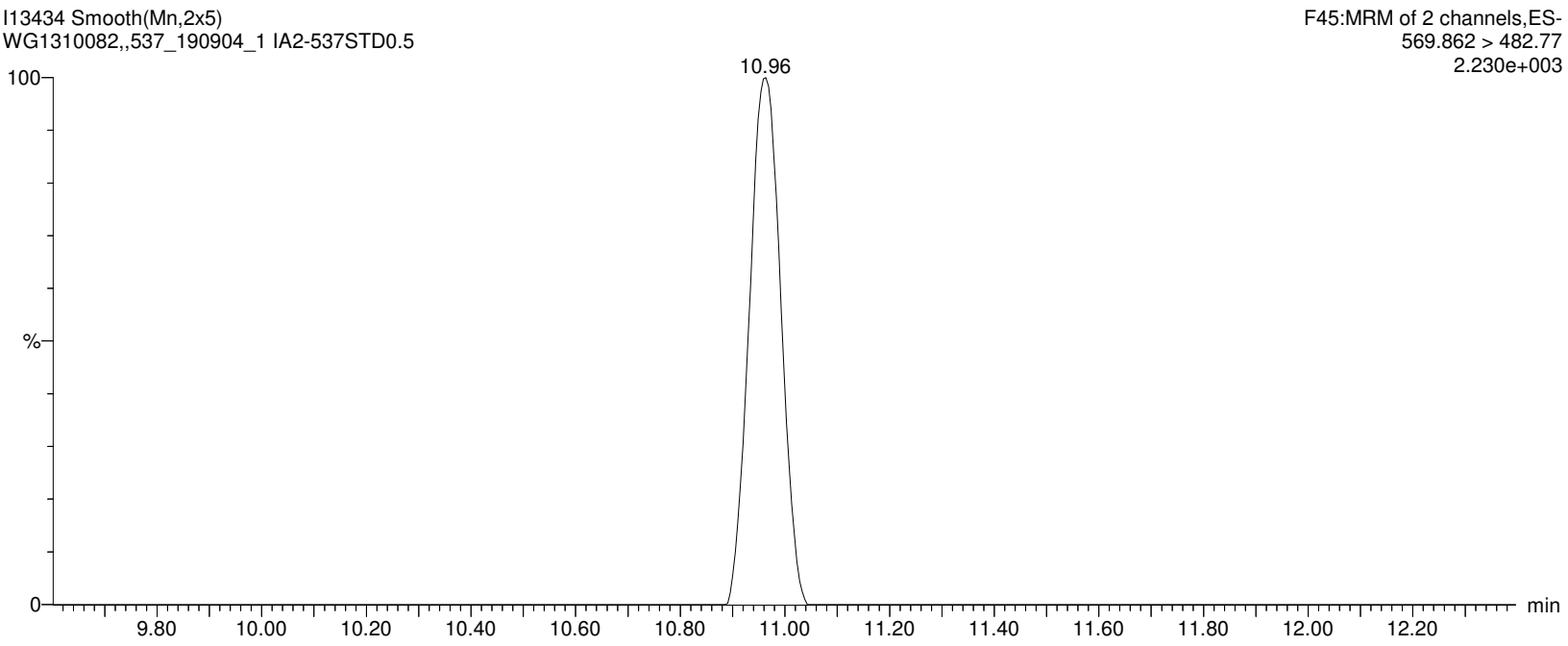
**br-NMeFOSAA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
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**Name: I13434**
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**User: LCMS02:JW**
**Vial: 1:A,2**
**Instrument: XEVO-TQSmicro#QEB0050**
**Inlet Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\LCMS_537_ISO_B**
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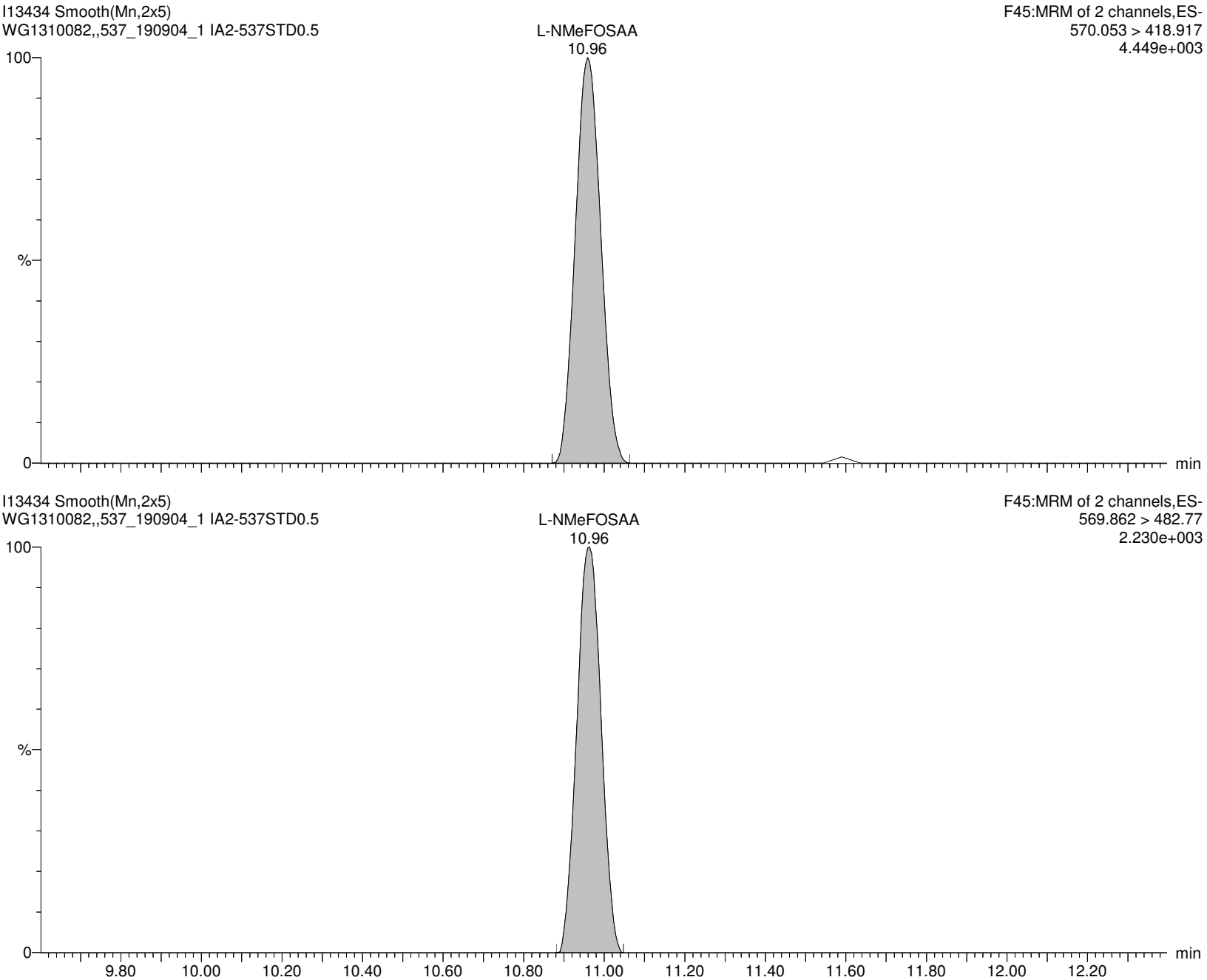
**L-NMeFOSAA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
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**ID: IA2-537STD0.5**
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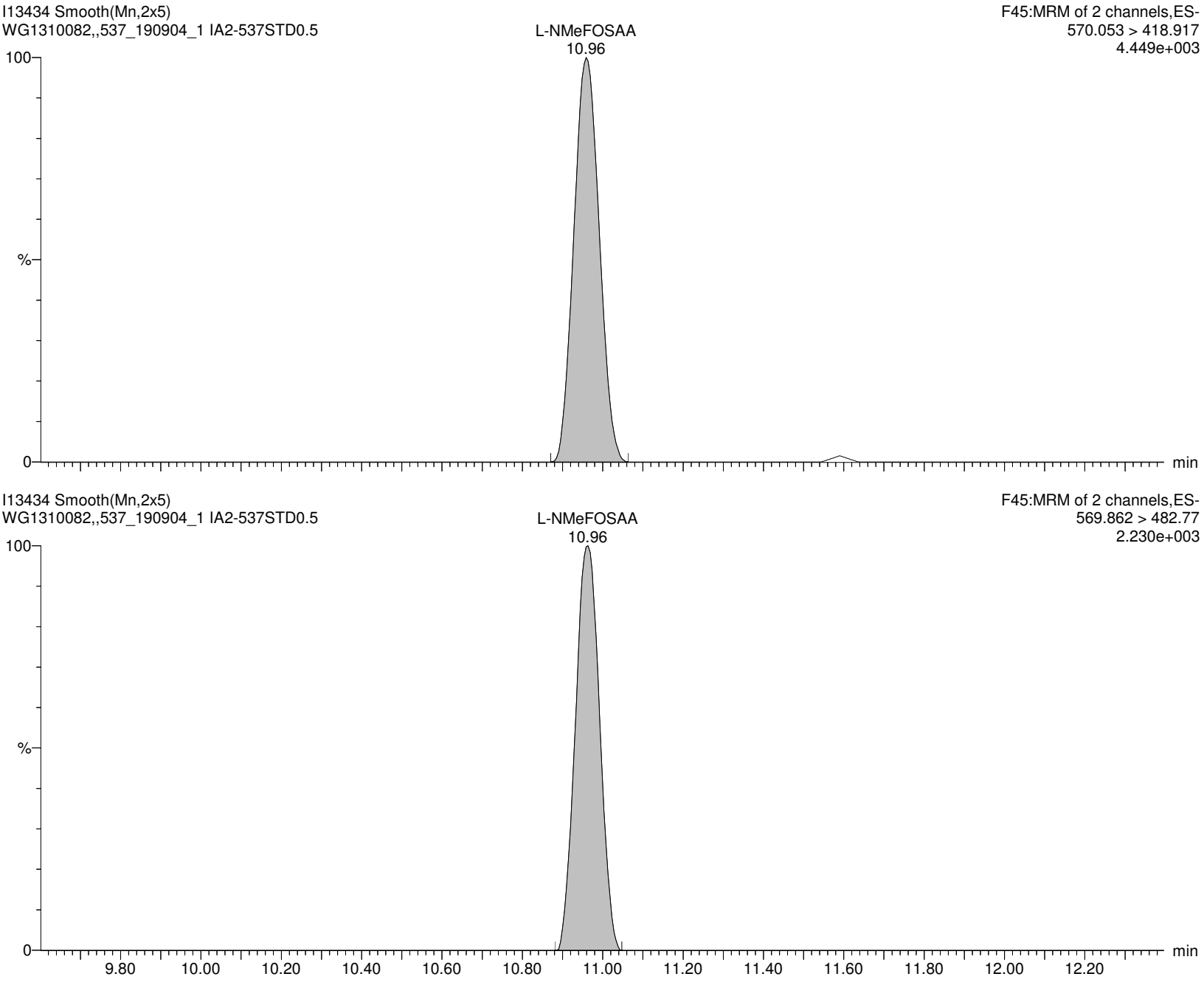
**NMeFOSAA**





all concentration units in (ng/mL)

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Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
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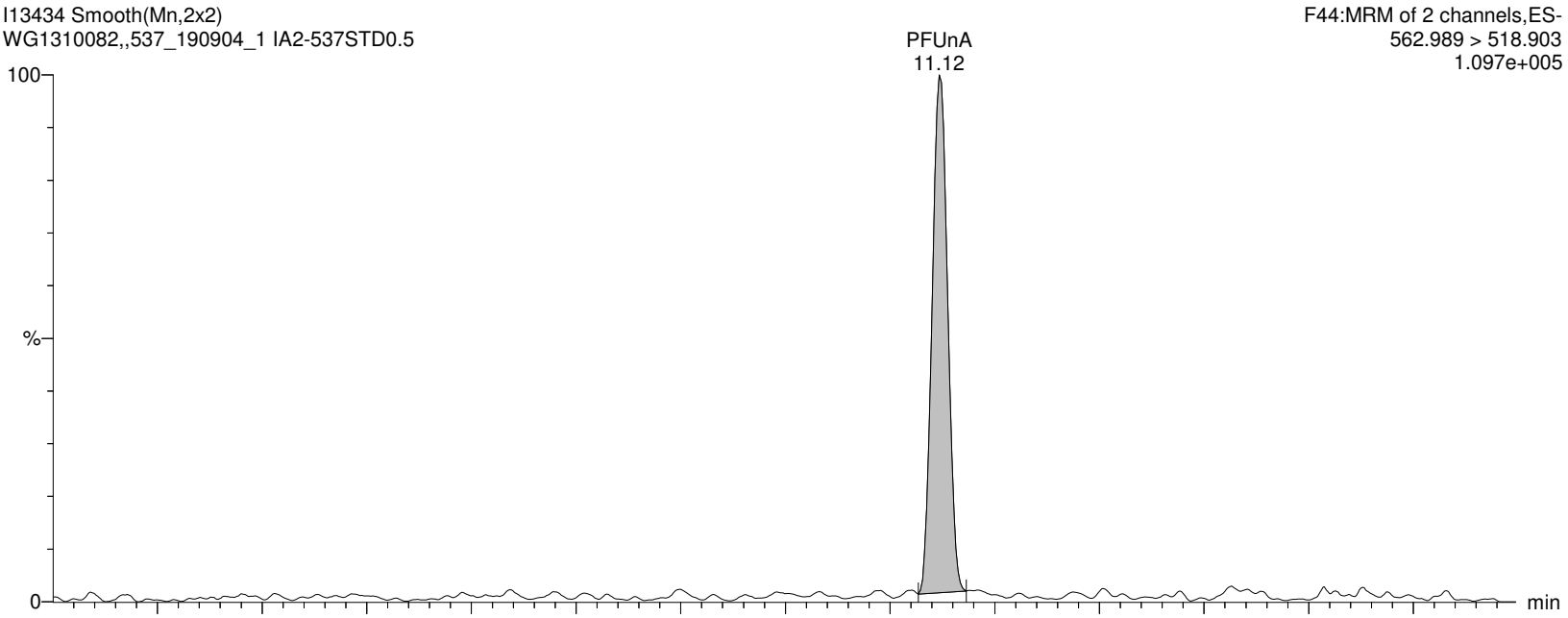


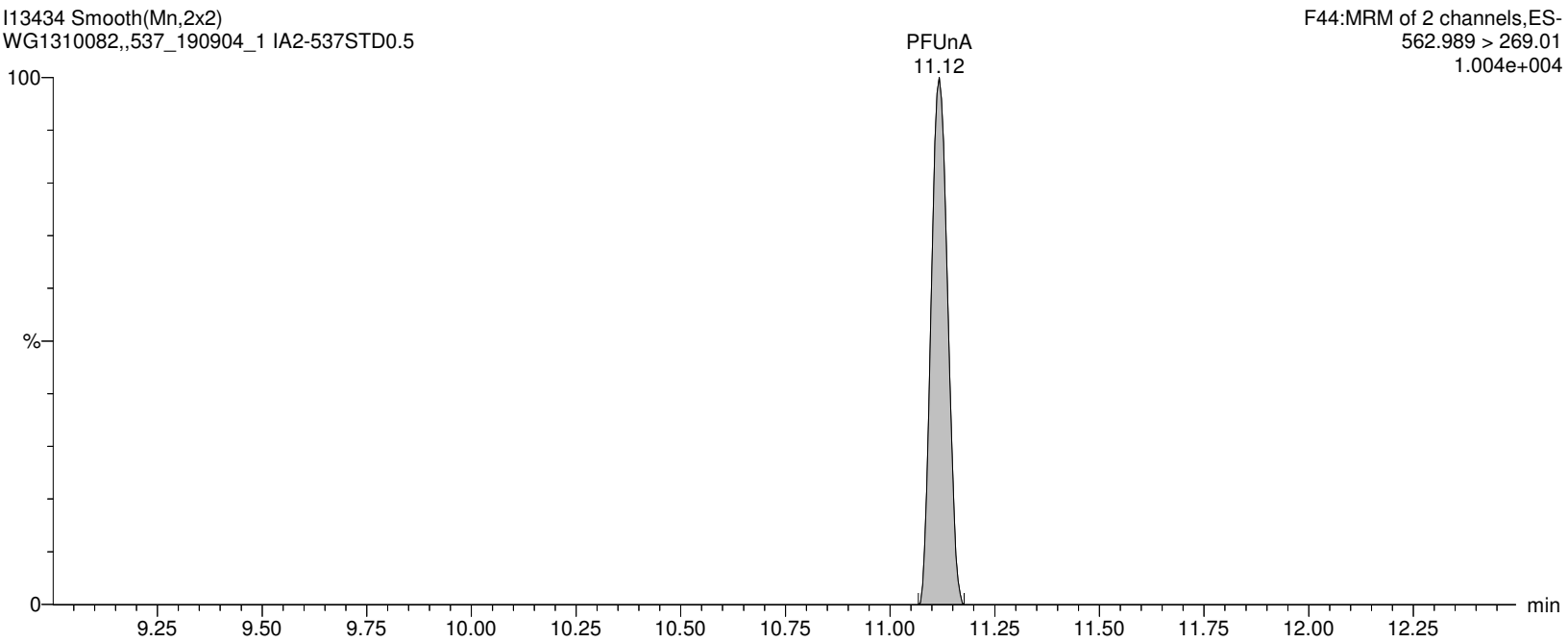



all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
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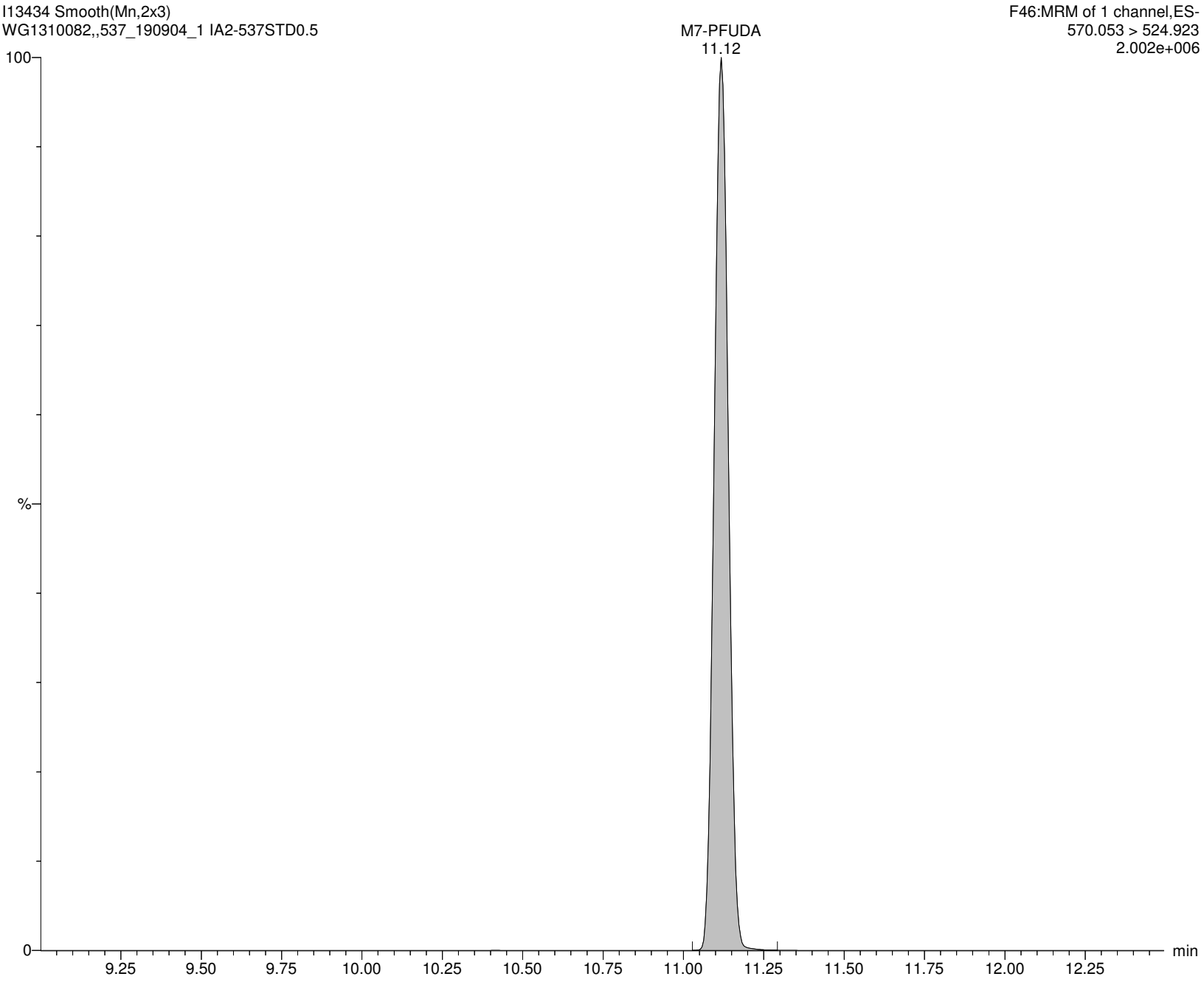
**M7-PFUDA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
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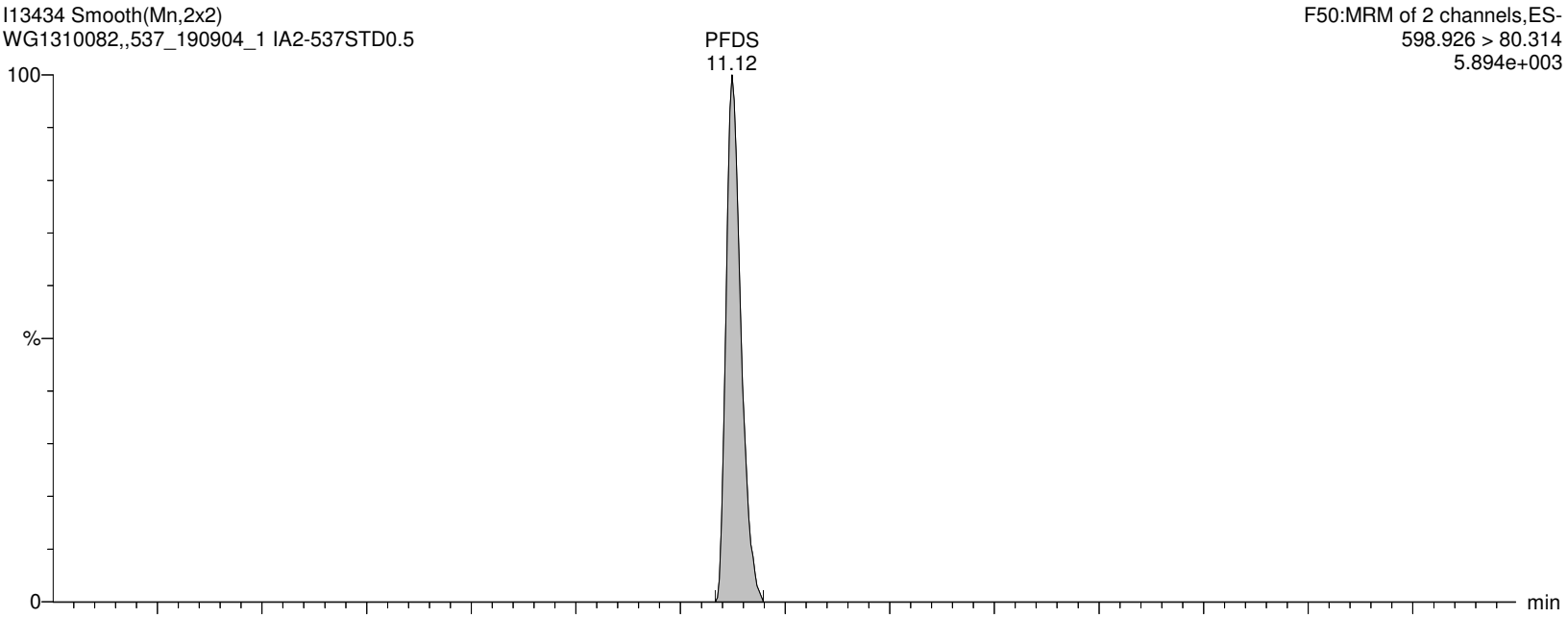
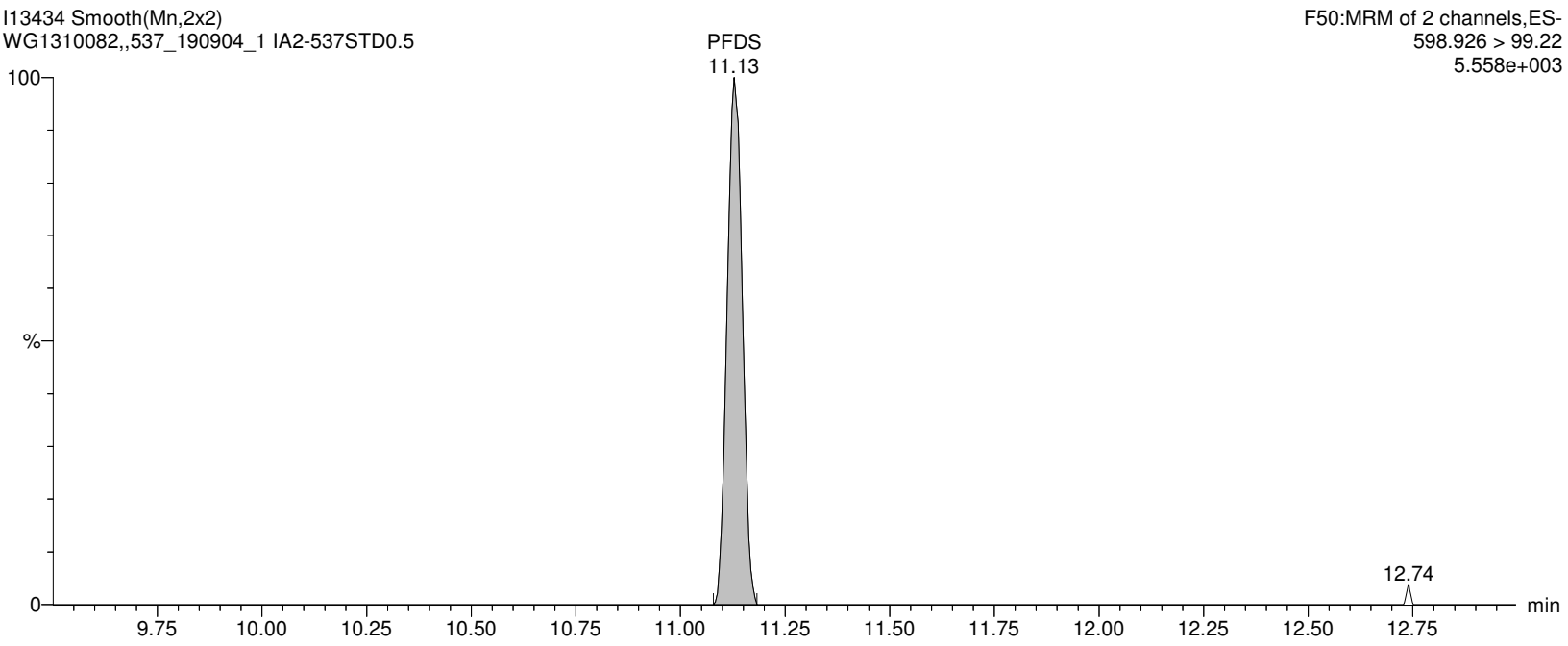
**PFDS**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
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**Vial: 1:A,2**
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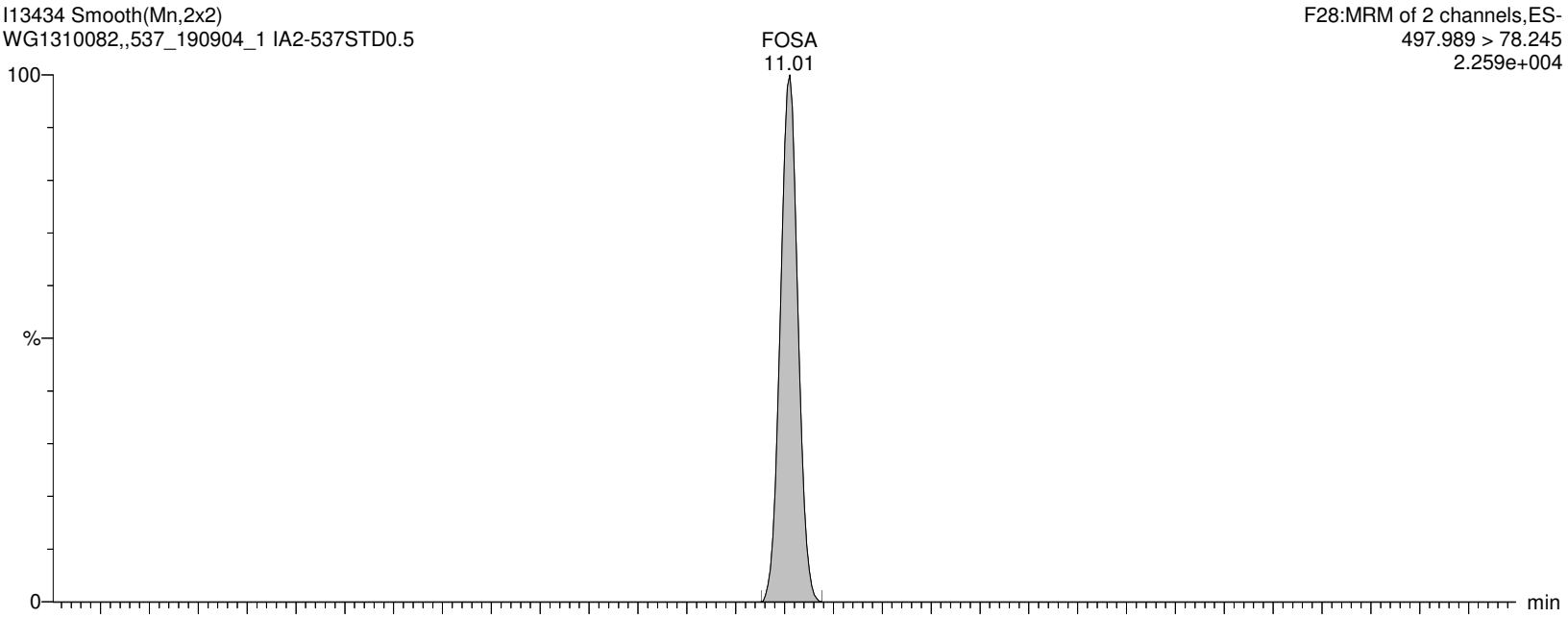
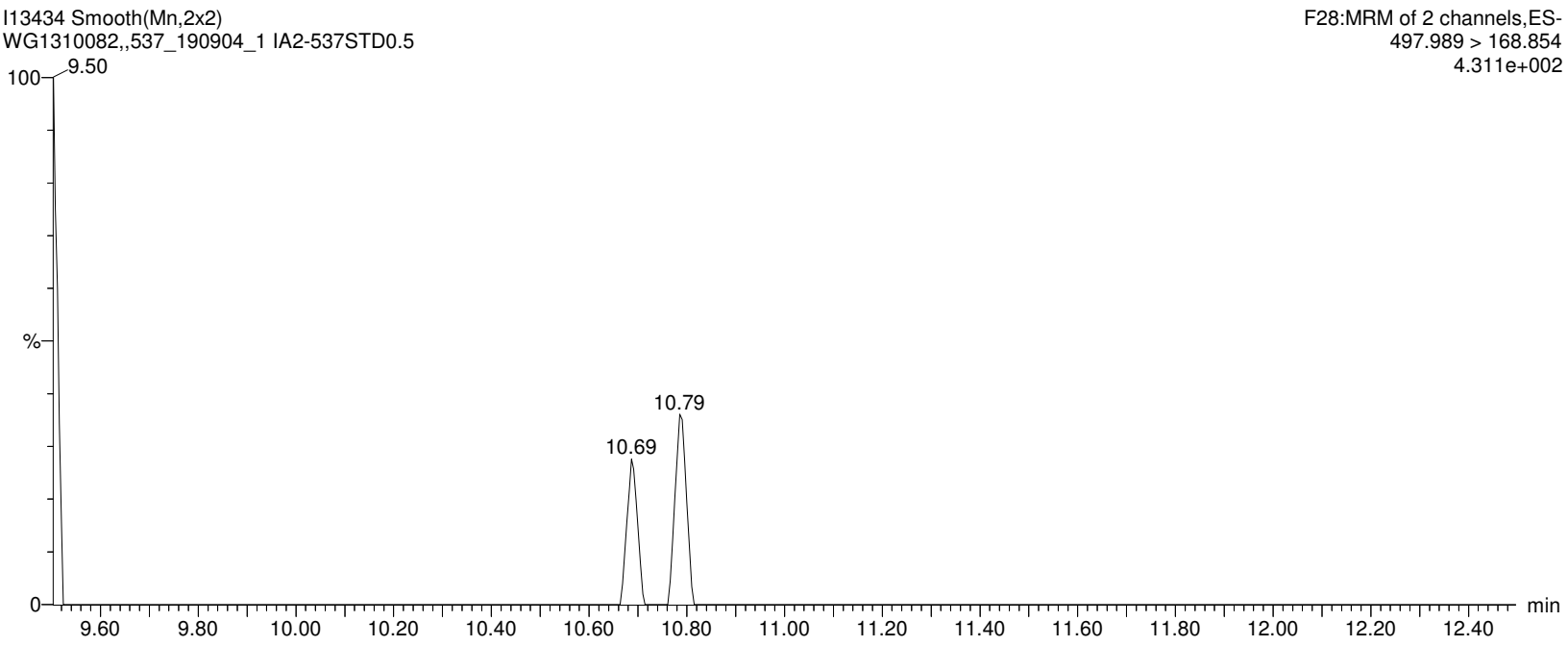
**FOSA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
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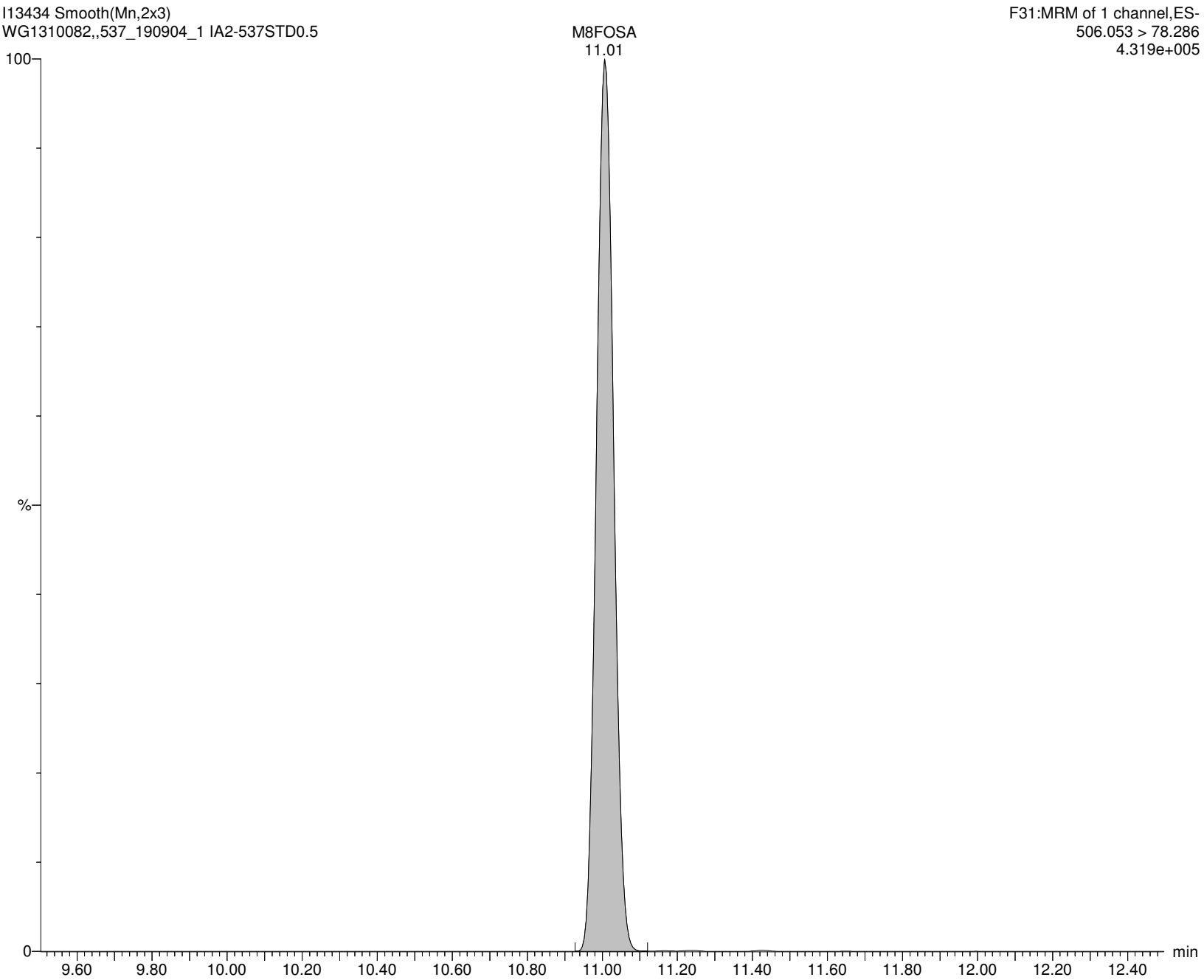



all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
Printed: Monday, November 18, 2019 13:42:48 Eastern Standard Time

**Name: I13434**
**ID: IA2-537STD0.5**
**Date: 18-Nov-2019**
**Time: 10:24:43**
**Description: WG1310082,,537_190904_1**
**User: LCMS02:JW**
**Vial: 1:A,2**
**Instrument: XEVO-TQSmicro#QEB0050**
**Inlet Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\LCMS_537_ISO_B**
**Tune Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\181009_TUNE.IPR**
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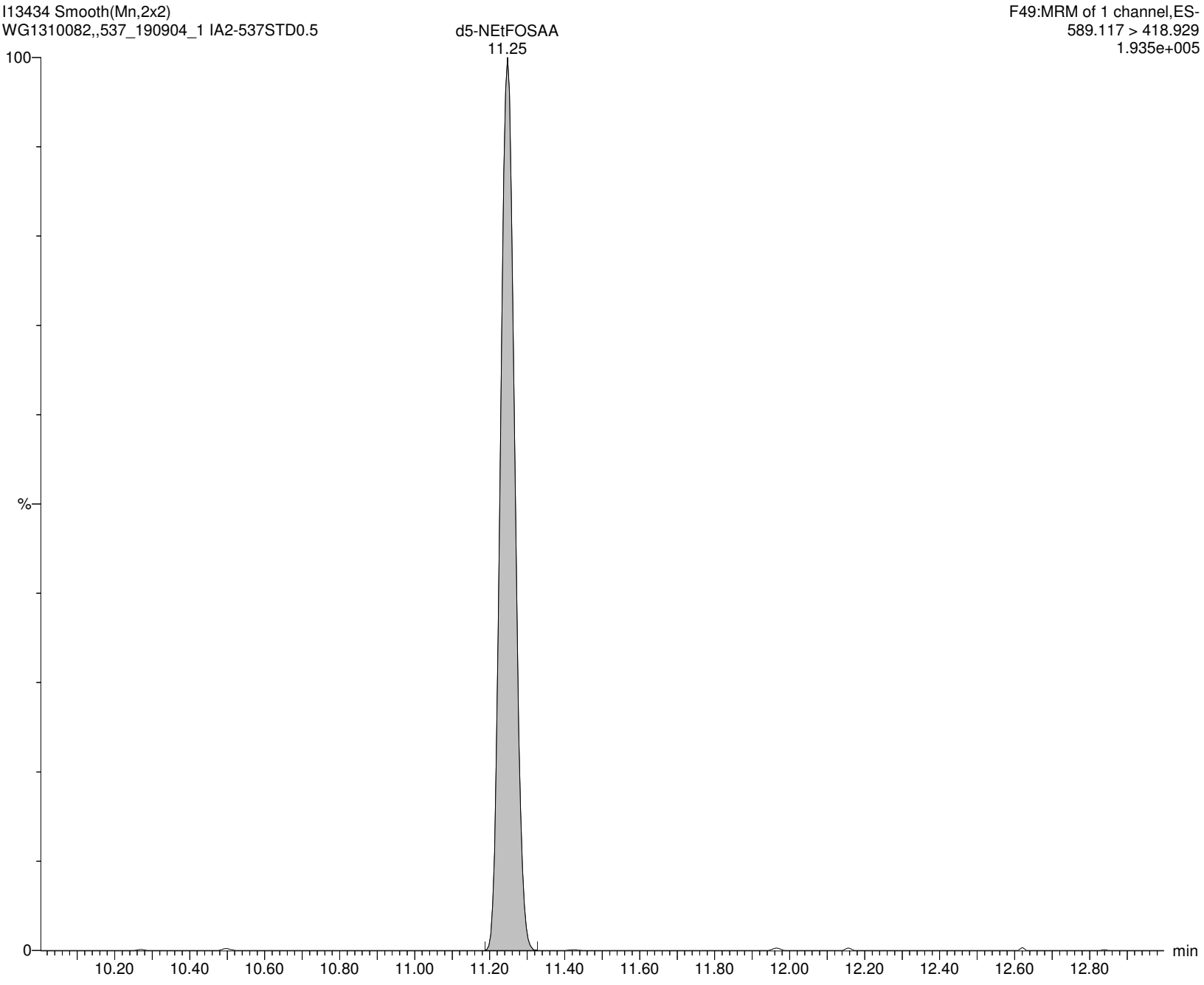



all concentration units in (ng/mL)

Alpha Analytical Inc.
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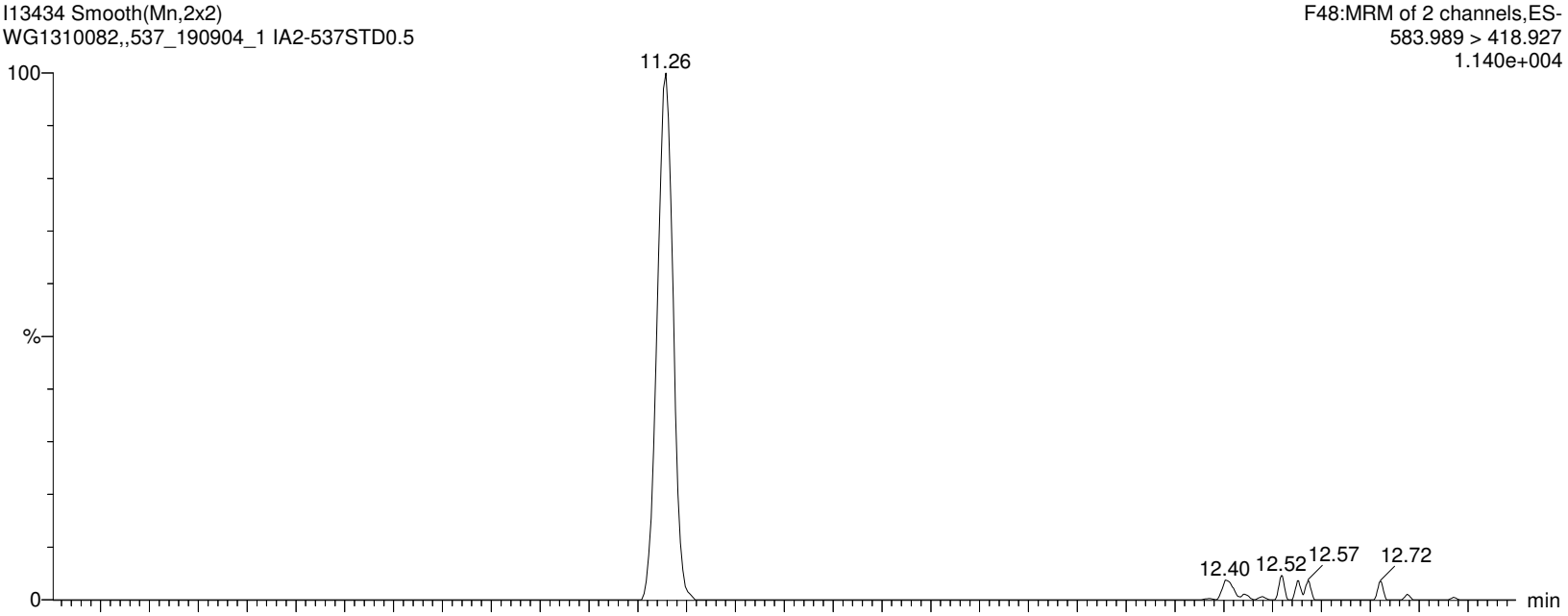


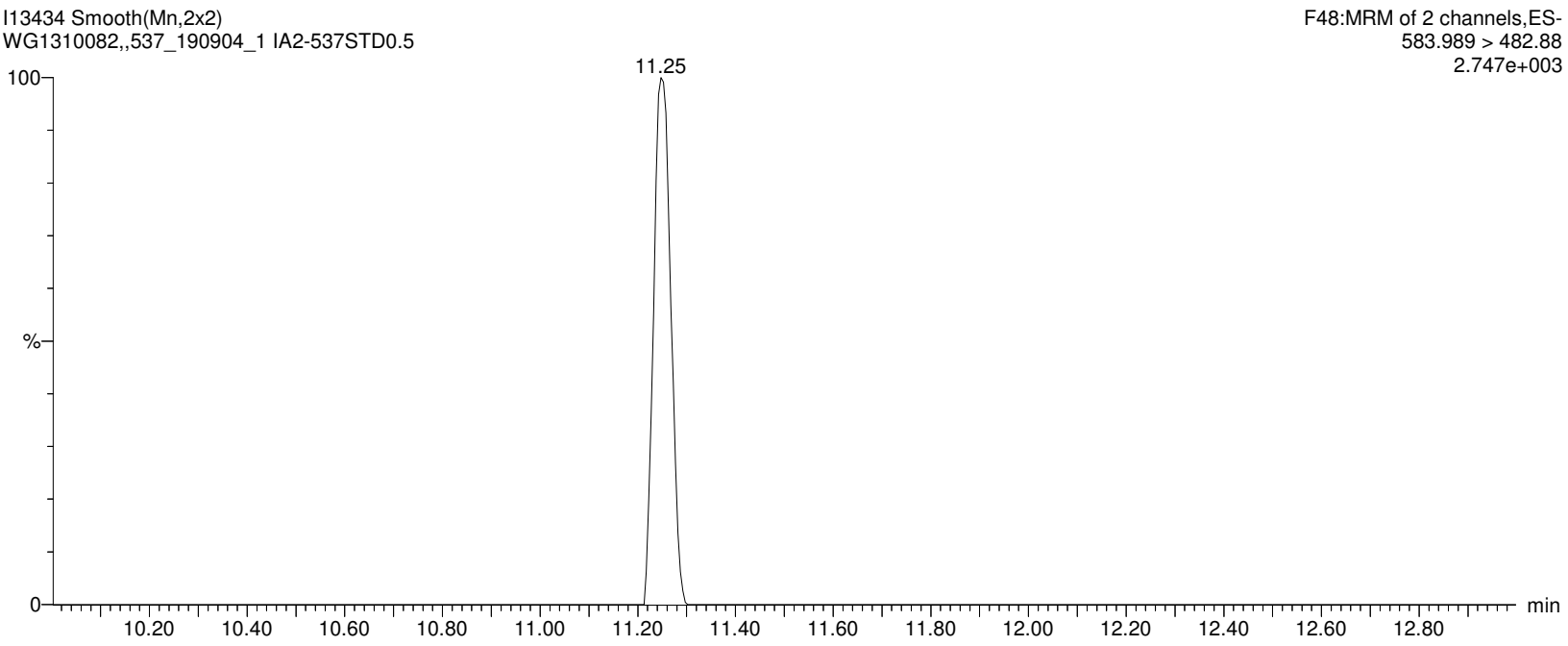



all concentration units in (ng/mL)

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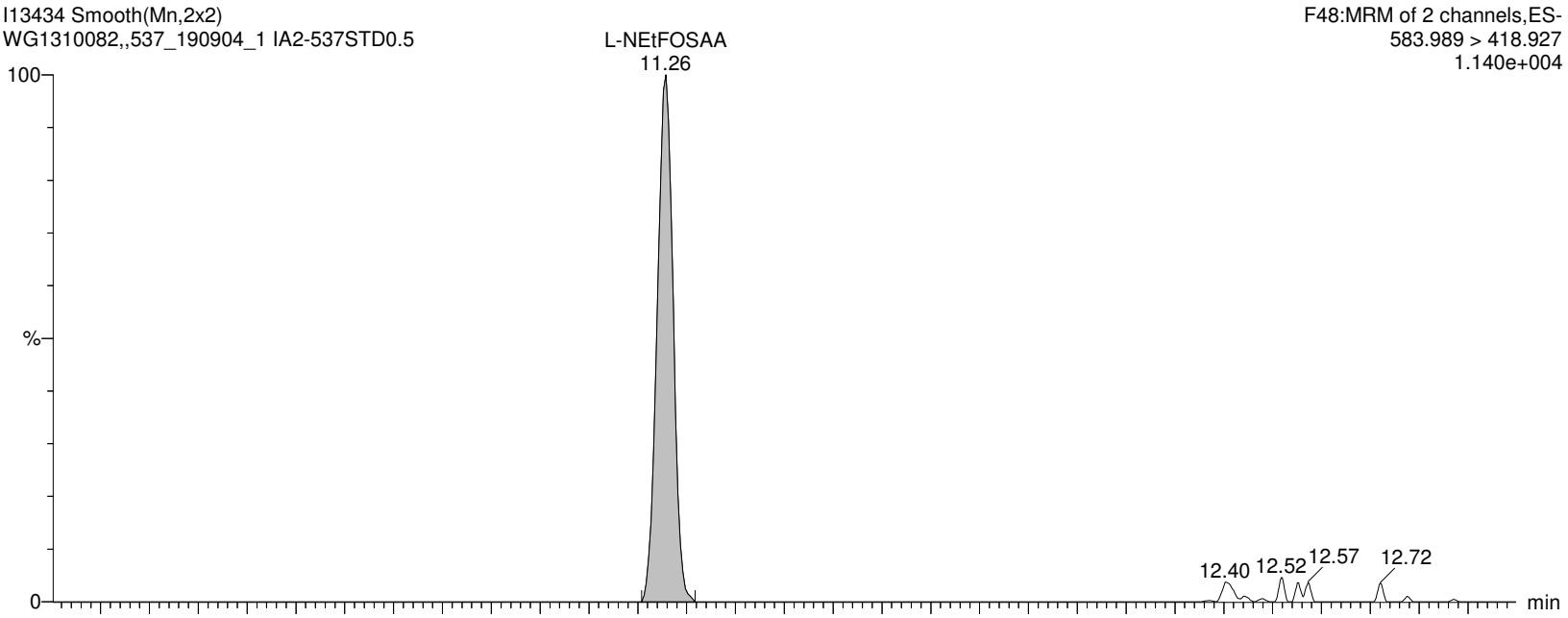


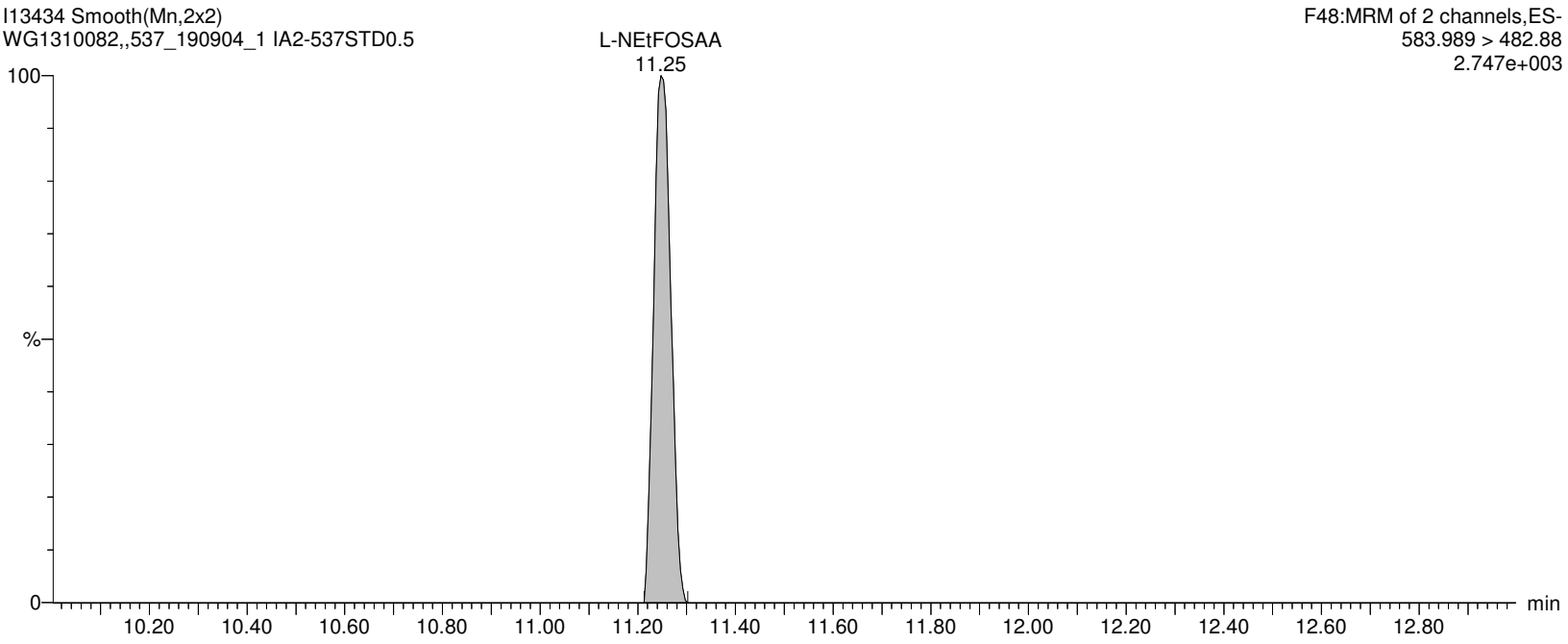



all concentration units in (ng/mL)

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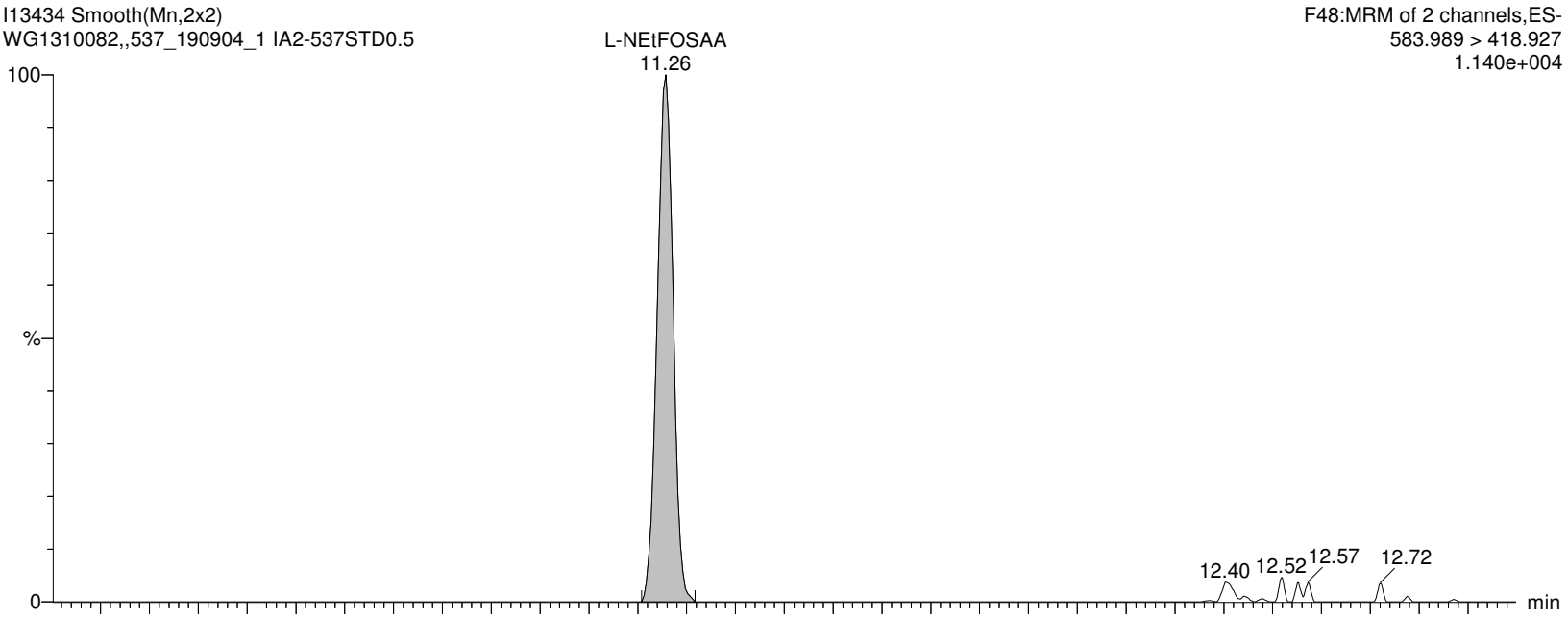


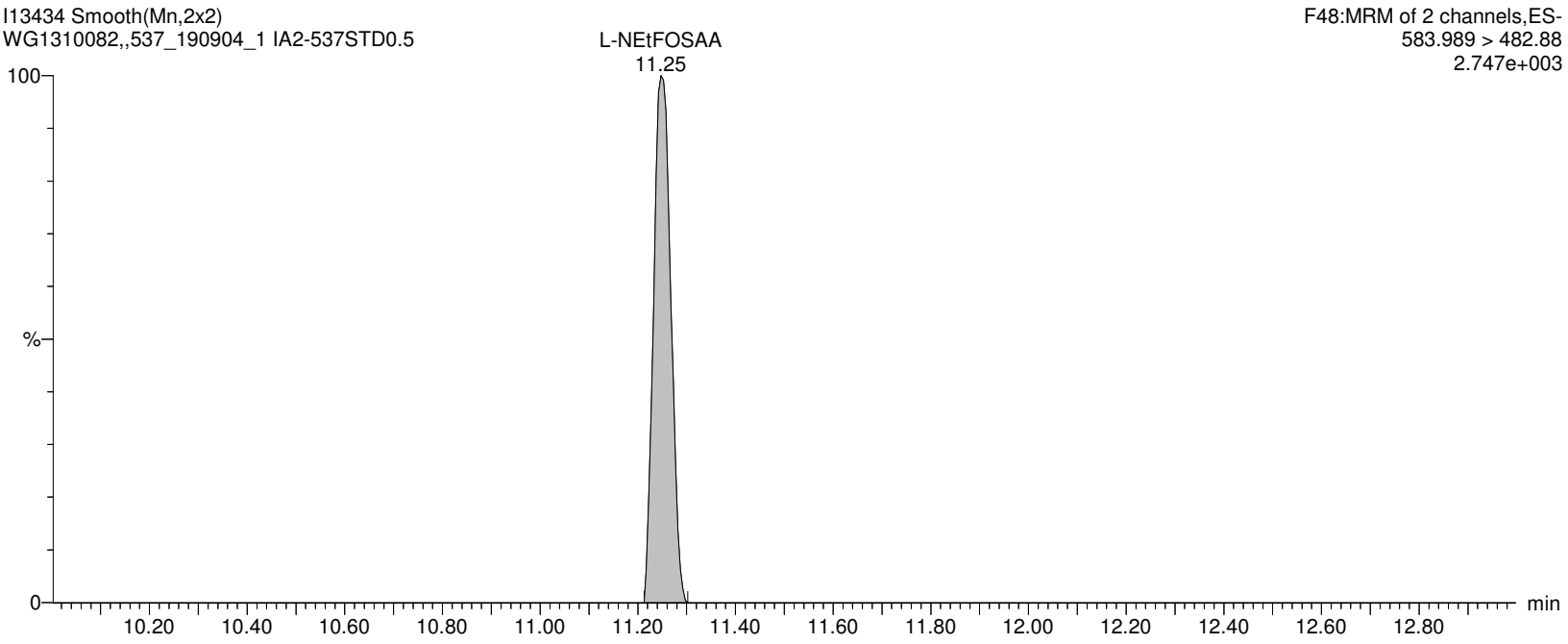



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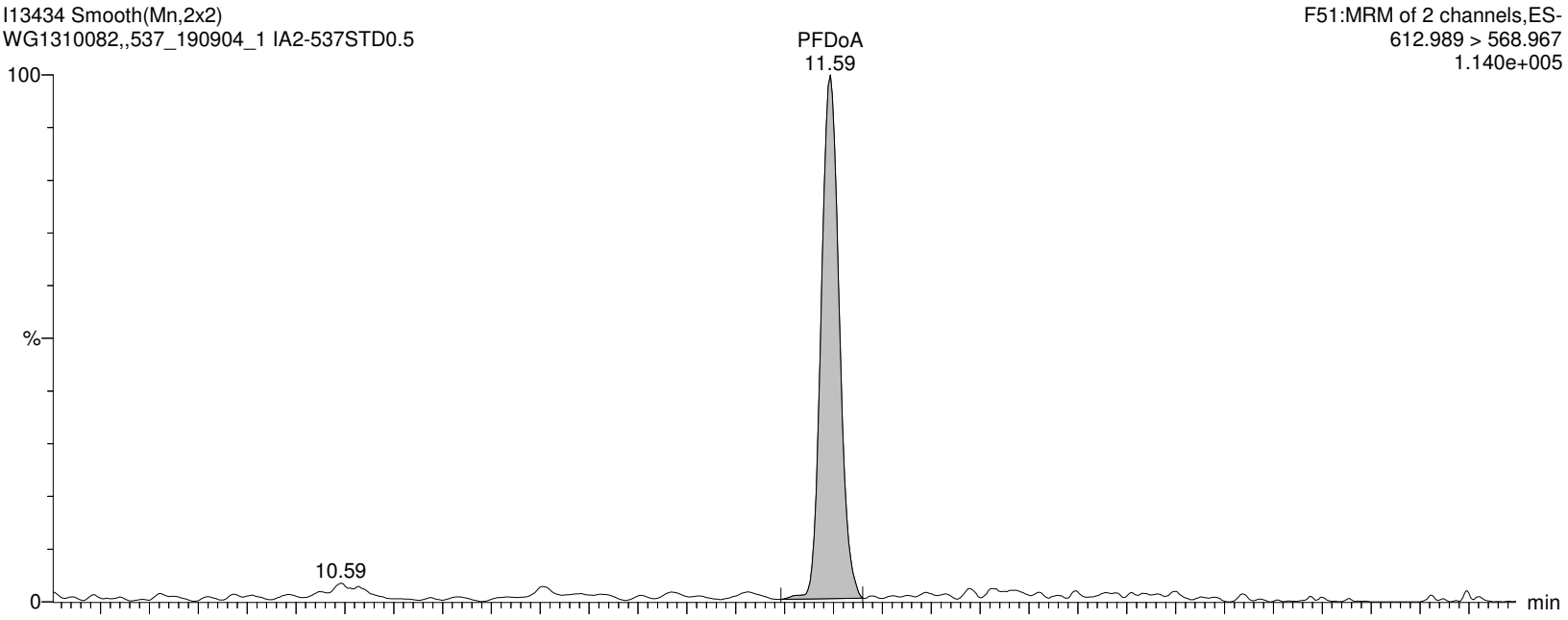


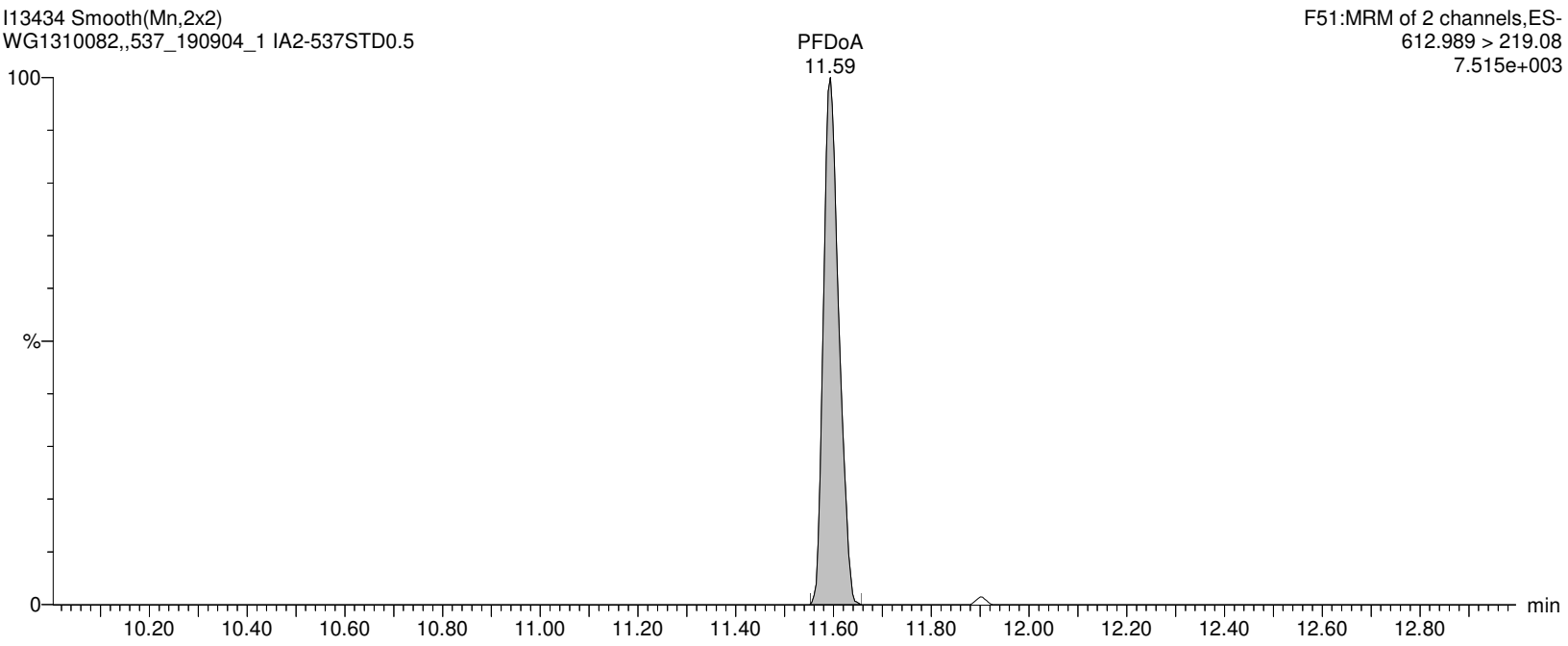



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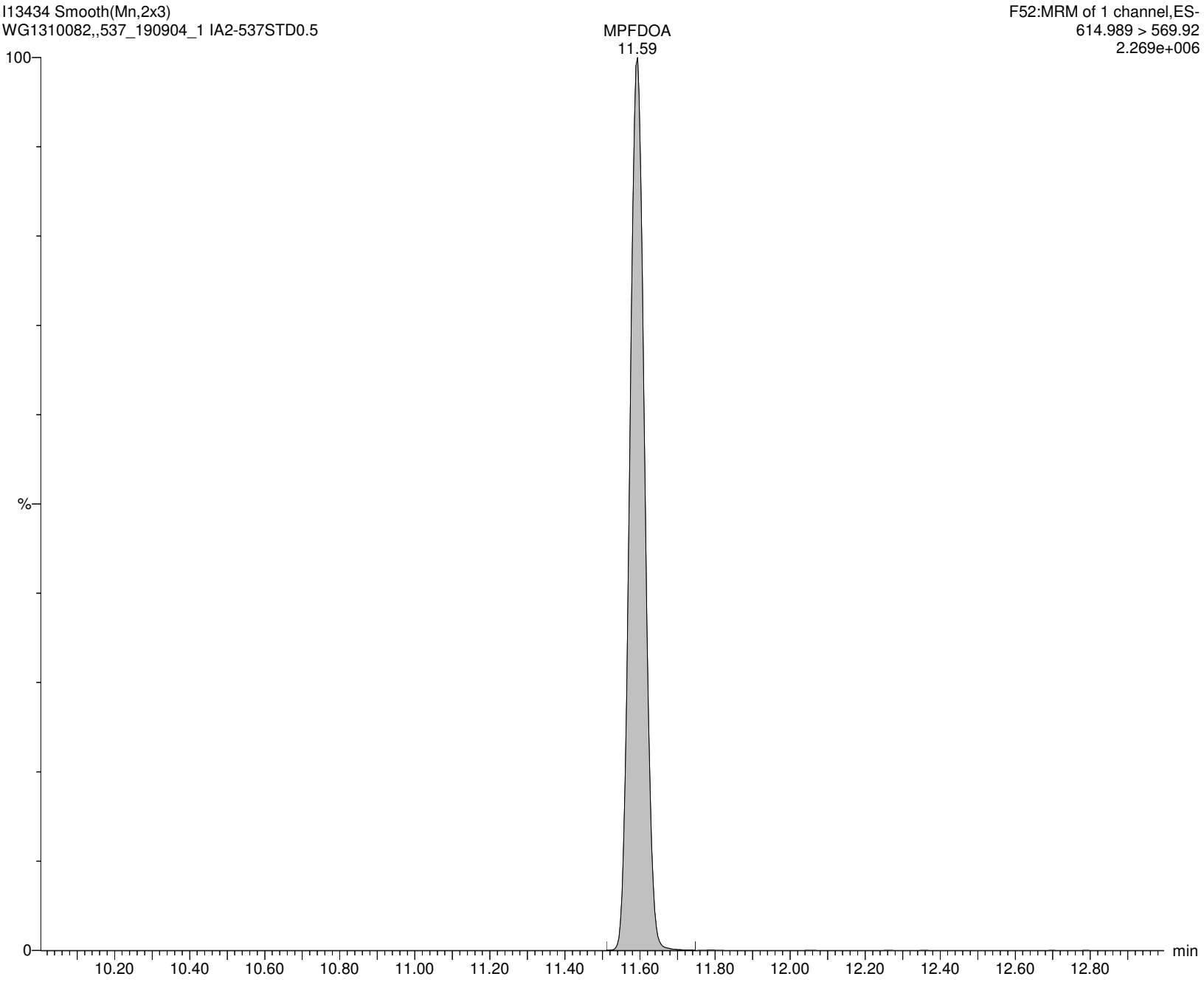



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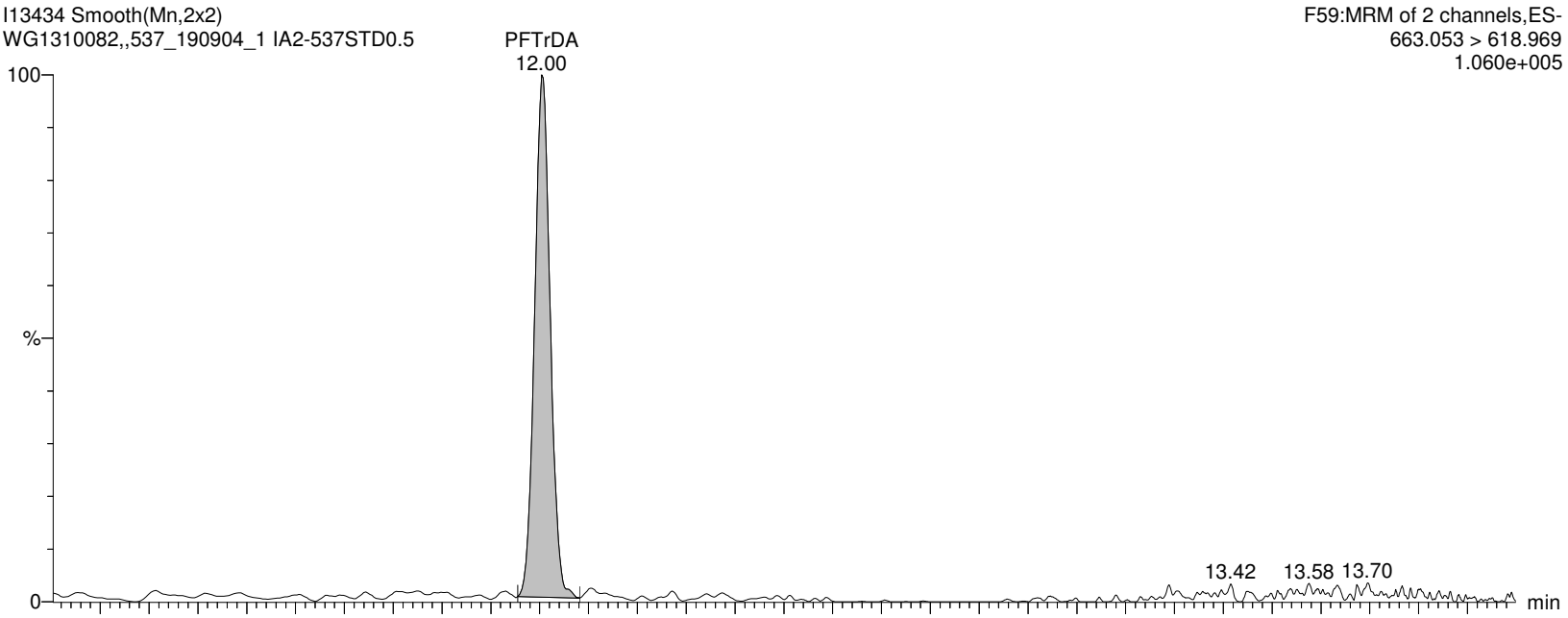


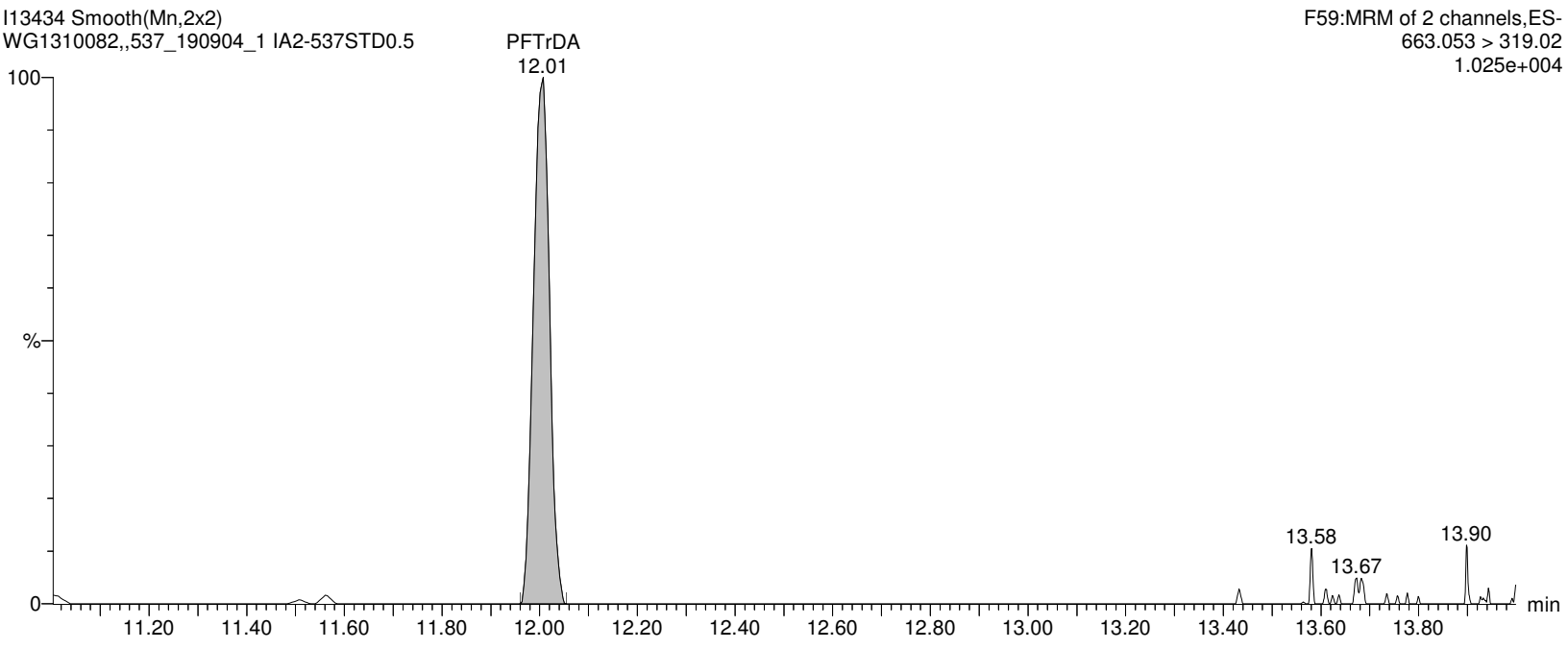



all concentration units in (ng/mL)

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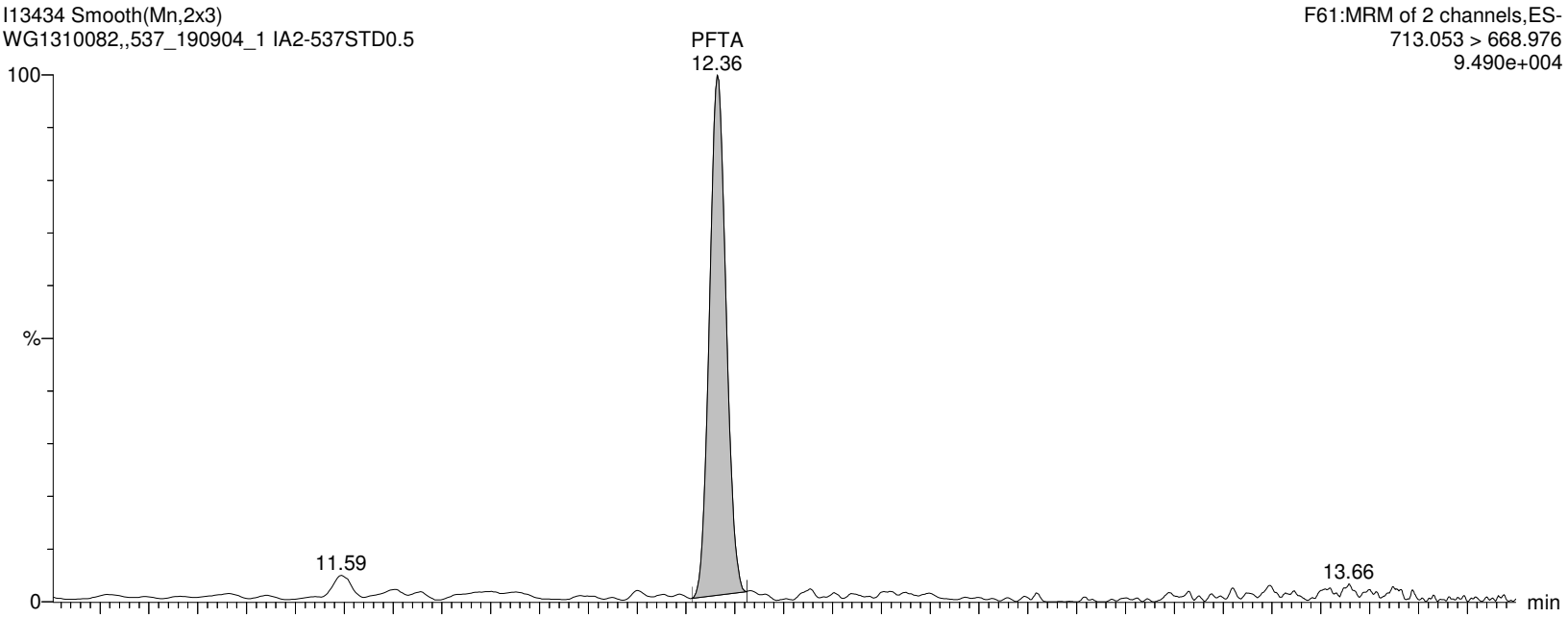


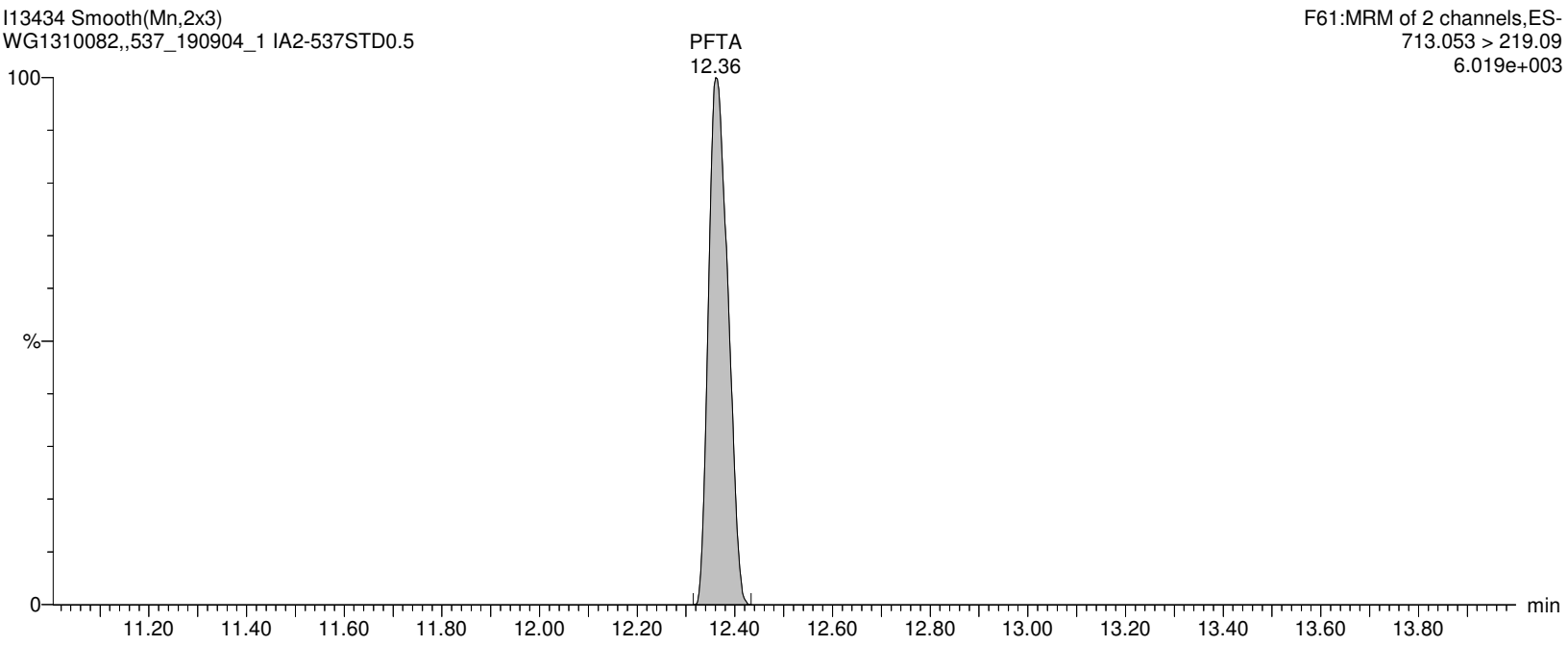



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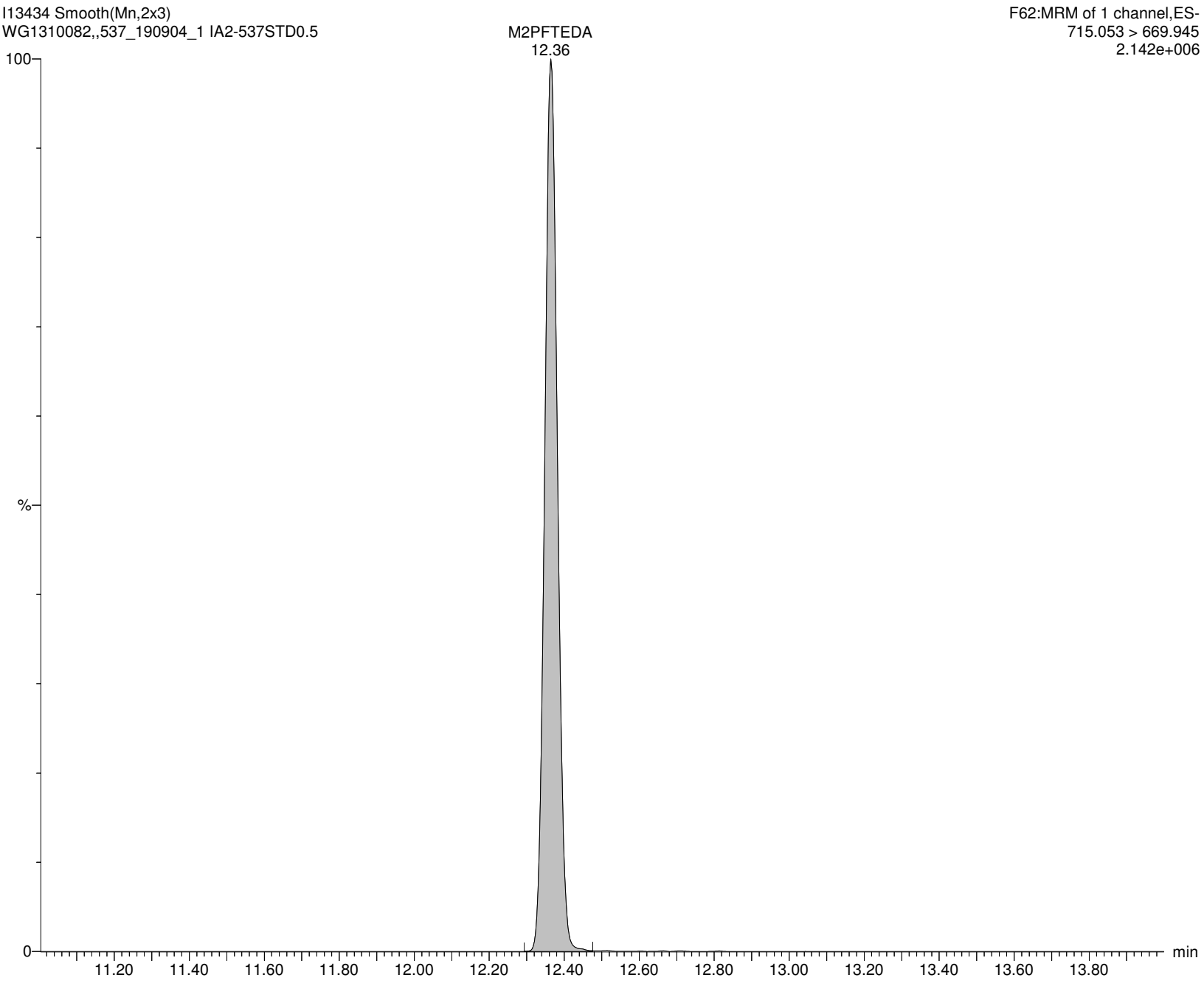



all concentration units in (ng/mL)

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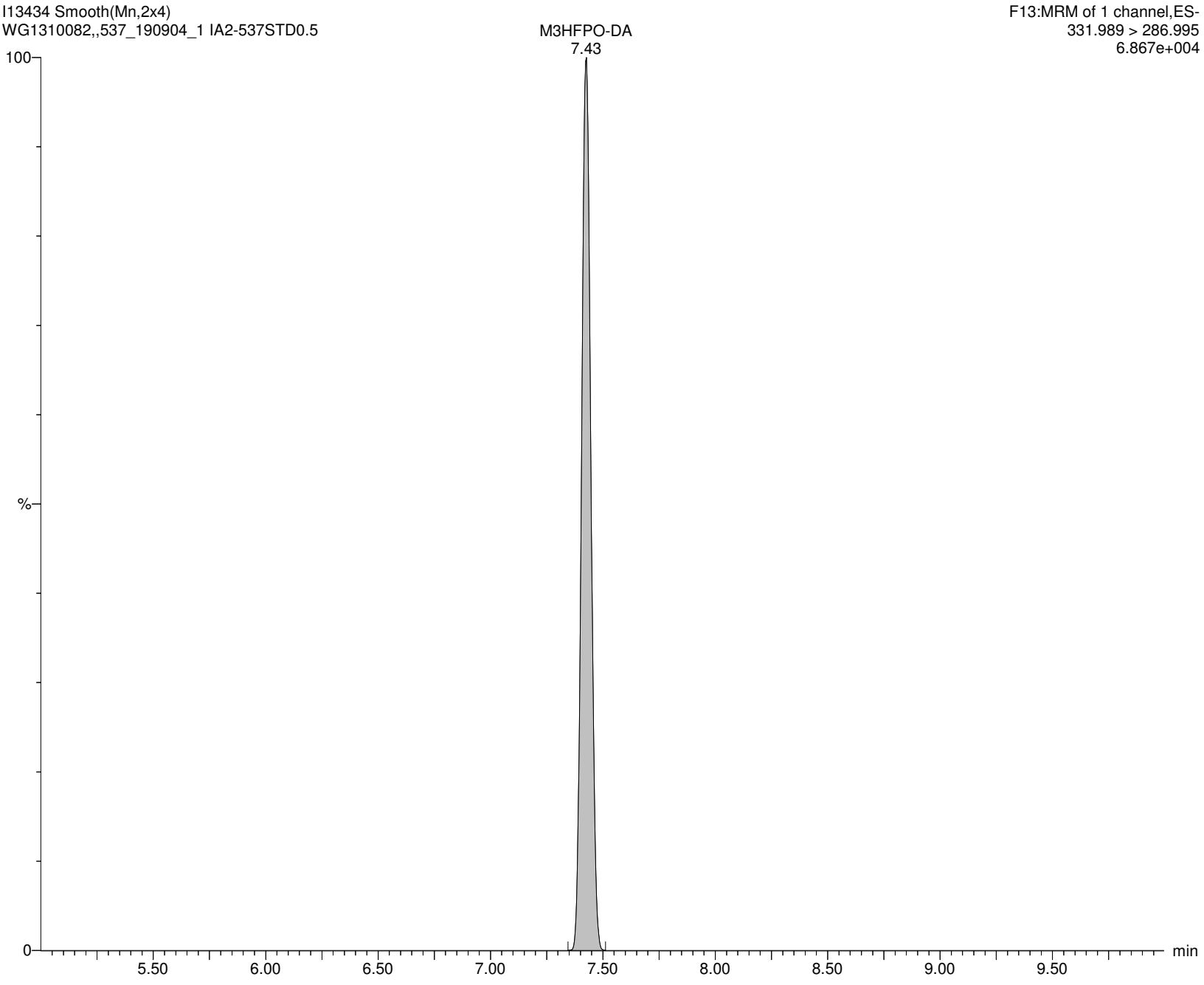



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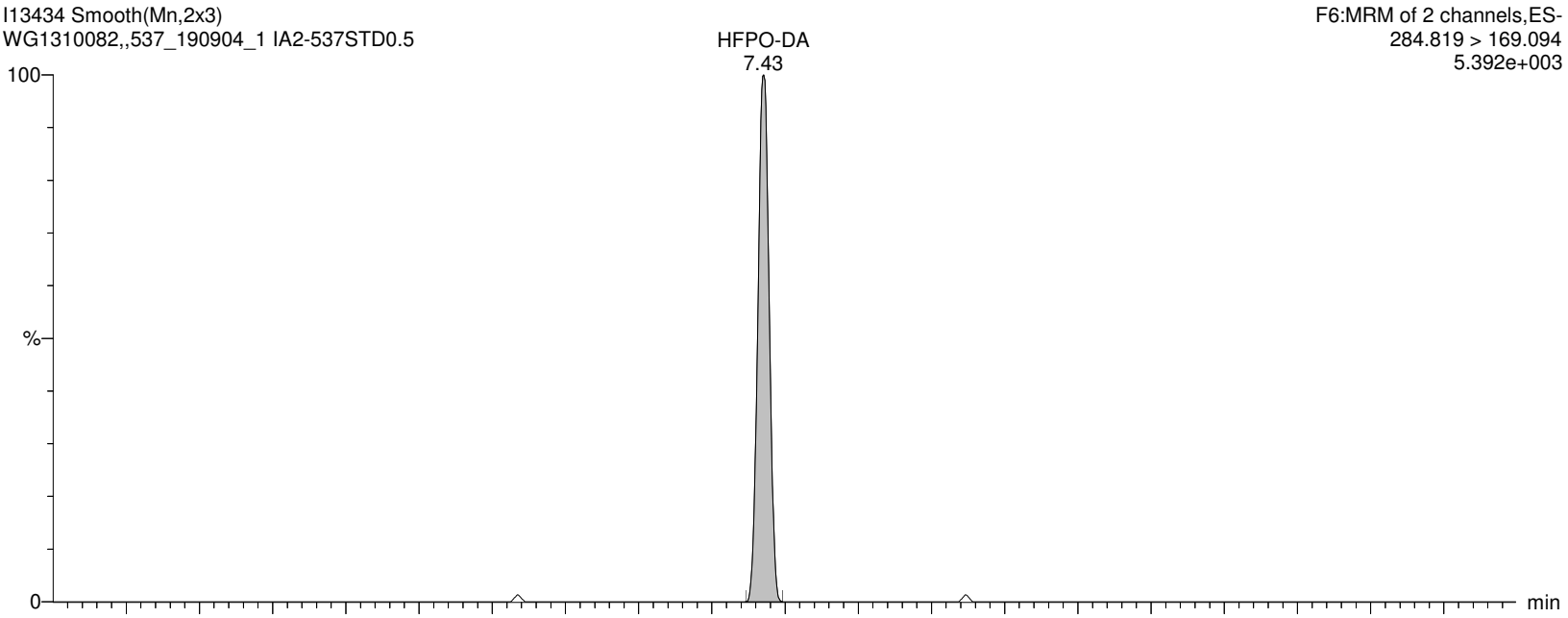


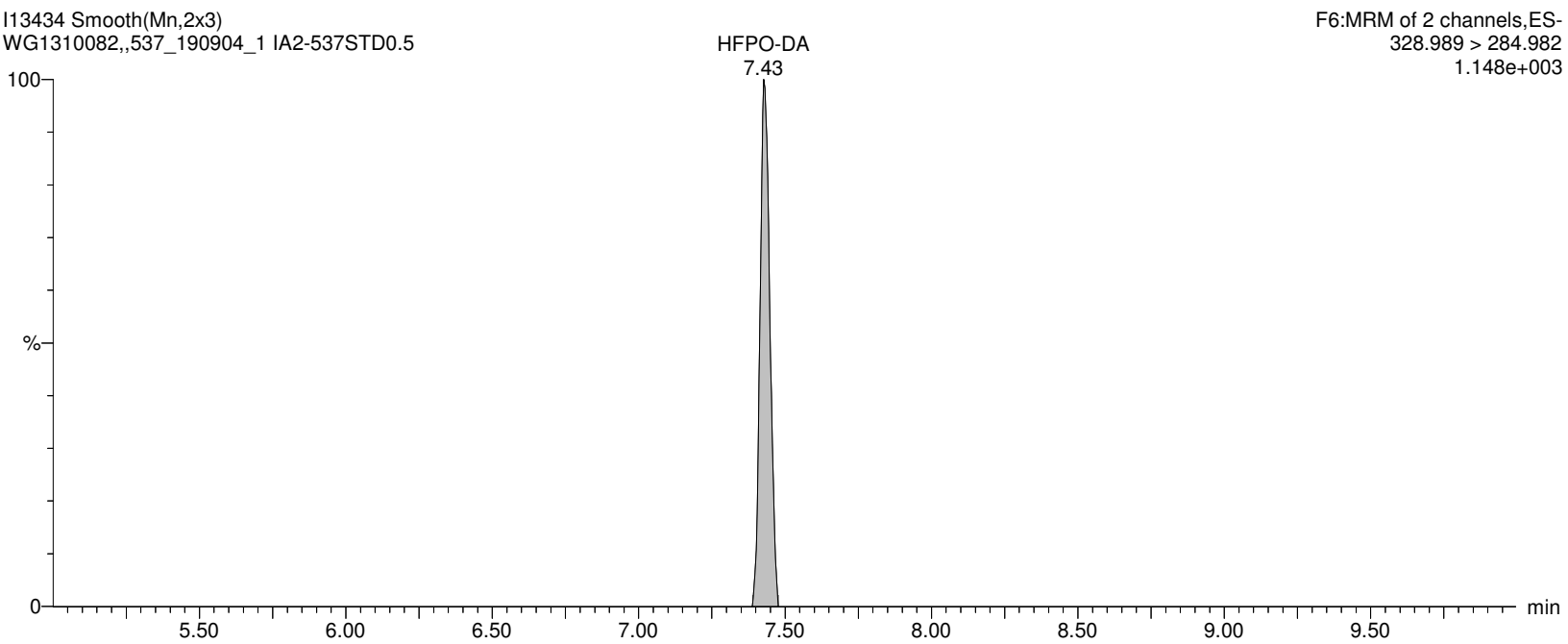



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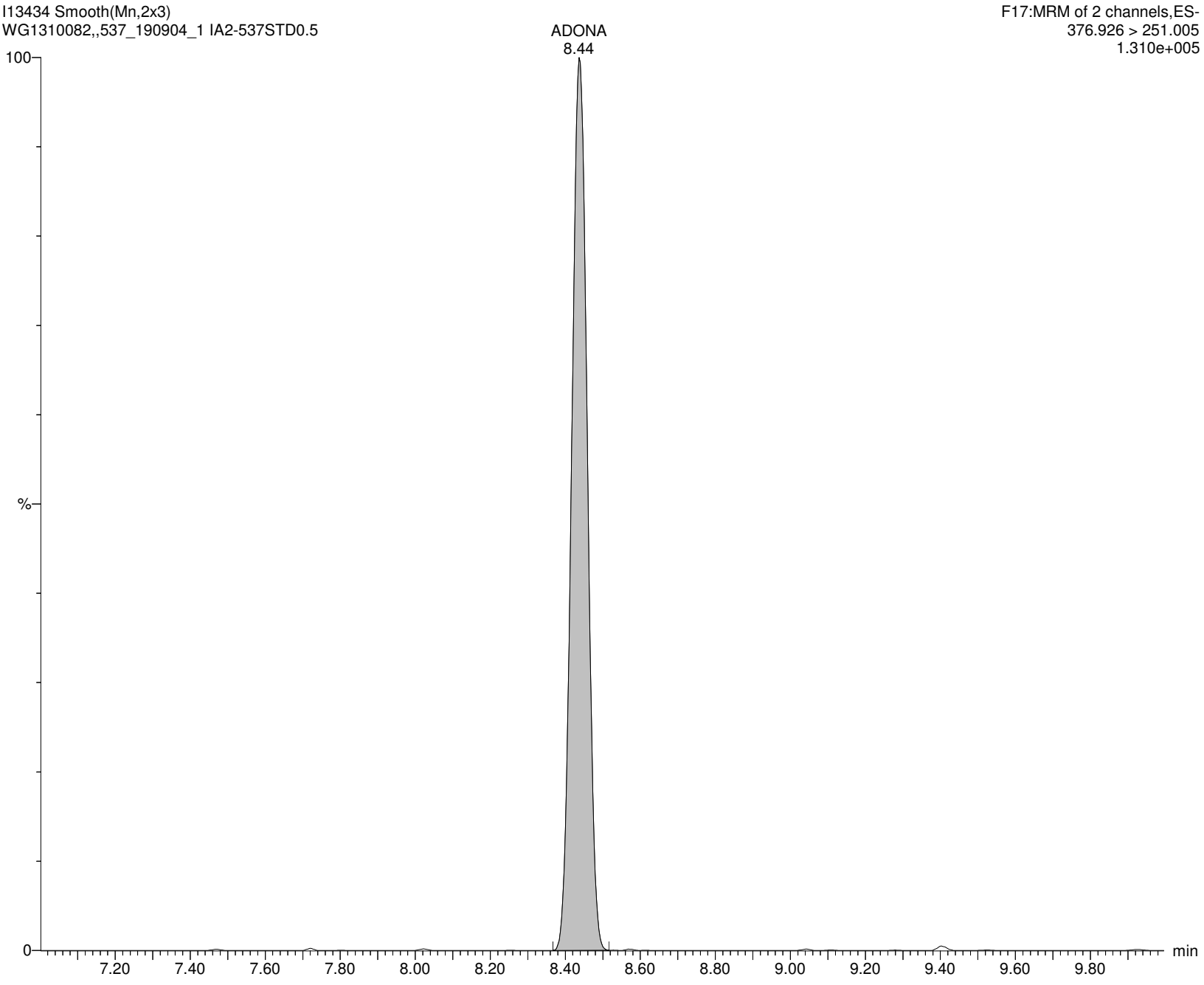



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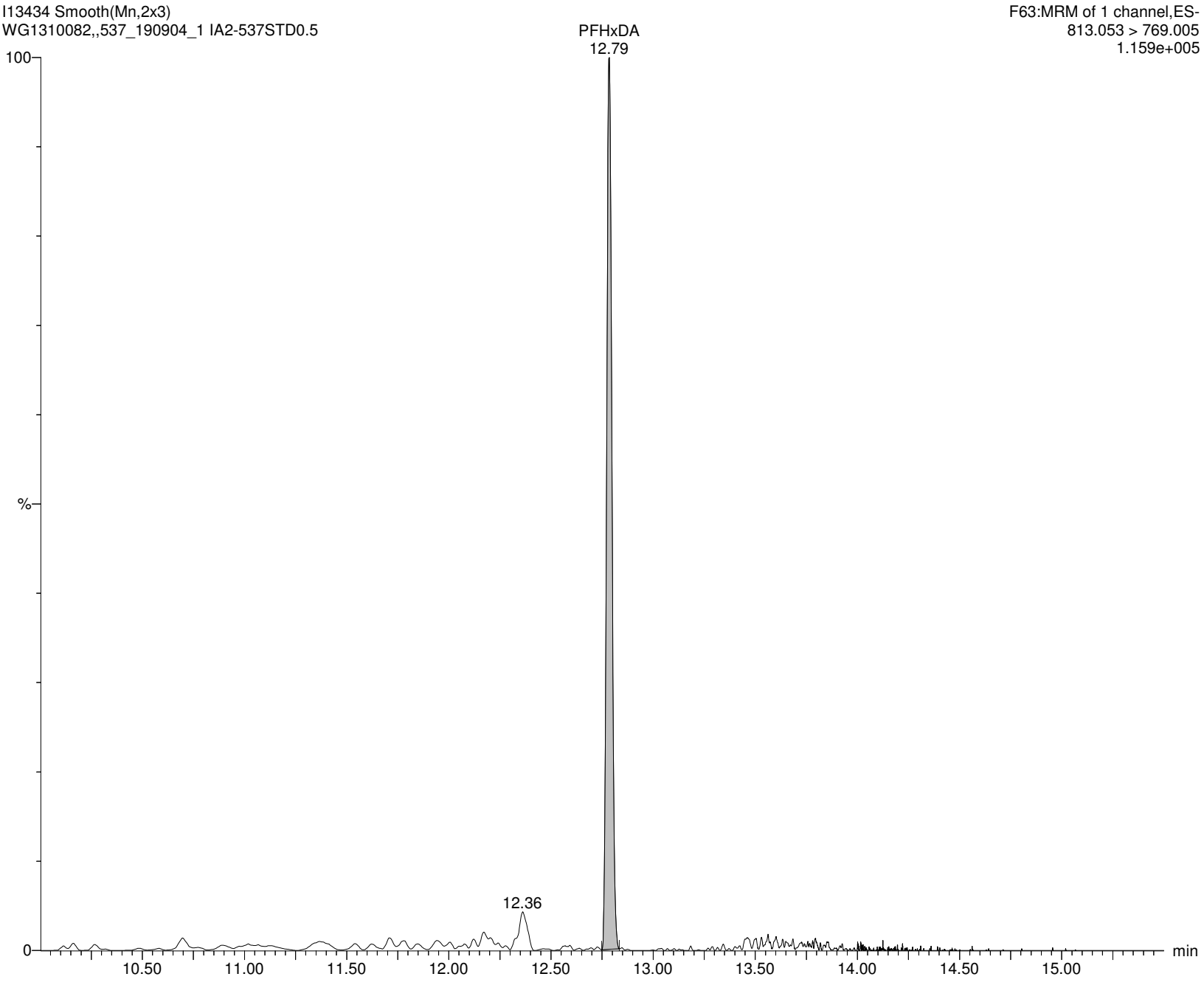



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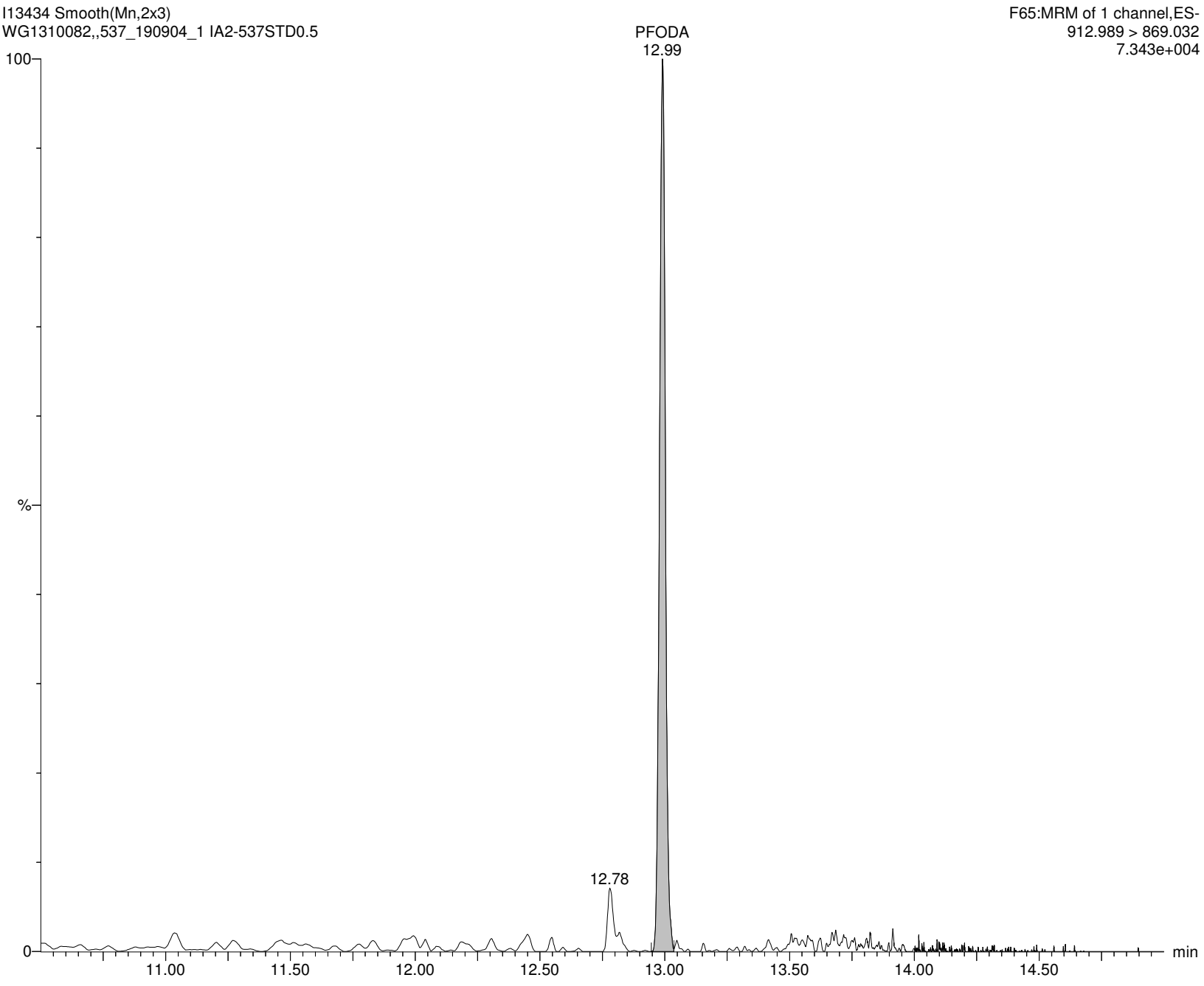



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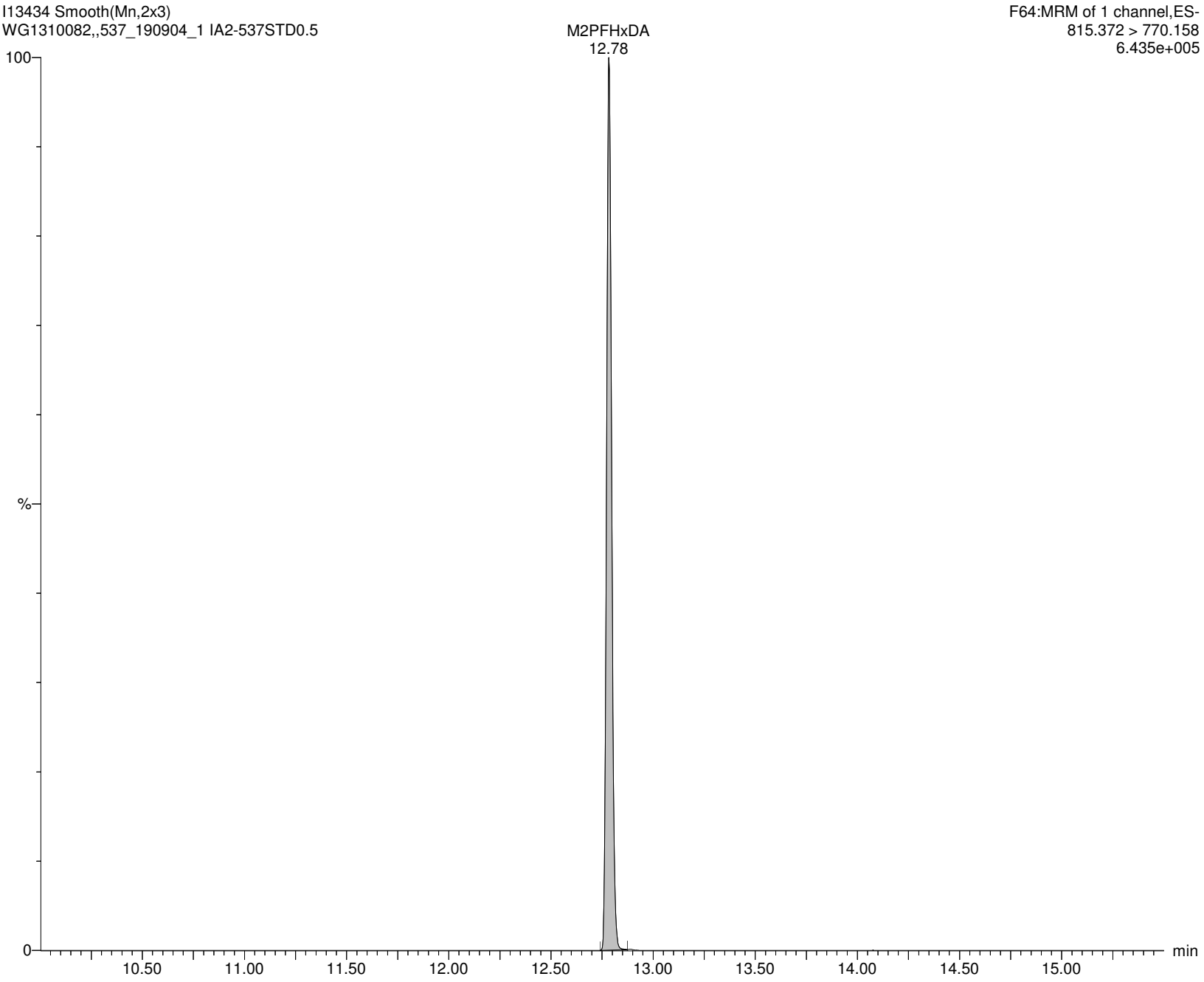



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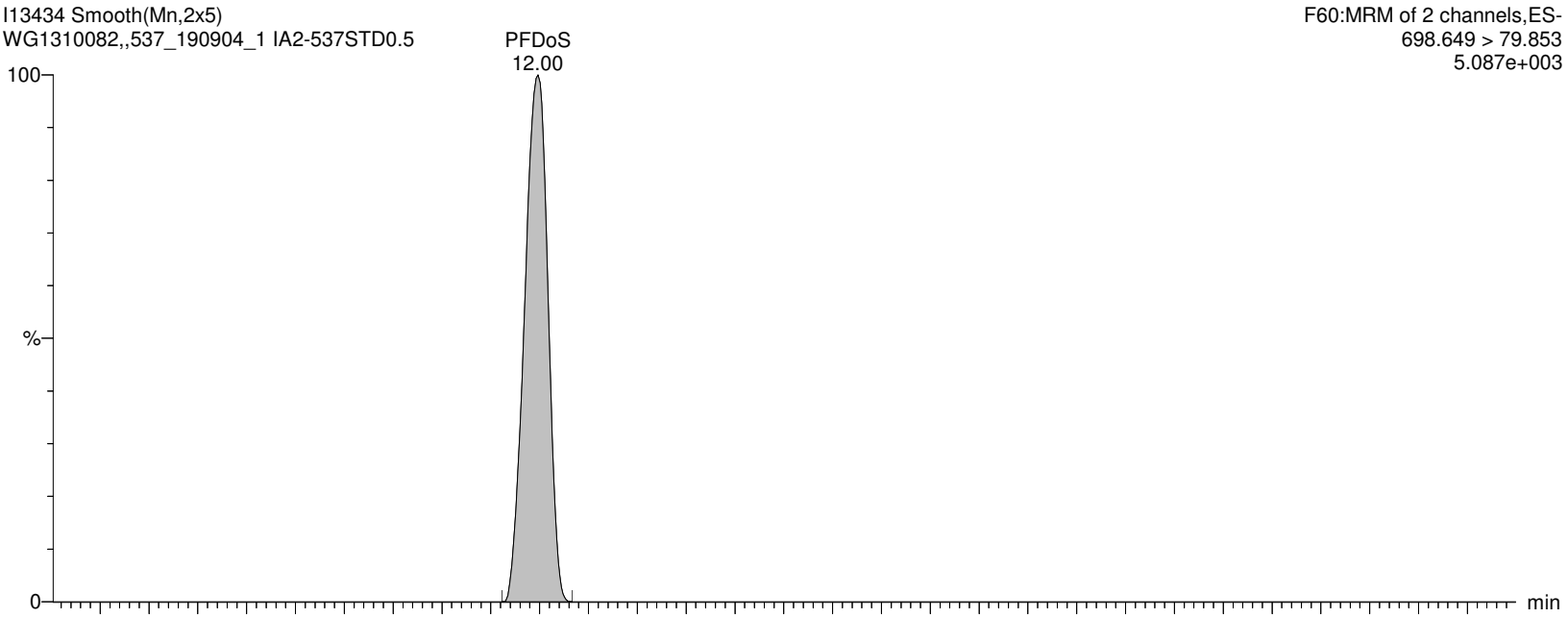
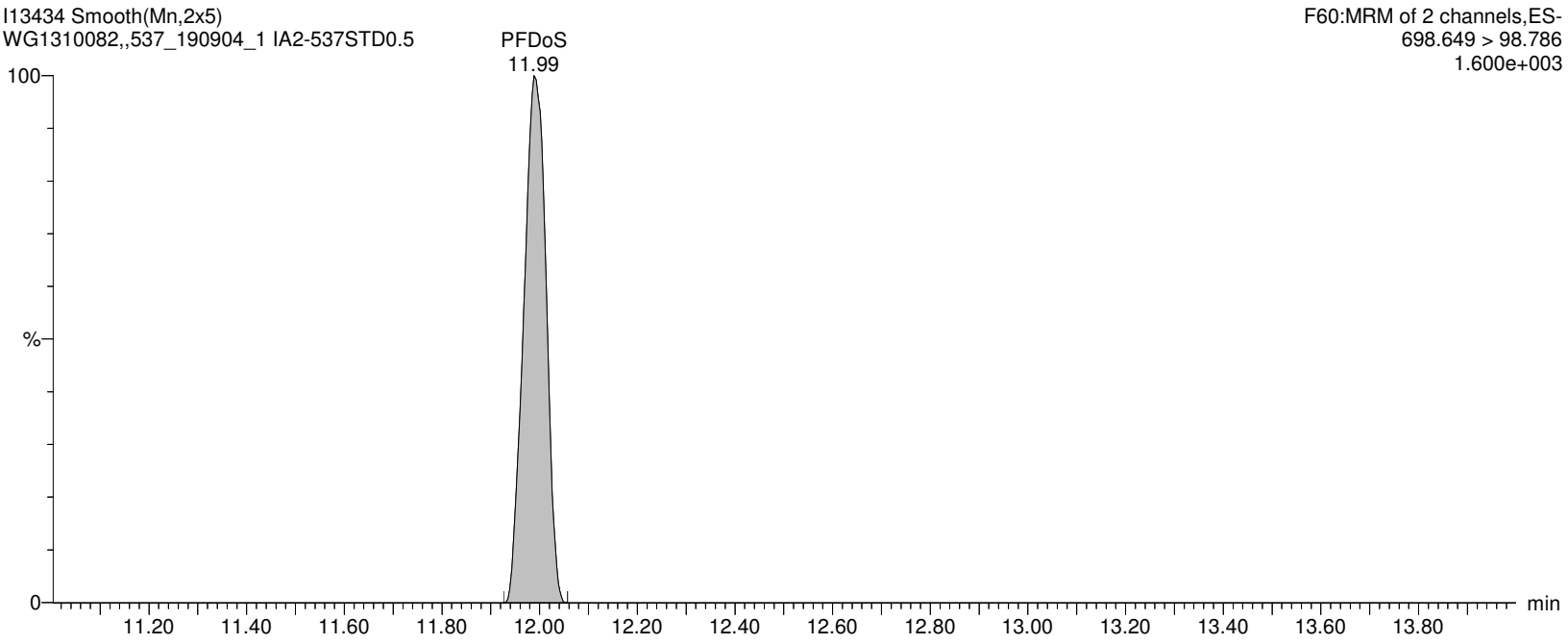
**Description: WG1310082,,537_190904_1**
**User: LCMS02:JW**
**Vial: 1:A,2**
**Instrument: XEVO-TQSmicro#QEB0050**
**Inlet Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\LCMS_537_ISO_B**
**Tune Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\181009_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**PFDoS**



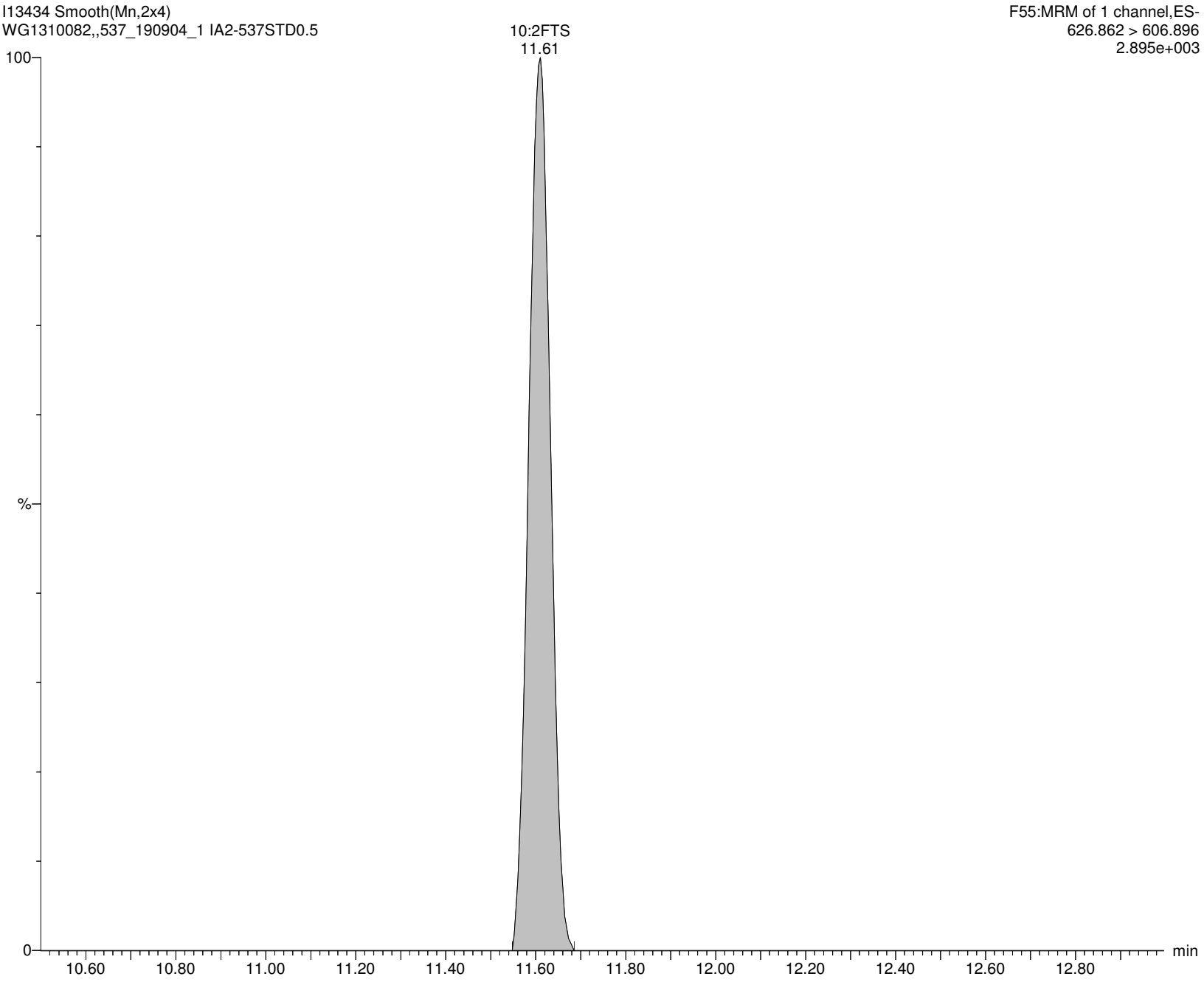


all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
Printed: Monday, November 18, 2019 13:42:48 Eastern Standard Time

**Name: I13434**
**ID: IA2-537STD0.5**
**Date: 18-Nov-2019**
**Time: 10:24:43**
**Description: WG1310082,,537_190904_1**
**User: LCMS02:JW**
**Vial: 1:A,2**
**Instrument: XEVO-TQSmicro#QEB0050**
**Inlet Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\LCMS_537_ISO_B**
**Tune Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\181009_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**10:2FTS**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
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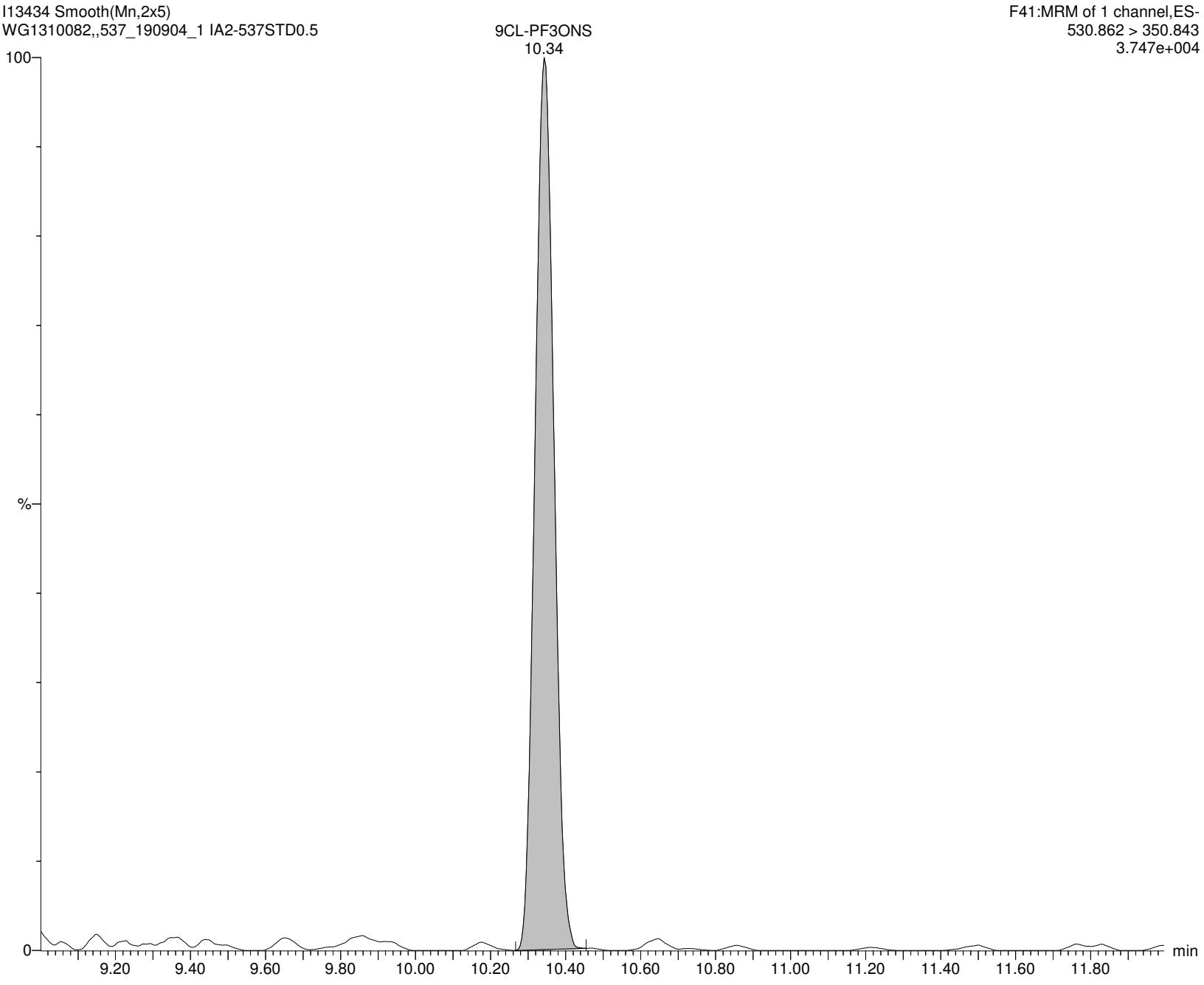
**Time: 10:24:43**
**Description: WG1310082,,537_190904_1**
**User: LCMS02:JW**
**Vial: 1:A,2**
**Instrument: XEVO-TQSmicro#QEB0050**
**Inlet Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\LCMS_537_ISO_B**
**Tune Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\181009_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**9CL-PF3ONS**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
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**Name: I13434**
**ID: IA2-537STD0.5**
**Date: 18-Nov-2019**
**Time: 10:24:43**
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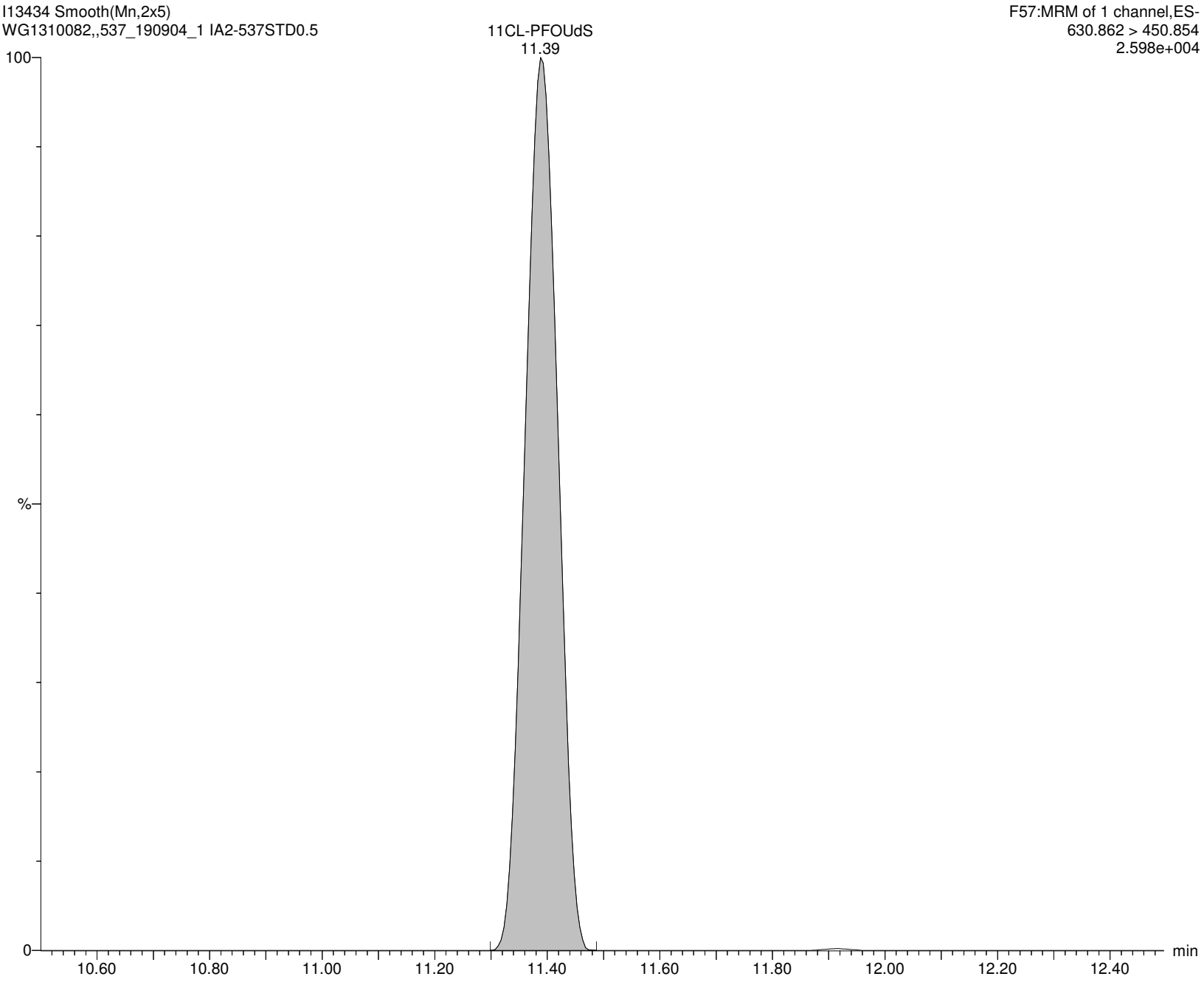
**Vial: 1:A,2**
**Instrument: XEVO-TQSmicro#QEB0050**
**Inlet Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\LCMS_537_ISO_B**
**Tune Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\181009_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**11CL-PFOUdS**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
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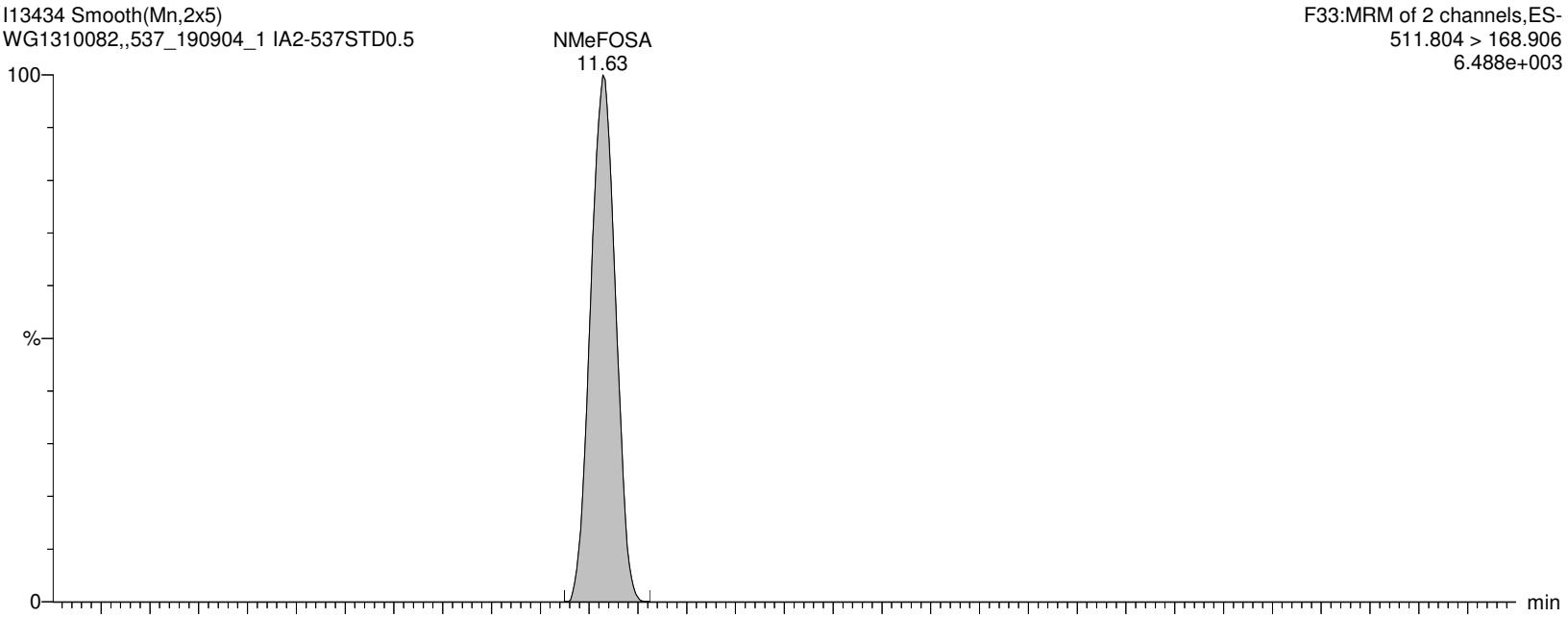
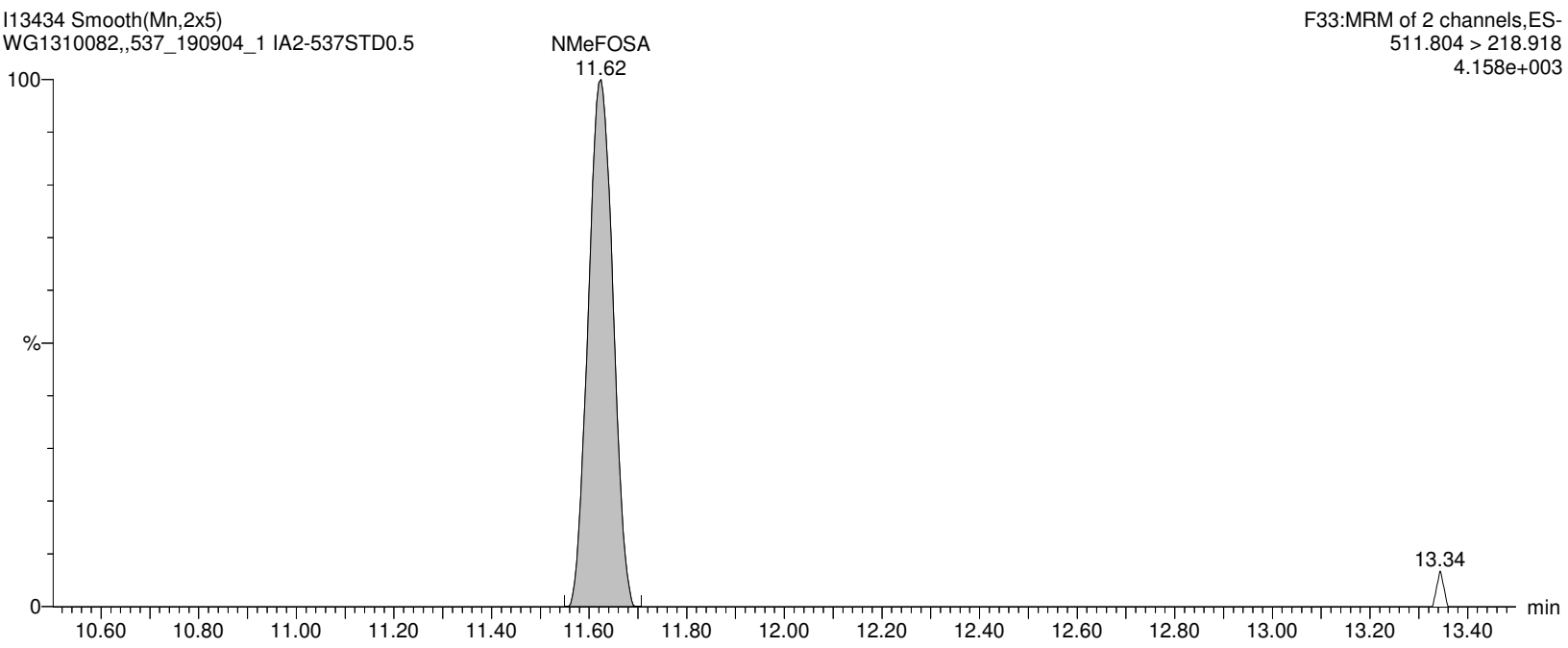
**User: LCMS02:JW**
**Vial: 1:A,2**
**Instrument: XEVO-TQSmicro#QEB0050**
**Inlet Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\LCMS_537_ISO_B**
**Tune Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\181009_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**NMeFOSA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
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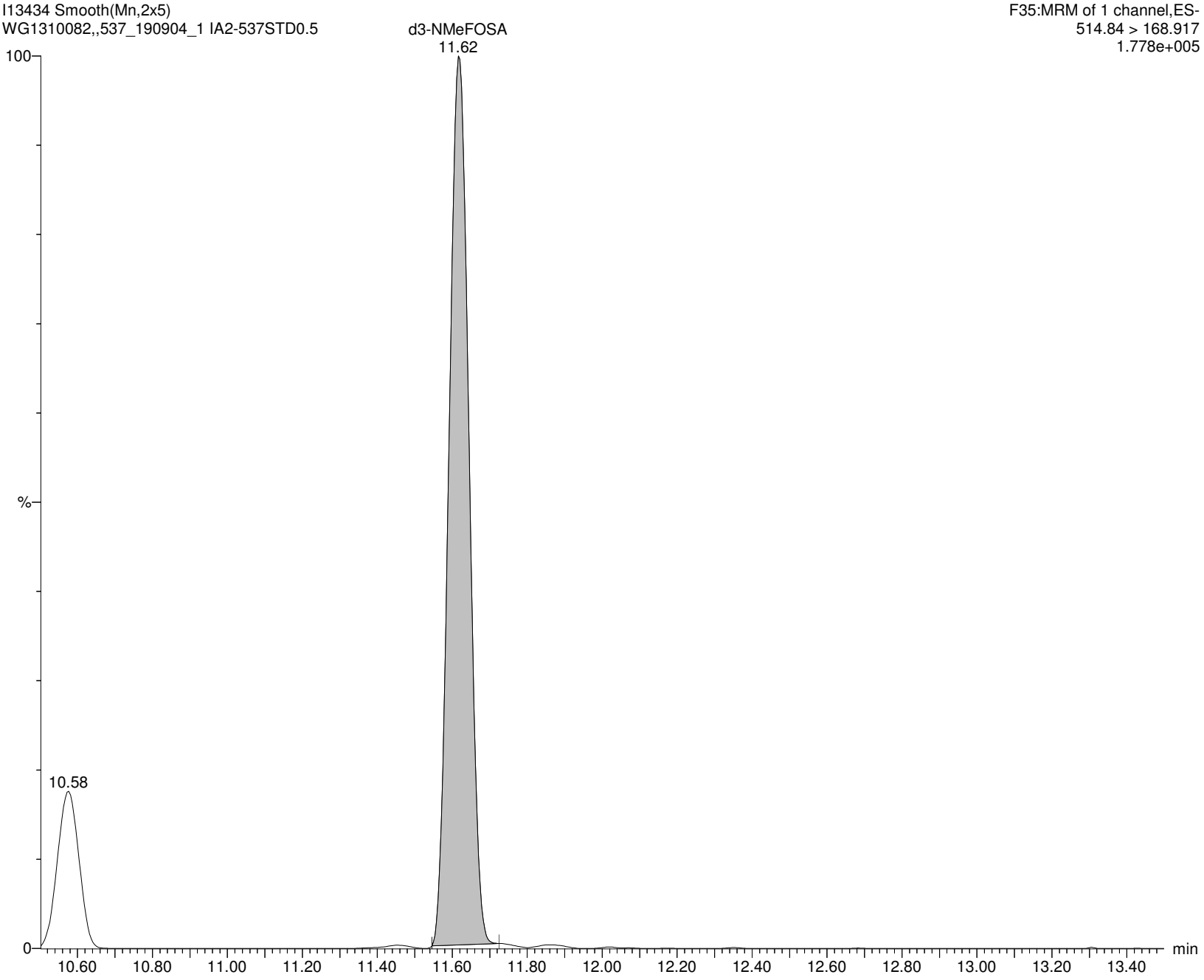
**Name: I13434**
**ID: IA2-537STD0.5**
**Date: 18-Nov-2019**
**Time: 10:24:43**
**Description: WG1310082,,537_190904_1**
**User: LCMS02:JW**
**Vial: 1:A,2**
**Instrument: XEVO-TQSmicro#QEB0050**
**Inlet Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\LCMS_537_ISO_B**
**Tune Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\181009_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**d3-NMeFOSA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
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**Name: I13434**
**ID: IA2-537STD0.5**
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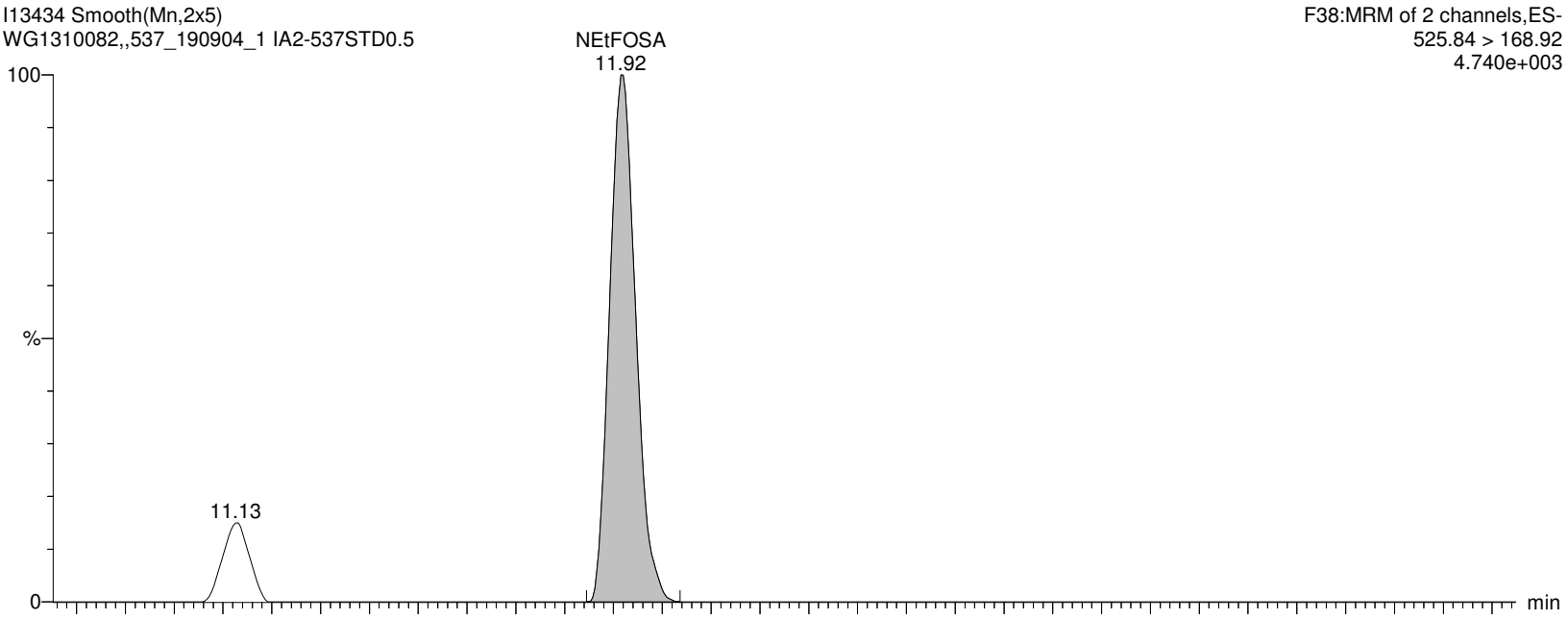
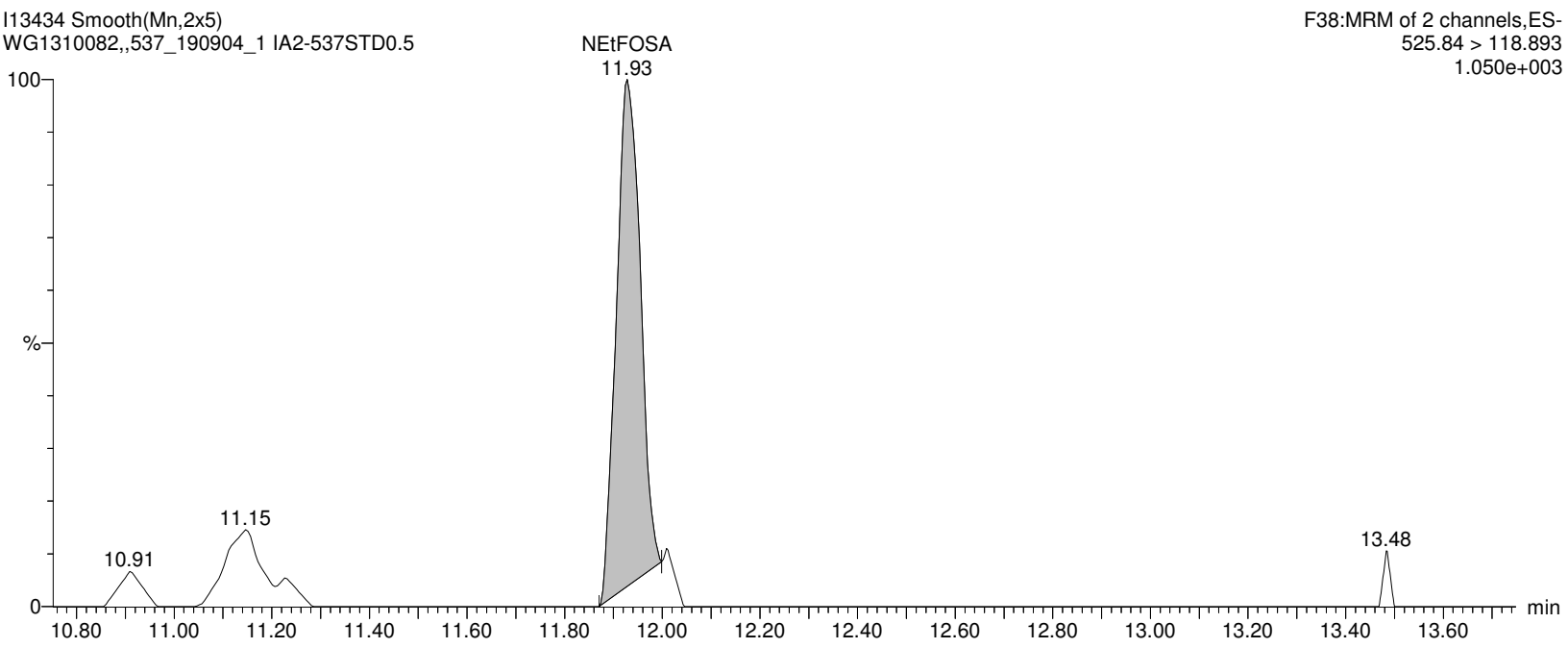
**Time: 10:24:43**
**Description: WG1310082,,537_190904_1**
**User: LCMS02:JW**
**Vial: 1:A,2**
**Instrument: XEVO-TQSmicro#QEB0050**
**Inlet Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\LCMS_537_ISO_B**
**Tune Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\181009_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**NEtFOSA**



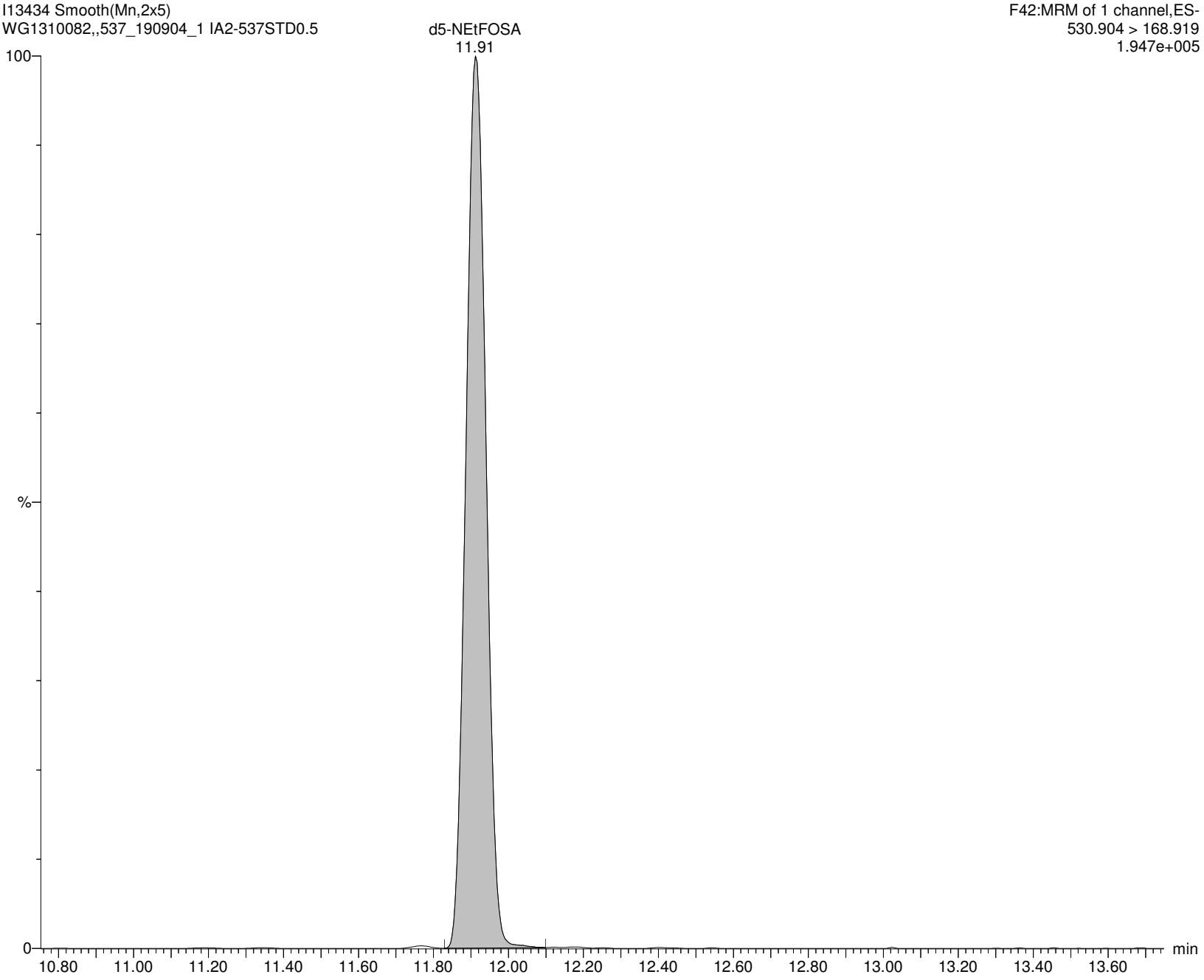


all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
Printed: Monday, November 18, 2019 13:42:48 Eastern Standard Time

**Name: I13434**
**ID: IA2-537STD0.5**
**Date: 18-Nov-2019**
**Time: 10:24:43**
**Description: WG1310082,,537_190904_1**
**User: LCMS02:JW**
**Vial: 1:A,2**
**Instrument: XEVO-TQSmicro#QEB0050**
**Inlet Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\LCMS_537_ISO_B**
**Tune Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\181009_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**d5-NEtFOSA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
Printed: Monday, November 18, 2019 13:42:48 Eastern Standard Time

**Name: I13434**
**ID: IA2-537STD0.5**
**Date: 18-Nov-2019**
**Time: 10:24:43**
**Description: WG1310082,,537_190904_1**
**User: LCMS02:JW**
**Vial: 1:A,2**
**Instrument: XEVO-TQSmicro#QEB0050**
**Inlet Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\LCMS_537_ISO_B**
**Tune Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\181009_TUNE.IPR**
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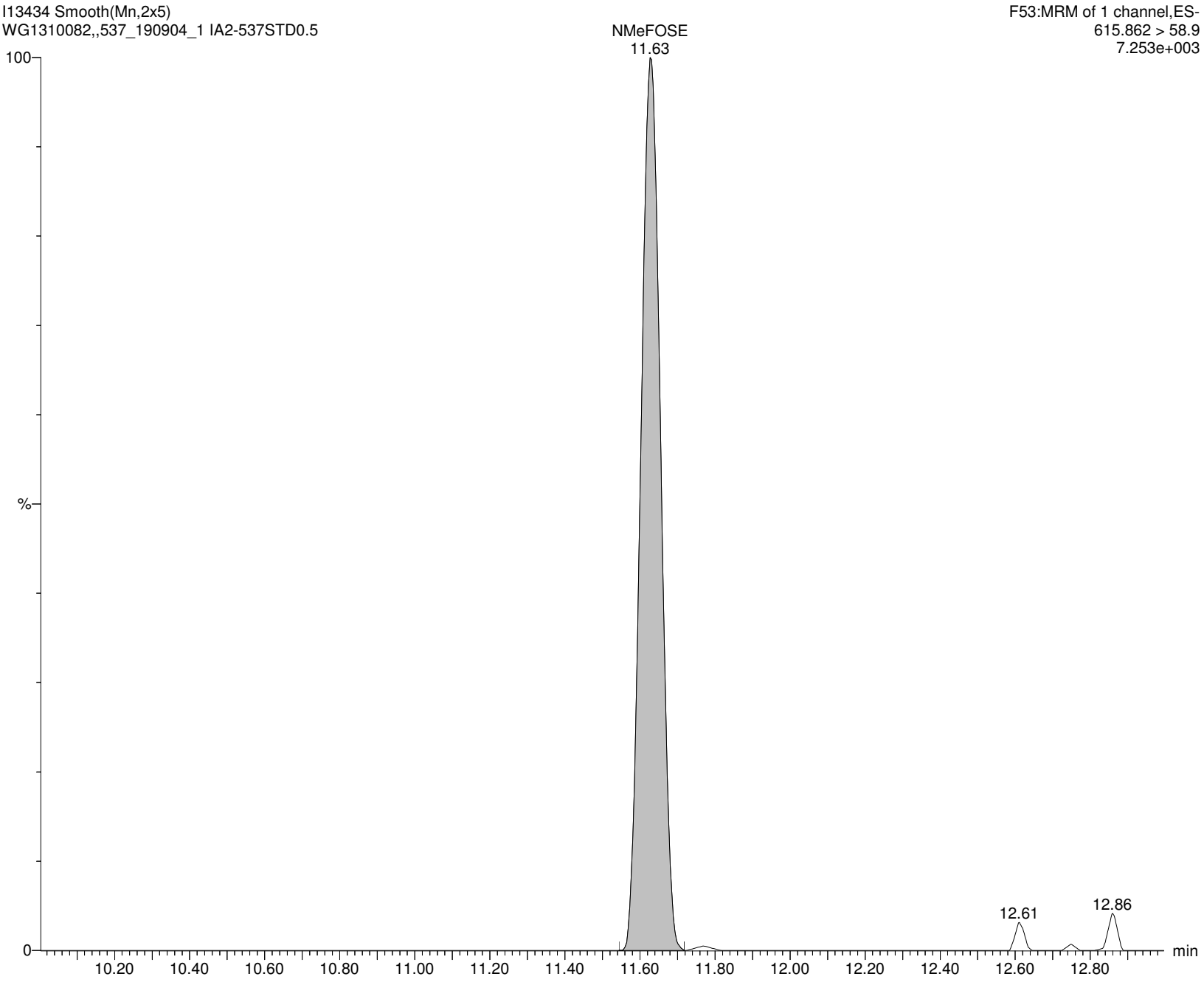
**NMeFOSE**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
Printed: Monday, November 18, 2019 13:42:48 Eastern Standard Time

**Name: I13434**
**ID: IA2-537STD0.5**
**Date: 18-Nov-2019**
**Time: 10:24:43**
**Description: WG1310082,,537_190904_1**
**User: LCMS02:JW**
**Vial: 1:A,2**
**Instrument: XEVO-TQSmicro#QEB0050**
**Inlet Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\LCMS_537_ISO_B**
**Tune Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\181009_TUNE.IPR**
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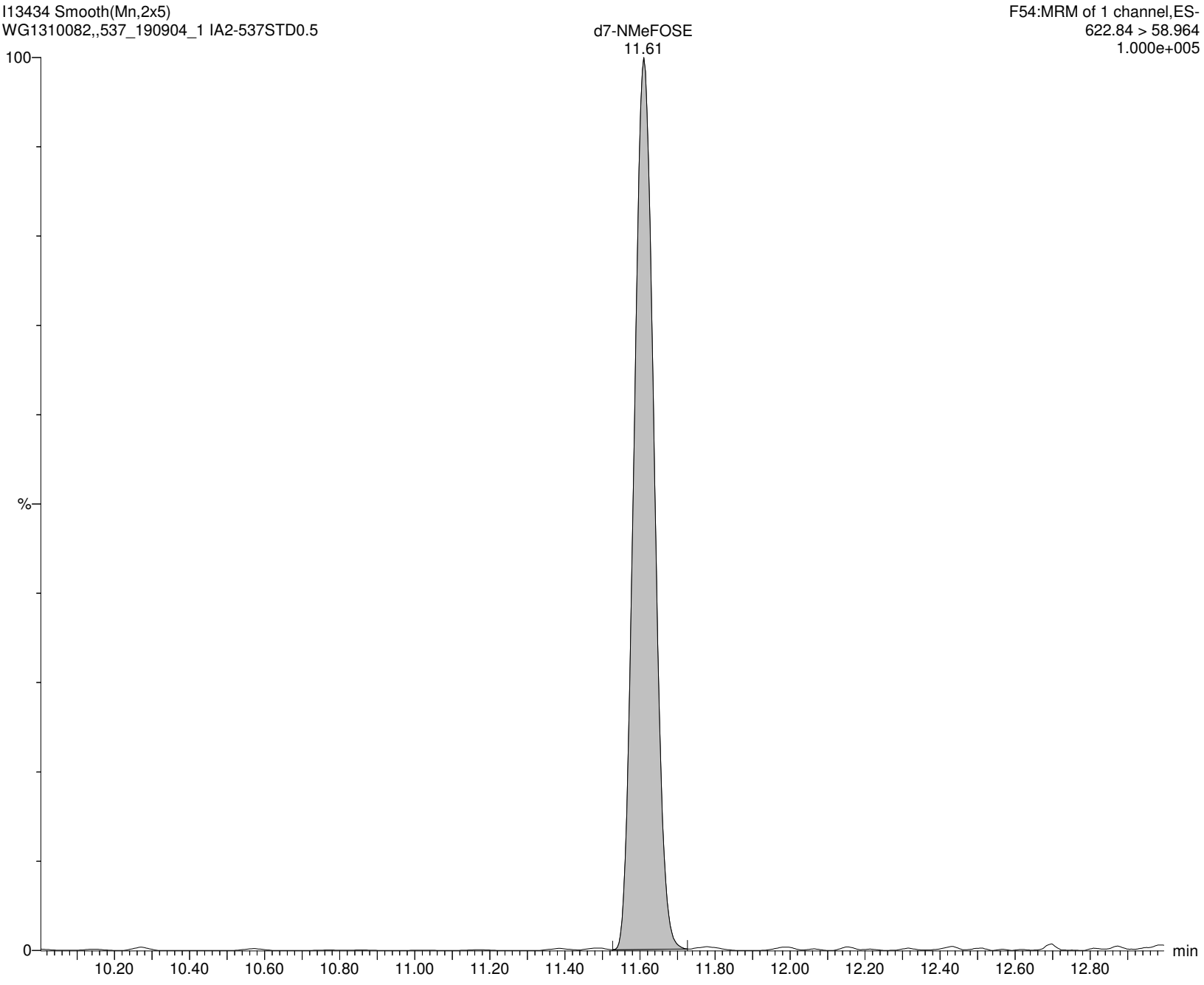
**d7-NMeFOSE**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
Printed: Monday, November 18, 2019 13:42:48 Eastern Standard Time

**Name: I13434**
**ID: IA2-537STD0.5**
**Date: 18-Nov-2019**
**Time: 10:24:43**
**Description: WG1310082,,537_190904_1**
**User: LCMS02:JW**
**Vial: 1:A,2**
**Instrument: XEVO-TQSmicro#QEB0050**
**Inlet Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\LCMS_537_ISO_B**
**Tune Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\181009_TUNE.IPR**
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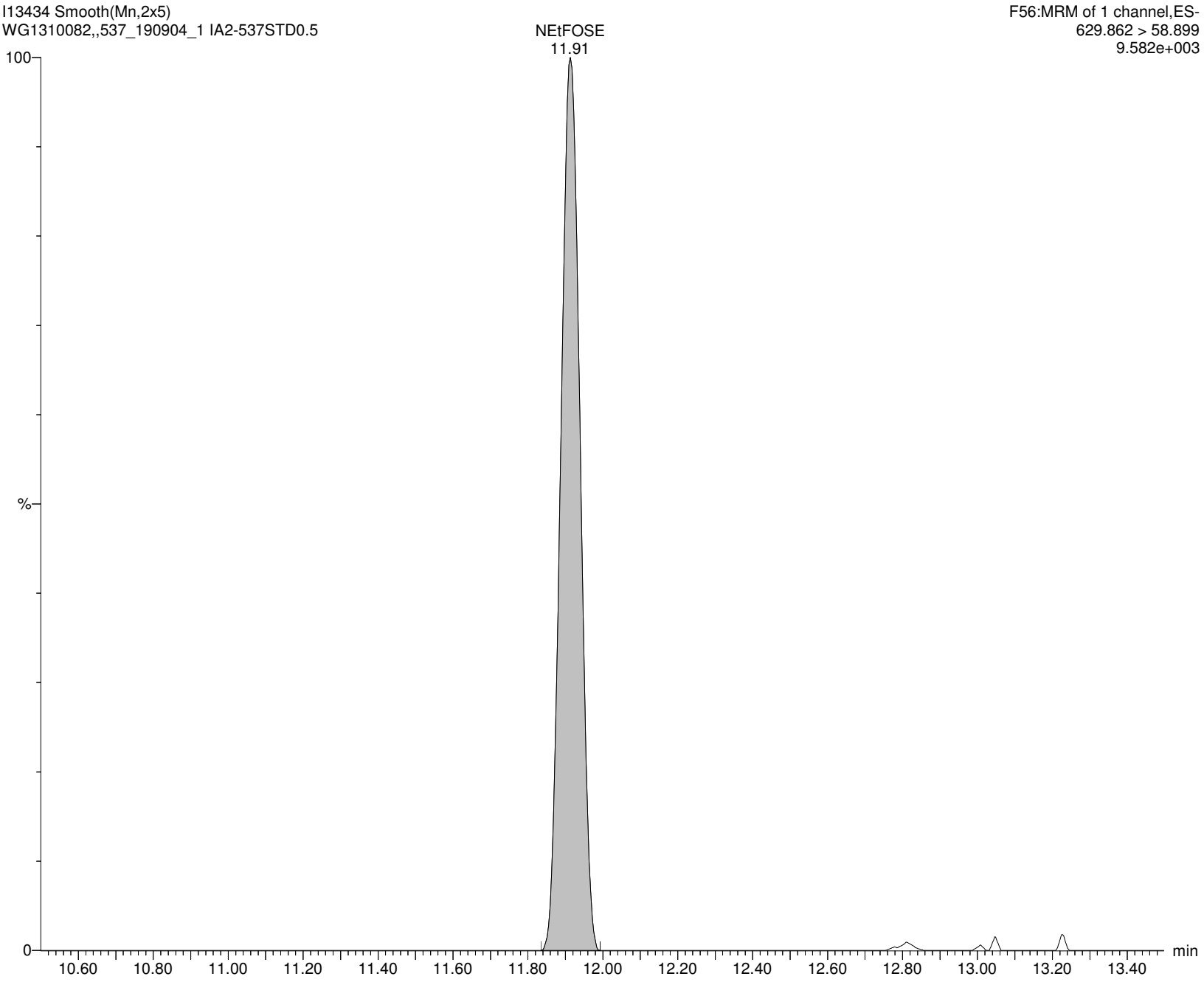
**NEtFOSE**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
Printed: Monday, November 18, 2019 13:42:48 Eastern Standard Time

**Name: I13434**
**ID: IA2-537STD0.5**
**Date: 18-Nov-2019**
**Time: 10:24:43**
**Description: WG1310082,,537_190904_1**
**User: LCMS02:JW**
**Vial: 1:A,2**
**Instrument: XEVO-TQSmicro#QEB0050**
**Inlet Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\LCMS_537_ISO_B**
**Tune Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\181009_TUNE.IPR**
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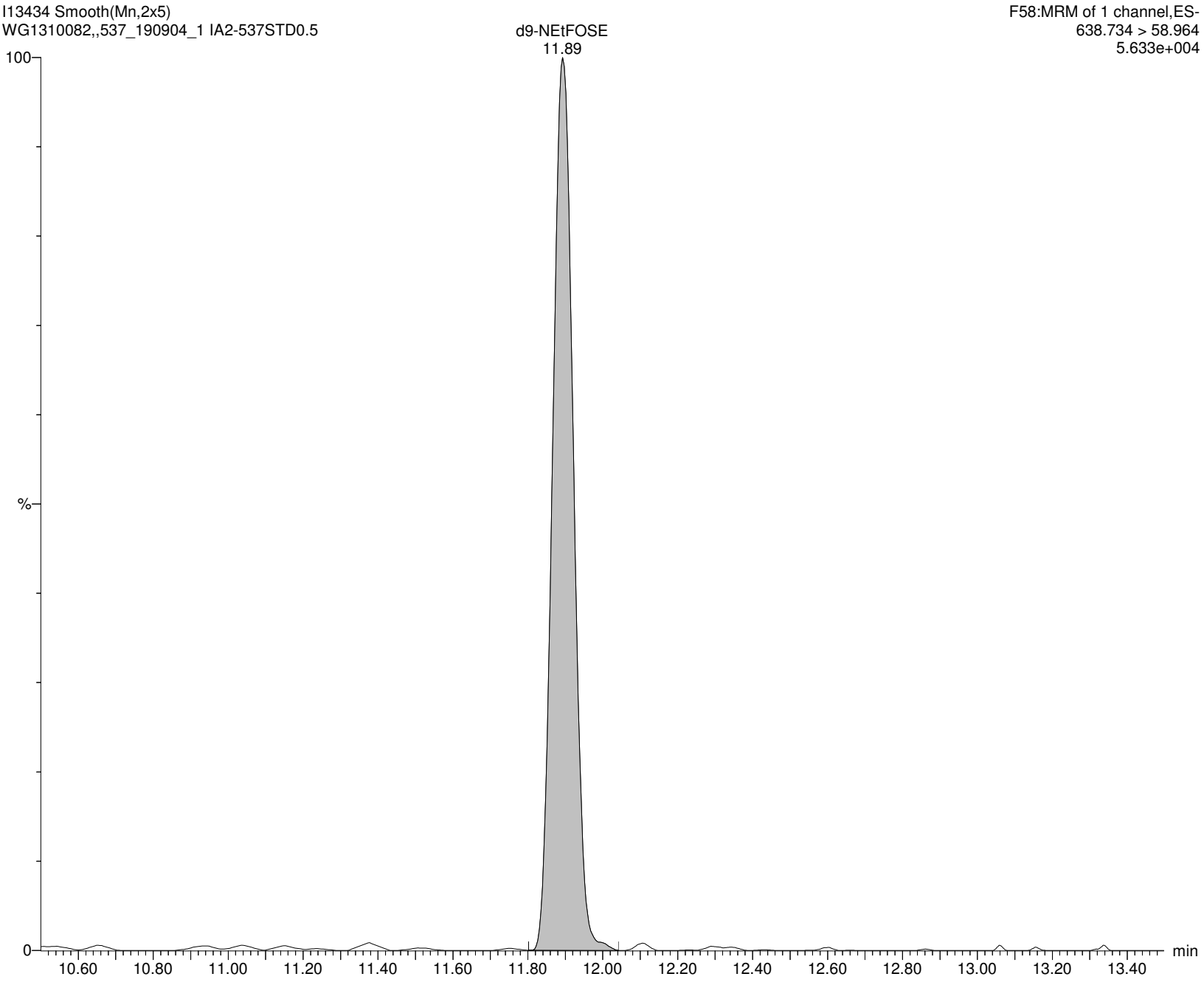
**d9-NEtFOSE**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
Printed: Monday, November 18, 2019 13:42:51 Eastern Standard Time

**Method: C:\MassLynx\Data\2019\191118_537ISO.PRO\MethDB\537ISO_Q_191118_DOD .mdb 18 Nov 2019 13:05:34**
**Calibration: C:\MassLynx\Data\2019\191118_537ISO.PRO\CurveDB\191118_ISO_ICAL.cdb 18 Nov 2019 13:41:42**

**ID: IA2-537STD1.0**
**Name: I13435**
**Date: 18-Nov-2019**
**Time: 10:53:49**
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**Instrument: XEVO-TQSmicro#QEB0050**
**User: LCMS02:JW**
**Inlet Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\LCMS_537_ISO_B**
**Tune Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\181009_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

| | Name | CAS | RT | Trace | Area | M Flag | Conc (ng/mL) | Ion Ratio | Ratio Flag | %Rec |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | PFBA | 375-22-4 | 2.24 | 212.926 > 169.111 | 4649 | | 1.065 | | na | 106.5 |
| 2 | M3PFBA | INT STD | 2.23 | 215.926 > 172.122 | 47673 | | 10.289 | | na | 102.9 |
| 3 | MPFBA | INT STD | 2.23 | 216.926 > 172.137 | 52305 | | 10.082 | | na | 100.8 |
| 4 | PFPeA | 2706-90-3 | 5.14 | 262.926 > 219.002 | 7746 | | 1.038 | | na | 103.8 |
| 5 | M5PFPEA | INT STD | 5.13 | 267.989 > 223.081 | 77264 | | 10.500 | | na | 105.0 |
| 6 | PFBS | 375-73-5 | 5.78 | 298.926 > 79.923 | 1392 | | 0.891 | 1.86 | NO | 100.7 |
| 7 | M3PFBS | INT STD | 5.77 | 301.989 > 80.254 | 10630 | | 9.740 | | na | 97.4 |
| 8 | 4:2FTS | 757124-72-4 | 6.93 | 326.926 > 306.957 | 638 | | 1.011 | 2.14 | NO | 108.2 |
| 9 | M2-4:2FTS | INT STD | 6.93 | 329.117 > 309.079 | 5701 | | 8.046 | | na | 80.5 |
| 10 | PFHxA | 307-24-4 | 7.01 | 312.989 > 269.028 | 9449 | | 1.153 | 17.48 | NO | 115.3 |
| 11 | M5PFHxA | INT STD | 7.01 | 317.989 > 273.045 | 89049 | | 10.133 | | na | 101.3 |
| 12 | PFPeS | 2706-91-4 | 7.32 | 348.926 > 80.251 | 947 | | 0.844 | 1.62 | NO | 89.8 |
| 13 | PFHpA | 375-85-9 | 8.27 | 362.926 > 319.014 | 11592 | | 1.056 | 5.86 | NO | 105.6 |
| 14 | M4PFHpA | INT STD | 8.27 | 366.926 > 321.979 | 121641 | | 10.391 | | na | 103.9 |
| 15 | br-PFHxS | 355-46-4 | 8.14 | 398.926 > 80.295 | 72 | M5 | 0.091 | 3.61 | NO | 53.5 |
| 16 | L-PFHxS | 355-46-4 | 8.42 | 398.926 > 80.295 | 471 | | 0.560 | 0.93 | NO | 75.7 |
| 17 | PFHxS | 355-46-4 | | 398.926 > 80.295 | 543 | | 0.651 | | na | |
| 18 | M3PFHxS | INT STD | 8.42 | 401.926 > 80.317 | 6709 | | 10.650 | | na | 106.5 |
| 19 | br-PFOA | 335-67-1 | | 412.989 > 368.9 | | | ND | | YES | |
| 20 | L-PFOA | 335-67-1 | 9.20 | 412.989 > 368.9 | 11900 | | 1.118 | 11.89 | NO | 111.8 |
| 21 | PFOA | 335-67-1 | | 412.989 > 368.9 | 11900 | | 1.118 | | na | |
| 22 | M8PFOA | INT STD | 9.20 | 420.989 > 375.979 | 115929 | | 10.320 | | na | 103.2 |
| 23 | M2PFOA | INT STD | 9.20 | 415.032 > 369.968 | 114802 | | 10.860 | | na | 108.6 |
| 24 | 6:2FTS | 27619-97-2 | 9.16 | 426.989 > 406.921 | 472 | | 1.007 | | YES | 106.0 |
| 25 | M2-6:2FTS | INT STD | 9.16 | 428.989 > 408.917 | 5794 | | 8.366 | | na | 83.7 |
| 26 | PFHpS | 375-92-8 | 9.29 | 448.926 > 80.257 | 622 | | 1.132 | 1.10 | YES | 119.2 |
| 27 | PFNA | 375-95-1 | 9.95 | 462.989 > 418.931 | 10940 | | 1.179 | 4.61 | NO | 117.9 |
| 28 | M9PFNA | INT STD | 9.95 | 472.053 > 426.947 | 113247 | | 10.246 | | na | 102.5 |
| 29 | br-PFOS | 1763-23-1 | 9.81 | 498.989 > 80.294 | 144 | M5 | 0.133 | 2.49 | NO | 66.3 |
| 30 | L-PFOS | 1763-23-1 | 10.00 | 498.989 > 80.294 | 646 | | 0.790 | 1.26 | NO | 108.2 |
| 31 | PFOS | 1763-23-1 | | 498.989 > 80.294 | 790 | | 0.922 | | na | |
| 32 | M4PFOS | INT STD | 10.00 | 503.032 > 80.306 | 7797 | | 11.164 | | na | 111.6 |
| 33 | M8PFOS | INT STD | 10.00 | 507.053 > 80.294 | 8338 | | 10.421 | | na | 104.2 |
| 34 | PFDA | 335-76-2 | 10.58 | 513.053 > 468.906 | 9945 | | 1.054 | 5.95 | NO | 105.4 |
| 35 | M2PFDA | INT STD | 10.58 | 515.053 > 469.934 | 104230 | | 11.805 | | na | 118.1 |
| 36 | M6PFDA | INT STD | 10.58 | 519.053 > 473.931 | 109985 | | 10.210 | | na | 102.1 |
| 37 | 8:2FTS | 39108-34-4 | 10.57 | 526.926 > 506.818 | 355 | | 0.873 | | na | 90.9 |
| 38 | M2-8:2FTS | INT STD | 10.57 | 529.053 > 508.945 | 3740 | | 9.207 | | na | 92.1 |
| 39 | PFNS | 68259-12-1 | 10.60 | 548.989 > 80.249 | 842 | | 1.086 | 1.49 | YES | 113.1 |


all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
Printed: Monday, November 18, 2019 13:42:51 Eastern Standard Time

**ID: IA2-537STD1.0**
**Name: I13435**
**Date: 18-Nov-2019**
**Time: 10:53:49**
**Description: WG1310082,,537_190904_2**
**Instrument: XEVO-TQSmicro#QEB0050**
**User: LCMS02:JW**
**Inlet Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\LCMS_537_ISO_B**
**Tune Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\181009_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

| | Name | CAS | RT | Trace | Area | M Flag | Conc (ng/mL) | Ion Ratio | Ratio Flag | %Rec |
|---|---|---|---|---|---|---|---|---|---|---|
| 40 | d3-NMeFOSAA | INT STD | 10.96 | 573.096 > 418.987 | 11161 | | 9.098 | | na | 91.0 |
| 41 | br-NMeFOSAA | 2355-31-9 | | 570.053 > 418.917 | | | ND | | YES | |
| 42 | L-NMeFOSAA | 2355-31-9 | 10.97 | 570.053 > 418.917 | 1167 | | 1.122 | 2.21 | NO | 112.2 |
| 43 | NMeFOSAA | 2355-31-9 | | 570.053 > 418.917 | 1167 | | 1.122 | | na | |
| 44 | PFUnA | 2058-94-8 | 11.12 | 562.989 > 518.903 | 10026 | | 1.034 | 6.81 | NO | 103.4 |
| 45 | M7-PFUDA | INT STD | 11.12 | 570.053 > 524.923 | 101388 | | 10.609 | | na | 106.1 |
| 46 | PFDS | 335-77-3 | 11.13 | 598.926 > 80.314 | 482 | | 0.870 | 0.81 | NO | 90.2 |
| 47 | FOSA | 754-91-6 | 11.01 | 497.989 > 78.245 | 2798 | | 1.172 | | YES | 117.2 |
| 48 | M8FOSA | INT STD | 11.01 | 506.053 > 78.286 | 22475 | | 8.824 | | na | 88.2 |
| 49 | d5-NEtFOSAA | INT STD | 11.25 | 589.117 > 418.929 | 9857 | | 9.096 | | na | 91.0 |
| 50 | br-NEtFOSAA | 2991-50-6 | | 583.989 > 418.927 | | | ND | | YES | |
| 51 | L-NEtFOSAA | 2991-50-6 | 11.26 | 583.989 > 418.927 | 836 | | 0.899 | 2.06 | NO | 89.9 |
| 52 | NEtFOSAA | 2991-50-6 | | 583.989 > 418.927 | 836 | | 0.899 | | na | |
| 53 | PFDoA | 307-55-1 | 11.60 | 612.989 > 568.967 | 9531 | | 1.089 | 13.33 | NO | 108.9 |
| 54 | MPFDOA | INT STD | 11.60 | 614.989 > 569.92 | 103352 | | 9.640 | | na | 96.4 |
| 55 | PFTrDA | 72629-94-8 | 12.01 | 663.053 > 618.969 | 8871 | | 1.260 | 10.92 | NO | 126.0 |
| 56 | PFTA | 376-06-7 | 12.37 | 713.053 > 668.976 | 7615 | | 1.139 | 8.80 | NO | 113.9 |
| 57 | M2PFTEDA | INT STD | 12.37 | 715.053 > 669.945 | 83480 | | 9.803 | | na | 98.0 |
| 58 | M3HFPO-DA | INT STD | 7.44 | 331.989 > 286.995 | 3469 | | 70.486 | | na | 35.2 |
| 59 | HFPO-DA | 13252-13-6 | 7.44 | 284.819 > 169.094 | 410 | | 14.231 | 2.23 | YES | 71.2 |
| 60 | ADONA | 958445-44-8 | 8.45 | 376.926 > 251.005 | 15122 | | 0.992 | | na | 104.9 |
| 61 | PFHxDA | | 12.79 | 813.053 > 769.005 | 6645 | | 1.044 | | na | 104.4 |
| 62 | PFODA | | 12.99 | 912.989 > 869.032 | 4023 | | 0.862 | | na | 86.2 |
| 63 | M2PFHxDA | | 12.79 | 815.372 > 770.158 | 17329 | | 9.560 | | na | 95.6 |
| 64 | PFDoS | | 12.00 | 698.649 > 79.853 | 611 | | 1.082 | 2.71 | NO | 108.2 |
| 65 | 10:2FTS | | 11.61 | 626.862 > 606.896 | 464 | | 1.191 | | na | 123.5 |
| 66 | 9CL-PF3ONS | | 10.35 | 530.862 > 350.843 | 4366 | | 0.797 | | na | 85.5 |
| 67 | 11CL-PFOUdS | | 11.39 | 630.862 > 450.854 | 4417 | | 0.956 | | na | 101.5 |
| 68 | NMeFOSA | | 11.62 | 511.804 > 168.906 | 821 | | 1.011 | 1.37 | NO | 101.1 |
| 69 | d3-NMeFOSA | | 11.62 | 514.84 > 168.917 | 10918 | | 8.220 | | na | 82.2 |
| 70 | NEtFOSA | | 11.92 | 525.84 > 168.92 | 951 | | 1.032 | 6.47 | YES | 103.2 |
| 71 | d5-NEtFOSA | | 11.92 | 530.904 > 168.919 | 10513 | | 8.092 | | na | 80.9 |
| 72 | NMeFOSE | | 11.63 | 615.862 > 58.9 | 848 | | 0.748 | | na | 74.8 |
| 73 | d7-NMeFOSE | | 11.61 | 622.84 > 58.964 | 5601 | | 9.004 | | na | 90.0 |
| 74 | NEtFOSE | | 11.91 | 629.862 > 58.899 | 1239 | | 0.961 | | na | 96.1 |
| 75 | d9-NEtFOSE | | 11.90 | 638.734 > 58.964 | 3265 | | 8.976 | | na | 89.8 |


all concentration units in (ng/mL)

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**Method: C:\MassLynx\Data\2019\191118_537ISO.PRO\MethDB\537ISO_Q_191118_DOD .mdb 18 Nov 2019 13:05:34**
**Calibration: C:\MassLynx\Data\2019\191118_537ISO.PRO\CurveDB\191118_ISO_ICAL.cdb 18 Nov 2019 13:41:42**

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**Date: 18-Nov-2019**
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**User: LCMS02:JW**
**Vial: 1:A,3**
**Instrument: XEVO-TQSmicro#QEB0050**
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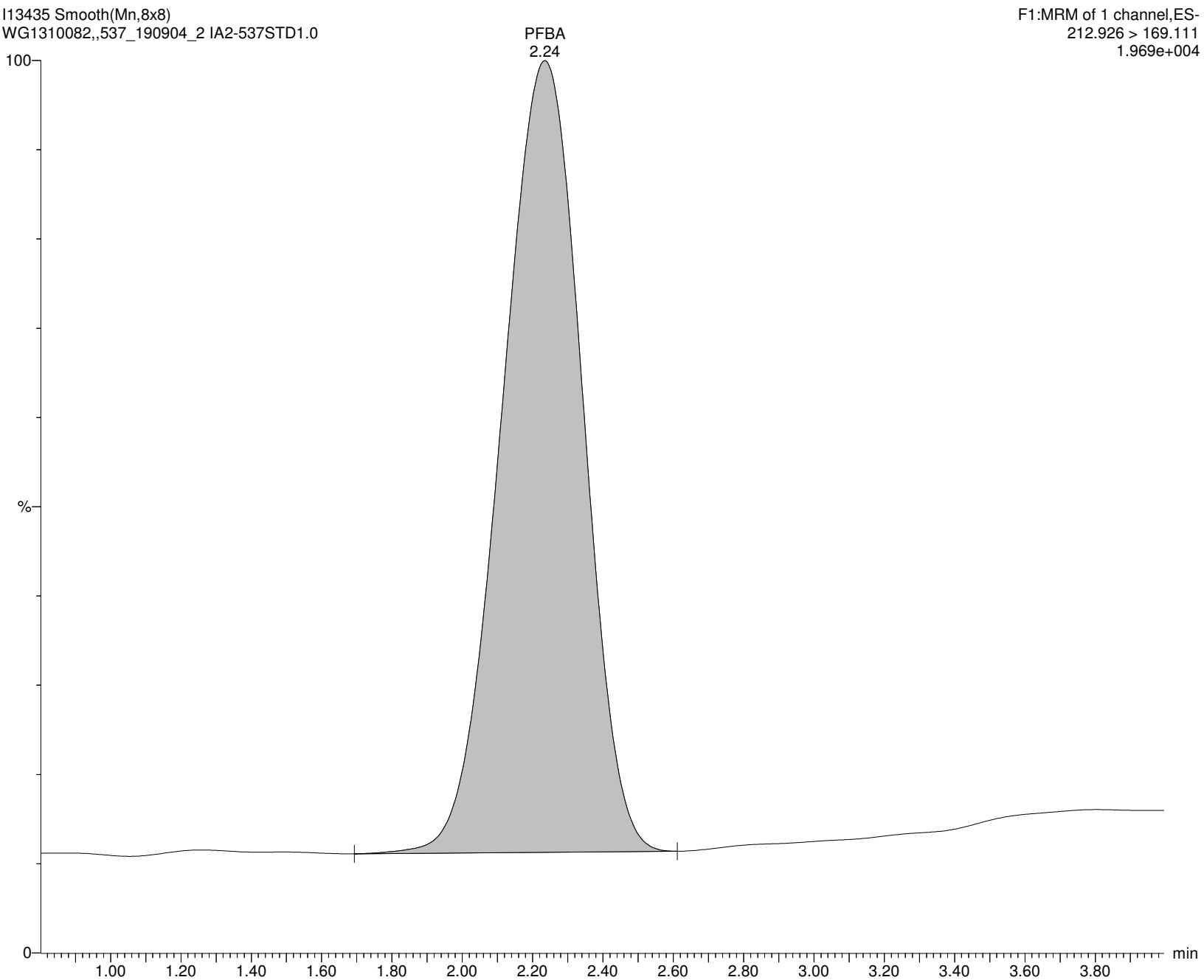
**MS Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**PFBA**





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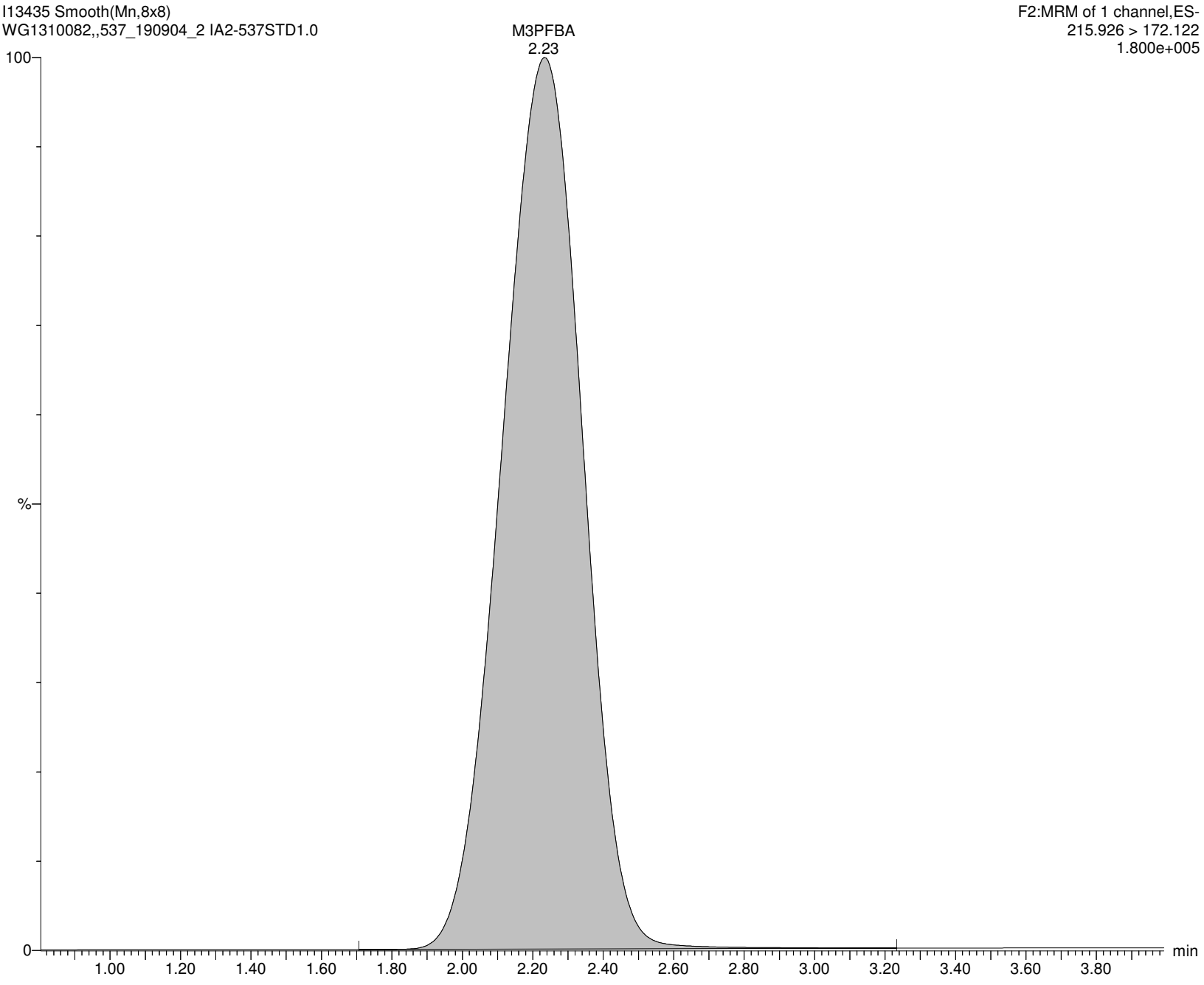
**M3PFBA**





all concentration units in (ng/mL)

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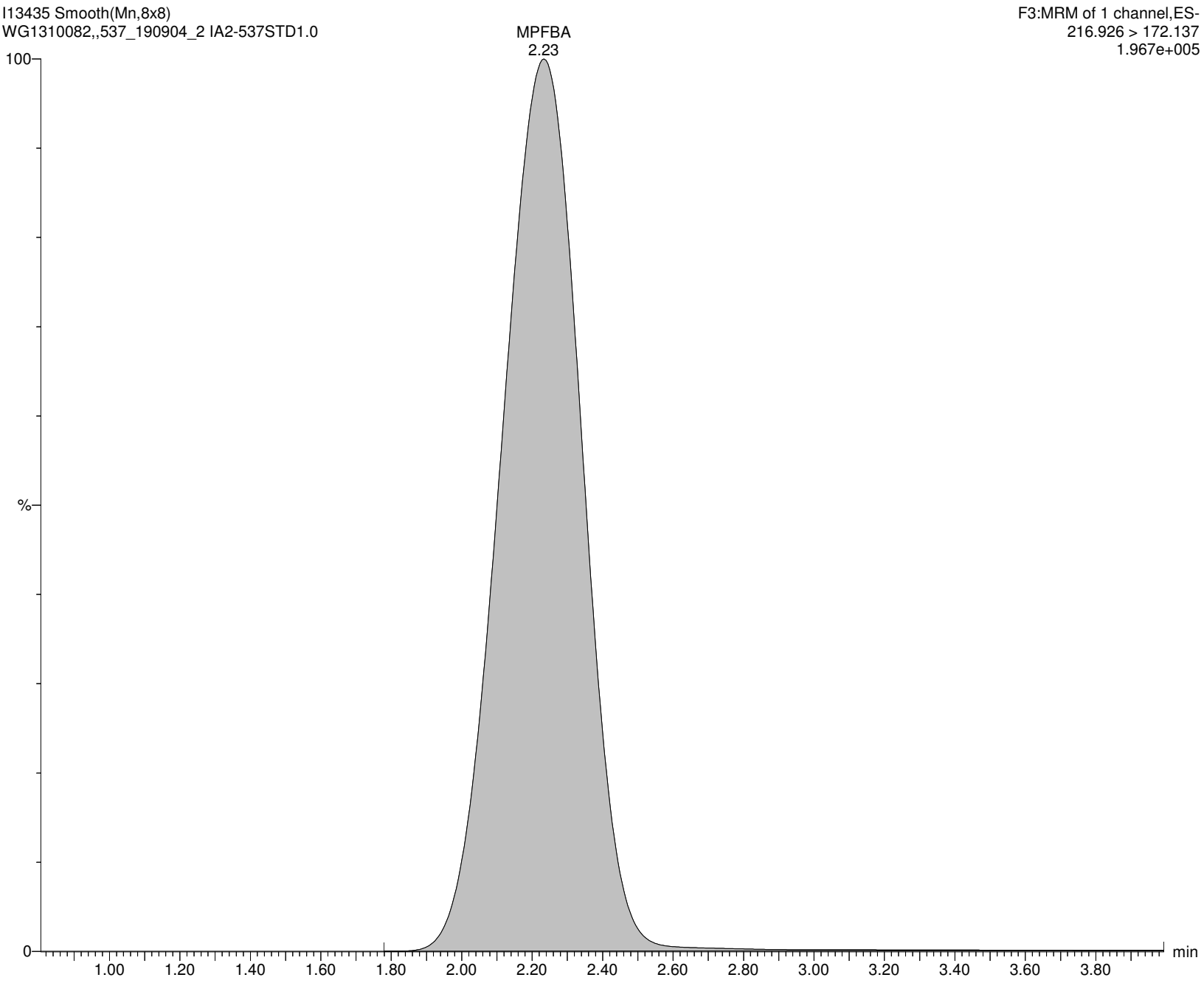
**MPFBA**





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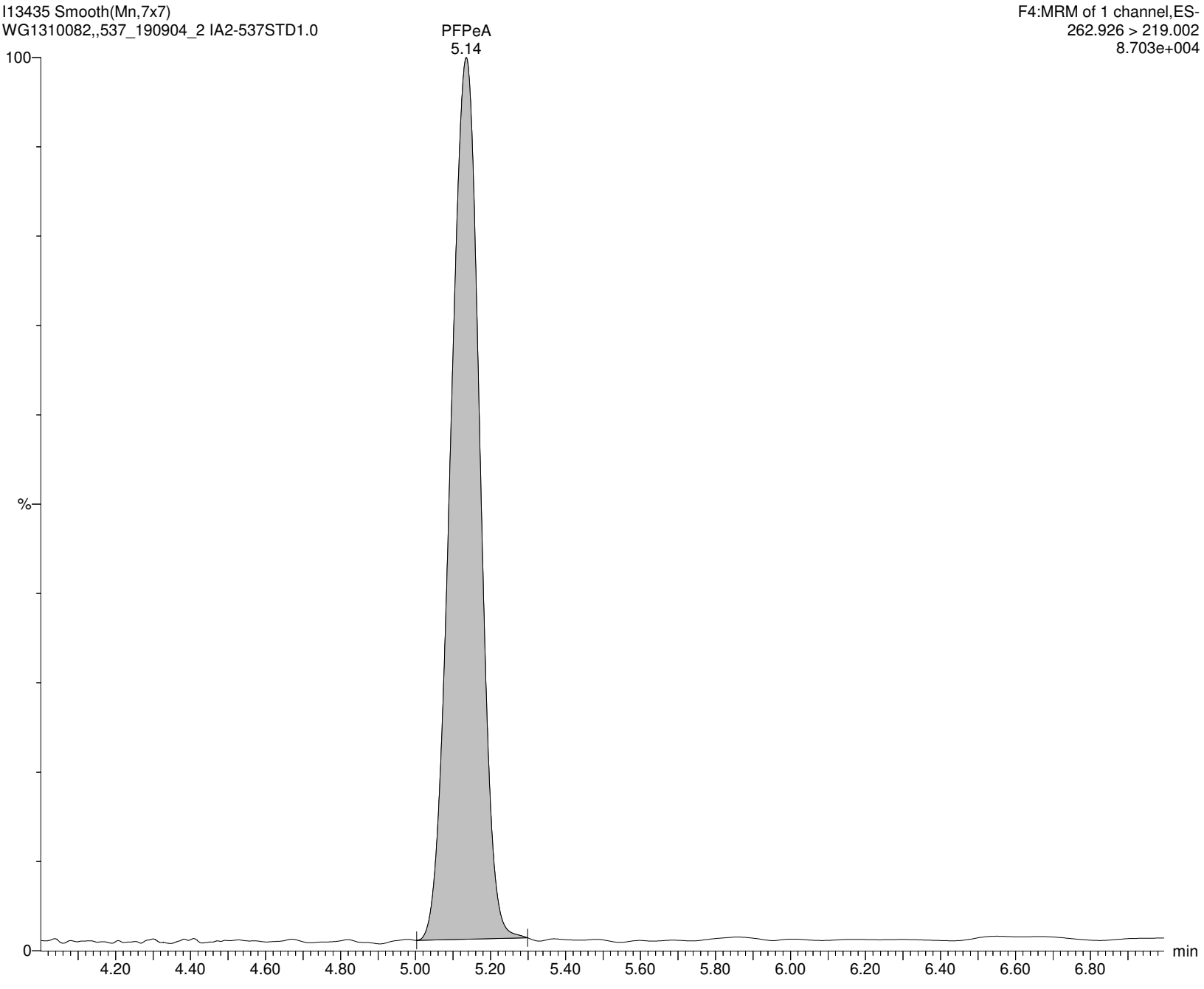
**PFPeA**





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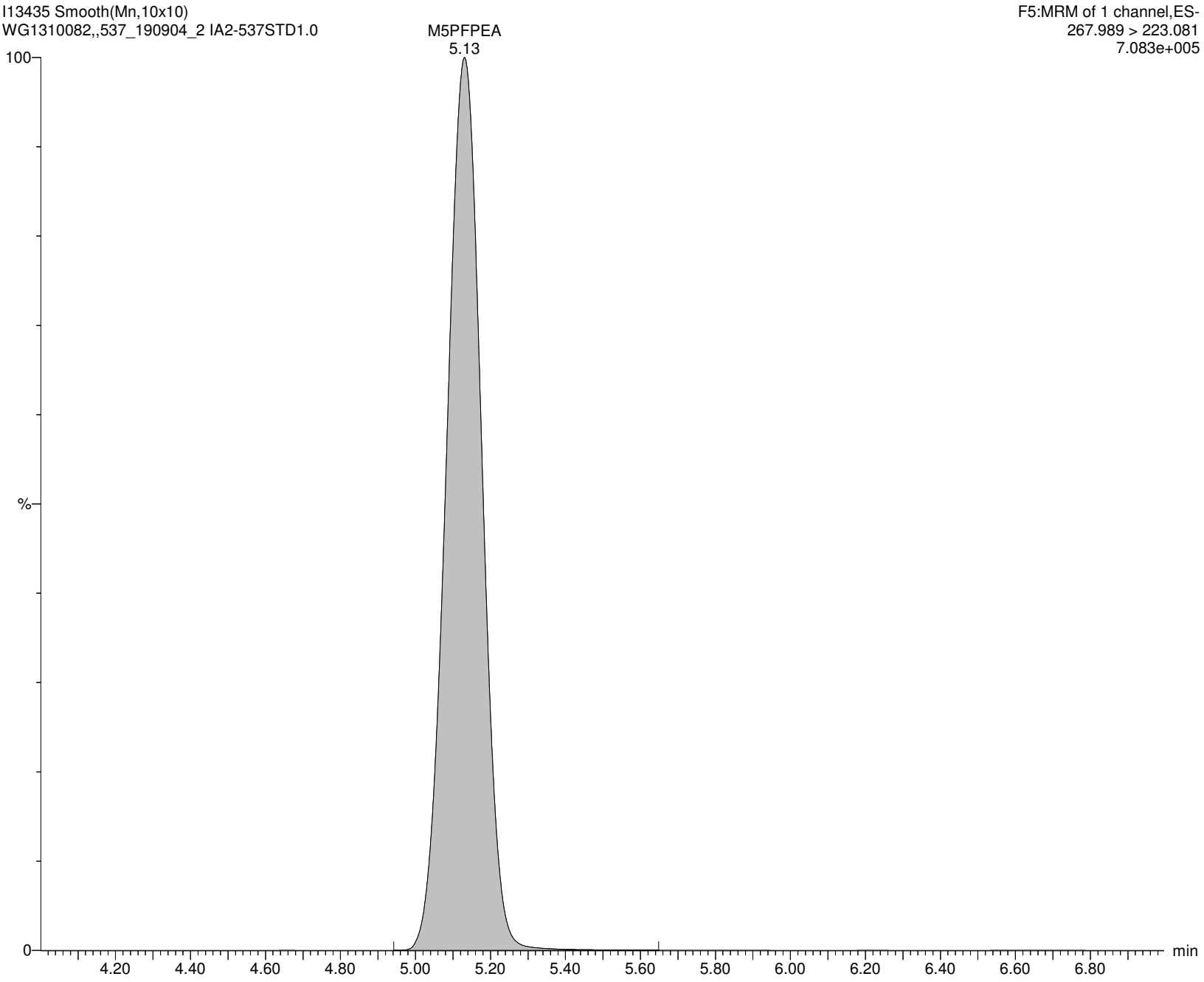
**M5PFPEA**





all concentration units in (ng/mL)

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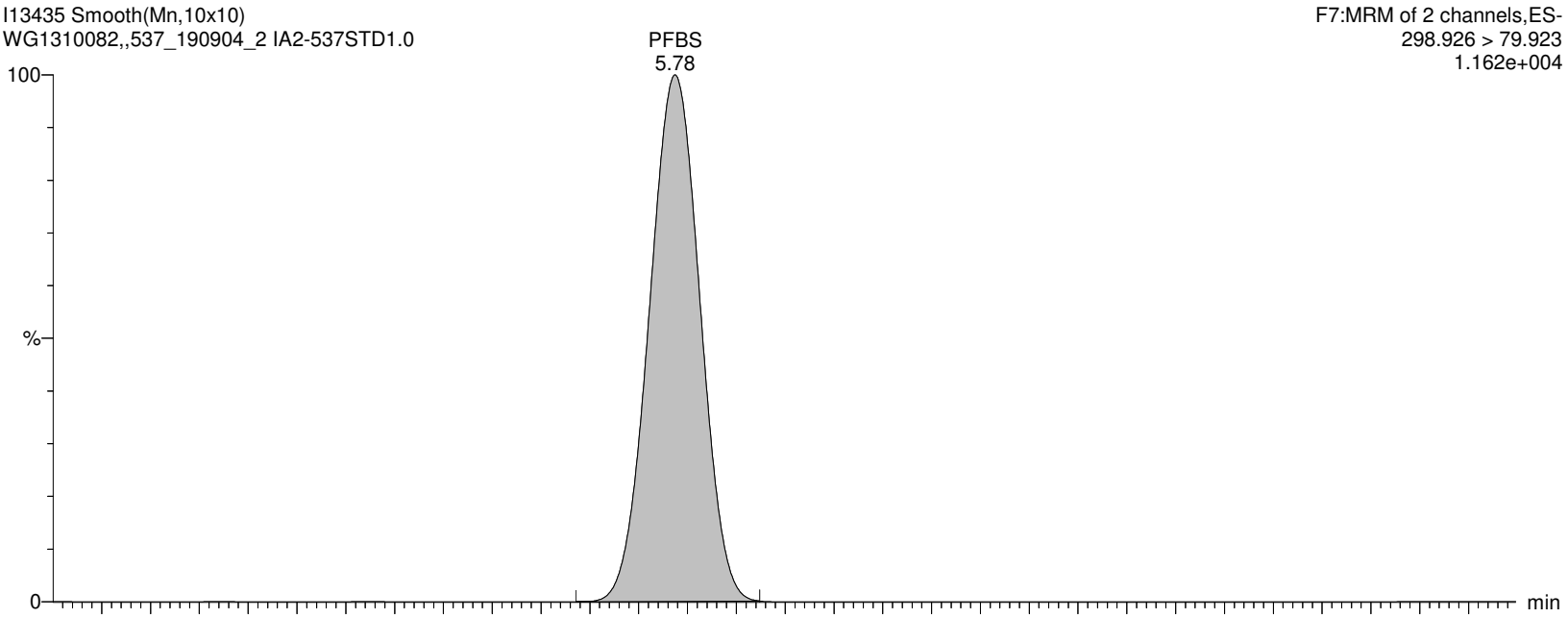
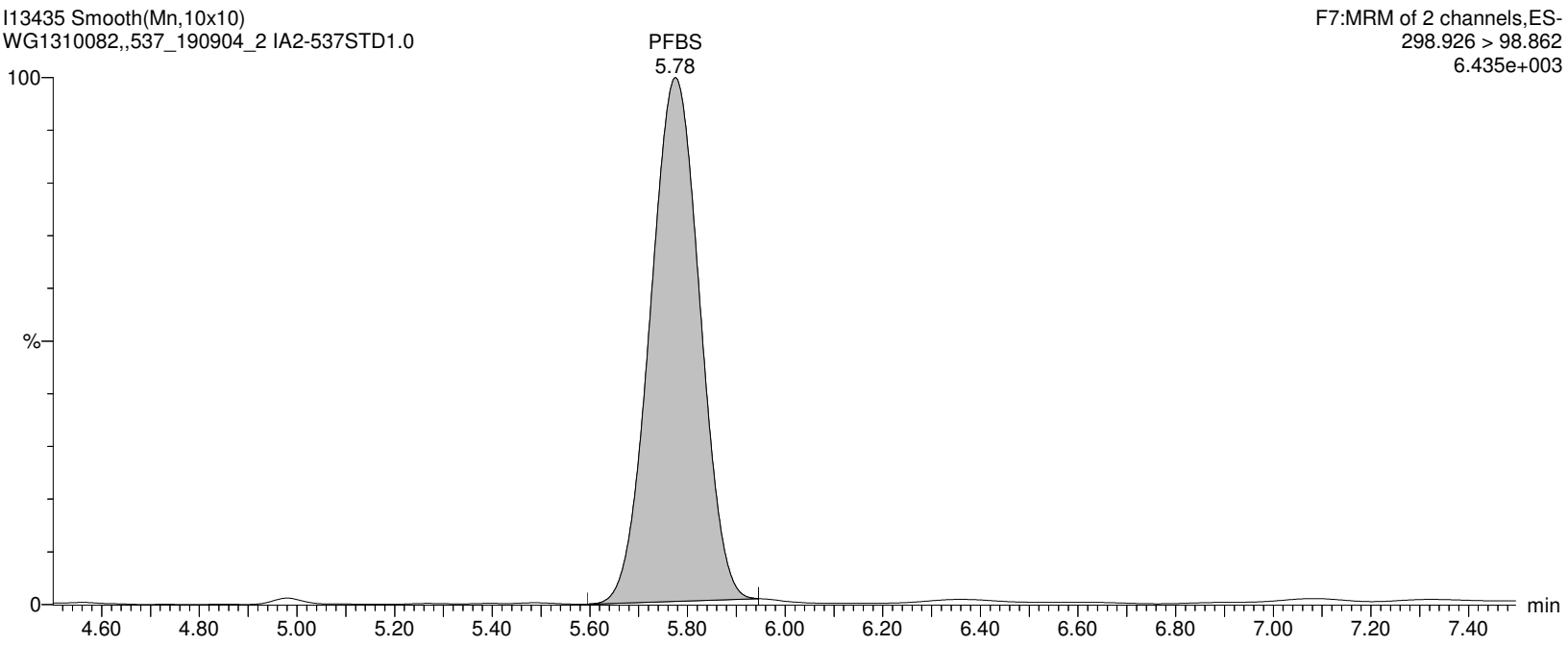
**PFBS**





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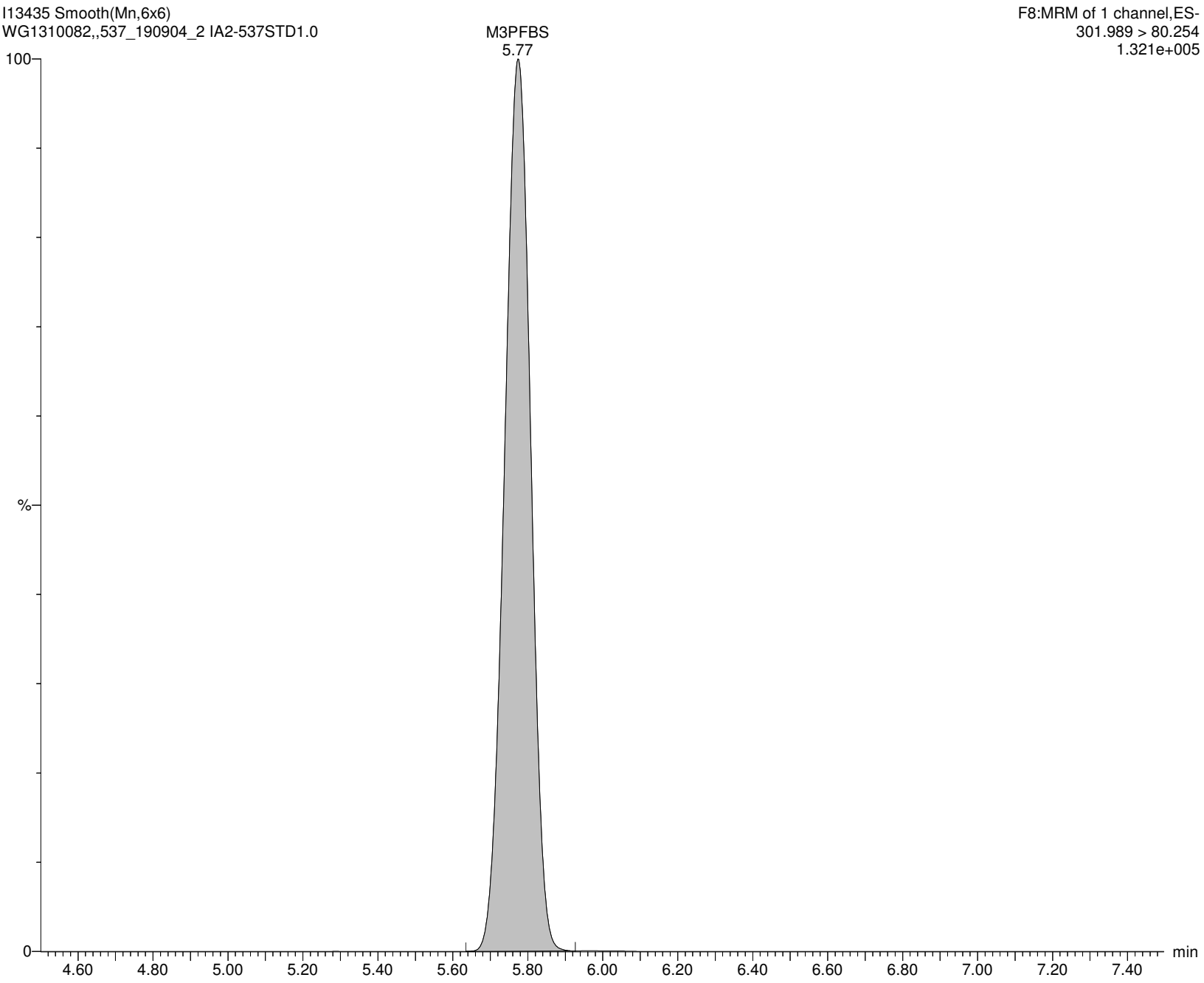
**M3PFBS**





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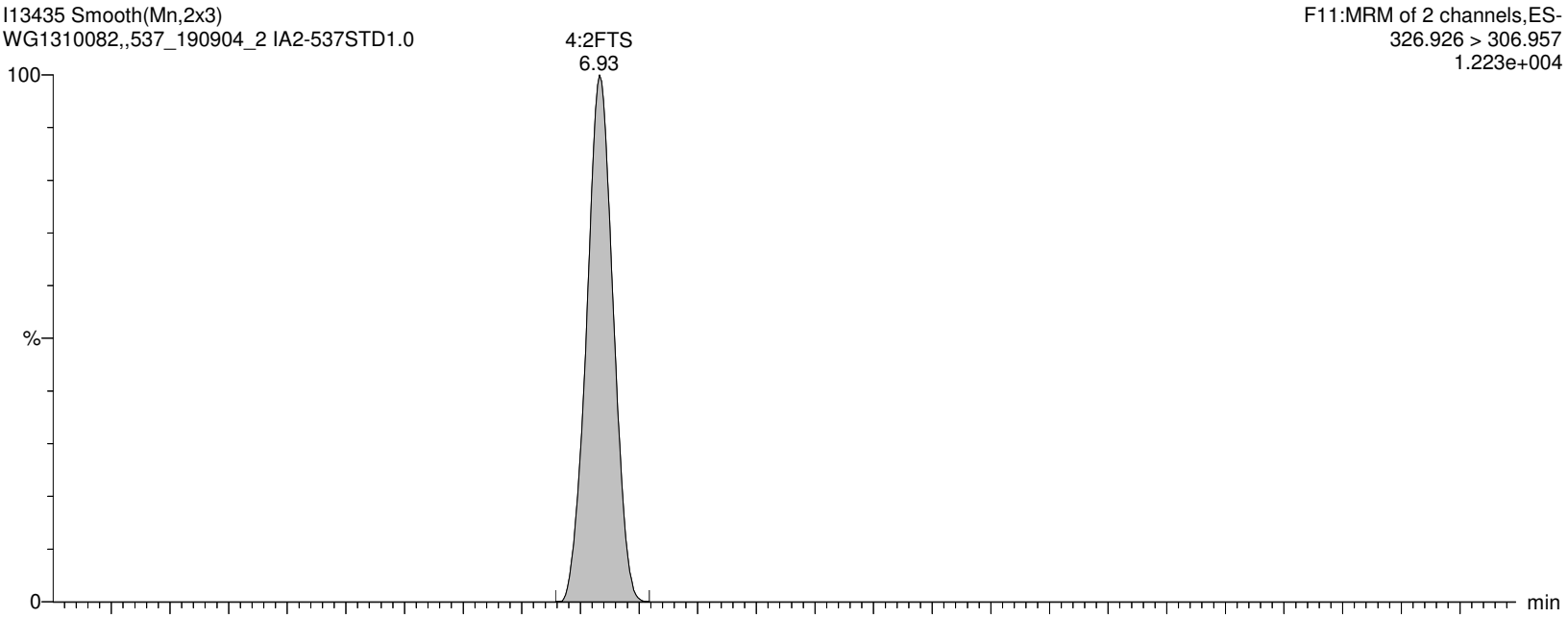
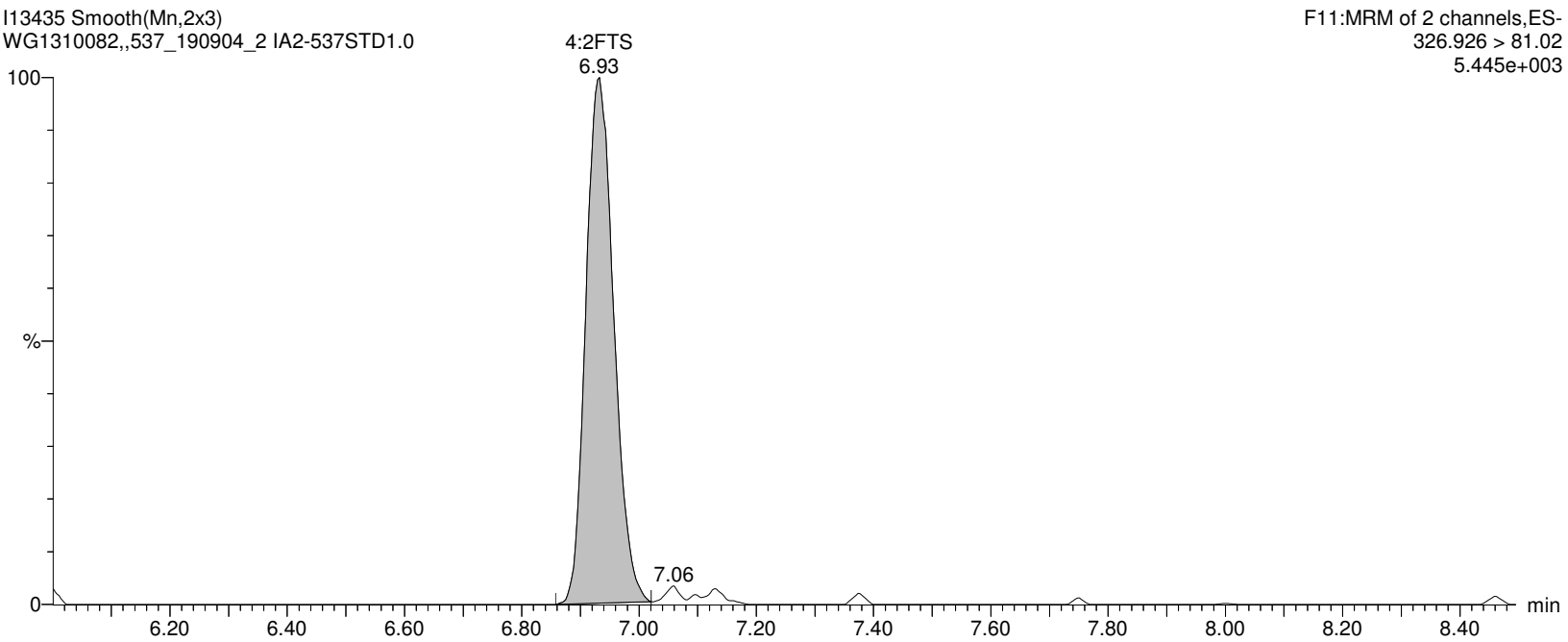
**4:2FTS**





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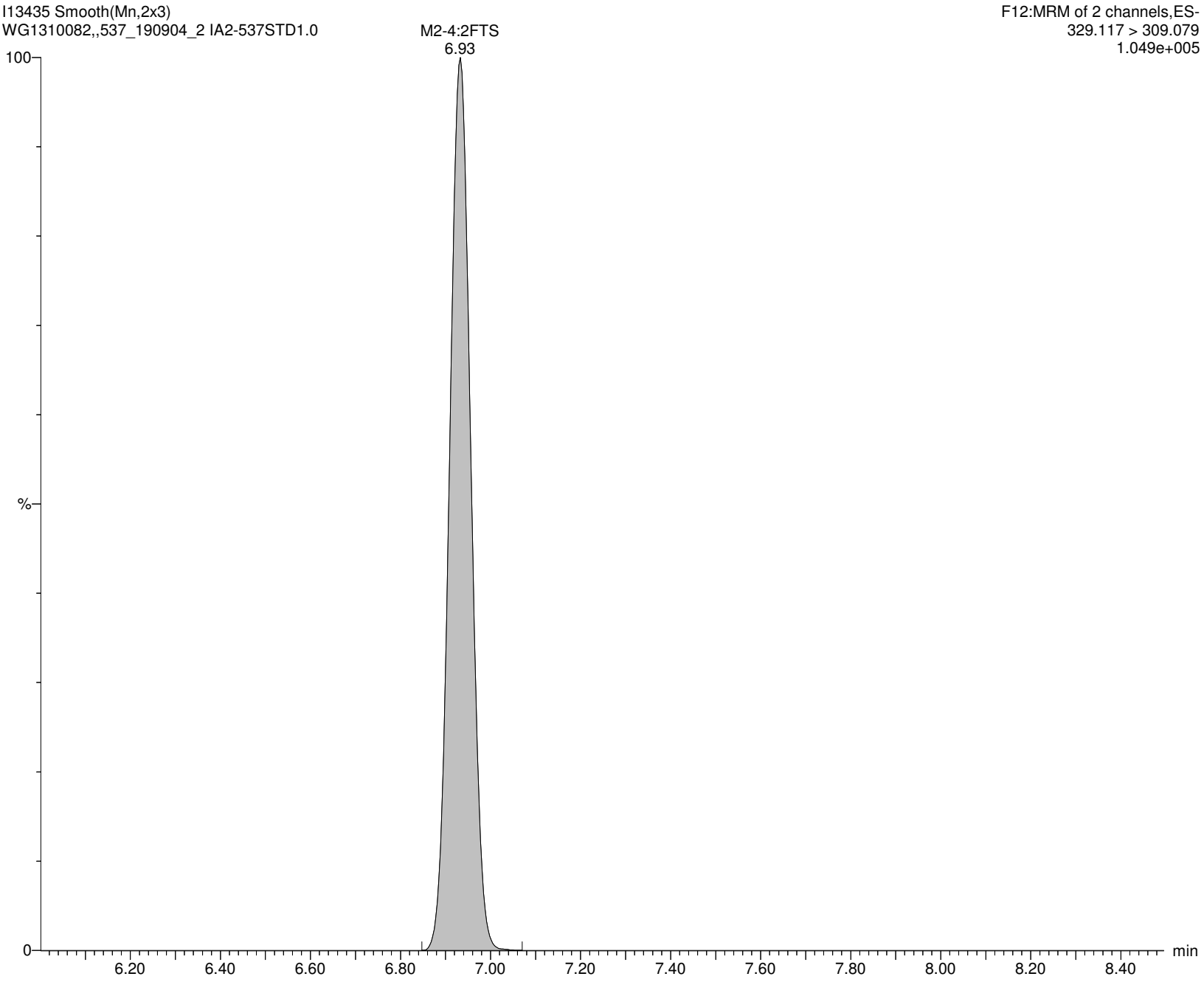
**M2-4:2FTS**





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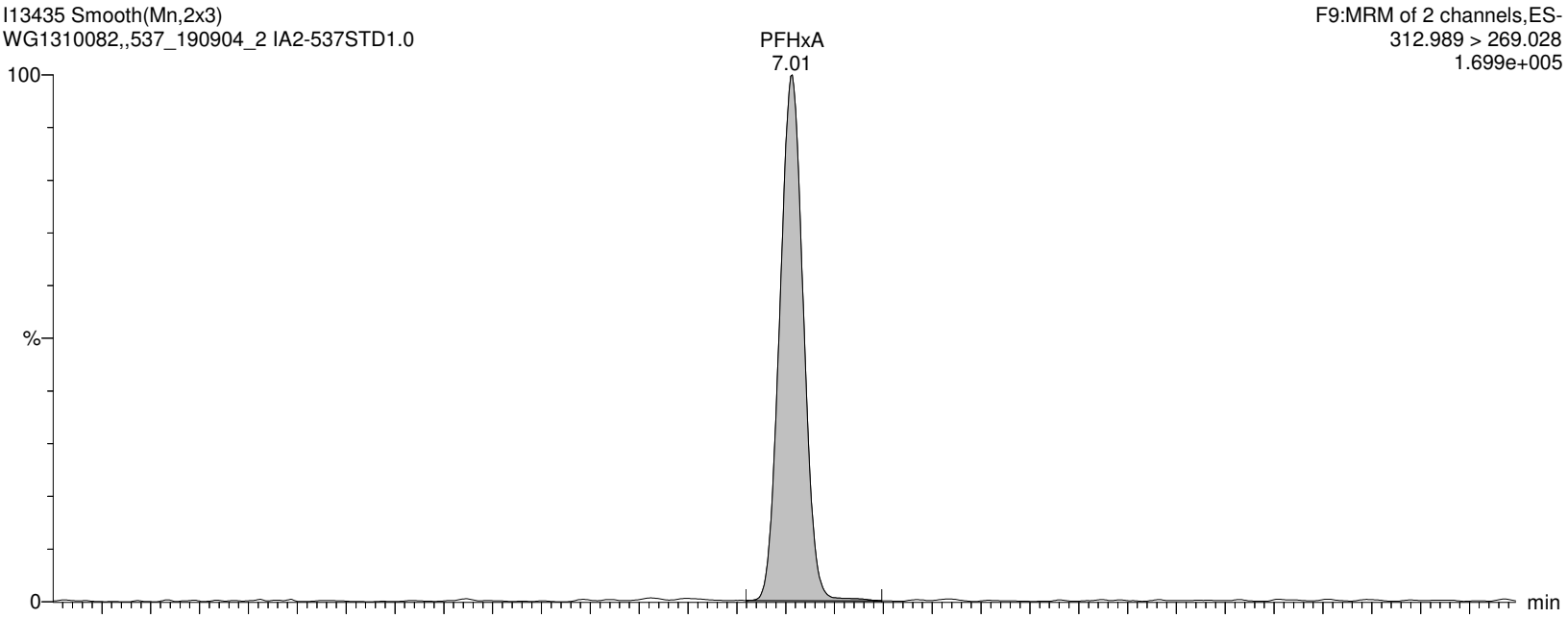
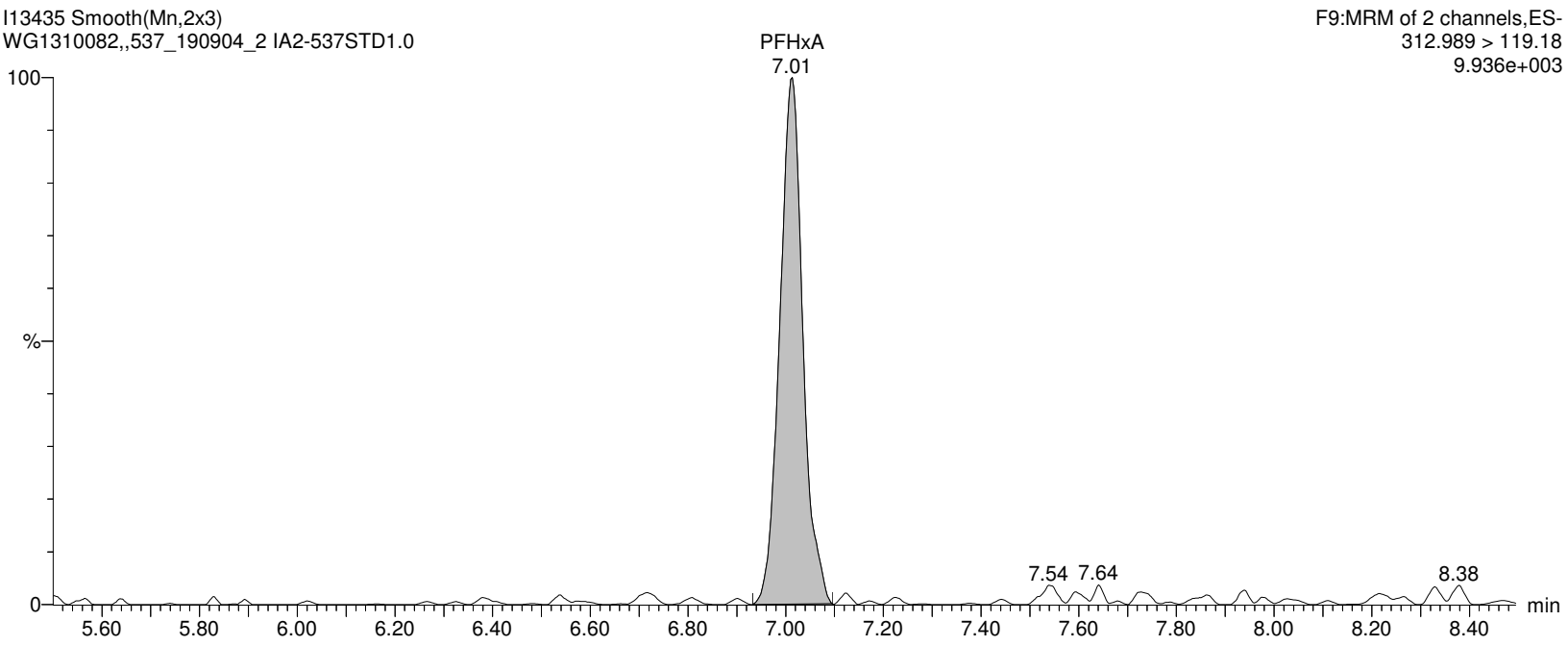
**PFHxA**





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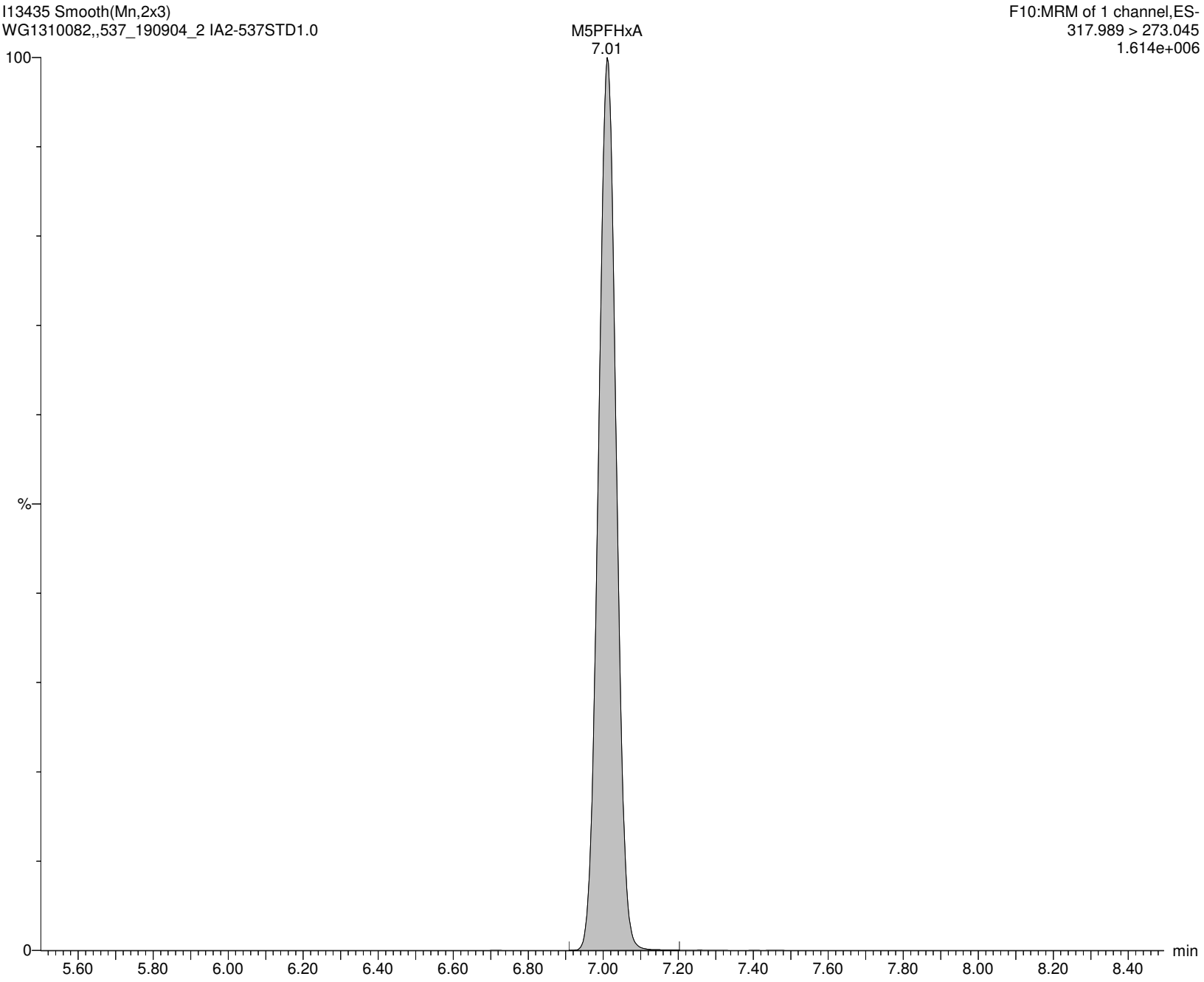
**M5PFHxA**





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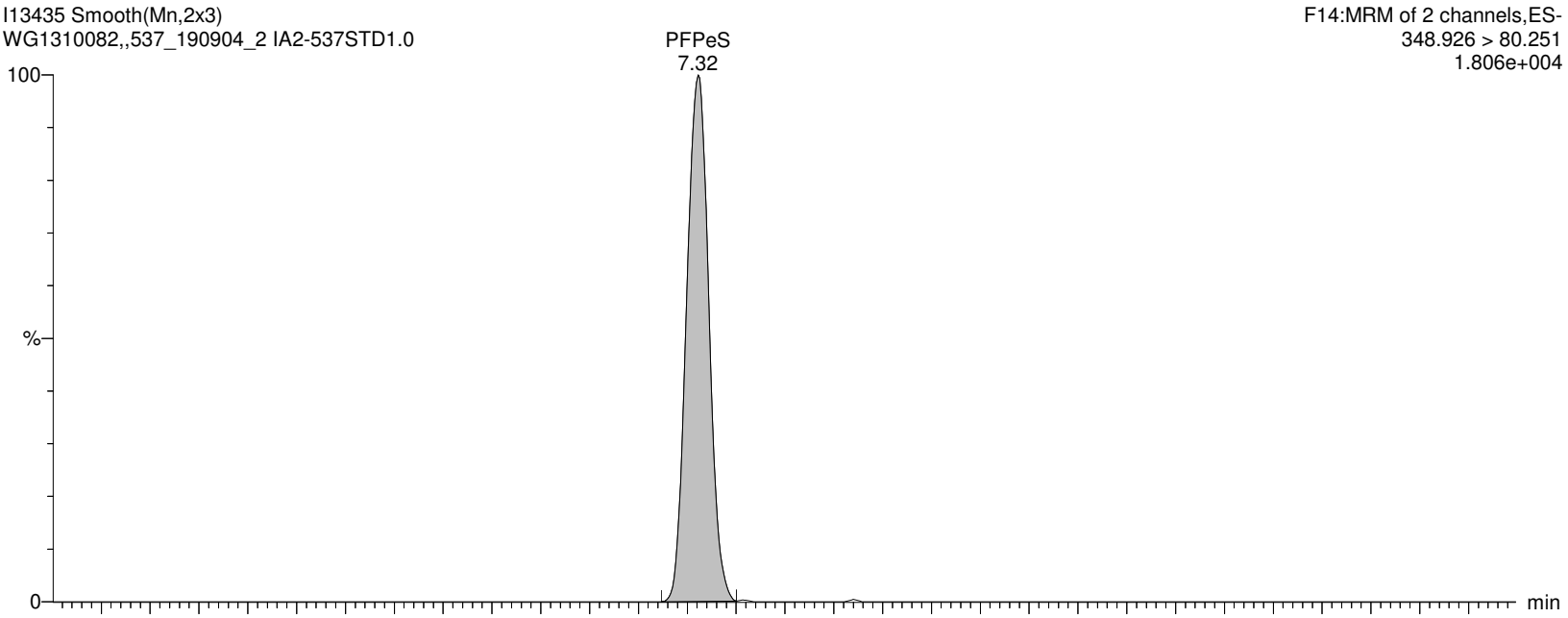


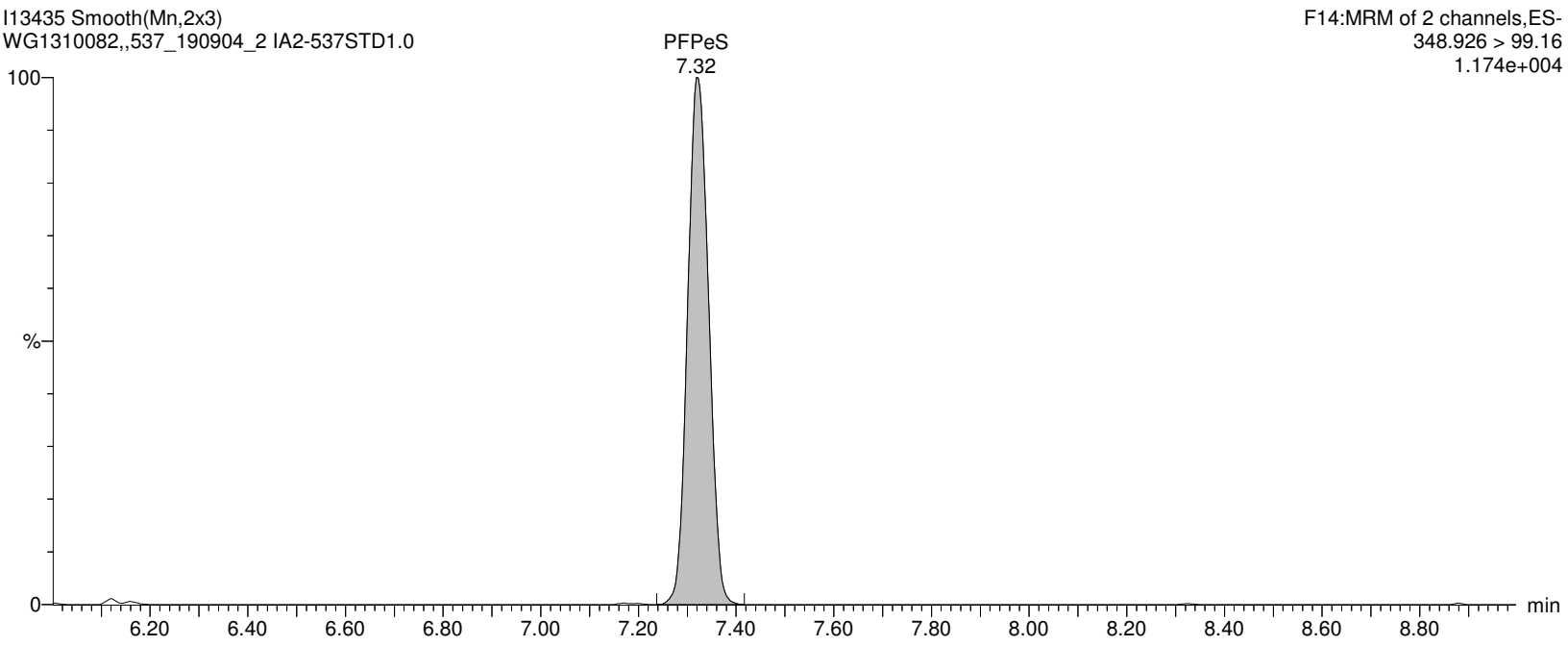



all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
Printed: Monday, November 18, 2019 13:42:51 Eastern Standard Time

**Name: I13435**
**ID: IA2-537STD1.0**
**Date: 18-Nov-2019**
**Time: 10:53:49**
**Description: WG1310082,,537_190904_2**
**User: LCMS02:JW**
**Vial: 1:A,3**
**Instrument: XEVO-TQSmicro#QEB0050**
**Inlet Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\LCMS_537_ISO_B**
**Tune Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\181009_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

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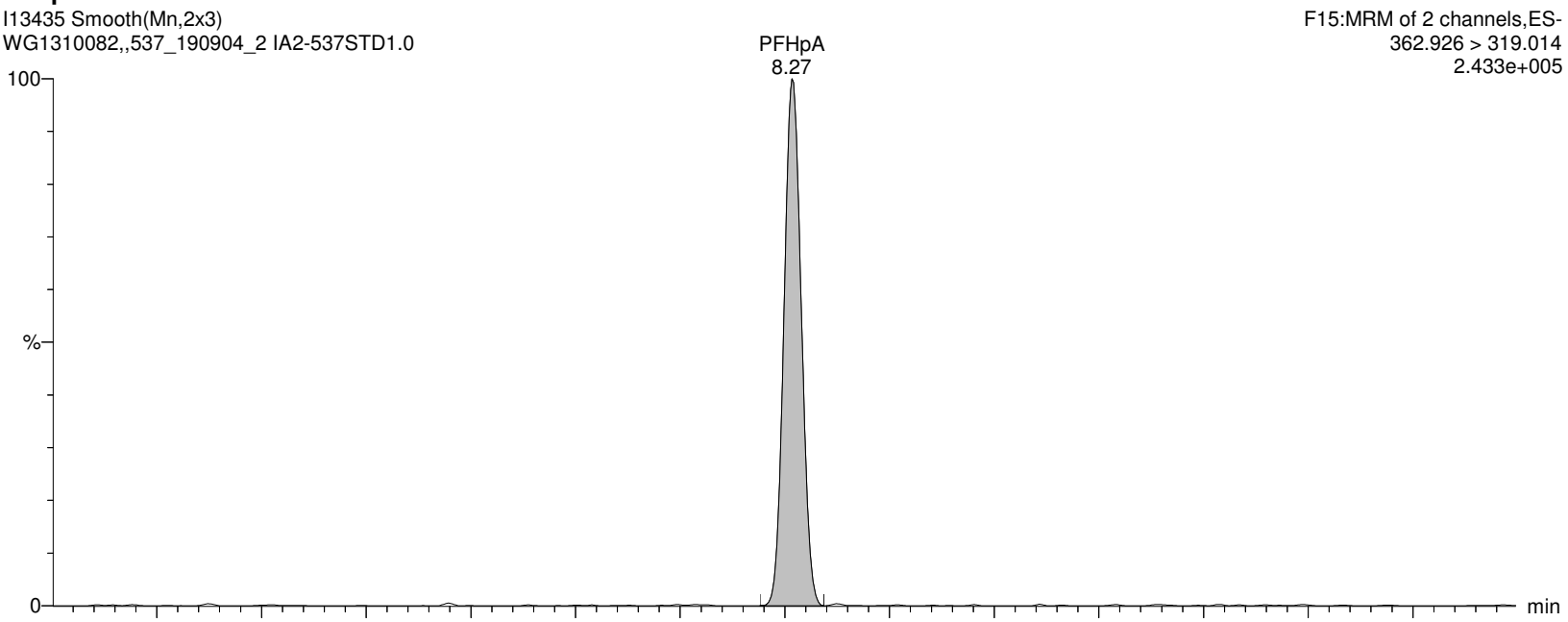


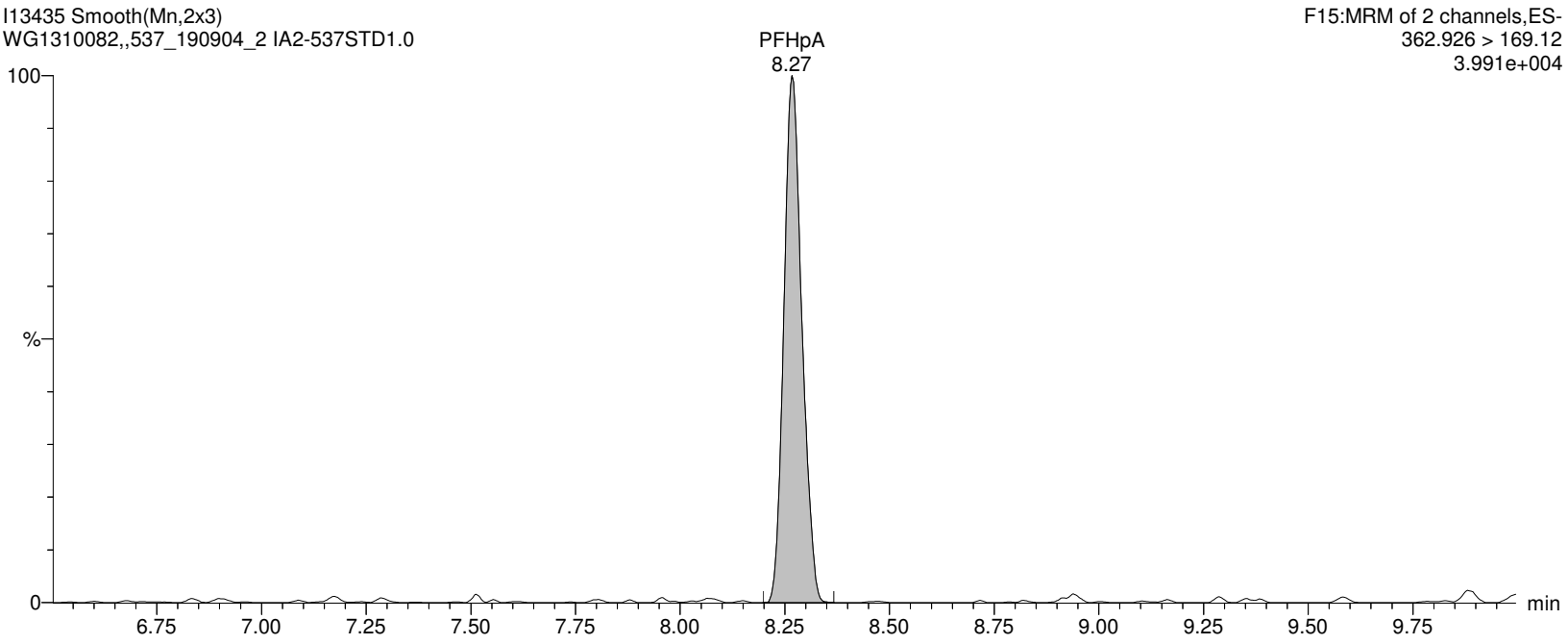



all concentration units in (ng/mL)

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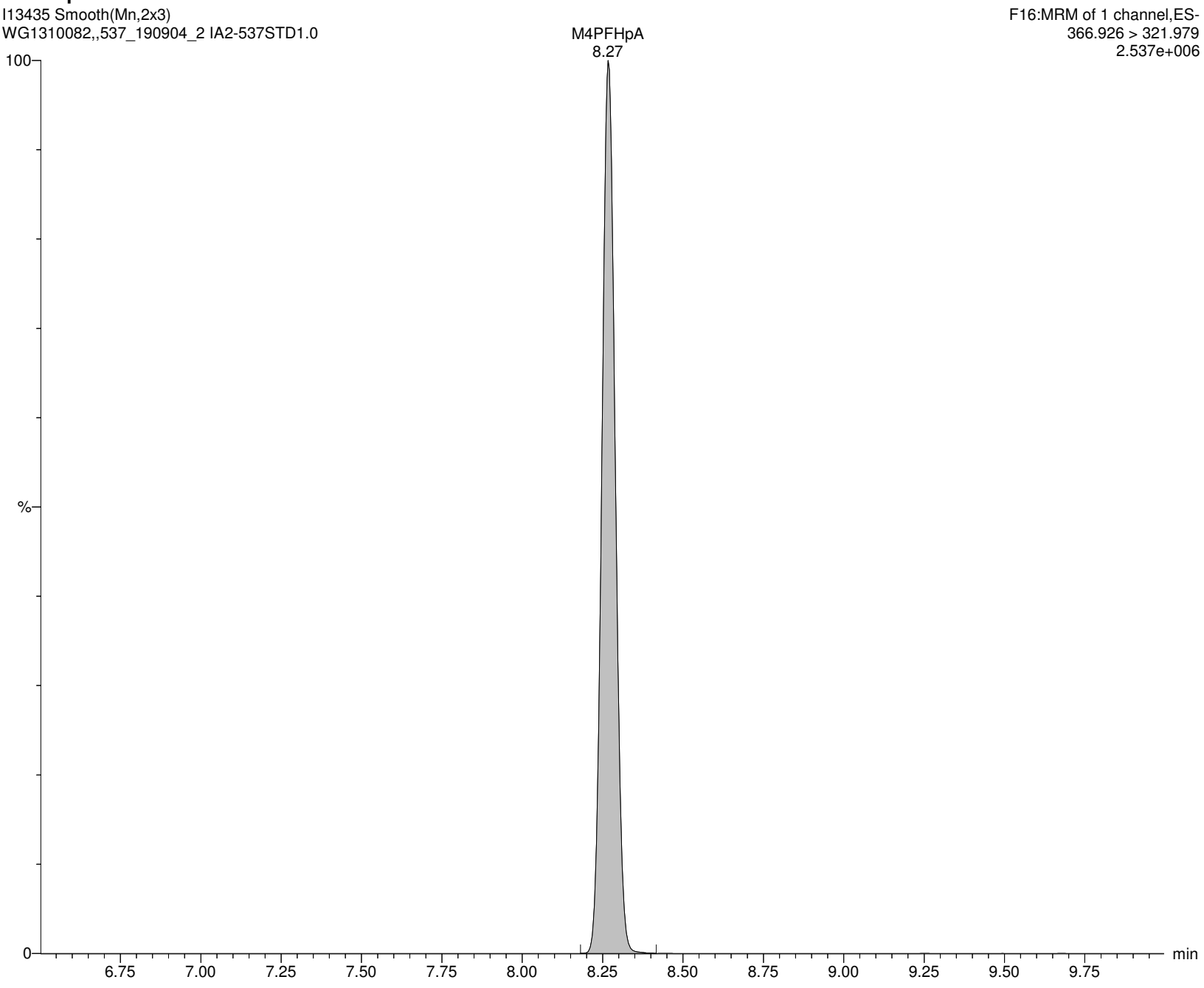
**M4PFHpA**





all concentration units in (ng/mL)

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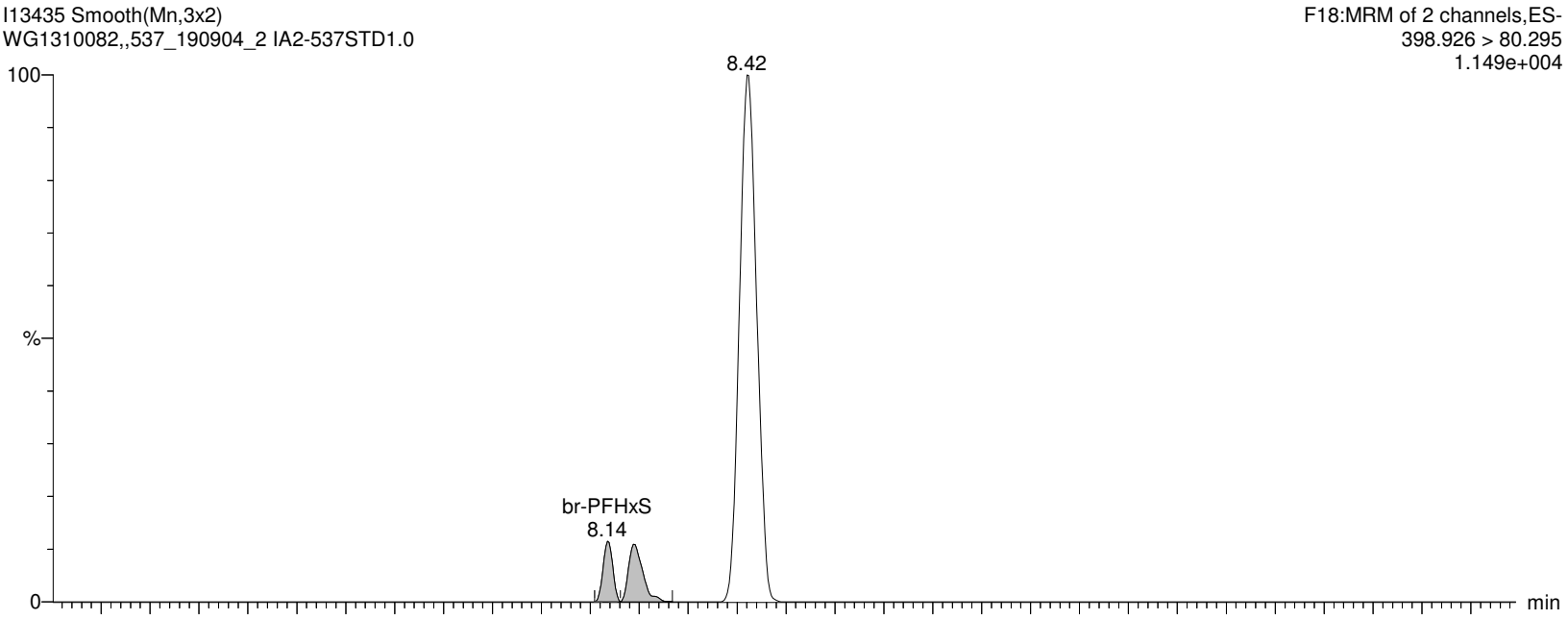
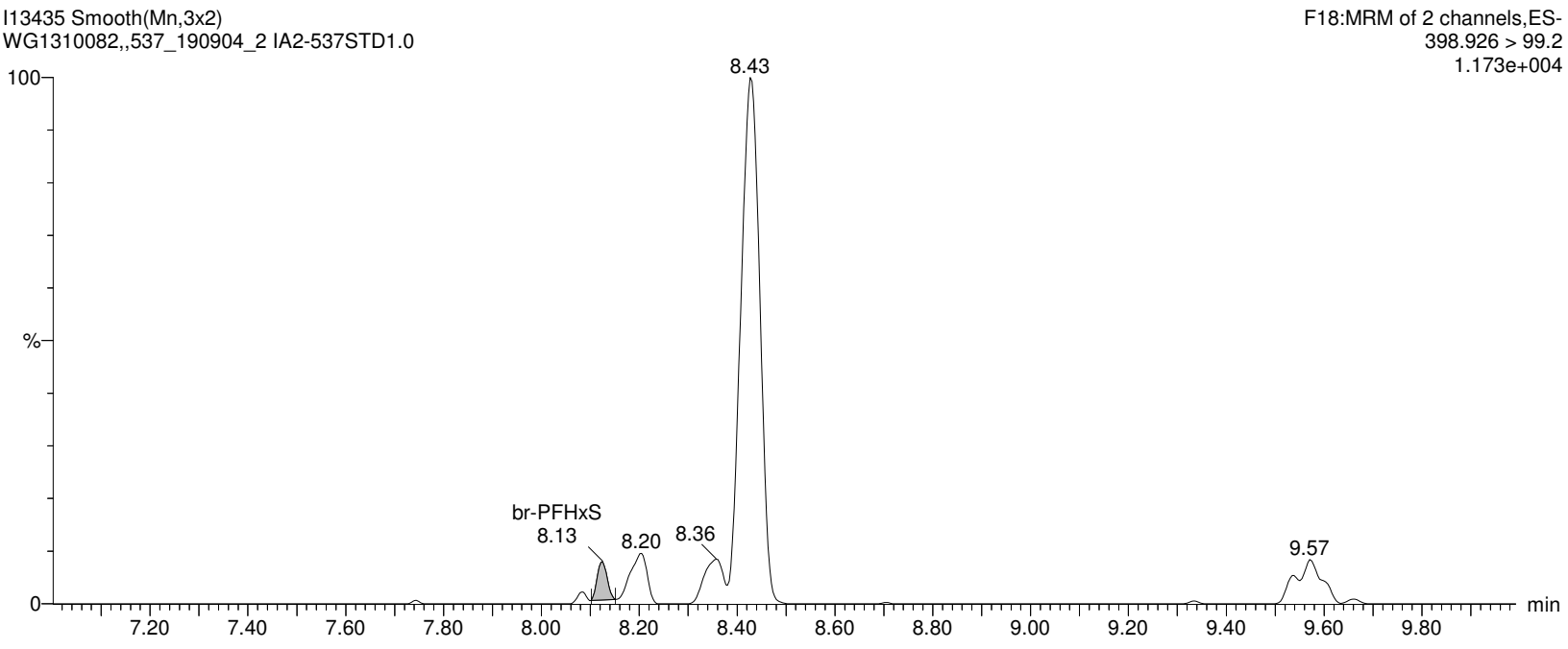
**br-PFHxS**





all concentration units in (ng/mL)

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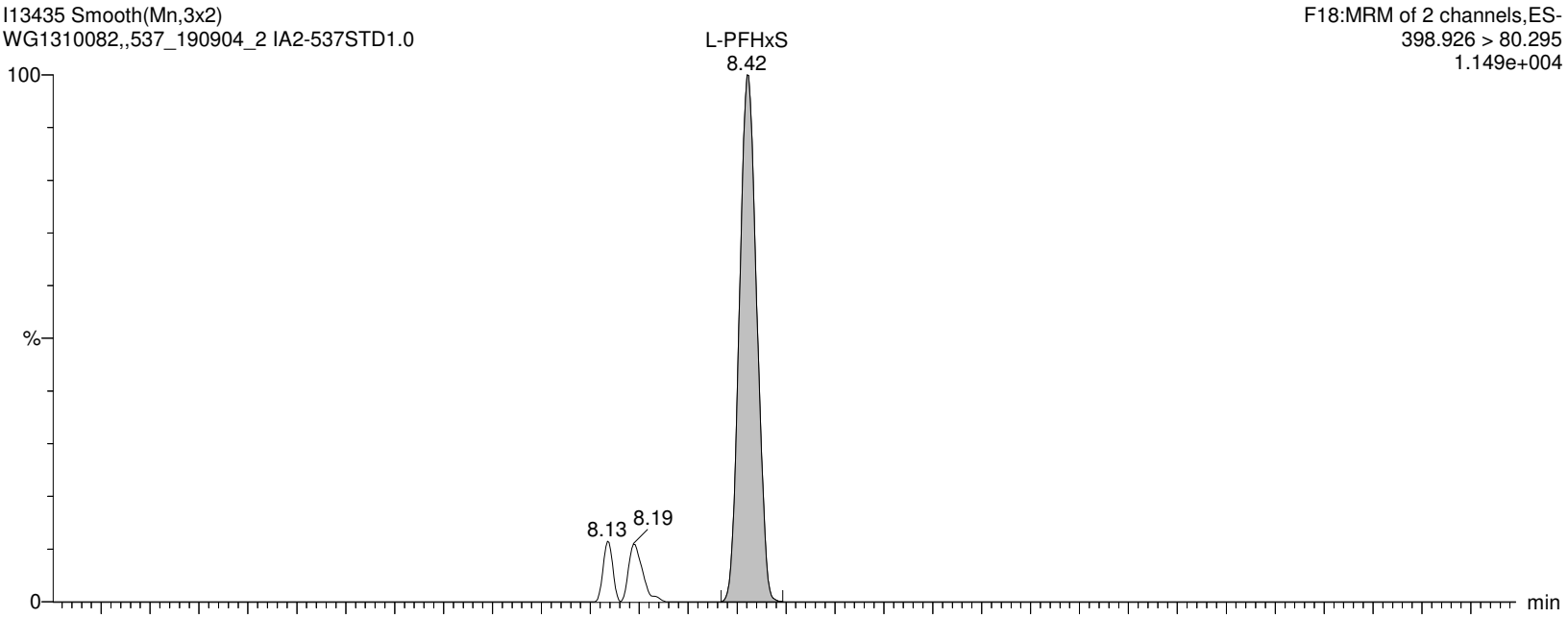
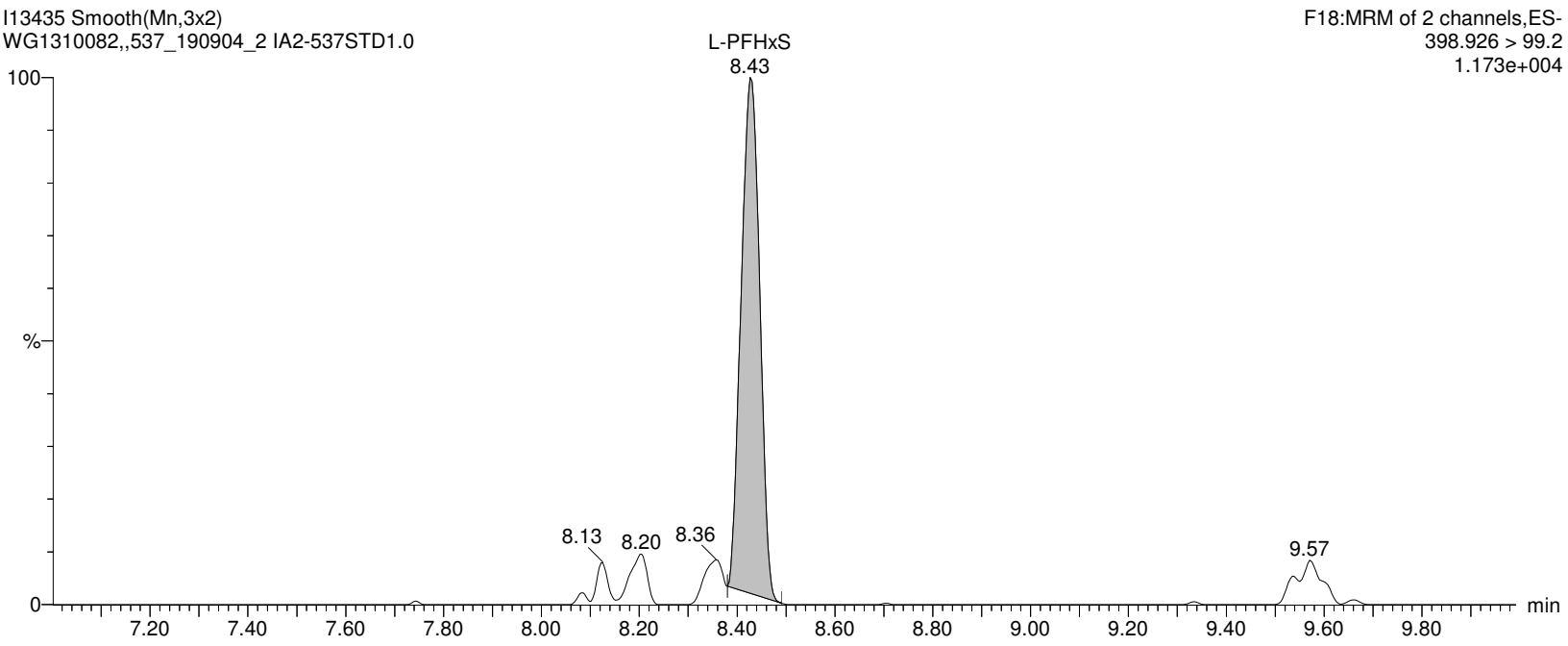
**L-PFHxS**





all concentration units in (ng/mL)

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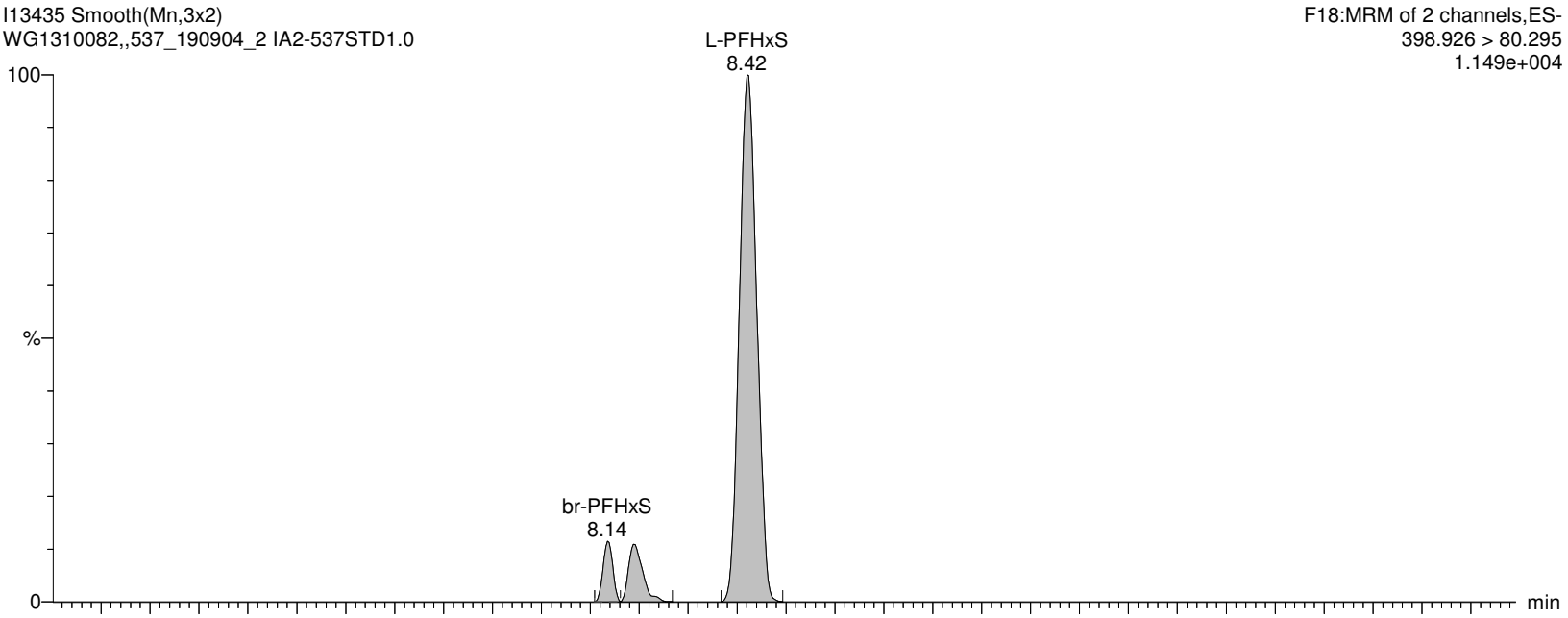
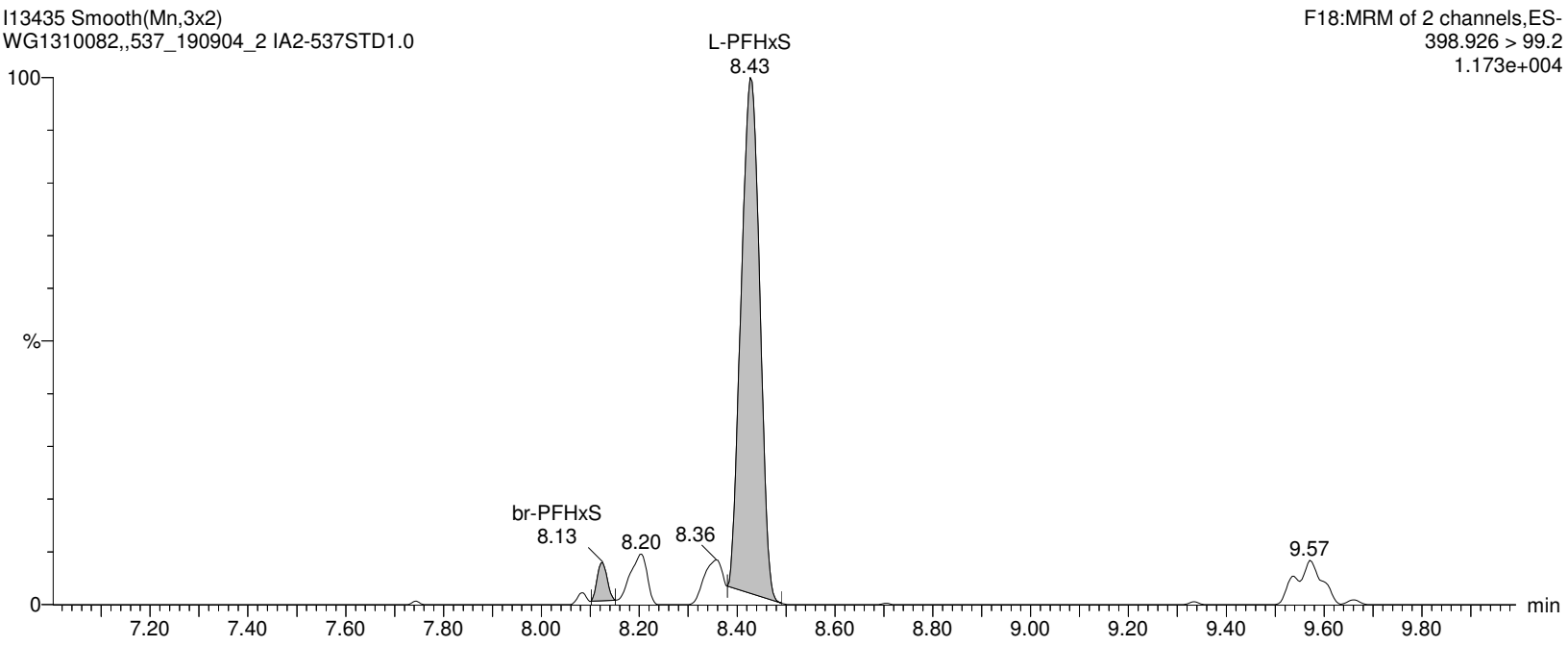
**PFHxS**





all concentration units in (ng/mL)

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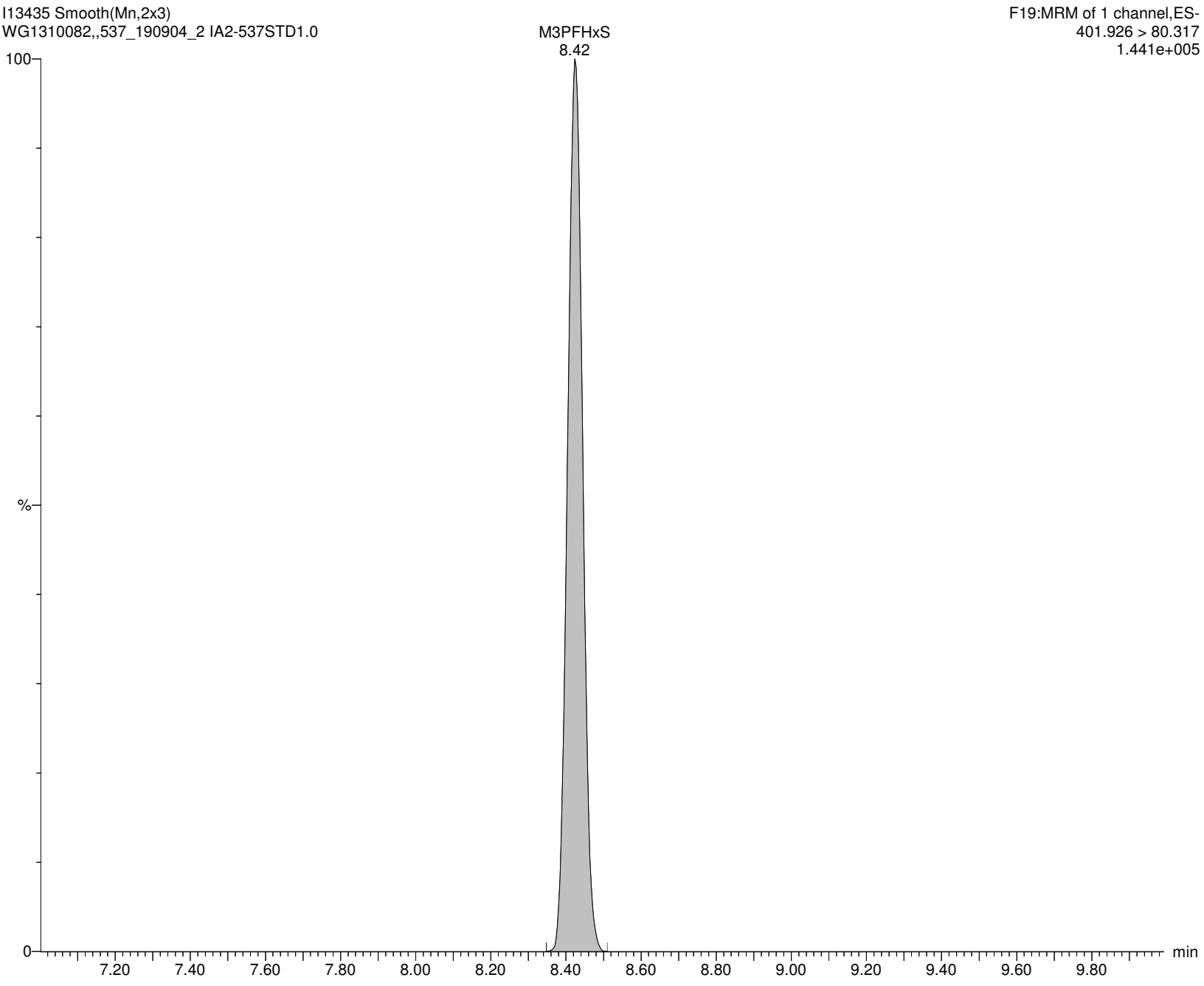
**M3PFHxS**





all concentration units in (ng/mL)

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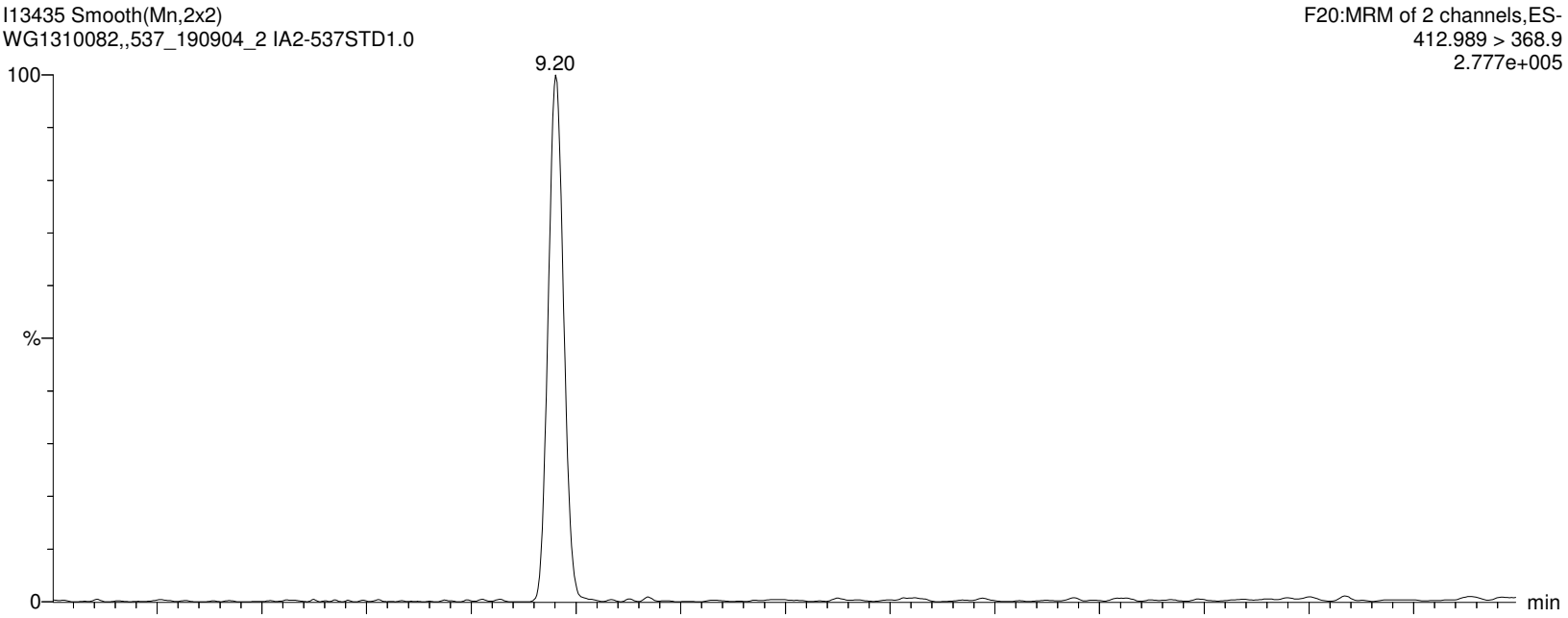
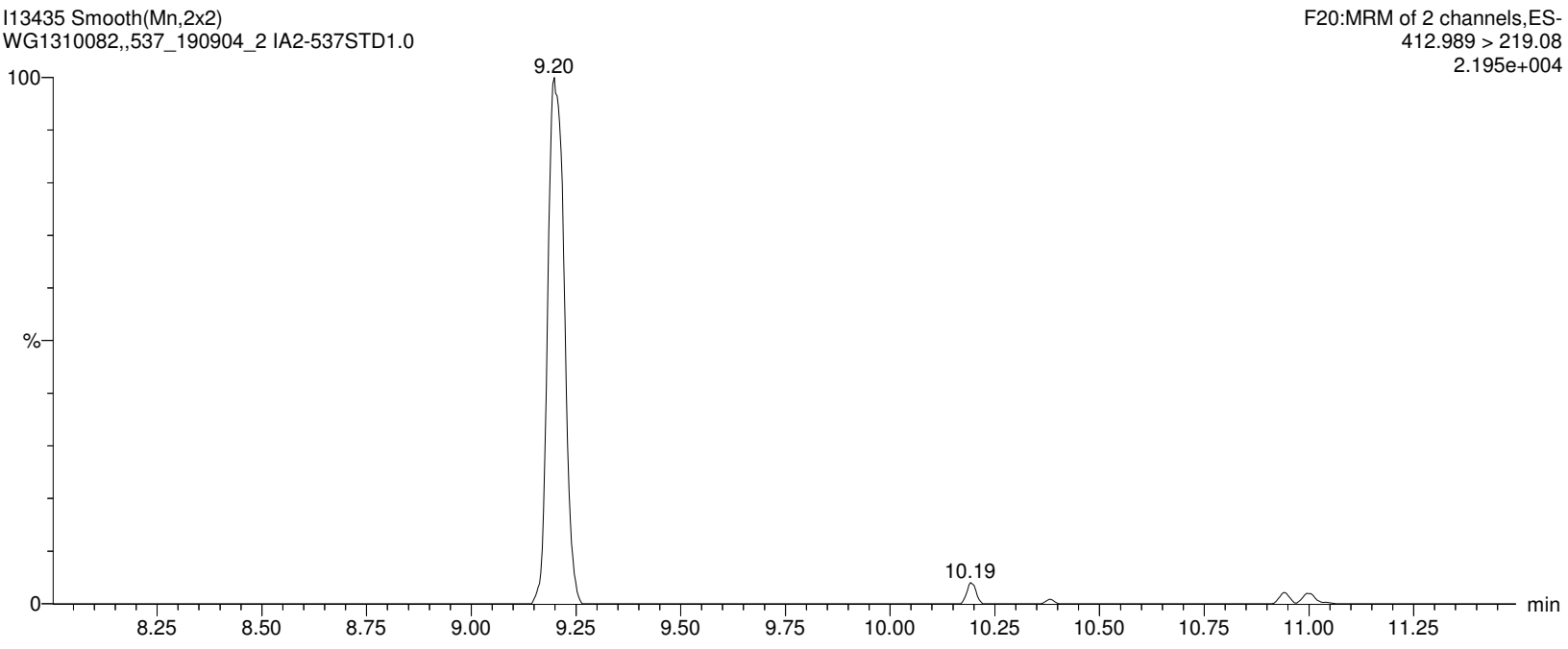
**br-PFOA**





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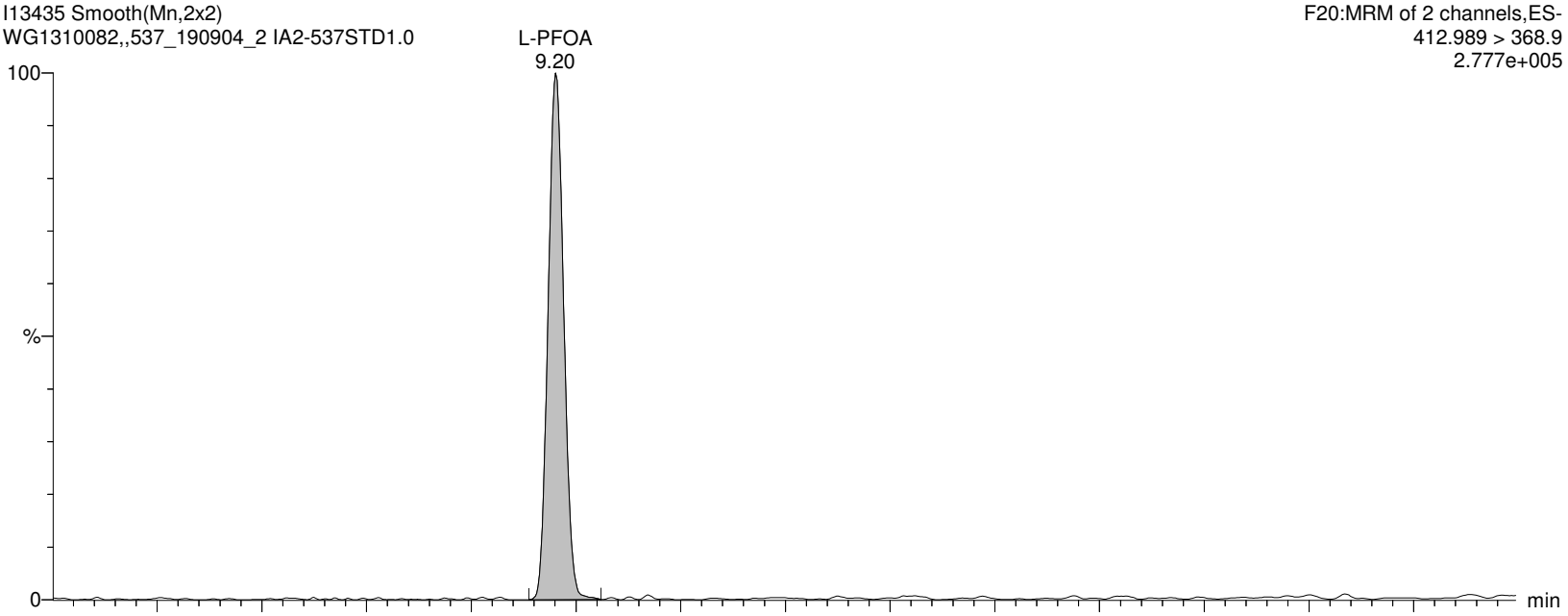
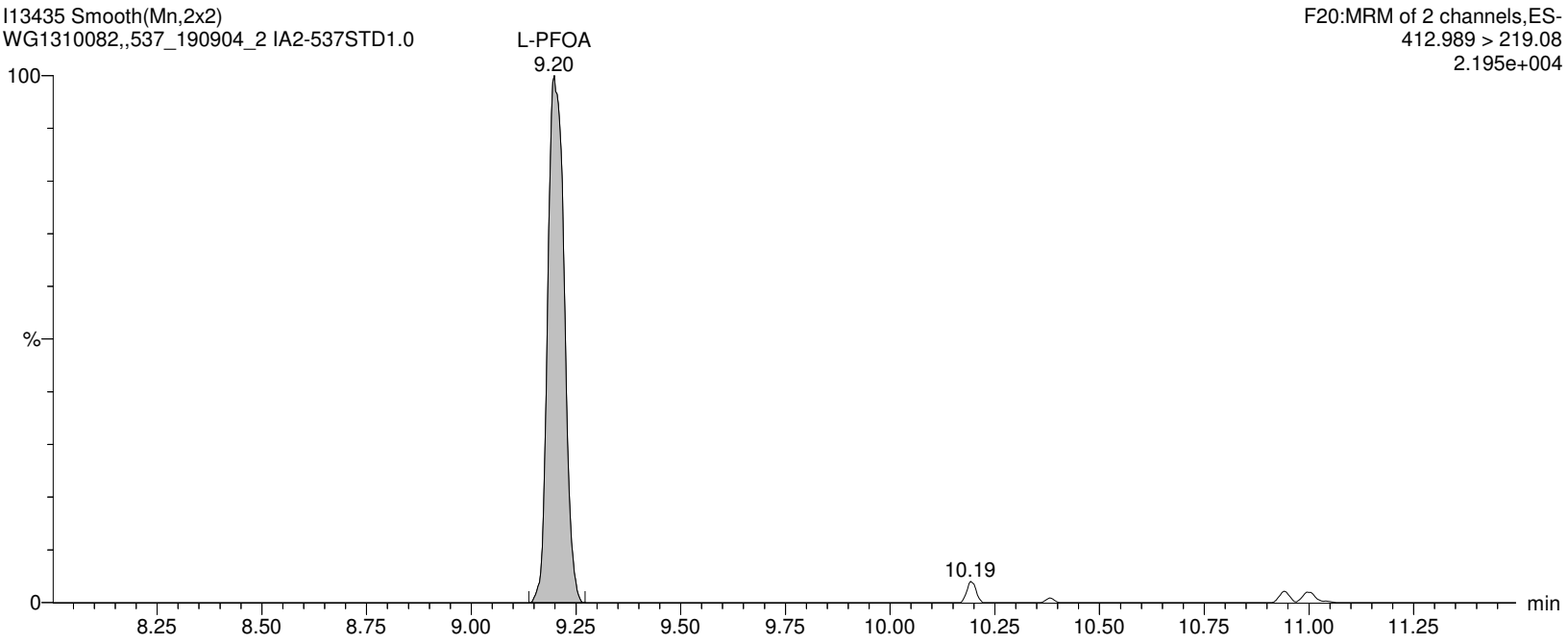
**L-PFOA**





all concentration units in (ng/mL)

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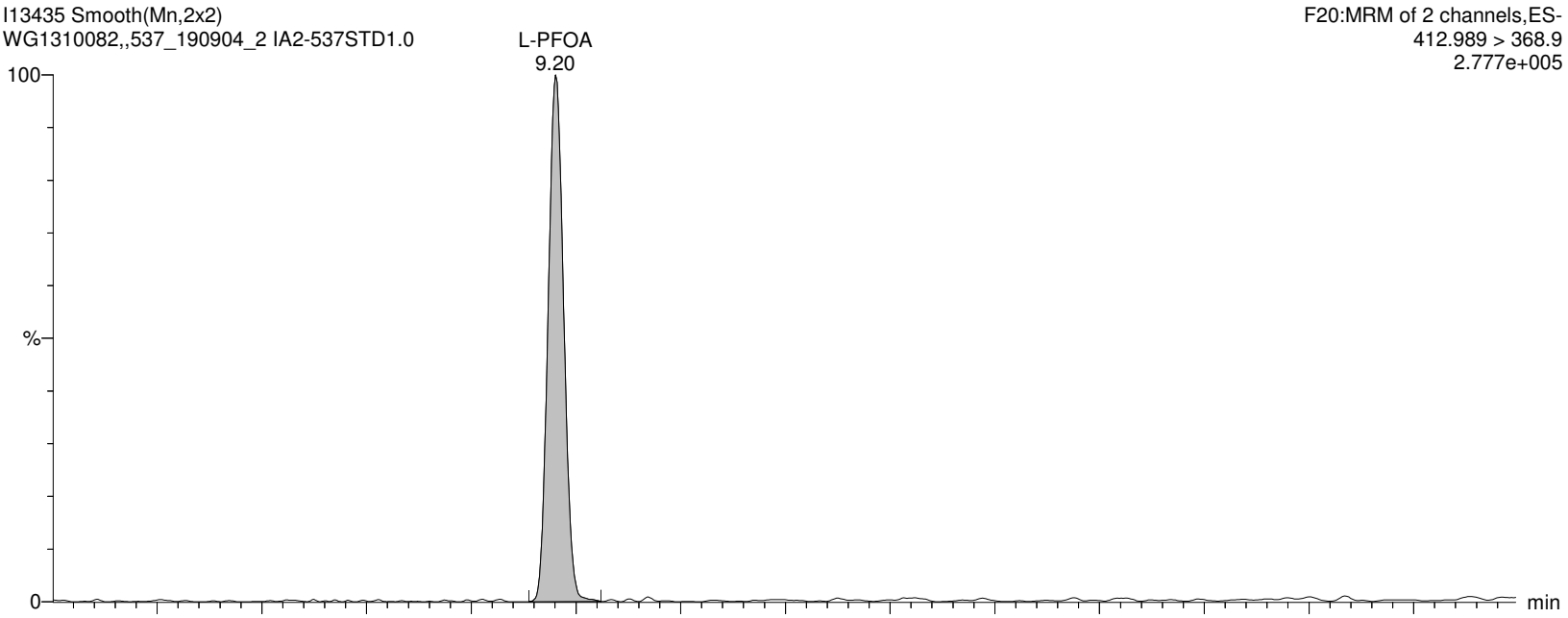
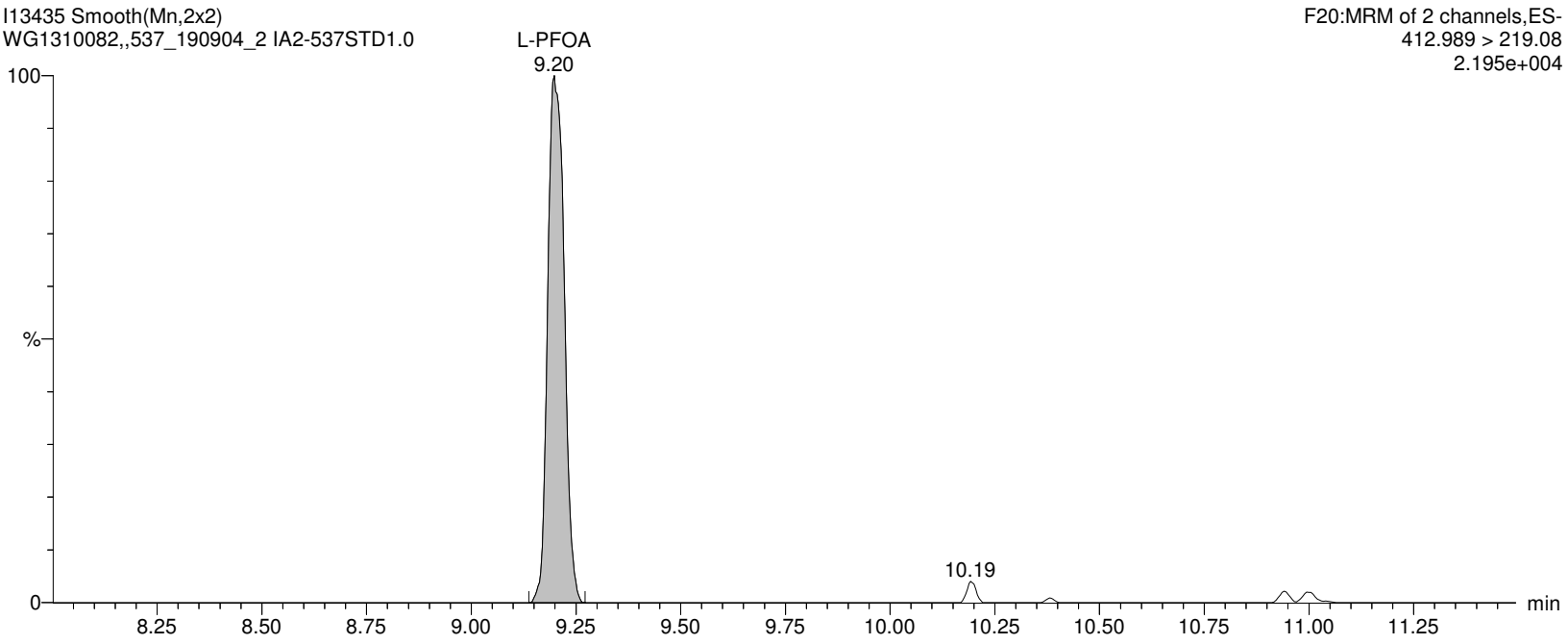
**PFOA**





all concentration units in (ng/mL)

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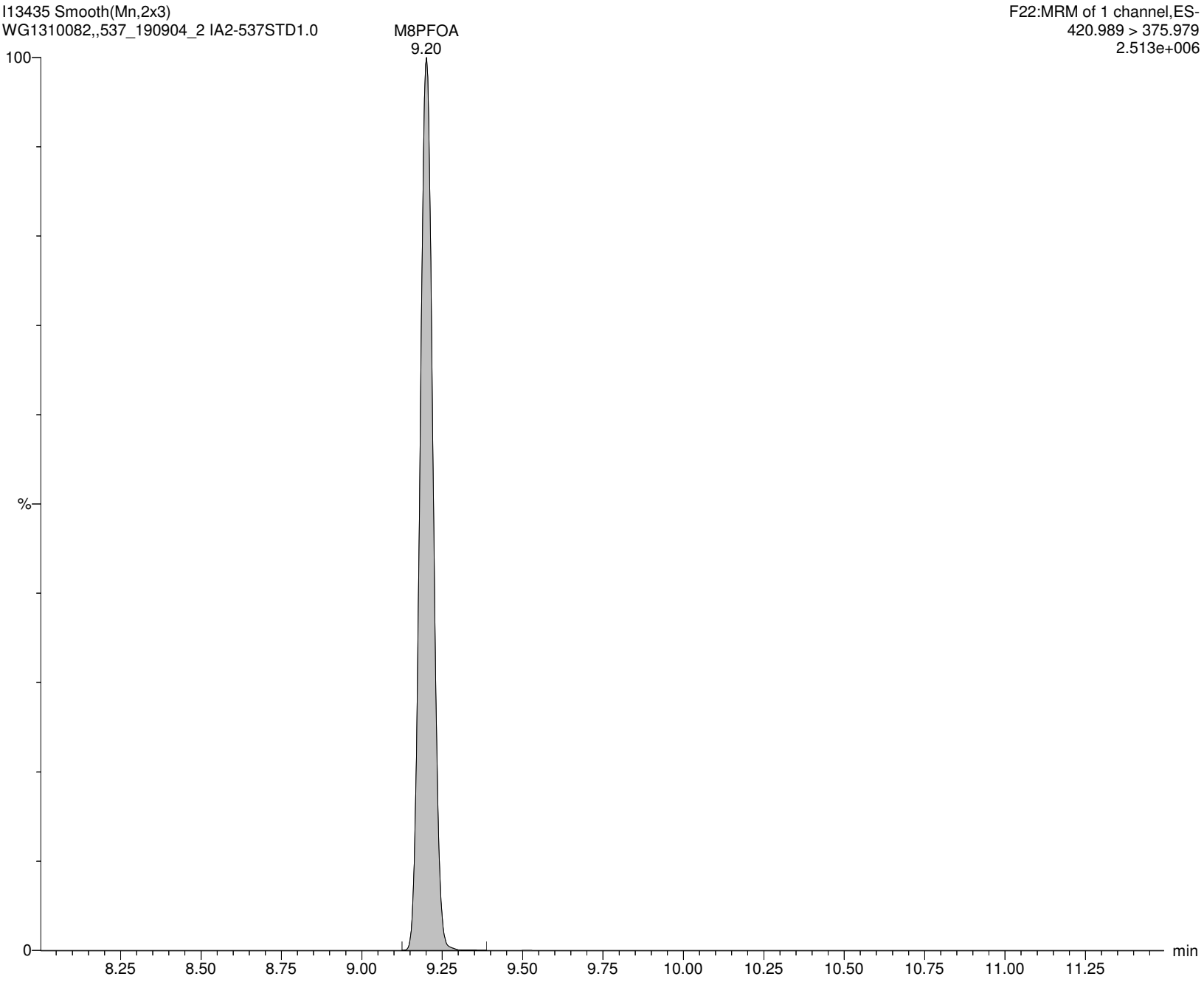



all concentration units in (ng/mL)

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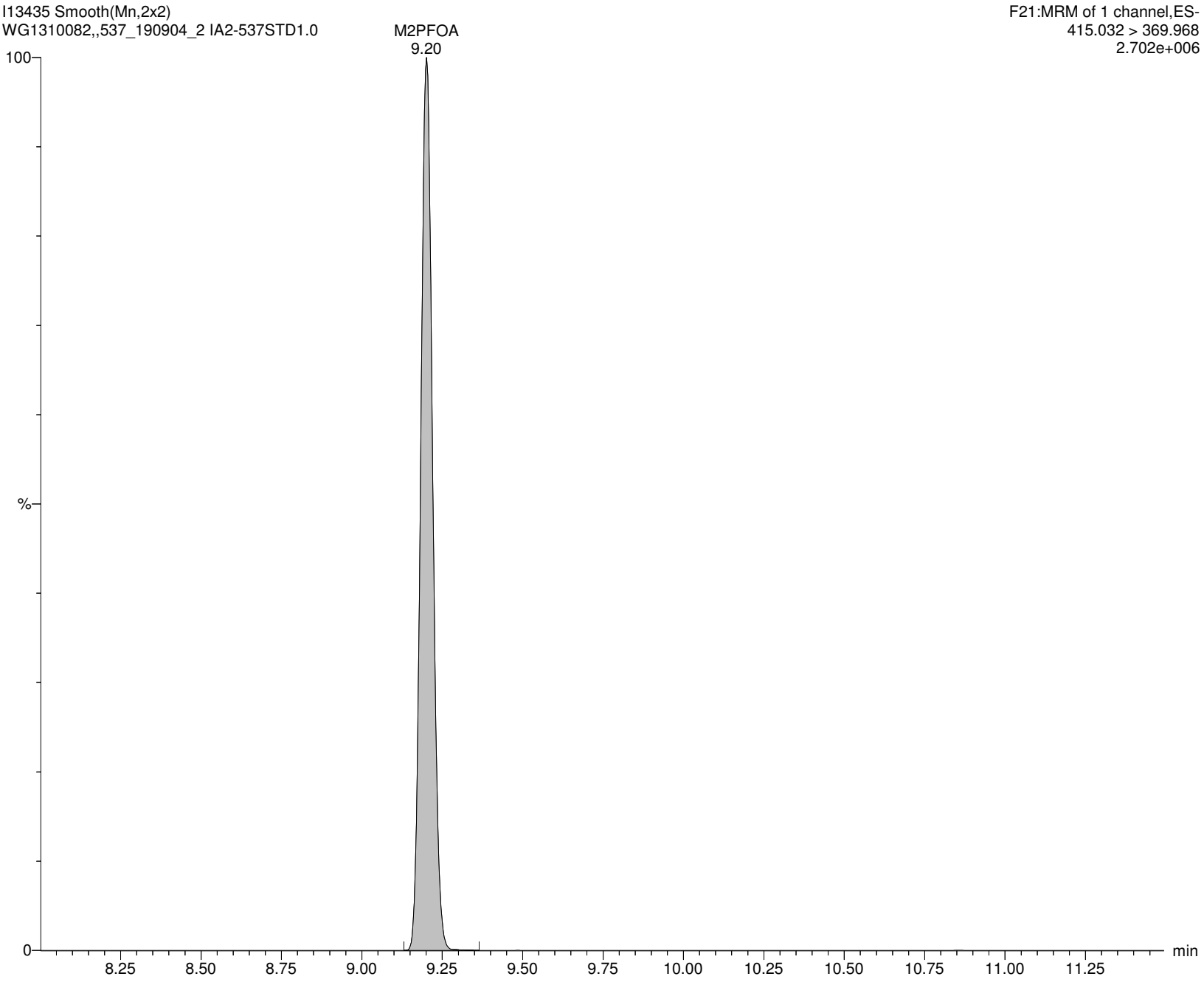



all concentration units in (ng/mL)

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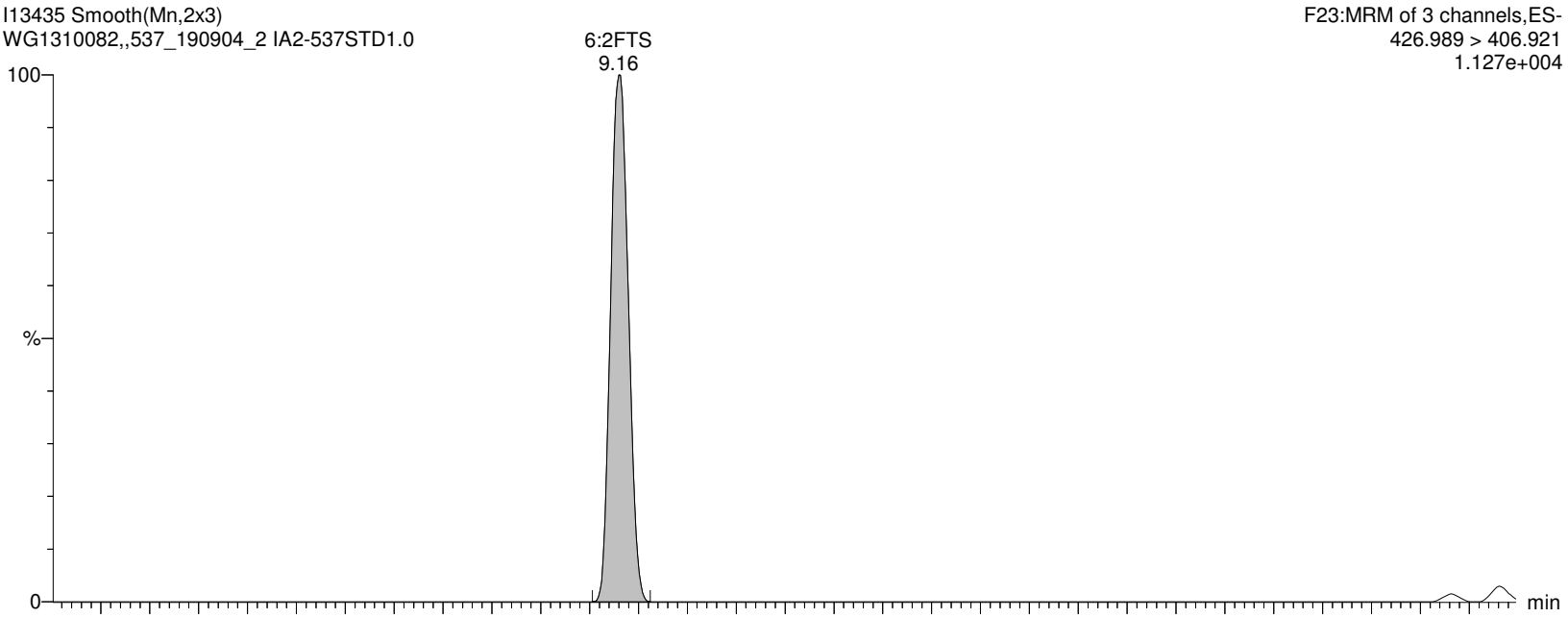
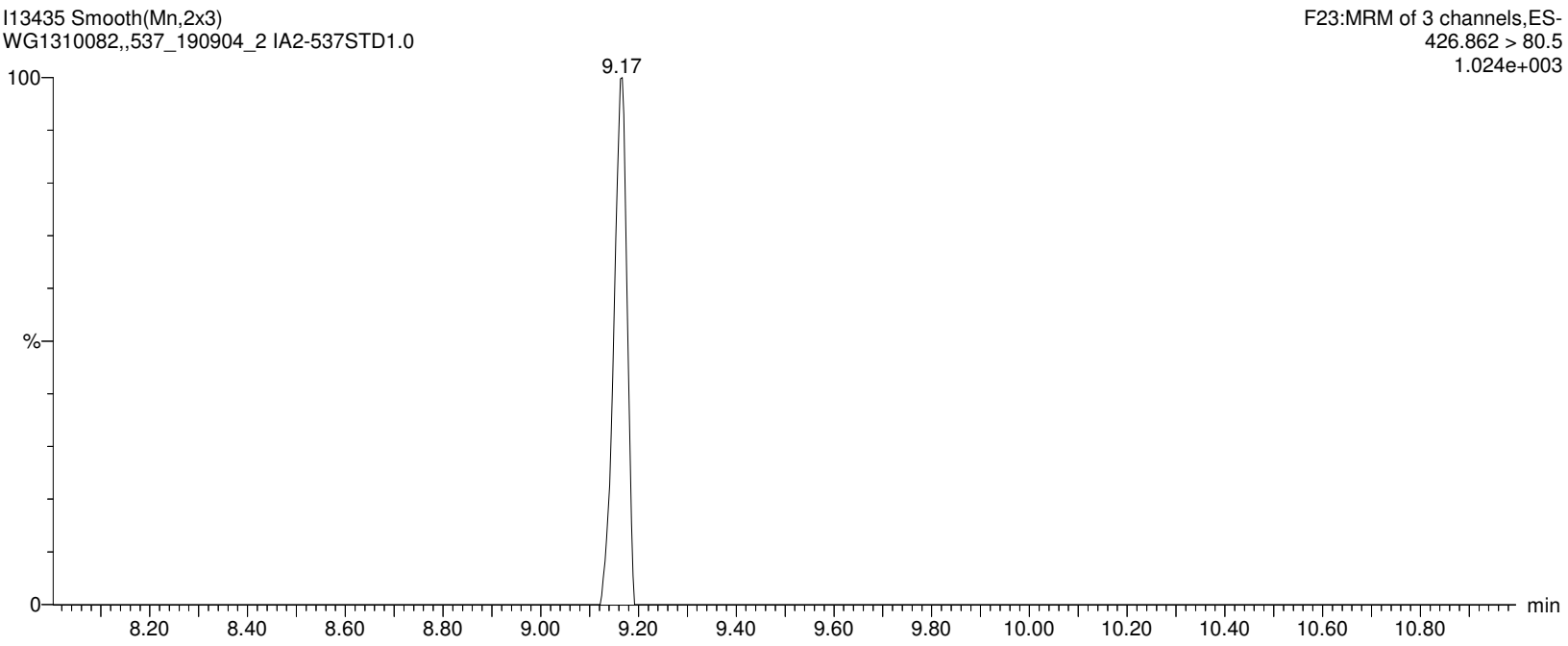
**6:2FTS**





all concentration units in (ng/mL)

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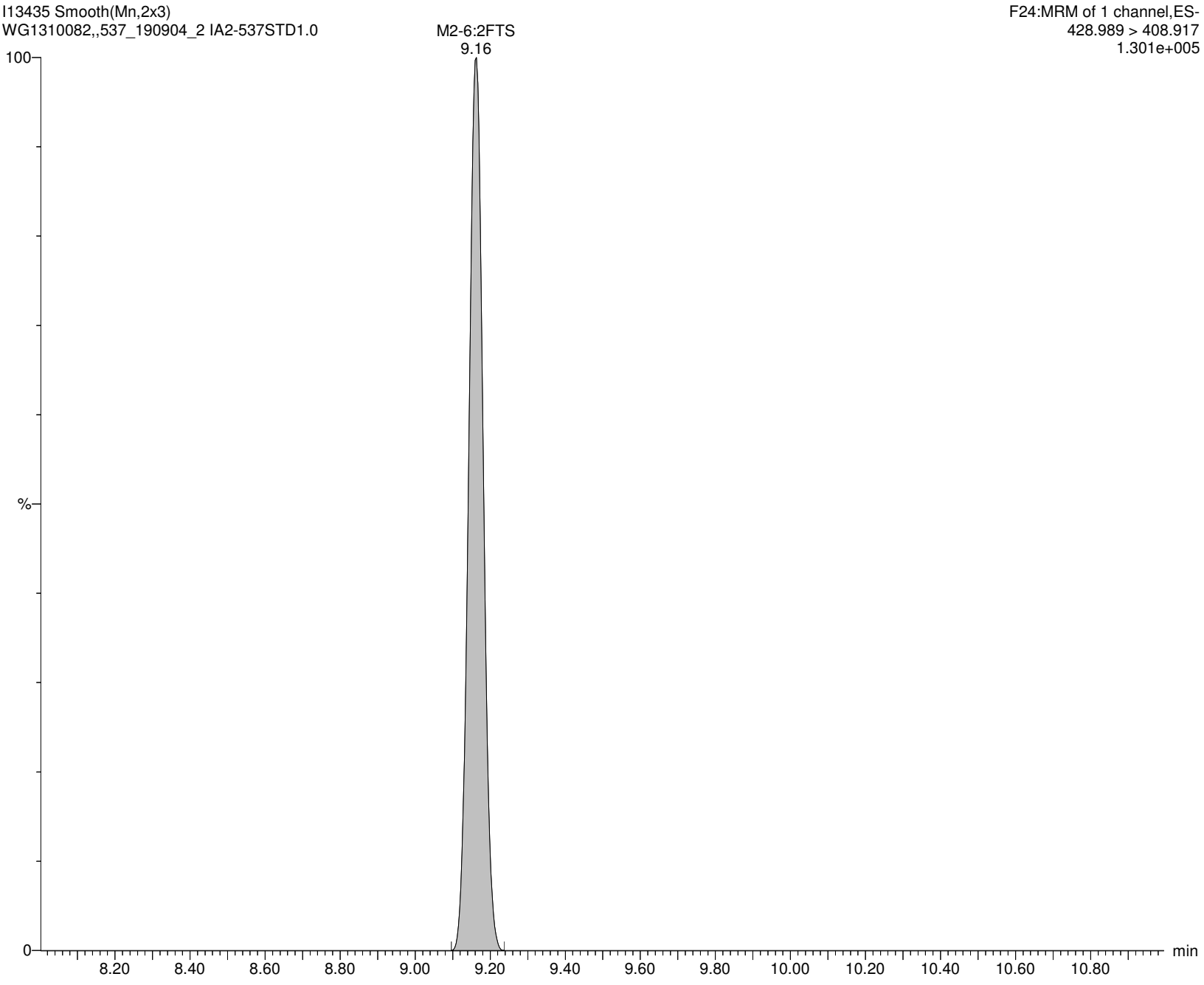



all concentration units in (ng/mL)

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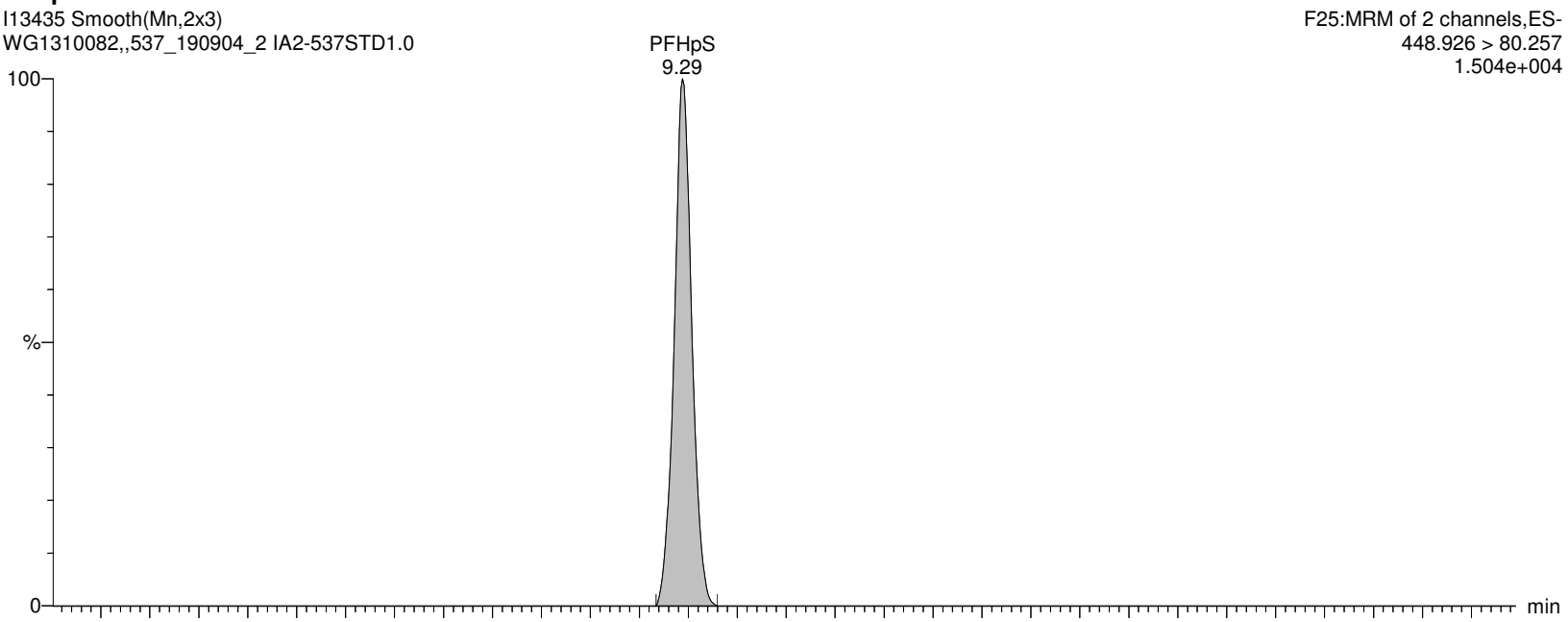
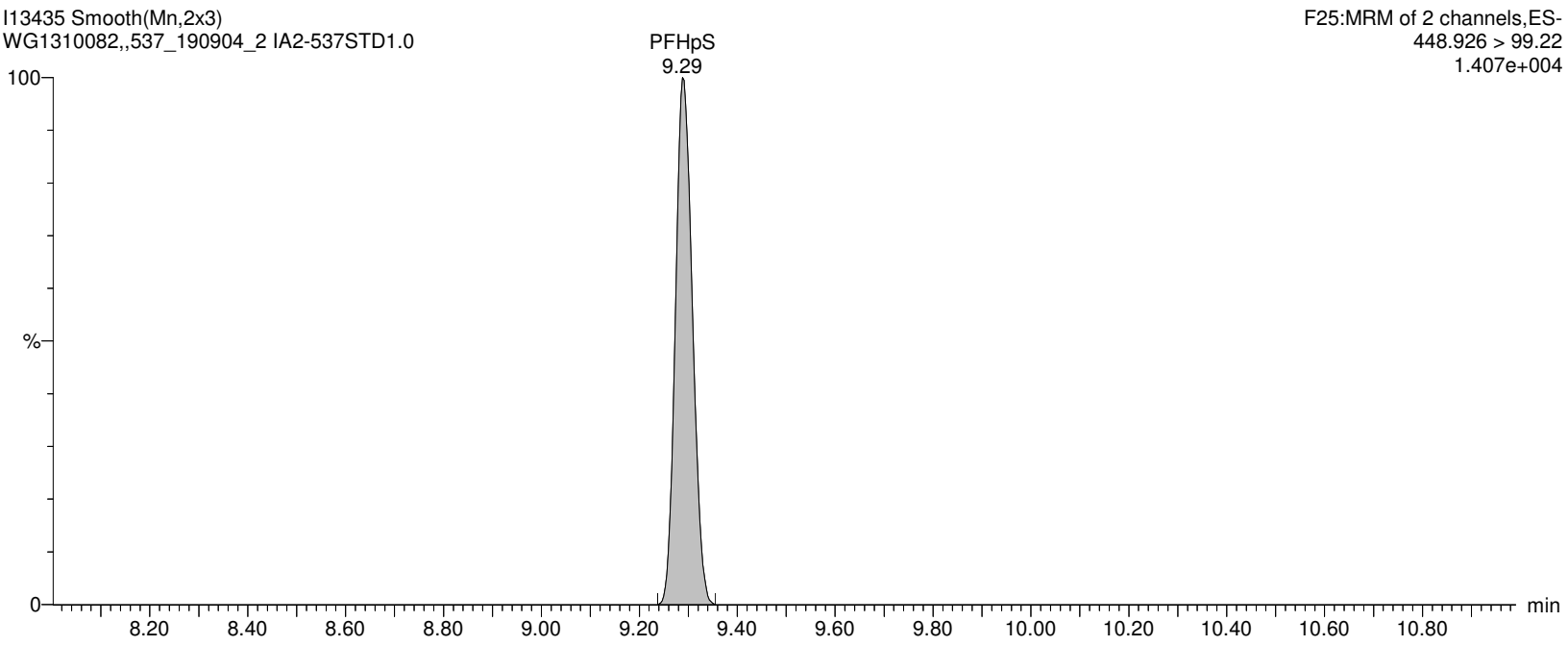
**PFHpS**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
Printed: Monday, November 18, 2019 13:42:51 Eastern Standard Time

**Name: I13435**
**ID: IA2-537STD1.0**
**Date: 18-Nov-2019**
**Time: 10:53:49**
**Description: WG1310082,,537_190904_2**
**User: LCMS02:JW**
**Vial: 1:A,3**
**Instrument: XEVO-TQSmicro#QEB0050**
**Inlet Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\LCMS_537_ISO_B**
**Tune Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\181009_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

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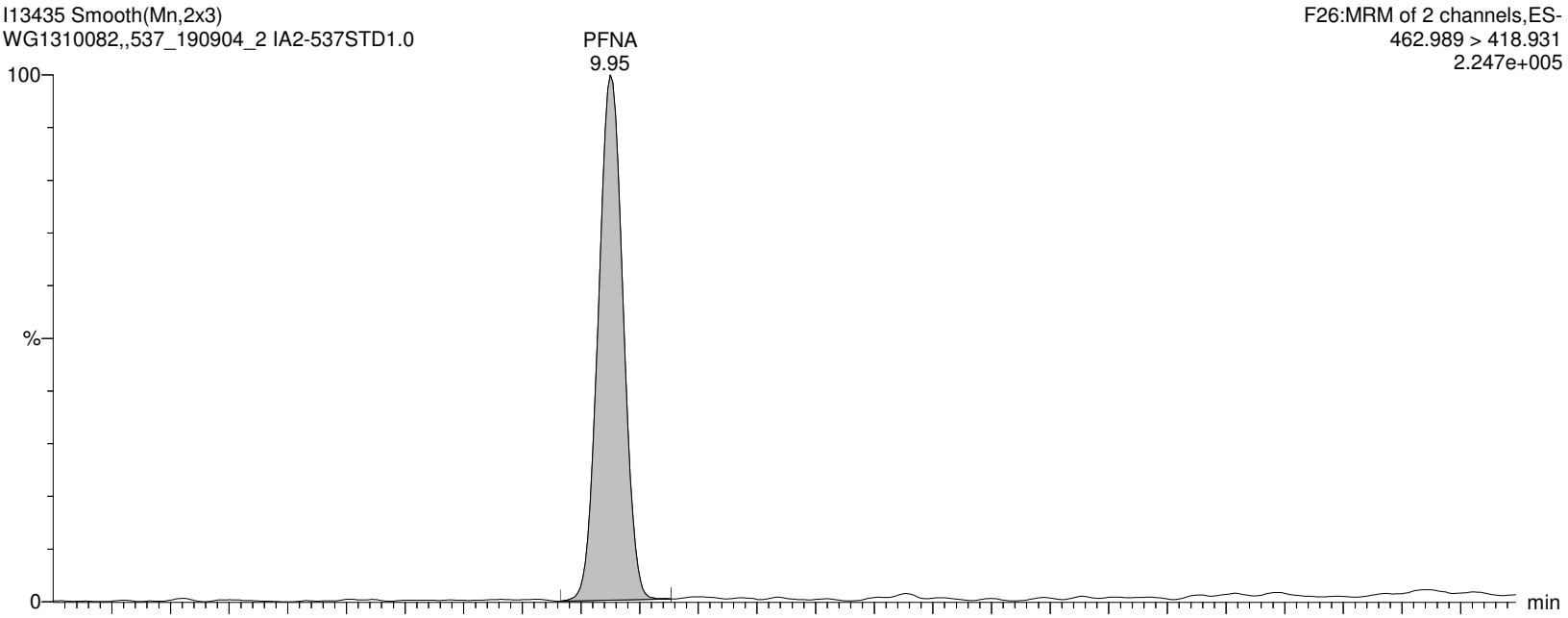


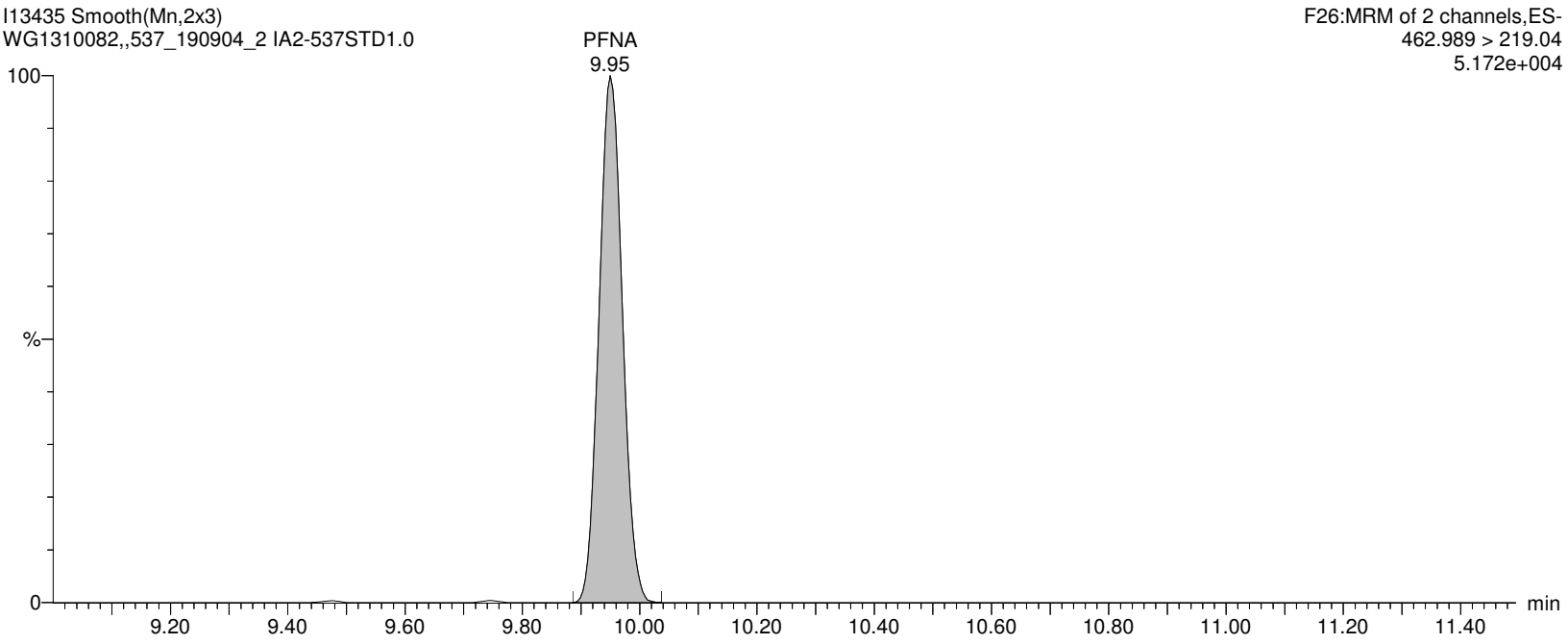



all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
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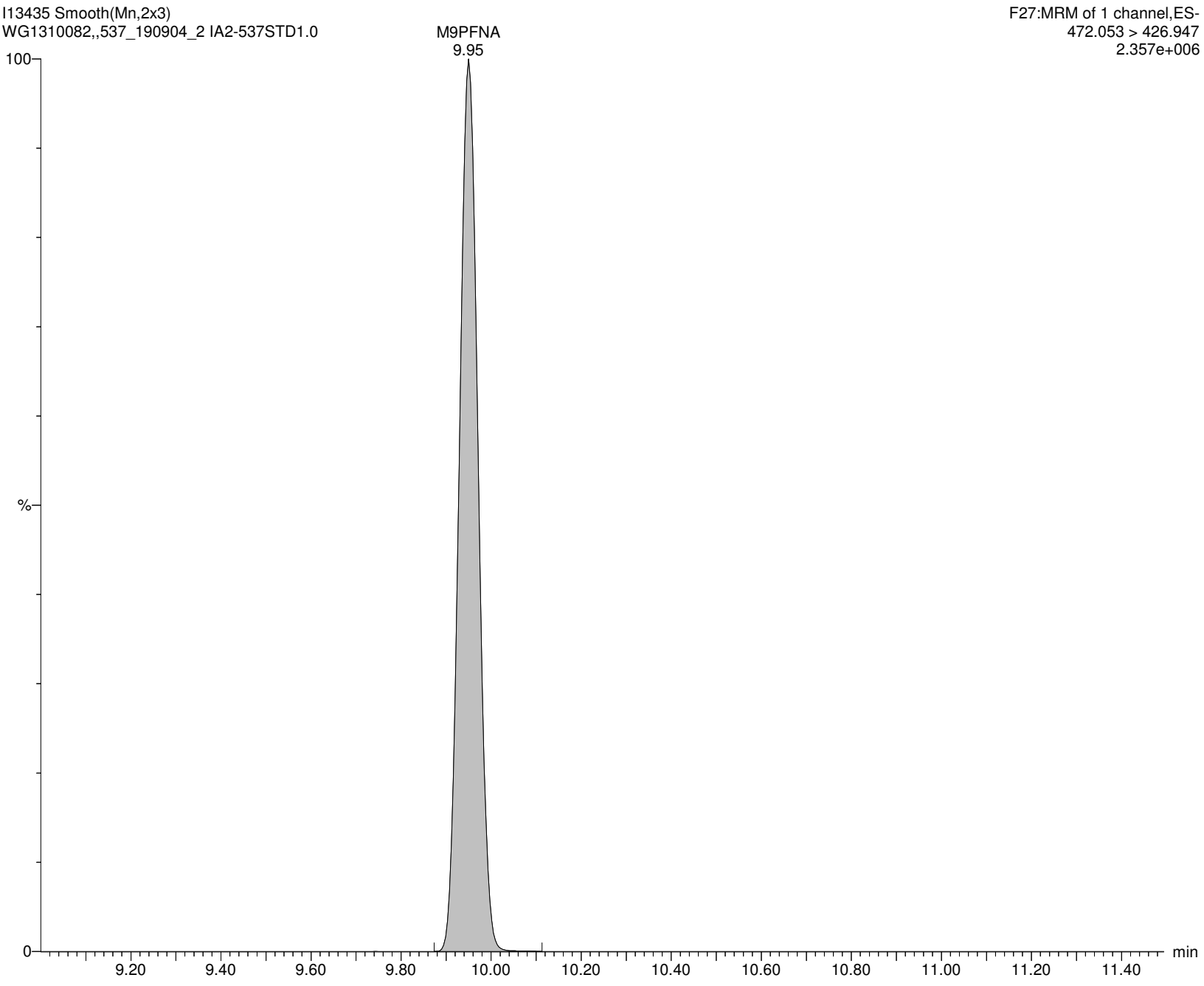



all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
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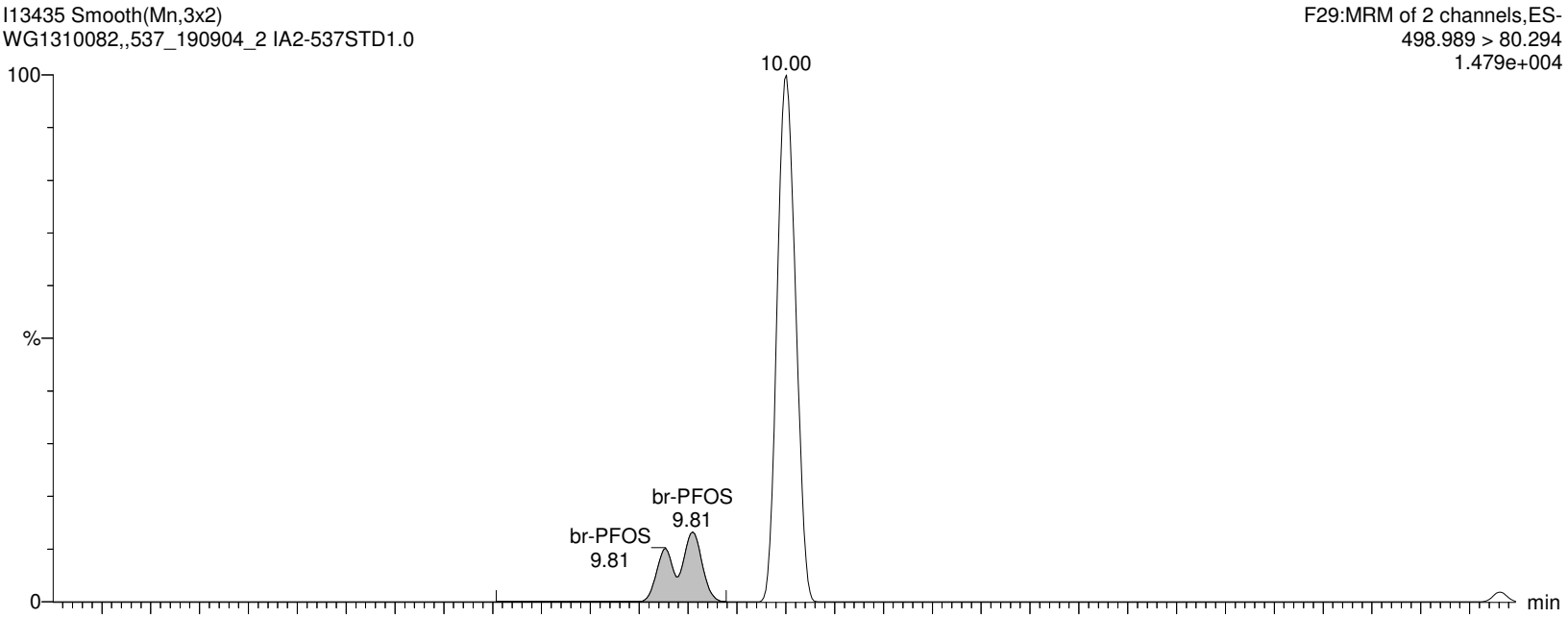
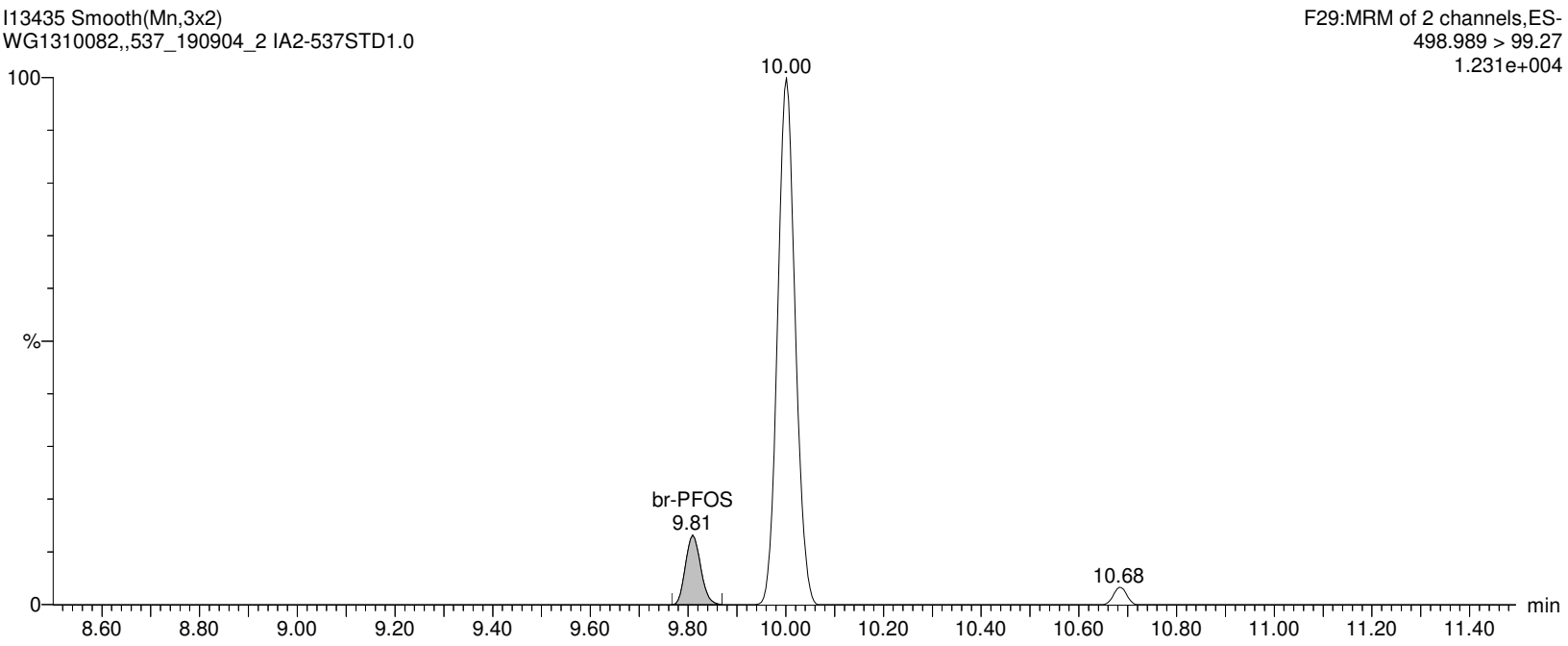
**br-PFOS**





all concentration units in (ng/mL)

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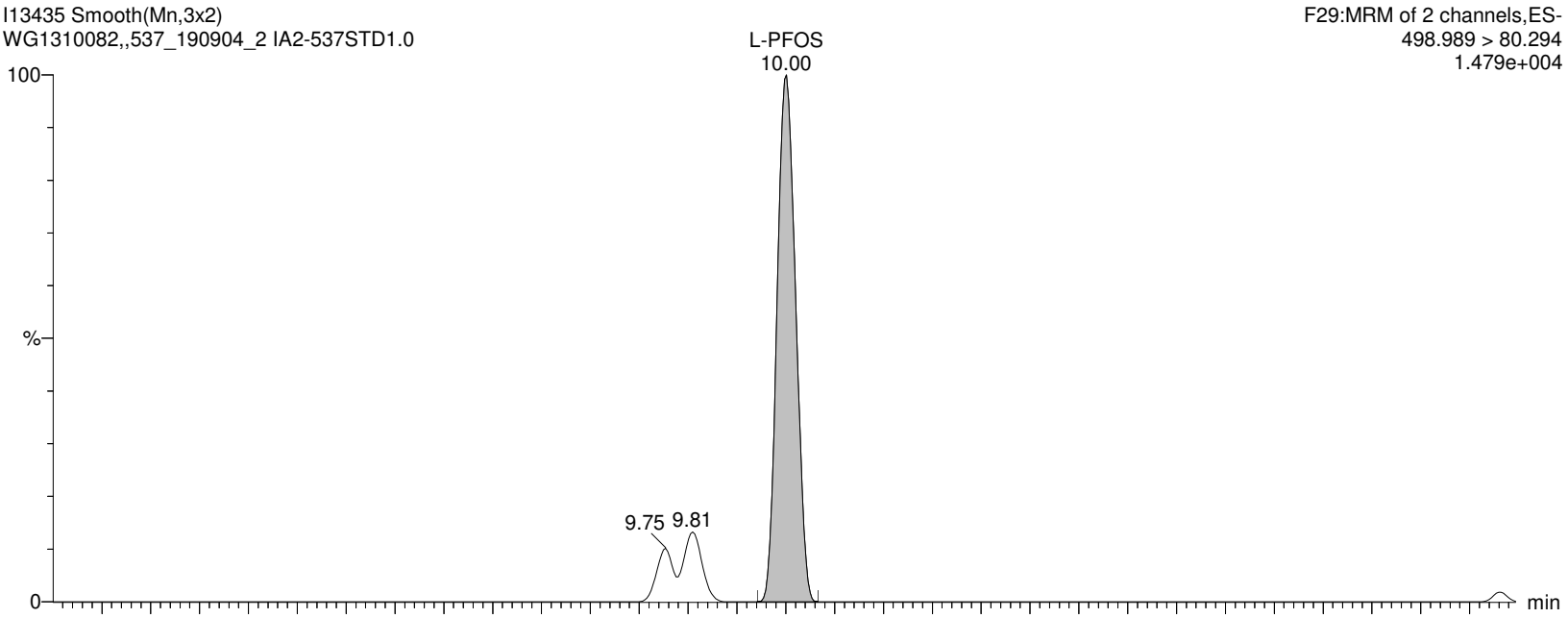


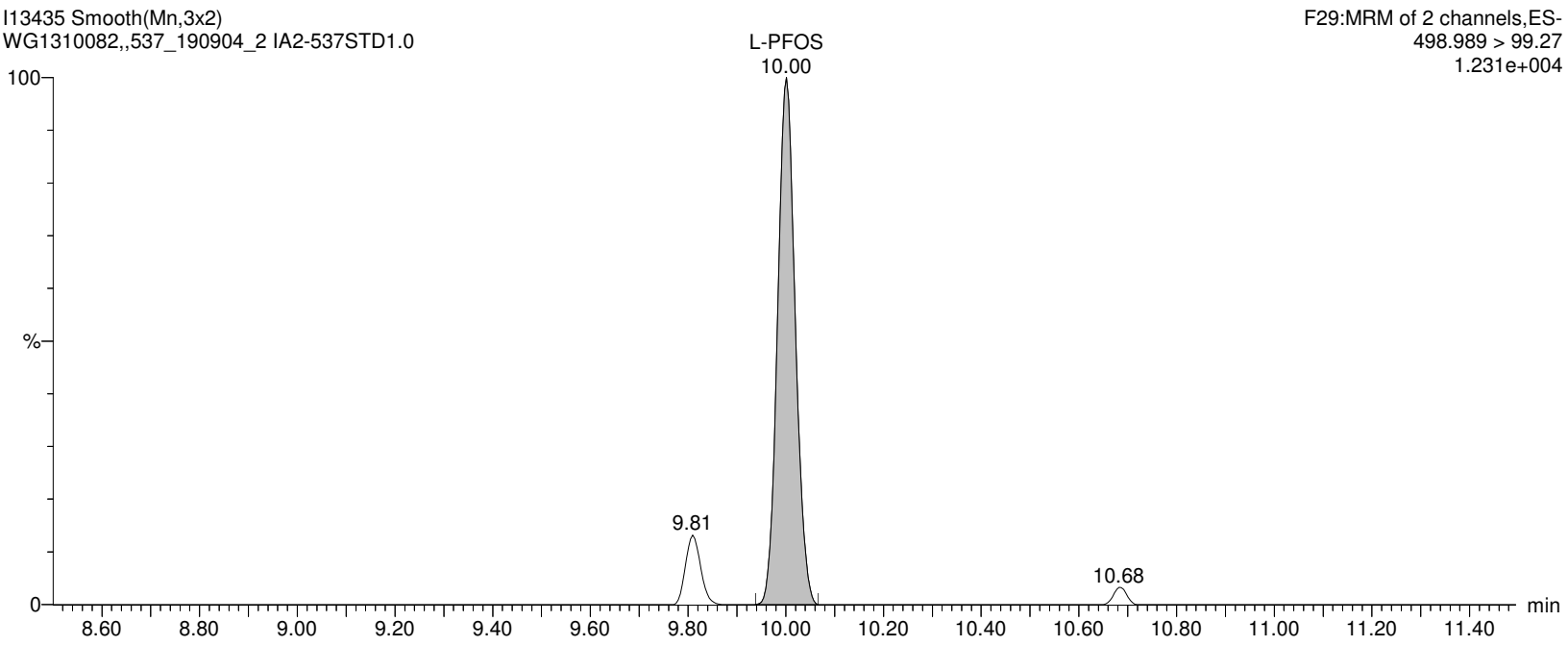



all concentration units in (ng/mL)

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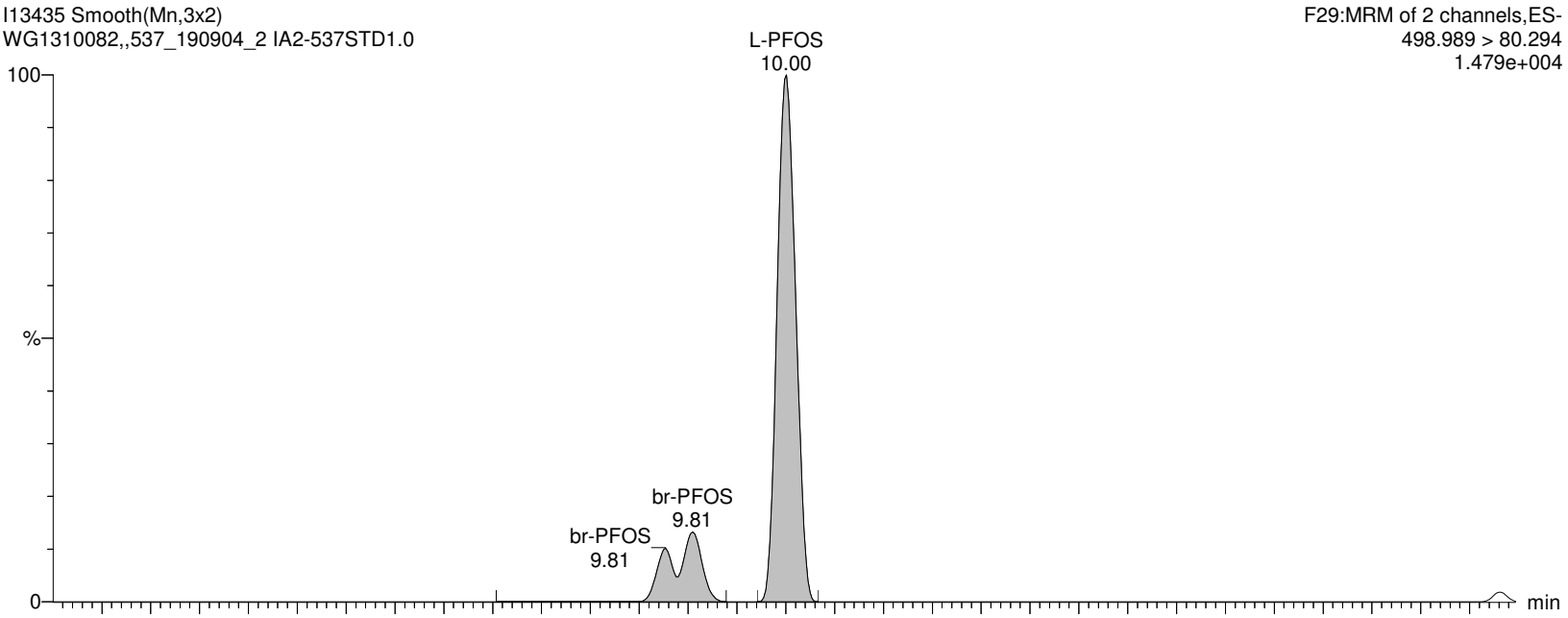
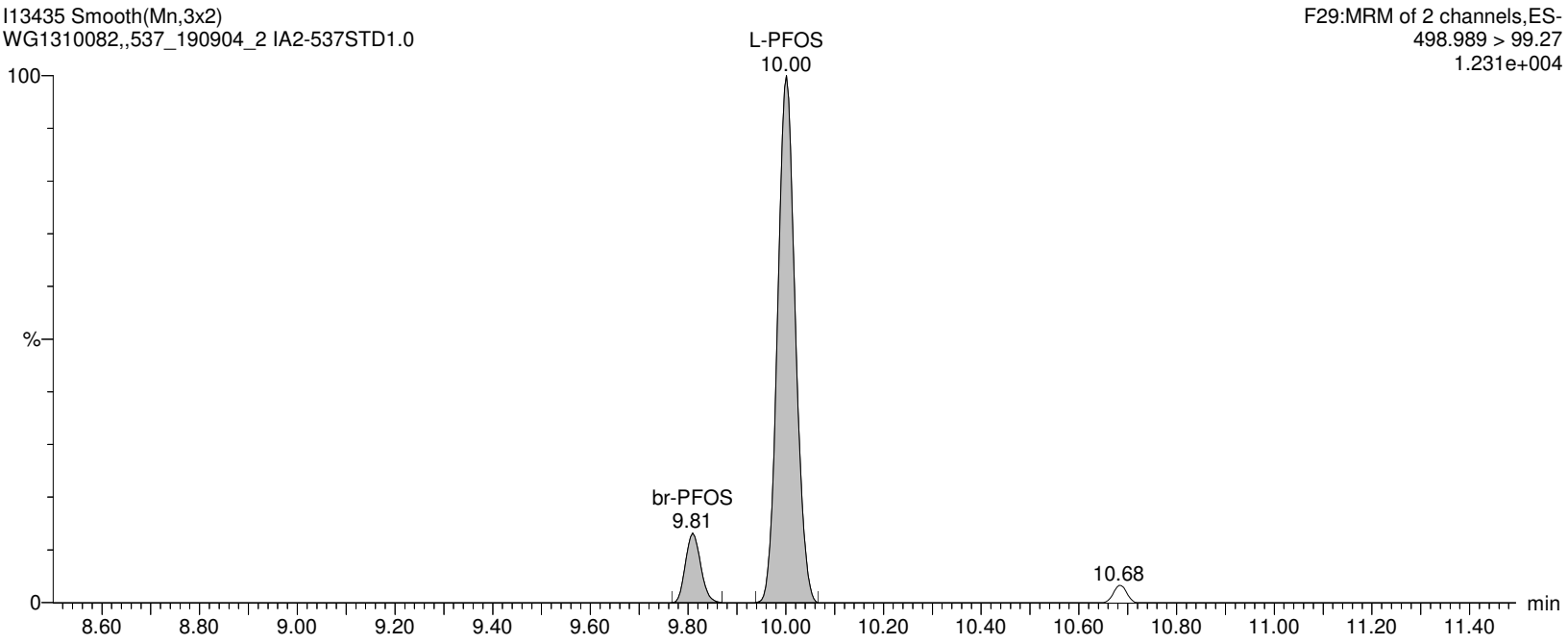
**PFOS**





all concentration units in (ng/mL)

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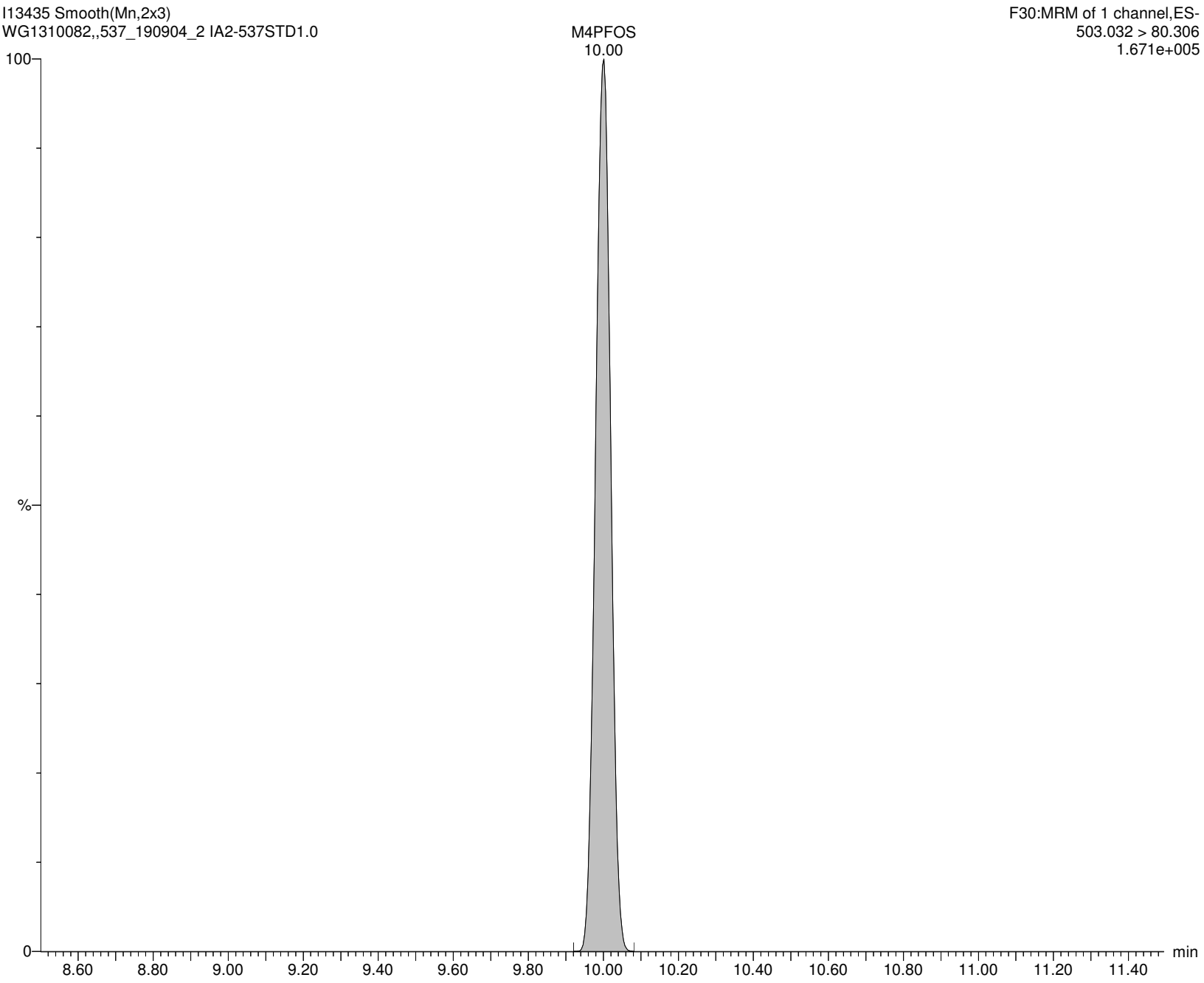
**M4PFOS**





all concentration units in (ng/mL)

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Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
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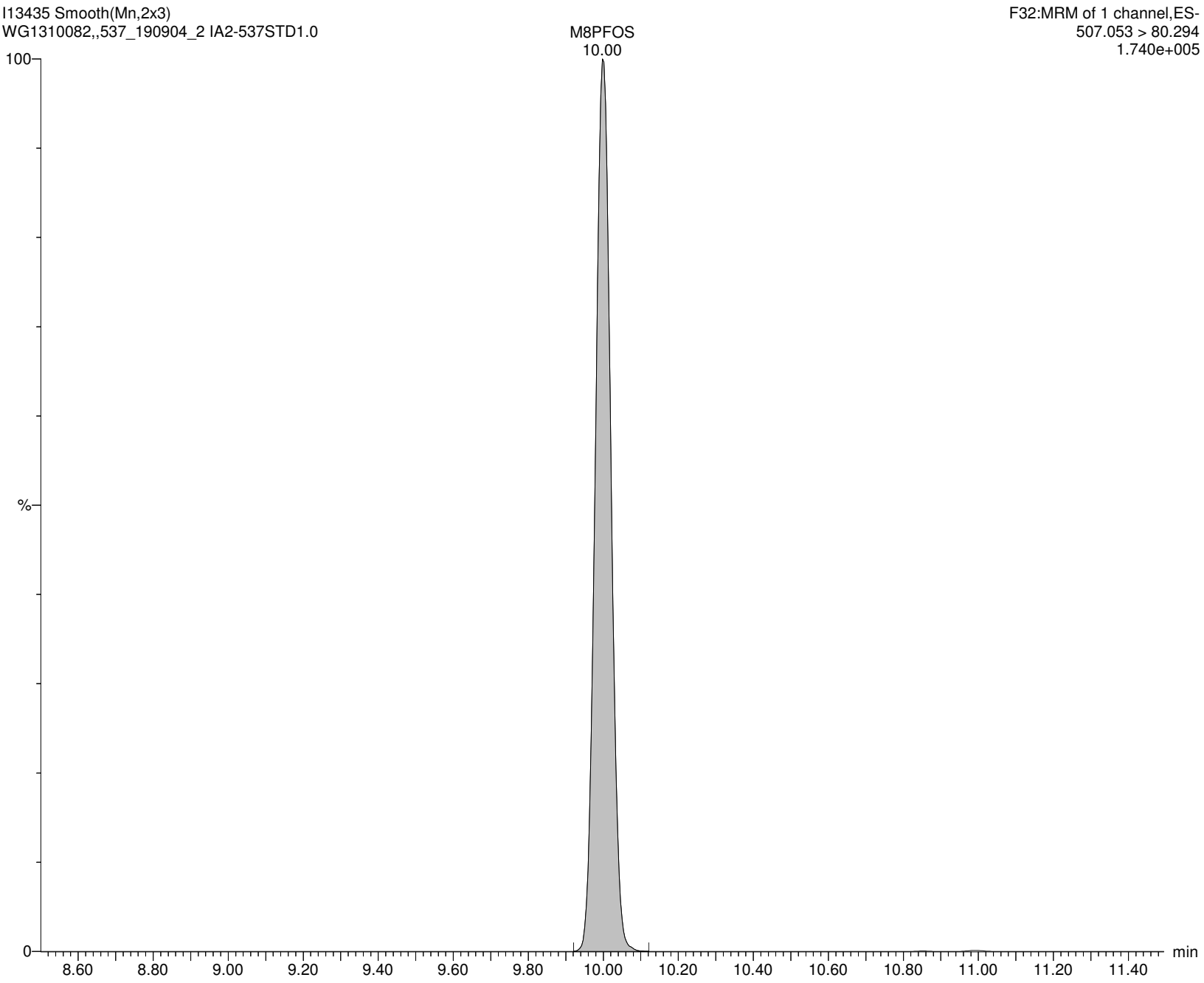



all concentration units in (ng/mL)

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**Instrument: XEVO-TQSmicro#QEB0050**
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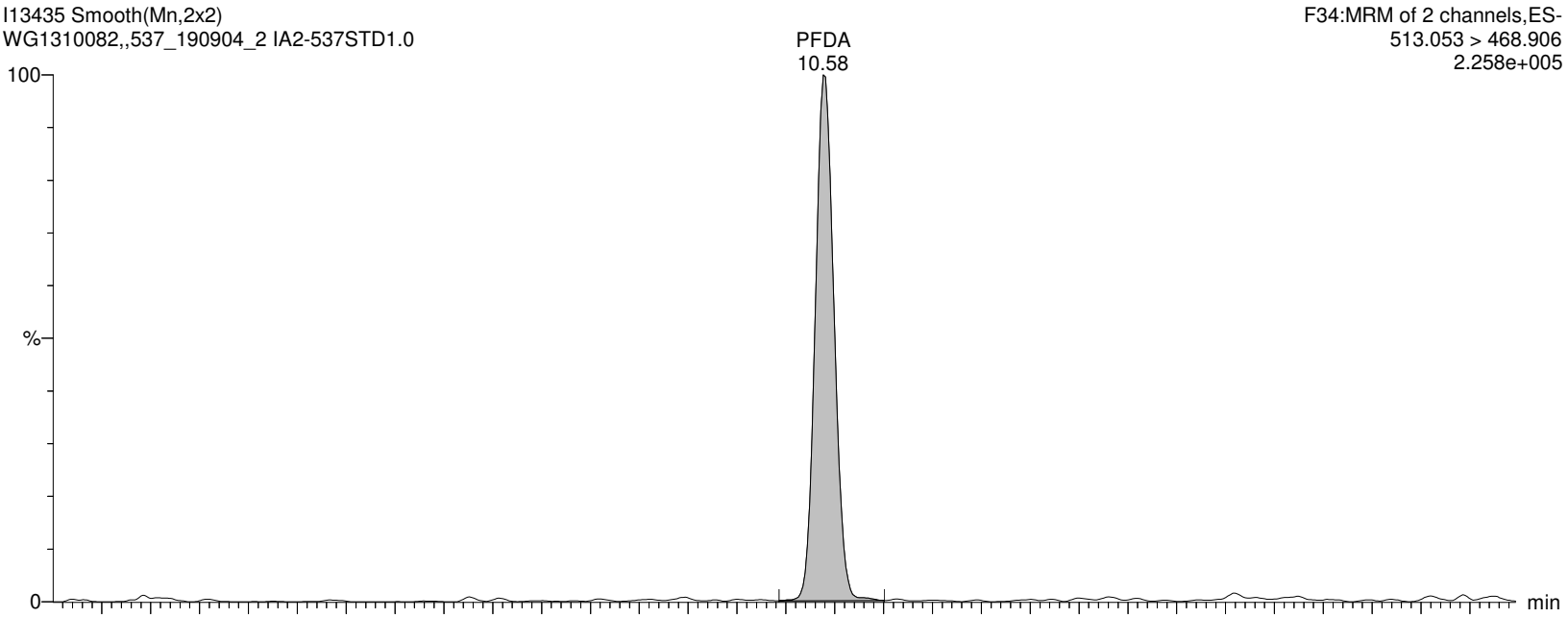
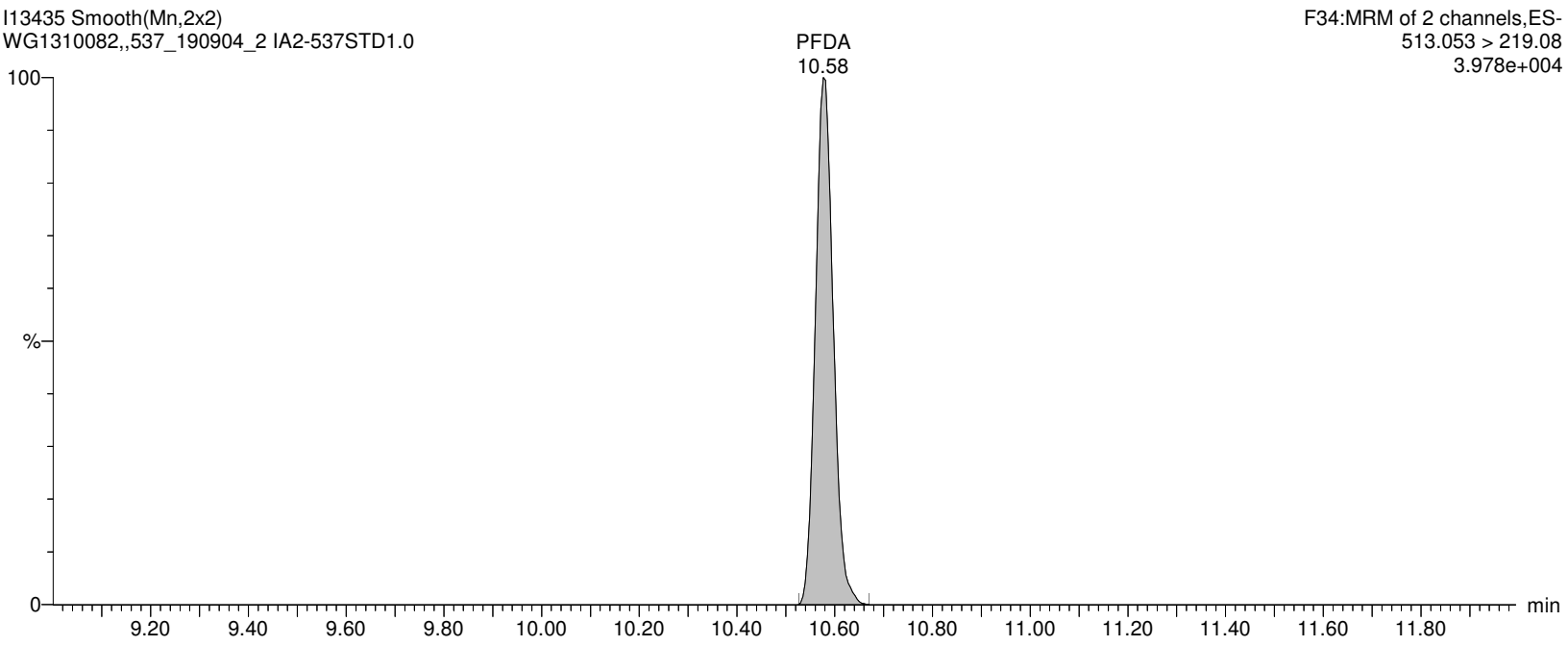
**PFDA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
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**Vial: 1:A,3**
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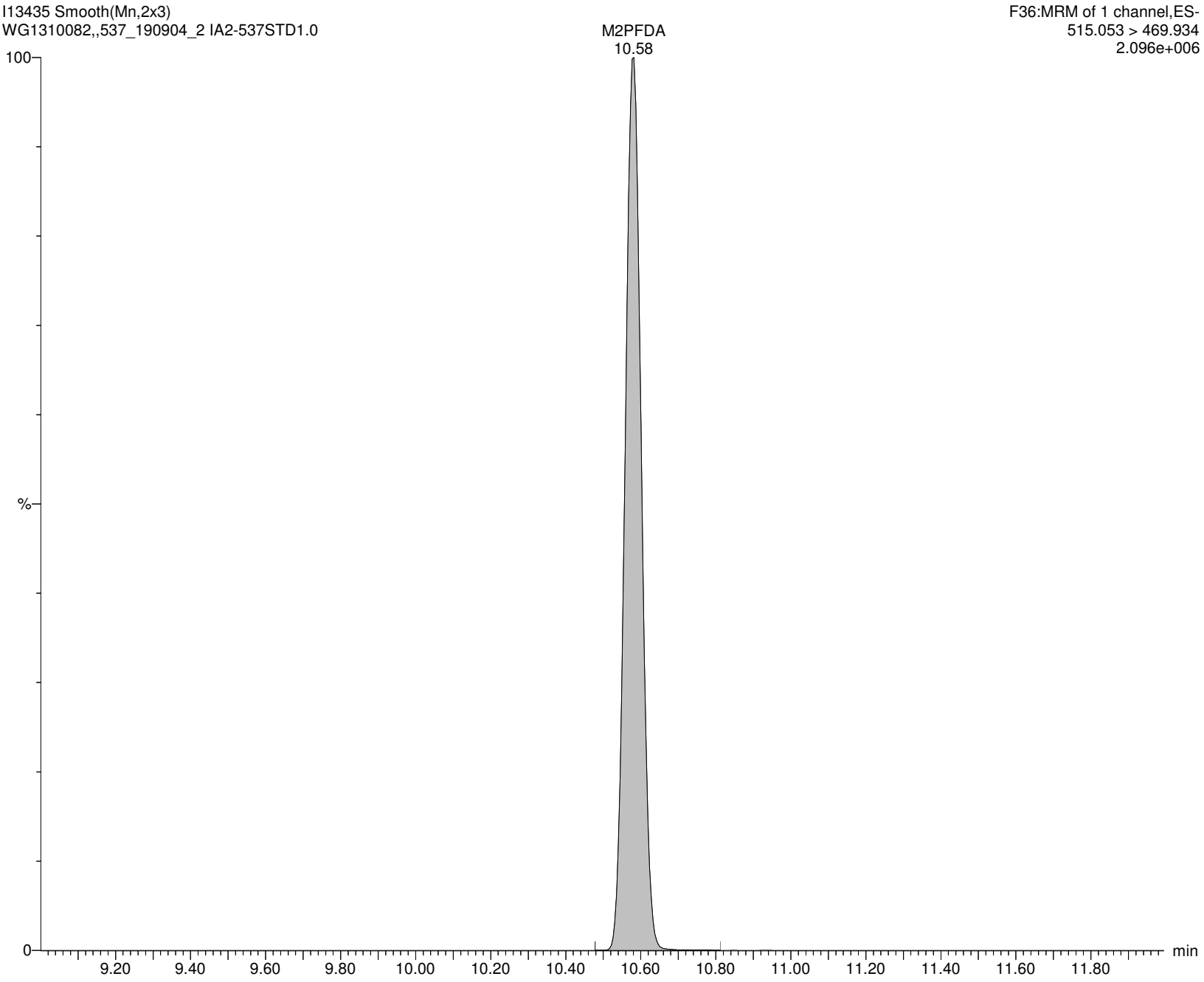



all concentration units in (ng/mL)

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**Vial: 1:A,3**
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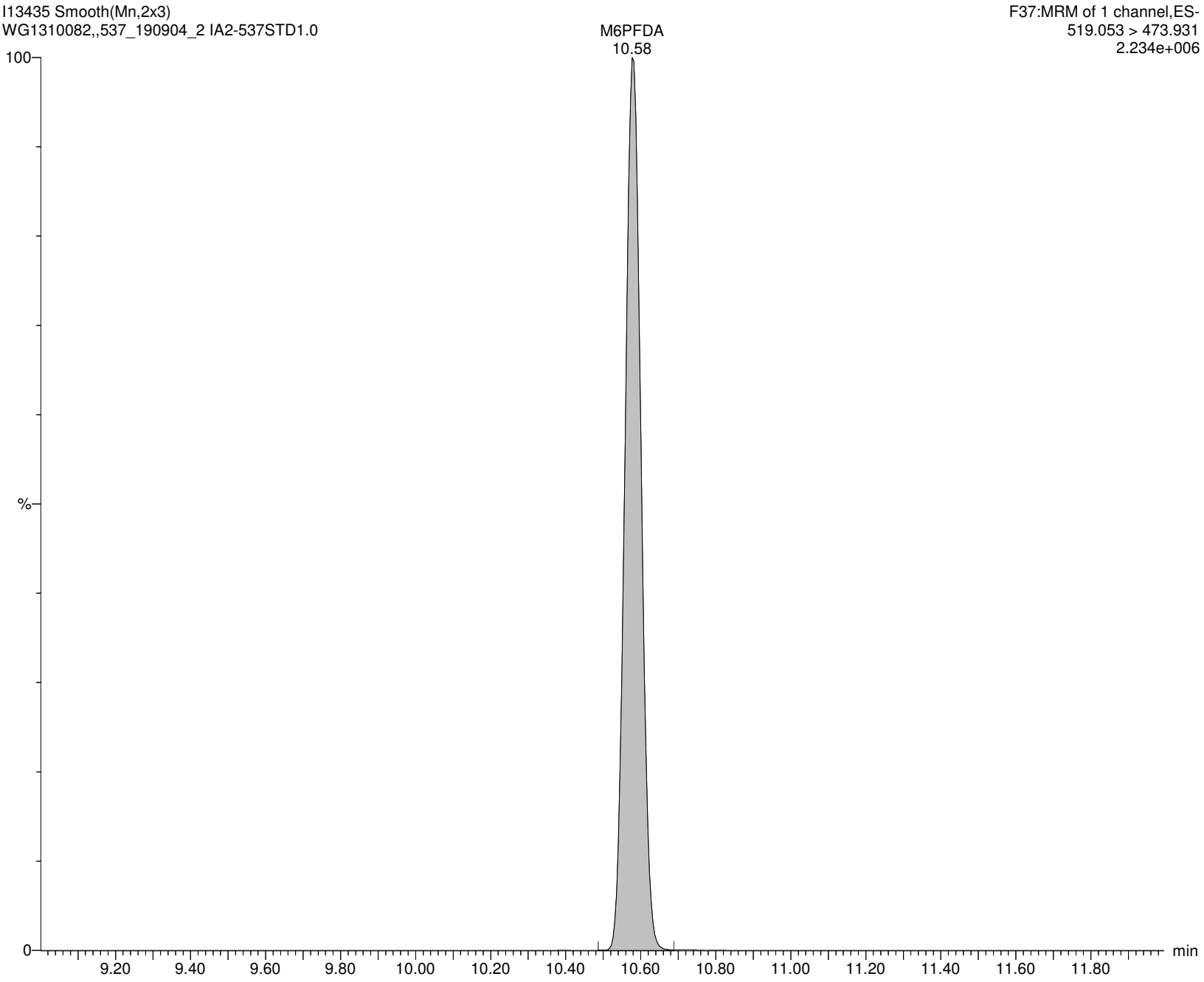



all concentration units in (ng/mL)

Alpha Analytical Inc.
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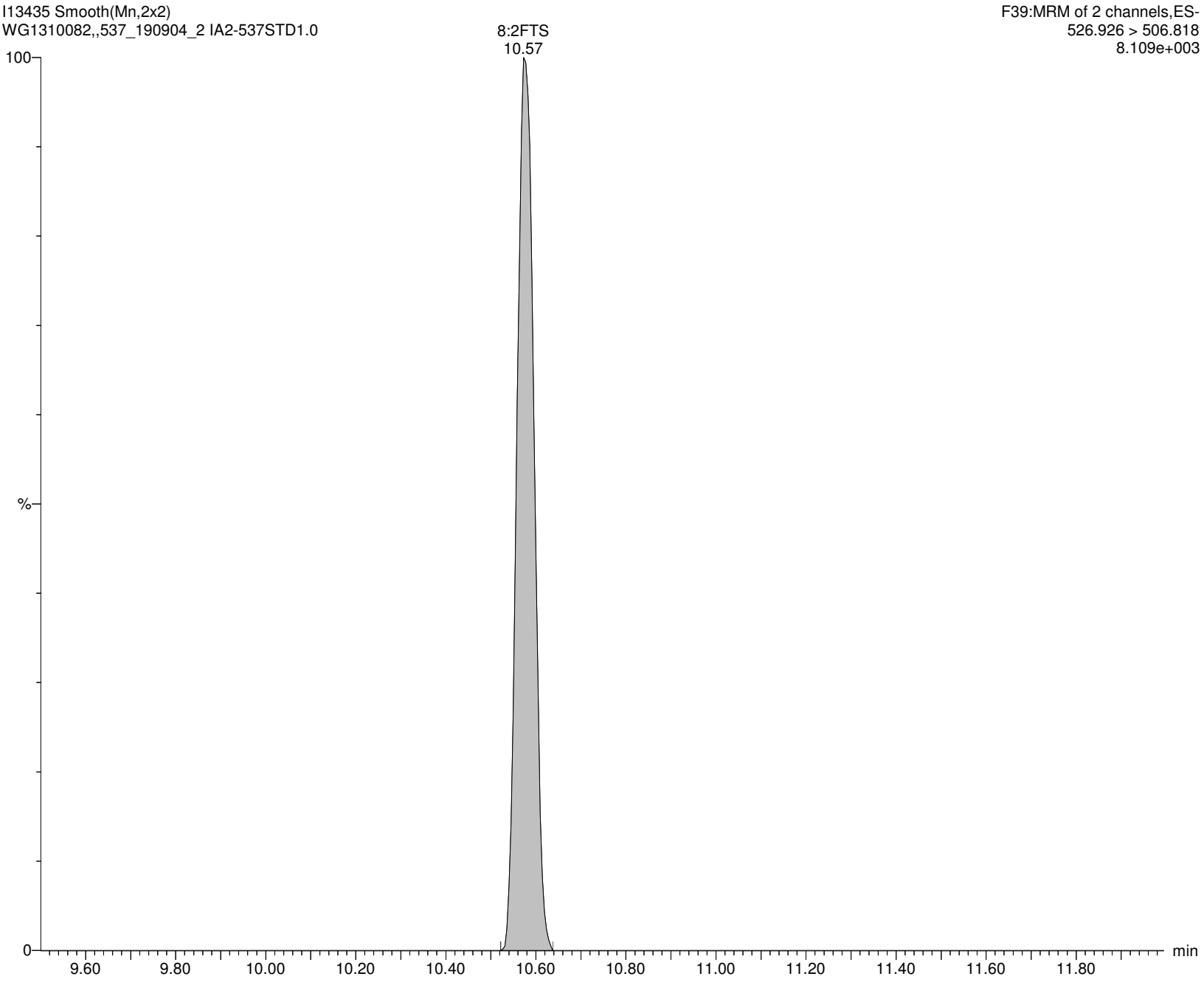
**8:2FTS**





all concentration units in (ng/mL)

Alpha Analytical Inc.
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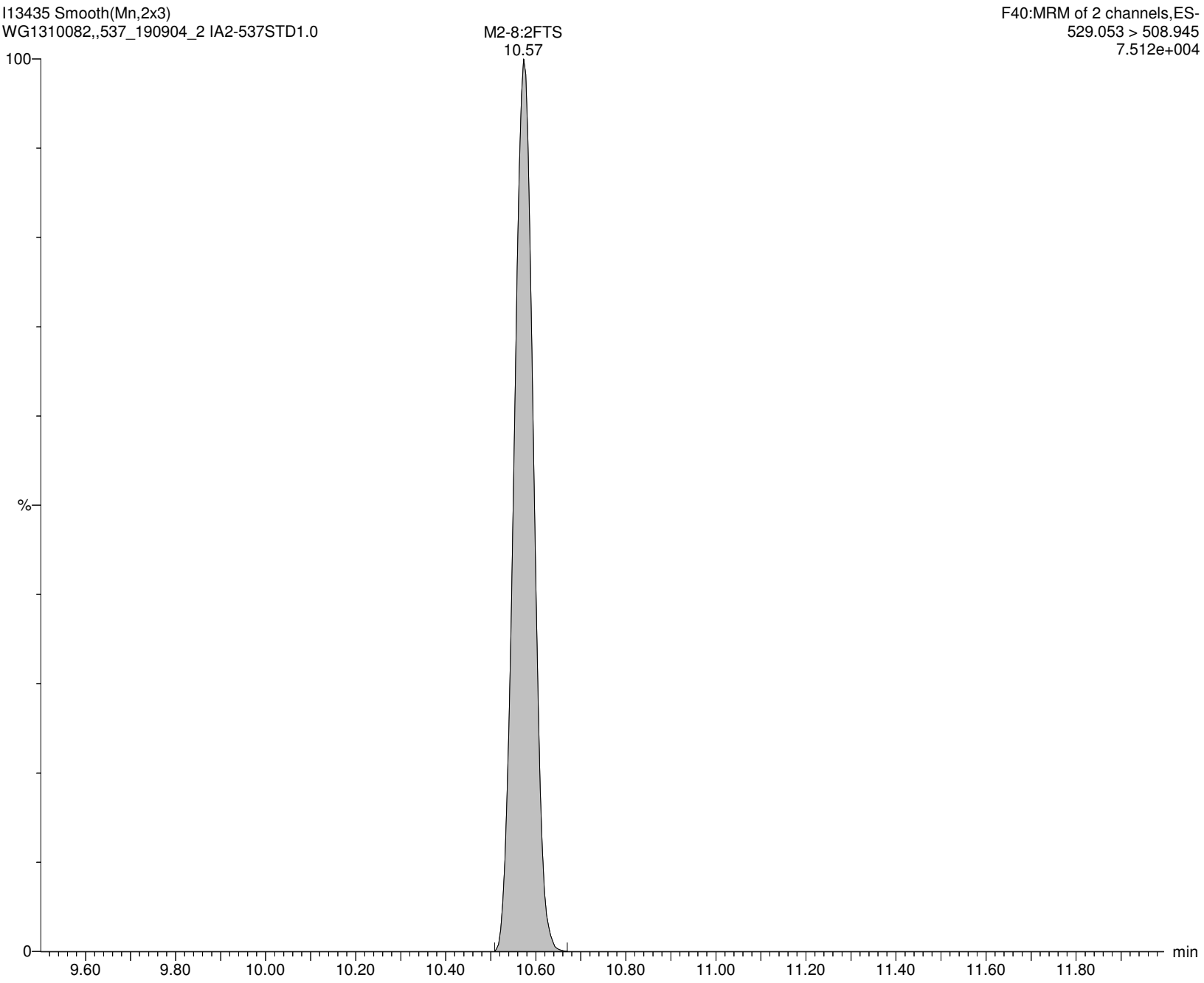
**M2-8:2FTS**





all concentration units in (ng/mL)

Alpha Analytical Inc.
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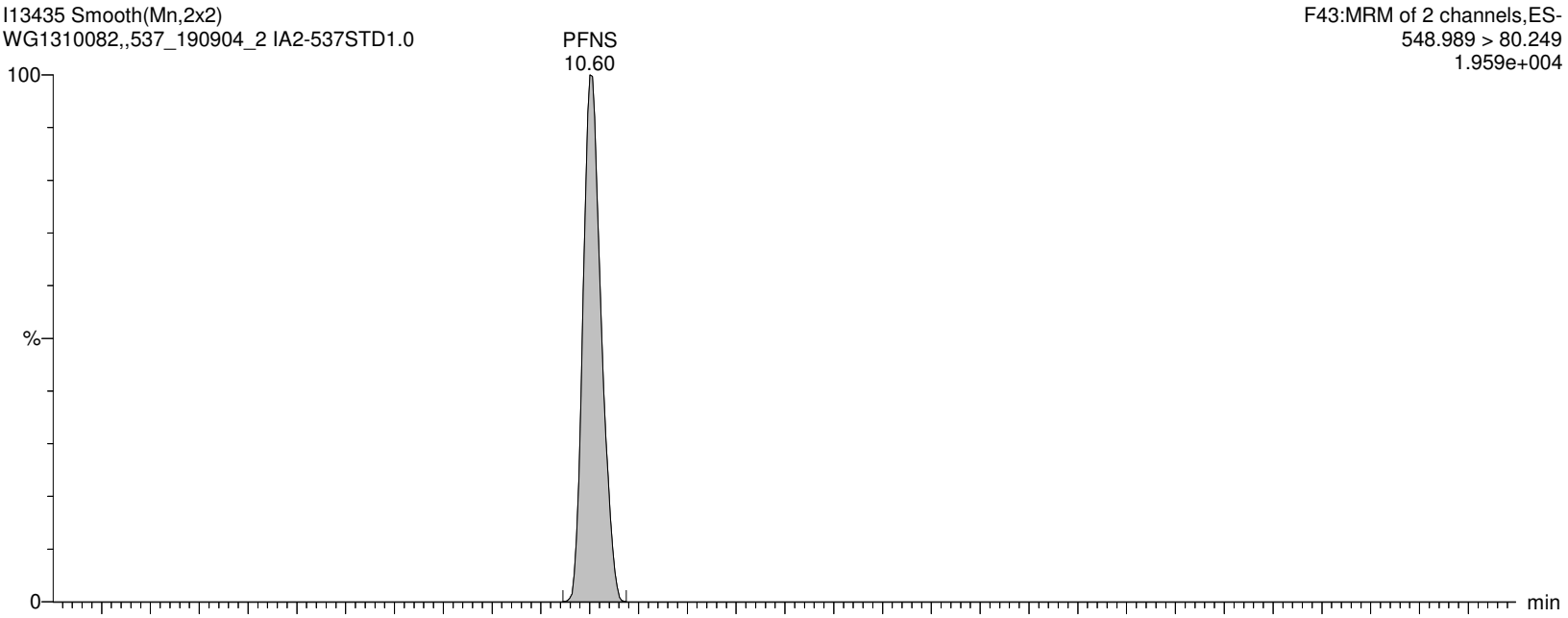
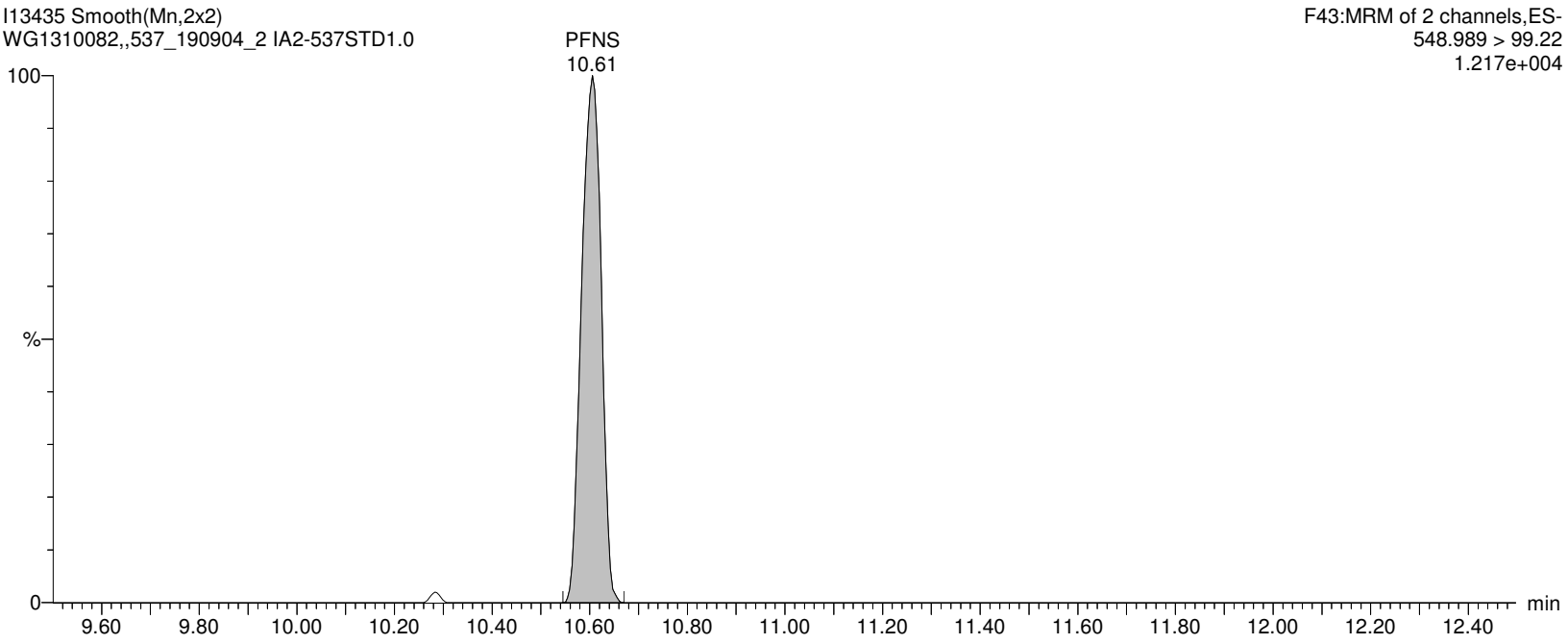
**PFNS**





all concentration units in (ng/mL)

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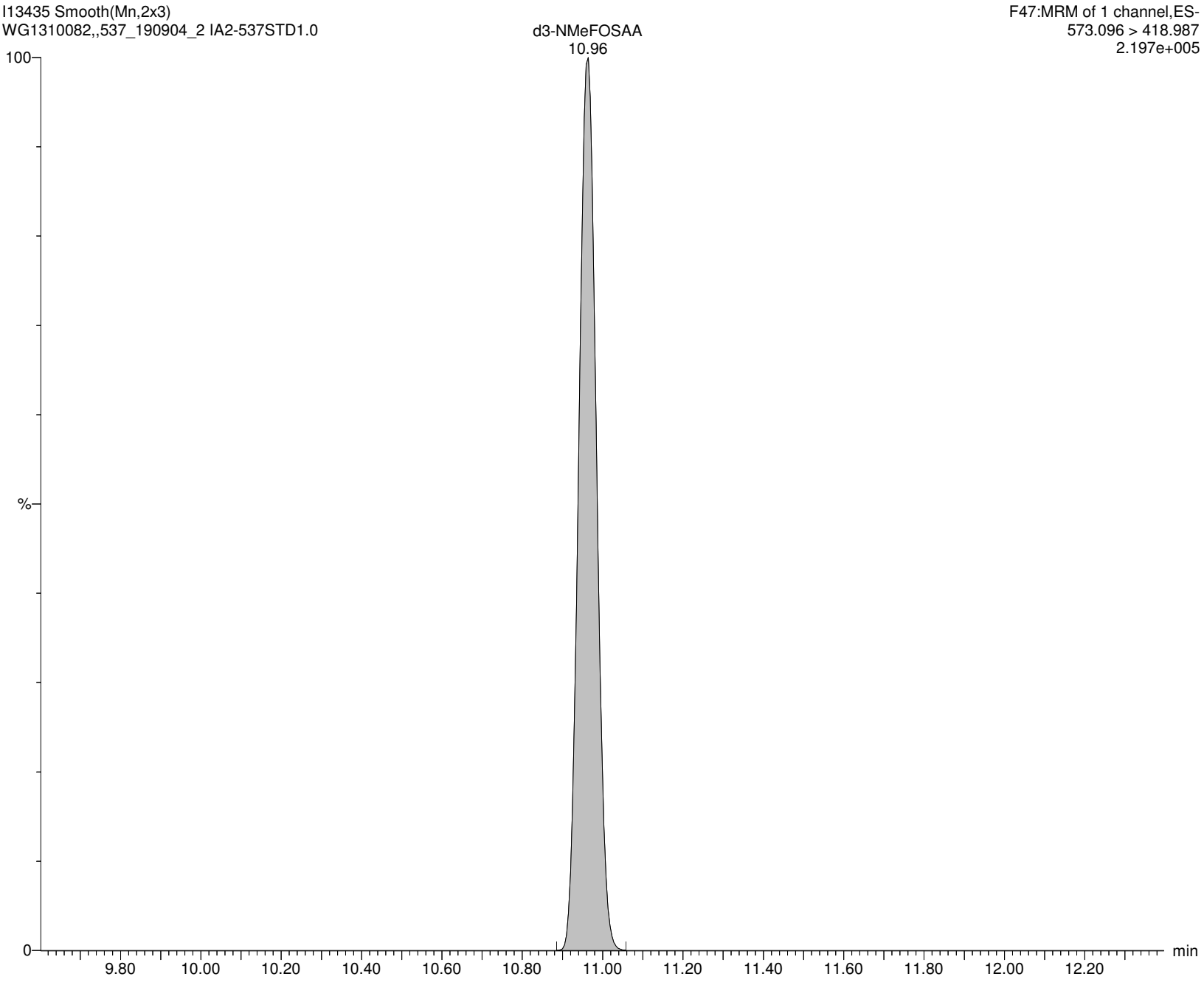



all concentration units in (ng/mL)

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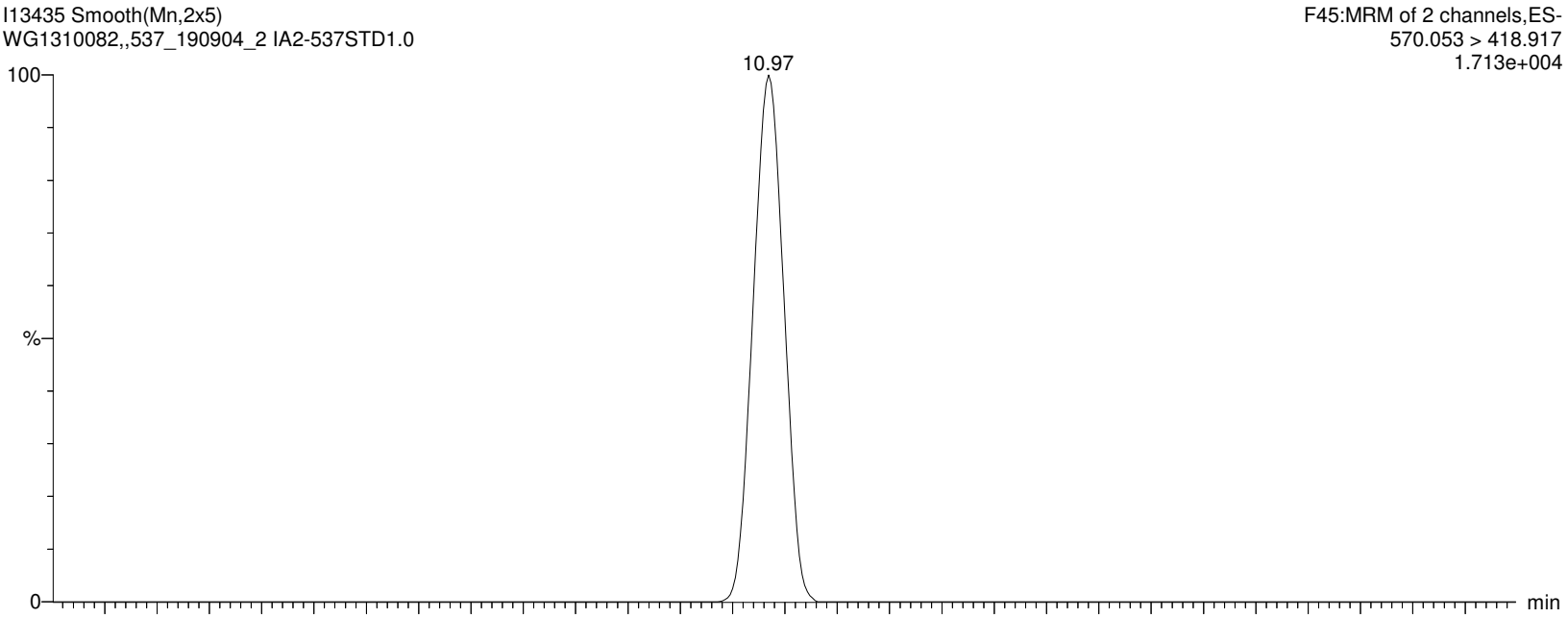
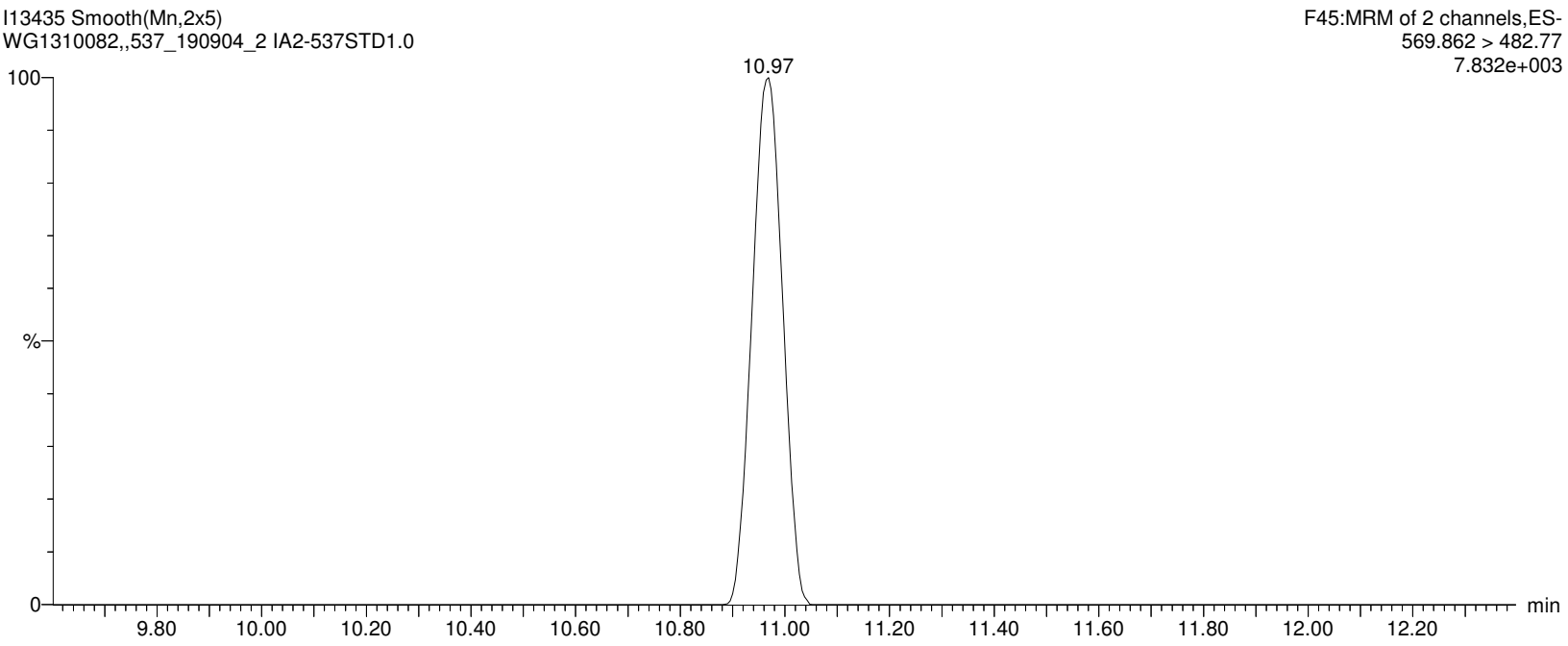
**br-NMeFOSAA**





all concentration units in (ng/mL)

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**Description: WG1310082,,537_190904_2**
**User: LCMS02:JW**
**Vial: 1:A,3**
**Instrument: XEVO-TQSmicro#QEB0050**
**Inlet Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\LCMS_537_ISO_B**
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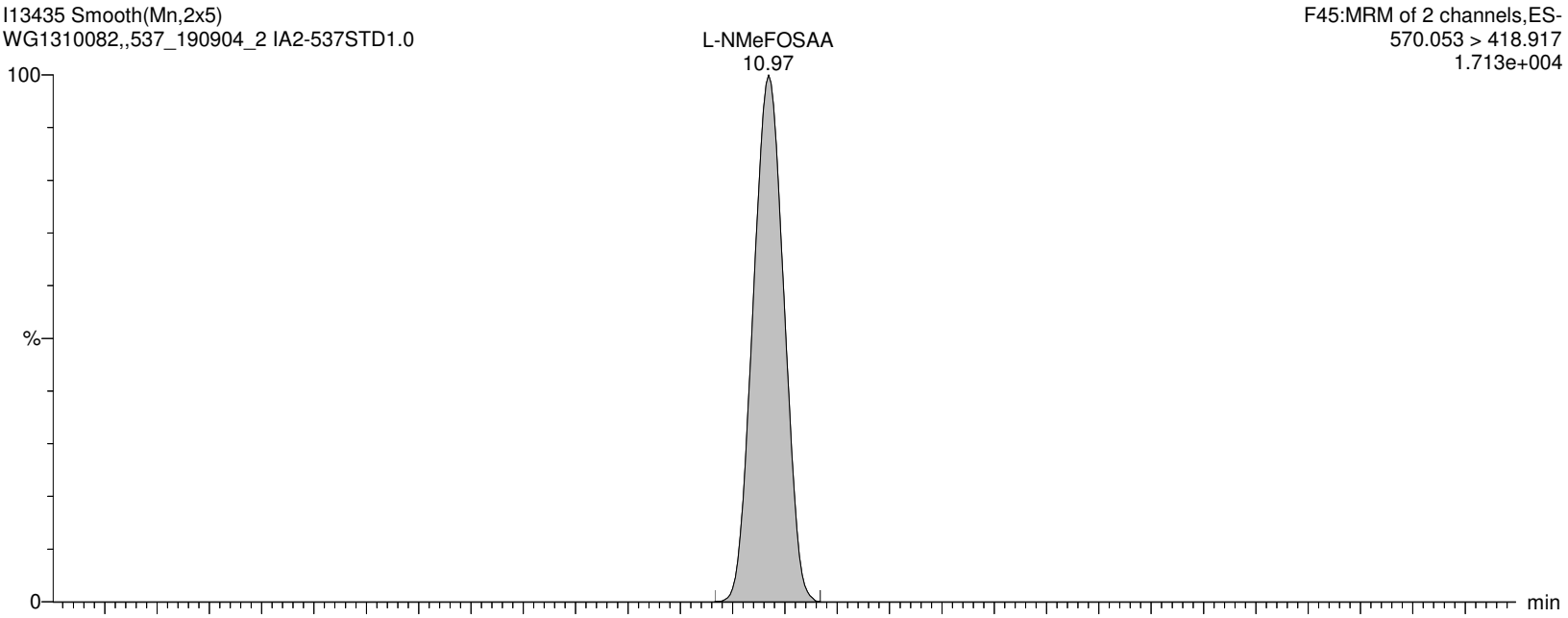


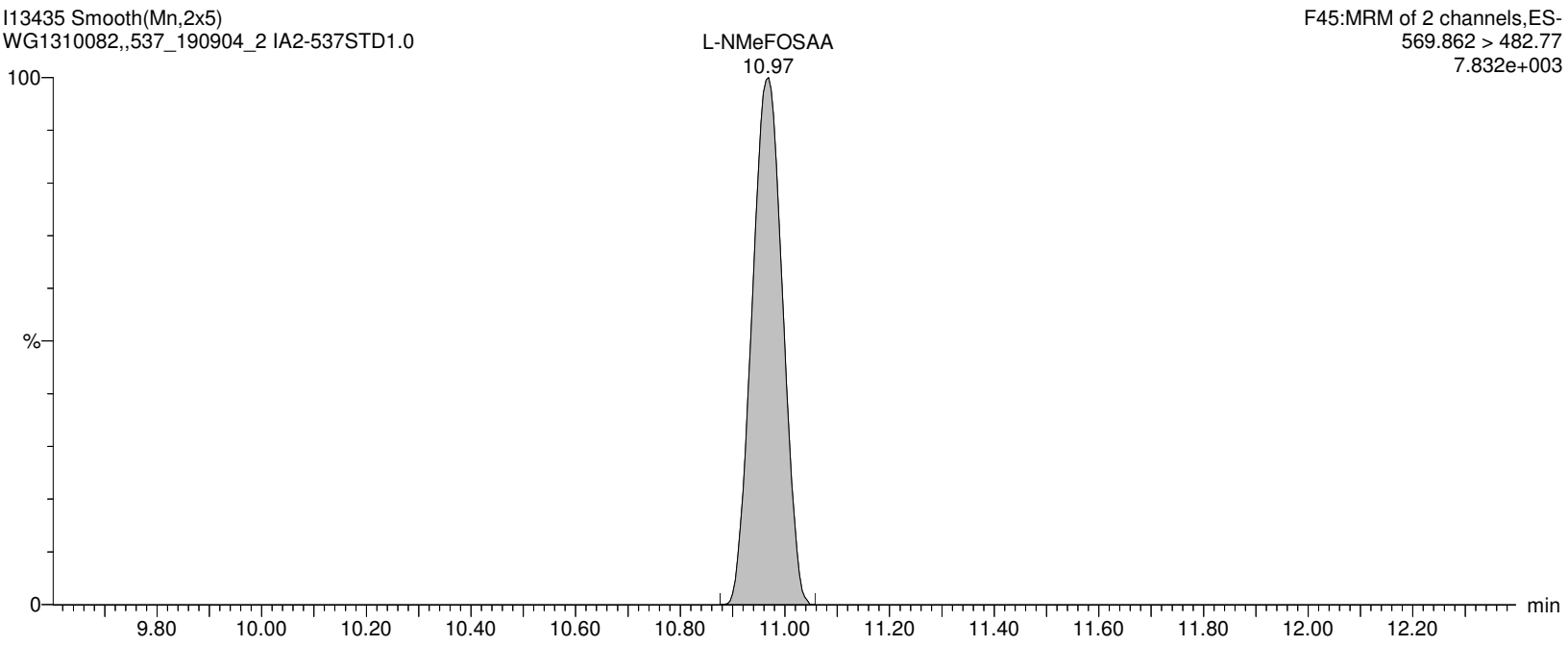



all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
Printed: Monday, November 18, 2019 13:42:51 Eastern Standard Time

**Name: I13435**
**ID: IA2-537STD1.0**
**Date: 18-Nov-2019**
**Time: 10:53:49**
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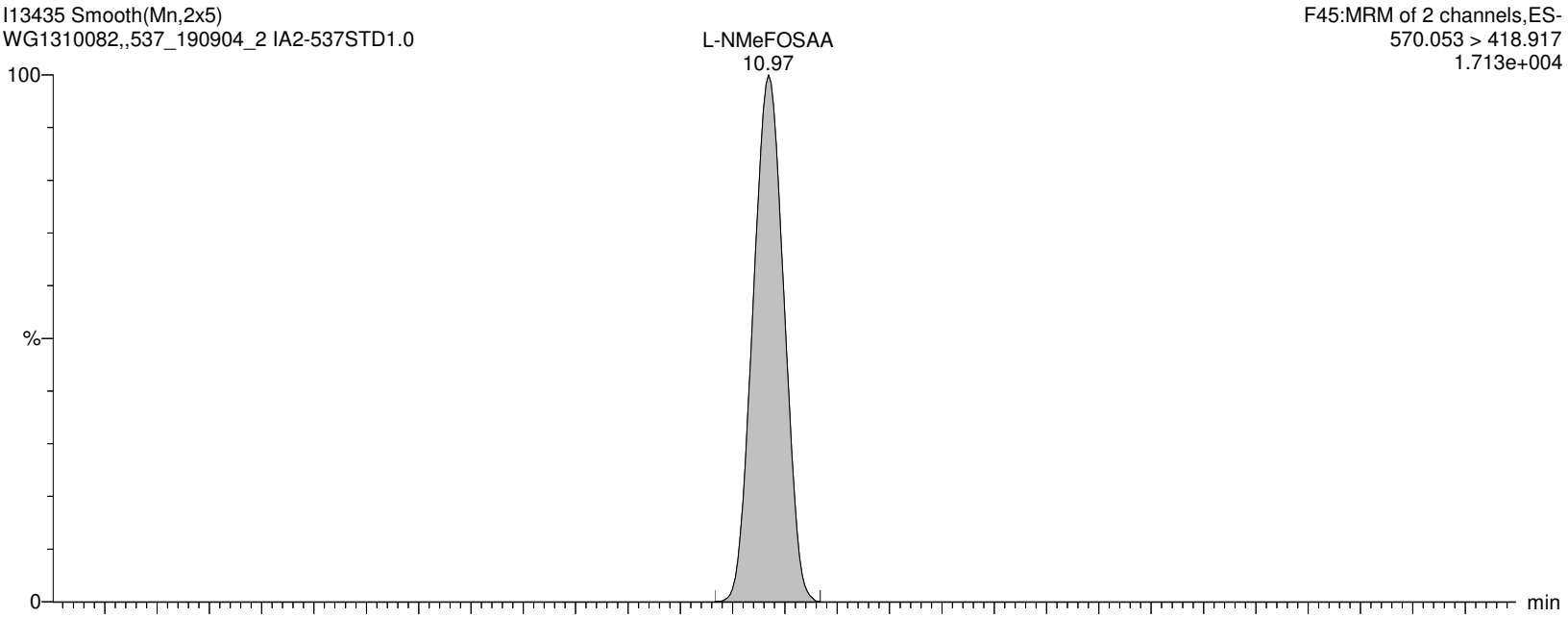


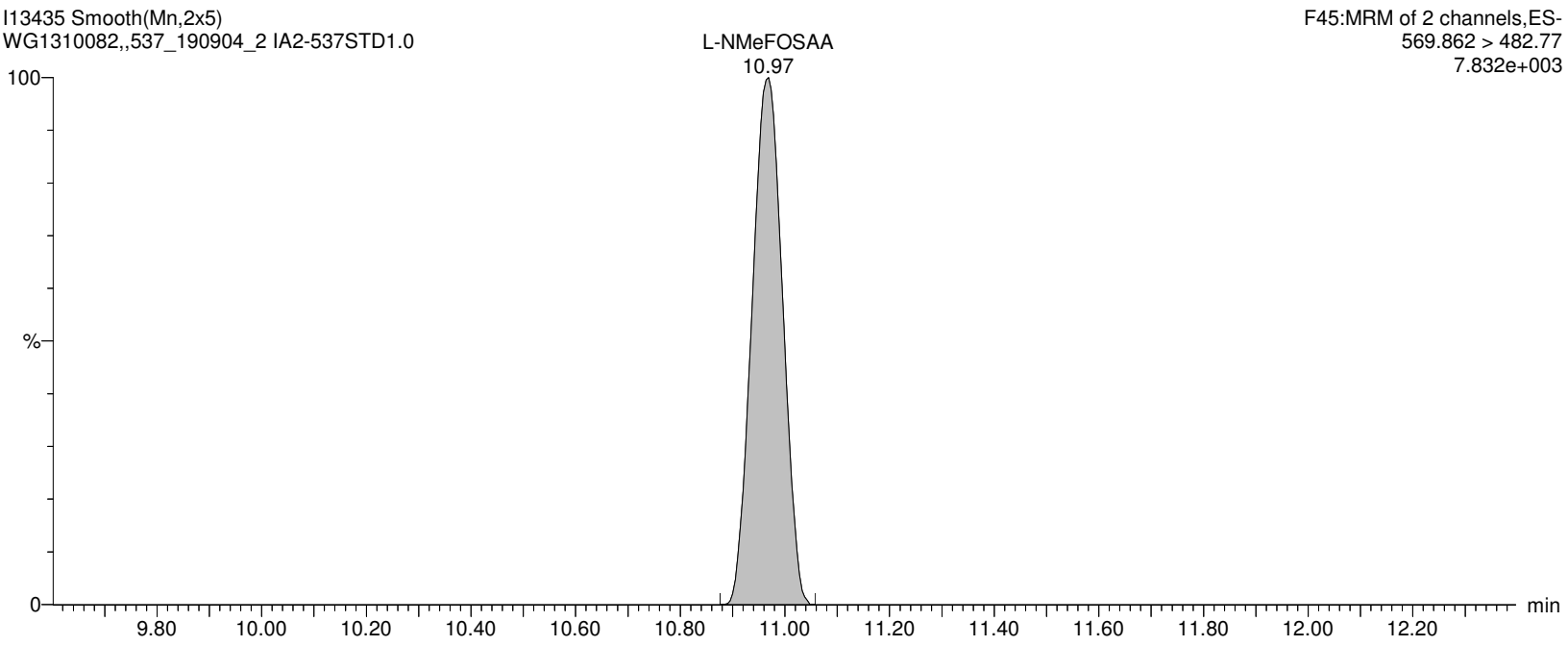



all concentration units in (ng/mL)

Alpha Analytical Inc.
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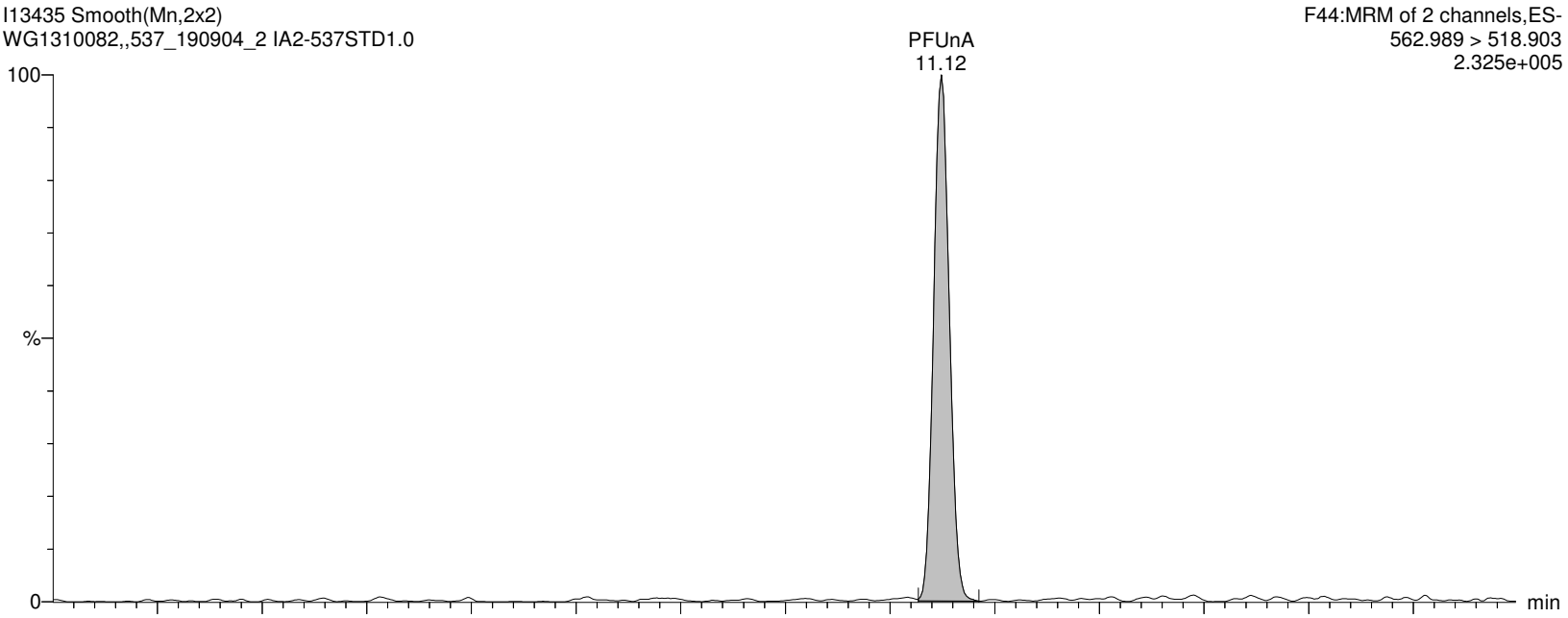


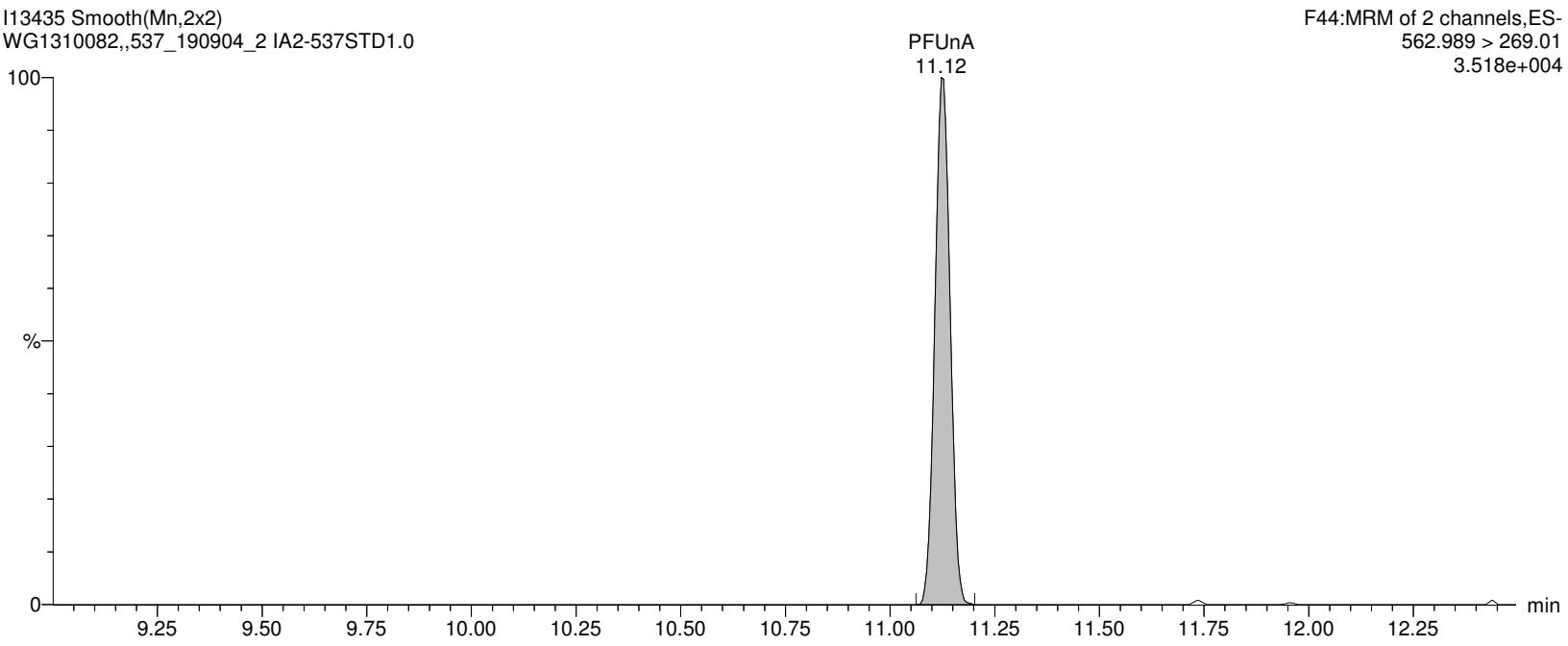



all concentration units in (ng/mL)

Alpha Analytical Inc.
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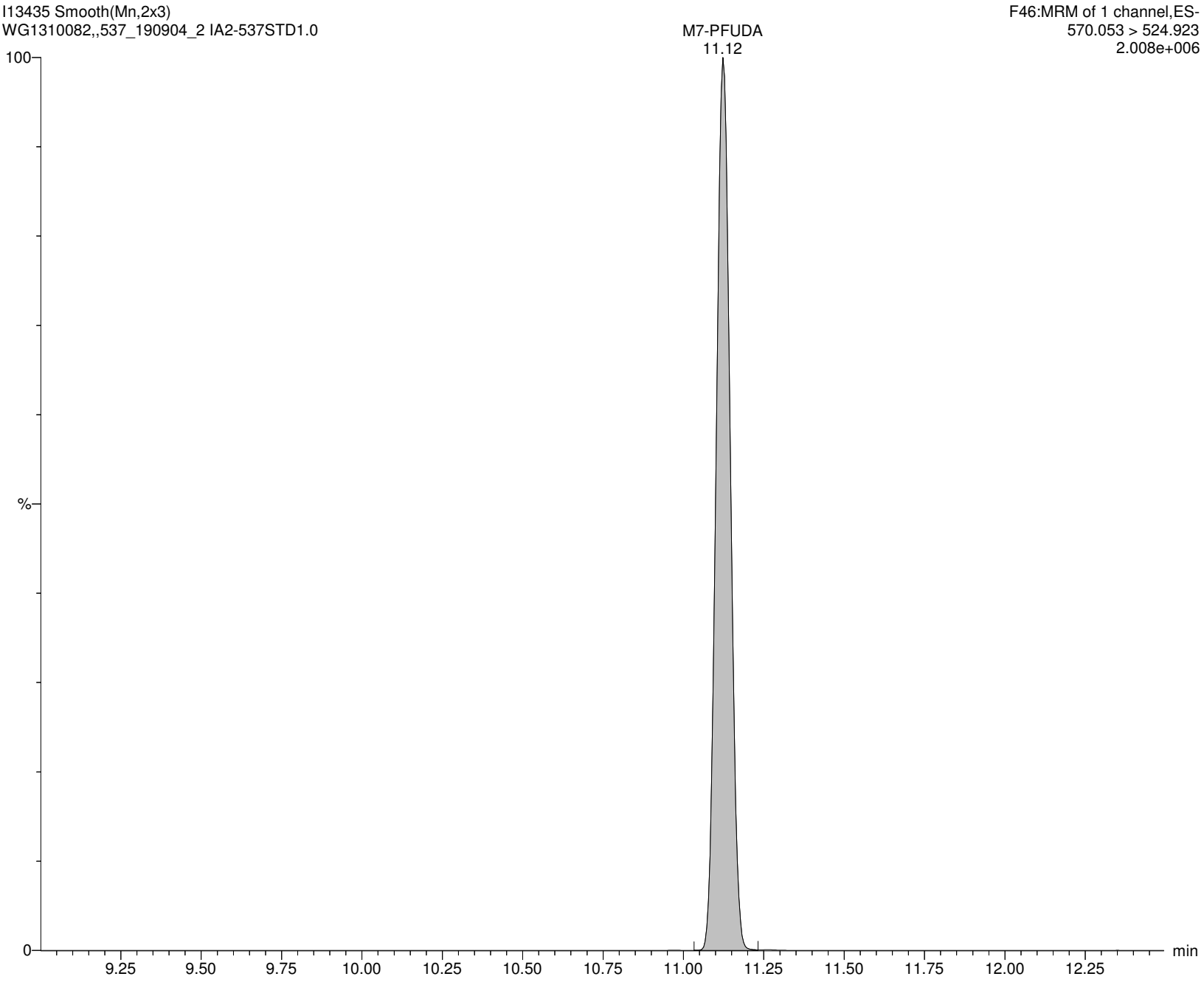



all concentration units in (ng/mL)

Alpha Analytical Inc.
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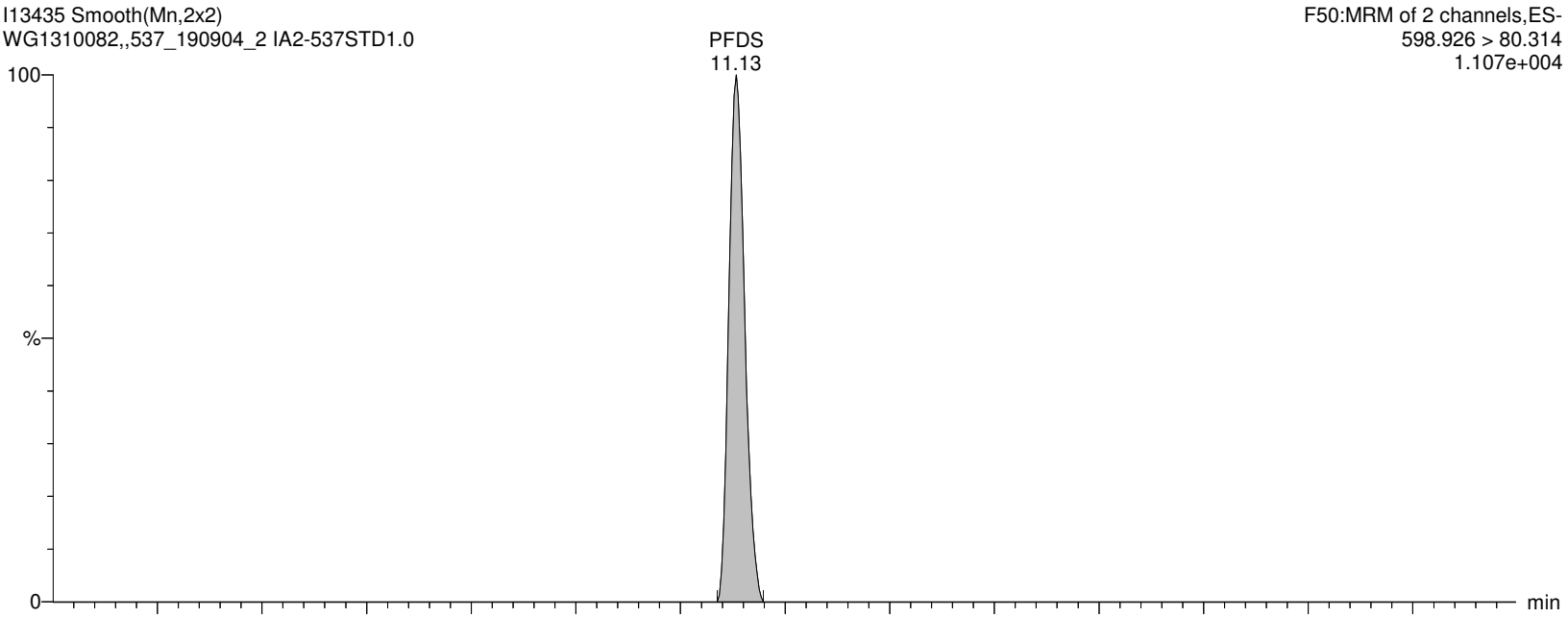


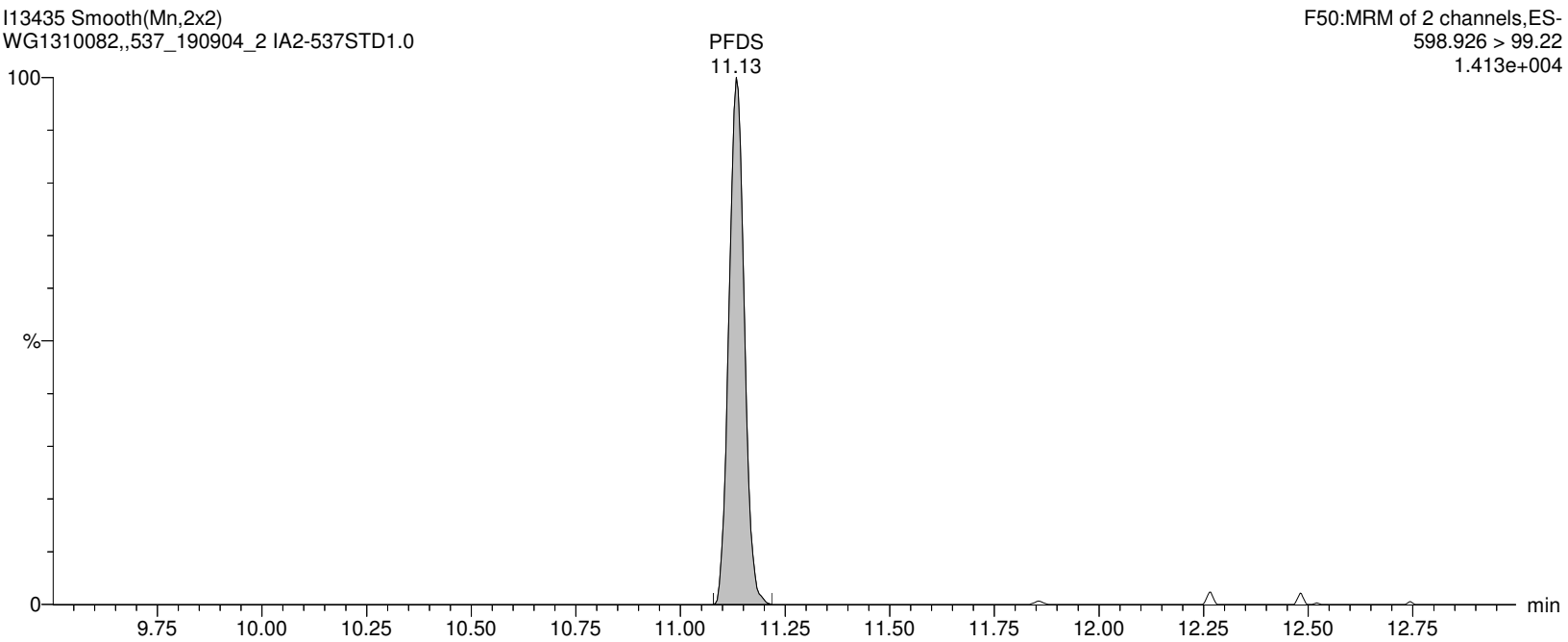



all concentration units in (ng/mL)

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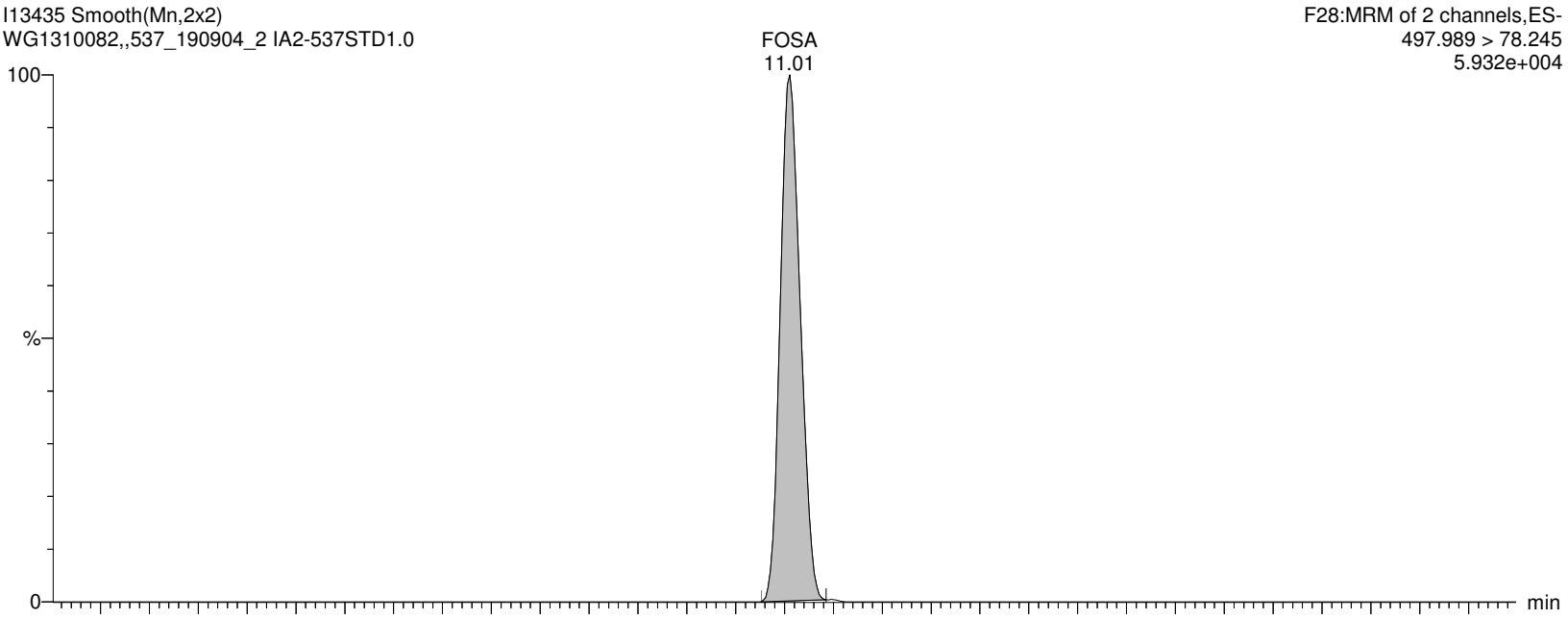
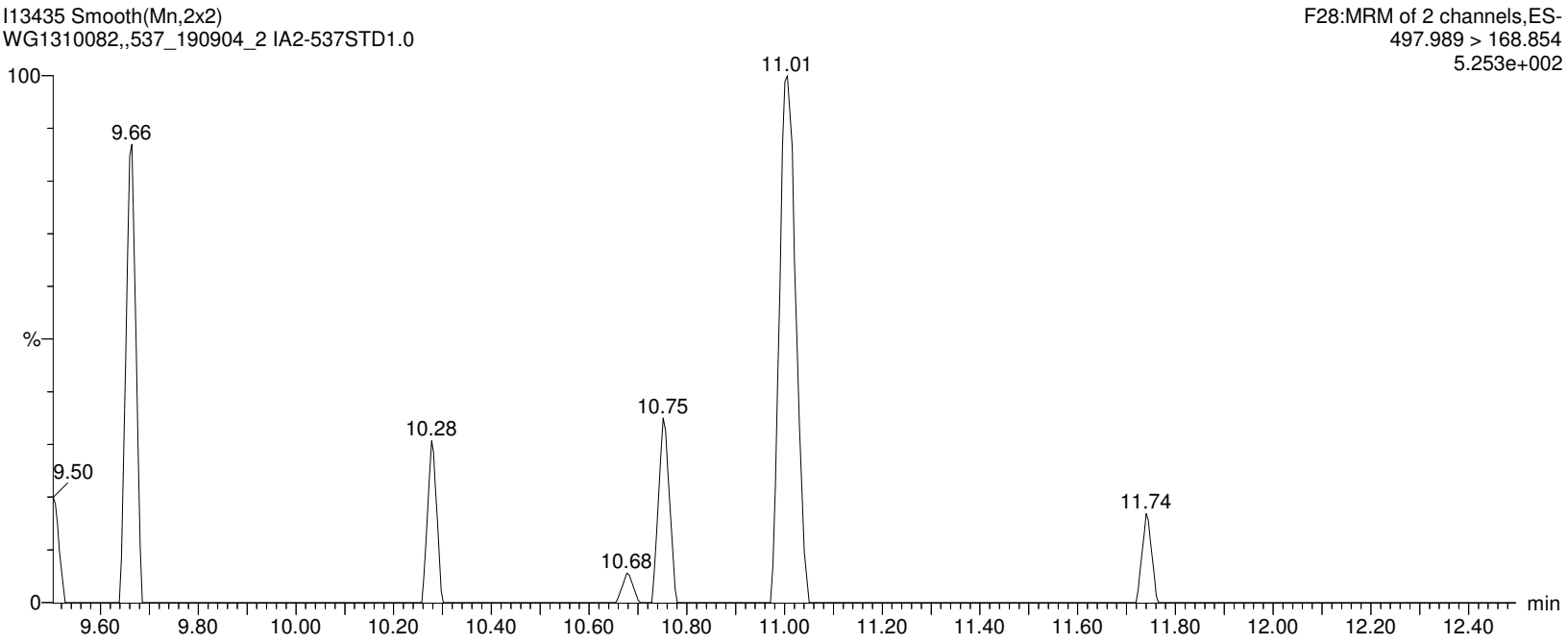
**FOSA**





all concentration units in (ng/mL)

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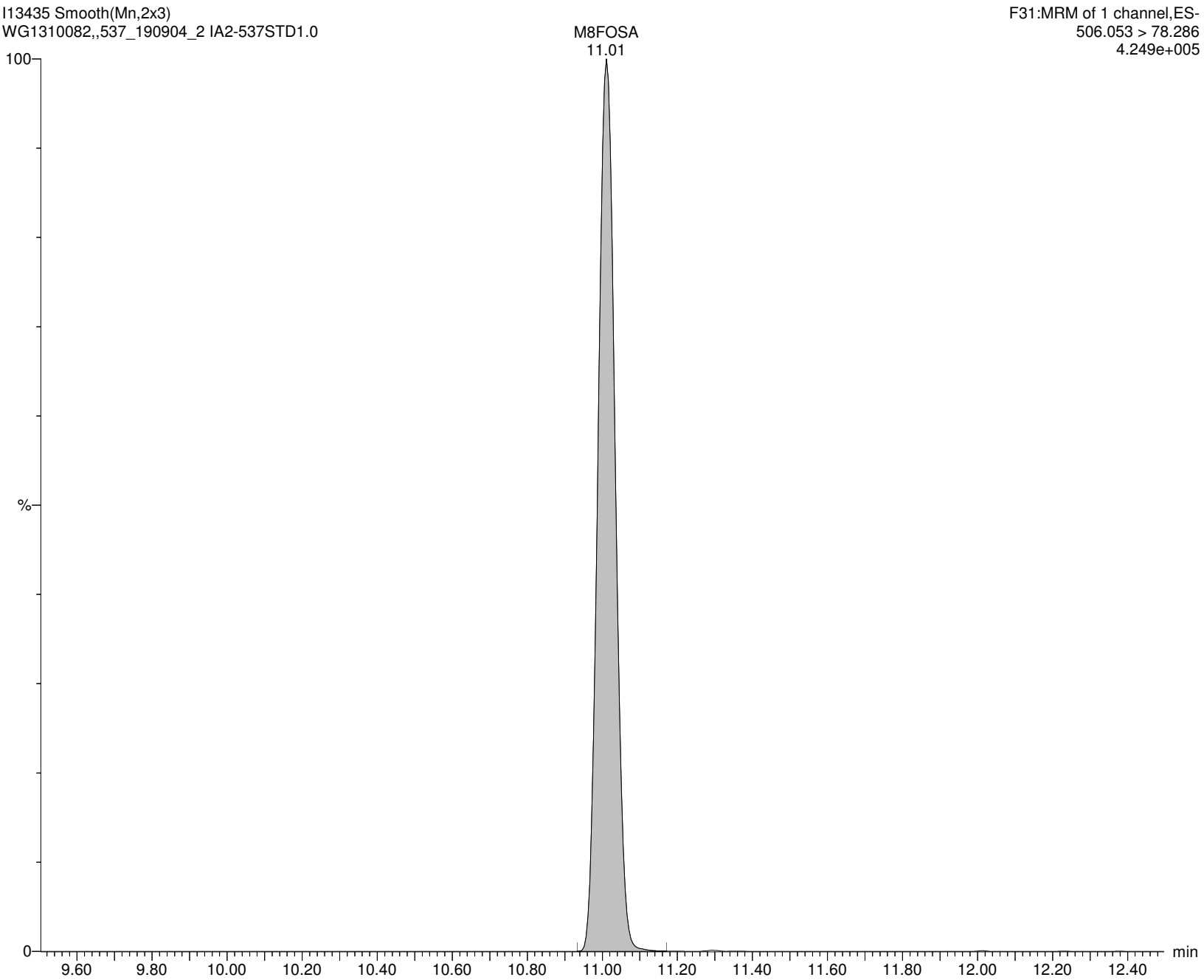



all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
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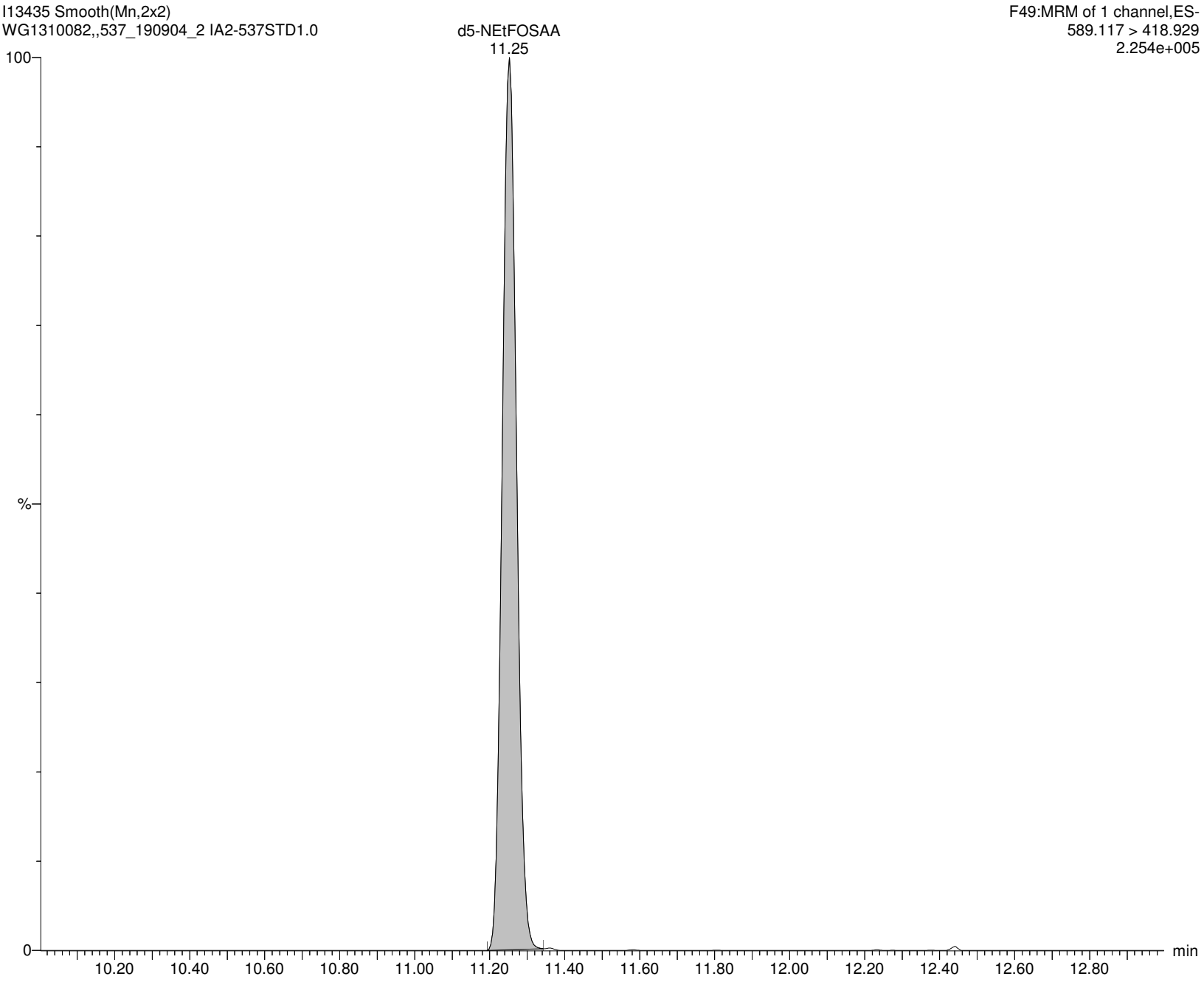



all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
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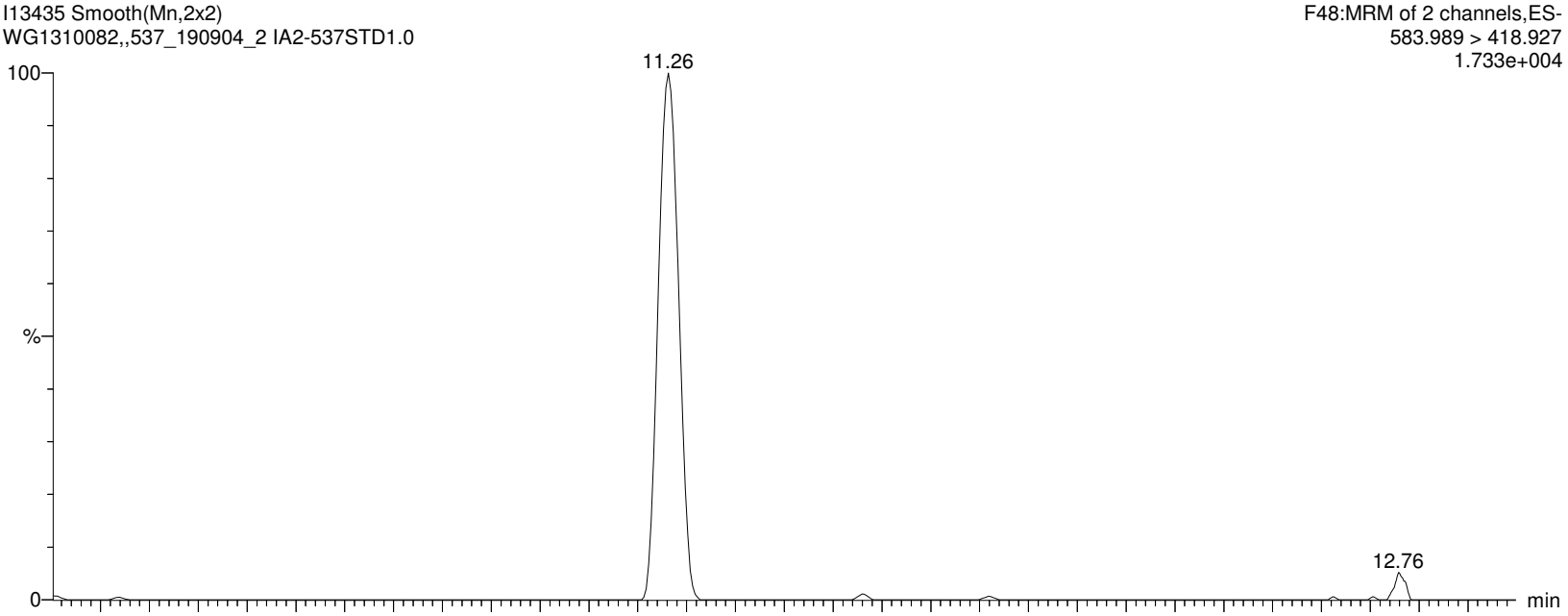


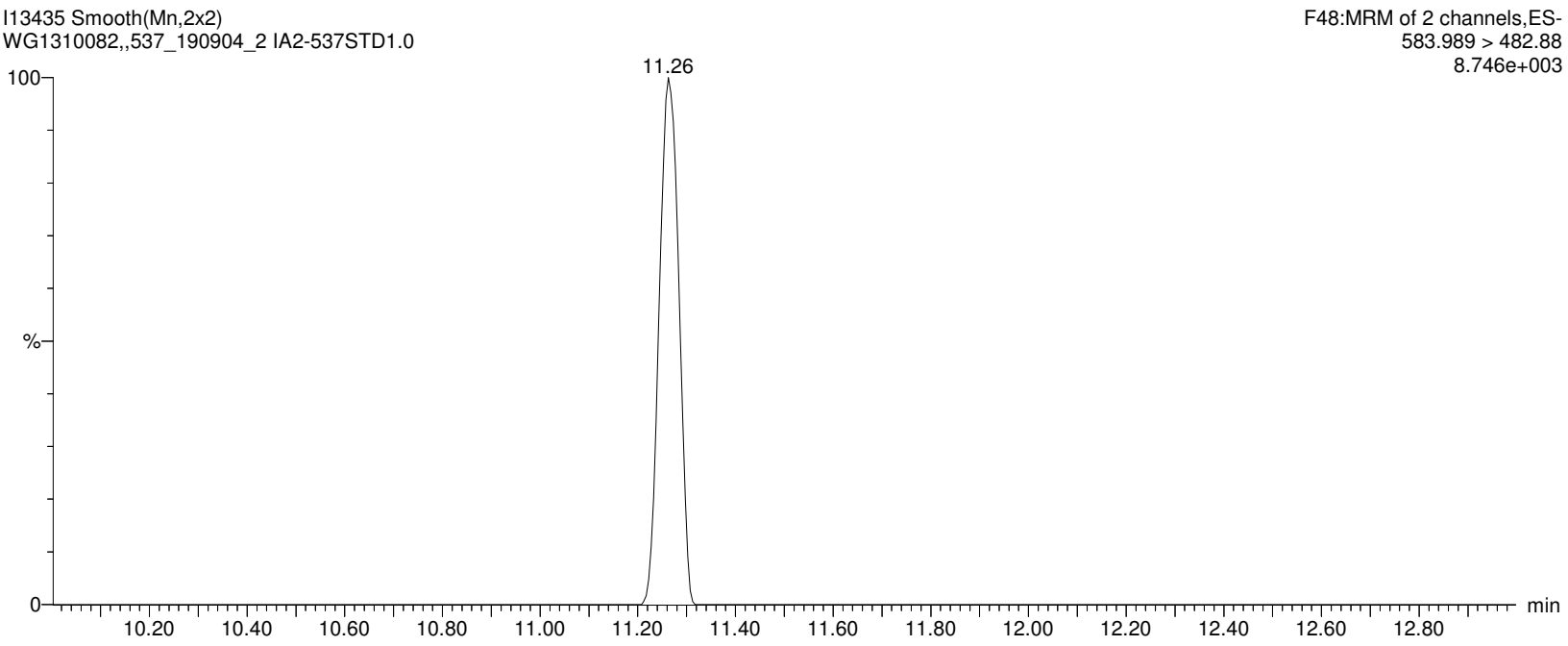



all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
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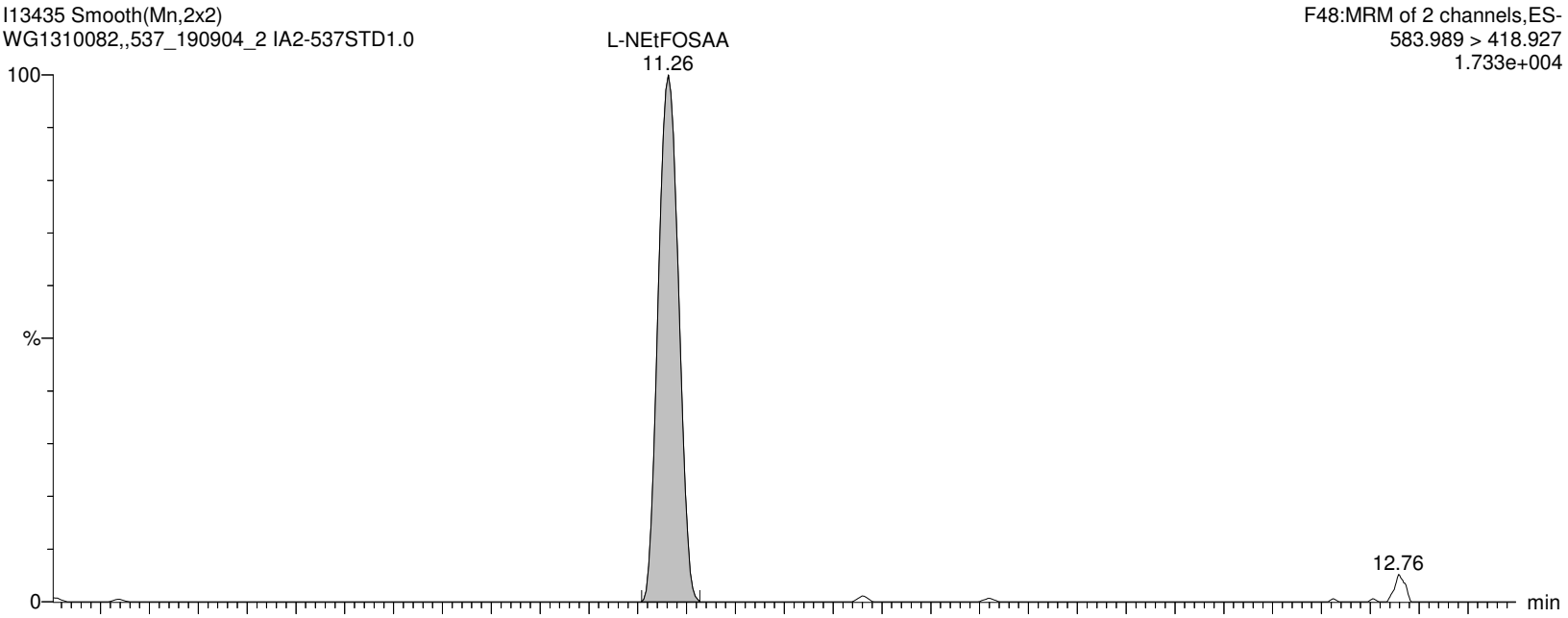
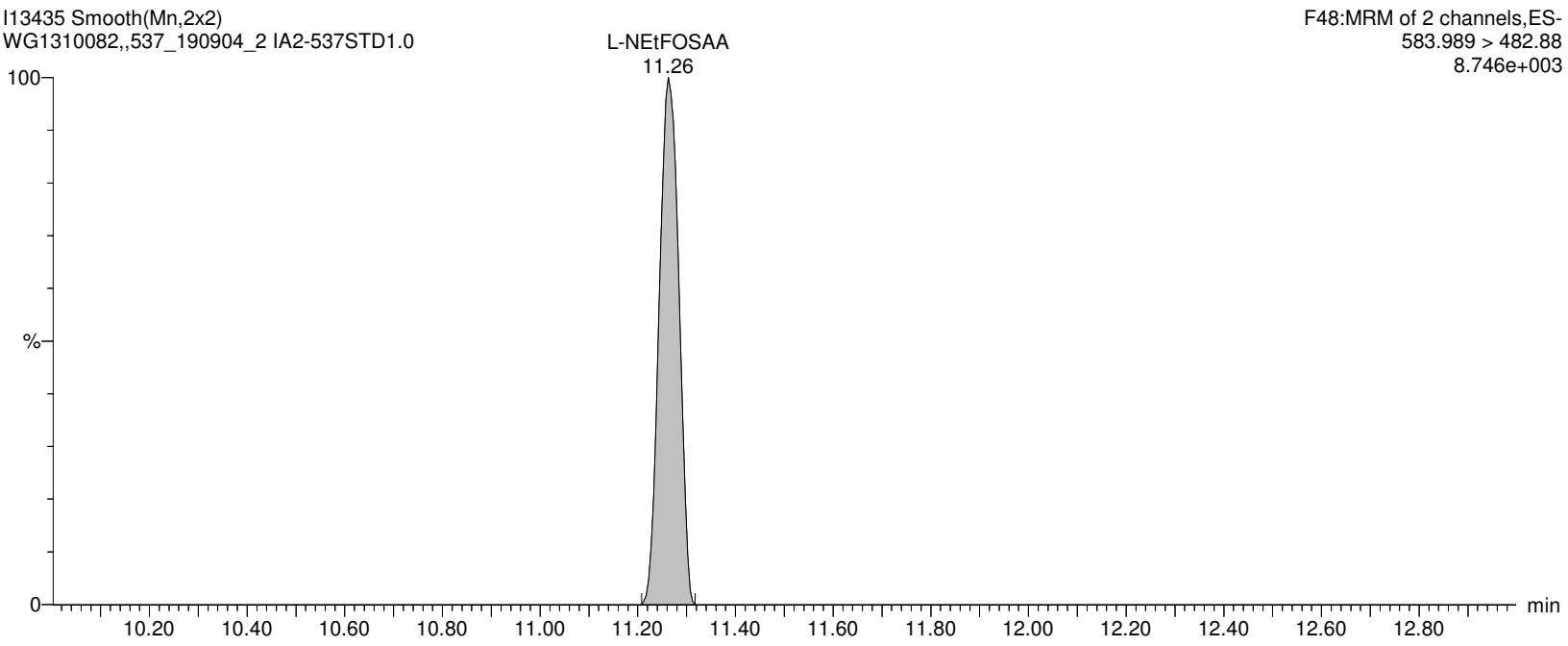
**L-NEtFOSAA**





all concentration units in (ng/mL)

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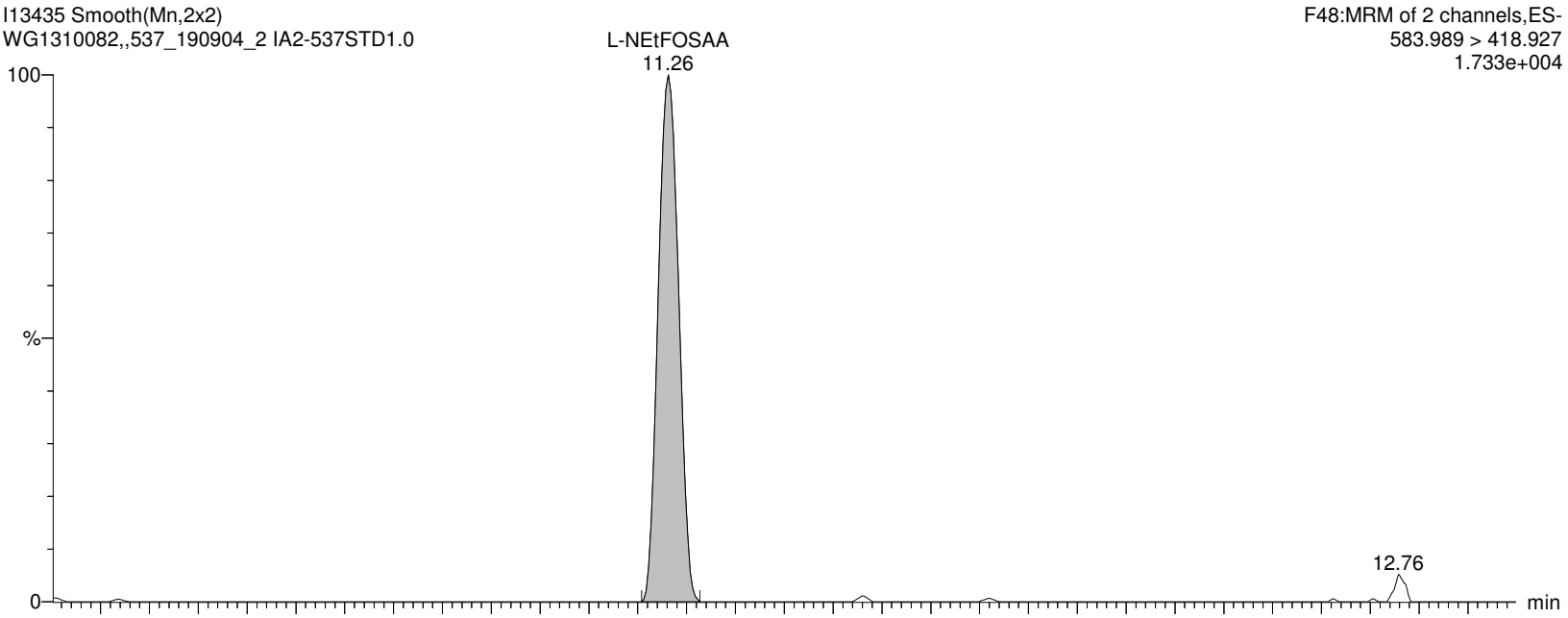


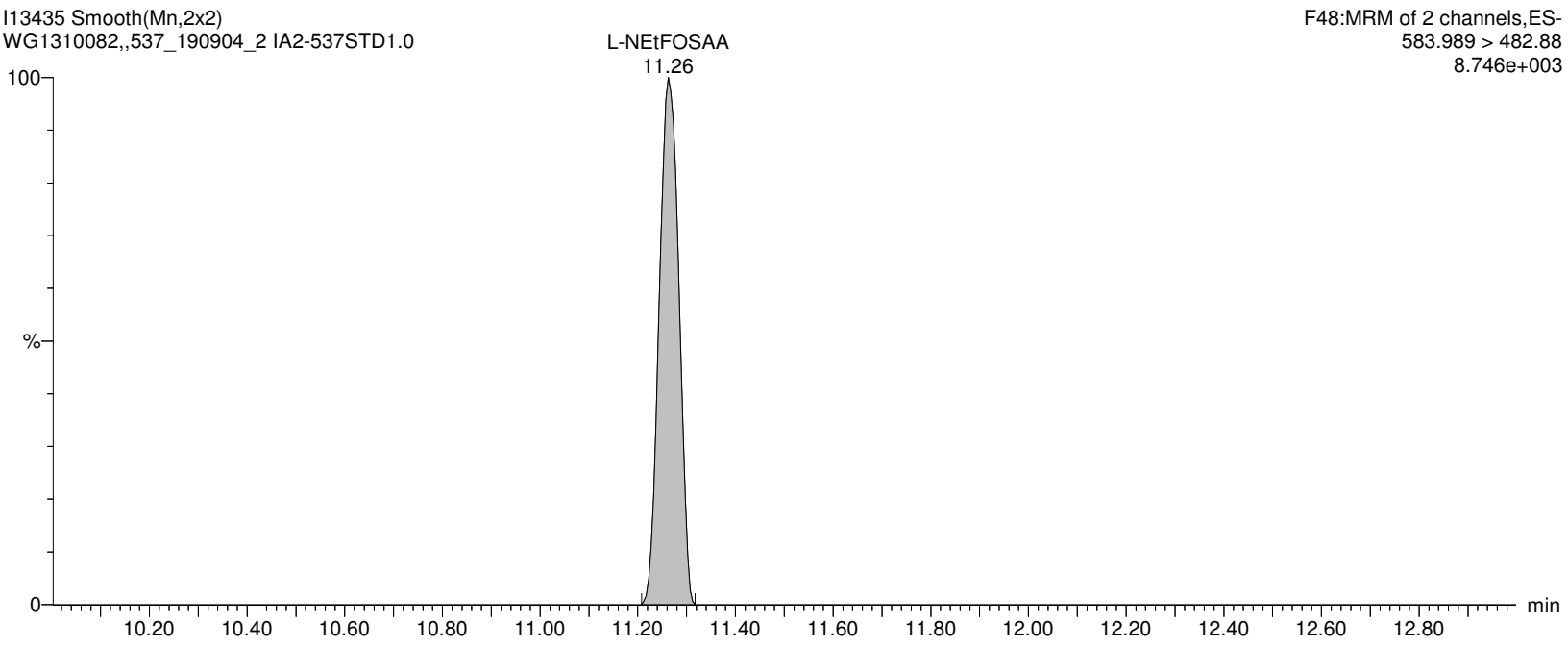



all concentration units in (ng/mL)

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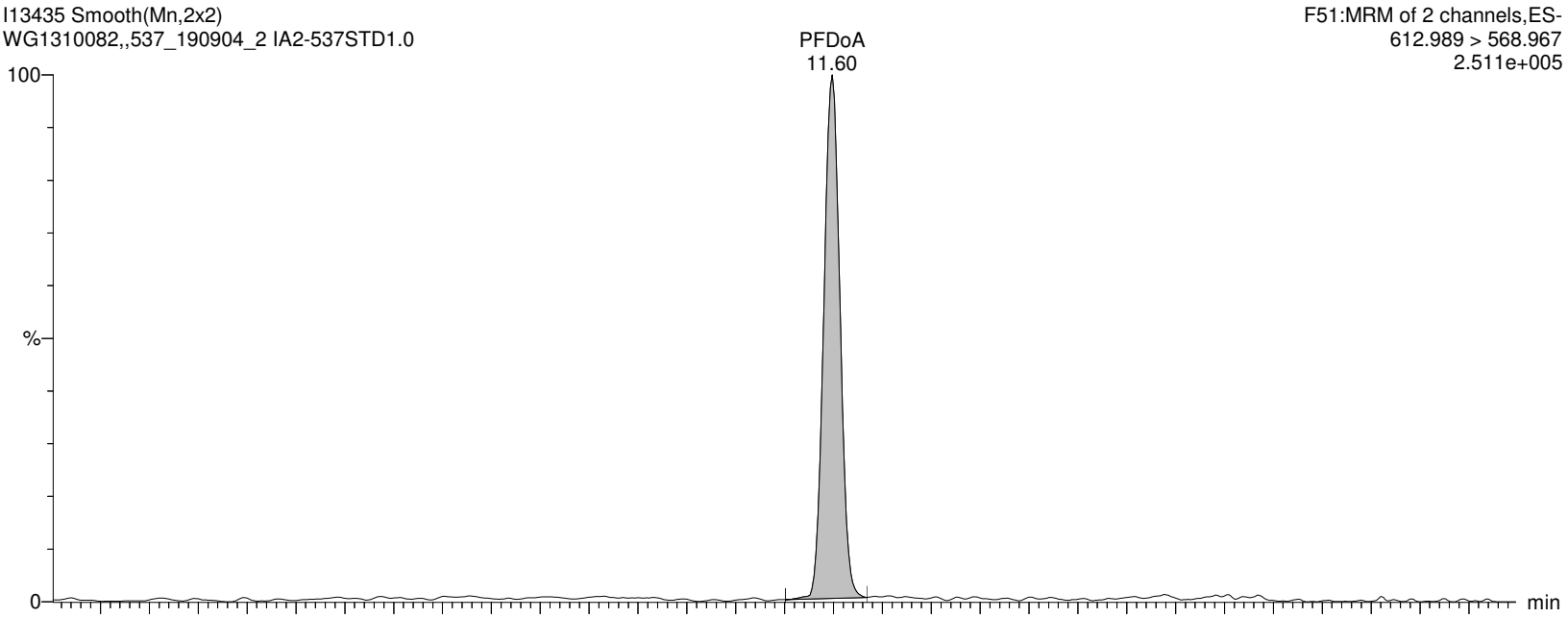


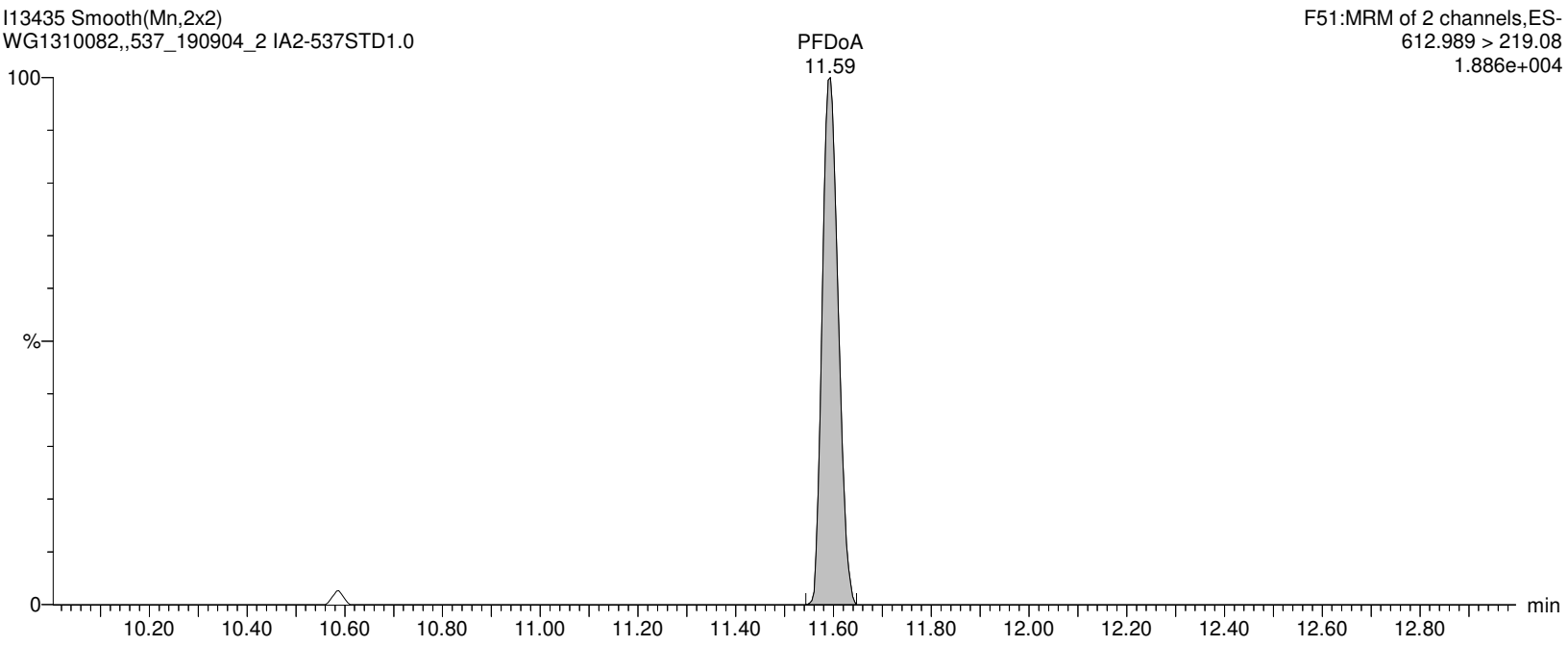



all concentration units in (ng/mL)

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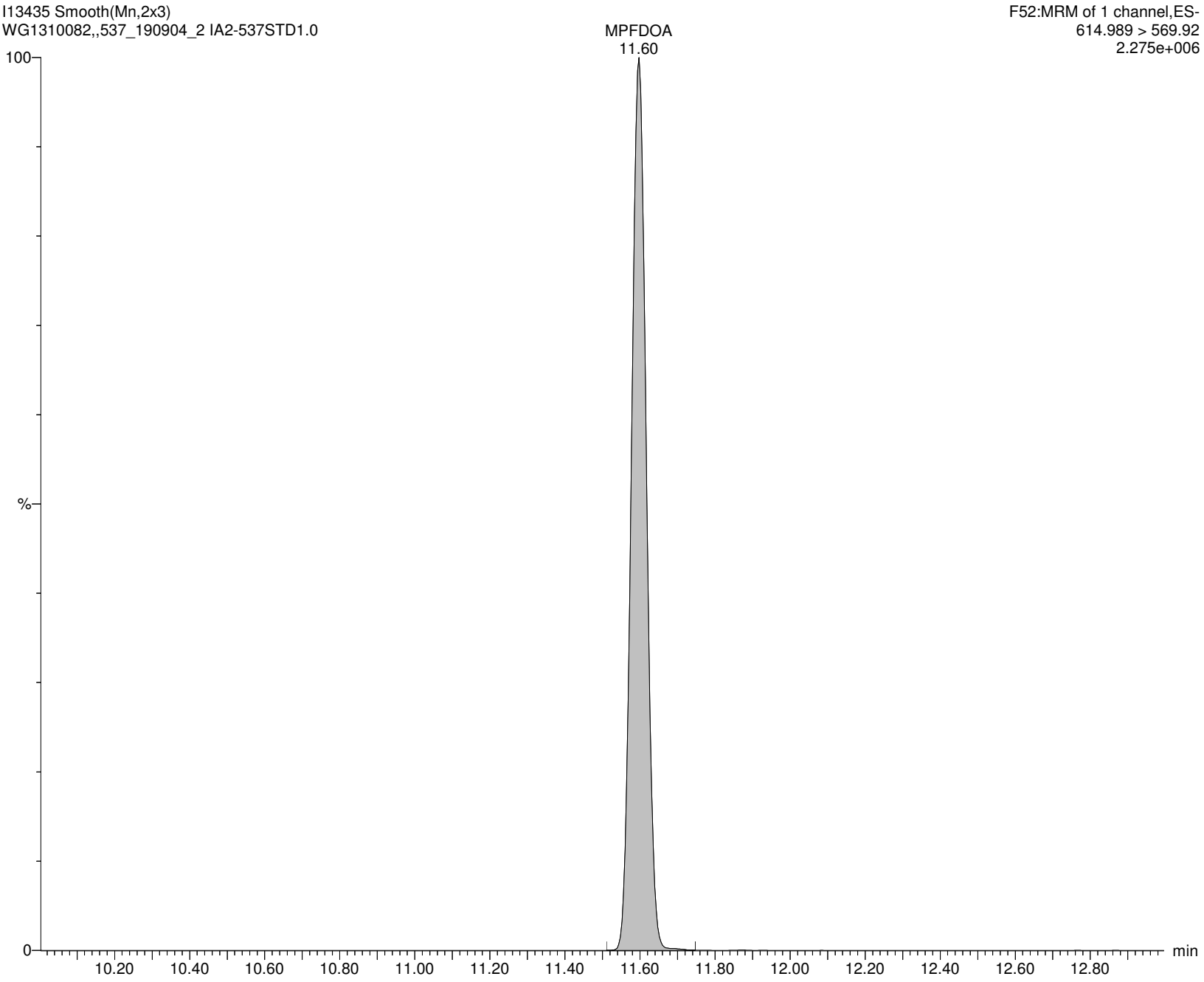



all concentration units in (ng/mL)

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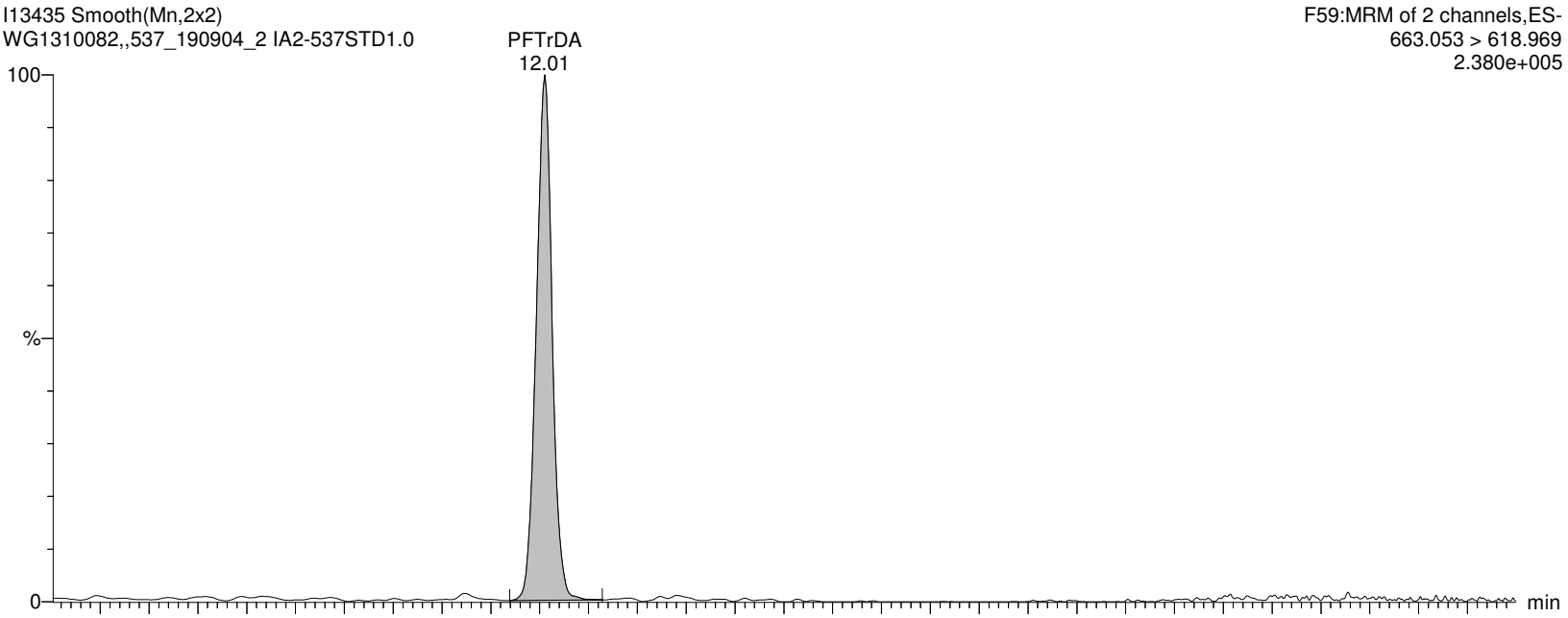


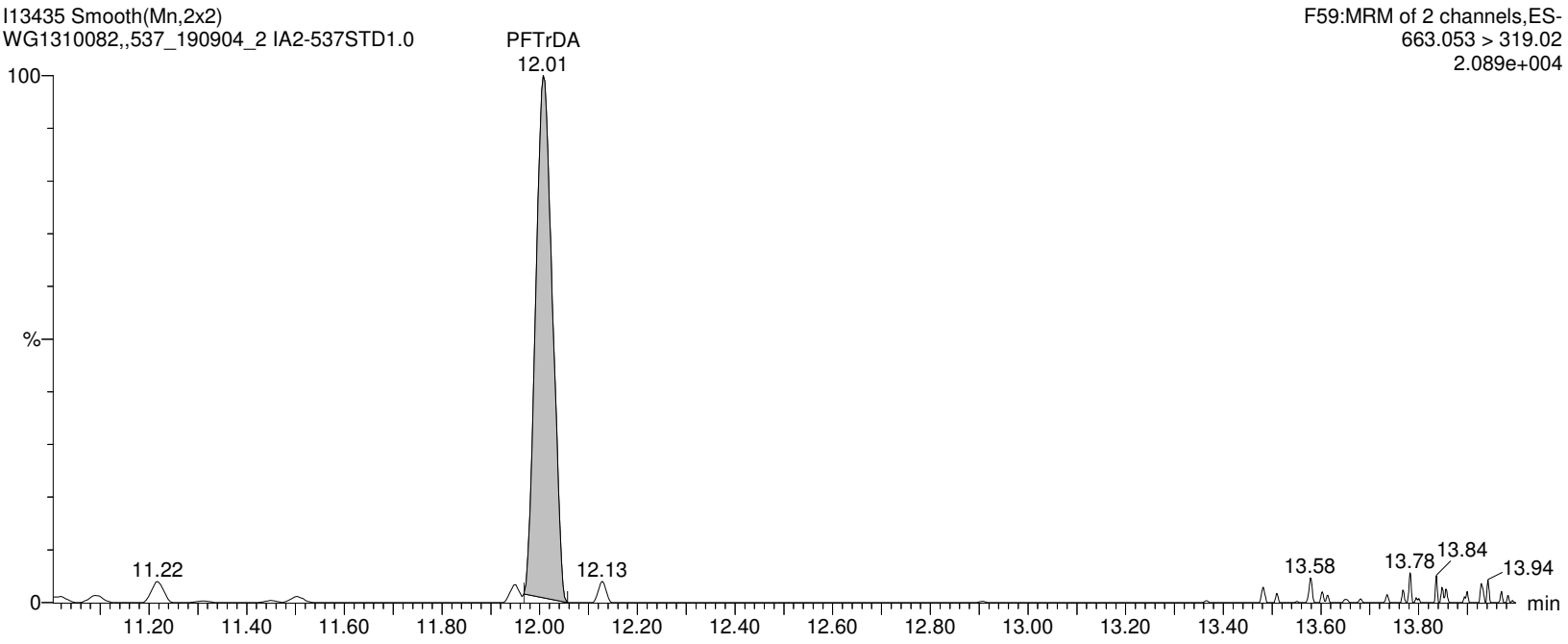



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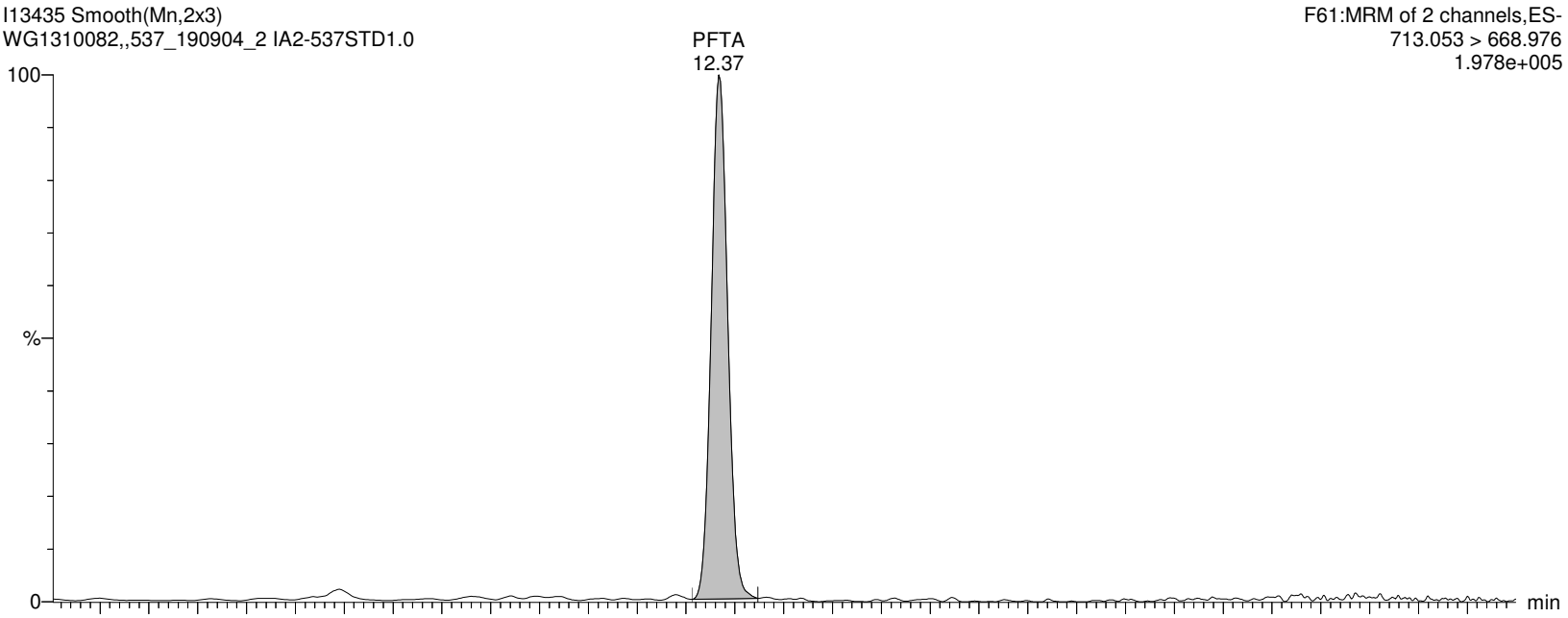


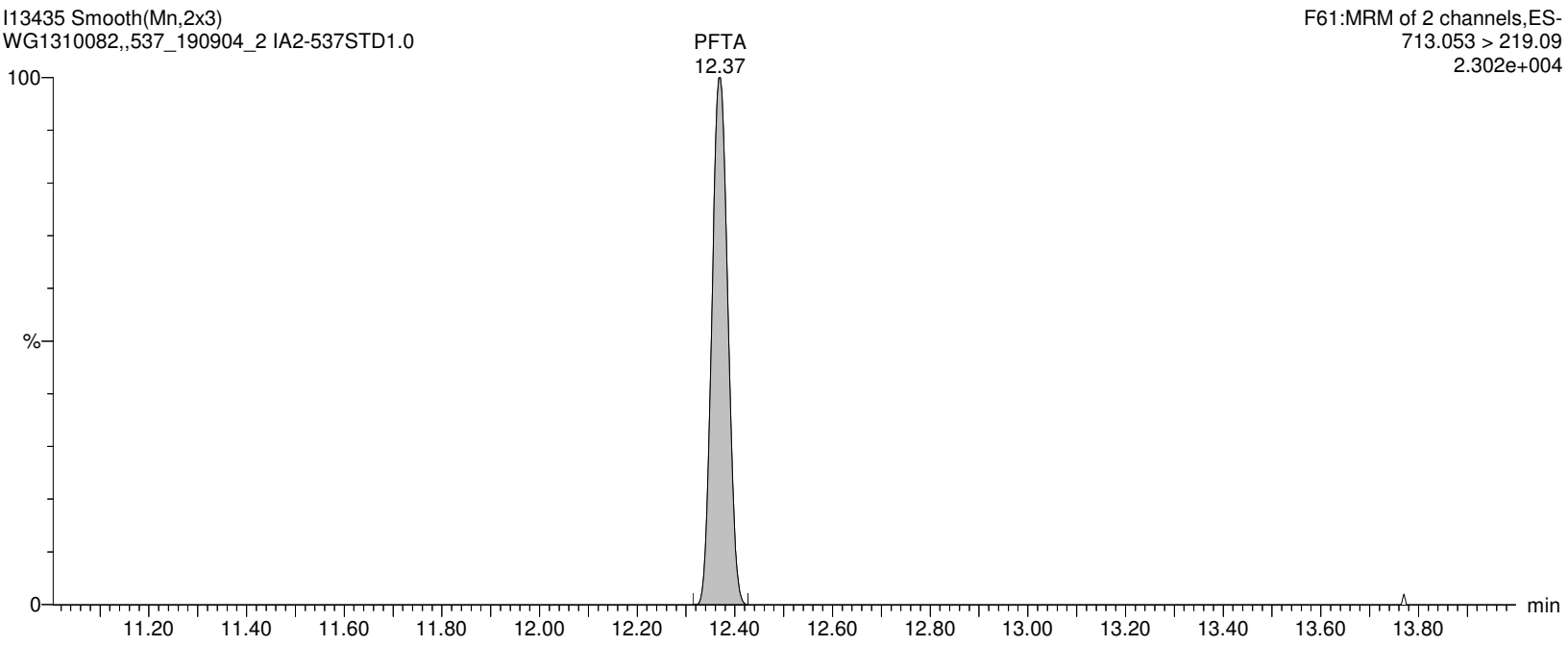



all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
Printed: Monday, November 18, 2019 13:42:51 Eastern Standard Time

**Name: I13435**
**ID: IA2-537STD1.0**
**Date: 18-Nov-2019**
**Time: 10:53:49**
**Description: WG1310082,,537_190904_2**
**User: LCMS02:JW**
**Vial: 1:A,3**
**Instrument: XEVO-TQSmicro#QEB0050**
**Inlet Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\LCMS_537_ISO_B**
**Tune Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\181009_TUNE.IPR**
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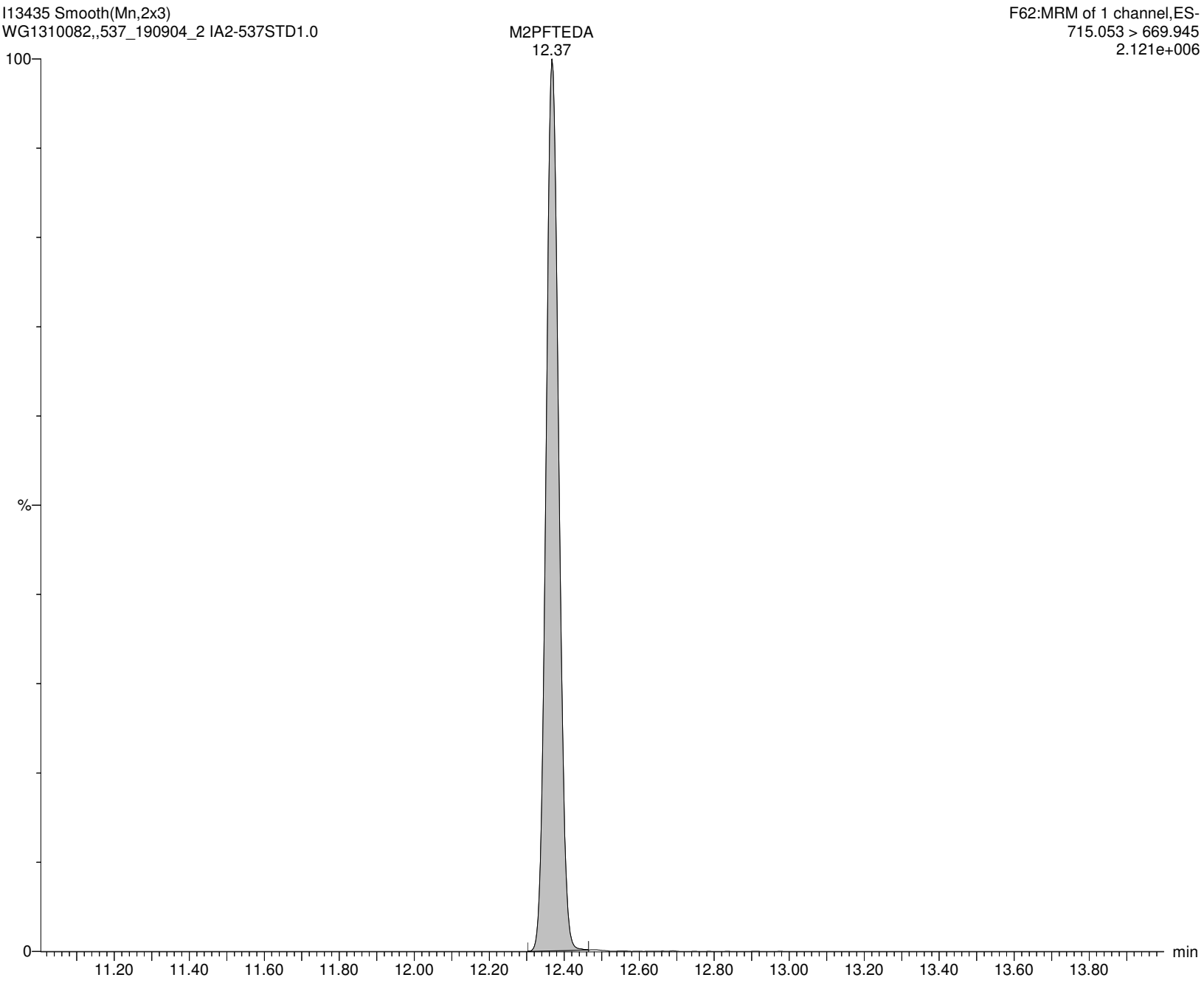



all concentration units in (ng/mL)

Alpha Analytical Inc.
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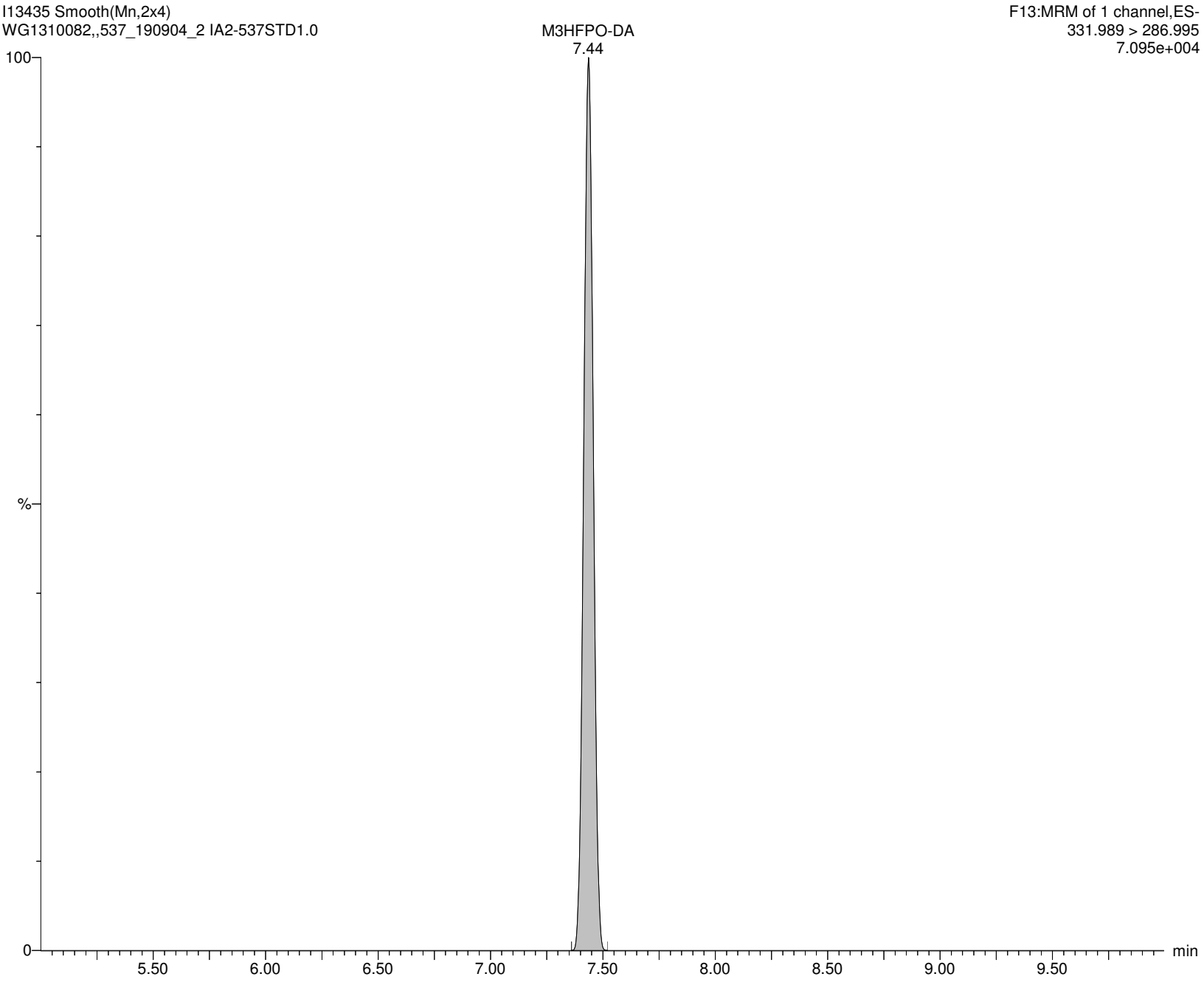



all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
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**Vial: 1:A,3**
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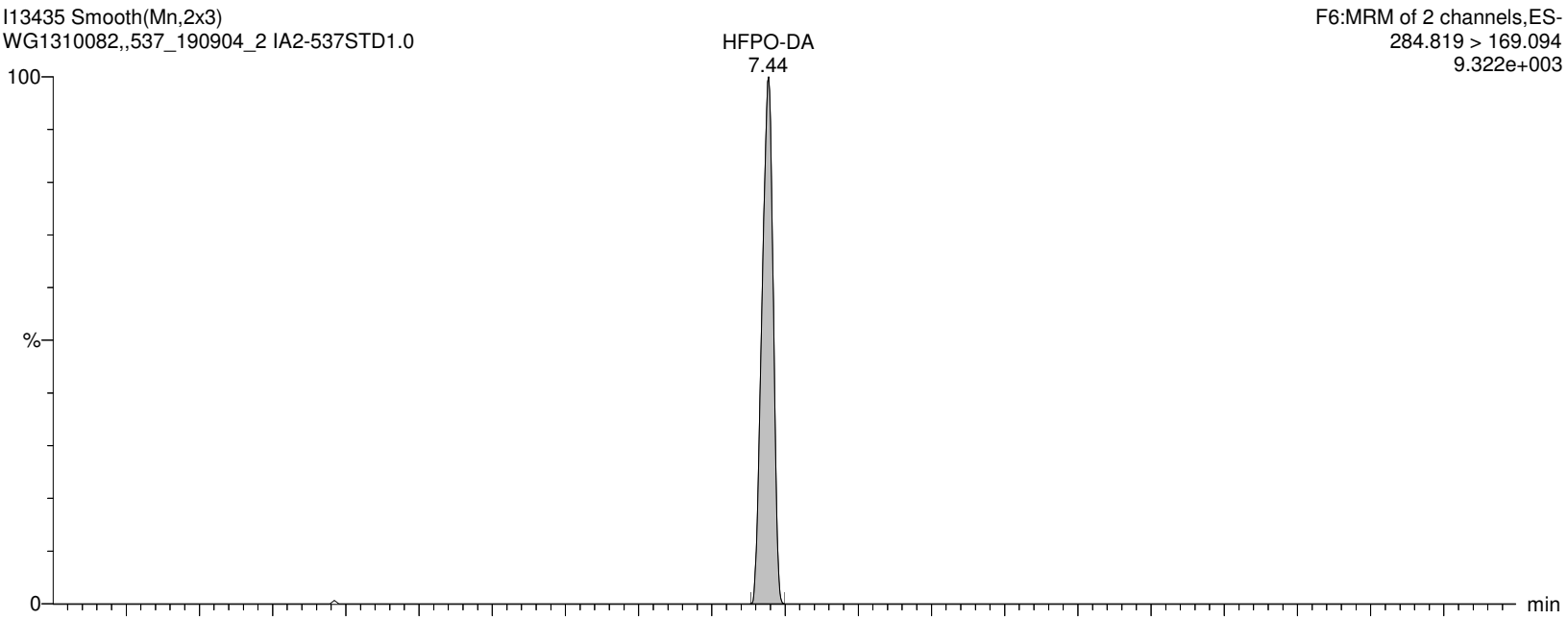


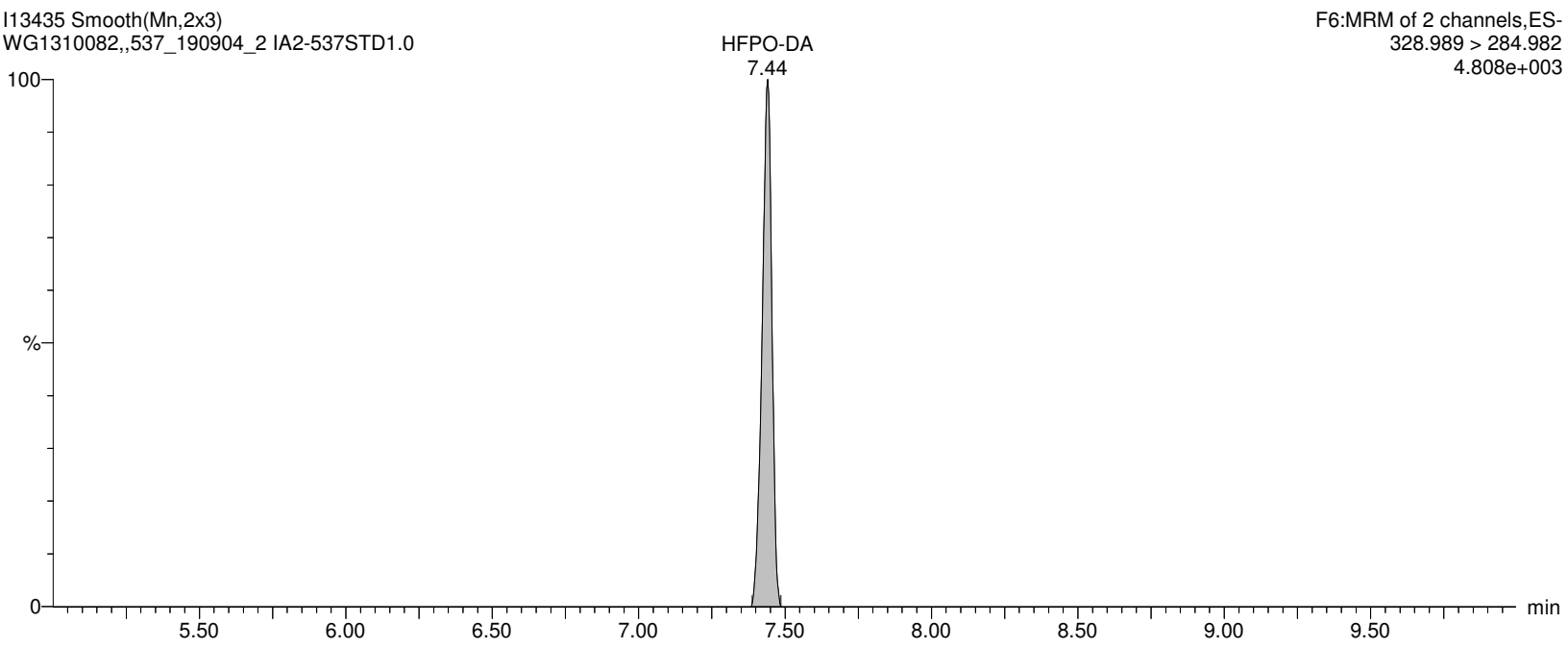



all concentration units in (ng/mL)

Alpha Analytical Inc.
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**Instrument: XEVO-TQSmicro#QEB0050**
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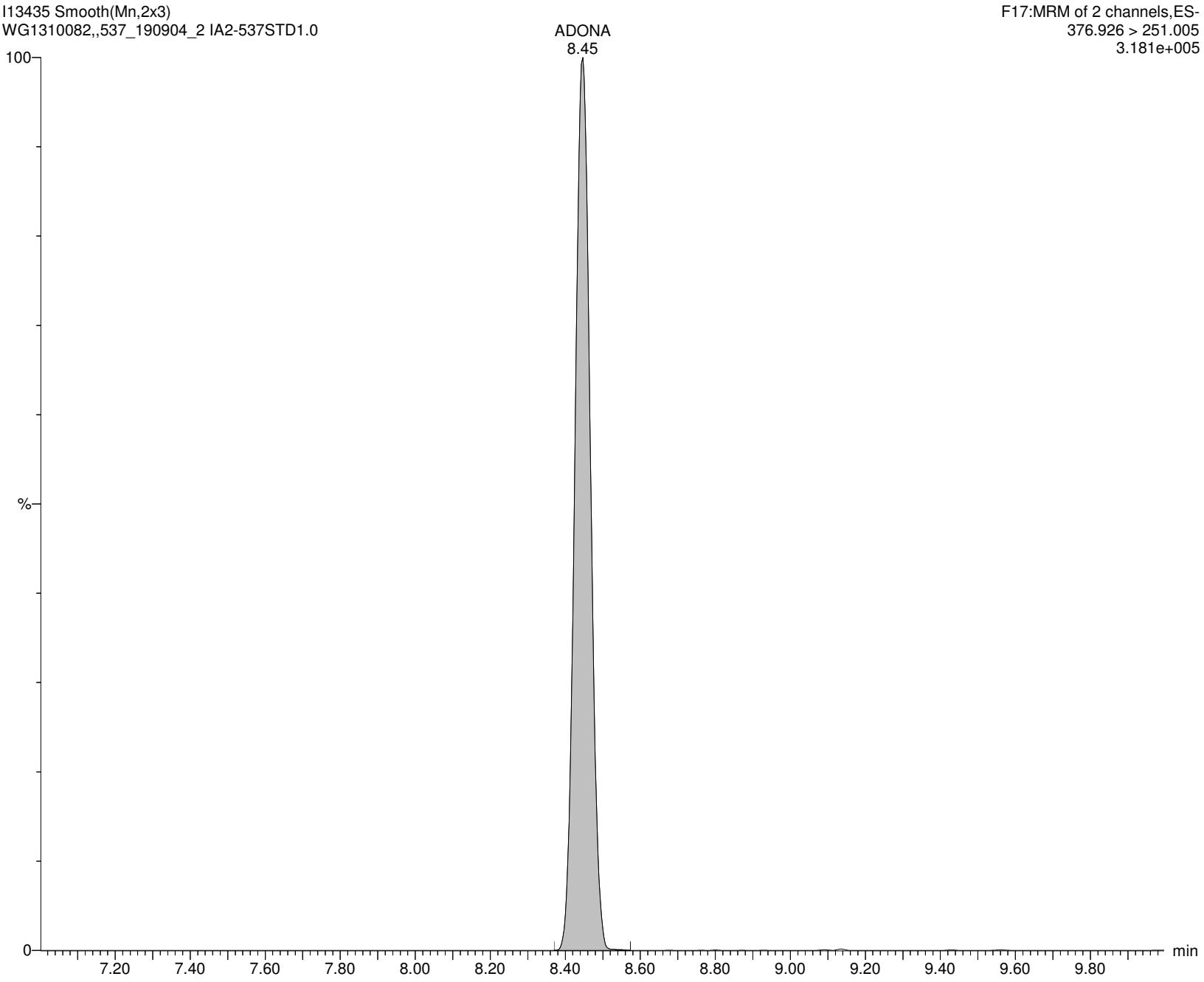
**ADONA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
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**Instrument: XEVO-TQSmicro#QEB0050**
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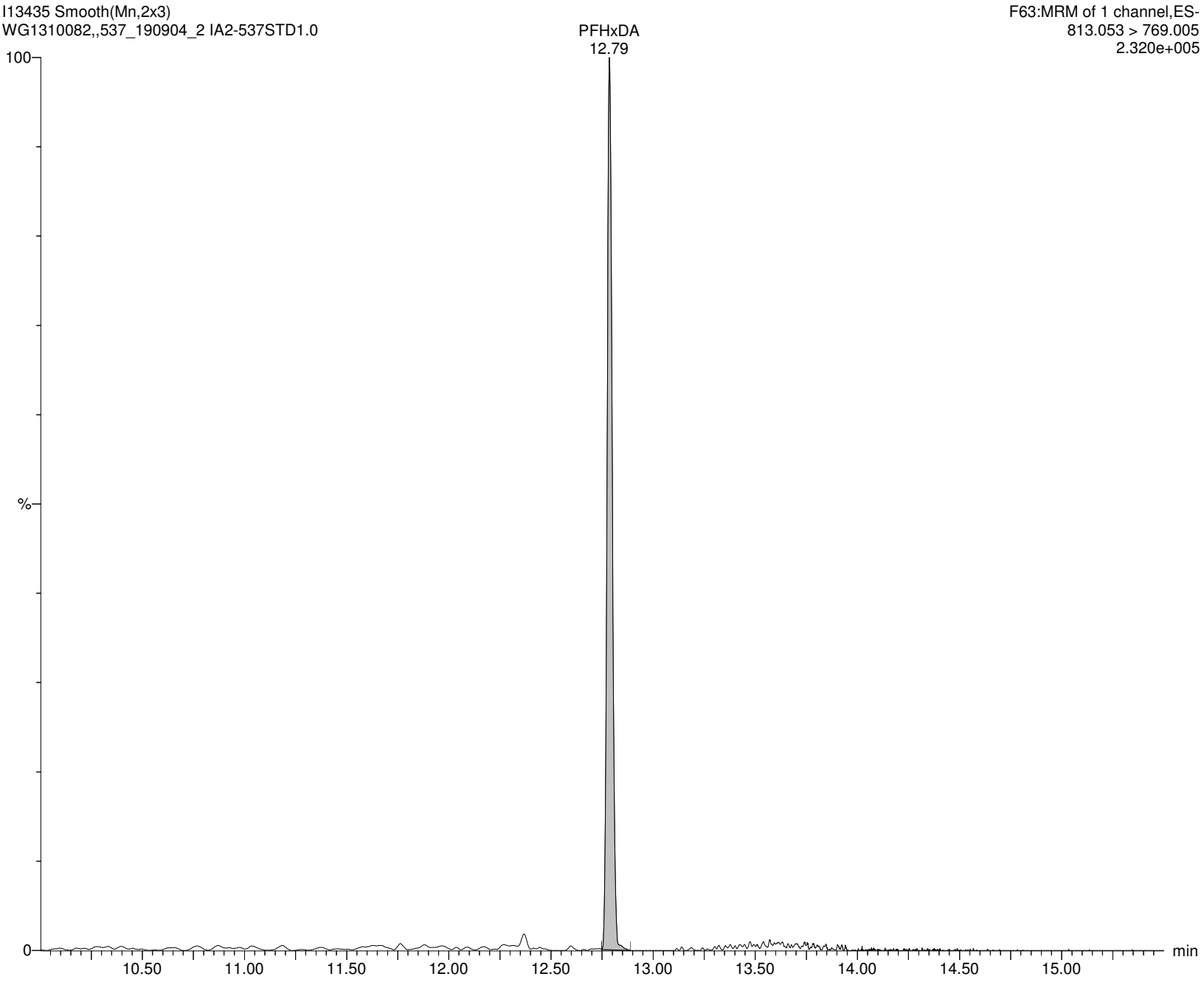
**PFHxDA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
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**User: LCMS02:JW**
**Vial: 1:A,3**
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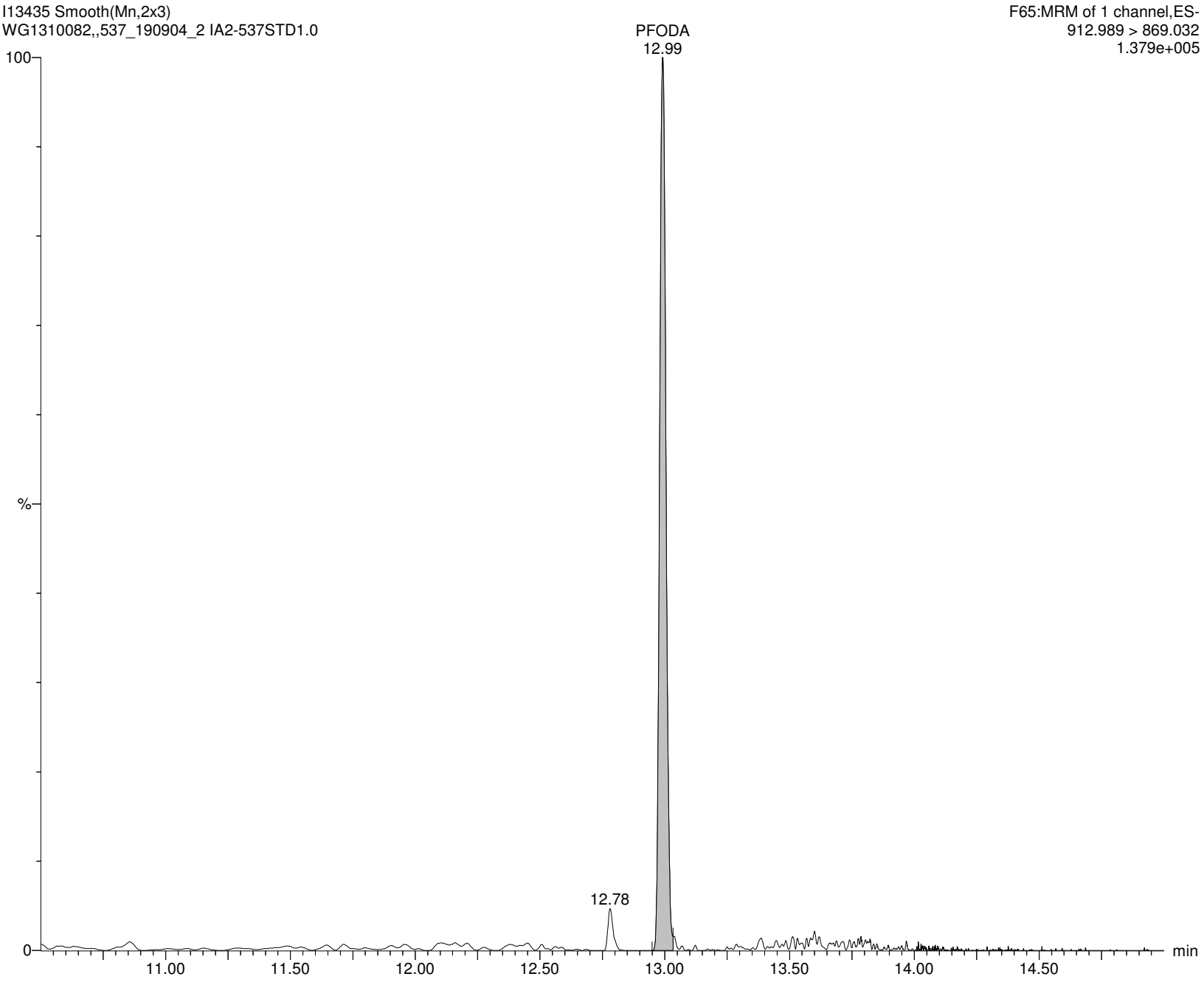
**PFODA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
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**User: LCMS02:JW**
**Vial: 1:A,3**
**Instrument: XEVO-TQSmicro#QEB0050**
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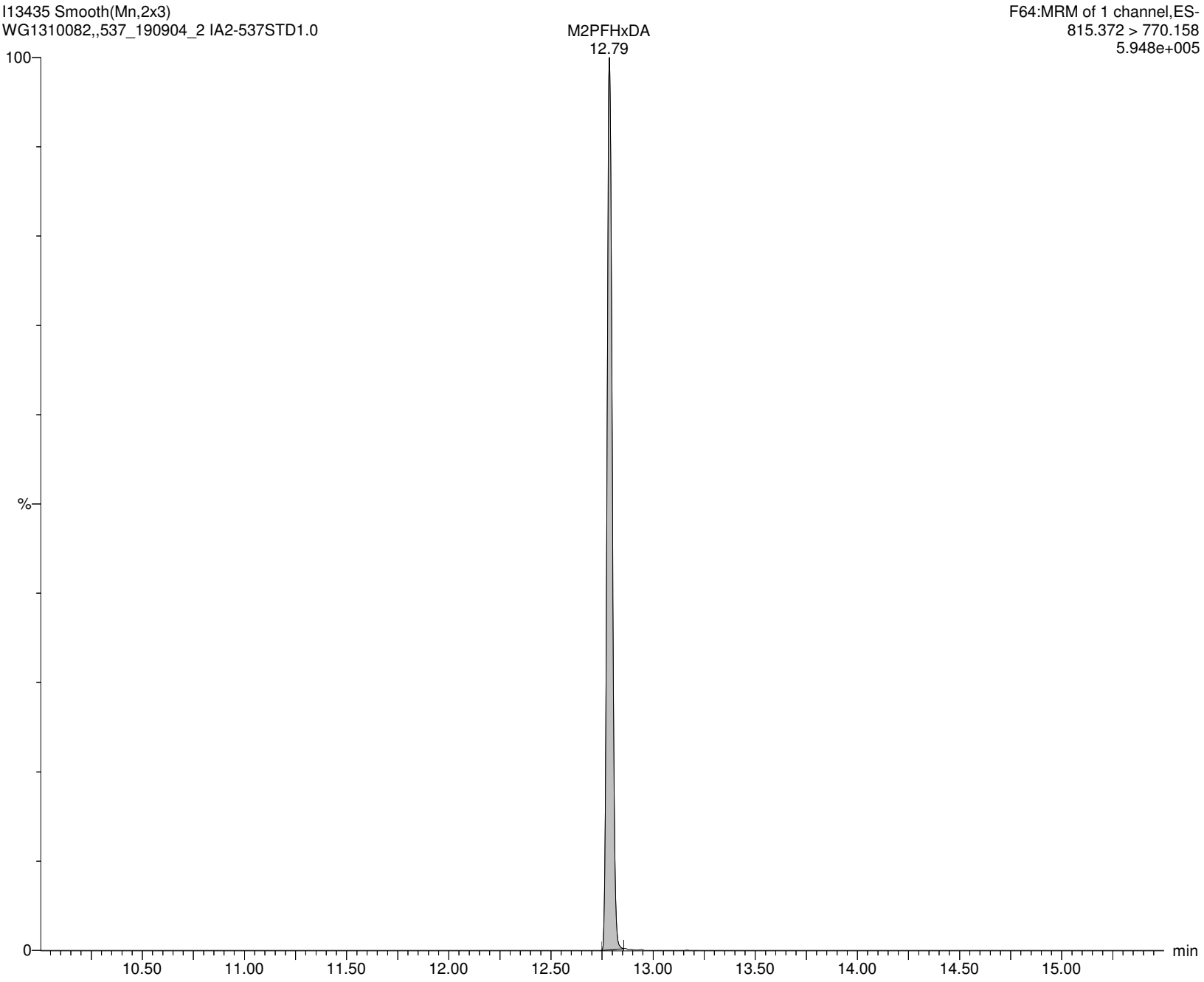
**M2PFHxDA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
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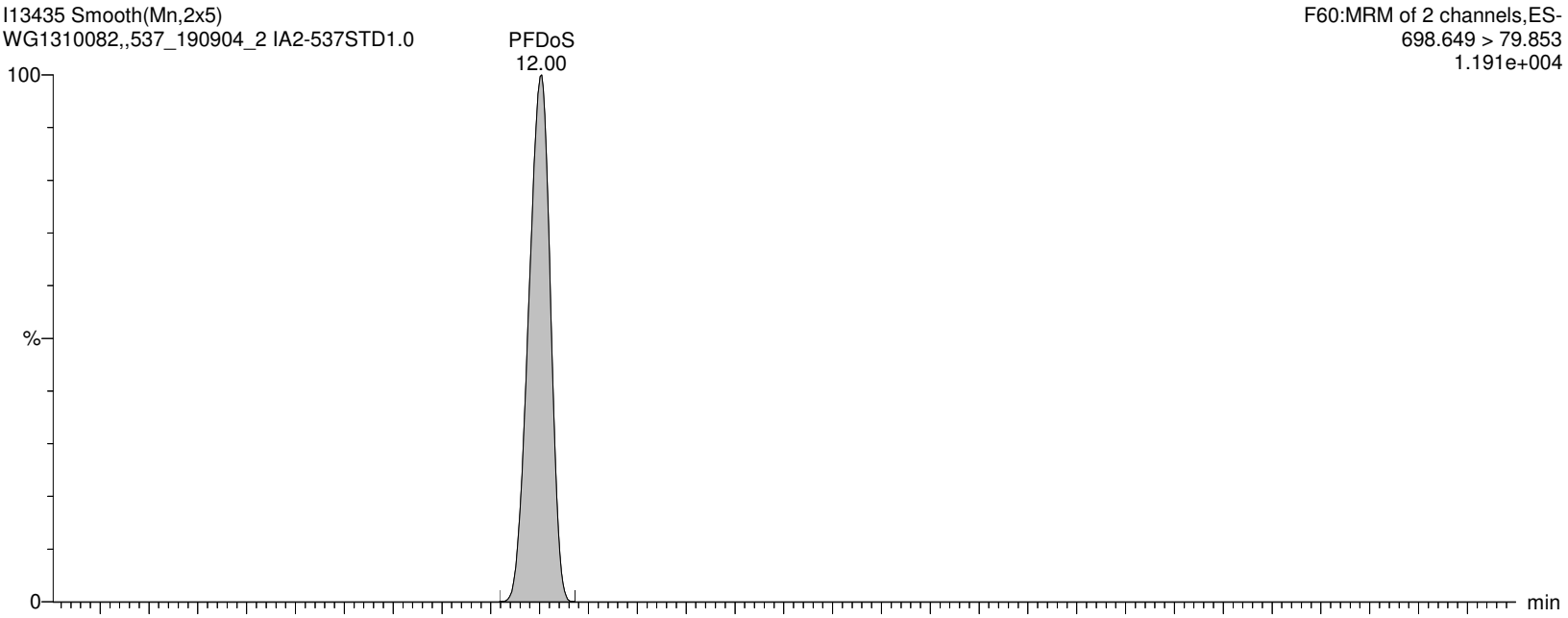
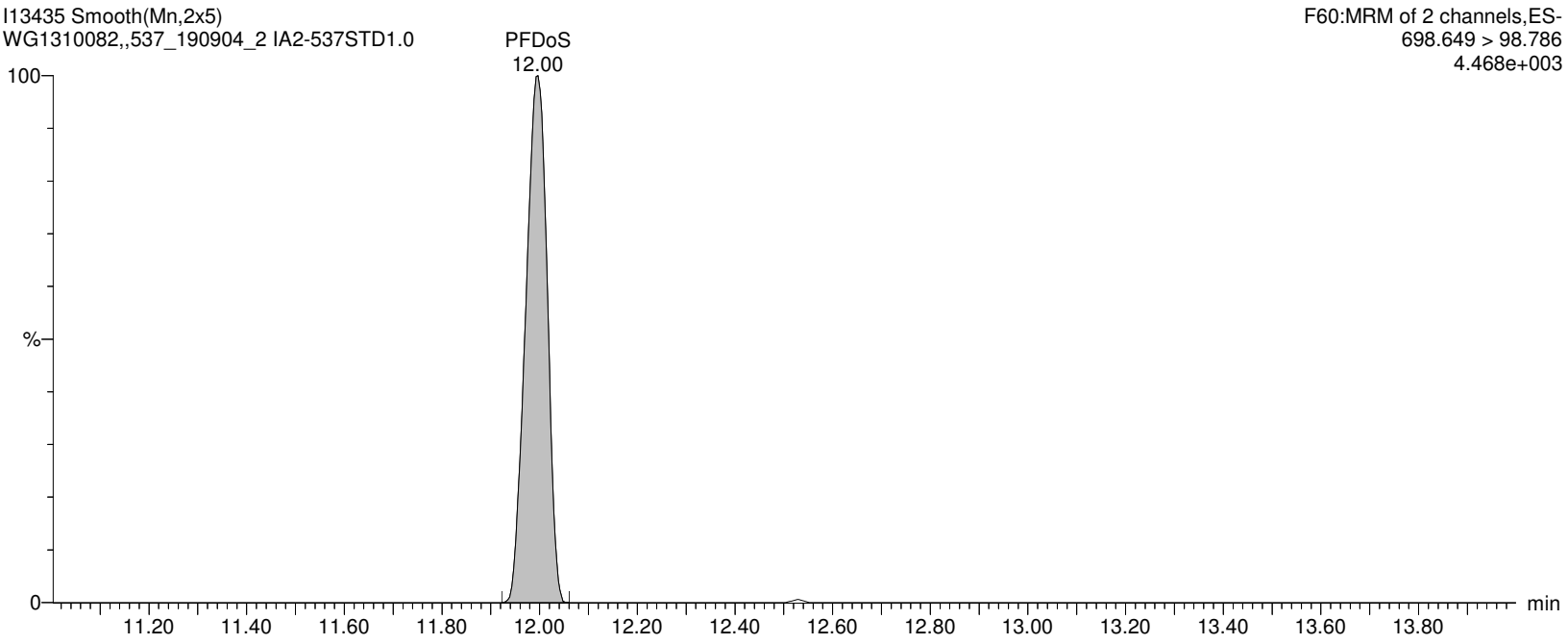
**PFDoS**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
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**Date: 18-Nov-2019**
**Time: 10:53:49**
**Description: WG1310082,,537_190904_2**
**User: LCMS02:JW**
**Vial: 1:A,3**
**Instrument: XEVO-TQSmicro#QEB0050**
**Inlet Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\LCMS_537_ISO_B**
**Tune Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\181009_TUNE.IPR**
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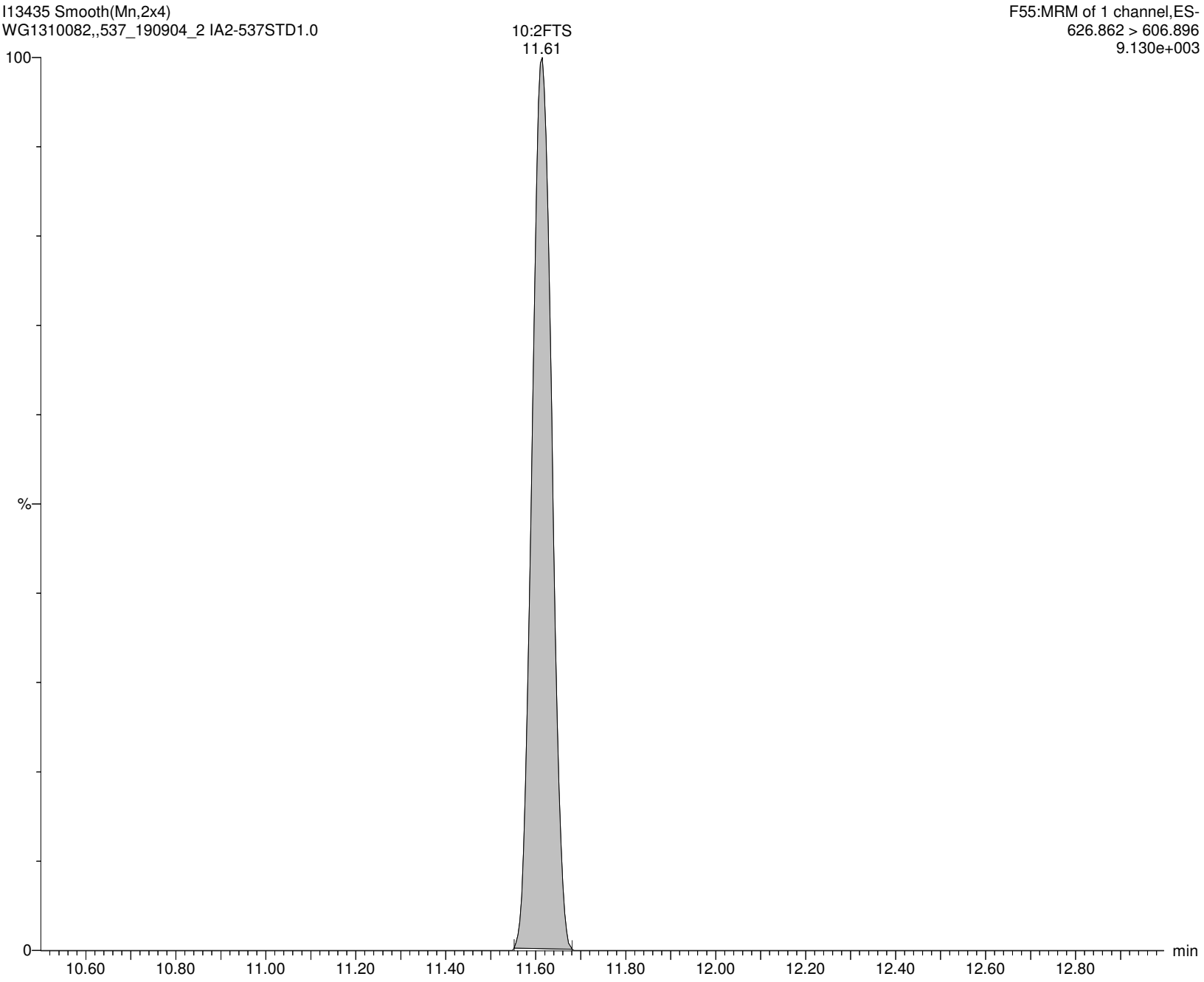
**10:2FTS**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
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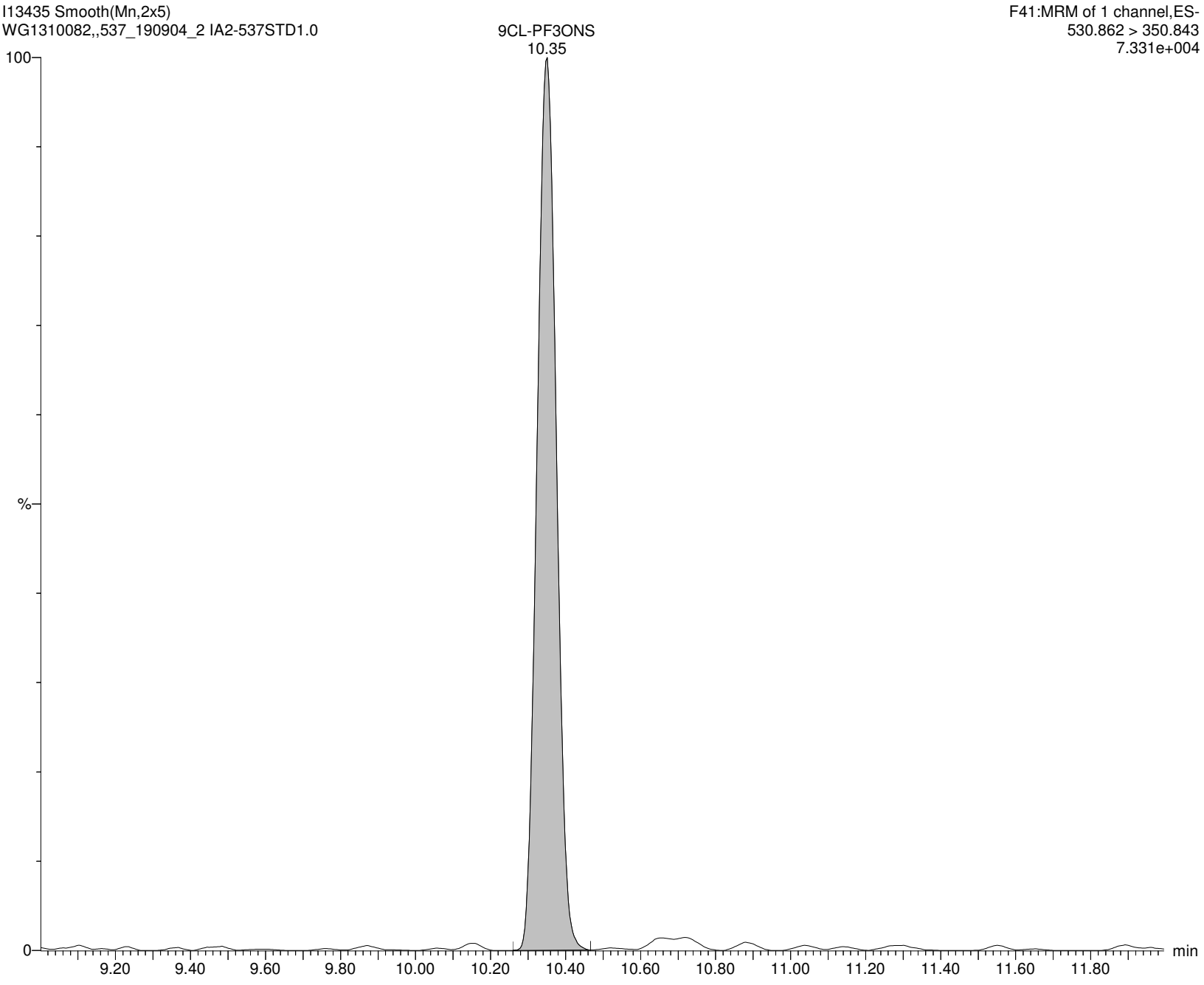
**9CL-PF3ONS**





all concentration units in (ng/mL)

Alpha Analytical Inc.
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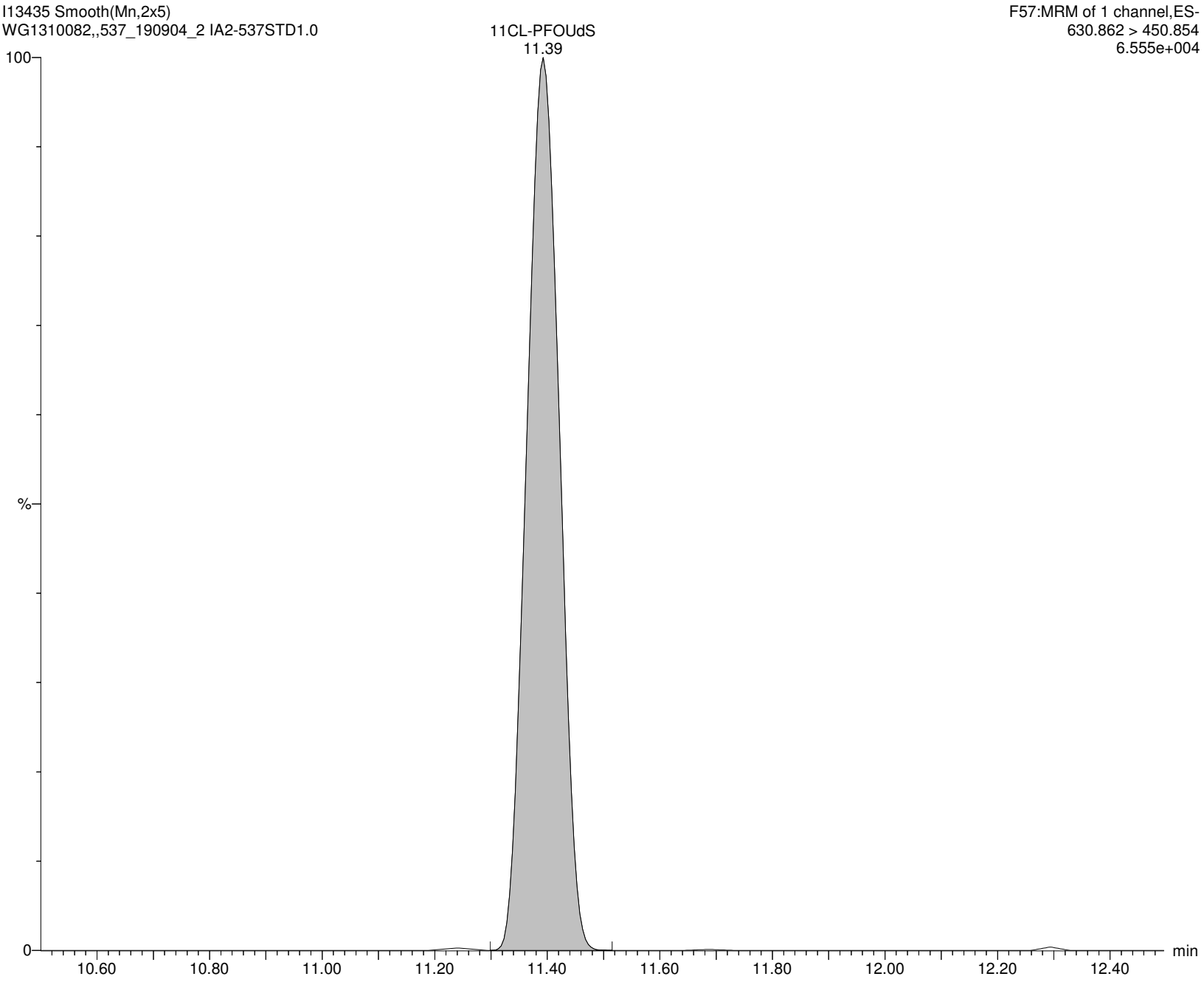
**11CL-PFOUdS**





all concentration units in (ng/mL)

Alpha Analytical Inc.
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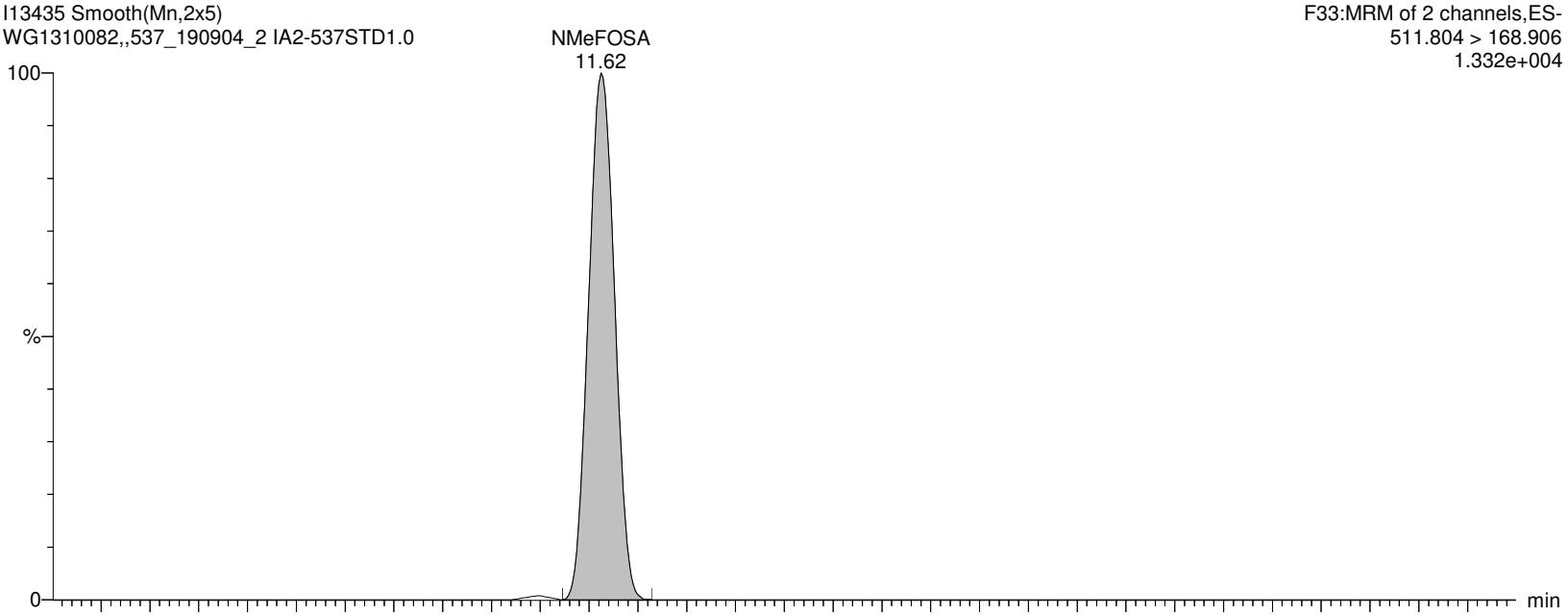
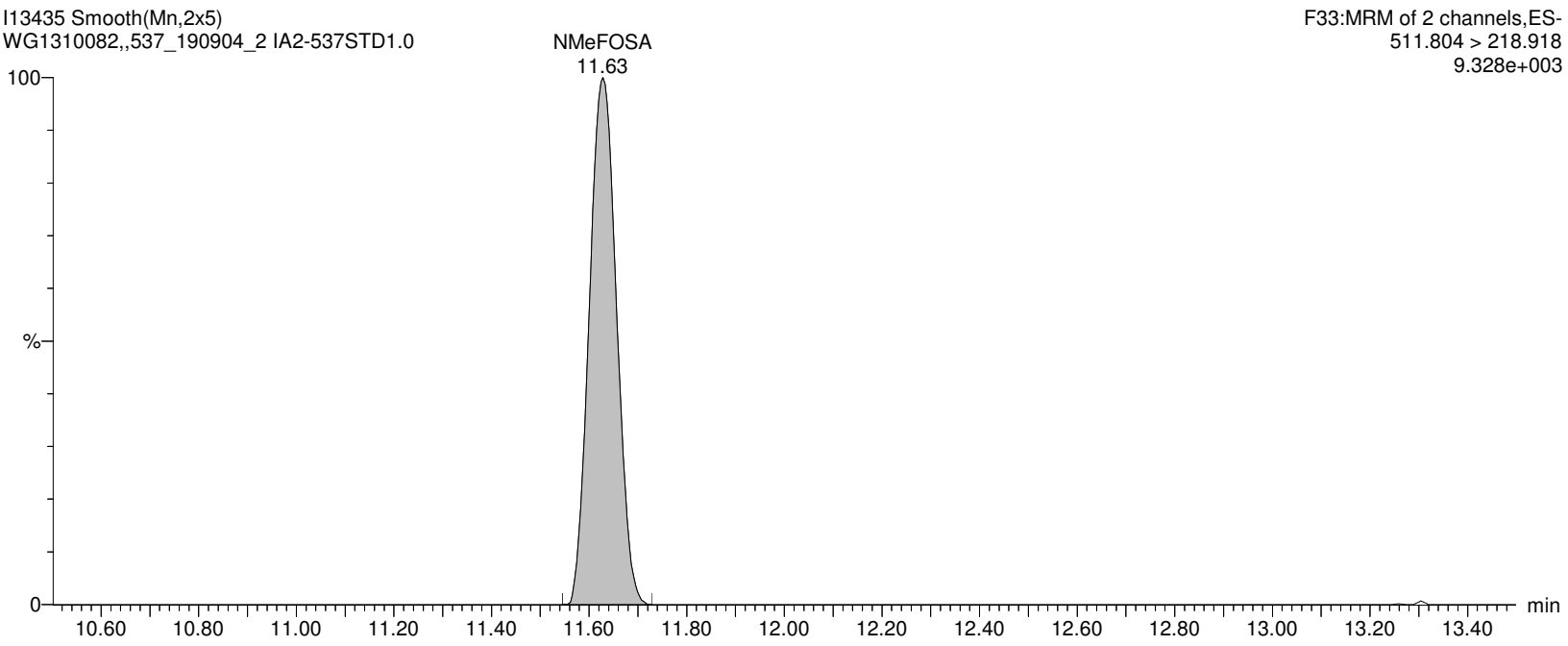
**NMeFOSA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
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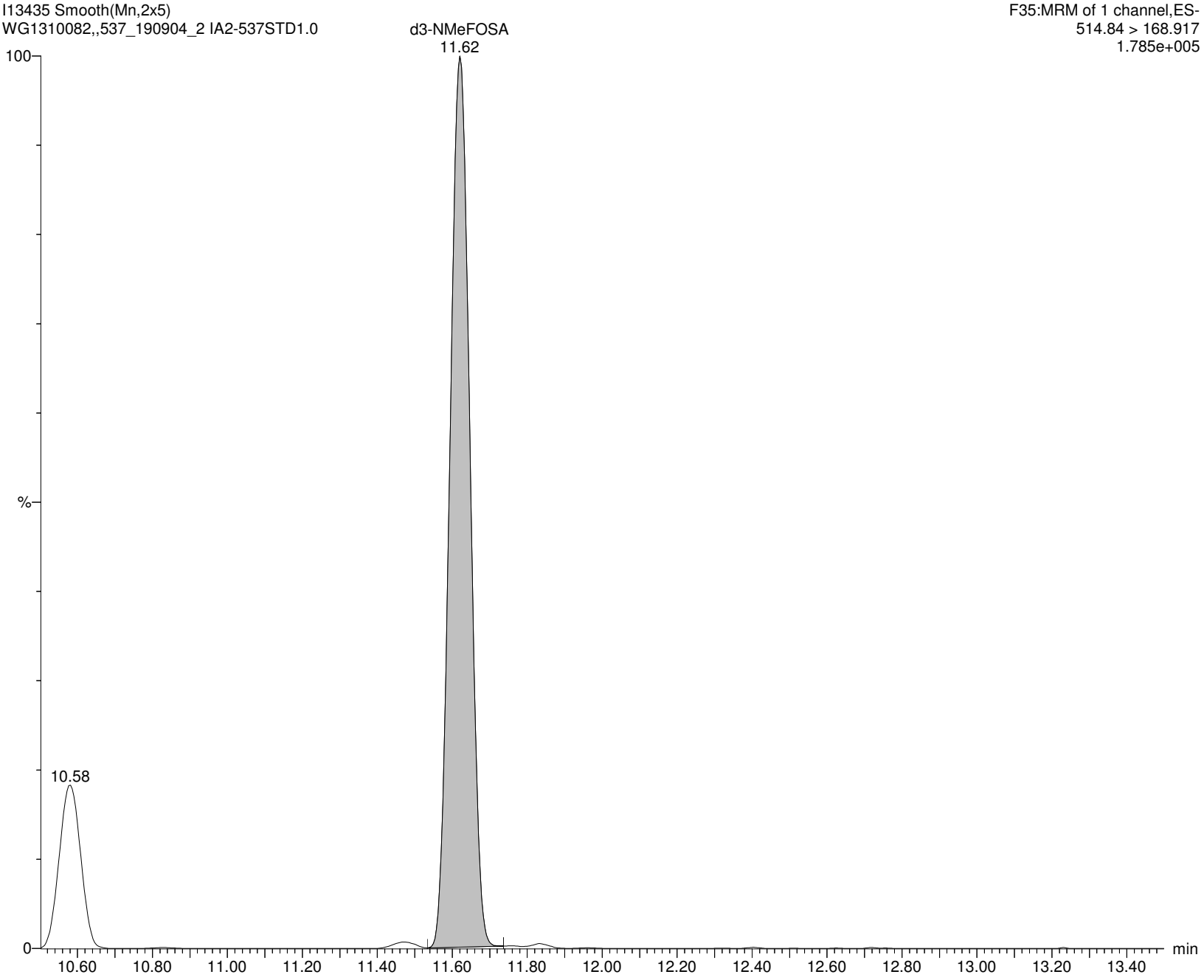



all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
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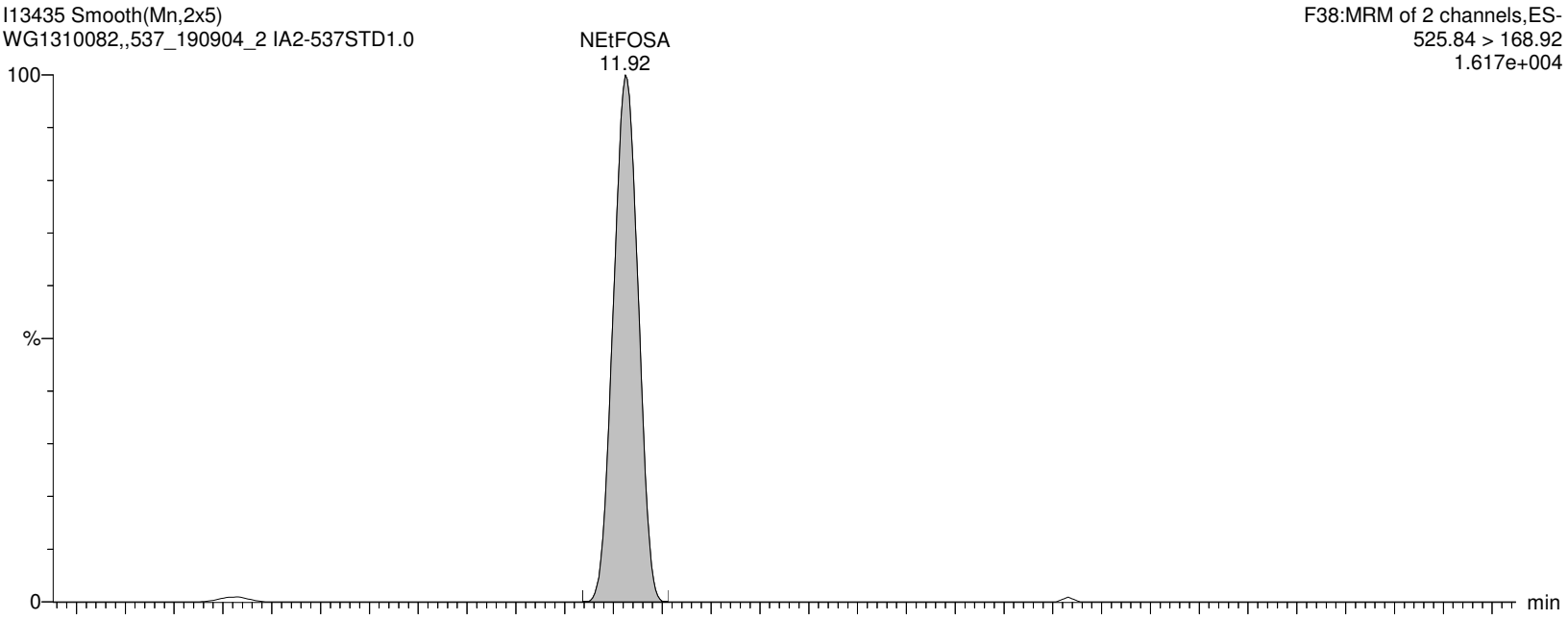
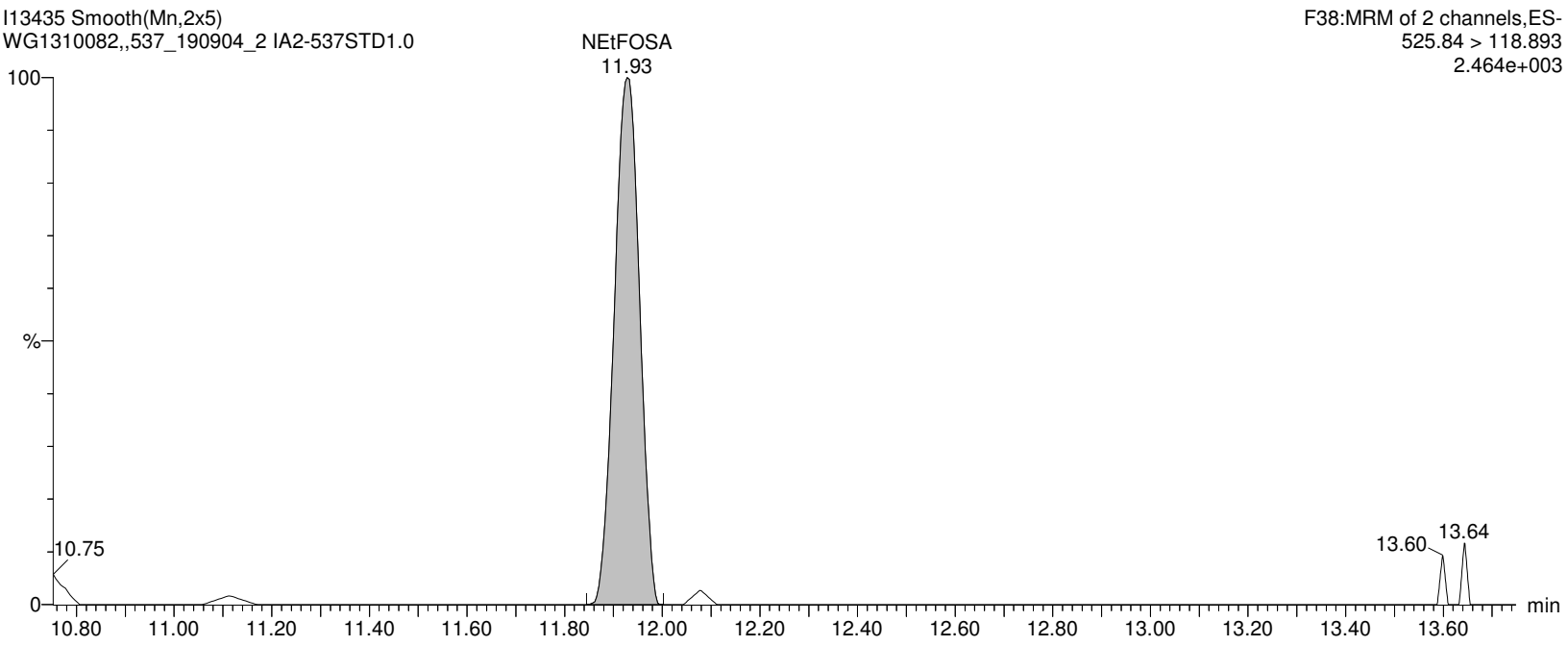
**NEtFOSA**





all concentration units in (ng/mL)

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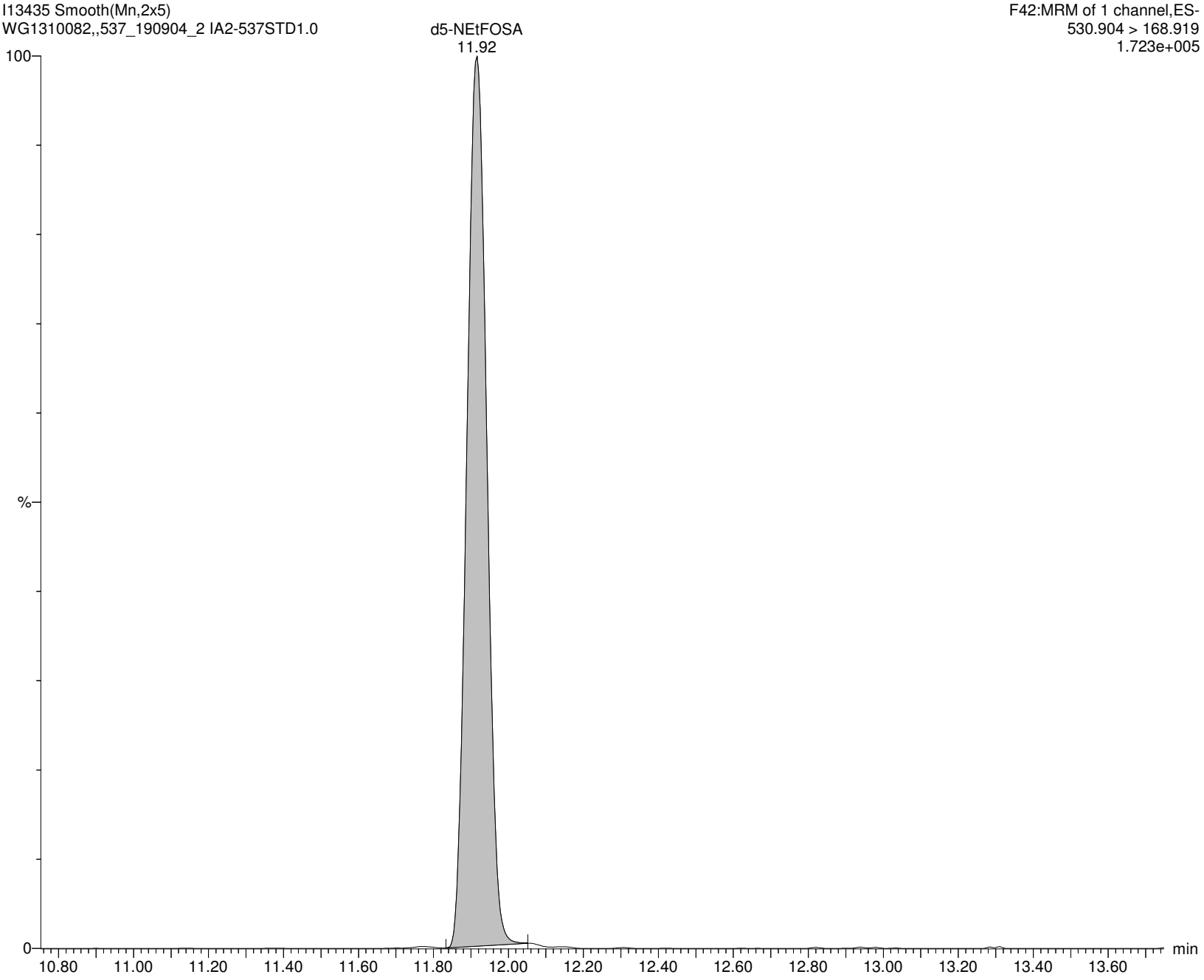



all concentration units in (ng/mL)

Alpha Analytical Inc.
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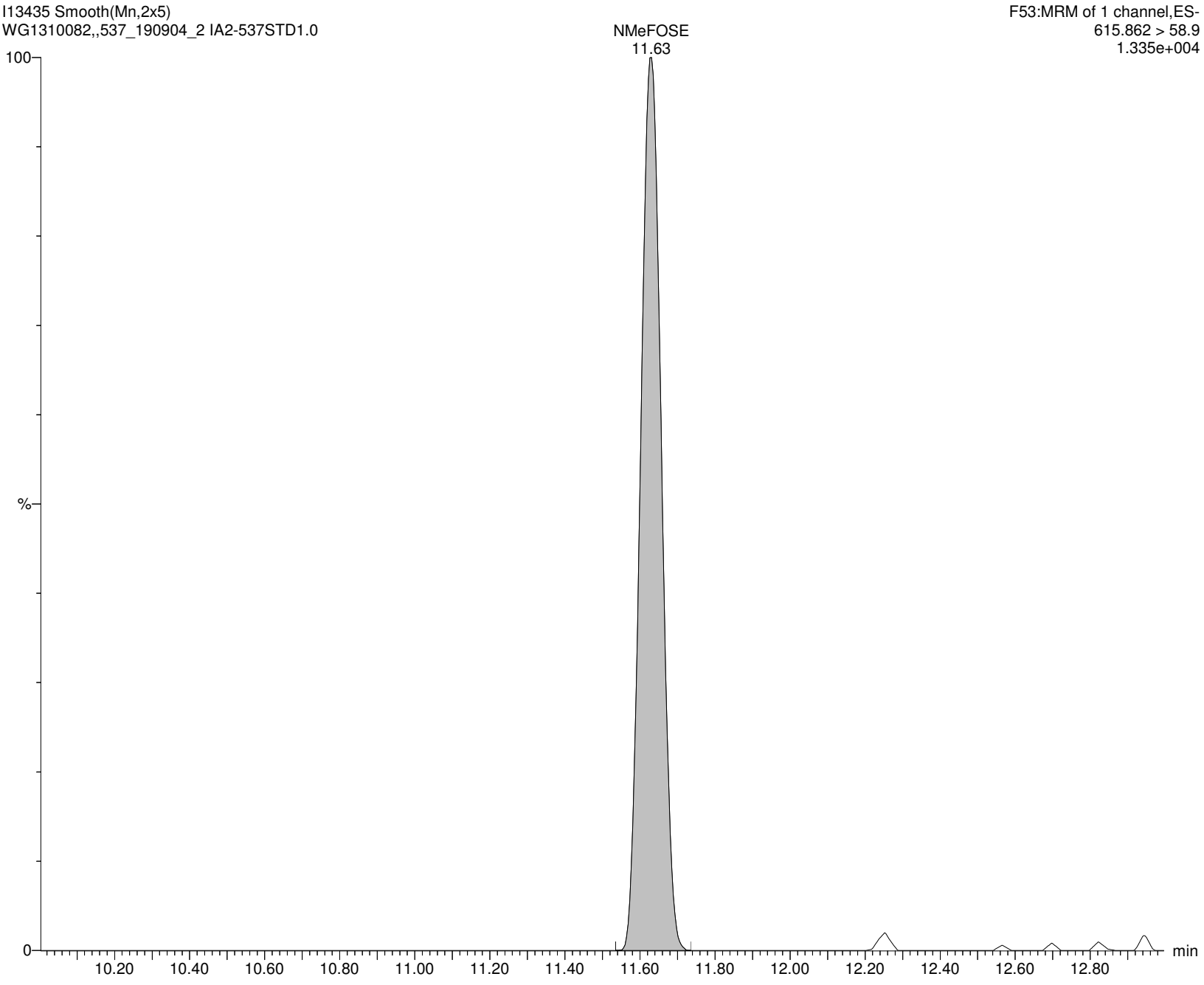
Printed: Monday, November 18, 2019 13:42:51 Eastern Standard Time

**Name: I13435**
**ID: IA2-537STD1.0**
**Date: 18-Nov-2019**
**Time: 10:53:49**
**Description: WG1310082,,537_190904_2**
**User: LCMS02:JW**
**Vial: 1:A,3**
**Instrument: XEVO-TQSmicro#QEB0050**
**Inlet Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\LCMS_537_ISO_B**
**Tune Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\181009_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**NMeFOSE**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
Printed: Monday, November 18, 2019 13:42:51 Eastern Standard Time

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**ID: IA2-537STD1.0**
**Date: 18-Nov-2019**
**Time: 10:53:49**
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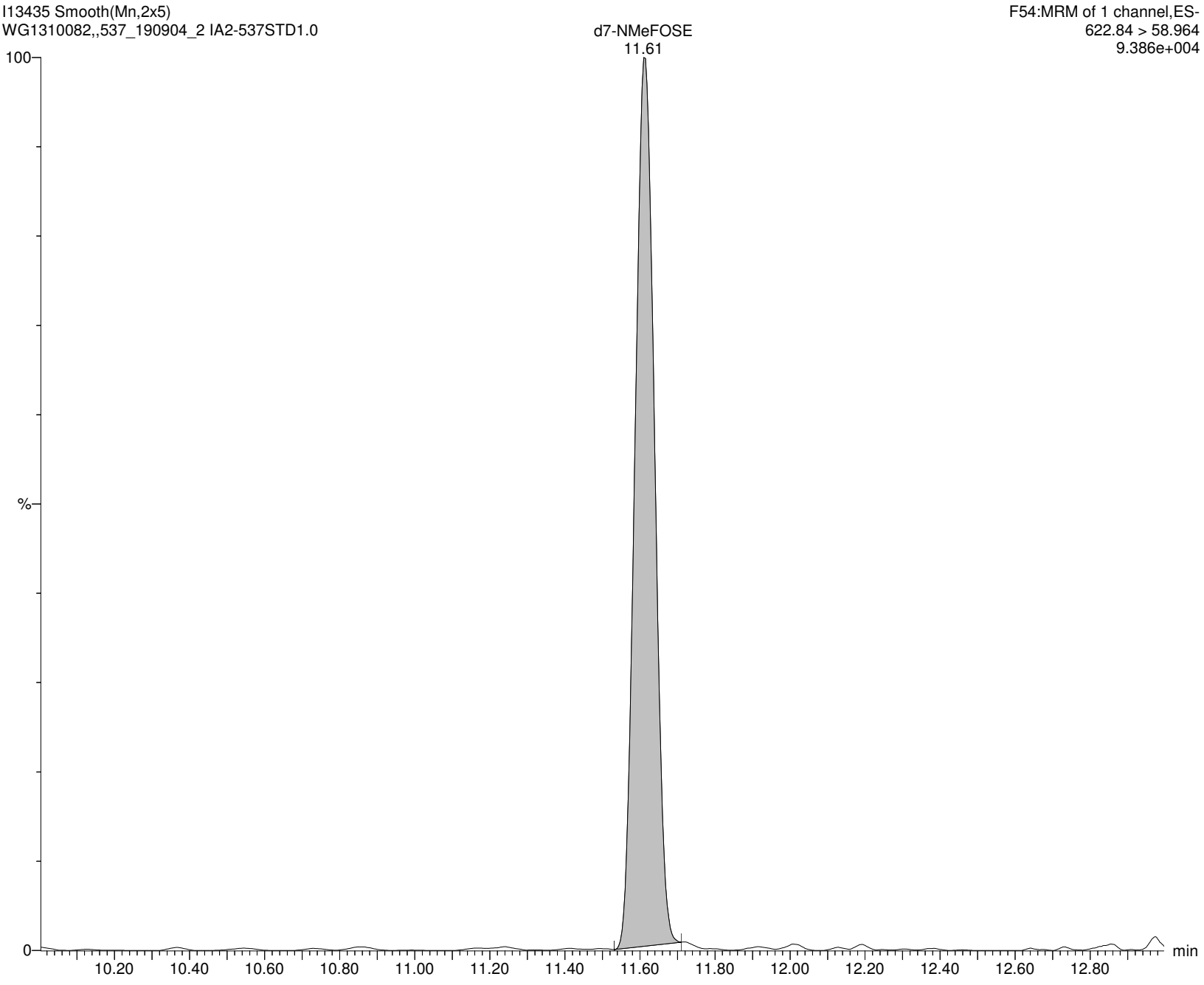
**MS Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**d7-NMeFOSE**





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**Instrument: XEVO-TQSmicro#QEB0050**
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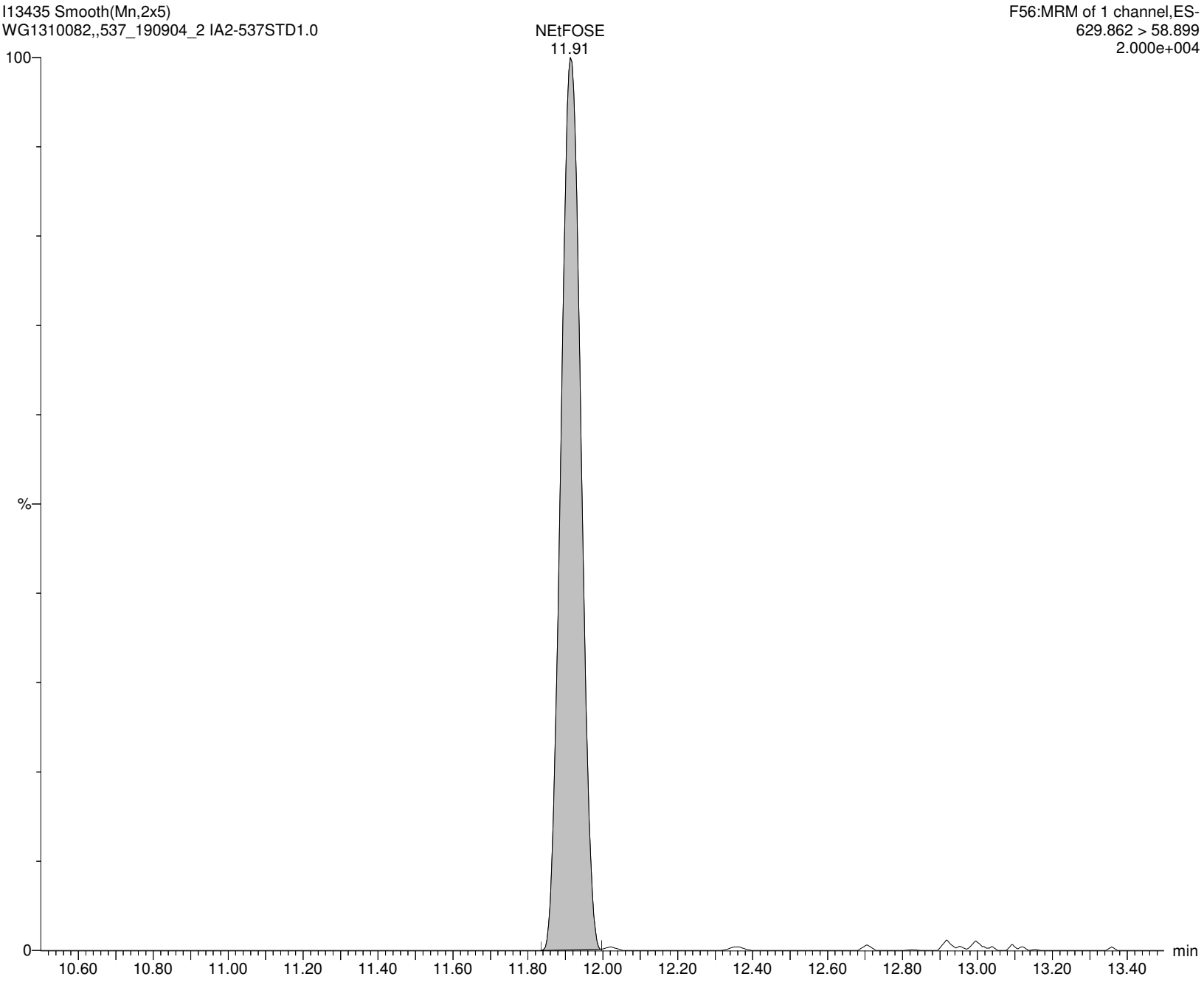
**NEtFOSE**





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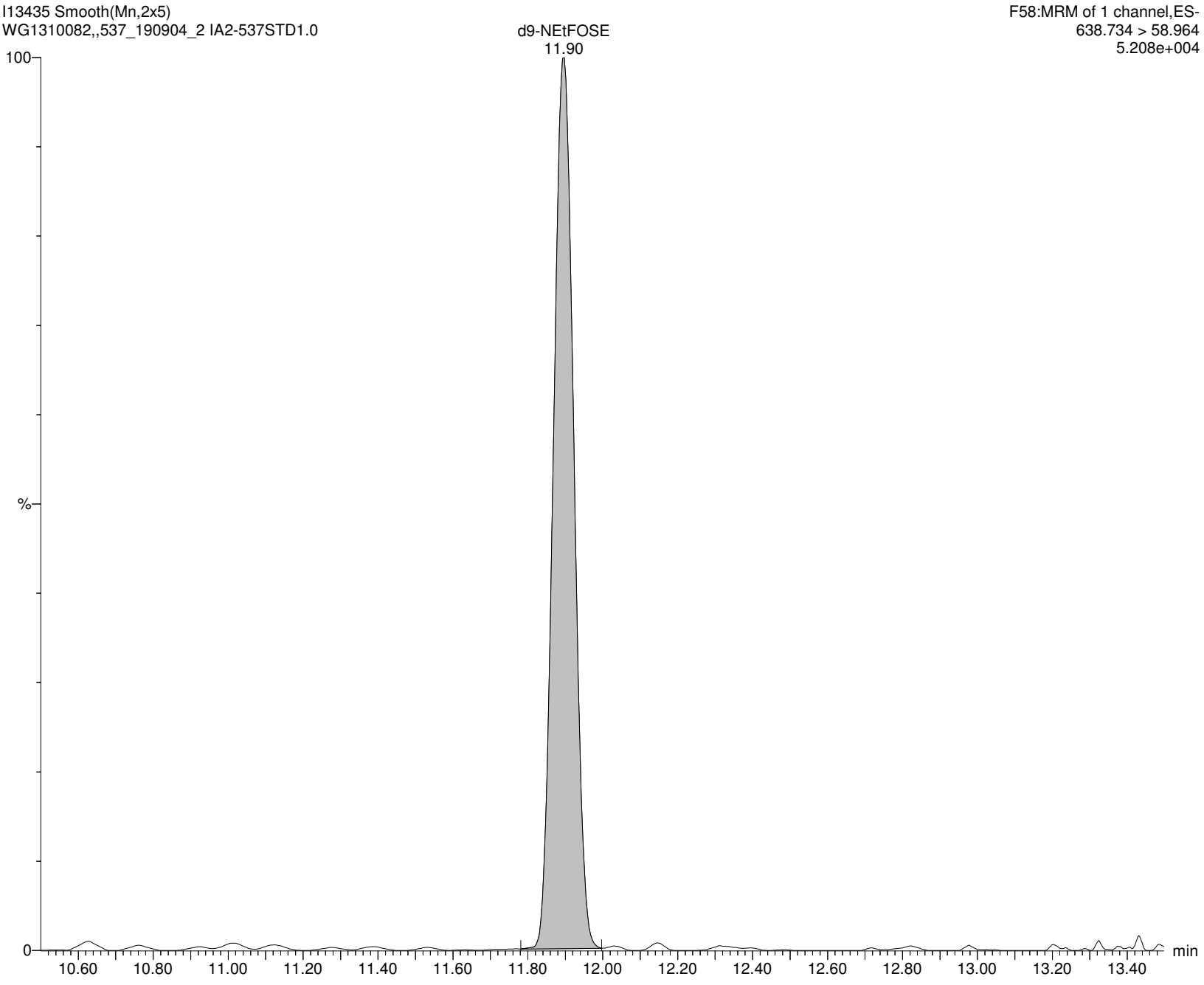
**MS Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**d9-NEtFOSE**





all concentration units in (ng/mL)

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Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
Printed: Monday, November 18, 2019 13:42:52 Eastern Standard Time

**Method: C:\MassLynx\Data\2019\191118_537ISO.PRO\MethDB\537ISO_Q_191118_DOD .mdb 18 Nov 2019 13:05:34**
**Calibration: C:\MassLynx\Data\2019\191118_537ISO.PRO\CurveDB\191118_ISO_ICAL.cdb 18 Nov 2019 13:41:42**

**ID: IA2-537STD5.0**
**Name: I13436**
**Date: 18-Nov-2019**
**Time: 11:10:20**
**Description: WG1310082,,537_190904_3**
**Instrument: XEVO-TQSmicro#QEB0050**
**User: LCMS02:JW**
**Inlet Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\LCMS_537_ISO_B**
**Tune Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\181009_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

| | Name | CAS | RT | Trace | Area | M Flag | Conc (ng/mL) | Ion Ratio | Ratio Flag | %Rec |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | PFBA | 375-22-4 | 2.20 | 212.926 > 169.111 | 24282 | | 5.570 | | na | 111.4 |
| 2 | M3PFBA | INT STD | 2.20 | 215.926 > 172.122 | 48104 | | 10.382 | | na | 103.8 |
| 3 | MPFBA | INT STD | 2.19 | 216.926 > 172.137 | 52211 | | 9.974 | | na | 99.7 |
| 4 | PFPeA | 2706-90-3 | 5.10 | 262.926 > 219.002 | 40900 | | 5.604 | | na | 112.1 |
| 5 | M5PFPEA | INT STD | 5.10 | 267.989 > 223.081 | 75572 | | 10.178 | | na | 101.8 |
| 6 | PFBS | 375-73-5 | 5.75 | 298.926 > 79.923 | 7652 | | 4.956 | 1.92 | NO | 112.0 |
| 7 | M3PFBS | INT STD | 5.75 | 301.989 > 80.254 | 10510 | | 9.079 | | na | 90.8 |
| 8 | 4:2FTS | 757124-72-4 | 6.92 | 326.926 > 306.957 | 3446 | | 5.526 | 2.25 | NO | 118.2 |
| 9 | M2-4:2FTS | INT STD | 6.92 | 329.117 > 309.079 | 5712 | | 7.601 | | na | 76.0 |
| 10 | PFHxA | 307-24-4 | 7.00 | 312.989 > 269.028 | 45762 | | 5.710 | 18.75 | NO | 114.2 |
| 11 | M5PFHxA | INT STD | 7.00 | 317.989 > 273.045 | 87051 | | 10.008 | | na | 100.1 |
| 12 | PFPeS | 2706-91-4 | 7.31 | 348.926 > 80.251 | 5127 | | 4.740 | 1.65 | NO | 100.9 |
| 13 | PFHpA | 375-85-9 | 8.26 | 362.926 > 319.014 | 60758 | | 5.723 | 5.90 | NO | 114.5 |
| 14 | M4PFHpA | INT STD | 8.26 | 366.926 > 321.979 | 117692 | | 10.158 | | na | 101.6 |
| 15 | br-PFHxS | 355-46-4 | 8.18 | 398.926 > 80.295 | 519 | M5 | 0.678 | 1.91 | NO | 79.8 |
| 16 | L-PFHxS | 355-46-4 | 8.41 | 398.926 > 80.295 | 3163 | | 3.904 | 1.19 | NO | 105.5 |
| 17 | PFHxS | 355-46-4 | | 398.926 > 80.295 | 3681 | | 4.582 | | na | |
| 18 | M3PFHxS | INT STD | 8.41 | 401.926 > 80.317 | 6467 | | 9.679 | | na | 96.8 |
| 19 | br-PFOA | 335-67-1 | | 412.989 > 368.9 | | | ND | | YES | |
| 20 | L-PFOA | 335-67-1 | 9.19 | 412.989 > 368.9 | 58198 | | 5.631 | 9.47 | NO | 112.6 |
| 21 | PFOA | 335-67-1 | | 412.989 > 368.9 | 58198 | | 5.631 | | na | |
| 22 | M8PFOA | INT STD | 9.19 | 420.989 > 375.979 | 112562 | | 10.124 | | na | 101.2 |
| 23 | M2PFOA | INT STD | 9.19 | 415.032 > 369.968 | 113627 | | 10.749 | | na | 107.5 |
| 24 | 6:2FTS | 27619-97-2 | 9.15 | 426.989 > 406.921 | 2365 | | 5.188 | 14.79 | NO | 109.2 |
| 25 | M2-6:2FTS | INT STD | 9.15 | 428.989 > 408.917 | 5687 | | 7.743 | | na | 77.4 |
| 26 | PFHpS | 375-92-8 | 9.28 | 448.926 > 80.257 | 2921 | | 5.646 | 0.85 | YES | 118.9 |
| 27 | PFNA | 375-95-1 | 9.94 | 462.989 > 418.931 | 52308 | | 5.690 | 4.48 | NO | 113.8 |
| 28 | M9PFNA | INT STD | 9.94 | 472.053 > 426.947 | 112216 | | 10.258 | | na | 102.6 |
| 29 | br-PFOS | 1763-23-1 | 9.80 | 498.989 > 80.294 | 1019 | M5 | 0.992 | 5.67 | NO | 99.2 |
| 30 | L-PFOS | 1763-23-1 | 9.99 | 498.989 > 80.294 | 3141 | | 4.074 | 1.45 | NO | 111.6 |
| 31 | PFOS | 1763-23-1 | | 498.989 > 80.294 | 4160 | | 5.066 | | na | |
| 32 | M4PFOS | INT STD | 9.99 | 503.032 > 80.306 | 8270 | | 11.841 | | na | 118.4 |
| 33 | M8PFOS | INT STD | 9.99 | 507.053 > 80.294 | 7857 | | 9.259 | | na | 92.6 |
| 34 | PFDA | 335-76-2 | 10.57 | 513.053 > 468.906 | 49945 | | 5.585 | 6.18 | NO | 111.7 |
| 35 | M2PFDA | INT STD | 10.57 | 515.053 > 469.934 | 99527 | | 11.273 | | na | 112.7 |
| 36 | M6PFDA | INT STD | 10.57 | 519.053 > 473.931 | 104240 | | 10.134 | | na | 101.3 |
| 37 | 8:2FTS | 39108-34-4 | 10.56 | 526.926 > 506.818 | 2399 | | 6.103 | | na | 127.1 |
| 38 | M2-8:2FTS | INT STD | 10.56 | 529.053 > 508.945 | 3681 | | 8.544 | | na | 85.4 |
| 39 | PFNS | 68259-12-1 | 10.60 | 548.989 > 80.249 | 4373 | | 5.984 | 1.33 | NO | 124.7 |


all concentration units in (ng/mL)

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Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
Printed: Monday, November 18, 2019 13:42:52 Eastern Standard Time

**ID: IA2-537STD5.0**
**Name: I13436**
**Date: 18-Nov-2019**
**Time: 11:10:20**
**Description: WG1310082,,537_190904_3**
**Instrument: XEVO-TQSmicro#QEB0050**
**User: LCMS02:JW**
**Inlet Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\LCMS_537_ISO_B**
**Tune Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\181009_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

| | Name | CAS | RT | Trace | Area | M Flag | Conc (ng/mL) | Ion Ratio | Ratio Flag | %Rec |
|---|---|---|---|---|---|---|---|---|---|---|
| 40 | d3-NMeFOSAA | INT STD | 10.95 | 573.096 > 418.987 | 10156 | | 8.669 | | na | 86.7 |
| 41 | br-NMeFOSAA | 2355-31-9 | | 570.053 > 418.917 | | | ND | | YES | |
| 42 | L-NMeFOSAA | 2355-31-9 | 10.96 | 570.053 > 418.917 | 5530 | | 5.843 | 2.80 | NO | 116.9 |
| 43 | NMeFOSAA | 2355-31-9 | | 570.053 > 418.917 | 5530 | | 5.843 | | na | |
| 44 | PFUnA | 2058-94-8 | 11.12 | 562.989 > 518.903 | 51117 | | 5.455 | 8.16 | NO | 109.1 |
| 45 | M7-PFUDA | INT STD | 11.11 | 570.053 > 524.923 | 97998 | | 10.739 | | na | 107.4 |
| 46 | PFDS | 335-77-3 | 11.13 | 598.926 > 80.314 | 3124 | | 5.981 | 0.92 | NO | 124.0 |
| 47 | FOSA | 754-91-6 | 11.01 | 497.989 > 78.245 | 12992 | | 5.461 | 154.86 | NO | 109.2 |
| 48 | M8FOSA | INT STD | 11.01 | 506.053 > 78.286 | 22388 | | 9.206 | | na | 92.1 |
| 49 | d5-NEtFOSAA | INT STD | 11.24 | 589.117 > 418.929 | 9137 | | 8.829 | | na | 88.3 |
| 50 | br-NEtFOSAA | 2991-50-6 | | 583.989 > 418.927 | | | ND | | YES | |
| 51 | L-NEtFOSAA | 2991-50-6 | 11.25 | 583.989 > 418.927 | 5154 | | 5.975 | 2.39 | NO | 119.5 |
| 52 | NEtFOSAA | 2991-50-6 | | 583.989 > 418.927 | 5154 | | 5.975 | | na | |
| 53 | PFDoA | 307-55-1 | 11.59 | 612.989 > 568.967 | 48924 | | 5.589 | 14.64 | NO | 111.8 |
| 54 | MPFDOA | INT STD | 11.59 | 614.989 > 569.92 | 103349 | | 10.095 | | na | 101.0 |
| 55 | PFTrDA | 72629-94-8 | 12.00 | 663.053 > 618.969 | 40716 | | 5.800 | 10.72 | NO | 116.0 |
| 56 | PFTA | 376-06-7 | 12.36 | 713.053 > 668.976 | 35875 | | 5.657 | 9.51 | NO | 113.1 |
| 57 | M2PFTEDA | INT STD | 12.36 | 715.053 > 669.945 | 79195 | | 9.739 | | na | 97.4 |
| 58 | M3HFPO-DA | INT STD | 7.42 | 331.989 > 286.995 | 3738 | | 76.726 | | na | 38.4 |
| 59 | HFPO-DA | 13252-13-6 | 7.42 | 284.819 > 169.094 | 3729 | | 120.149 | 3.16 | YES | 120.1 |
| 60 | ADONA | 958445-44-8 | 8.43 | 376.926 > 251.005 | 76970 | | 5.201 | | na | 109.9 |
| 61 | PFHxDA | | 12.78 | 813.053 > 769.005 | 31167 | | 5.116 | | na | 102.3 |
| 62 | PFODA | | 12.99 | 912.989 > 869.032 | 20393 | | 4.568 | | na | 91.4 |
| 63 | M2PFHxDA | | 12.78 | 815.372 > 770.158 | 16613 | | 9.598 | | na | 96.0 |
| 64 | PFDoS | | 11.99 | 698.649 > 79.853 | 2929 | | 5.501 | 1.77 | YES | 110.0 |
| 65 | 10:2FTS | | 11.60 | 626.862 > 606.896 | 2107 | | 5.561 | | na | 115.4 |
| 66 | 9CL-PF3ONS | | 10.34 | 530.862 > 350.843 | 25232 | | 4.887 | | na | 104.9 |
| 67 | 11CL-PFOUdS | | 11.38 | 630.862 > 450.854 | 21642 | | 4.972 | | na | 105.6 |
| 68 | NMeFOSA | | 11.62 | 511.804 > 168.906 | 4556 | | 5.673 | 1.38 | NO | 113.5 |
| 69 | d3-NMeFOSA | | 11.61 | 514.84 > 168.917 | 10805 | | 8.519 | | na | 85.2 |
| 70 | NEtFOSA | | 11.92 | 525.84 > 168.92 | 4898 | | 5.157 | 5.71 | NO | 103.1 |
| 71 | d5-NEtFOSA | | 11.91 | 530.904 > 168.919 | 10840 | | 8.738 | | na | 87.4 |
| 72 | NMeFOSE | | 11.62 | 615.862 > 58.9 | 5940 | | 5.259 | | na | 105.2 |
| 73 | d7-NMeFOSE | | 11.61 | 622.84 > 58.964 | 5584 | | 9.400 | | na | 94.0 |
| 74 | NEtFOSE | | 11.91 | 629.862 > 58.899 | 6476 | | 4.988 | | na | 99.8 |
| 75 | d9-NEtFOSE | | 11.89 | 638.734 > 58.964 | 3289 | | 9.469 | | na | 94.7 |


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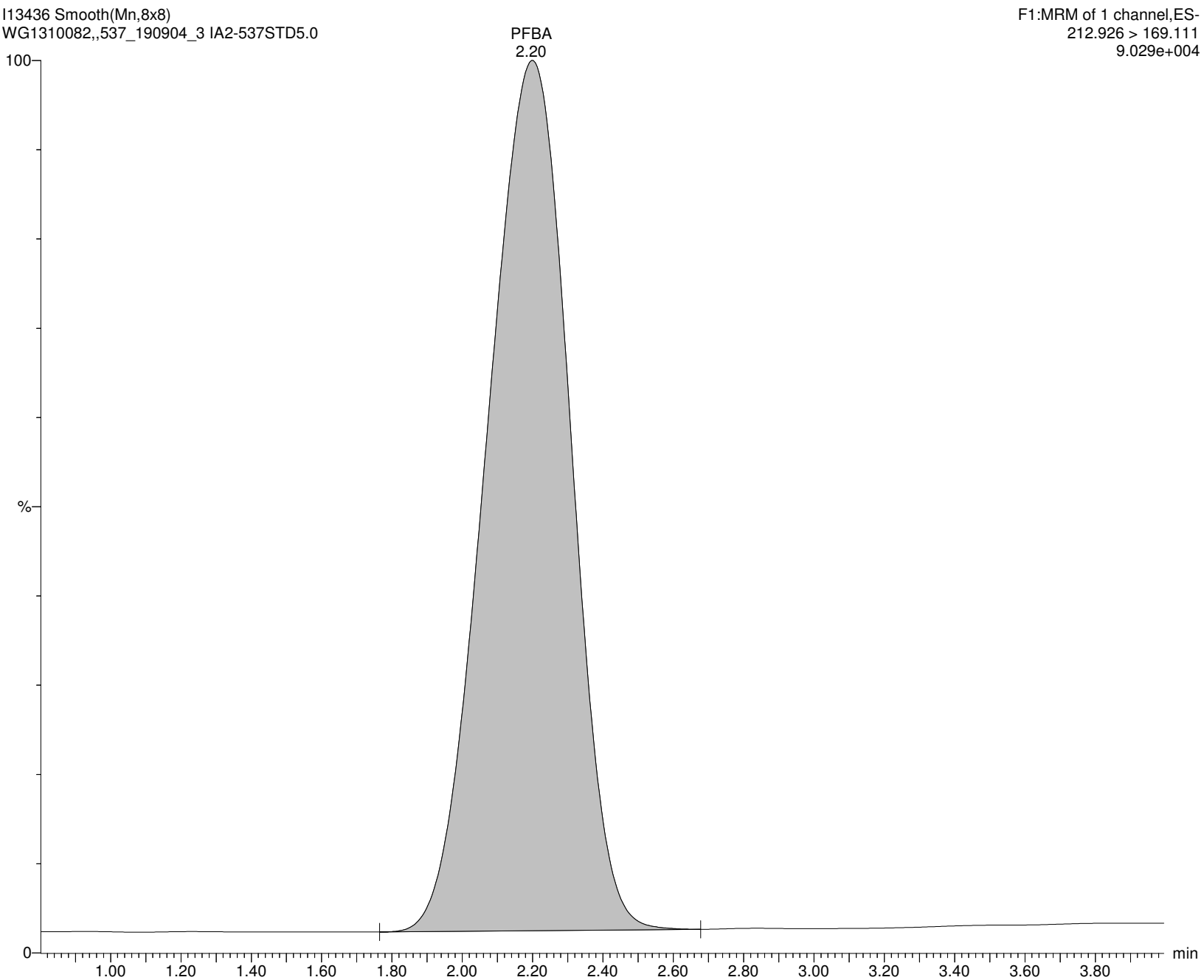
**PFBA**





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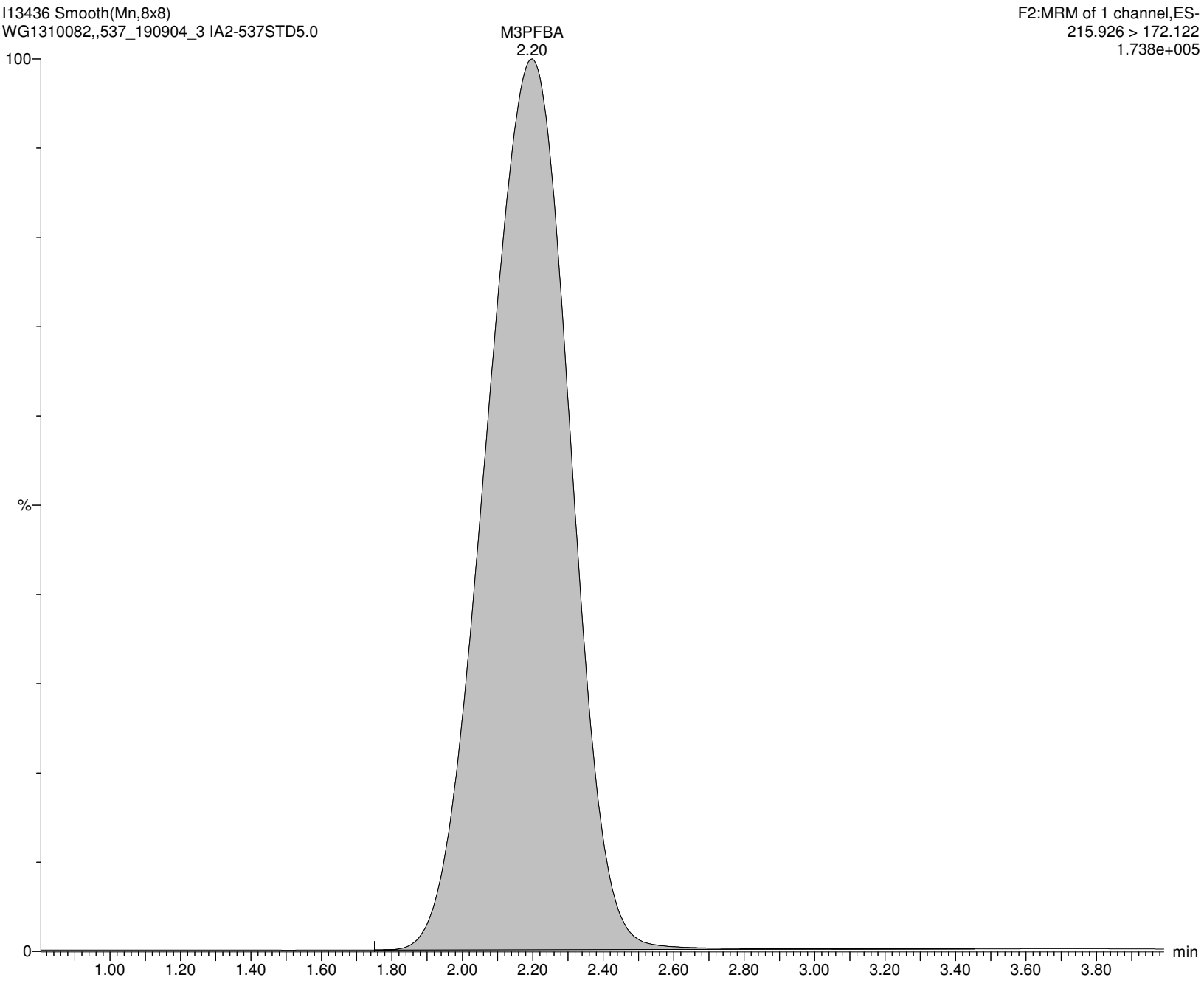
**M3PFBA**





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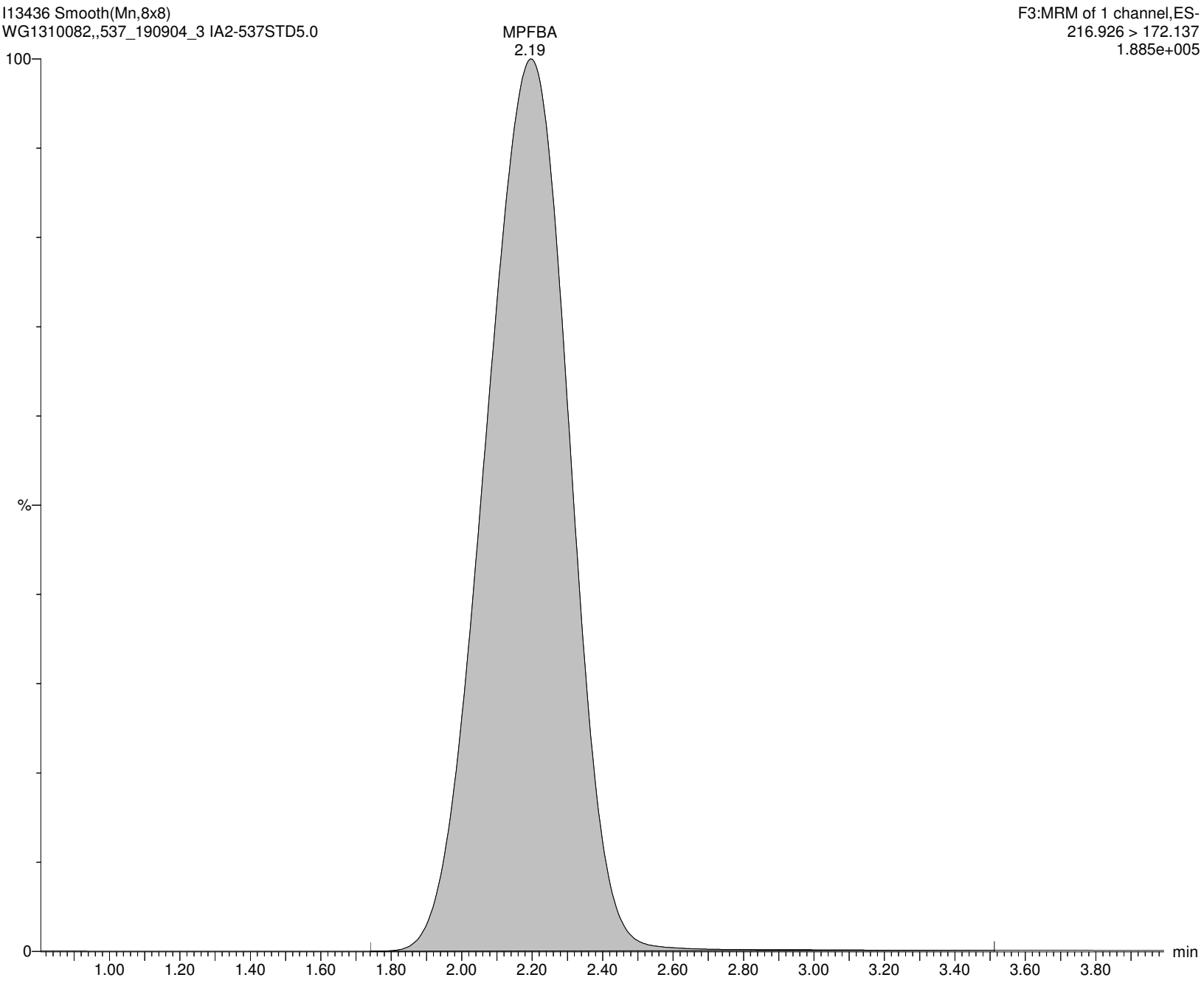
**MPFBA**





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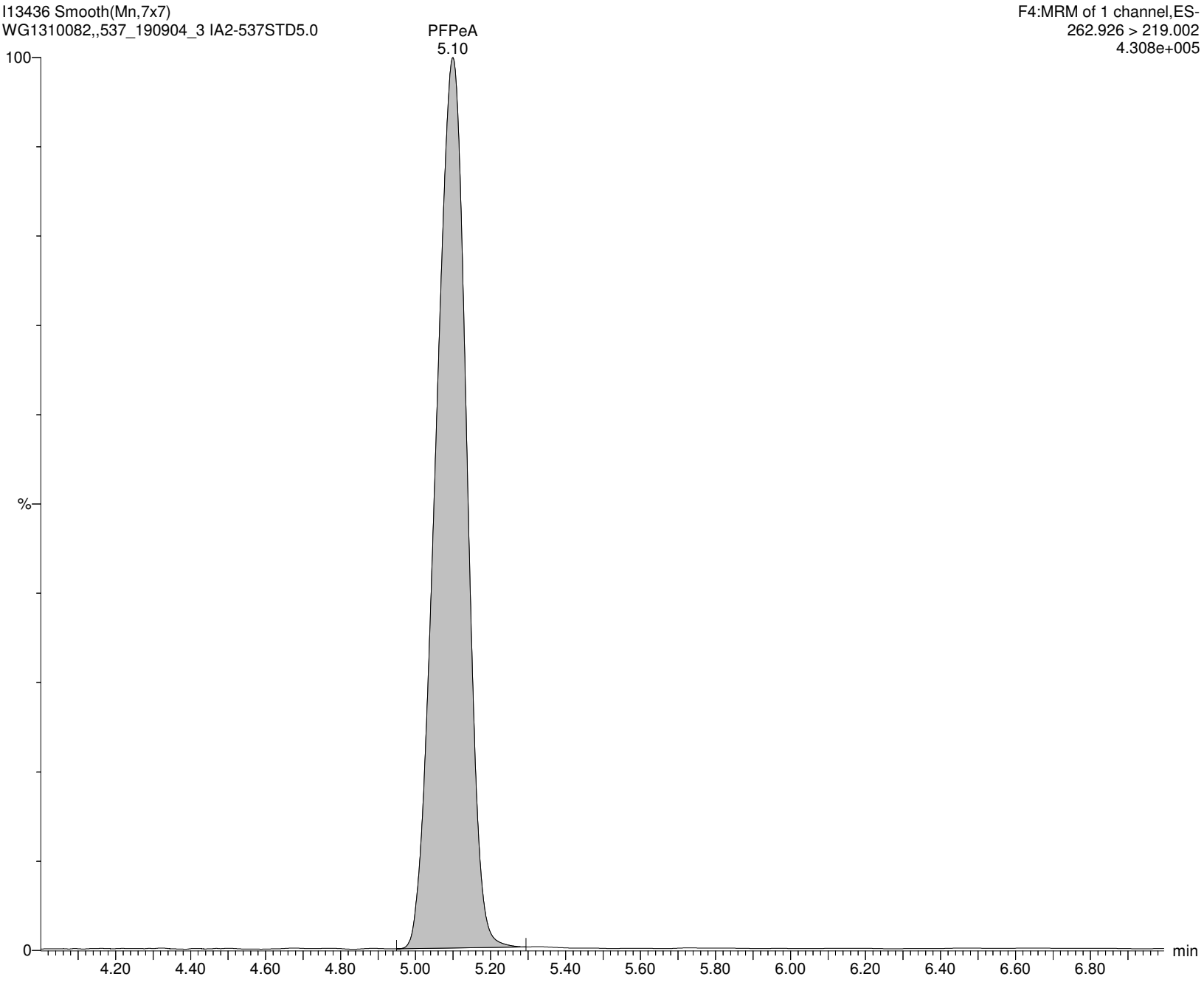
**PFPeA**





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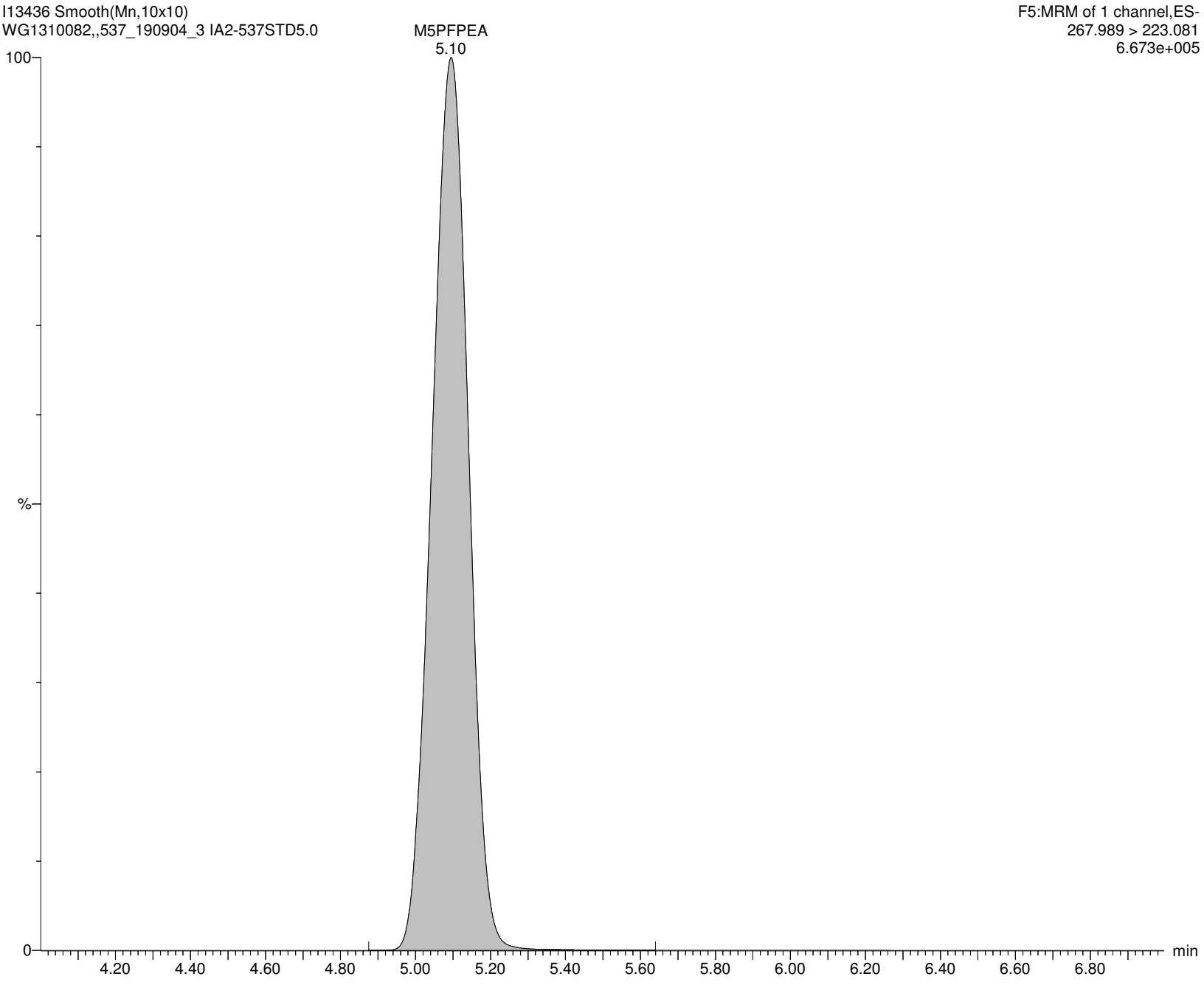
**Inlet Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\LCMS_537_ISO_B**
**Tune Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\181009_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**M5PFPEA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
Printed: Monday, November 18, 2019 13:42:52 Eastern Standard Time

**Name: I13436**
**ID: IA2-537STD5.0**
**Date: 18-Nov-2019**
**Time: 11:10:20**
**Description: WG1310082,,537_190904_3**
**User: LCMS02:JW**
**Vial: 1:A,4**
**Instrument: XEVO-TQSmicro#QEB0050**
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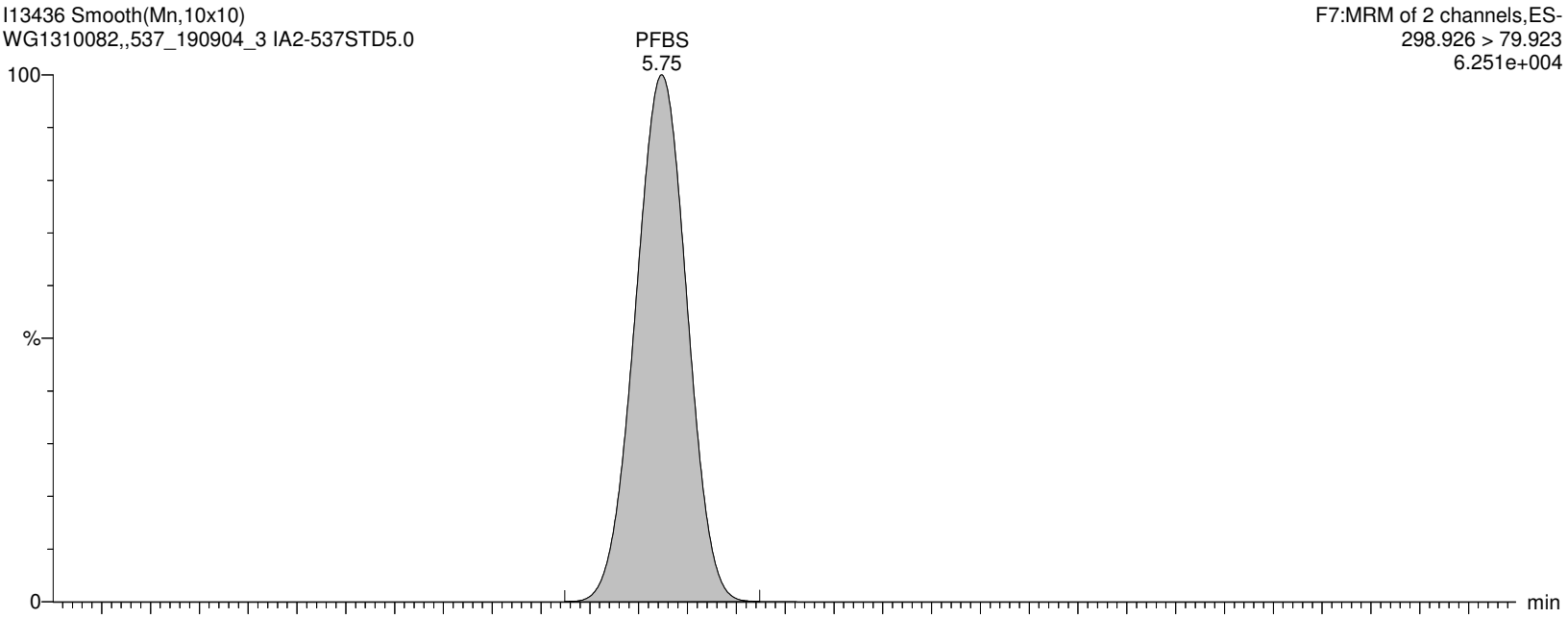
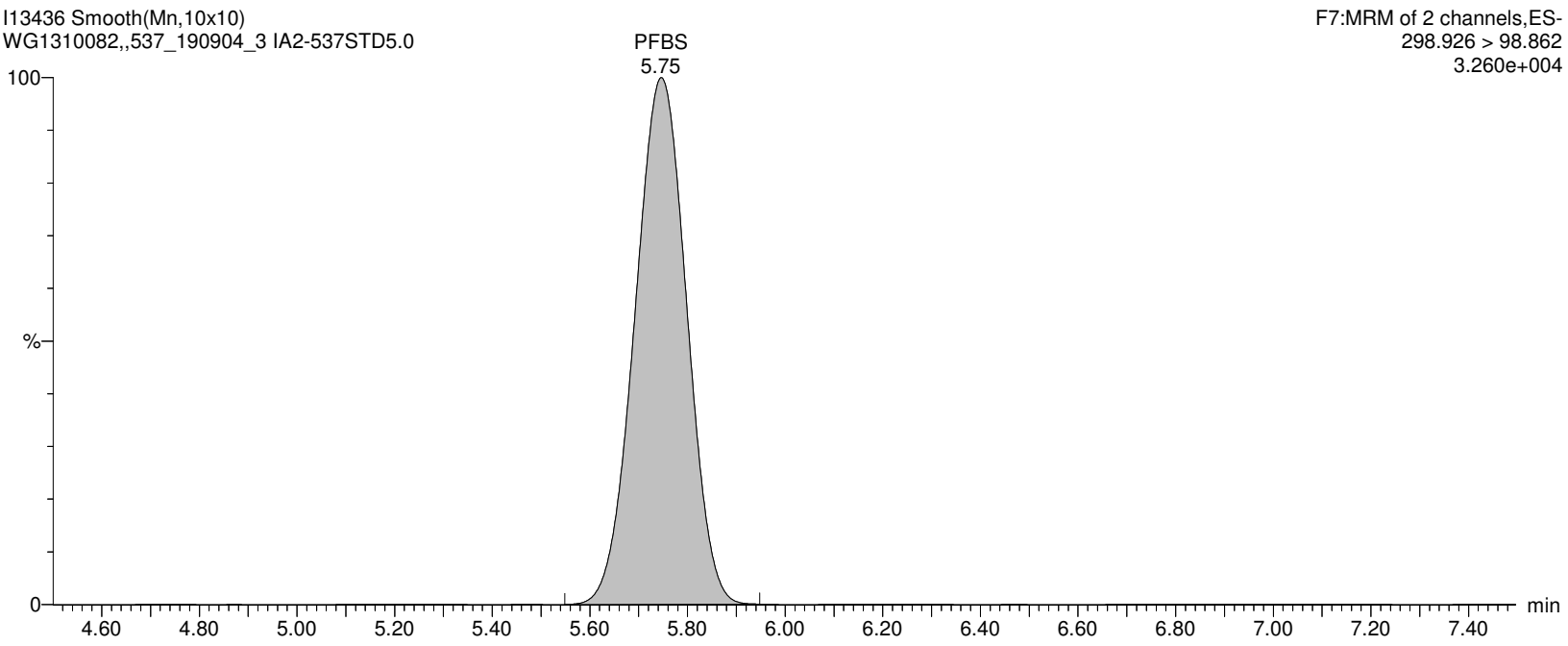
**Tune Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\181009_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**PFBS**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
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**Vial: 1:A,4**
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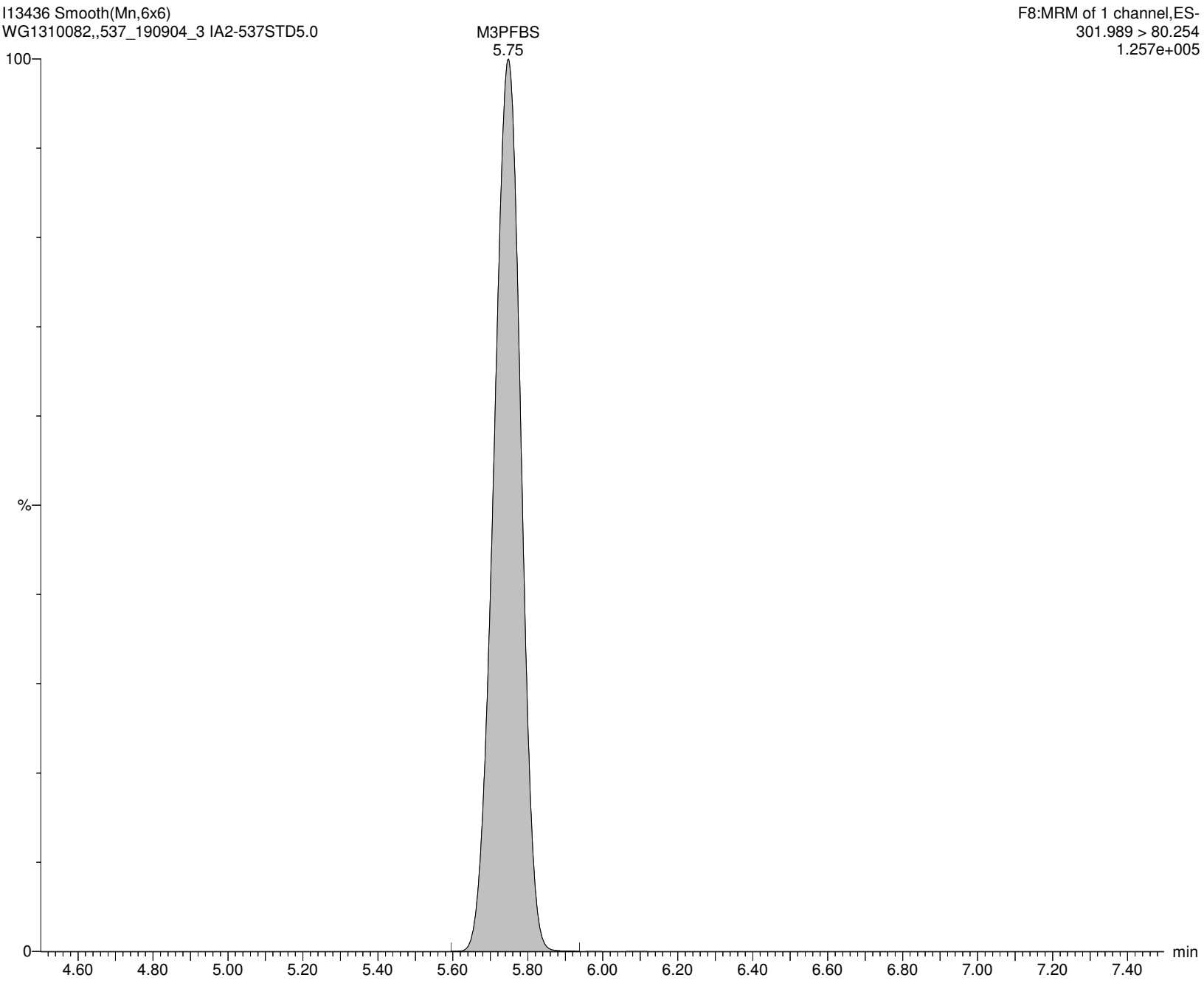
**MS Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**M3PFBS**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
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**User: LCMS02:JW**
**Vial: 1:A,4**
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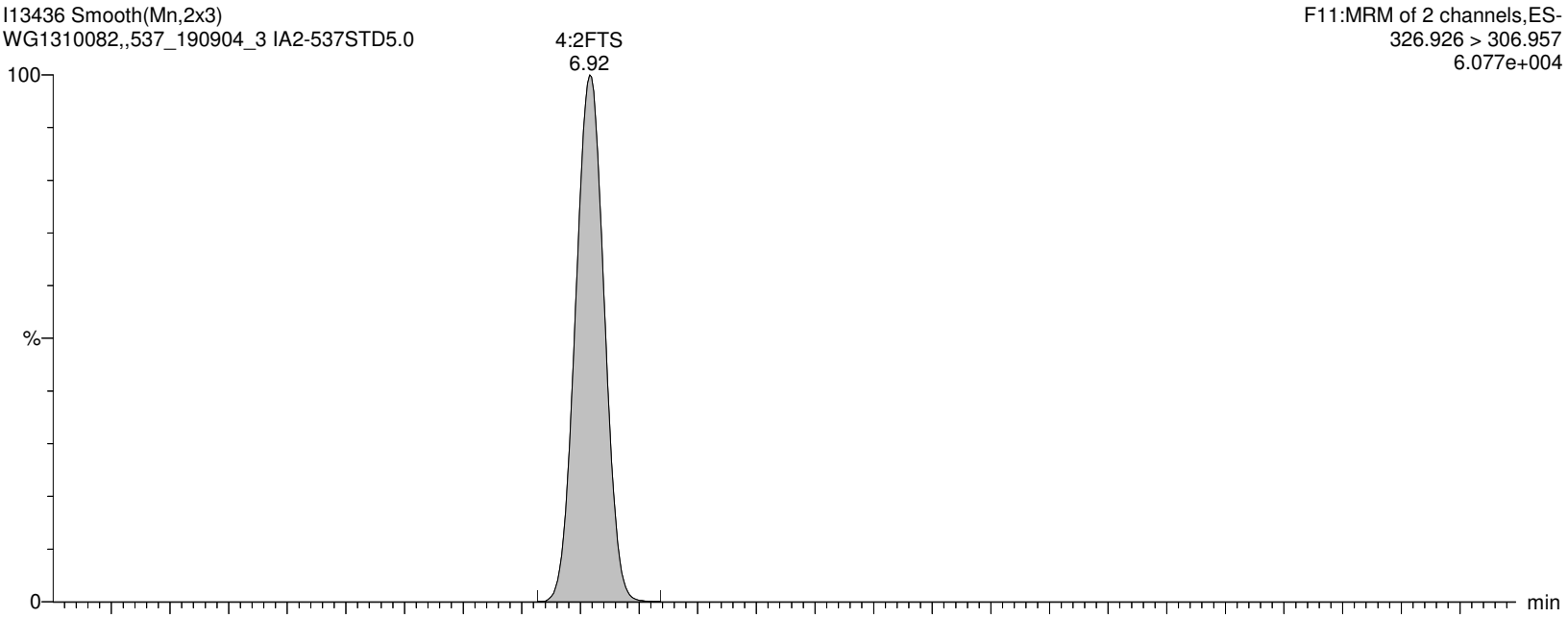
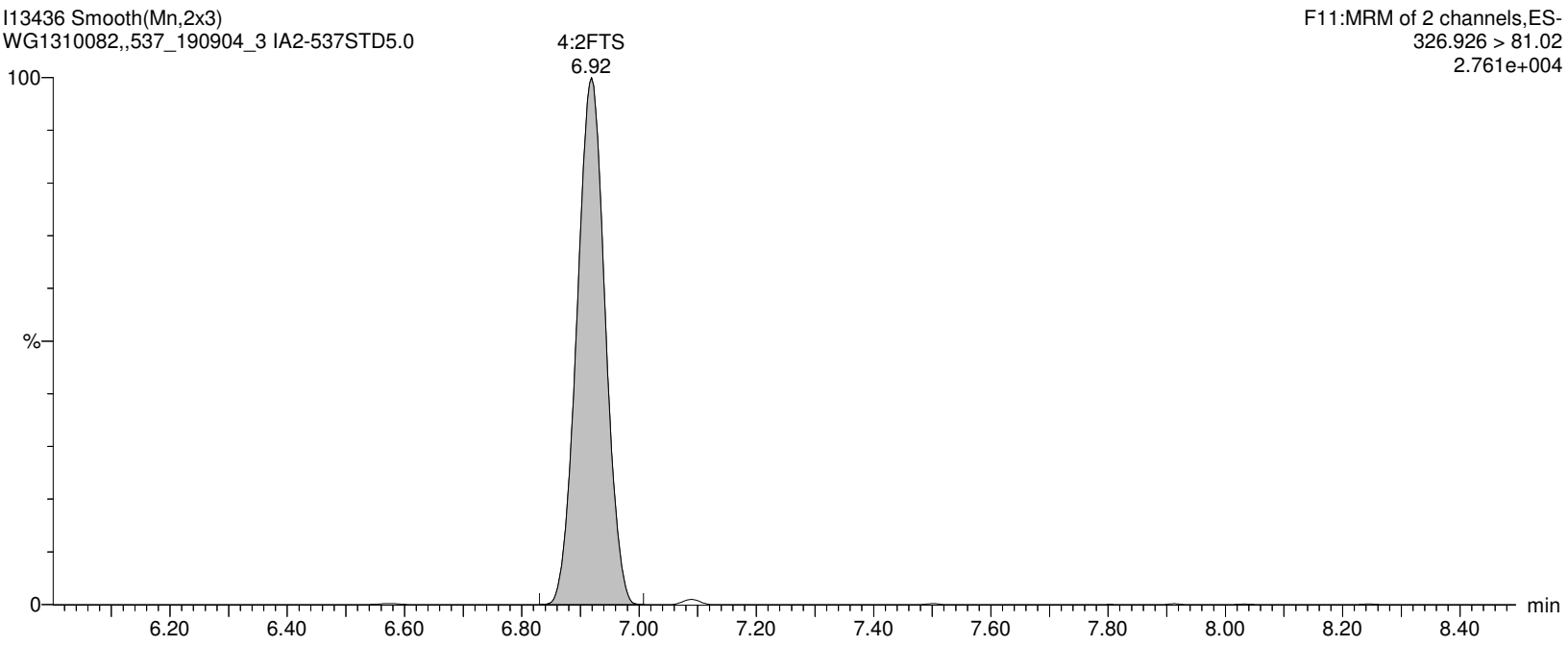
**4:2FTS**





all concentration units in (ng/mL)

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Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
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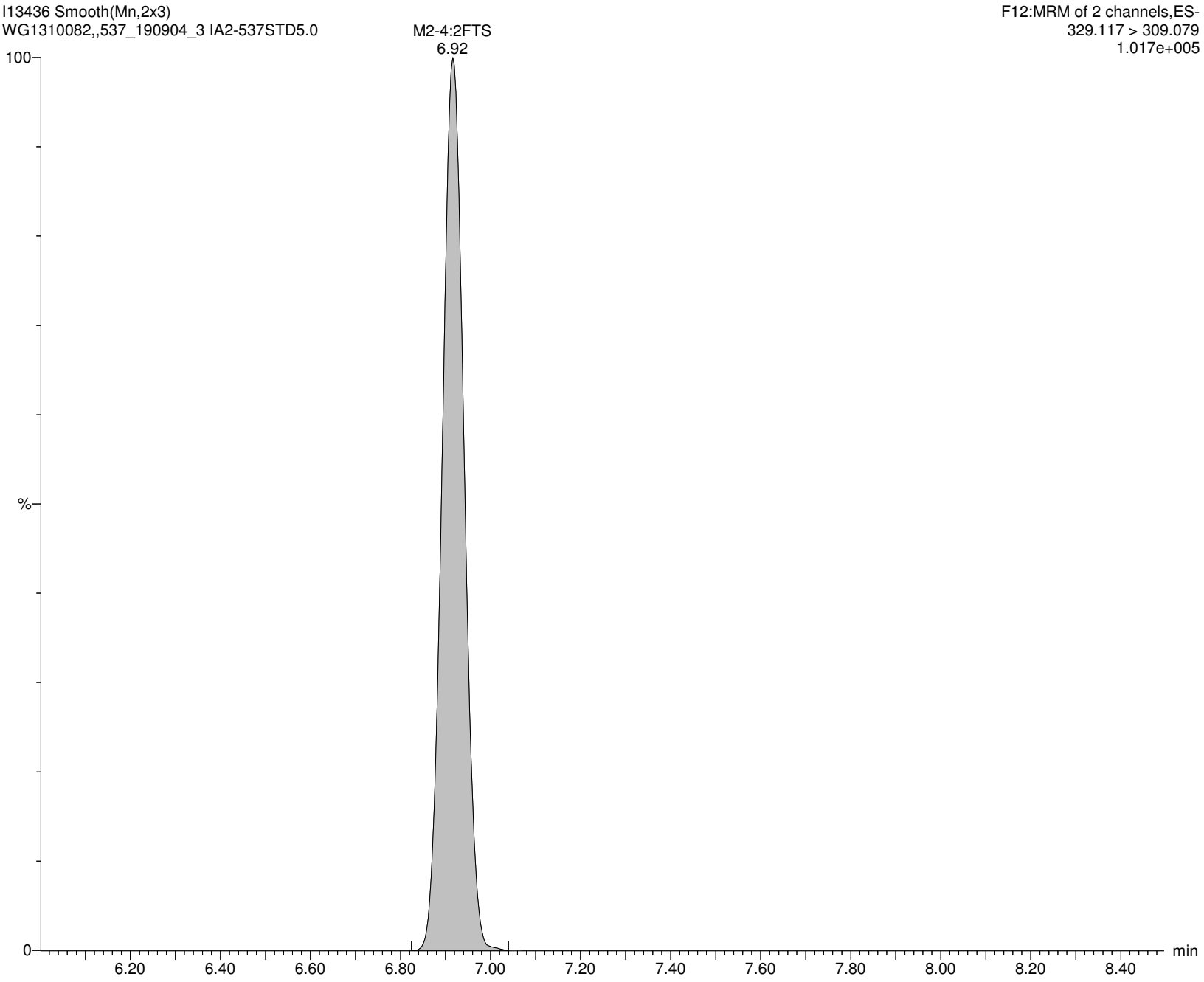
**MS Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**M2-4:2FTS**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
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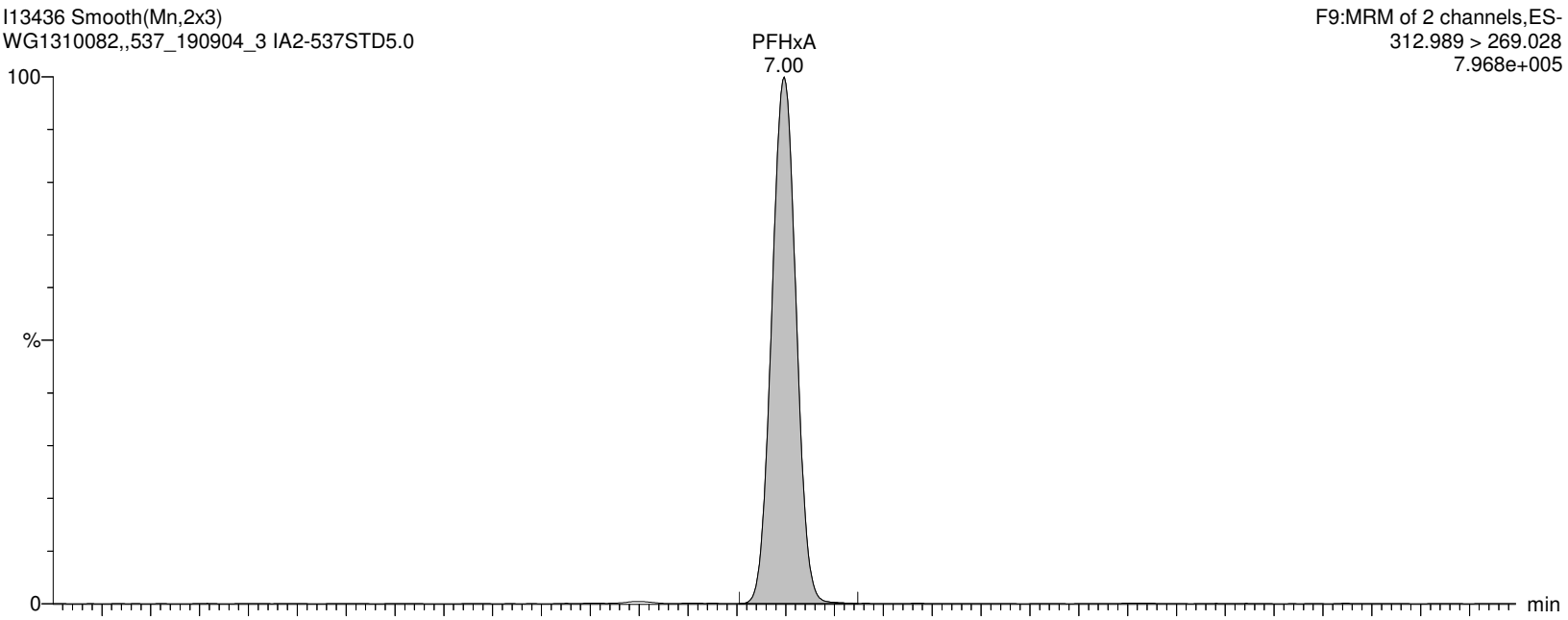
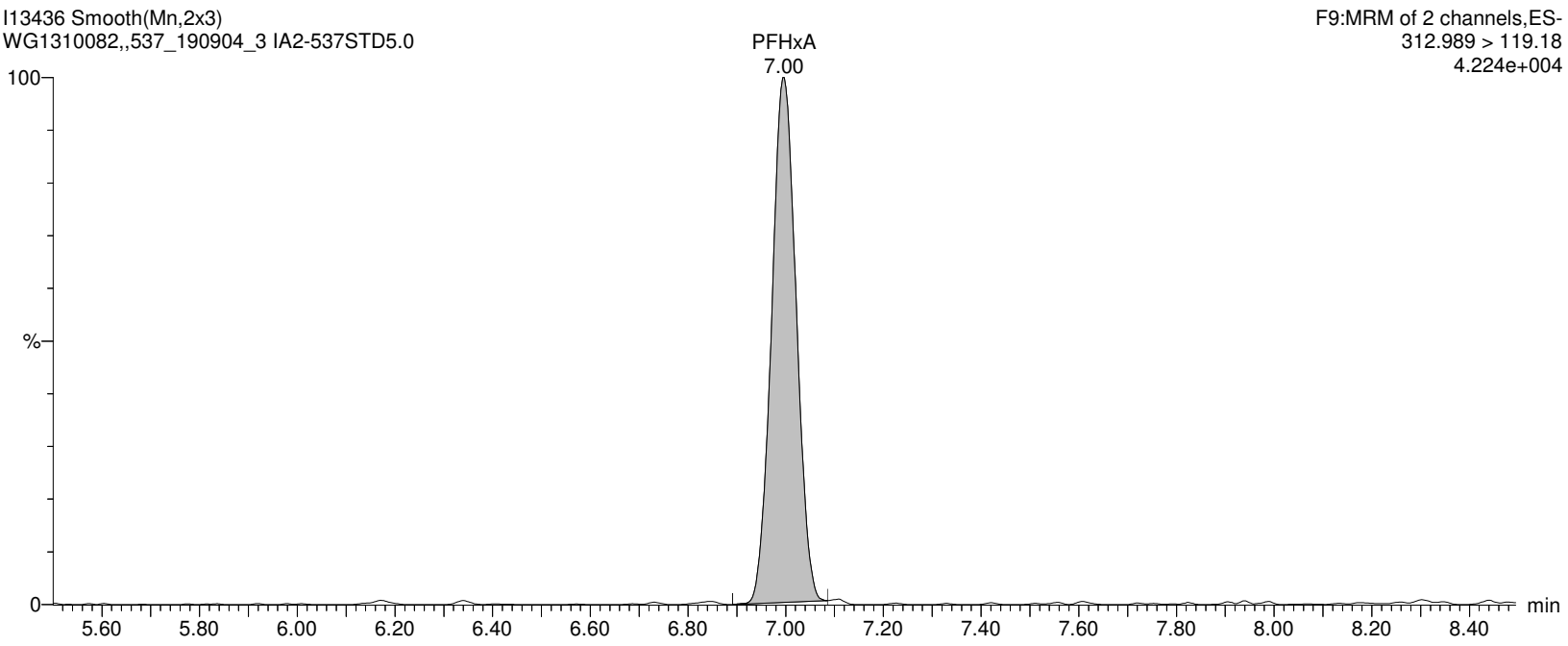
**PFHxA**





all concentration units in (ng/mL)

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Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
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**Tune Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\181009_TUNE.IPR**
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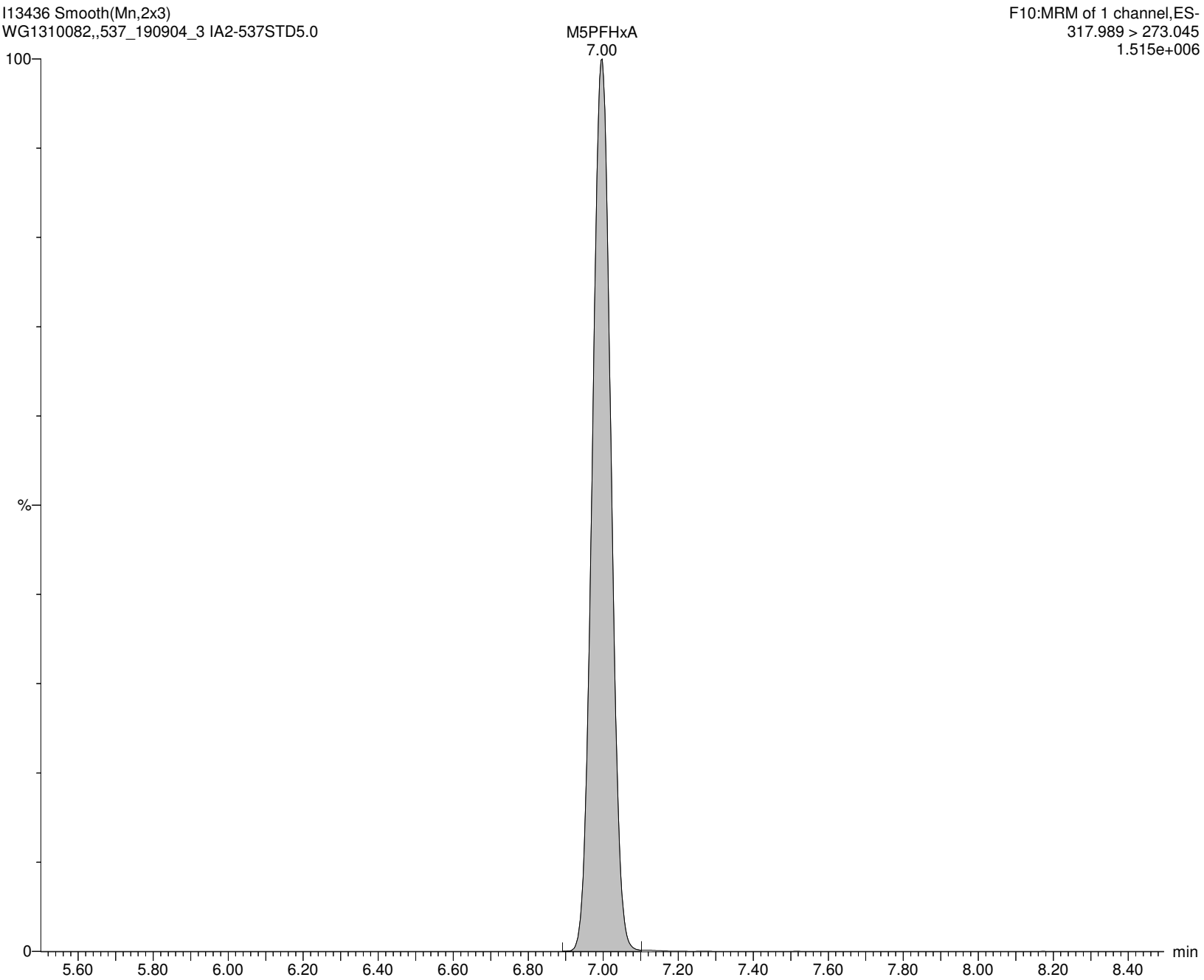
**M5PFHxA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
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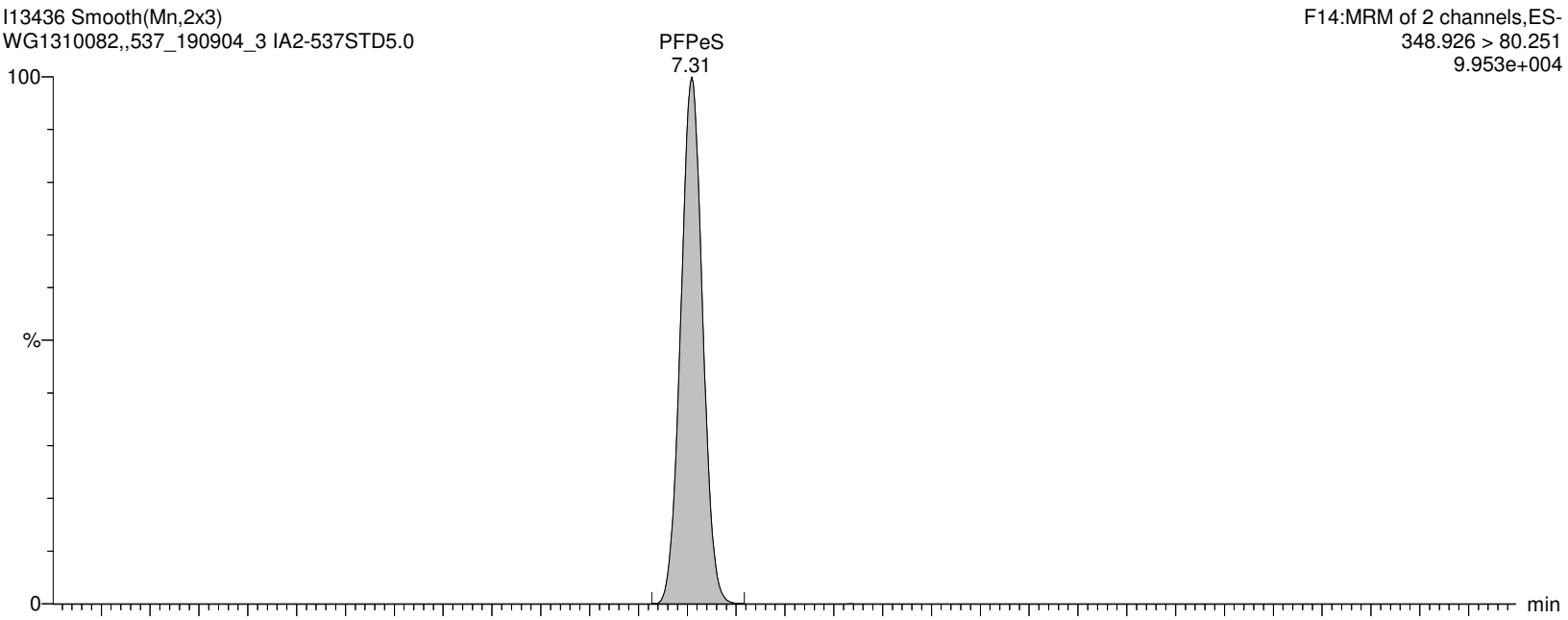
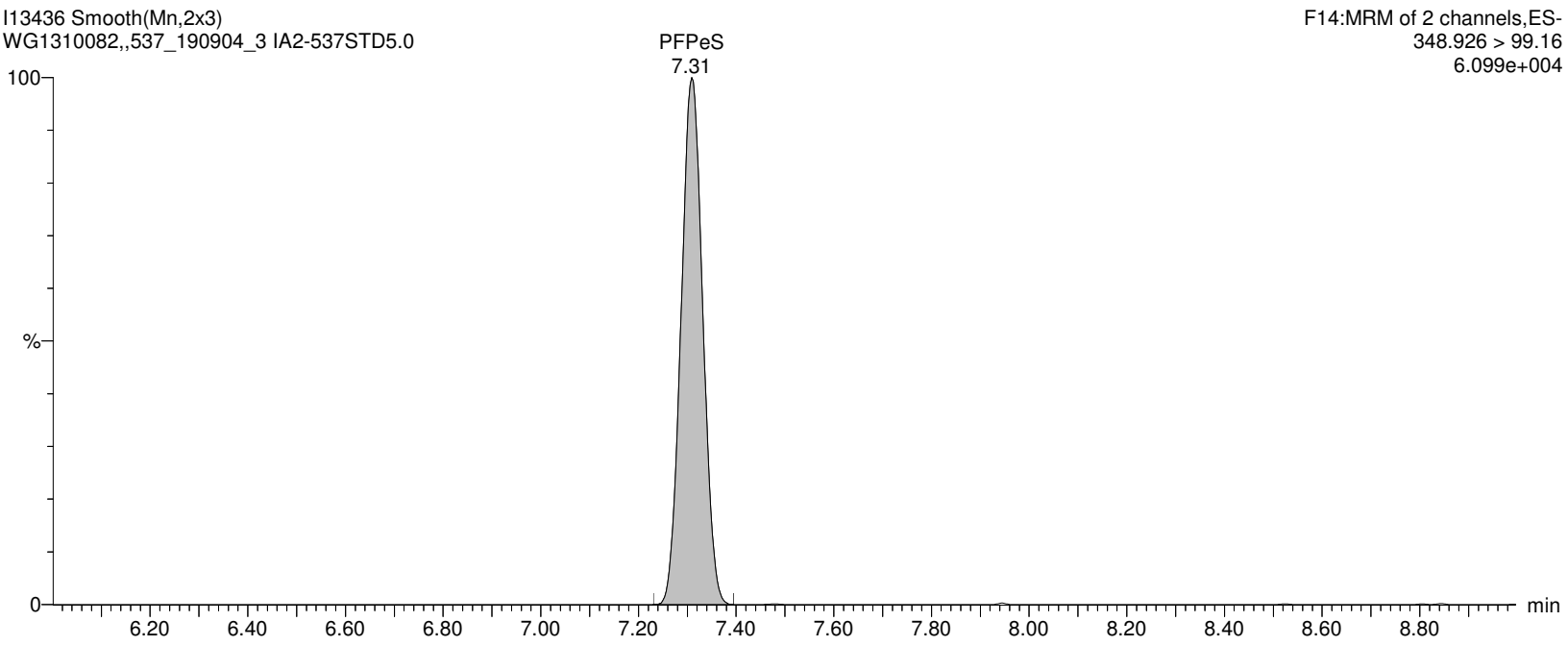
**PFPeS**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
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**Vial: 1:A,4**
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**Tune Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\181009_TUNE.IPR**
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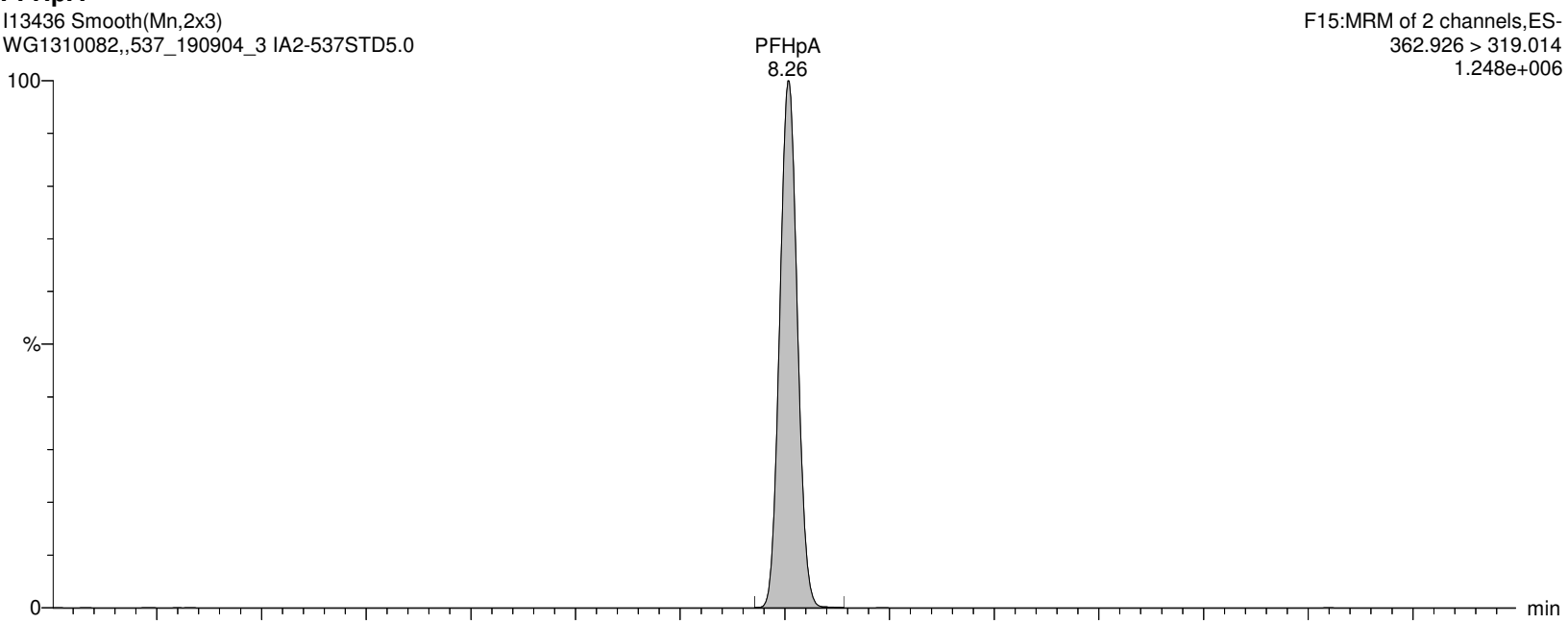
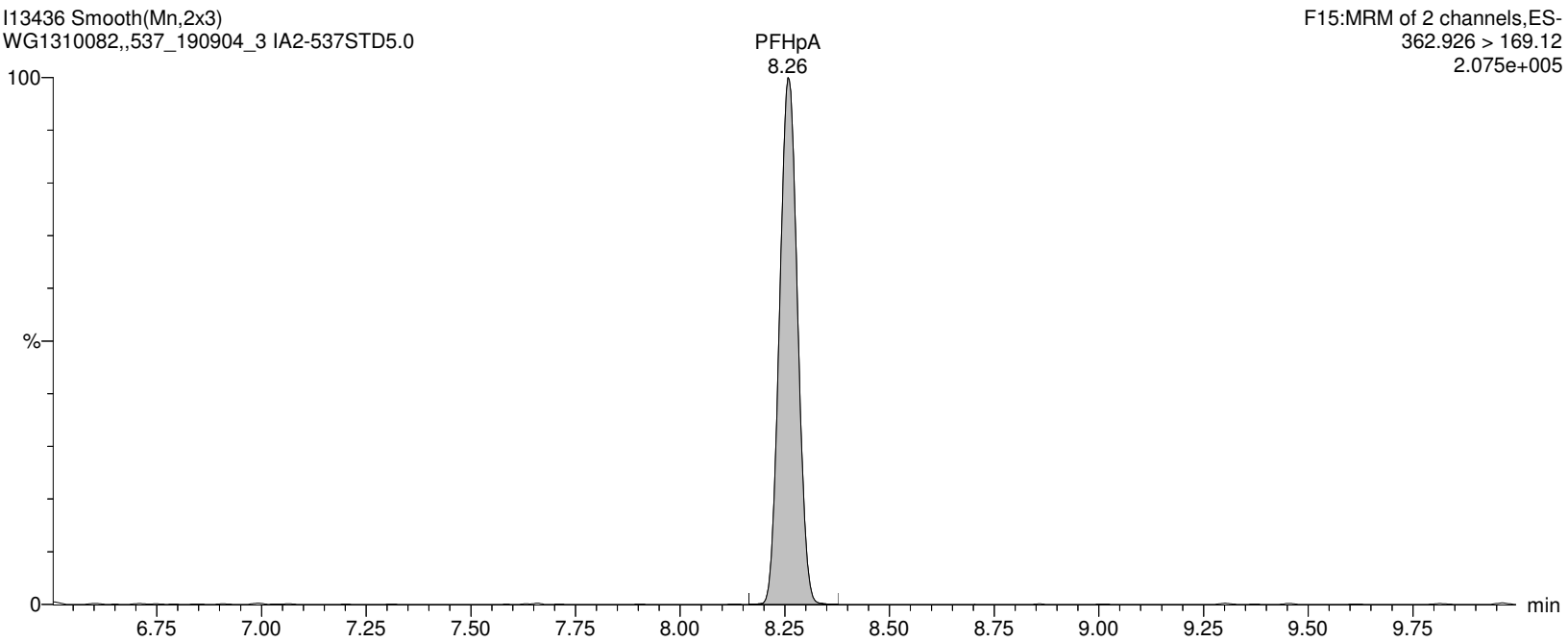
**PFHpA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
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**Inlet Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\LCMS_537_ISO_B**
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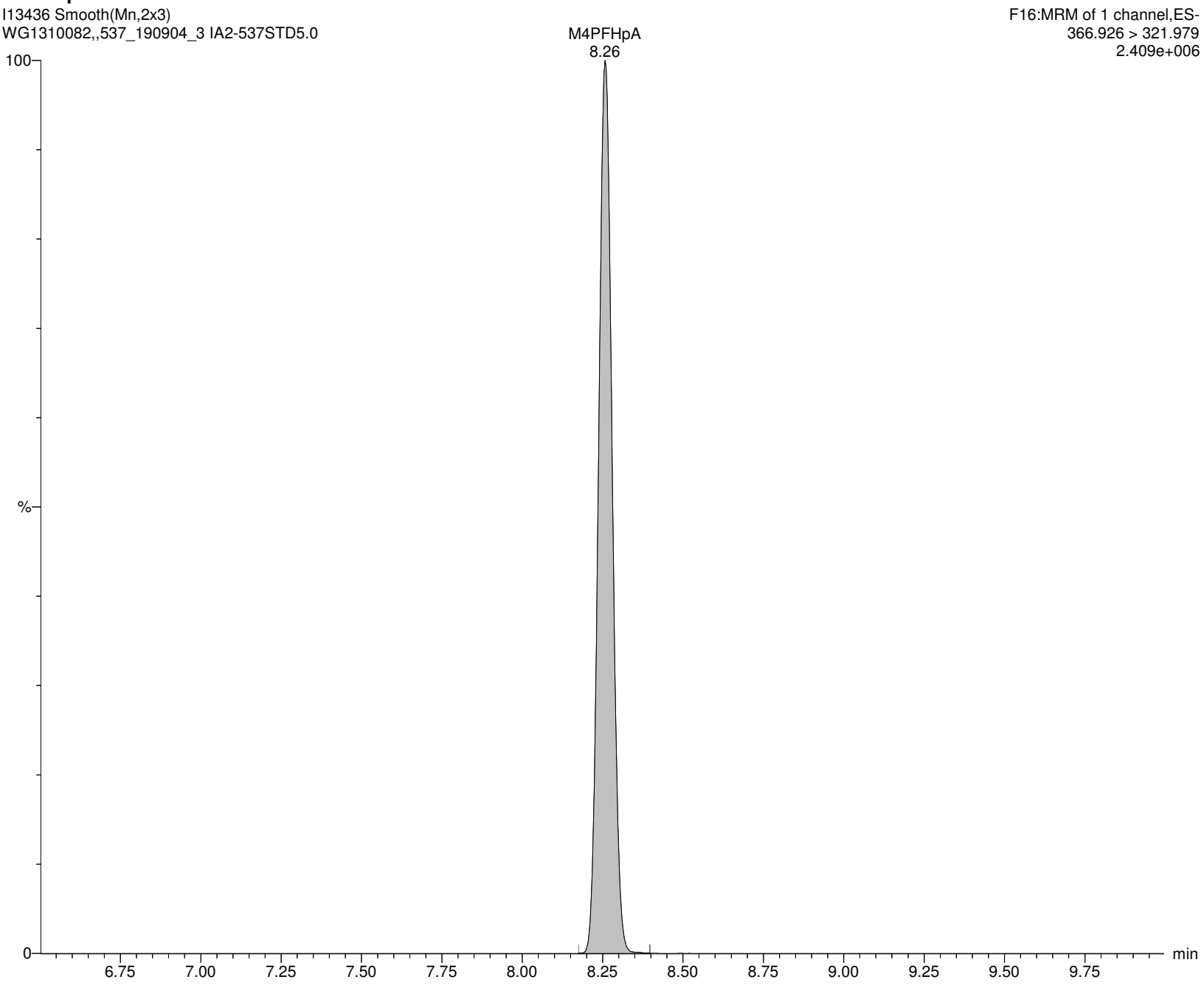
**M4PFHpA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
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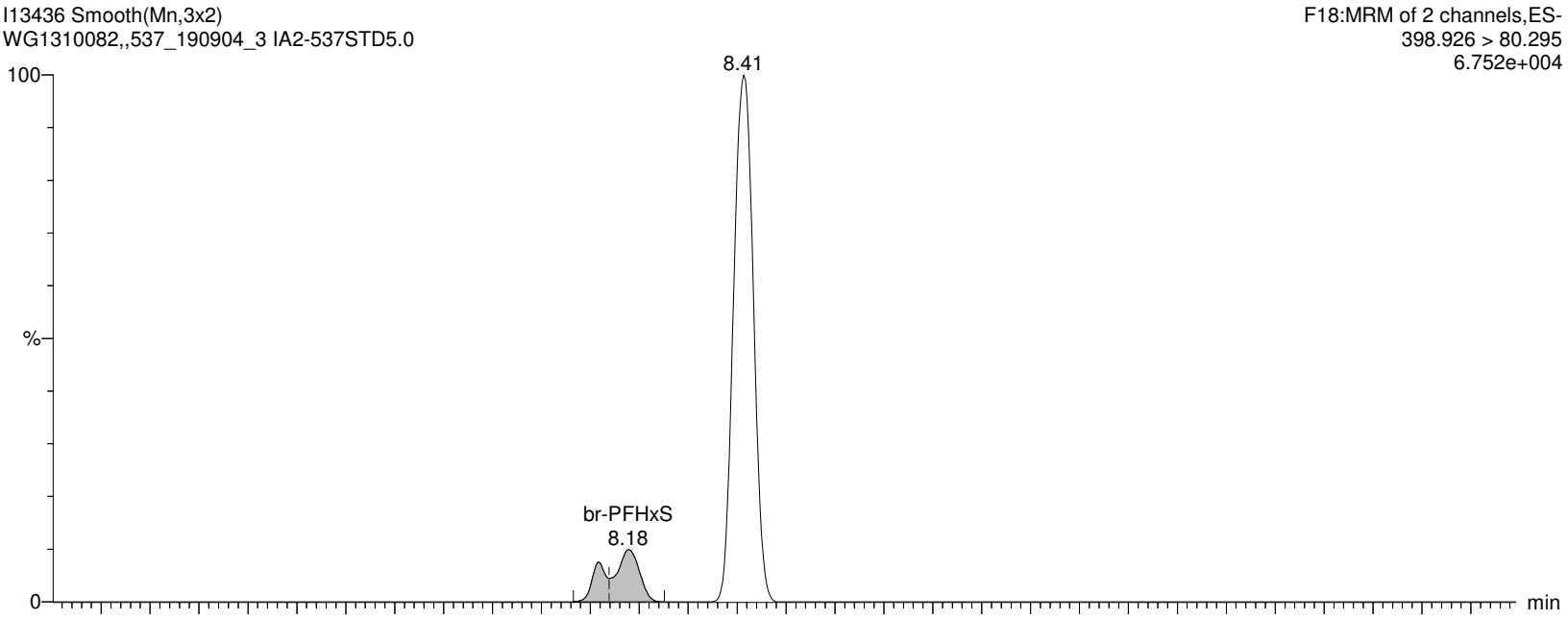
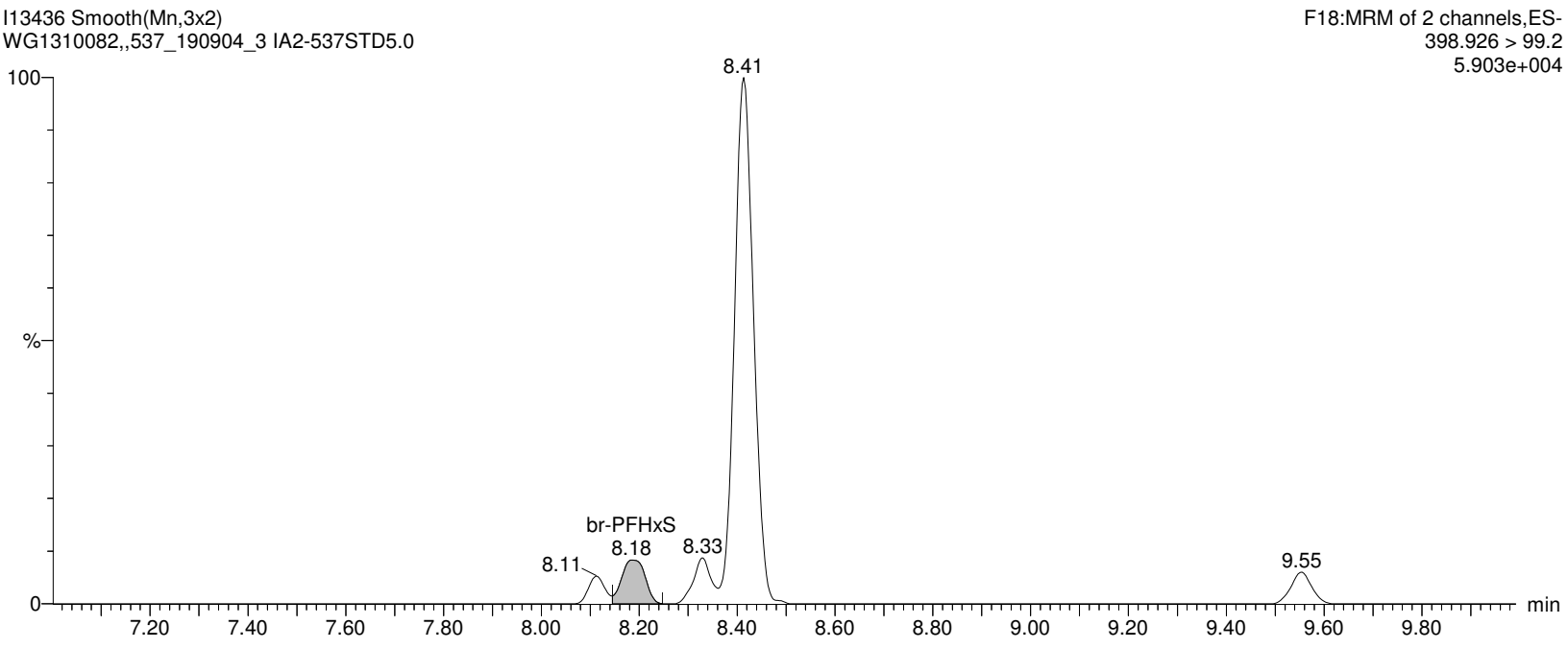
**Tune Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\181009_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**br-PFHxS**





all concentration units in (ng/mL)

Alpha Analytical Inc.
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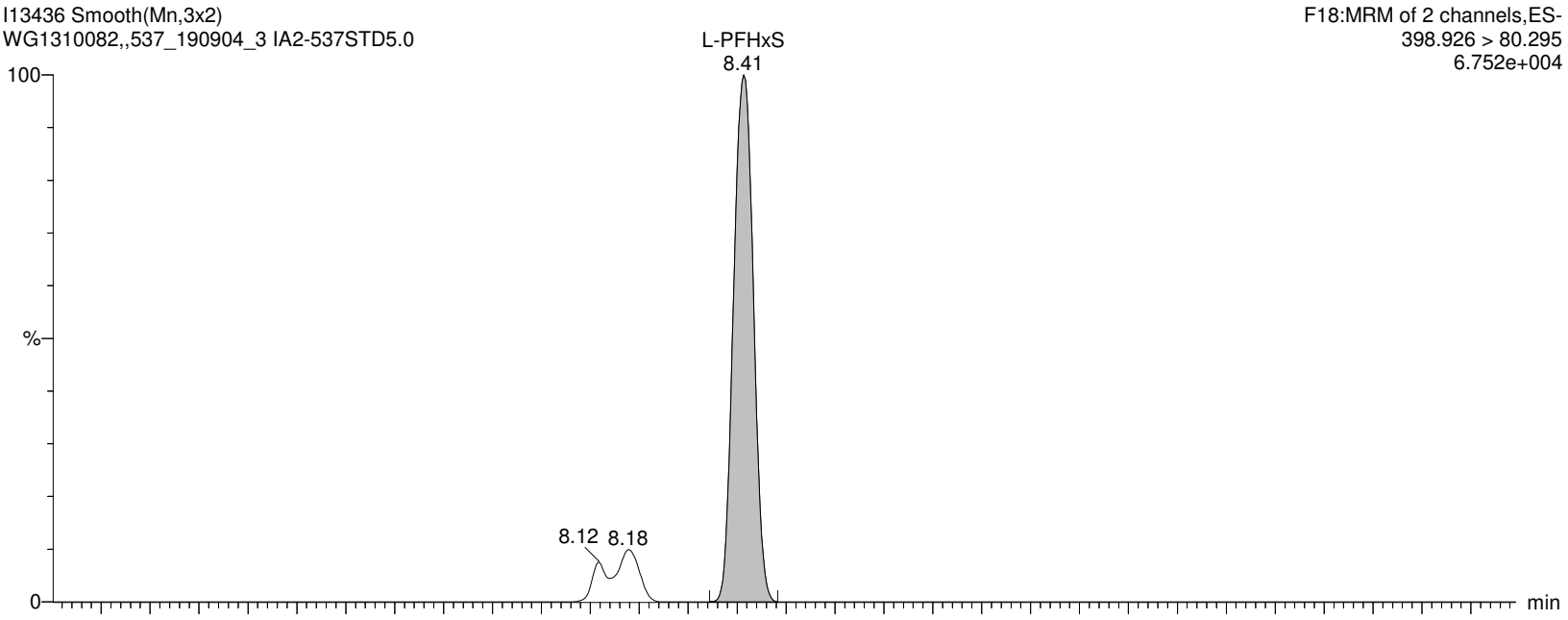
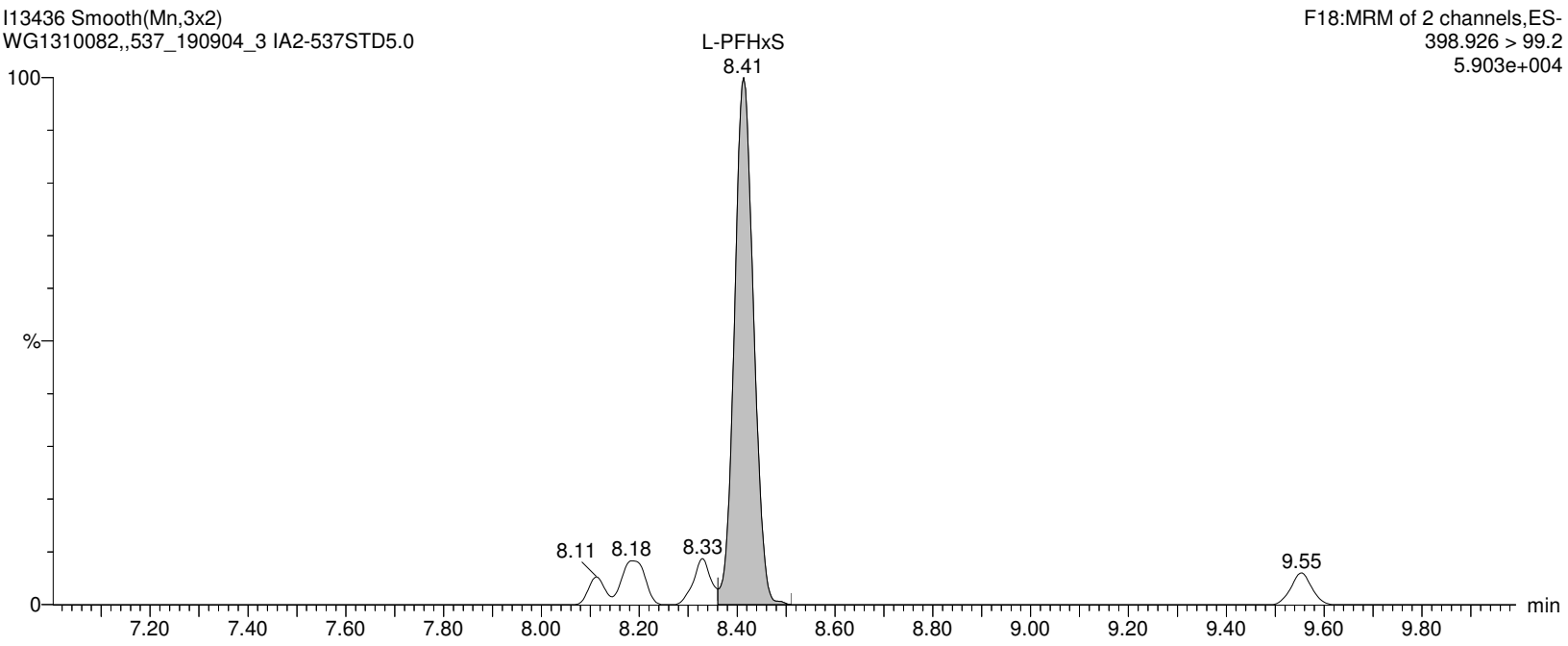
**L-PFHxS**





all concentration units in (ng/mL)

Alpha Analytical Inc.
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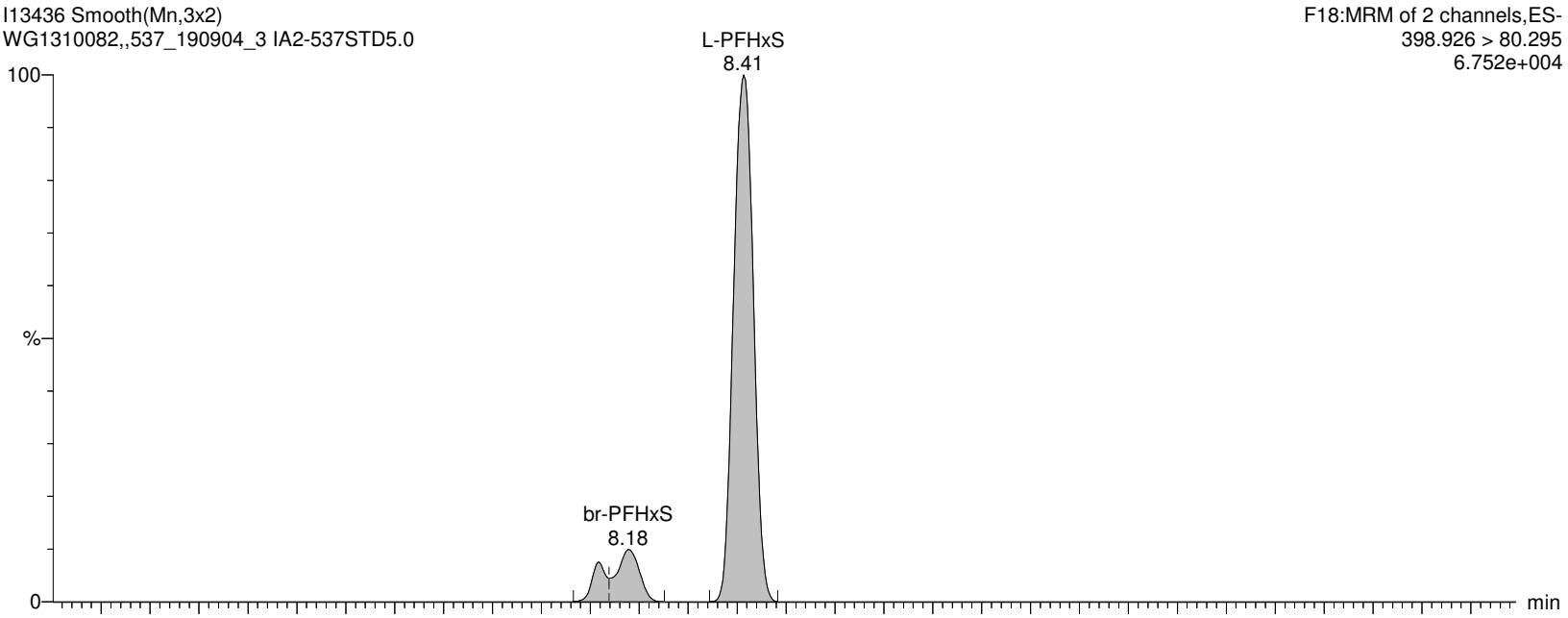
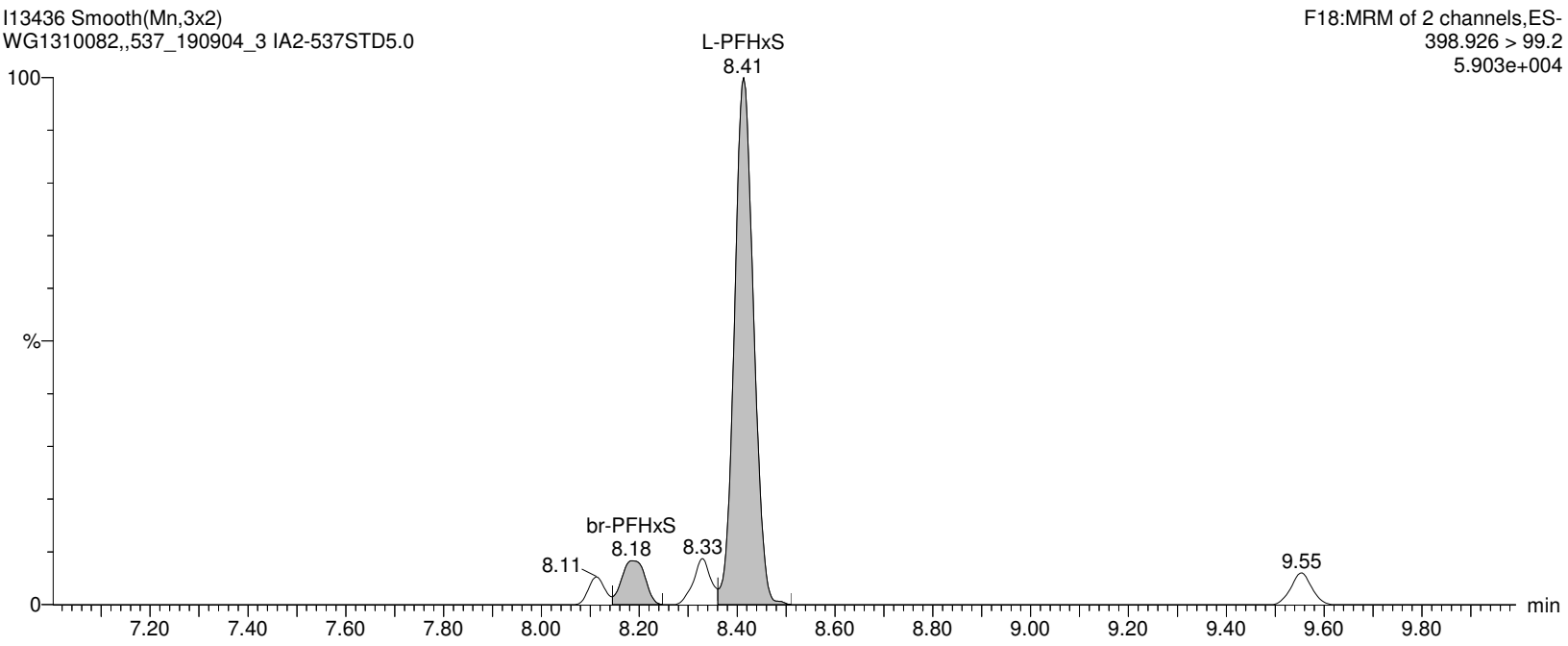
**PFHxS**





all concentration units in (ng/mL)

Alpha Analytical Inc.
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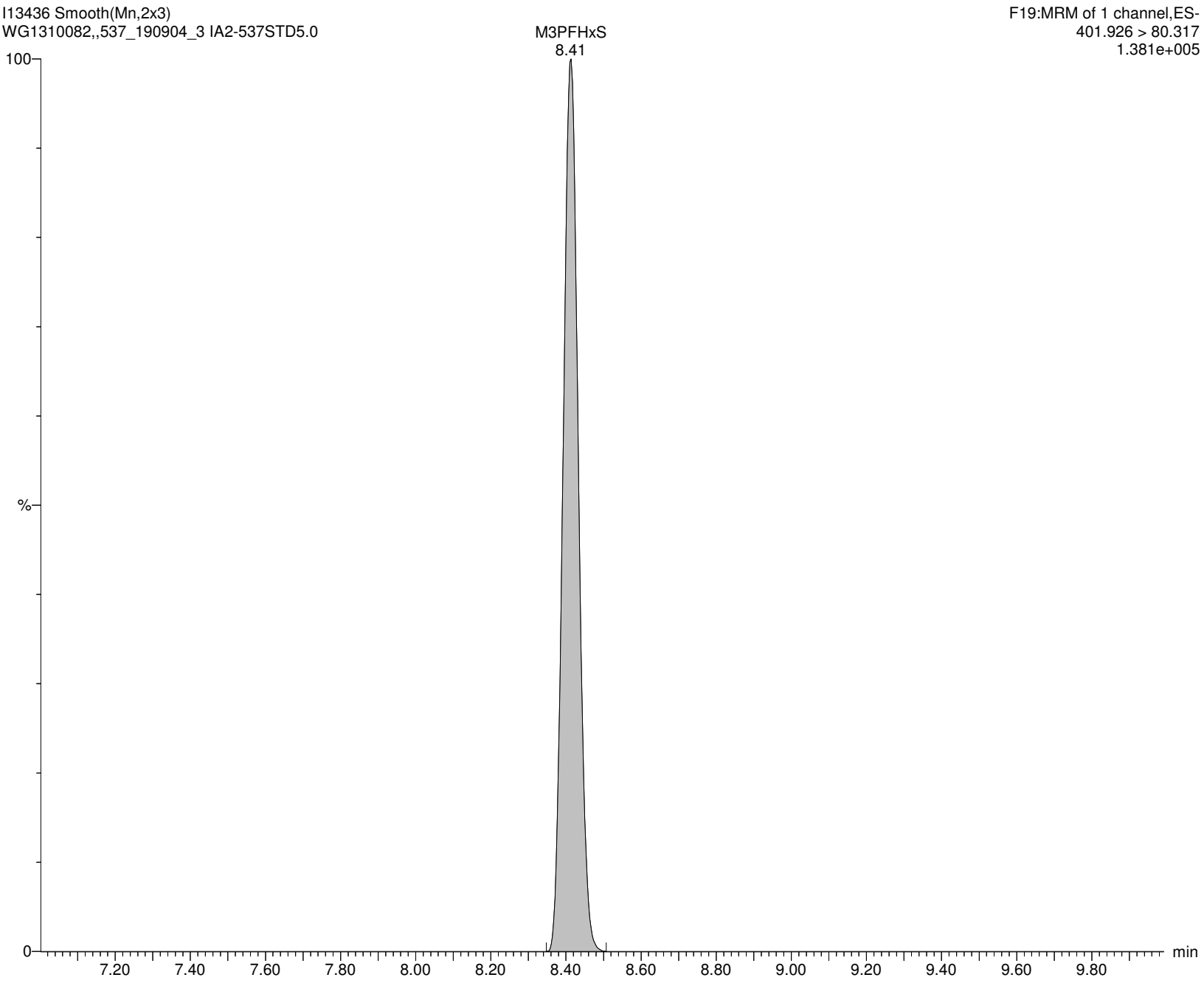
**M3PFHxS**





all concentration units in (ng/mL)

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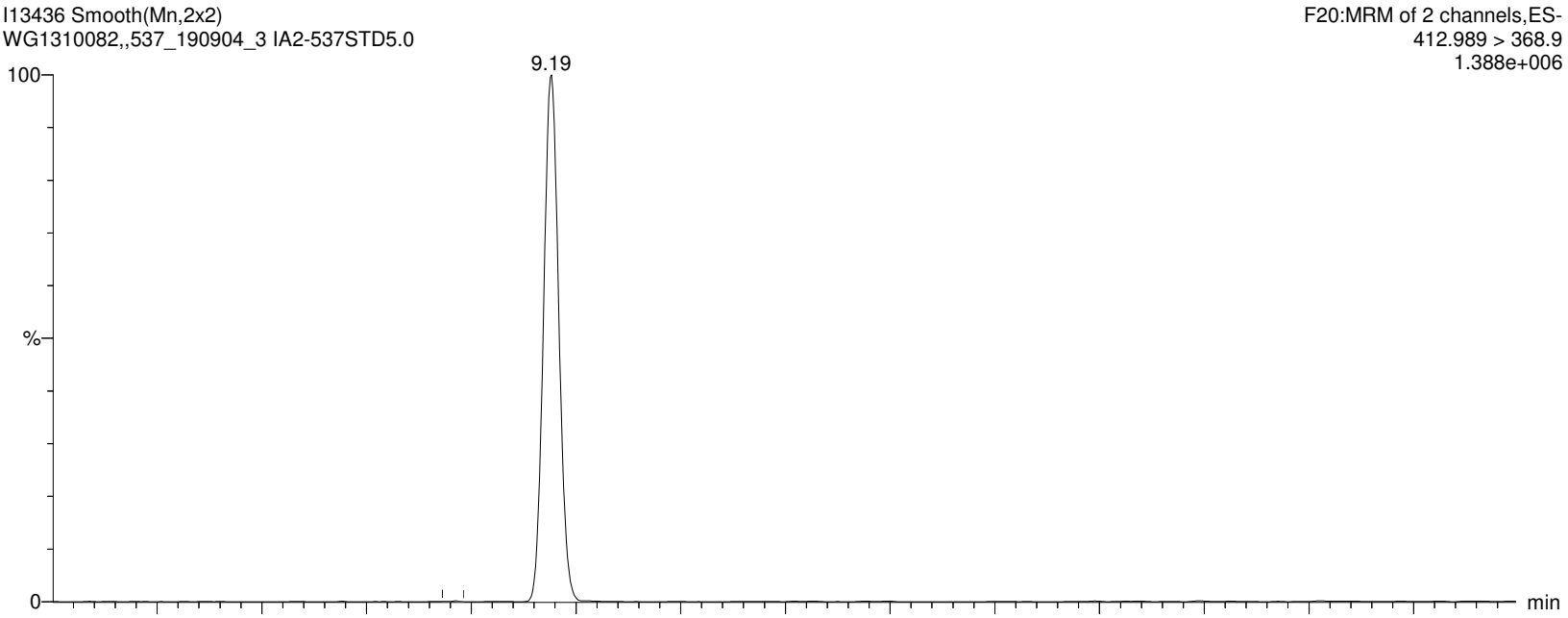
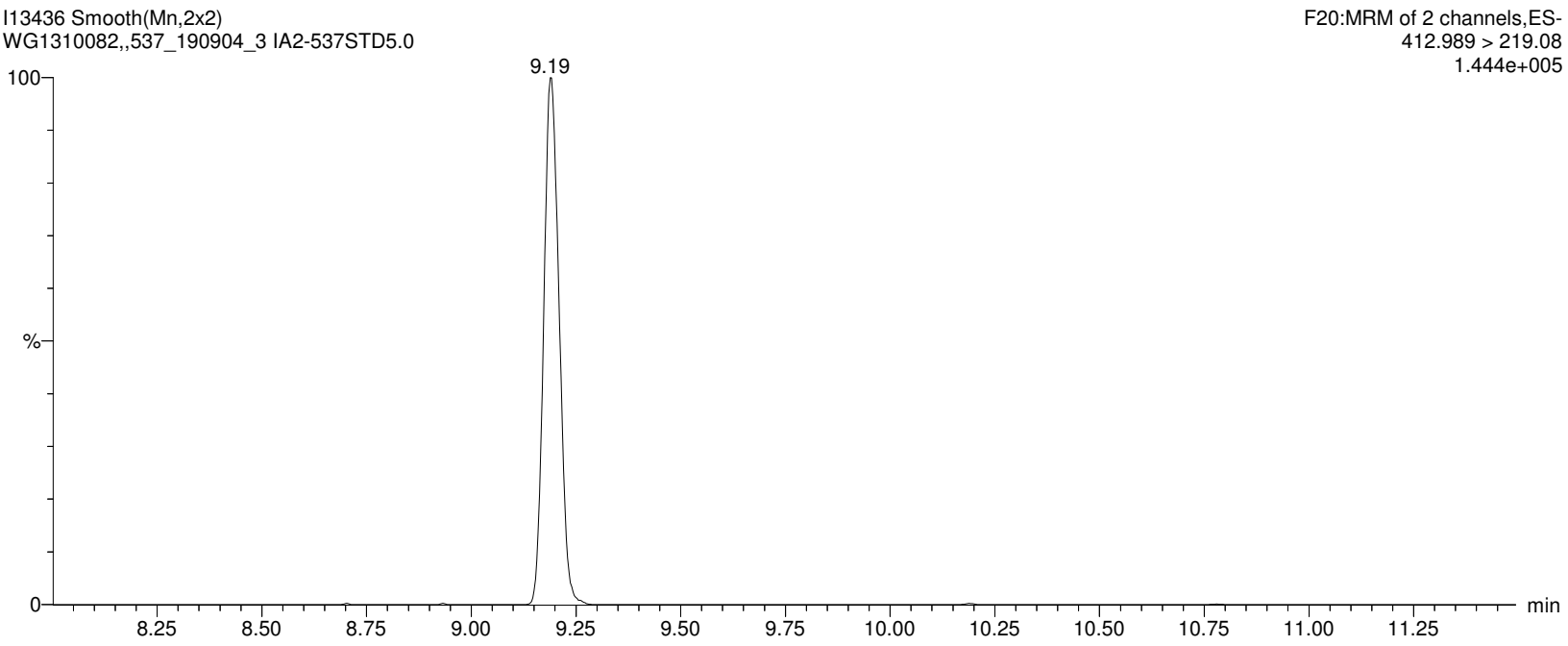
**br-PFOA**



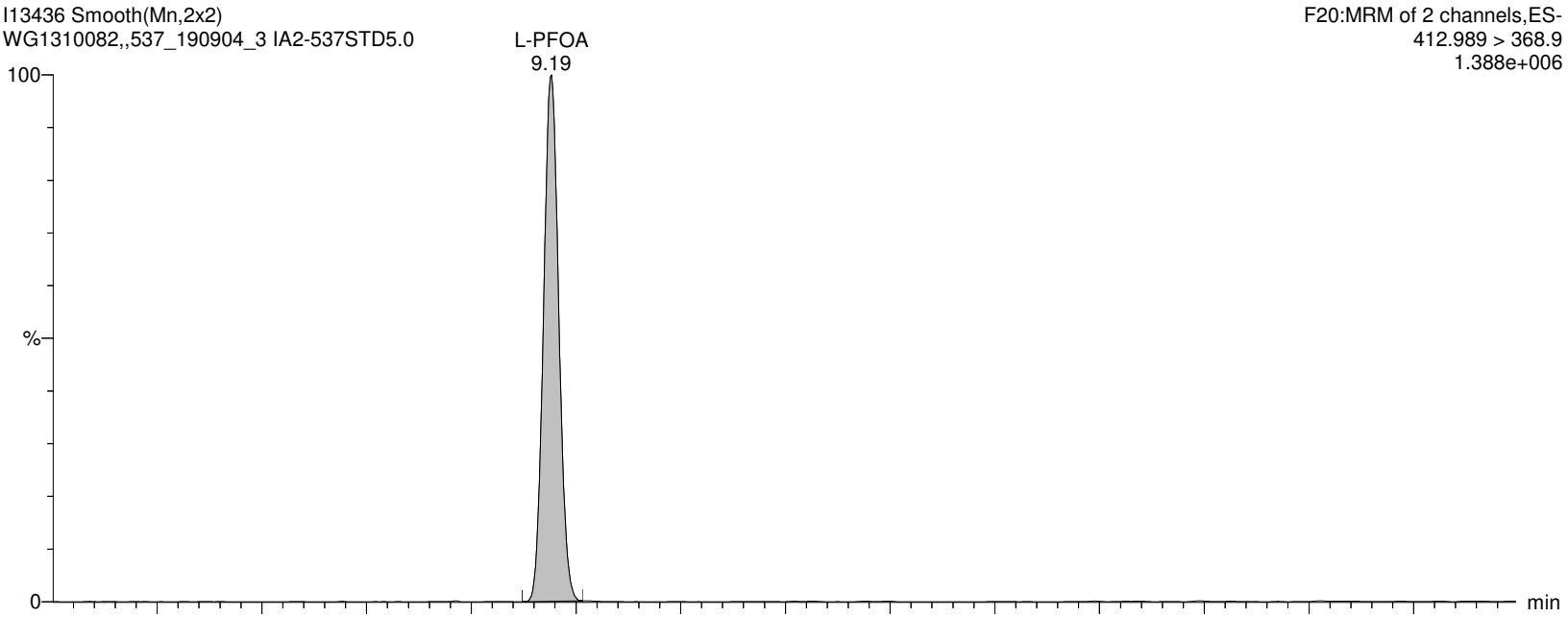


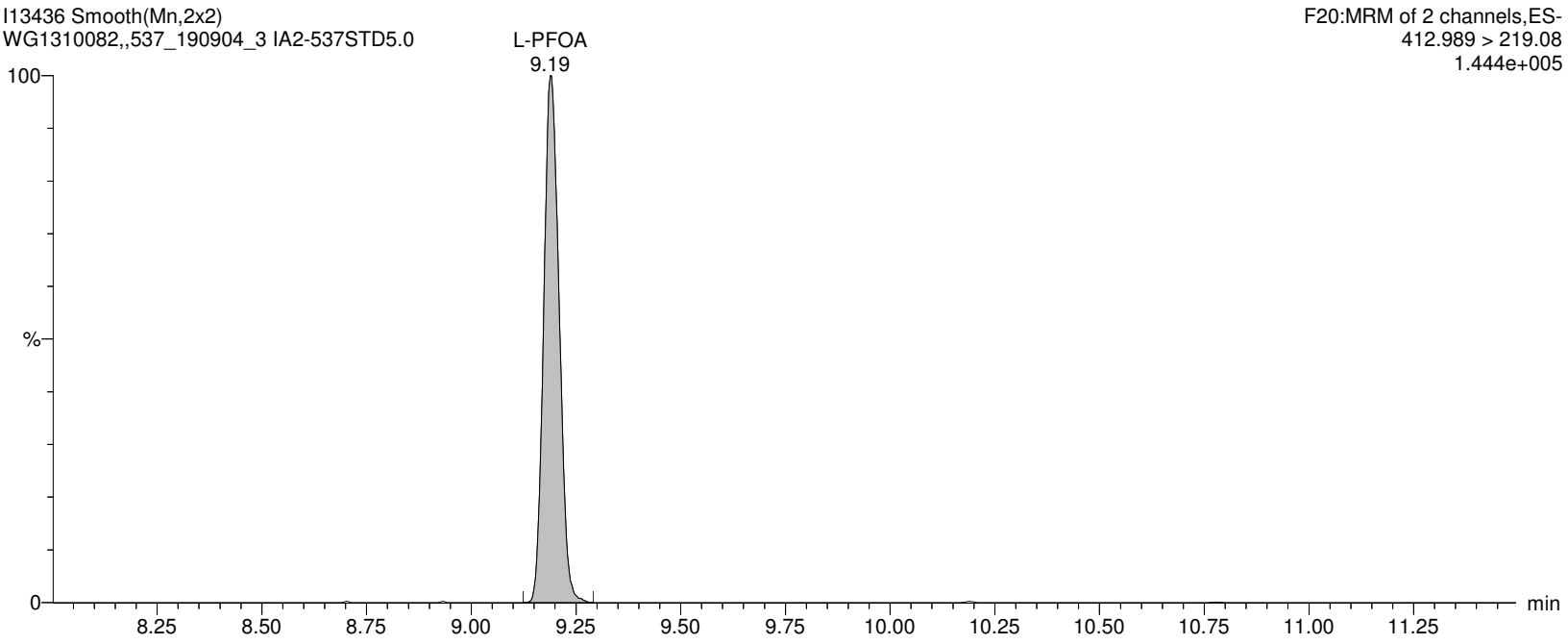
all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
Printed: Monday, November 18, 2019 13:42:52 Eastern Standard Time

**Name: I13436**
**ID: IA2-537STD5.0**
**Date: 18-Nov-2019**
**Time: 11:10:20**
**Description: WG1310082,,537_190904_3**
**User: LCMS02:JW**
**Vial: 1:A,4**
**Instrument: XEVO-TQSmicro#QEB0050**
**Inlet Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\LCMS_537_ISO_B**
**Tune Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\181009_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**L-PFOA**





all concentration units in (ng/mL)

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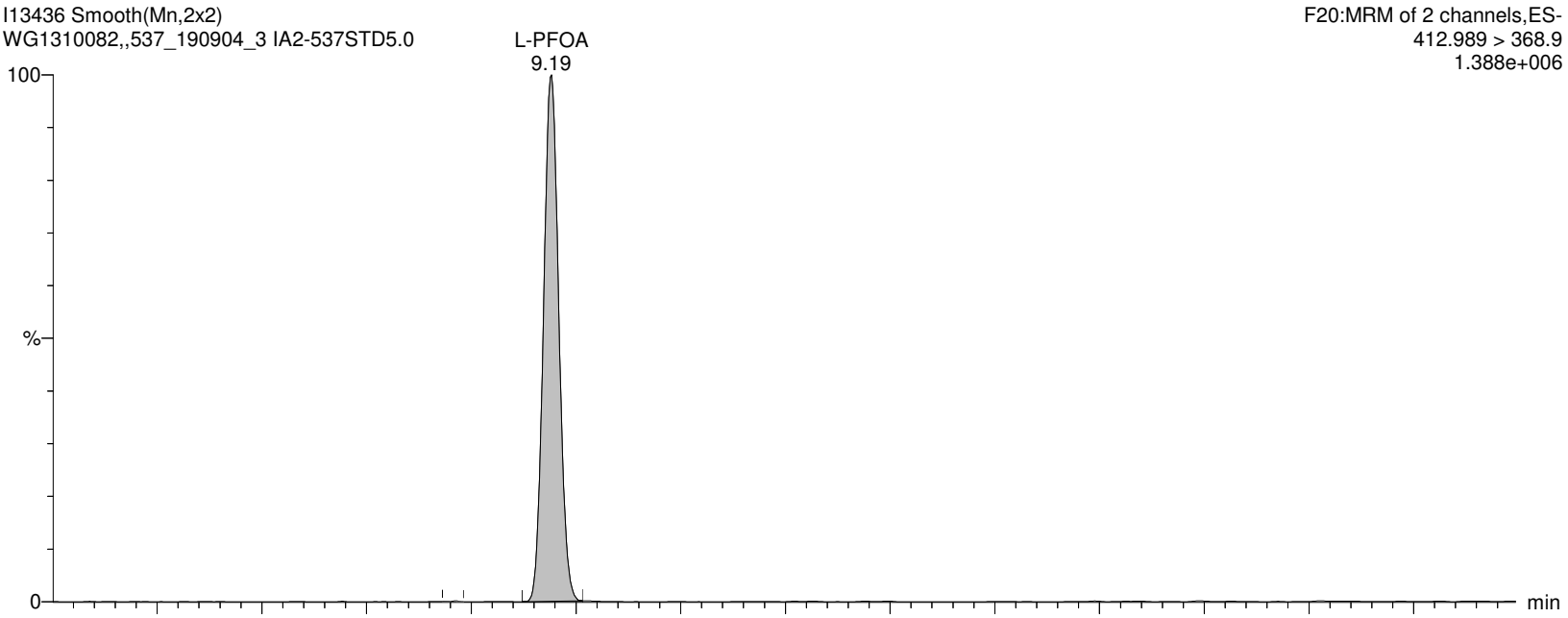
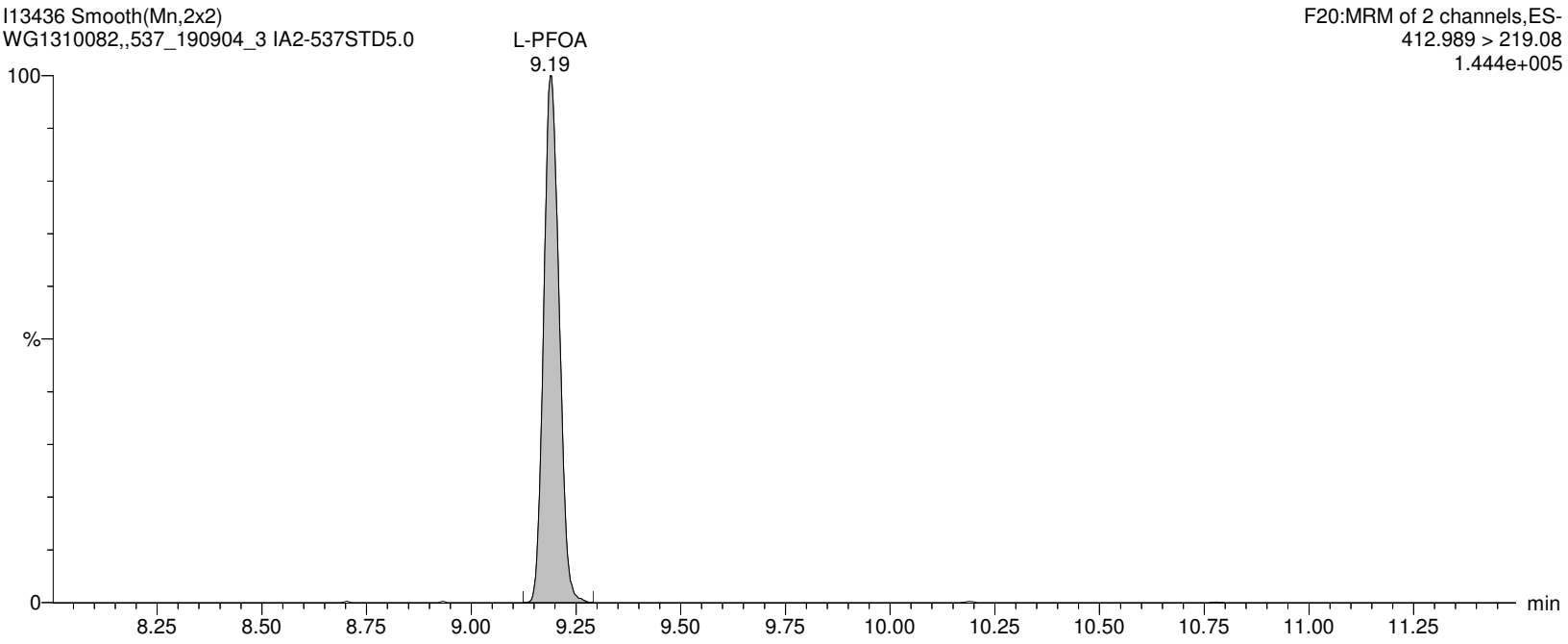
**PFOA**





all concentration units in (ng/mL)

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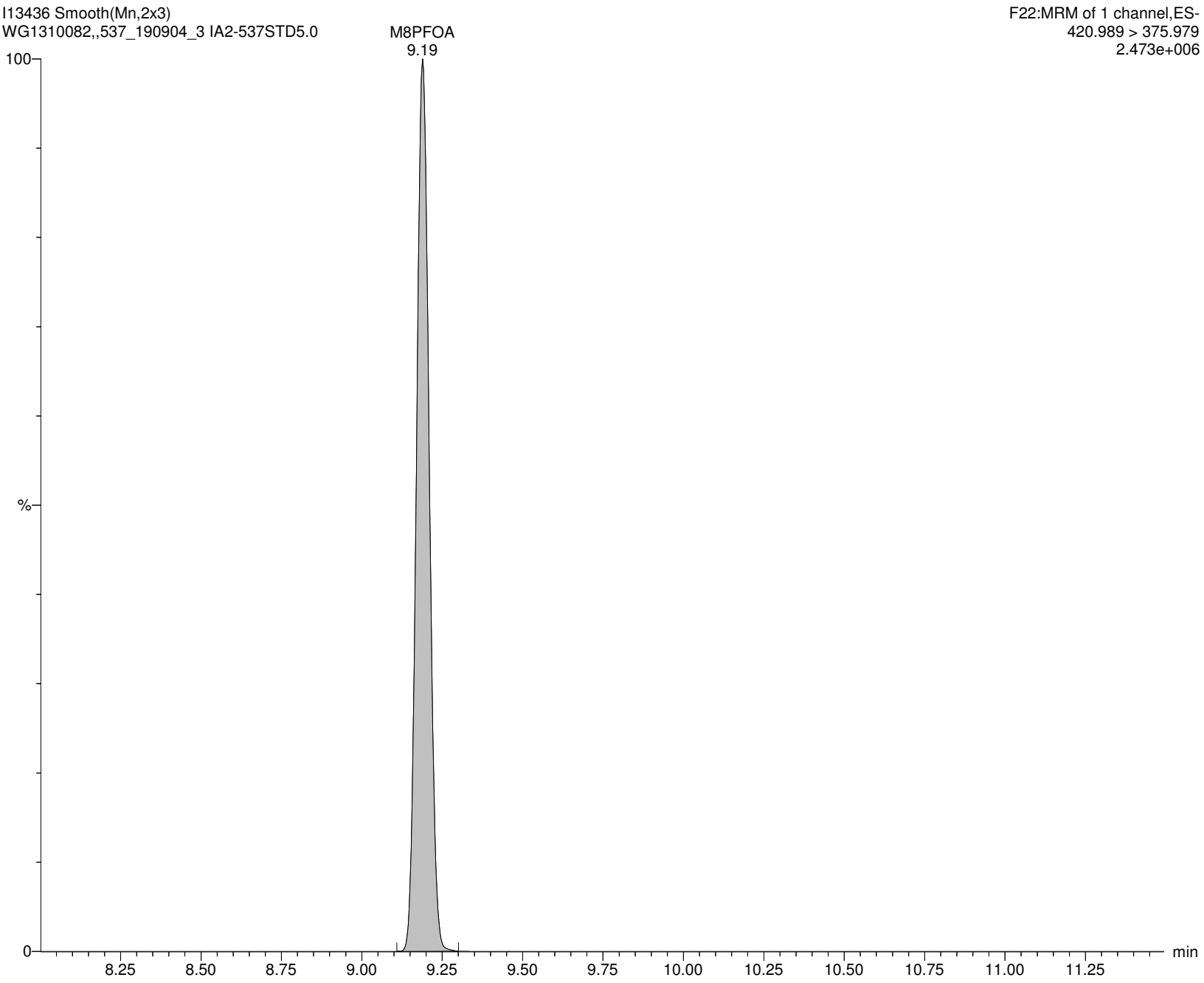



all concentration units in (ng/mL)

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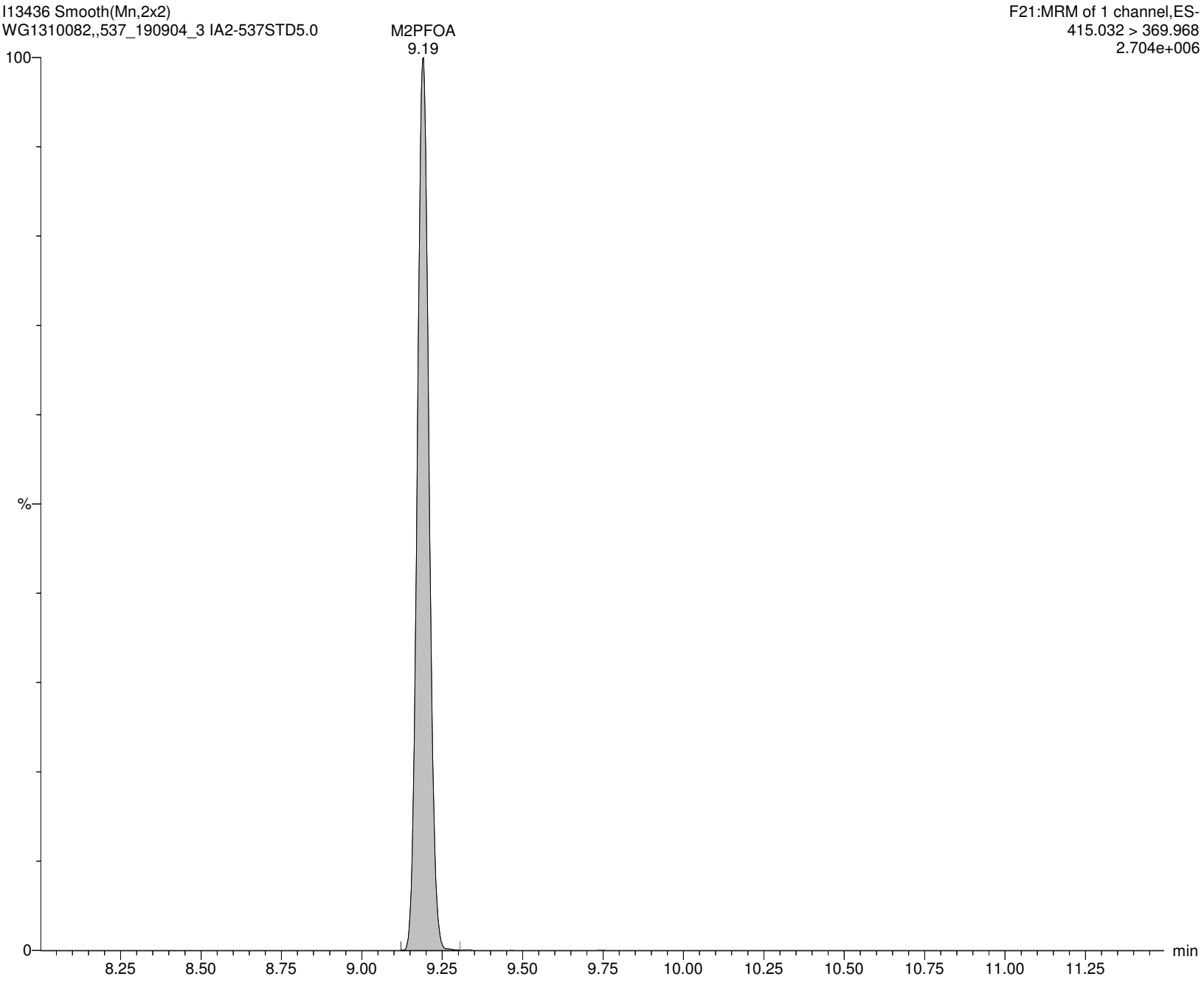
**M2PFOA**





all concentration units in (ng/mL)

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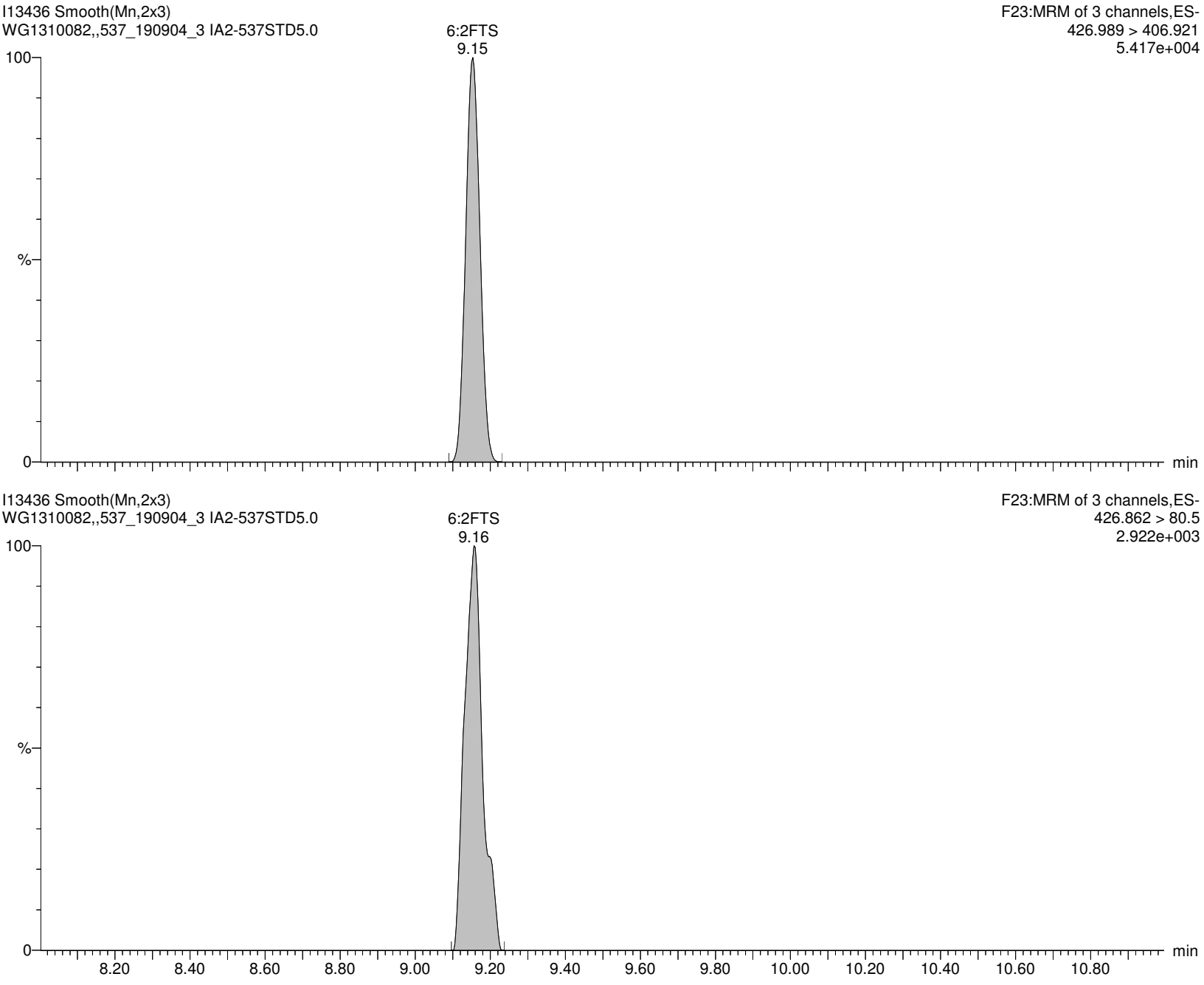
**6:2FTS**





all concentration units in (ng/mL)

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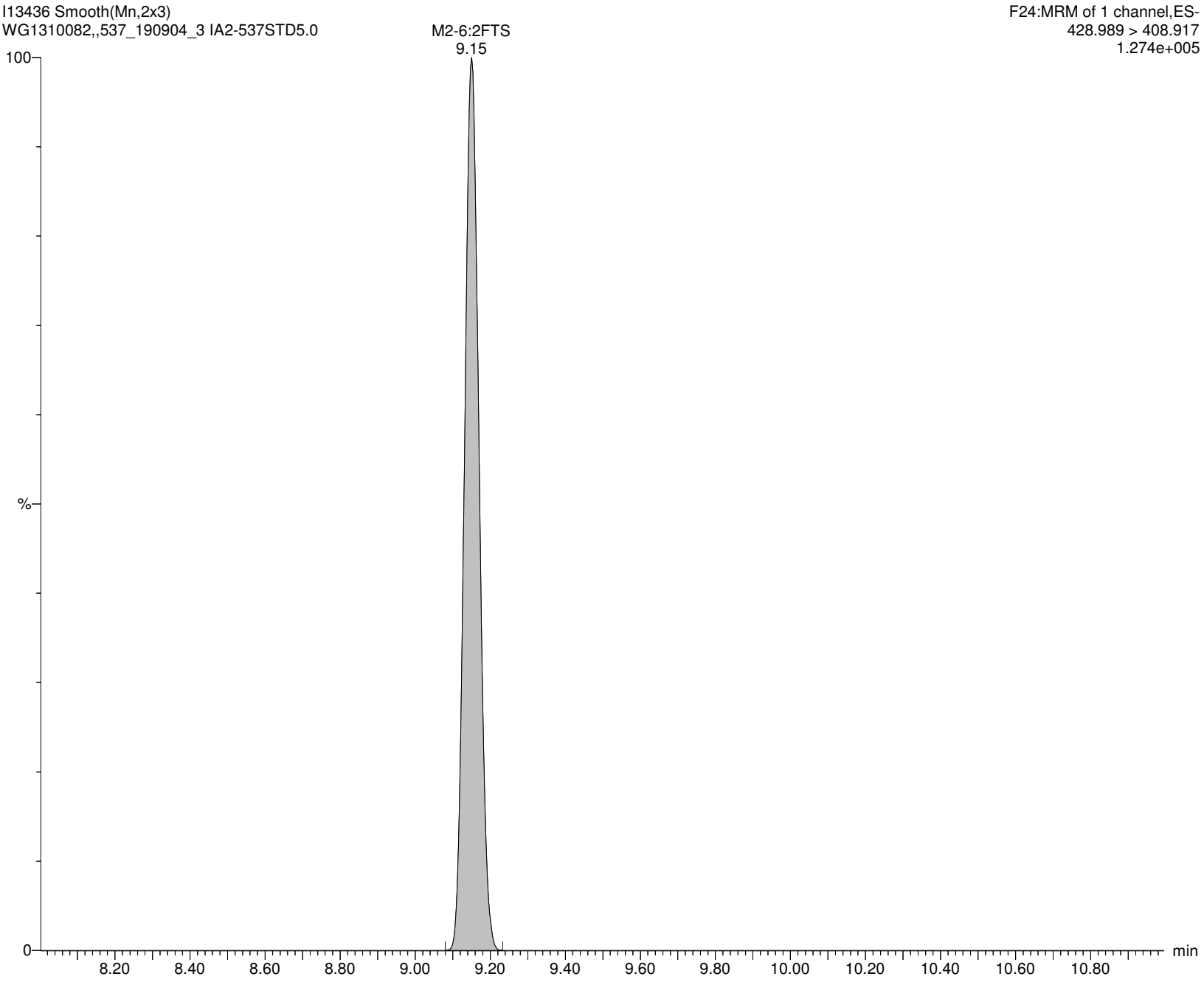
**M2-6:2FTS**





all concentration units in (ng/mL)

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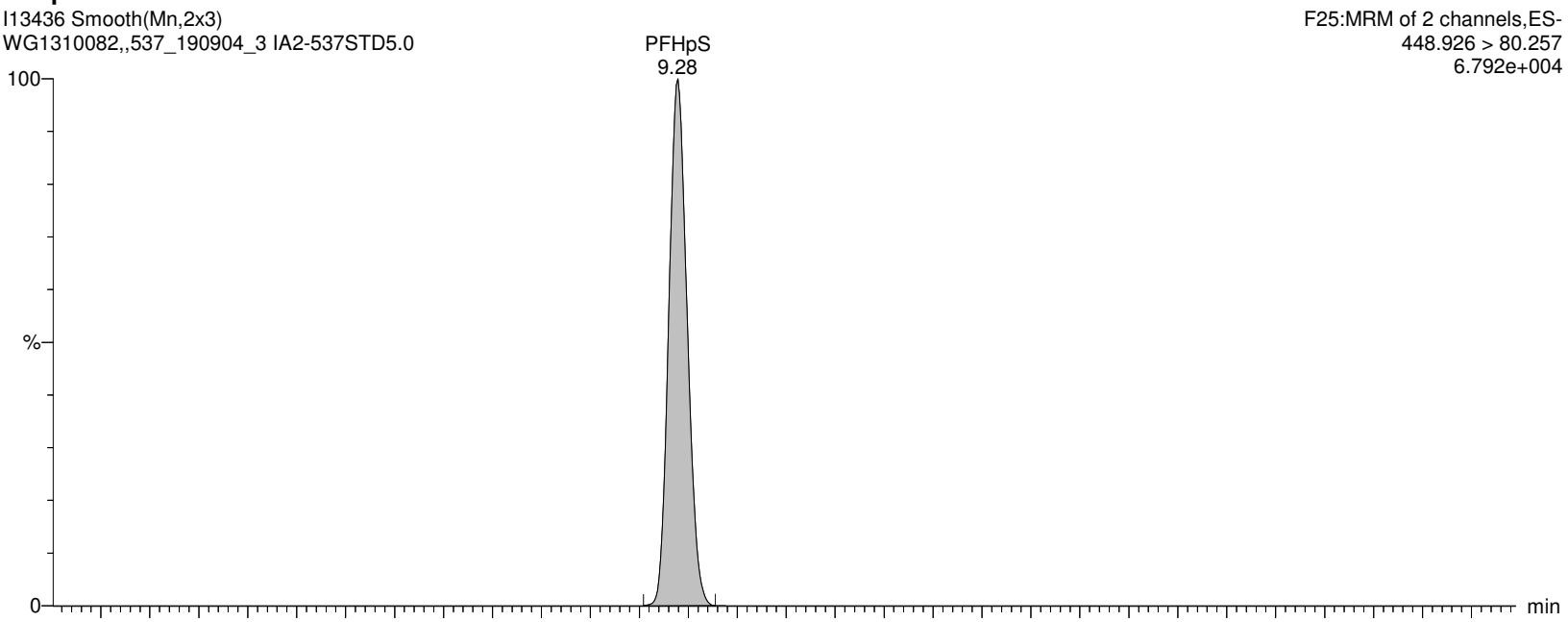


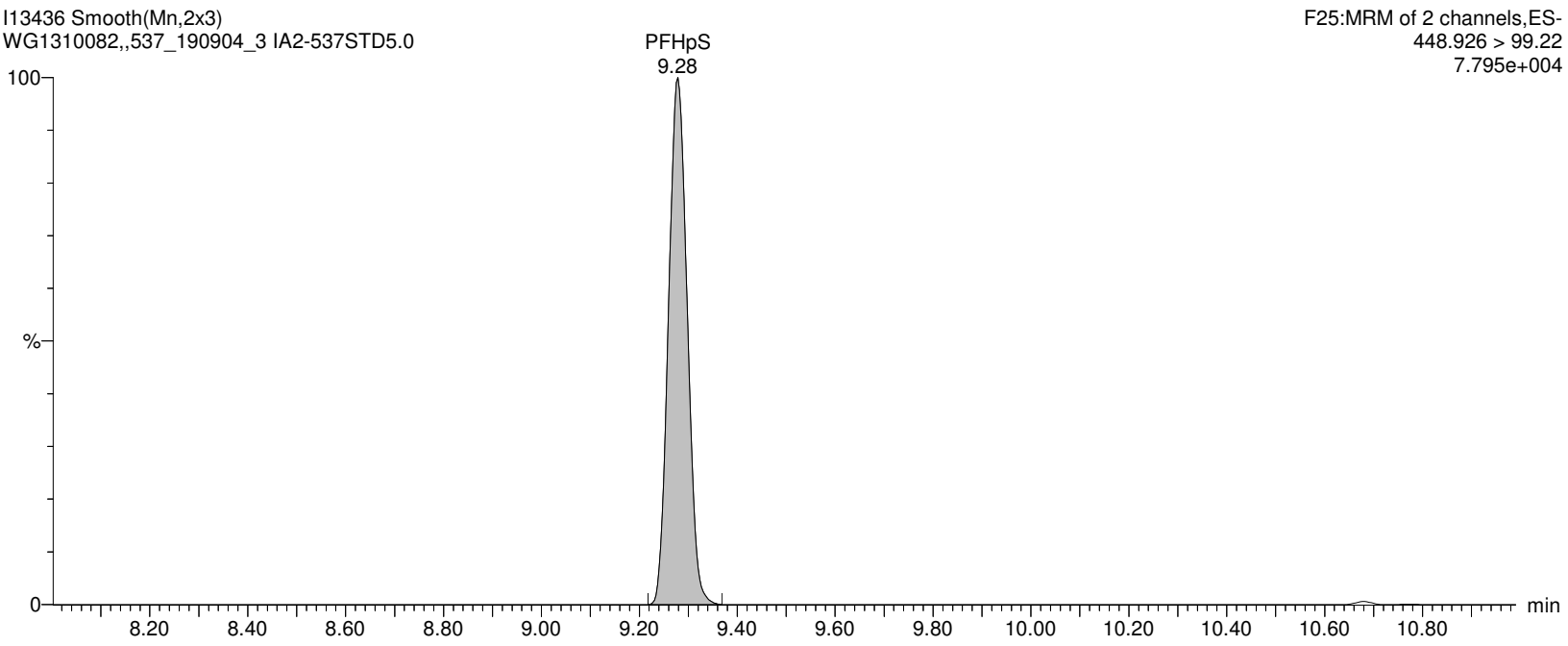



all concentration units in (ng/mL)

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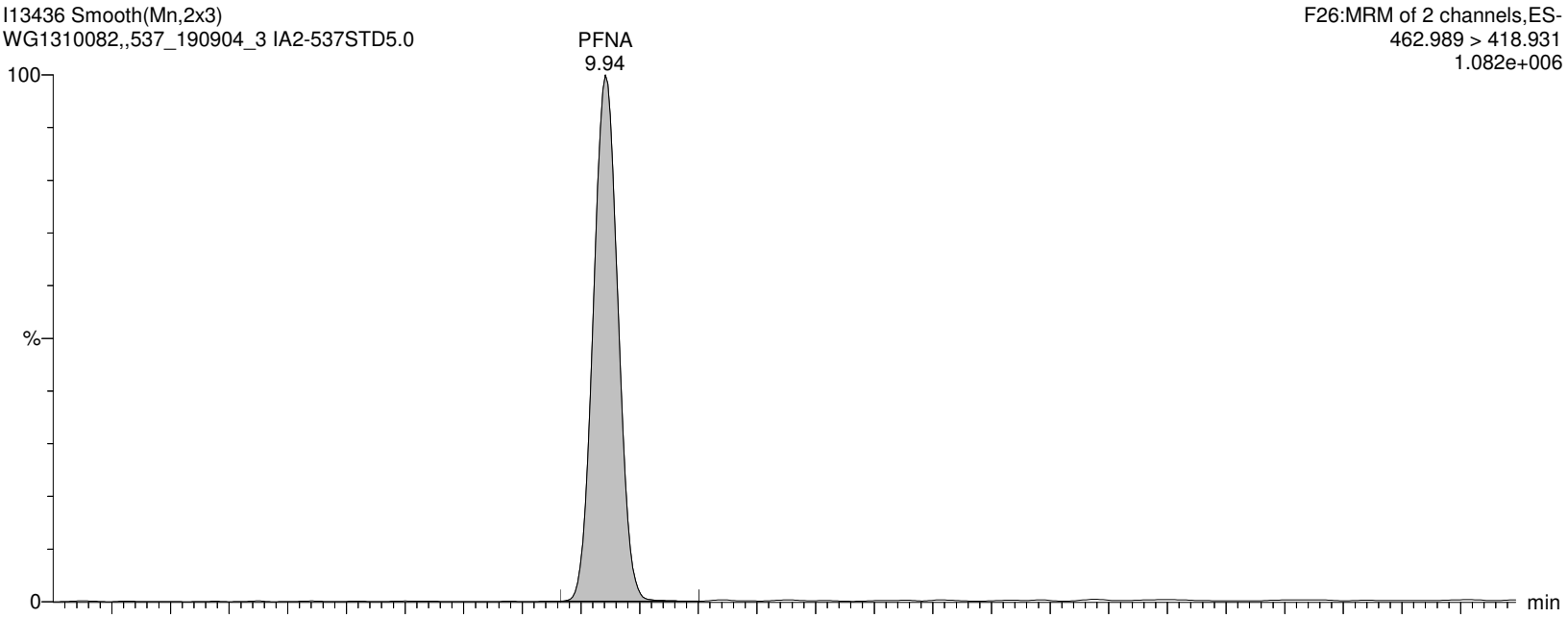


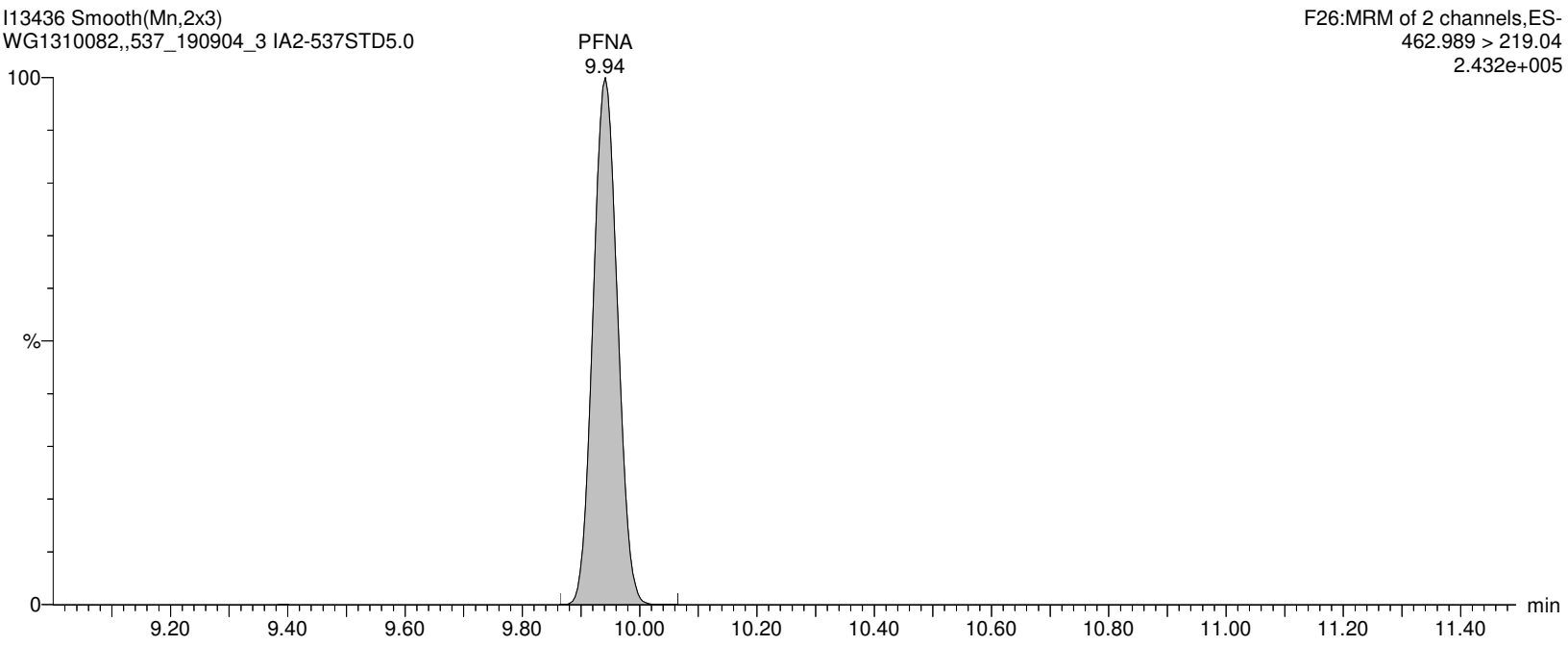



all concentration units in (ng/mL)

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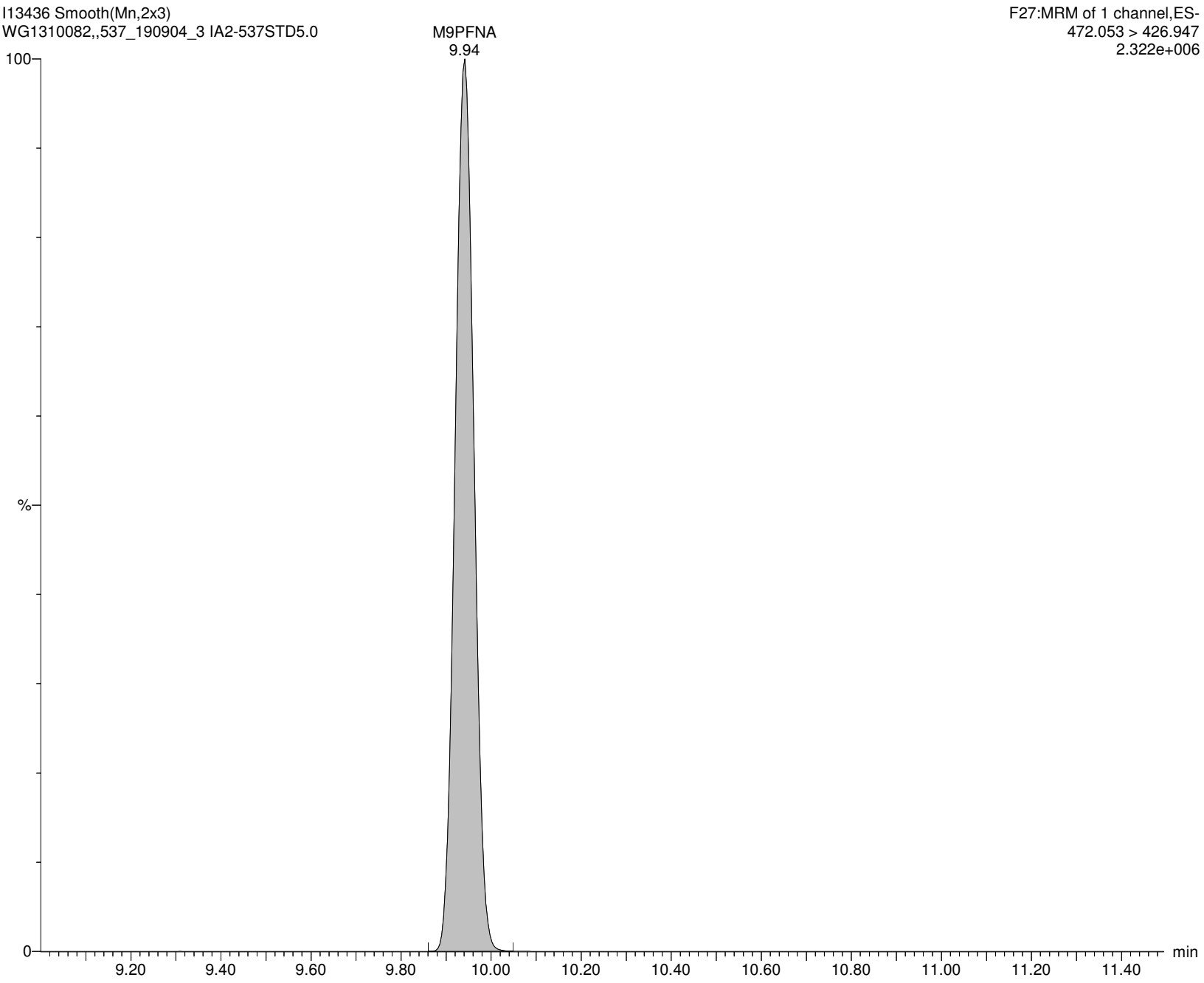
**M9PFNA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
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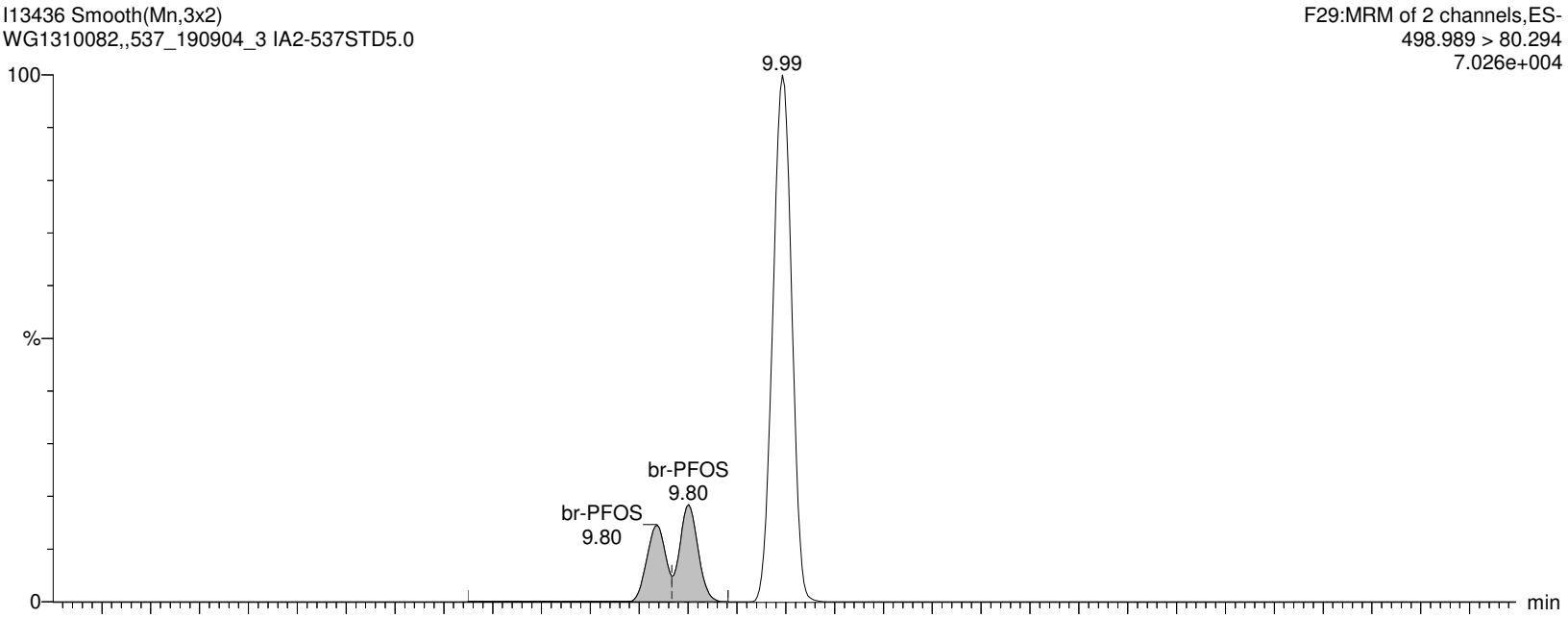
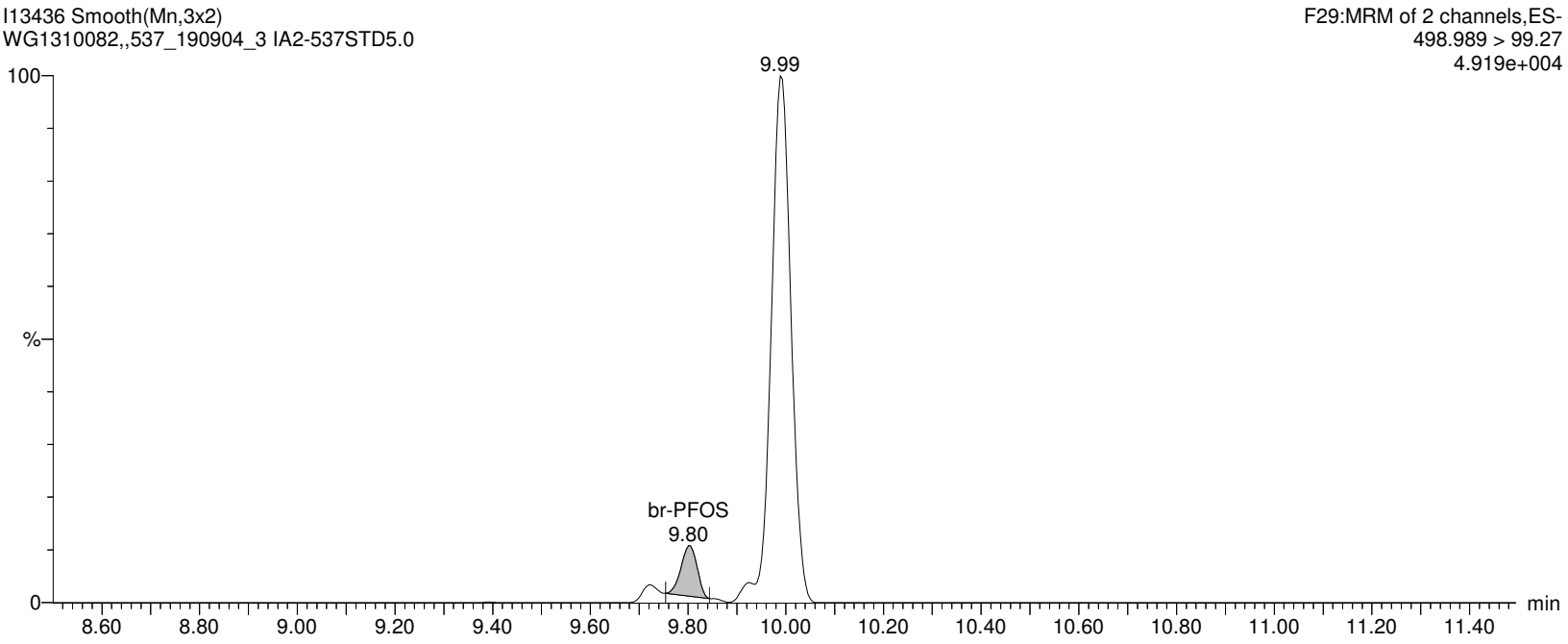
**br-PFOS**





all concentration units in (ng/mL)

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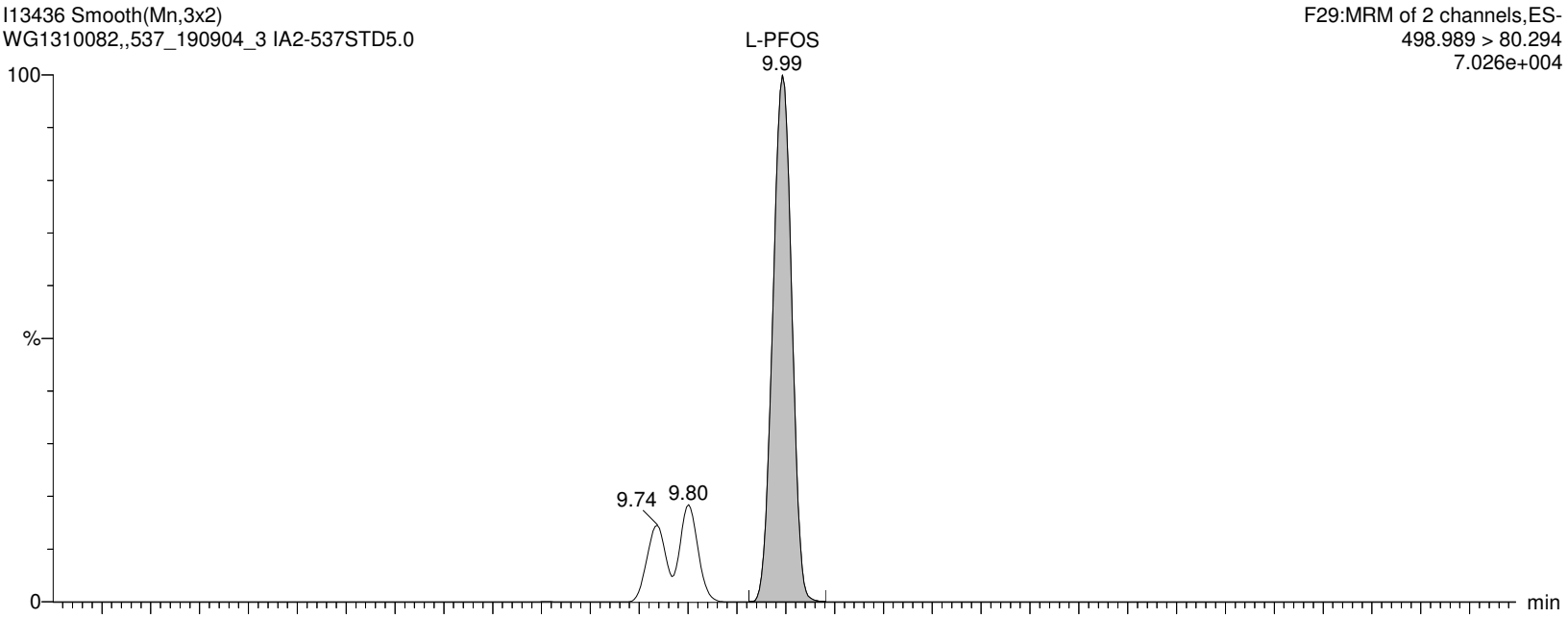
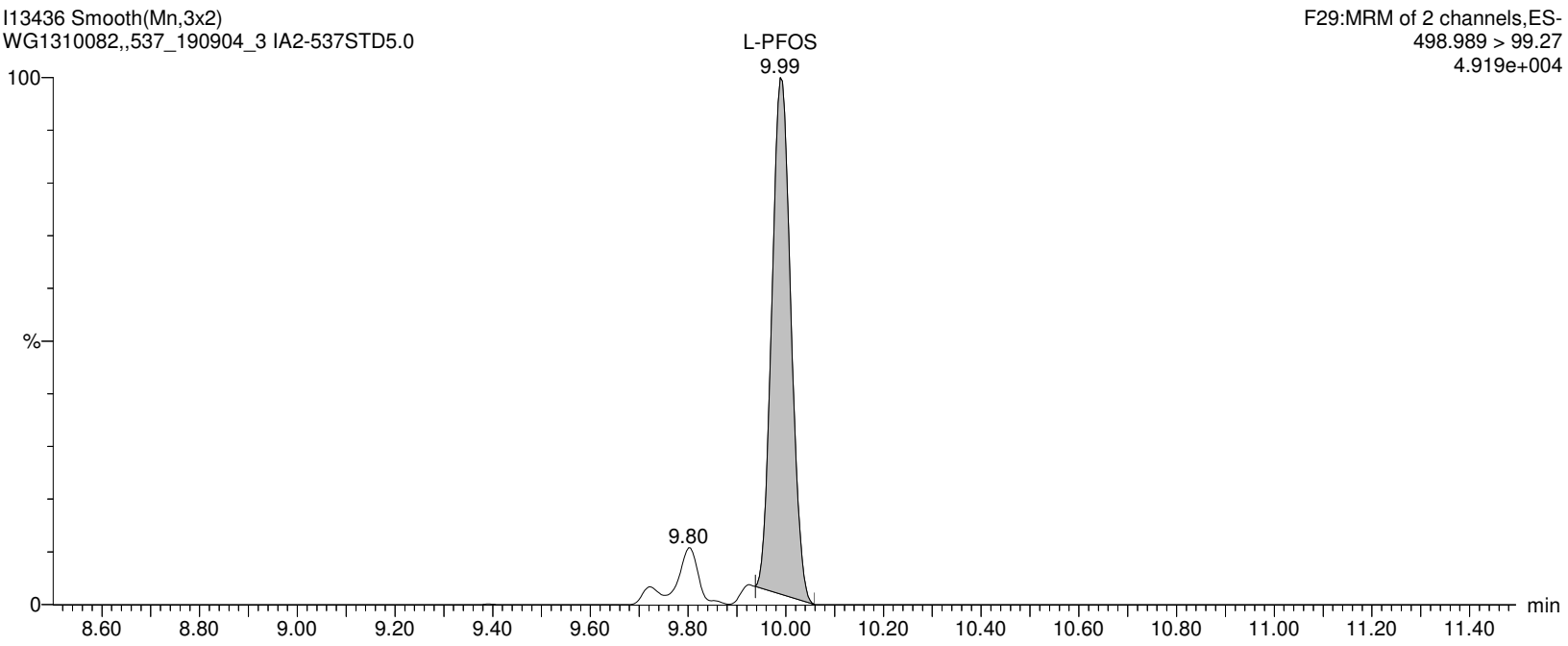
**L-PFOS**





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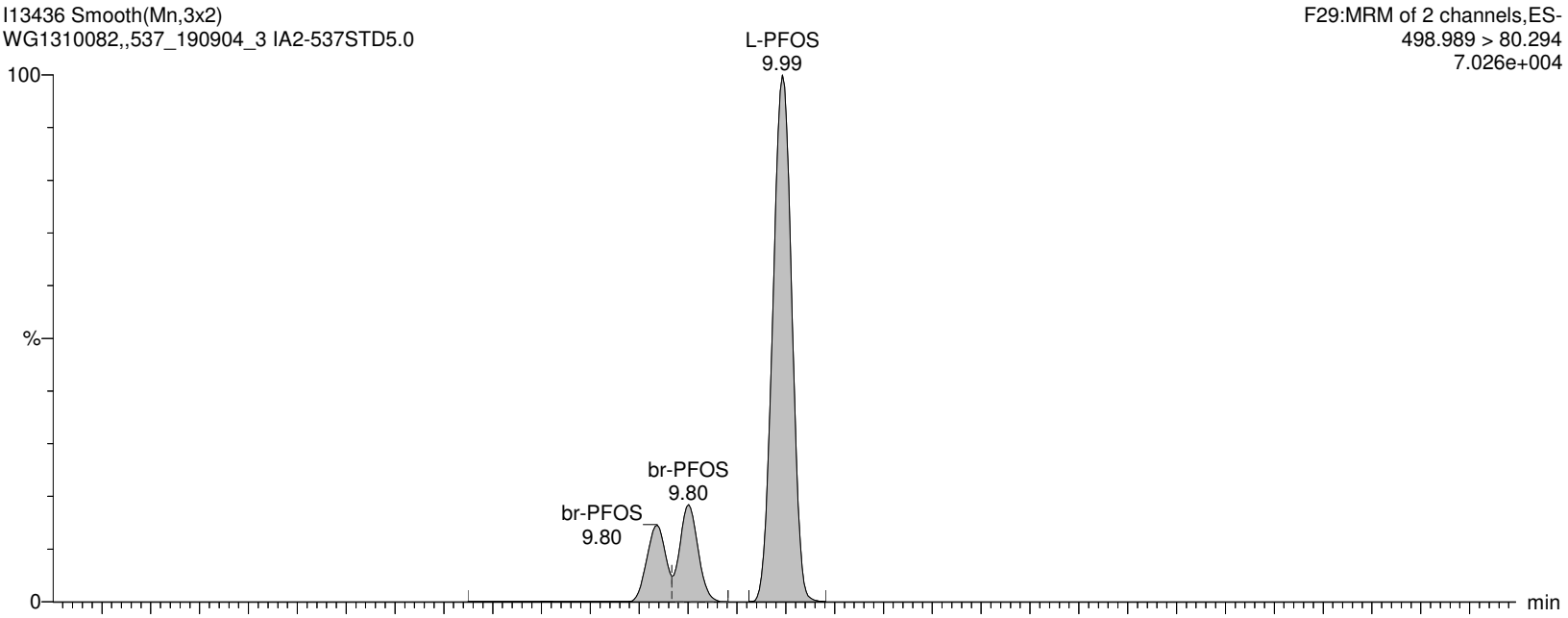


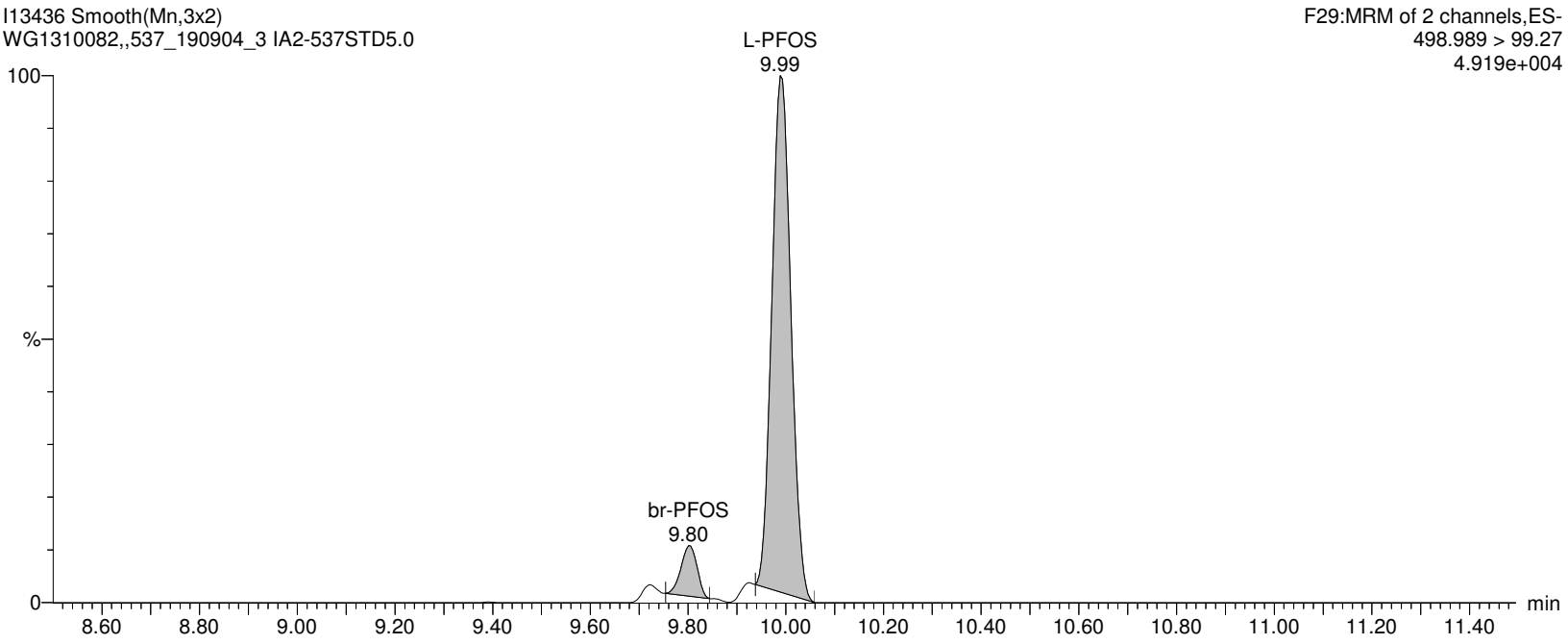



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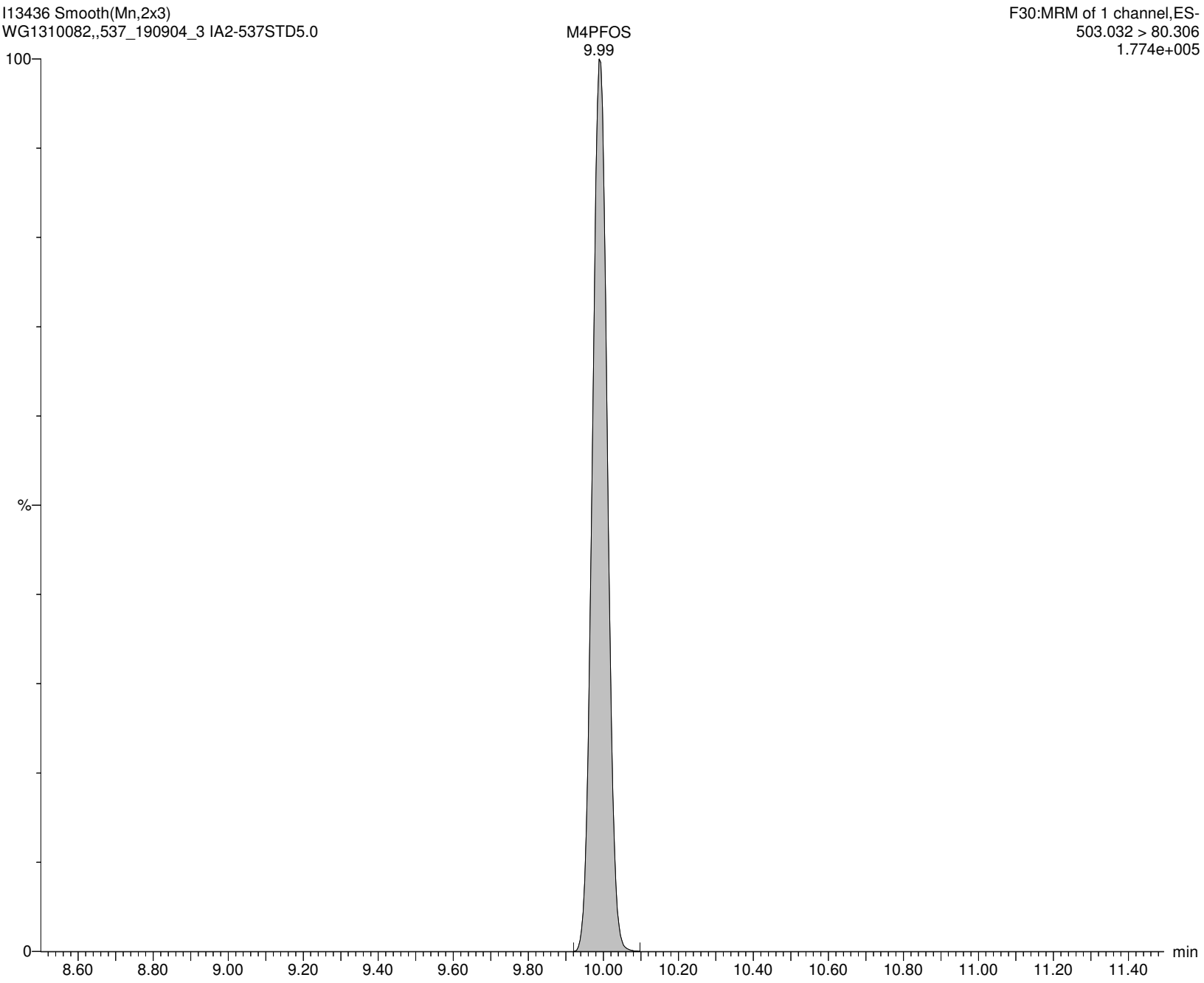



all concentration units in (ng/mL)

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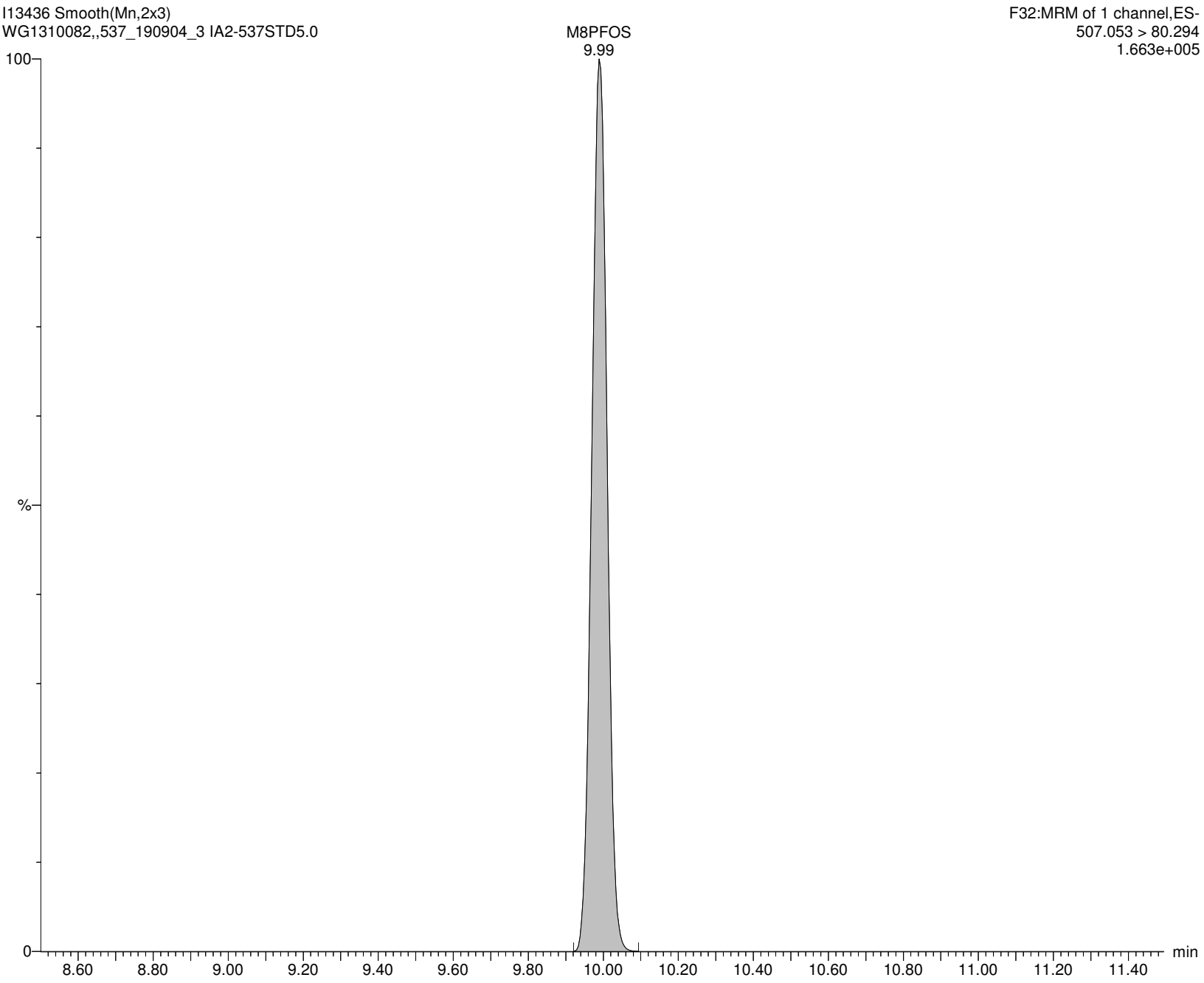
**M8PFOS**





all concentration units in (ng/mL)

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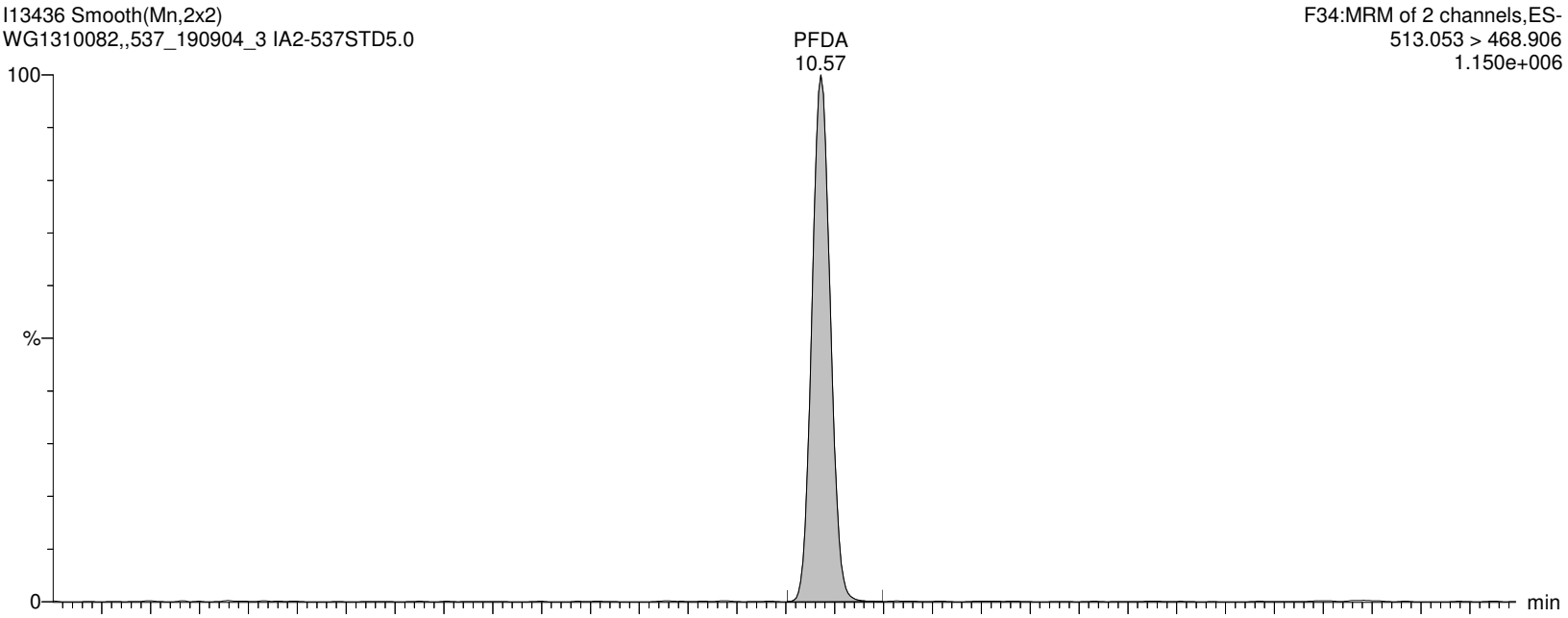


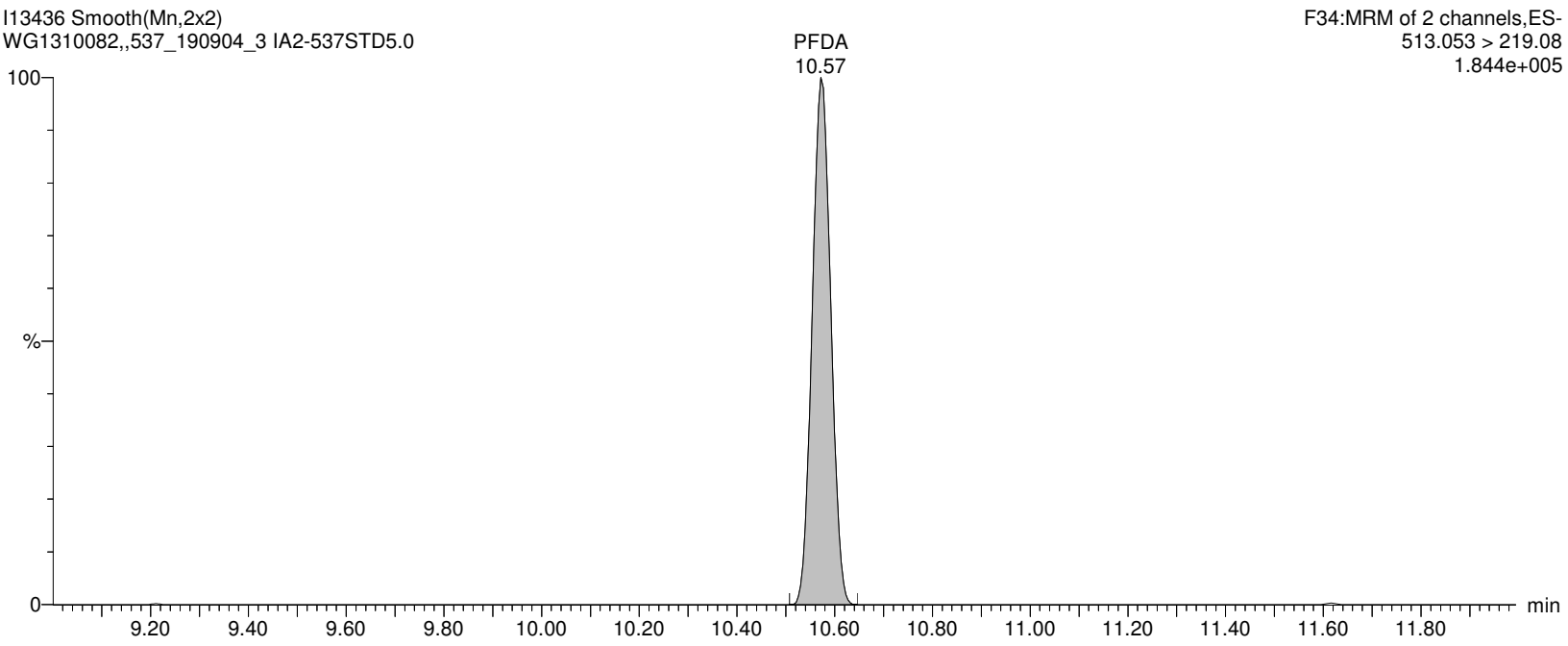



all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
Printed: Monday, November 18, 2019 13:42:52 Eastern Standard Time

**Name: I13436**
**ID: IA2-537STD5.0**
**Date: 18-Nov-2019**
**Time: 11:10:20**
**Description: WG1310082,,537_190904_3**
**User: LCMS02:JW**
**Vial: 1:A,4**
**Instrument: XEVO-TQSmicro#QEB0050**
**Inlet Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\LCMS_537_ISO_B**
**Tune Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\181009_TUNE.IPR**
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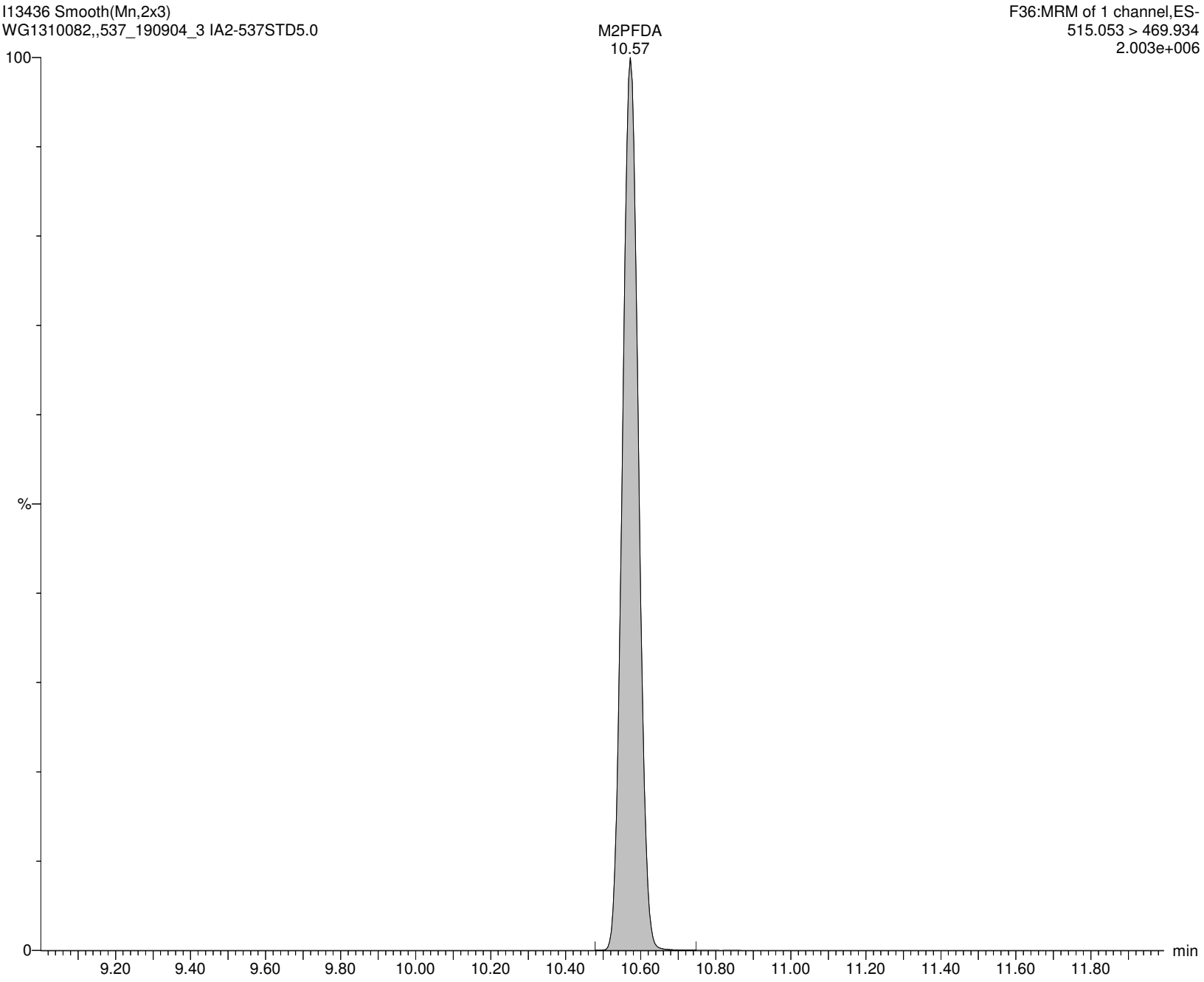



all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
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**Vial: 1:A,4**
**Instrument: XEVO-TQSmicro#QEB0050**
**Inlet Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\LCMS_537_ISO_B**
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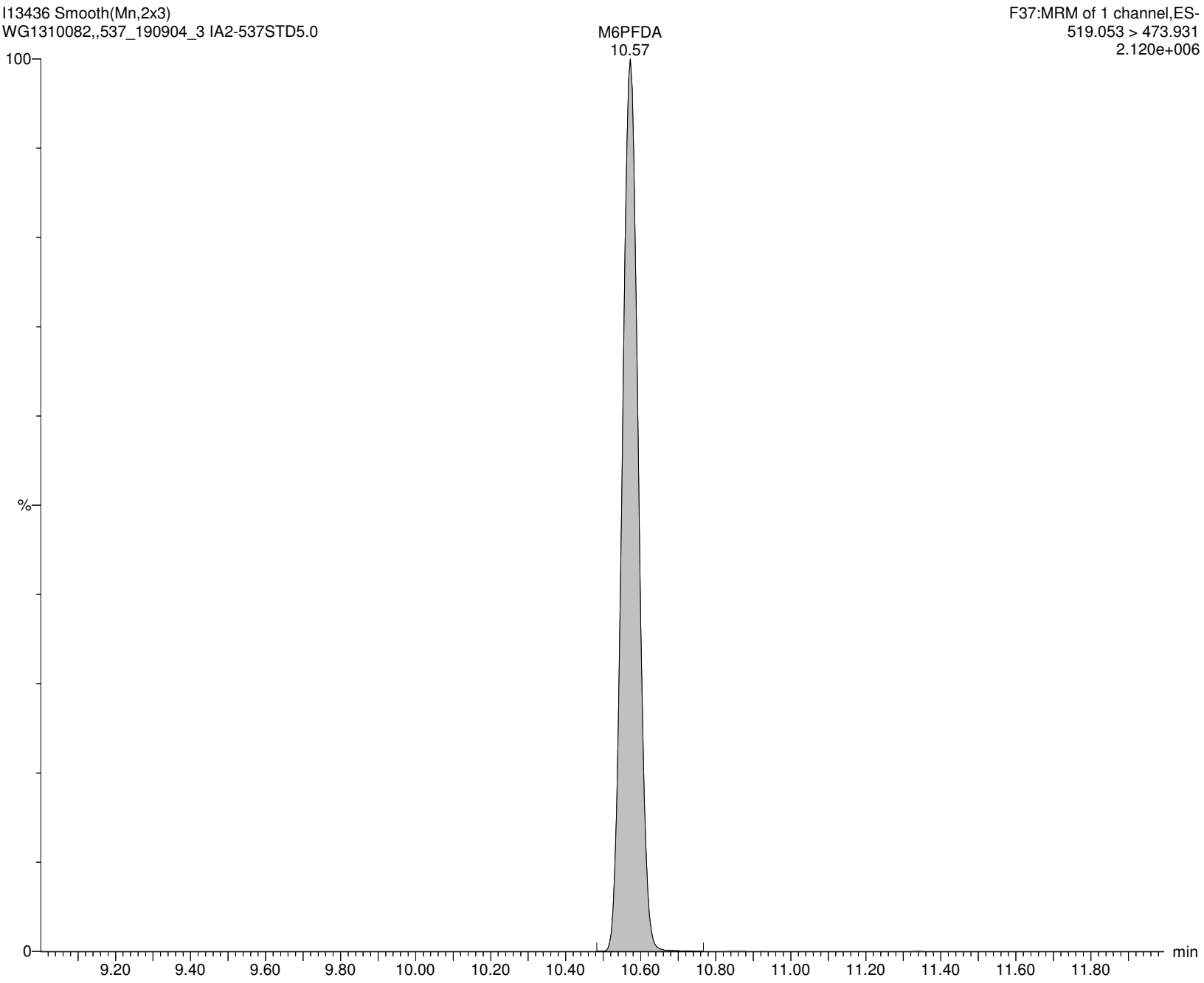



all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
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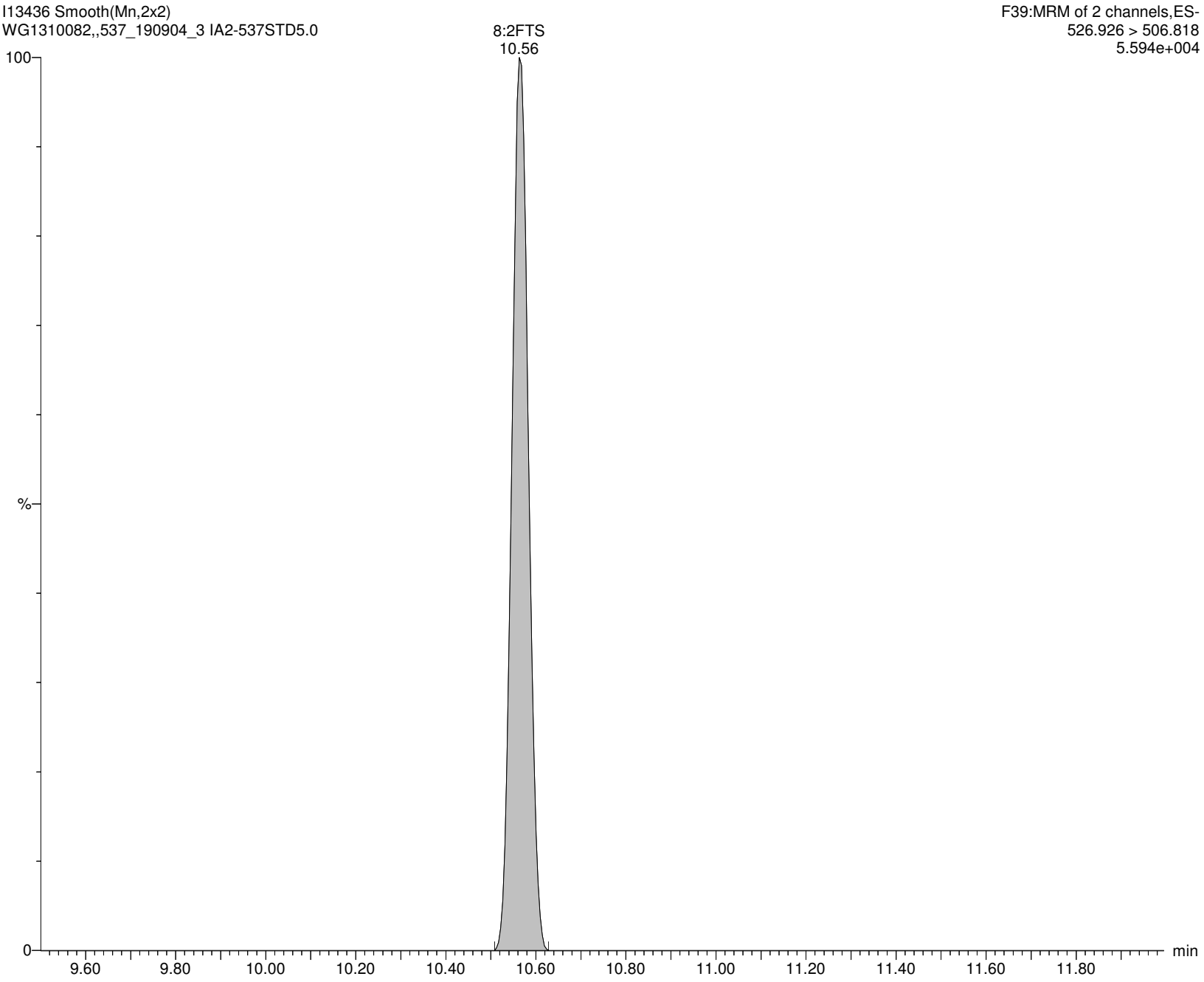
**MS Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**8:2FTS**





all concentration units in (ng/mL)

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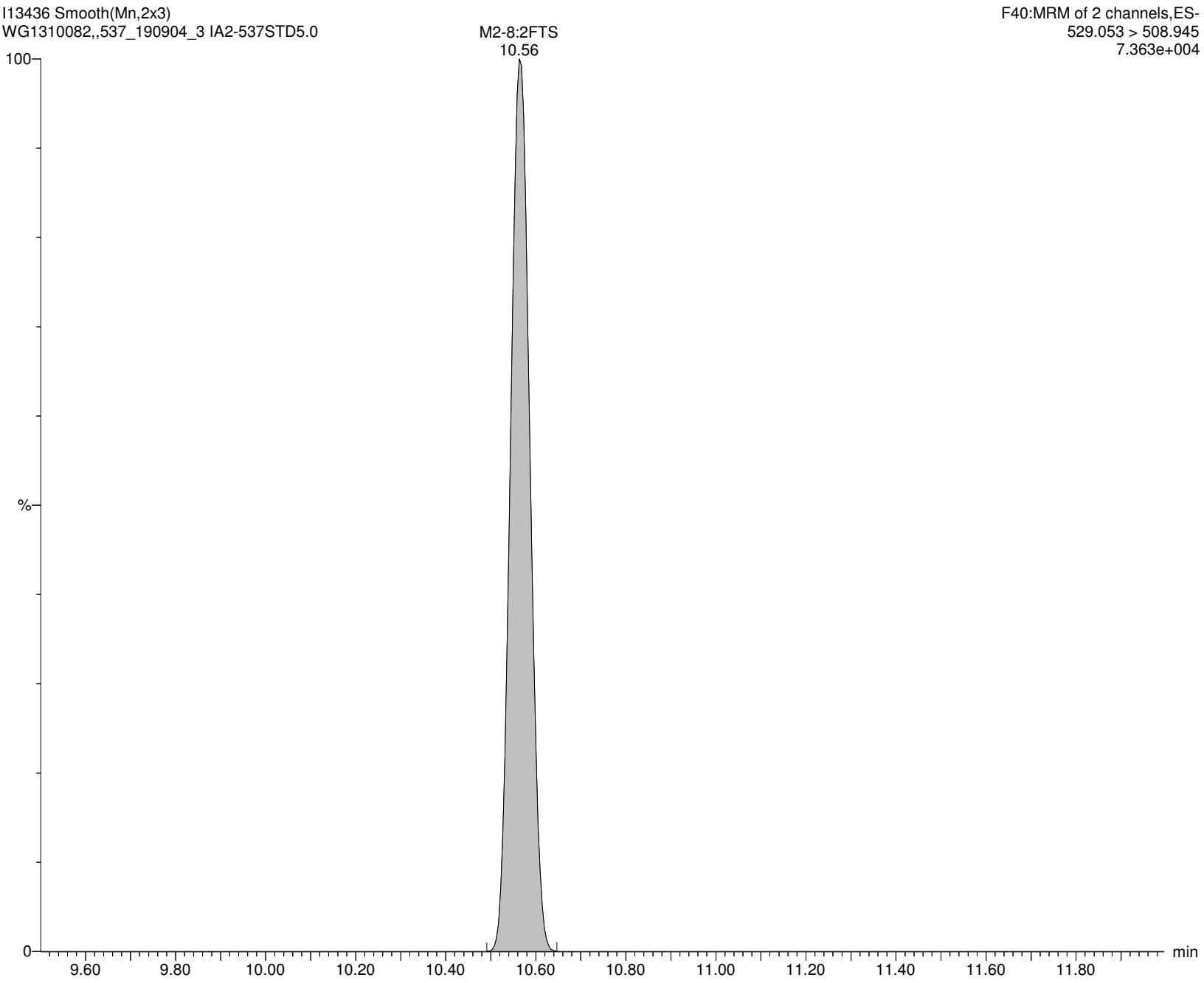
**M2-8:2FTS**





all concentration units in (ng/mL)

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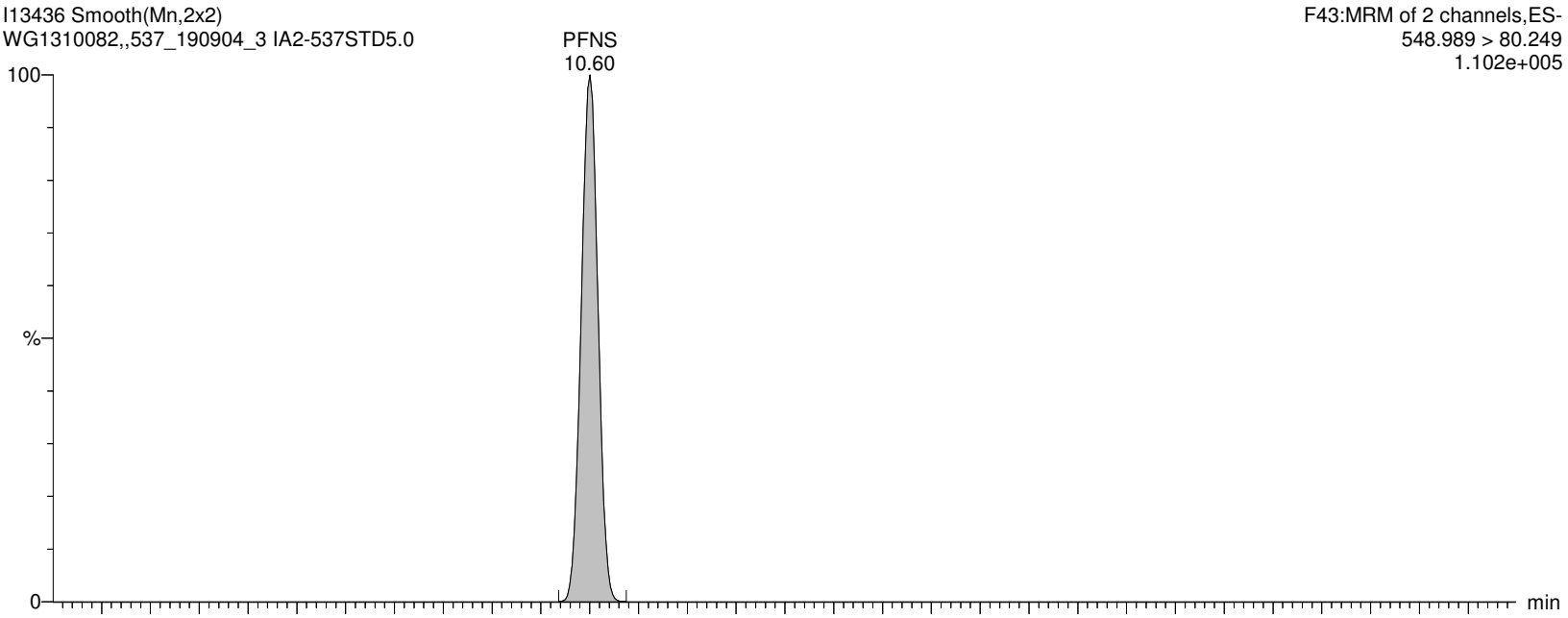


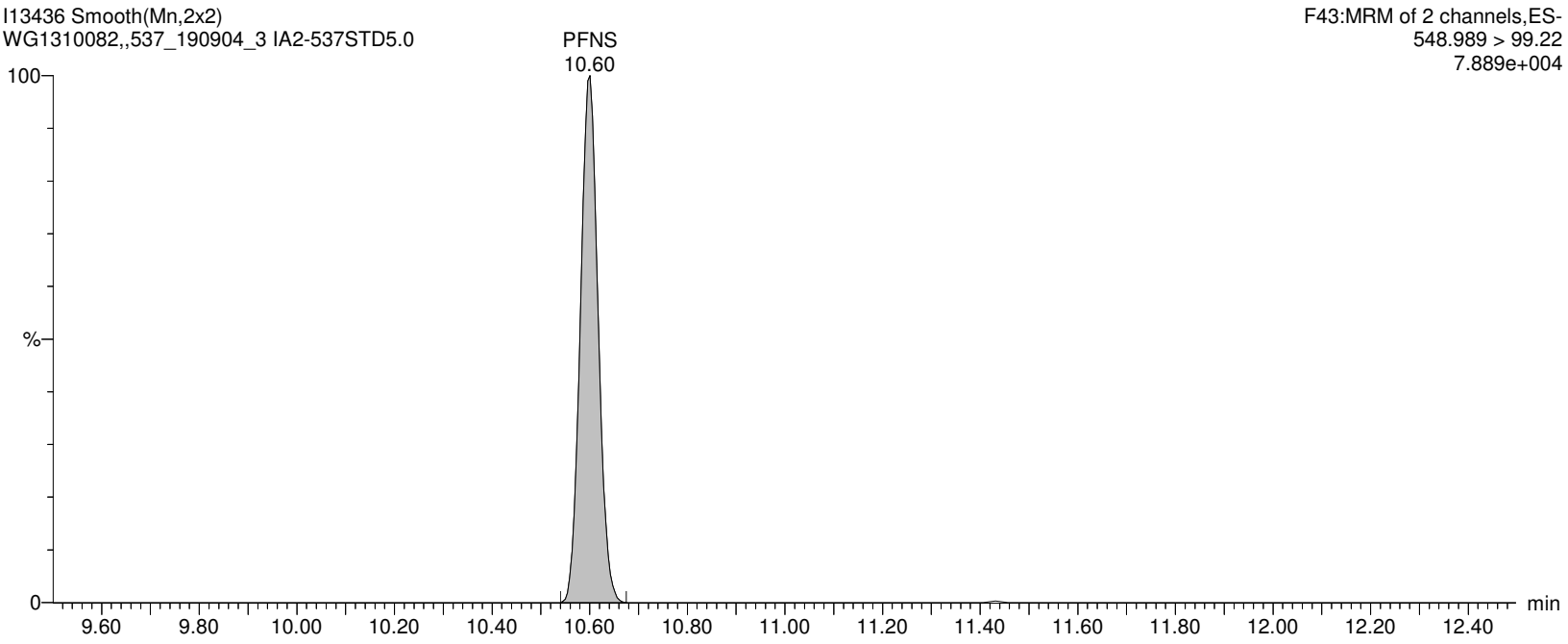



all concentration units in (ng/mL)

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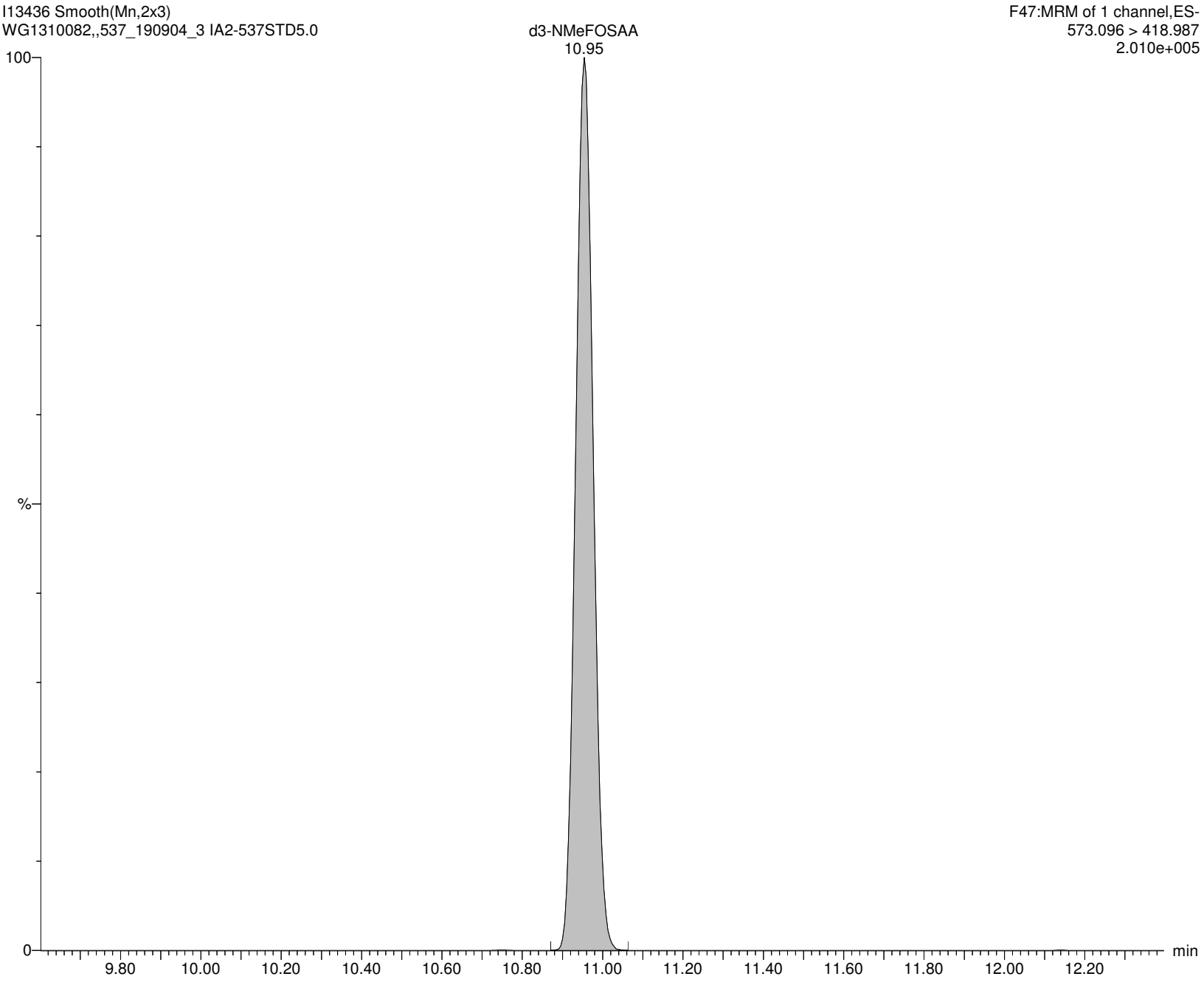
**d3-NMeFOSAA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
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**Vial: 1:A,4**
**Instrument: XEVO-TQSmicro#QEB0050**
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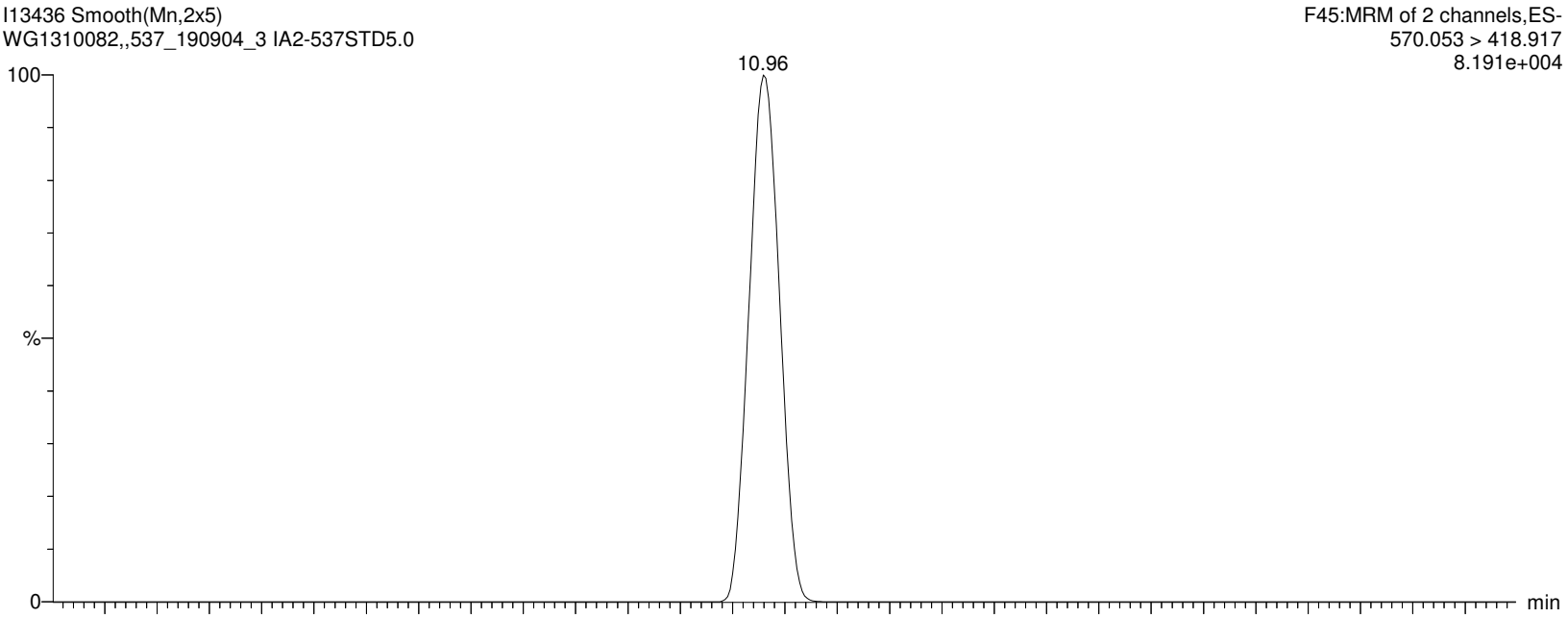
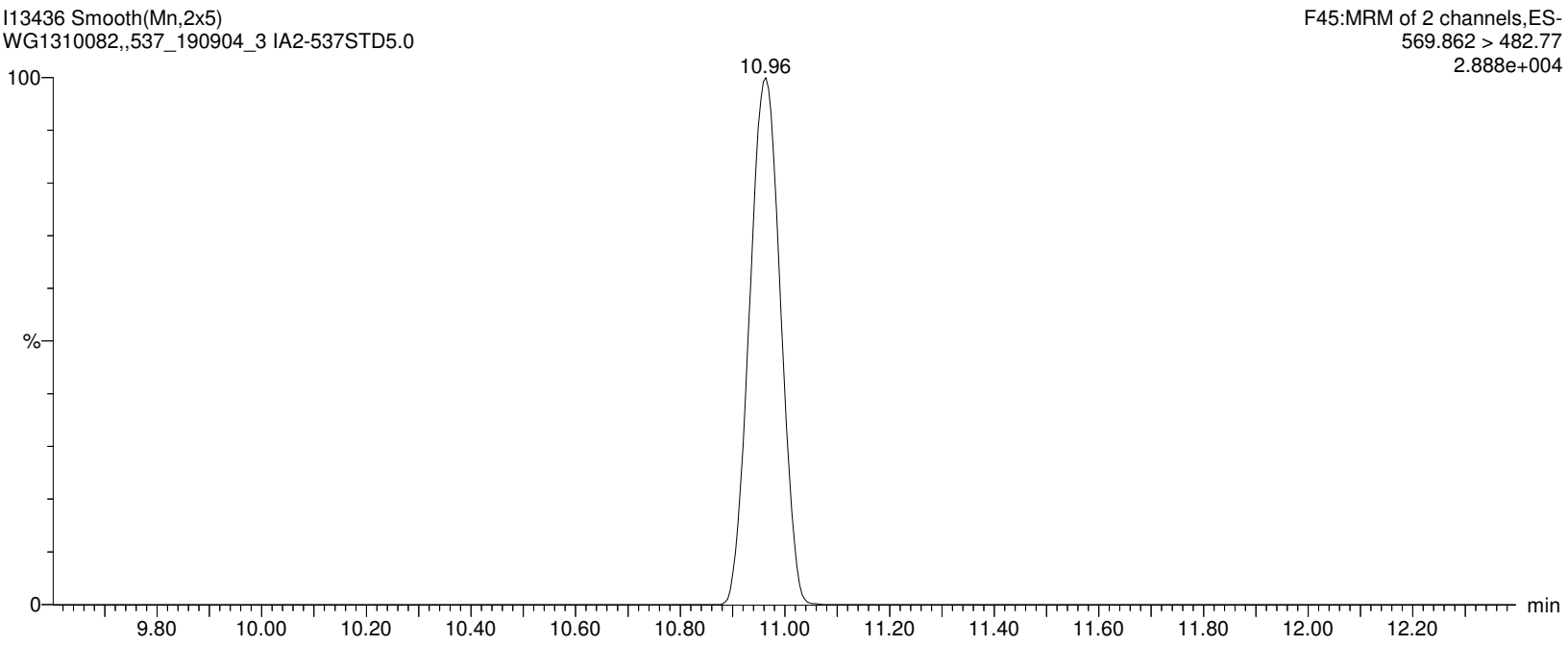
**br-NMeFOSAA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
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**Instrument: XEVO-TQSmicro#QEB0050**
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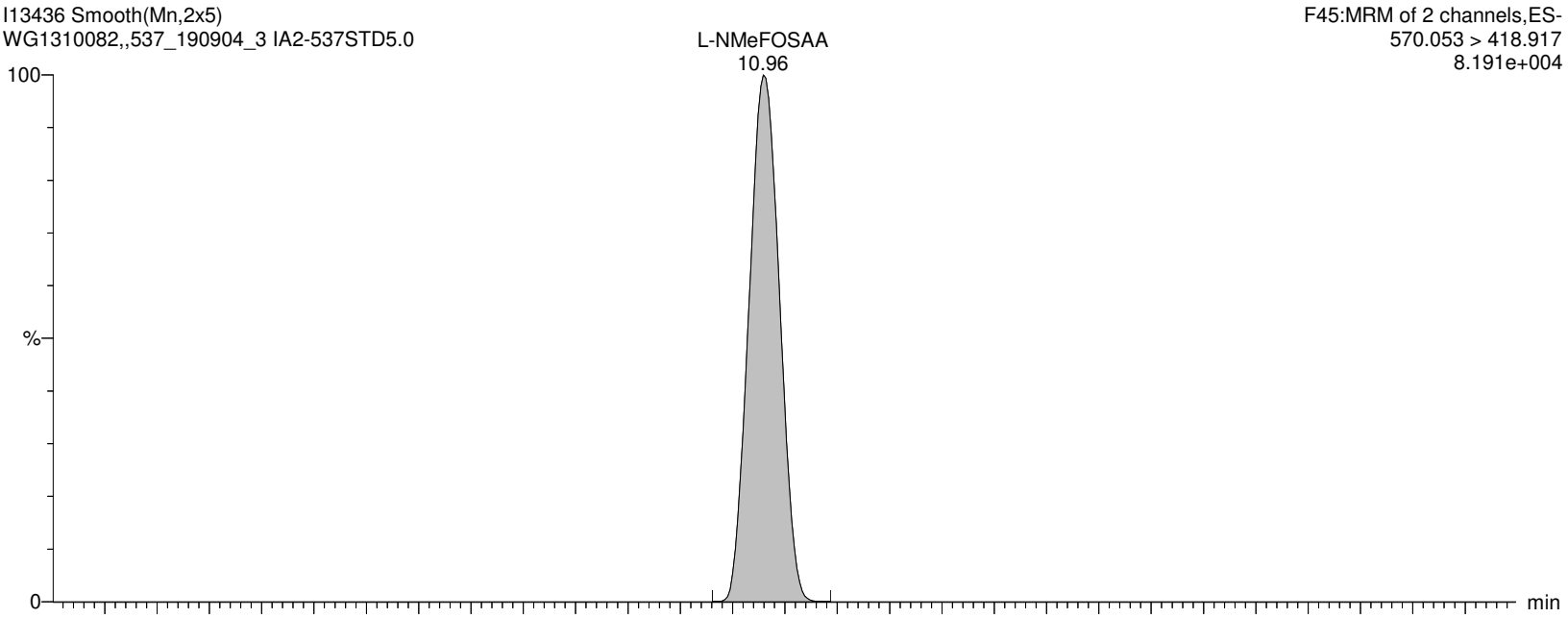
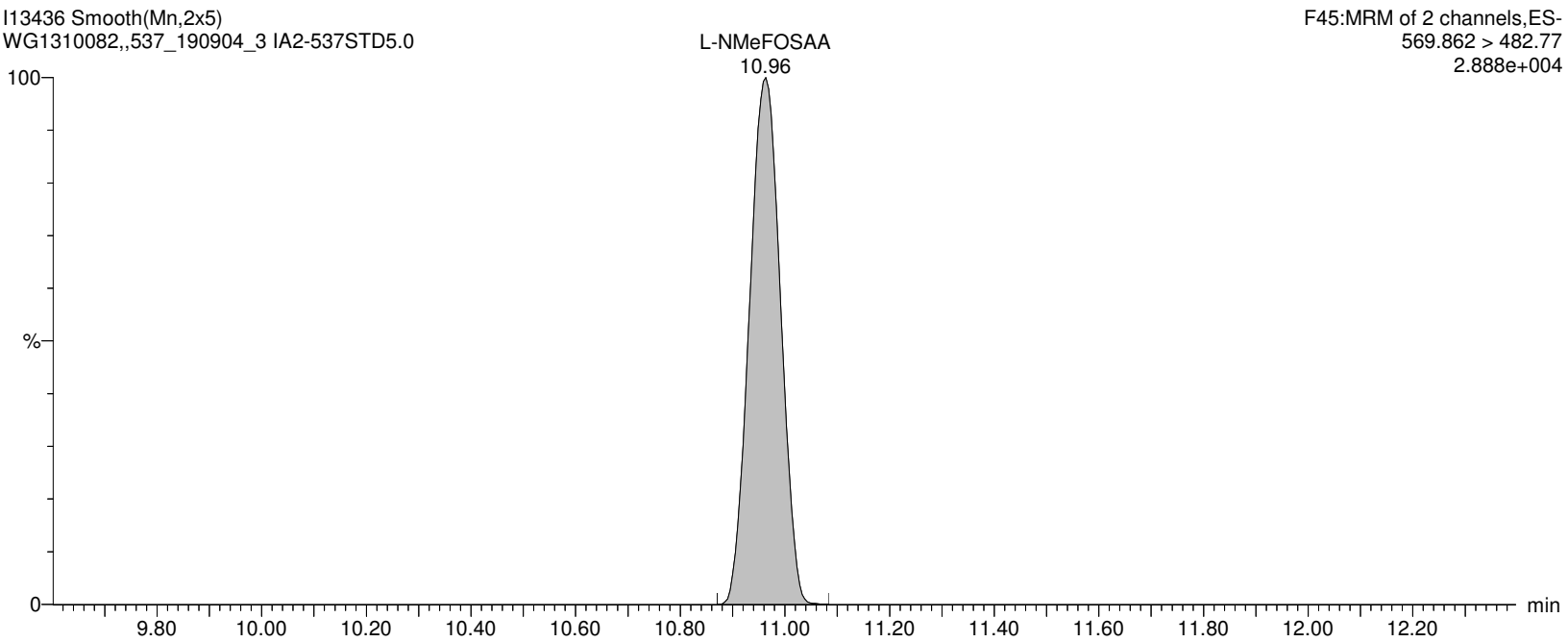
**L-NMeFOSAA**





all concentration units in (ng/mL)

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**Tune Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\181009_TUNE.IPR**
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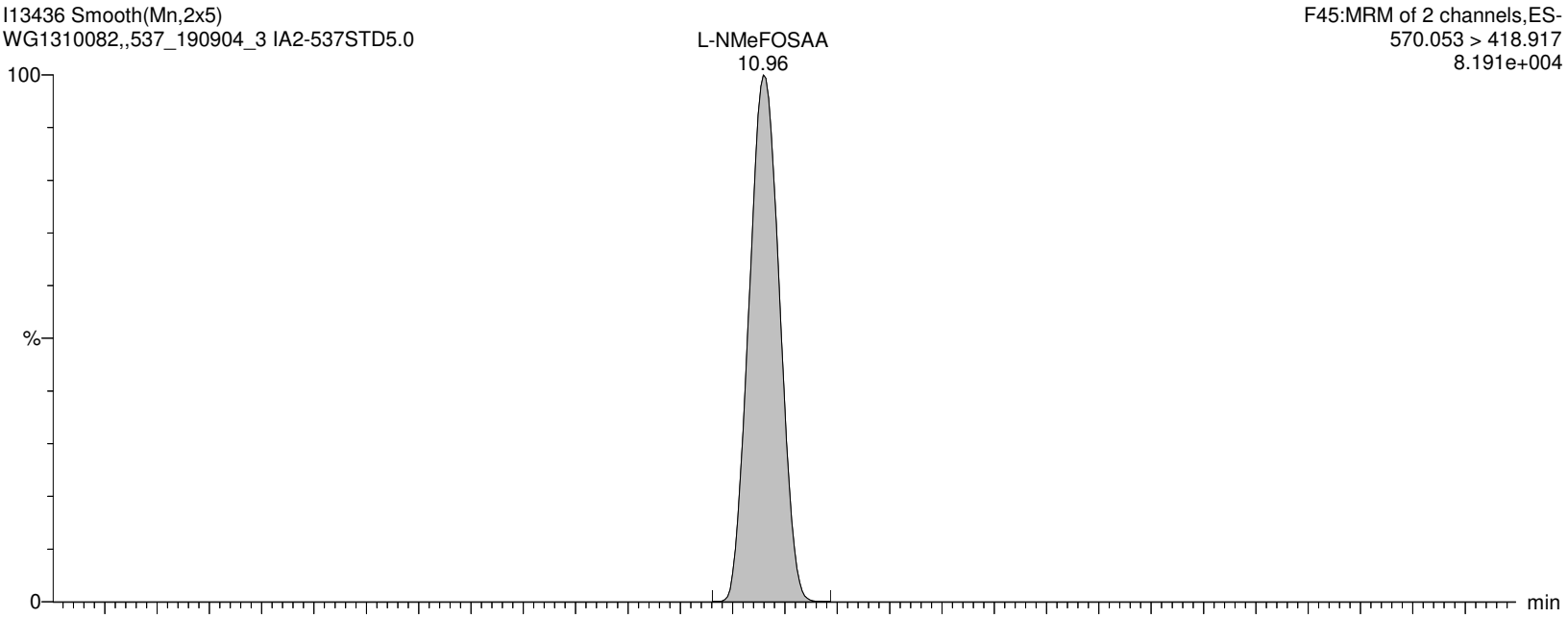
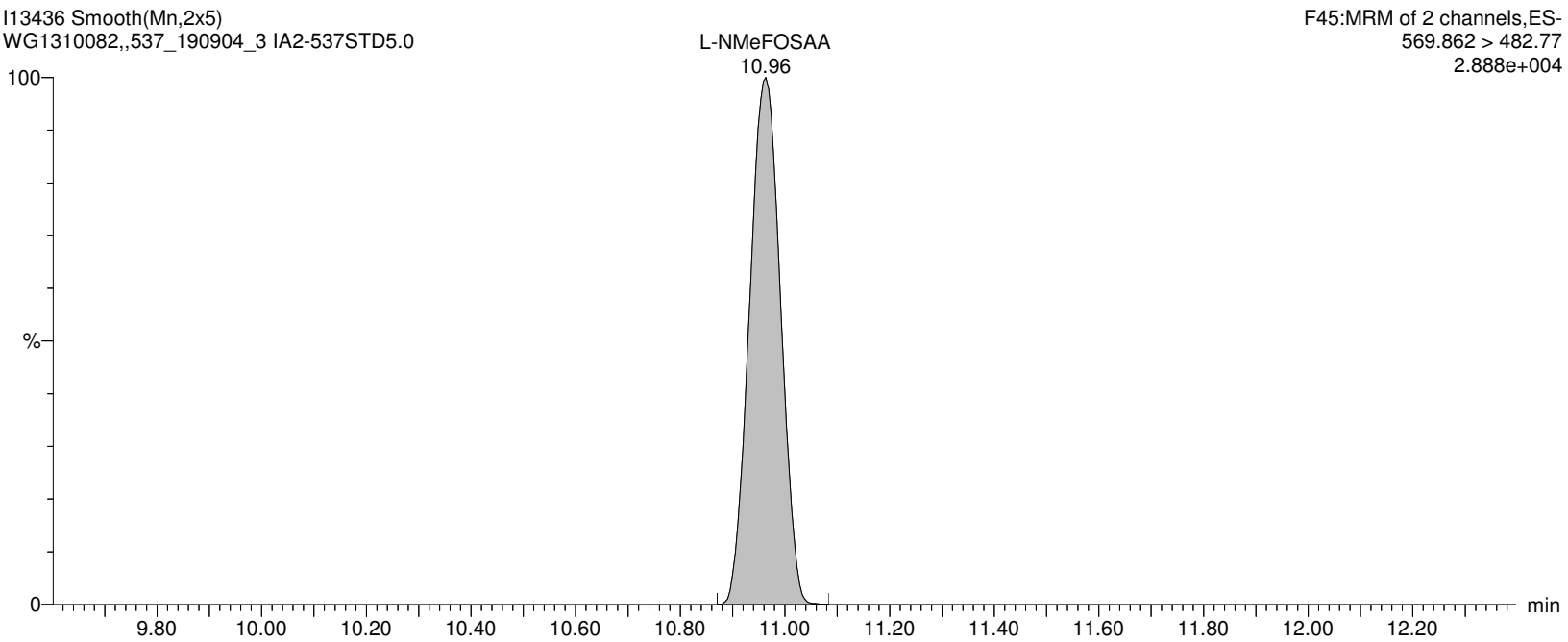
**NMeFOSAA**





all concentration units in (ng/mL)

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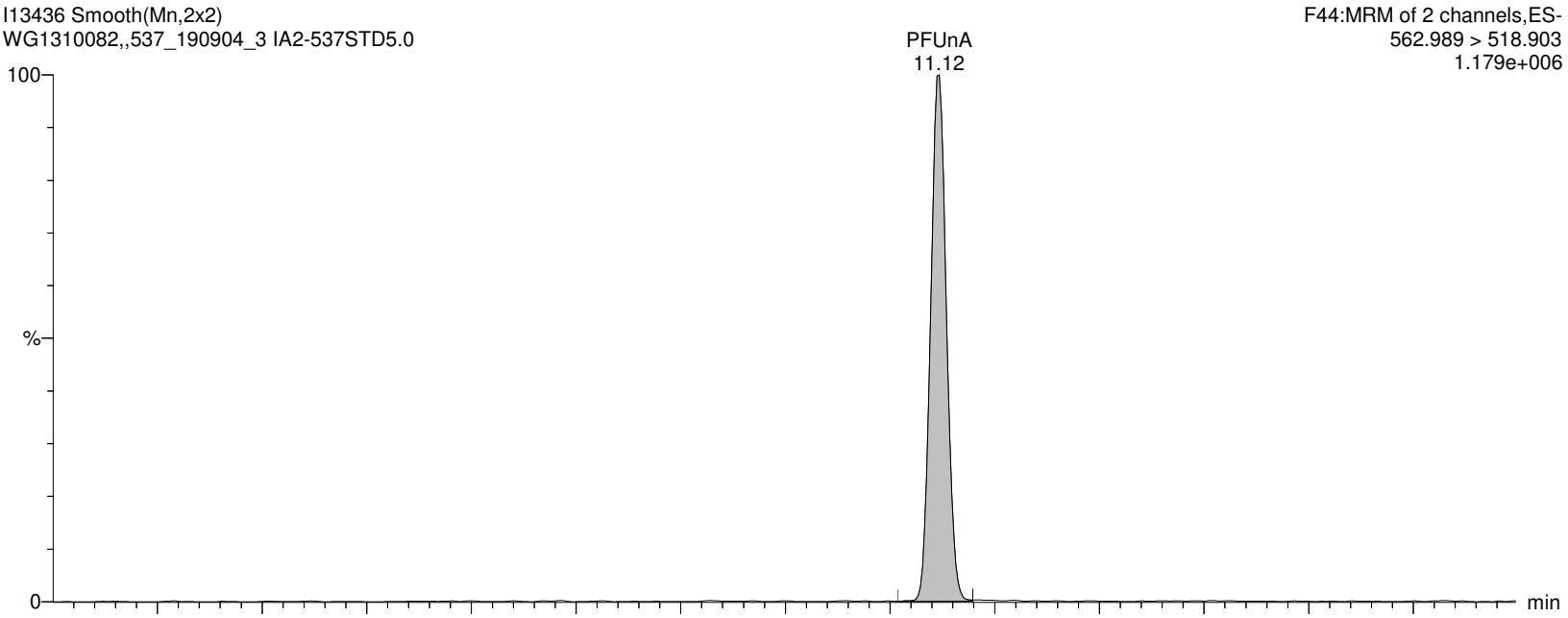


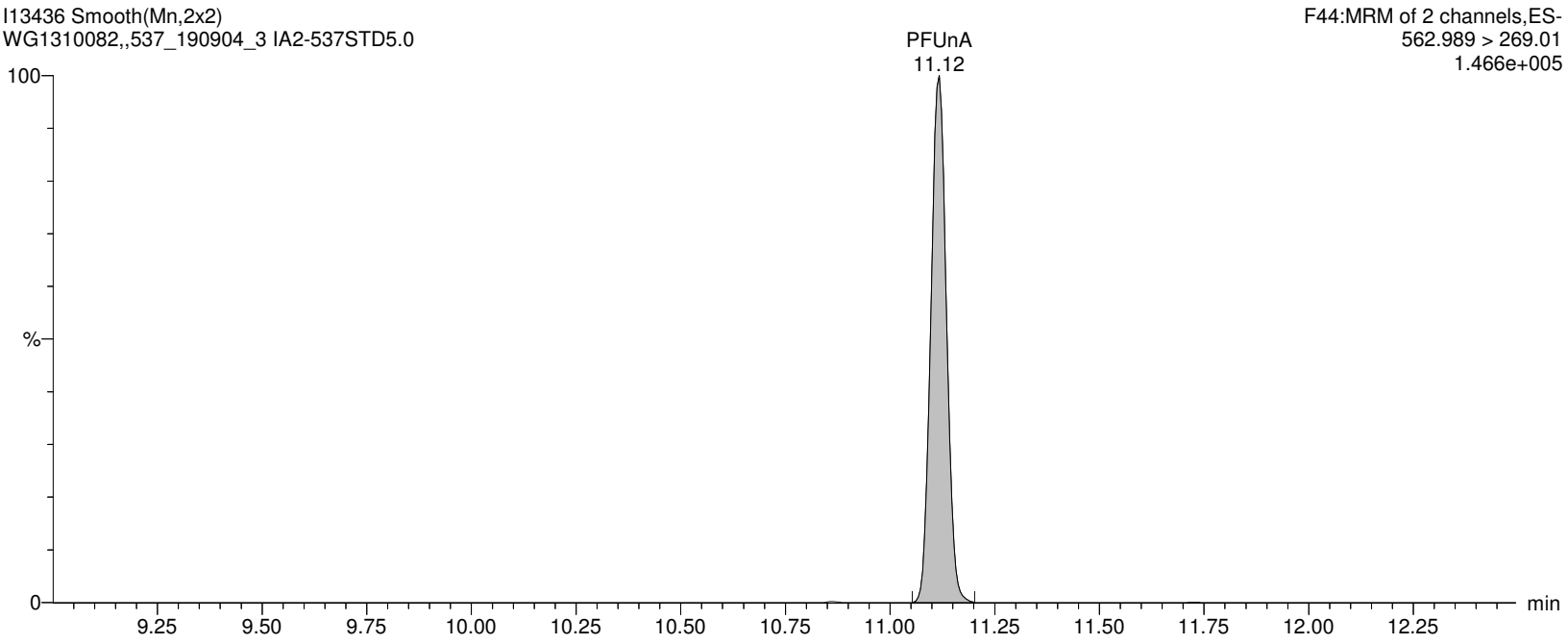



all concentration units in (ng/mL)

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**Vial: 1:A,4**
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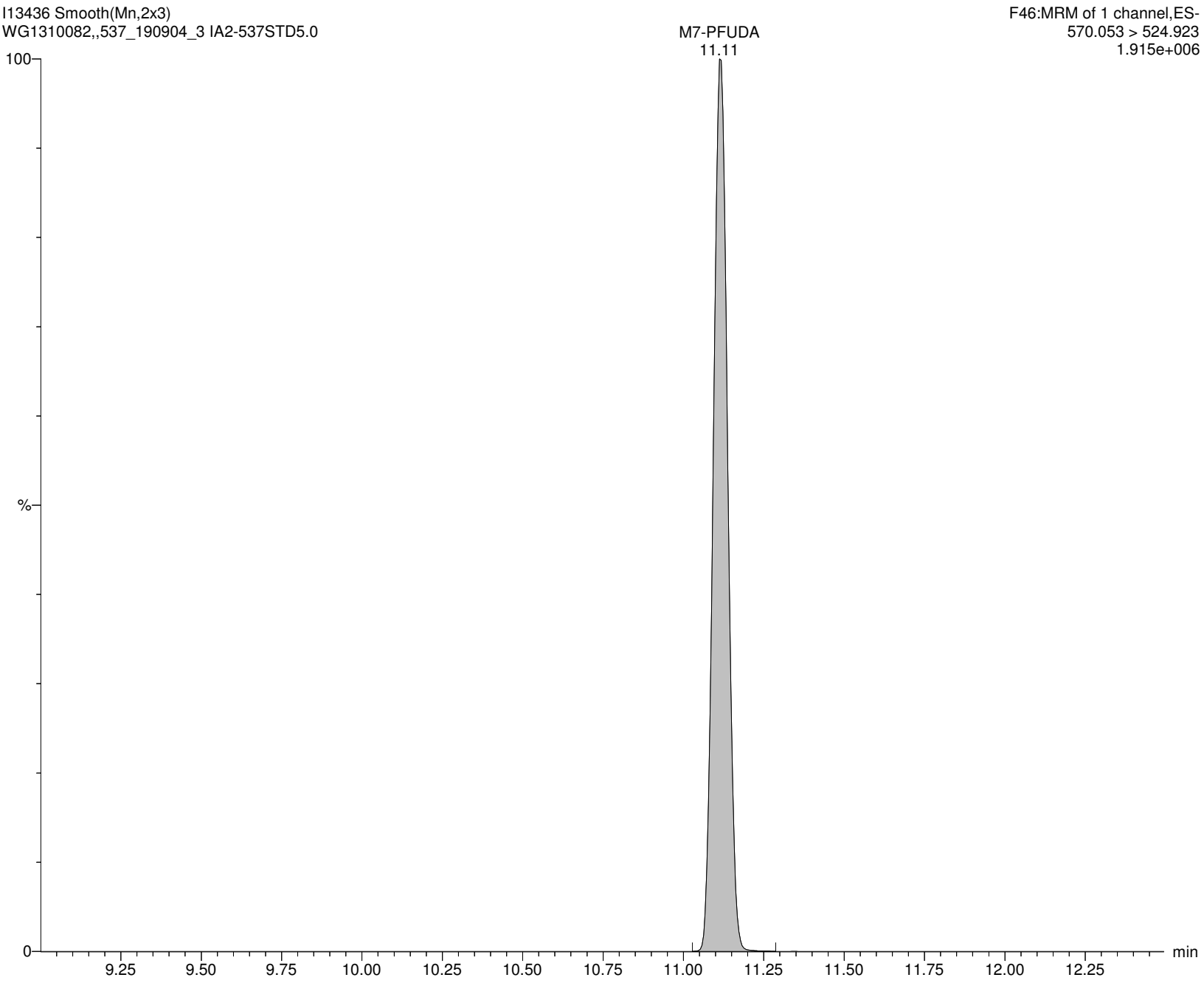
**M7-PFUDA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
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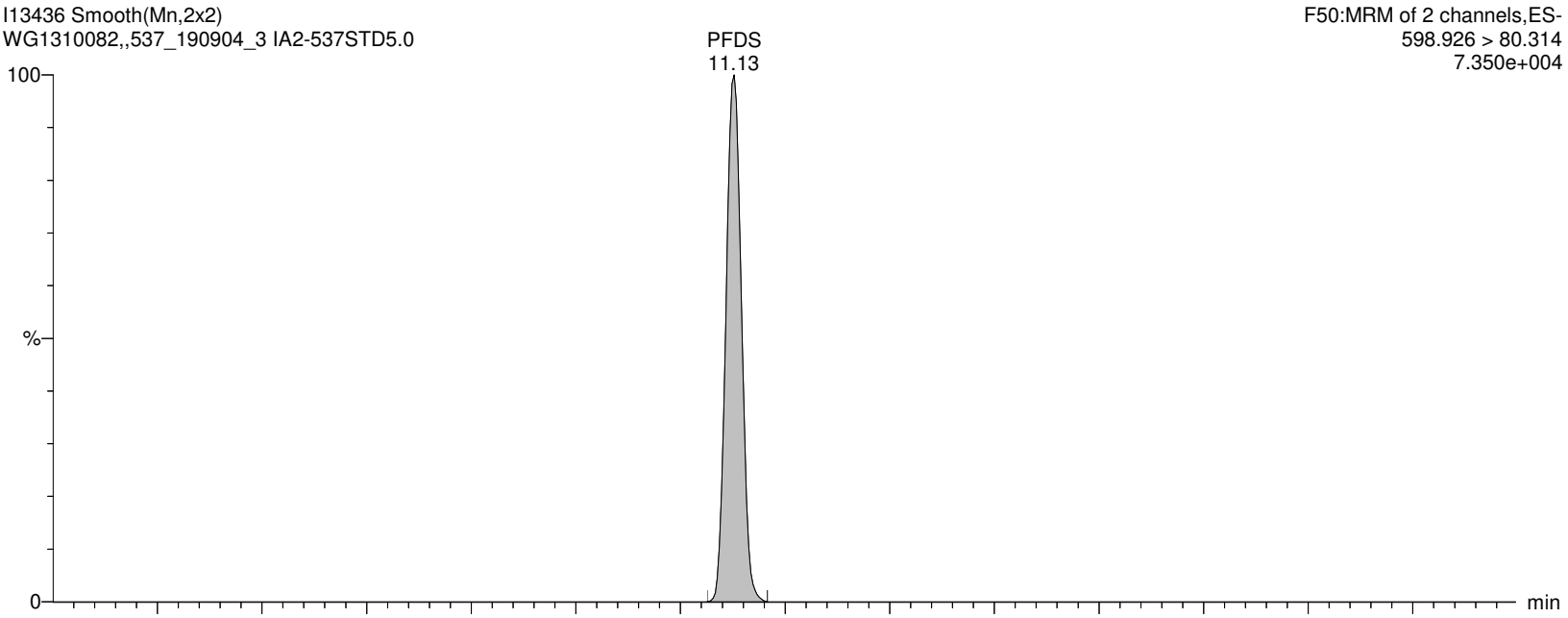
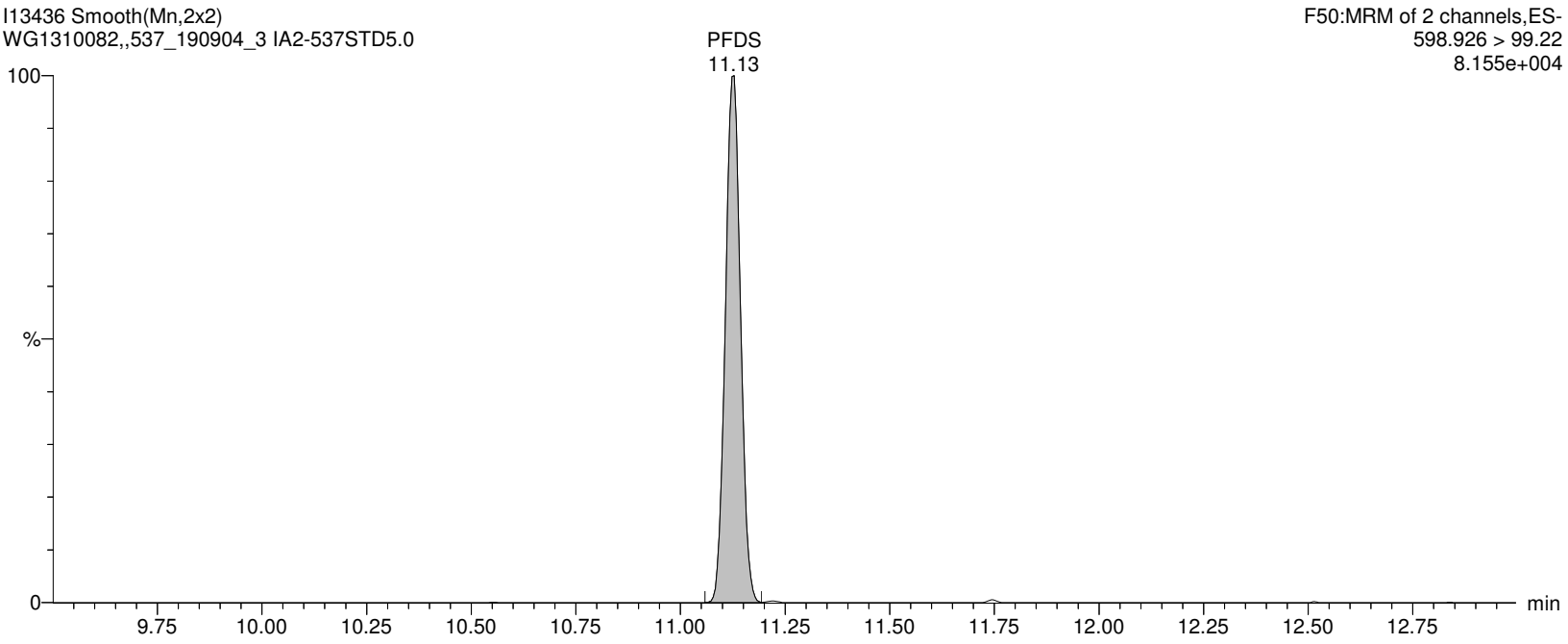
**PFDS**





all concentration units in (ng/mL)

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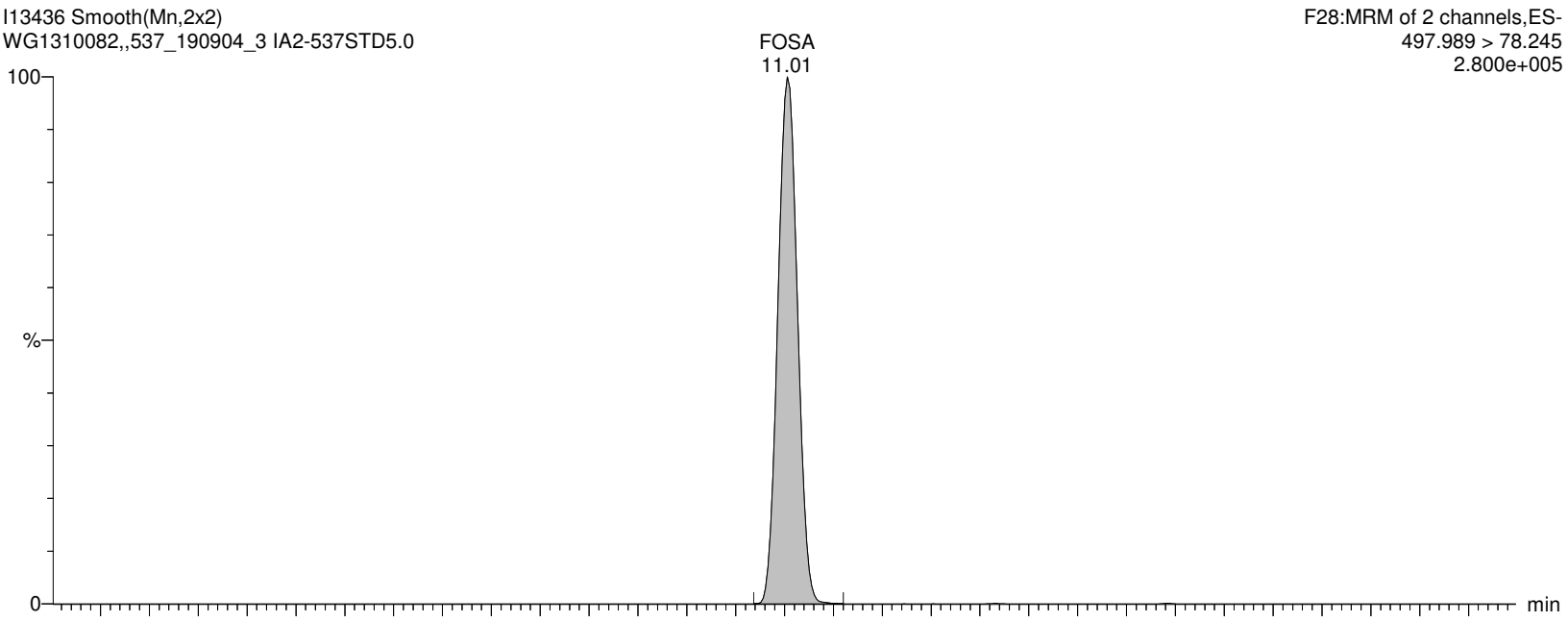


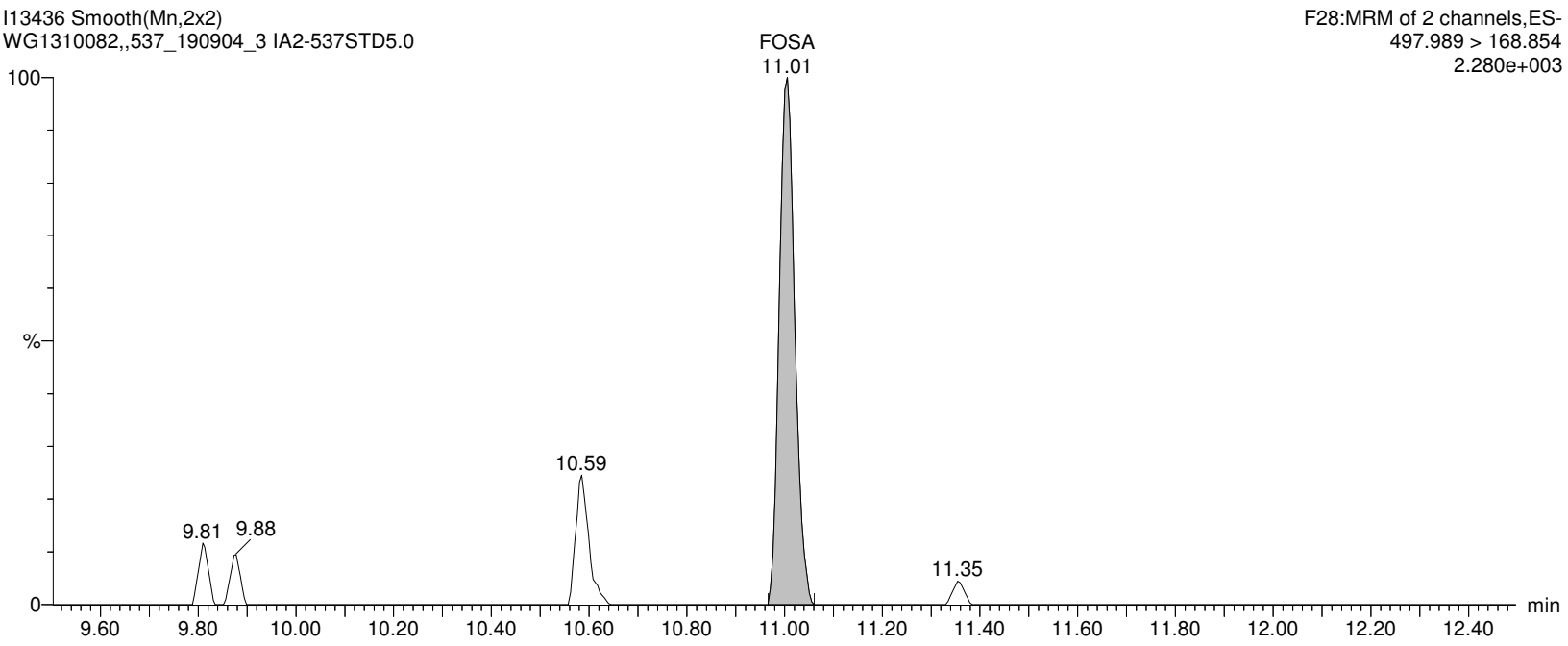



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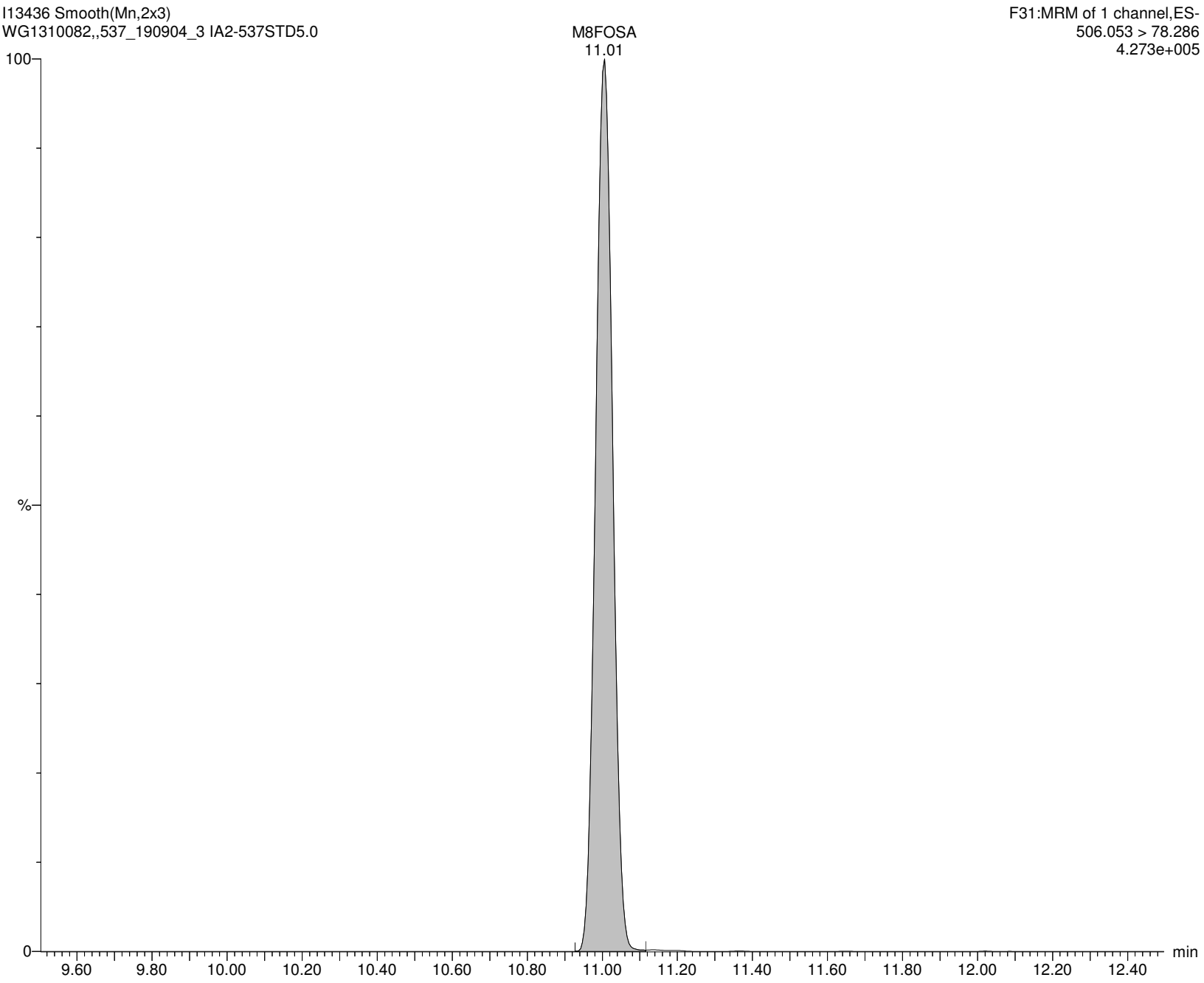
**M8FOSA**





all concentration units in (ng/mL)

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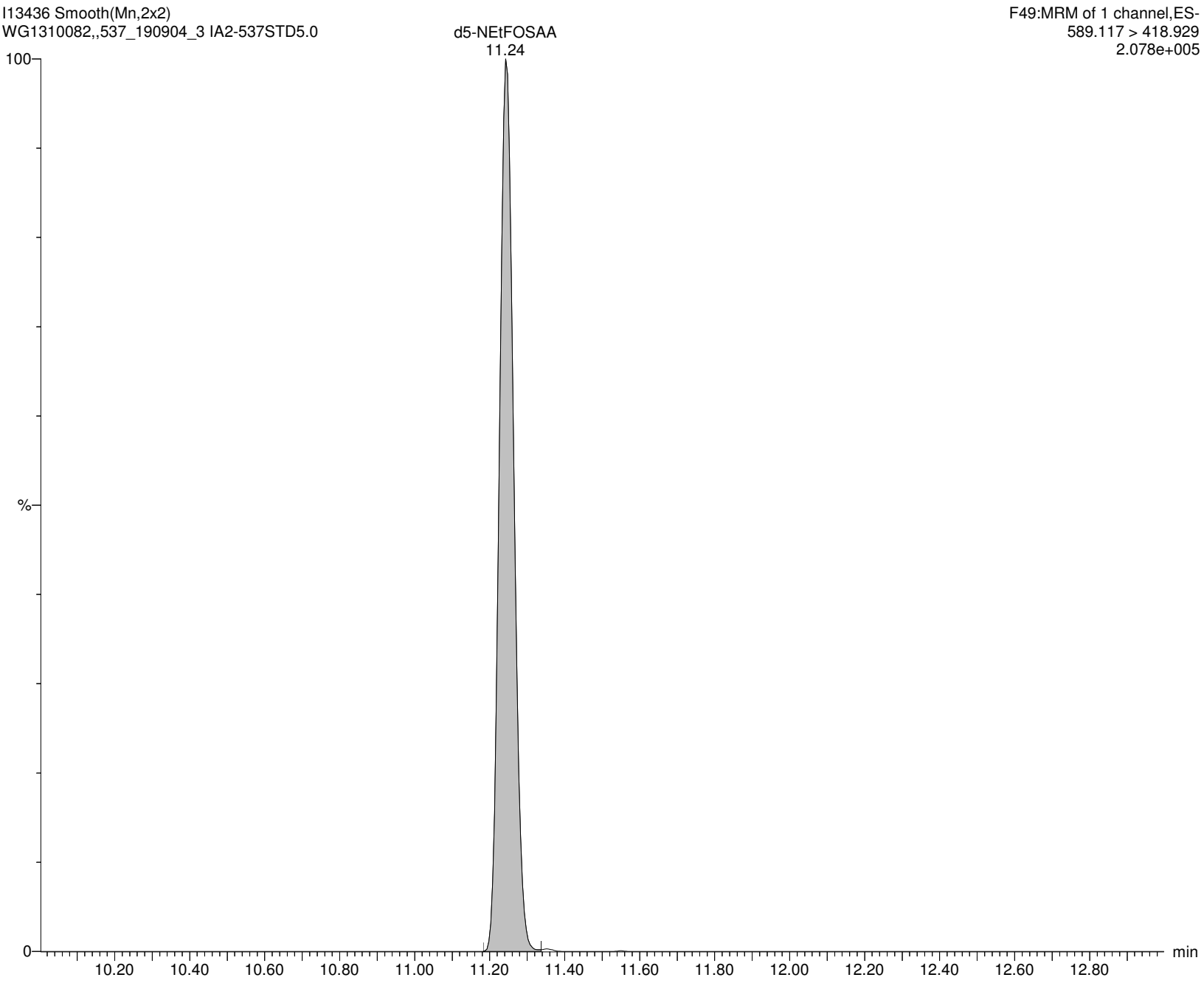



all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
Printed: Monday, November 18, 2019 13:42:52 Eastern Standard Time

**Name: I13436**
**ID: IA2-537STD5.0**
**Date: 18-Nov-2019**
**Time: 11:10:20**
**Description: WG1310082,,537_190904_3**
**User: LCMS02:JW**
**Vial: 1:A,4**
**Instrument: XEVO-TQSmicro#QEB0050**
**Inlet Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\LCMS_537_ISO_B**
**Tune Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\181009_TUNE.IPR**
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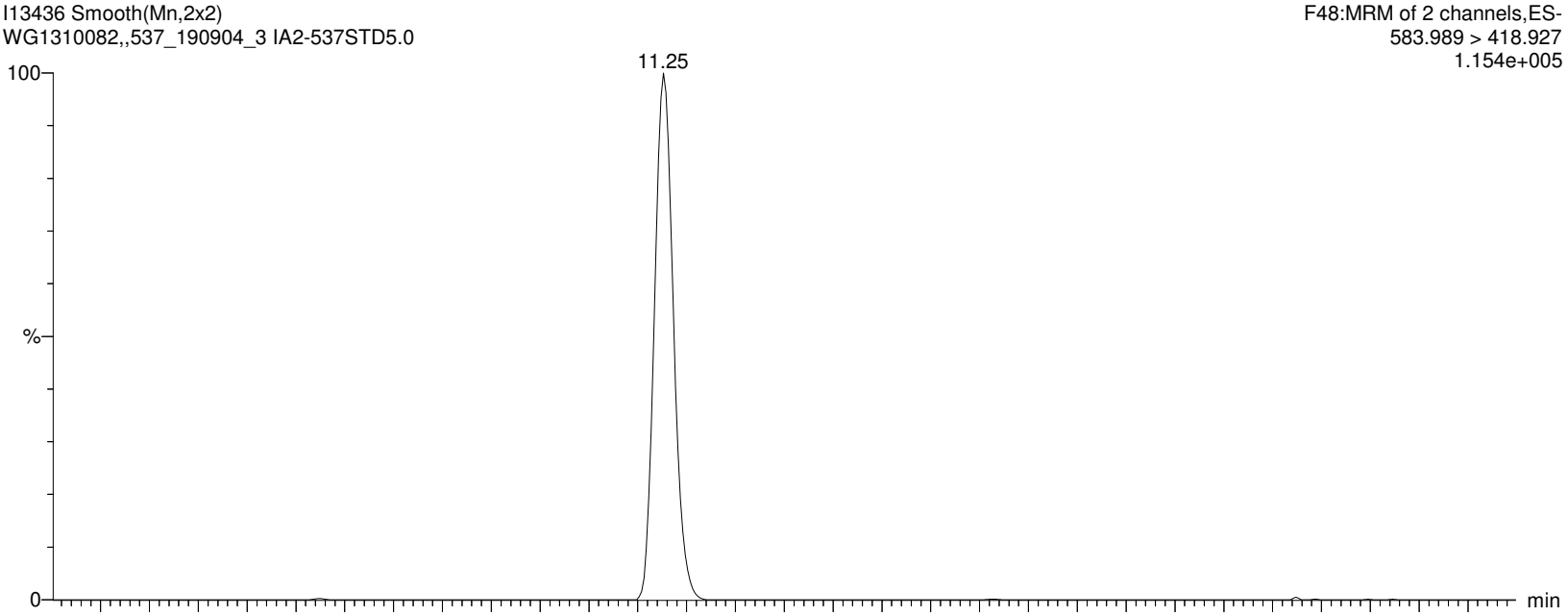


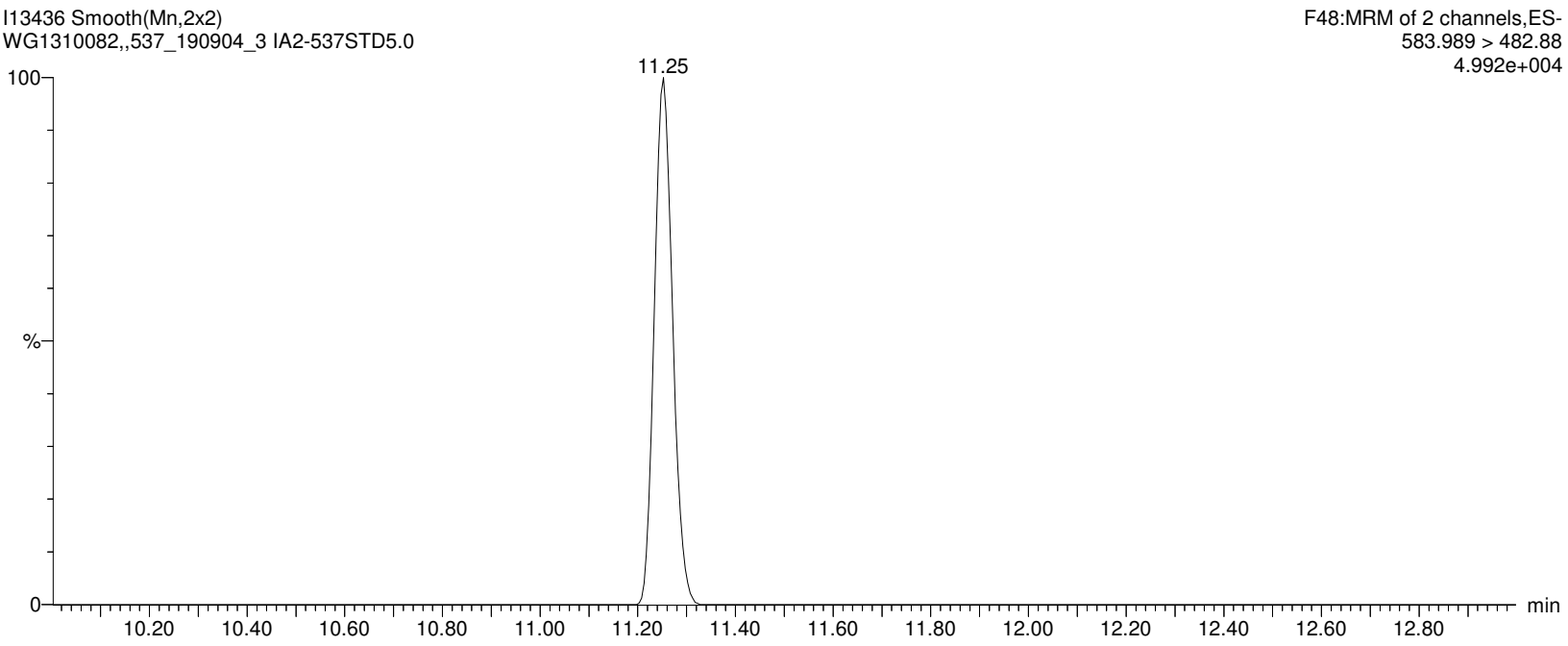



all concentration units in (ng/mL)

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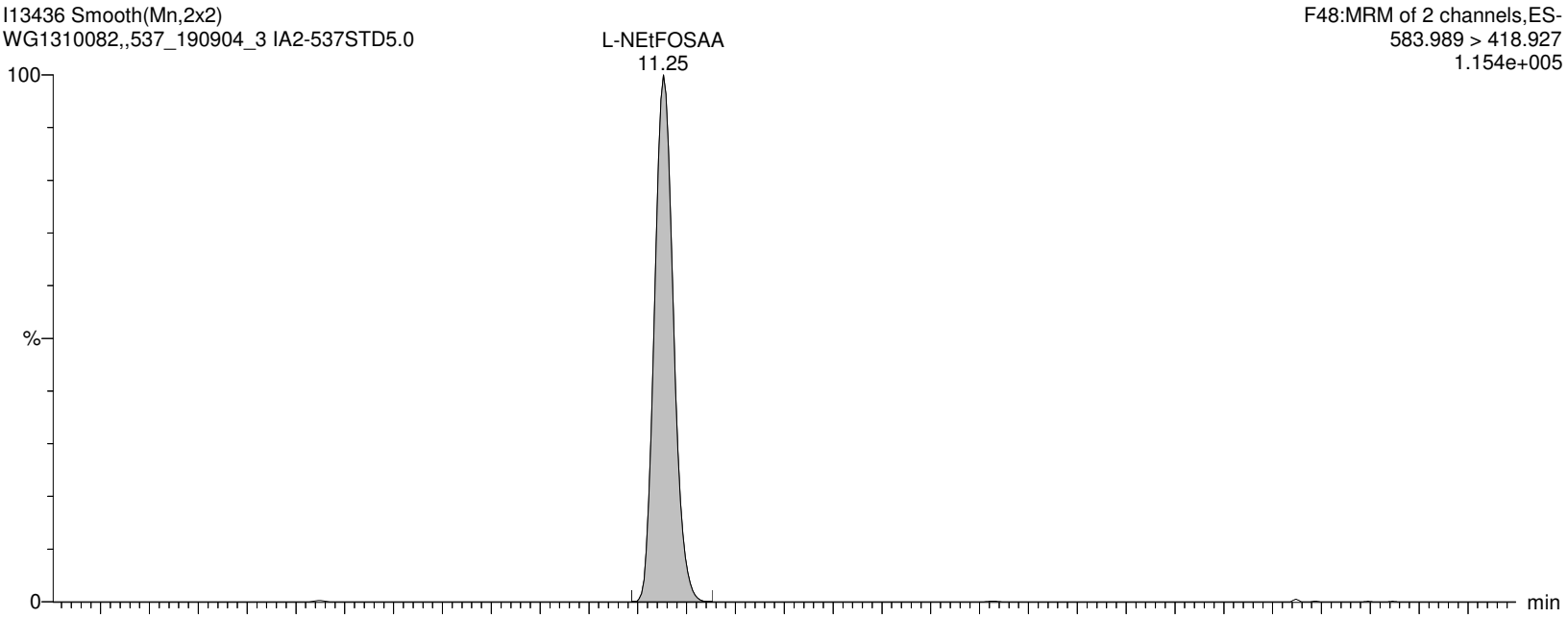


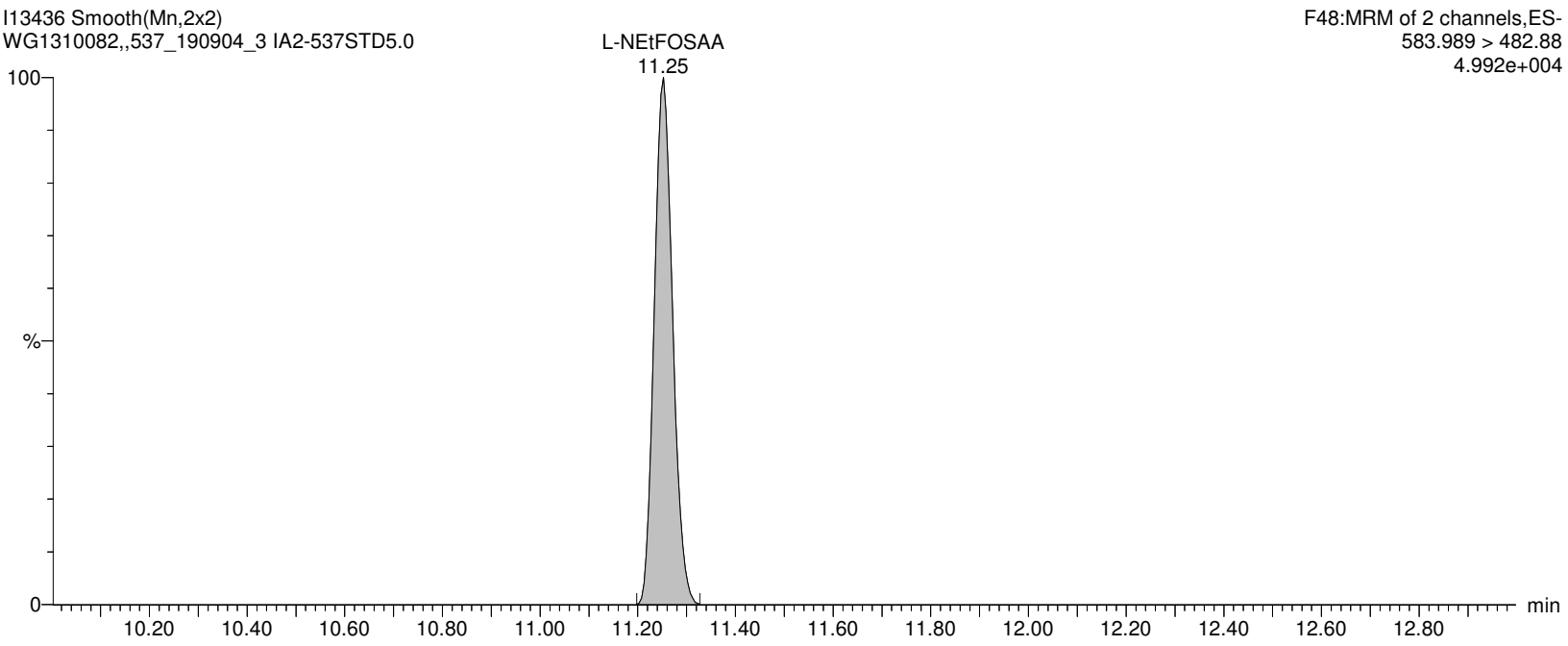



all concentration units in (ng/mL)

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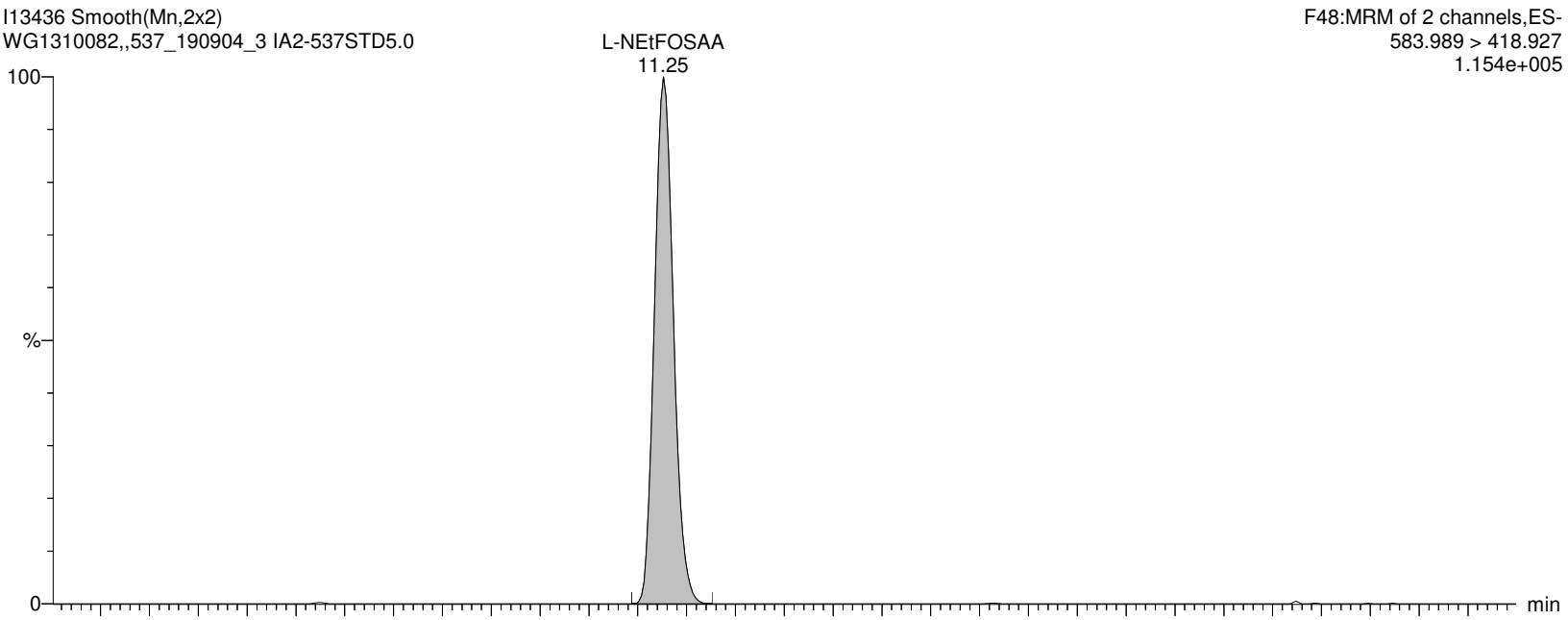


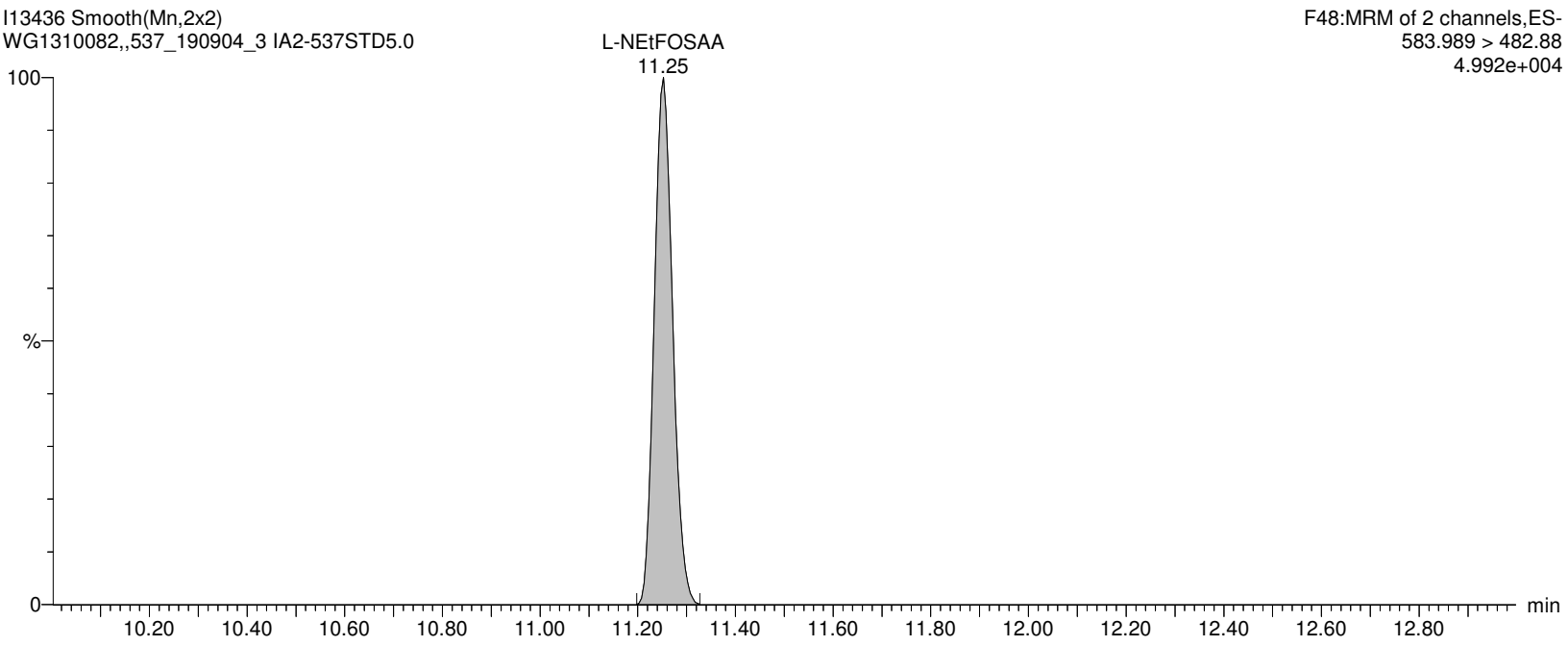



all concentration units in (ng/mL)

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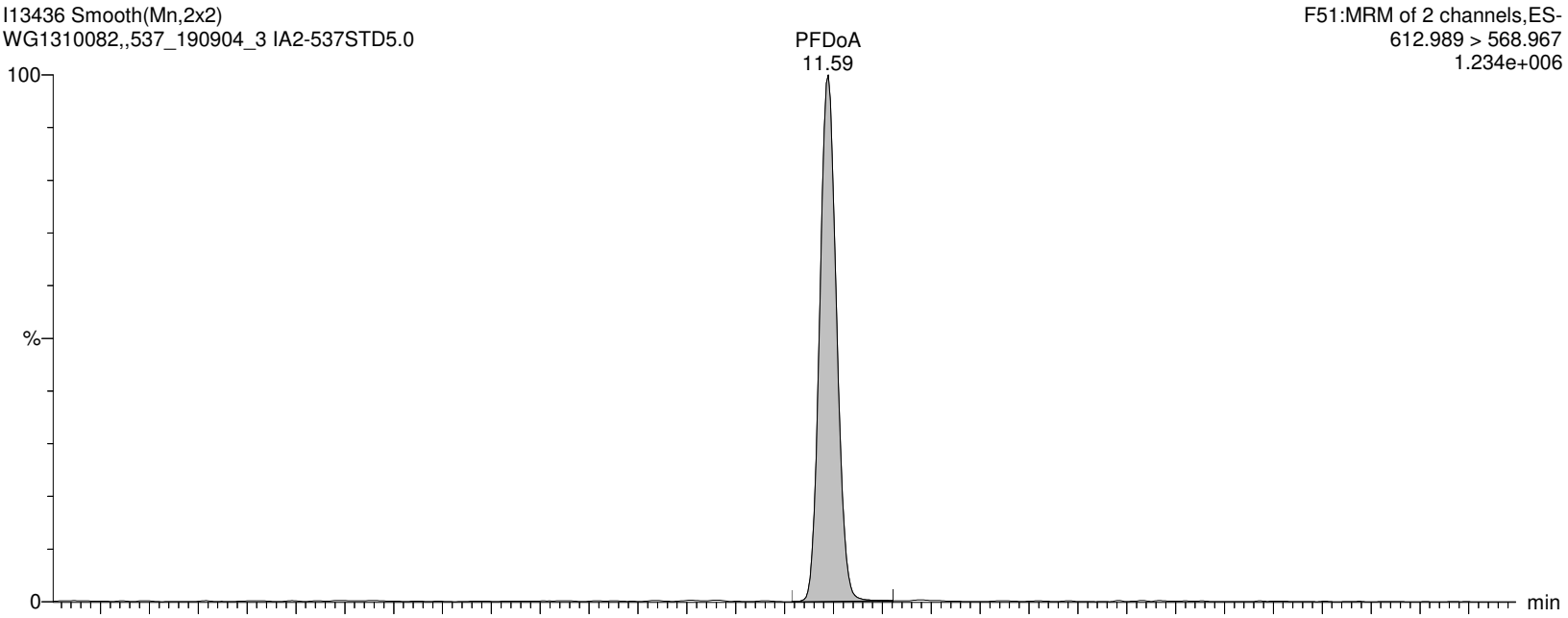


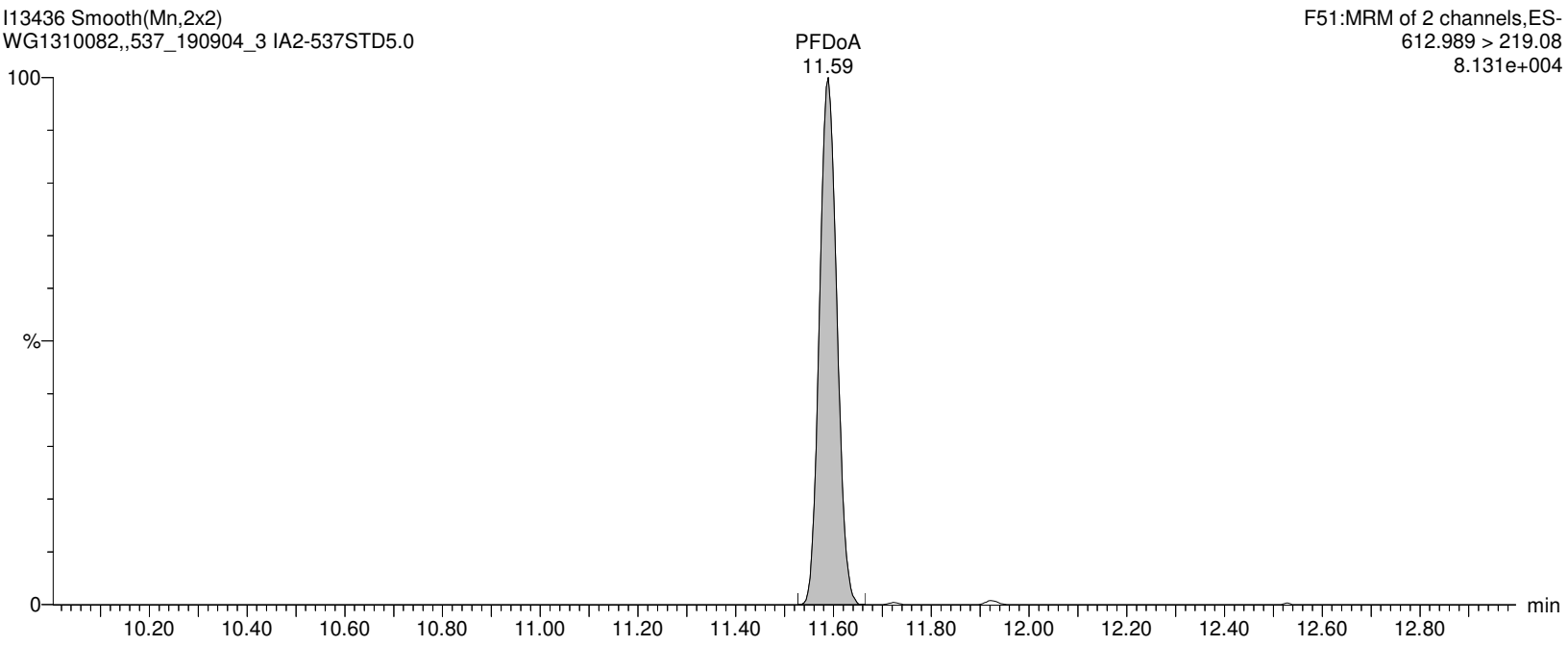



all concentration units in (ng/mL)

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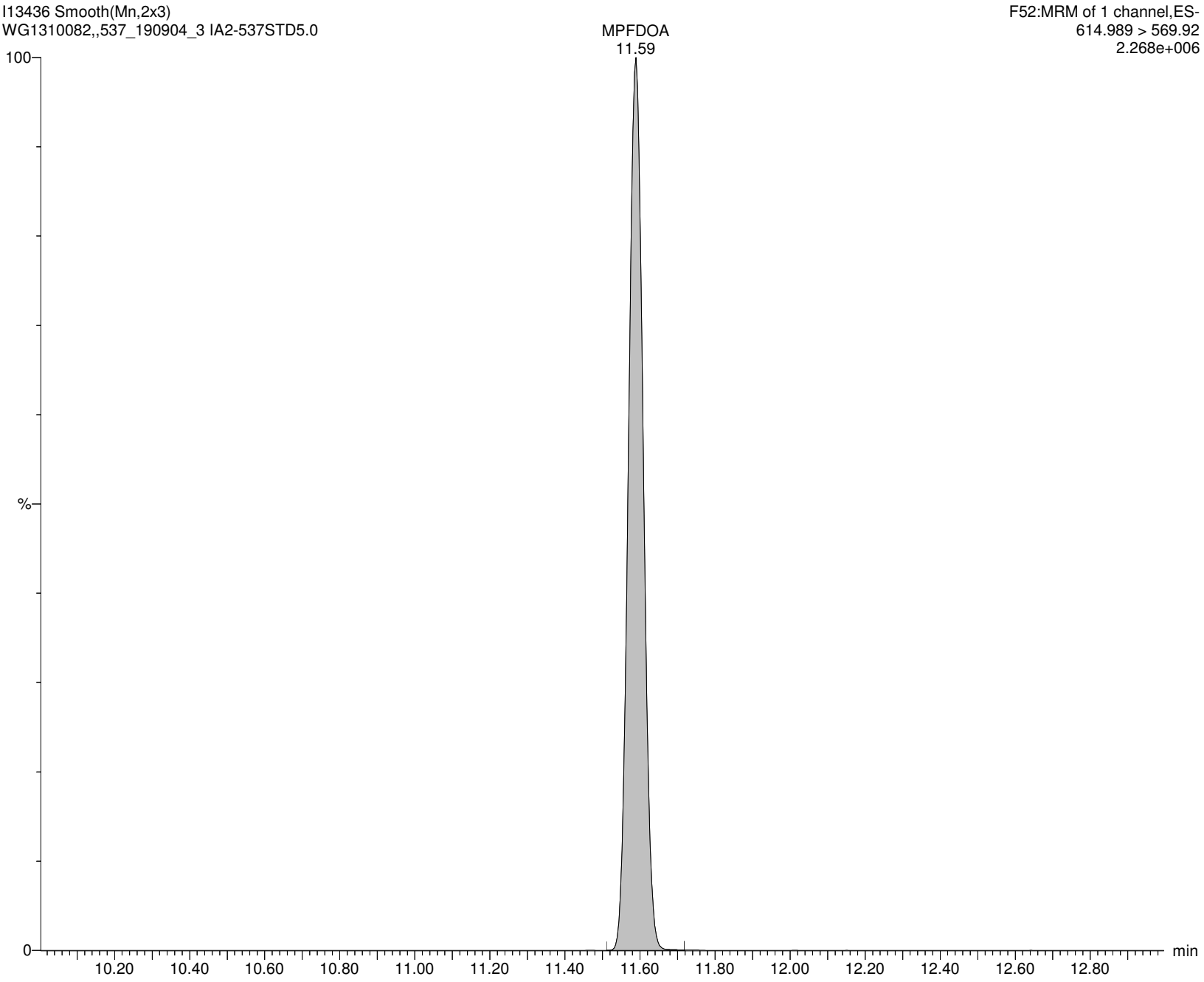



all concentration units in (ng/mL)

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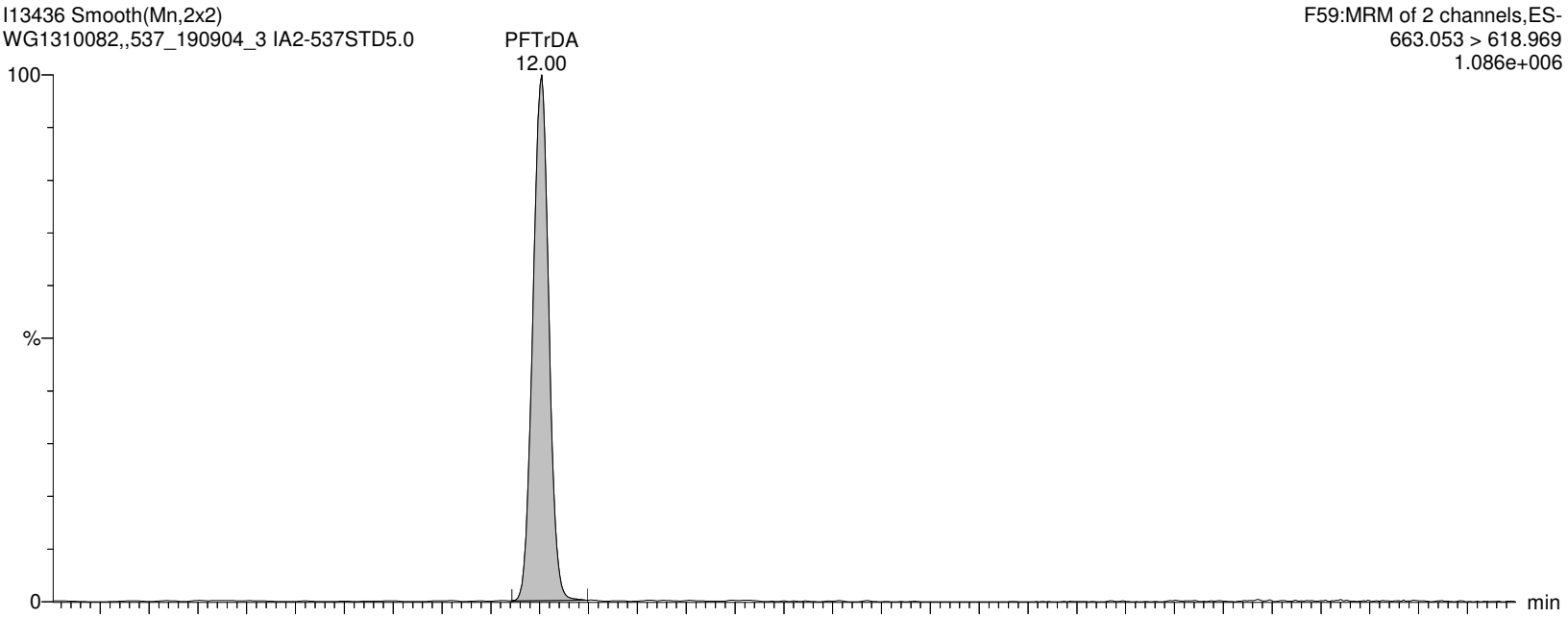
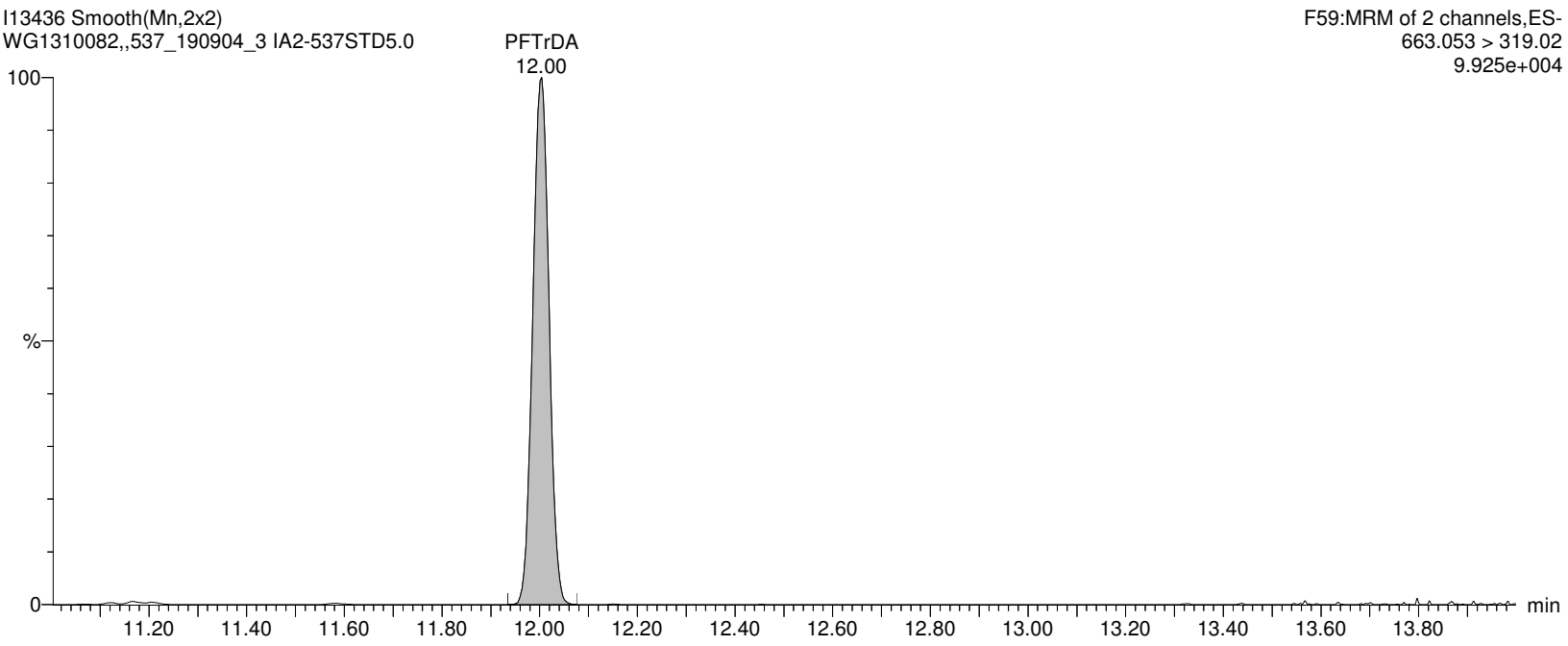
**PFTrDA**





all concentration units in (ng/mL)

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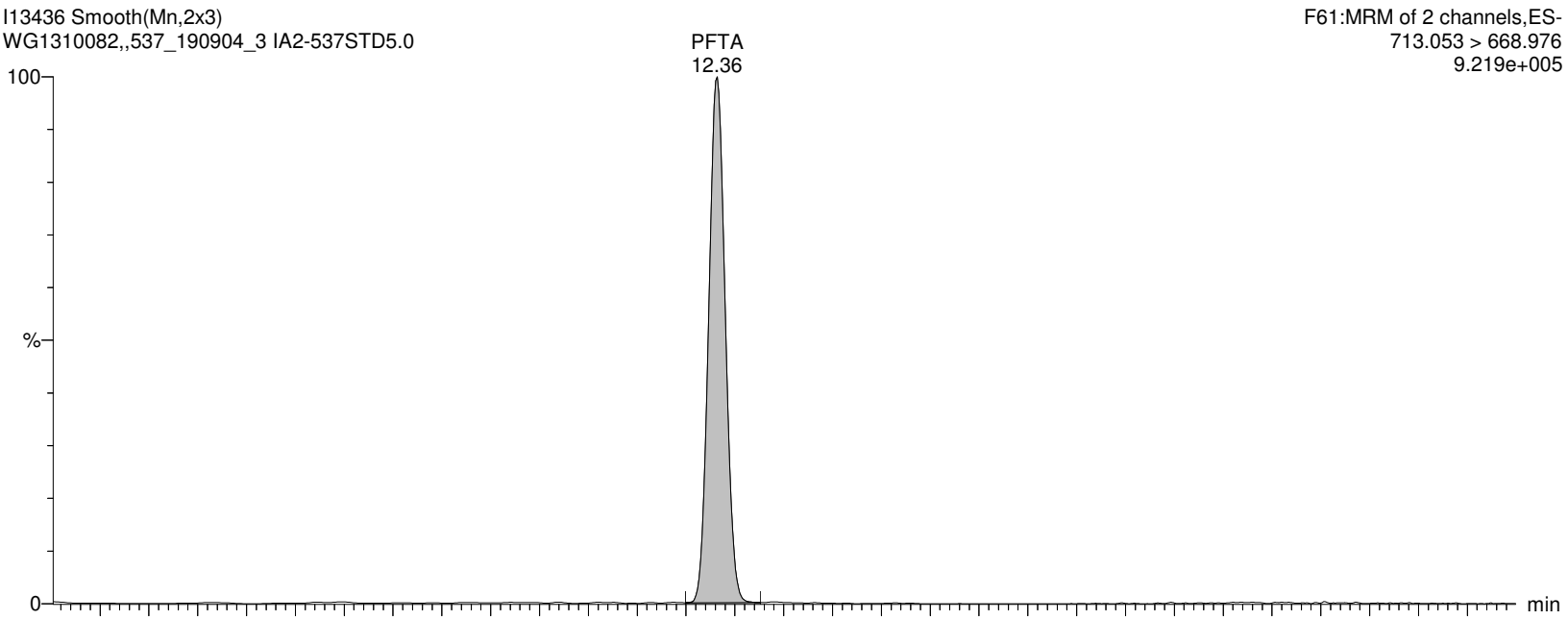


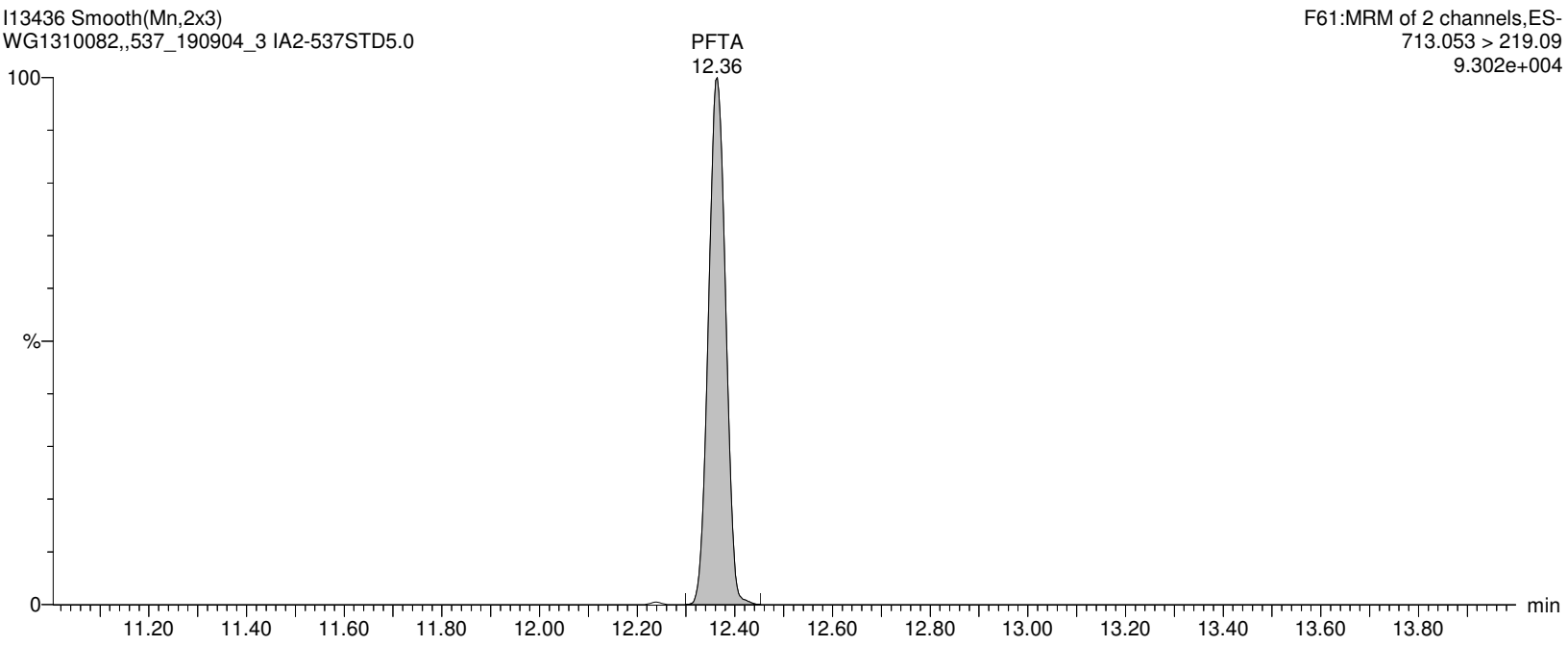



all concentration units in (ng/mL)

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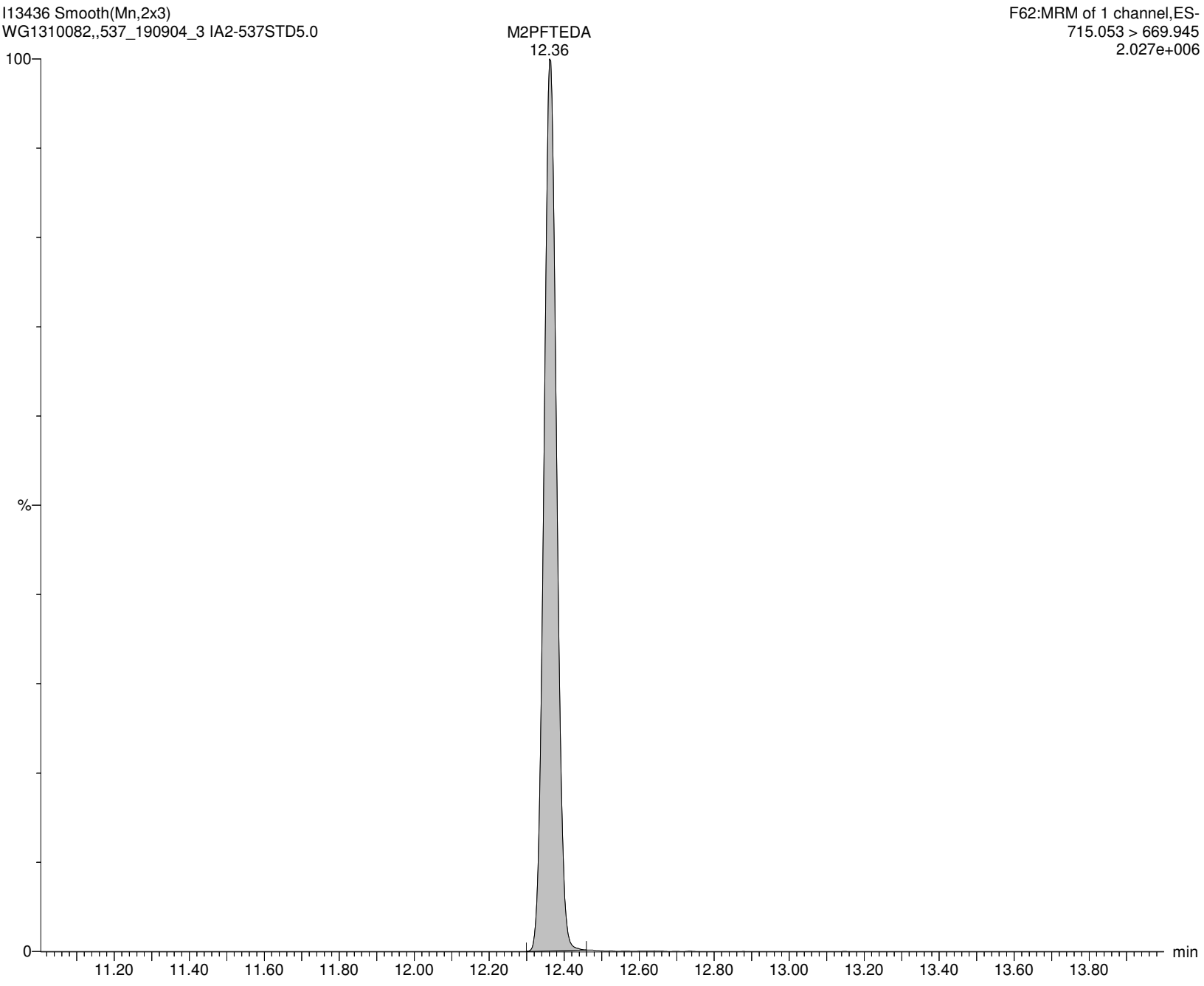



all concentration units in (ng/mL)

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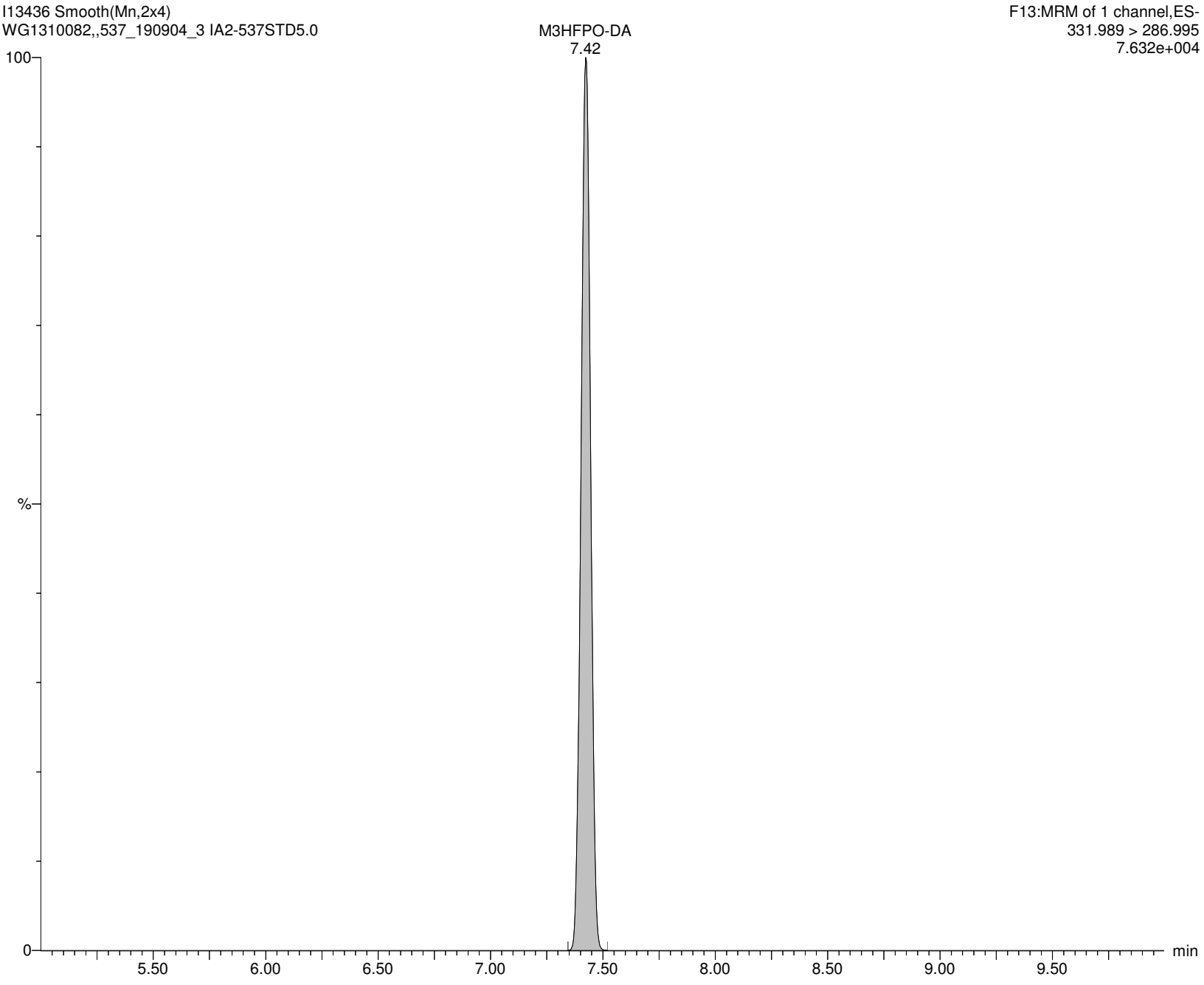



all concentration units in (ng/mL)

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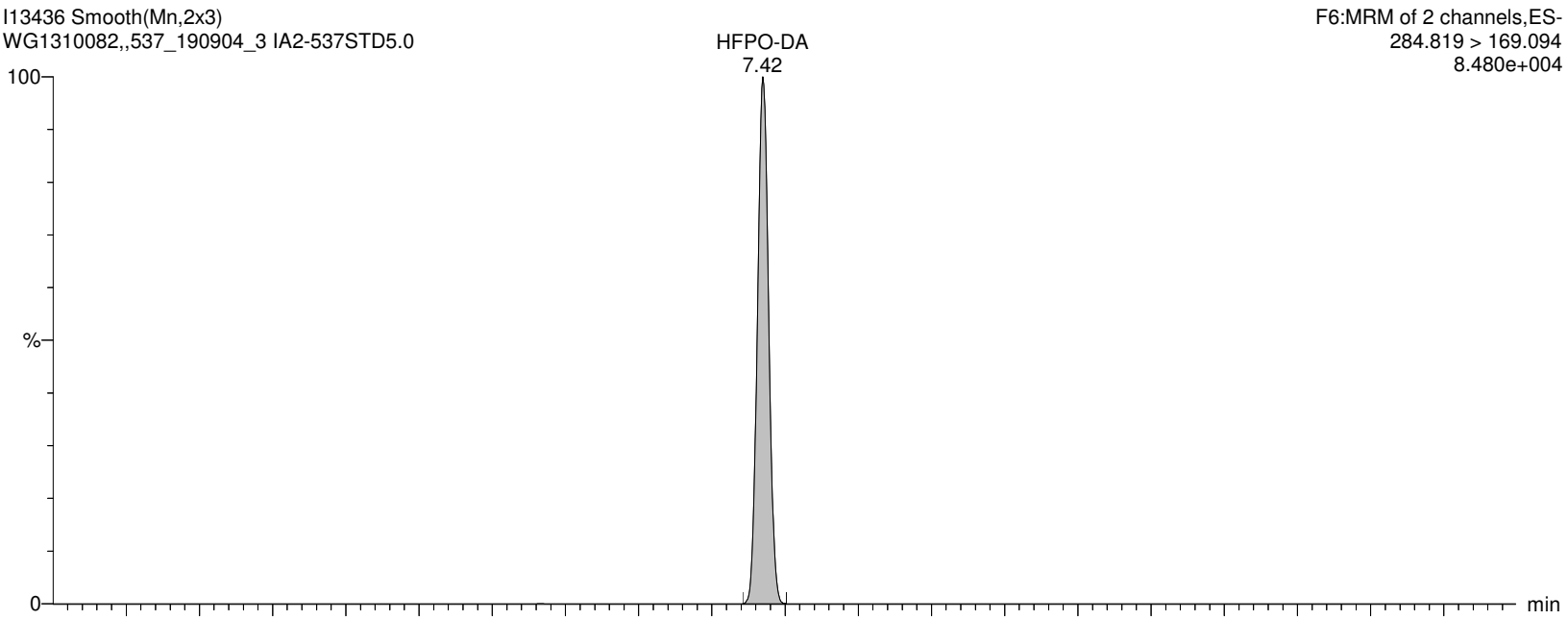


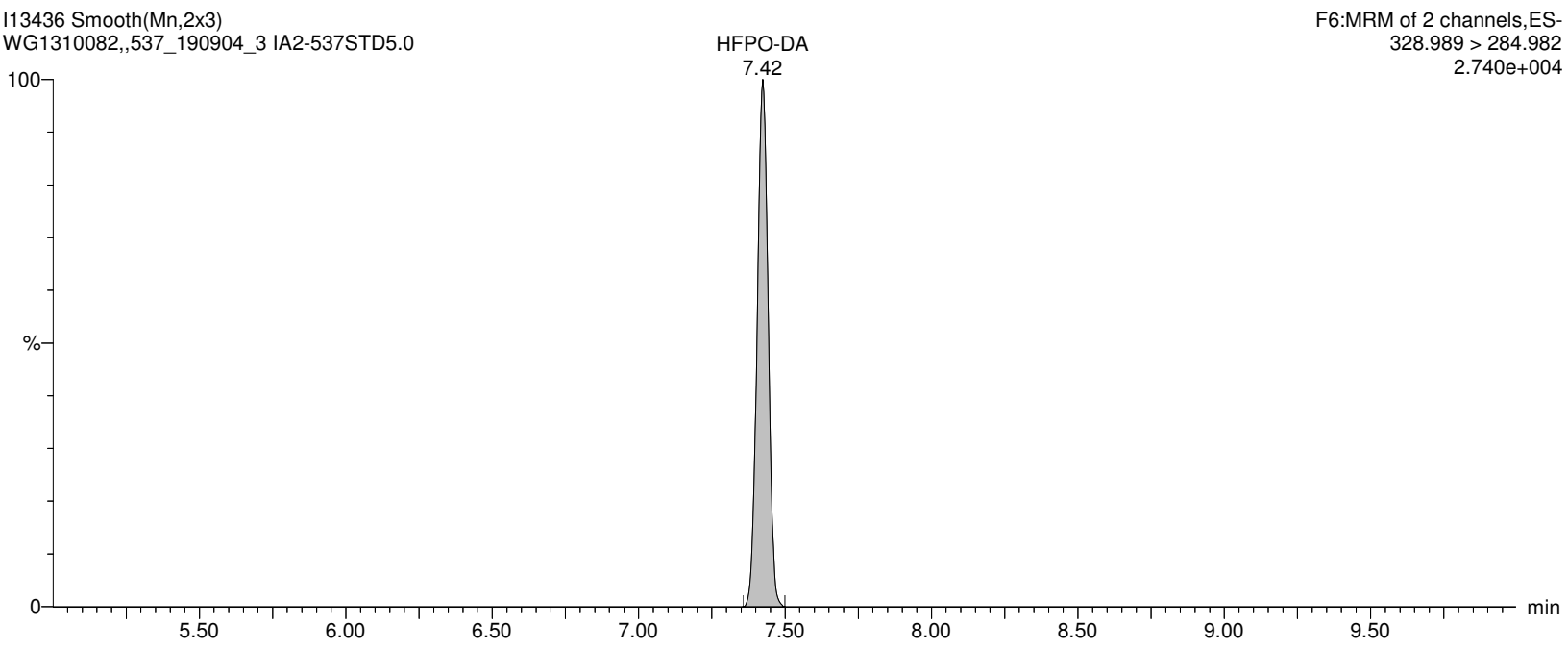



all concentration units in (ng/mL)

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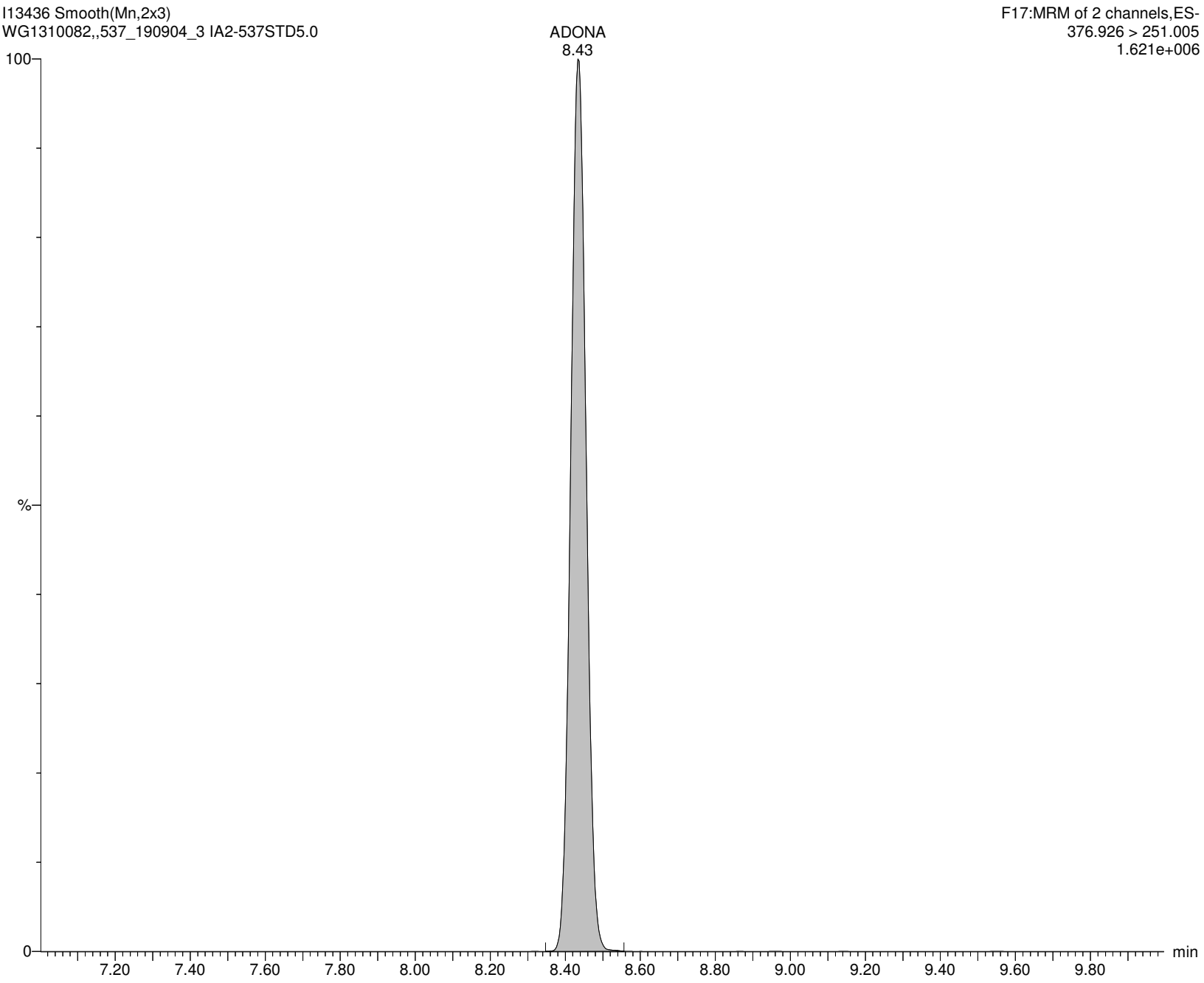



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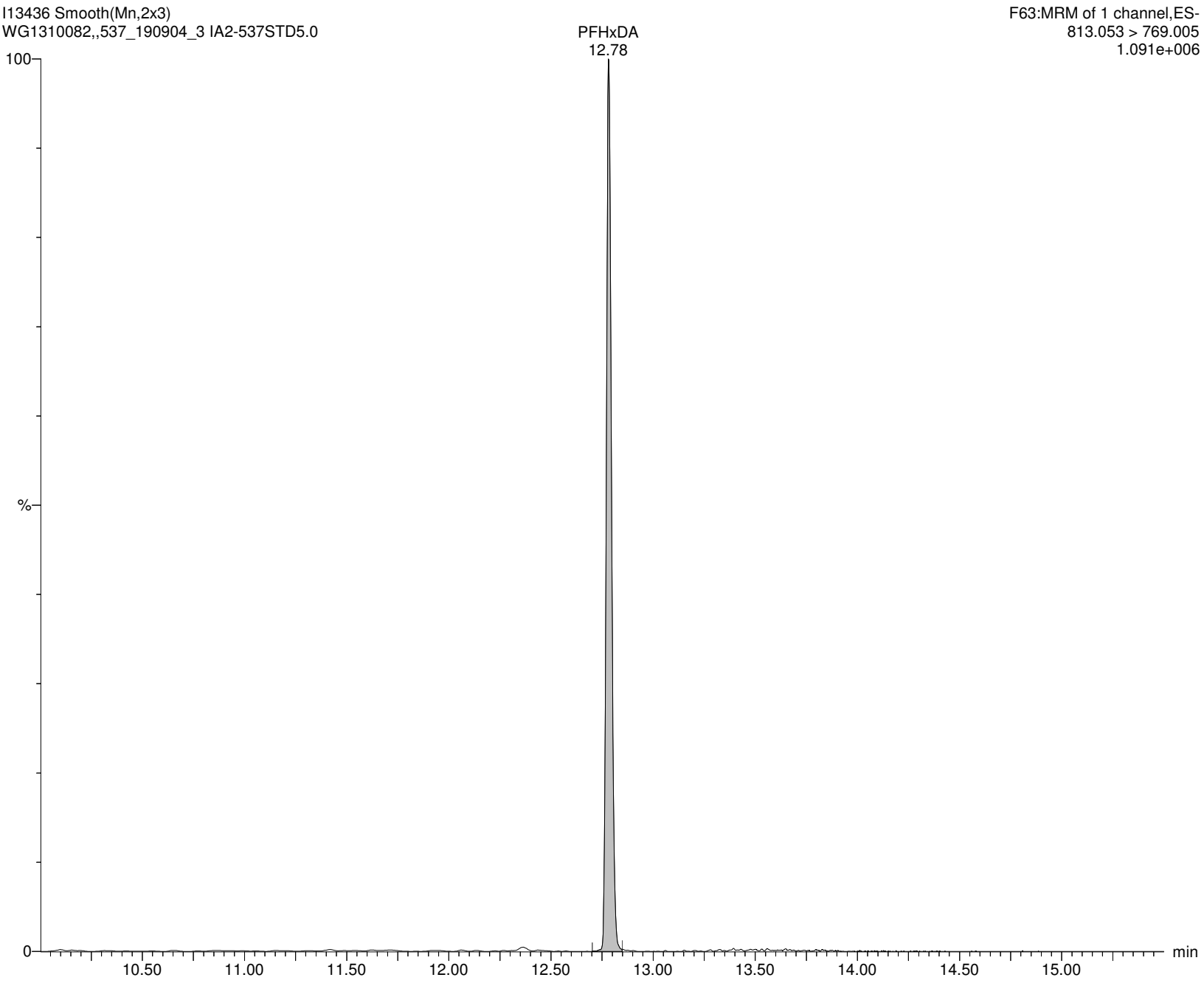



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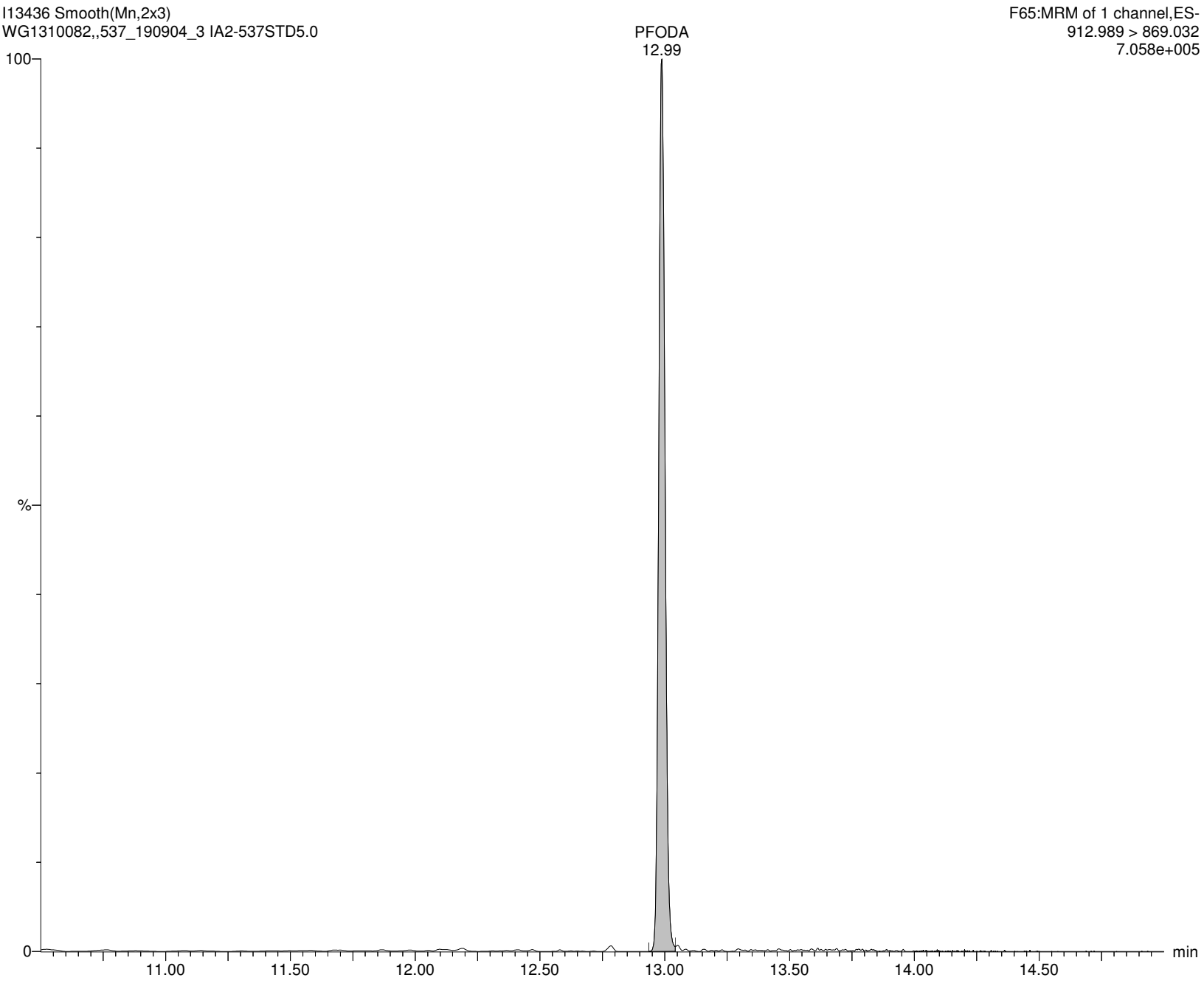



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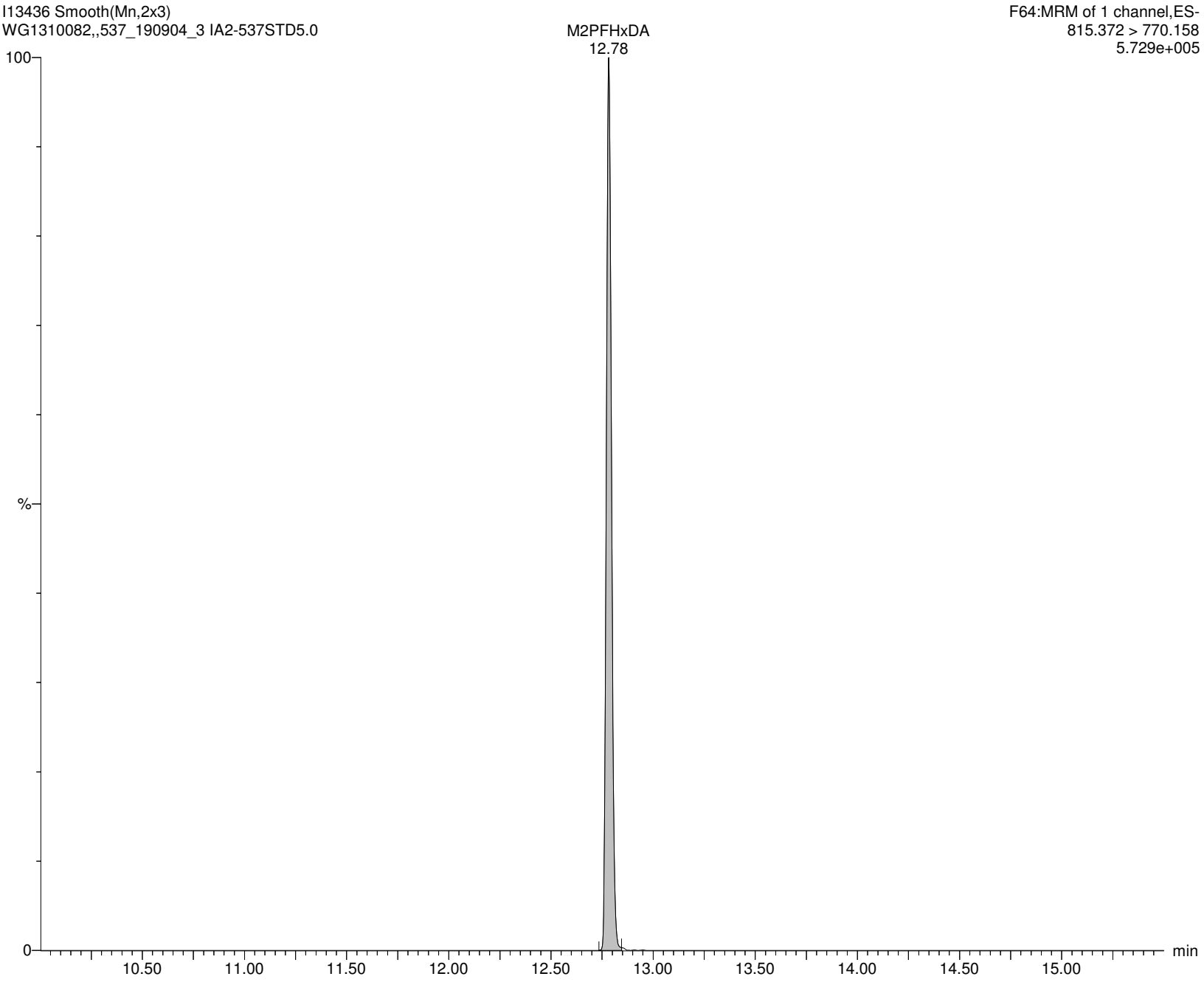
**M2PFHxDA**





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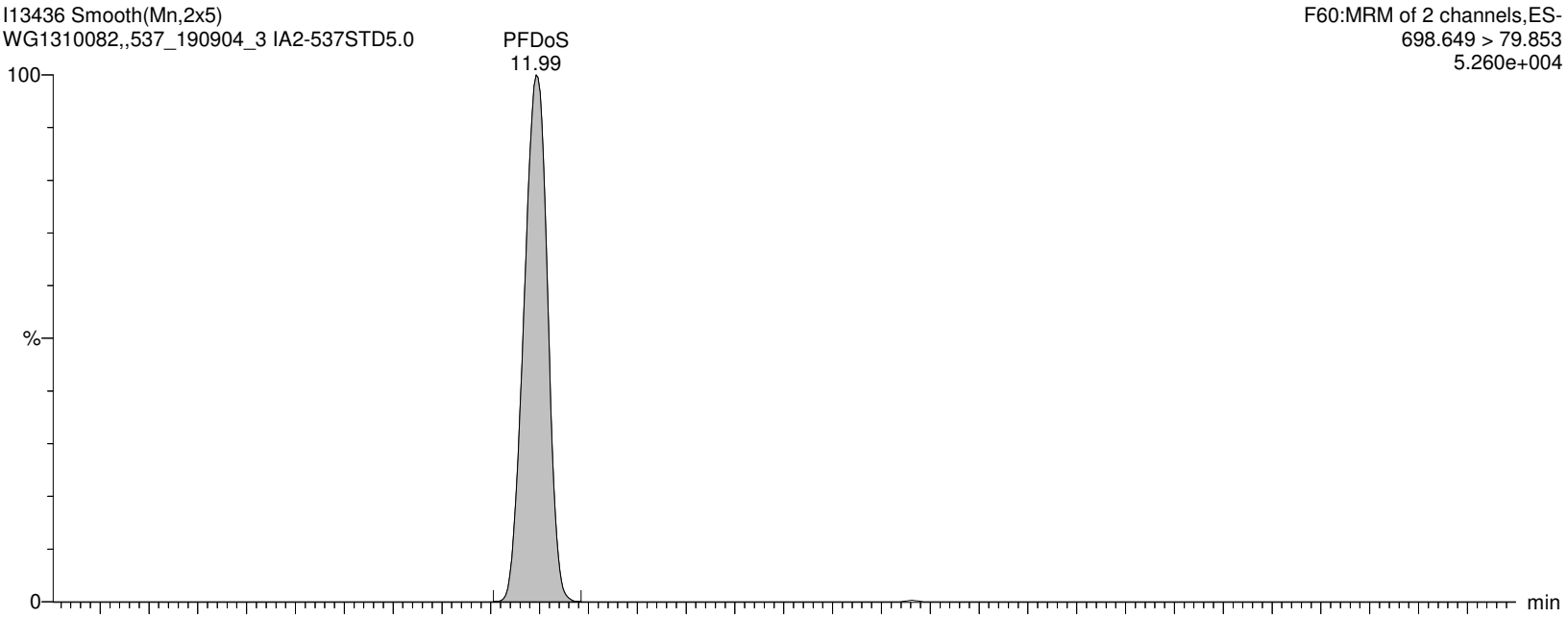
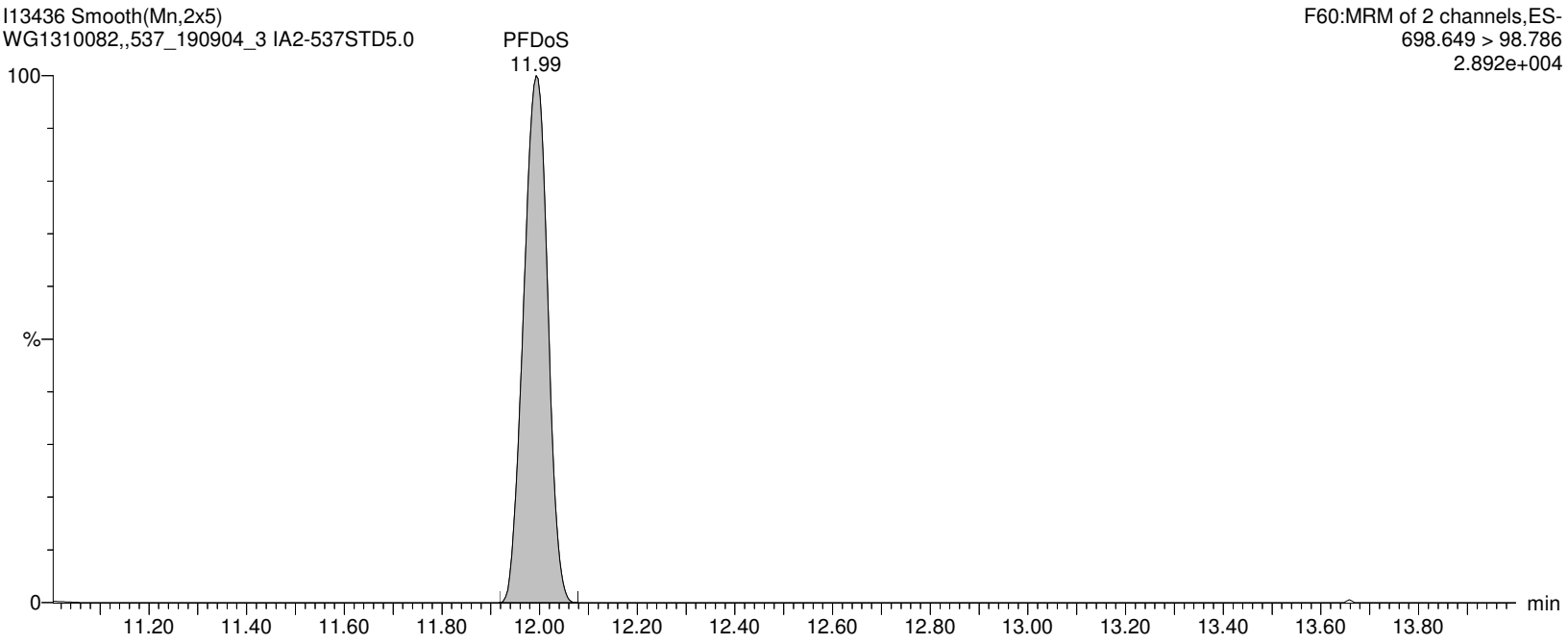
**MS Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**PFDoS**



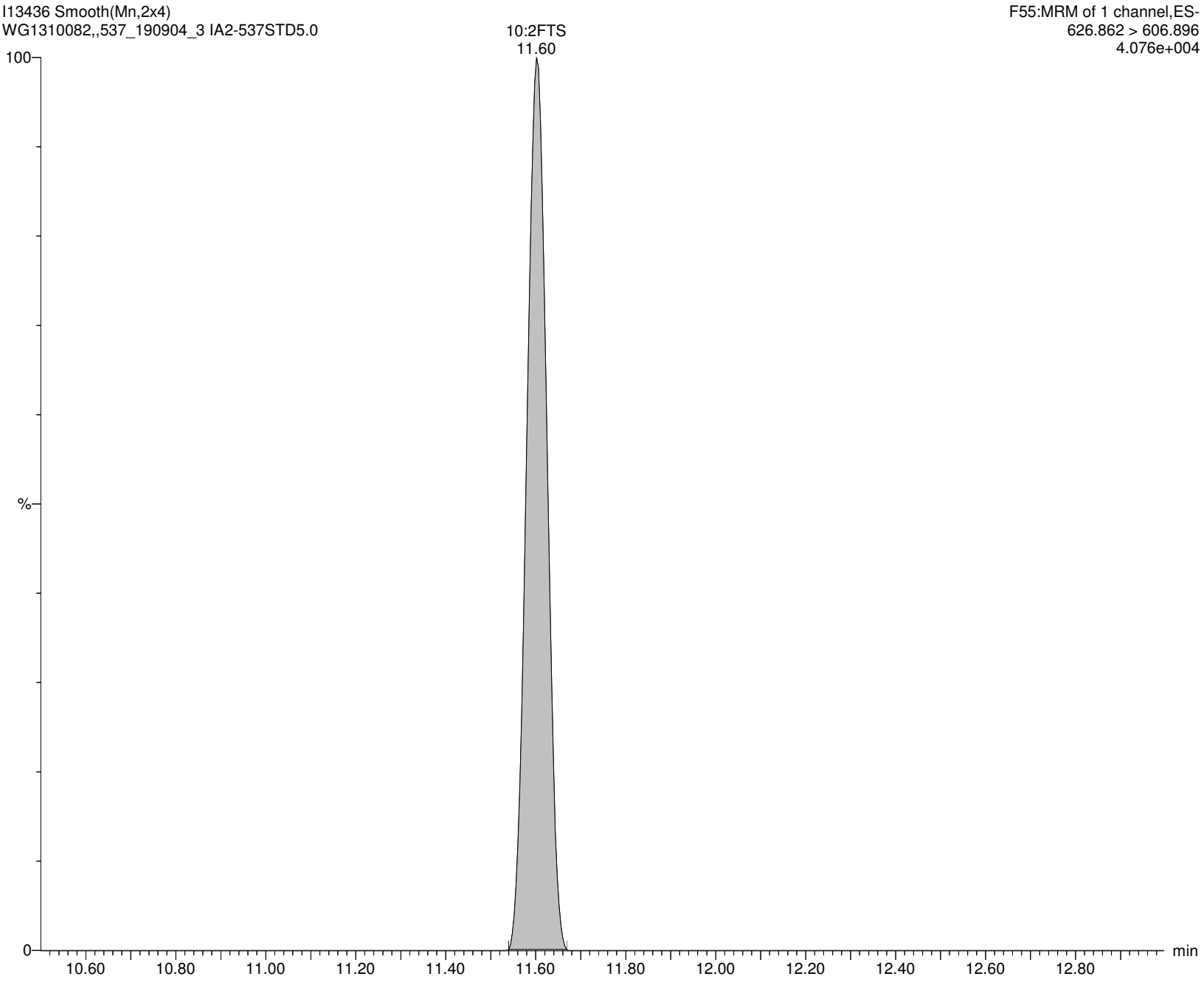


all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
Printed: Monday, November 18, 2019 13:42:52 Eastern Standard Time

**Name: I13436**
**ID: IA2-537STD5.0**
**Date: 18-Nov-2019**
**Time: 11:10:20**
**Description: WG1310082,,537_190904_3**
**User: LCMS02:JW**
**Vial: 1:A,4**
**Instrument: XEVO-TQSmicro#QEB0050**
**Inlet Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\LCMS_537_ISO_B**
**Tune Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\181009_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**10:2FTS**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
Printed: Monday, November 18, 2019 13:42:52 Eastern Standard Time

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**ID: IA2-537STD5.0**
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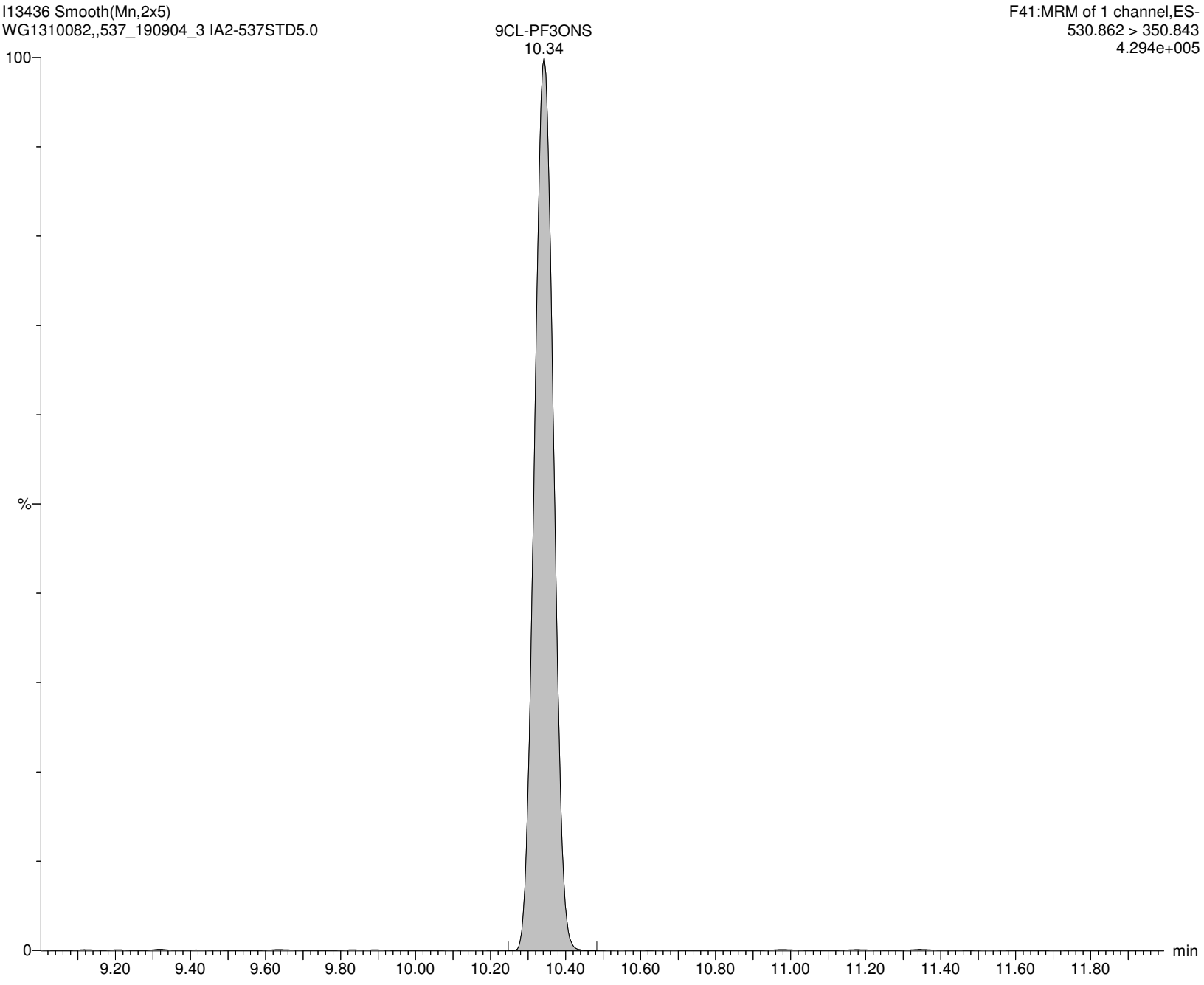
**Time: 11:10:20**
**Description: WG1310082,,537_190904_3**
**User: LCMS02:JW**
**Vial: 1:A,4**
**Instrument: XEVO-TQSmicro#QEB0050**
**Inlet Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\LCMS_537_ISO_B**
**Tune Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\181009_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**9CL-PF3ONS**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
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**Name: I13436**
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**Date: 18-Nov-2019**
**Time: 11:10:20**
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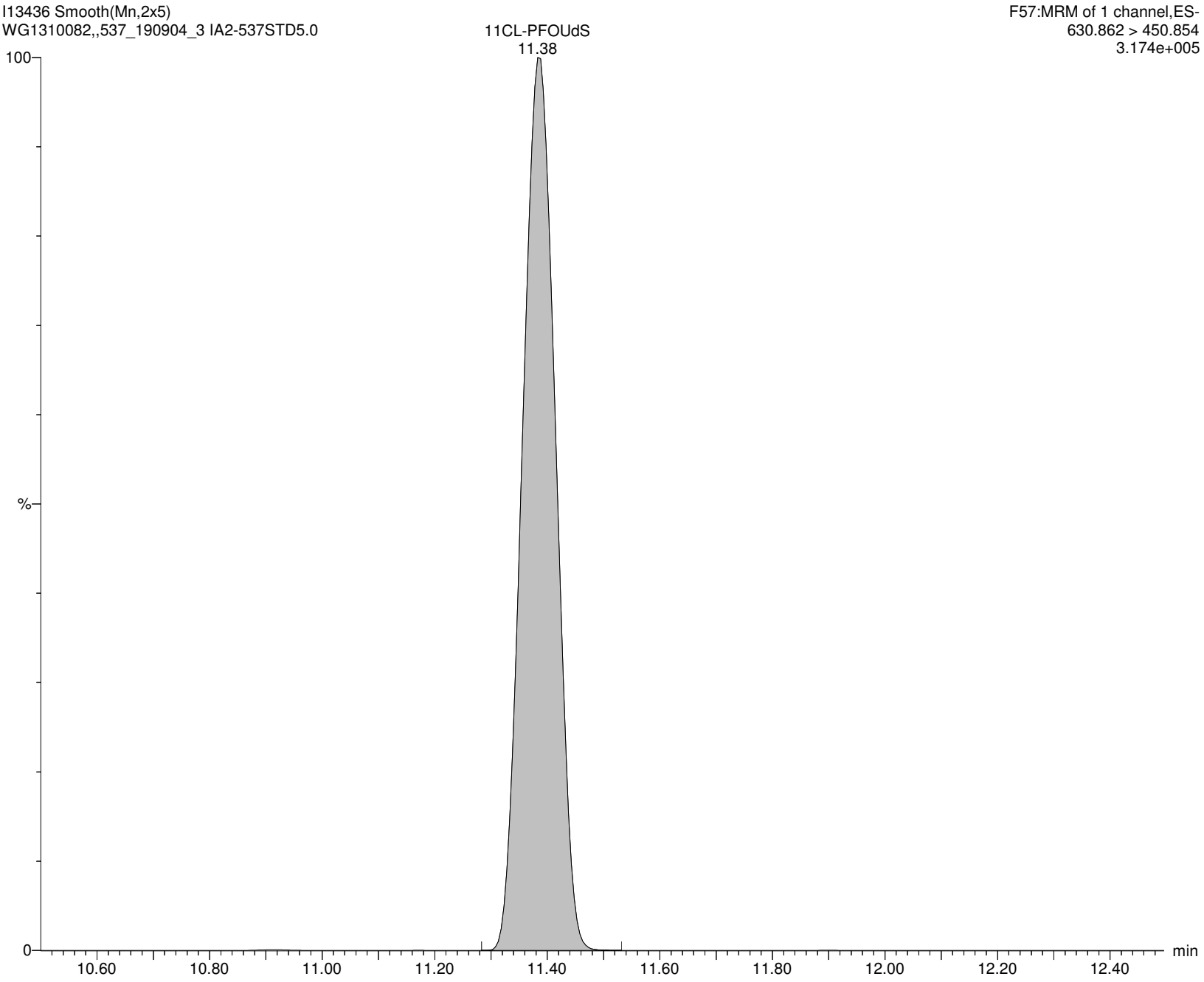
**User: LCMS02:JW**
**Vial: 1:A,4**
**Instrument: XEVO-TQSmicro#QEB0050**
**Inlet Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\LCMS_537_ISO_B**
**Tune Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\181009_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**11CL-PFOUdS**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
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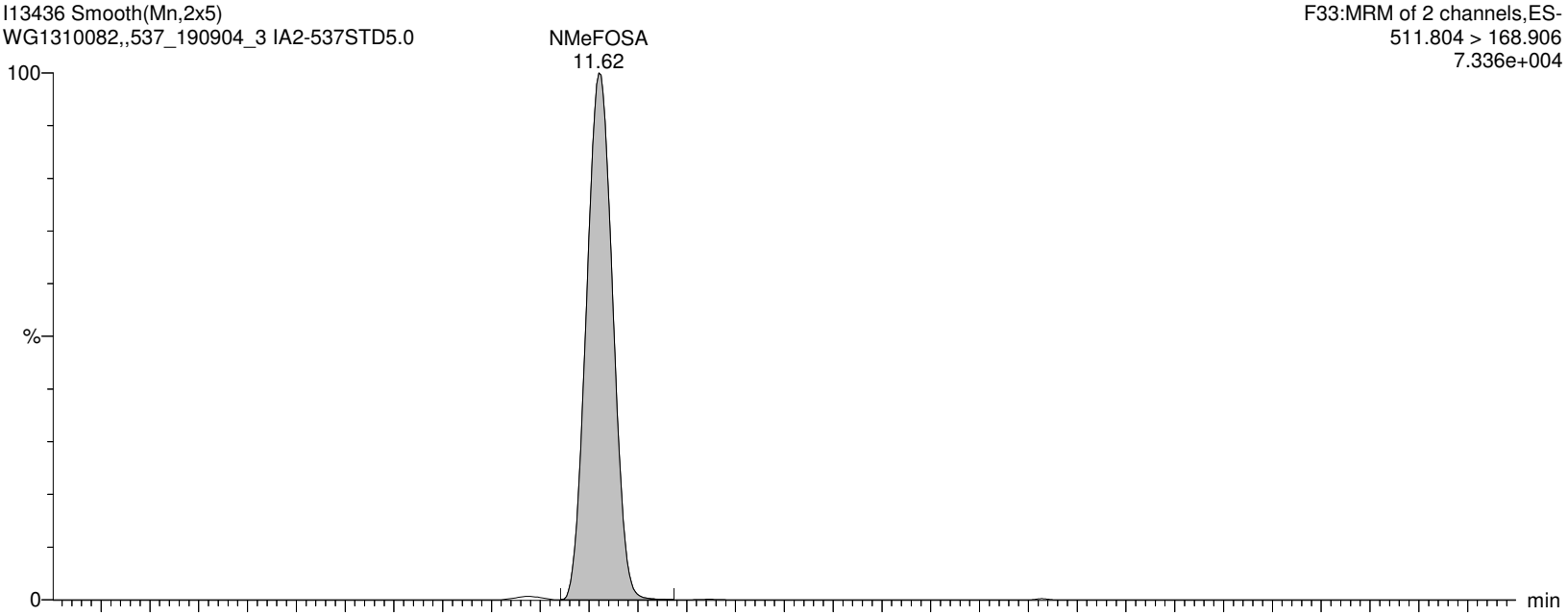
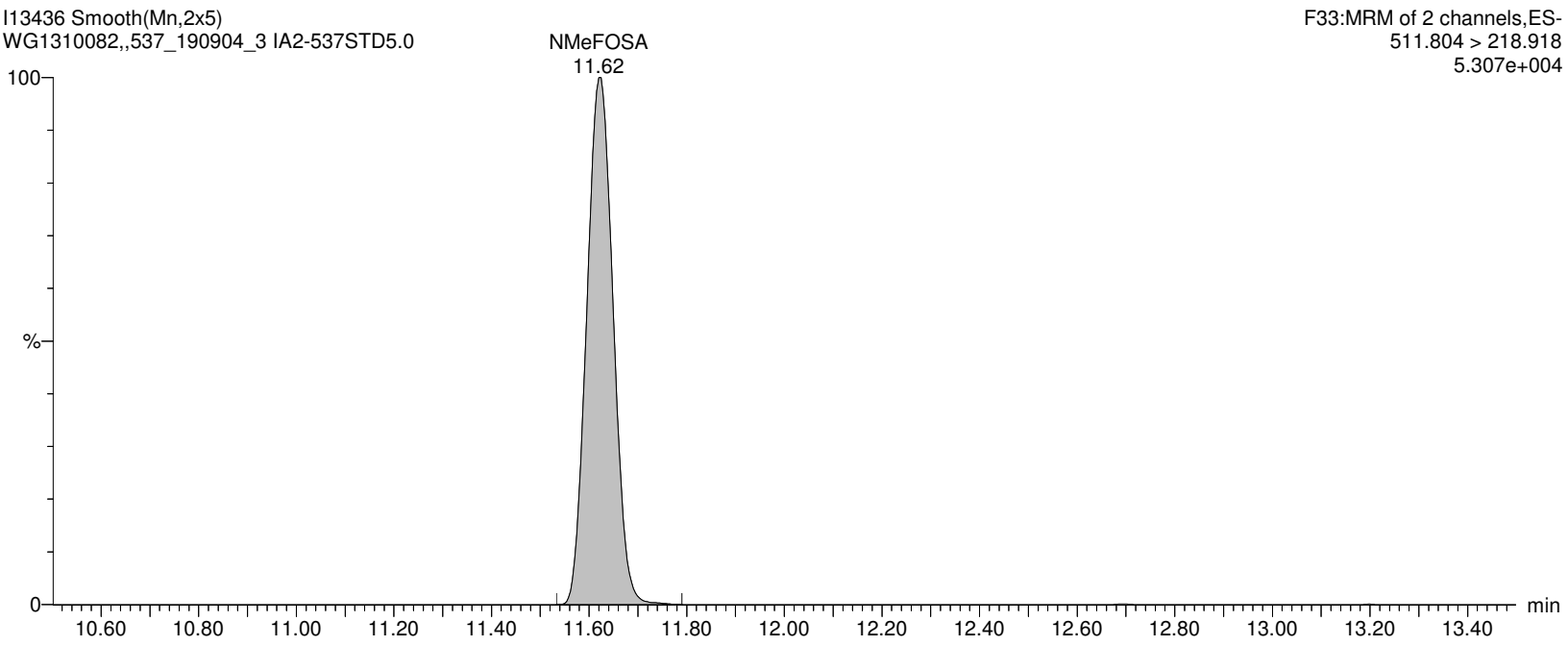
**User: LCMS02:JW**
**Vial: 1:A,4**
**Instrument: XEVO-TQSmicro#QEB0050**
**Inlet Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\LCMS_537_ISO_B**
**Tune Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\181009_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**NMeFOSA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
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**ID: IA2-537STD5.0**
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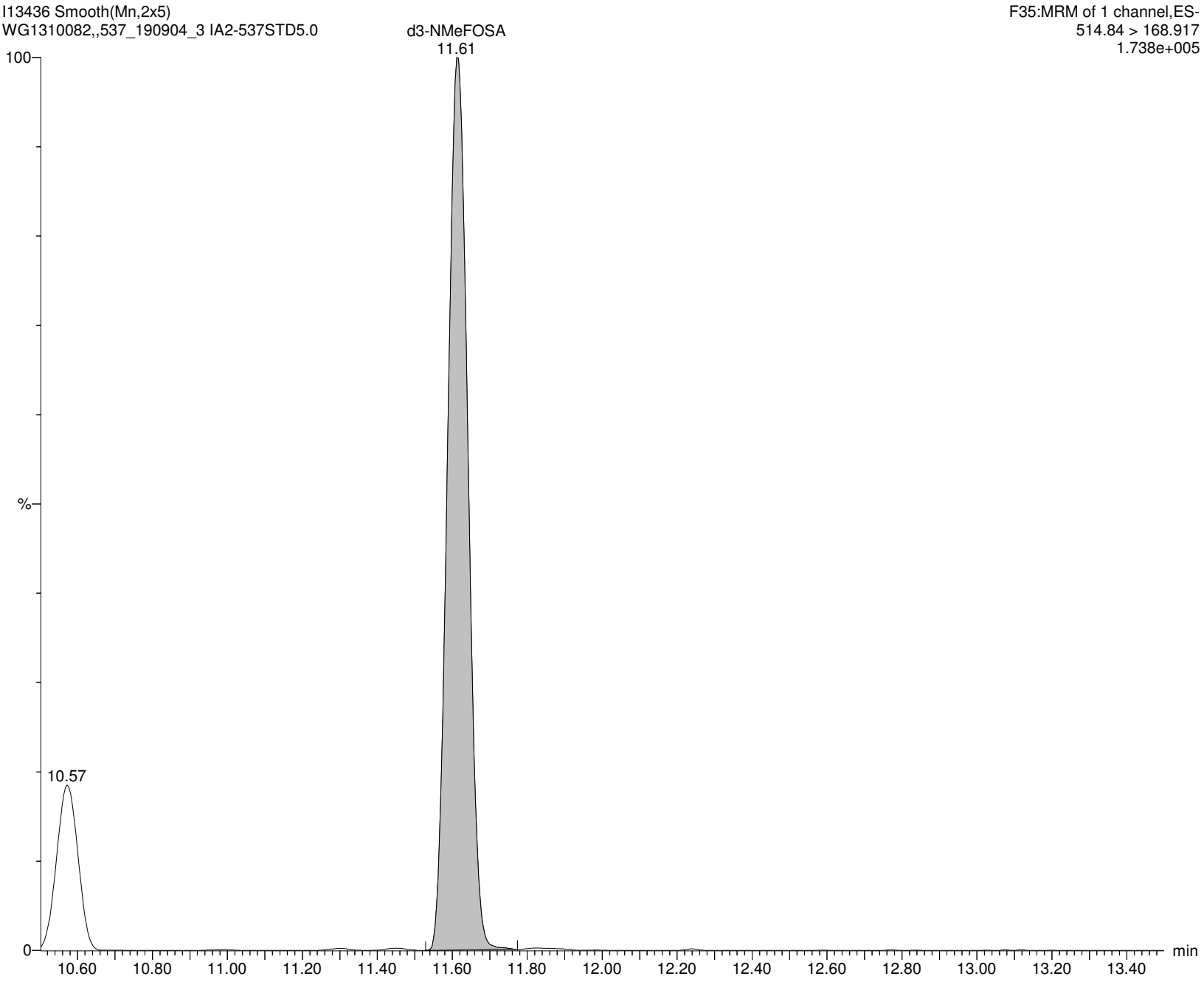
**Description: WG1310082,,537_190904_3**
**User: LCMS02:JW**
**Vial: 1:A,4**
**Instrument: XEVO-TQSmicro#QEB0050**
**Inlet Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\LCMS_537_ISO_B**
**Tune Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\181009_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**d3-NMeFOSA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
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**Name: I13436**
**ID: IA2-537STD5.0**
**Date: 18-Nov-2019**
**Time: 11:10:20**
**Description: WG1310082,,537_190904_3**
**User: LCMS02:JW**
**Vial: 1:A,4**
**Instrument: XEVO-TQSmicro#QEB0050**
**Inlet Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\LCMS_537_ISO_B**
**Tune Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\181009_TUNE.IPR**
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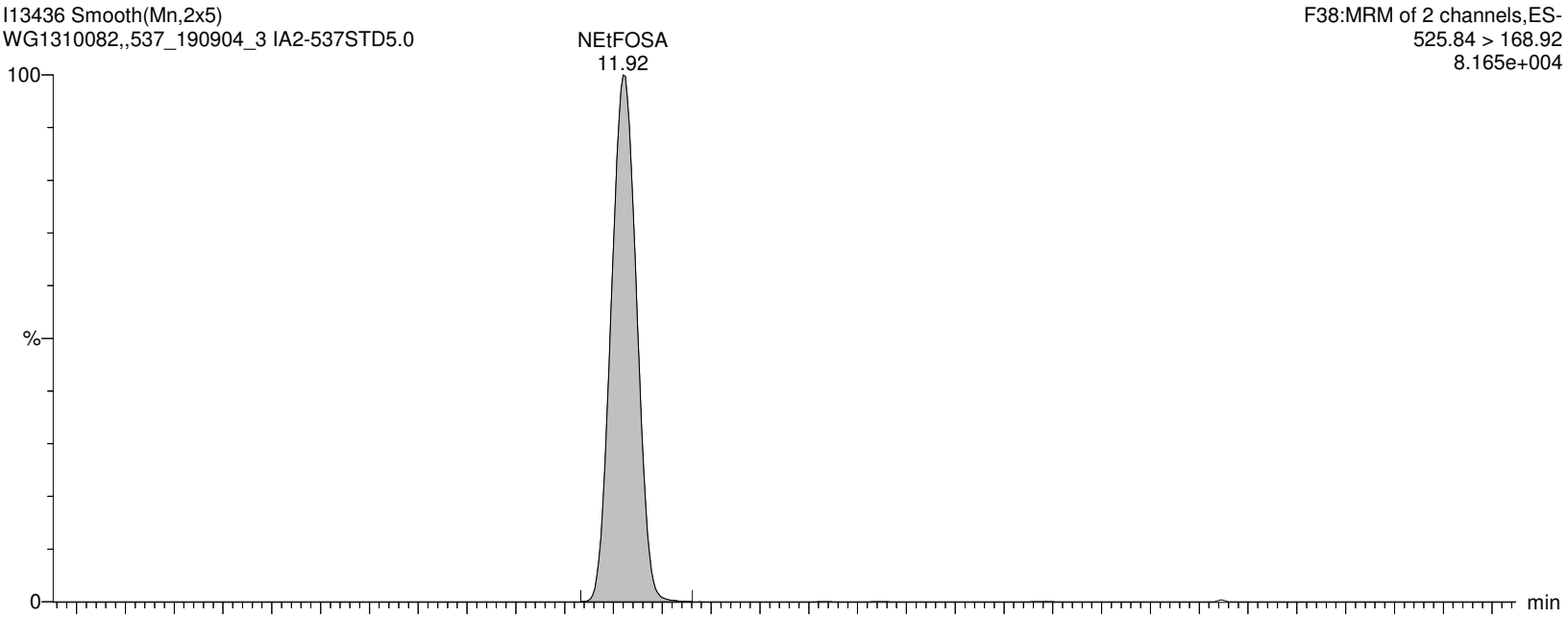
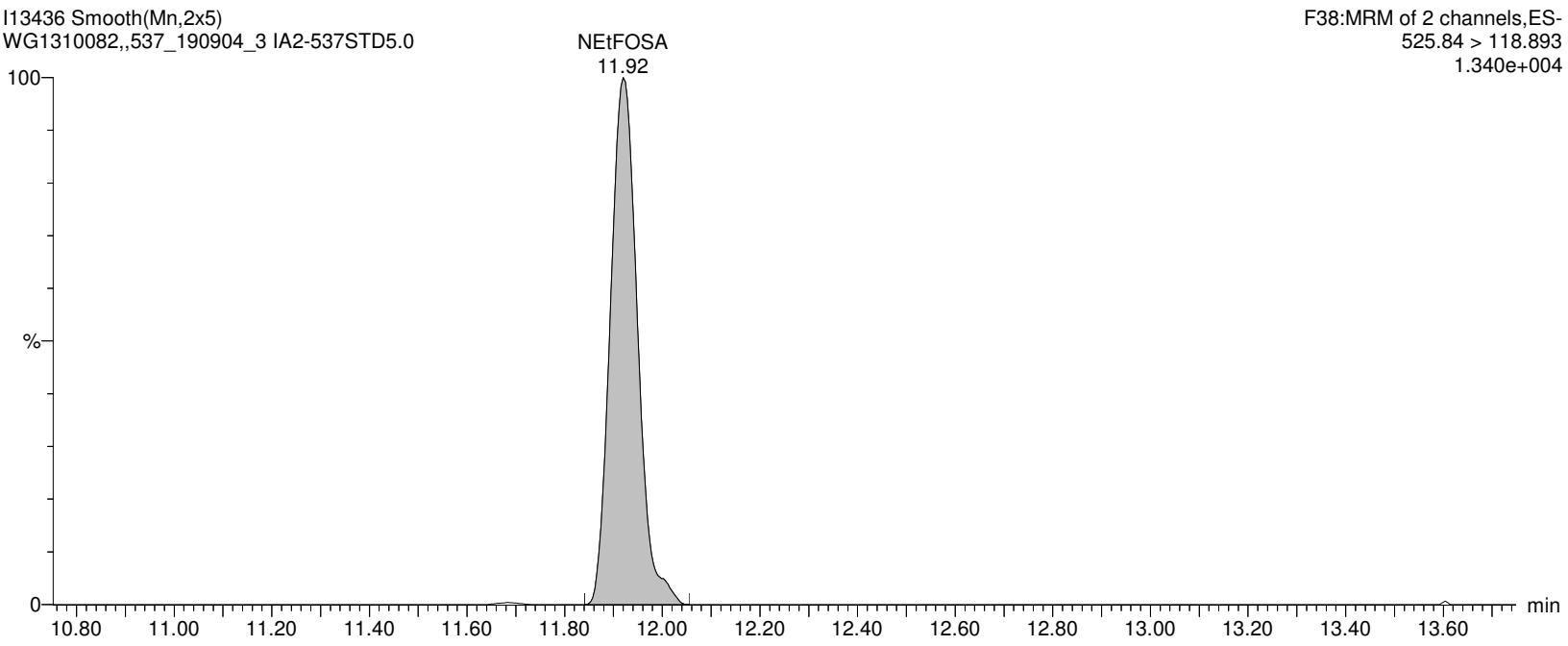
**NEtFOSA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
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**Name: I13436**
**ID: IA2-537STD5.0**
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**Description: WG1310082,,537_190904_3**
**User: LCMS02:JW**
**Vial: 1:A,4**
**Instrument: XEVO-TQSmicro#QEB0050**
**Inlet Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\LCMS_537_ISO_B**
**Tune Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\181009_TUNE.IPR**
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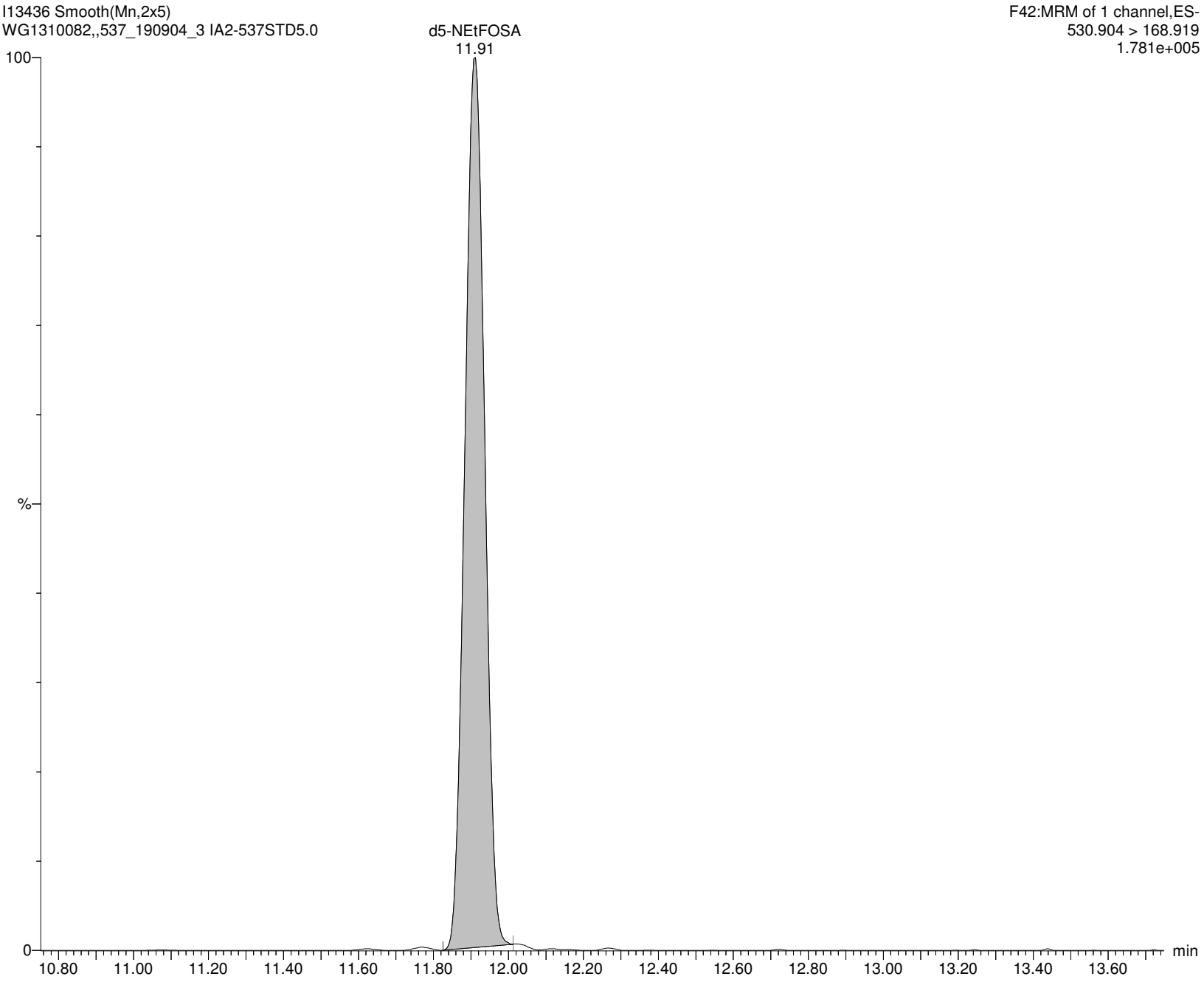
**d5-NEtFOSA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
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**ID: IA2-537STD5.0**
**Date: 18-Nov-2019**
**Time: 11:10:20**
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**User: LCMS02:JW**
**Vial: 1:A,4**
**Instrument: XEVO-TQSmicro#QEB0050**
**Inlet Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\LCMS_537_ISO_B**
**Tune Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\181009_TUNE.IPR**
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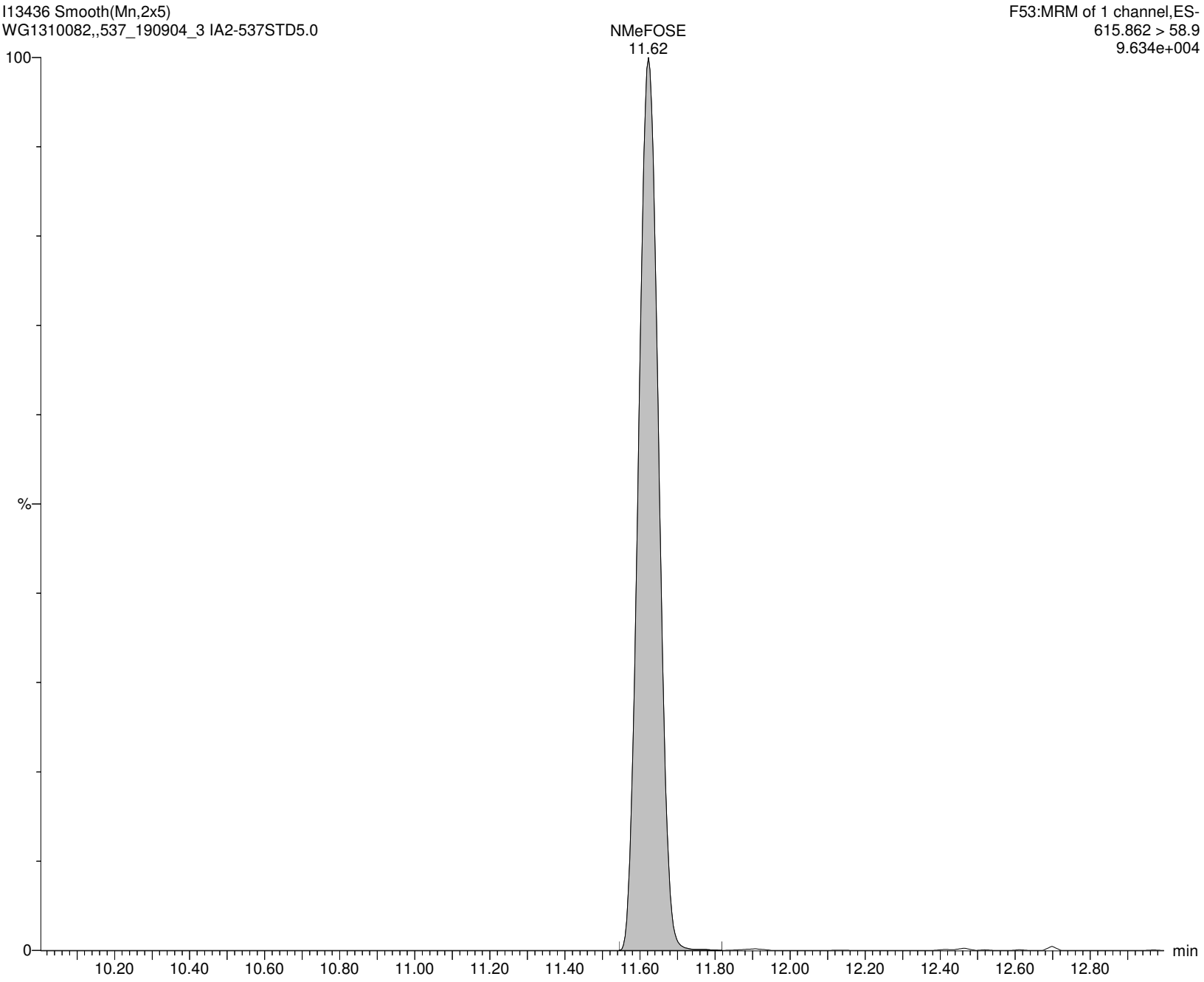
**NMeFOSE**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
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**Name: I13436**
**ID: IA2-537STD5.0**
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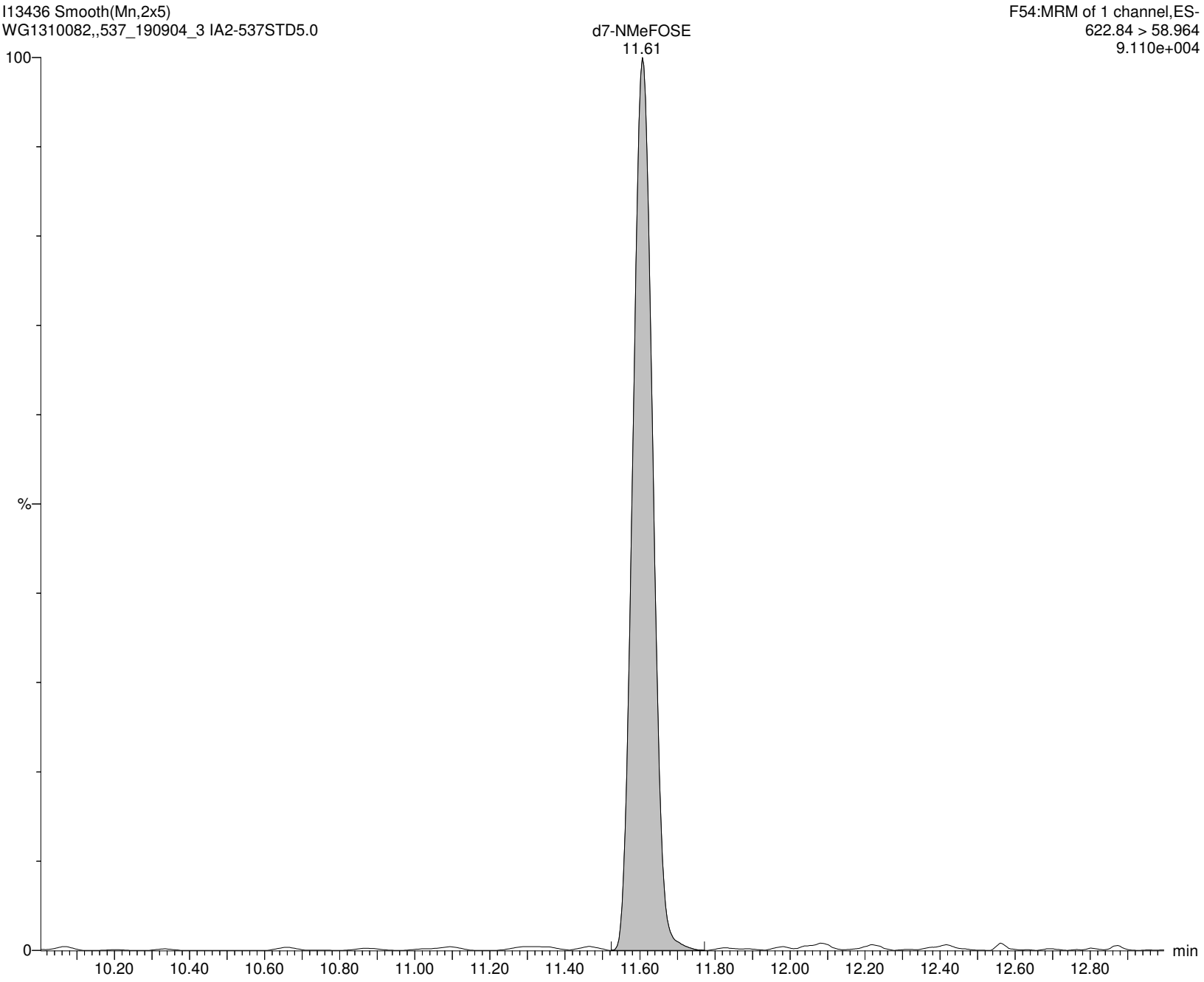
**Time: 11:10:20**
**Description: WG1310082,,537_190904_3**
**User: LCMS02:JW**
**Vial: 1:A,4**
**Instrument: XEVO-TQSmicro#QEB0050**
**Inlet Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\LCMS_537_ISO_B**
**Tune Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\181009_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**d7-NMeFOSE**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
Printed: Monday, November 18, 2019 13:42:52 Eastern Standard Time

**Name: I13436**
**ID: IA2-537STD5.0**
**Date: 18-Nov-2019**
**Time: 11:10:20**
**Description: WG1310082,,537_190904_3**
**User: LCMS02:JW**
**Vial: 1:A,4**
**Instrument: XEVO-TQSmicro#QEB0050**
**Inlet Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\LCMS_537_ISO_B**
**Tune Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\181009_TUNE.IPR**
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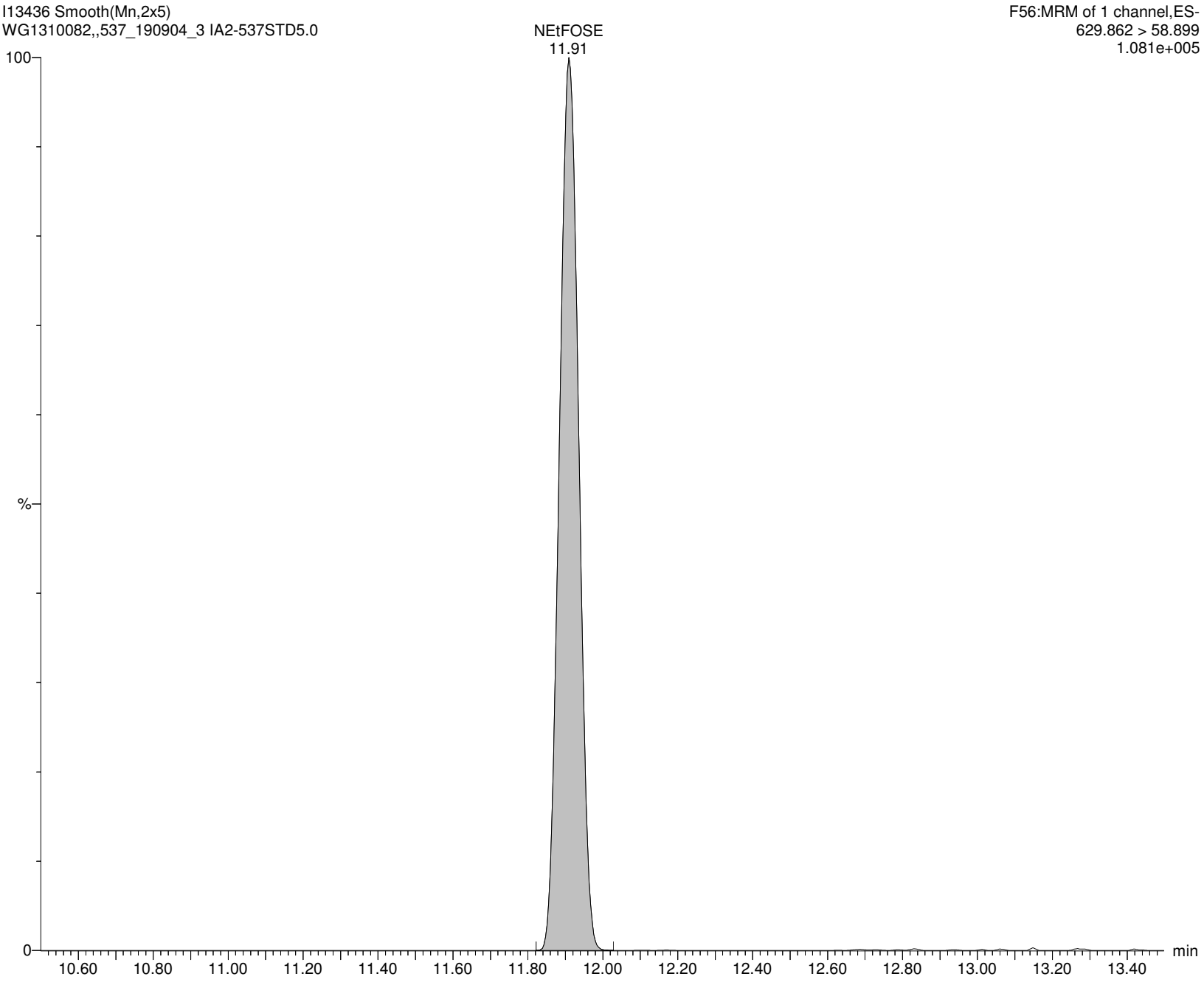
**NEtFOSE**





all concentration units in (ng/mL)

Alpha Analytical Inc.
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Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
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**Name: I13436**
**ID: IA2-537STD5.0**
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**Time: 11:10:20**
**Description: WG1310082,,537_190904_3**
**User: LCMS02:JW**
**Vial: 1:A,4**
**Instrument: XEVO-TQSmicro#QEB0050**
**Inlet Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\LCMS_537_ISO_B**
**Tune Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\181009_TUNE.IPR**
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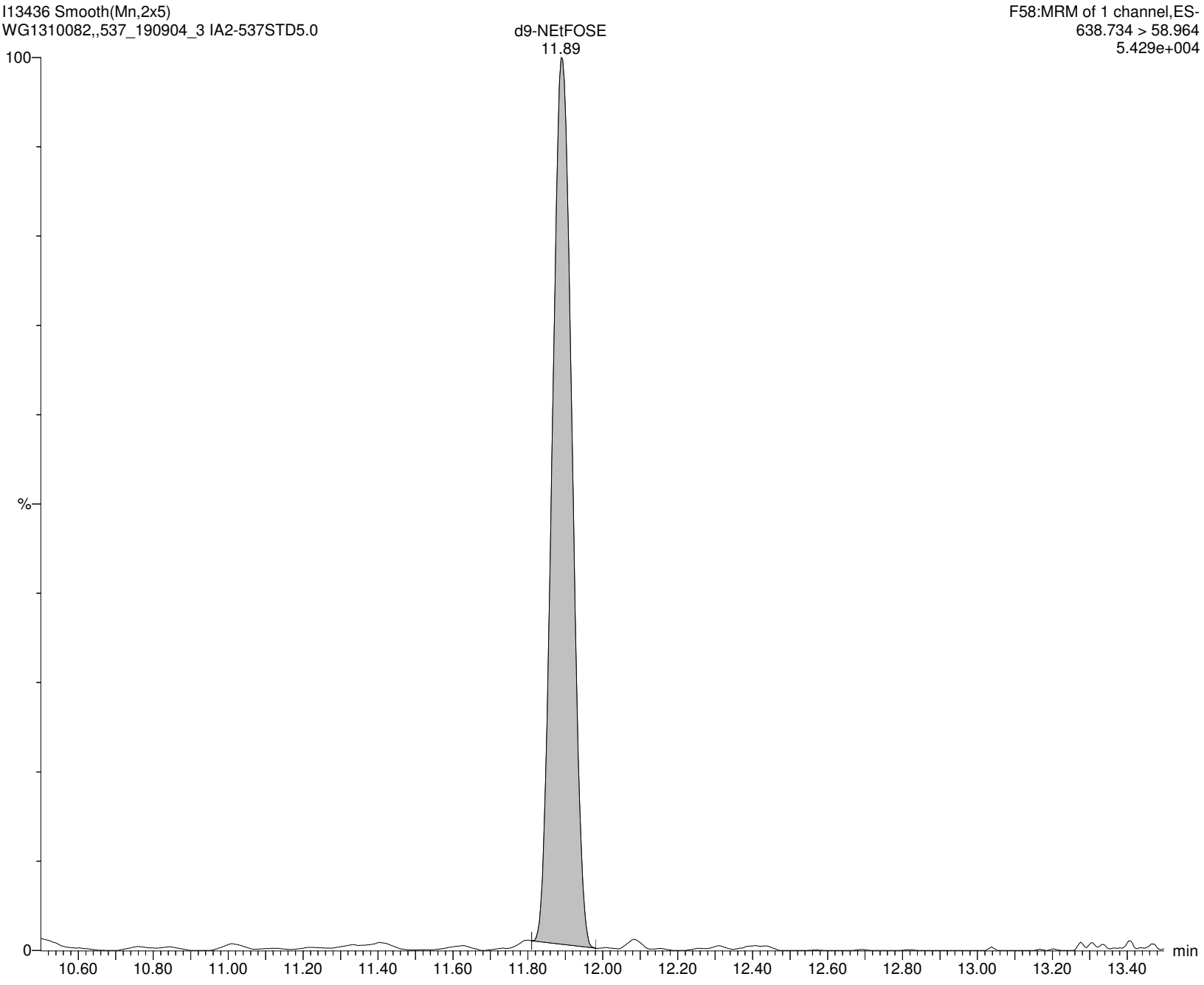
**d9-NEtFOSE**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
Printed: Monday, November 18, 2019 13:42:55 Eastern Standard Time

**Method: C:\MassLynx\Data\2019\191118_537ISO.PRO\MethDB\537ISO_Q_191118_DOD .mdb 18 Nov 2019 13:05:34**
**Calibration: C:\MassLynx\Data\2019\191118_537ISO.PRO\CurveDB\191118_ISO_ICAL.cdb 18 Nov 2019 13:41:42**

**ID: IA2-537STD10.0**
**Name: I13437**
**Date: 18-Nov-2019**
**Time: 11:26:51**
**Description: WG1310082,,537_190904_4**
**Instrument: XEVO-TQSmicro#QEB0050**
**User: LCMS02:JW**
**Inlet Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\LCMS_537_ISO_B**
**Tune Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\181009_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

| | Name | CAS | RT | Trace | Area | M Flag | Conc (ng/mL) | Ion Ratio | Ratio Flag | %Rec |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | PFBA | 375-22-4 | 2.20 | 212.926 > 169.111 | 42613 | | 9.920 | | na | 99.2 |
| 2 | M3PFBA | INT STD | 2.19 | 215.926 > 172.122 | 47492 | | 10.249 | | na | 102.5 |
| 3 | MPFBA | INT STD | 2.19 | 216.926 > 172.137 | 51444 | | 9.954 | | na | 99.5 |
| 4 | PFPeA | 2706-90-3 | 5.10 | 262.926 > 219.002 | 70843 | | 9.778 | | na | 97.8 |
| 5 | M5PFPEA | INT STD | 5.09 | 267.989 > 223.081 | 75018 | | 10.234 | | na | 102.3 |
| 6 | PFBS | 375-73-5 | 5.75 | 298.926 > 79.923 | 13152 | | 8.873 | 1.86 | NO | 100.3 |
| 7 | M3PFBS | INT STD | 5.75 | 301.989 > 80.254 | 10089 | | 9.447 | | na | 94.5 |
| 8 | 4:2FTS | 757124-72-4 | 6.92 | 326.926 > 306.957 | 5684 | | 9.476 | 2.14 | NO | 101.3 |
| 9 | M2-4:2FTS | INT STD | 6.92 | 329.117 > 309.079 | 5560 | | 8.019 | | na | 80.2 |
| 10 | PFHxA | 307-24-4 | 7.00 | 312.989 > 269.028 | 78643 | | 9.941 | 18.89 | NO | 99.4 |
| 11 | M5PFHxA | INT STD | 6.99 | 317.989 > 273.045 | 85938 | | 9.771 | | na | 97.7 |
| 12 | PFPeS | 2706-91-4 | 7.31 | 348.926 > 80.251 | 9042 | | 8.563 | 1.75 | NO | 91.1 |
| 13 | PFHpA | 375-85-9 | 8.26 | 362.926 > 319.014 | 103796 | | 9.884 | 5.91 | NO | 98.8 |
| 14 | M4PFHpA | INT STD | 8.25 | 366.926 > 321.979 | 116421 | | 9.938 | | na | 99.4 |
| 15 | br-PFHxS | 355-46-4 | 8.18 | 398.926 > 80.295 | 1051 | M5 | 1.400 | 2.02 | NO | 82.4 |
| 16 | L-PFHxS | 355-46-4 | 8.41 | 398.926 > 80.295 | 5750 | | 7.270 | 1.19 | NO | 98.2 |
| 17 | PFHxS | 355-46-4 | | 398.926 > 80.295 | 6801 | | 8.670 | | na | |
| 18 | M3PFHxS | INT STD | 8.41 | 401.926 > 80.317 | 6314 | | 10.243 | | na | 102.4 |
| 19 | br-PFOA | 335-67-1 | | 412.989 > 368.9 | | | ND | | YES | |
| 20 | L-PFOA | 335-67-1 | 9.19 | 412.989 > 368.9 | 105110 | | 10.457 | 10.79 | NO | 104.6 |
| 21 | PFOA | 335-67-1 | | 412.989 > 368.9 | 105110 | | 10.457 | | na | |
| 22 | M8PFOA | INT STD | 9.19 | 420.989 > 375.979 | 109471 | | 9.738 | | na | 97.4 |
| 23 | M2PFOA | INT STD | 9.19 | 415.032 > 369.968 | 114891 | | 10.868 | | na | 108.7 |
| 24 | 6:2FTS | 27619-97-2 | 9.15 | 426.989 > 406.921 | 4543 | | 10.363 | 9.85 | NO | 109.1 |
| 25 | M2-6:2FTS | INT STD | 9.15 | 428.989 > 408.917 | 5537 | | 8.172 | | na | 81.7 |
| 26 | PFHpS | 375-92-8 | 9.28 | 448.926 > 80.257 | 5201 | | 10.378 | 0.86 | YES | 109.2 |
| 27 | PFNA | 375-95-1 | 9.94 | 462.989 > 418.931 | 90734 | | 9.831 | 4.55 | NO | 98.3 |
| 28 | M9PFNA | INT STD | 9.94 | 472.053 > 426.947 | 112654 | | 10.184 | | na | 101.8 |
| 29 | br-PFOS | 1763-23-1 | 9.80 | 498.989 > 80.294 | 1720 | M5 | 1.724 | 4.24 | NO | 86.2 |
| 30 | L-PFOS | 1763-23-1 | 9.99 | 498.989 > 80.294 | 5687 | | 7.613 | 1.50 | YES | 104.3 |
| 31 | PFOS | 1763-23-1 | | 498.989 > 80.294 | 7407 | | 9.338 | | na | |
| 32 | M4PFOS | INT STD | 9.99 | 503.032 > 80.306 | 7630 | | 10.925 | | na | 109.2 |
| 33 | M8PFOS | INT STD | 9.99 | 507.053 > 80.294 | 7611 | | 9.722 | | na | 97.2 |
| 34 | PFDA | 335-76-2 | 10.57 | 513.053 > 468.906 | 86873 | | 10.017 | 7.04 | NO | 100.2 |
| 35 | M2PFDA | INT STD | 10.57 | 515.053 > 469.934 | 99233 | | 11.239 | | na | 112.4 |
| 36 | M6PFDA | INT STD | 10.57 | 519.053 > 473.931 | 101095 | | 9.857 | | na | 98.6 |
| 37 | 8:2FTS | 39108-34-4 | 10.56 | 526.926 > 506.818 | 3723 | | 9.890 | | na | 103.0 |
| 38 | M2-8:2FTS | INT STD | 10.56 | 529.053 > 508.945 | 3572 | | 8.987 | | na | 89.9 |
| 39 | PFNS | 68259-12-1 | 10.60 | 548.989 > 80.249 | 7010 | | 9.902 | 1.23 | NO | 103.1 |


all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
Printed: Monday, November 18, 2019 13:42:55 Eastern Standard Time

**ID: IA2-537STD10.0**
**Name: I13437**
**Date: 18-Nov-2019**
**Time: 11:26:51**
**Description: WG1310082,,537_190904_4**
**Instrument: XEVO-TQSmicro#QEB0050**
**User: LCMS02:JW**
**Inlet Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\LCMS_537_ISO_B**
**Tune Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\181009_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

| | Name | CAS | RT | Trace | Area | M Flag | Conc (ng/mL) | Ion Ratio | Ratio Flag | %Rec |
|---|---|---|---|---|---|---|---|---|---|---|
| 40 | d3-NMeFOSAA | INT STD | 10.95 | 573.096 > 418.987 | 10699 | | 9.160 | | na | 91.6 |
| 41 | br-NMeFOSAA | 2355-31-9 | | 570.053 > 418.917 | | | ND | | YES | |
| 42 | L-NMeFOSAA | 2355-31-9 | 10.96 | 570.053 > 418.917 | 9818 | | 9.846 | 2.79 | NO | 98.5 |
| 43 | NMeFOSAA | 2355-31-9 | | 570.053 > 418.917 | 9818 | | 9.846 | | na | |
| 44 | PFUnA | 2058-94-8 | 11.11 | 562.989 > 518.903 | 88904 | | 9.957 | 8.09 | NO | 99.6 |
| 45 | M7-PFUDA | INT STD | 11.11 | 570.053 > 524.923 | 93371 | | 10.262 | | na | 102.6 |
| 46 | PFDS | 335-77-3 | 11.12 | 598.926 > 80.314 | 5333 | | 10.538 | 0.94 | NO | 109.2 |
| 47 | FOSA | 754-91-6 | 11.01 | 497.989 > 78.245 | 23947 | | 9.769 | 147.69 | NO | 97.7 |
| 48 | M8FOSA | INT STD | 11.01 | 506.053 > 78.286 | 23068 | | 9.513 | | na | 95.1 |
| 49 | d5-NEtFOSAA | INT STD | 11.24 | 589.117 > 418.929 | 9223 | | 8.939 | | na | 89.4 |
| 50 | br-NEtFOSAA | 2991-50-6 | | 583.989 > 418.927 | | | ND | | YES | |
| 51 | L-NEtFOSAA | 2991-50-6 | 11.25 | 583.989 > 418.927 | 8886 | | 10.205 | 2.73 | NO | 102.1 |
| 52 | NEtFOSAA | 2991-50-6 | | 583.989 > 418.927 | 8886 | | 10.205 | | na | |
| 53 | PFDoA | 307-55-1 | 11.59 | 612.989 > 568.967 | 85750 | | 10.516 | 13.86 | NO | 105.2 |
| 54 | MPFDOA | INT STD | 11.59 | 614.989 > 569.92 | 96275 | | 9.432 | | na | 94.3 |
| 55 | PFTrDA | 72629-94-8 | 12.00 | 663.053 > 618.969 | 69475 | | 10.654 | 10.35 | NO | 106.5 |
| 56 | PFTA | 376-06-7 | 12.36 | 713.053 > 668.976 | 63347 | | 10.427 | 9.29 | NO | 104.3 |
| 57 | M2PFTEDA | INT STD | 12.36 | 715.053 > 669.945 | 75865 | | 9.357 | | na | 93.6 |
| 58 | M3HFPO-DA | INT STD | 7.42 | 331.989 > 286.995 | 4823 | | 97.911 | | na | 49.0 |
| 59 | HFPO-DA | 13252-13-6 | 7.42 | 284.819 > 169.094 | 8056 | | 201.196 | 2.76 | YES | 100.6 |
| 60 | ADONA | 958445-44-8 | 8.43 | 376.926 > 251.005 | 142939 | | 9.932 | | na | 105.0 |
| 61 | PFHxDA | | 12.78 | 813.053 > 769.005 | 56901 | | 8.061 | | na | 80.6 |
| 62 | PFODA | | 12.99 | 912.989 > 869.032 | 38946 | | 7.529 | | na | 75.3 |
| 63 | M2PFHxDA | | 12.78 | 815.372 > 770.158 | 19278 | | 11.170 | | na | 111.7 |
| 64 | PFDoS | | 11.99 | 698.649 > 79.853 | 5766 | | 11.178 | 1.86 | YES | 111.8 |
| 65 | 10:2FTS | | 11.60 | 626.862 > 606.896 | 3399 | | 9.346 | | na | 96.9 |
| 66 | 9CL-PF3ONS | | 10.34 | 530.862 > 350.843 | 47426 | | 9.481 | | na | 101.7 |
| 67 | 11CL-PFOUdS | | 11.38 | 630.862 > 450.854 | 39060 | | 9.263 | | na | 98.3 |
| 68 | NMeFOSA | | 11.62 | 511.804 > 168.906 | 8669 | | 10.184 | 1.38 | NO | 101.8 |
| 69 | d3-NMeFOSA | | 11.62 | 514.84 > 168.917 | 11452 | | 9.056 | | na | 90.6 |
| 70 | NEtFOSA | | 11.92 | 525.84 > 168.92 | 9820 | | 9.587 | 6.55 | YES | 95.9 |
| 71 | d5-NEtFOSA | | 11.91 | 530.904 > 168.919 | 11690 | | 9.451 | | na | 94.5 |
| 72 | NMeFOSE | | 11.62 | 615.862 > 58.9 | 10782 | | 9.298 | | na | 93.0 |
| 73 | d7-NMeFOSE | | 11.61 | 622.84 > 58.964 | 5732 | | 9.678 | | na | 96.8 |
| 74 | NEtFOSE | | 11.91 | 629.862 > 58.899 | 12373 | | 10.043 | | na | 100.4 |
| 75 | d9-NEtFOSE | | 11.89 | 638.734 > 58.964 | 3121 | | 9.012 | | na | 90.1 |

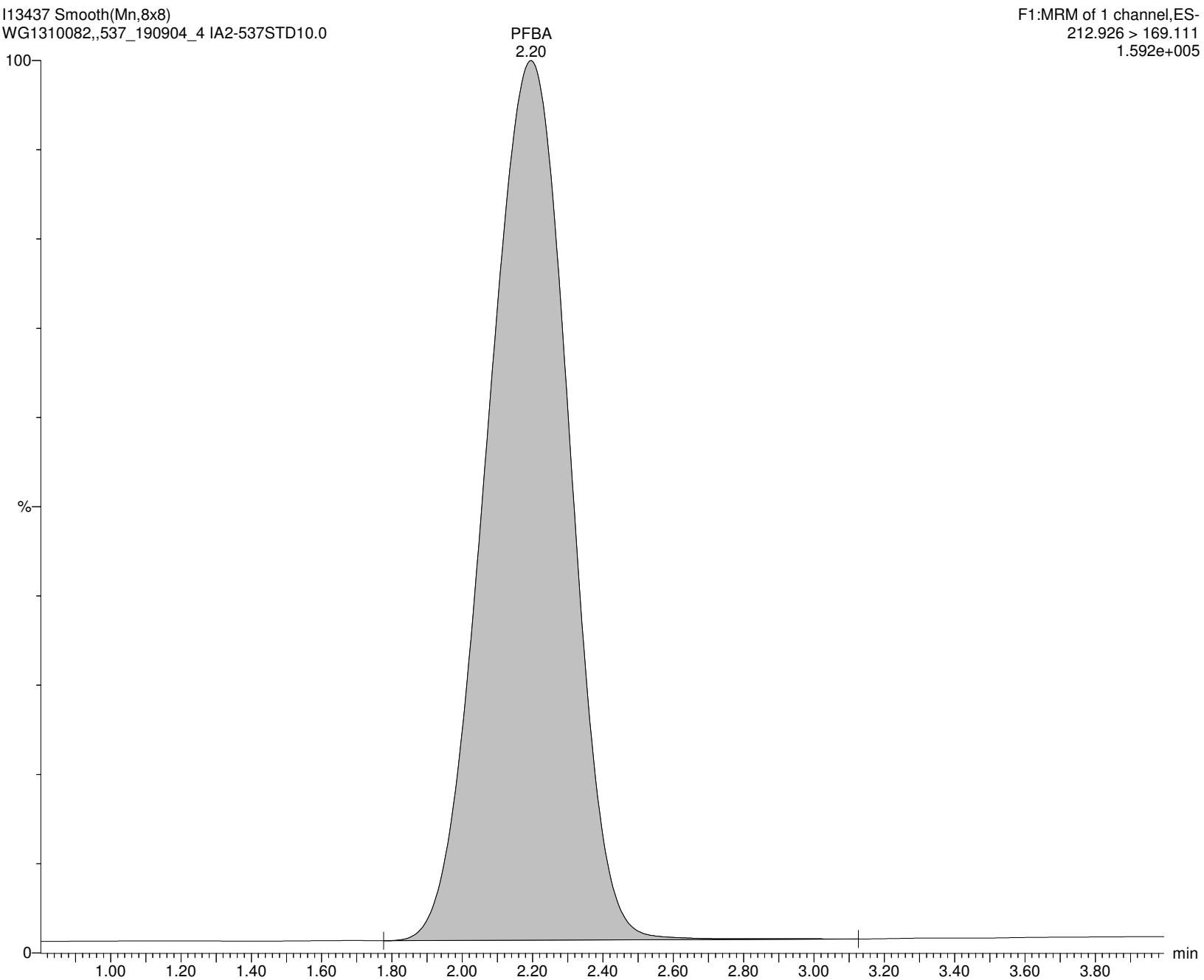

all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
Printed: Monday, November 18, 2019 13:42:55 Eastern Standard Time

**Method: C:\MassLynx\Data\2019\191118_537ISO.PRO\MethDB\537ISO_Q_191118_DOD .mdb 18 Nov 2019 13:05:34**
**Calibration: C:\MassLynx\Data\2019\191118_537ISO.PRO\CurveDB\191118_ISO_ICAL.cdb 18 Nov 2019 13:41:42**

**Name: I13437**
**ID: IA2-537STD10.0**
**Date: 18-Nov-2019**
**Time: 11:26:51**
**Description: WG1310082,,537_190904_4**
**User: LCMS02:JW**
**Vial: 1:A,5**
**Instrument: XEVO-TQSmicro#QEB0050**
**Inlet Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\LCMS_537_ISO_B**
**Tune Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\181009_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**PFBA**





all concentration units in (ng/mL)

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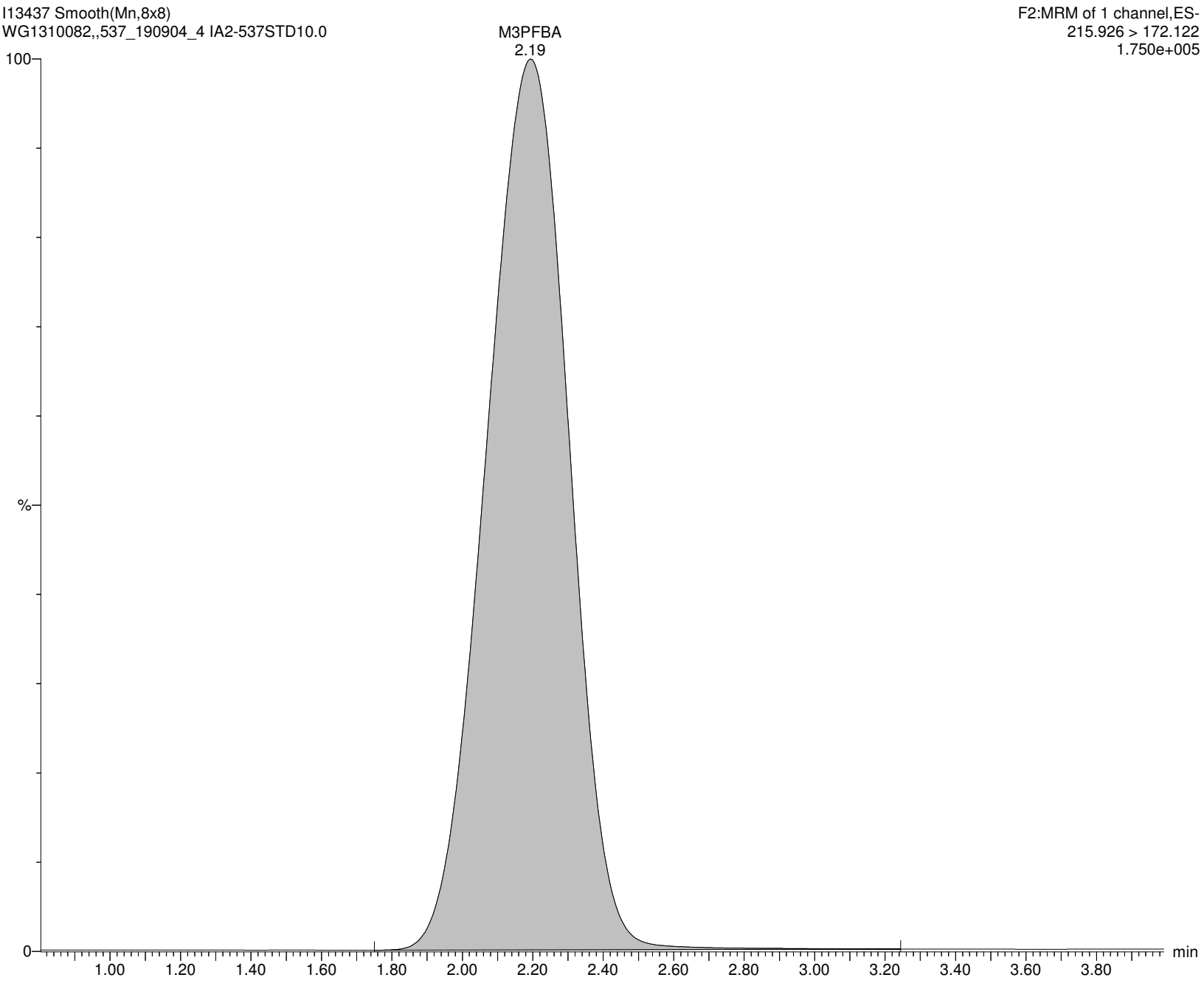
**M3PFBA**





all concentration units in (ng/mL)

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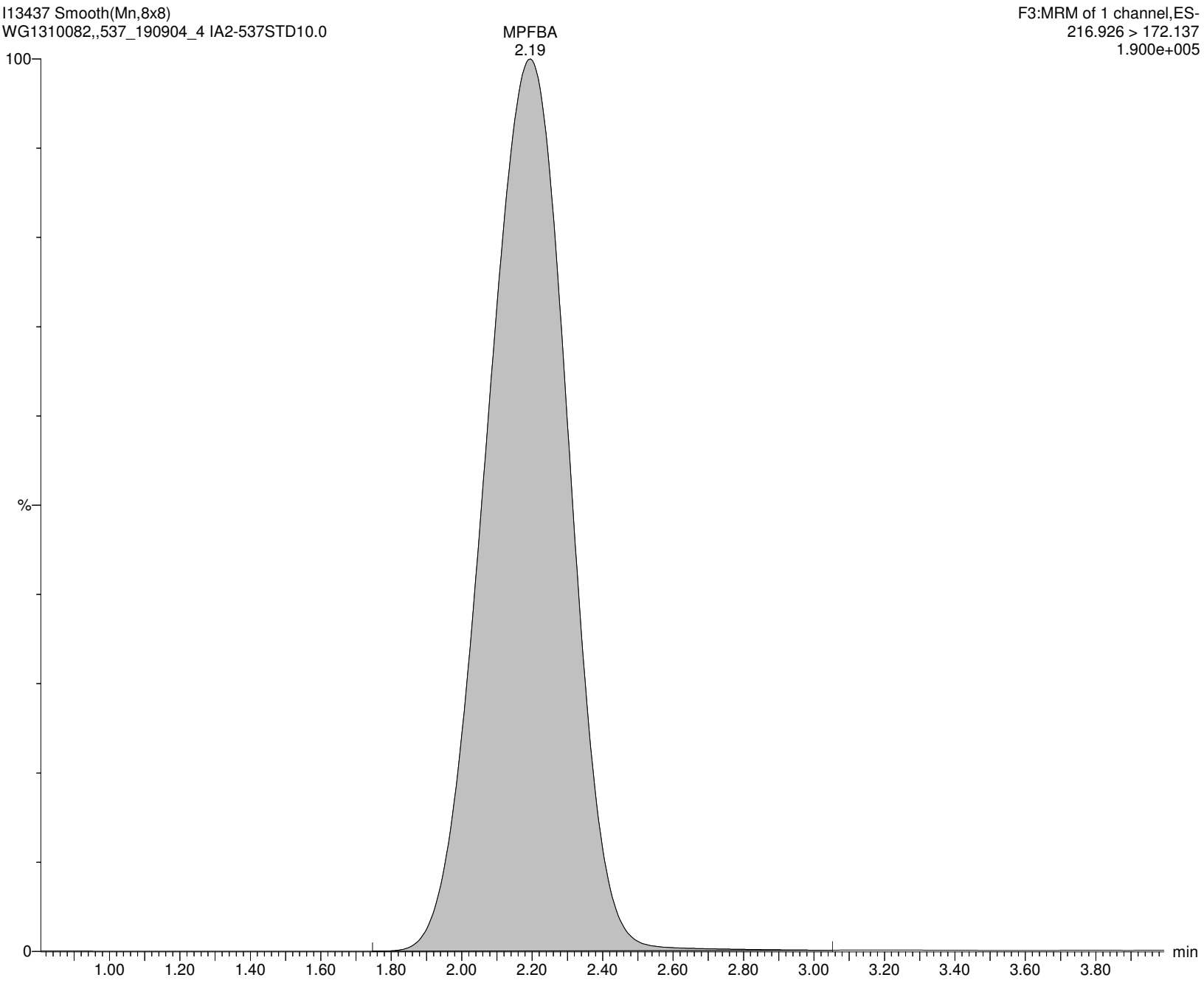
**MPFBA**





all concentration units in (ng/mL)

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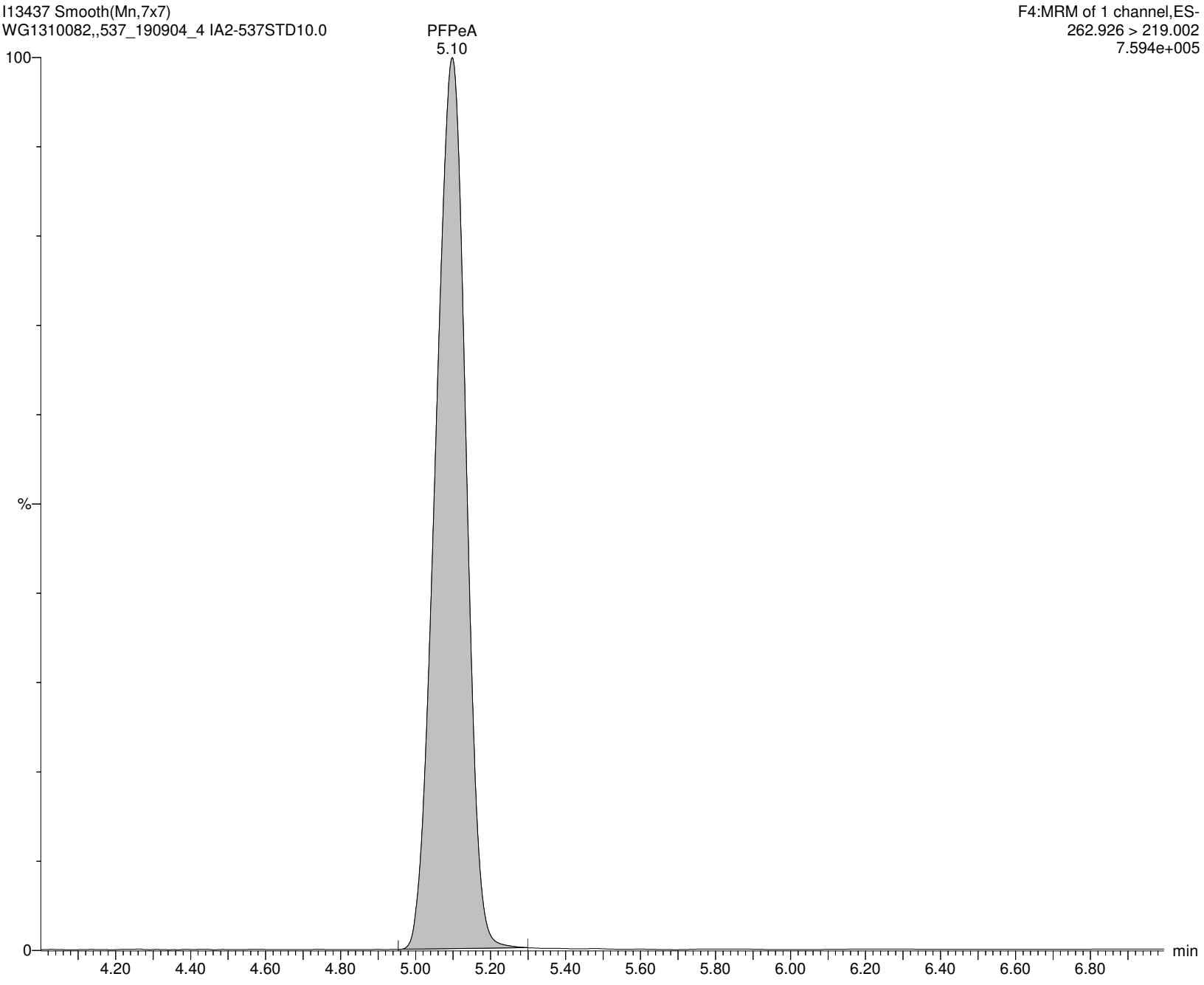
**PFPeA**





all concentration units in (ng/mL)

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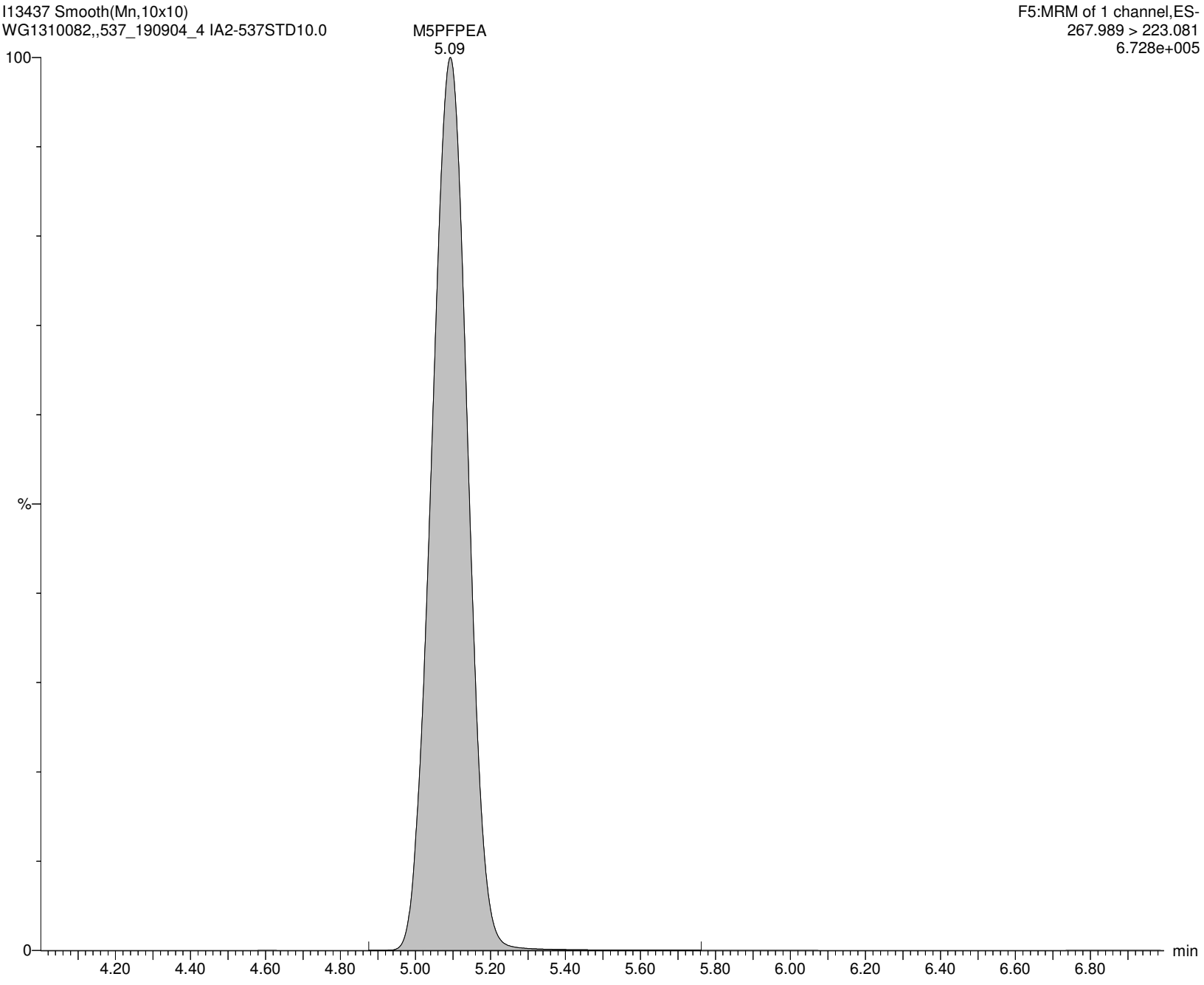
**M5PFPEA**





all concentration units in (ng/mL)

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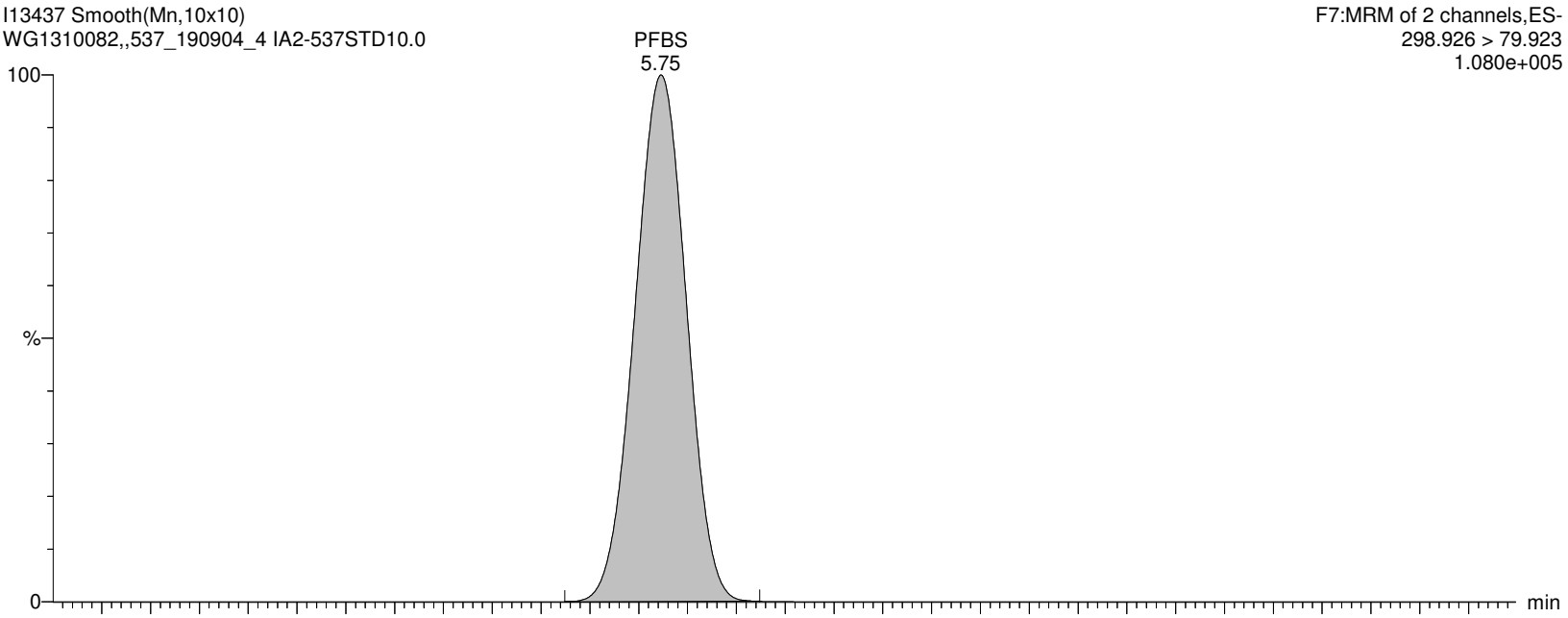
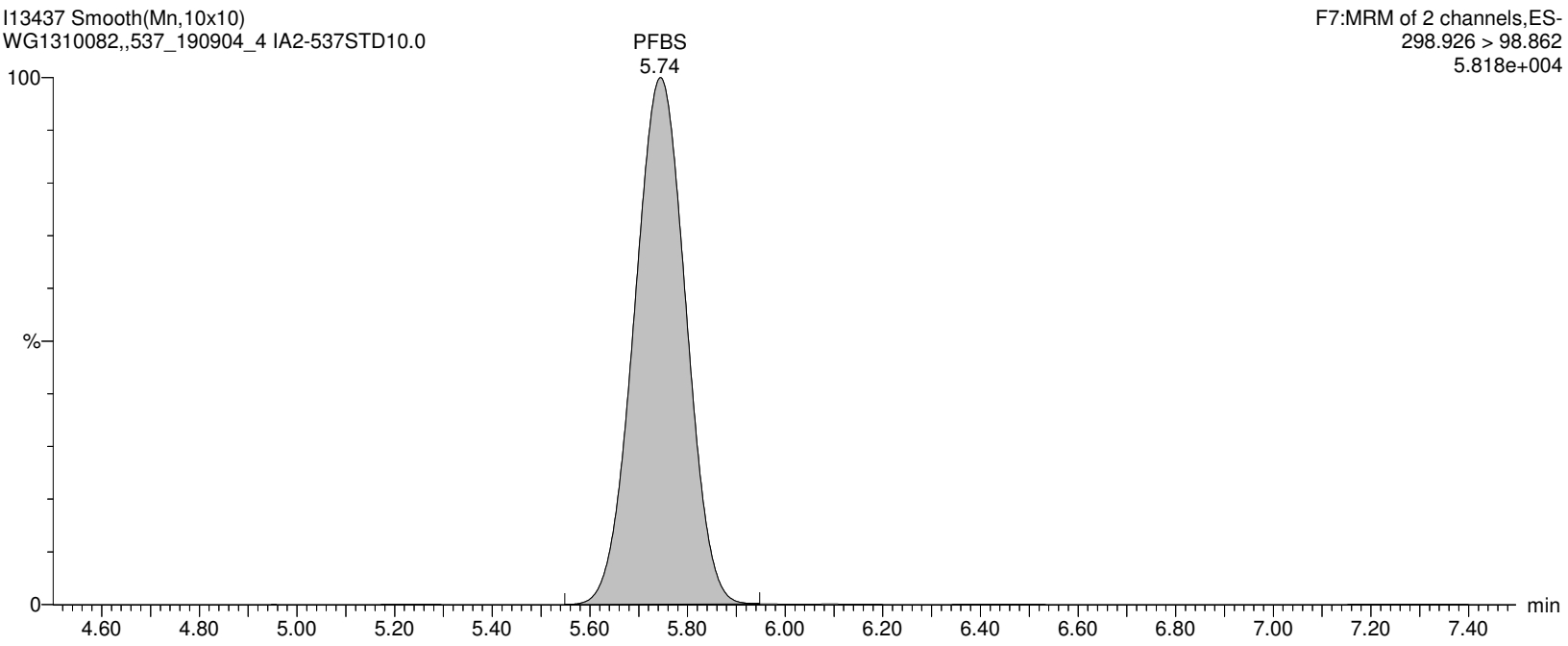
**PFBS**





all concentration units in (ng/mL)

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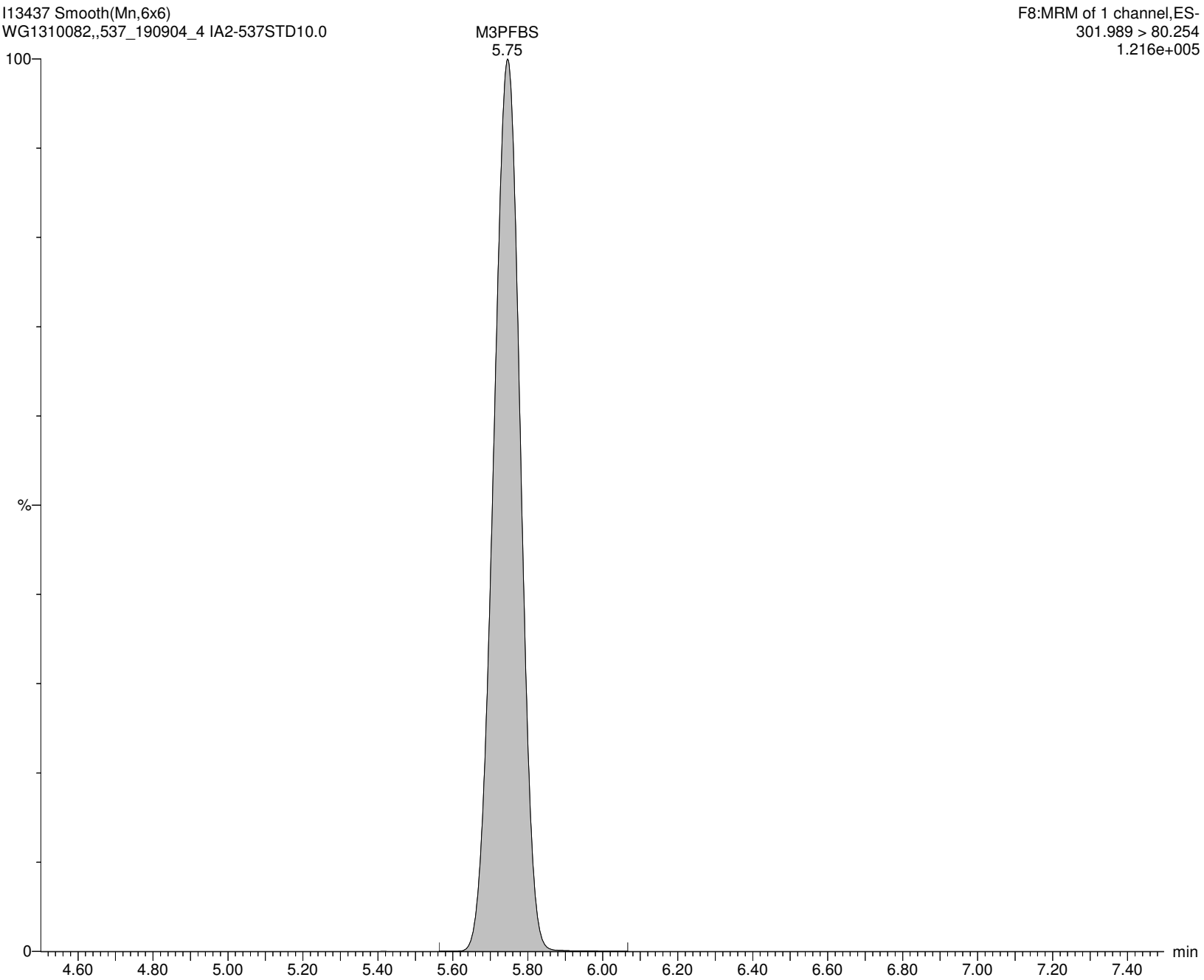
**M3PFBS**





all concentration units in (ng/mL)

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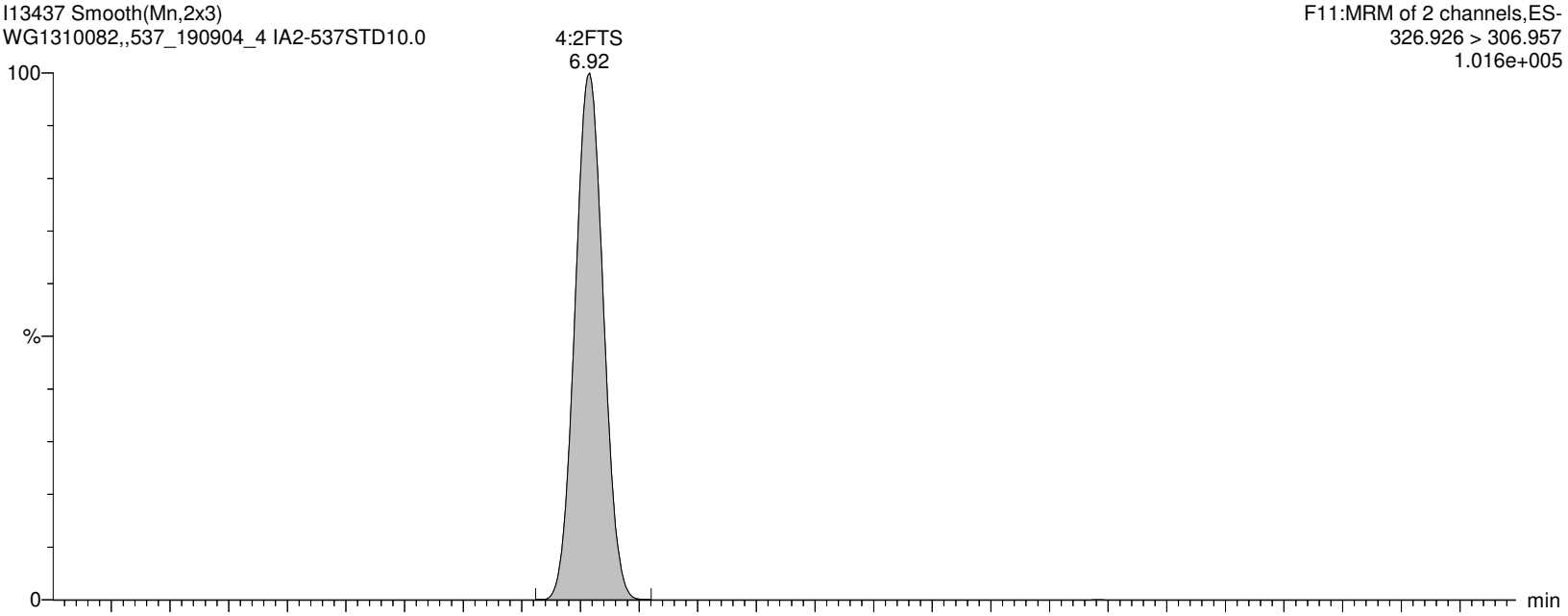
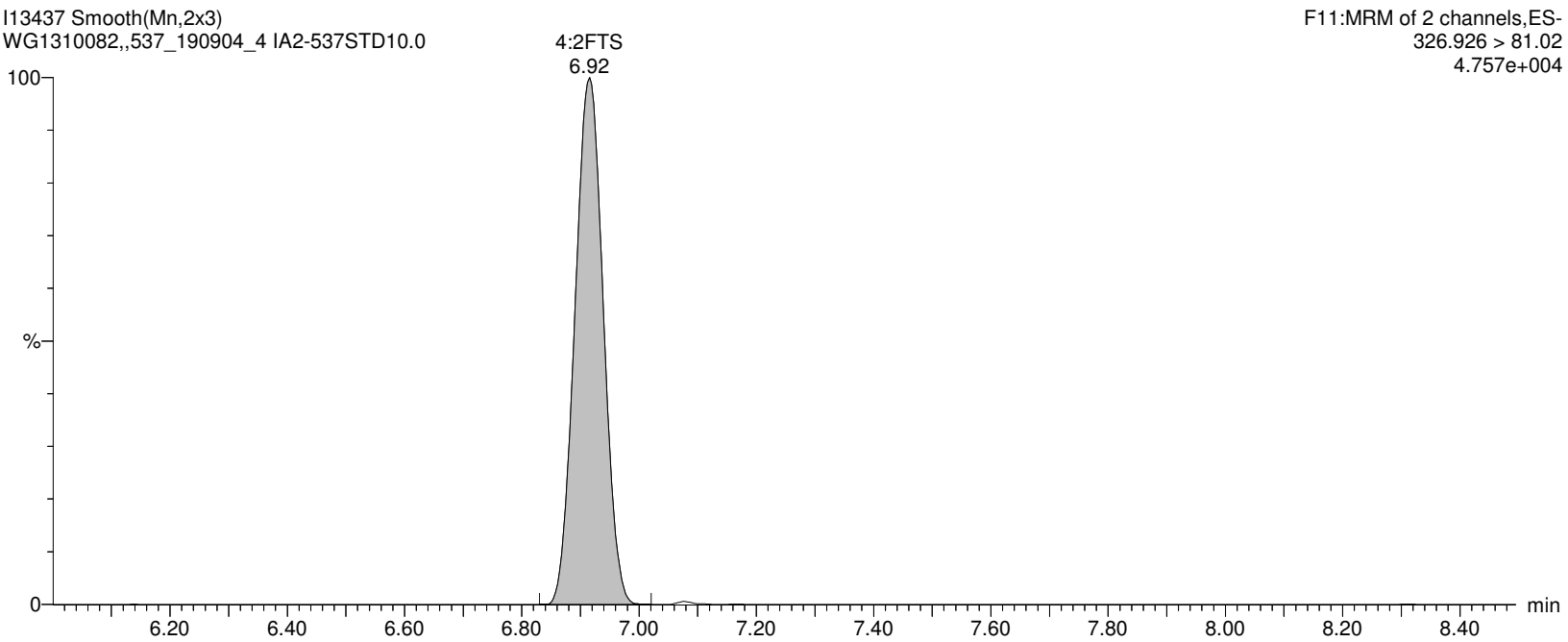
**4:2FTS**





all concentration units in (ng/mL)

Alpha Analytical Inc.
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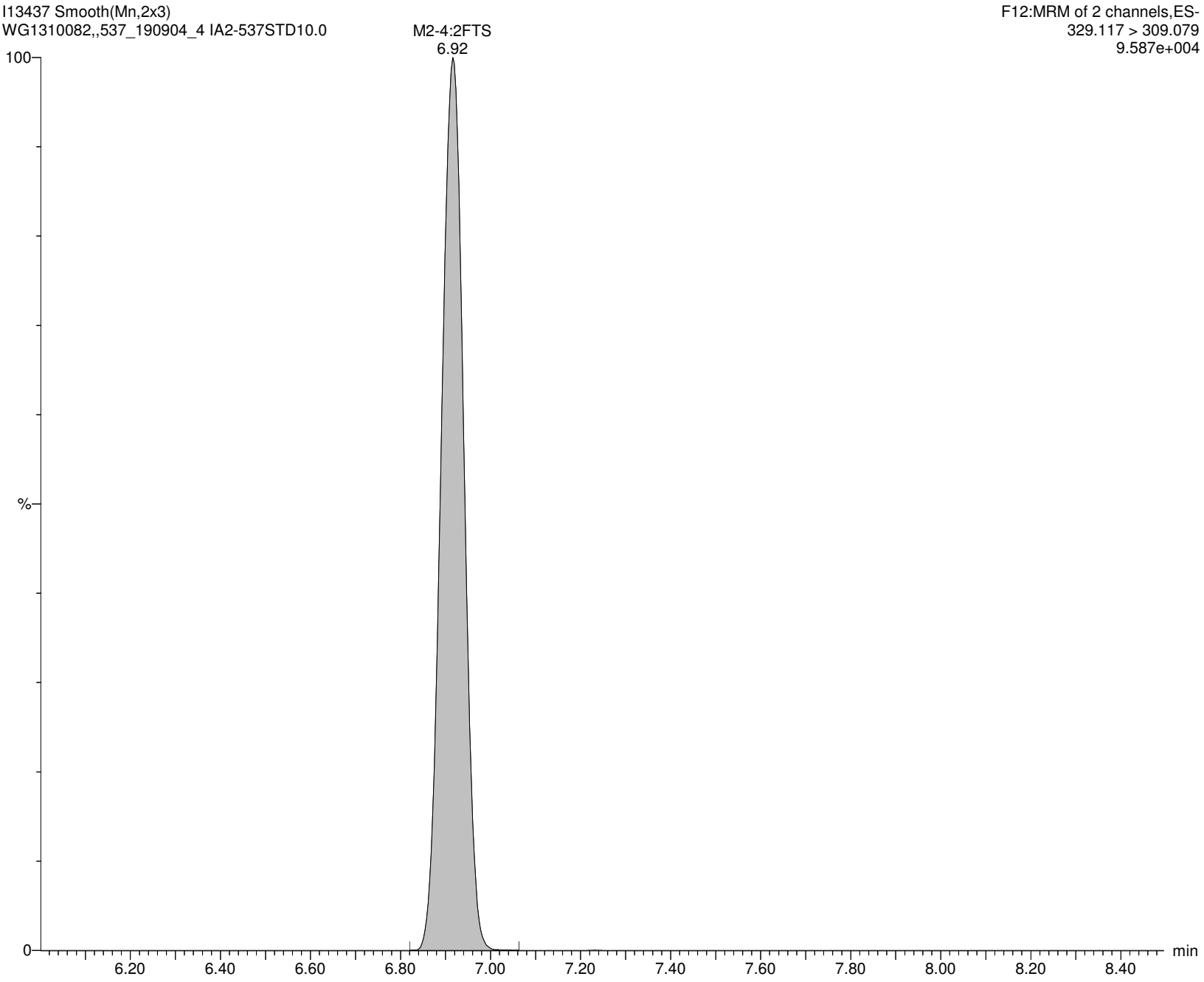
**M2-4:2FTS**





all concentration units in (ng/mL)

Alpha Analytical Inc.
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Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
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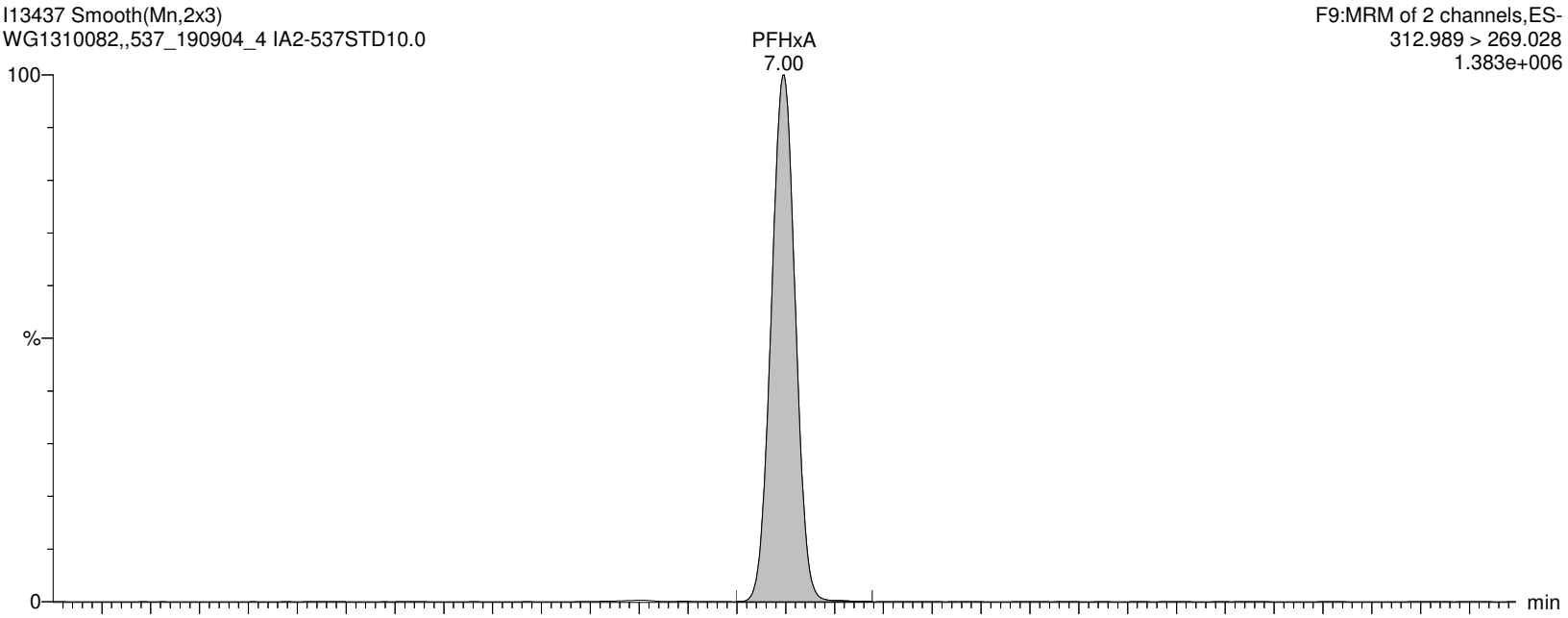
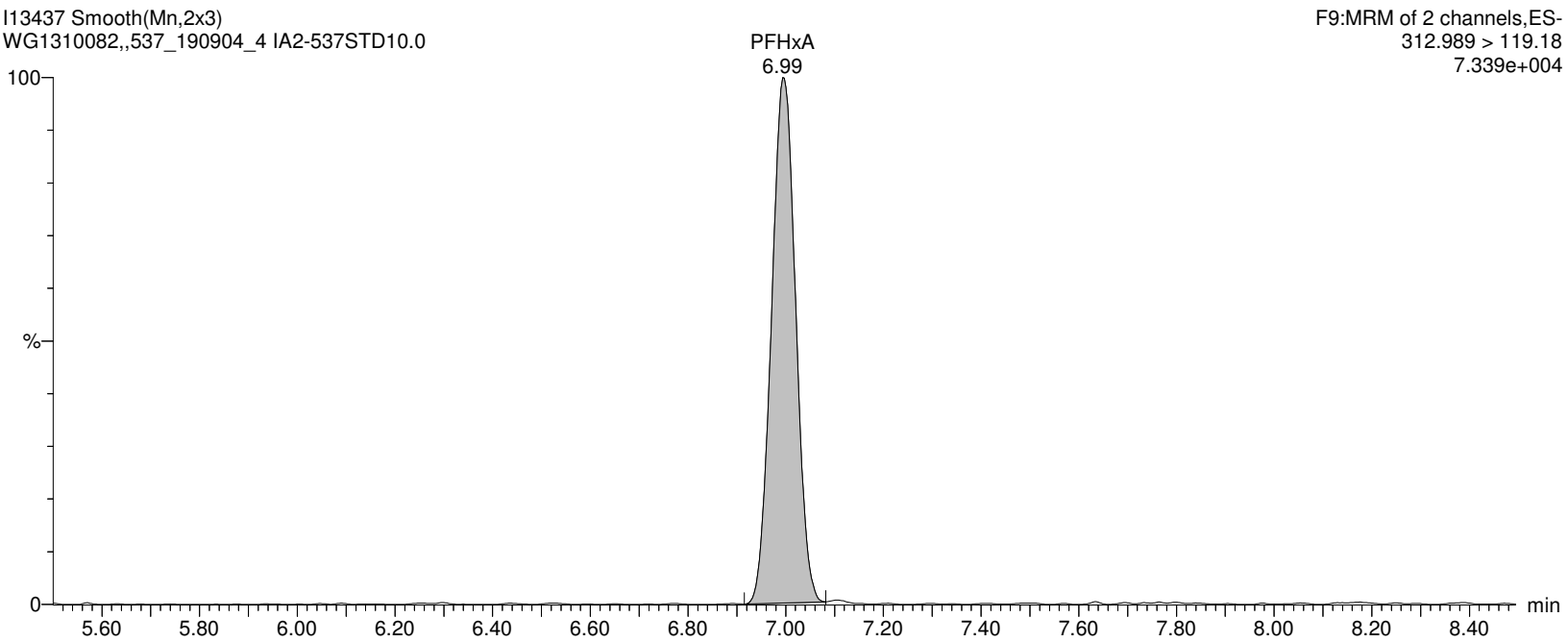
**PFHxA**





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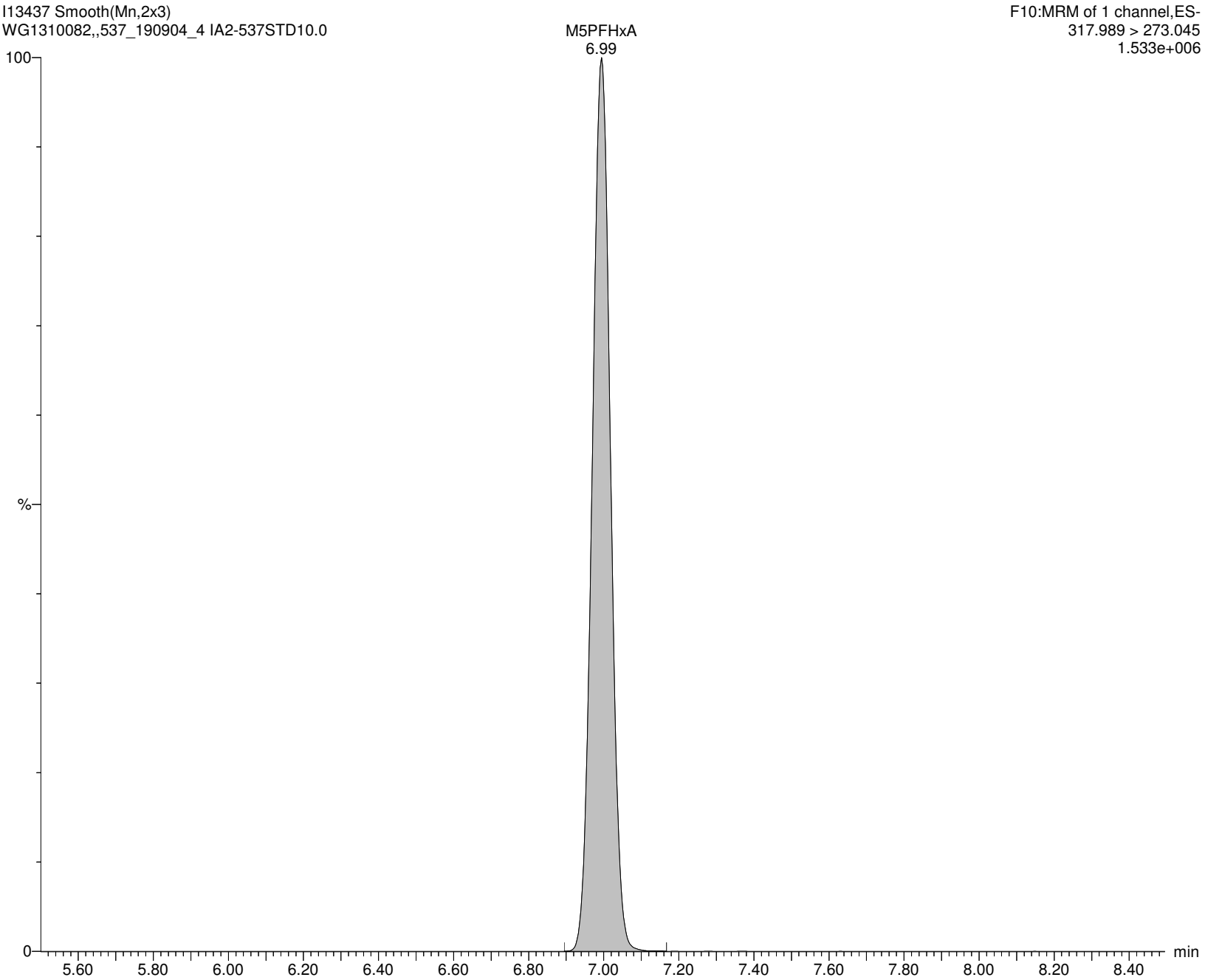
**M5PFHxA**





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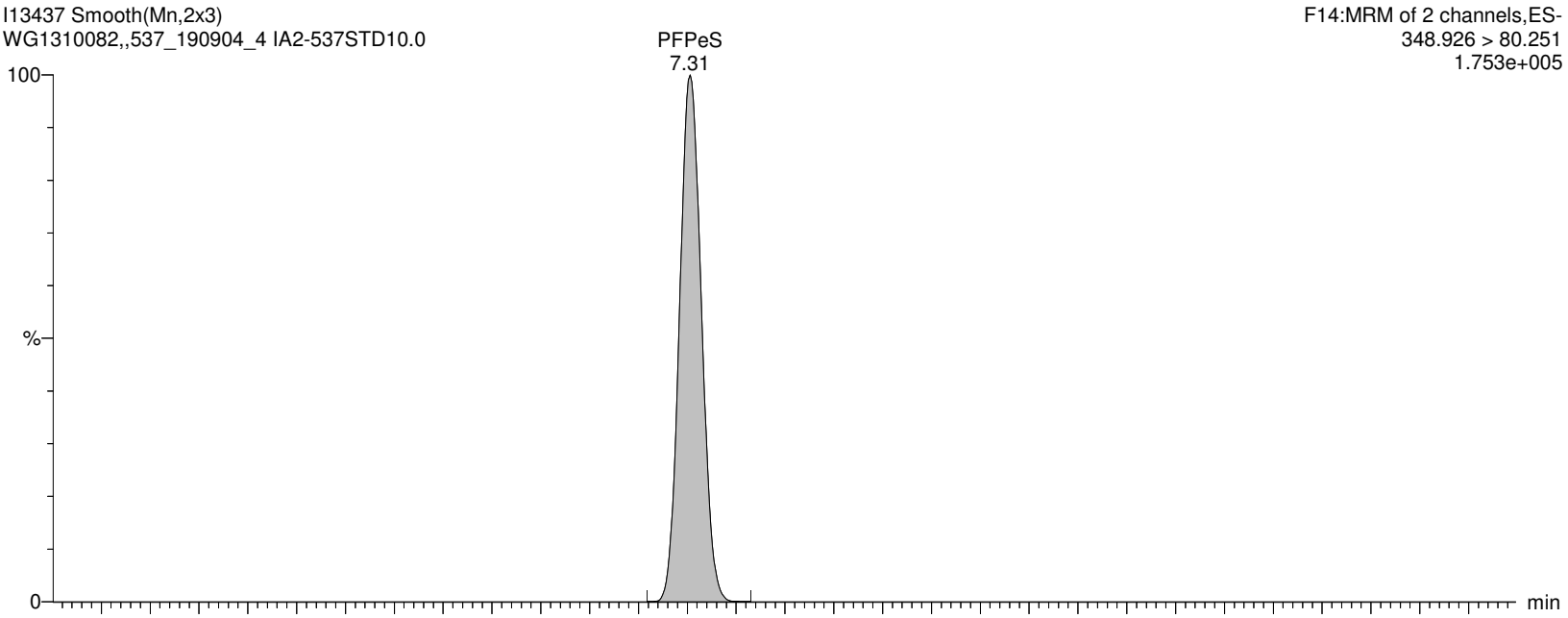
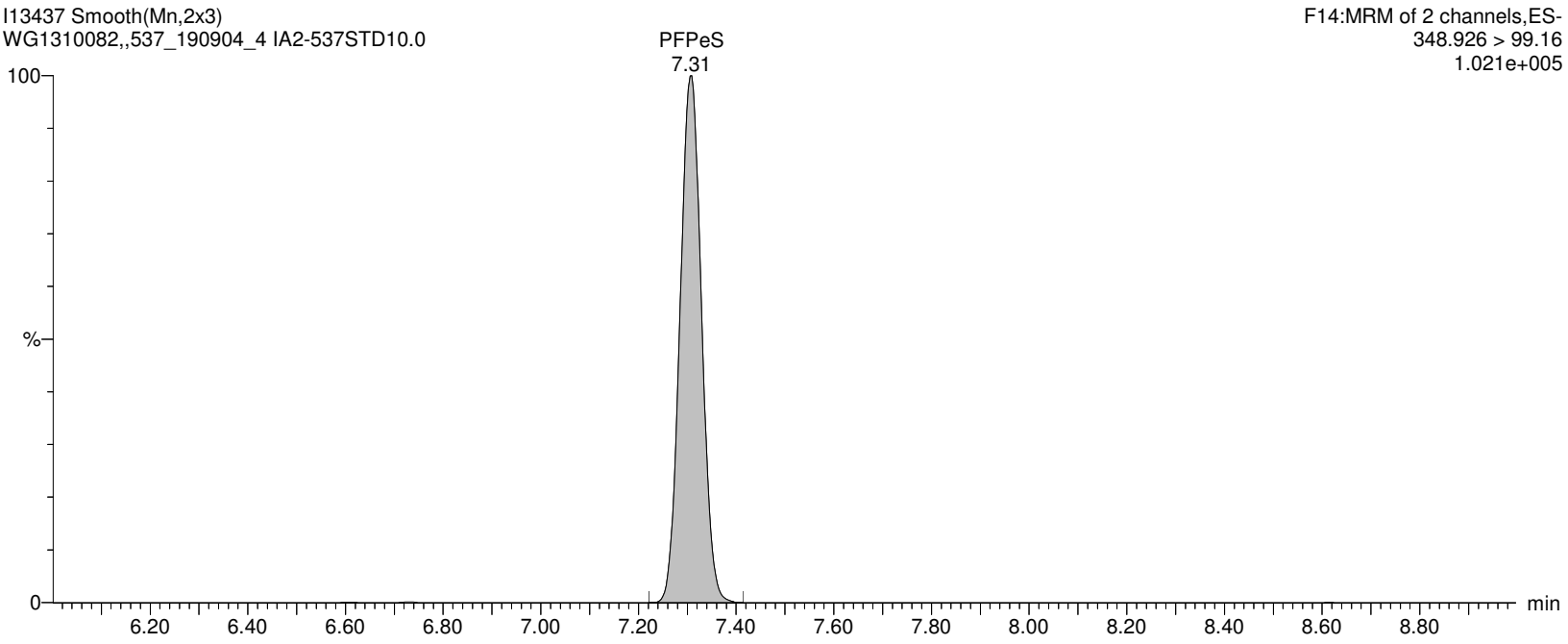
**PFPeS**





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**Name: I13437**
**ID: IA2-537STD10.0**
**Date: 18-Nov-2019**
**Time: 11:26:51**
**Description: WG1310082,,537_190904_4**
**User: LCMS02:JW**
**Vial: 1:A,5**
**Instrument: XEVO-TQSmicro#QEB0050**
**Inlet Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\LCMS_537_ISO_B**
**Tune Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\181009_TUNE.IPR**
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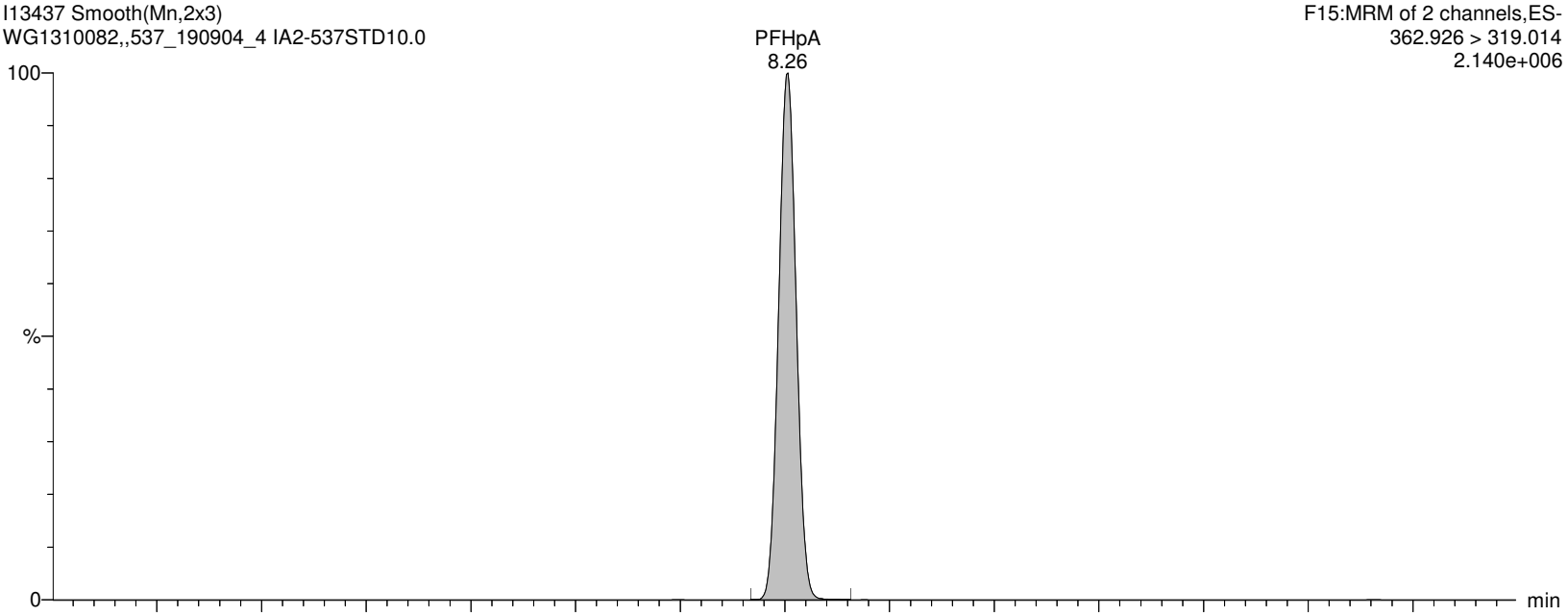


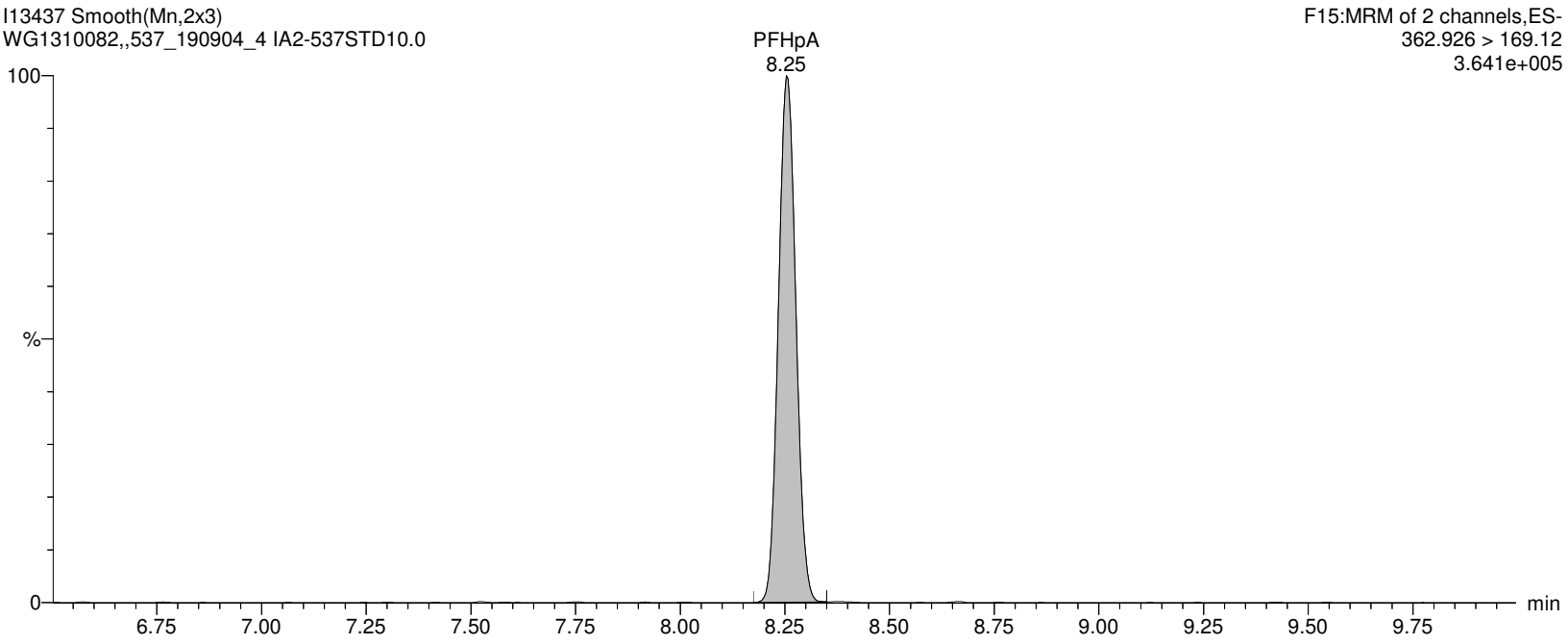



all concentration units in (ng/mL)

Alpha Analytical Inc.
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Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
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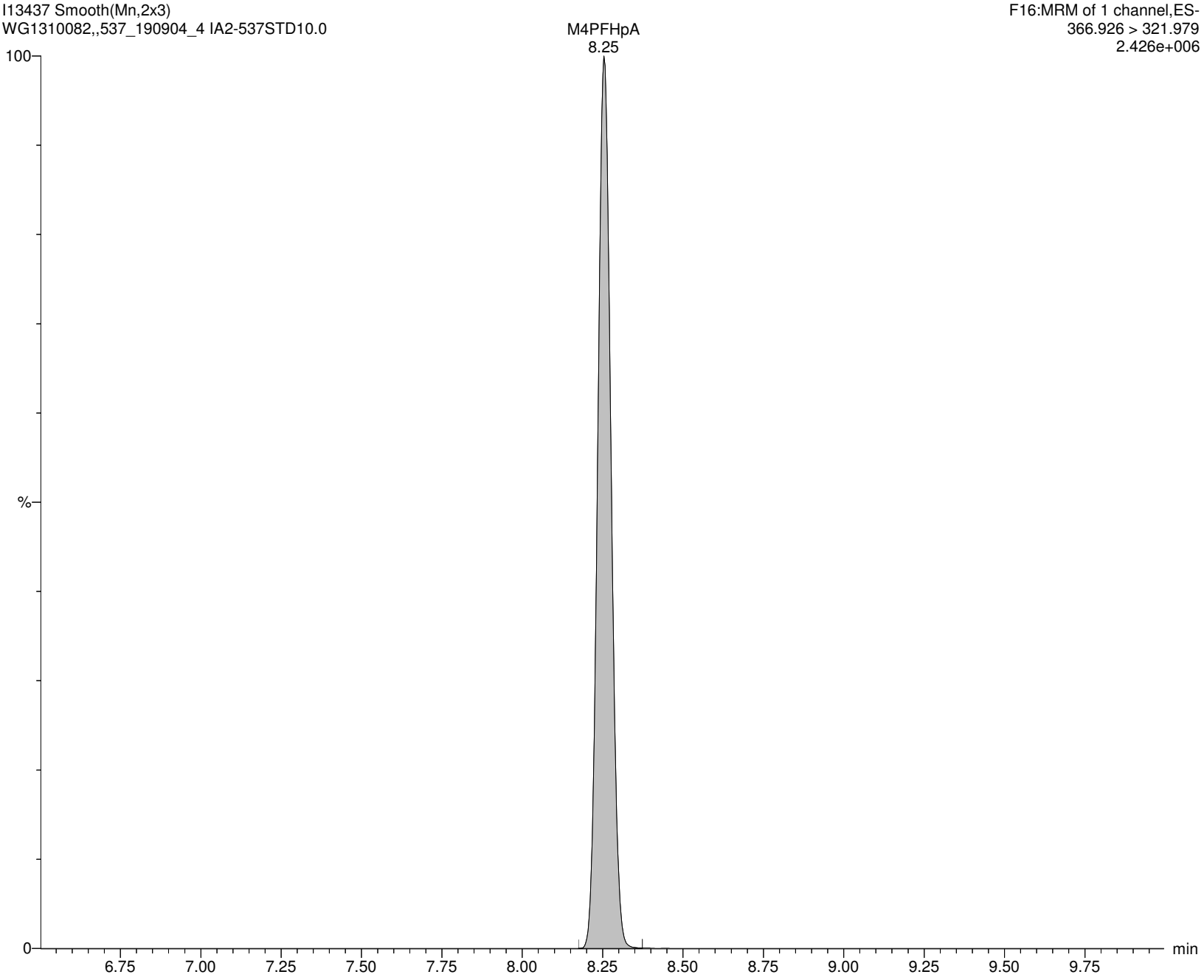



all concentration units in (ng/mL)

Alpha Analytical Inc.
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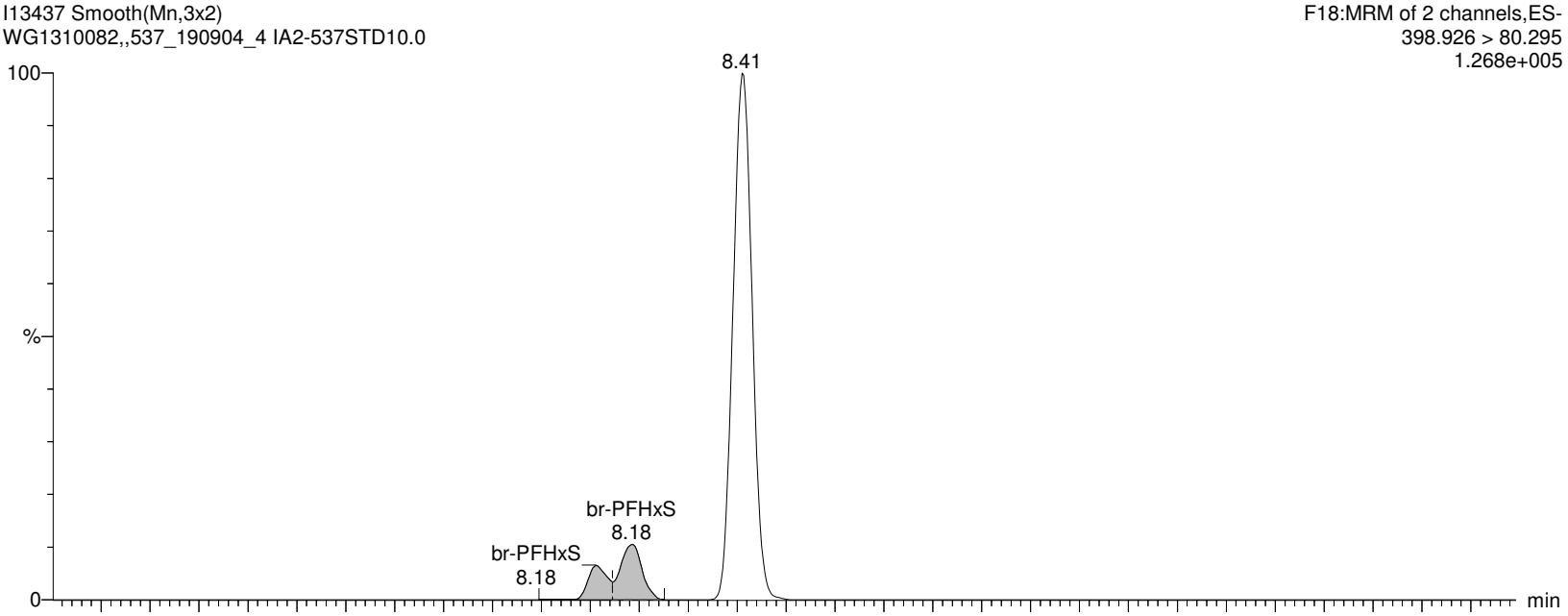


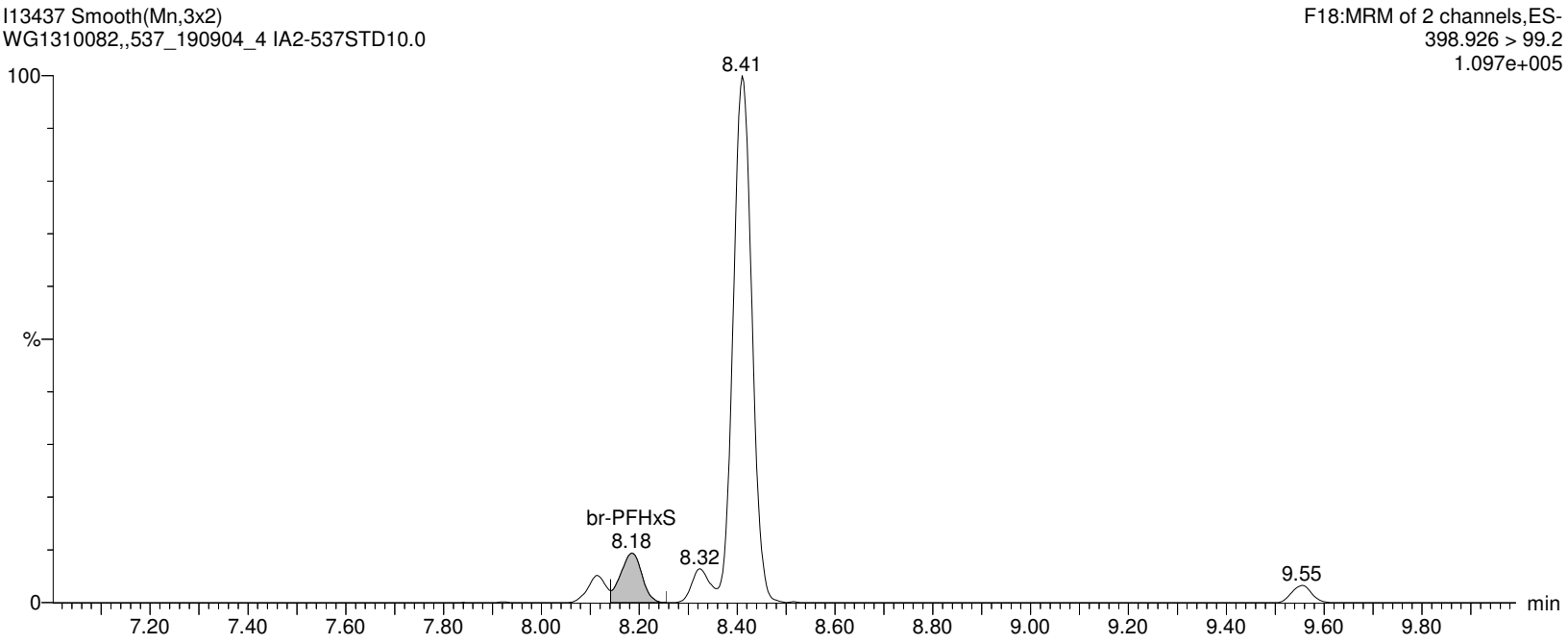



all concentration units in (ng/mL)

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Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
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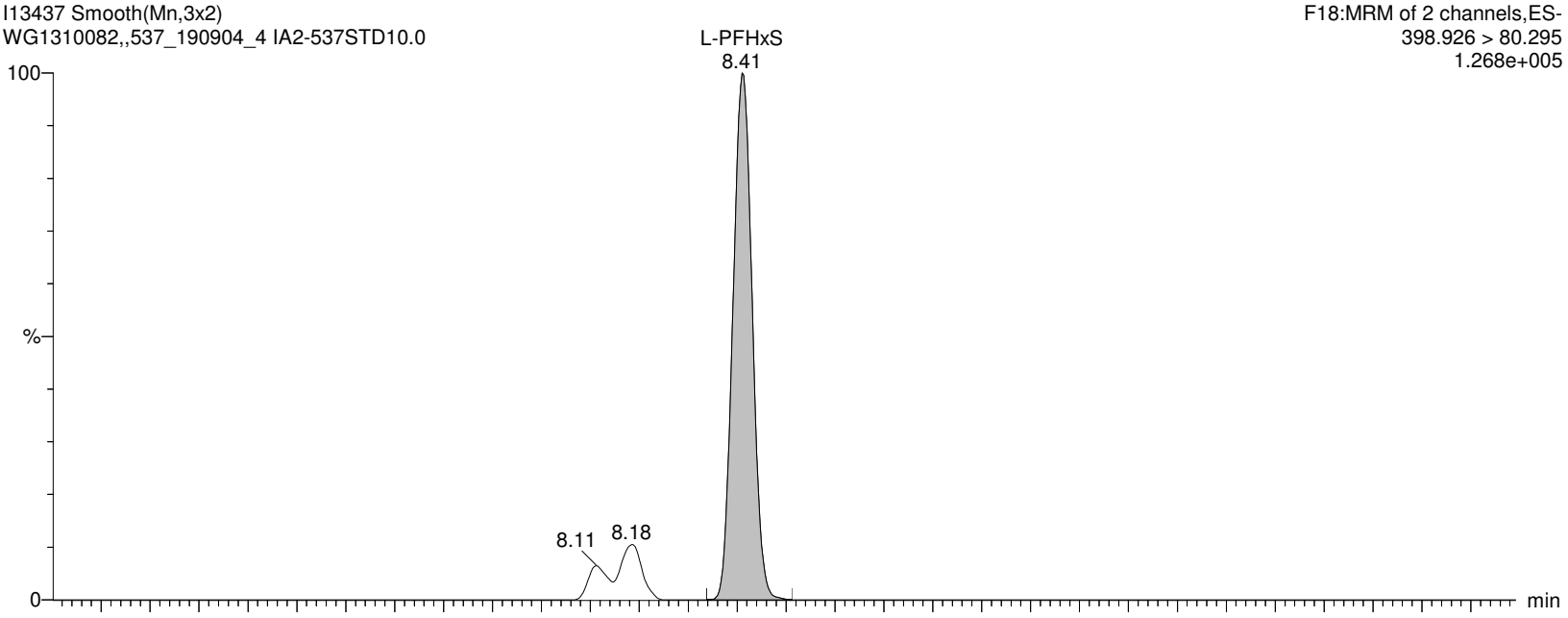


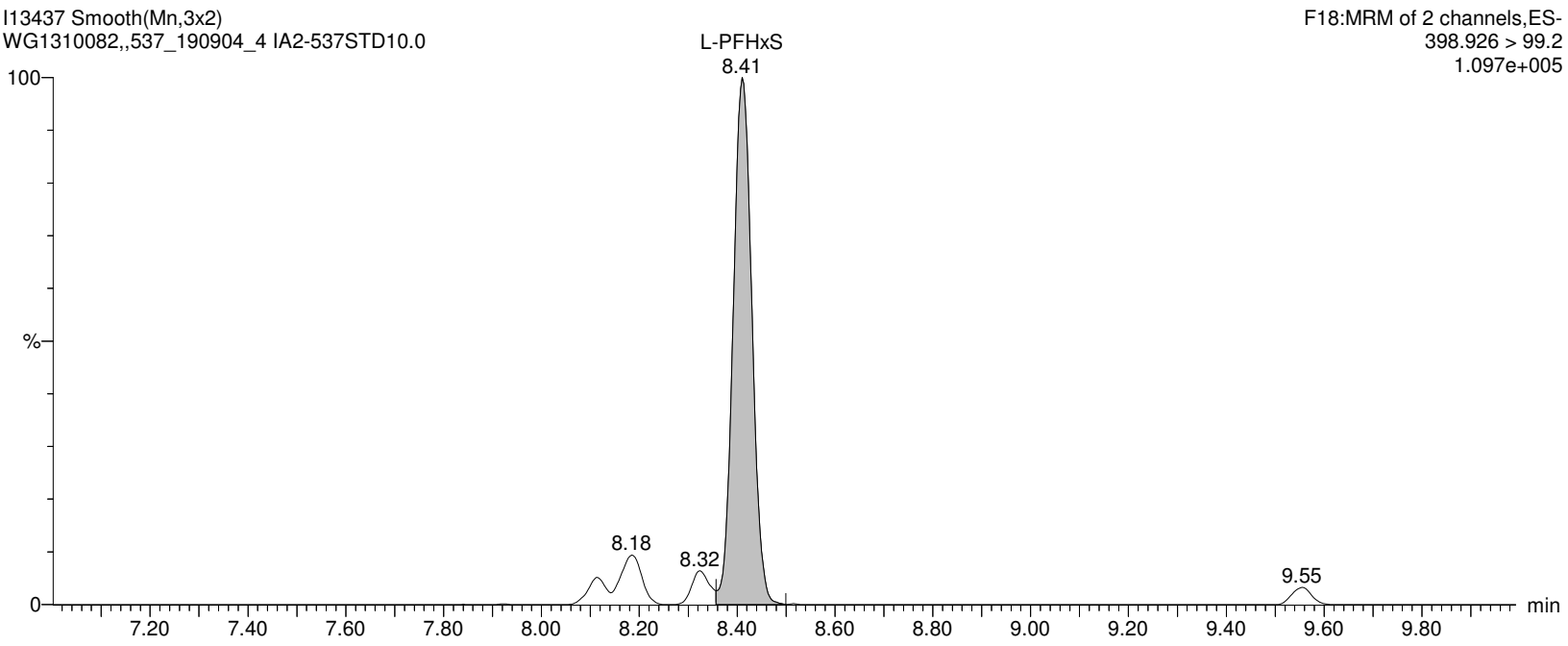



all concentration units in (ng/mL)

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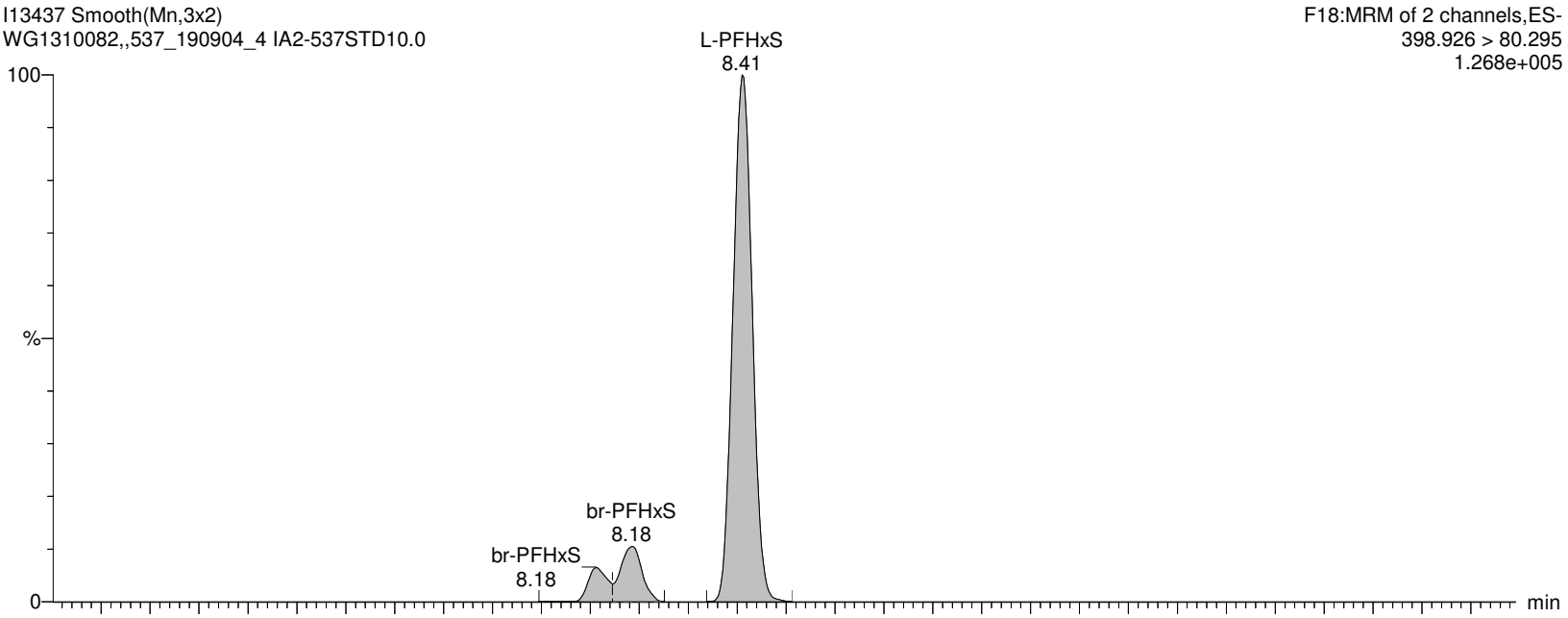


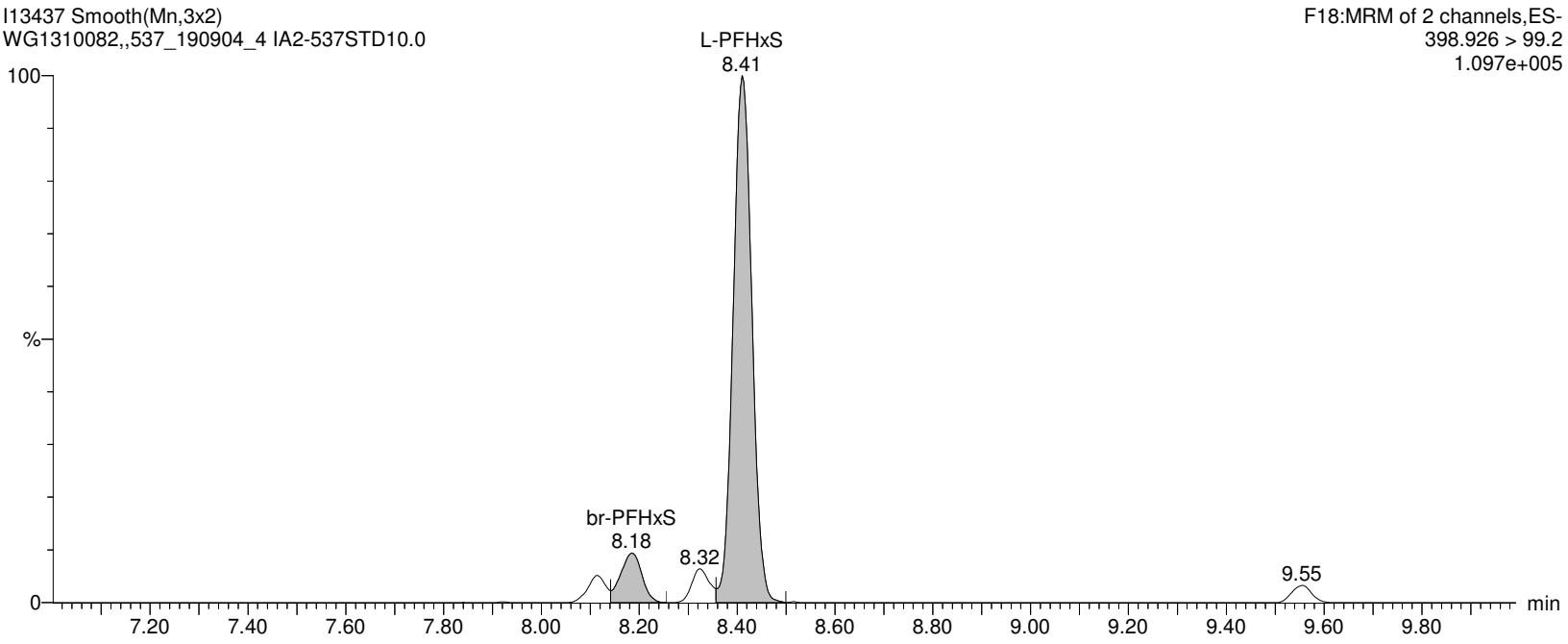



all concentration units in (ng/mL)

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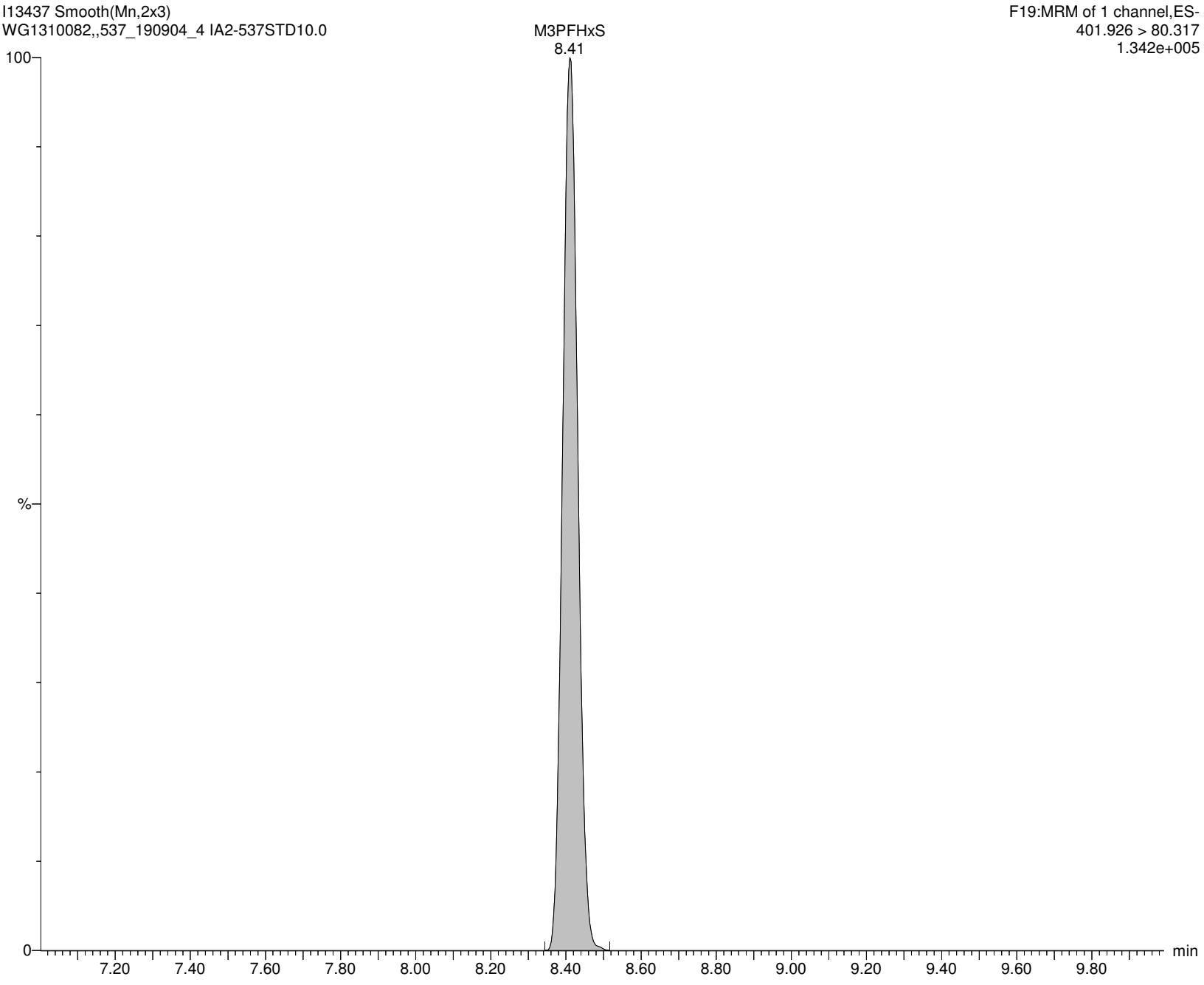
**M3PFHxS**





all concentration units in (ng/mL)

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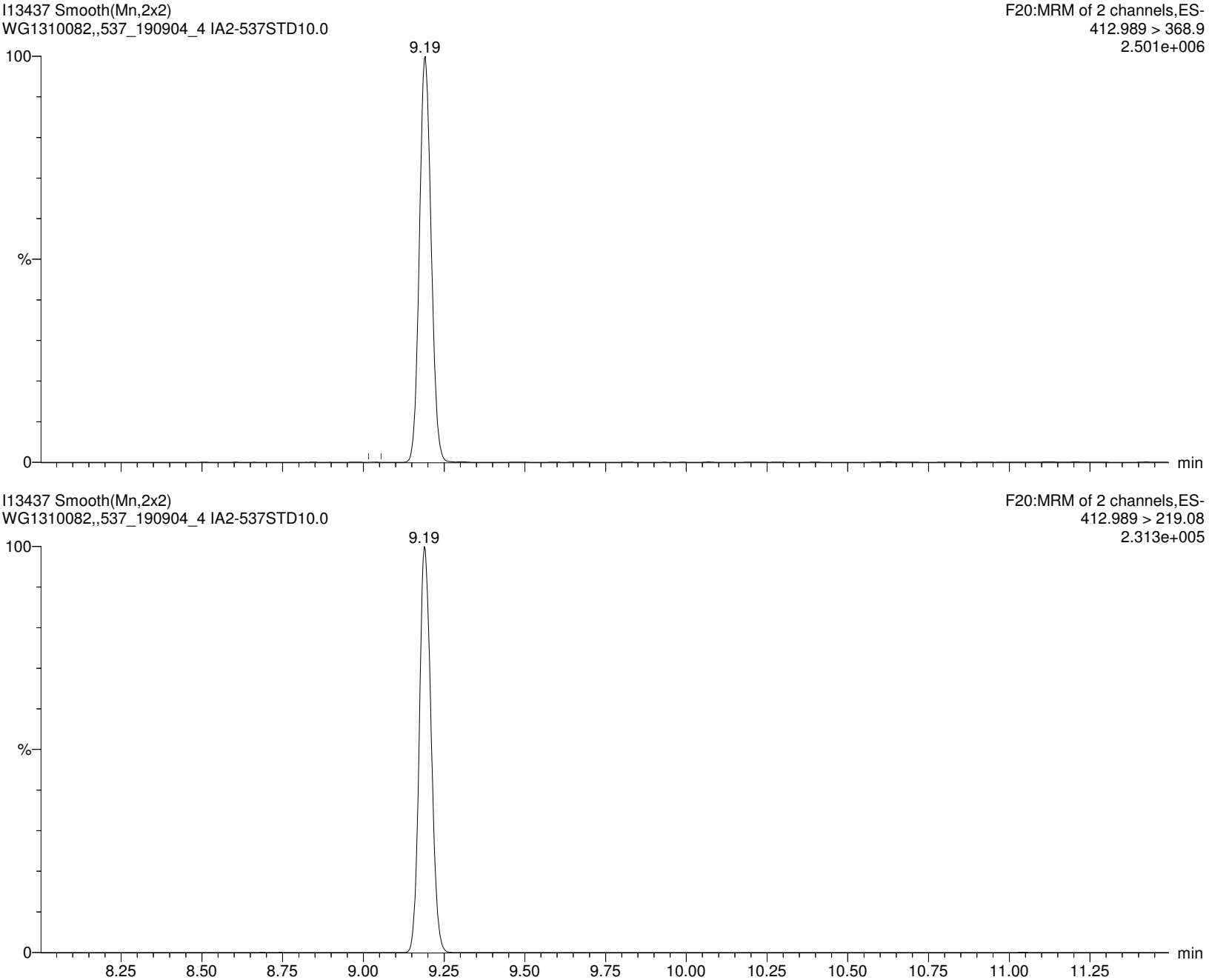
**br-PFOA**





all concentration units in (ng/mL)

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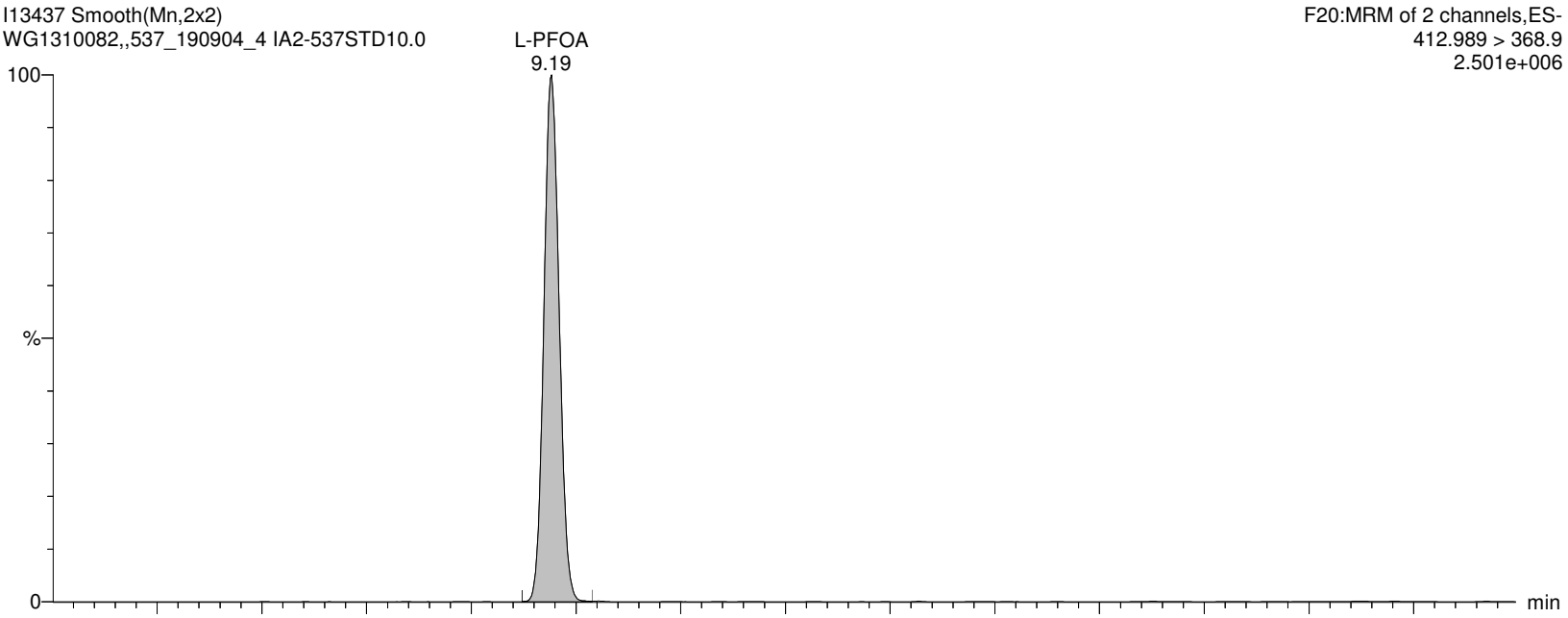


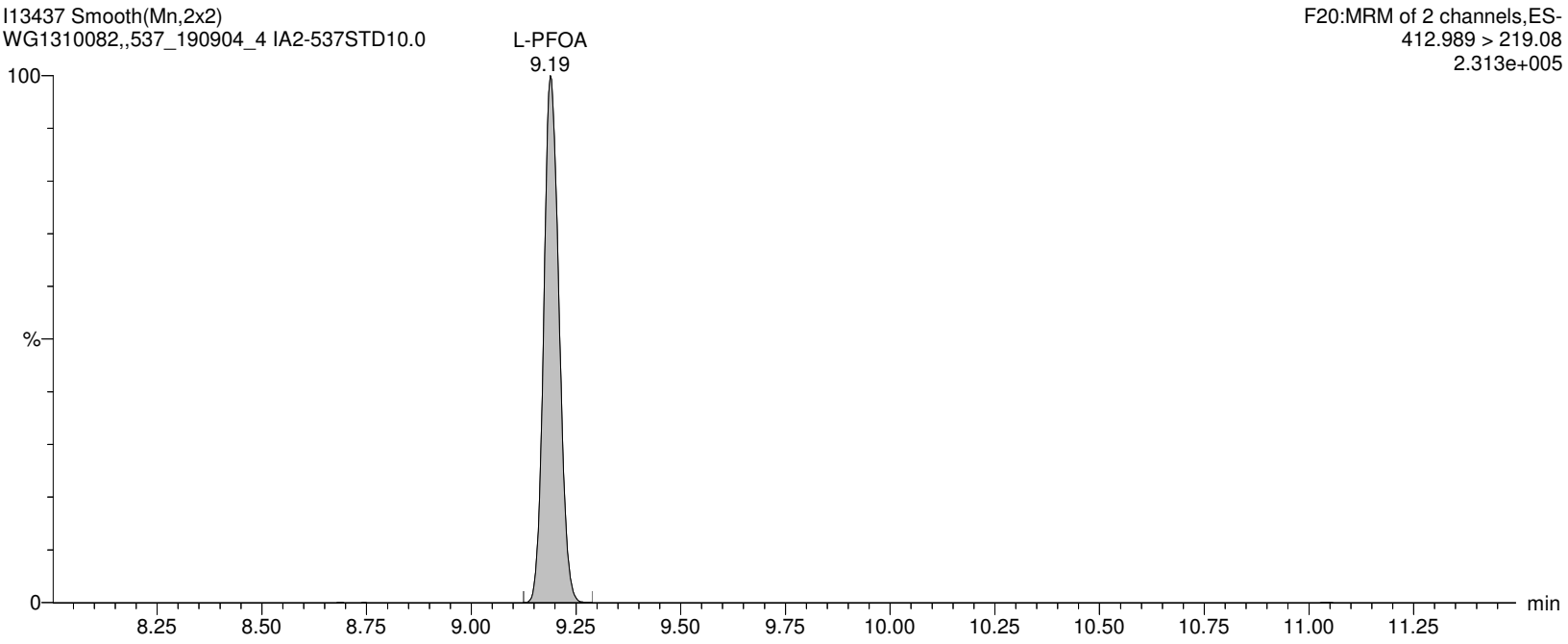



all concentration units in (ng/mL)

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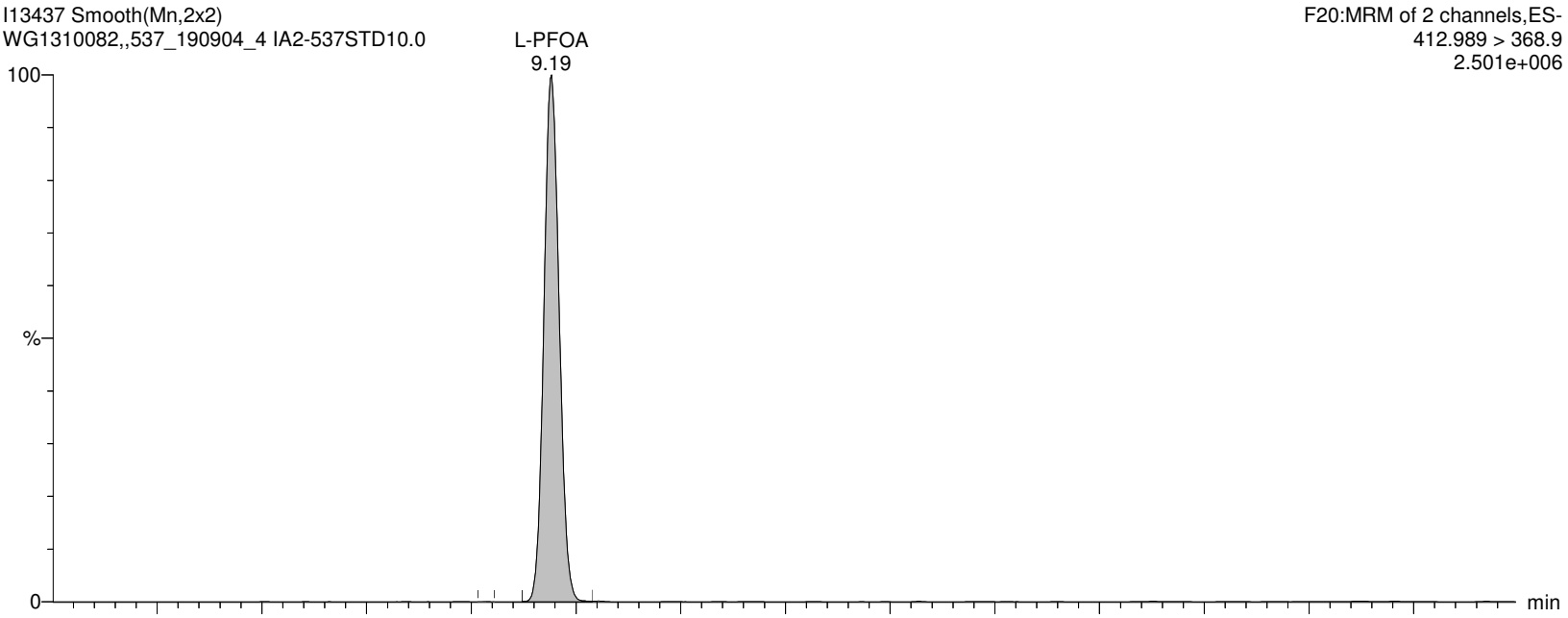
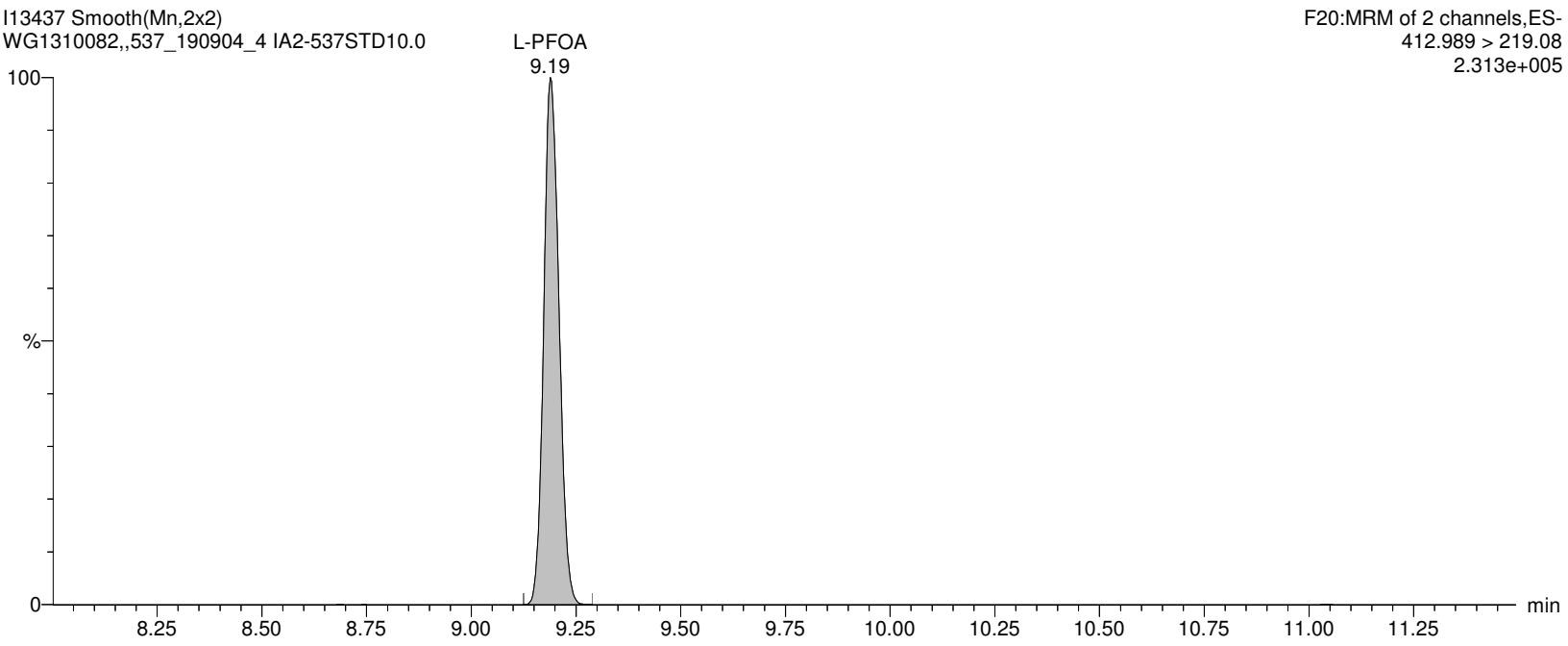
**PFOA**





all concentration units in (ng/mL)

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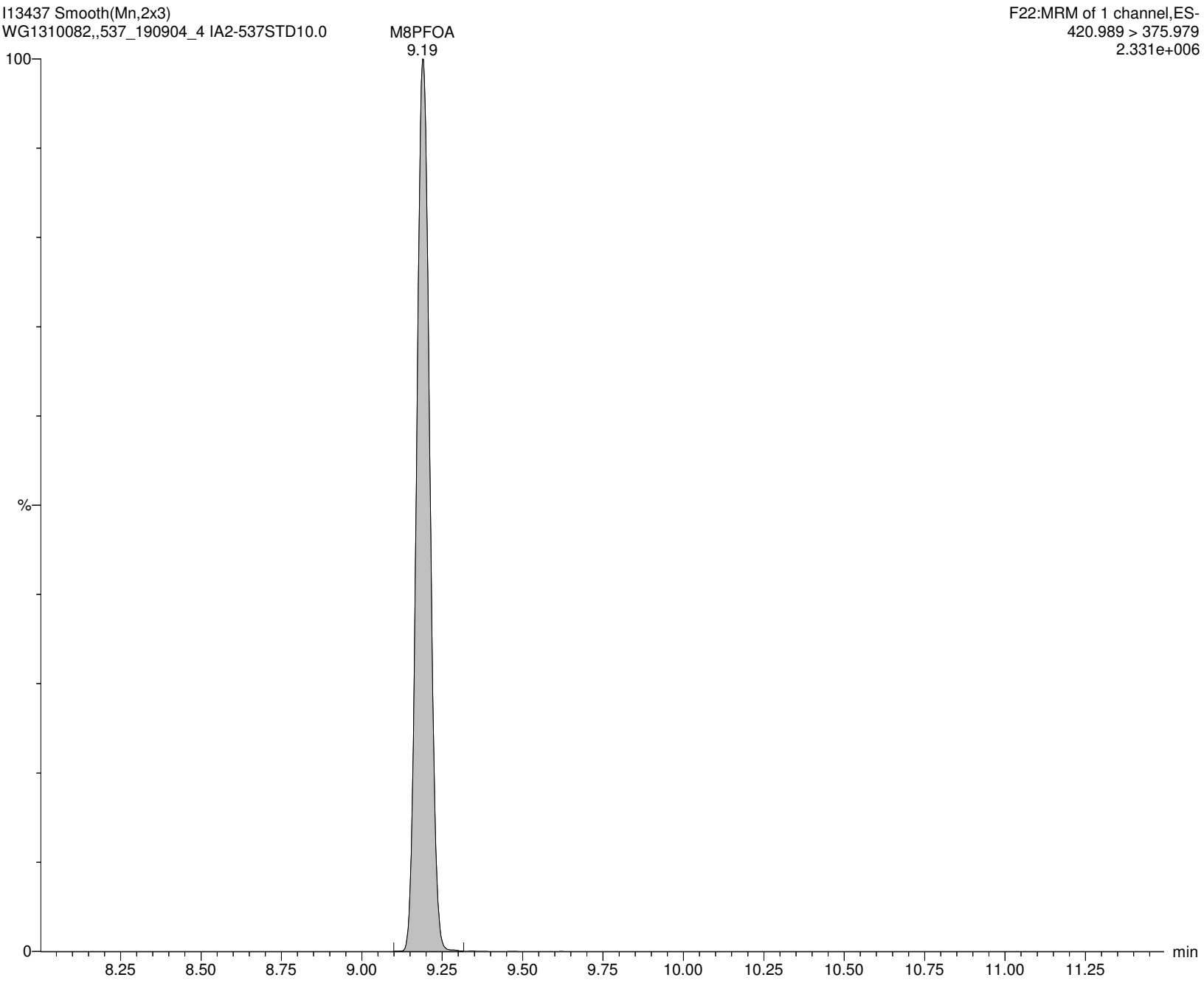



all concentration units in (ng/mL)

Alpha Analytical Inc.
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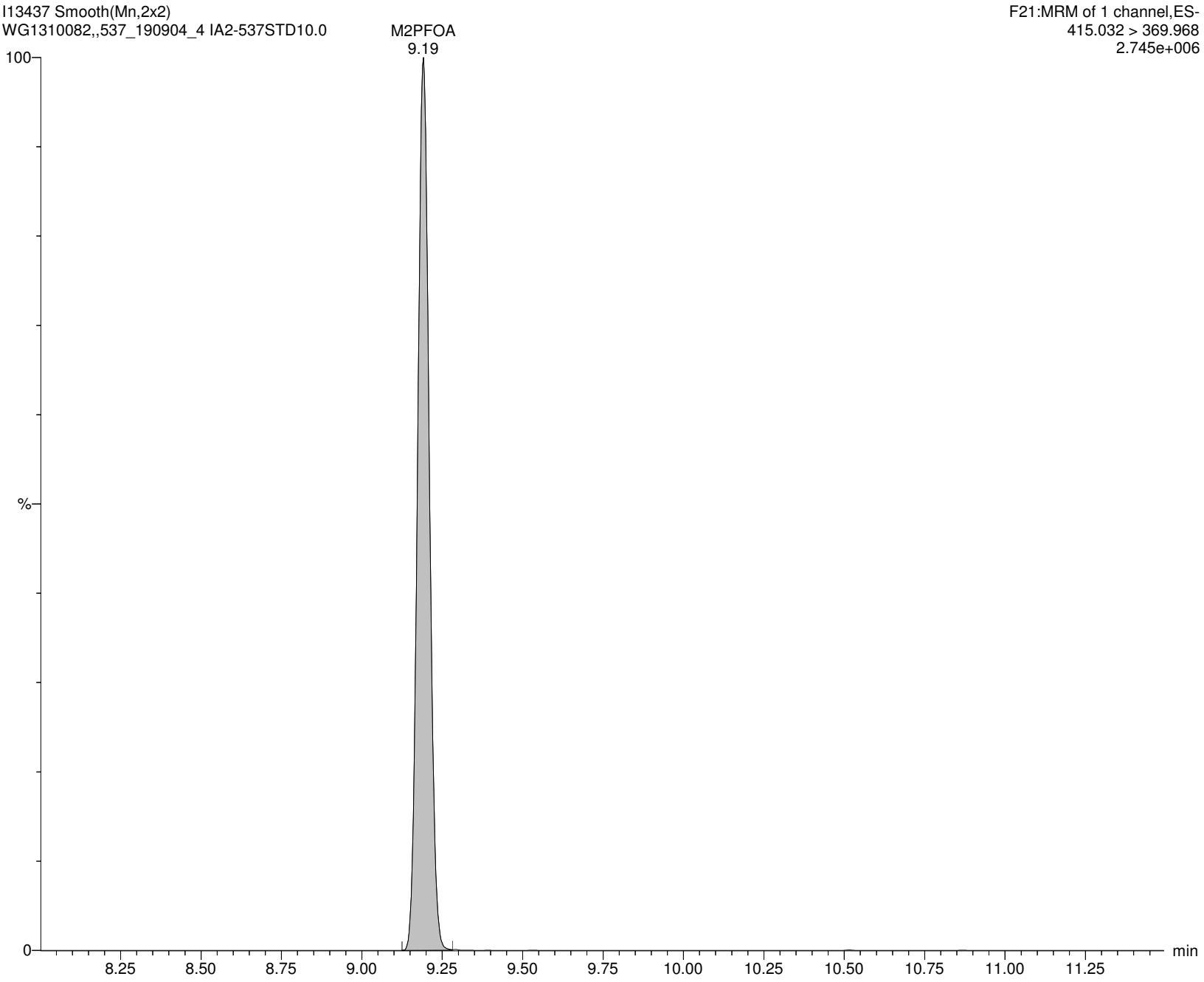



all concentration units in (ng/mL)

Alpha Analytical Inc.
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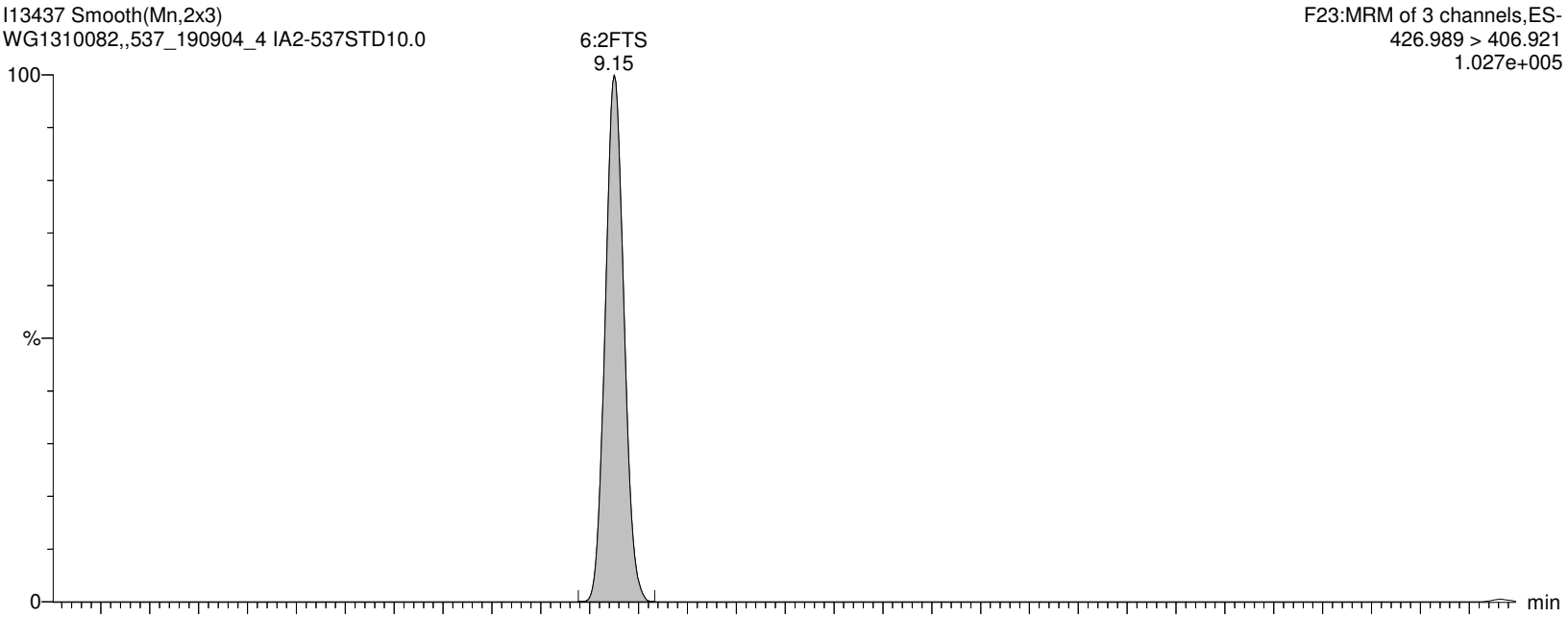


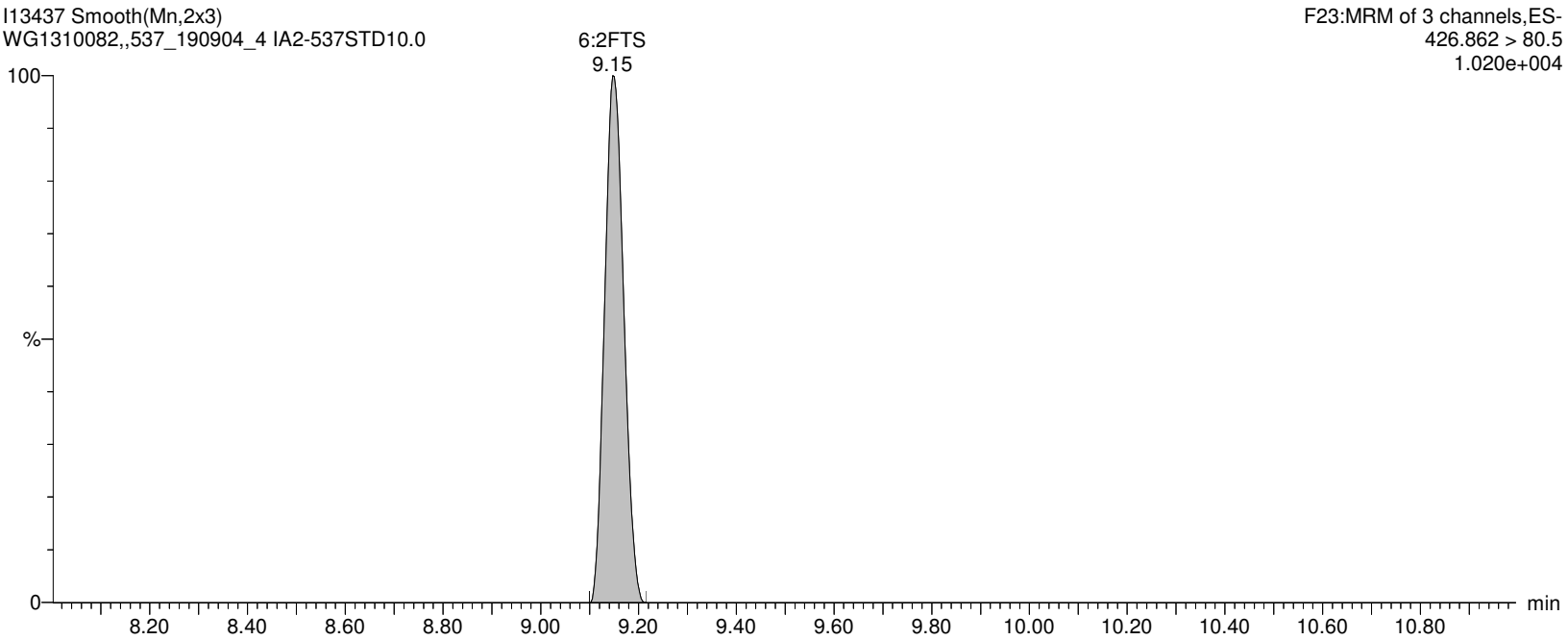



all concentration units in (ng/mL)

Alpha Analytical Inc.
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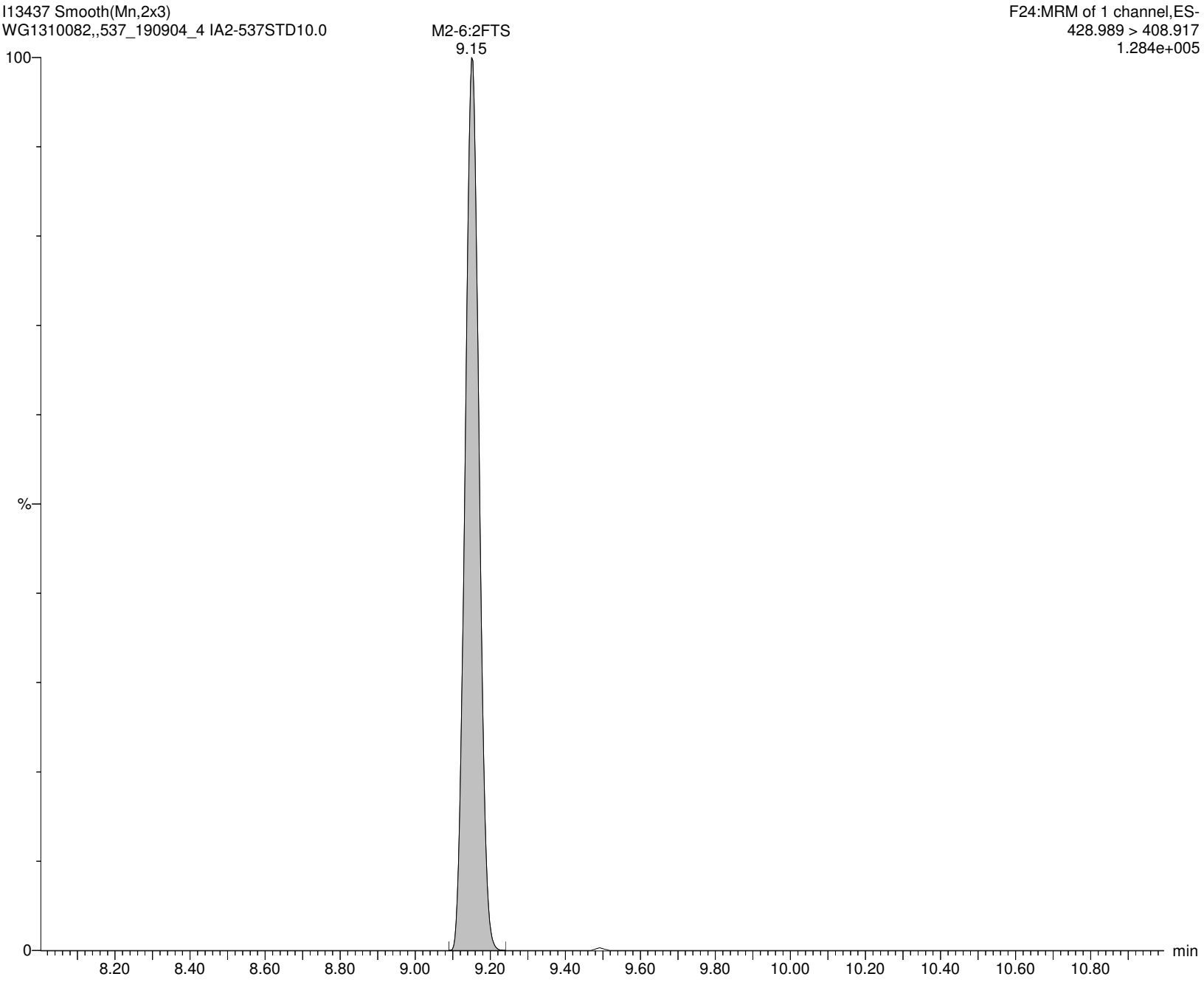
**M2-6:2FTS**





all concentration units in (ng/mL)

Alpha Analytical Inc.
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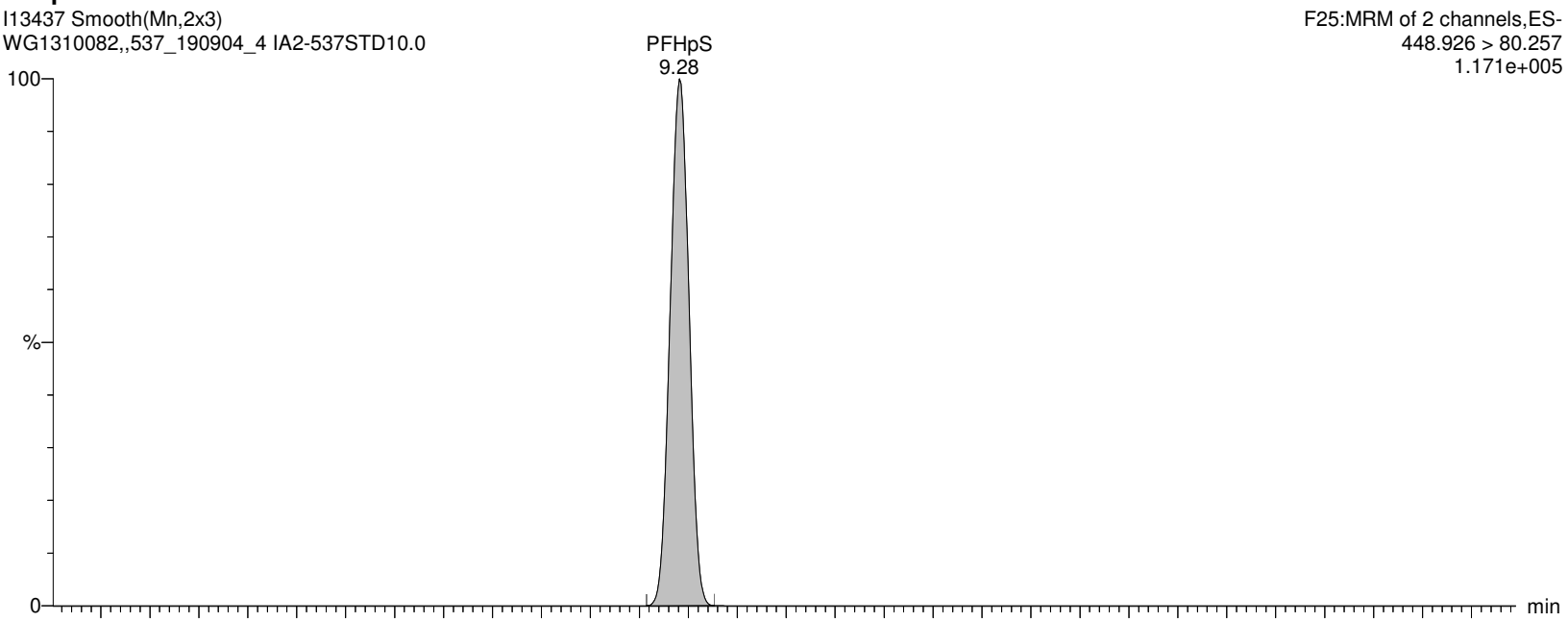
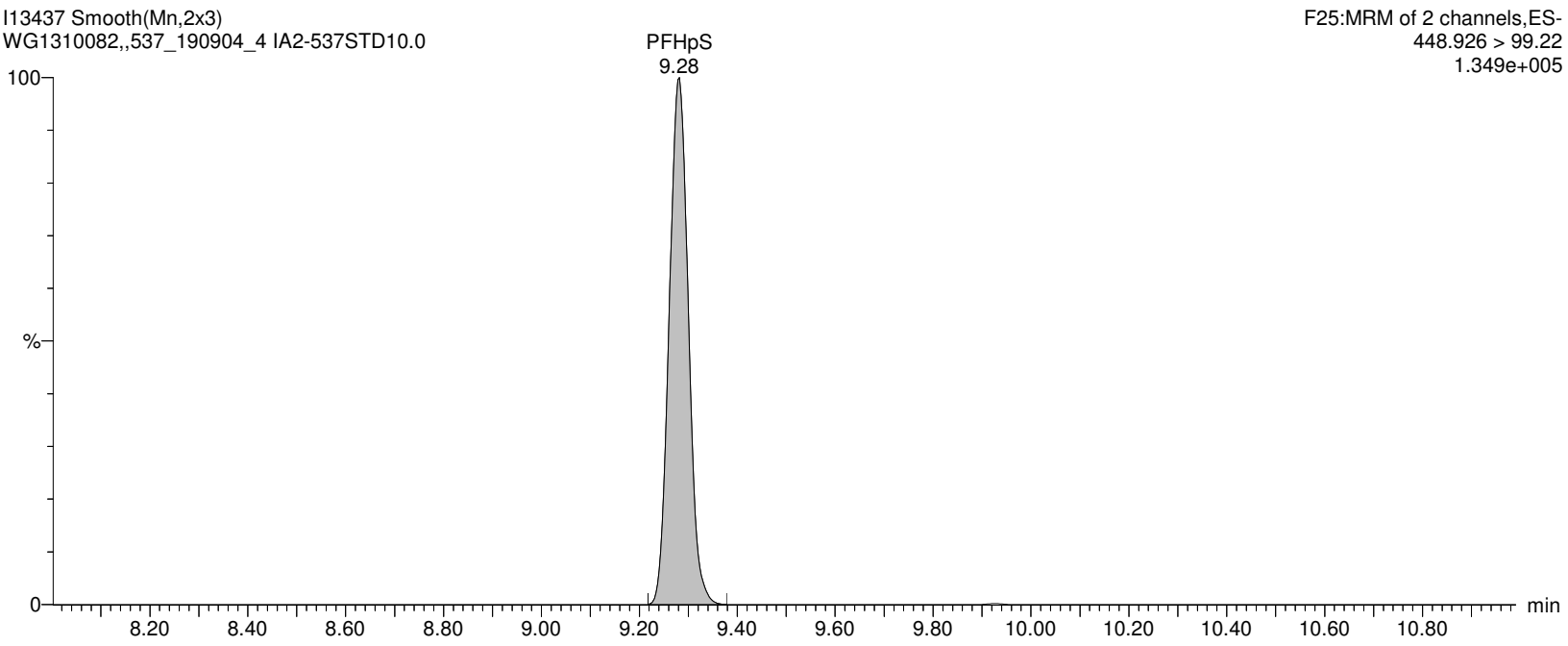
**PFHpS**





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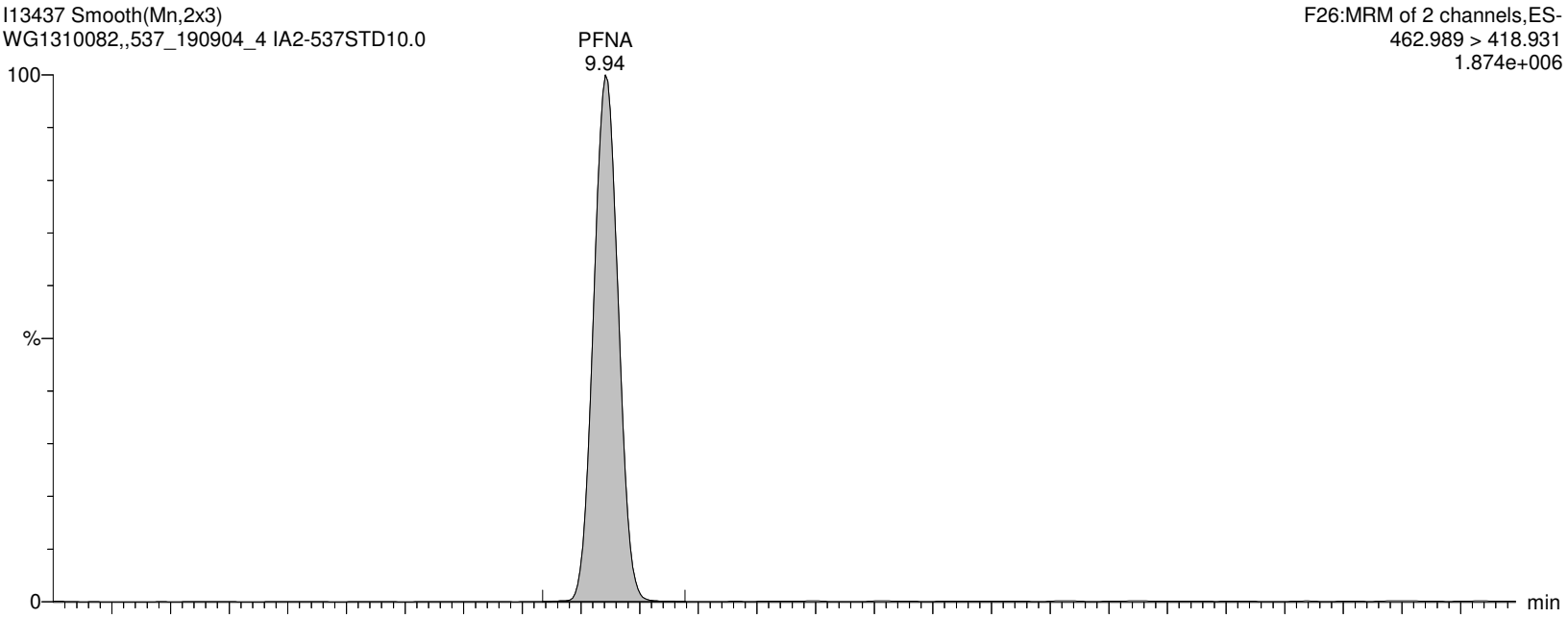
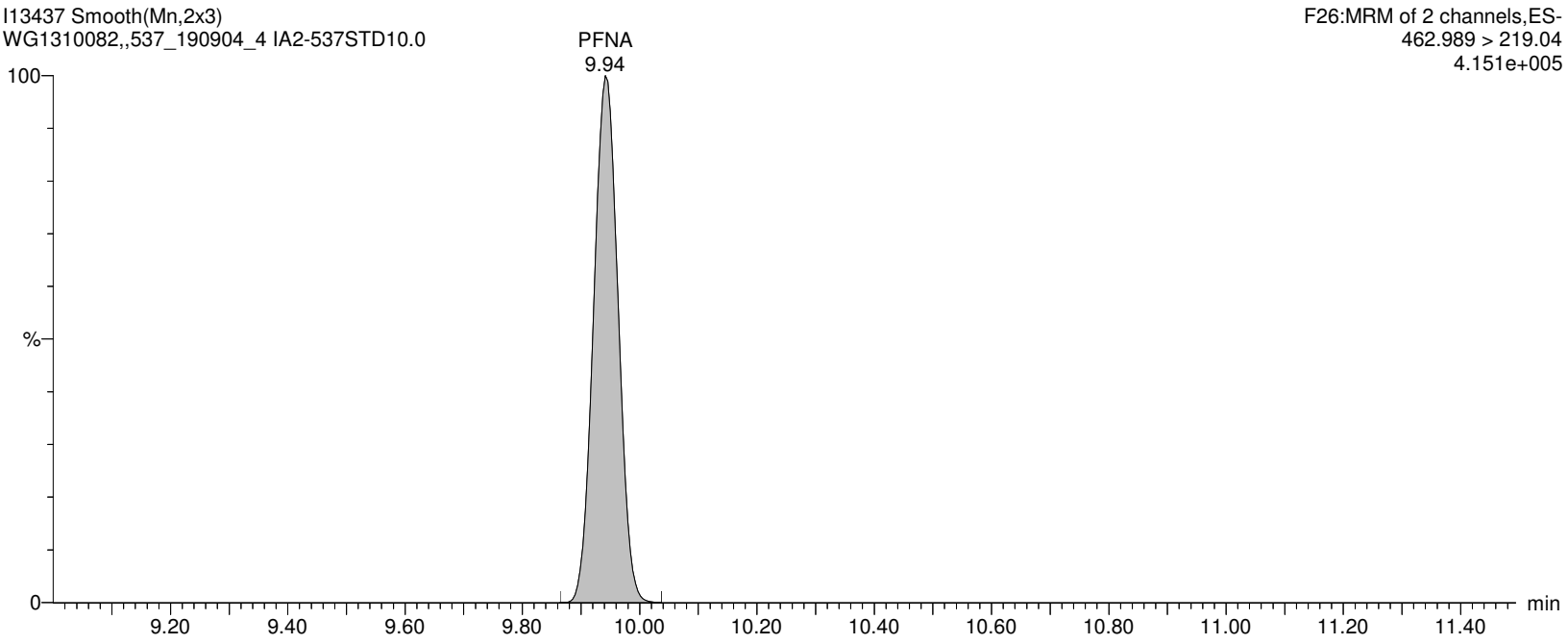


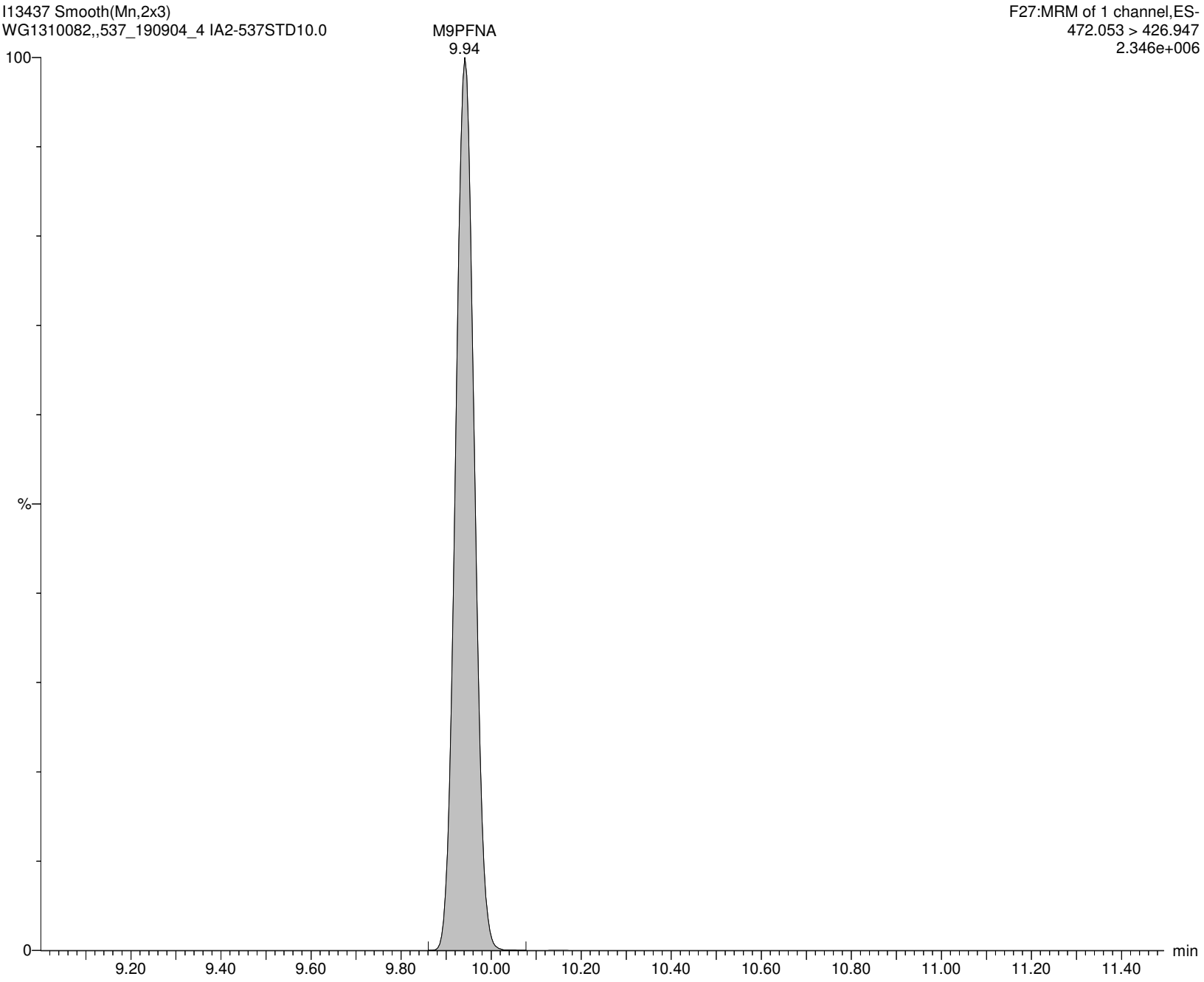


all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
Printed: Monday, November 18, 2019 13:42:55 Eastern Standard Time

**Name: I13437**
**ID: IA2-537STD10.0**
**Date: 18-Nov-2019**
**Time: 11:26:51**
**Description: WG1310082,,537_190904_4**
**User: LCMS02:JW**
**Vial: 1:A,5**
**Instrument: XEVO-TQSmicro#QEB0050**
**Inlet Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\LCMS_537_ISO_B**
**Tune Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\181009_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**M9PFNA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
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**Vial: 1:A,5**
**Instrument: XEVO-TQSmicro#QEB0050**
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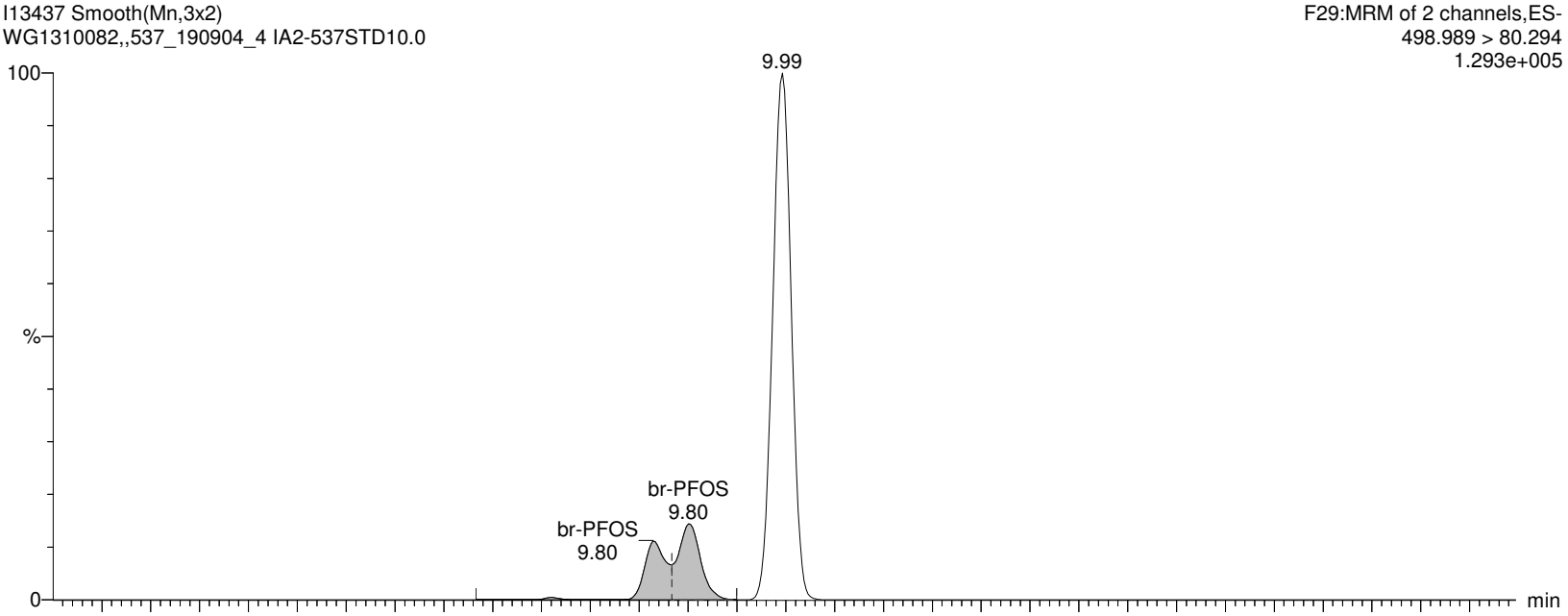
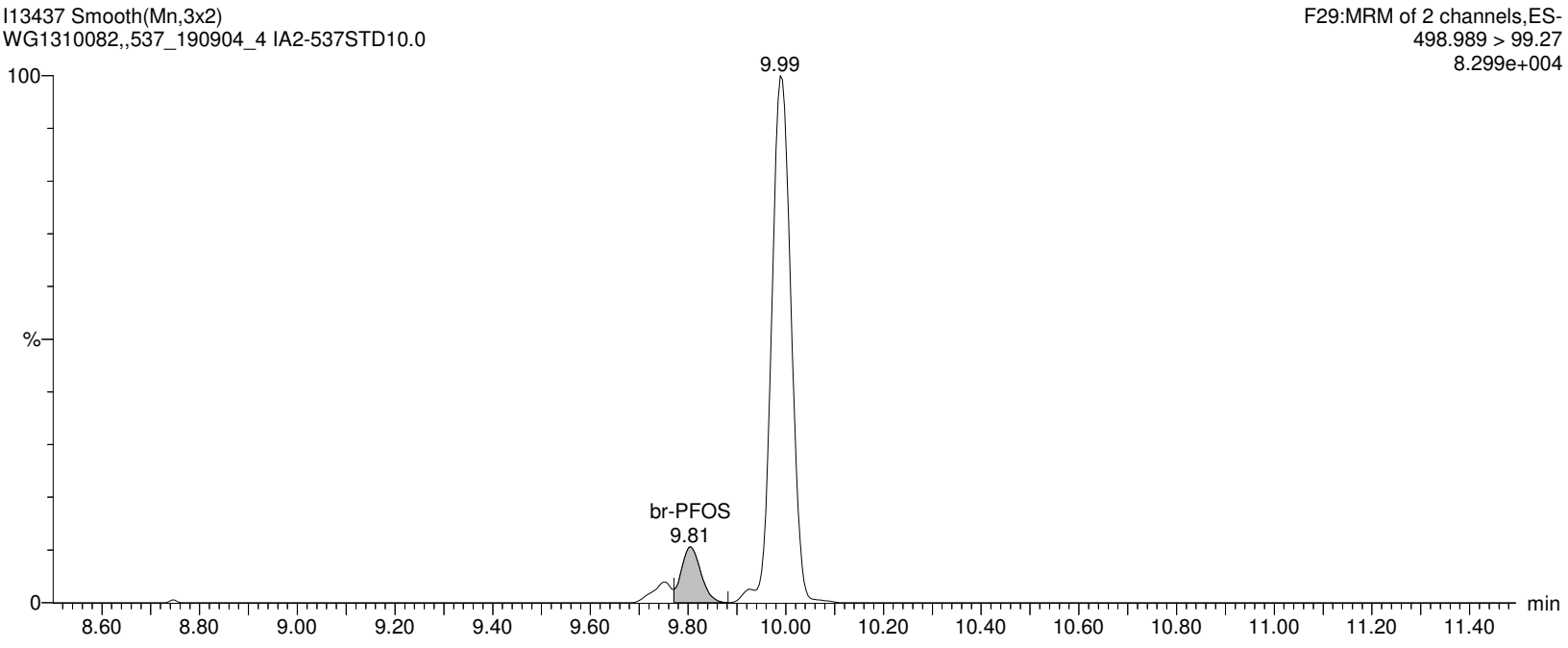
**br-PFOS**





all concentration units in (ng/mL)

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**User: LCMS02:JW**
**Vial: 1:A,5**
**Instrument: XEVO-TQSmicro#QEB0050**
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**Tune Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\181009_TUNE.IPR**
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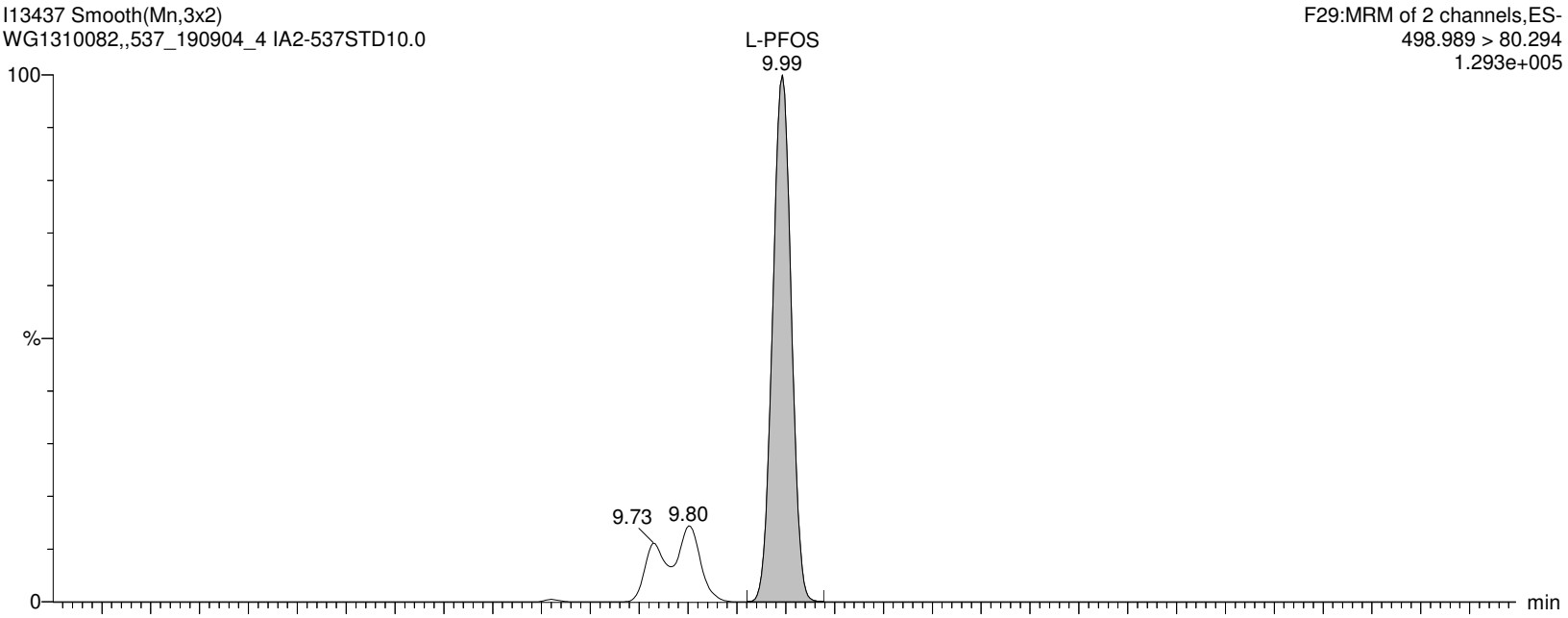
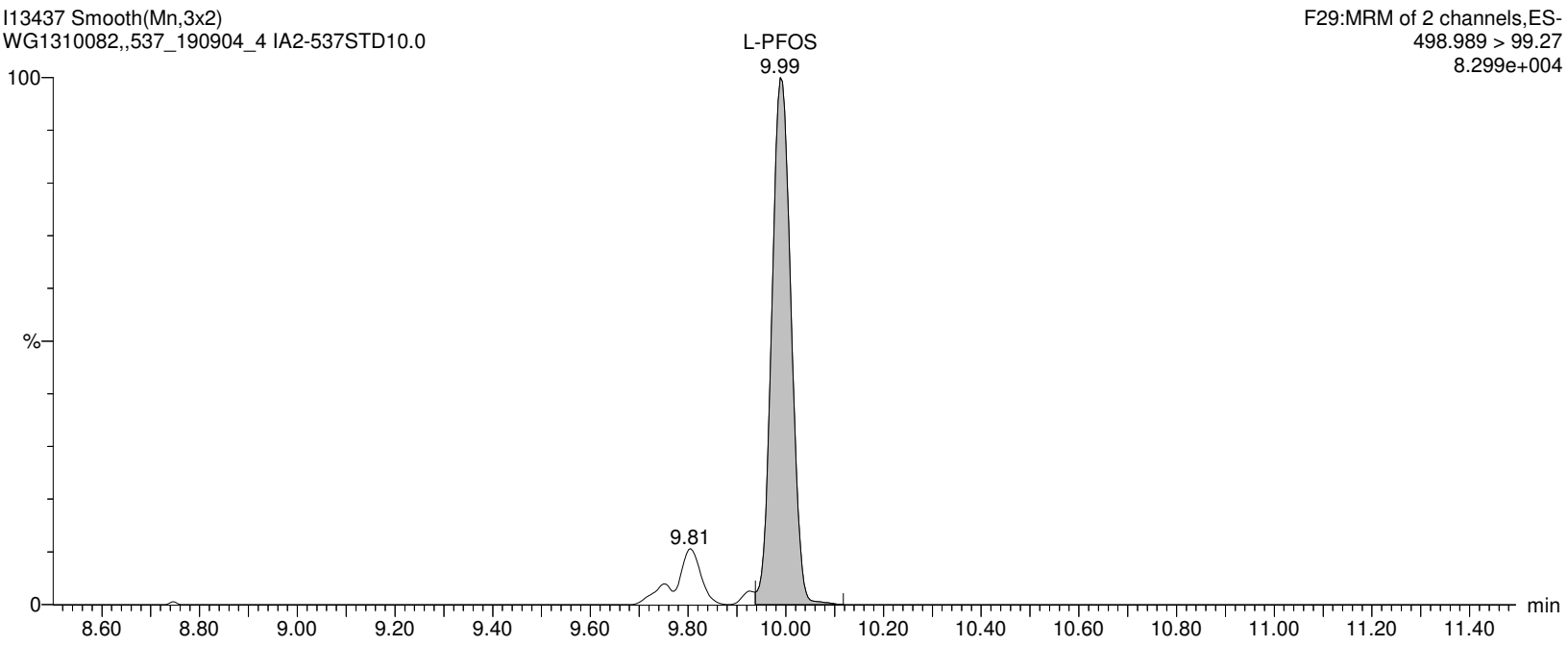
**L-PFOS**





all concentration units in (ng/mL)

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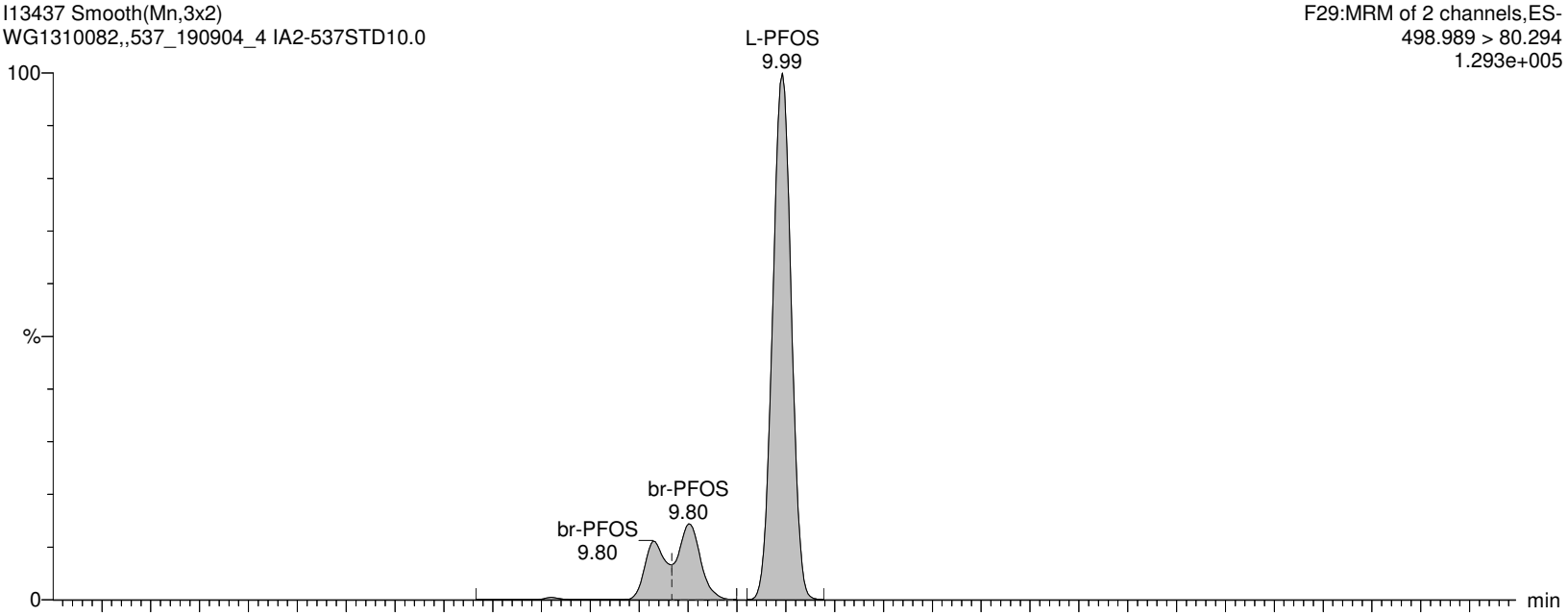
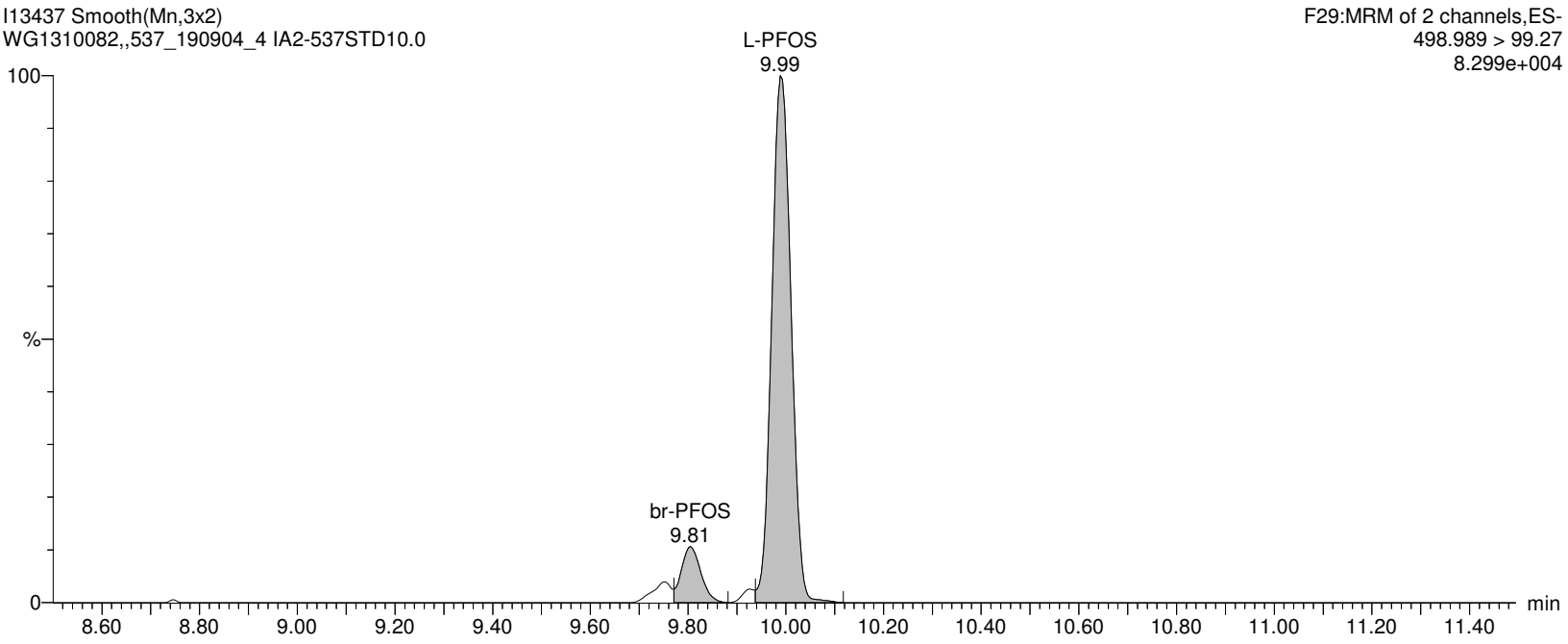
**PFOS**





all concentration units in (ng/mL)

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**Tune Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\181009_TUNE.IPR**
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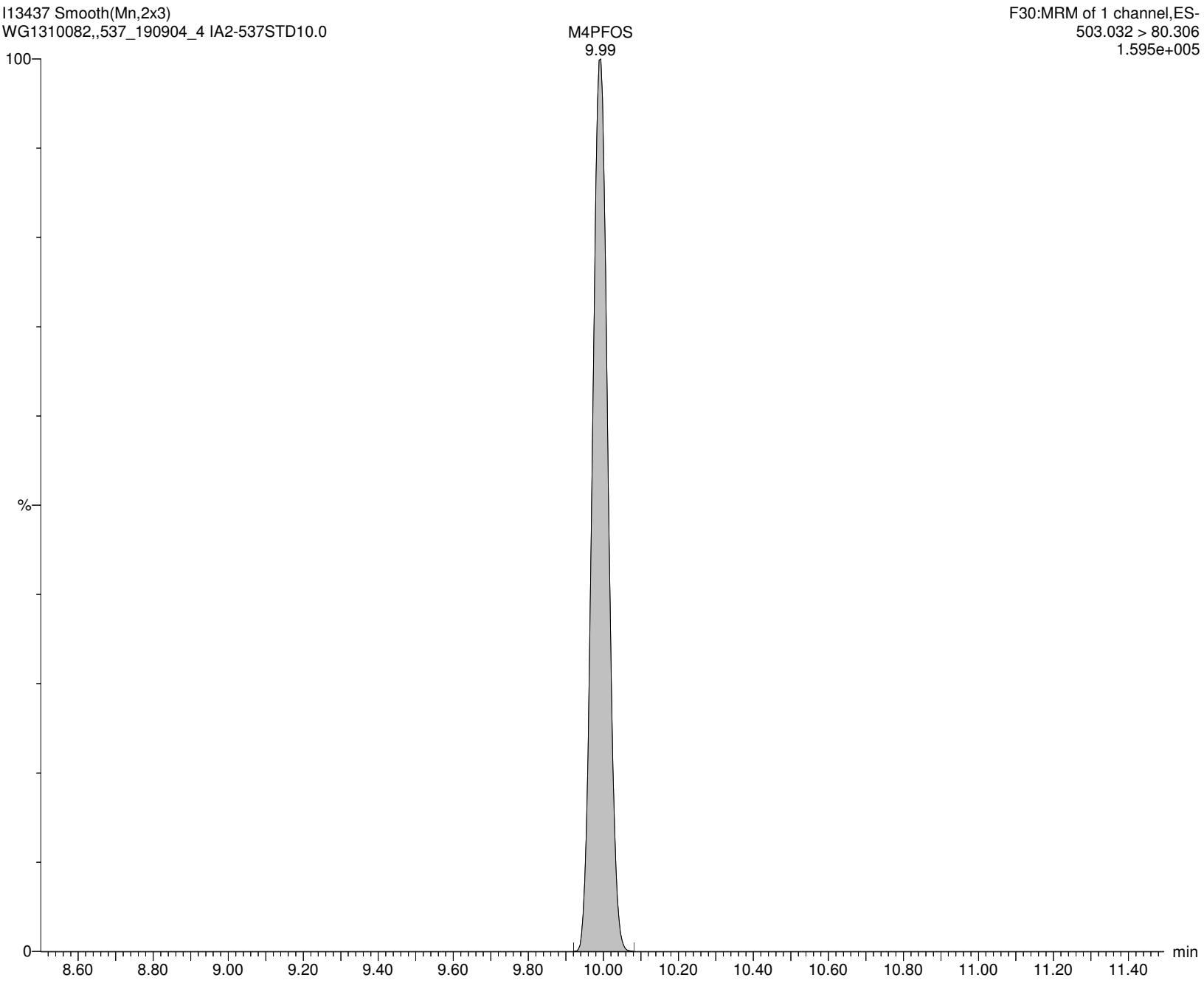
**M4PFOS**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
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**Vial: 1:A,5**
**Instrument: XEVO-TQSmicro#QEB0050**
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**Tune Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\181009_TUNE.IPR**
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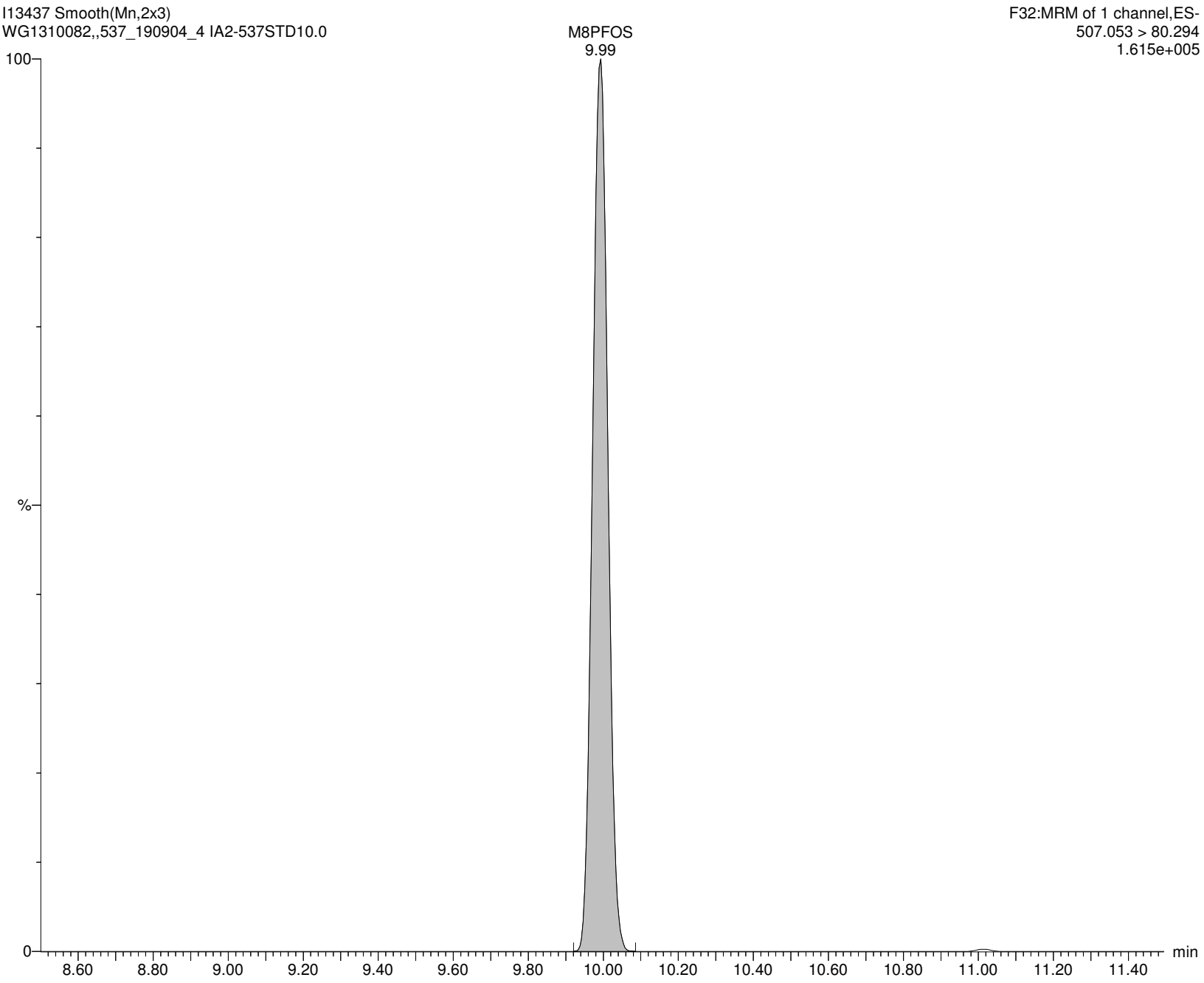
**M8PFOS**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
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**Vial: 1:A,5**
**Instrument: XEVO-TQSmicro#QEB0050**
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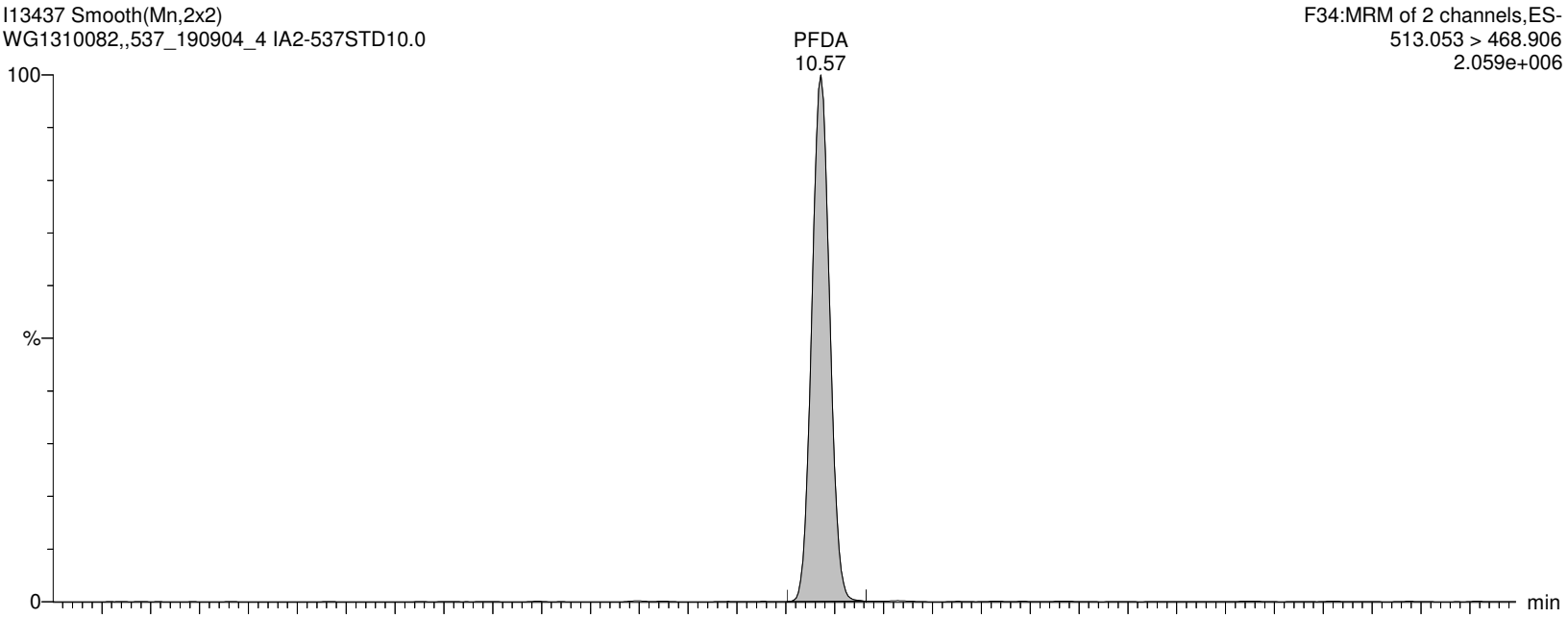
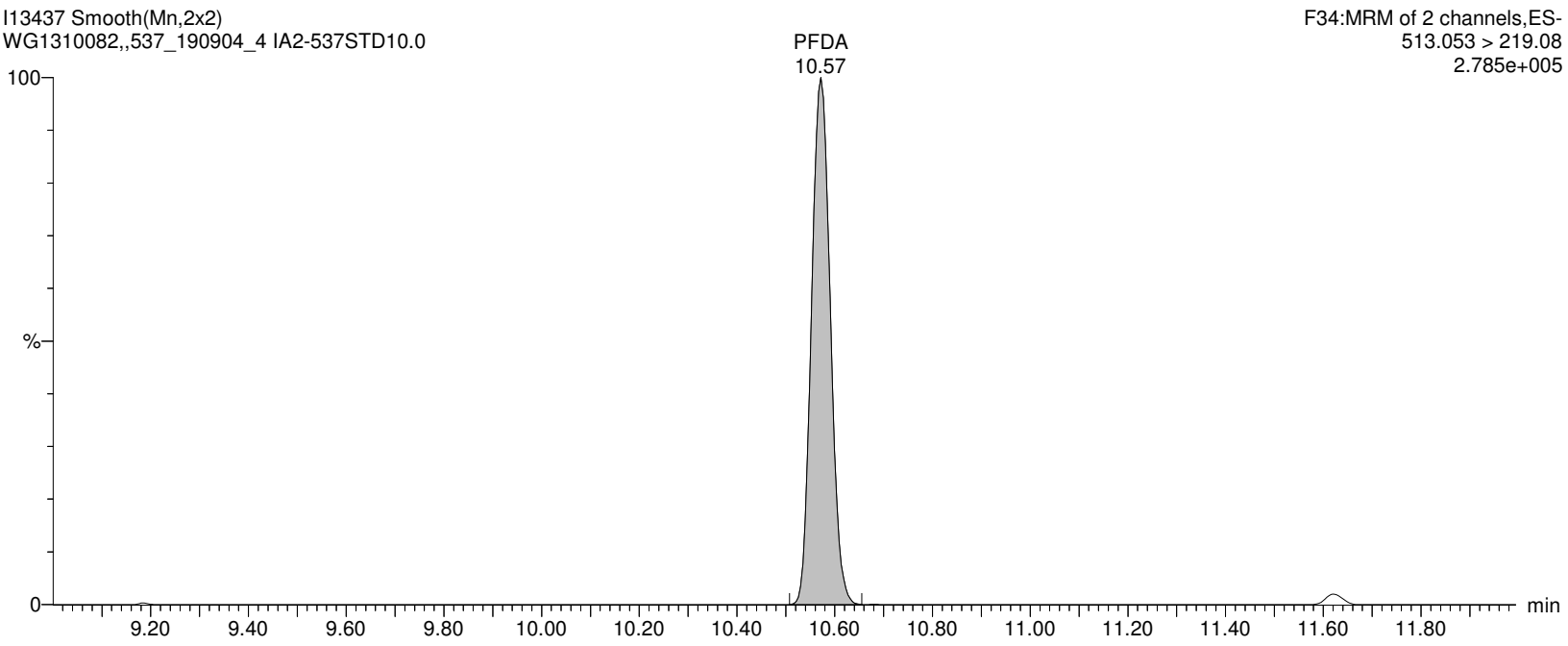
**PFDA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
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**Vial: 1:A,5**
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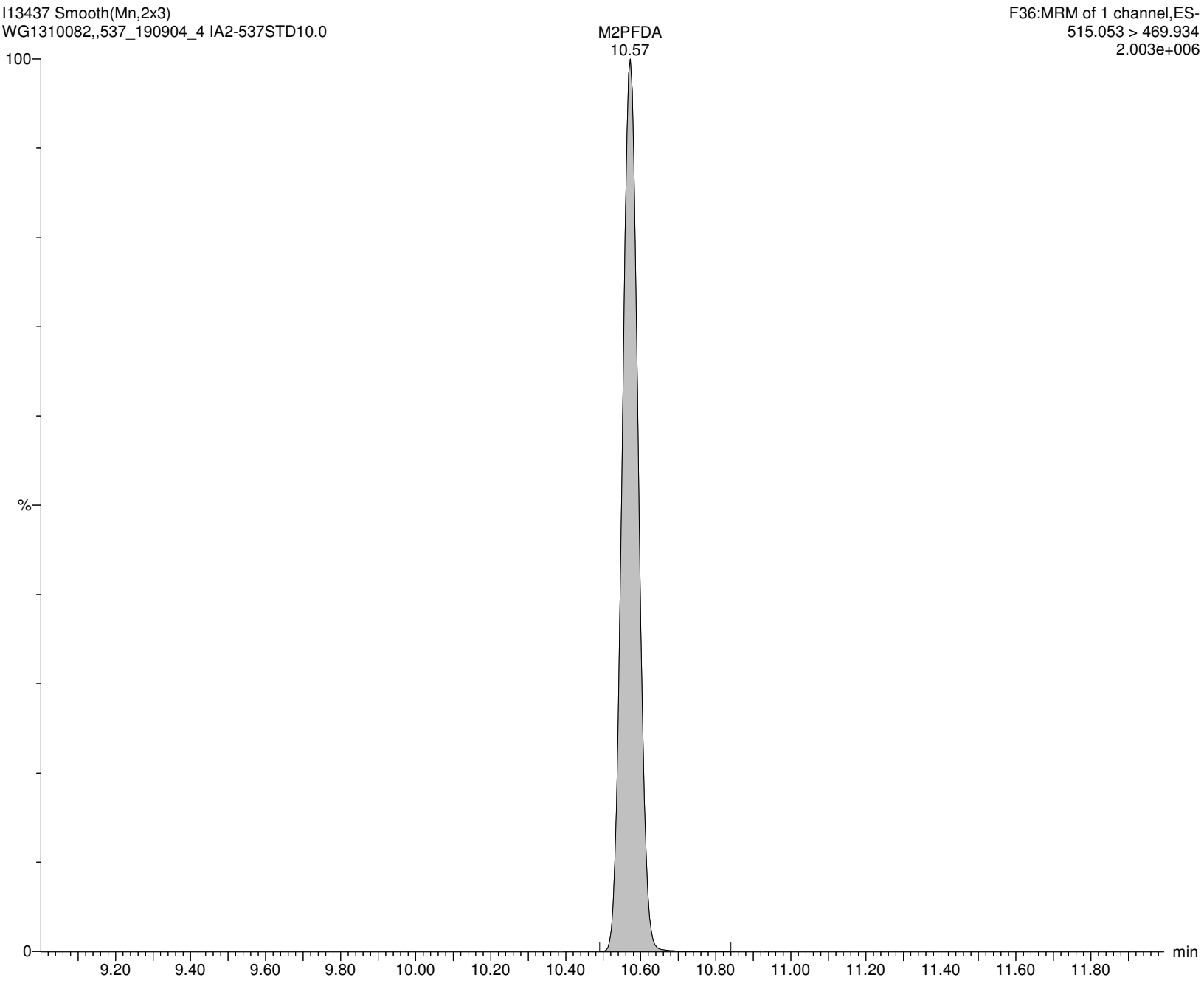
**M2PFDA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
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**User: LCMS02:JW**
**Vial: 1:A,5**
**Instrument: XEVO-TQSmicro#QEB0050**
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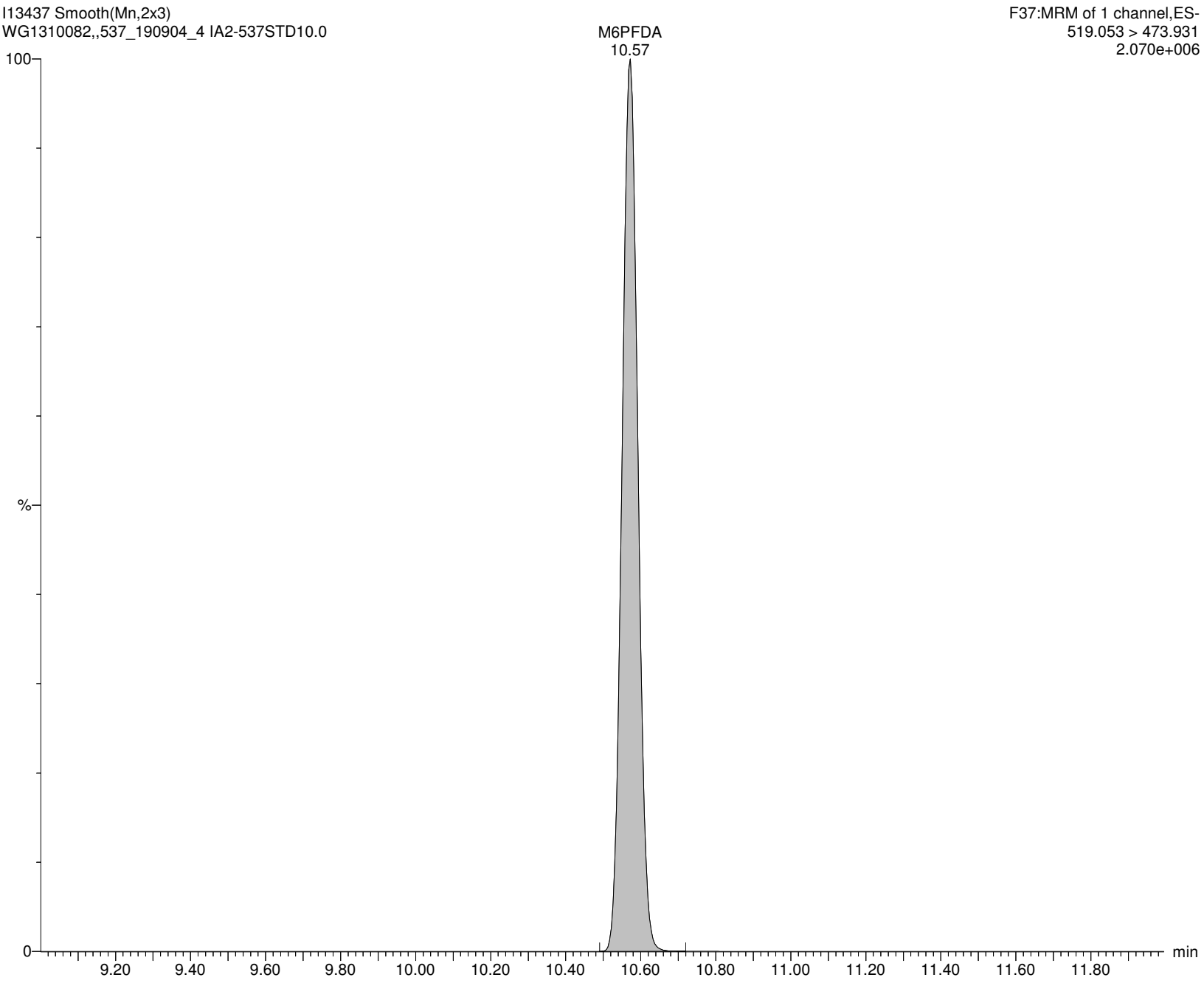



all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
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**Vial: 1:A,5**
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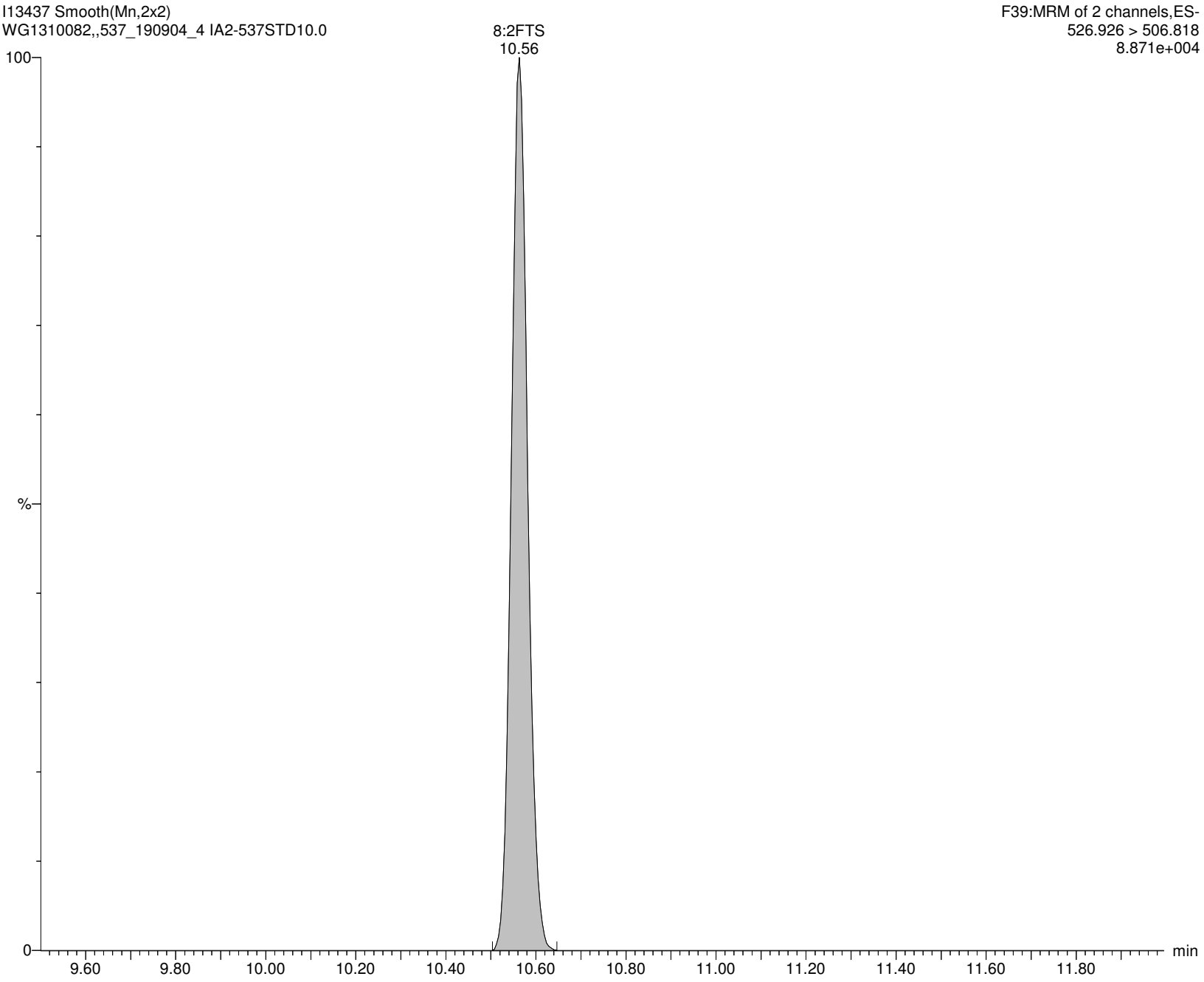
**8:2FTS**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
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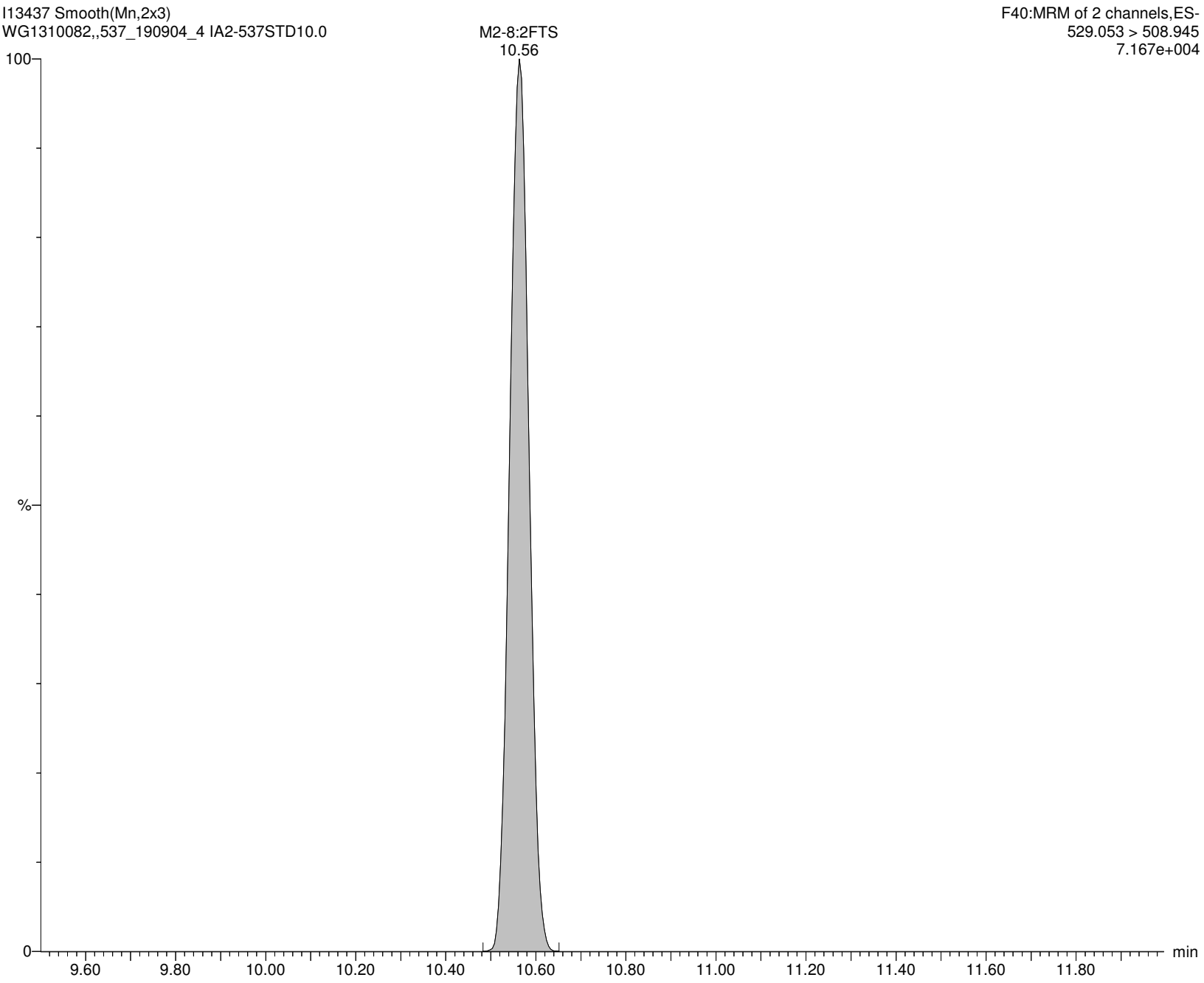
**M2-8:2FTS**





all concentration units in (ng/mL)

Alpha Analytical Inc.
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**Vial: 1:A,5**
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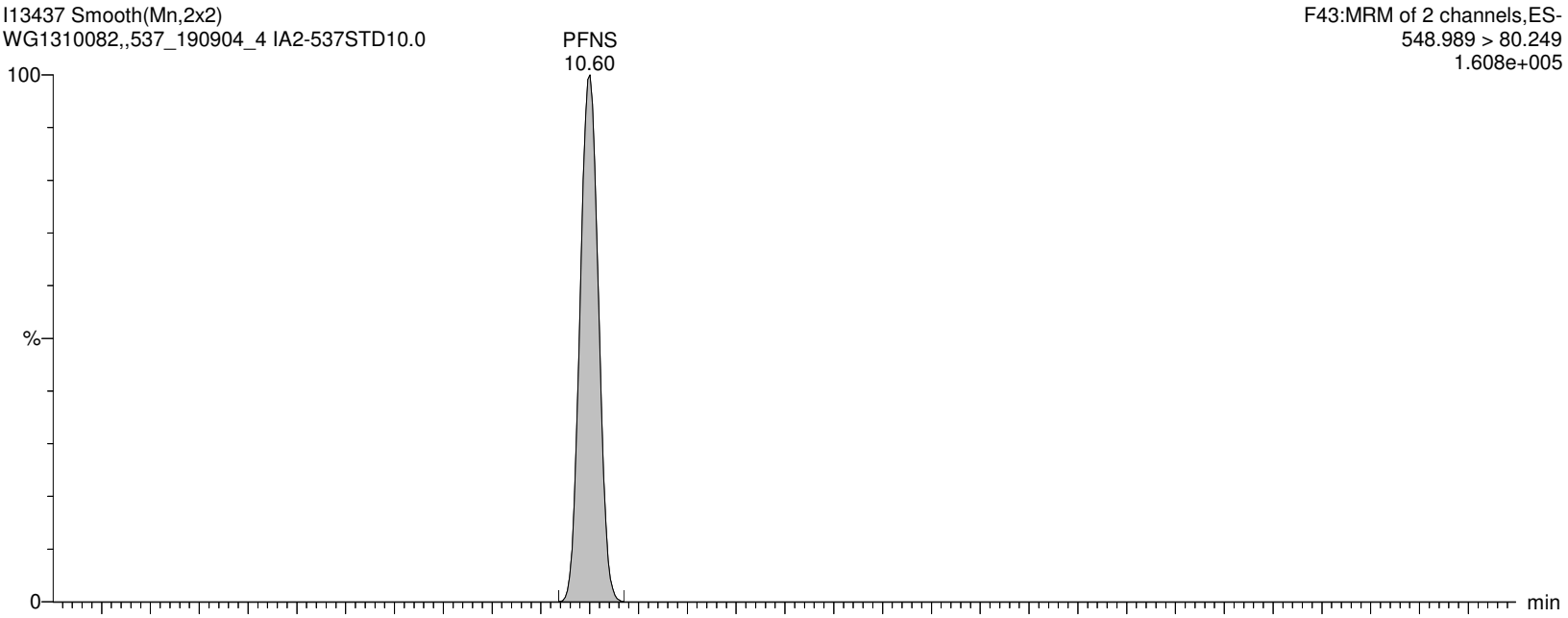
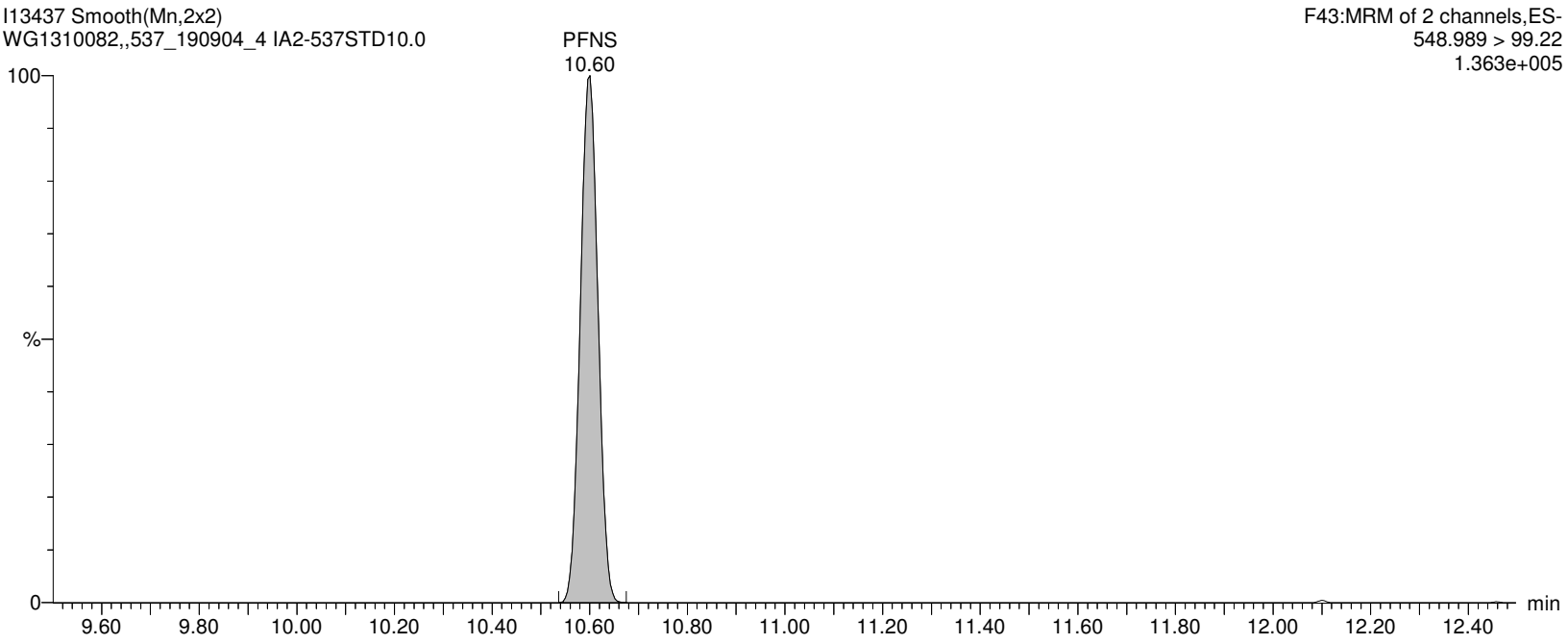
**PFNS**





all concentration units in (ng/mL)

Alpha Analytical Inc.
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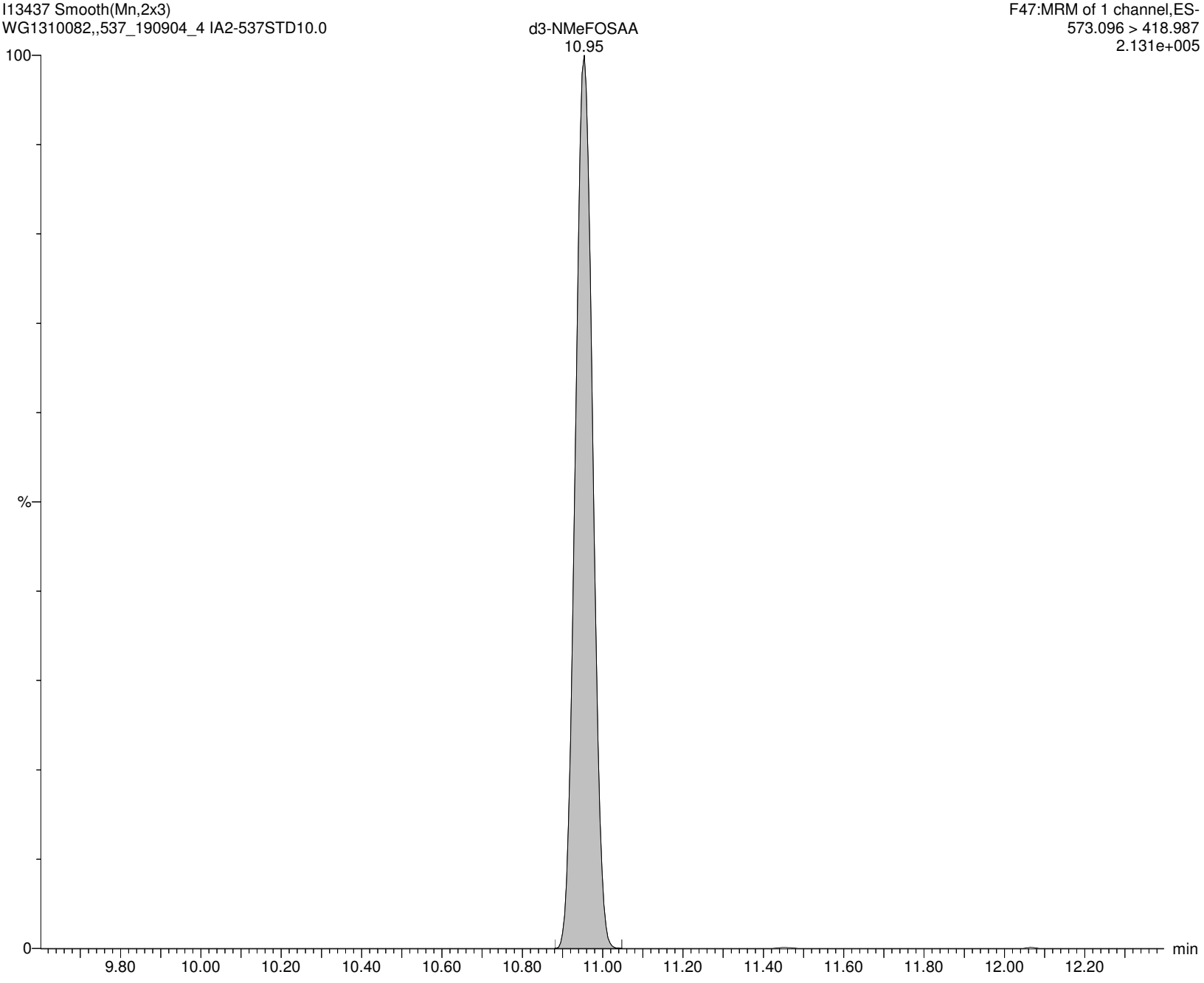



all concentration units in (ng/mL)

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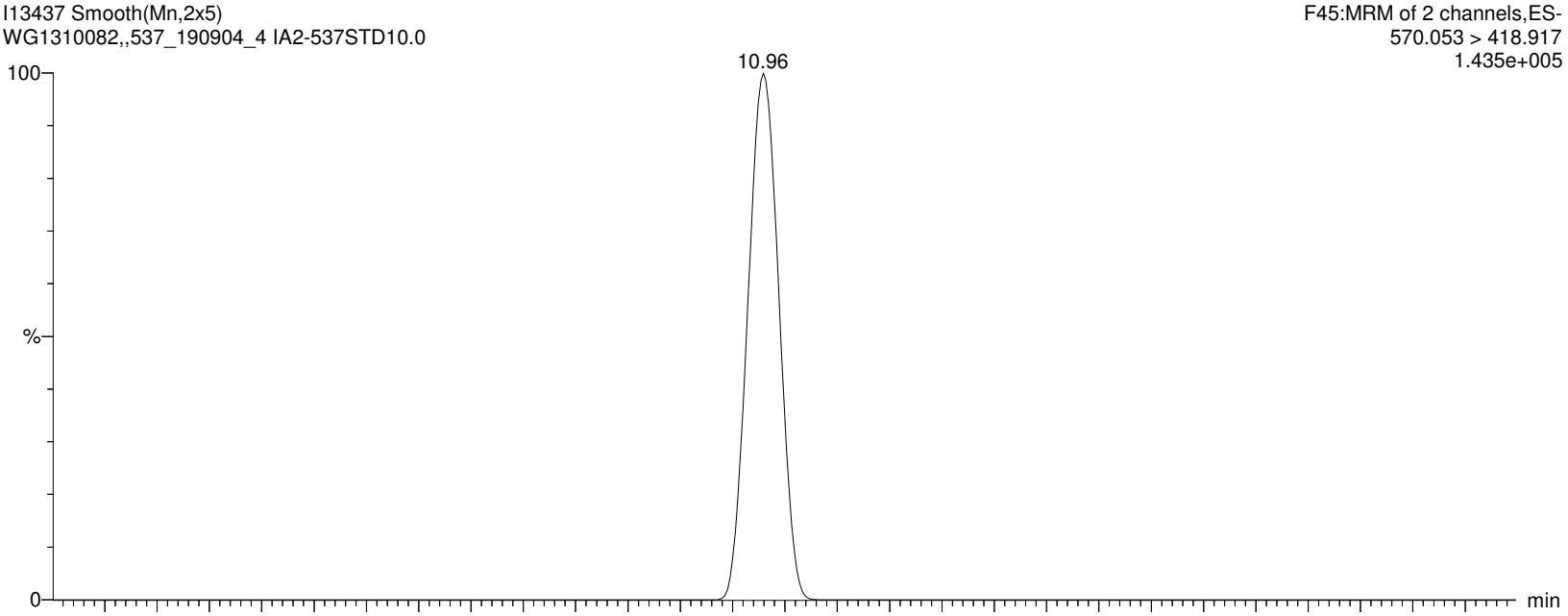
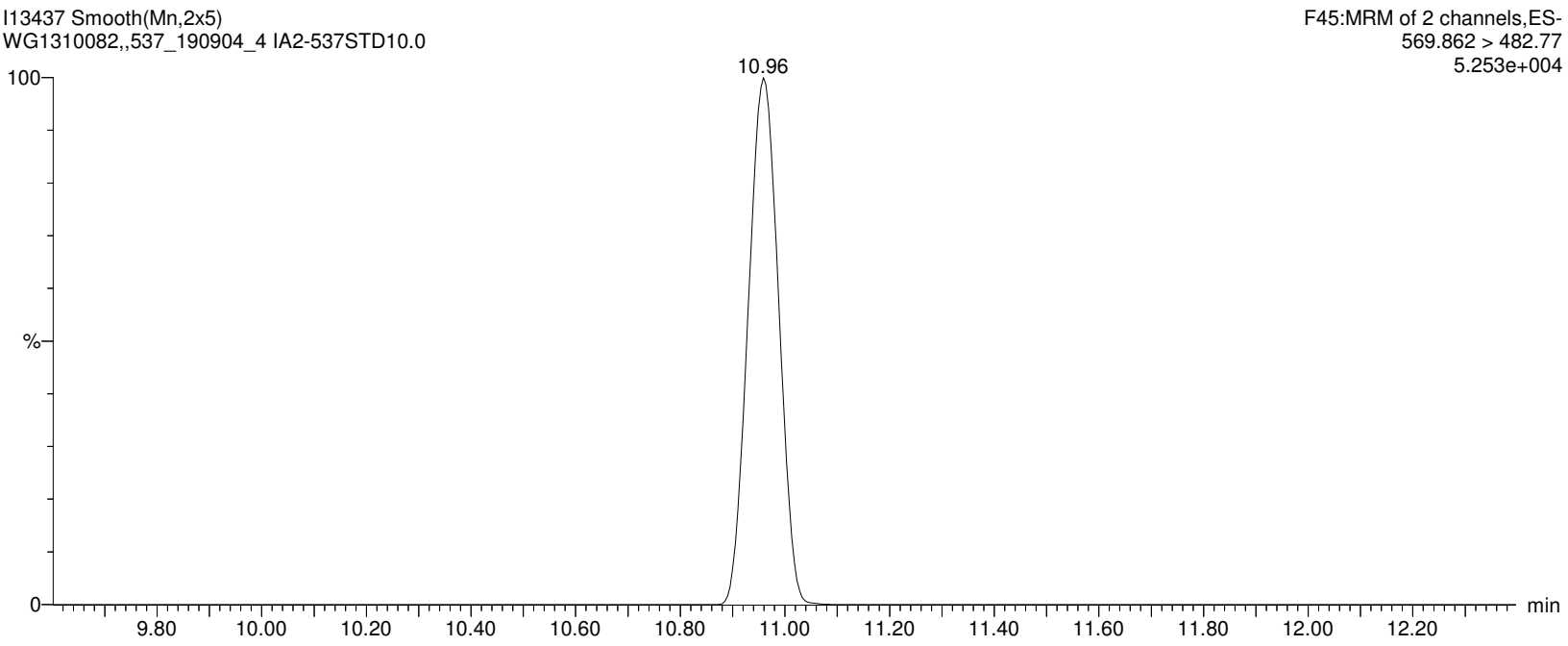
**br-NMeFOSAA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
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**Instrument: XEVO-TQSmicro#QEB0050**
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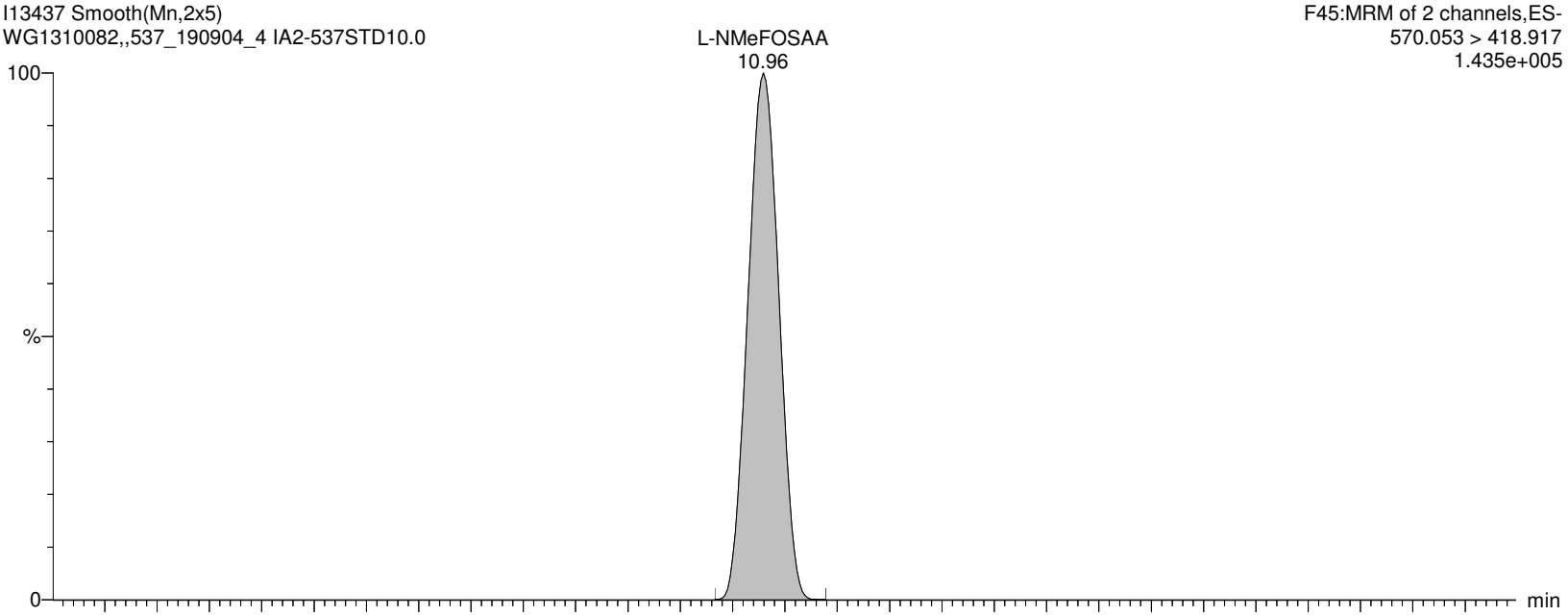
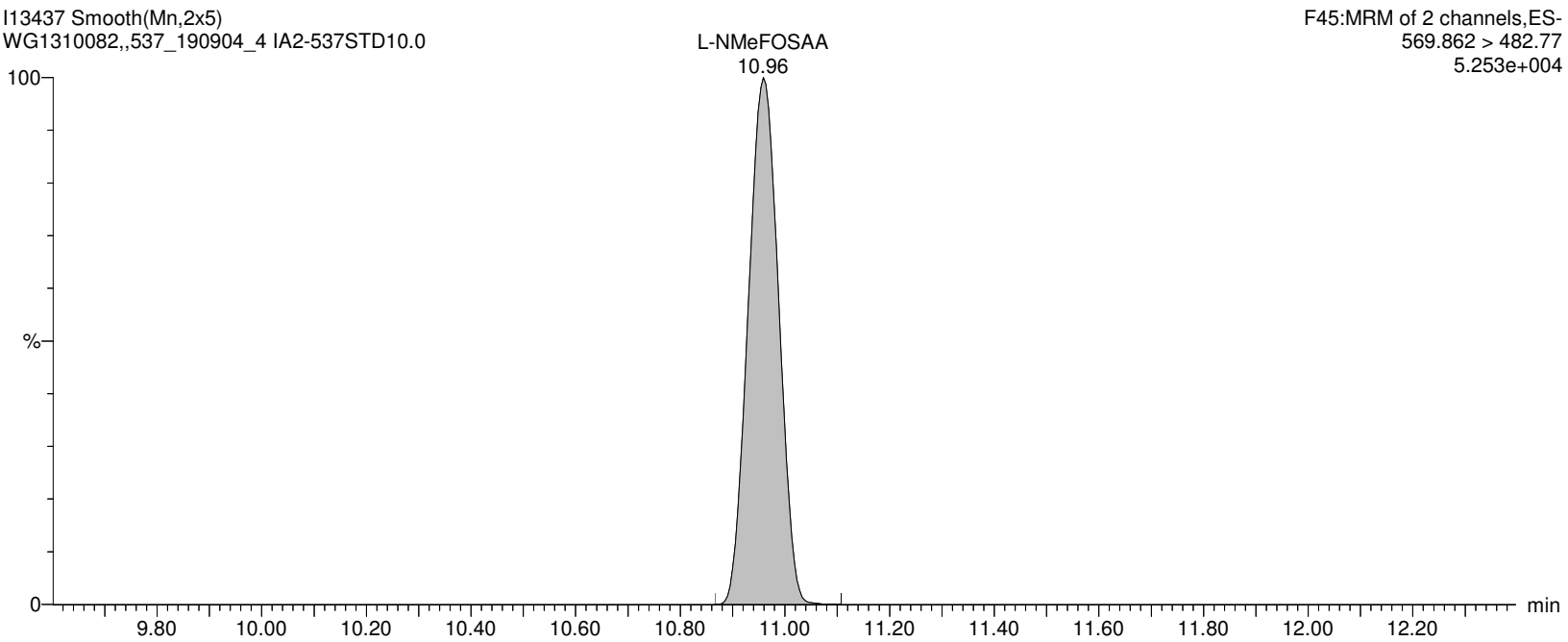
**L-NMeFOSAA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
Printed: Monday, November 18, 2019 13:42:55 Eastern Standard Time

**Name: I13437**
**ID: IA2-537STD10.0**
**Date: 18-Nov-2019**
**Time: 11:26:51**
**Description: WG1310082,,537_190904_4**
**User: LCMS02:JW**
**Vial: 1:A,5**
**Instrument: XEVO-TQSmicro#QEB0050**
**Inlet Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\LCMS_537_ISO_B**
**Tune Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\181009_TUNE.IPR**
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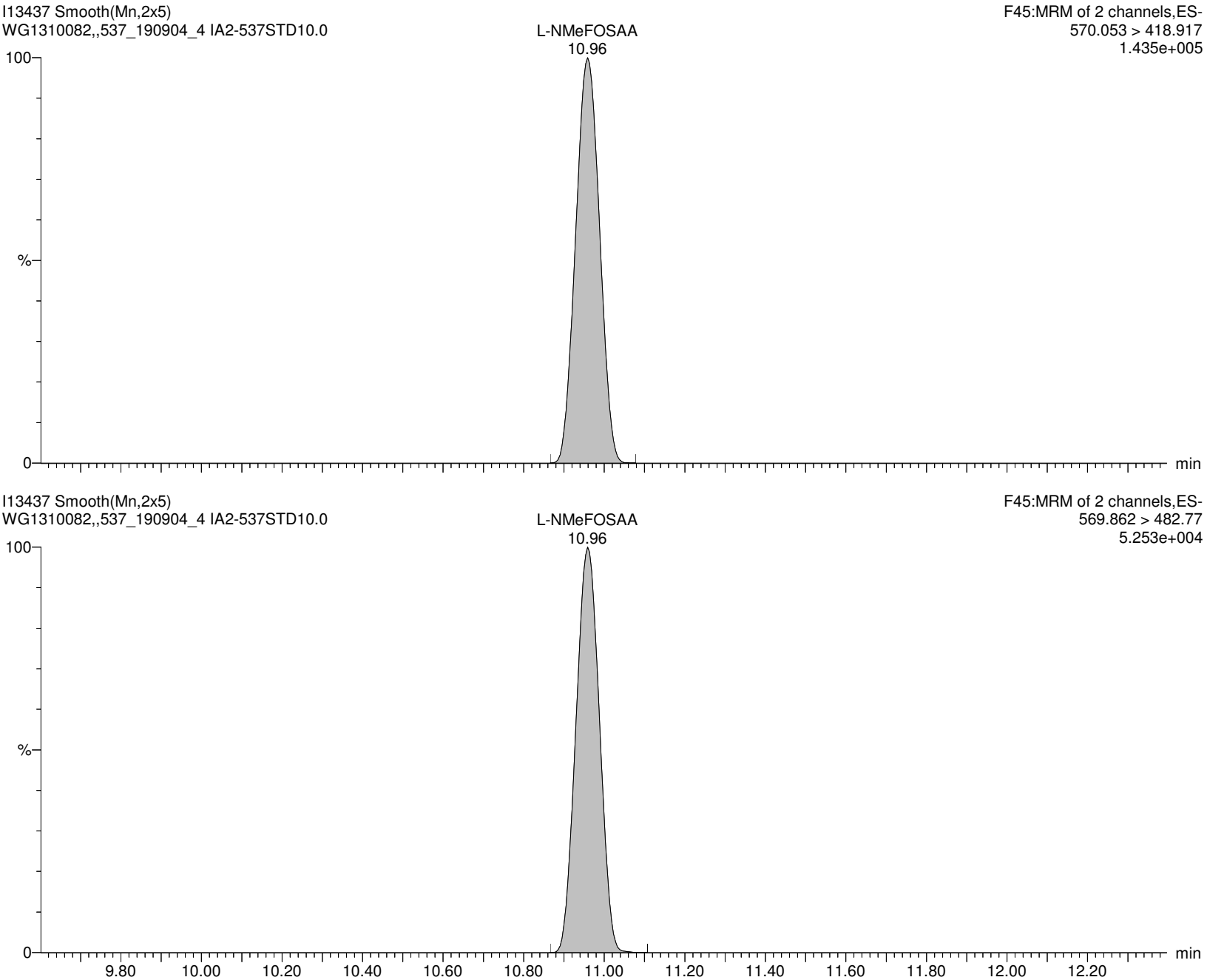



all concentration units in (ng/mL)

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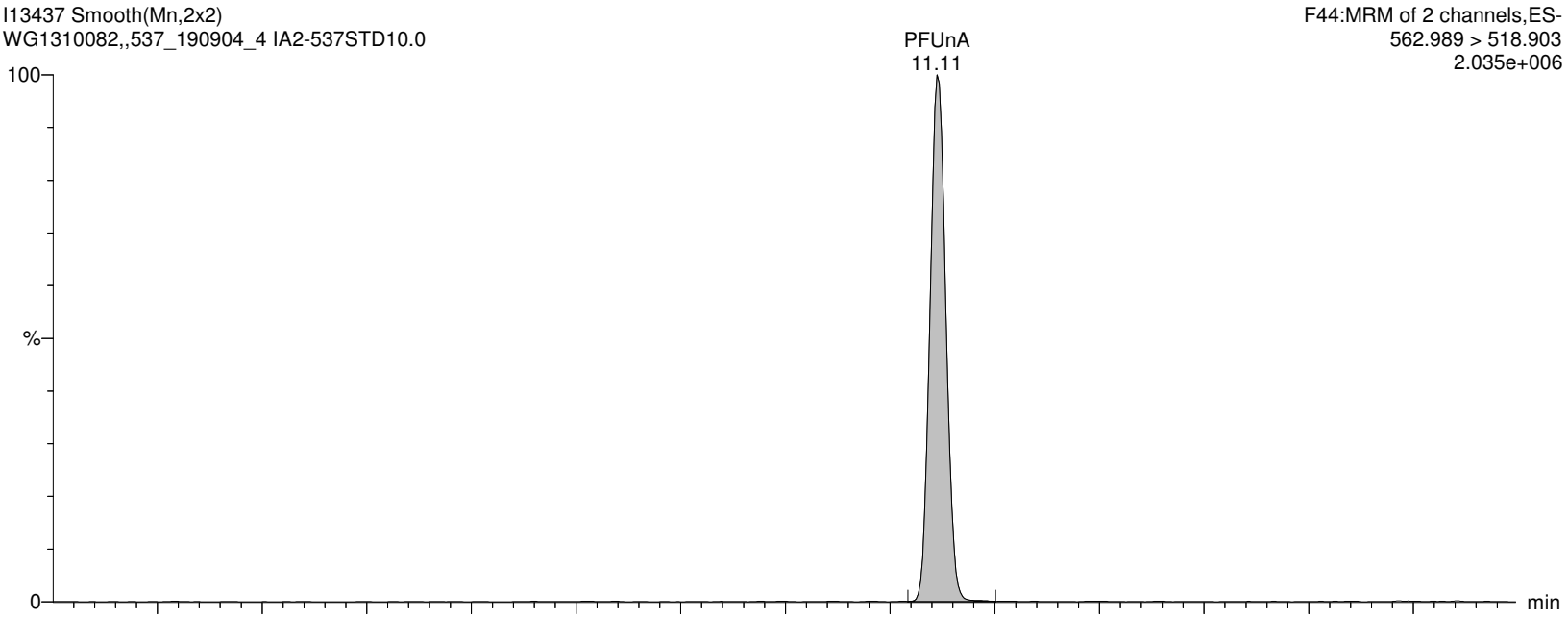


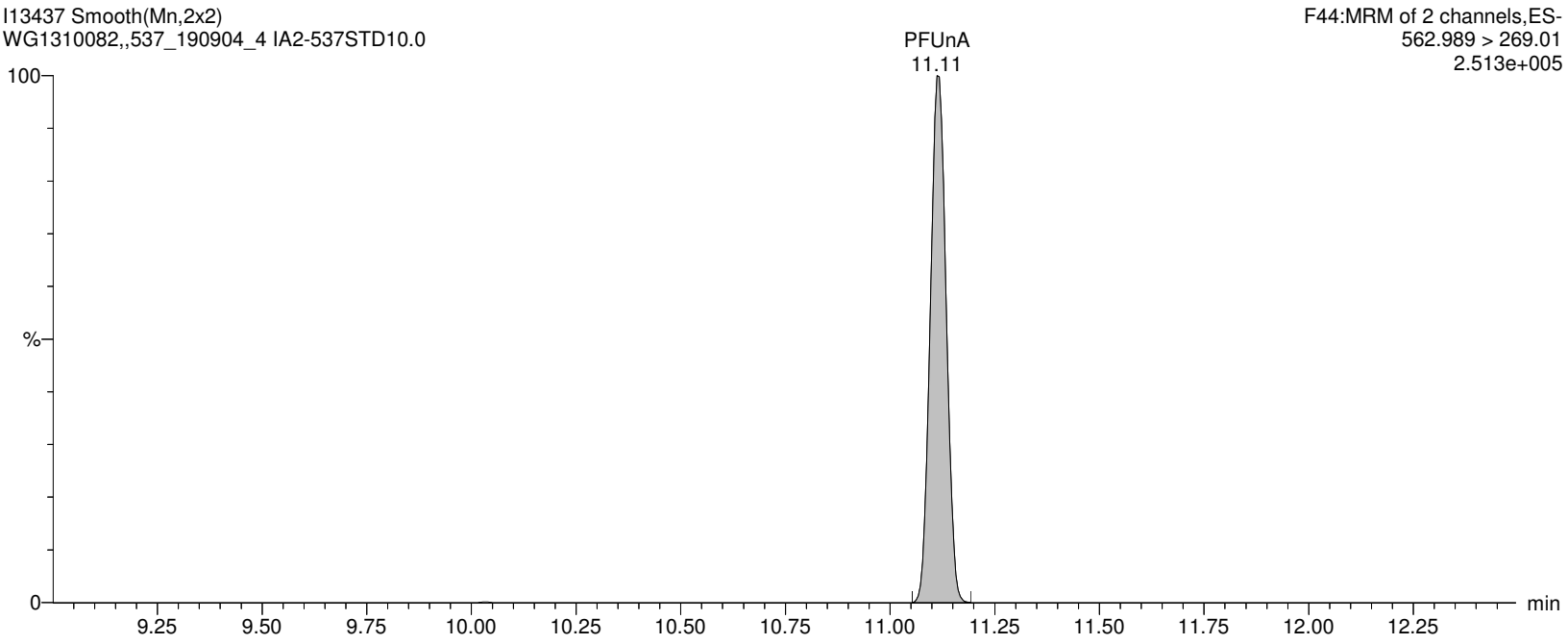



all concentration units in (ng/mL)

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**Instrument: XEVO-TQSmicro#QEB0050**
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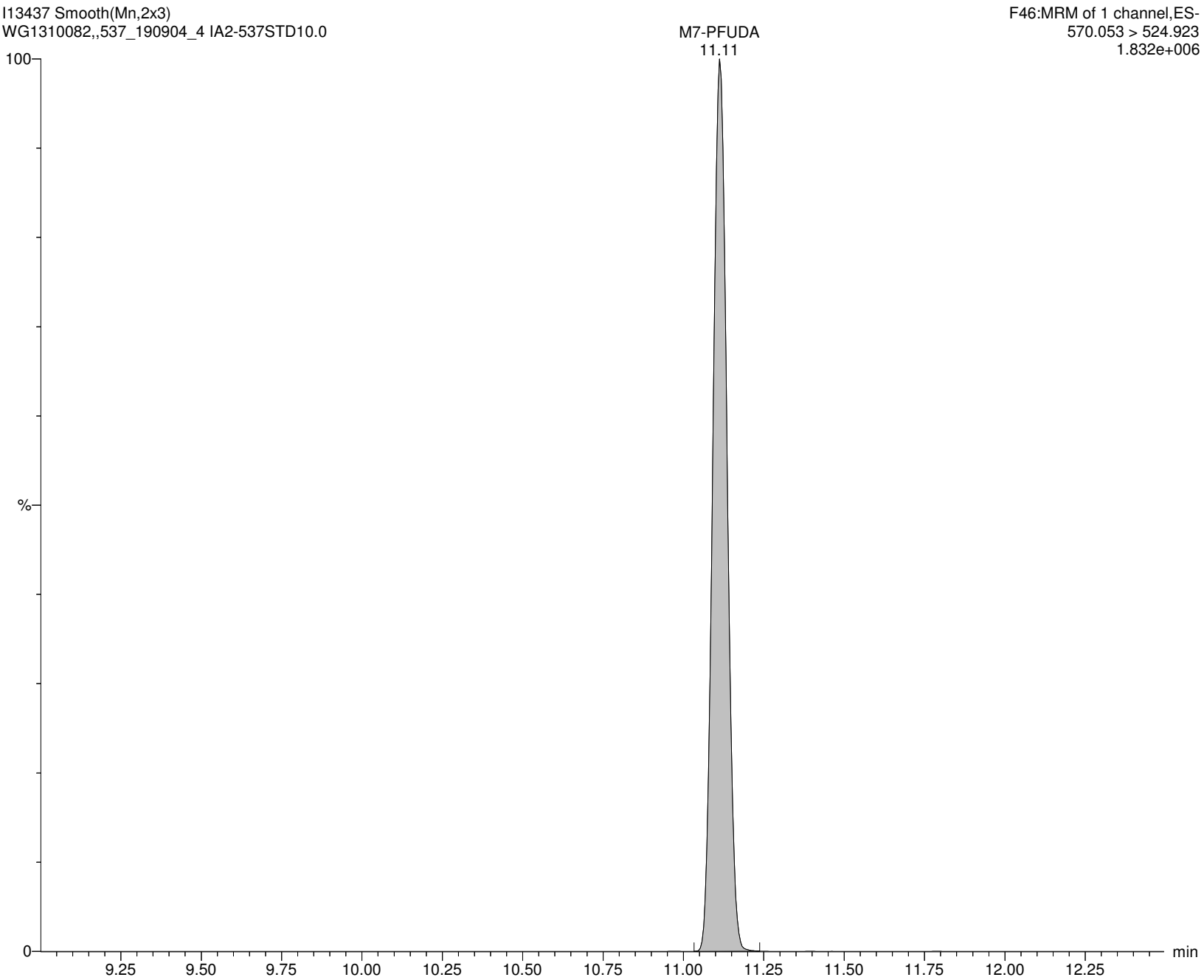
**M7-PFUDA**





all concentration units in (ng/mL)

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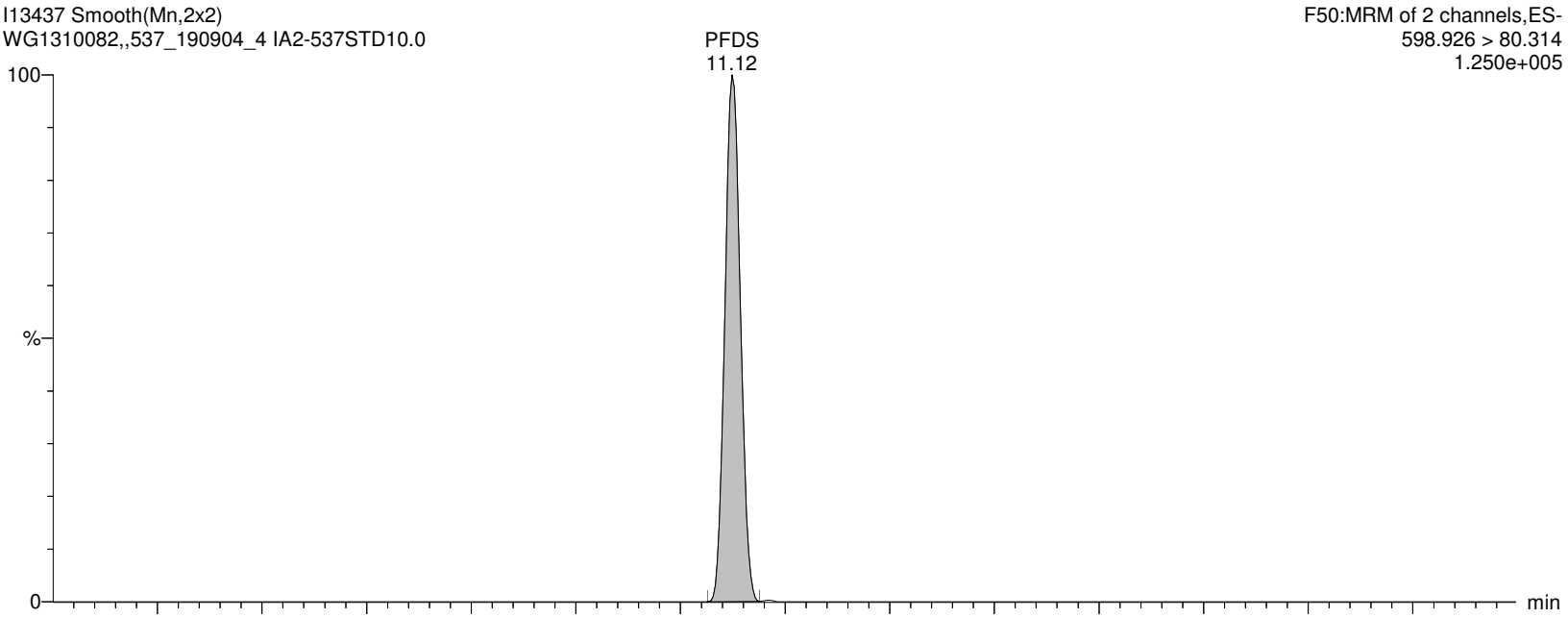


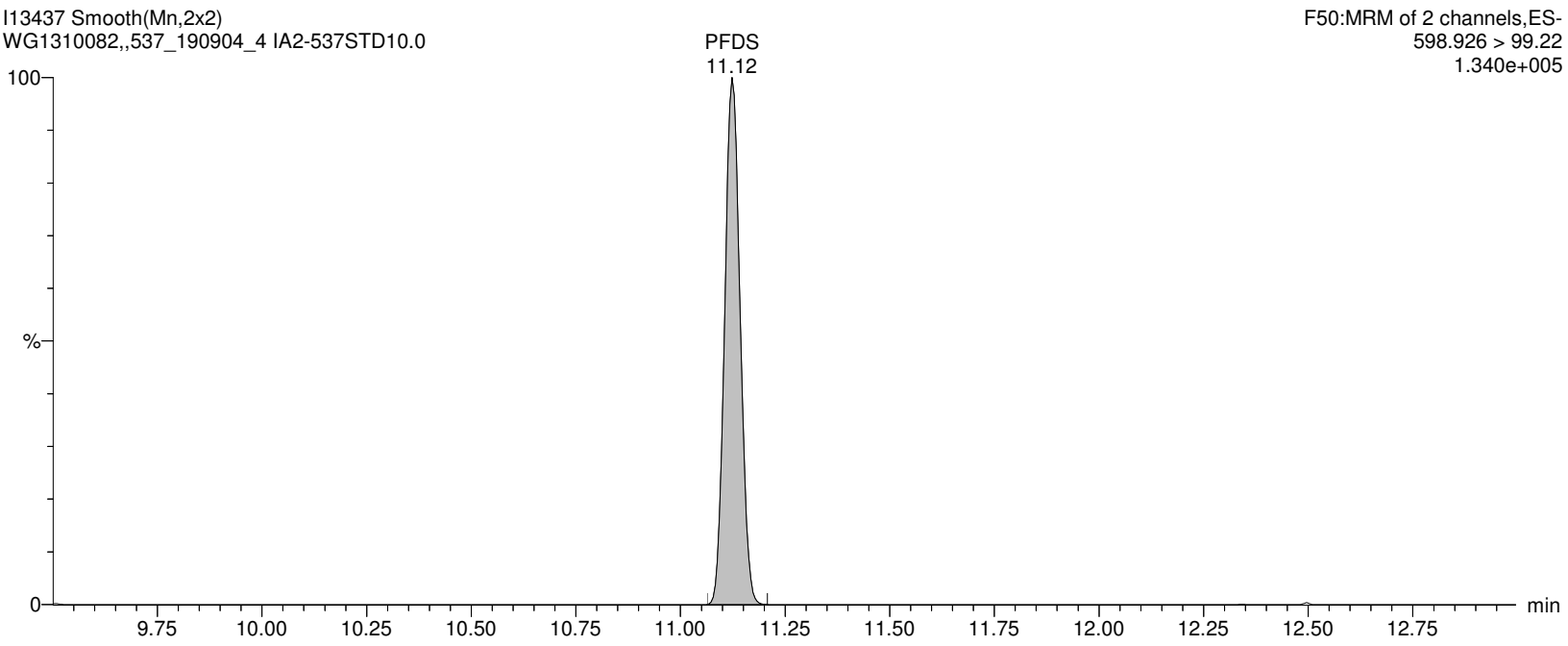



all concentration units in (ng/mL)

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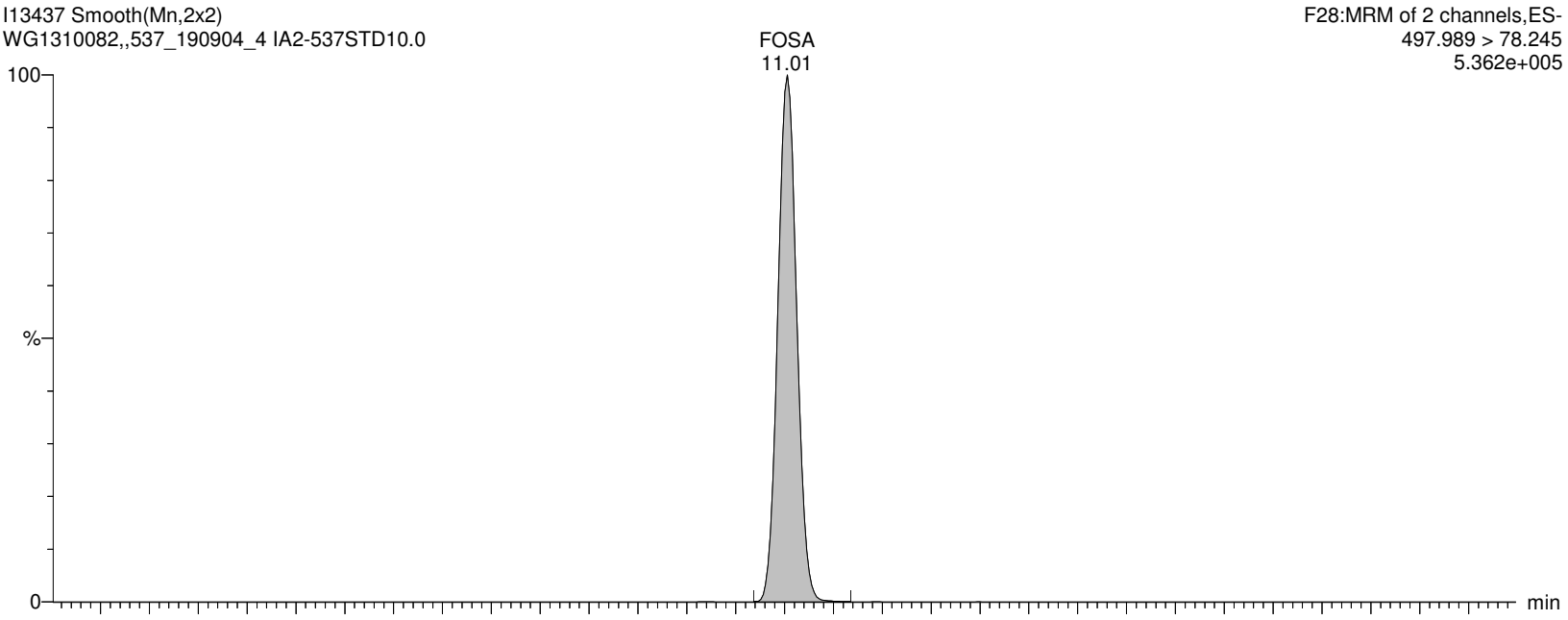
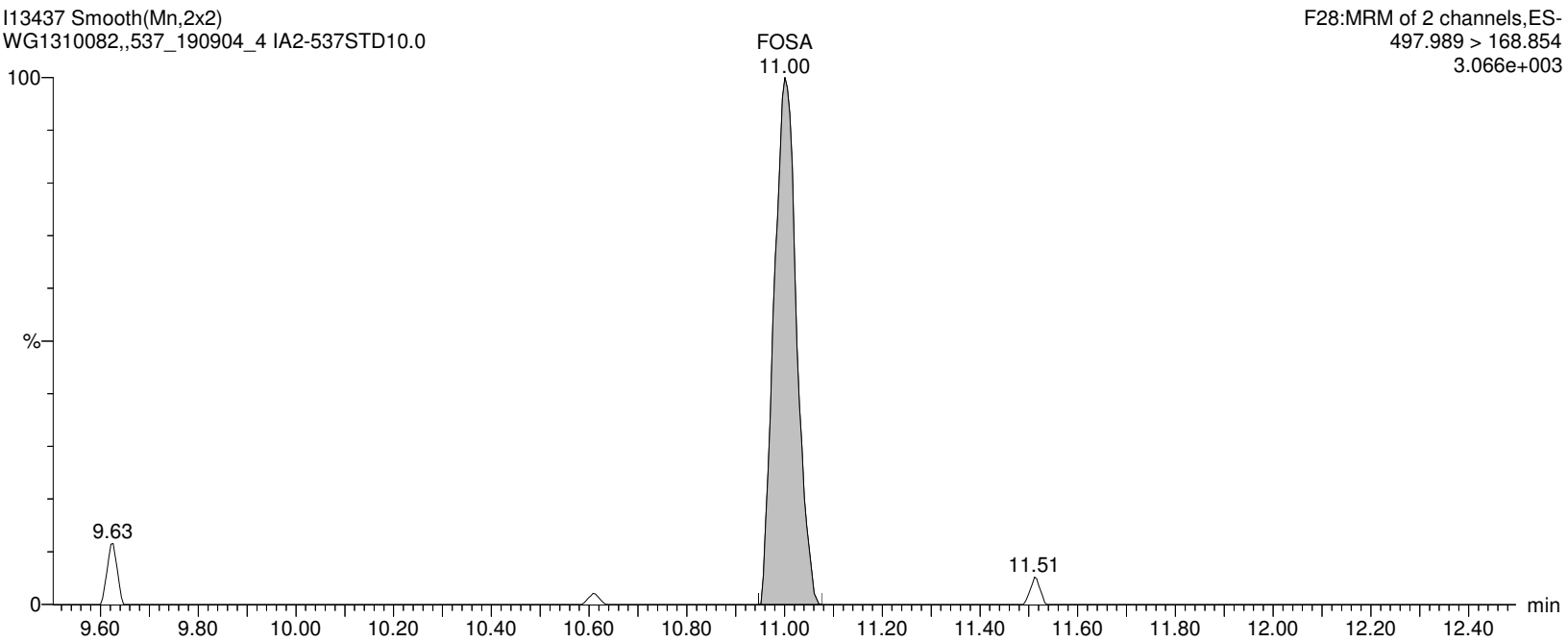
**FOSA**





all concentration units in (ng/mL)

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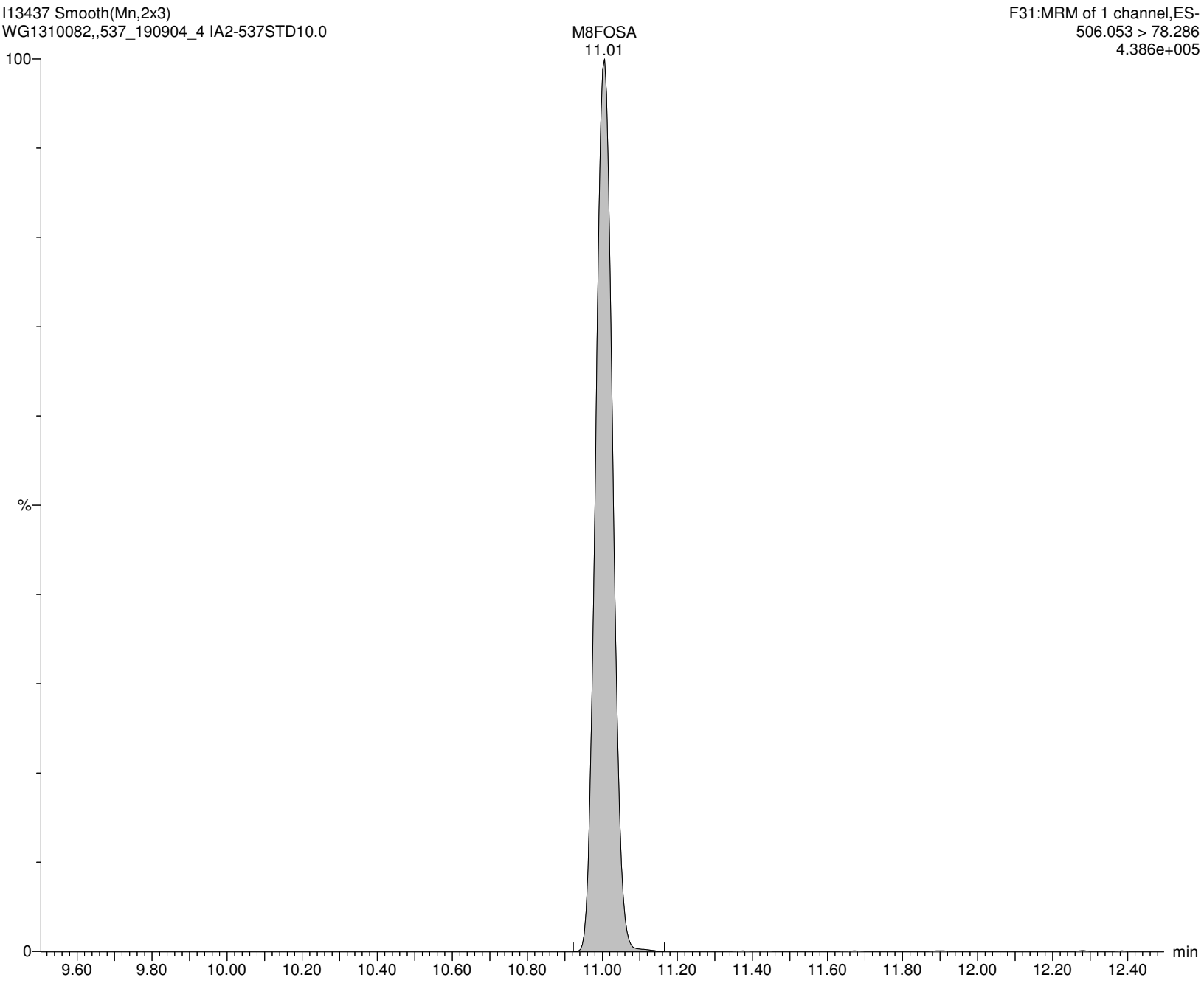
**M8FOSA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
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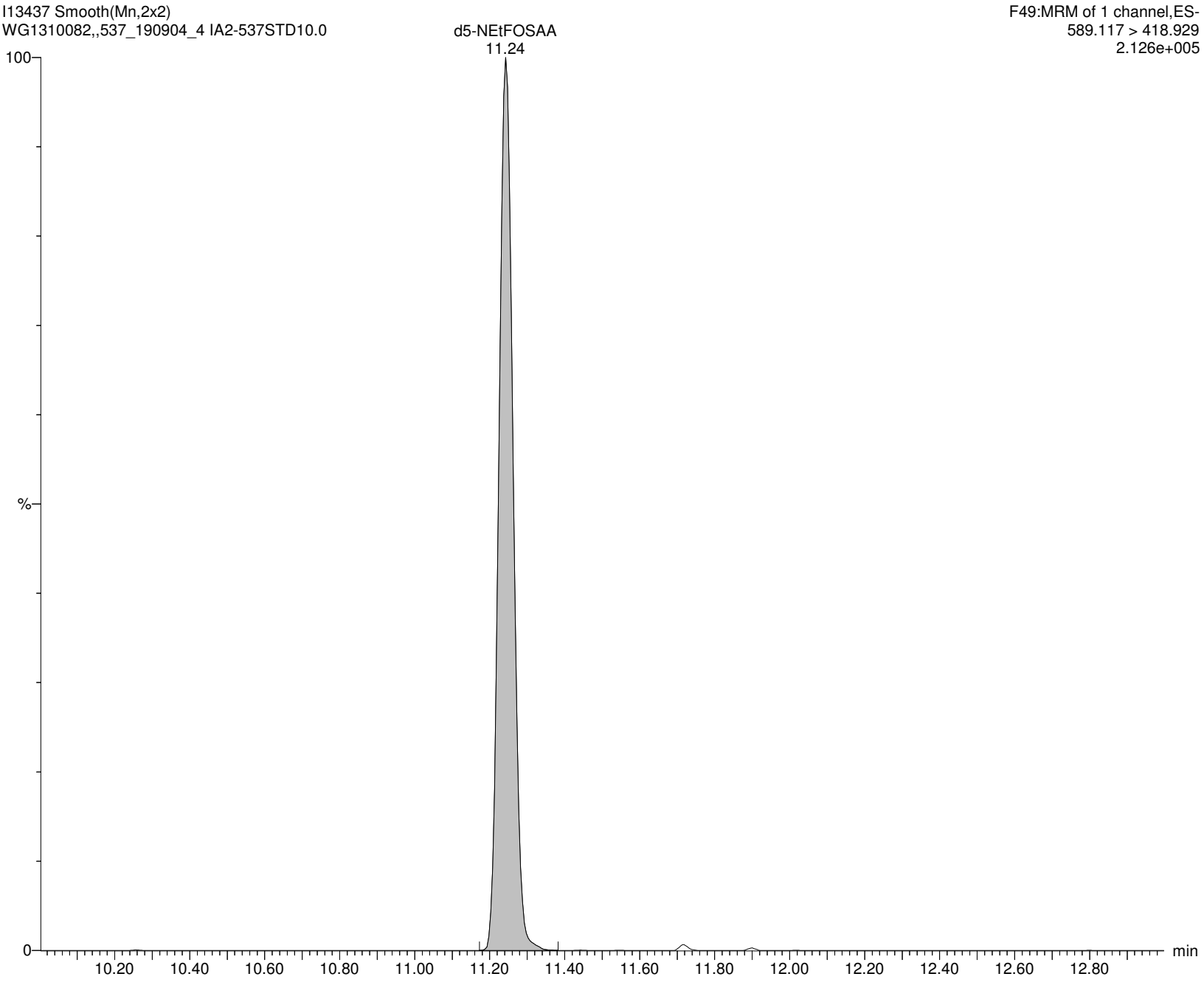



all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
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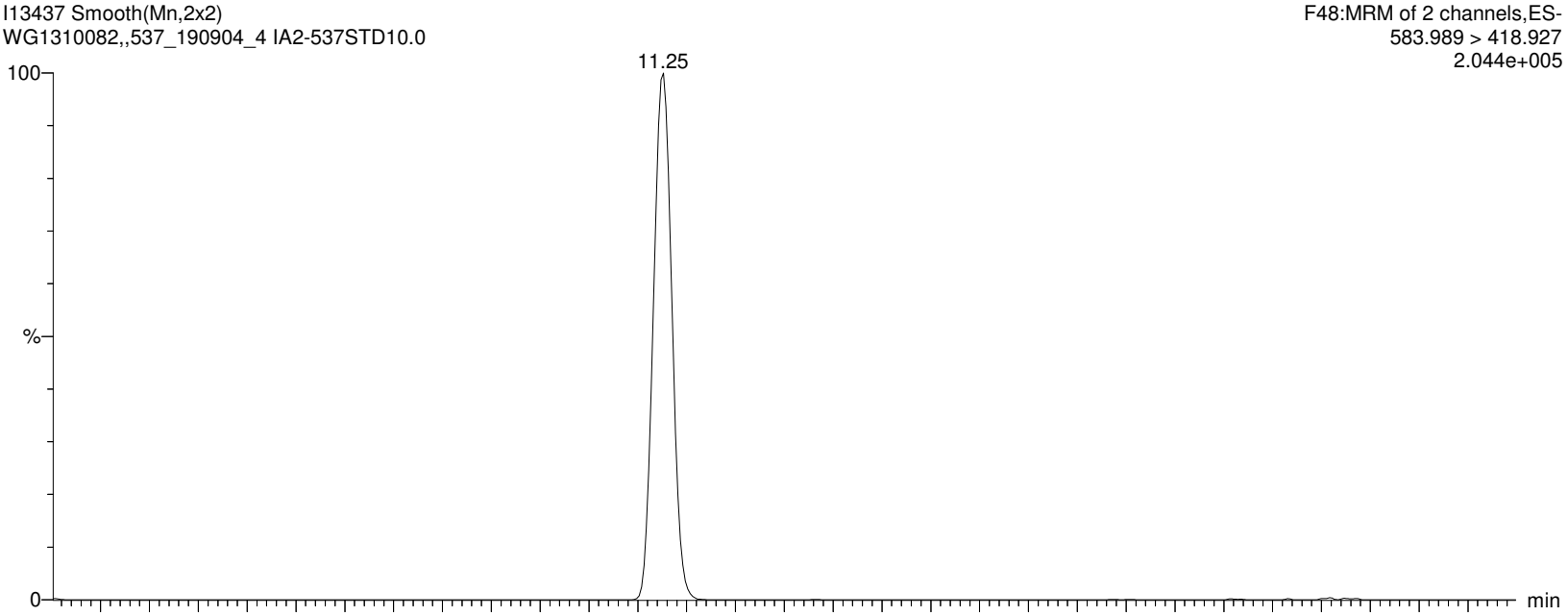


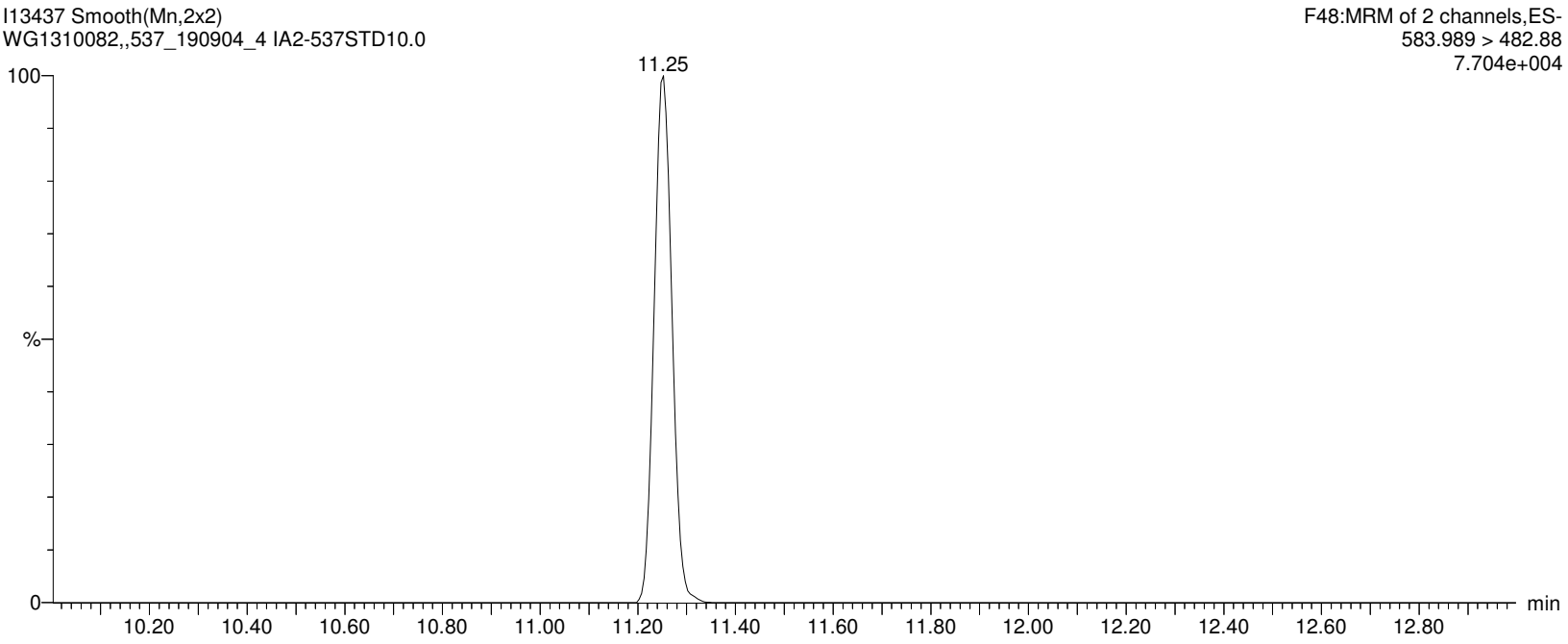



all concentration units in (ng/mL)

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**Vial: 1:A,5**
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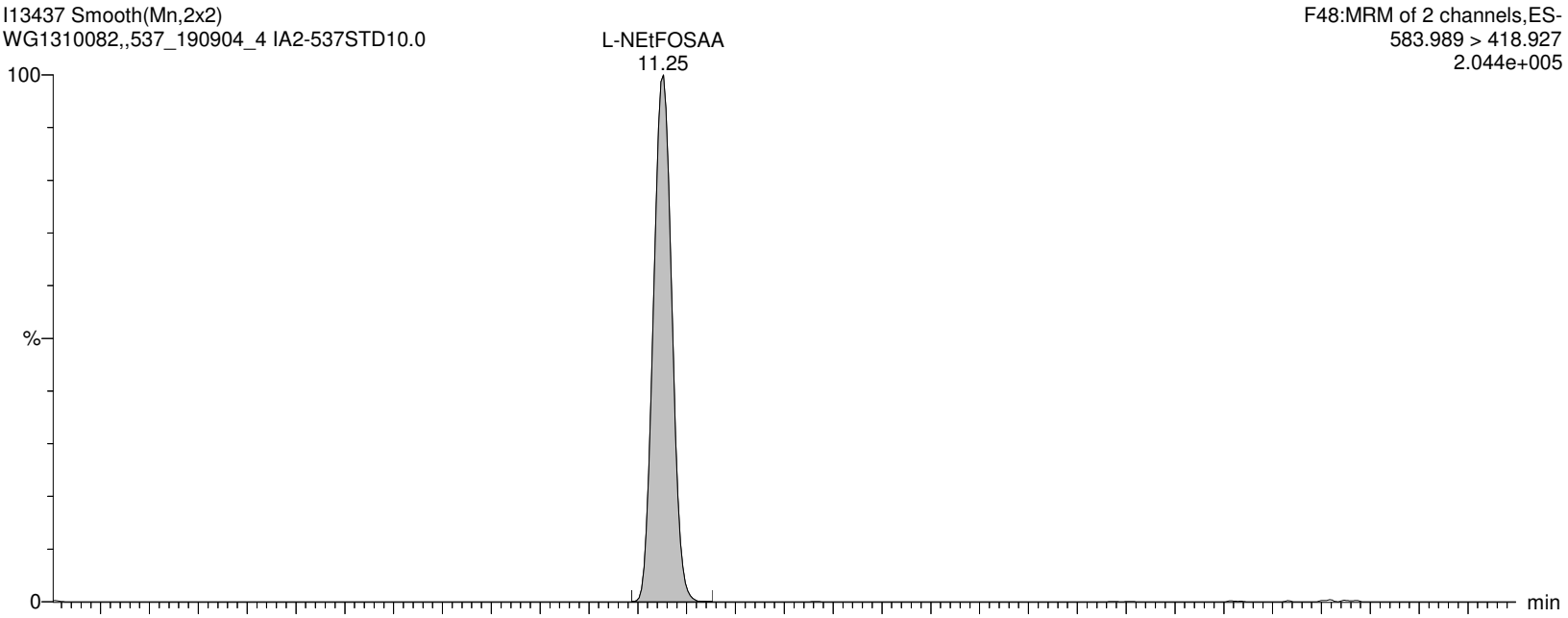


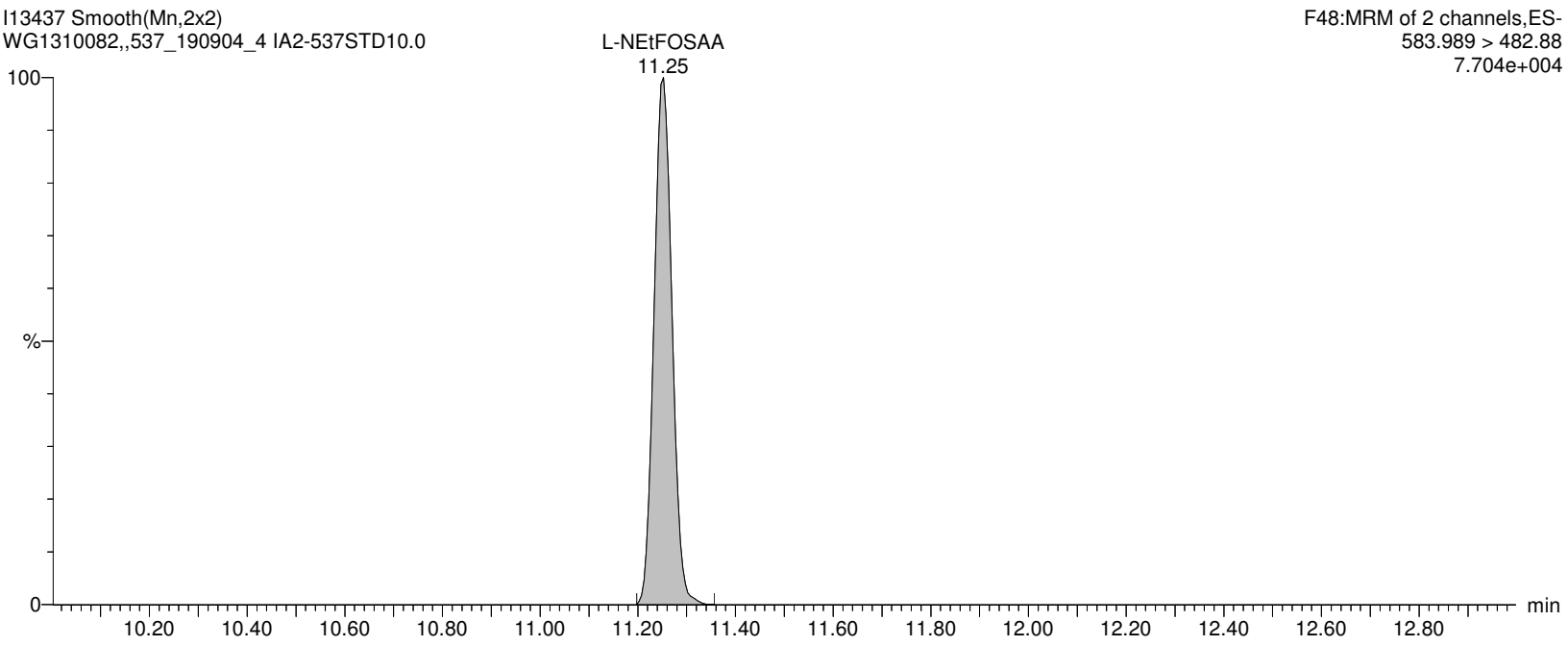



all concentration units in (ng/mL)

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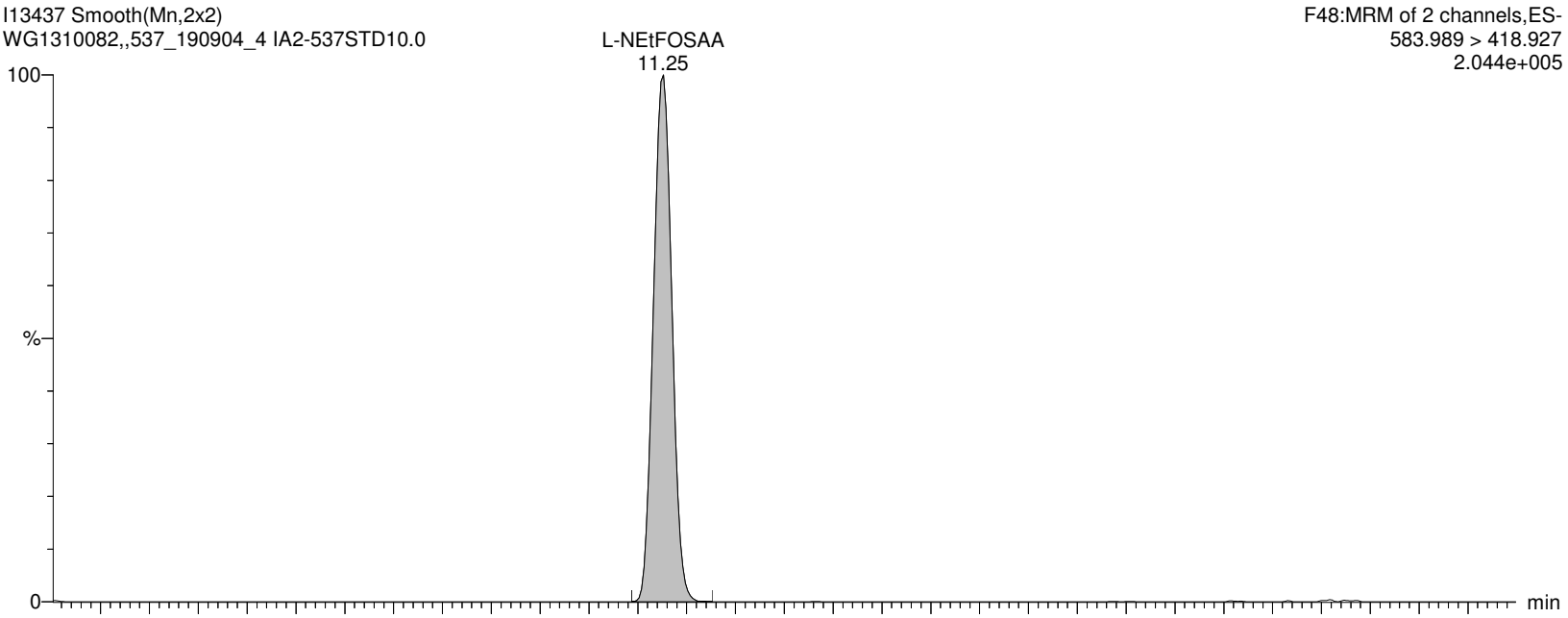


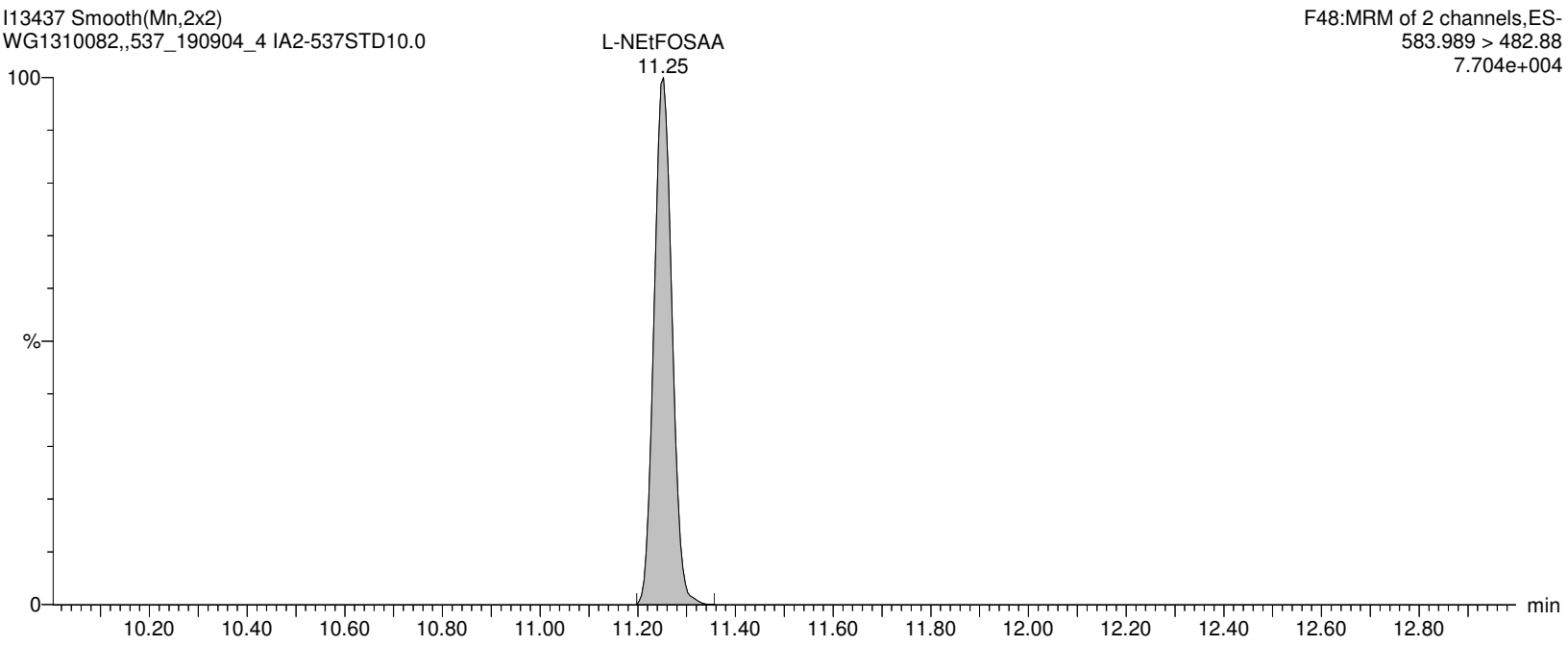



all concentration units in (ng/mL)

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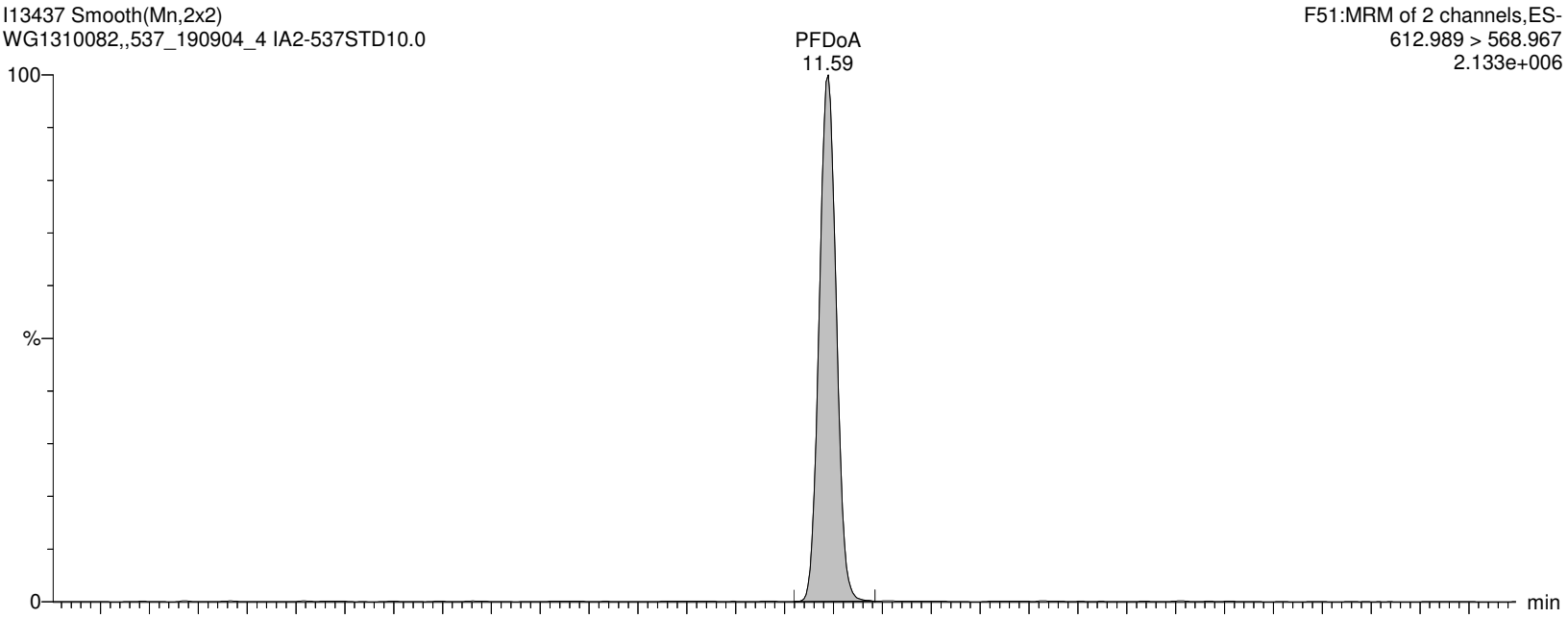


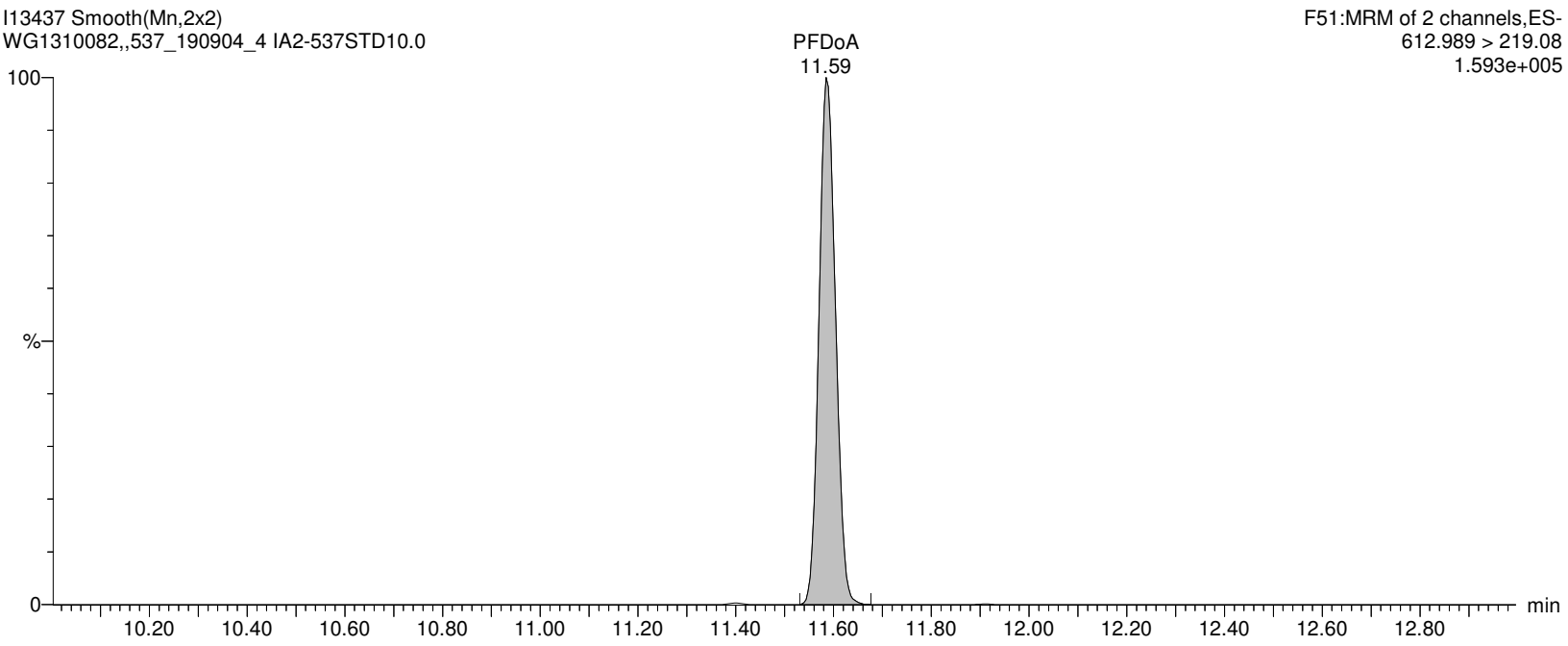



all concentration units in (ng/mL)

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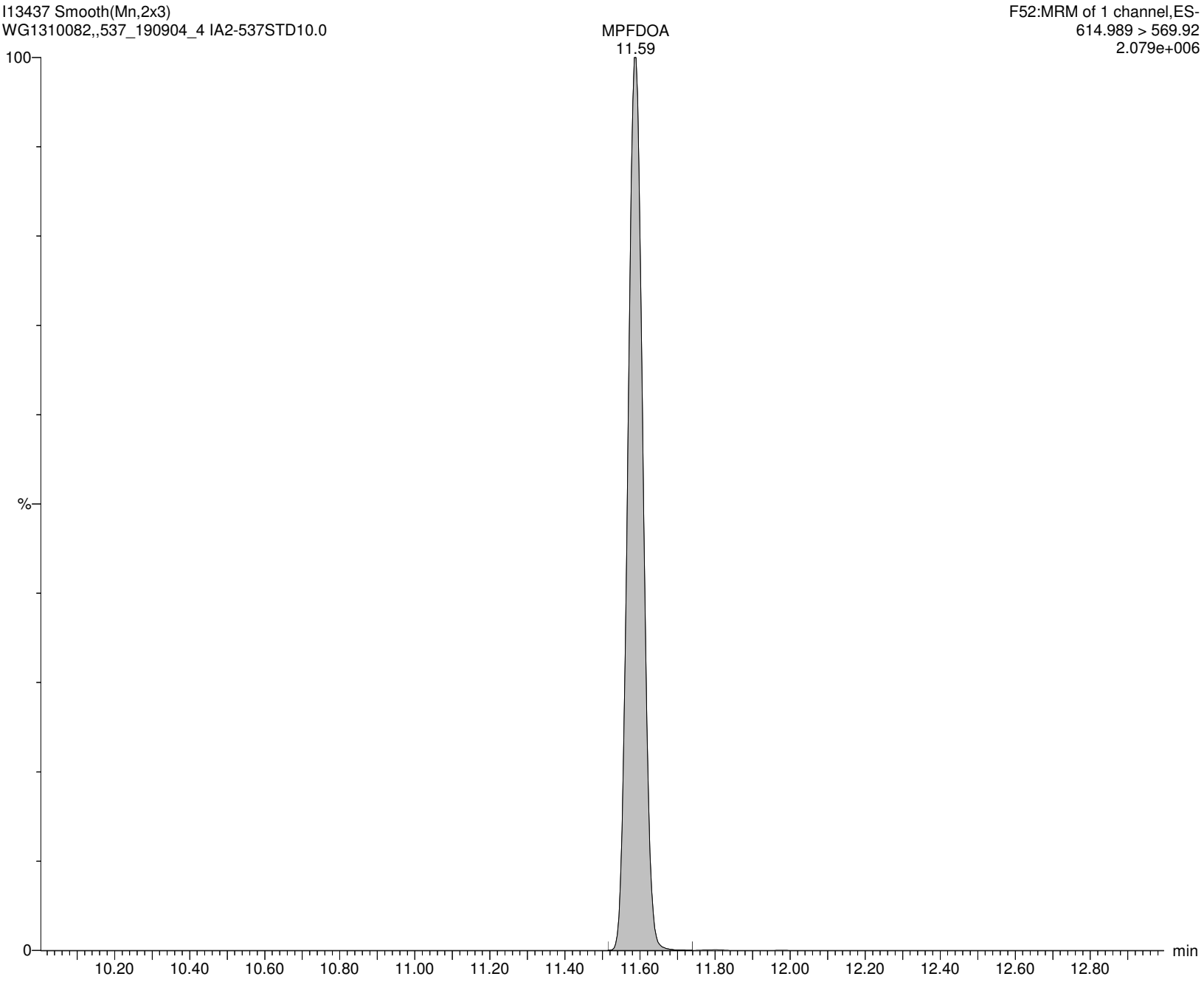



all concentration units in (ng/mL)

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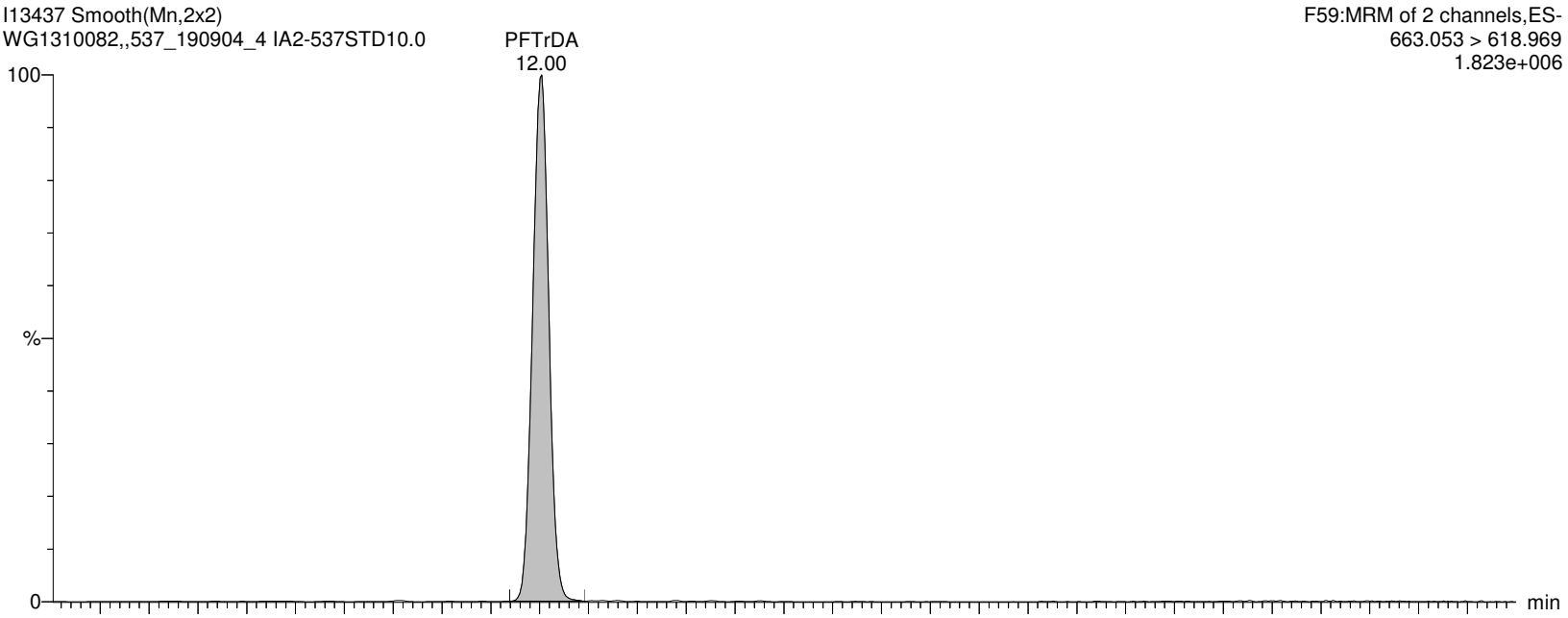


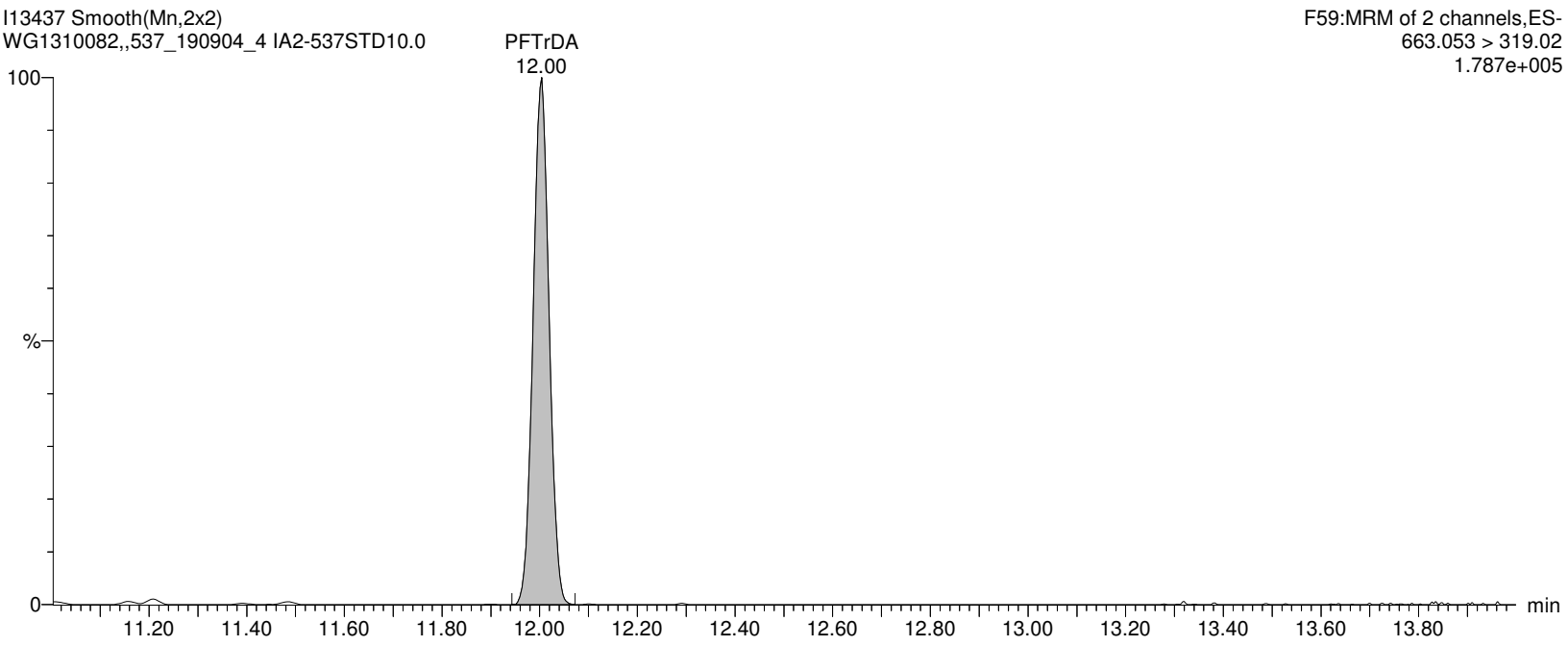



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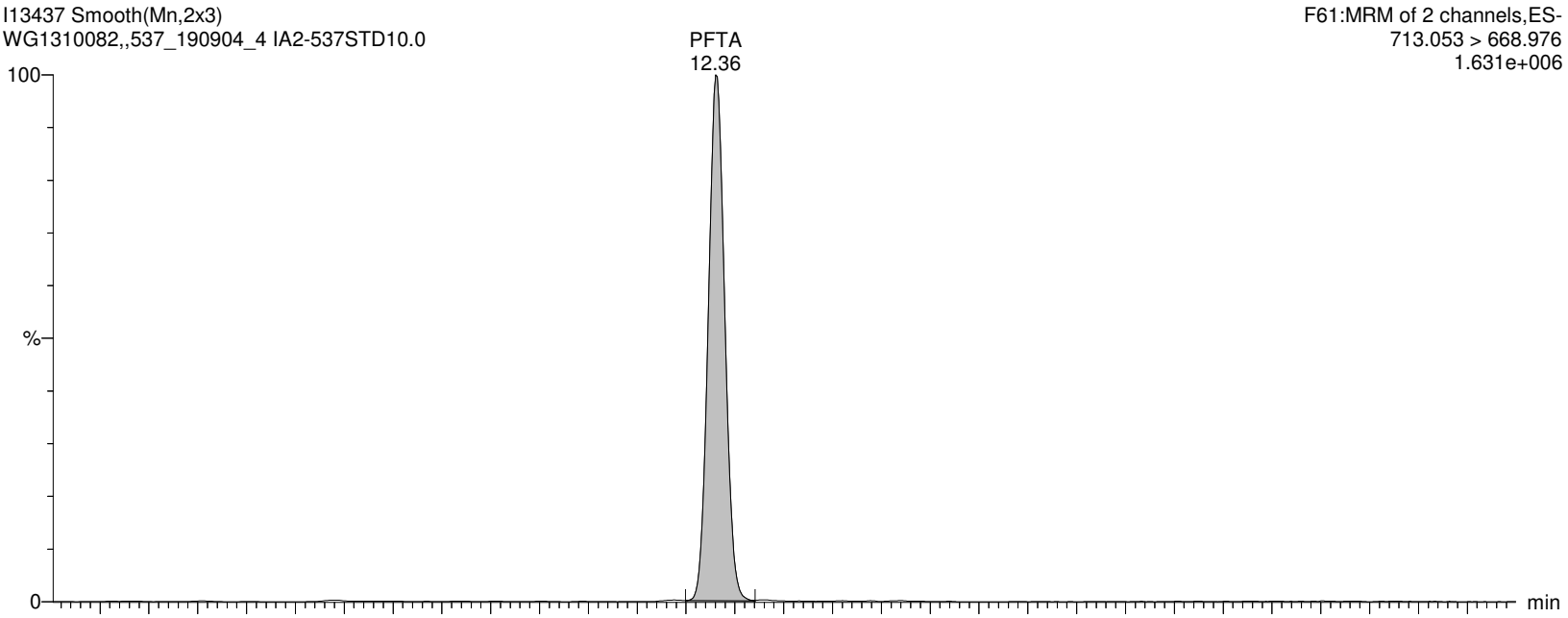


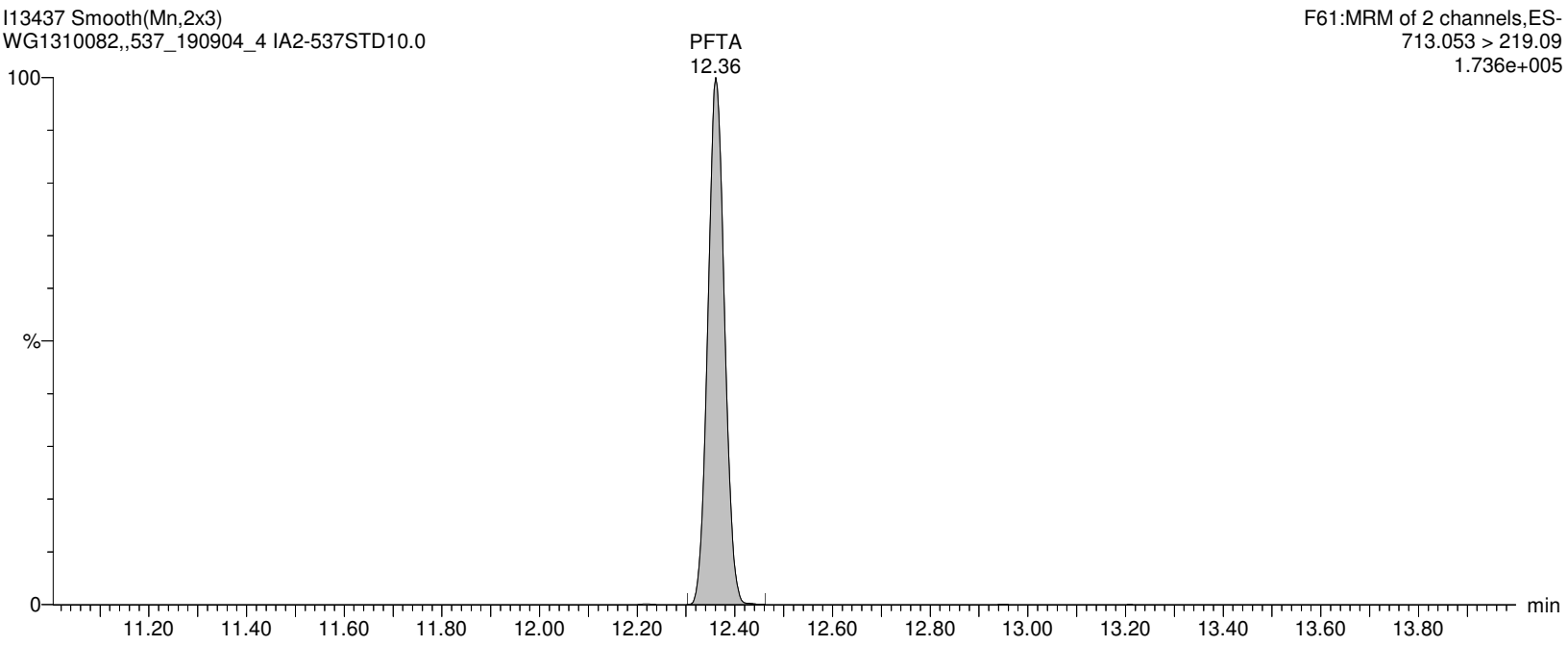



all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
Printed: Monday, November 18, 2019 13:42:55 Eastern Standard Time

**Name: I13437**
**ID: IA2-537STD10.0**
**Date: 18-Nov-2019**
**Time: 11:26:51**
**Description: WG1310082,,537_190904_4**
**User: LCMS02:JW**
**Vial: 1:A,5**
**Instrument: XEVO-TQSmicro#QEB0050**
**Inlet Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\LCMS_537_ISO_B**
**Tune Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\181009_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

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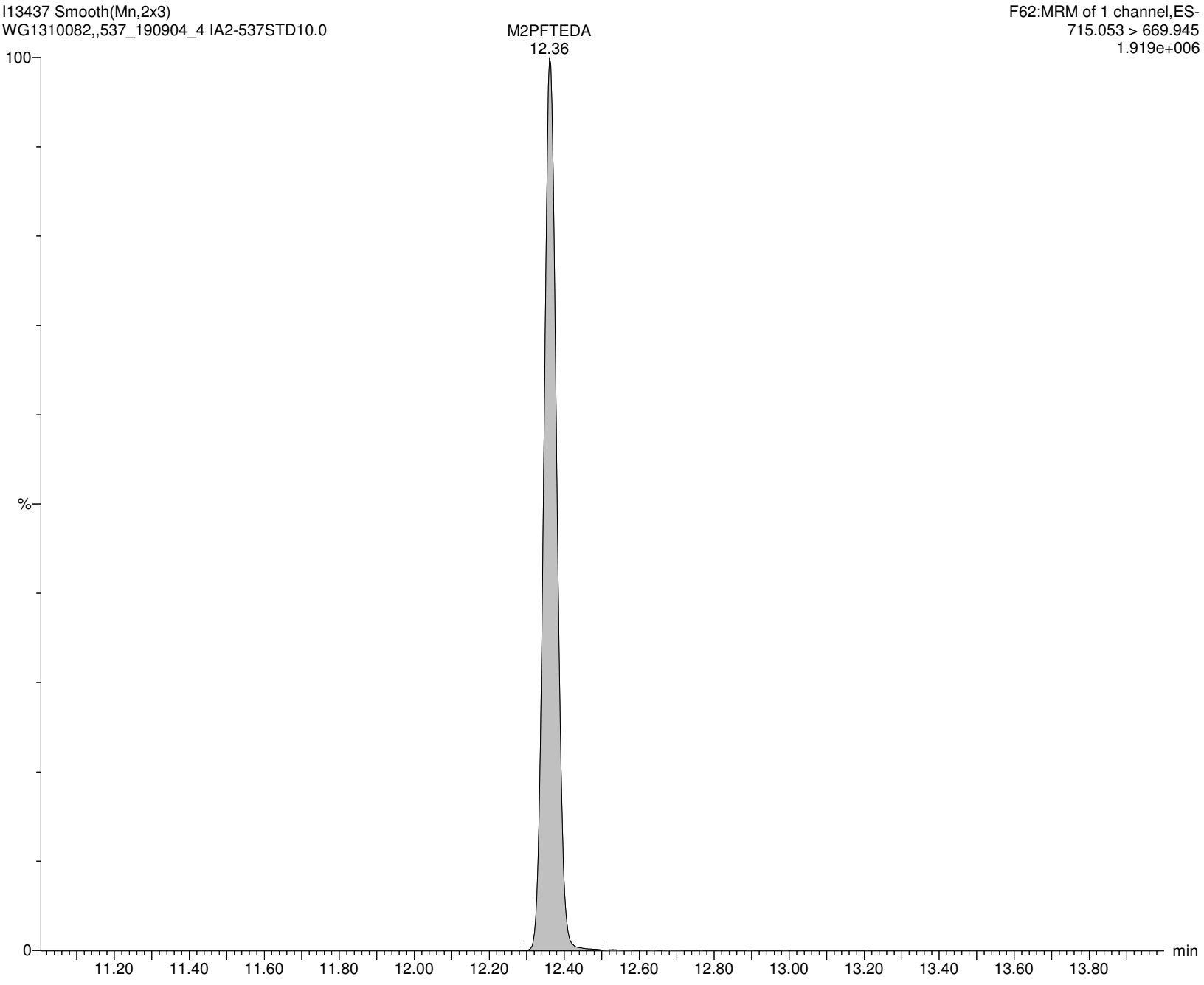



all concentration units in (ng/mL)

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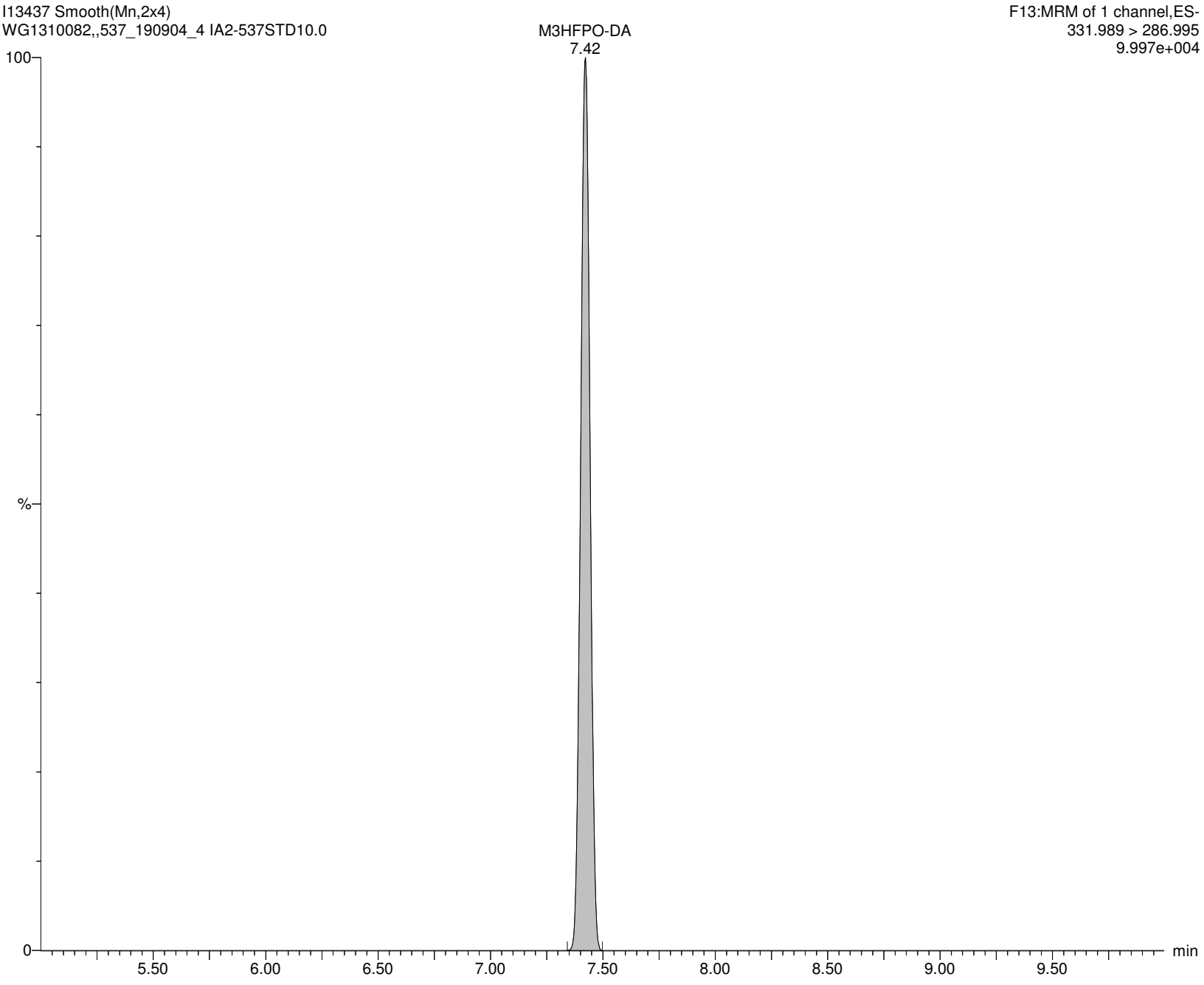



all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
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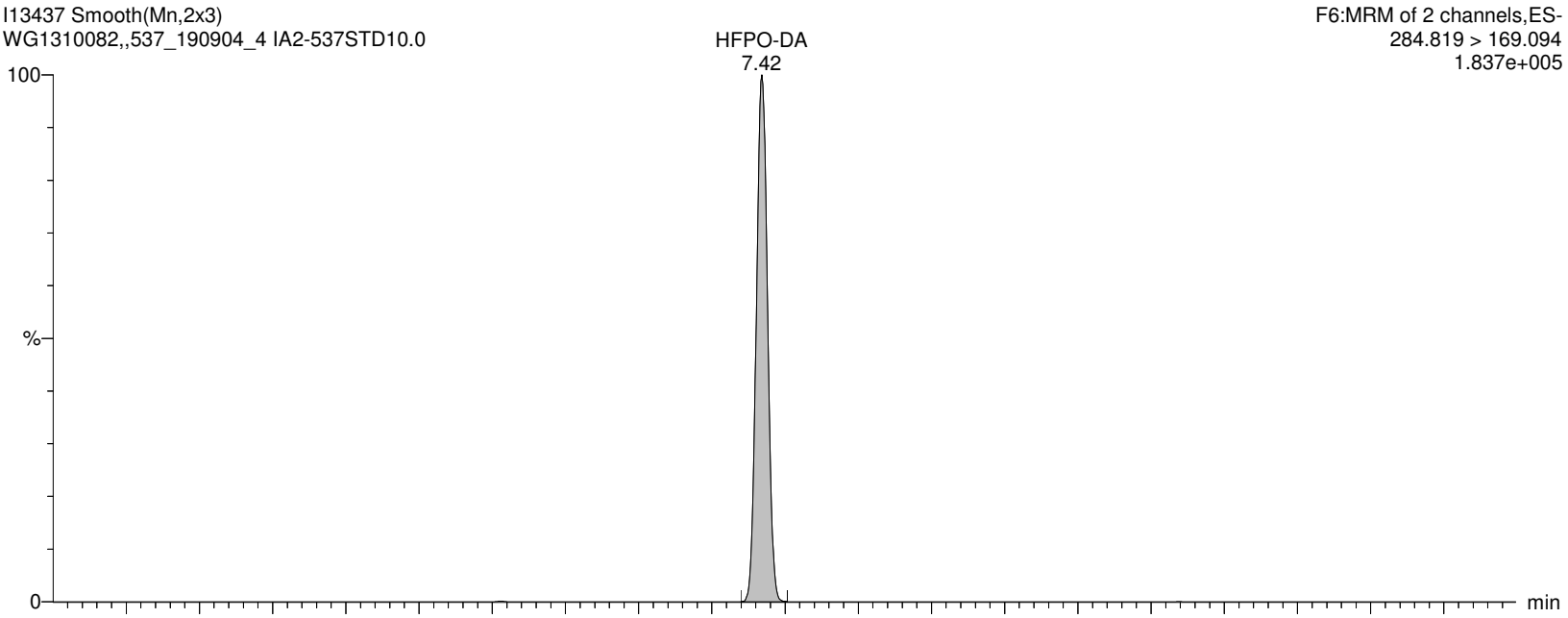


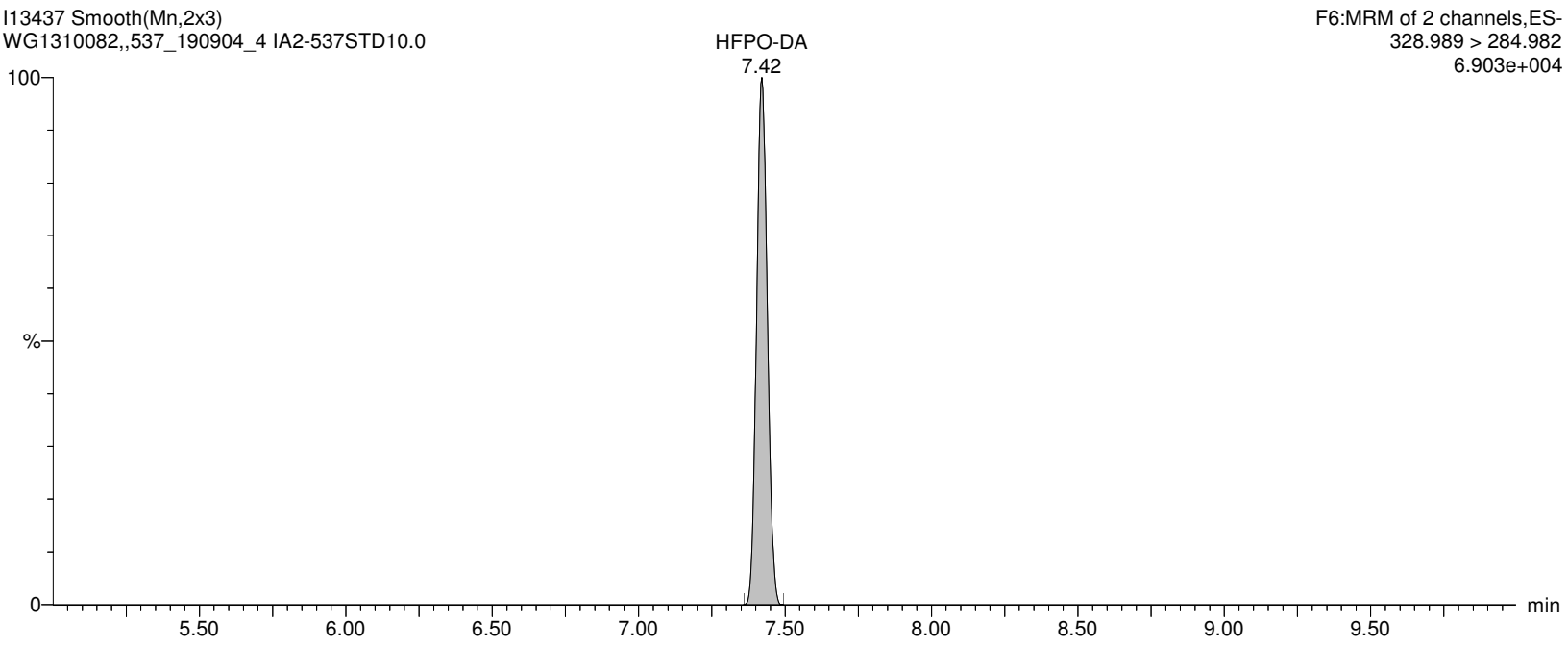



all concentration units in (ng/mL)

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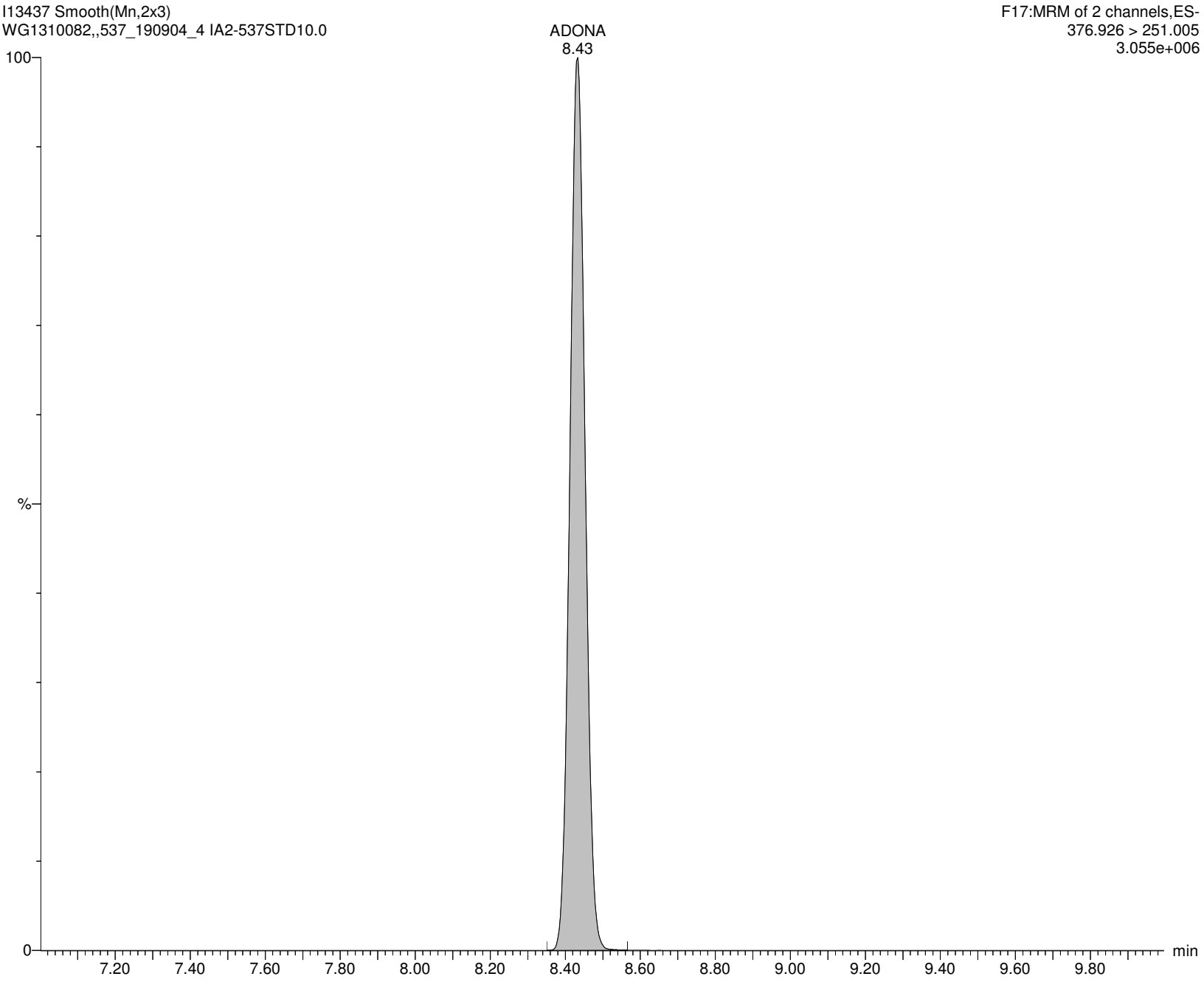
**ADONA**





all concentration units in (ng/mL)

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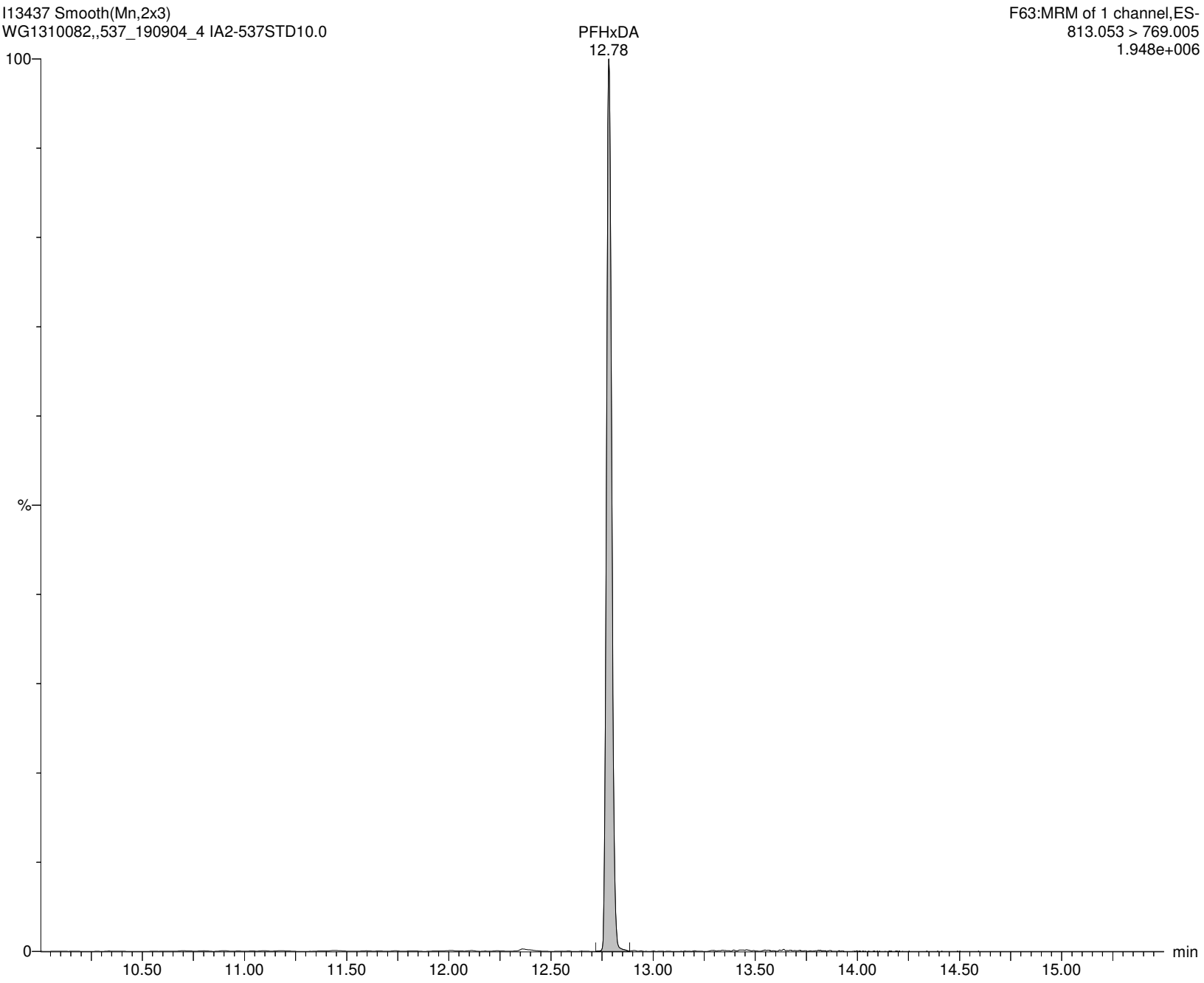
**PFHxDA**





all concentration units in (ng/mL)

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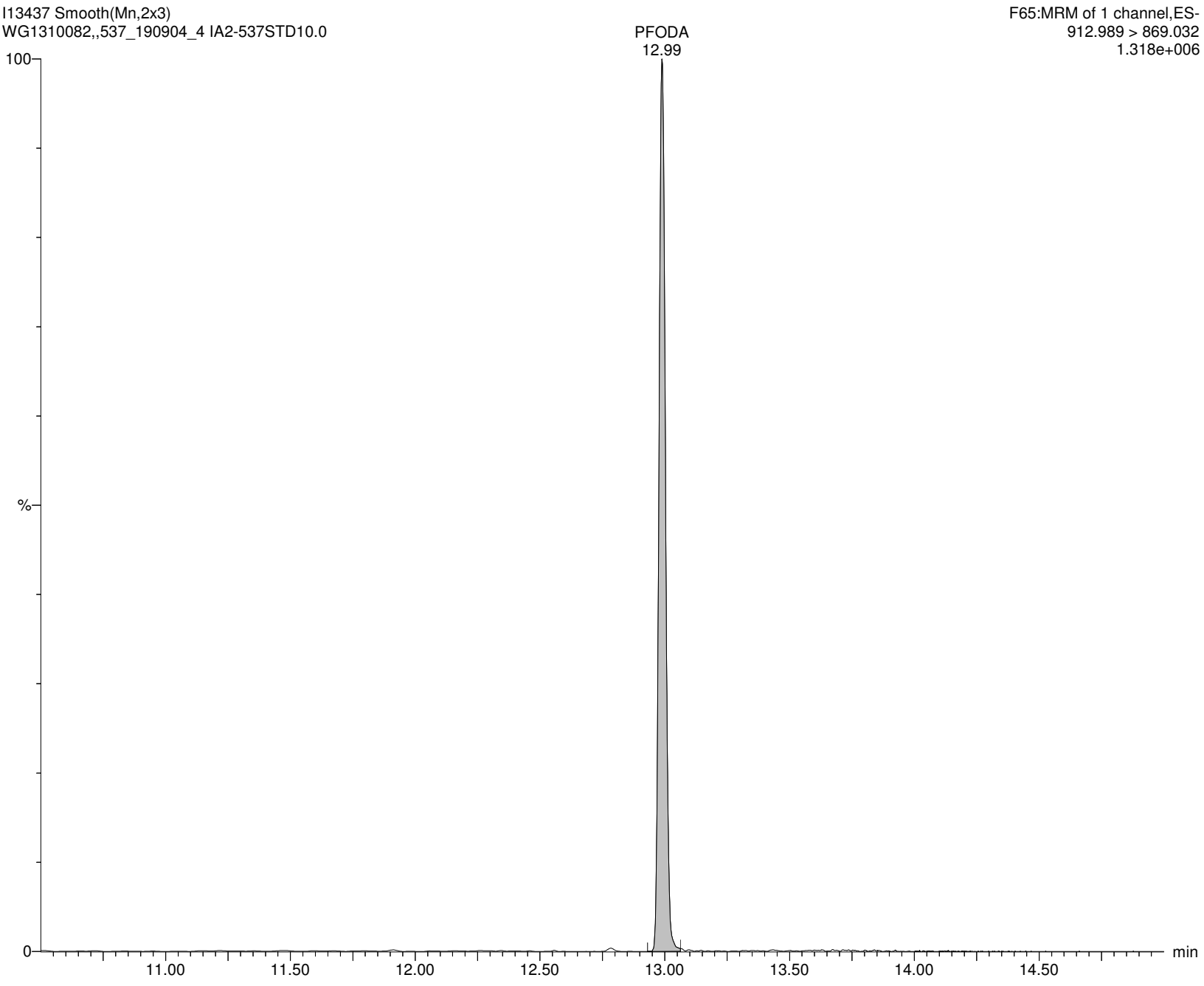



all concentration units in (ng/mL)

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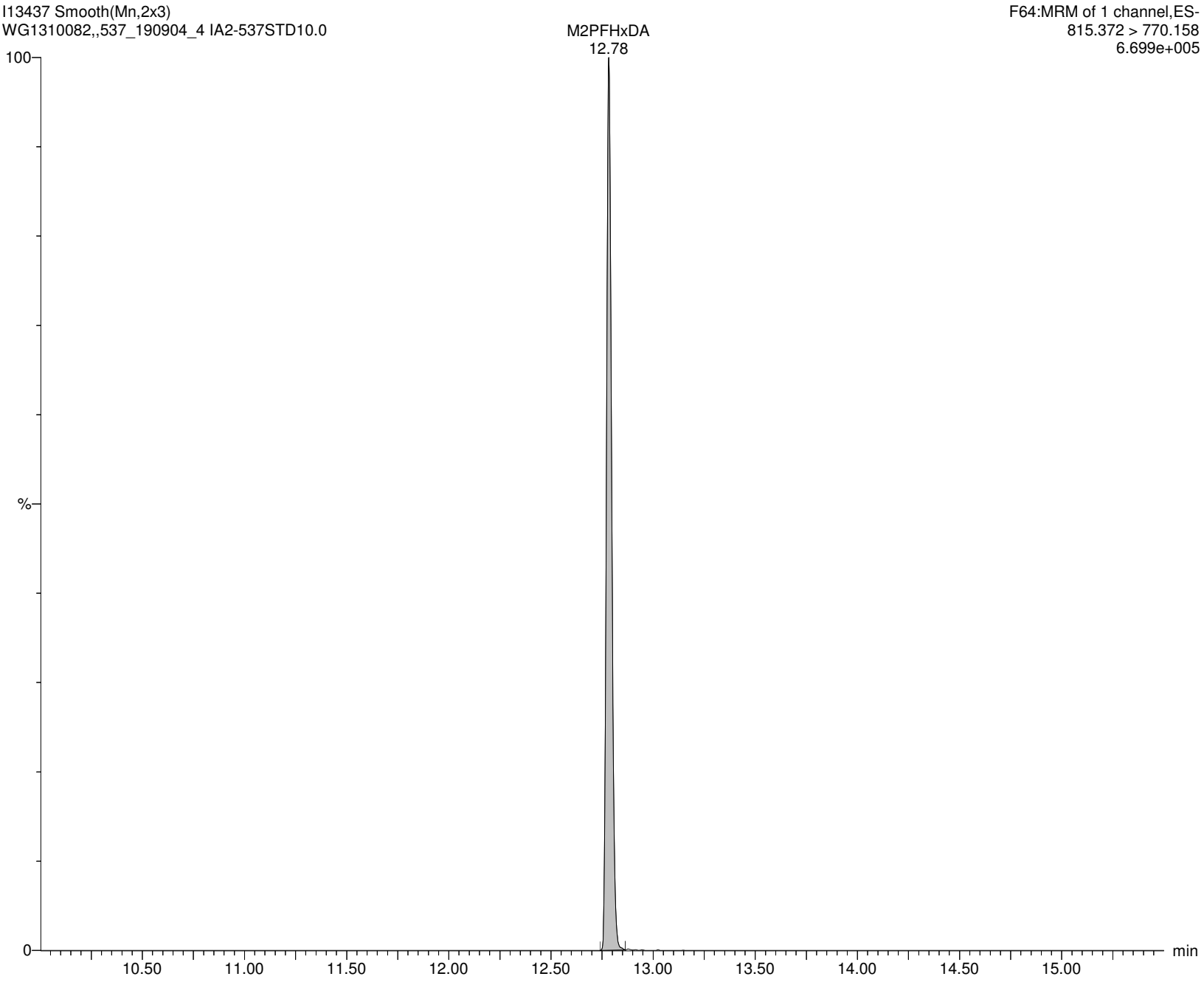
**M2PFHxDA**





all concentration units in (ng/mL)

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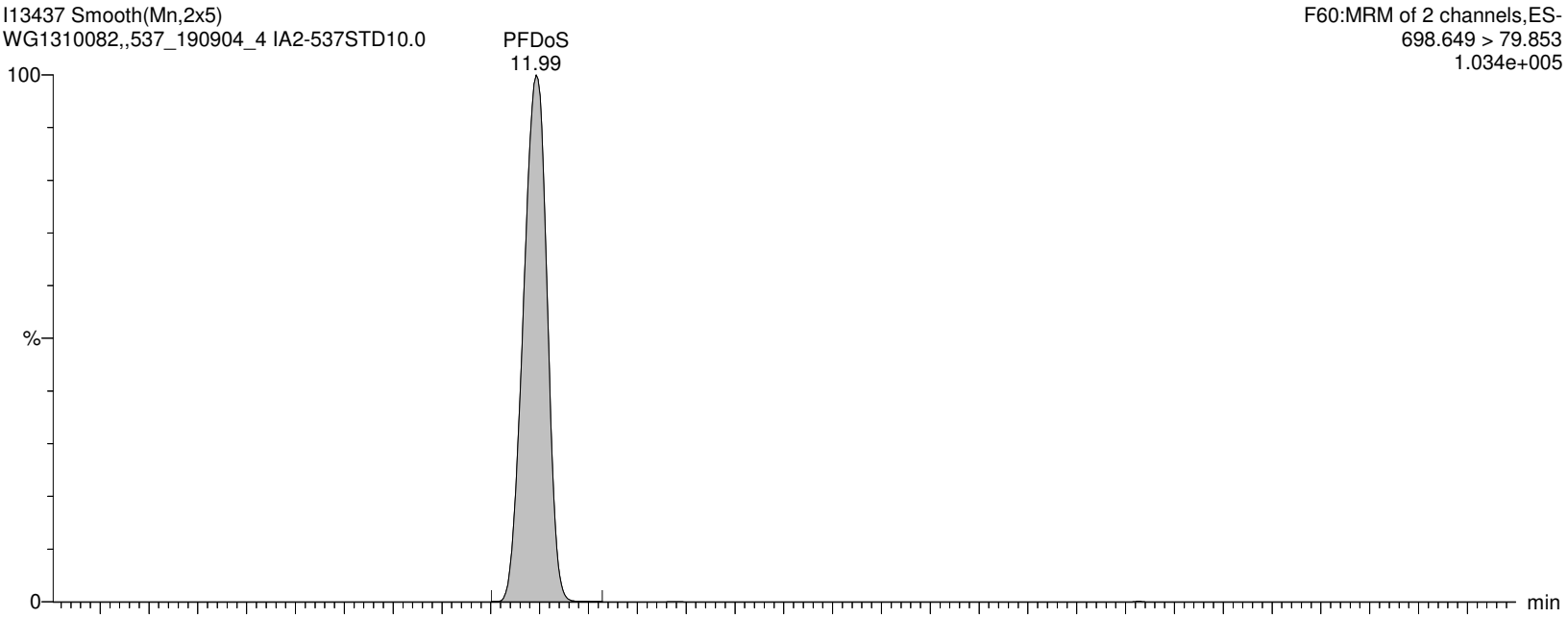
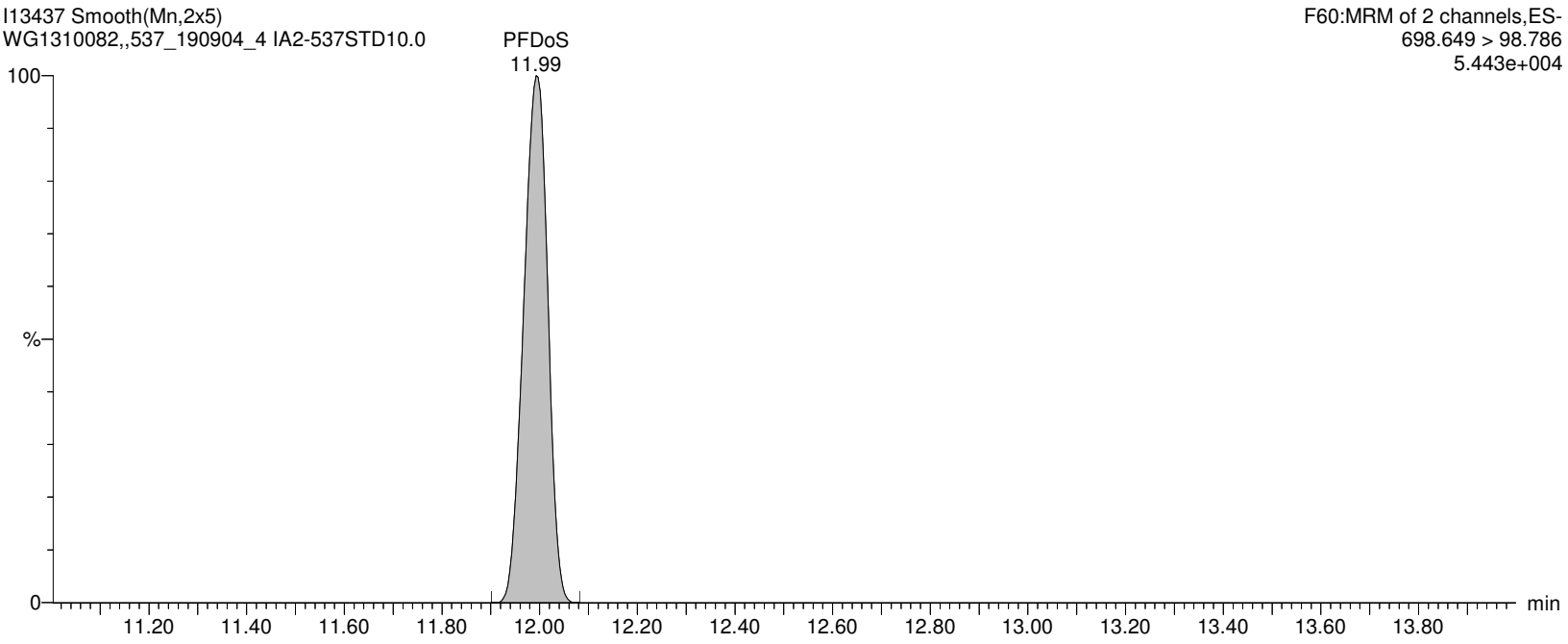
**PFDoS**





all concentration units in (ng/mL)

Alpha Analytical Inc.
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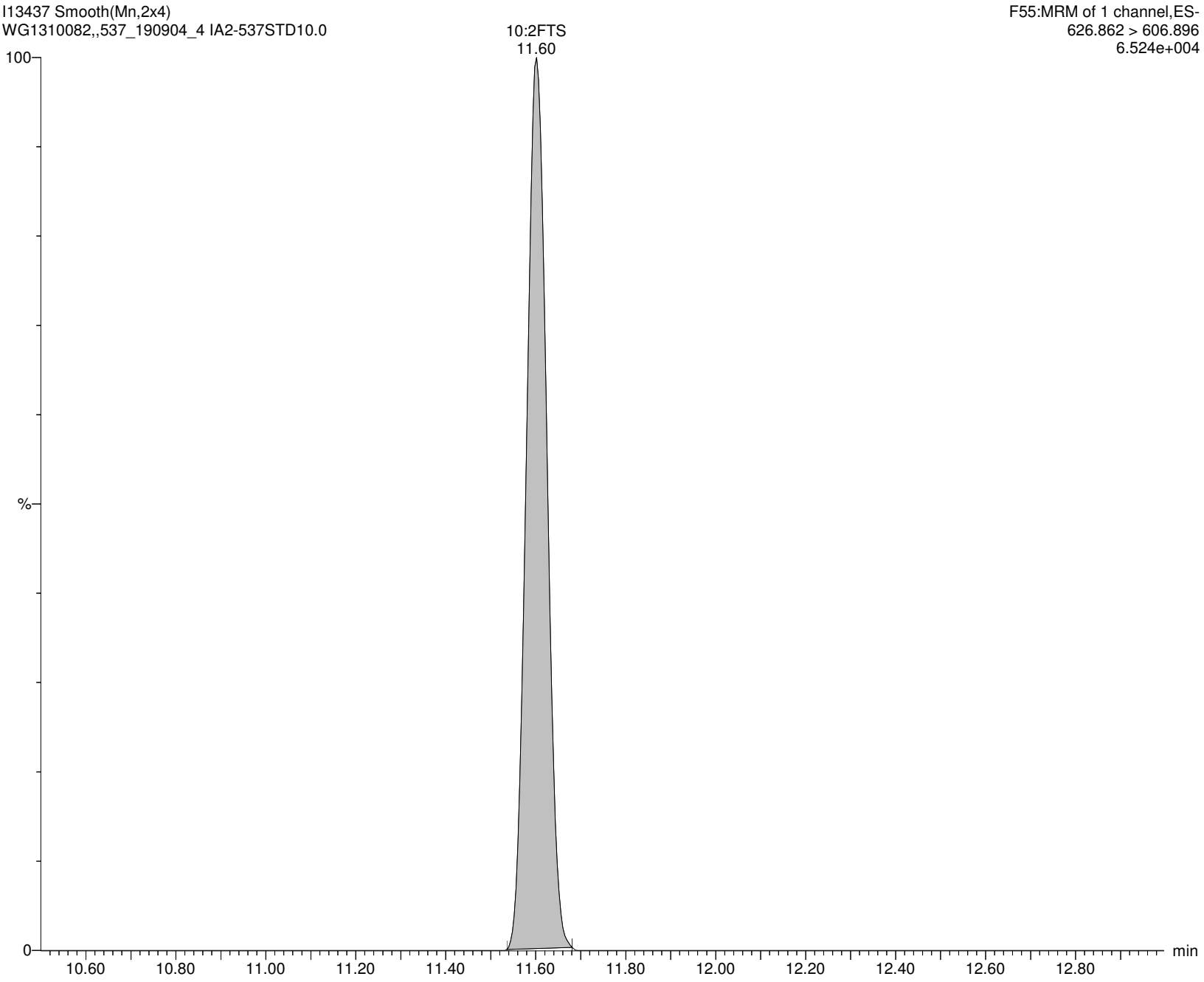



all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
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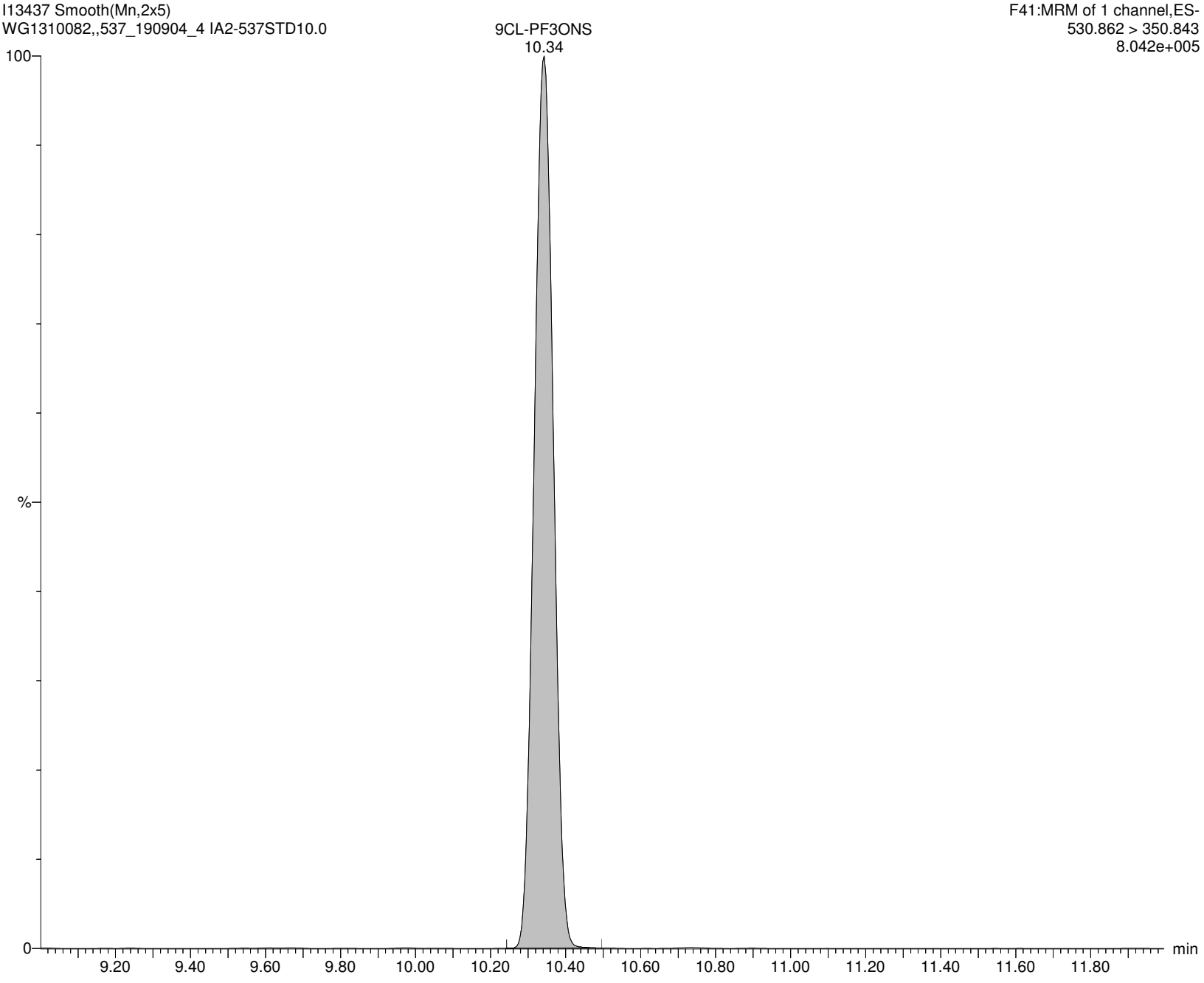



all concentration units in (ng/mL)

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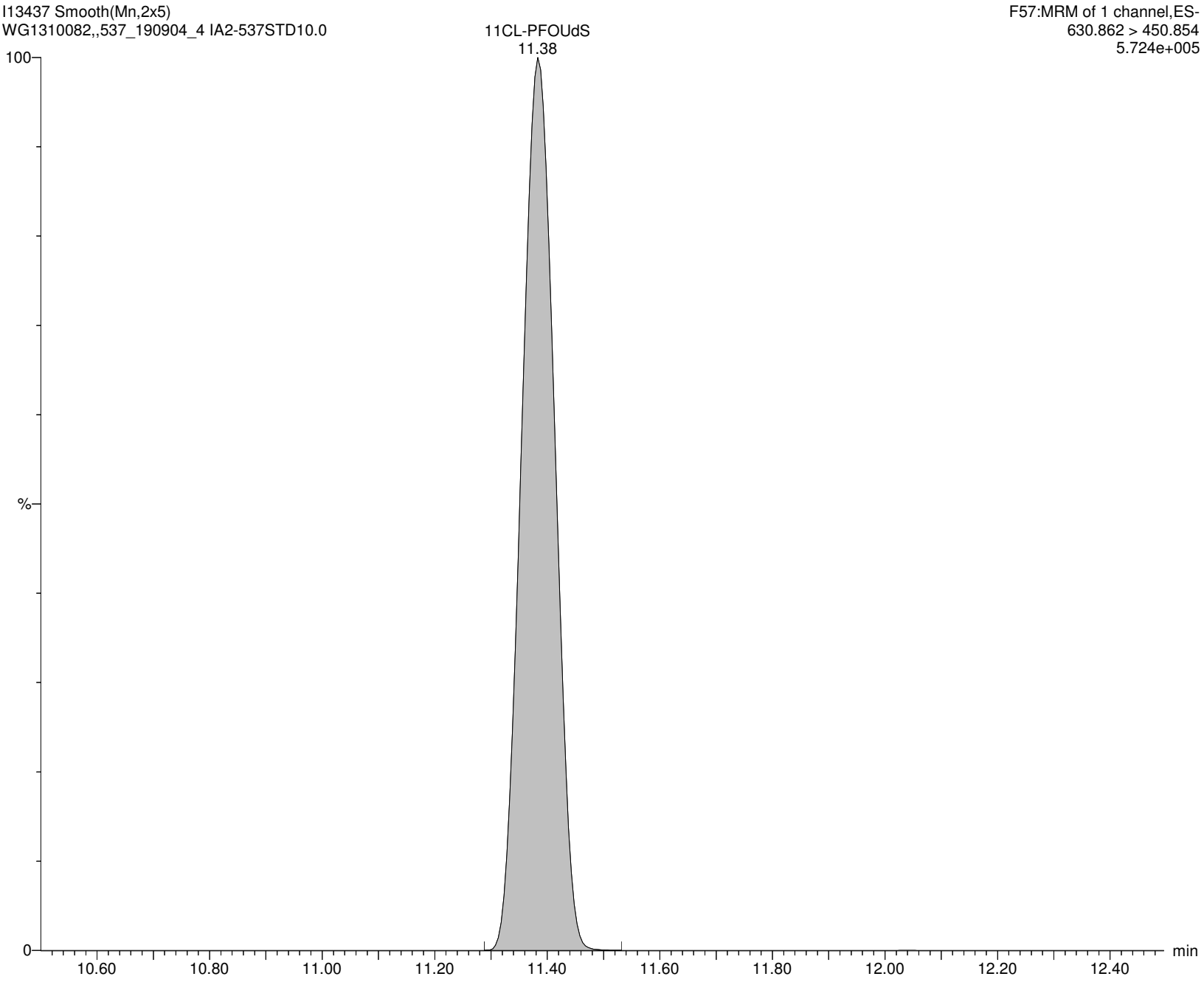



all concentration units in (ng/mL)

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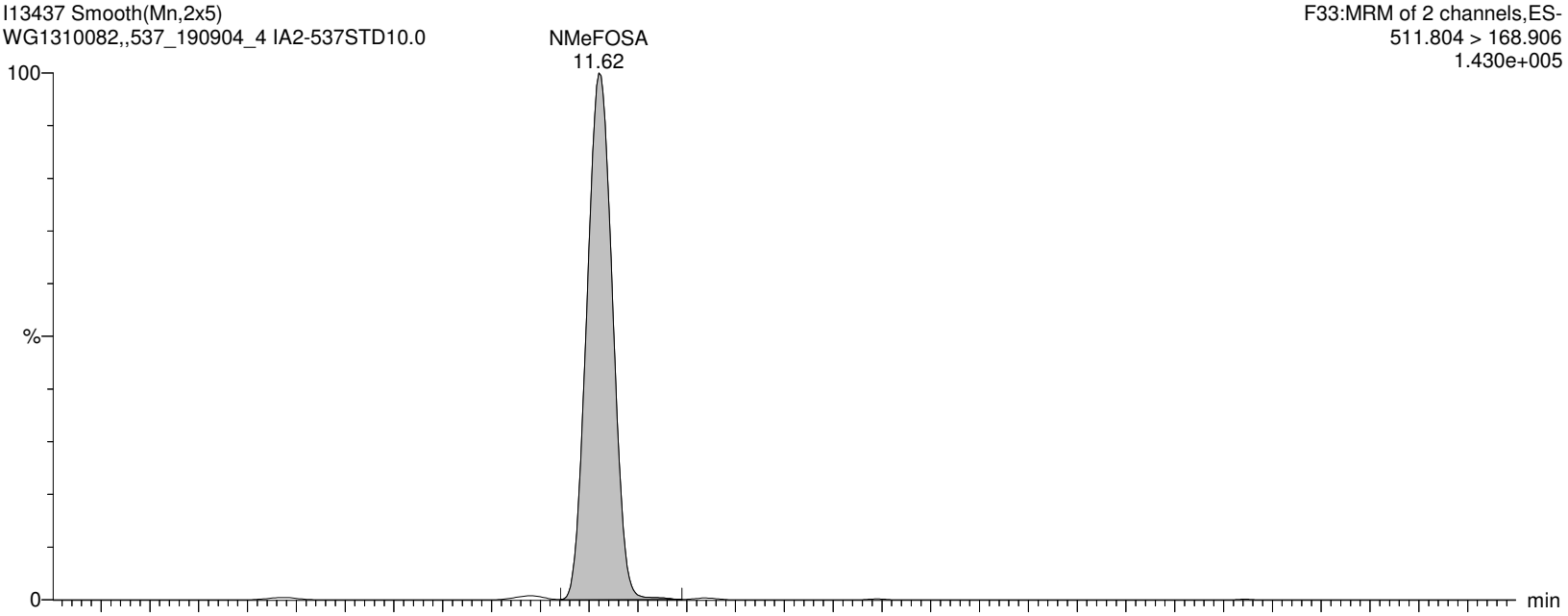
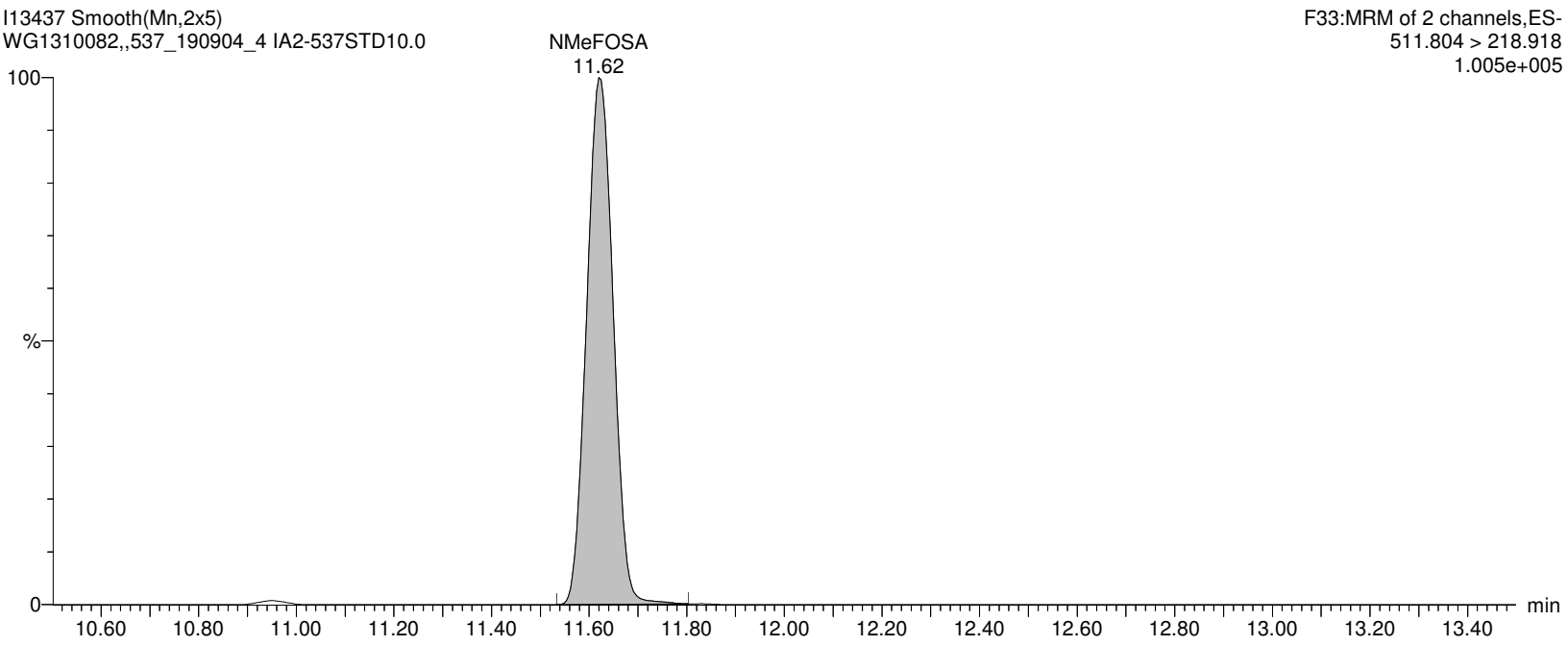
**NMeFOSA**





all concentration units in (ng/mL)

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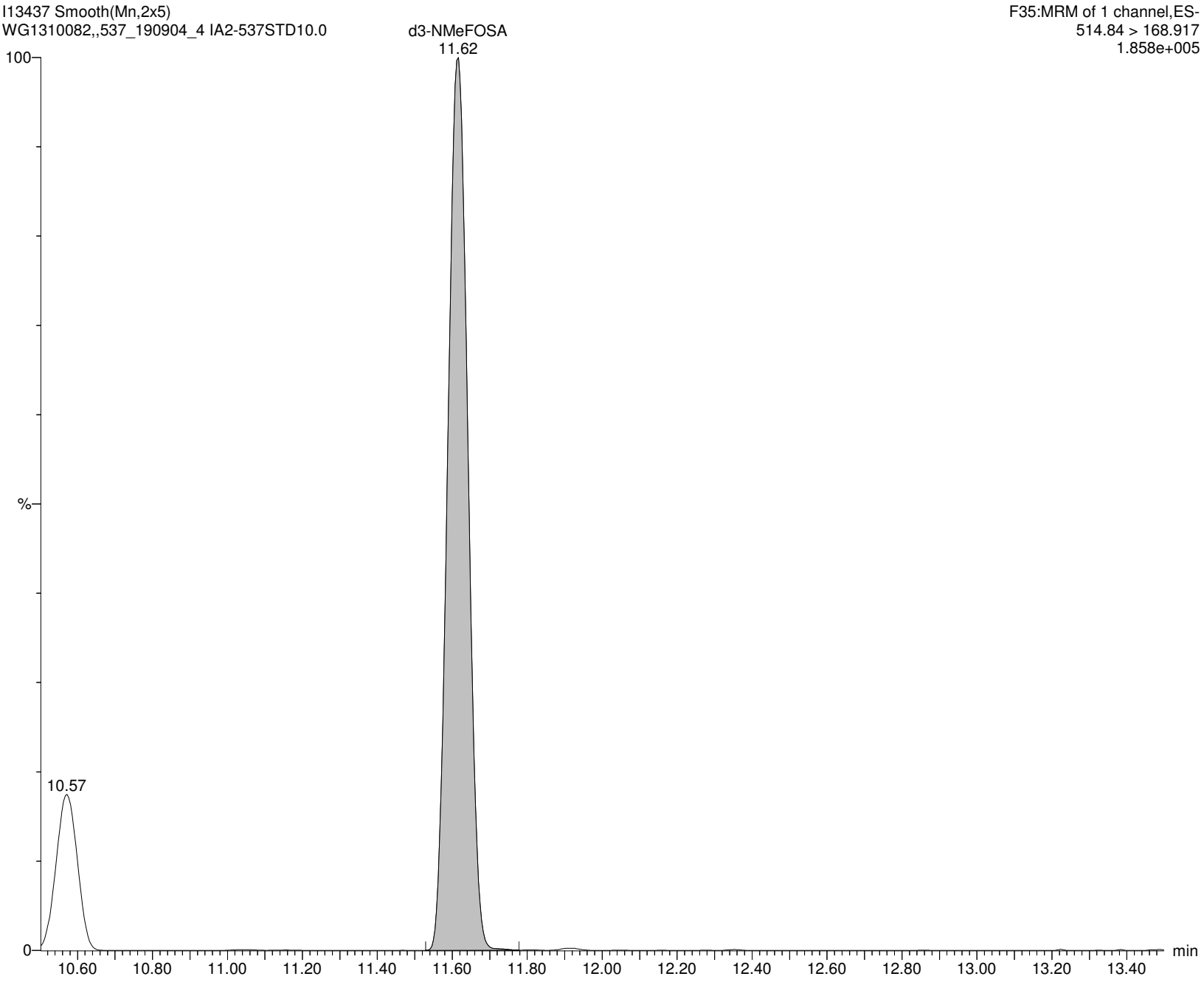



all concentration units in (ng/mL)

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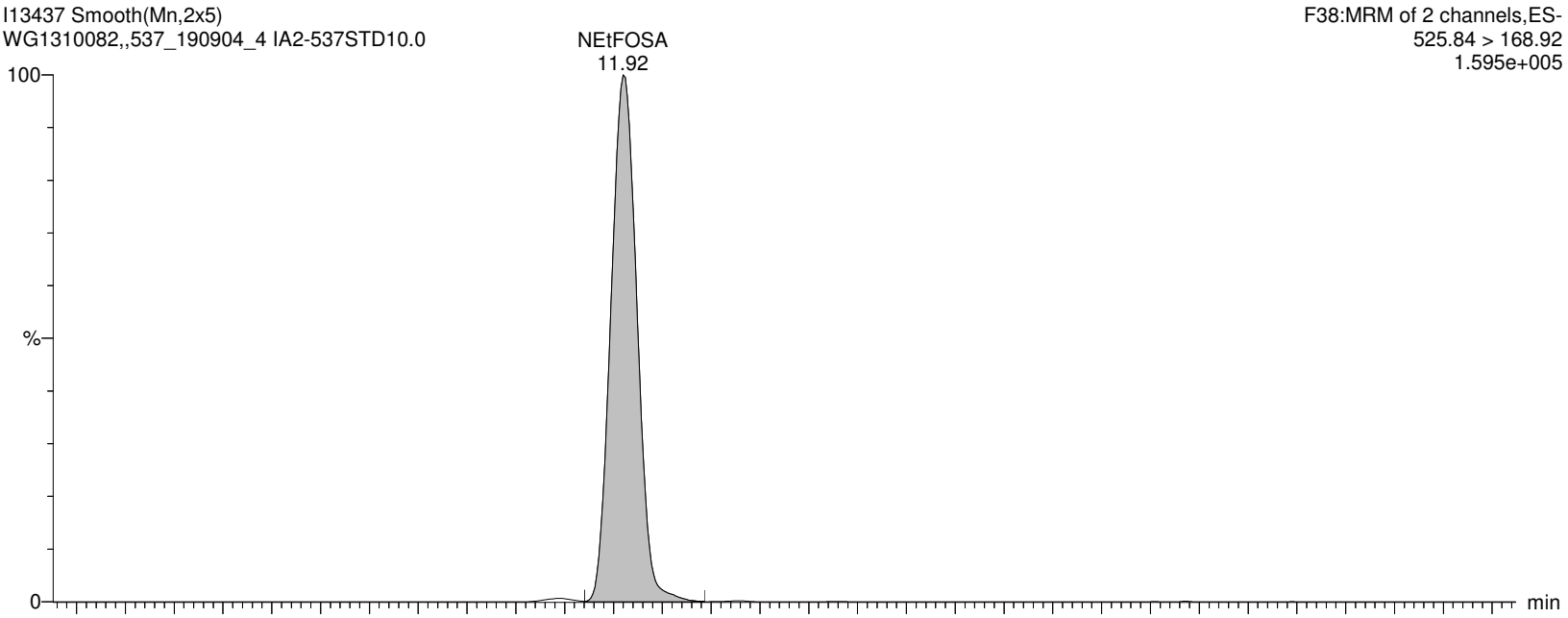
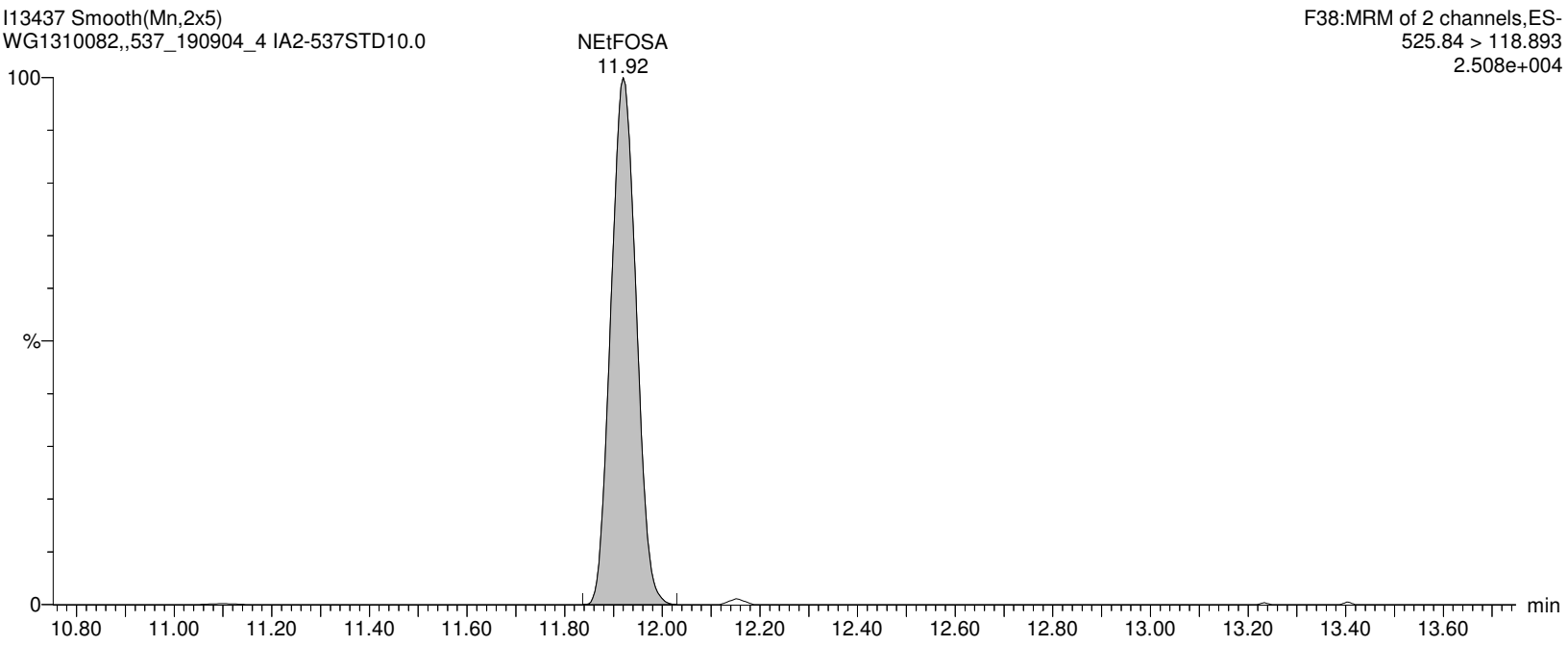
**NEtFOSA**





all concentration units in (ng/mL)

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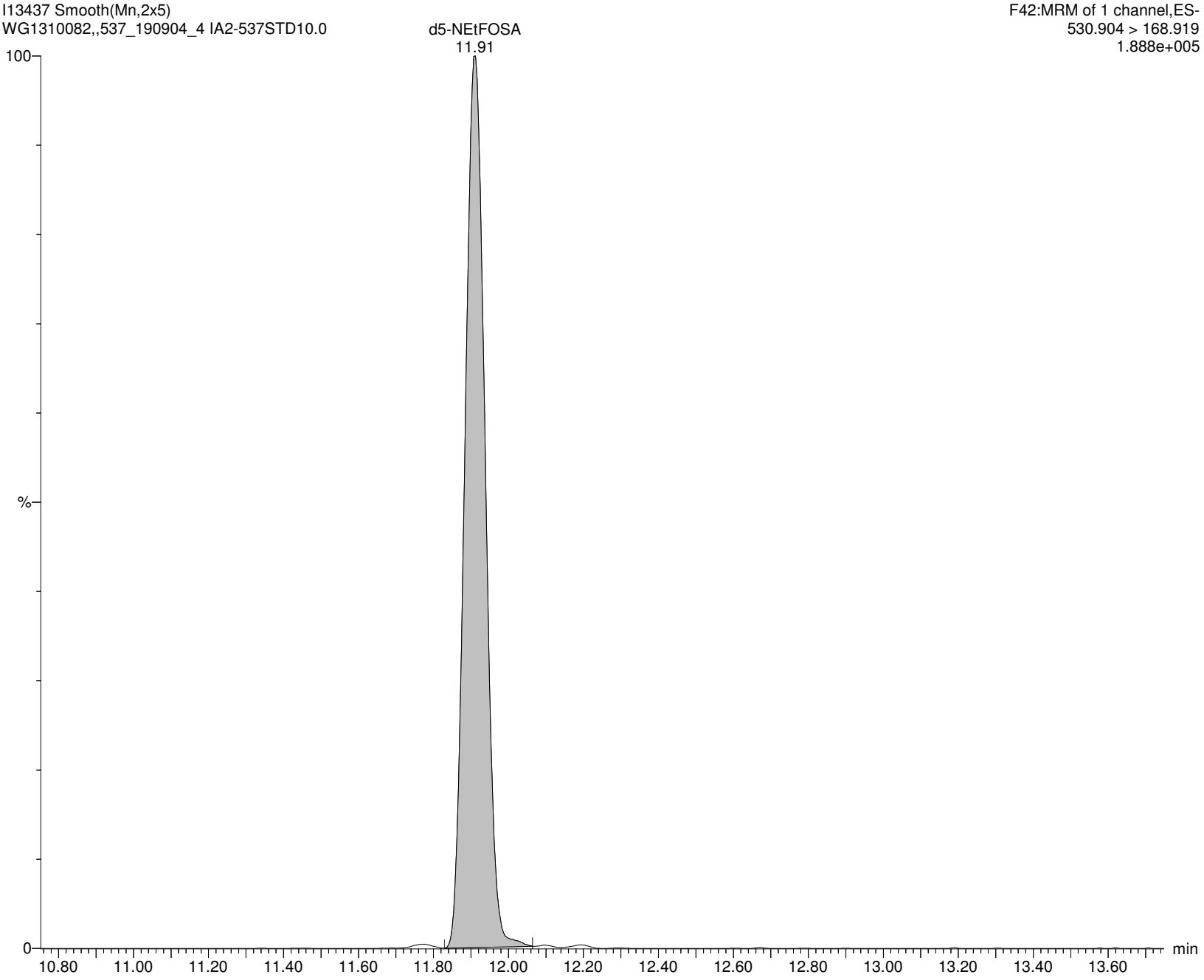



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**Instrument: XEVO-TQSmicro#QEB0050**
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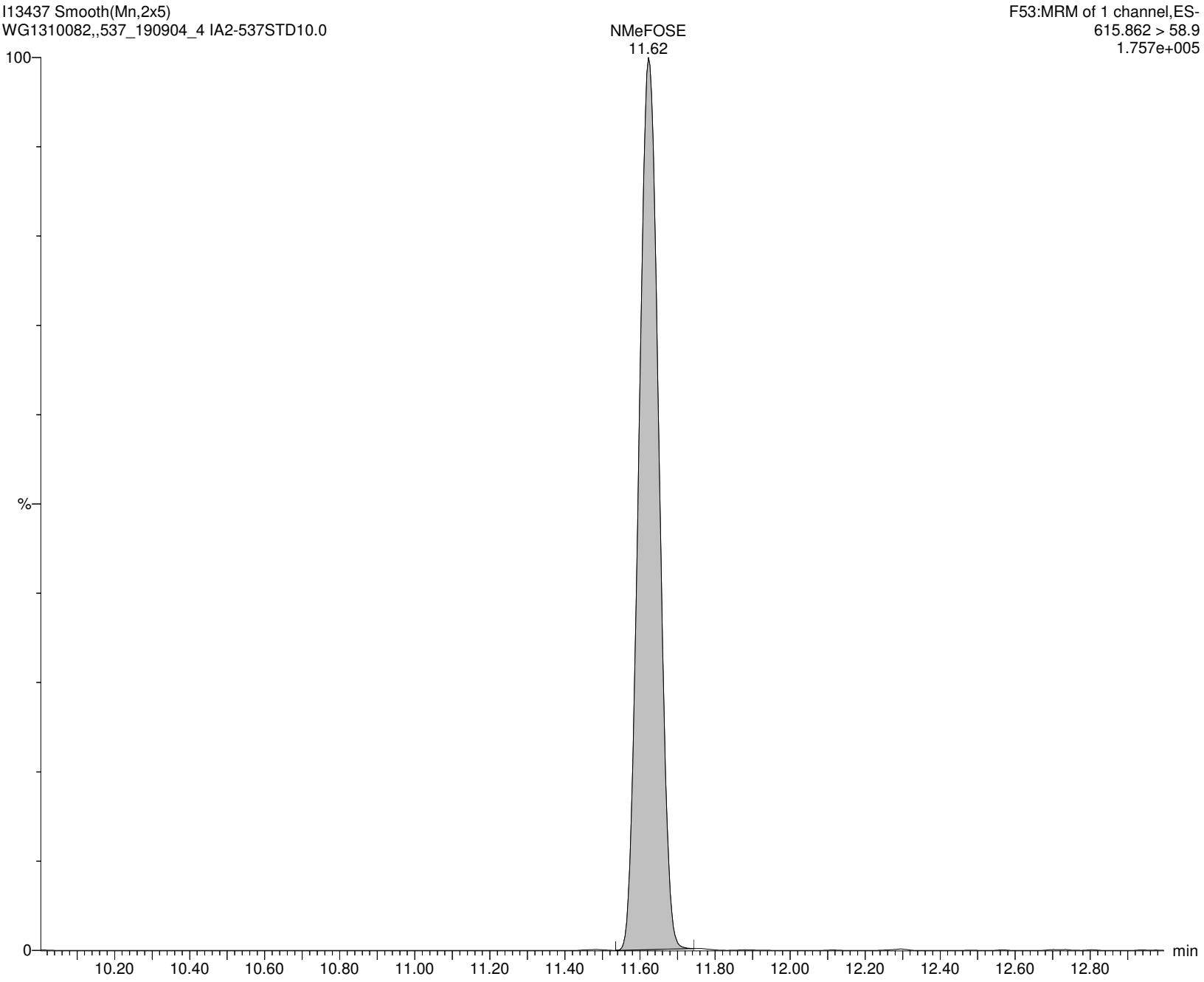
**Tune Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\181009_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**NMeFOSE**



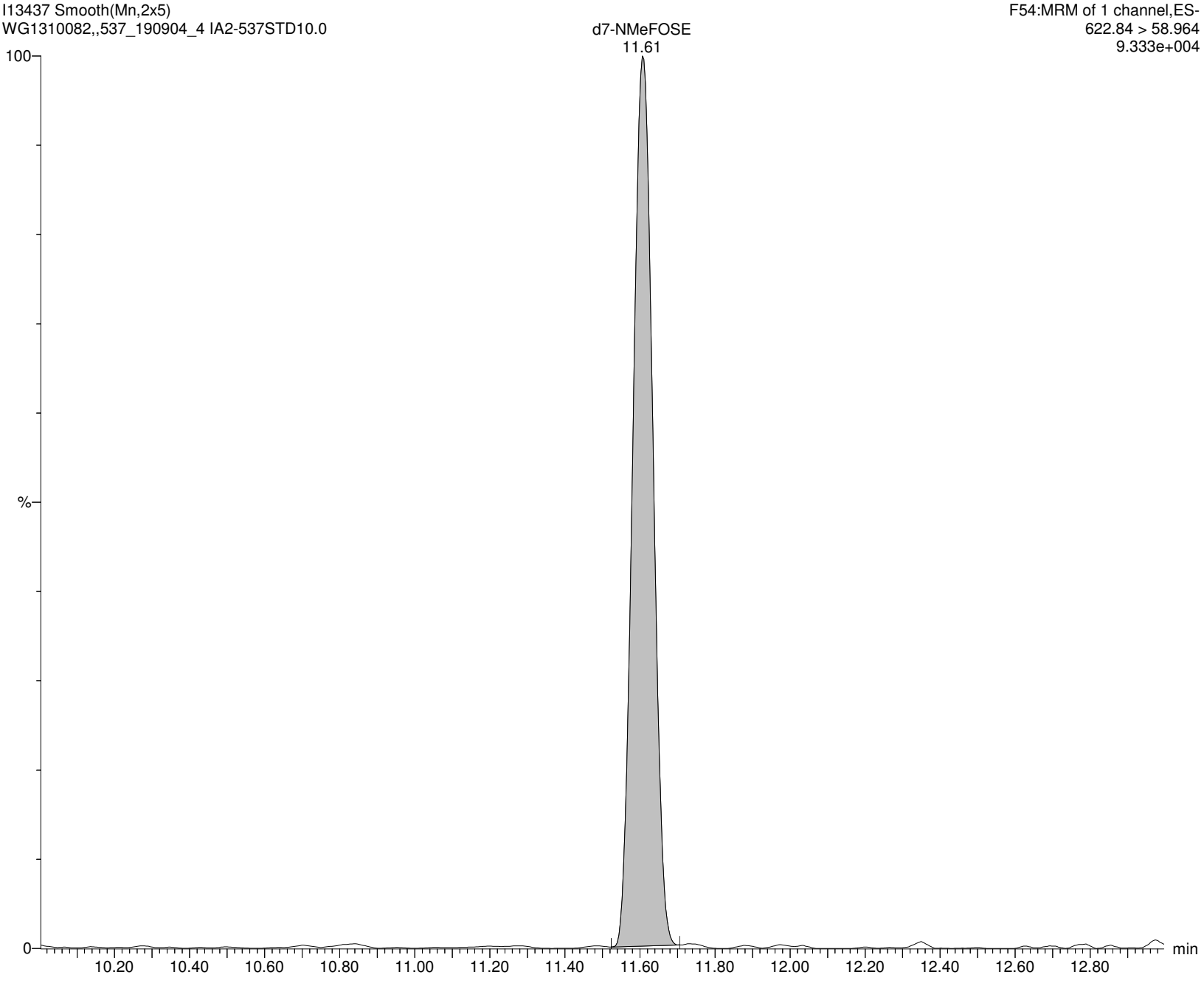


all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
Printed: Monday, November 18, 2019 13:42:55 Eastern Standard Time

**Name: I13437**
**ID: IA2-537STD10.0**
**Date: 18-Nov-2019**
**Time: 11:26:51**
**Description: WG1310082,,537_190904_4**
**User: LCMS02:JW**
**Vial: 1:A,5**
**Instrument: XEVO-TQSmicro#QEB0050**
**Inlet Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\LCMS_537_ISO_B**
**Tune Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\181009_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**d7-NMeFOSE**





all concentration units in (ng/mL)

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Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
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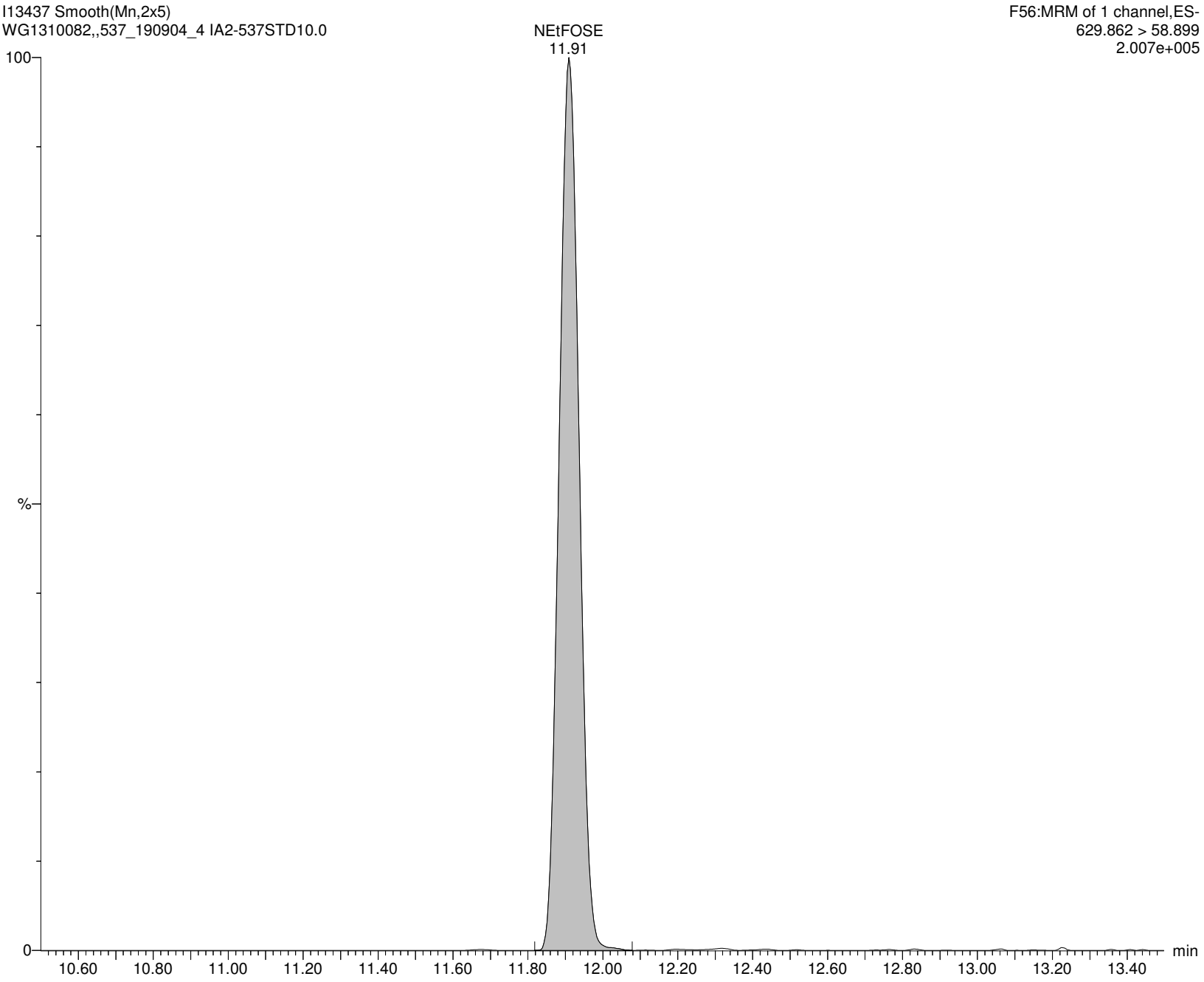
**User: LCMS02:JW**
**Vial: 1:A,5**
**Instrument: XEVO-TQSmicro#QEB0050**
**Inlet Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\LCMS_537_ISO_B**
**Tune Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\181009_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**NEtFOSE**





all concentration units in (ng/mL)

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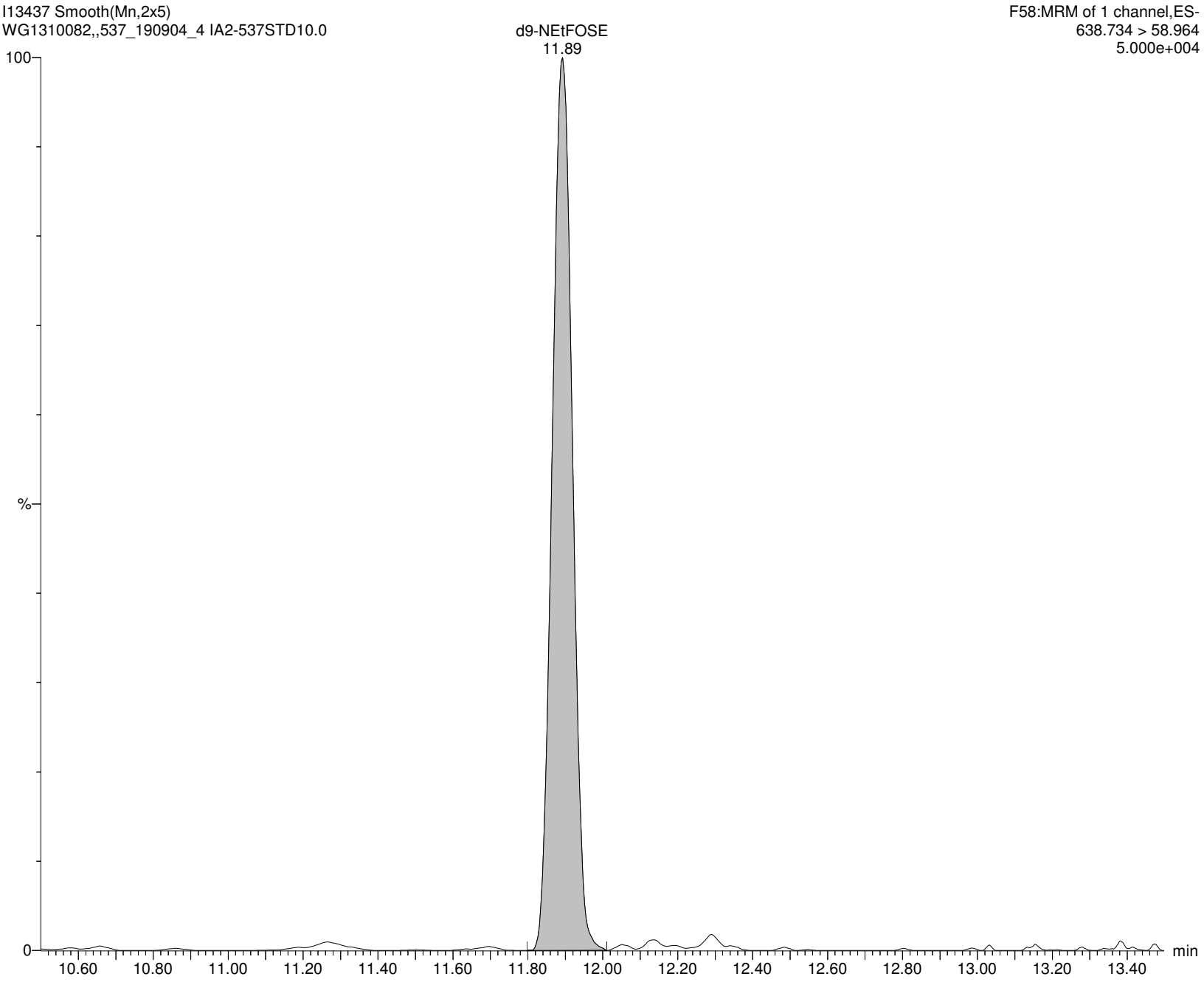
**MS Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**d9-NEtFOSE**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
Printed: Monday, November 18, 2019 13:42:56 Eastern Standard Time

**Method: C:\MassLynx\Data\2019\191118_537ISO.PRO\MethDB\537ISO_Q_191118_DOD .mdb 18 Nov 2019 13:05:34**
**Calibration: C:\MassLynx\Data\2019\191118_537ISO.PRO\CurveDB\191118_ISO_ICAL.cdb 18 Nov 2019 13:41:42**

**ID: IA2-537STD50.0**
**Name: I13438**
**Date: 18-Nov-2019**
**Time: 11:43:24**
**Description: WG1310082,,537_190904_5**
**Instrument: XEVO-TQSmicro#QEB0050**
**User: LCMS02:JW**
**Inlet Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\LCMS_537_ISO_B**
**Tune Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\181009_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

| | Name | CAS | RT | Trace | Area | M Flag | Conc (ng/mL) | Ion Ratio | Ratio Flag | %Rec |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | PFBA | 375-22-4 | 2.20 | 212.926 > 169.111 | 211671 | | 49.930 | | na | 99.9 |
| 2 | M3PFBA | INT STD | 2.19 | 215.926 > 172.122 | 46738 | | 10.087 | | na | 100.9 |
| 3 | MPFBA | INT STD | 2.19 | 216.926 > 172.137 | 50772 | | 9.982 | | na | 99.8 |
| 4 | PFPeA | 2706-90-3 | 5.10 | 262.926 > 219.002 | 350630 | | 50.254 | | na | 100.5 |
| 5 | M5PFPEA | INT STD | 5.09 | 267.989 > 223.081 | 72242 | | 10.014 | | na | 100.1 |
| 6 | PFBS | 375-73-5 | 5.74 | 298.926 > 79.923 | 64765 | | 44.235 | 1.89 | NO | 100.0 |
| 7 | M3PFBS | INT STD | 5.75 | 301.989 > 80.254 | 9966 | | 10.041 | | na | 100.4 |
| 8 | 4:2FTS | 757124-72-4 | 6.92 | 326.926 > 306.957 | 29144 | | 45.413 | 2.16 | NO | 97.1 |
| 9 | M2-4:2FTS | INT STD | 6.91 | 329.117 > 309.079 | 6682 | | 10.370 | | na | 103.7 |
| 10 | PFHxA | 307-24-4 | 6.99 | 312.989 > 269.028 | 385144 | | 50.500 | 18.41 | NO | 101.0 |
| 11 | M5PFHxA | INT STD | 6.99 | 317.989 > 273.045 | 82848 | | 10.082 | | na | 100.8 |
| 12 | PFPeS | 2706-91-4 | 7.31 | 348.926 > 80.251 | 44566 | | 46.448 | 1.79 | NO | 98.8 |
| 13 | PFHpA | 375-85-9 | 8.26 | 362.926 > 319.014 | 506167 | | 51.681 | 5.83 | NO | 103.4 |
| 14 | M4PFHpA | INT STD | 8.26 | 366.926 > 321.979 | 108577 | | 9.920 | | na | 99.2 |
| 15 | br-PFHxS | 355-46-4 | 8.18 | 398.926 > 80.295 | 5932 | M5 | 8.333 | 2.23 | NO | 98.0 |
| 16 | L-PFHxS | 355-46-4 | 8.42 | 398.926 > 80.295 | 26815 | | 37.313 | 1.13 | NO | 100.8 |
| 17 | PFHxS | 355-46-4 | | 398.926 > 80.295 | 32747 | | 45.646 | | na | |
| 18 | M3PFHxS | INT STD | 8.41 | 401.926 > 80.317 | 5737 | | 10.015 | | na | 100.2 |
| 19 | br-PFOA | 335-67-1 | | 412.989 > 368.9 | | | ND | | YES | |
| 20 | L-PFOA | 335-67-1 | 9.20 | 412.989 > 368.9 | 491336 | | 50.111 | 9.97 | NO | 100.2 |
| 21 | PFOA | 335-67-1 | | 412.989 > 368.9 | 491336 | | 50.111 | | na | |
| 22 | M8PFOA | INT STD | 9.20 | 420.989 > 375.979 | 106782 | | 10.166 | | na | 101.7 |
| 23 | M2PFOA | INT STD | 9.20 | 415.032 > 369.968 | 107343 | | 10.154 | | na | 101.5 |
| 24 | 6:2FTS | 27619-97-2 | 9.16 | 426.989 > 406.921 | 22888 | | 45.588 | 10.94 | NO | 96.0 |
| 25 | M2-6:2FTS | INT STD | 9.16 | 428.989 > 408.917 | 6924 | | 10.995 | | na | 109.9 |
| 26 | PFHpS | 375-92-8 | 9.29 | 448.926 > 80.257 | 24824 | | 49.296 | 0.86 | YES | 103.8 |
| 27 | PFNA | 375-95-1 | 9.95 | 462.989 > 418.931 | 434642 | | 50.925 | 4.52 | NO | 101.8 |
| 28 | M9PFNA | INT STD | 9.95 | 472.053 > 426.947 | 104183 | | 10.081 | | na | 100.8 |
| 29 | br-PFOS | 1763-23-1 | 9.81 | 498.989 > 80.294 | 9375 | M5 | 9.110 | 4.54 | NO | 91.1 |
| 30 | L-PFOS | 1763-23-1 | 10.00 | 498.989 > 80.294 | 27678 | | 36.880 | 1.51 | YES | 101.0 |
| 31 | PFOS | 1763-23-1 | | 498.989 > 80.294 | 37053 | | 45.990 | | na | |
| 32 | M4PFOS | INT STD | 10.00 | 503.032 > 80.306 | 7090 | | 10.152 | | na | 101.5 |
| 33 | M8PFOS | INT STD | 10.00 | 507.053 > 80.294 | 7647 | | 10.511 | | na | 105.1 |
| 34 | PFDA | 335-76-2 | 10.58 | 513.053 > 468.906 | 409067 | | 51.371 | 6.93 | NO | 102.7 |
| 35 | M2PFDA | INT STD | 10.58 | 515.053 > 469.934 | 89580 | | 10.146 | | na | 101.5 |
| 36 | M6PFDA | INT STD | 10.58 | 519.053 > 473.931 | 92827 | | 10.027 | | na | 100.3 |
| 37 | 8:2FTS | 39108-34-4 | 10.57 | 526.926 > 506.818 | 17680 | | 44.549 | | na | 92.8 |
| 38 | M2-8:2FTS | INT STD | 10.57 | 529.053 > 508.945 | 4282 | | 11.592 | | na | 115.9 |
| 39 | PFNS | 68259-12-1 | 10.61 | 548.989 > 80.249 | 34941 | | 49.120 | 1.23 | NO | 102.3 |


all concentration units in (ng/mL)

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Printed: Monday, November 18, 2019 13:42:56 Eastern Standard Time

**ID: IA2-537STD50.0**
**Name: I13438**
**Date: 18-Nov-2019**
**Time: 11:43:24**
**Description: WG1310082,,537_190904_5**
**Instrument: XEVO-TQSmicro#QEB0050**
**User: LCMS02:JW**
**Inlet Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\LCMS_537_ISO_B**
**Tune Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\181009_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

| | Name | CAS | RT | Trace | Area | M Flag | Conc (ng/mL) | Ion Ratio | Ratio Flag | %Rec |
|---|---|---|---|---|---|---|---|---|---|---|
| 40 | d3-NMeFOSAA | INT STD | 10.96 | 573.096 > 418.987 | 10035 | | 9.518 | | na | 95.2 |
| 41 | br-NMeFOSAA | 2355-31-9 | | 570.053 > 418.917 | | | ND | | YES | |
| 42 | L-NMeFOSAA | 2355-31-9 | 10.96 | 570.053 > 418.917 | 51048 | | 54.582 | 2.68 | NO | 109.2 |
| 43 | NMeFOSAA | 2355-31-9 | | 570.053 > 418.917 | 51048 | | 54.582 | | na | |
| 44 | PFUnA | 2058-94-8 | 11.12 | 562.989 > 518.903 | 396063 | | 49.990 | 7.94 | NO | 100.0 |
| 45 | M7-PFUDA | INT STD | 11.12 | 570.053 > 524.923 | 82849 | | 10.087 | | na | 100.9 |
| 46 | PFDS | 335-77-3 | 11.13 | 598.926 > 80.314 | 25123 | | 49.411 | 1.00 | NO | 102.4 |
| 47 | FOSA | 754-91-6 | 11.01 | 497.989 > 78.245 | 116432 | | 51.200 | 129.12 | NO | 102.4 |
| 48 | M8FOSA | INT STD | 11.01 | 506.053 > 78.286 | 21401 | | 9.777 | | na | 97.8 |
| 49 | d5-NEtFOSAA | INT STD | 11.25 | 589.117 > 418.929 | 7892 | | 8.474 | | na | 84.7 |
| 50 | br-NEtFOSAA | 2991-50-6 | | 583.989 > 418.927 | | | ND | | YES | |
| 51 | L-NEtFOSAA | 2991-50-6 | 11.26 | 583.989 > 418.927 | 44566 | | 59.815 | 2.59 | NO | 119.6 |
| 52 | NEtFOSAA | 2991-50-6 | | 583.989 > 418.927 | 44566 | | 59.815 | | na | |
| 53 | PFDoA | 307-55-1 | 11.59 | 612.989 > 568.967 | 409028 | | 50.488 | 14.39 | NO | 101.0 |
| 54 | MPFDOA | INT STD | 11.59 | 614.989 > 569.92 | 95651 | | 10.381 | | na | 103.8 |
| 55 | PFTrDA | 72629-94-8 | 12.00 | 663.053 > 618.969 | 320248 | | 50.655 | 11.40 | NO | 101.3 |
| 56 | PFTA | 376-06-7 | 12.36 | 713.053 > 668.976 | 294391 | | 49.694 | 9.09 | NO | 99.4 |
| 57 | M2PFTEDA | INT STD | 12.36 | 715.053 > 669.945 | 73975 | | 10.107 | | na | 101.1 |
| 58 | M3HFPO-DA | INT STD | 7.42 | 331.989 > 286.995 | 8243 | | 179.113 | | na | 89.6 |
| 59 | HFPO-DA | 13252-13-6 | 7.42 | 284.819 > 169.094 | 69989 | | 1022.673 | 2.72 | YES | 102.3 |
| 60 | ADONA | 958445-44-8 | 8.44 | 376.926 > 251.005 | 687811 | | 48.997 | | na | 103.6 |
| 61 | PFHxDA | | 12.78 | 813.053 > 769.005 | 269633 | | 49.164 | | na | 98.3 |
| 62 | PFODA | | 12.98 | 912.989 > 869.032 | 185708 | | 46.110 | | na | 92.2 |
| 63 | M2PFHxDA | | 12.78 | 815.372 > 770.158 | 15306 | | 9.825 | | na | 98.2 |
| 64 | PFDoS | | 12.00 | 698.649 > 79.853 | 28014 | | 54.048 | 1.99 | YES | 108.1 |
| 65 | 10:2FTS | | 11.61 | 626.862 > 606.896 | 18204 | | 46.805 | | na | 97.1 |
| 66 | 9CL-PF3ONS | | 10.35 | 530.862 > 350.843 | 237445 | | 47.245 | | na | 101.4 |
| 67 | 11CL-PFOUdS | | 11.39 | 630.862 > 450.854 | 200296 | | 47.274 | | na | 100.4 |
| 68 | NMeFOSA | | 11.62 | 511.804 > 168.906 | 45477 | | 52.480 | 1.49 | NO | 105.0 |
| 69 | d3-NMeFOSA | | 11.62 | 514.84 > 168.917 | 11659 | | 10.213 | | na | 102.1 |
| 70 | NEtFOSA | | 11.92 | 525.84 > 168.92 | 49117 | | 52.606 | 6.00 | NO | 105.2 |
| 71 | d5-NEtFOSA | | 11.91 | 530.904 > 168.919 | 10656 | | 9.543 | | na | 95.4 |
| 72 | NMeFOSE | | 11.63 | 615.862 > 58.9 | 54087 | | 49.204 | | na | 98.4 |
| 73 | d7-NMeFOSE | | 11.61 | 622.84 > 58.964 | 5434 | | 10.163 | | na | 101.6 |
| 74 | NEtFOSE | | 11.91 | 629.862 > 58.899 | 65148 | | 59.318 | | na | 118.6 |
| 75 | d9-NEtFOSE | | 11.89 | 638.734 > 58.964 | 2782 | | 8.900 | | na | 89.0 |


all concentration units in (ng/mL)

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**Method: C:\MassLynx\Data\2019\191118_537ISO.PRO\MethDB\537ISO_Q_191118_DOD .mdb 18 Nov 2019 13:05:34**
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**Name: I13438**
**ID: IA2-537STD50.0**
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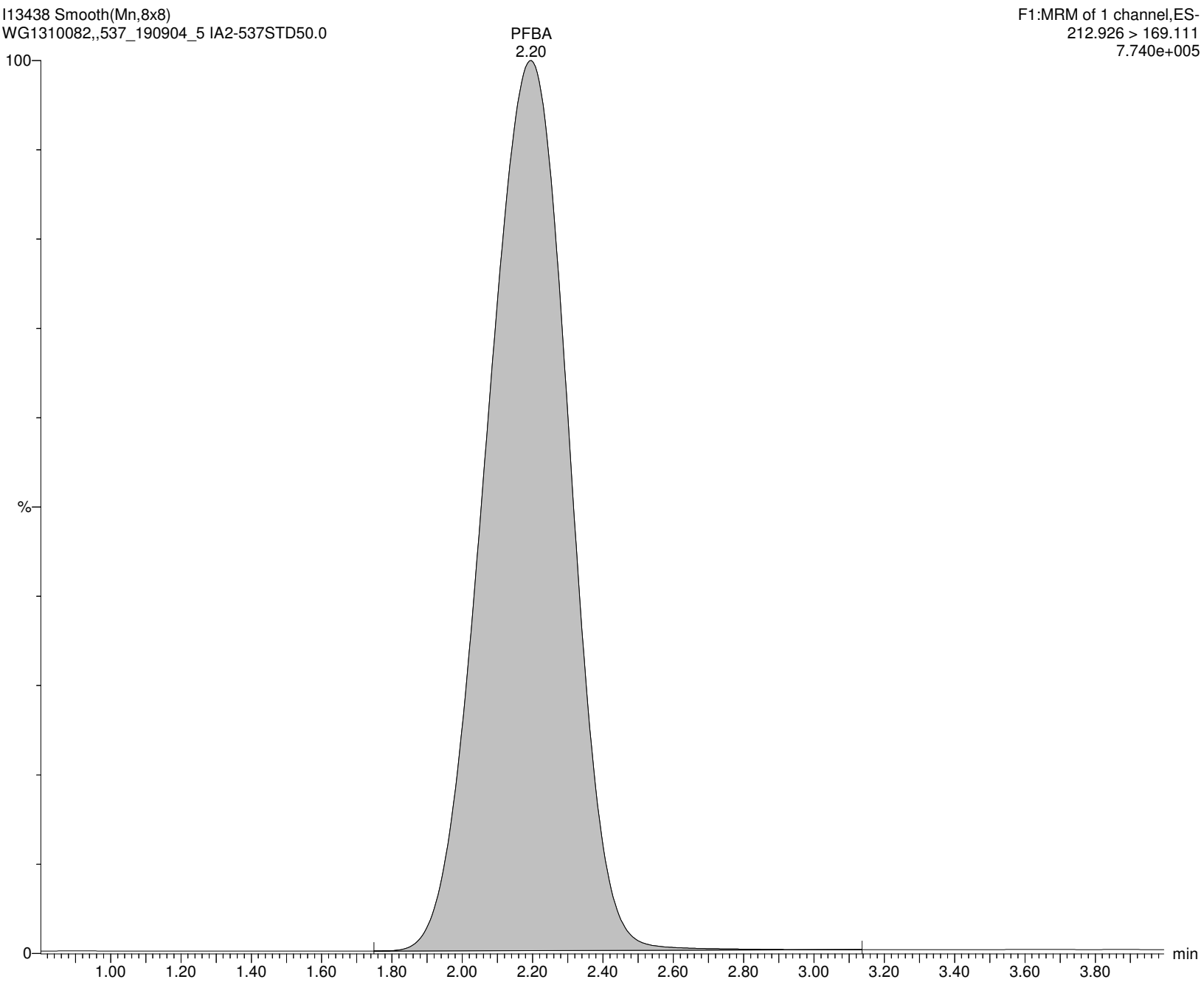
**Description: WG1310082,,537_190904_5**
**User: LCMS02:JW**
**Vial: 1:A,6**
**Instrument: XEVO-TQSmicro#QEB0050**
**Inlet Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\LCMS_537_ISO_B**
**Tune Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\181009_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**PFBA**





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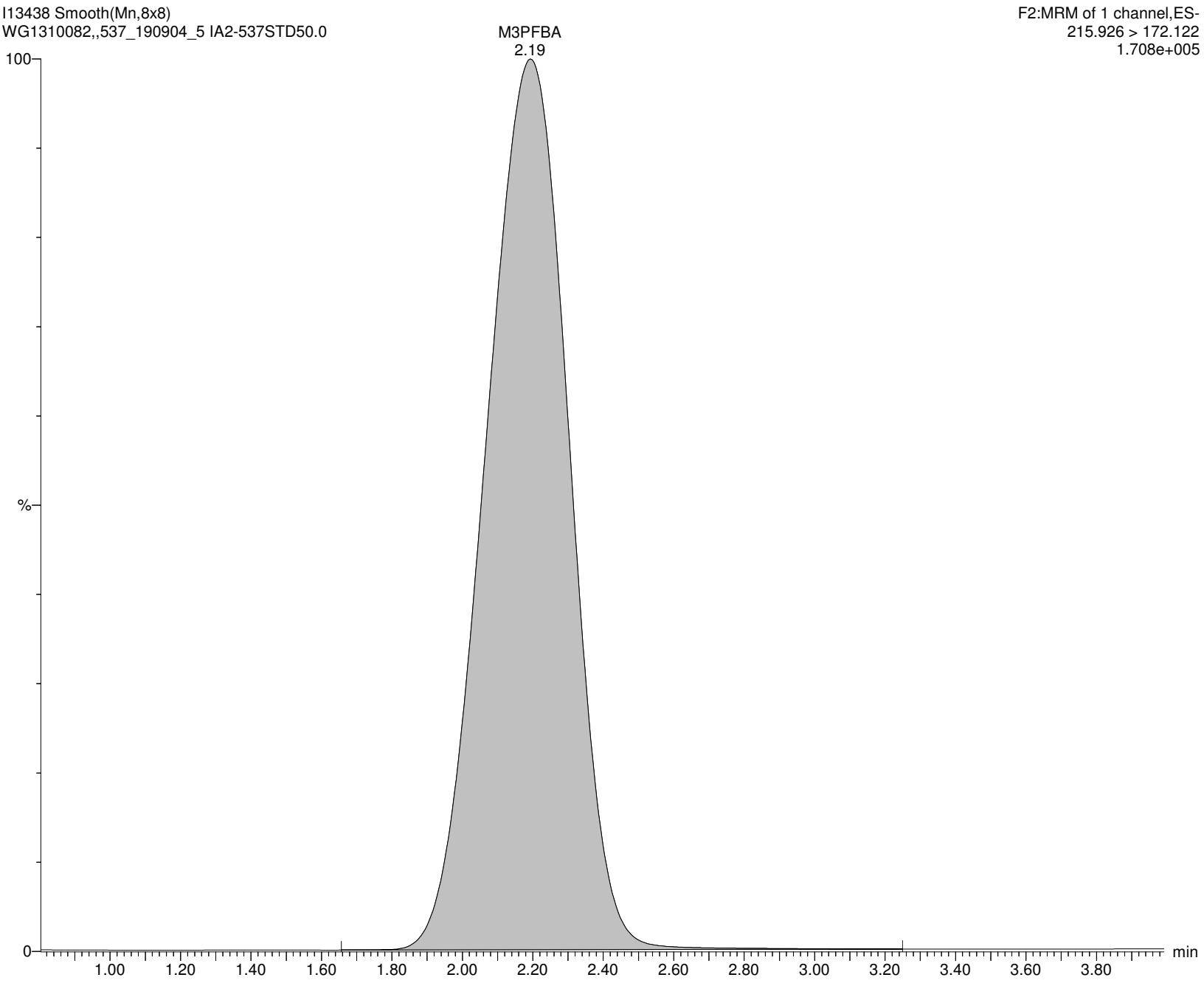
**MS Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**M3PFBA**





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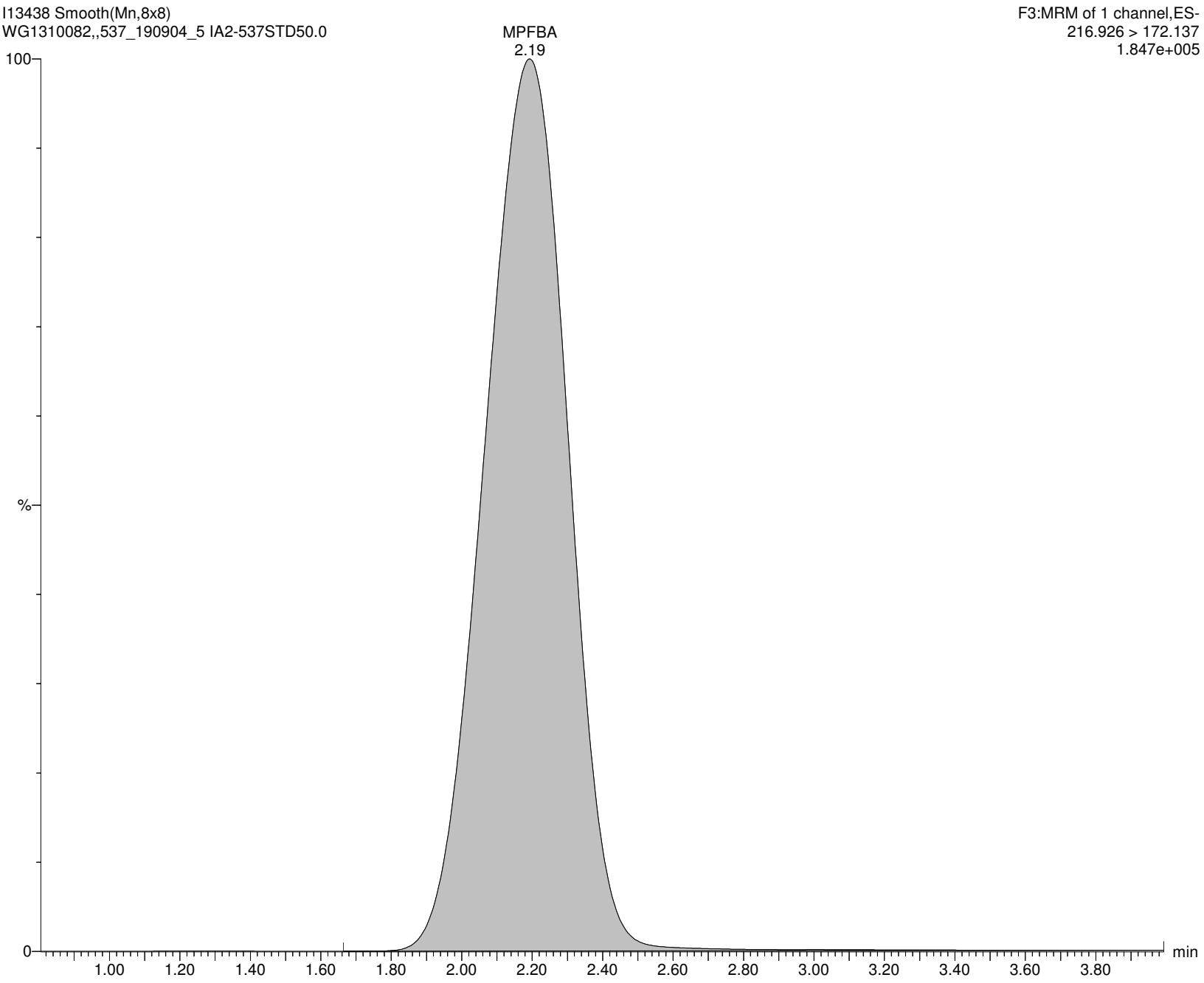
**MPFBA**





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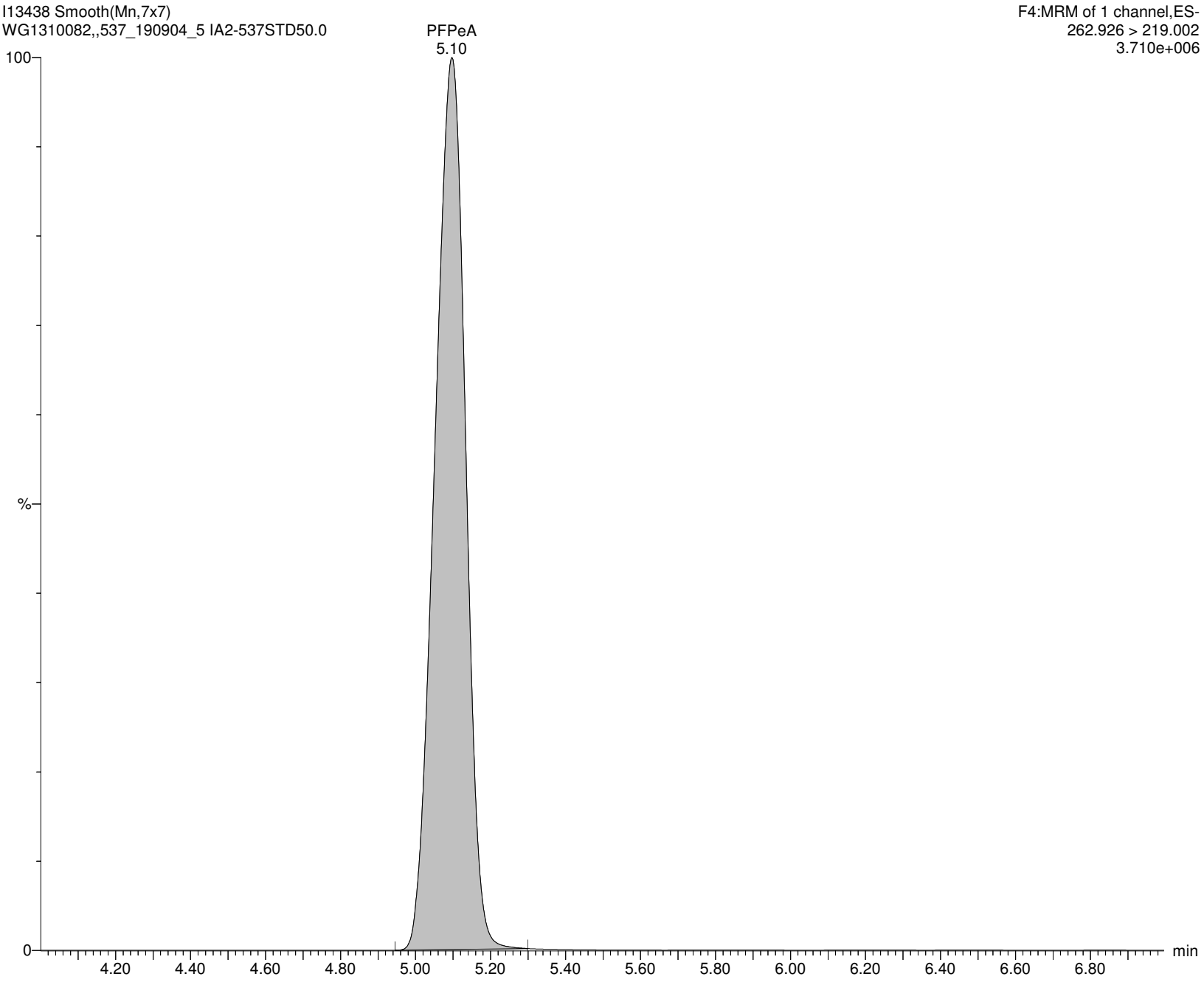
**MS Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**PFPeA**





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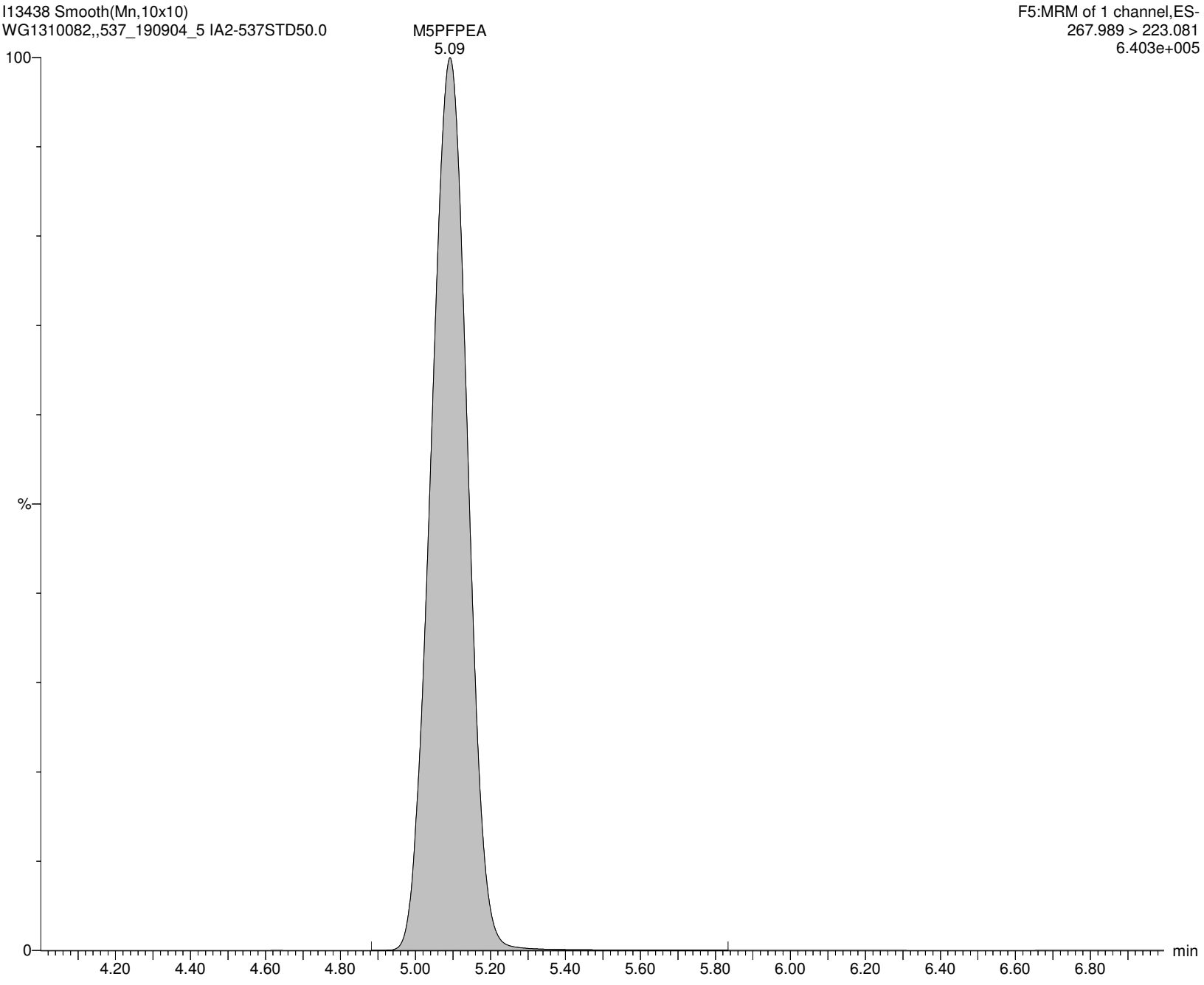
**MS Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**M5PFPEA**



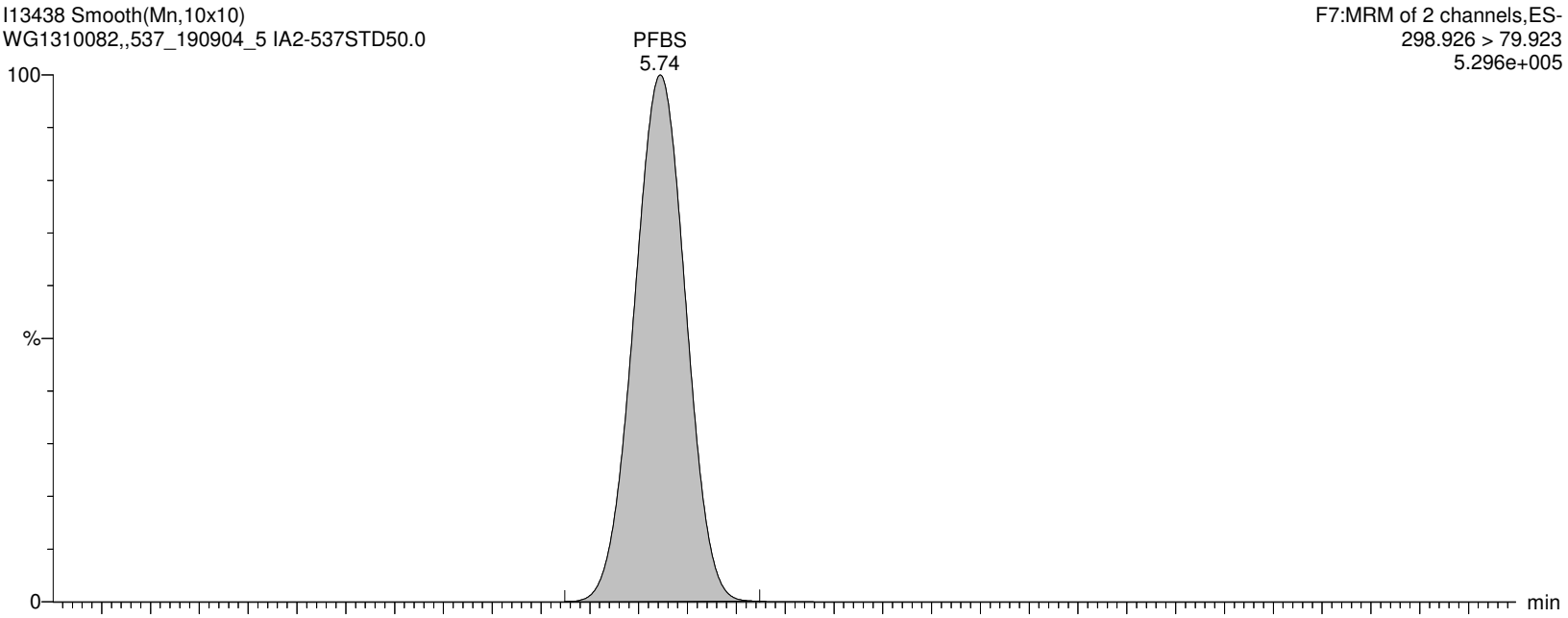


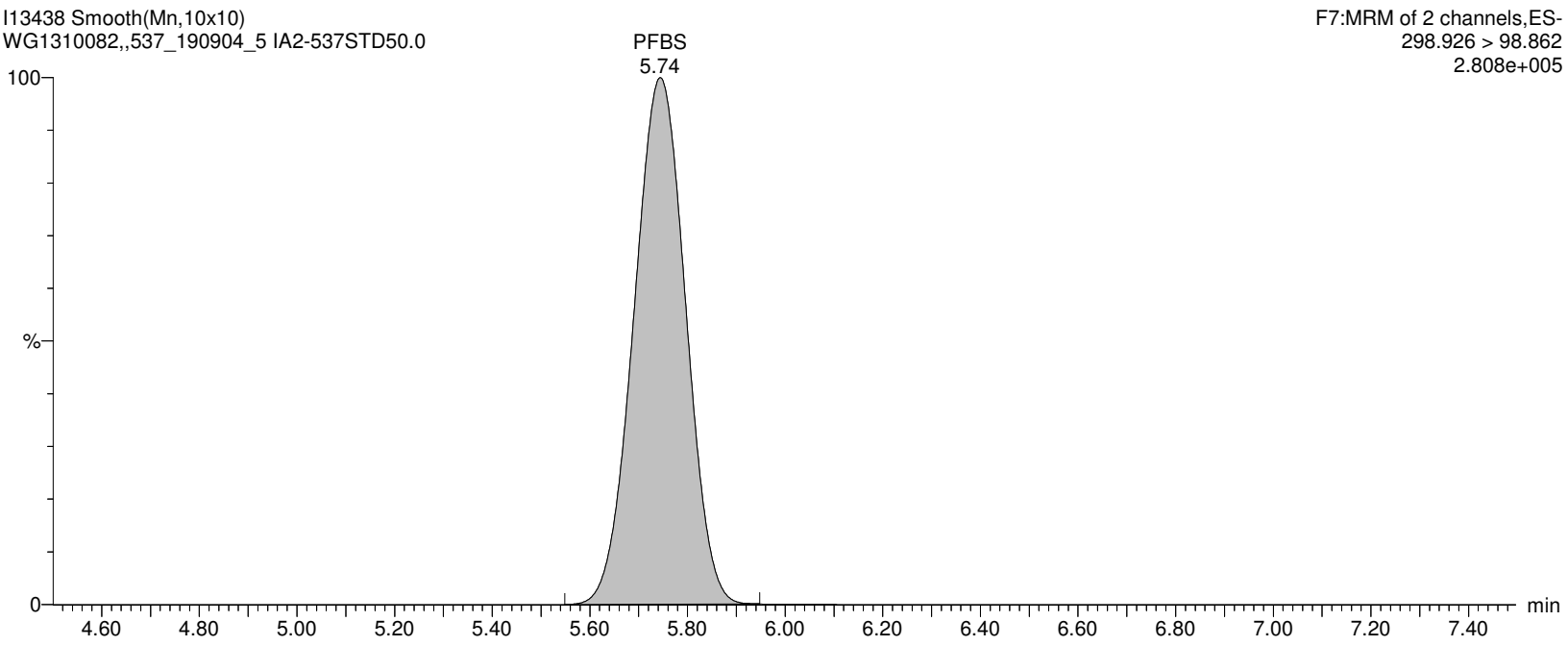
all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
Printed: Monday, November 18, 2019 13:42:56 Eastern Standard Time

**Name: I13438**
**ID: IA2-537STD50.0**
**Date: 18-Nov-2019**
**Time: 11:43:24**
**Description: WG1310082,,537_190904_5**
**User: LCMS02:JW**
**Vial: 1:A,6**
**Instrument: XEVO-TQSmicro#QEB0050**
**Inlet Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\LCMS_537_ISO_B**
**Tune Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\181009_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**PFBS**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
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**Vial: 1:A,6**
**Instrument: XEVO-TQSmicro#QEB0050**
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**Tune Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\181009_TUNE.IPR**
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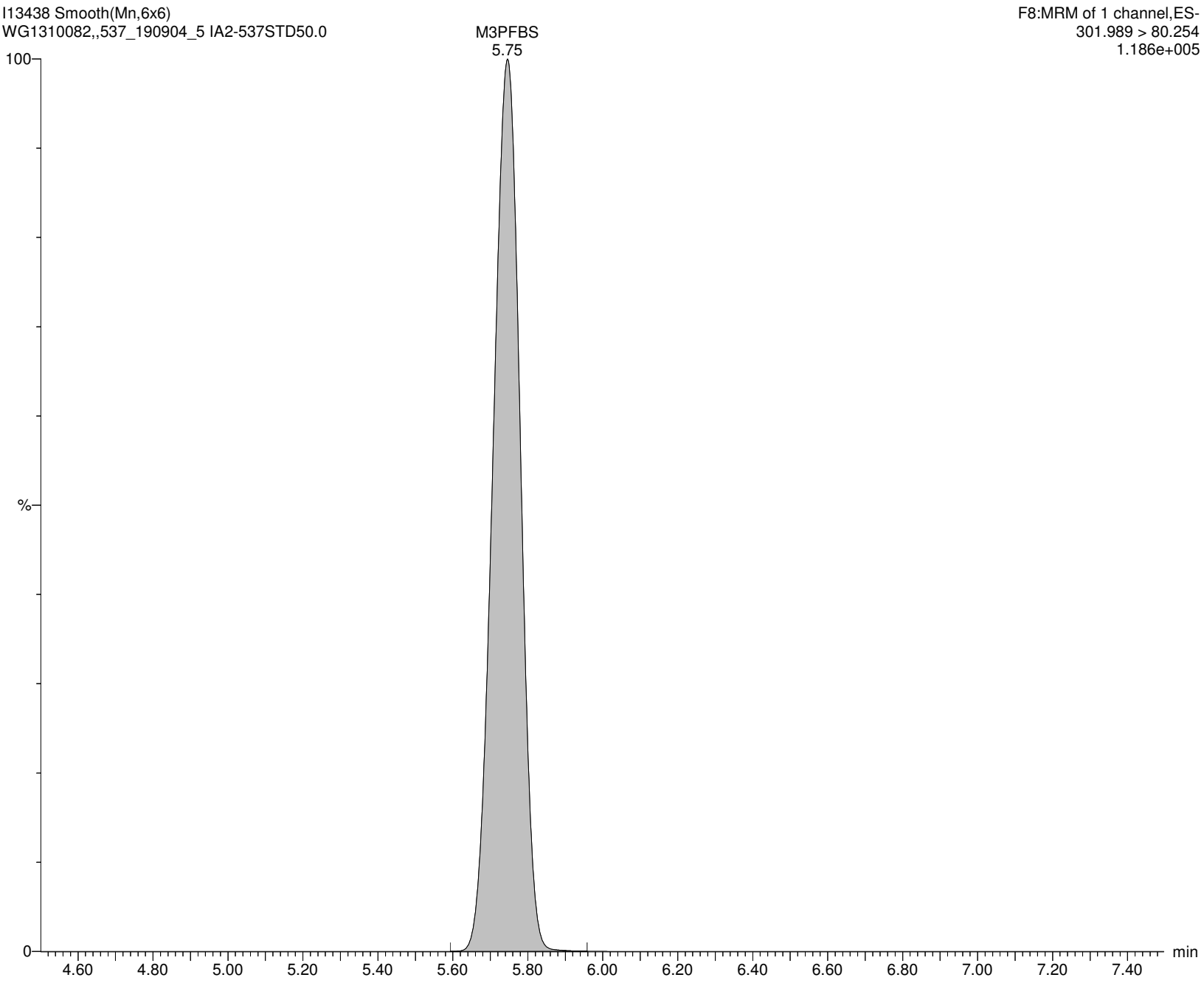
**M3PFBS**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
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**Instrument: XEVO-TQSmicro#QEB0050**
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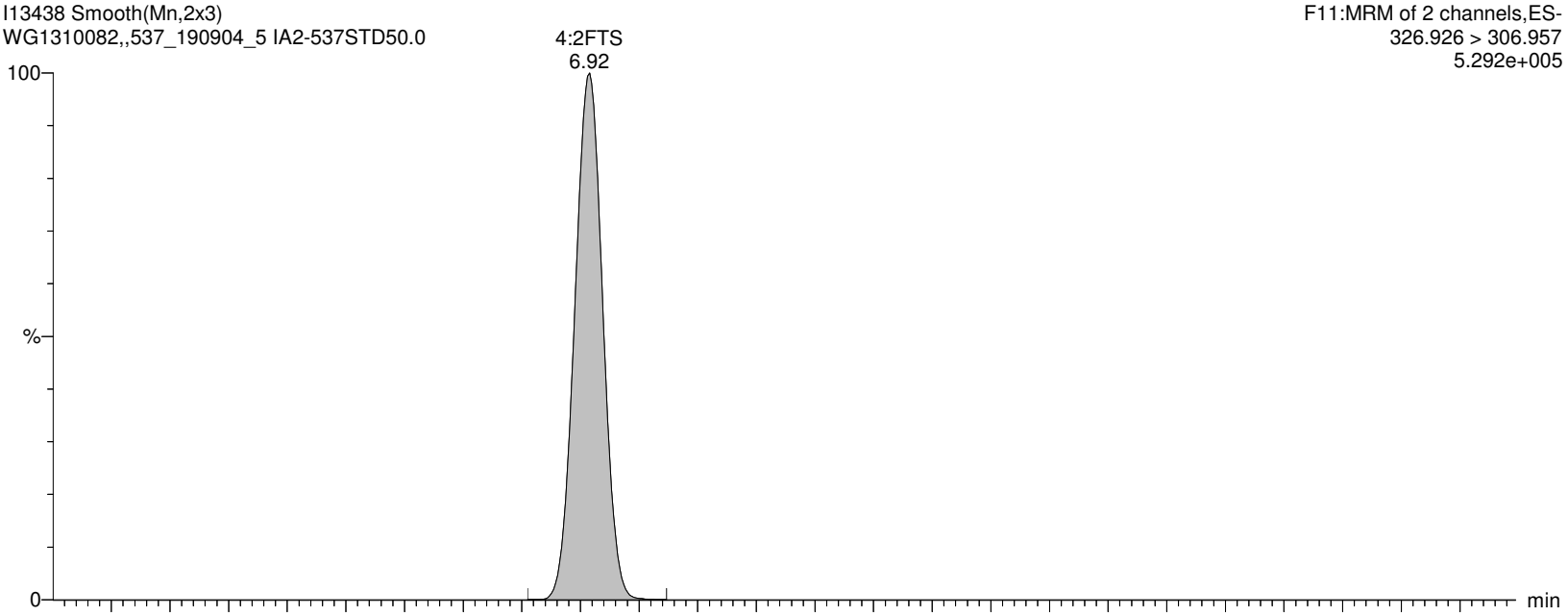
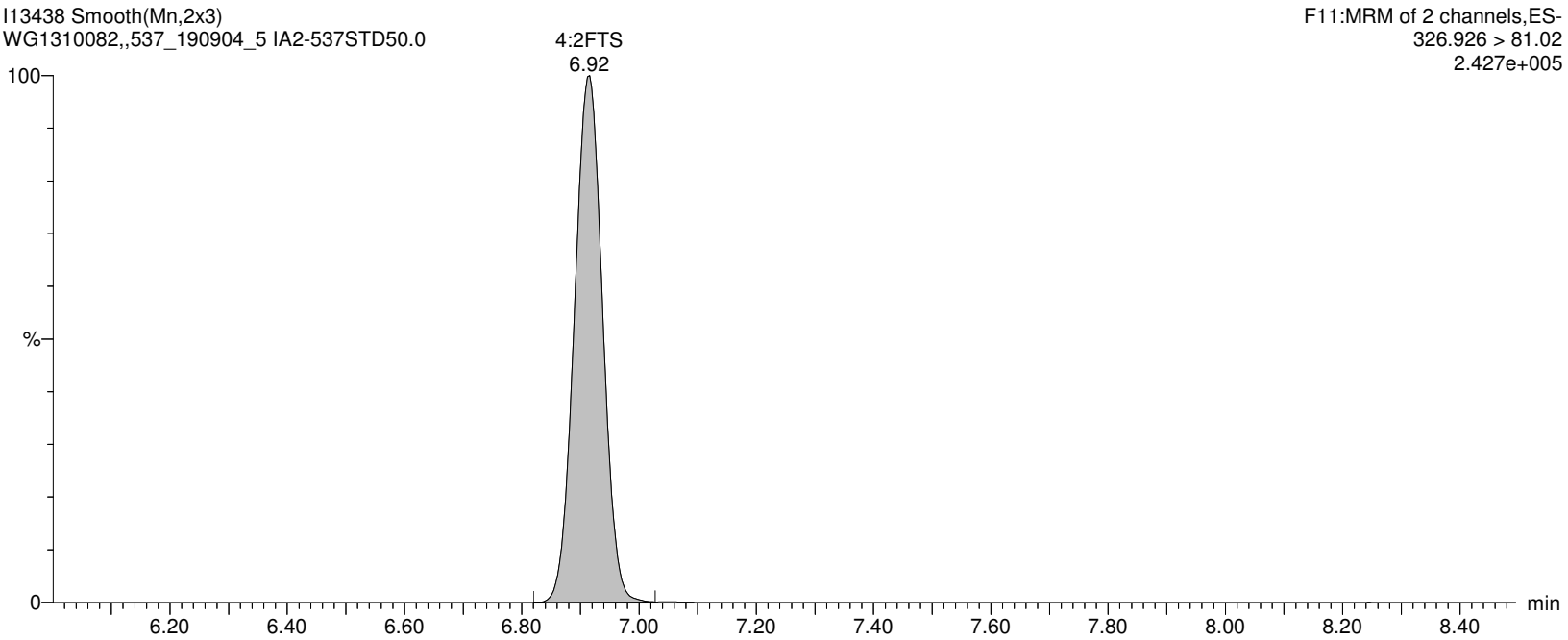
**4:2FTS**





all concentration units in (ng/mL)

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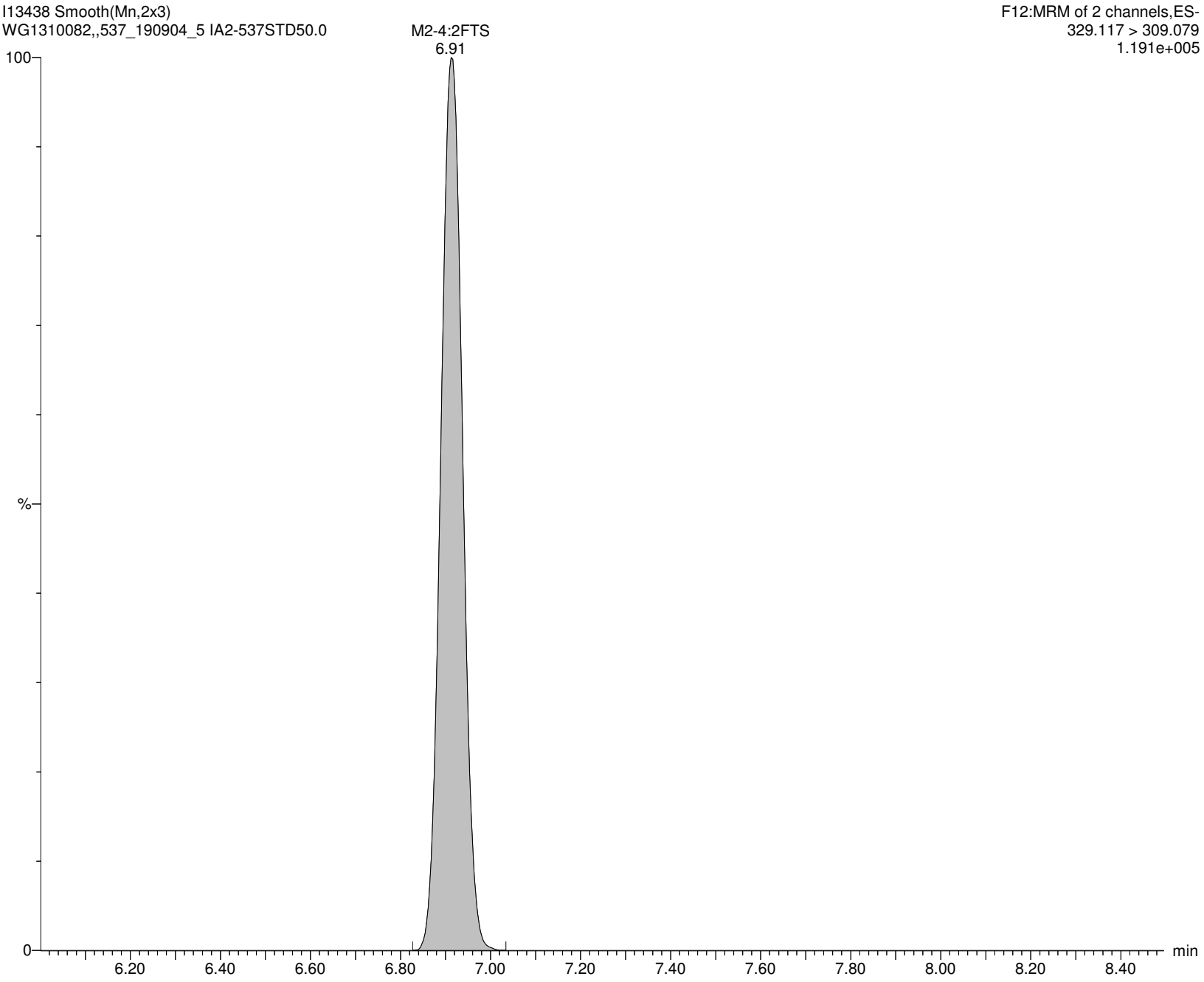
**Vial: 1:A,6**
**Instrument: XEVO-TQSmicro#QEB0050**
**Inlet Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\LCMS_537_ISO_B**
**Tune Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\181009_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**M2-4:2FTS**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
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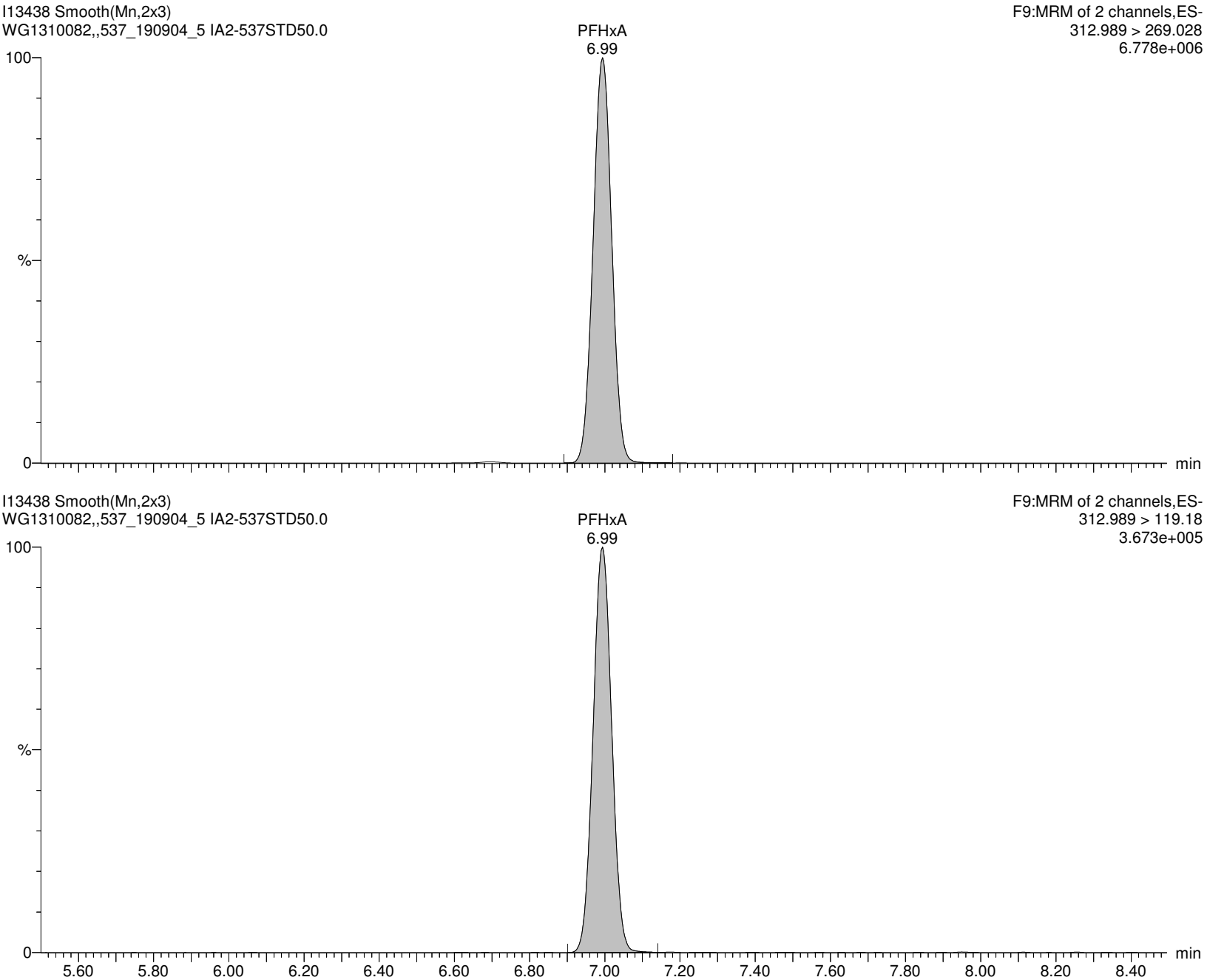
**MS Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**PFHxA**





all concentration units in (ng/mL)

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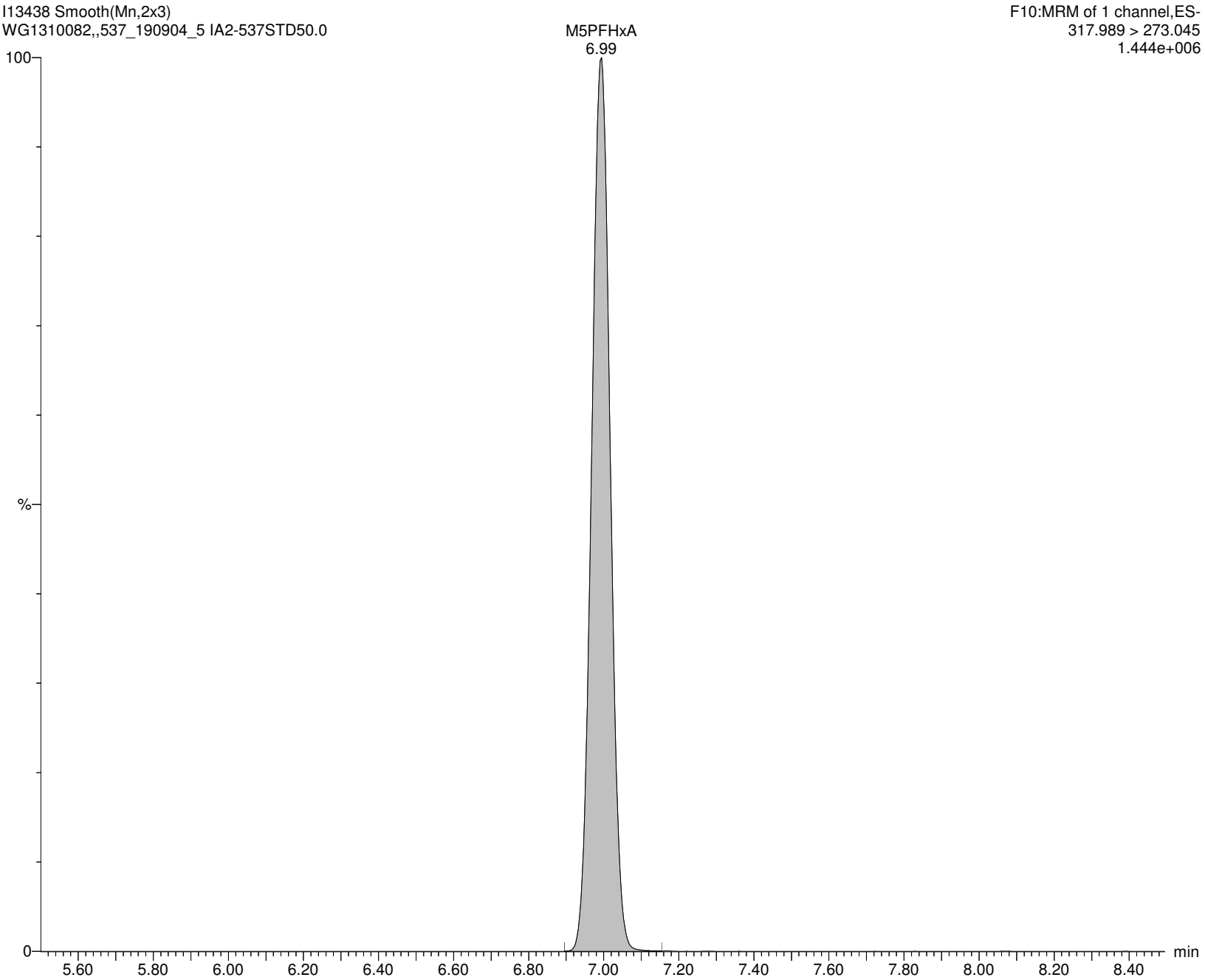
**M5PFHxA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
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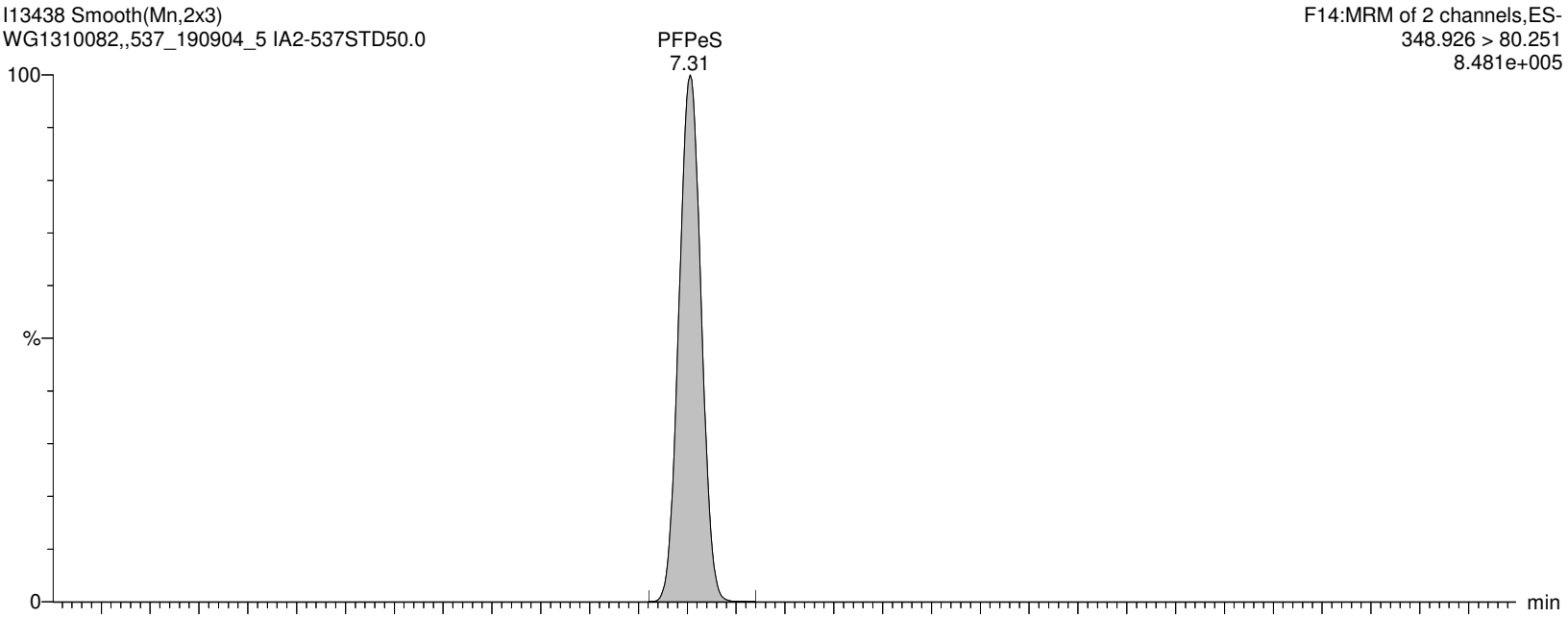
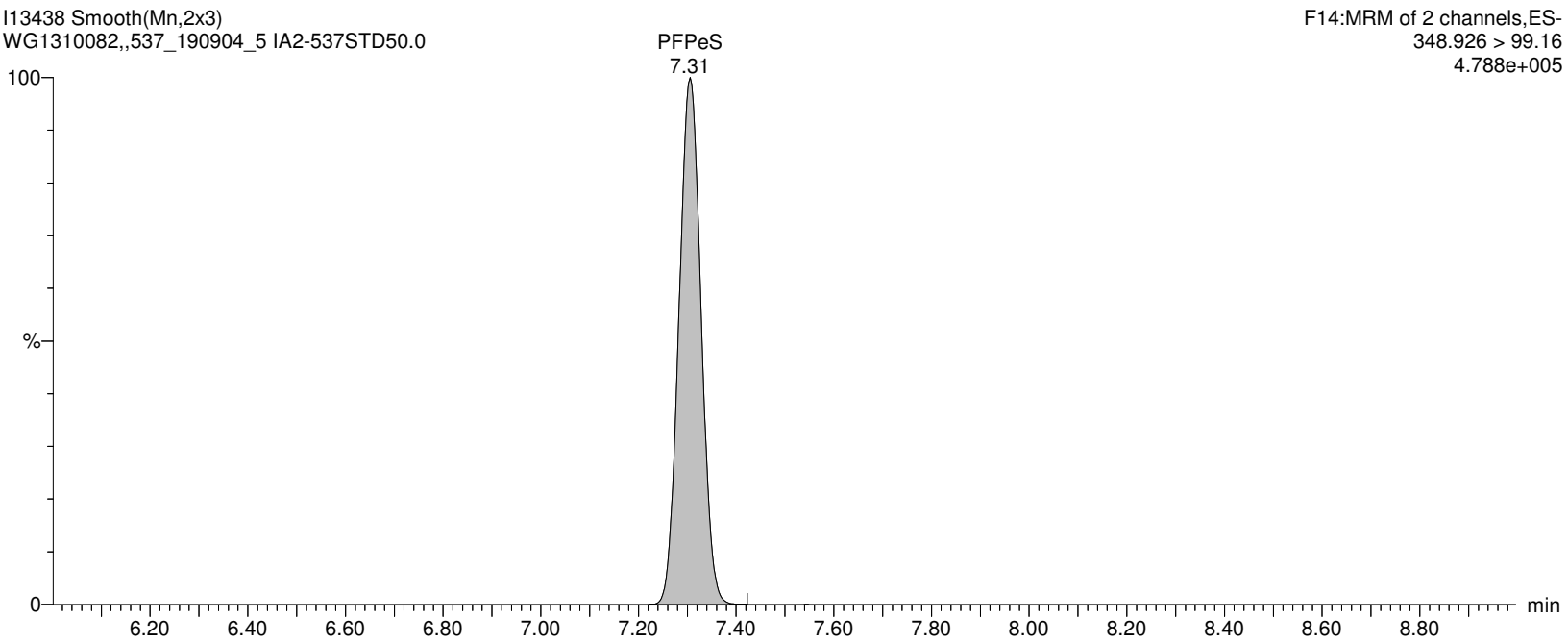
**PFPeS**





all concentration units in (ng/mL)

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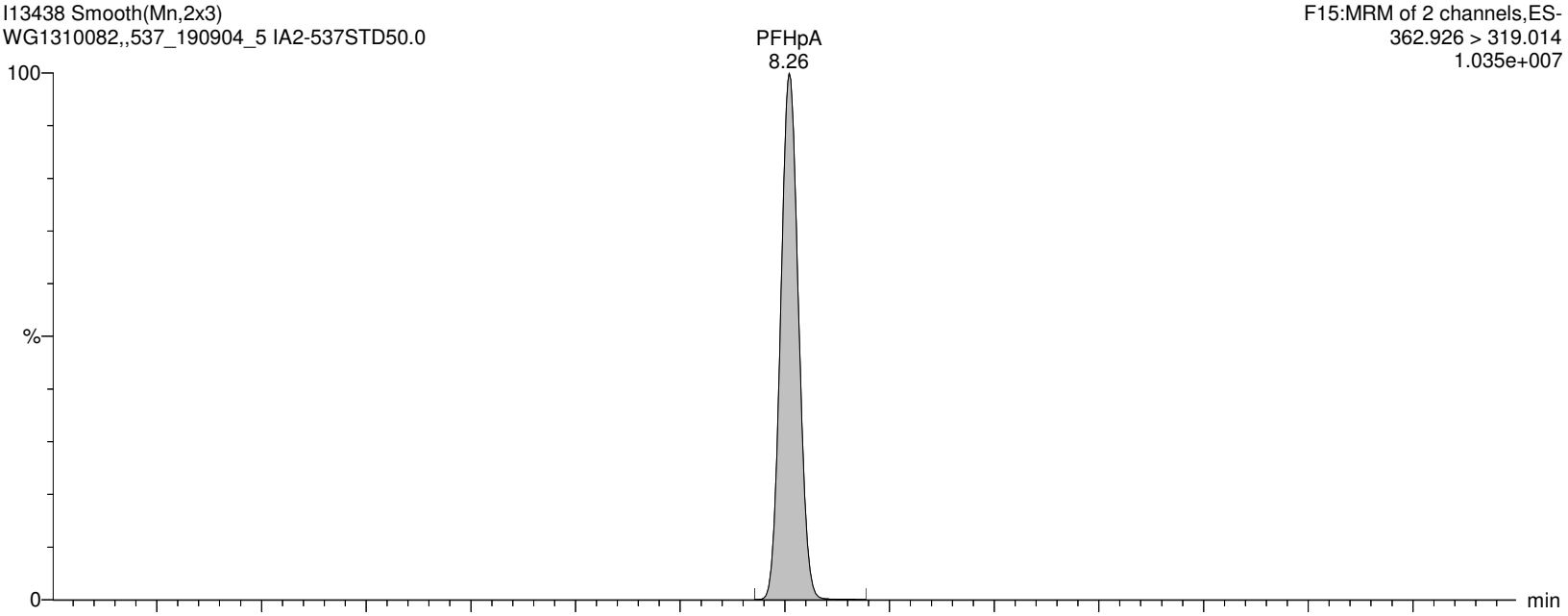
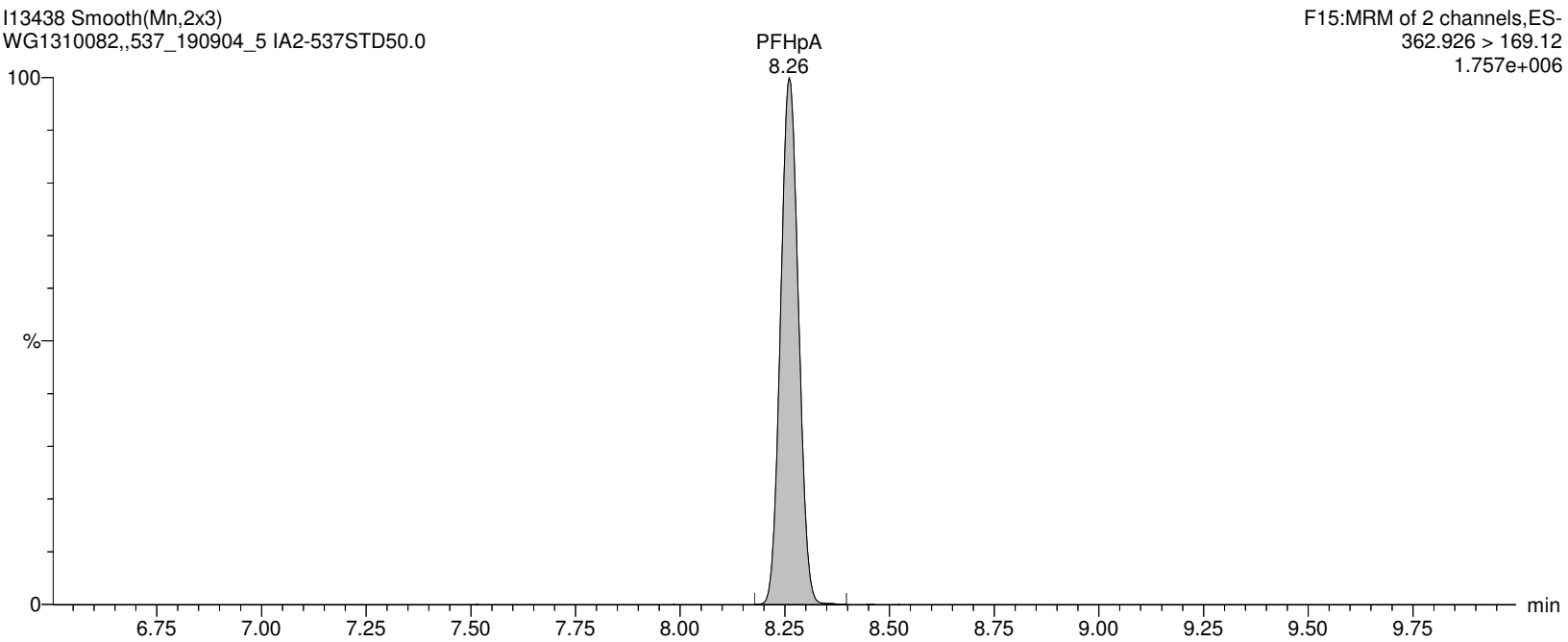
**PFHpA**





all concentration units in (ng/mL)

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**Inlet Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\LCMS_537_ISO_B**
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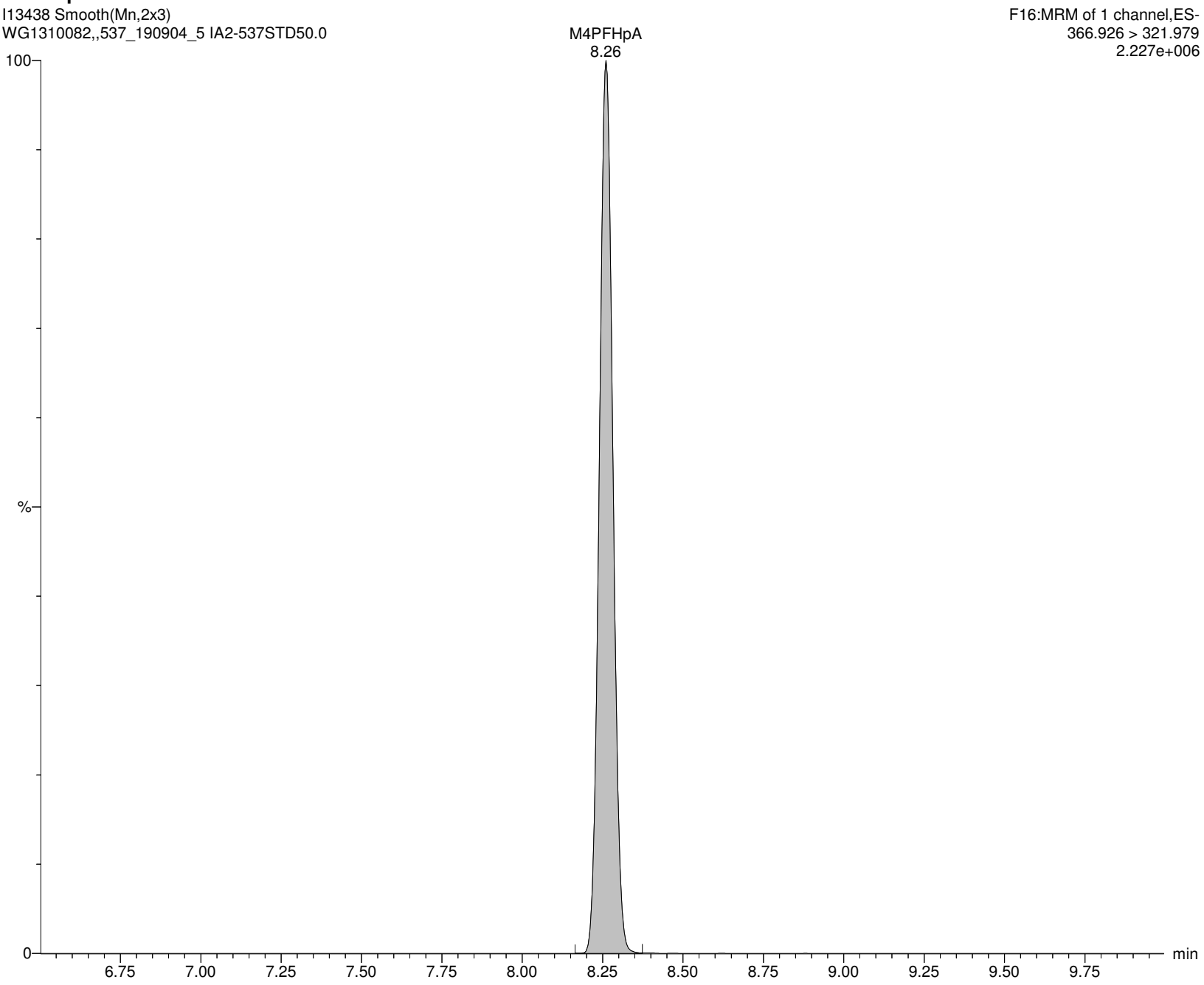
**M4PFHpA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
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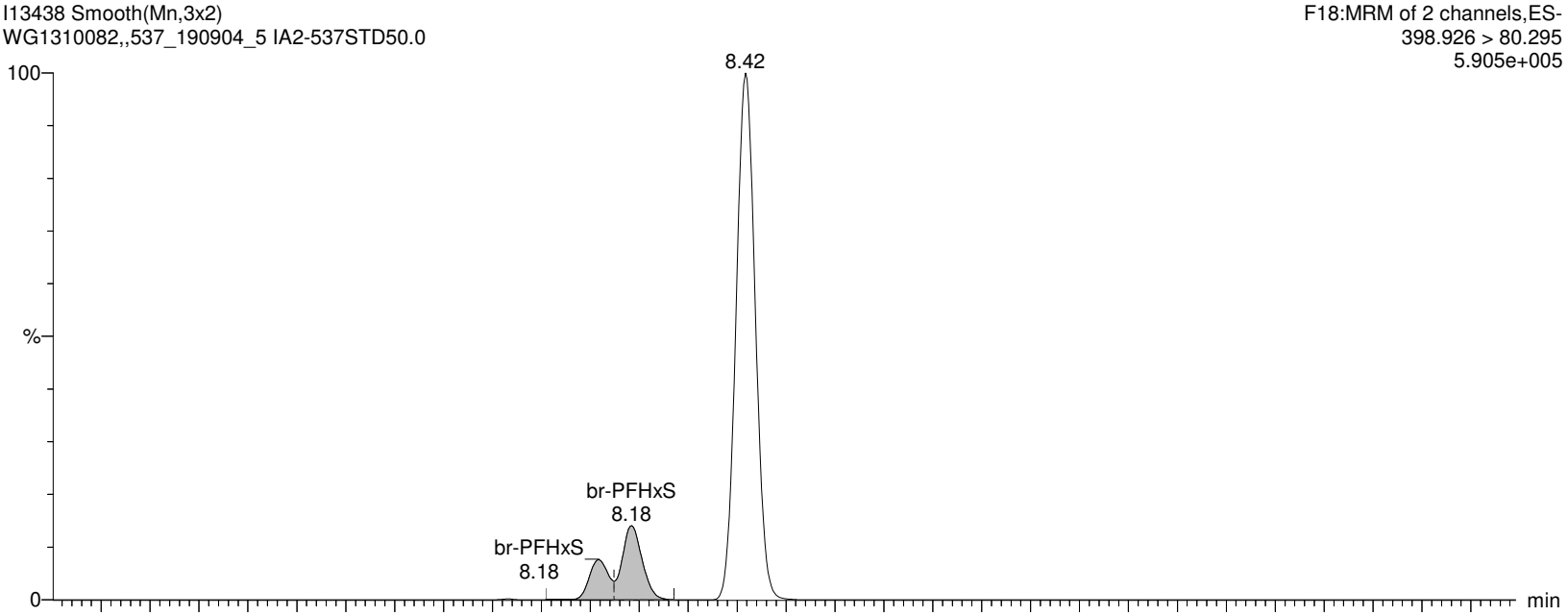
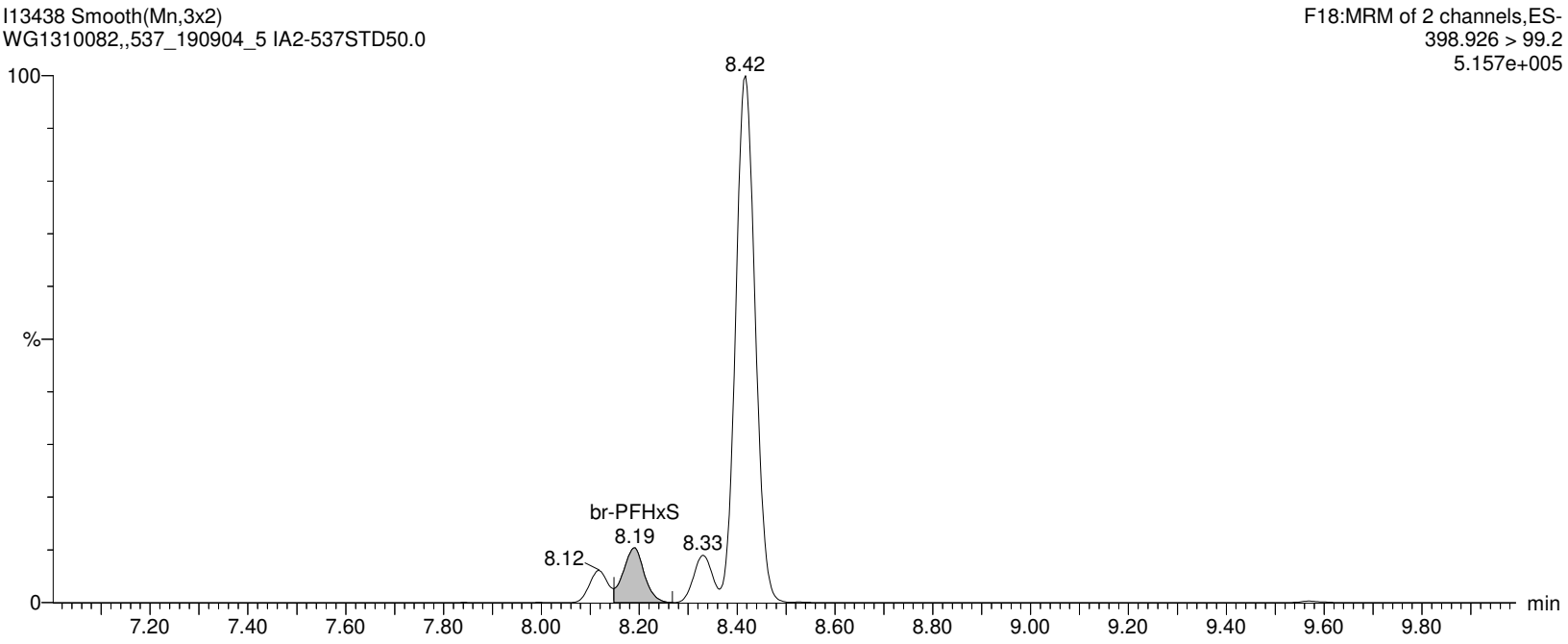
**br-PFHxS**





all concentration units in (ng/mL)

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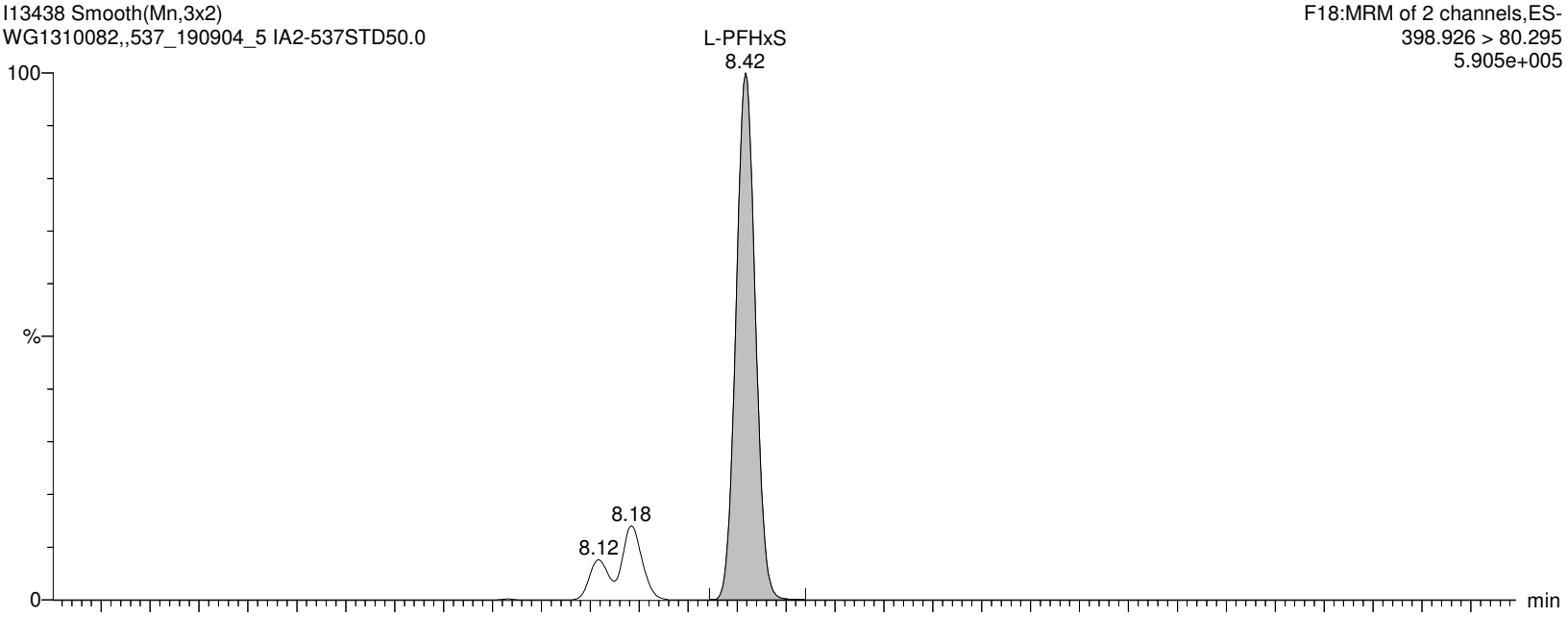
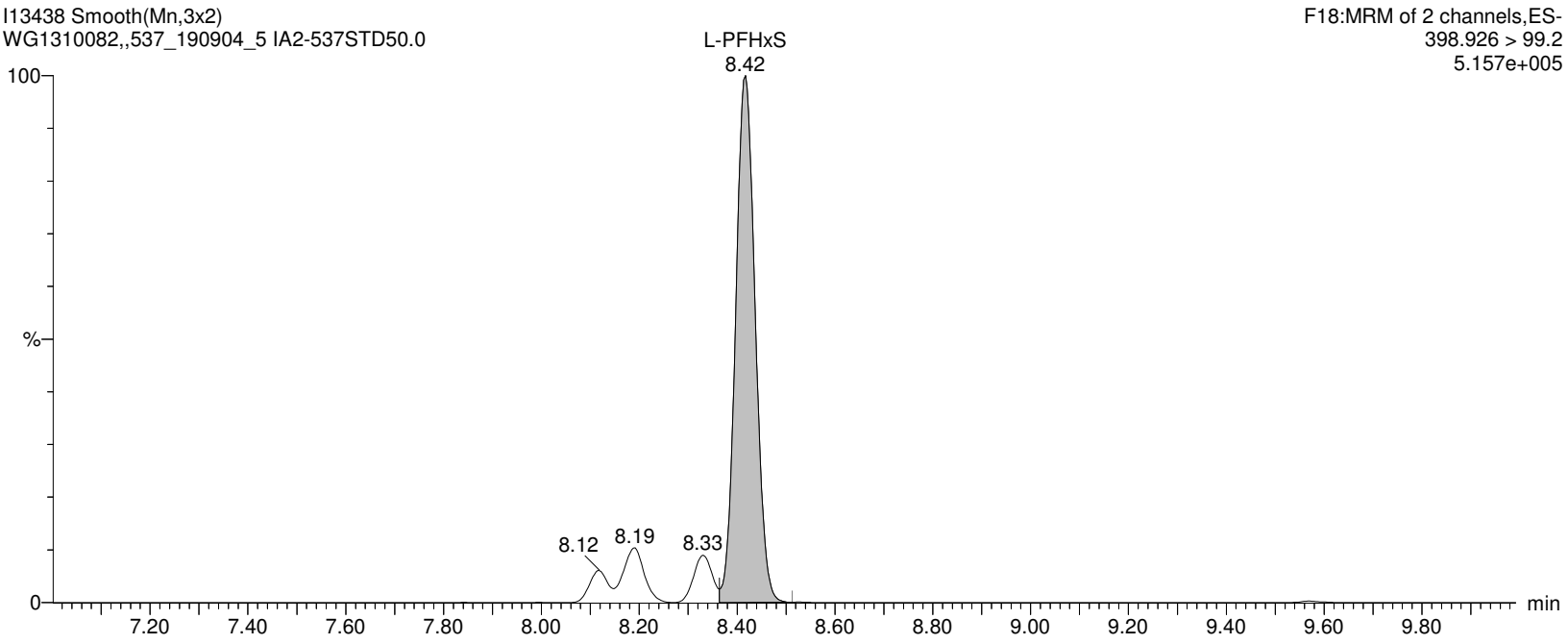
**MS Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**L-PFHxS**





all concentration units in (ng/mL)

Alpha Analytical Inc.
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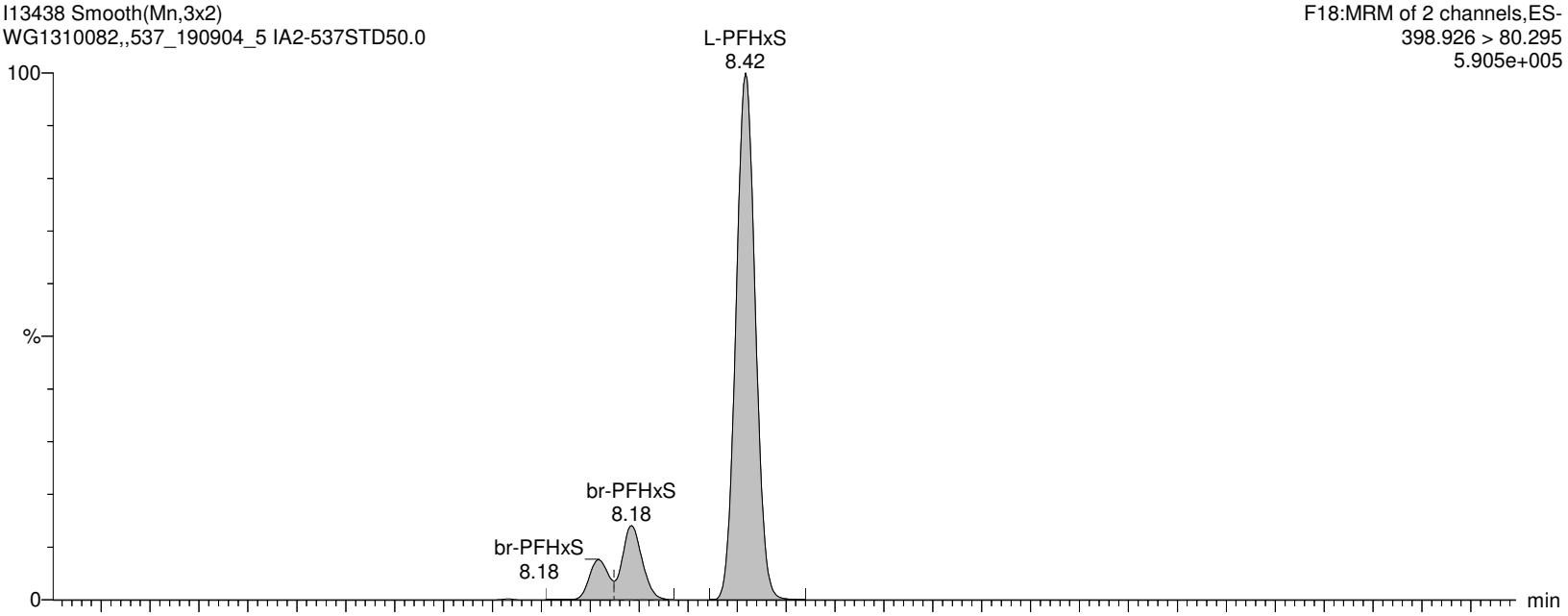
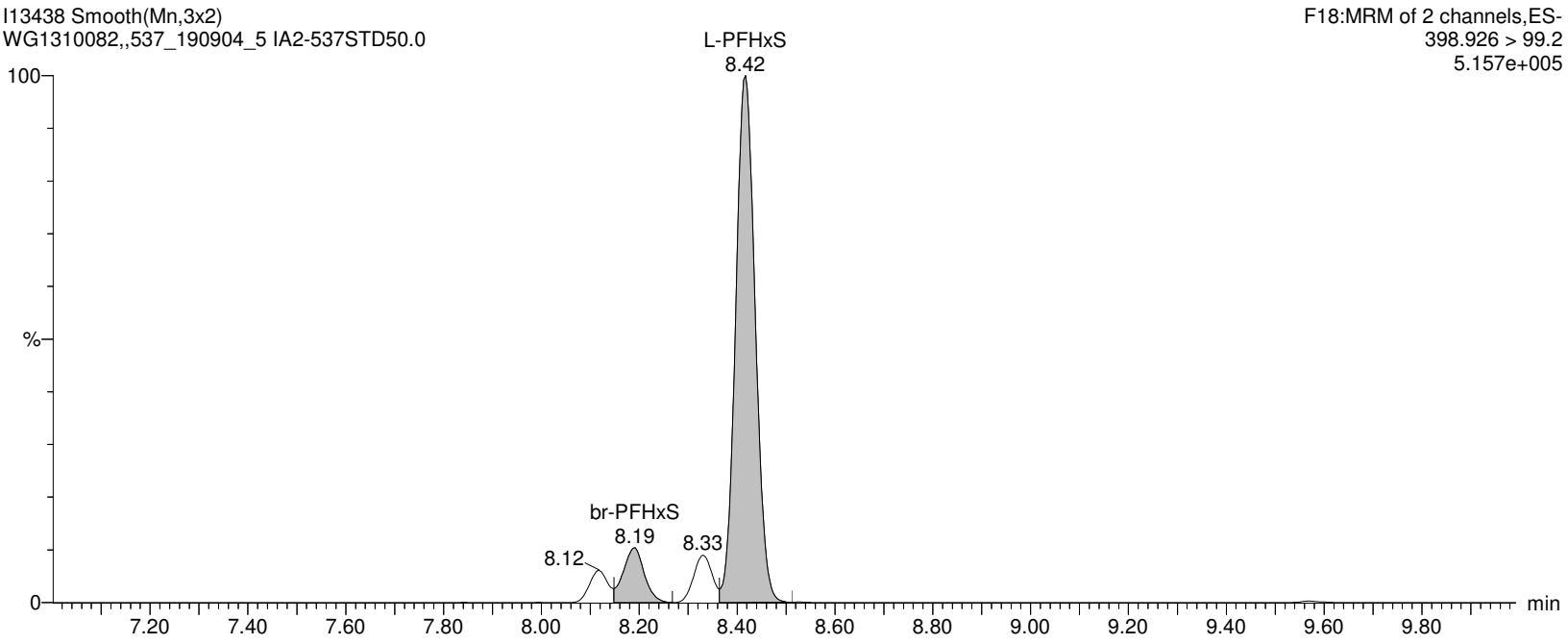
**PFHxS**





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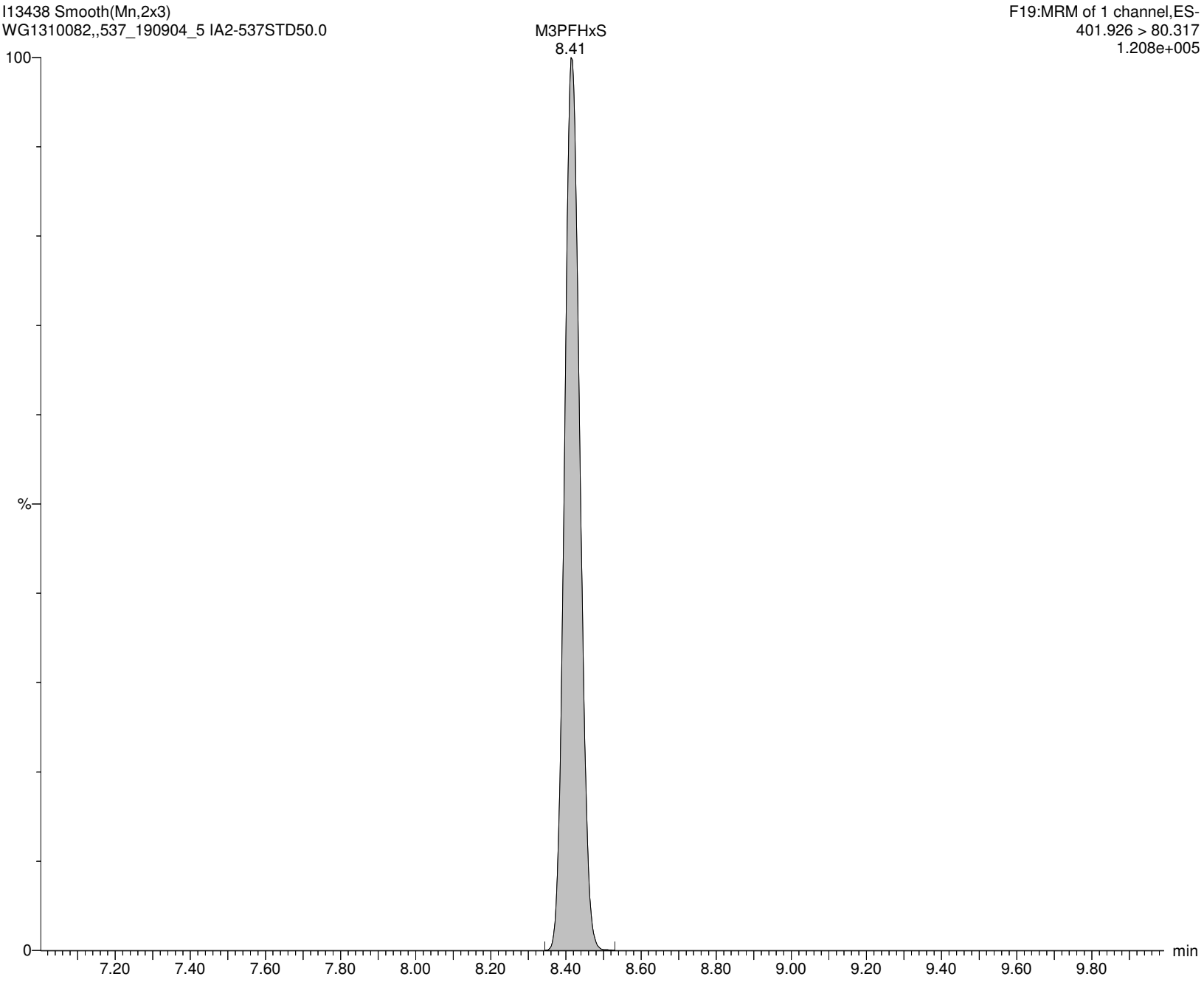
**M3PFHxS**





all concentration units in (ng/mL)

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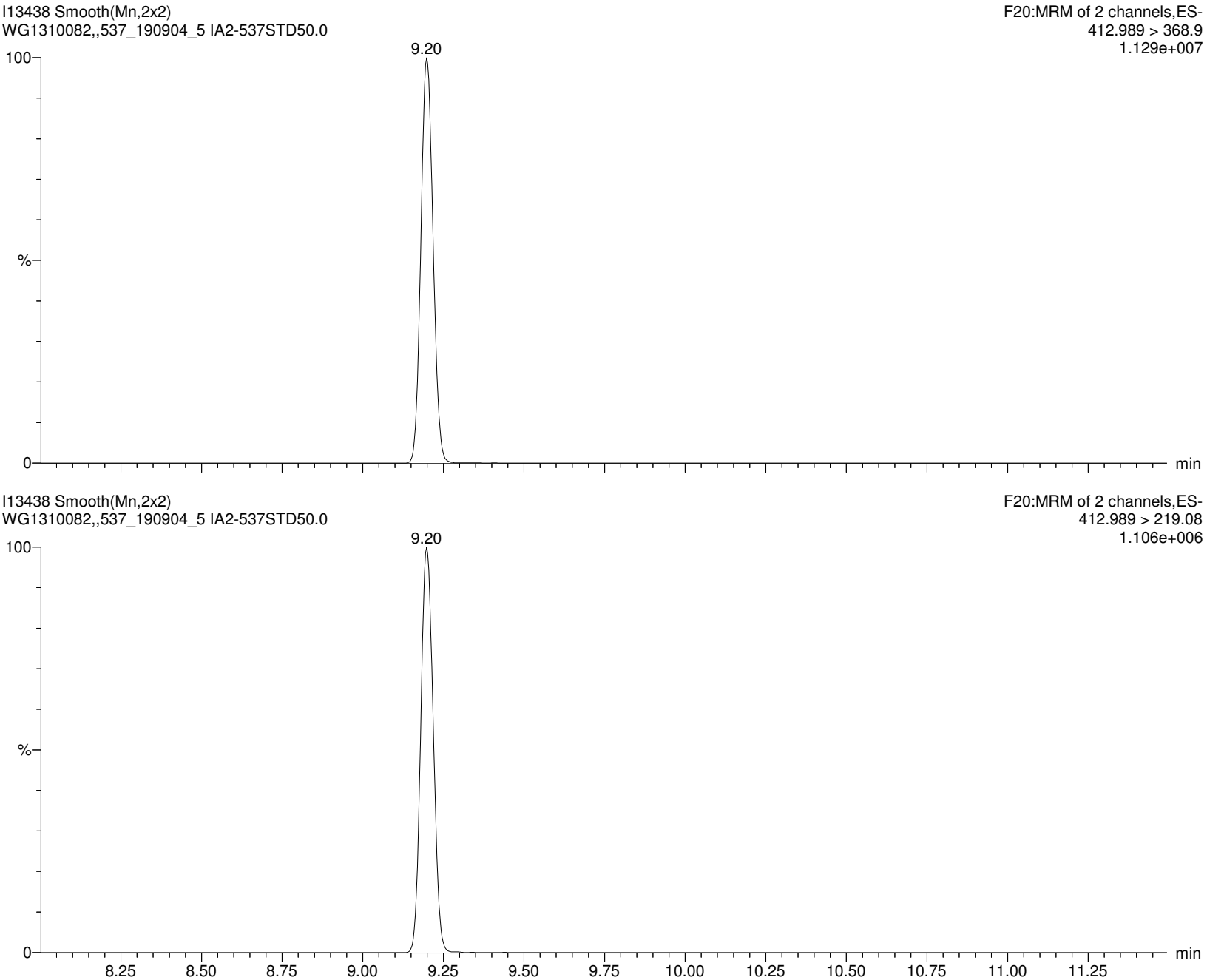
**br-PFOA**





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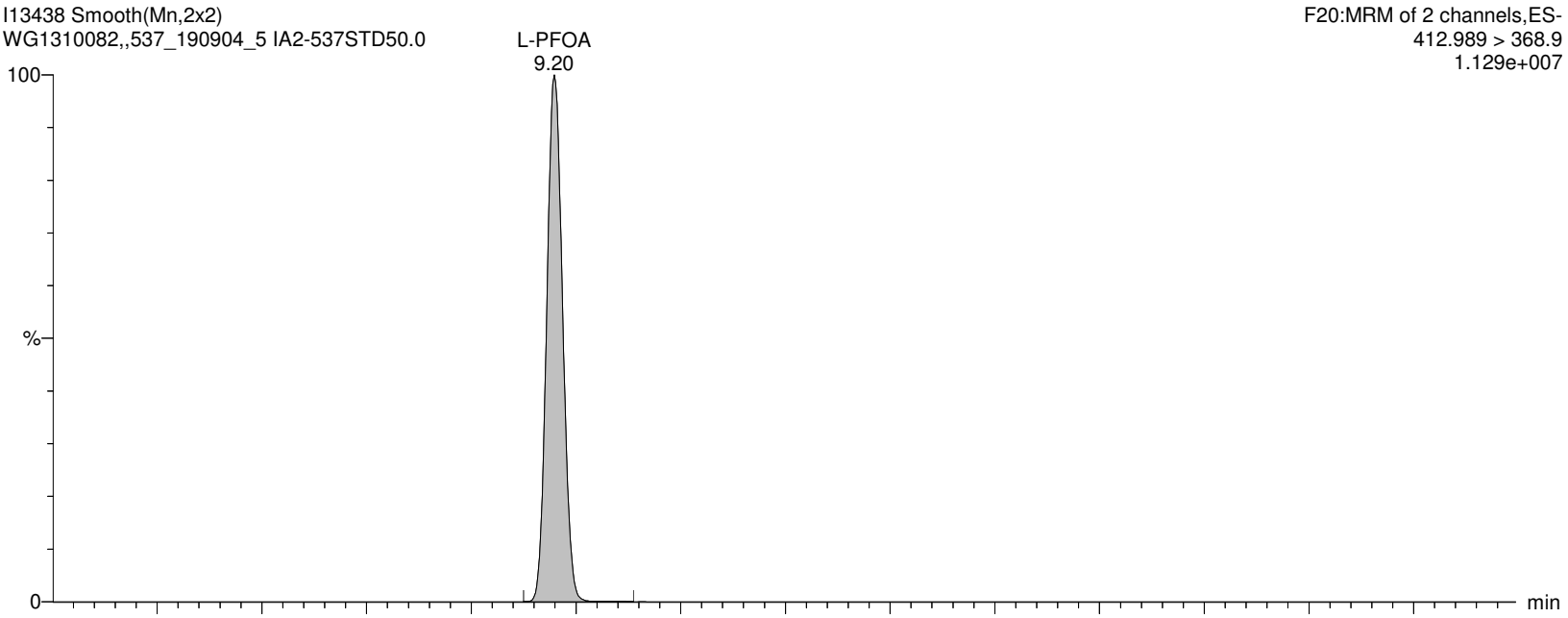
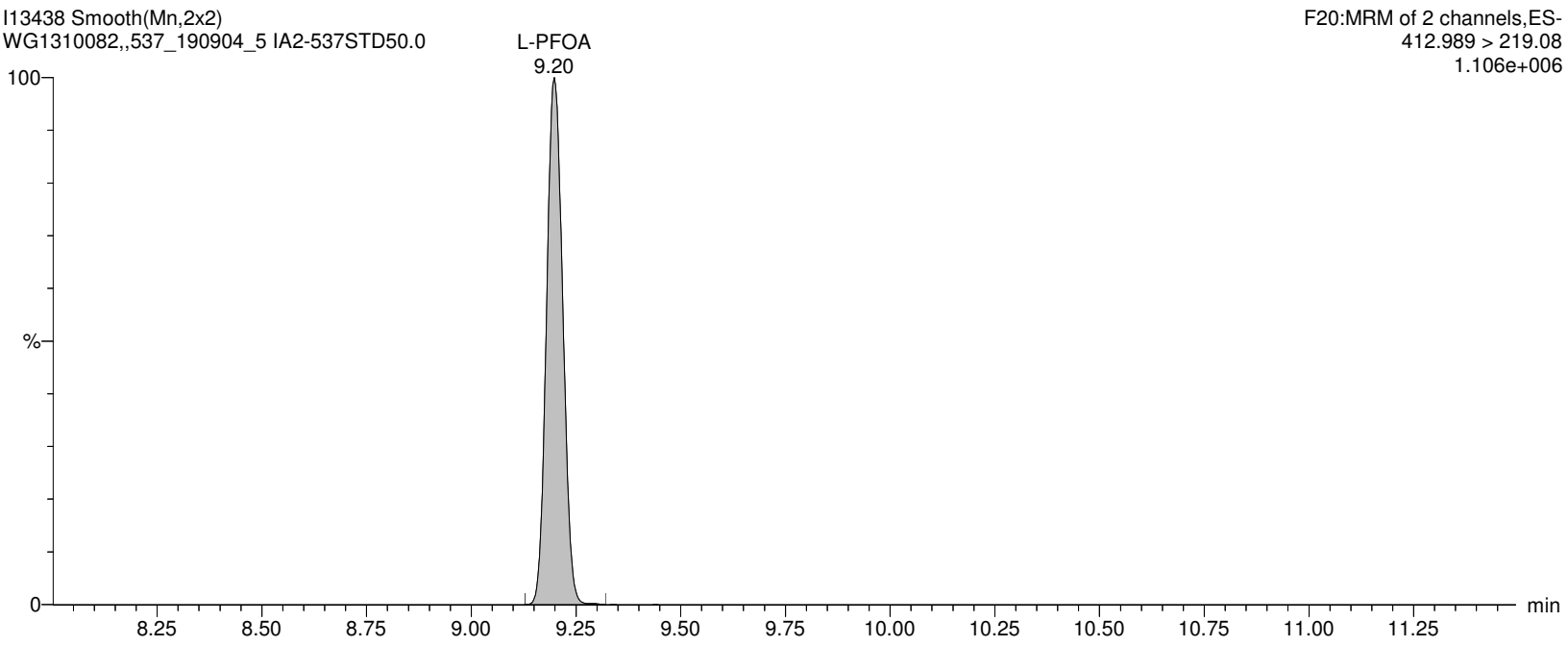
**L-PFOA**



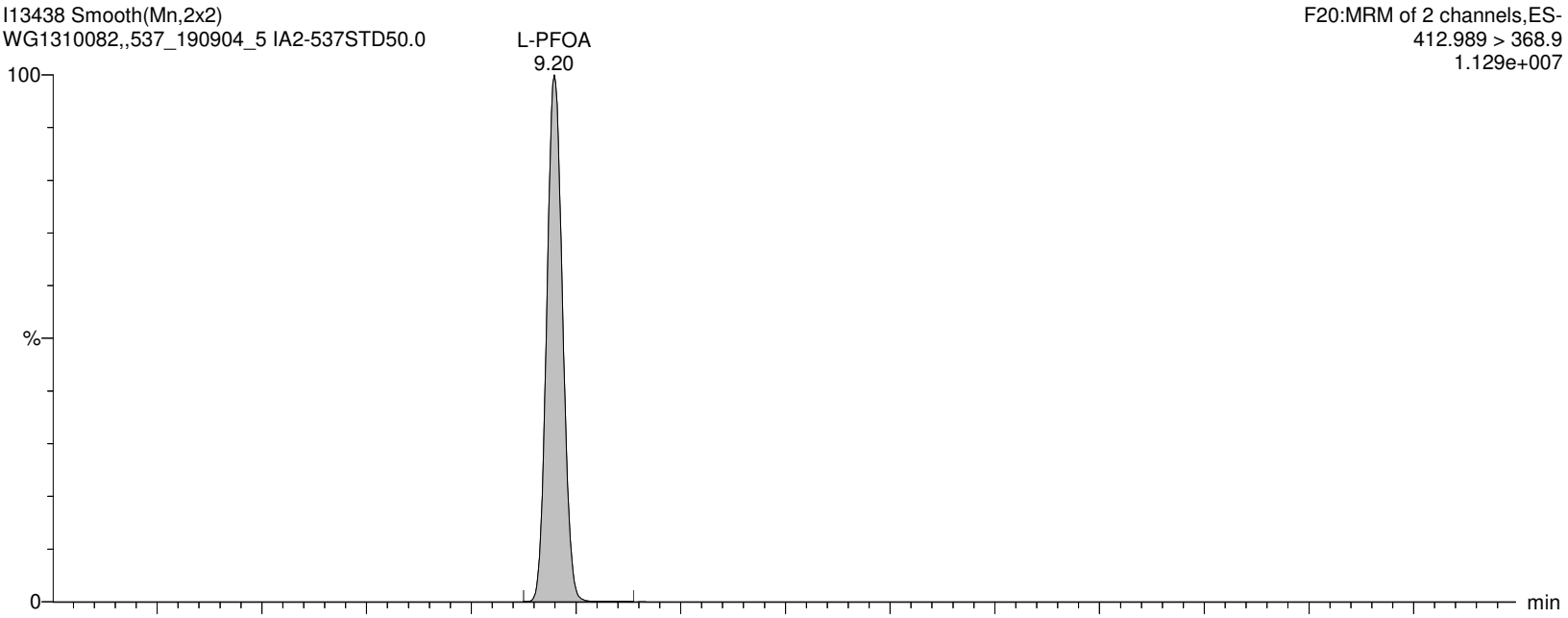


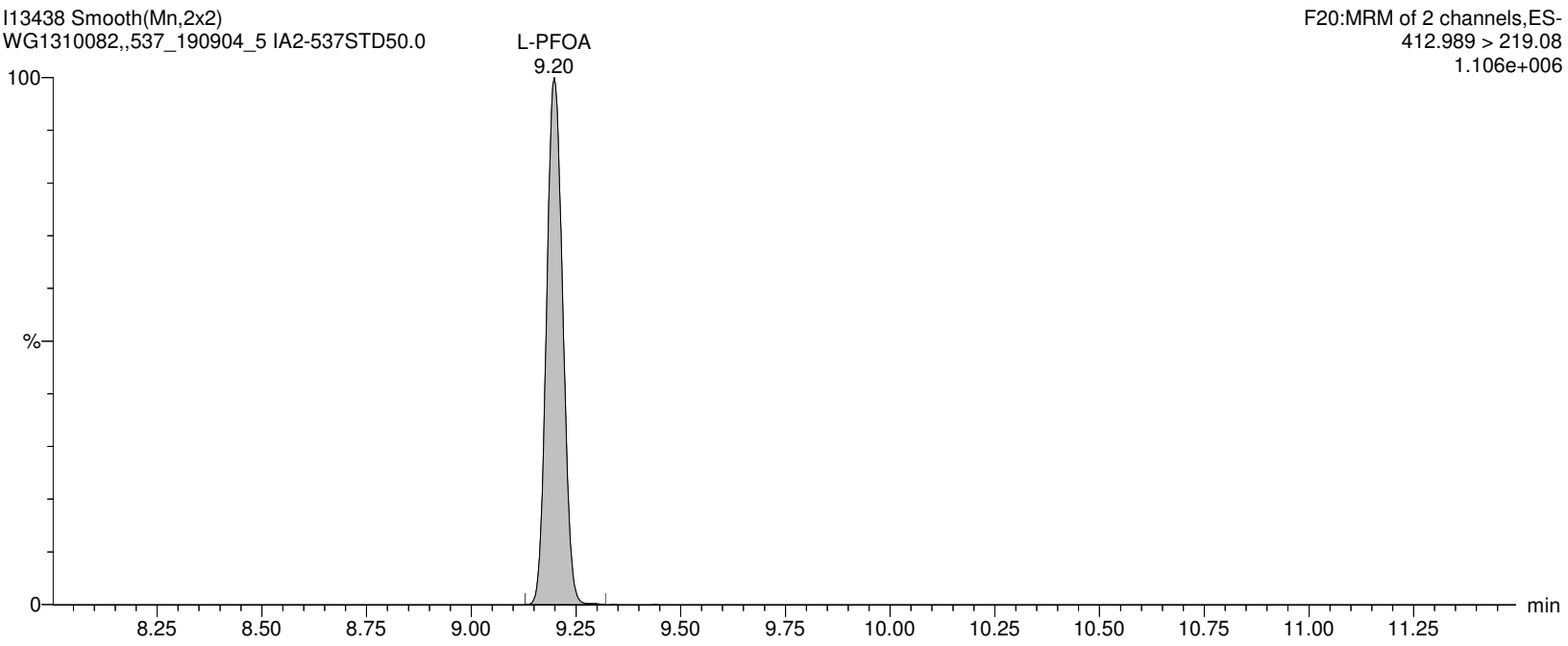
all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
Printed: Monday, November 18, 2019 13:42:56 Eastern Standard Time

**Name: I13438**
**ID: IA2-537STD50.0**
**Date: 18-Nov-2019**
**Time: 11:43:24**
**Description: WG1310082,,537_190904_5**
**User: LCMS02:JW**
**Vial: 1:A,6**
**Instrument: XEVO-TQSmicro#QEB0050**
**Inlet Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\LCMS_537_ISO_B**
**Tune Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\181009_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**PFOA**





all concentration units in (ng/mL)

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Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
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**Vial: 1:A,6**
**Instrument: XEVO-TQSmicro#QEB0050**
**Inlet Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\LCMS_537_ISO_B**
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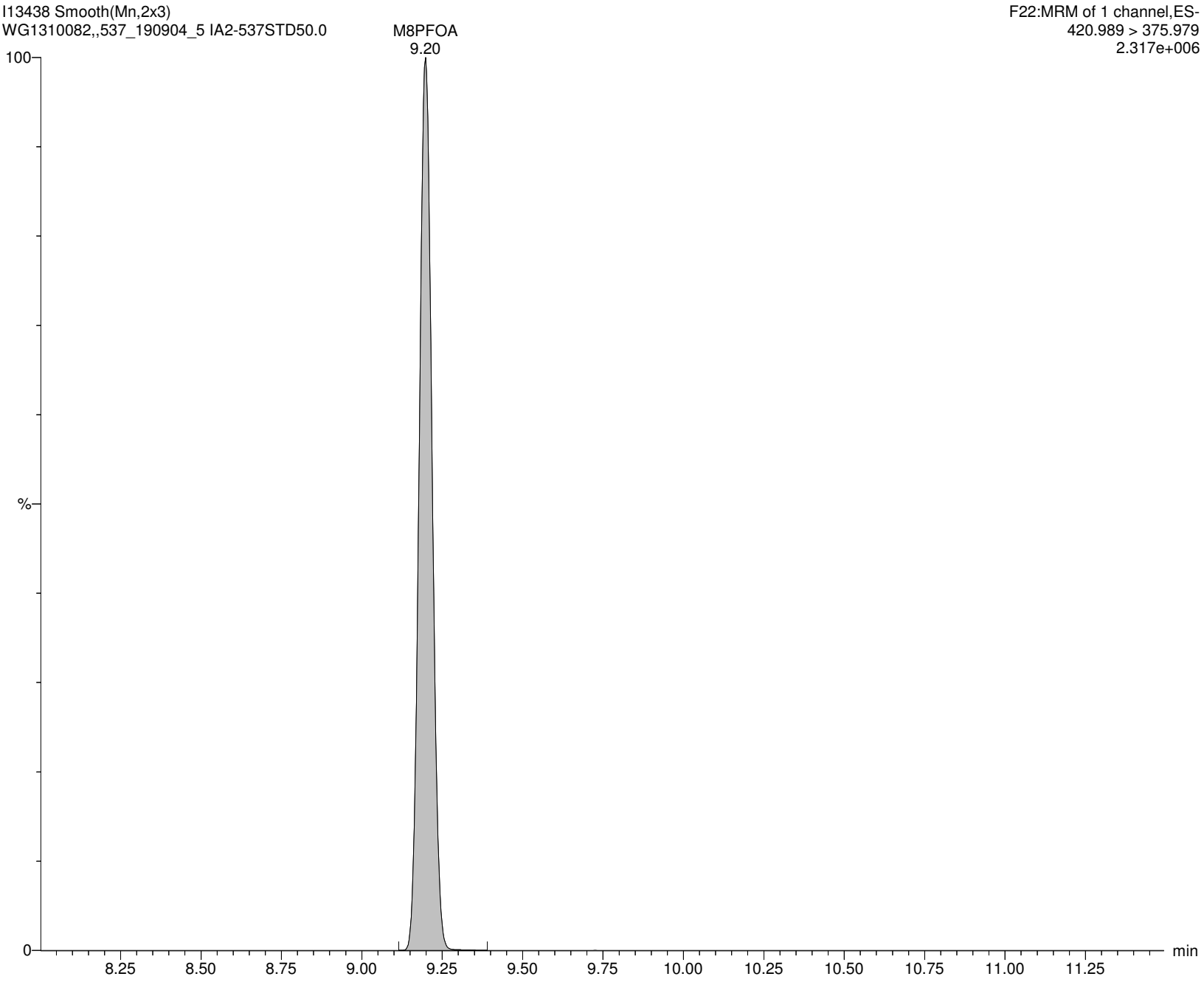



all concentration units in (ng/mL)

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Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
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**Vial: 1:A,6**
**Instrument: XEVO-TQSmicro#QEB0050**
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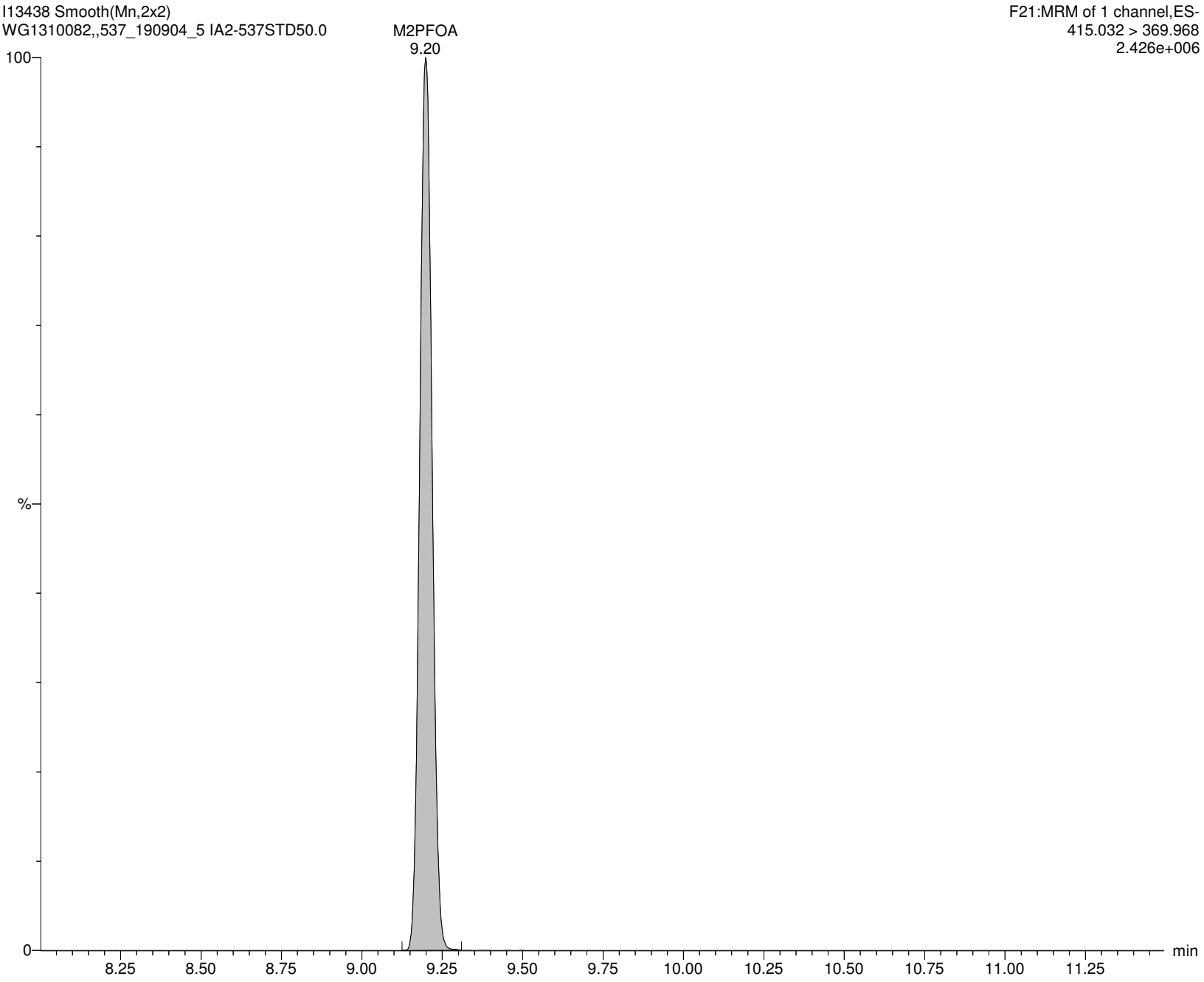



all concentration units in (ng/mL)

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Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
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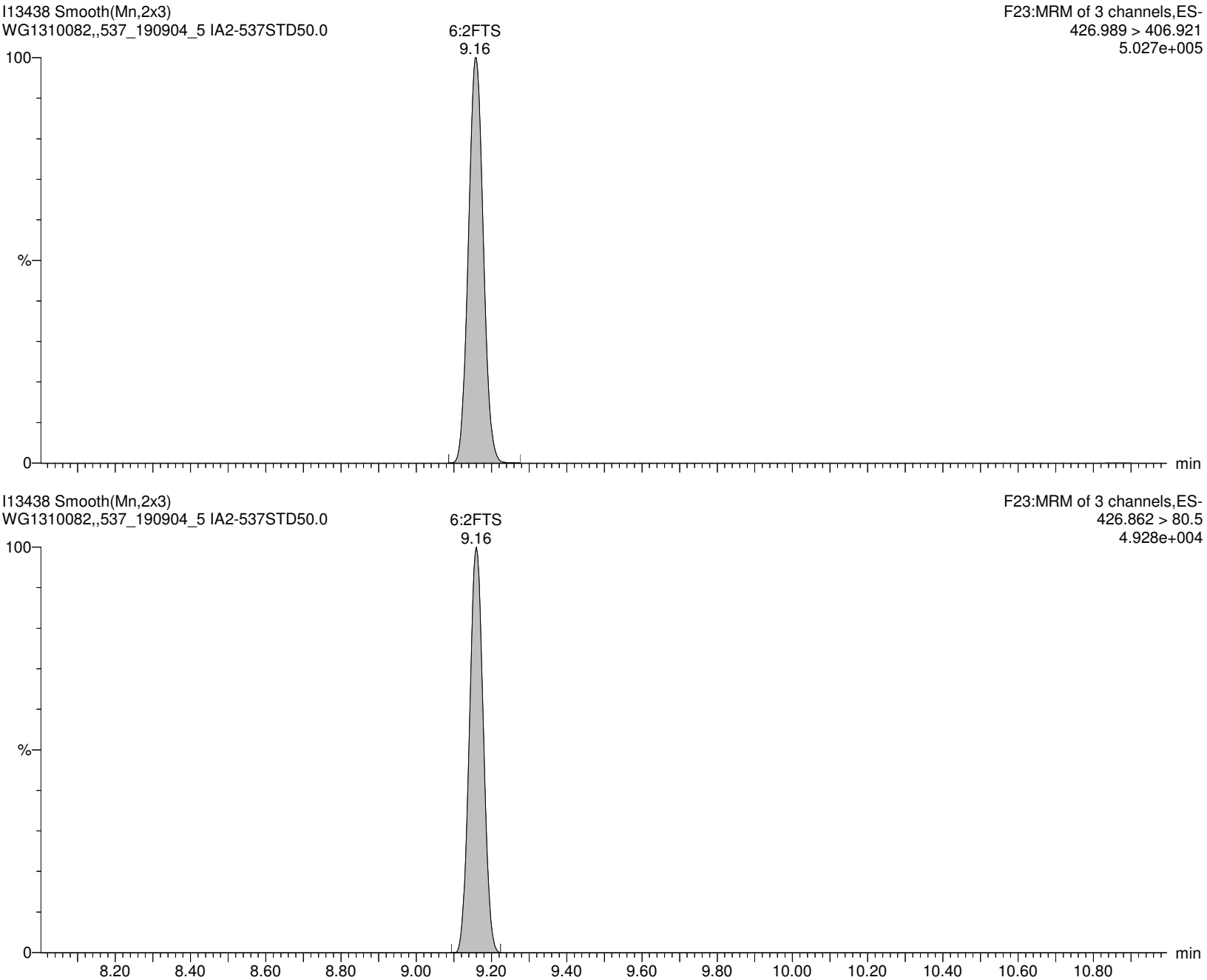
**6:2FTS**





all concentration units in (ng/mL)

Alpha Analytical Inc.
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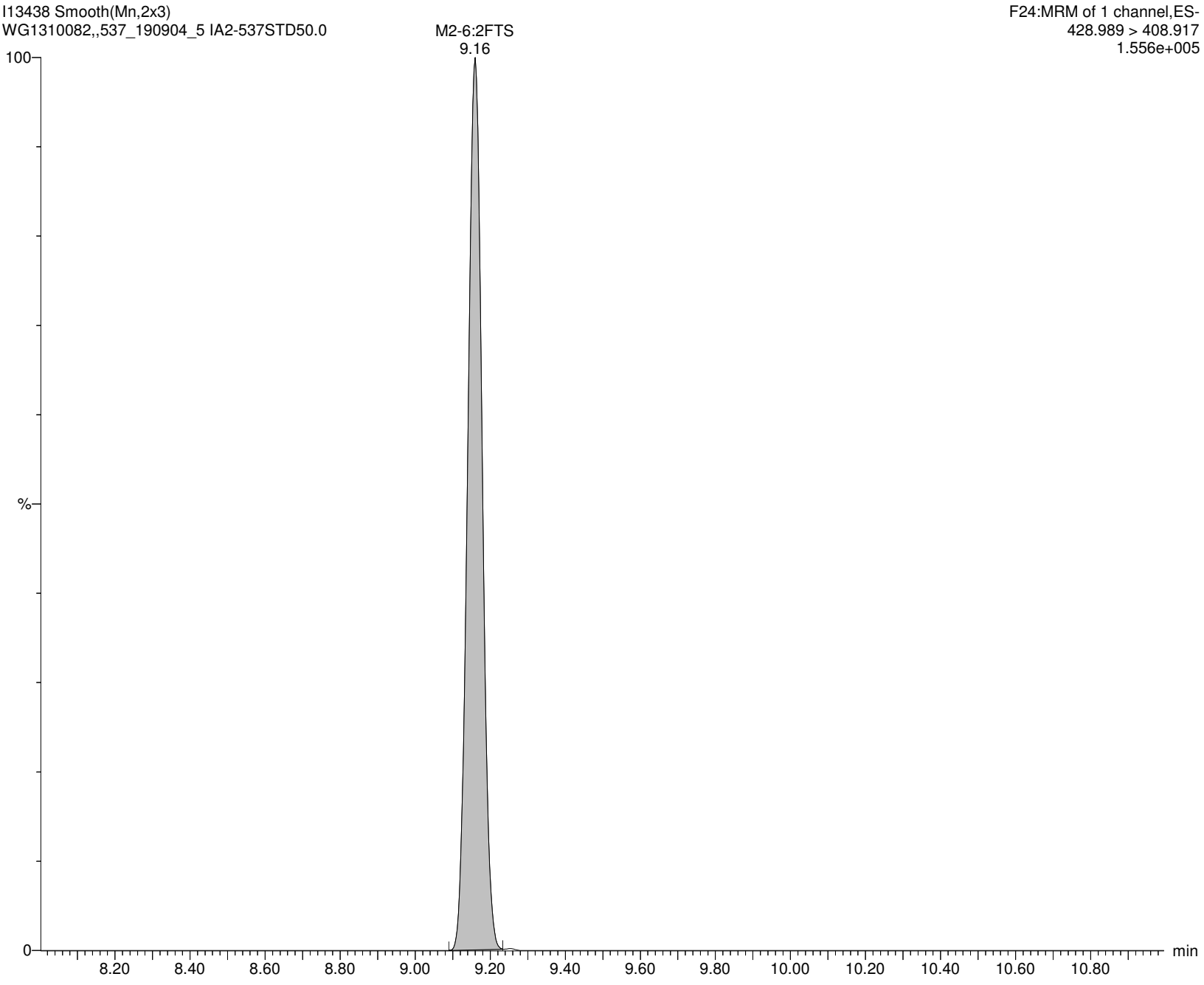
**M2-6:2FTS**





all concentration units in (ng/mL)

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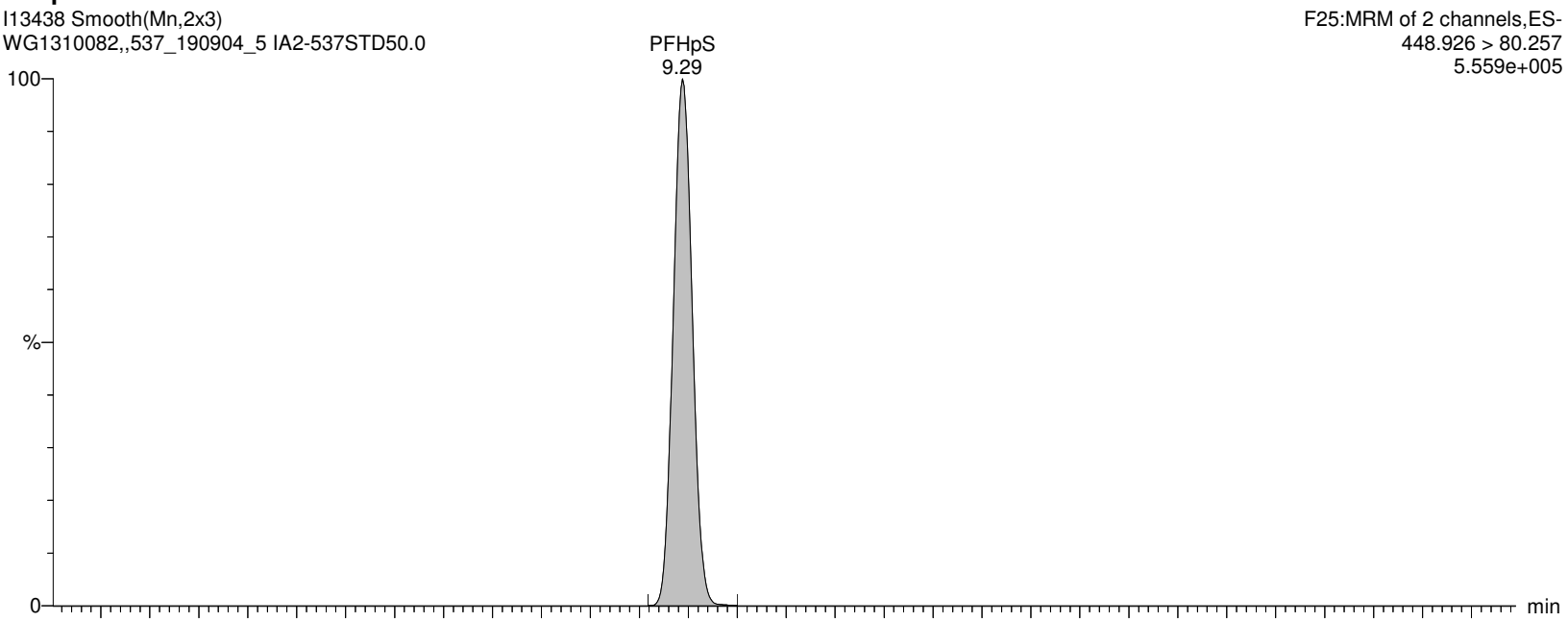
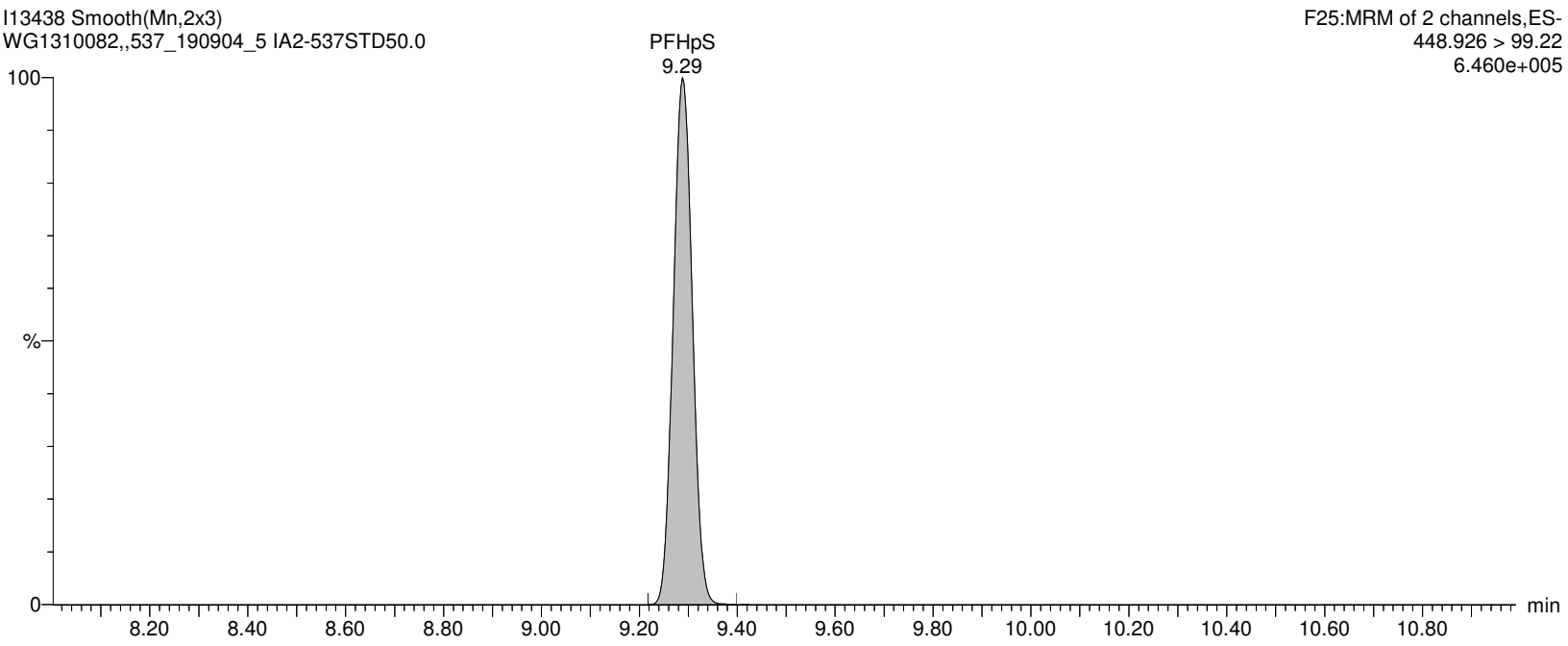
**PFHpS**





all concentration units in (ng/mL)

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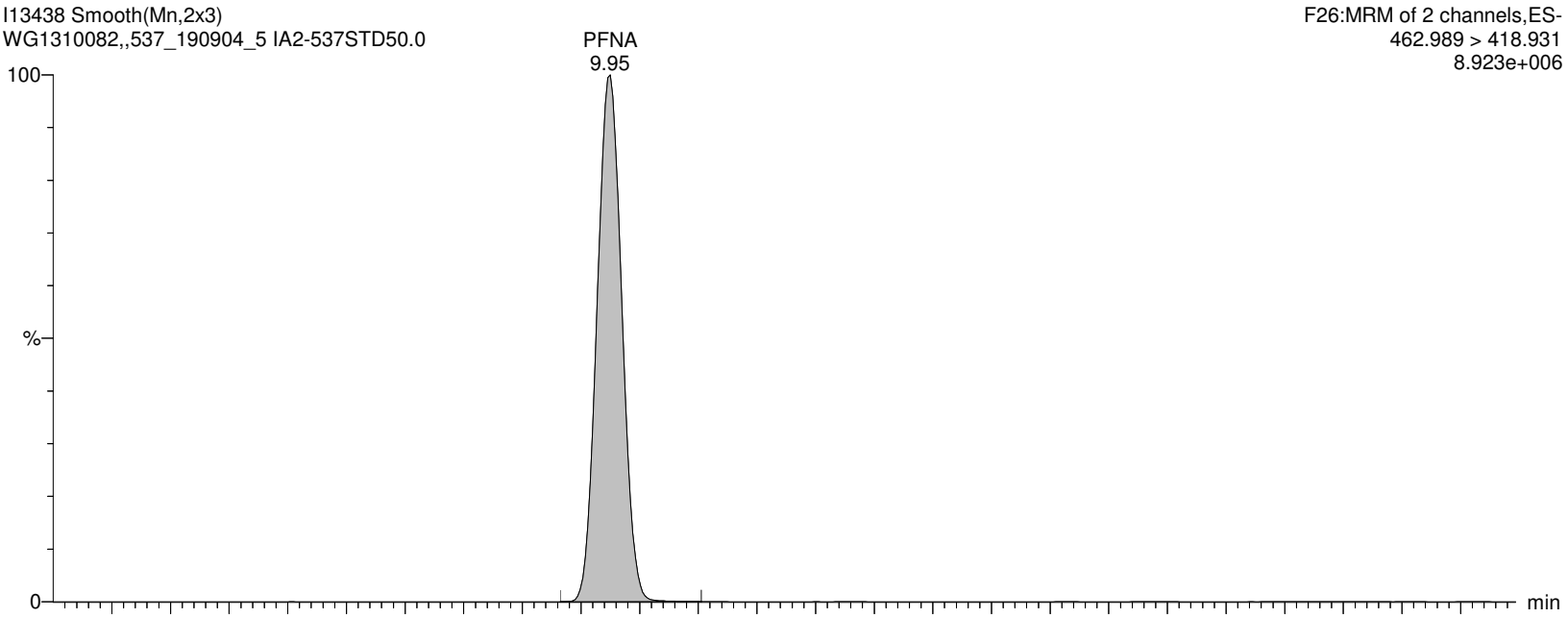


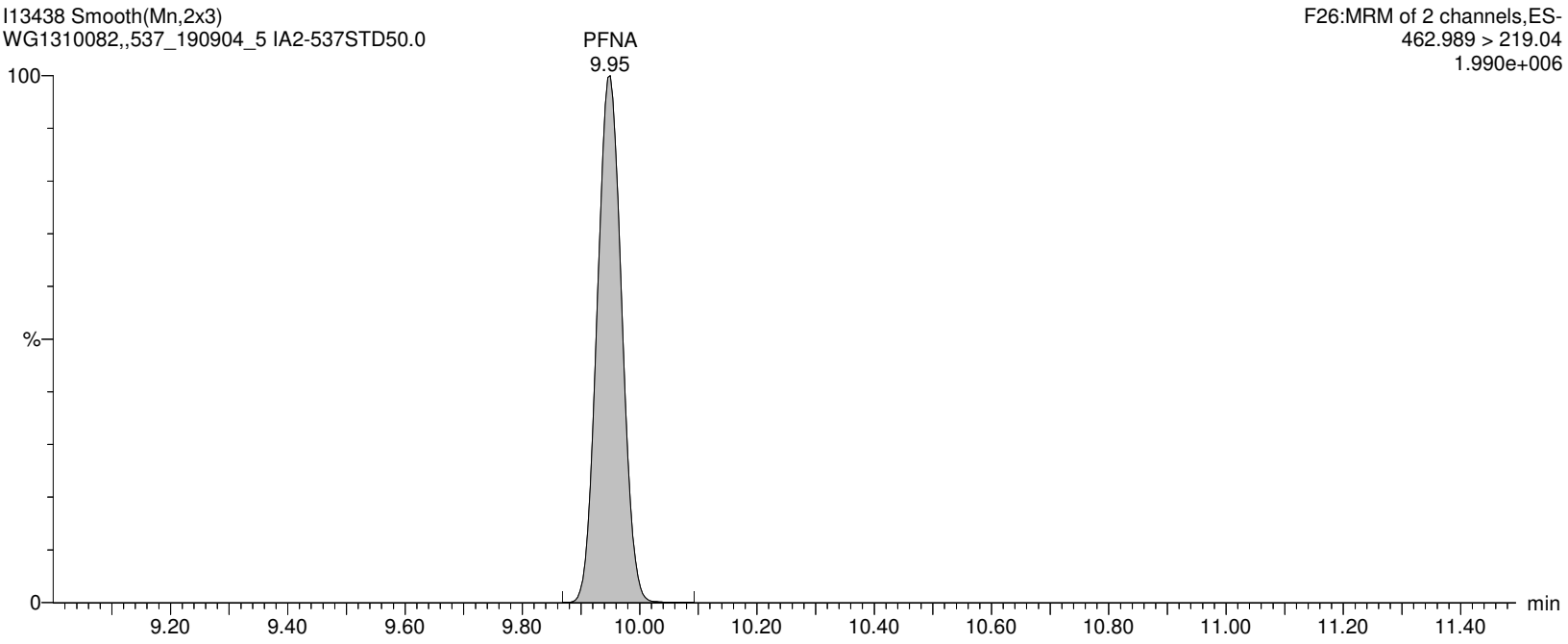



all concentration units in (ng/mL)

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**Instrument: XEVO-TQSmicro#QEB0050**
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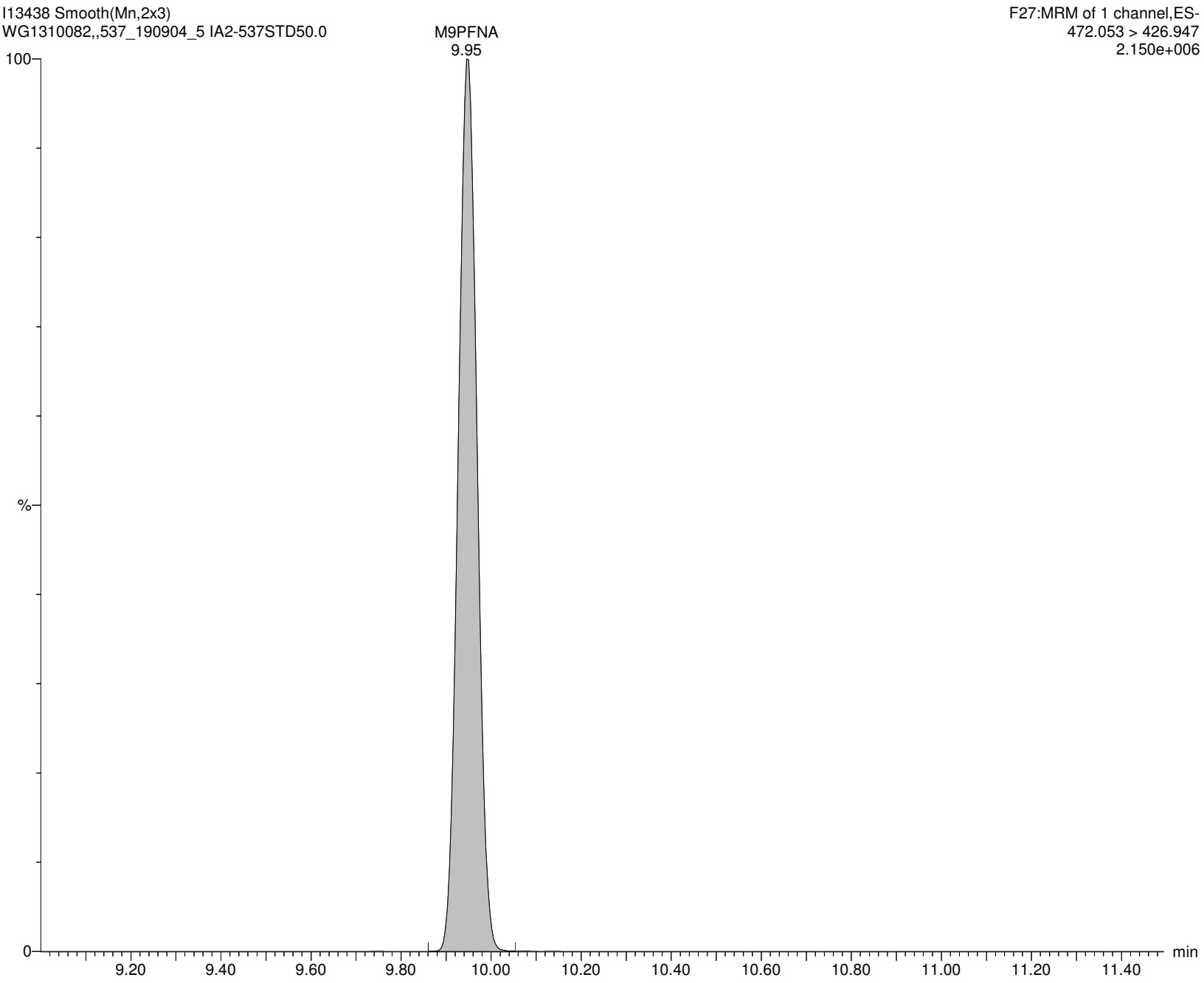
**M9PFNA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
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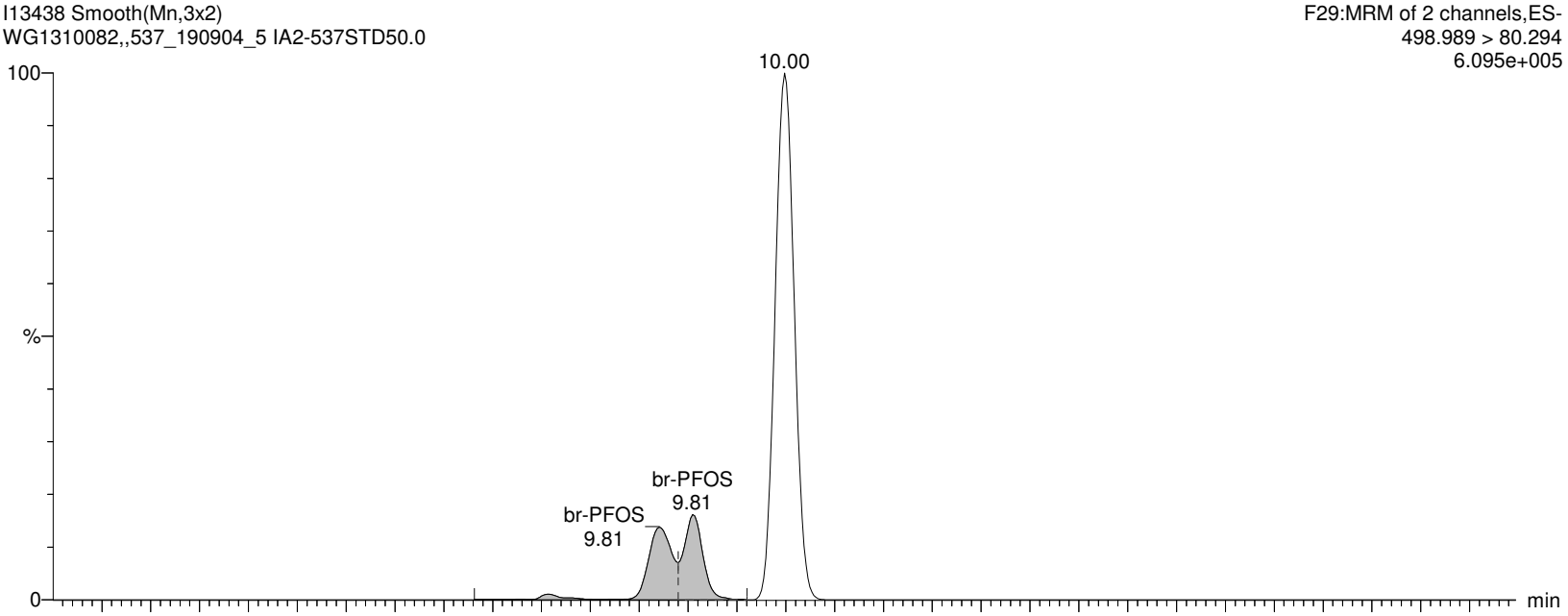
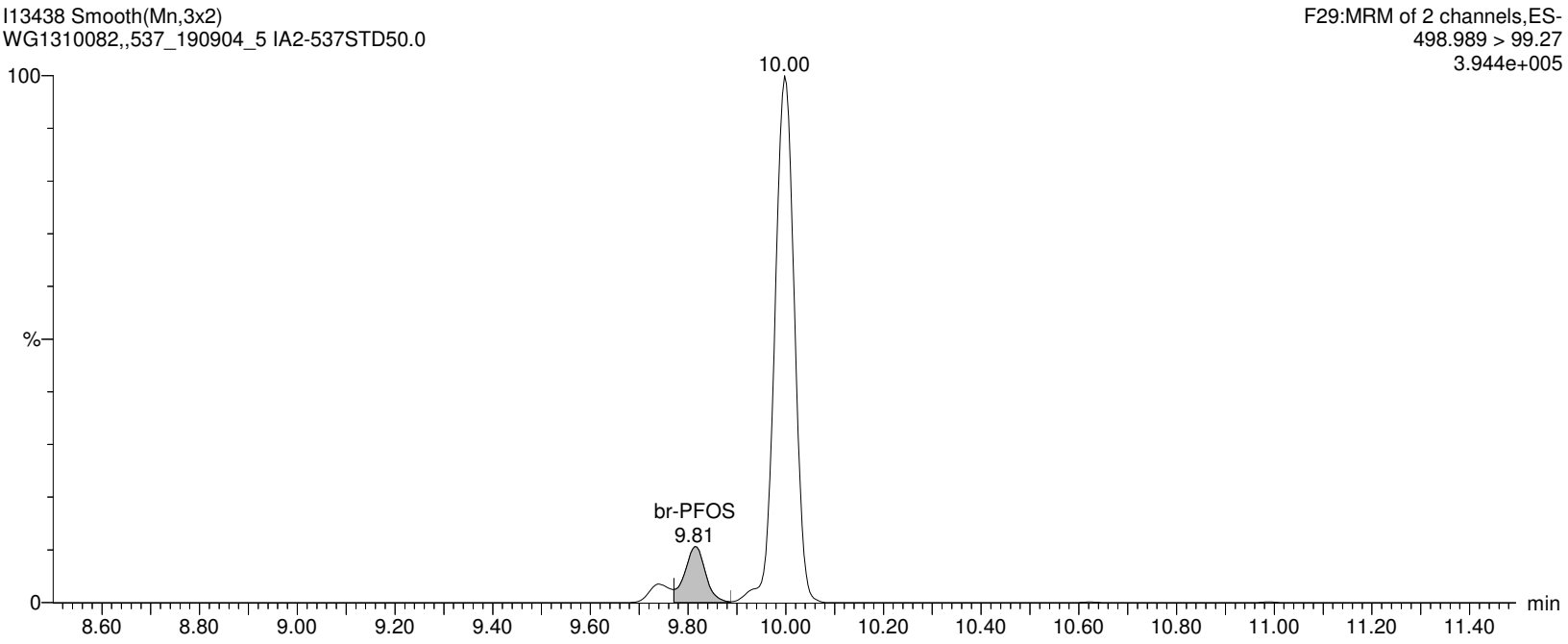
**br-PFOS**





all concentration units in (ng/mL)

Alpha Analytical Inc.
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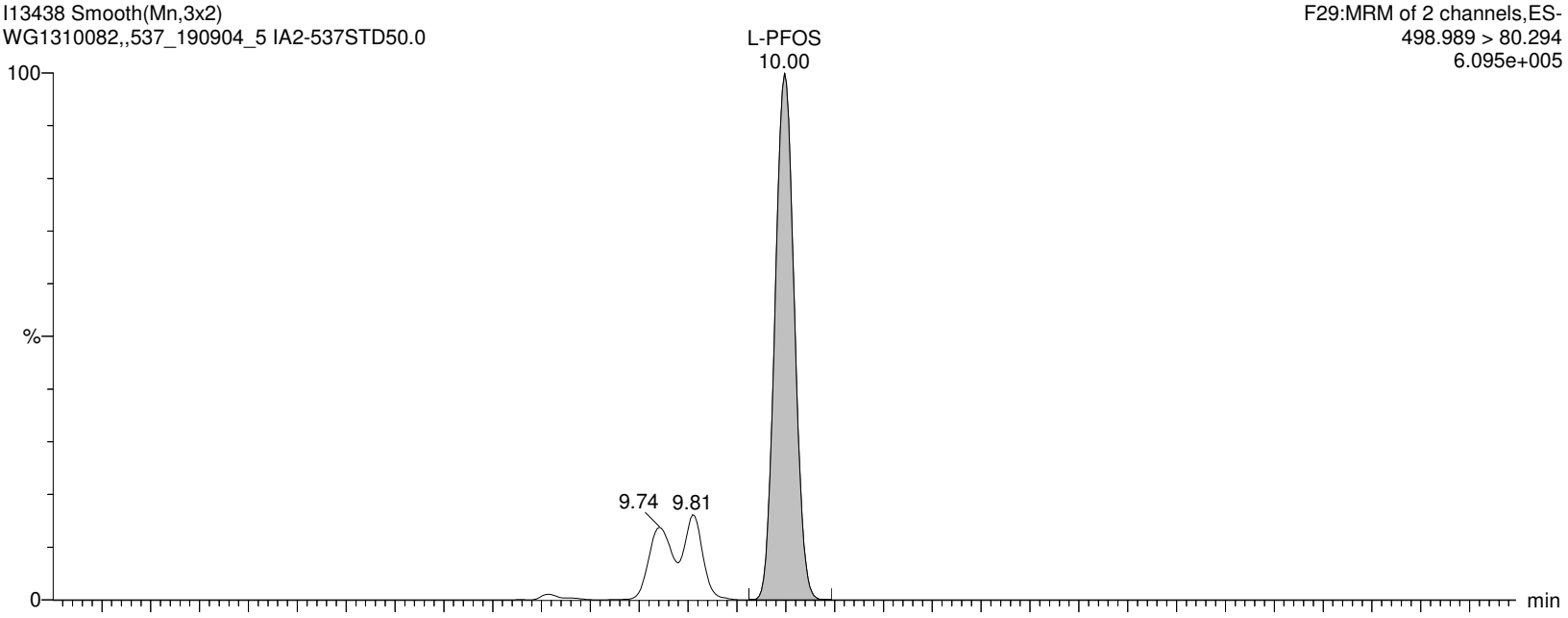
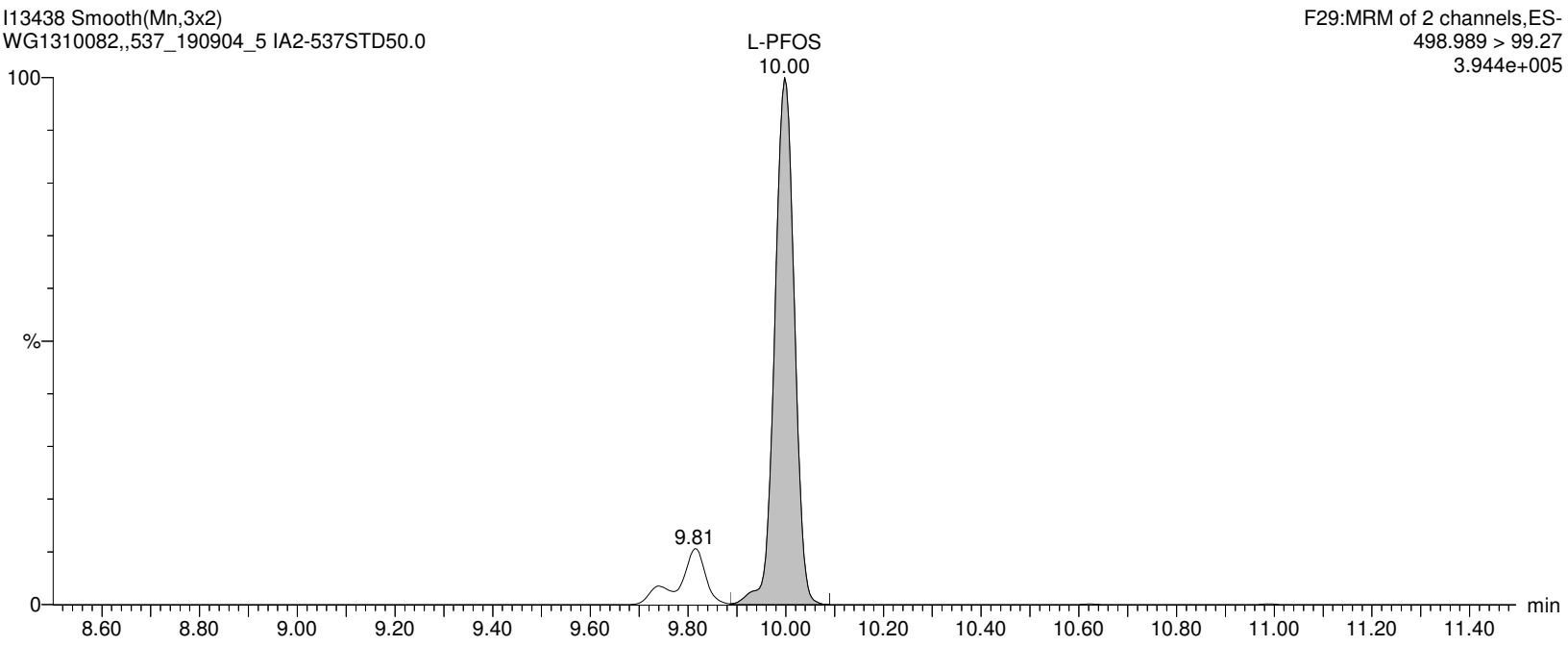
**MS Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**L-PFOS**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
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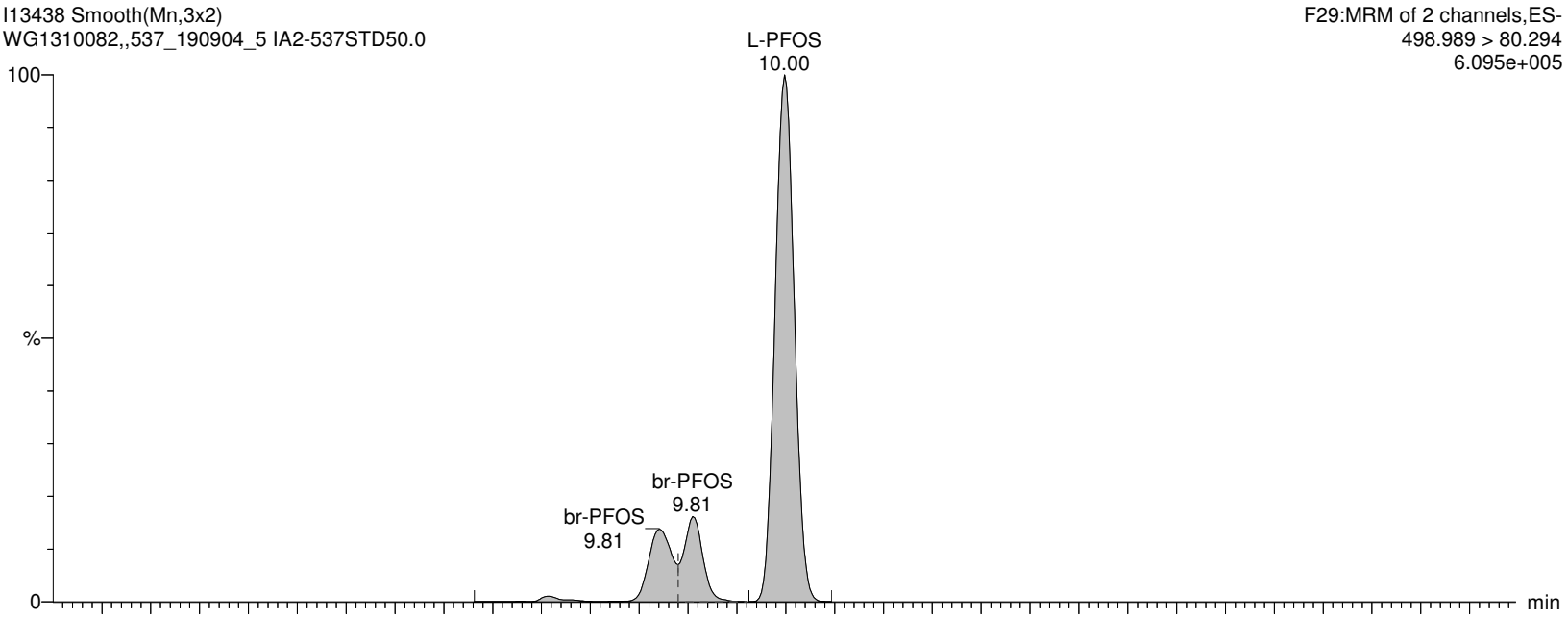


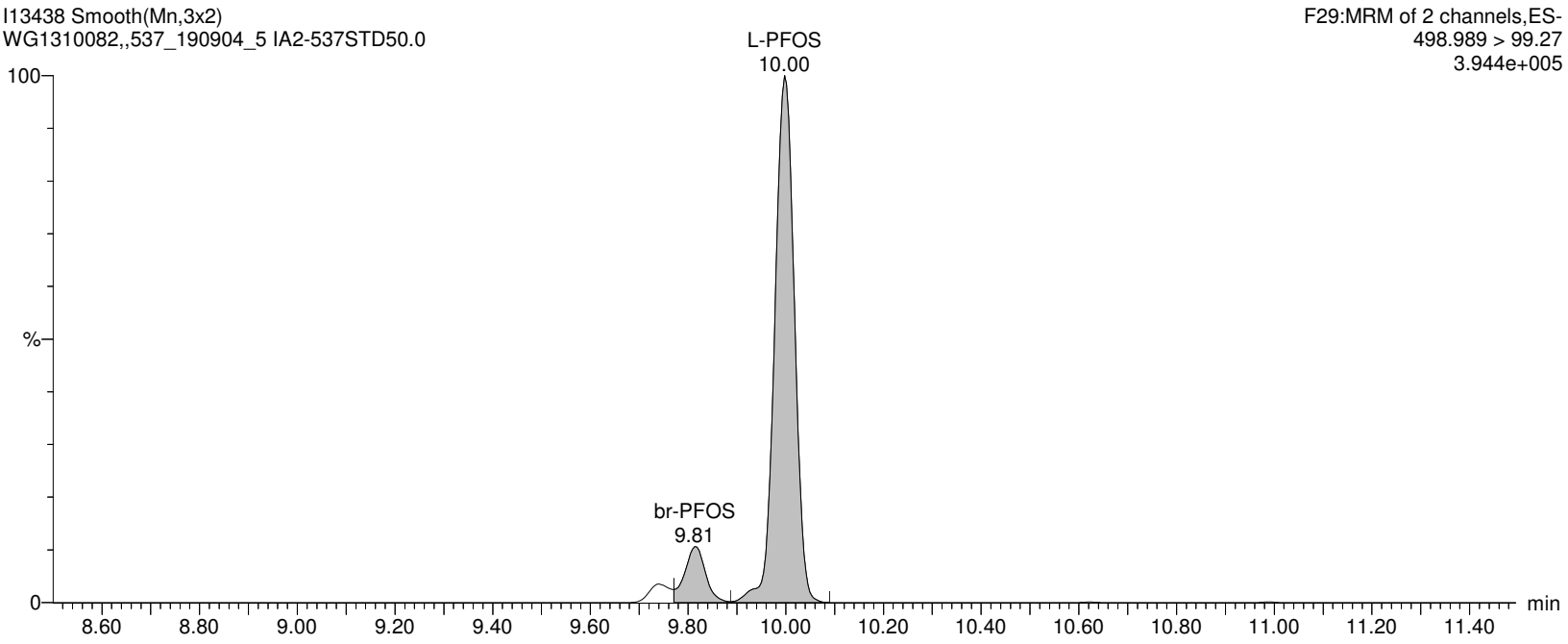



all concentration units in (ng/mL)

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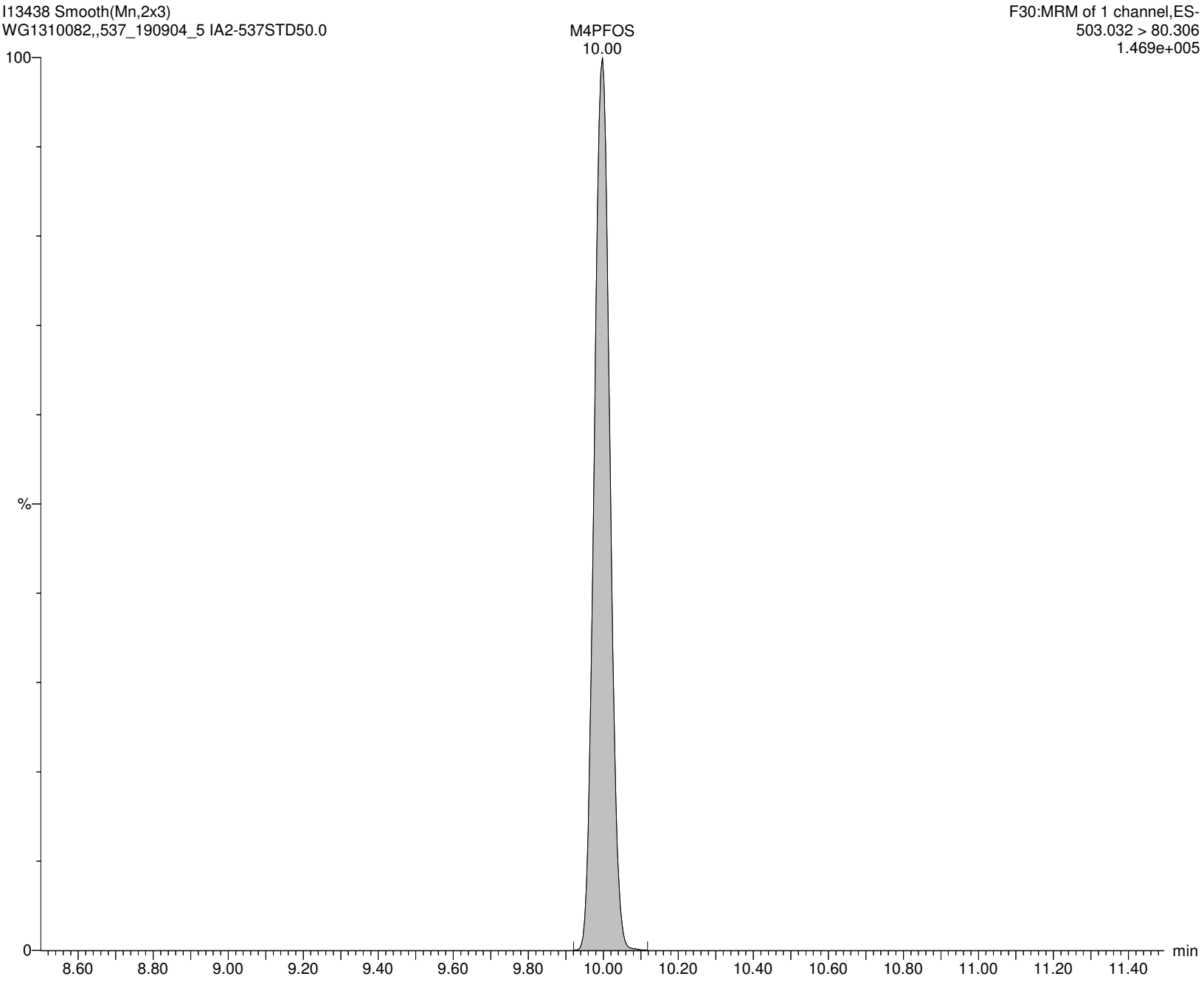
**M4PFOS**





all concentration units in (ng/mL)

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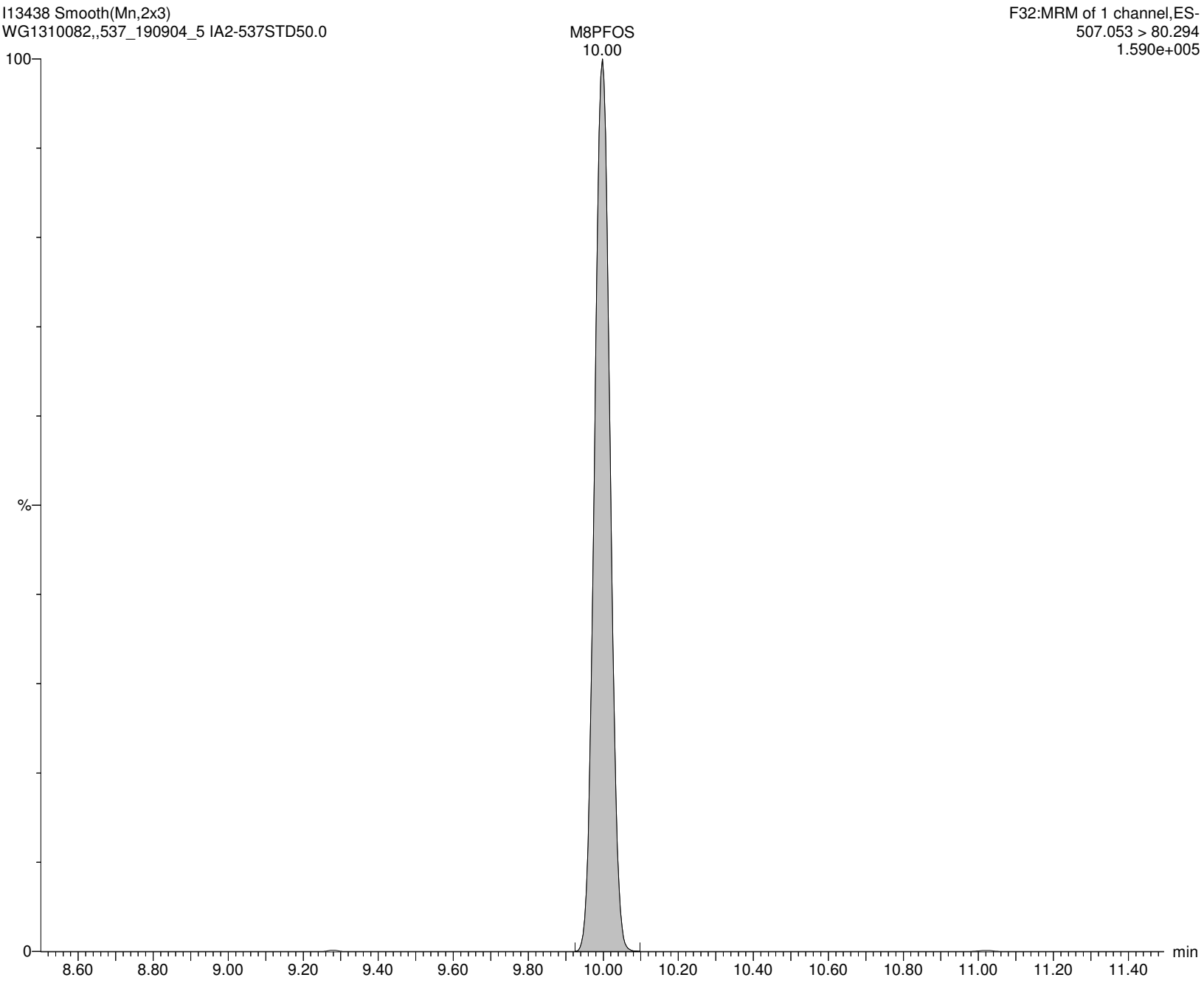
**M8PFOS**





all concentration units in (ng/mL)

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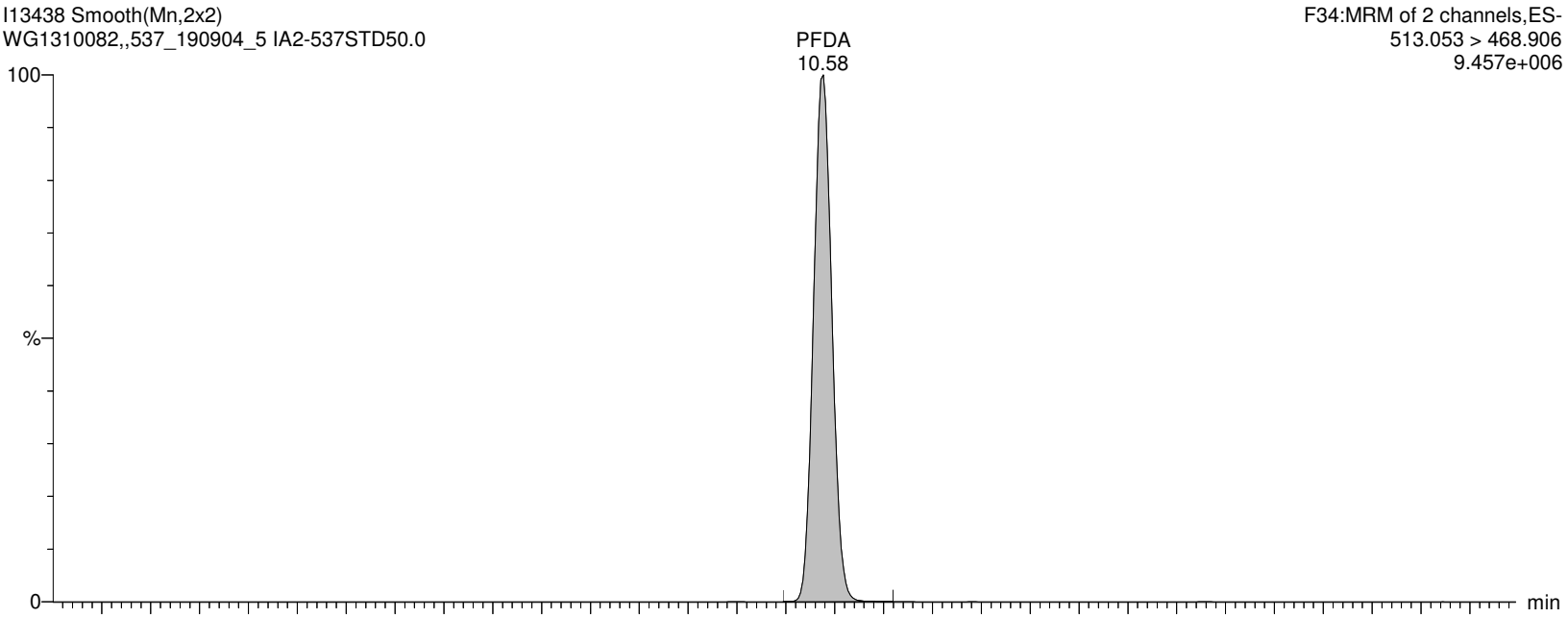


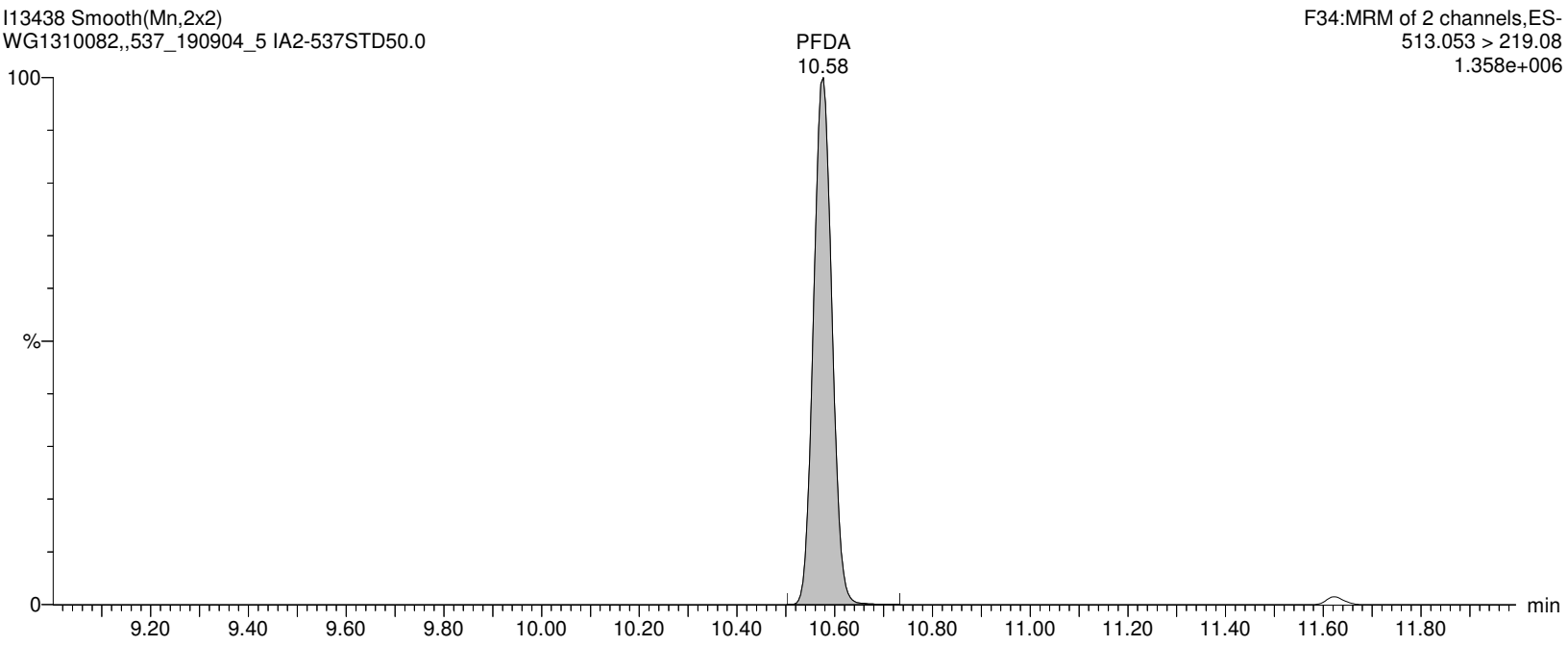



all concentration units in (ng/mL)

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**Instrument: XEVO-TQSmicro#QEB0050**
**Inlet Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\LCMS_537_ISO_B**
**Tune Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\181009_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

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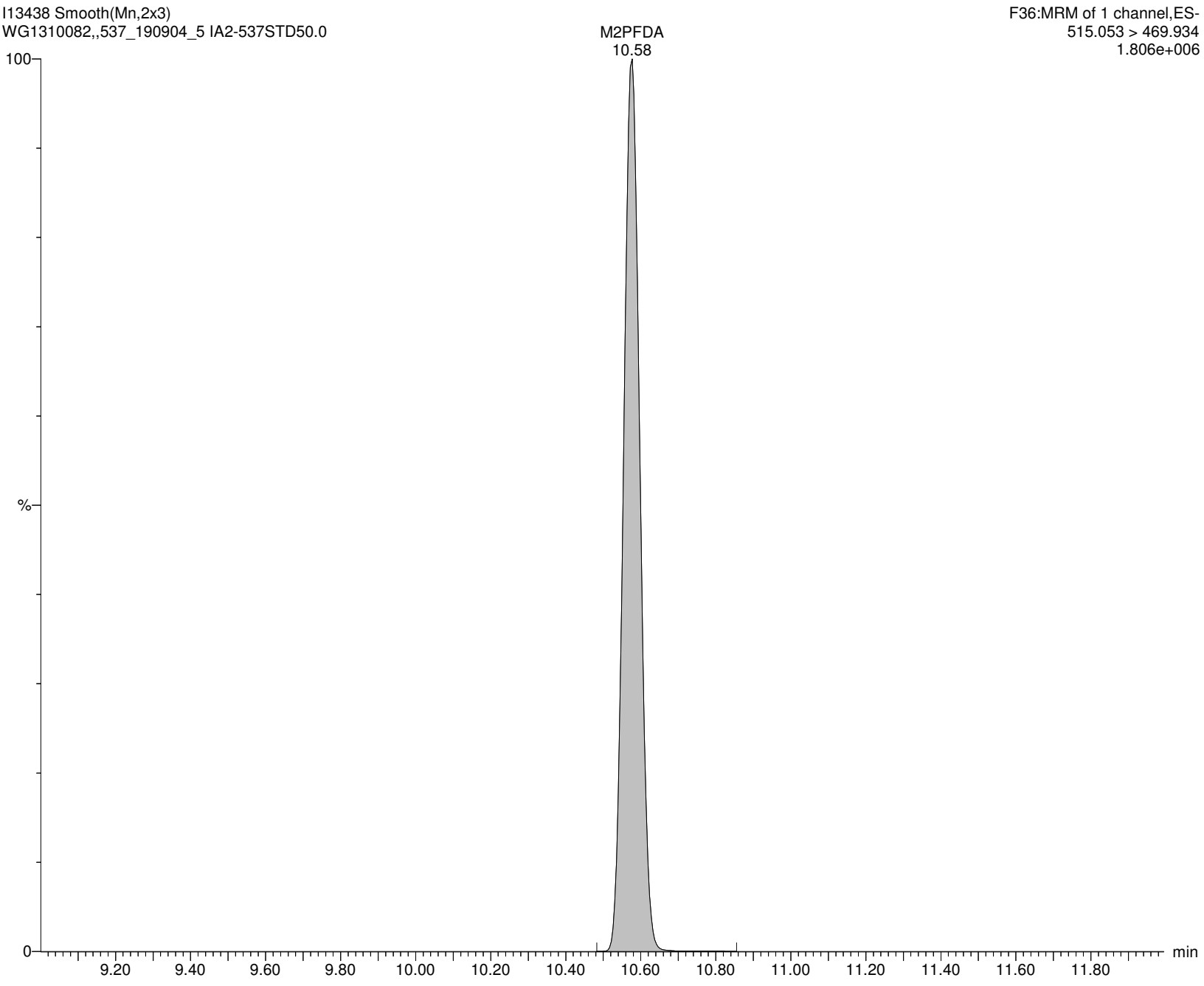



all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
Printed: Monday, November 18, 2019 13:42:56 Eastern Standard Time

**Name: I13438**
**ID: IA2-537STD50.0**
**Date: 18-Nov-2019**
**Time: 11:43:24**
**Description: WG1310082,,537_190904_5**
**User: LCMS02:JW**
**Vial: 1:A,6**
**Instrument: XEVO-TQSmicro#QEB0050**
**Inlet Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\LCMS_537_ISO_B**
**Tune Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\181009_TUNE.IPR**
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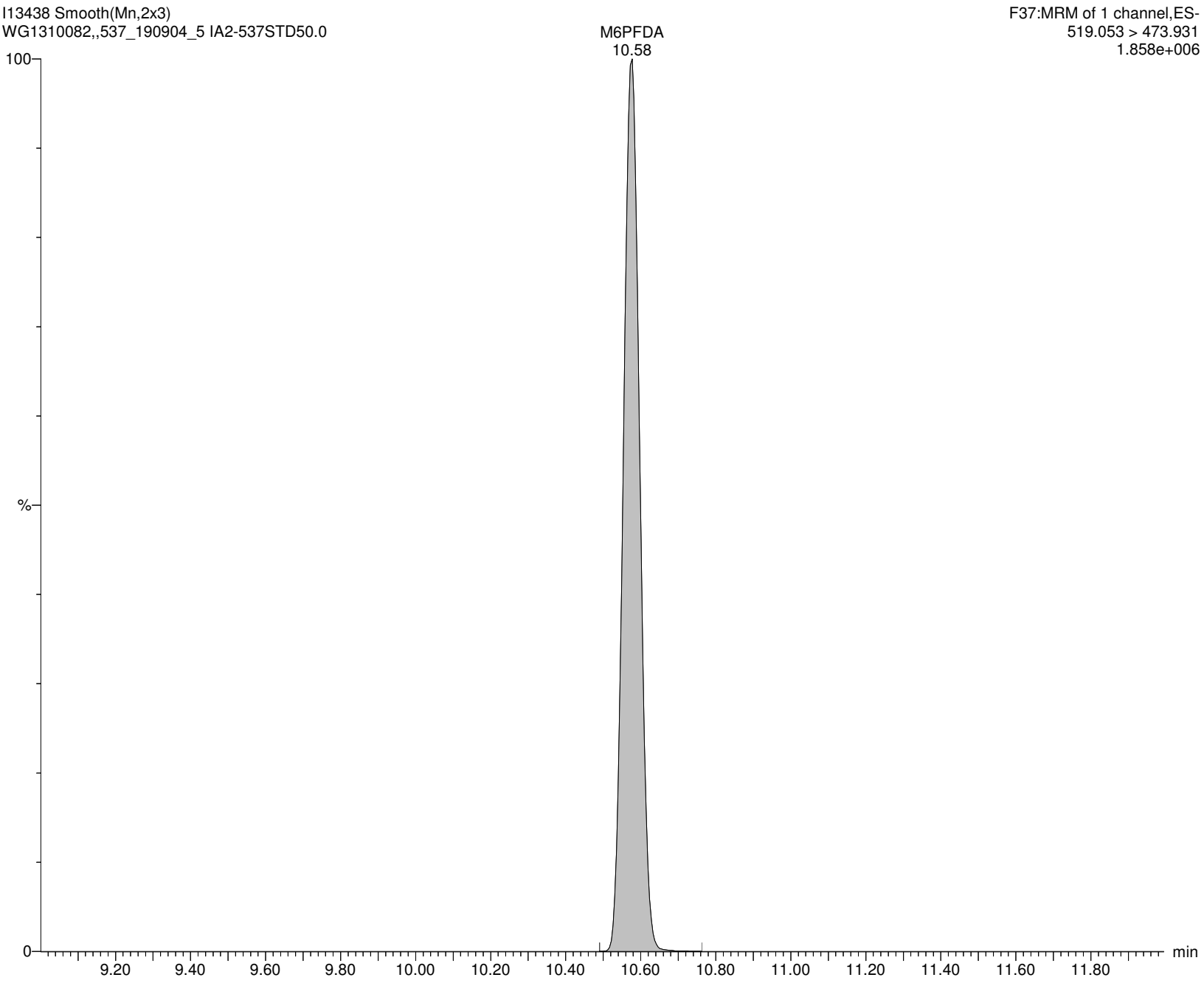
**M6PFDA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
Printed: Monday, November 18, 2019 13:42:56 Eastern Standard Time

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**Time: 11:43:24**
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**User: LCMS02:JW**
**Vial: 1:A,6**
**Instrument: XEVO-TQSmicro#QEB0050**
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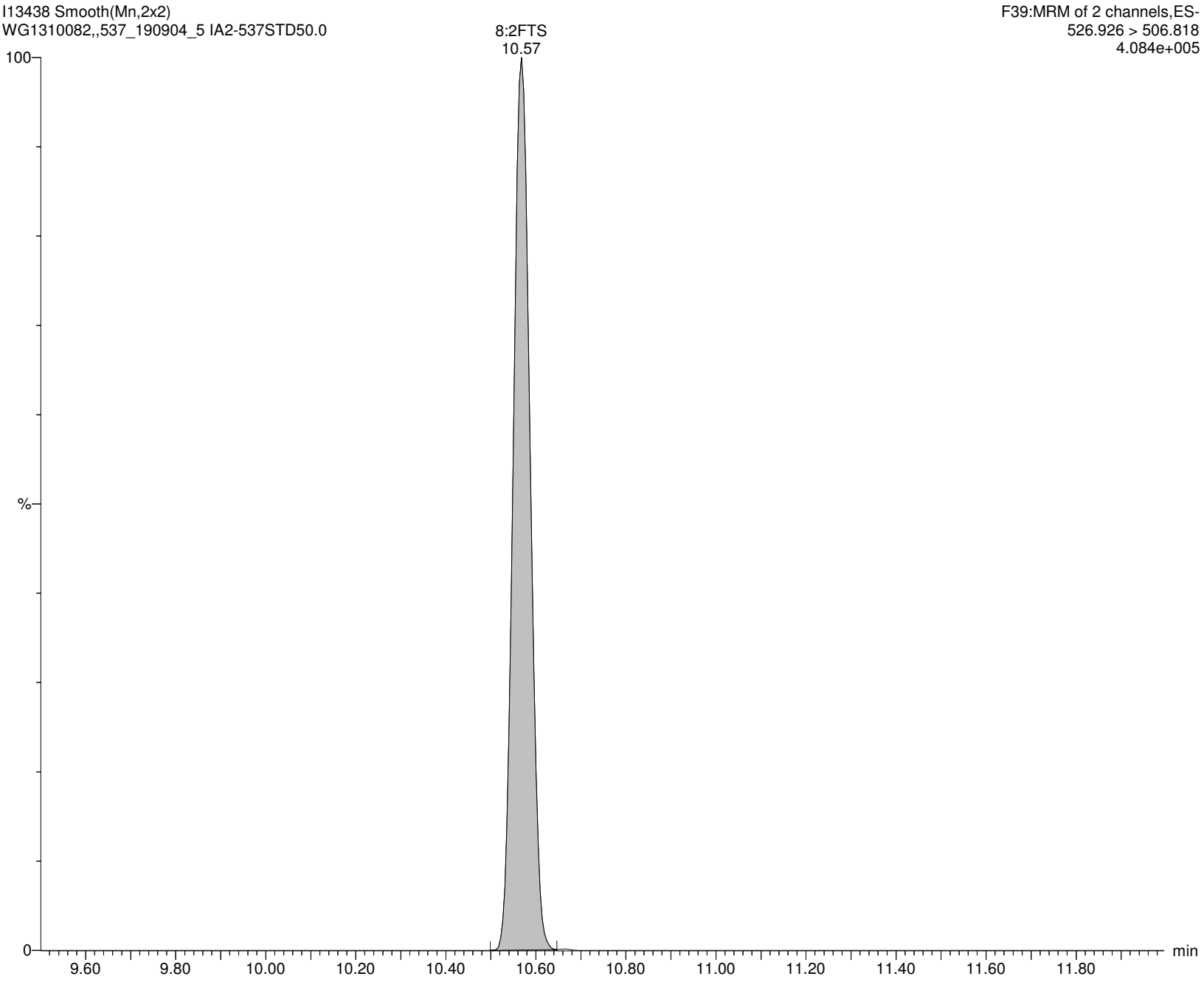
**8:2FTS**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
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**Time: 11:43:24**
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**Vial: 1:A,6**
**Instrument: XEVO-TQSmicro#QEB0050**
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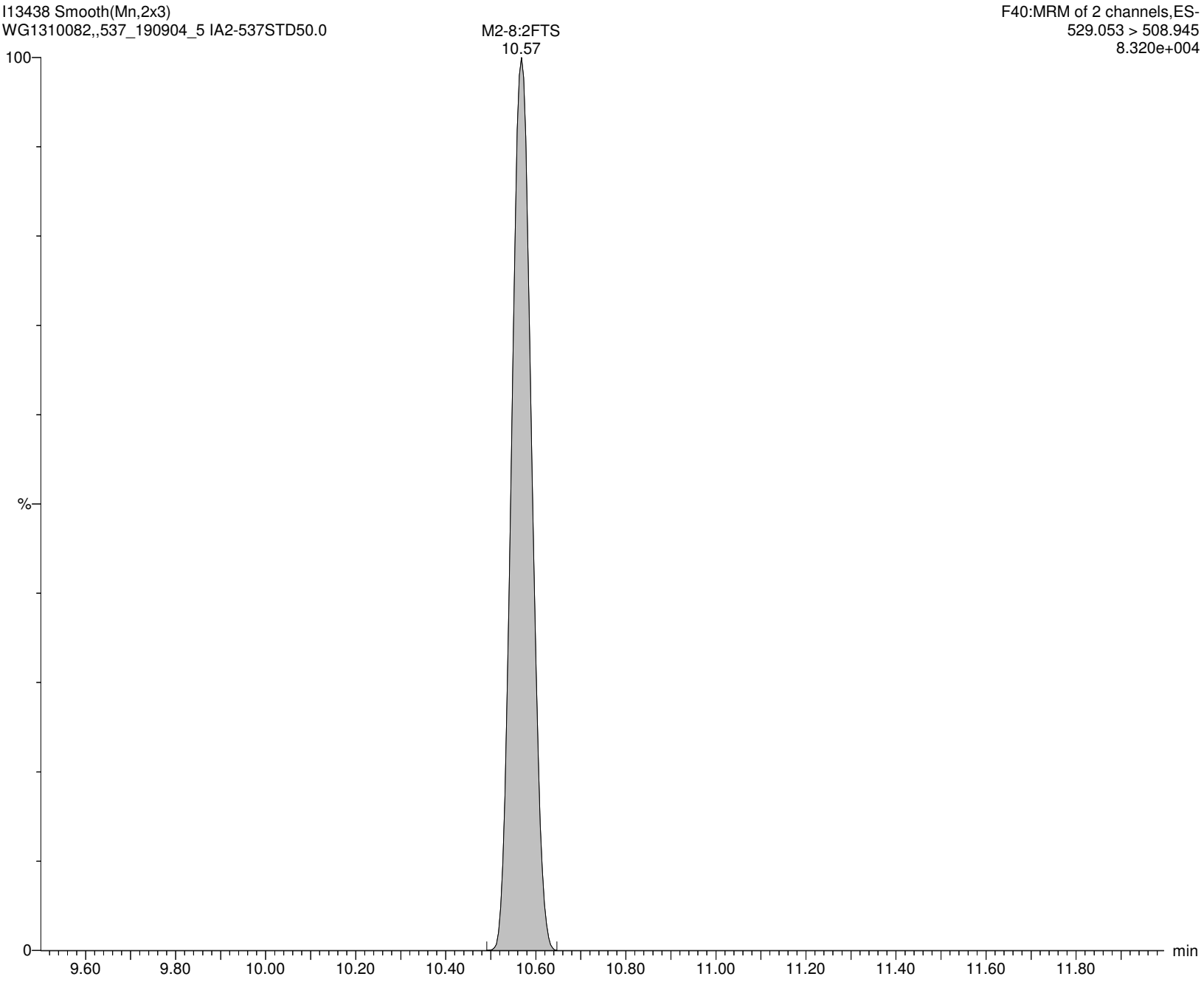
**M2-8:2FTS**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
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**Vial: 1:A,6**
**Instrument: XEVO-TQSmicro#QEB0050**
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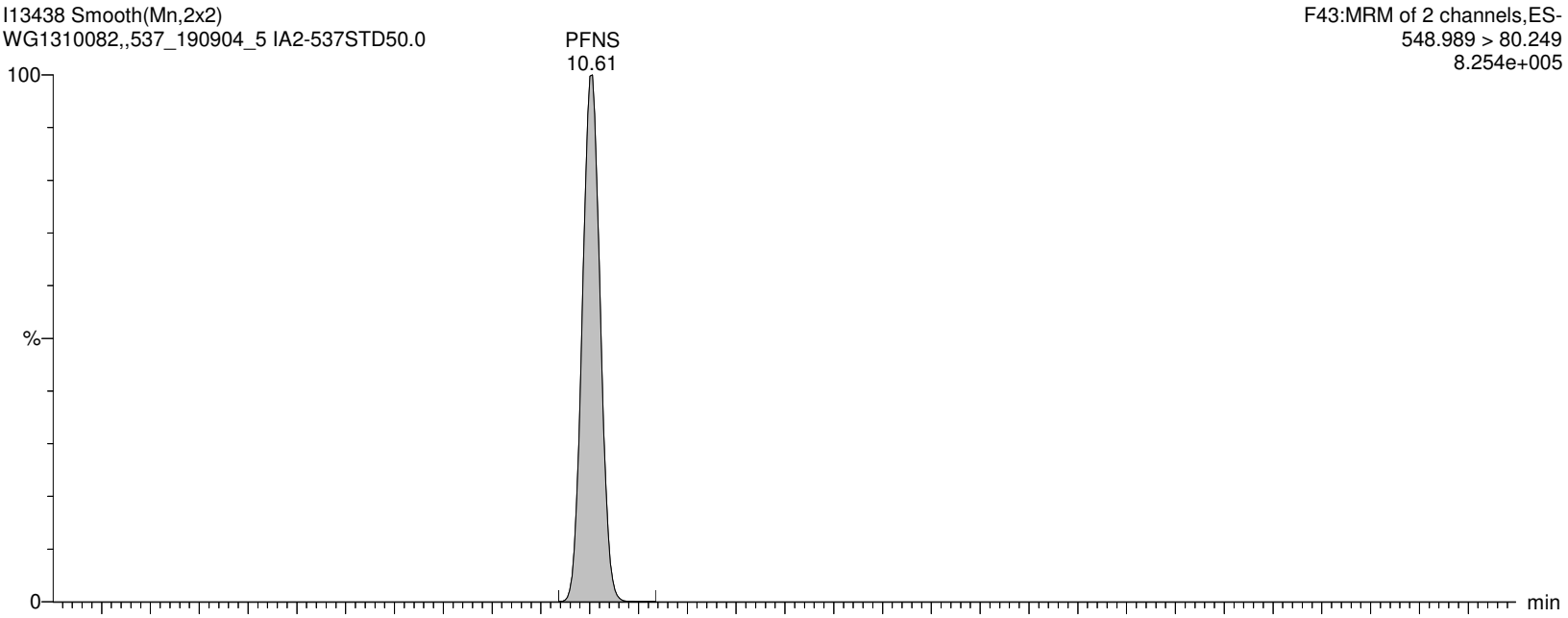


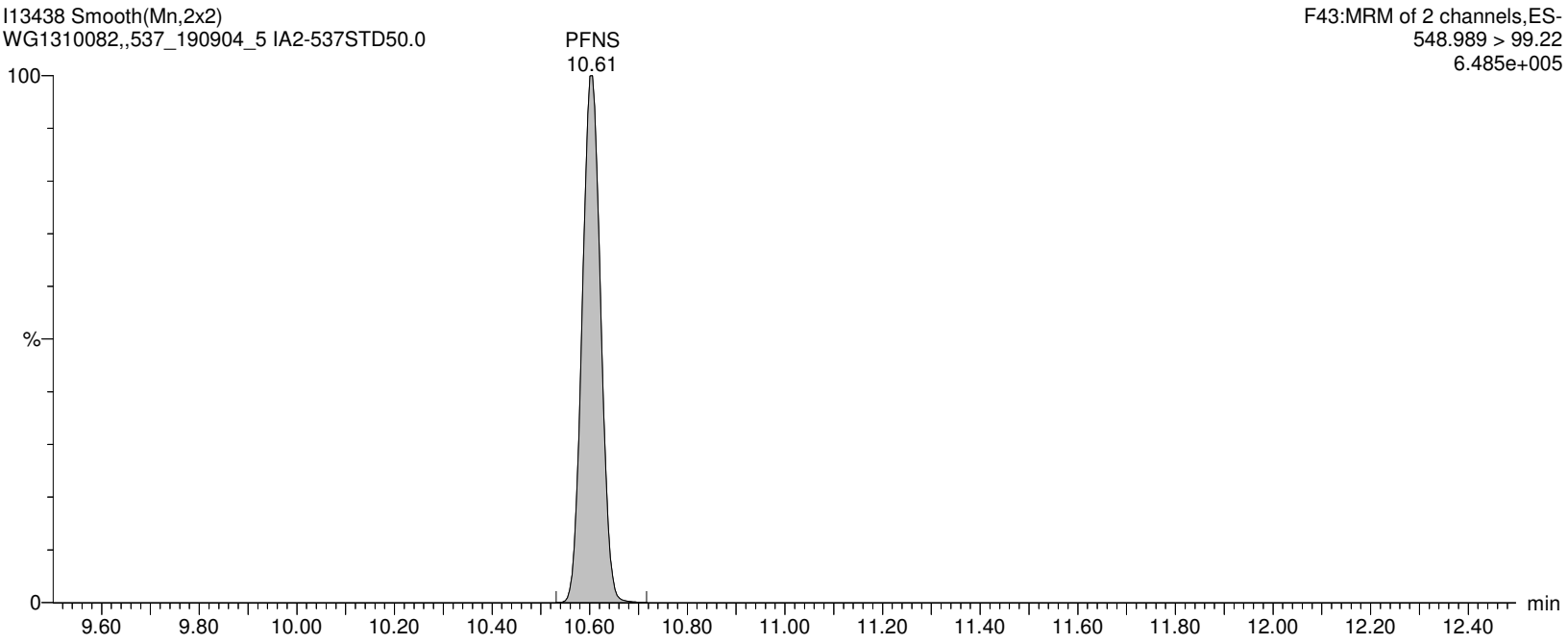



all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
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**Instrument: XEVO-TQSmicro#QEB0050**
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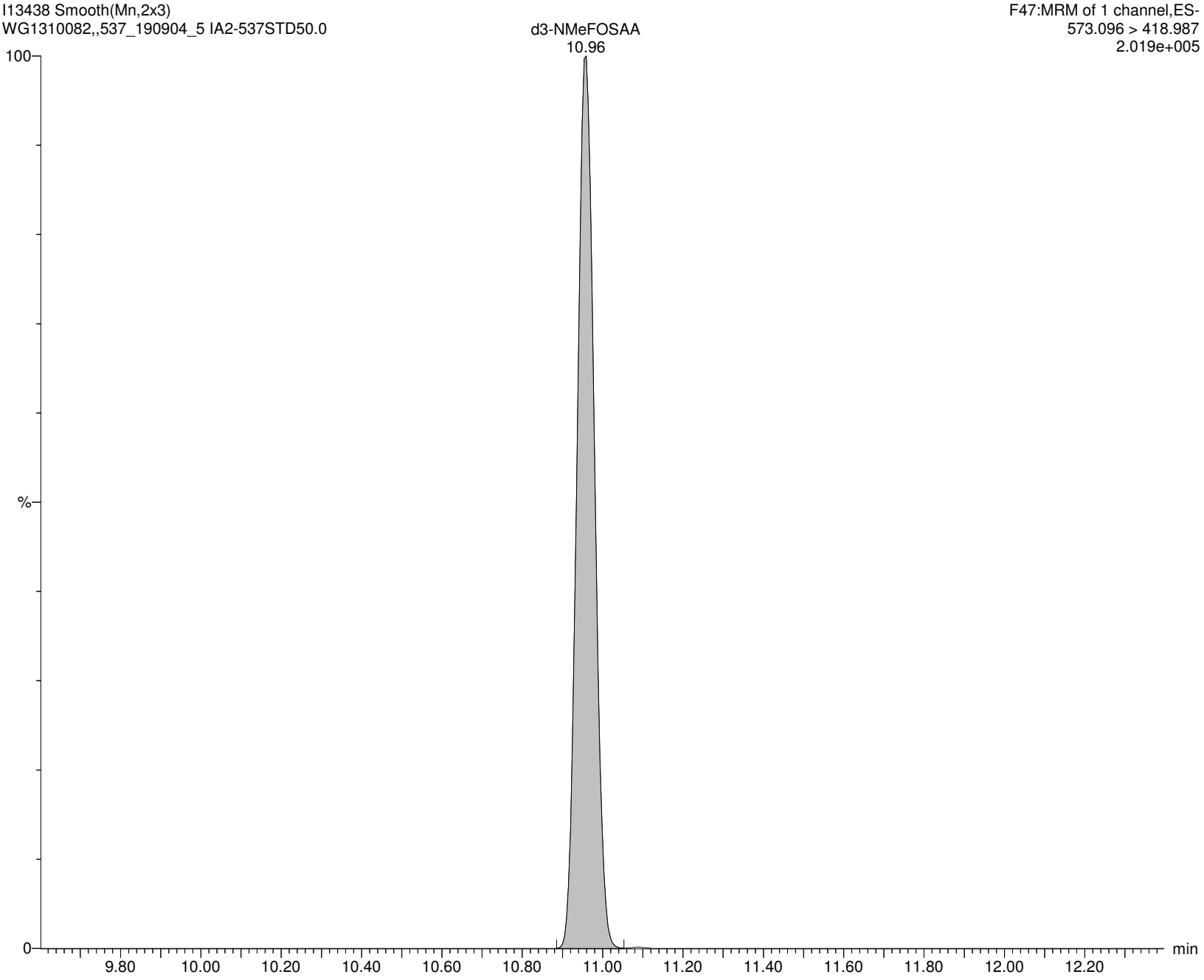
**d3-NMeFOSAA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
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**Vial: 1:A,6**
**Instrument: XEVO-TQSmicro#QEB0050**
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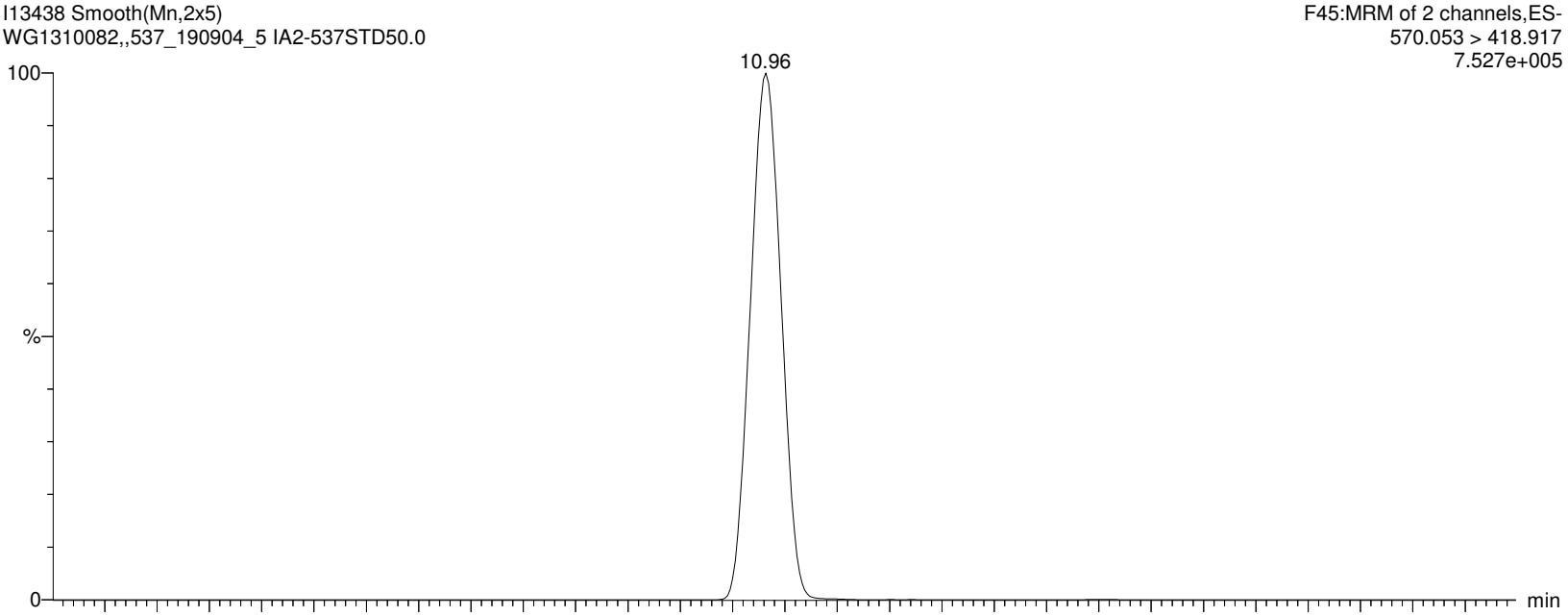
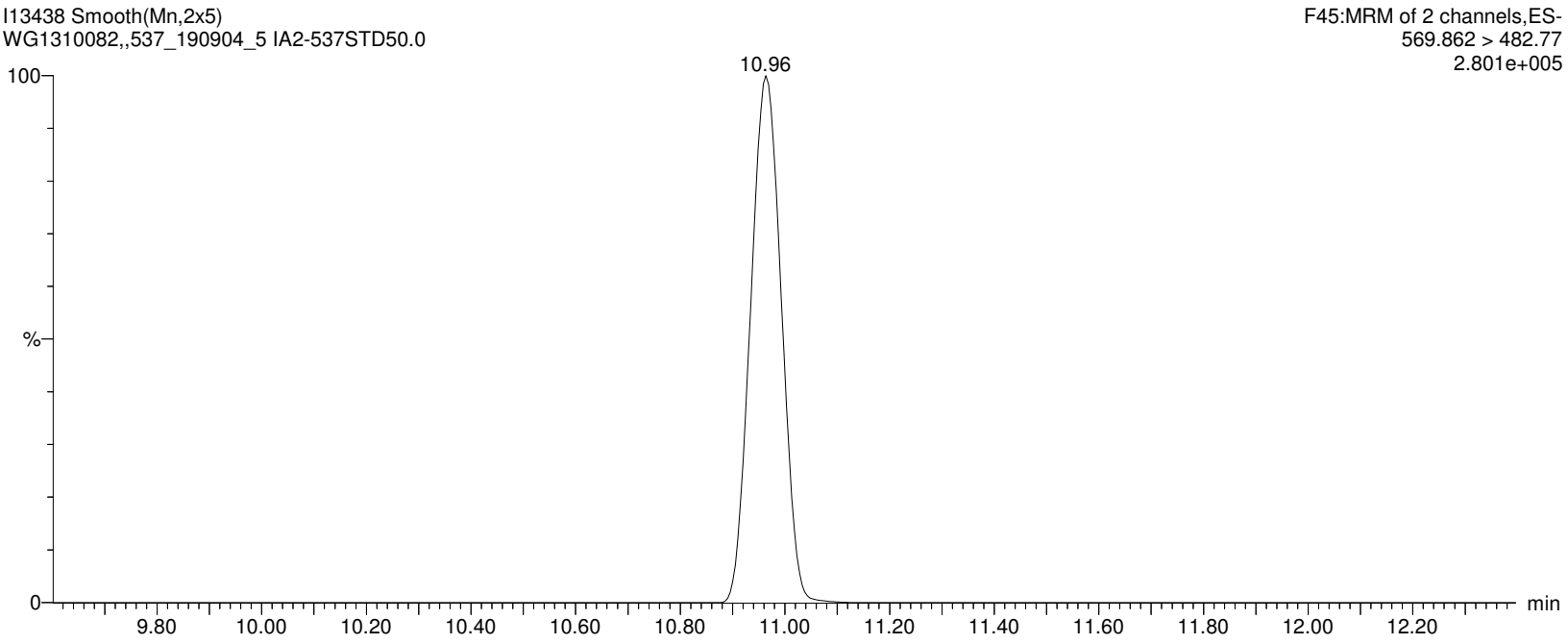
**br-NMeFOSAA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
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**User: LCMS02:JW**
**Vial: 1:A,6**
**Instrument: XEVO-TQSmicro#QEB0050**
**Inlet Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\LCMS_537_ISO_B**
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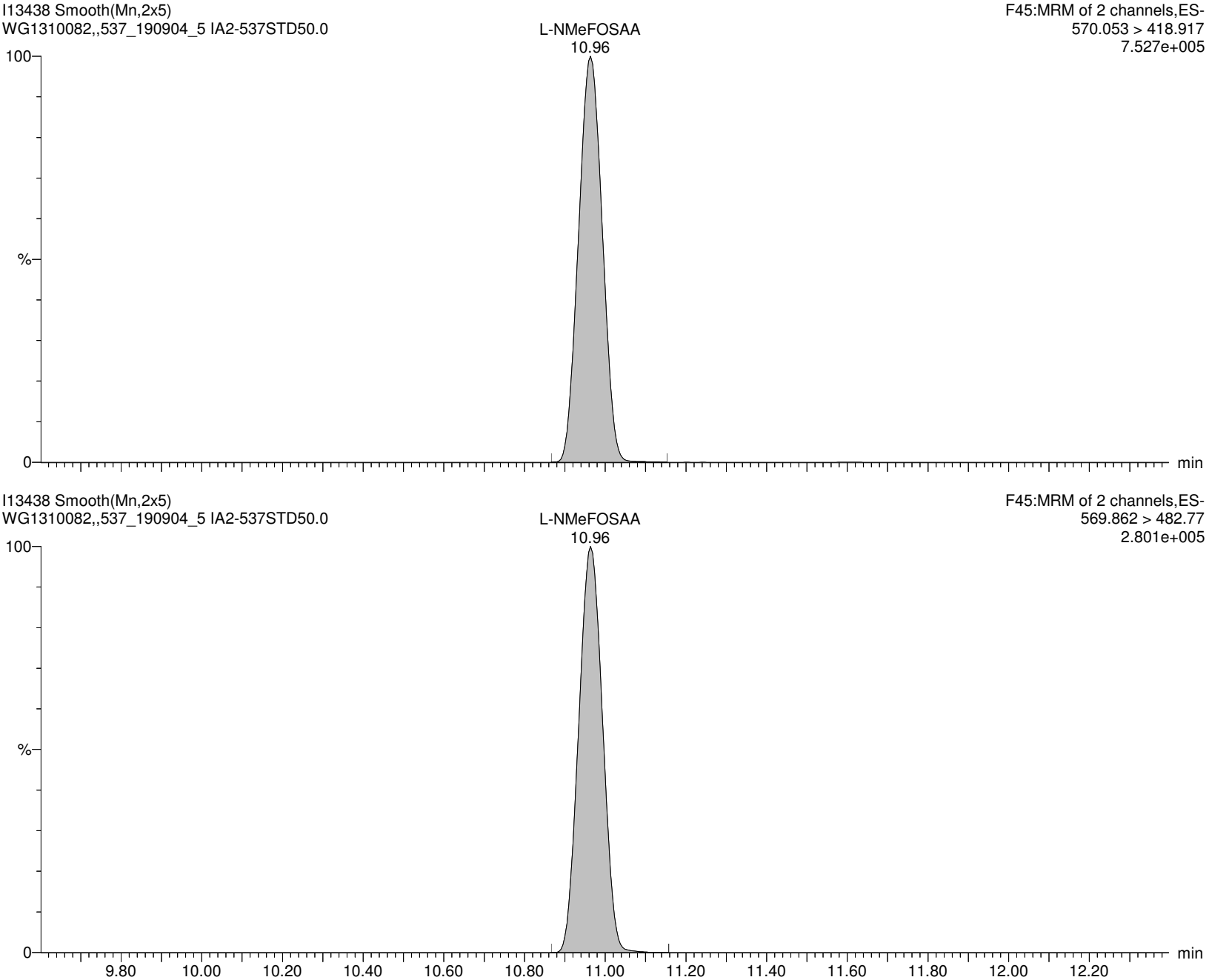
**L-NMeFOSAA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
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**Vial: 1:A,6**
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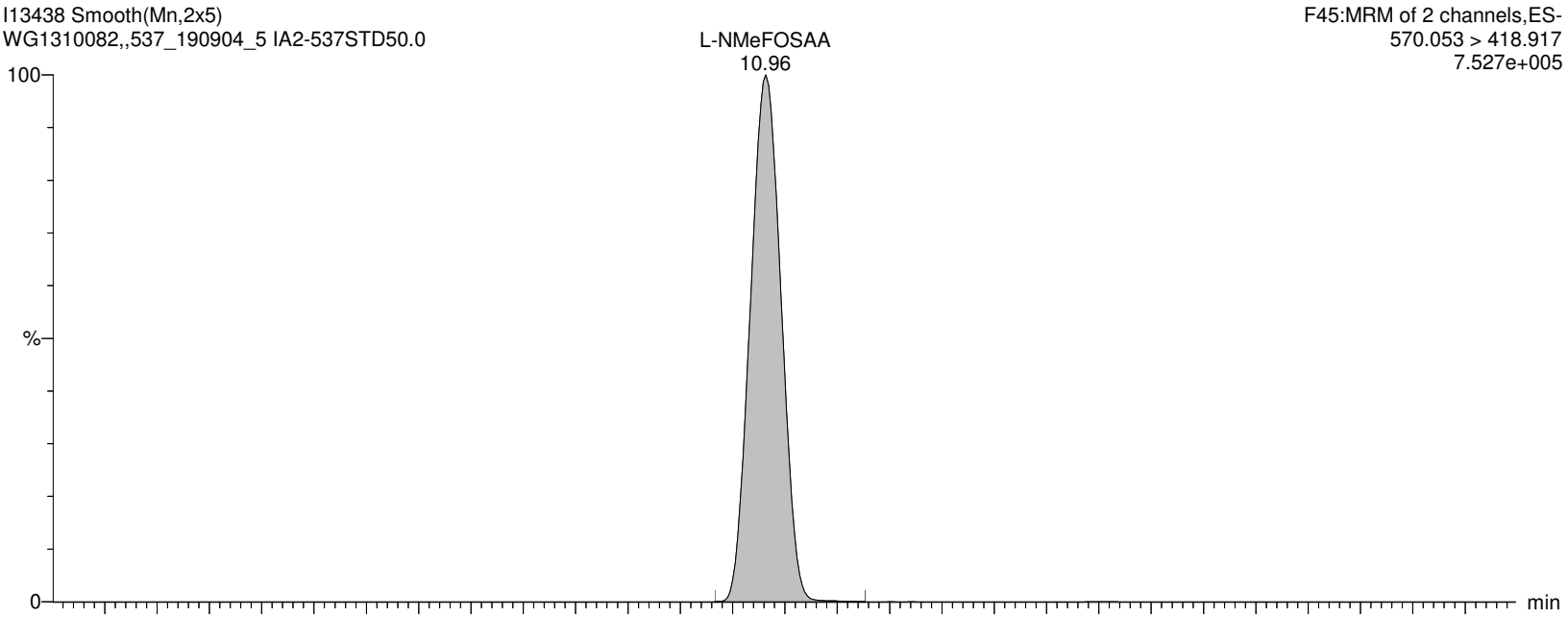
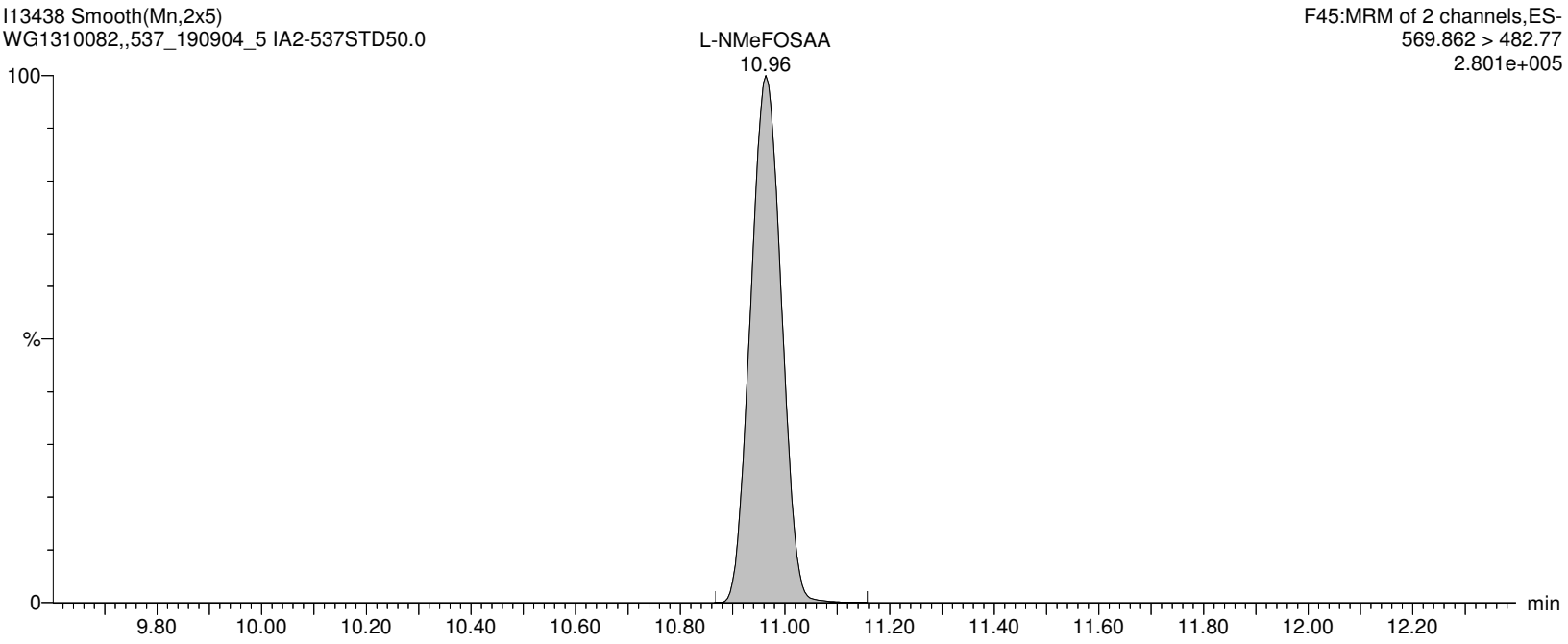
**NMeFOSAA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
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**Vial: 1:A,6**
**Instrument: XEVO-TQSmicro#QEB0050**
**Inlet Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\LCMS_537_ISO_B**
**Tune Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\181009_TUNE.IPR**
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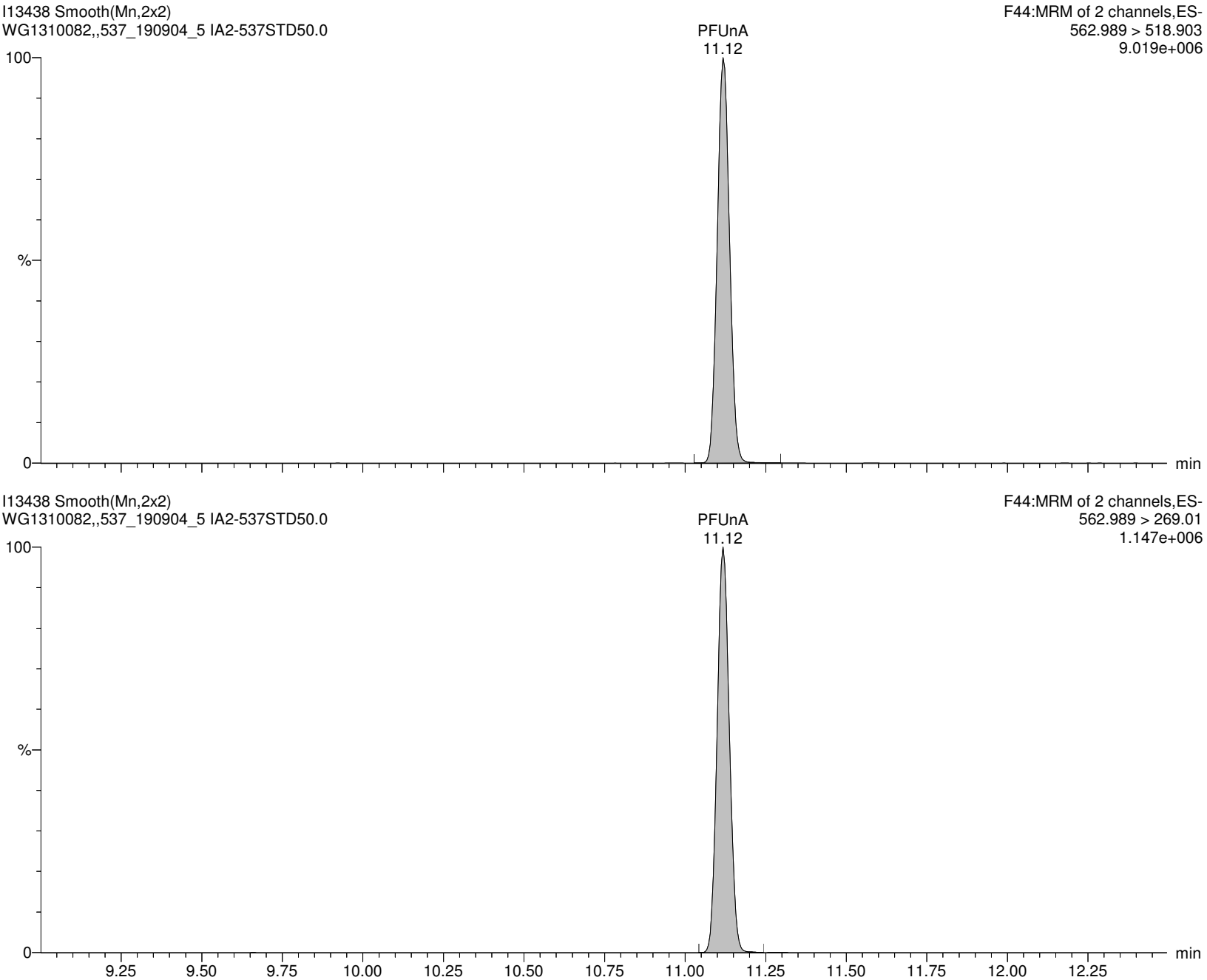
**PFUnA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
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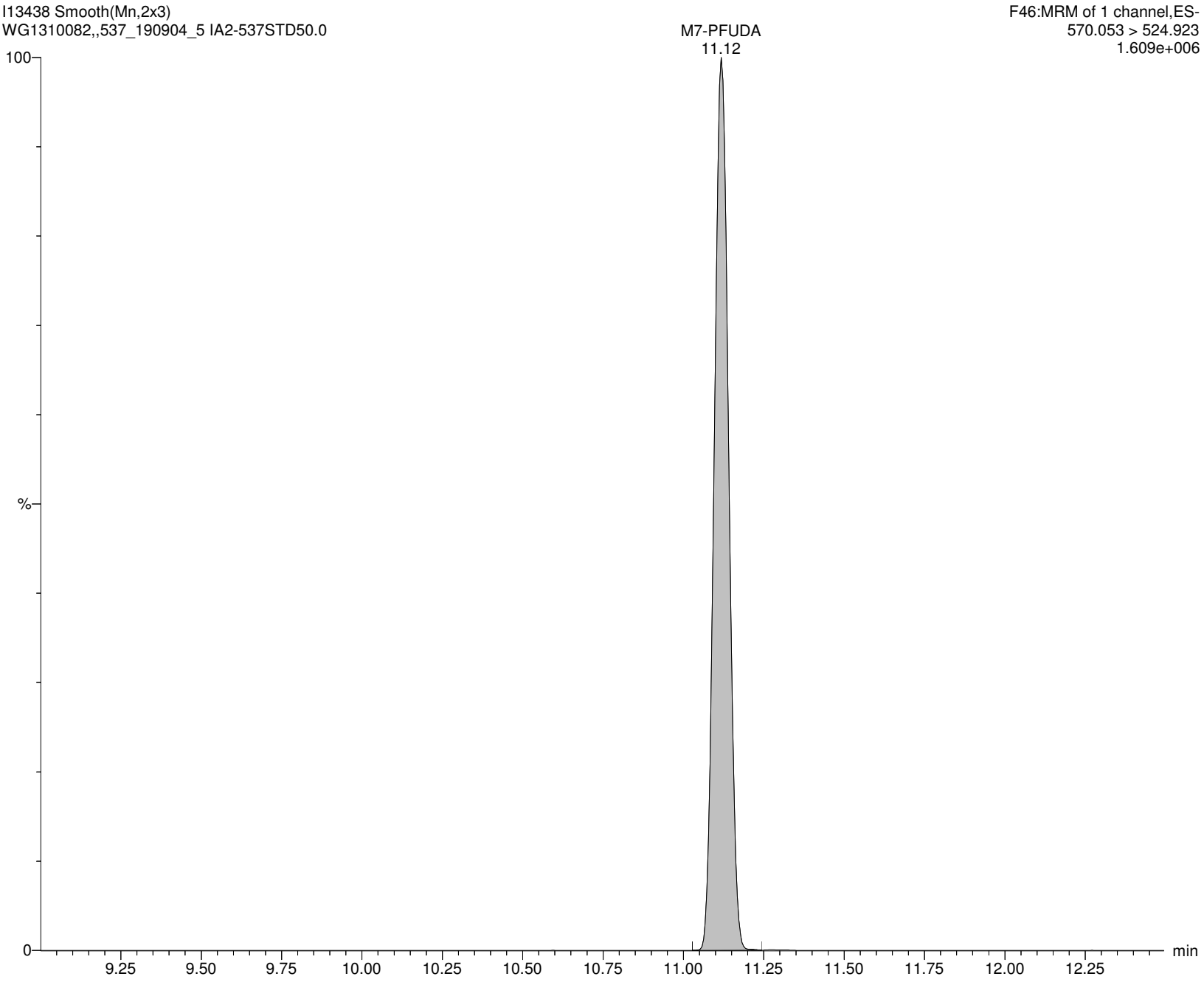
**M7-PFUDA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
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**Description: WG1310082,,537_190904_5**
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**Vial: 1:A,6**
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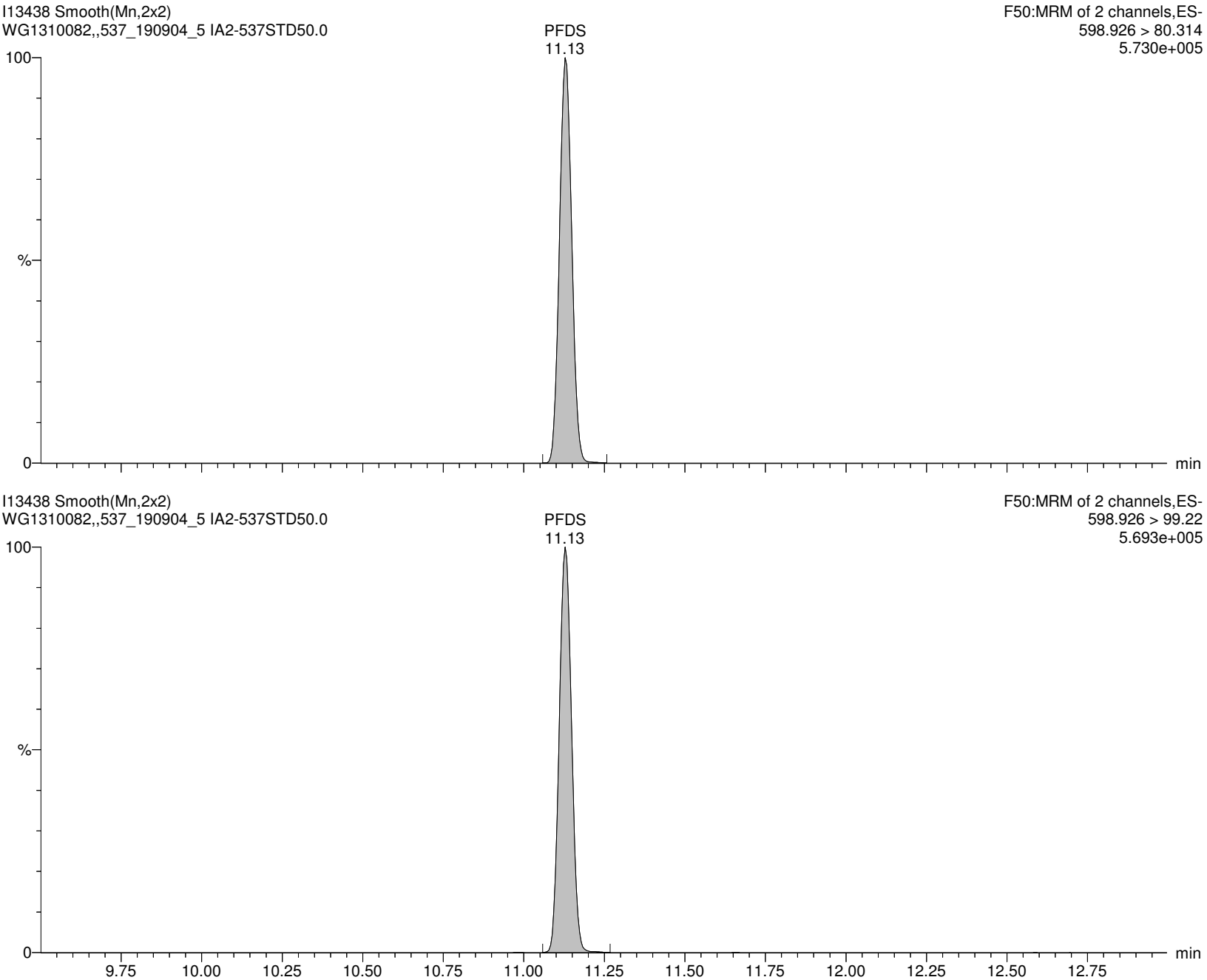
**PFDS**





all concentration units in (ng/mL)

Alpha Analytical Inc.
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Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
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**Vial: 1:A,6**
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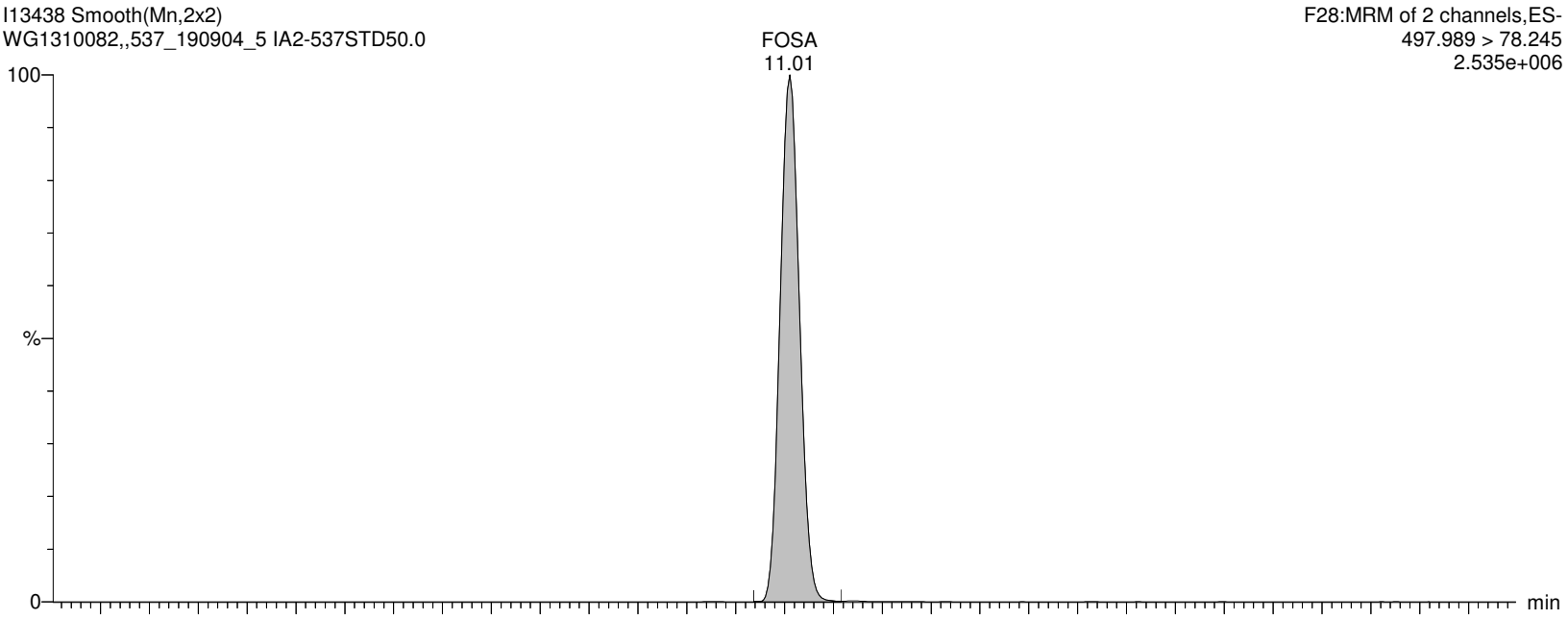
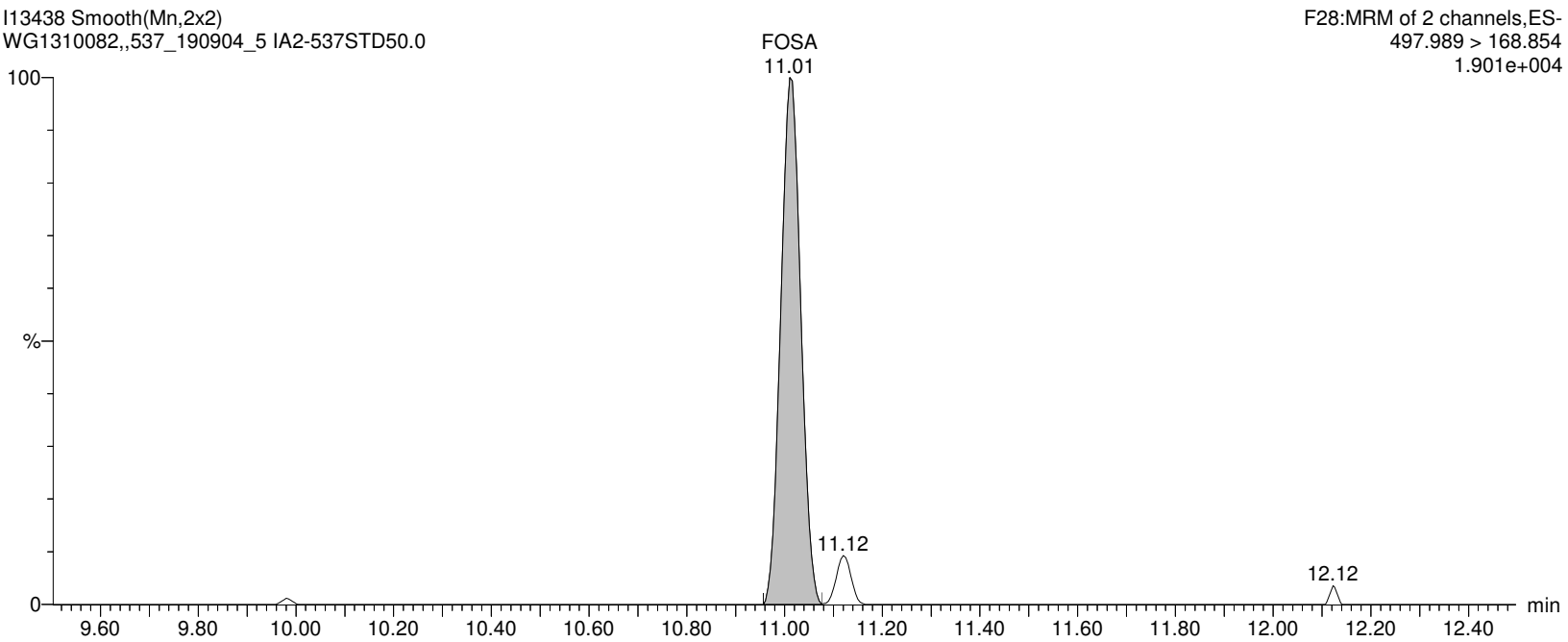
**FOSA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
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**Vial: 1:A,6**
**Instrument: XEVO-TQSmicro#QEB0050**
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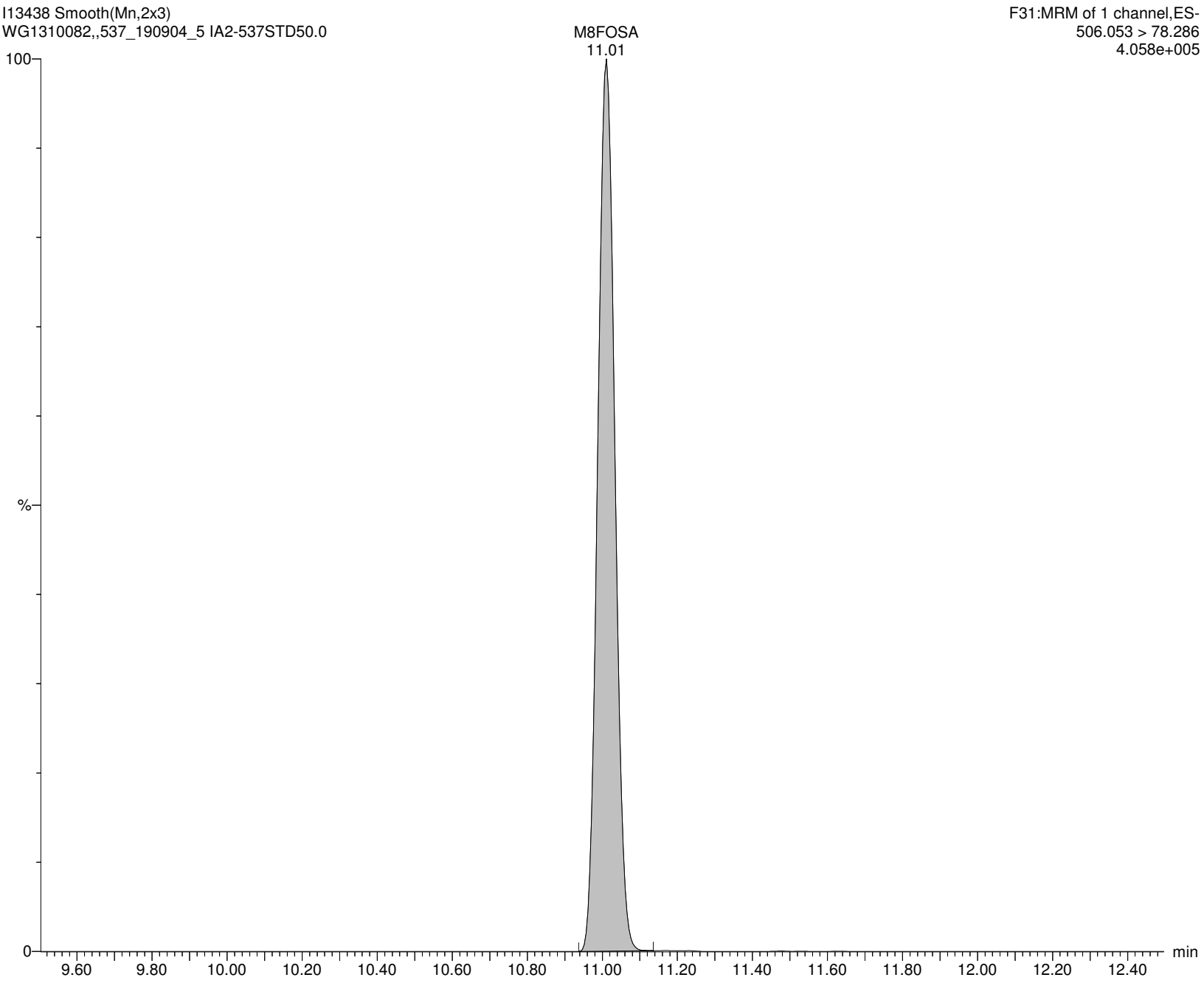
**M8FOSA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
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**Vial: 1:A,6**
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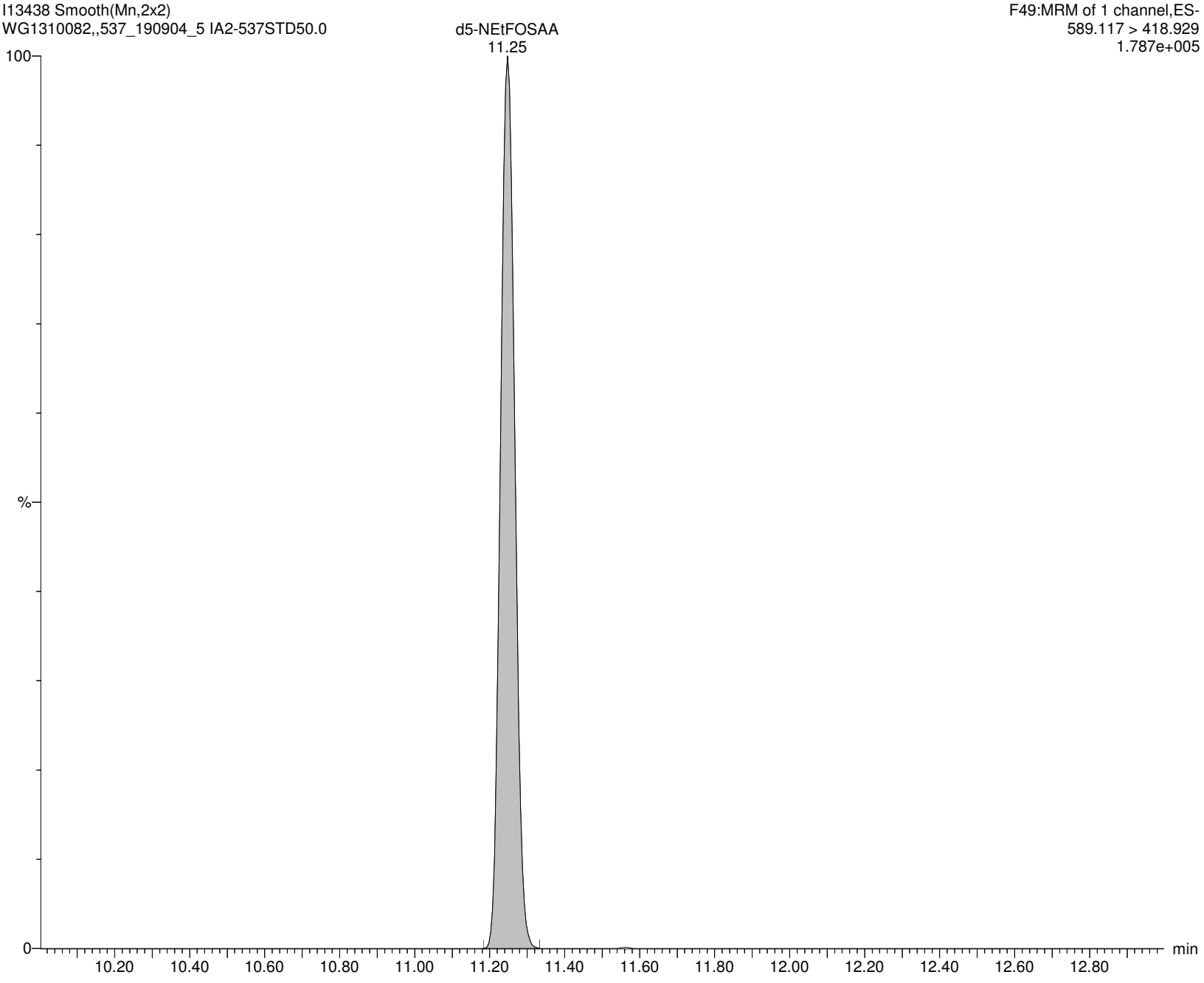
**d5-NEtFOSAA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
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**Vial: 1:A,6**
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**Tune Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\181009_TUNE.IPR**
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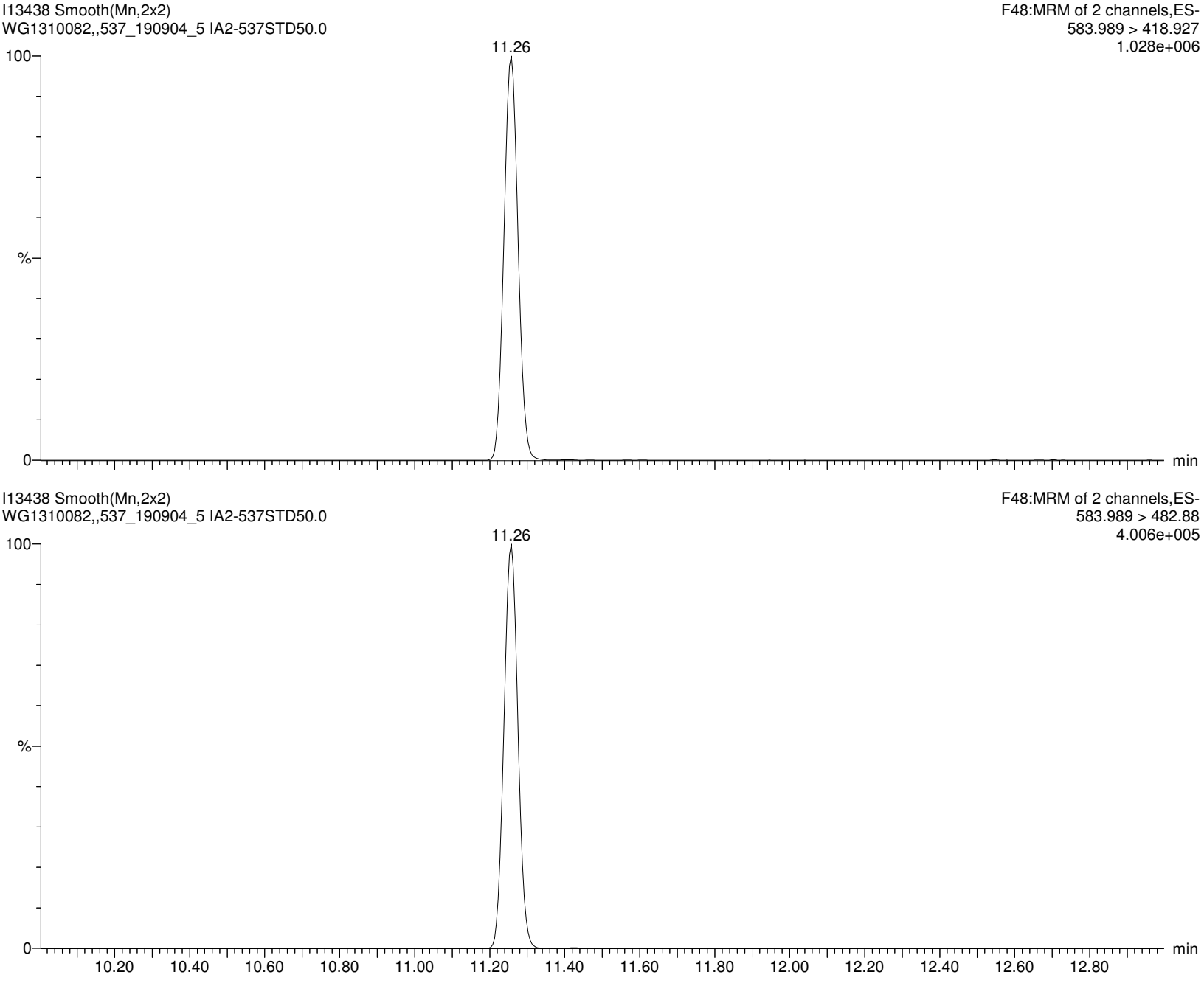
**br-NEtFOSAA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
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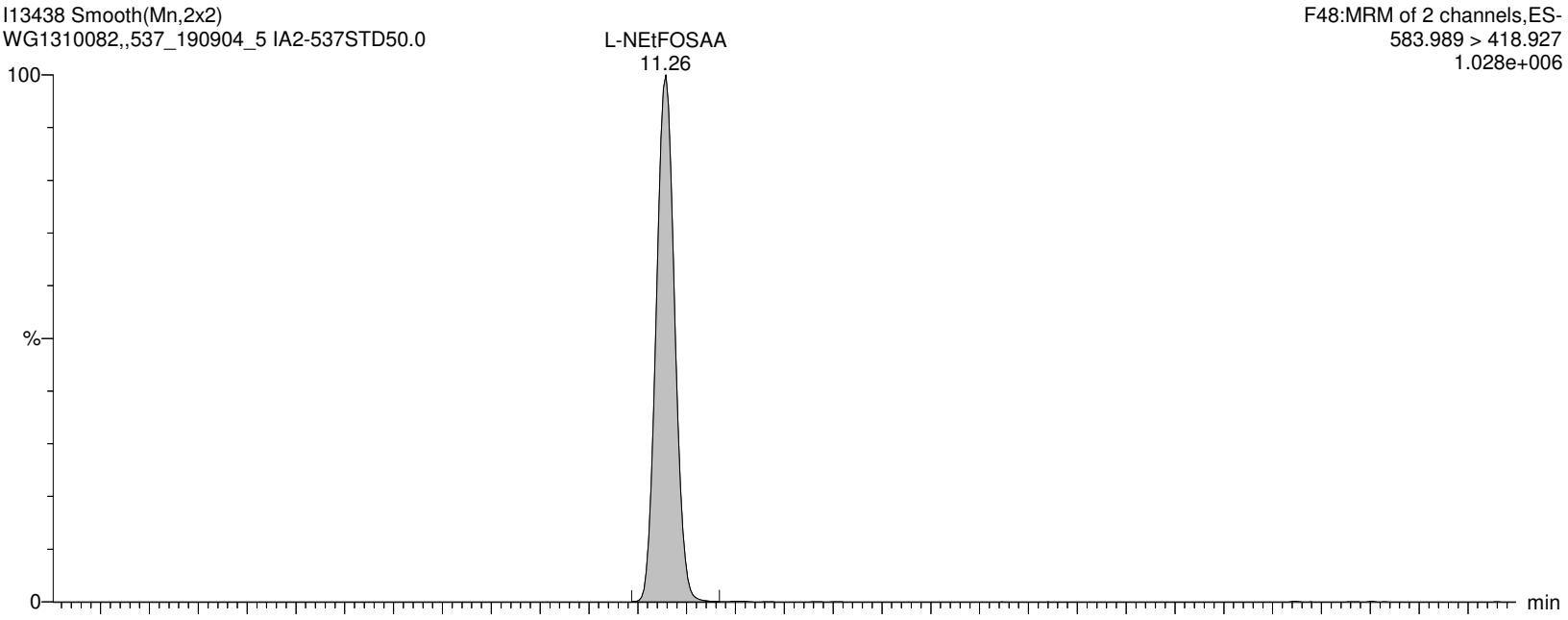


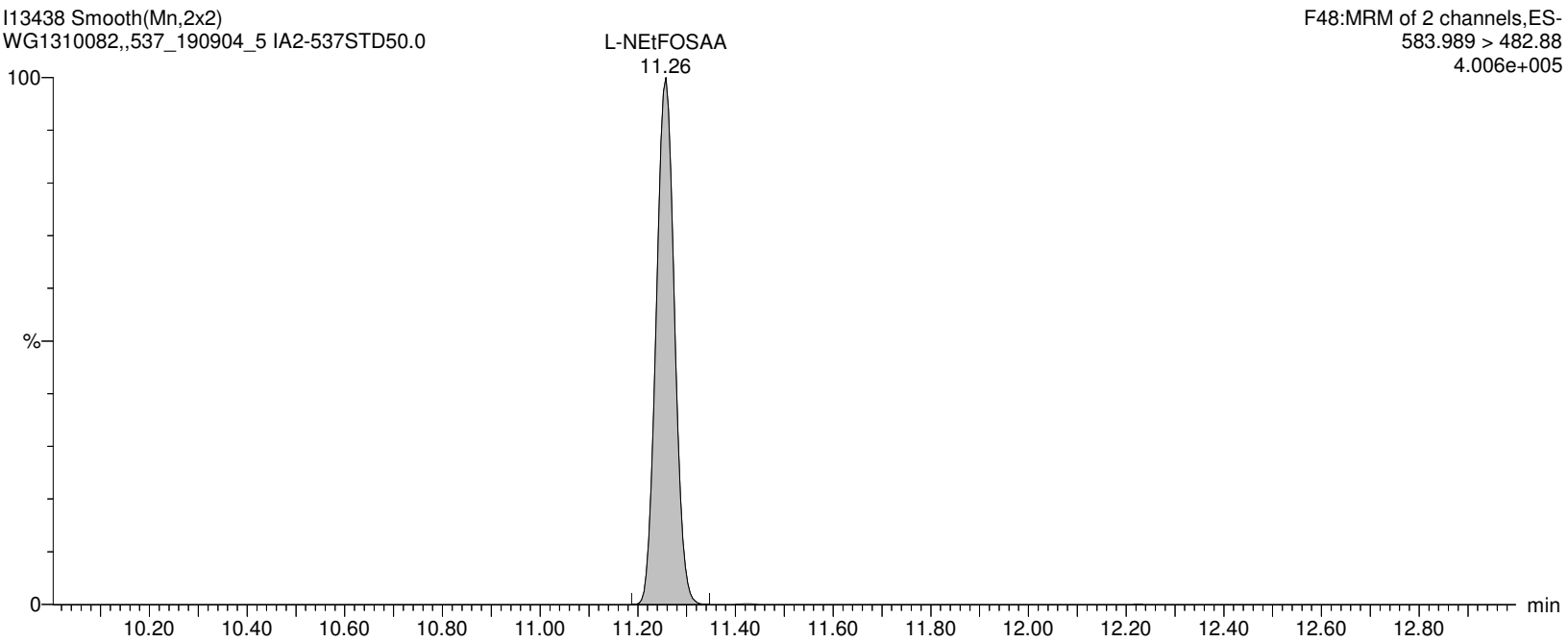



all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
Printed: Monday, November 18, 2019 13:42:56 Eastern Standard Time

**Name: I13438**
**ID: IA2-537STD50.0**
**Date: 18-Nov-2019**
**Time: 11:43:24**
**Description: WG1310082,,537_190904_5**
**User: LCMS02:JW**
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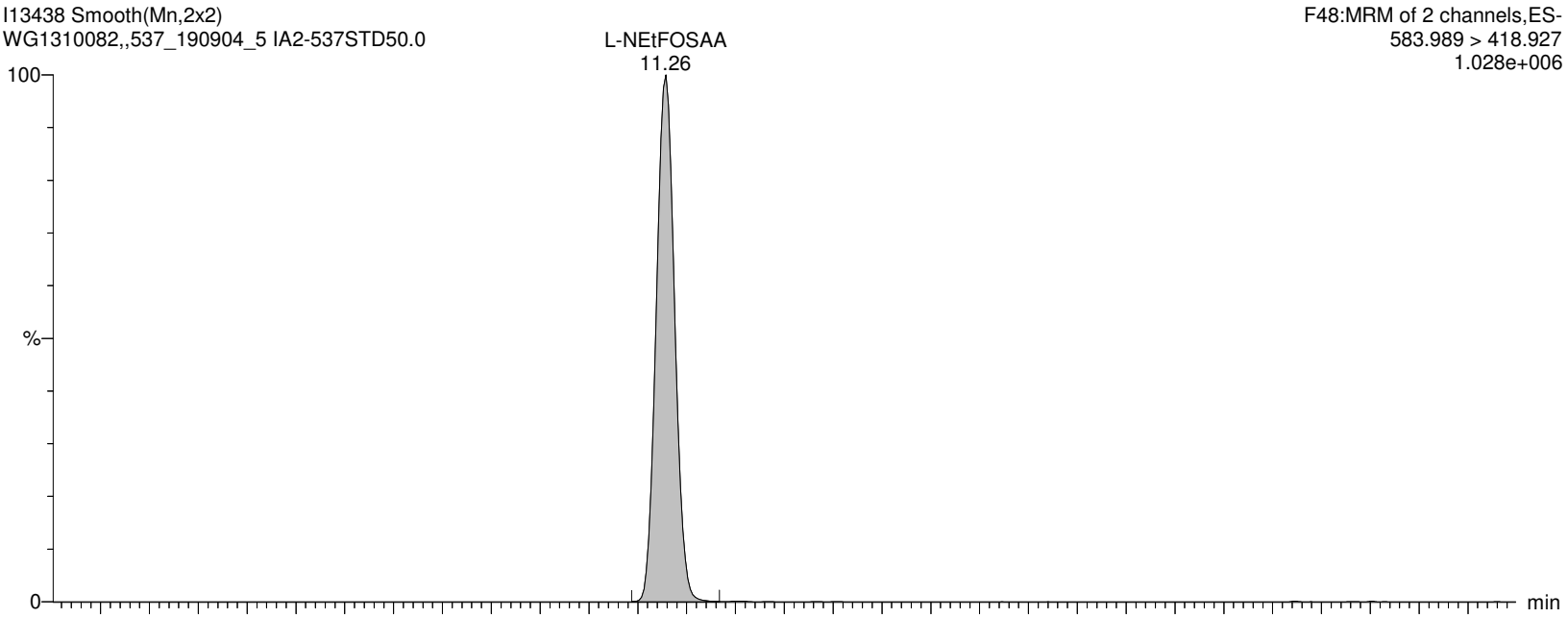


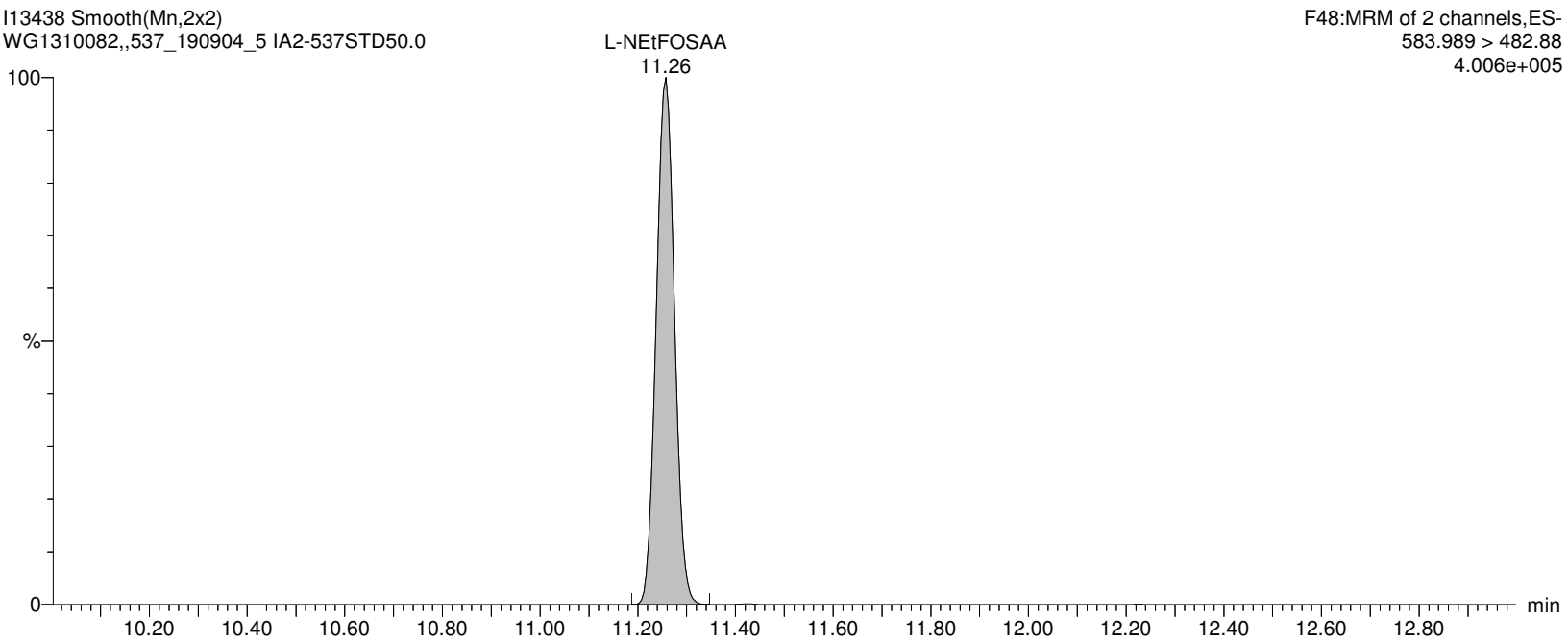



all concentration units in (ng/mL)

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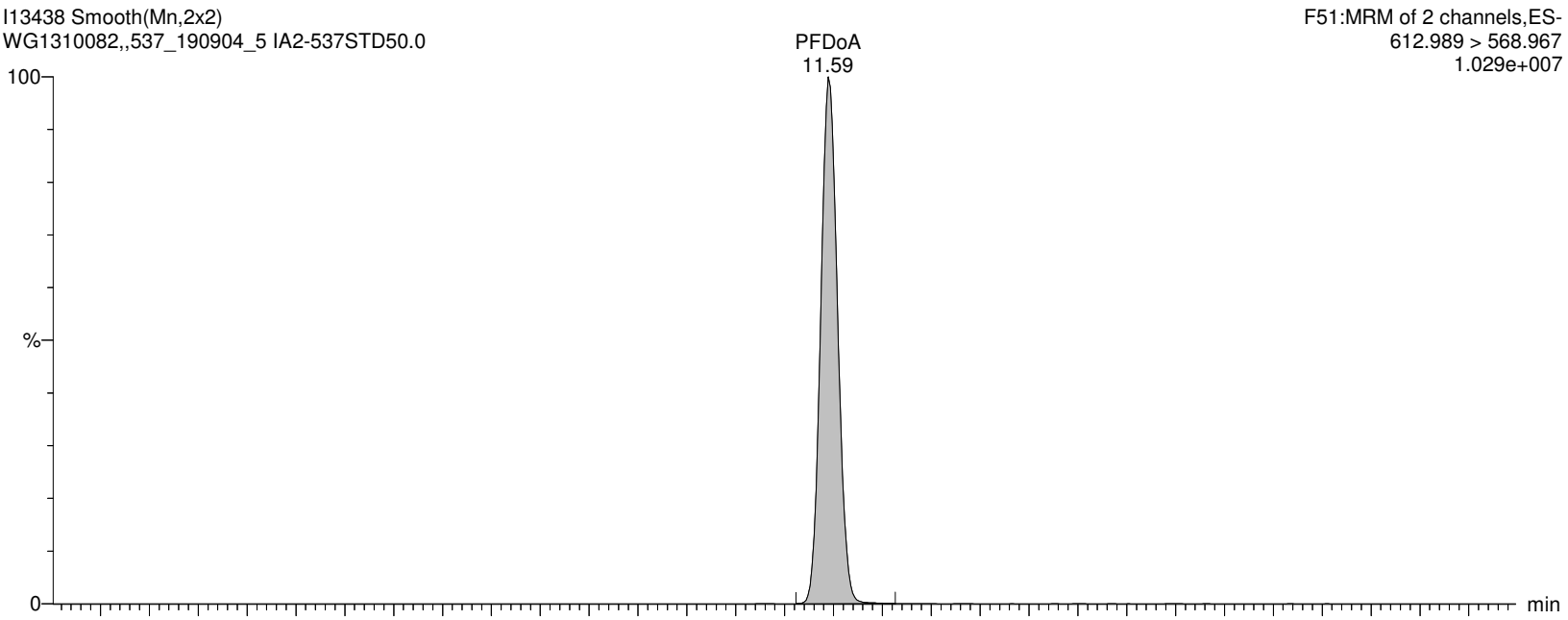


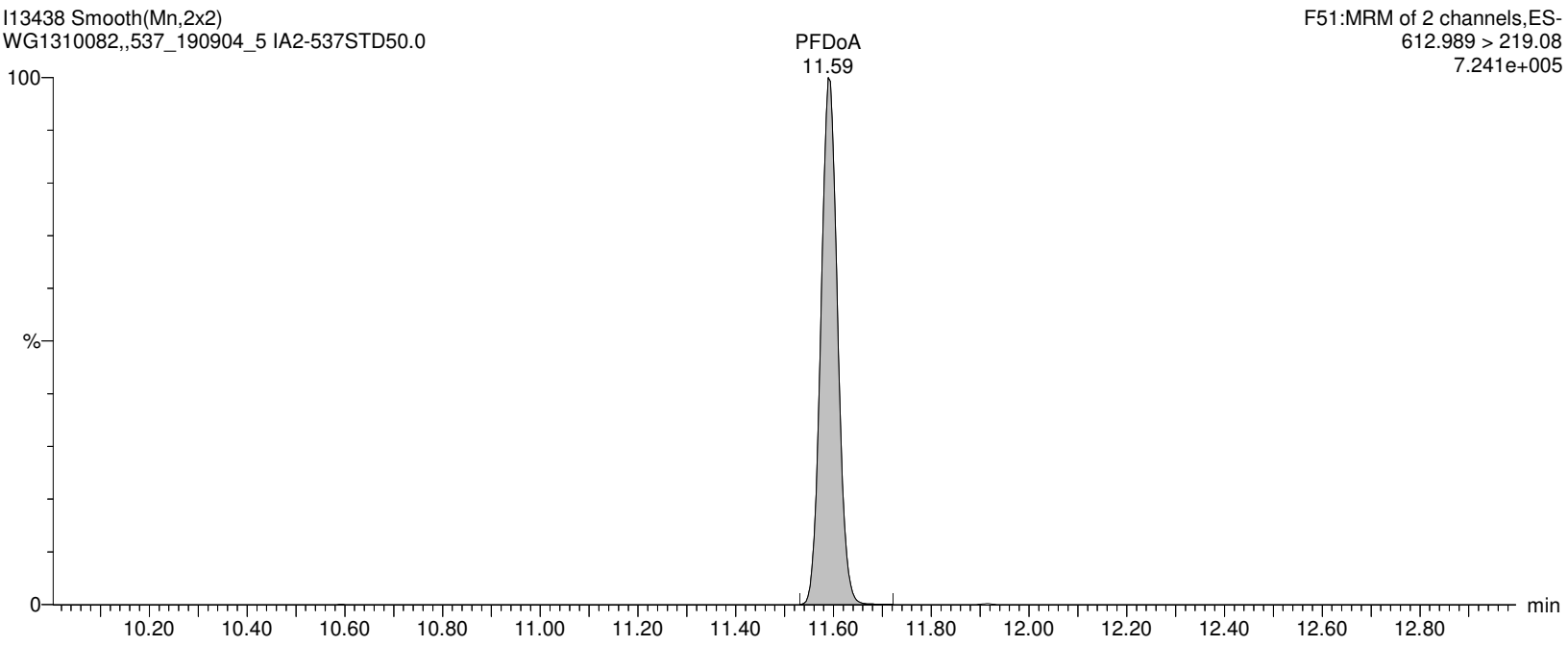



all concentration units in (ng/mL)

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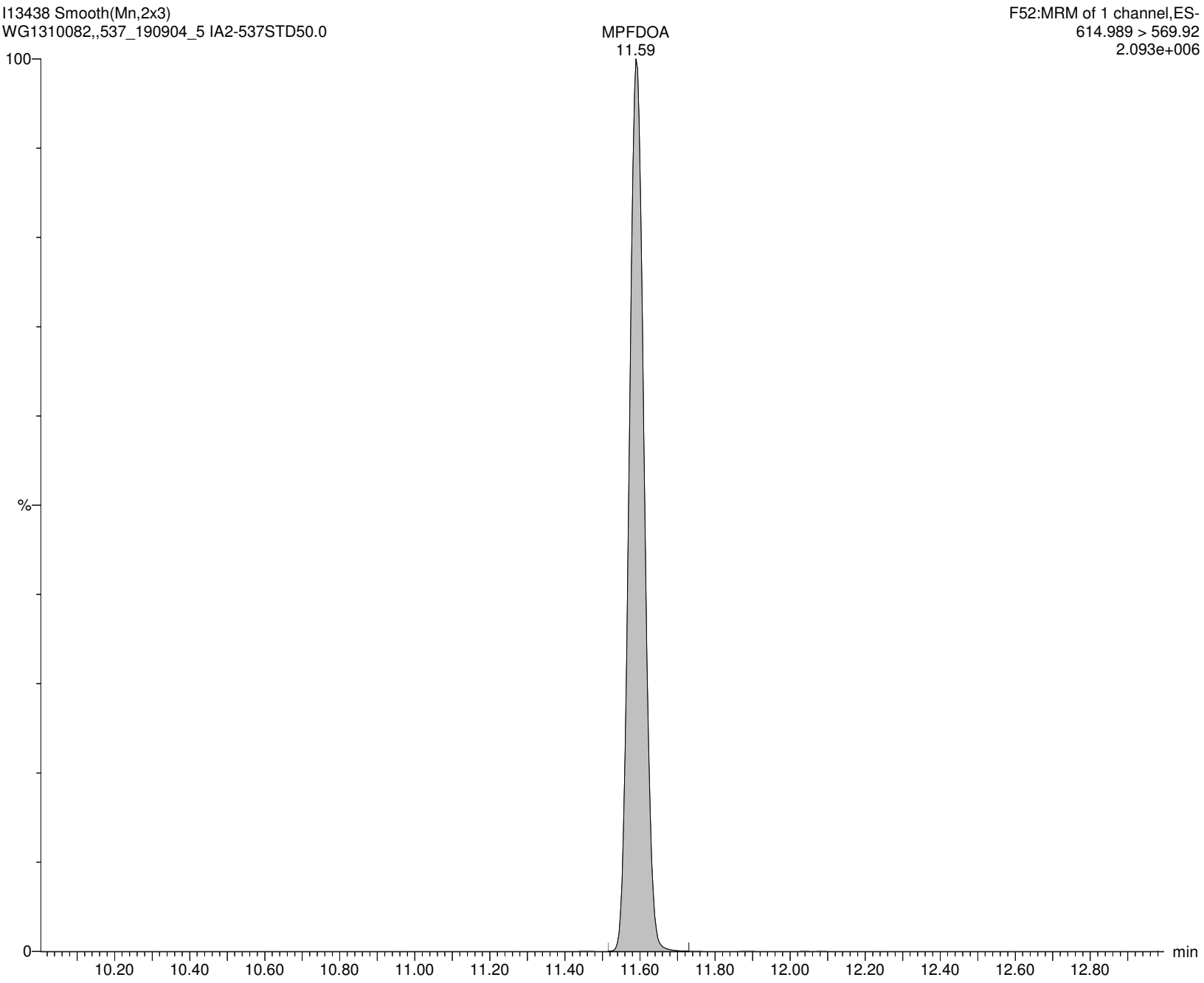



all concentration units in (ng/mL)

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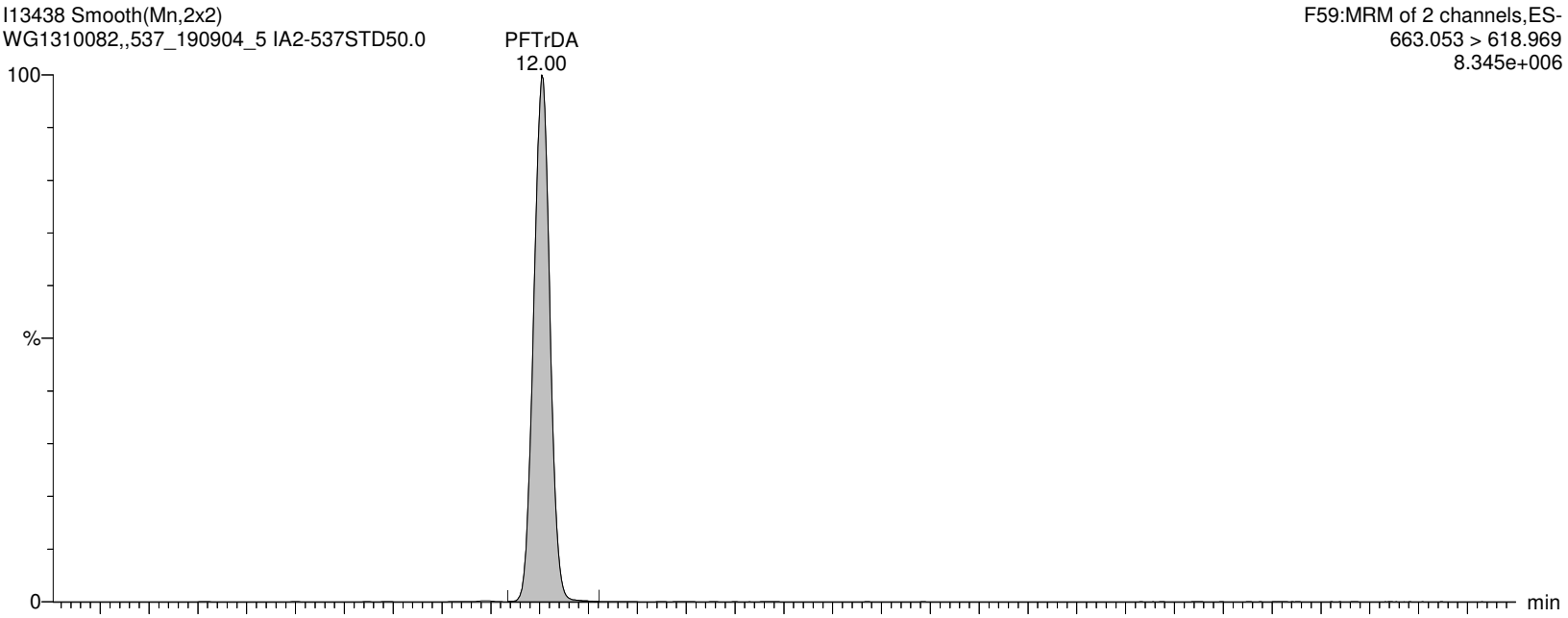


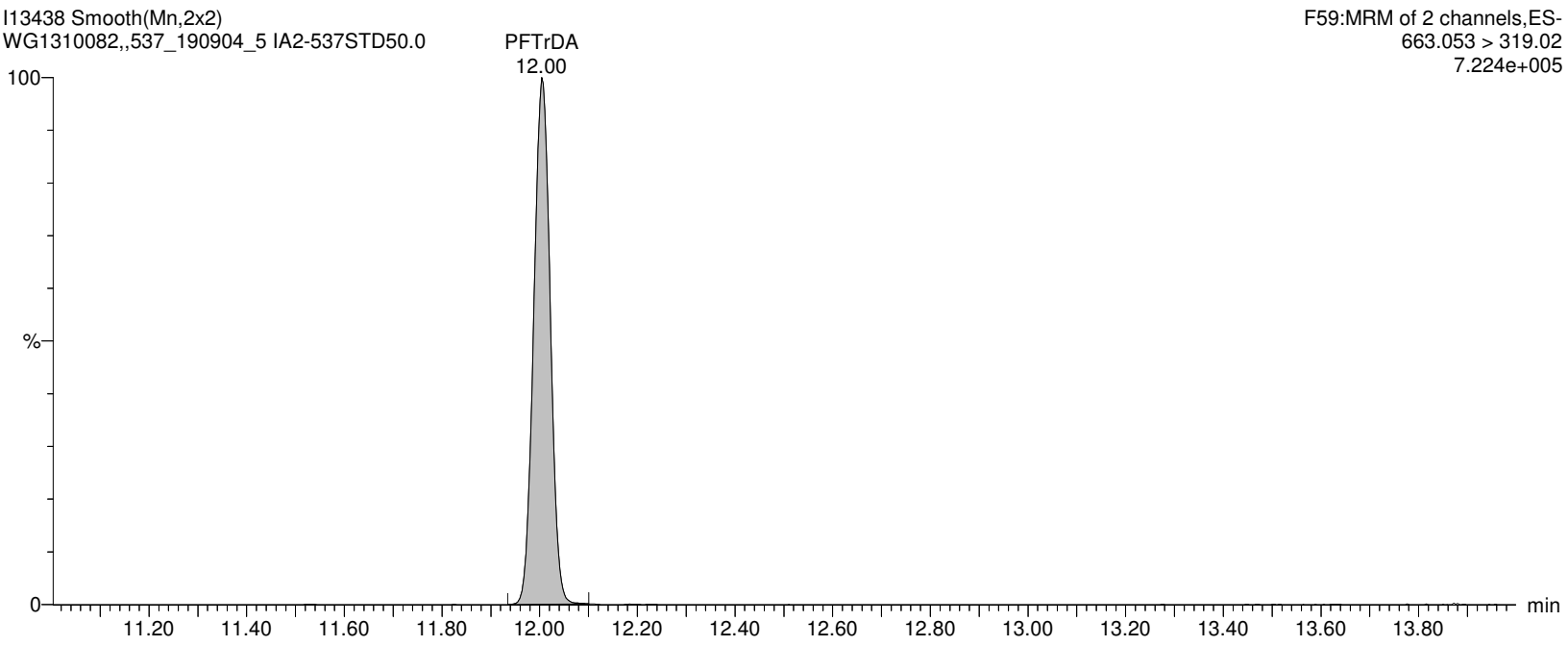



all concentration units in (ng/mL)

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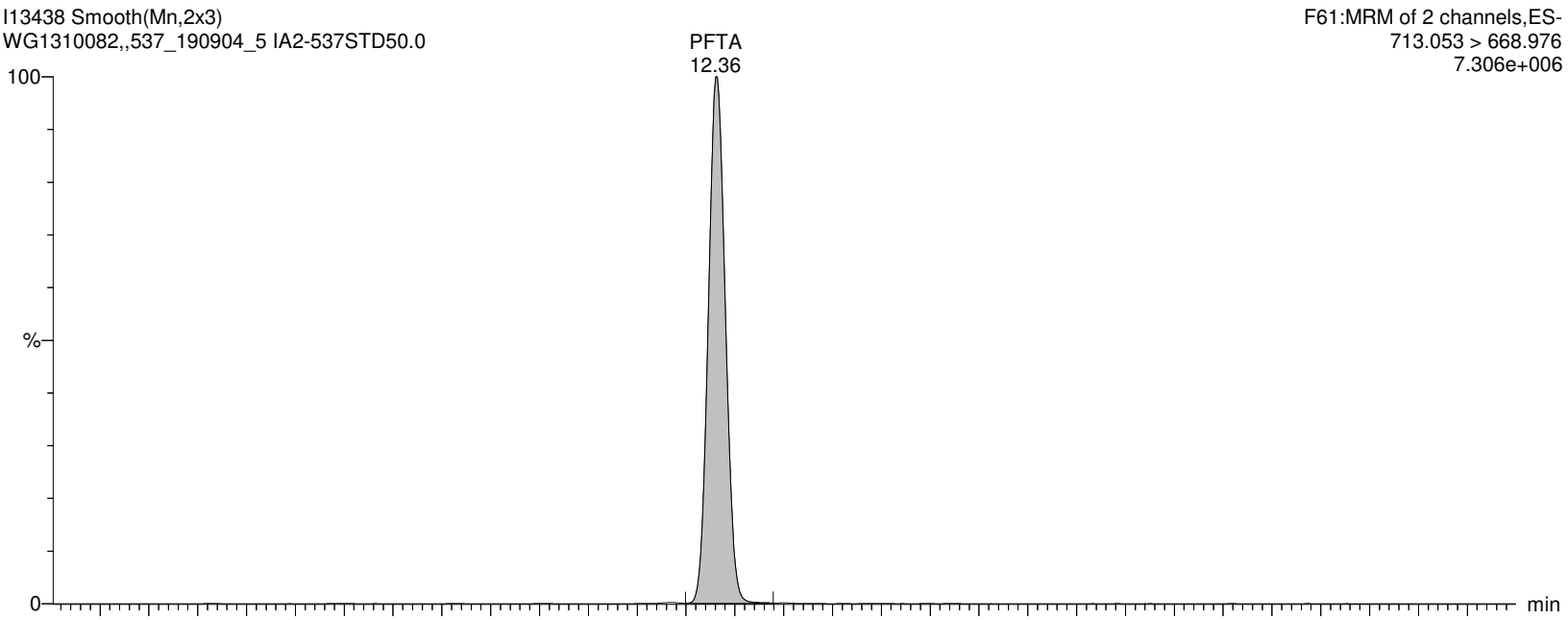


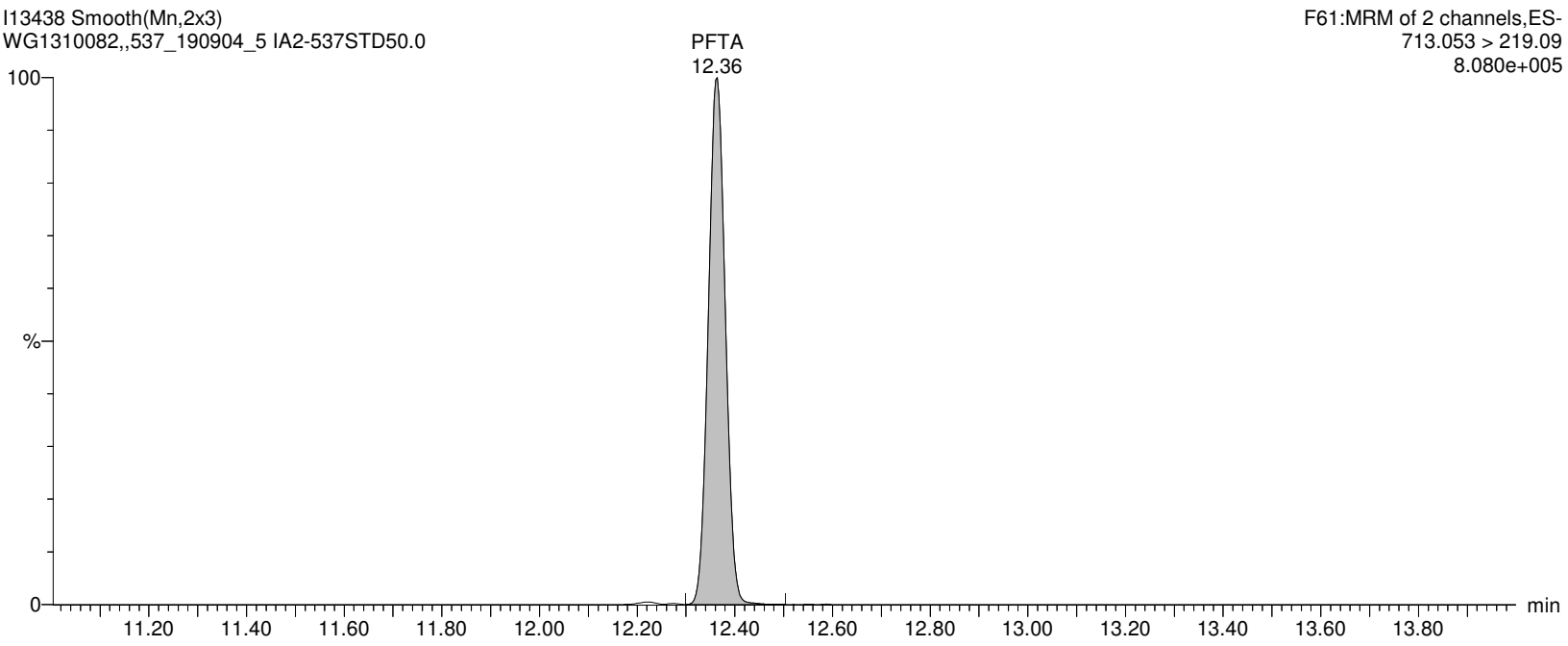



all concentration units in (ng/mL)

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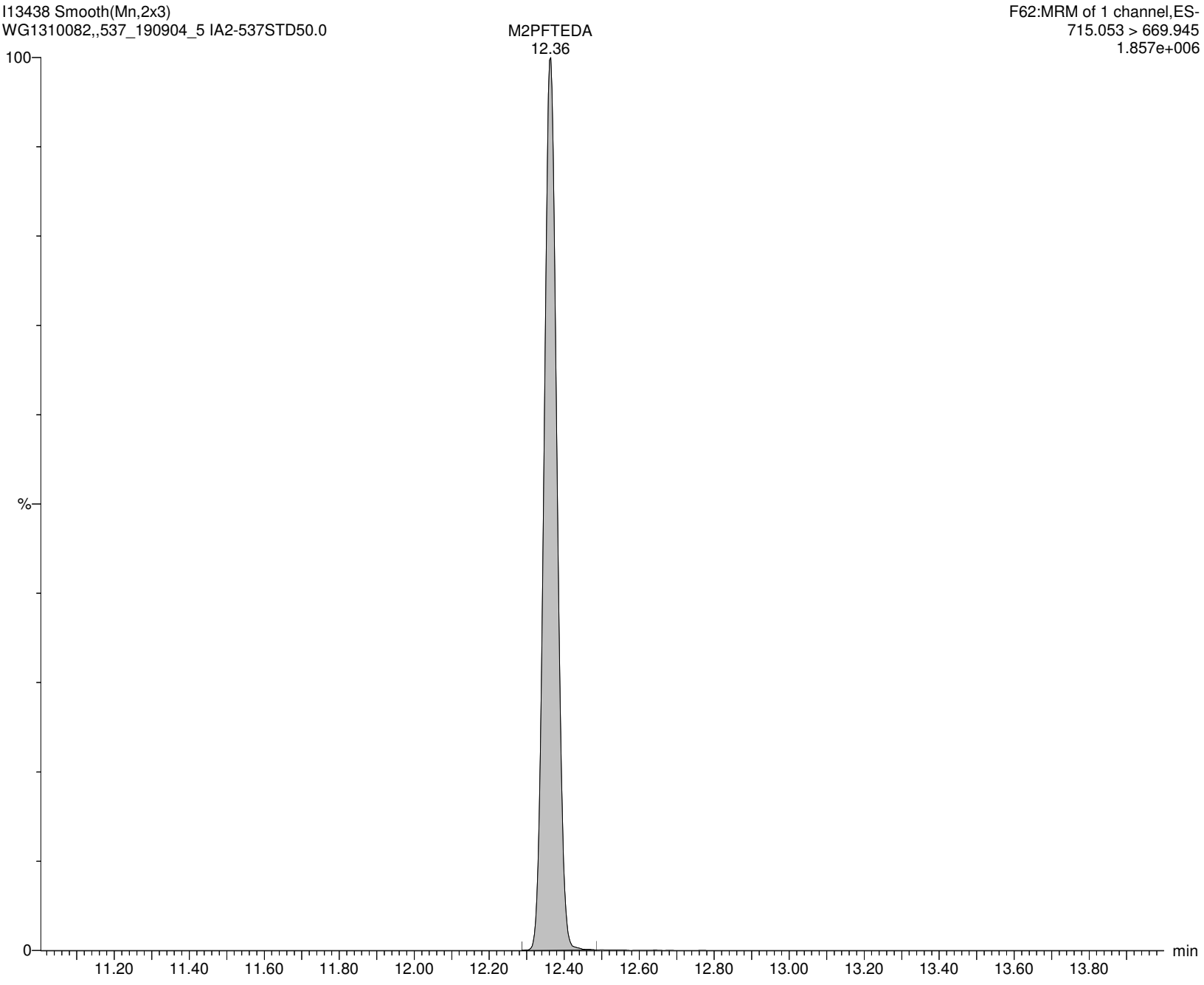



all concentration units in (ng/mL)

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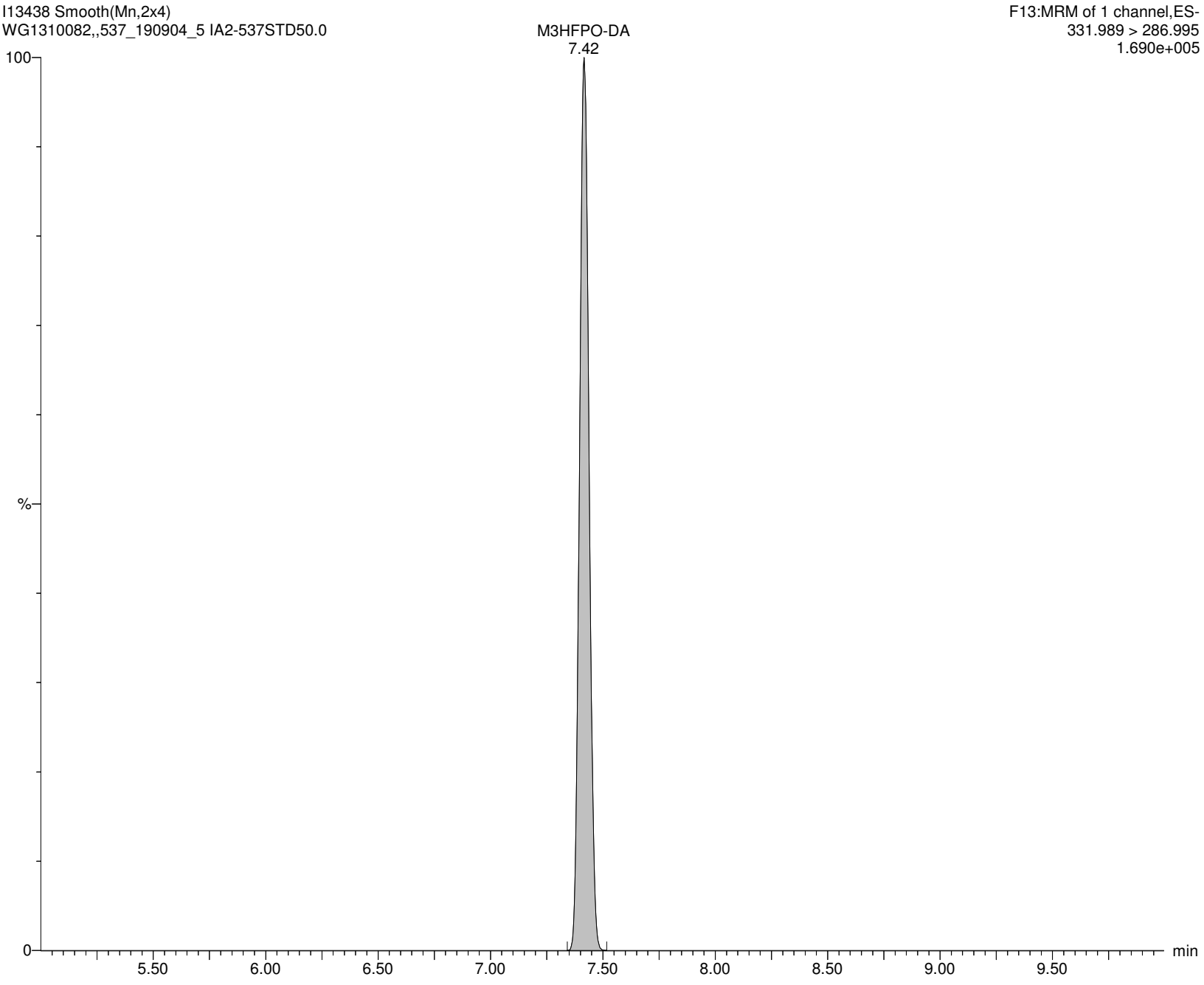



all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
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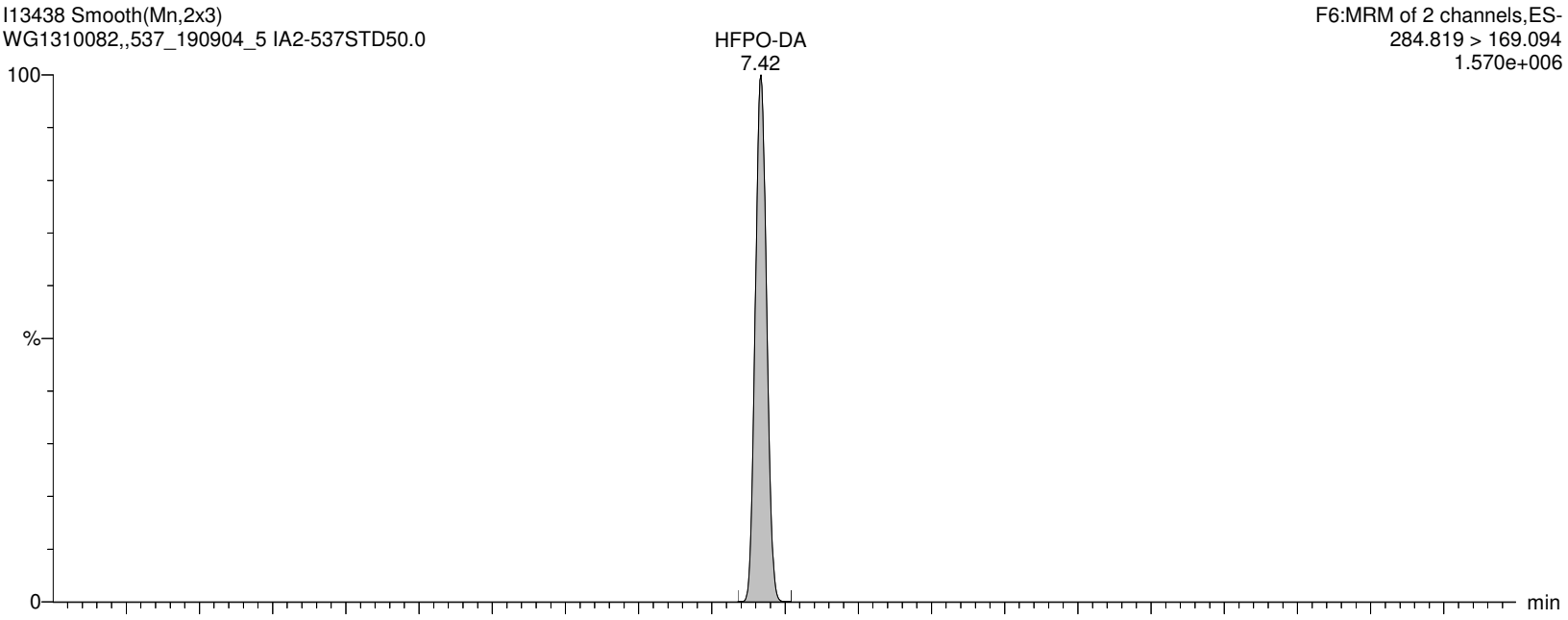


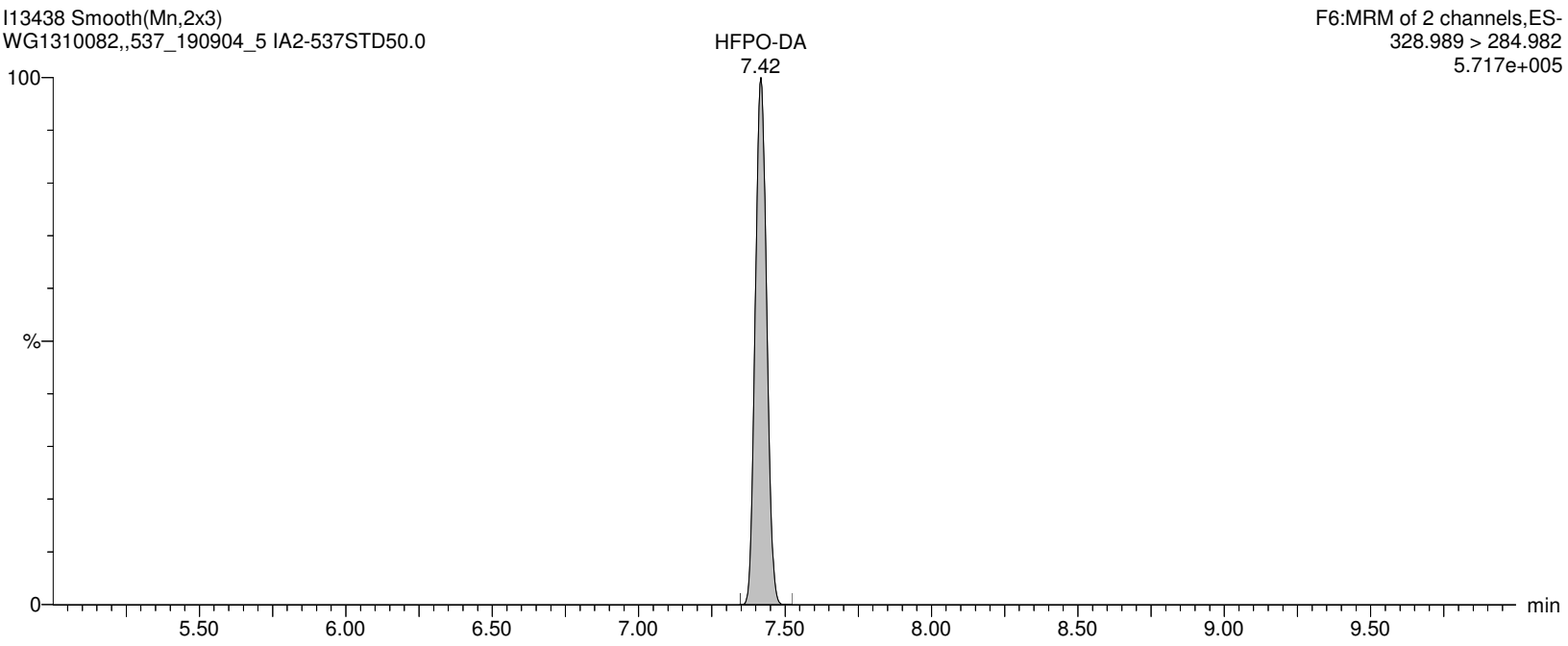



all concentration units in (ng/mL)

Alpha Analytical Inc.
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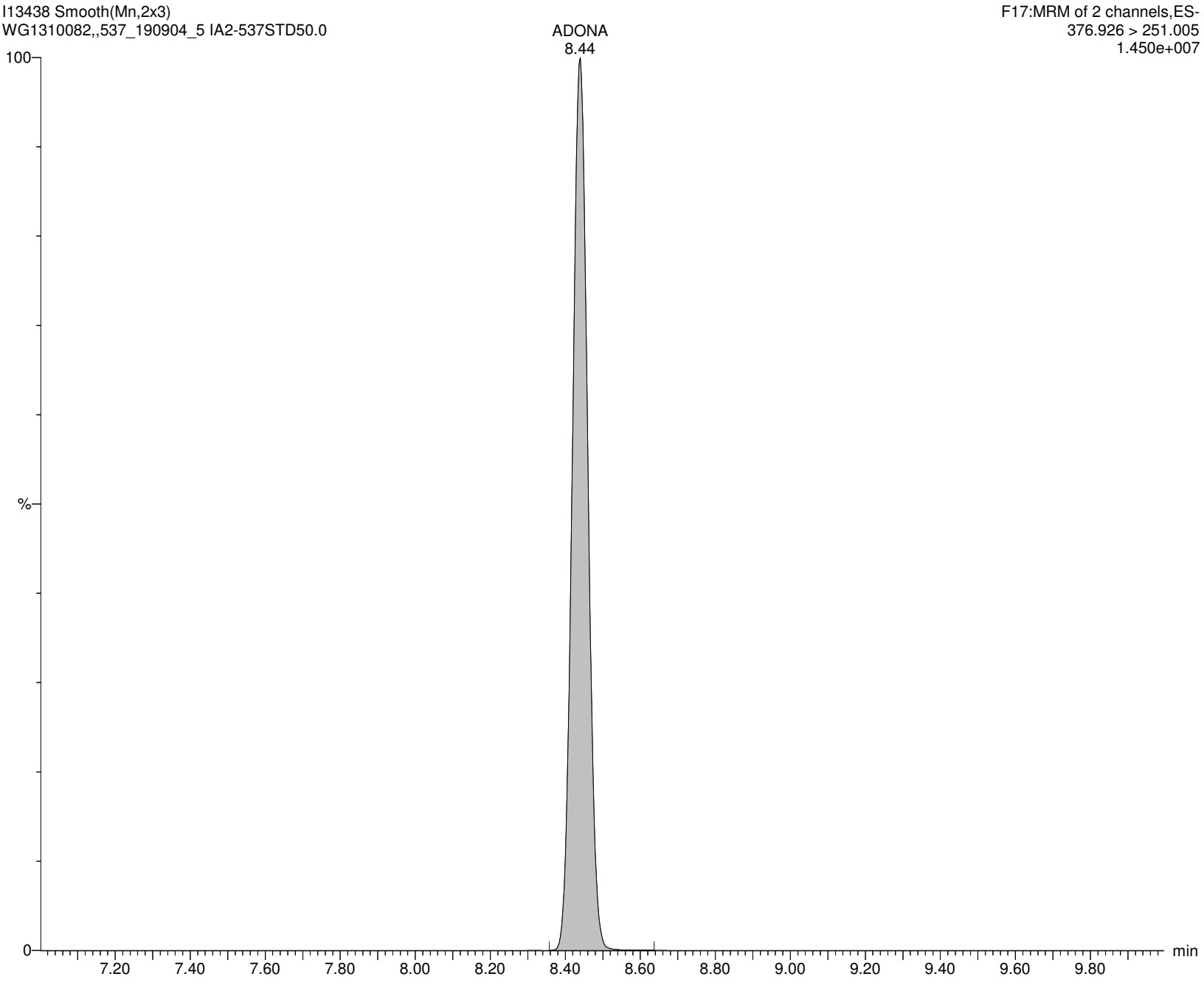



all concentration units in (ng/mL)

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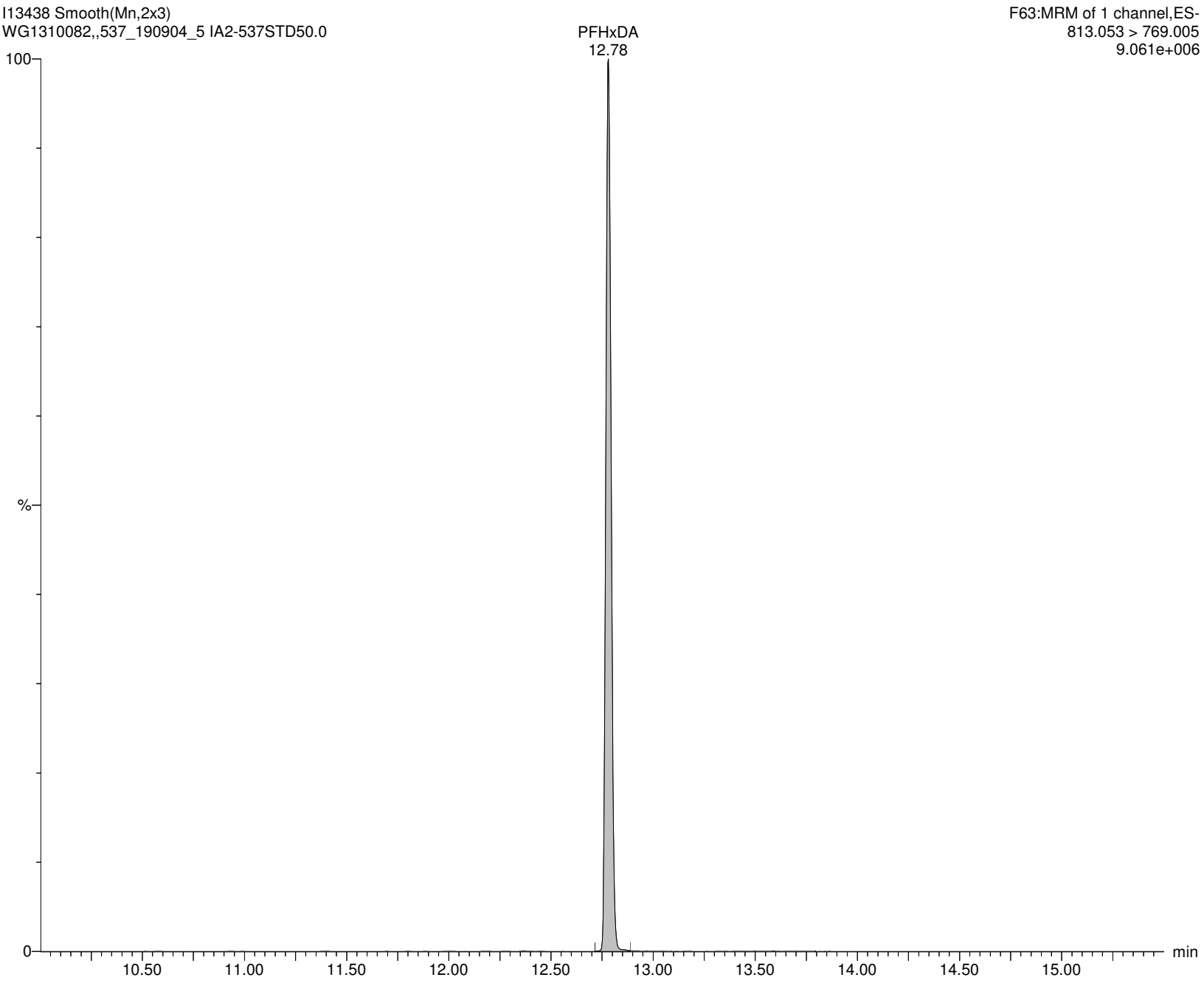



all concentration units in (ng/mL)

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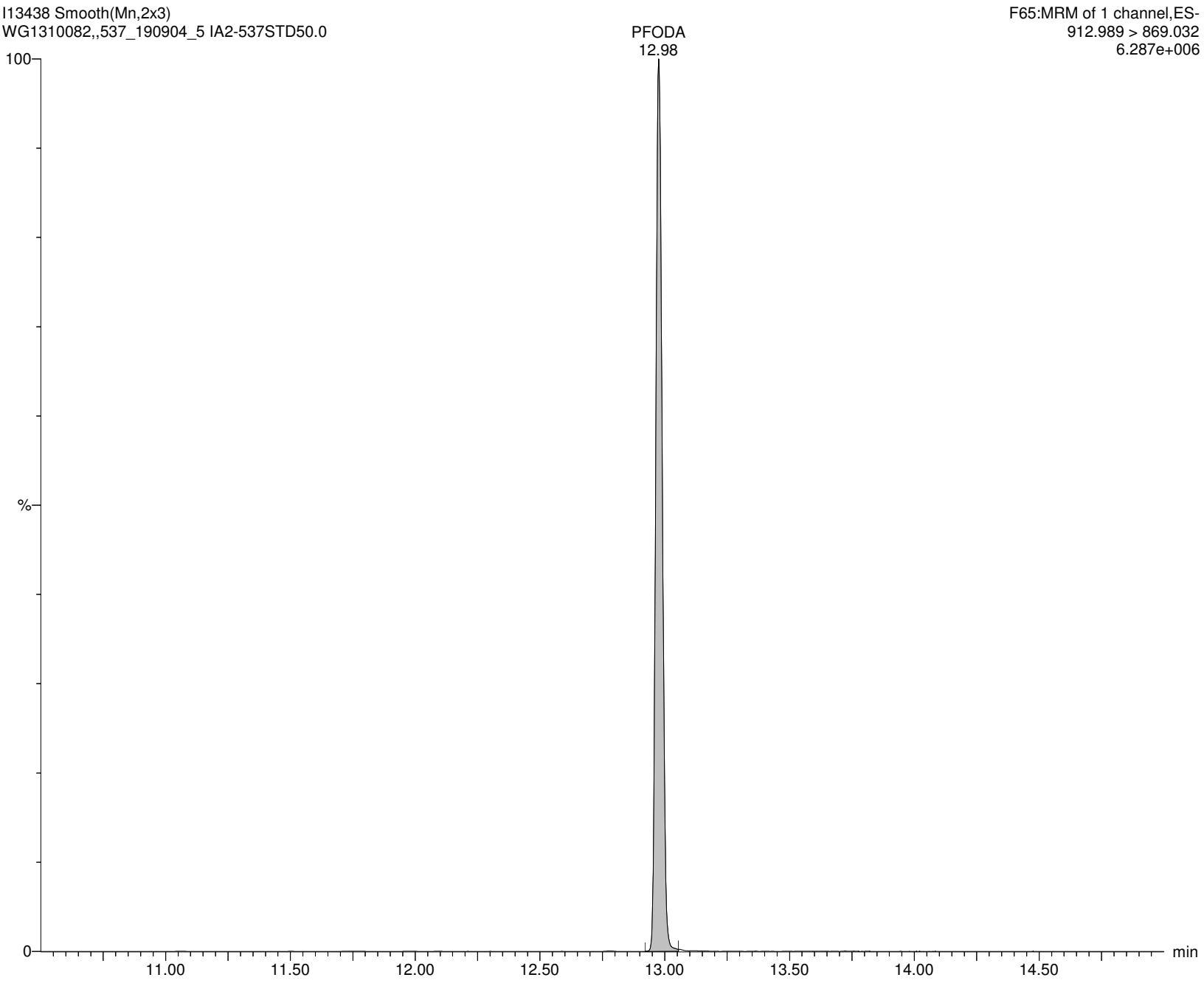



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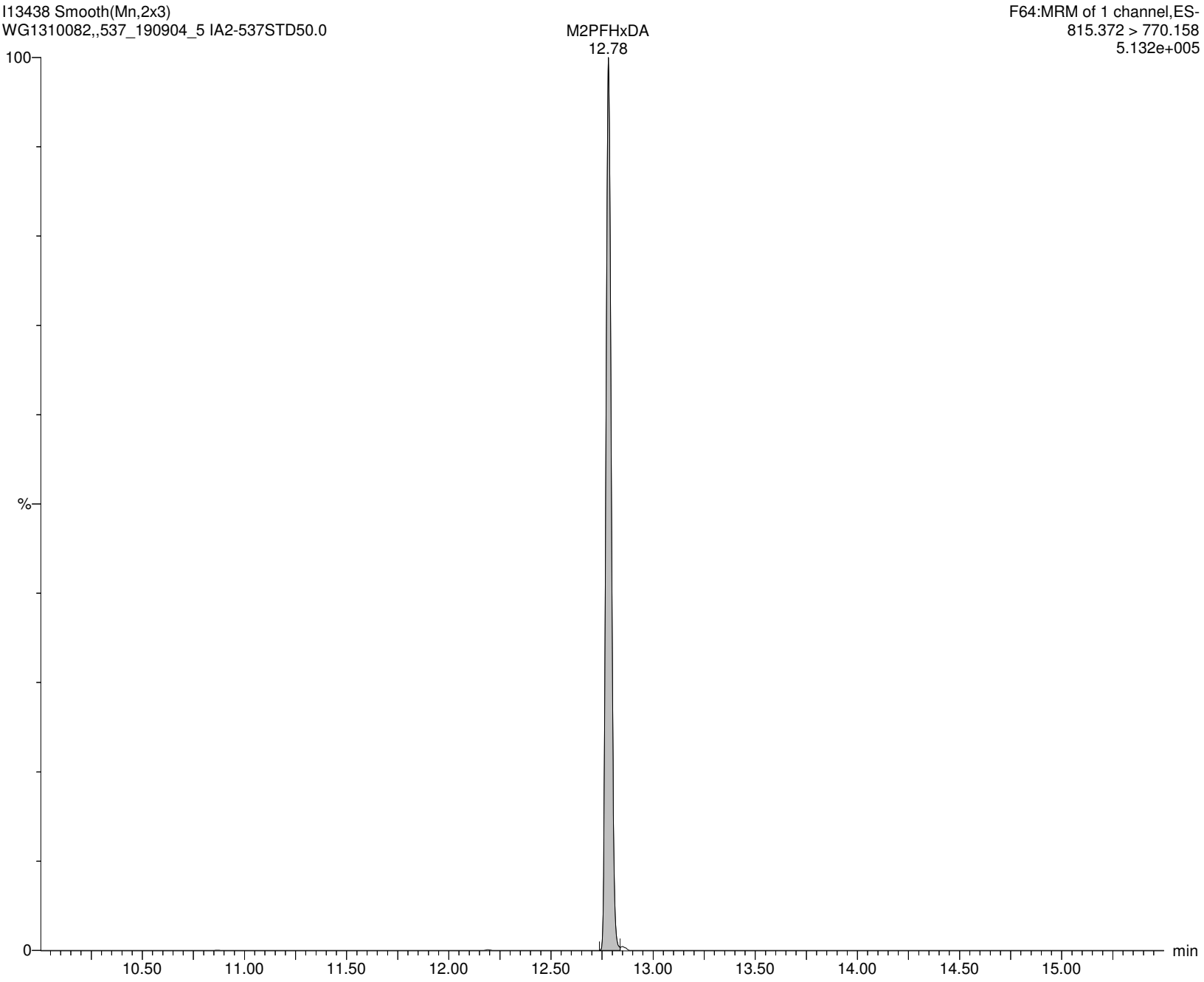



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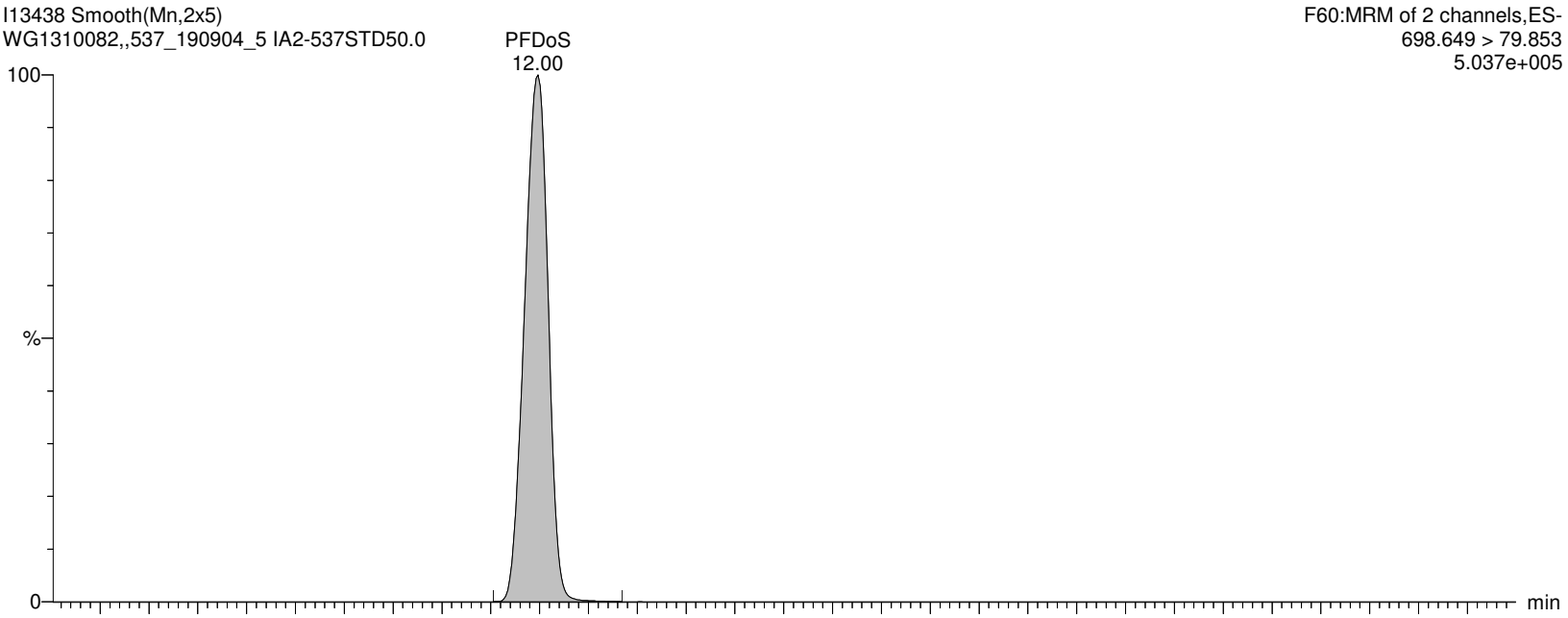


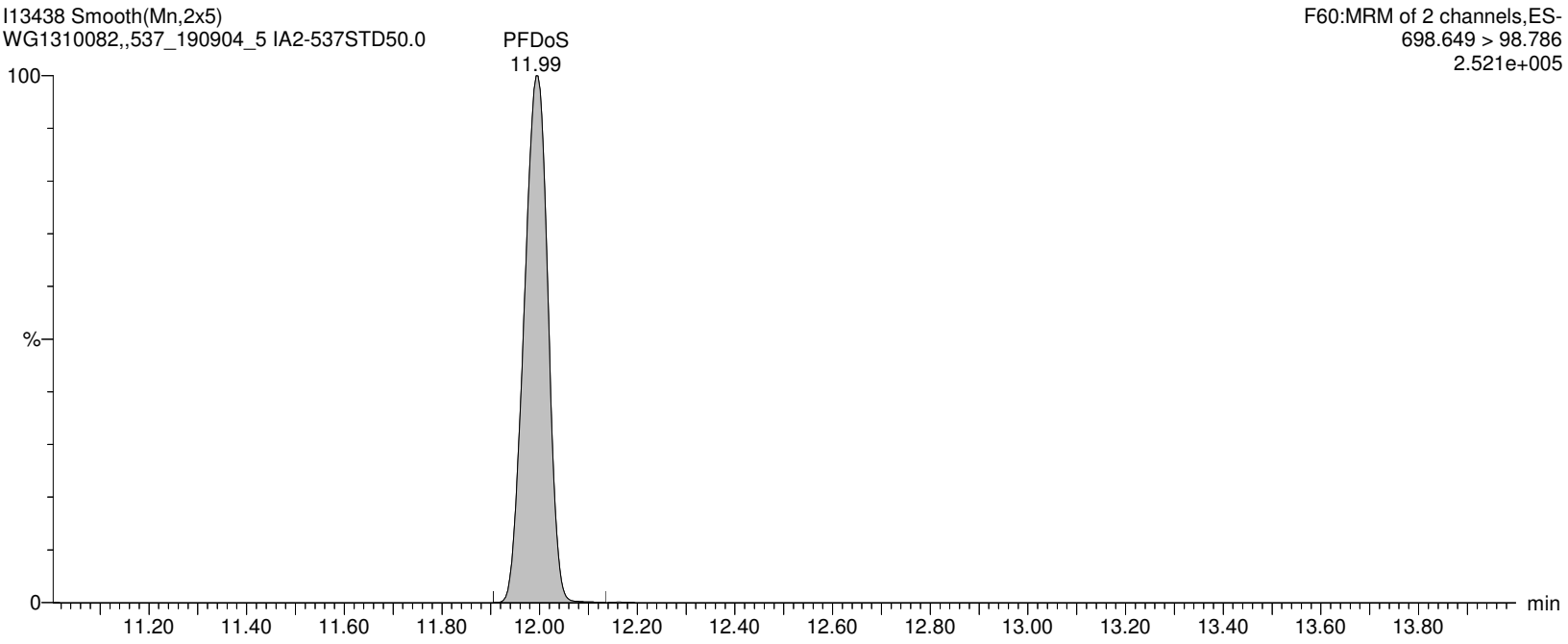



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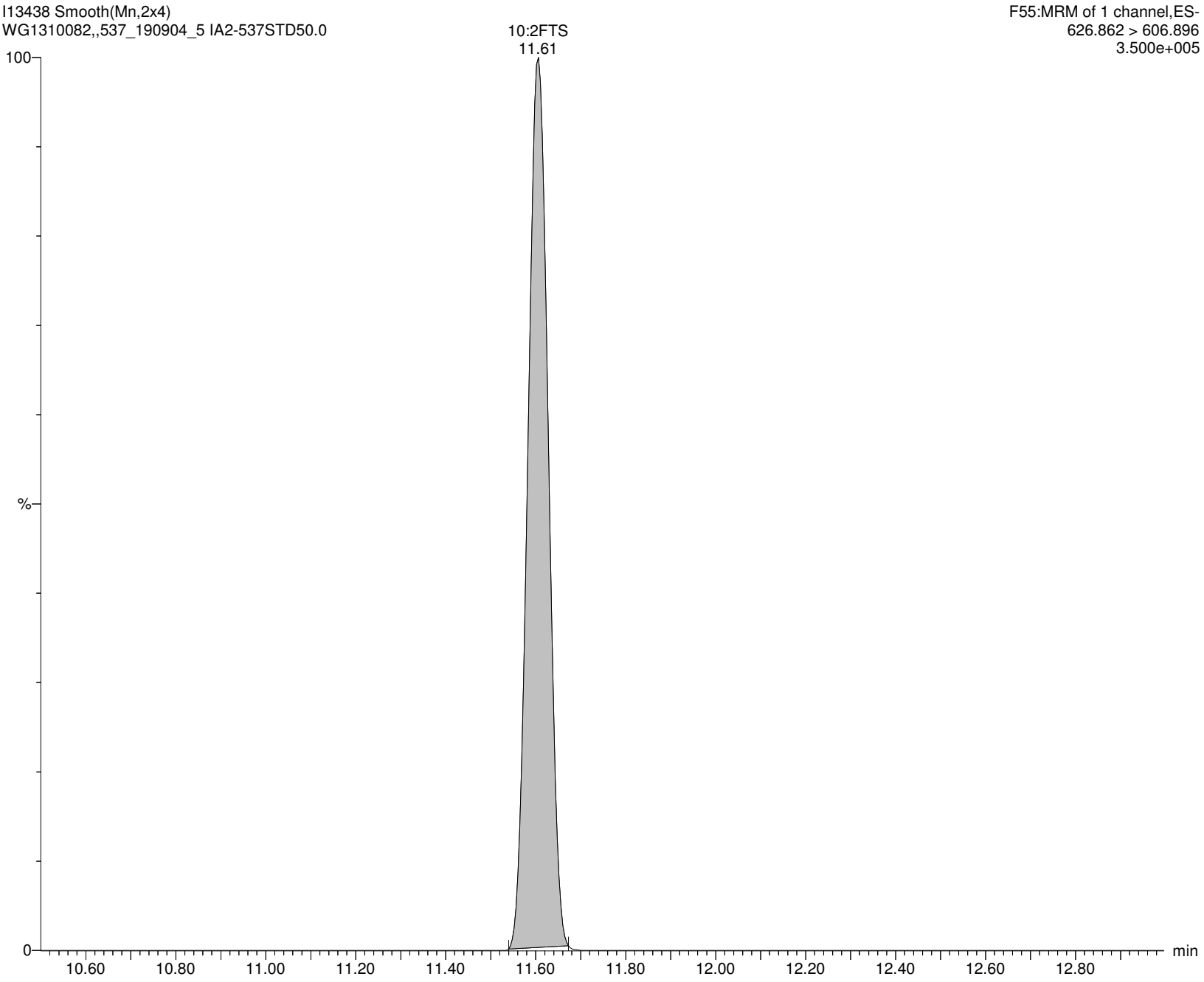



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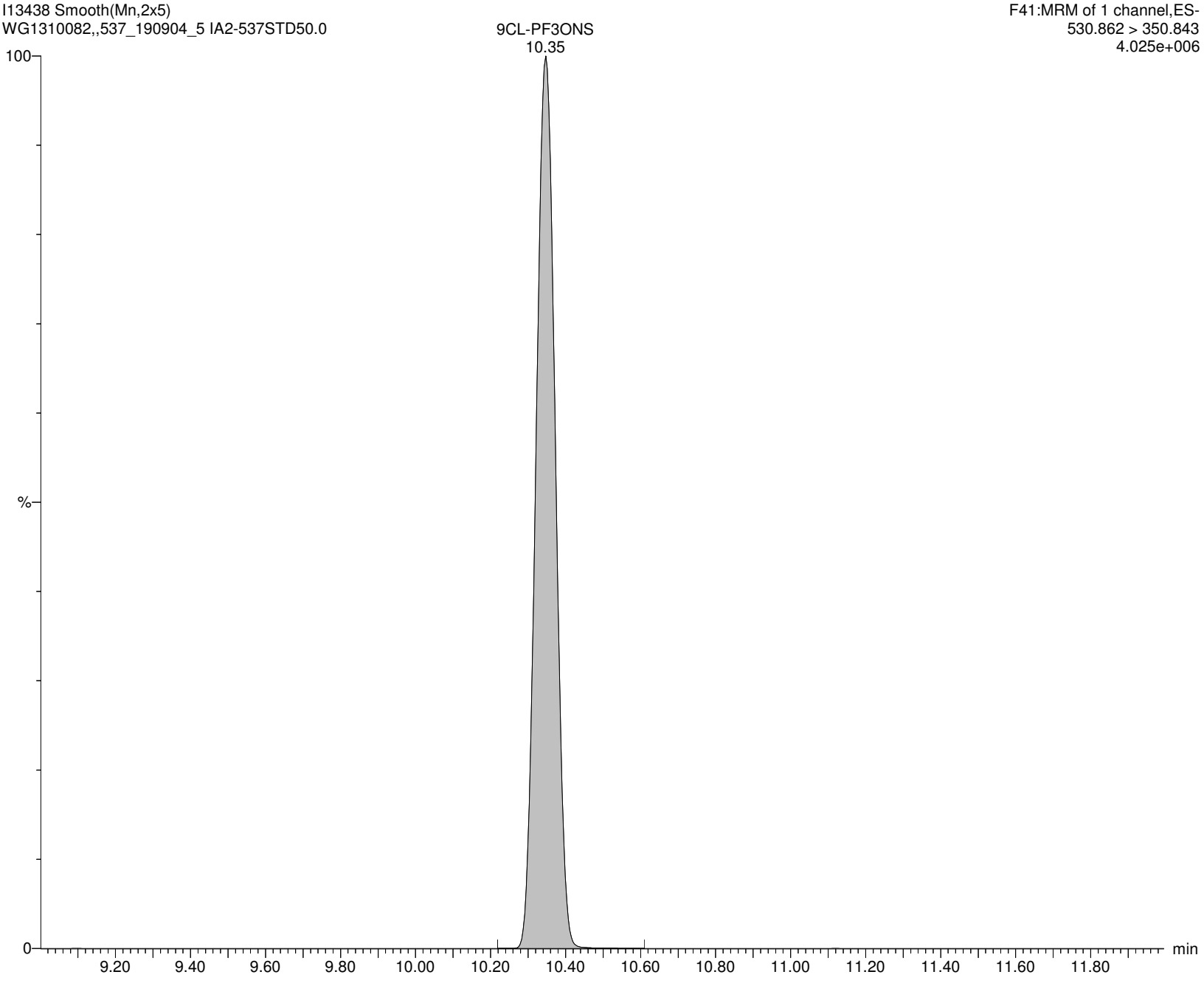
**MS Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**9CL-PF3ONS**



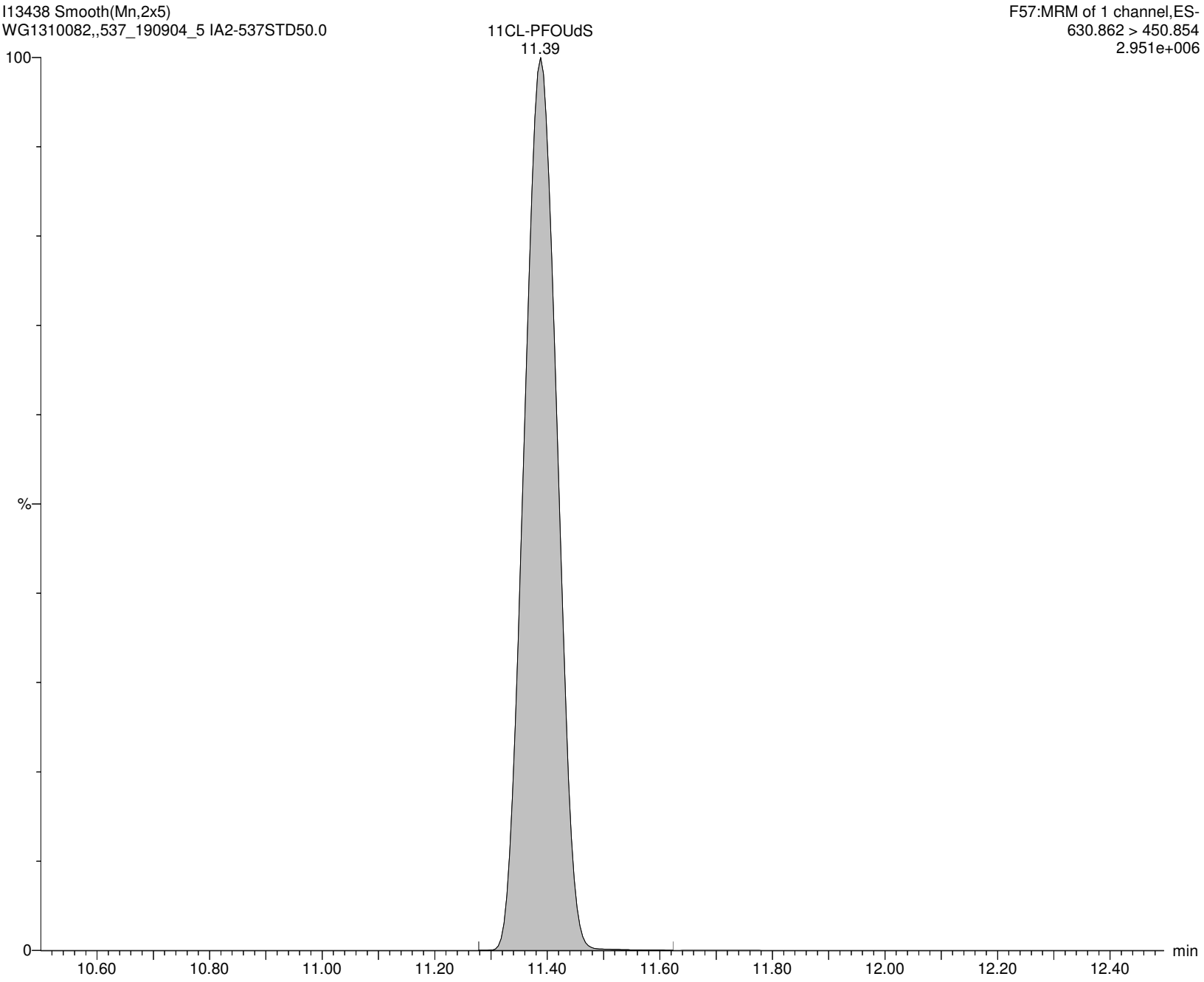


all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
Printed: Monday, November 18, 2019 13:42:56 Eastern Standard Time

**Name: I13438**
**ID: IA2-537STD50.0**
**Date: 18-Nov-2019**
**Time: 11:43:24**
**Description: WG1310082,,537_190904_5**
**User: LCMS02:JW**
**Vial: 1:A,6**
**Instrument: XEVO-TQSmicro#QEB0050**
**Inlet Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\LCMS_537_ISO_B**
**Tune Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\181009_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**11CL-PFOUdS**



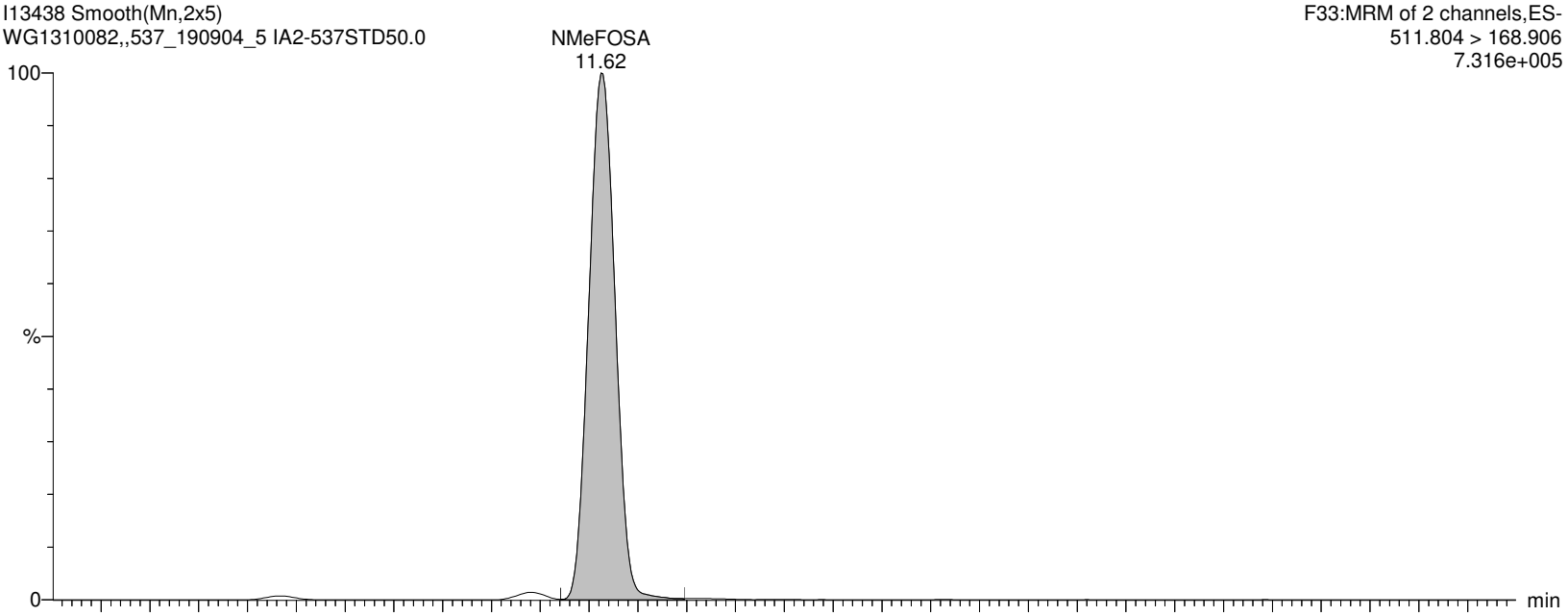


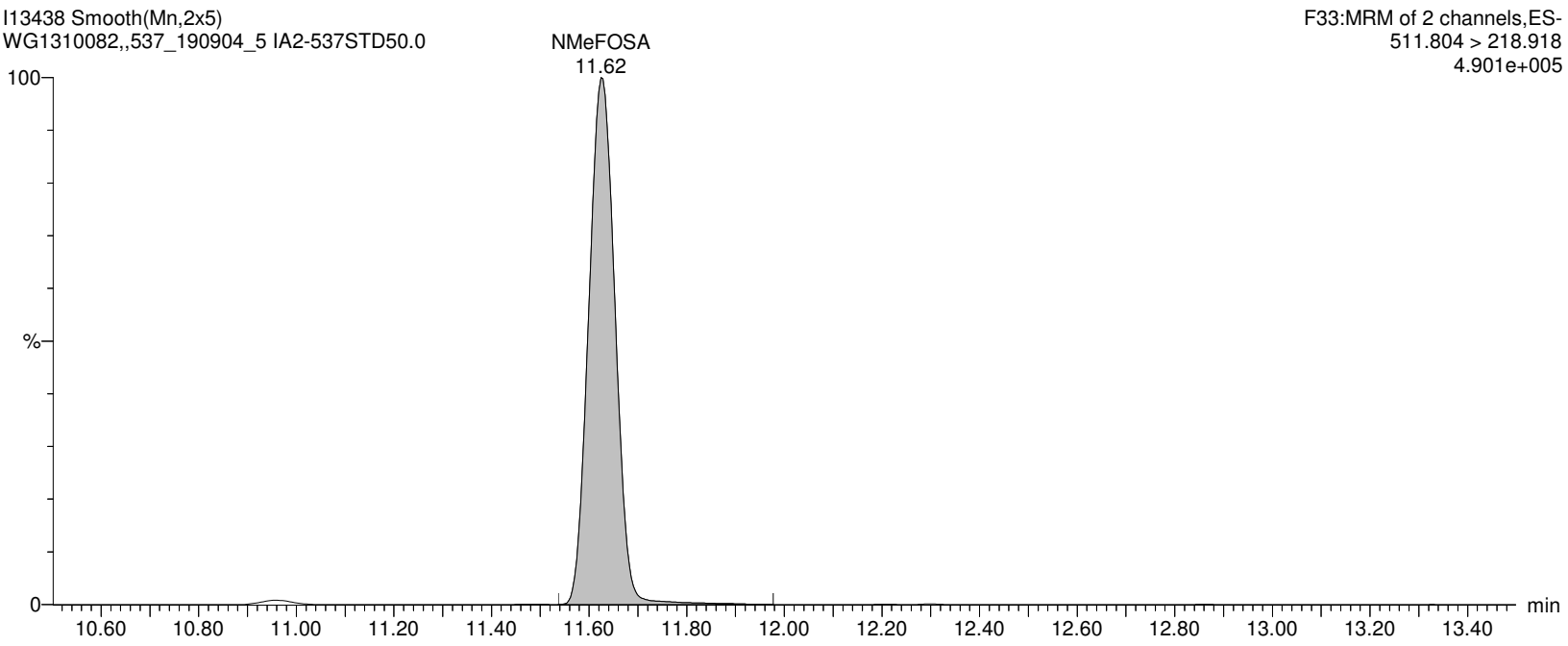
all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
Printed: Monday, November 18, 2019 13:42:56 Eastern Standard Time

**Name: I13438**
**ID: IA2-537STD50.0**
**Date: 18-Nov-2019**
**Time: 11:43:24**
**Description: WG1310082,,537_190904_5**
**User: LCMS02:JW**
**Vial: 1:A,6**
**Instrument: XEVO-TQSmicro#QEB0050**
**Inlet Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\LCMS_537_ISO_B**
**Tune Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\181009_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**NMeFOSA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
Printed: Monday, November 18, 2019 13:42:56 Eastern Standard Time

**Name: I13438**
**ID: IA2-537STD50.0**
**Date: 18-Nov-2019**
**Time: 11:43:24**
**Description: WG1310082,,537_190904_5**
**User: LCMS02:JW**
**Vial: 1:A,6**
**Instrument: XEVO-TQSmicro#QEB0050**
**Inlet Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\LCMS_537_ISO_B**
**Tune Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\181009_TUNE.IPR**
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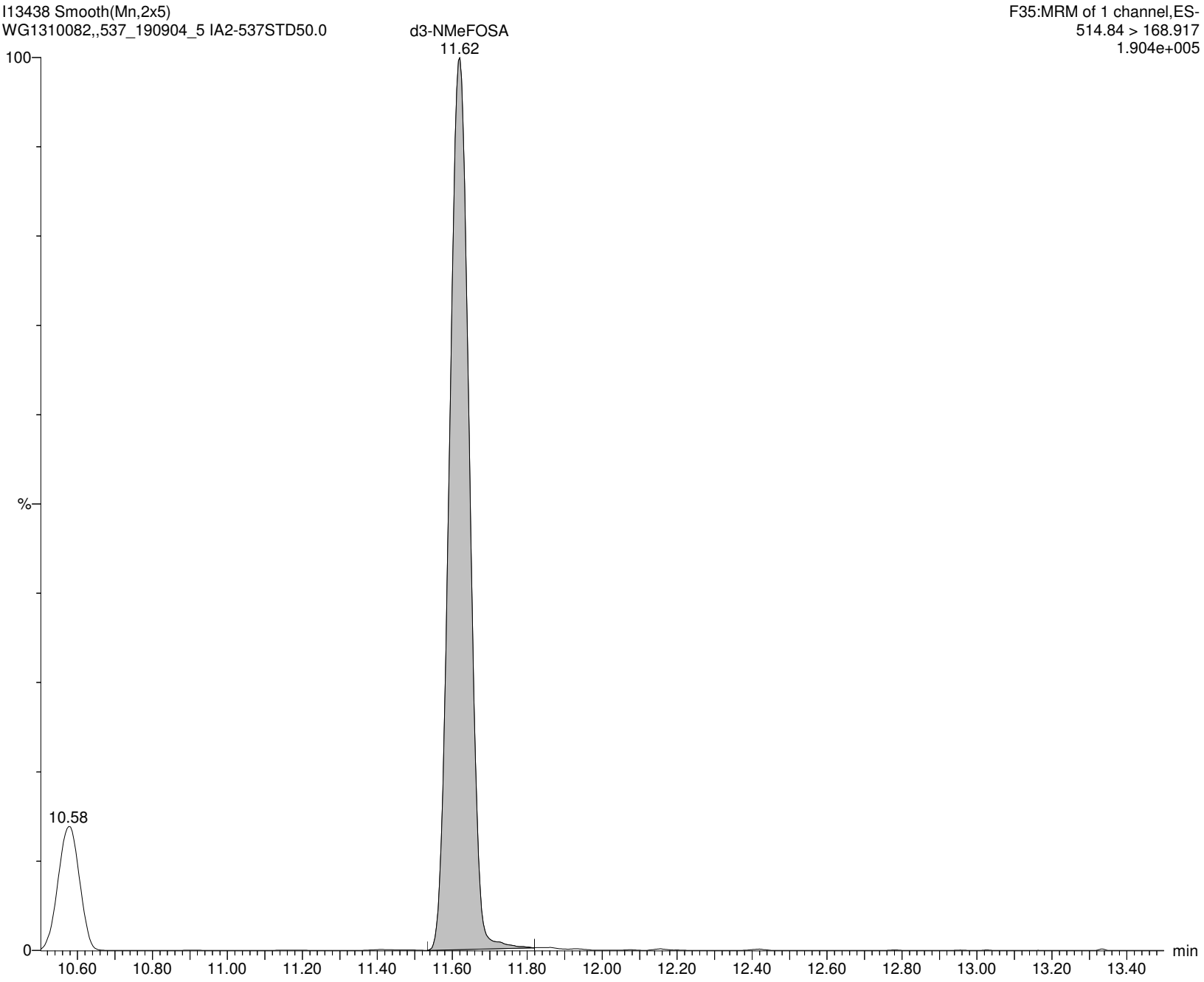
**d3-NMeFOSA**



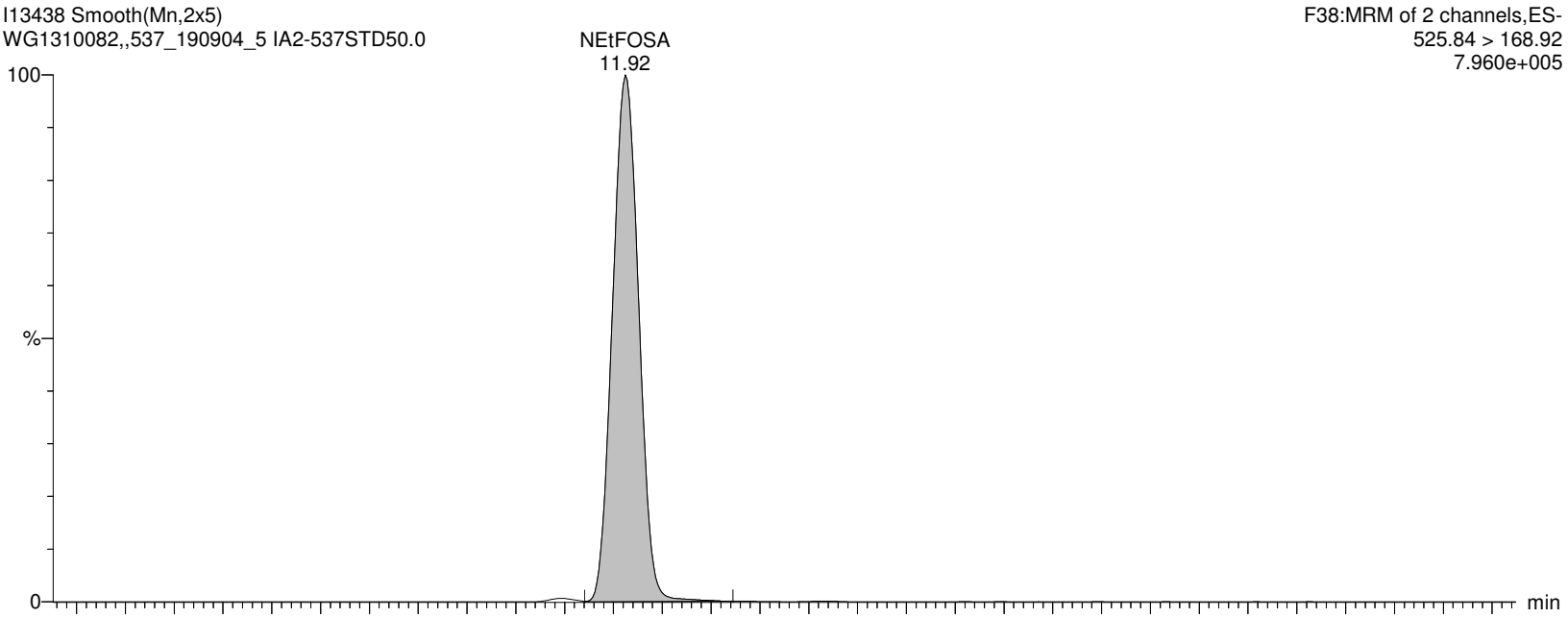


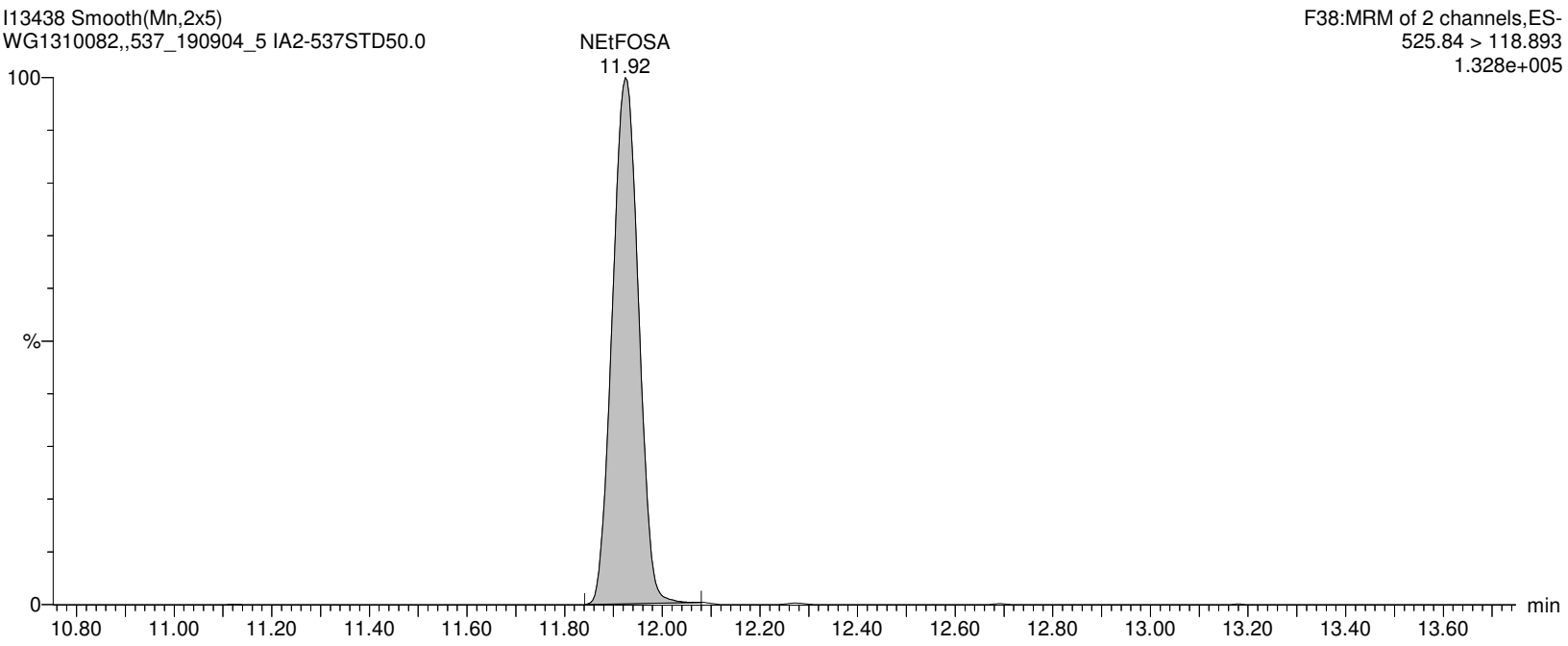
all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
Printed: Monday, November 18, 2019 13:42:56 Eastern Standard Time

**Name: I13438**
**ID: IA2-537STD50.0**
**Date: 18-Nov-2019**
**Time: 11:43:24**
**Description: WG1310082,,537_190904_5**
**User: LCMS02:JW**
**Vial: 1:A,6**
**Instrument: XEVO-TQSmicro#QEB0050**
**Inlet Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\LCMS_537_ISO_B**
**Tune Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\181009_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**NEtFOSA**



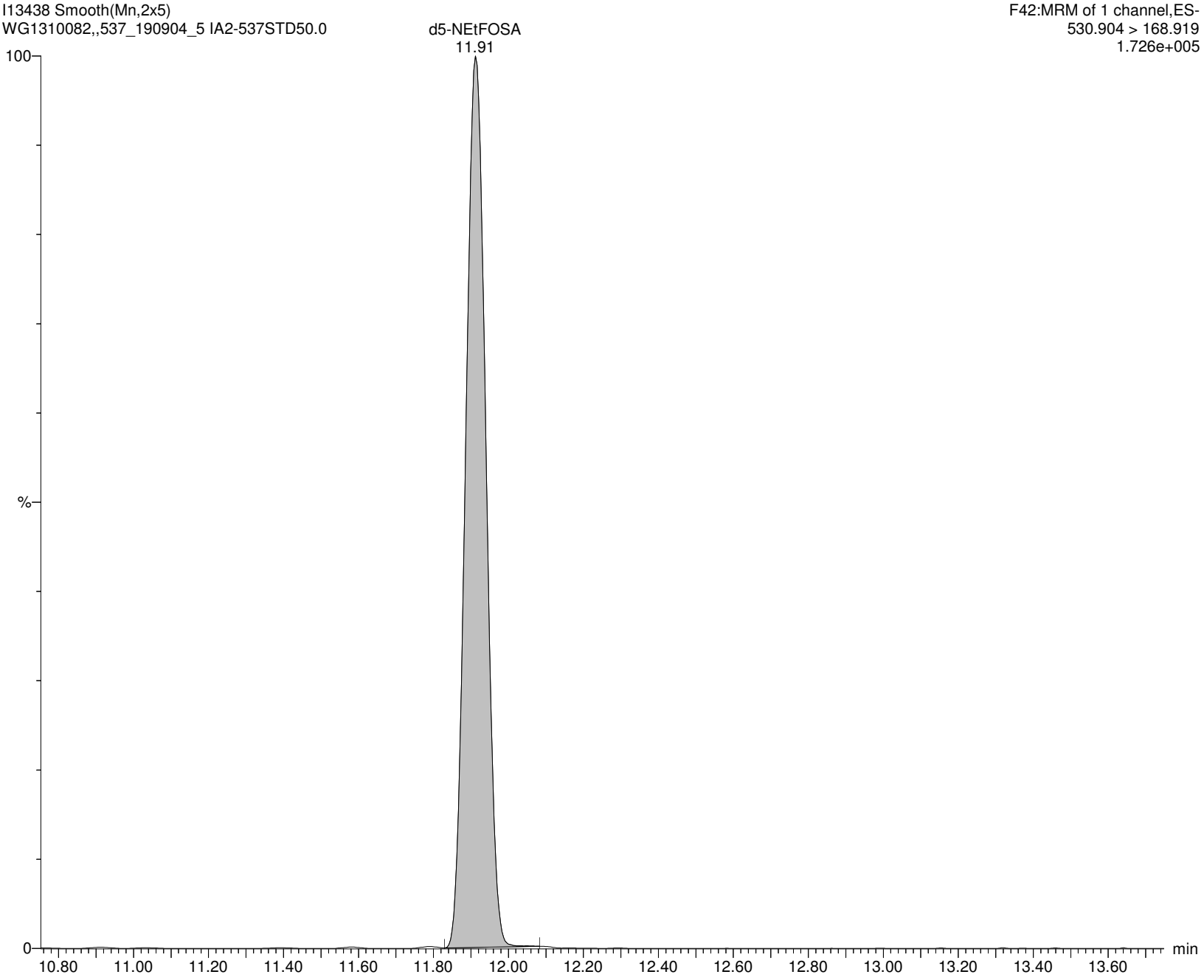


all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
Printed: Monday, November 18, 2019 13:42:56 Eastern Standard Time

**Name: I13438**
**ID: IA2-537STD50.0**
**Date: 18-Nov-2019**
**Time: 11:43:24**
**Description: WG1310082,,537_190904_5**
**User: LCMS02:JW**
**Vial: 1:A,6**
**Instrument: XEVO-TQSmicro#QEB0050**
**Inlet Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\LCMS_537_ISO_B**
**Tune Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\181009_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**d5-NEtFOSA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
Printed: Monday, November 18, 2019 13:42:56 Eastern Standard Time

**Name: I13438**
**ID: IA2-537STD50.0**
**Date: 18-Nov-2019**
**Time: 11:43:24**
**Description: WG1310082,,537_190904_5**
**User: LCMS02:JW**
**Vial: 1:A,6**
**Instrument: XEVO-TQSmicro#QEB0050**
**Inlet Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\LCMS_537_ISO_B**
**Tune Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\181009_TUNE.IPR**
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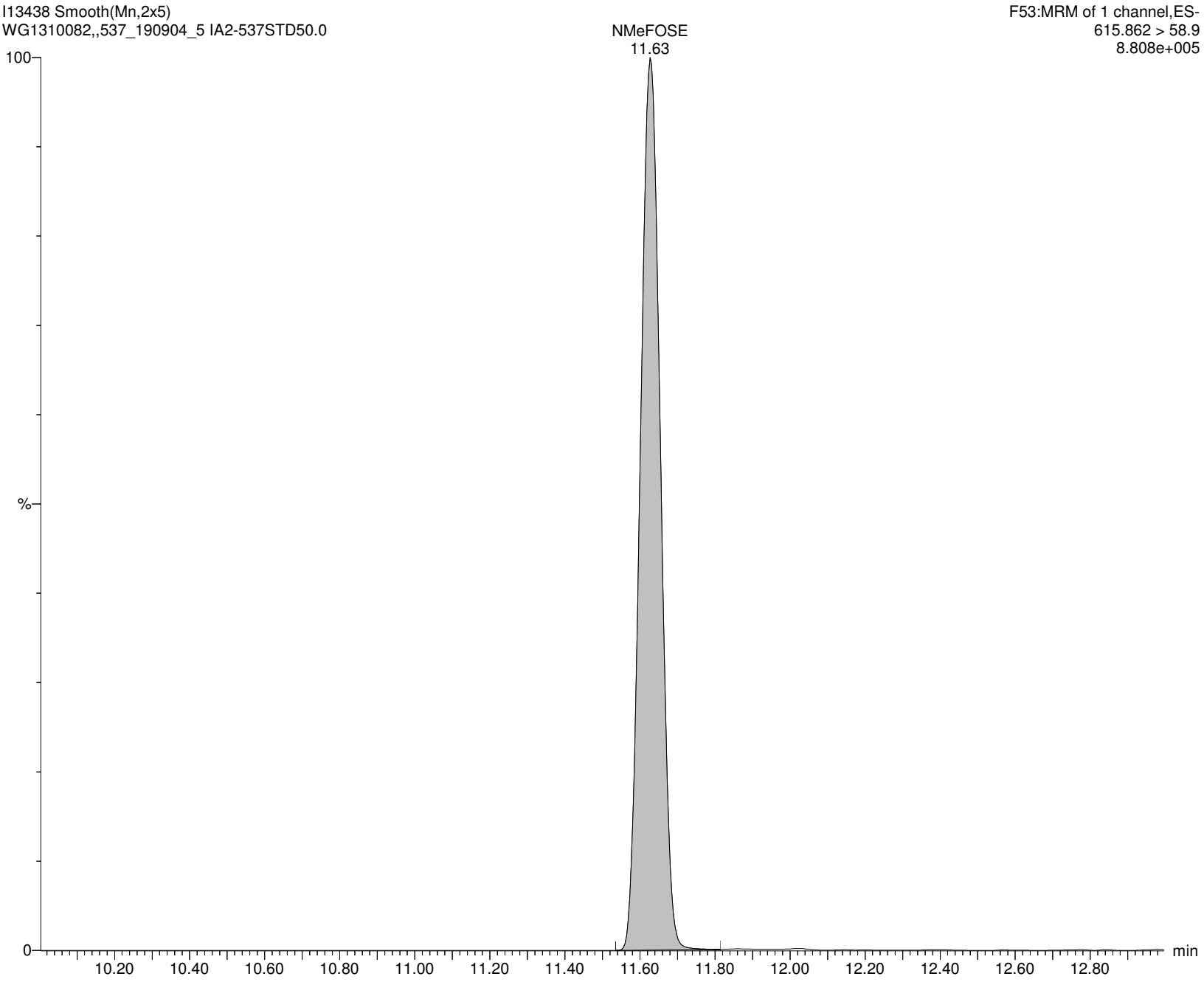
**NMeFOSE**



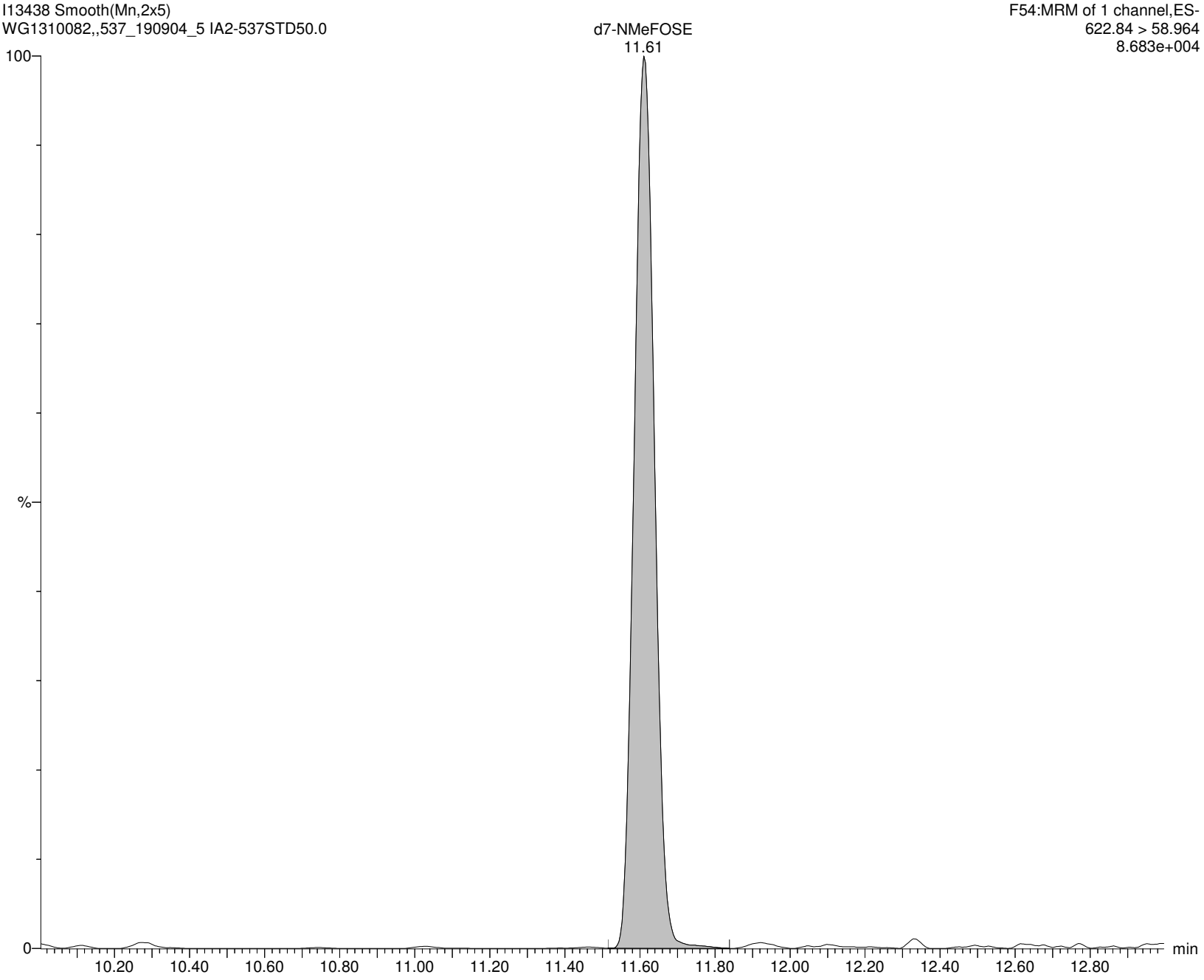


all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
Printed: Monday, November 18, 2019 13:42:56 Eastern Standard Time

**Name: I13438**
**ID: IA2-537STD50.0**
**Date: 18-Nov-2019**
**Time: 11:43:24**
**Description: WG1310082,,537_190904_5**
**User: LCMS02:JW**
**Vial: 1:A,6**
**Instrument: XEVO-TQSmicro#QEB0050**
**Inlet Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\LCMS_537_ISO_B**
**Tune Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\181009_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**d7-NMeFOSE**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
Printed: Monday, November 18, 2019 13:42:56 Eastern Standard Time

**Name: I13438**
**ID: IA2-537STD50.0**
**Date: 18-Nov-2019**
**Time: 11:43:24**
**Description: WG1310082,,537_190904_5**
**User: LCMS02:JW**
**Vial: 1:A,6**
**Instrument: XEVO-TQSmicro#QEB0050**
**Inlet Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\LCMS_537_ISO_B**
**Tune Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\181009_TUNE.IPR**
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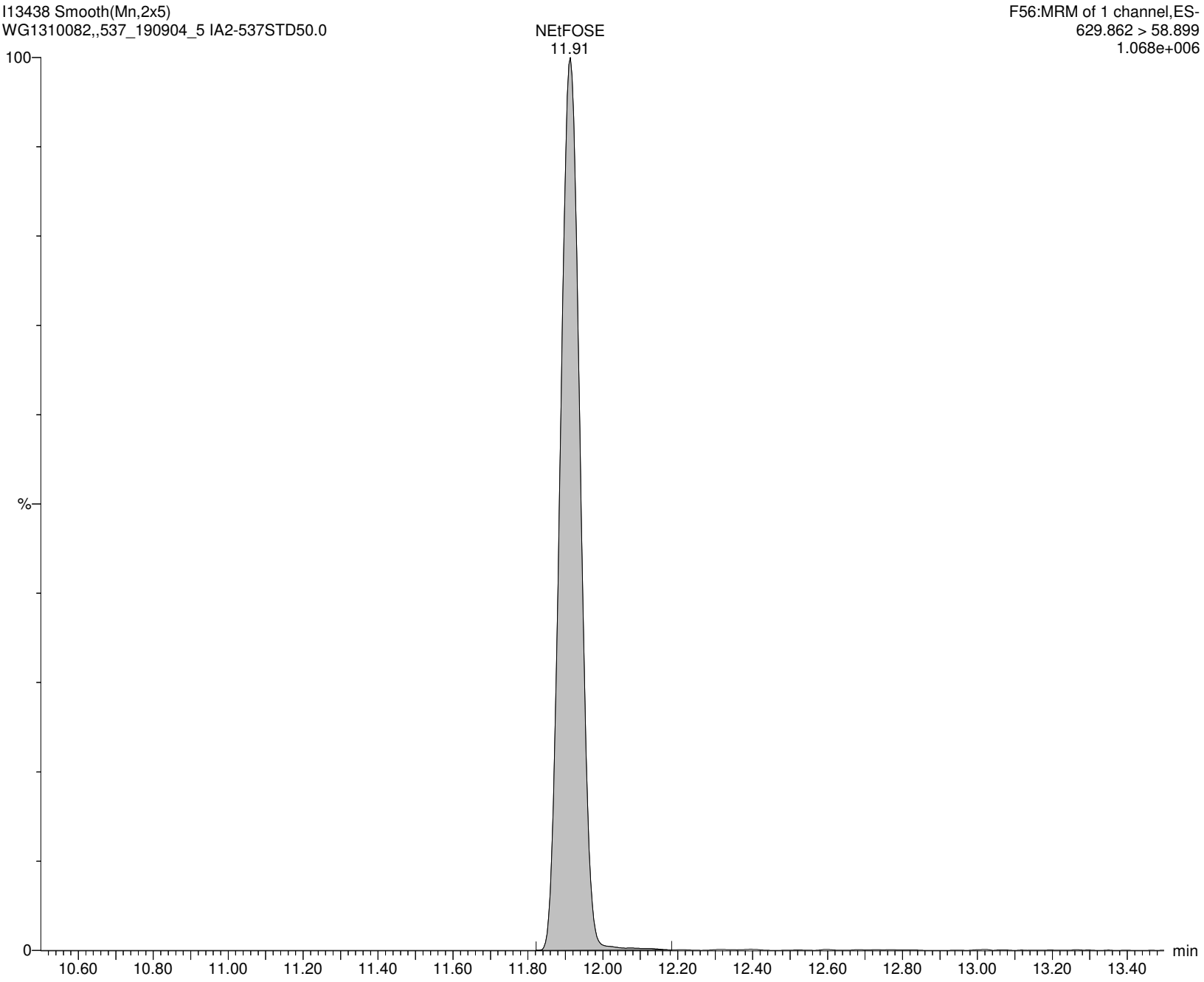
**NEtFOSE**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
Printed: Monday, November 18, 2019 13:42:56 Eastern Standard Time

**Name: I13438**
**ID: IA2-537STD50.0**
**Date: 18-Nov-2019**
**Time: 11:43:24**
**Description: WG1310082,,537_190904_5**
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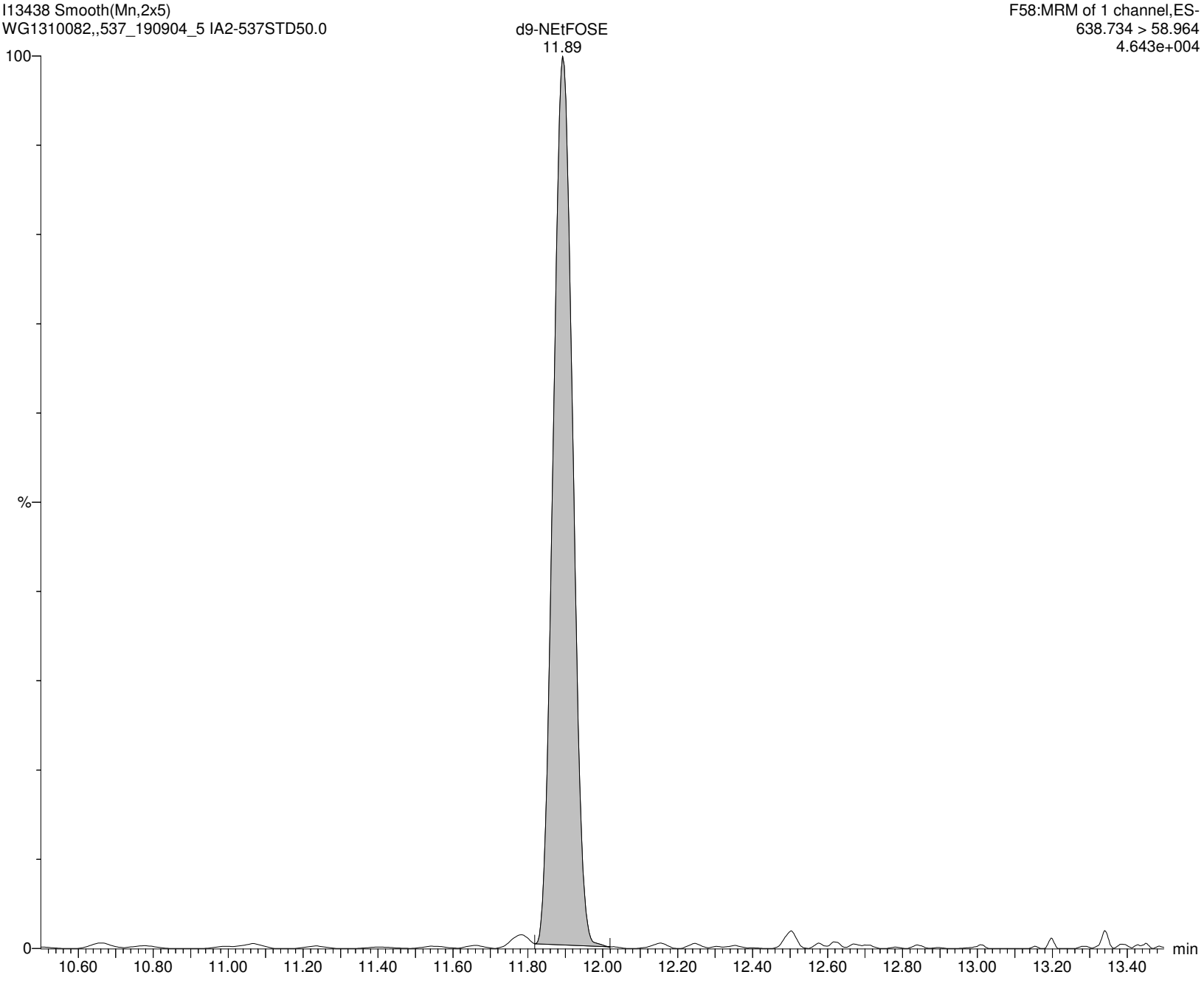
**Vial: 1:A,6**
**Instrument: XEVO-TQSmicro#QEB0050**
**Inlet Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\LCMS_537_ISO_B**
**Tune Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\181009_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**d9-NEtFOSE**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
Printed: Monday, November 18, 2019 13:42:59 Eastern Standard Time

**Method: C:\MassLynx\Data\2019\191118_537ISO.PRO\MethDB\537ISO_Q_191118_DOD .mdb 18 Nov 2019 13:05:34**
**Calibration: C:\MassLynx\Data\2019\191118_537ISO.PRO\CurveDB\191118_ISO_ICAL.cdb 18 Nov 2019 13:41:42**

**ID: IA2-537STD125**
**Name: I13439**
**Date: 18-Nov-2019**
**Time: 12:00:10**
**Description: WG1310082,,537_190904_6**
**Instrument: XEVO-TQSmicro#QEB0050**
**User: LCMS02:JW**
**Inlet Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\LCMS_537_ISO_B**
**Tune Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\181009_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

| | Name | CAS | RT | Trace | Area | M Flag | Conc (ng/mL) | Ion Ratio | Ratio Flag | %Rec |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | PFBA | 375-22-4 | 2.20 | 212.926 > 169.111 | 497631 | | 123.580 | | na | 98.9 |
| 2 | M3PFBA | INT STD | 2.19 | 215.926 > 172.122 | 44597 | | 9.625 | | na | 96.2 |
| 3 | MPFBA | INT STD | 2.19 | 216.926 > 172.137 | 48226 | | 9.937 | | na | 99.4 |
| 4 | PFPeA | 2706-90-3 | 5.10 | 262.926 > 219.002 | 808329 | | 123.649 | | na | 98.9 |
| 5 | M5PFPEA | INT STD | 5.09 | 267.989 > 223.081 | 67688 | | 9.833 | | na | 98.3 |
| 6 | PFBS | 375-73-5 | 5.74 | 298.926 > 79.923 | 147916 | | 109.133 | 1.91 | NO | 98.7 |
| 7 | M3PFBS | INT STD | 5.74 | 301.989 > 80.254 | 9225 | | 9.219 | | na | 92.2 |
| 8 | 4:2FTS | 757124-72-4 | 6.91 | 326.926 > 306.957 | 66776 | | 110.524 | 2.11 | NO | 94.6 |
| 9 | M2-4:2FTS | INT STD | 6.91 | 329.117 > 309.079 | 8099 | | 12.466 | | na | 124.7 |
| 10 | PFHxA | 307-24-4 | 6.99 | 312.989 > 269.028 | 867097 | | 122.320 | 18.02 | NO | 97.9 |
| 11 | M5PFHxA | INT STD | 6.99 | 317.989 > 273.045 | 77004 | | 9.950 | | na | 99.5 |
| 12 | PFPeS | 2706-91-4 | 7.30 | 348.926 > 80.251 | 97344 | | 104.923 | 1.74 | NO | 89.3 |
| 13 | PFHpA | 375-85-9 | 8.25 | 362.926 > 319.014 | 1153906 | | 126.109 | 5.91 | NO | 100.9 |
| 14 | M4PFHpA | INT STD | 8.25 | 366.926 > 321.979 | 101437 | | 9.839 | | na | 98.4 |
| 15 | br-PFHxS | 355-46-4 | 8.18 | 398.926 > 80.295 | 14988 | M5 | 20.296 | 2.52 | NO | 95.5 |
| 16 | L-PFHxS | 355-46-4 | 8.41 | 398.926 > 80.295 | 58360 | | 83.984 | 1.15 | NO | 90.8 |
| 17 | PFHxS | 355-46-4 | | 398.926 > 80.295 | 73348 | | 104.280 | | na | |
| 18 | M3PFHxS | INT STD | 8.41 | 401.926 > 80.317 | 5548 | | 9.605 | | na | 96.0 |
| 19 | br-PFOA | 335-67-1 | | 412.989 > 368.9 | | | ND | | YES | |
| 20 | L-PFOA | 335-67-1 | 9.19 | 412.989 > 368.9 | 1104013 | | 122.381 | 10.15 | NO | 97.9 |
| 21 | PFOA | 335-67-1 | | 412.989 > 368.9 | 1104013 | | 122.381 | | na | |
| 22 | M8PFOA | INT STD | 9.19 | 420.989 > 375.979 | 98245 | | 9.931 | | na | 99.3 |
| 23 | M2PFOA | INT STD | 9.19 | 415.032 > 369.968 | 101103 | | 9.564 | | na | 95.6 |
| 24 | 6:2FTS | 27619-97-2 | 9.15 | 426.989 > 406.921 | 52169 | | 117.597 | 11.09 | NO | 99.0 |
| 25 | M2-6:2FTS | INT STD | 9.15 | 428.989 > 408.917 | 7531 | | 11.861 | | na | 118.6 |
| 26 | PFHpS | 375-92-8 | 9.28 | 448.926 > 80.257 | 51706 | | 114.358 | 0.84 | NO | 96.3 |
| 27 | PFNA | 375-95-1 | 9.95 | 462.989 > 418.931 | 964954 | | 124.705 | 4.55 | NO | 99.8 |
| 28 | M9PFNA | INT STD | 9.94 | 472.053 > 426.947 | 94452 | | 9.703 | | na | 97.0 |
| 29 | br-PFOS | 1763-23-1 | 9.81 | 498.989 > 80.294 | 23336 | M5 | 23.990 | 4.76 | NO | 96.0 |
| 30 | L-PFOS | 1763-23-1 | 9.99 | 498.989 > 80.294 | 58382 | | 86.636 | 1.47 | NO | 94.9 |
| 31 | PFOS | 1763-23-1 | | 498.989 > 80.294 | 81717 | | 110.626 | | na | |
| 32 | M4PFOS | INT STD | 9.99 | 503.032 > 80.306 | 7149 | | 10.237 | | na | 102.4 |
| 33 | M8PFOS | INT STD | 9.99 | 507.053 > 80.294 | 6866 | | 9.360 | | na | 93.6 |
| 34 | PFDA | 335-76-2 | 10.57 | 513.053 > 468.906 | 877901 | | 120.538 | 6.76 | NO | 96.4 |
| 35 | M2PFDA | INT STD | 10.57 | 515.053 > 469.934 | 80832 | | 9.155 | | na | 91.6 |
| 36 | M6PFDA | INT STD | 10.57 | 519.053 > 473.931 | 84901 | | 10.163 | | na | 101.6 |
| 37 | 8:2FTS | 39108-34-4 | 10.56 | 526.926 > 506.818 | 37557 | | 124.992 | | na | 104.2 |
| 38 | M2-8:2FTS | INT STD | 10.56 | 529.053 > 508.945 | 4755 | | 12.767 | | na | 127.7 |
| 39 | PFNS | 68259-12-1 | 10.60 | 548.989 > 80.249 | 74580 | | 116.767 | 1.30 | NO | 97.3 |


all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
Printed: Monday, November 18, 2019 13:42:59 Eastern Standard Time

**ID: IA2-537STD125**
**Name: I13439**
**Date: 18-Nov-2019**
**Time: 12:00:10**
**Description: WG1310082,,537_190904_6**
**Instrument: XEVO-TQSmicro#QEB0050**
**User: LCMS02:JW**
**Inlet Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\LCMS_537_ISO_B**
**Tune Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\181009_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

| | Name | CAS | RT | Trace | Area | M Flag | Conc (ng/mL) | Ion Ratio | Ratio Flag | %Rec |
|---|---|---|---|---|---|---|---|---|---|---|
| 40 | d3-NMeFOSAA | INT STD | 10.95 | 573.096 > 418.987 | 9496 | | 9.981 | | na | 99.8 |
| 41 | br-NMeFOSAA | 2355-31-9 | | 570.053 > 418.917 | | | ND | | YES | |
| 42 | L-NMeFOSAA | 2355-31-9 | 10.96 | 570.053 > 418.917 | 118339 | | 133.711 | 2.73 | NO | 107.0 |
| 43 | NMeFOSAA | 2355-31-9 | | 570.053 > 418.917 | 118339 | | 133.711 | | na | |
| 44 | PFUnA | 2058-94-8 | 11.11 | 562.989 > 518.903 | 824708 | | 120.130 | 8.09 | NO | 96.1 |
| 45 | M7-PFUDA | INT STD | 11.11 | 570.053 > 524.923 | 71788 | | 9.686 | | na | 96.9 |
| 46 | PFDS | 335-77-3 | 11.12 | 598.926 > 80.314 | 51137 | | 112.012 | 0.96 | NO | 92.9 |
| 47 | FOSA | 754-91-6 | 11.01 | 497.989 > 78.245 | 264461 | | 120.464 | 110.76 | NO | 96.4 |
| 48 | M8FOSA | INT STD | 11.01 | 506.053 > 78.286 | 20661 | | 10.460 | | na | 104.6 |
| 49 | d5-NEtFOSAA | INT STD | 11.24 | 589.117 > 418.929 | 8803 | | 10.474 | | na | 104.7 |
| 50 | br-NEtFOSAA | 2991-50-6 | | 583.989 > 418.927 | | | ND | | YES | |
| 51 | L-NEtFOSAA | 2991-50-6 | 11.25 | 583.989 > 418.927 | 103539 | | 124.593 | 2.46 | NO | 99.7 |
| 52 | NEtFOSAA | 2991-50-6 | | 583.989 > 418.927 | 103539 | | 124.593 | | na | |
| 53 | PFDoA | 307-55-1 | 11.59 | 612.989 > 568.967 | 888519 | | 128.977 | 14.51 | NO | 103.2 |
| 54 | MPFDOA | INT STD | 11.59 | 614.989 > 569.92 | 81335 | | 9.782 | | na | 97.8 |
| 55 | PFTrDA | 72629-94-8 | 12.00 | 663.053 > 618.969 | 612947 | | 119.054 | 11.28 | NO | 95.2 |
| 56 | PFTA | 376-06-7 | 12.36 | 713.053 > 668.976 | 649348 | | 121.308 | 8.67 | NO | 97.0 |
| 57 | M2PFTEDA | INT STD | 12.36 | 715.053 > 669.945 | 66842 | | 10.121 | | na | 101.2 |
| 58 | M3HFPO-DA | INT STD | 7.40 | 331.989 > 286.995 | 11429 | | 263.678 | | na | 131.8 |
| 59 | HFPO-DA | 13252-13-6 | 7.40 | 284.819 > 169.094 | 264459 | | 2786.926 | 2.68 | YES | 111.5 |
| 60 | ADONA | 958445-44-8 | 8.43 | 376.926 > 251.005 | 1641867 | | 127.123 | | na | 107.5 |
| 61 | PFHxDA | | 12.78 | 813.053 > 769.005 | 578244 | | 122.629 | | na | 98.1 |
| 62 | PFODA | | 12.99 | 912.989 > 869.032 | 447829 | | 129.854 | | na | 103.9 |
| 63 | M2PFHxDA | | 12.78 | 815.372 > 770.158 | 13695 | | 9.742 | | na | 97.4 |
| 64 | PFDoS | | 11.99 | 698.649 > 79.853 | 58474 | | 125.644 | 1.96 | YES | 100.5 |
| 65 | 10:2FTS | | 11.60 | 626.862 > 606.896 | 39856 | | 121.752 | | na | 101.0 |
| 66 | 9CL-PF3ONS | | 10.34 | 530.862 > 350.843 | 556616 | | 123.346 | | na | 105.9 |
| 67 | 11CL-PFOUdS | | 11.38 | 630.862 > 450.854 | 466933 | | 122.738 | | na | 104.2 |
| 68 | NMeFOSA | | 11.62 | 511.804 > 168.906 | 110689 | | 136.165 | 1.44 | NO | 108.9 |
| 69 | d3-NMeFOSA | | 11.62 | 514.84 > 168.917 | 10937 | | 10.618 | | na | 106.2 |
| 70 | NEtFOSA | | 11.92 | 525.84 > 168.92 | 119958 | | 133.286 | 5.69 | NO | 106.6 |
| 71 | d5-NEtFOSA | | 11.91 | 530.904 > 168.919 | 10272 | | 10.195 | | na | 101.9 |
| 72 | NMeFOSE | | 11.62 | 615.862 > 58.9 | 128959 | | 131.619 | | na | 105.3 |
| 73 | d7-NMeFOSE | | 11.61 | 622.84 > 58.964 | 4843 | | 10.039 | | na | 100.4 |
| 74 | NEtFOSE | | 11.91 | 629.862 > 58.899 | 148855 | | 121.844 | | na | 97.5 |
| 75 | d9-NEtFOSE | | 11.89 | 638.734 > 58.964 | 3095 | | 10.971 | | na | 109.7 |

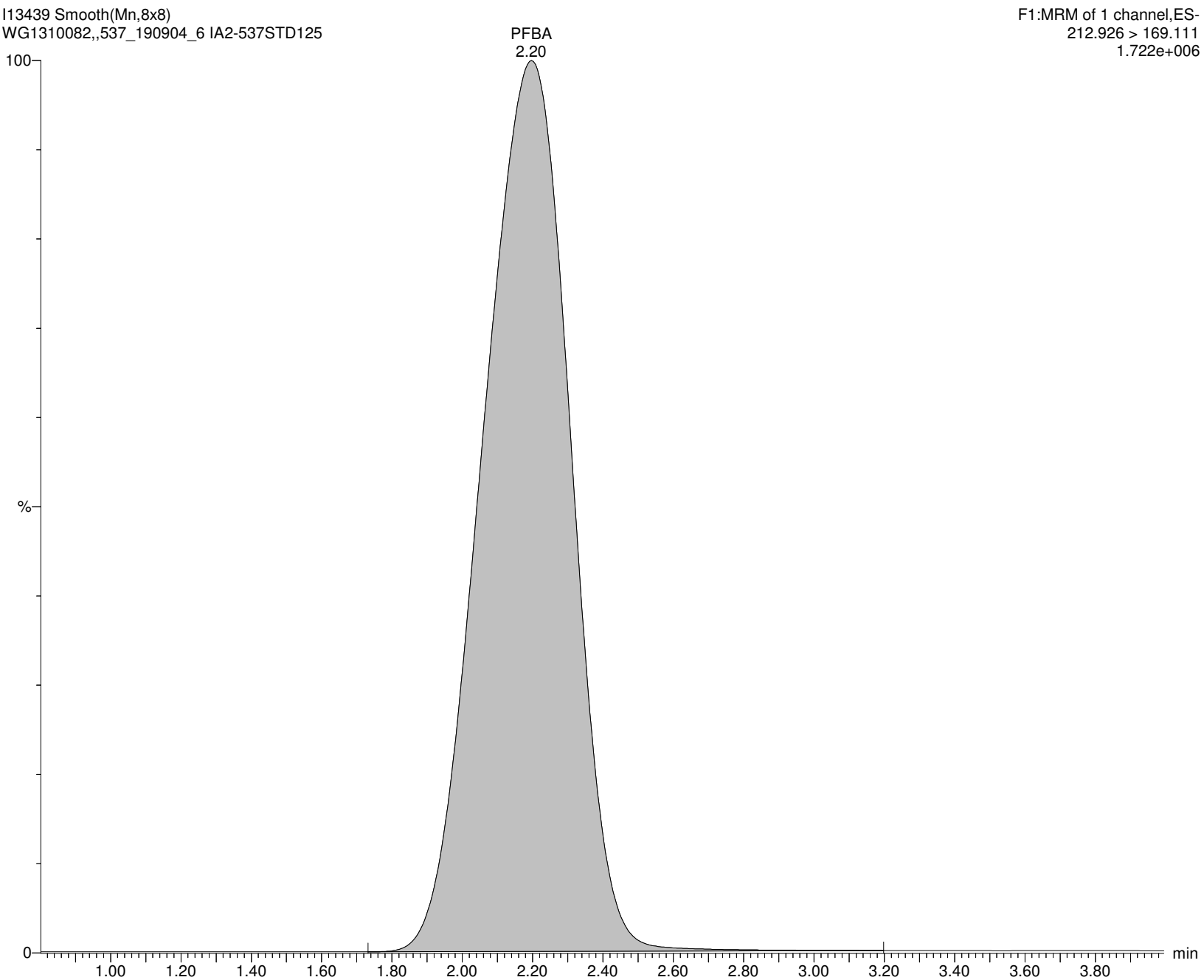

all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
Printed: Monday, November 18, 2019 13:42:59 Eastern Standard Time

**Method: C:\MassLynx\Data\2019\191118_537ISO.PRO\MethDB\537ISO_Q_191118_DOD .mdb 18 Nov 2019 13:05:34**
**Calibration: C:\MassLynx\Data\2019\191118_537ISO.PRO\CurveDB\191118_ISO_ICAL.cdb 18 Nov 2019 13:41:42**

**Name: I13439**
**ID: IA2-537STD125**
**Date: 18-Nov-2019**
**Time: 12:00:10**
**Description: WG1310082,,537_190904_6**
**User: LCMS02:JW**
**Vial: 1:A,7**
**Instrument: XEVO-TQSmicro#QEB0050**
**Inlet Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\LCMS_537_ISO_B**
**Tune Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\181009_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**PFBA**





all concentration units in (ng/mL)

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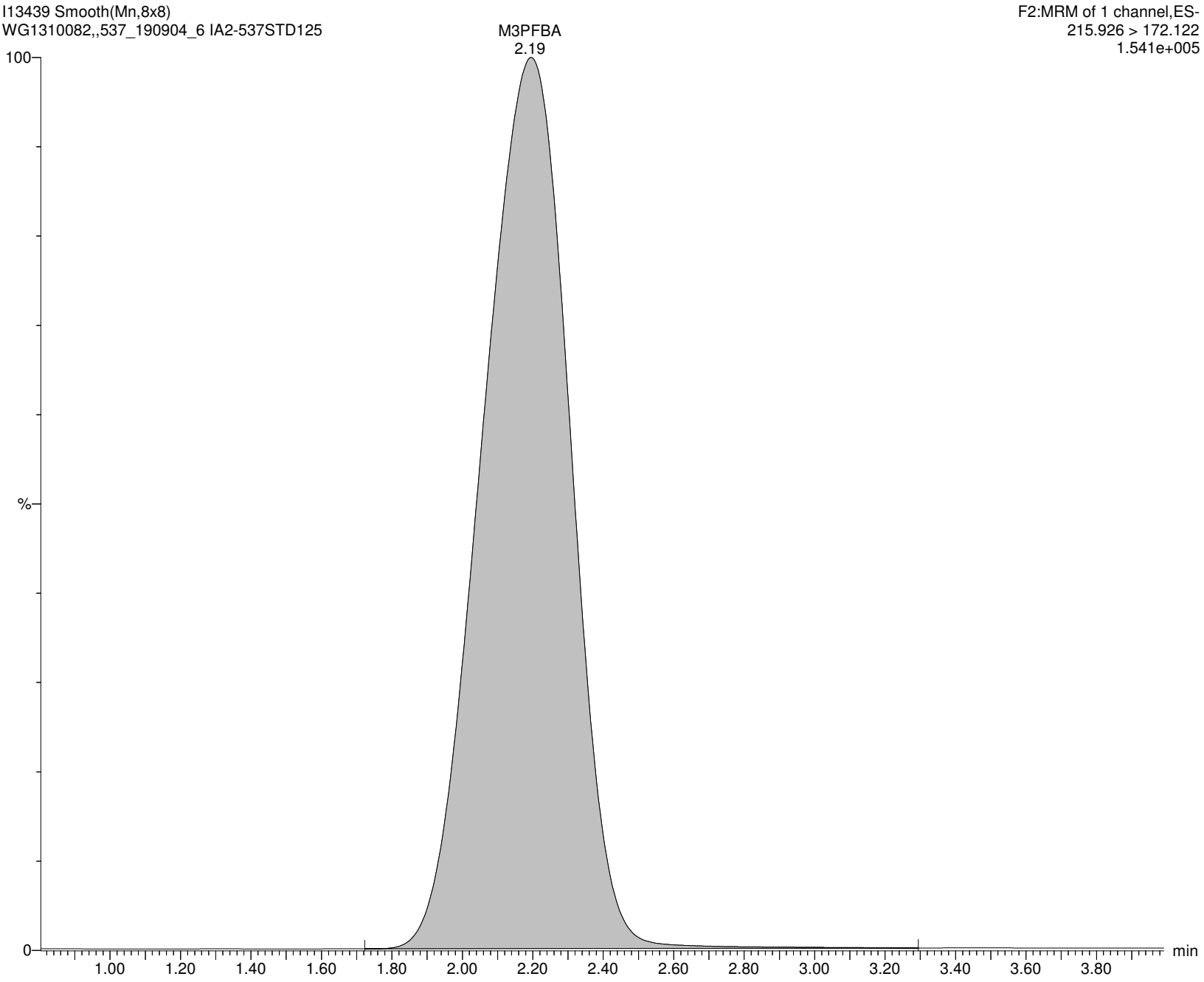
**M3PFBA**





all concentration units in (ng/mL)

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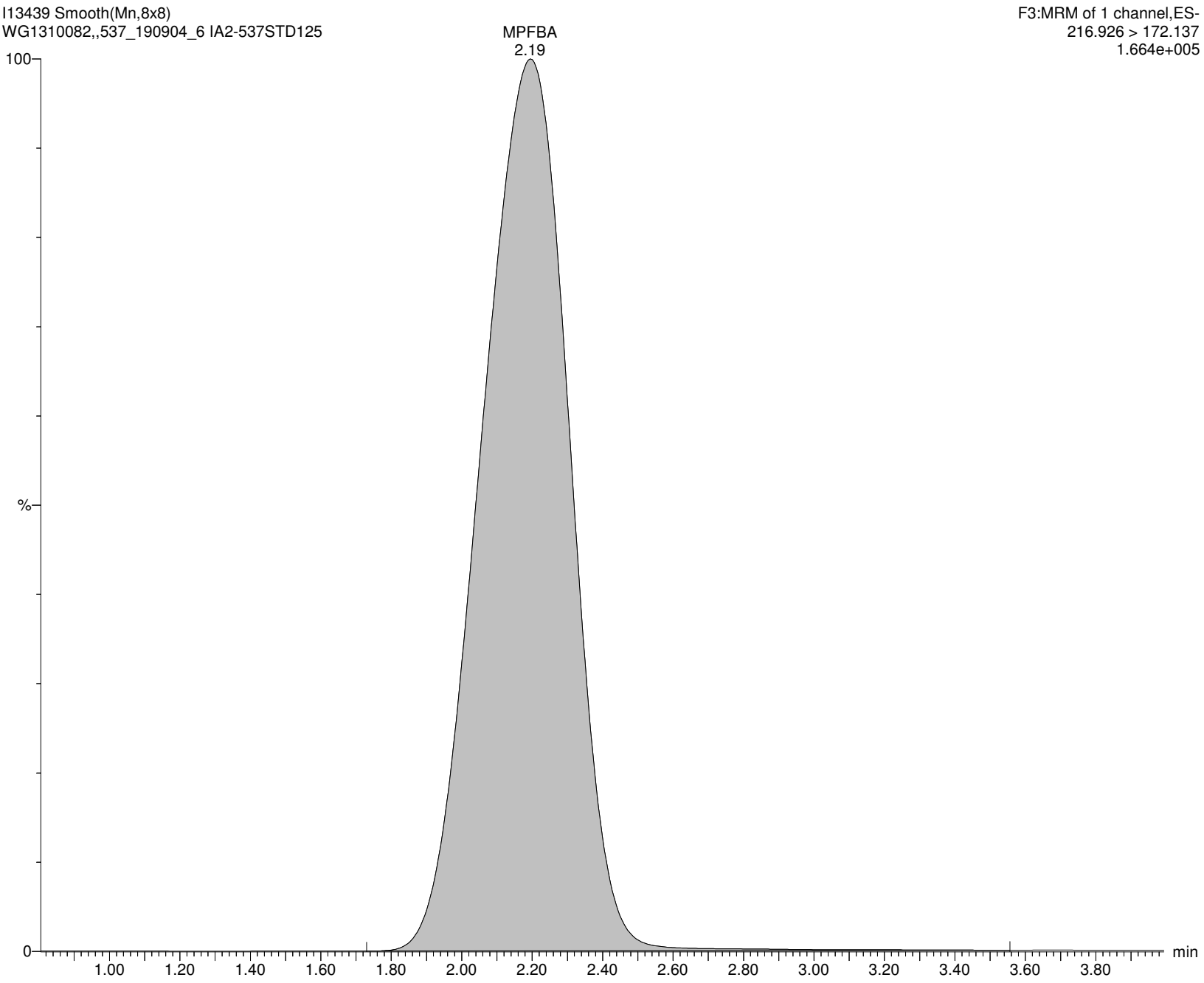
**MPFBA**





all concentration units in (ng/mL)

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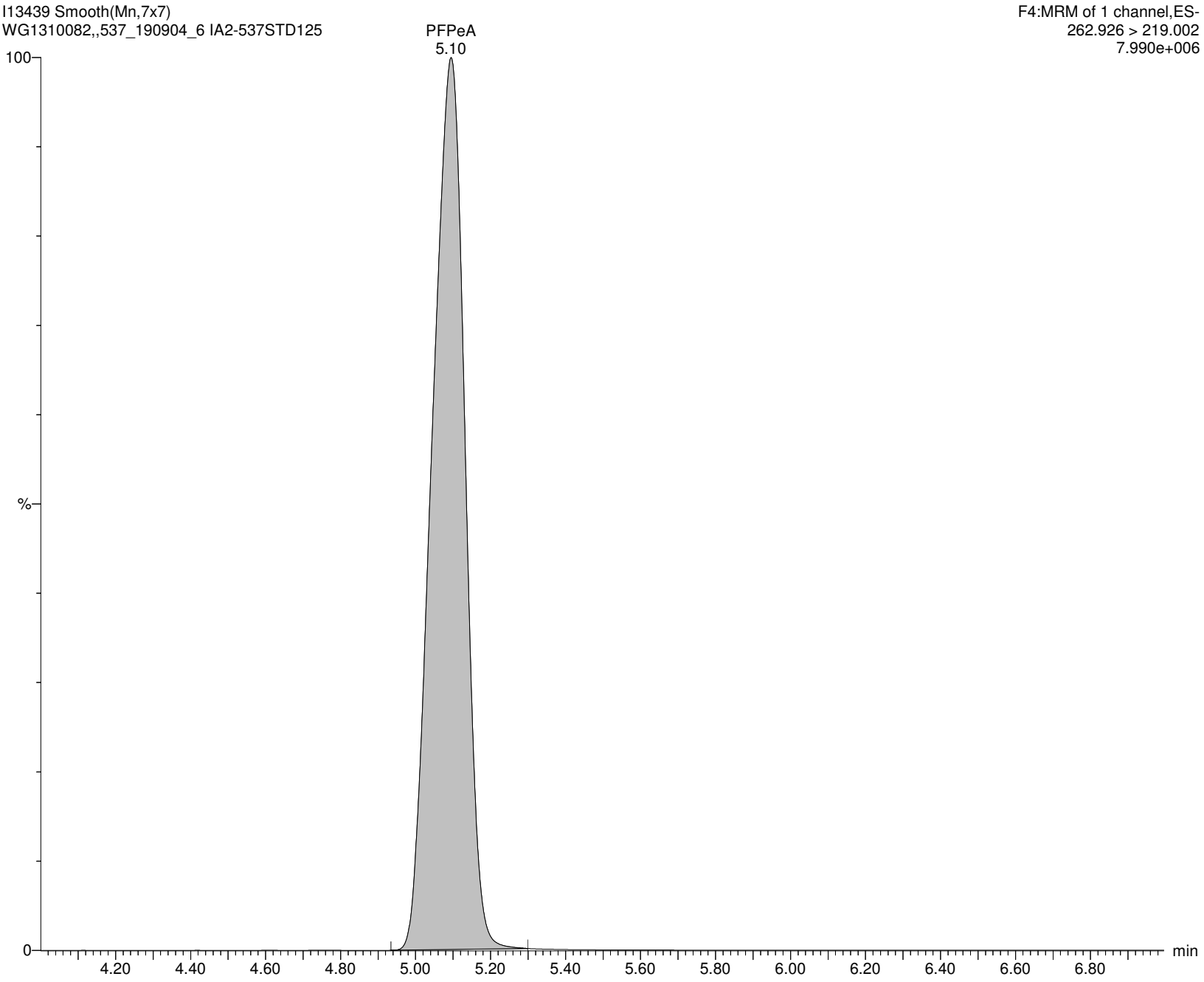
**PFPeA**





all concentration units in (ng/mL)

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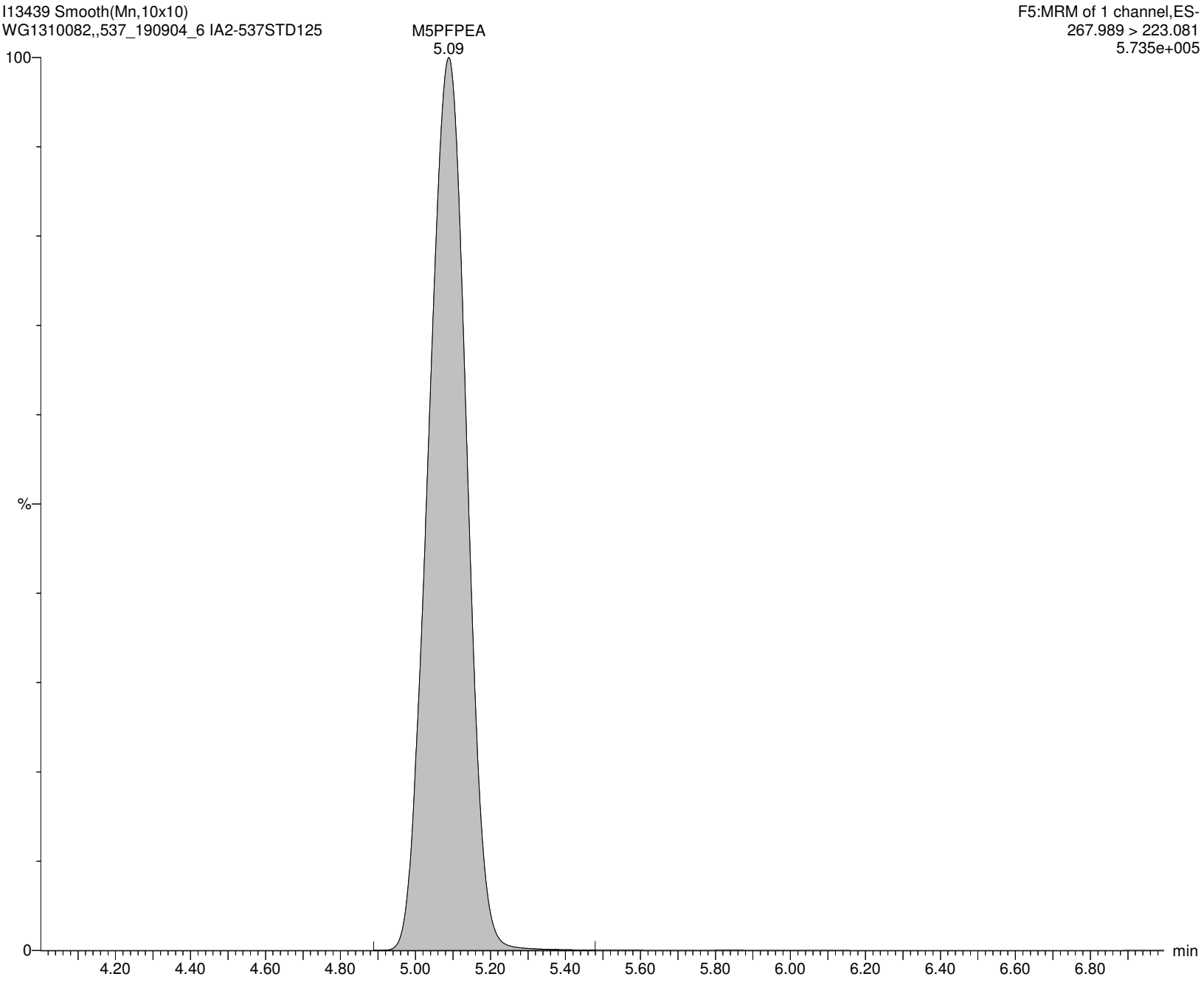
**M5PFPEA**





all concentration units in (ng/mL)

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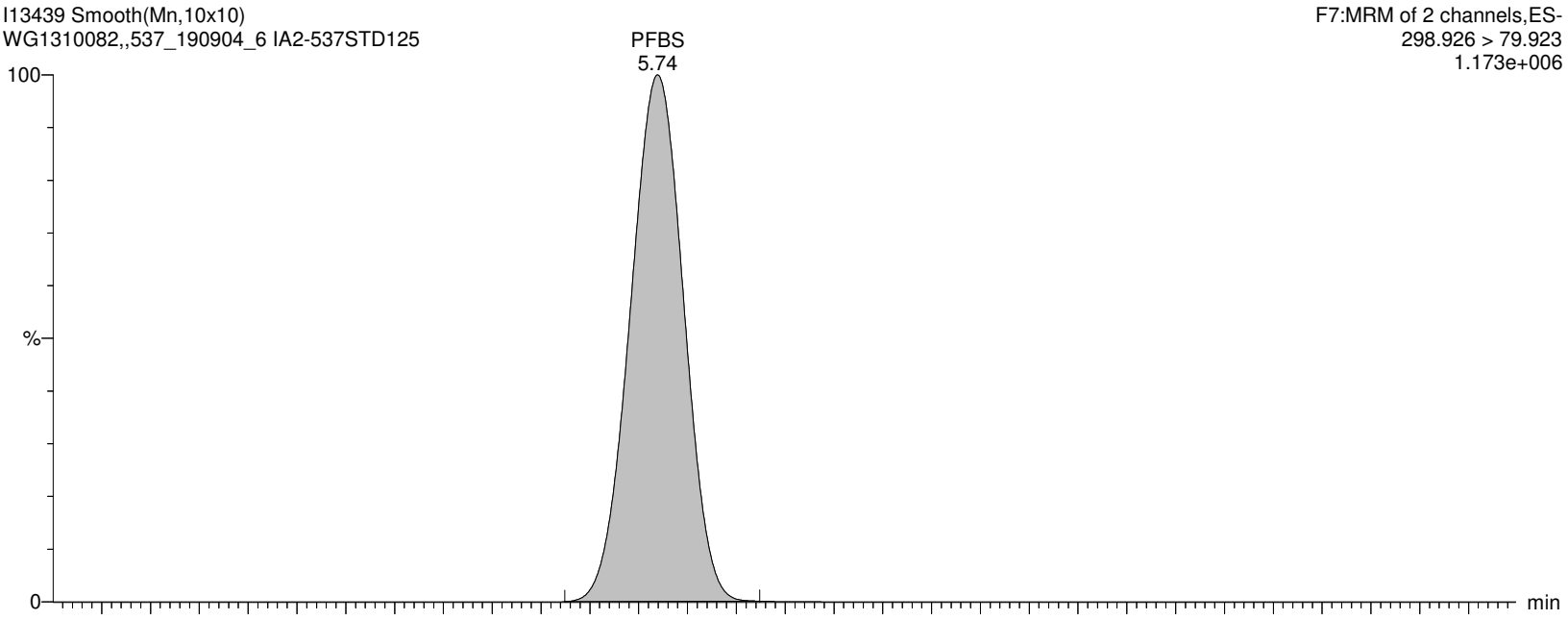
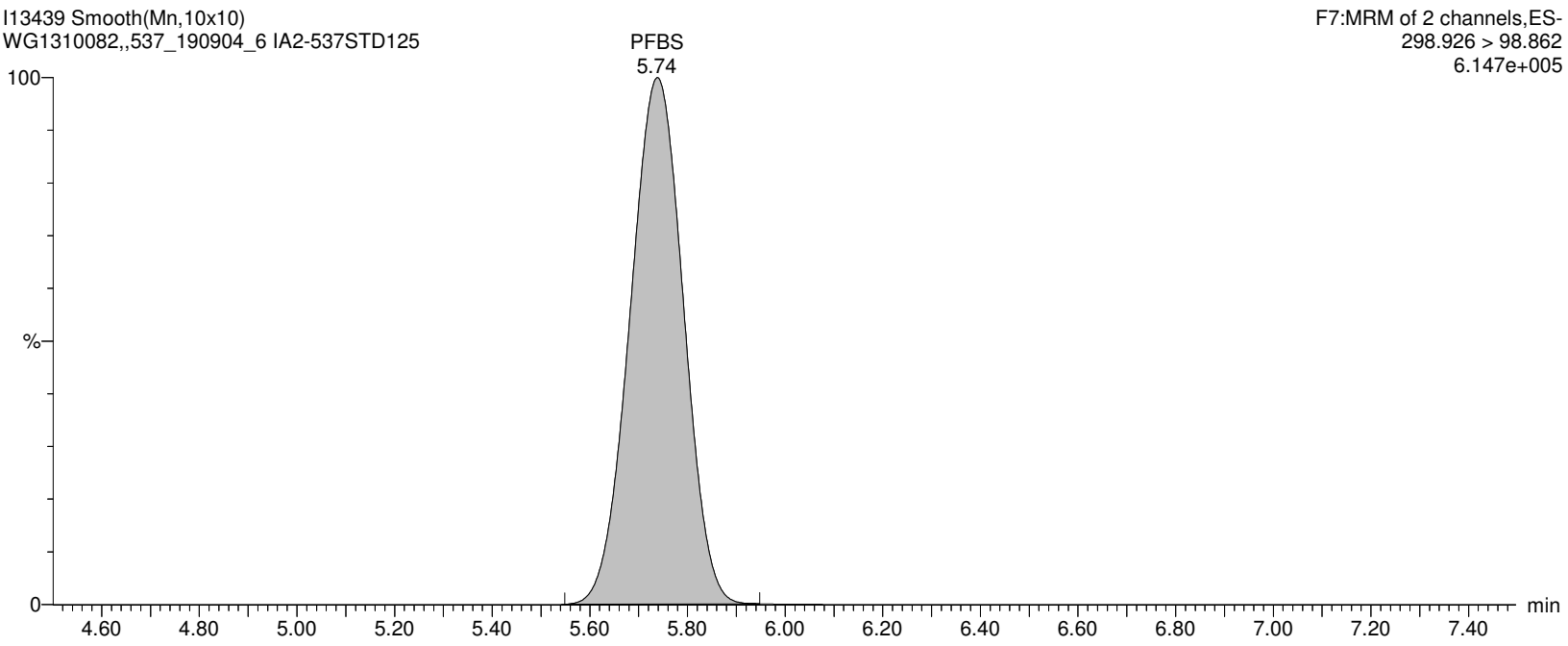
**PFBS**





all concentration units in (ng/mL)

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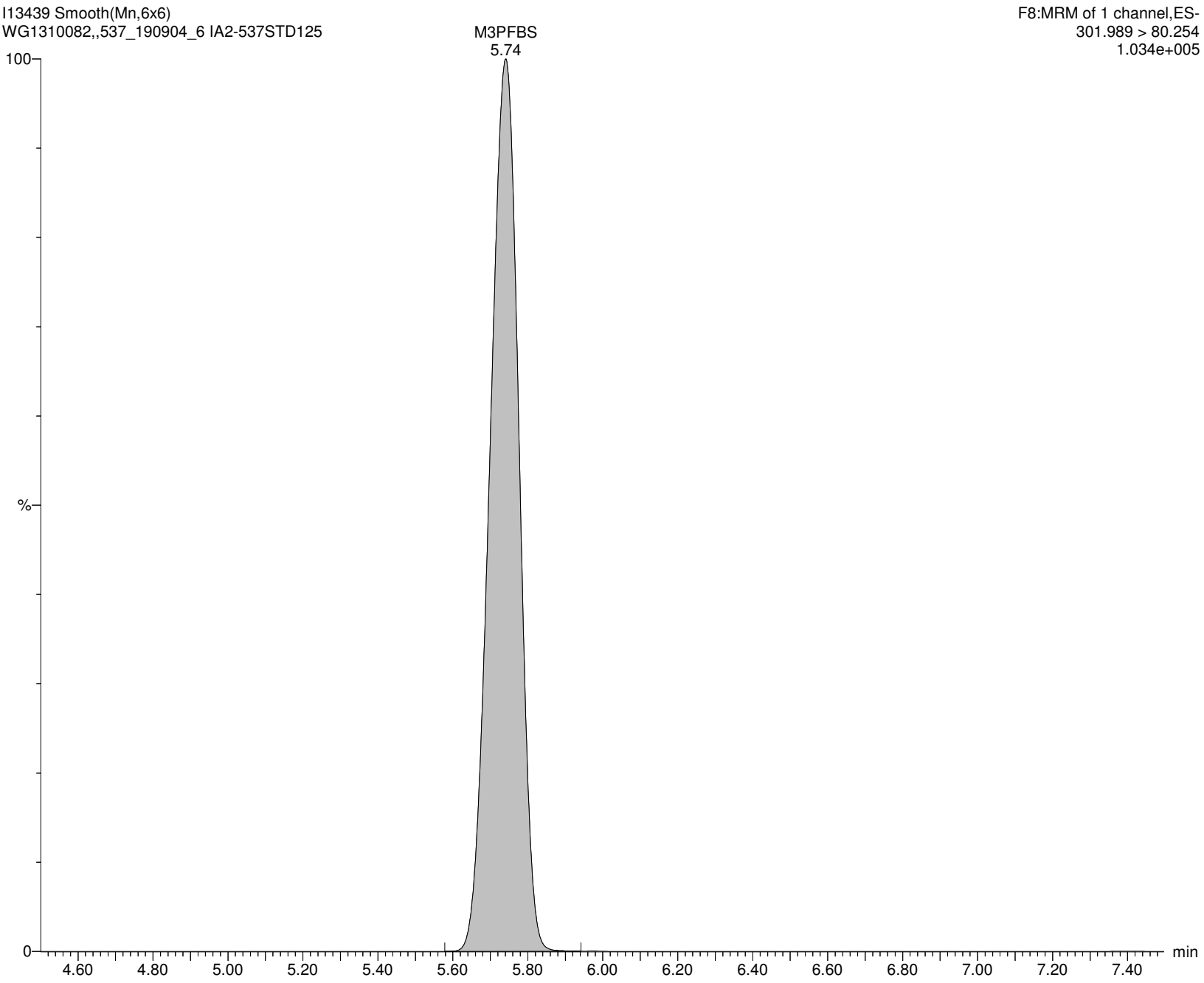
**M3PFBS**





all concentration units in (ng/mL)

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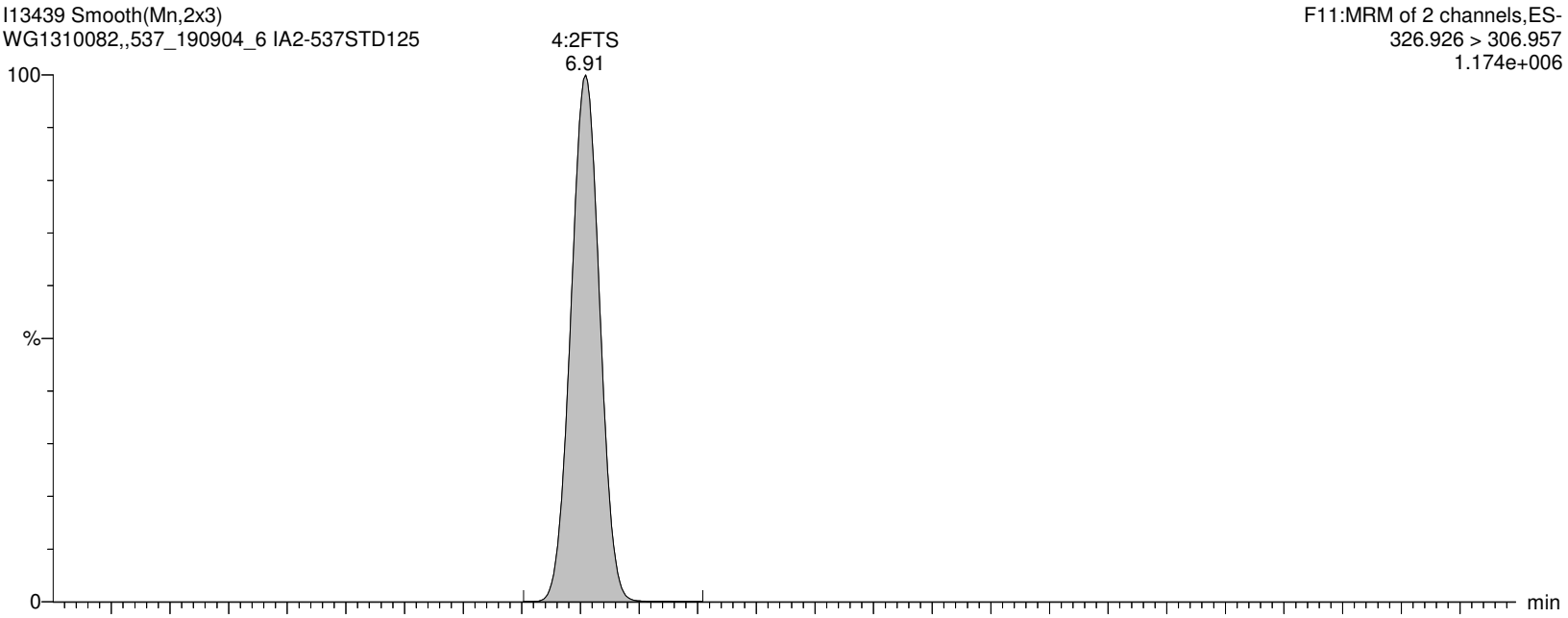
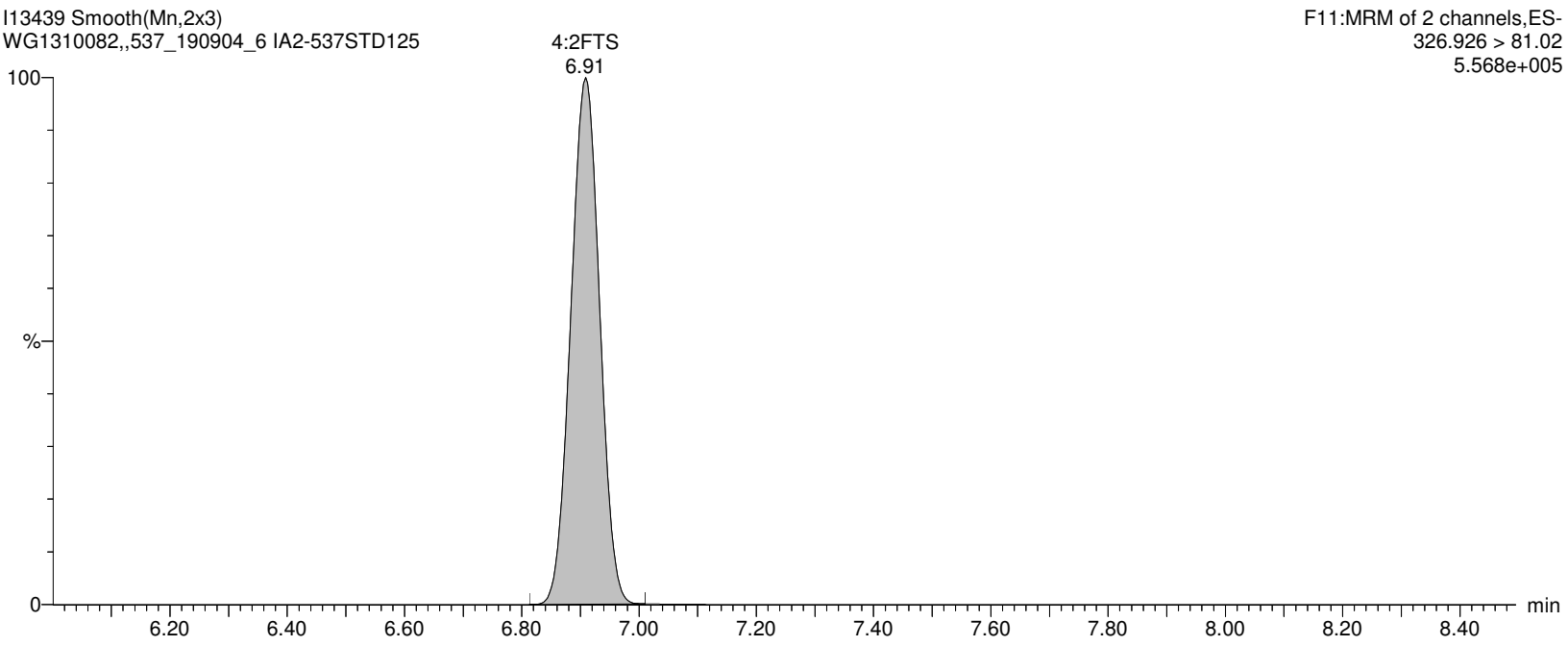
**4:2FTS**





all concentration units in (ng/mL)

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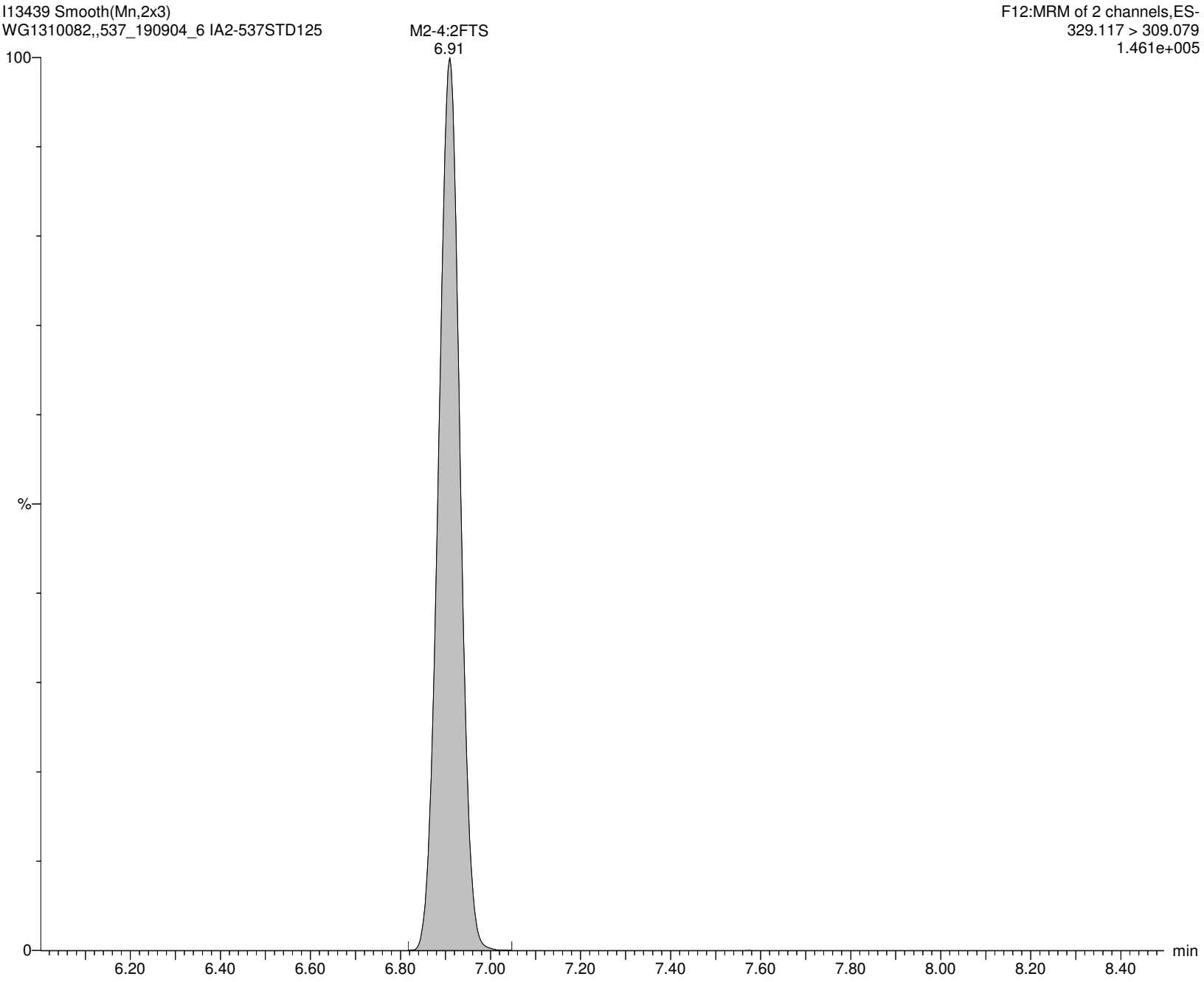
**M2-4:2FTS**





all concentration units in (ng/mL)

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Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
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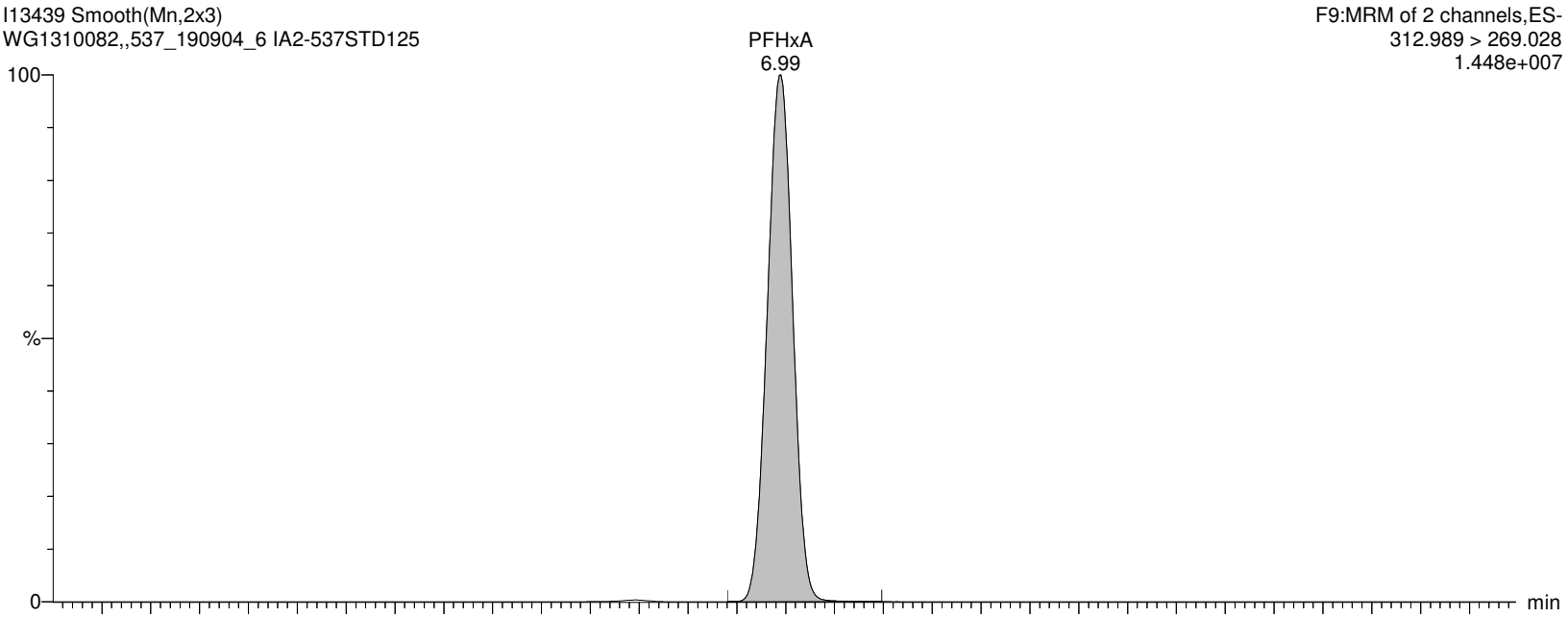
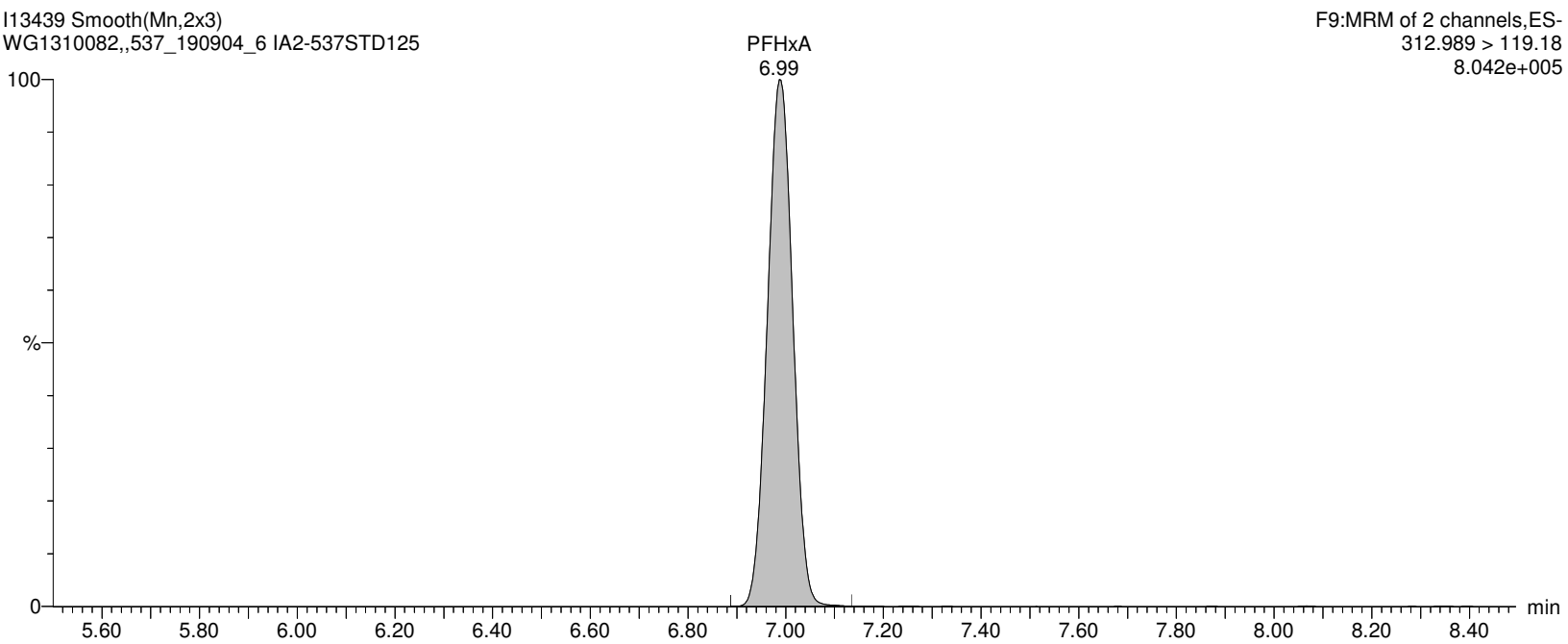
**PFHxA**





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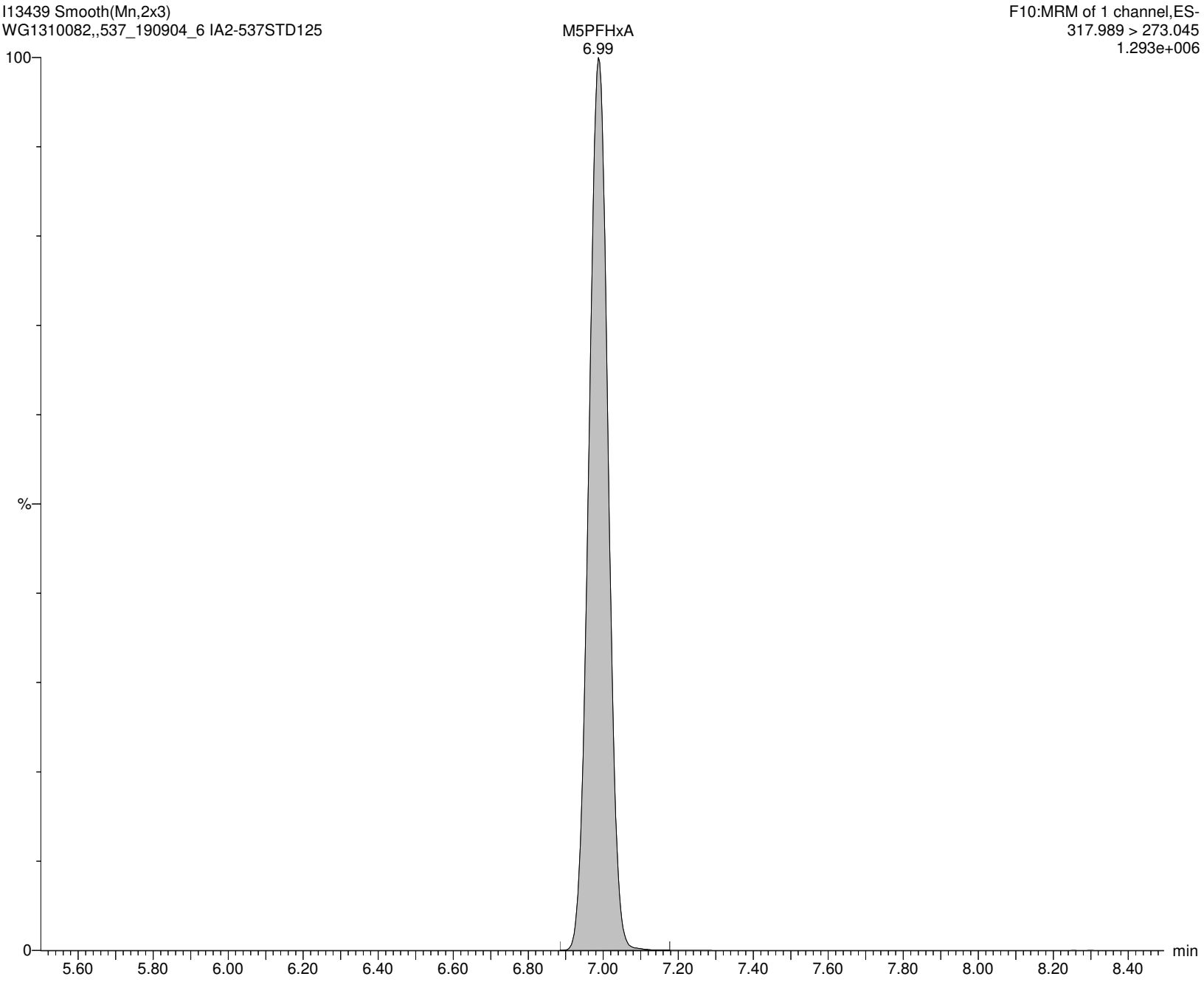
**M5PFHxA**





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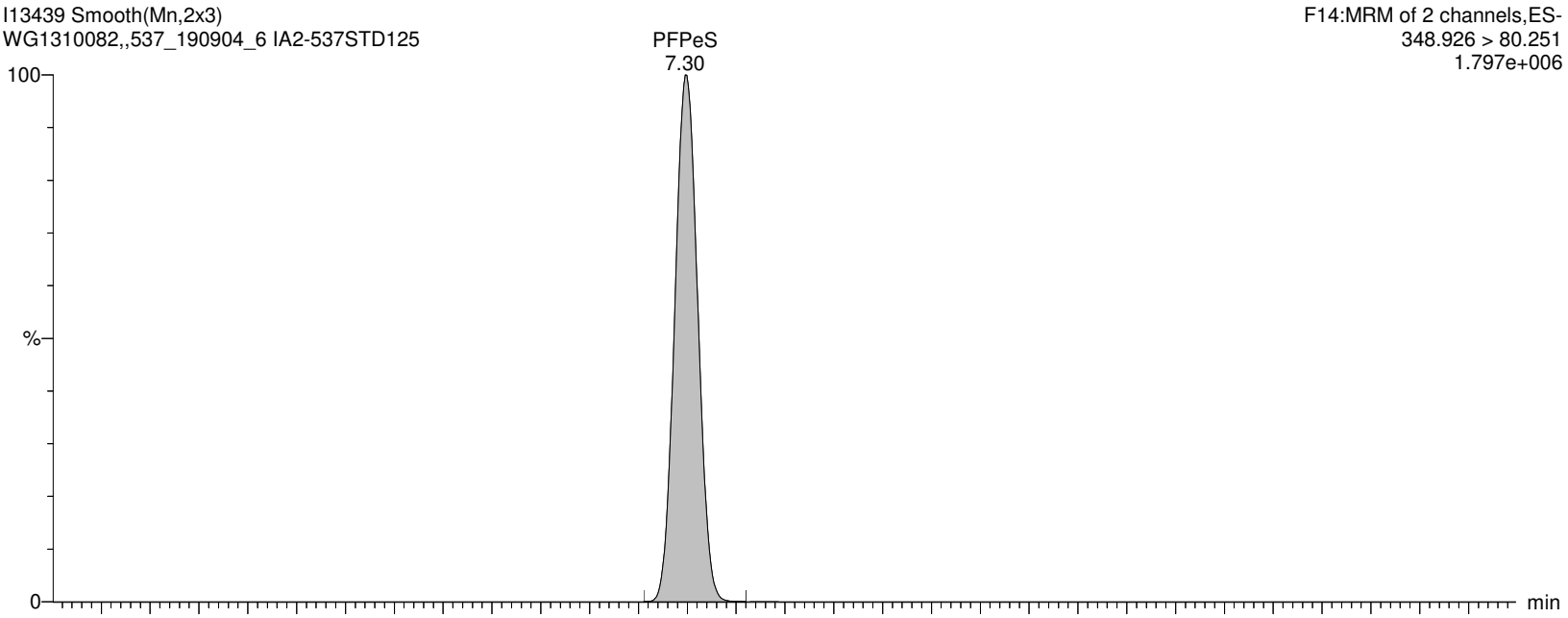
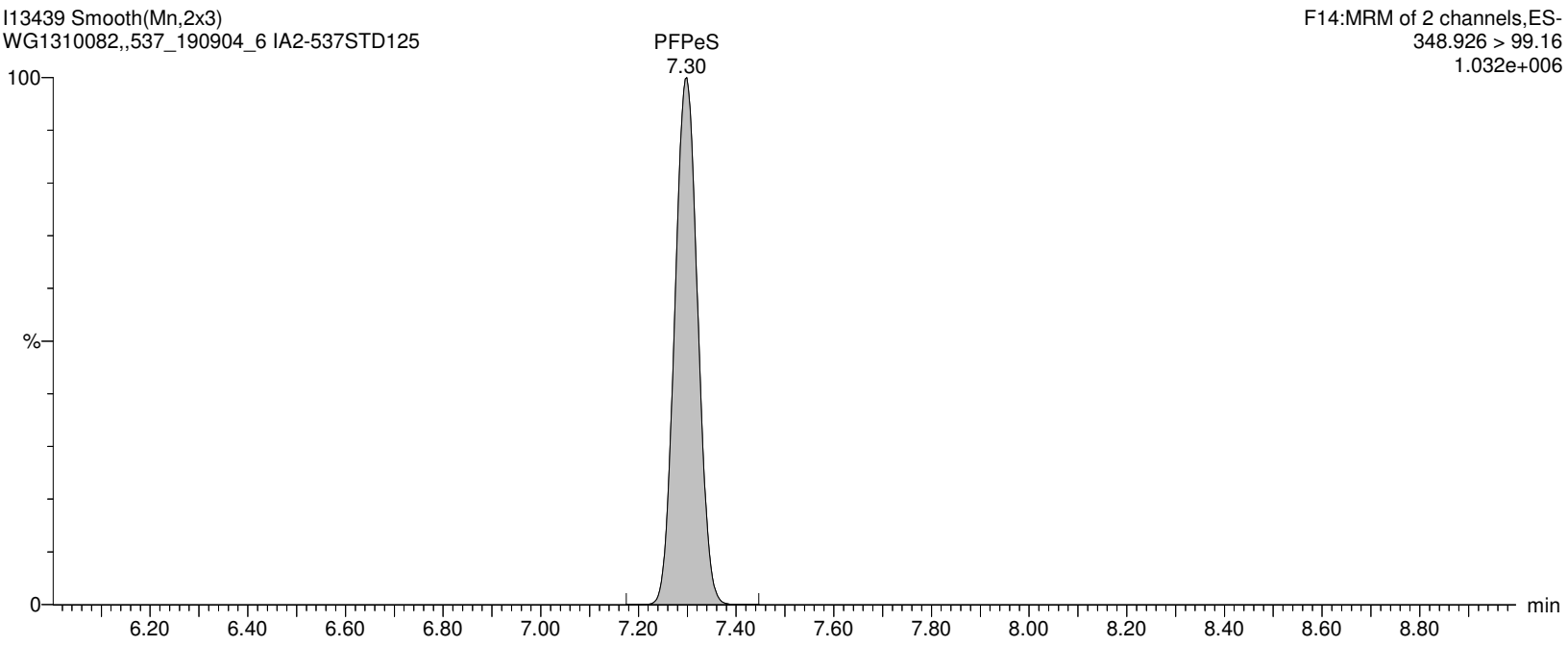
**PFPeS**





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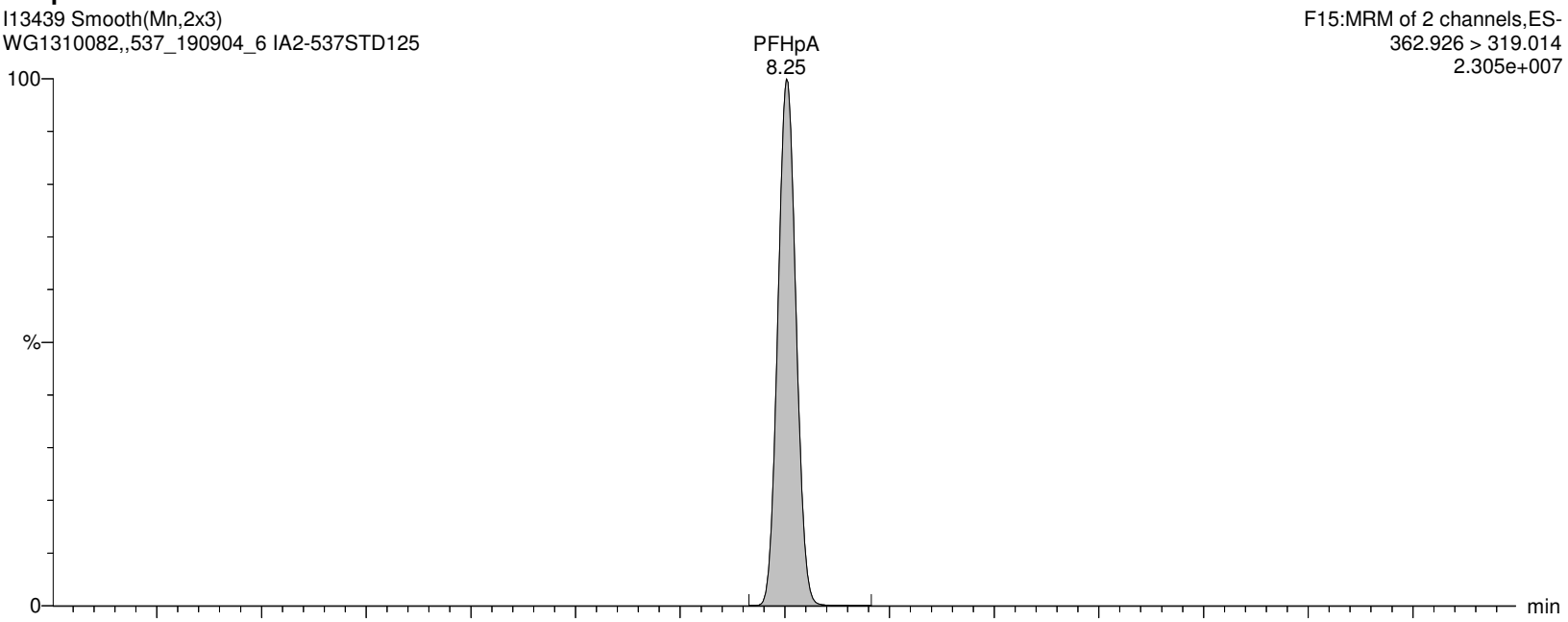
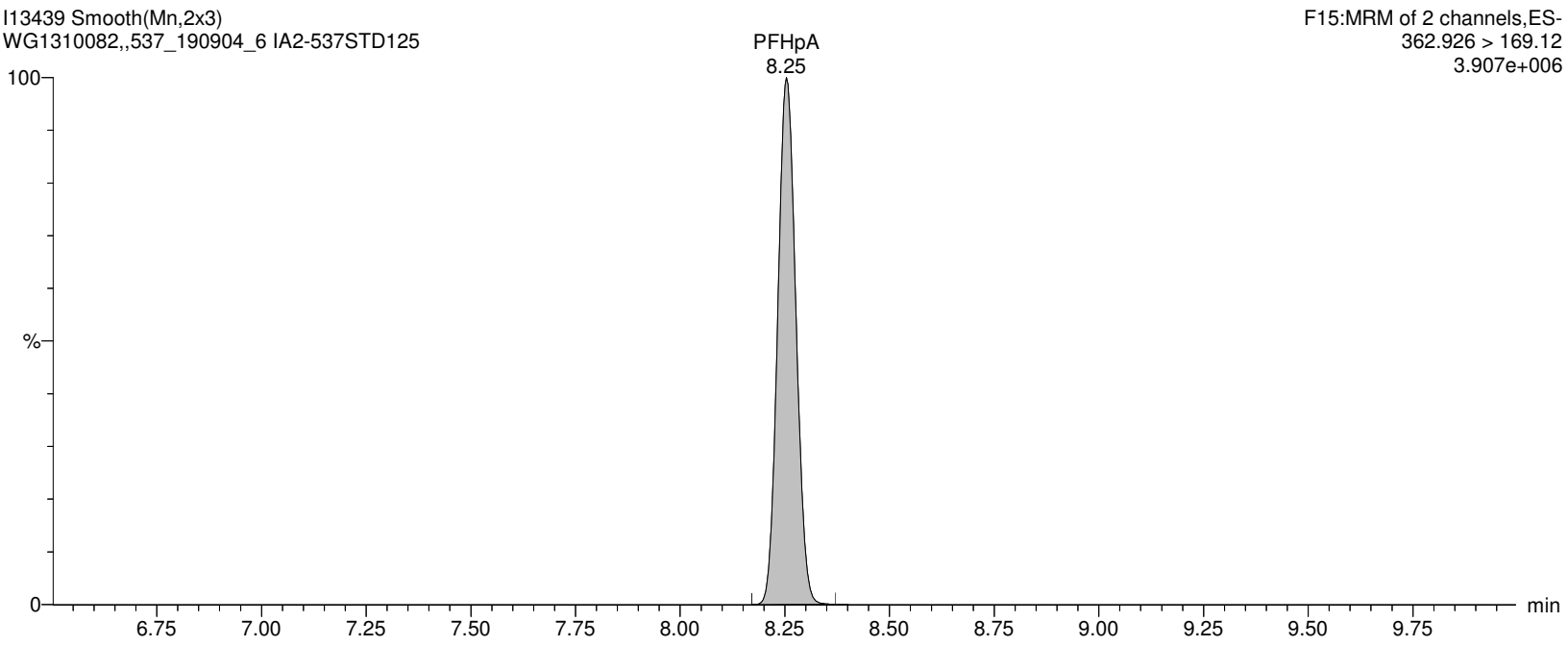
**PFHpA**





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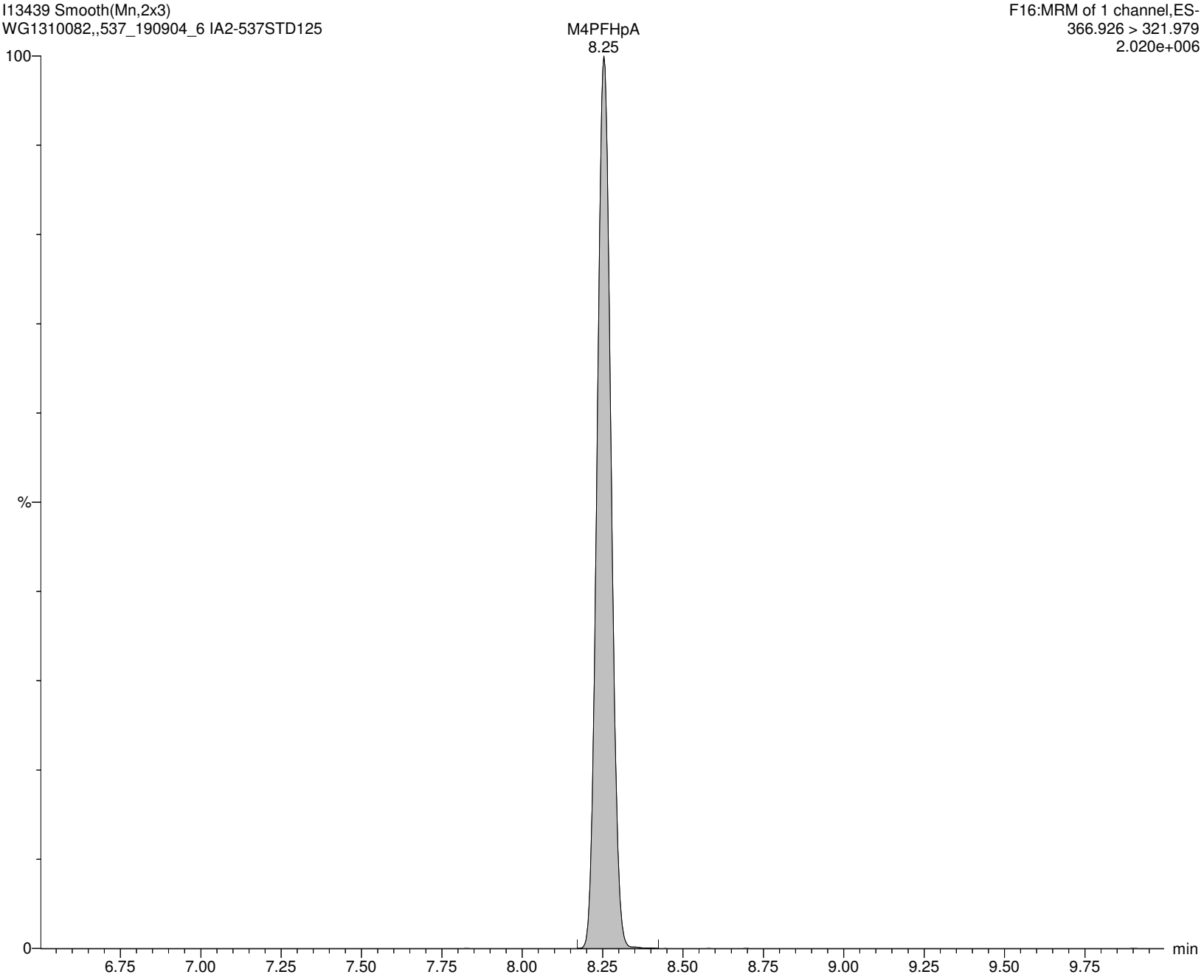
**M4PFHpA**



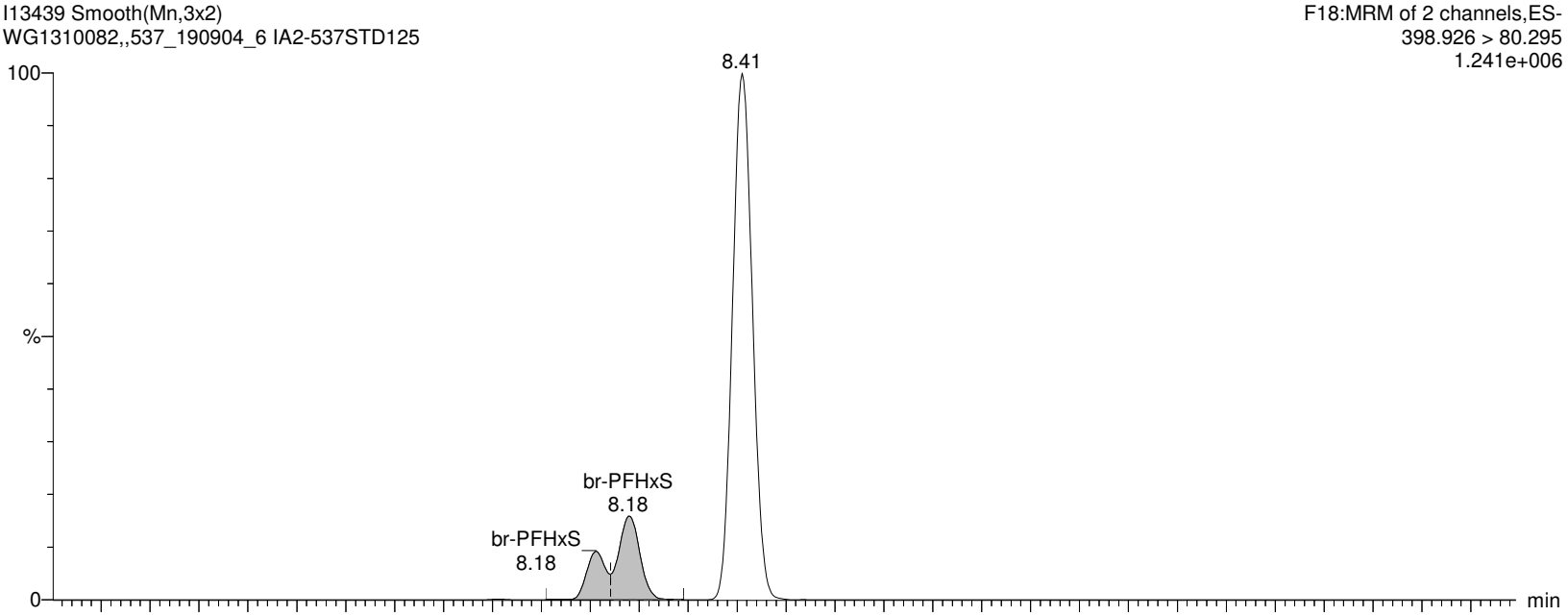


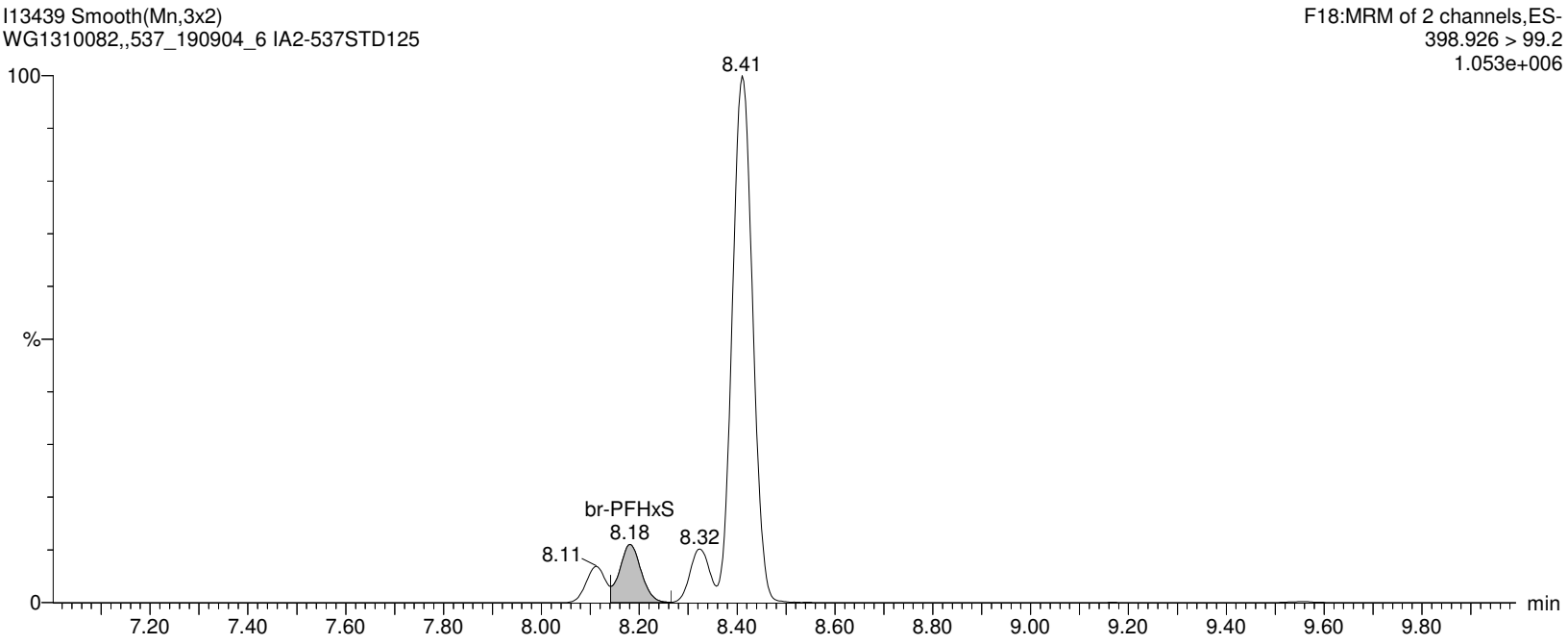
all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
Printed: Monday, November 18, 2019 13:42:59 Eastern Standard Time

**Name: I13439**
**ID: IA2-537STD125**
**Date: 18-Nov-2019**
**Time: 12:00:10**
**Description: WG1310082,,537_190904_6**
**User: LCMS02:JW**
**Vial: 1:A,7**
**Instrument: XEVO-TQSmicro#QEB0050**
**Inlet Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\LCMS_537_ISO_B**
**Tune Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\181009_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**br-PFHxS**





all concentration units in (ng/mL)

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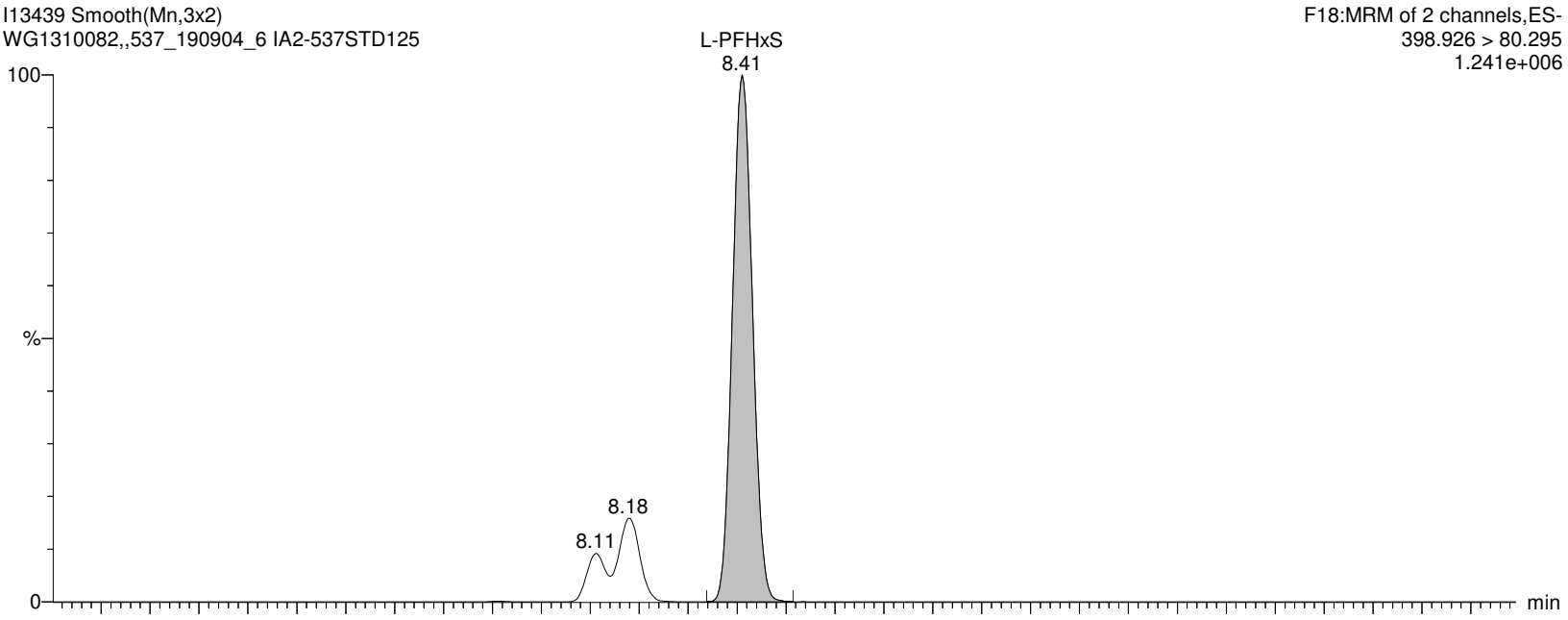
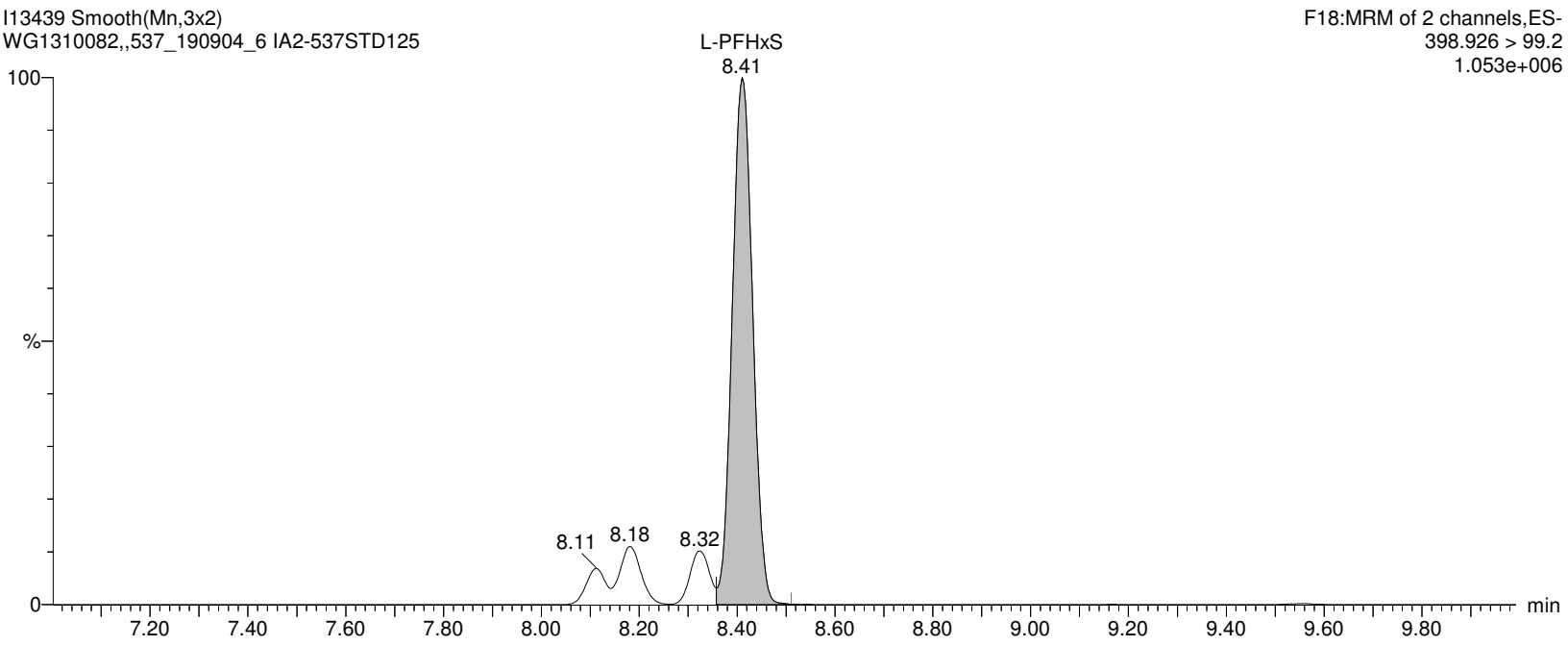
**L-PFHxS**





all concentration units in (ng/mL)

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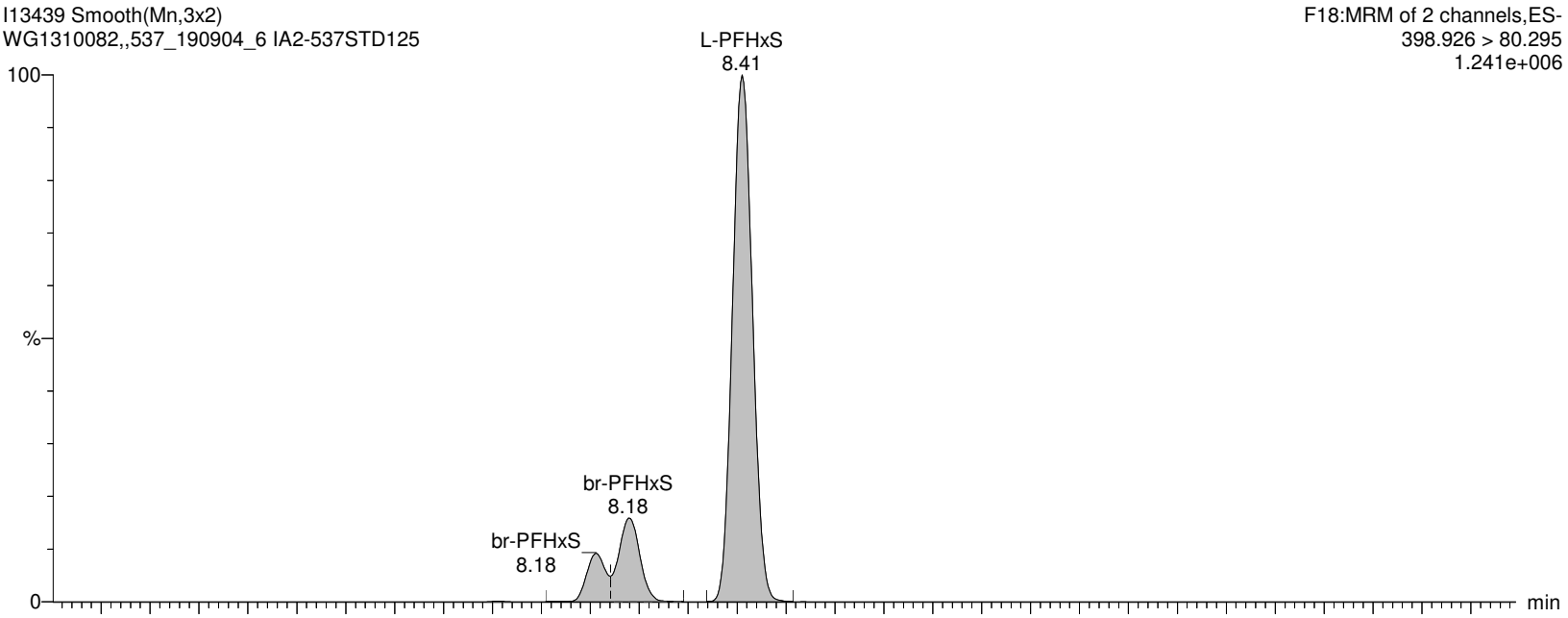
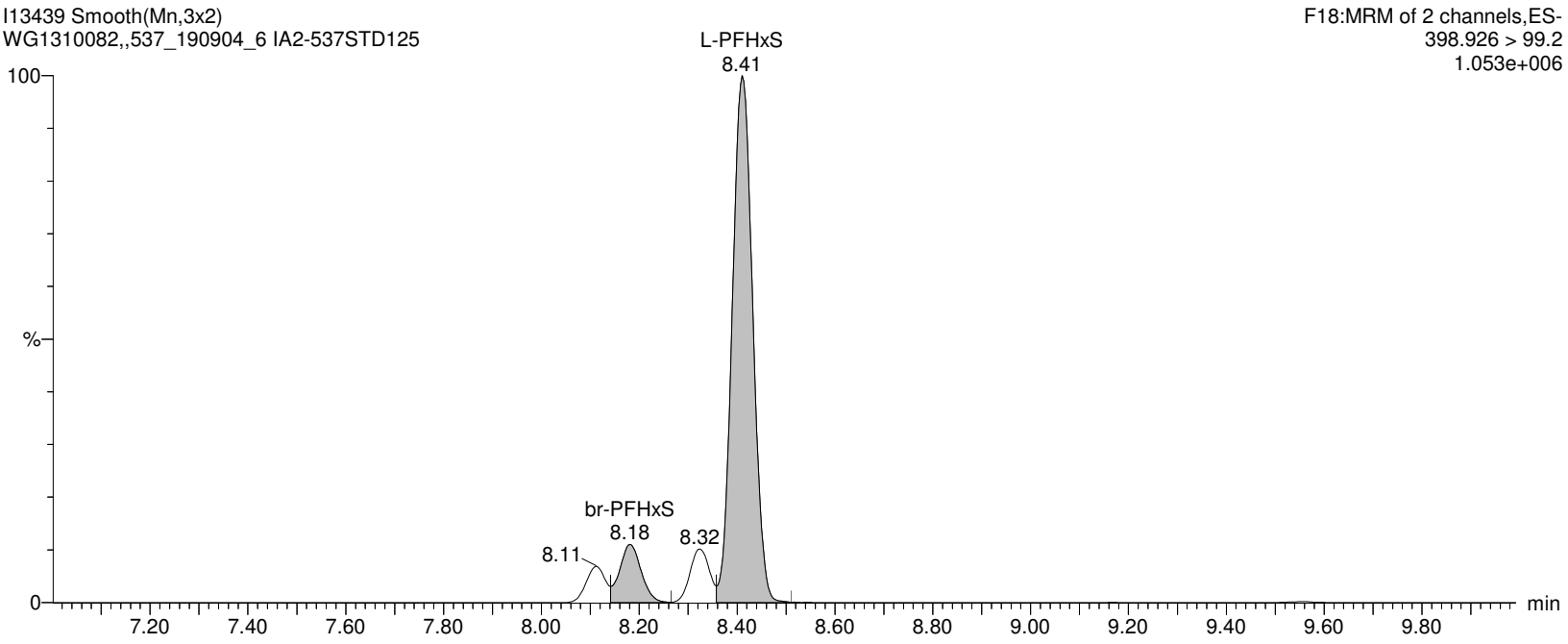
**PFHxS**





all concentration units in (ng/mL)

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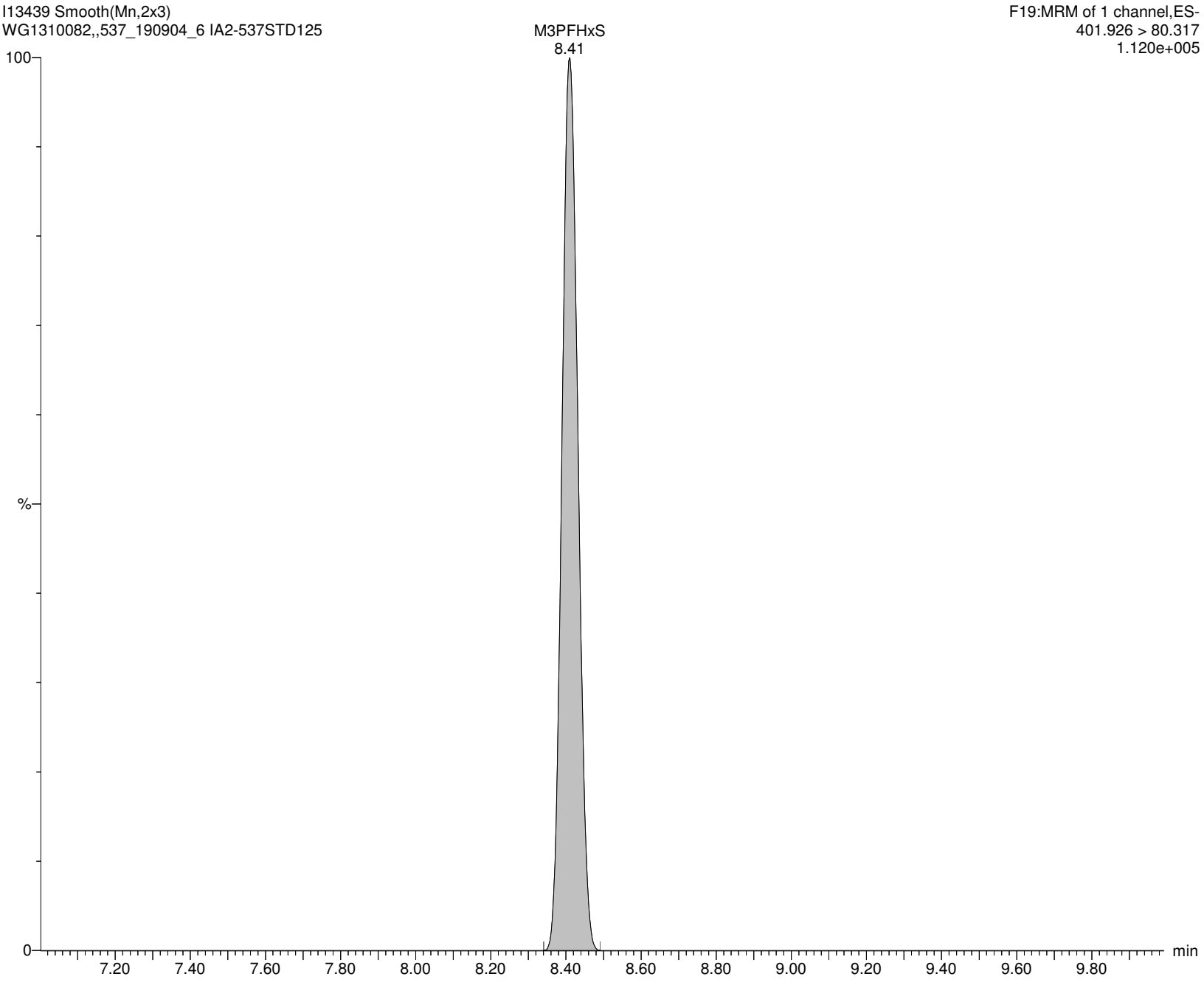
**M3PFHxS**





all concentration units in (ng/mL)

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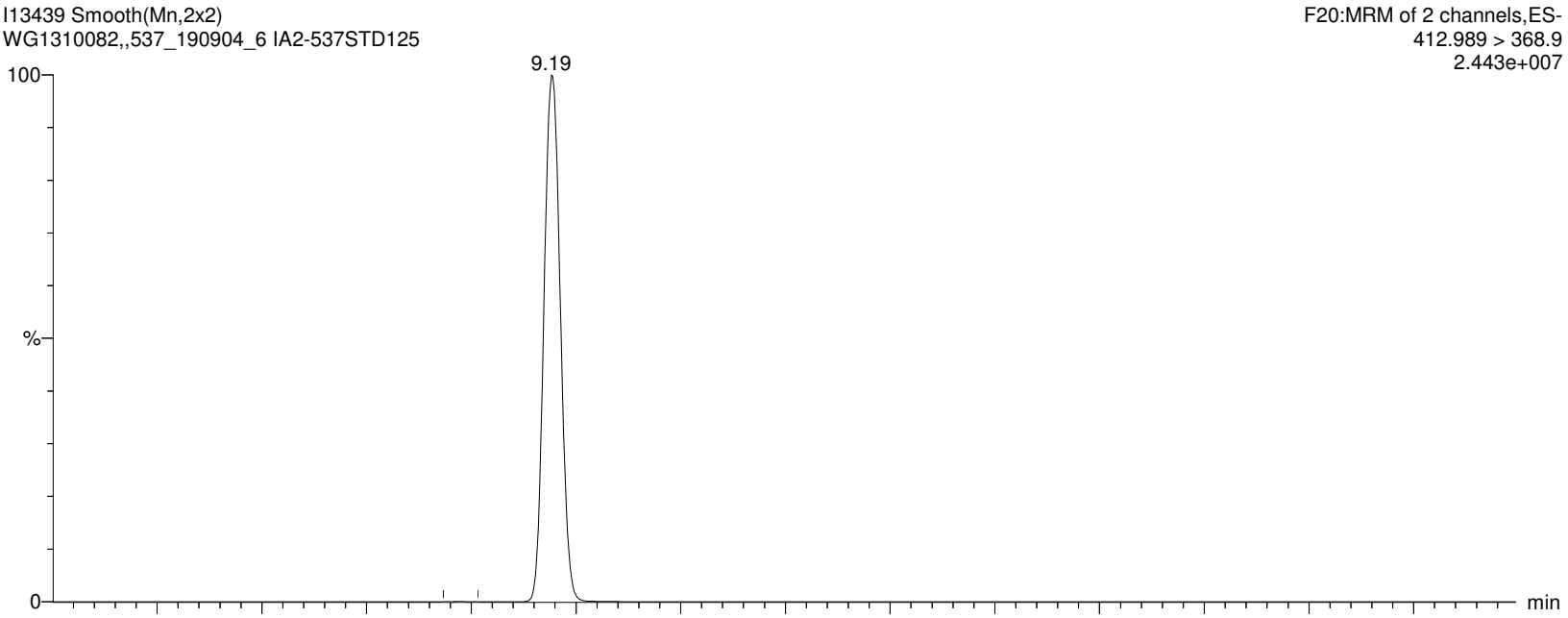
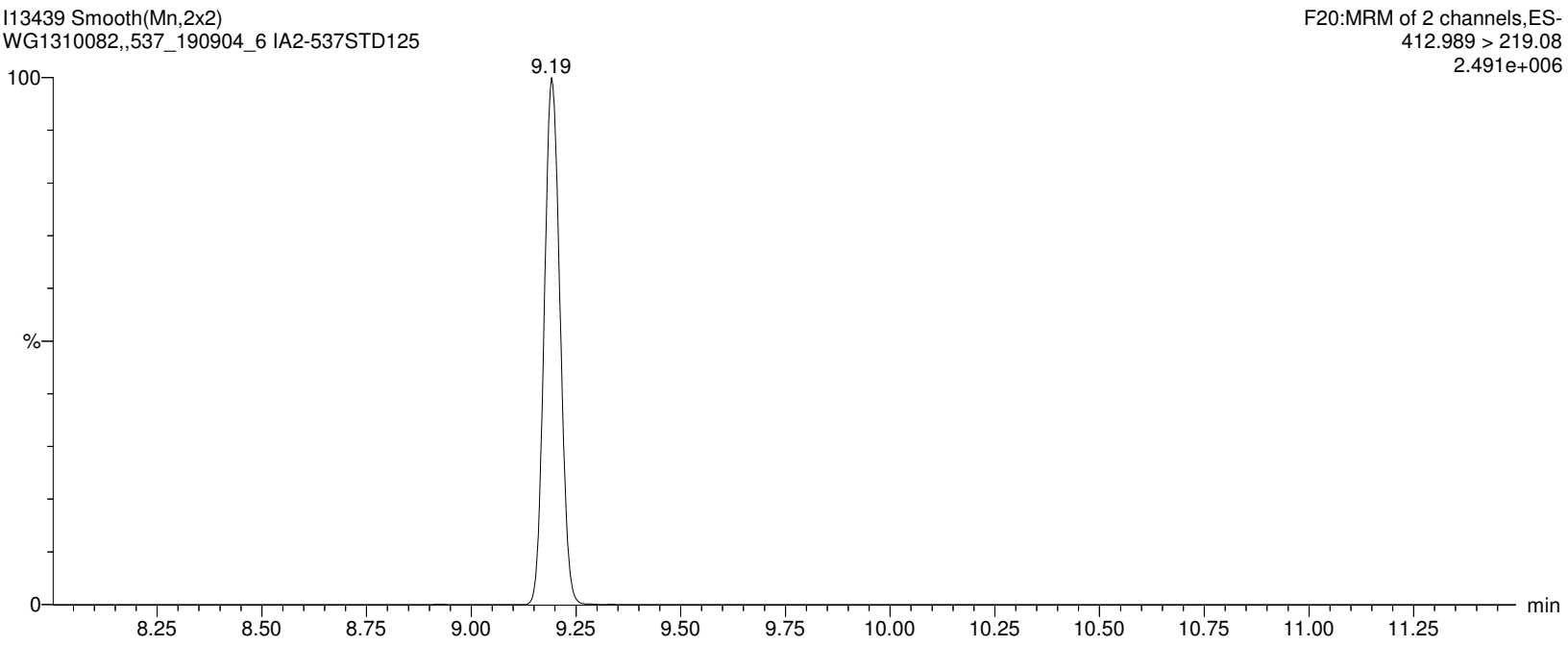
**br-PFOA**





all concentration units in (ng/mL)

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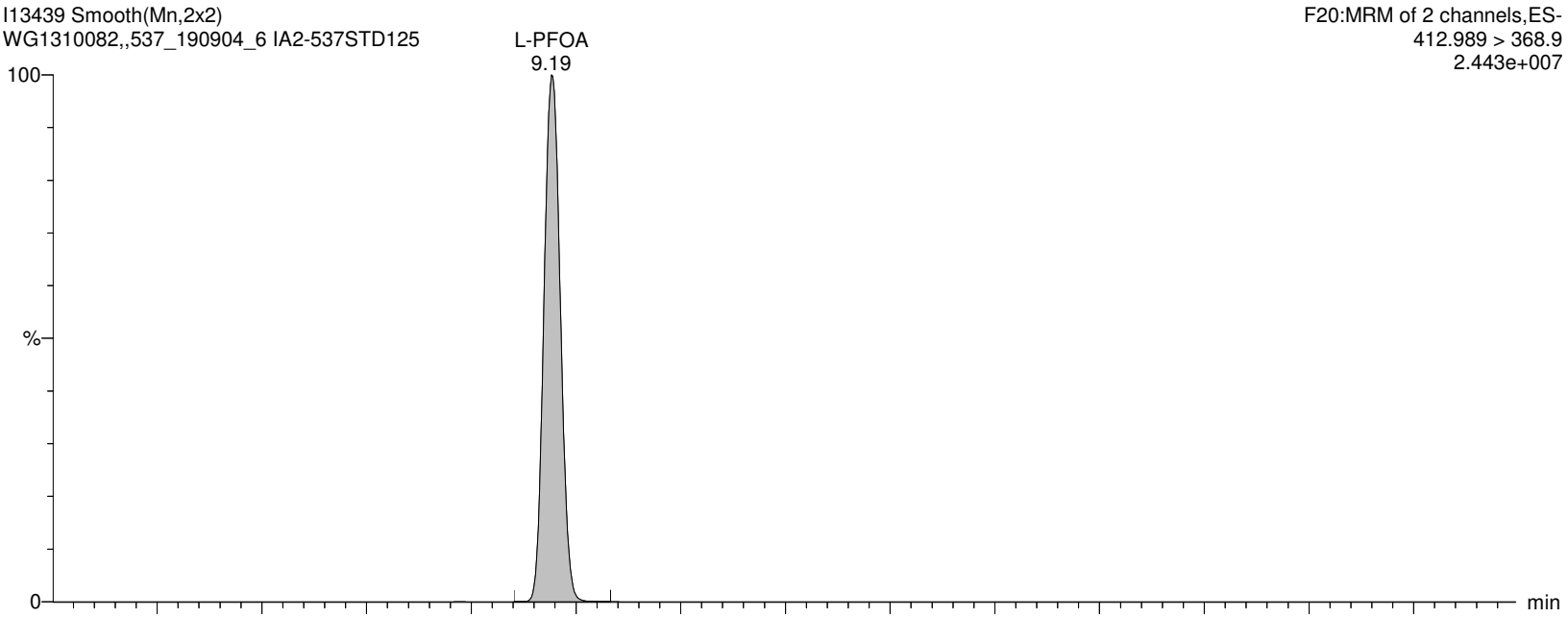
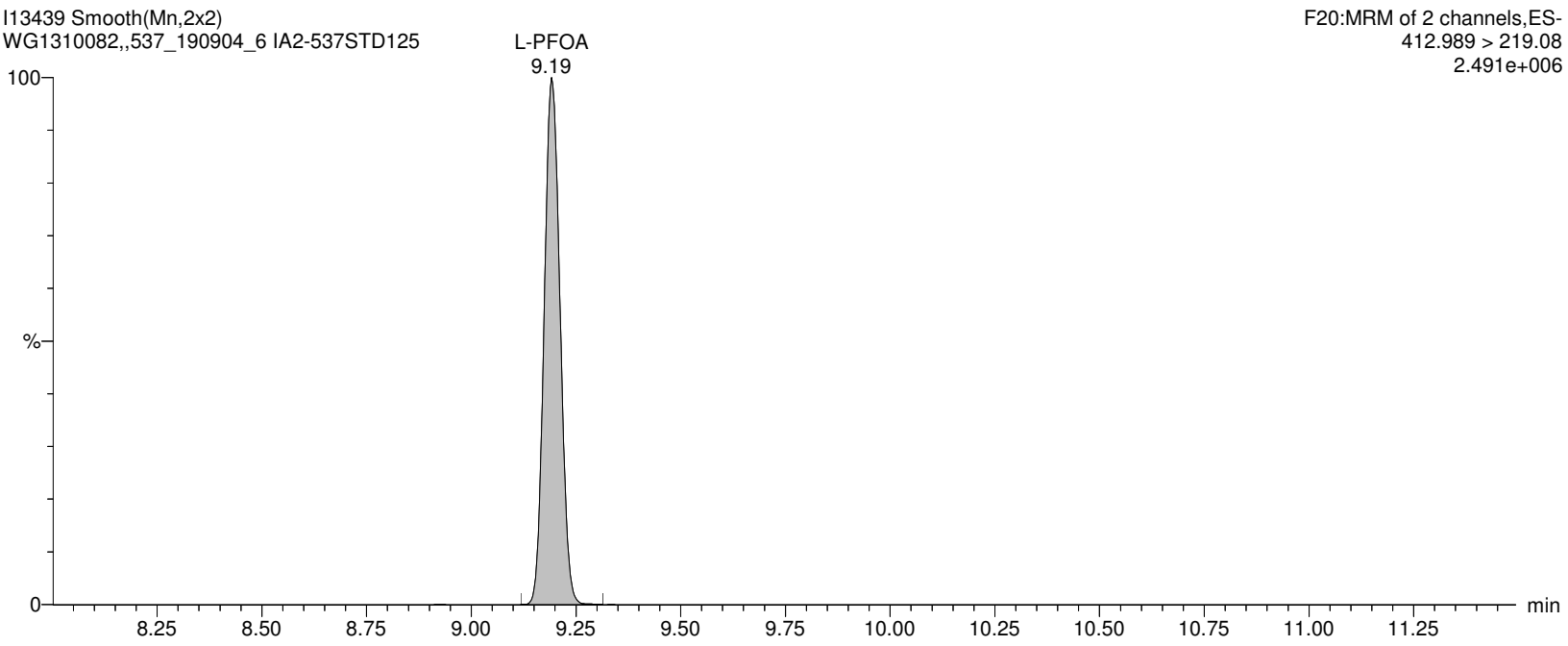
**L-PFOA**





all concentration units in (ng/mL)

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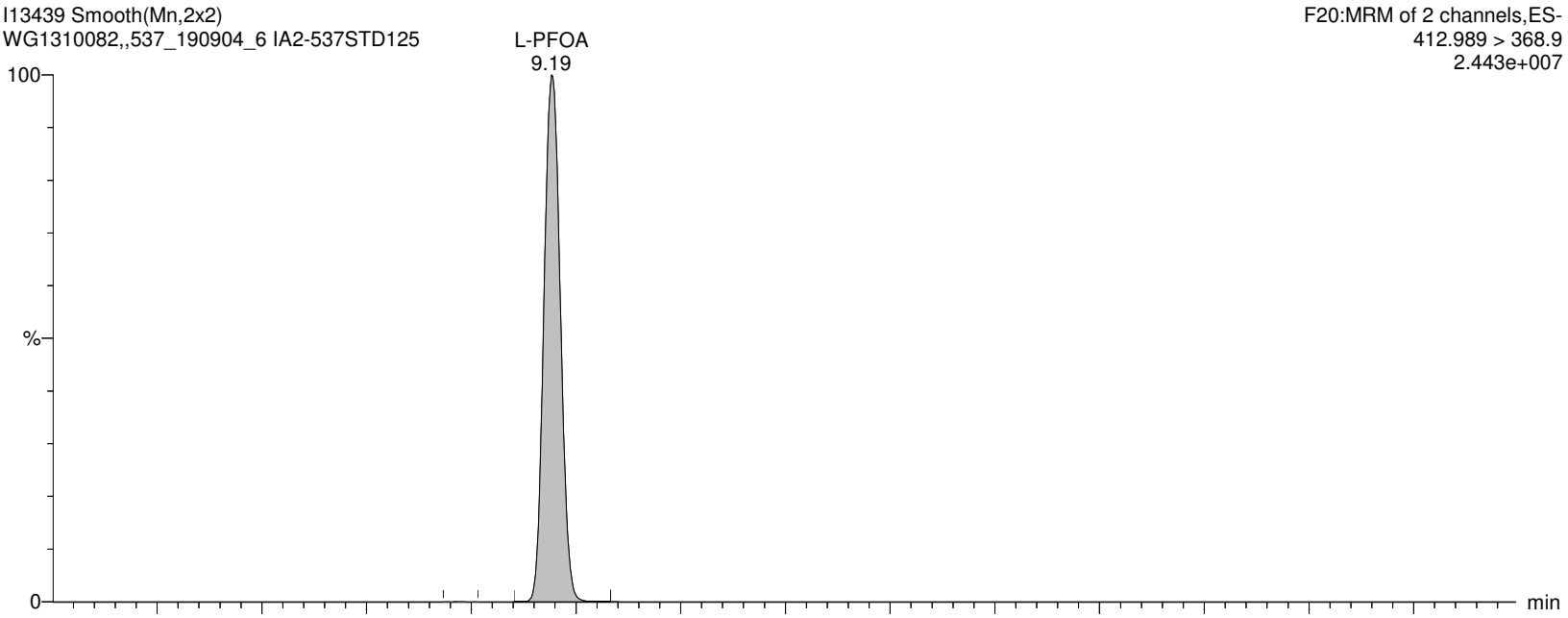
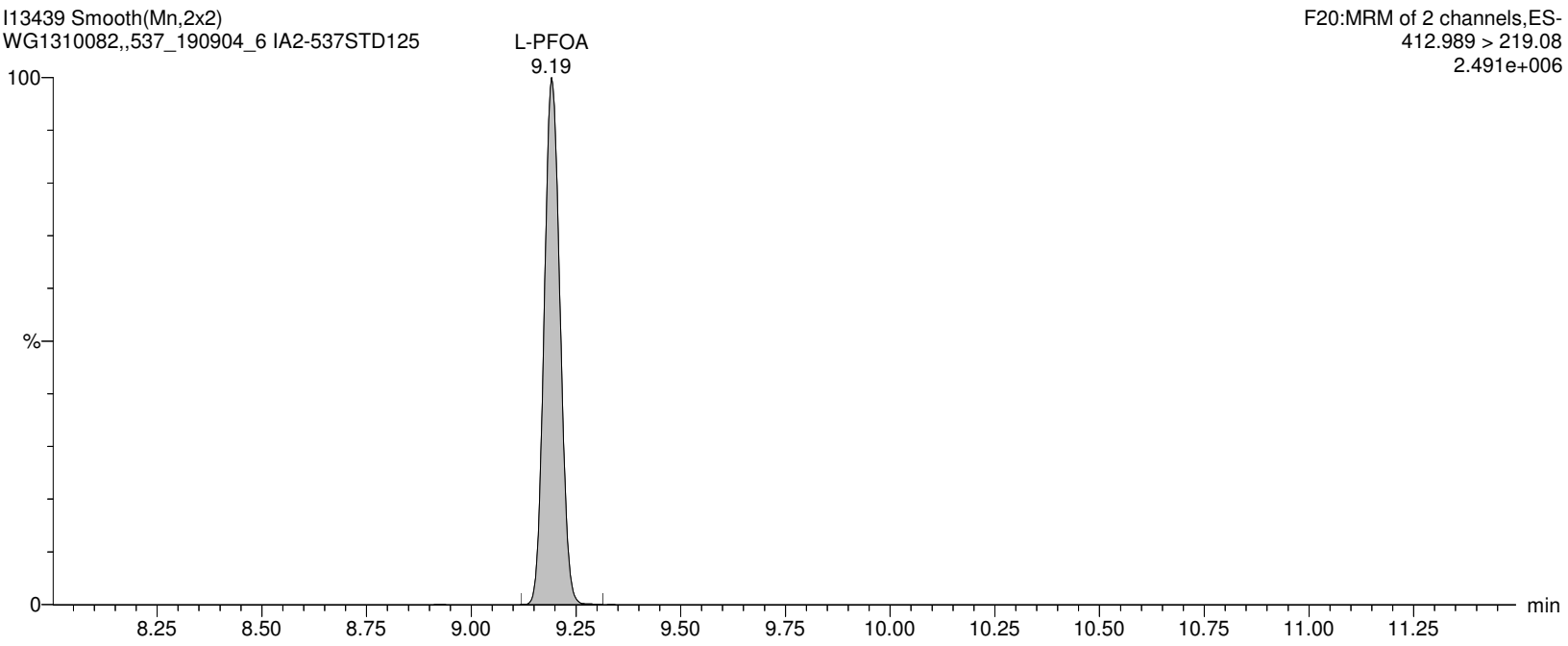
**PFOA**





all concentration units in (ng/mL)

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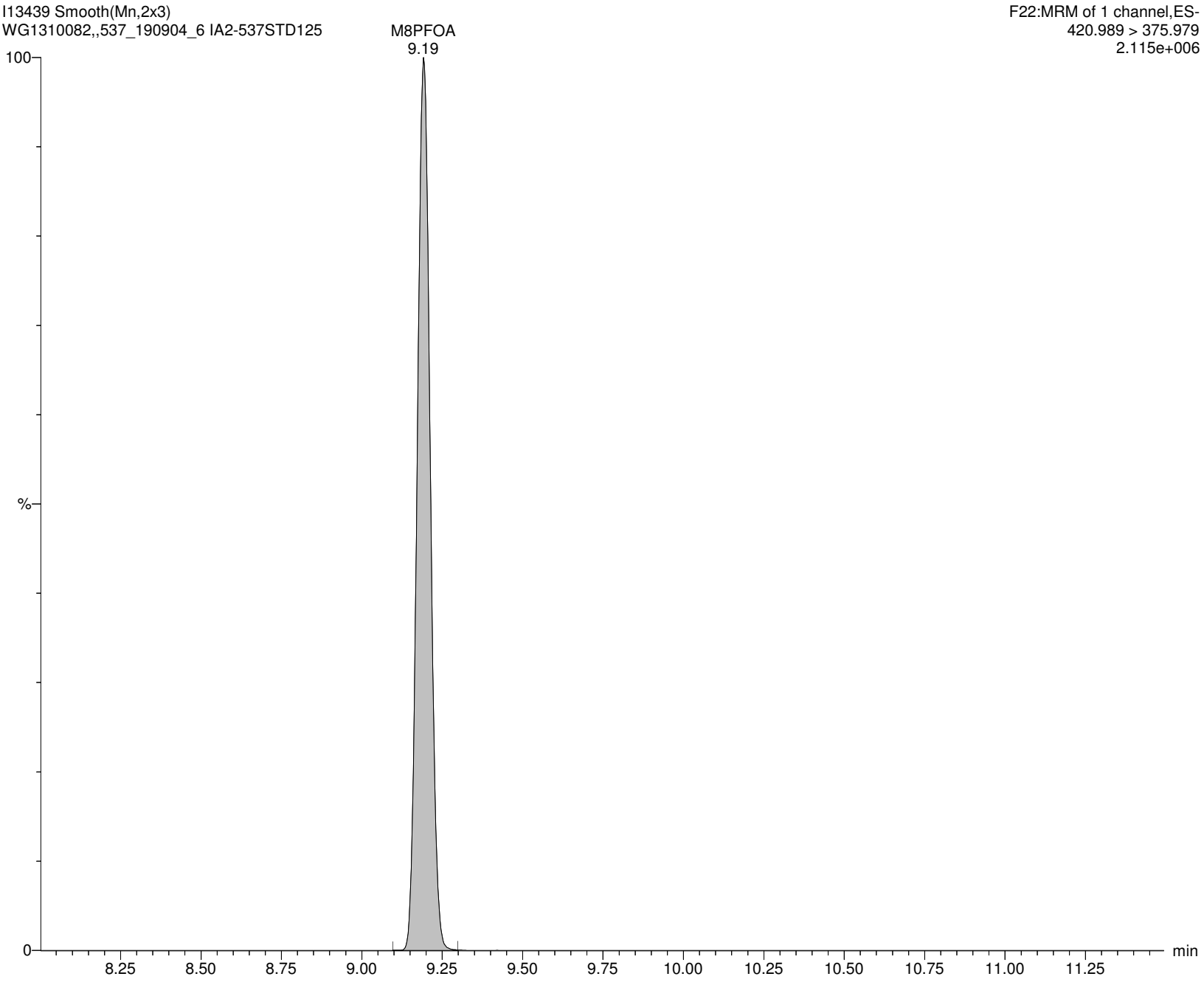
**M8PFOA**





all concentration units in (ng/mL)

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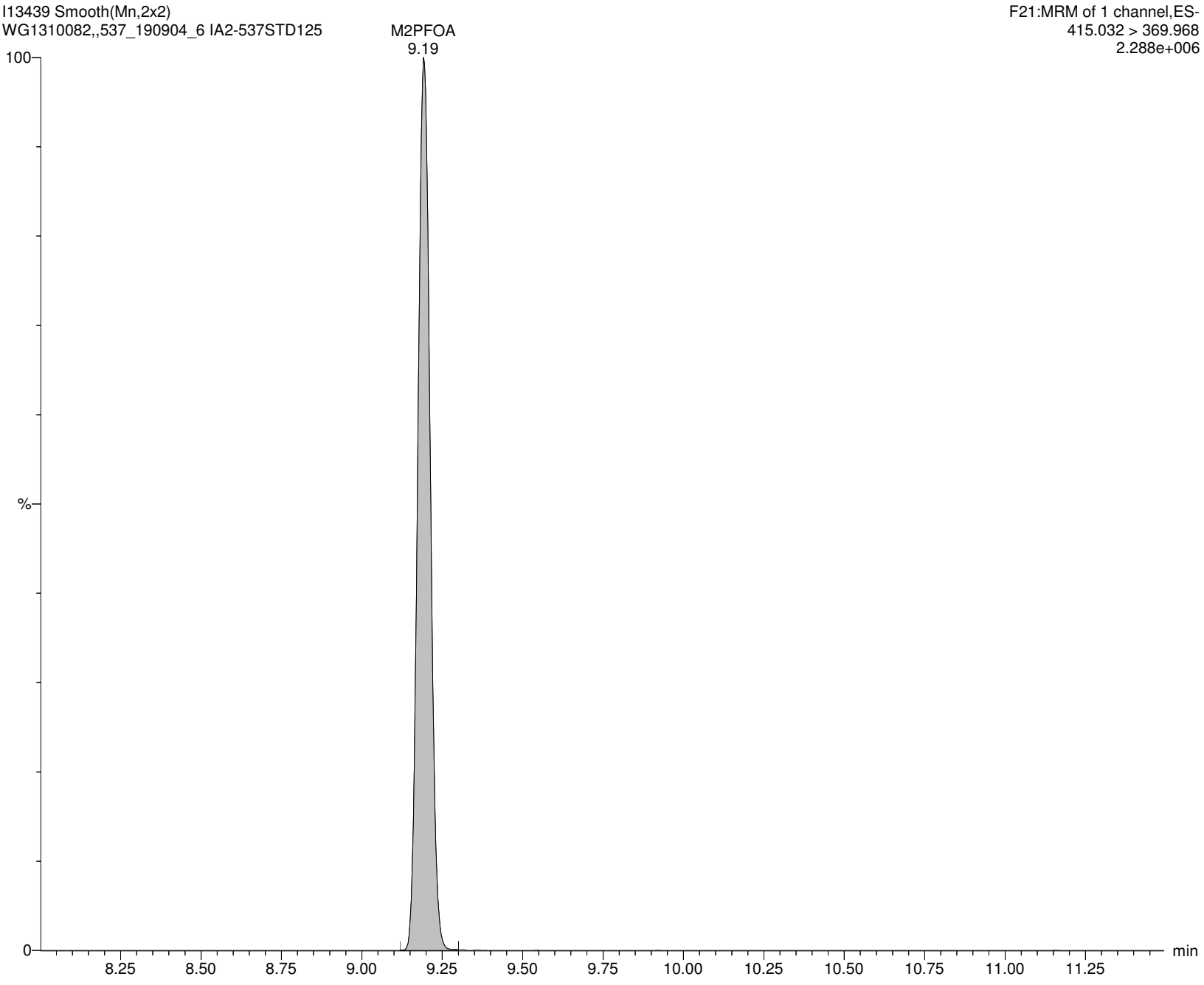
**M2PFOA**





all concentration units in (ng/mL)

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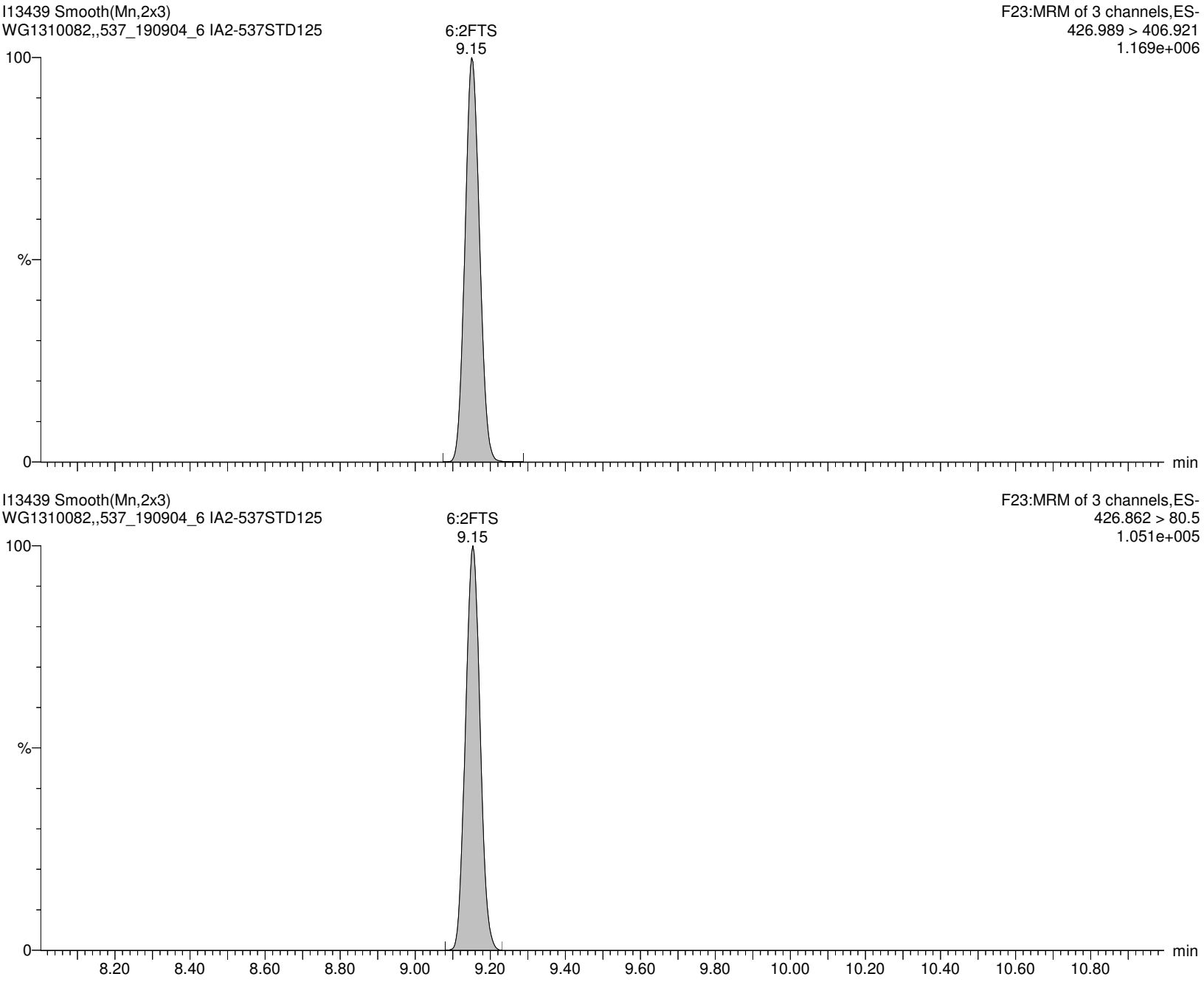
**6:2FTS**





all concentration units in (ng/mL)

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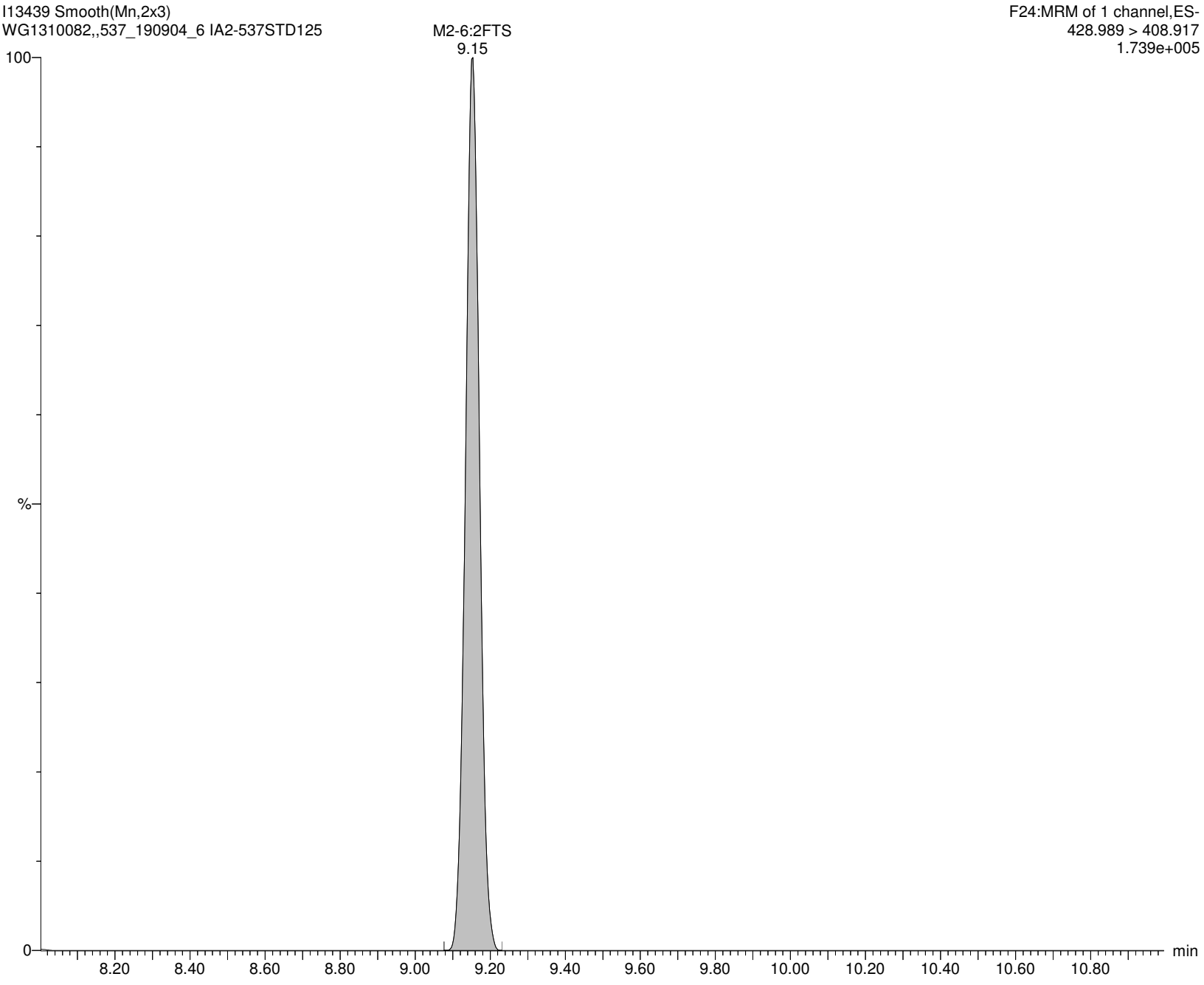
**M2-6:2FTS**





all concentration units in (ng/mL)

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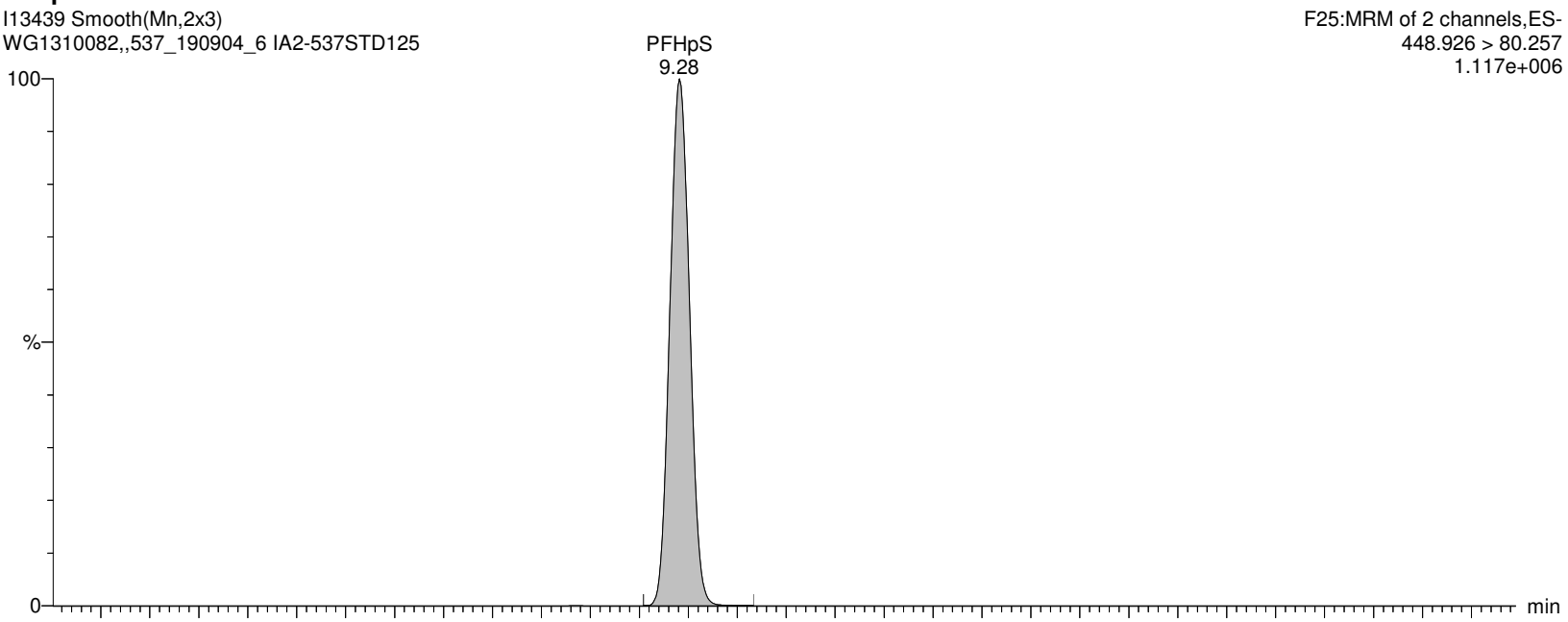
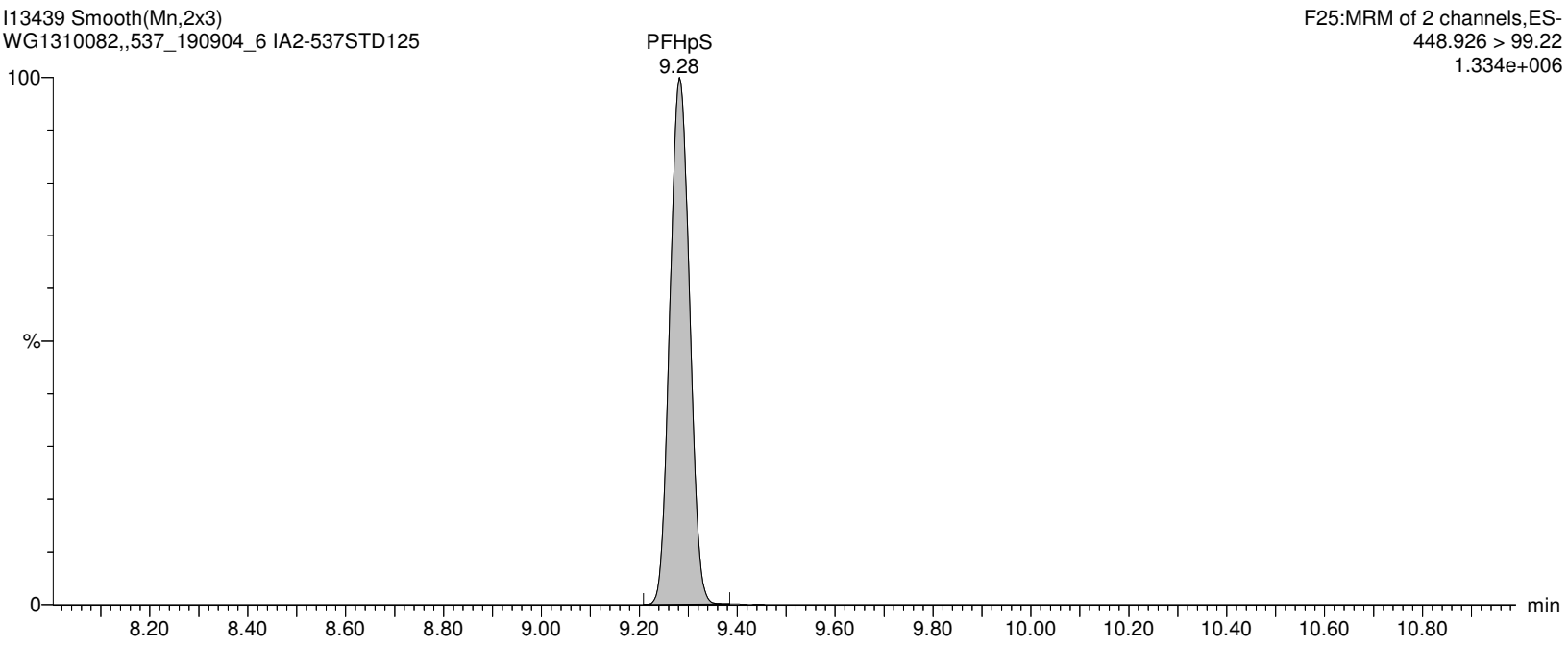
**PFHpS**





all concentration units in (ng/mL)

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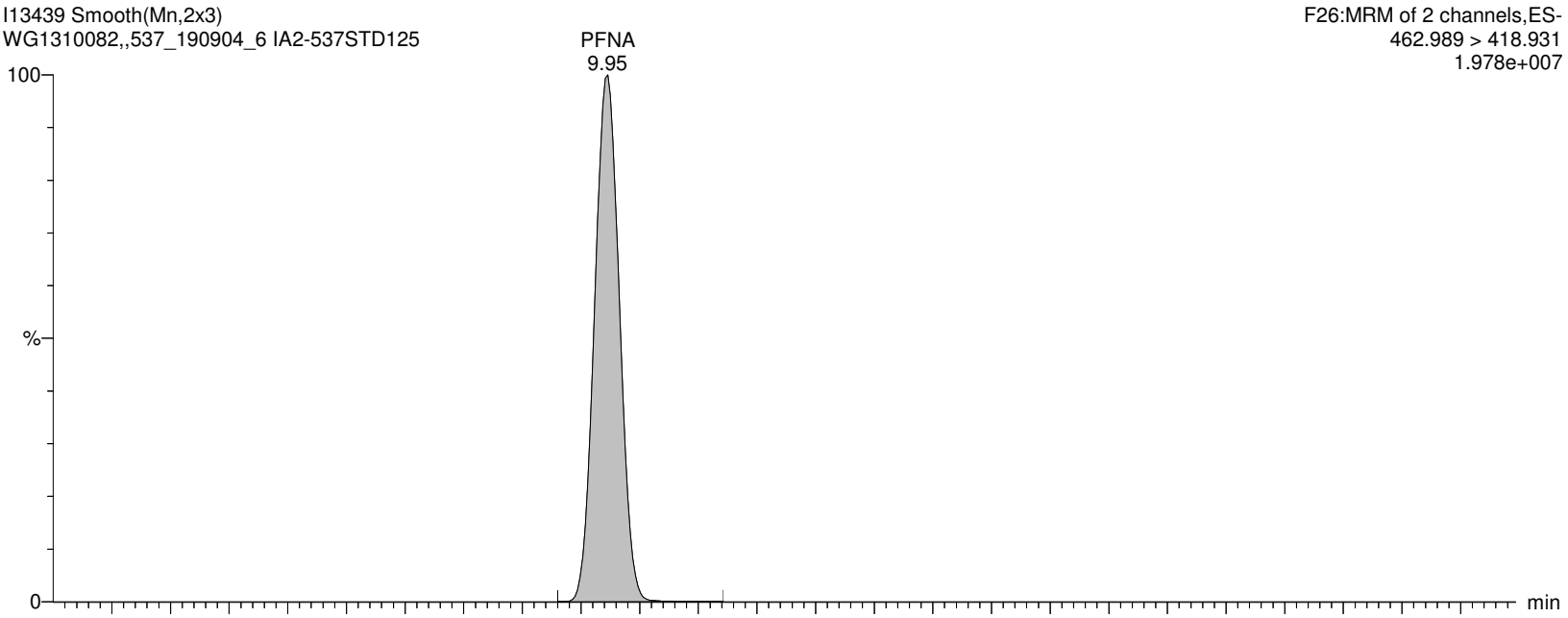
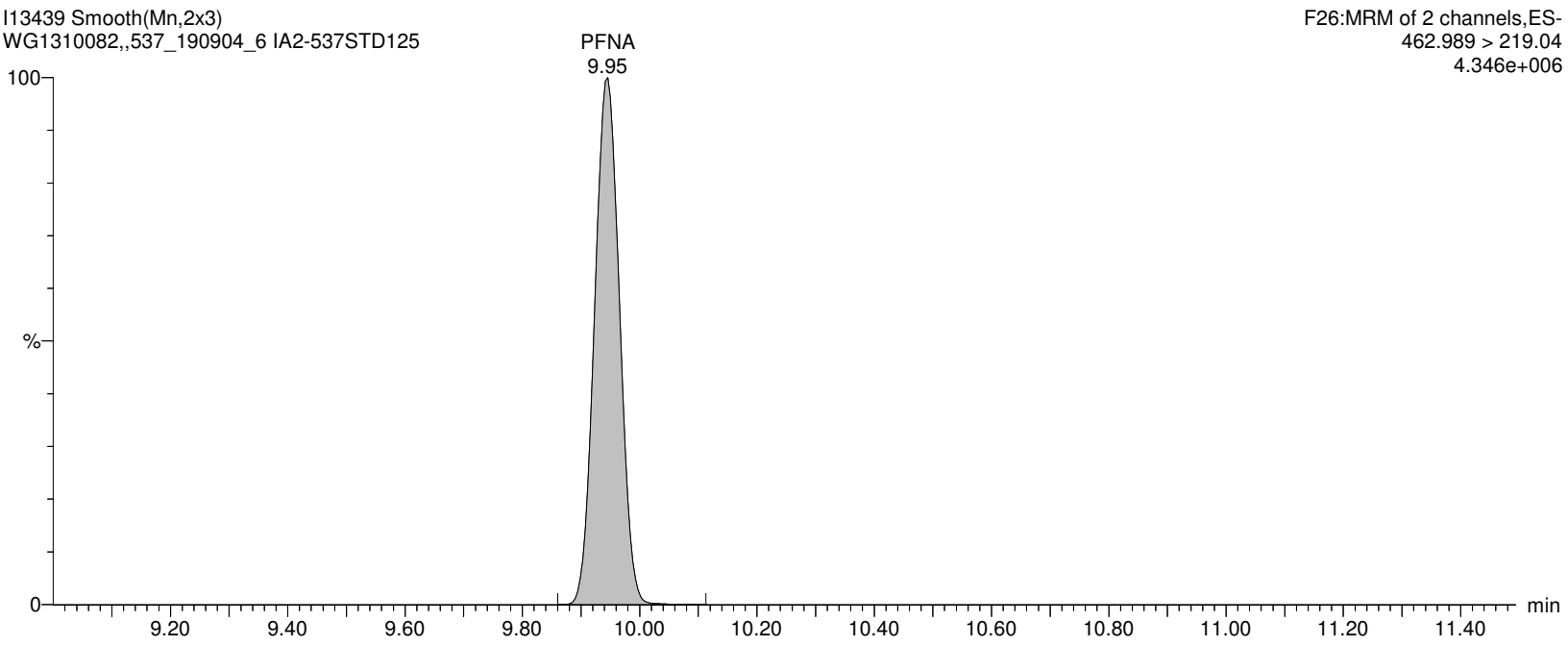
**PFNA**





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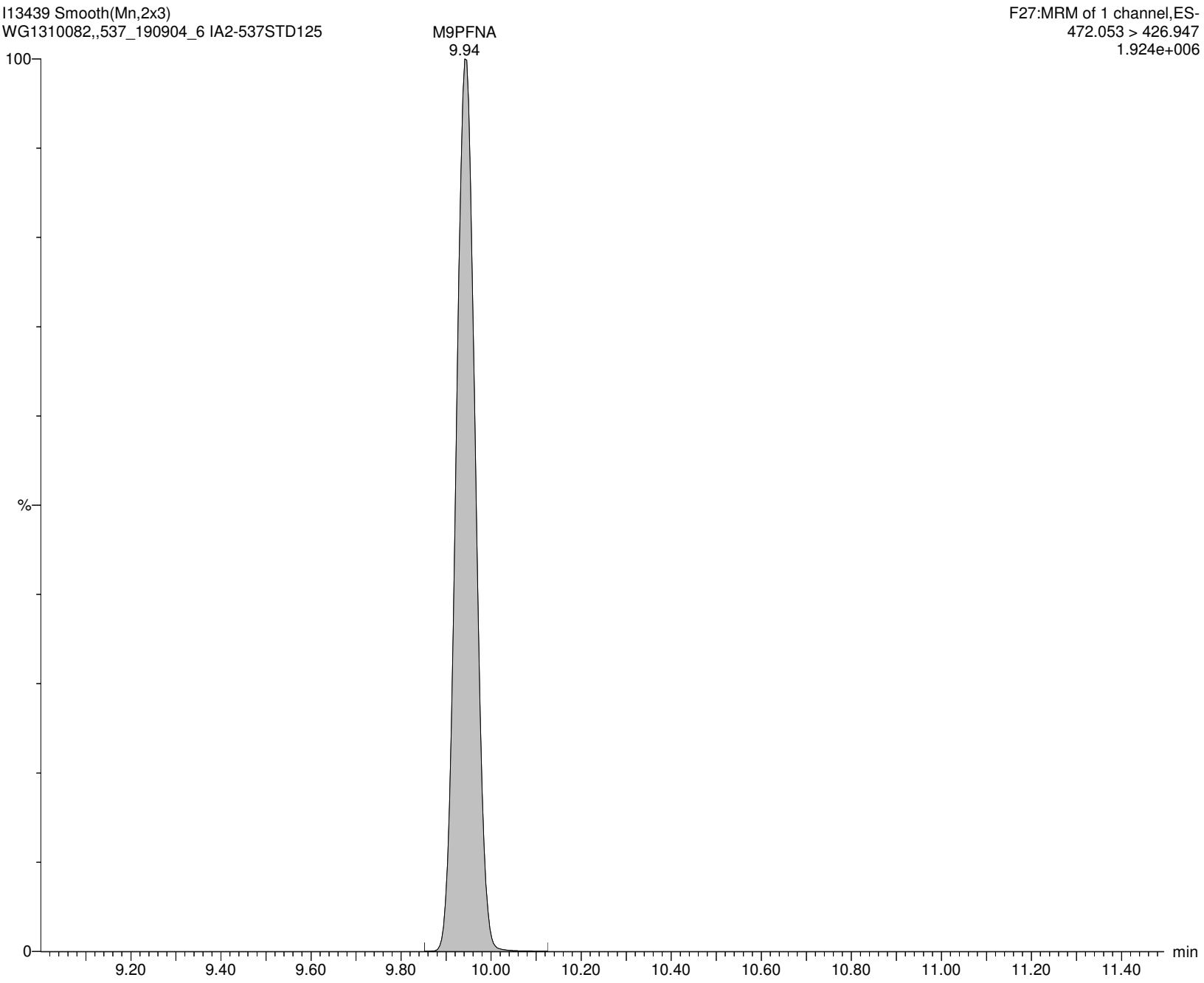



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**MS Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

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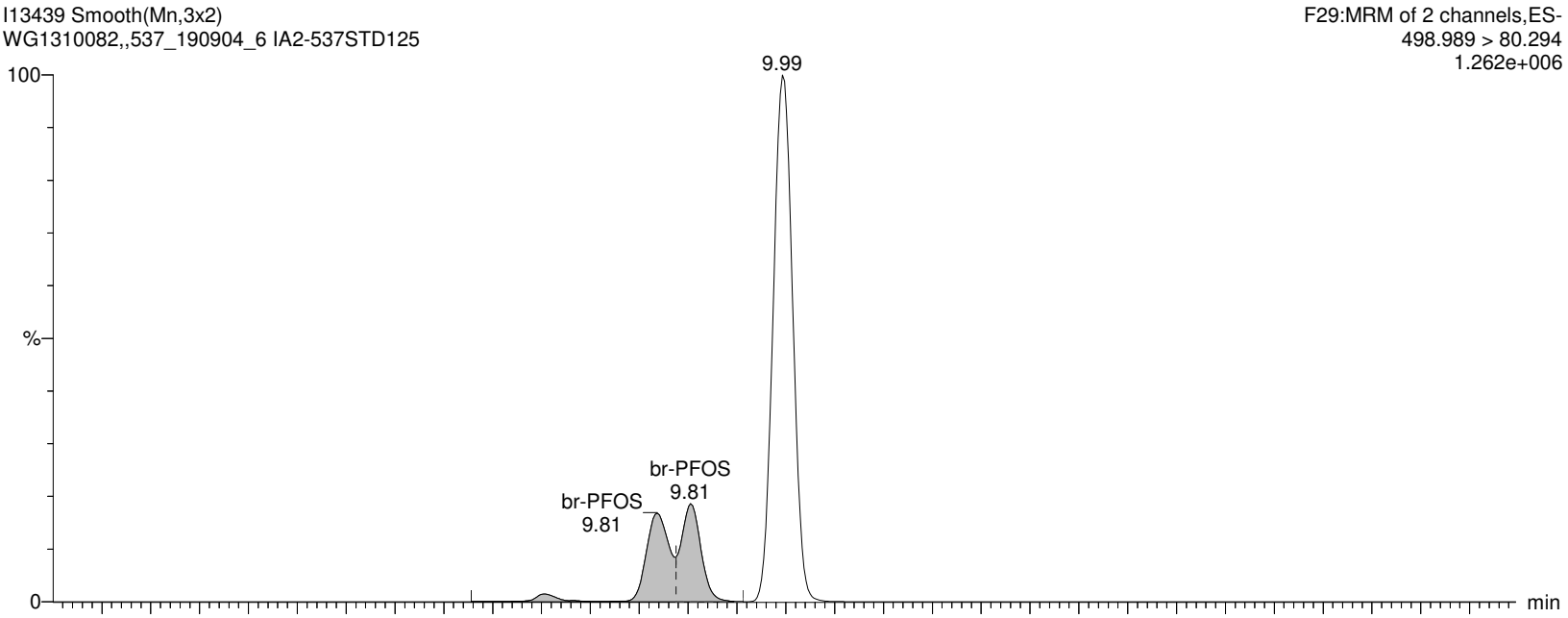


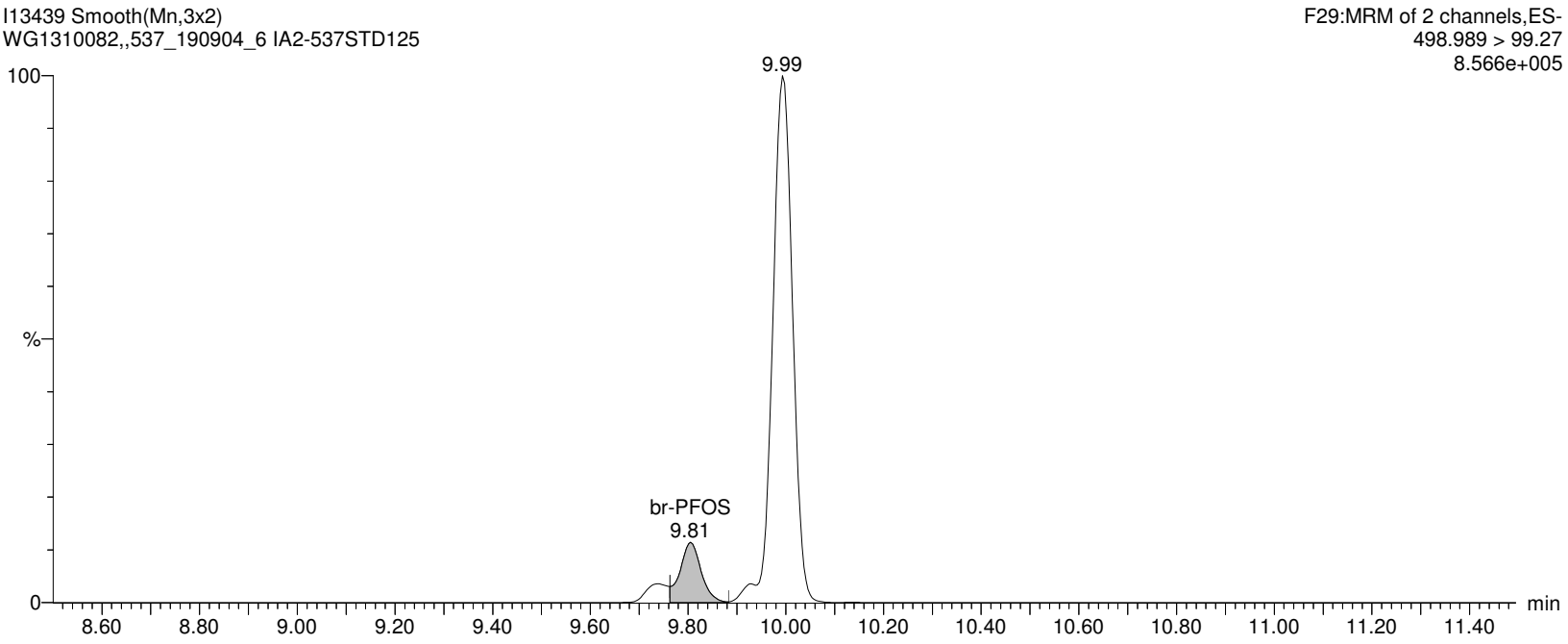



all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
Printed: Monday, November 18, 2019 13:42:59 Eastern Standard Time

**Name: I13439**
**ID: IA2-537STD125**
**Date: 18-Nov-2019**
**Time: 12:00:10**
**Description: WG1310082,,537_190904_6**
**User: LCMS02:JW**
**Vial: 1:A,7**
**Instrument: XEVO-TQSmicro#QEB0050**
**Inlet Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\LCMS_537_ISO_B**
**Tune Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\181009_TUNE.IPR**
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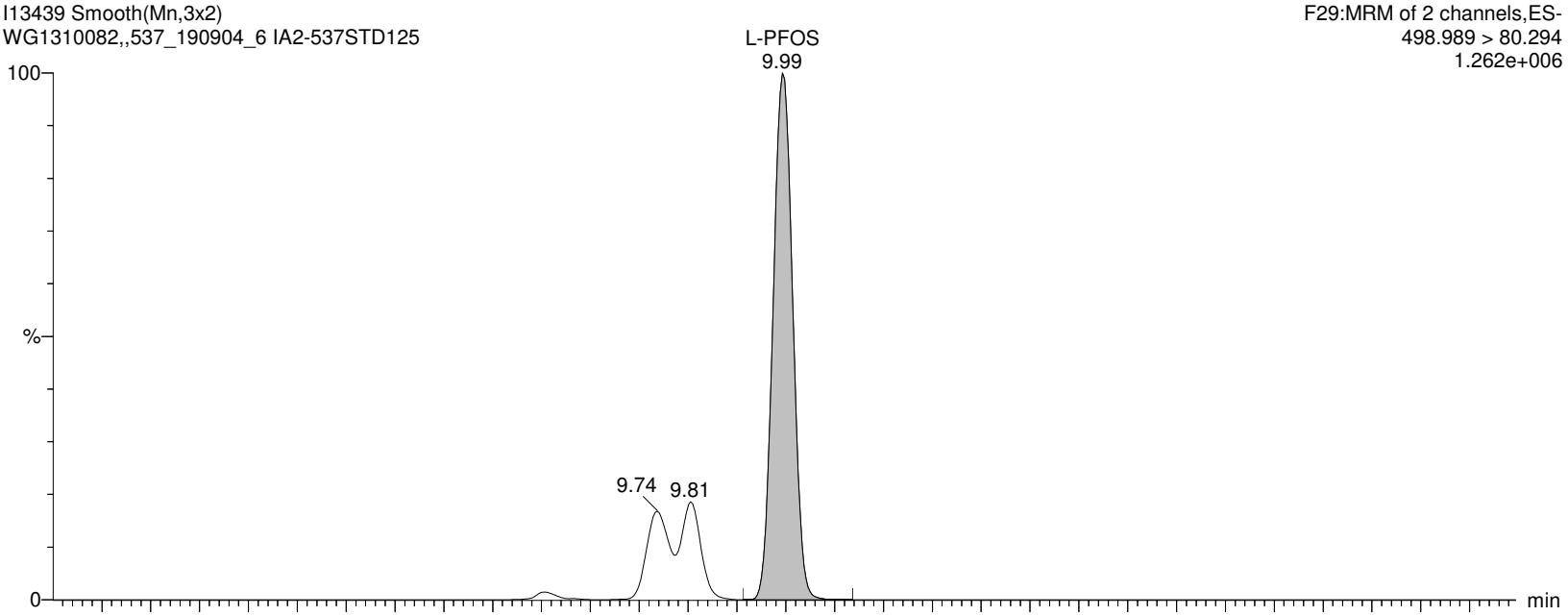
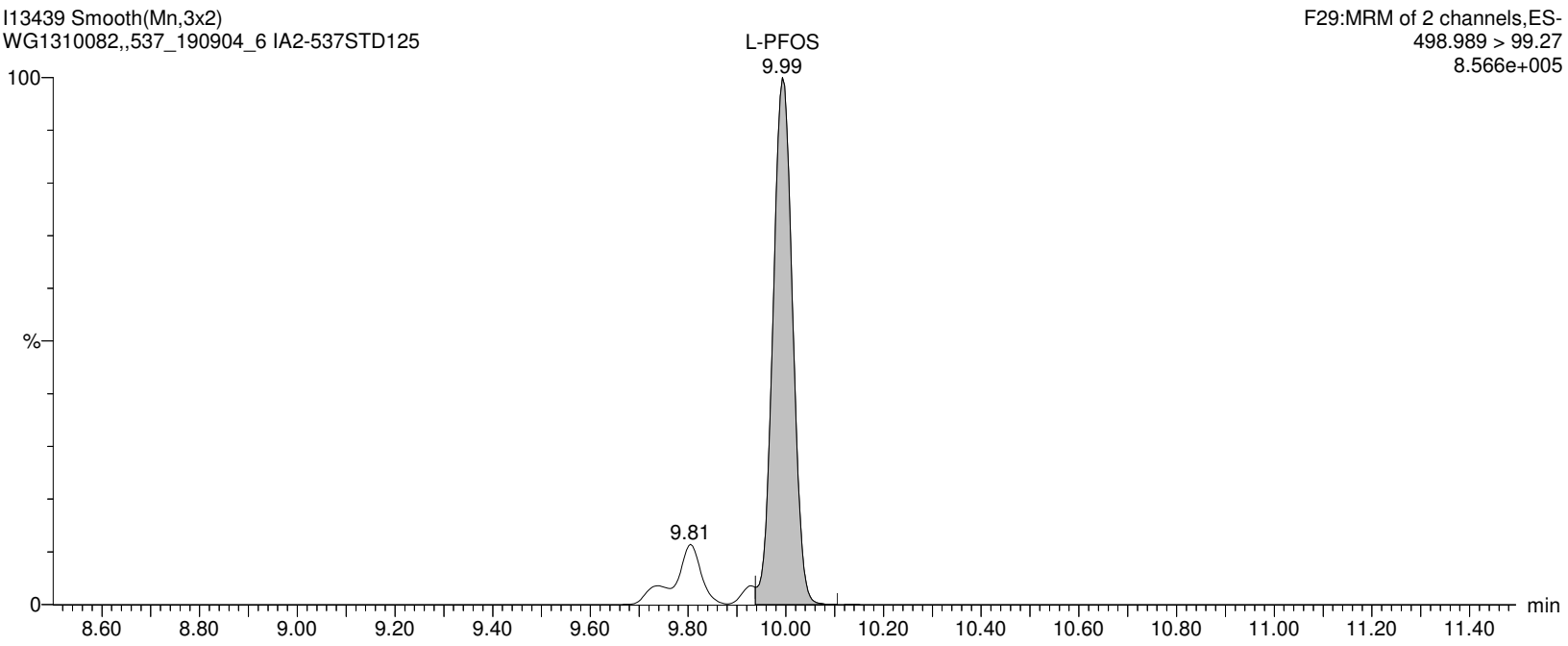
**L-PFOS**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
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**ID: IA2-537STD125**
**Date: 18-Nov-2019**
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**Vial: 1:A,7**
**Instrument: XEVO-TQSmicro#QEB0050**
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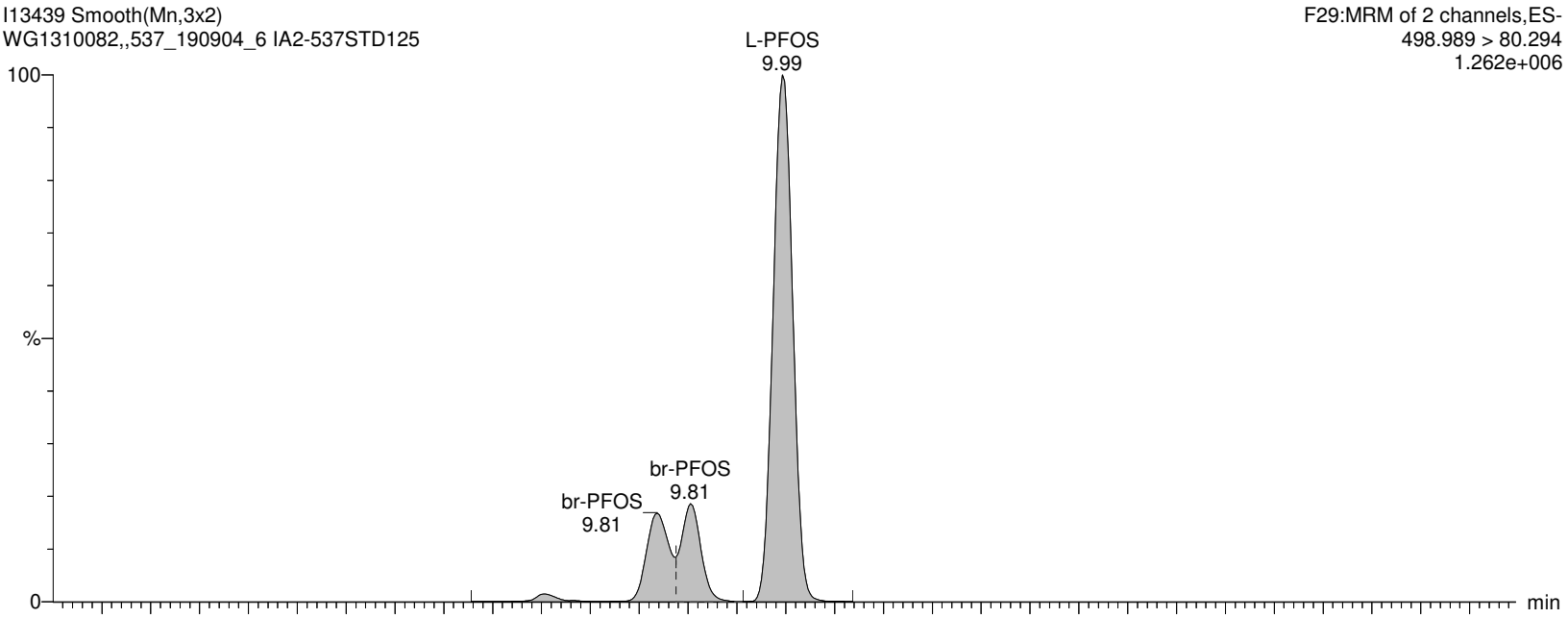
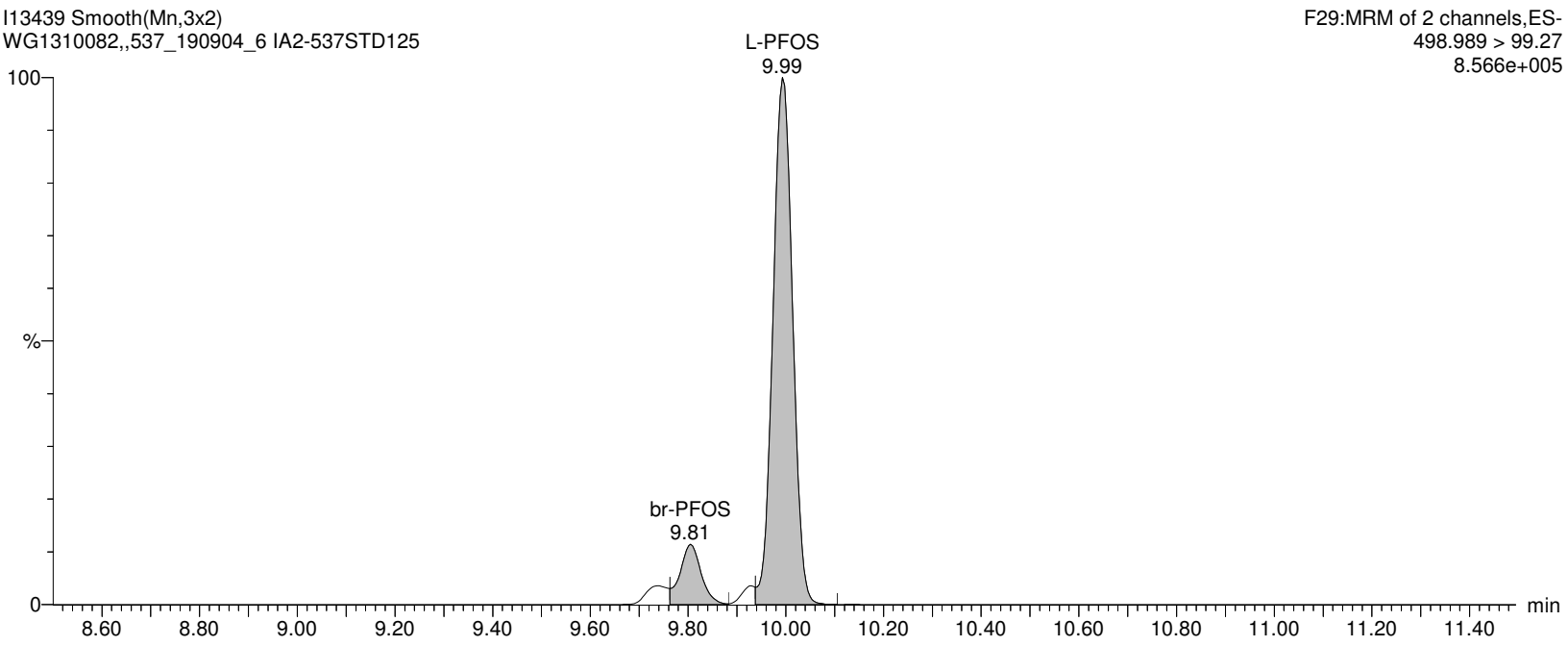
**MS Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**PFOS**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
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**Vial: 1:A,7**
**Instrument: XEVO-TQSmicro#QEB0050**
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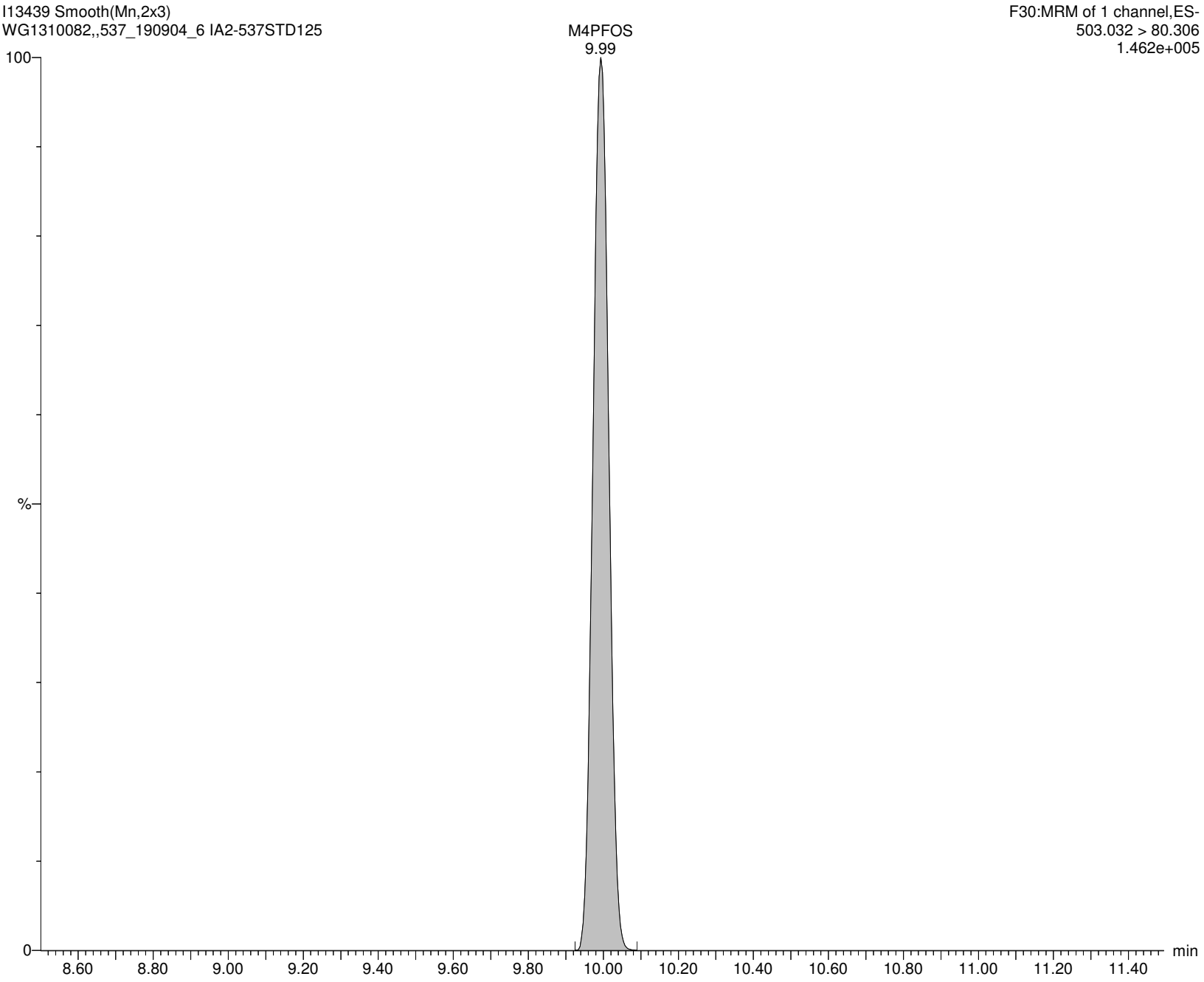



all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
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**User: LCMS02:JW**
**Vial: 1:A,7**
**Instrument: XEVO-TQSmicro#QEB0050**
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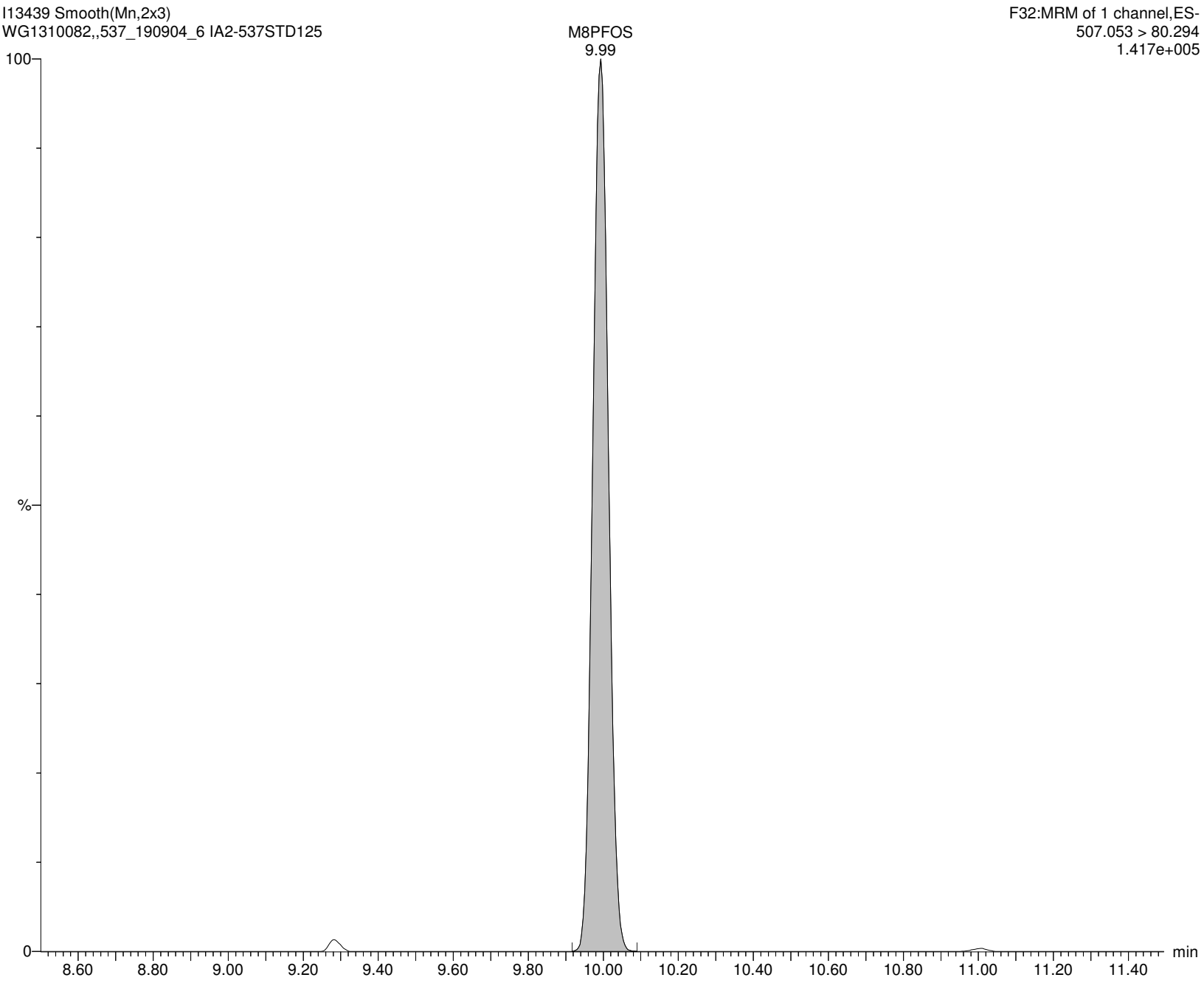



all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
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**Vial: 1:A,7**
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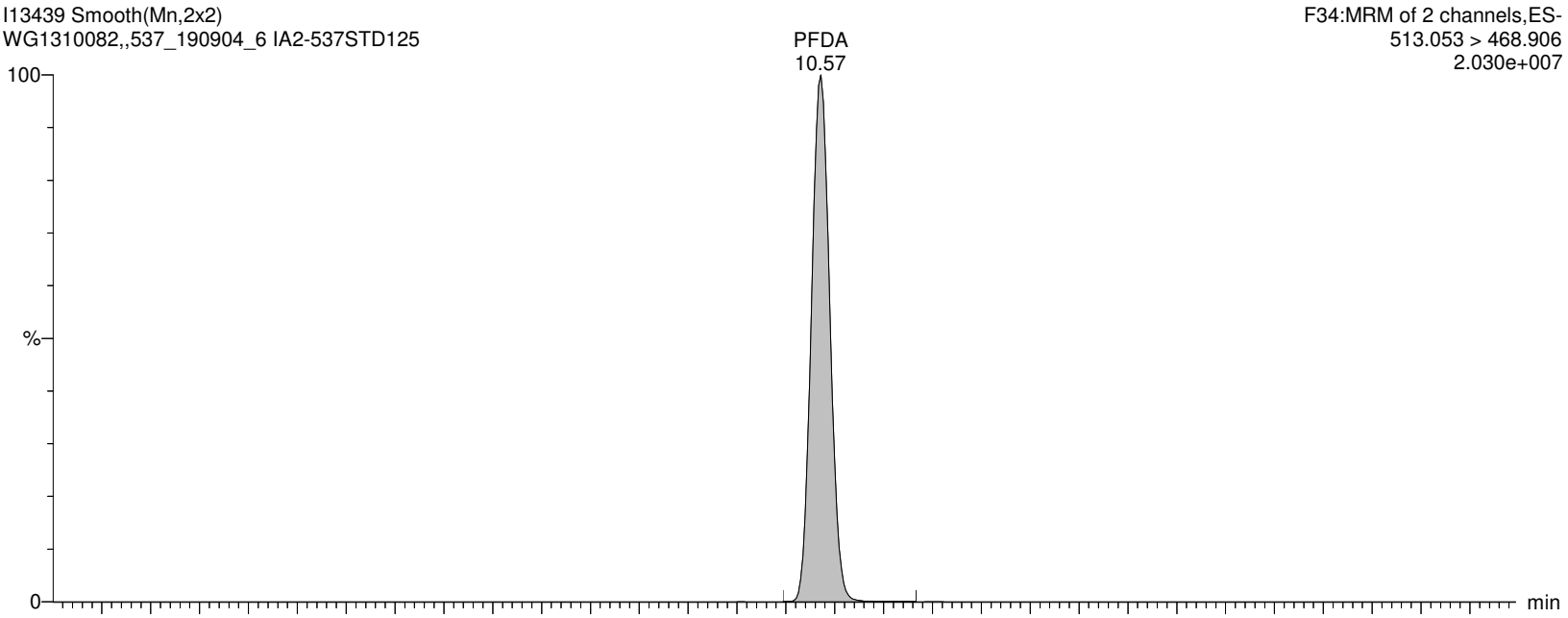
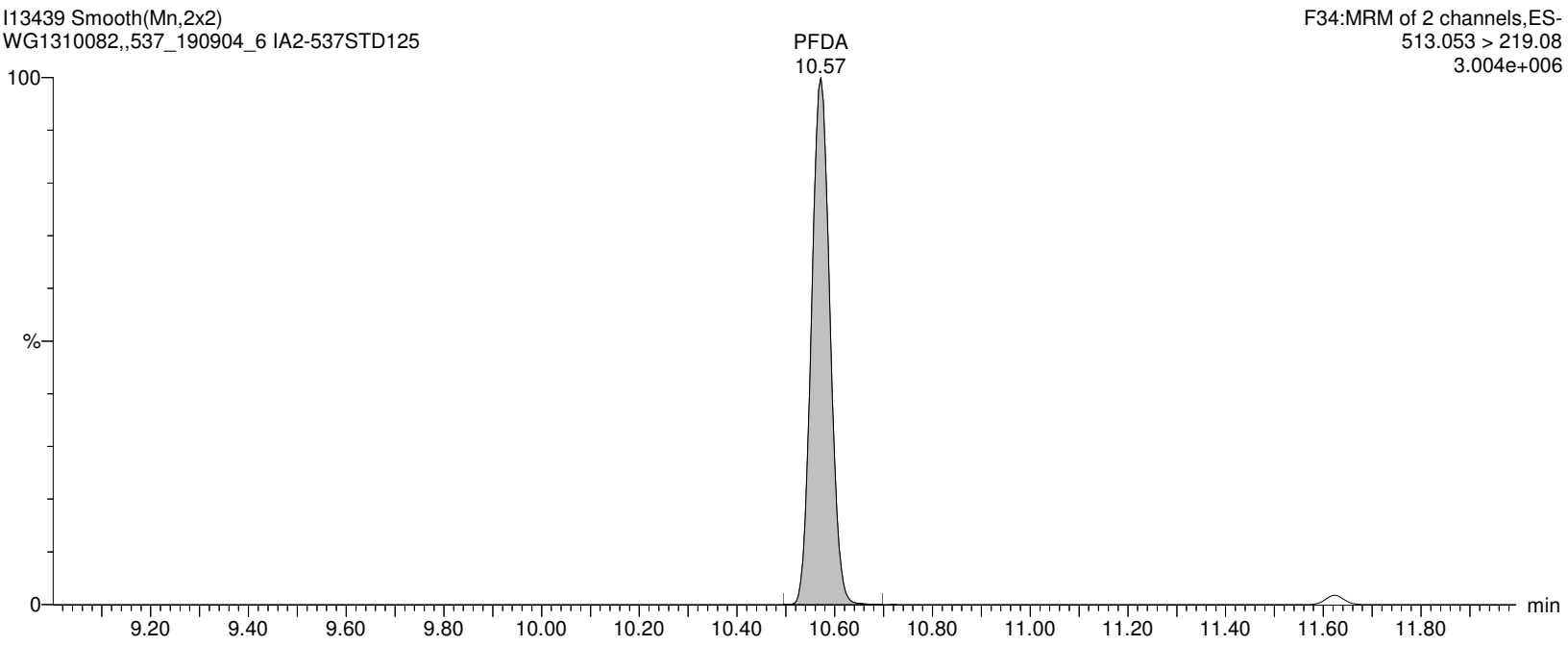
**PFDA**





all concentration units in (ng/mL)

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**Vial: 1:A,7**
**Instrument: XEVO-TQSmicro#QEB0050**
**Inlet Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\LCMS_537_ISO_B**
**Tune Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\181009_TUNE.IPR**
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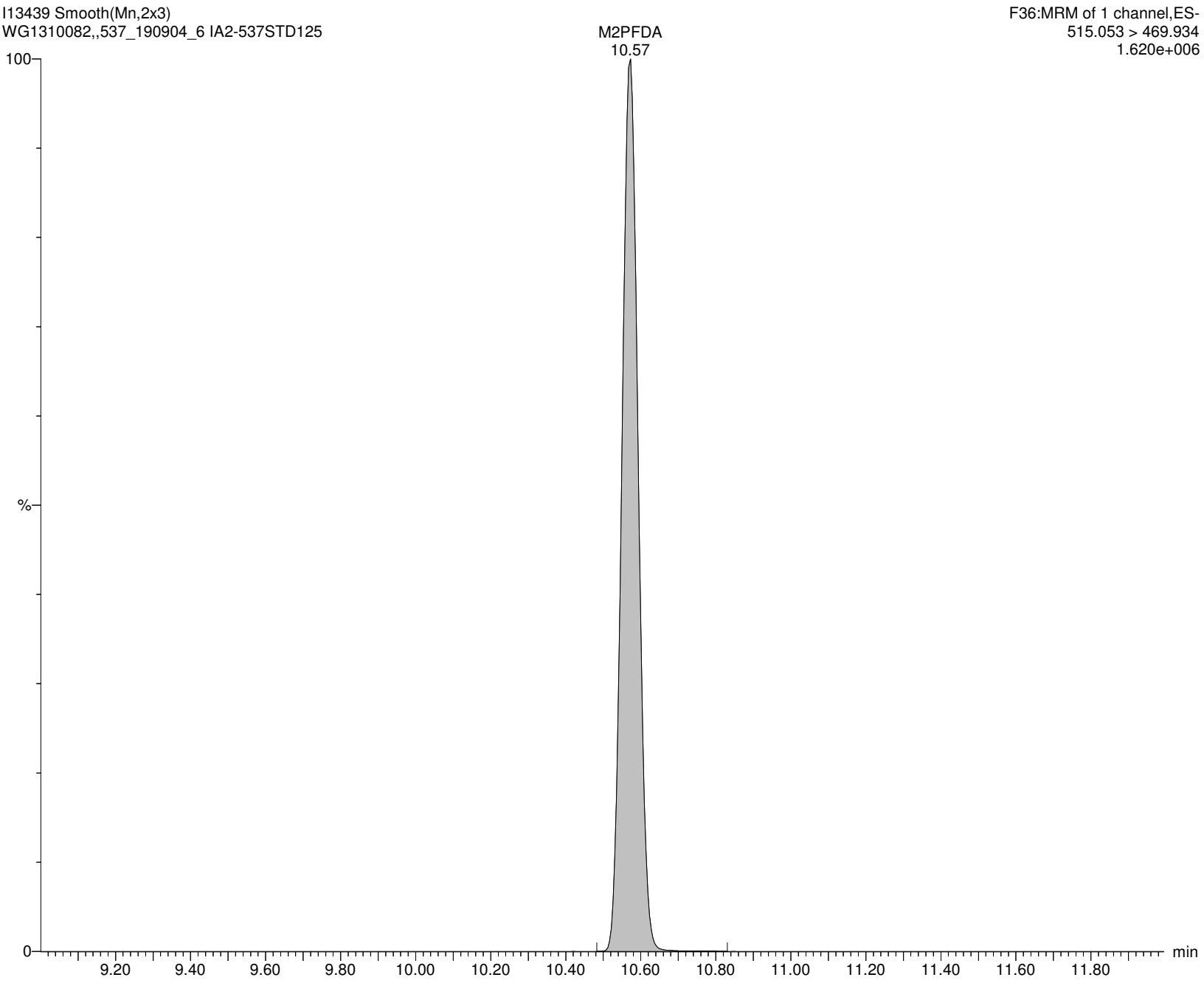
**M2PFDA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
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**Vial: 1:A,7**
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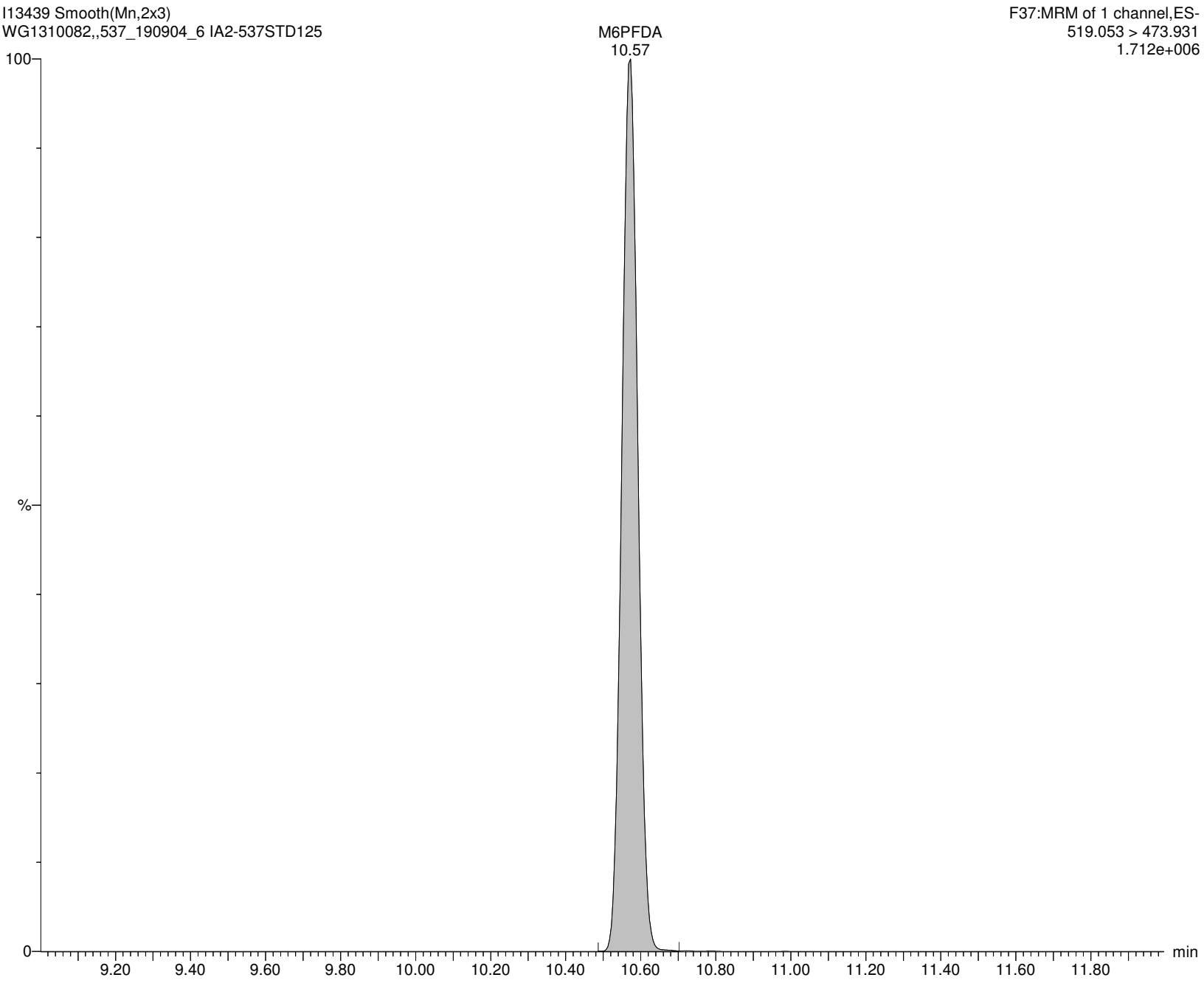
**M6PFDA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
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**Date: 18-Nov-2019**
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**User: LCMS02:JW**
**Vial: 1:A,7**
**Instrument: XEVO-TQSmicro#QEB0050**
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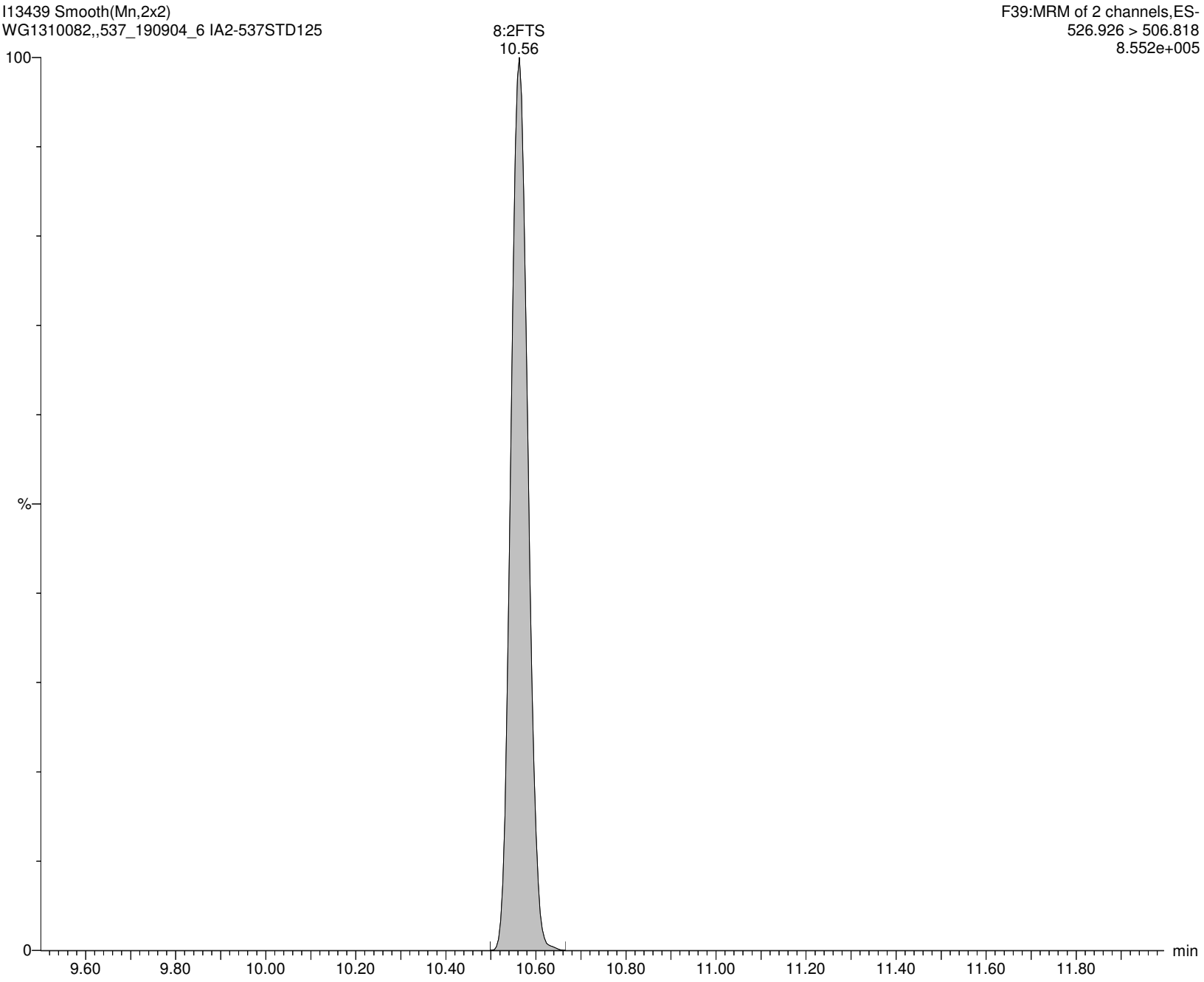
**8:2FTS**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
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**User: LCMS02:JW**
**Vial: 1:A,7**
**Instrument: XEVO-TQSmicro#QEB0050**
**Inlet Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\LCMS_537_ISO_B**
**Tune Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\181009_TUNE.IPR**
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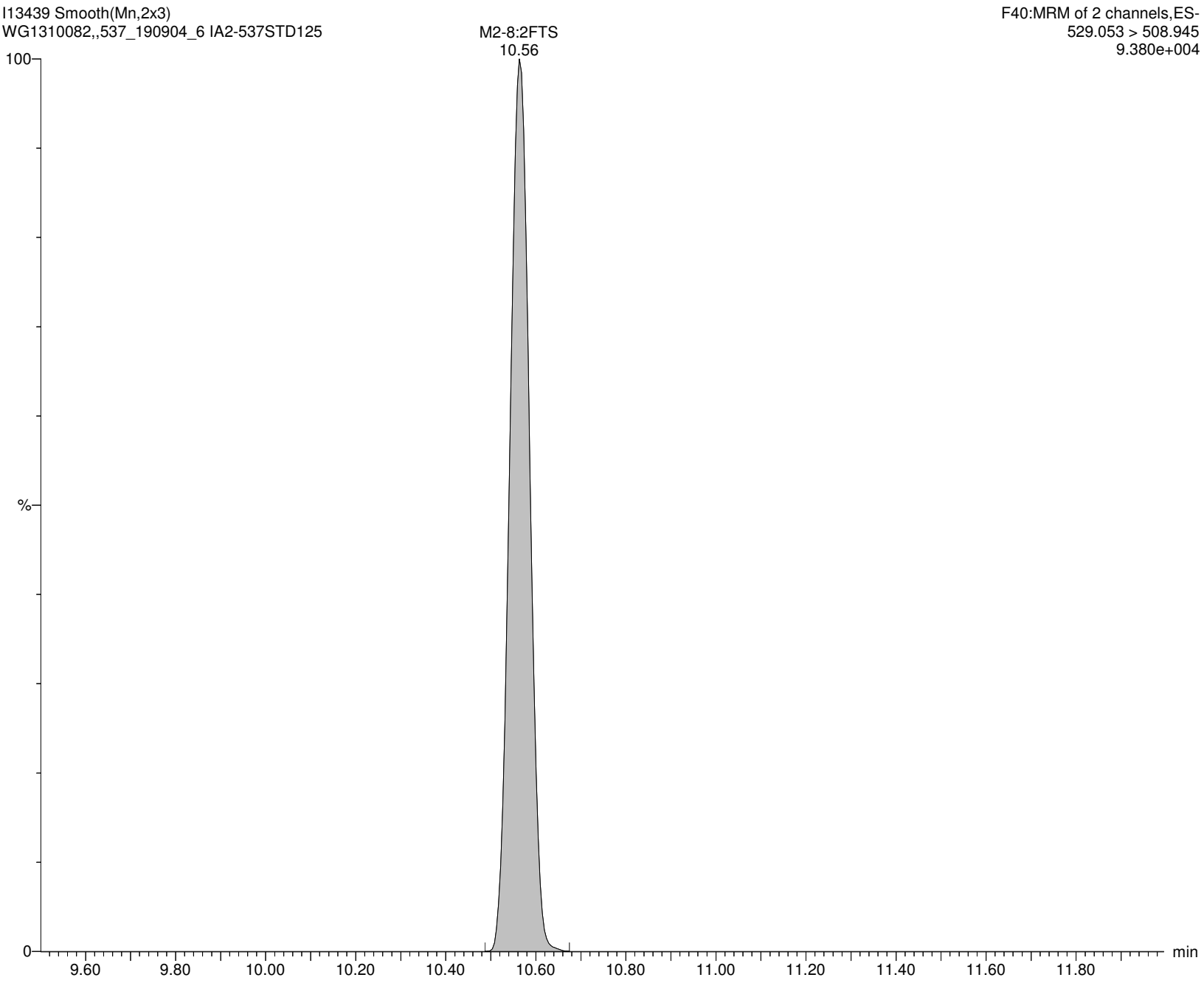
**M2-8:2FTS**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
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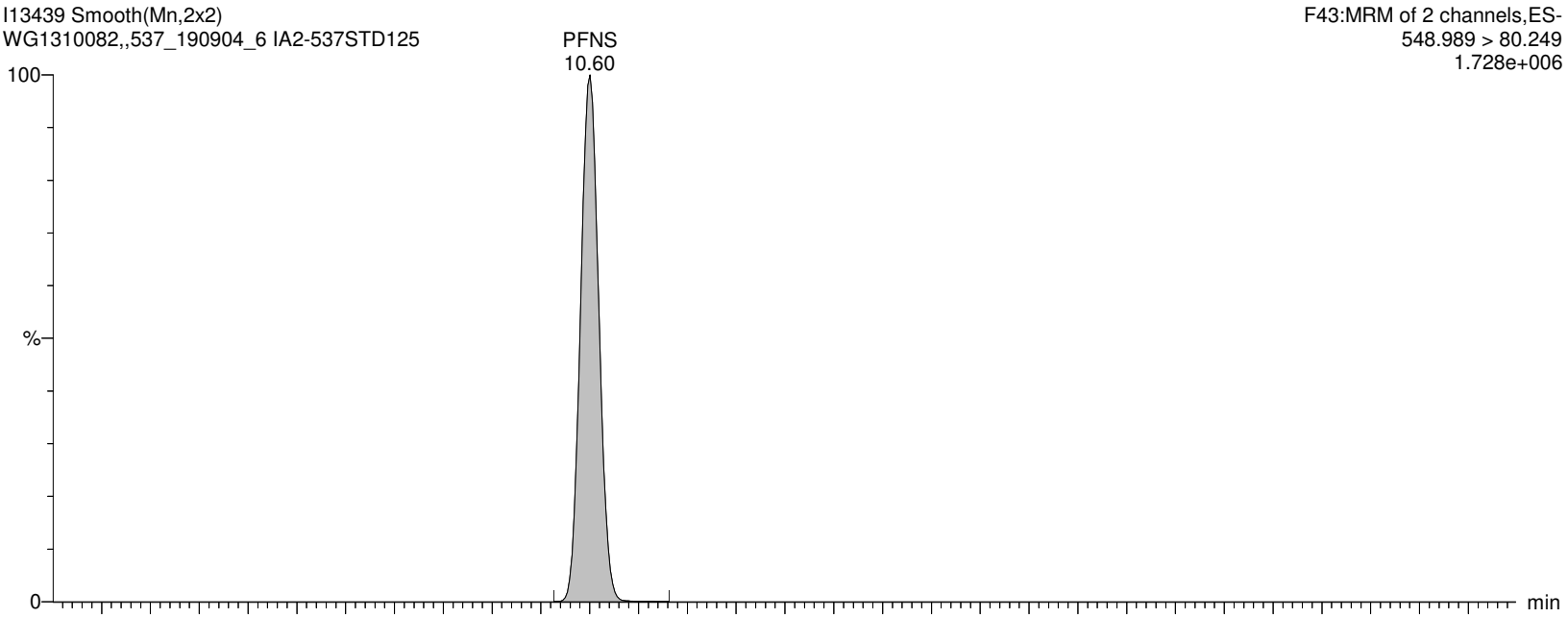


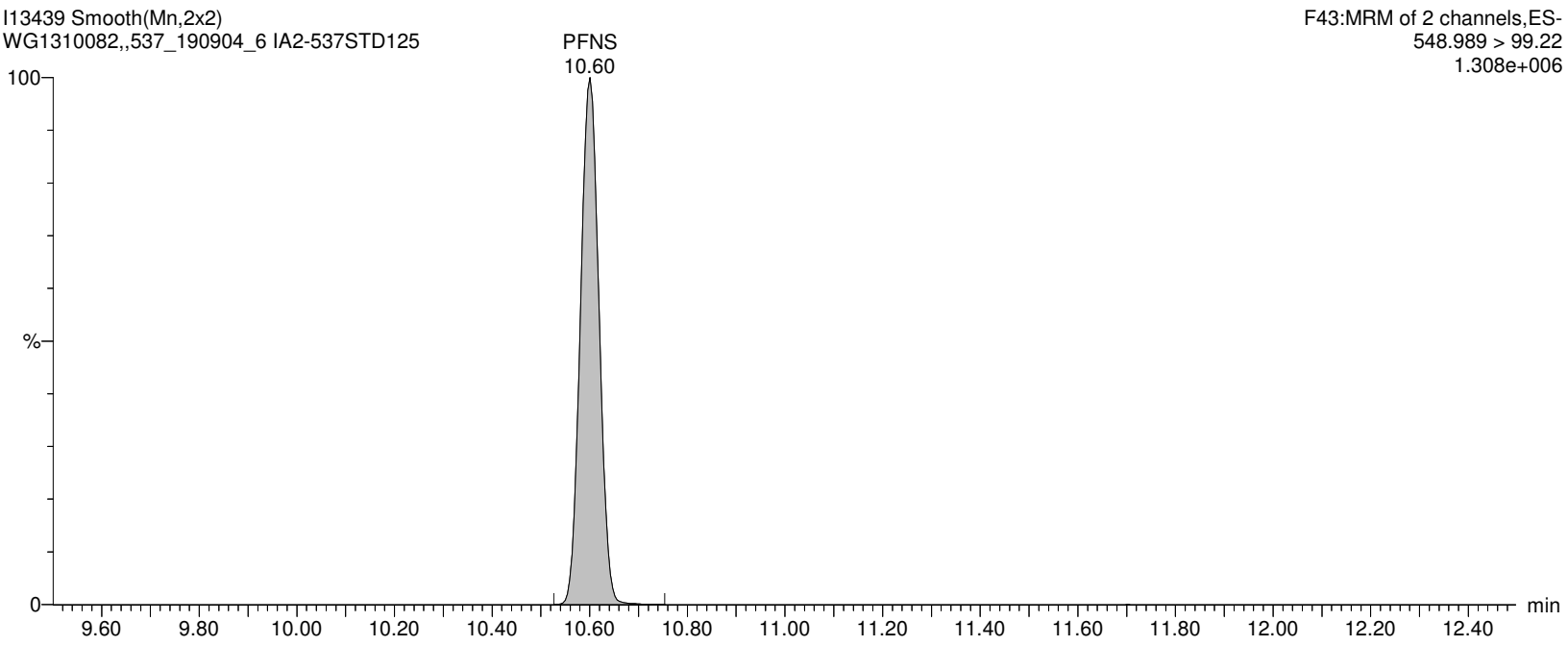



all concentration units in (ng/mL)

Alpha Analytical Inc.
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**Vial: 1:A,7**
**Instrument: XEVO-TQSmicro#QEB0050**
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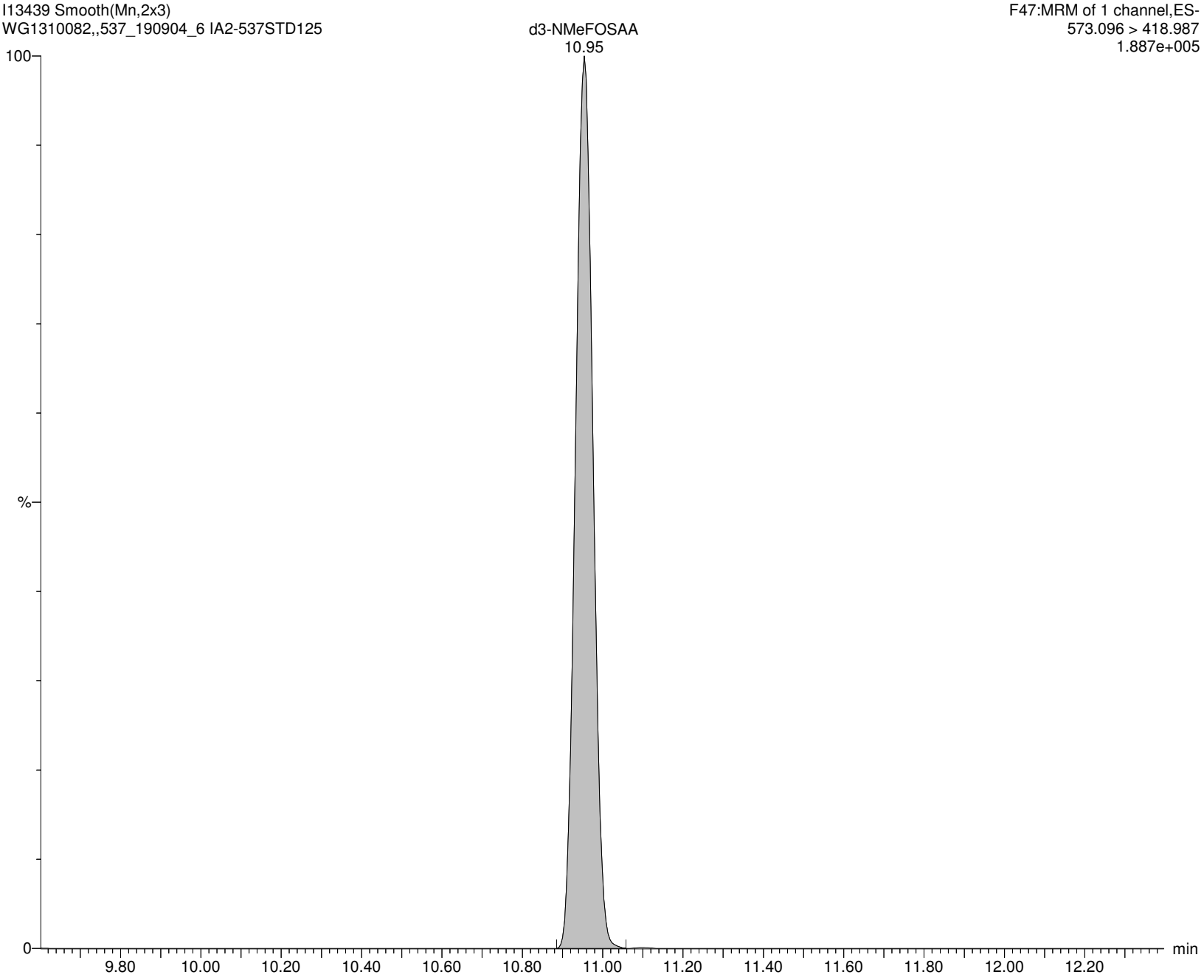



all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
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**Vial: 1:A,7**
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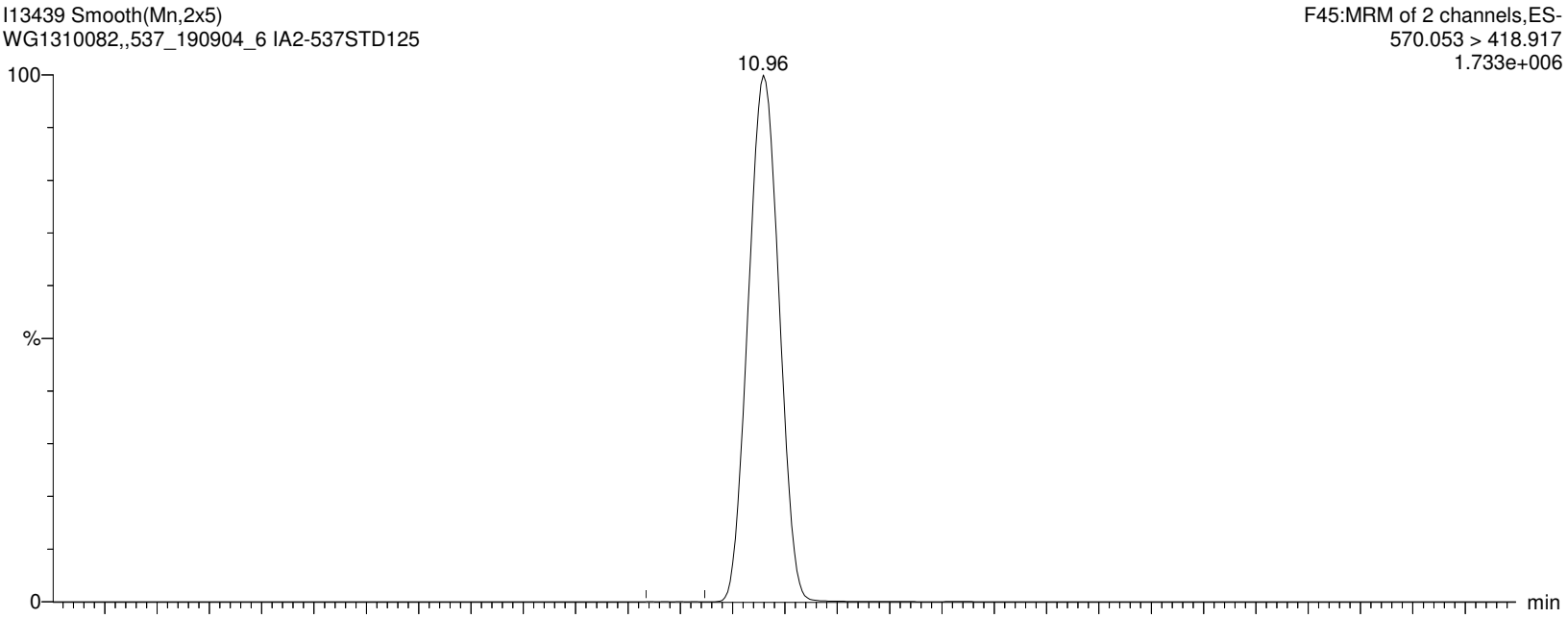
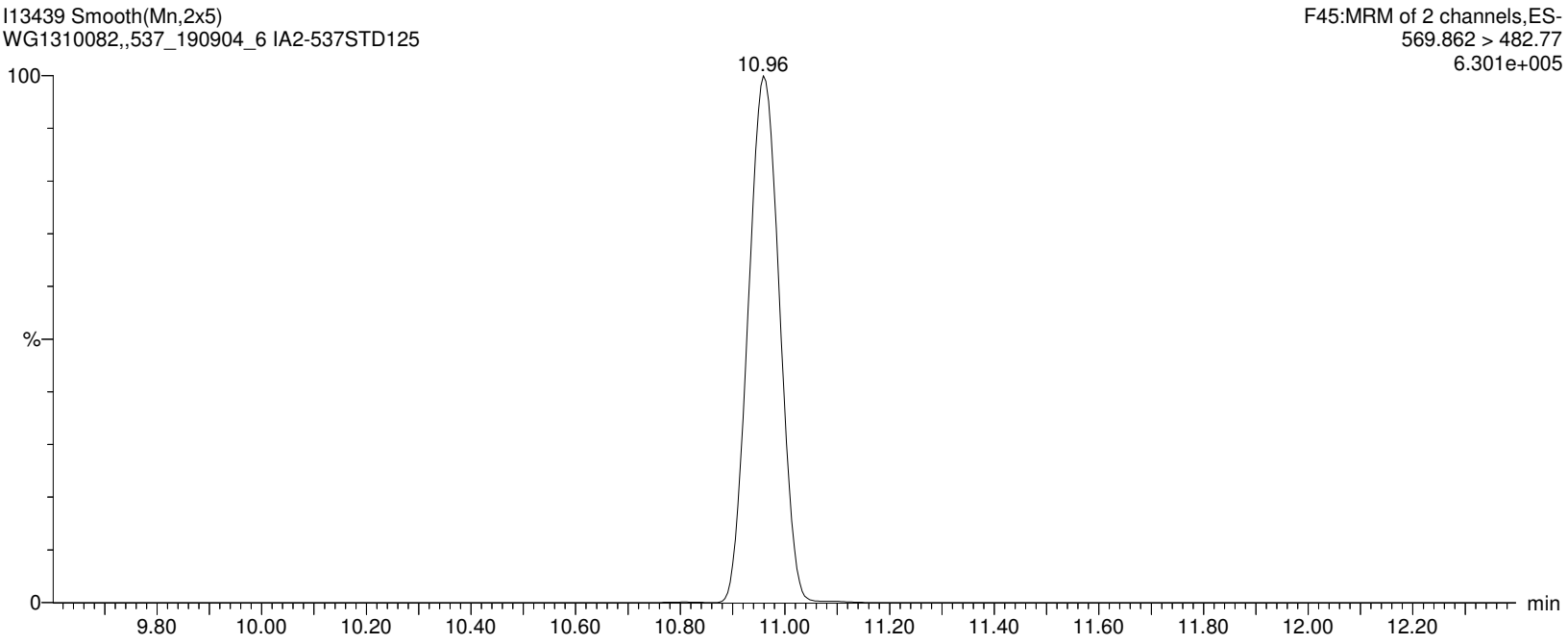
**br-NMeFOSAA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
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**Vial: 1:A,7**
**Instrument: XEVO-TQSmicro#QEB0050**
**Inlet Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\LCMS_537_ISO_B**
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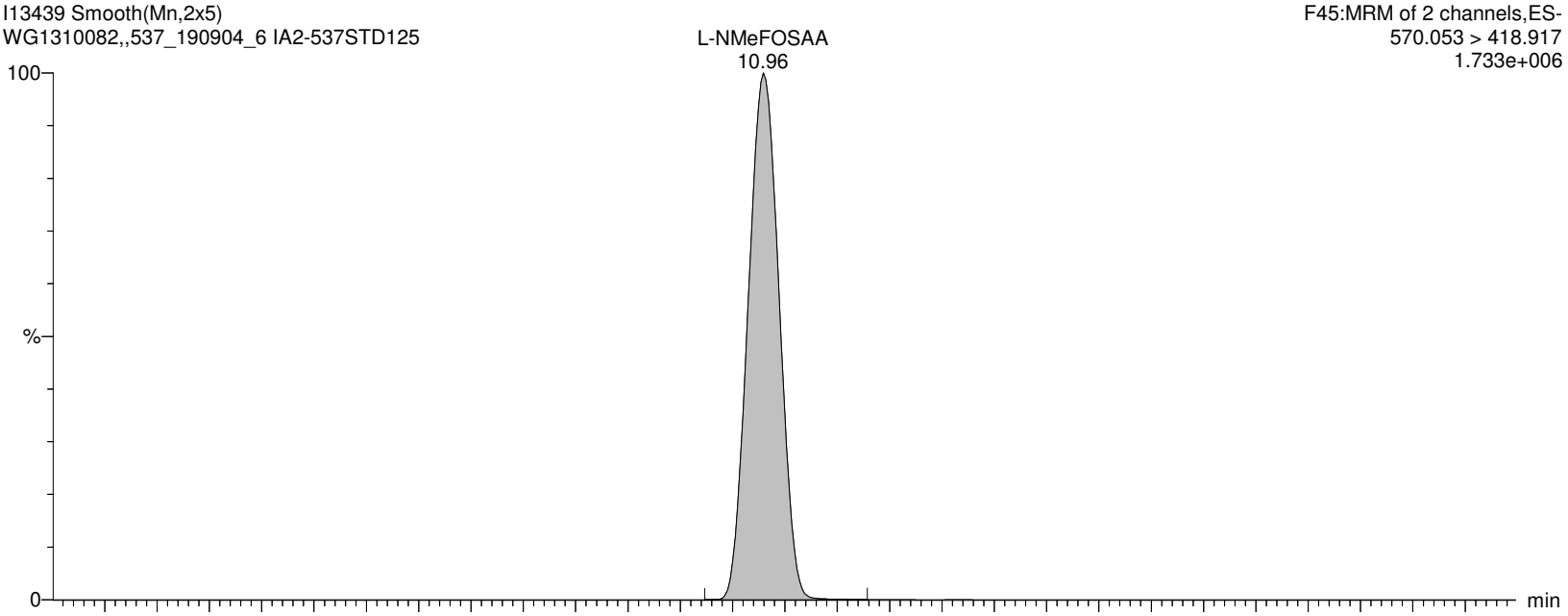
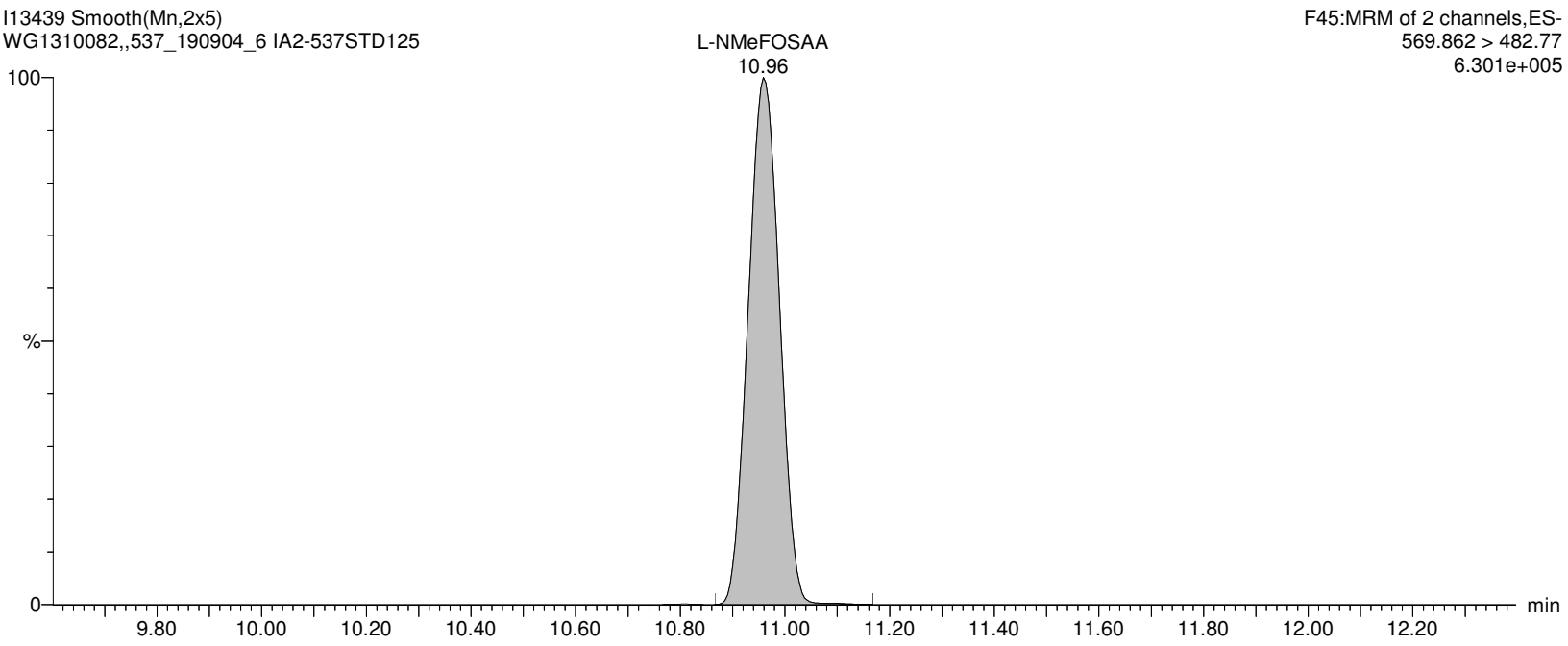
**L-NMeFOSAA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
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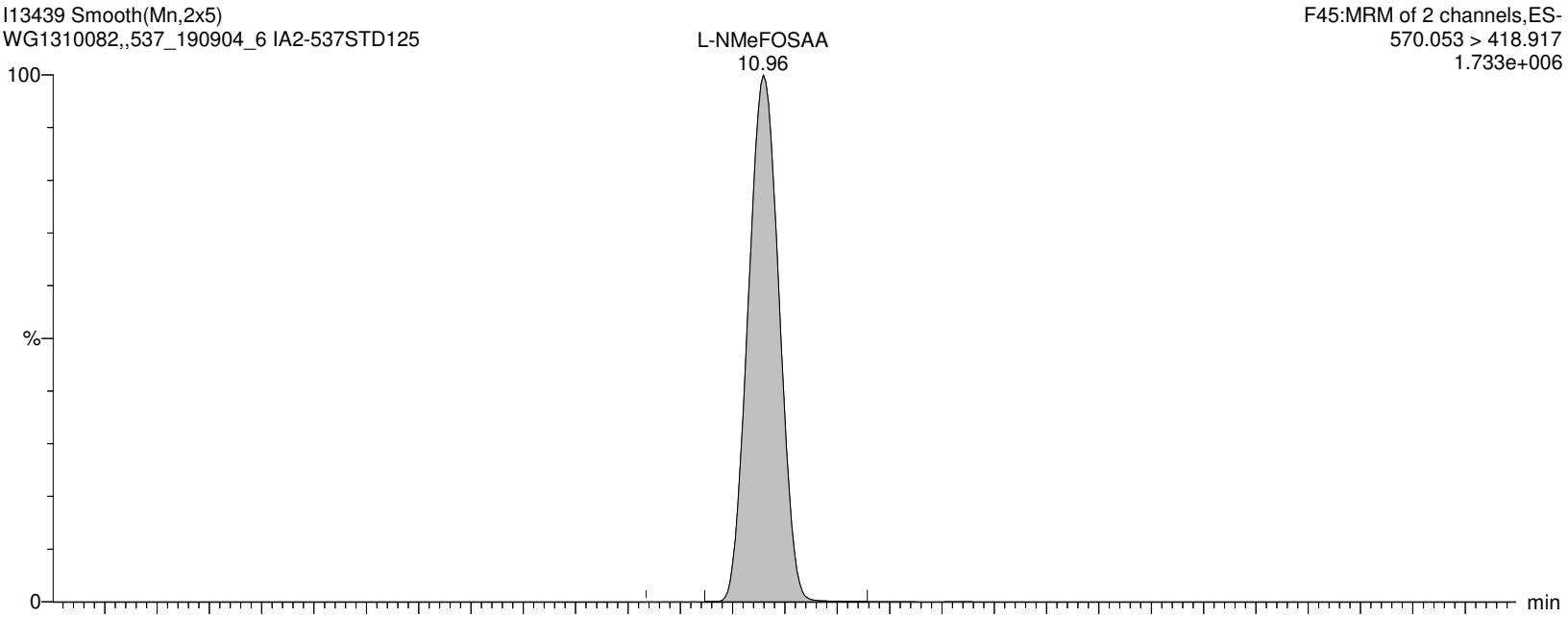
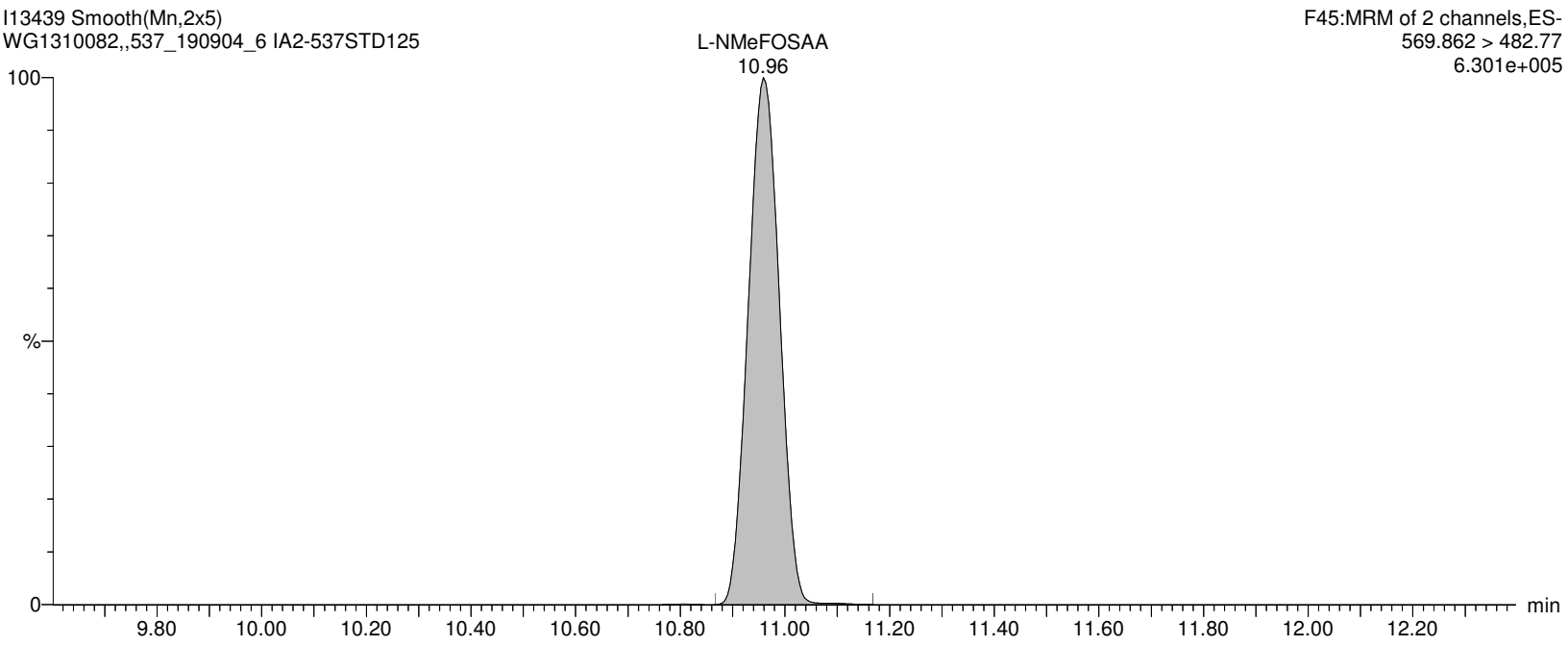
**NMeFOSAA**





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**Vial: 1:A,7**
**Instrument: XEVO-TQSmicro#QEB0050**
**Inlet Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\LCMS_537_ISO_B**
**Tune Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\181009_TUNE.IPR**
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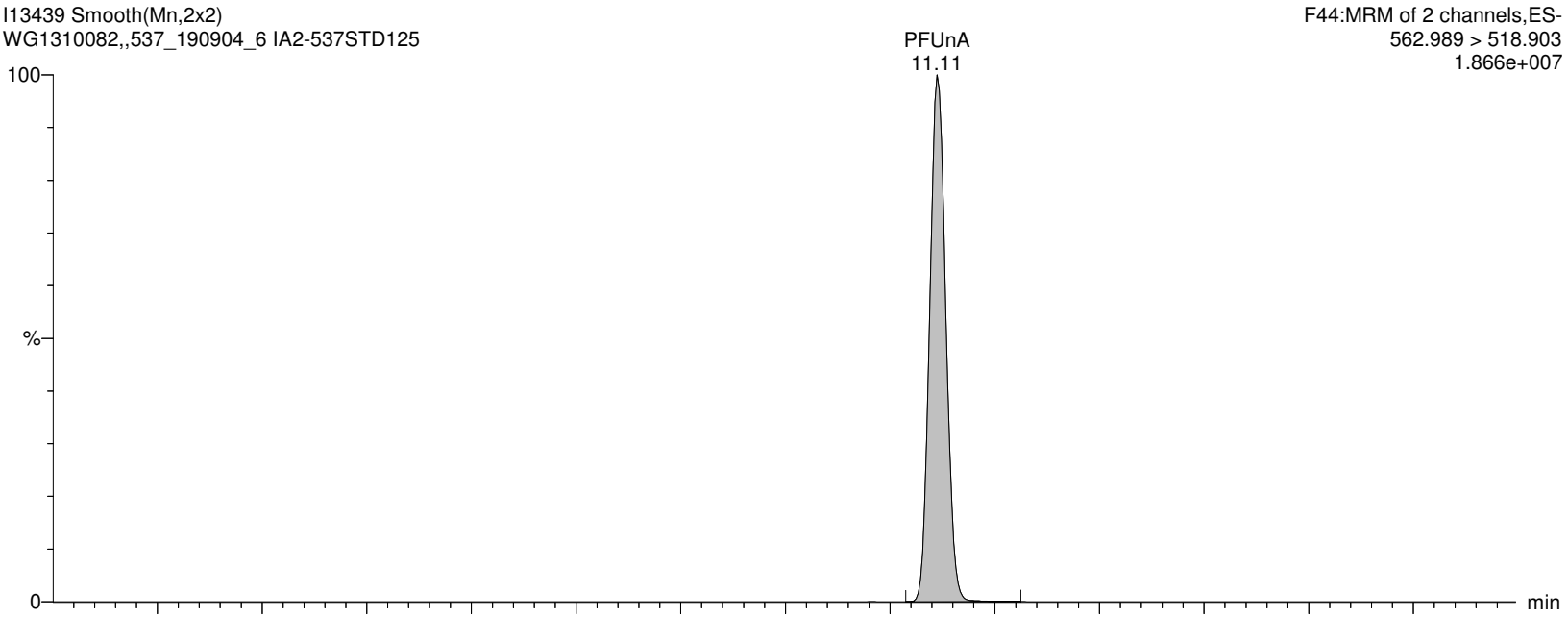


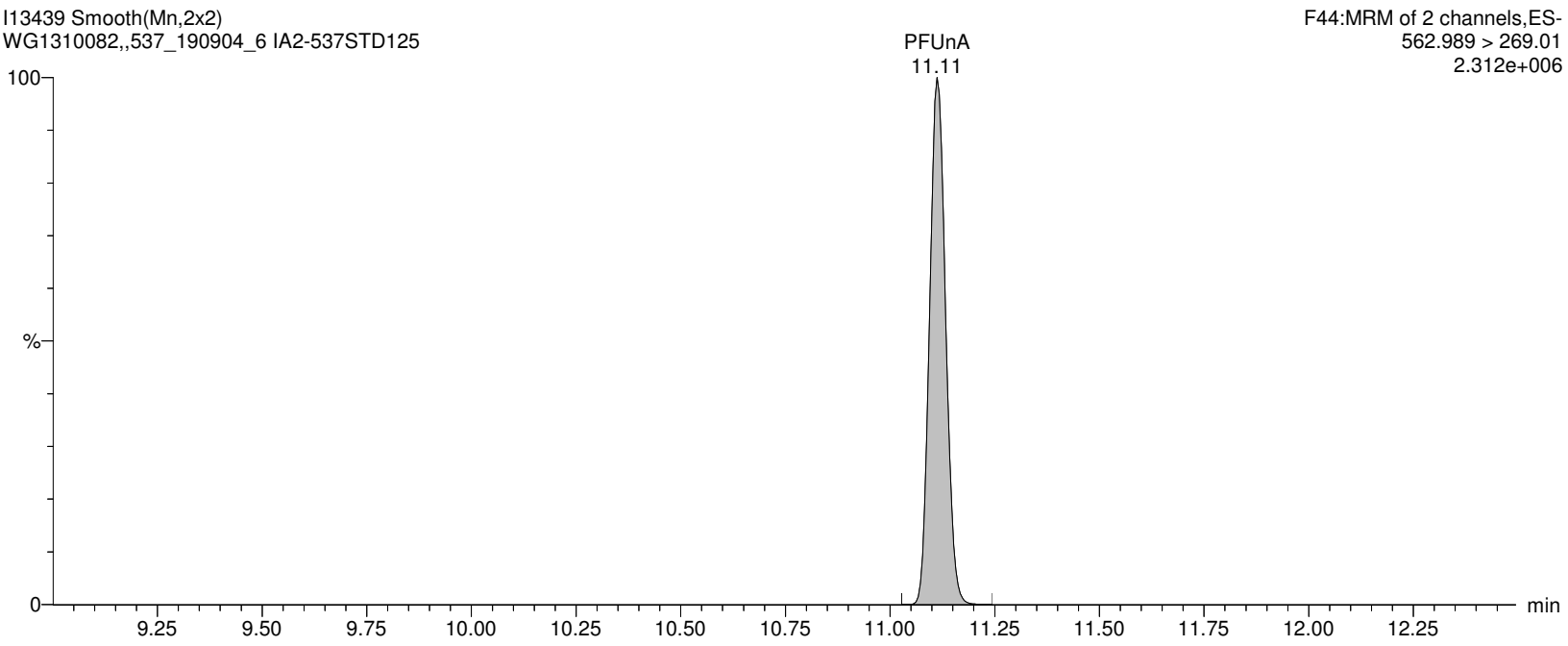



all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
Printed: Monday, November 18, 2019 13:42:59 Eastern Standard Time

**Name: I13439**
**ID: IA2-537STD125**
**Date: 18-Nov-2019**
**Time: 12:00:10**
**Description: WG1310082,,537_190904_6**
**User: LCMS02:JW**
**Vial: 1:A,7**
**Instrument: XEVO-TQSmicro#QEB0050**
**Inlet Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\LCMS_537_ISO_B**
**Tune Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\181009_TUNE.IPR**
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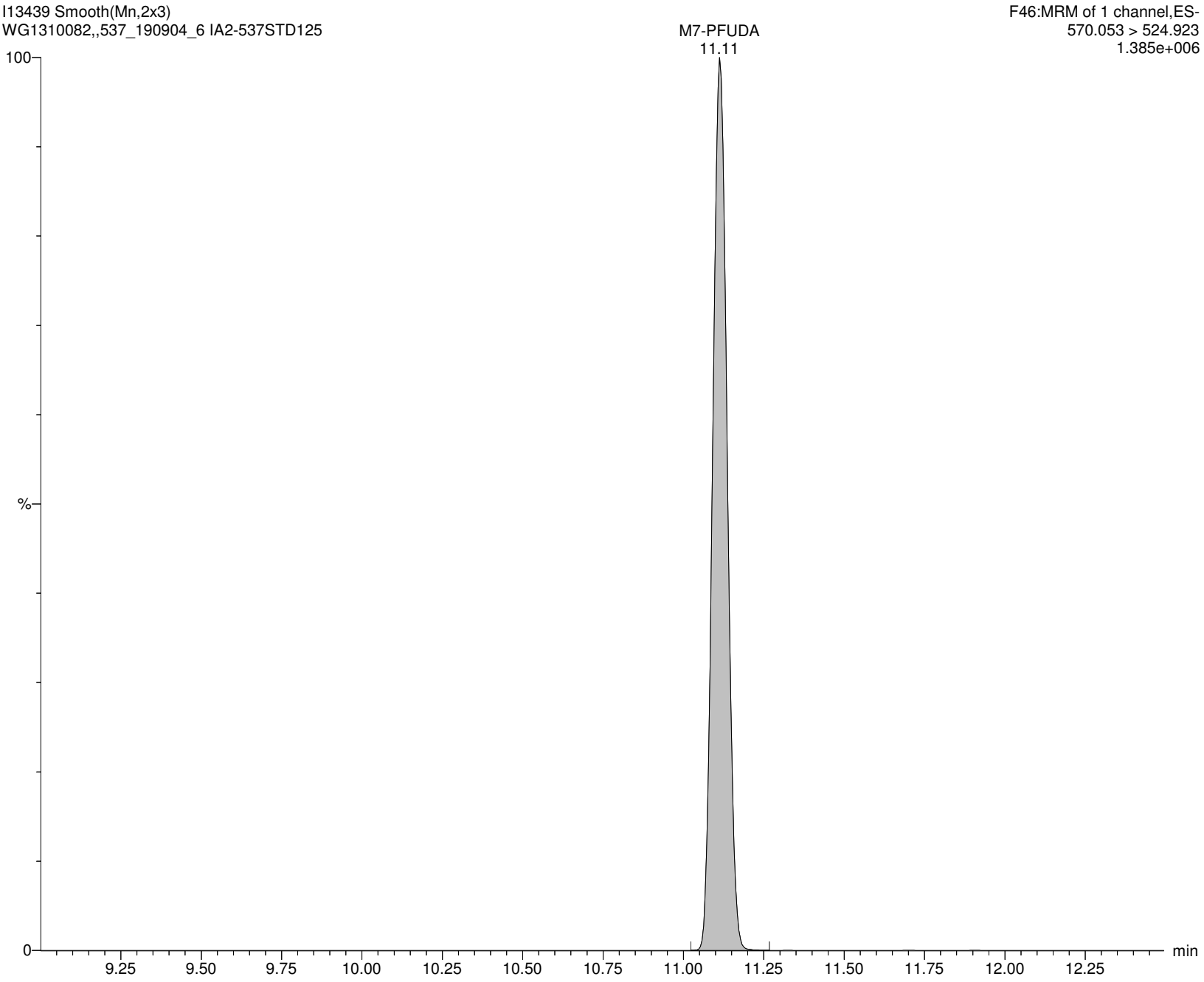
**M7-PFUDA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
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Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
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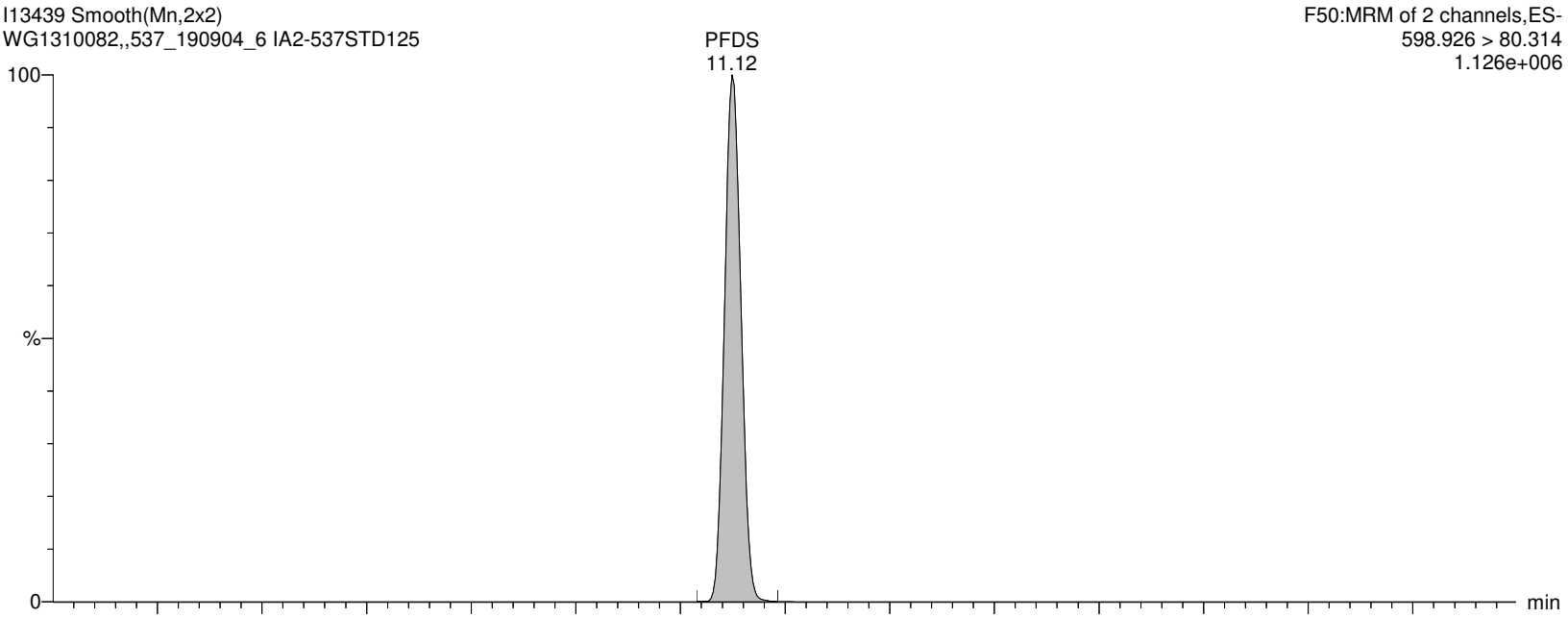


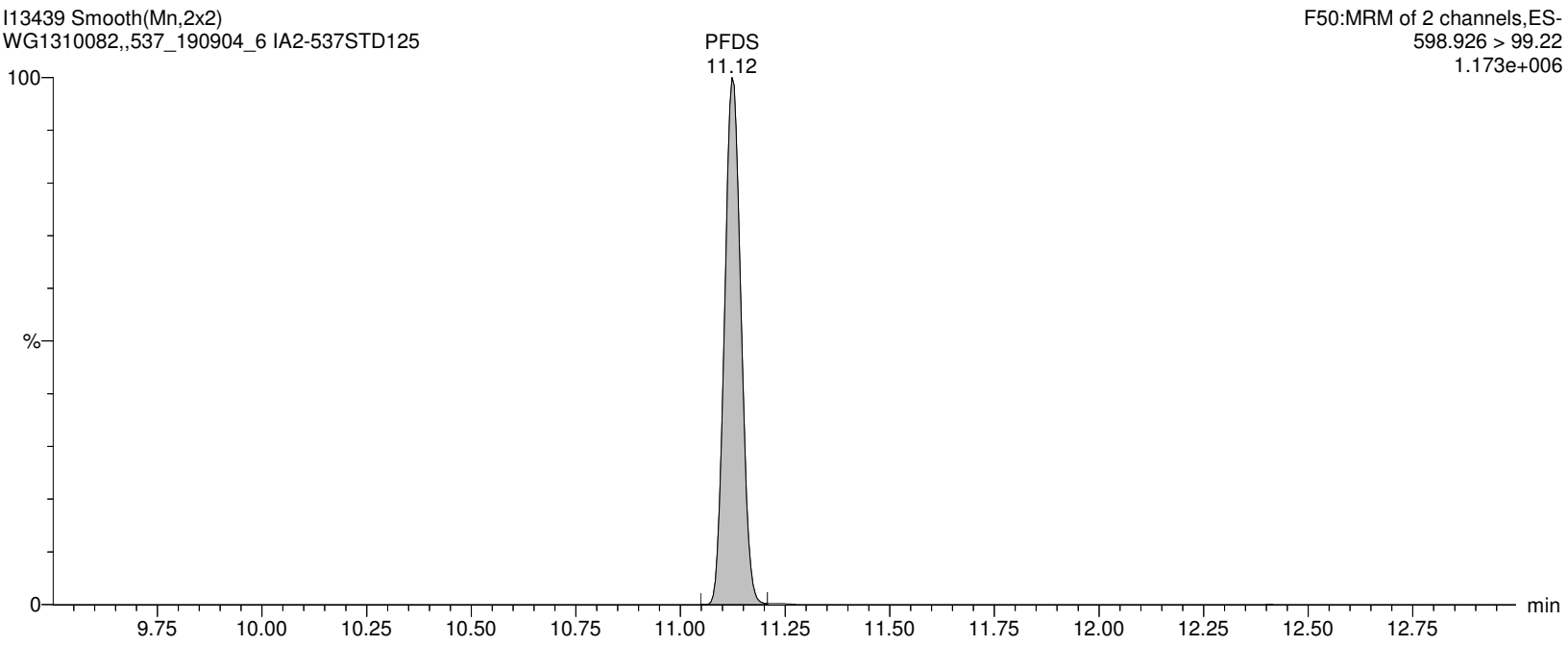



all concentration units in (ng/mL)

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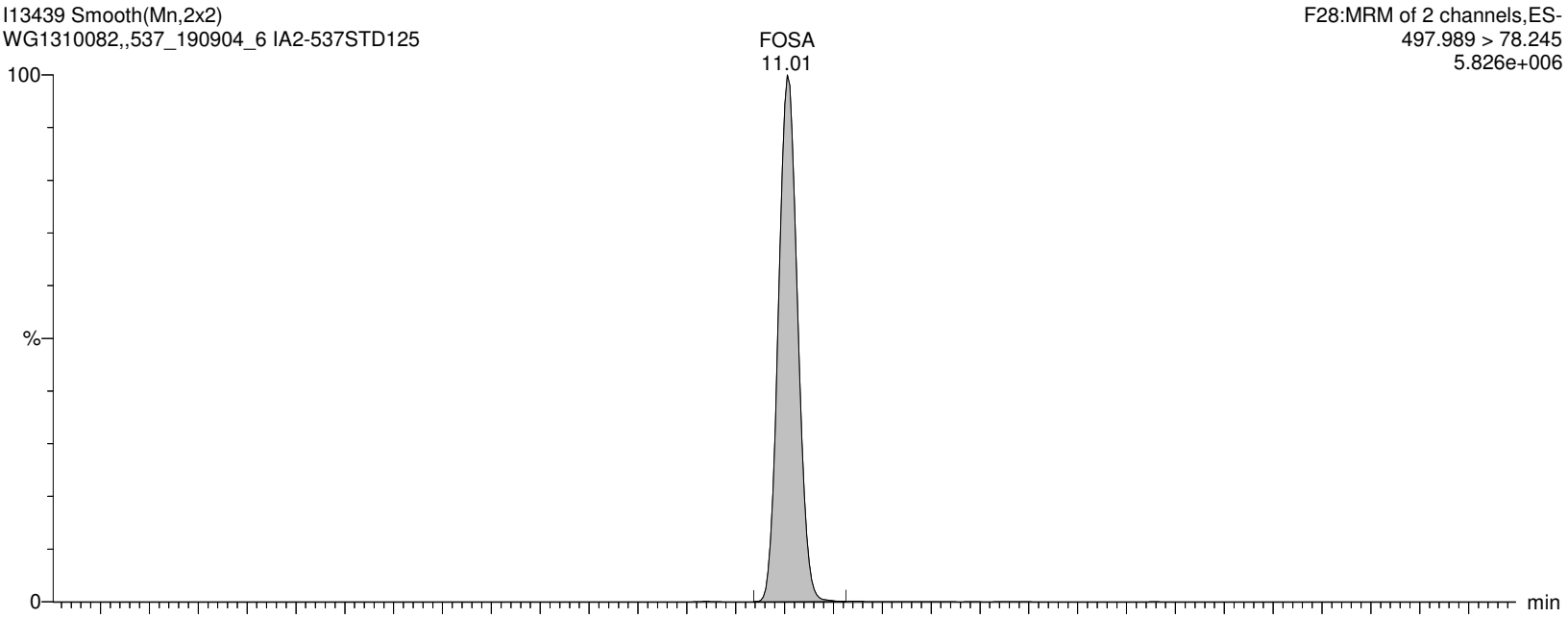
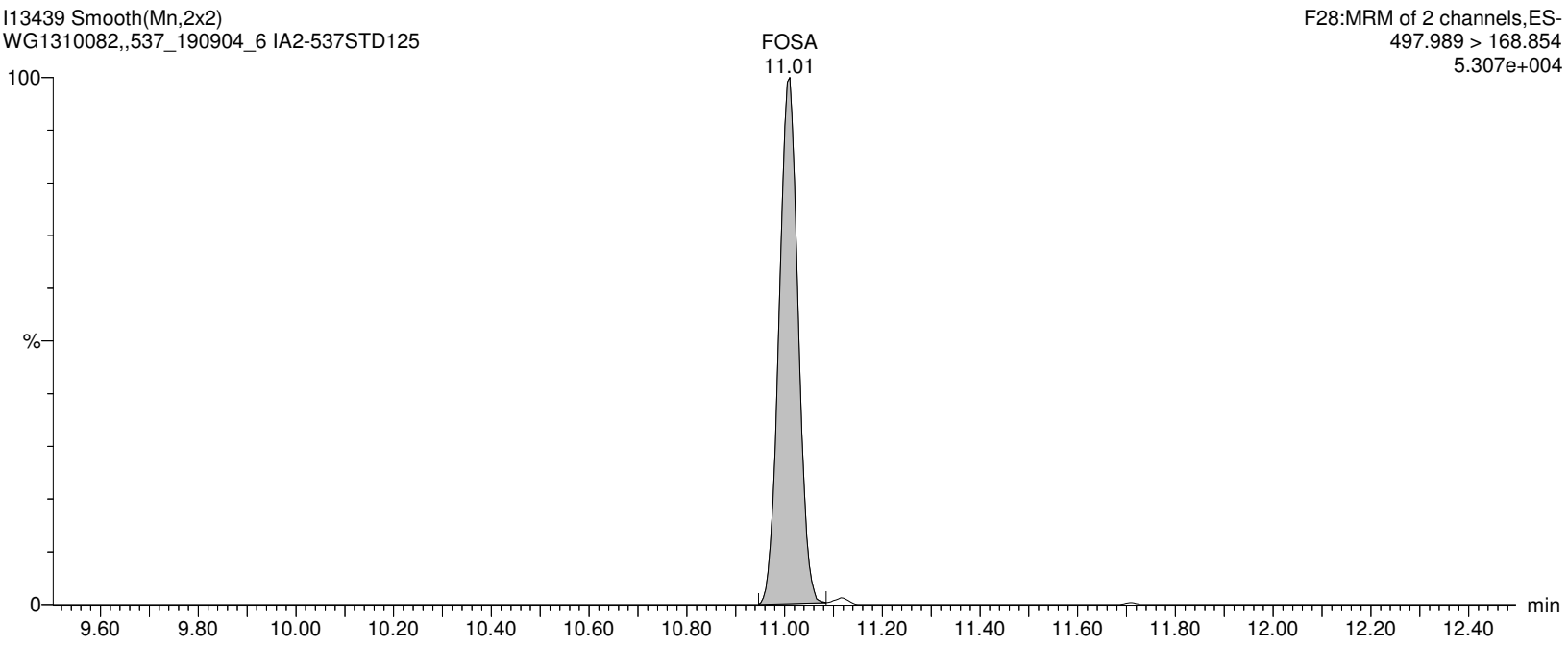
**FOSA**





all concentration units in (ng/mL)

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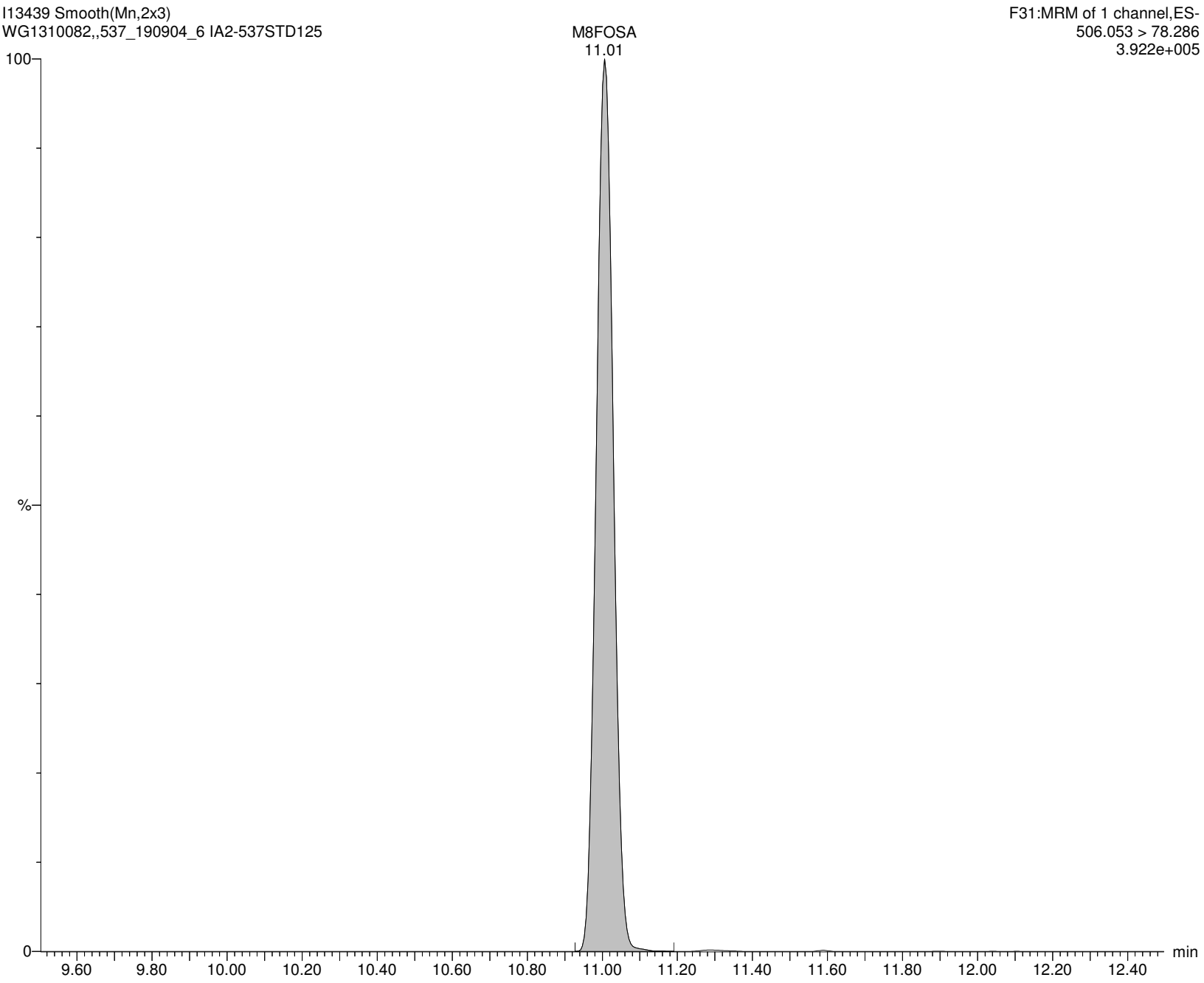
**M8FOSA**





all concentration units in (ng/mL)

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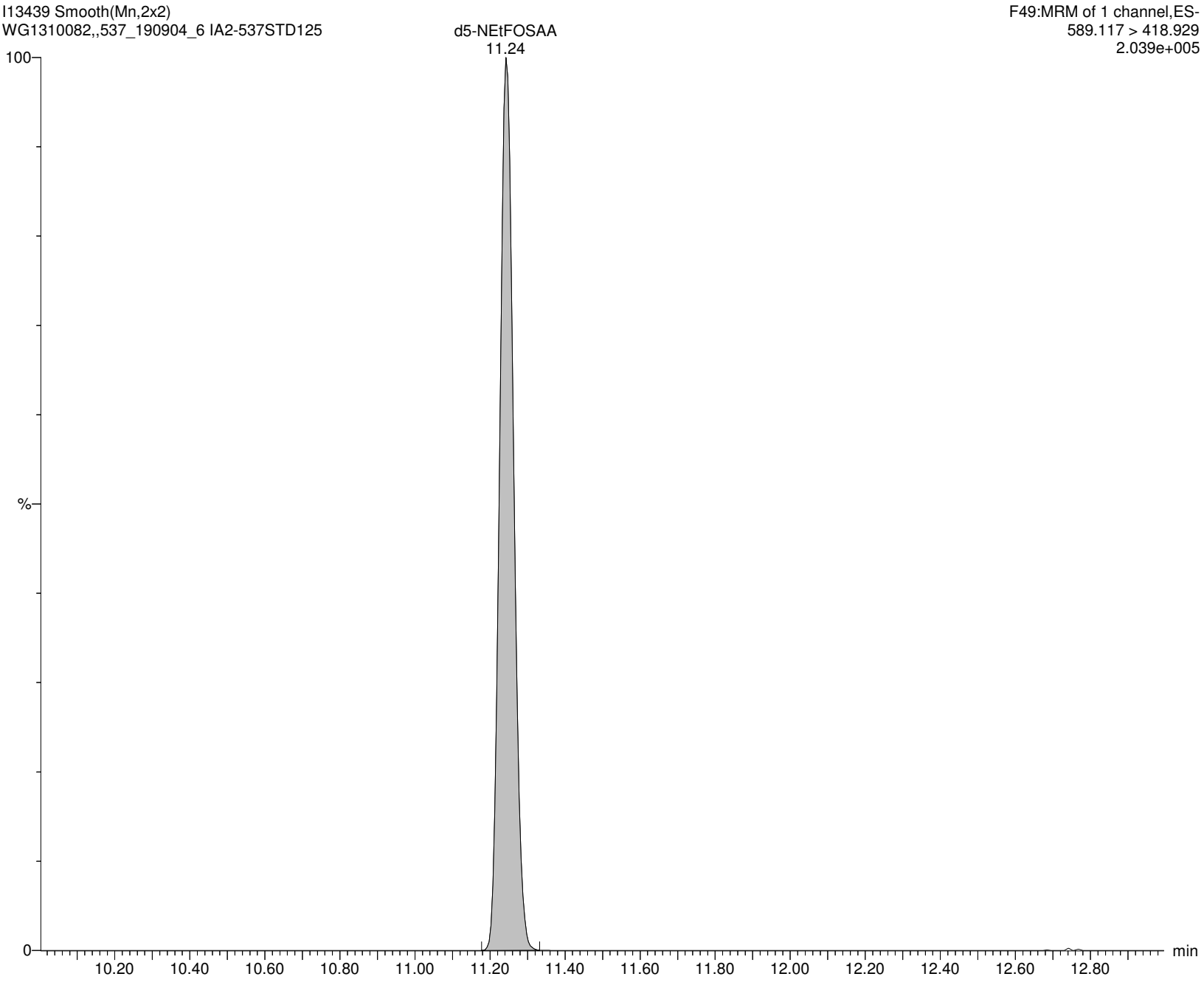



all concentration units in (ng/mL)

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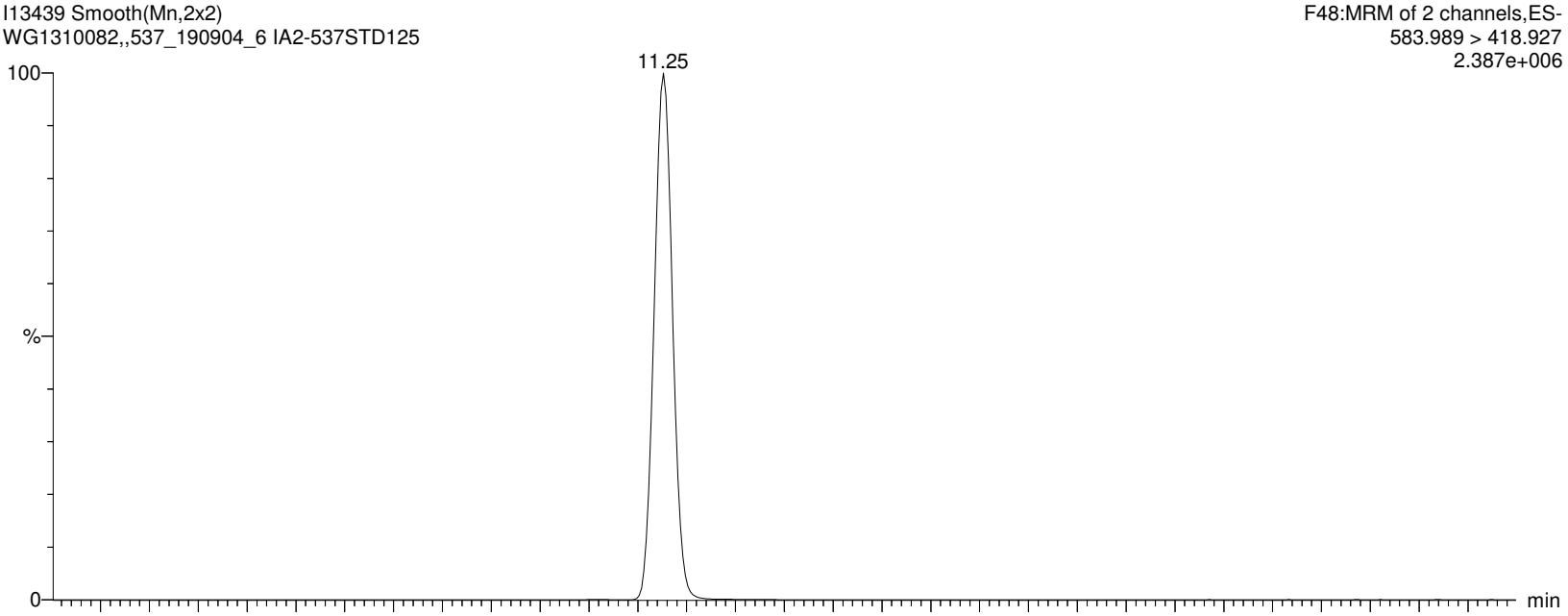
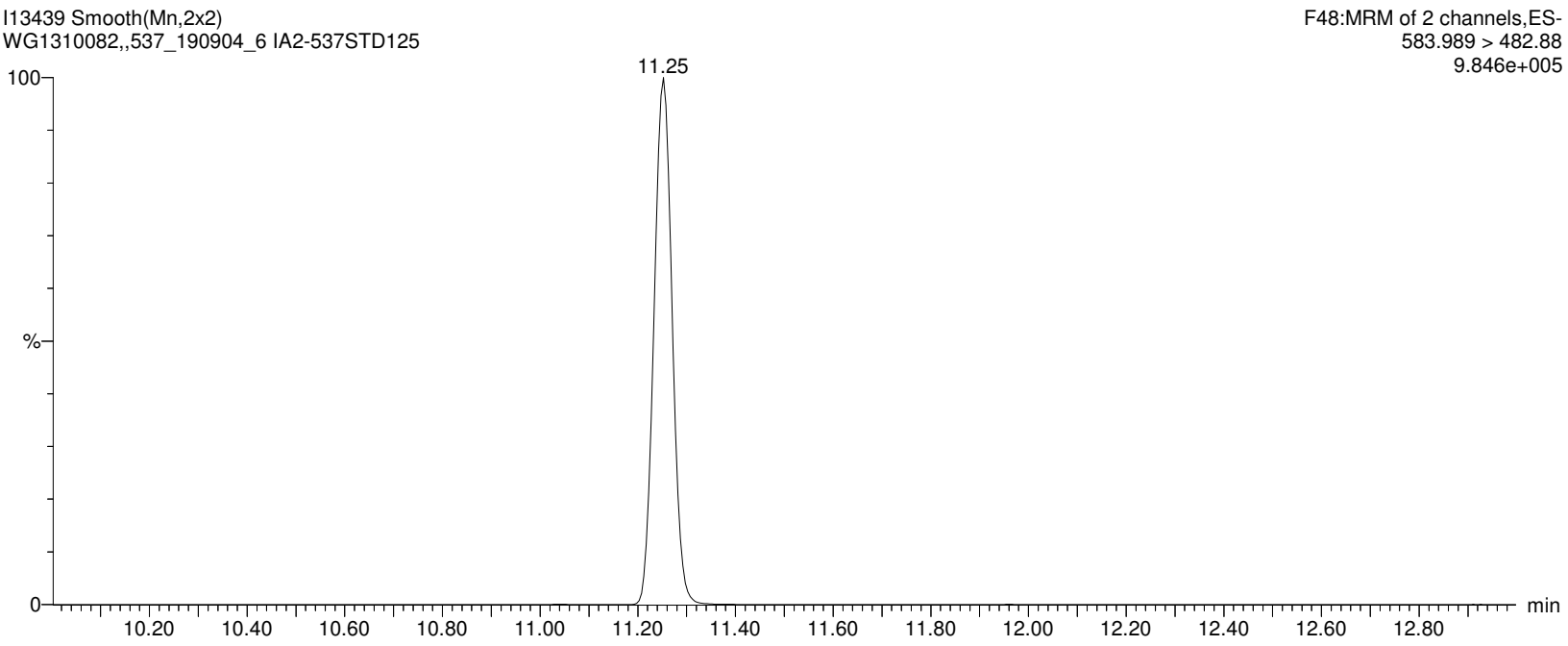
**br-NEtFOSAA**





all concentration units in (ng/mL)

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**Vial: 1:A,7**
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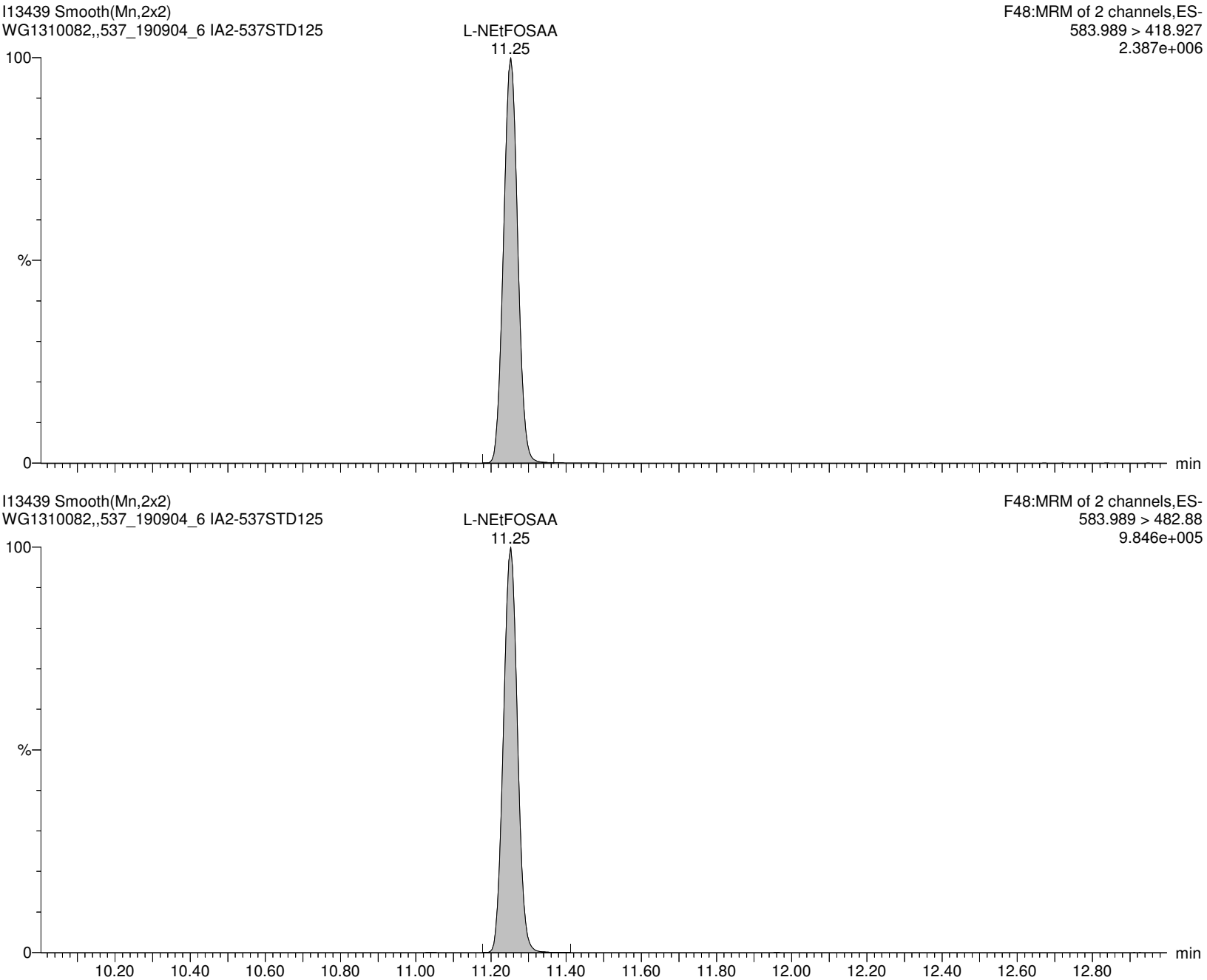
**L-NEtFOSAA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
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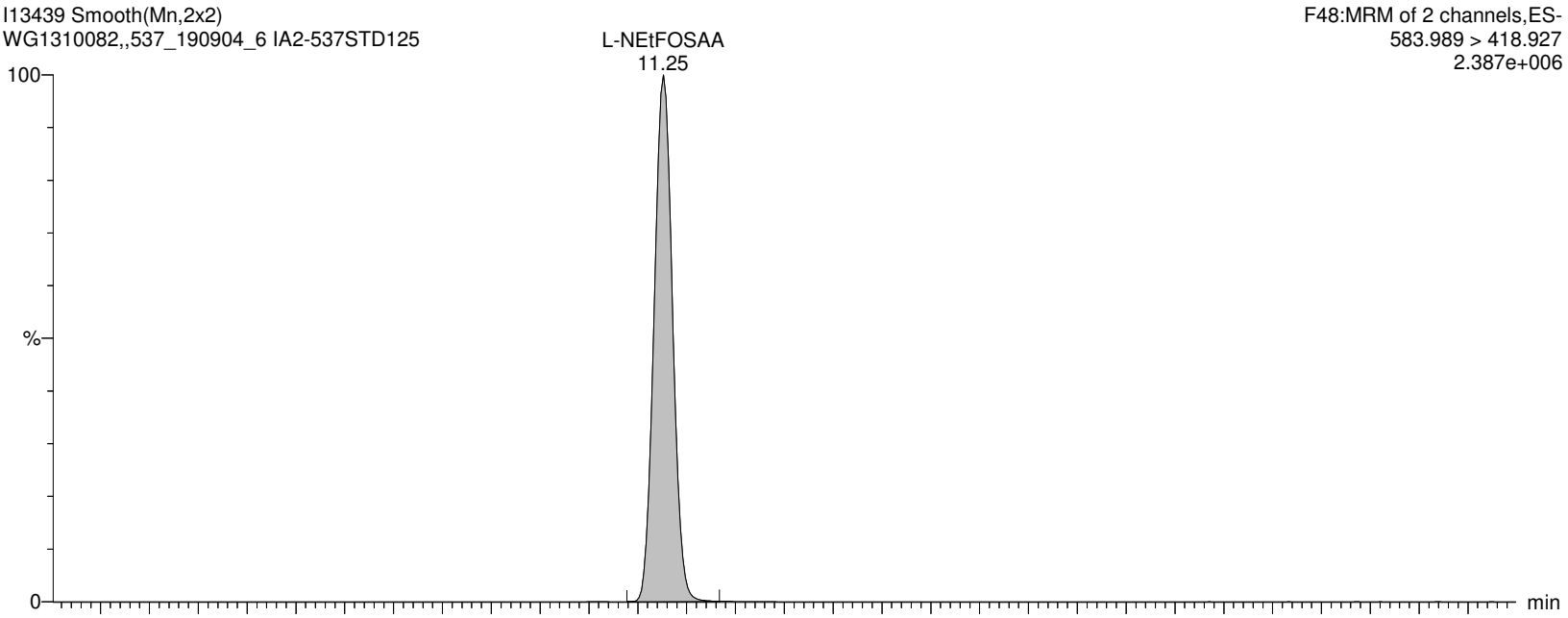
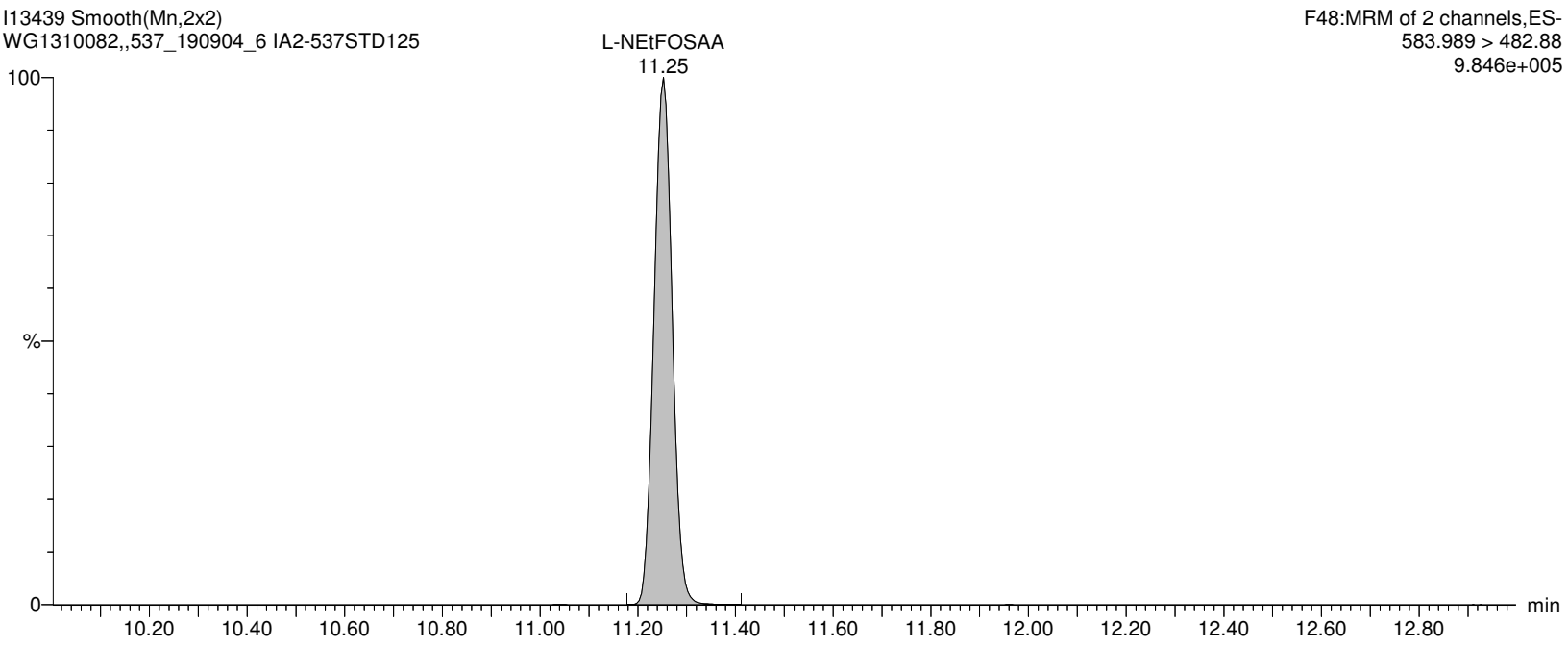
**NEtFOSAA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
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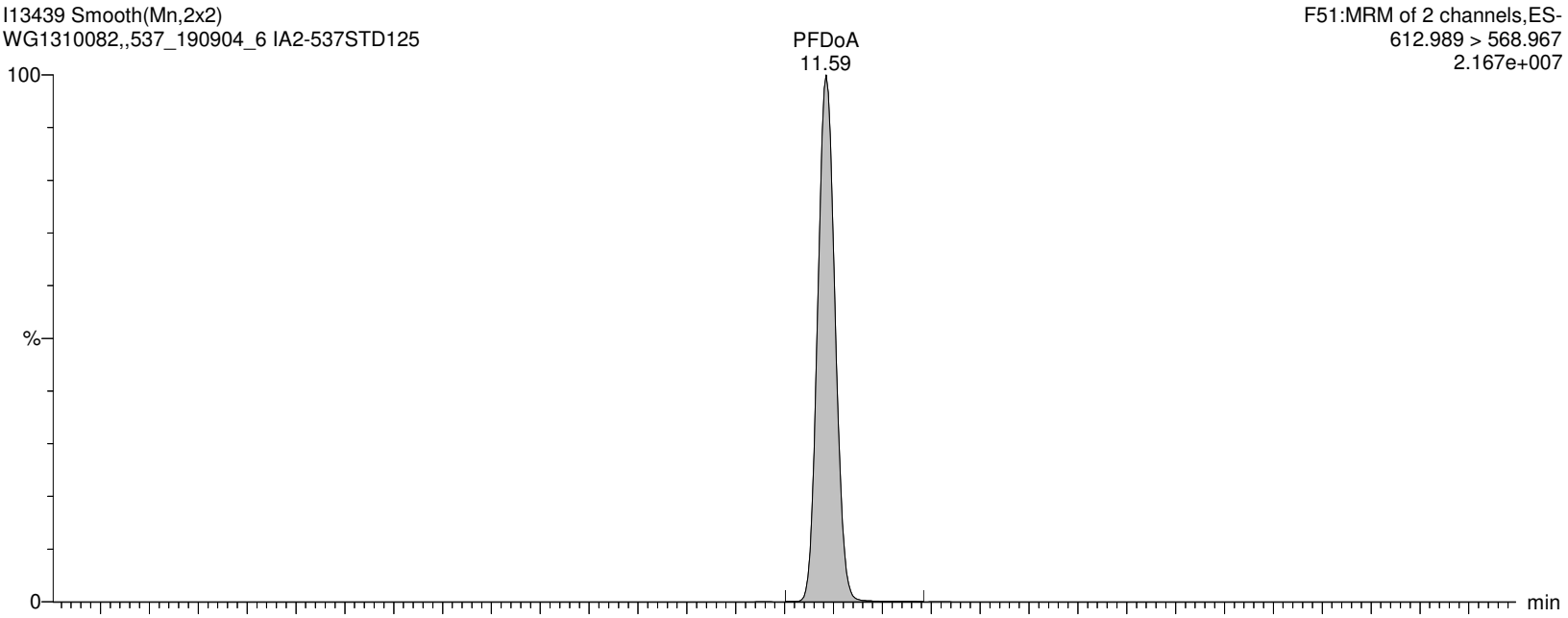


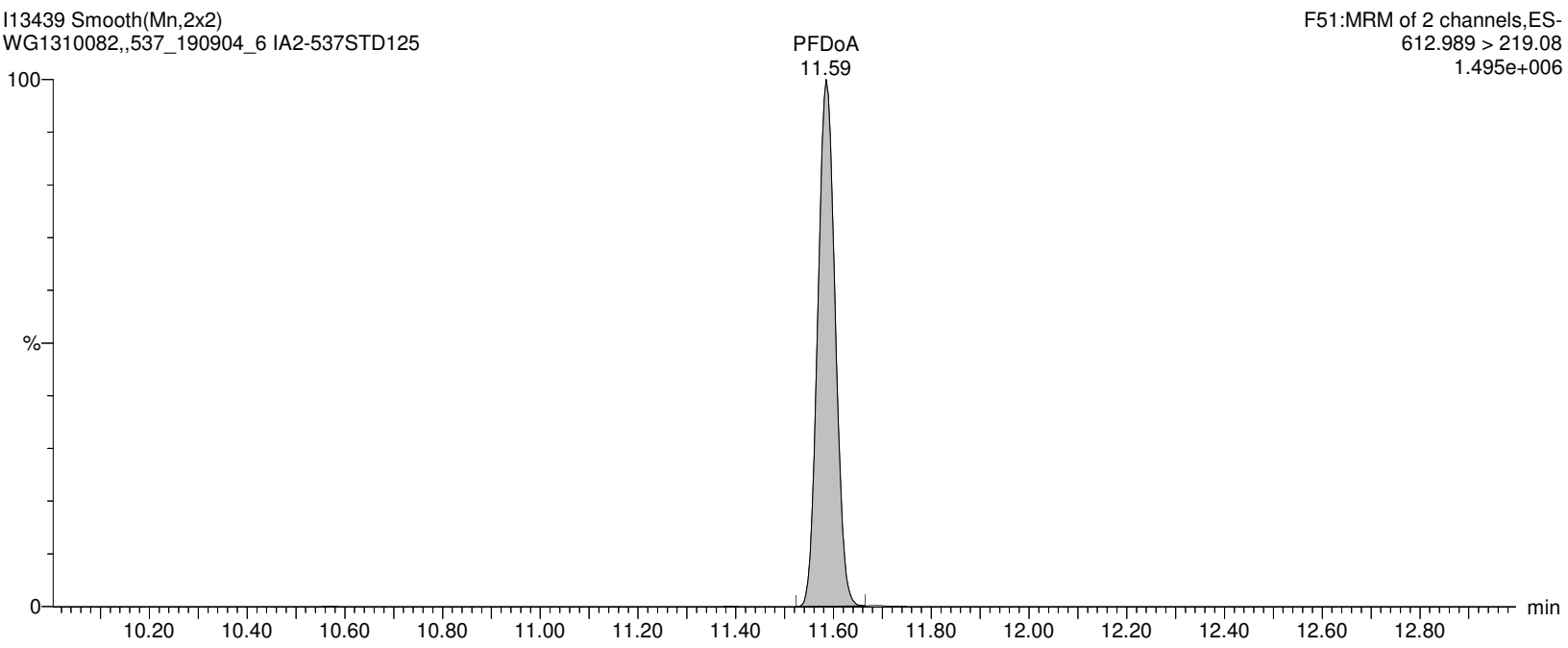



all concentration units in (ng/mL)

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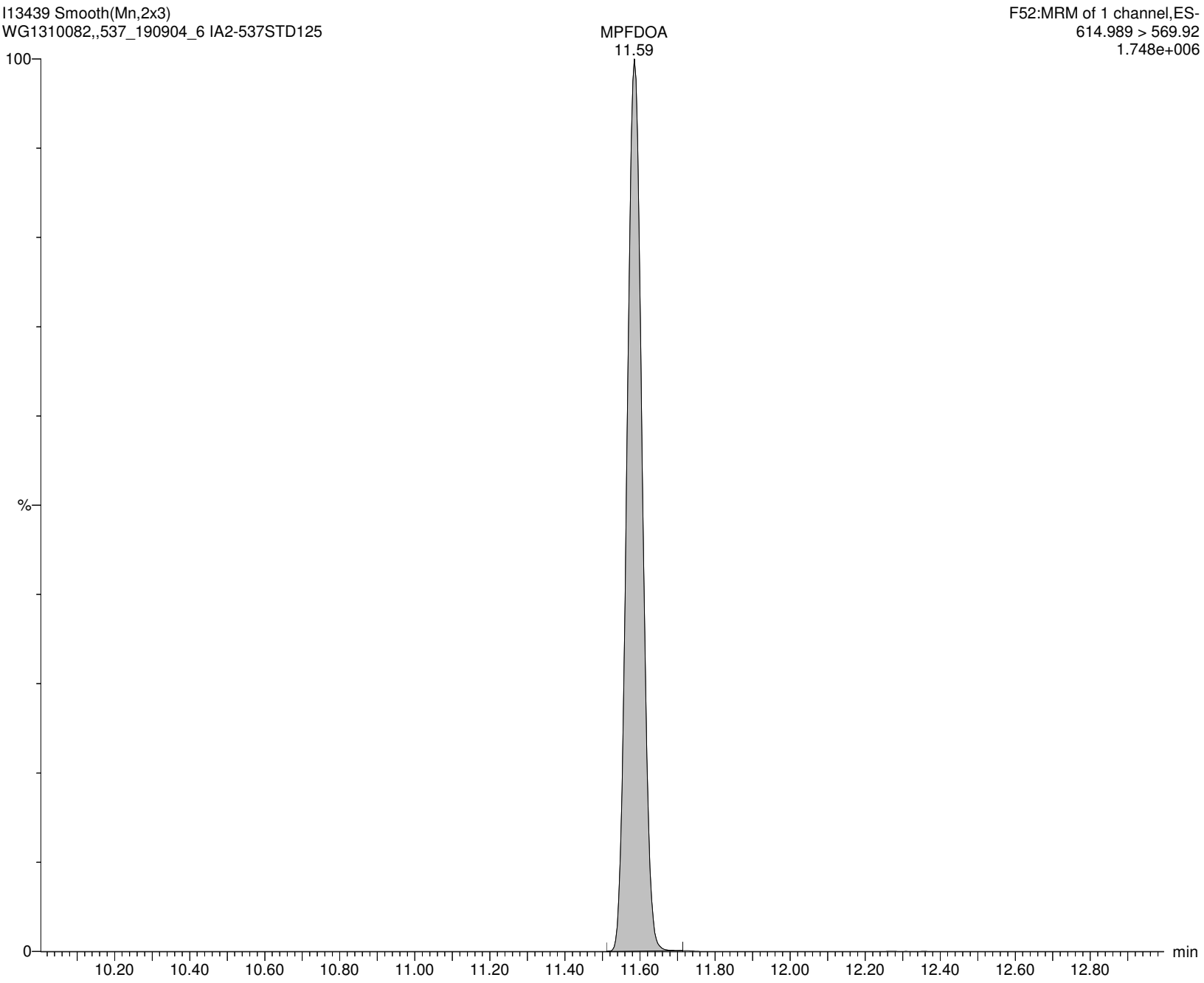



all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
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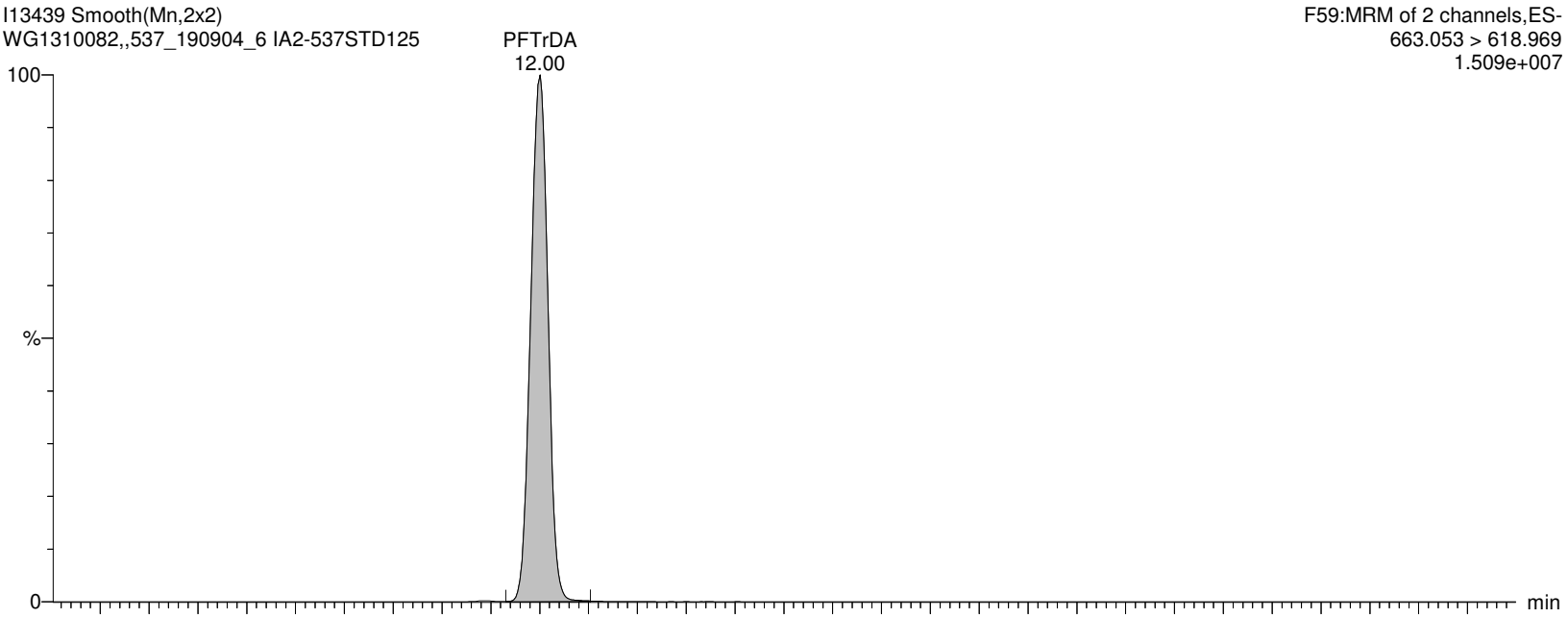


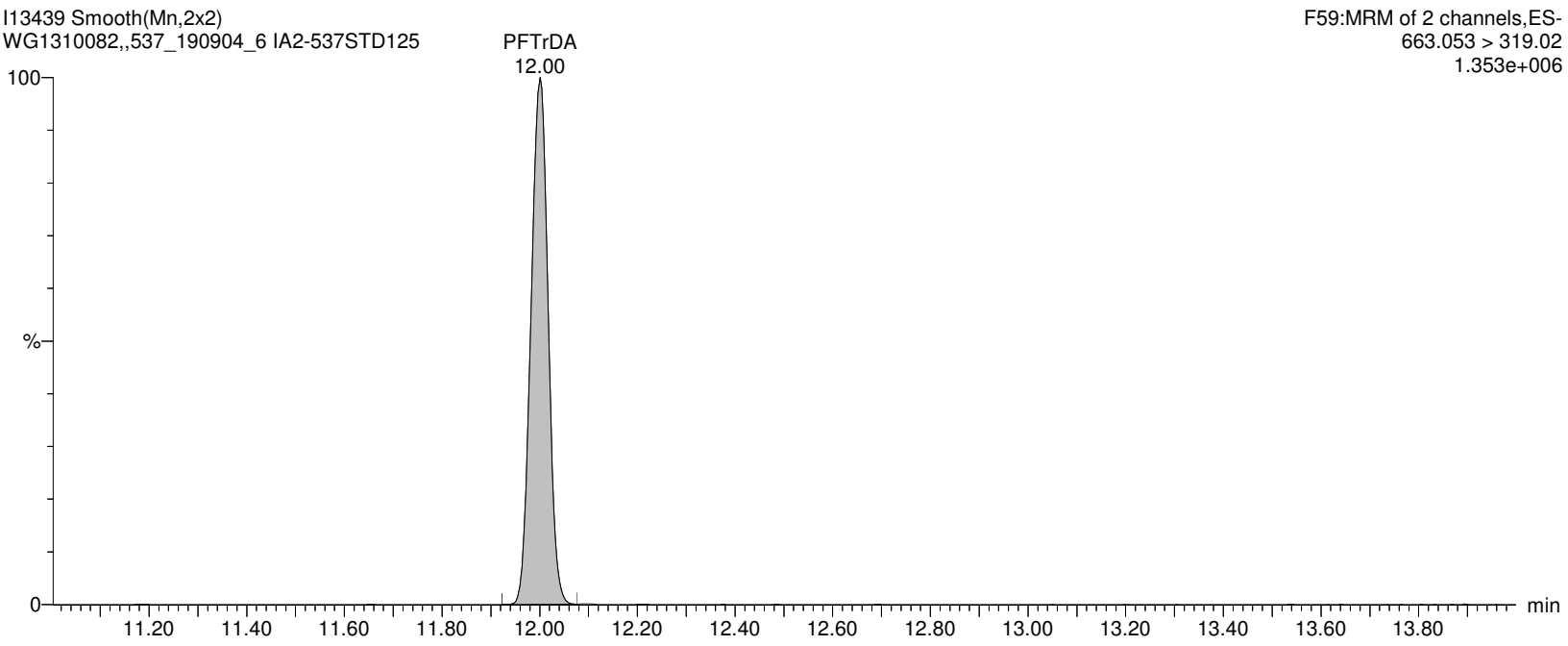



all concentration units in (ng/mL)

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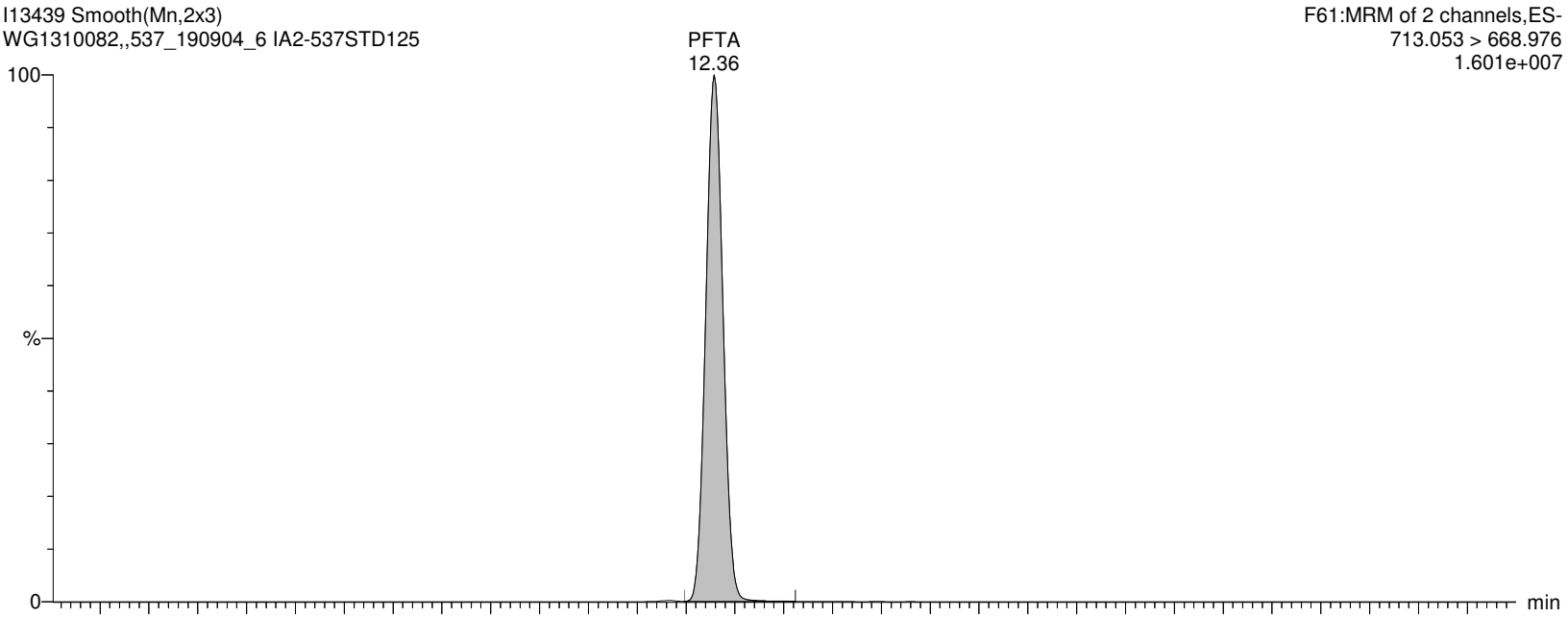


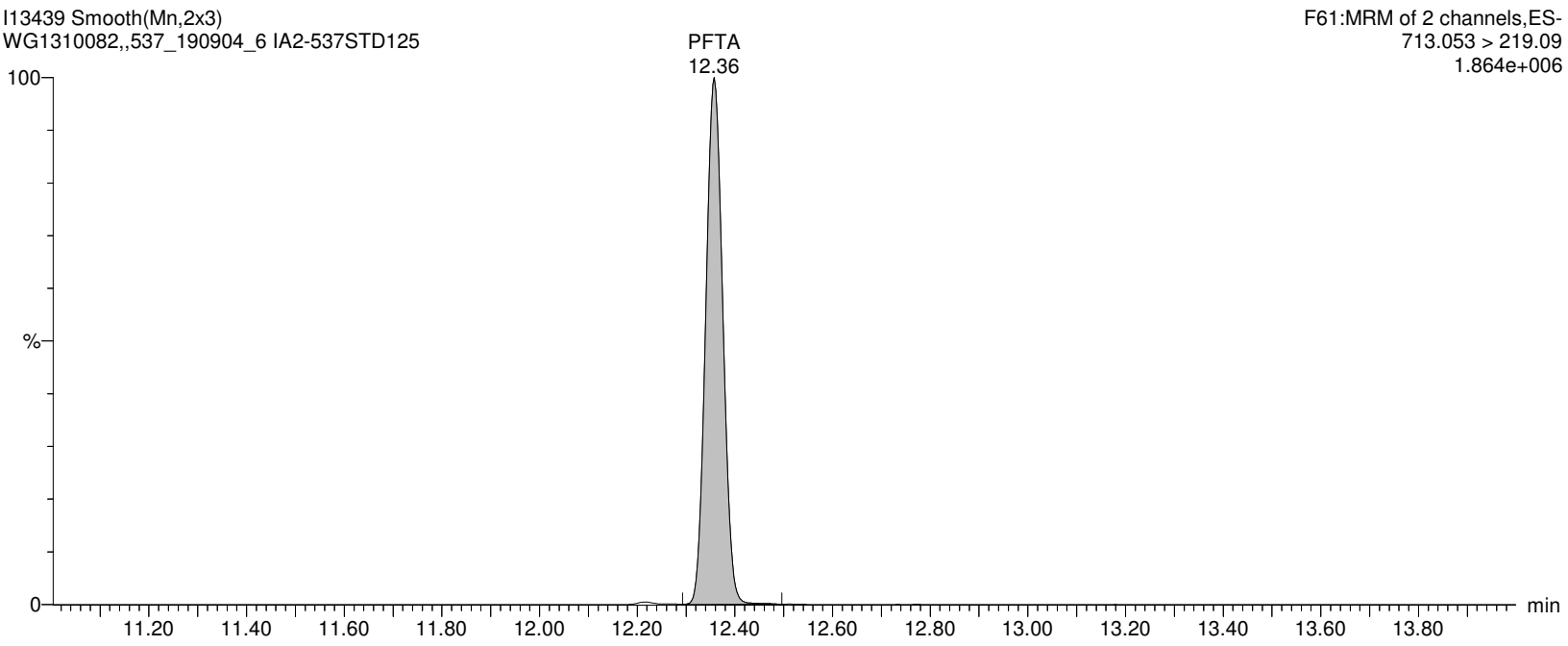



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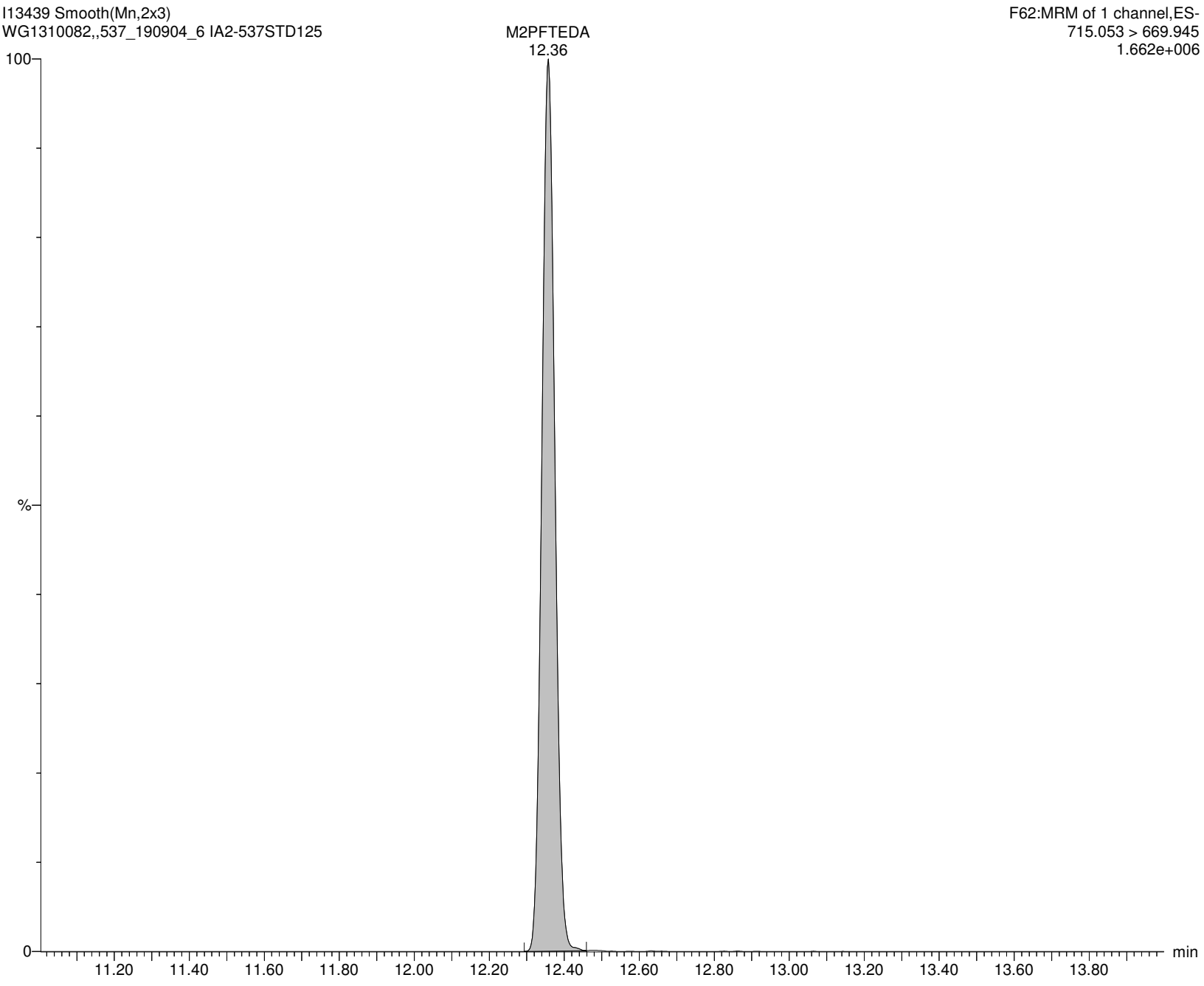



all concentration units in (ng/mL)

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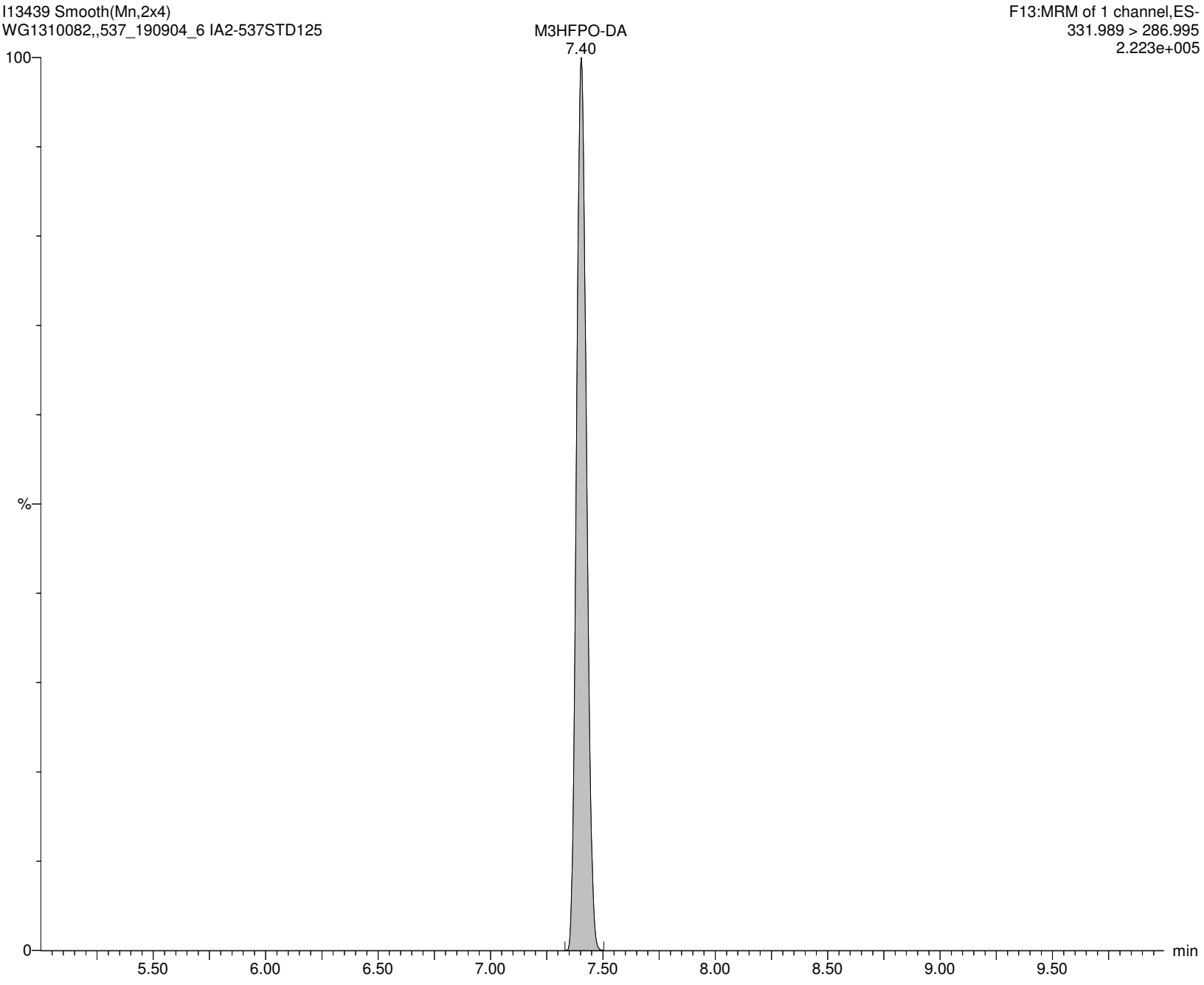



all concentration units in (ng/mL)

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**User: LCMS02:JW**
**Vial: 1:A,7**
**Instrument: XEVO-TQSmicro#QEB0050**
**Inlet Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\LCMS_537_ISO_B**
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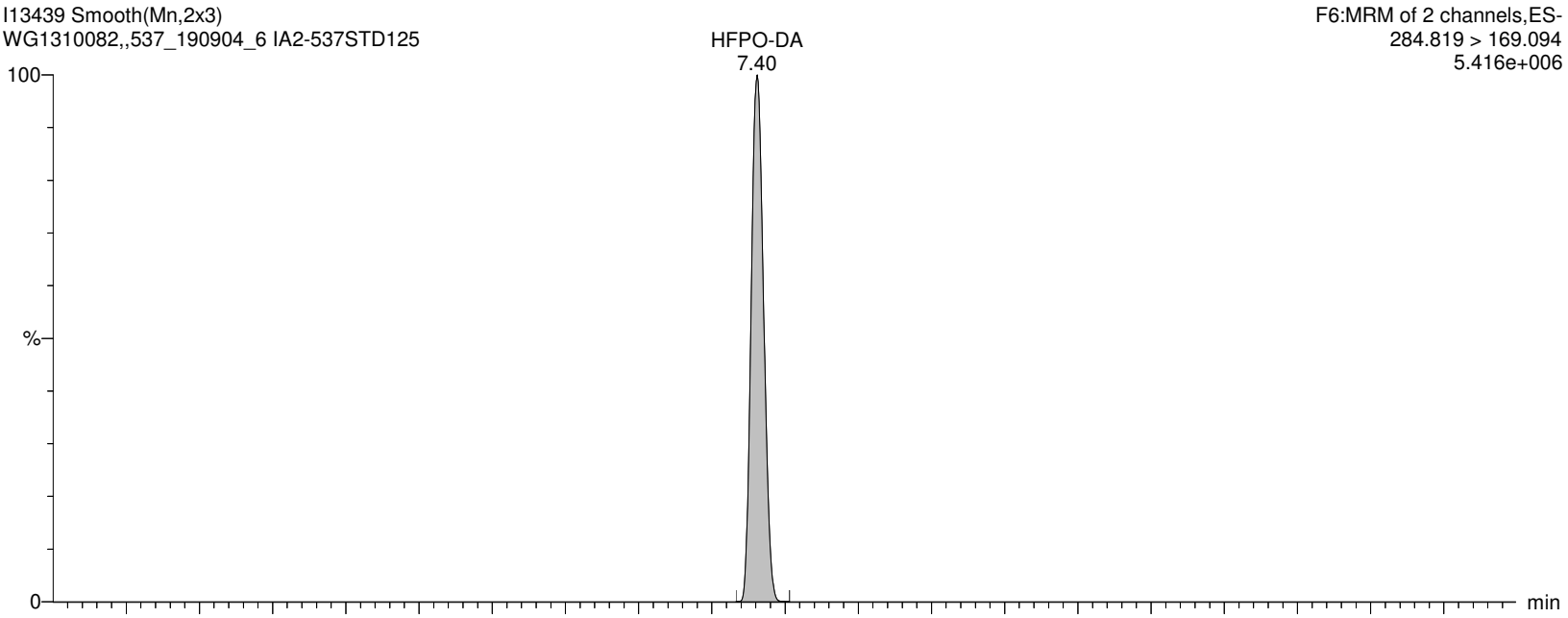


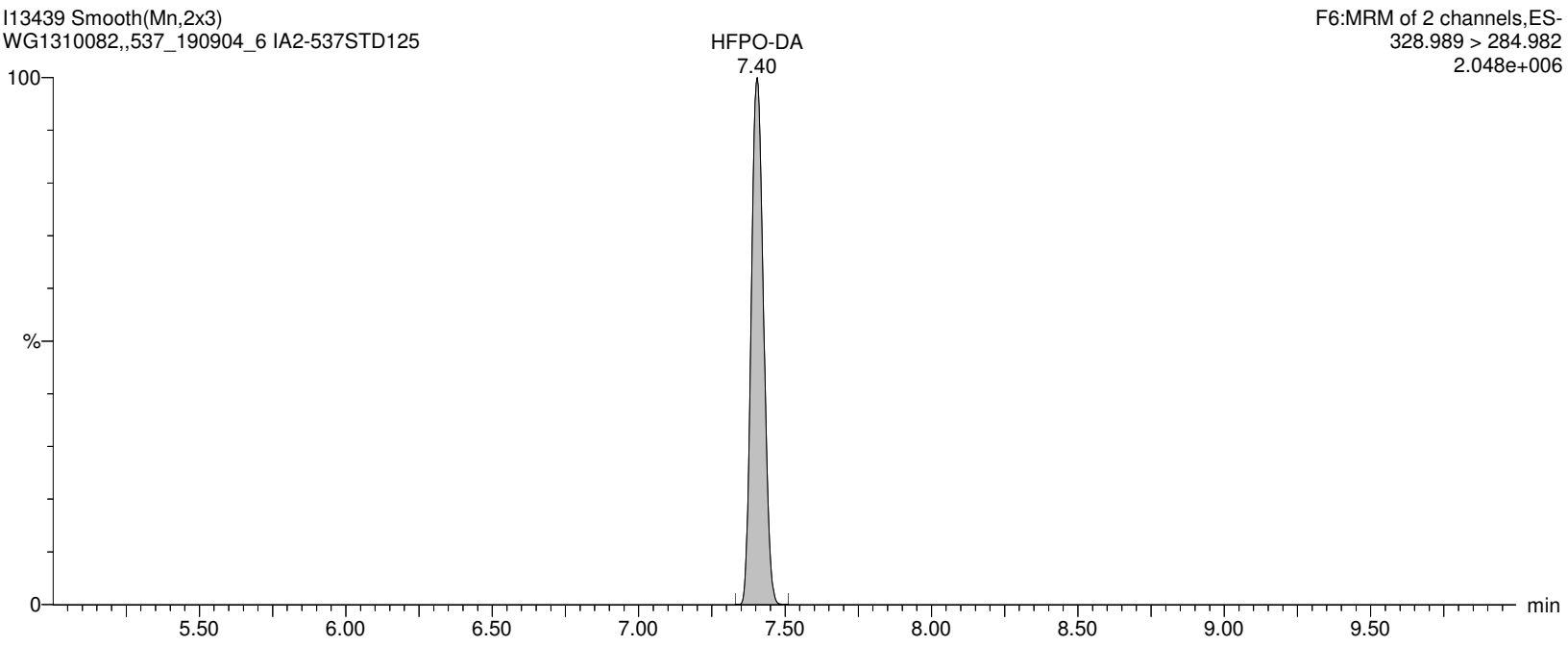



all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
Printed: Monday, November 18, 2019 13:42:59 Eastern Standard Time

**Name: I13439**
**ID: IA2-537STD125**
**Date: 18-Nov-2019**
**Time: 12:00:10**
**Description: WG1310082,,537_190904_6**
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**Vial: 1:A,7**
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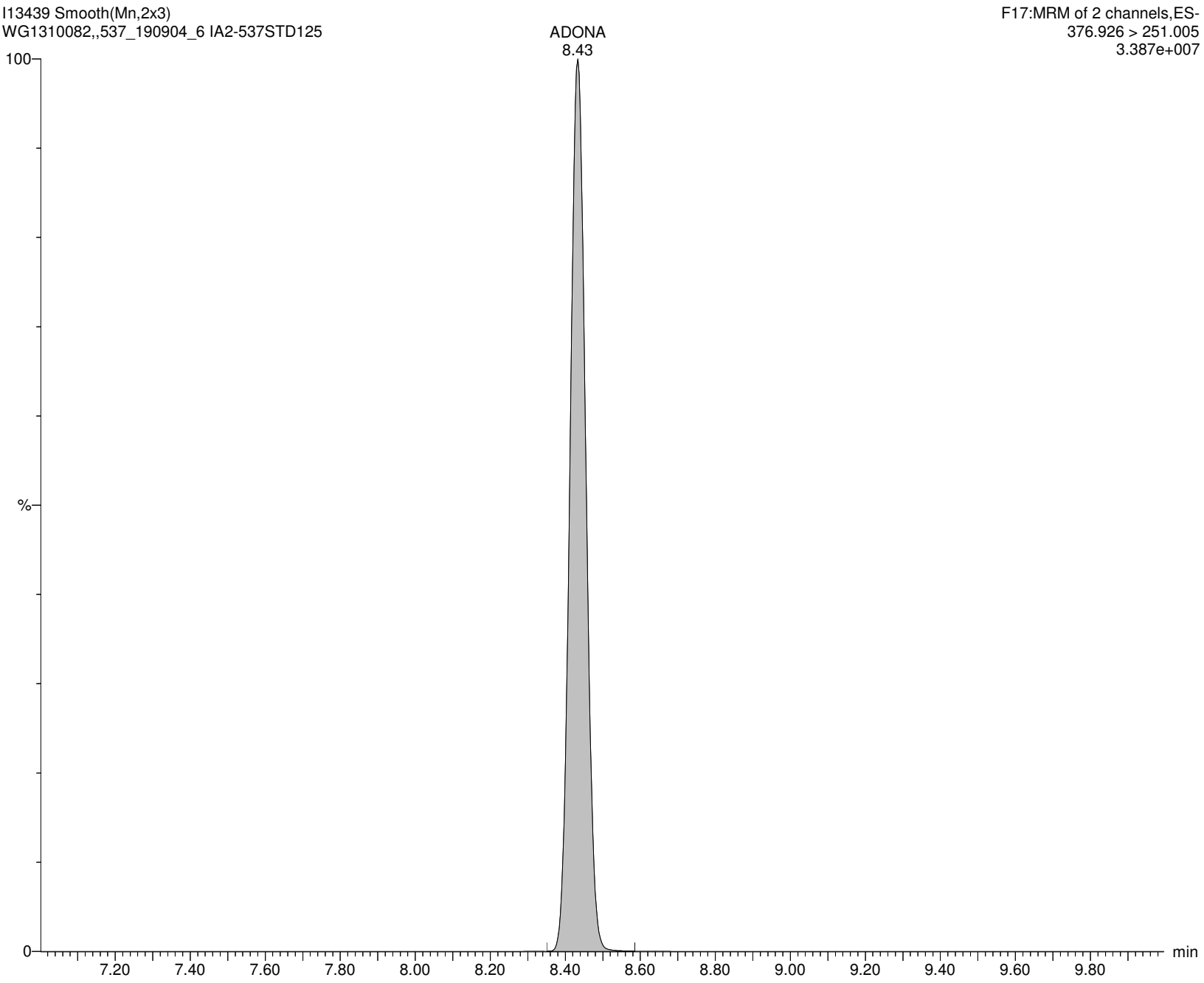



all concentration units in (ng/mL)

Alpha Analytical Inc.
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**Vial: 1:A,7**
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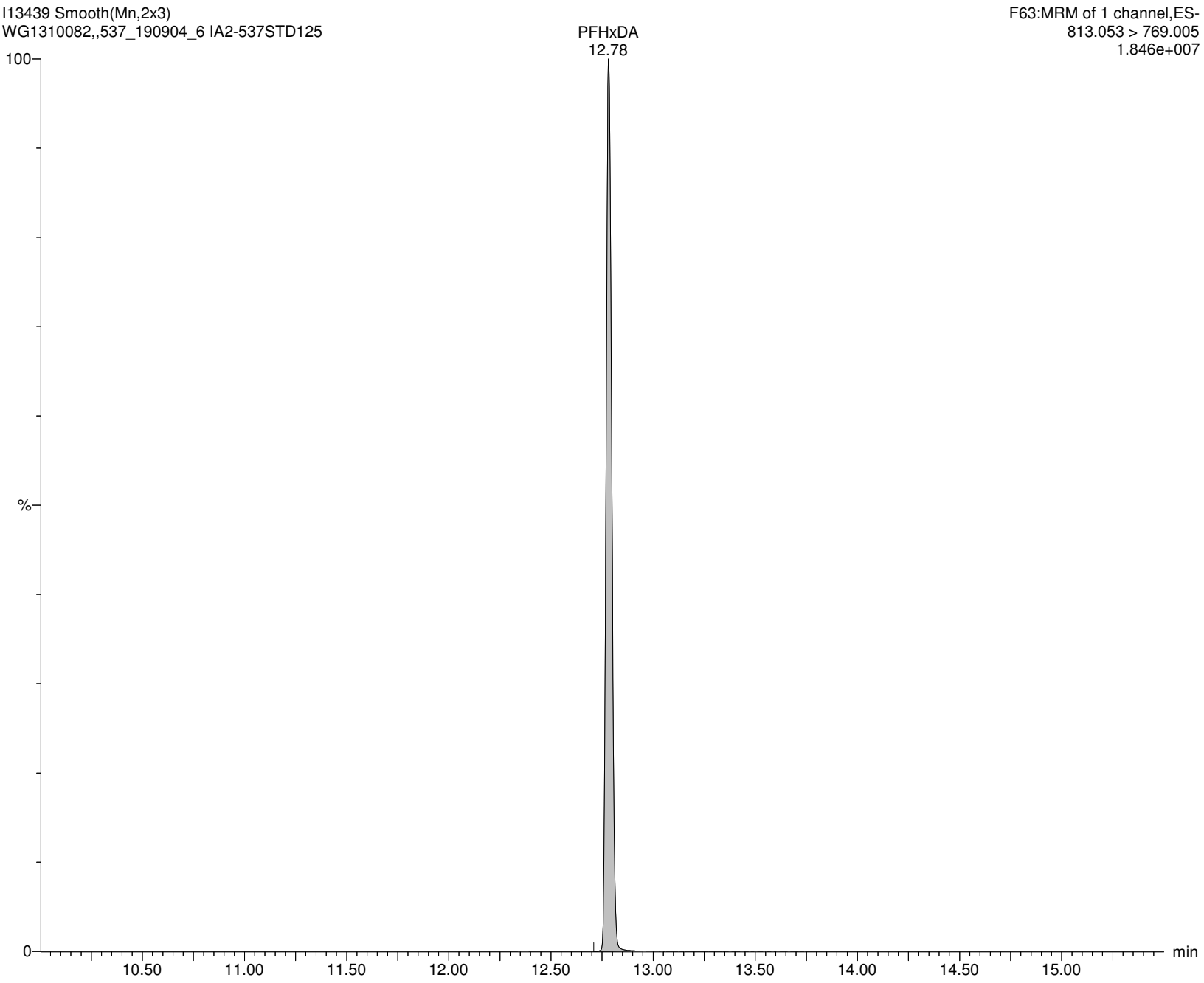



all concentration units in (ng/mL)

Alpha Analytical Inc.
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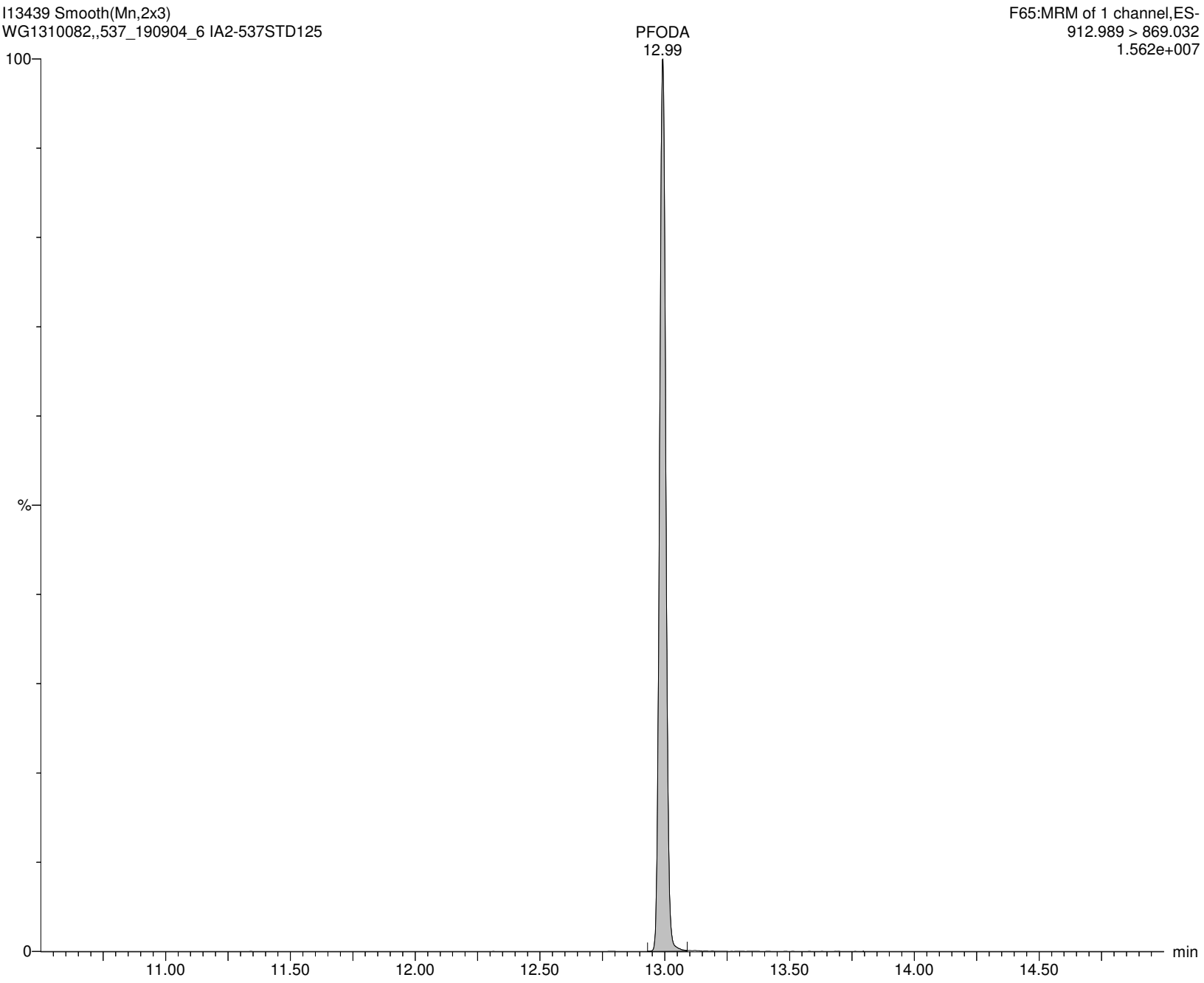



all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
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**Instrument: XEVO-TQSmicro#QEB0050**
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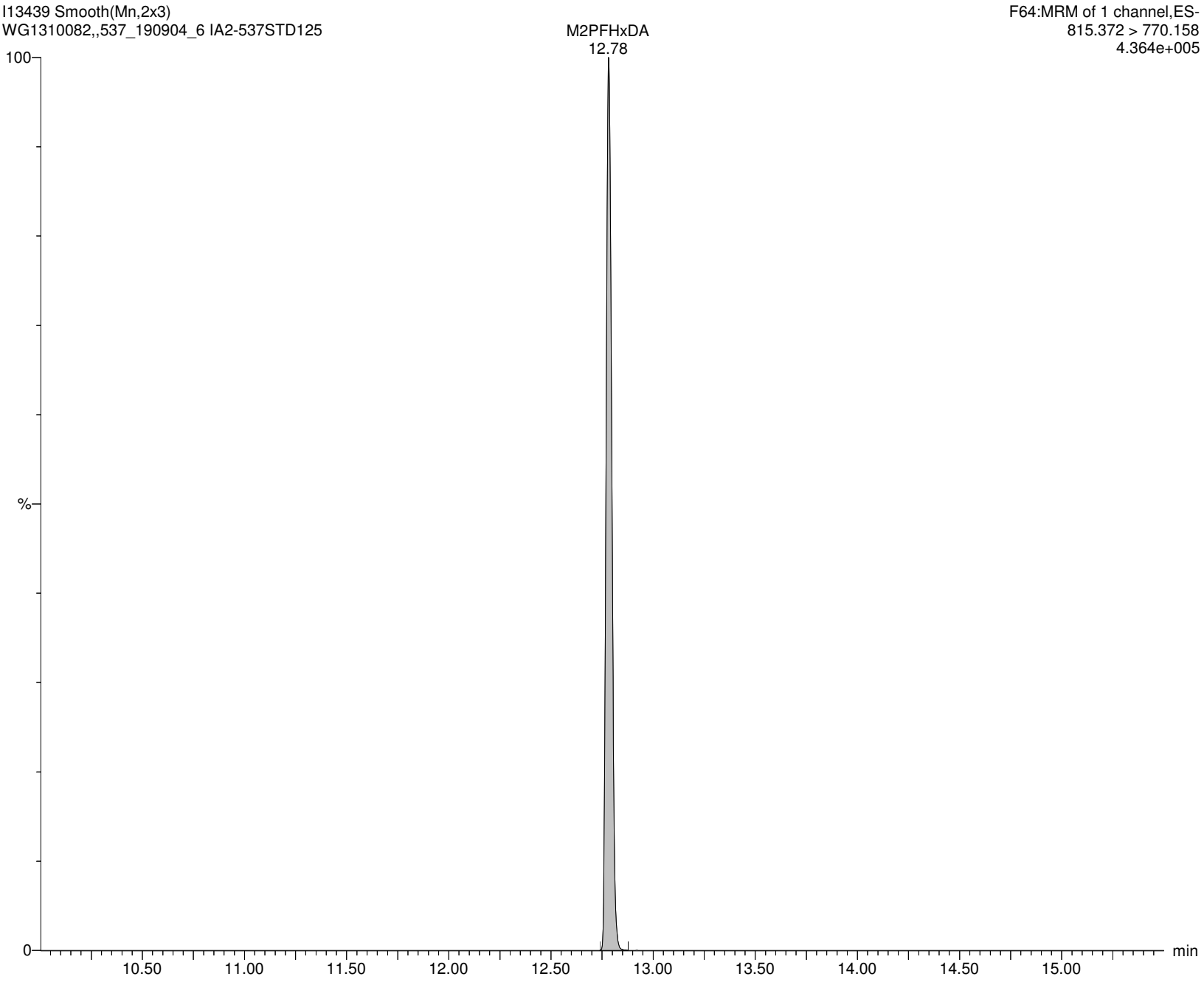



all concentration units in (ng/mL)

Alpha Analytical Inc.
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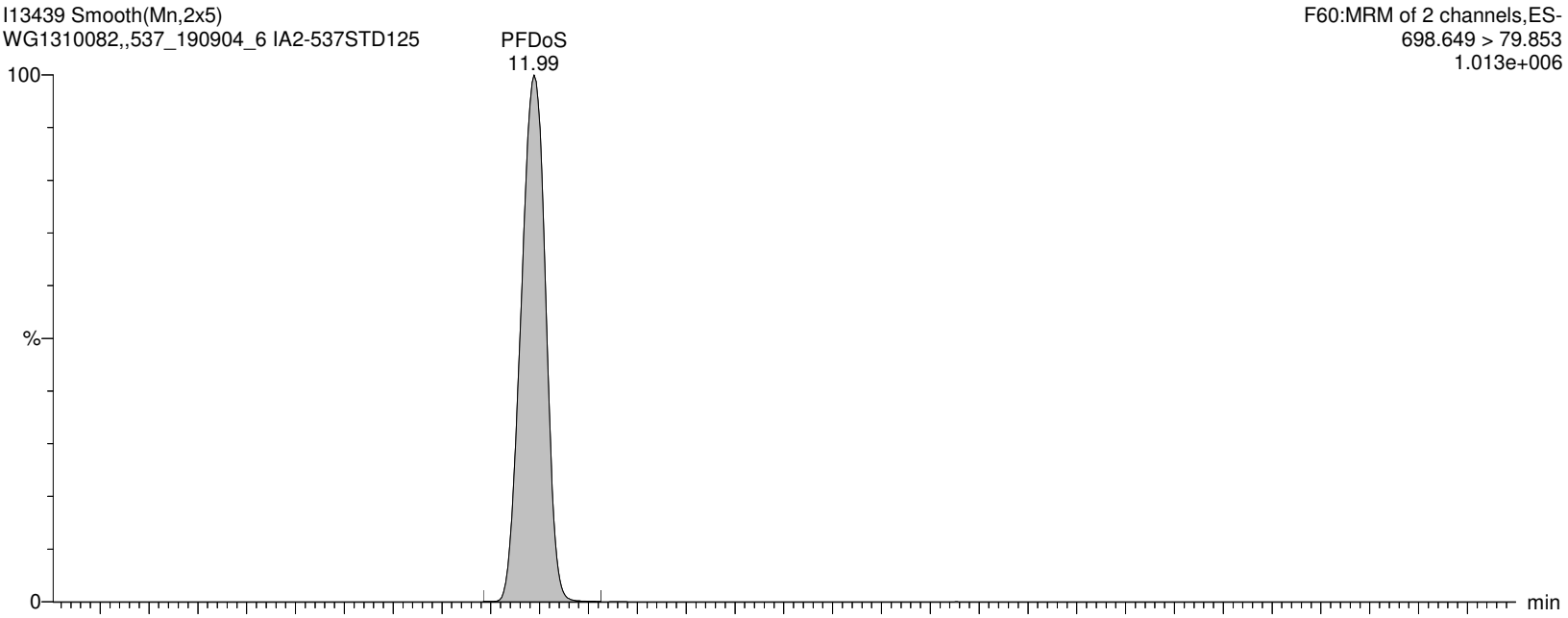
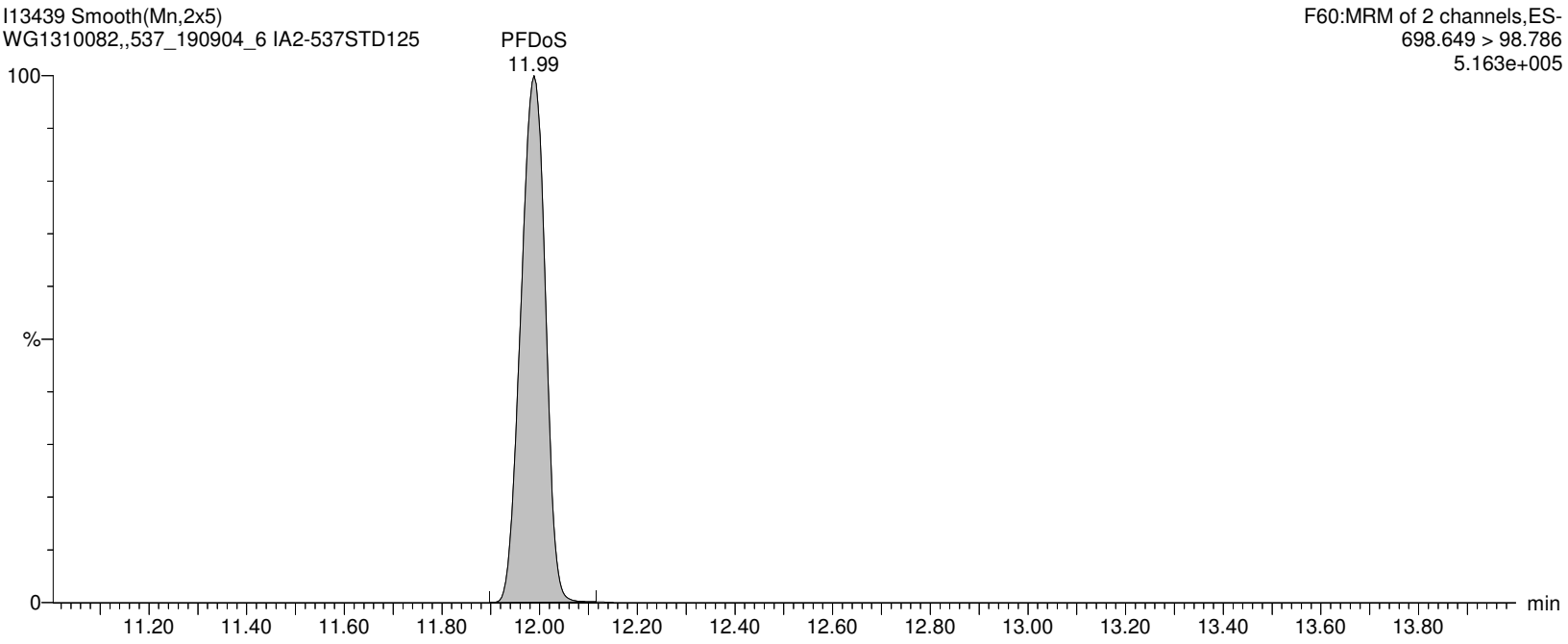
**PFDoS**





all concentration units in (ng/mL)

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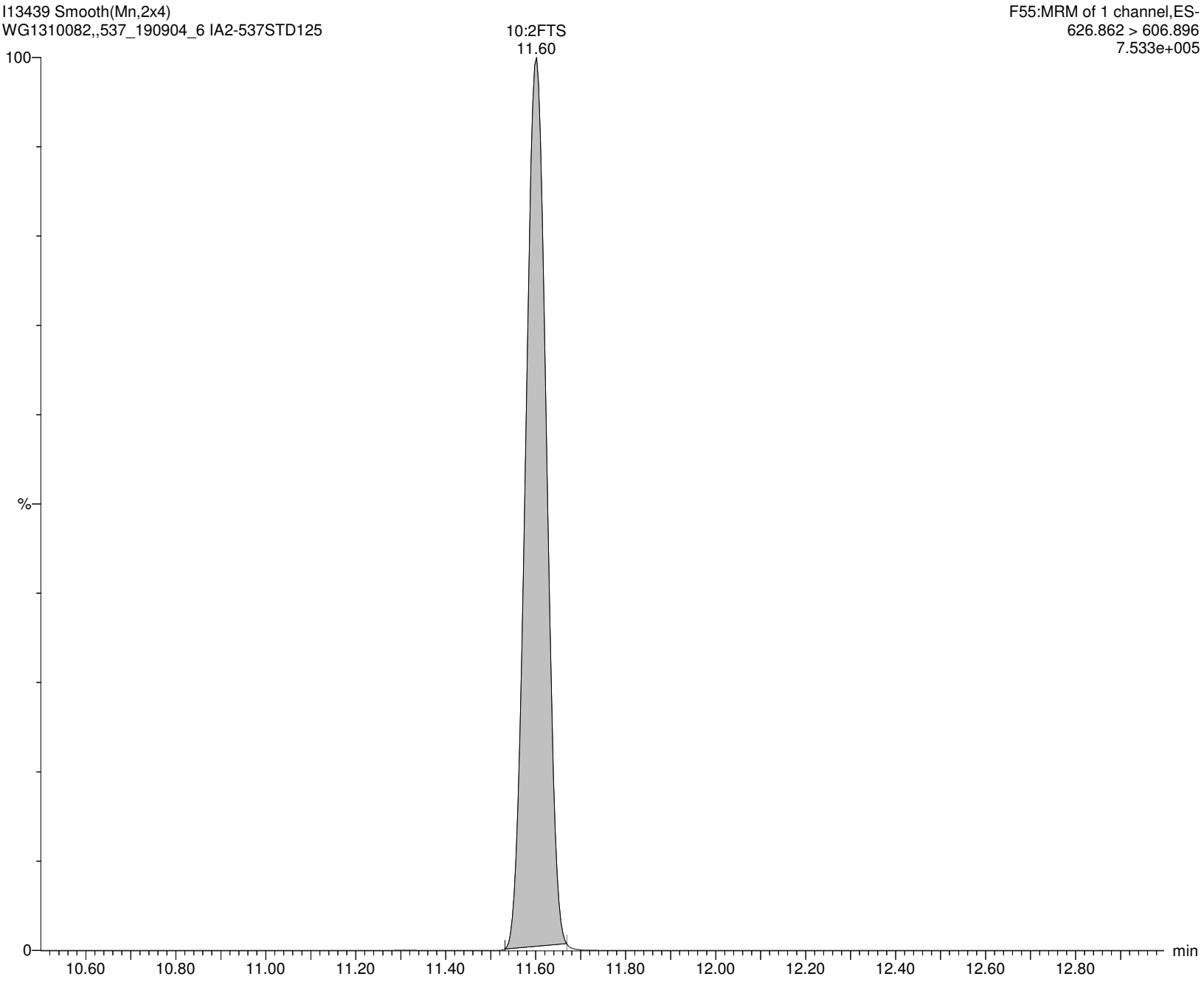



all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
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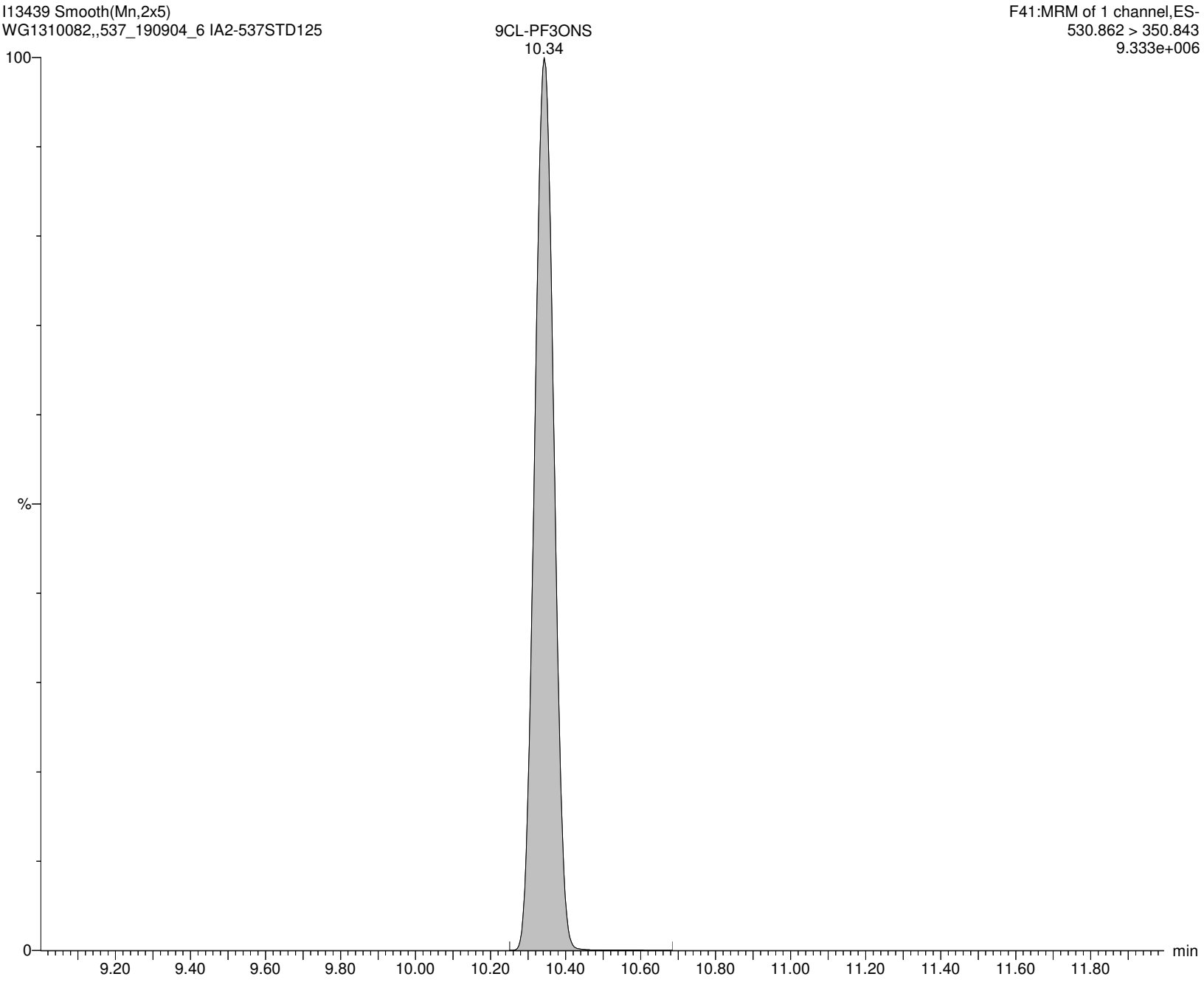
**9CL-PF3ONS**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
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**Vial: 1:A,7**
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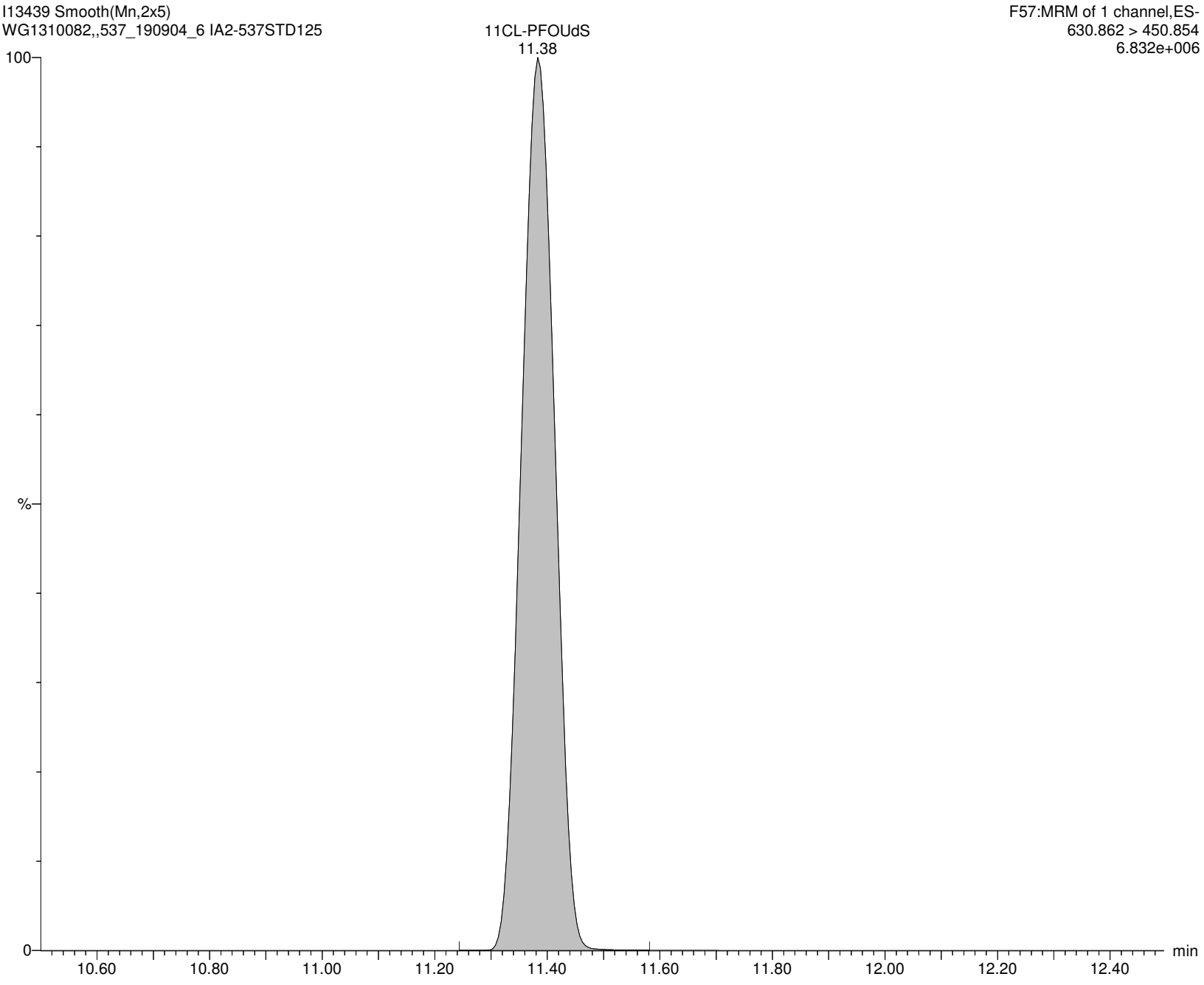
**11CL-PFOUdS**





all concentration units in (ng/mL)

Alpha Analytical Inc.
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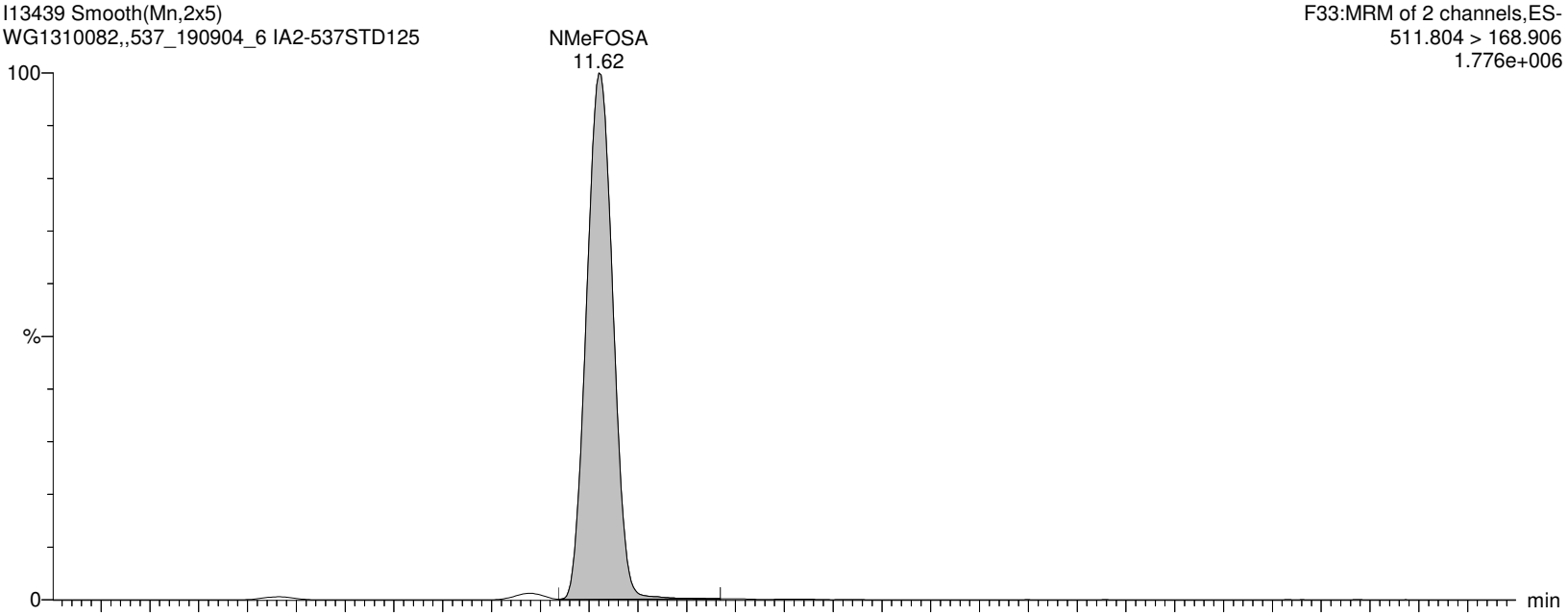
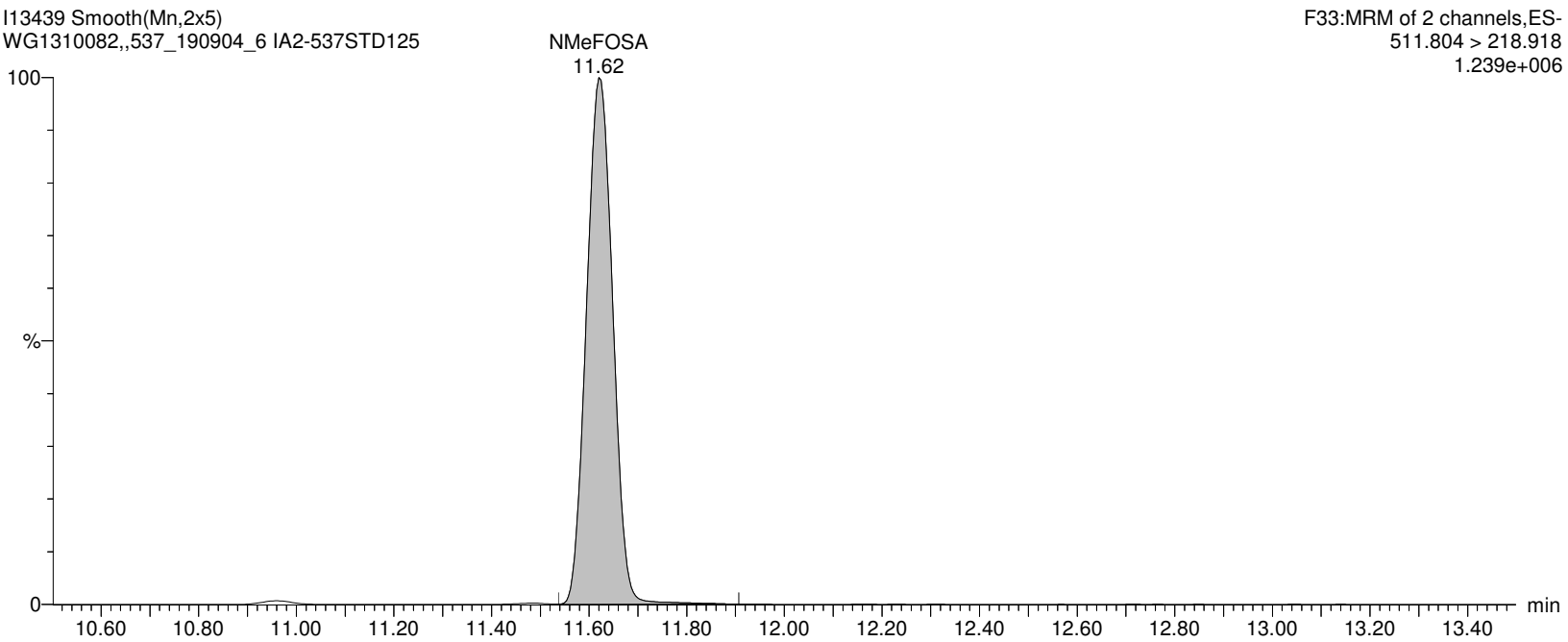
**NMeFOSA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
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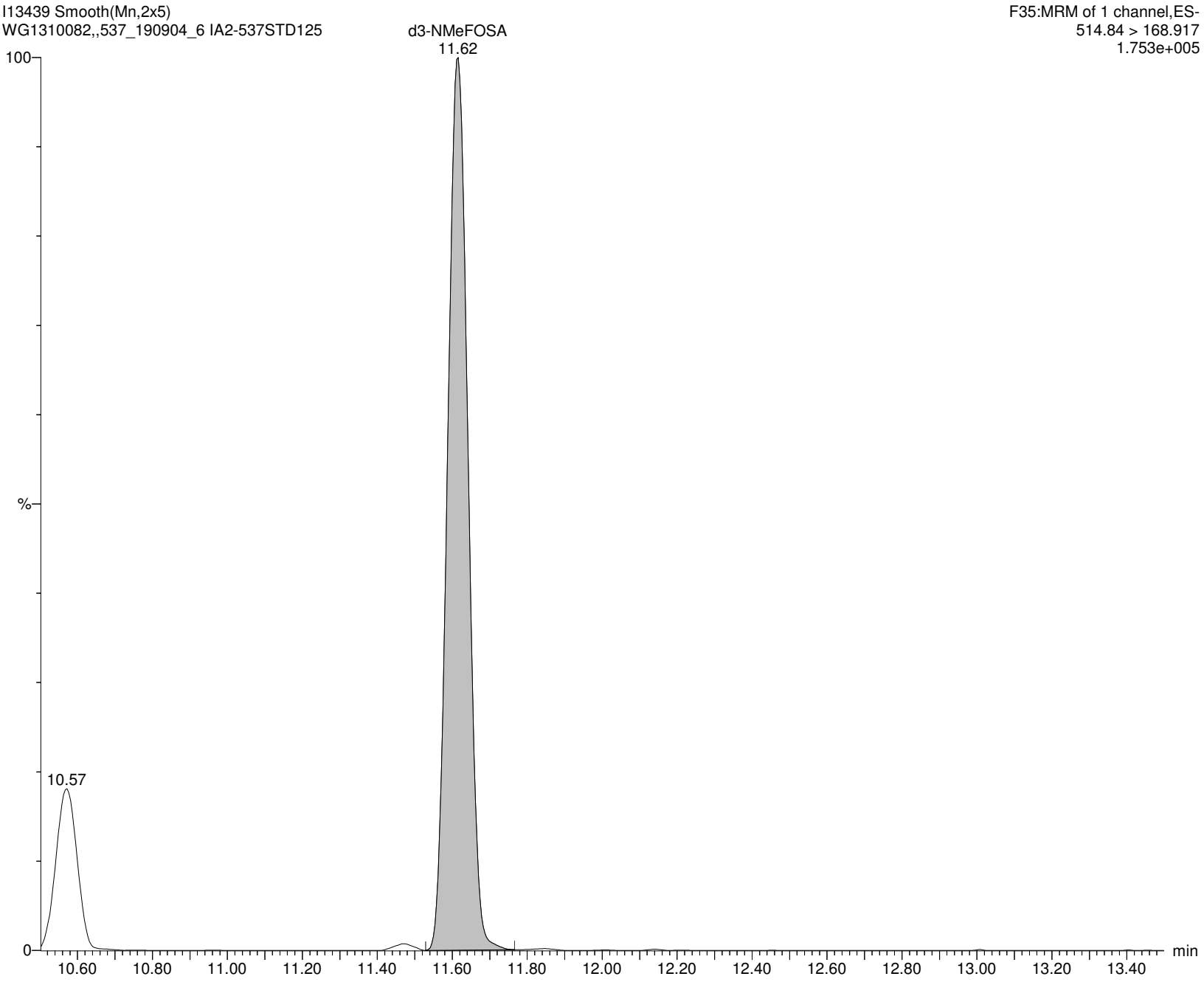
**d3-NMeFOSA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
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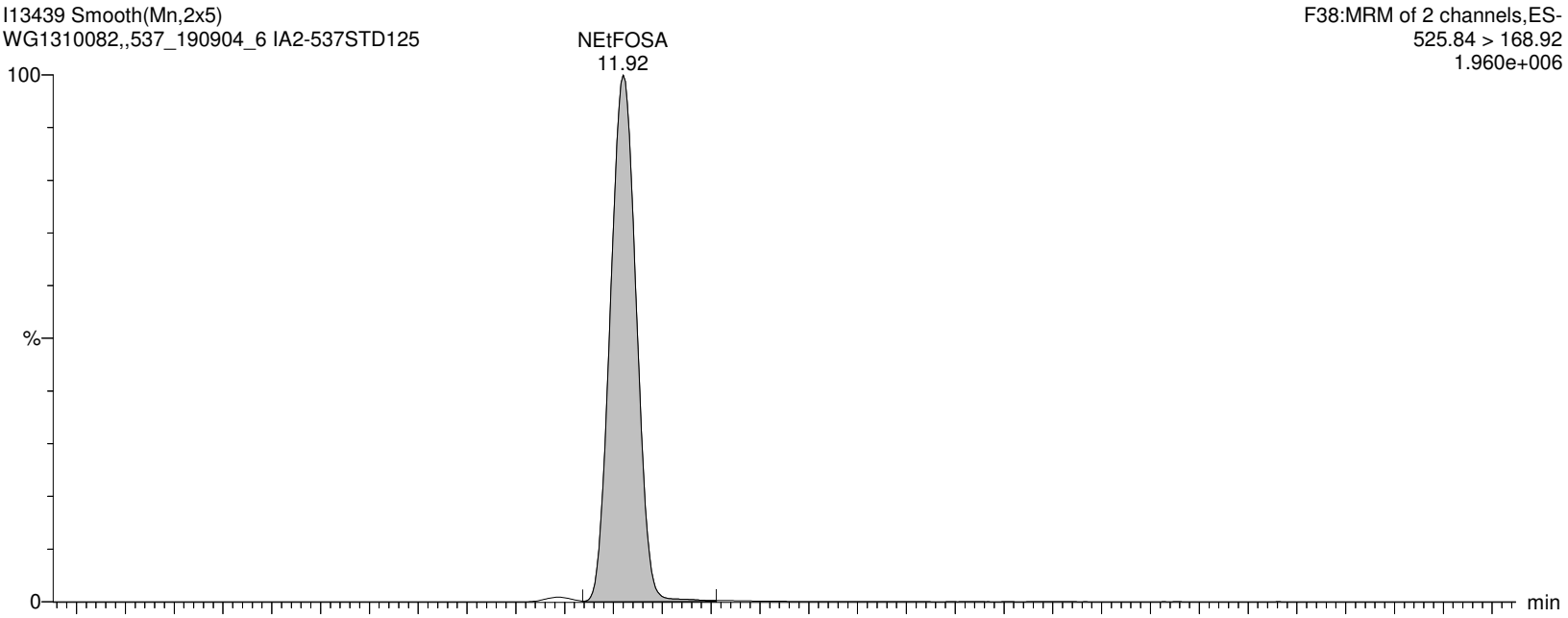
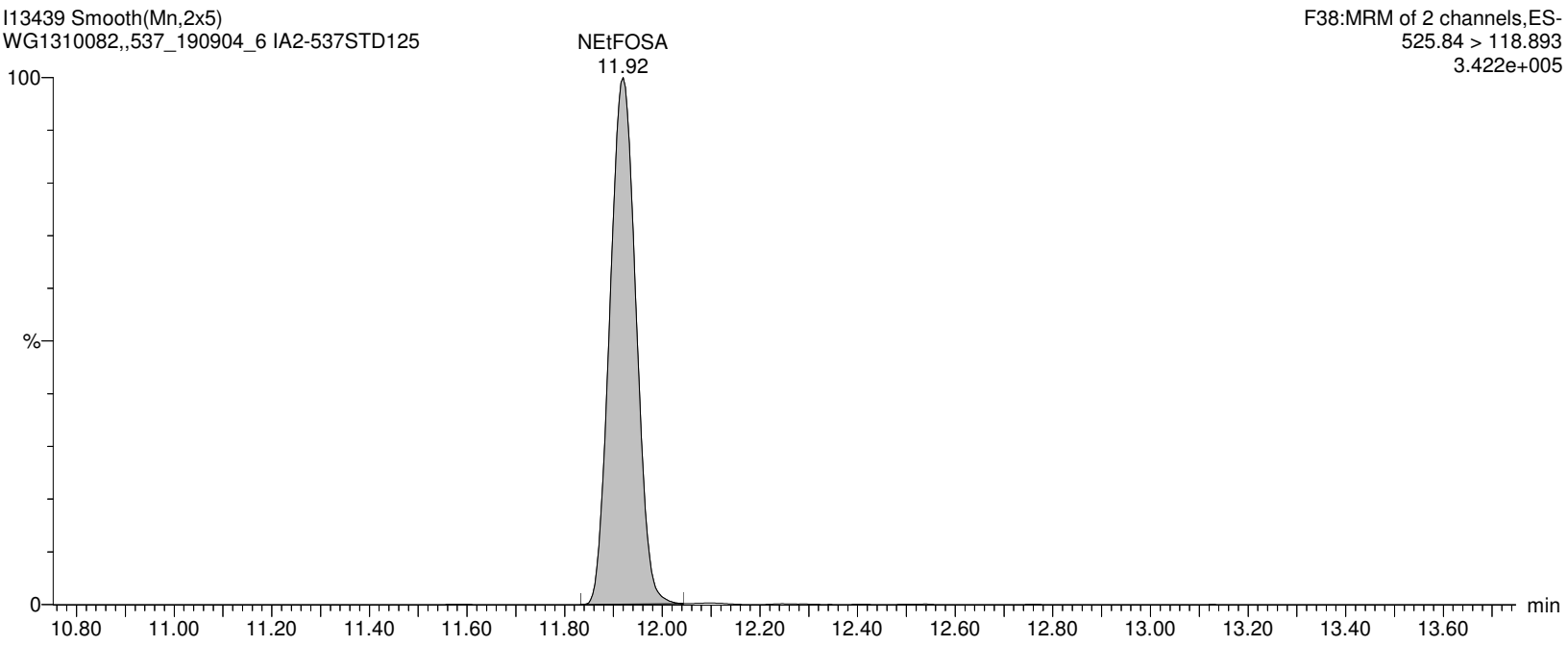
**NEtFOSA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
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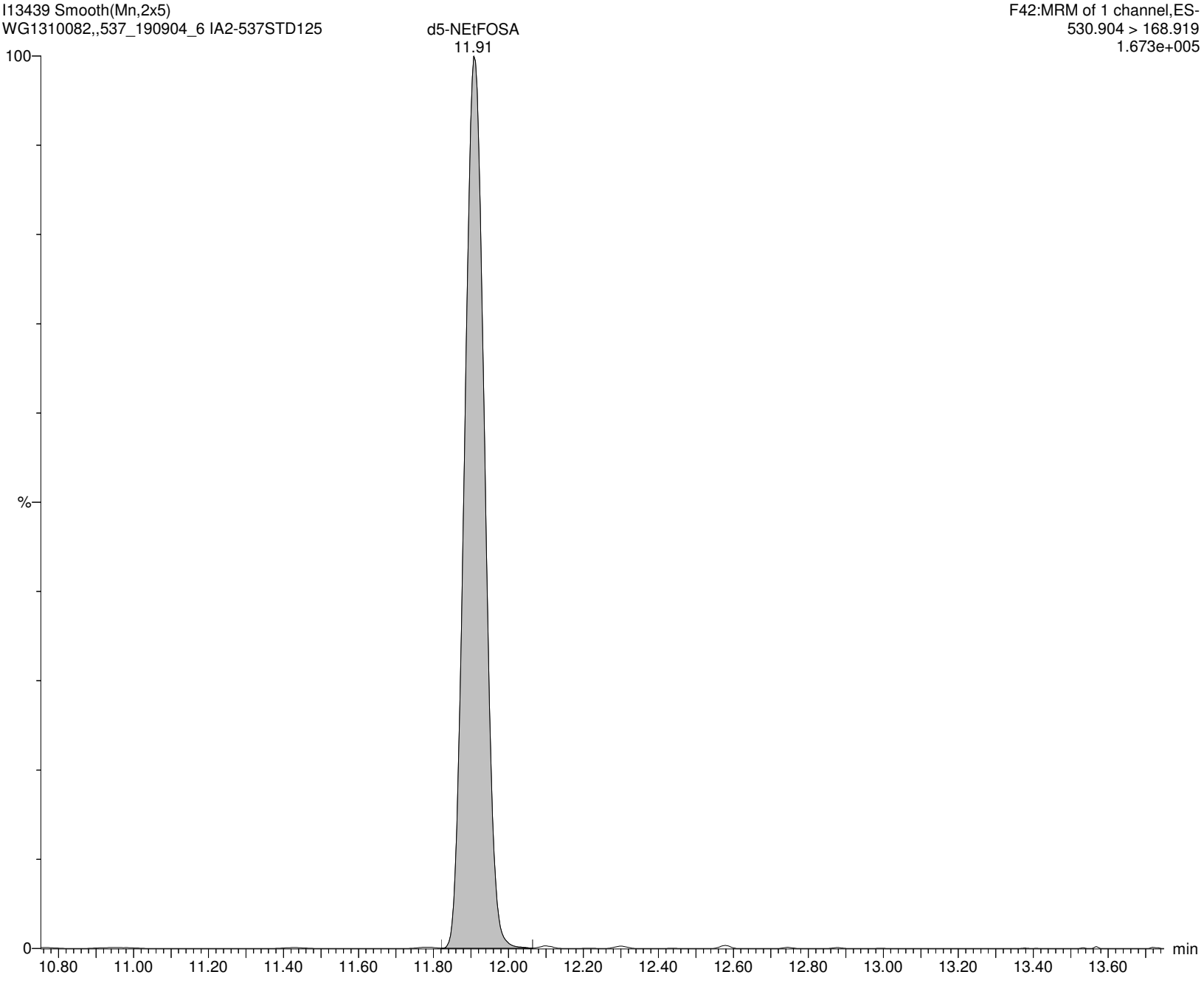
**d5-NEtFOSA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
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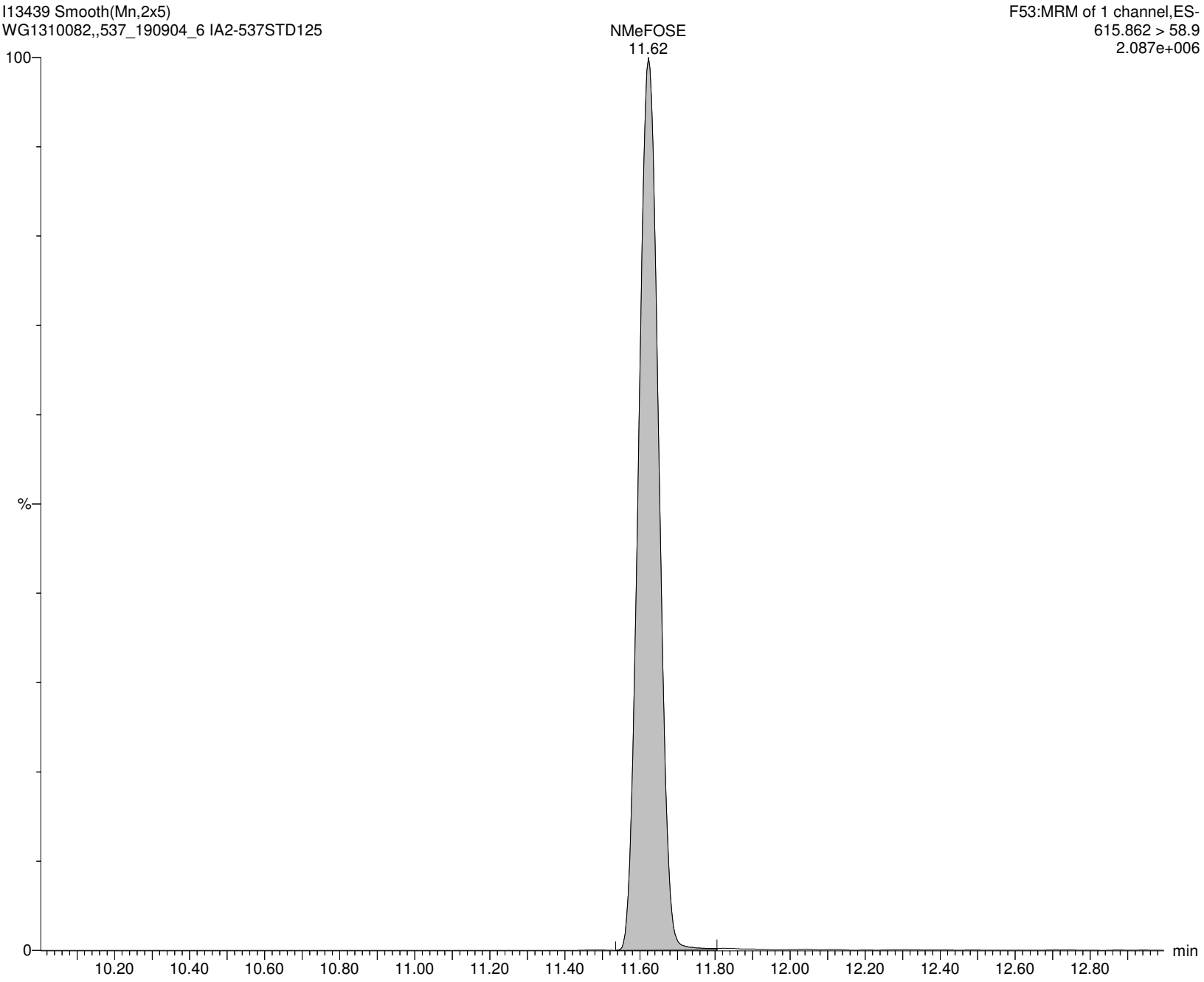
**NMeFOSE**





all concentration units in (ng/mL)

Alpha Analytical Inc.
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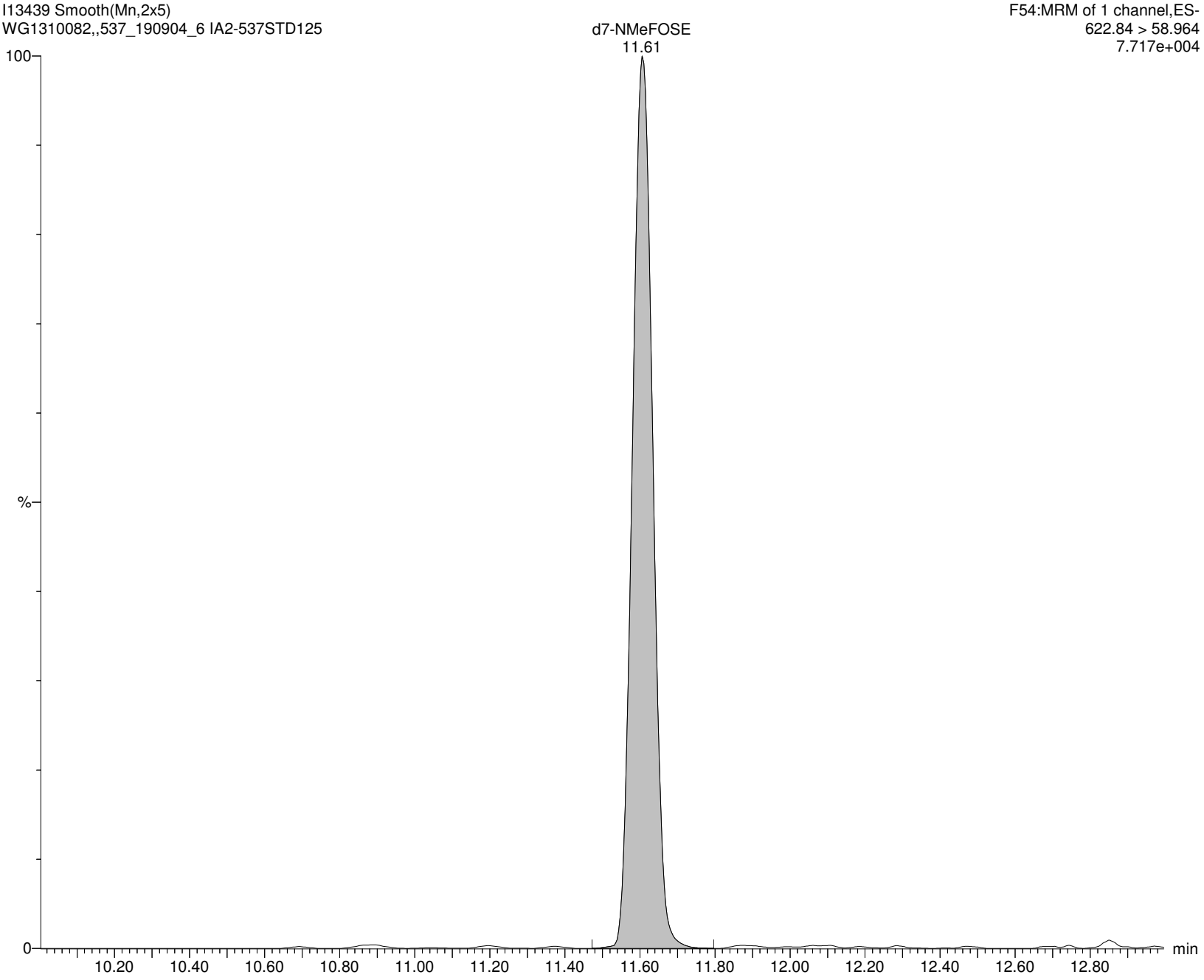



all concentration units in (ng/mL)

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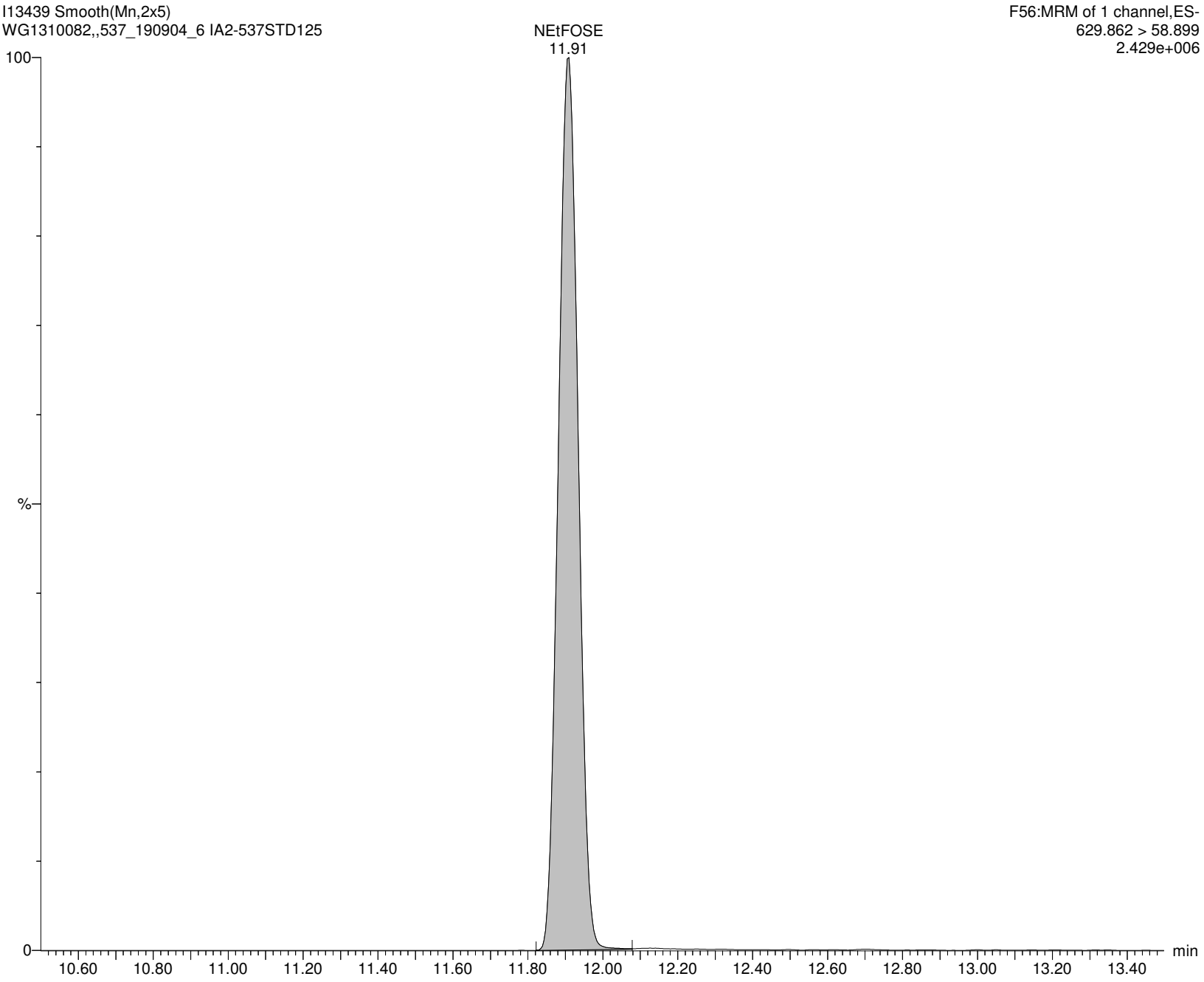
**NEtFOSE**





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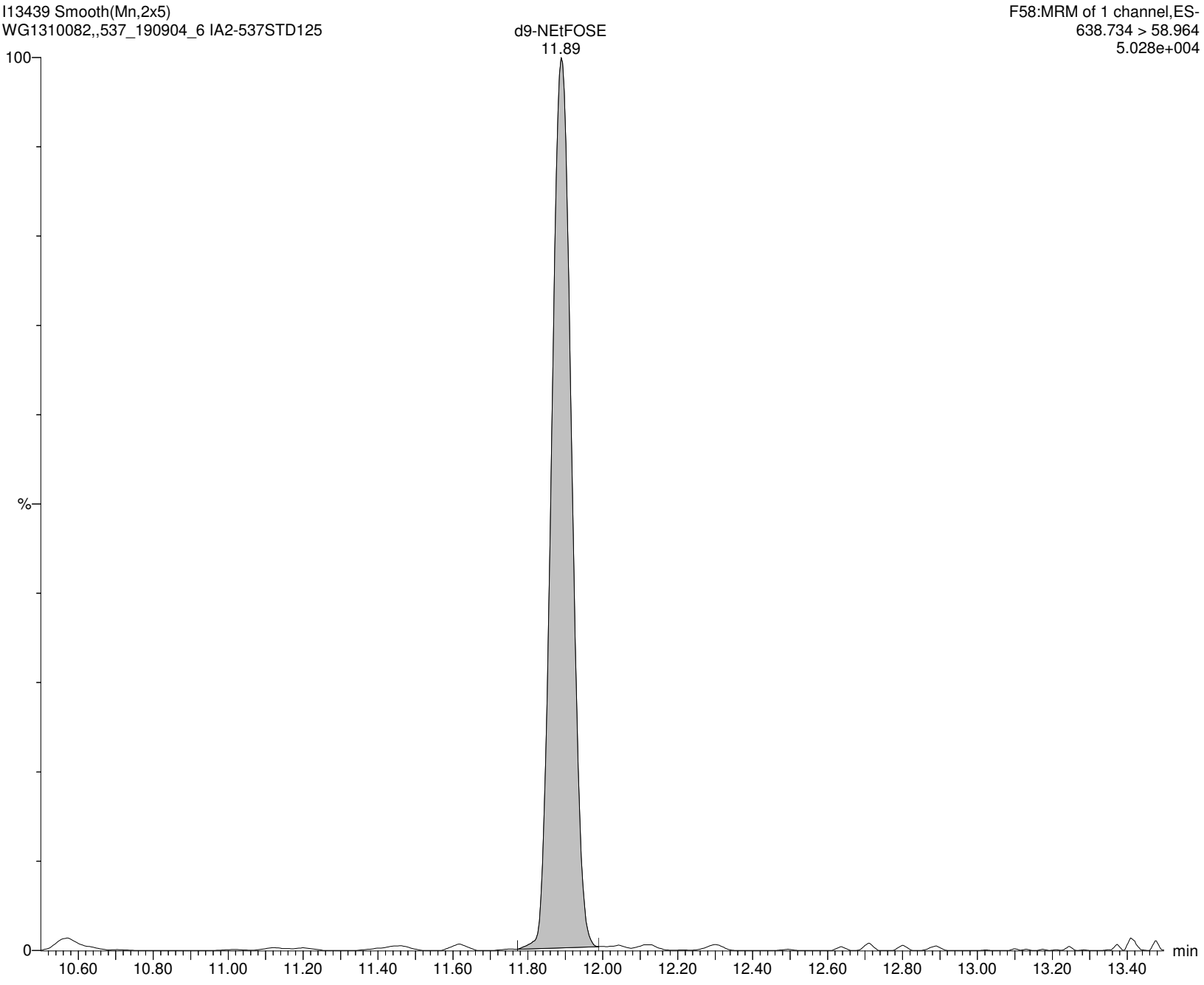
**Vial: 1:A,7**
**Instrument: XEVO-TQSmicro#QEB0050**
**Inlet Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\LCMS_537_ISO_B**
**Tune Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\181009_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**d9-NEtFOSE**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
Printed: Monday, November 18, 2019 13:43:00 Eastern Standard Time

**Method: C:\MassLynx\Data\2019\191118_537ISO.PRO\MethDB\537ISO_Q_191118_DOD .mdb 18 Nov 2019 13:05:34**
**Calibration: C:\MassLynx\Data\2019\191118_537ISO.PRO\CurveDB\191118_ISO_ICAL.cdb 18 Nov 2019 13:41:42**

**ID: IA2-537STD150**
**Name: I13440**
**Date: 18-Nov-2019**
**Time: 12:16:43**
**Description: WG1310082,,537_190904_7**
**Instrument: XEVO-TQSmicro#QEB0050**
**User: LCMS02:JW**
**Inlet Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\LCMS_537_ISO_B**
**Tune Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\181009_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

| | Name | CAS | RT | Trace | Area | M Flag | Conc (ng/mL) | Ion Ratio | Ratio Flag | %Rec |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | PFBA | 375-22-4 | 2.20 | 212.926 > 169.111 | 626725 | | 152.770 | | na | 101.8 |
| 2 | M3PFBA | INT STD | 2.19 | 215.926 > 172.122 | 44321 | | 9.565 | | na | 95.7 |
| 3 | MPFBA | INT STD | 2.19 | 216.926 > 172.137 | 49132 | | 10.186 | | na | 101.9 |
| 4 | PFPeA | 2706-90-3 | 5.09 | 262.926 > 219.002 | 1014589 | | 152.143 | | na | 101.4 |
| 5 | M5PFPEA | INT STD | 5.09 | 267.989 > 223.081 | 69048 | | 10.093 | | na | 100.9 |
| 6 | PFBS | 375-73-5 | 5.74 | 298.926 > 79.923 | 183933 | | 136.241 | 1.89 | NO | 102.6 |
| 7 | M3PFBS | INT STD | 5.74 | 301.989 > 80.254 | 9189 | | 10.380 | | na | 103.8 |
| 8 | 4:2FTS | 757124-72-4 | 6.91 | 326.926 > 306.957 | 86895 | | 157.479 | 2.21 | NO | 112.3 |
| 9 | M2-4:2FTS | INT STD | 6.91 | 329.117 > 309.079 | 9331 | | 16.234 | | na | 162.3 |
| 10 | PFHxA | 307-24-4 | 6.99 | 312.989 > 269.028 | 1081576 | | 153.479 | 18.51 | NO | 102.3 |
| 11 | M5PFHxA | INT STD | 6.99 | 317.989 > 273.045 | 76552 | | 10.205 | | na | 102.1 |
| 12 | PFPeS | 2706-91-4 | 7.30 | 348.926 > 80.251 | 121259 | | 138.608 | 1.78 | NO | 98.3 |
| 13 | PFHpA | 375-85-9 | 8.25 | 362.926 > 319.014 | 1427443 | | 153.988 | 5.91 | NO | 102.7 |
| 14 | M4PFHpA | INT STD | 8.25 | 366.926 > 321.979 | 102764 | | 10.285 | | na | 102.8 |
| 15 | br-PFHxS | 355-46-4 | 8.18 | 398.926 > 80.295 | 18596 | M5 | 25.883 | 2.38 | NO | 101.5 |
| 16 | L-PFHxS | 355-46-4 | 8.41 | 398.926 > 80.295 | 73279 | | 111.834 | 1.16 | NO | 100.8 |
| 17 | PFHxS | 355-46-4 | | 398.926 > 80.295 | 91875 | | 137.717 | | na | |
| 18 | M3PFHxS | INT STD | 8.41 | 401.926 > 80.317 | 5231 | | 10.237 | | na | 102.4 |
| 19 | br-PFOA | 335-67-1 | | 412.989 > 368.9 | | | ND | | YES | |
| 20 | L-PFOA | 335-67-1 | 9.19 | 412.989 > 368.9 | 1380425 | | 153.321 | 10.18 | NO | 102.2 |
| 21 | PFOA | 335-67-1 | | 412.989 > 368.9 | 1380425 | | 153.321 | | na | |
| 22 | M8PFOA | INT STD | 9.19 | 420.989 > 375.979 | 98053 | | 10.226 | | na | 102.3 |
| 23 | M2PFOA | INT STD | 9.19 | 415.032 > 369.968 | 97991 | | 9.270 | | na | 92.7 |
| 24 | 6:2FTS | 27619-97-2 | 9.15 | 426.989 > 406.921 | 66169 | | 145.112 | 10.43 | NO | 101.8 |
| 25 | M2-6:2FTS | INT STD | 9.15 | 428.989 > 408.917 | 8491 | | 15.115 | | na | 151.2 |
| 26 | PFHpS | 375-92-8 | 9.28 | 448.926 > 80.257 | 65509 | | 151.638 | 0.85 | YES | 106.4 |
| 27 | PFNA | 375-95-1 | 9.94 | 462.989 > 418.931 | 1196780 | | 151.249 | 4.46 | NO | 100.8 |
| 28 | M9PFNA | INT STD | 9.94 | 472.053 > 426.947 | 96586 | | 10.238 | | na | 102.4 |
| 29 | br-PFOS | 1763-23-1 | 9.80 | 498.989 > 80.294 | 28882 | M5 | 30.417 | 4.33 | NO | 101.4 |
| 30 | L-PFOS | 1763-23-1 | 9.99 | 498.989 > 80.294 | 73591 | | 114.296 | 1.52 | YES | 104.4 |
| 31 | PFOS | 1763-23-1 | | 498.989 > 80.294 | 102473 | | 144.713 | | na | |
| 32 | M4PFOS | INT STD | 9.99 | 503.032 > 80.306 | 6325 | | 9.056 | | na | 90.6 |
| 33 | M8PFOS | INT STD | 9.99 | 507.053 > 80.294 | 6561 | | 10.109 | | na | 101.1 |
| 34 | PFDA | 335-76-2 | 10.57 | 513.053 > 468.906 | 1090370 | | 154.634 | 6.85 | NO | 103.1 |
| 35 | M2PFDA | INT STD | 10.57 | 515.053 > 469.934 | 77816 | | 8.814 | | na | 88.1 |
| 36 | M6PFDA | INT STD | 10.57 | 519.053 > 473.931 | 82199 | | 10.221 | | na | 102.2 |
| 37 | 8:2FTS | 39108-34-4 | 10.56 | 526.926 > 506.818 | 47139 | | ND | | na | |
| 38 | M2-8:2FTS | INT STD | 10.56 | 529.053 > 508.945 | 4959 | | 15.048 | | na | 150.5 |
| 39 | PFNS | 68259-12-1 | 10.60 | 548.989 > 80.249 | 90356 | | 148.060 | 1.24 | NO | 102.8 |


all concentration units in (ng/mL)

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Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
Printed: Monday, November 18, 2019 13:43:00 Eastern Standard Time

**ID: IA2-537STD150**
**Name: I13440**
**Date: 18-Nov-2019**
**Time: 12:16:43**
**Description: WG1310082,,537_190904_7**
**Instrument: XEVO-TQSmicro#QEB0050**
**User: LCMS02:JW**
**Inlet Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\LCMS_537_ISO_B**
**Tune Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\181009_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

| | Name | CAS | RT | Trace | Area | M Flag | Conc (ng/mL) | Ion Ratio | Ratio Flag | %Rec |
|---|---|---|---|---|---|---|---|---|---|---|
| 40 | d3-NMeFOSAA | INT STD | 10.95 | 573.096 > 418.987 | 9724 | | 10.617 | | na | 106.2 |
| 41 | br-NMeFOSAA | 2355-31-9 | | 570.053 > 418.917 | | | ND | | YES | |
| 42 | L-NMeFOSAA | 2355-31-9 | 10.96 | 570.053 > 418.917 | 146965 | | 162.157 | 2.74 | NO | 108.1 |
| 43 | NMeFOSAA | 2355-31-9 | | 570.053 > 418.917 | 146965 | | 162.157 | | na | |
| 44 | PFUnA | 2058-94-8 | 11.11 | 562.989 > 518.903 | 1013266 | | 151.620 | 8.25 | NO | 101.1 |
| 45 | M7-PFUDA | INT STD | 11.11 | 570.053 > 524.923 | 69883 | | 9.795 | | na | 97.9 |
| 46 | PFDS | 335-77-3 | 11.12 | 598.926 > 80.314 | 65178 | | 149.422 | 0.99 | NO | 103.2 |
| 47 | FOSA | 754-91-6 | 11.01 | 497.989 > 78.245 | 333812 | | 147.280 | 120.34 | NO | 98.2 |
| 48 | M8FOSA | INT STD | 11.01 | 506.053 > 78.286 | 21330 | | 11.218 | | na | 112.2 |
| 49 | d5-NEtFOSAA | INT STD | 11.24 | 589.117 > 418.929 | 9186 | | 11.353 | | na | 113.5 |
| 50 | br-NEtFOSAA | 2991-50-6 | | 583.989 > 418.927 | | | ND | 0.00 | NO | |
| 51 | L-NEtFOSAA | 2991-50-6 | 11.25 | 583.989 > 418.927 | 136569 | | 157.490 | 2.64 | NO | 105.0 |
| 52 | NEtFOSAA | 2991-50-6 | | 583.989 > 418.927 | 136569 | | 157.490 | | na | |
| 53 | PFDoA | 307-55-1 | 11.59 | 612.989 > 568.967 | 1093507 | | 154.839 | 14.29 | NO | 103.2 |
| 54 | MPFDOA | INT STD | 11.59 | 614.989 > 569.92 | 83381 | | 10.417 | | na | 104.2 |
| 55 | PFTrDA | 72629-94-8 | 12.00 | 663.053 > 618.969 | 780709 | | 151.037 | 10.89 | NO | 100.7 |
| 56 | PFTA | 376-06-7 | 12.36 | 713.053 > 668.976 | 832832 | | 158.787 | 9.10 | NO | 105.9 |
| 57 | M2PFTEDA | INT STD | 12.36 | 715.053 > 669.945 | 65494 | | 10.301 | | na | 103.0 |
| 58 | M3HFPO-DA | INT STD | 7.40 | 331.989 > 286.995 | 12097 | | 287.953 | | na | 144.0 |
| 59 | HFPO-DA | 13252-13-6 | 7.40 | 284.819 > 169.094 | 306093 | | 3047.579 | 2.68 | YES | 101.6 |
| 60 | ADONA | 958445-44-8 | 8.43 | 376.926 > 251.005 | 1853079 | | 143.757 | | na | 101.3 |
| 61 | PFHxDA | | 12.78 | 813.053 > 769.005 | 689196 | | 150.297 | | na | 100.2 |
| 62 | PFODA | | 12.99 | 912.989 > 869.032 | 517898 | | 154.059 | | na | 102.7 |
| 63 | M2PFHxDA | | 12.78 | 815.372 > 770.158 | 13525 | | 9.993 | | na | 99.9 |
| 64 | PFDoS | | 11.99 | 698.649 > 79.853 | 69331 | | 155.917 | 1.91 | YES | 103.9 |
| 65 | 10:2FTS | | 11.60 | 626.862 > 606.896 | 47687 | | ND | | na | |
| 66 | 9CL-PF3ONS | | 10.34 | 530.862 > 350.843 | 635029 | | 147.281 | | na | 105.4 |
| 67 | 11CL-PFOUdS | | 11.38 | 630.862 > 450.854 | 542069 | | 149.130 | | na | 105.5 |
| 68 | NMeFOSA | | 11.62 | 511.804 > 168.906 | 126611 | | 161.032 | 1.50 | NO | 107.4 |
| 69 | d3-NMeFOSA | | 11.62 | 514.84 > 168.917 | 10579 | | 10.668 | | na | 106.7 |
| 70 | NEtFOSA | | 11.92 | 525.84 > 168.92 | 142438 | | 150.612 | 5.67 | NO | 100.4 |
| 71 | d5-NEtFOSA | | 11.91 | 530.904 > 168.919 | 10793 | | 11.128 | | na | 111.3 |
| 72 | NMeFOSE | | 11.62 | 615.862 > 58.9 | 153742 | | 160.875 | | na | 107.2 |
| 73 | d7-NMeFOSE | | 11.61 | 622.84 > 58.964 | 4724 | | 10.171 | | na | 101.7 |
| 74 | NEtFOSE | | 11.91 | 629.862 > 58.899 | 178591 | | 147.011 | | na | 98.0 |
| 75 | d9-NEtFOSE | | 11.89 | 638.734 > 58.964 | 3077 | | 11.332 | | na | 113.3 |


all concentration units in (ng/mL)

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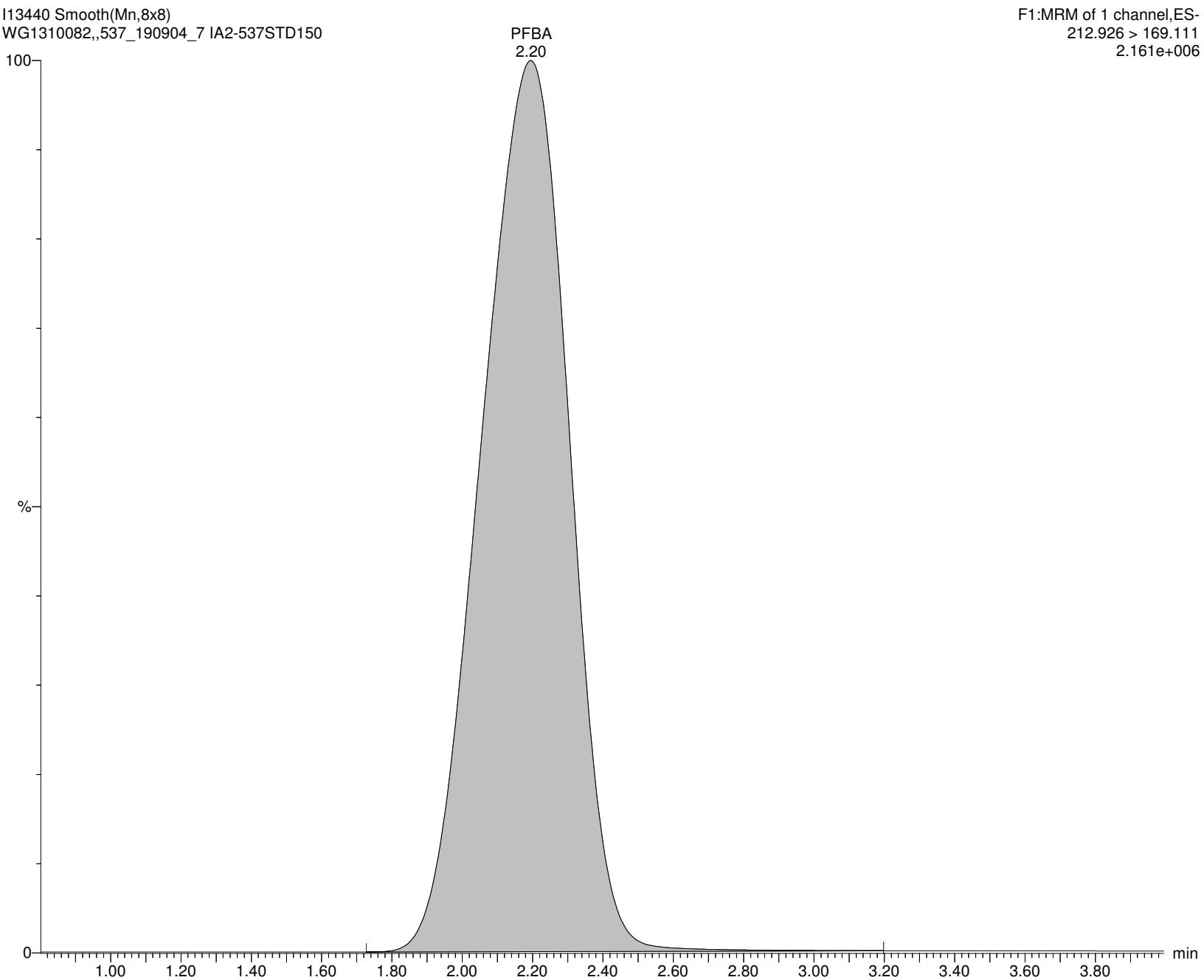
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
Printed: Monday, November 18, 2019 13:43:00 Eastern Standard Time

**Method: C:\MassLynx\Data\2019\191118_537ISO.PRO\MethDB\537ISO_Q_191118_DOD .mdb 18 Nov 2019 13:05:34**
**Calibration: C:\MassLynx\Data\2019\191118_537ISO.PRO\CurveDB\191118_ISO_ICAL.cdb 18 Nov 2019 13:41:42**

**Name: I13440**
**ID: IA2-537STD150**
**Date: 18-Nov-2019**
**Time: 12:16:43**
**Description: WG1310082,,537_190904_7**
**User: LCMS02:JW**
**Vial: 1:A,8**
**Instrument: XEVO-TQSmicro#QEB0050**
**Inlet Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\LCMS_537_ISO_B**
**Tune Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\181009_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**PFBA**





all concentration units in (ng/mL)

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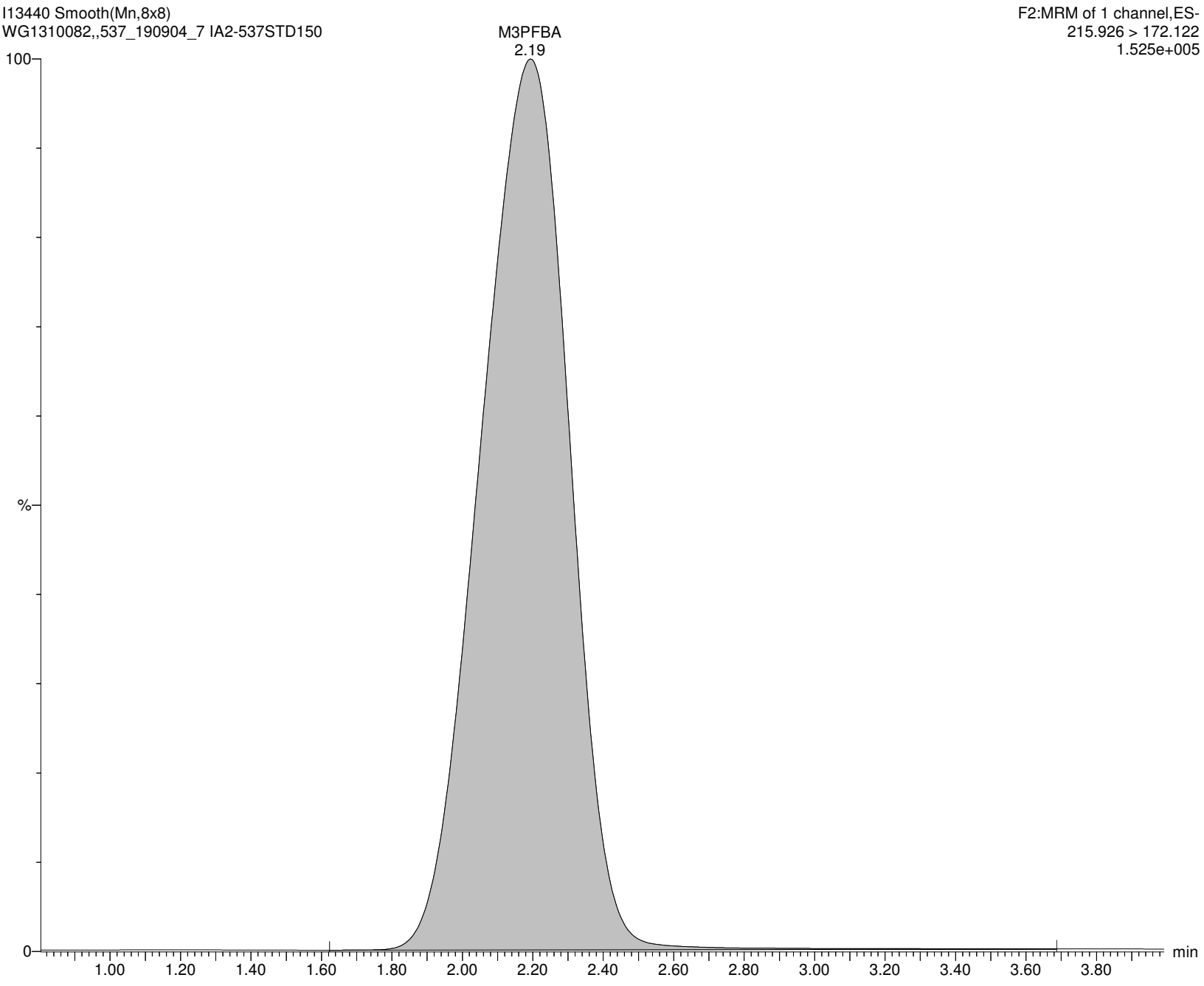
**MS Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**M3PFBA**





all concentration units in (ng/mL)

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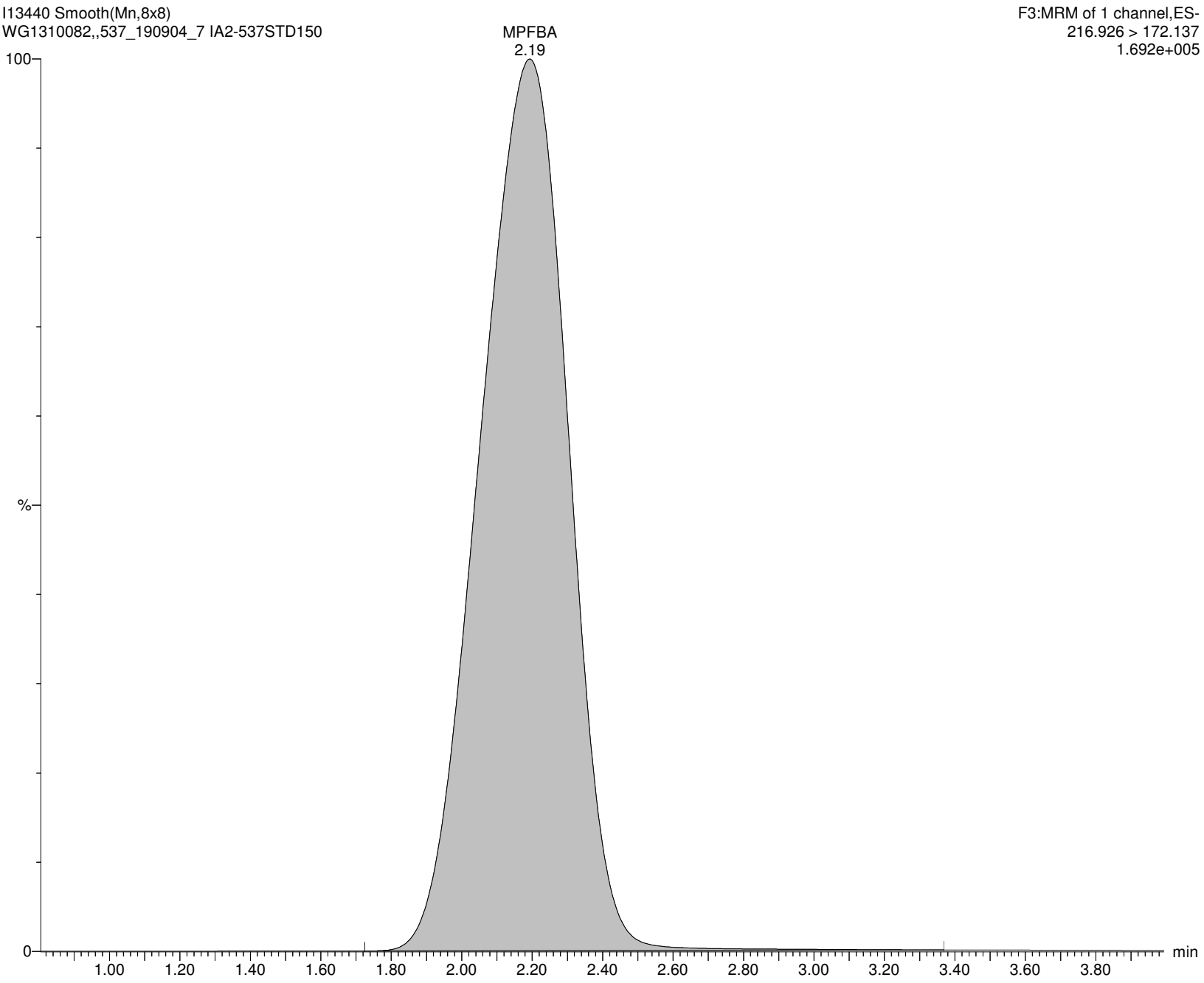
**MS Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**MPFBA**





all concentration units in (ng/mL)

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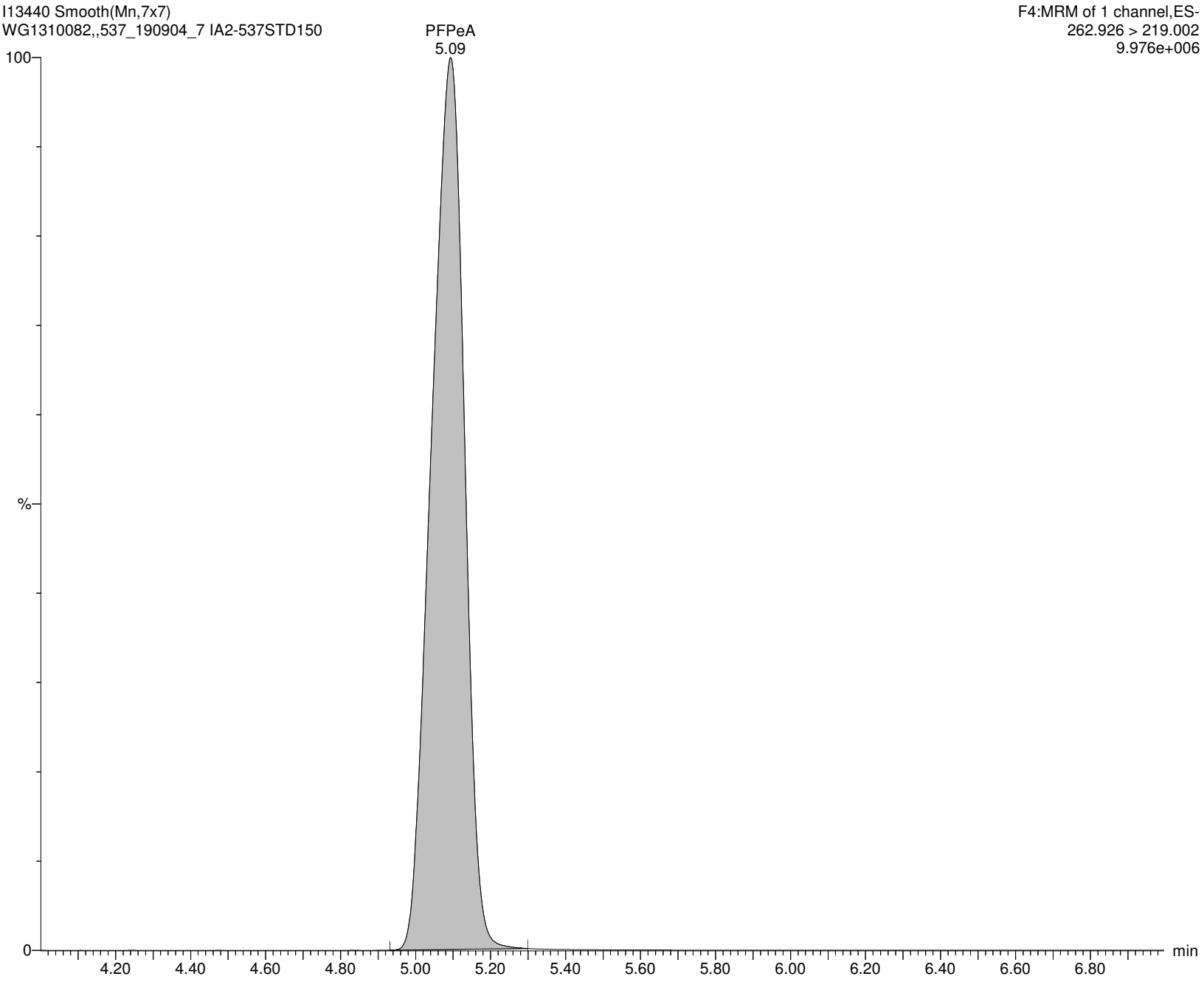
**MS Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**PFPeA**





all concentration units in (ng/mL)

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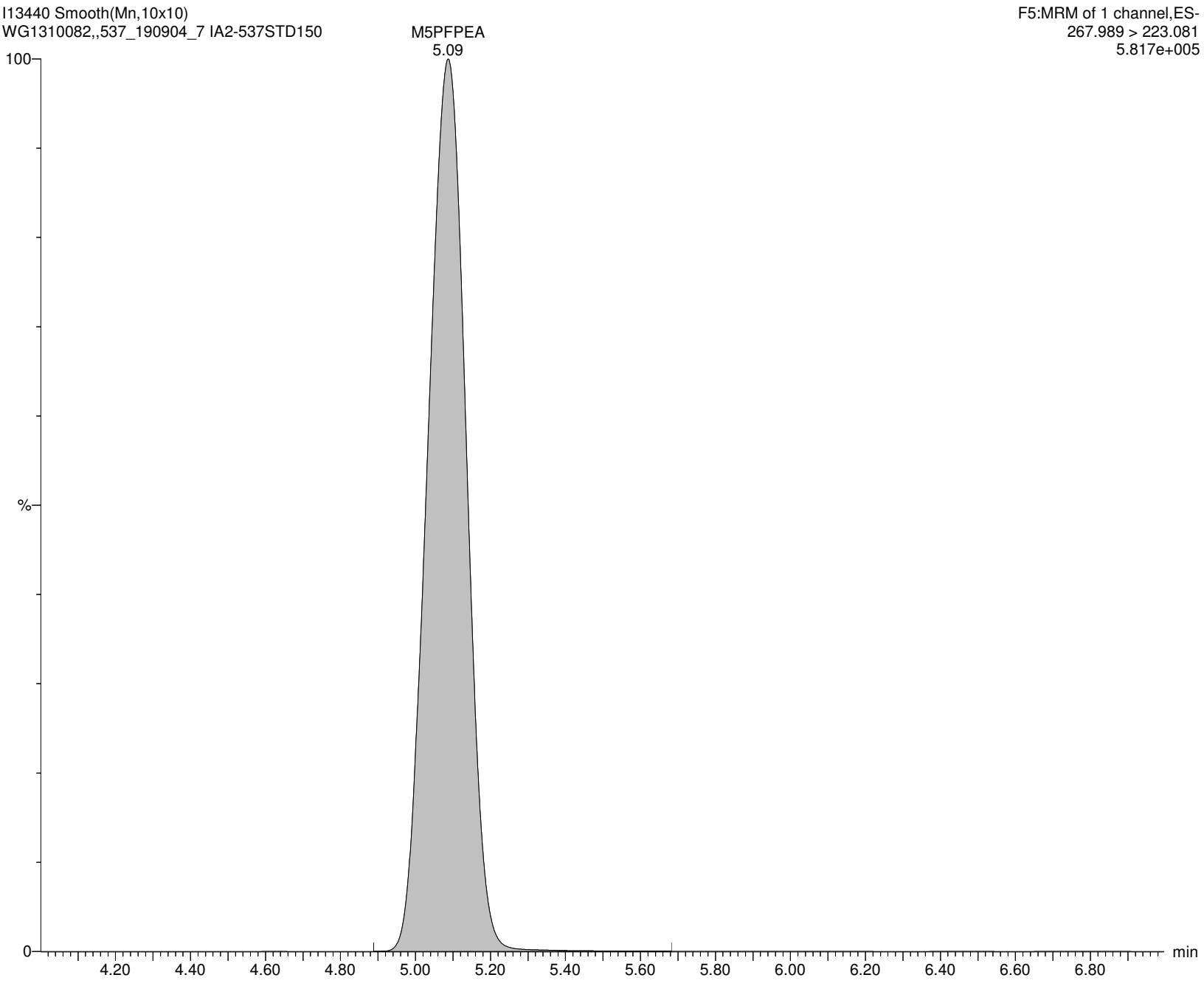
**MS Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**M5PFPEA**





all concentration units in (ng/mL)

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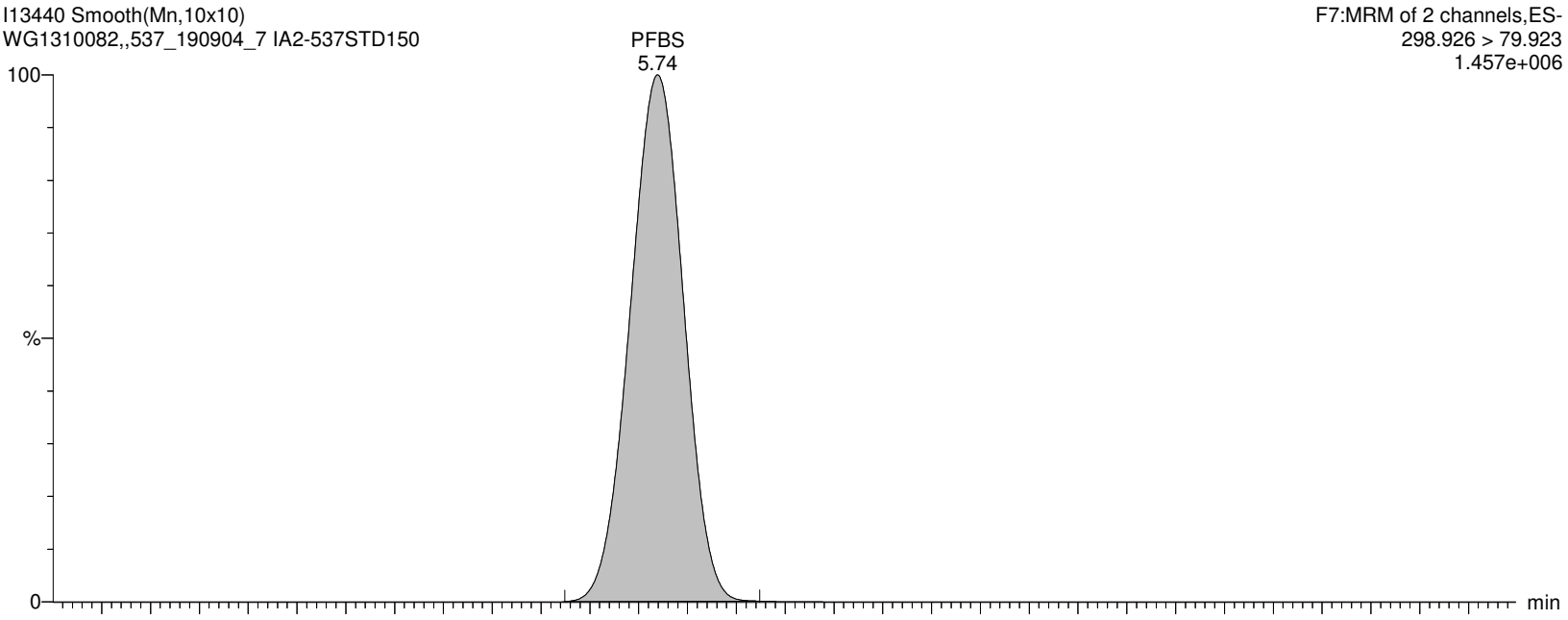
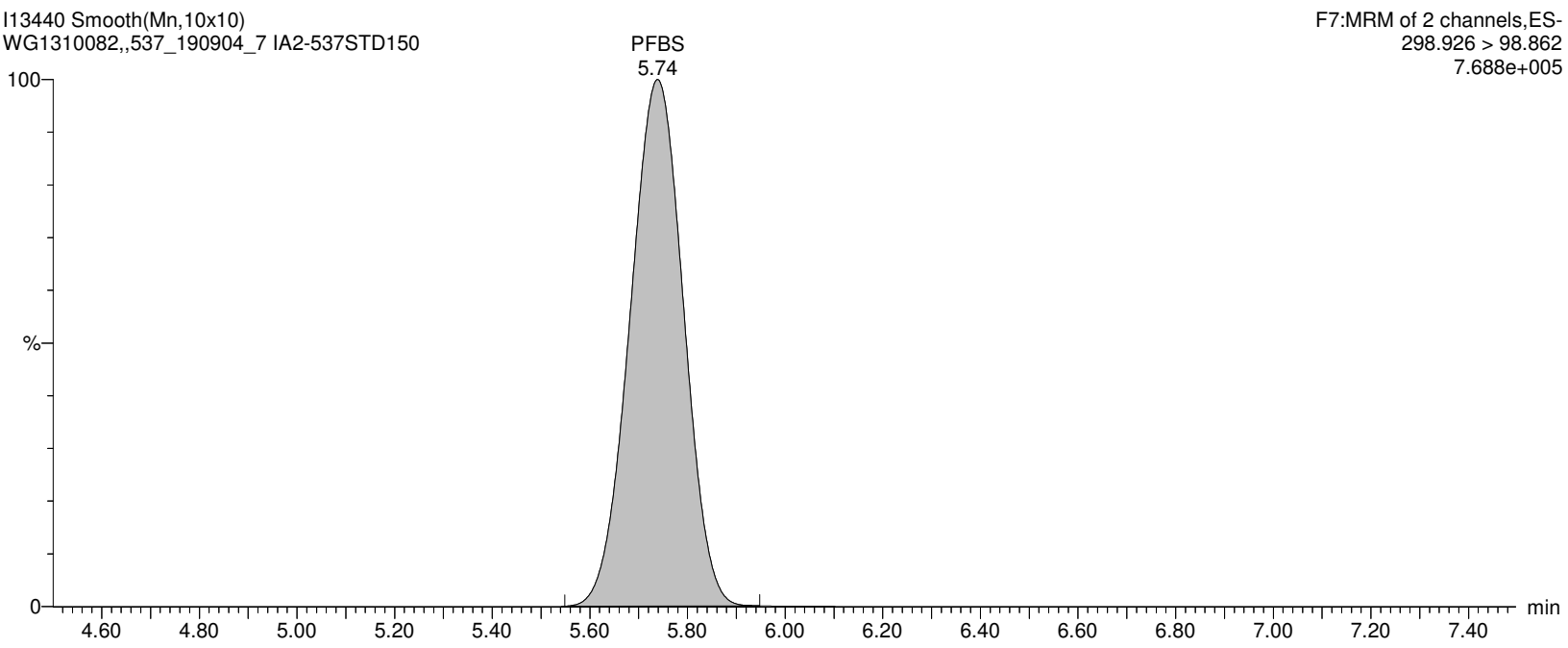
**MS Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**PFBS**





all concentration units in (ng/mL)

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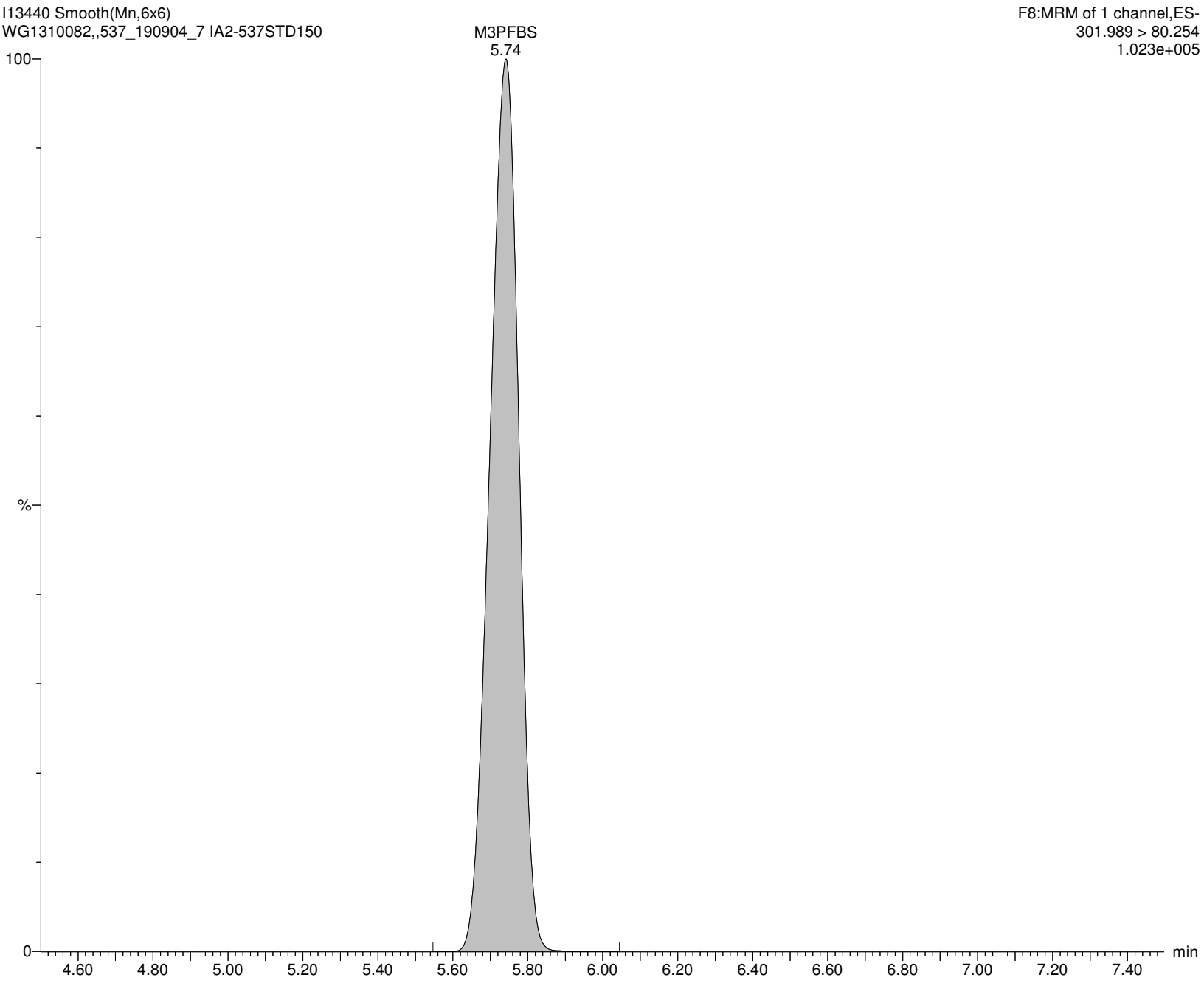
**MS Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**M3PFBS**





all concentration units in (ng/mL)

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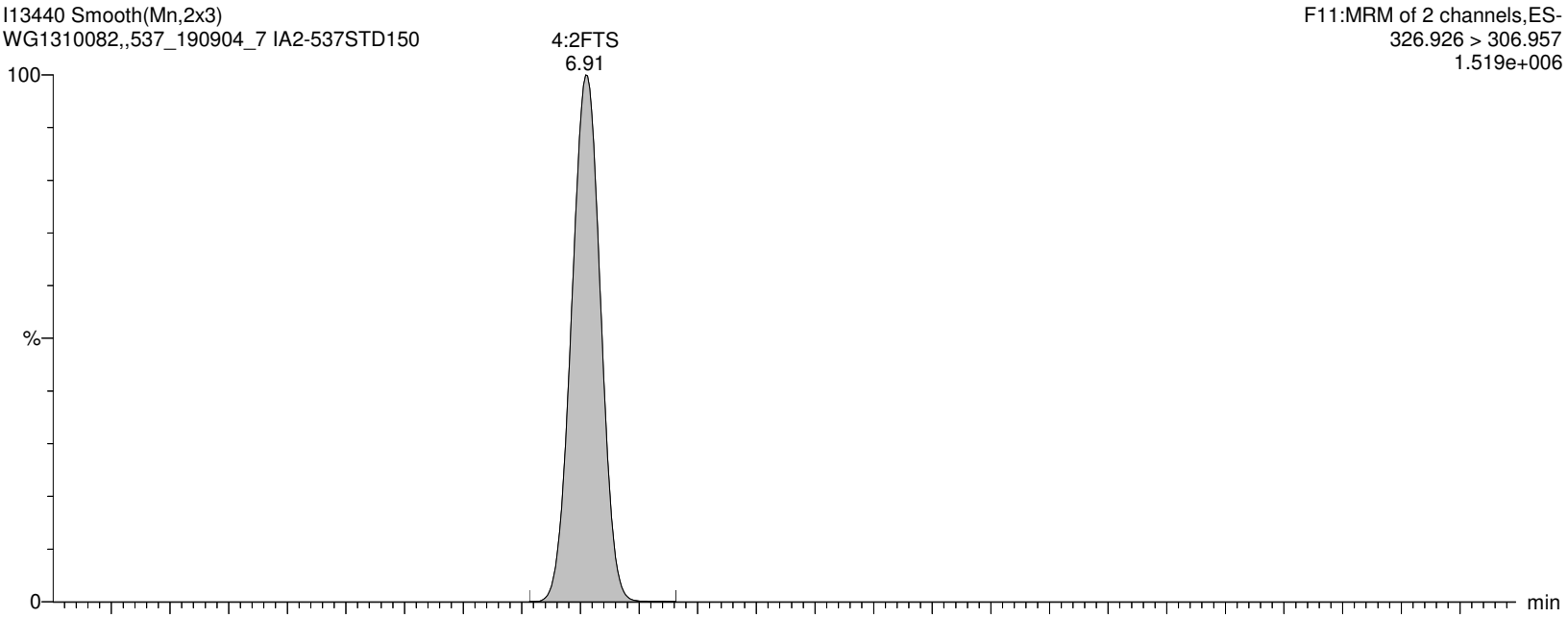
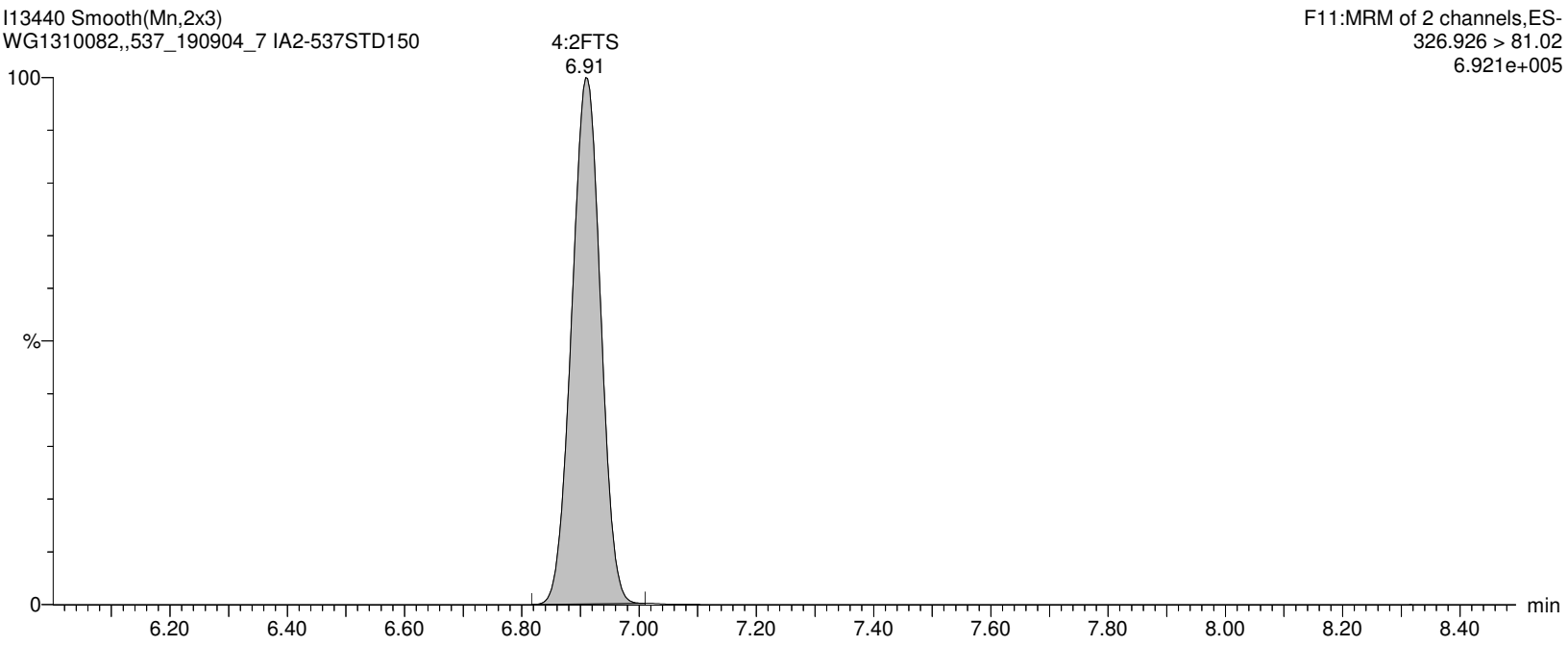
**Instrument: XEVO-TQSmicro#QEB0050**
**Inlet Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\LCMS_537_ISO_B**
**Tune Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\181009_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**4:2FTS**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
Printed: Monday, November 18, 2019 13:43:00 Eastern Standard Time

**Name: I13440**
**ID: IA2-537STD150**
**Date: 18-Nov-2019**
**Time: 12:16:43**
**Description: WG1310082,,537_190904_7**
**User: LCMS02:JW**
**Vial: 1:A,8**
**Instrument: XEVO-TQSmicro#QEB0050**
**Inlet Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\LCMS_537_ISO_B**
**Tune Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\181009_TUNE.IPR**
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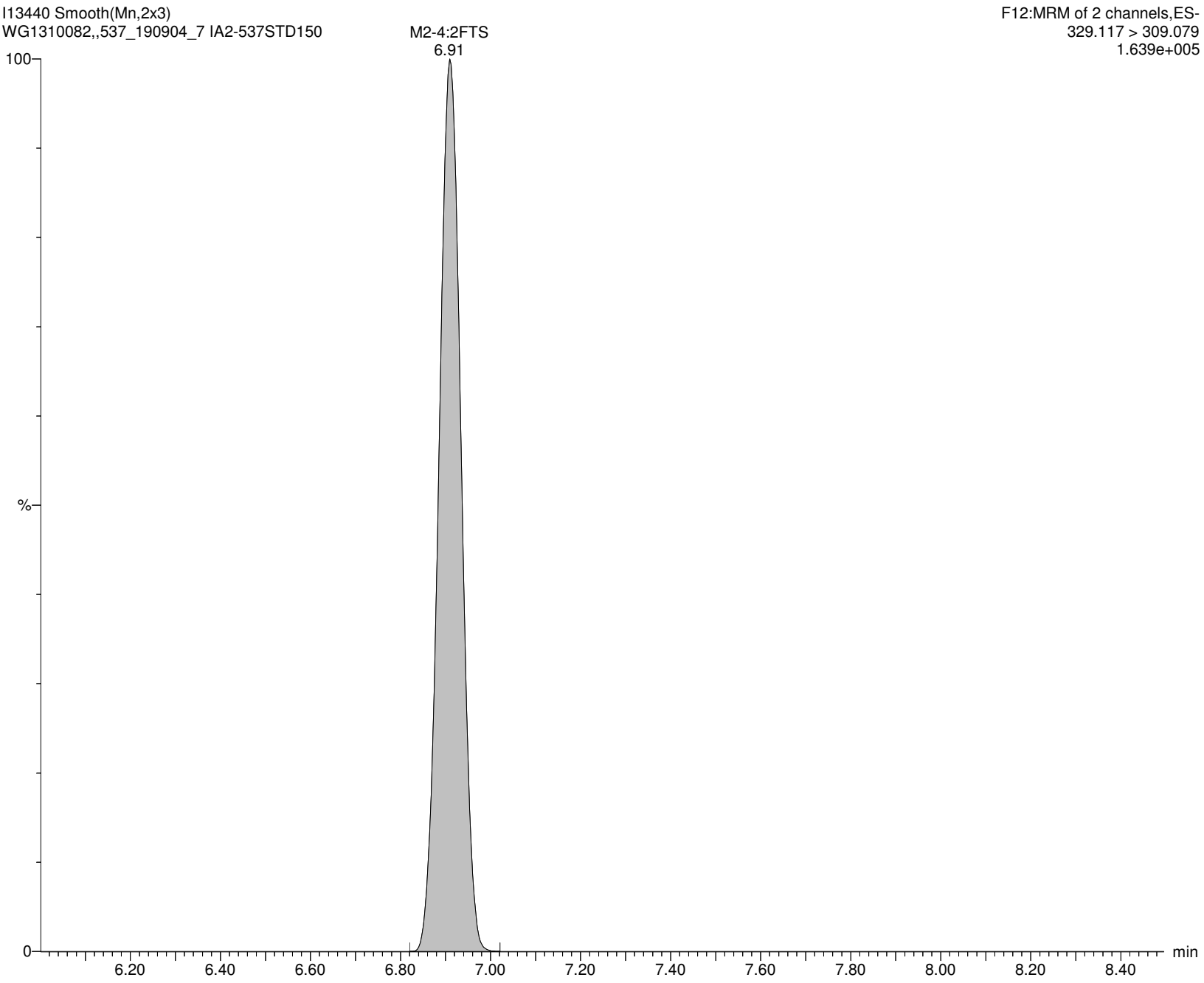
**M2-4:2FTS**





all concentration units in (ng/mL)

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**Instrument: XEVO-TQSmicro#QEB0050**
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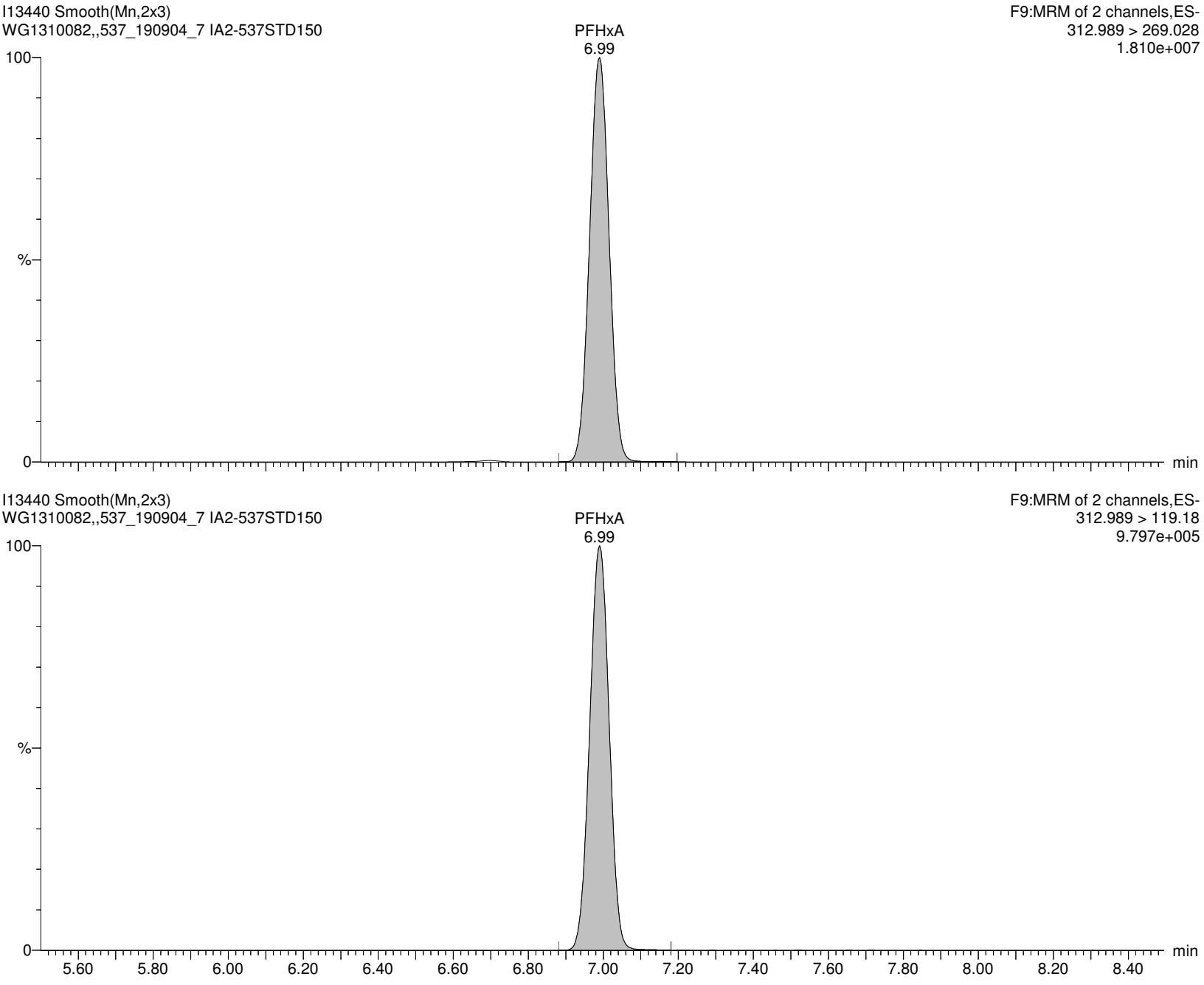
**PFHxA**





all concentration units in (ng/mL)

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Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
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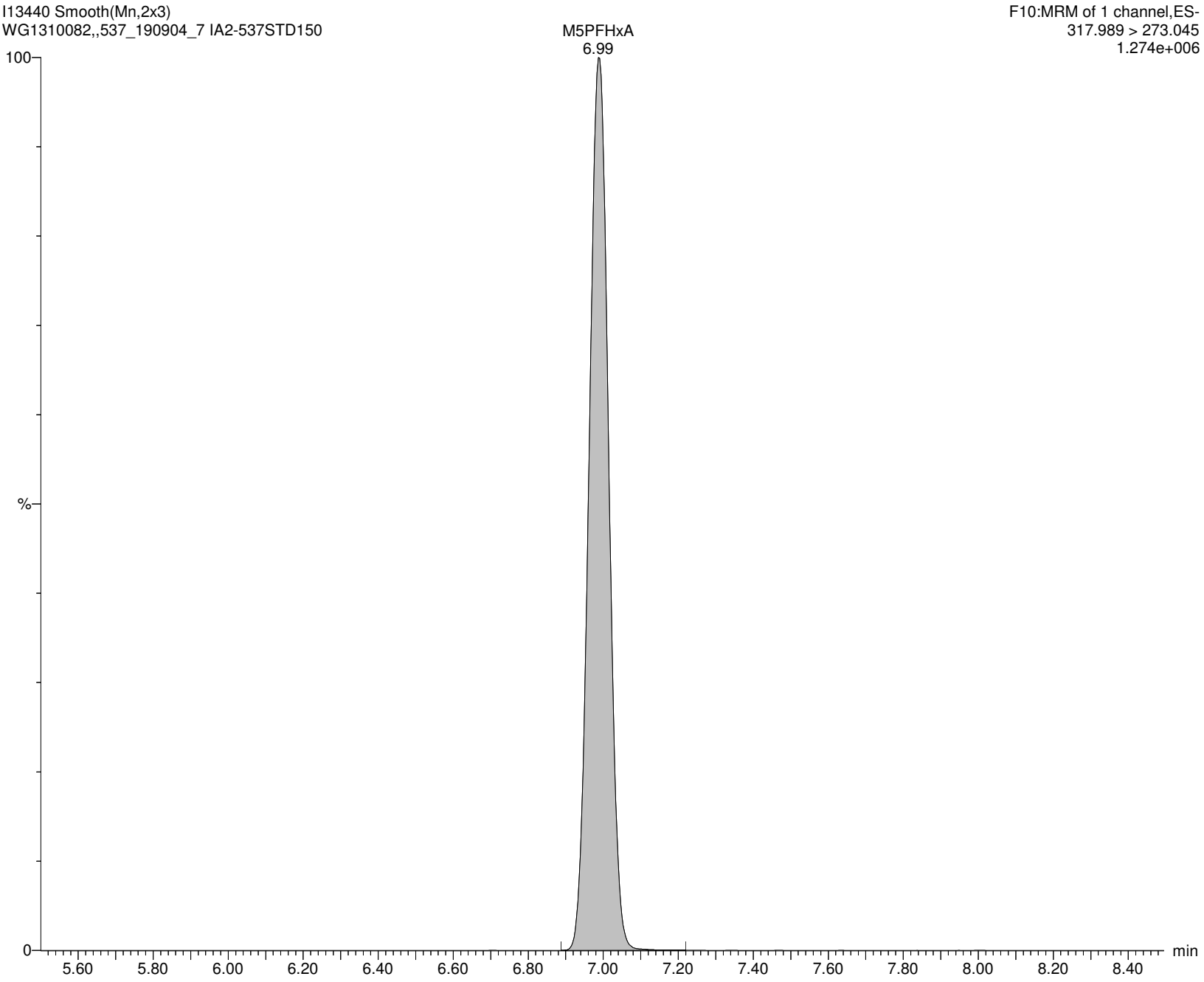



all concentration units in (ng/mL)

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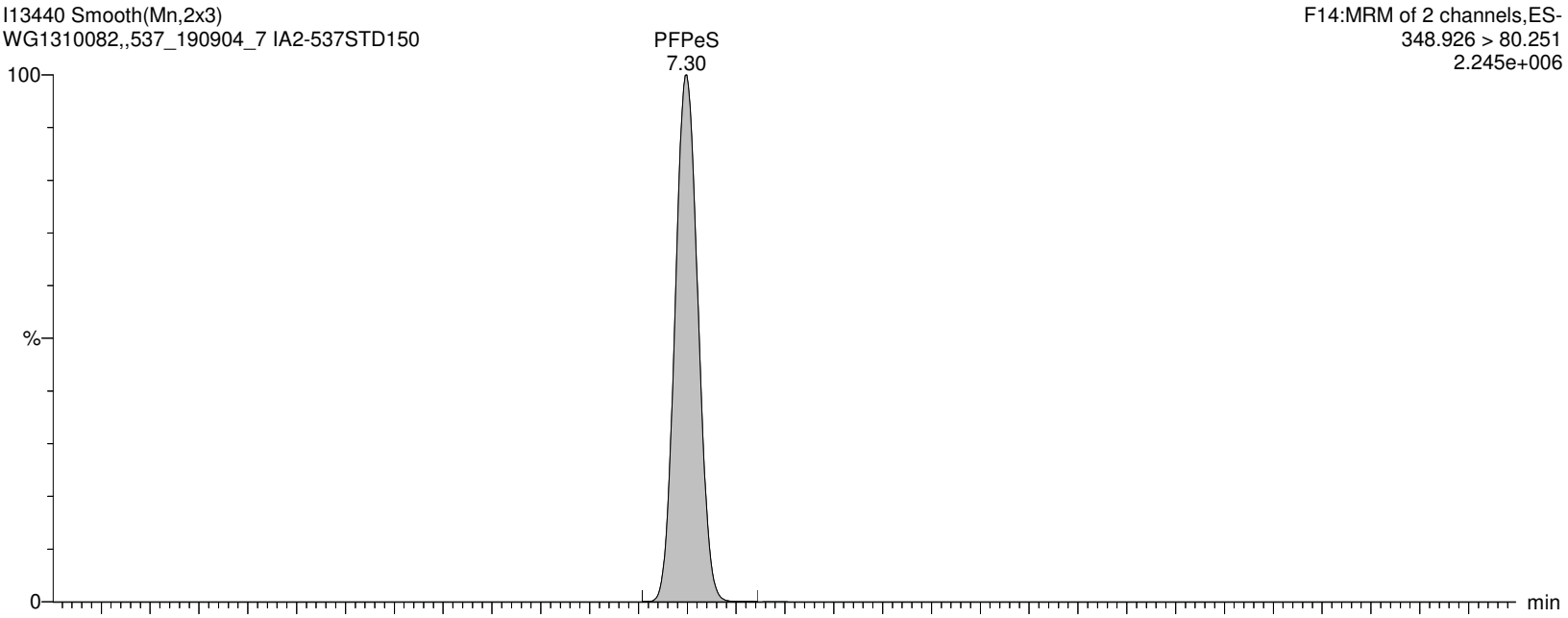
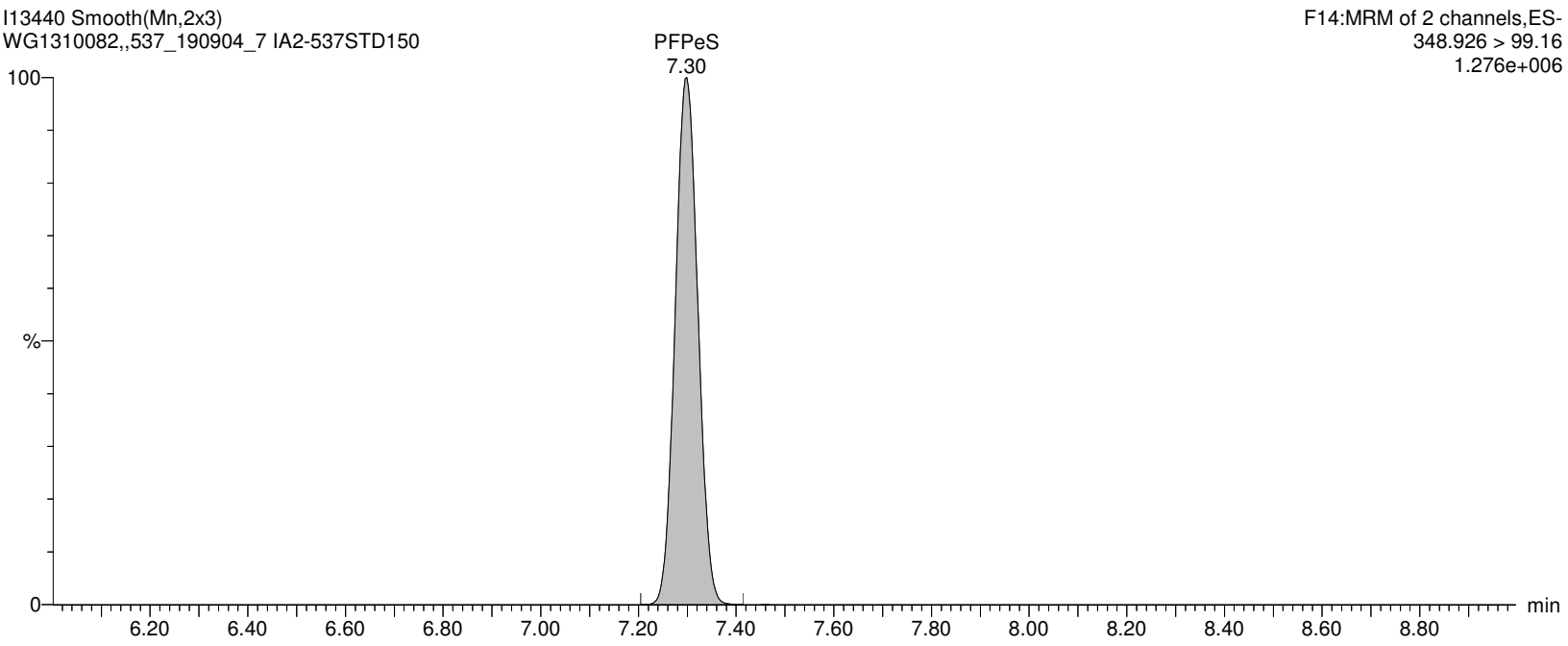
**PFPeS**





all concentration units in (ng/mL)

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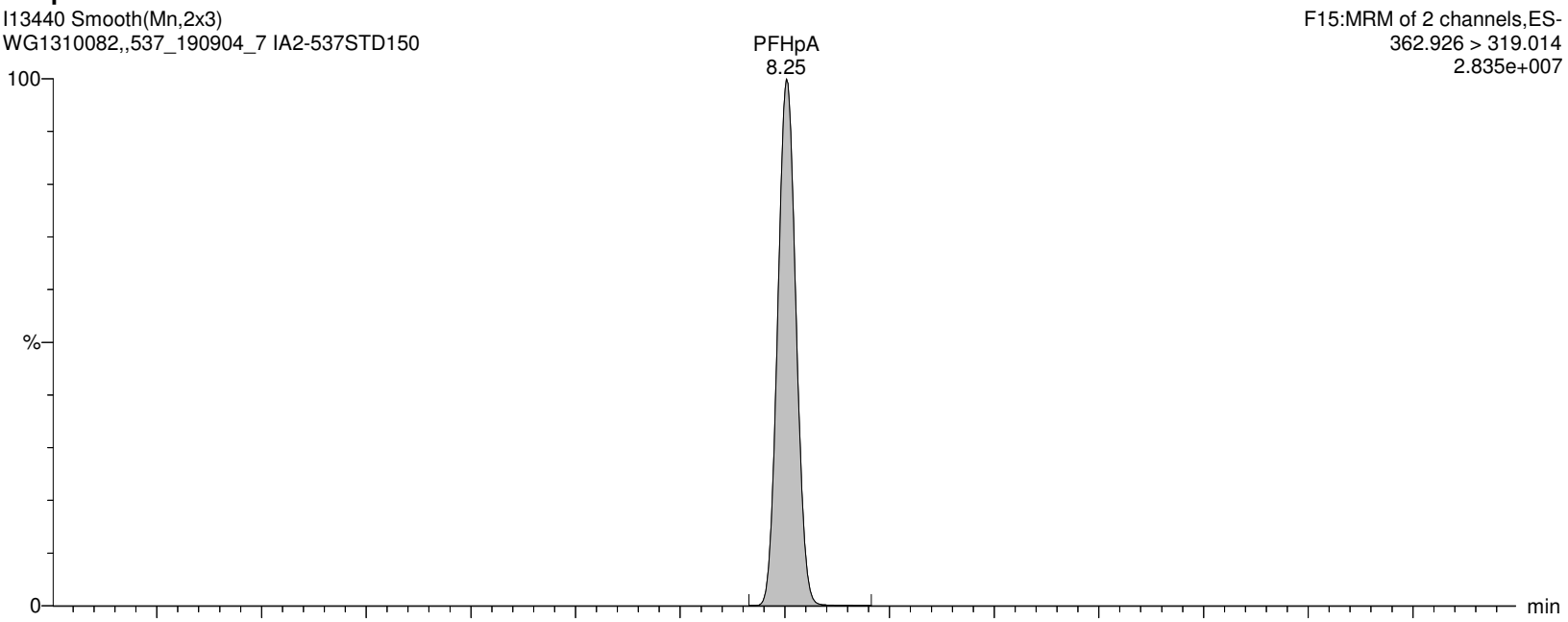
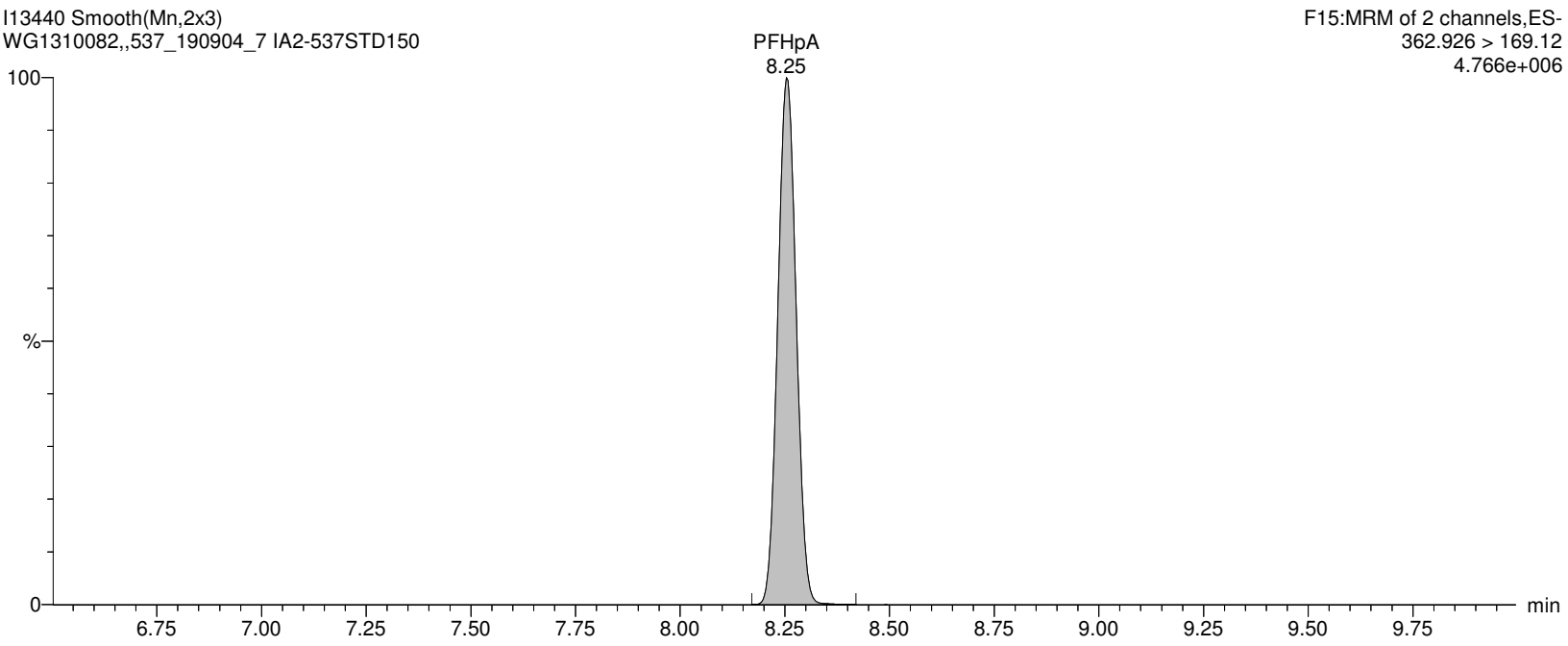
**PFHpA**





all concentration units in (ng/mL)

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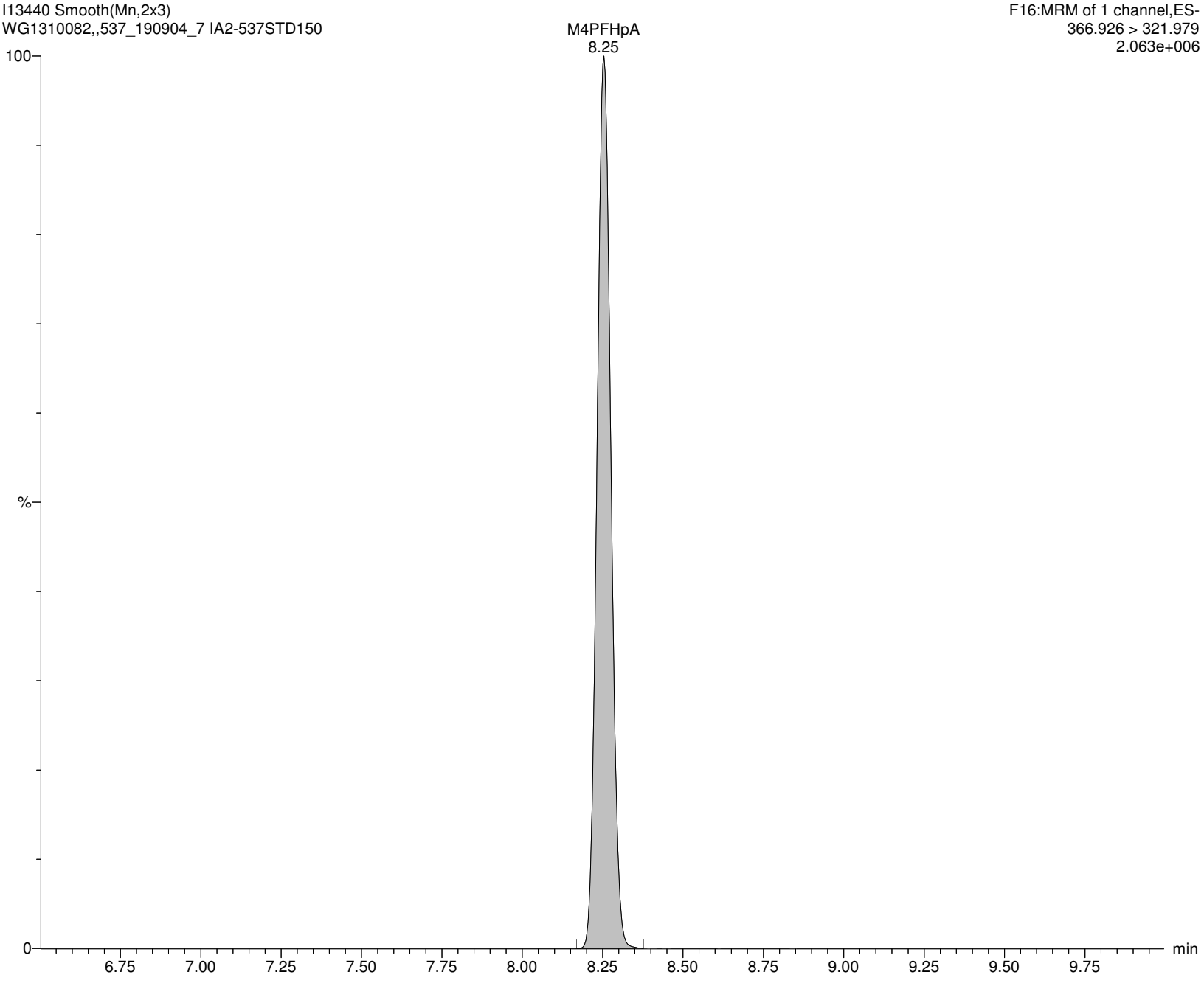
**M4PFHpA**





all concentration units in (ng/mL)

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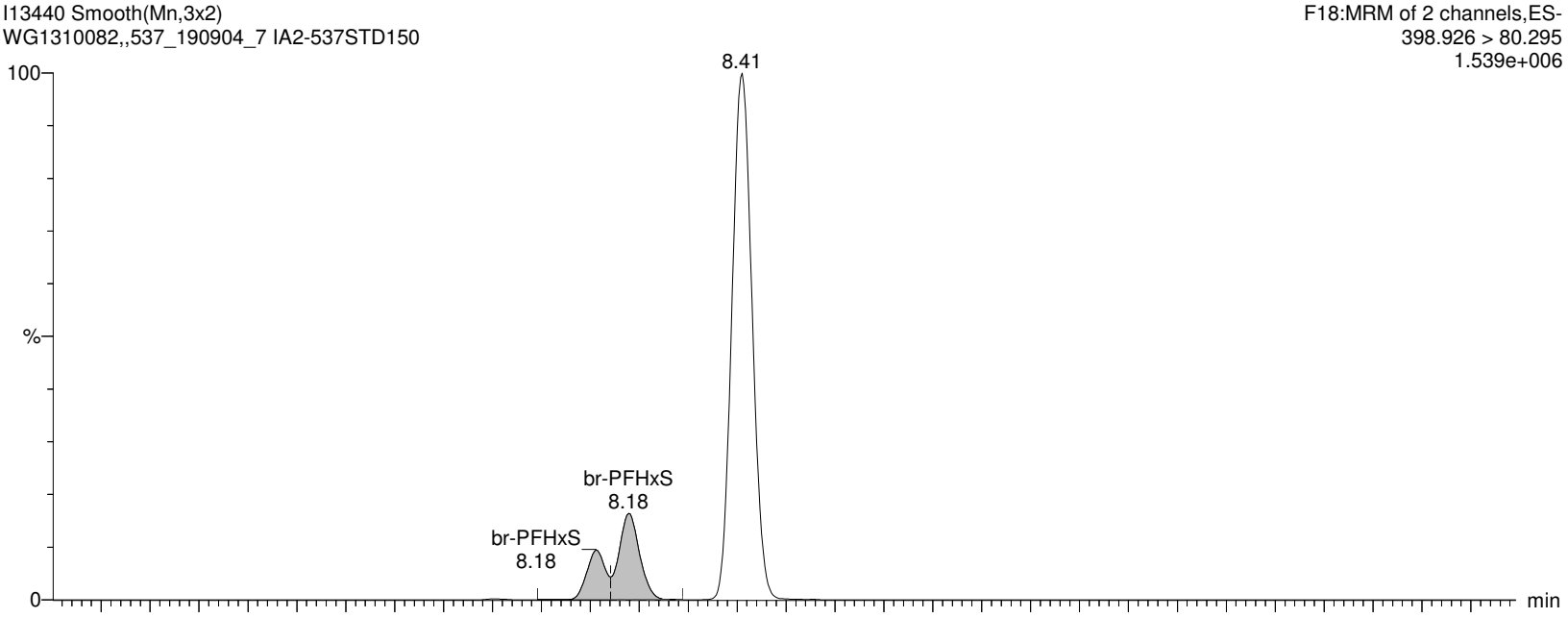
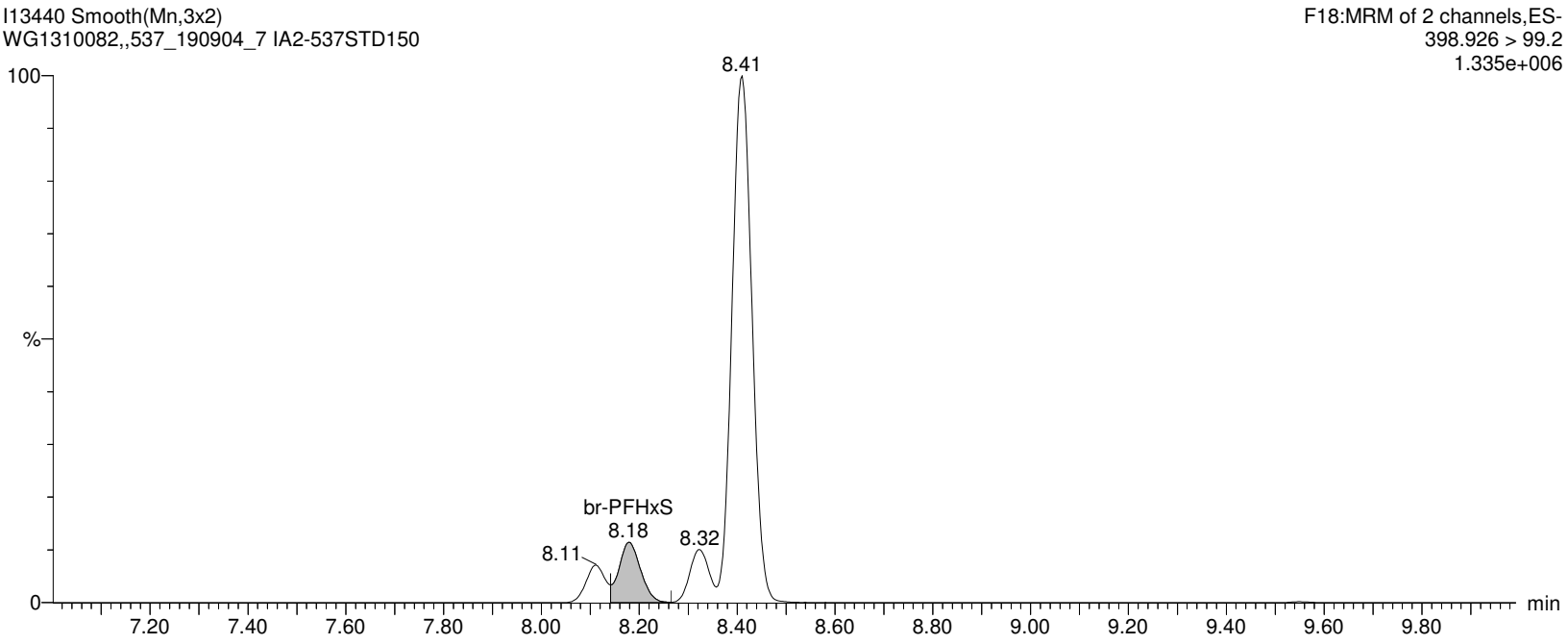
**br-PFHxS**





all concentration units in (ng/mL)

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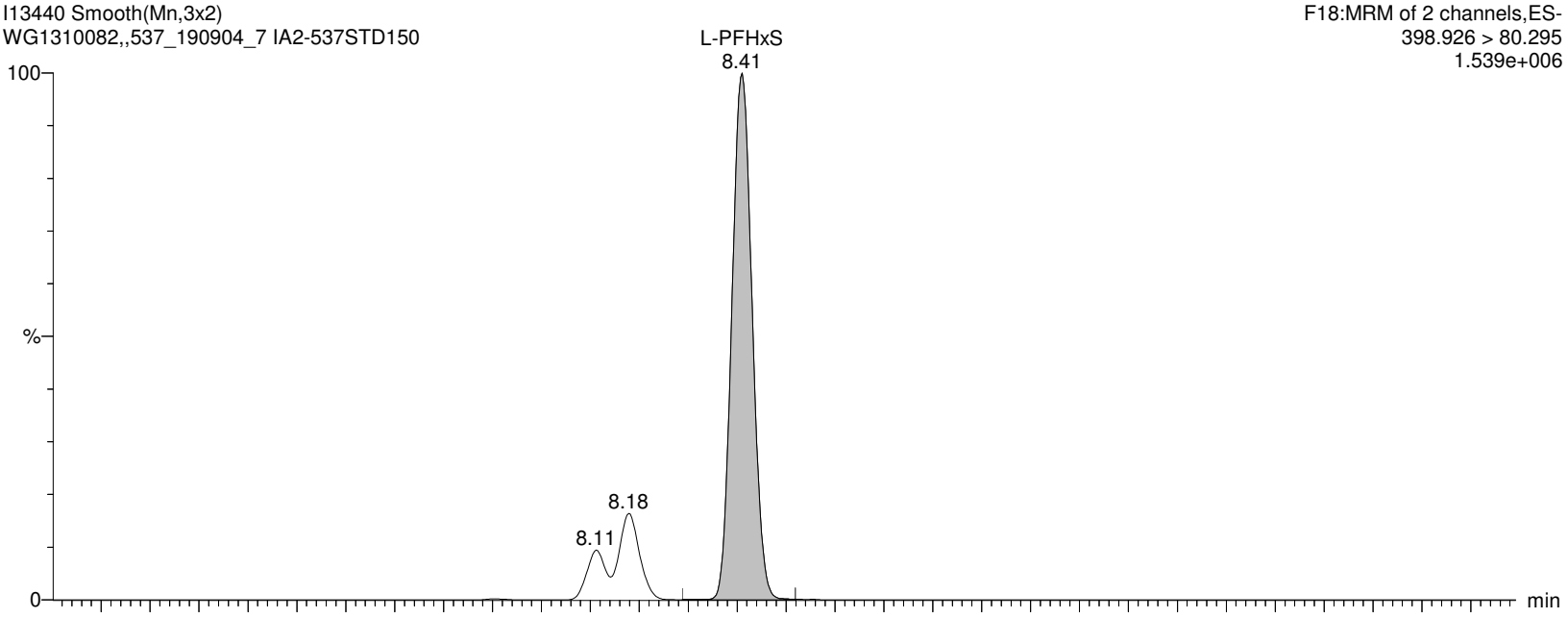
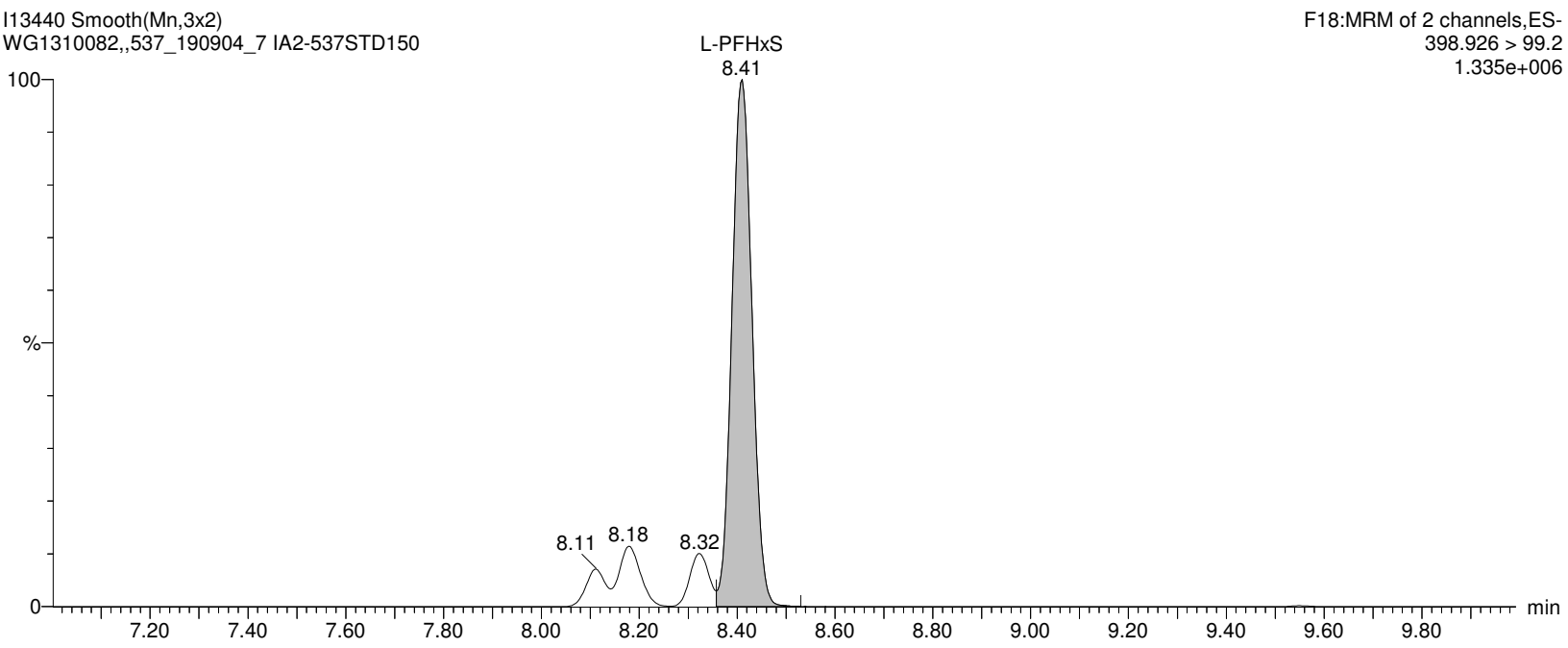
**L-PFHxS**





all concentration units in (ng/mL)

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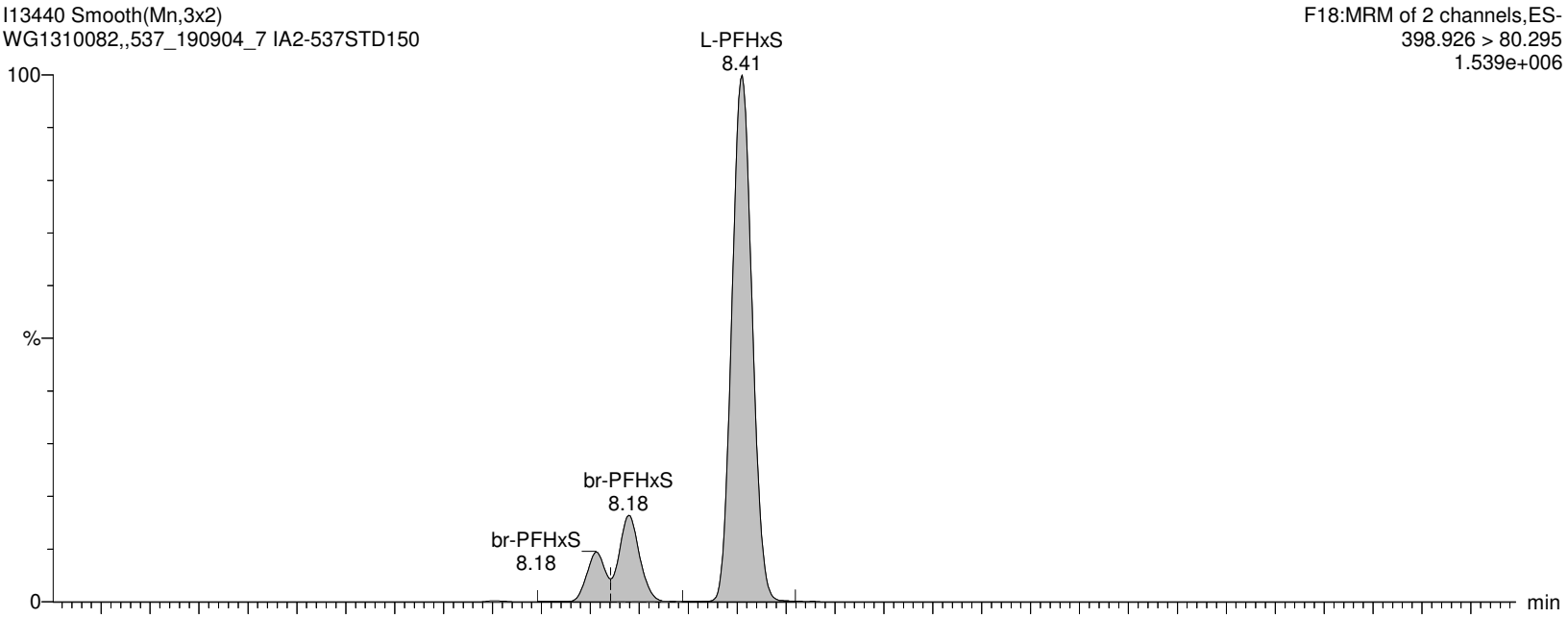
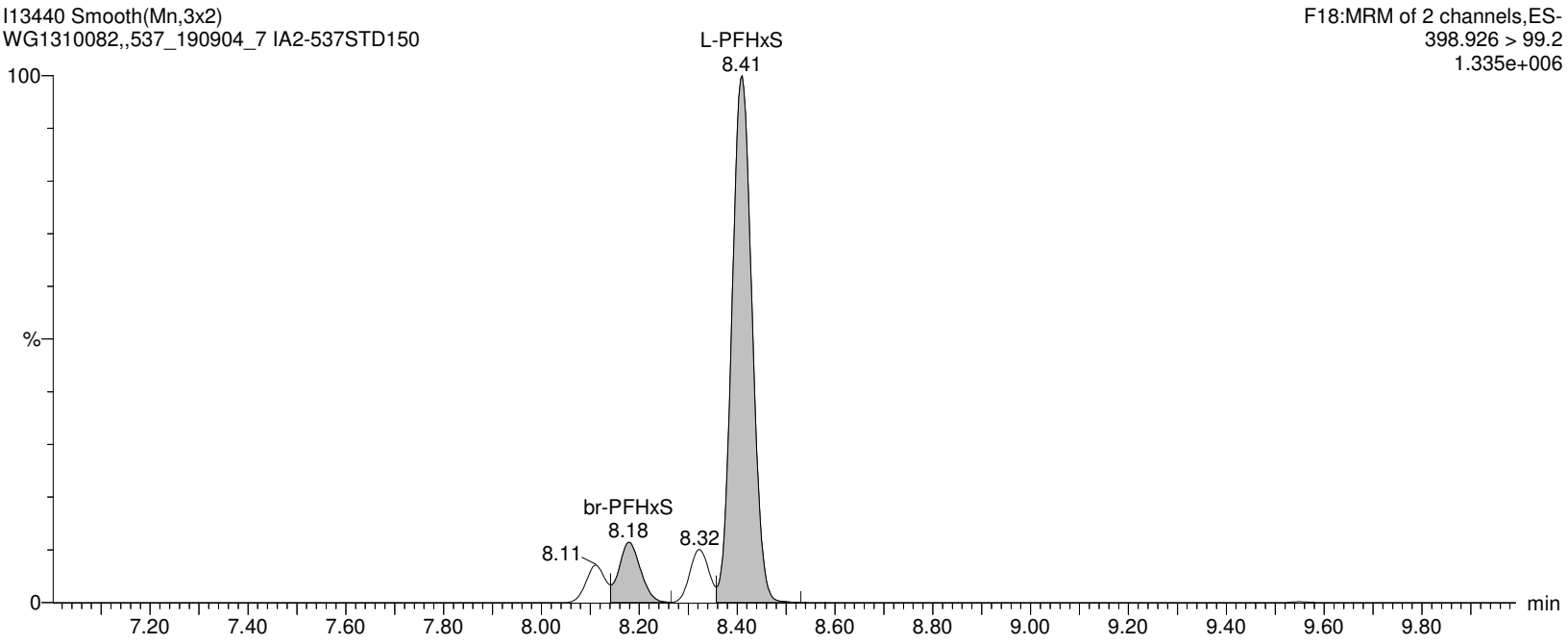
**MS Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**PFHxS**





all concentration units in (ng/mL)

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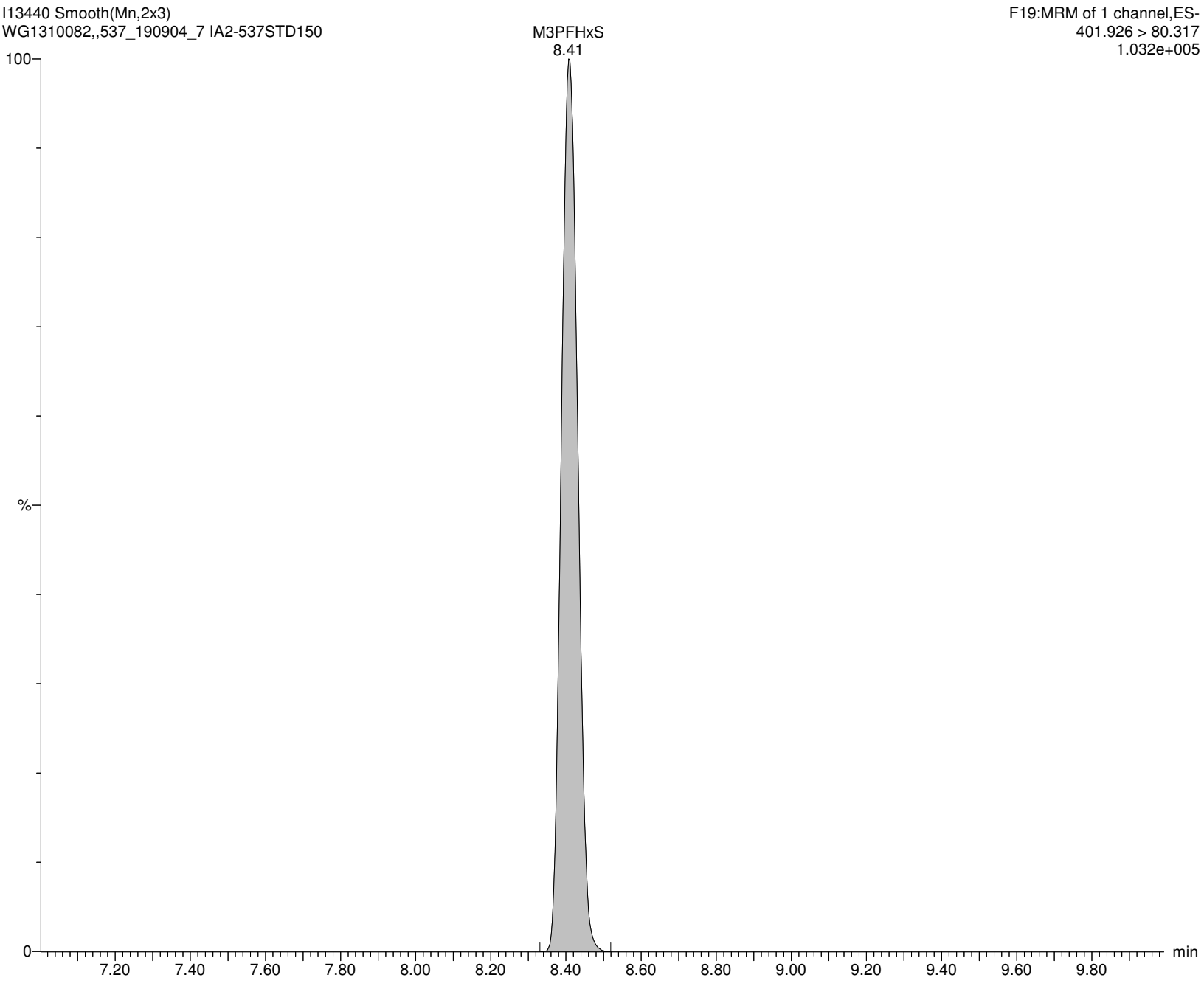
**M3PFHxS**





all concentration units in (ng/mL)

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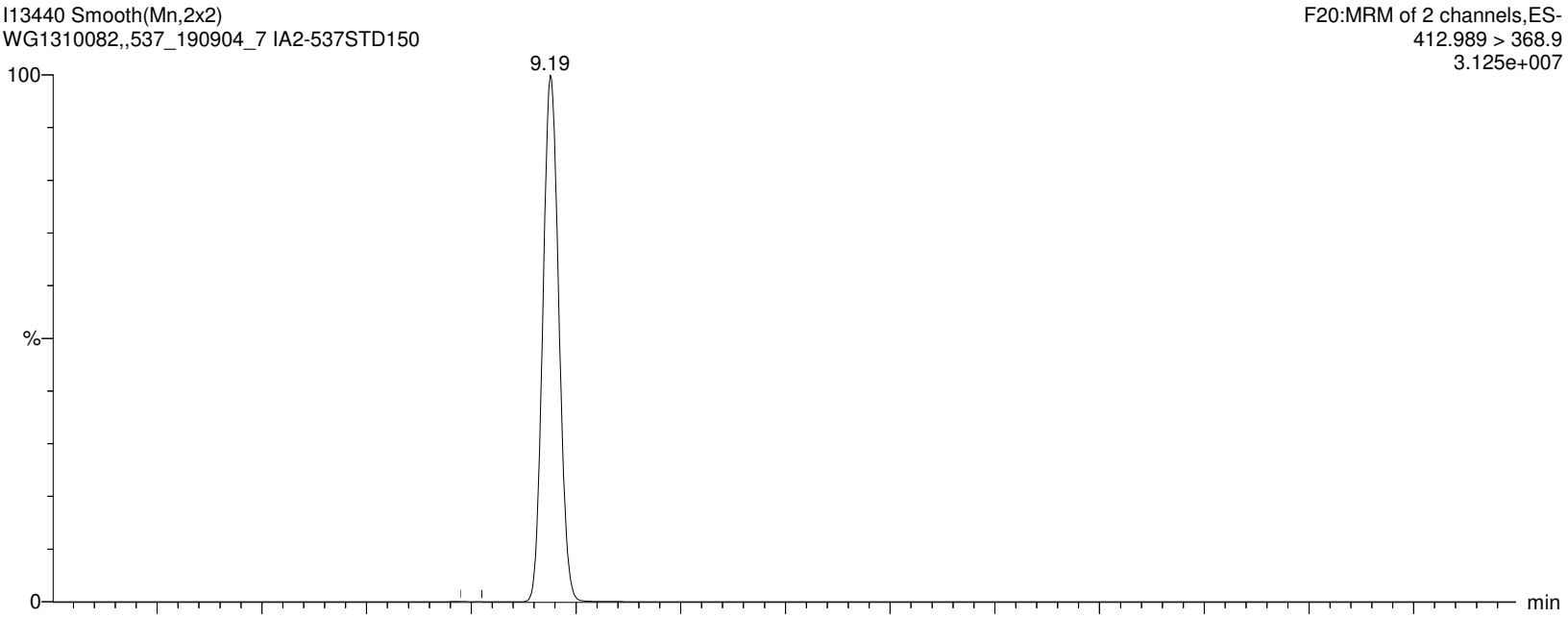
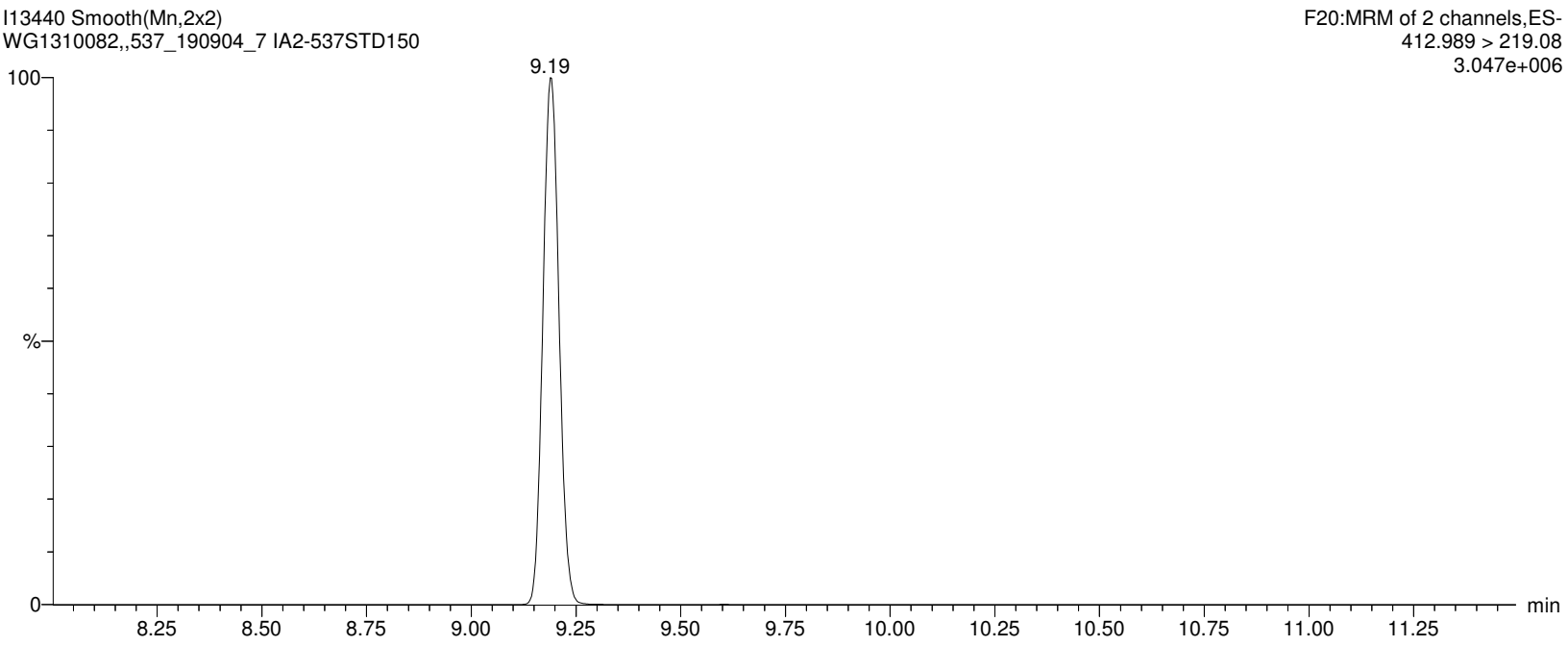
**br-PFOA**





all concentration units in (ng/mL)

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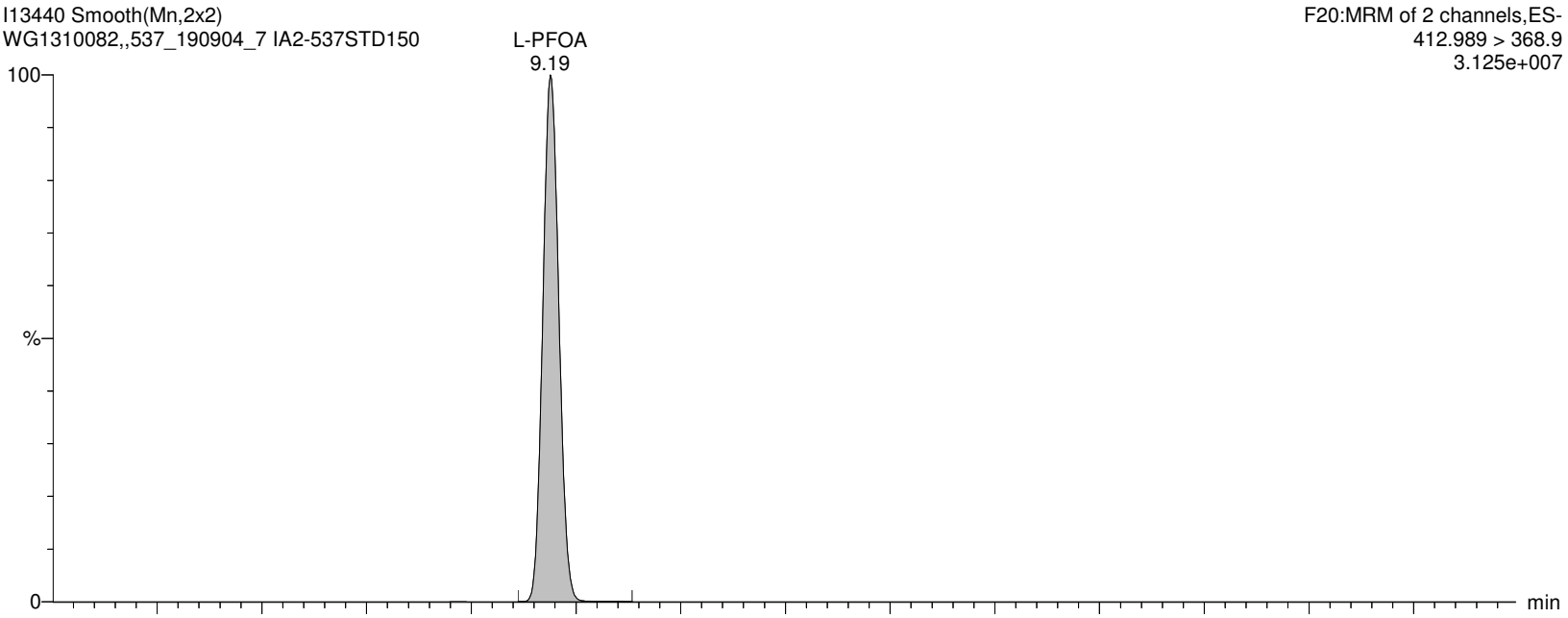
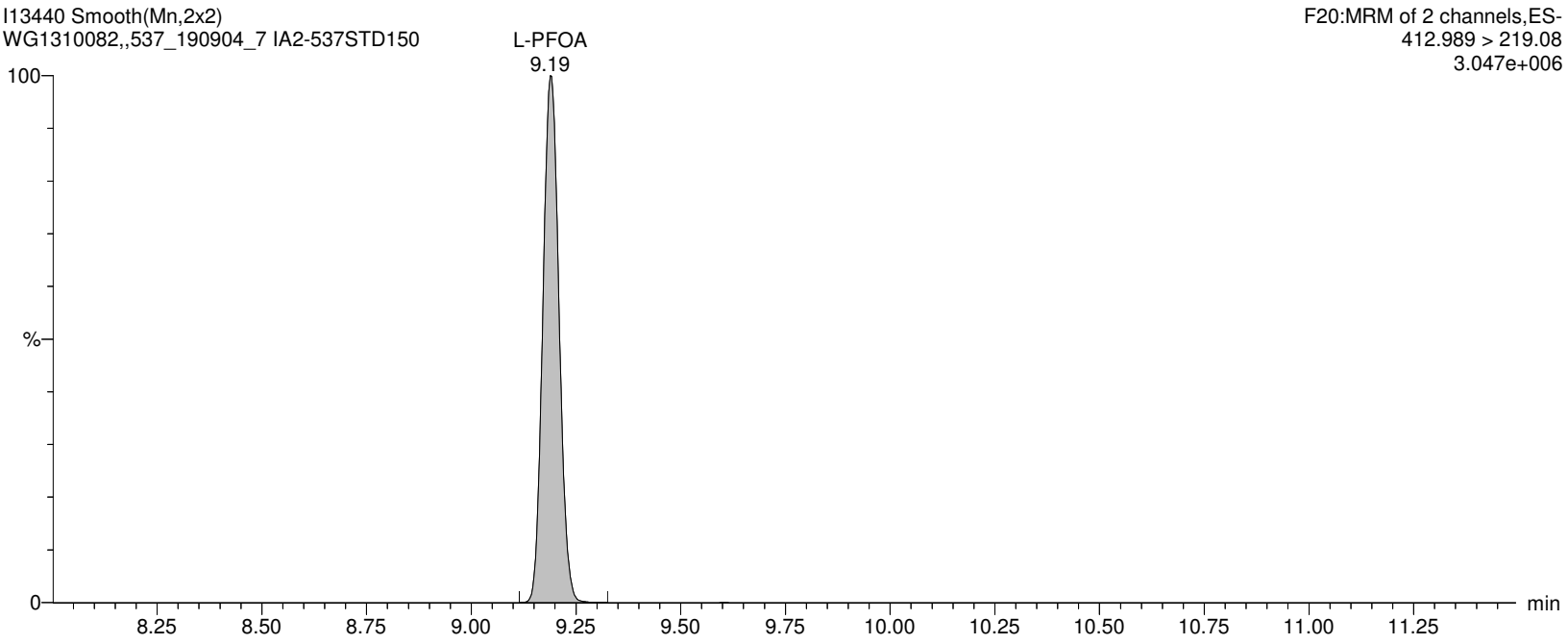
**L-PFOA**





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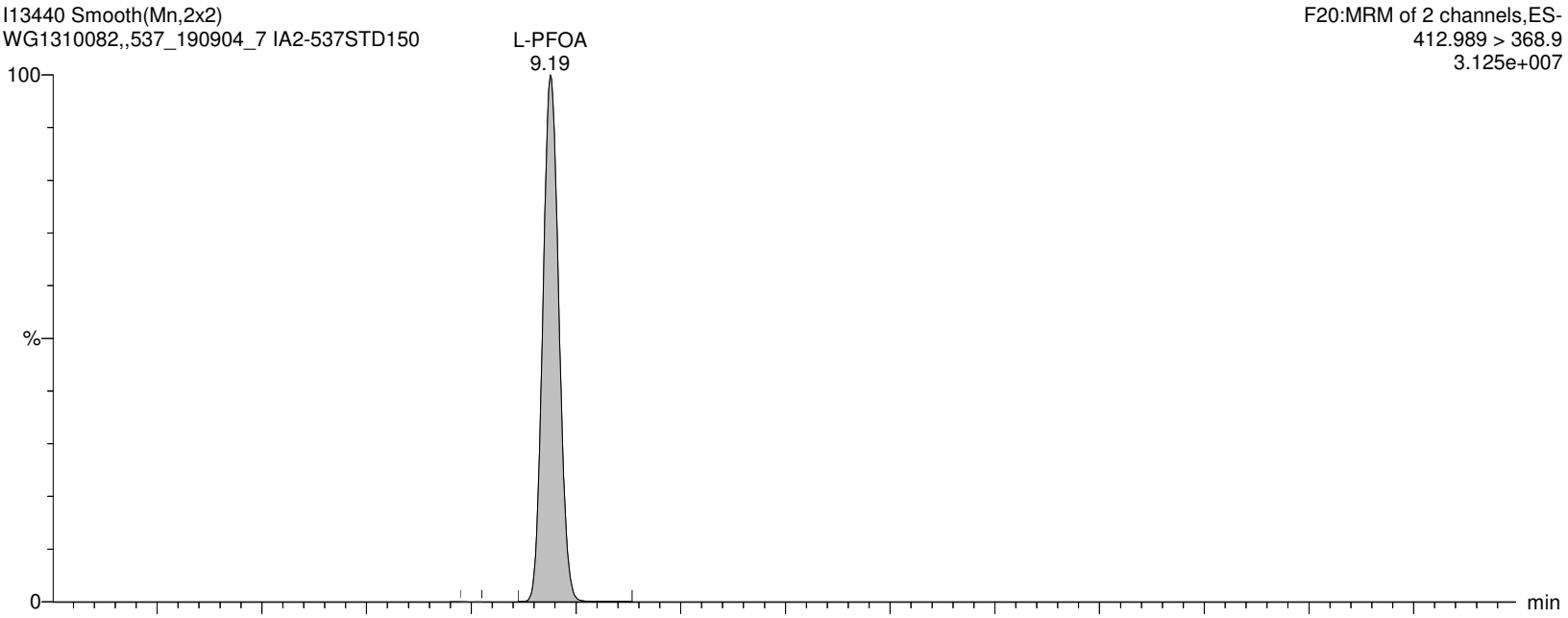
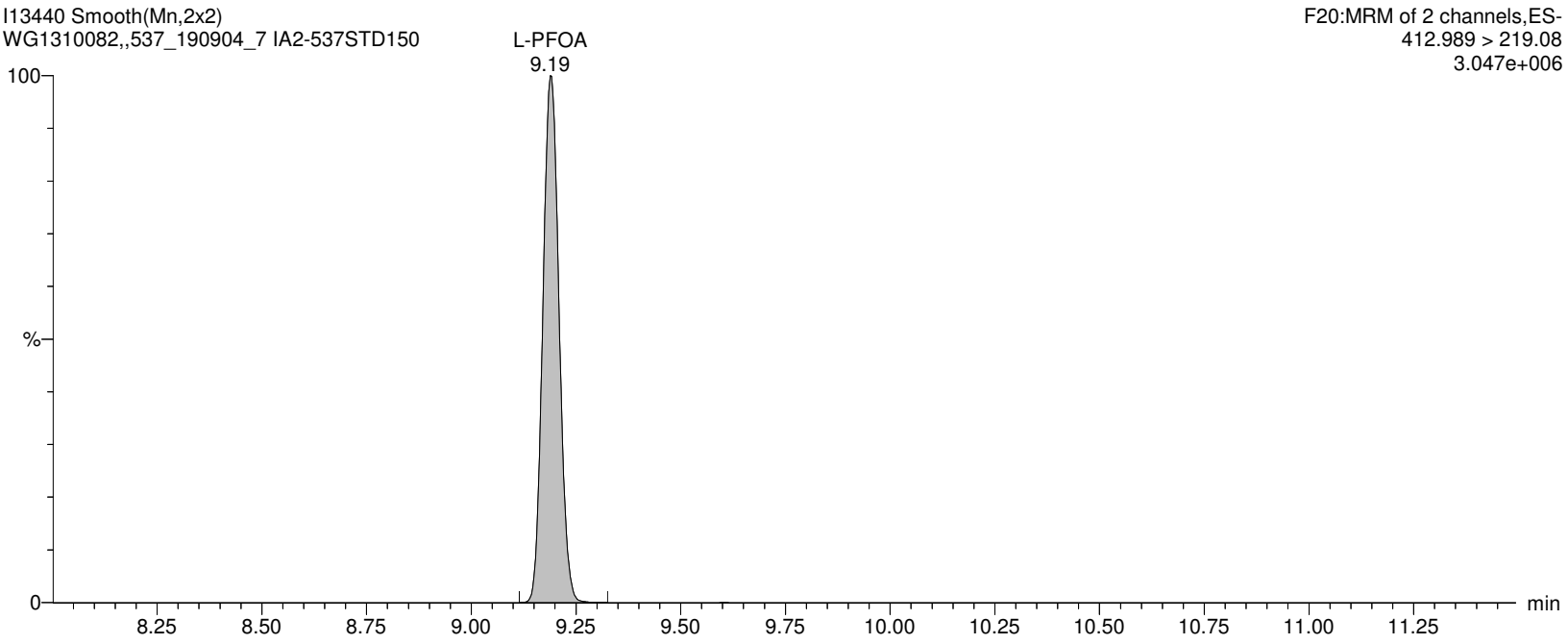
**PFOA**





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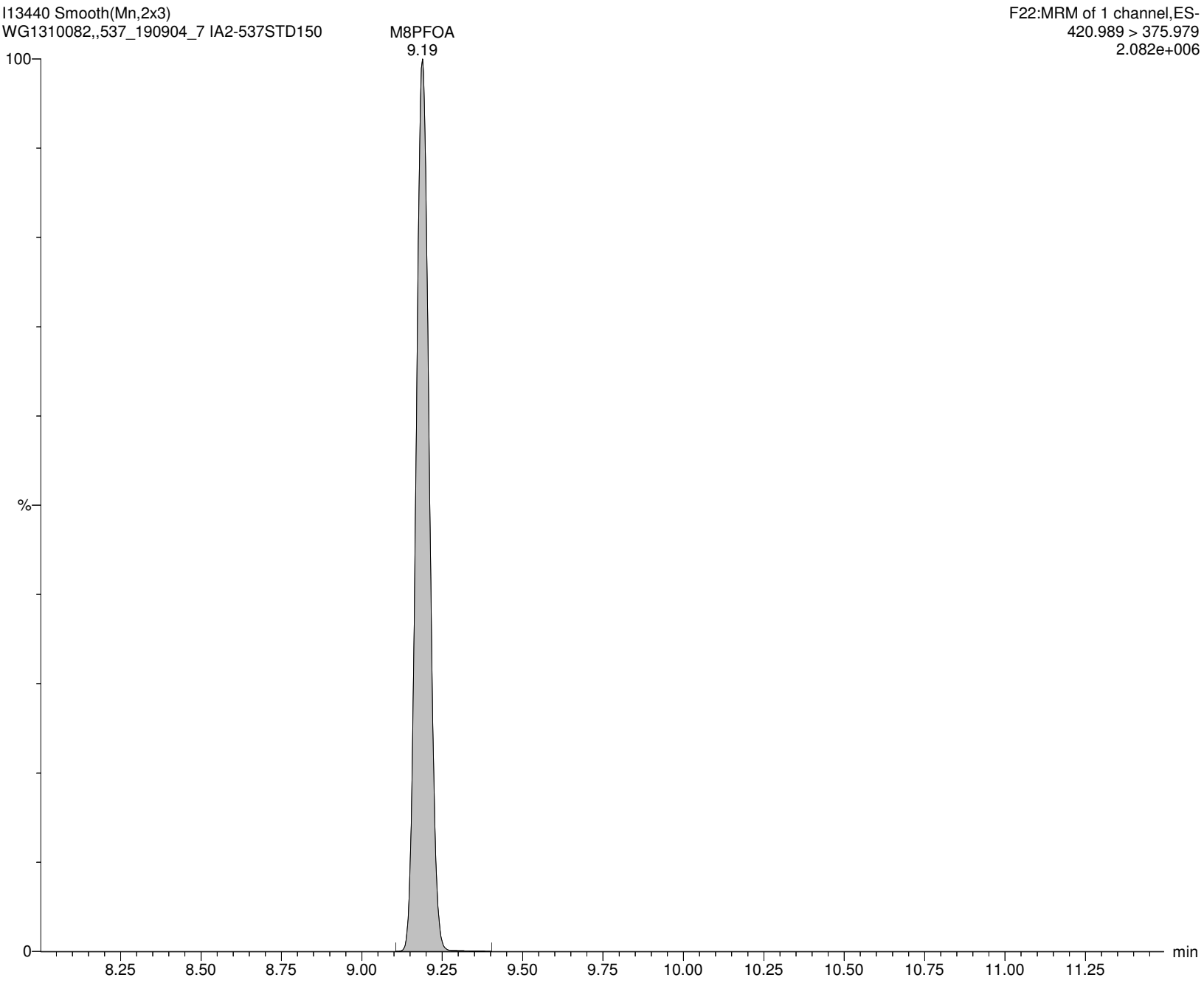



all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
Printed: Monday, November 18, 2019 13:43:00 Eastern Standard Time

**Name: I13440**
**ID: IA2-537STD150**
**Date: 18-Nov-2019**
**Time: 12:16:43**
**Description: WG1310082,,537_190904_7**
**User: LCMS02:JW**
**Vial: 1:A,8**
**Instrument: XEVO-TQSmicro#QEB0050**
**Inlet Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\LCMS_537_ISO_B**
**Tune Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\181009_TUNE.IPR**
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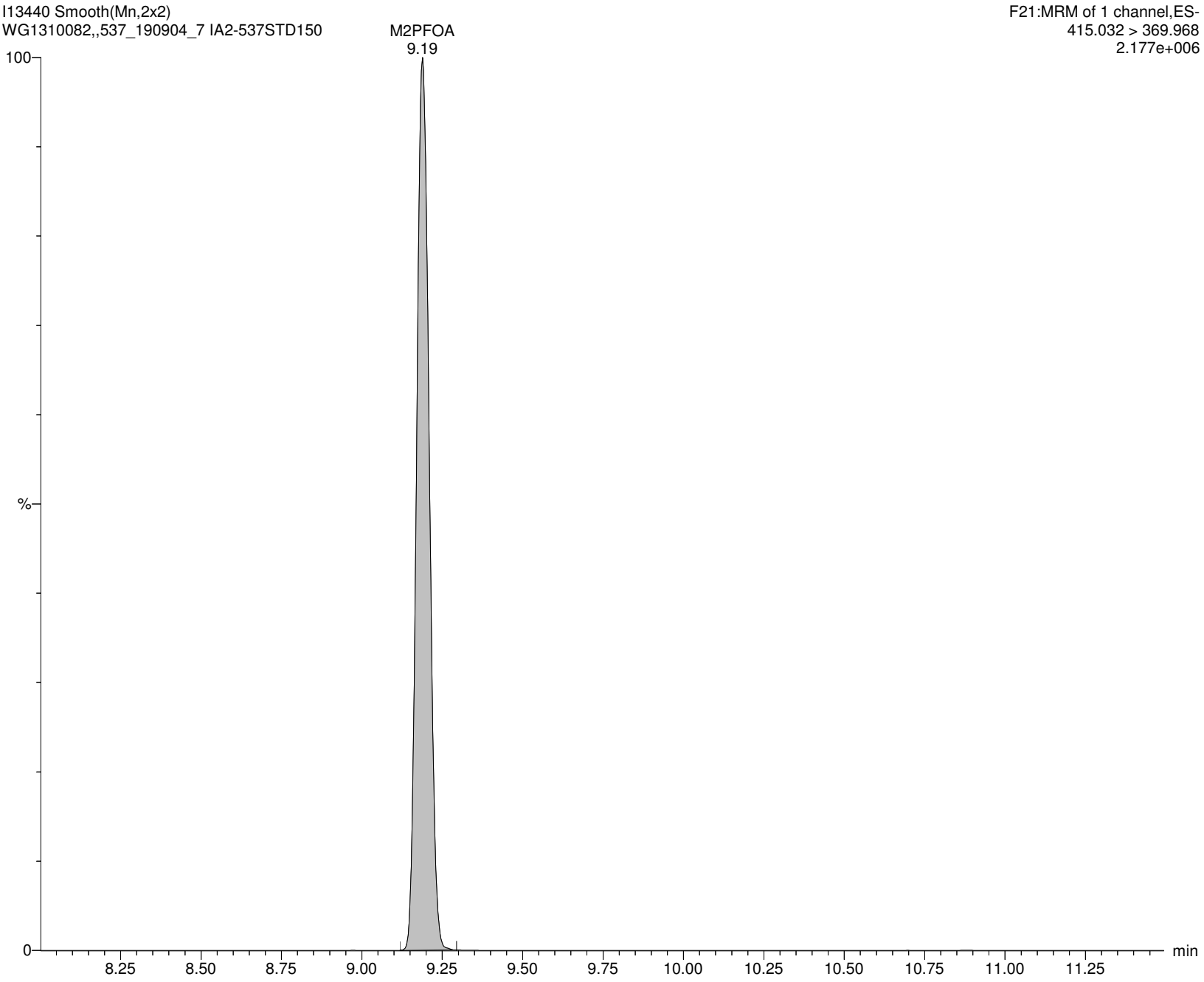



all concentration units in (ng/mL)

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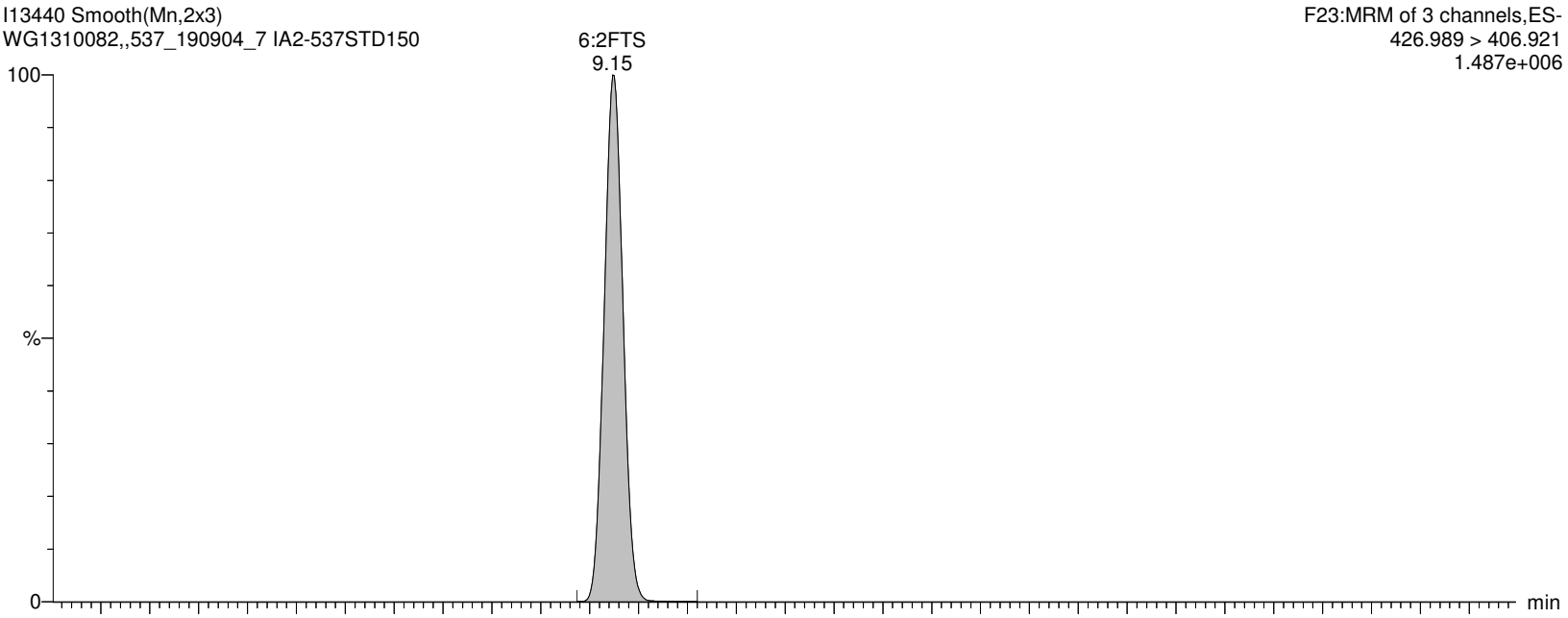


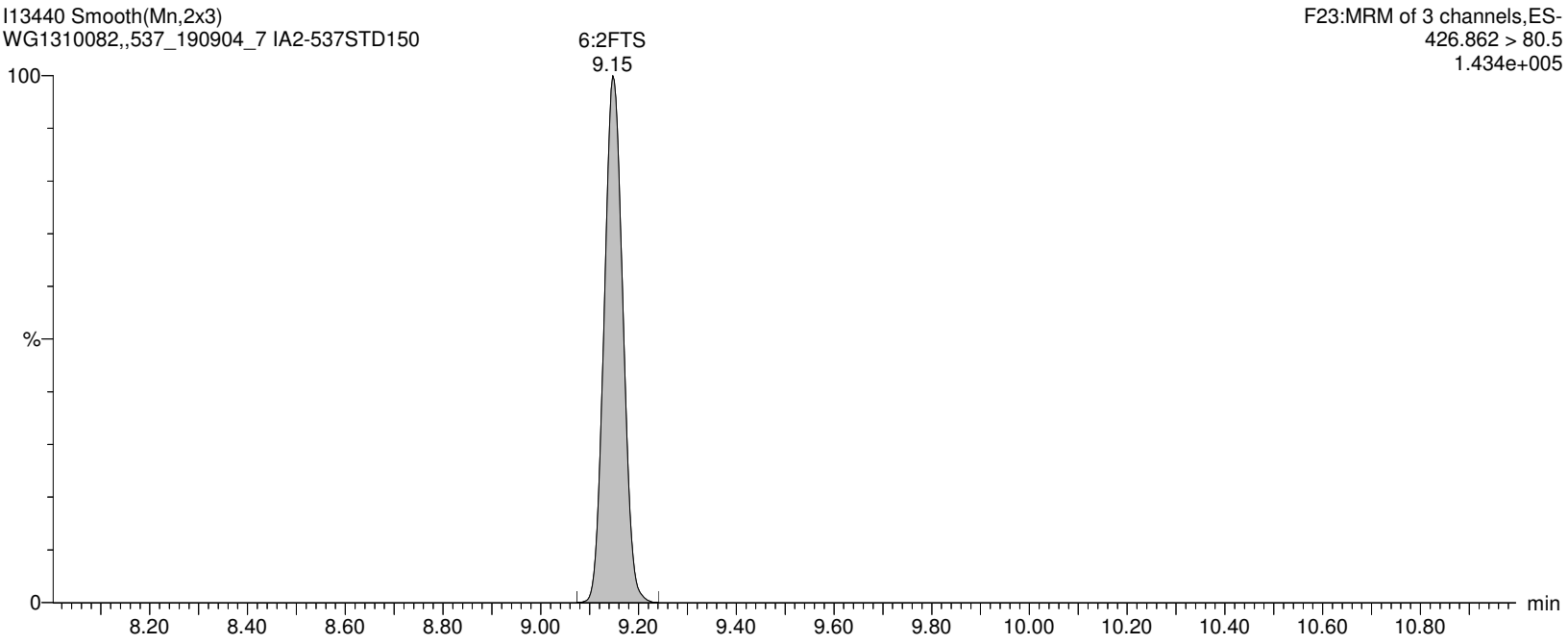



all concentration units in (ng/mL)

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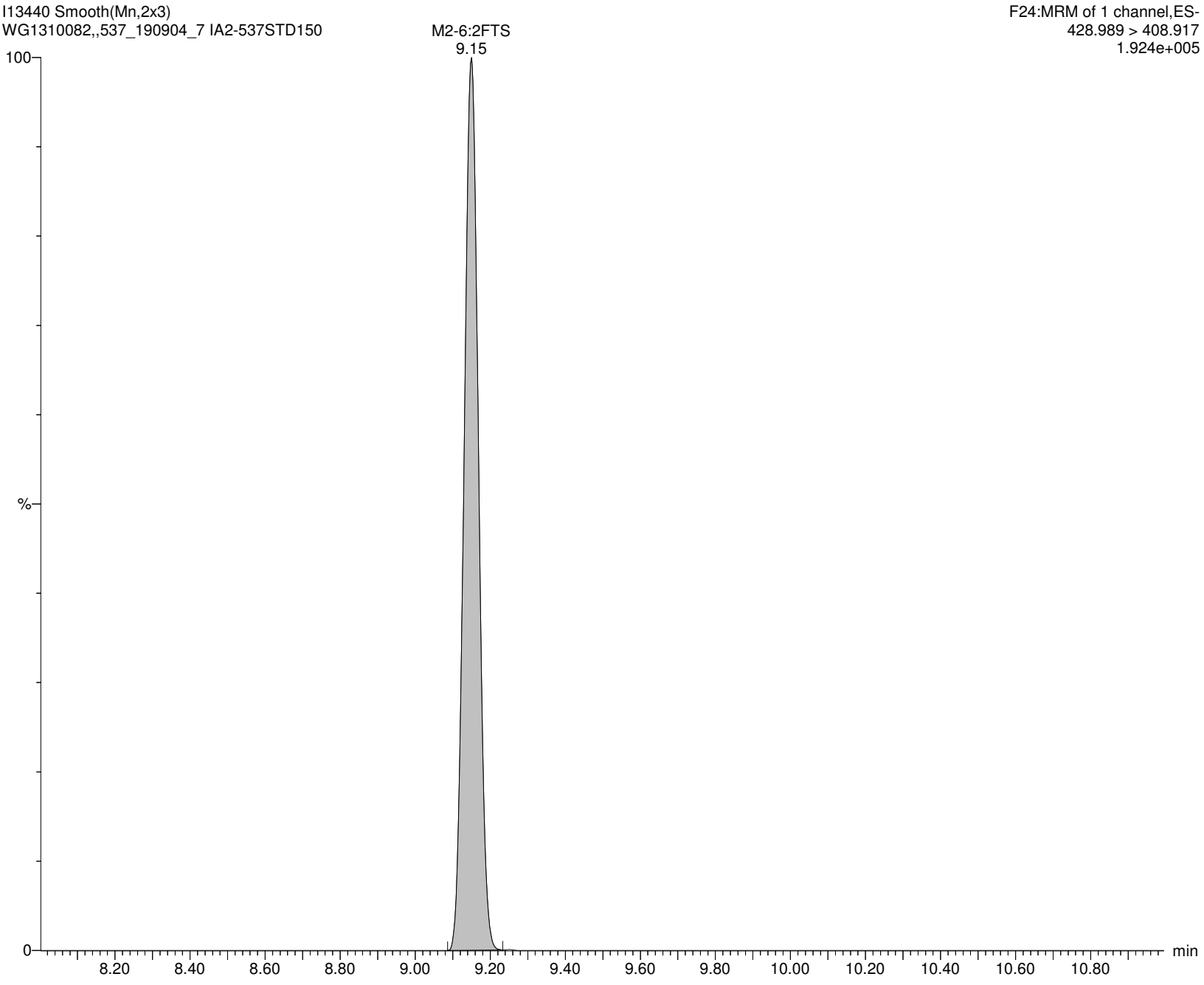
**M2-6:2FTS**





all concentration units in (ng/mL)

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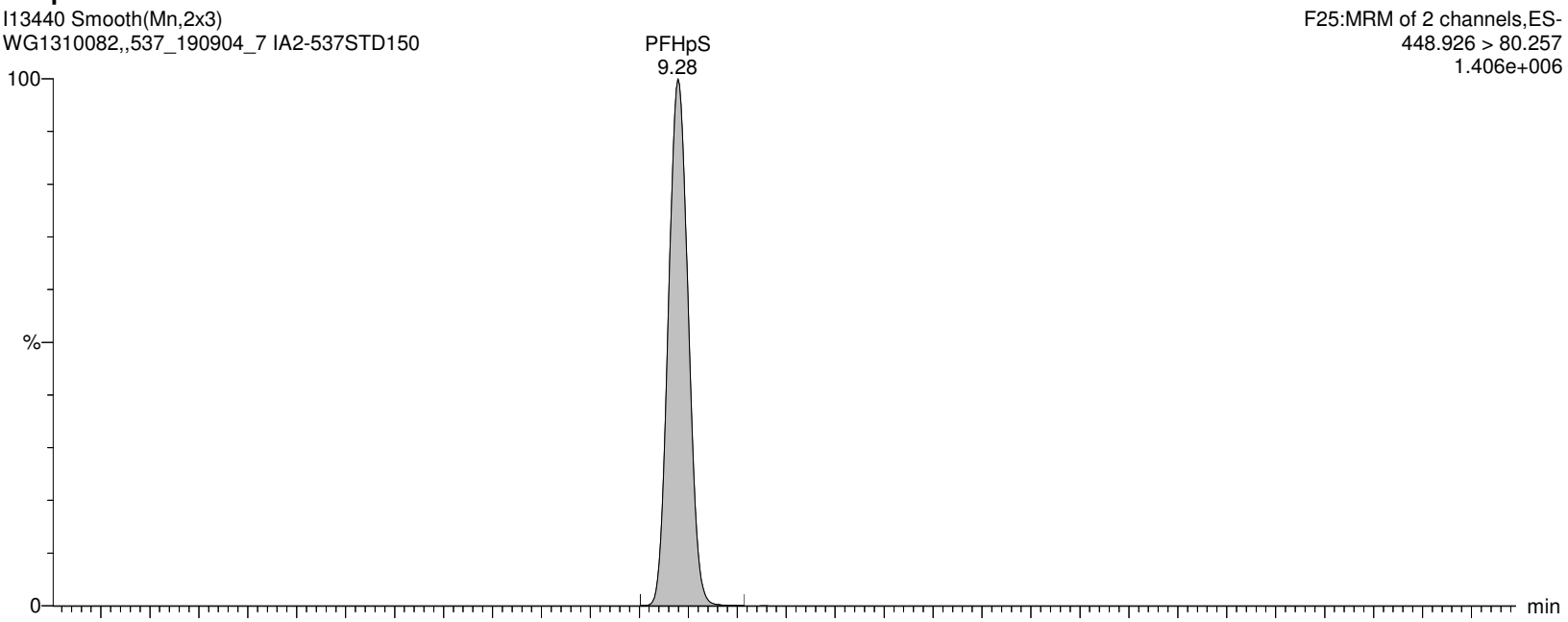
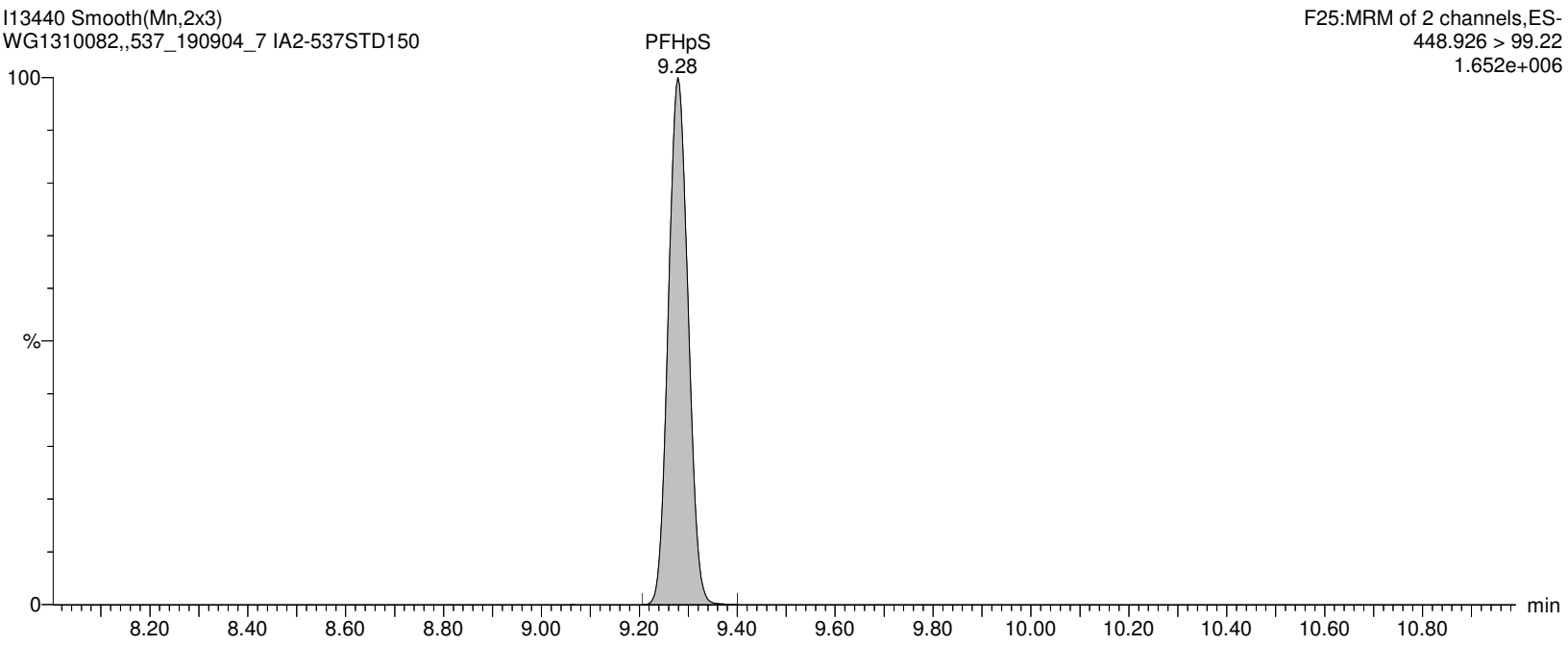
**PFHpS**





all concentration units in (ng/mL)

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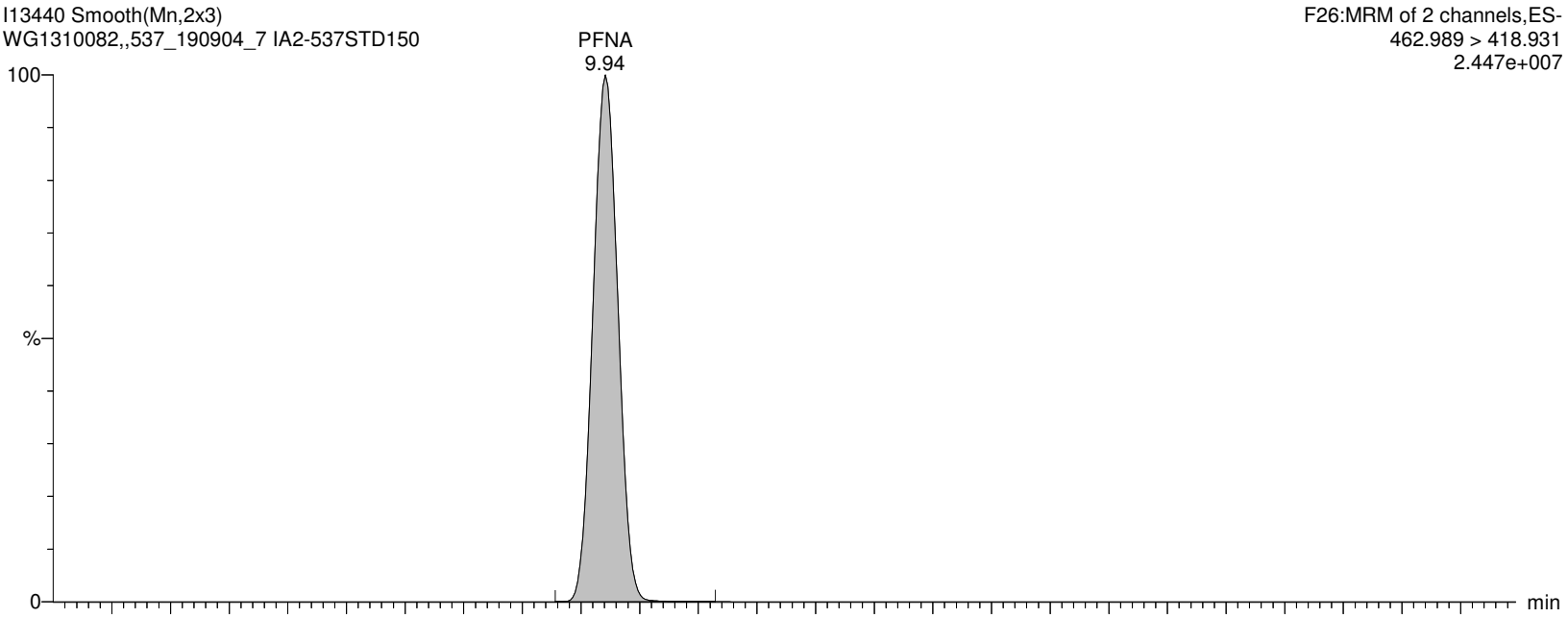


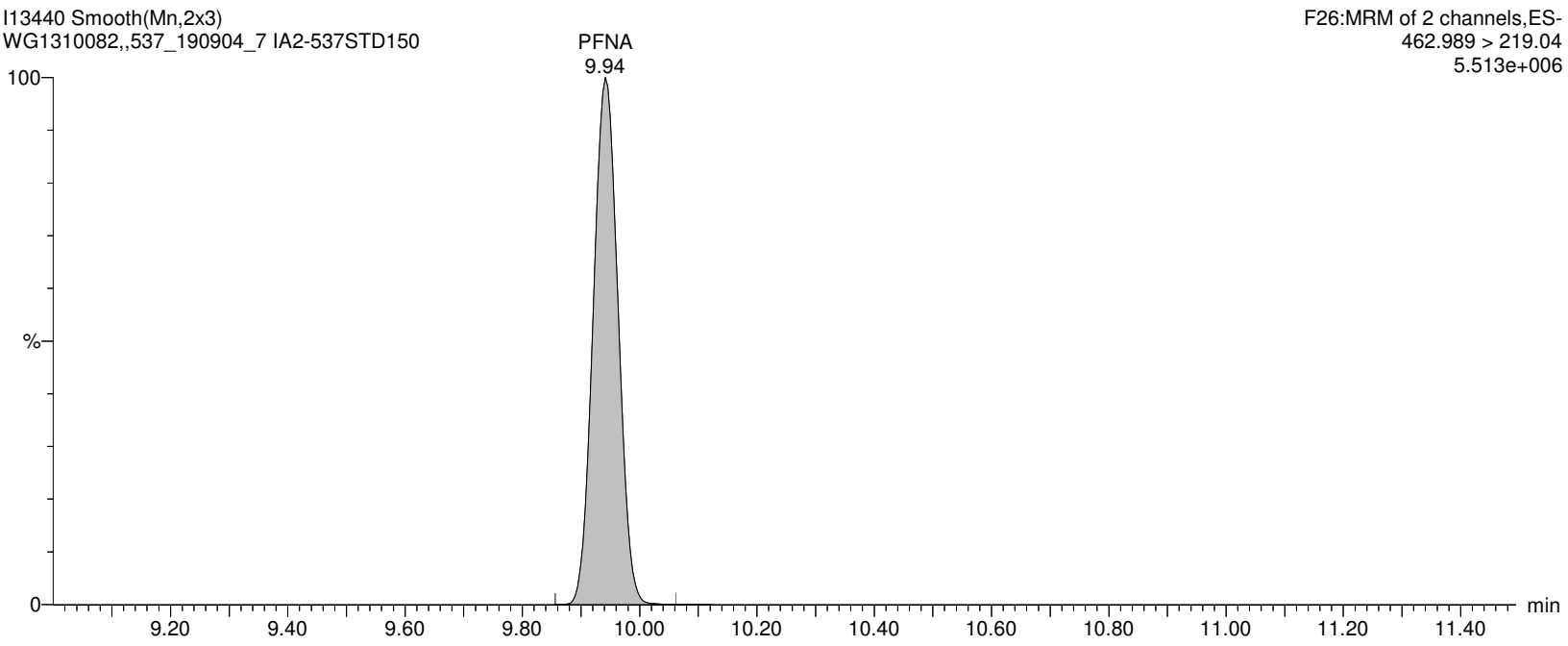



all concentration units in (ng/mL)

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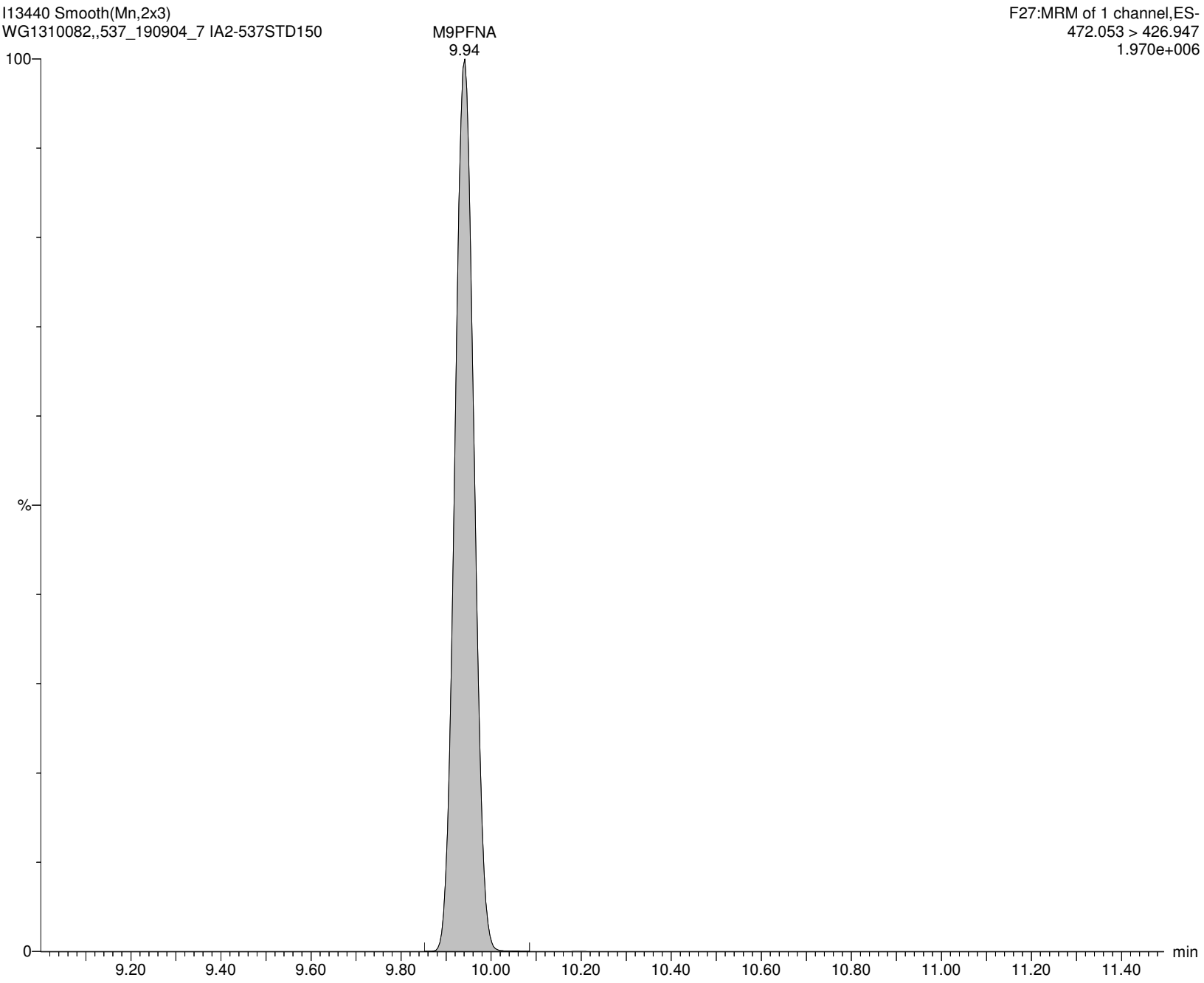



all concentration units in (ng/mL)

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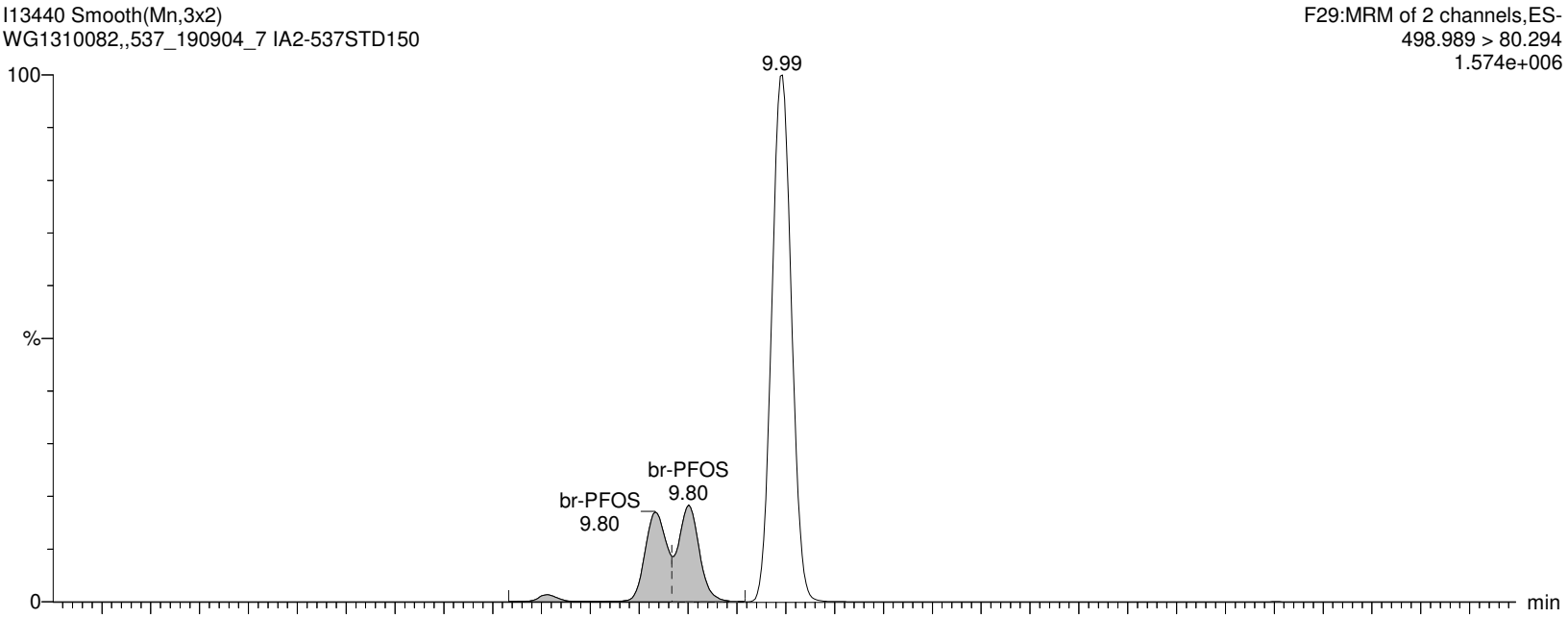
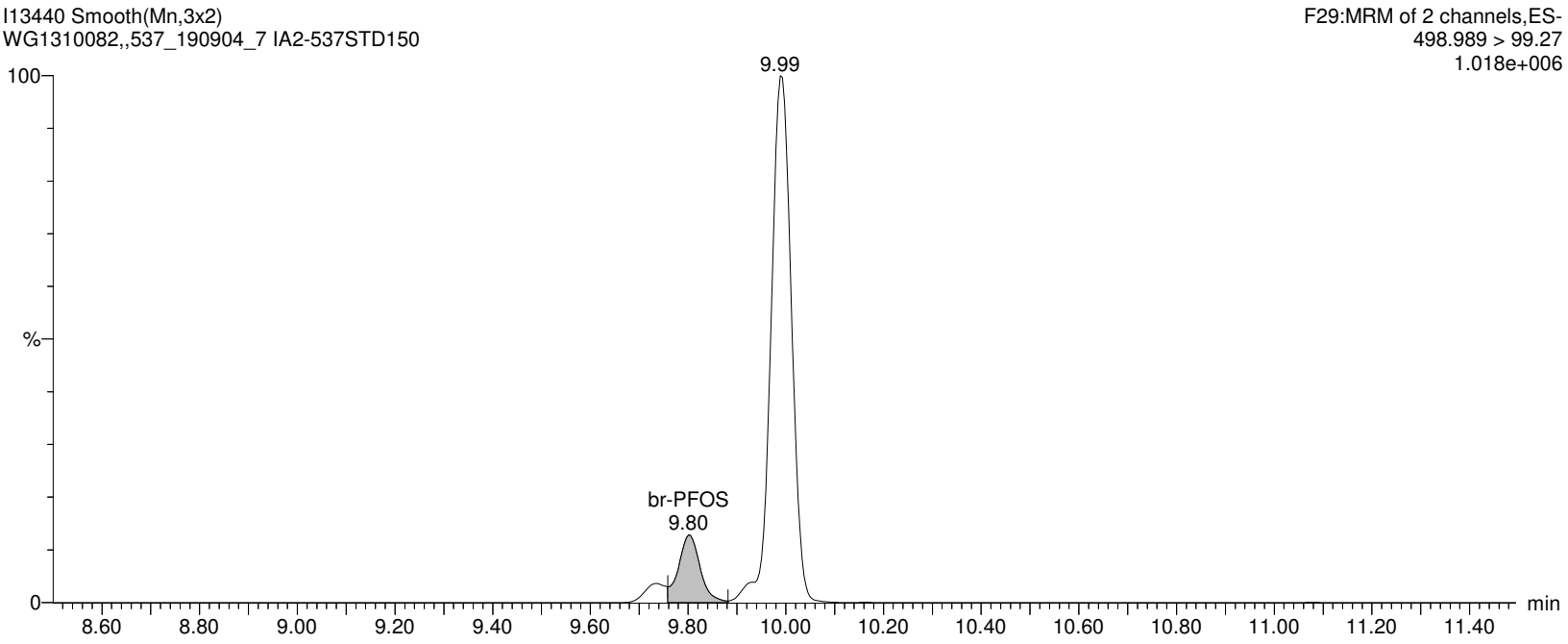
**br-PFOS**





all concentration units in (ng/mL)

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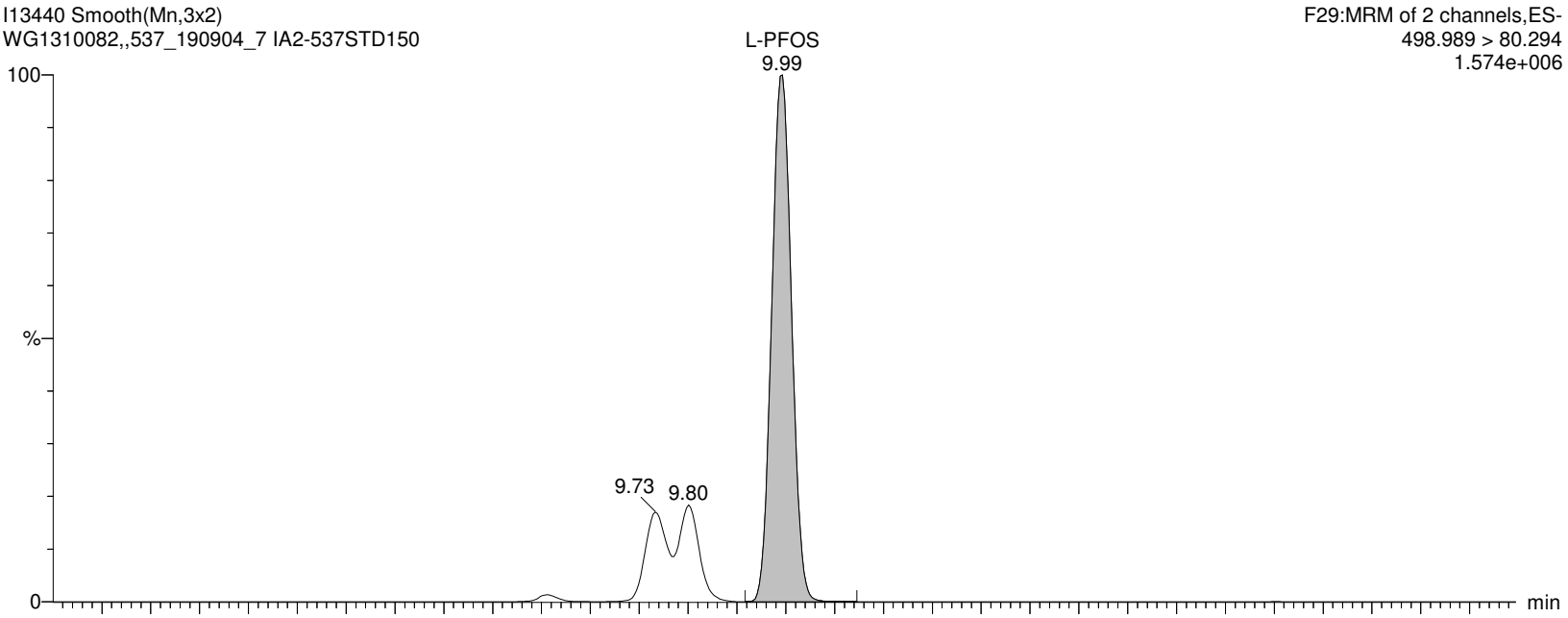


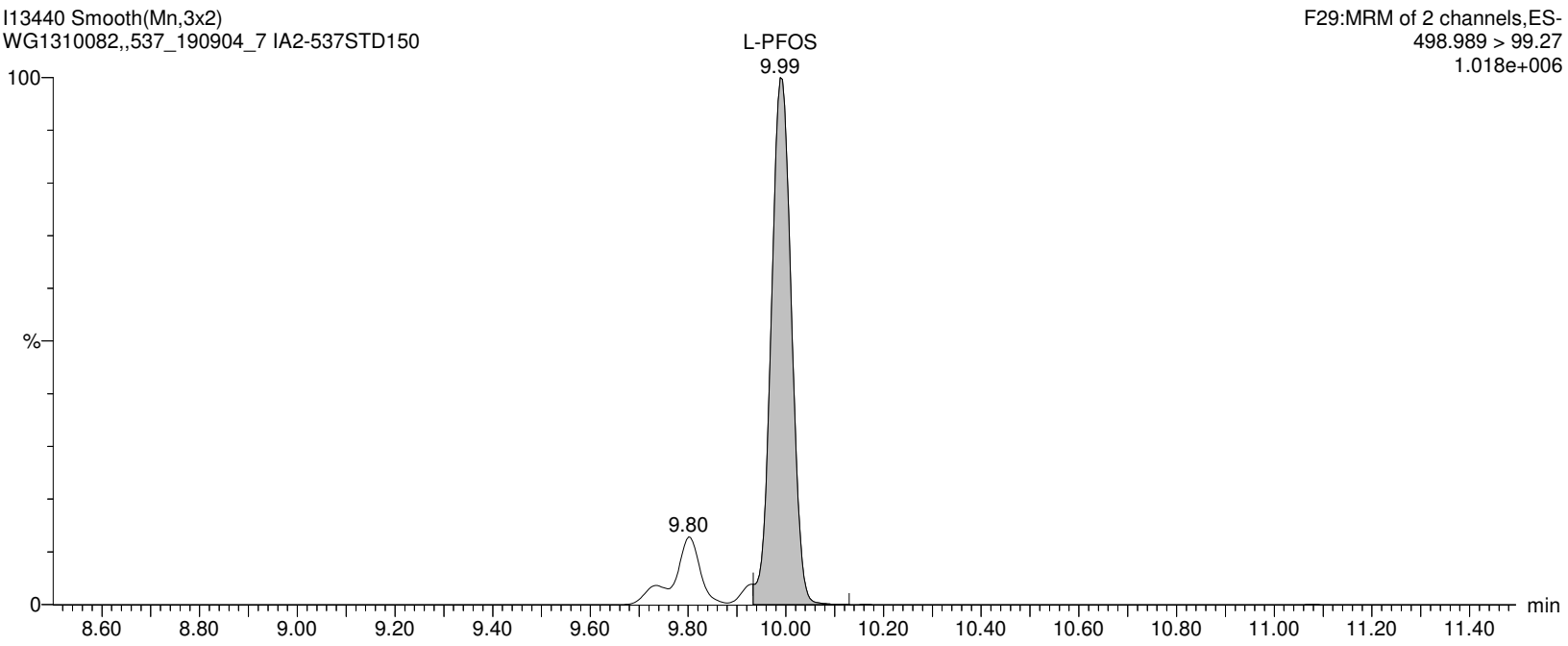



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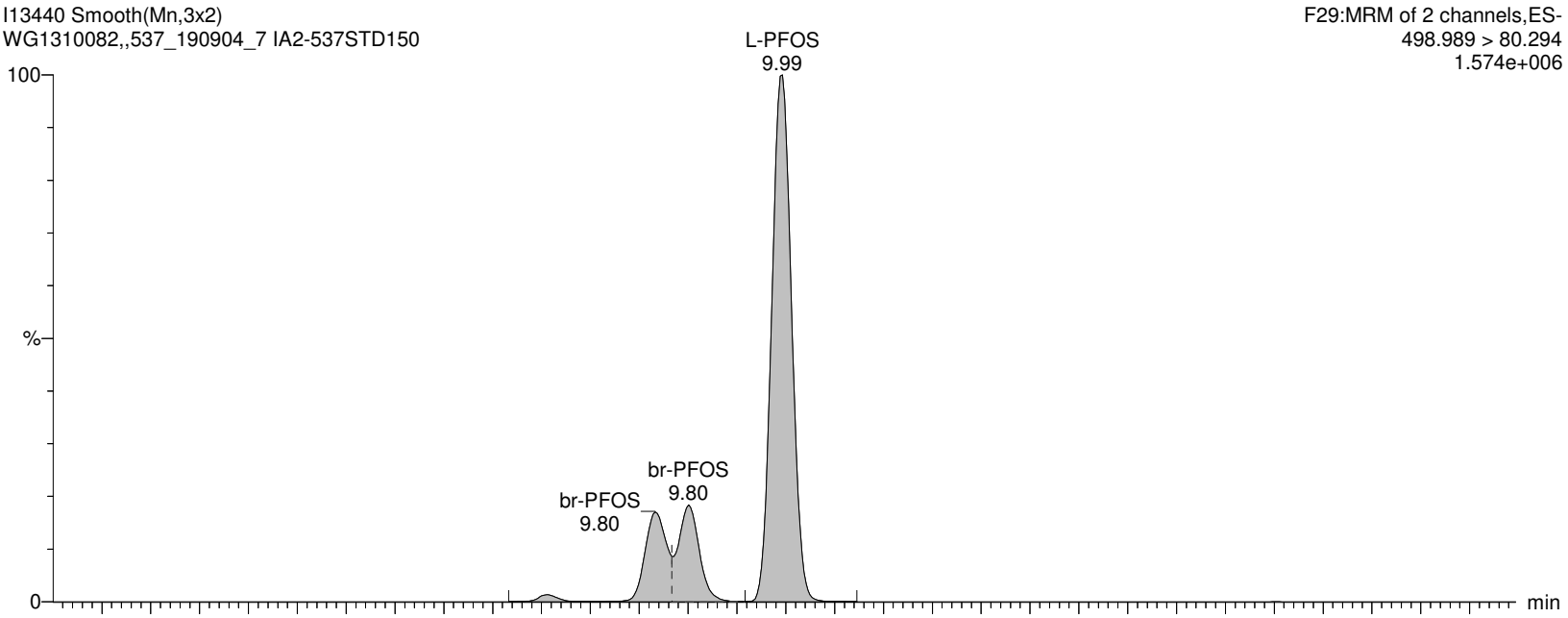


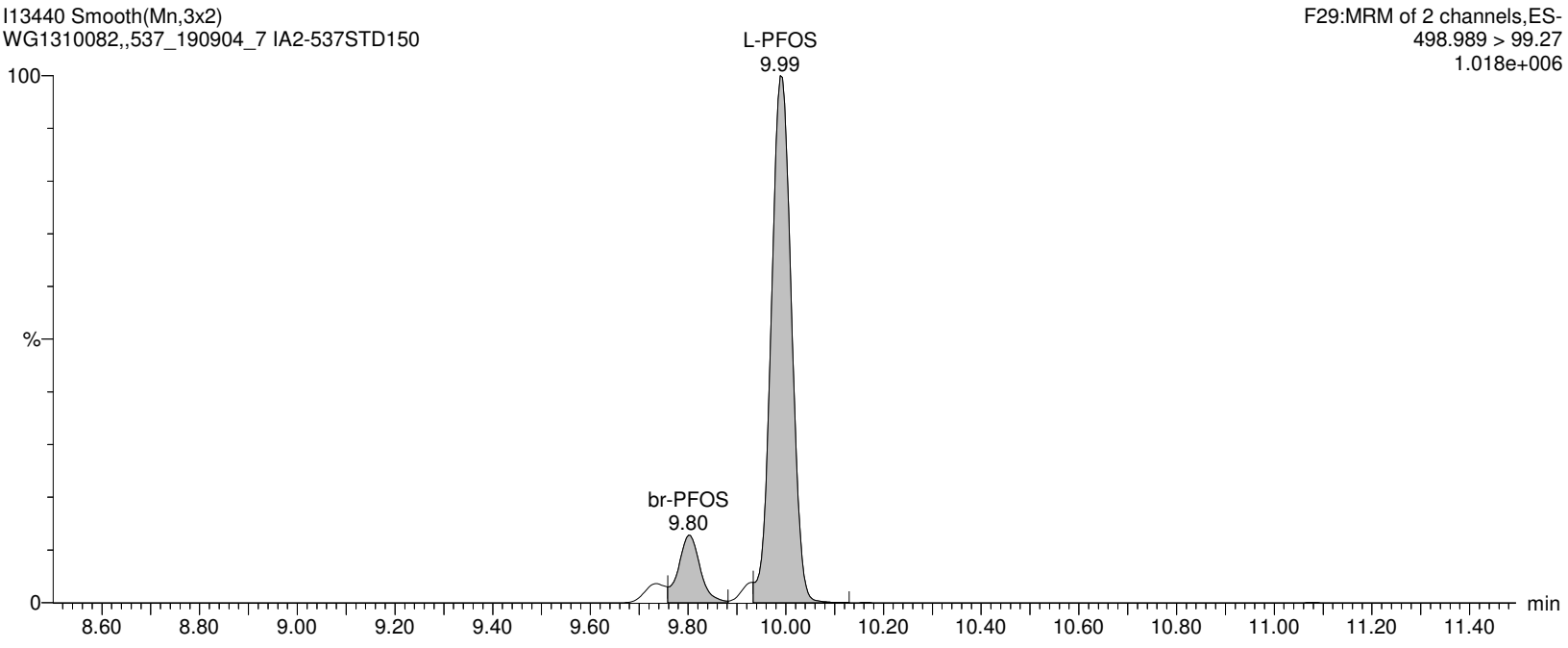



all concentration units in (ng/mL)

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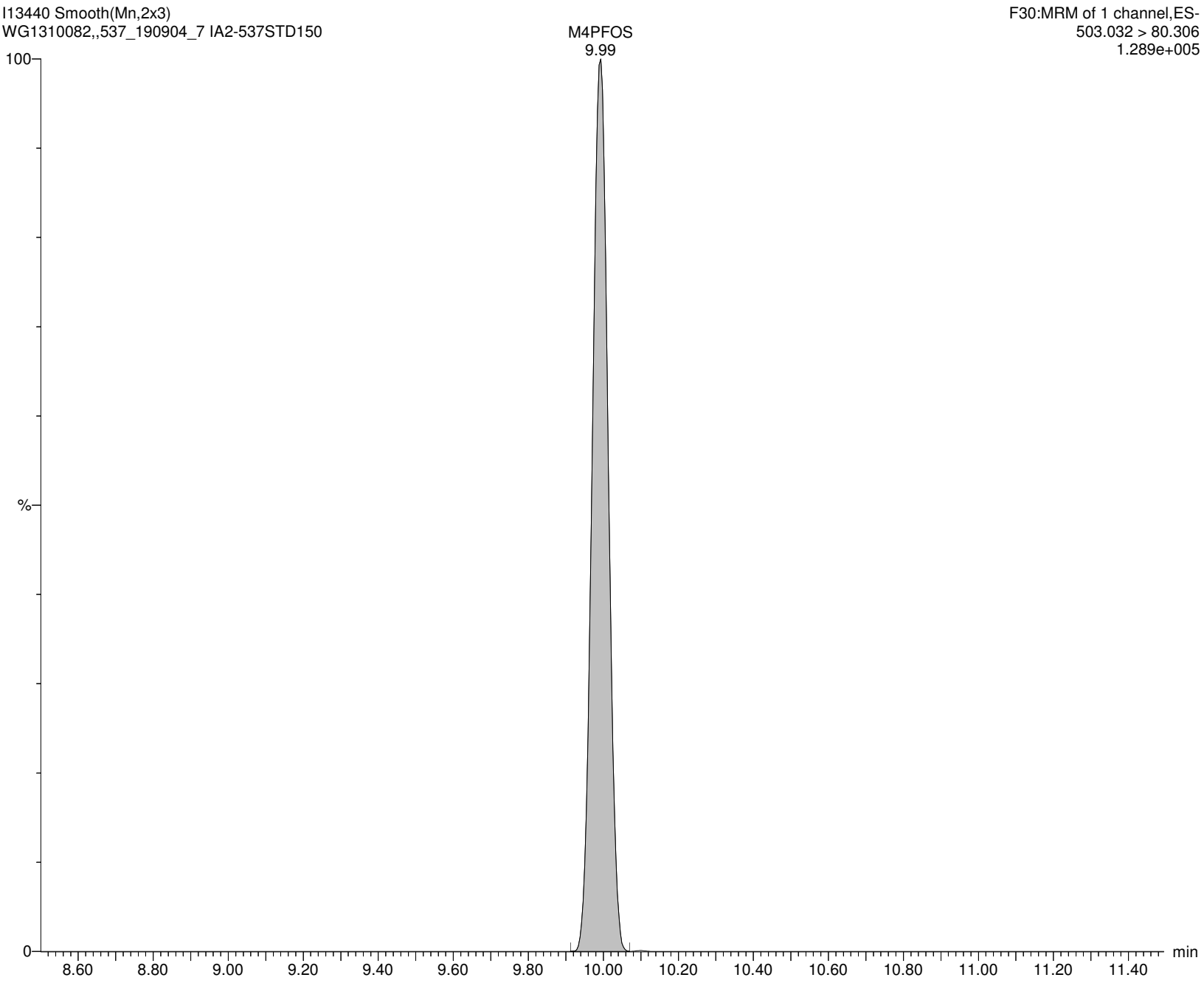



all concentration units in (ng/mL)

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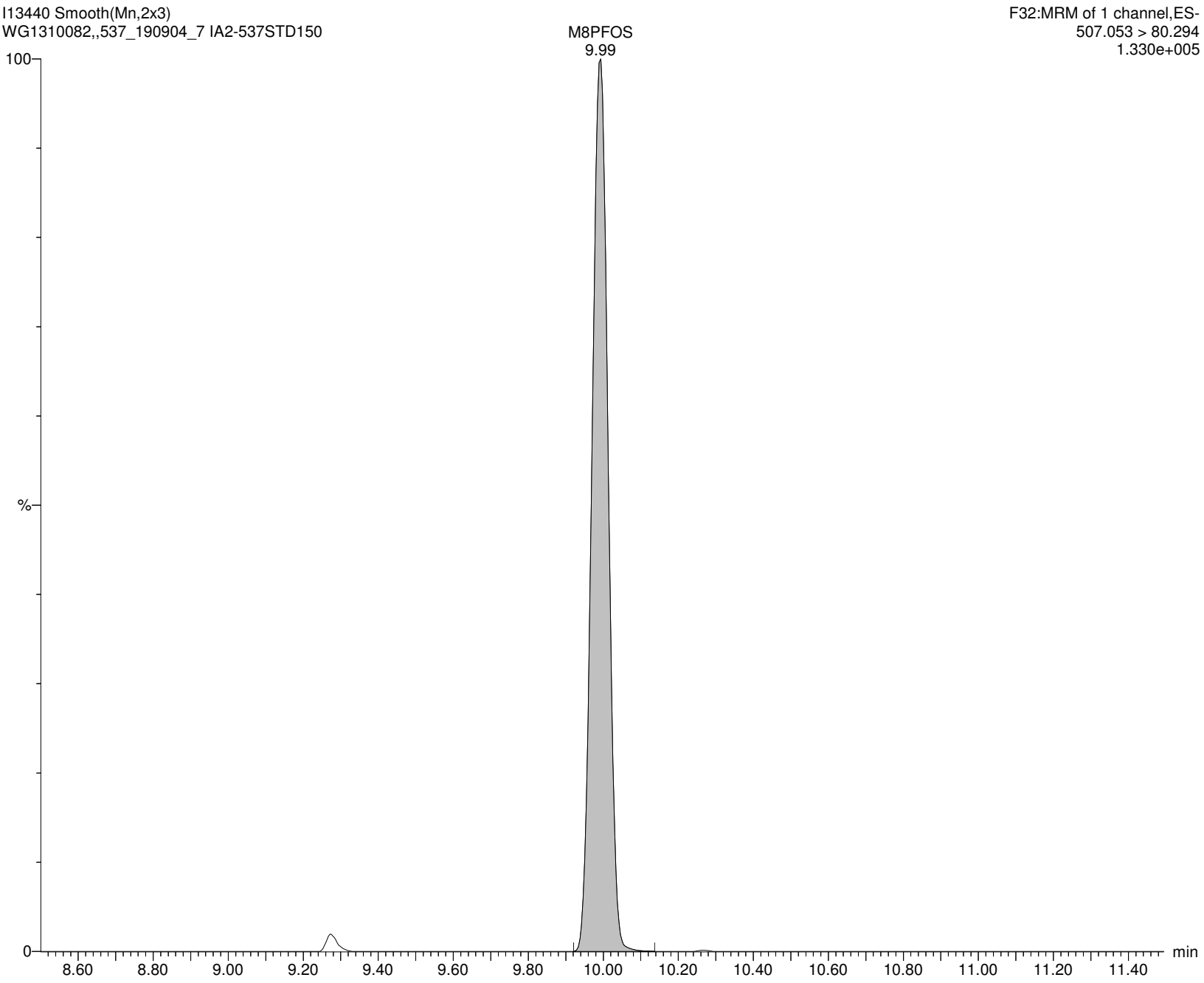



all concentration units in (ng/mL)

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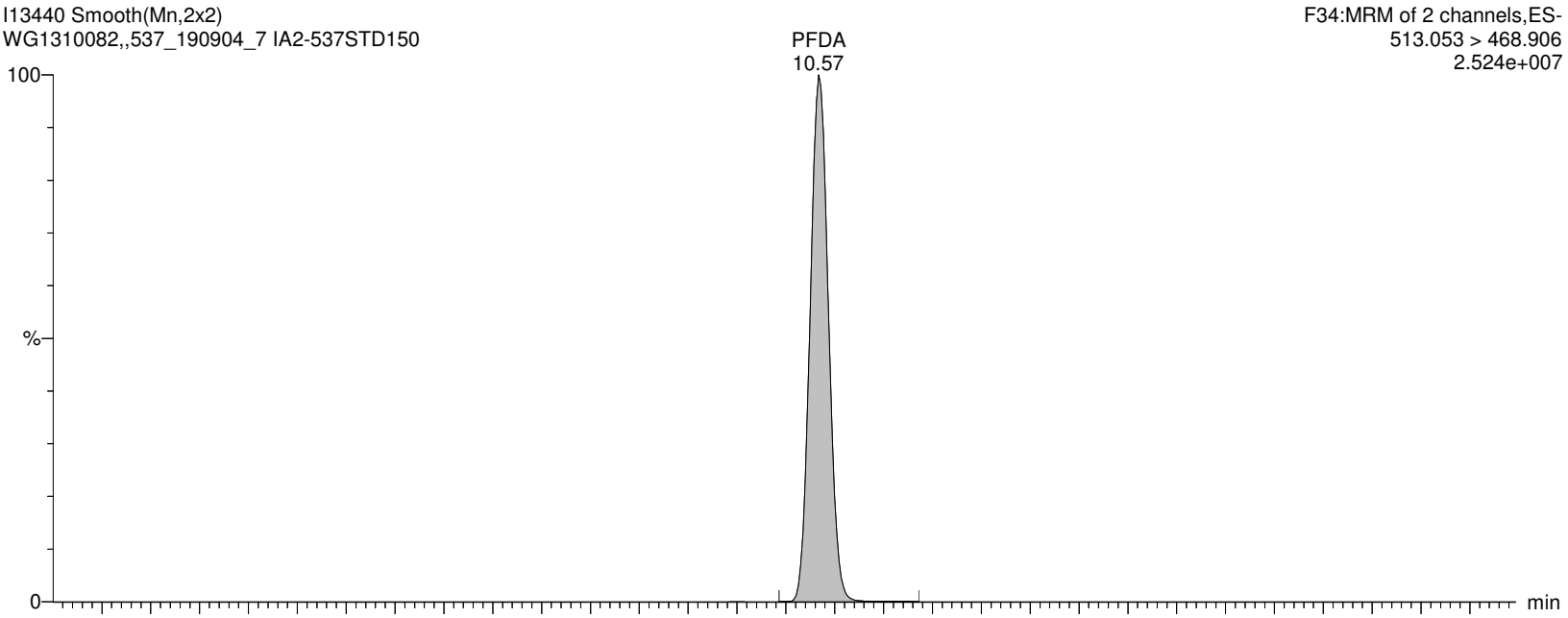


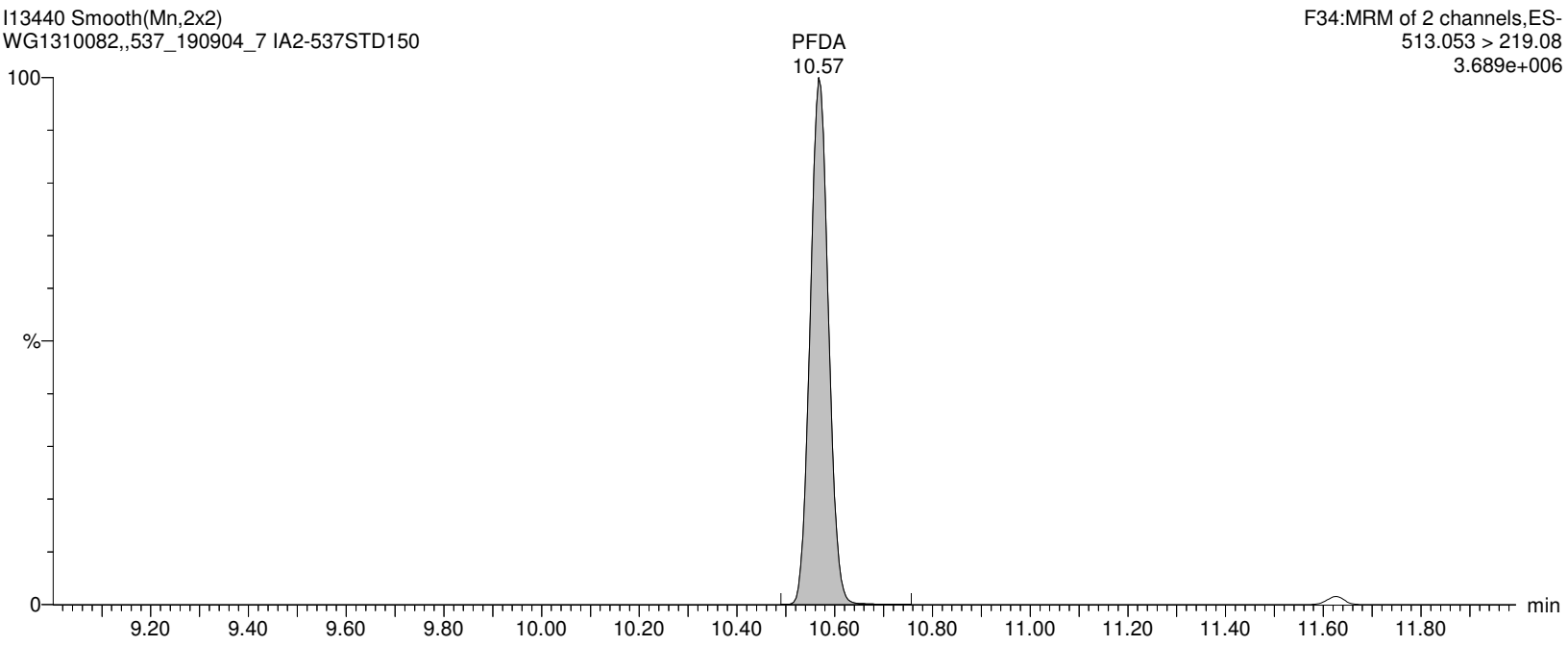



all concentration units in (ng/mL)

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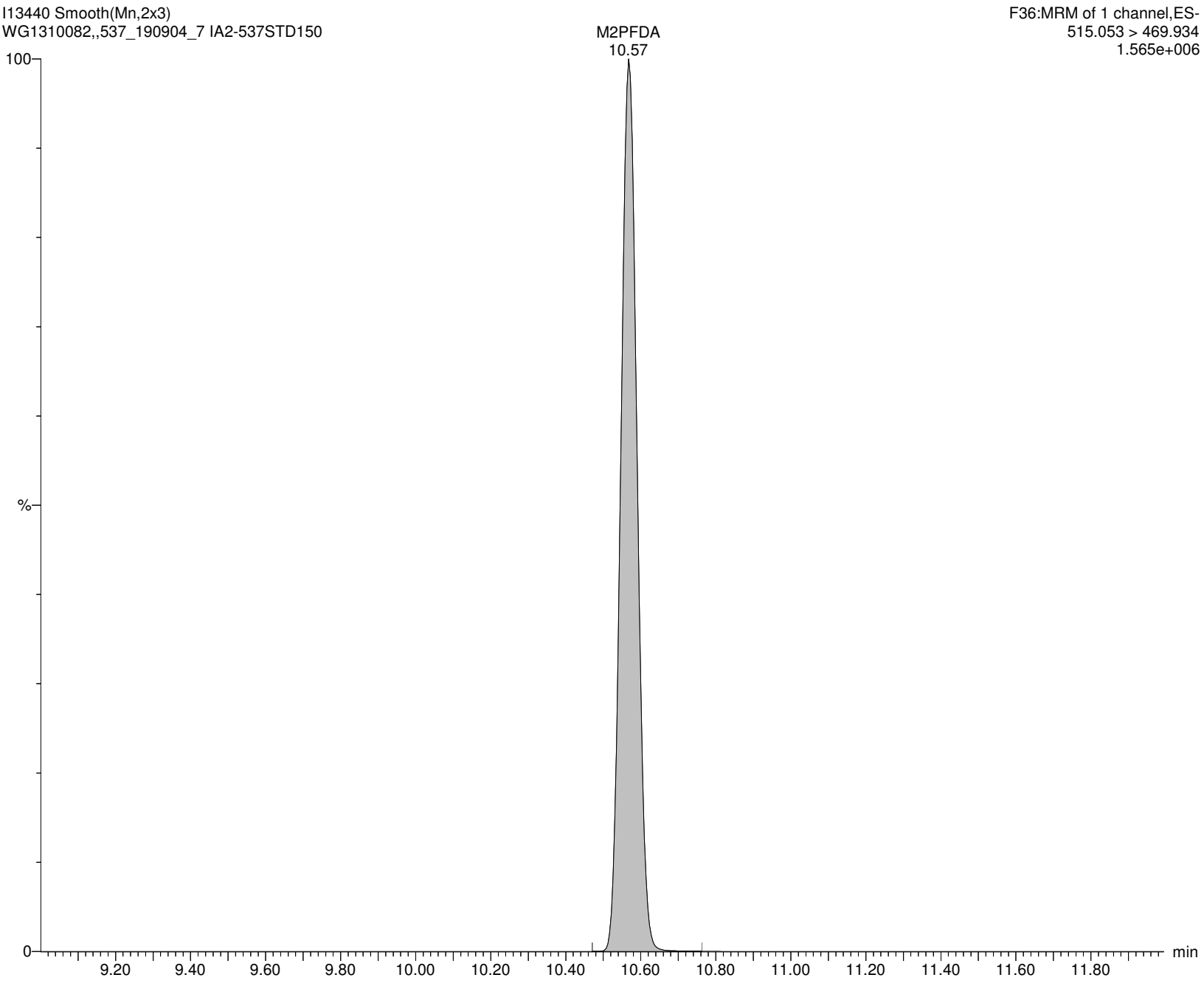



all concentration units in (ng/mL)

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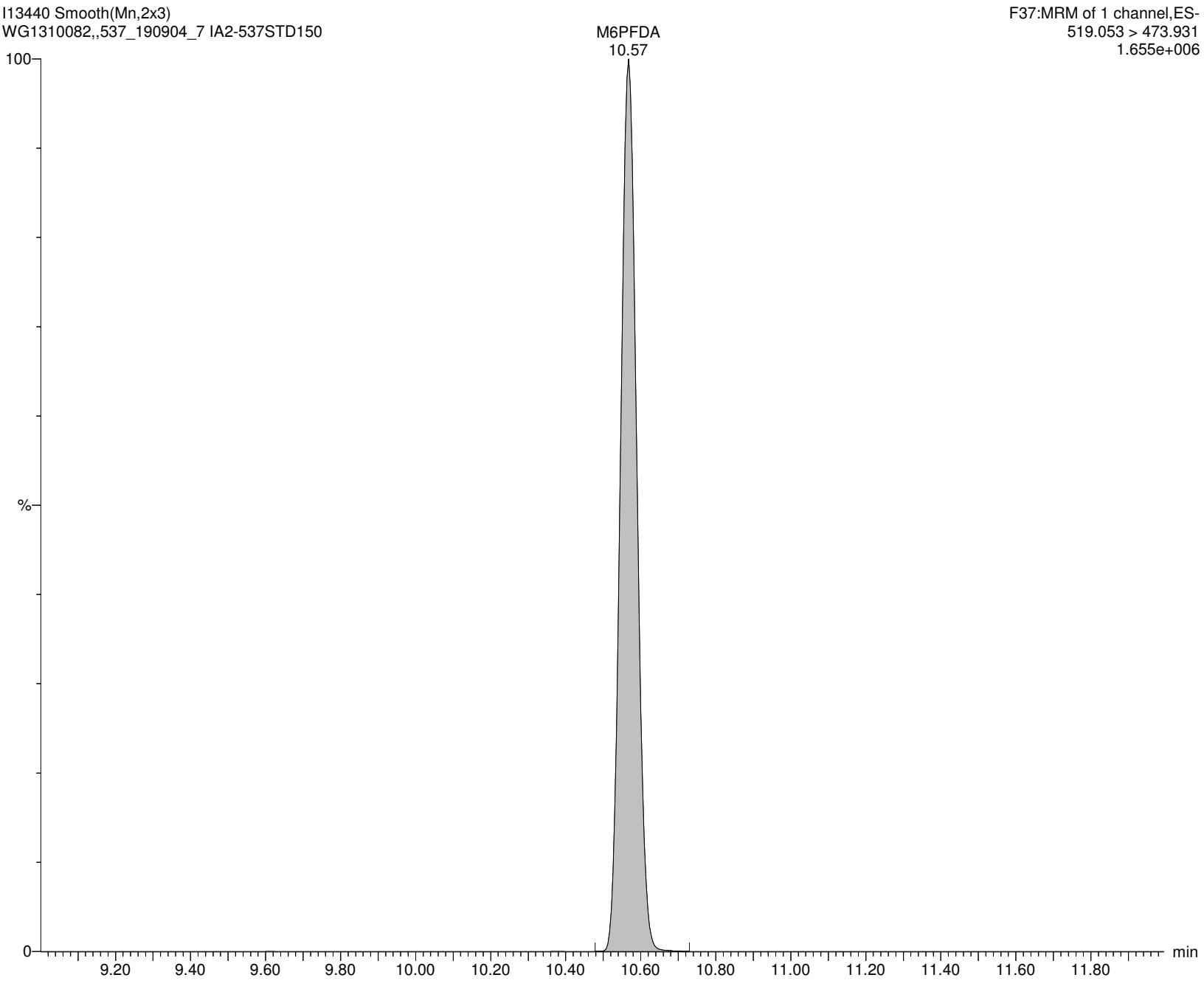



all concentration units in (ng/mL)

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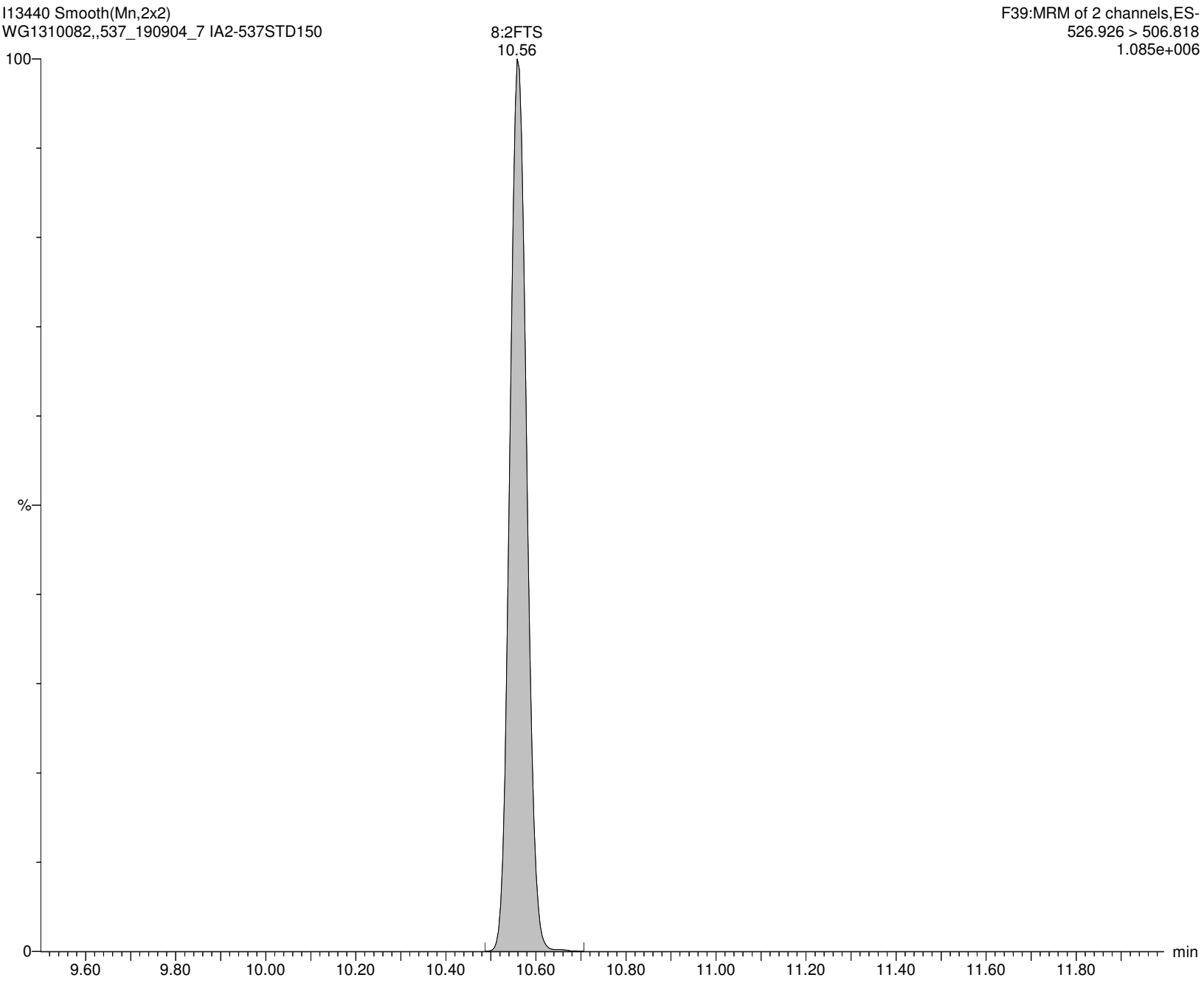
**8:2FTS**





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**User: LCMS02:JW**
**Vial: 1:A,8**
**Instrument: XEVO-TQSmicro#QEB0050**
**Inlet Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\LCMS_537_ISO_B**
**Tune Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\181009_TUNE.IPR**
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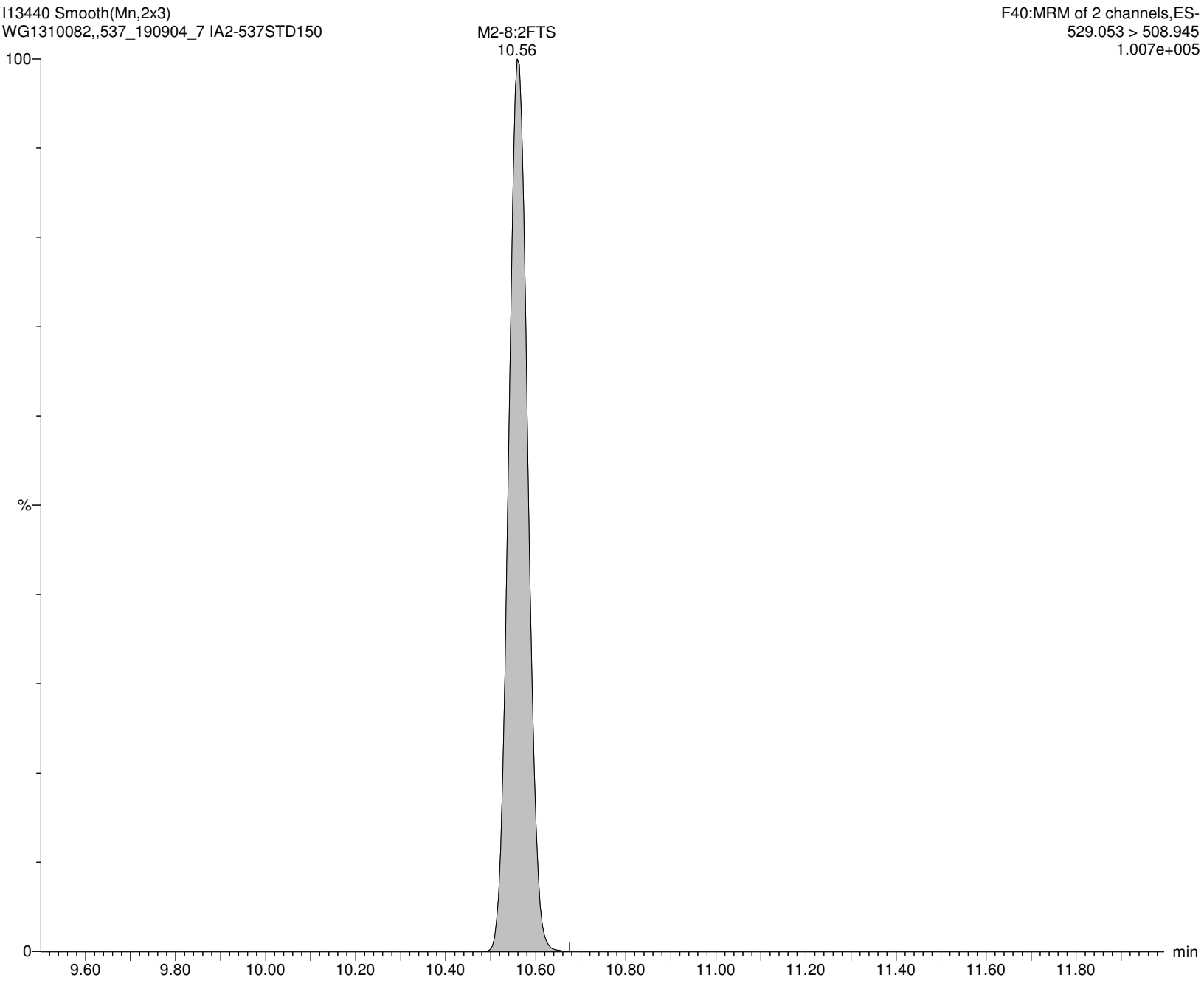



all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
Printed: Monday, November 18, 2019 13:43:00 Eastern Standard Time

**Name: I13440**
**ID: IA2-537STD150**
**Date: 18-Nov-2019**
**Time: 12:16:43**
**Description: WG1310082,,537_190904_7**
**User: LCMS02:JW**
**Vial: 1:A,8**
**Instrument: XEVO-TQSmicro#QEB0050**
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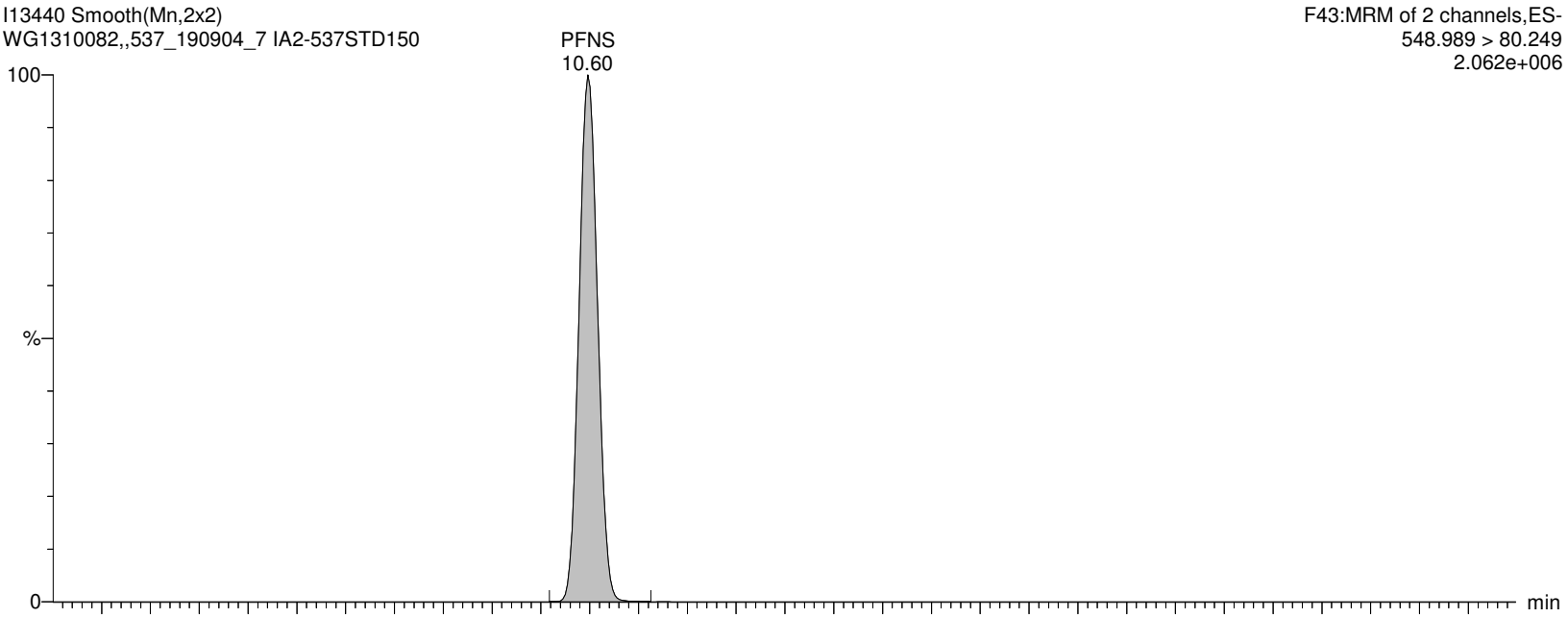
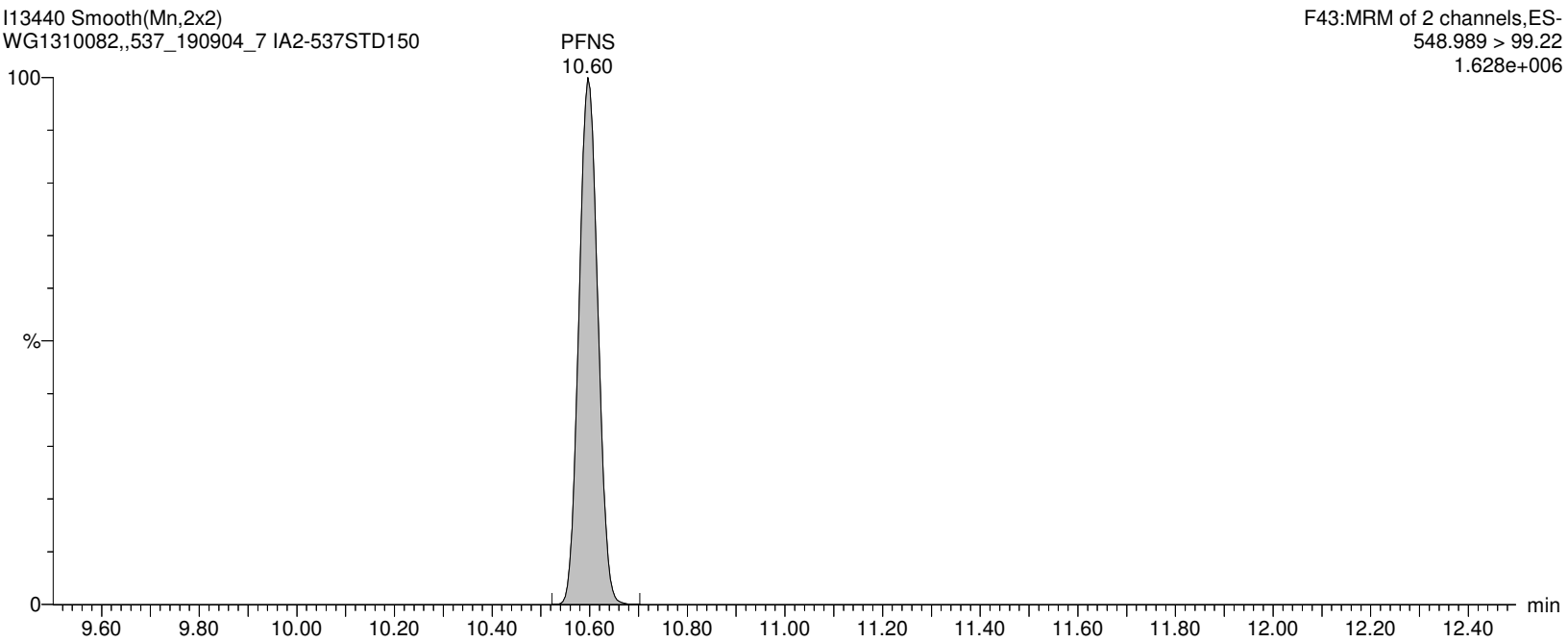
**PFNS**





all concentration units in (ng/mL)

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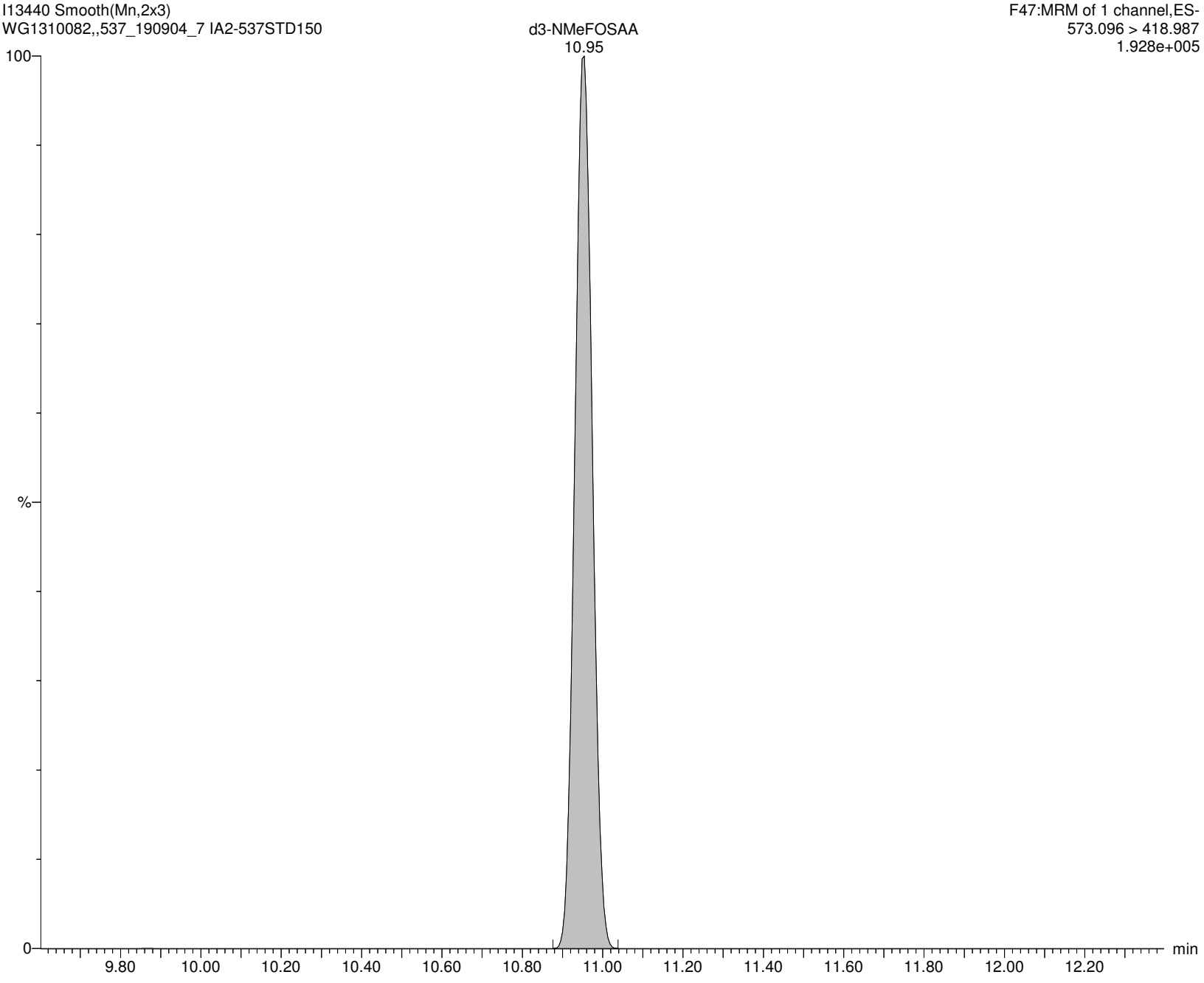



all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
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**Vial: 1:A,8**
**Instrument: XEVO-TQSmicro#QEB0050**
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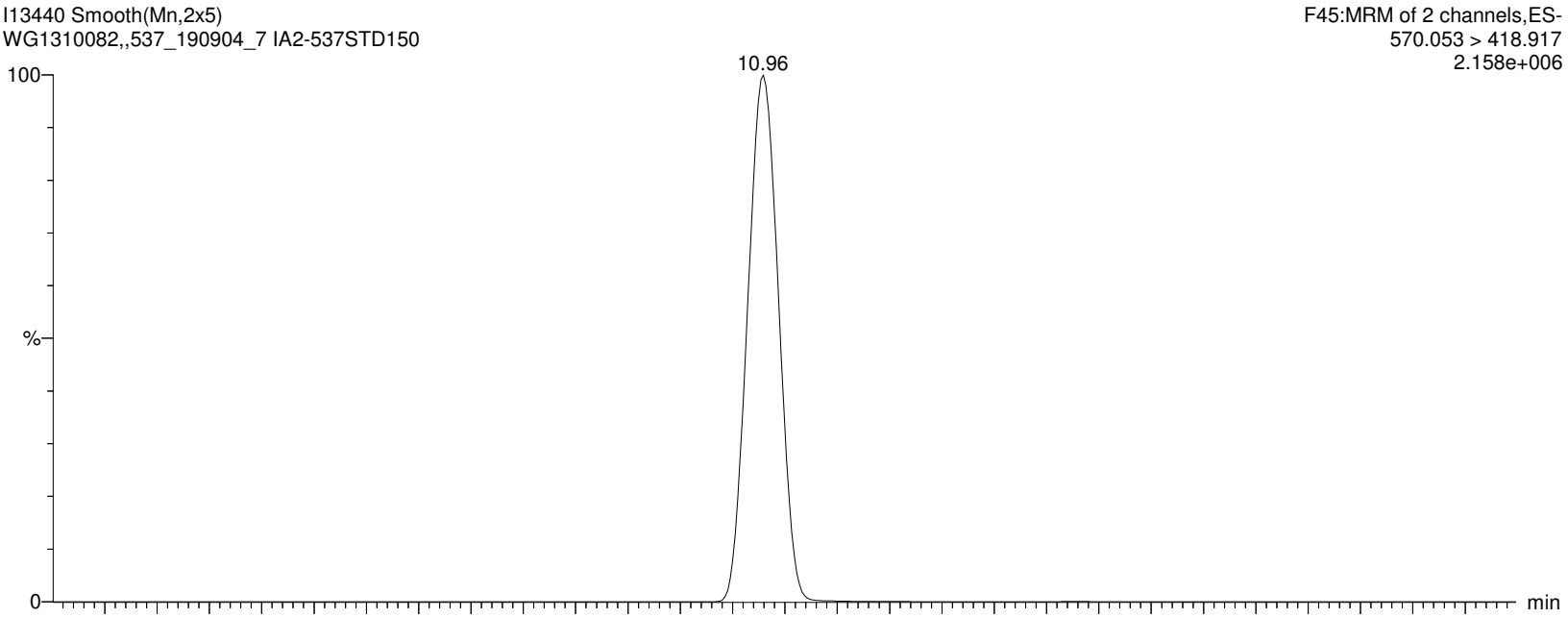
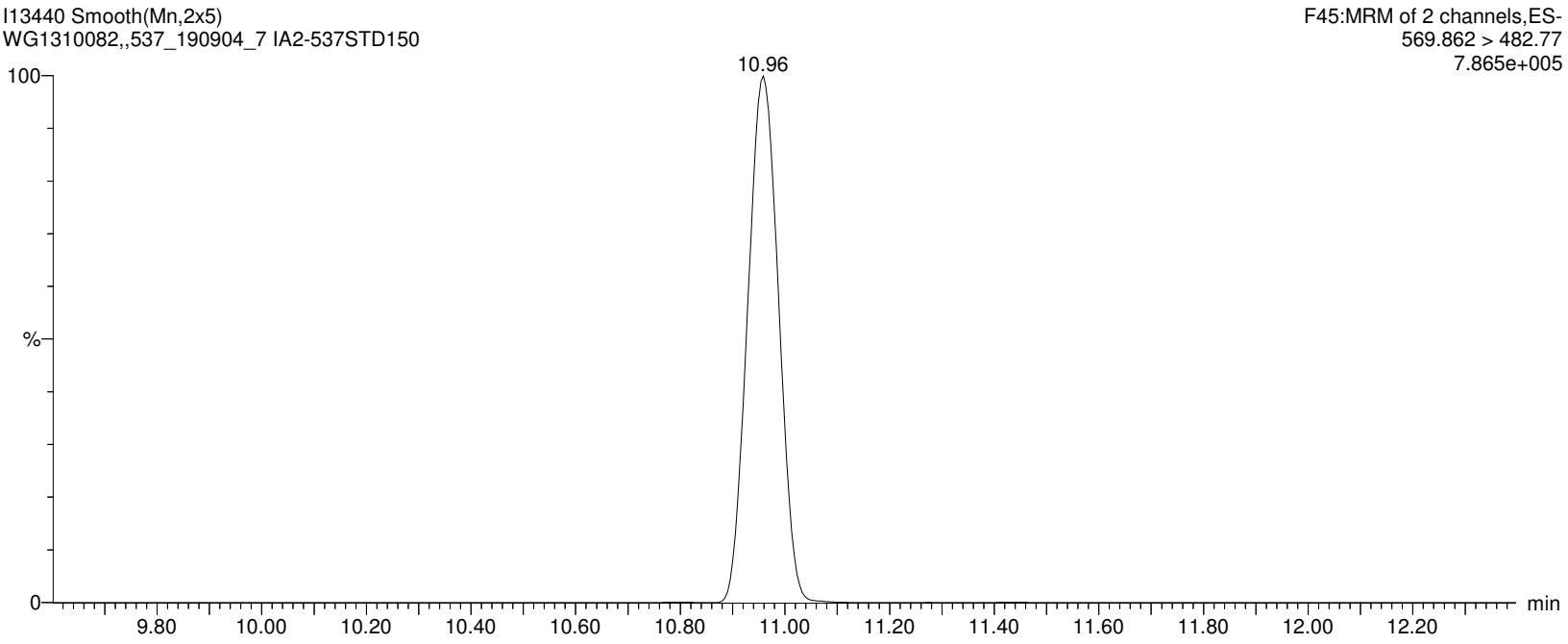
**br-NMeFOSAA**





all concentration units in (ng/mL)

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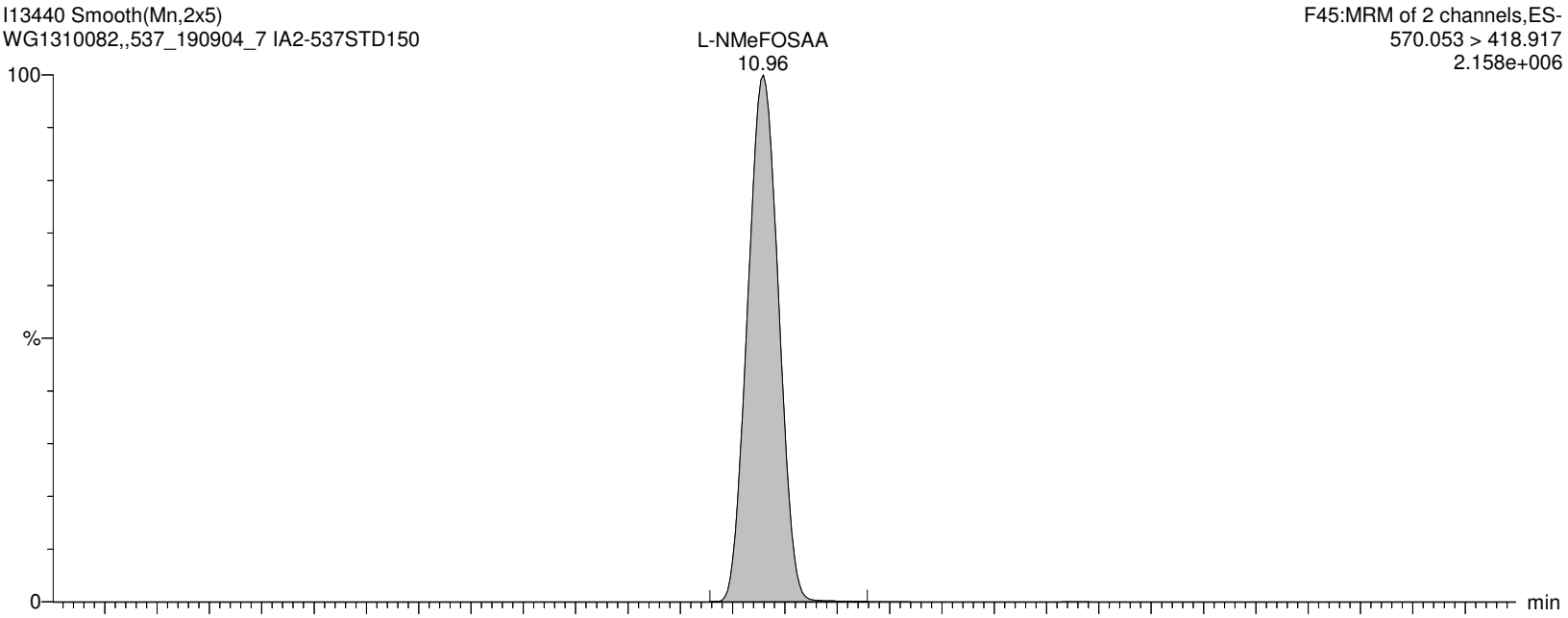
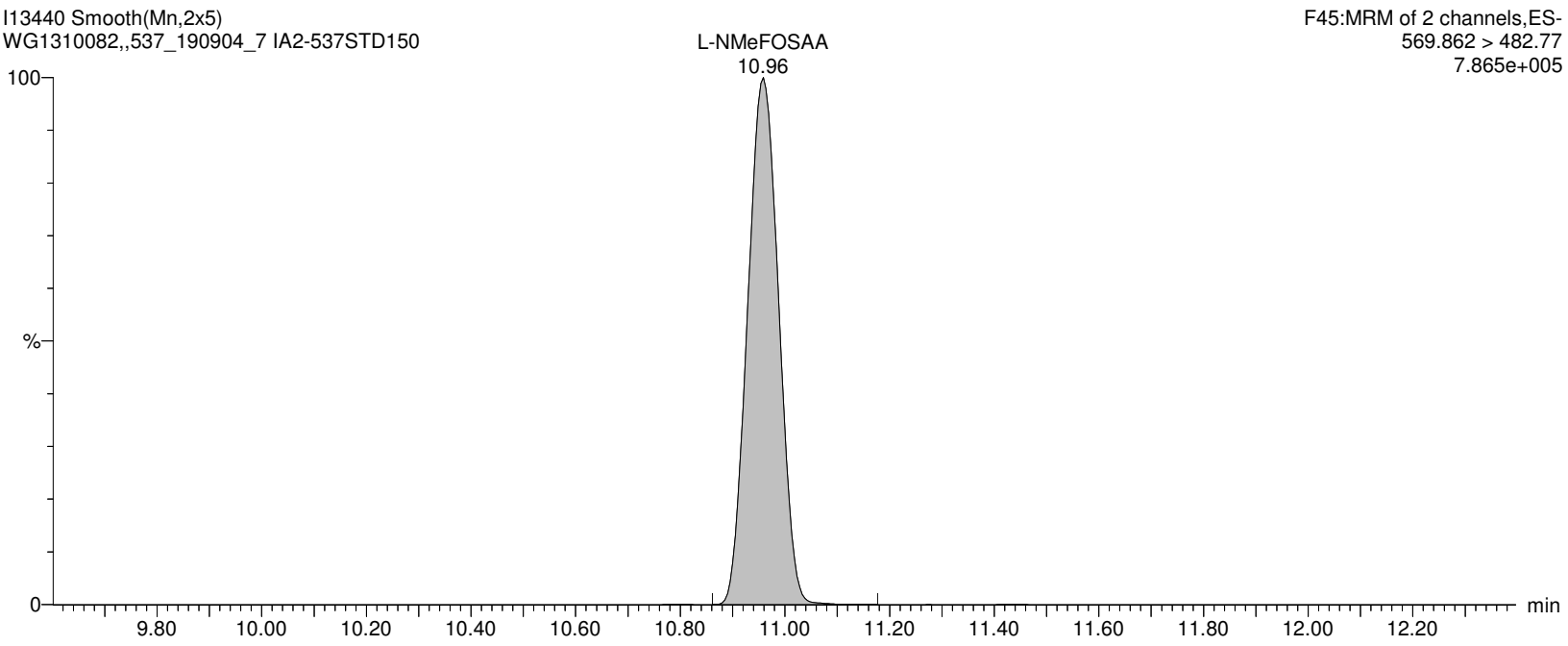
**L-NMeFOSAA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
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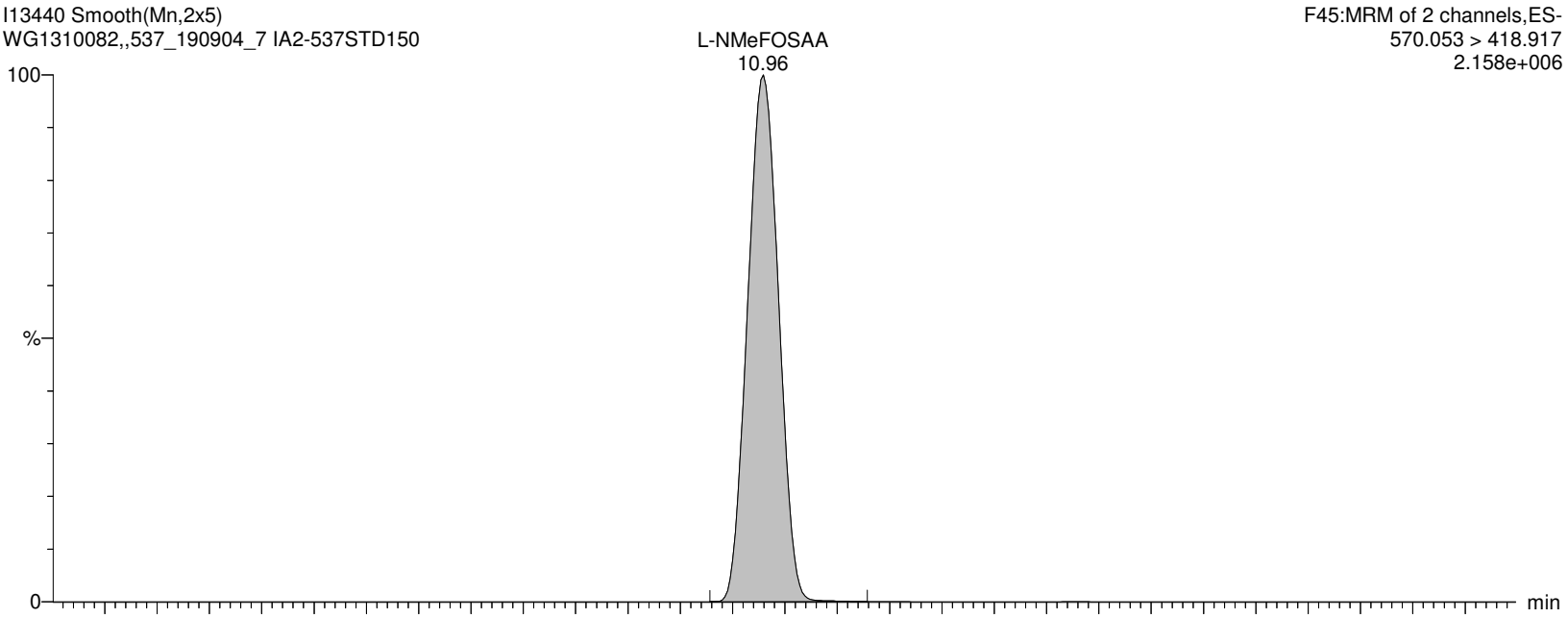
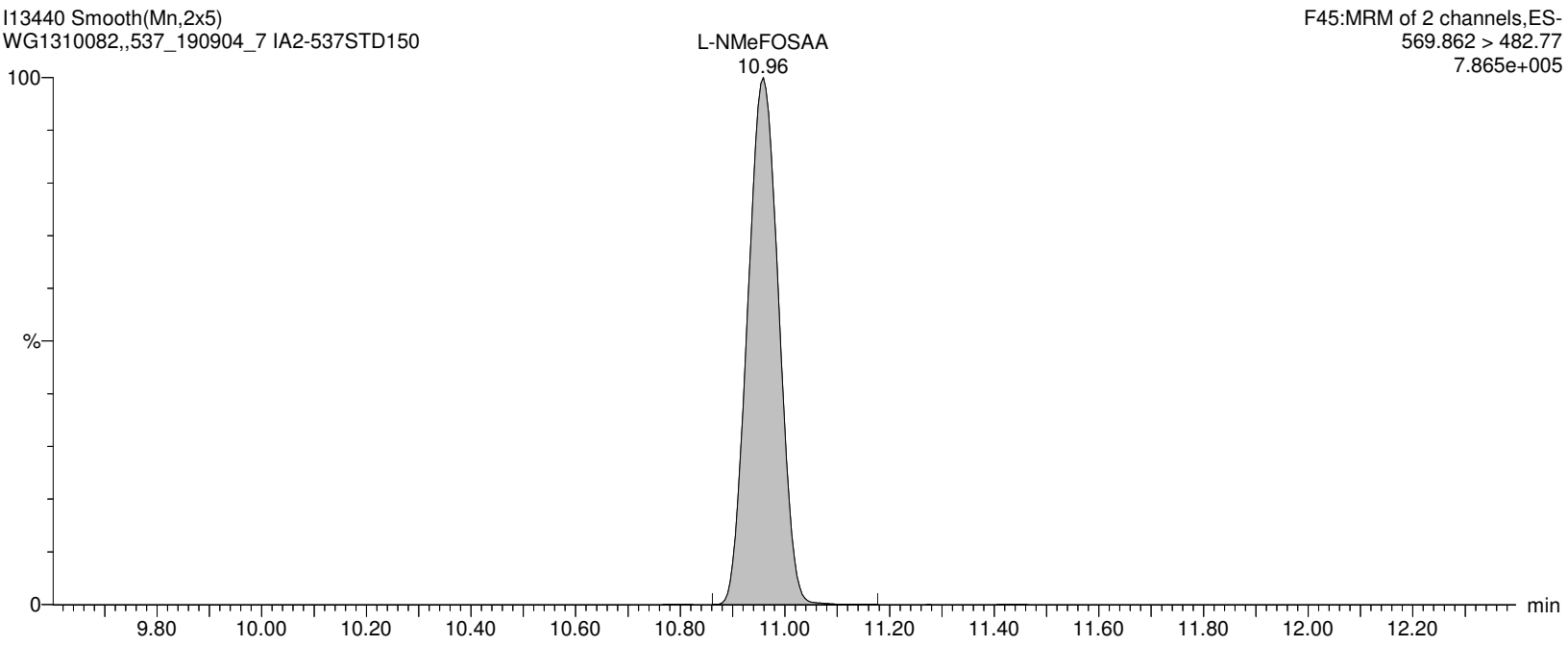
**NMeFOSAA**





all concentration units in (ng/mL)

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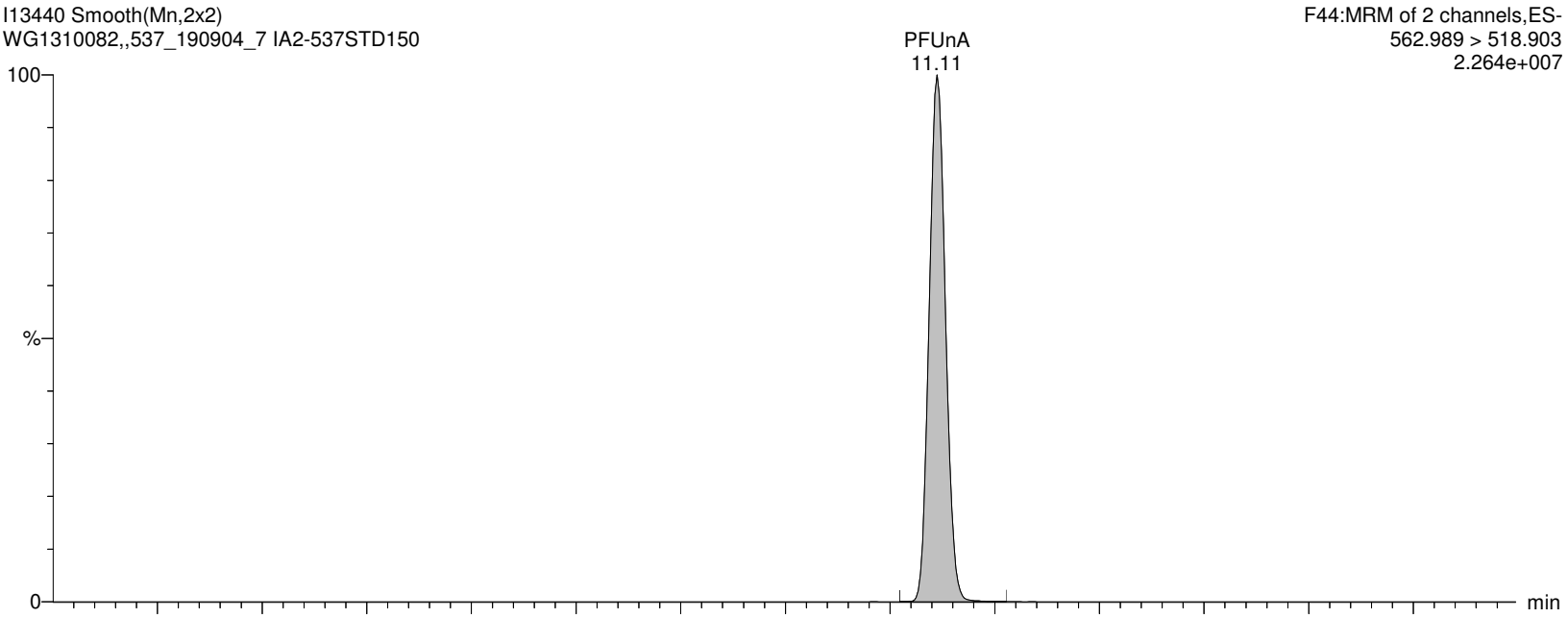
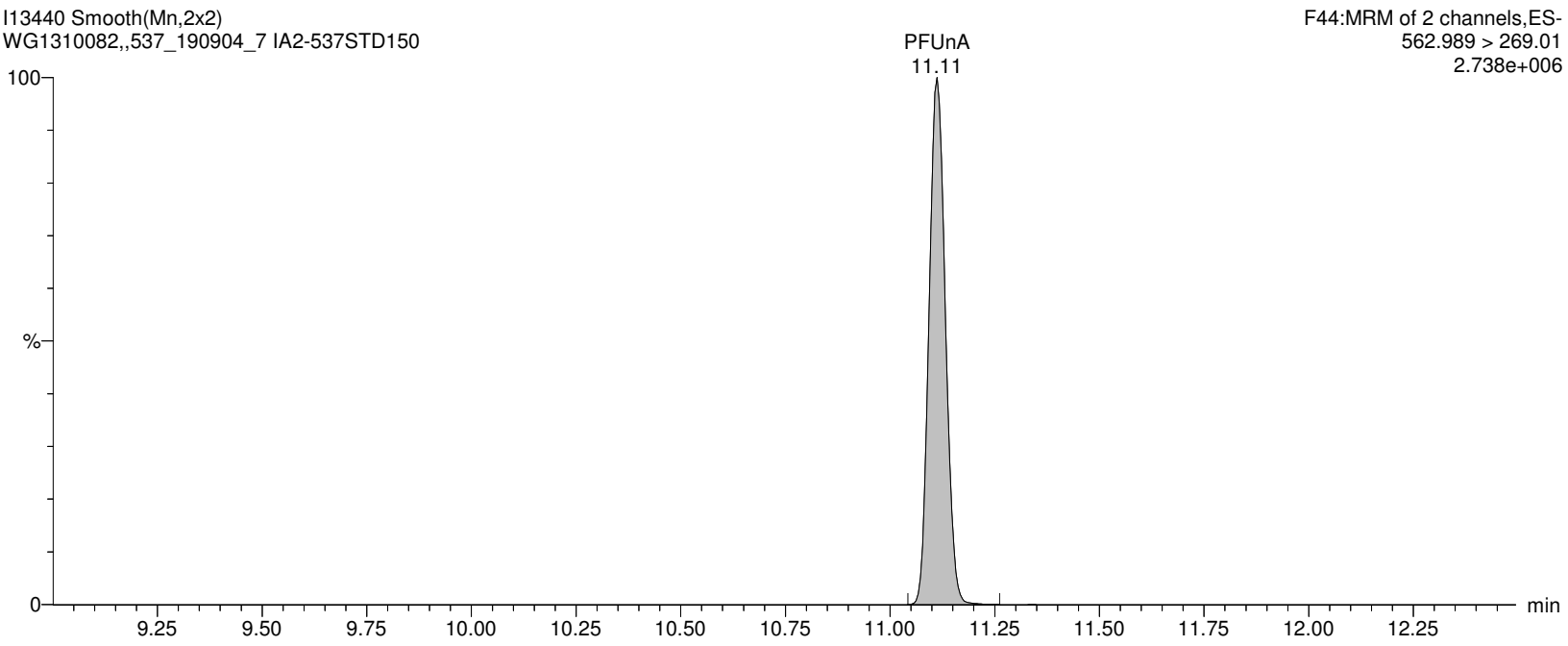
**MS Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**PFUnA**





all concentration units in (ng/mL)

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**Vial: 1:A,8**
**Instrument: XEVO-TQSmicro#QEB0050**
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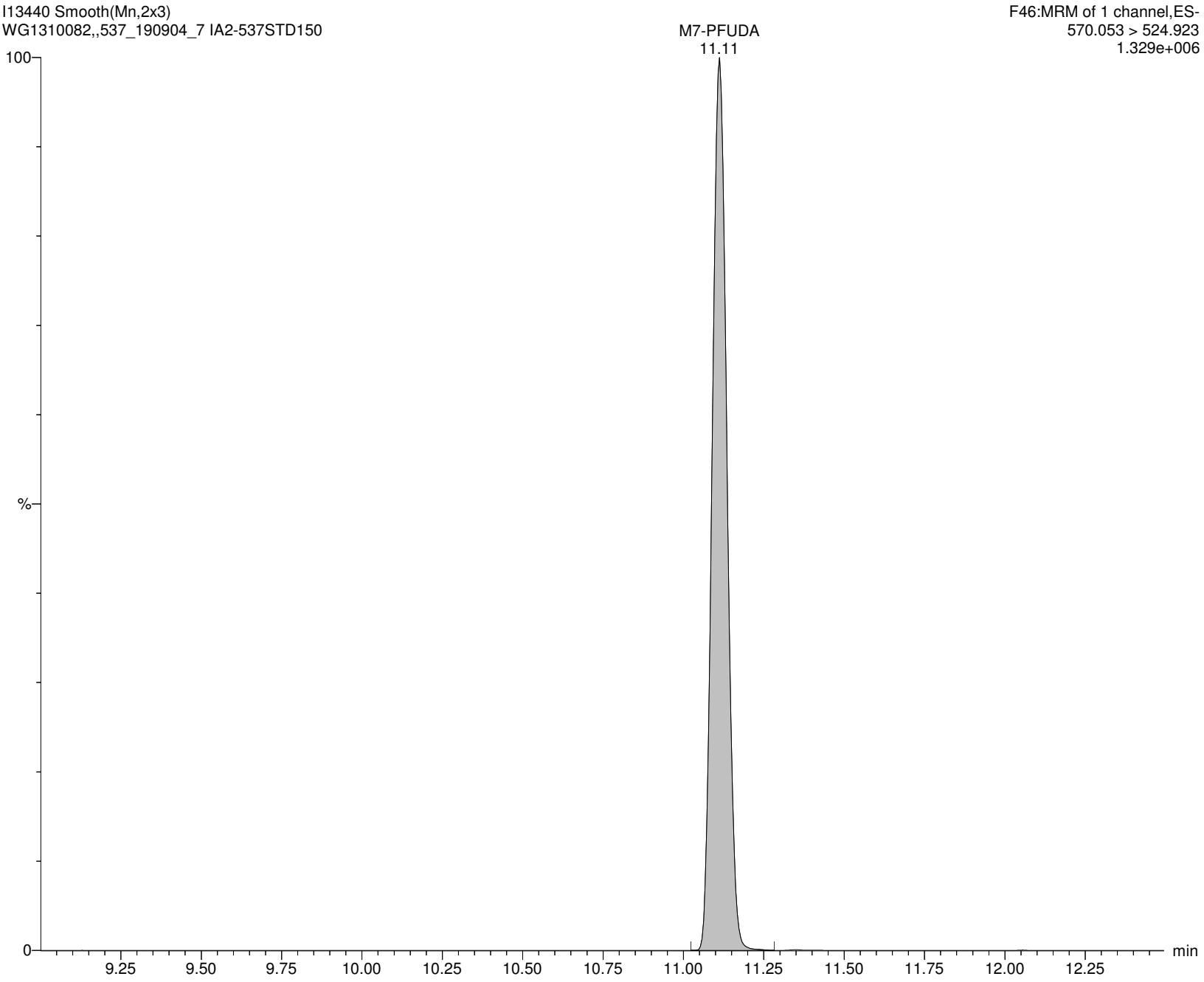
**M7-PFUDA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
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**Vial: 1:A,8**
**Instrument: XEVO-TQSmicro#QEB0050**
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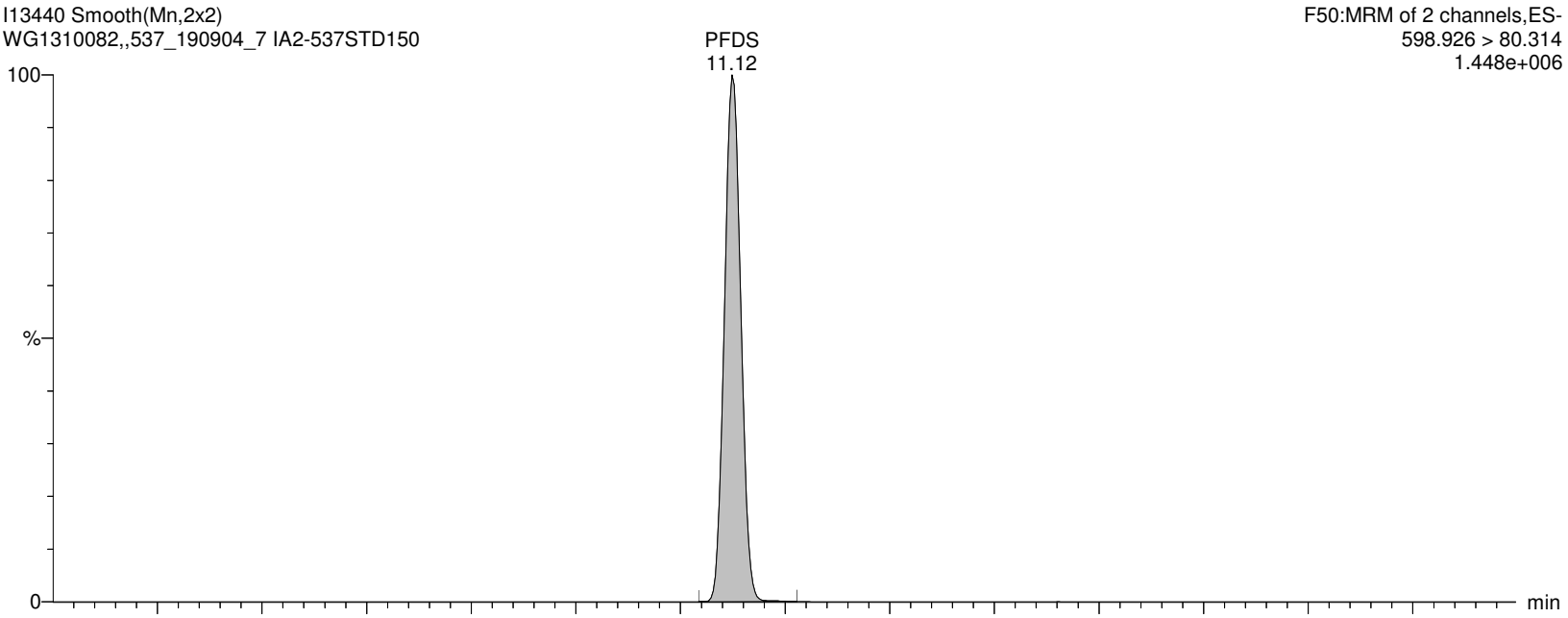
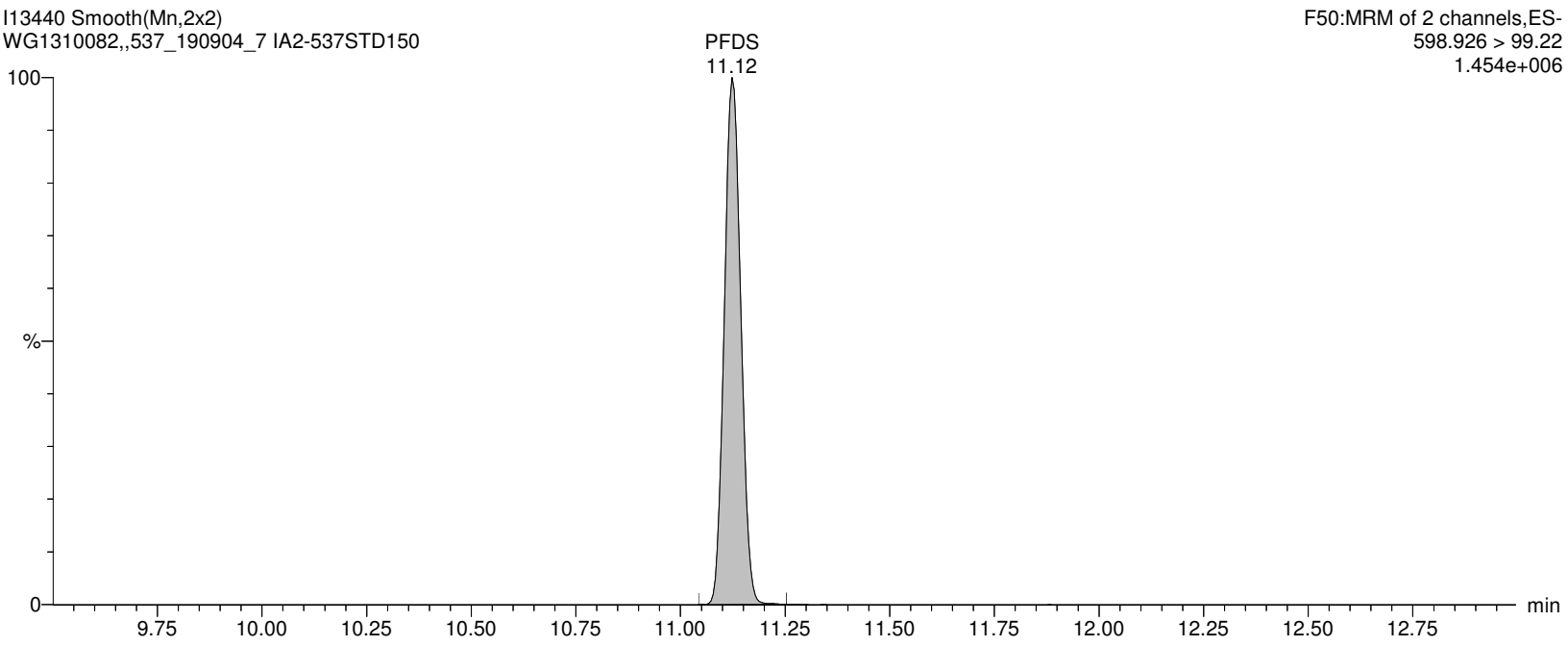
**PFDS**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
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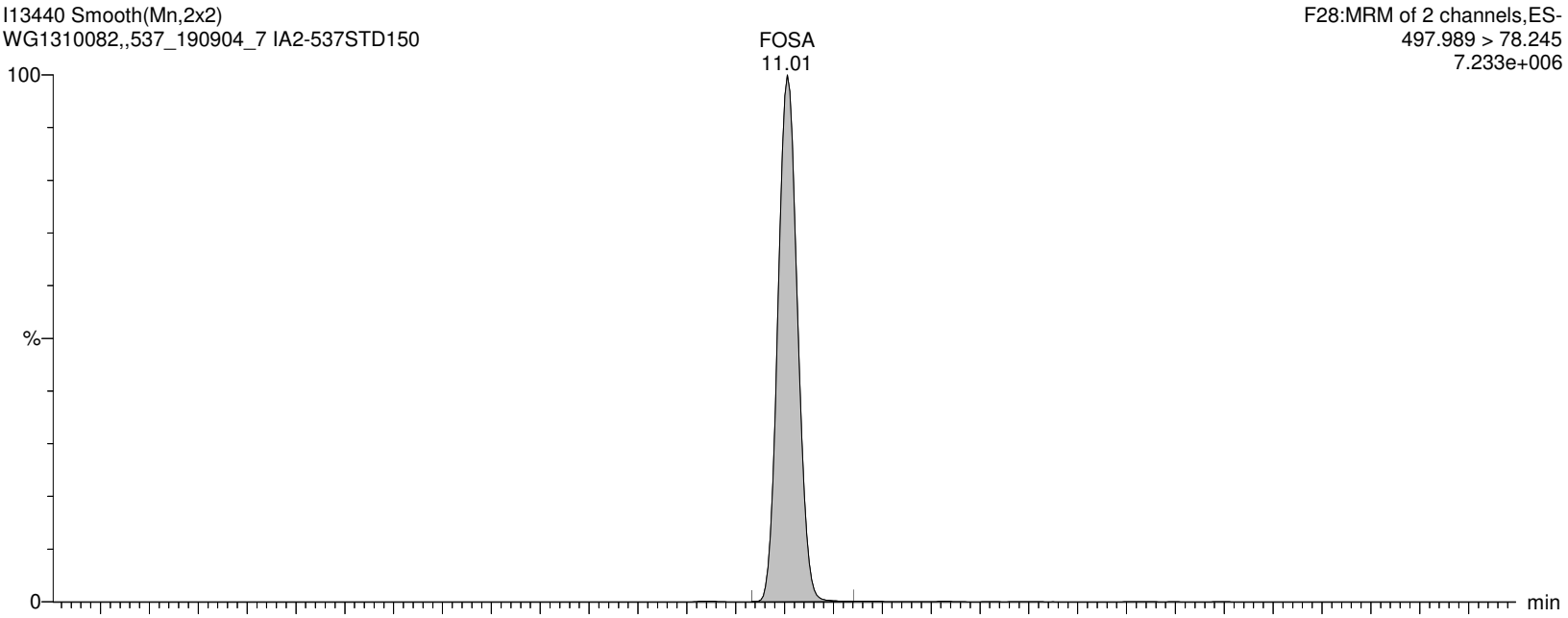
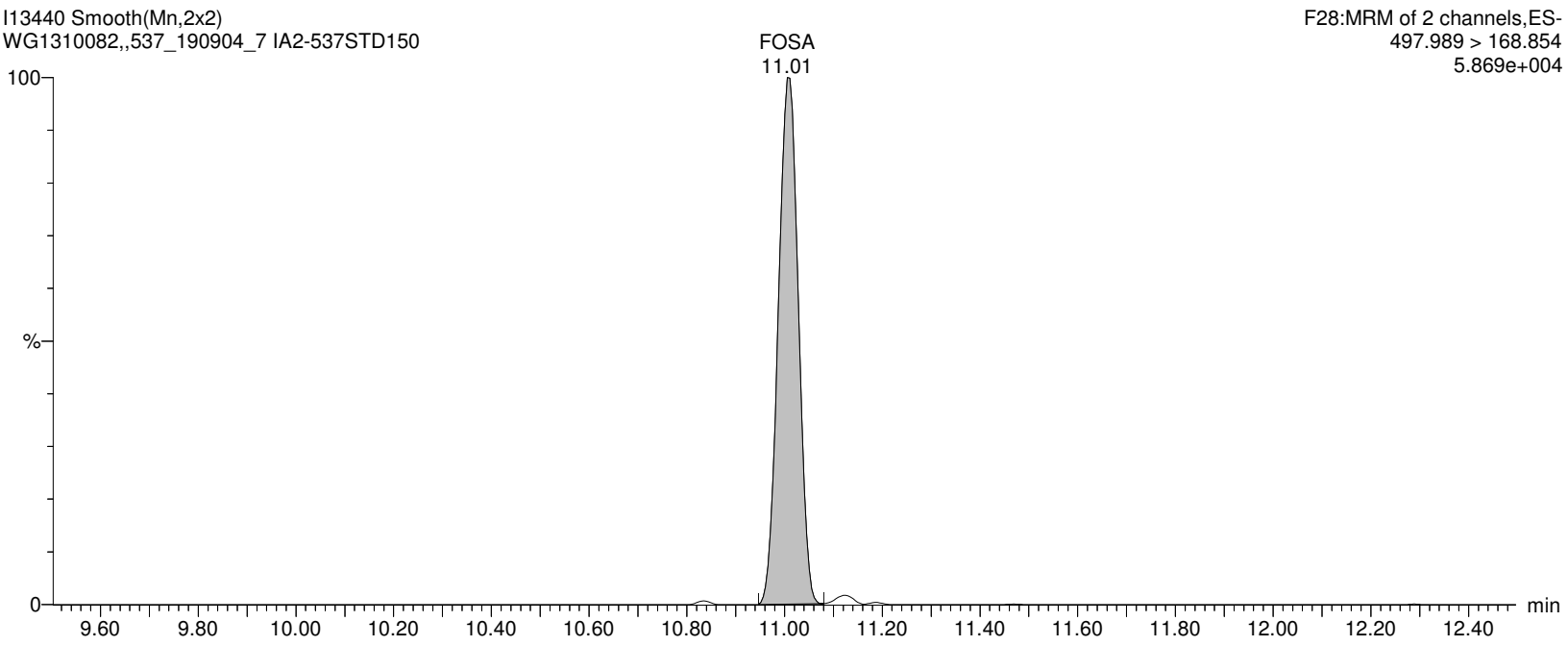
**FOSA**





all concentration units in (ng/mL)

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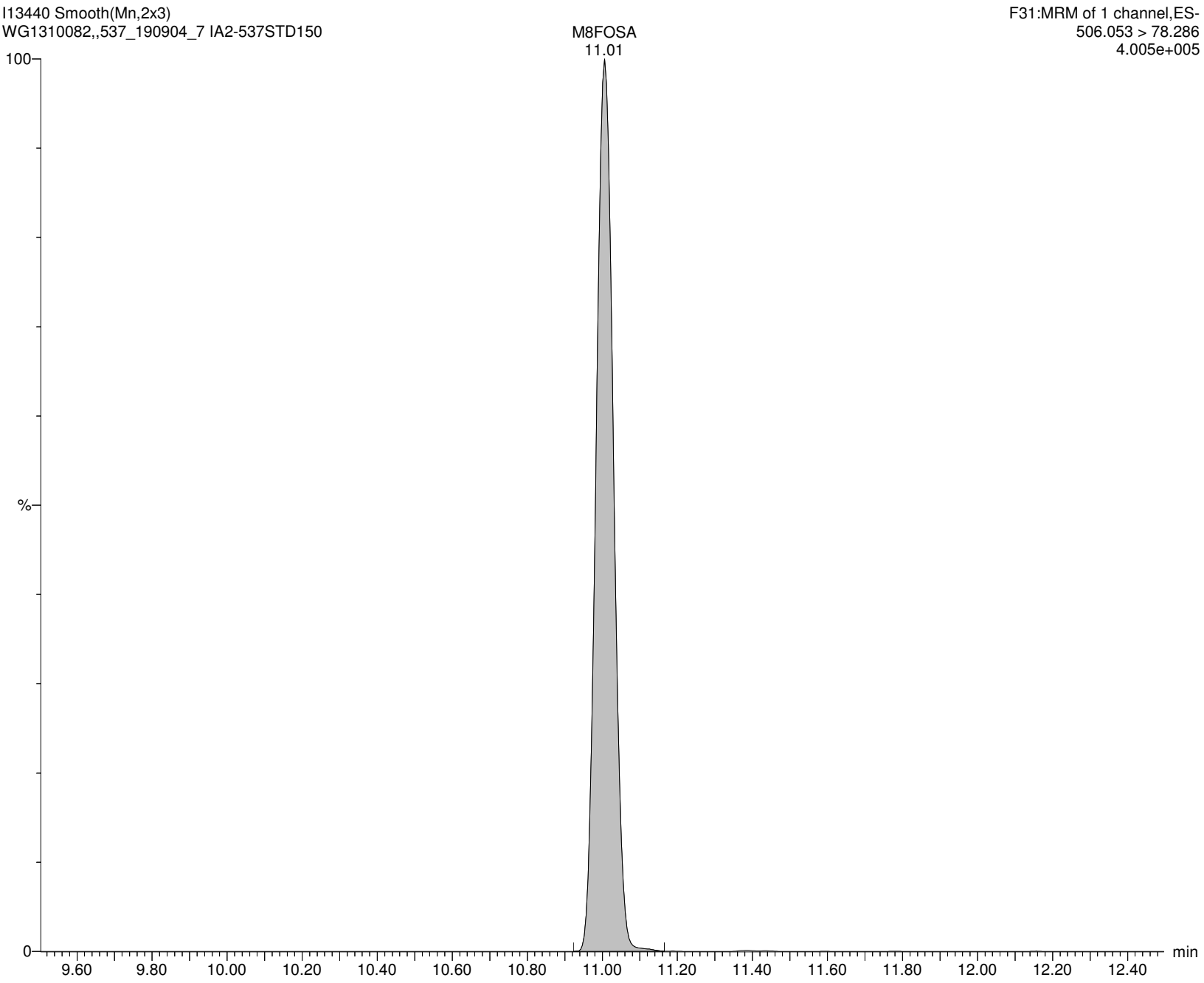
**M8FOSA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
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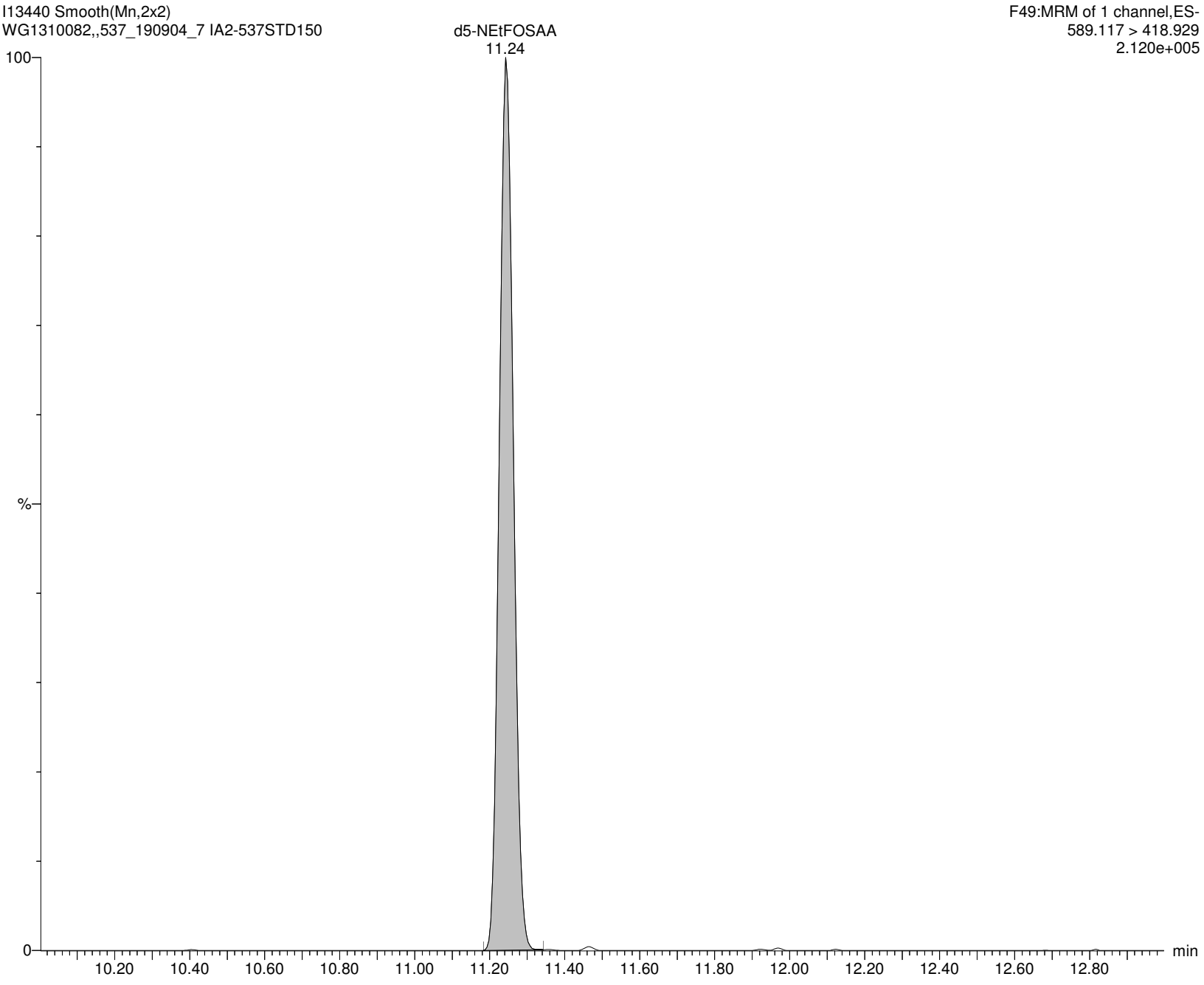
**d5-NEtFOSAA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
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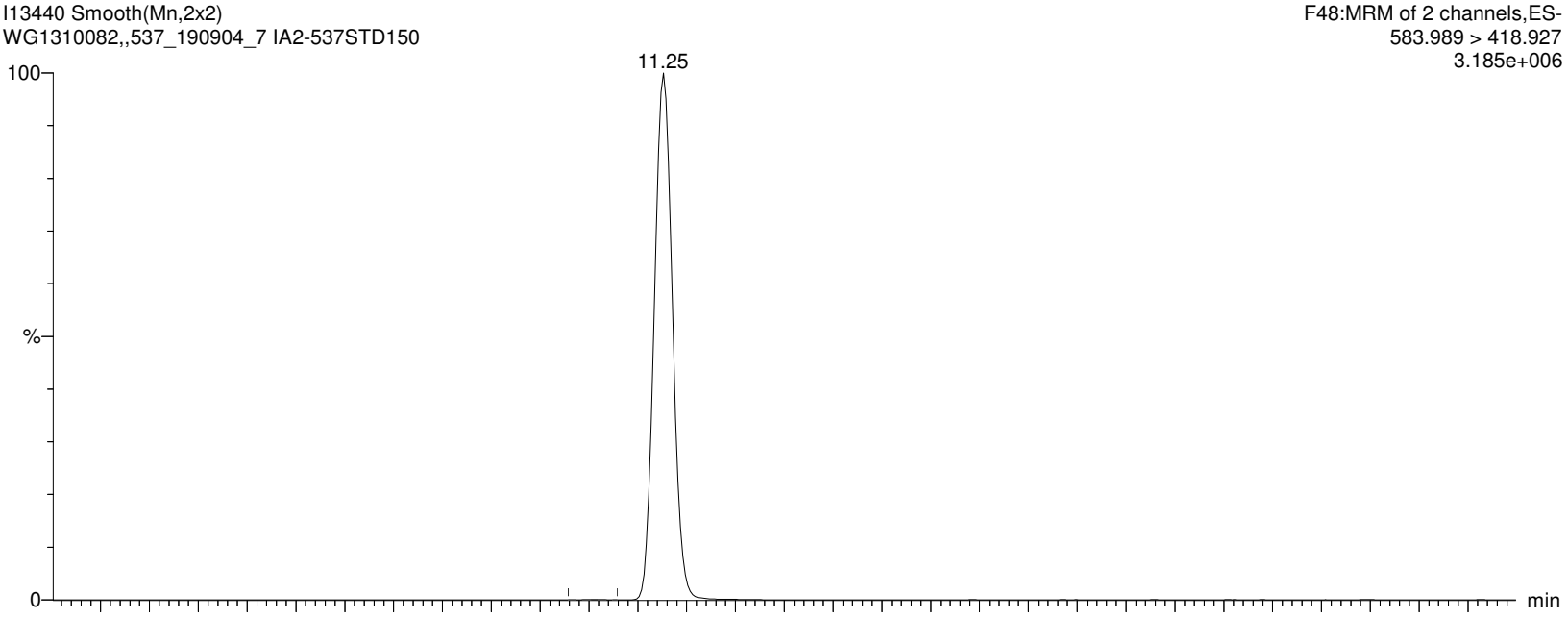
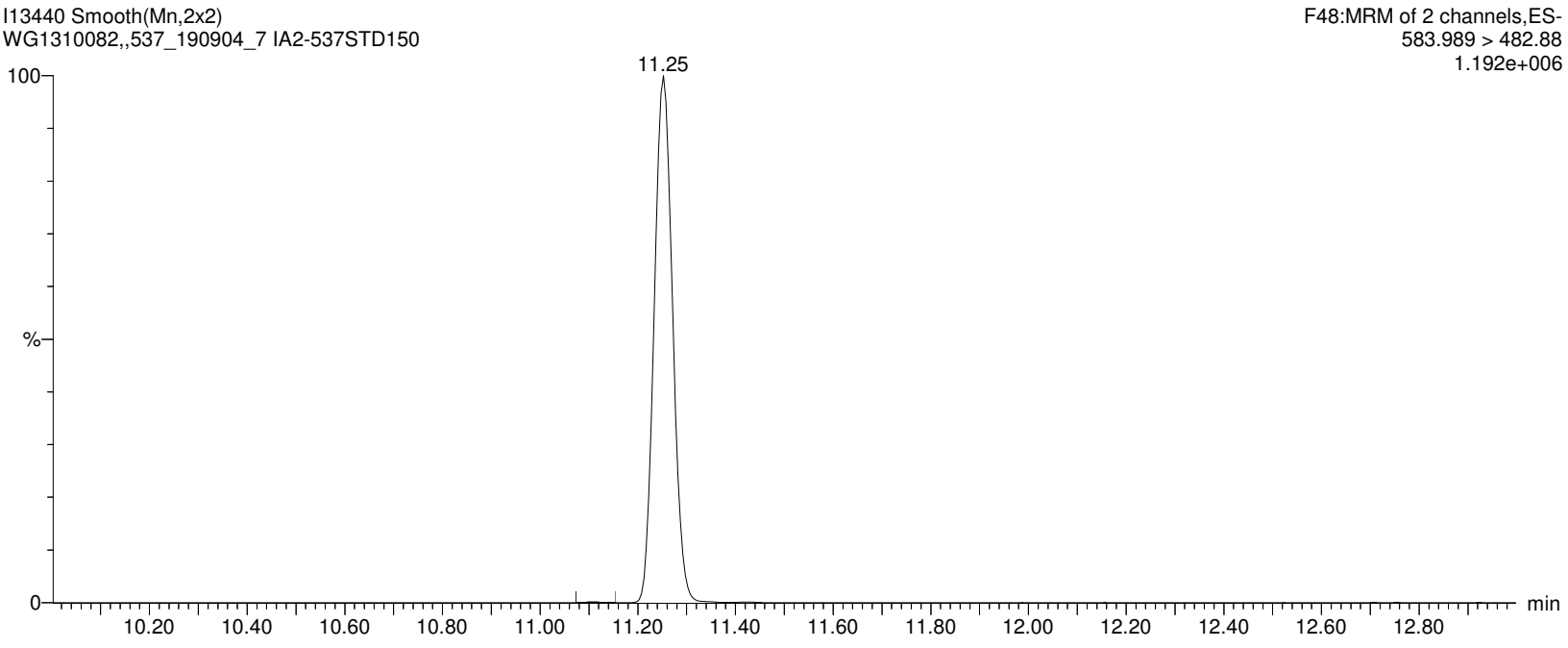
**br-NEtFOSAA**





all concentration units in (ng/mL)

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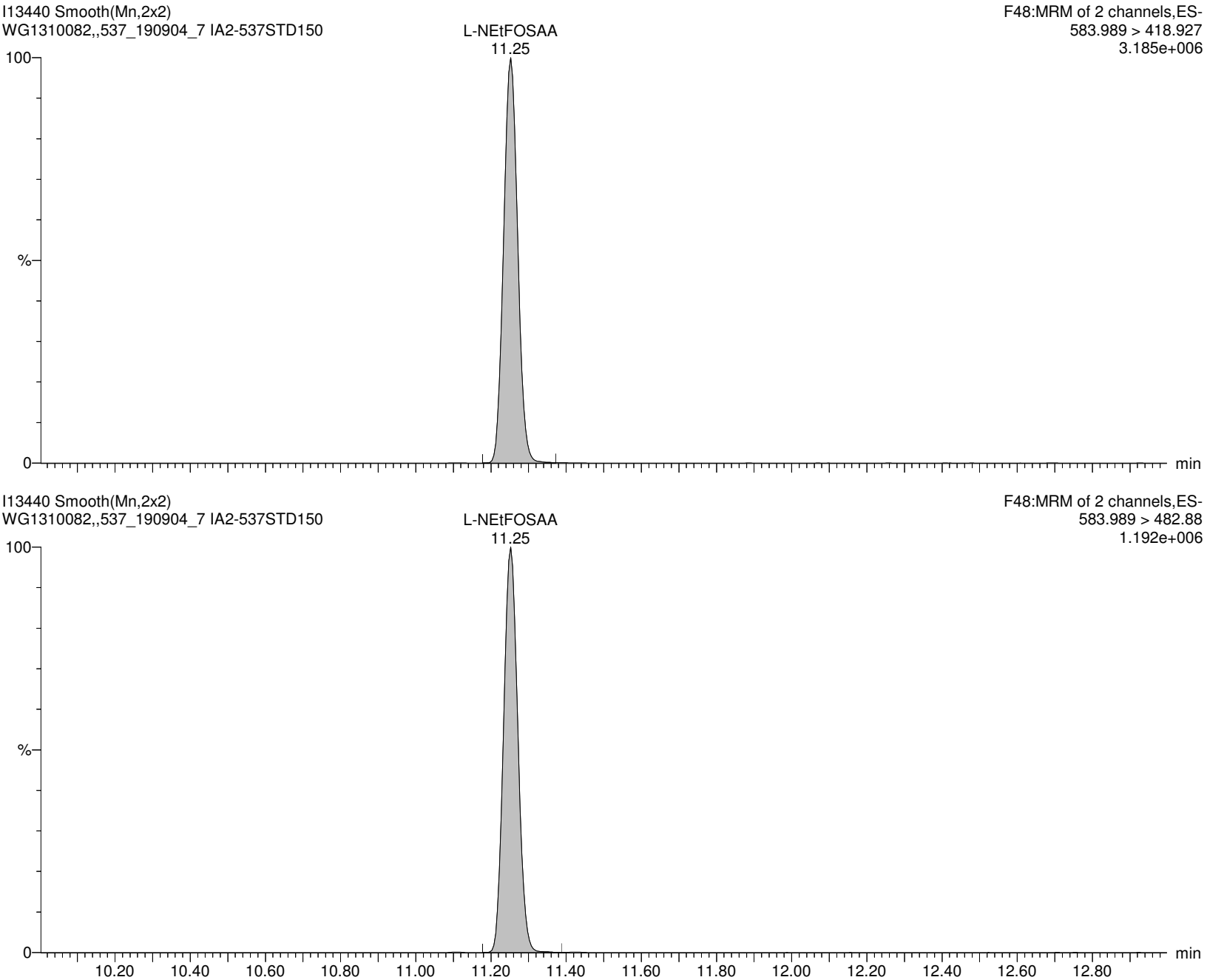
**L-NEtFOSAA**





all concentration units in (ng/mL)

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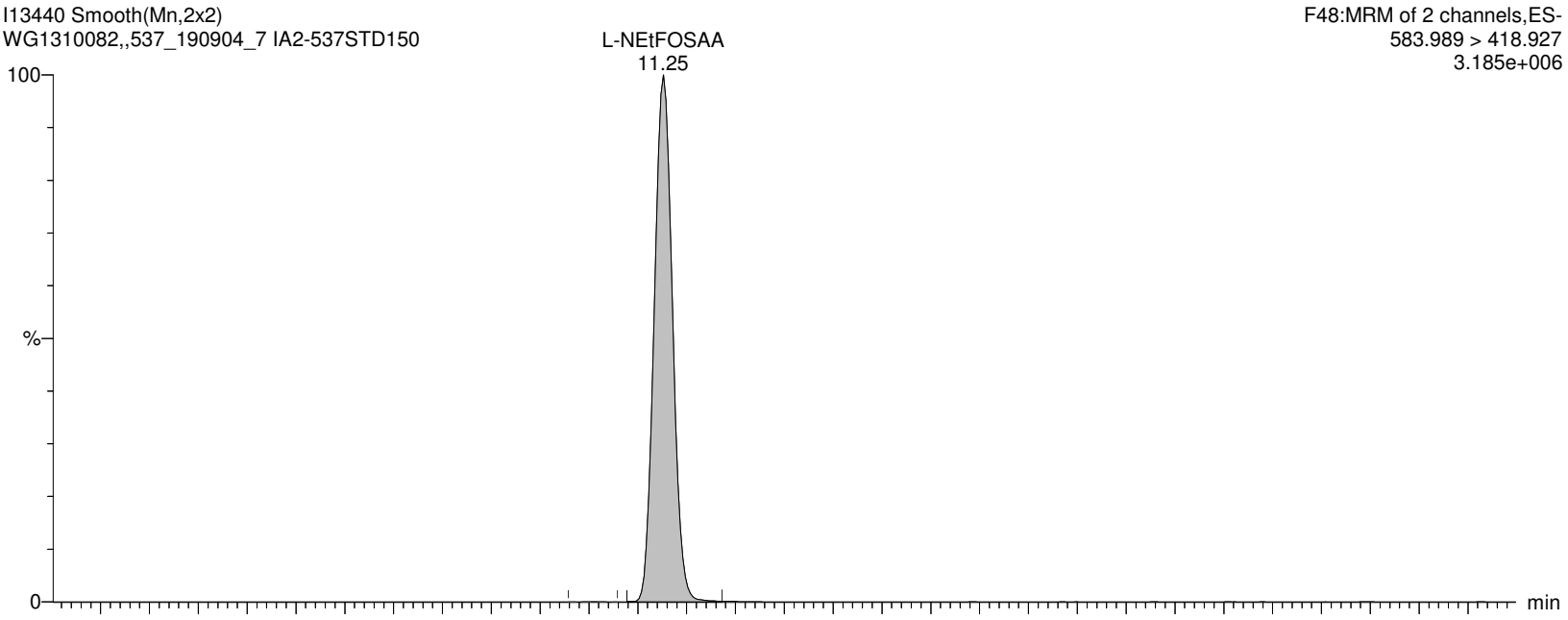


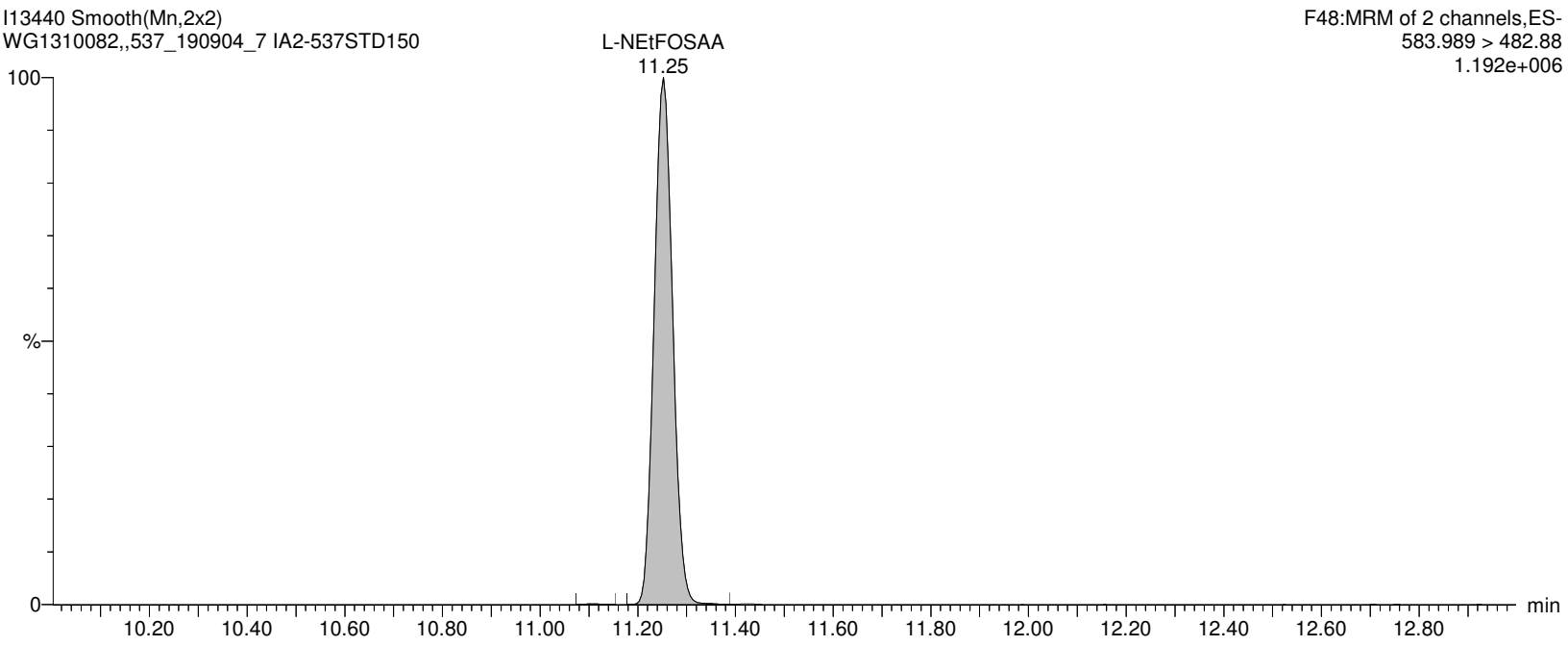



all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
Printed: Monday, November 18, 2019 13:43:00 Eastern Standard Time

**Name: I13440**
**ID: IA2-537STD150**
**Date: 18-Nov-2019**
**Time: 12:16:43**
**Description: WG1310082,,537_190904_7**
**User: LCMS02:JW**
**Vial: 1:A,8**
**Instrument: XEVO-TQSmicro#QEB0050**
**Inlet Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\LCMS_537_ISO_B**
**Tune Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\181009_TUNE.IPR**
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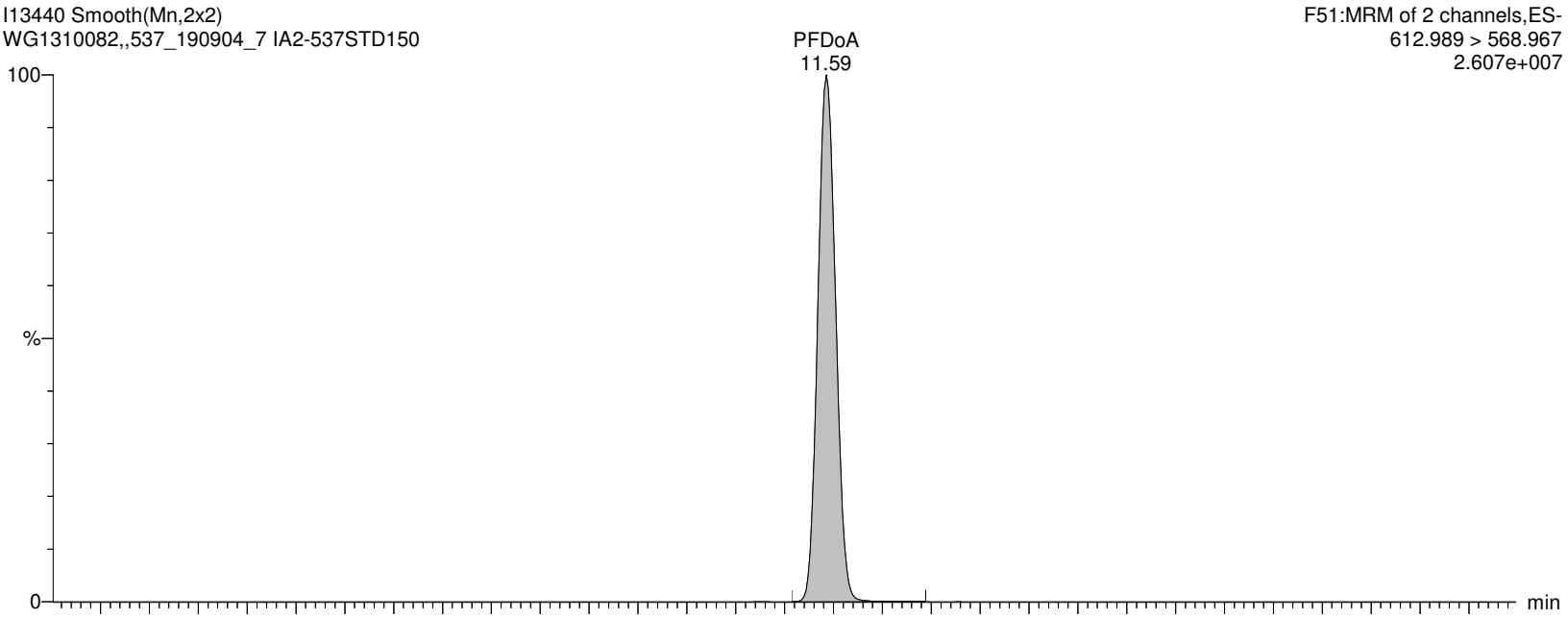


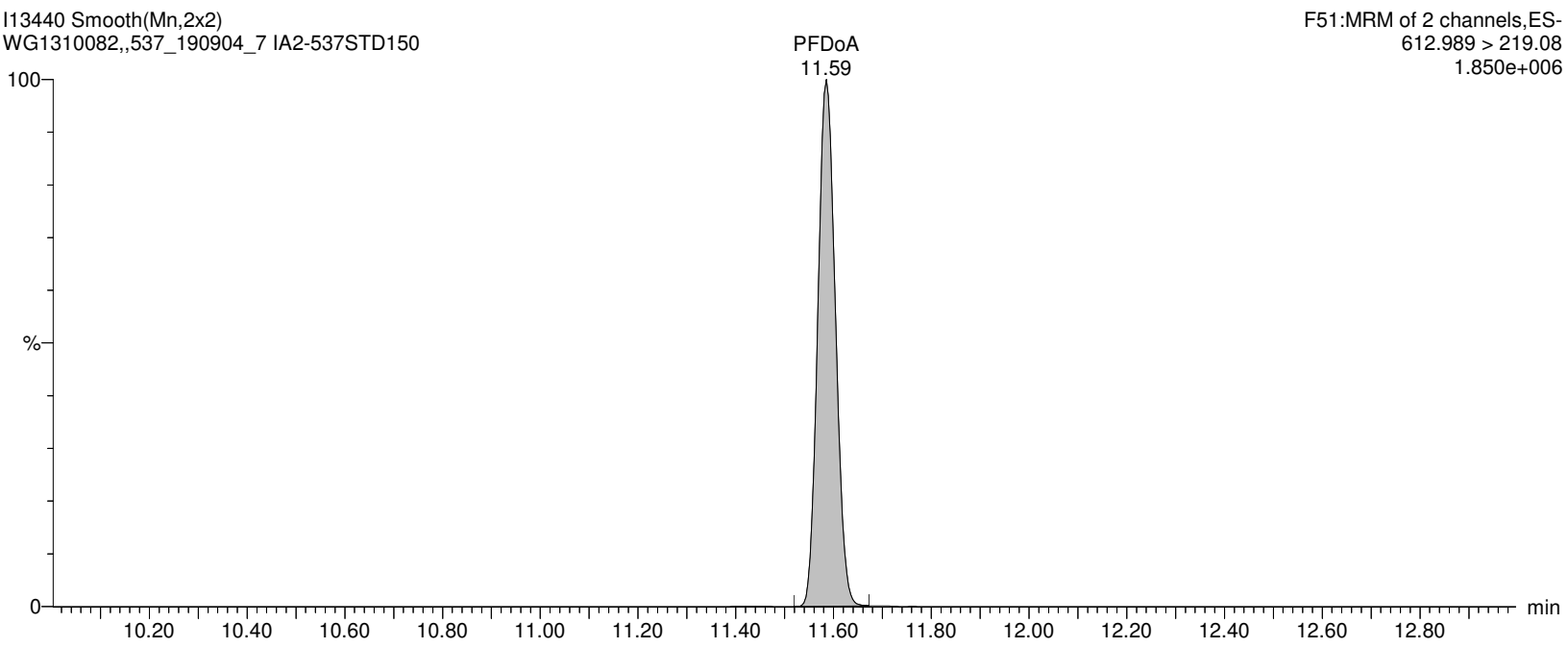



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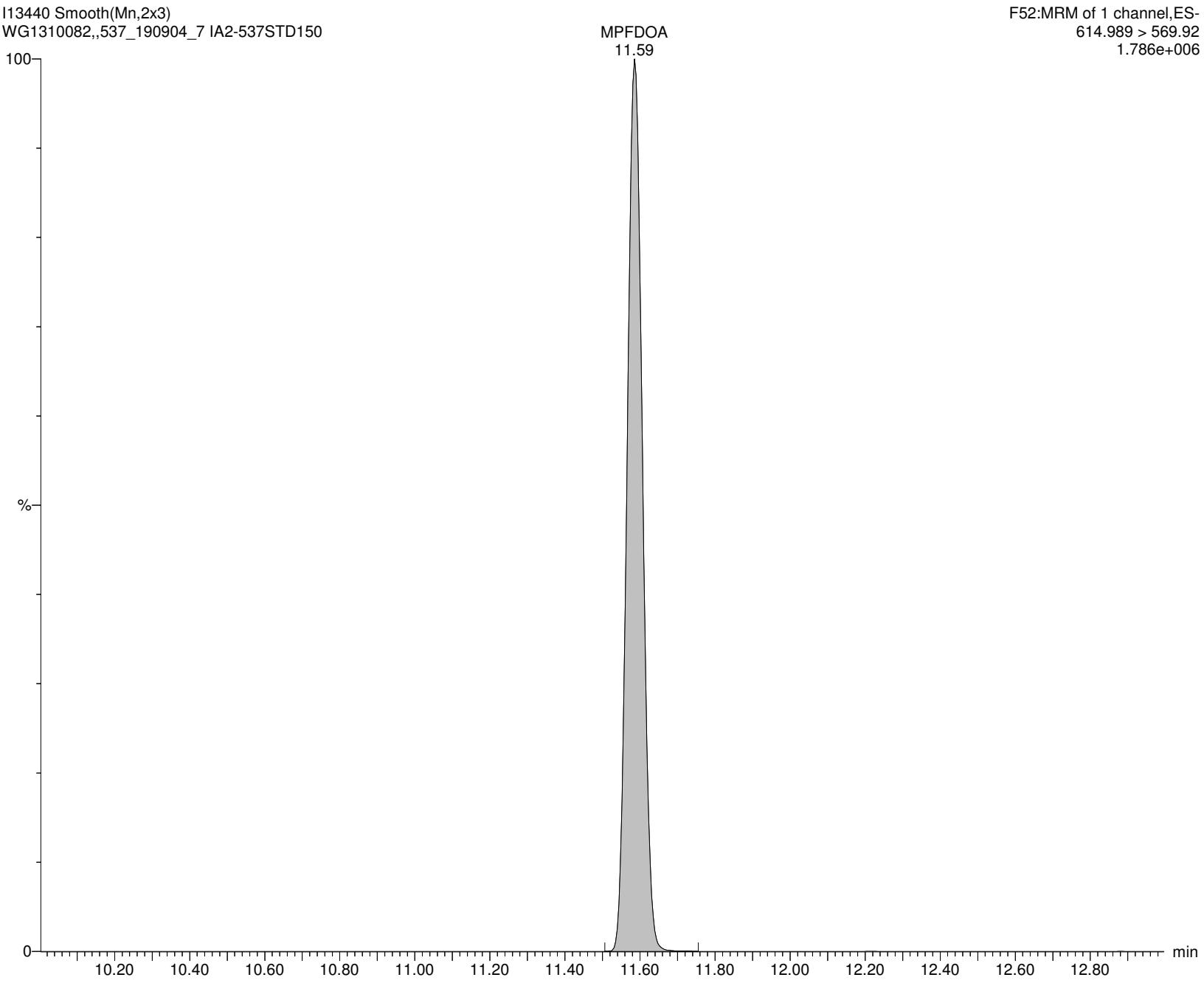



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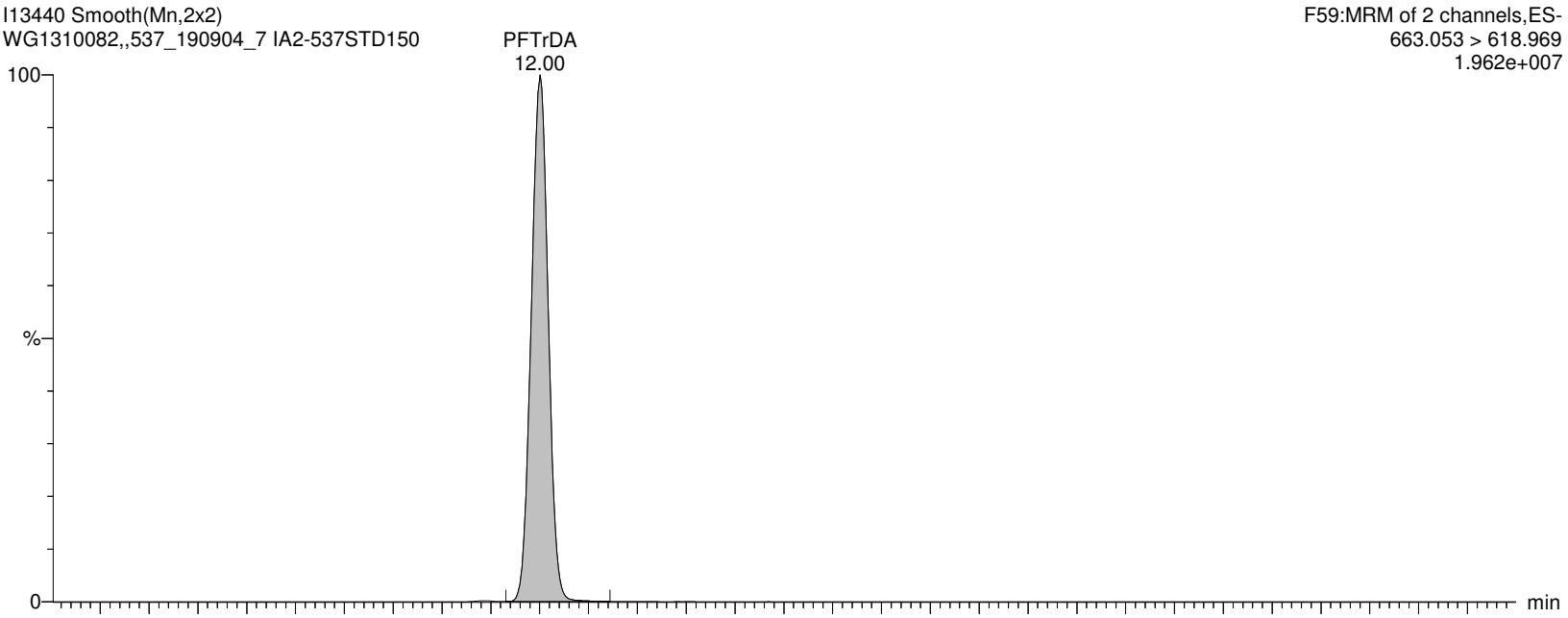


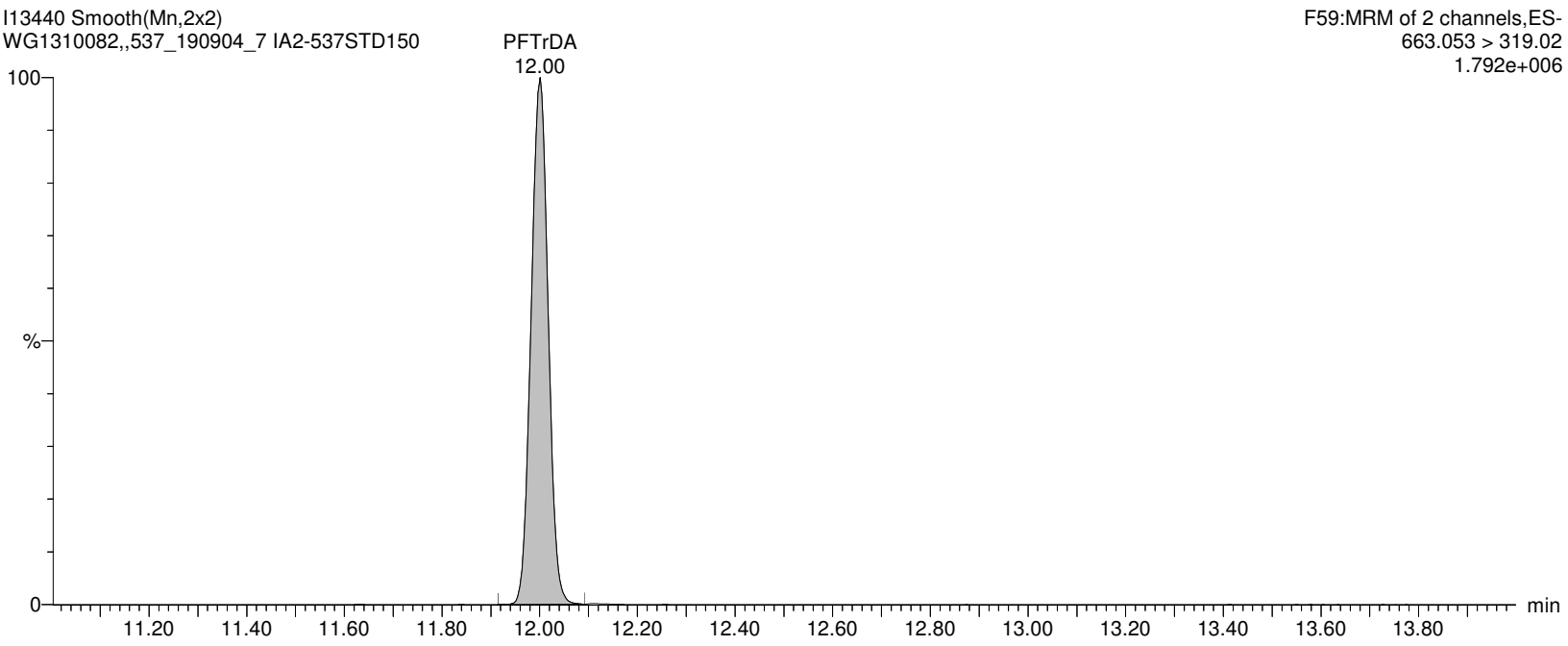



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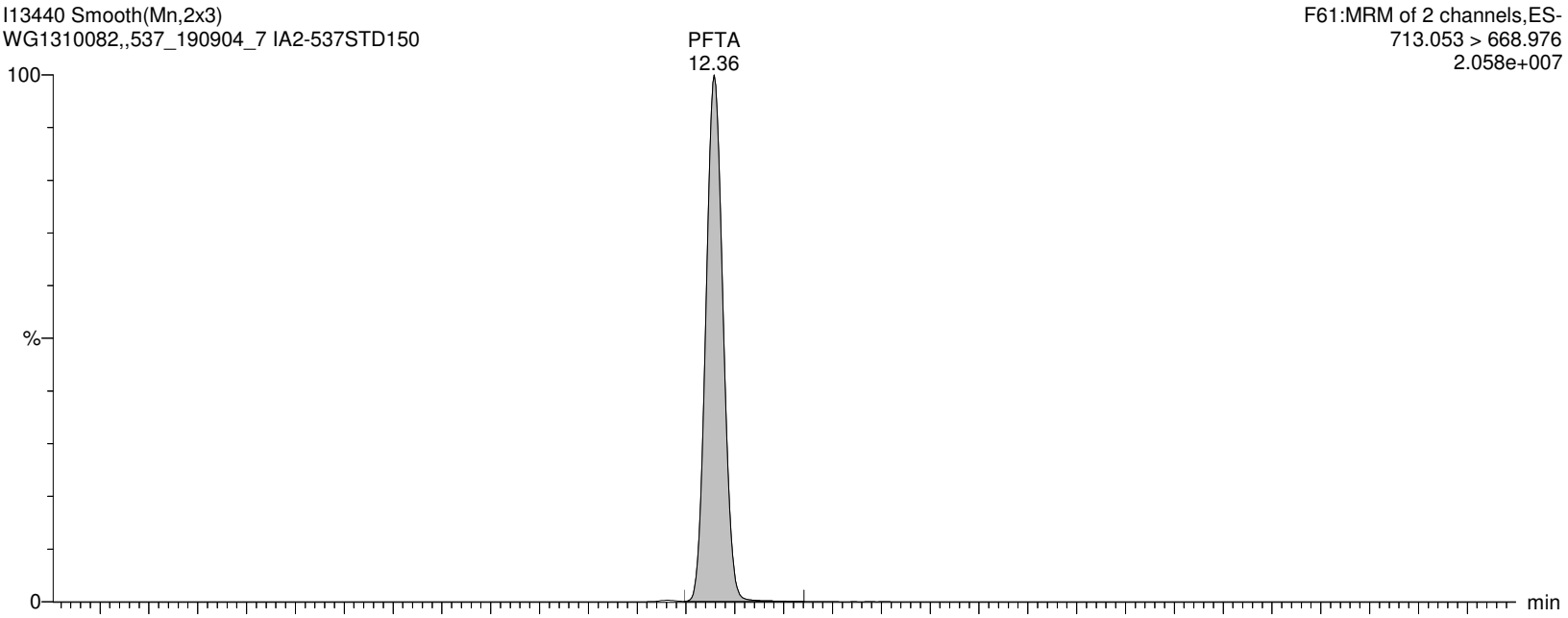


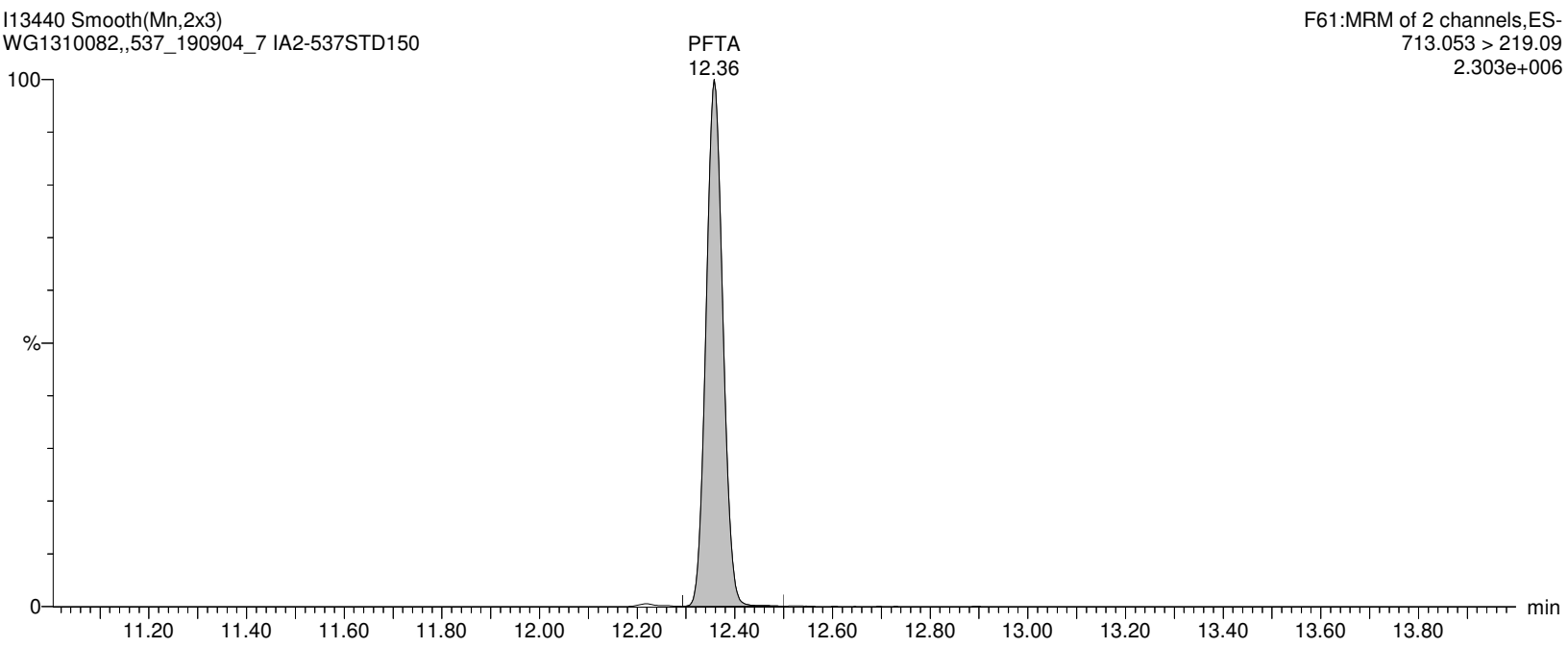



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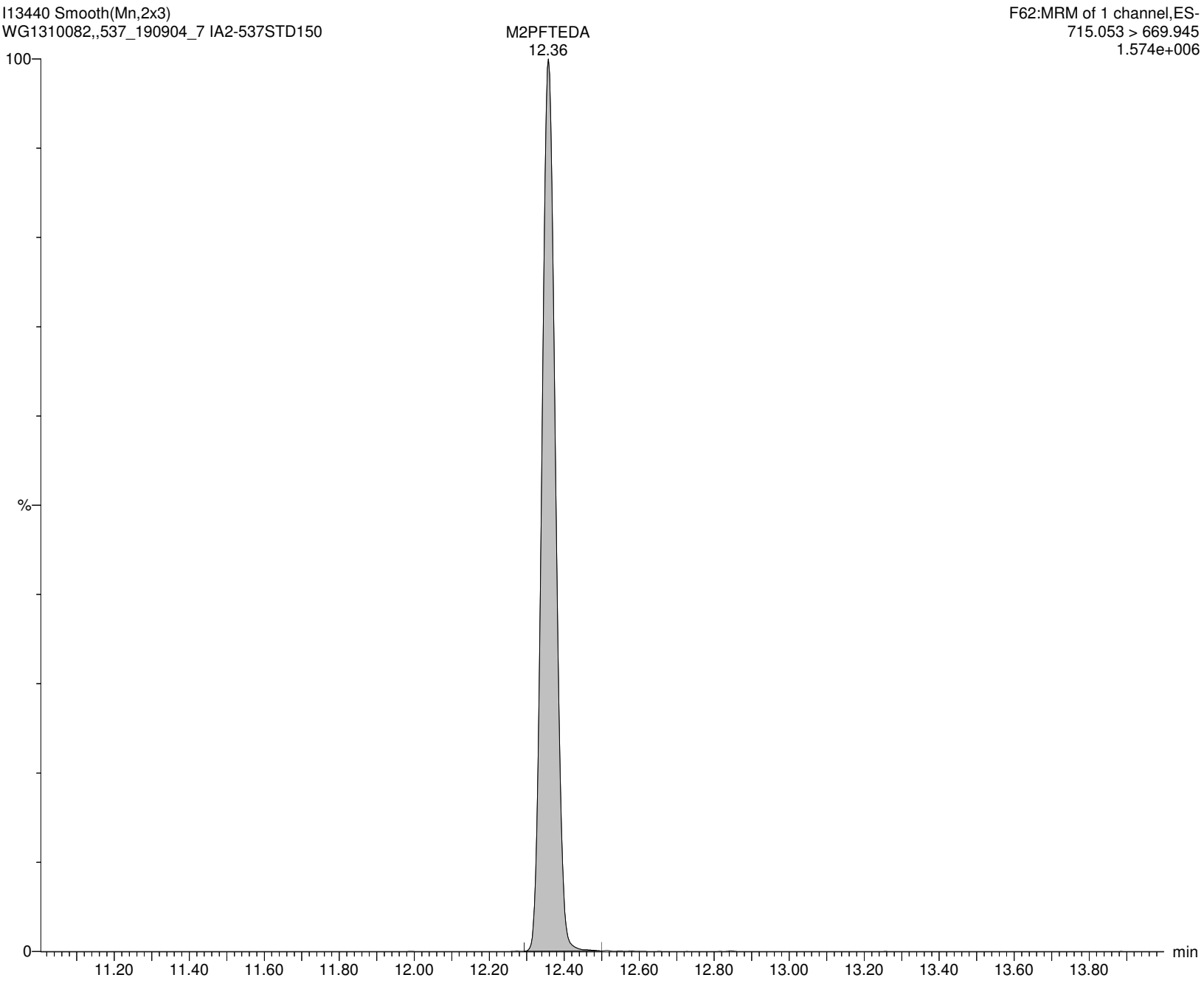



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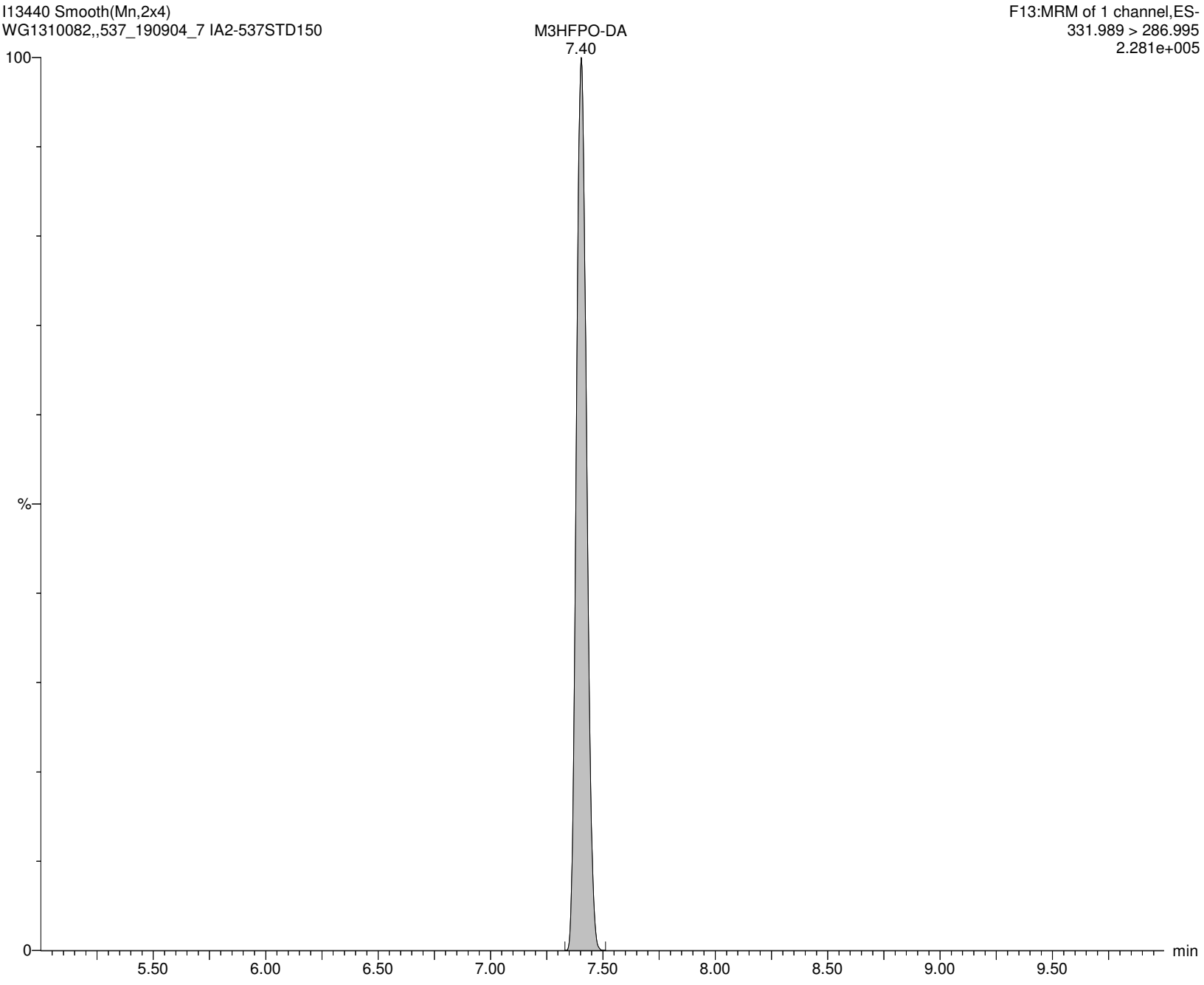



all concentration units in (ng/mL)

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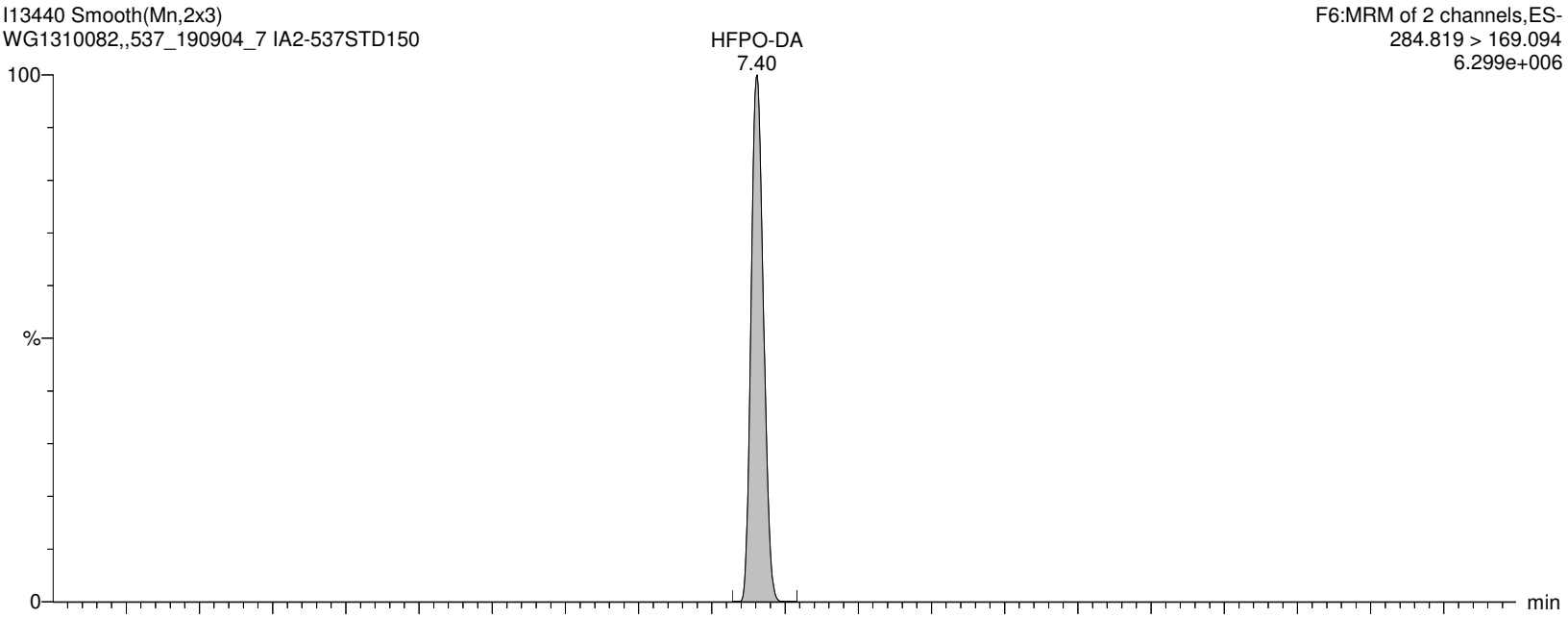


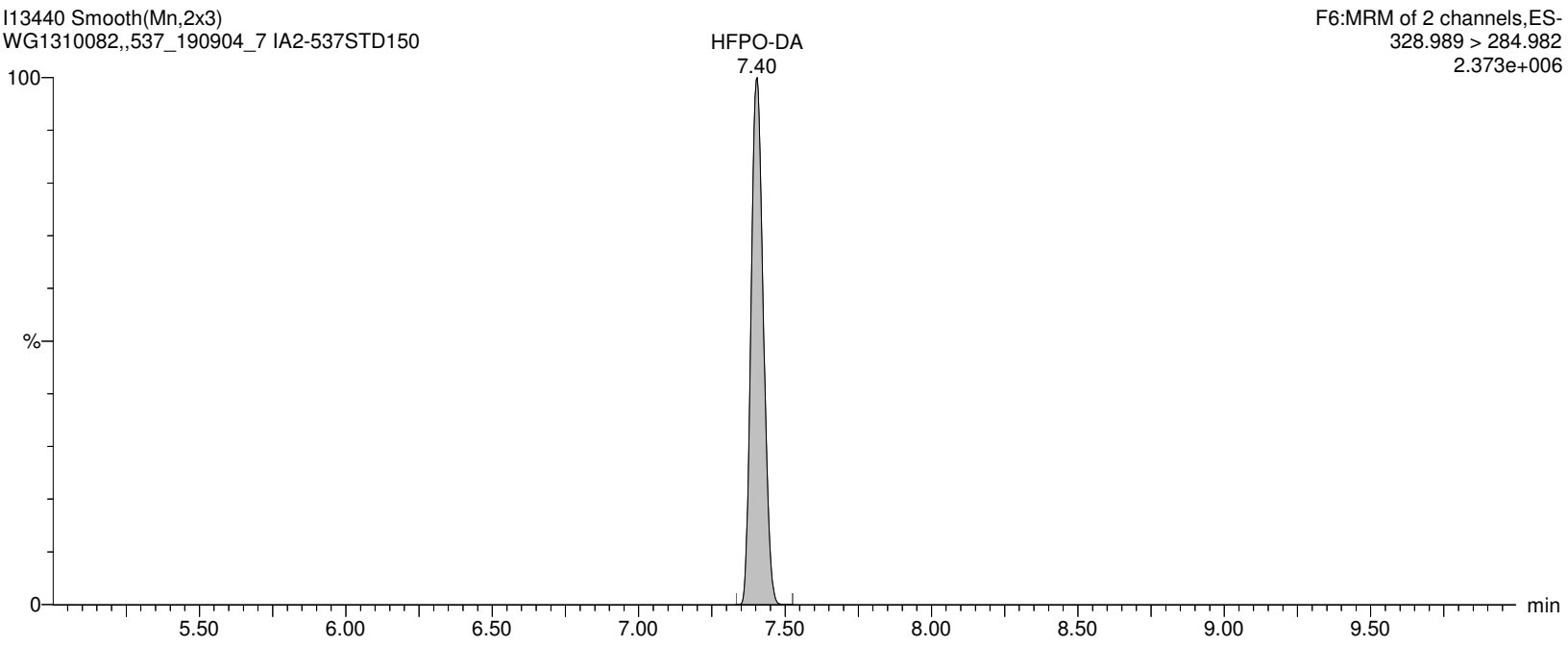



all concentration units in (ng/mL)

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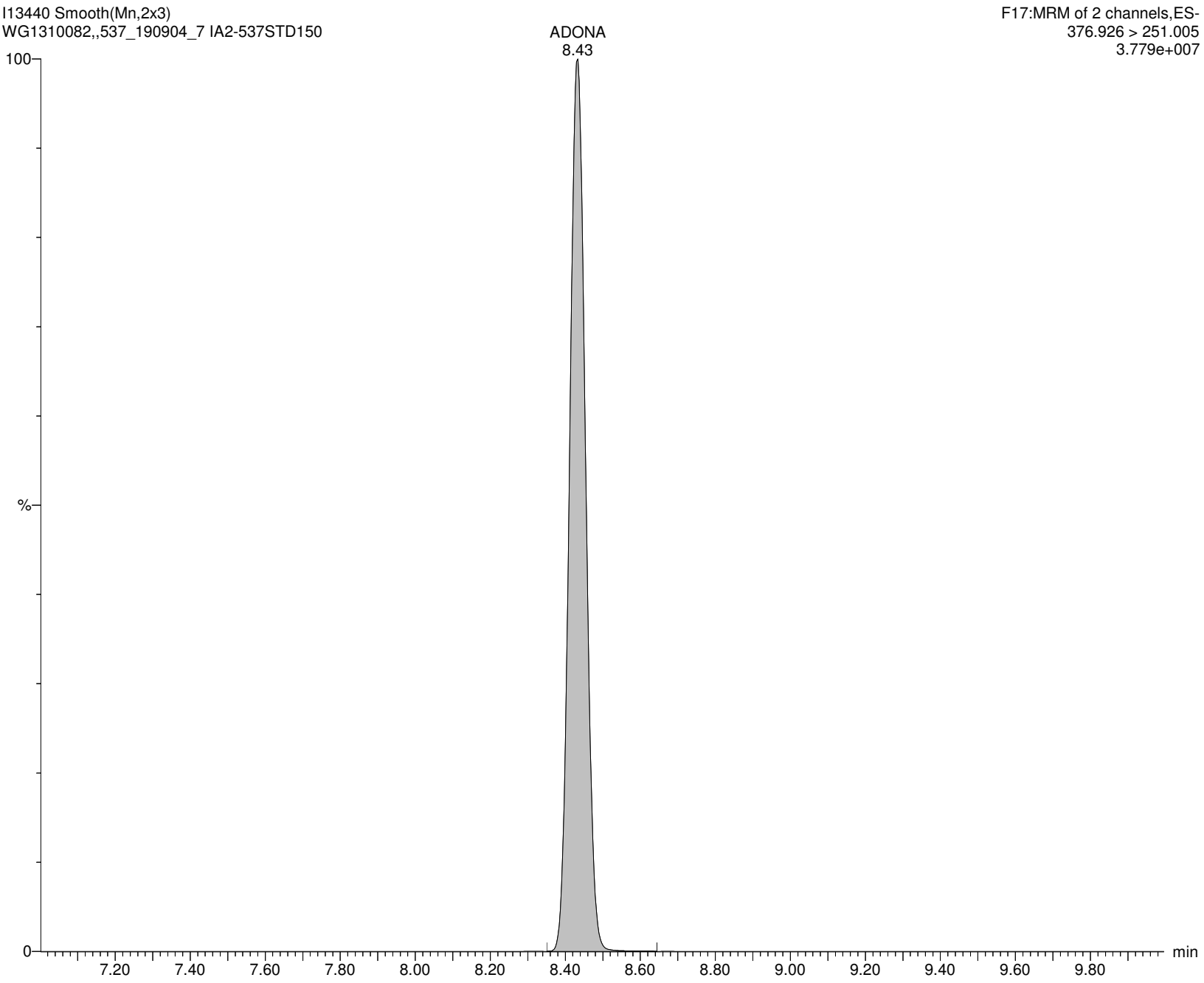



all concentration units in (ng/mL)

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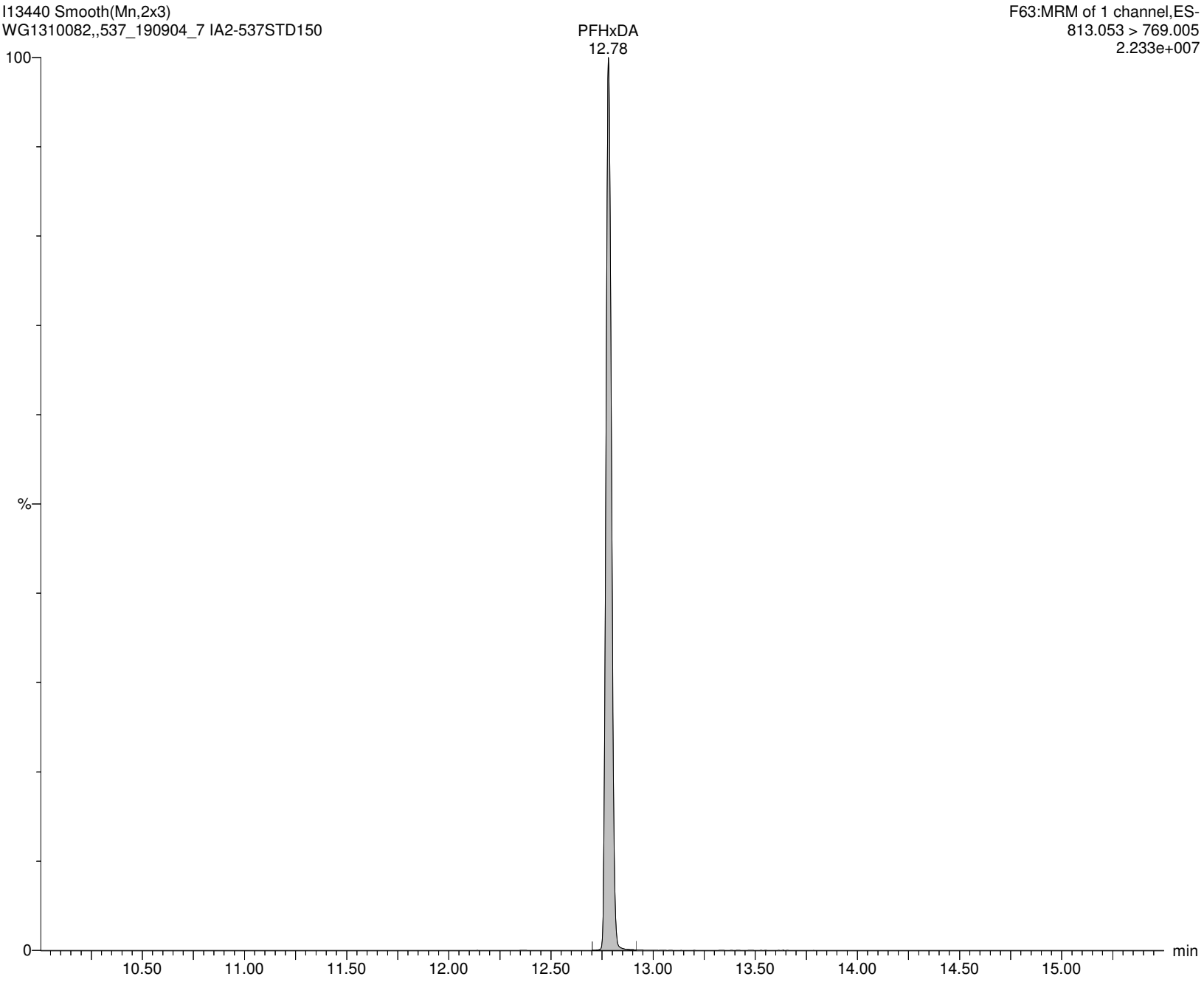



all concentration units in (ng/mL)

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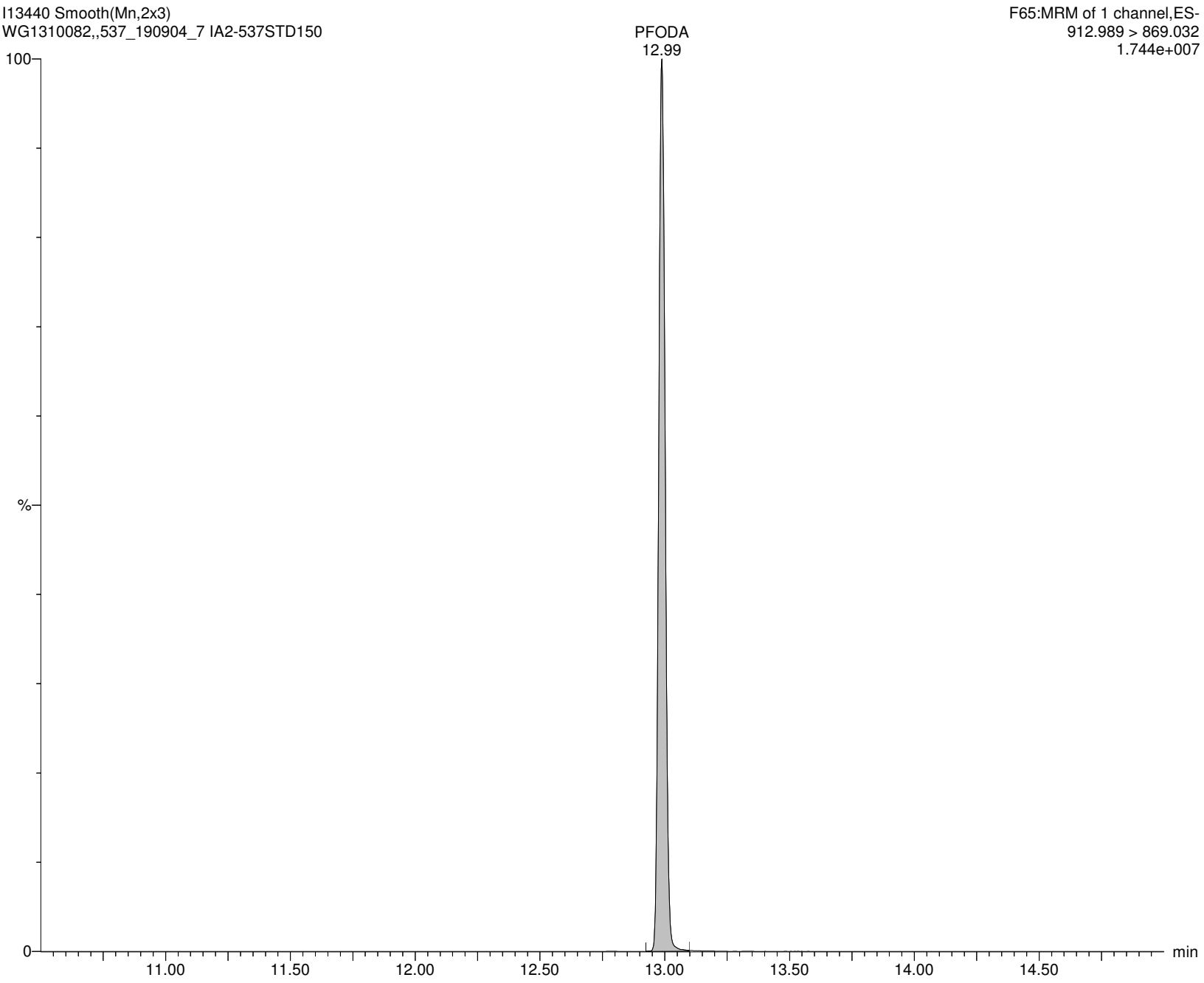



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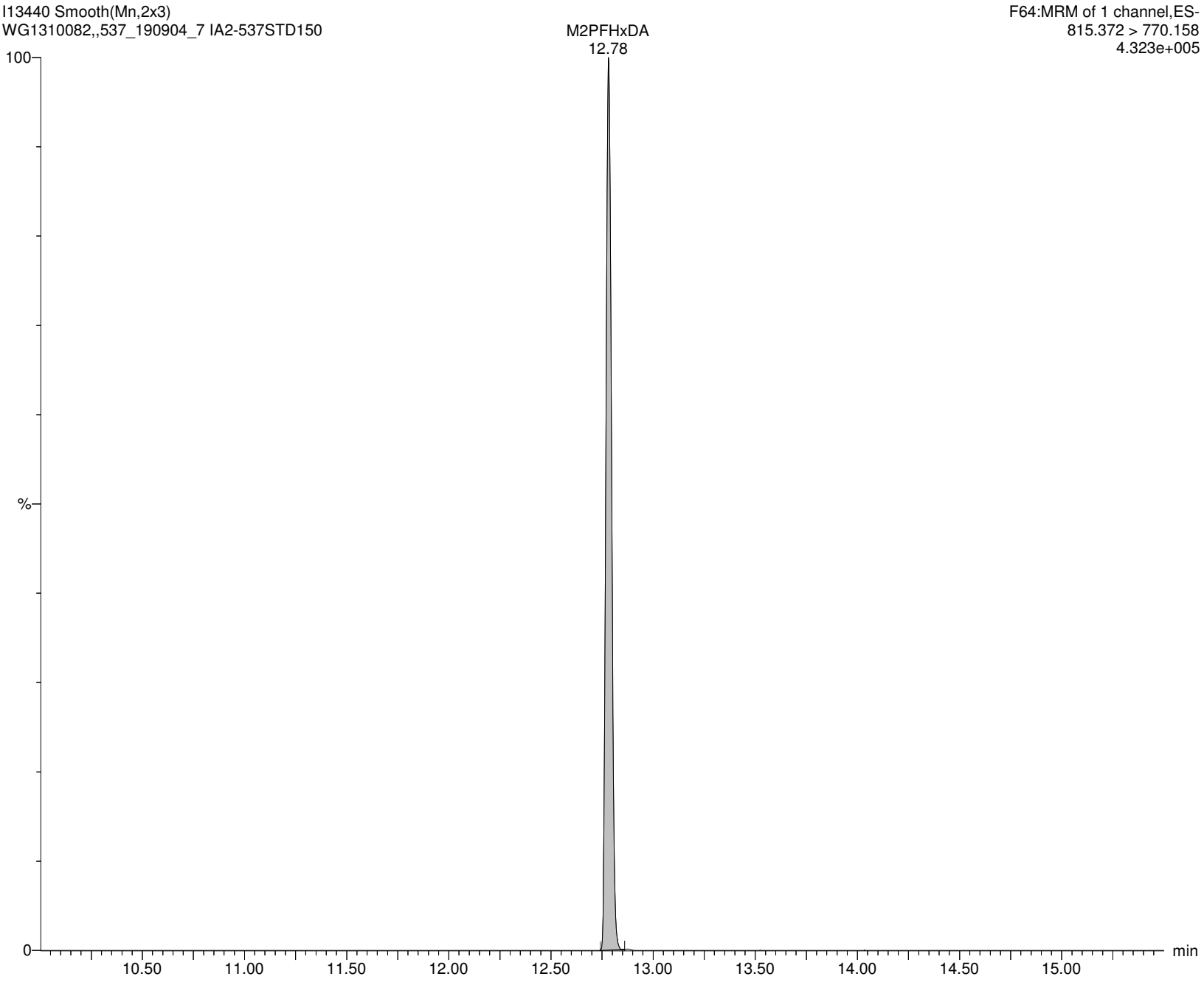



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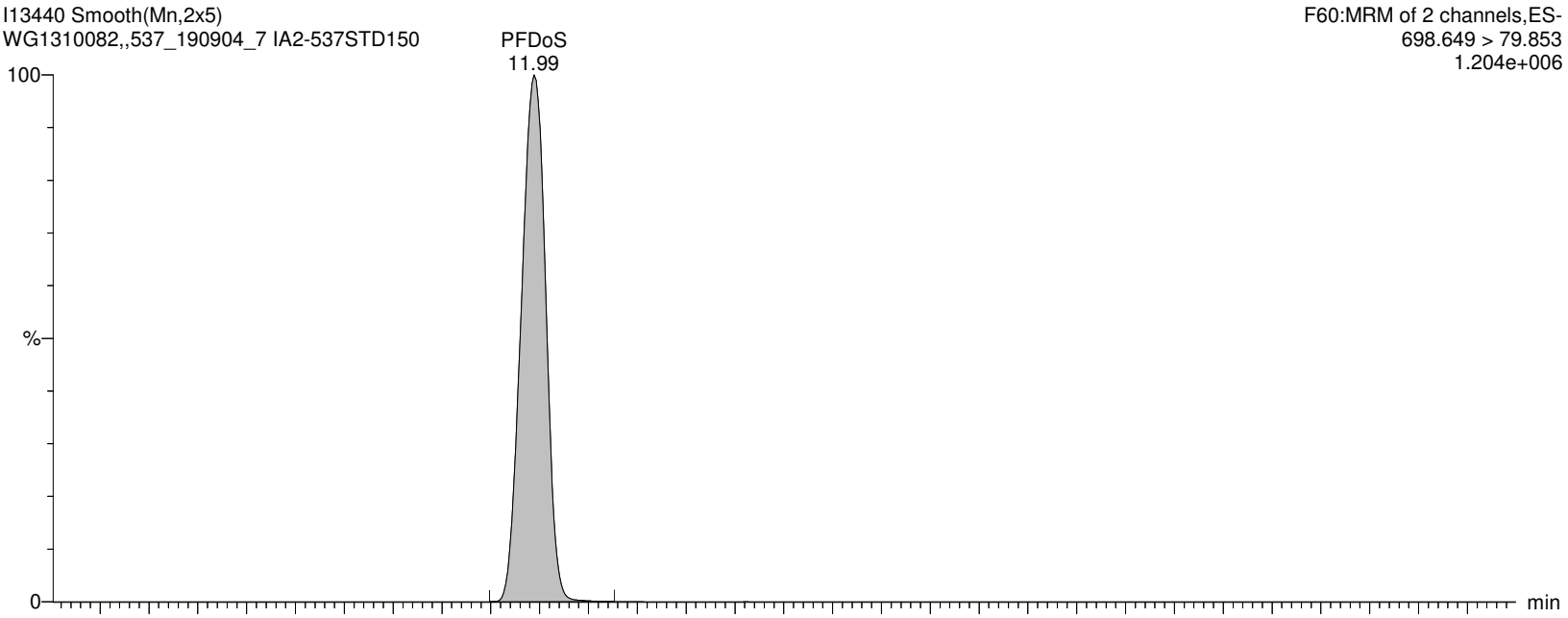


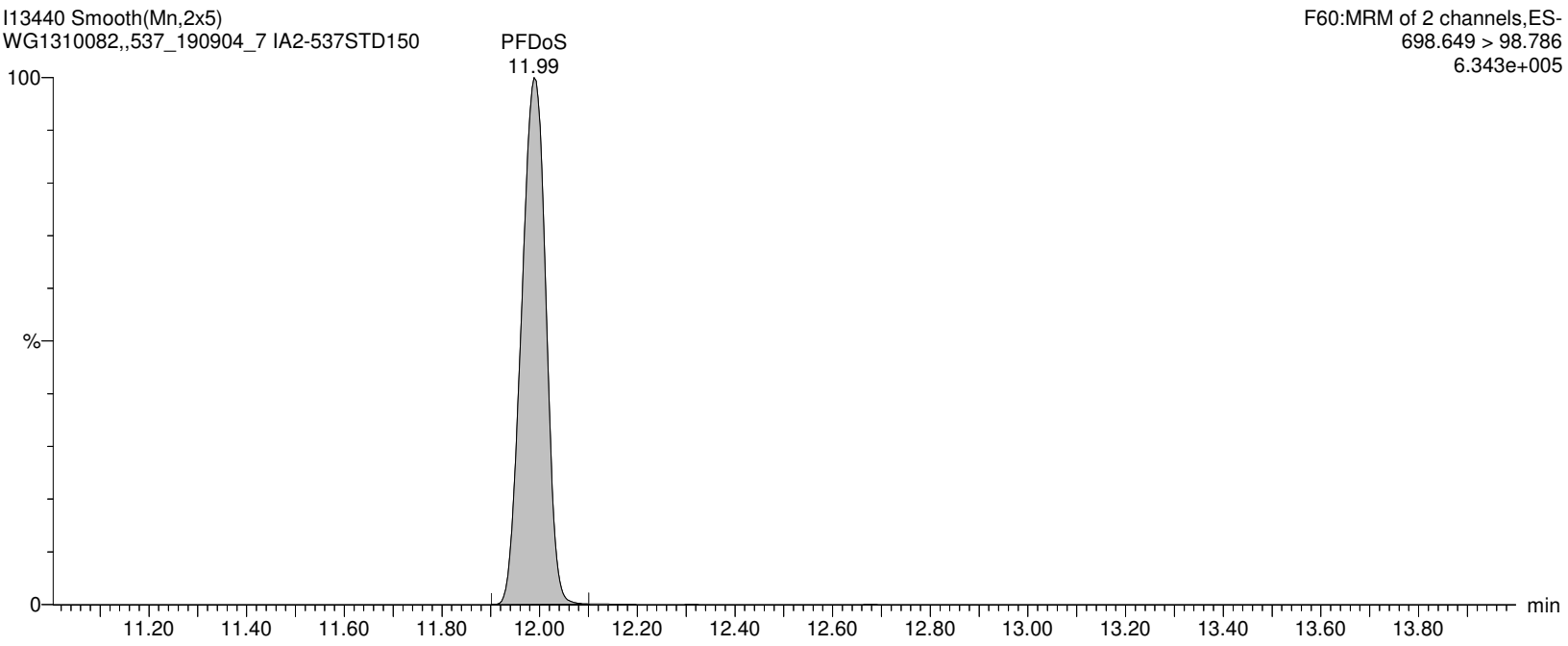



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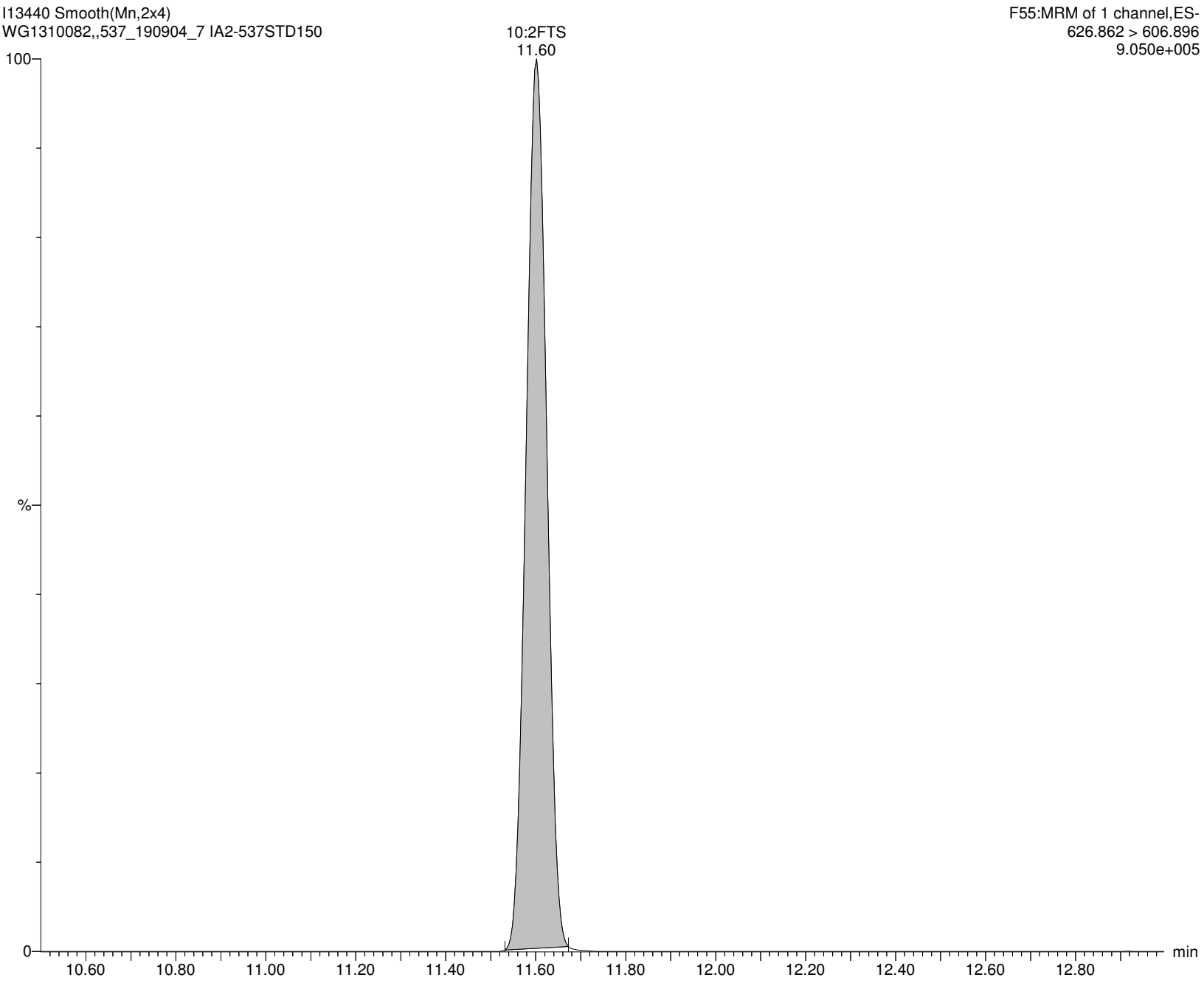



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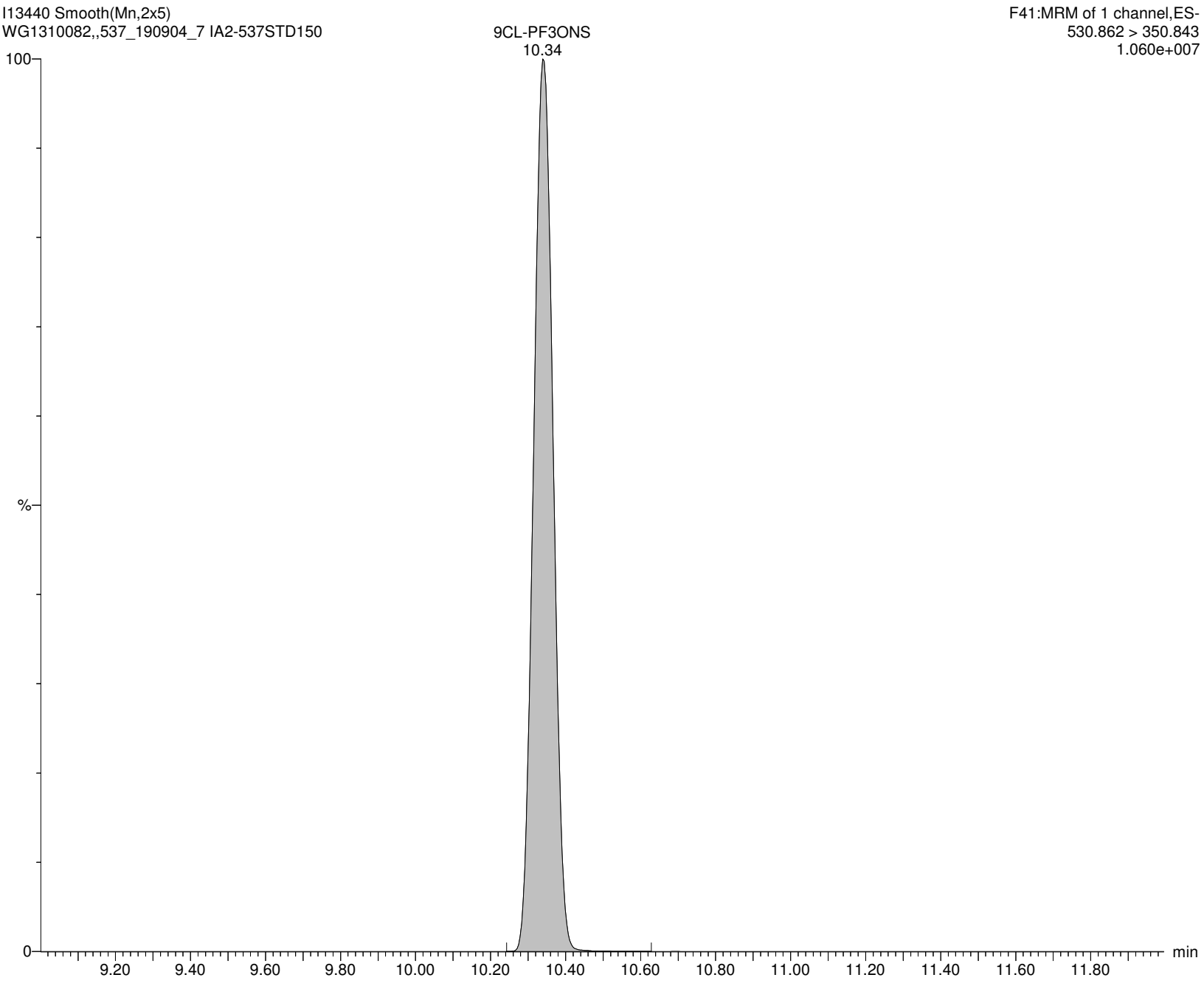



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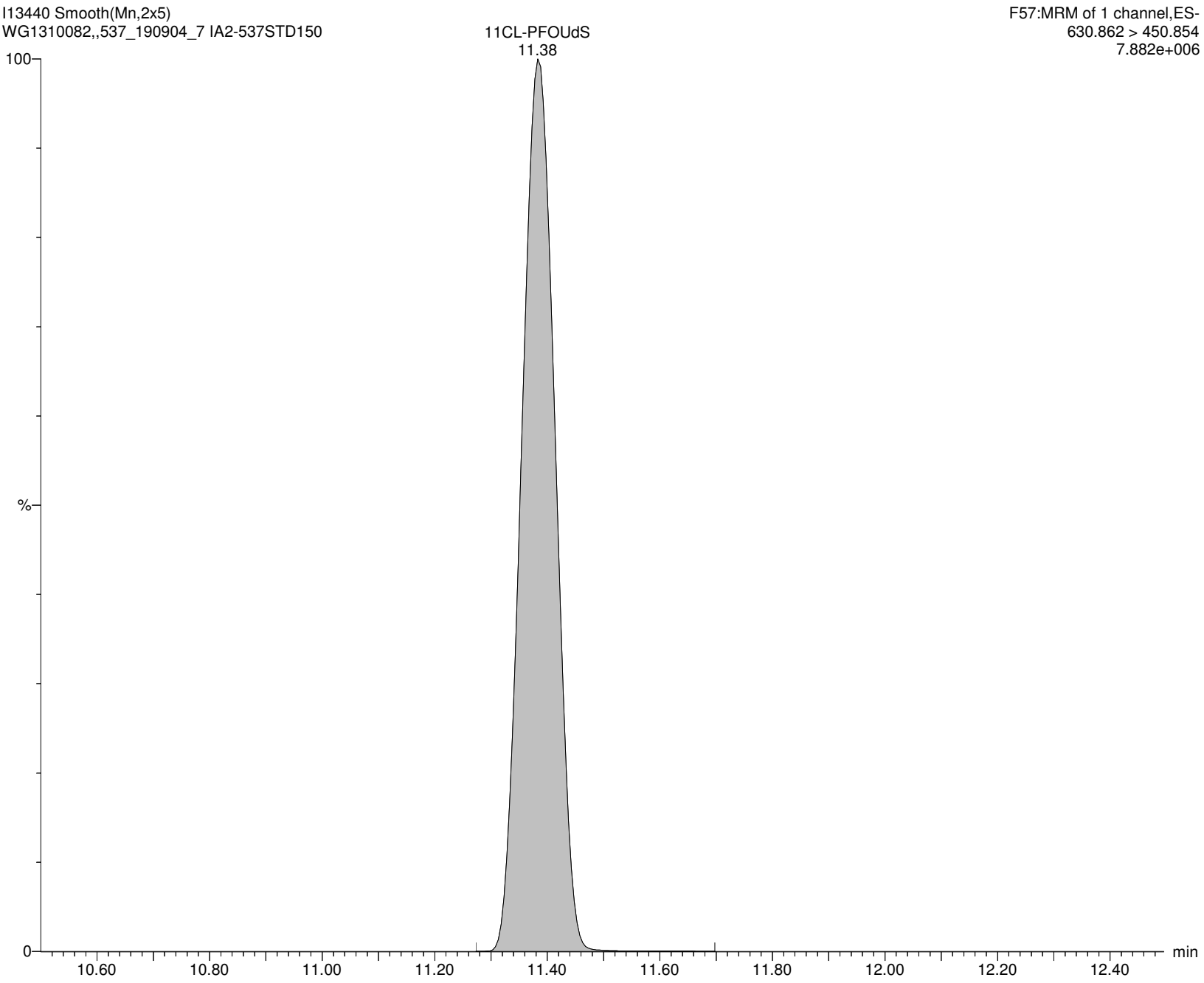
**11CL-PFOUdS**





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**Time: 12:16:43**
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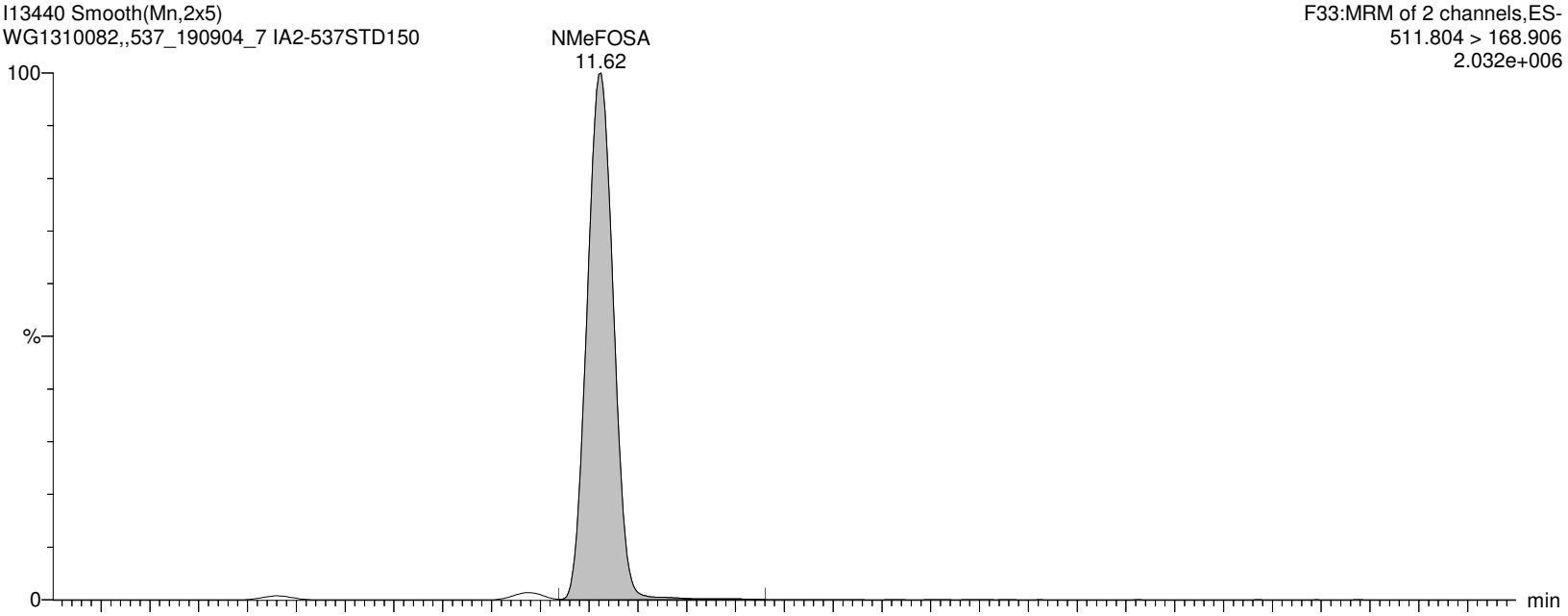
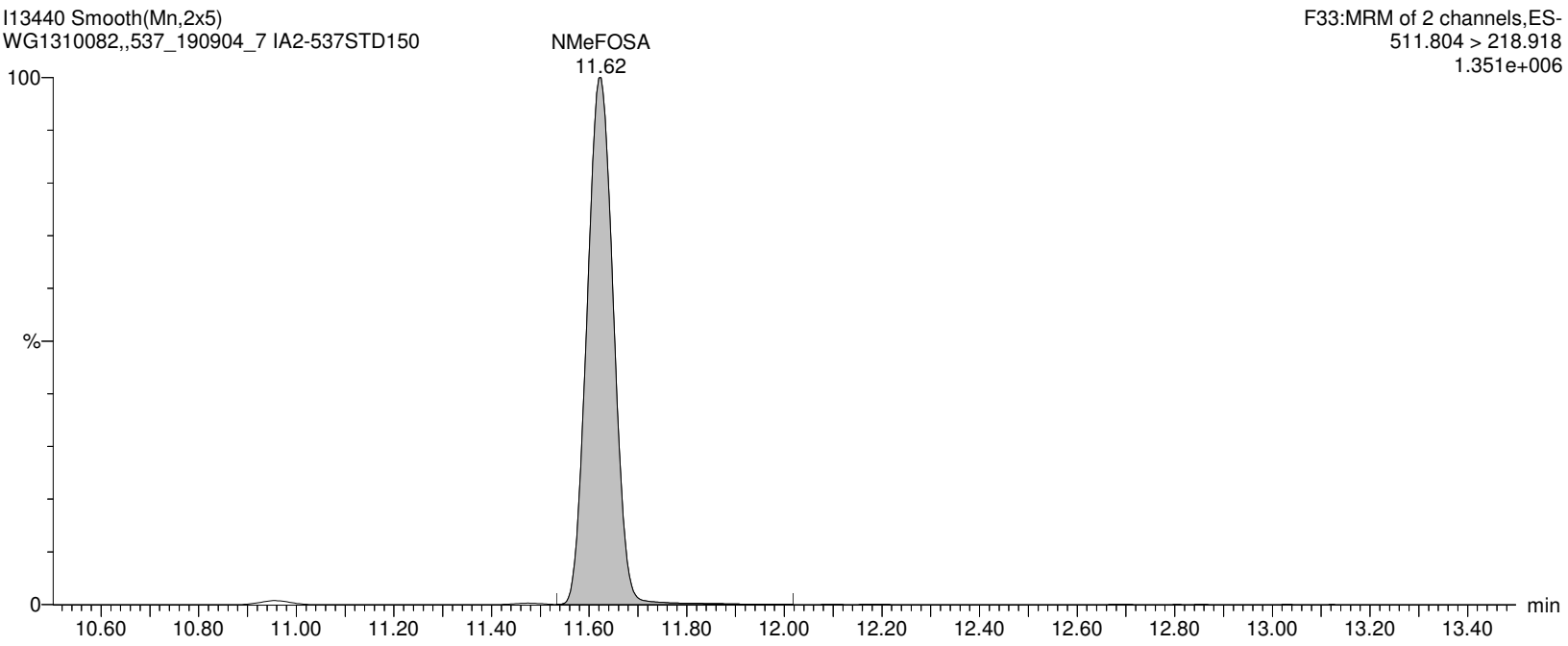
**User: LCMS02:JW**
**Vial: 1:A,8**
**Instrument: XEVO-TQSmicro#QEB0050**
**Inlet Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\LCMS_537_ISO_B**
**Tune Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\181009_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**NMeFOSA**



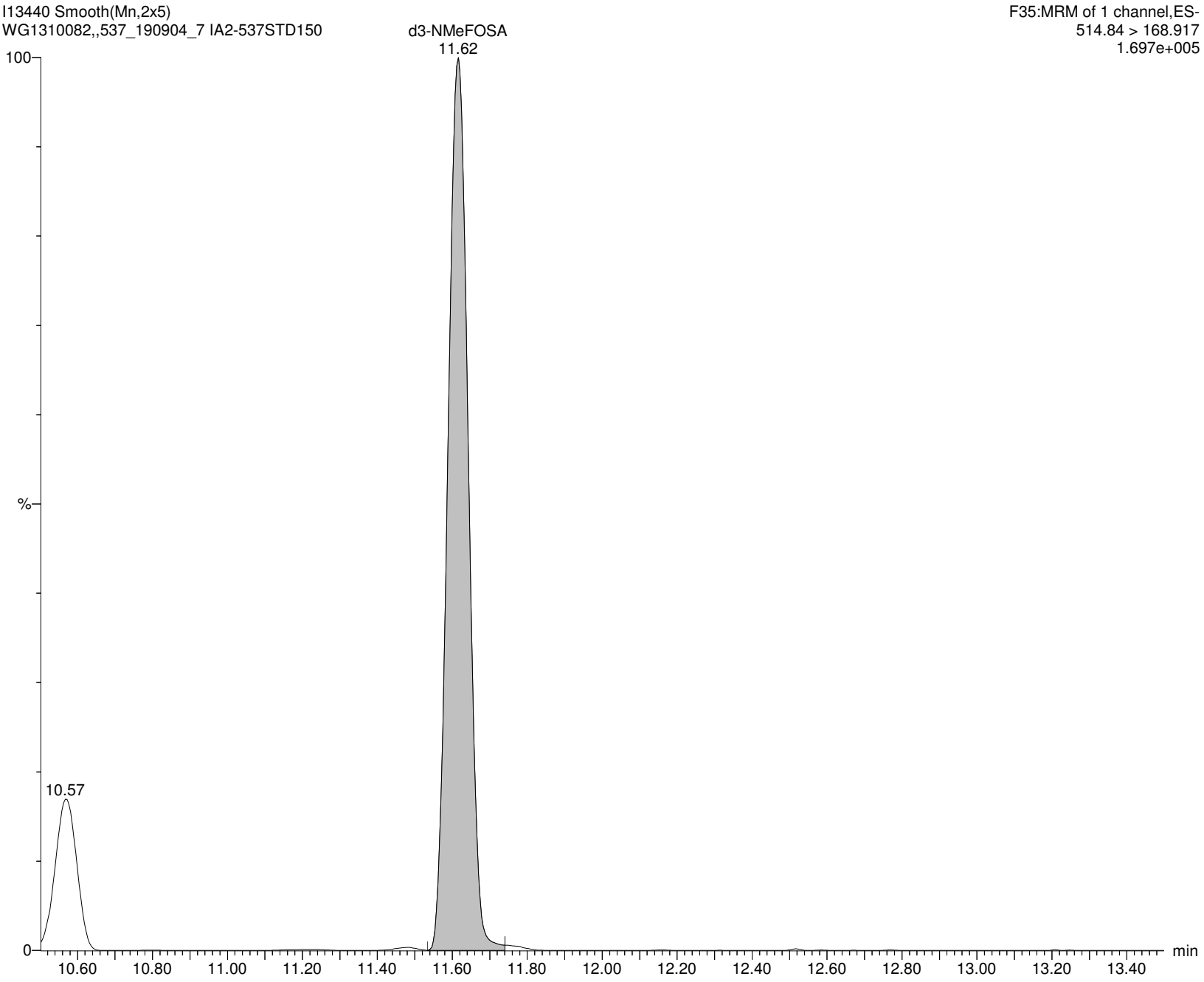


all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
Printed: Monday, November 18, 2019 13:43:00 Eastern Standard Time

**Name: I13440**
**ID: IA2-537STD150**
**Date: 18-Nov-2019**
**Time: 12:16:43**
**Description: WG1310082,,537_190904_7**
**User: LCMS02:JW**
**Vial: 1:A,8**
**Instrument: XEVO-TQSmicro#QEB0050**
**Inlet Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\LCMS_537_ISO_B**
**Tune Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\181009_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**d3-NMeFOSA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
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Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
Printed: Monday, November 18, 2019 13:43:00 Eastern Standard Time

**Name: I13440**
**ID: IA2-537STD150**
**Date: 18-Nov-2019**
**Time: 12:16:43**
**Description: WG1310082,,537_190904_7**
**User: LCMS02:JW**
**Vial: 1:A,8**
**Instrument: XEVO-TQSmicro#QEB0050**
**Inlet Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\LCMS_537_ISO_B**
**Tune Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\181009_TUNE.IPR**
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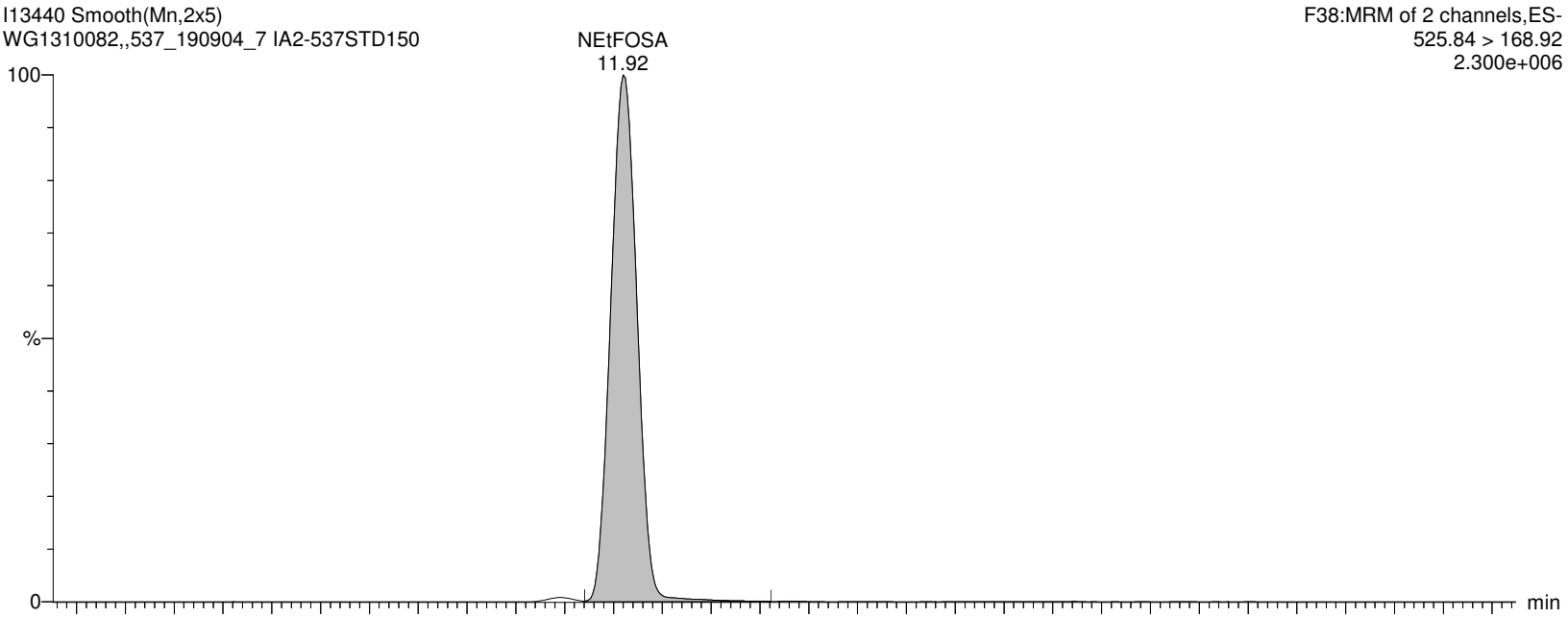
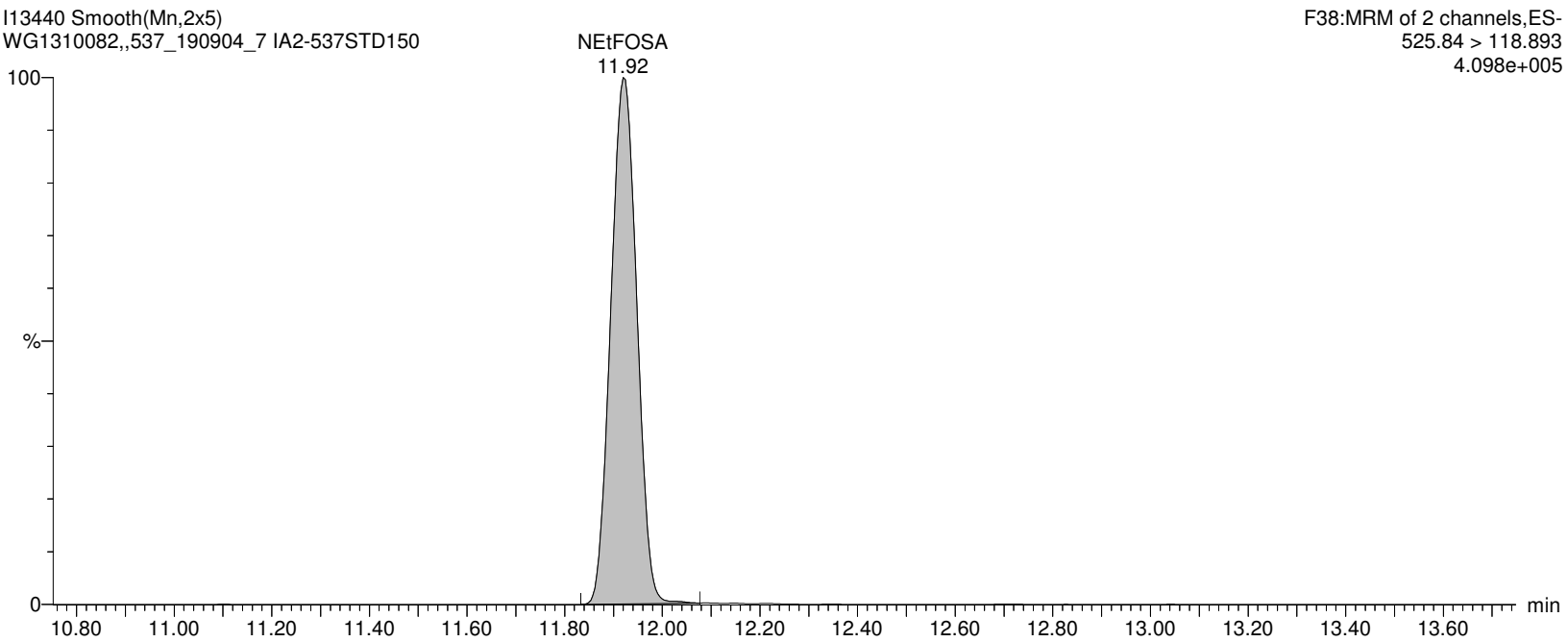
**NEtFOSA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
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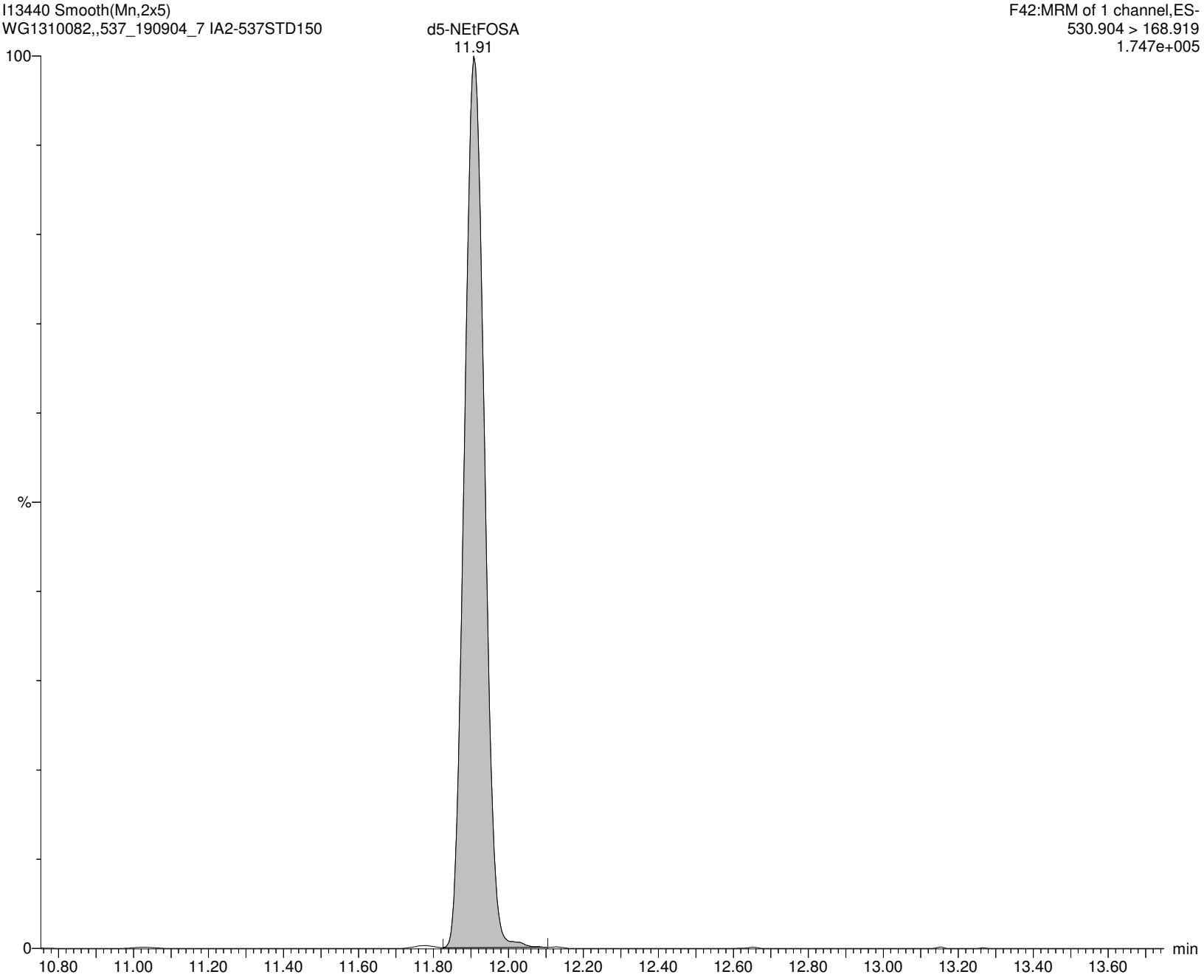
**ID: IA2-537STD150**
**Date: 18-Nov-2019**
**Time: 12:16:43**
**Description: WG1310082,,537_190904_7**
**User: LCMS02:JW**
**Vial: 1:A,8**
**Instrument: XEVO-TQSmicro#QEB0050**
**Inlet Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\LCMS_537_ISO_B**
**Tune Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\181009_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**d5-NEtFOSA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
Printed: Monday, November 18, 2019 13:43:00 Eastern Standard Time

**Name: I13440**
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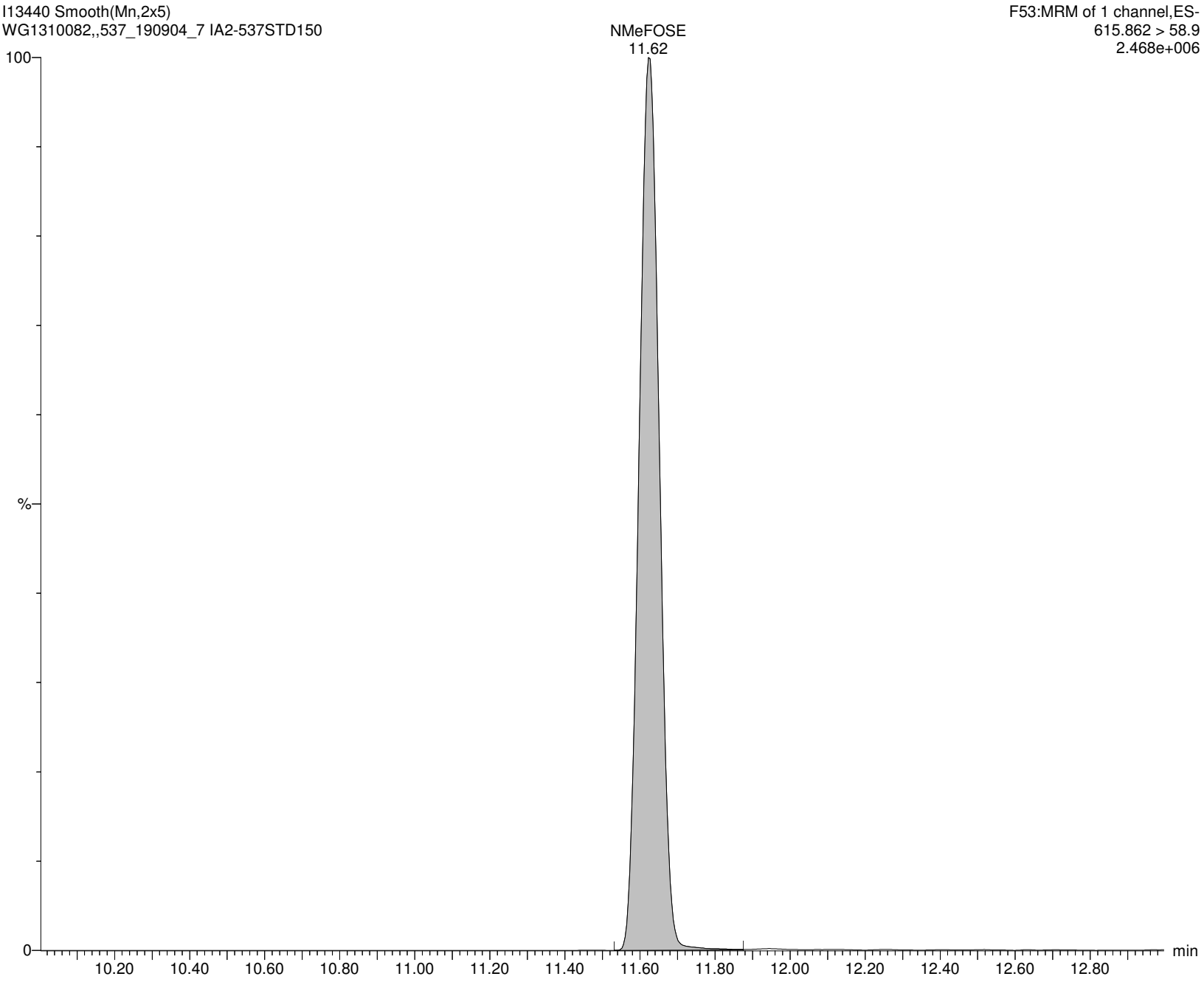
**Date: 18-Nov-2019**
**Time: 12:16:43**
**Description: WG1310082,,537_190904_7**
**User: LCMS02:JW**
**Vial: 1:A,8**
**Instrument: XEVO-TQSmicro#QEB0050**
**Inlet Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\LCMS_537_ISO_B**
**Tune Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\181009_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**NMeFOSE**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
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**ID: IA2-537STD150**
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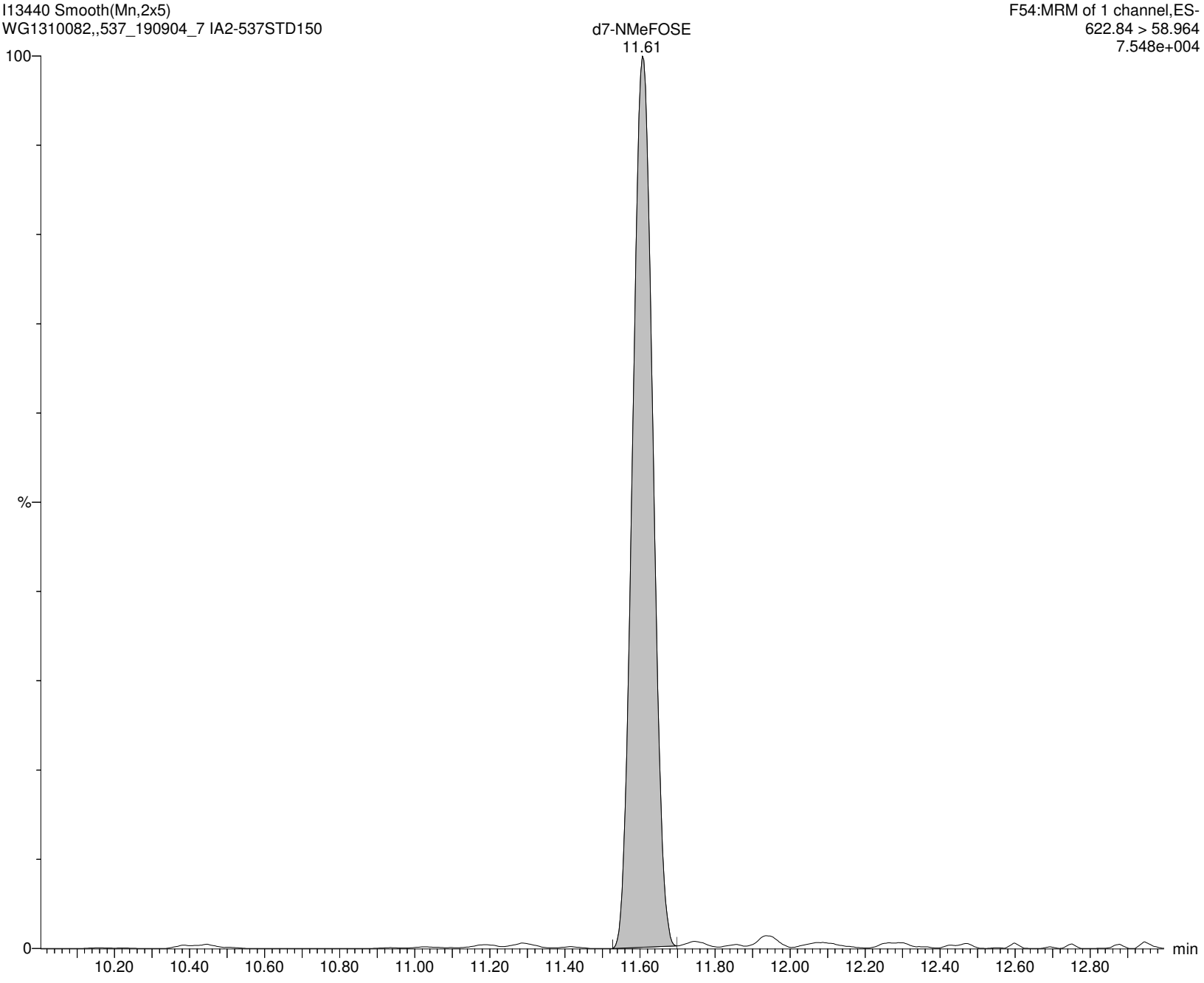
**Time: 12:16:43**
**Description: WG1310082,,537_190904_7**
**User: LCMS02:JW**
**Vial: 1:A,8**
**Instrument: XEVO-TQSmicro#QEB0050**
**Inlet Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\LCMS_537_ISO_B**
**Tune Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\181009_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**d7-NMeFOSE**



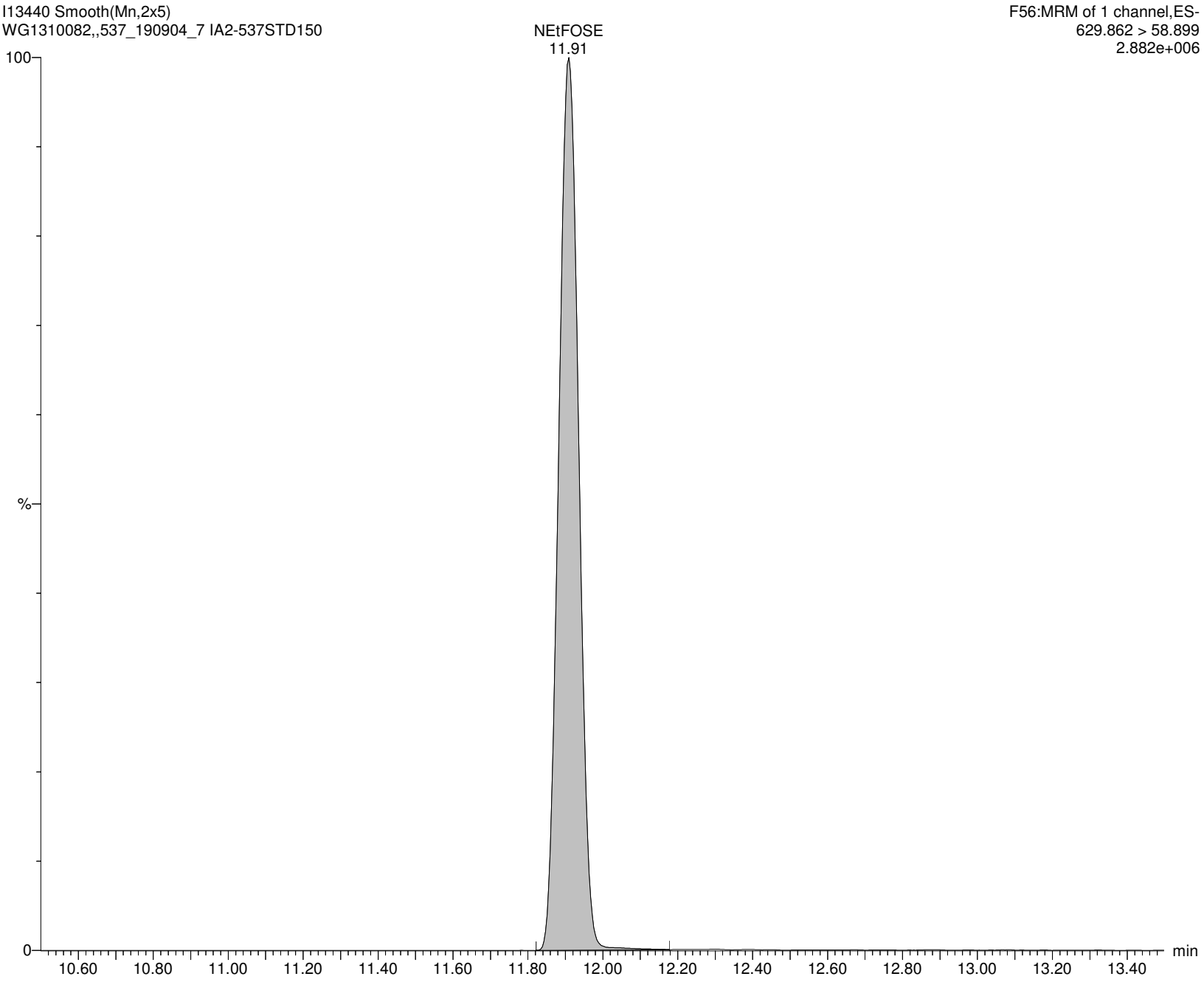


all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
Printed: Monday, November 18, 2019 13:43:00 Eastern Standard Time

**Name: I13440**
**ID: IA2-537STD150**
**Date: 18-Nov-2019**
**Time: 12:16:43**
**Description: WG1310082,,537_190904_7**
**User: LCMS02:JW**
**Vial: 1:A,8**
**Instrument: XEVO-TQSmicro#QEB0050**
**Inlet Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\LCMS_537_ISO_B**
**Tune Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\181009_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**NEtFOSE**



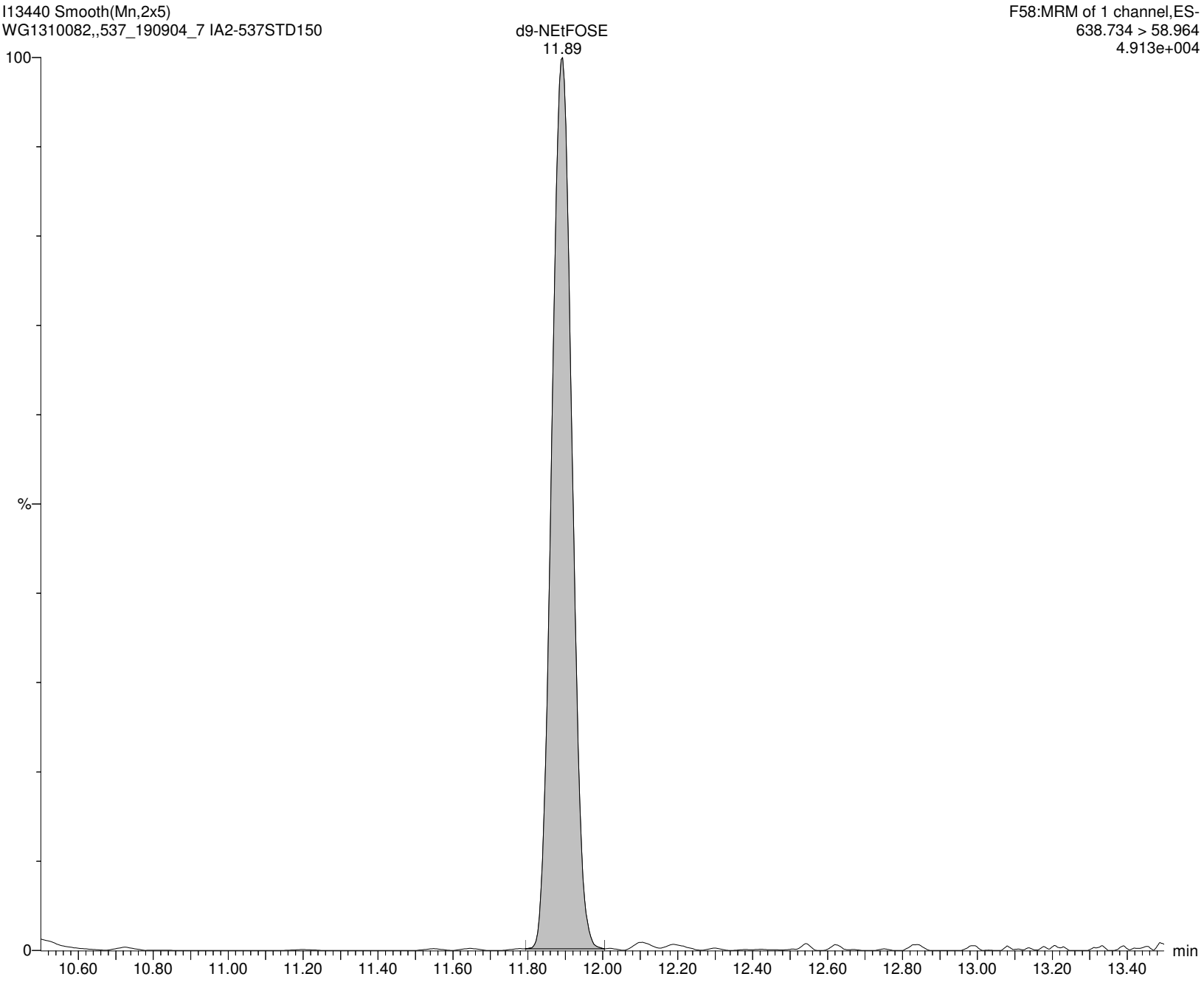


all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
Printed: Monday, November 18, 2019 13:43:00 Eastern Standard Time

**Name: I13440**
**ID: IA2-537STD150**
**Date: 18-Nov-2019**
**Time: 12:16:43**
**Description: WG1310082,,537_190904_7**
**User: LCMS02:JW**
**Vial: 1:A,8**
**Instrument: XEVO-TQSmicro#QEB0050**
**Inlet Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\LCMS_537_ISO_B**
**Tune Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\181009_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**d9-NEtFOSE**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
Printed: Monday, November 18, 2019 13:43:03 Eastern Standard Time

**Method: C:\MassLynx\Data\2019\191118_537ISO.PRO\MethDB\537ISO_Q_191118_DOD .mdb 18 Nov 2019 13:05:34**
**Calibration: C:\MassLynx\Data\2019\191118_537ISO.PRO\CurveDB\191118_ISO_ICAL.cdb 18 Nov 2019 13:41:42**

**ID: IA2-537STD250**
**Name: I13441**
**Date: 18-Nov-2019**
**Time: 12:33:16**
**Description: WG1310082,,537_190904_8**
**Instrument: XEVO-TQSmicro#QEB0050**
**User: LCMS02:JW**
**Inlet Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\LCMS_537_ISO_B**
**Tune Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\181009_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

| | Name | CAS | RT | Trace | Area | M Flag | Conc (ng/mL) | Ion Ratio | Ratio Flag | %Rec |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | PFBA | 375-22-4 | 2.20 | 212.926 > 169.111 | 1053097 | | 260.349 | | na | 104.1 |
| 2 | M3PFBA | INT STD | 2.19 | 215.926 > 172.122 | 44855 | | 9.680 | | na | 96.8 |
| 3 | MPFBA | INT STD | 2.19 | 216.926 > 172.137 | 48443 | | 9.924 | | na | 99.2 |
| 4 | PFPeA | 2706-90-3 | 5.09 | 262.926 > 219.002 | 1664294 | | 259.541 | | na | 103.8 |
| 5 | M5PFPEA | INT STD | 5.09 | 267.989 > 223.081 | 66395 | | 9.590 | | na | 95.9 |
| 6 | PFBS | 375-73-5 | 5.74 | 298.926 > 79.923 | 295488 | | 229.092 | 1.91 | NO | 103.5 |
| 7 | M3PFBS | INT STD | 5.74 | 301.989 > 80.254 | 8779 | | 11.009 | | na | 110.1 |
| 8 | 4:2FTS | 757124-72-4 | 6.91 | 326.926 > 306.957 | 140203 | | ND | 2.17 | NO | |
| 9 | M2-4:2FTS | INT STD | 6.91 | 329.117 > 309.079 | 11231 | | 21.693 | | na | 216.9 |
| 10 | PFHxA | 307-24-4 | 6.99 | 312.989 > 269.028 | 1733137 | | 256.561 | 18.12 | NO | 102.6 |
| 11 | M5PFHxA | INT STD | 6.99 | 317.989 > 273.045 | 73382 | | 9.981 | | na | 99.8 |
| 12 | PFPeS | 2706-91-4 | 7.29 | 348.926 > 80.251 | 187634 | | 242.760 | 1.78 | NO | 103.3 |
| 13 | PFHpA | 375-85-9 | 8.26 | 362.926 > 319.014 | 2202073 | | 256.824 | 5.74 | NO | 102.7 |
| 14 | M4PFHpA | INT STD | 8.26 | 366.926 > 321.979 | 95053 | | 9.705 | | na | 97.1 |
| 15 | br-PFHxS | 355-46-4 | 8.18 | 398.926 > 80.295 | 30899 | M5 | 44.216 | 2.24 | NO | 104.0 |
| 16 | L-PFHxS | 355-46-4 | 8.41 | 398.926 > 80.295 | 110742 | | 191.292 | 1.18 | NO | 103.4 |
| 17 | PFHxS | 355-46-4 | | 398.926 > 80.295 | 141641 | | 235.508 | | na | |
| 18 | M3PFHxS | INT STD | 8.41 | 401.926 > 80.317 | 4622 | | 10.041 | | na | 100.4 |
| 19 | br-PFOA | 335-67-1 | | 412.989 > 368.9 | | | ND | 0.00 | NO | |
| 20 | L-PFOA | 335-67-1 | 9.19 | 412.989 > 368.9 | 2184240 | | 262.402 | 10.26 | NO | 105.0 |
| 21 | PFOA | 335-67-1 | | 412.989 > 368.9 | 2184240 | | 262.402 | | na | |
| 22 | M8PFOA | INT STD | 9.19 | 420.989 > 375.979 | 90653 | | 9.646 | | na | 96.5 |
| 23 | M2PFOA | INT STD | 9.19 | 415.032 > 369.968 | 96049 | | 9.086 | | na | 90.9 |
| 24 | 6:2FTS | 27619-97-2 | 9.15 | 426.989 > 406.921 | 105135 | | ND | 9.62 | NO | |
| 25 | M2-6:2FTS | INT STD | 9.15 | 428.989 > 408.917 | 11016 | | 21.773 | | na | 217.7 |
| 26 | PFHpS | 375-92-8 | 9.29 | 448.926 > 80.257 | 99603 | | 255.931 | 0.86 | YES | 107.8 |
| 27 | PFNA | 375-95-1 | 9.95 | 462.989 > 418.931 | 1887085 | | 262.199 | 4.53 | NO | 104.9 |
| 28 | M9PFNA | INT STD | 9.95 | 472.053 > 426.947 | 87852 | | 9.500 | | na | 95.0 |
| 29 | br-PFOS | 1763-23-1 | 9.81 | 498.989 > 80.294 | 48276 | M5 | 52.590 | 4.53 | NO | 105.2 |
| 30 | L-PFOS | 1763-23-1 | 10.00 | 498.989 > 80.294 | 114602 | | 197.579 | 1.54 | YES | 108.3 |
| 31 | PFOS | 1763-23-1 | | 498.989 > 80.294 | 162877 | | 250.169 | | na | |
| 32 | M4PFOS | INT STD | 10.00 | 503.032 > 80.306 | 5697 | | 8.157 | | na | 81.6 |
| 33 | M8PFOS | INT STD | 10.00 | 507.053 > 80.294 | 5910 | | 10.111 | | na | 101.1 |
| 34 | PFDA | 335-76-2 | 10.57 | 513.053 > 468.906 | 1633247 | | 254.115 | 6.75 | NO | 101.6 |
| 35 | M2PFDA | INT STD | 10.57 | 515.053 > 469.934 | 73447 | | 8.319 | | na | 83.2 |
| 36 | M6PFDA | INT STD | 10.57 | 519.053 > 473.931 | 74923 | | 9.870 | | na | 98.7 |
| 37 | 8:2FTS | 39108-34-4 | 10.56 | 526.926 > 506.818 | 72996 | | ND | | na | |
| 38 | M2-8:2FTS | INT STD | 10.56 | 529.053 > 508.945 | 6318 | | 21.284 | | na | 212.8 |
| 39 | PFNS | 68259-12-1 | 10.60 | 548.989 > 80.249 | 130021 | | 236.503 | 1.24 | NO | 98.5 |


all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
Printed: Monday, November 18, 2019 13:43:03 Eastern Standard Time

**ID: IA2-537STD250**
**Name: I13441**
**Date: 18-Nov-2019**
**Time: 12:33:16**
**Description: WG1310082,,537_190904_8**
**Instrument: XEVO-TQSmicro#QEB0050**
**User: LCMS02:JW**
**Inlet Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\LCMS_537_ISO_B**
**Tune Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\181009_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

| | Name | CAS | RT | Trace | Area | M Flag | Conc (ng/mL) | Ion Ratio | Ratio Flag | %Rec |
|---|---|---|---|---|---|---|---|---|---|---|
| 40 | d3-NMeFOSAA | INT STD | 10.95 | 573.096 > 418.987 | 9846 | | 11.389 | | na | 113.9 |
| 41 | br-NMeFOSAA | 2355-31-9 | | 570.053 > 418.917 | | | ND | | YES | |
| 42 | L-NMeFOSAA | 2355-31-9 | 10.96 | 570.053 > 418.917 | 236955 | | 258.231 | 2.71 | NO | 103.3 |
| 43 | NMeFOSAA | 2355-31-9 | | 570.053 > 418.917 | 236955 | | 258.231 | | na | |
| 44 | PFUnA | 2058-94-8 | 11.11 | 562.989 > 518.903 | 1508727 | | 258.265 | 8.05 | NO | 103.3 |
| 45 | M7-PFUDA | INT STD | 11.11 | 570.053 > 524.923 | 61087 | | 9.071 | | na | 90.7 |
| 46 | PFDS | 335-77-3 | 11.12 | 598.926 > 80.314 | 95134 | | 242.098 | 1.03 | NO | 100.4 |
| 47 | FOSA | 754-91-6 | 11.01 | 497.989 > 78.245 | 535815 | | 260.532 | 123.86 | NO | 104.2 |
| 48 | M8FOSA | INT STD | 11.01 | 506.053 > 78.286 | 19355 | | 10.784 | | na | 107.8 |
| 49 | d5-NEtFOSAA | INT STD | 11.24 | 589.117 > 418.929 | 8970 | | 11.746 | | na | 117.5 |
| 50 | br-NEtFOSAA | 2991-50-6 | | 583.989 > 418.927 | | | ND | 0.00 | NO | |
| 51 | L-NEtFOSAA | 2991-50-6 | 11.25 | 583.989 > 418.927 | 207896 | | 245.516 | 2.47 | NO | 98.2 |
| 52 | NEtFOSAA | 2991-50-6 | | 583.989 > 418.927 | 207896 | | 245.516 | | na | |
| 53 | PFDoA | 307-55-1 | 11.59 | 612.989 > 568.967 | 1677290 | | 257.198 | 14.32 | NO | 102.9 |
| 54 | MPFDOA | INT STD | 11.59 | 614.989 > 569.92 | 76995 | | 10.191 | | na | 101.9 |
| 55 | PFTrDA | 72629-94-8 | 12.00 | 663.053 > 618.969 | 1125203 | | 252.665 | 11.01 | NO | 101.1 |
| 56 | PFTA | 376-06-7 | 12.36 | 713.053 > 668.976 | 1254326 | | 259.404 | 8.67 | NO | 103.8 |
| 57 | M2PFTEDA | INT STD | 12.36 | 715.053 > 669.945 | 60380 | | 10.062 | | na | 100.6 |
| 58 | M3HFPO-DA | INT STD | 7.39 | 331.989 > 286.995 | 14124 | | 343.019 | | na | 171.5 |
| 59 | HFPO-DA | 13252-13-6 | 7.39 | 284.819 > 169.094 | 593297 | | 5059.075 | 2.71 | YES | 101.2 |
| 60 | ADONA | 958445-44-8 | 8.44 | 376.926 > 251.005 | 2918572 | | 244.897 | | na | 103.5 |
| 61 | PFHxDA | | 12.78 | 813.053 > 769.005 | 1043087 | | 260.356 | | na | 104.1 |
| 62 | PFODA | | 12.98 | 912.989 > 869.032 | 747347 | | 252.158 | | na | 100.9 |
| 63 | M2PFHxDA | | 12.78 | 815.372 > 770.158 | 12595 | | 9.860 | | na | 98.6 |
| 64 | PFDoS | | 11.99 | 698.649 > 79.853 | 95181 | | 237.606 | 1.96 | YES | 95.0 |
| 65 | 10:2FTS | | 11.60 | 626.862 > 606.896 | 73628 | | ND | | na | |
| 66 | 9CL-PF3ONS | | 10.35 | 530.862 > 350.843 | 962078 | | 247.688 | | na | 106.3 |
| 67 | 11CL-PFOUdS | | 11.38 | 630.862 > 450.854 | 830743 | | 253.699 | | na | 107.7 |
| 68 | NMeFOSA | | 11.62 | 511.804 > 168.906 | 204881 | | 255.491 | 1.50 | NO | 102.2 |
| 69 | d3-NMeFOSA | | 11.62 | 514.84 > 168.917 | 10789 | | 11.528 | | na | 115.3 |
| 70 | NEtFOSA | | 11.92 | 525.84 > 168.92 | 228134 | | 243.312 | 5.52 | NO | 97.3 |
| 71 | d5-NEtFOSA | | 11.91 | 530.904 > 168.919 | 10701 | | 11.689 | | na | 116.9 |
| 72 | NMeFOSE | | 11.63 | 615.862 > 58.9 | 245770 | | 263.169 | | na | 105.3 |
| 73 | d7-NMeFOSE | | 11.61 | 622.84 > 58.964 | 4616 | | 10.531 | | na | 105.3 |
| 74 | NEtFOSE | | 11.91 | 629.862 > 58.899 | 285368 | | 246.934 | | na | 98.8 |
| 75 | d9-NEtFOSE | | 11.89 | 638.734 > 58.964 | 2928 | | 11.421 | | na | 114.2 |


all concentration units in (ng/mL)

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Printed: Monday, November 18, 2019 13:43:03 Eastern Standard Time

**Method: C:\MassLynx\Data\2019\191118_537ISO.PRO\MethDB\537ISO_Q_191118_DOD .mdb 18 Nov 2019 13:05:34**
**Calibration: C:\MassLynx\Data\2019\191118_537ISO.PRO\CurveDB\191118_ISO_ICAL.cdb 18 Nov 2019 13:41:42**

**Name: I13441**
**ID: IA2-537STD250**
**Date: 18-Nov-2019**
**Time: 12:33:16**
**Description: WG1310082,,537_190904_8**
**User: LCMS02:JW**
**Vial: 1:B,1**
**Instrument: XEVO-TQSmicro#QEB0050**
**Inlet Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\LCMS_537_ISO_B**
**Tune Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\181009_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

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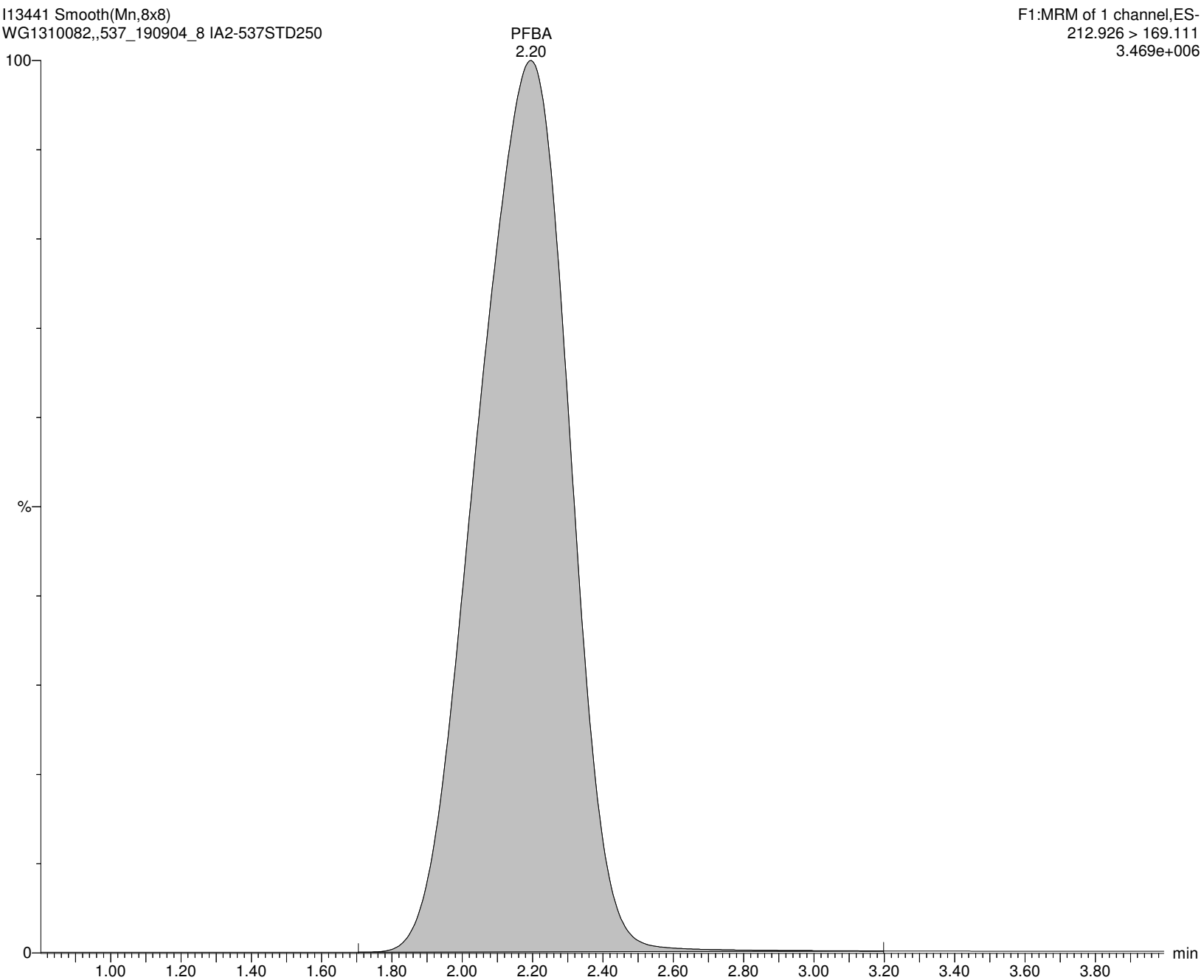



all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
Printed: Monday, November 18, 2019 13:43:03 Eastern Standard Time

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**ID: IA2-537STD250**
**Date: 18-Nov-2019**
**Time: 12:33:16**
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**User: LCMS02:JW**
**Vial: 1:B,1**
**Instrument: XEVO-TQSmicro#QEB0050**
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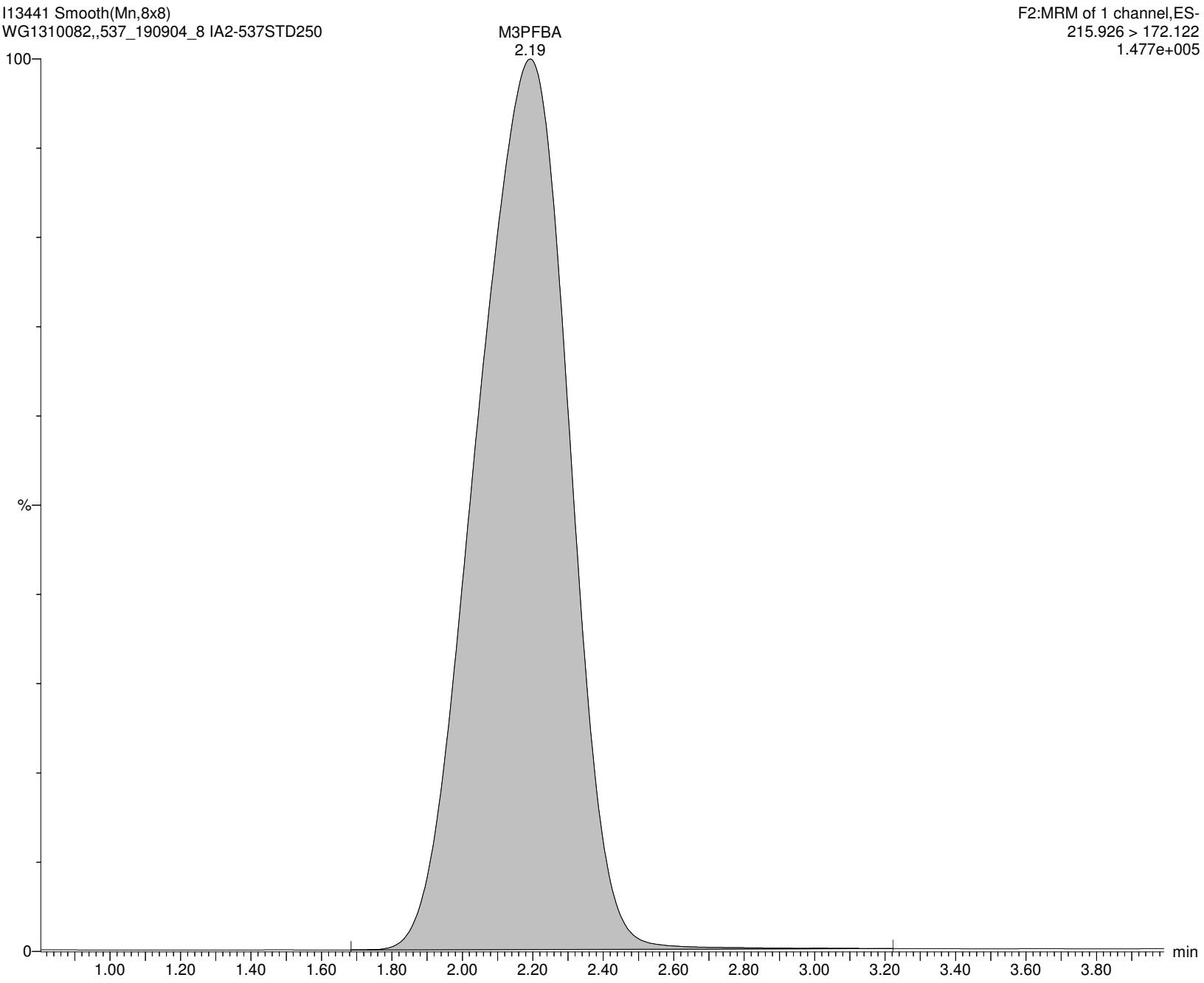



all concentration units in (ng/mL)

Alpha Analytical Inc.
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Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
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**Time: 12:33:16**
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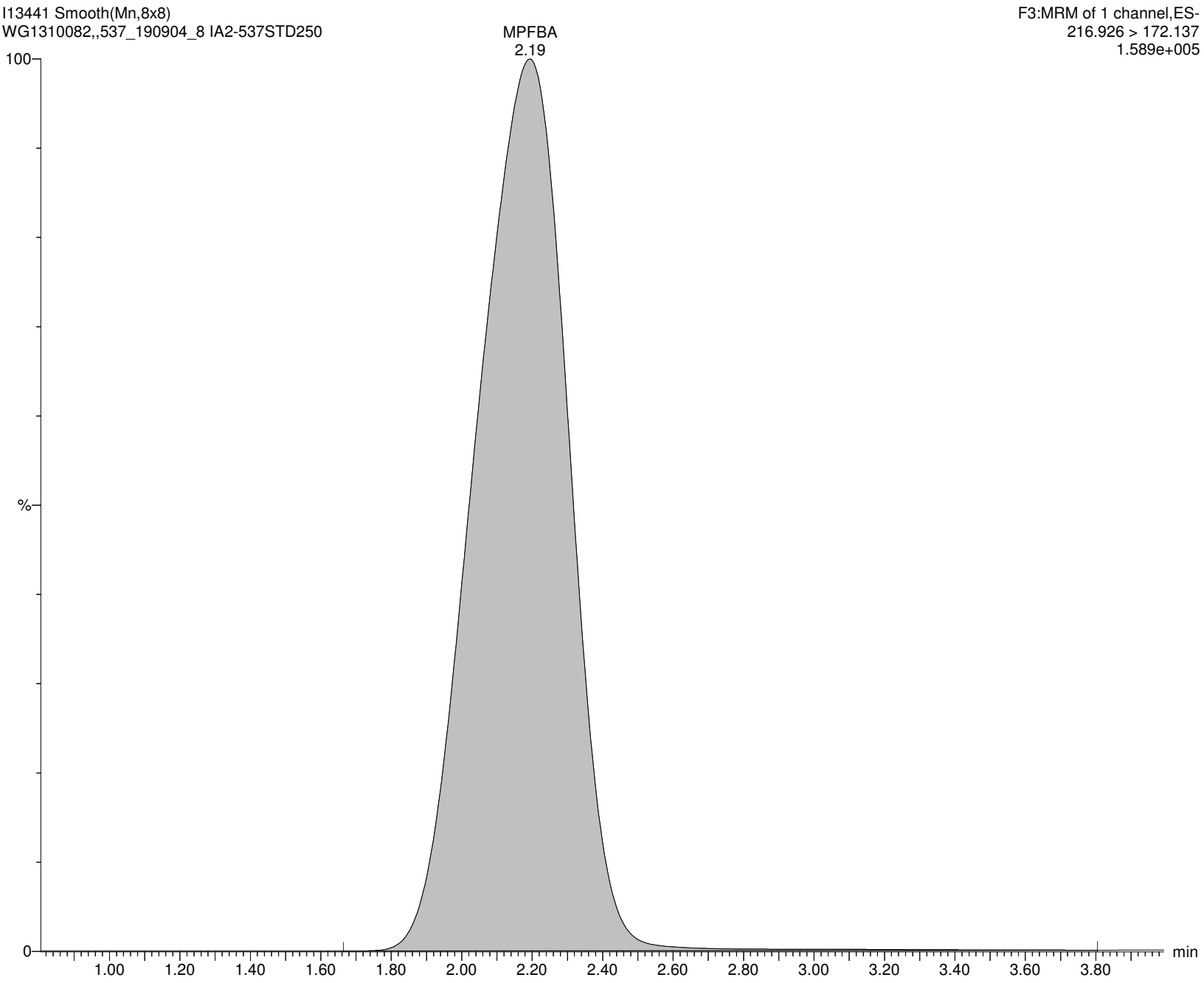
**MPFBA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
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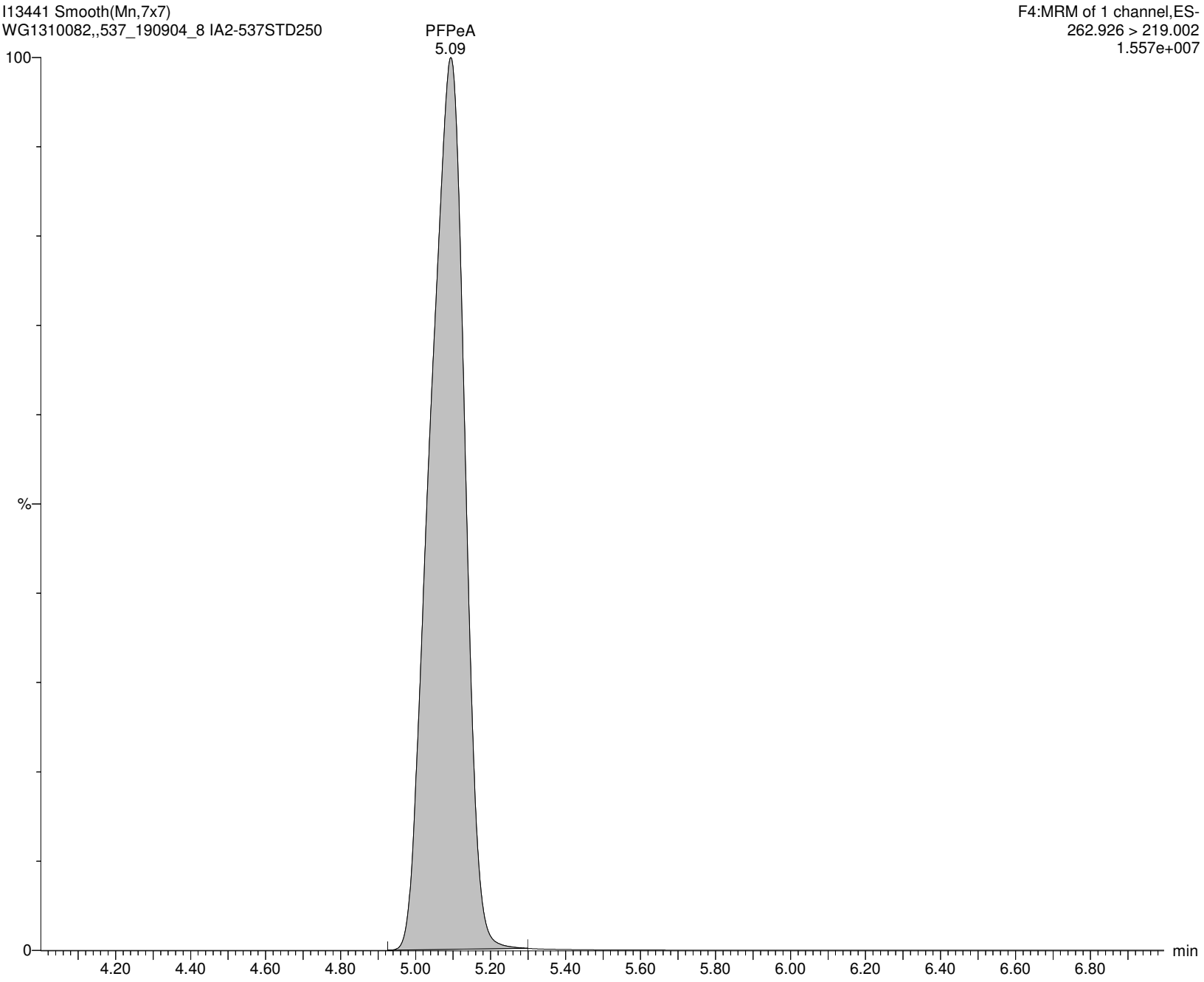
**MS Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**PFPeA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
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**Vial: 1:B,1**
**Instrument: XEVO-TQSmicro#QEB0050**
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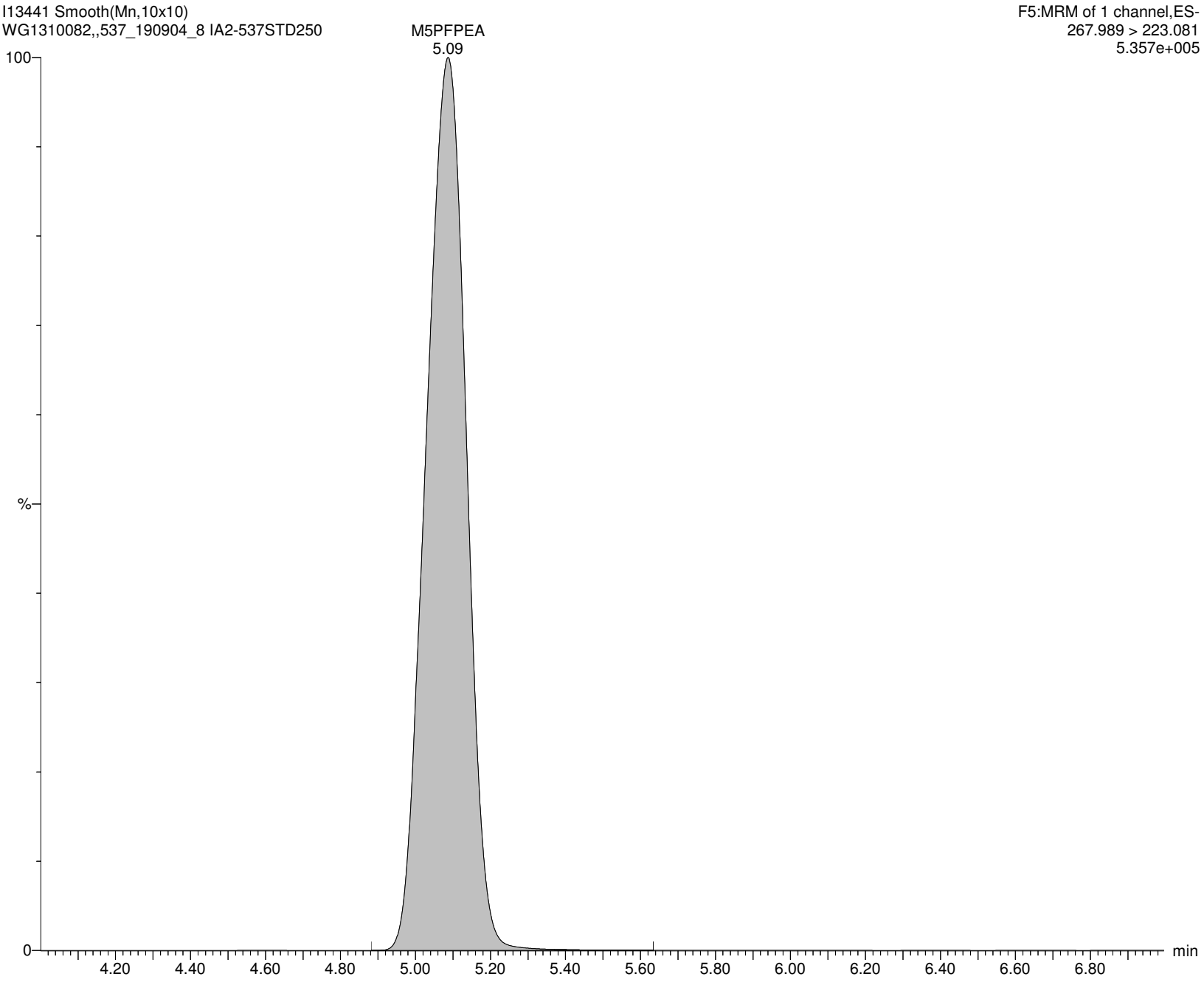
**M5PFPEA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
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**Vial: 1:B,1**
**Instrument: XEVO-TQSmicro#QEB0050**
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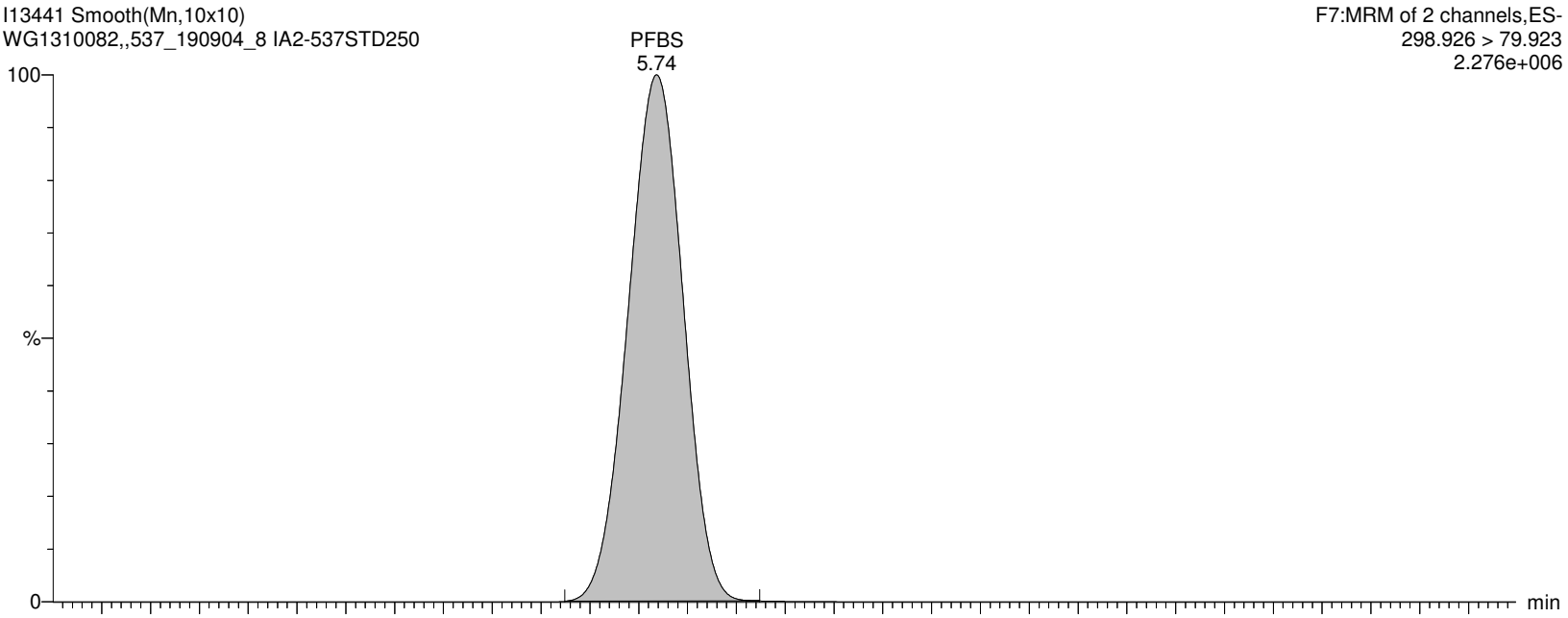
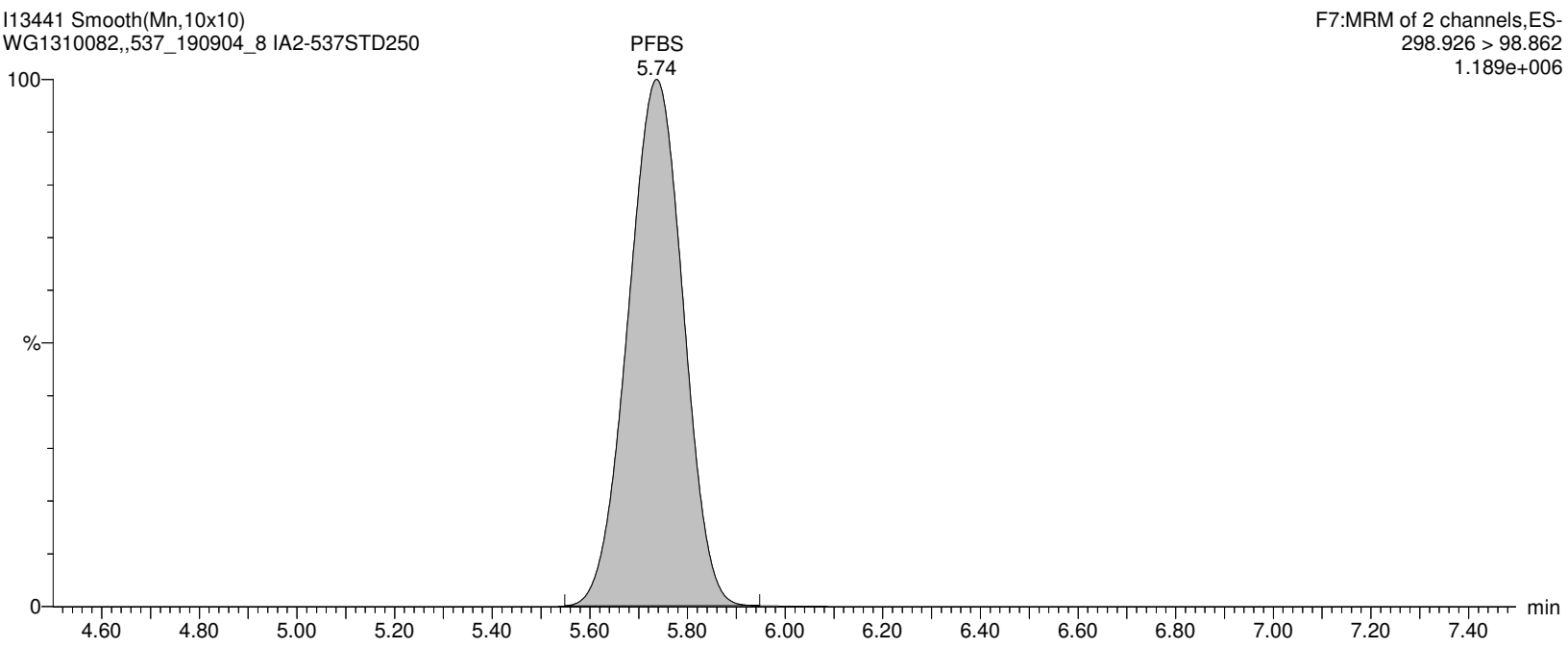
**PFBS**





all concentration units in (ng/mL)

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Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
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**Vial: 1:B,1**
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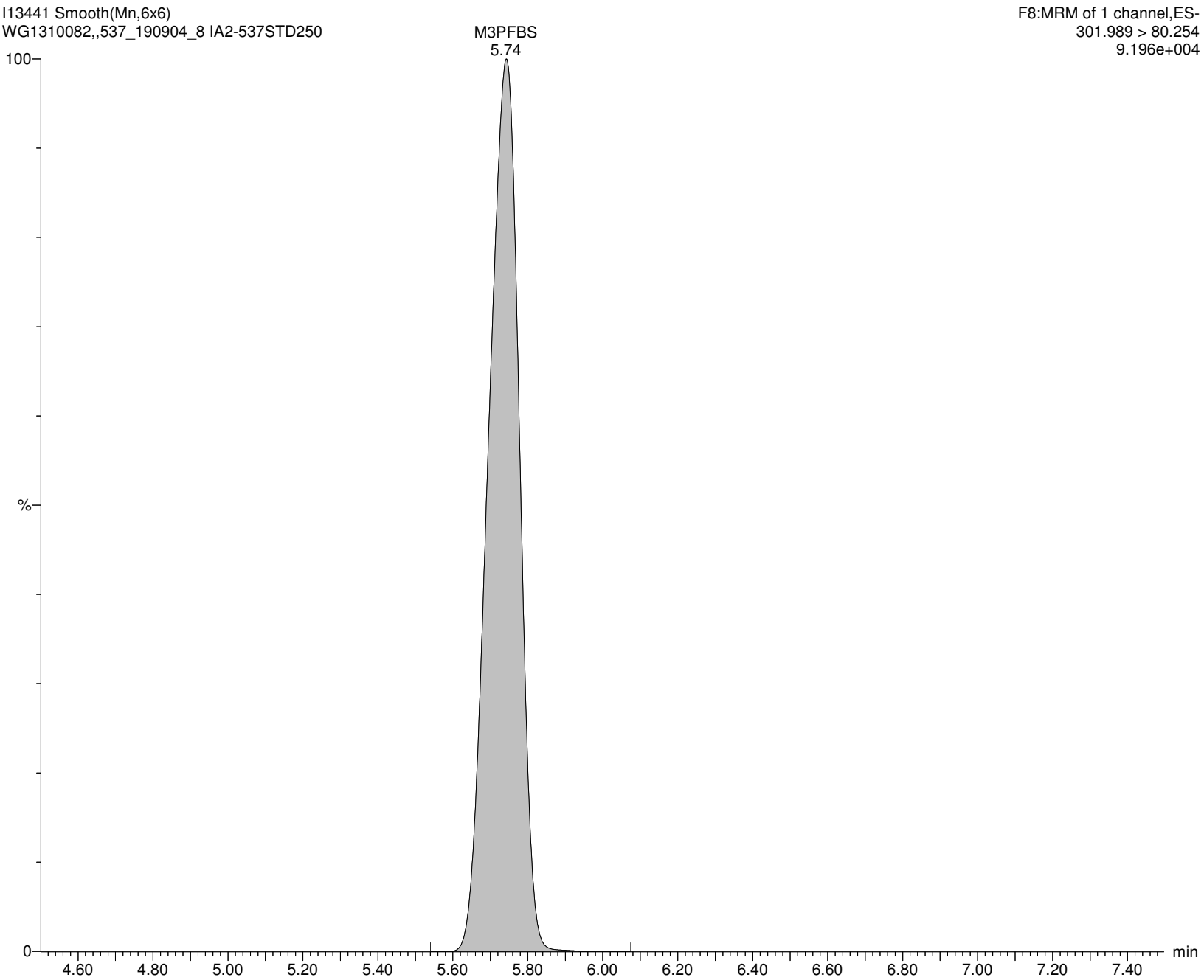
**M3PFBS**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
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**Vial: 1:B,1**
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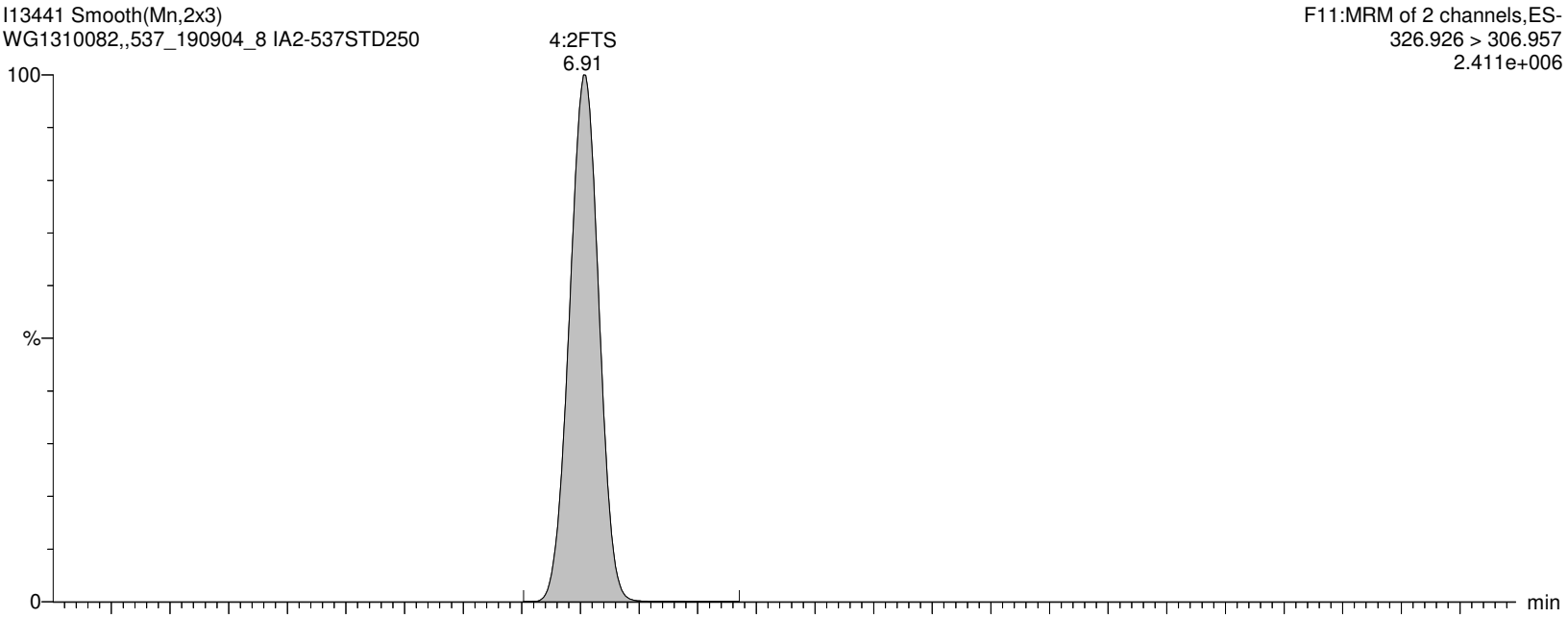
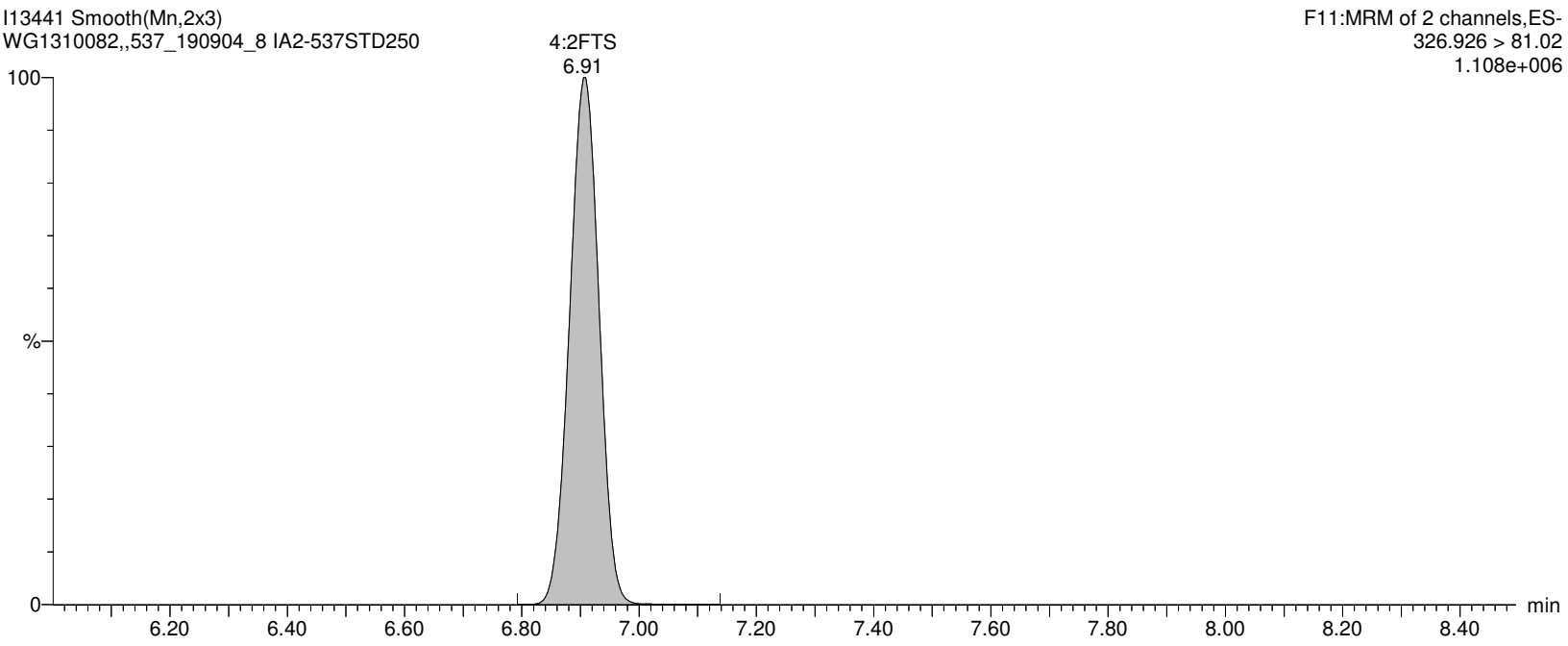
**4:2FTS**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
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**Description: WG1310082,,537_190904_8**
**User: LCMS02:JW**
**Vial: 1:B,1**
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**Tune Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\181009_TUNE.IPR**
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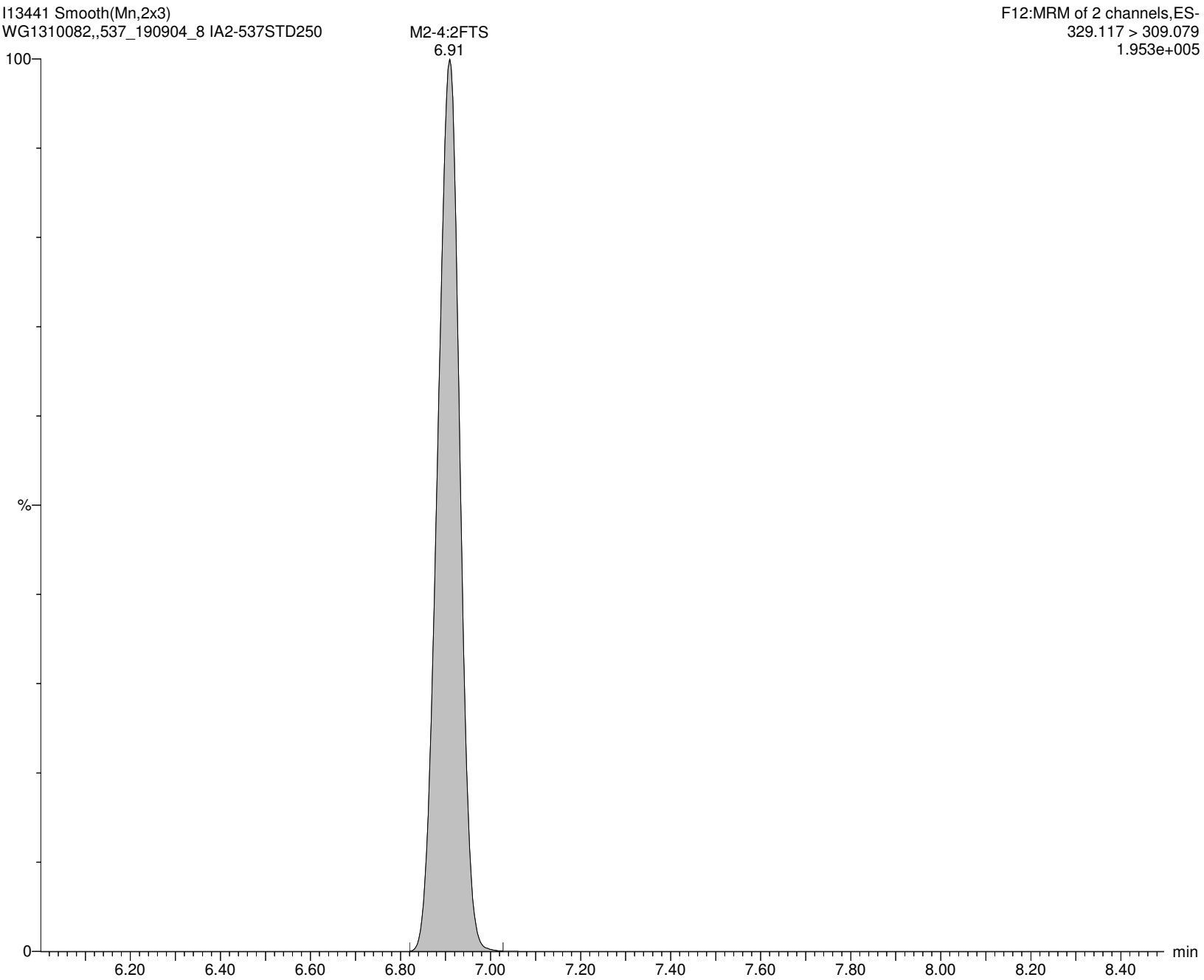
**M2-4:2FTS**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
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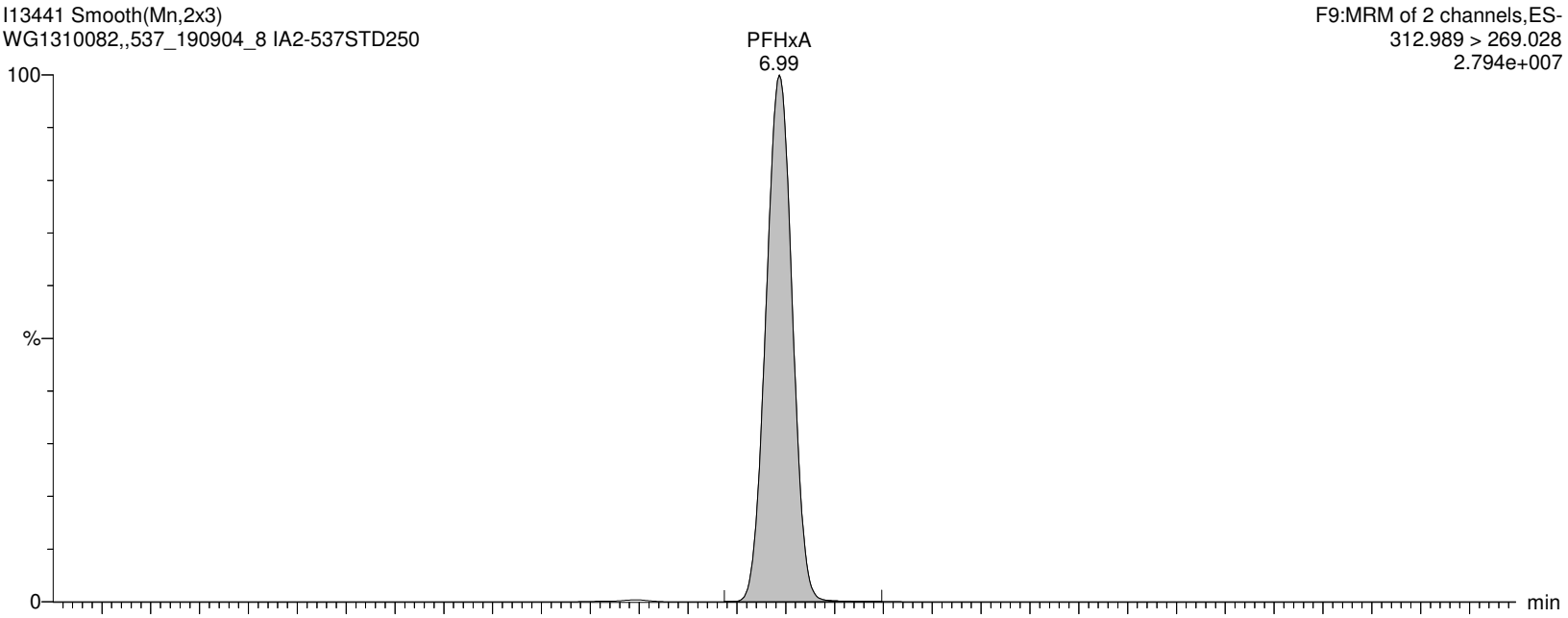
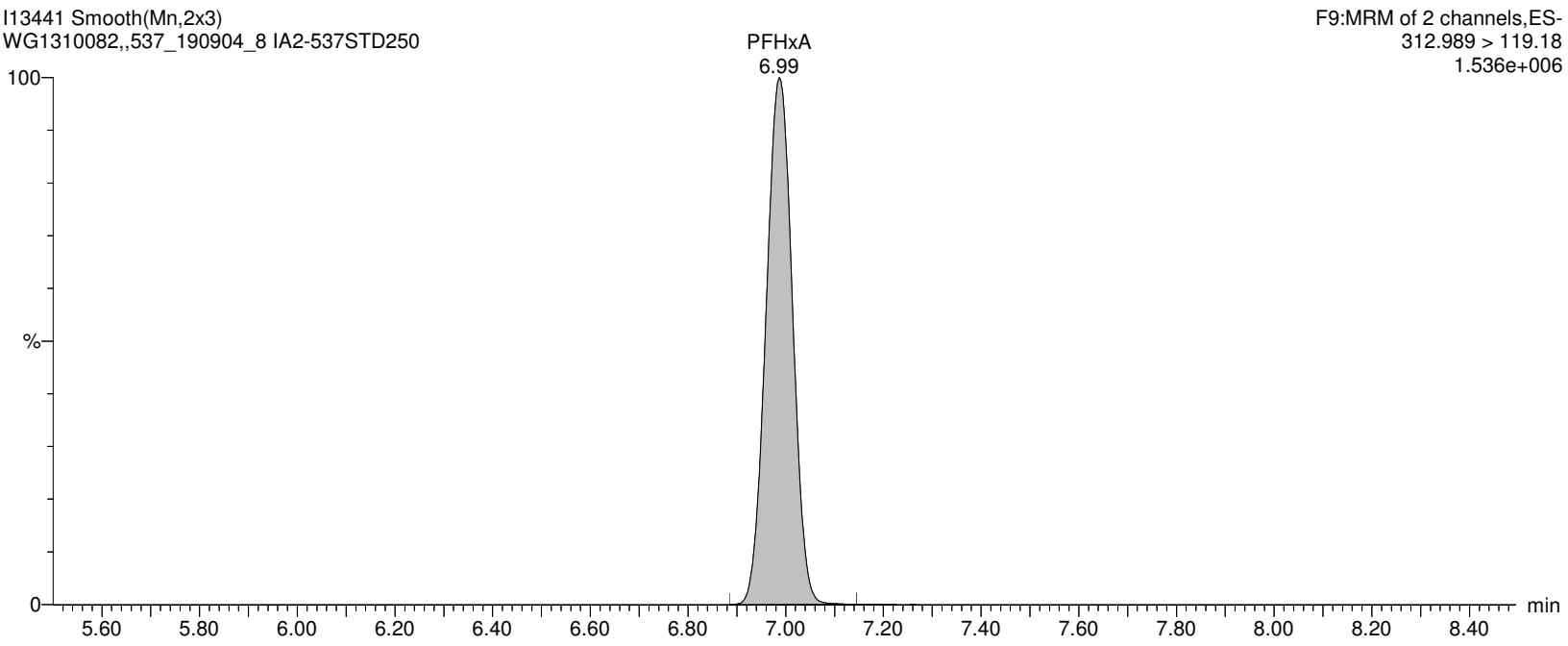
**PFHxA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
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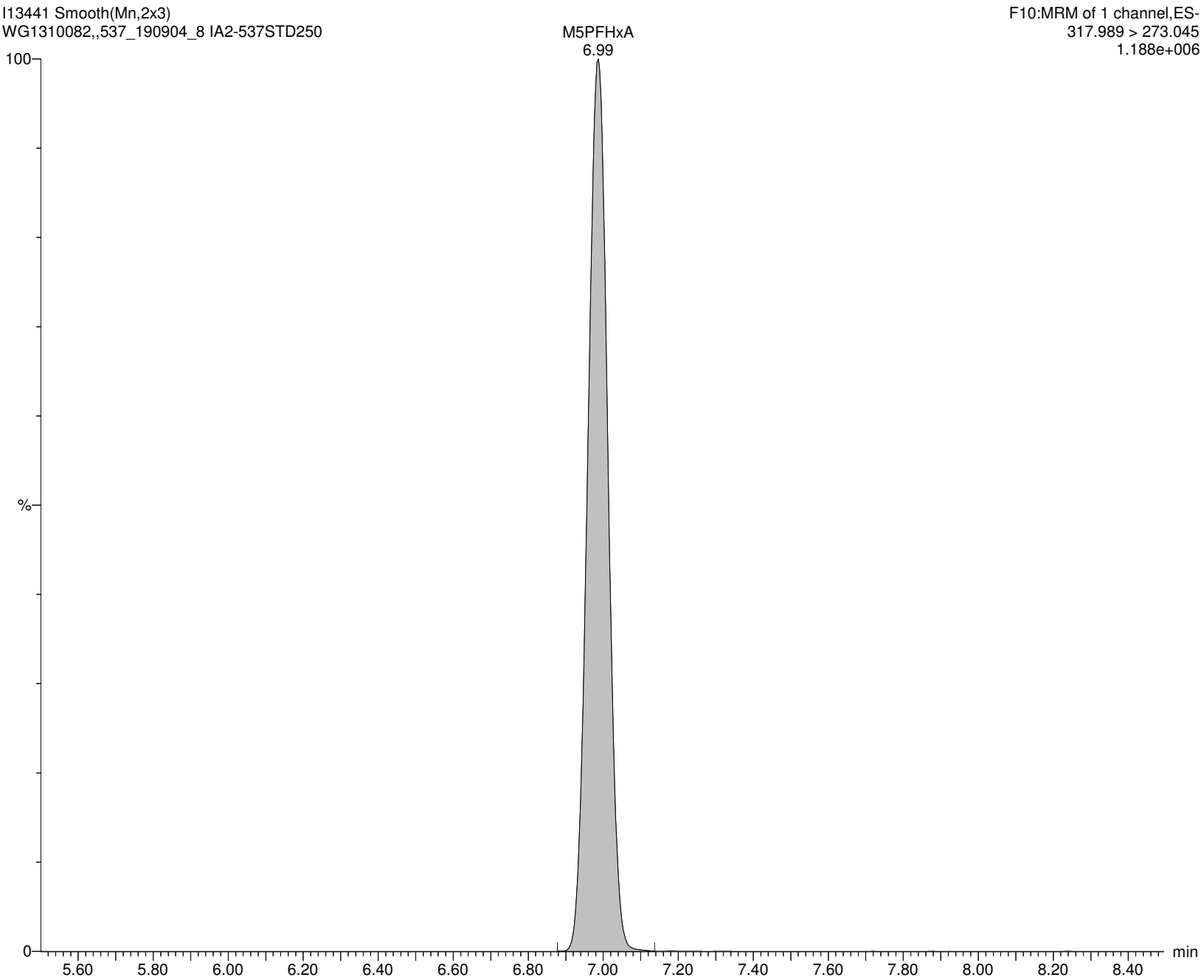
**M5PFHxA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
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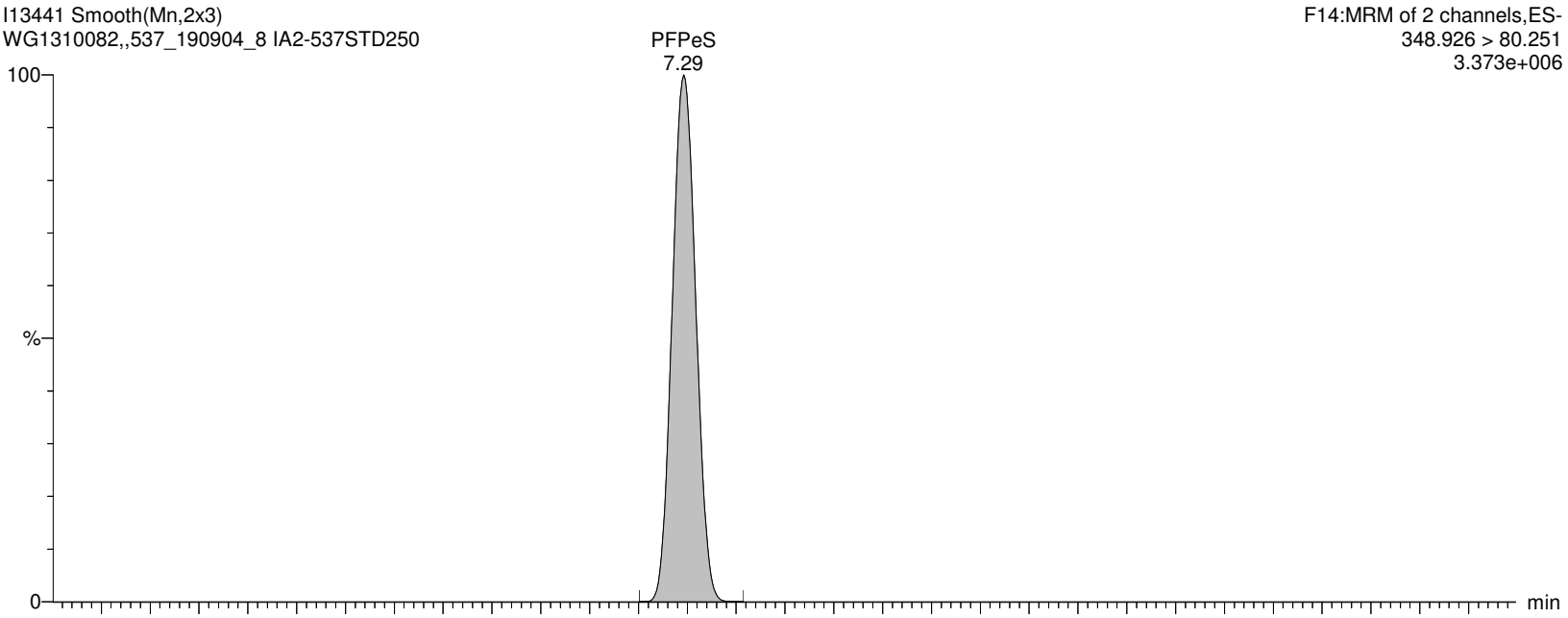
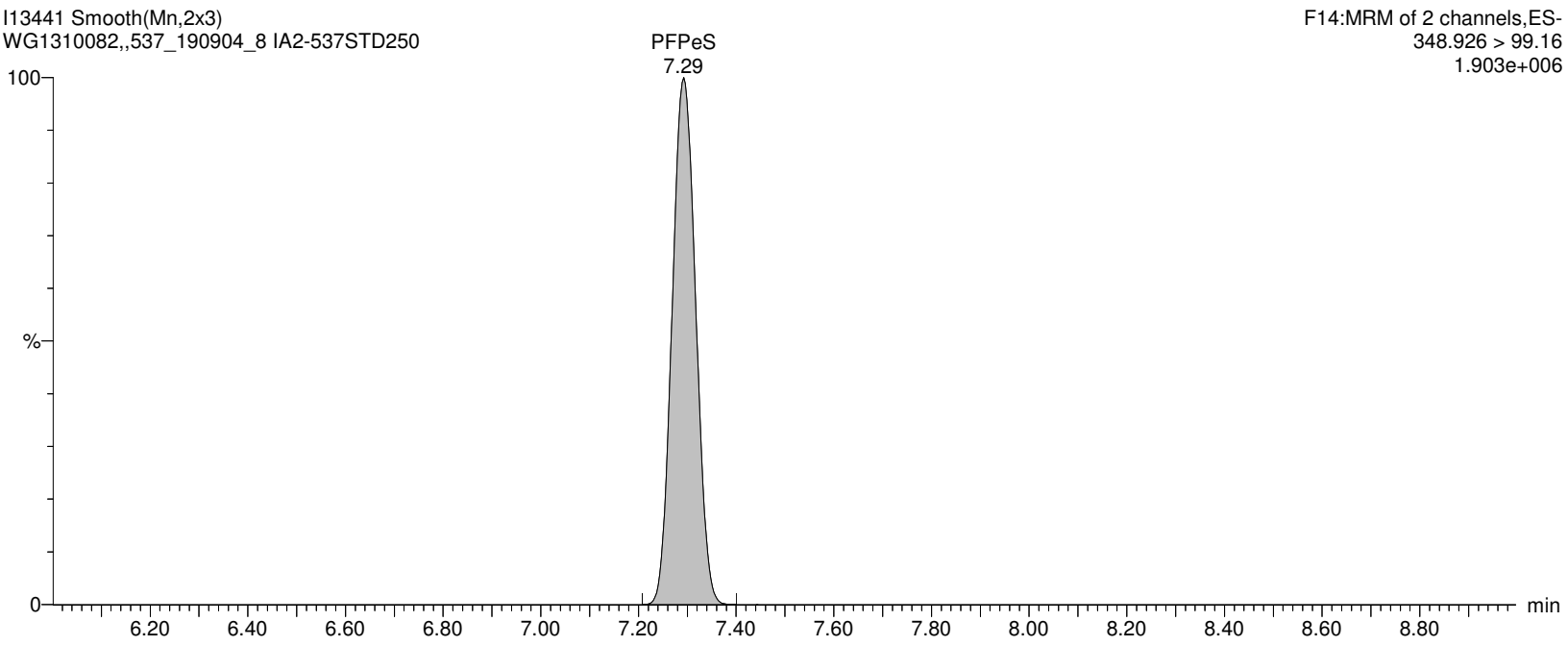
**PFPeS**





all concentration units in (ng/mL)

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Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
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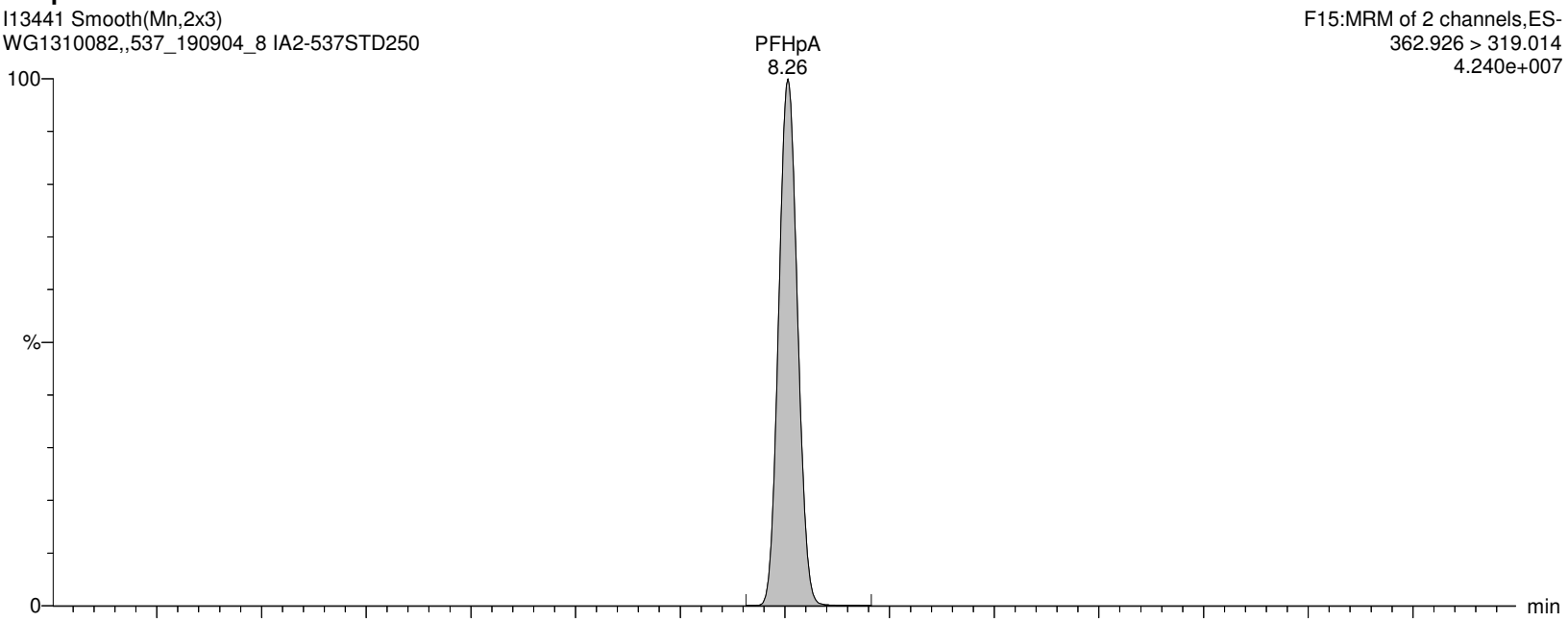
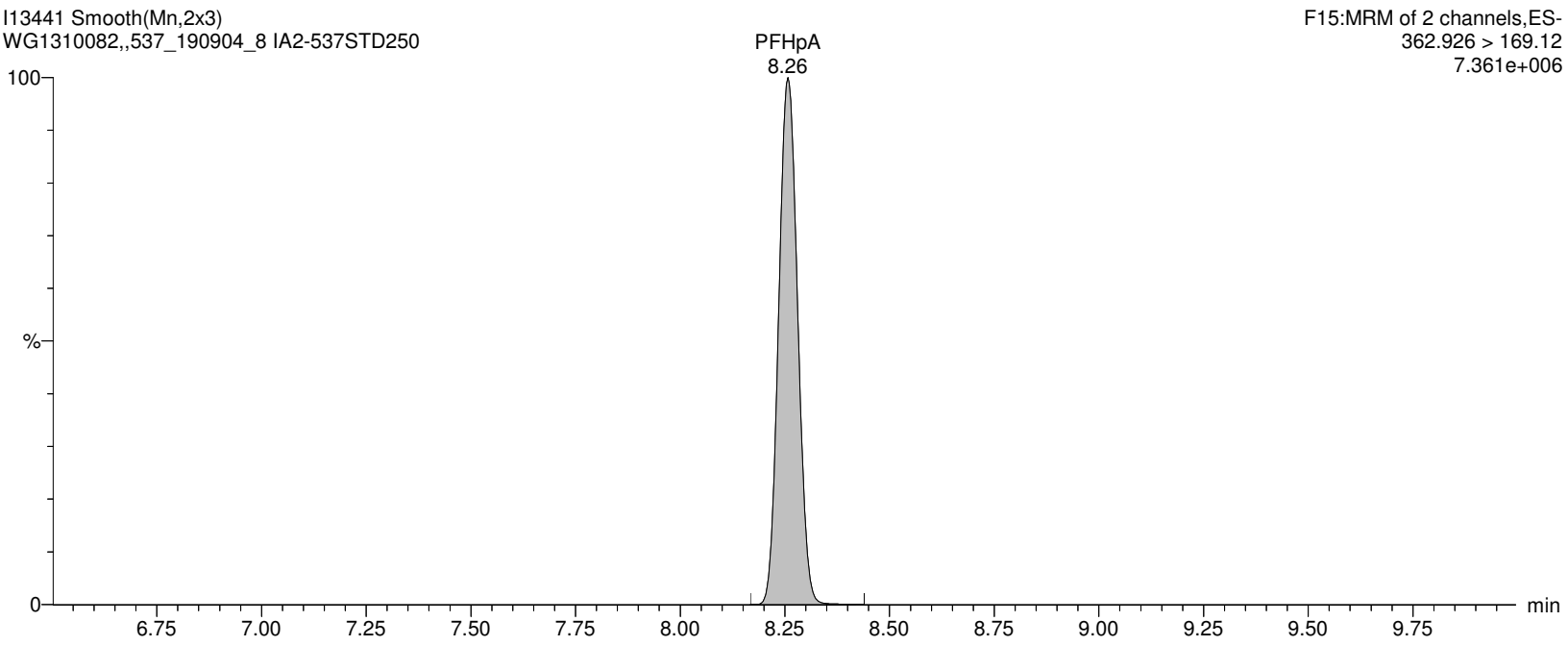
**PFHpA**





all concentration units in (ng/mL)

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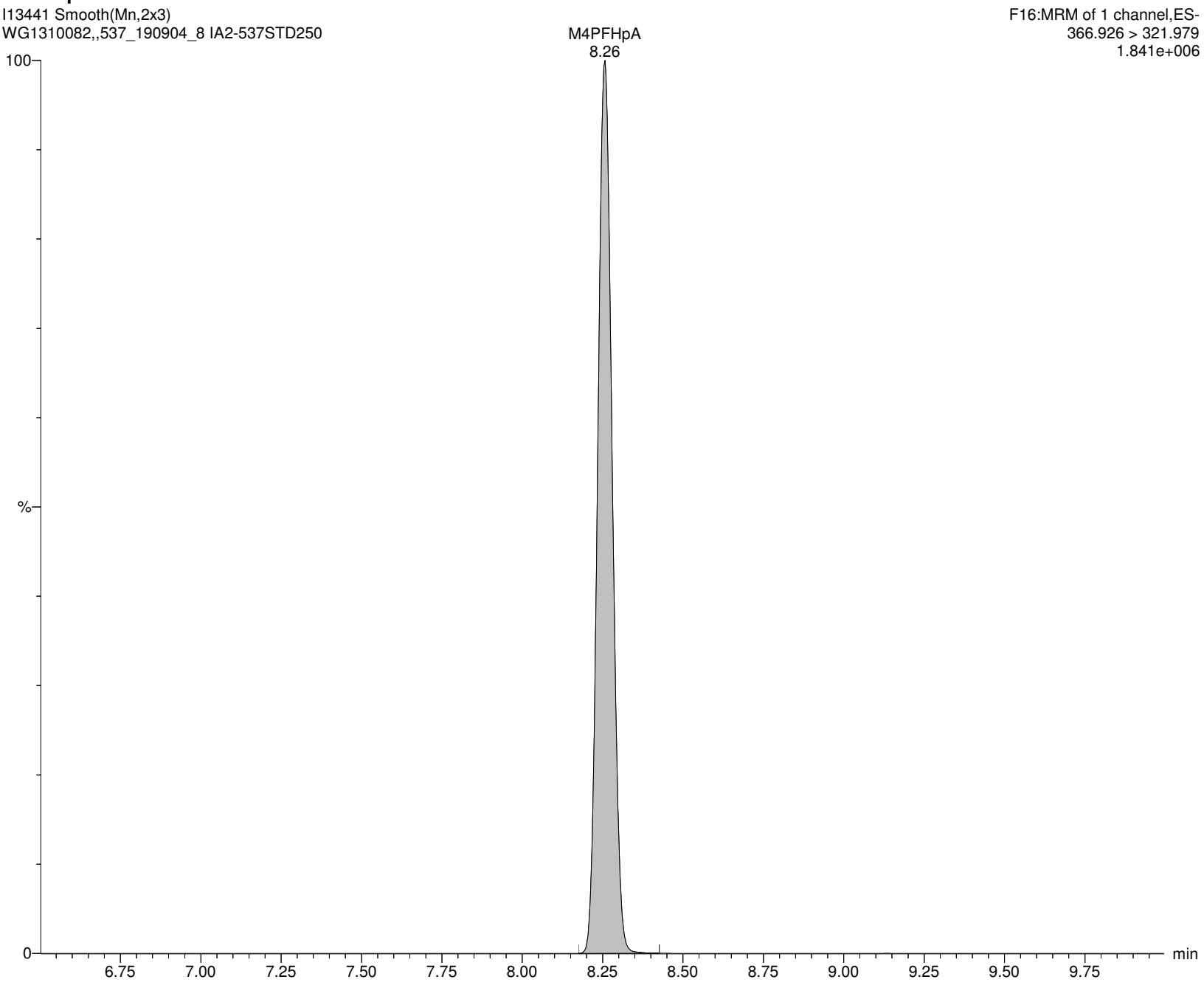
**M4PFHpA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
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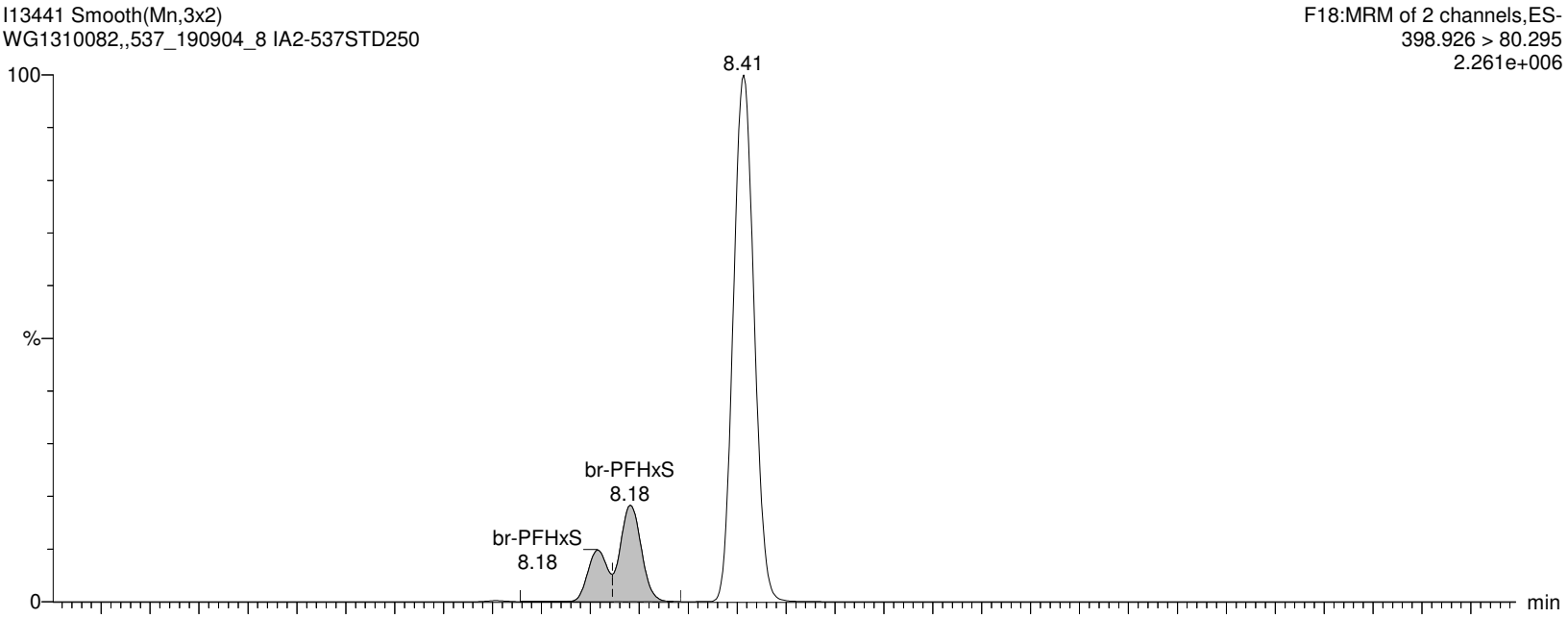
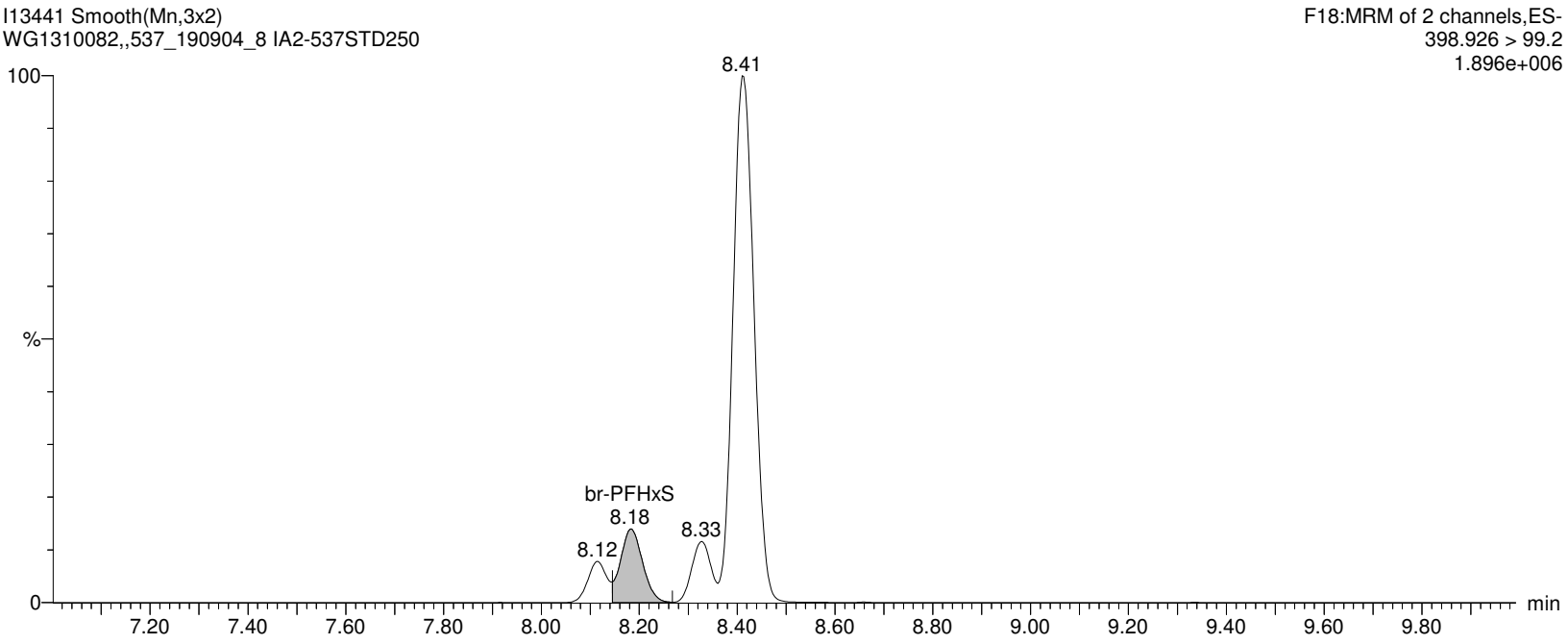
**br-PFHxS**





all concentration units in (ng/mL)

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**MS Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

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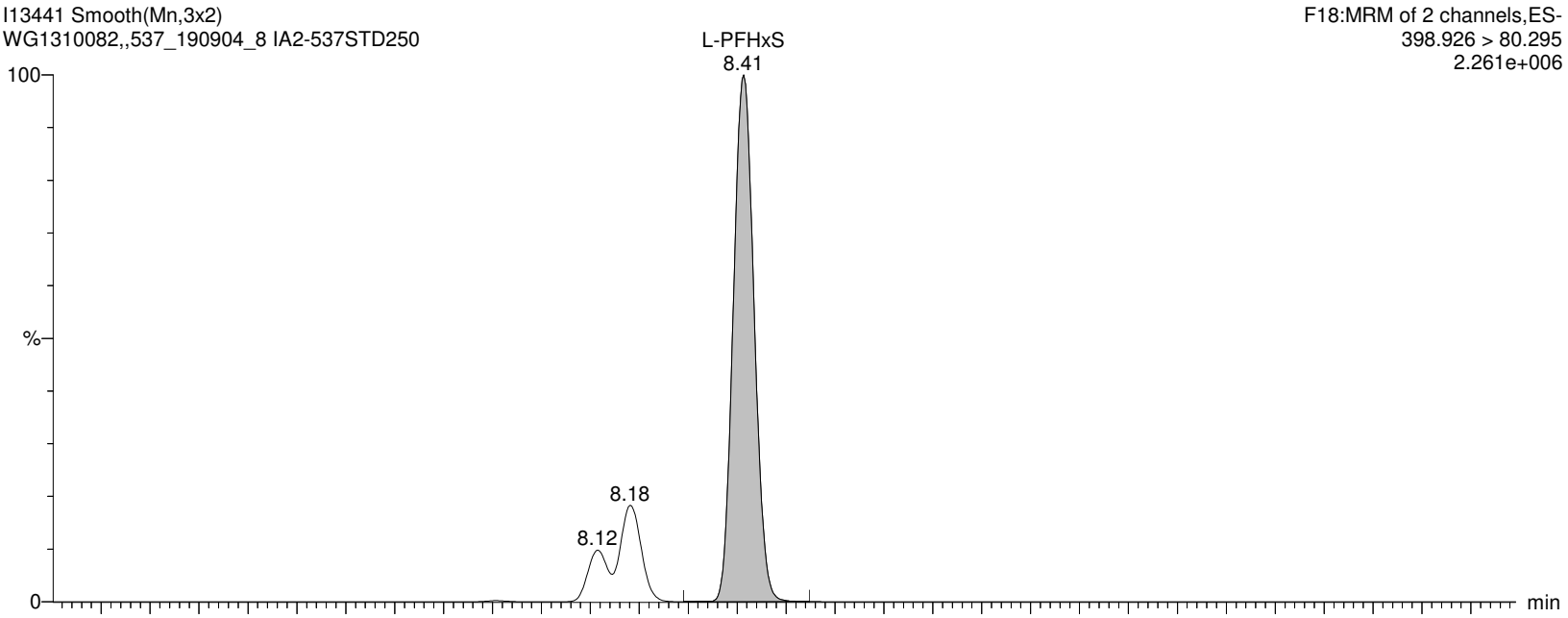


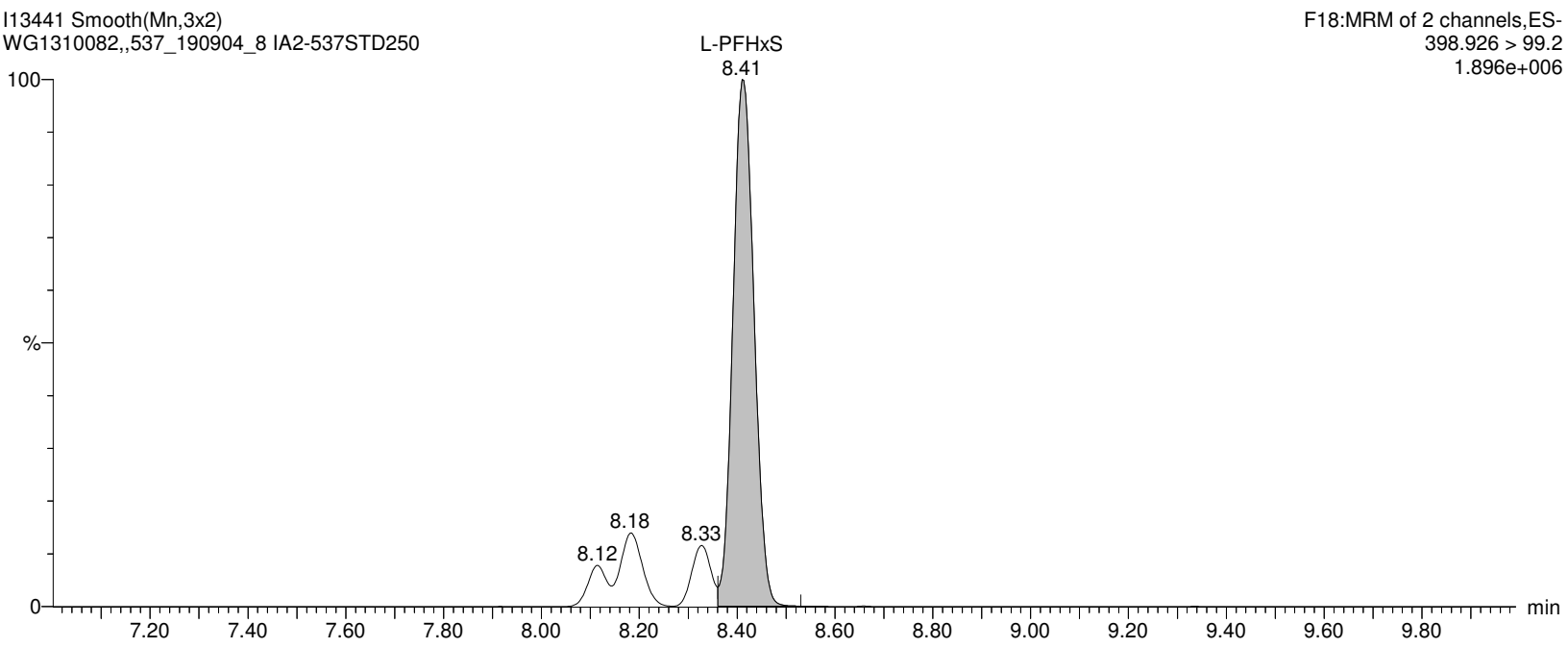



all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
Printed: Monday, November 18, 2019 13:43:03 Eastern Standard Time

**Name: I13441**
**ID: IA2-537STD250**
**Date: 18-Nov-2019**
**Time: 12:33:16**
**Description: WG1310082,,537_190904_8**
**User: LCMS02:JW**
**Vial: 1:B,1**
**Instrument: XEVO-TQSmicro#QEB0050**
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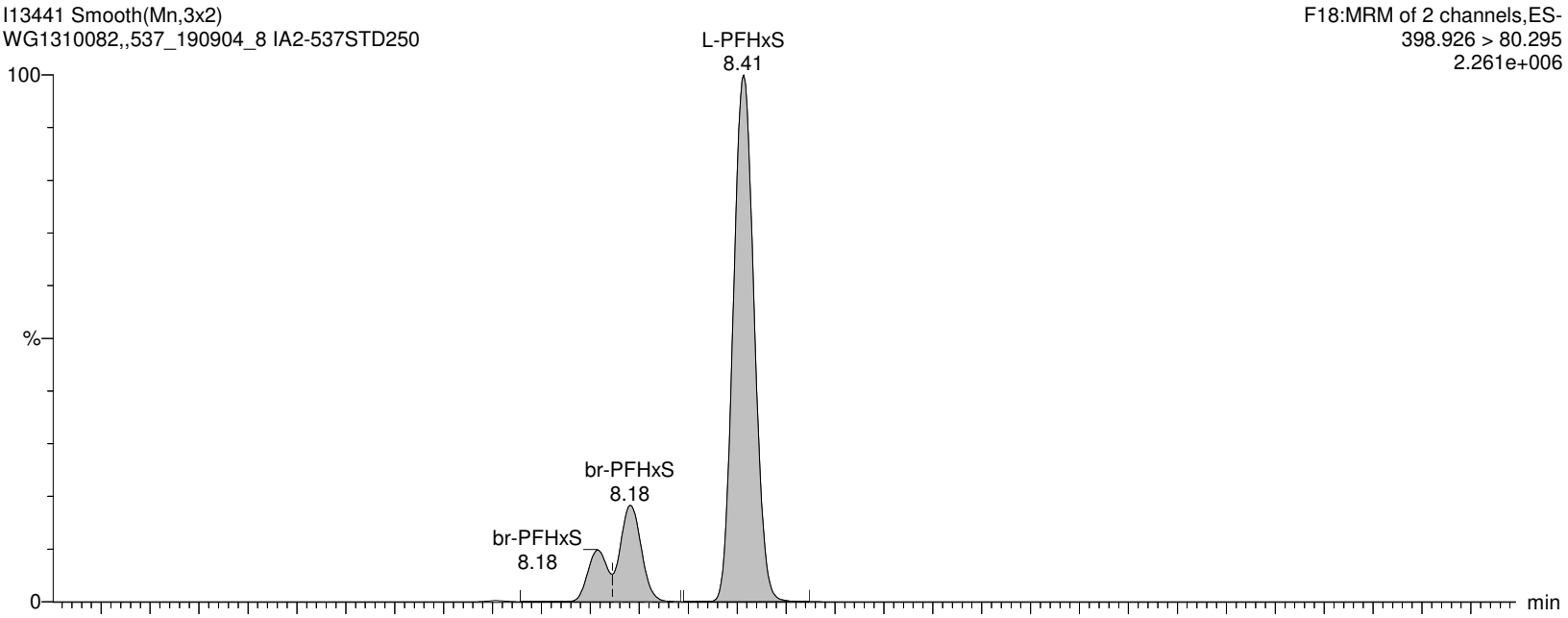


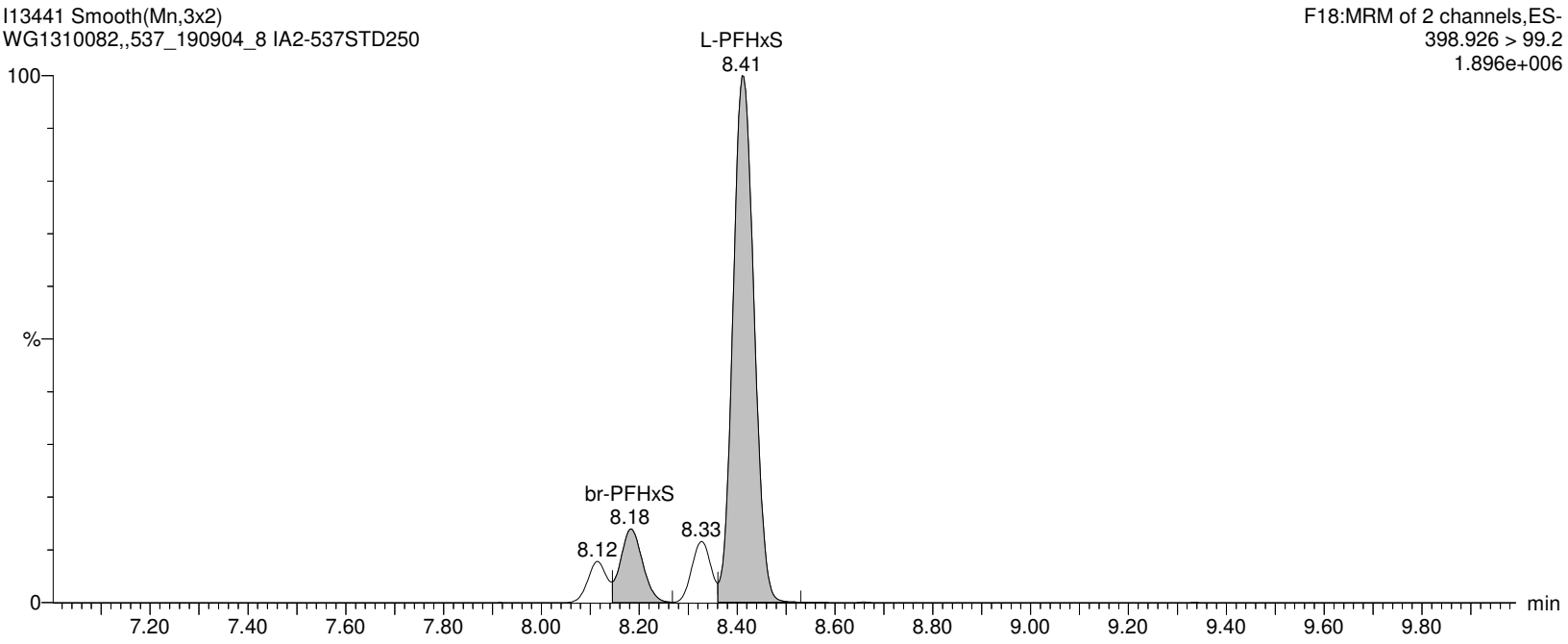



all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
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**Vial: 1:B,1**
**Instrument: XEVO-TQSmicro#QEB0050**
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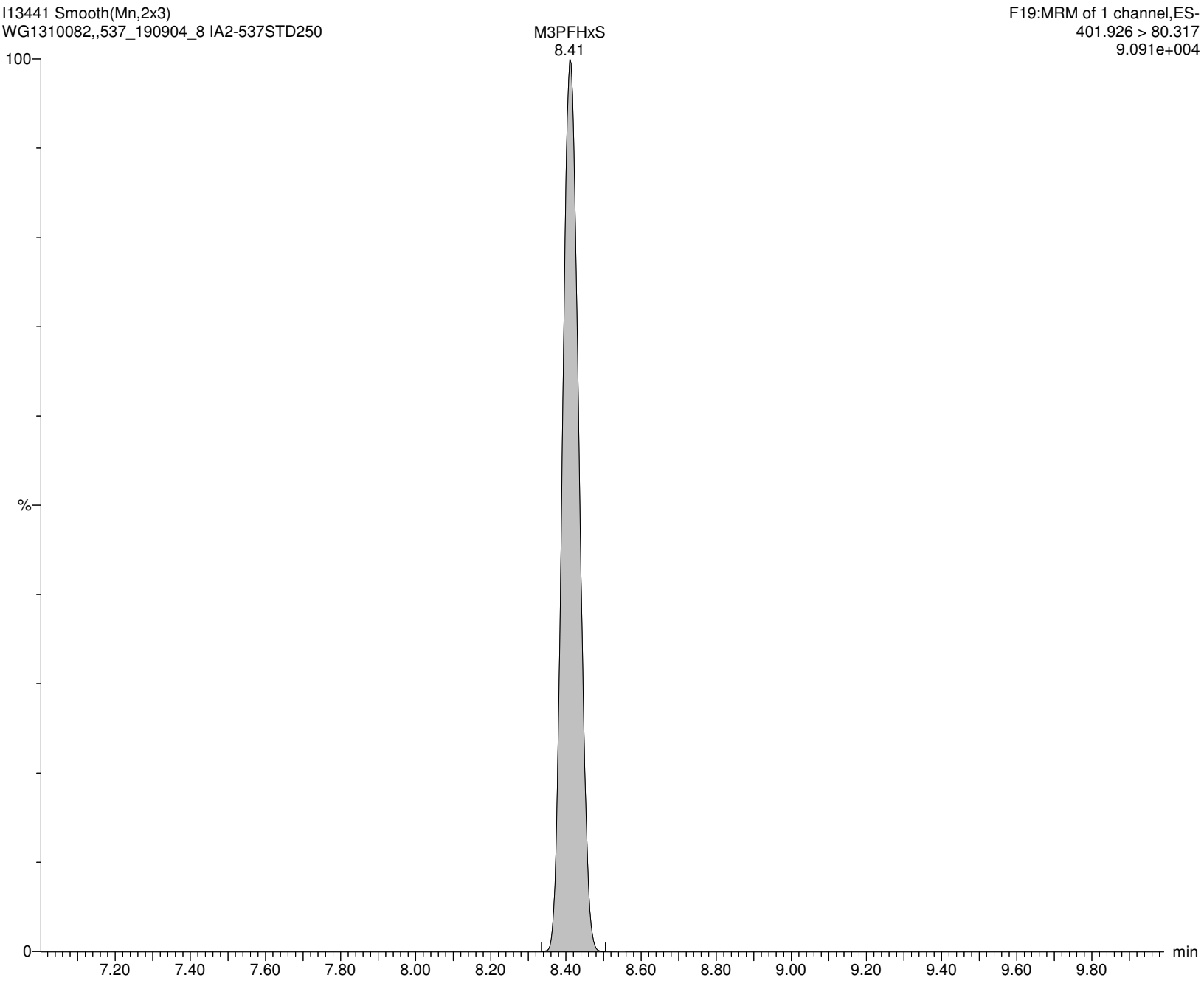



all concentration units in (ng/mL)

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Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
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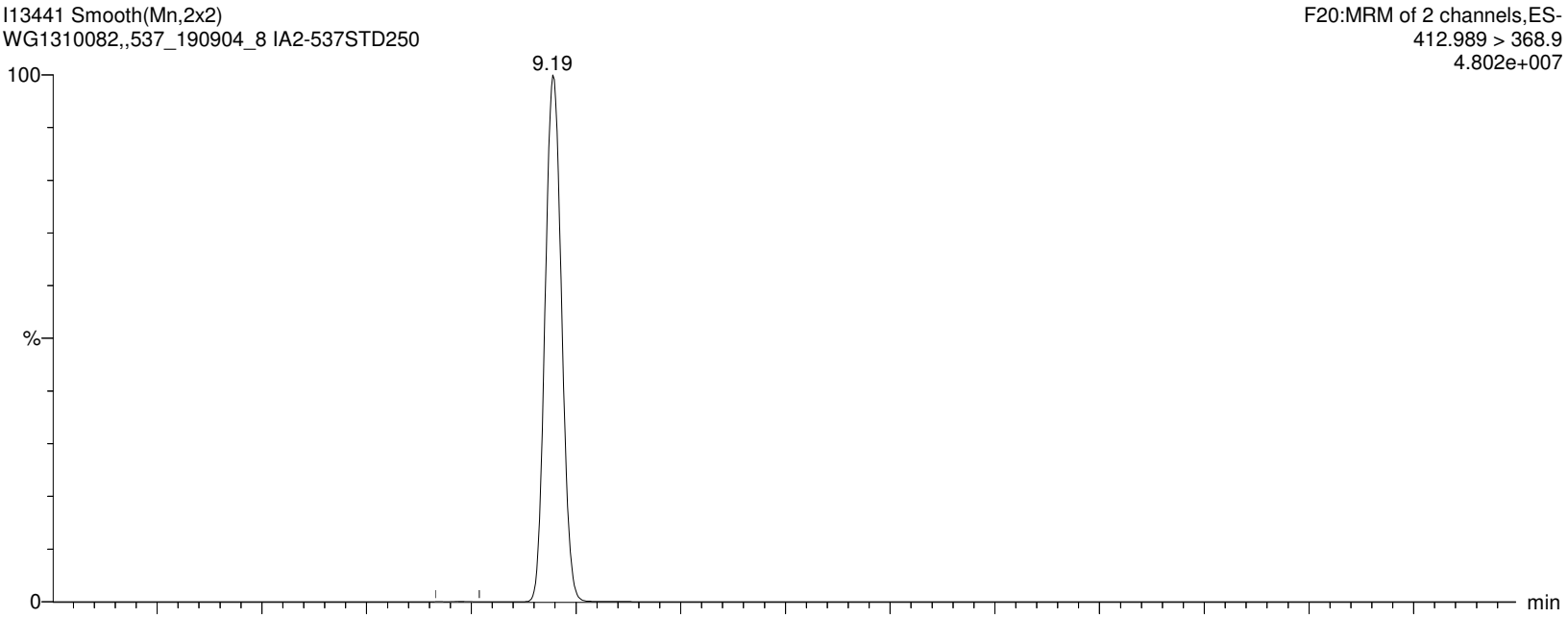
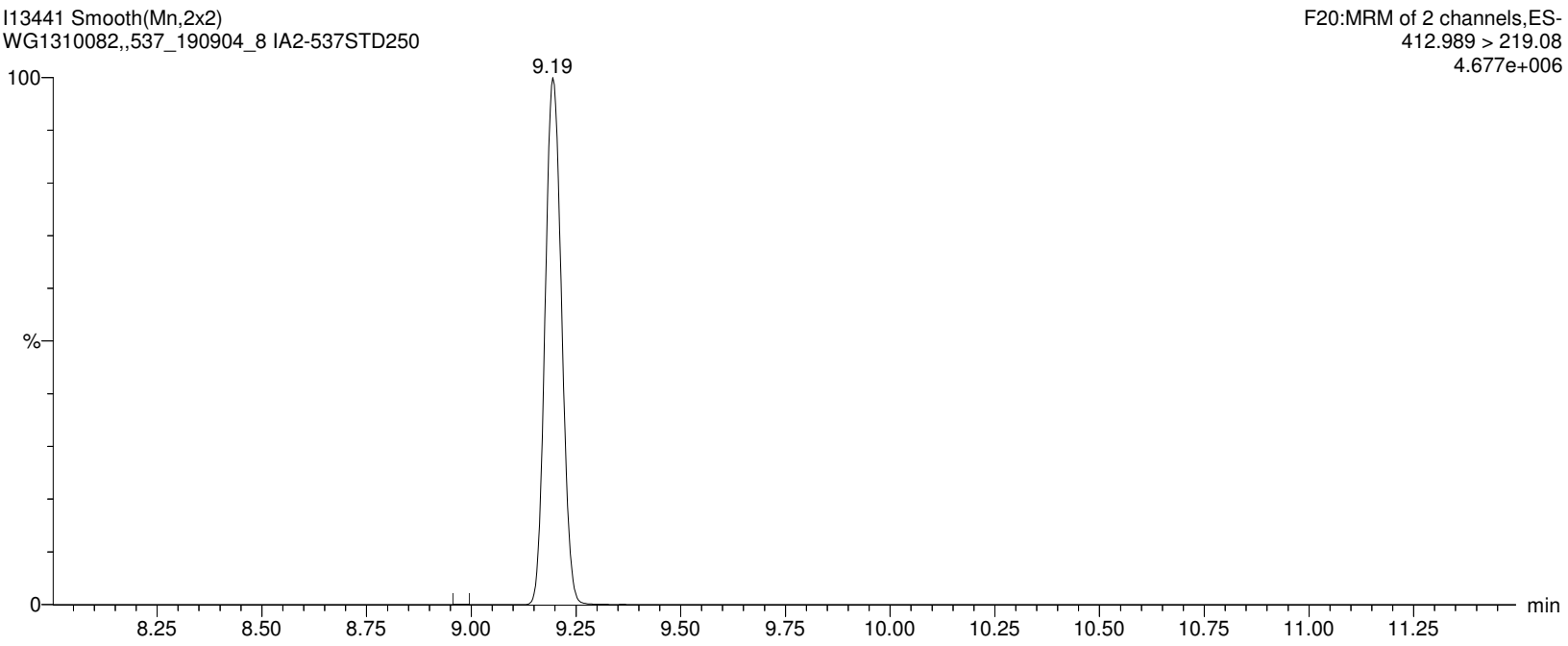
**br-PFOA**





all concentration units in (ng/mL)

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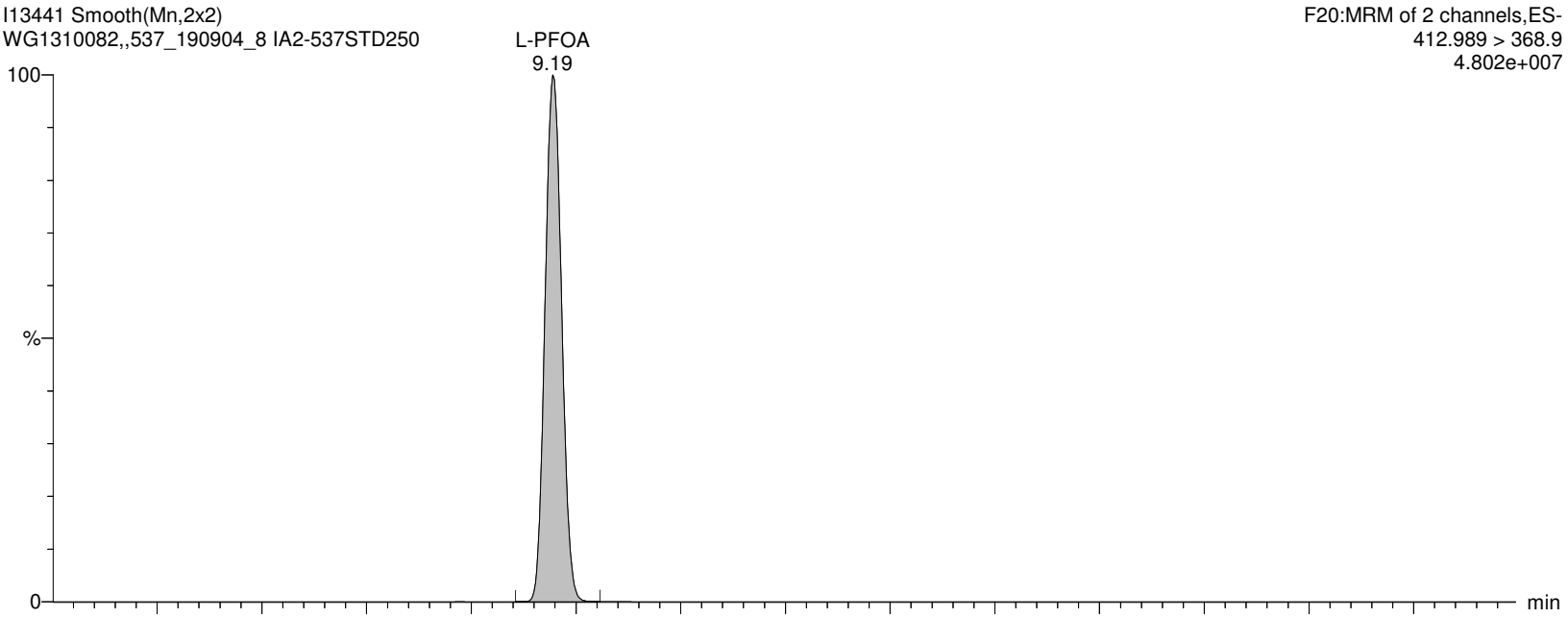


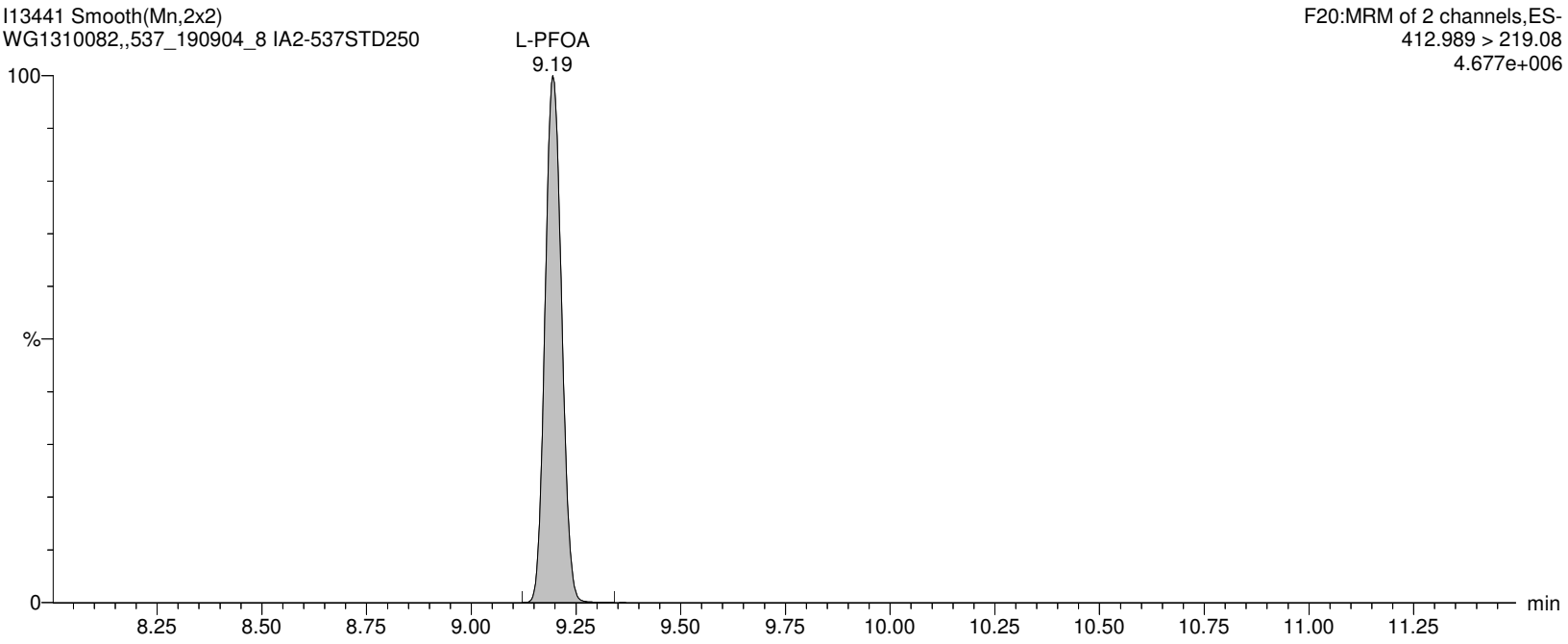



all concentration units in (ng/mL)

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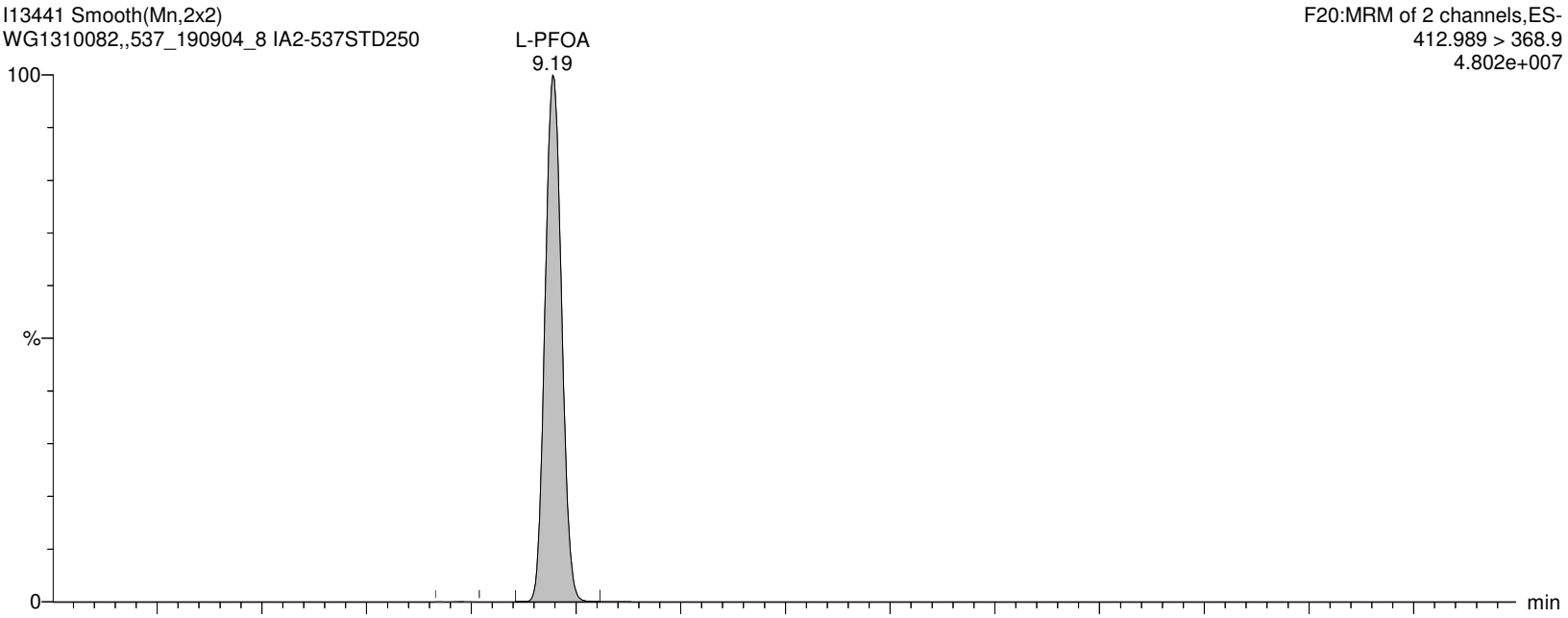
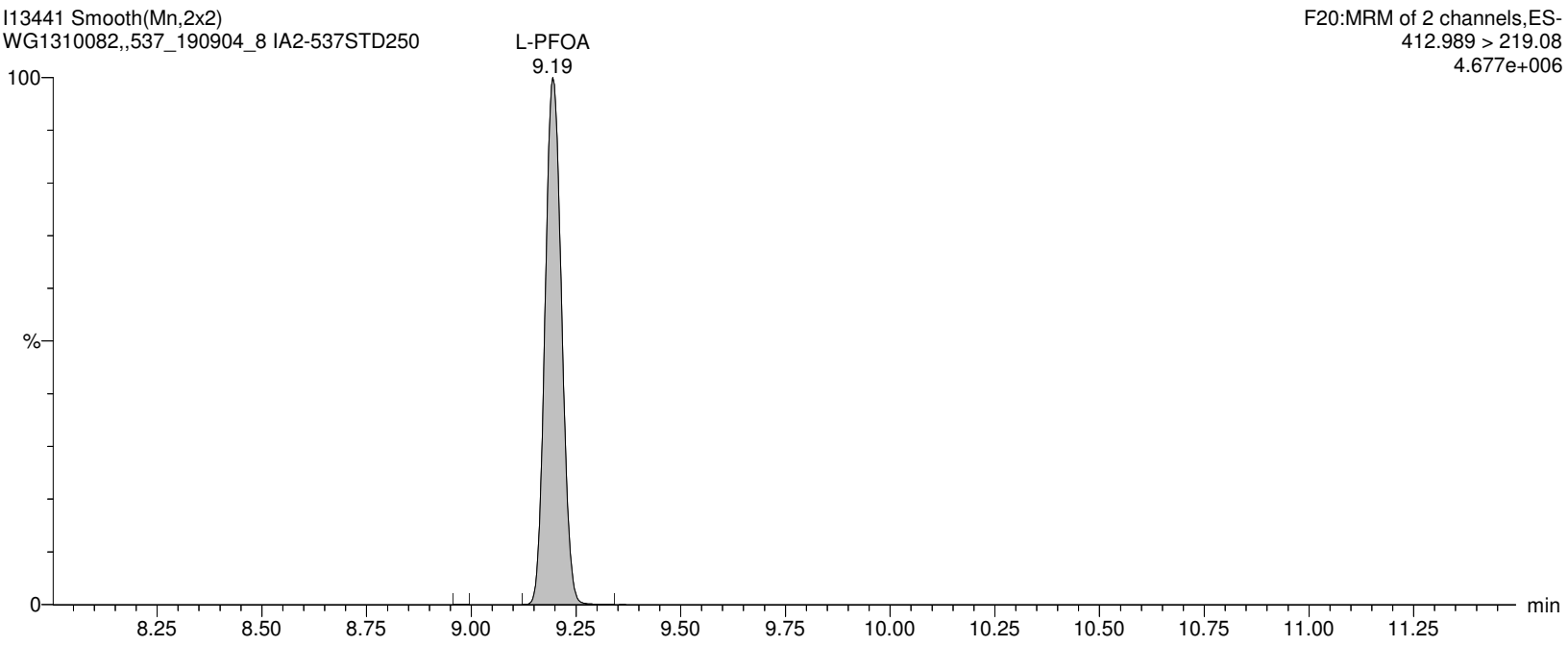
**MS Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**PFOA**





all concentration units in (ng/mL)

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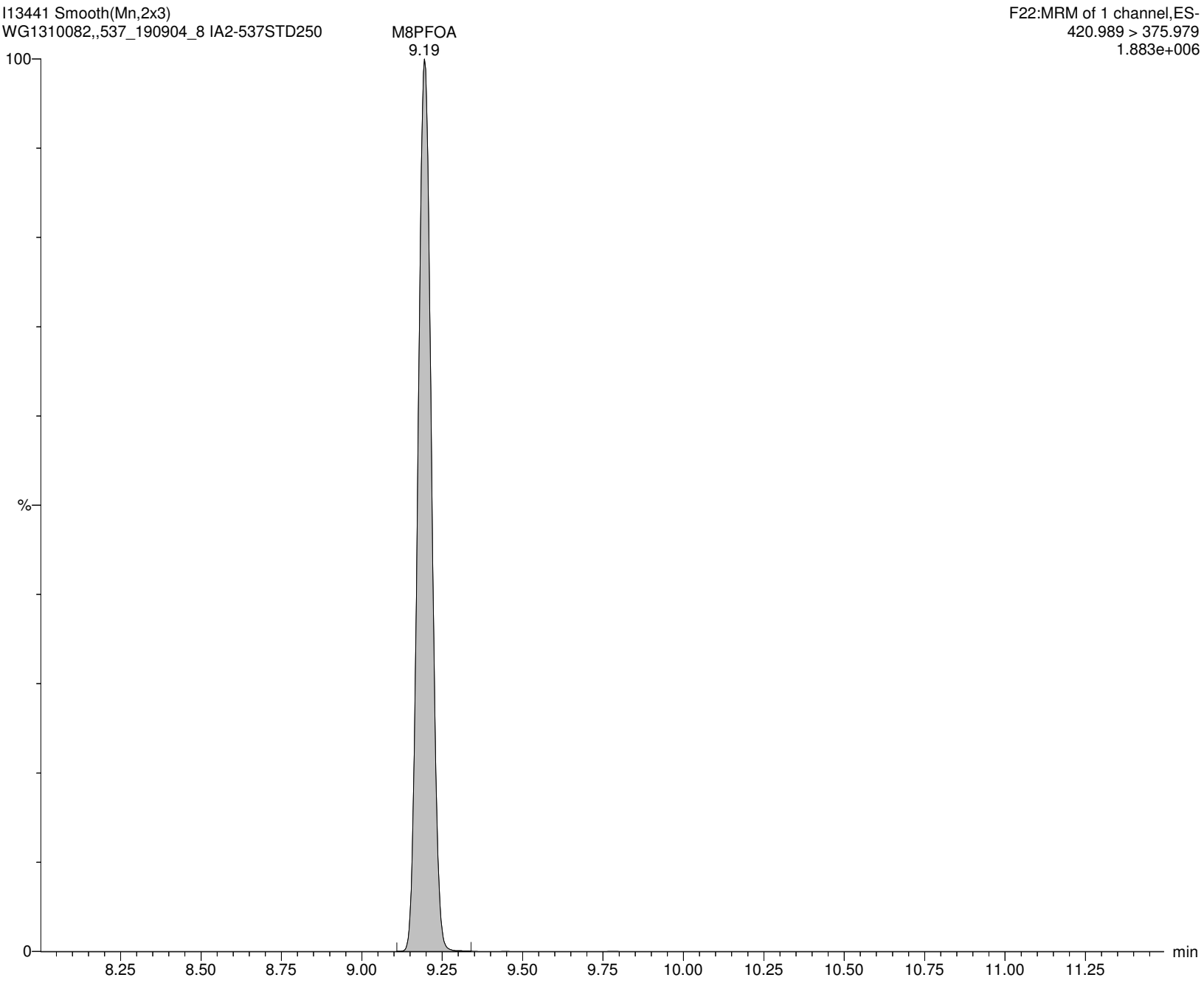
**Tune Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\181009_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**M8PFOA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
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**Vial: 1:B,1**
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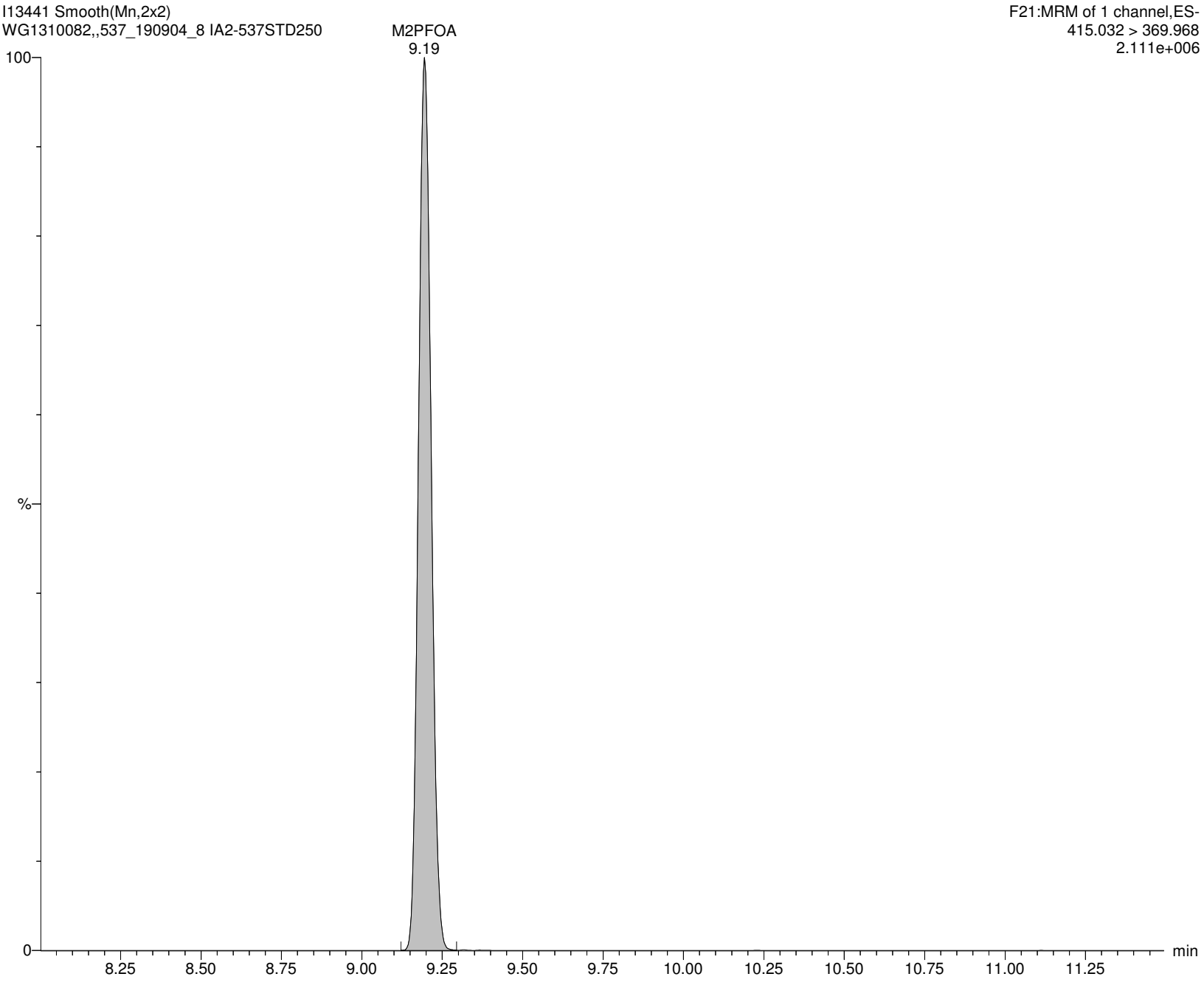
**M2PFOA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
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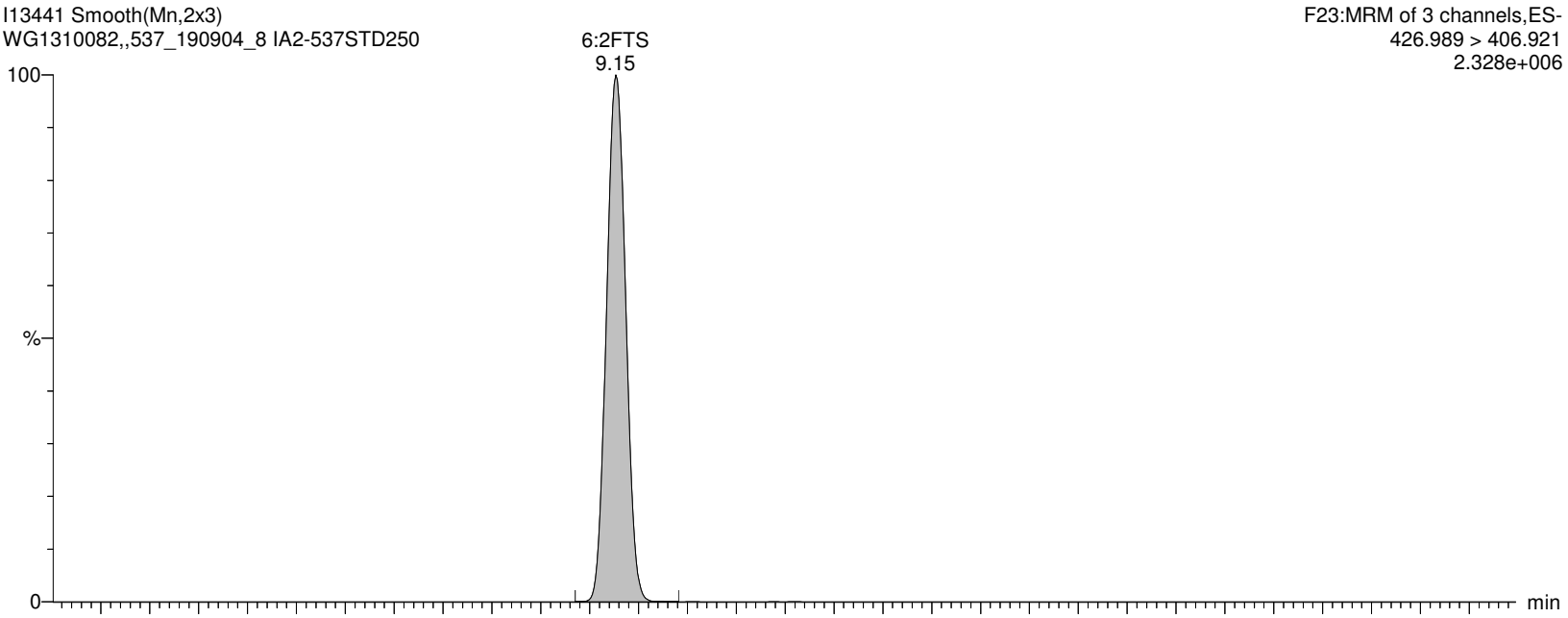
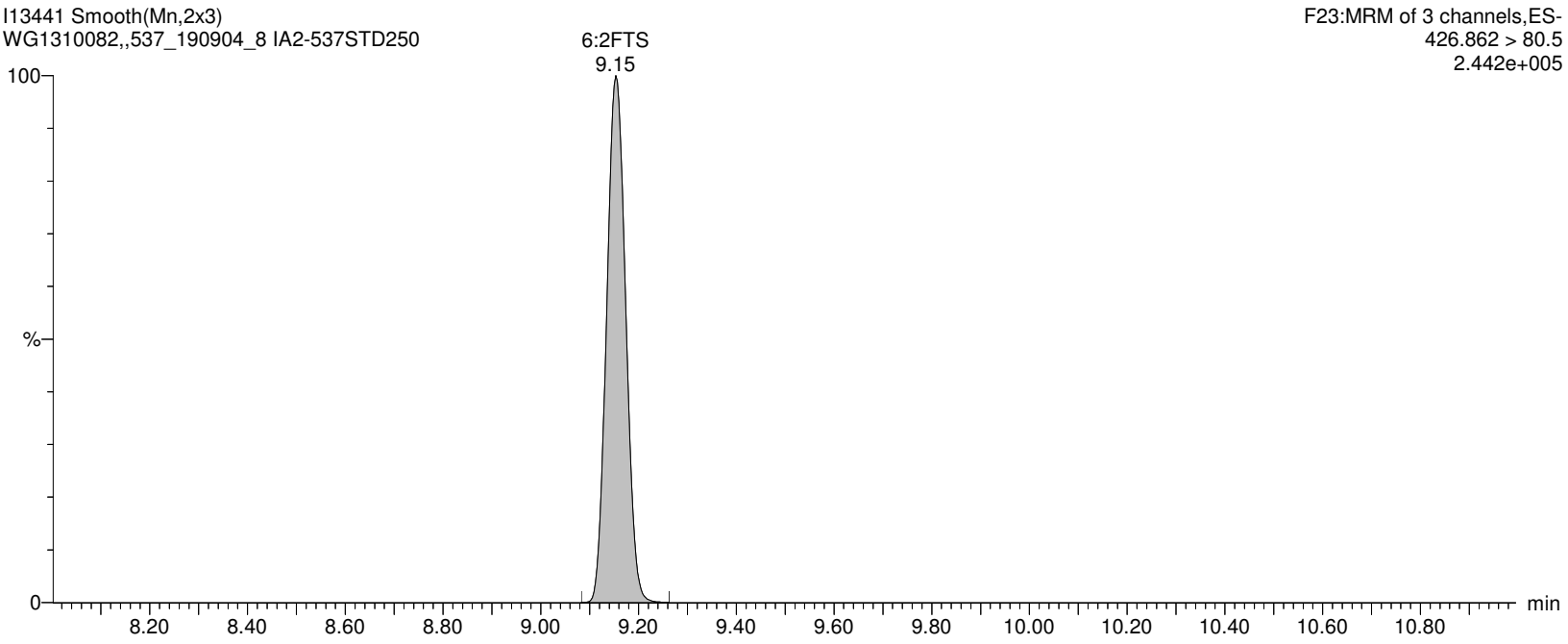
**6:2FTS**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
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**ID: IA2-537STD250**
**Date: 18-Nov-2019**
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**User: LCMS02:JW**
**Vial: 1:B,1**
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**Tune Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\181009_TUNE.IPR**
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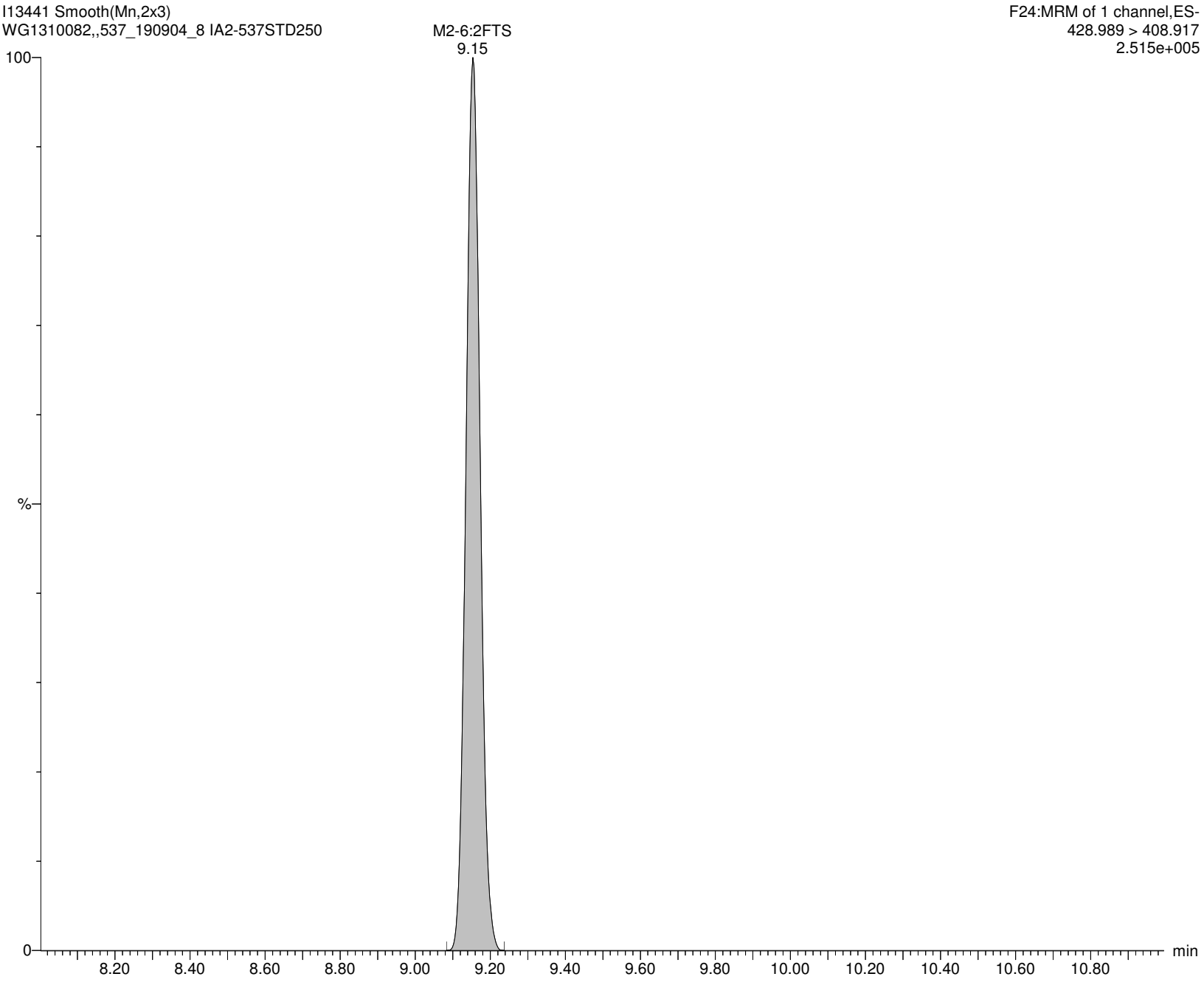
**M2-6:2FTS**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
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**Tune Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\181009_TUNE.IPR**
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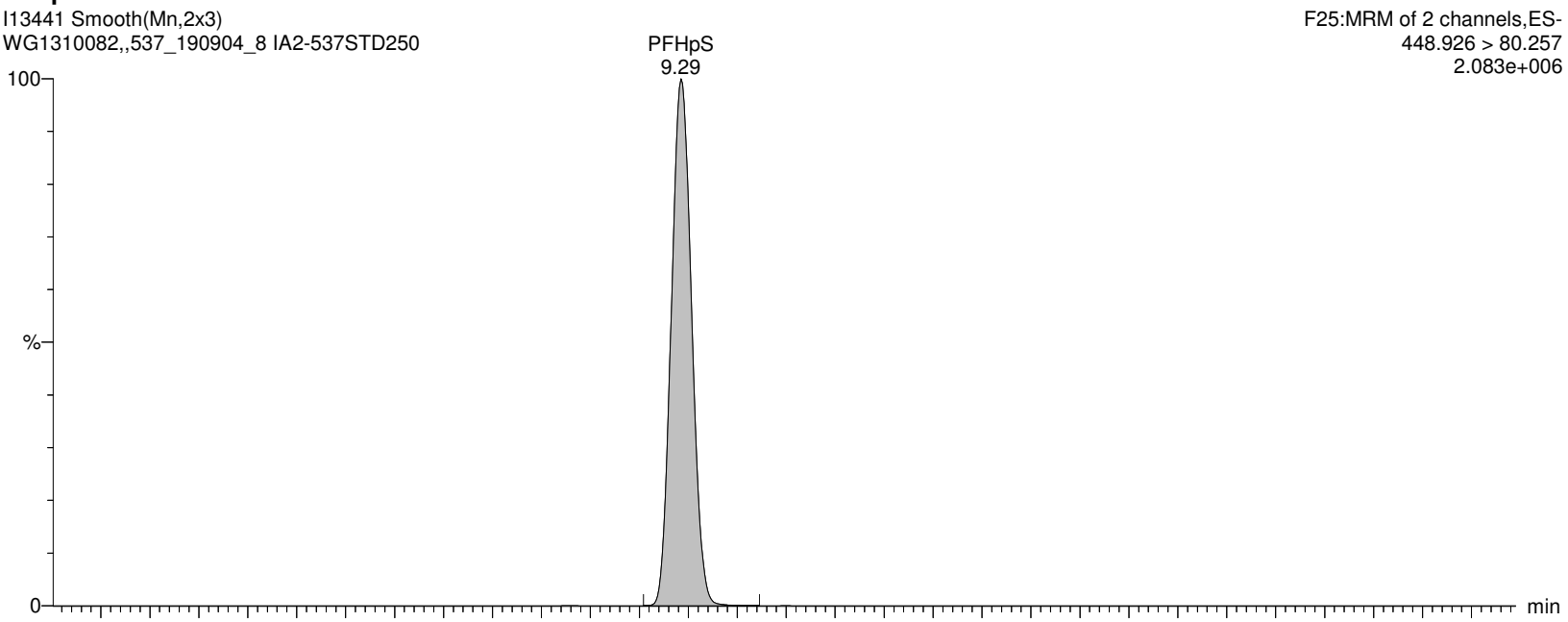
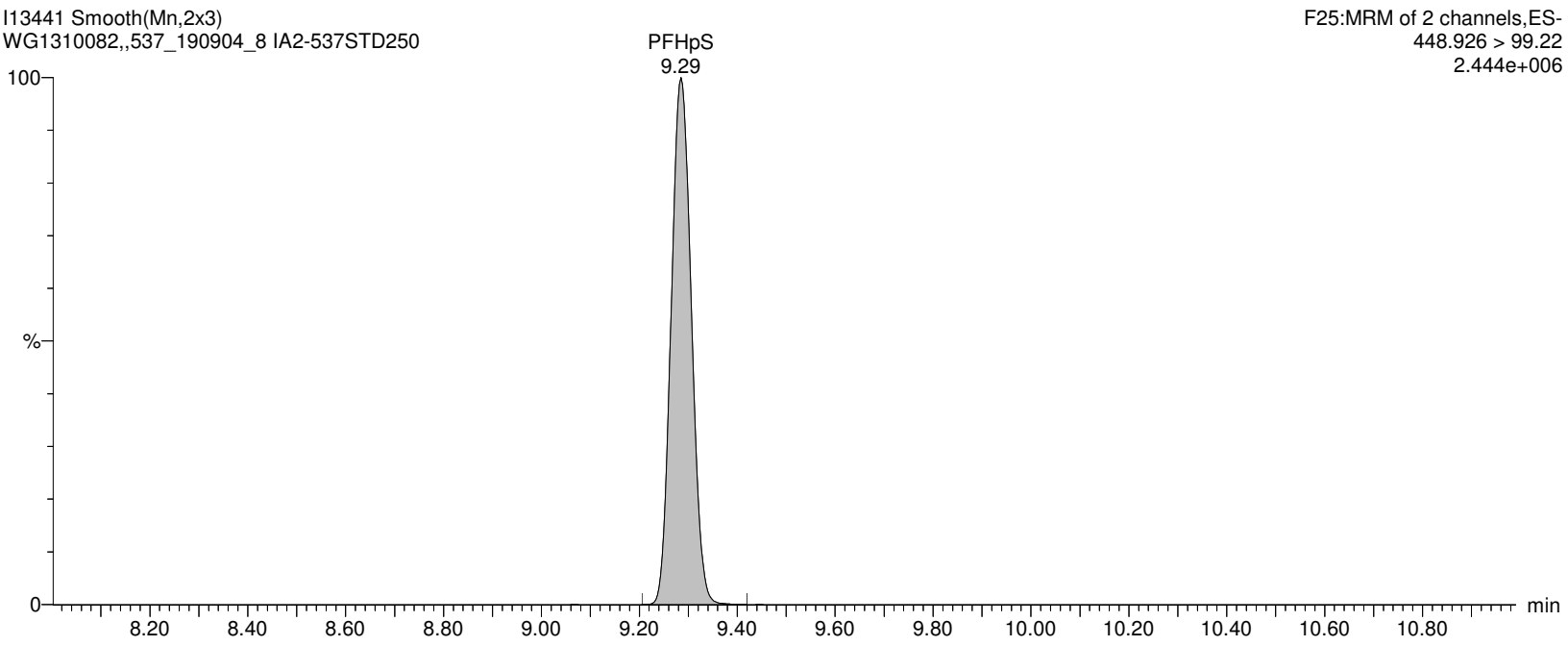
**PFHpS**





all concentration units in (ng/mL)

Alpha Analytical Inc.
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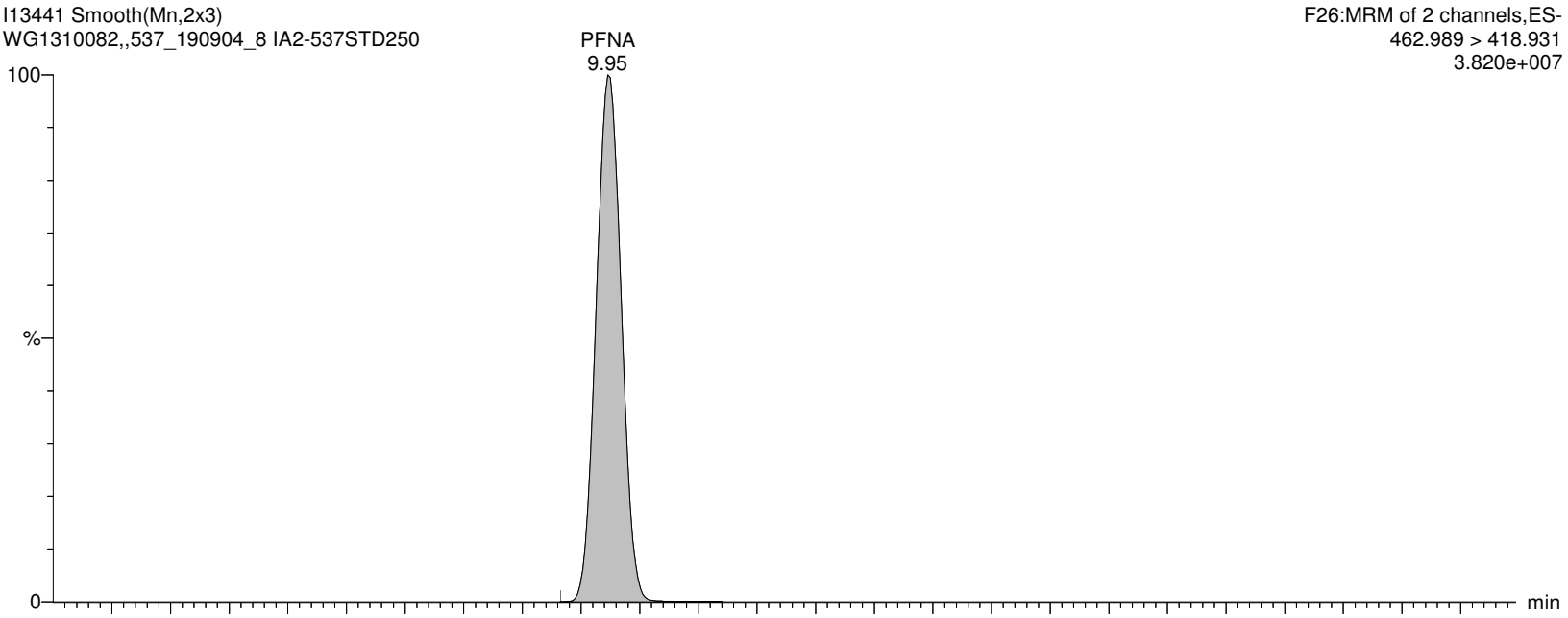


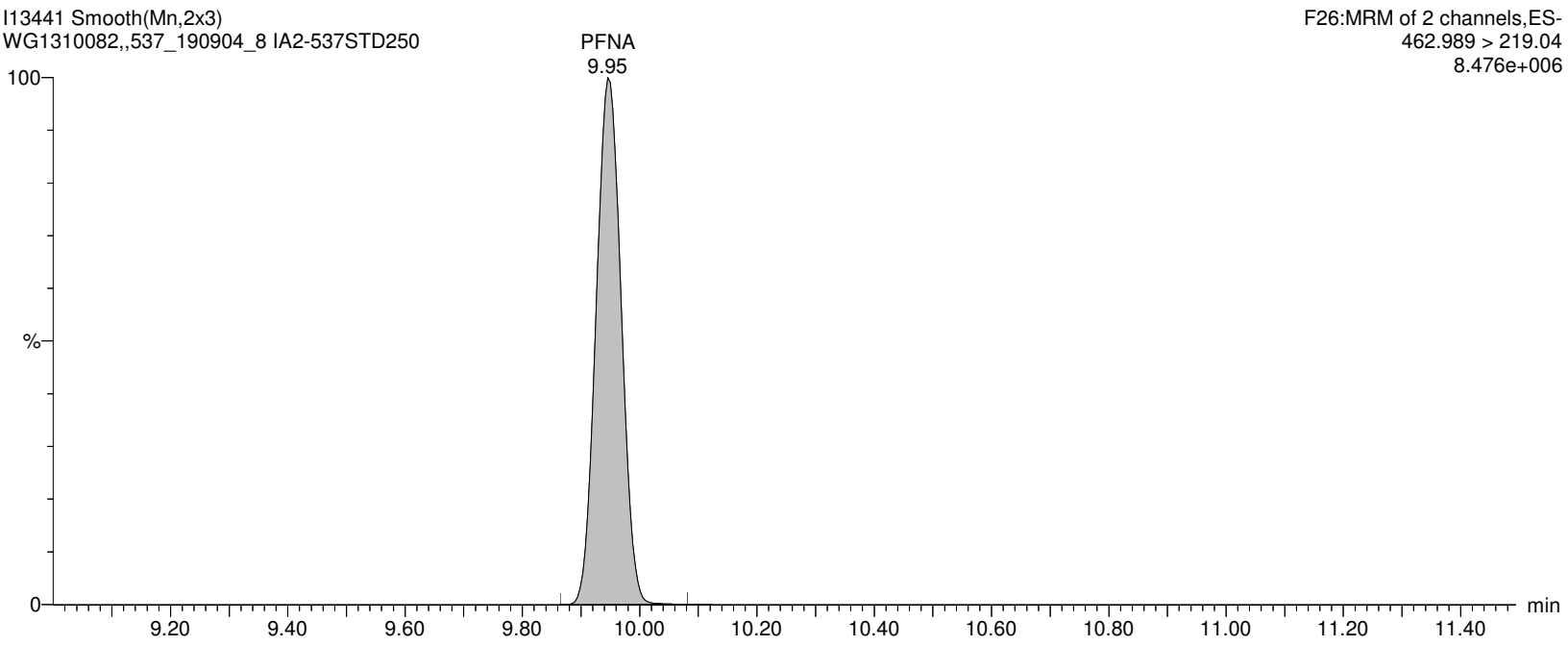



all concentration units in (ng/mL)

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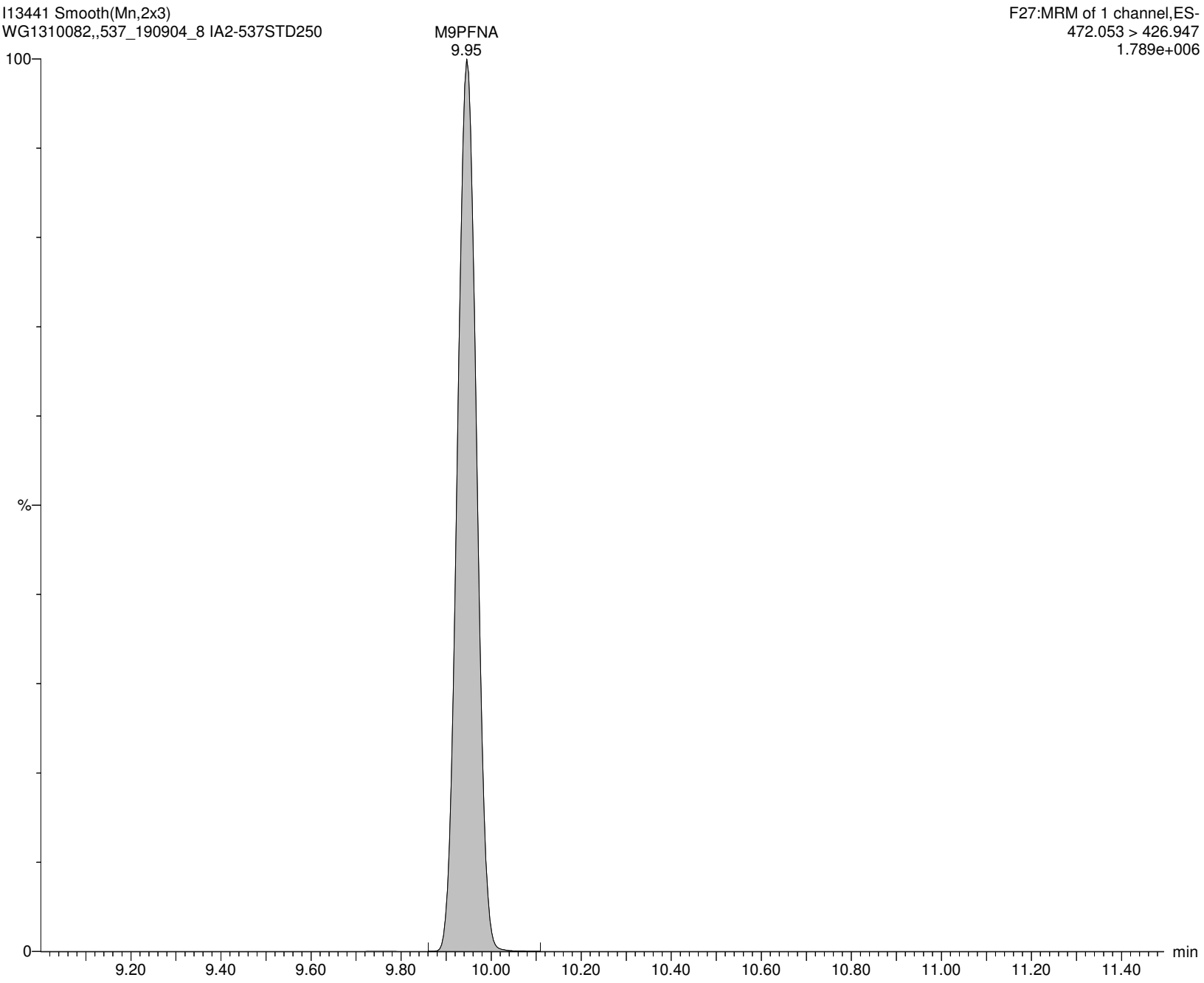
**M9PFNA**





all concentration units in (ng/mL)

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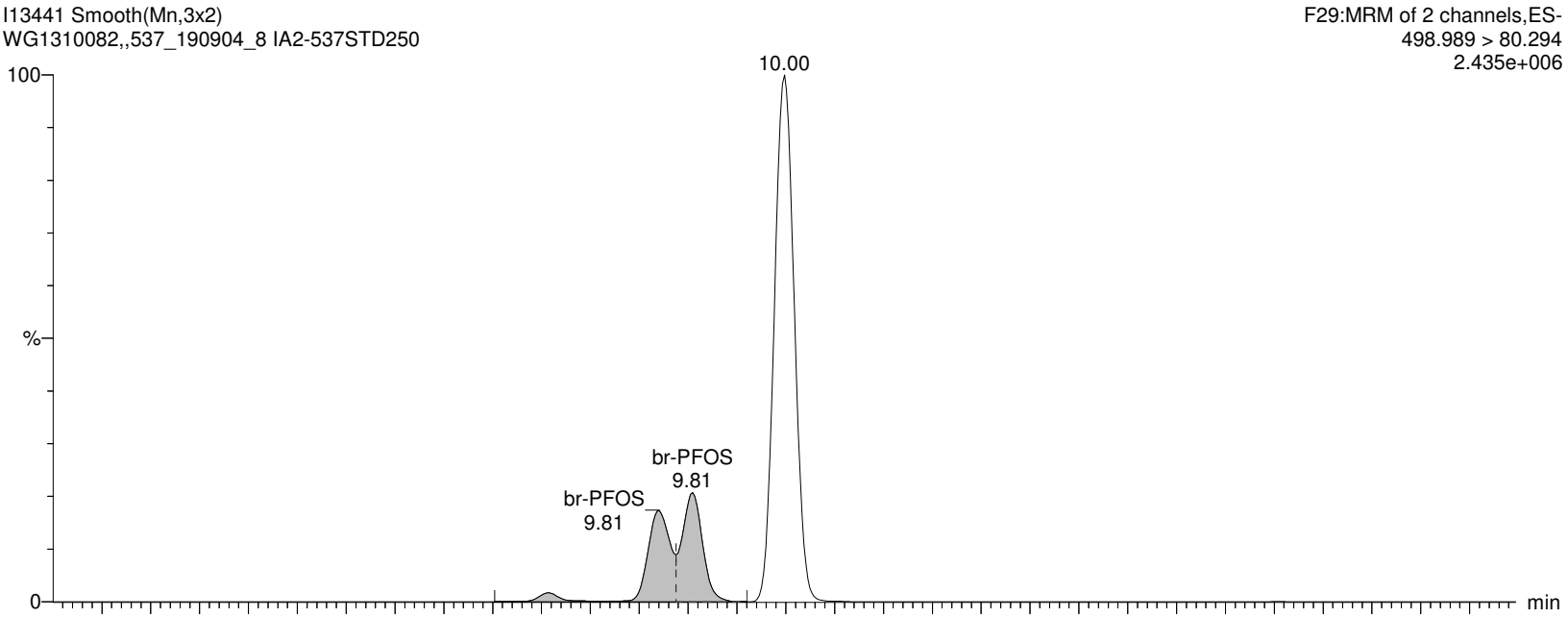
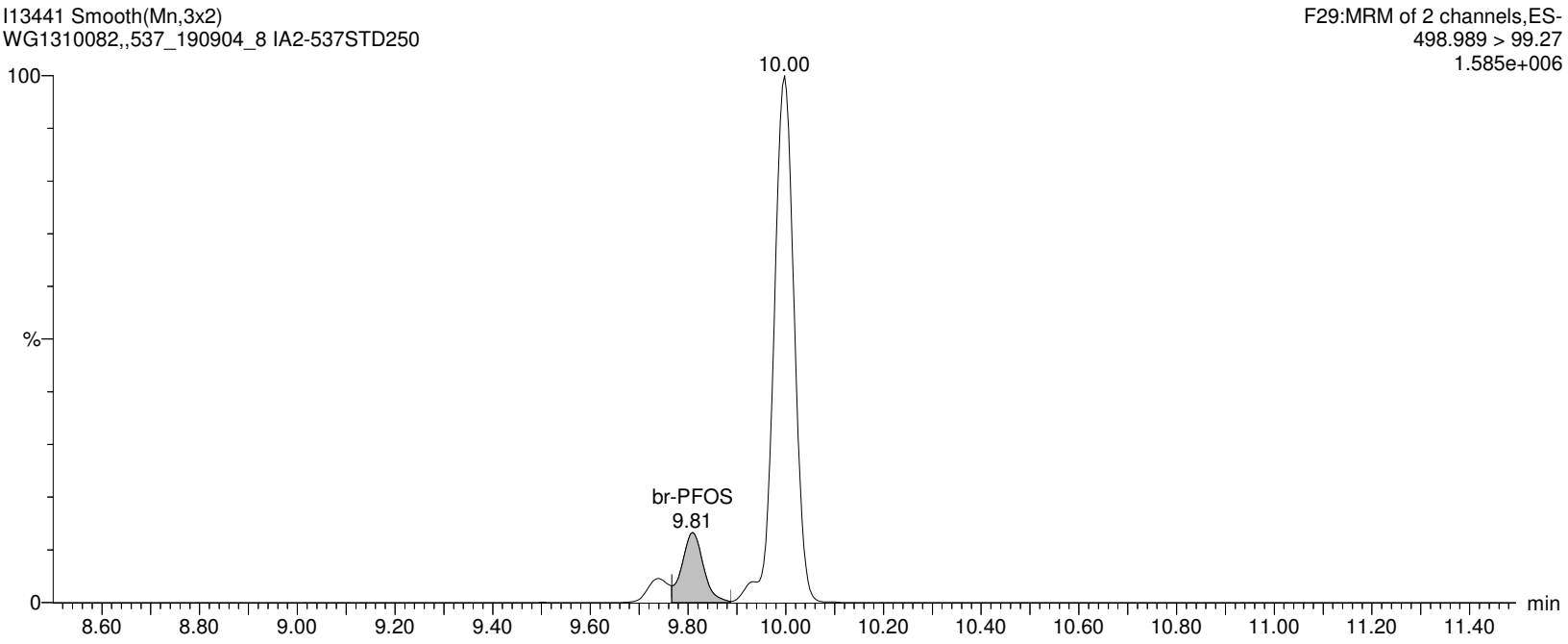
**br-PFOS**





all concentration units in (ng/mL)

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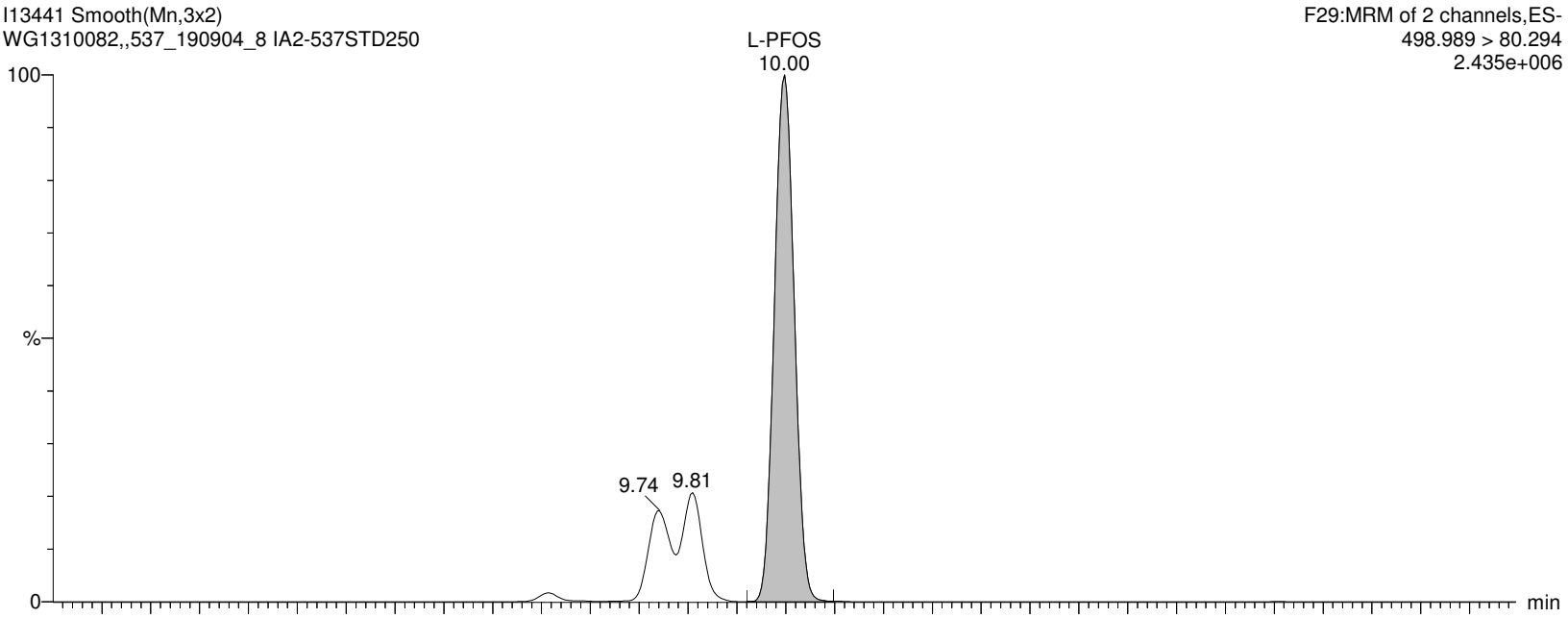
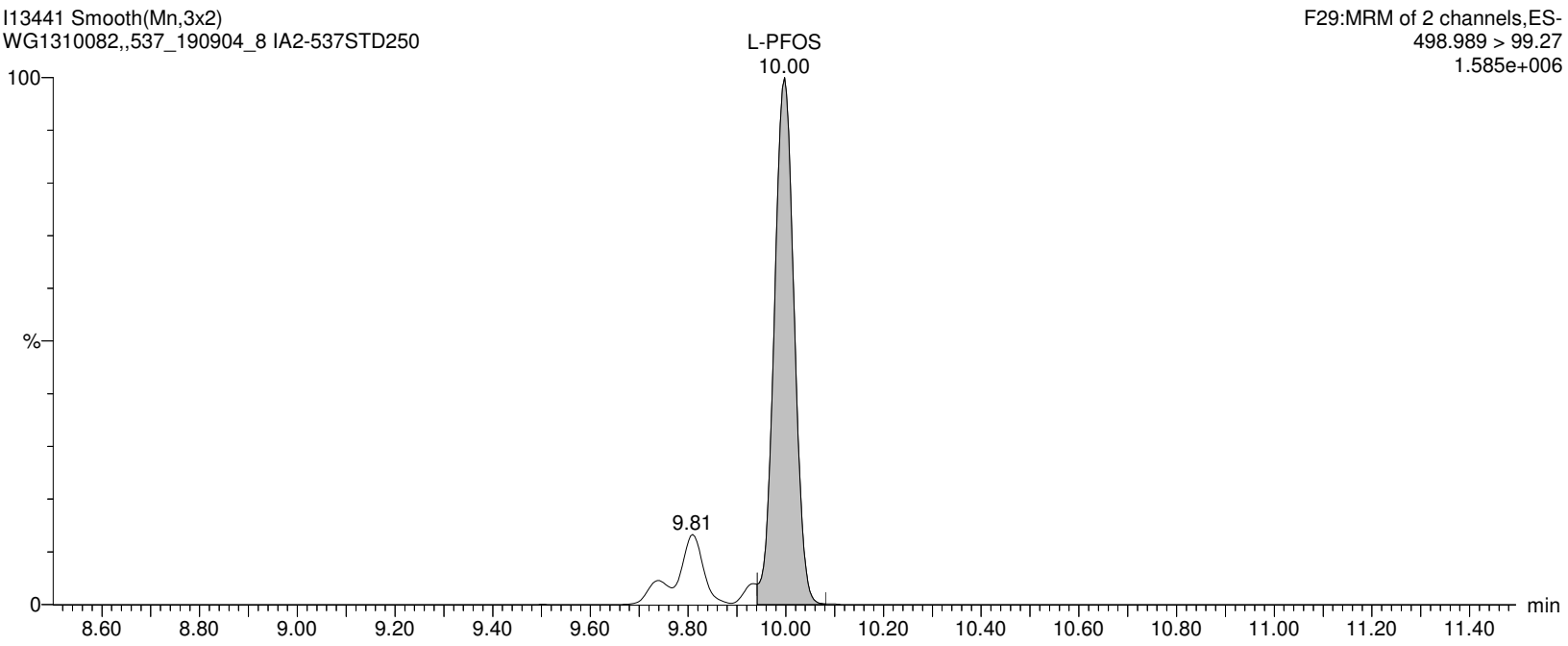
**L-PFOS**



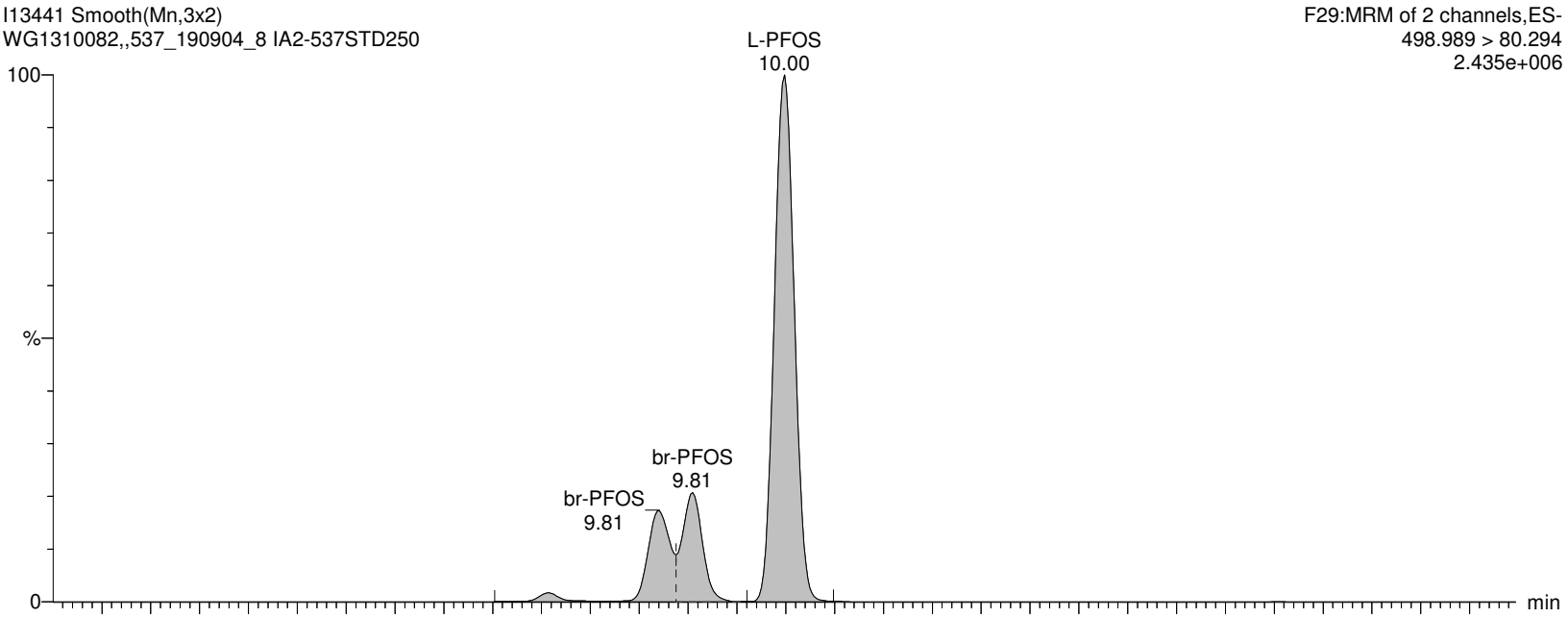


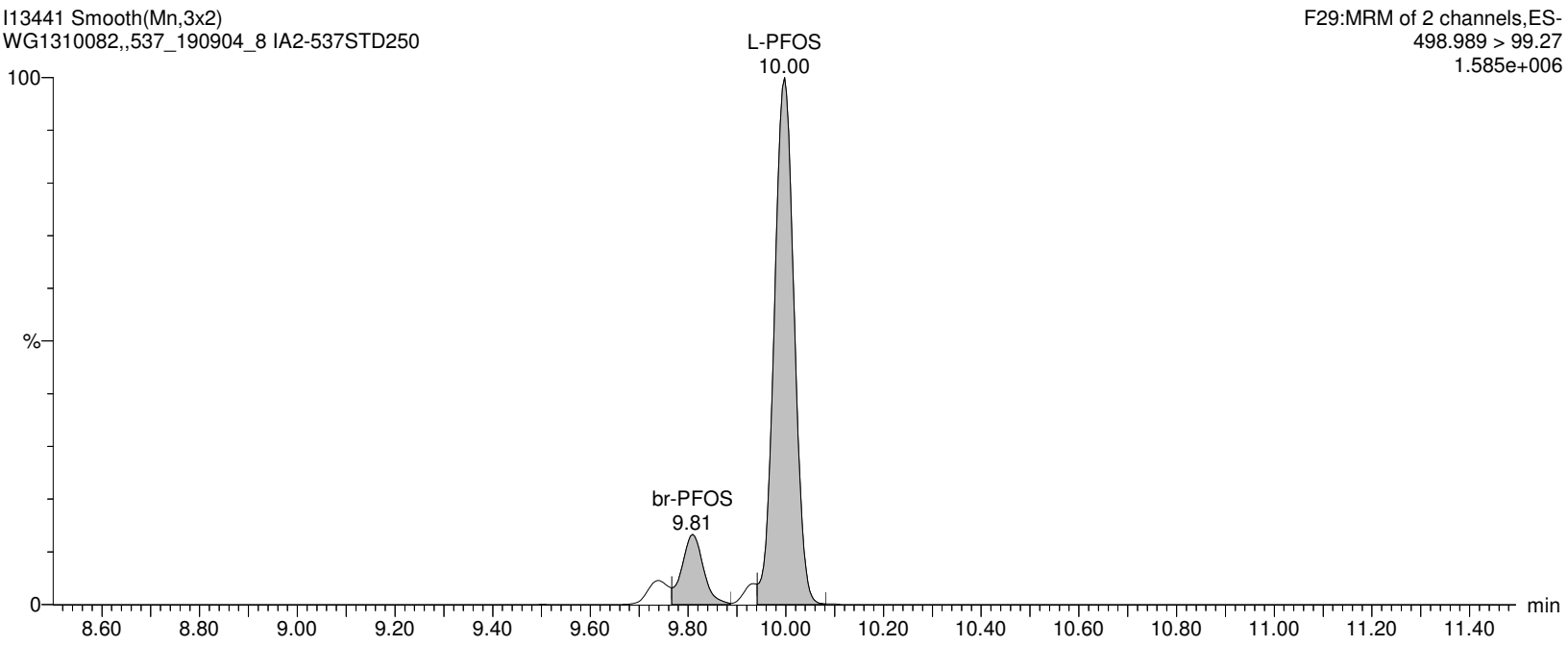
all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
Printed: Monday, November 18, 2019 13:43:03 Eastern Standard Time

**Name: I13441**
**ID: IA2-537STD250**
**Date: 18-Nov-2019**
**Time: 12:33:16**
**Description: WG1310082,,537_190904_8**
**User: LCMS02:JW**
**Vial: 1:B,1**
**Instrument: XEVO-TQSmicro#QEB0050**
**Inlet Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\LCMS_537_ISO_B**
**Tune Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\181009_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**PFOS**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
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**Vial: 1:B,1**
**Instrument: XEVO-TQSmicro#QEB0050**
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**MS Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

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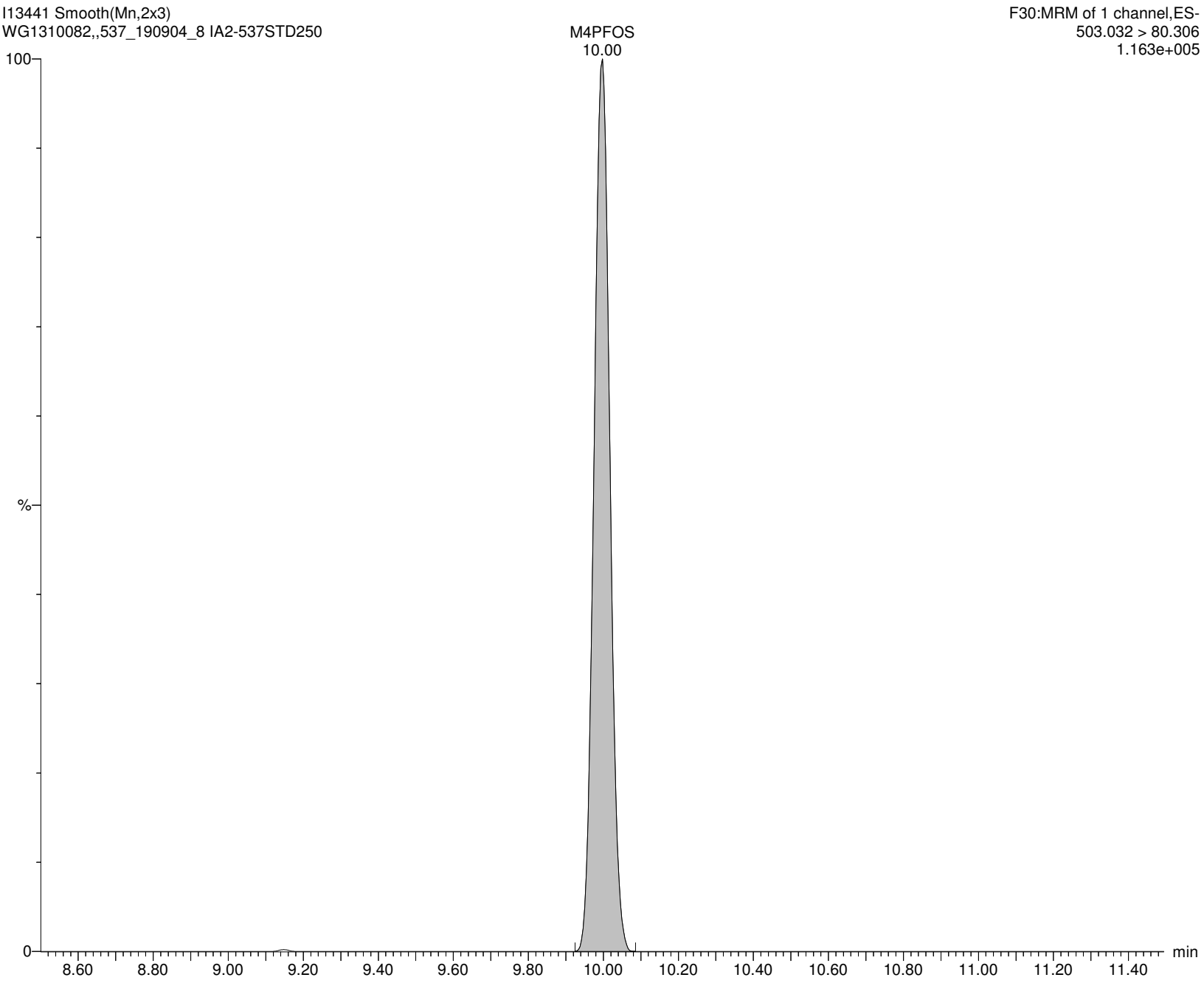



all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
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**User: LCMS02:JW**
**Vial: 1:B,1**
**Instrument: XEVO-TQSmicro#QEB0050**
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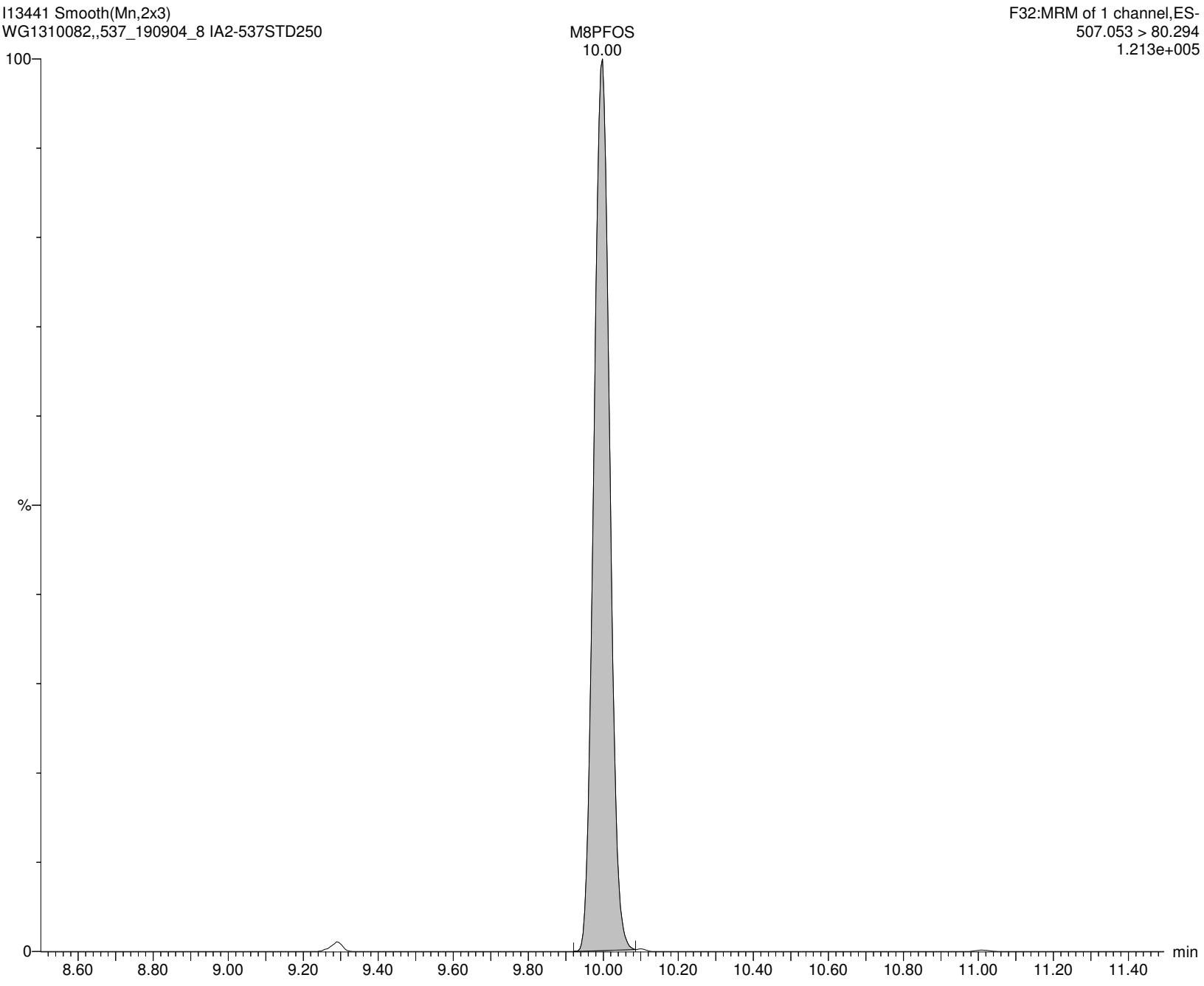



all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
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**Vial: 1:B,1**
**Instrument: XEVO-TQSmicro#QEB0050**
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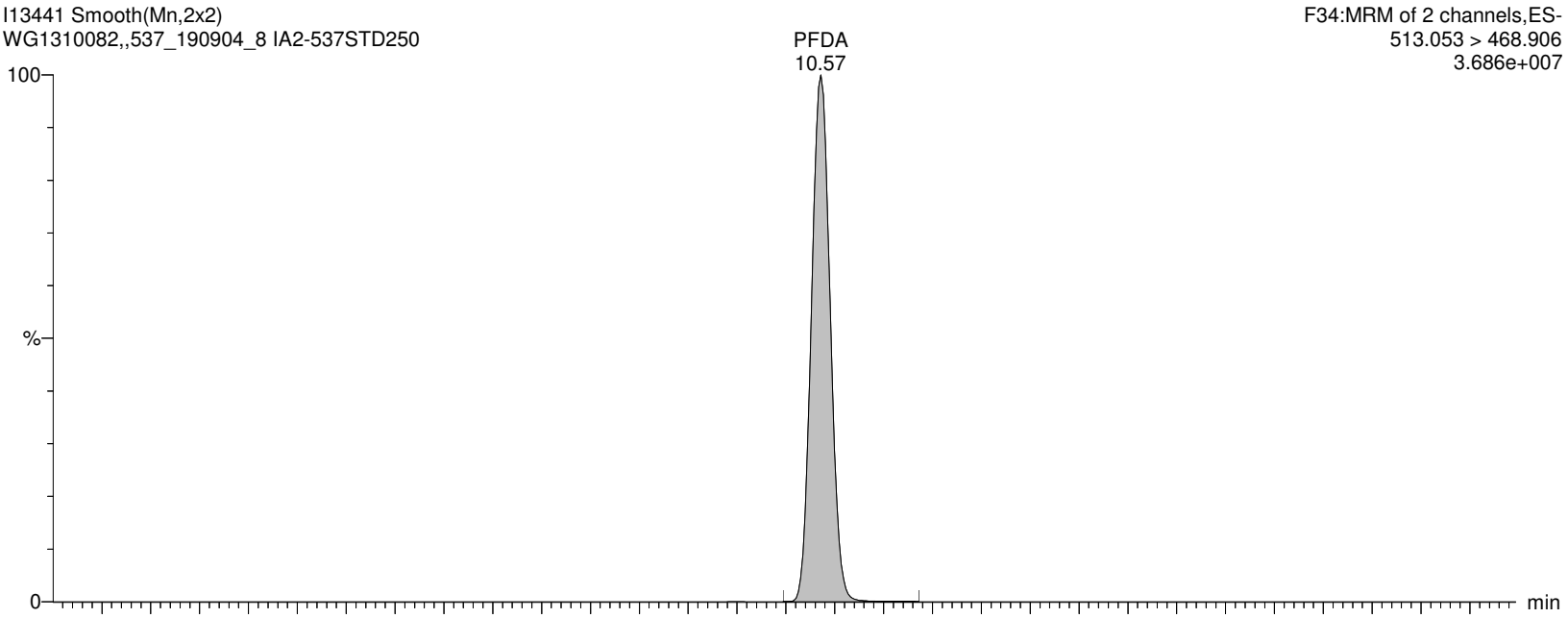
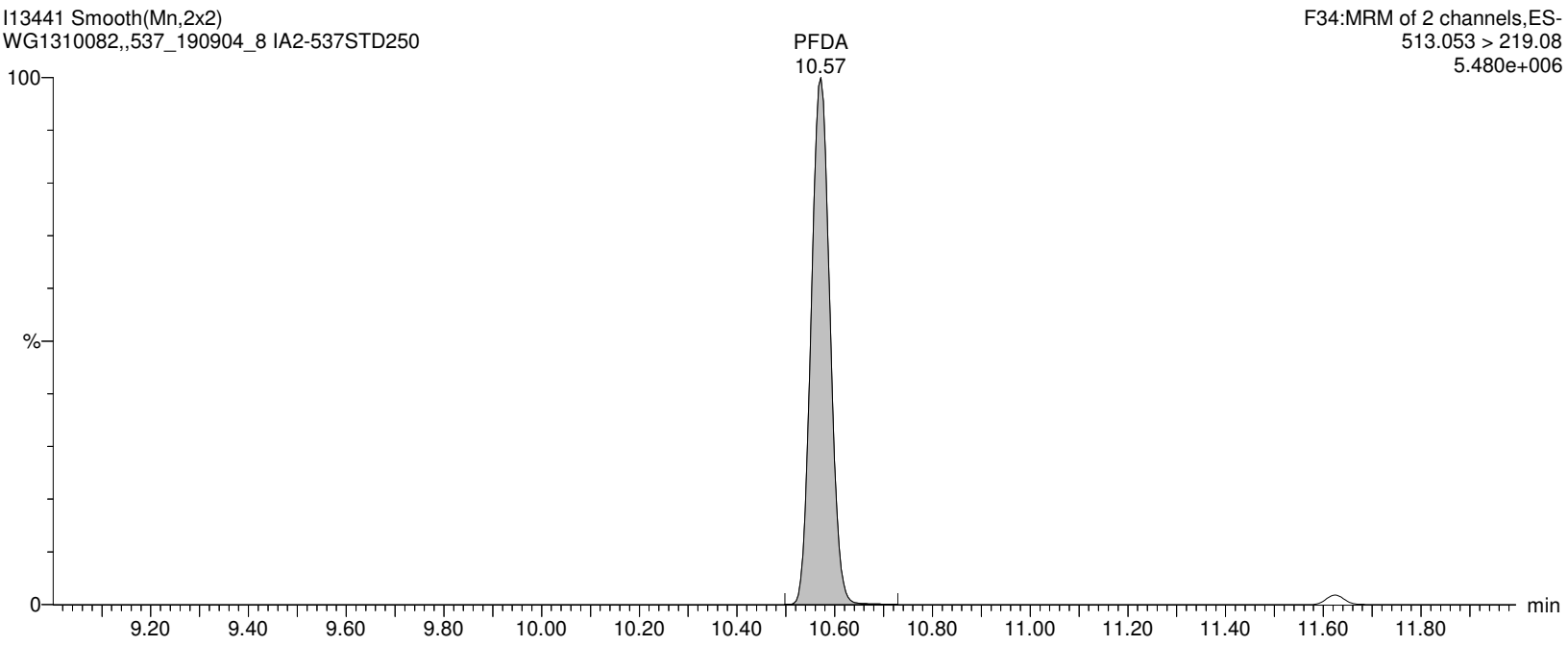
**PFDA**





all concentration units in (ng/mL)

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**Vial: 1:B,1**
**Instrument: XEVO-TQSmicro#QEB0050**
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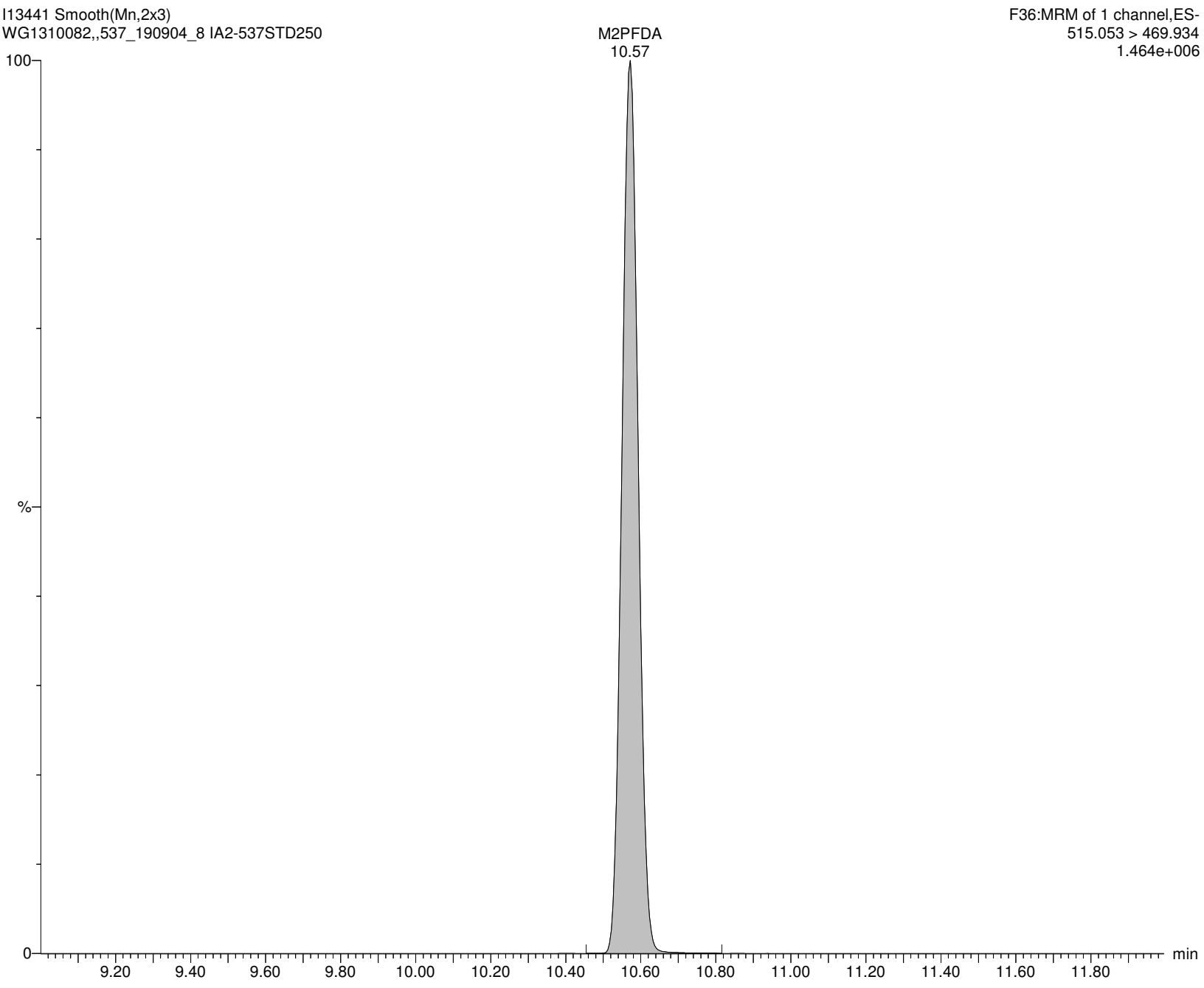
**Tune Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\181009_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**M2PFDA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
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**Vial: 1:B,1**
**Instrument: XEVO-TQSmicro#QEB0050**
**Inlet Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\LCMS_537_ISO_B**
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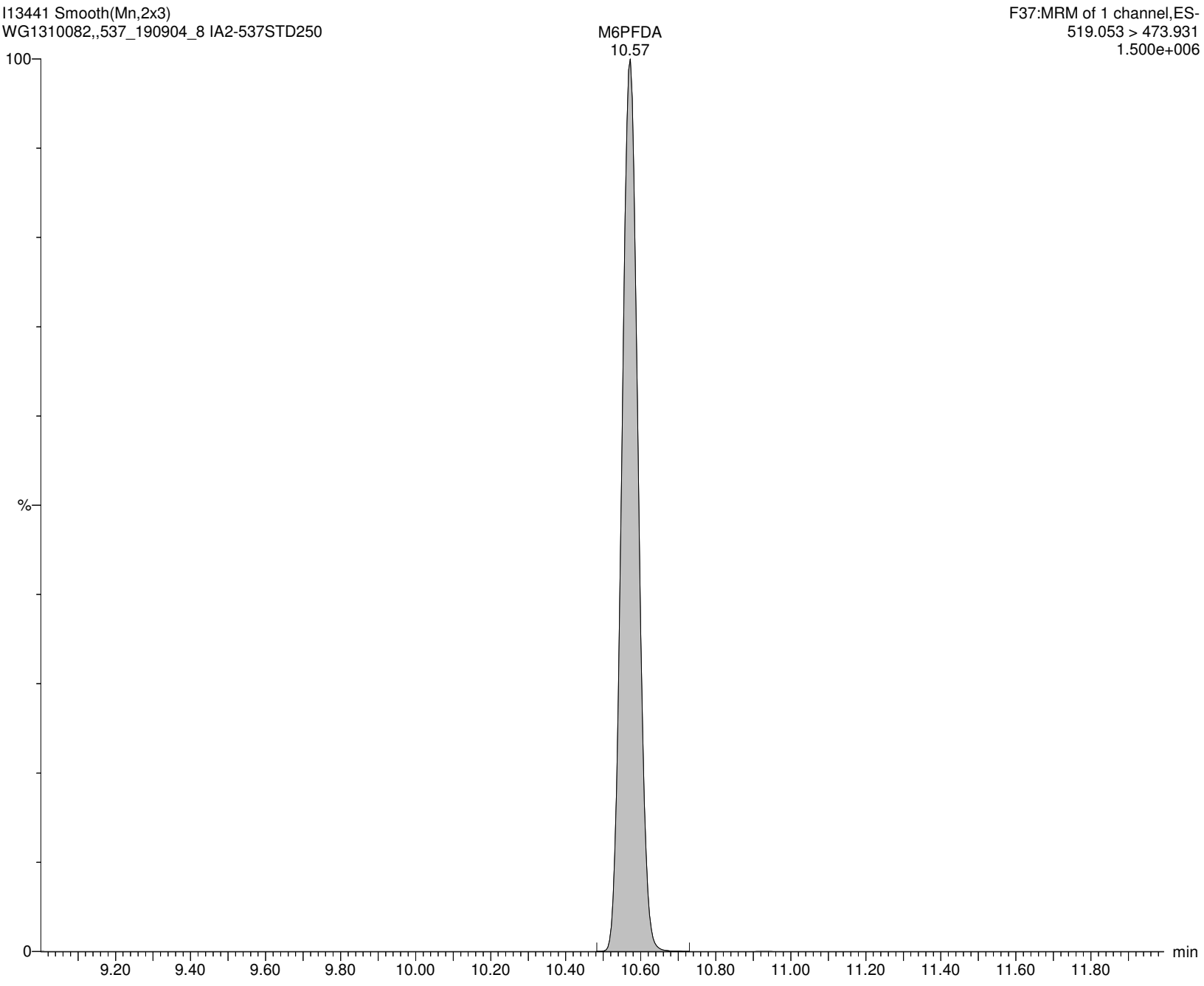



all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
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**Vial: 1:B,1**
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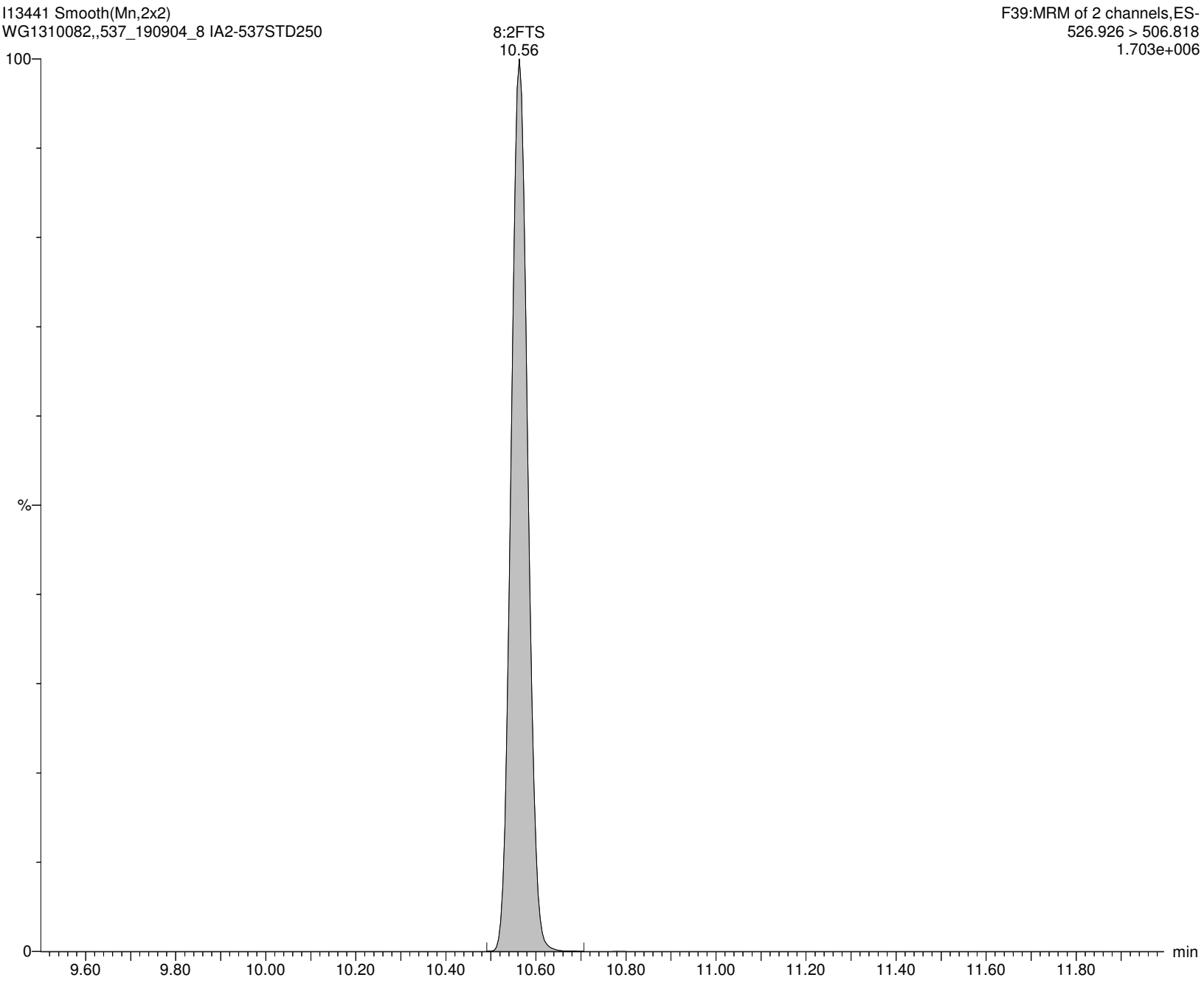
**8:2FTS**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
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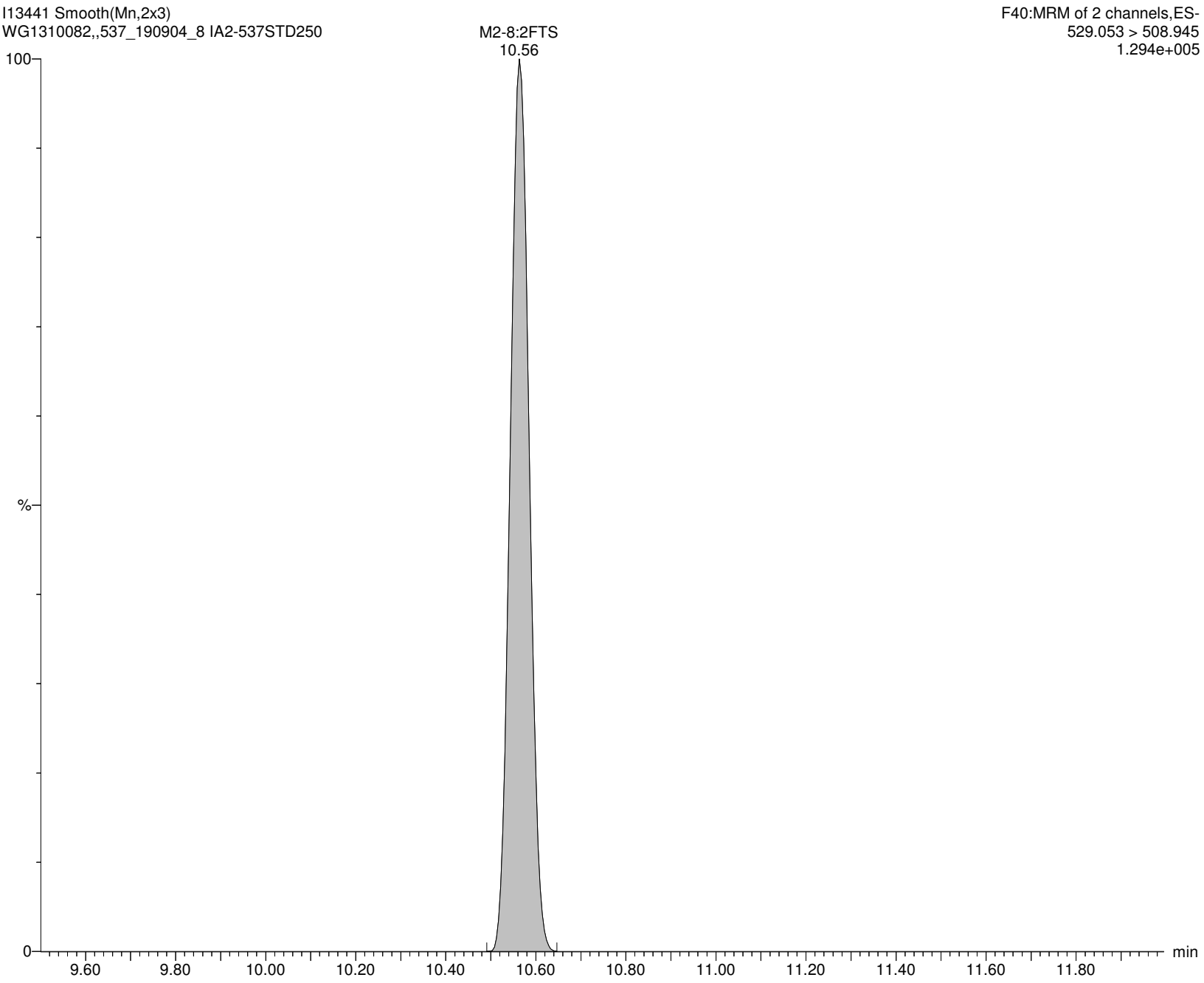
**M2-8:2FTS**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
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**Vial: 1:B,1**
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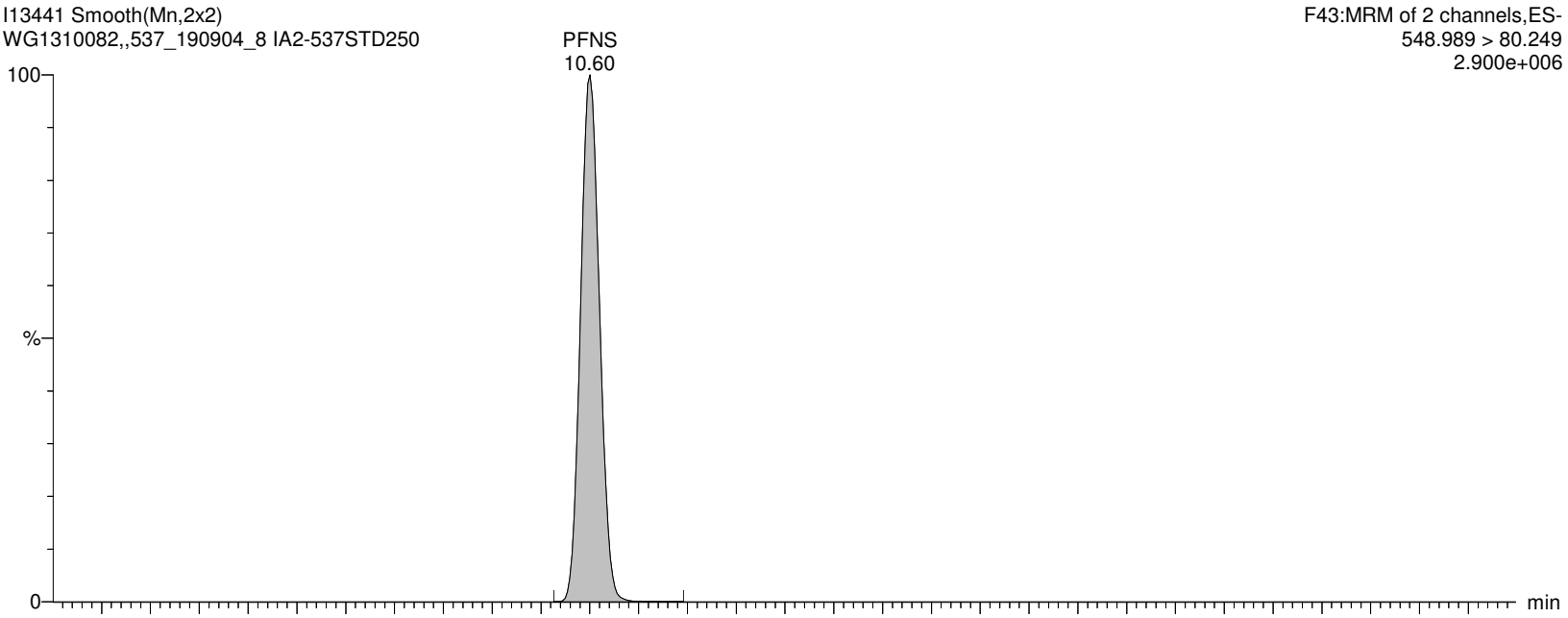


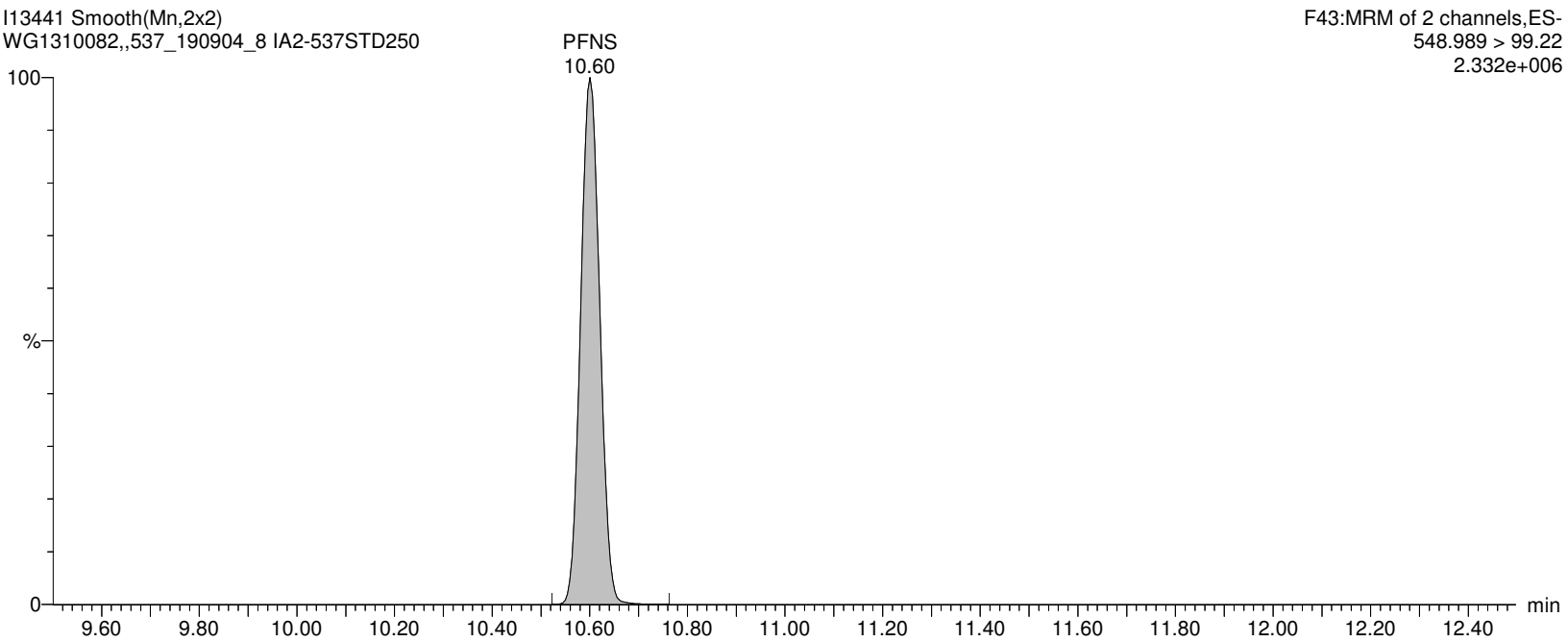



all concentration units in (ng/mL)

Alpha Analytical Inc.
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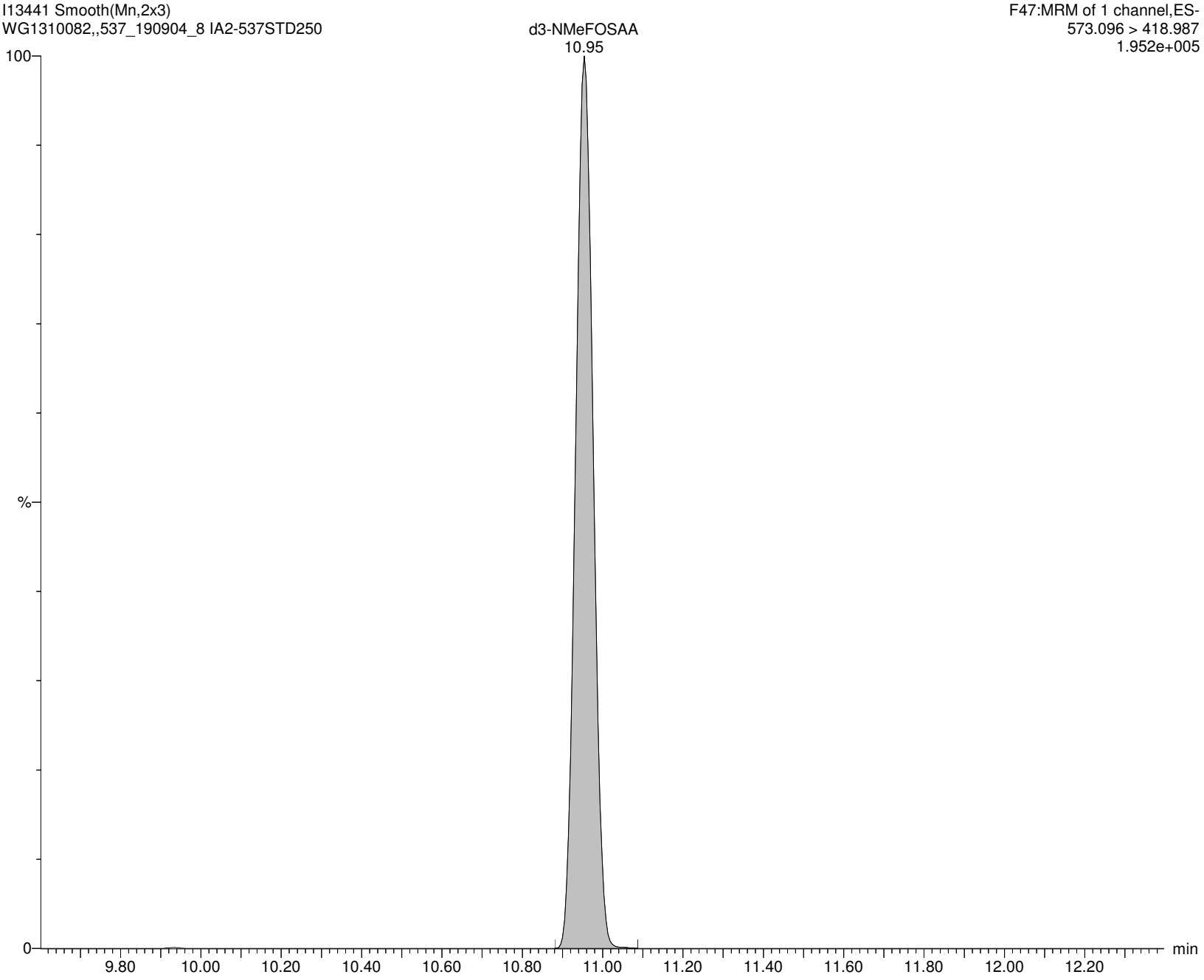



all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
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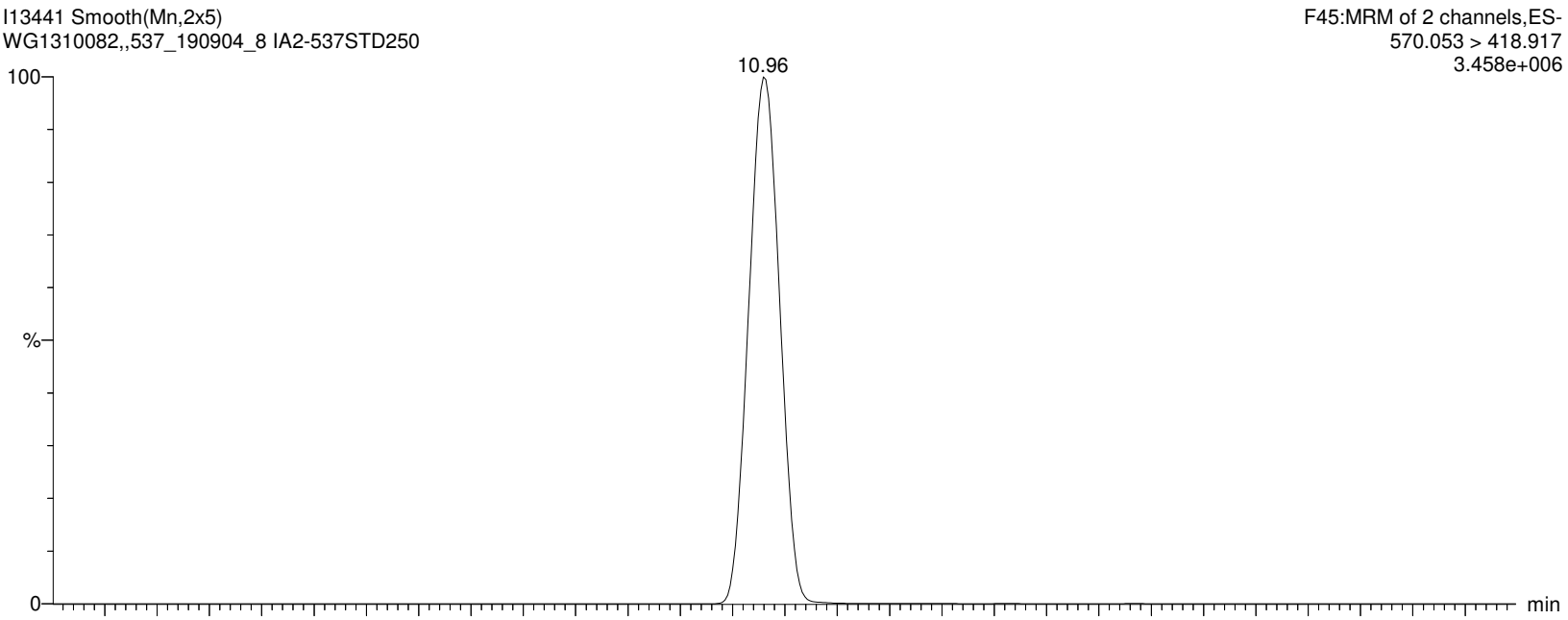
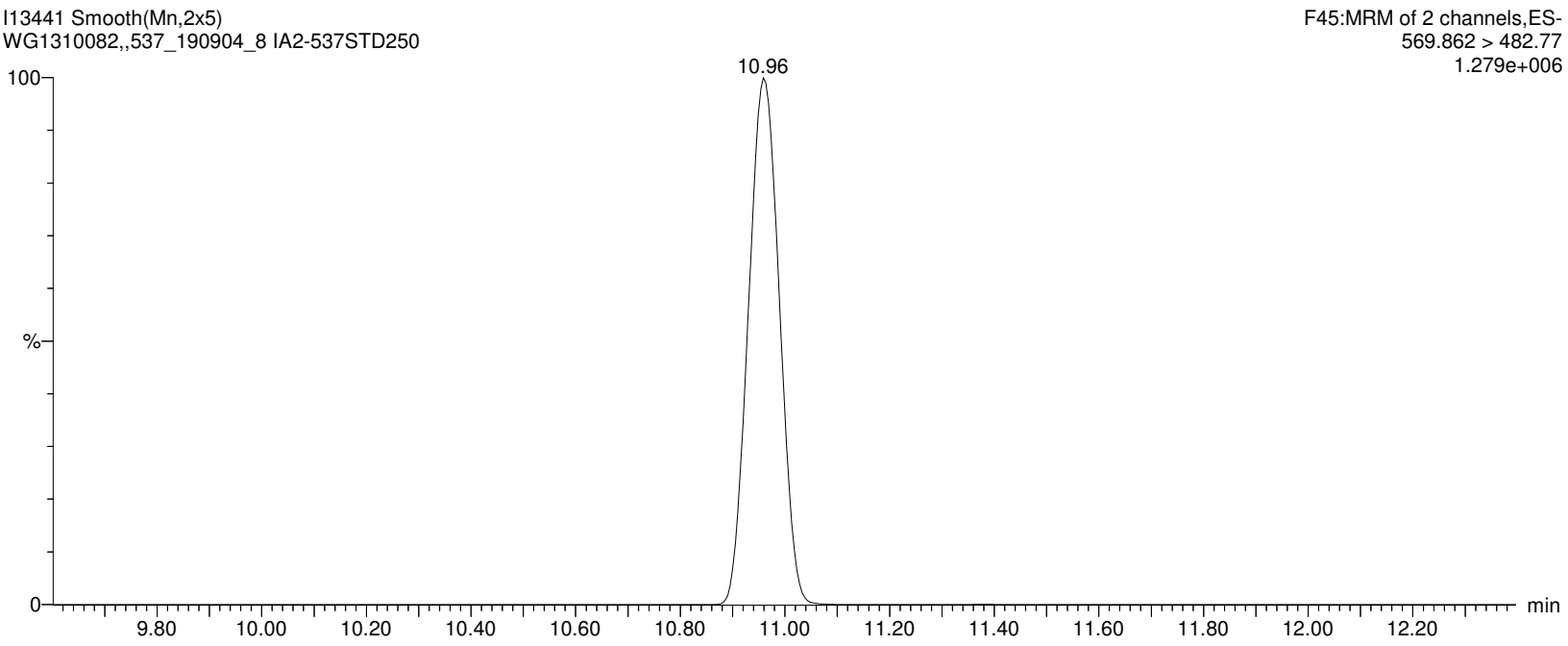
**br-NMeFOSAA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
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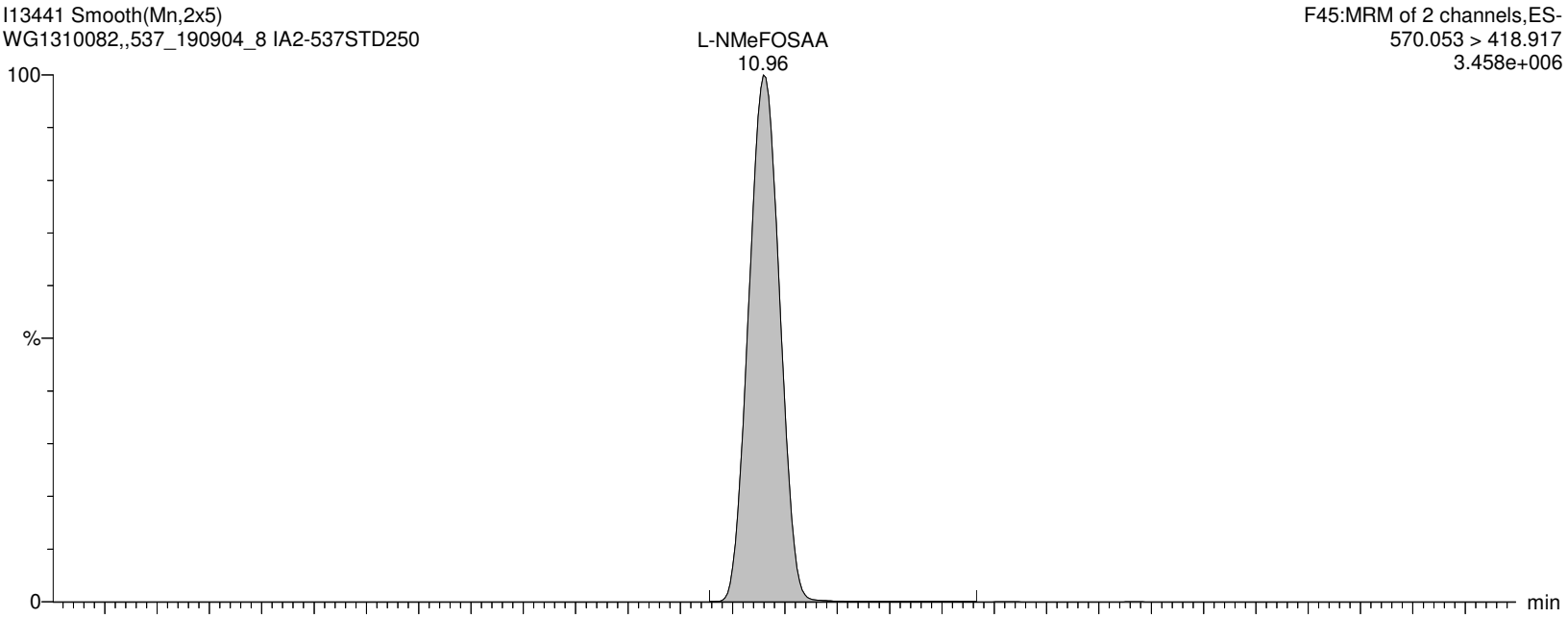
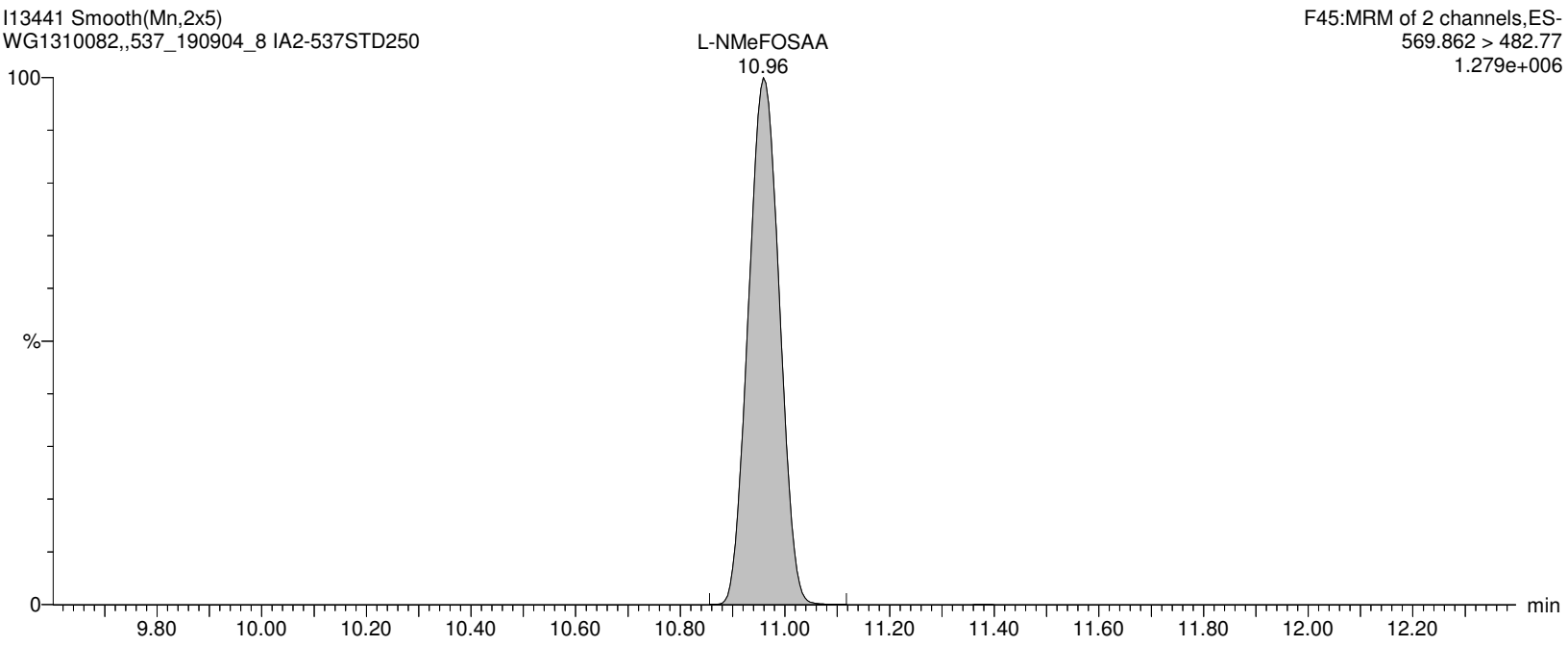
**L-NMeFOSAA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
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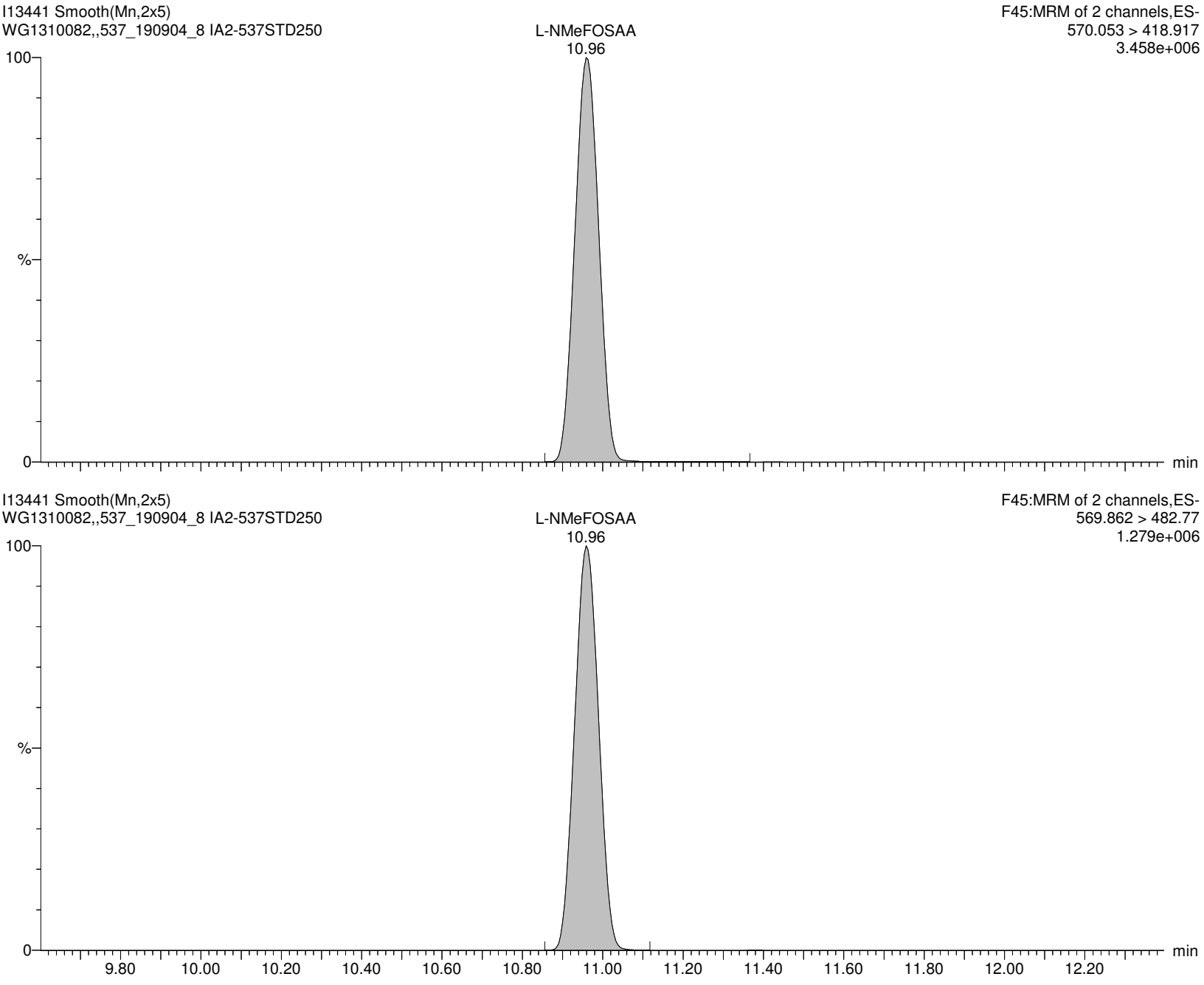



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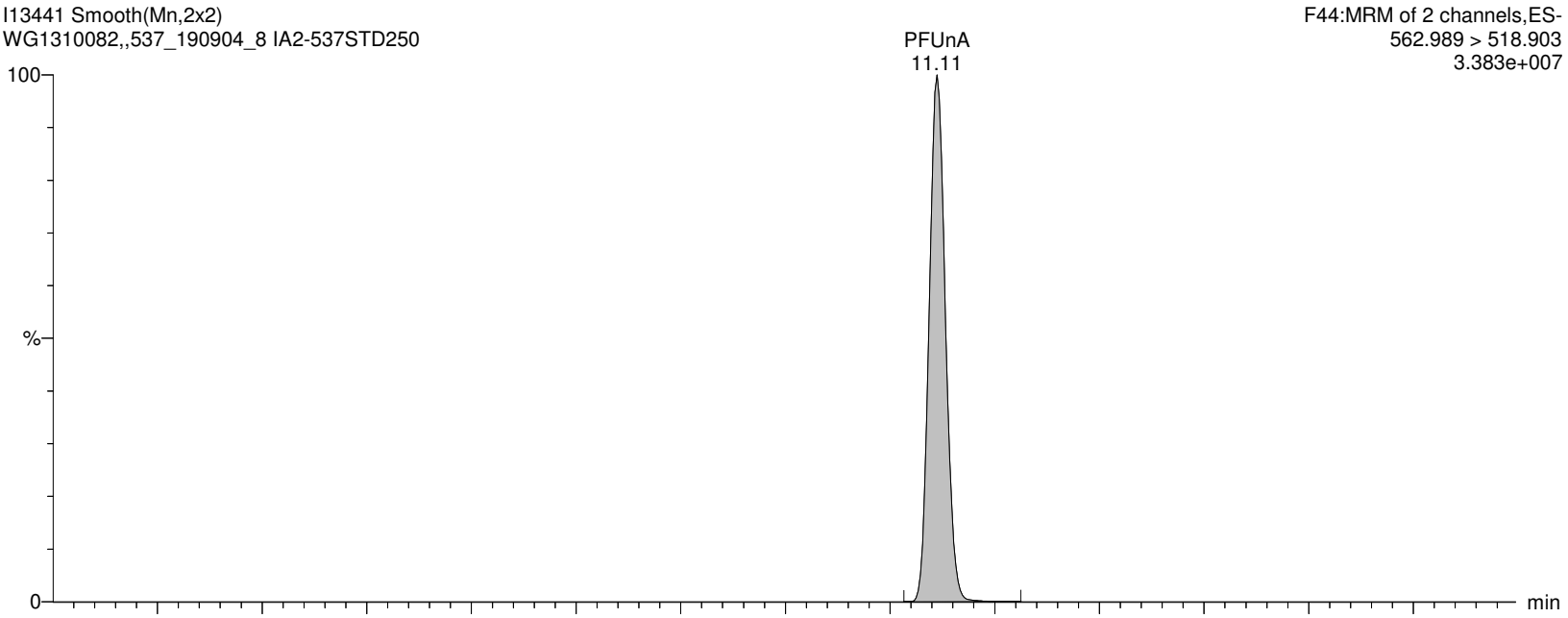
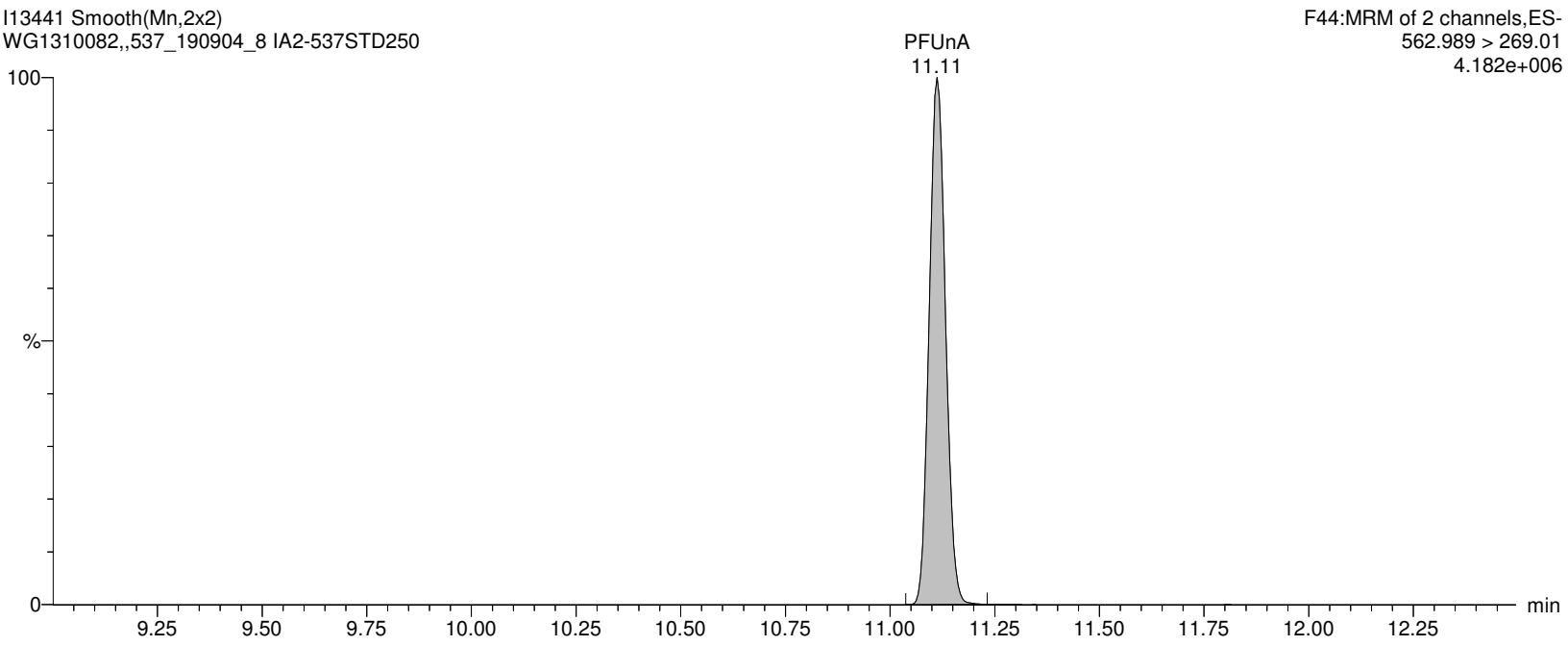
**PFUnA**





all concentration units in (ng/mL)

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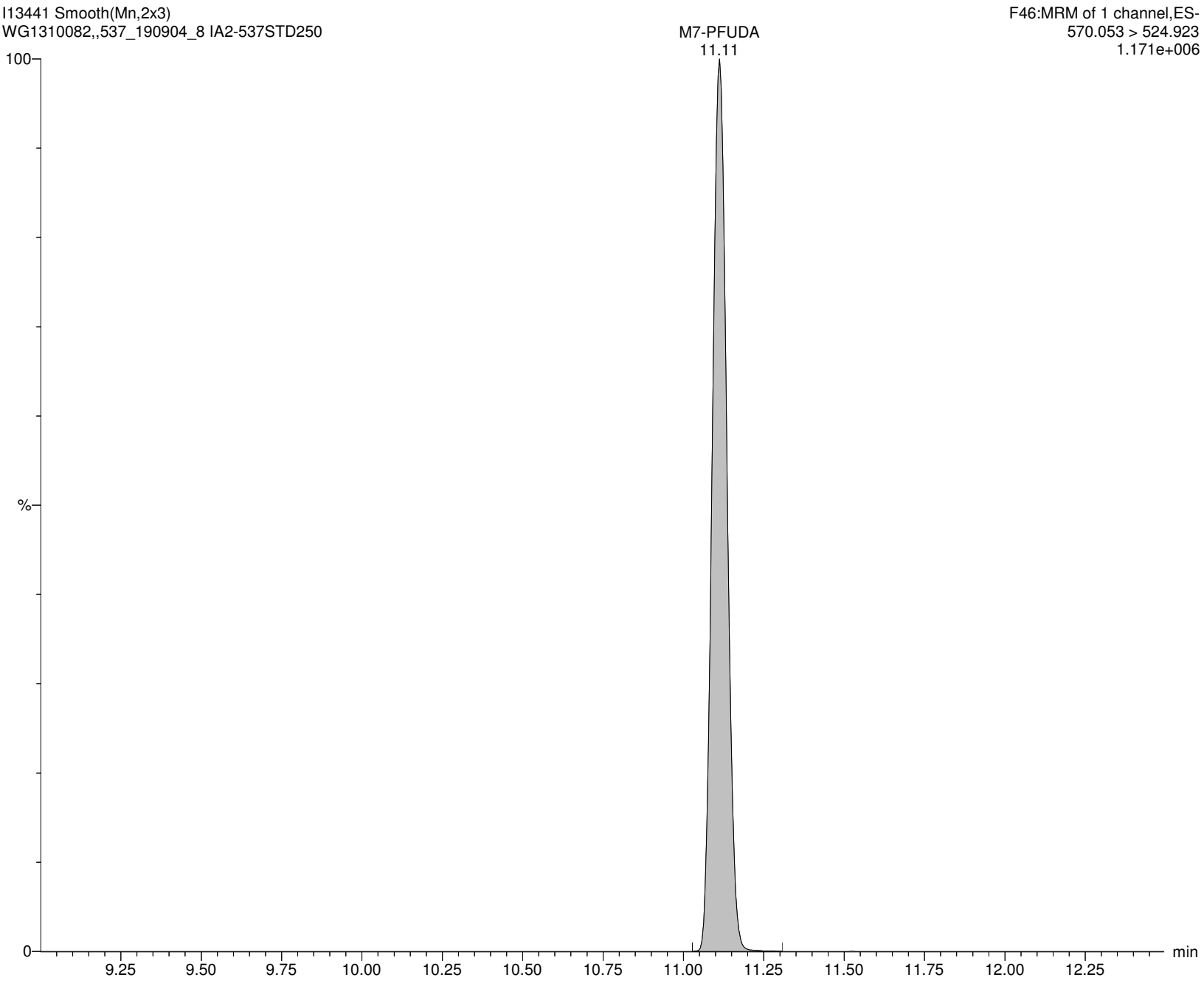
**MS Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**M7-PFUDA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
Printed: Monday, November 18, 2019 13:43:03 Eastern Standard Time

**Name: I13441**
**ID: IA2-537STD250**
**Date: 18-Nov-2019**
**Time: 12:33:16**
**Description: WG1310082,,537_190904_8**
**User: LCMS02:JW**
**Vial: 1:B,1**
**Instrument: XEVO-TQSmicro#QEB0050**
**Inlet Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\LCMS_537_ISO_B**
**Tune Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\181009_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

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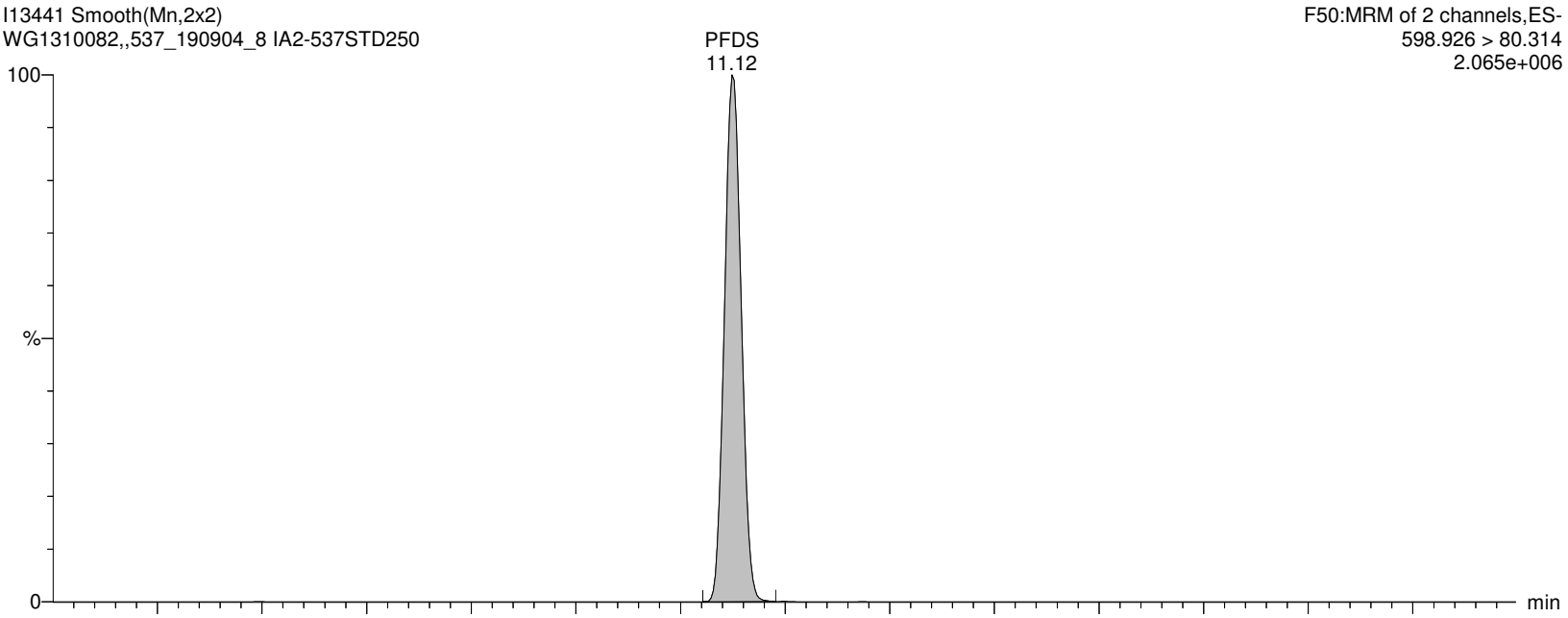


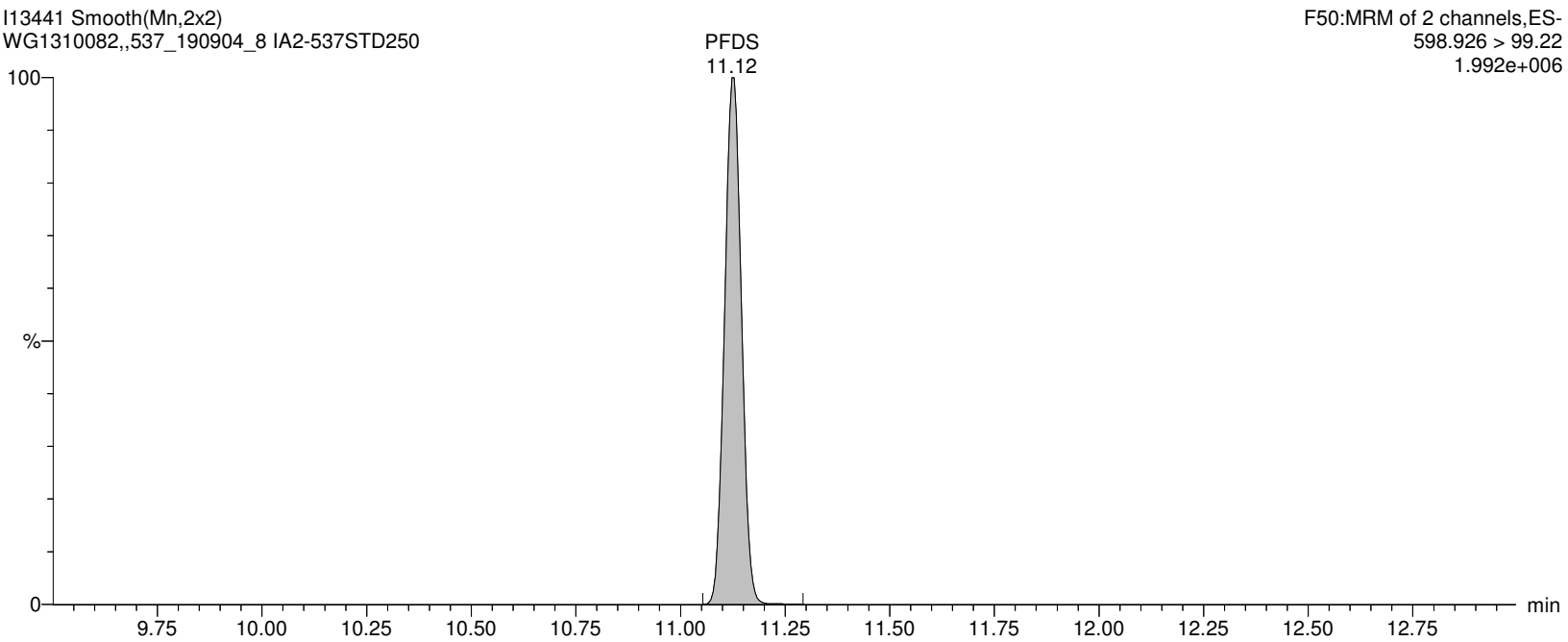



all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
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**Vial: 1:B,1**
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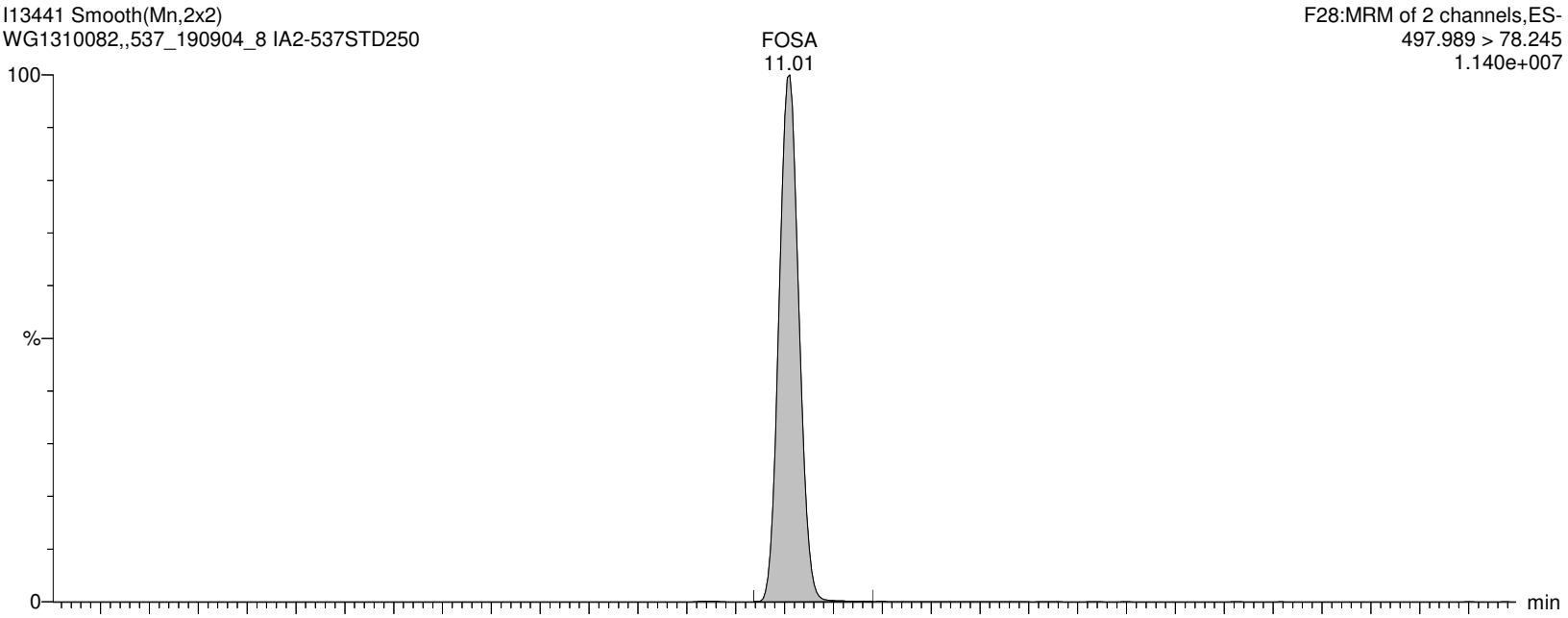
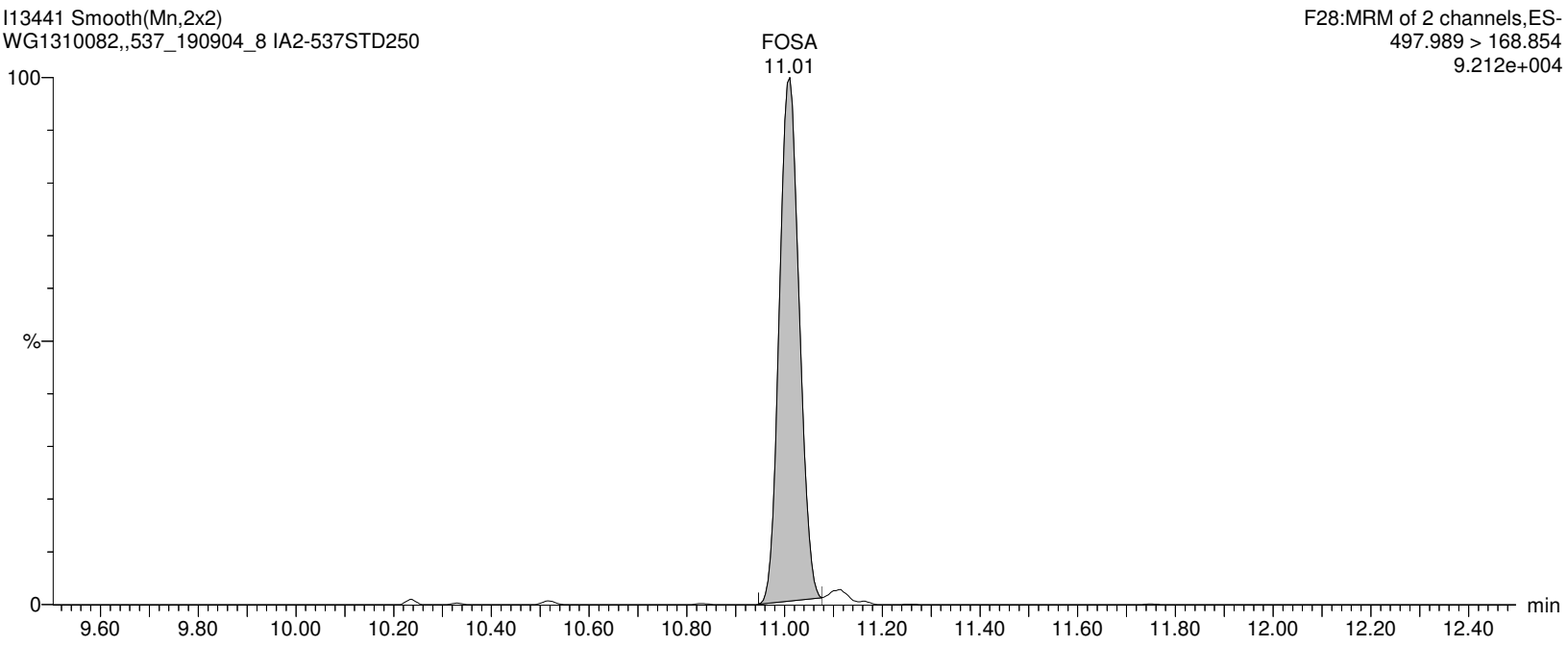
**FOSA**





all concentration units in (ng/mL)

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Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
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**Vial: 1:B,1**
**Instrument: XEVO-TQSmicro#QEB0050**
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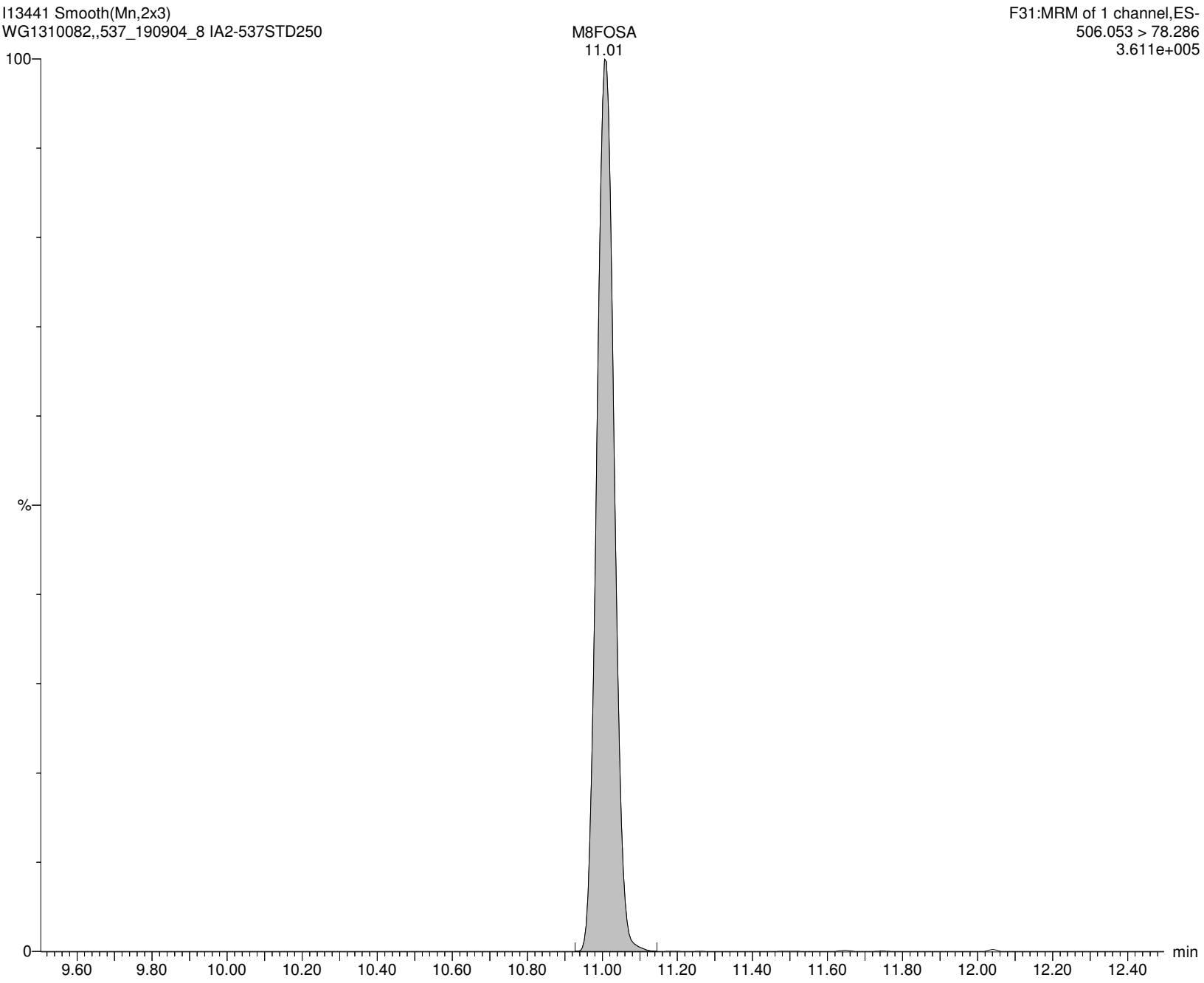
**M8FOSA**





all concentration units in (ng/mL)

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Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
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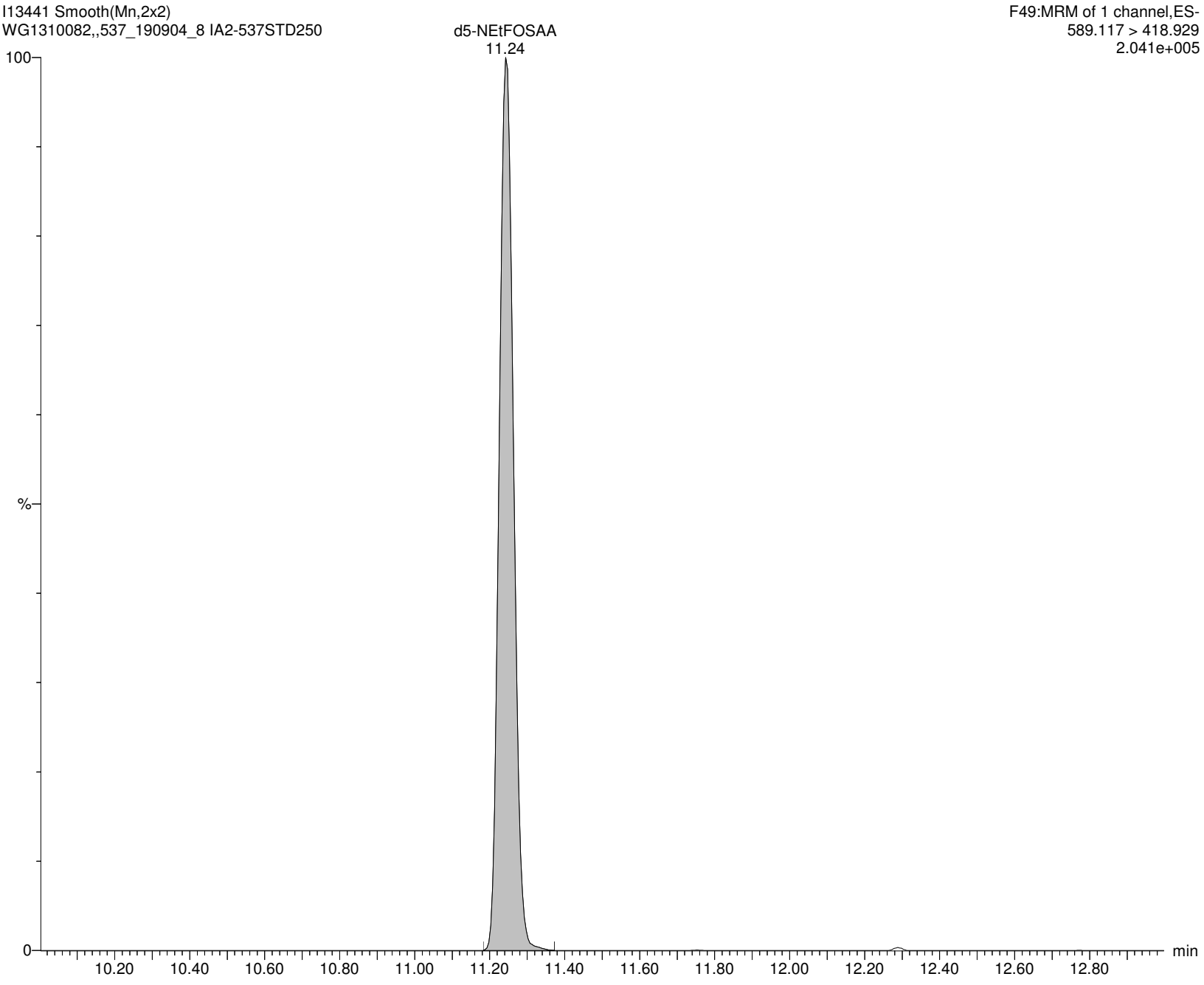
**d5-NEtFOSAA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
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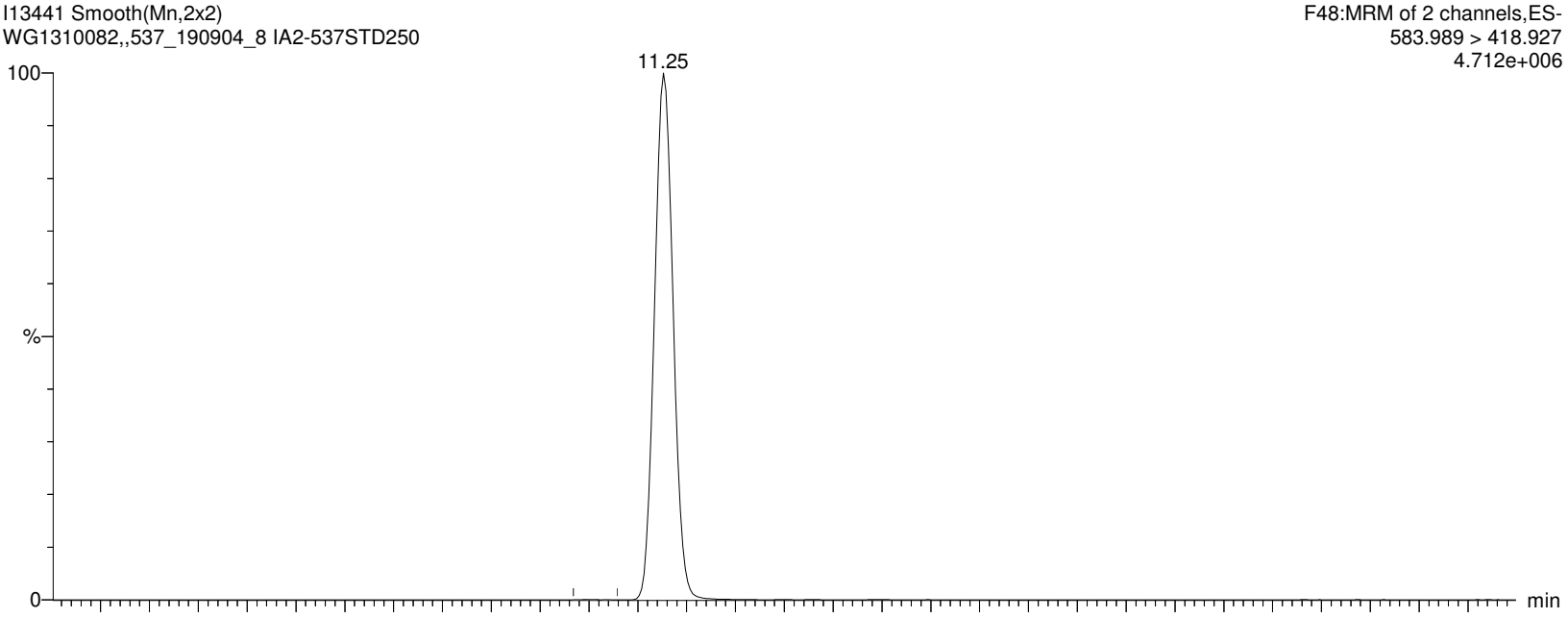
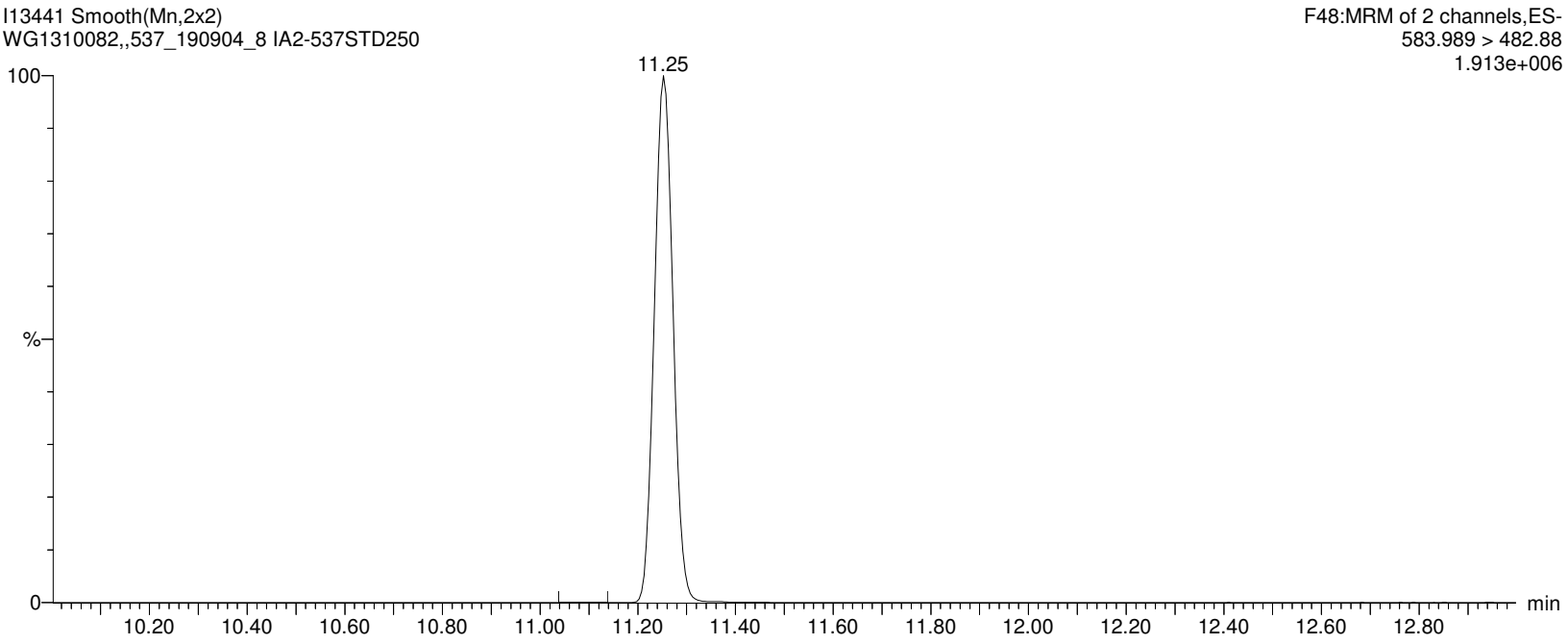
**br-NEtFOSAA**





all concentration units in (ng/mL)

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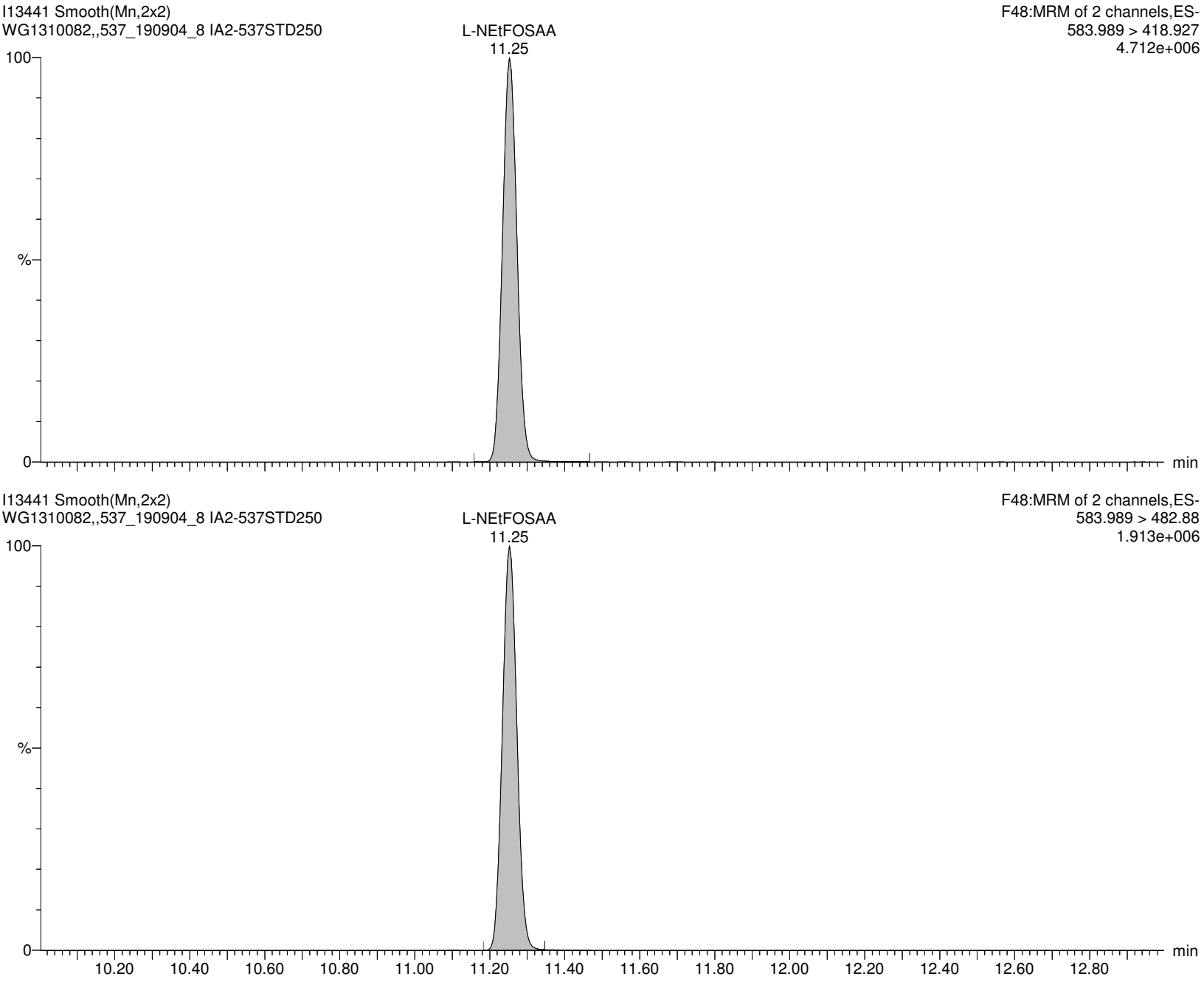
**L-NEtFOSAA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
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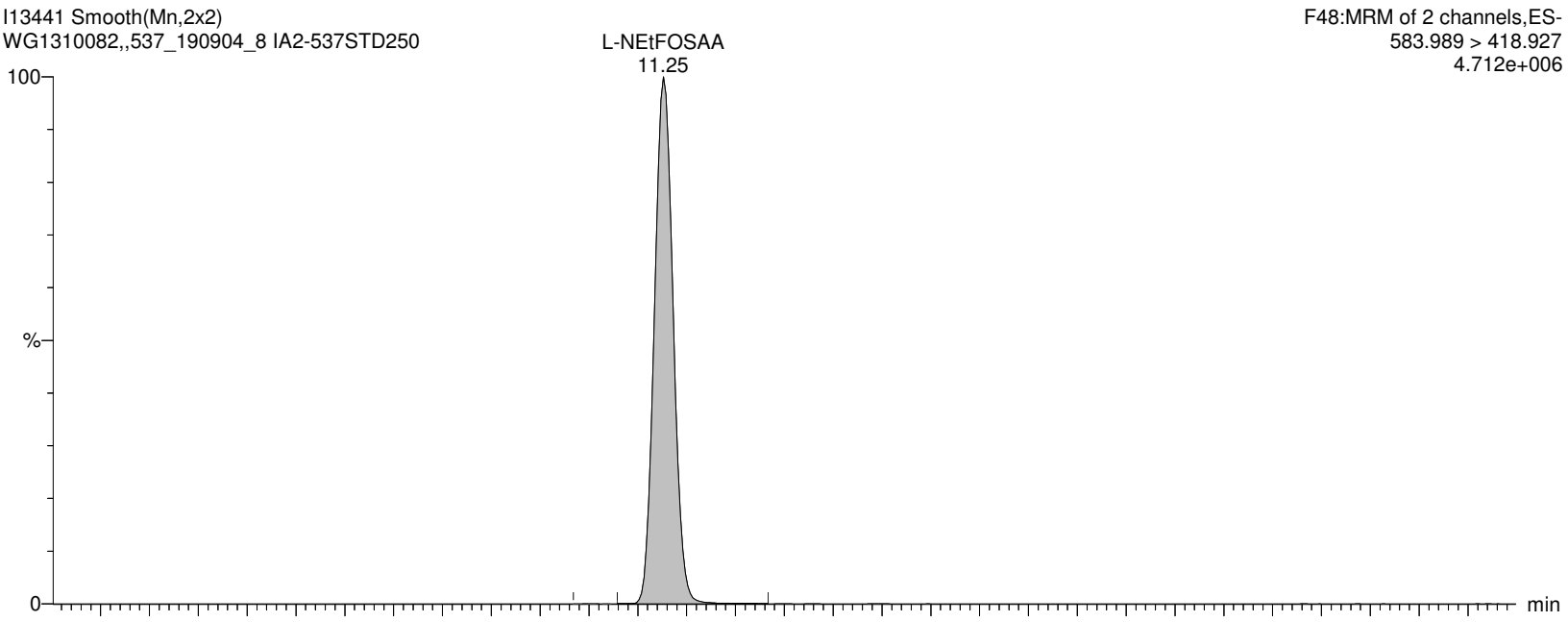
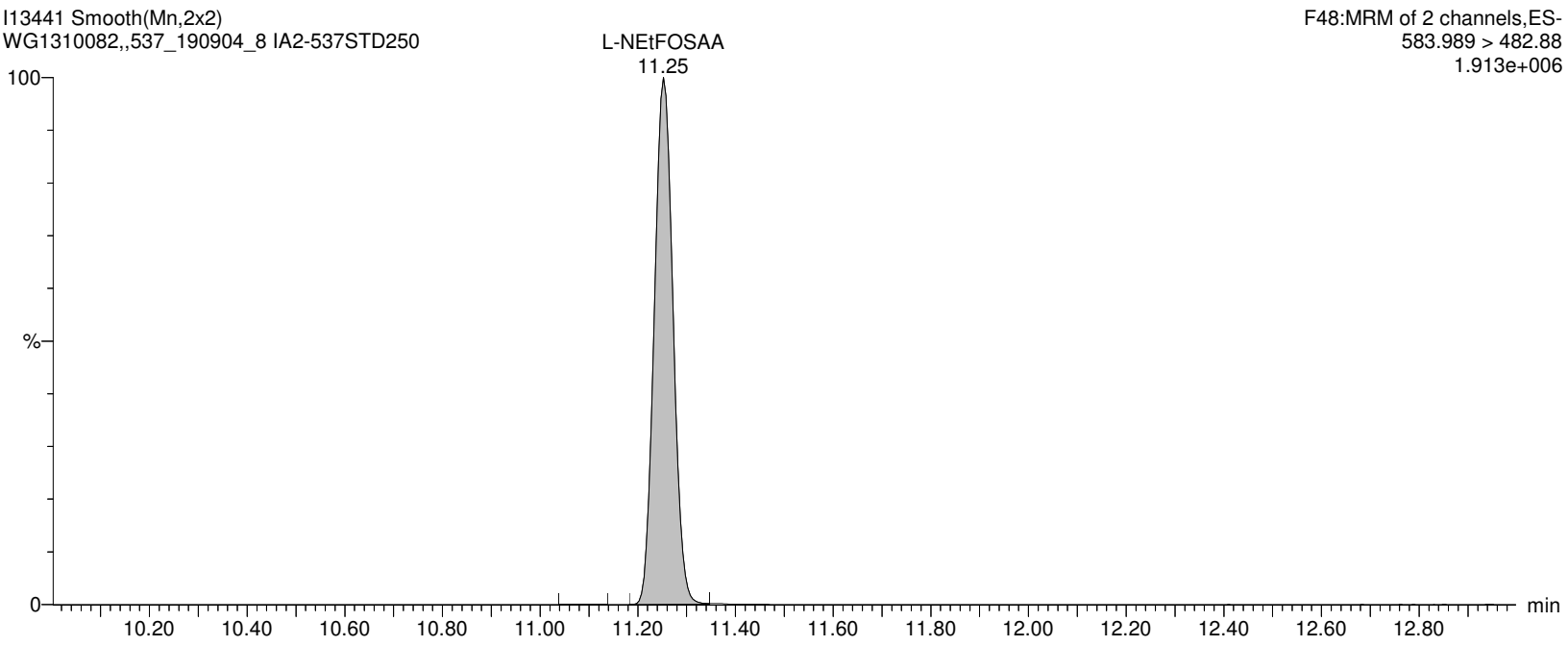
**NEtFOSAA**





all concentration units in (ng/mL)

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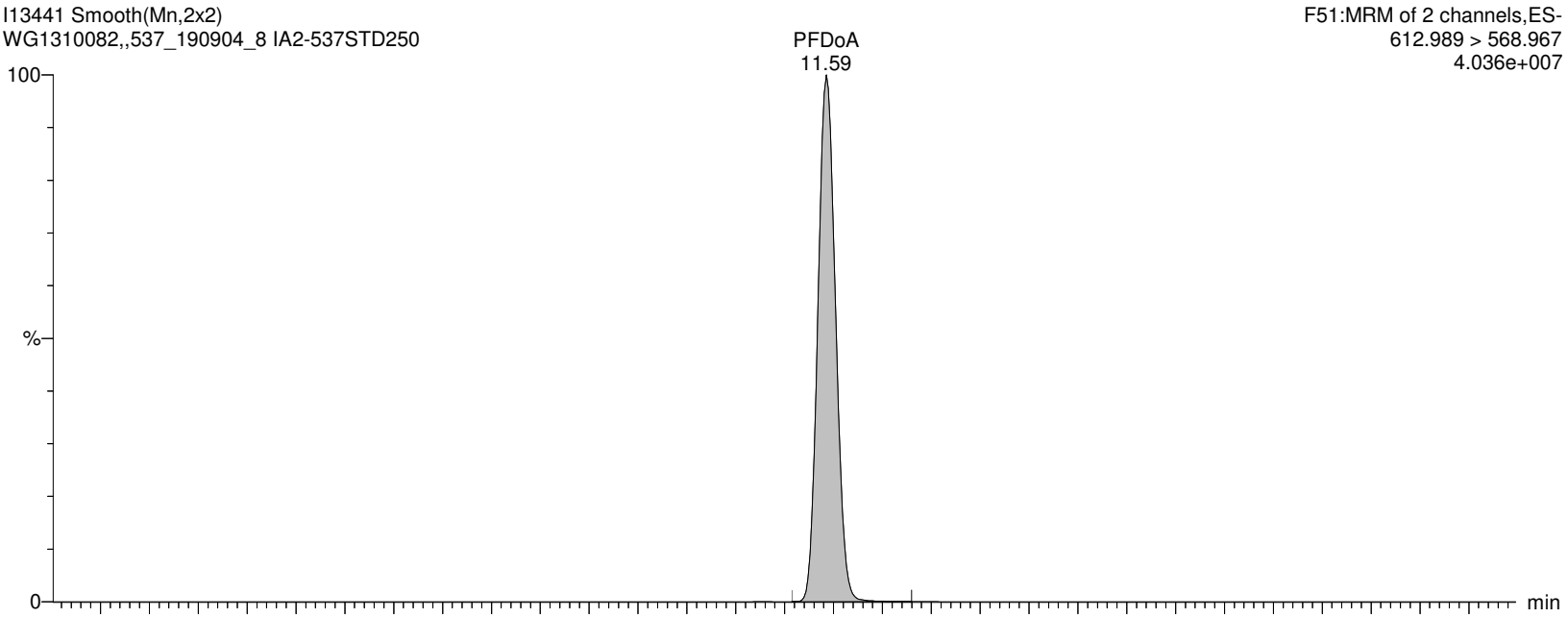
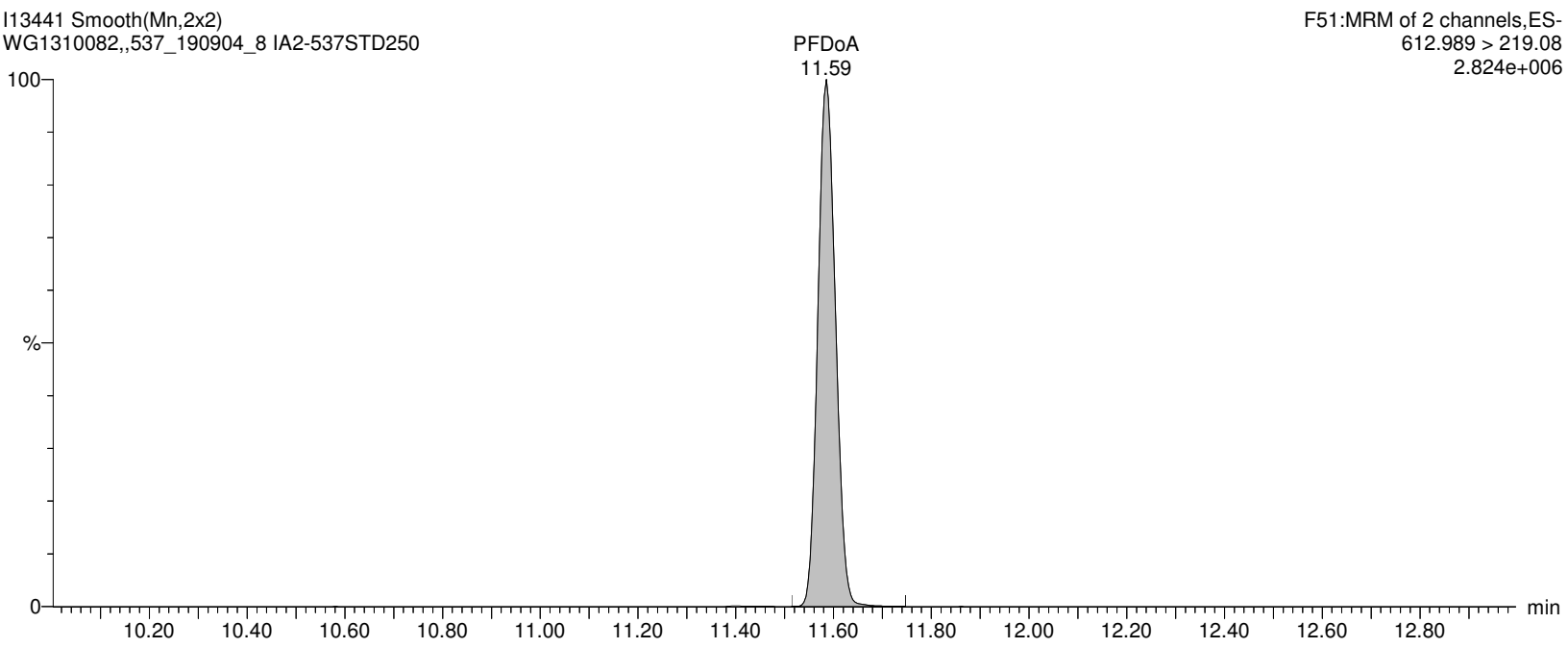
**PFDoA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
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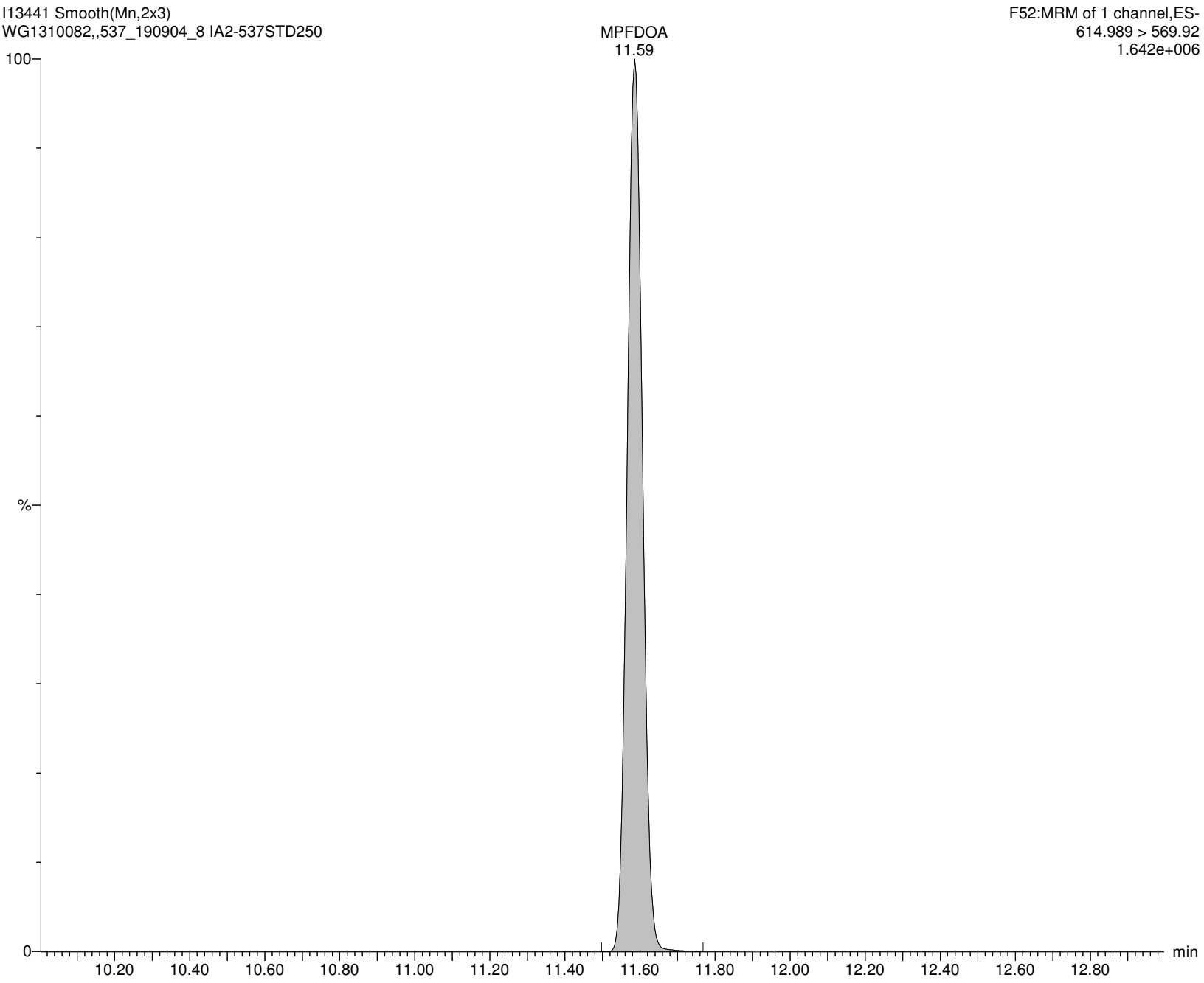



all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
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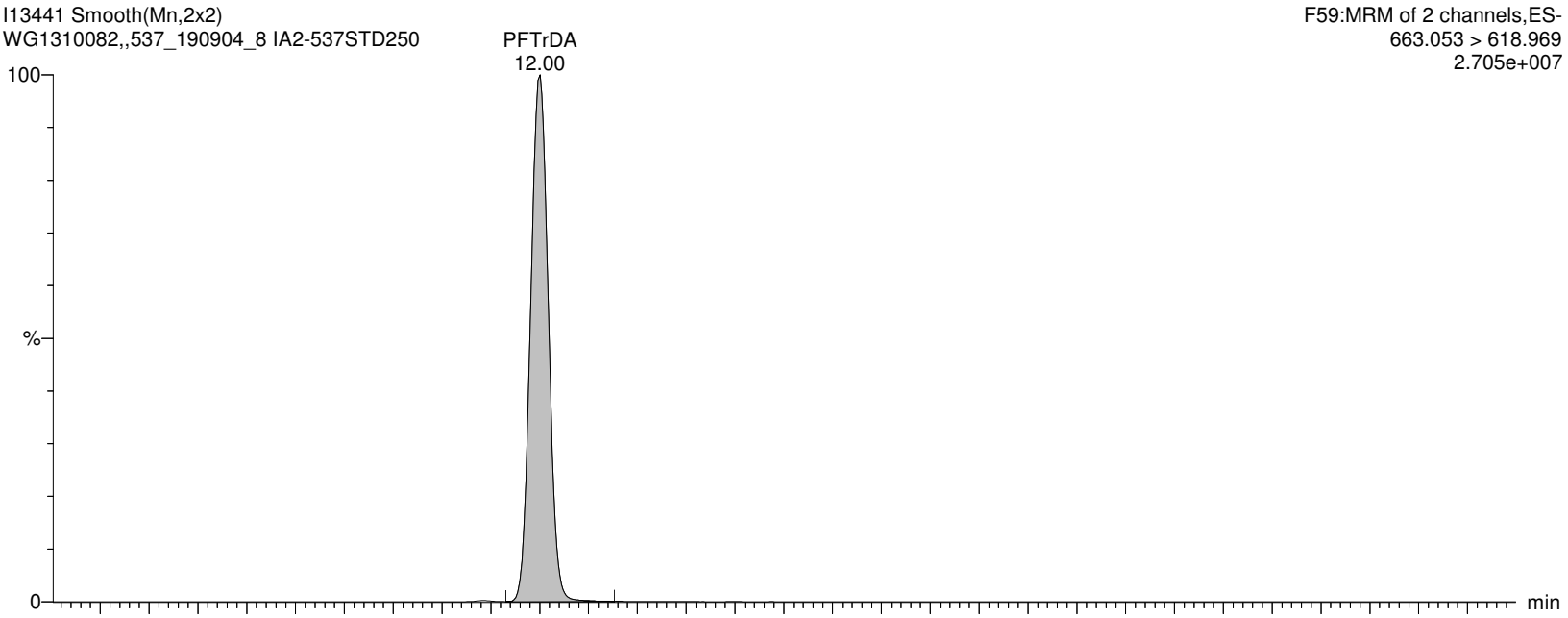


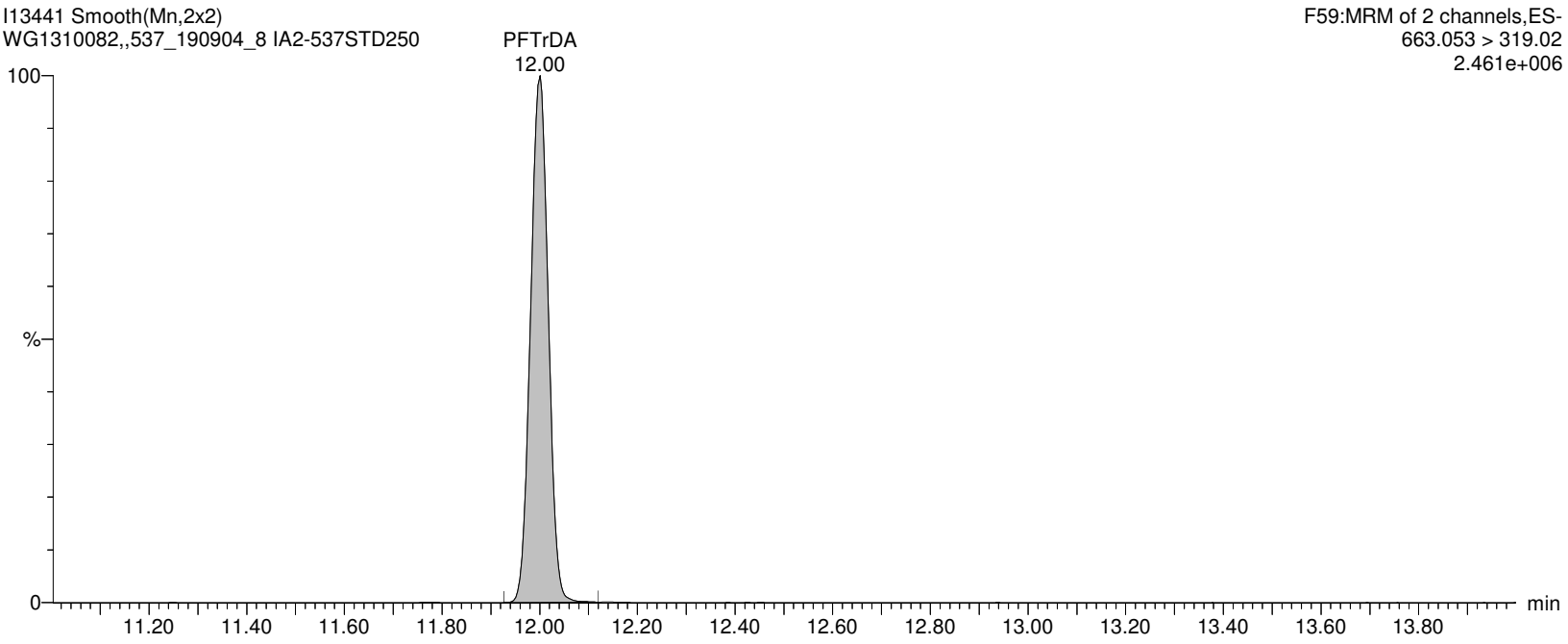



all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
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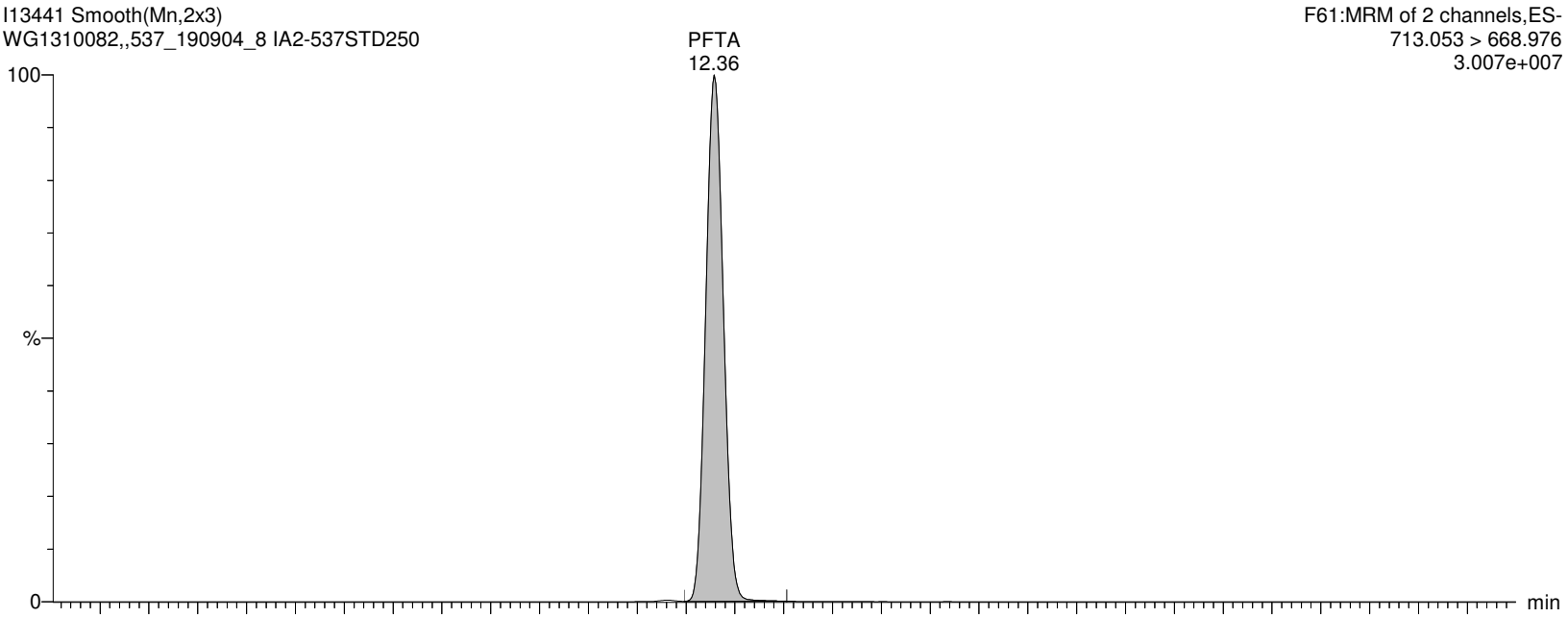


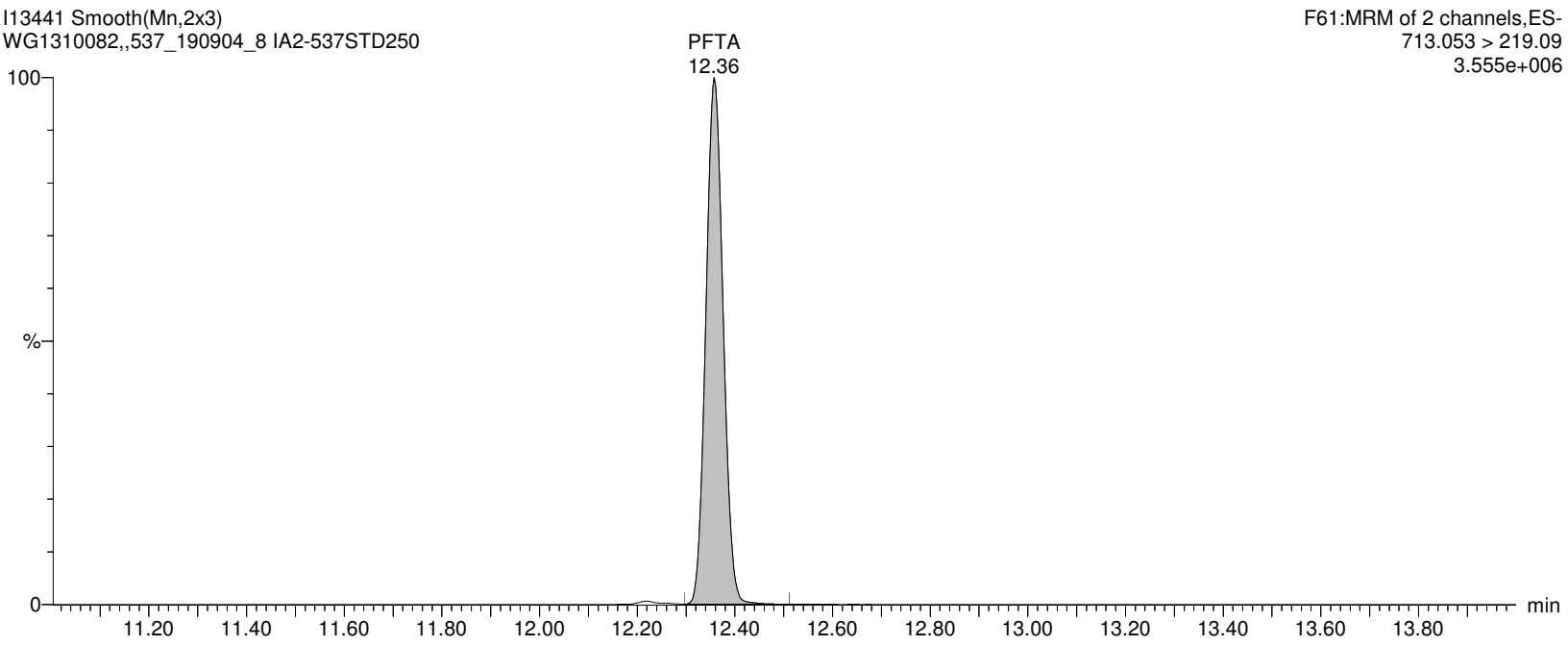



all concentration units in (ng/mL)

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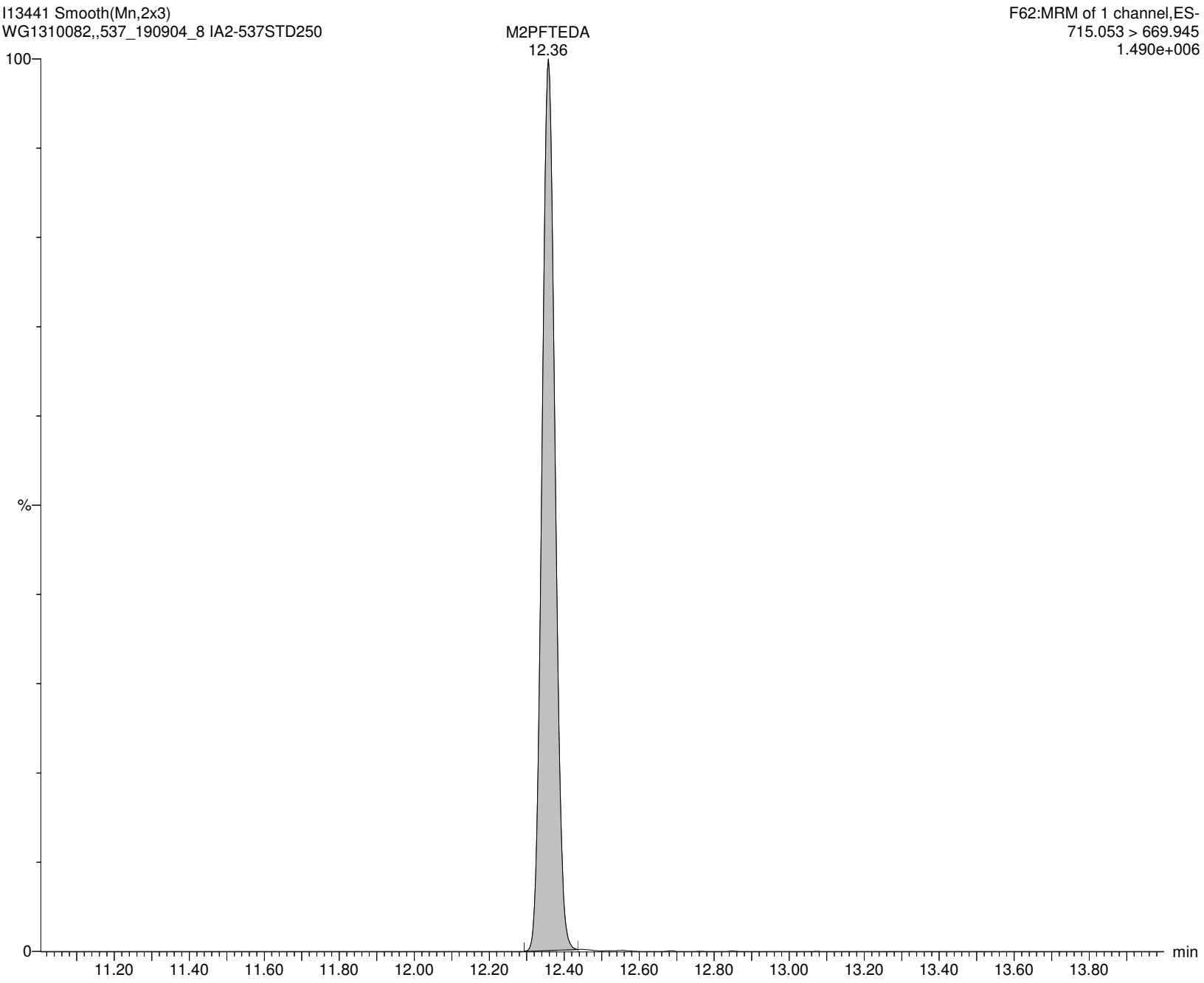



all concentration units in (ng/mL)

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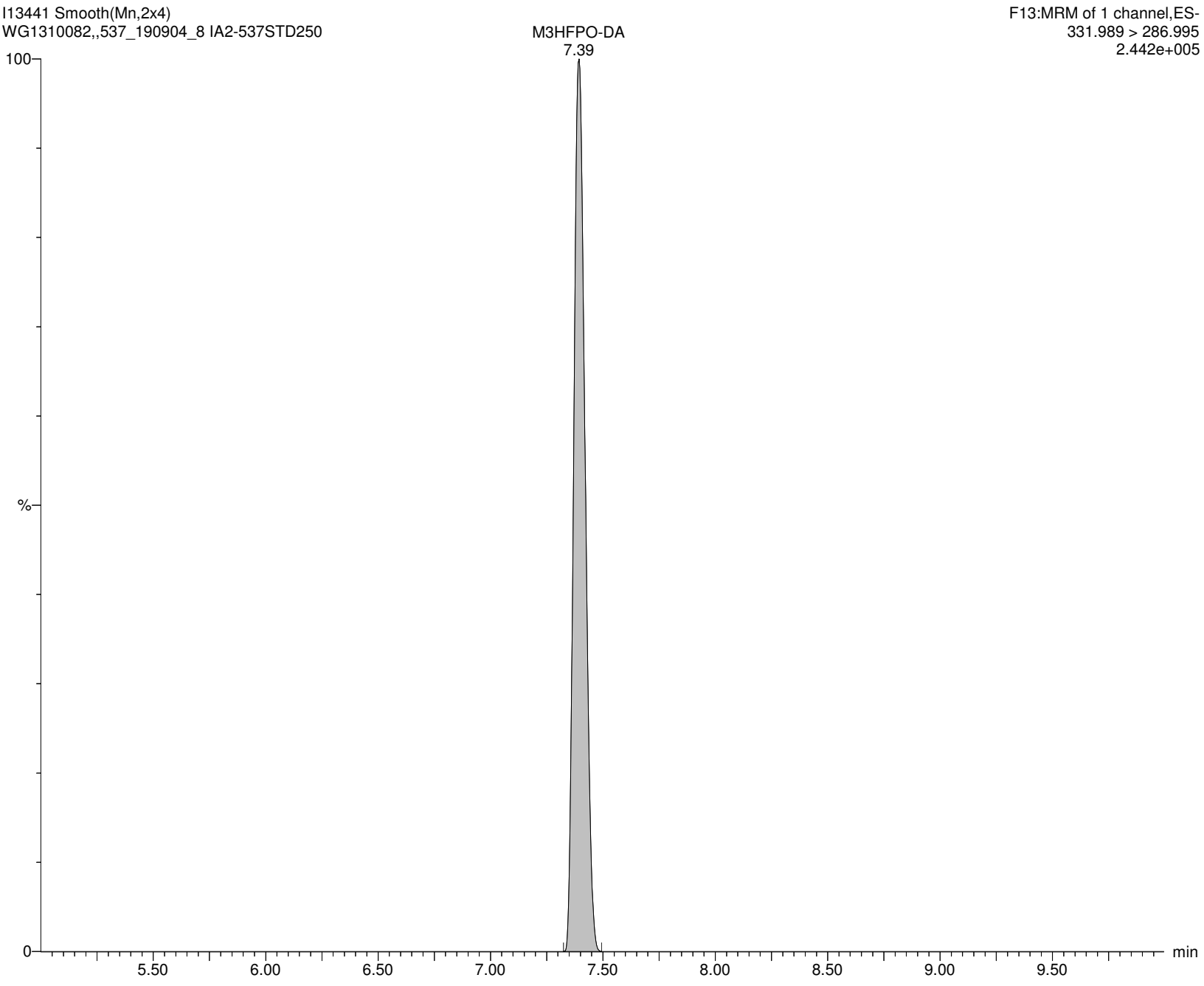



all concentration units in (ng/mL)

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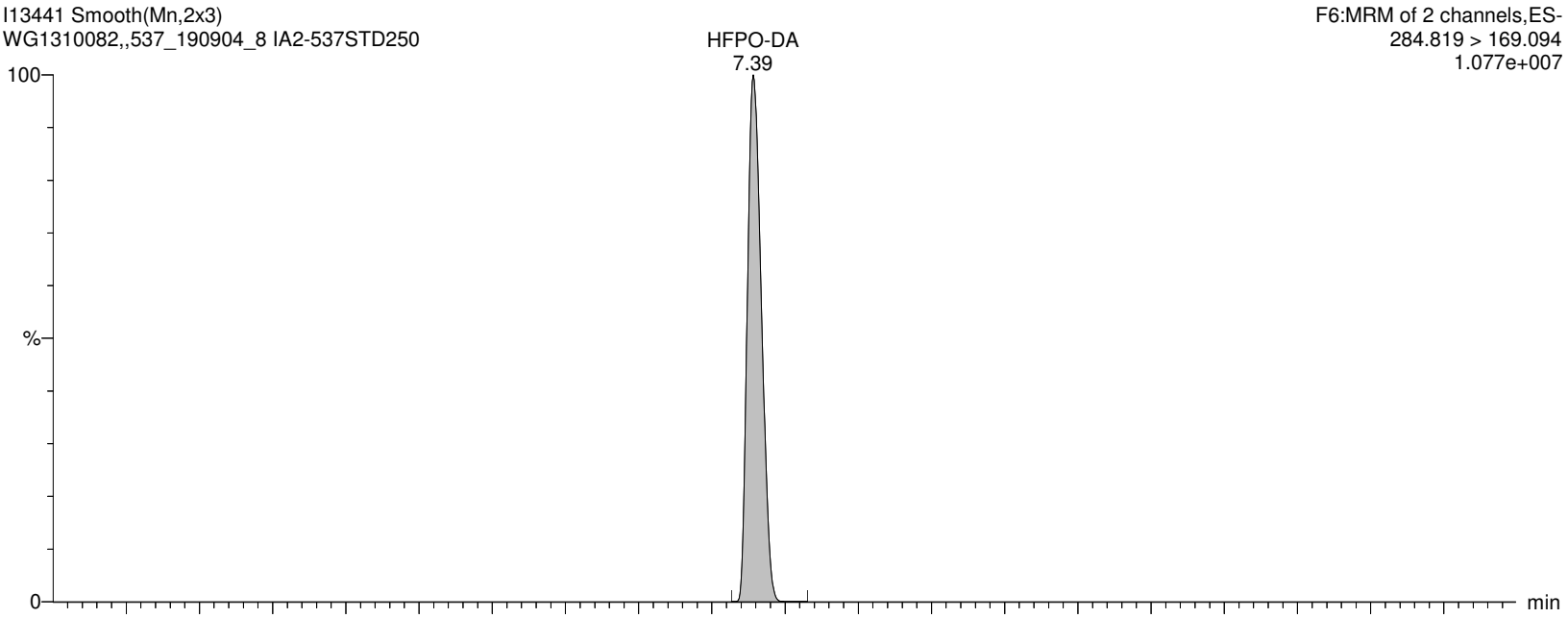


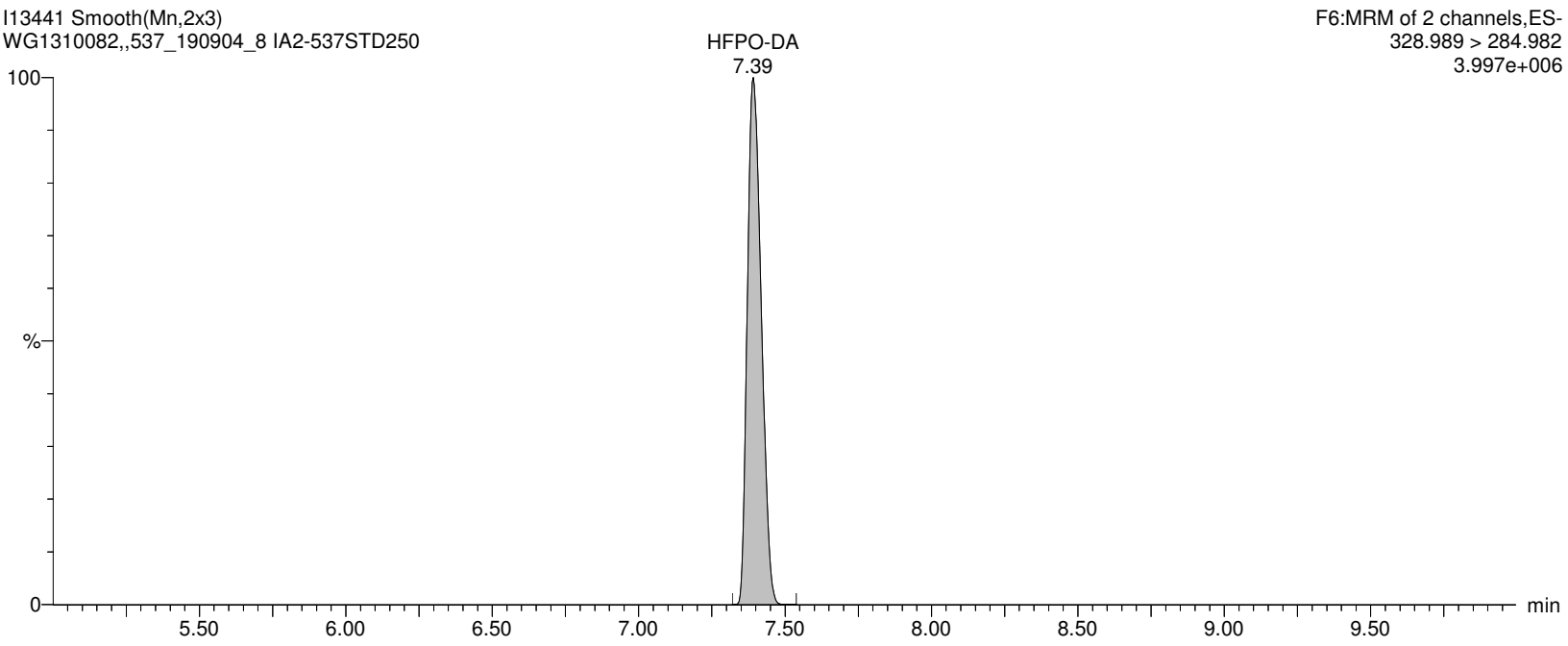



all concentration units in (ng/mL)

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**Tune Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\181009_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

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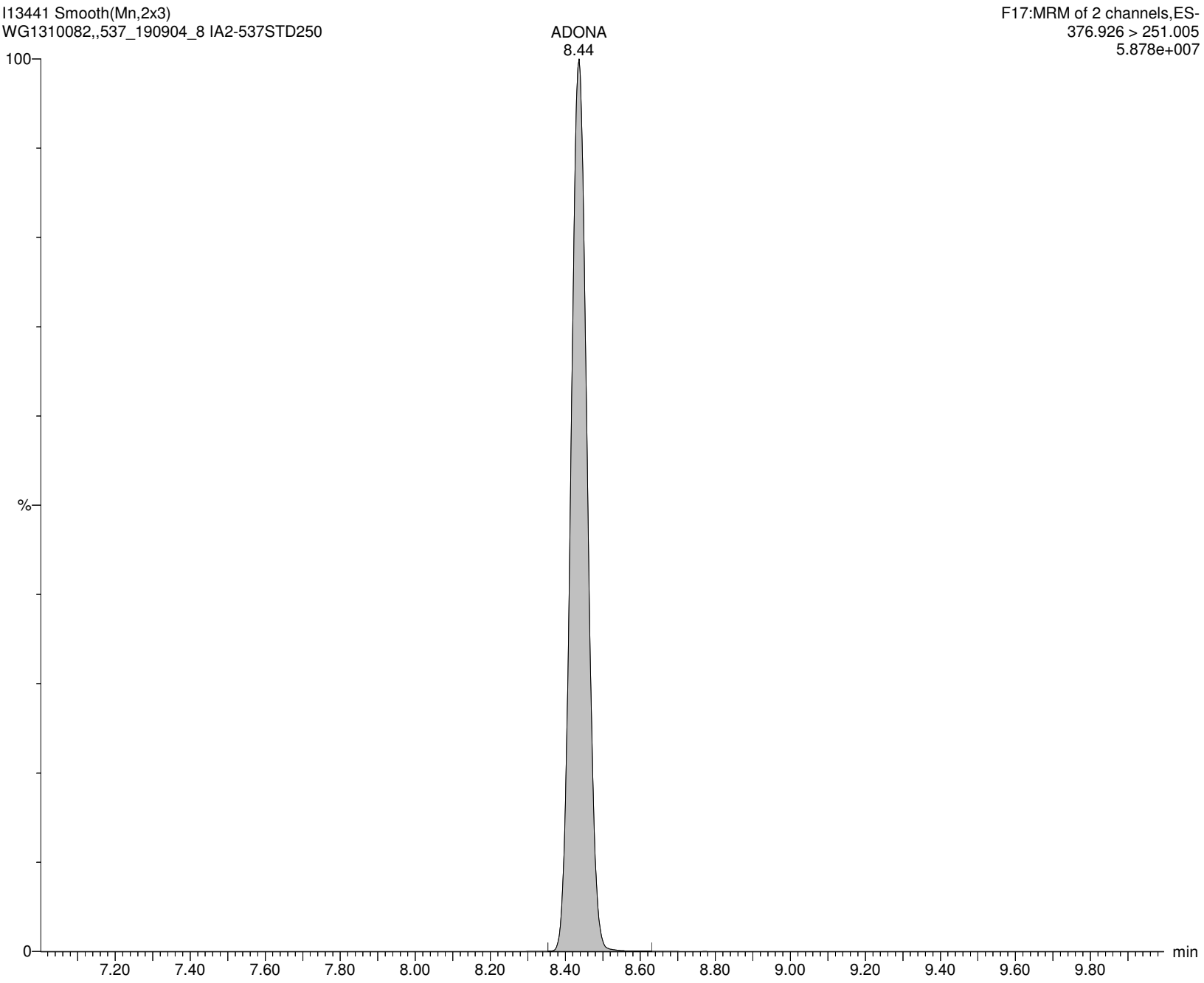



all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
Printed: Monday, November 18, 2019 13:43:03 Eastern Standard Time

**Name: I13441**
**ID: IA2-537STD250**
**Date: 18-Nov-2019**
**Time: 12:33:16**
**Description: WG1310082,,537_190904_8**
**User: LCMS02:JW**
**Vial: 1:B,1**
**Instrument: XEVO-TQSmicro#QEB0050**
**Inlet Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\LCMS_537_ISO_B**
**Tune Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\181009_TUNE.IPR**
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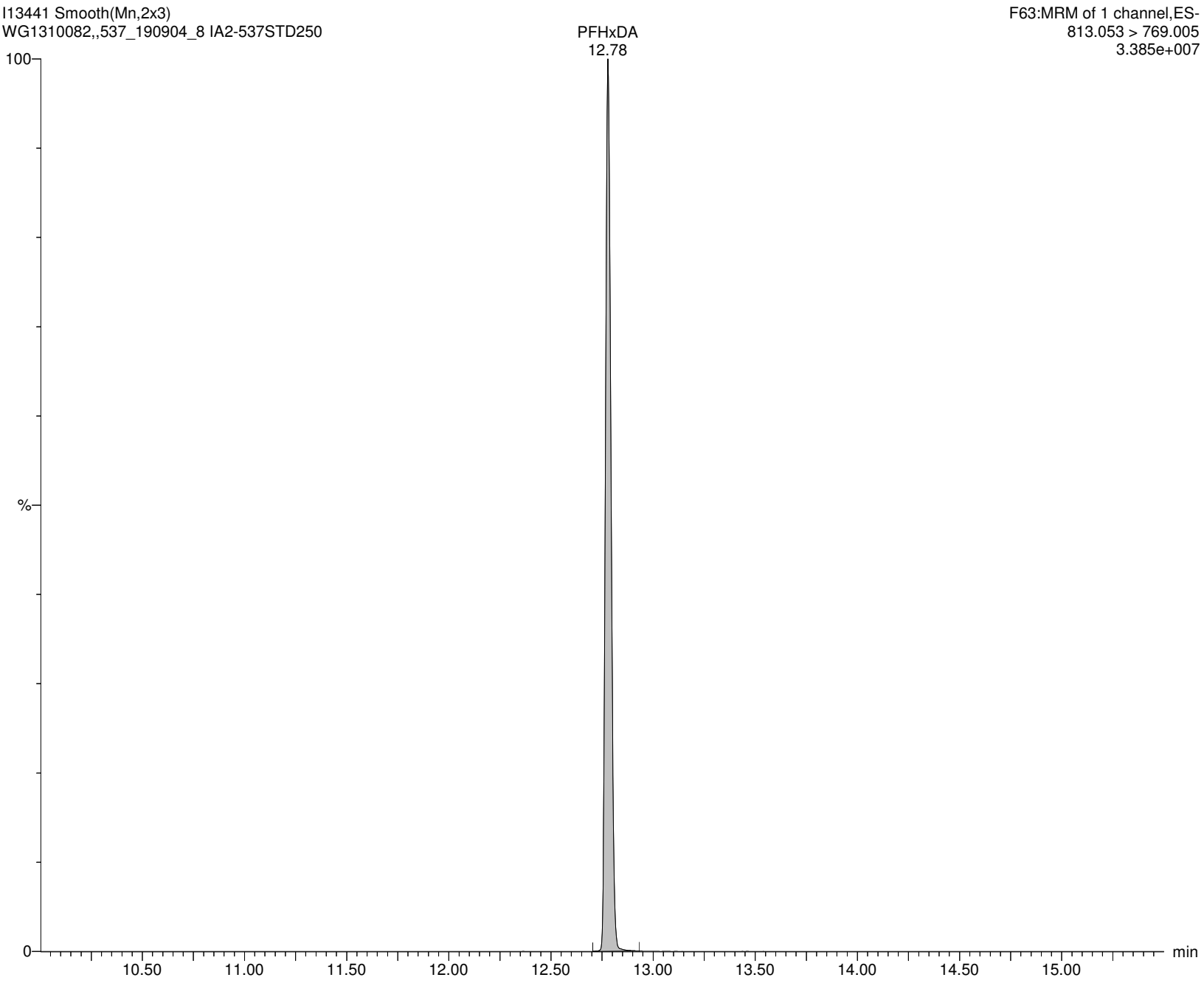



all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
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**Date: 18-Nov-2019**
**Time: 12:33:16**
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**Vial: 1:B,1**
**Instrument: XEVO-TQSmicro#QEB0050**
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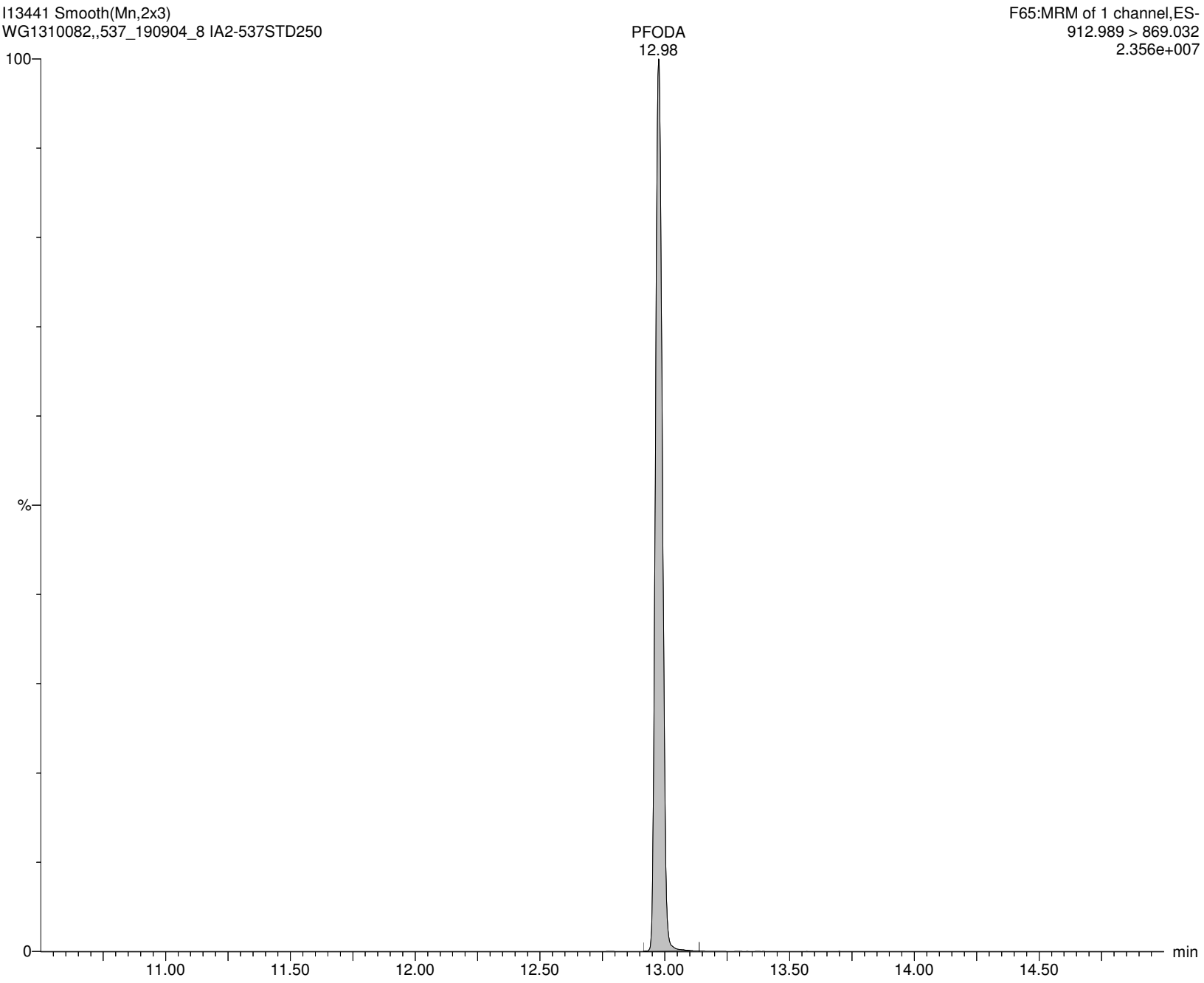



all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
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**Date: 18-Nov-2019**
**Time: 12:33:16**
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**User: LCMS02:JW**
**Vial: 1:B,1**
**Instrument: XEVO-TQSmicro#QEB0050**
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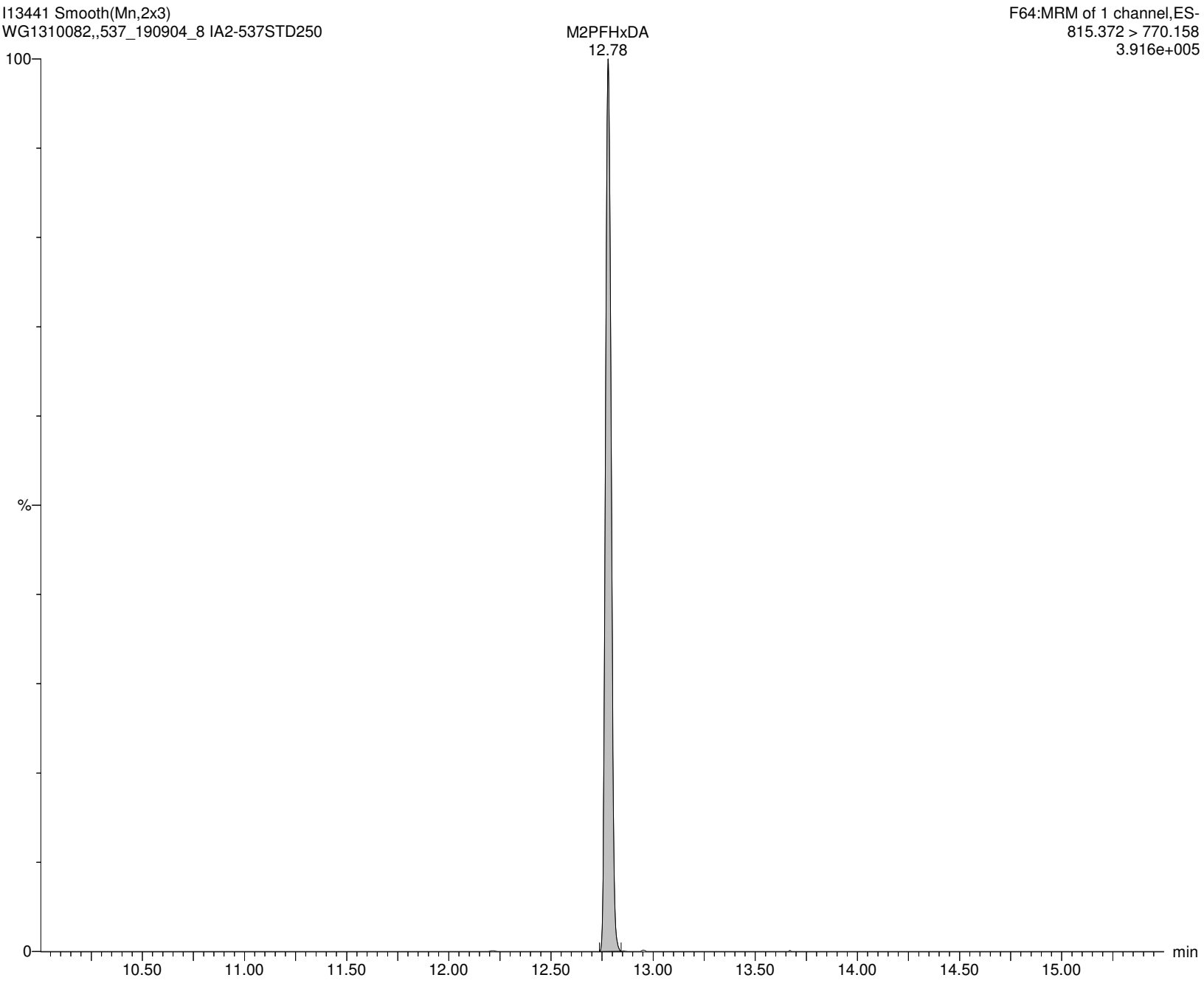



all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
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**Vial: 1:B,1**
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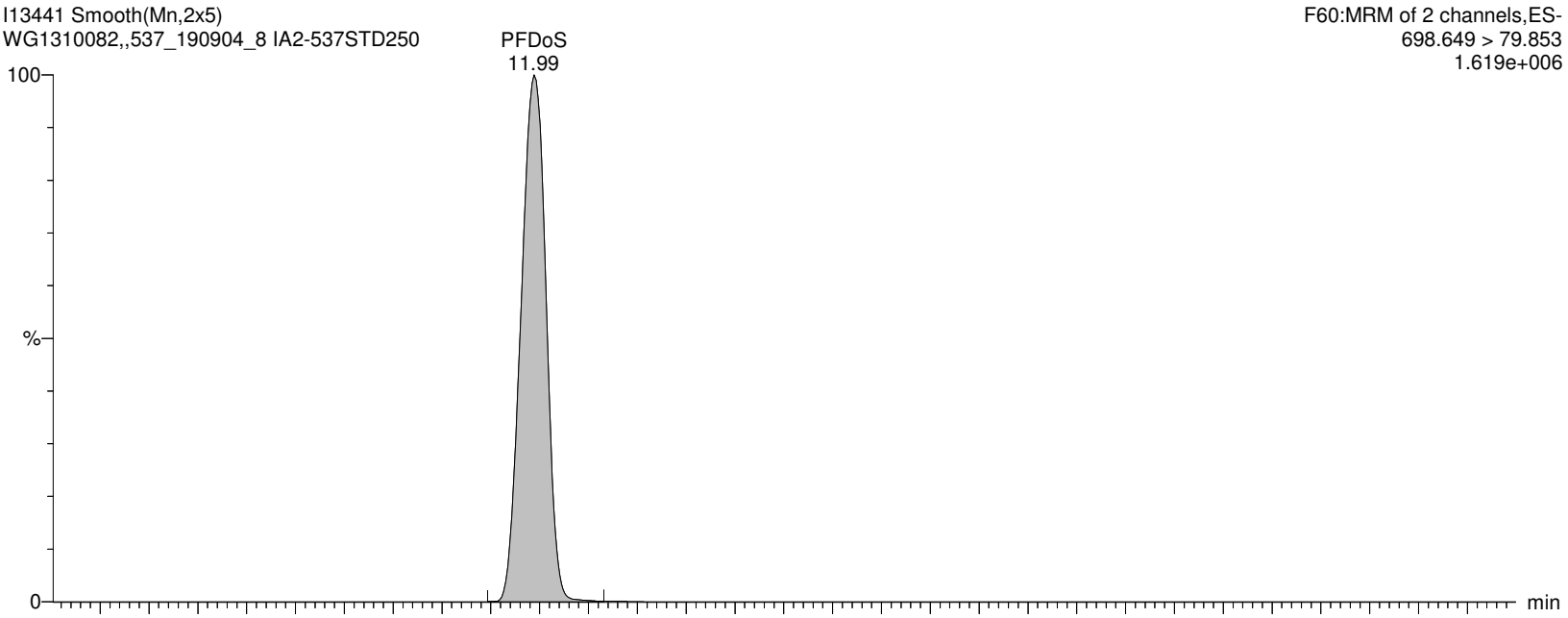
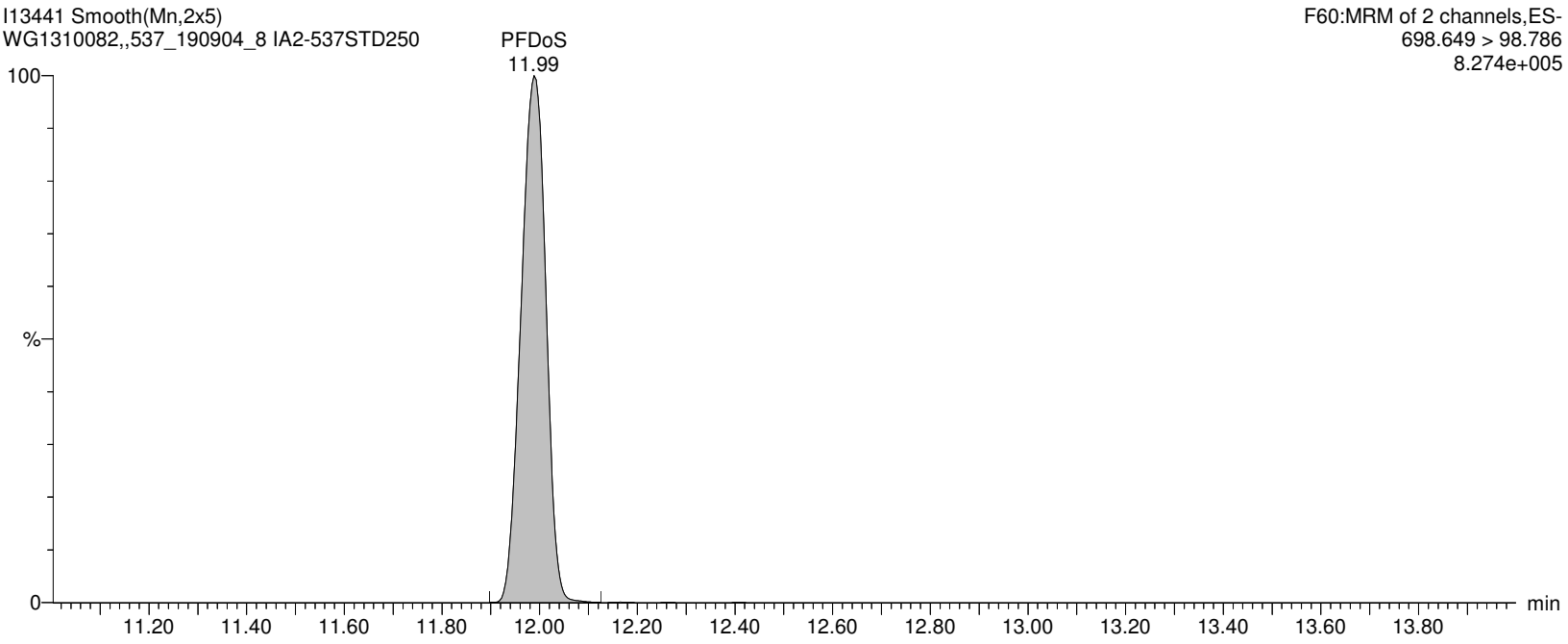
**MS Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**PFDoS**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
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**ID: IA2-537STD250**
**Date: 18-Nov-2019**
**Time: 12:33:16**
**Description: WG1310082,,537_190904_8**
**User: LCMS02:JW**
**Vial: 1:B,1**
**Instrument: XEVO-TQSmicro#QEB0050**
**Inlet Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\LCMS_537_ISO_B**
**Tune Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\181009_TUNE.IPR**
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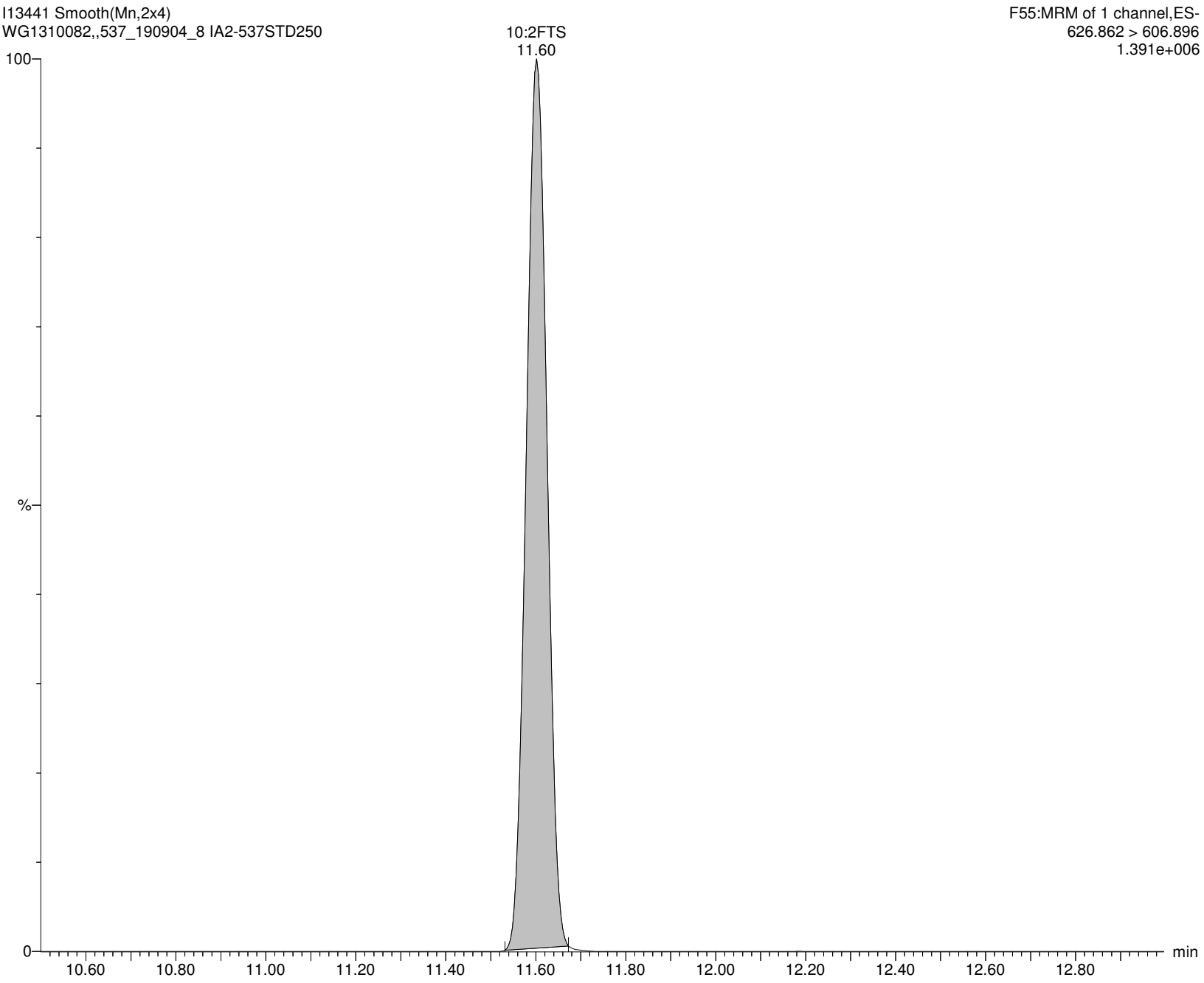



all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
Printed: Monday, November 18, 2019 13:43:03 Eastern Standard Time

**Name: I13441**
**ID: IA2-537STD250**
**Date: 18-Nov-2019**
**Time: 12:33:16**
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**User: LCMS02:JW**
**Vial: 1:B,1**
**Instrument: XEVO-TQSmicro#QEB0050**
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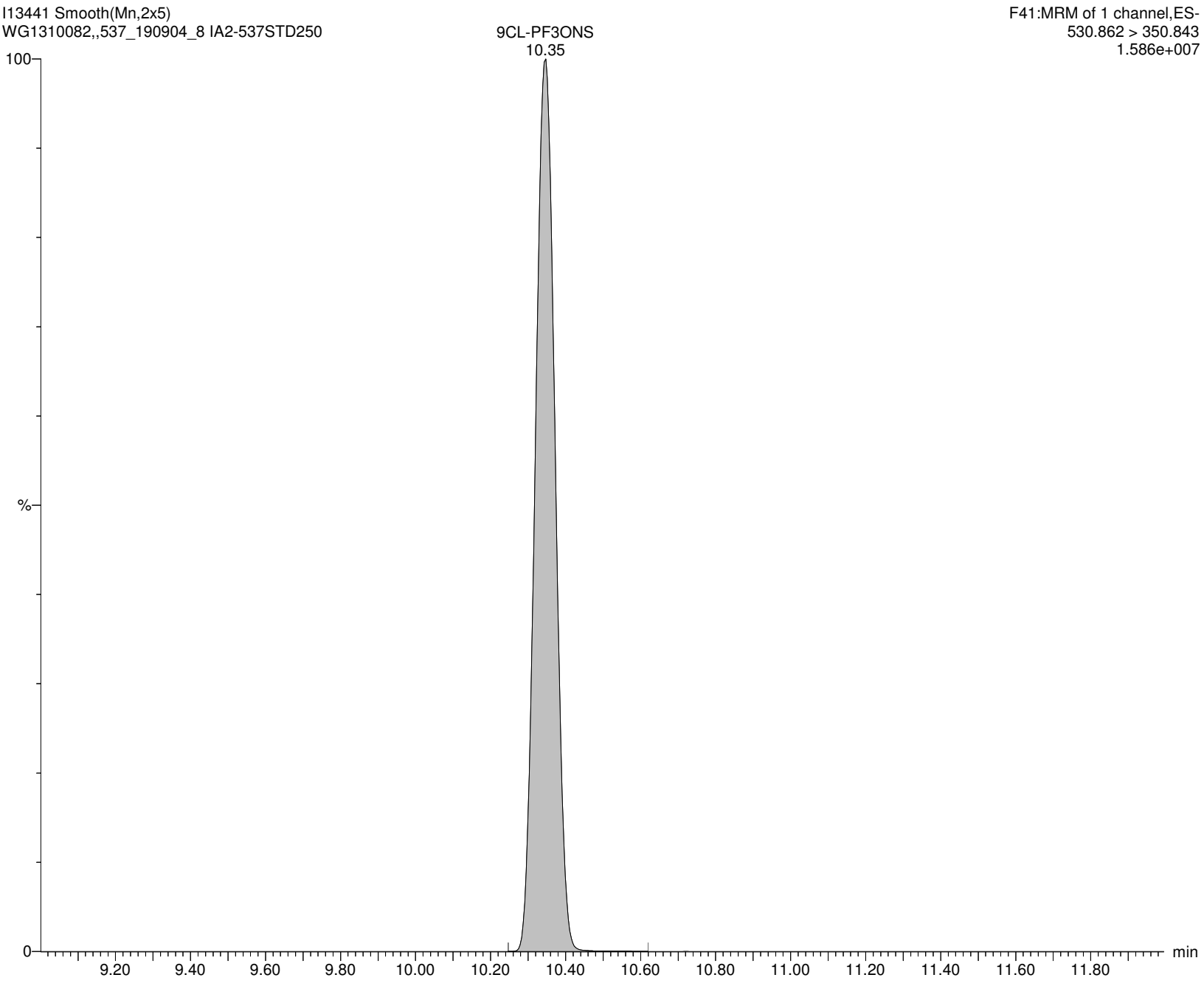
**9CL-PF3ONS**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
Printed: Monday, November 18, 2019 13:43:03 Eastern Standard Time

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**Date: 18-Nov-2019**
**Time: 12:33:16**
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**User: LCMS02:JW**
**Vial: 1:B,1**
**Instrument: XEVO-TQSmicro#QEB0050**
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**Tune Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\181009_TUNE.IPR**
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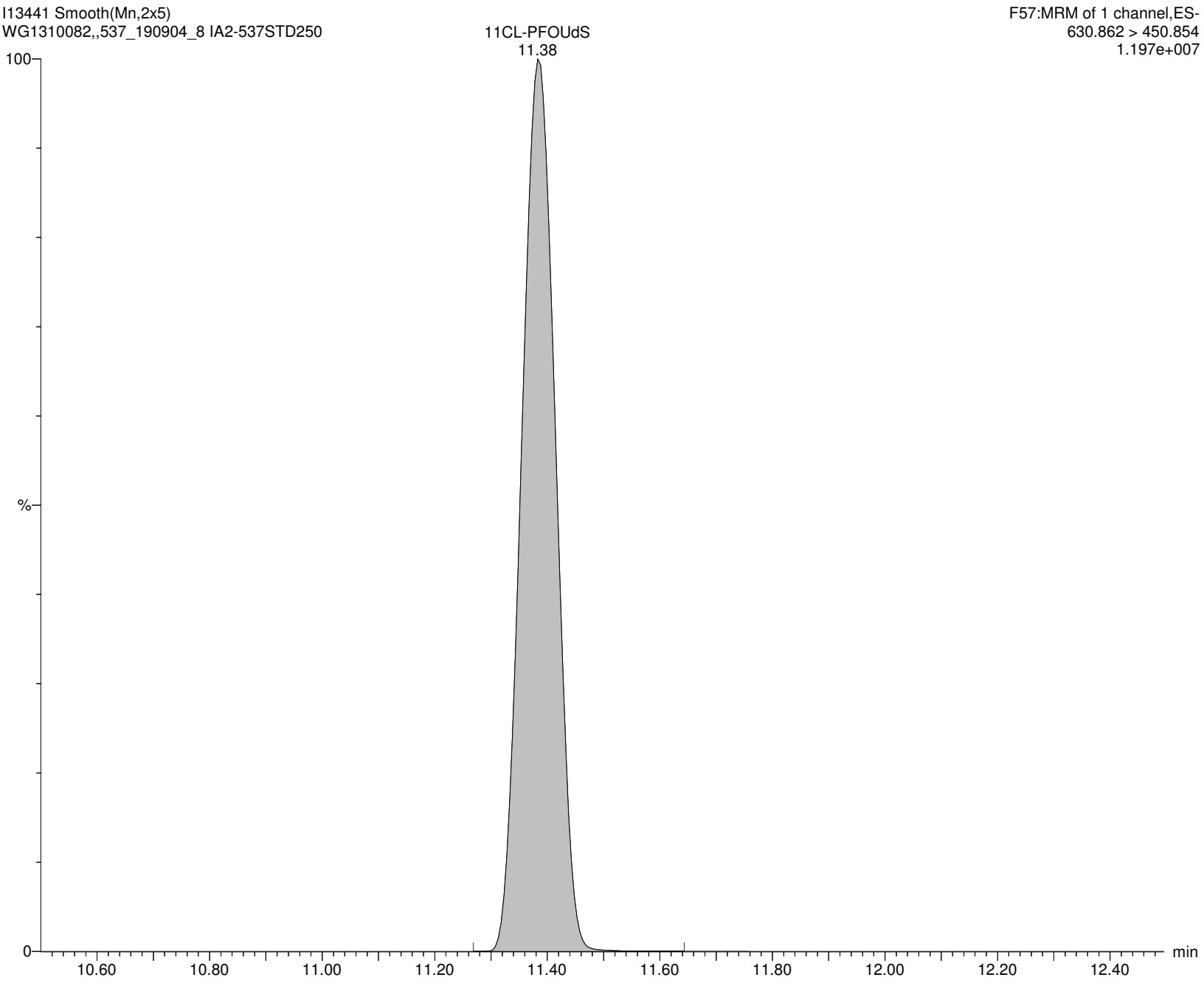
**11CL-PFOUdS**





all concentration units in (ng/mL)

Alpha Analytical Inc.
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Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
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**User: LCMS02:JW**
**Vial: 1:B,1**
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**Tune Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\181009_TUNE.IPR**
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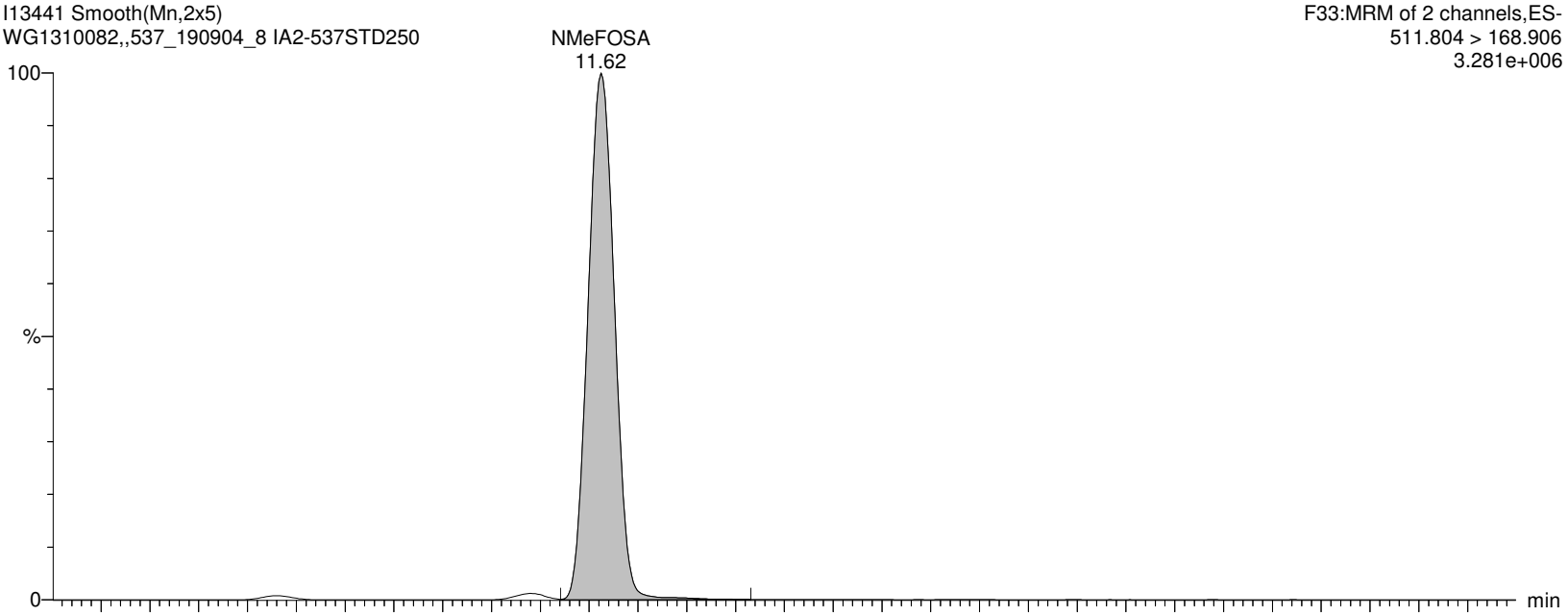
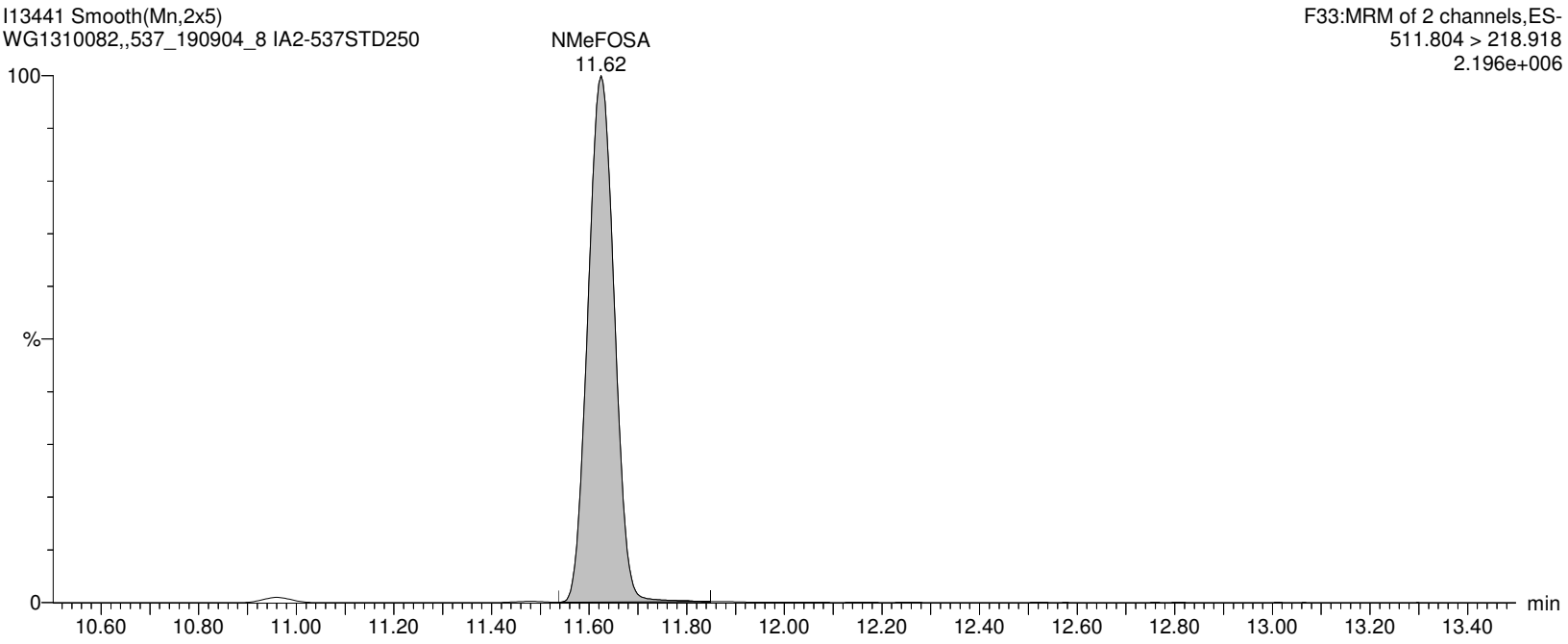
**NMeFOSA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
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**Name: I13441**
**ID: IA2-537STD250**
**Date: 18-Nov-2019**
**Time: 12:33:16**
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**User: LCMS02:JW**
**Vial: 1:B,1**
**Instrument: XEVO-TQSmicro#QEB0050**
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**Tune Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\181009_TUNE.IPR**
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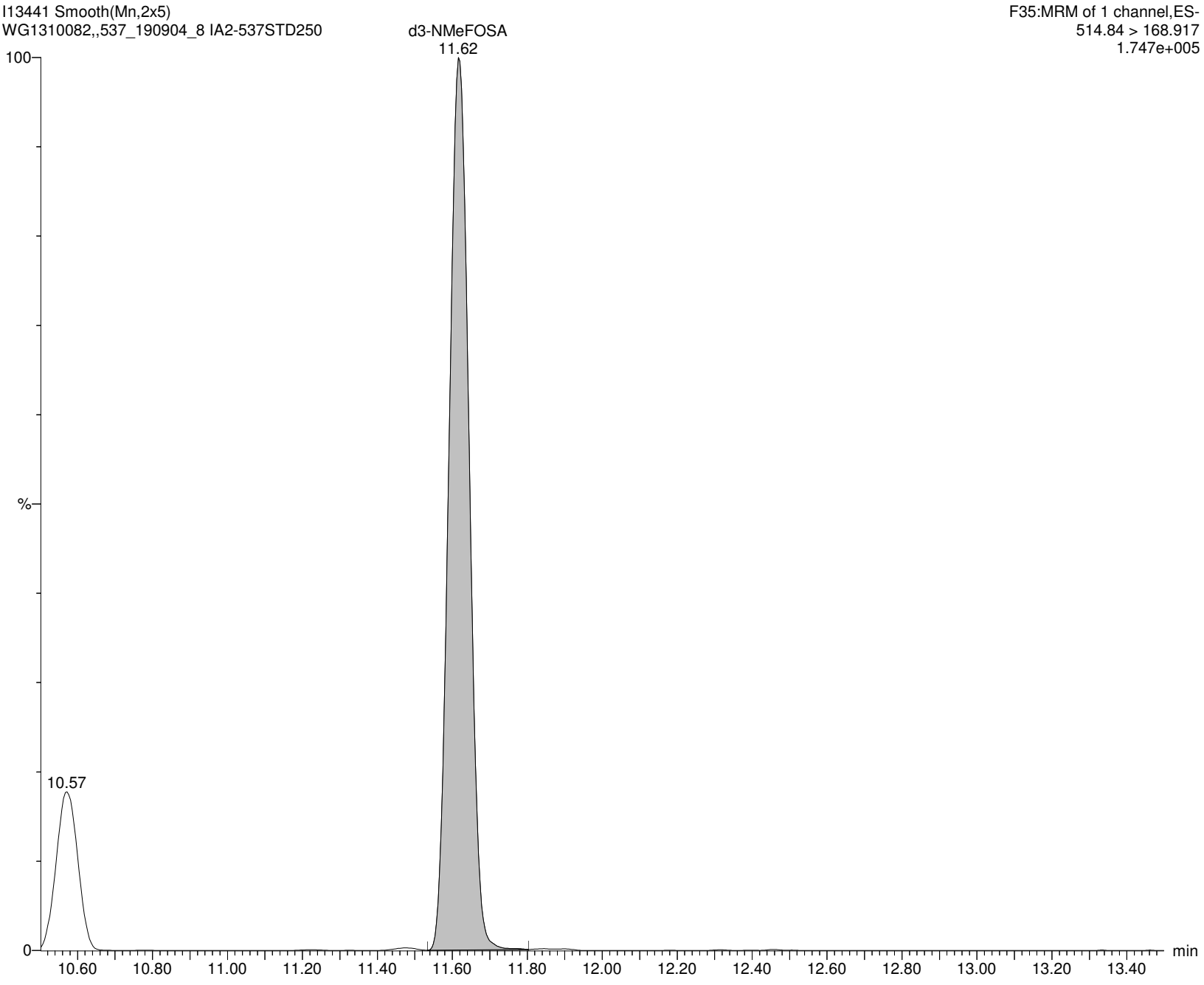
**d3-NMeFOSA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
Printed: Monday, November 18, 2019 13:43:03 Eastern Standard Time

**Name: I13441**
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**Date: 18-Nov-2019**
**Time: 12:33:16**
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**User: LCMS02:JW**
**Vial: 1:B,1**
**Instrument: XEVO-TQSmicro#QEB0050**
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**Tune Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\181009_TUNE.IPR**
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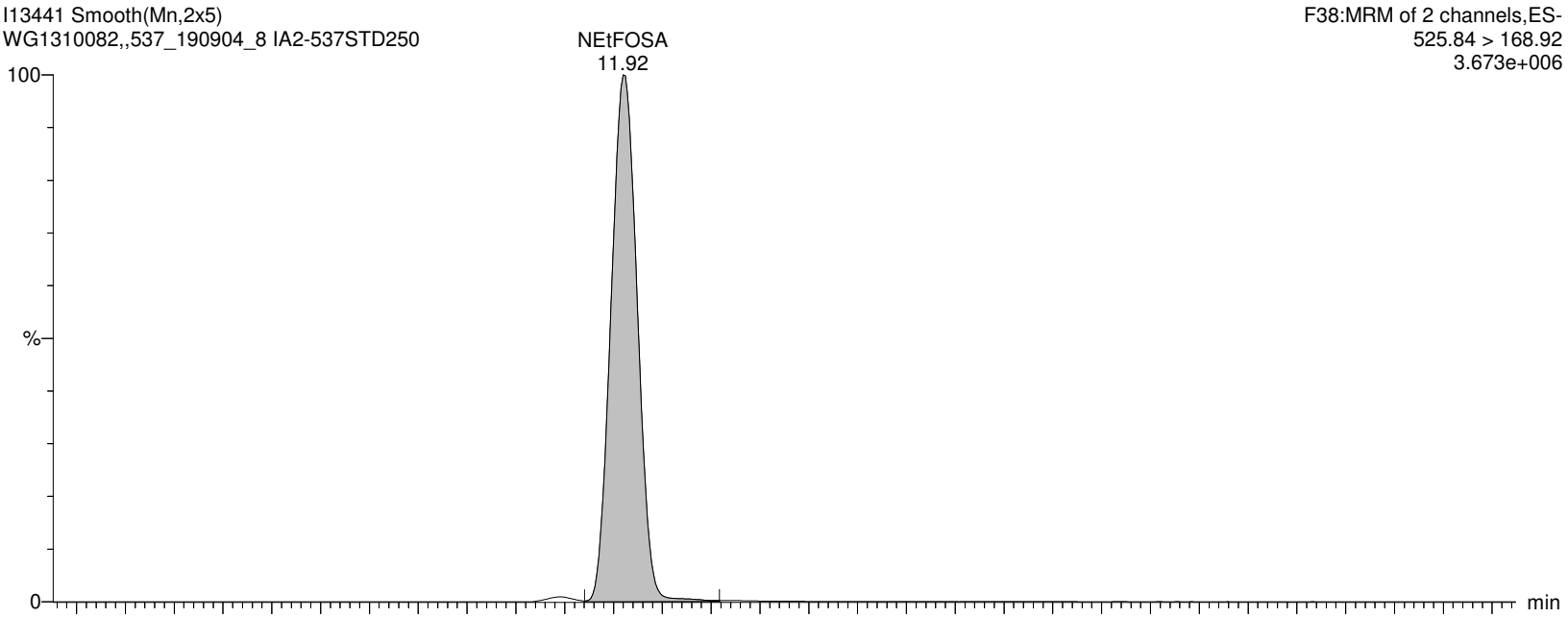
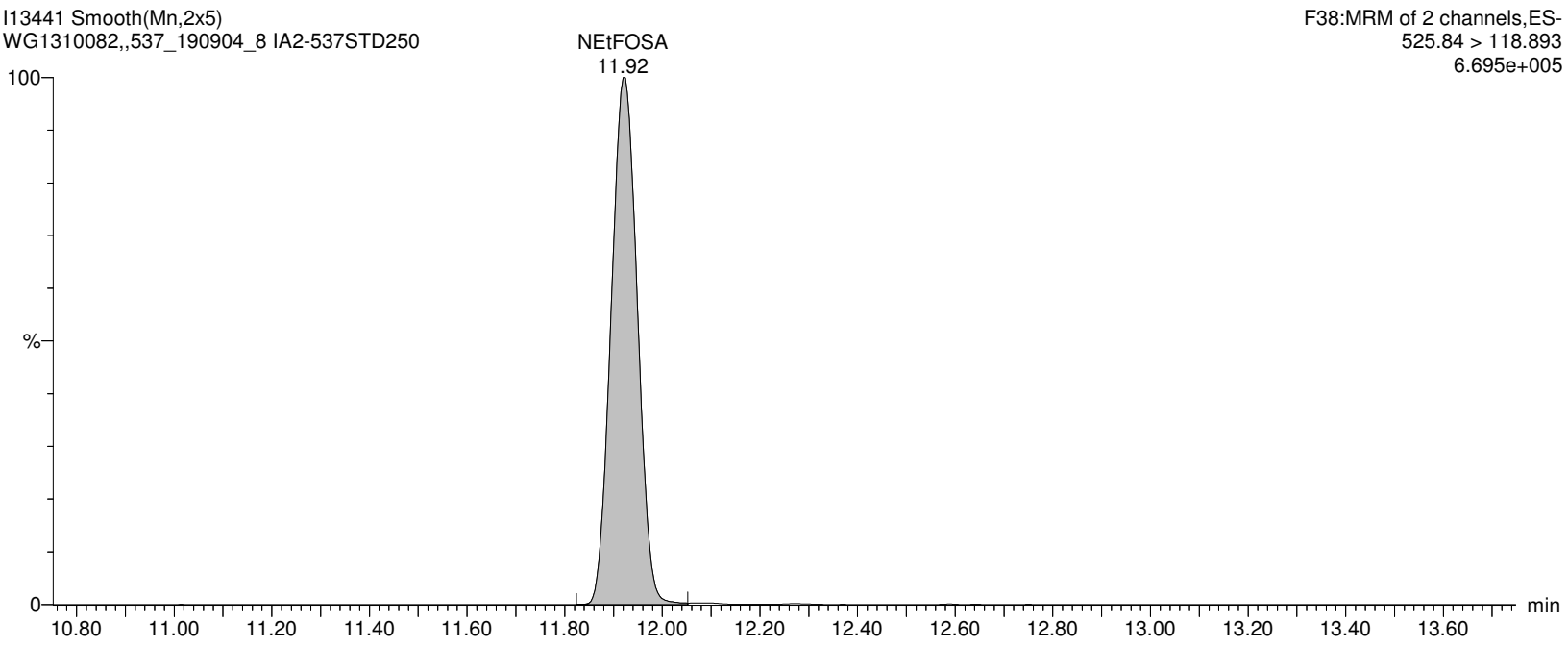
**NEtFOSA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
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**Date: 18-Nov-2019**
**Time: 12:33:16**
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**User: LCMS02:JW**
**Vial: 1:B,1**
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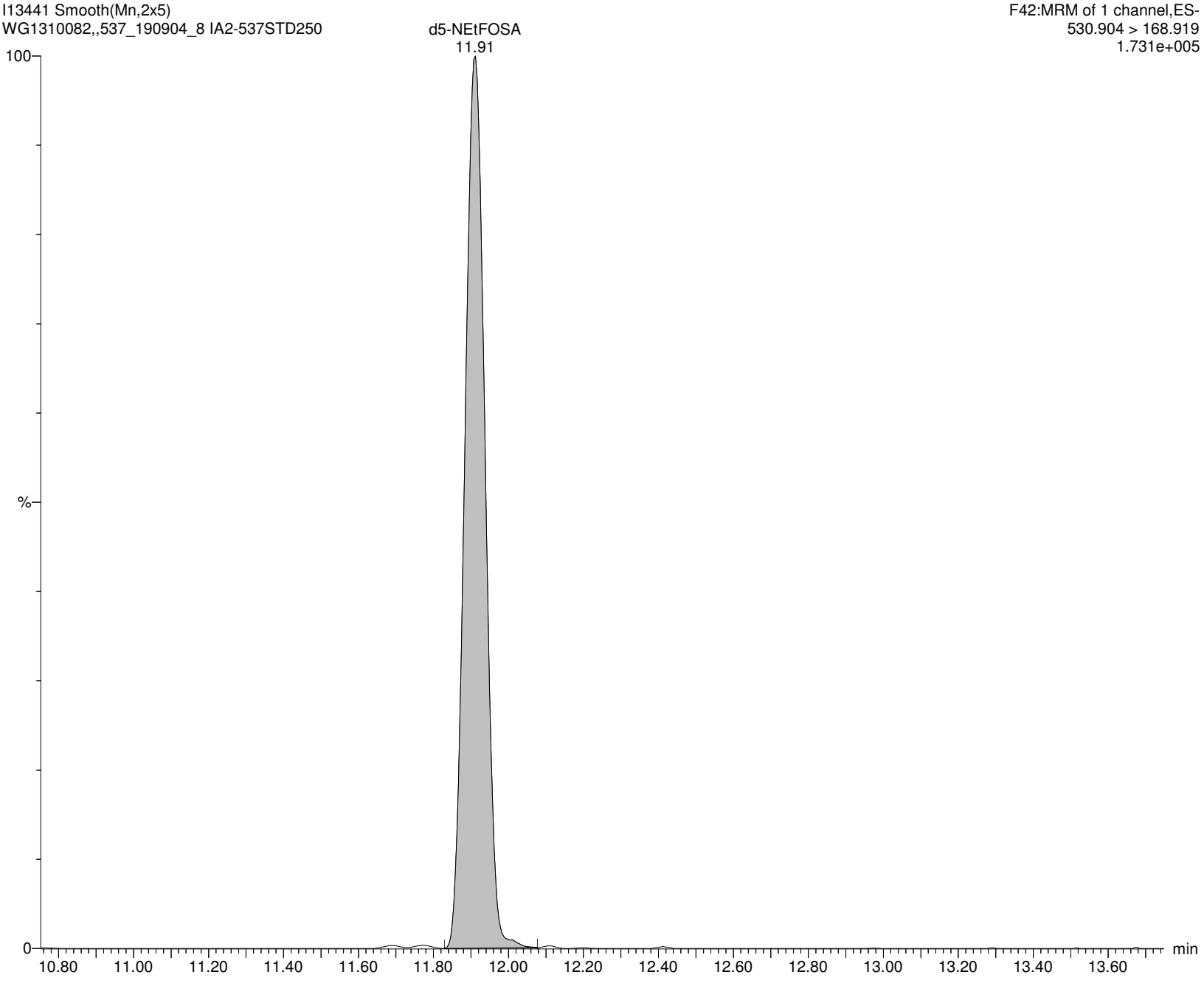
**d5-NEtFOSA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
Printed: Monday, November 18, 2019 13:43:03 Eastern Standard Time

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**Date: 18-Nov-2019**
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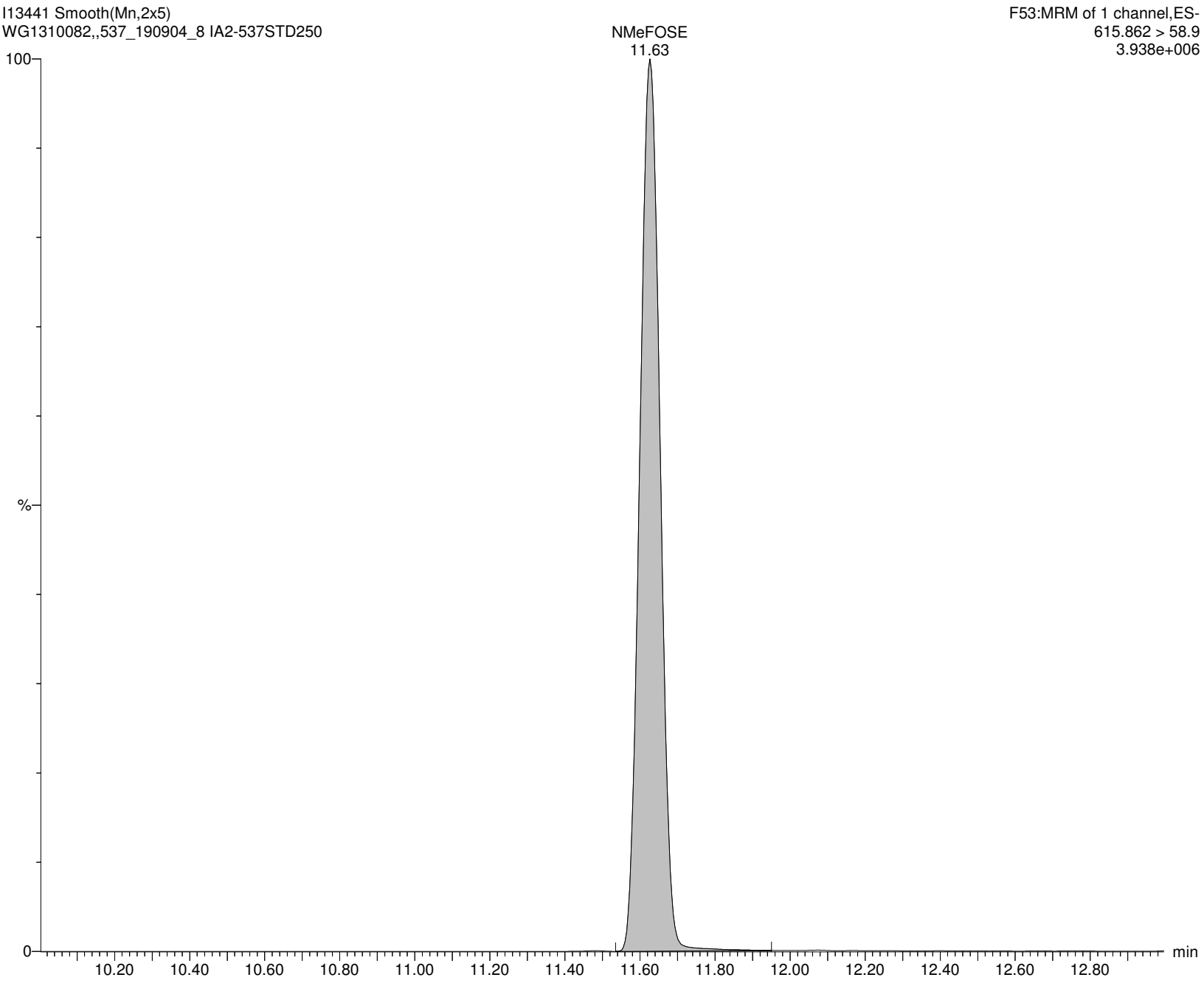
**NMeFOSE**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
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**Date: 18-Nov-2019**
**Time: 12:33:16**
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**Vial: 1:B,1**
**Instrument: XEVO-TQSmicro#QEB0050**
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**Tune Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\181009_TUNE.IPR**
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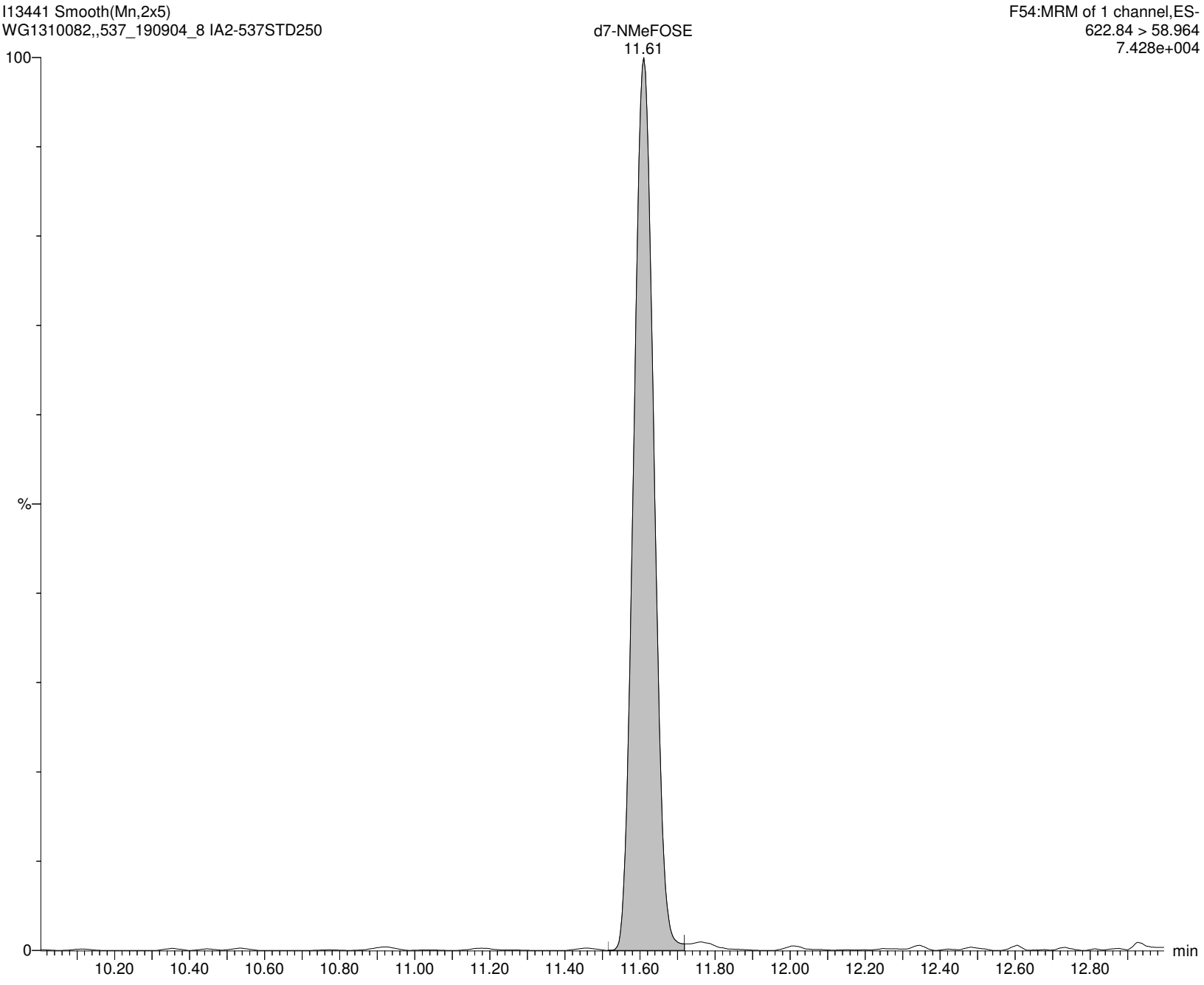



all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
Printed: Monday, November 18, 2019 13:43:03 Eastern Standard Time

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**Date: 18-Nov-2019**
**Time: 12:33:16**
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**User: LCMS02:JW**
**Vial: 1:B,1**
**Instrument: XEVO-TQSmicro#QEB0050**
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**Tune Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\181009_TUNE.IPR**
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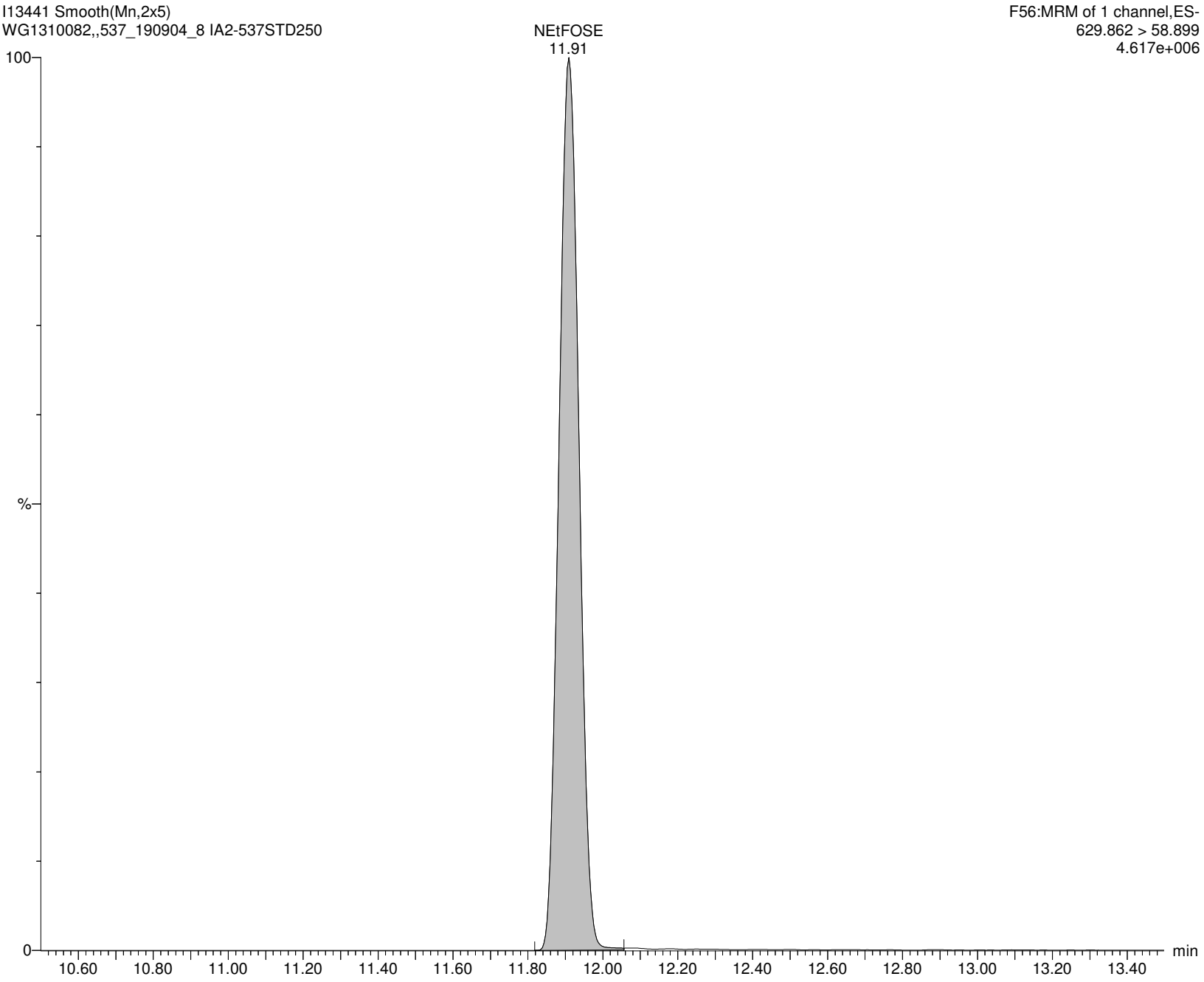
**NEtFOSE**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
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**Date: 18-Nov-2019**
**Time: 12:33:16**
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**User: LCMS02:JW**
**Vial: 1:B,1**
**Instrument: XEVO-TQSmicro#QEB0050**
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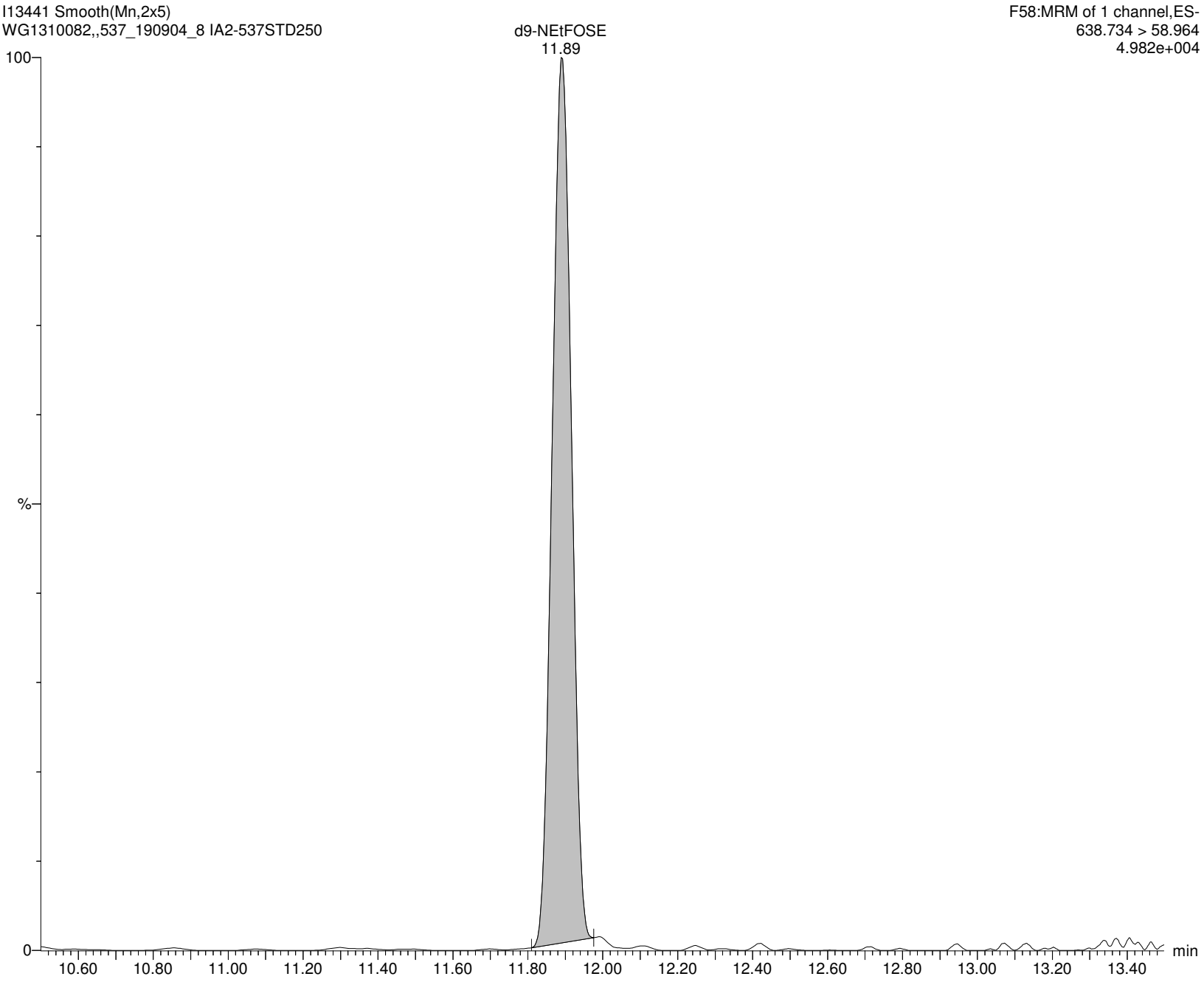
**d9-NEtFOSE**





all concentration units in (ng/mL)

Alpha Analytical Inc.
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Printed: Monday, November 18, 2019 13:43:05 Eastern Standard Time

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**Tune Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\181009_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

| | Name | CAS | RT | Trace | Area | M Flag | Conc (ng/mL) | Ion Ratio | Ratio Flag | %Rec |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | PFBA | 375-22-4 | 2.20 | 212.926 > 169.111 | 1988963 | | 487.854 | | na | 97.6 |
| 2 | M3PFBA | INT STD | 2.20 | 215.926 > 172.122 | 44687 | | 9.644 | | na | 96.4 |
| 3 | MPFBA | INT STD | 2.20 | 216.926 > 172.137 | 48827 | | 10.040 | | na | 100.4 |
| 4 | PFPeA | 2706-90-3 | 5.09 | 262.926 > 219.002 | 3063172 | | 489.018 | | na | 97.8 |
| 5 | M5PFPEA | INT STD | 5.09 | 267.989 > 223.081 | 64857 | | 9.403 | | na | 94.0 |
| 6 | PFBS | 375-73-5 | 5.73 | 298.926 > 79.923 | 533040 | | 432.126 | 1.90 | NO | 97.7 |
| 7 | M3PFBS | INT STD | 5.74 | 301.989 > 80.254 | 8396 | | 11.367 | | na | 113.7 |
| 8 | 4:2FTS | 757124-72-4 | 6.91 | 326.926 > 306.957 | 268378 | | ND | 2.19 | NO | |
| 9 | M2-4:2FTS | INT STD | 6.91 | 329.117 > 309.079 | 16746 | | 34.921 | | na | 349.2 |
| 10 | PFHxA | 307-24-4 | 6.98 | 312.989 > 269.028 | 3131820 | | 491.234 | 18.32 | NO | 98.2 |
| 11 | M5PFHxA | INT STD | 6.98 | 317.989 > 273.045 | 69256 | | 10.284 | | na | 102.8 |
| 12 | PFPeS | 2706-91-4 | 7.28 | 348.926 > 80.251 | 317015 | | 478.701 | 1.78 | NO | 101.9 |
| 13 | PFHpA | 375-85-9 | 8.25 | 362.926 > 319.014 | 3907236 | | 485.746 | 5.80 | NO | 97.1 |
| 14 | M4PFHpA | INT STD | 8.25 | 366.926 > 321.979 | 89172 | | 9.941 | | na | 99.4 |
| 15 | br-PFHxS | 355-46-4 | 8.18 | 398.926 > 80.295 | 60734 | M5 | 84.444 | 2.29 | NO | 99.3 |
| 16 | L-PFHxS | 355-46-4 | 8.41 | 398.926 > 80.295 | 184133 | | 371.225 | 1.18 | NO | 100.3 |
| 17 | PFHxS | 355-46-4 | | 398.926 > 80.295 | 244868 | | 455.669 | | na | |
| 18 | M3PFHxS | INT STD | 8.41 | 401.926 > 80.317 | 3960 | | 9.289 | | na | 92.9 |
| 19 | br-PFOA | 335-67-1 | | 412.989 > 368.9 | | | ND | 0.00 | NO | |
| 20 | L-PFOA | 335-67-1 | 9.19 | 412.989 > 368.9 | 3792058 | | 485.579 | 9.98 | NO | 97.1 |
| 21 | PFOA | 335-67-1 | | 412.989 > 368.9 | 3792058 | | 485.579 | | na | |
| 22 | M8PFOA | INT STD | 9.20 | 420.989 > 375.979 | 85048 | | 9.880 | | na | 98.8 |
| 23 | M2PFOA | INT STD | 9.19 | 415.032 > 369.968 | 87972 | | 8.322 | | na | 83.2 |
| 24 | 6:2FTS | 27619-97-2 | 9.15 | 426.989 > 406.921 | 196701 | | ND | 9.82 | NO | |
| 25 | M2-6:2FTS | INT STD | 9.15 | 428.989 > 408.917 | 16173 | | 34.510 | | na | 345.1 |
| 26 | PFHpS | 375-92-8 | 9.29 | 448.926 > 80.257 | 167010 | | 448.266 | 0.84 | NO | 94.4 |
| 27 | PFNA | 375-95-1 | 9.95 | 462.989 > 418.931 | 3262202 | | 485.252 | 4.54 | NO | 97.1 |
| 28 | M9PFNA | INT STD | 9.95 | 472.053 > 426.947 | 82061 | | 9.689 | | na | 96.9 |
| 29 | br-PFOS | 1763-23-1 | 9.81 | 498.989 > 80.294 | 99553 | M5 | 99.112 | 4.46 | NO | 99.1 |
| 30 | L-PFOS | 1763-23-1 | 10.00 | 498.989 > 80.294 | 193598 | | 348.655 | 1.51 | YES | 95.5 |
| 31 | PFOS | 1763-23-1 | | 498.989 > 80.294 | 293151 | | 447.767 | | na | |
| 32 | M4PFOS | INT STD | 10.00 | 503.032 > 80.306 | 5277 | | 7.555 | | na | 75.6 |
| 33 | M8PFOS | INT STD | 10.00 | 507.053 > 80.294 | 5658 | | 10.450 | | na | 104.5 |
| 34 | PFDA | 335-76-2 | 10.57 | 513.053 > 468.906 | 2803895 | | 493.667 | 6.72 | NO | 98.7 |
| 35 | M2PFDA | INT STD | 10.57 | 515.053 > 469.934 | 66127 | | 7.490 | | na | 74.9 |
| 36 | M6PFDA | INT STD | 10.57 | 519.053 > 473.931 | 66210 | | 9.688 | | na | 96.9 |
| 37 | 8:2FTS | 39108-34-4 | 10.56 | 526.926 > 506.818 | 122449 | | ND | | na | |
| 38 | M2-8:2FTS | INT STD | 10.56 | 529.053 > 508.945 | 8146 | | 29.628 | | na | 296.3 |
| 39 | PFNS | 68259-12-1 | 10.61 | 548.989 > 80.249 | 212195 | | 403.183 | 1.26 | NO | 84.0 |


all concentration units in (ng/mL)

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Printed: Monday, November 18, 2019 13:43:05 Eastern Standard Time

**ID: IA2-537STD500**
**Name: I13442**
**Date: 18-Nov-2019**
**Time: 12:49:53**
**Description: WG1310082,,537_190904_9**
**Instrument: XEVO-TQSmicro#QEB0050**
**User: LCMS02:JW**
**Inlet Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\LCMS_537_ISO_B**
**Tune Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\181009_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

| | Name | CAS | RT | Trace | Area | M Flag | Conc (ng/mL) | Ion Ratio | Ratio Flag | %Rec |
|---|---|---|---|---|---|---|---|---|---|---|
| 40 | d3-NMeFOSAA | INT STD | 10.96 | 573.096 > 418.987 | 10688 | | 13.732 | | na | 137.3 |
| 41 | br-NMeFOSAA | 2355-31-9 | | 570.053 > 418.917 | | | ND | 0.00 | NO | |
| 42 | L-NMeFOSAA | 2355-31-9 | 10.96 | 570.053 > 418.917 | 463842 | | 465.644 | 2.68 | NO | 93.1 |
| 43 | NMeFOSAA | 2355-31-9 | | 570.053 > 418.917 | 463842 | | 465.644 | | na | |
| 44 | PFUnA | 2058-94-8 | 11.11 | 562.989 > 518.903 | 2591577 | | 494.577 | 8.06 | NO | 98.9 |
| 45 | M7-PFUDA | INT STD | 11.11 | 570.053 > 524.923 | 54794 | | 9.037 | | na | 90.4 |
| 46 | PFDS | 335-77-3 | 11.13 | 598.926 > 80.314 | 148916 | | 395.857 | 0.98 | NO | 82.0 |
| 47 | FOSA | 754-91-6 | 11.01 | 497.989 > 78.245 | 949921 | | 495.235 | 125.07 | NO | 99.0 |
| 48 | M8FOSA | INT STD | 11.01 | 506.053 > 78.286 | 18052 | | 11.172 | | na | 111.7 |
| 49 | d5-NEtFOSAA | INT STD | 11.25 | 589.117 > 418.929 | 9097 | | 13.230 | | na | 132.3 |
| 50 | br-NEtFOSAA | 2991-50-6 | | 583.989 > 418.927 | | | ND | | YES | |
| 51 | L-NEtFOSAA | 2991-50-6 | 11.25 | 583.989 > 418.927 | 417755 | | 486.475 | 2.52 | NO | 97.3 |
| 52 | NEtFOSAA | 2991-50-6 | | 583.989 > 418.927 | 417755 | | 486.475 | | na | |
| 53 | PFDoA | 307-55-1 | 11.59 | 612.989 > 568.967 | 2884692 | | 482.251 | 13.98 | NO | 96.5 |
| 54 | MPFDOA | INT STD | 11.59 | 614.989 > 569.92 | 70624 | | 10.383 | | na | 103.8 |
| 55 | PFTrDA | 72629-94-8 | 12.00 | 663.053 > 618.969 | 1976668 | | 730.913 | 11.31 | NO | 146.2 |
| 56 | PFTA | 376-06-7 | 12.36 | 713.053 > 668.976 | 2216106 | | 484.540 | 8.77 | NO | 96.9 |
| 57 | M2PFTEDA | INT STD | 12.36 | 715.053 > 669.945 | 57111 | | 10.571 | | na | 105.7 |
| 58 | M3HFPO-DA | INT STD | 7.37 | 331.989 > 286.995 | 15713 | | 416.633 | | na | 208.3 |
| 59 | HFPO-DA | 13252-13-6 | 7.37 | 284.819 > 169.094 | 1248450 | | 9569.328 | 2.65 | YES | 95.7 |
| 60 | ADONA | 958445-44-8 | 8.43 | 376.926 > 251.005 | 5047635 | | 451.460 | | na | 95.4 |
| 61 | PFHxDA | | 12.78 | 813.053 > 769.005 | 1578940 | | 493.304 | | na | 98.7 |
| 62 | PFODA | | 12.98 | 912.989 > 869.032 | 1172349 | | 495.065 | | na | 99.0 |
| 63 | M2PFHxDA | | 12.78 | 815.372 > 770.158 | 11692 | | 10.167 | | na | 101.7 |
| 64 | PFDoS | | 11.99 | 698.649 > 79.853 | 148644 | | 387.613 | 1.96 | YES | 77.5 |
| 65 | 10:2FTS | | 11.60 | 626.862 > 606.896 | 120841 | | ND | | na | |
| 66 | 9CL-PF3ONS | | 10.35 | 530.862 > 350.843 | 1621731 | | 436.130 | | na | 93.6 |
| 67 | 11CL-PFOUdS | | 11.39 | 630.862 > 450.854 | 1378542 | | 439.759 | | na | 93.4 |
| 68 | NMeFOSA | | 11.63 | 511.804 > 168.906 | 381907 | | 468.985 | 1.48 | NO | 93.8 |
| 69 | d3-NMeFOSA | | 11.62 | 514.84 > 168.917 | 10957 | | 13.002 | | na | 130.0 |
| 70 | NEtFOSA | | 11.92 | 525.84 > 168.92 | 425931 | | 495.631 | 5.72 | NO | 99.1 |
| 71 | d5-NEtFOSA | | 11.91 | 530.904 > 168.919 | 9808 | | 11.899 | | na | 119.0 |
| 72 | NMeFOSE | | 11.63 | 615.862 > 58.9 | 415137 | | 470.976 | | na | 94.2 |
| 73 | d7-NMeFOSE | | 11.61 | 622.84 > 58.964 | 4357 | | 11.040 | | na | 110.4 |
| 74 | NEtFOSE | | 11.91 | 629.862 > 58.899 | 502557 | | 408.793 | | na | 81.8 |
| 75 | d9-NEtFOSE | | 11.89 | 638.734 > 58.964 | 3114 | | 13.495 | | na | 135.0 |


all concentration units in (ng/mL)

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**Method: C:\MassLynx\Data\2019\191118_537ISO.PRO\MethDB\537ISO_Q_191118_DOD .mdb 18 Nov 2019 13:05:34**
**Calibration: C:\MassLynx\Data\2019\191118_537ISO.PRO\CurveDB\191118_ISO_ICAL.cdb 18 Nov 2019 13:41:42**

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**Description: WG1310082,,537_190904_9**
**User: LCMS02:JW**
**Vial: 1:B,2**
**Instrument: XEVO-TQSmicro#QEB0050**
**Inlet Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\LCMS_537_ISO_B**
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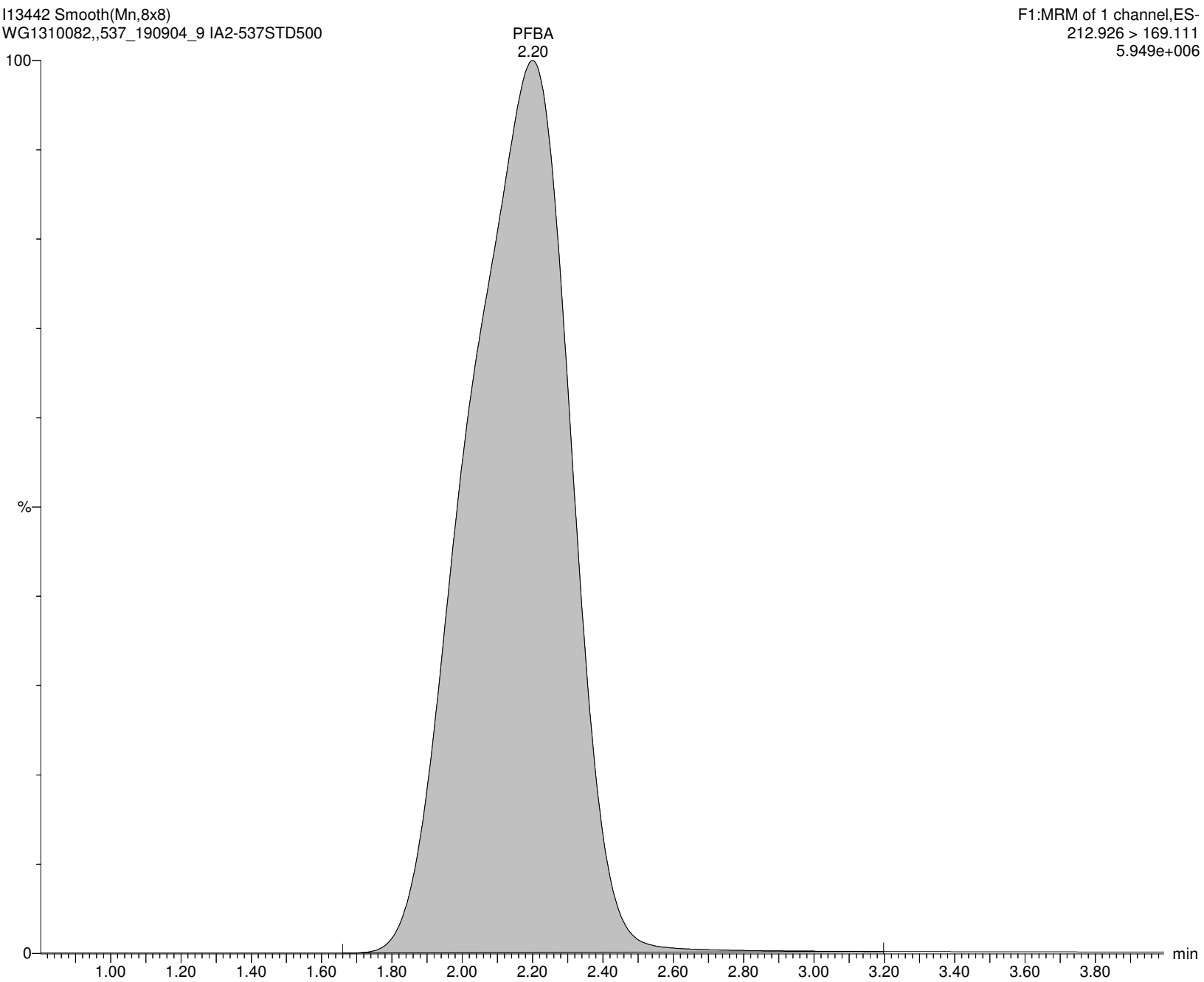
**MS Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**PFBA**





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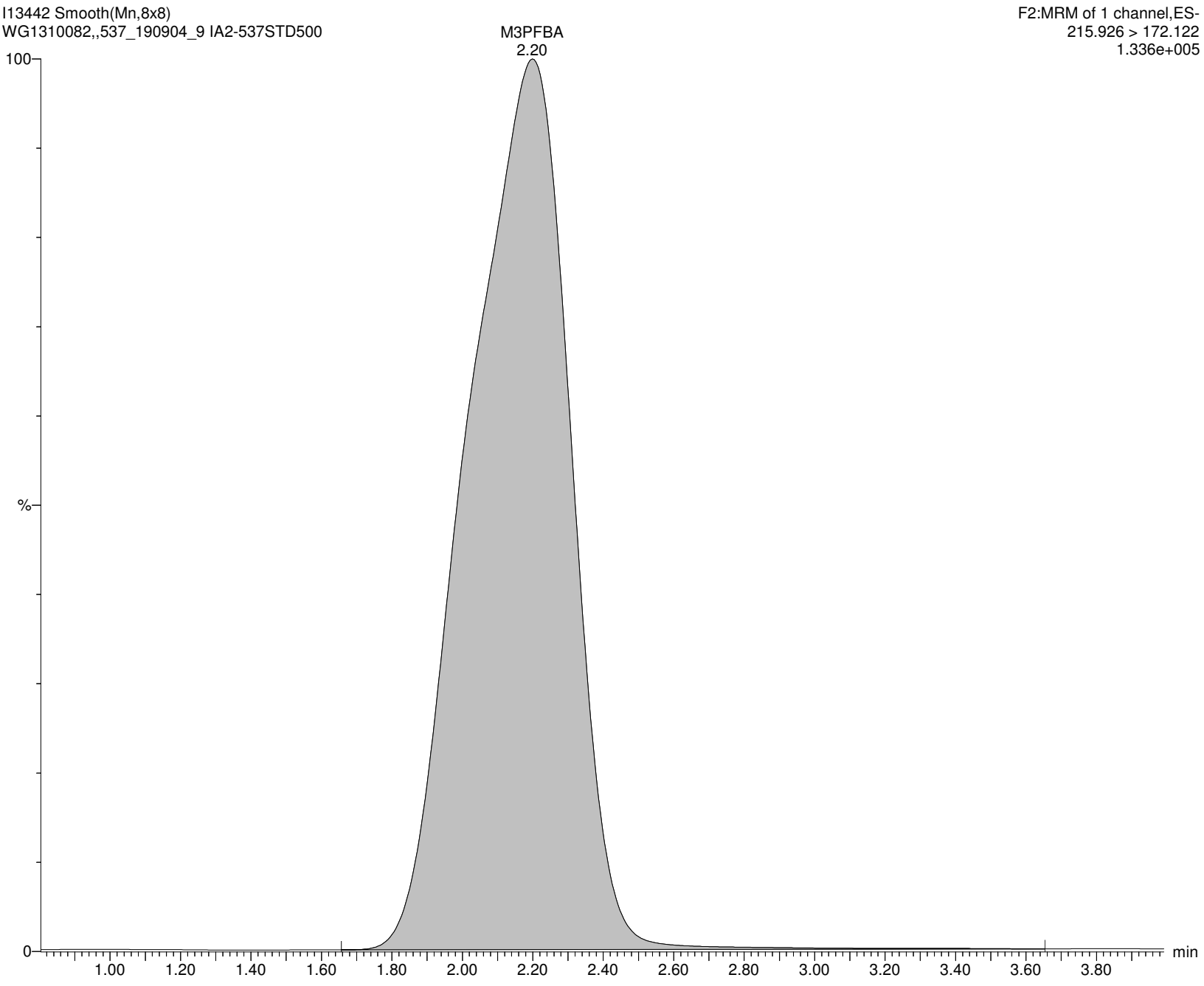
**M3PFBA**





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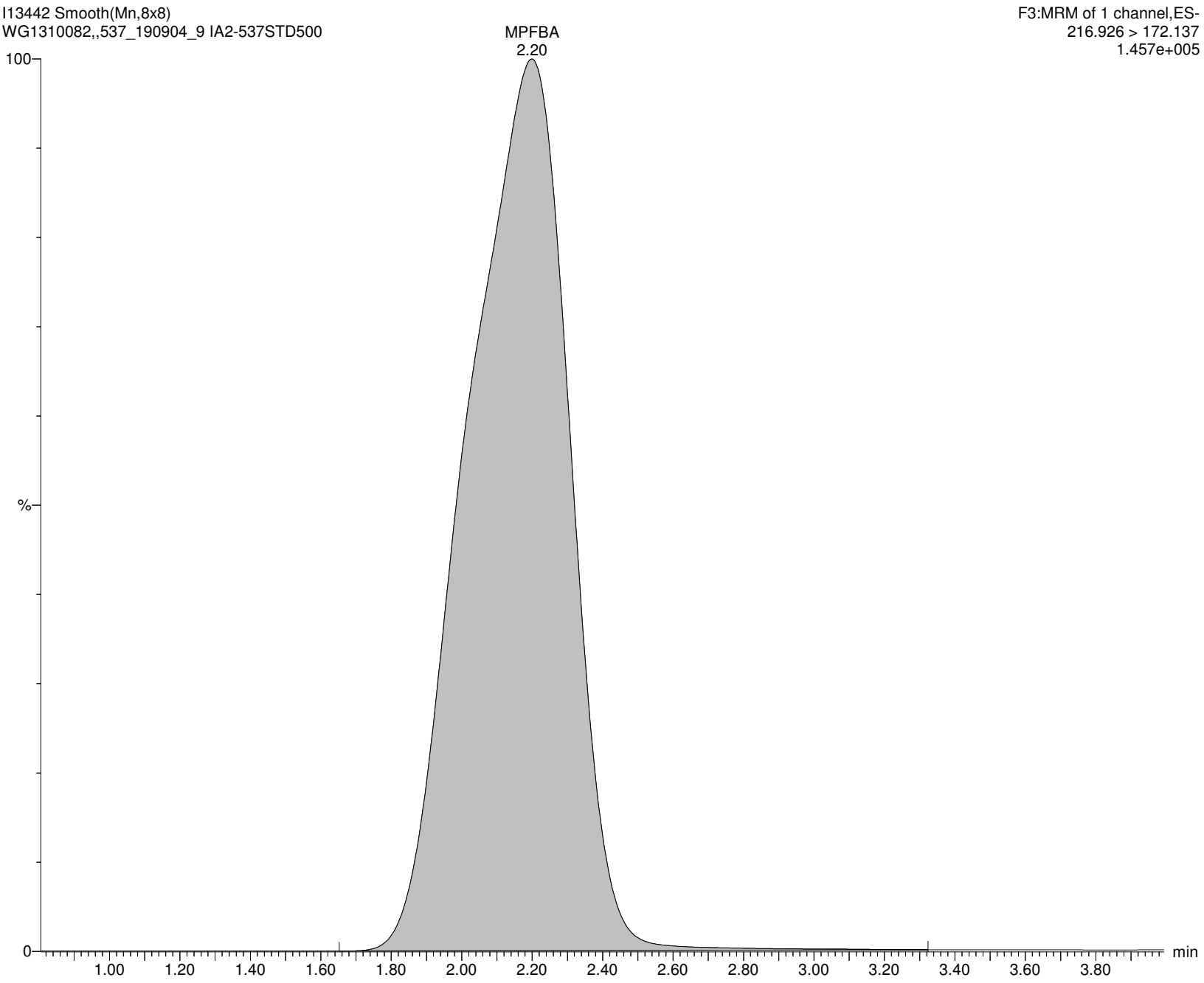
**MPFBA**





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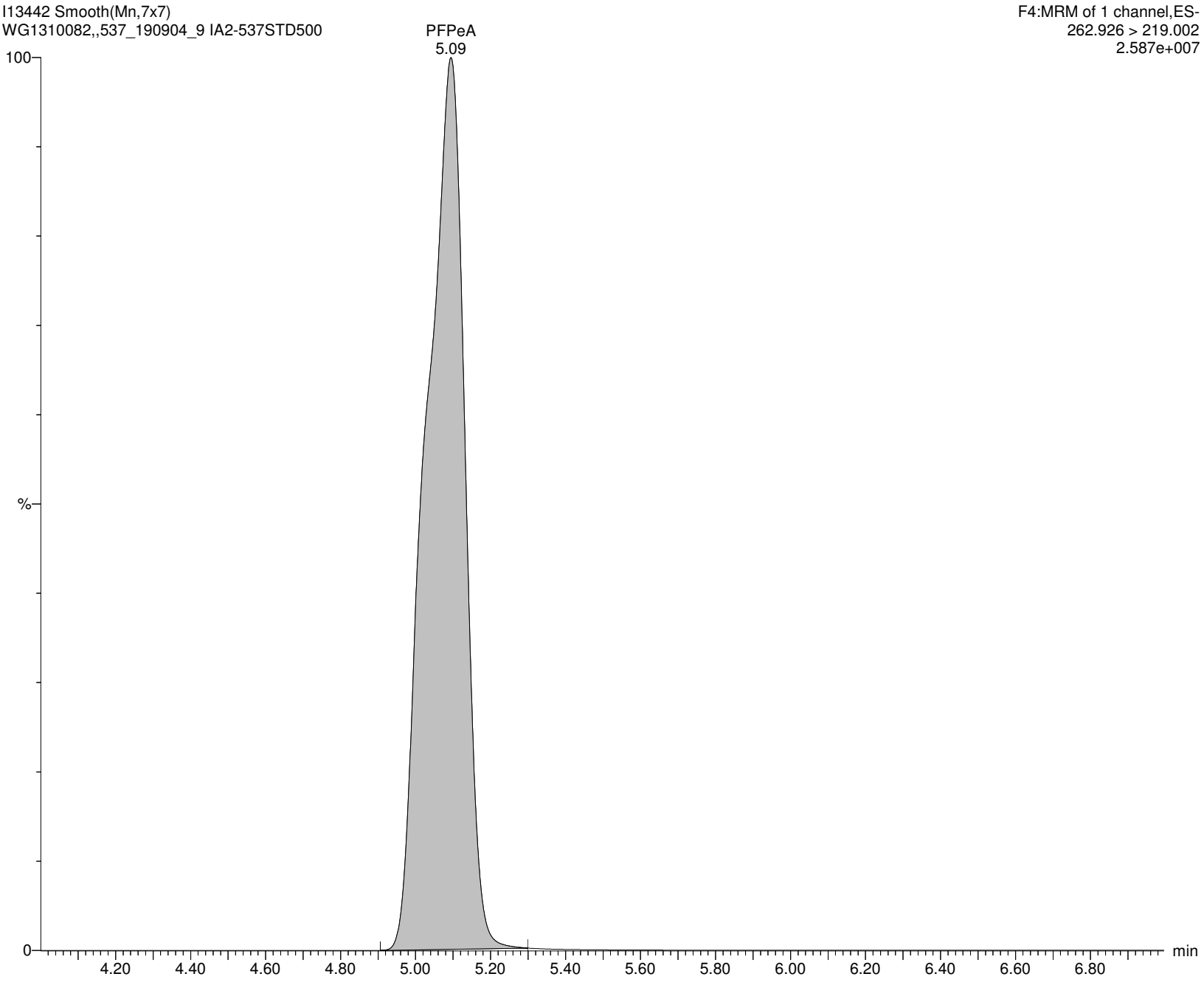
**PFPeA**





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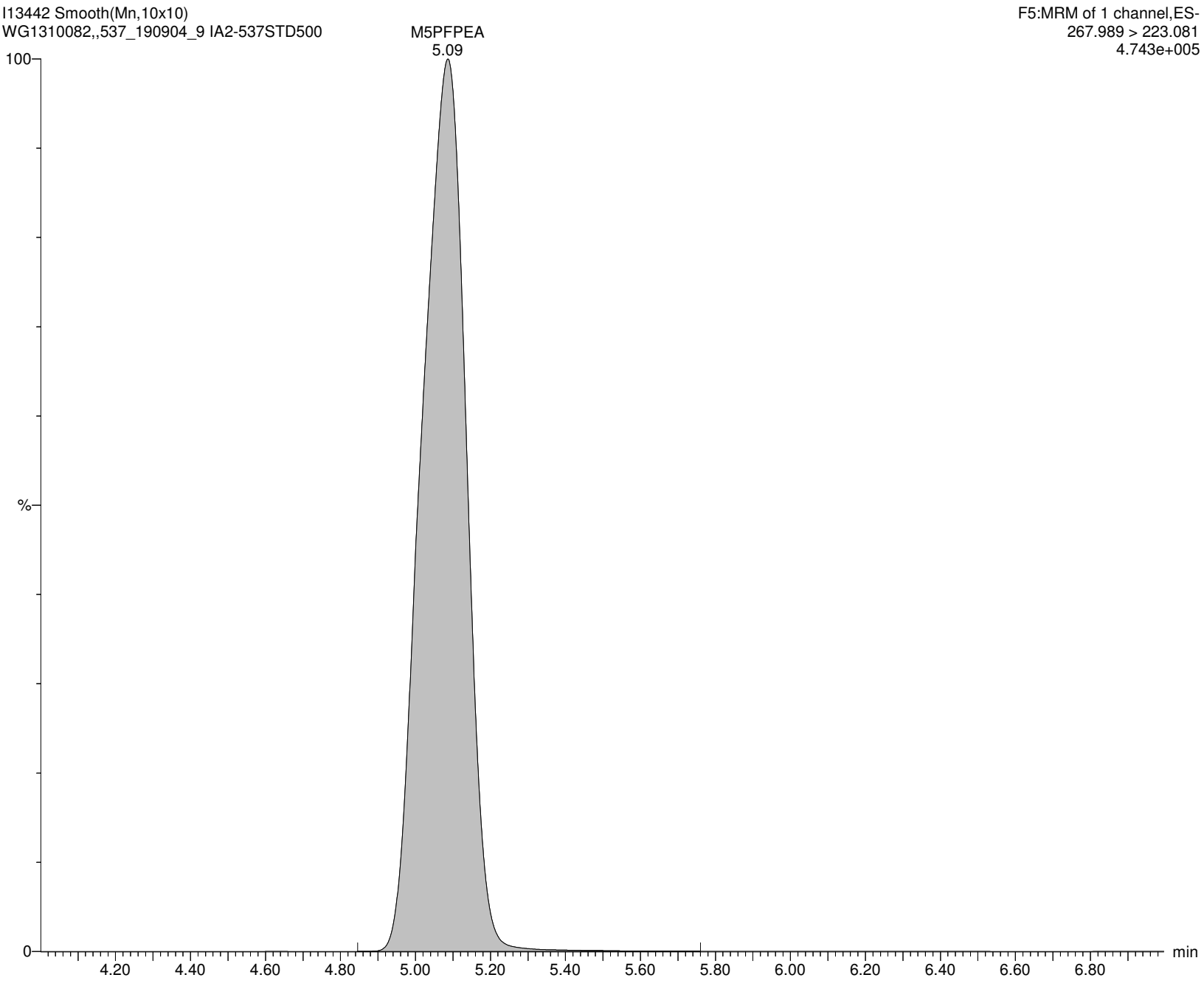
**M5PFPEA**





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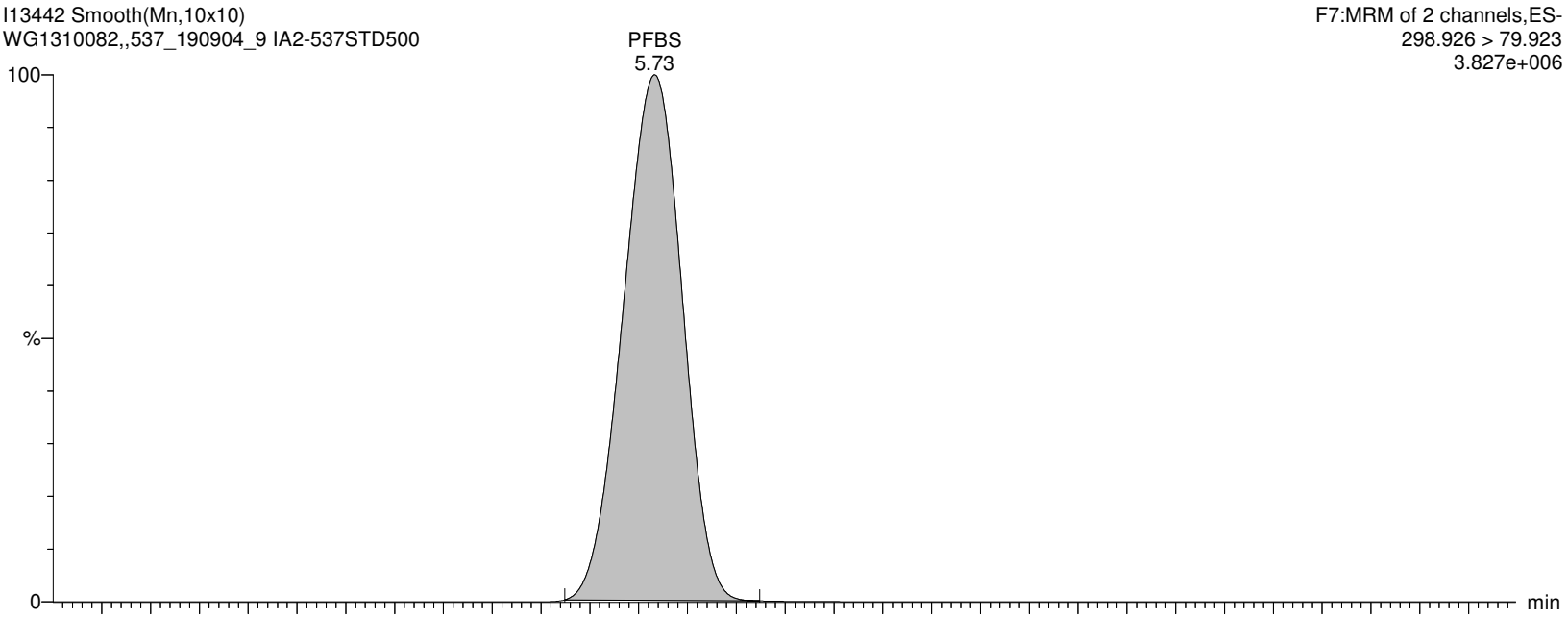
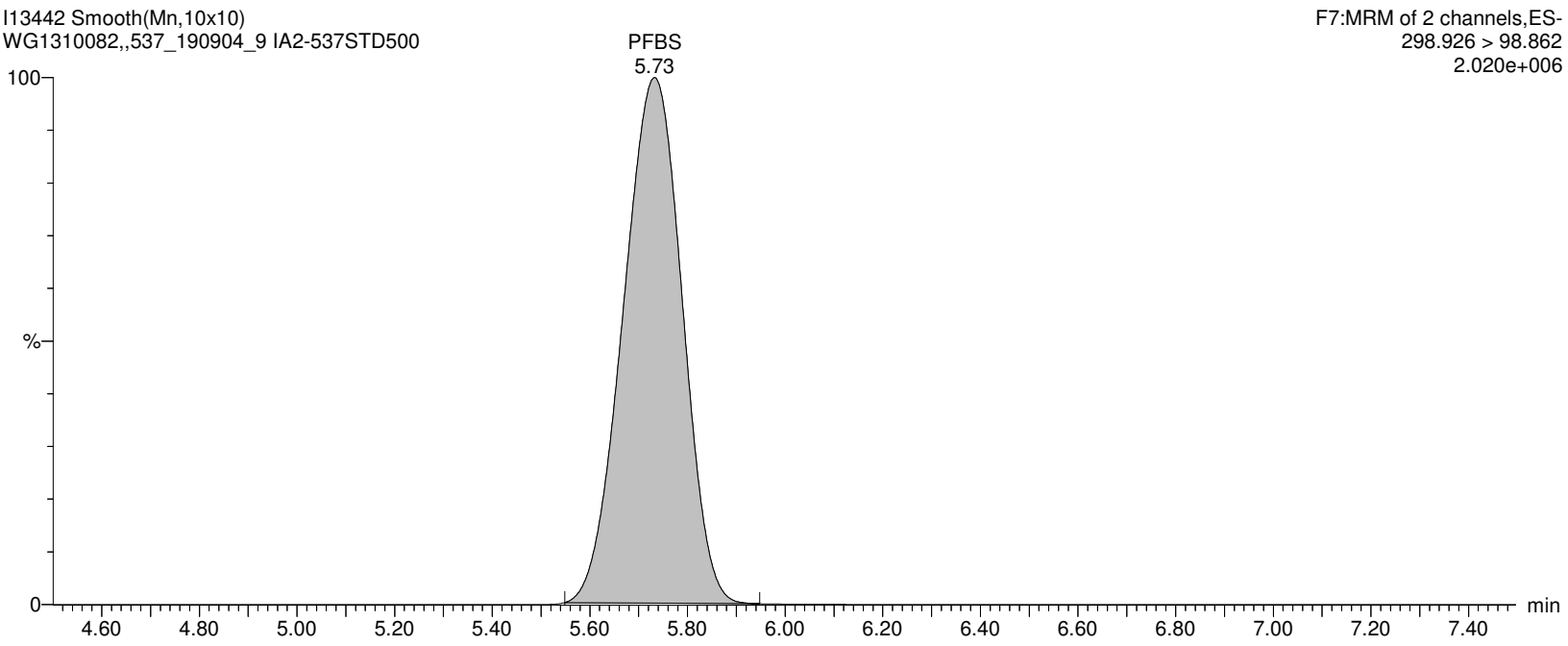
**PFBS**





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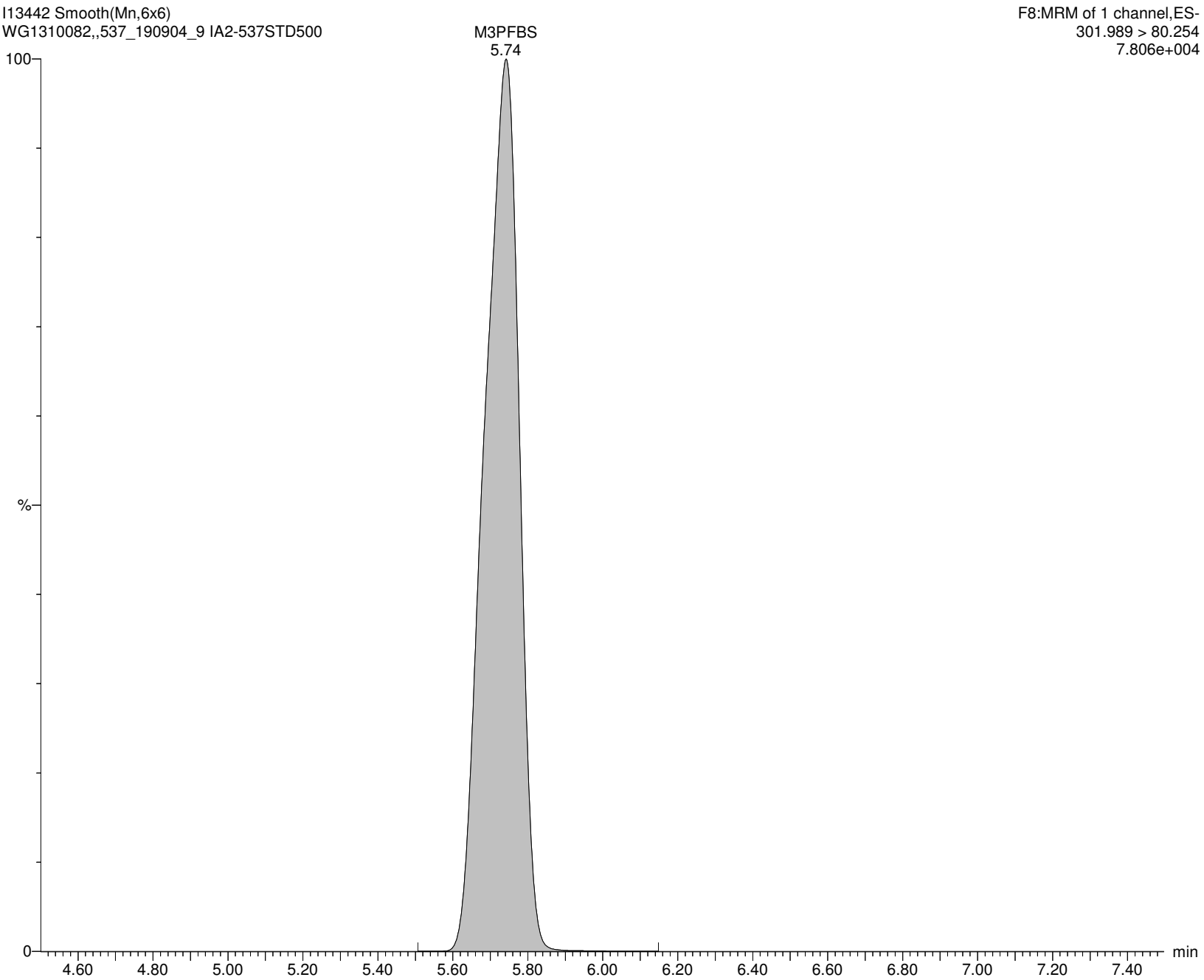
**M3PFBS**





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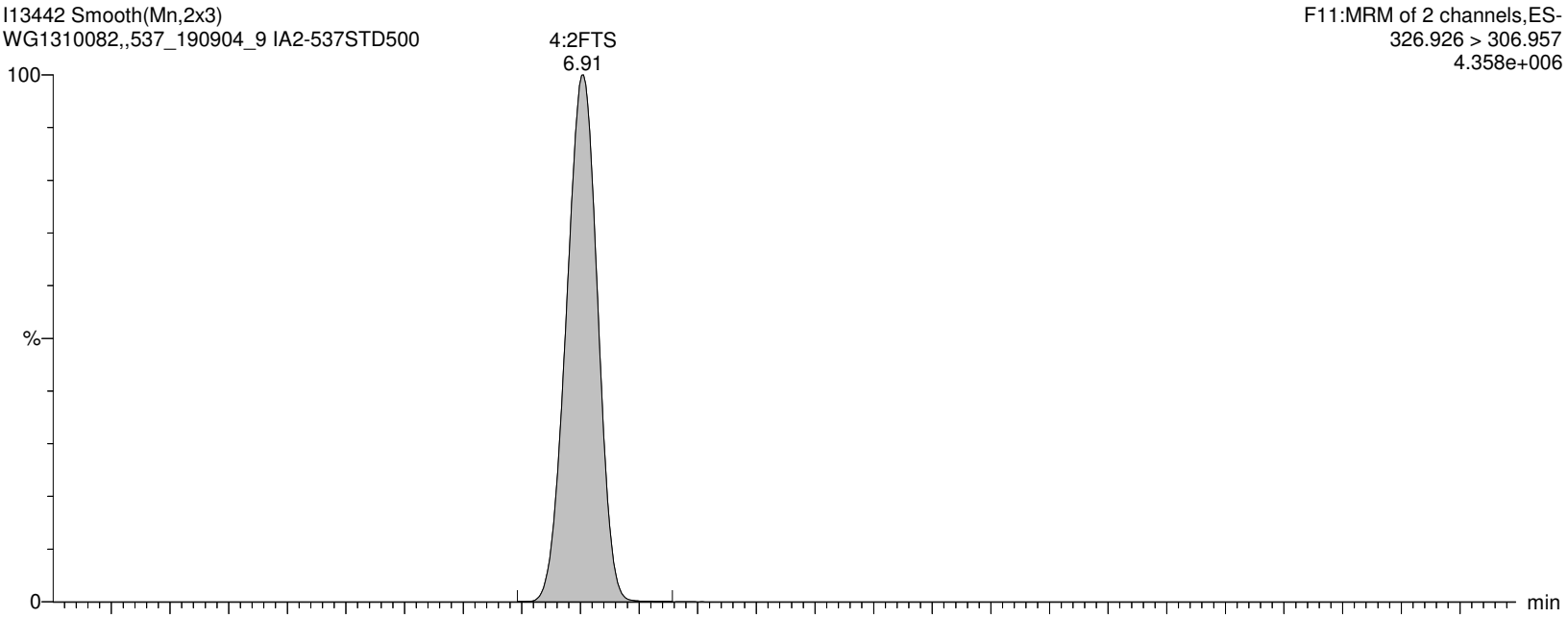
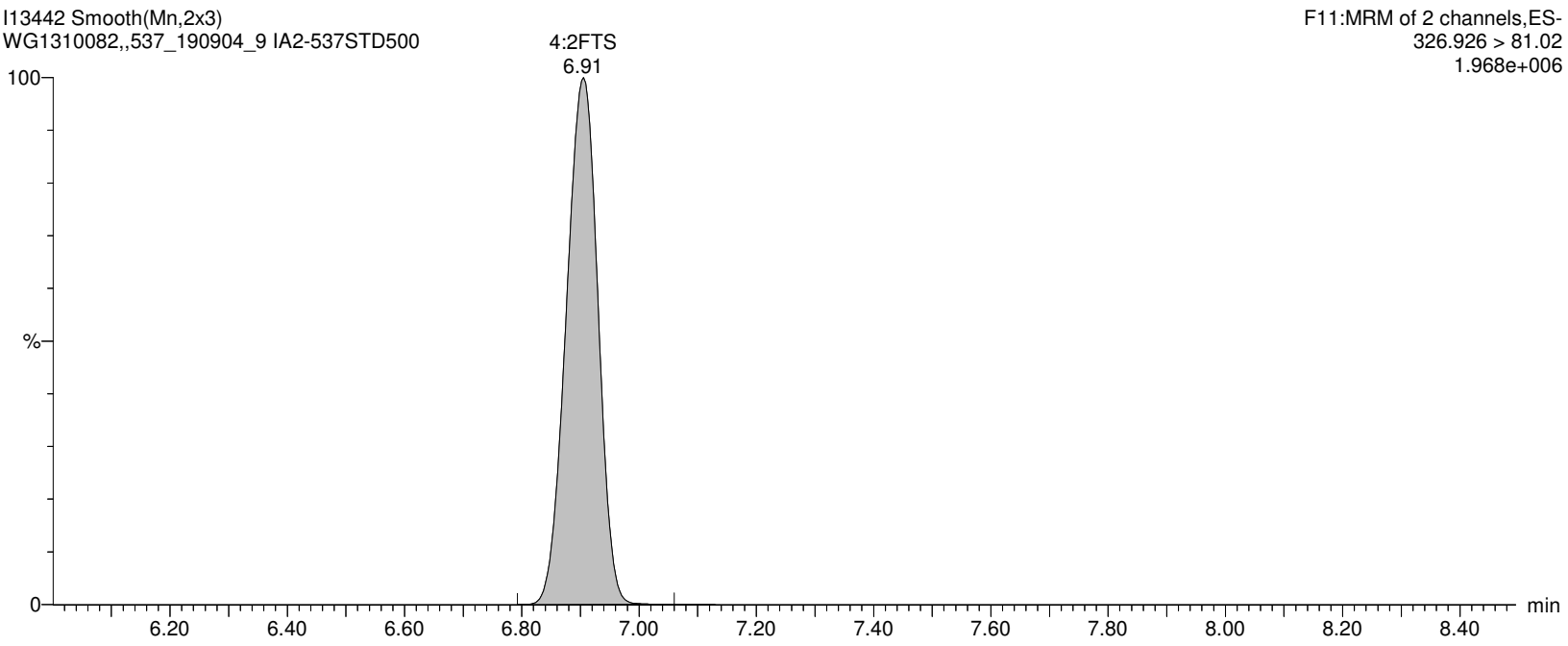
**4:2FTS**





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**Instrument: XEVO-TQSmicro#QEB0050**
**Inlet Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\LCMS_537_ISO_B**
**Tune Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\181009_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

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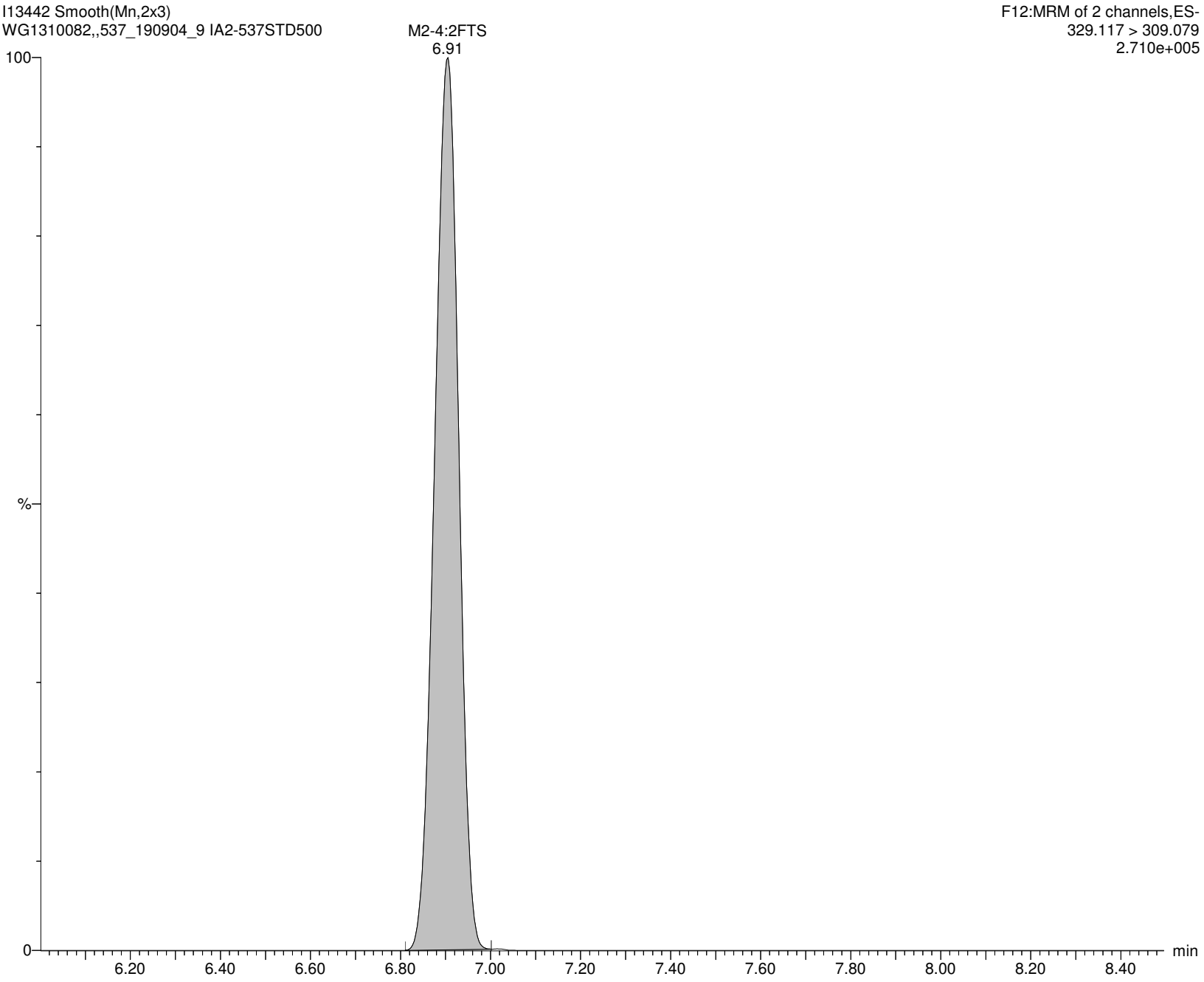



all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
Printed: Monday, November 18, 2019 13:43:05 Eastern Standard Time

**Name: I13442**
**ID: IA2-537STD500**
**Date: 18-Nov-2019**
**Time: 12:49:53**
**Description: WG1310082,,537_190904_9**
**User: LCMS02:JW**
**Vial: 1:B,2**
**Instrument: XEVO-TQSmicro#QEB0050**
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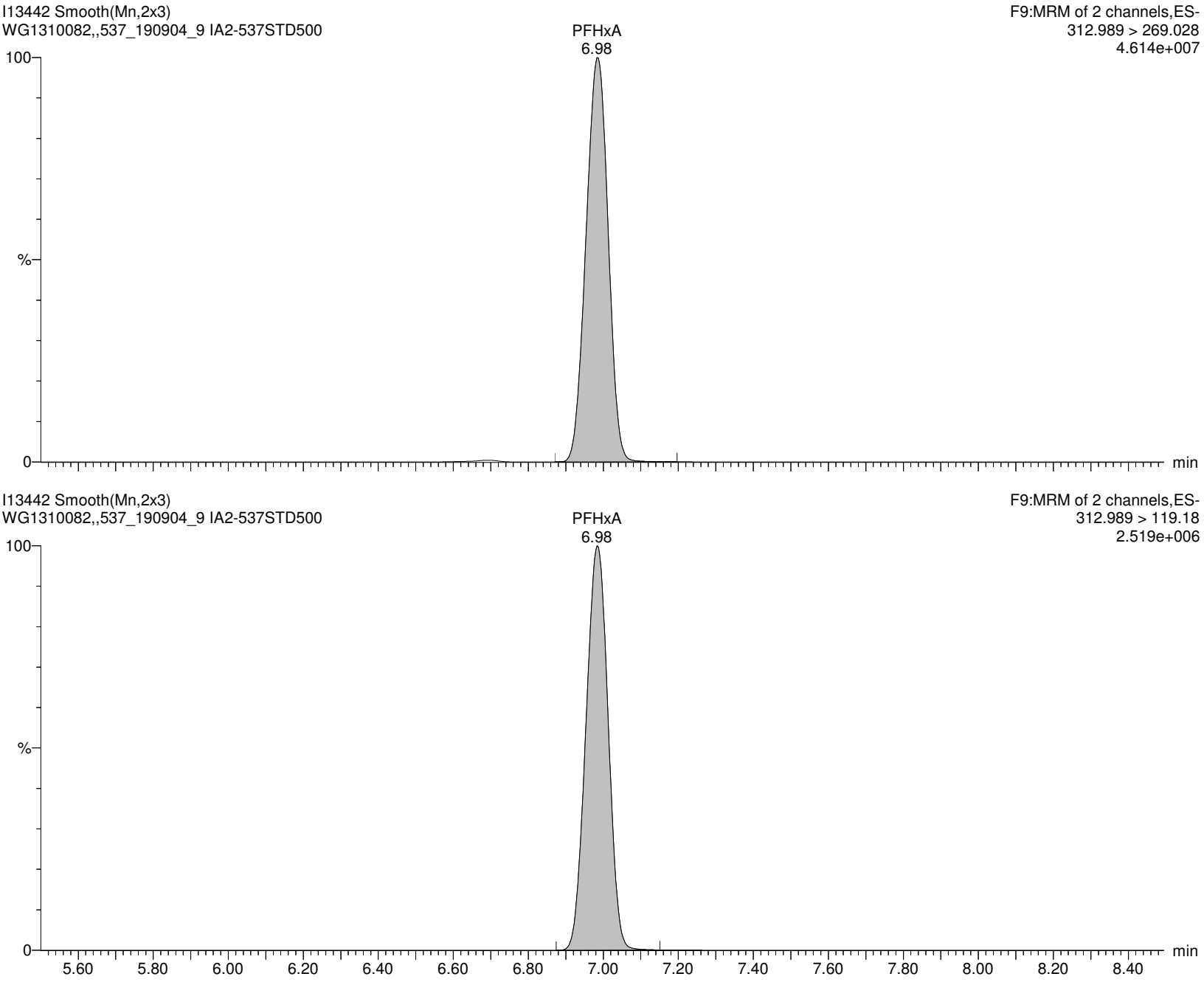
**PFHxA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
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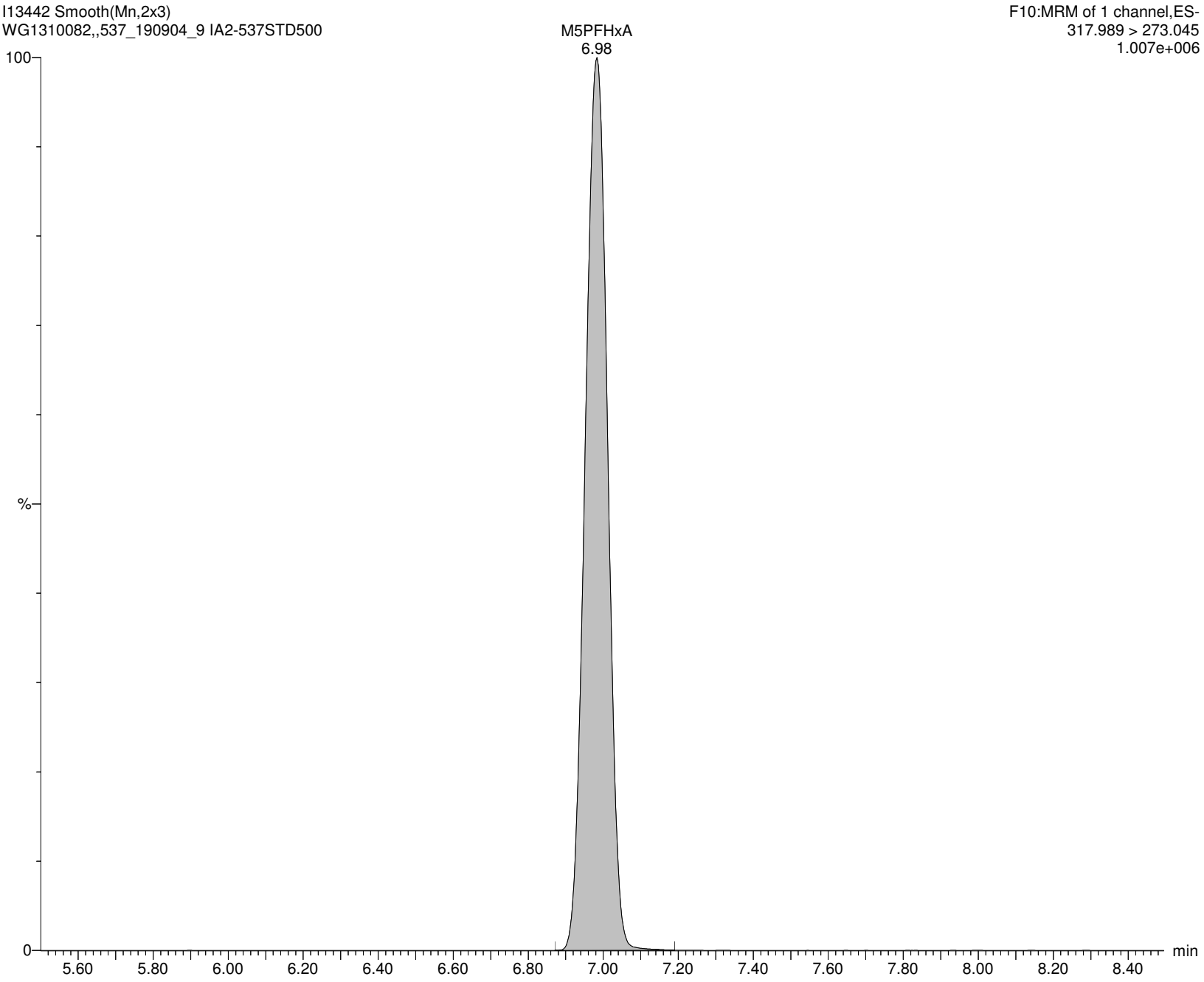



all concentration units in (ng/mL)

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Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
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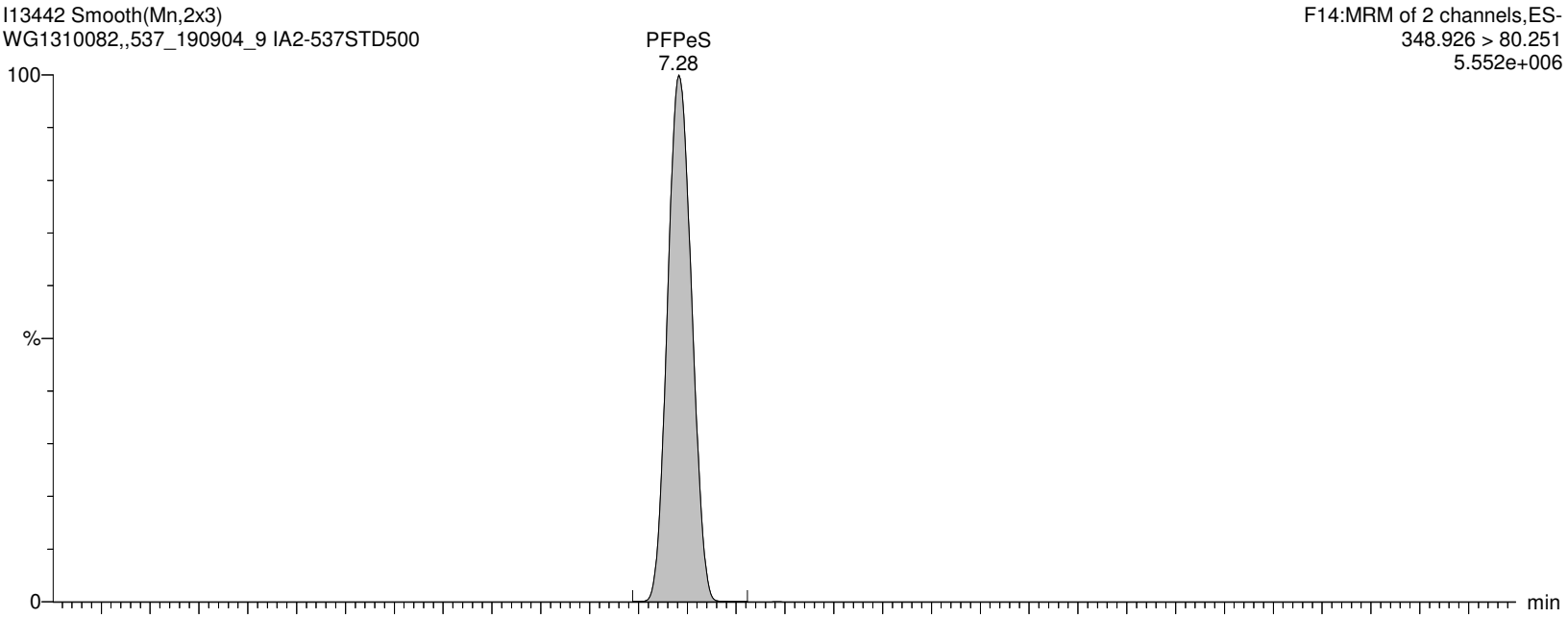


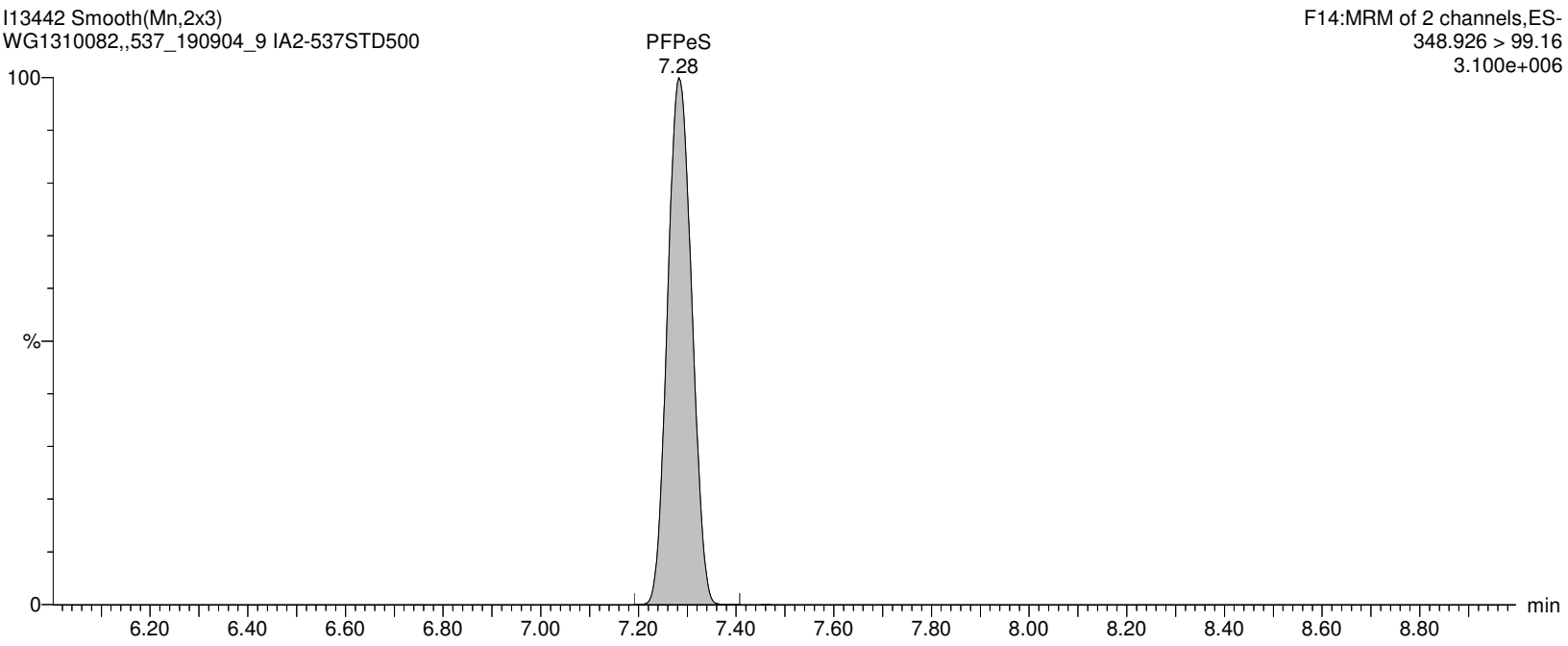



all concentration units in (ng/mL)

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Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
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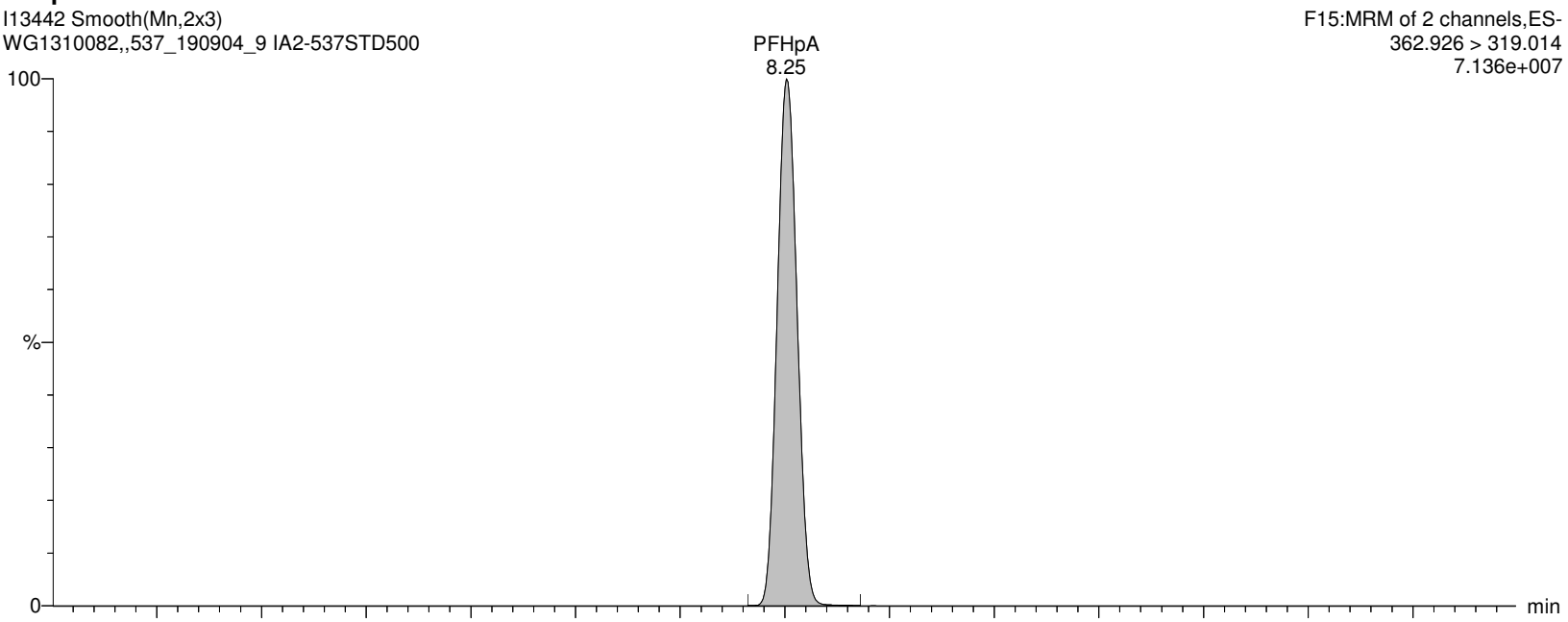
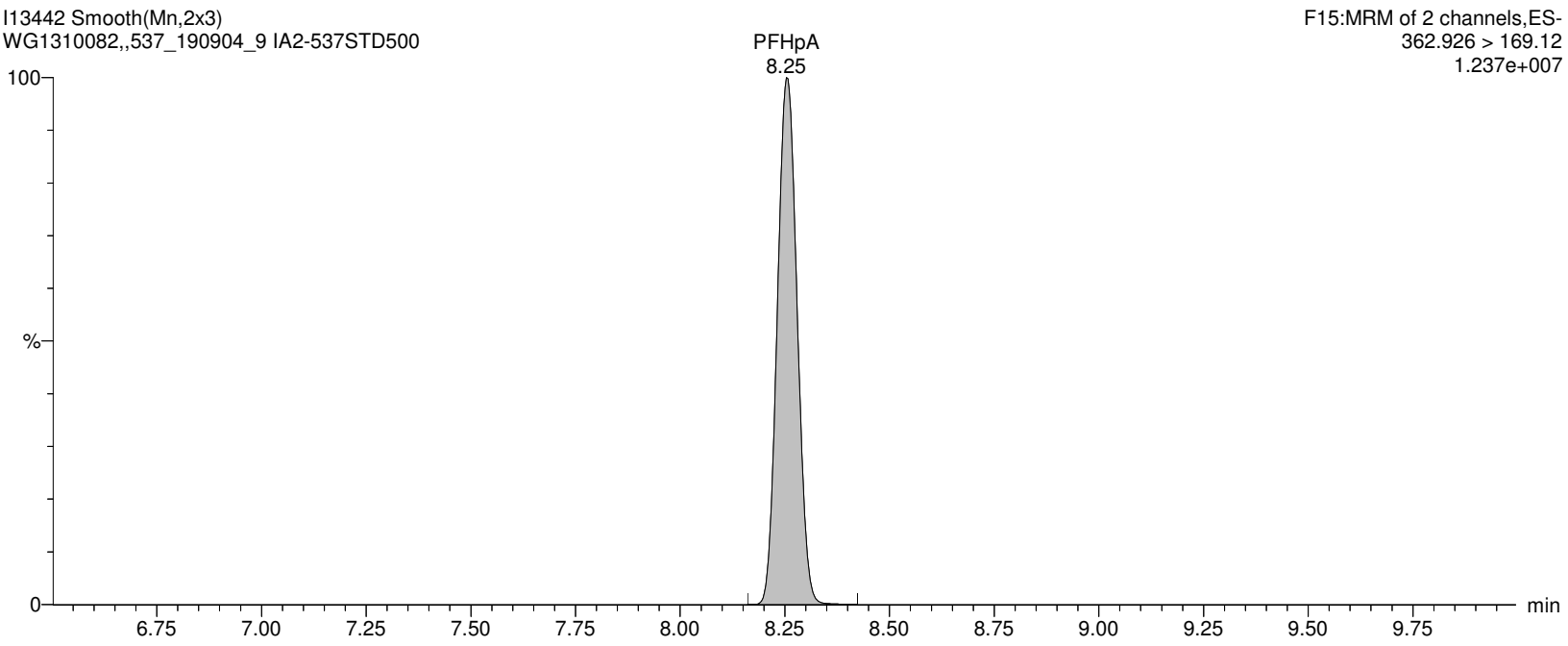
**PFHpA**





all concentration units in (ng/mL)

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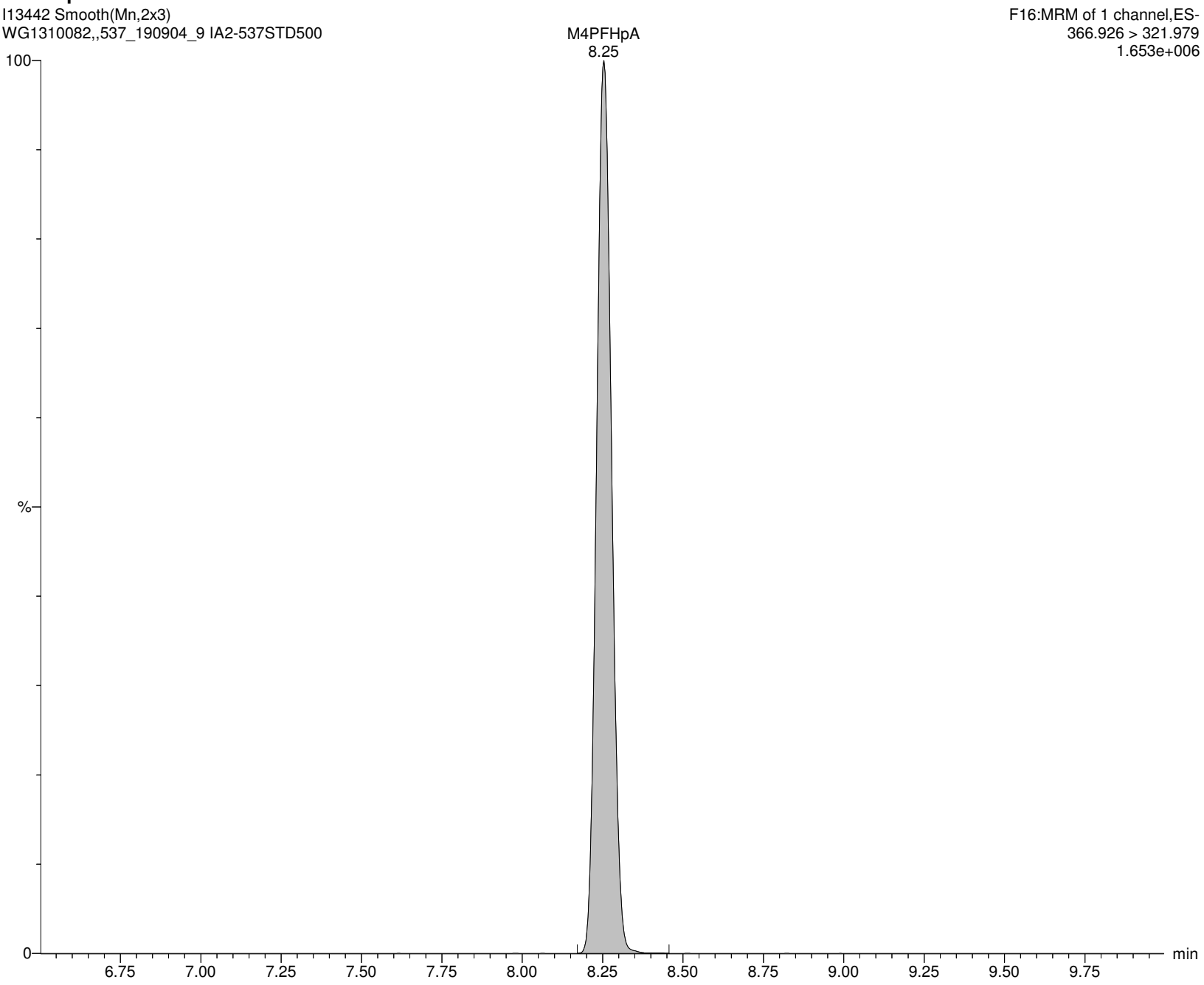
**M4PFHpA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
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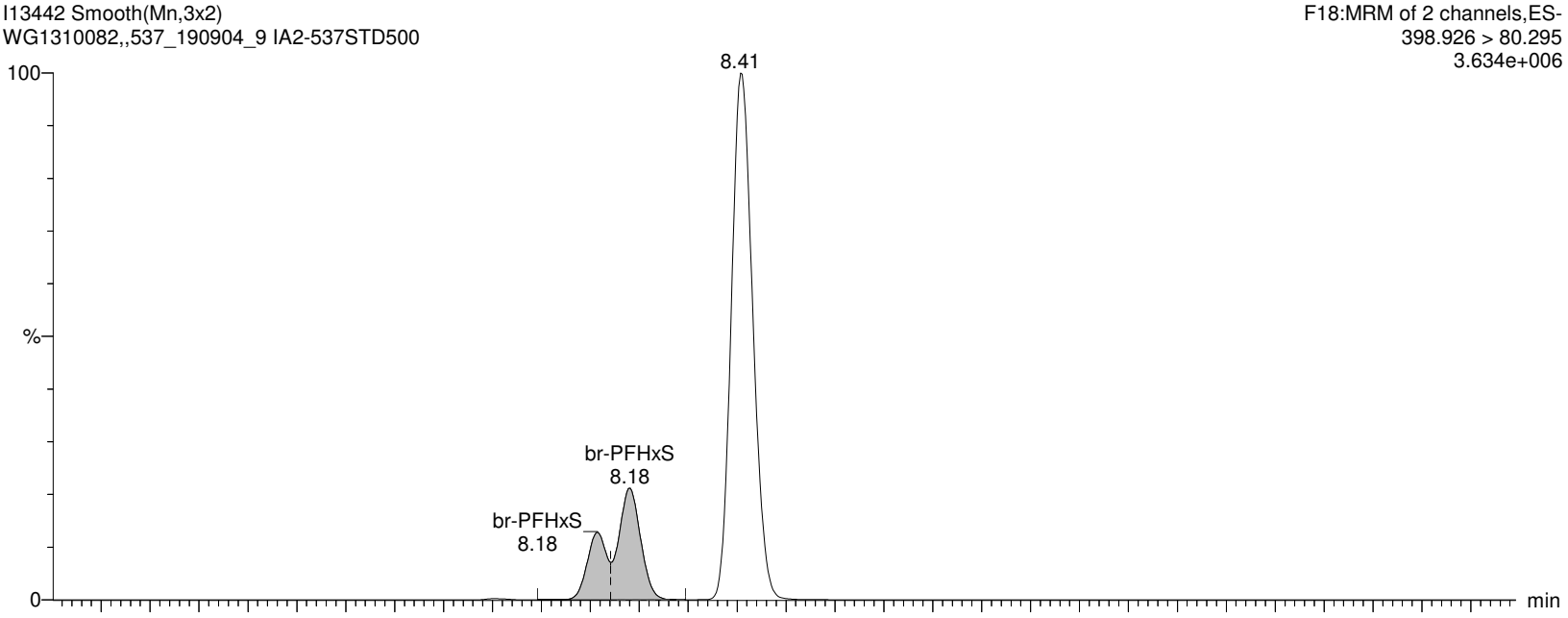
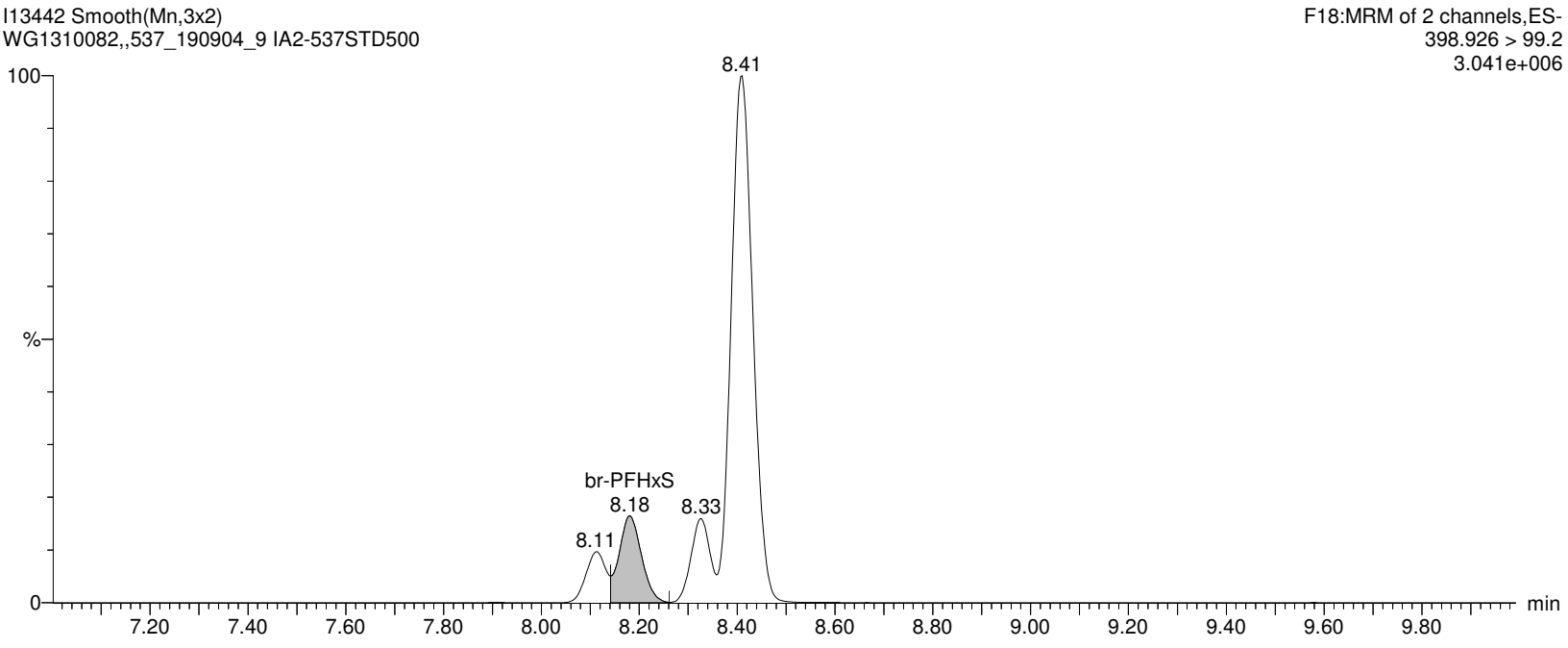
**br-PFHxS**





all concentration units in (ng/mL)

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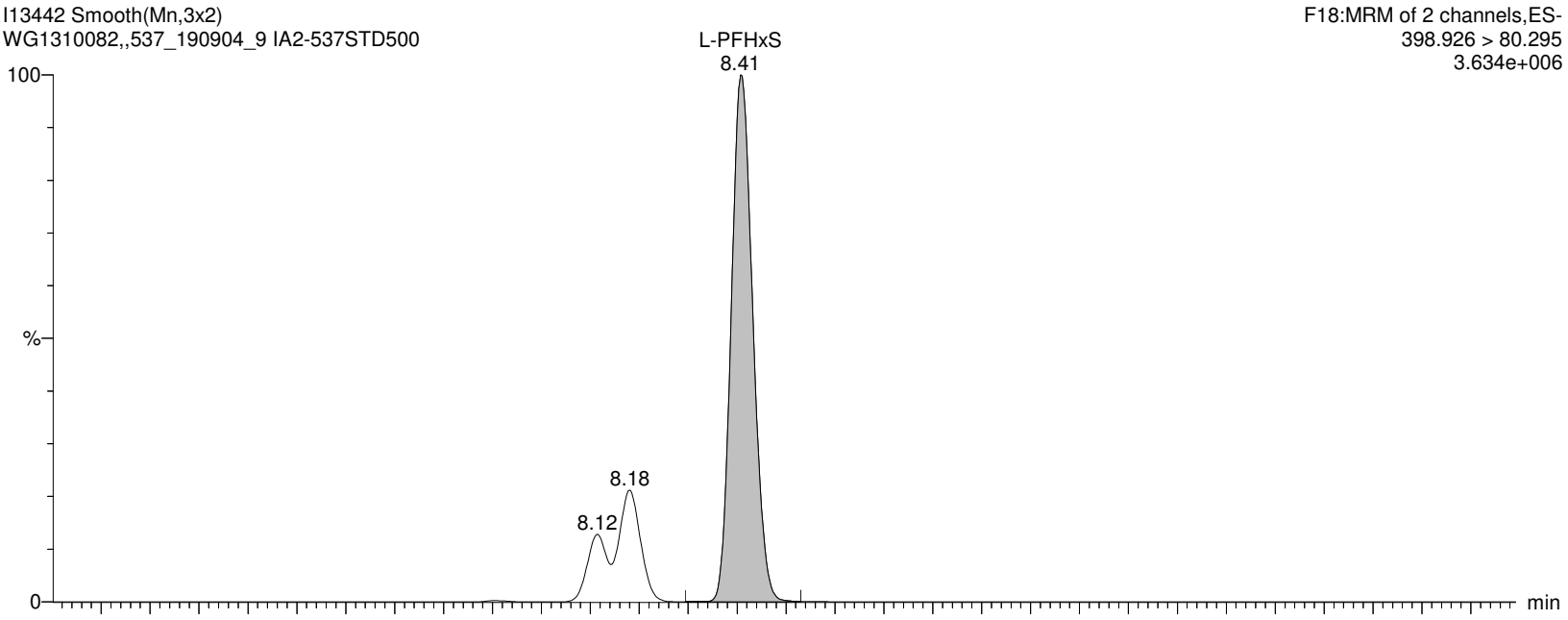
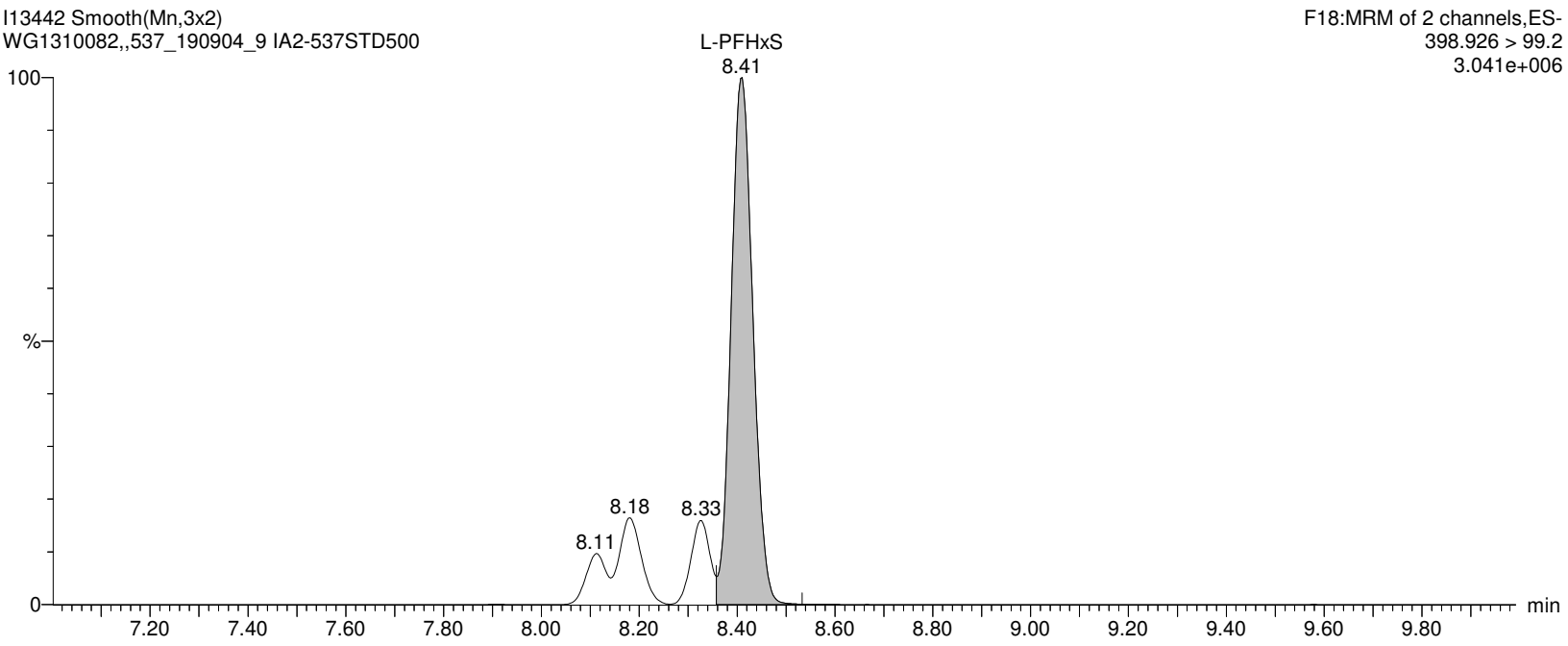
**L-PFHxS**





all concentration units in (ng/mL)

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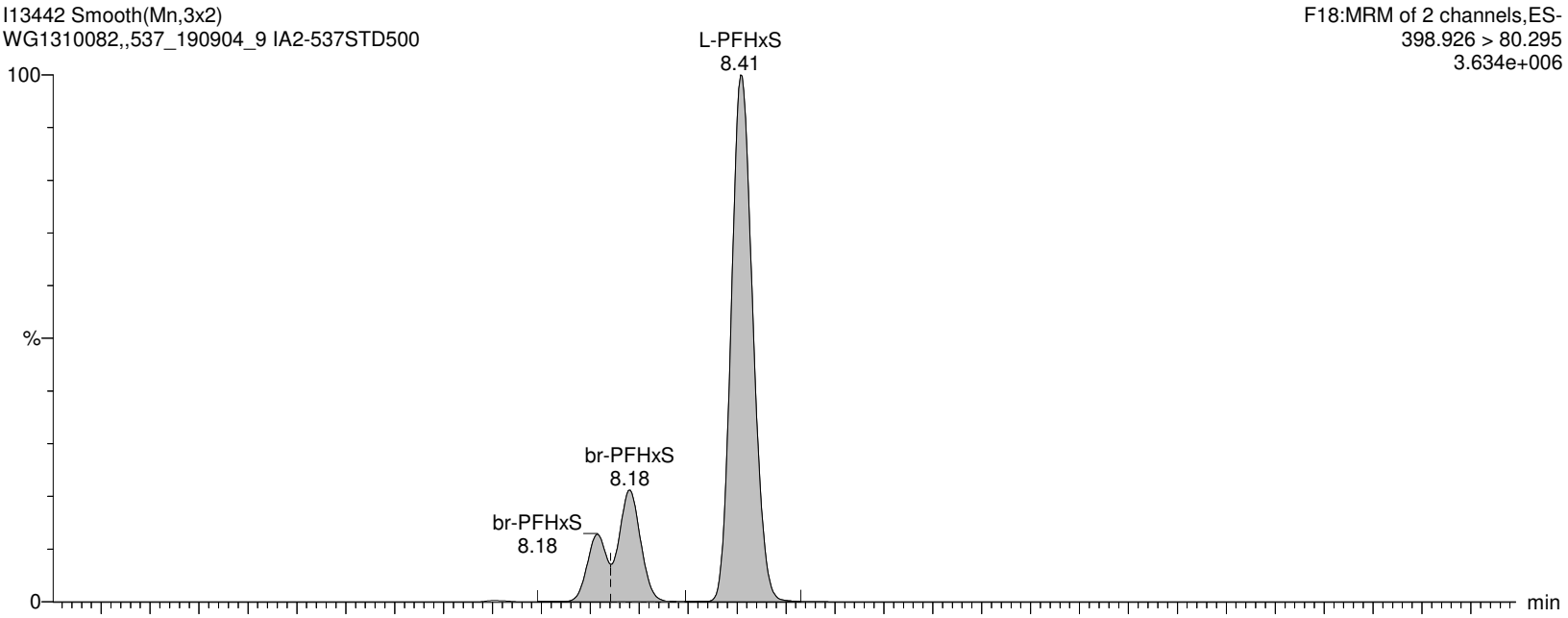
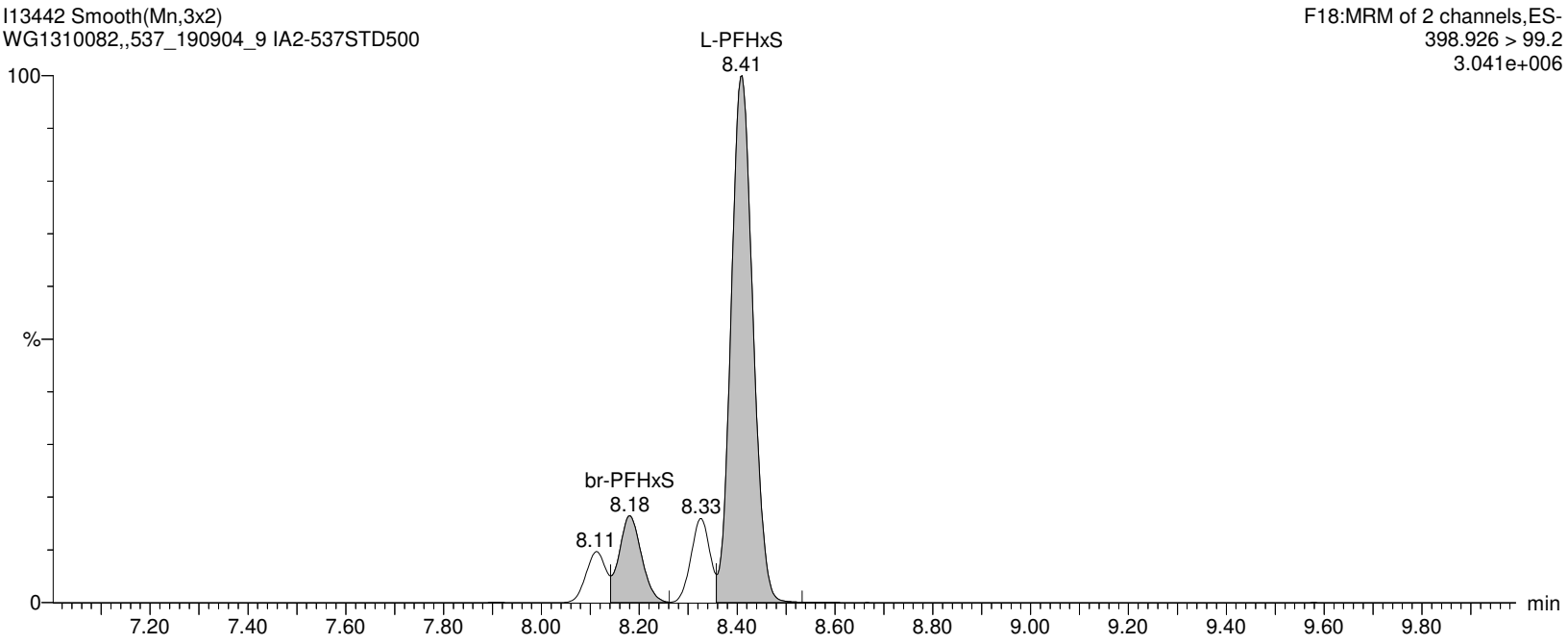
**PFHxS**





all concentration units in (ng/mL)

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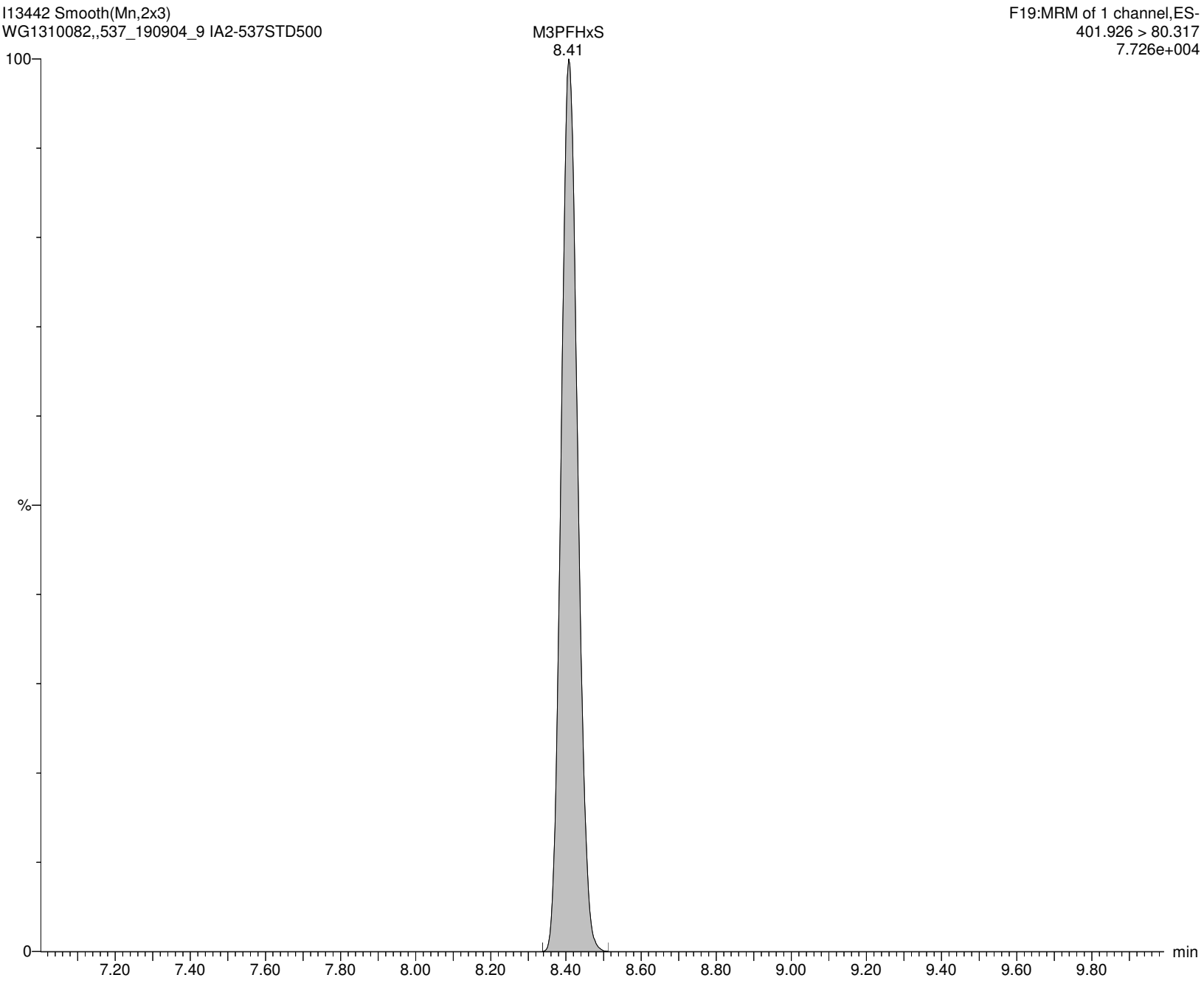
**M3PFHxS**





all concentration units in (ng/mL)

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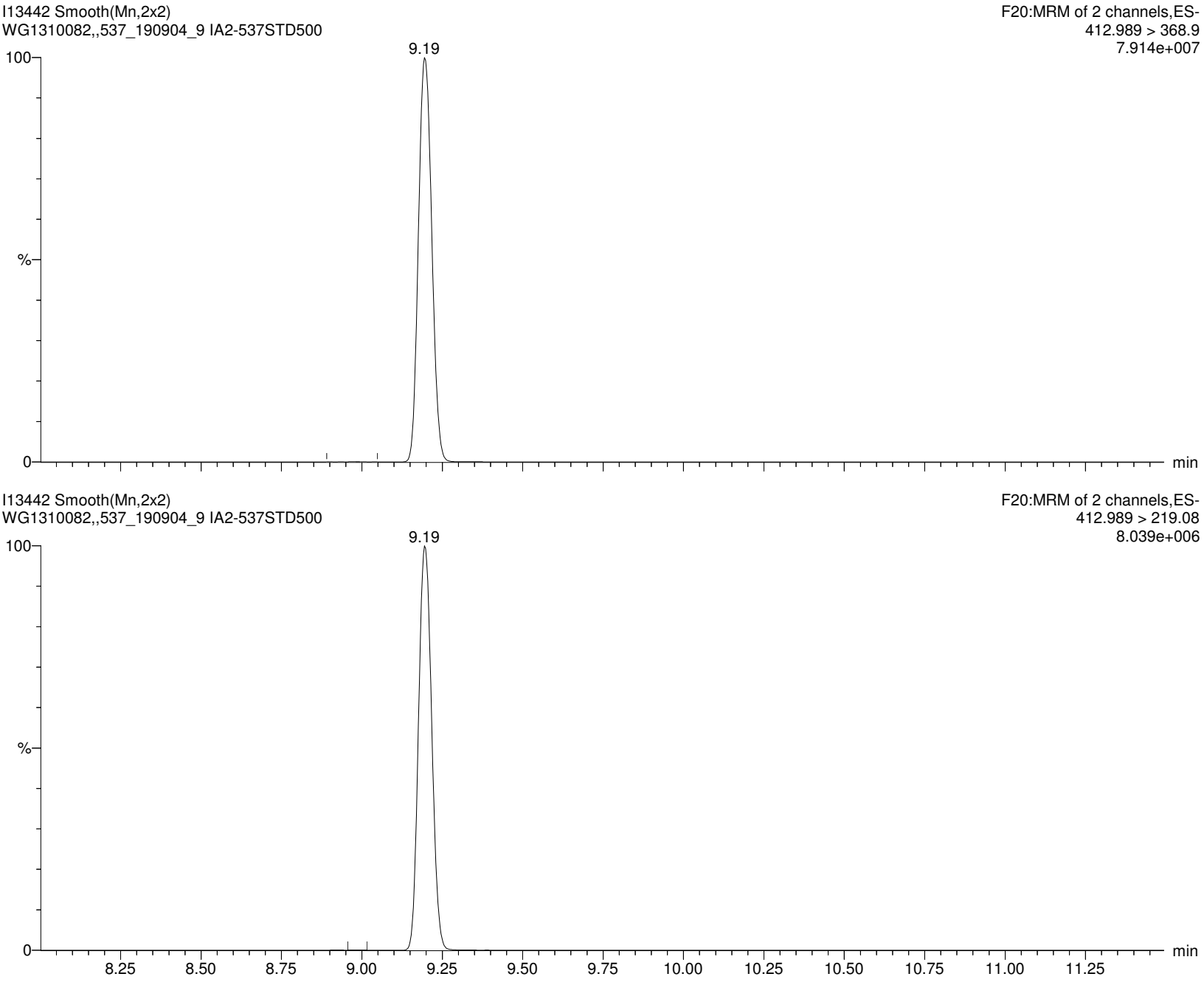



all concentration units in (ng/mL)

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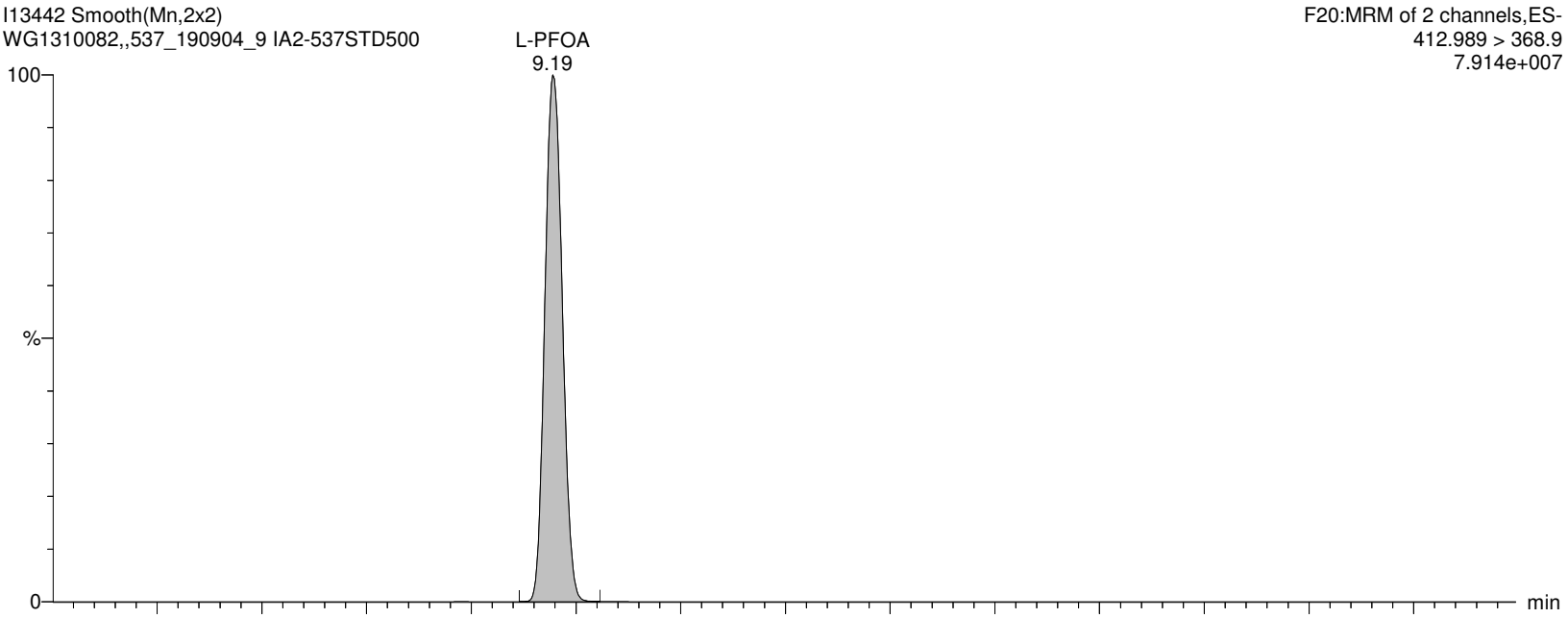
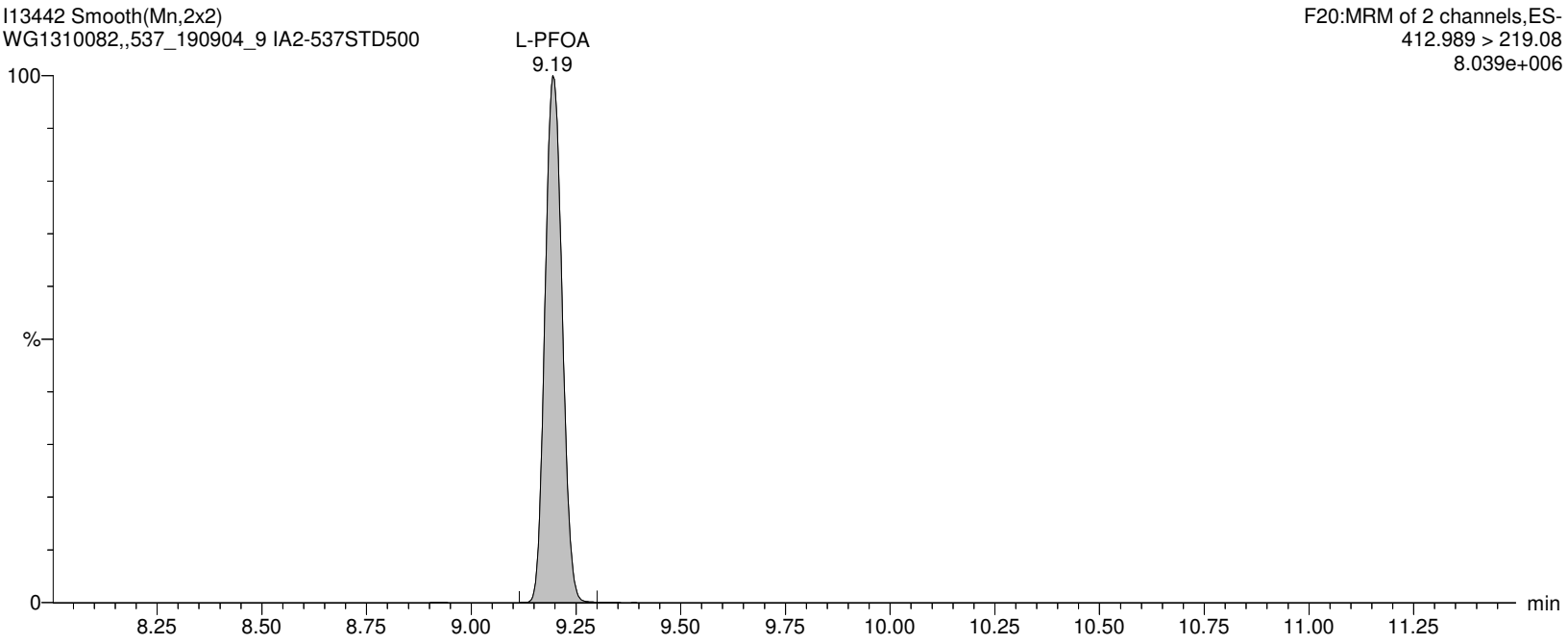
**L-PFOA**





all concentration units in (ng/mL)

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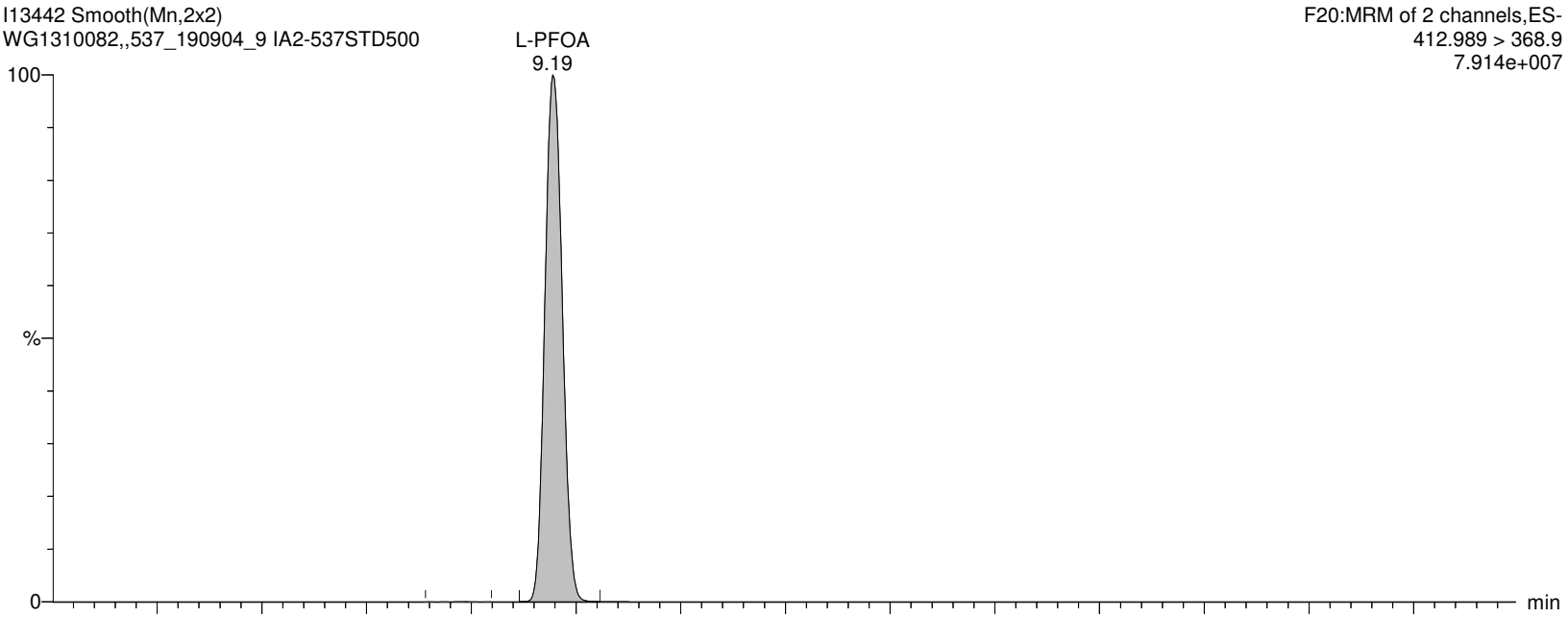


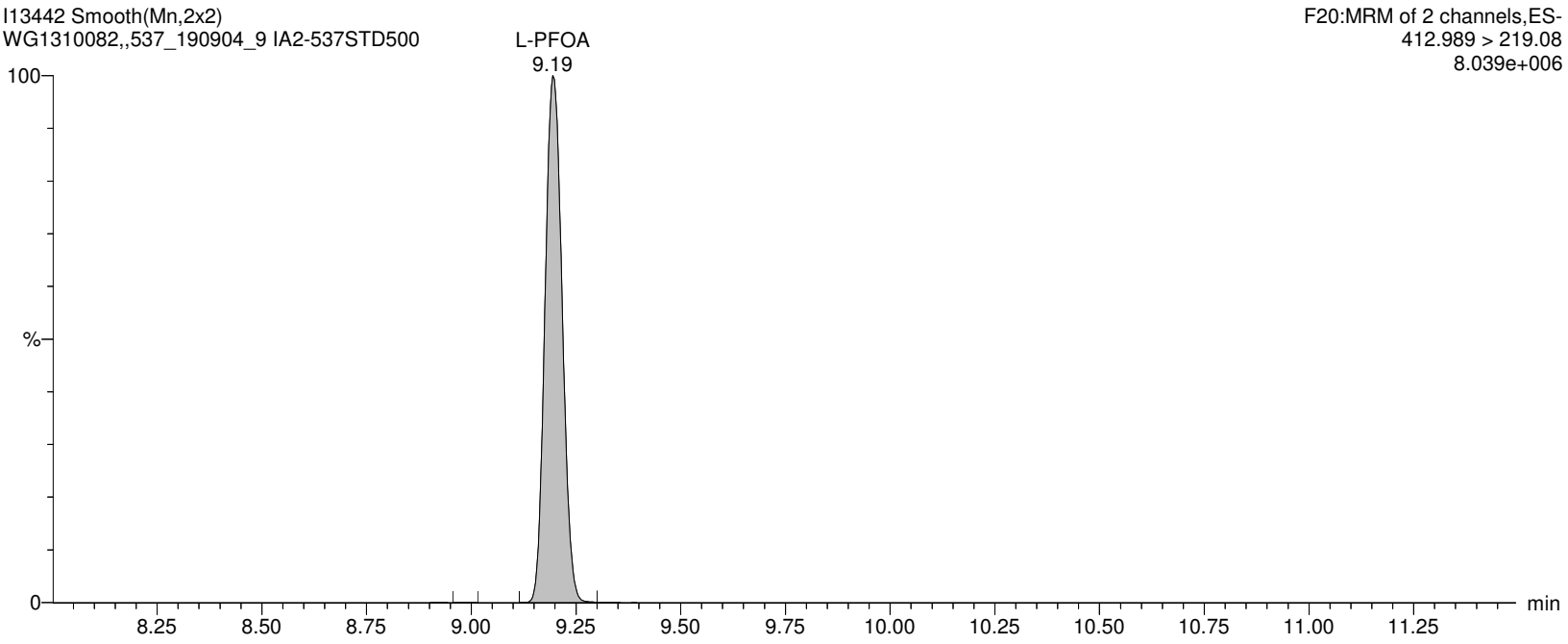



all concentration units in (ng/mL)

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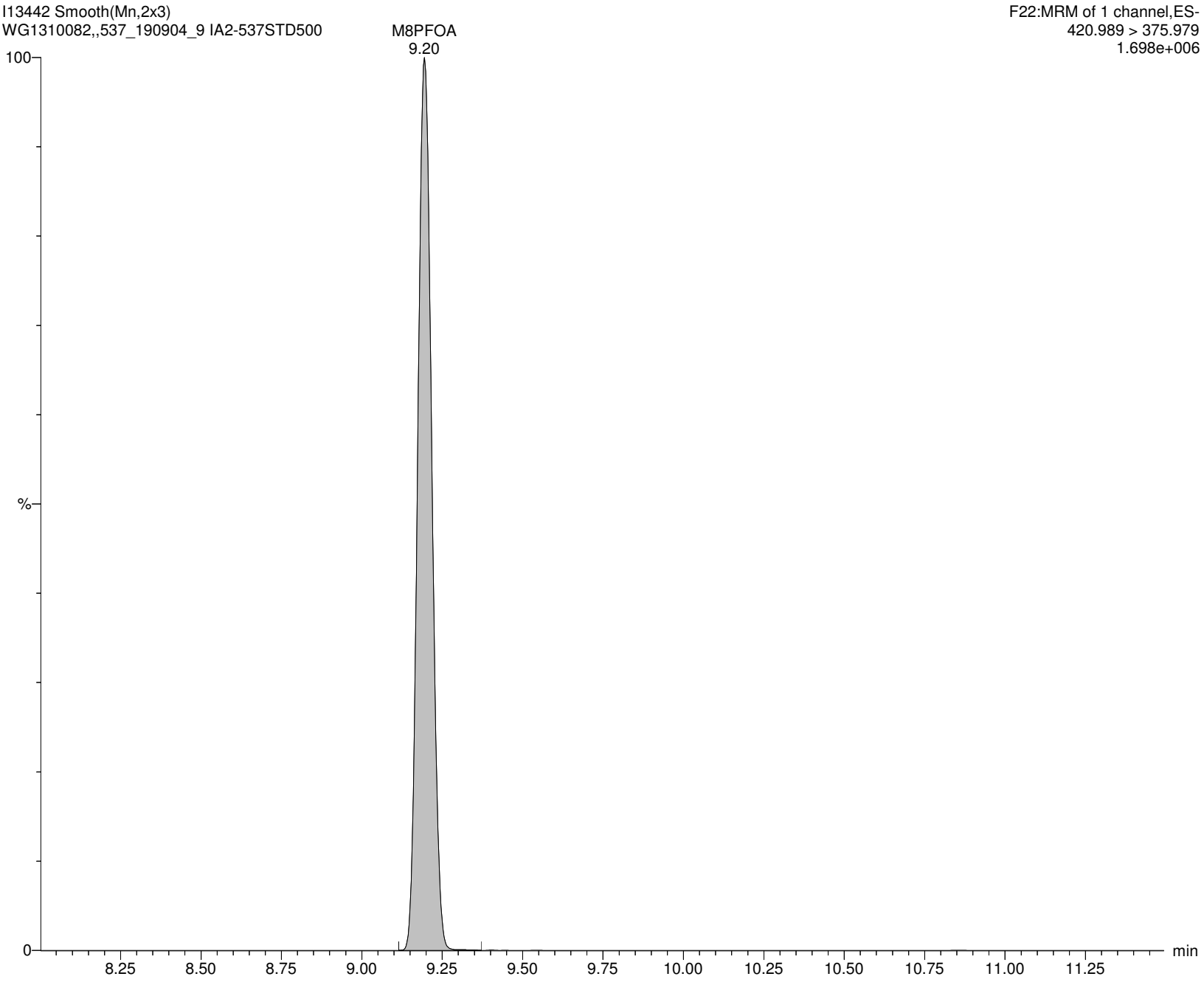
**M8PFOA**





all concentration units in (ng/mL)

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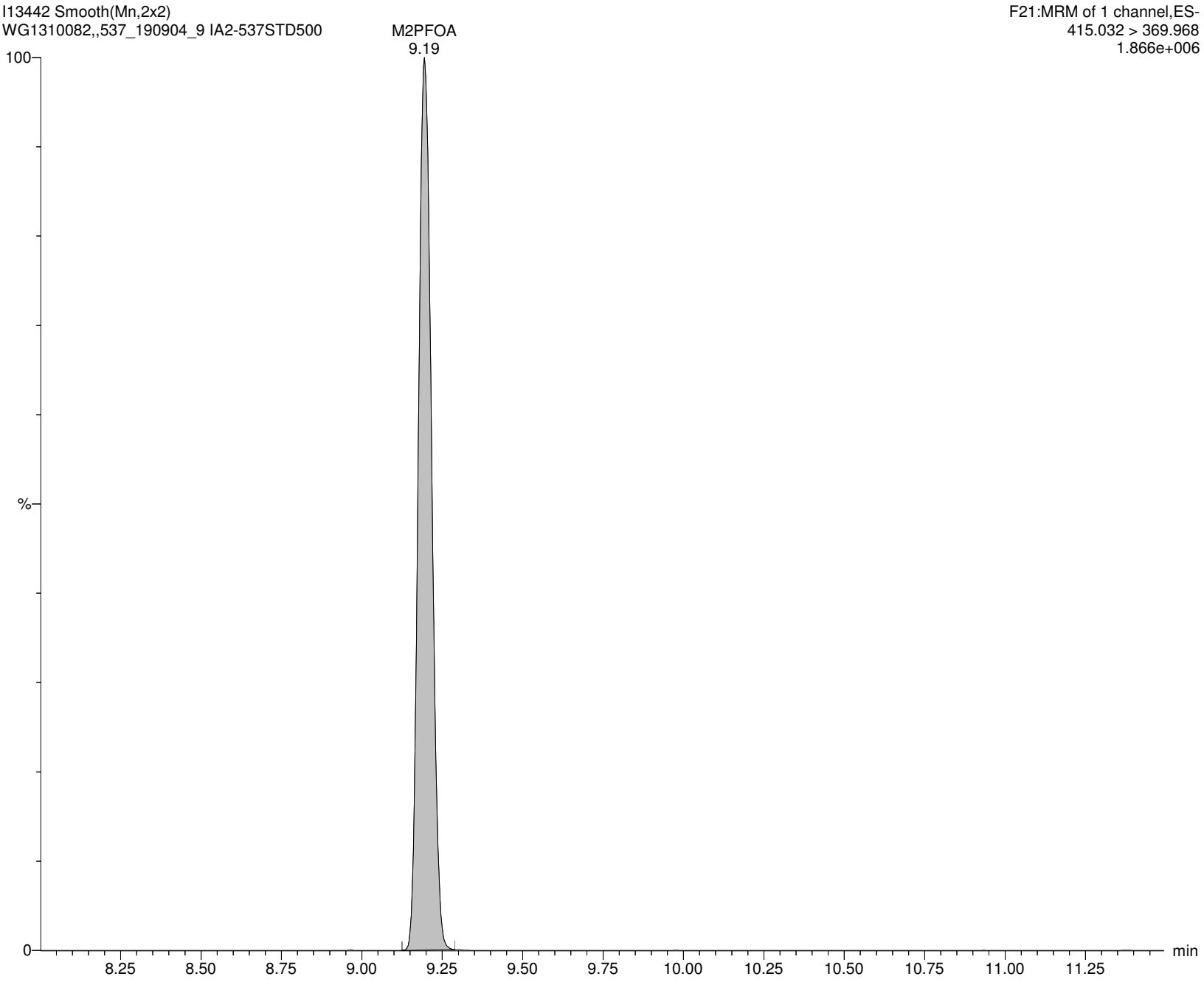
**M2PFOA**





all concentration units in (ng/mL)

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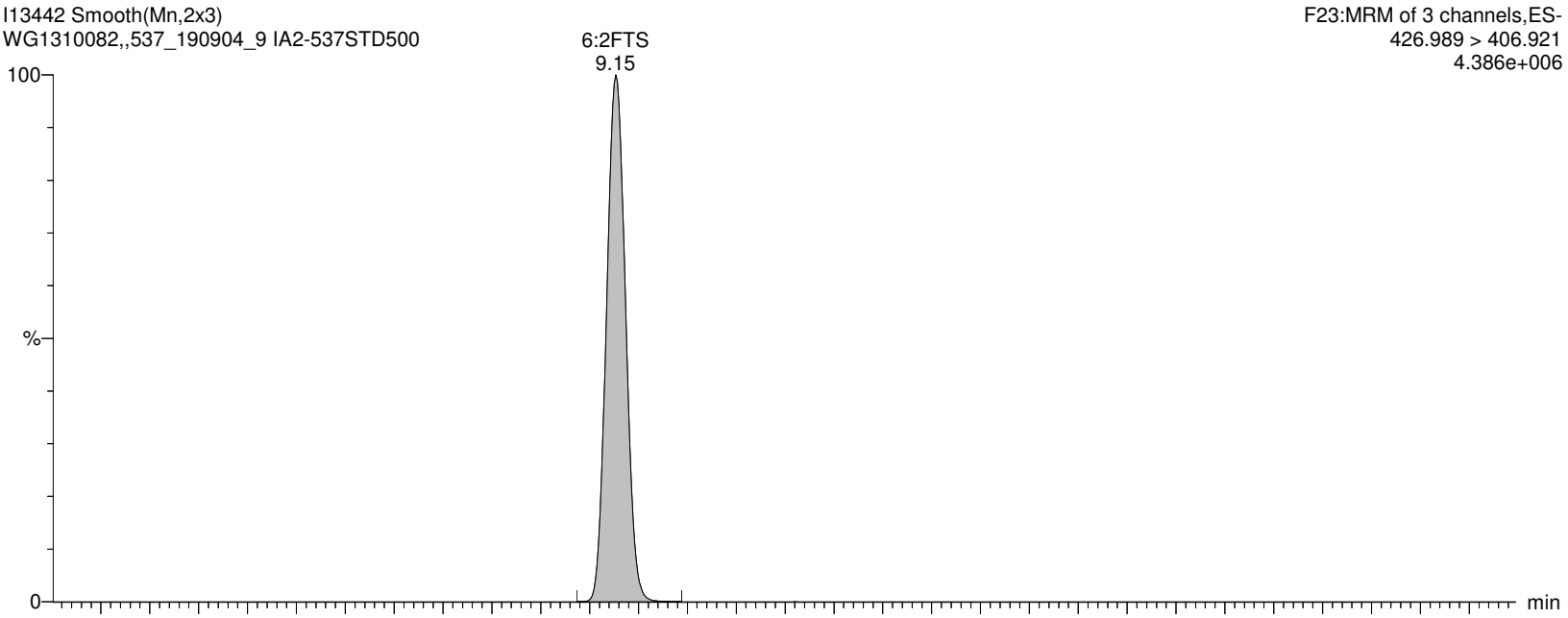


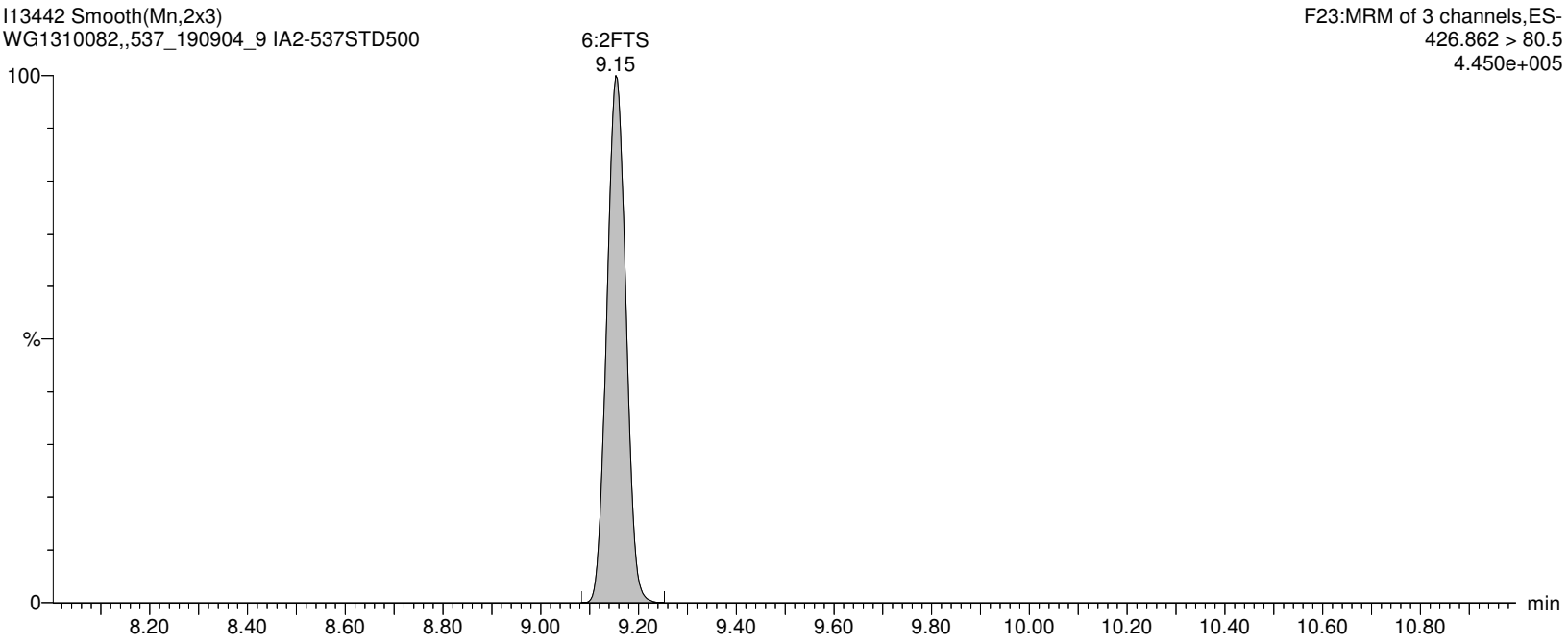



all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
Printed: Monday, November 18, 2019 13:43:05 Eastern Standard Time

**Name: I13442**
**ID: IA2-537STD500**
**Date: 18-Nov-2019**
**Time: 12:49:53**
**Description: WG1310082,,537_190904_9**
**User: LCMS02:JW**
**Vial: 1:B,2**
**Instrument: XEVO-TQSmicro#QEB0050**
**Inlet Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\LCMS_537_ISO_B**
**Tune Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\181009_TUNE.IPR**
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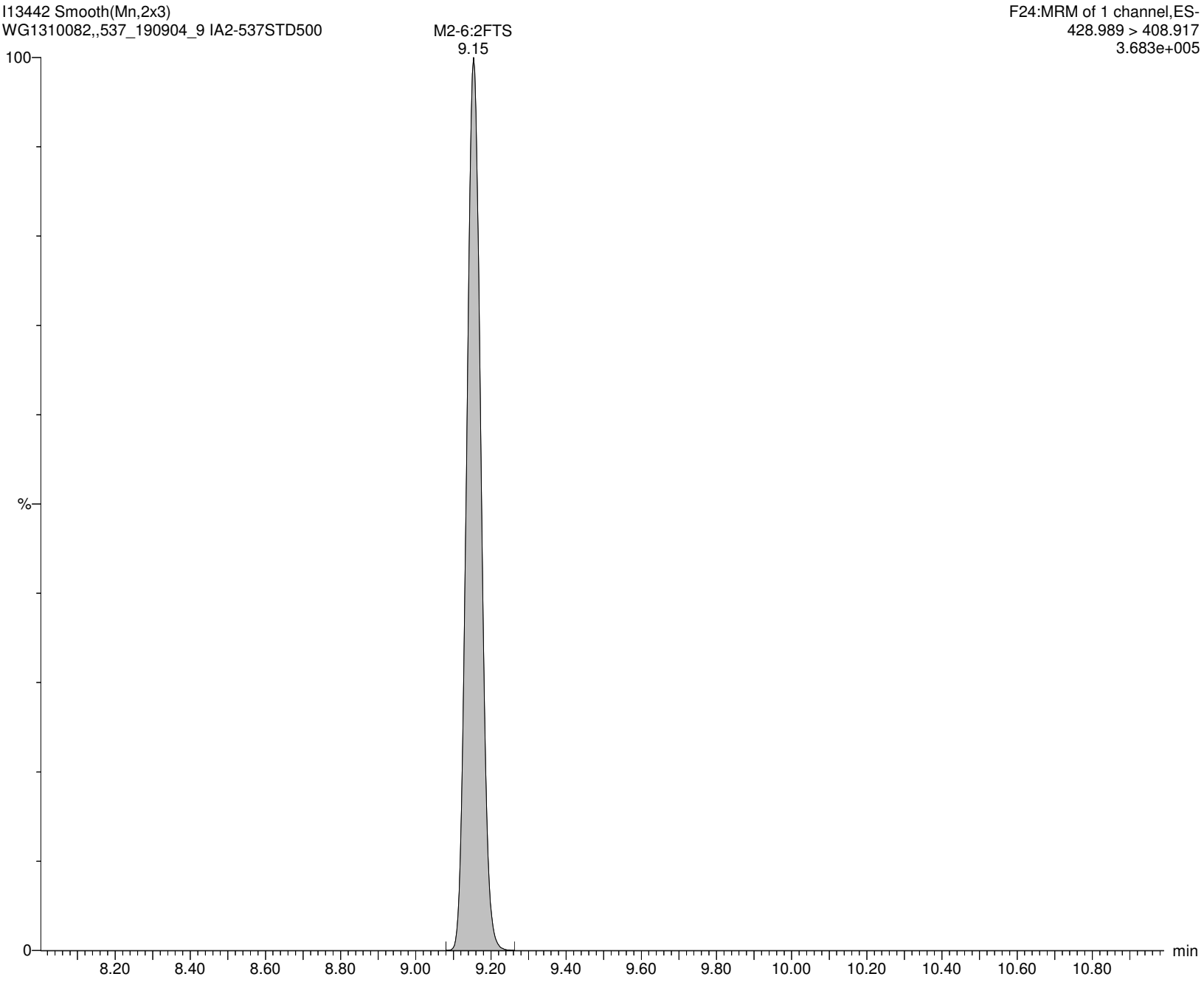
**M2-6:2FTS**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
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**Date: 18-Nov-2019**
**Time: 12:49:53**
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**Vial: 1:B,2**
**Instrument: XEVO-TQSmicro#QEB0050**
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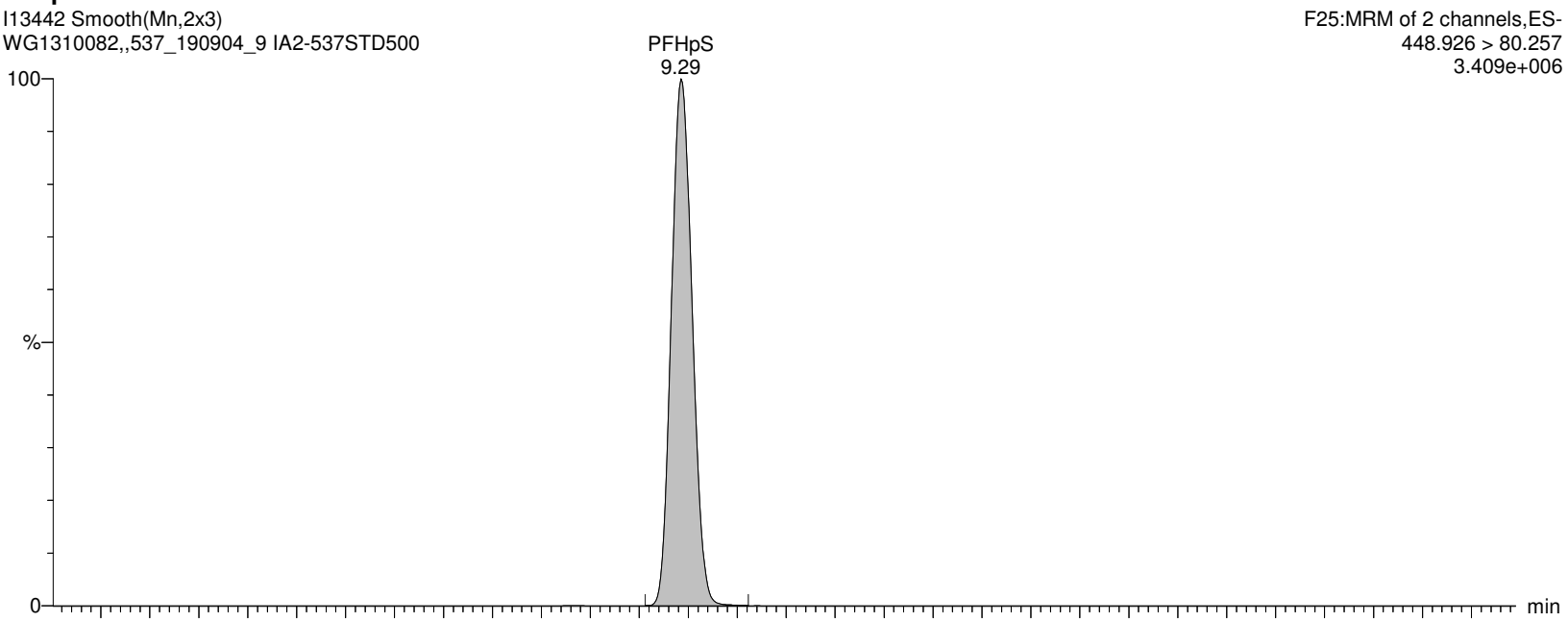
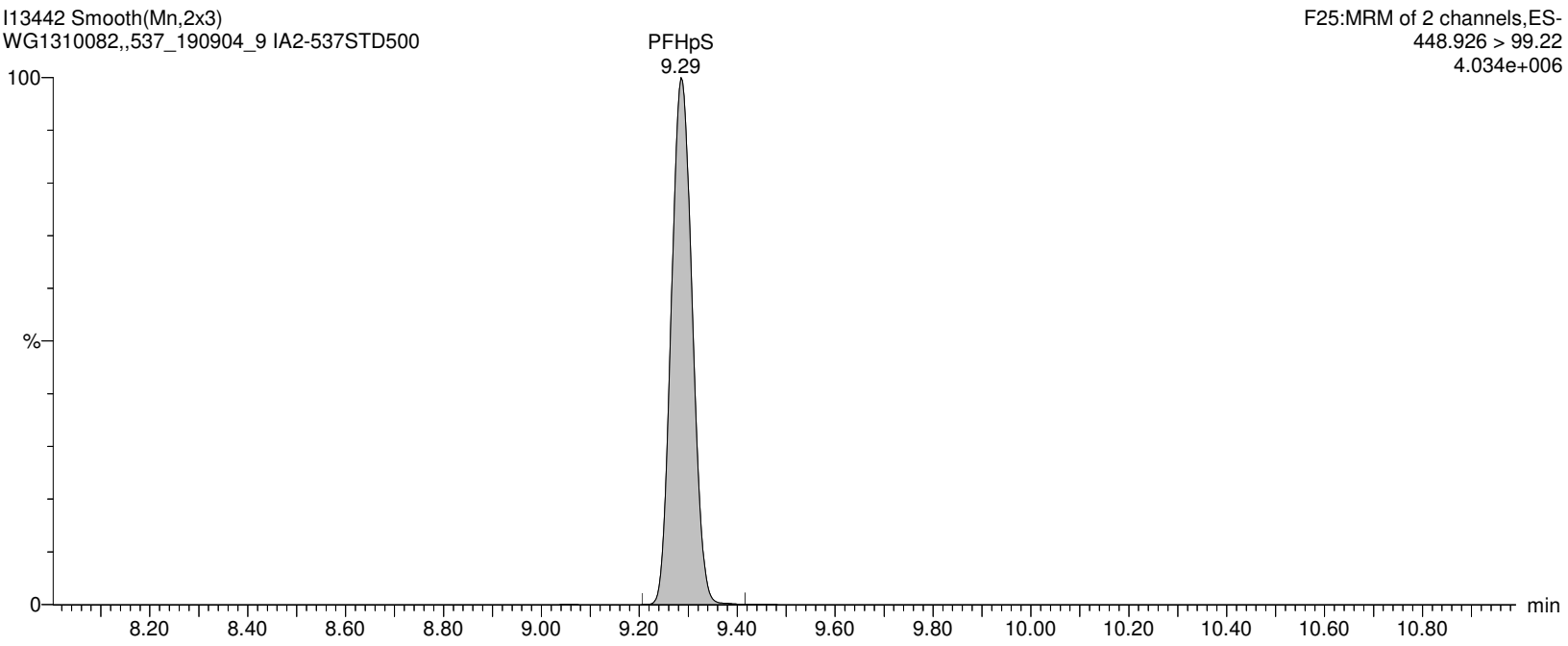
**PFHpS**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
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**Name: I13442**
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**Vial: 1:B,2**
**Instrument: XEVO-TQSmicro#QEB0050**
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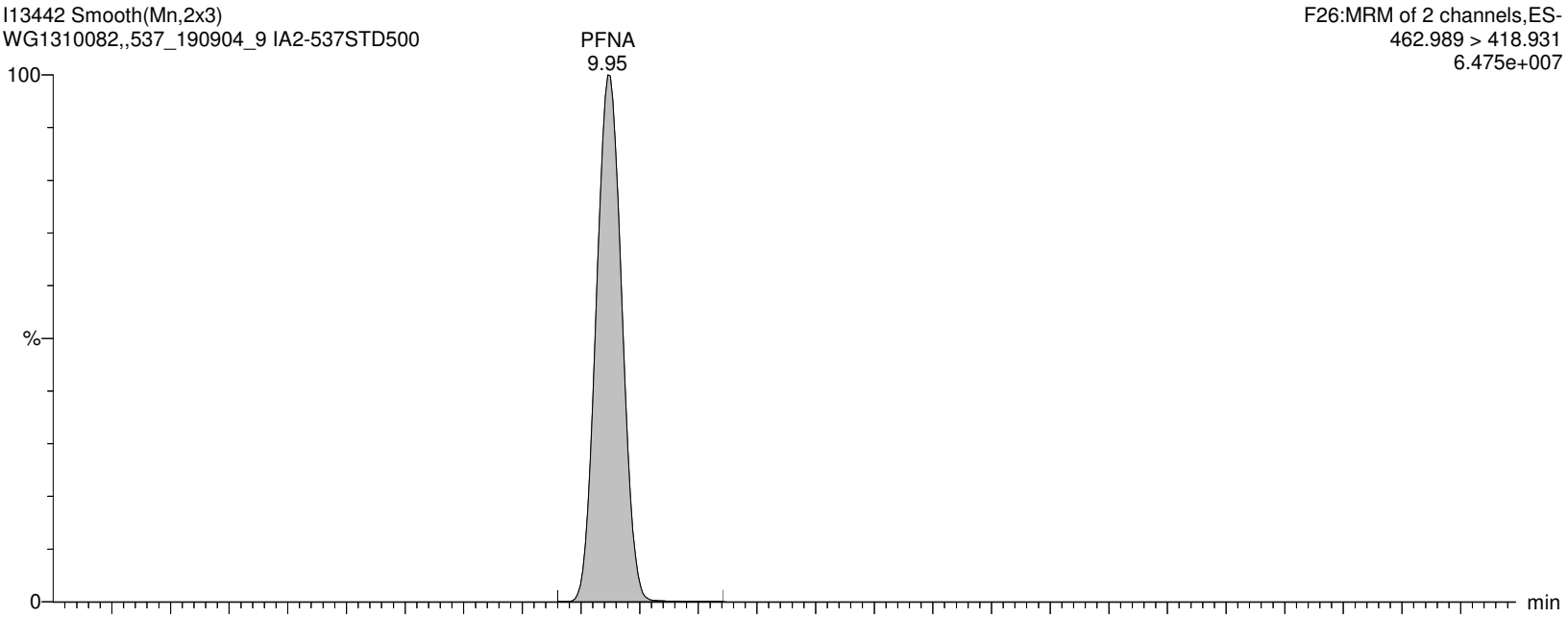
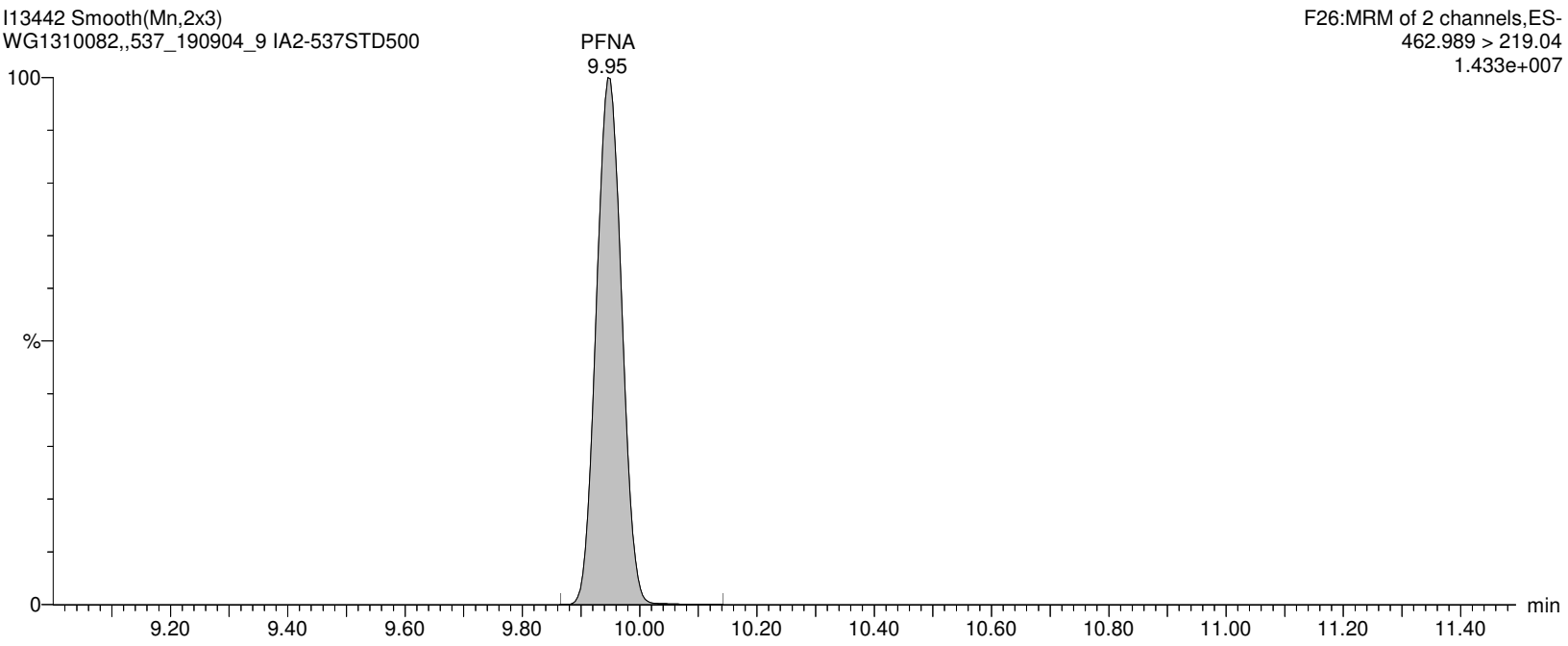
**PFNA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
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**Vial: 1:B,2**
**Instrument: XEVO-TQSmicro#QEB0050**
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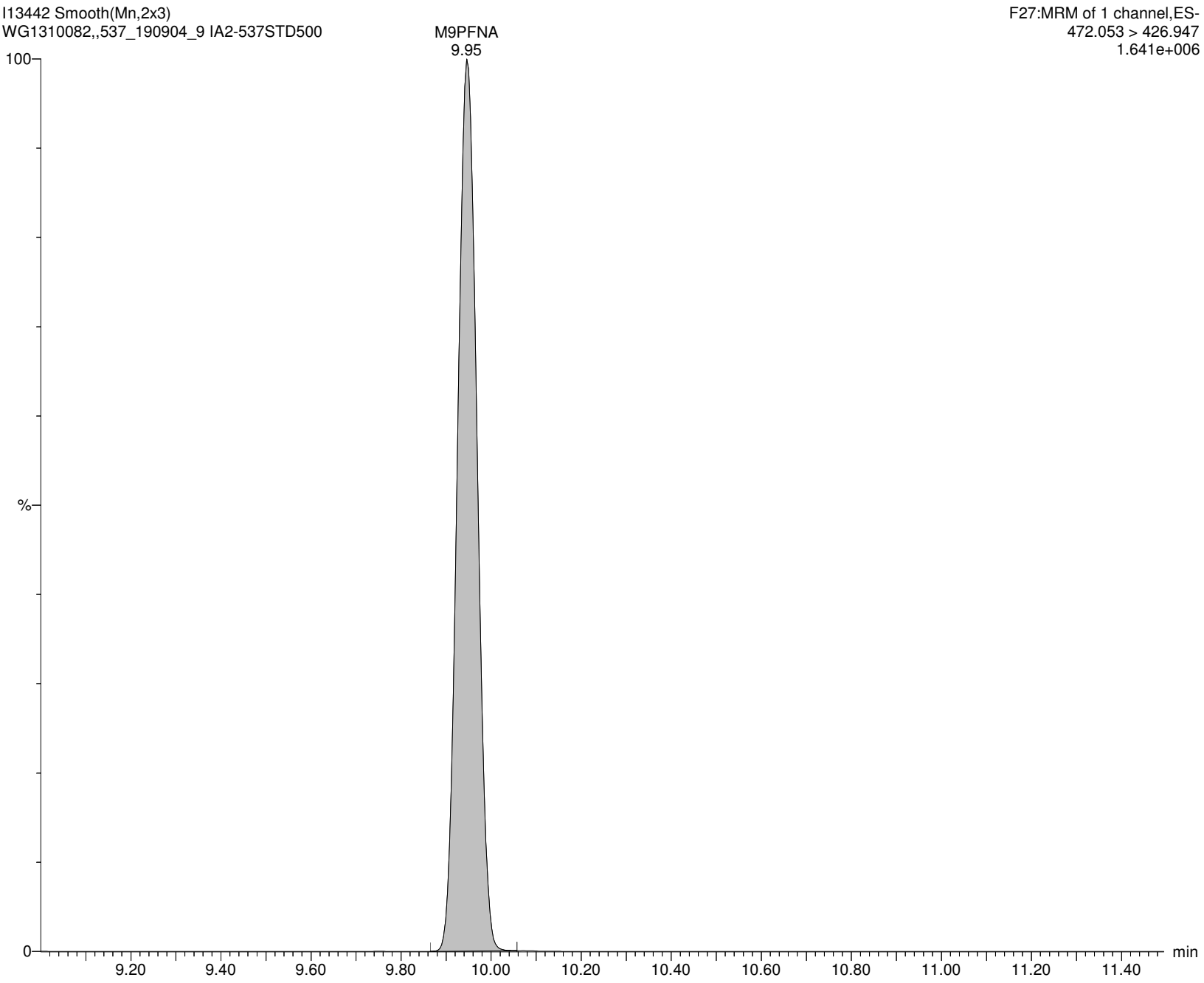
**M9PFNA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
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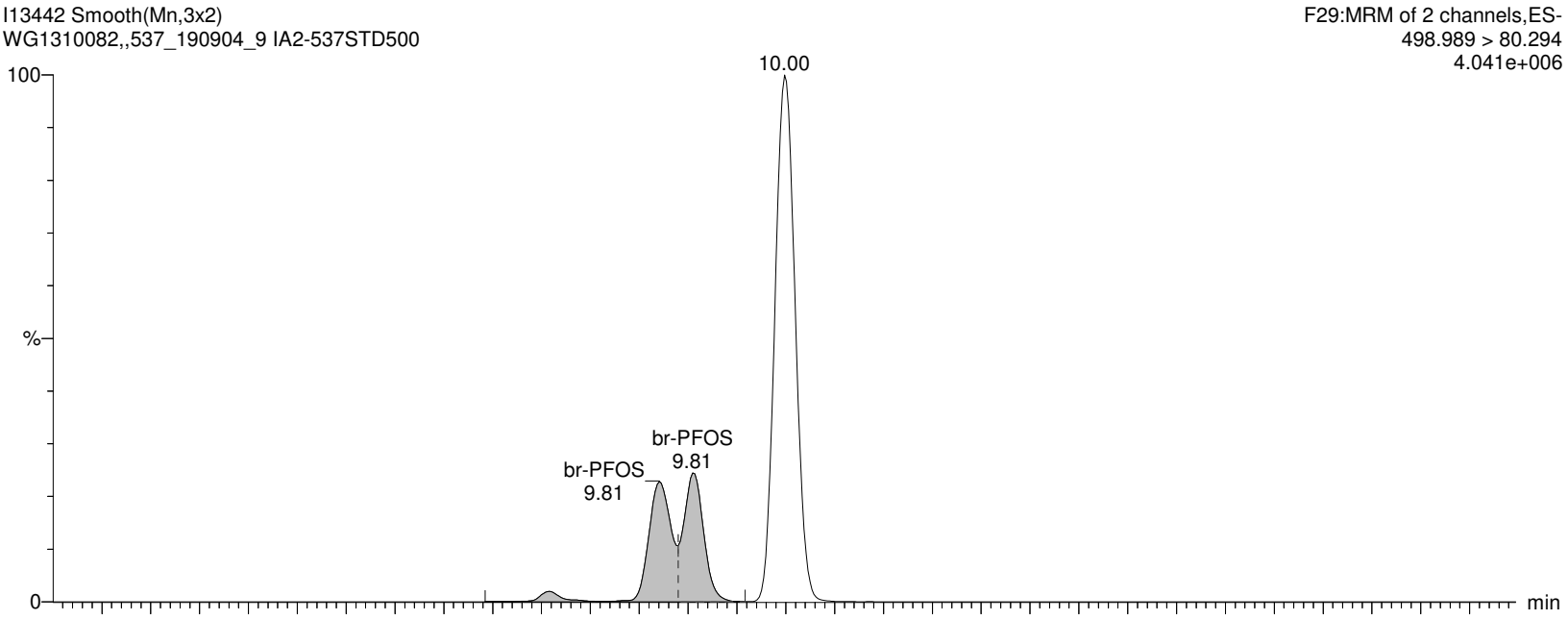
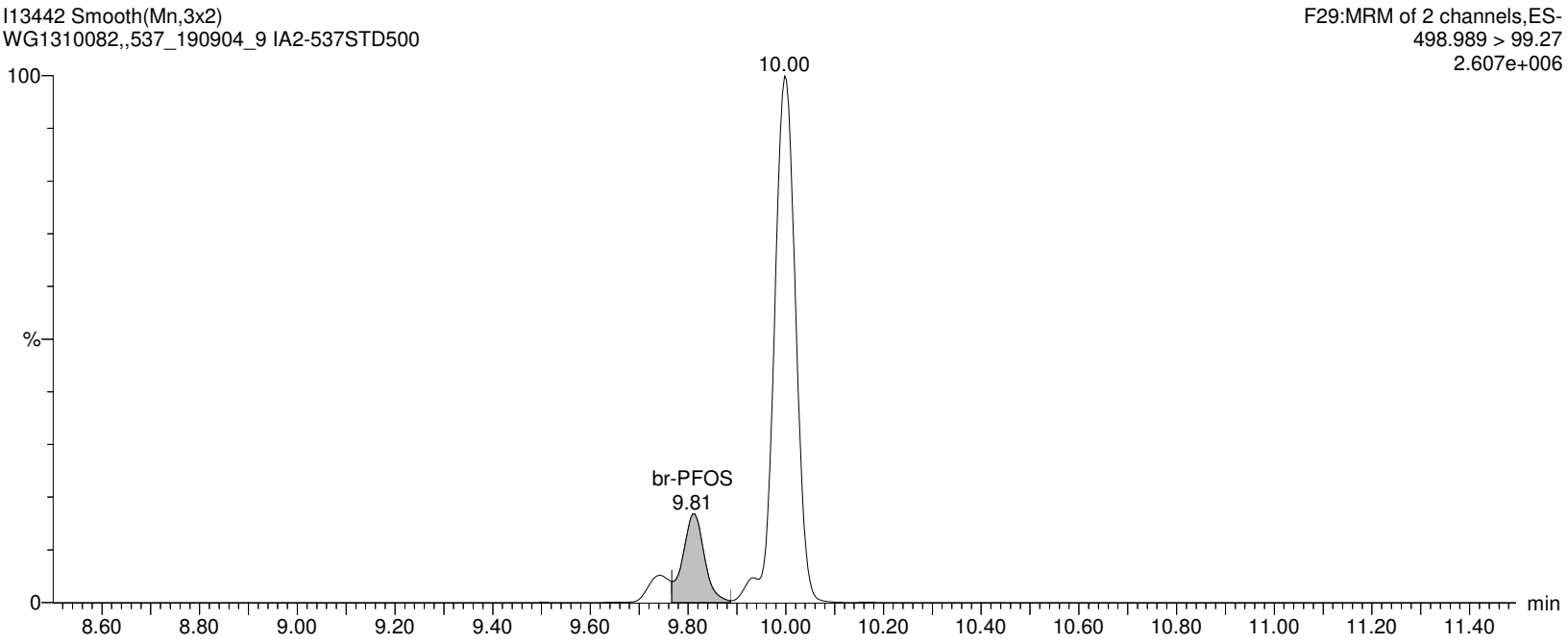
**br-PFOS**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
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**User: LCMS02:JW**
**Vial: 1:B,2**
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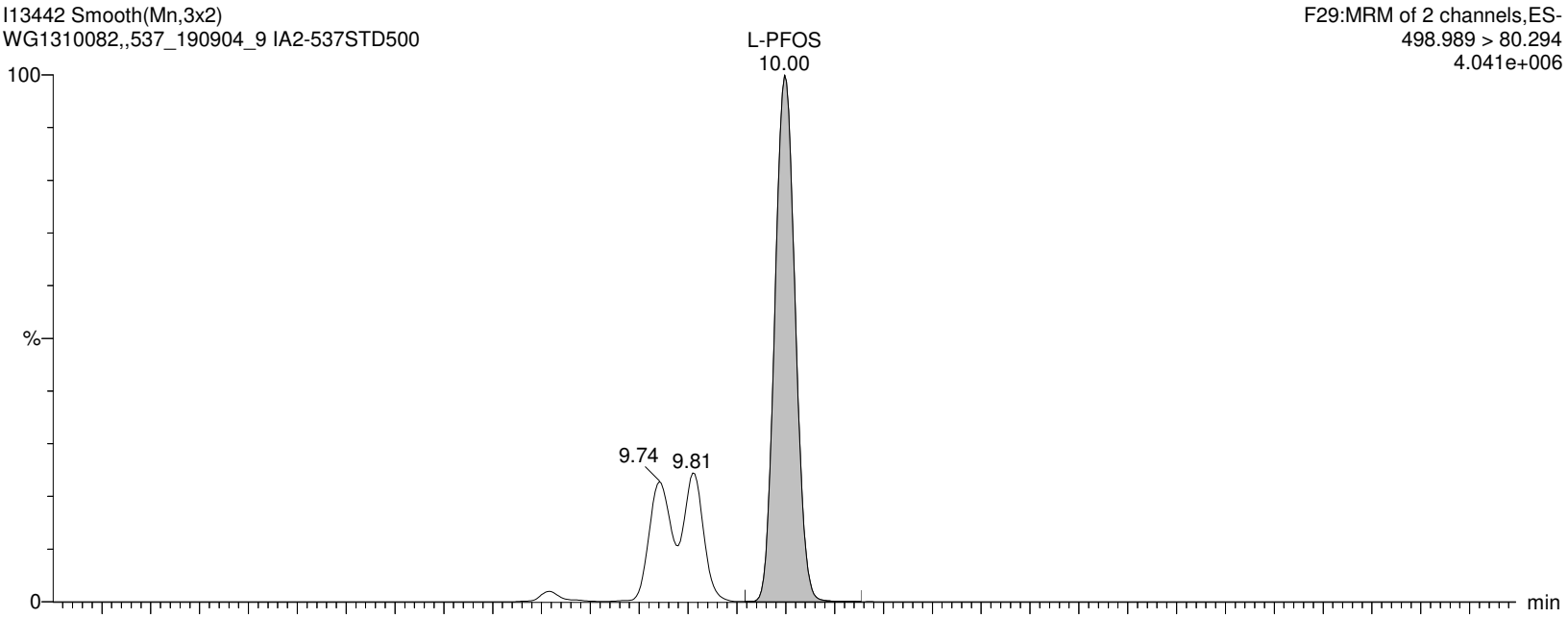
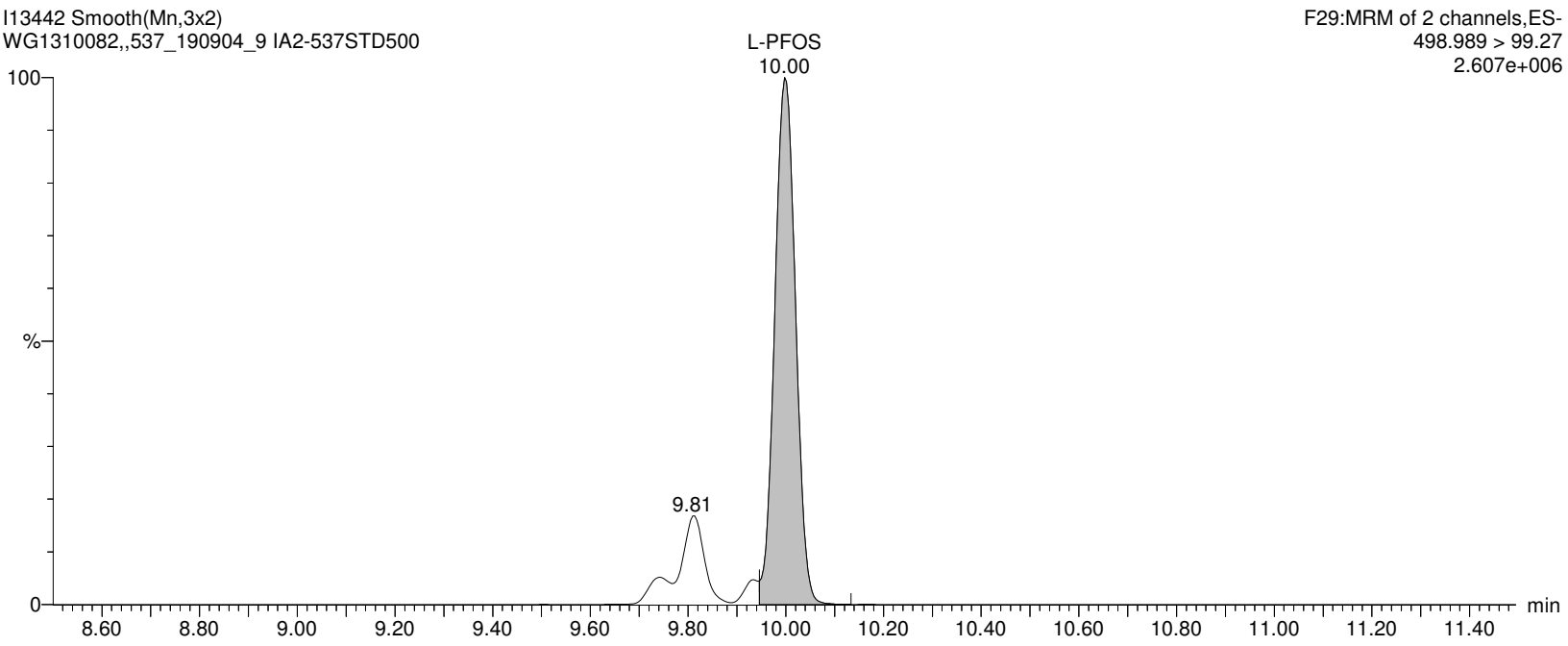
**Tune Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\181009_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**L-PFOS**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
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**User: LCMS02:JW**
**Vial: 1:B,2**
**Instrument: XEVO-TQSmicro#QEB0050**
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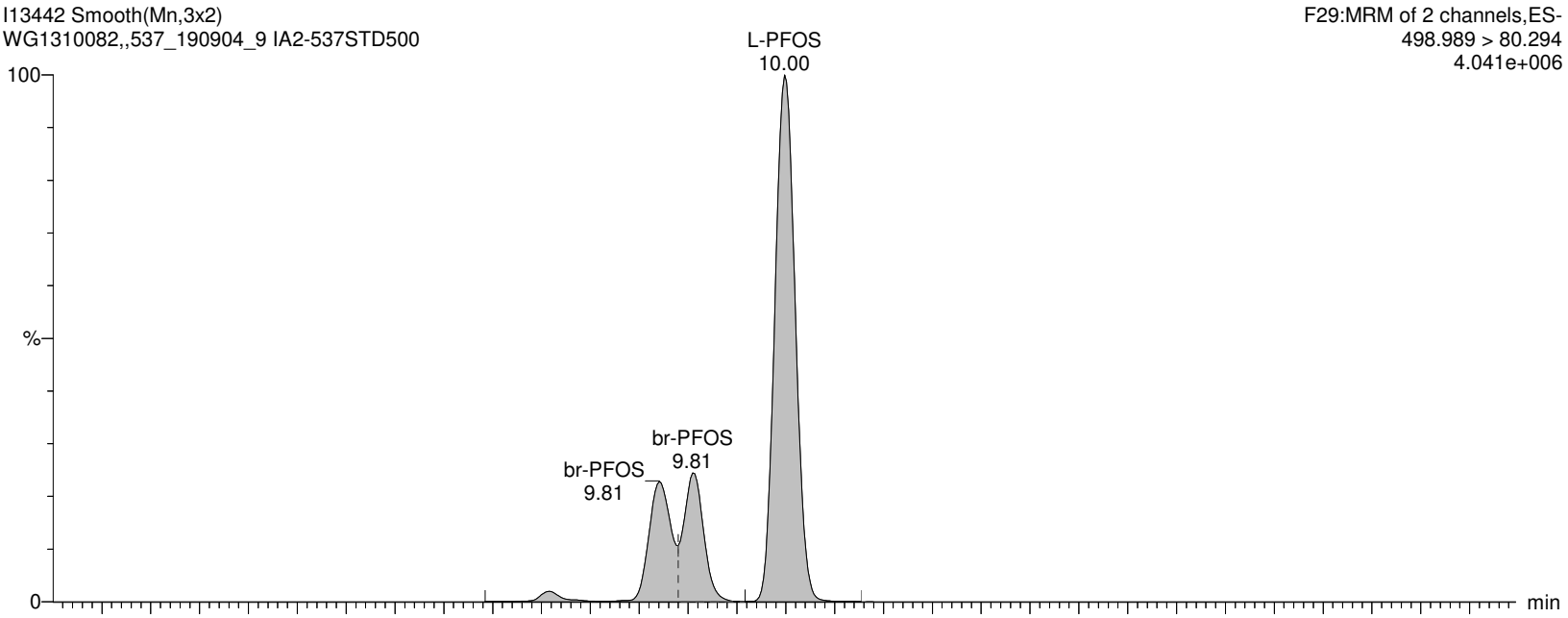
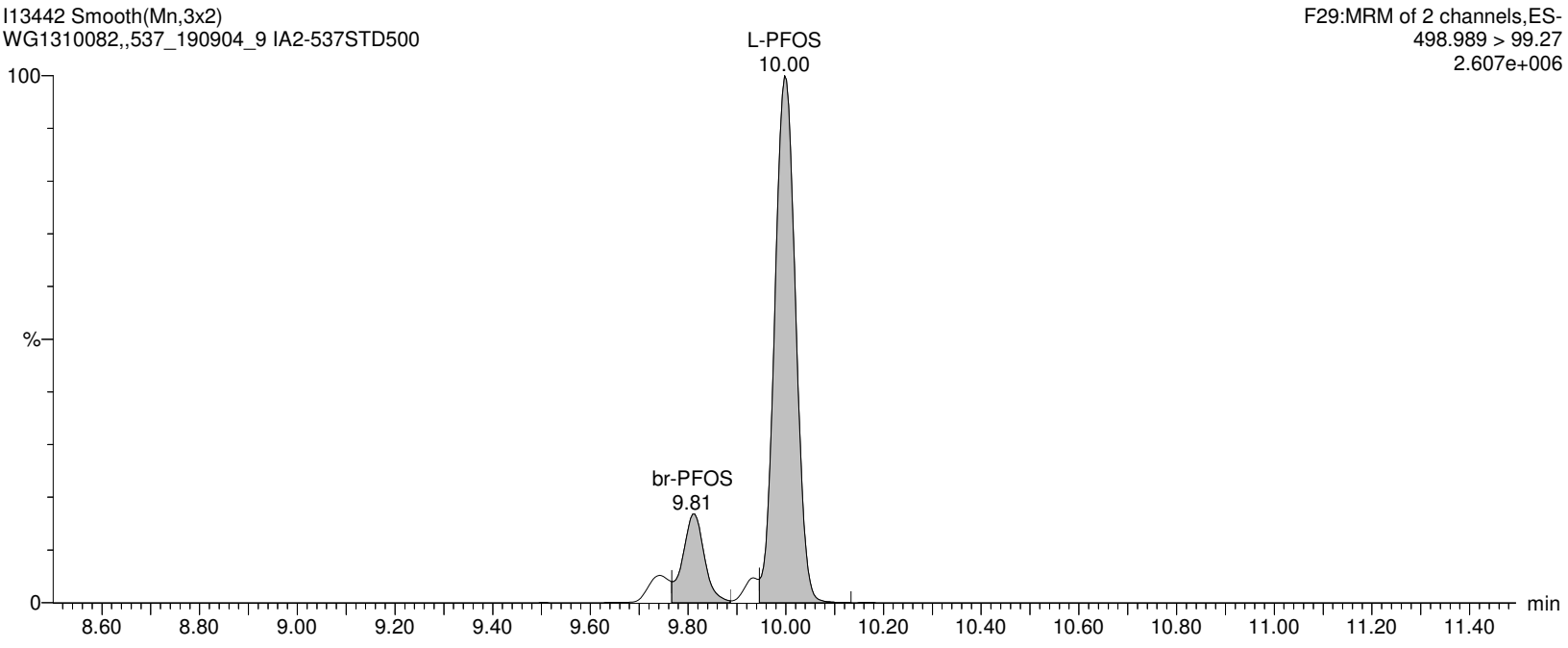
**Tune Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\181009_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**PFOS**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
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**Vial: 1:B,2**
**Instrument: XEVO-TQSmicro#QEB0050**
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**Tune Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\181009_TUNE.IPR**
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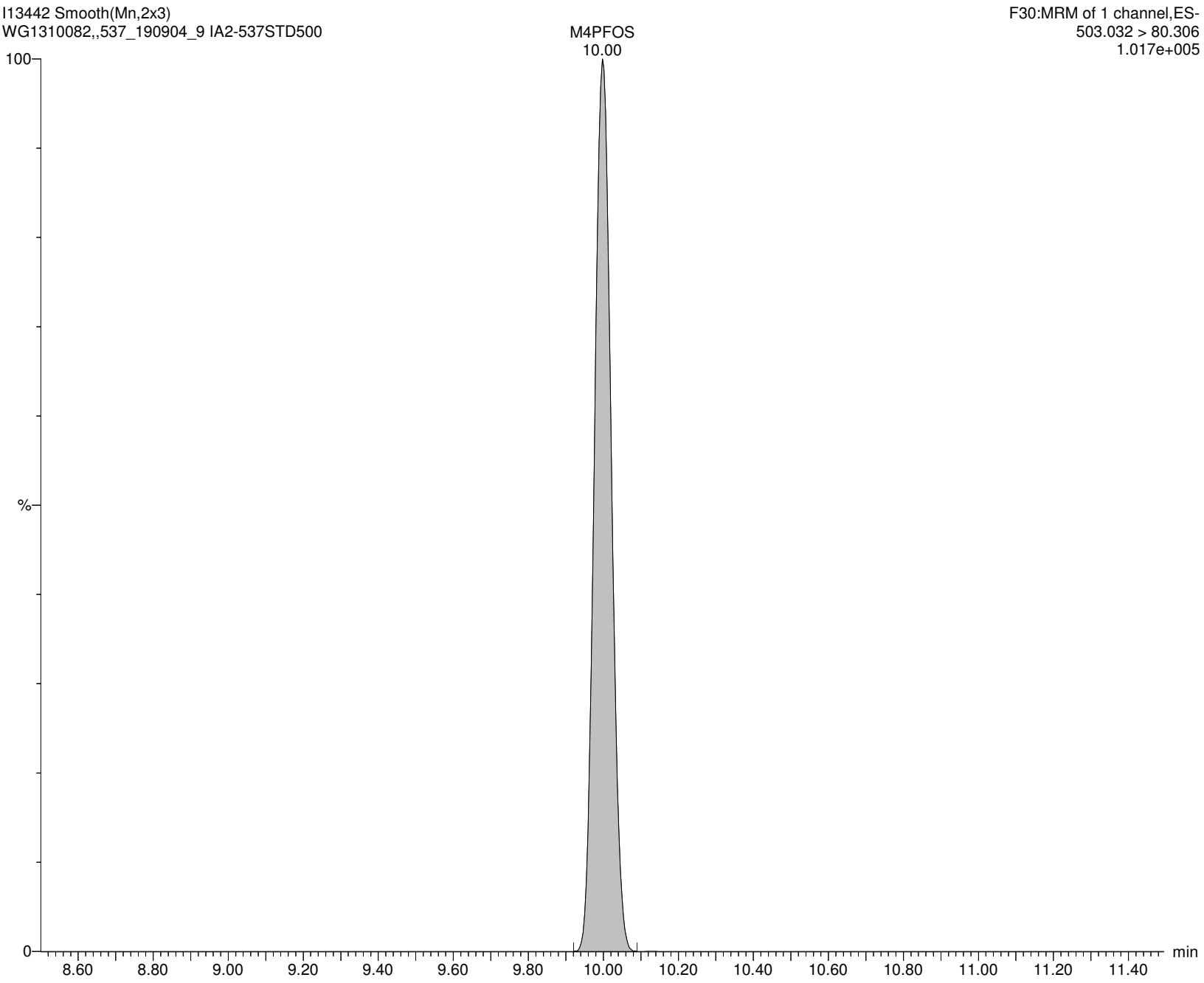



all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
Printed: Monday, November 18, 2019 13:43:05 Eastern Standard Time

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**Time: 12:49:53**
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**Vial: 1:B,2**
**Instrument: XEVO-TQSmicro#QEB0050**
**Inlet Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\LCMS_537_ISO_B**
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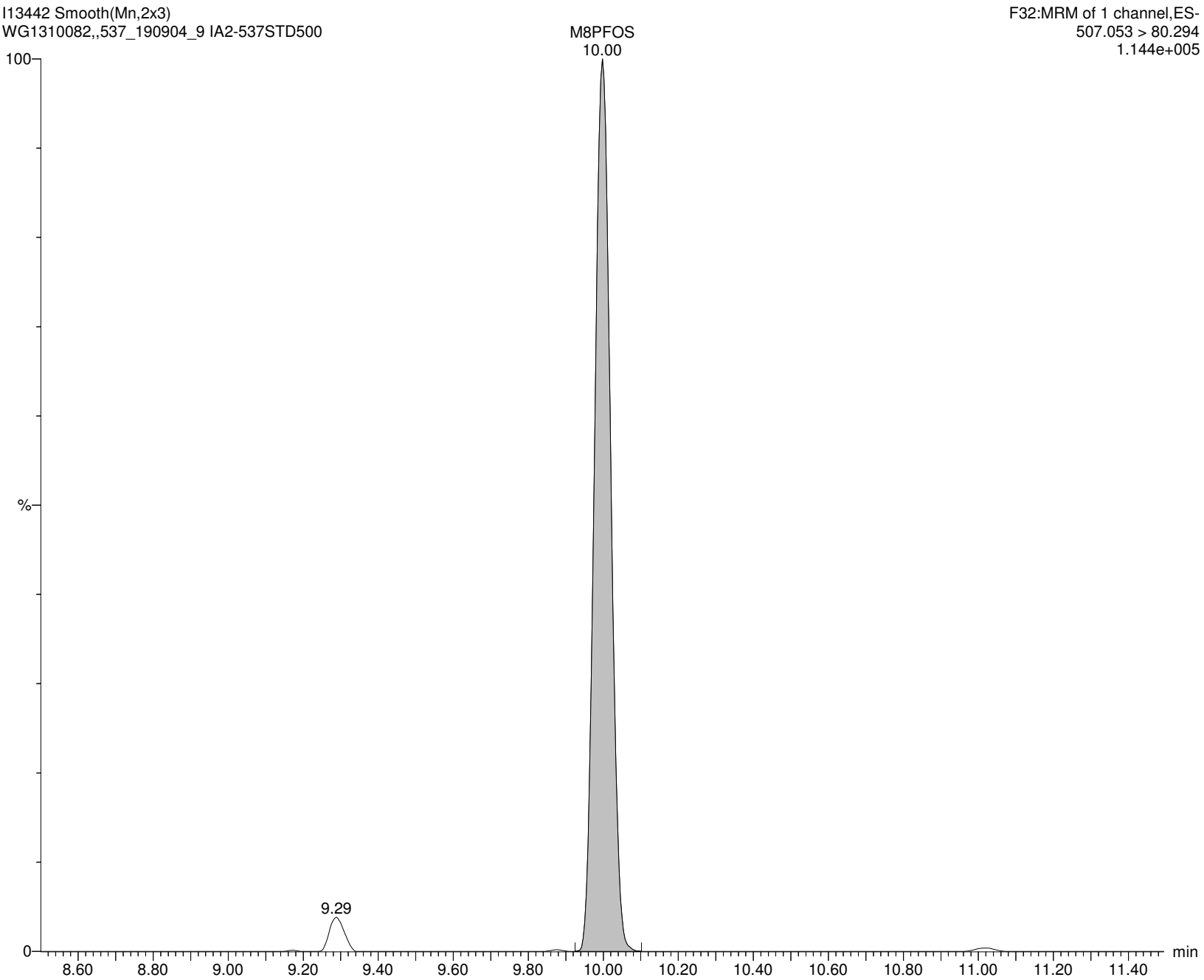



all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
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**Time: 12:49:53**
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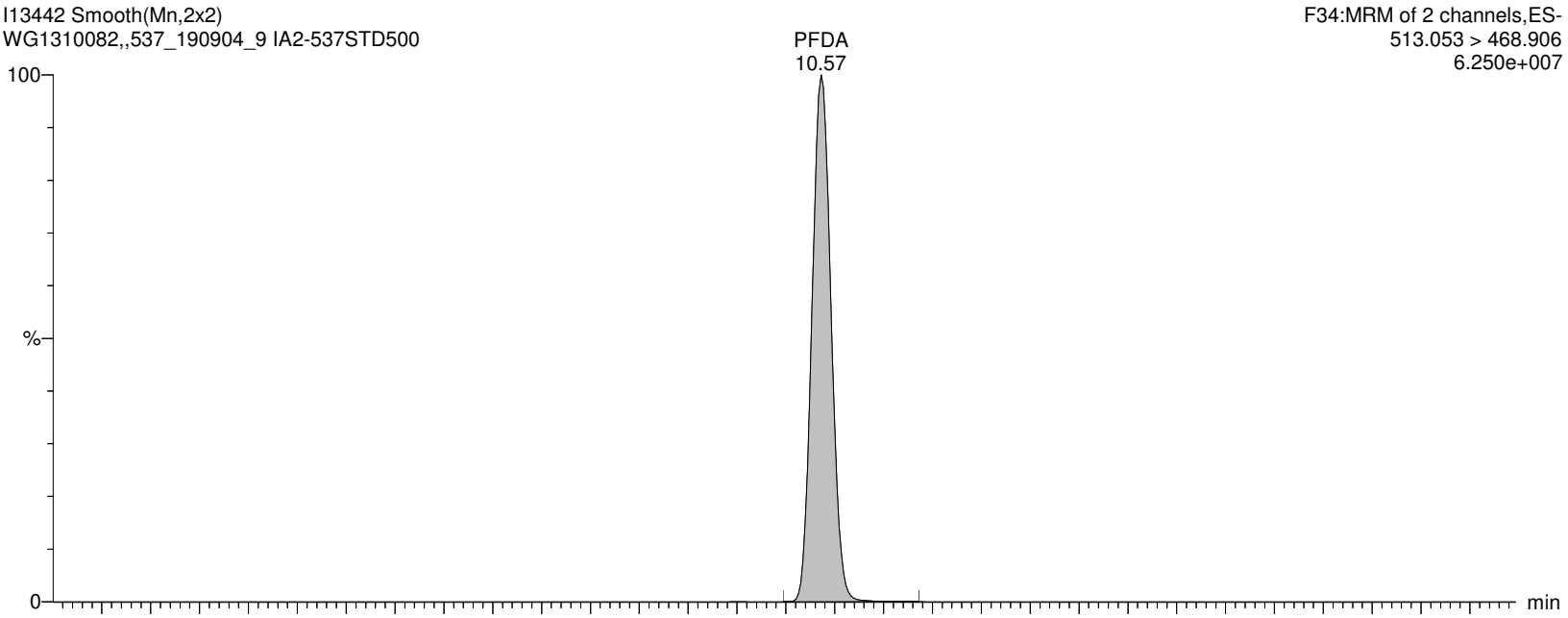
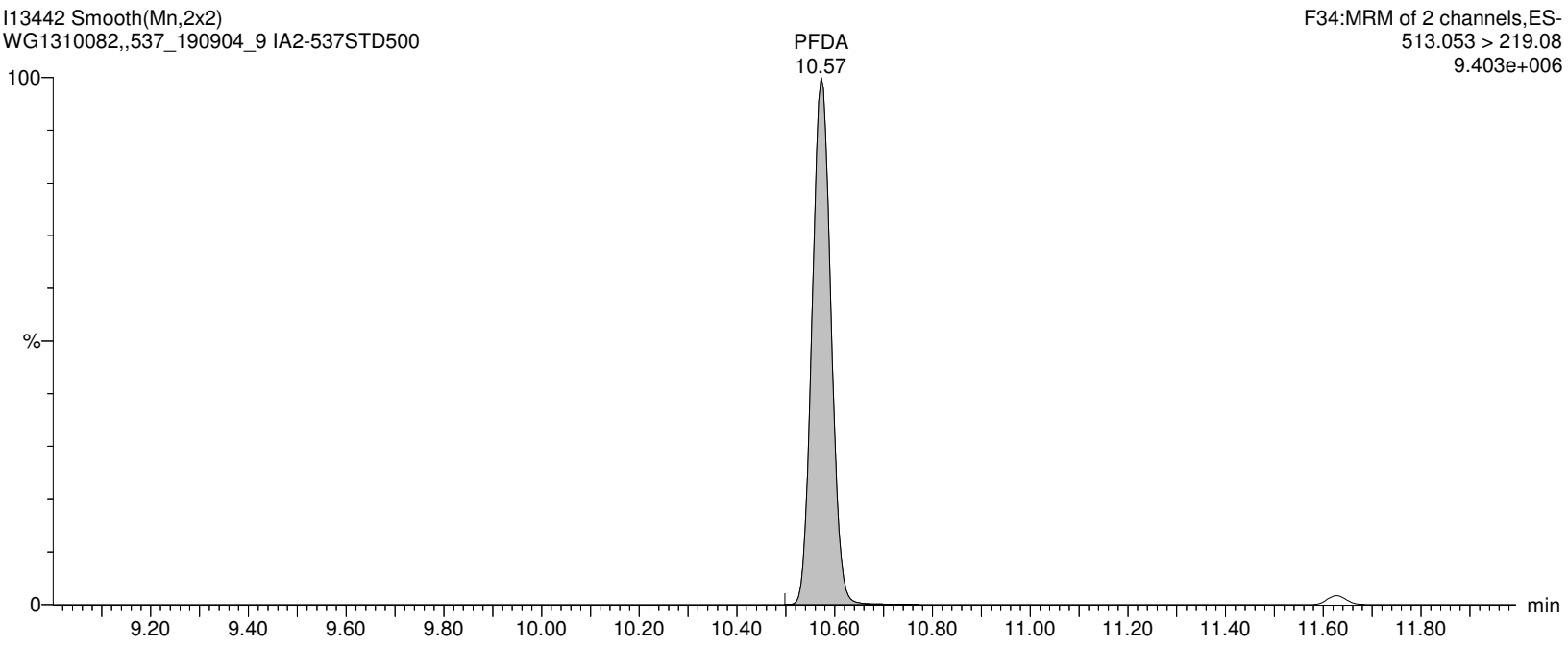
**PFDA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
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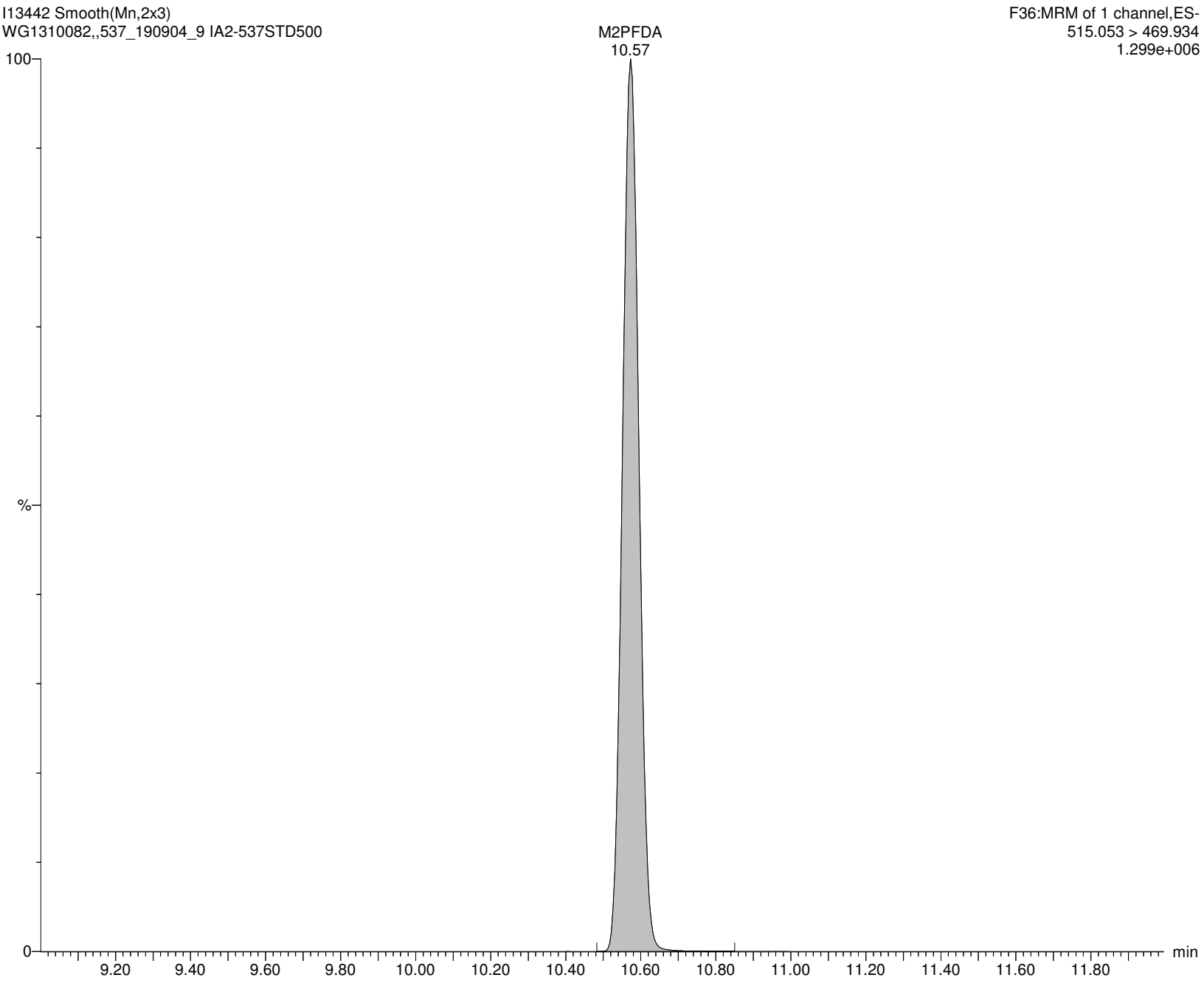



all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
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**Date: 18-Nov-2019**
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**Vial: 1:B,2**
**Instrument: XEVO-TQSmicro#QEB0050**
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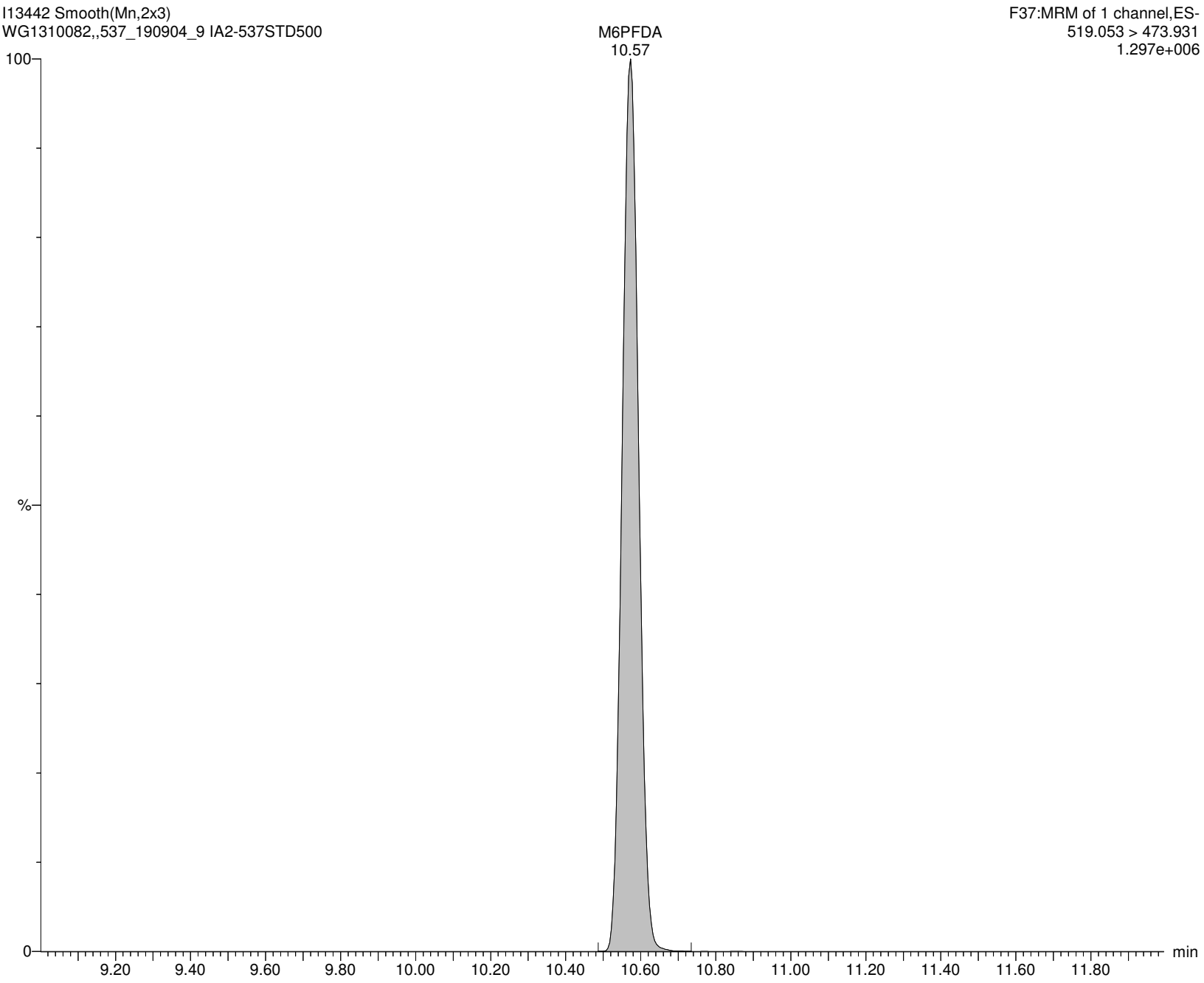



all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
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**Date: 18-Nov-2019**
**Time: 12:49:53**
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**User: LCMS02:JW**
**Vial: 1:B,2**
**Instrument: XEVO-TQSmicro#QEB0050**
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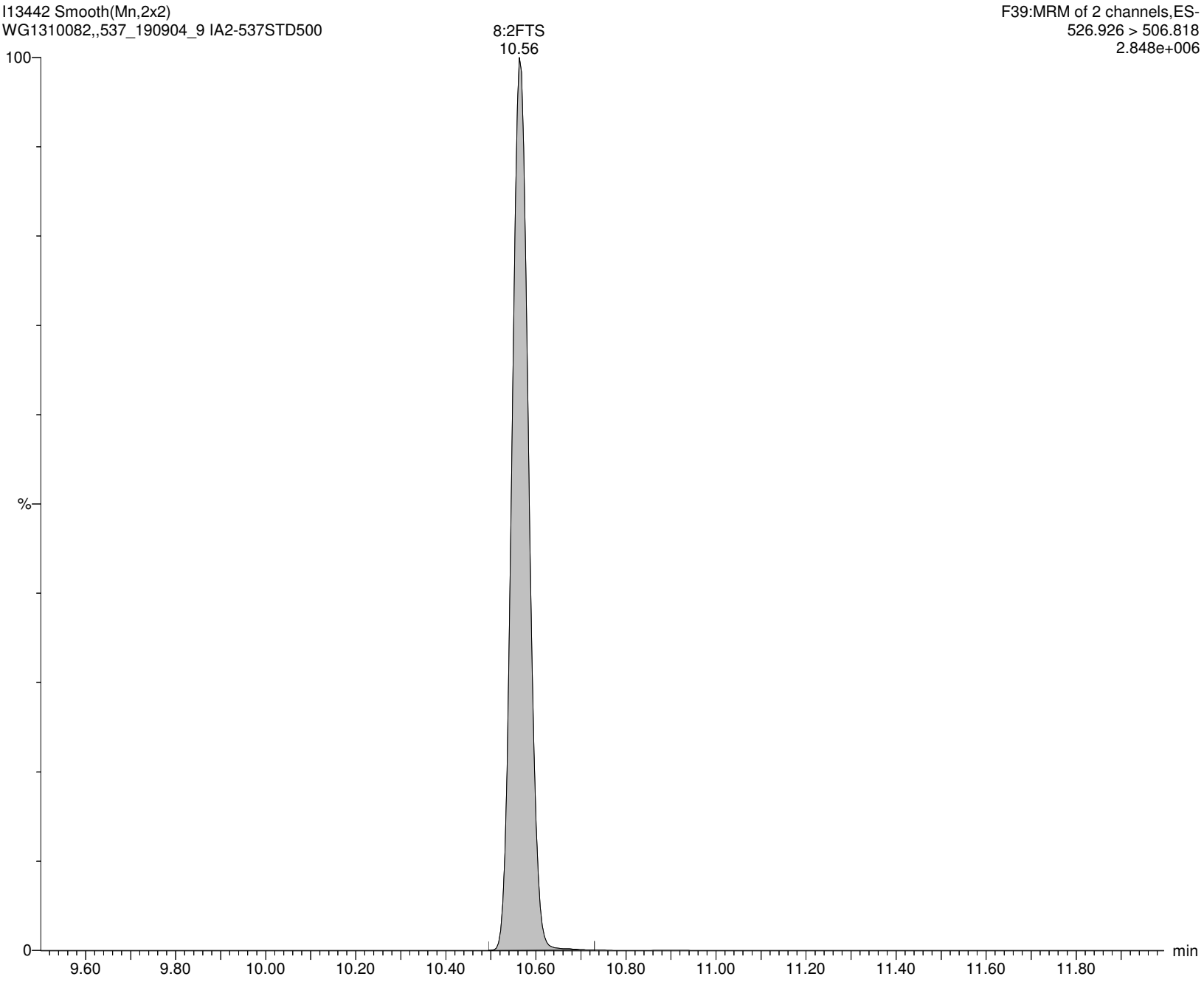
**8:2FTS**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
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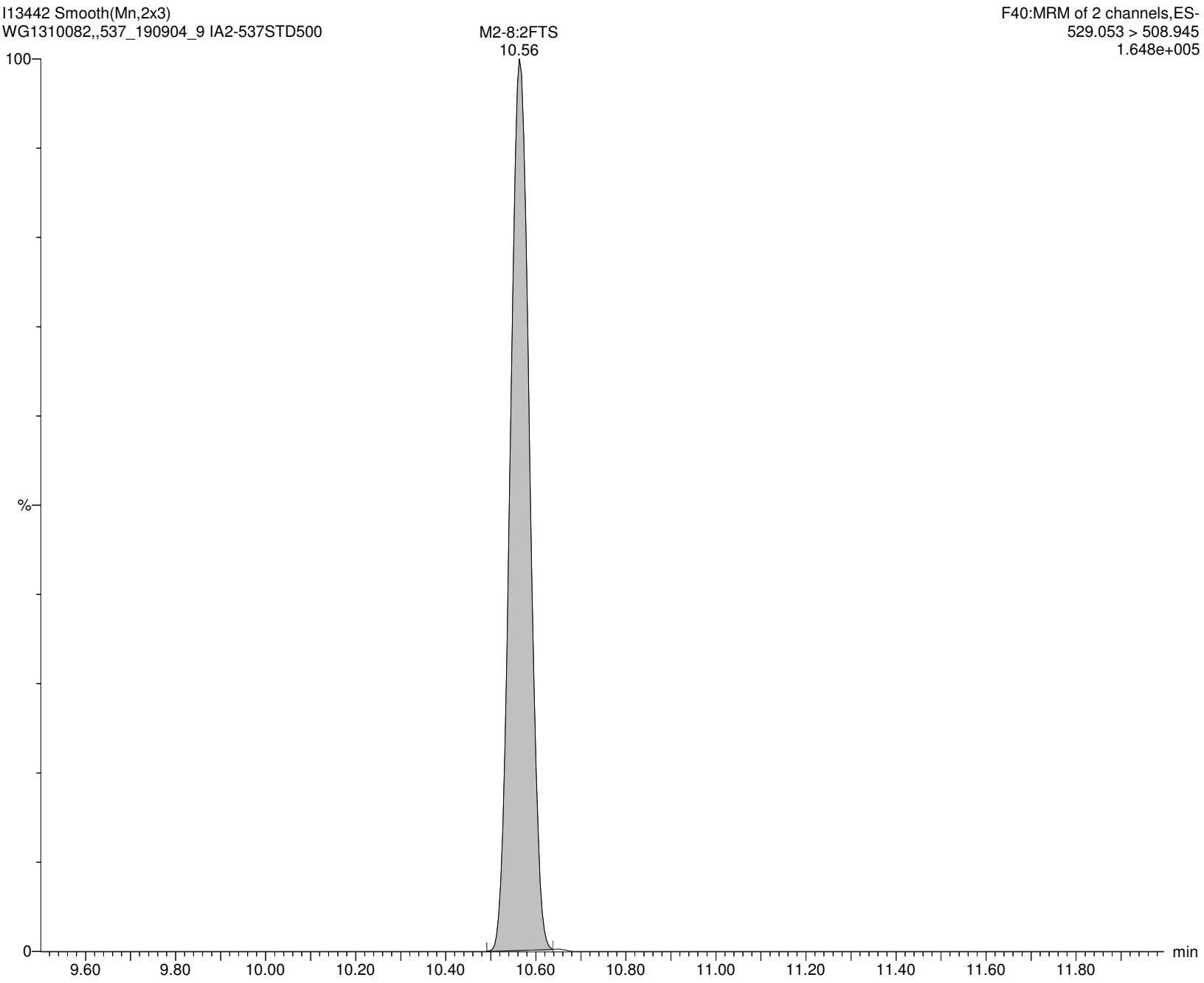
**M2-8:2FTS**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
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**Description: WG1310082,,537_190904_9**
**User: LCMS02:JW**
**Vial: 1:B,2**
**Instrument: XEVO-TQSmicro#QEB0050**
**Inlet Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\LCMS_537_ISO_B**
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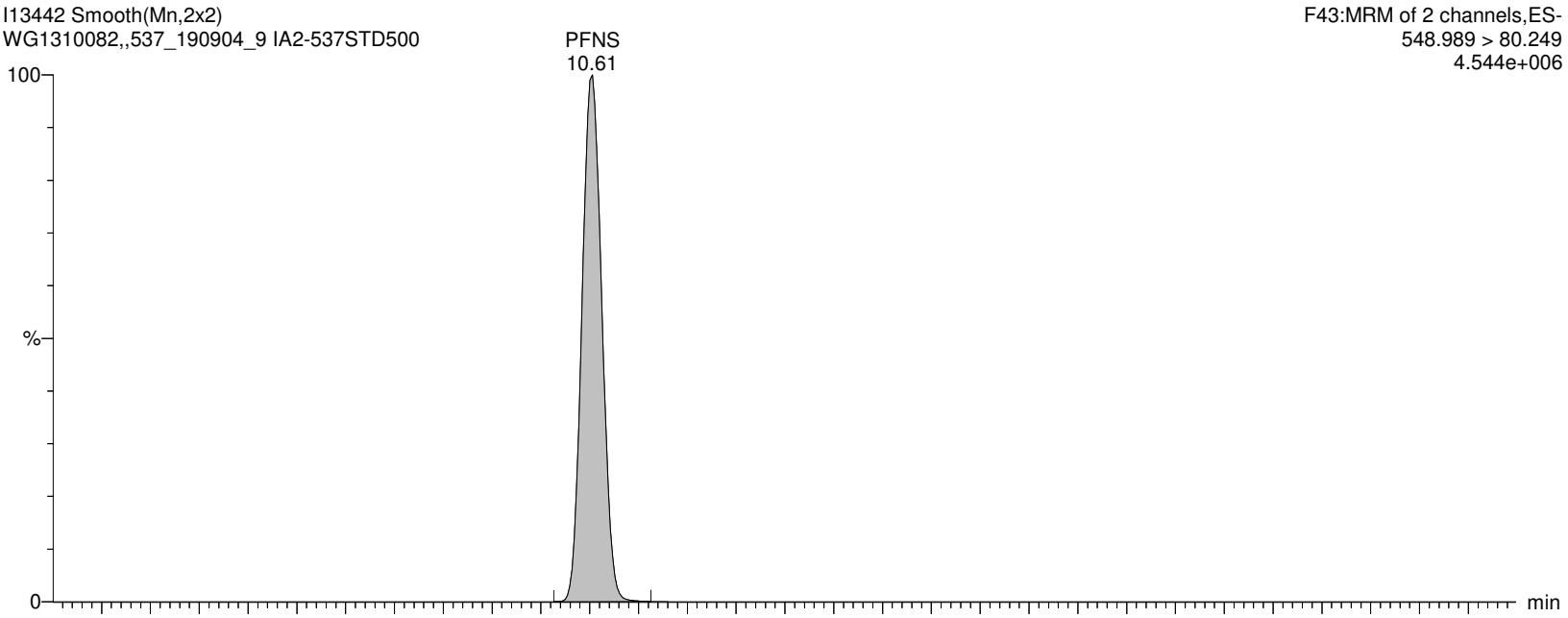
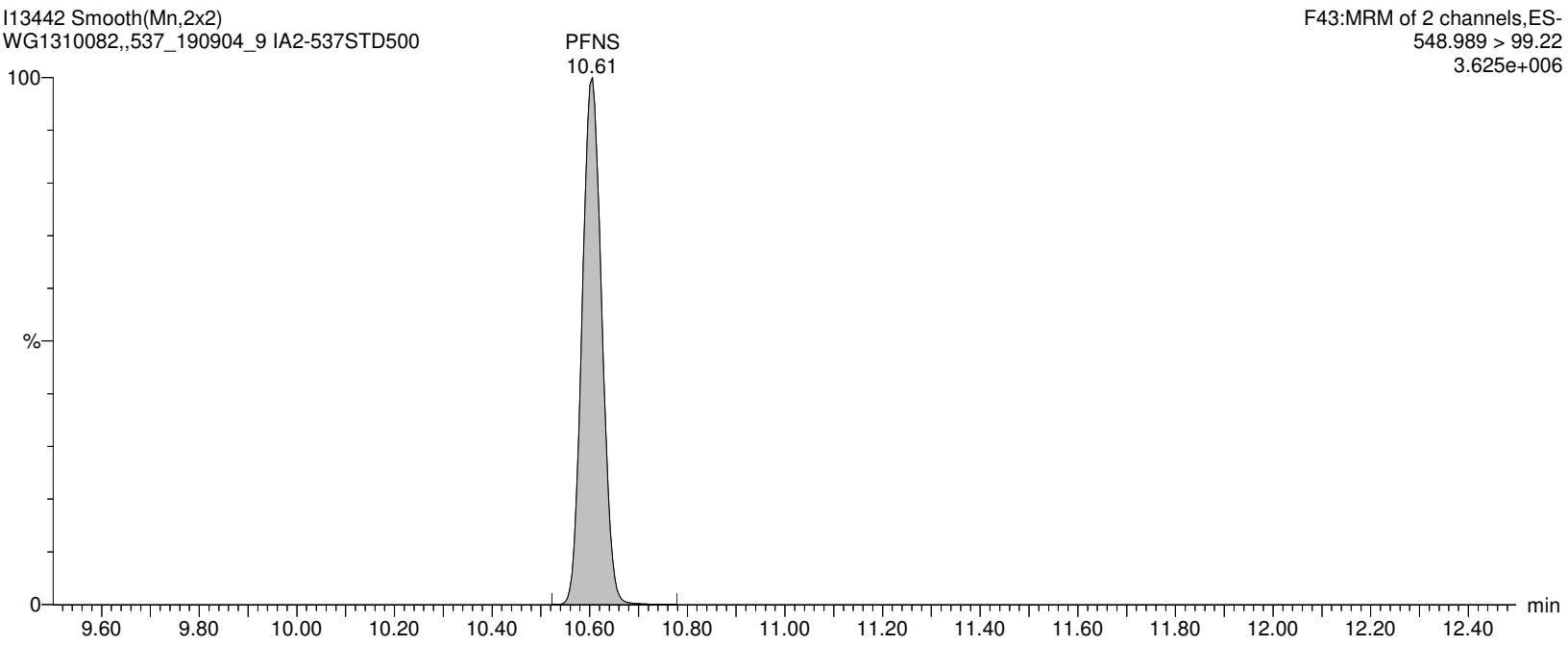
**PFNS**



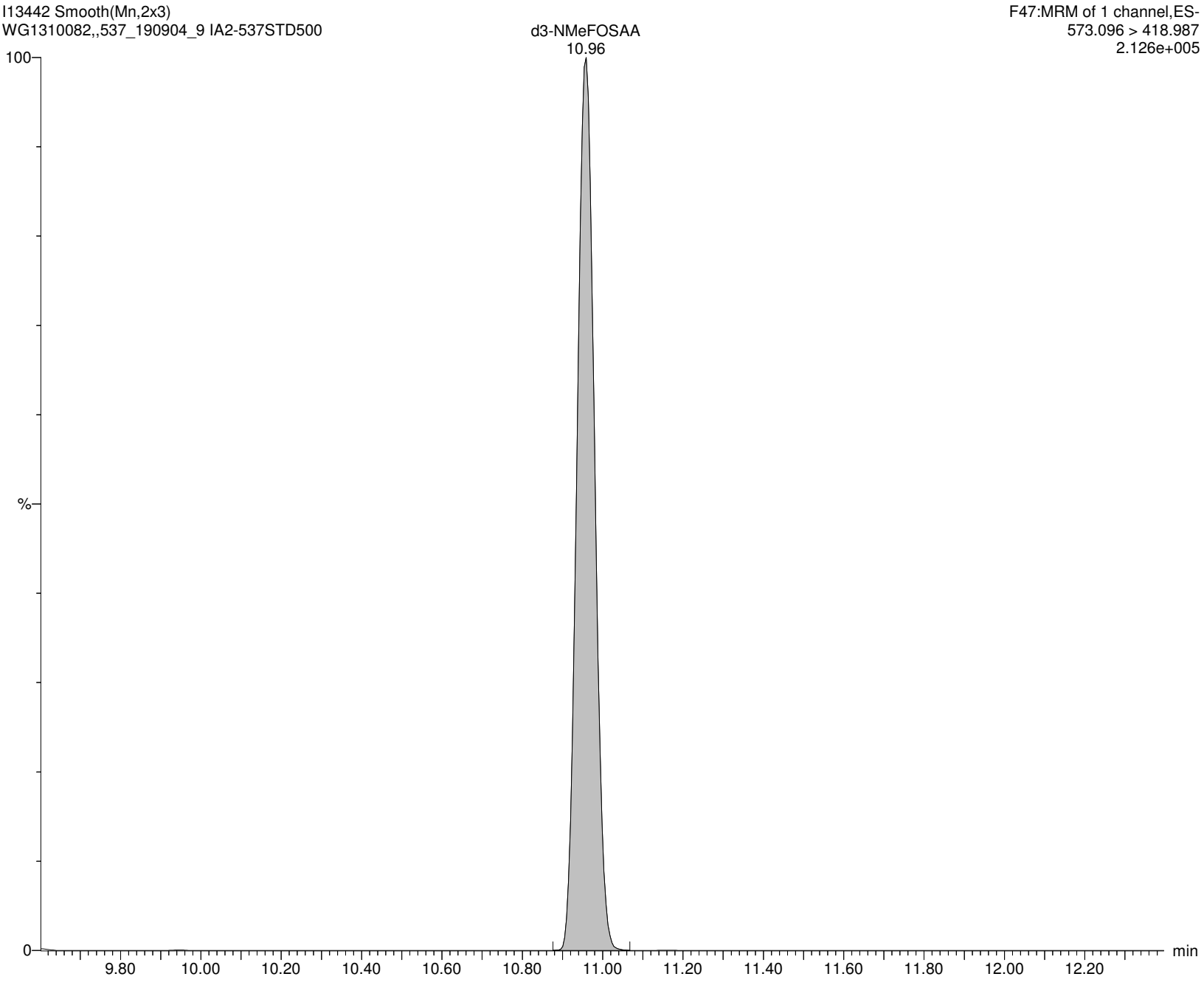


all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
Printed: Monday, November 18, 2019 13:43:05 Eastern Standard Time

**Name: I13442**
**ID: IA2-537STD500**
**Date: 18-Nov-2019**
**Time: 12:49:53**
**Description: WG1310082,,537_190904_9**
**User: LCMS02:JW**
**Vial: 1:B,2**
**Instrument: XEVO-TQSmicro#QEB0050**
**Inlet Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\LCMS_537_ISO_B**
**Tune Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\181009_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**d3-NMeFOSAA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
Printed: Monday, November 18, 2019 13:43:05 Eastern Standard Time

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**Date: 18-Nov-2019**
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**User: LCMS02:JW**
**Vial: 1:B,2**
**Instrument: XEVO-TQSmicro#QEB0050**
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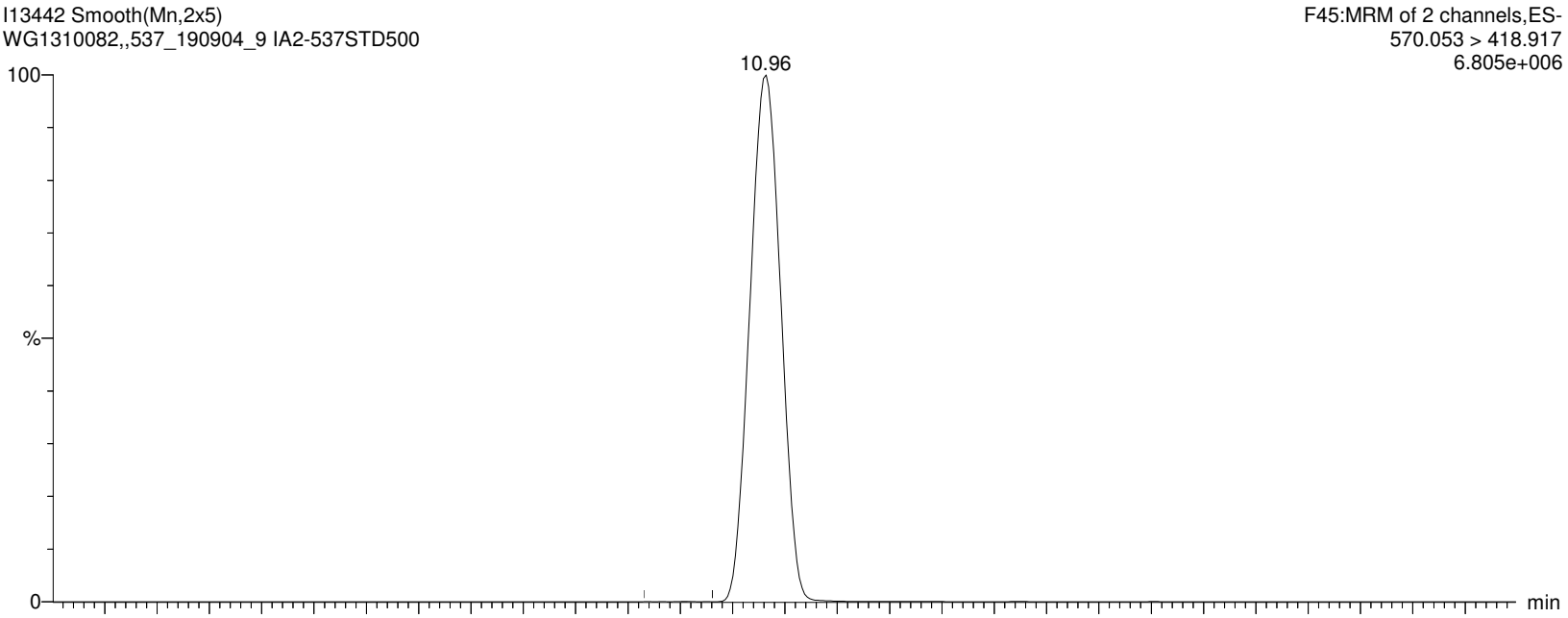
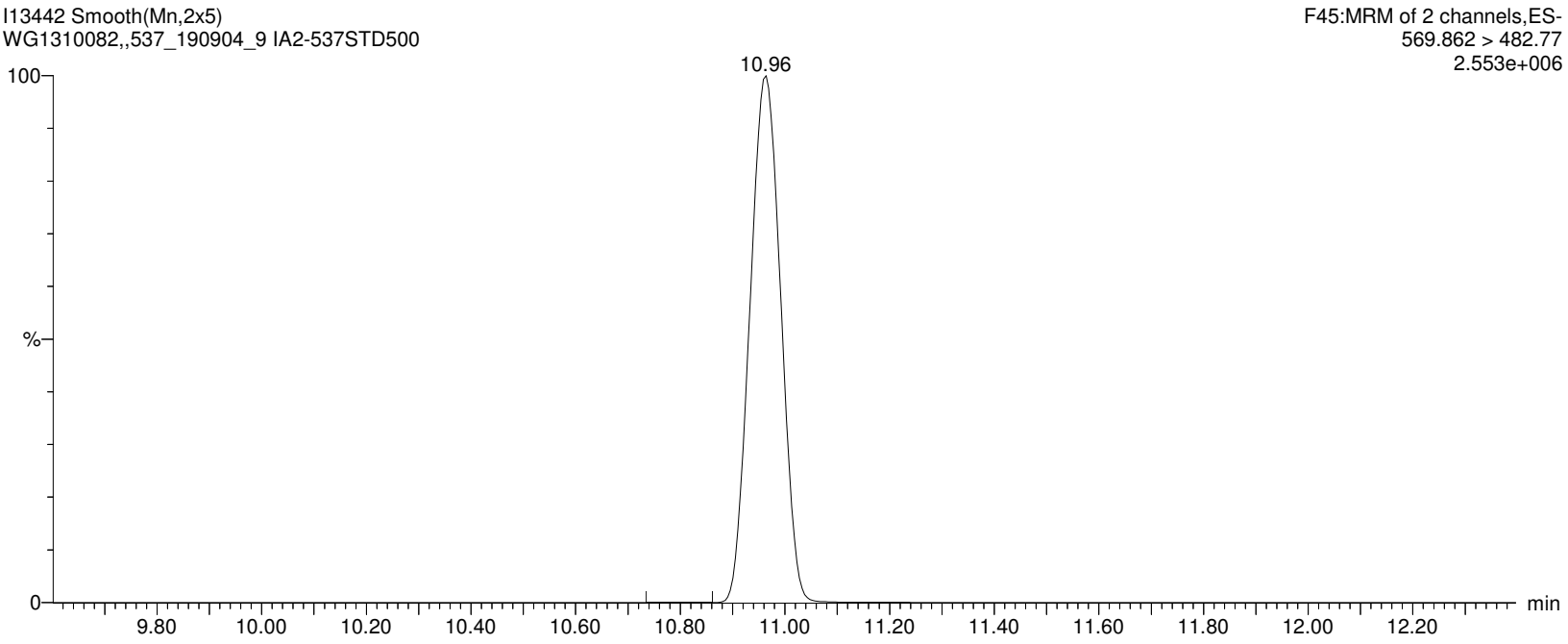
**br-NMeFOSAA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
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**Description: WG1310082,,537_190904_9**
**User: LCMS02:JW**
**Vial: 1:B,2**
**Instrument: XEVO-TQSmicro#QEB0050**
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**Tune Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\181009_TUNE.IPR**
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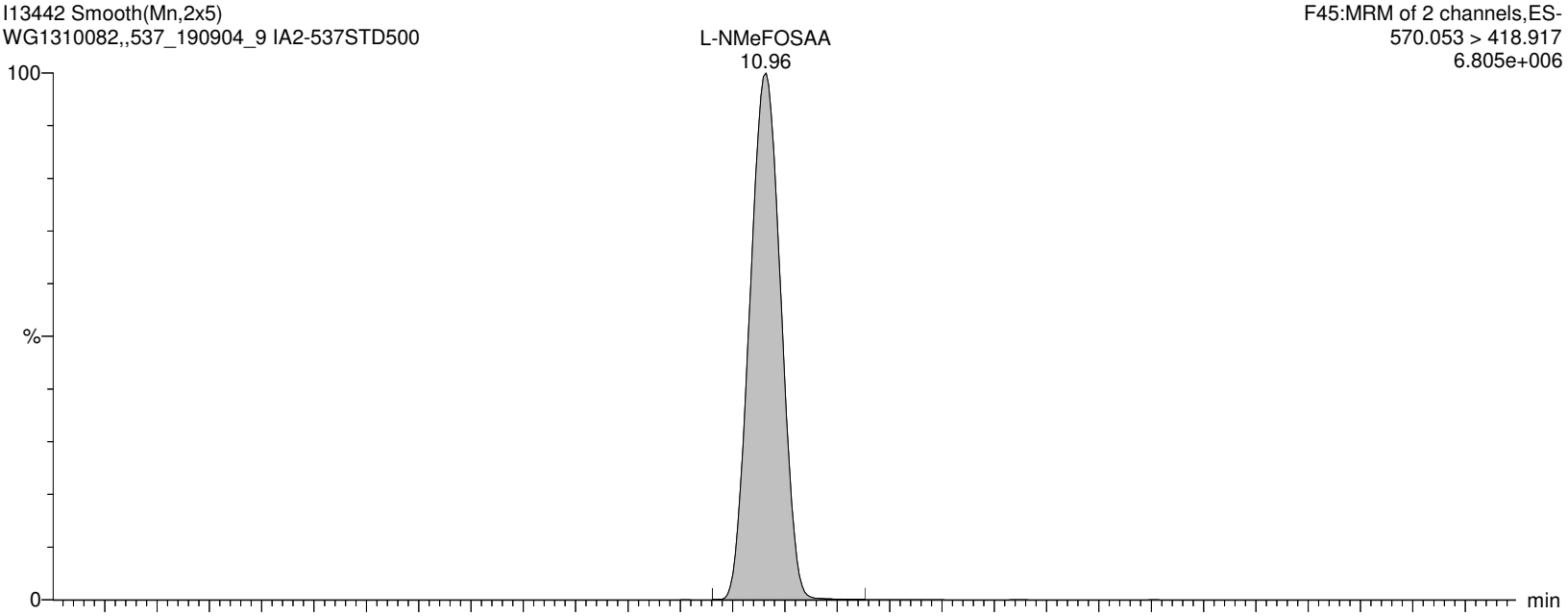
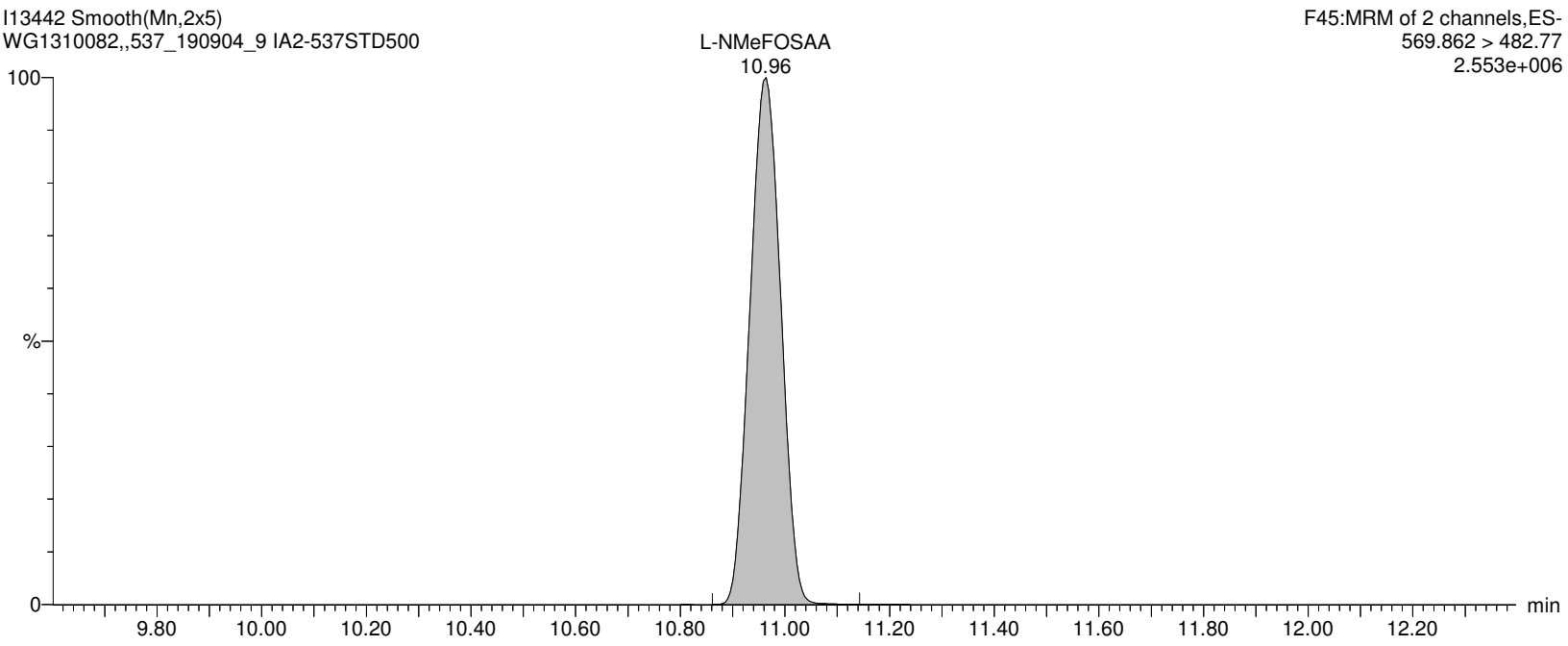
**L-NMeFOSAA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
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**User: LCMS02:JW**
**Vial: 1:B,2**
**Instrument: XEVO-TQSmicro#QEB0050**
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**Tune Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\181009_TUNE.IPR**
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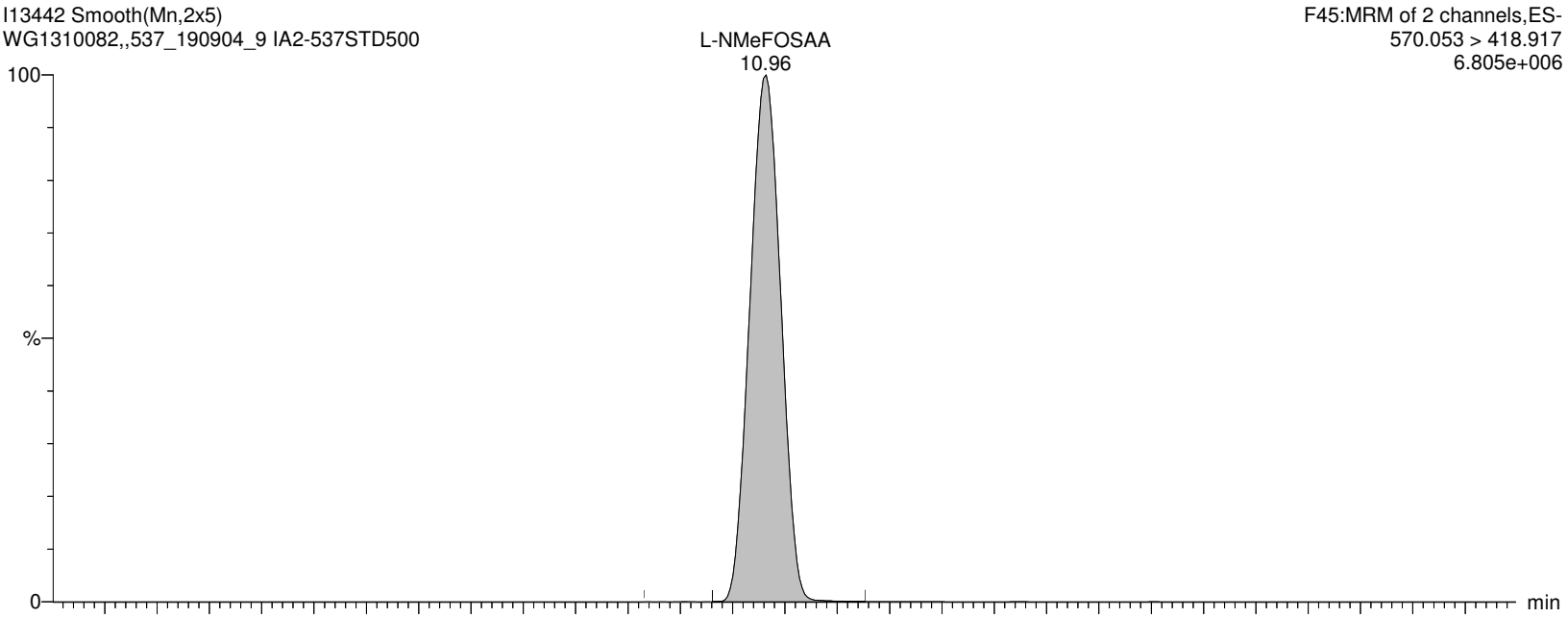
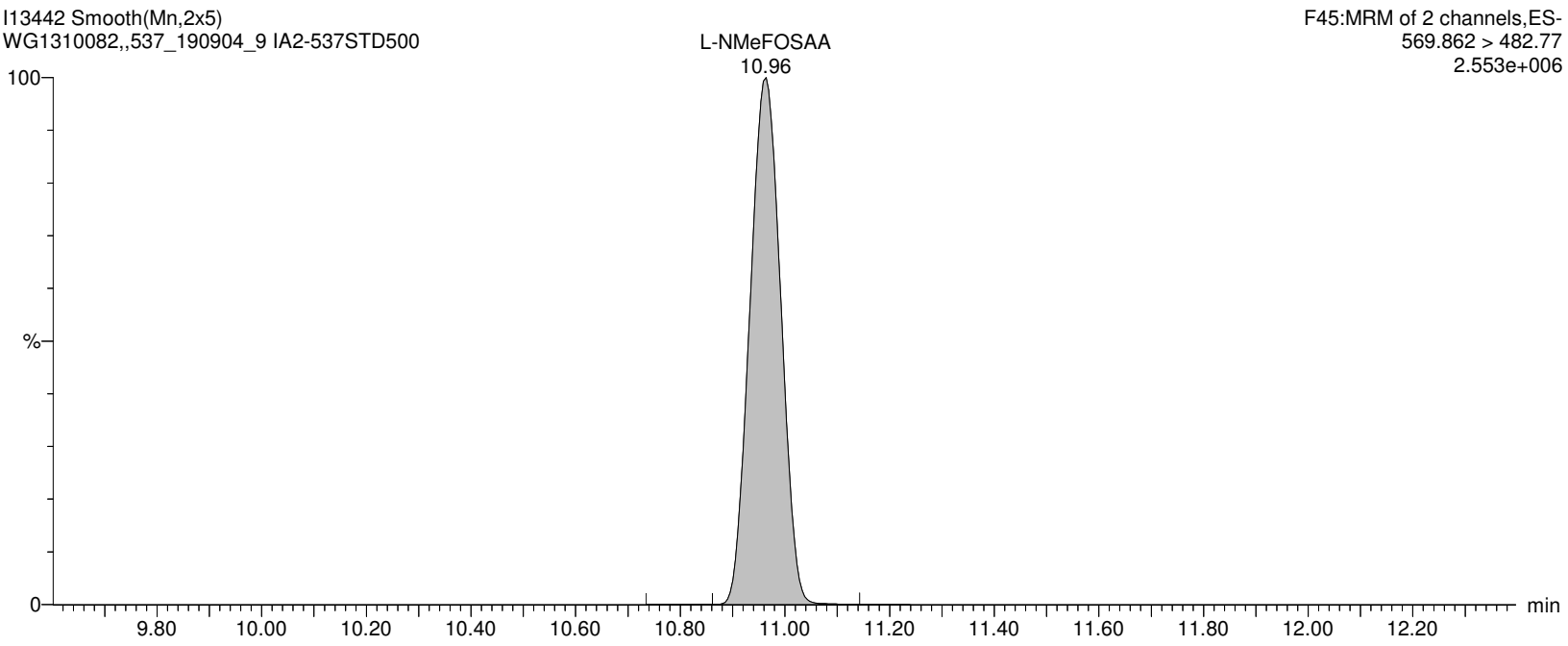
**NMeFOSAA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
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**Instrument: XEVO-TQSmicro#QEB0050**
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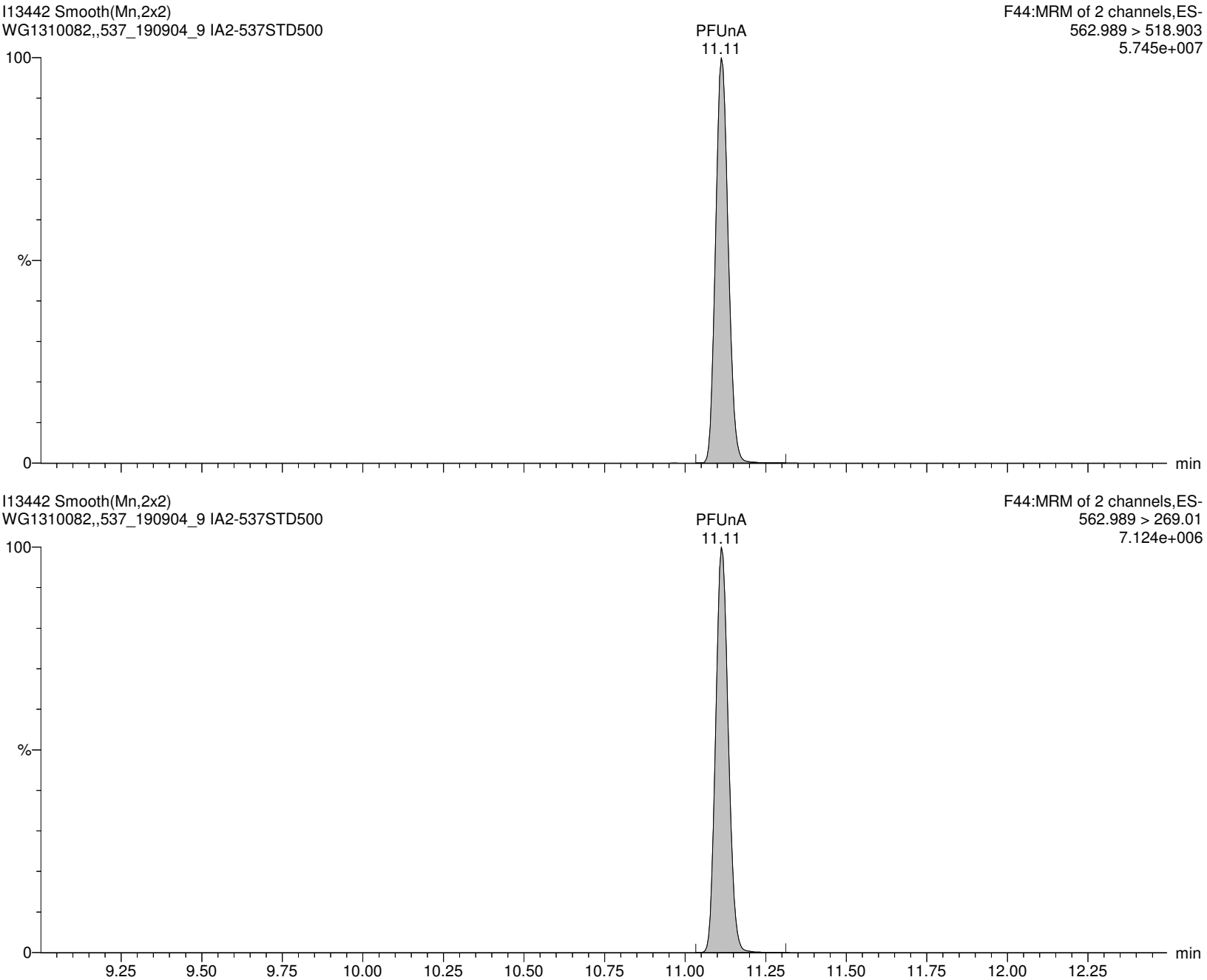
**MS Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**PFUnA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
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**Vial: 1:B,2**
**Instrument: XEVO-TQSmicro#QEB0050**
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**Tune Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\181009_TUNE.IPR**
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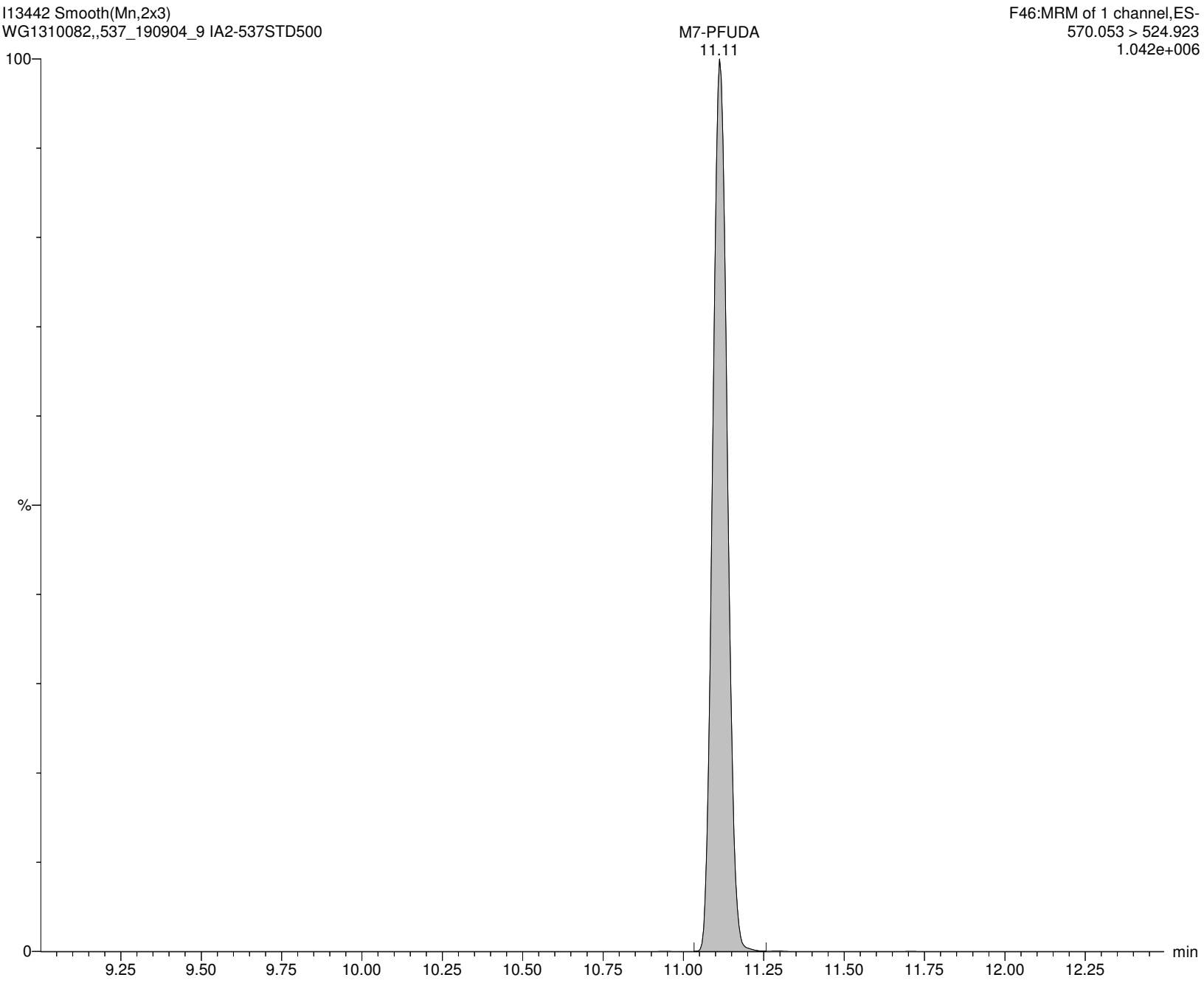
**M7-PFUDA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
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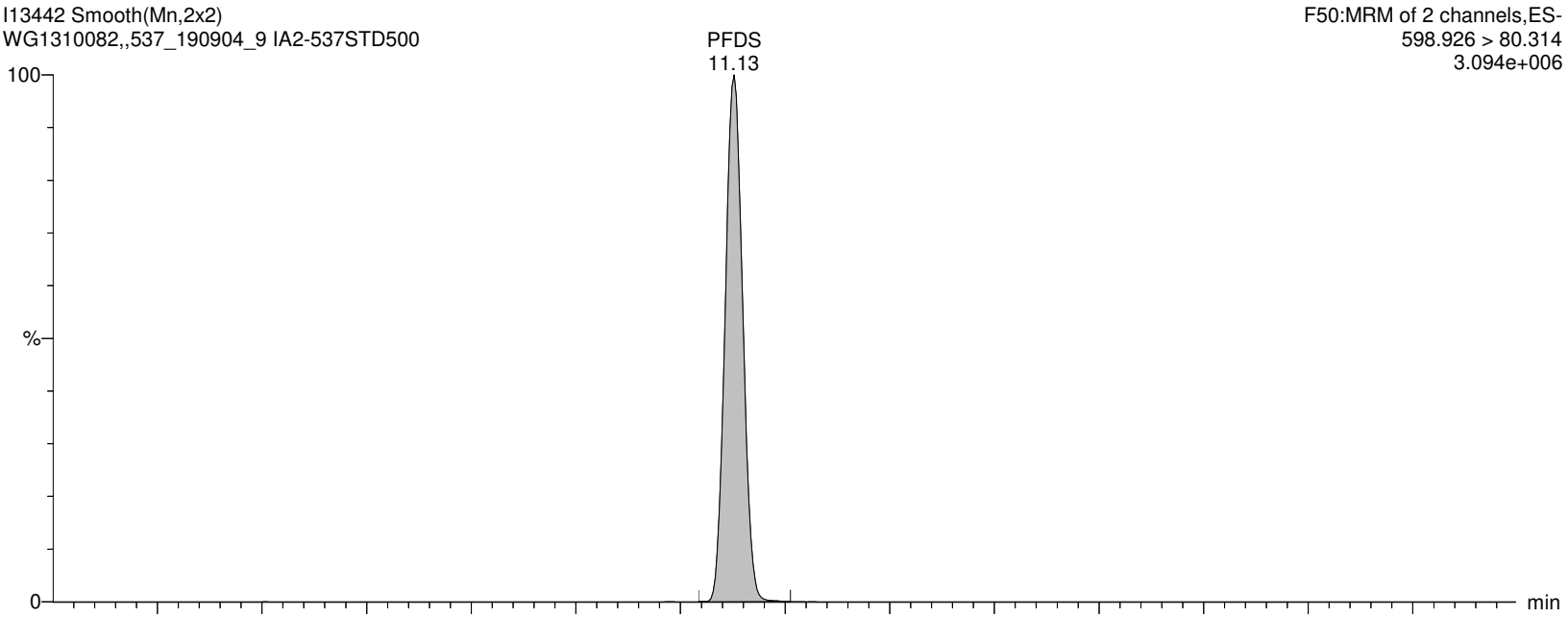
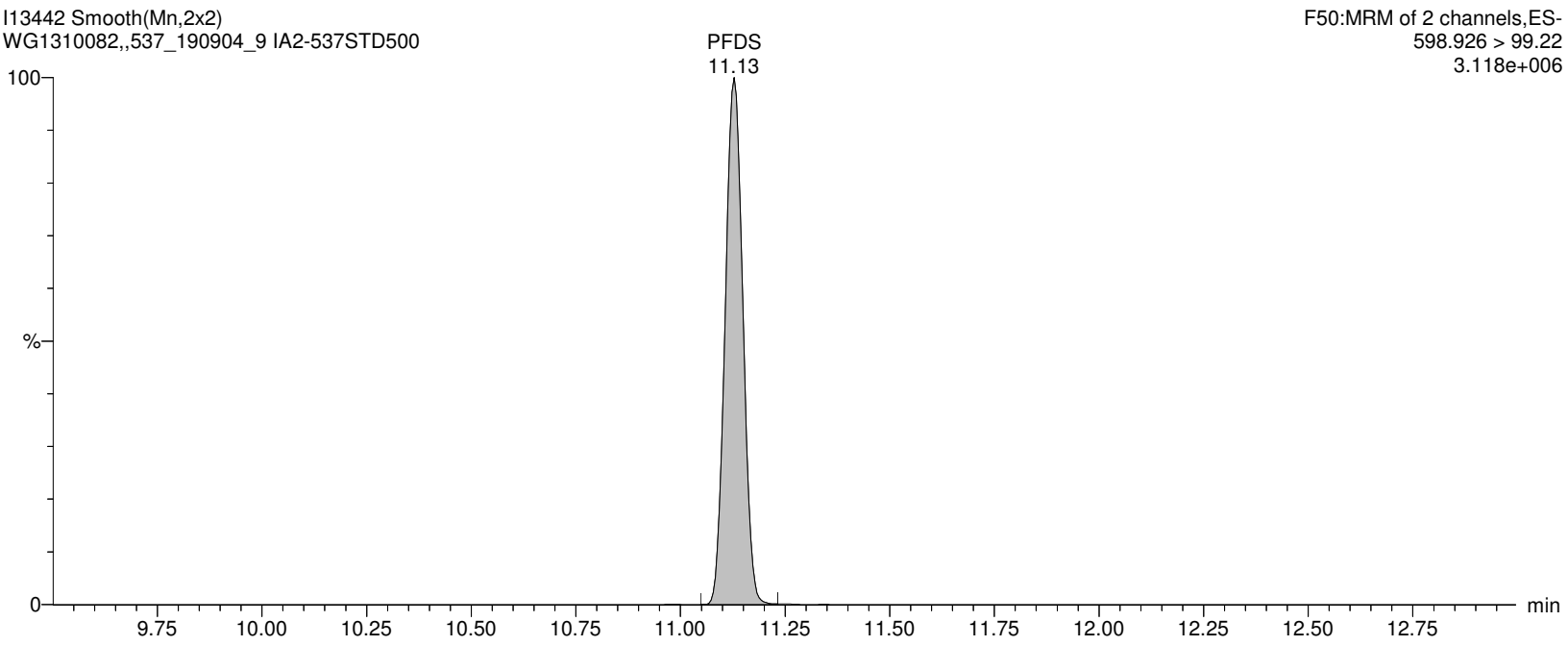
**PFDS**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
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**User: LCMS02:JW**
**Vial: 1:B,2**
**Instrument: XEVO-TQSmicro#QEB0050**
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**Tune Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\181009_TUNE.IPR**
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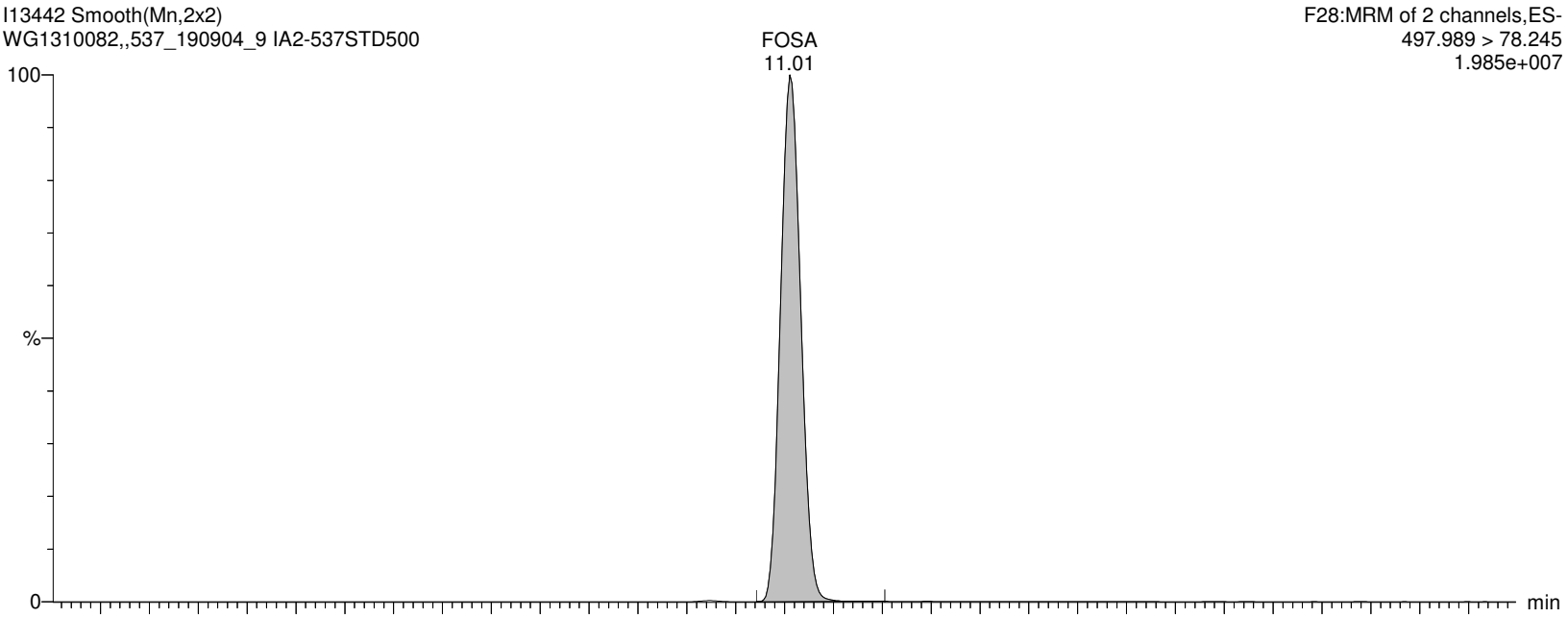
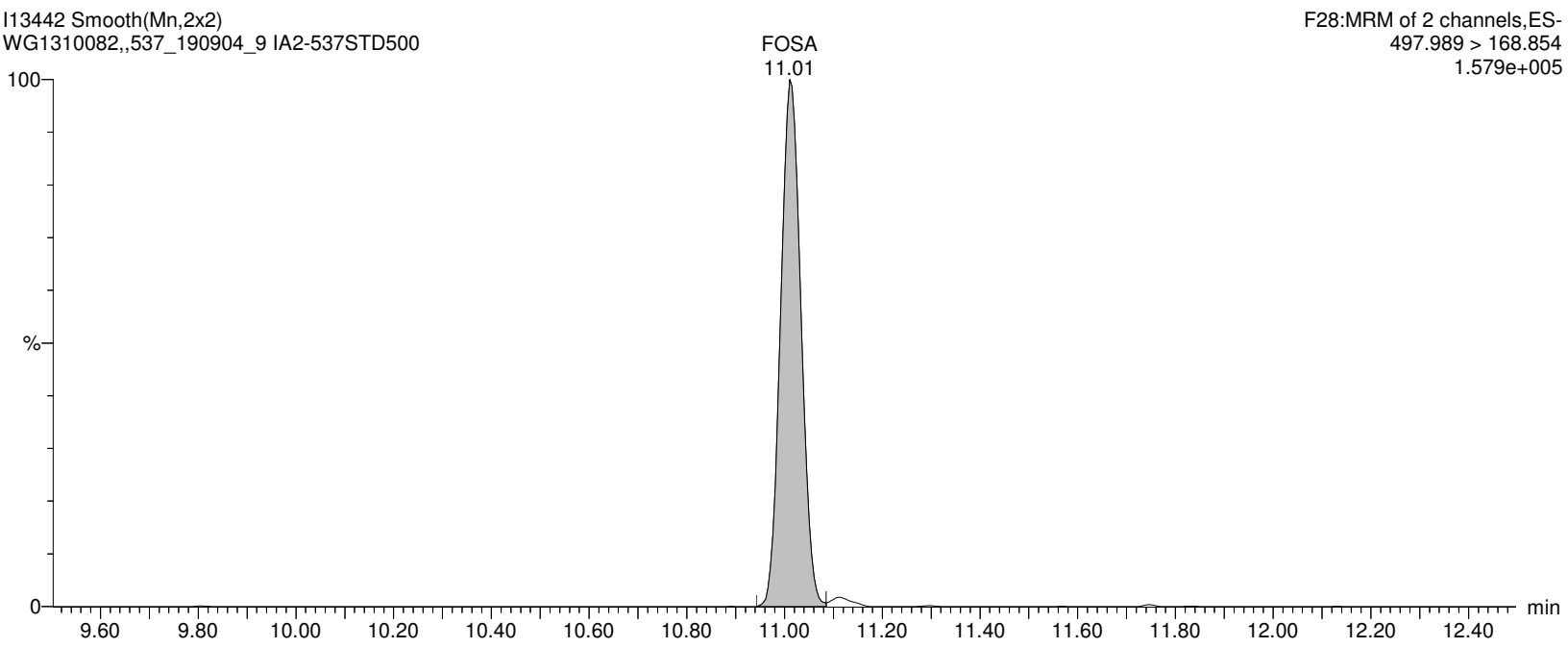
**FOSA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
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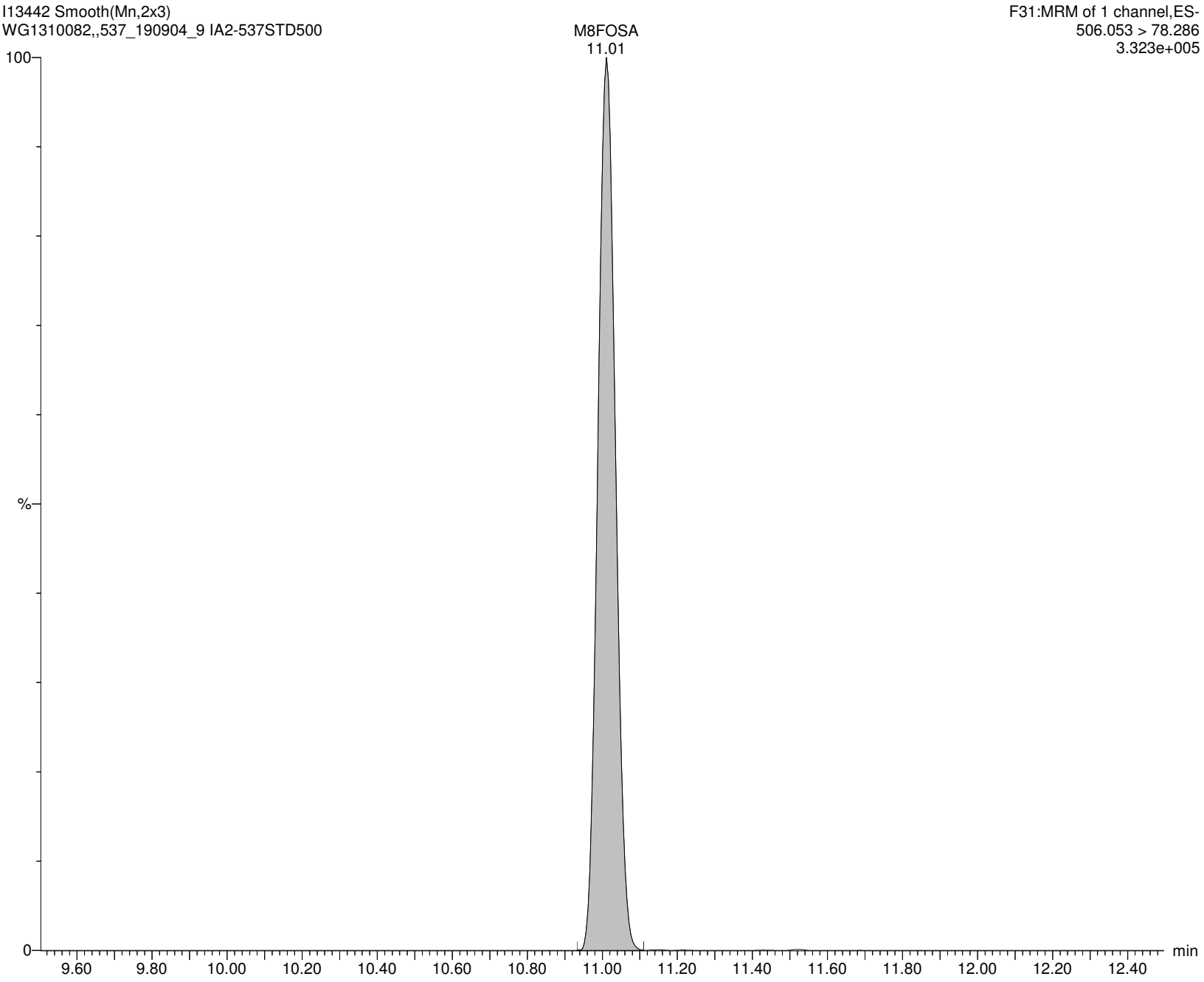
**M8FOSA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
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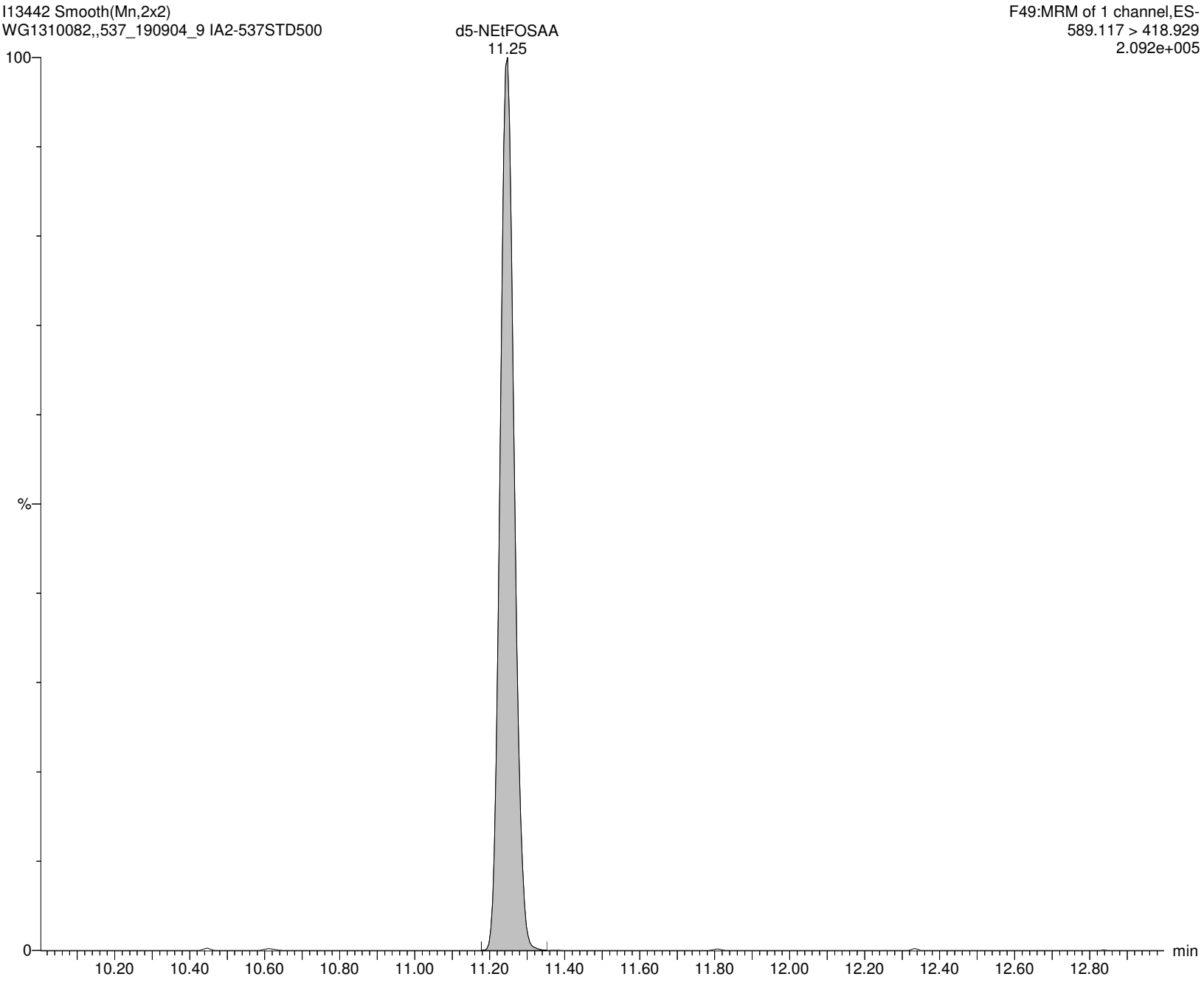
**d5-NEtFOSAA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
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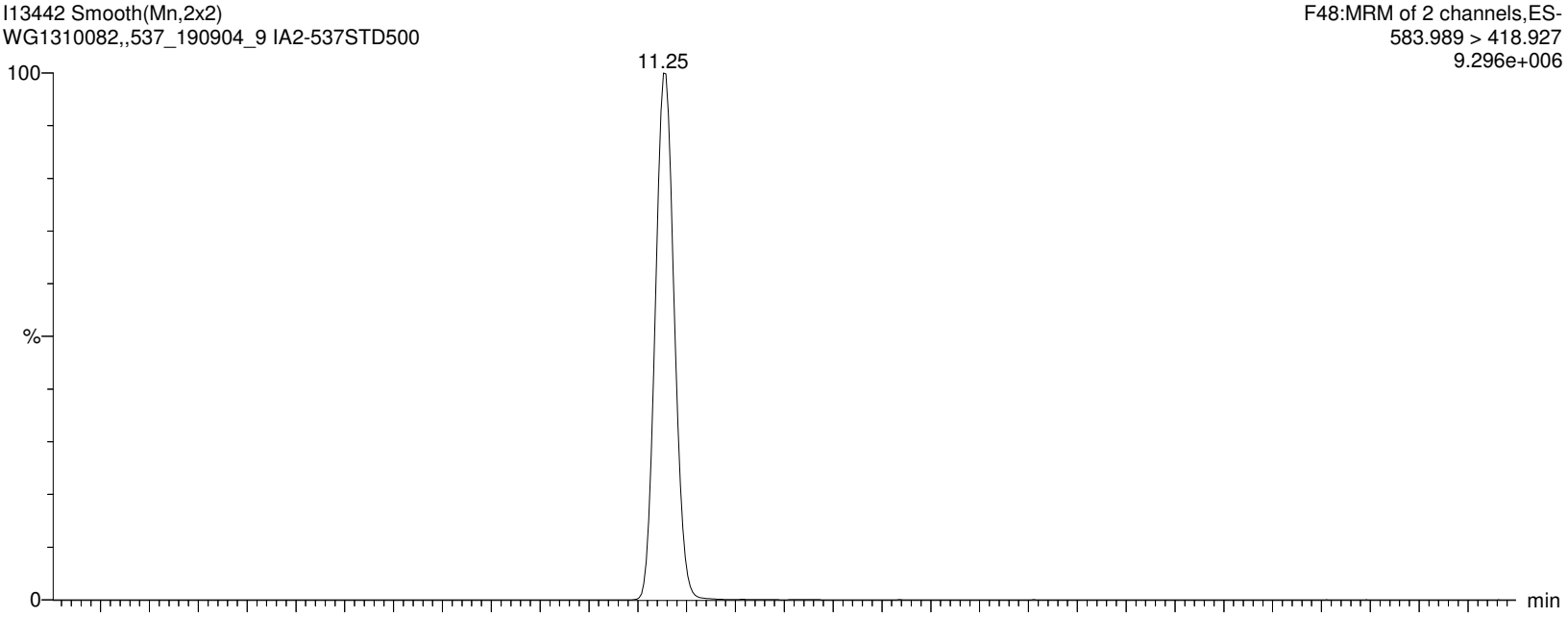
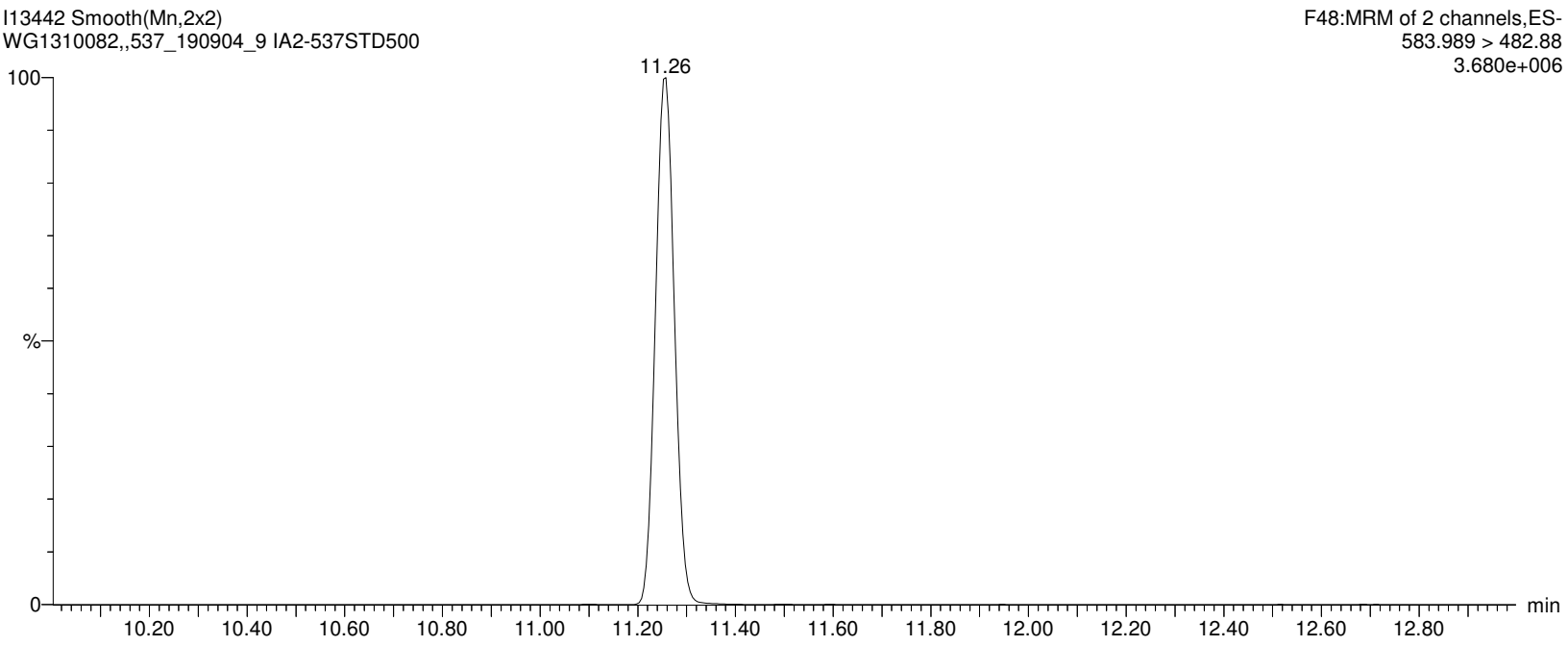
**br-NEtFOSAA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
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**Vial: 1:B,2**
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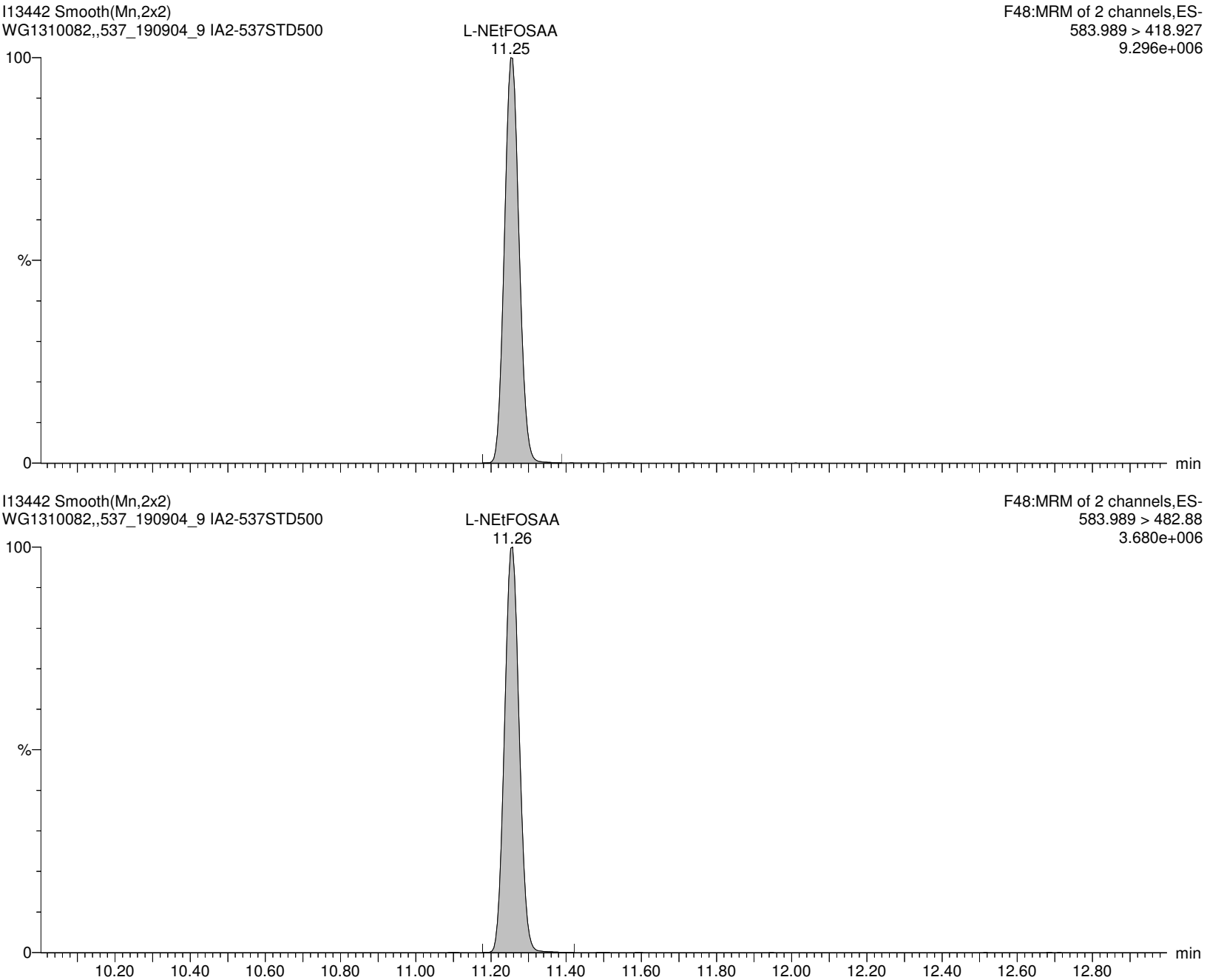
**L-NEtFOSAA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
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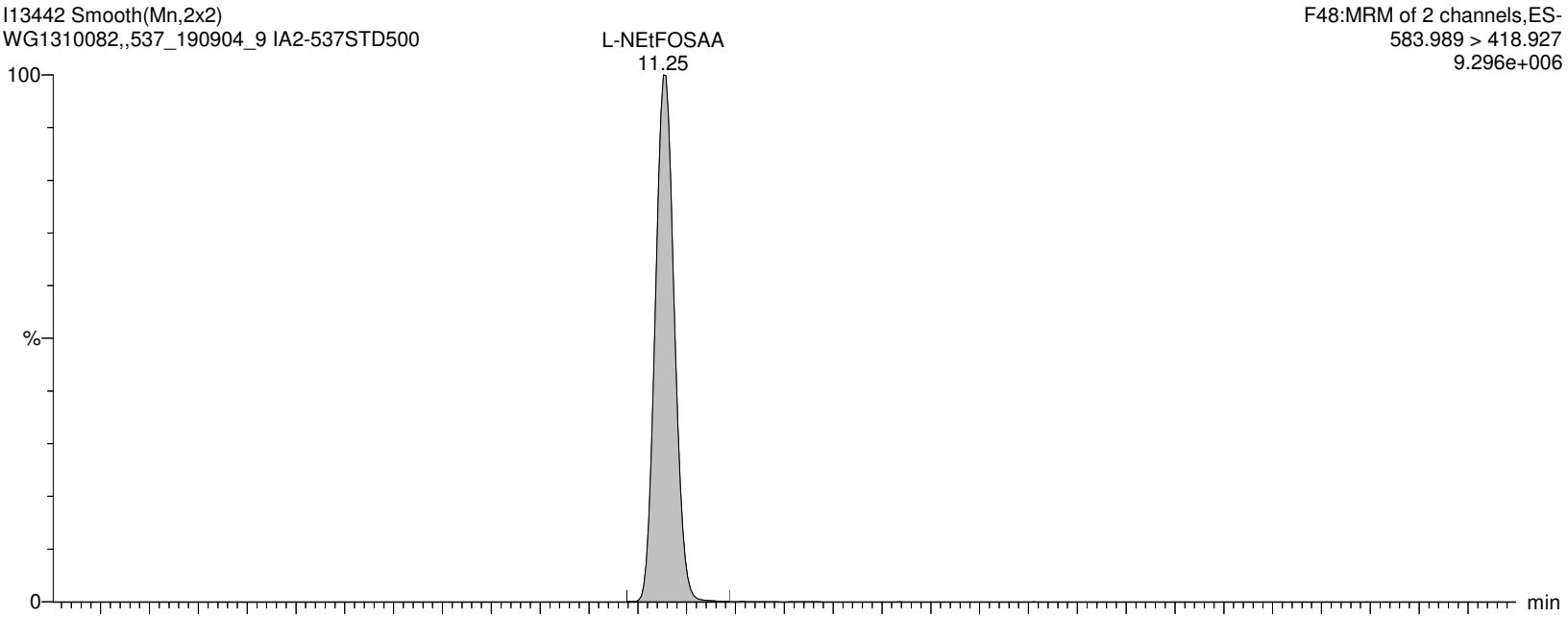
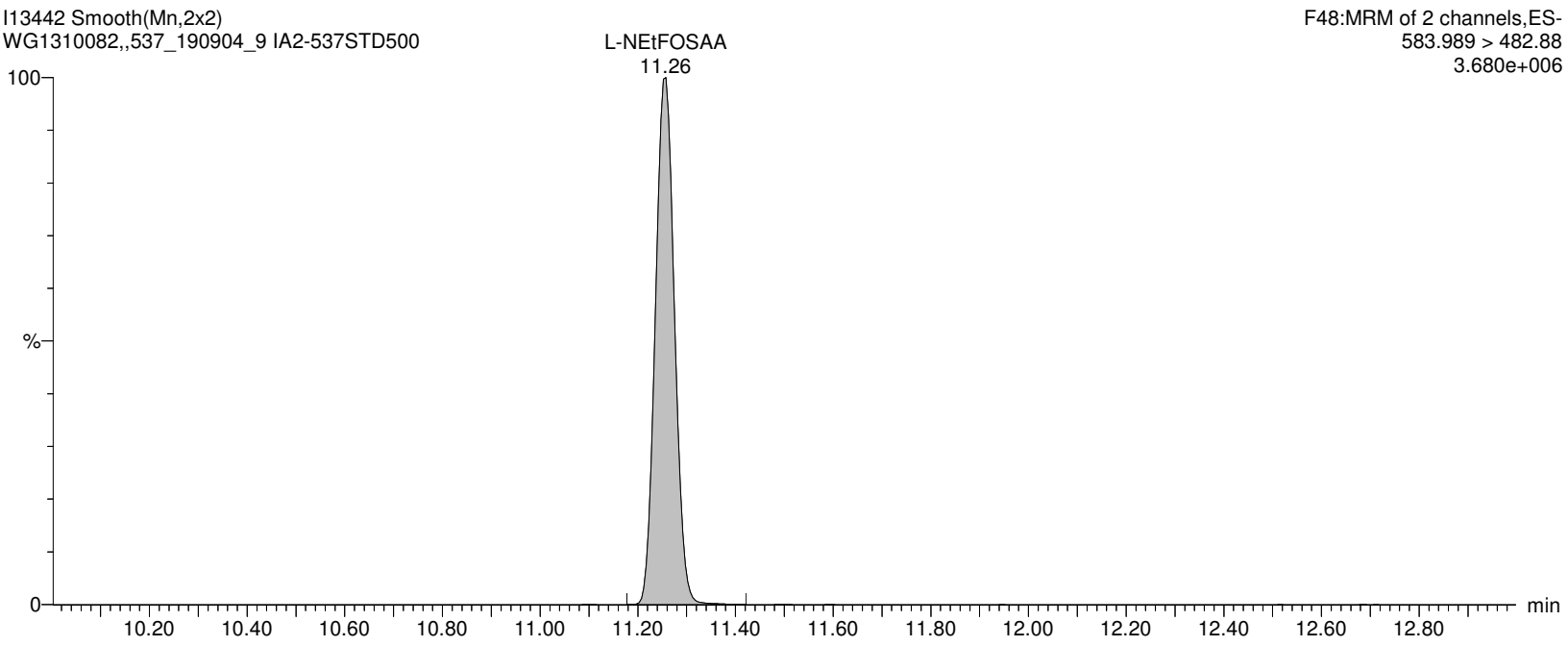
**NEtFOSAA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
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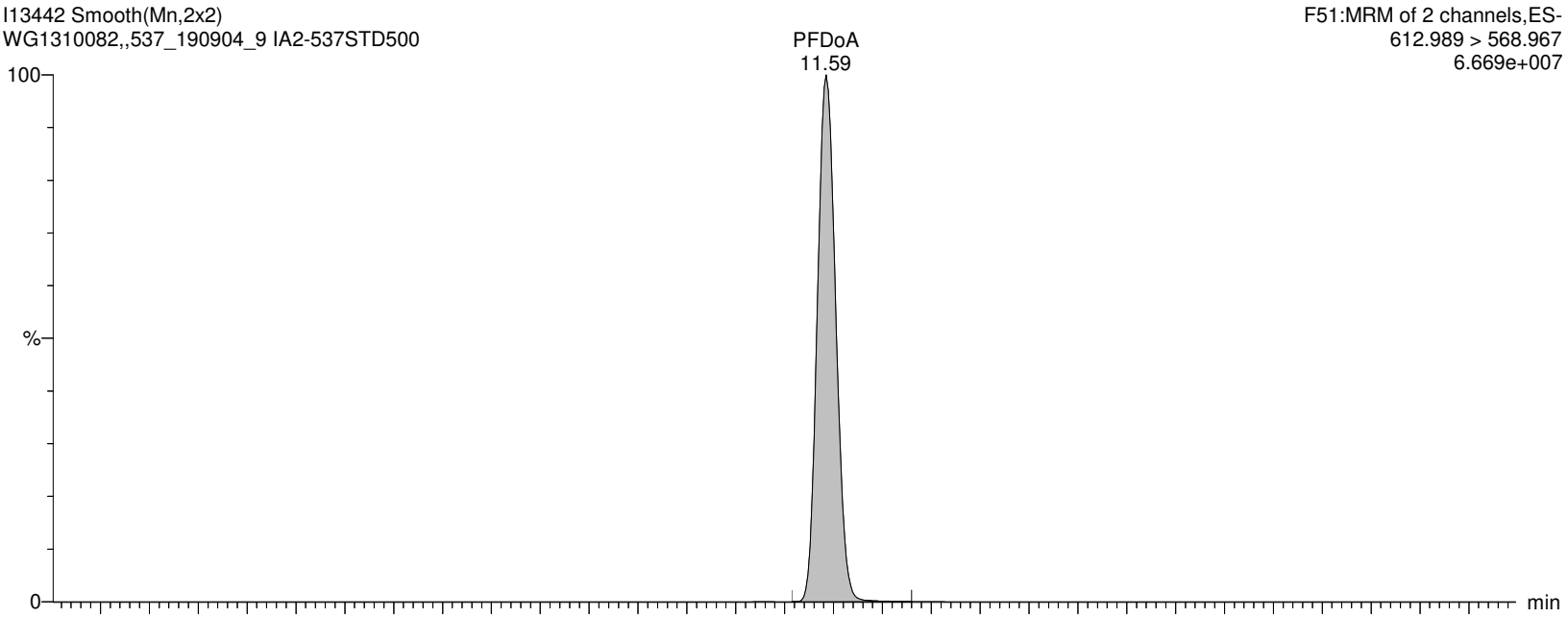
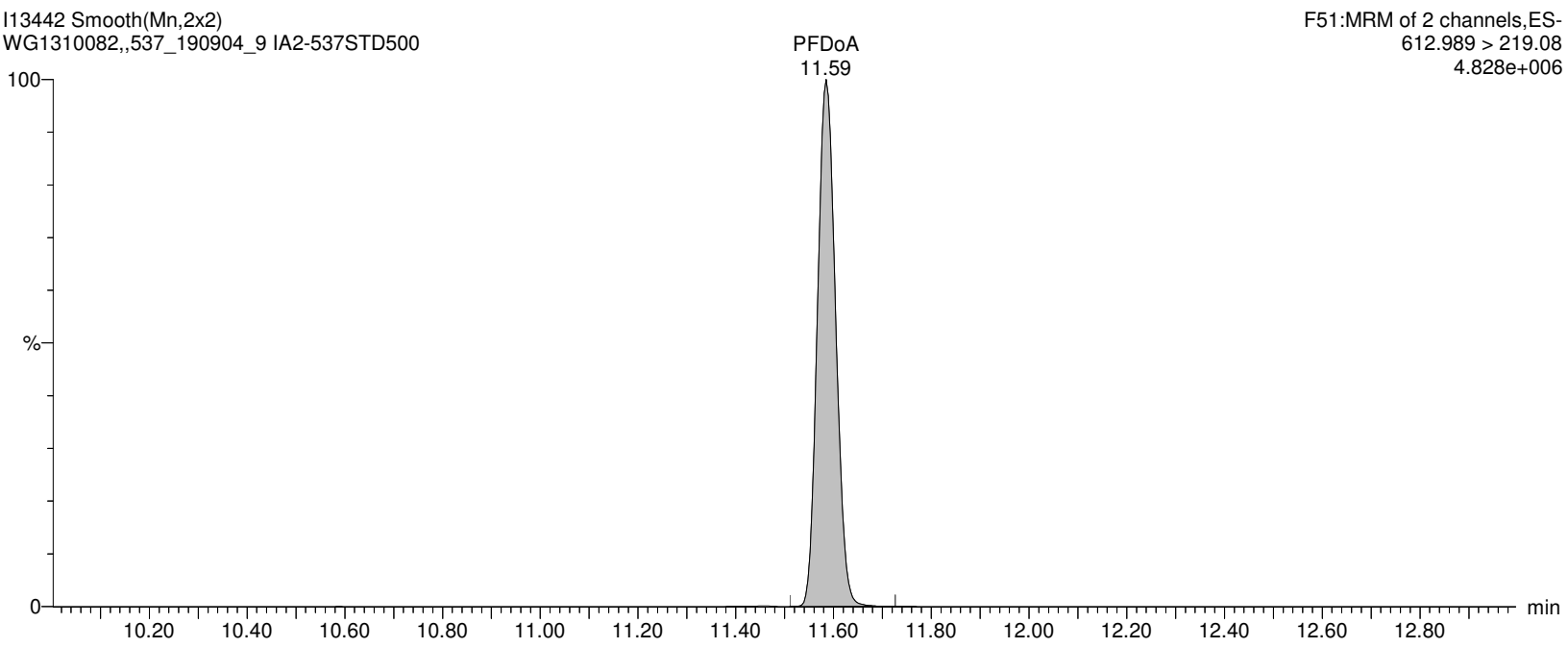
**PFDoA**





all concentration units in (ng/mL)

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**Description: WG1310082,,537_190904_9**
**User: LCMS02:JW**
**Vial: 1:B,2**
**Instrument: XEVO-TQSmicro#QEB0050**
**Inlet Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\LCMS_537_ISO_B**
**Tune Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\181009_TUNE.IPR**
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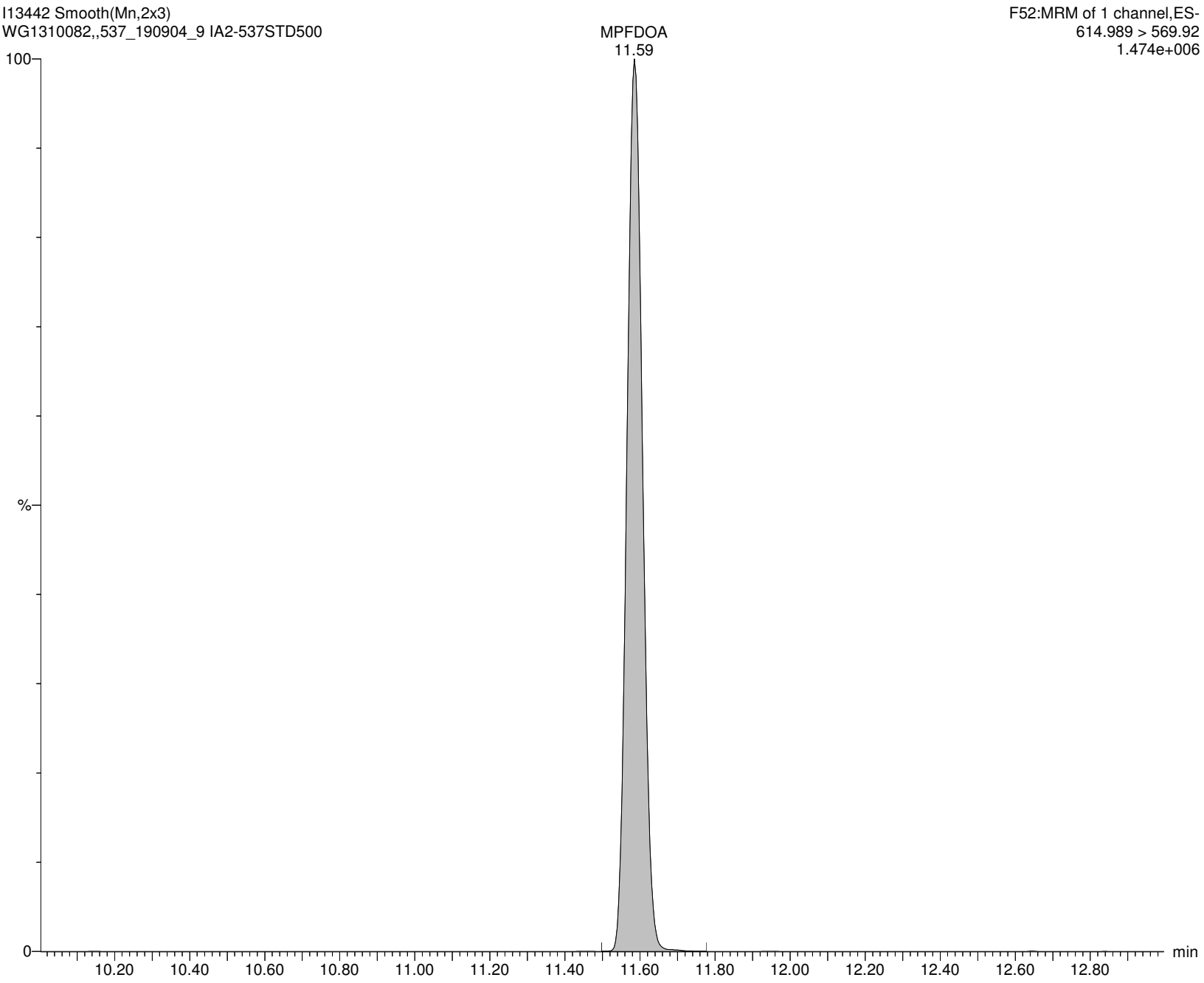



all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
Printed: Monday, November 18, 2019 13:43:05 Eastern Standard Time

**Name: I13442**
**ID: IA2-537STD500**
**Date: 18-Nov-2019**
**Time: 12:49:53**
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**Vial: 1:B,2**
**Instrument: XEVO-TQSmicro#QEB0050**
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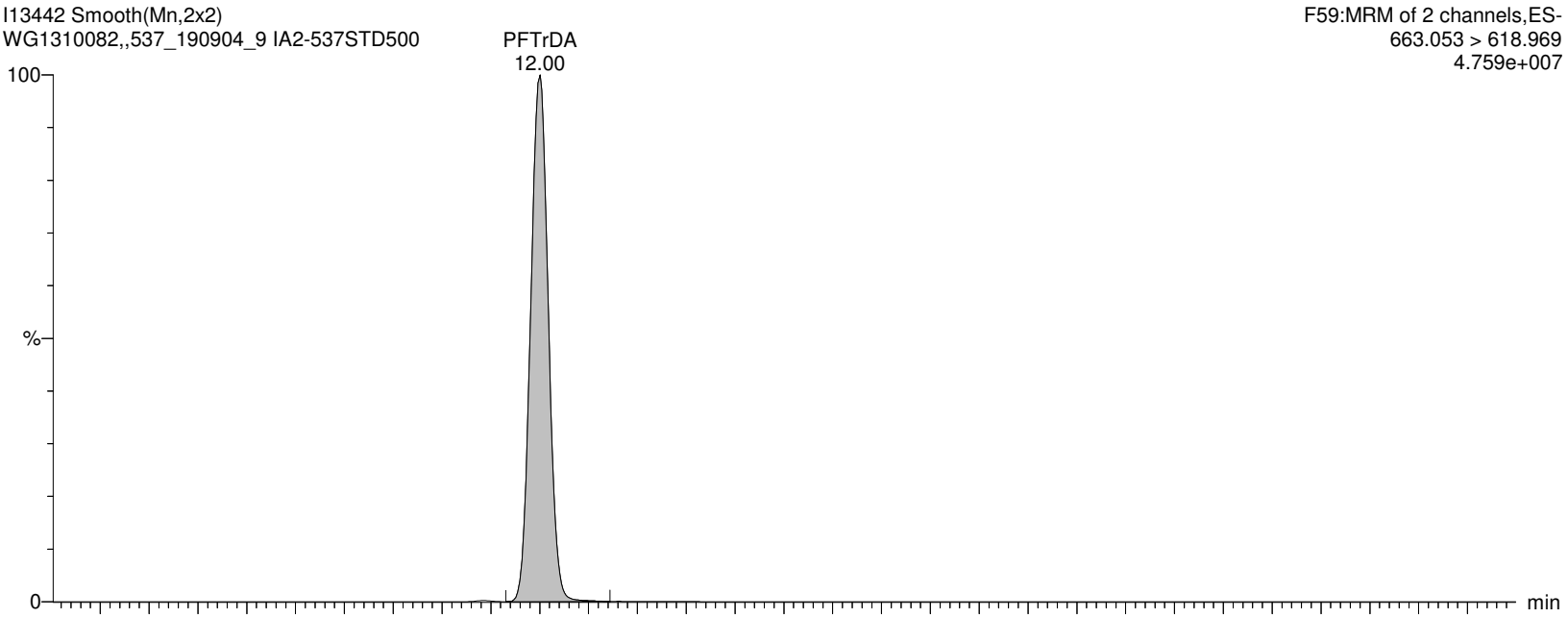


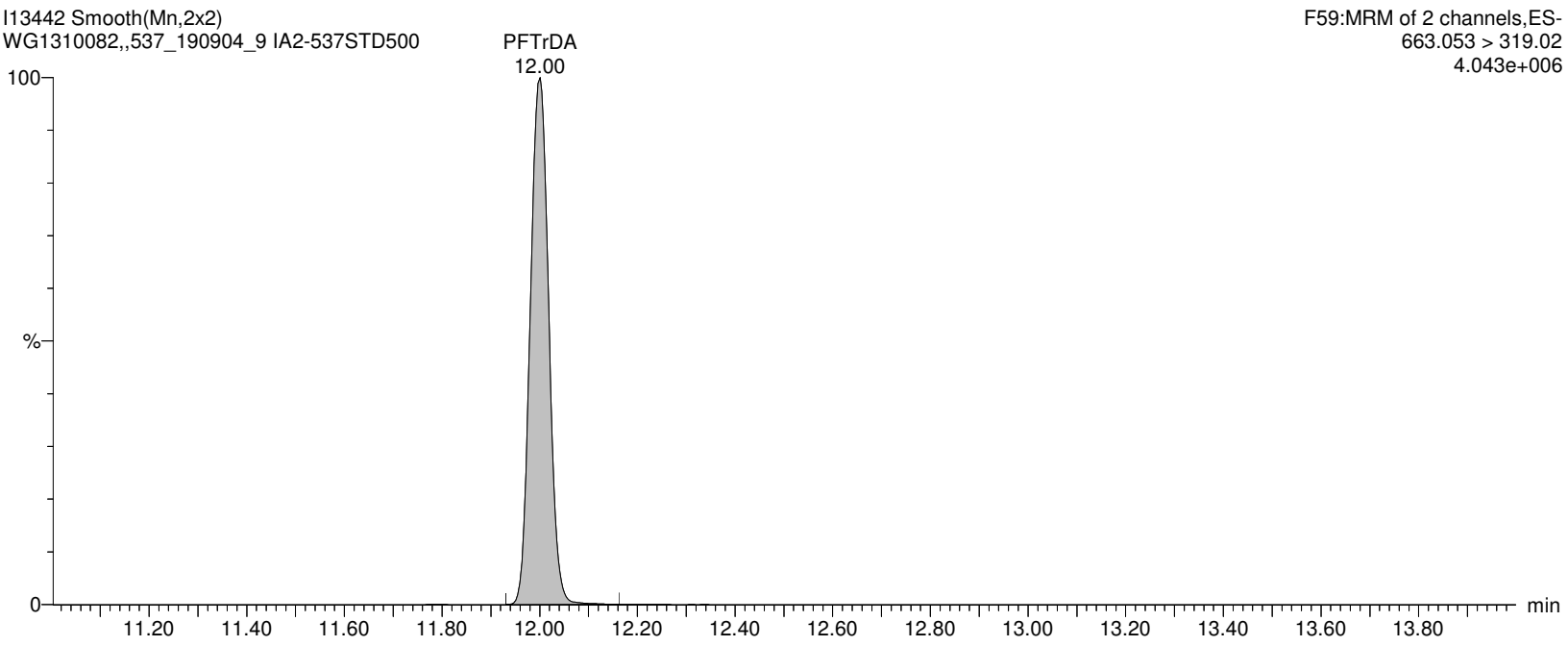



all concentration units in (ng/mL)

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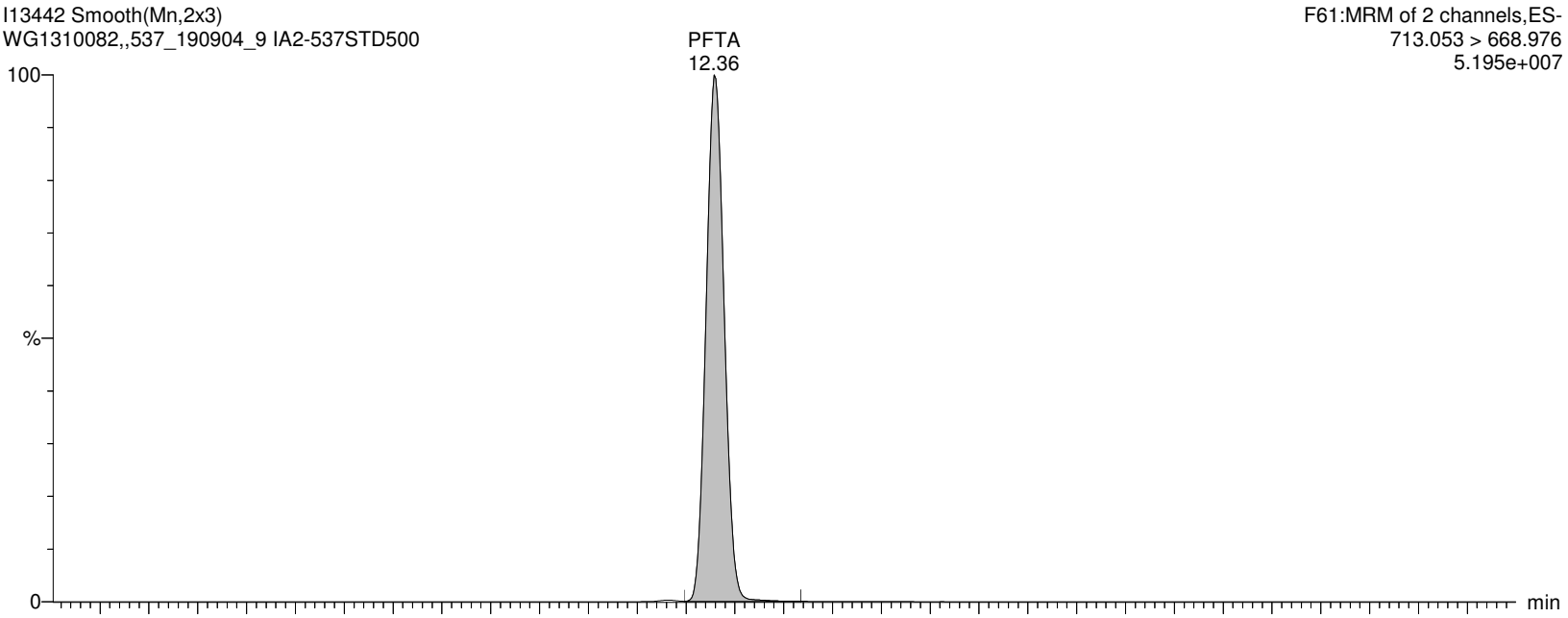


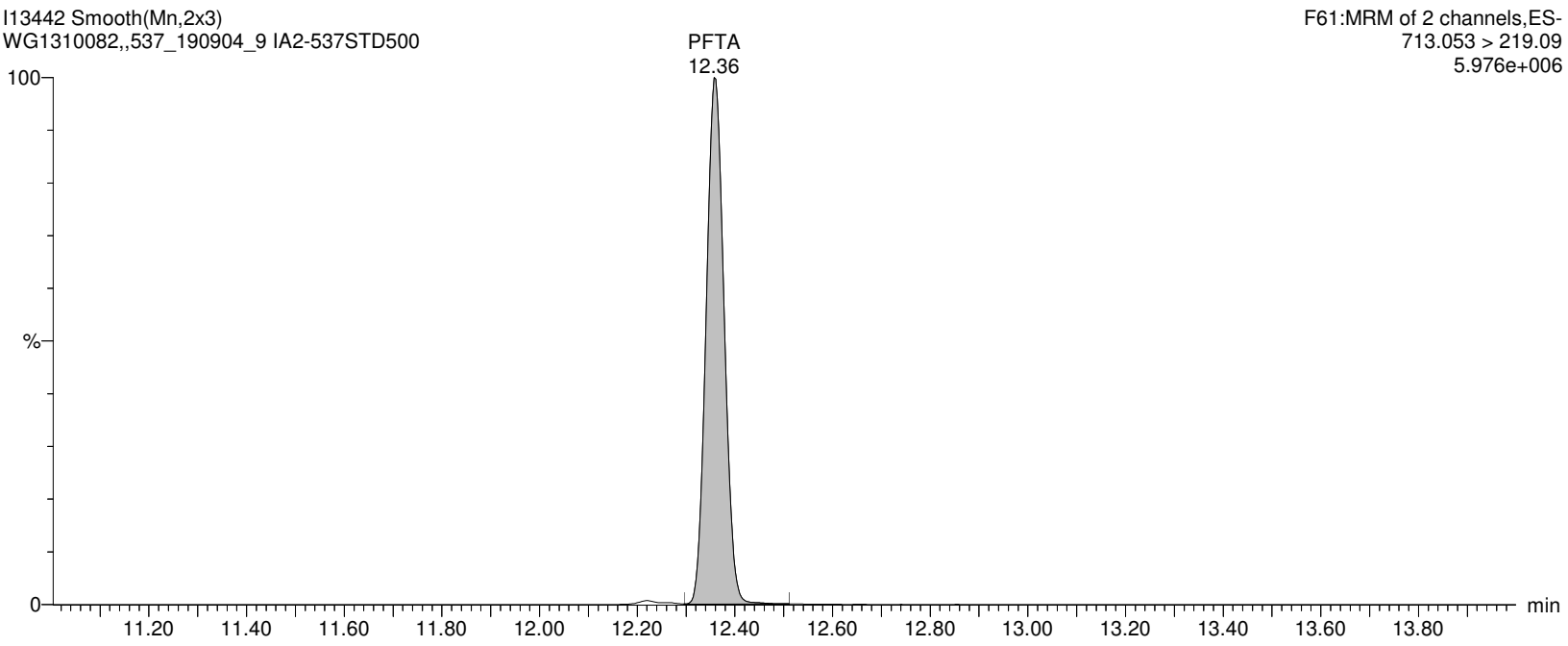



all concentration units in (ng/mL)

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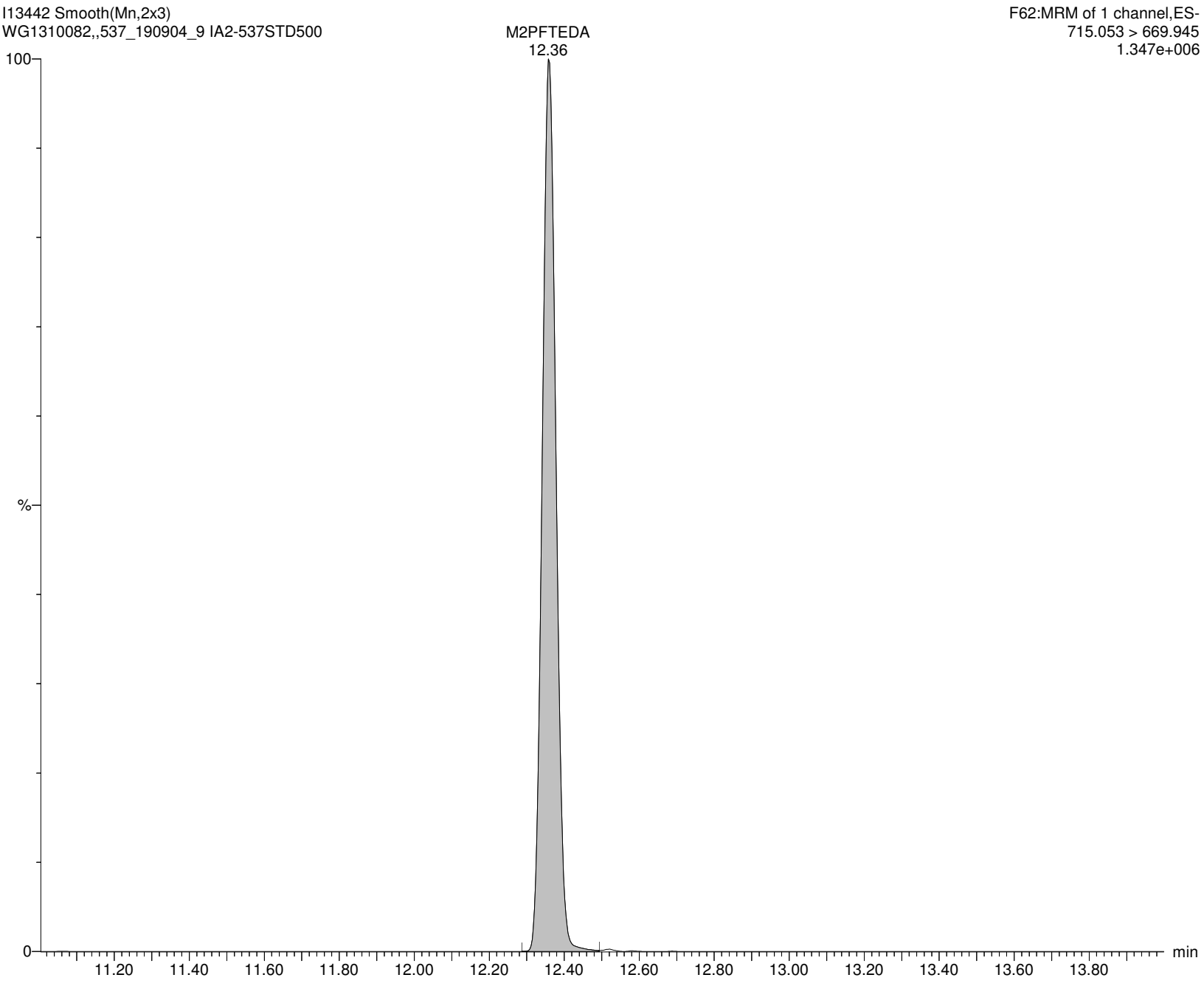



all concentration units in (ng/mL)

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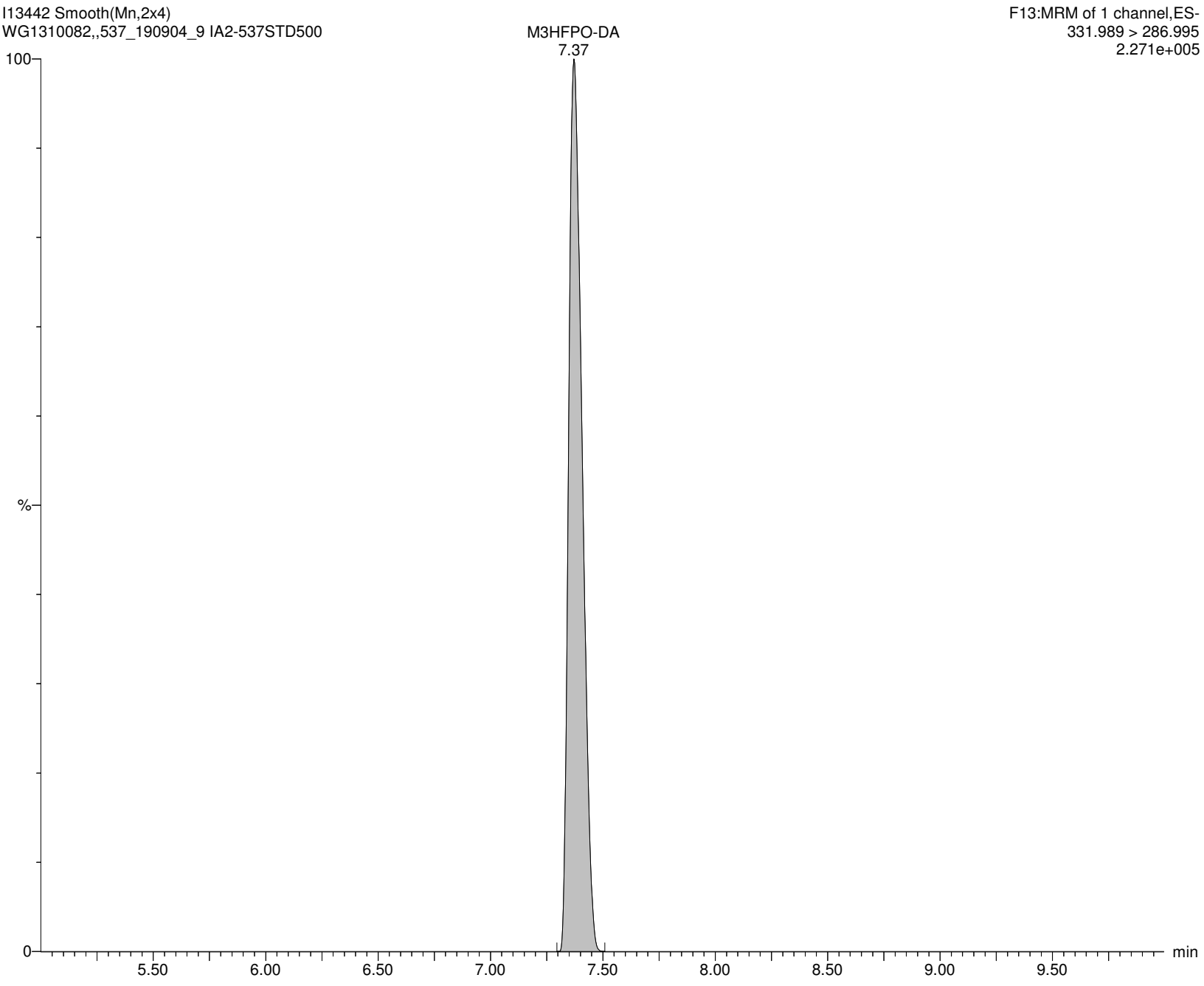



all concentration units in (ng/mL)

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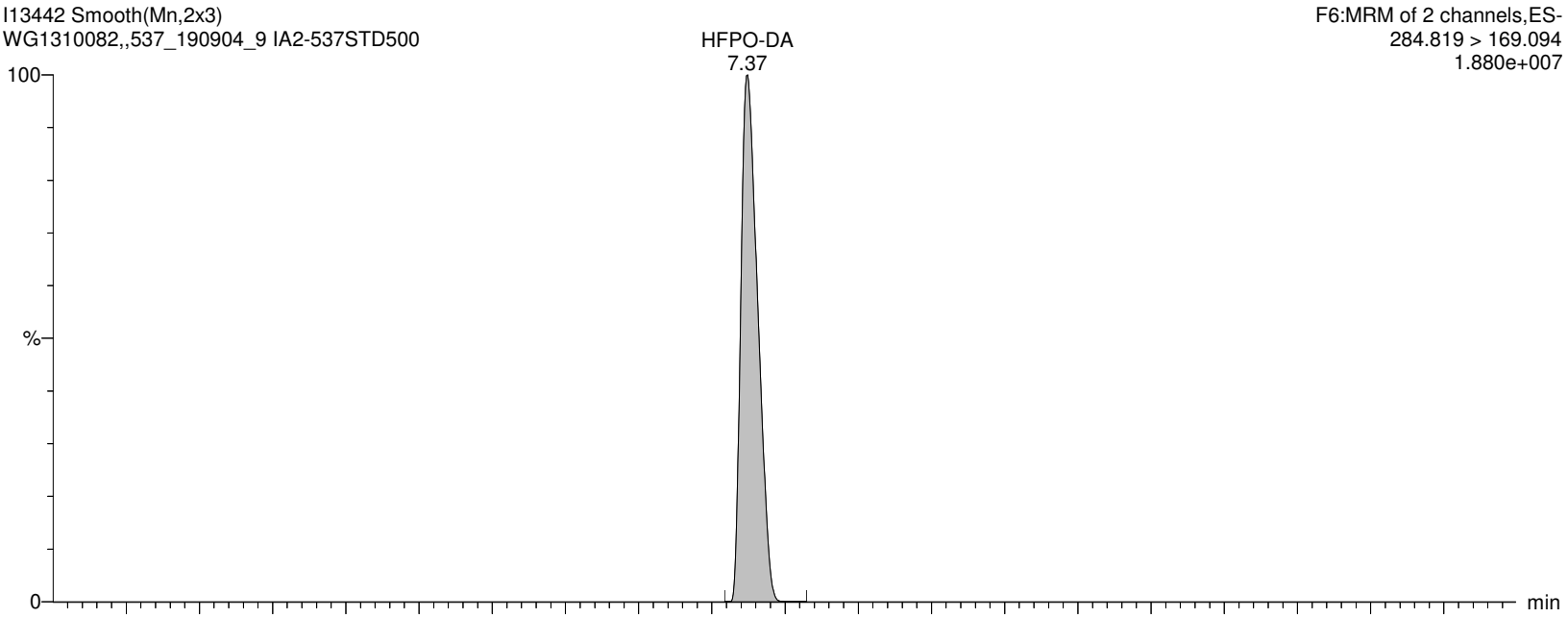


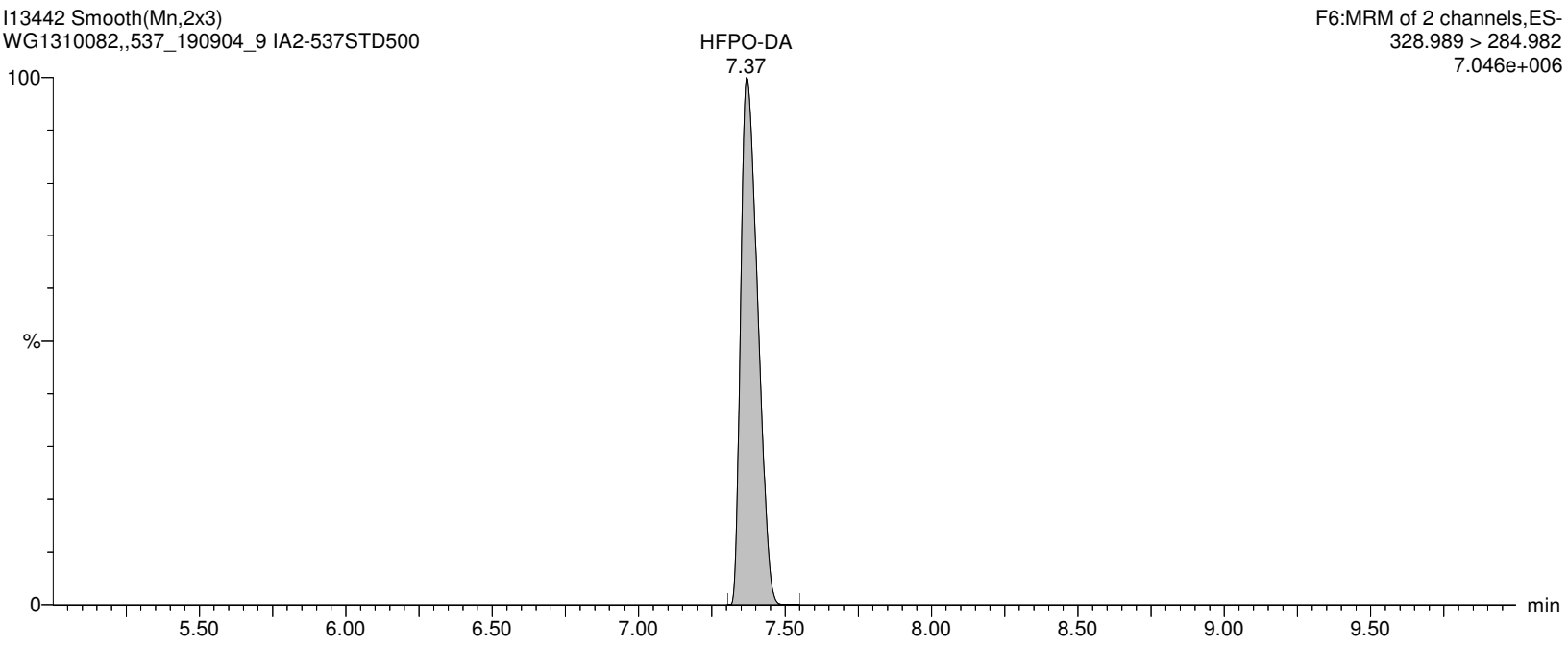



all concentration units in (ng/mL)

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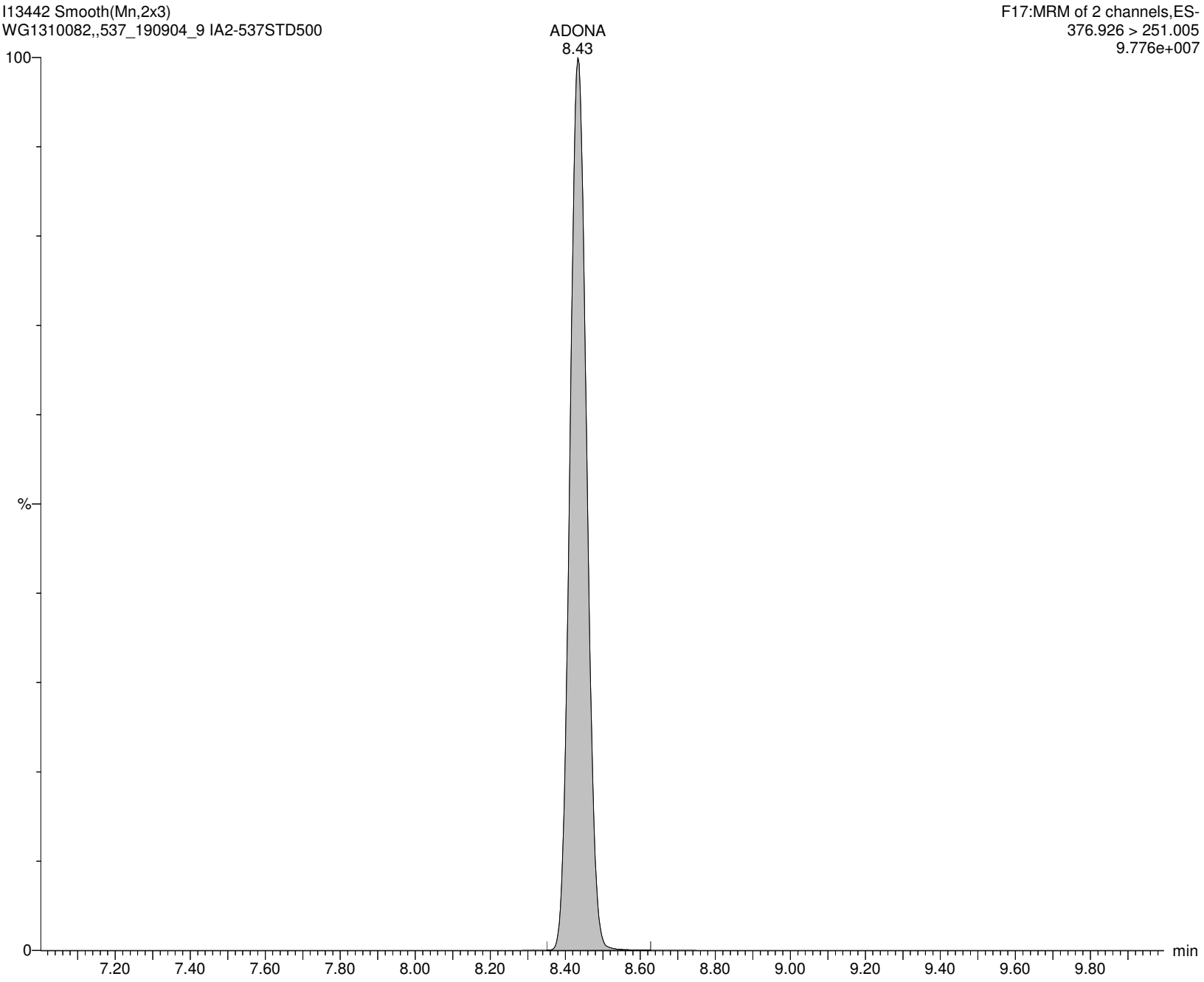



all concentration units in (ng/mL)

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Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
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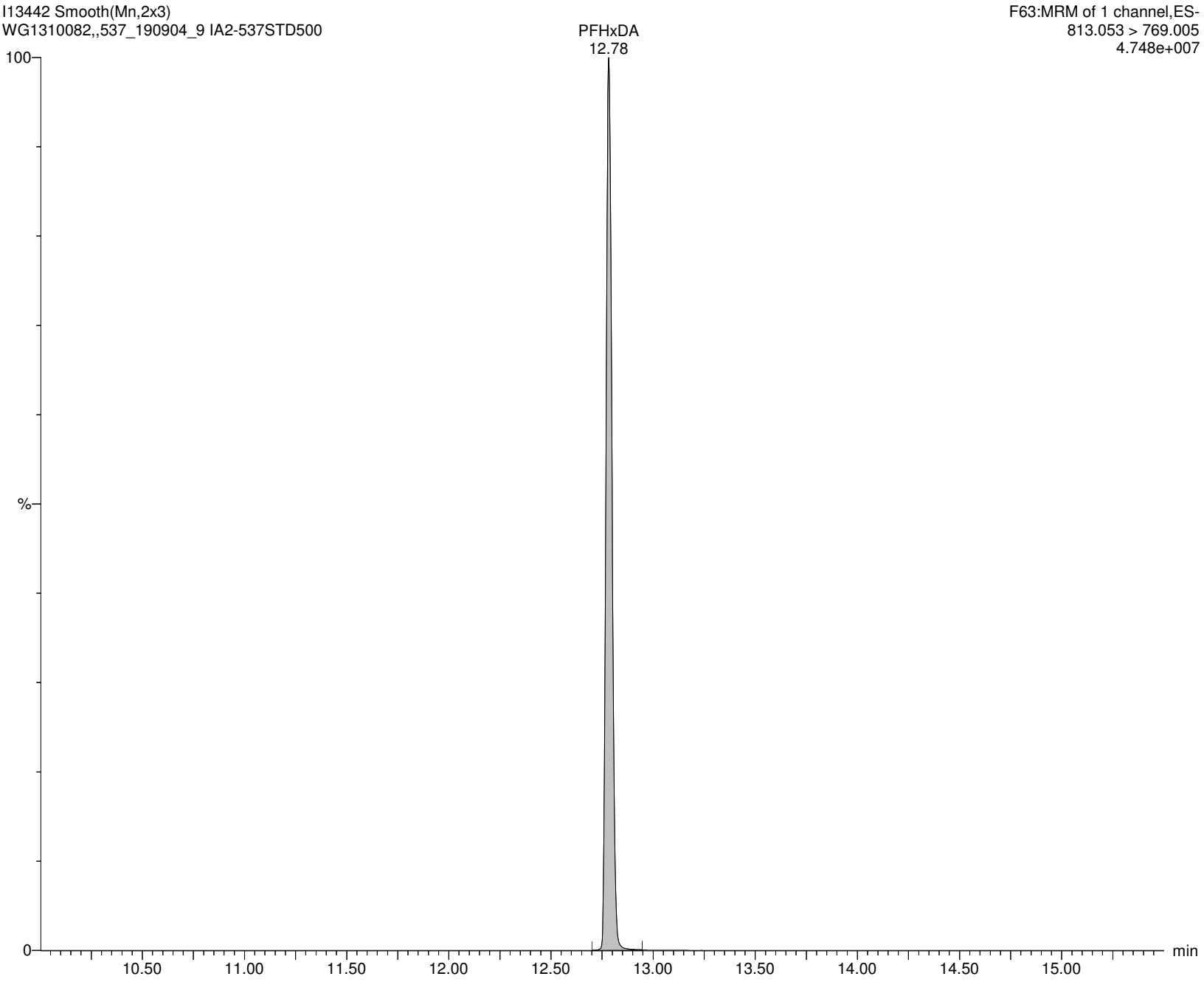



all concentration units in (ng/mL)

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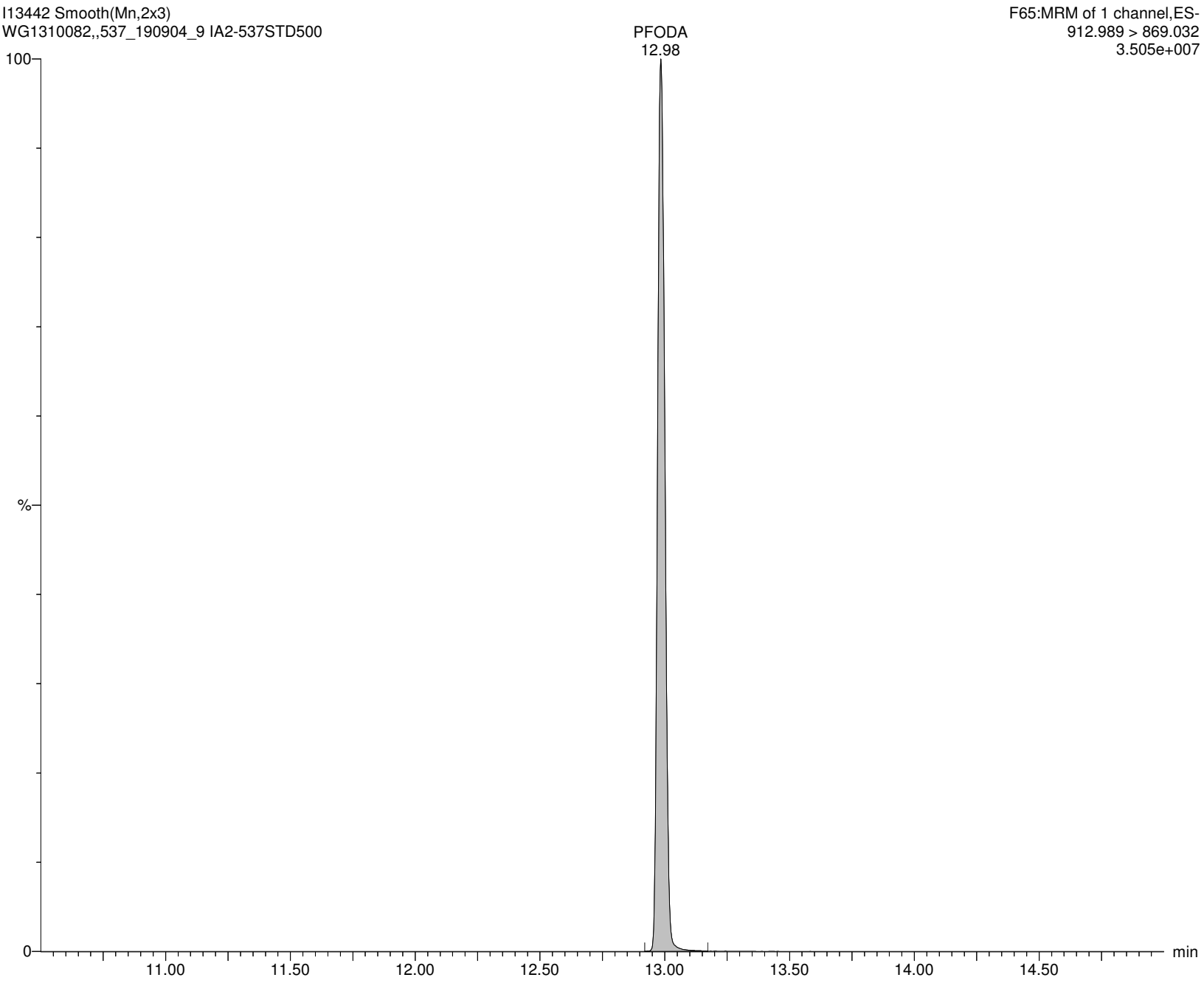



all concentration units in (ng/mL)

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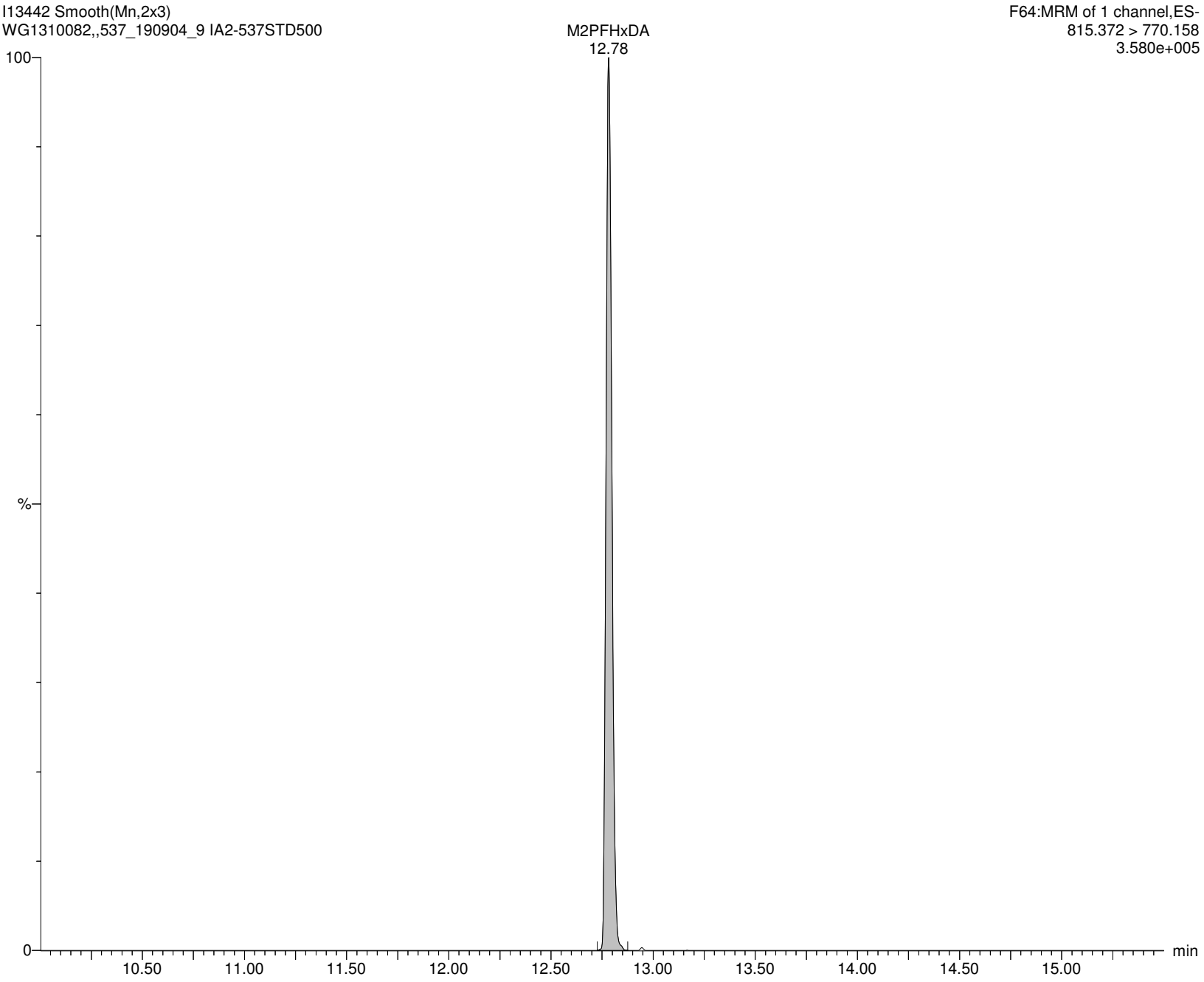



all concentration units in (ng/mL)

Alpha Analytical Inc.
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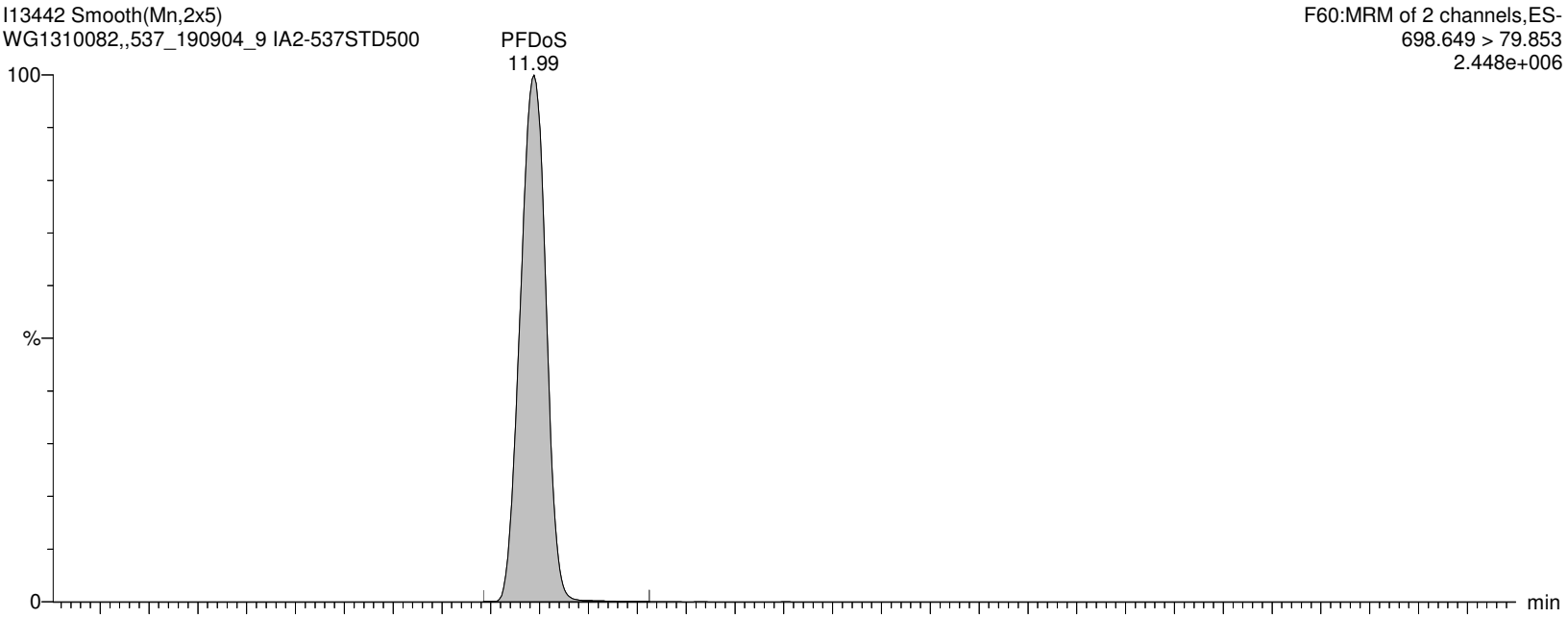
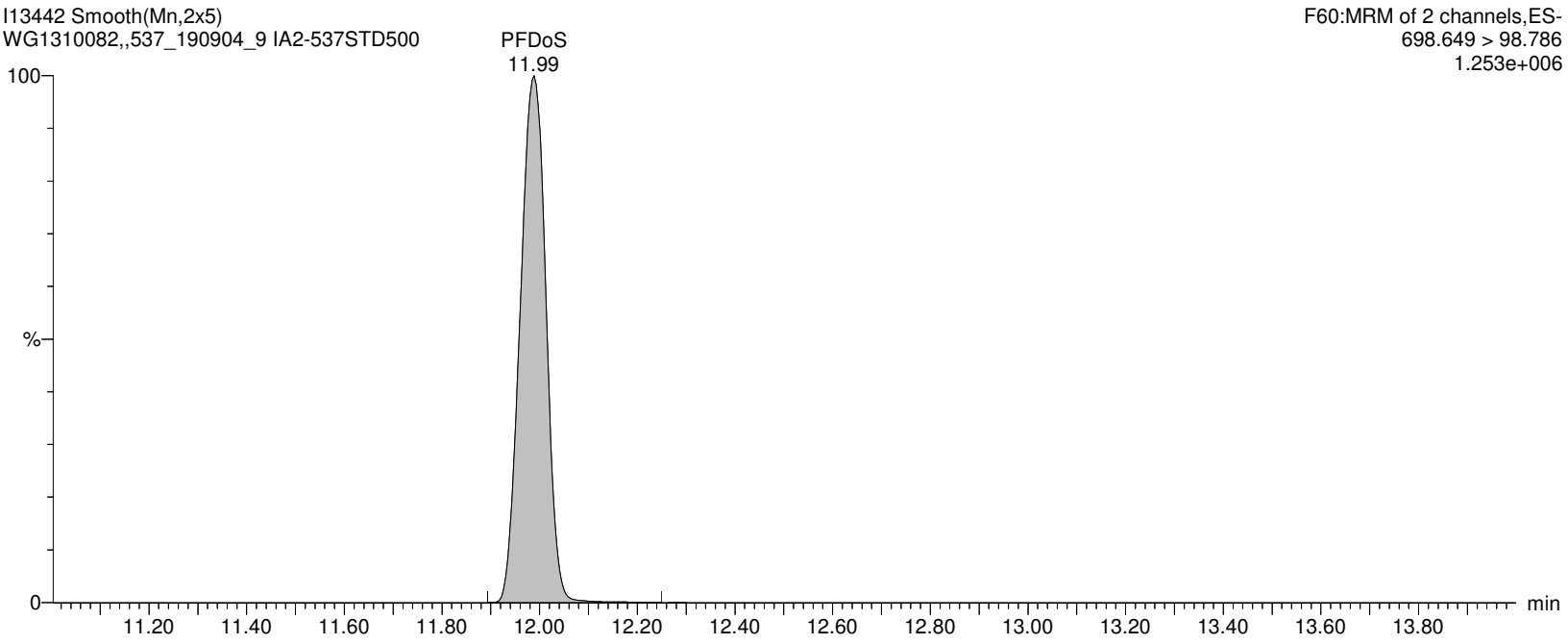
**PFDoS**





all concentration units in (ng/mL)

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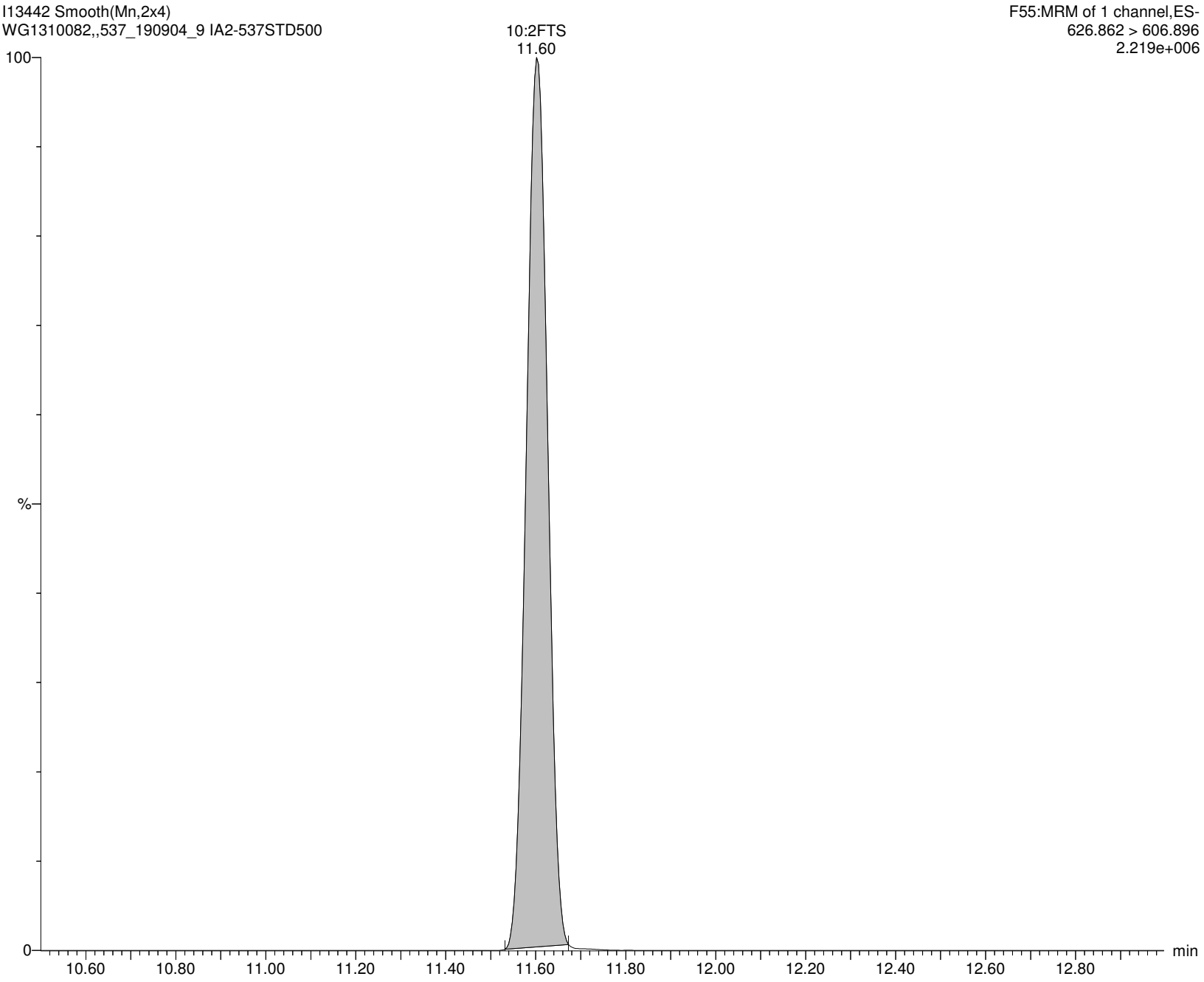



all concentration units in (ng/mL)

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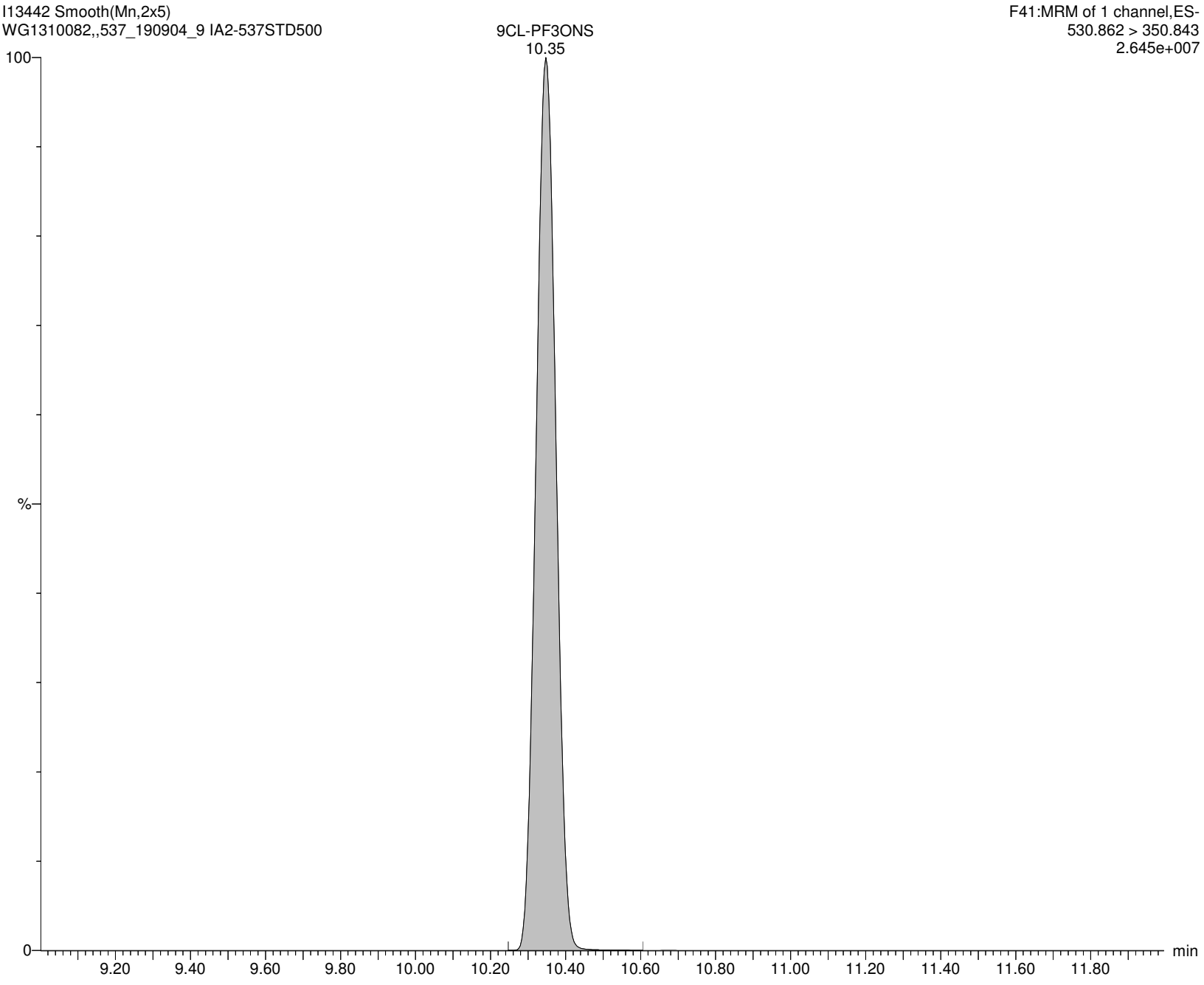



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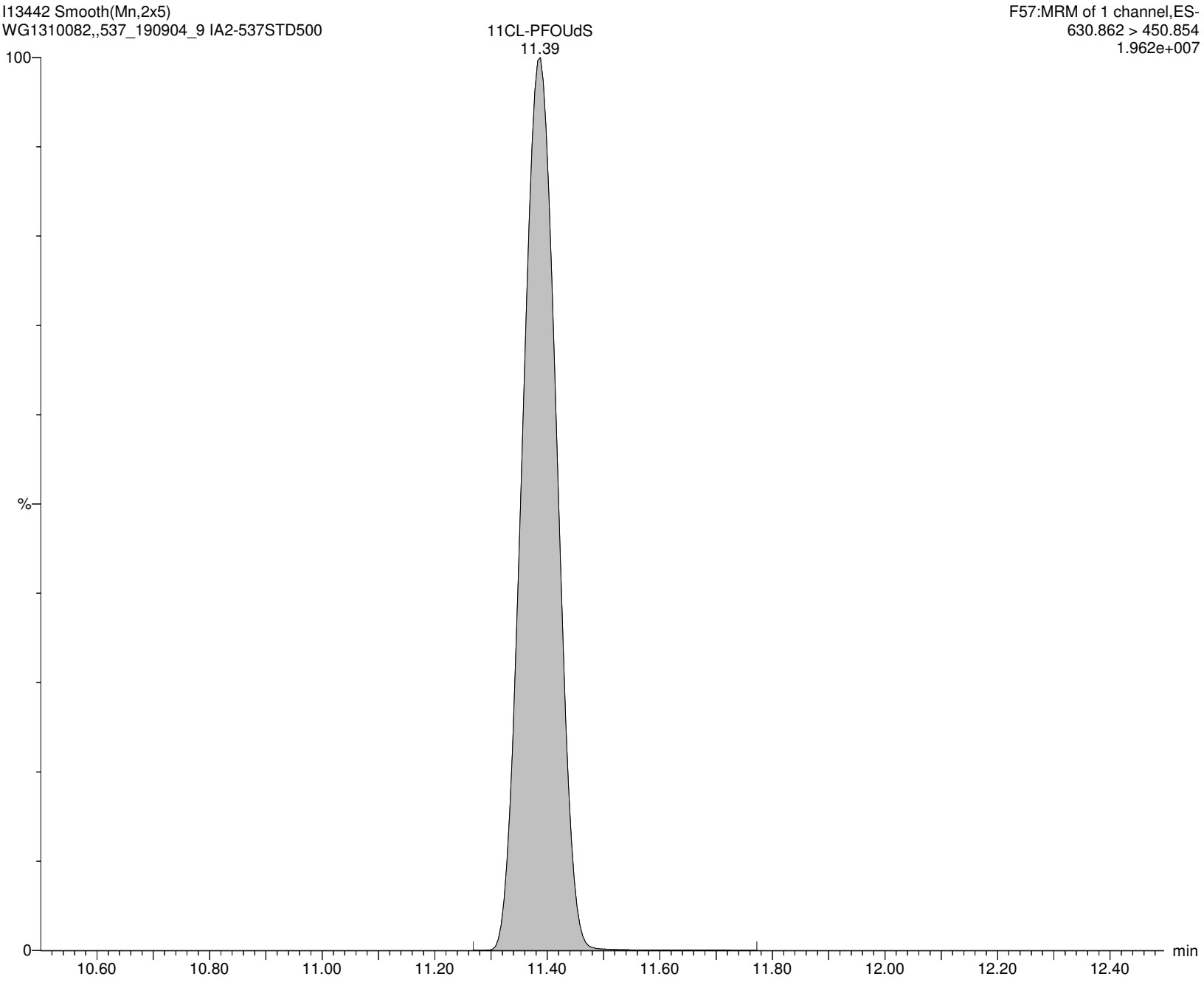



all concentration units in (ng/mL)

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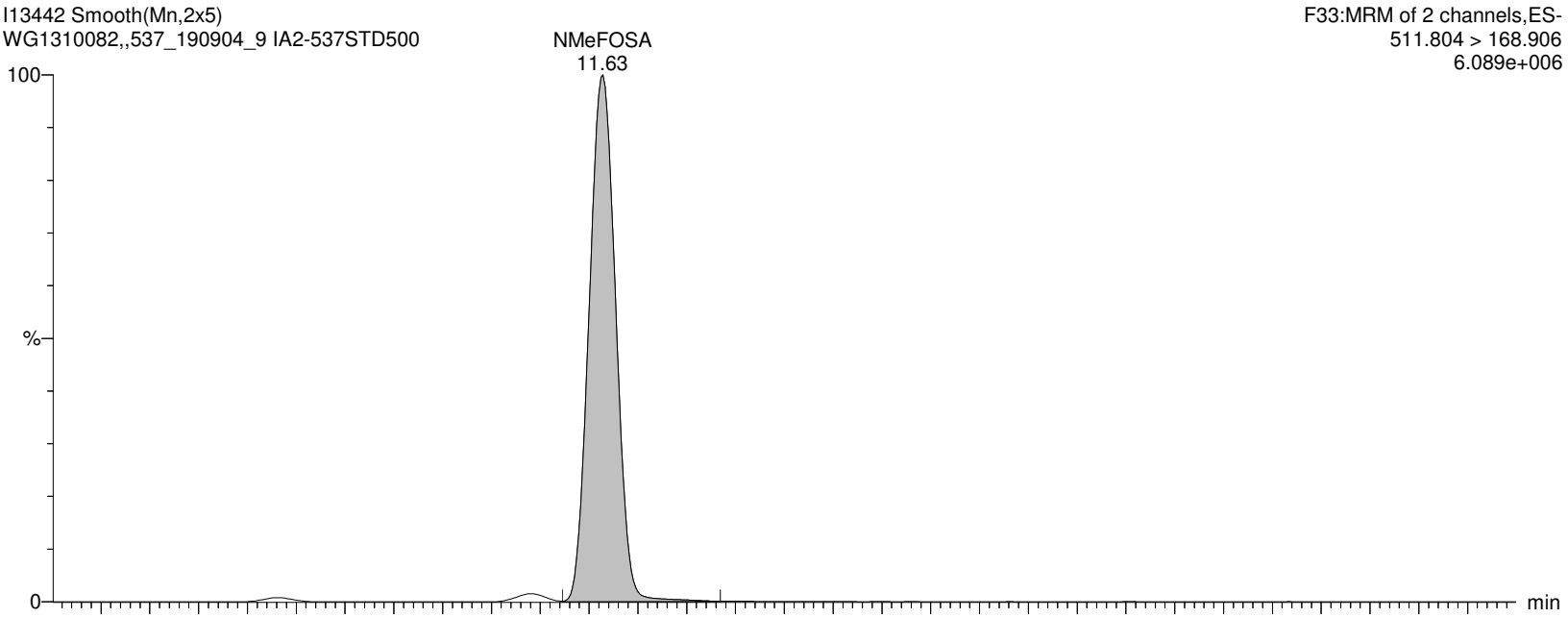
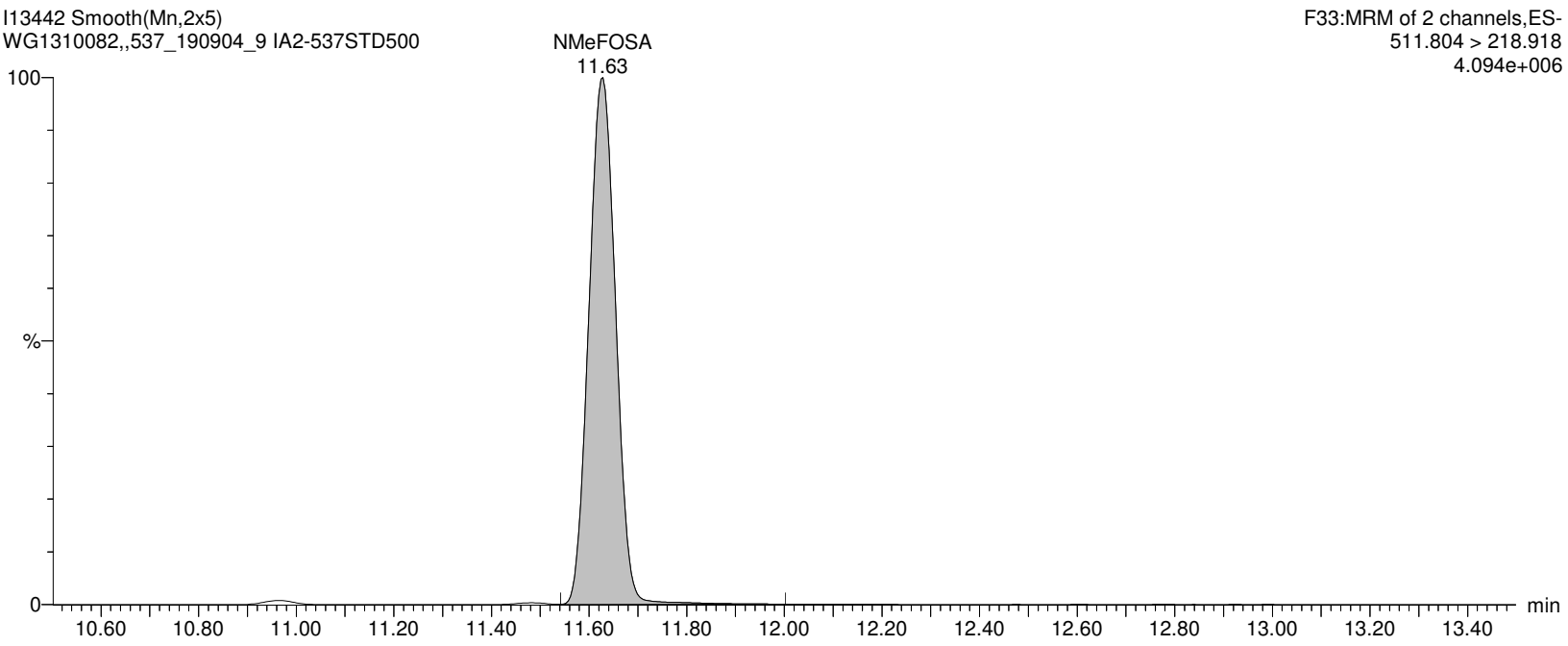
**NMeFOSA**





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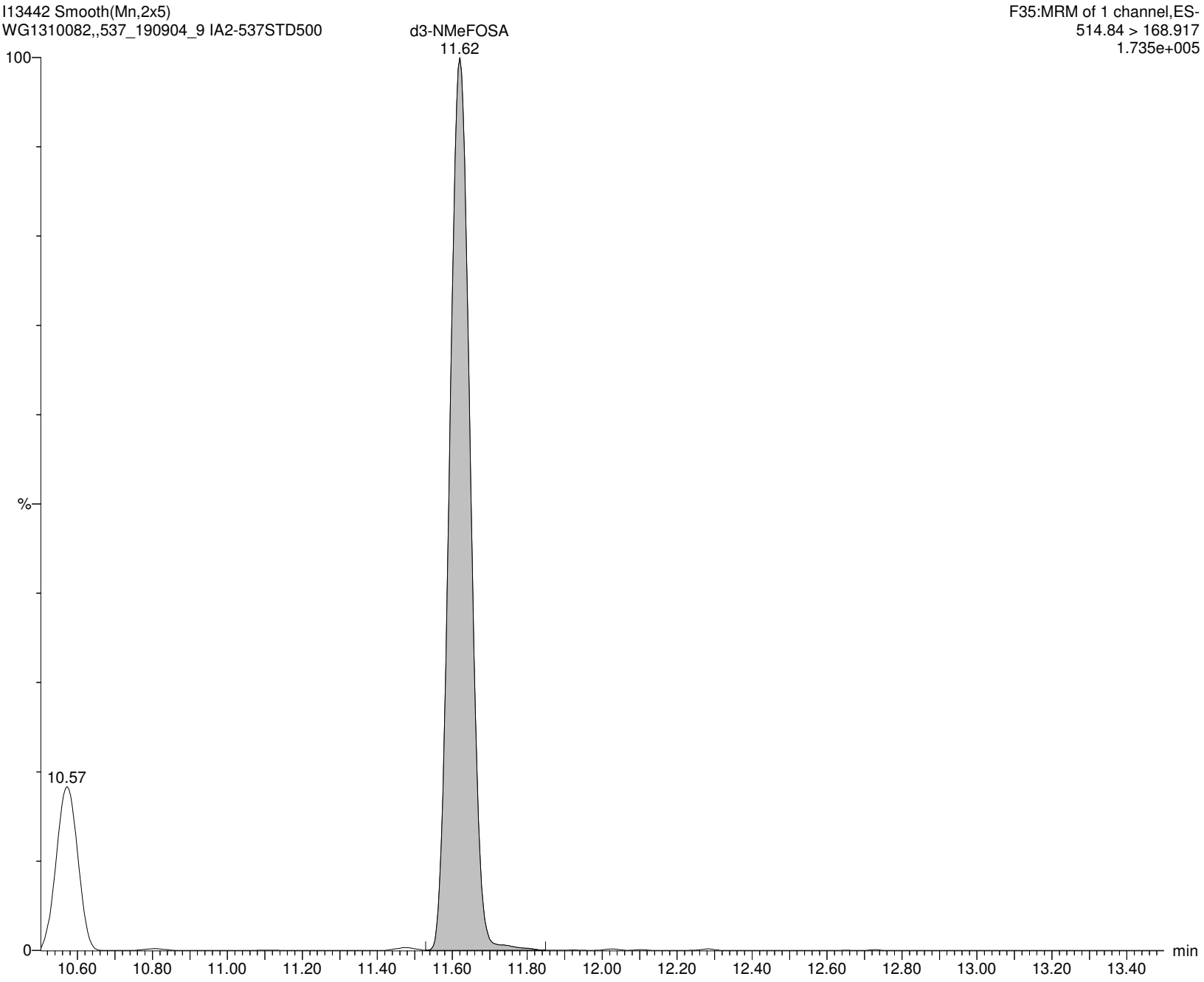



all concentration units in (ng/mL)

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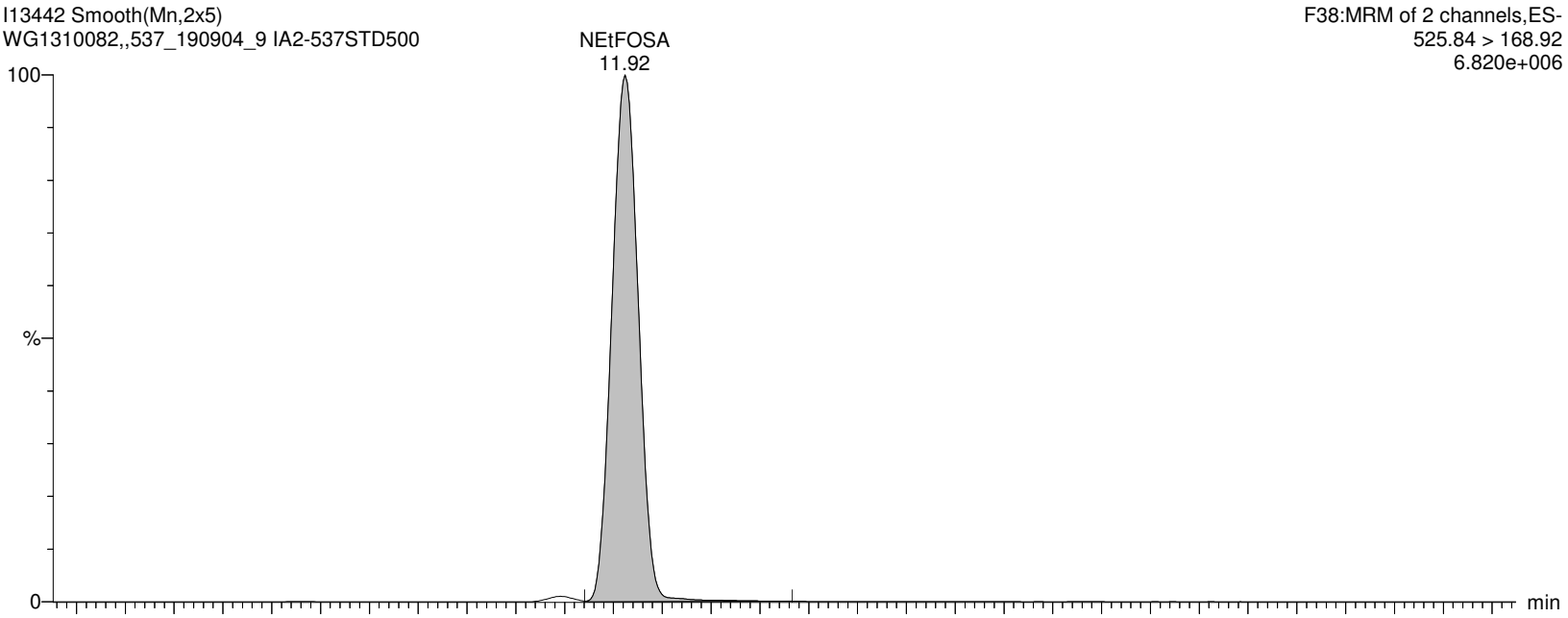
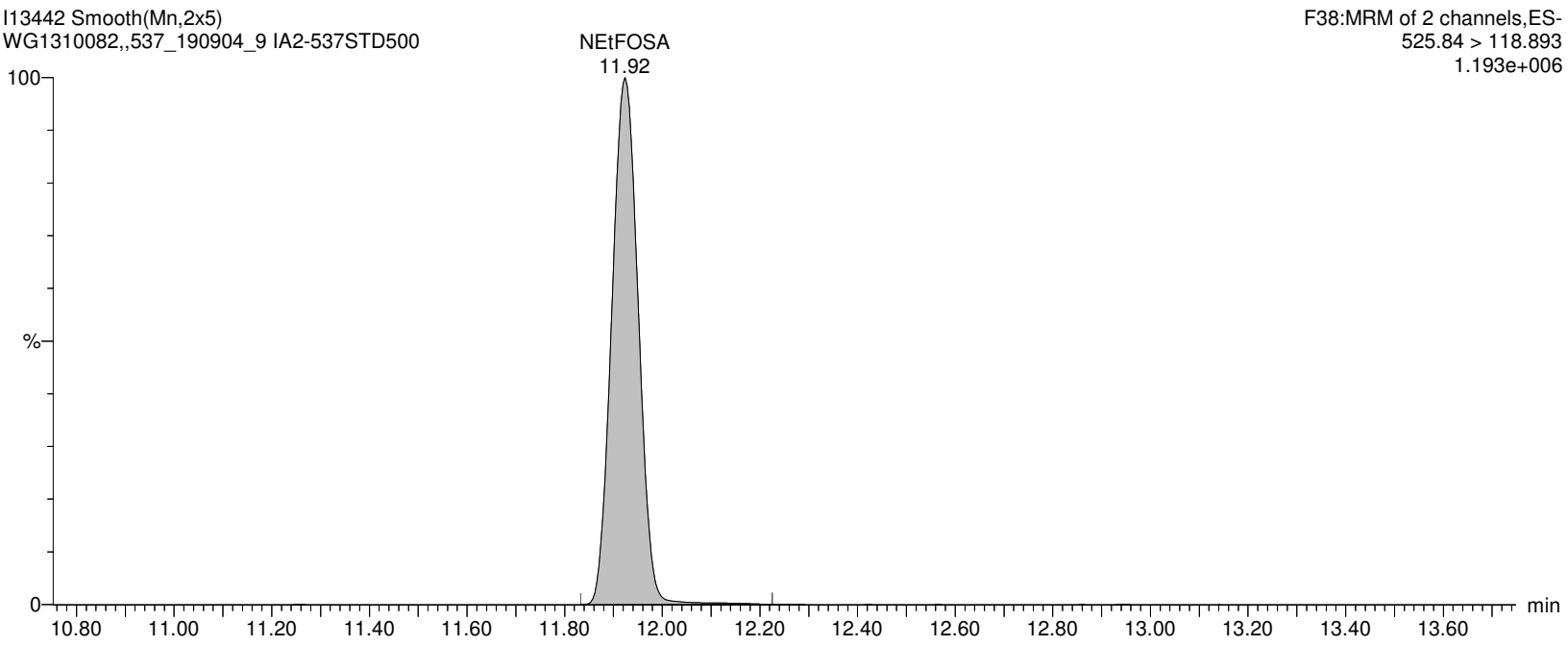
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
Printed: Monday, November 18, 2019 13:43:05 Eastern Standard Time

**Name: I13442**
**ID: IA2-537STD500**
**Date: 18-Nov-2019**
**Time: 12:49:53**
**Description: WG1310082,,537_190904_9**
**User: LCMS02:JW**
**Vial: 1:B,2**
**Instrument: XEVO-TQSmicro#QEB0050**
**Inlet Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\LCMS_537_ISO_B**
**Tune Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\181009_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**NEtFOSA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
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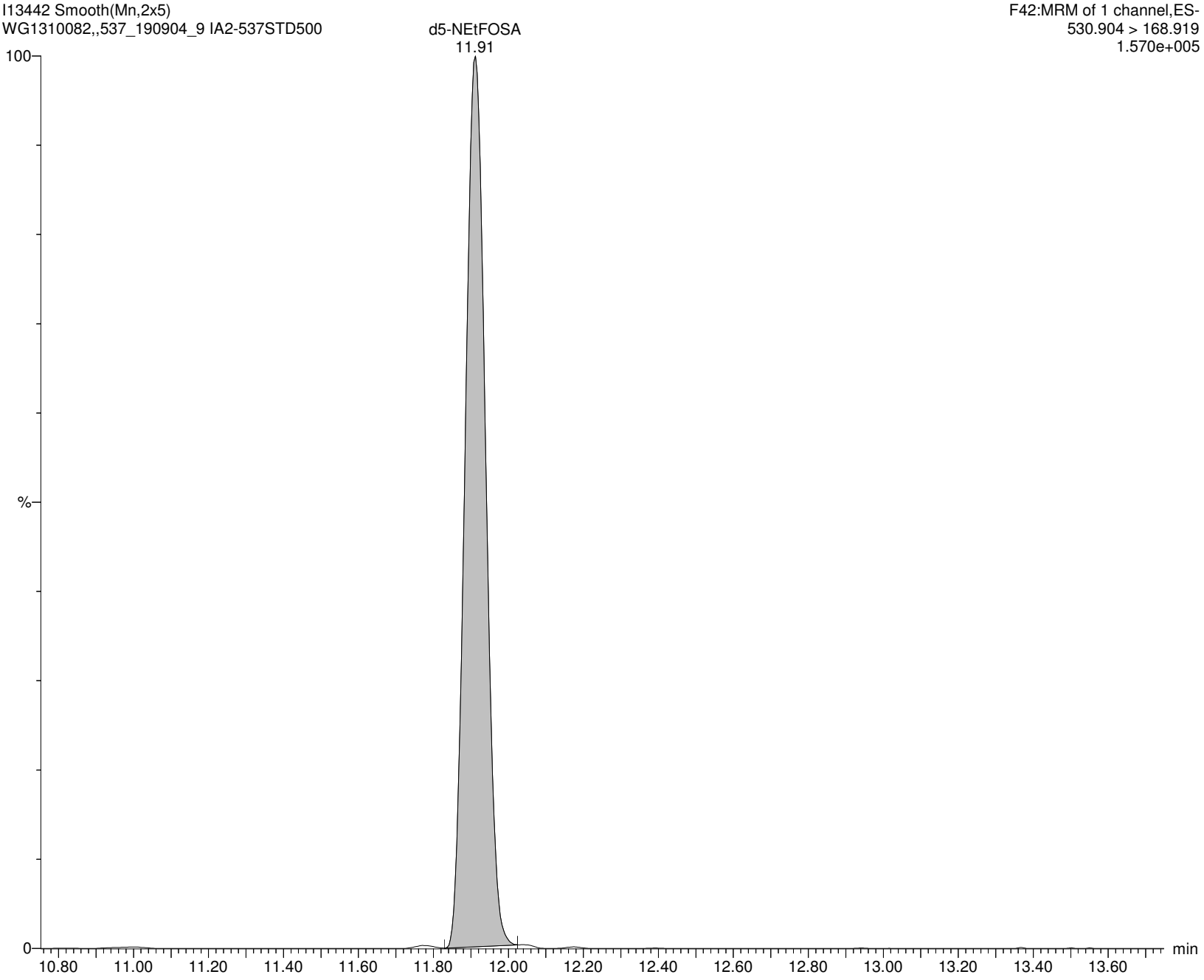
**Description: WG1310082,,537_190904_9**
**User: LCMS02:JW**
**Vial: 1:B,2**
**Instrument: XEVO-TQSmicro#QEB0050**
**Inlet Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\LCMS_537_ISO_B**
**Tune Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\181009_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**d5-NEtFOSA**



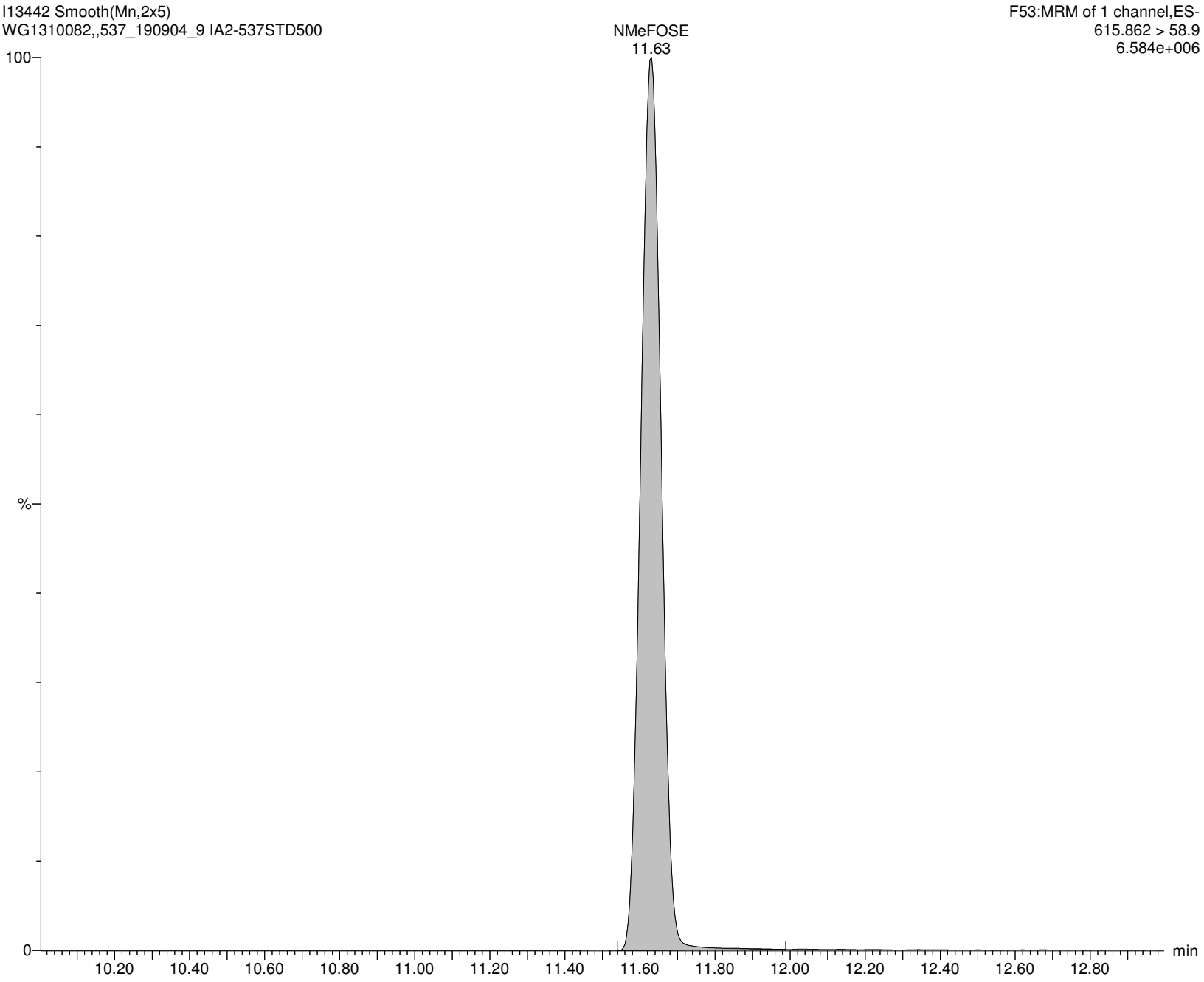


all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
Printed: Monday, November 18, 2019 13:43:05 Eastern Standard Time

**Name: I13442**
**ID: IA2-537STD500**
**Date: 18-Nov-2019**
**Time: 12:49:53**
**Description: WG1310082,,537_190904_9**
**User: LCMS02:JW**
**Vial: 1:B,2**
**Instrument: XEVO-TQSmicro#QEB0050**
**Inlet Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\LCMS_537_ISO_B**
**Tune Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\181009_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**NMeFOSE**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
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**Name: I13442**
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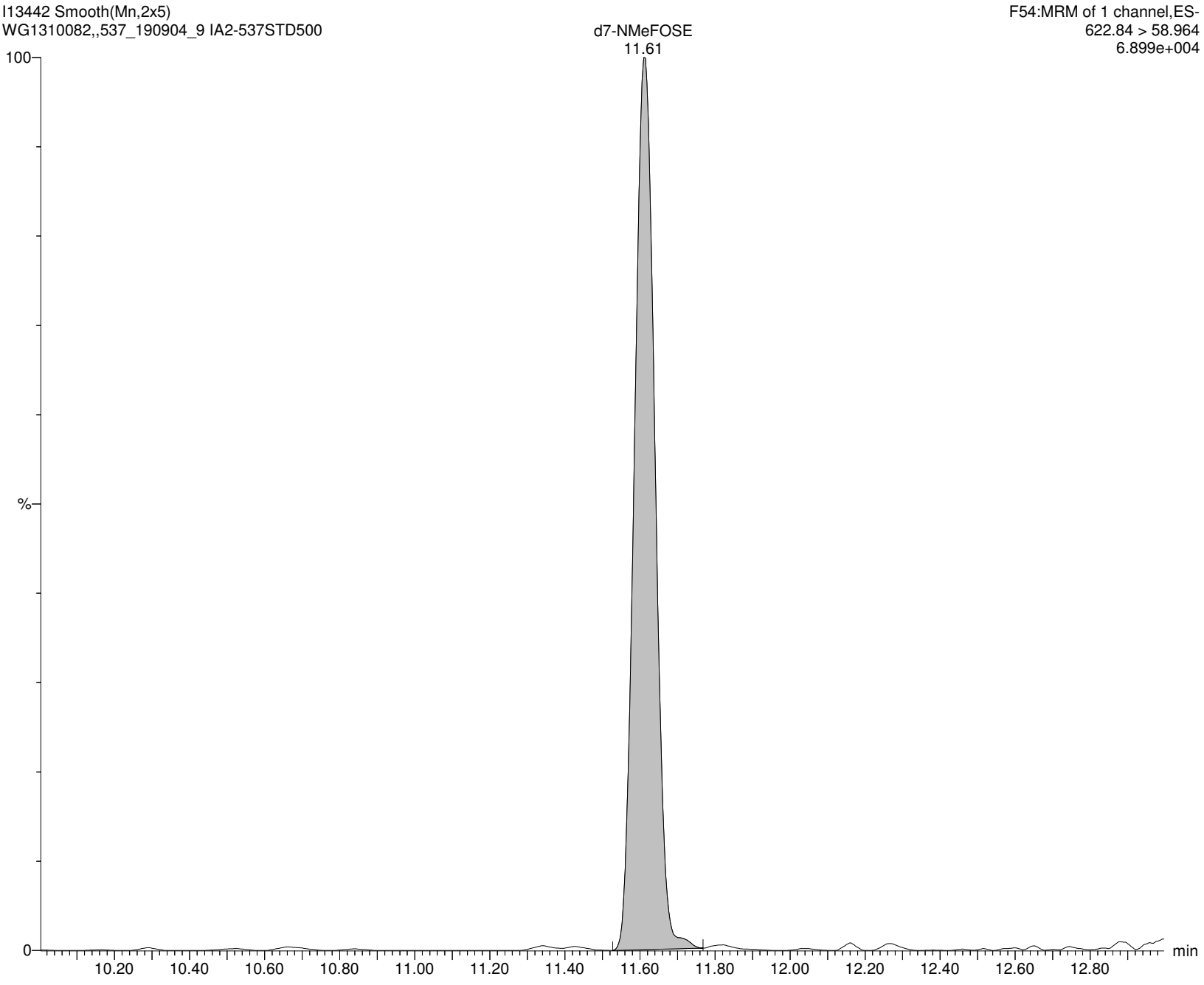
**Time: 12:49:53**
**Description: WG1310082,,537_190904_9**
**User: LCMS02:JW**
**Vial: 1:B,2**
**Instrument: XEVO-TQSmicro#QEB0050**
**Inlet Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\LCMS_537_ISO_B**
**Tune Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\181009_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**d7-NMeFOSE**





all concentration units in (ng/mL)

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Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICAL.qld
Last Altered: Monday, November 18, 2019 13:41:42 Eastern Standard Time
Printed: Monday, November 18, 2019 13:43:05 Eastern Standard Time

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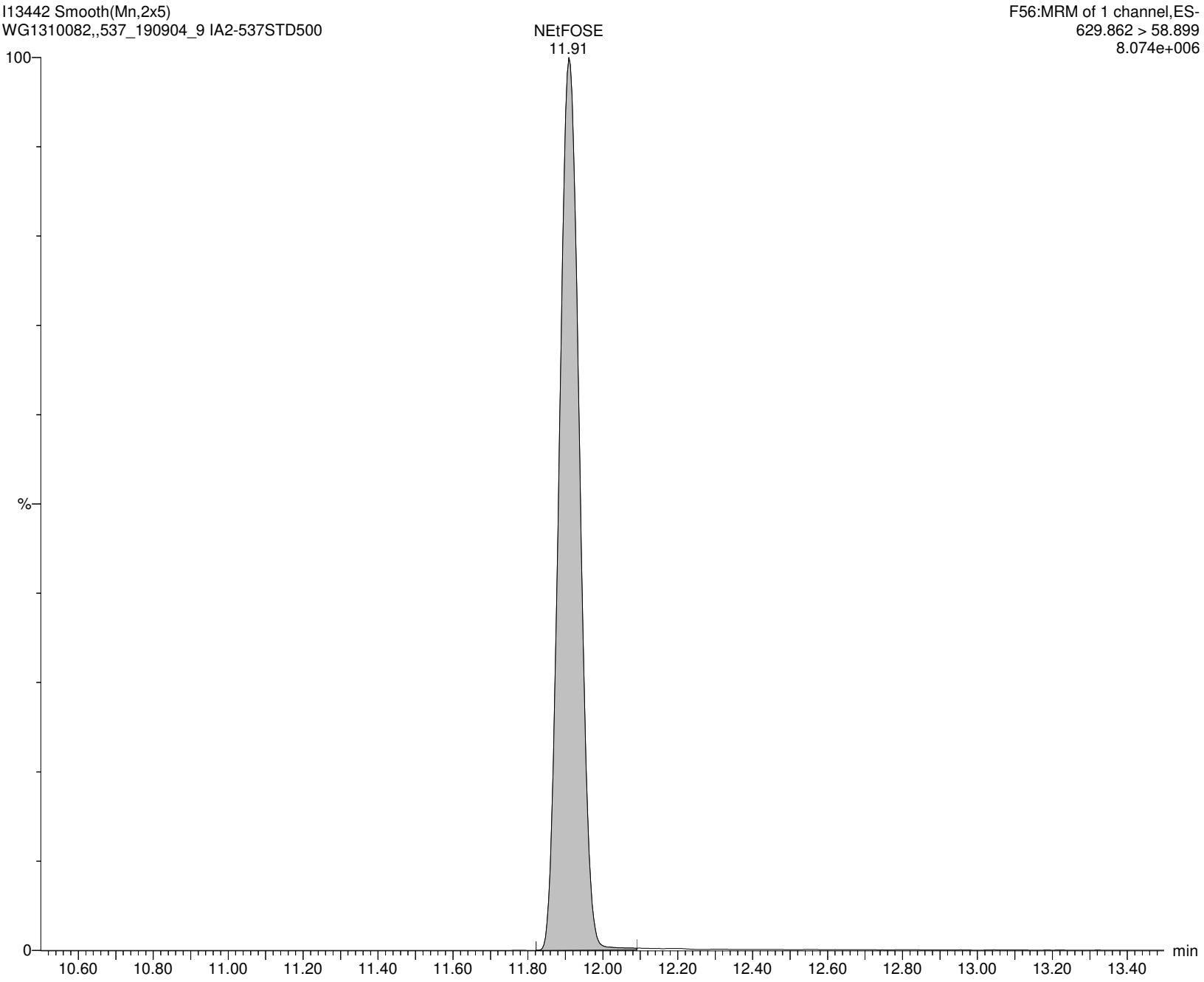
**ID: IA2-537STD500**
**Date: 18-Nov-2019**
**Time: 12:49:53**
**Description: WG1310082,,537_190904_9**
**User: LCMS02:JW**
**Vial: 1:B,2**
**Instrument: XEVO-TQSmicro#QEB0050**
**Inlet Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\LCMS_537_ISO_B**
**Tune Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\181009_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**NEtFOSE**





all concentration units in (ng/mL)

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**Instrument: XEVO-TQSmicro#QEB0050**
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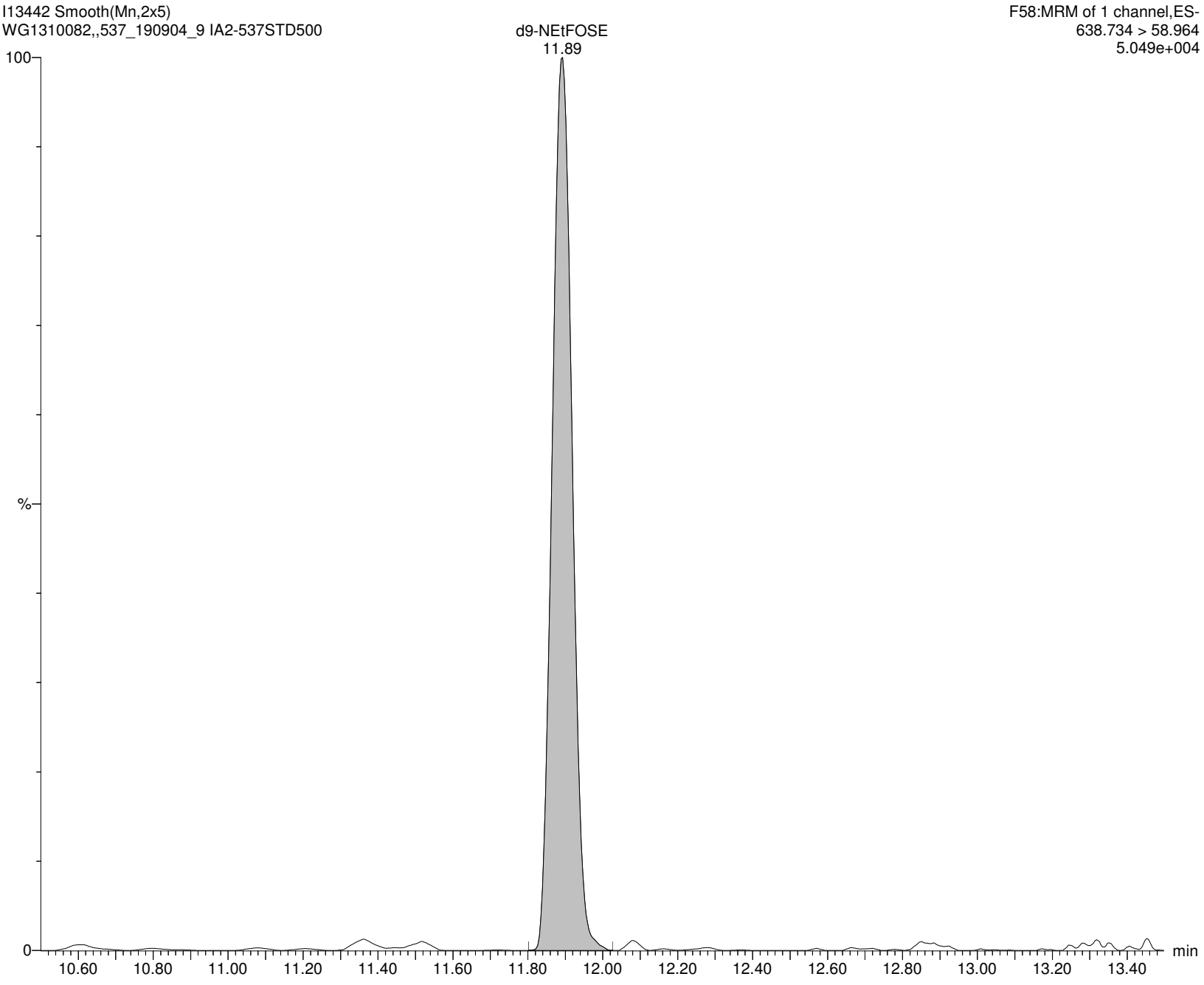
**Tune Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\181009_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**d9-NEtFOSE**





all concentration units in (ng/mL)

# Initial Calibration Verification

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICV.qld
Last Altered: Monday, November 18, 2019 14:24:08 Eastern Standard Time
Printed: Monday, November 18, 2019 14:24:51 Eastern Standard Time

**Method: C:\MassLynx\Data\2019\191118_537ISO.PRO\MethDB\537ISO_Q_191118_DOD .mdb 18 Nov 2019 13:42:01**
**Calibration: C:\MassLynx\Data\2019\191118_537ISO.PRO\CurveDB\191118_ISO_ICAL.cdb 18 Nov 2019 13:41:42**

**ID: CA2-537STD010**
**Name: I13446**
**Date: 18-Nov-2019**
**Time: 14:05:52**
**Description: WG1310082,,537ISO_190904**
**Instrument: XEVO-TQSmicro#QEB0050**
**User: LCMS02:JW**
**Inlet Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\LCMS_537_ISO_B**
**Tune Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\181009_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

| | Name | CAS | RT | Trace | Area | M Flag | Conc (ng/mL) | Ion Ratio | Ratio Flag | %Rec |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | PFBA | 375-22-4 | 2.20 | 212.926 > 169.111 | 42361 | | 9.613 | | na | 96.1 |
| 2 | M3PFBA | INT STD | 2.20 | 215.926 > 172.122 | 47650 | | 10.284 | | na | 102.8 |
| 3 | MPFBA | INT STD | 2.20 | 216.926 > 172.137 | 52774 | | 10.177 | | na | 101.8 |
| 4 | PFPeA | 2706-90-3 | 5.10 | 262.926 > 219.002 | 74854 | | 10.093 | | na | 100.9 |
| 5 | M5PFPEA | INT STD | 5.10 | 267.989 > 223.081 | 76794 | | 10.441 | | na | 104.4 |
| 6 | PFBS | 375-73-5 | 5.75 | 298.926 > 79.923 | 15207 | | 9.790 | 1.84 | NO | 110.6 |
| 7 | M3PFBS | INT STD | 5.75 | 301.989 > 80.254 | 10573 | | 9.614 | | na | 96.1 |
| 8 | 4:2FTS | 757124-72-4 | 6.92 | 326.926 > 306.957 | 6628 | | 10.082 | 2.28 | NO | 107.8 |
| 9 | M2-4:2FTS | INT STD | 6.91 | 329.117 > 309.079 | 6106 | | 8.550 | | na | 85.5 |
| 10 | PFHxA | 307-24-4 | 6.99 | 312.989 > 269.028 | 86177 | | 10.613 | 18.33 | NO | 106.1 |
| 11 | M5PFHxA | INT STD | 6.99 | 317.989 > 273.045 | 88207 | | 10.040 | | na | 100.4 |
| 12 | PFPeS | 2706-91-4 | 7.31 | 348.926 > 80.251 | 10536 | | 9.627 | 1.75 | NO | 102.4 |
| 13 | PFHpA | 375-85-9 | 8.26 | 362.926 > 319.014 | 106076 | | 9.749 | 5.71 | NO | 97.5 |
| 14 | M4PFHpA | INT STD | 8.26 | 366.926 > 321.979 | 120626 | | 10.307 | | na | 103.1 |
| 15 | br-PFHxS | 355-46-4 | 8.18 | 398.926 > 80.295 | 1040 | M5 | 1.338 | 1.53 | NO | 78.7 |
| 16 | L-PFHxS | 355-46-4 | 8.41 | 398.926 > 80.295 | 7078 | | 8.636 | 1.14 | NO | 116.7 |
| 17 | PFHxS | 355-46-4 | | 398.926 > 80.295 | 8119 | | 9.974 | | na | |
| 18 | M3PFHxS | INT STD | 8.41 | 401.926 > 80.317 | 6544 | | 10.308 | | na | 103.1 |
| 19 | br-PFOA | 335-67-1 | | 412.989 > 368.9 | | | ND | 0.00 | NO | |
| 20 | L-PFOA | 335-67-1 | 9.19 | 412.989 > 368.9 | 106483 | | 10.020 | 10.36 | NO | 100.2 |
| 21 | PFOA | 335-67-1 | | 412.989 > 368.9 | 106483 | | 10.020 | | na | |
| 22 | M8PFOA | INT STD | 9.20 | 420.989 > 375.979 | 115730 | | 10.305 | | na | 103.1 |
| 23 | M2PFOA | INT STD | 9.19 | 415.032 > 369.968 | 114773 | | 10.857 | | na | 108.6 |
| 24 | 6:2FTS | 27619-97-2 | 9.16 | 426.989 > 406.921 | 5027 | | 9.893 | 10.39 | NO | 104.1 |
| 25 | M2-6:2FTS | INT STD | 9.15 | 428.989 > 408.917 | 6410 | | 9.186 | | na | 91.9 |
| 26 | PFHpS | 375-92-8 | 9.29 | 448.926 > 80.257 | 5298 | | 9.538 | 0.80 | NO | 100.4 |
| 27 | PFNA | 375-95-1 | 9.95 | 462.989 > 418.931 | 100647 | | 10.746 | 4.57 | NO | 107.5 |
| 28 | M9PFNA | INT STD | 9.95 | 472.053 > 426.947 | 114327 | | 10.346 | | na | 103.5 |
| 29 | br-PFOS | 1763-23-1 | 9.75 | 498.989 > 80.294 | 2213 | M5 | 2.000 | 12.82 | NO | 100.0 |
| 30 | L-PFOS | 1763-23-1 | 10.00 | 498.989 > 80.294 | 4755 | | 5.744 | 1.31 | NO | 78.7 |
| 31 | PFOS | 1763-23-1 | | 498.989 > 80.294 | 6968 | | 7.744 | | na | |
| 32 | M4PFOS | INT STD | 9.99 | 503.032 > 80.306 | 7858 | | 11.251 | | na | 112.5 |
| 33 | M8PFOS | INT STD | 9.99 | 507.053 > 80.294 | 8435 | | 10.462 | | na | 104.6 |
| 34 | PFDA | 335-76-2 | 10.57 | 513.053 > 468.906 | 97351 | | 10.757 | 6.98 | NO | 107.6 |
| 35 | M2PFDA | INT STD | 10.57 | 515.053 > 469.934 | 101020 | | 11.442 | | na | 114.4 |
| 36 | M6PFDA | INT STD | 10.57 | 519.053 > 473.931 | 105496 | | 10.105 | | na | 101.0 |
| 37 | 8:2FTS | 39108-34-4 | 10.56 | 526.926 > 506.818 | 4539 | | 11.498 | | na | 119.8 |
| 38 | M2-8:2FTS | INT STD | 10.56 | 529.053 > 508.945 | 3767 | | 9.201 | | na | 92.0 |
| 39 | PFNS | 68259-12-1 | 10.60 | 548.989 > 80.249 | 7693 | | 9.805 | 1.23 | NO | 102.1 |


all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICV.qld
Last Altered: Monday, November 18, 2019 14:24:08 Eastern Standard Time
Printed: Monday, November 18, 2019 14:24:51 Eastern Standard Time

**ID: CA2-537STD010**
**Name: I13446**
**Date: 18-Nov-2019**
**Time: 14:05:52**
**Description: WG1310082,,537ISO_190904**
**Instrument: XEVO-TQSmicro#QEB0050**
**User: LCMS02:JW**
**Inlet Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\LCMS_537_ISO_B**
**Tune Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\181009_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

| | Name | CAS | RT | Trace | Area | M Flag | Conc (ng/mL) | Ion Ratio | Ratio Flag | %Rec |
|---|---|---|---|---|---|---|---|---|---|---|
| 40 | d3-NMeFOSAA | INT STD | 10.95 | 573.096 > 418.987 | 11079 | | 9.317 | | na | 93.2 |
| 41 | br-NMeFOSAA | 2355-31-9 | | 570.053 > 418.917 | | | ND | | YES | |
| 42 | L-NMeFOSAA | 2355-31-9 | 10.96 | 570.053 > 418.917 | 11297 | | 10.941 | 2.63 | NO | 109.4 |
| 43 | NMeFOSAA | 2355-31-9 | | 570.053 > 418.917 | 11297 | | 10.941 | | na | |
| 44 | PFUnA | 2058-94-8 | 11.11 | 562.989 > 518.903 | 82999 | | 8.764 | 7.78 | NO | 87.6 |
| 45 | M7-PFUDA | INT STD | 11.11 | 570.053 > 524.923 | 99029 | | 10.692 | | na | 106.9 |
| 46 | PFDS | 335-77-3 | 11.12 | 598.926 > 80.314 | 5925 | | 10.565 | 0.97 | NO | 109.5 |
| 47 | FOSA | 754-91-6 | 11.01 | 497.989 > 78.245 | 24260 | | 9.662 | 147.48 | NO | 96.6 |
| 48 | M8FOSA | INT STD | 11.01 | 506.053 > 78.286 | 23629 | | 9.573 | | na | 95.7 |
| 49 | d5-NEtFOSAA | INT STD | 11.25 | 589.117 > 418.929 | 9513 | | 9.057 | | na | 90.6 |
| 50 | br-NEtFOSAA | 2991-50-6 | | 583.989 > 418.927 | | | ND | | YES | |
| 51 | L-NEtFOSAA | 2991-50-6 | 11.25 | 583.989 > 418.927 | 9291 | | 10.346 | 2.69 | NO | 103.5 |
| 52 | NEtFOSAA | 2991-50-6 | | 583.989 > 418.927 | 9291 | | 10.346 | | na | |
| 53 | PFDoA | 307-55-1 | 11.59 | 612.989 > 568.967 | 87678 | | 10.260 | 15.06 | NO | 102.6 |
| 54 | MPFDOA | INT STD | 11.59 | 614.989 > 569.92 | 100895 | | 9.710 | | na | 97.1 |
| 55 | PFTrDA | 72629-94-8 | 12.00 | 663.053 > 618.969 | 70021 | | 10.244 | 11.82 | NO | 102.4 |
| 56 | PFTA | 376-06-7 | 12.36 | 713.053 > 668.976 | 68360 | | 10.866 | 8.97 | NO | 108.7 |
| 57 | M2PFTEDA | INT STD | 12.36 | 715.053 > 669.945 | 78556 | | 9.518 | | na | 95.2 |
| 58 | M3HFPO-DA | INT STD | 7.42 | 331.989 > 286.995 | 4341 | | 88.220 | | na | 44.1 |
| 59 | HFPO-DA | 13252-13-6 | 7.42 | 284.819 > 169.094 | 7583 | | 210.406 | 2.55 | YES | 105.2 |
| 60 | ADONA | 958445-44-8 | 8.44 | 376.926 > 251.005 | 164793 | | 10.832 | | na | 114.5 |
| 61 | PFHxDA | | 12.78 | 813.053 > 769.005 | 57272 | | 8.572 | | na | 85.7 |
| 62 | PFODA | | 12.99 | 912.989 > 869.032 | 39786 | | 8.125 | | na | 81.2 |
| 63 | M2PFHxDA | | 12.78 | 815.372 > 770.158 | 18254 | | 10.390 | | na | 103.9 |
| 64 | PFDoS | | 11.99 | 698.649 > 79.853 | 5661 | | 9.903 | 2.09 | YES | 99.0 |
| 65 | 10:2FTS | | 11.60 | 626.862 > 606.896 | 4054 | | 10.610 | | na | 110.1 |
| 66 | 9CL-PF3ONS | | 10.34 | 530.862 > 350.843 | 49285 | | 8.891 | | na | 95.4 |
| 67 | 11CL-PFOUdS | | 11.38 | 630.862 > 450.854 | 38494 | | 8.237 | | na | 87.4 |
| 68 | NMeFOSA | | 11.62 | 511.804 > 168.906 | 9247 | | 10.775 | 1.49 | NO | 107.8 |
| 69 | d3-NMeFOSA | | 11.62 | 514.84 > 168.917 | 11547 | | 8.969 | | na | 89.7 |
| 70 | NEtFOSA | | 11.92 | 525.84 > 168.92 | 10066 | | 10.332 | 6.38 | YES | 103.3 |
| 71 | d5-NEtFOSA | | 11.91 | 530.904 > 168.919 | 11119 | | 8.830 | | na | 88.3 |
| 72 | NMeFOSE | | 11.62 | 615.862 > 58.9 | 13355 | | 12.138 | | na | 121.4 |
| 73 | d7-NMeFOSE | | 11.61 | 622.84 > 58.964 | 5439 | | 9.020 | | na | 90.2 |
| 74 | NEtFOSE | | 11.91 | 629.862 > 58.899 | 13817 | | 10.579 | | na | 105.8 |
| 75 | d9-NEtFOSE | | 11.89 | 638.734 > 58.964 | 3309 | | 9.385 | | na | 93.8 |


all concentration units in (ng/mL)

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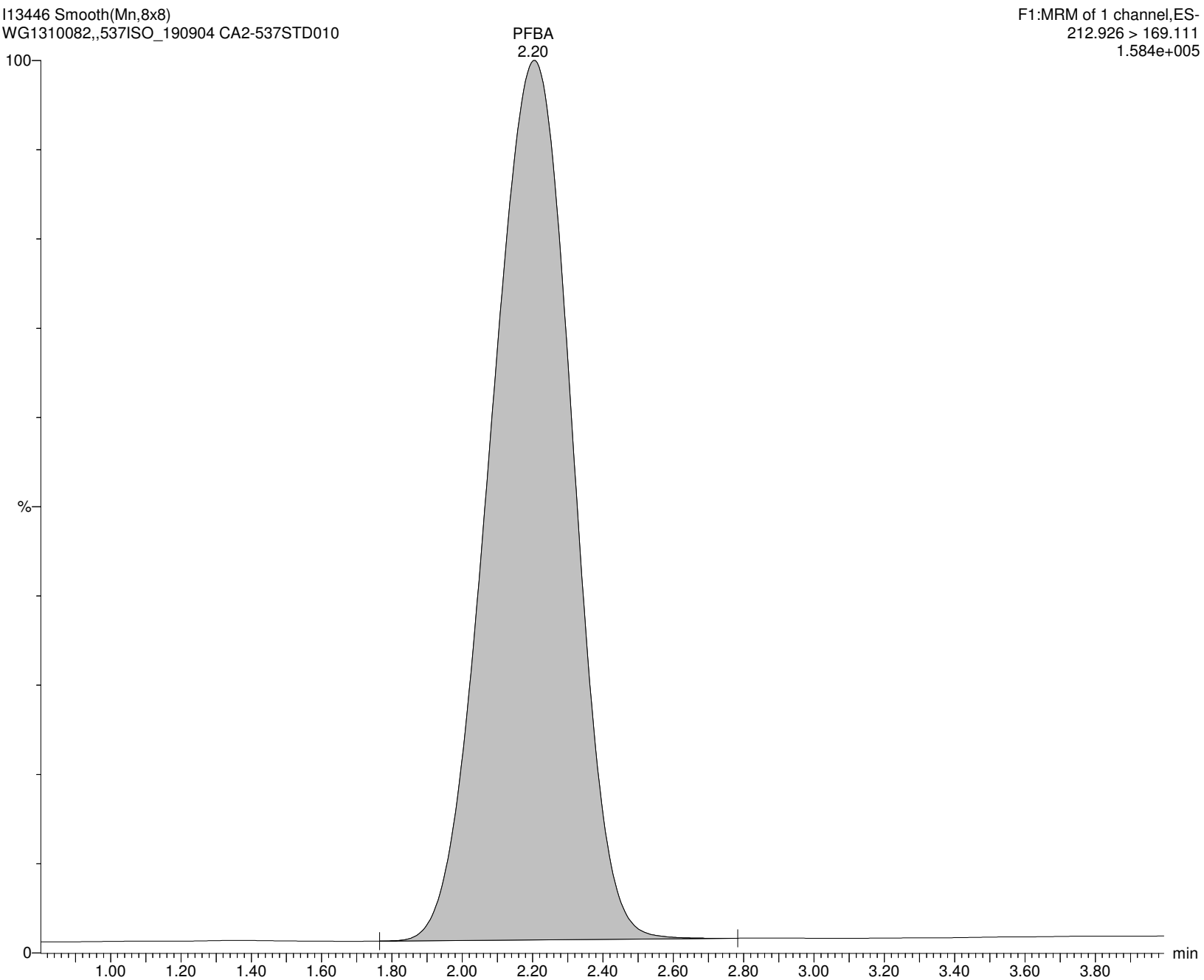
Printed: Monday, November 18, 2019 14:24:51 Eastern Standard Time

**Method: C:\MassLynx\Data\2019\191118_537ISO.PRO\MethDB\537ISO_Q_191118_DOD .mdb 18 Nov 2019 13:42:01**
**Calibration: C:\MassLynx\Data\2019\191118_537ISO.PRO\CurveDB\191118_ISO_ICAL.cdb 18 Nov 2019 13:41:42**

**Name: I13446**
**ID: CA2-537STD010**
**Date: 18-Nov-2019**
**Time: 14:05:52**
**Description: WG1310082,,537ISO_190904**
**User: LCMS02:JW**
**Vial: 1:B,3**
**Instrument: XEVO-TQSmicro#QEB0050**
**Inlet Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\LCMS_537_ISO_B**
**Tune Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\181009_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**PFBA**





all concentration units in (ng/mL)

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**Time: 14:05:52**
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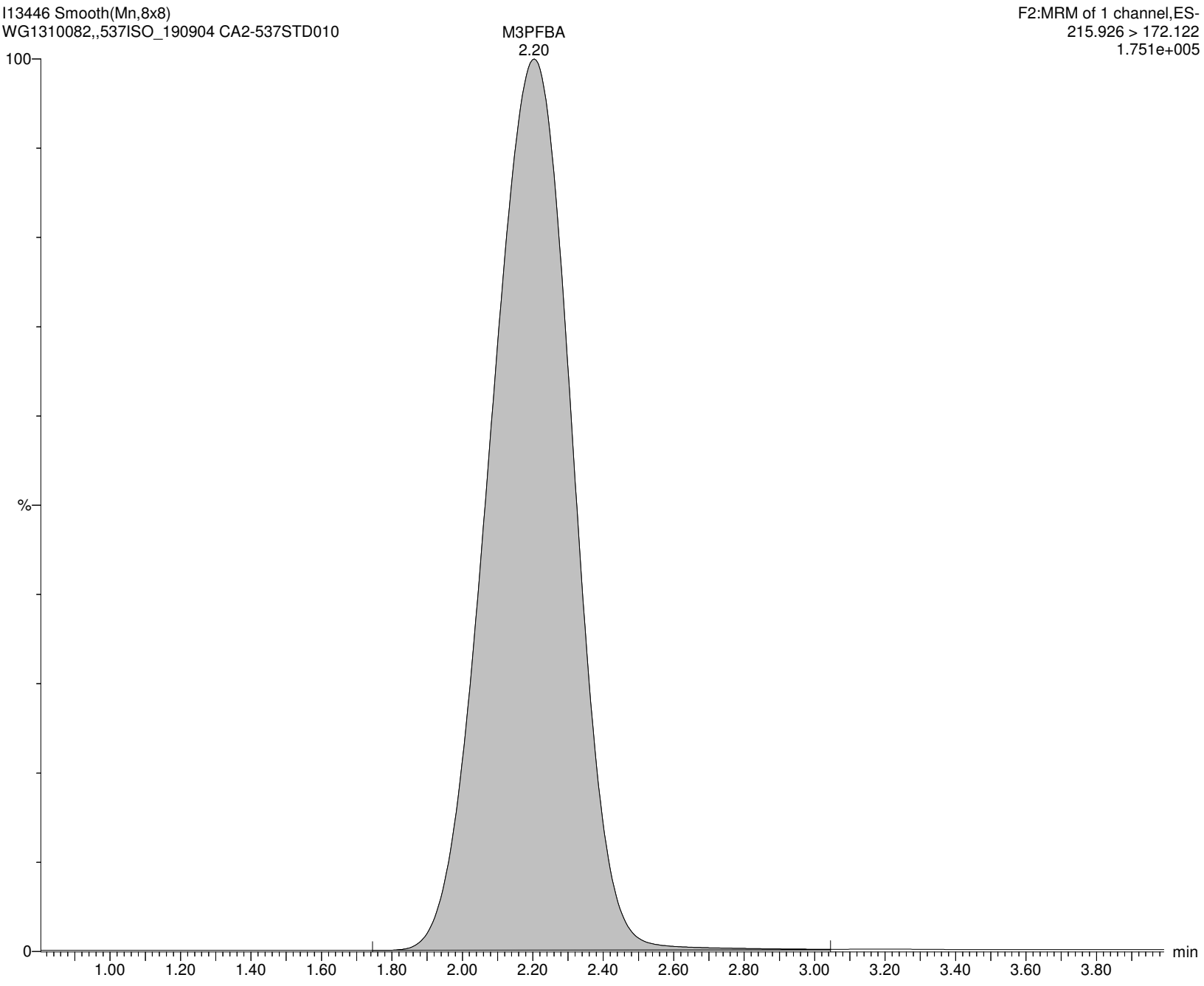
**User: LCMS02:JW**
**Vial: 1:B,3**
**Instrument: XEVO-TQSmicro#QEB0050**
**Inlet Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\LCMS_537_ISO_B**
**Tune Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\181009_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**M3PFBA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
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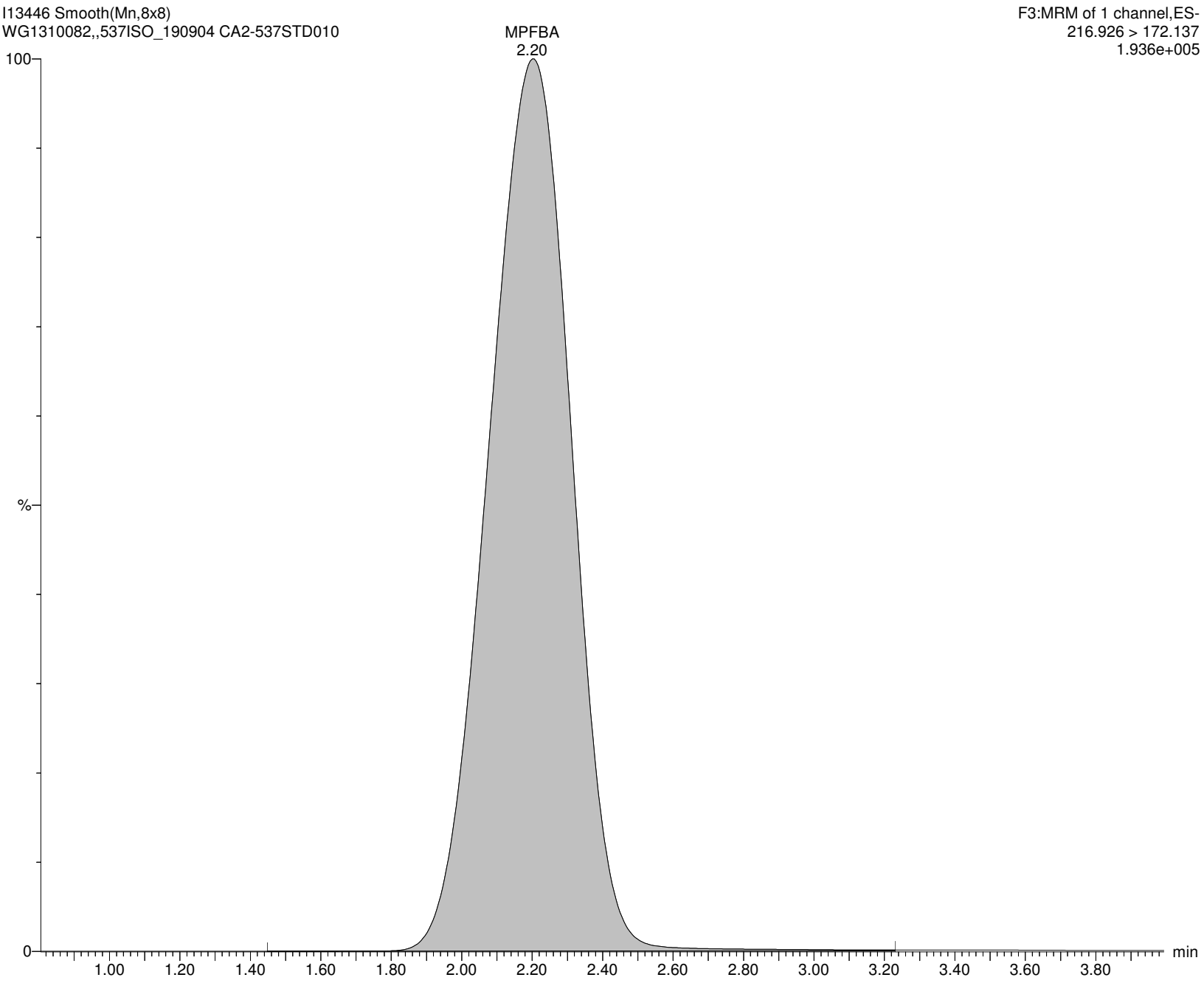
Last Altered: Monday, November 18, 2019 14:24:08 Eastern Standard Time
Printed: Monday, November 18, 2019 14:24:51 Eastern Standard Time

**Name: I13446**
**ID: CA2-537STD010**
**Date: 18-Nov-2019**
**Time: 14:05:52**
**Description: WG1310082,,537ISO_190904**
**User: LCMS02:JW**
**Vial: 1:B,3**
**Instrument: XEVO-TQSmicro#QEB0050**
**Inlet Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\LCMS_537_ISO_B**
**Tune Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\181009_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**MPFBA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICV.qld
Last Altered: Monday, November 18, 2019 14:24:08 Eastern Standard Time
Printed: Monday, November 18, 2019 14:24:51 Eastern Standard Time

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**User: LCMS02:JW**
**Vial: 1:B,3**
**Instrument: XEVO-TQSmicro#QEB0050**
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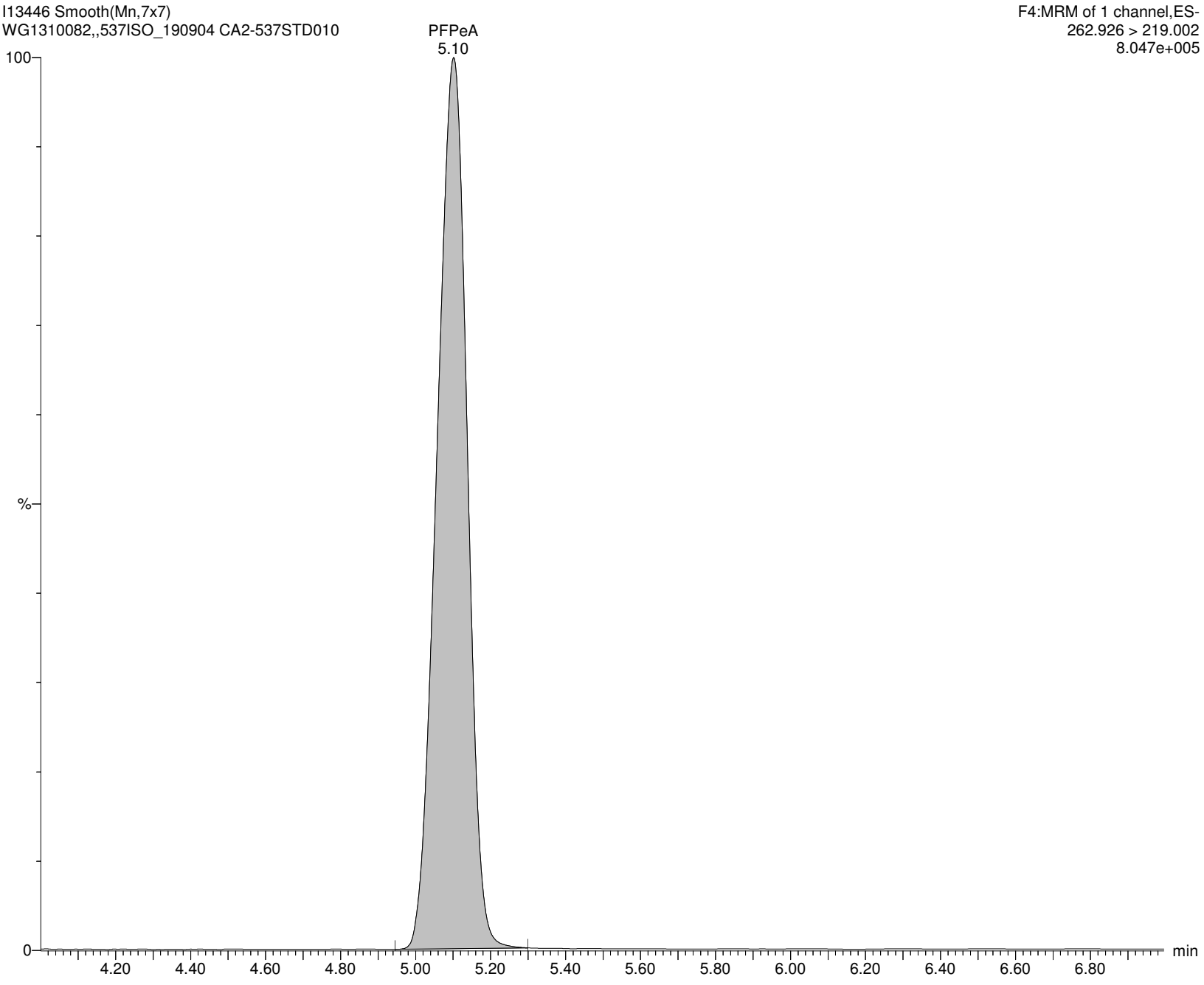
**PFPeA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
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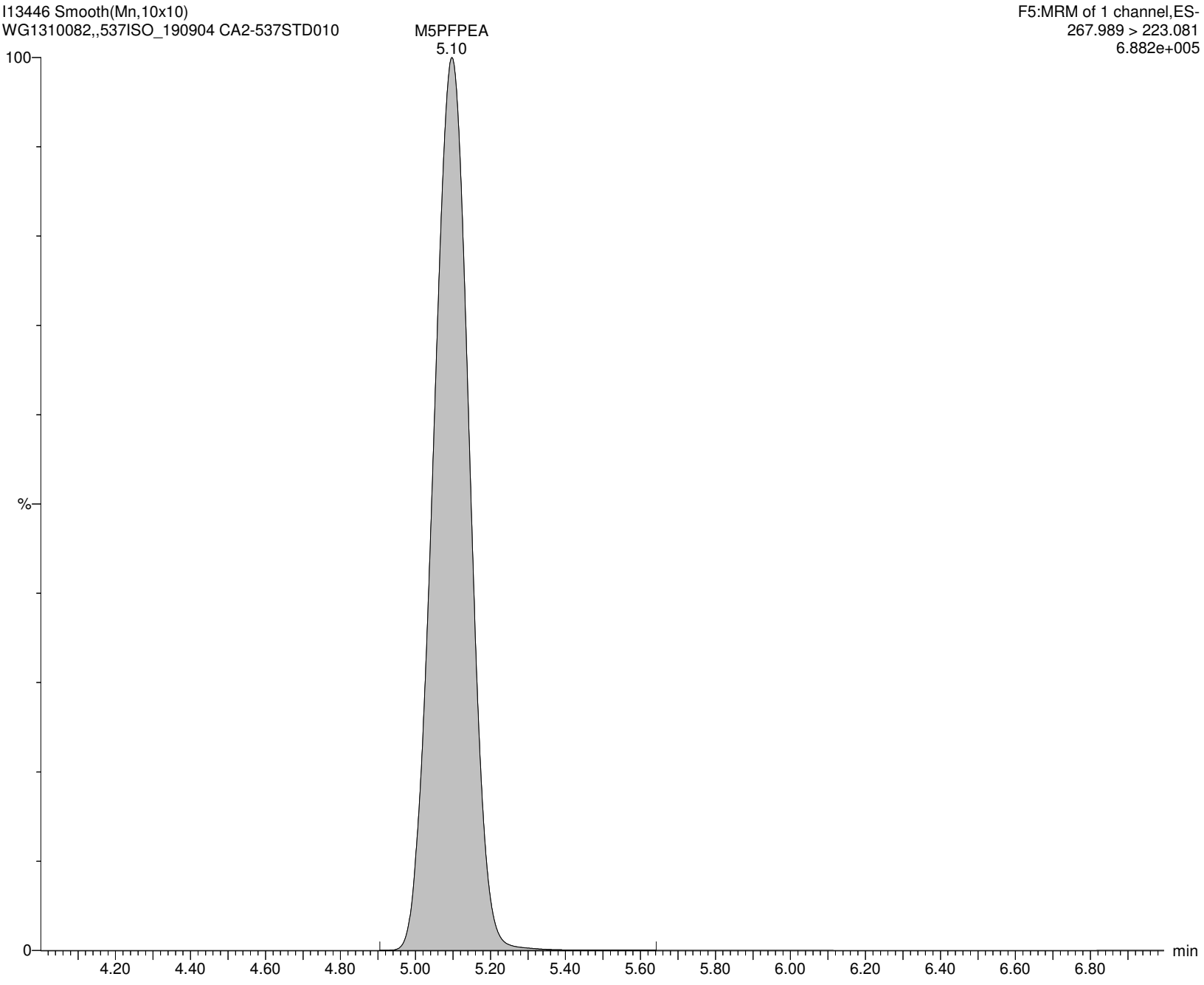
**M5PFPEA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
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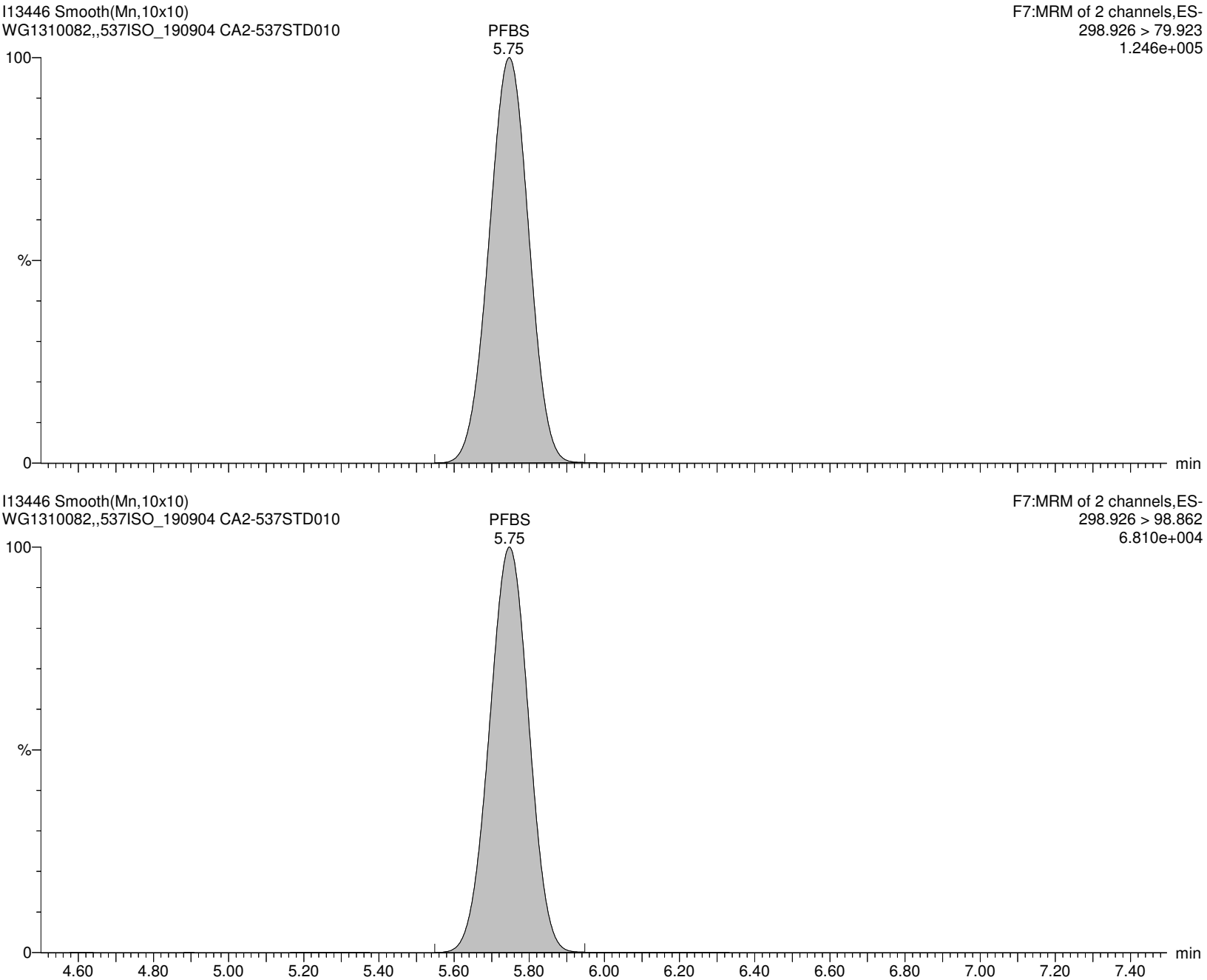
**PFBS**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICV.qld
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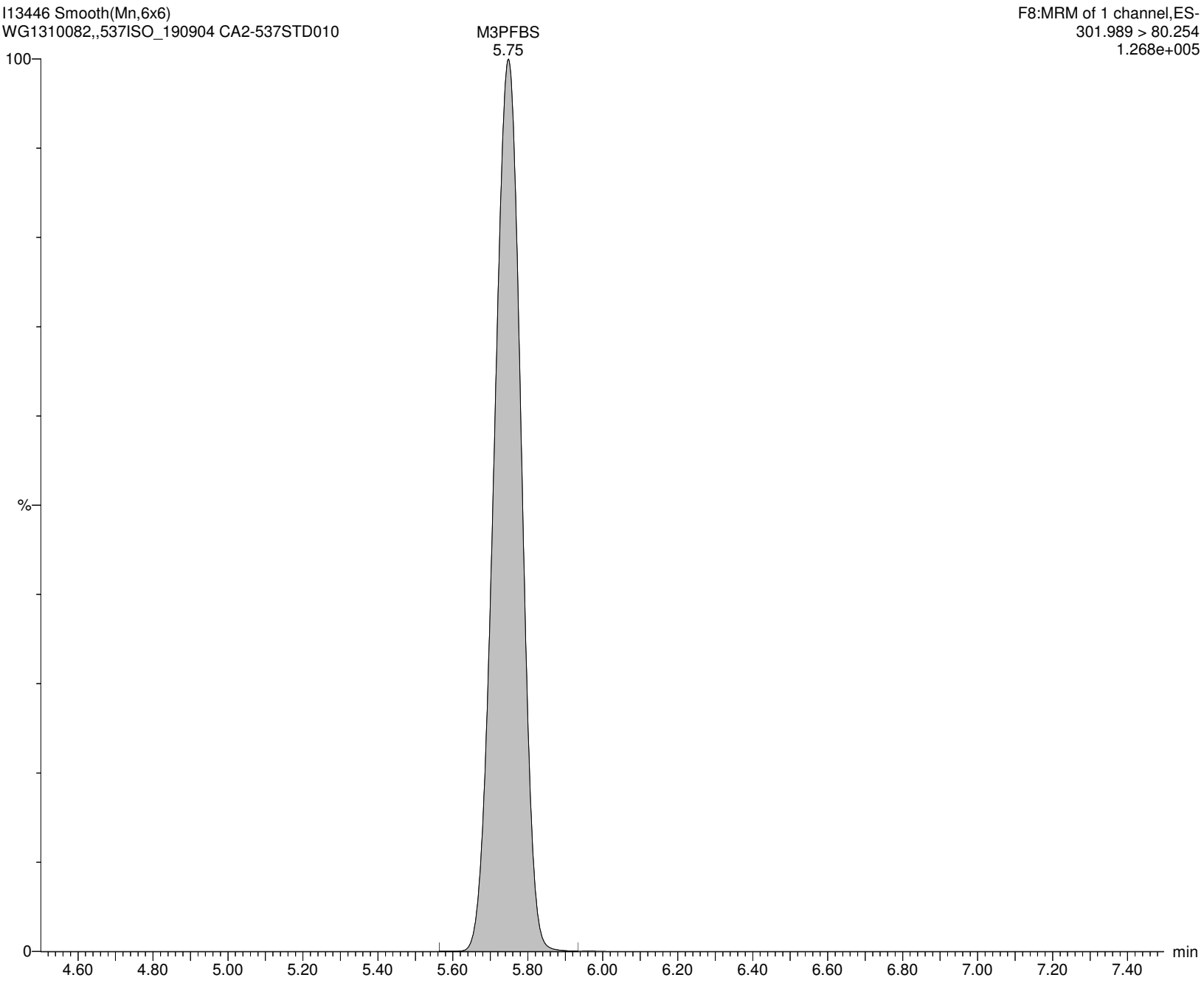
**M3PFBS**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICV.qld
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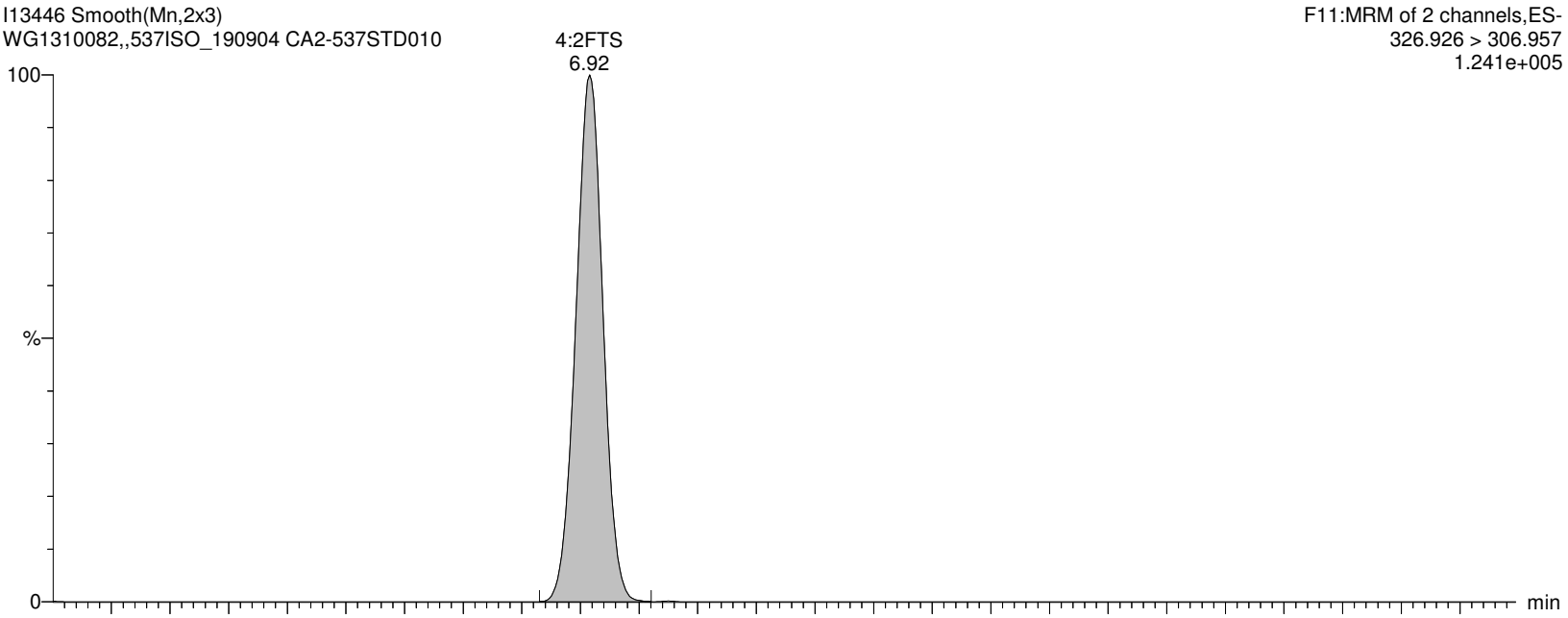
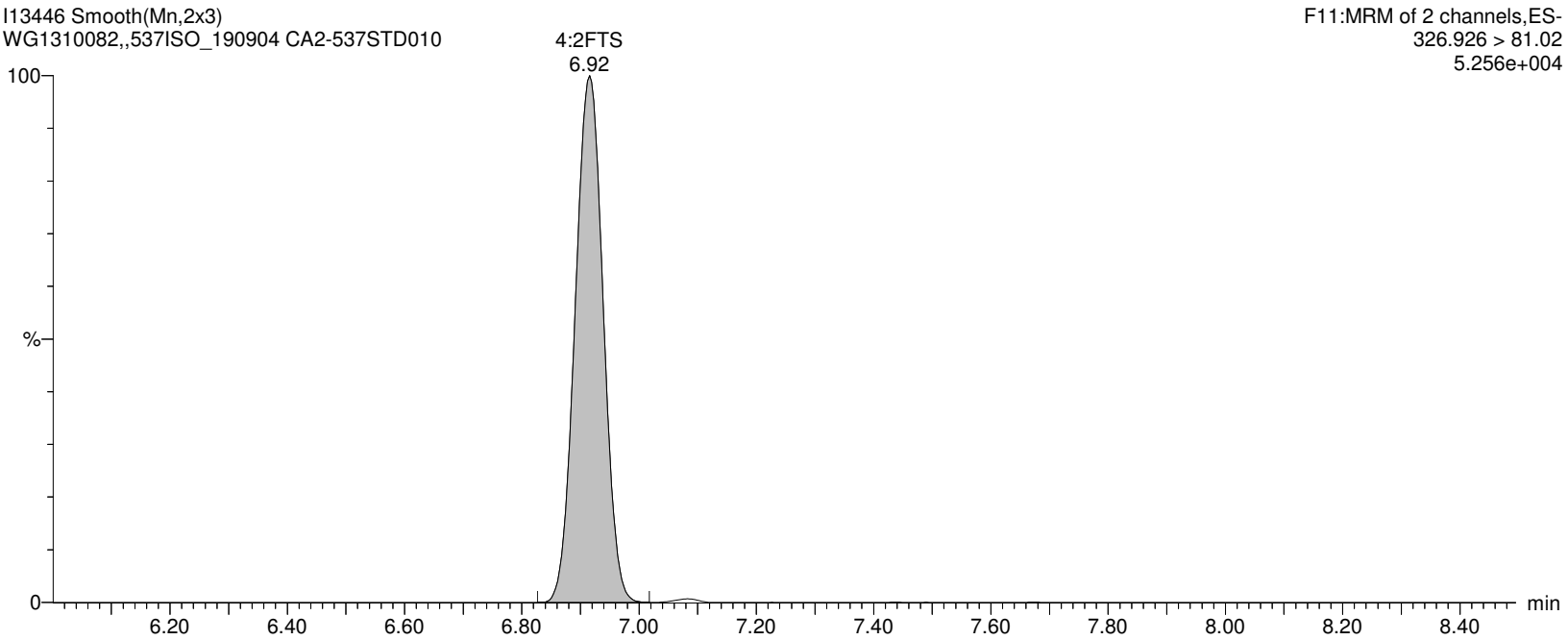
**4:2FTS**





all concentration units in (ng/mL)

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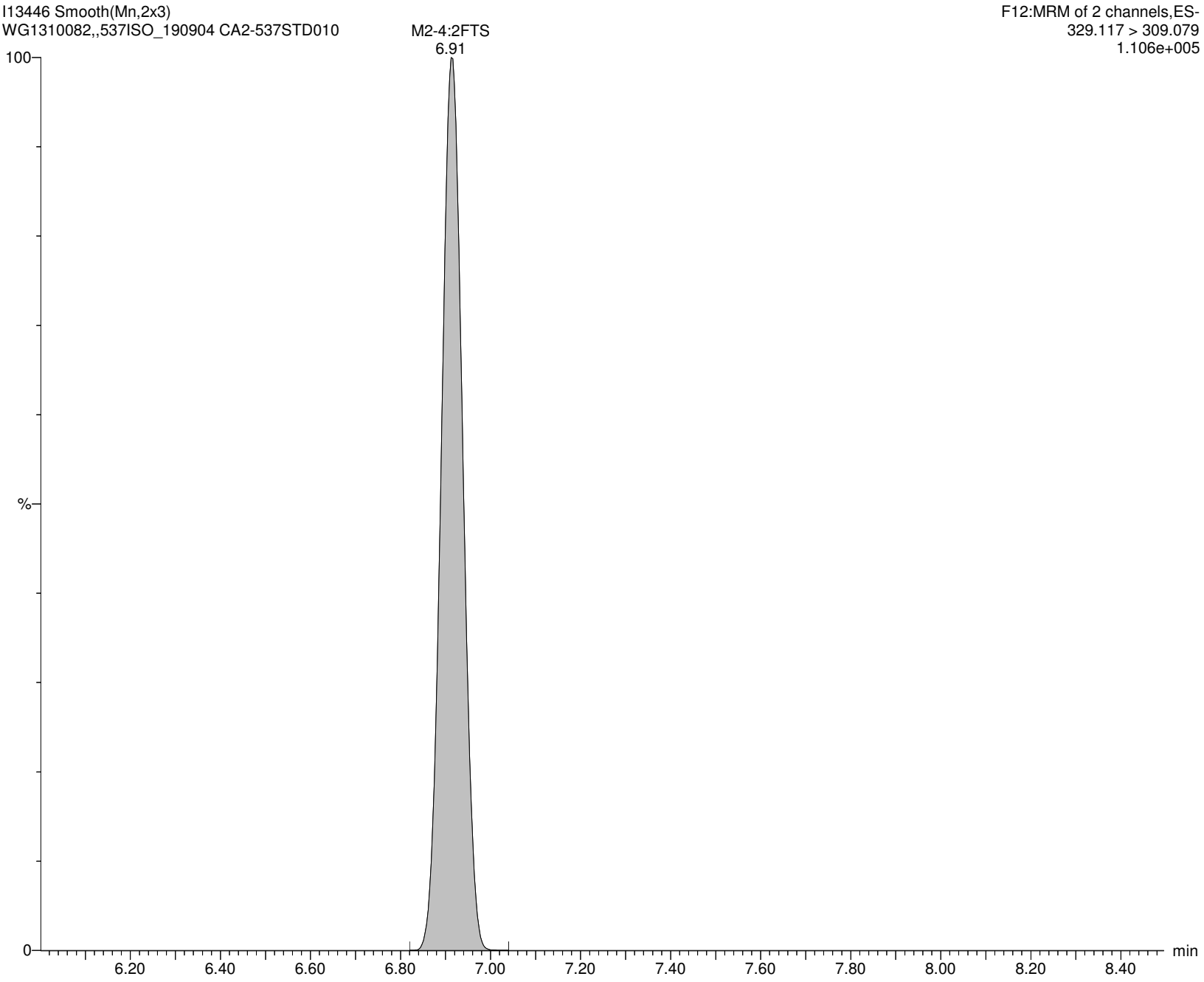
**M2-4:2FTS**





all concentration units in (ng/mL)

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Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICV.qld
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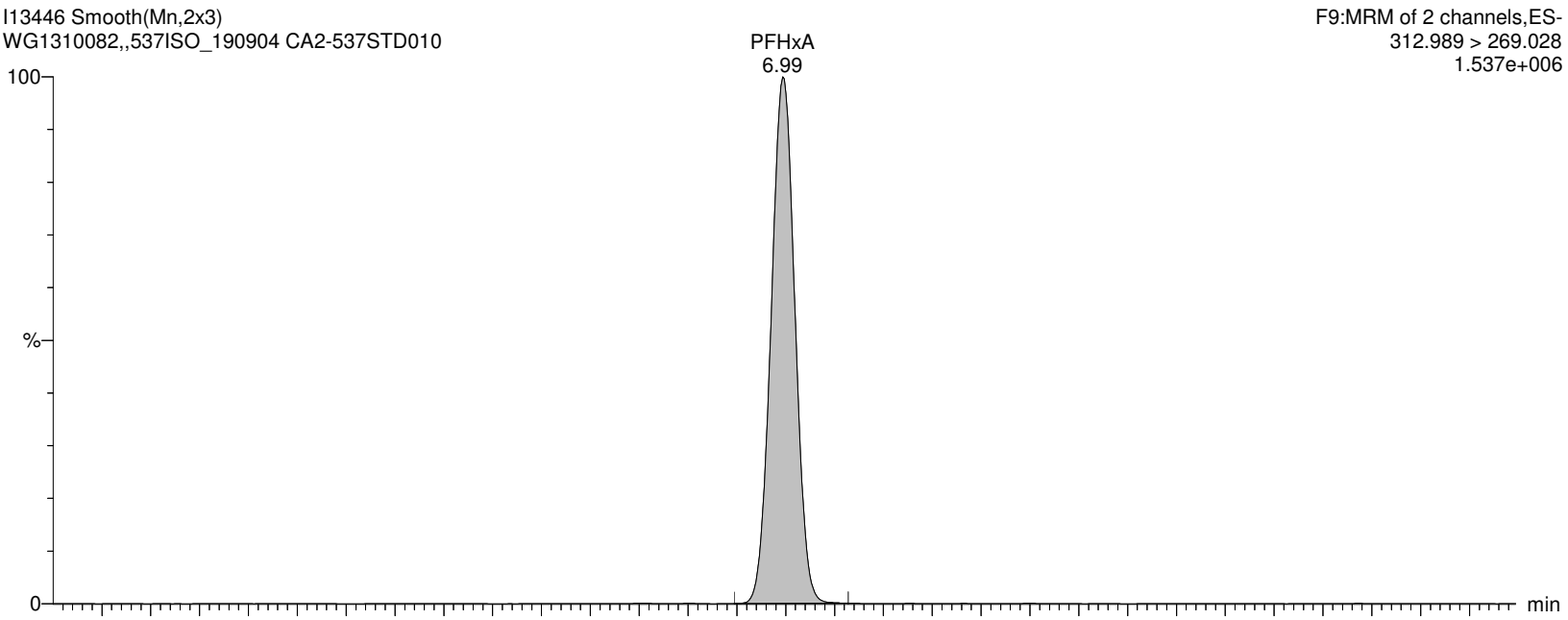
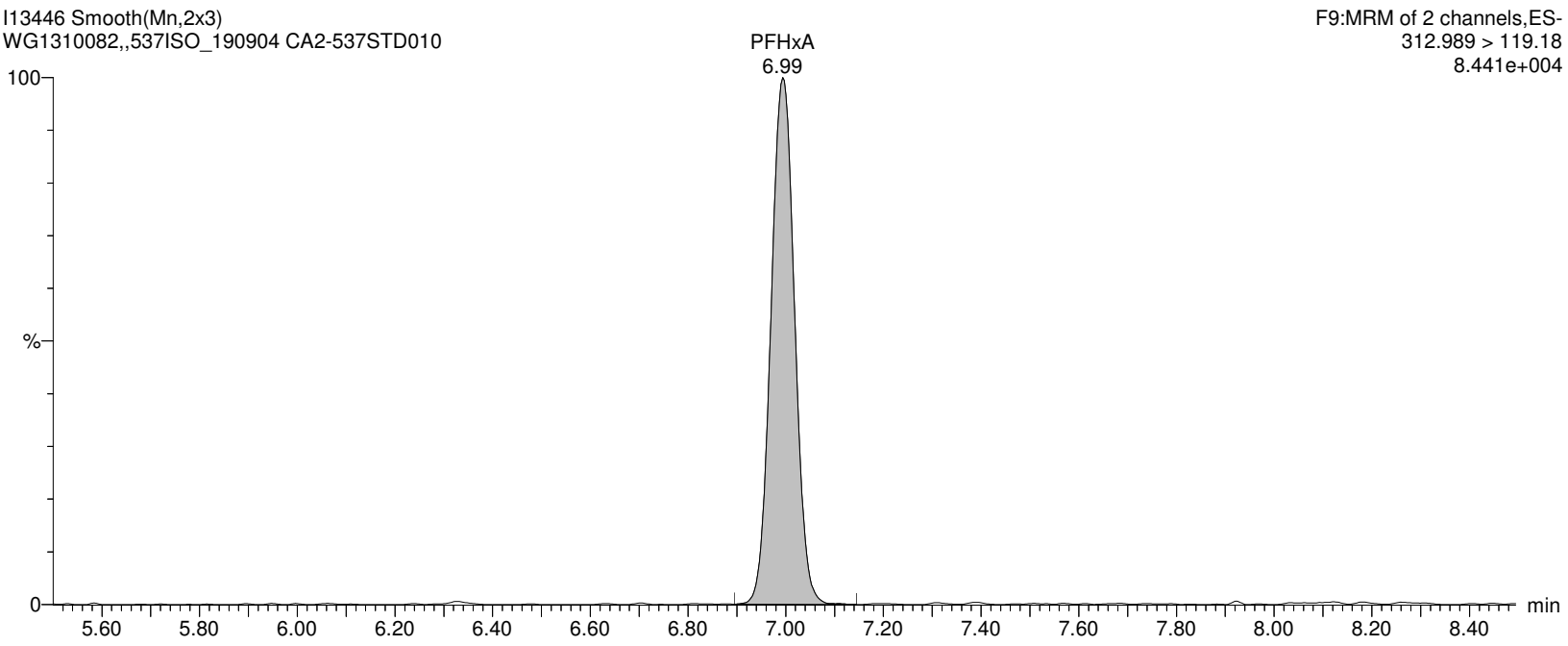
**PFHxA**





all concentration units in (ng/mL)

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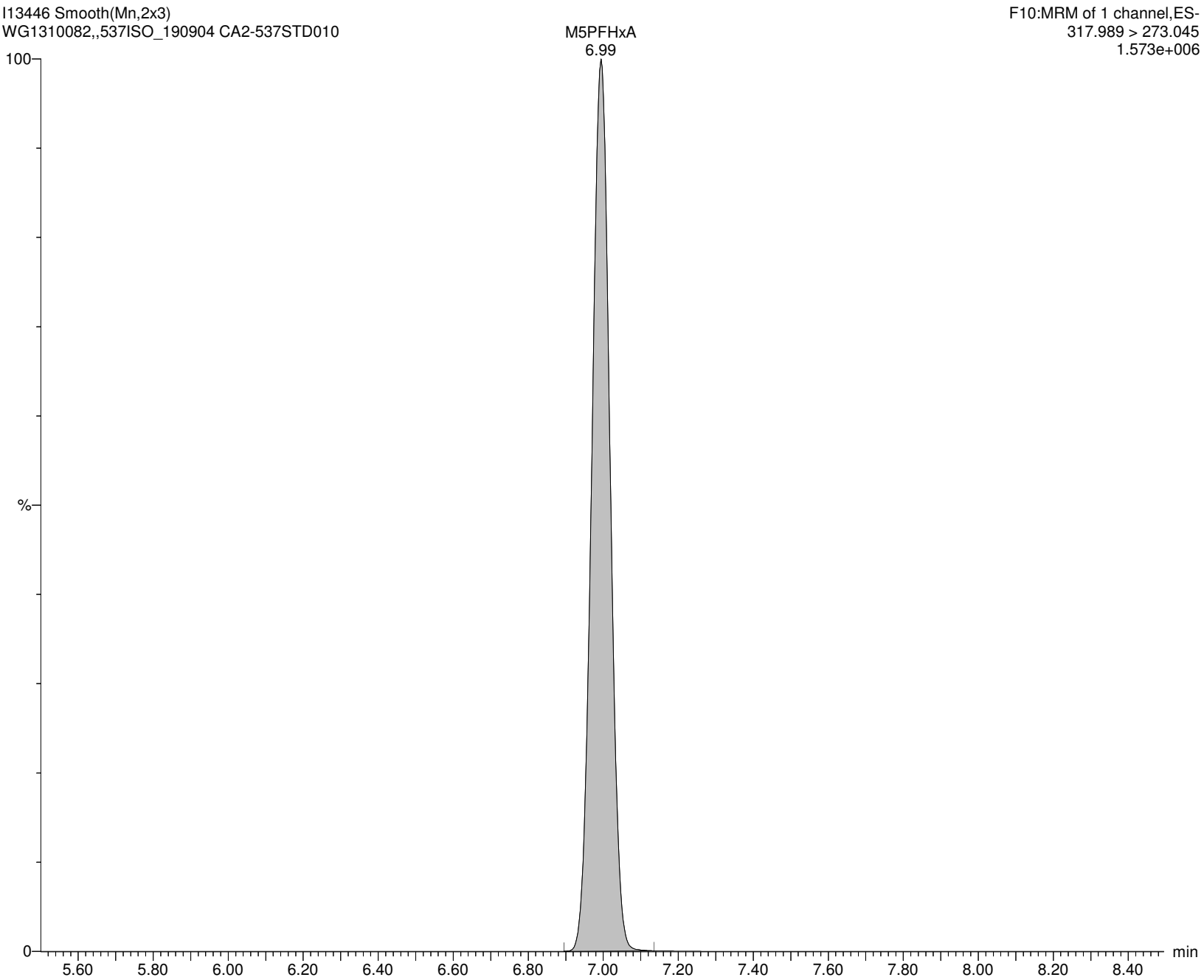
**M5PFHxA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
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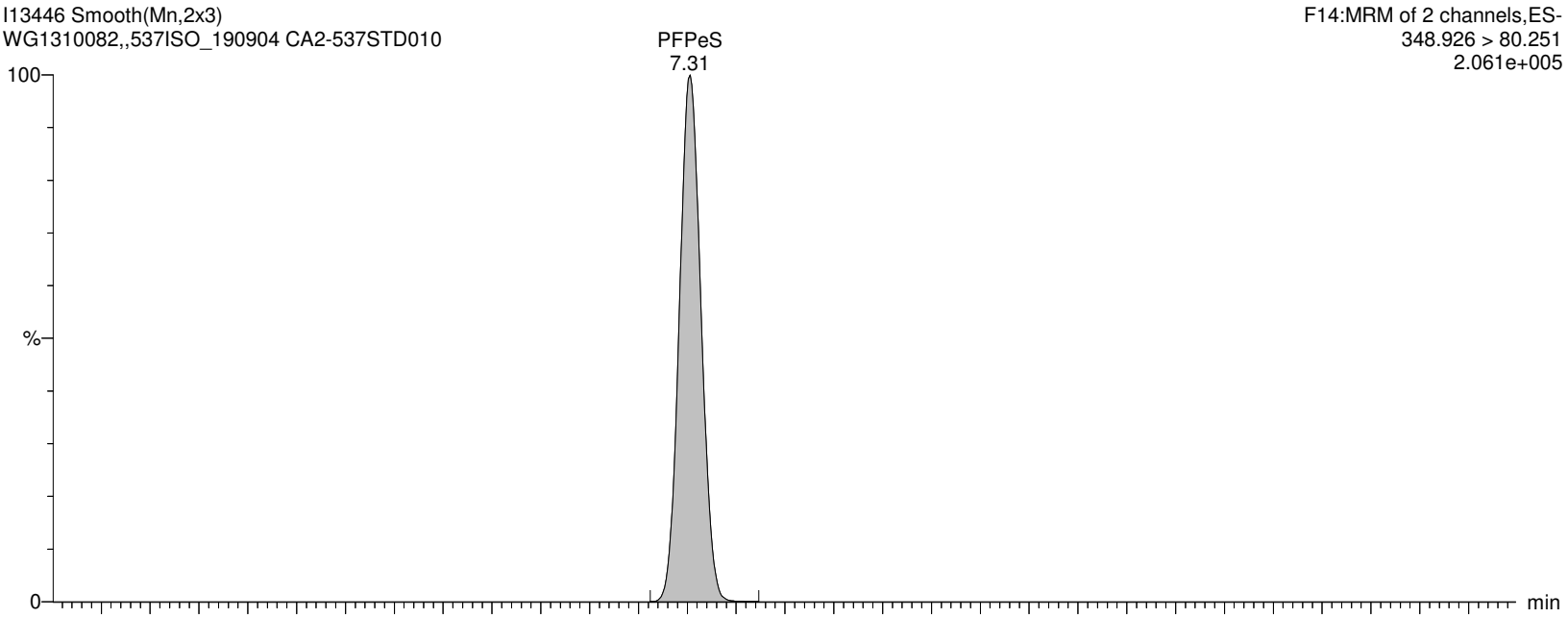
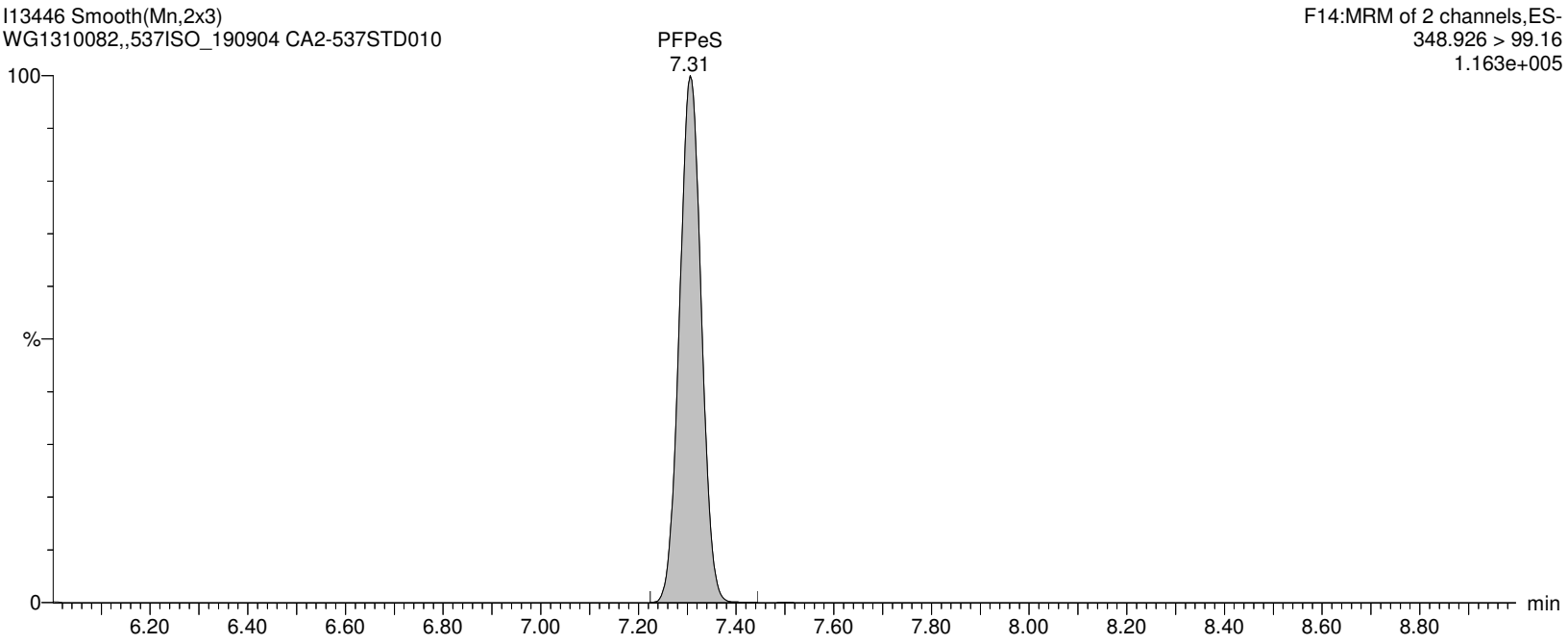
**PFPeS**





all concentration units in (ng/mL)

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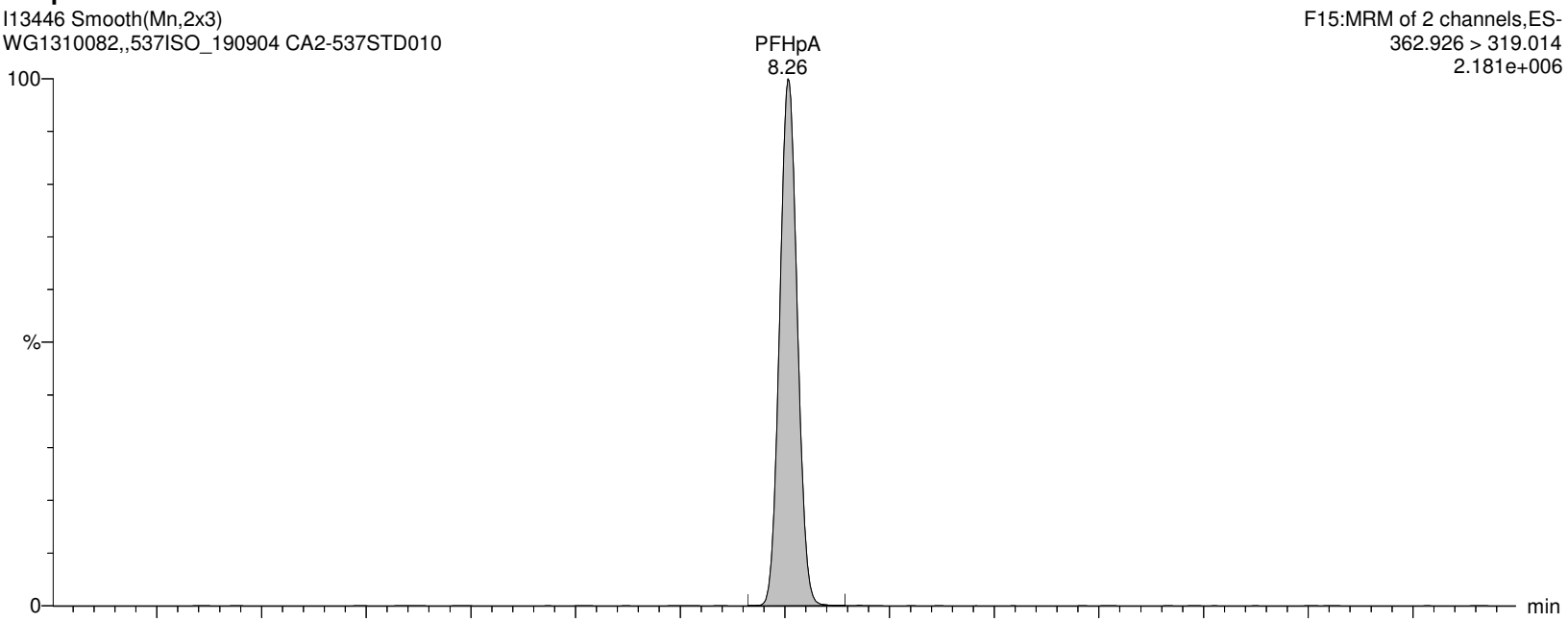


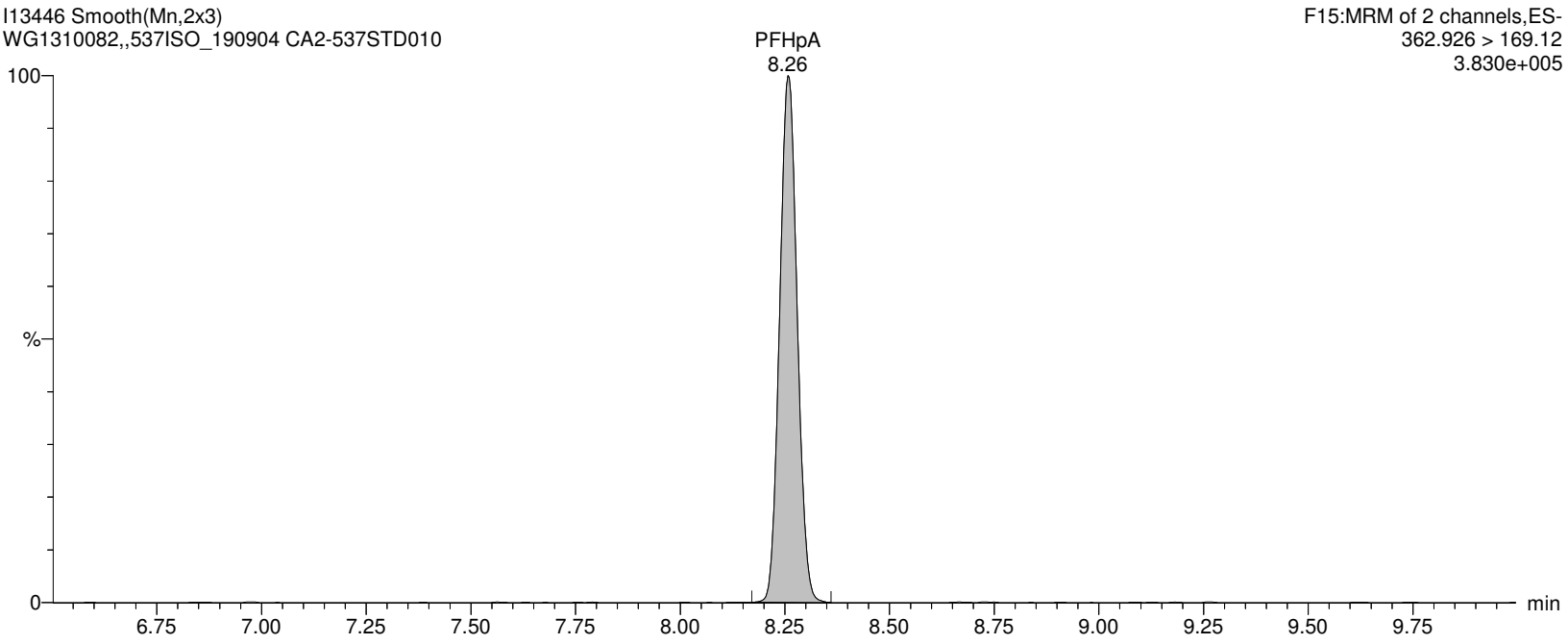



all concentration units in (ng/mL)

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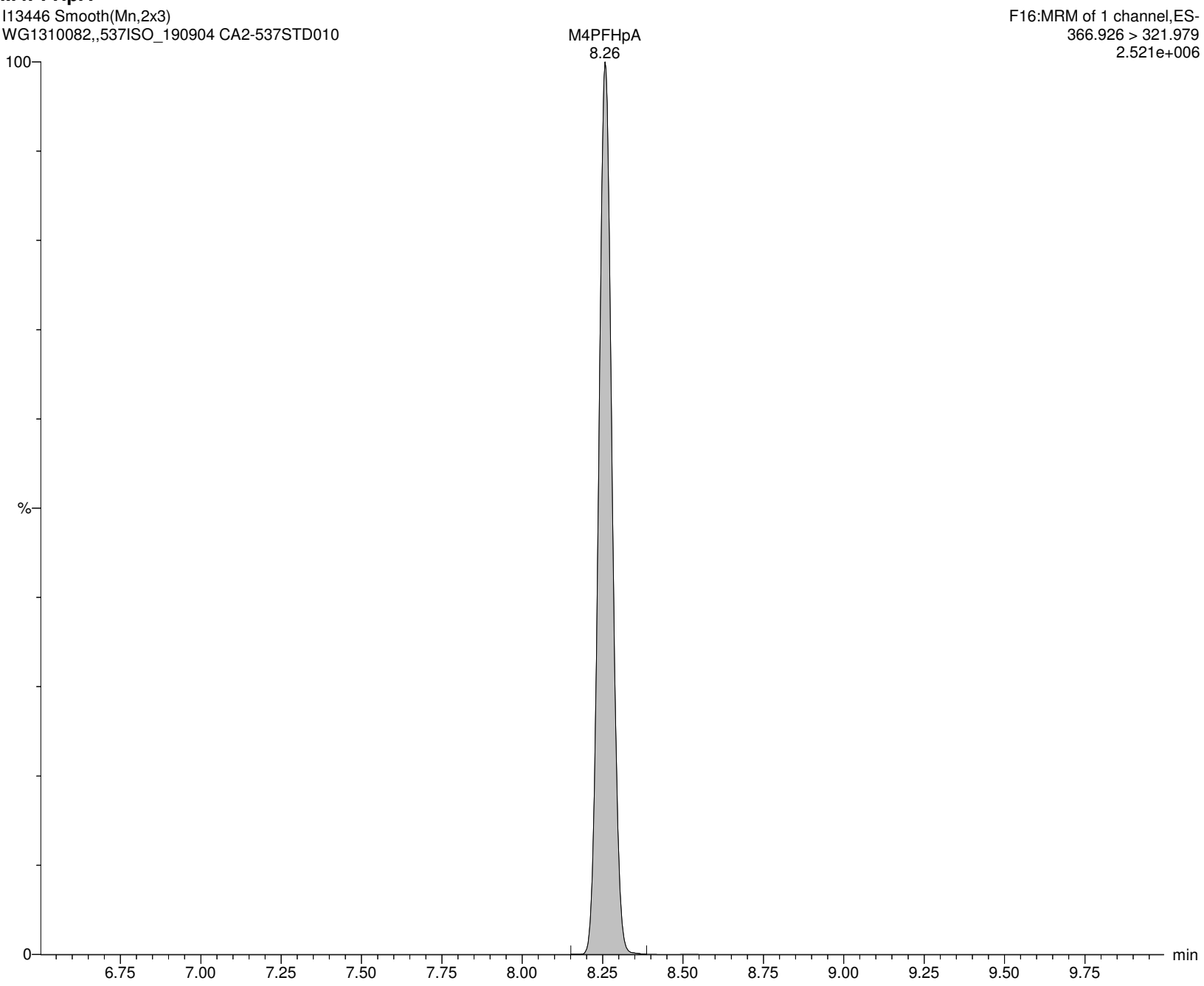
**M4PFHpA**





all concentration units in (ng/mL)

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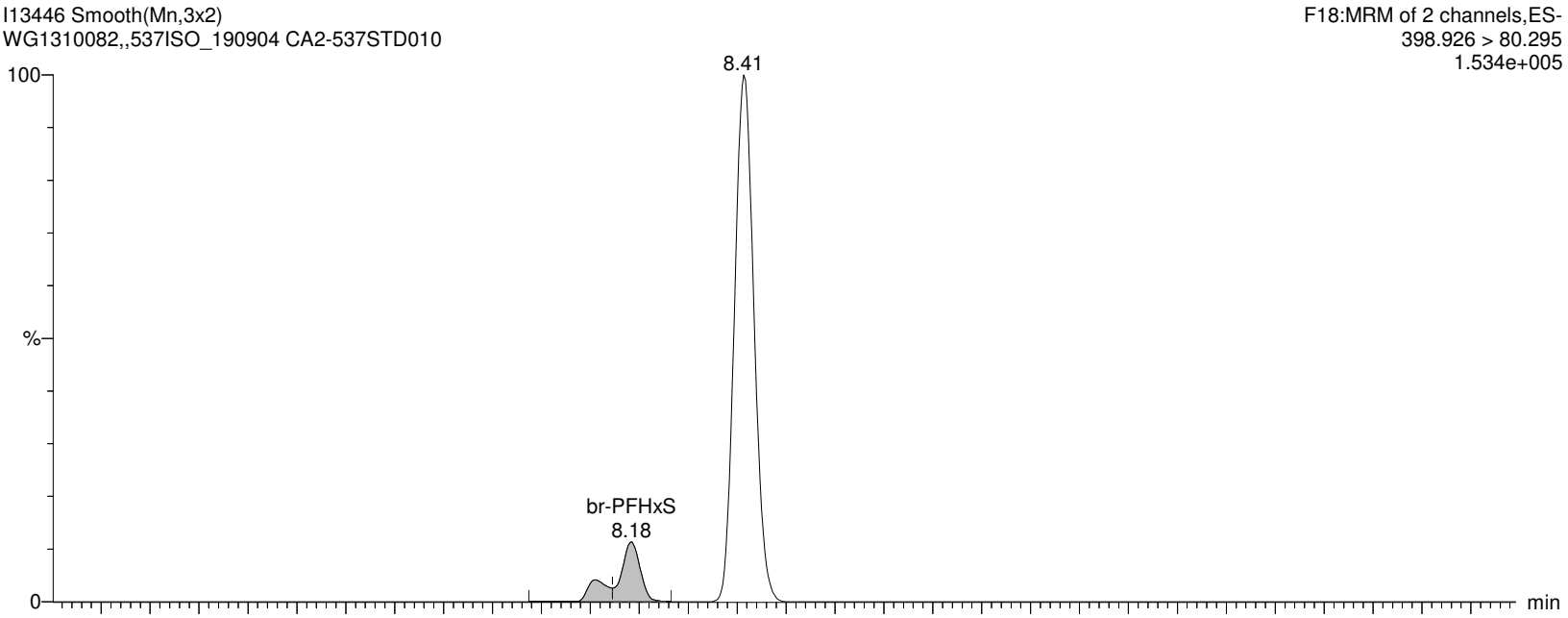
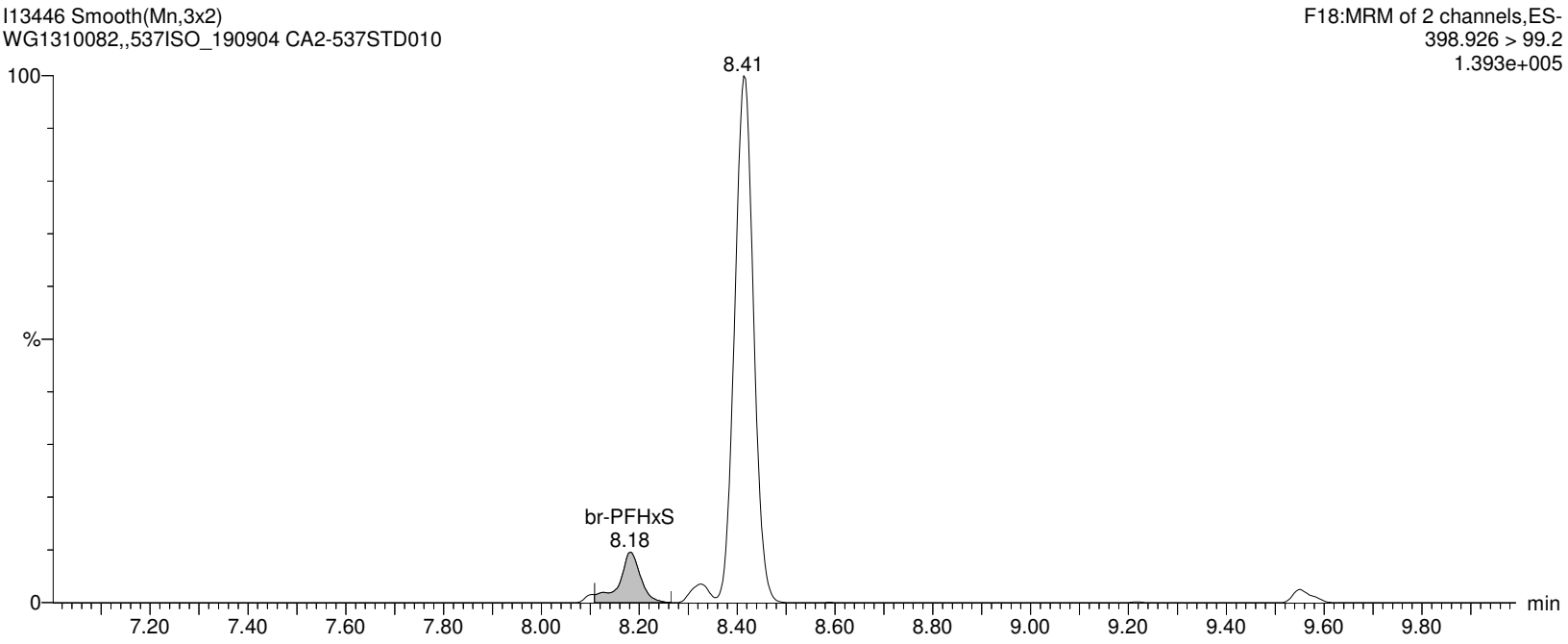
**br-PFHxS**





all concentration units in (ng/mL)

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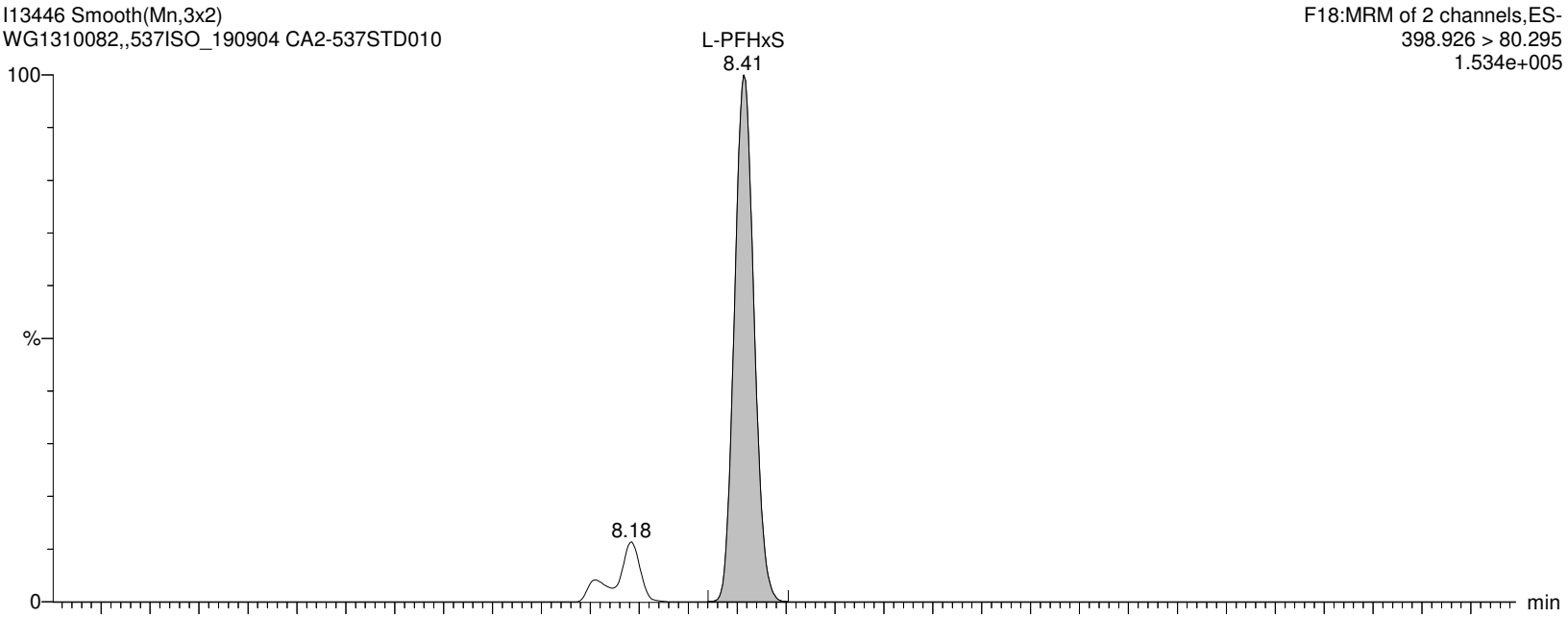
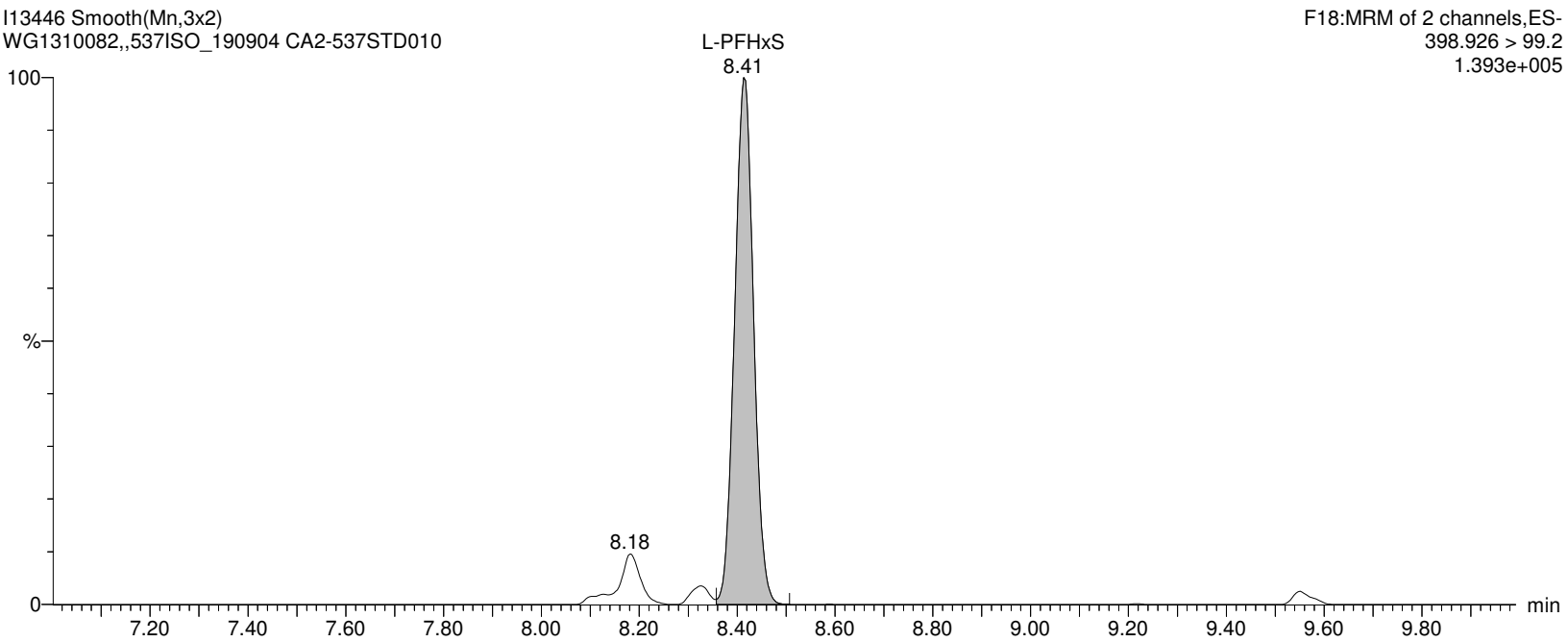
**L-PFHxS**





all concentration units in (ng/mL)

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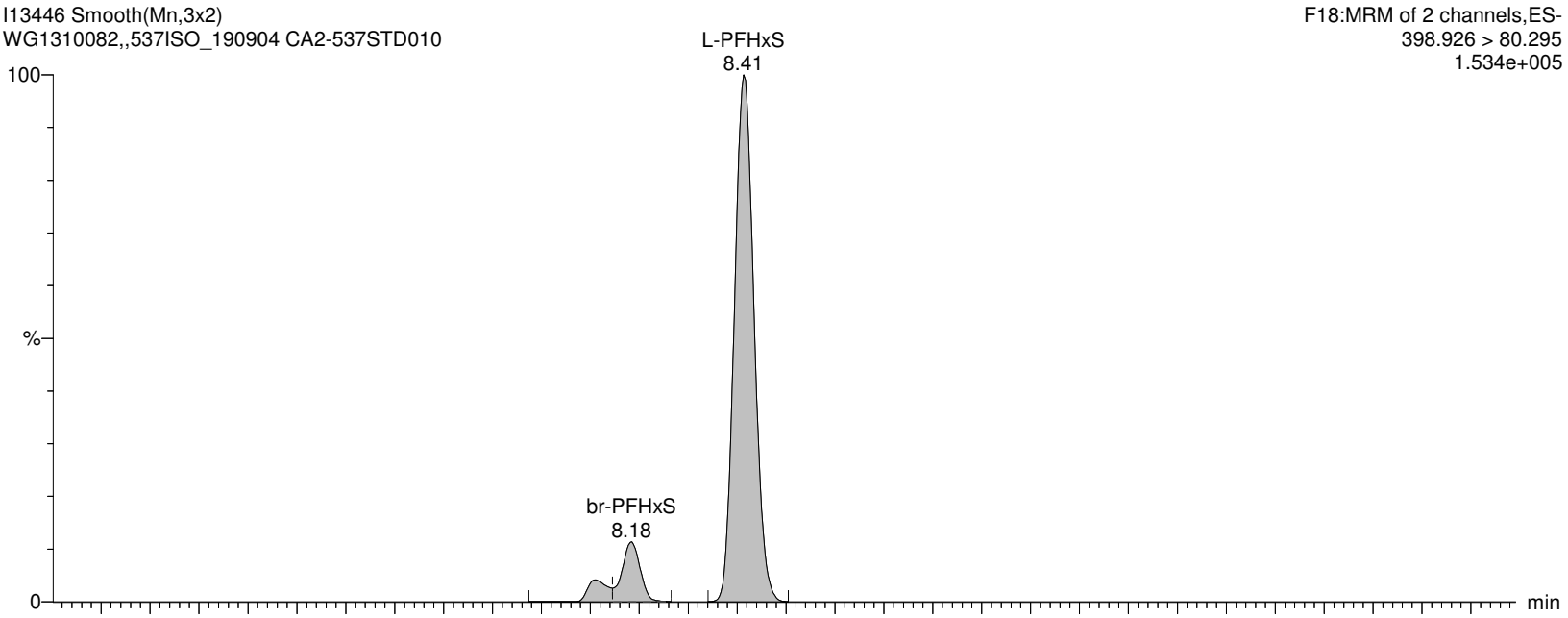


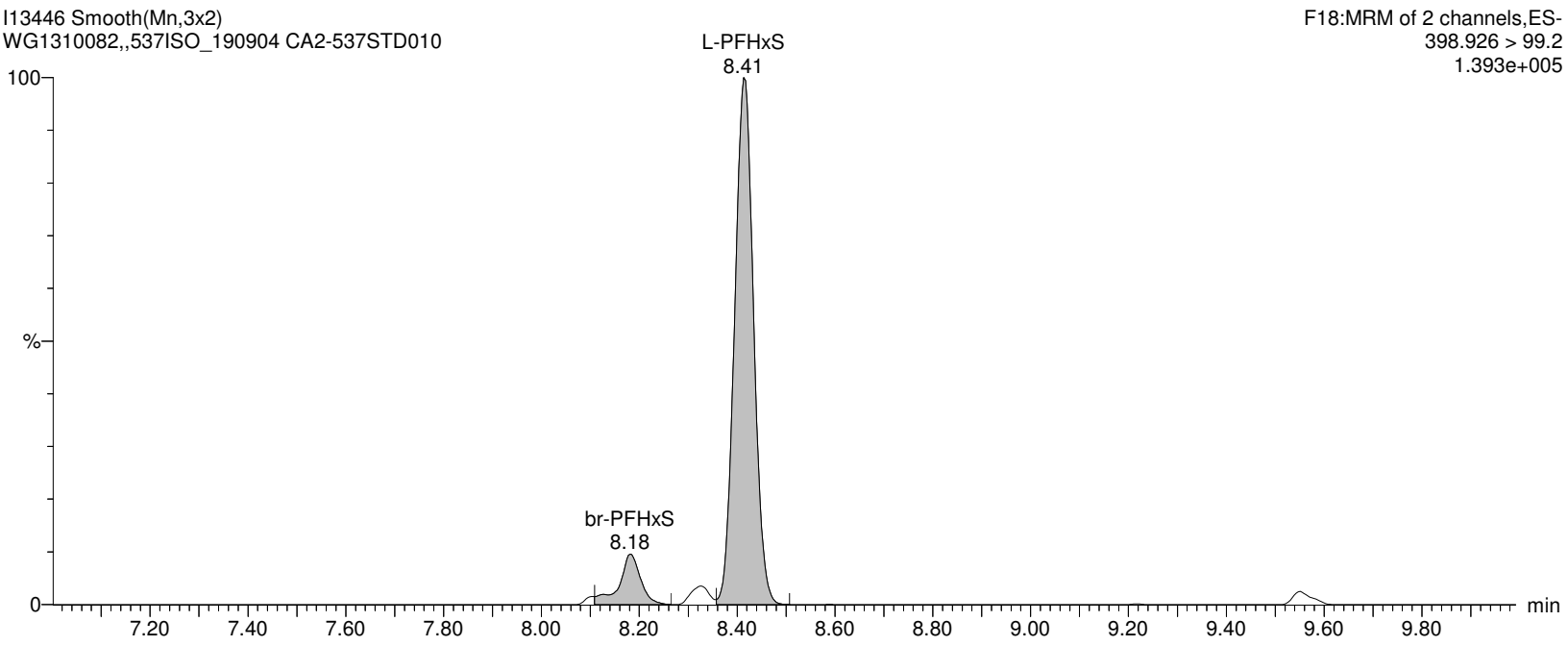



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**Instrument: XEVO-TQSmicro#QEB0050**
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**Tune Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\181009_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

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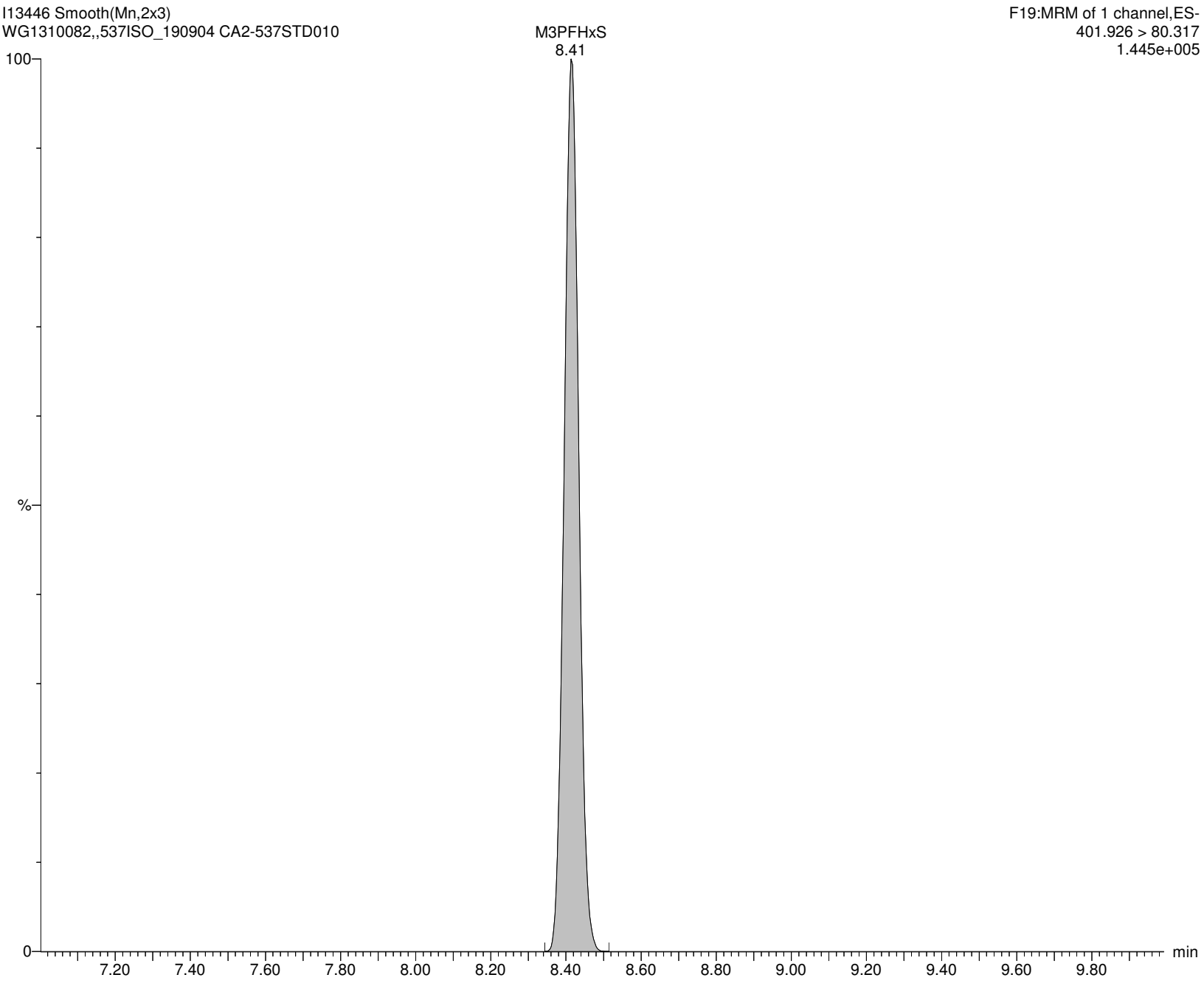



all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICV.qld
Last Altered: Monday, November 18, 2019 14:24:08 Eastern Standard Time
Printed: Monday, November 18, 2019 14:24:51 Eastern Standard Time

**Name: I13446**
**ID: CA2-537STD010**
**Date: 18-Nov-2019**
**Time: 14:05:52**
**Description: WG1310082,,537ISO_190904**
**User: LCMS02:JW**
**Vial: 1:B,3**
**Instrument: XEVO-TQSmicro#QEB0050**
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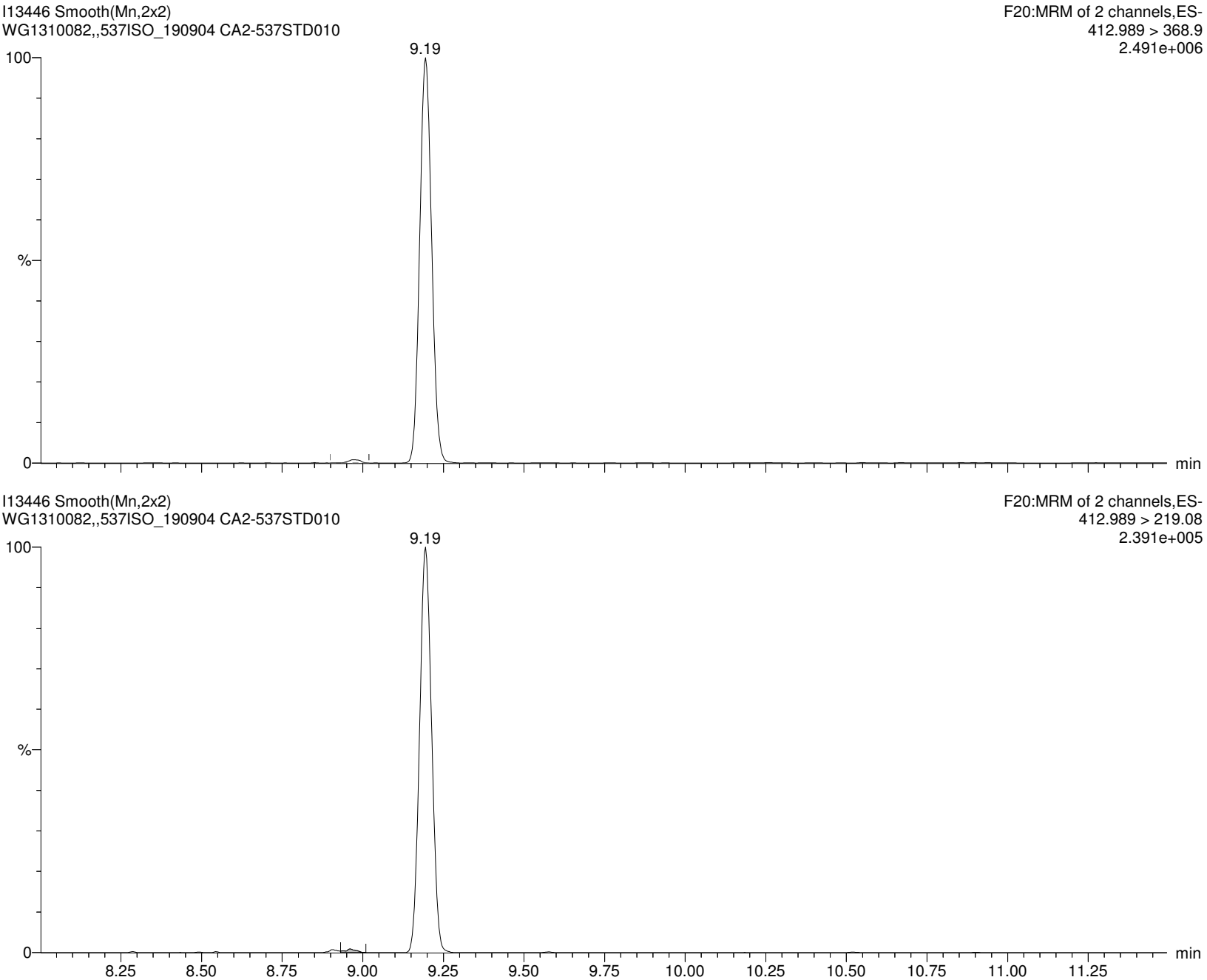
**br-PFOA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
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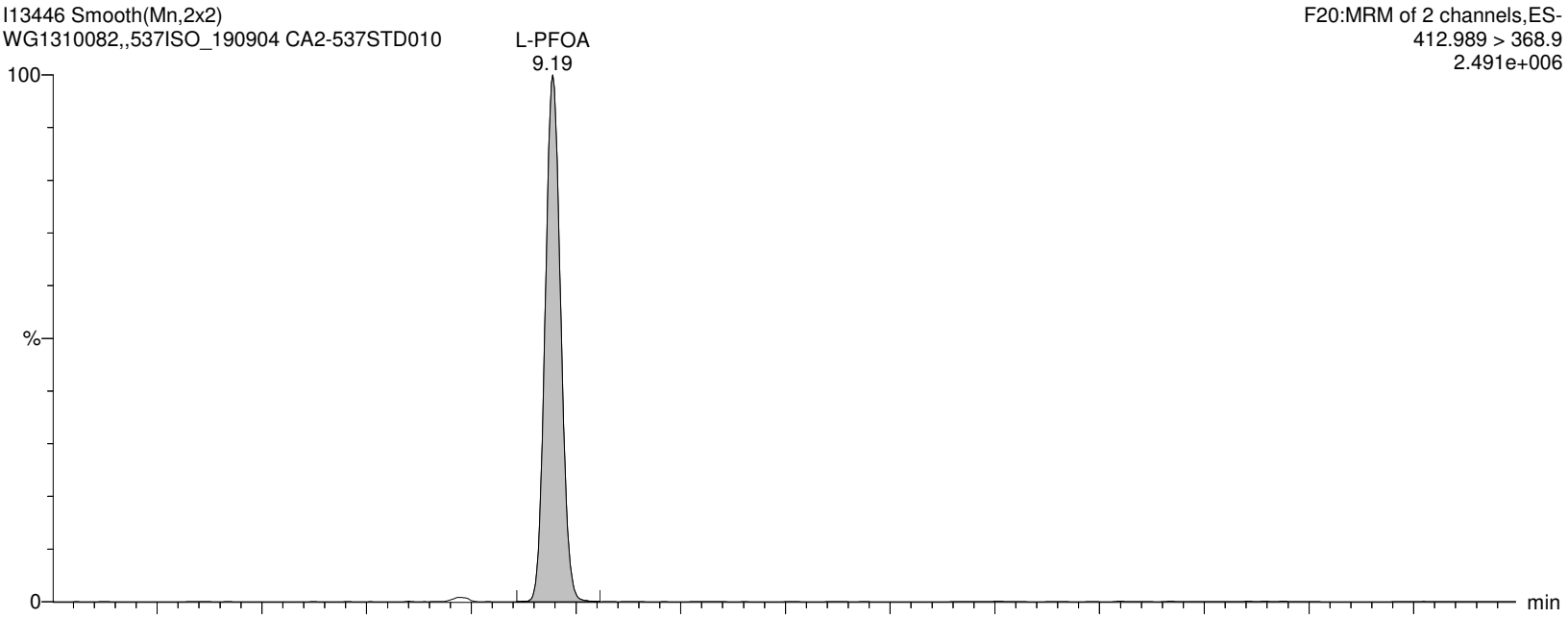


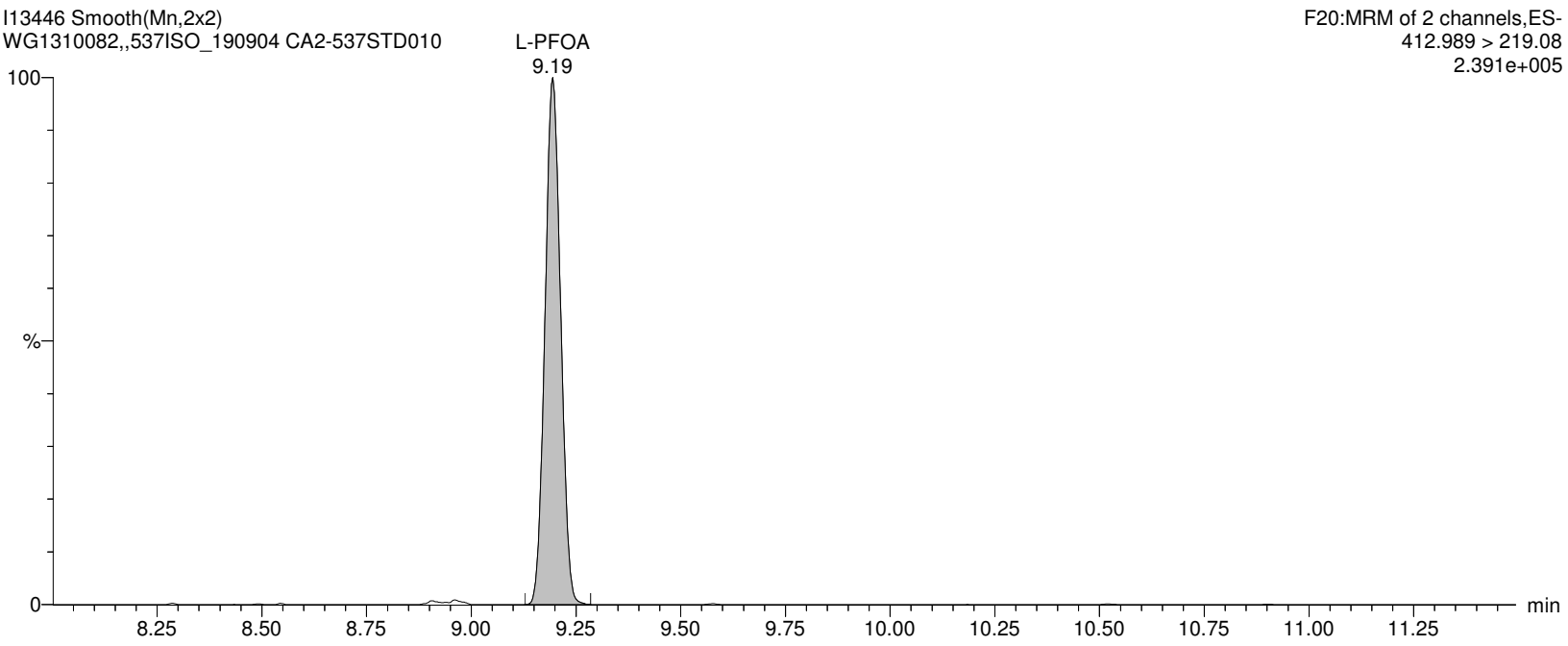



all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICV.qld
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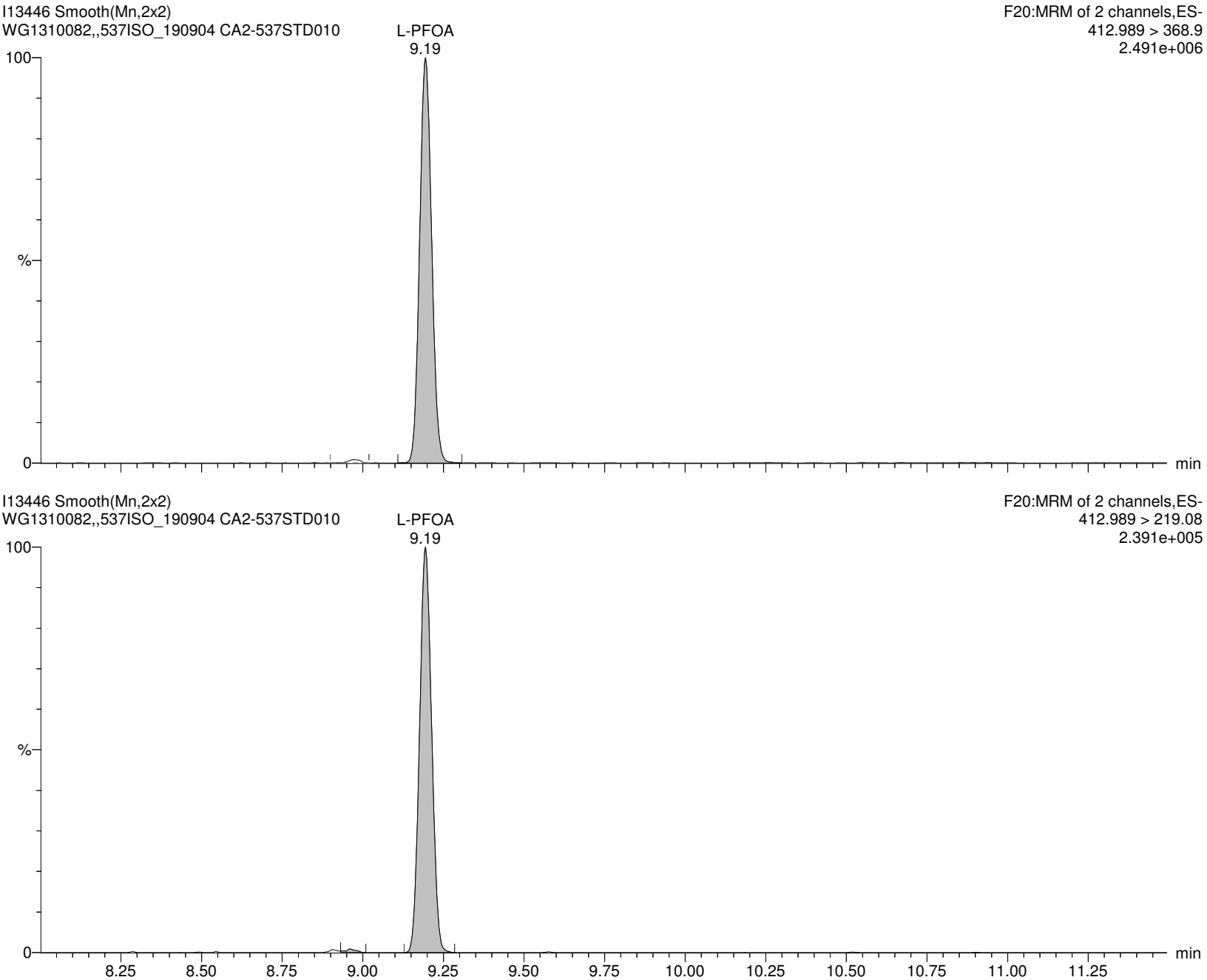
**PFOA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICV.qld
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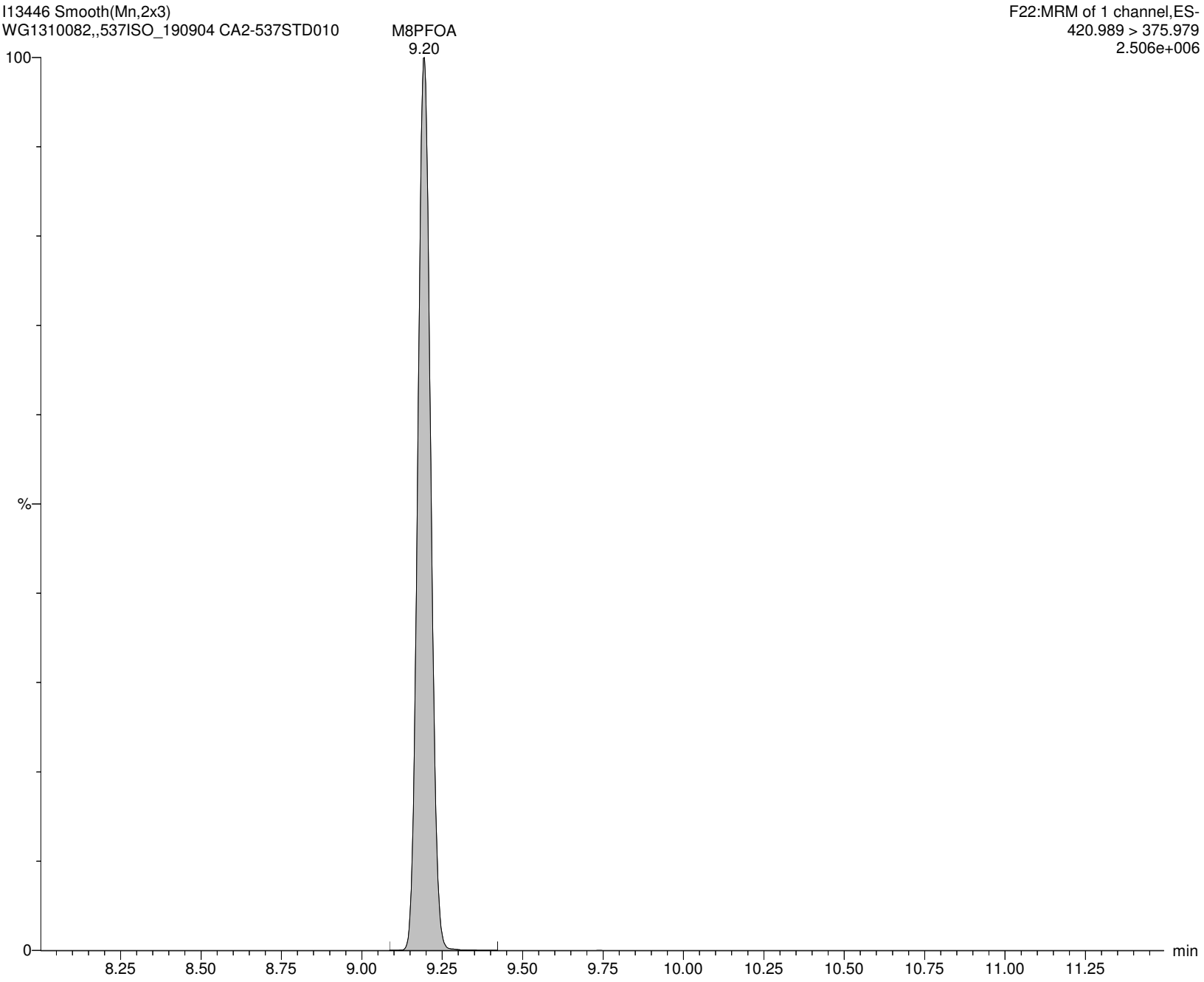
**M8PFOA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
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**Vial: 1:B,3**
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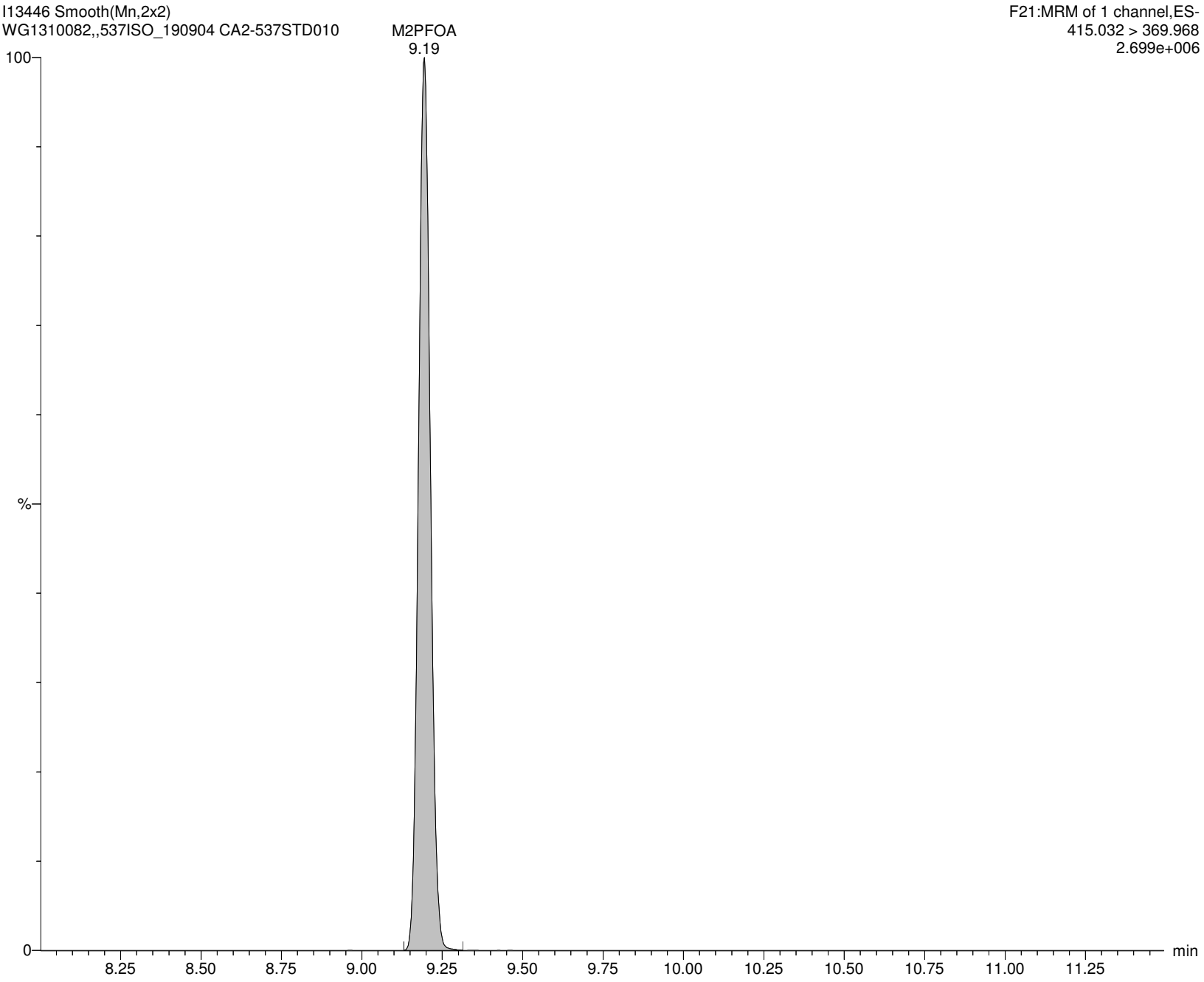
**M2PFOA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICV.qld
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**Vial: 1:B,3**
**Instrument: XEVO-TQSmicro#QEB0050**
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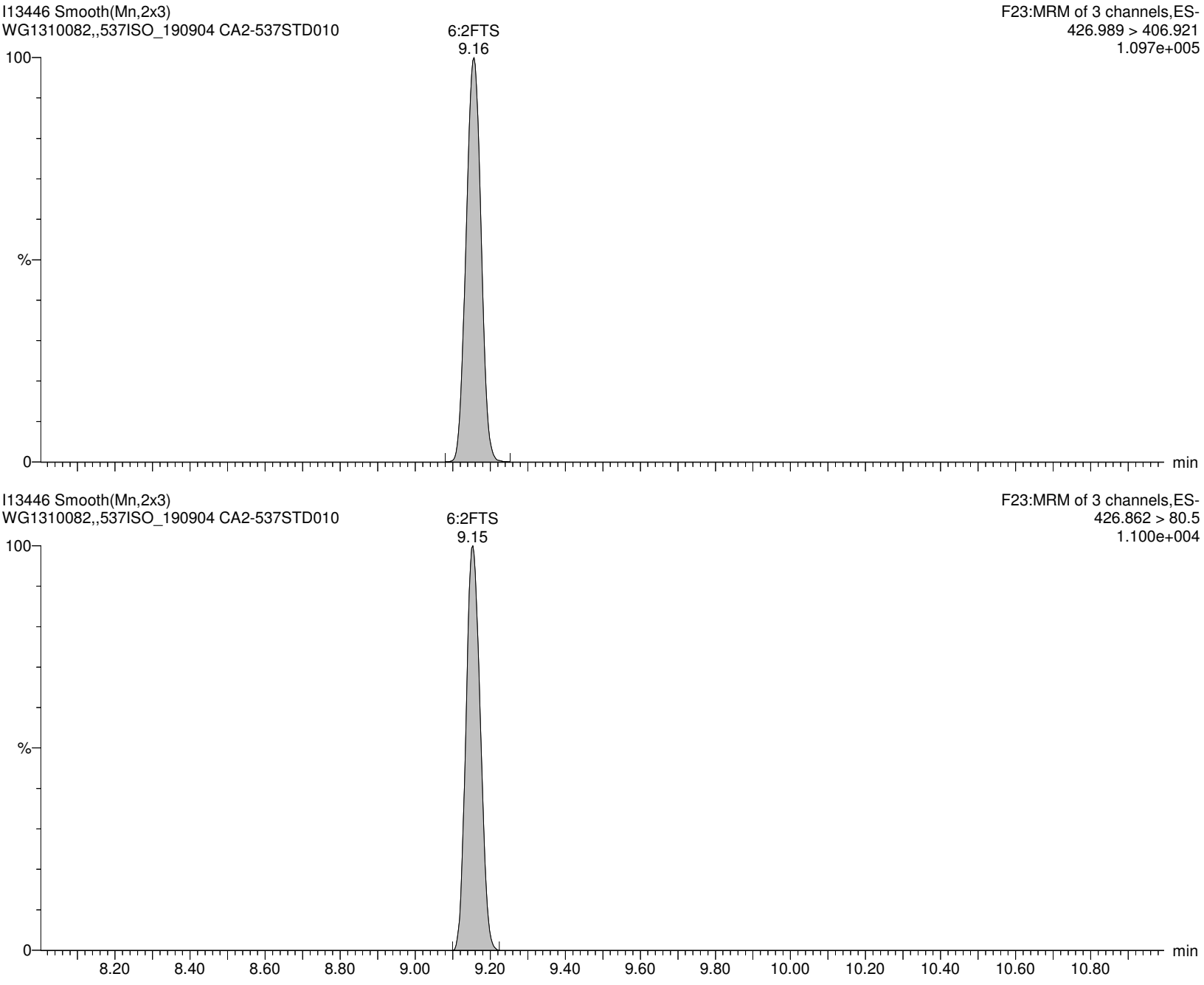
**6:2FTS**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICV.qld
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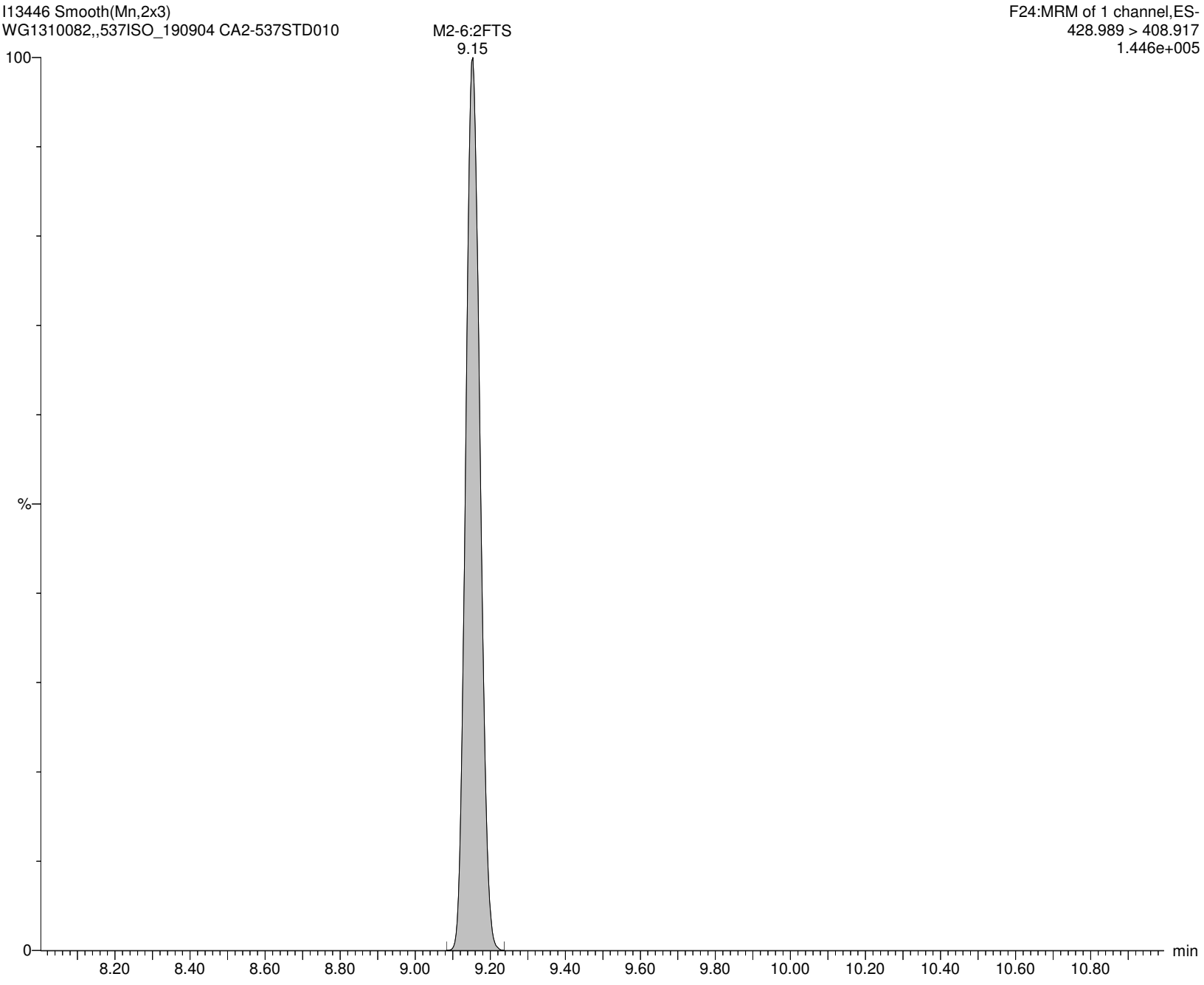
**MS Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**M2-6:2FTS**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICV.qld
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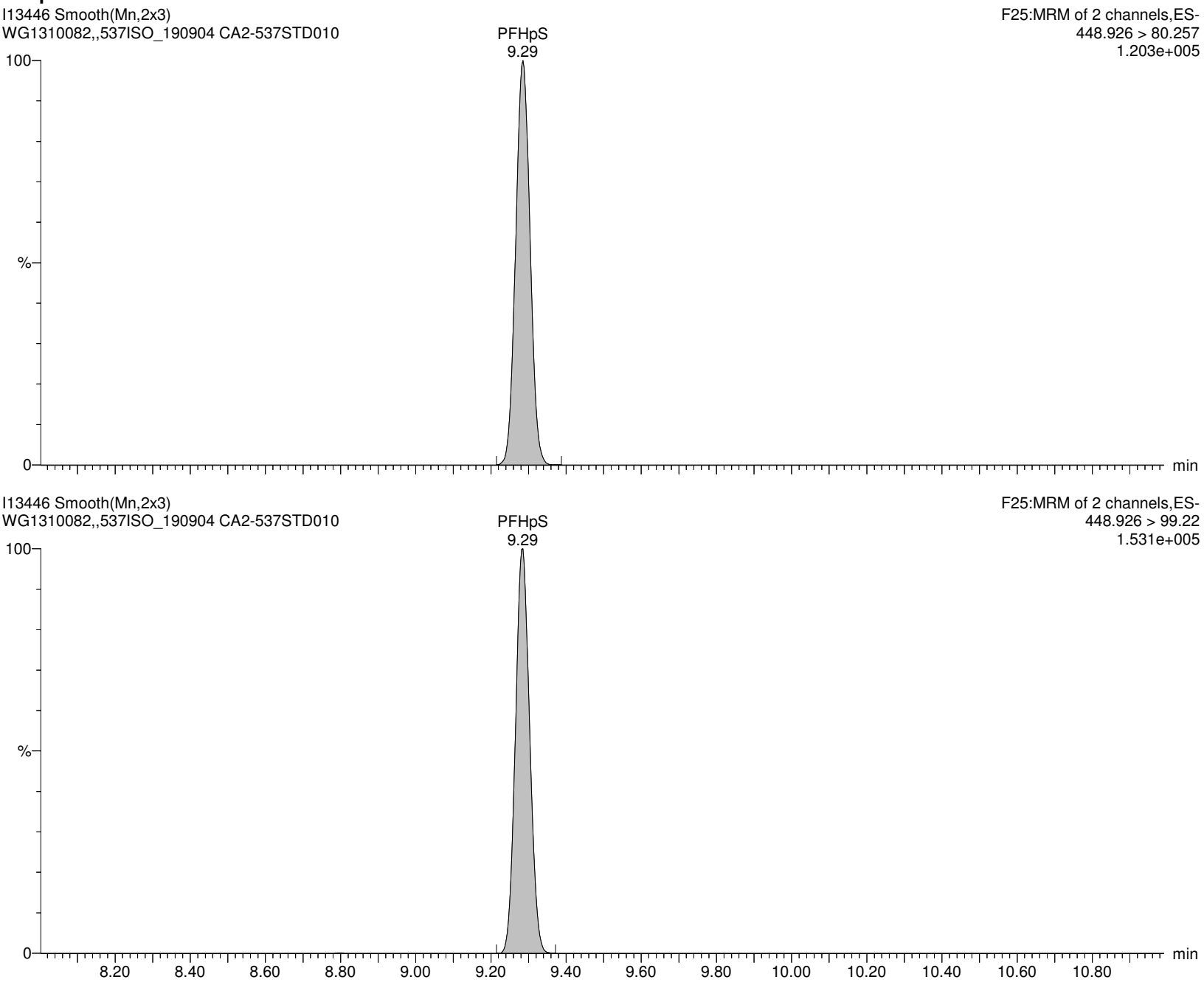
**PFHpS**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICV.qld
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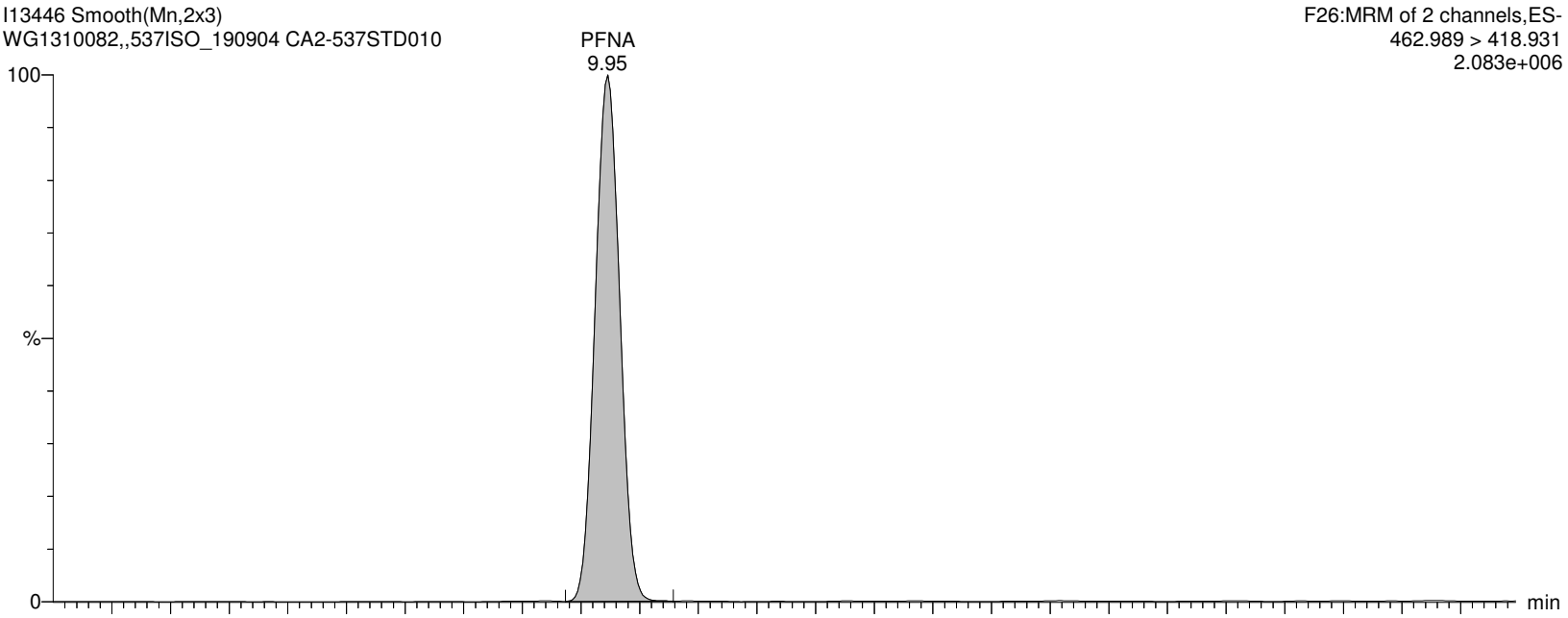
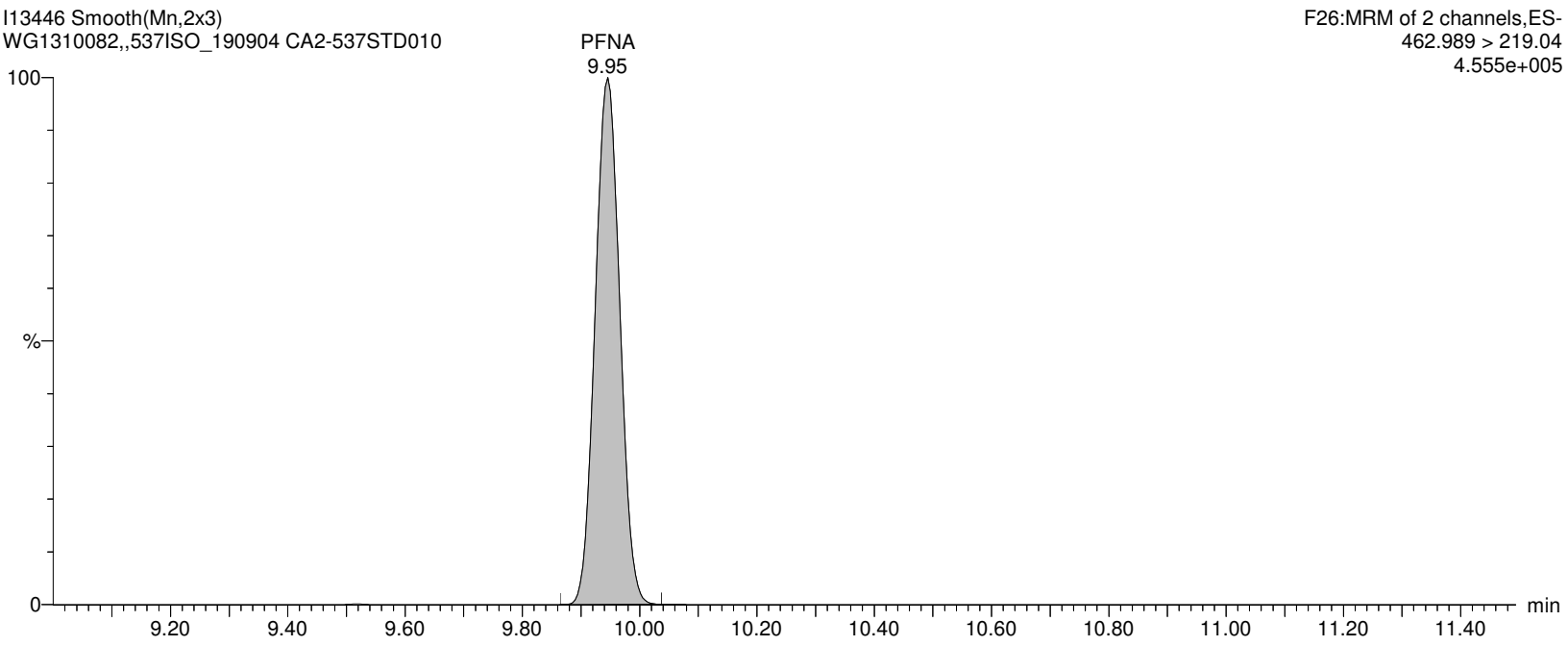
**PFNA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICV.qld
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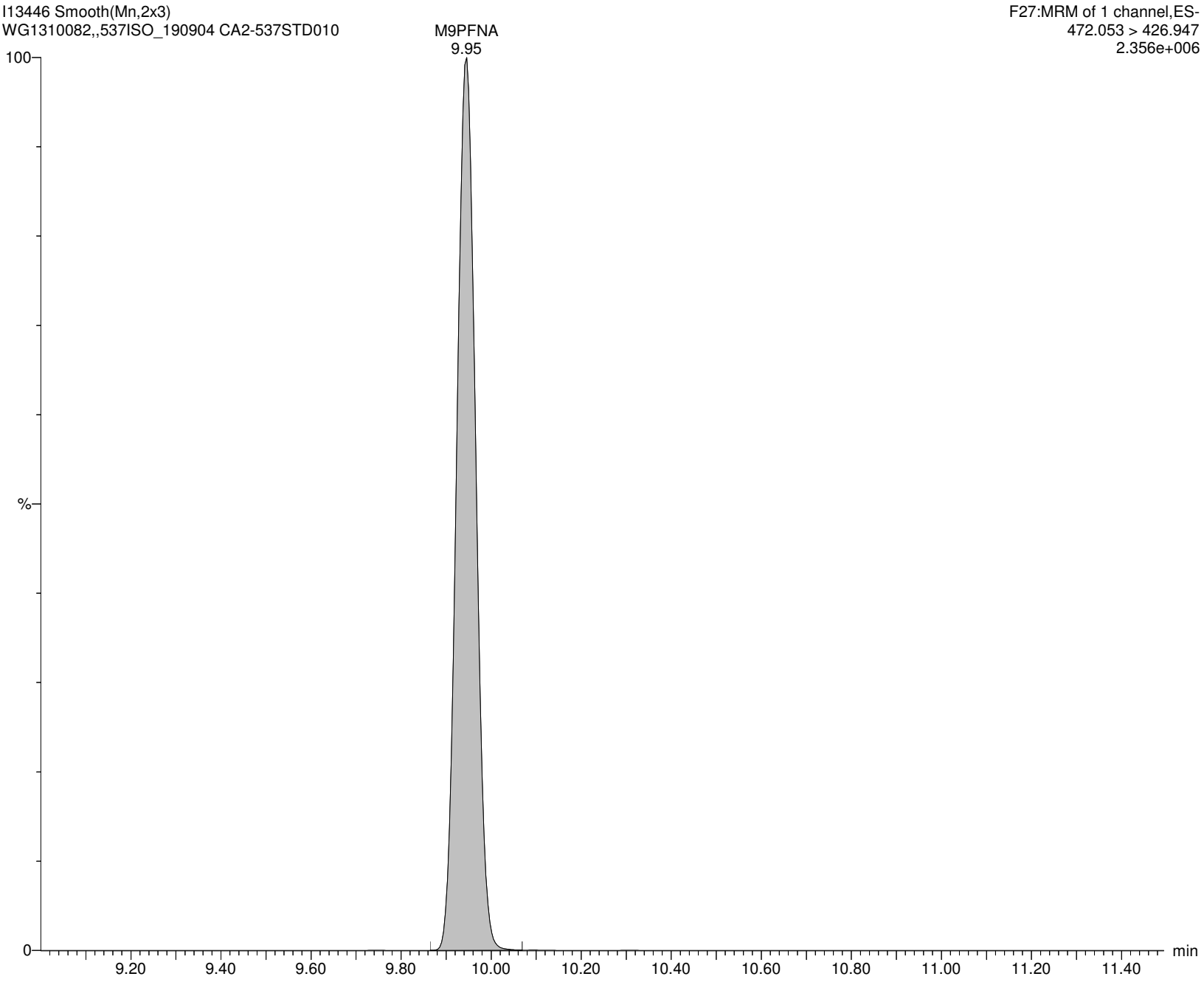
**M9PFNA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICV.qld
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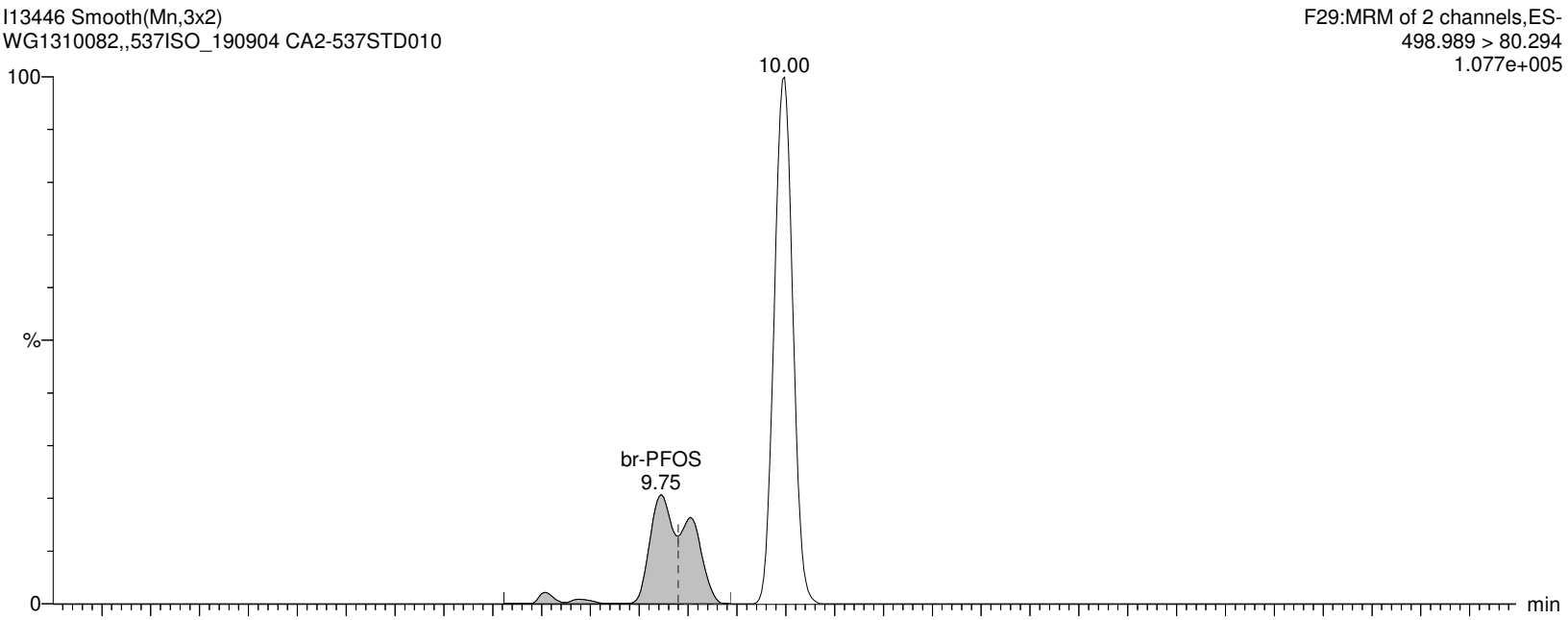
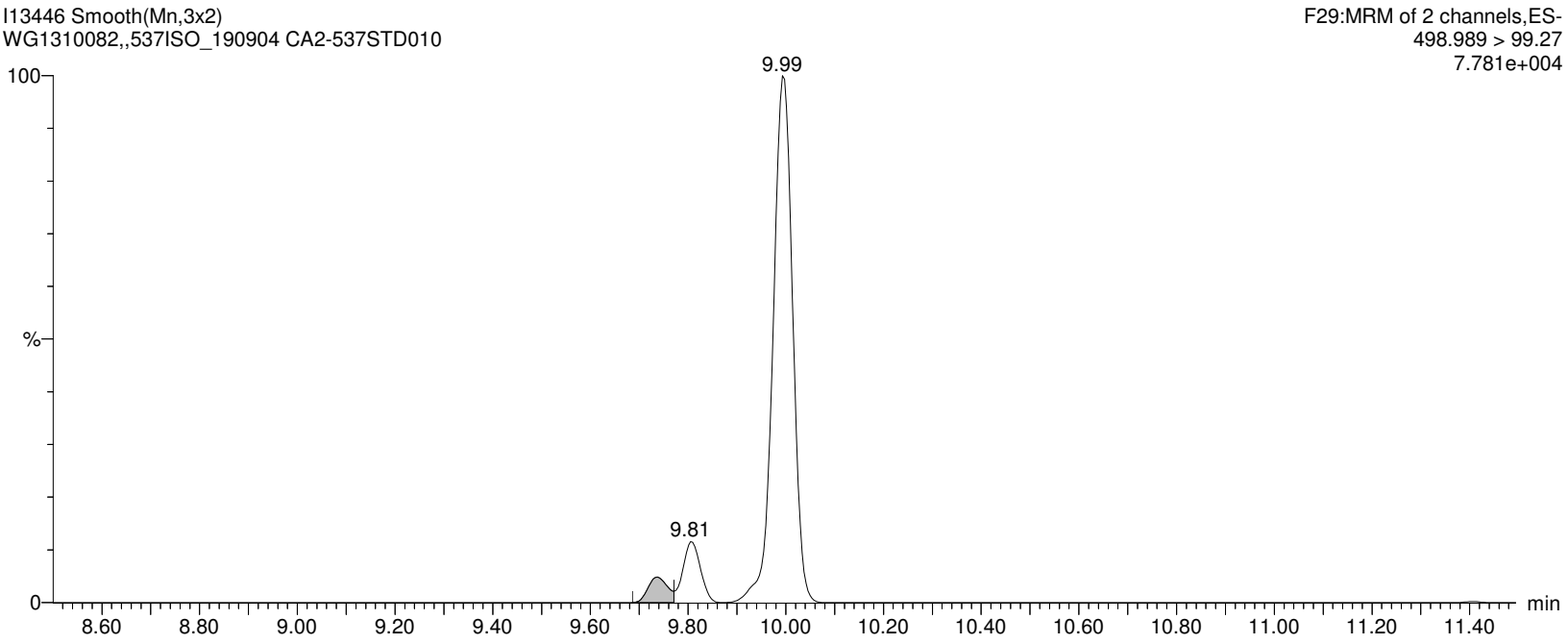
**br-PFOS**





all concentration units in (ng/mL)

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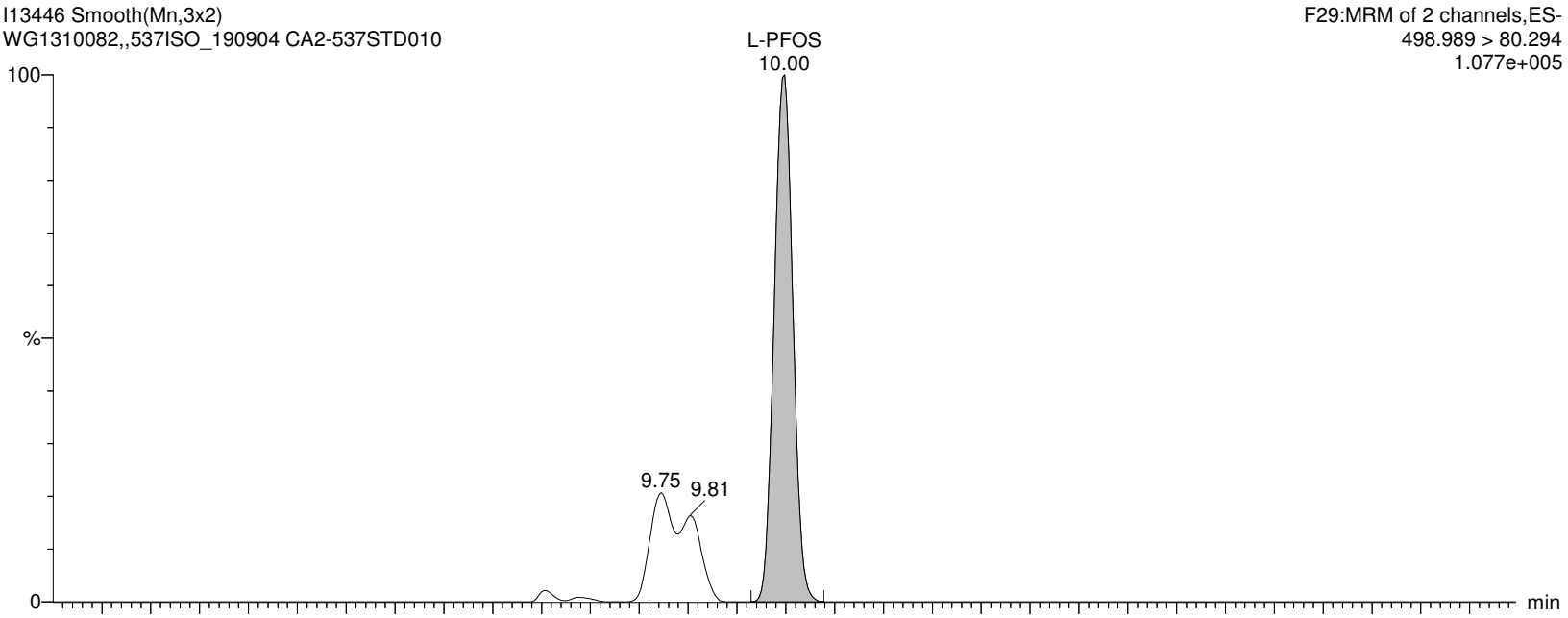
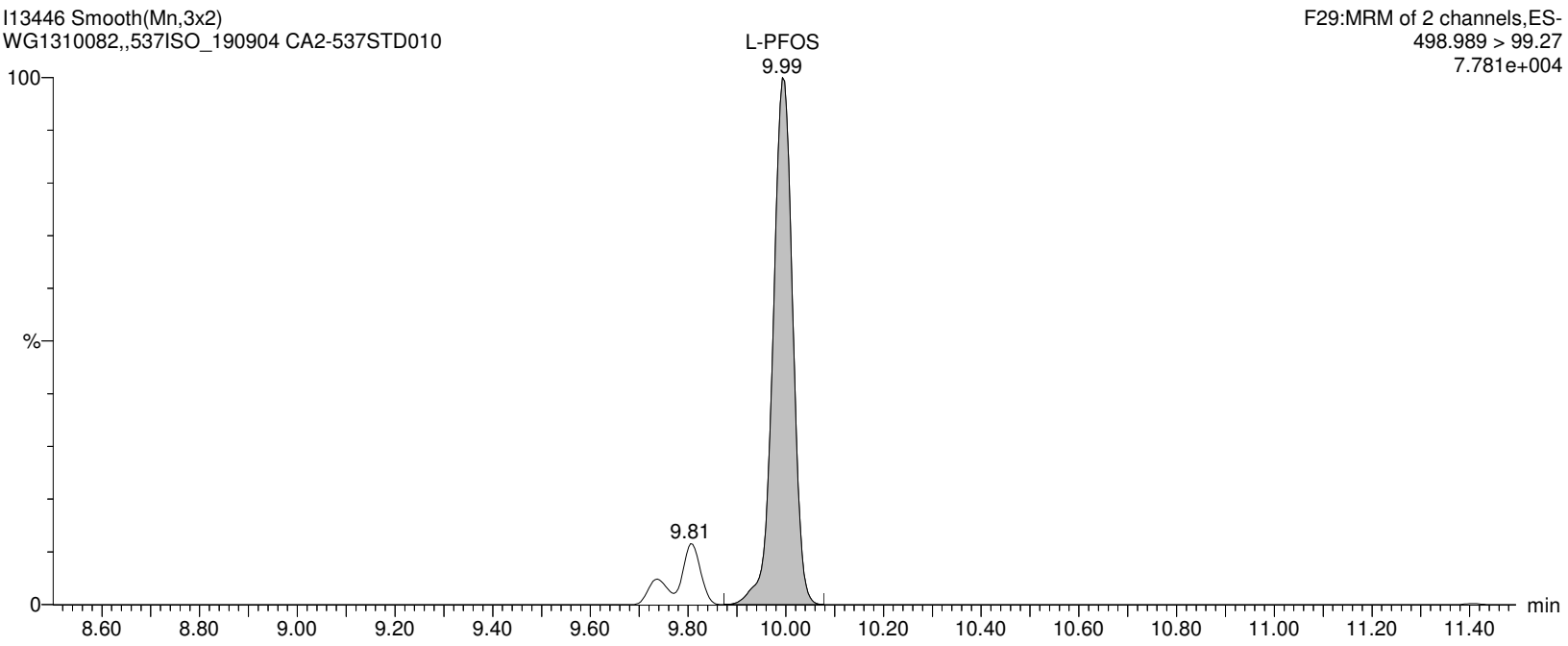
**L-PFOS**





all concentration units in (ng/mL)

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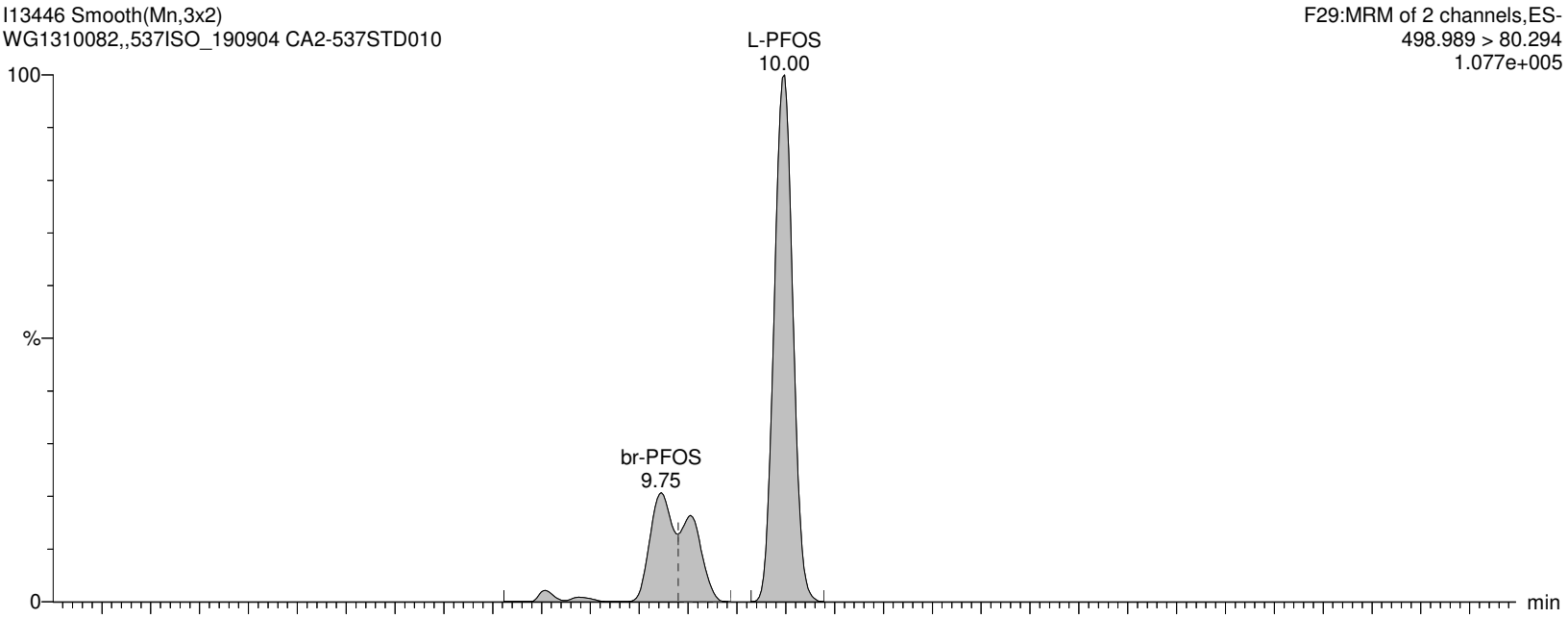
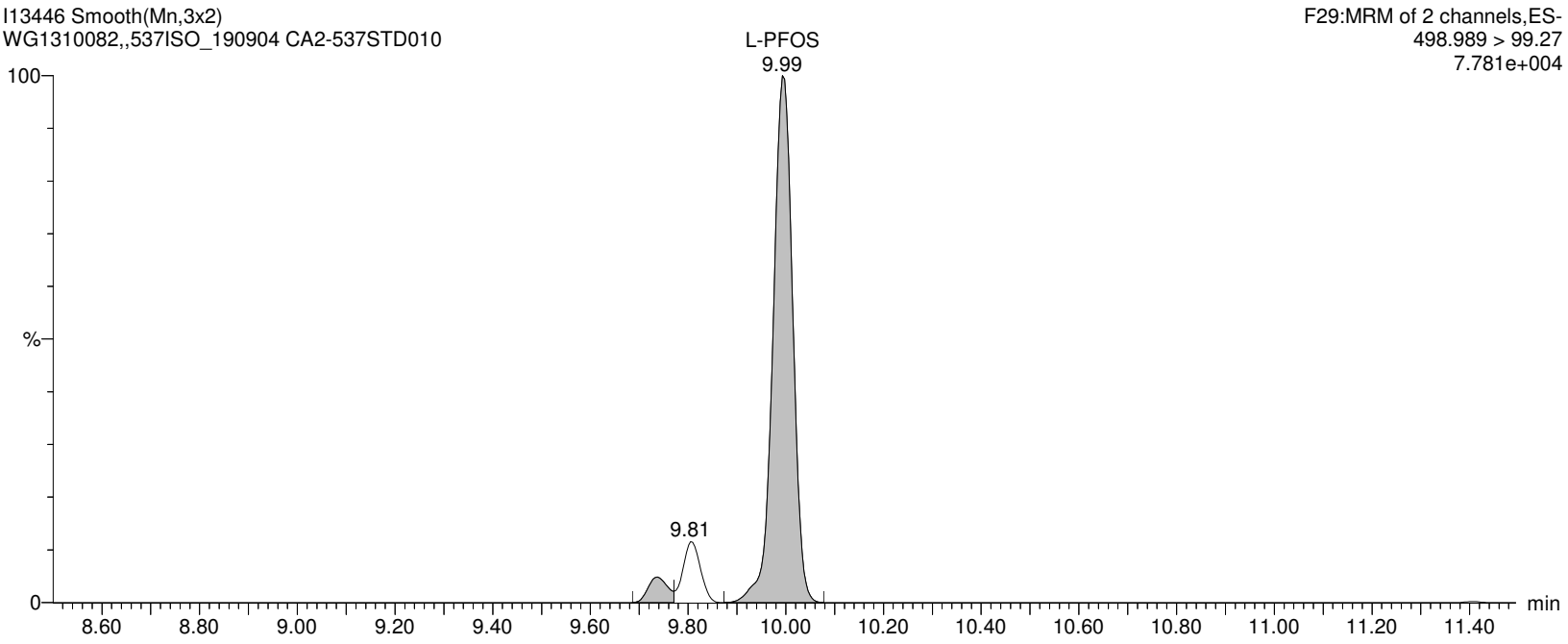
**PFOS**





all concentration units in (ng/mL)

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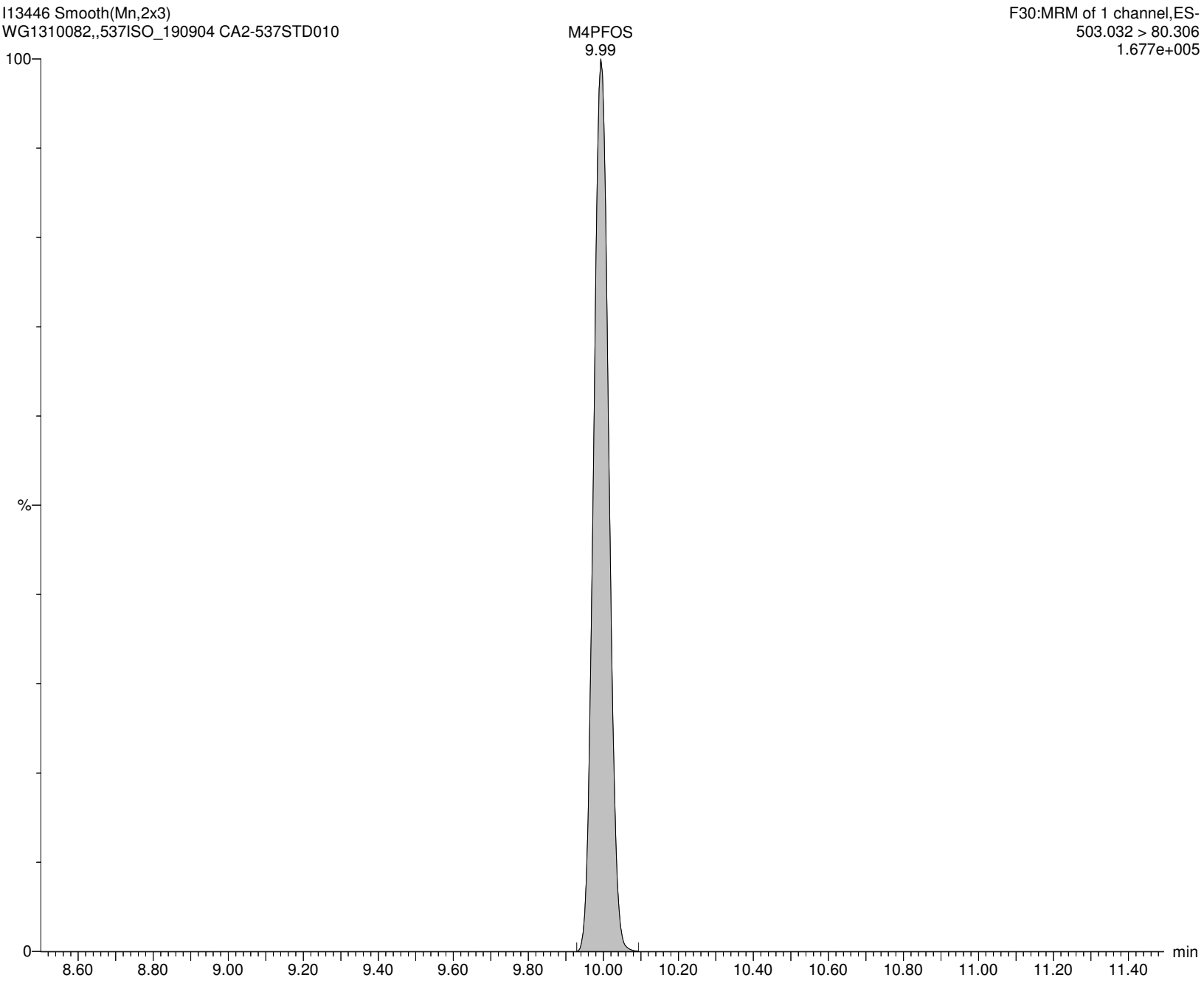
**M4PFOS**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICV.qld
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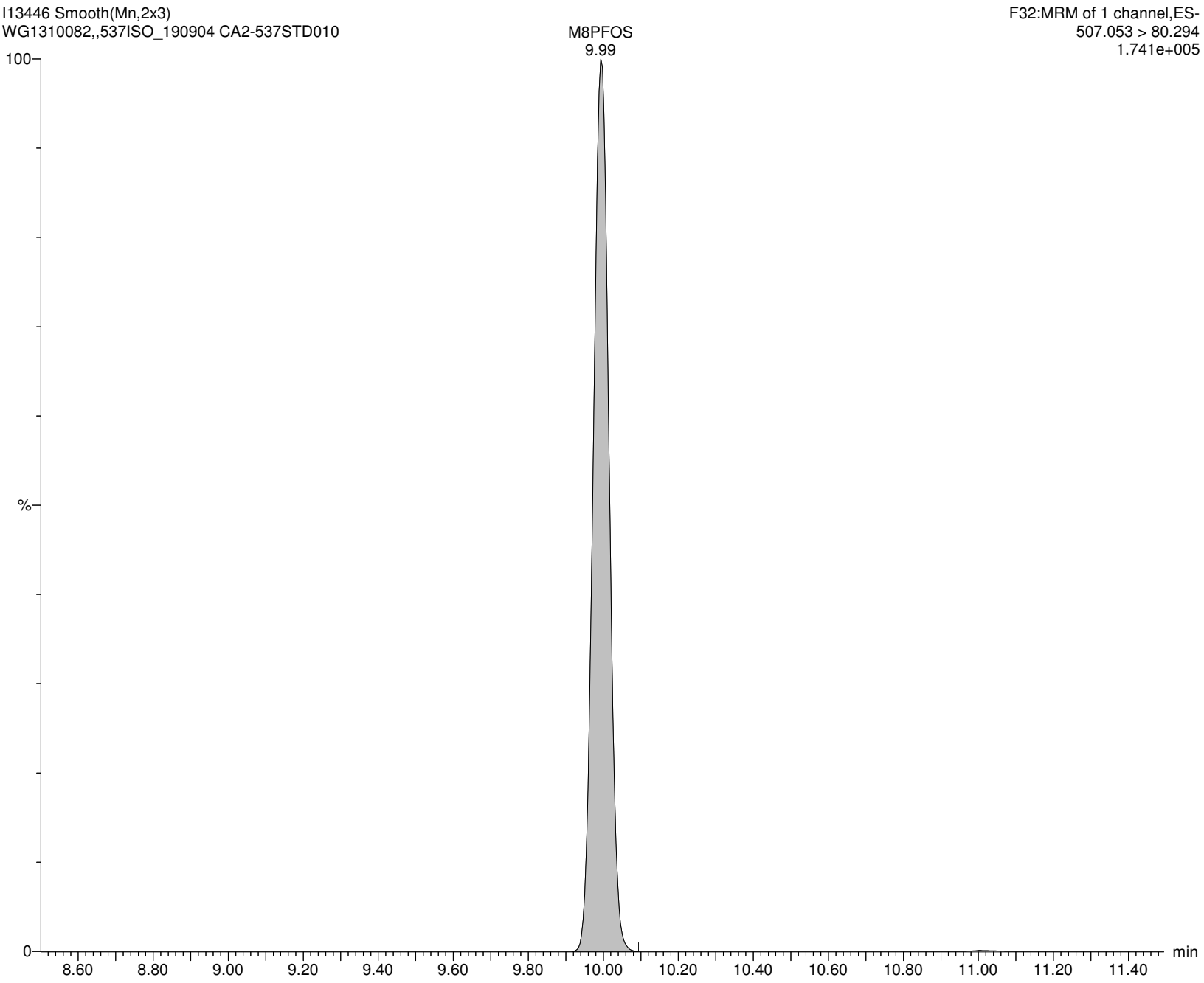
**M8PFOS**





all concentration units in (ng/mL)

Alpha Analytical Inc.
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**Date: 18-Nov-2019**
**Time: 14:05:52**
**Description: WG1310082,,537ISO_190904**
**User: LCMS02:JW**
**Vial: 1:B,3**
**Instrument: XEVO-TQSmicro#QEB0050**
**Inlet Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\LCMS_537_ISO_B**
**Tune Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\181009_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

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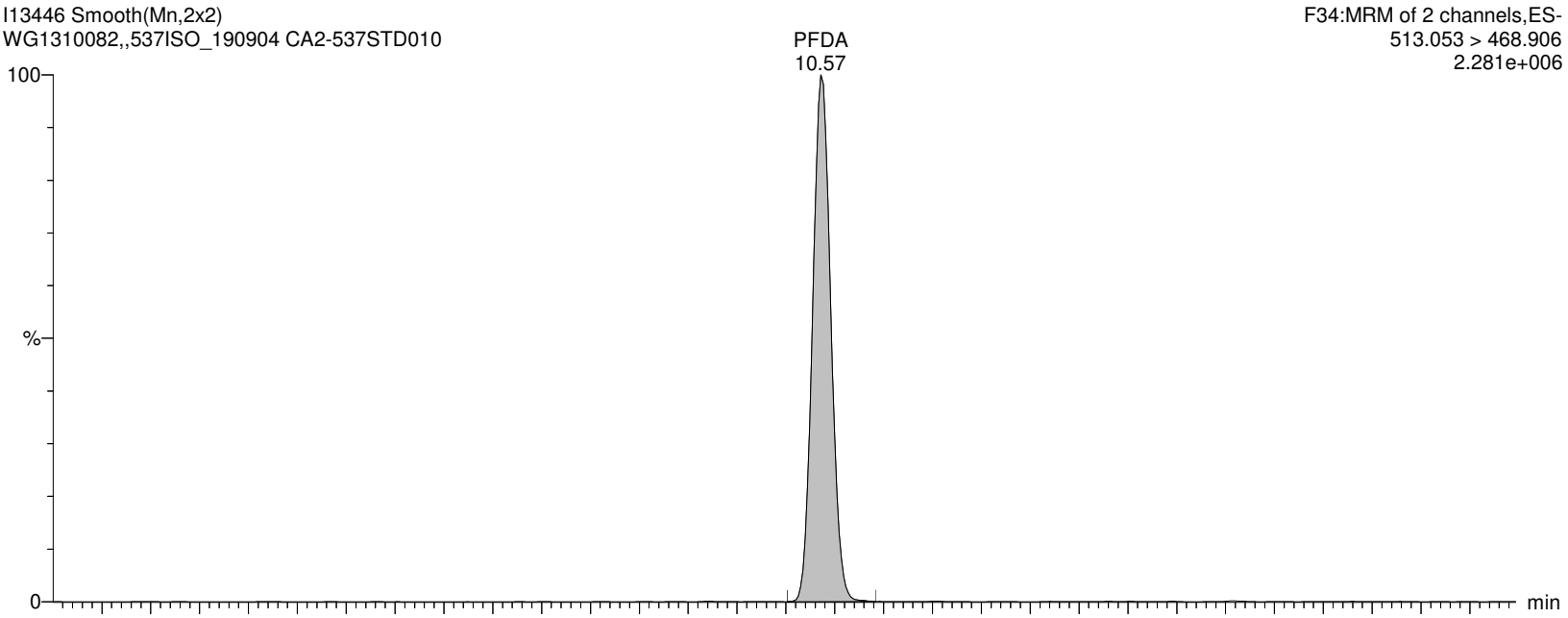


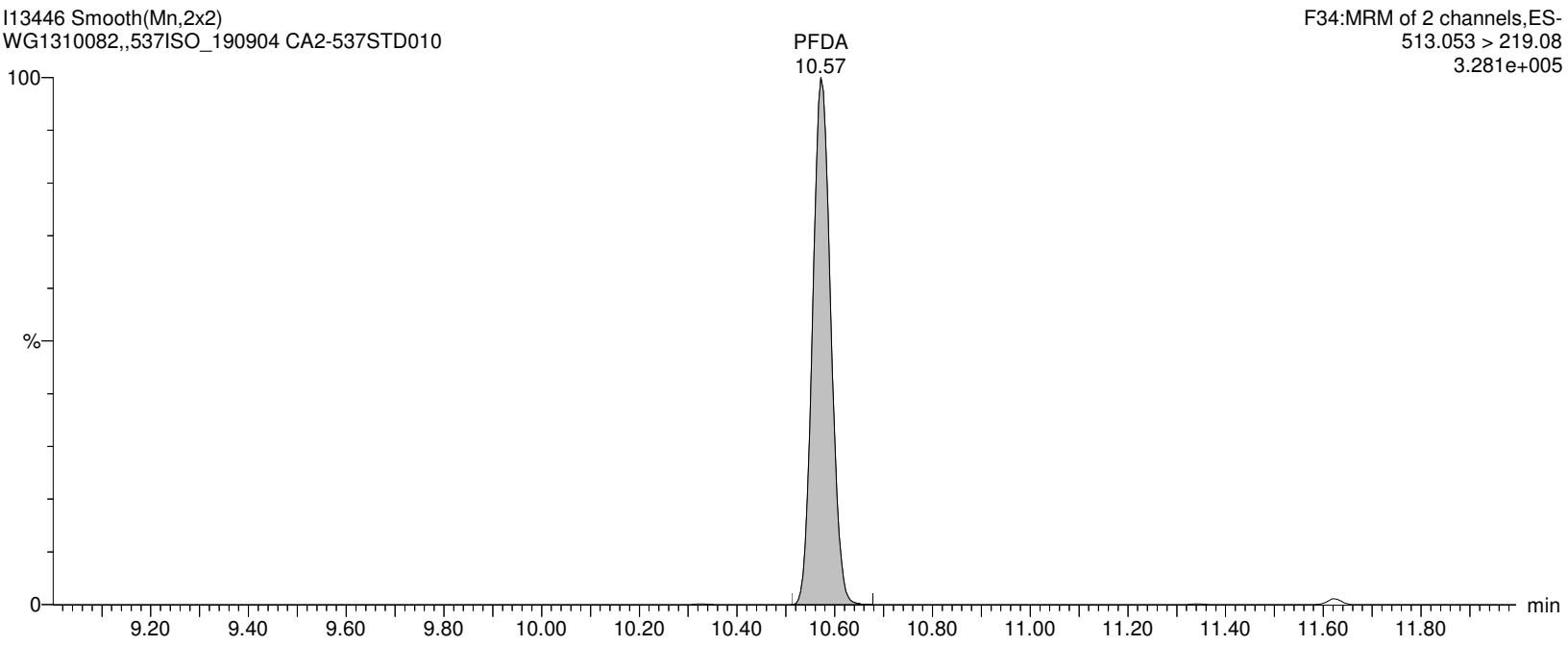



all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICV.qld
Last Altered: Monday, November 18, 2019 14:24:08 Eastern Standard Time
Printed: Monday, November 18, 2019 14:24:51 Eastern Standard Time

**Name: I13446**
**ID: CA2-537STD010**
**Date: 18-Nov-2019**
**Time: 14:05:52**
**Description: WG1310082,,537ISO_190904**
**User: LCMS02:JW**
**Vial: 1:B,3**
**Instrument: XEVO-TQSmicro#QEB0050**
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**Tune Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\181009_TUNE.IPR**
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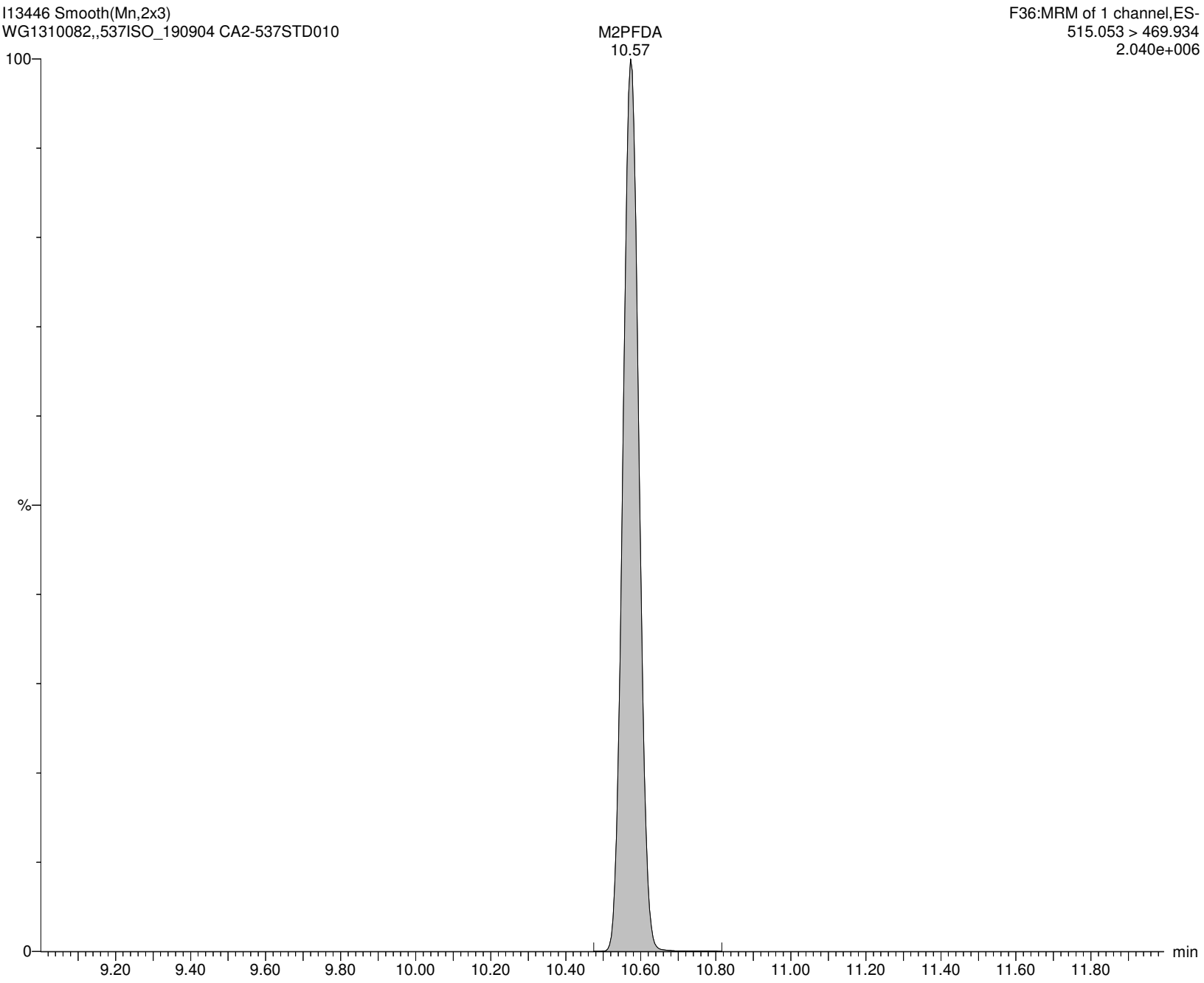



all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICV.qld
Last Altered: Monday, November 18, 2019 14:24:08 Eastern Standard Time
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**Date: 18-Nov-2019**
**Time: 14:05:52**
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**User: LCMS02:JW**
**Vial: 1:B,3**
**Instrument: XEVO-TQSmicro#QEB0050**
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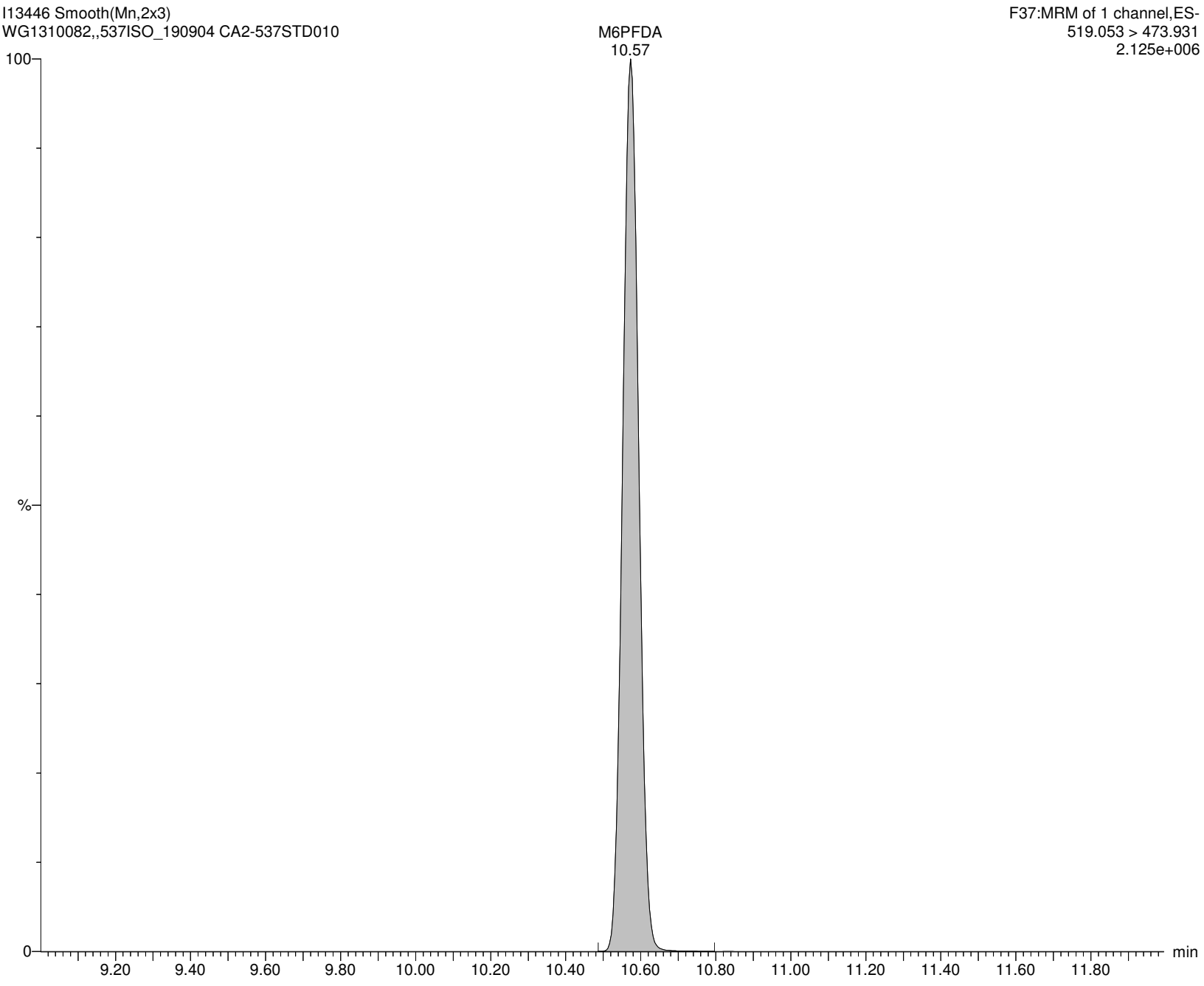



all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICV.qld
Last Altered: Monday, November 18, 2019 14:24:08 Eastern Standard Time
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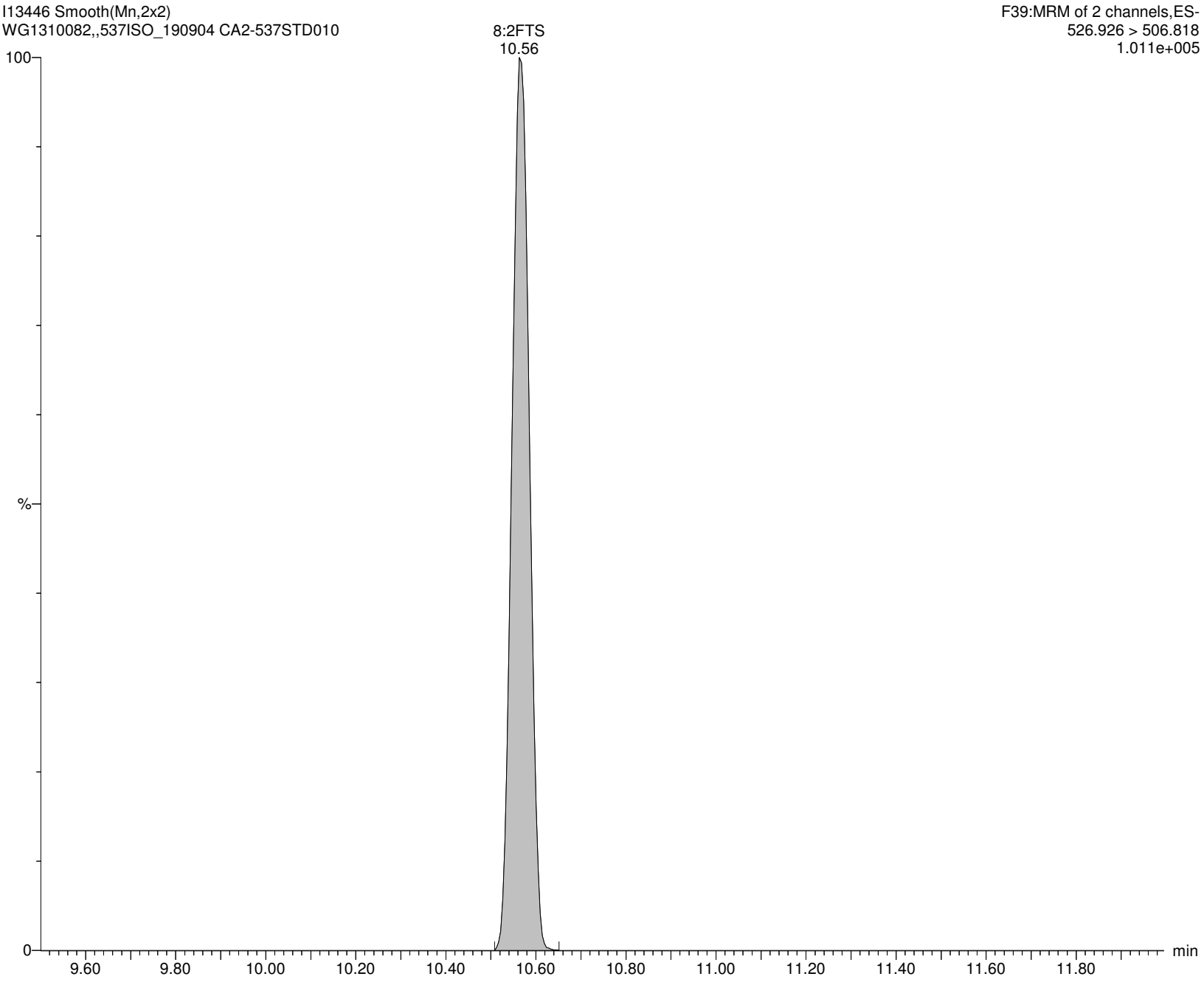
**8:2FTS**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICV.qld
Last Altered: Monday, November 18, 2019 14:24:08 Eastern Standard Time
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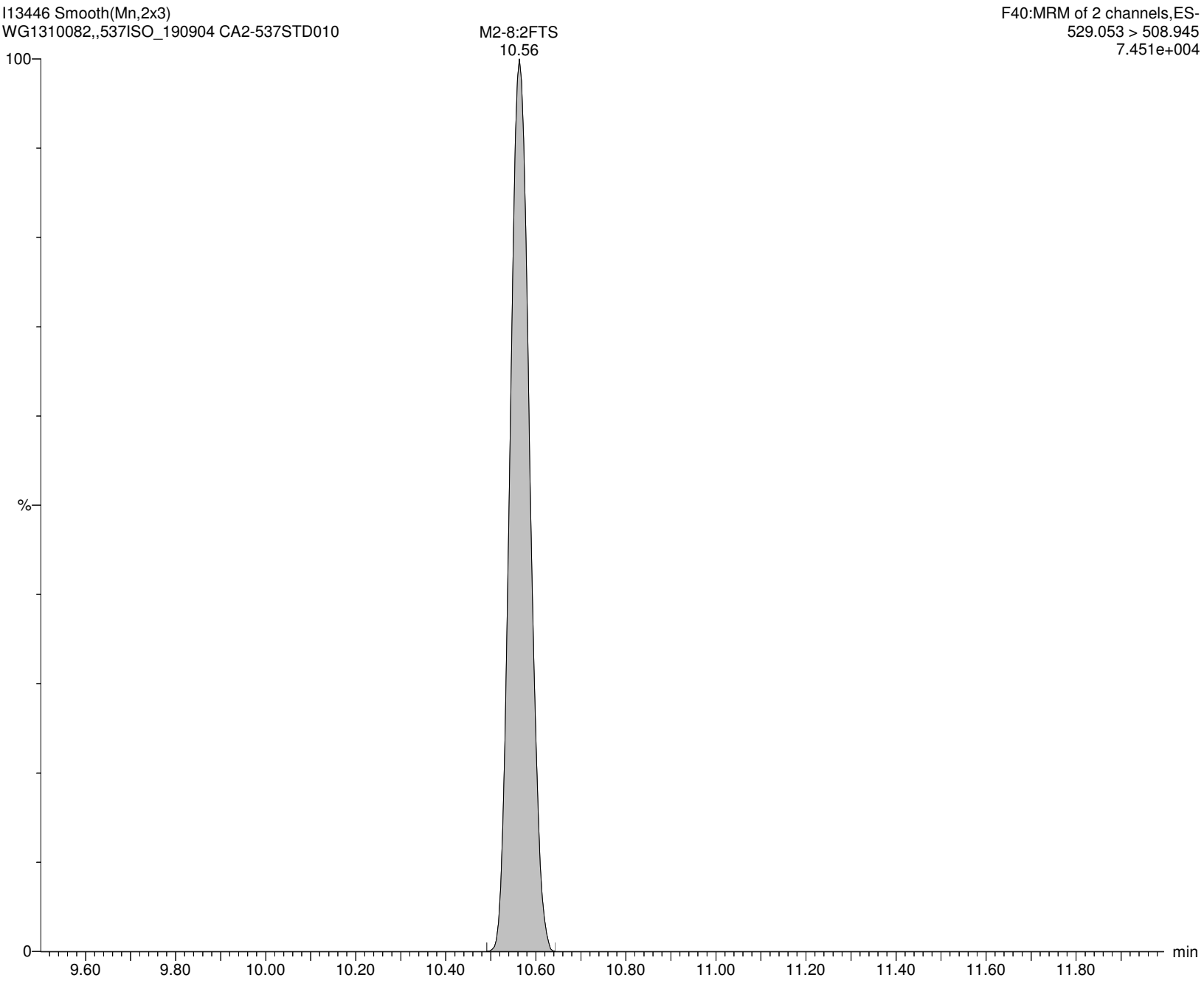
**M2-8:2FTS**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICV.qld
Last Altered: Monday, November 18, 2019 14:24:08 Eastern Standard Time
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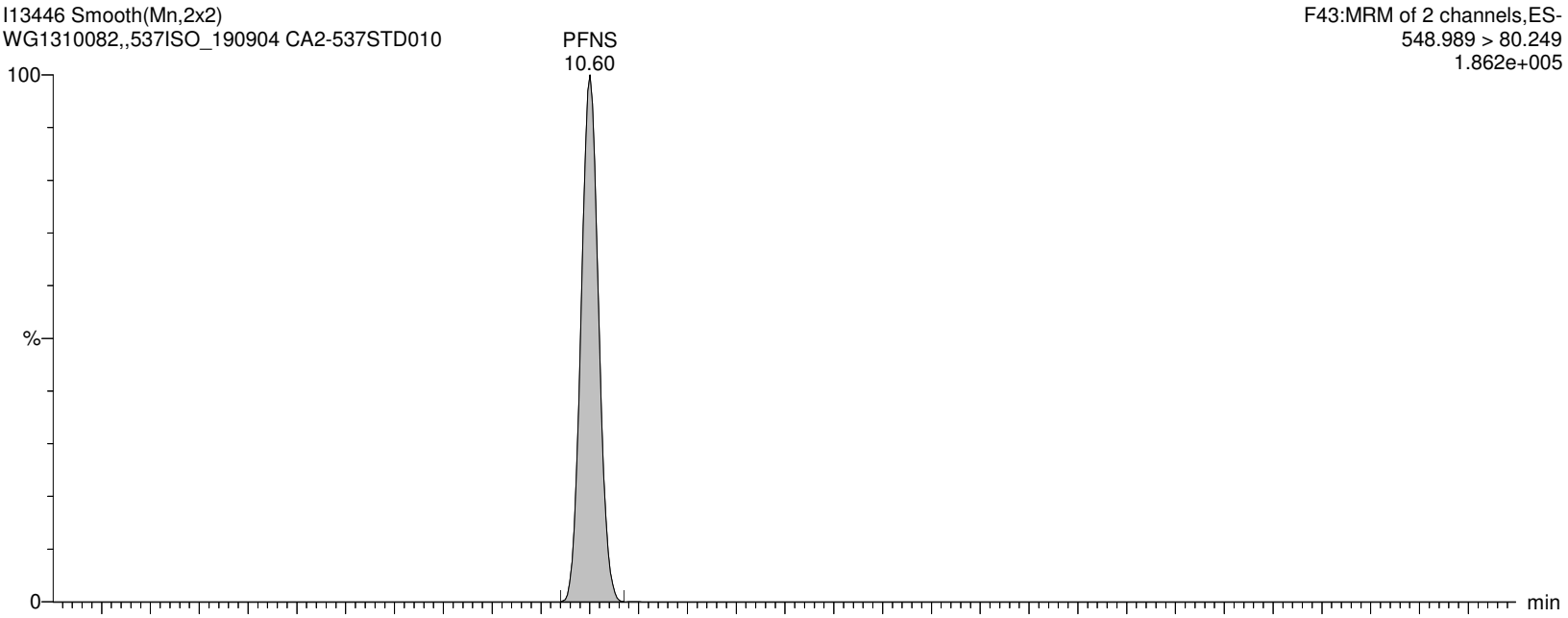


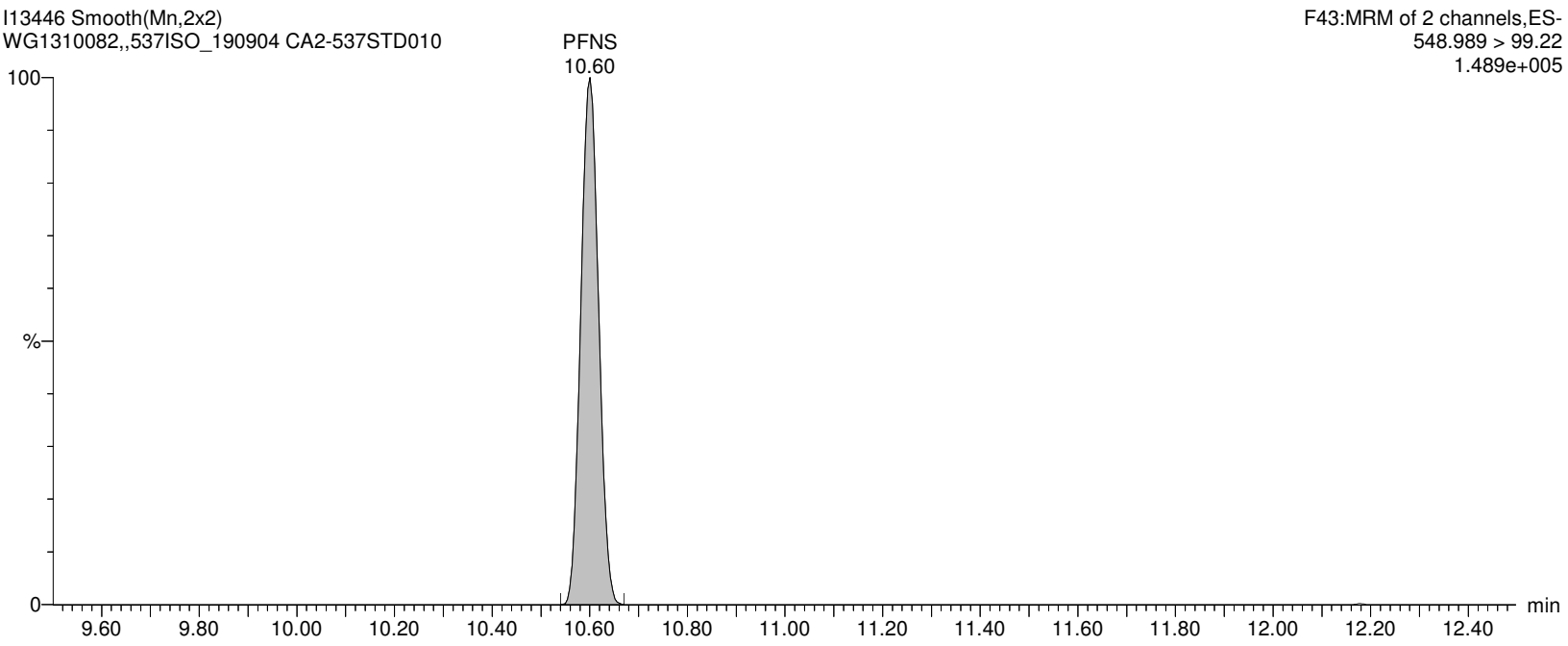



all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICV.qld
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**Vial: 1:B,3**
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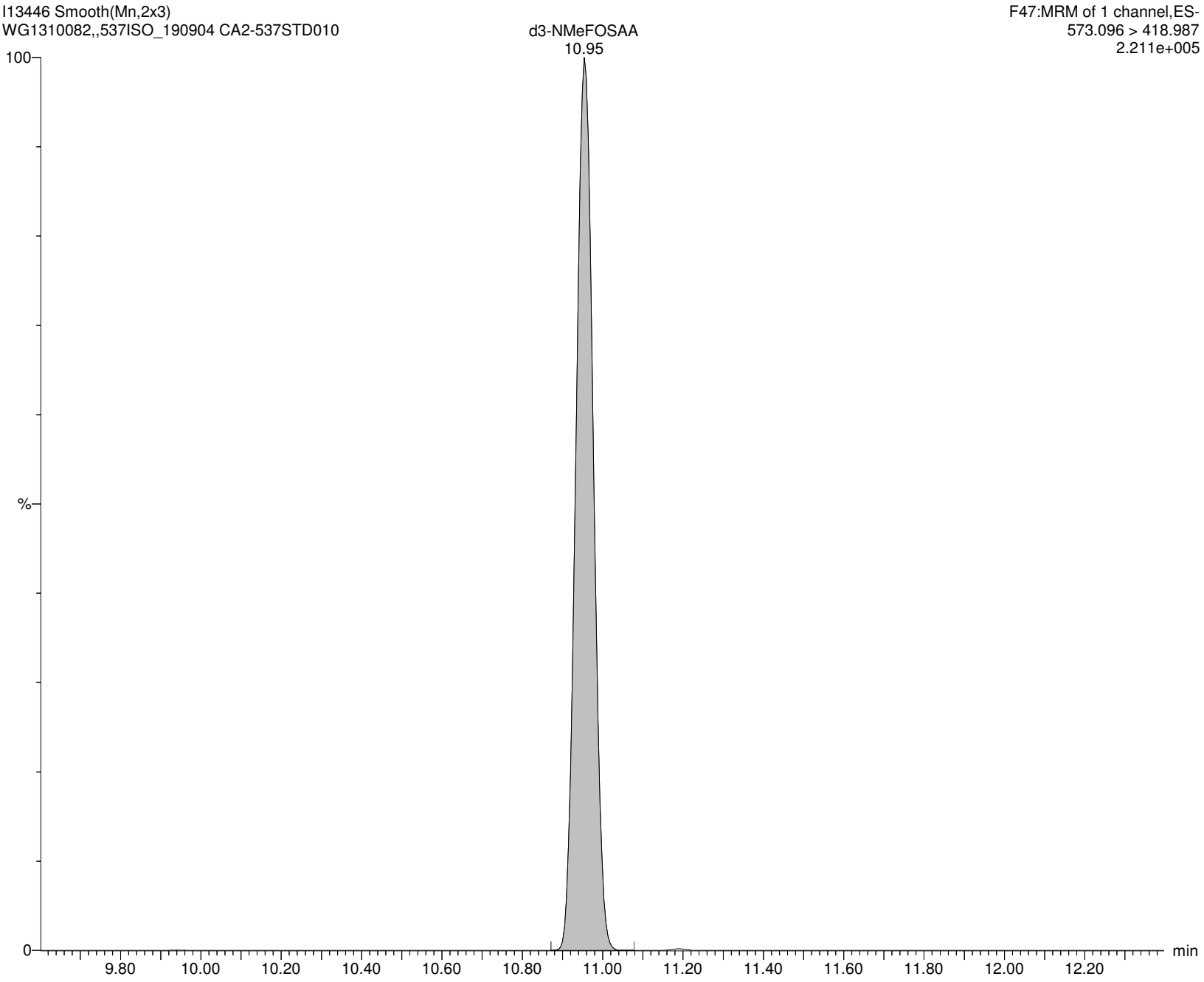
**d3-NMeFOSAA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
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Last Altered: Monday, November 18, 2019 14:24:08 Eastern Standard Time
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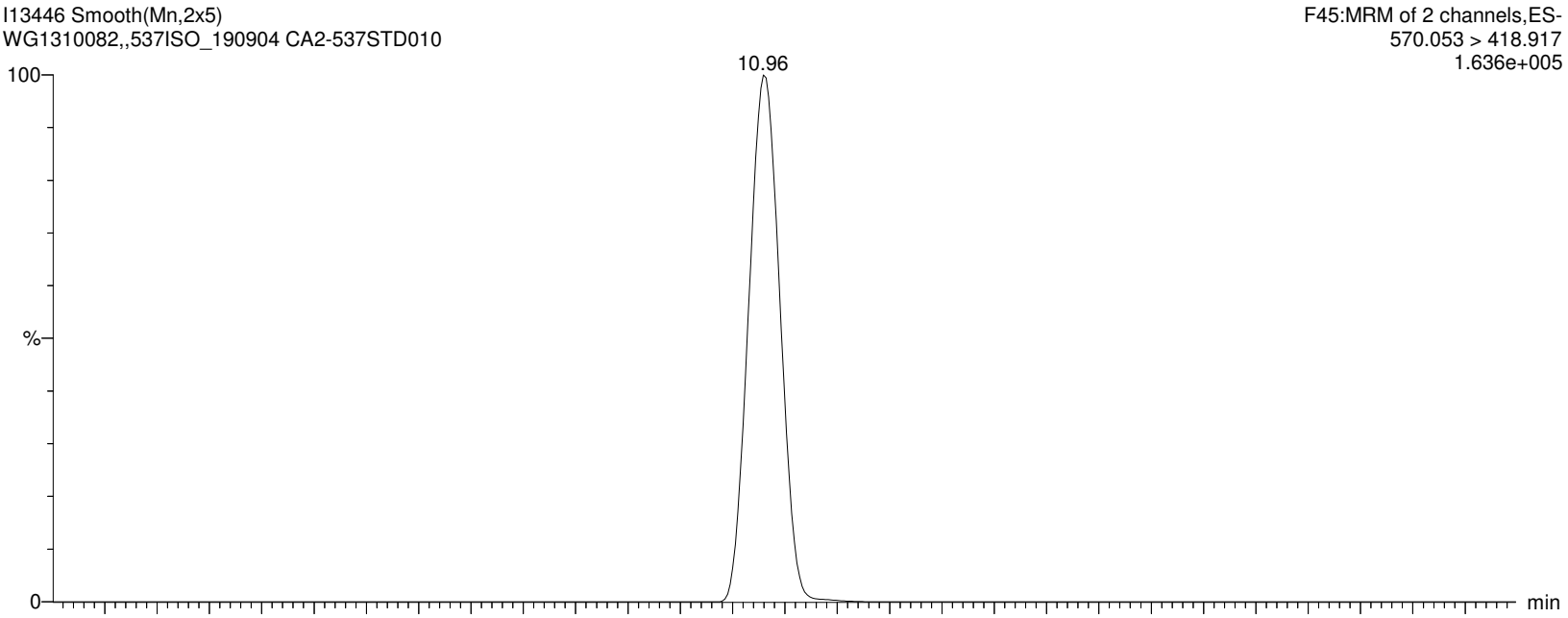
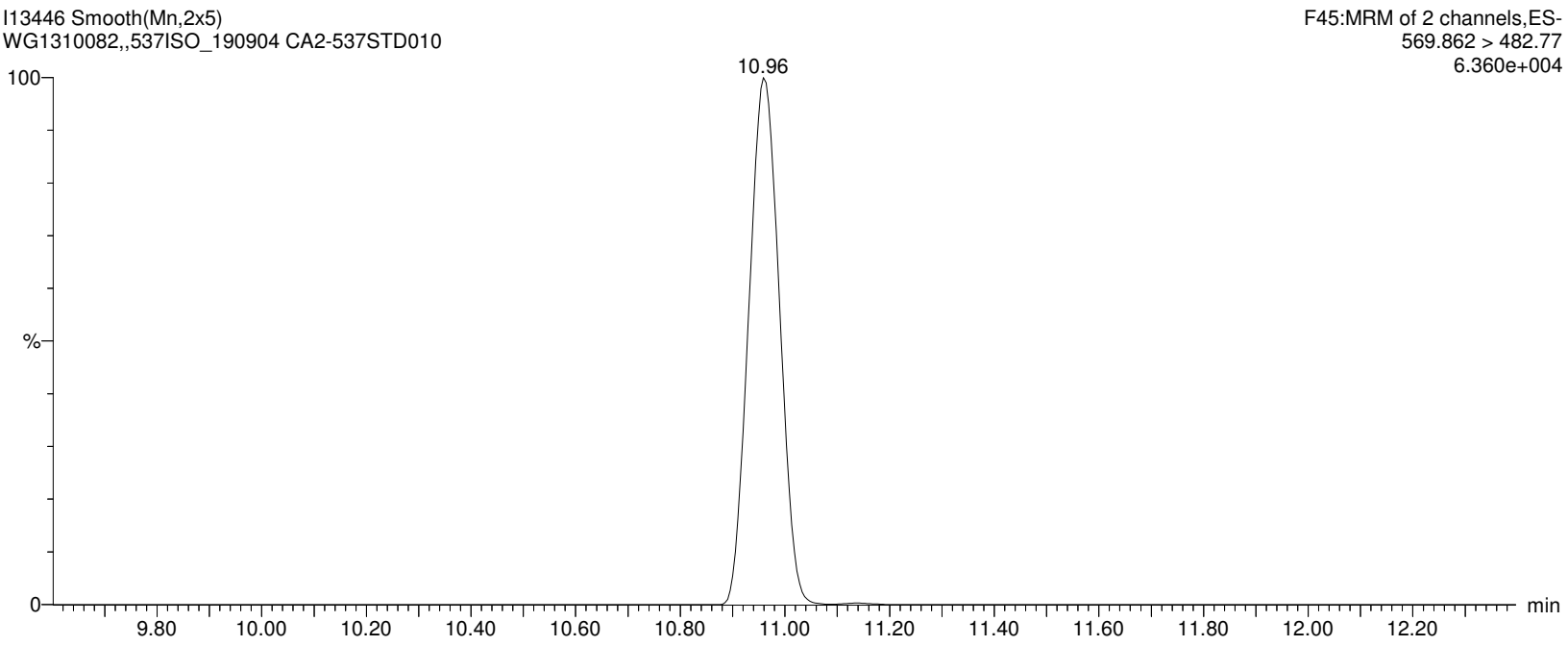
**br-NMeFOSAA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
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Last Altered: Monday, November 18, 2019 14:24:08 Eastern Standard Time
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**User: LCMS02:JW**
**Vial: 1:B,3**
**Instrument: XEVO-TQSmicro#QEB0050**
**Inlet Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\LCMS_537_ISO_B**
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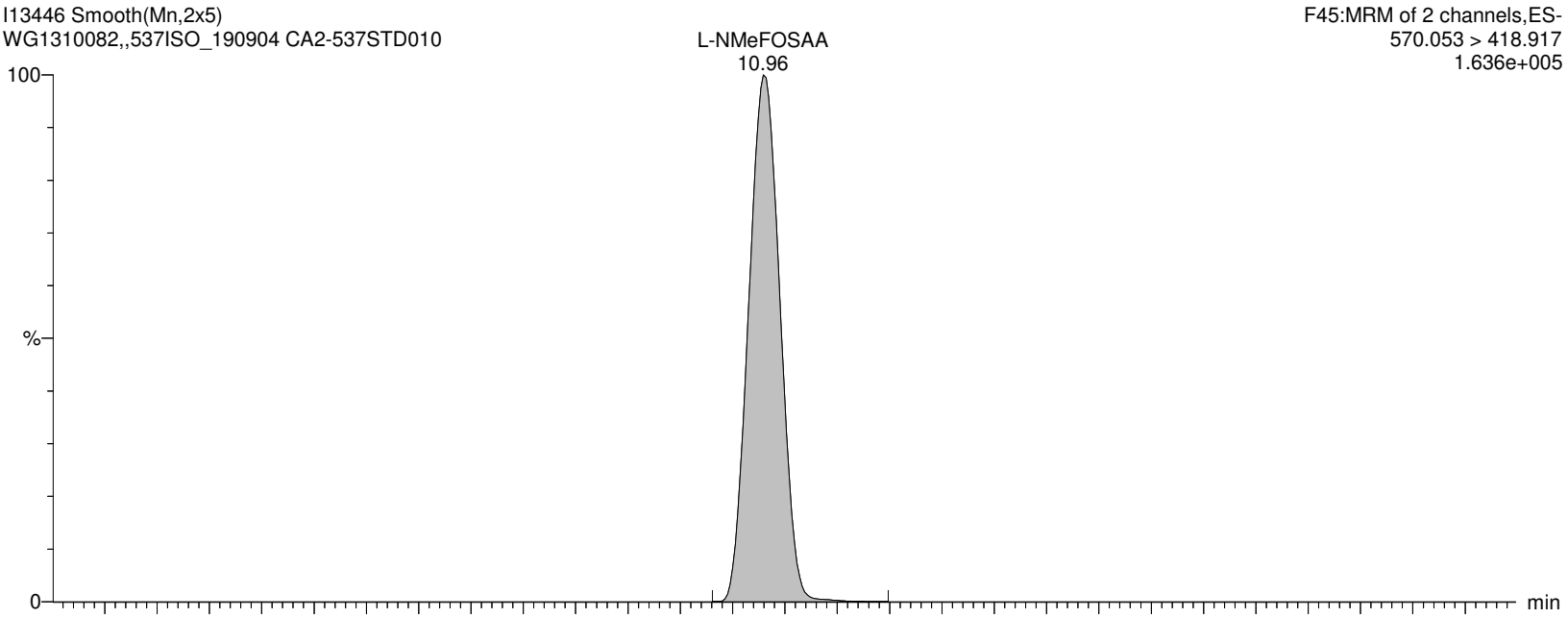
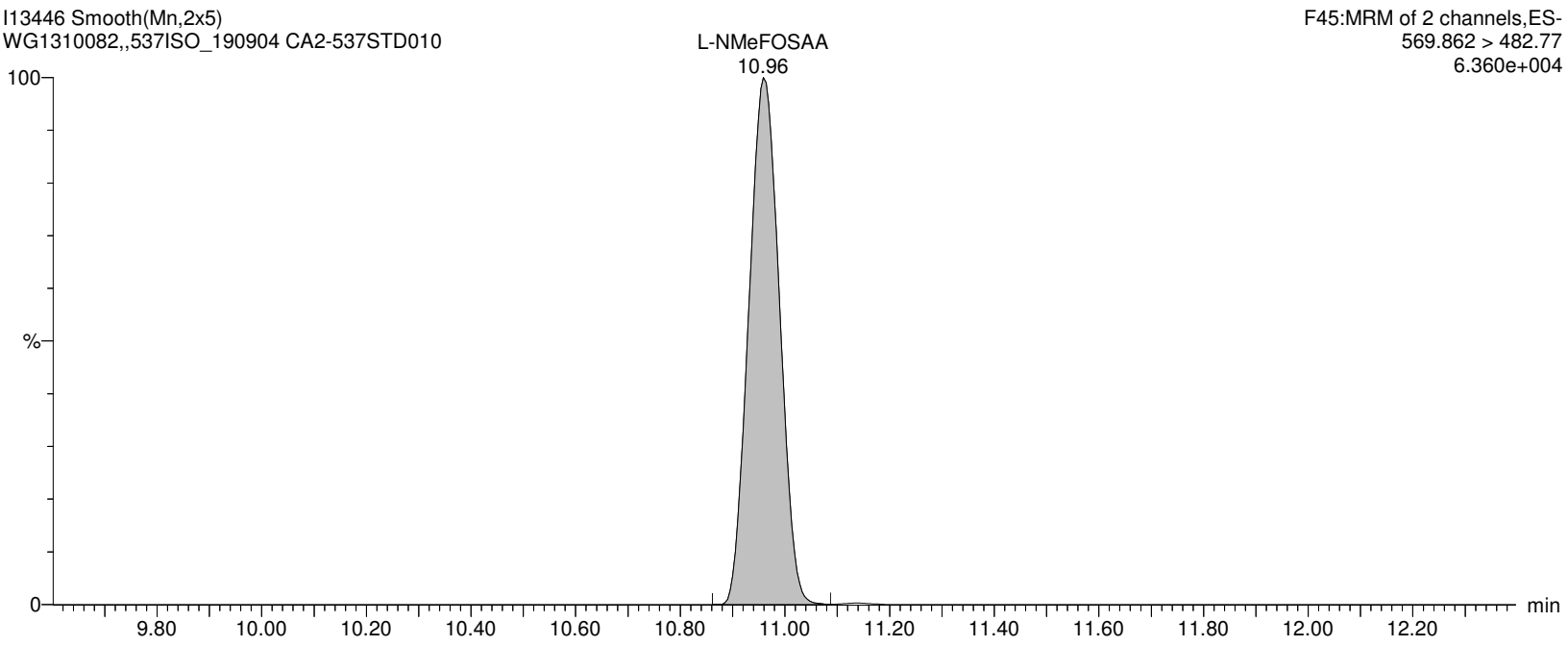
**L-NMeFOSAA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
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Last Altered: Monday, November 18, 2019 14:24:08 Eastern Standard Time
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**Name: I13446**
**ID: CA2-537STD010**
**Date: 18-Nov-2019**
**Time: 14:05:52**
**Description: WG1310082,,537ISO_190904**
**User: LCMS02:JW**
**Vial: 1:B,3**
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**Tune Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\181009_TUNE.IPR**
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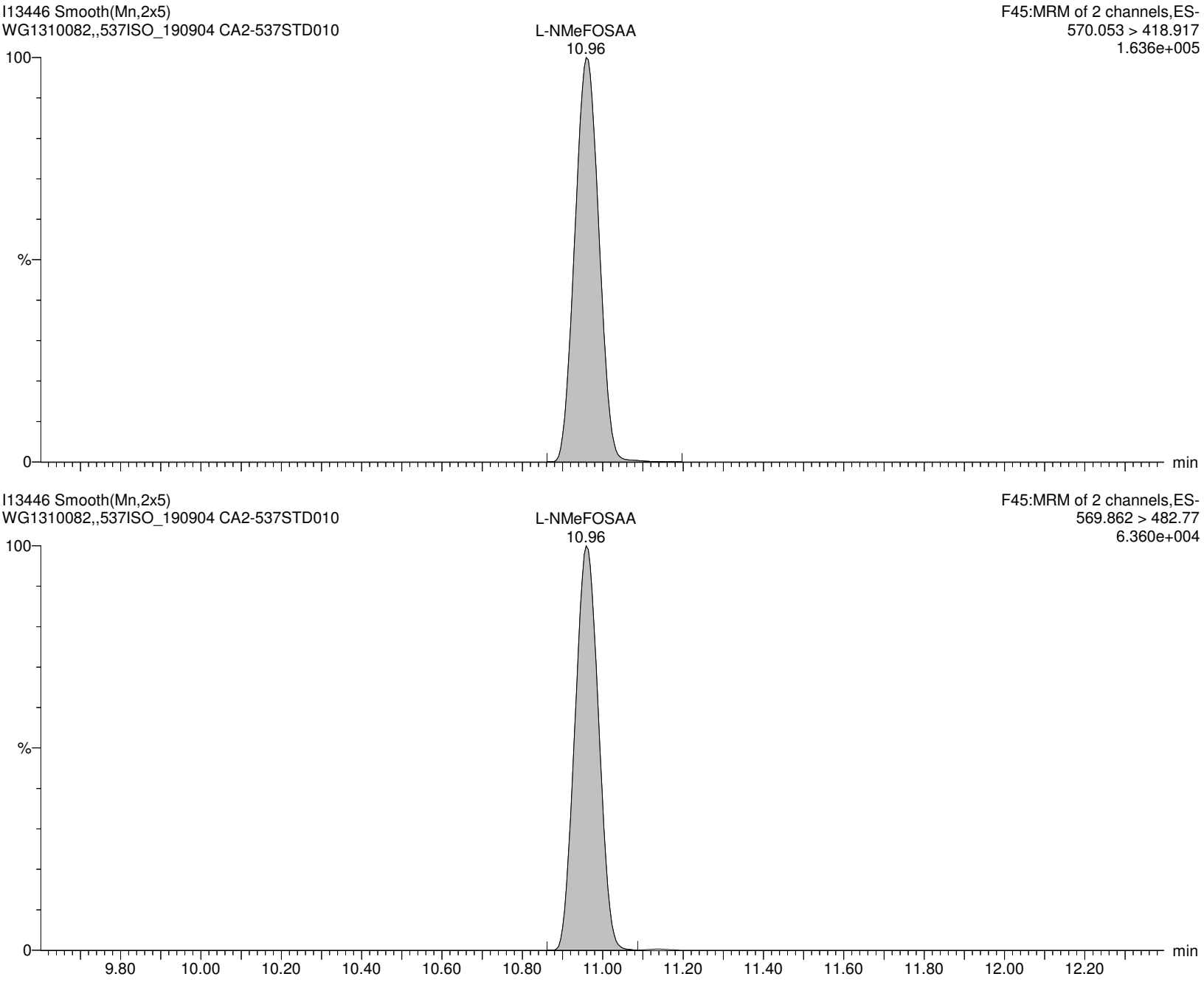
**NMeFOSAA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
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Last Altered: Monday, November 18, 2019 14:24:08 Eastern Standard Time
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**Date: 18-Nov-2019**
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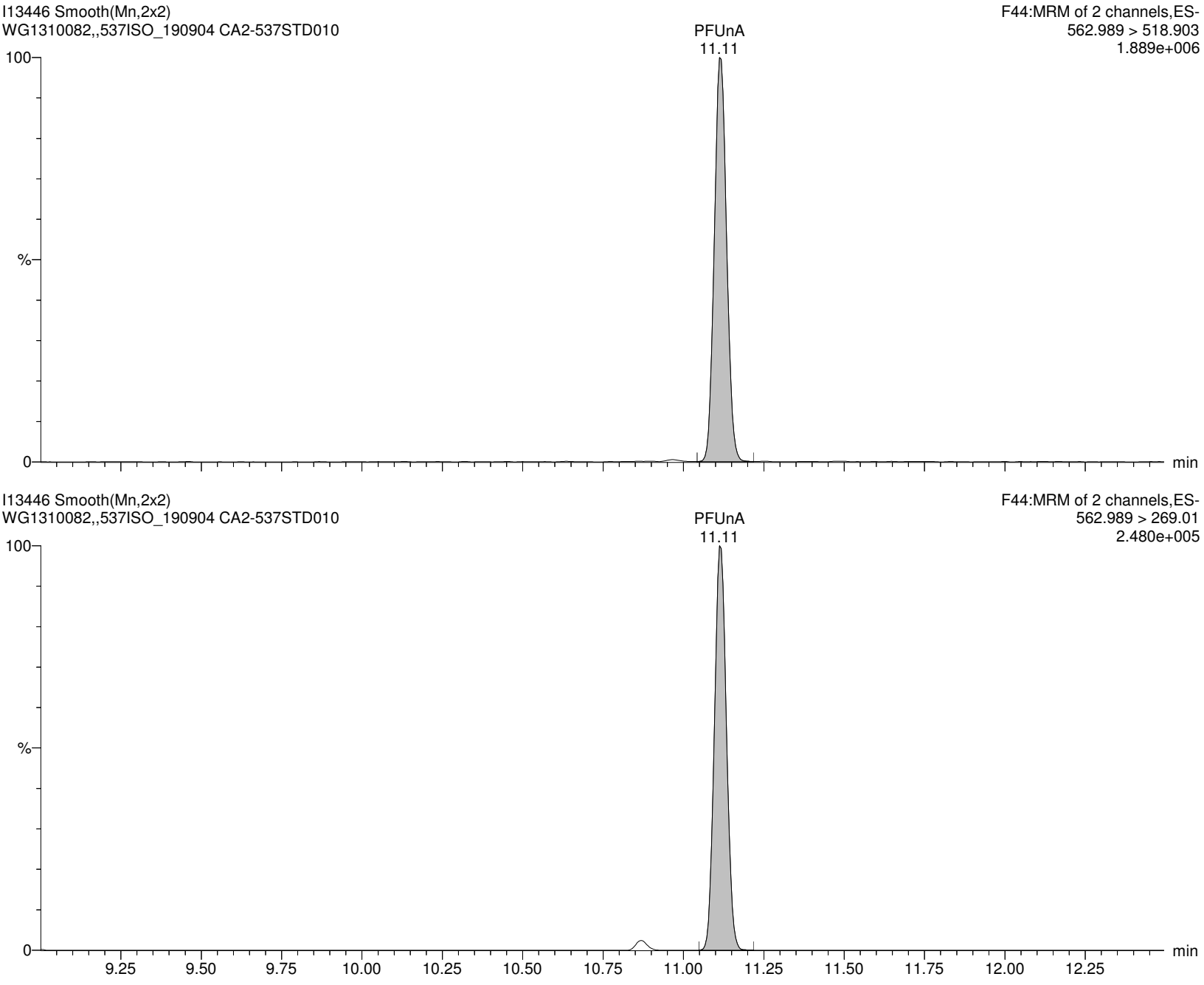



all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICV.qld
Last Altered: Monday, November 18, 2019 14:24:08 Eastern Standard Time
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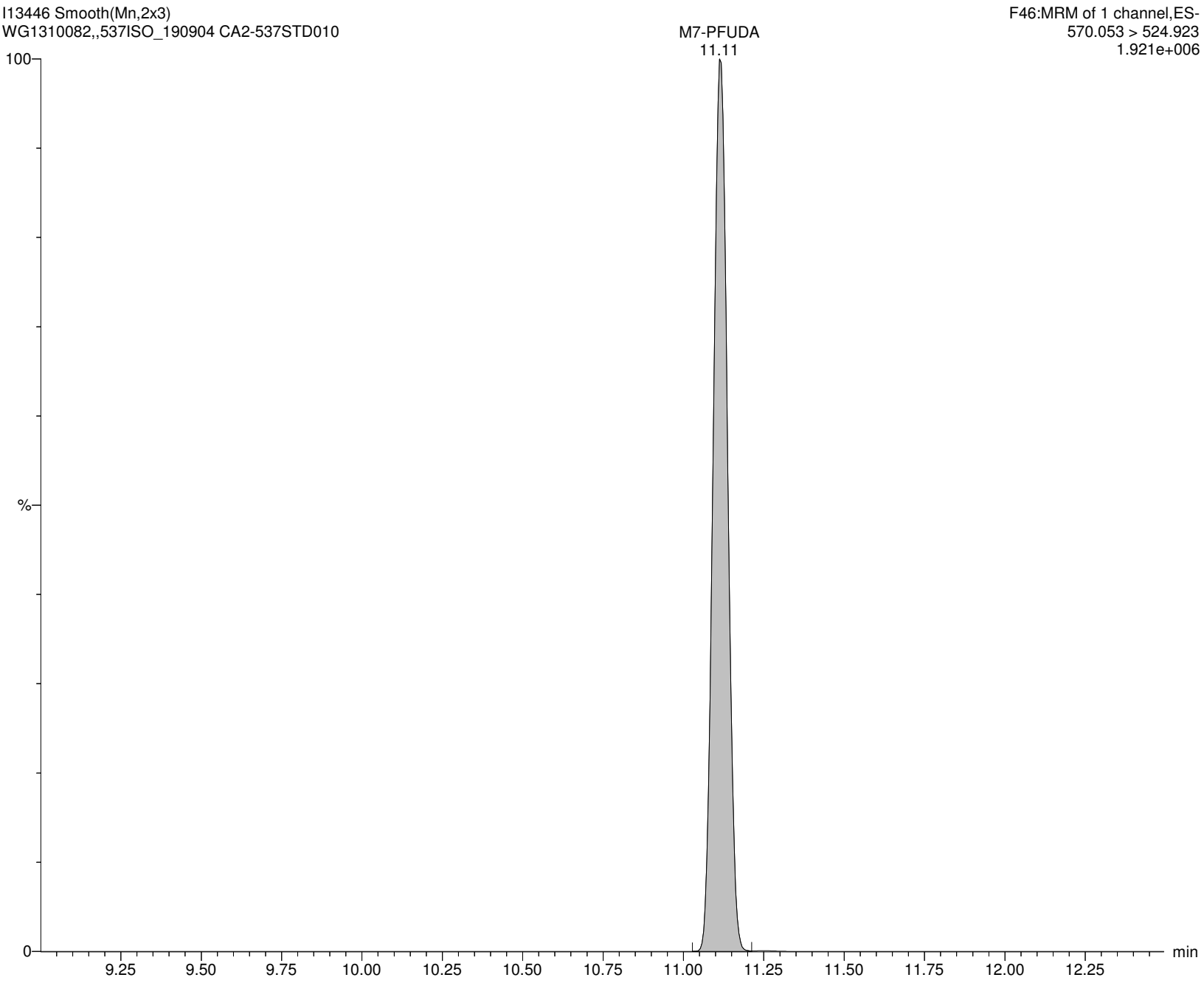
**M7-PFUDA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
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Last Altered: Monday, November 18, 2019 14:24:08 Eastern Standard Time
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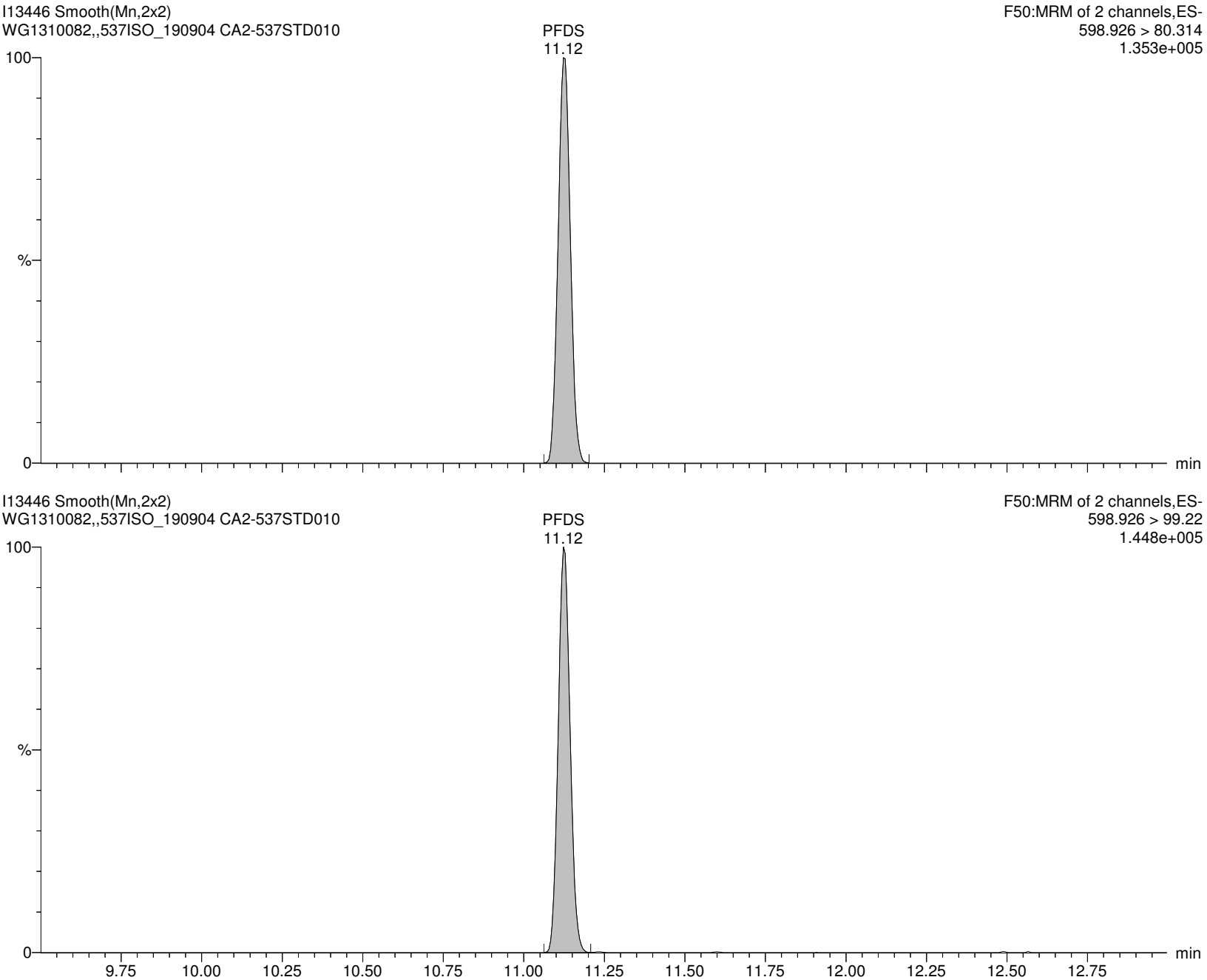



all concentration units in (ng/mL)

Alpha Analytical Inc.
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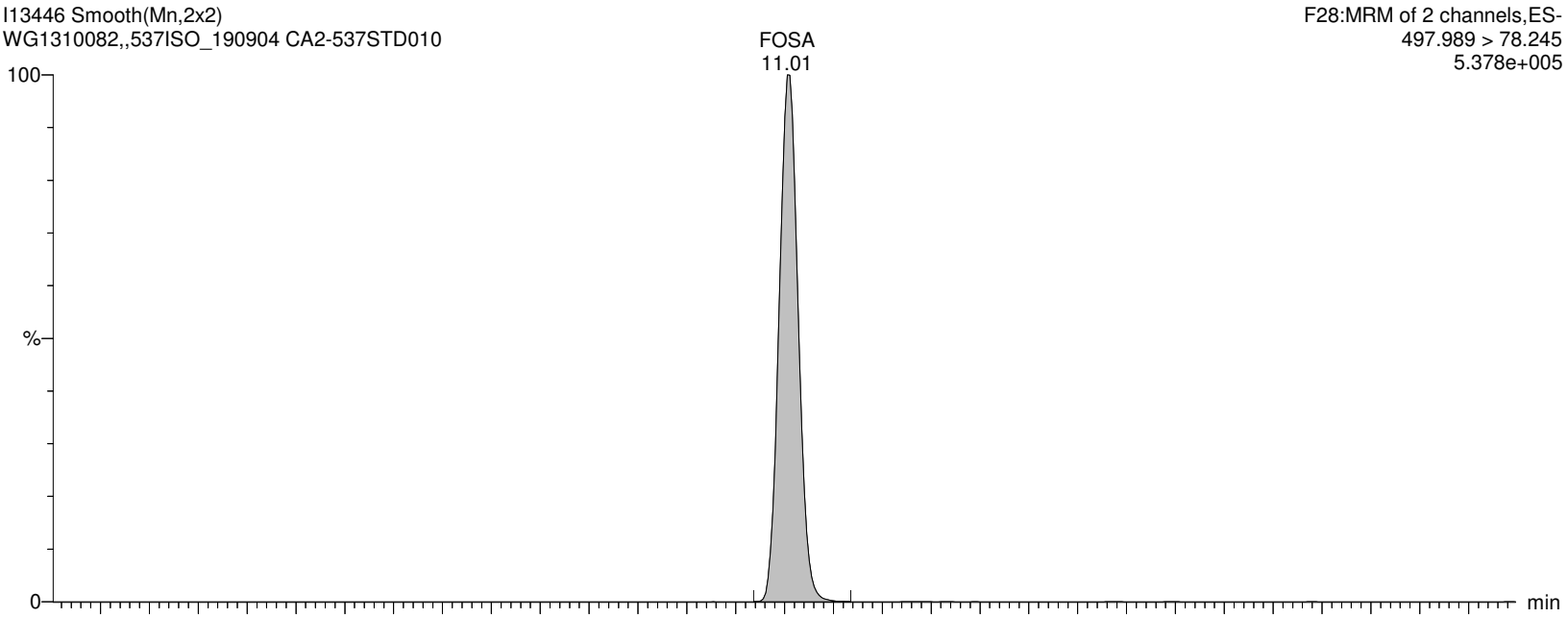
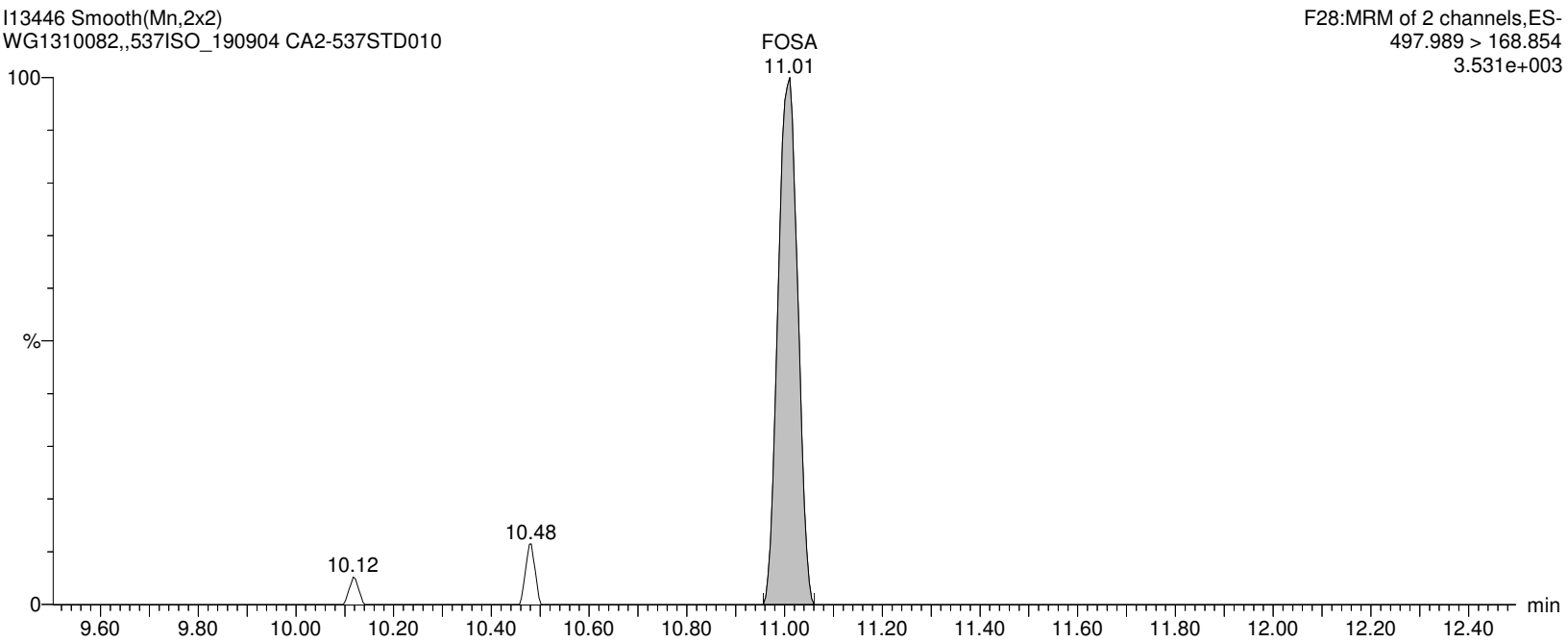
**FOSA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICV.qld
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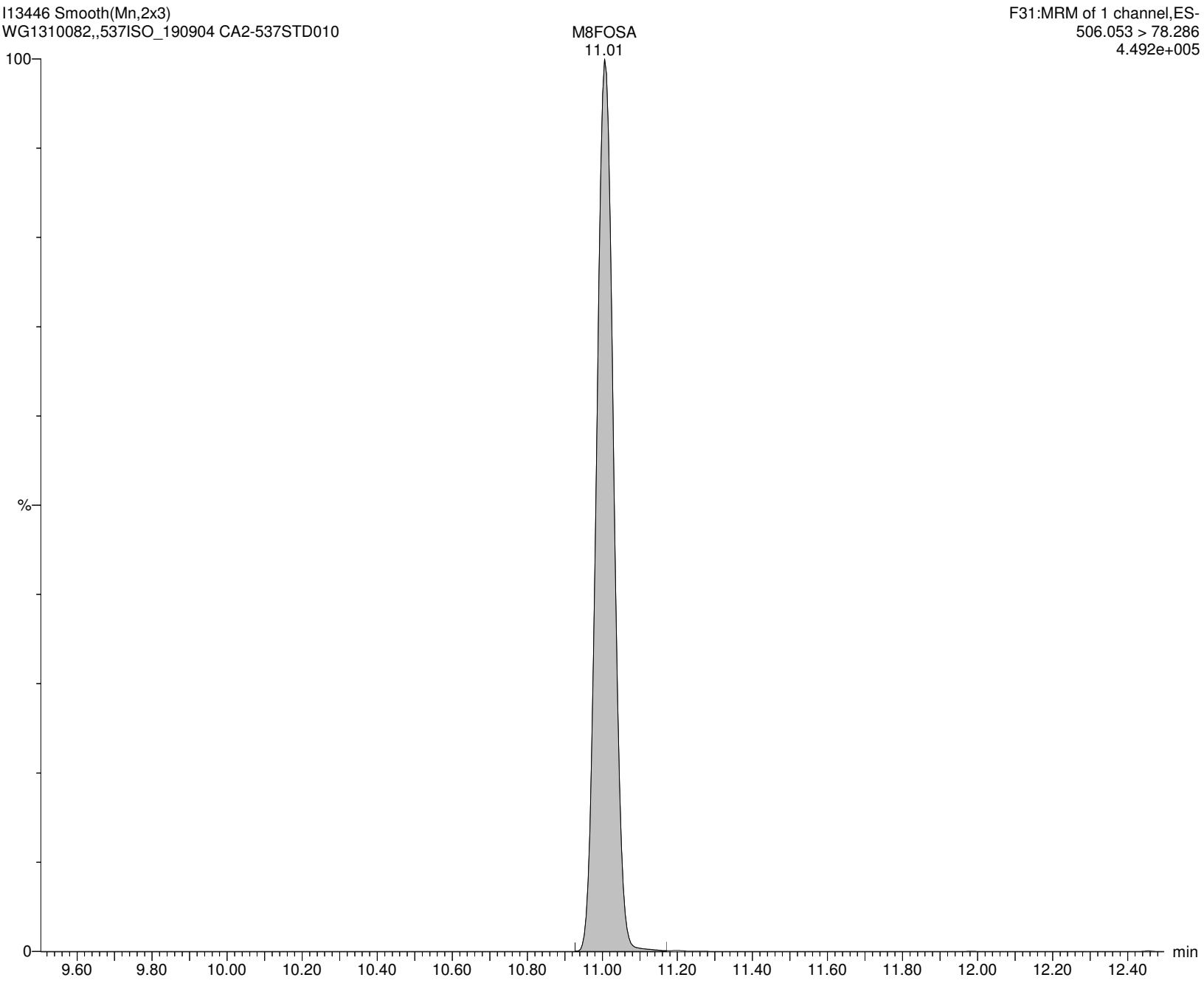
**M8FOSA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
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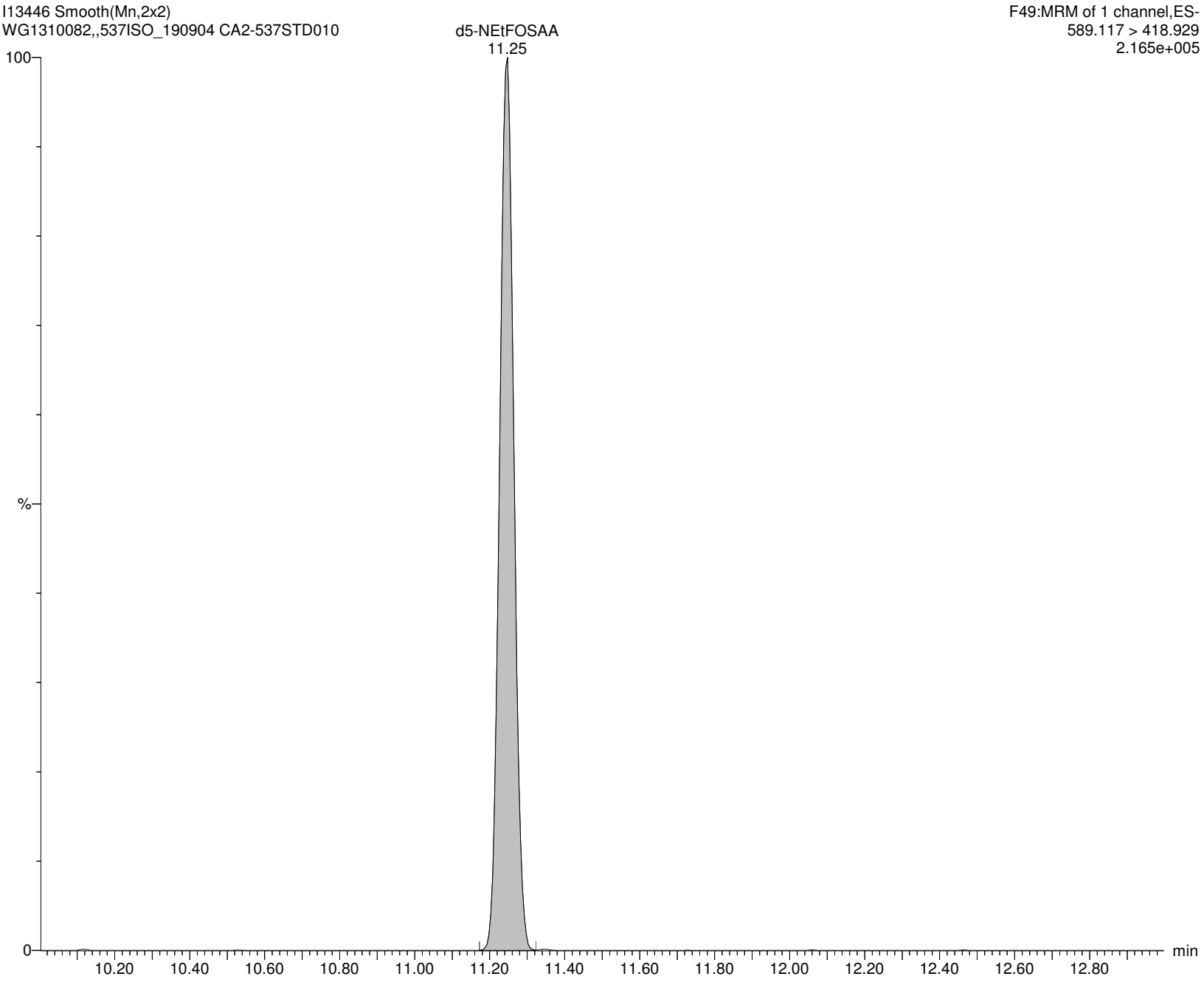



all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICV.qld
Last Altered: Monday, November 18, 2019 14:24:08 Eastern Standard Time
Printed: Monday, November 18, 2019 14:24:51 Eastern Standard Time

**Name: I13446**
**ID: CA2-537STD010**
**Date: 18-Nov-2019**
**Time: 14:05:52**
**Description: WG1310082,,537ISO_190904**
**User: LCMS02:JW**
**Vial: 1:B,3**
**Instrument: XEVO-TQSmicro#QEB0050**
**Inlet Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\LCMS_537_ISO_B**
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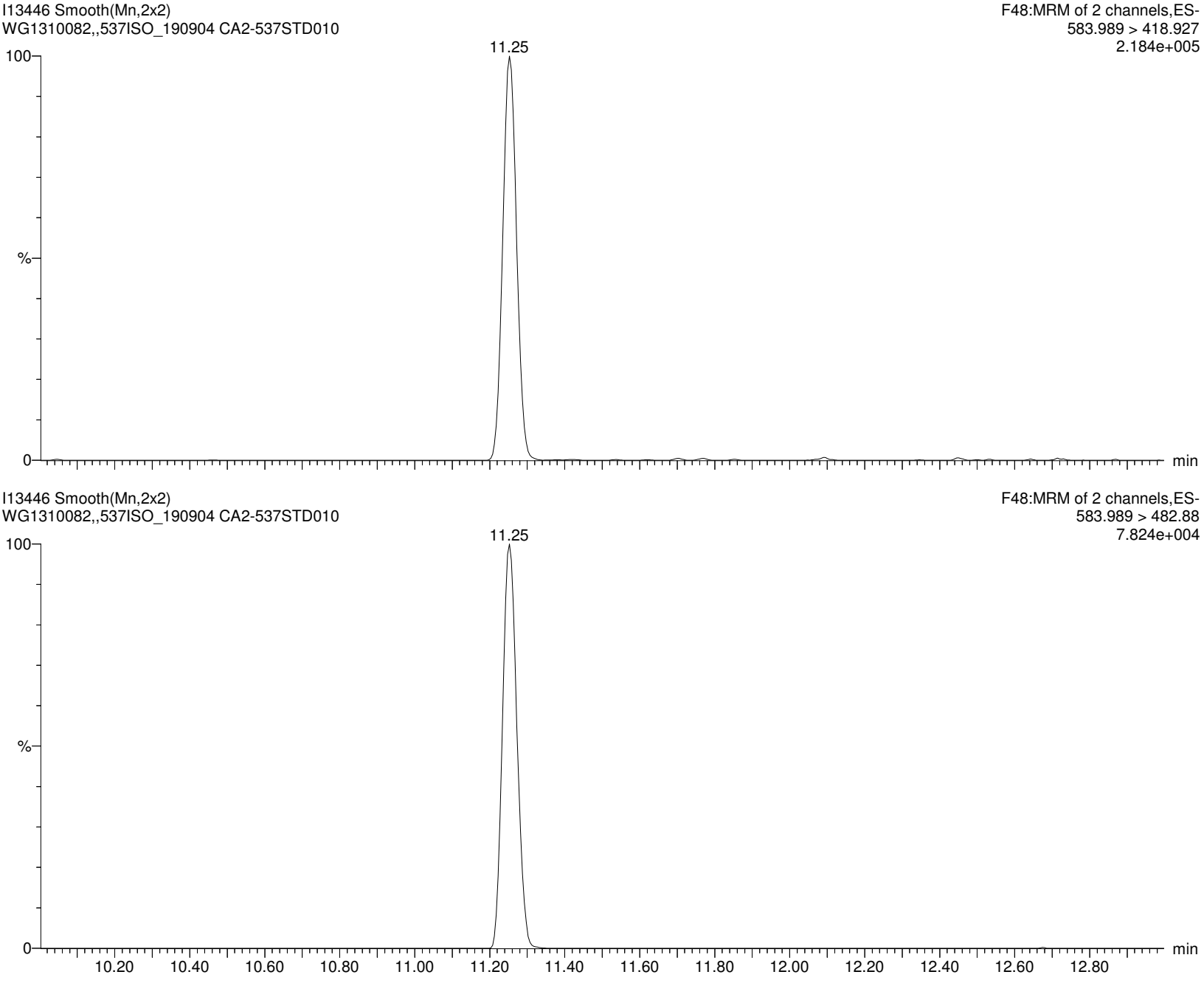



all concentration units in (ng/mL)

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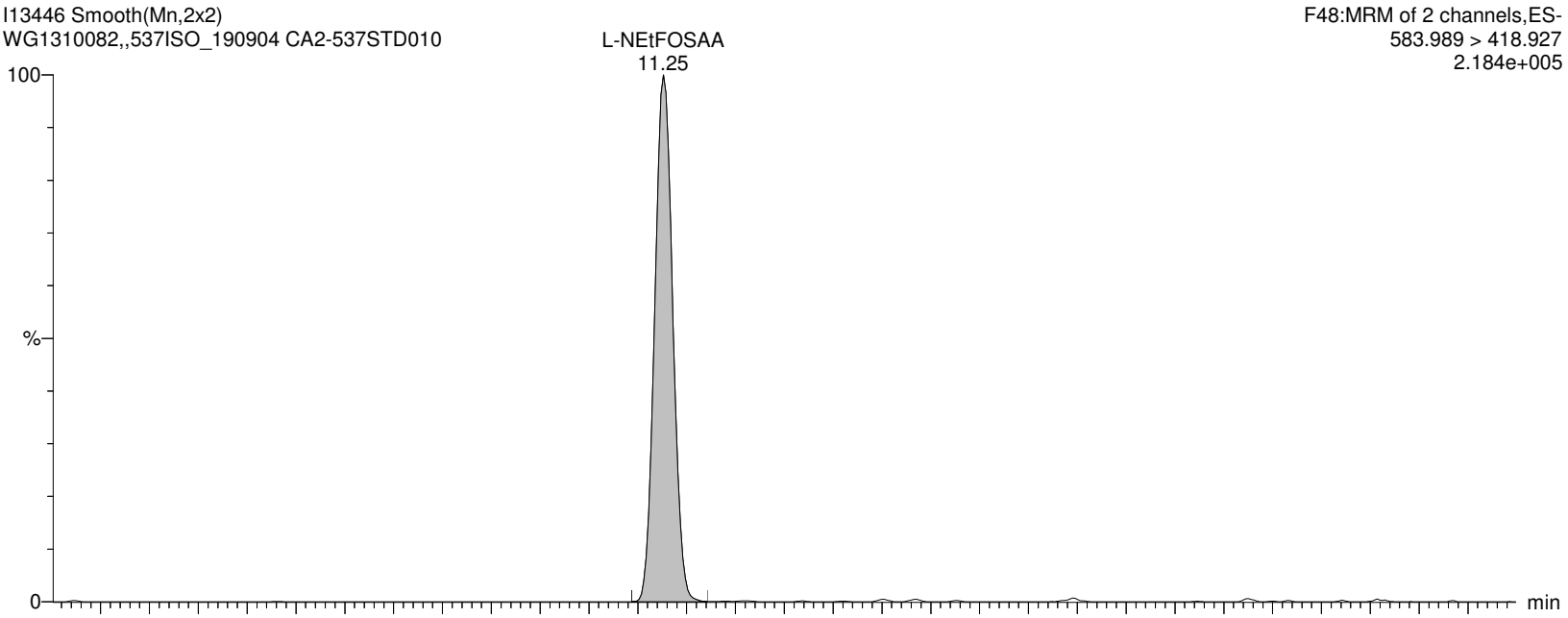


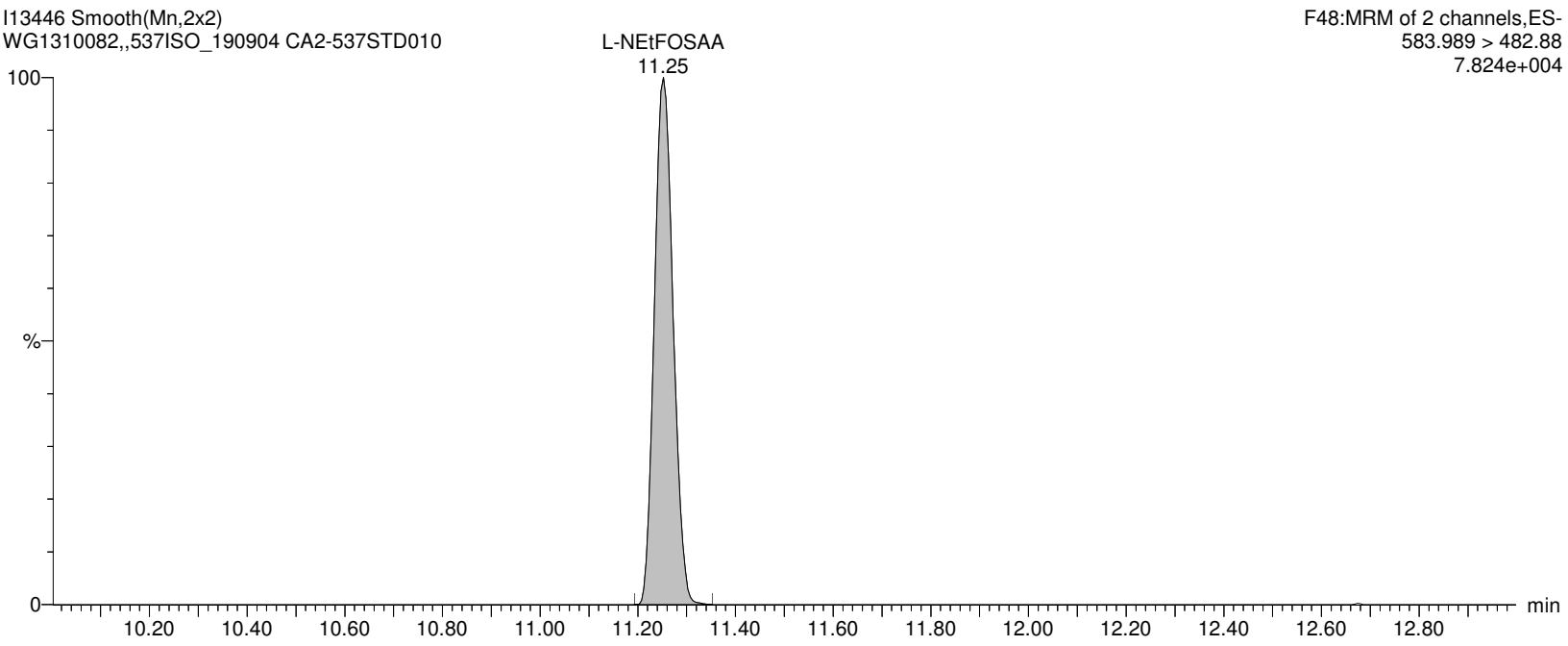



all concentration units in (ng/mL)

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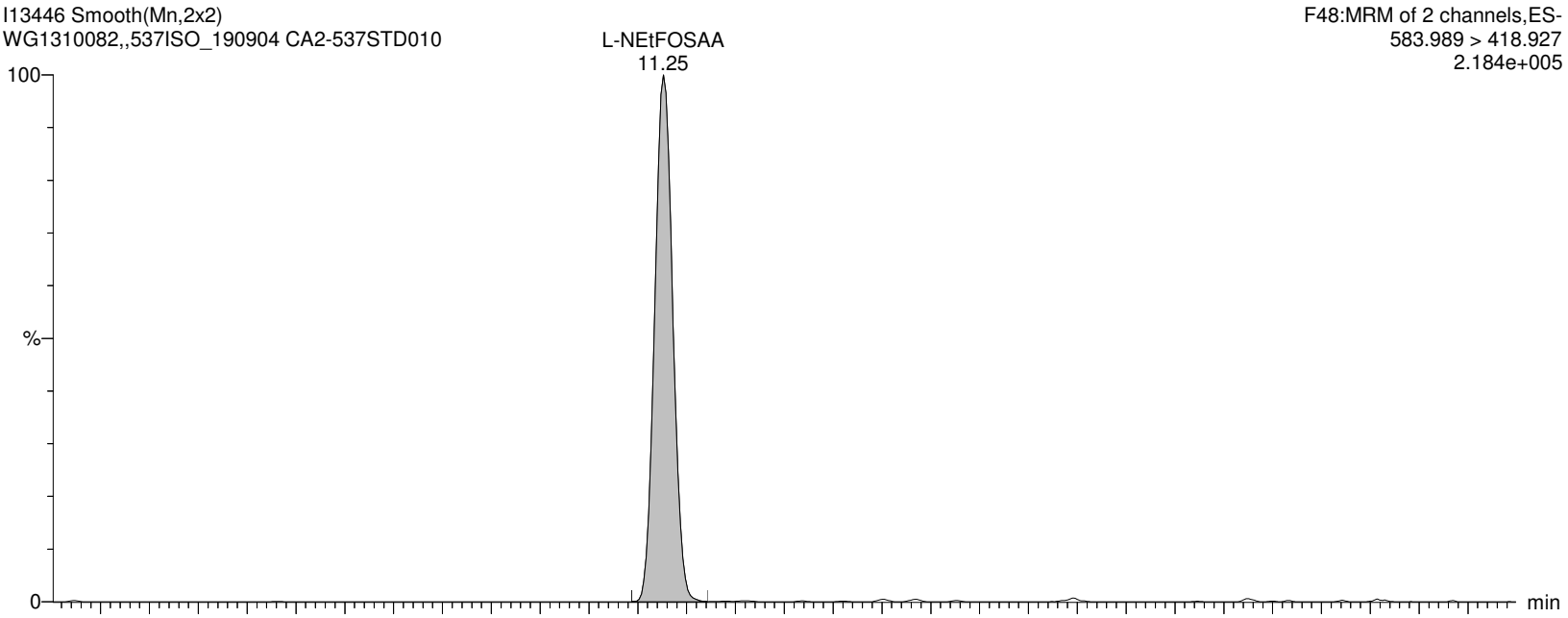


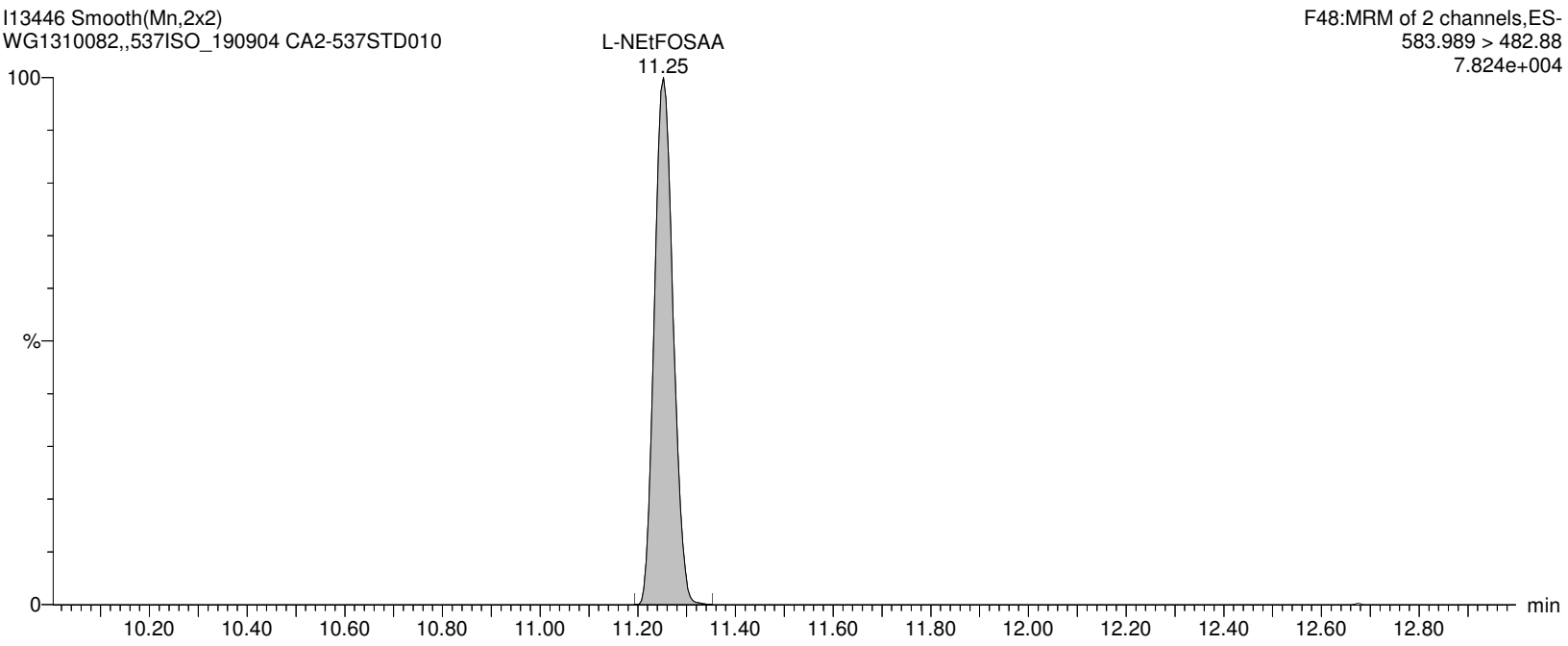



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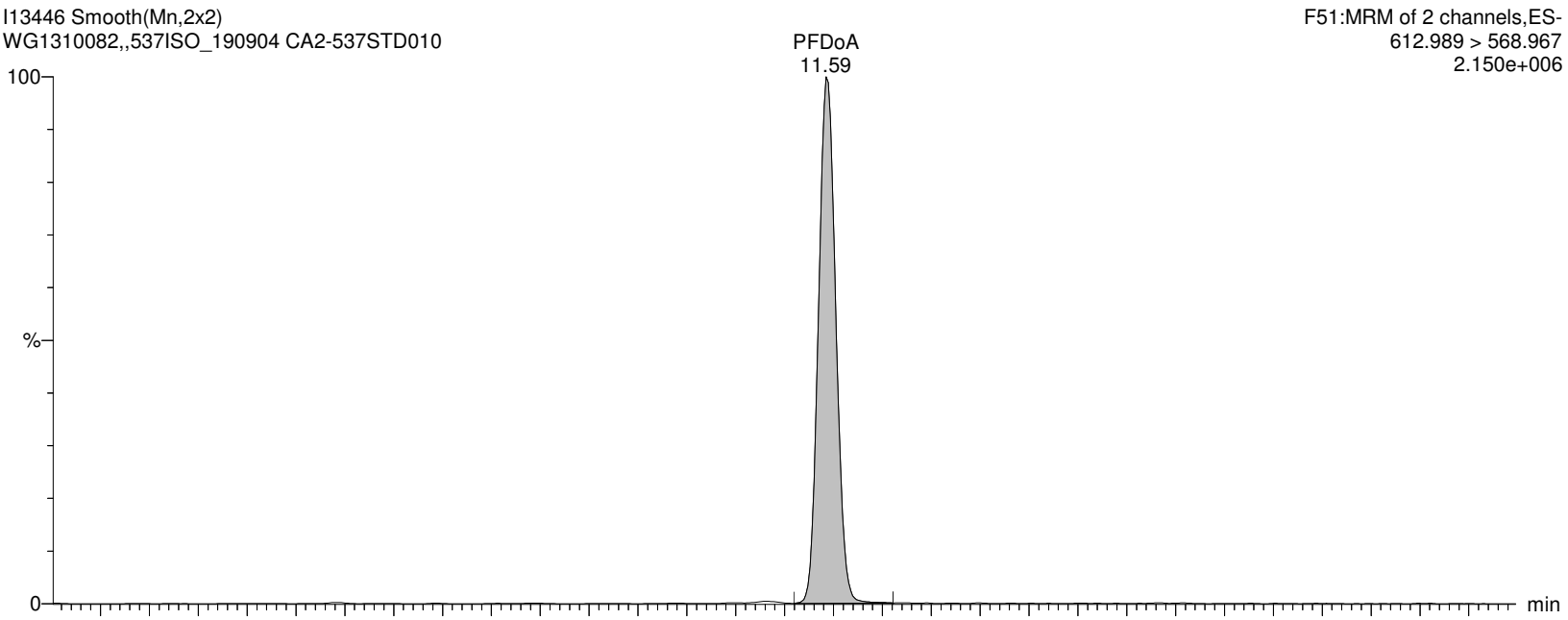


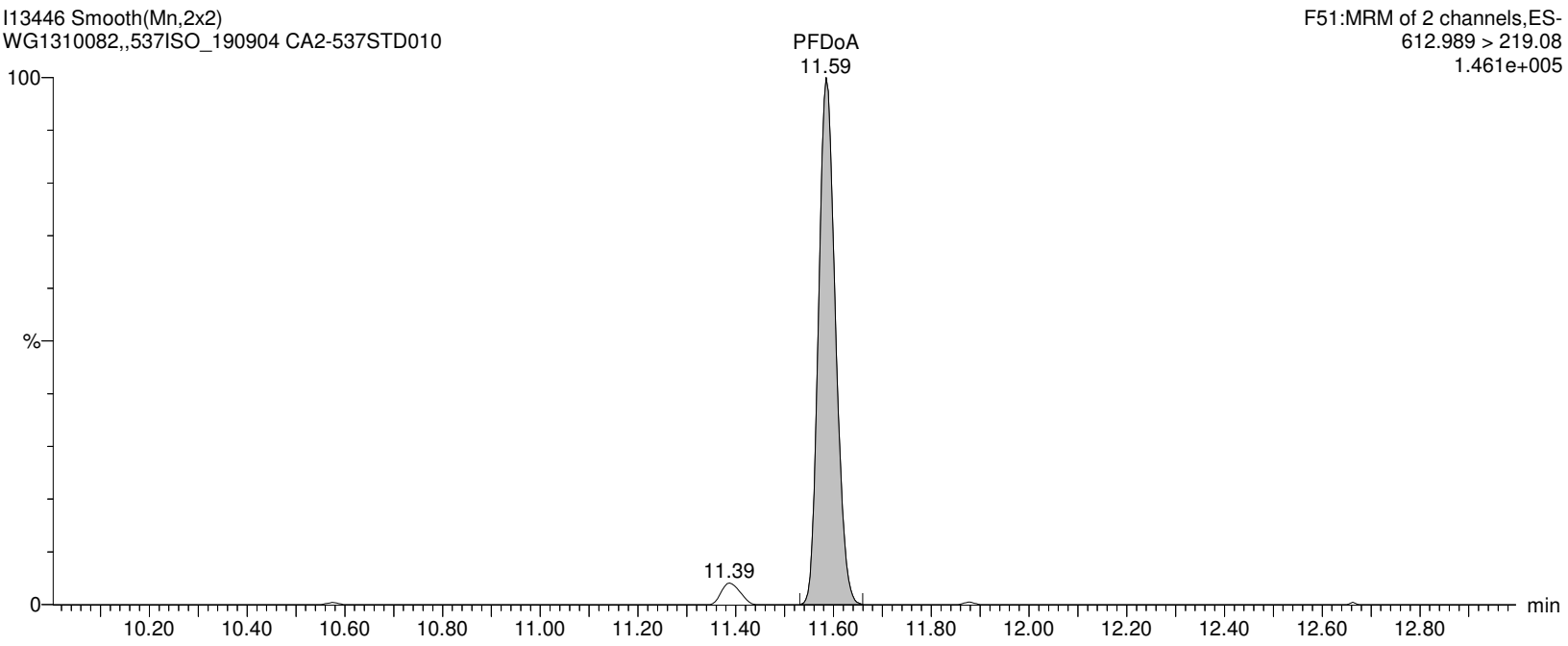



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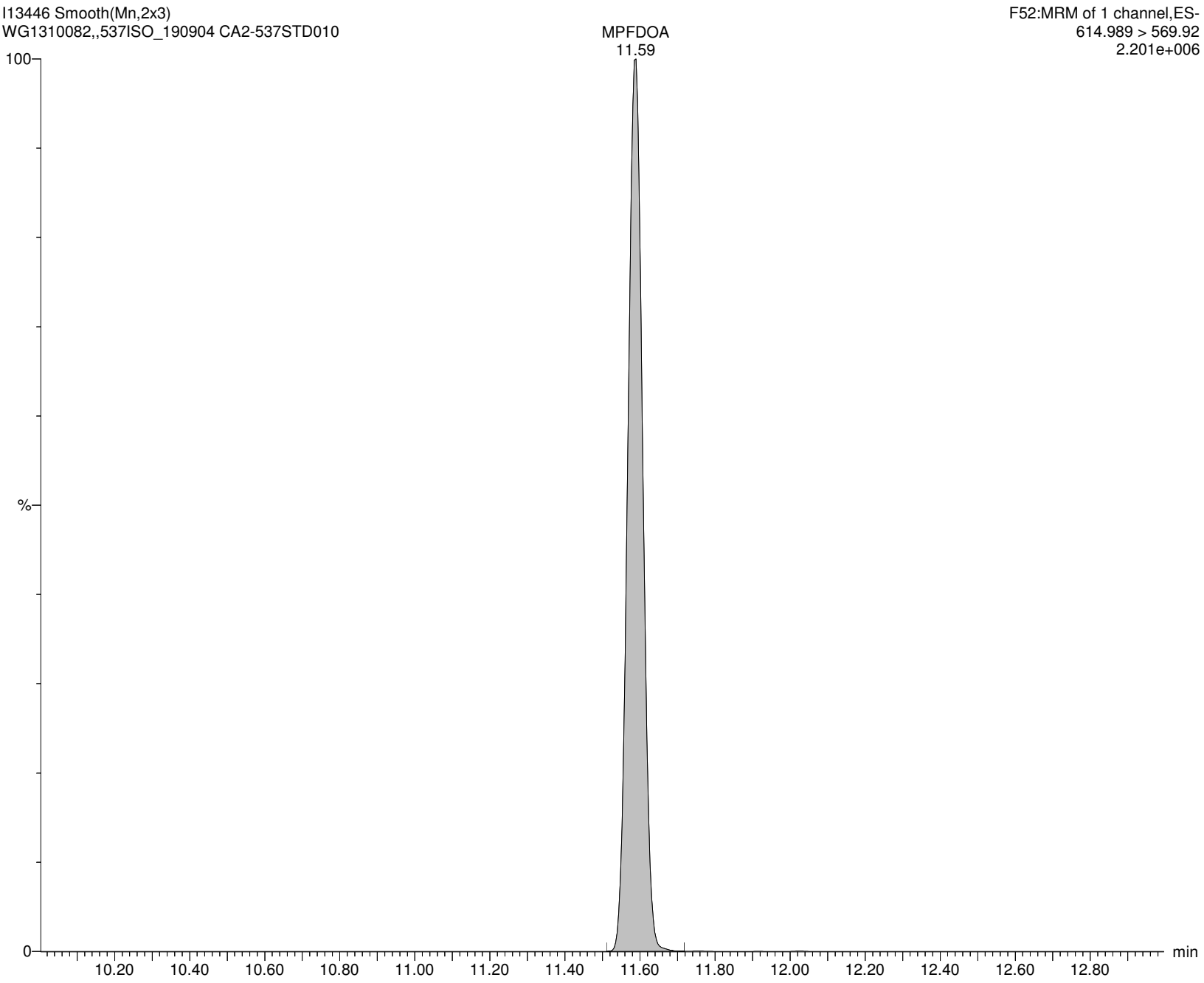



all concentration units in (ng/mL)

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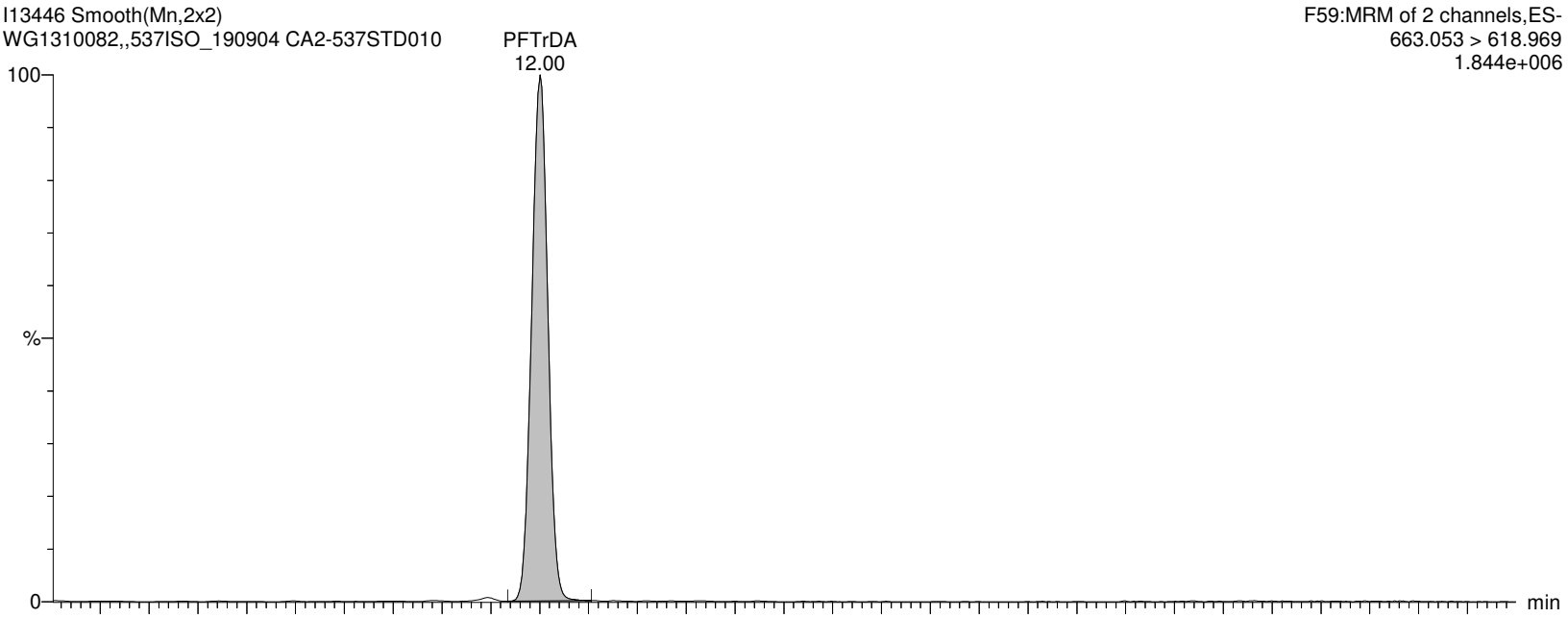


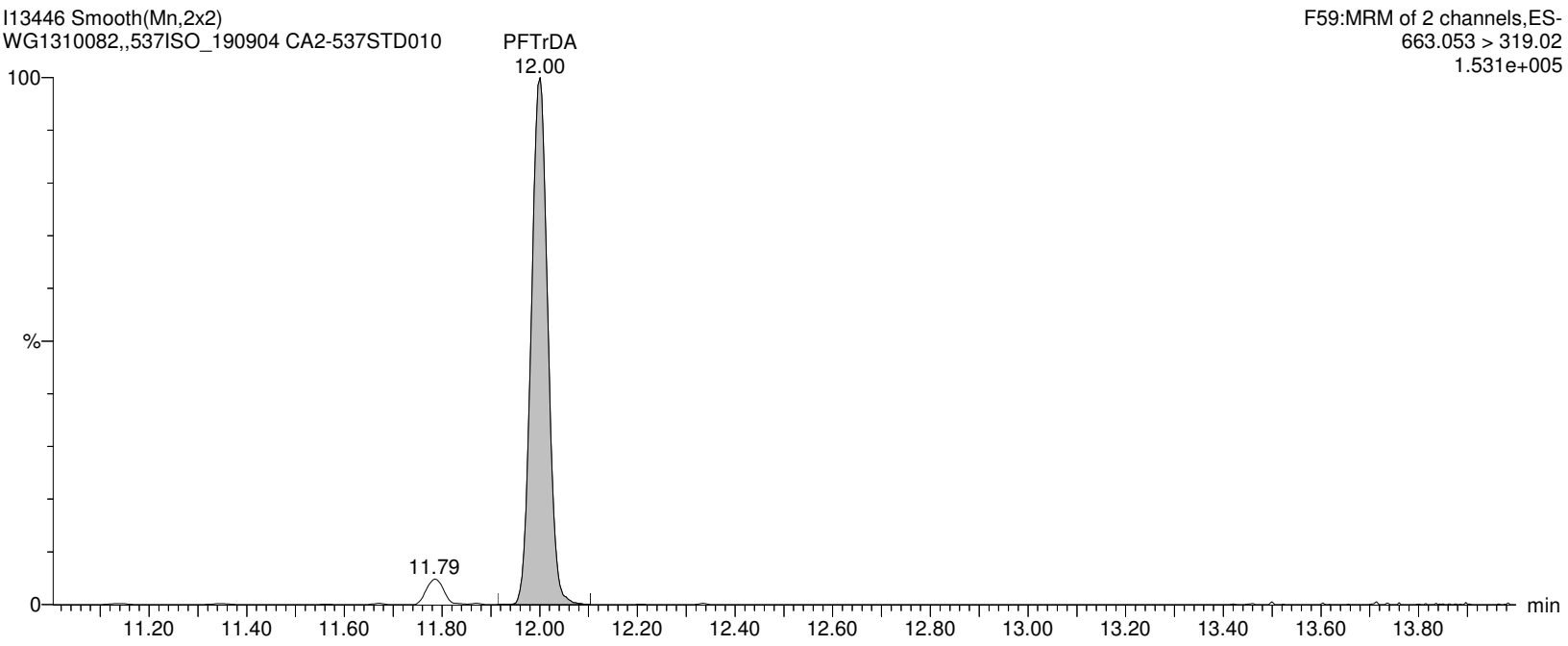



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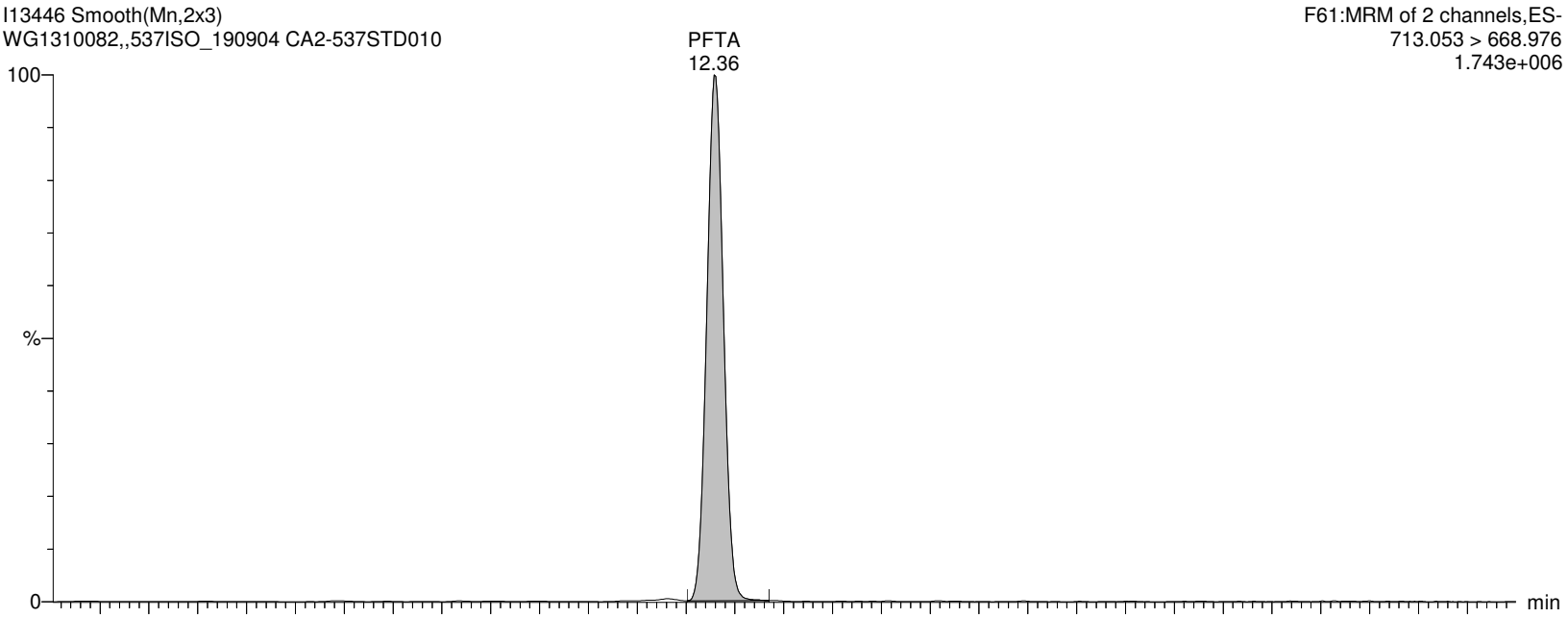


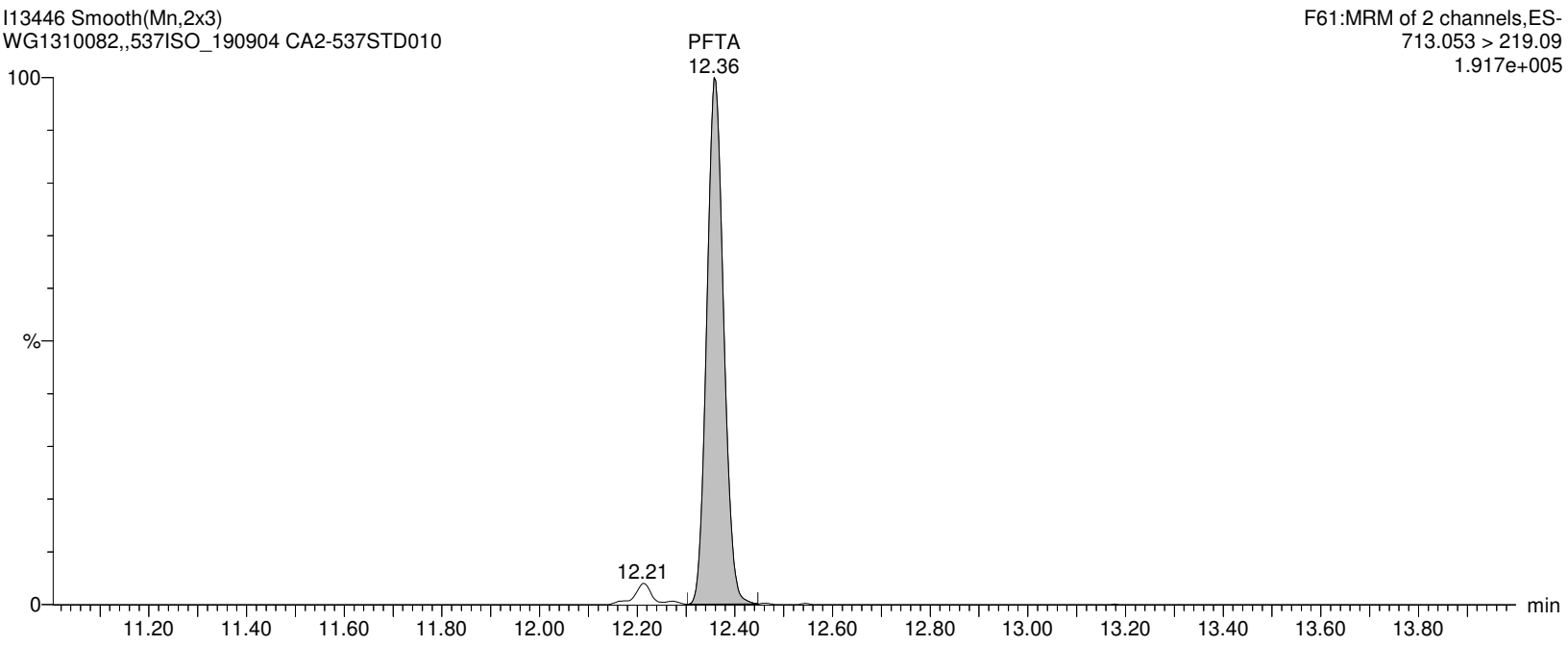



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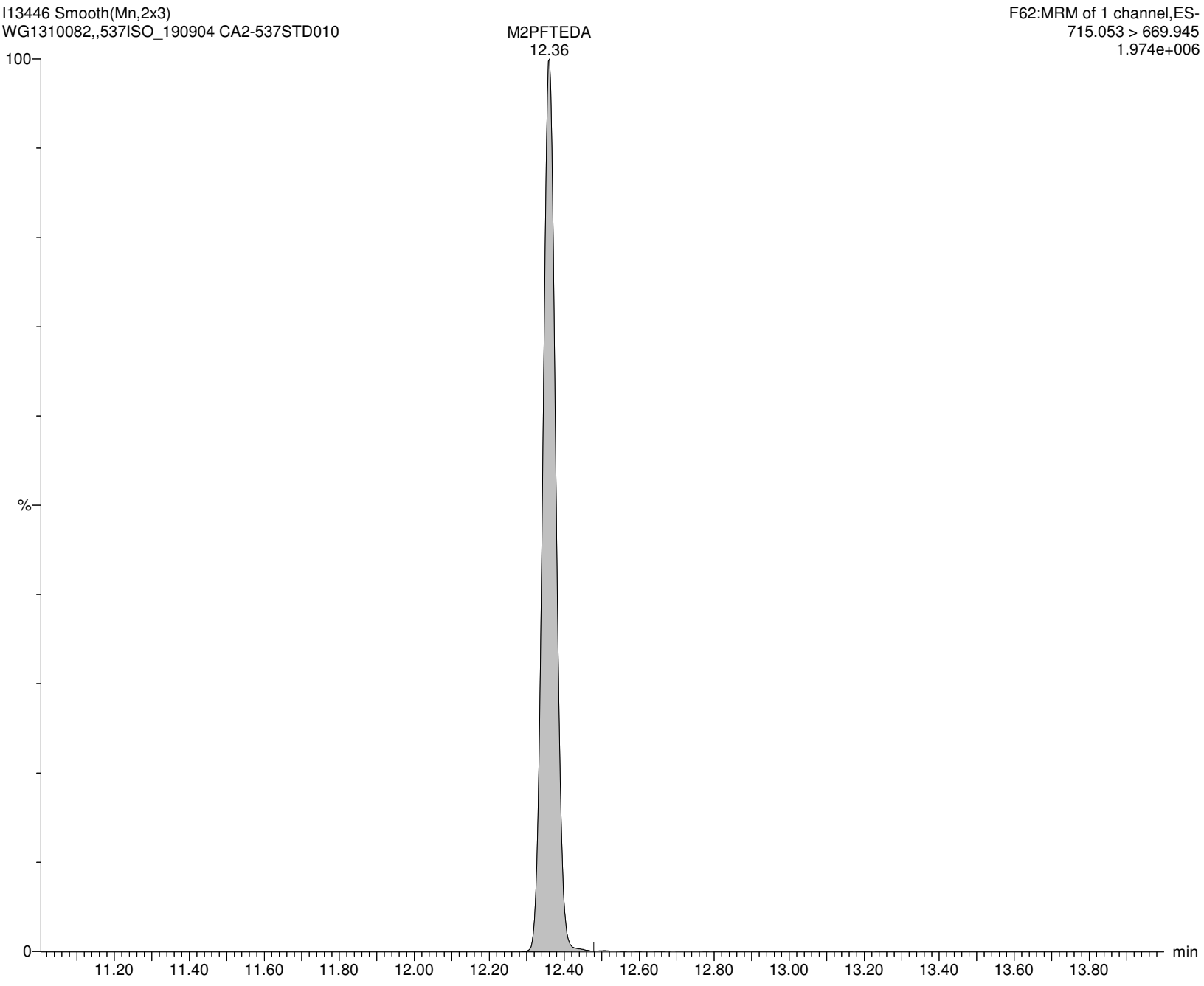



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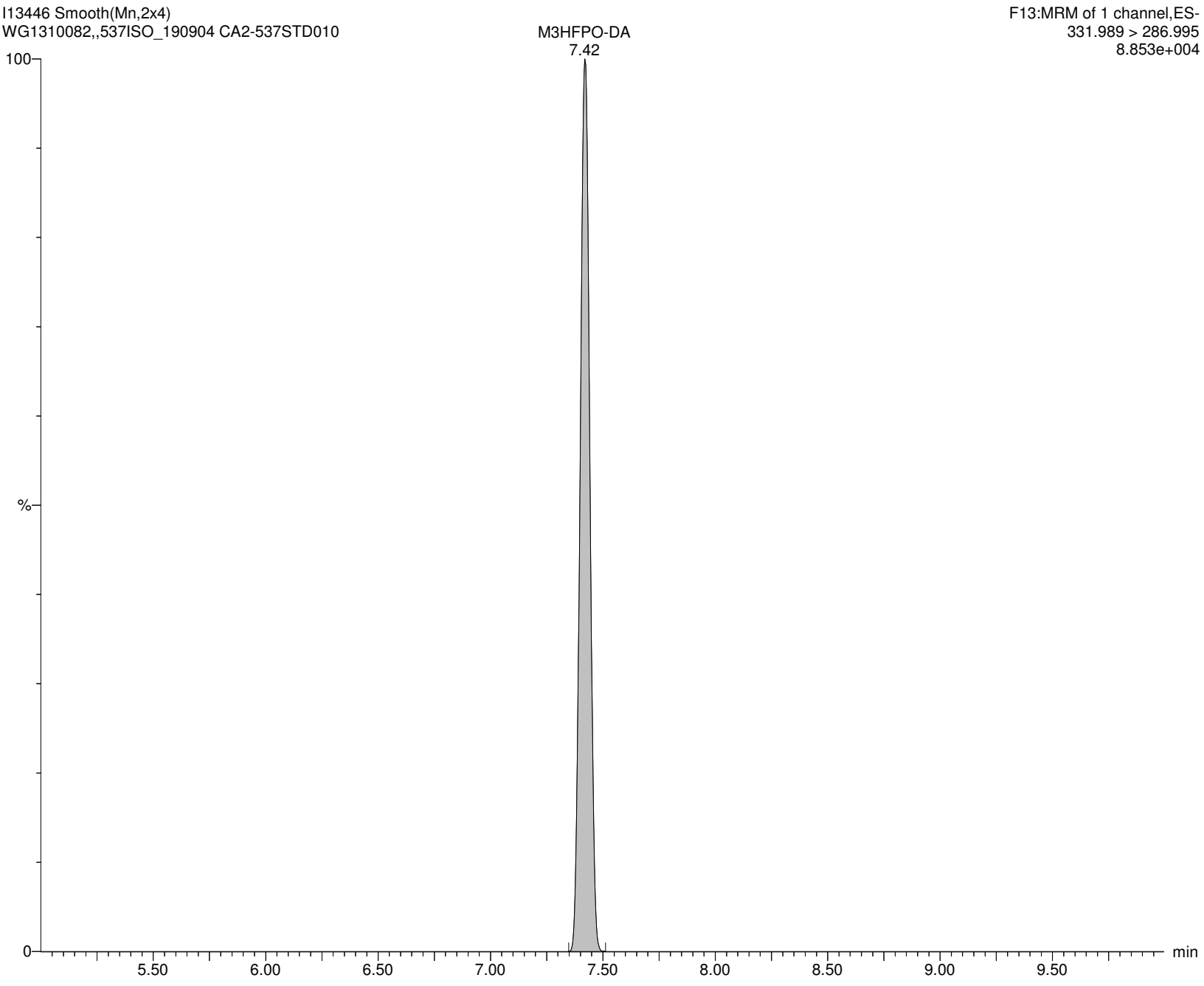



all concentration units in (ng/mL)

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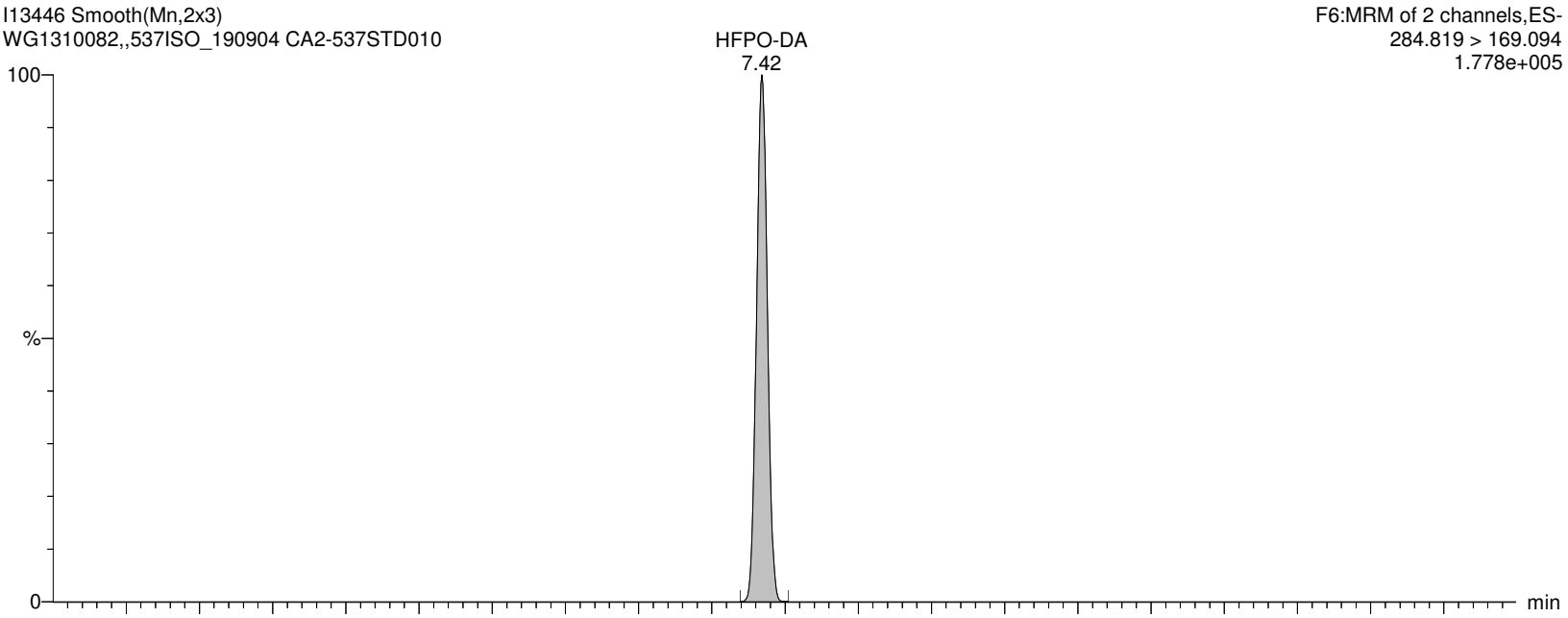


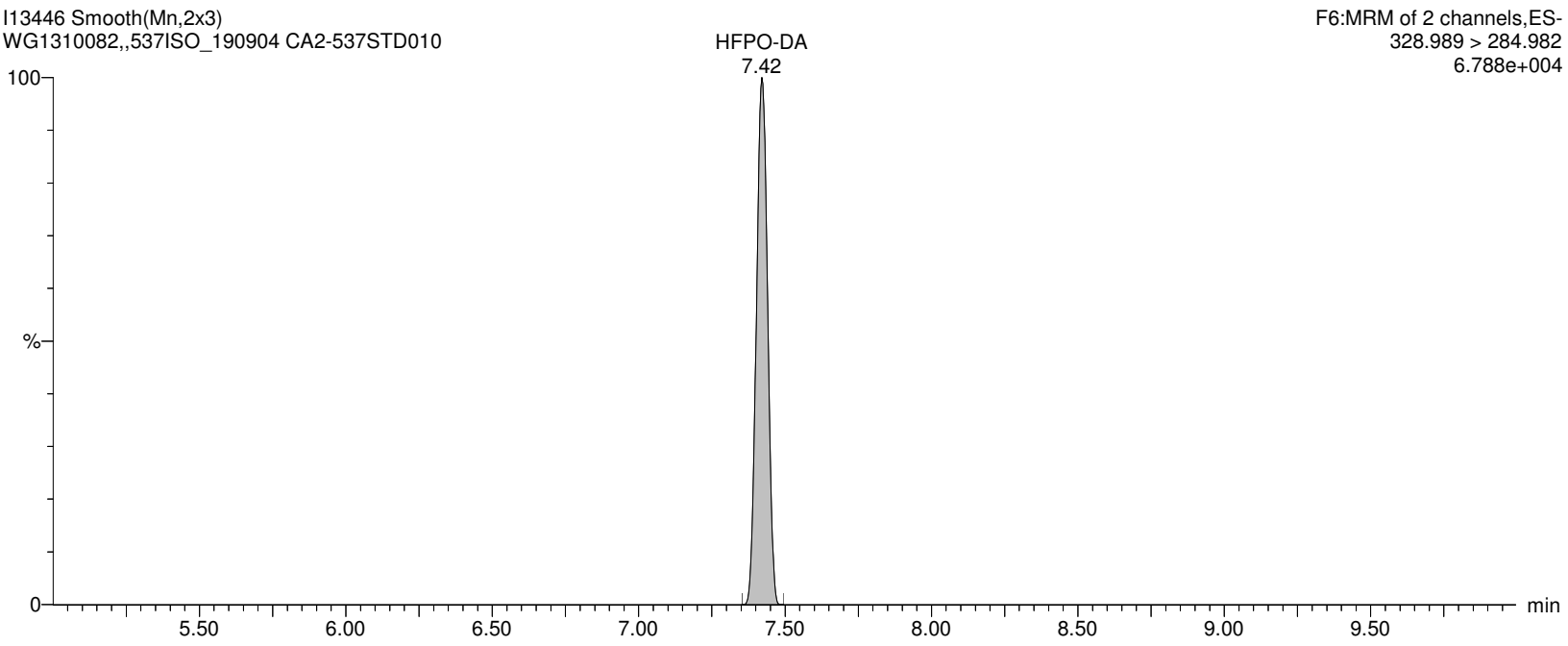



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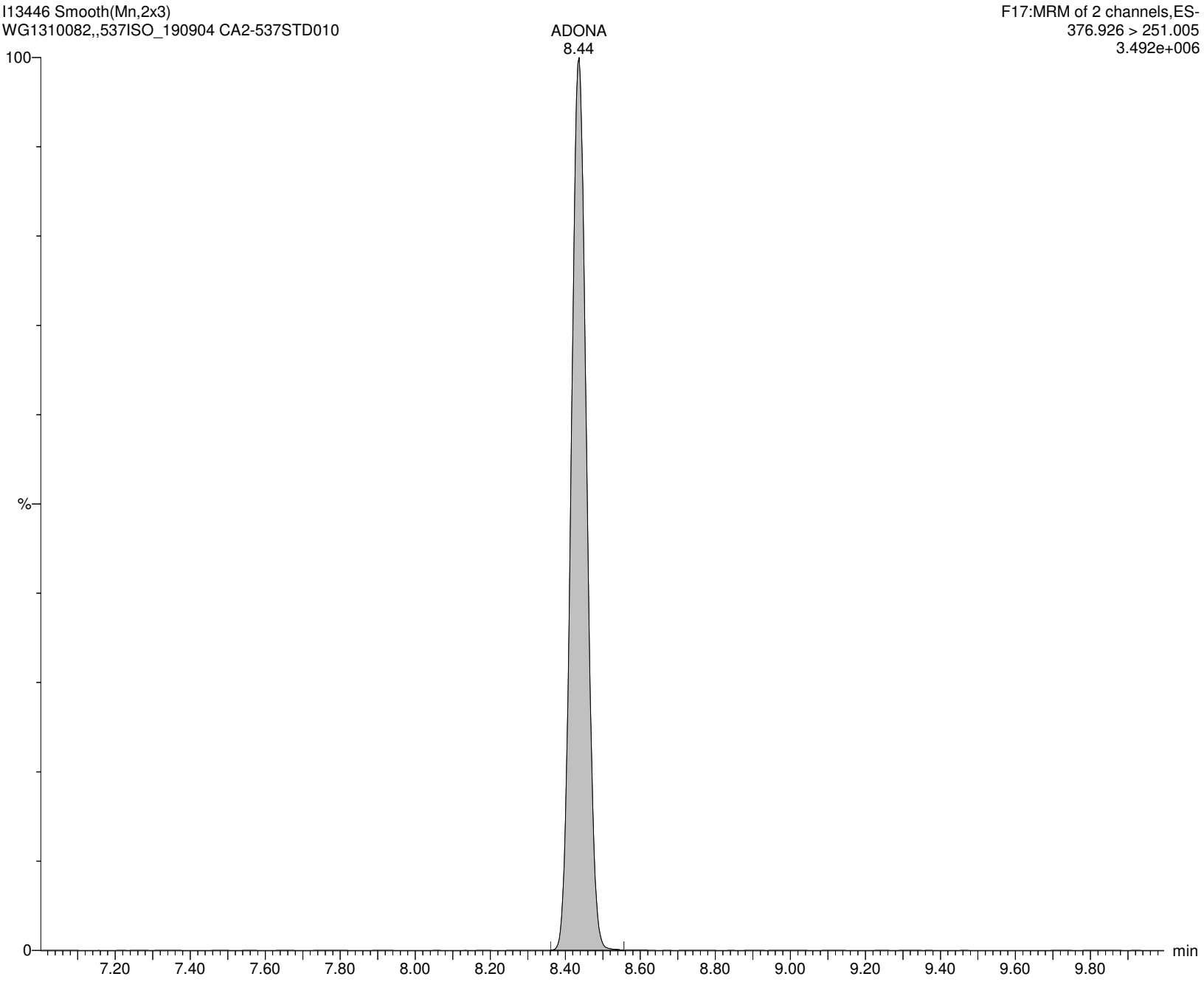



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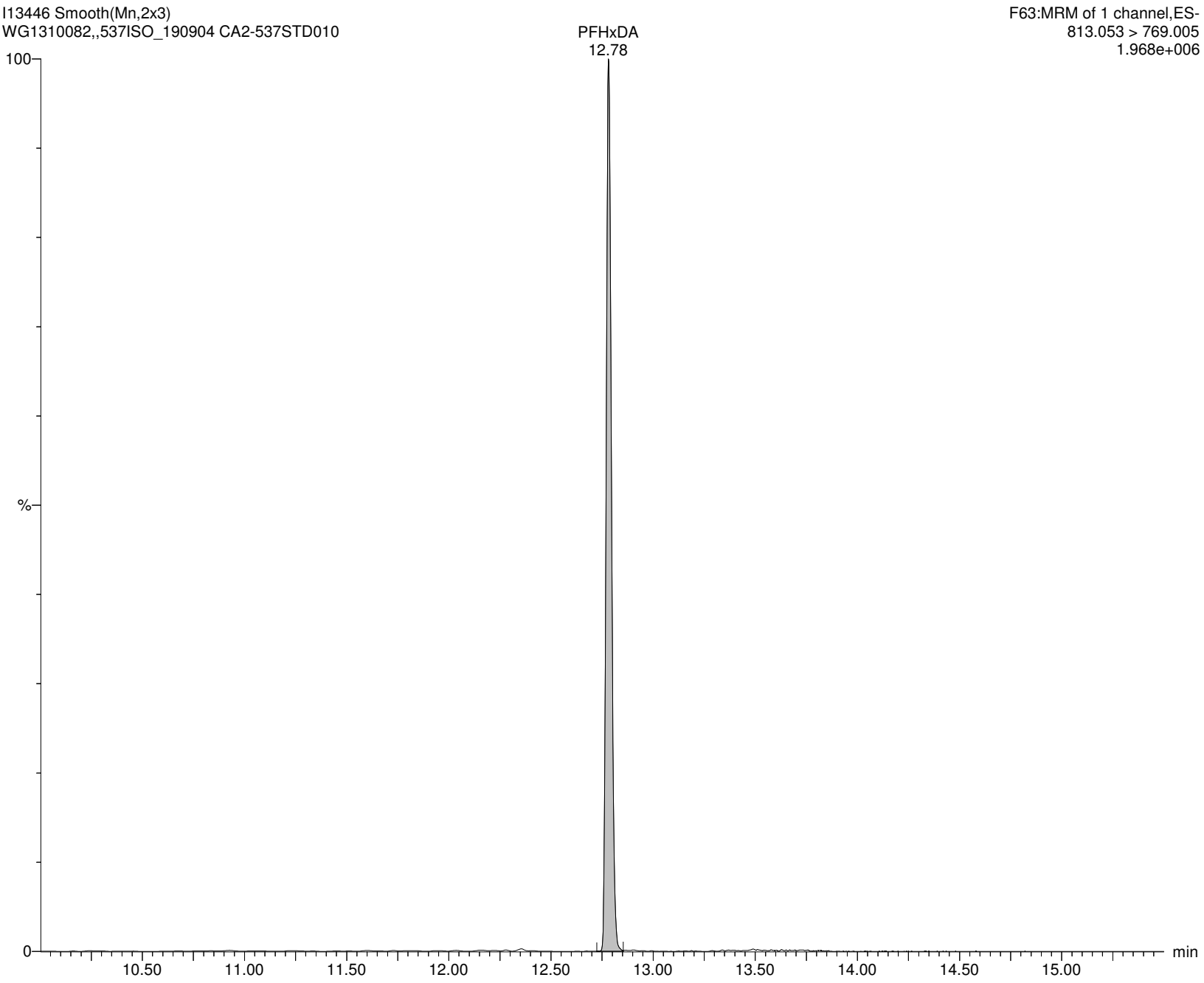



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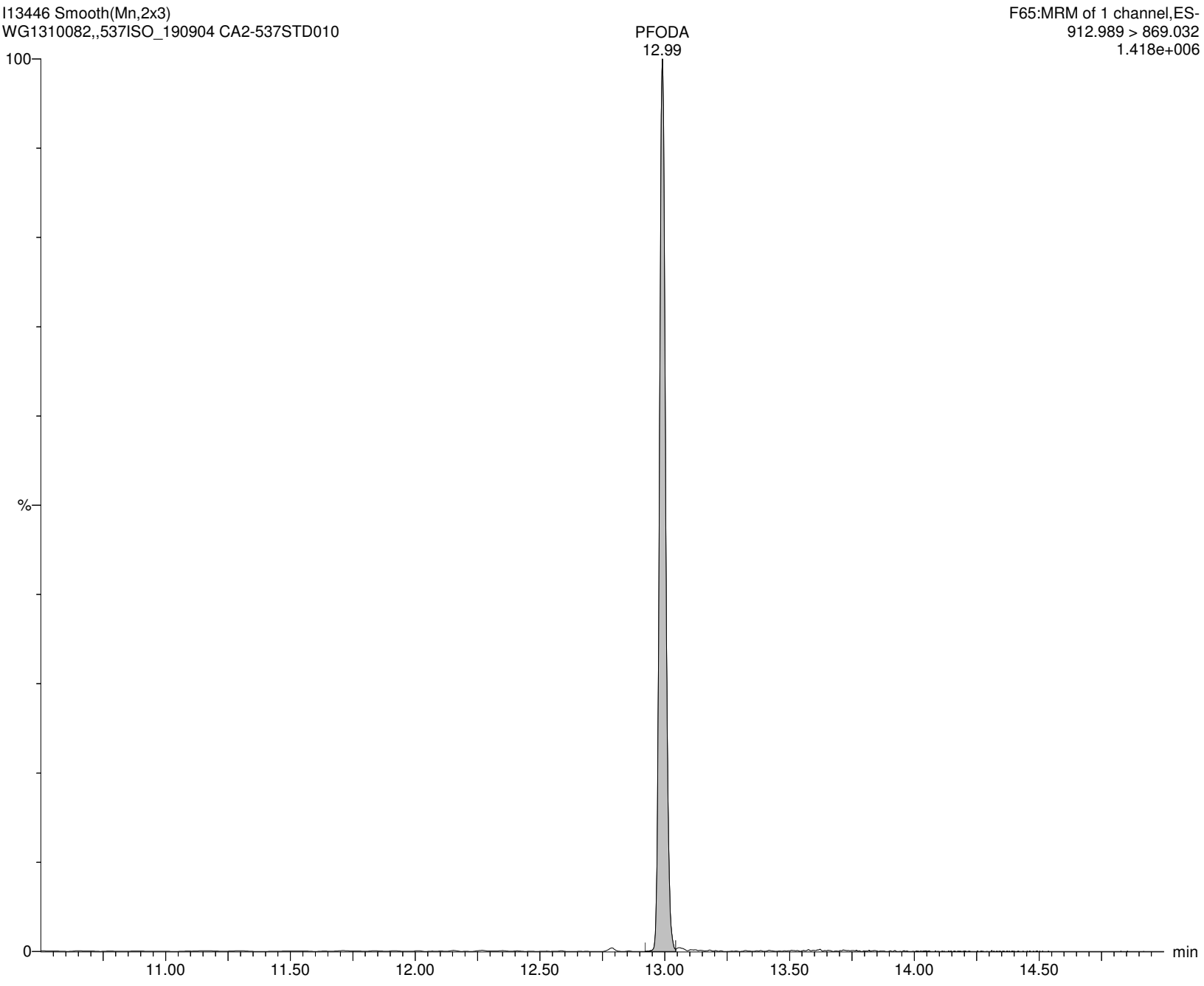



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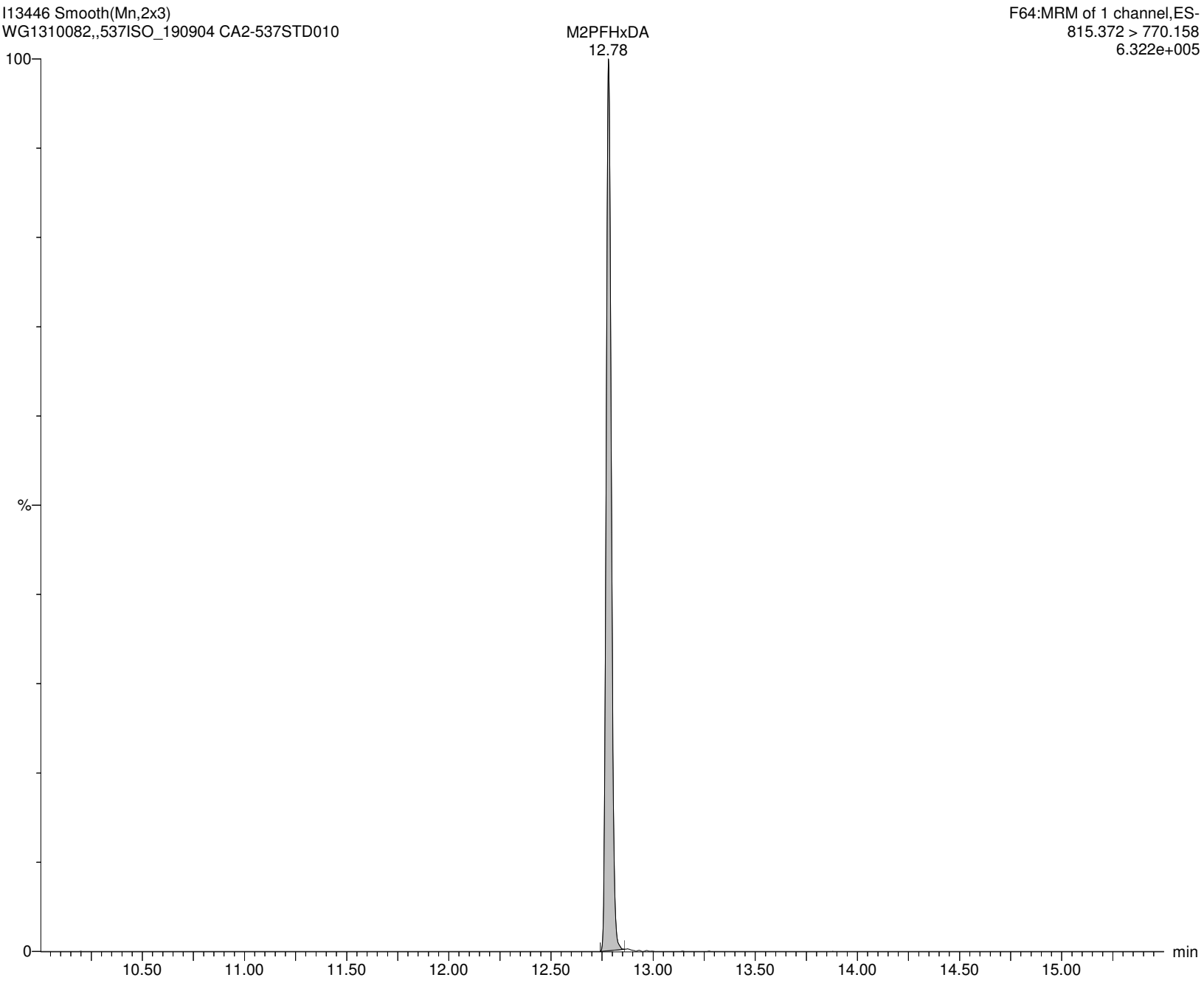



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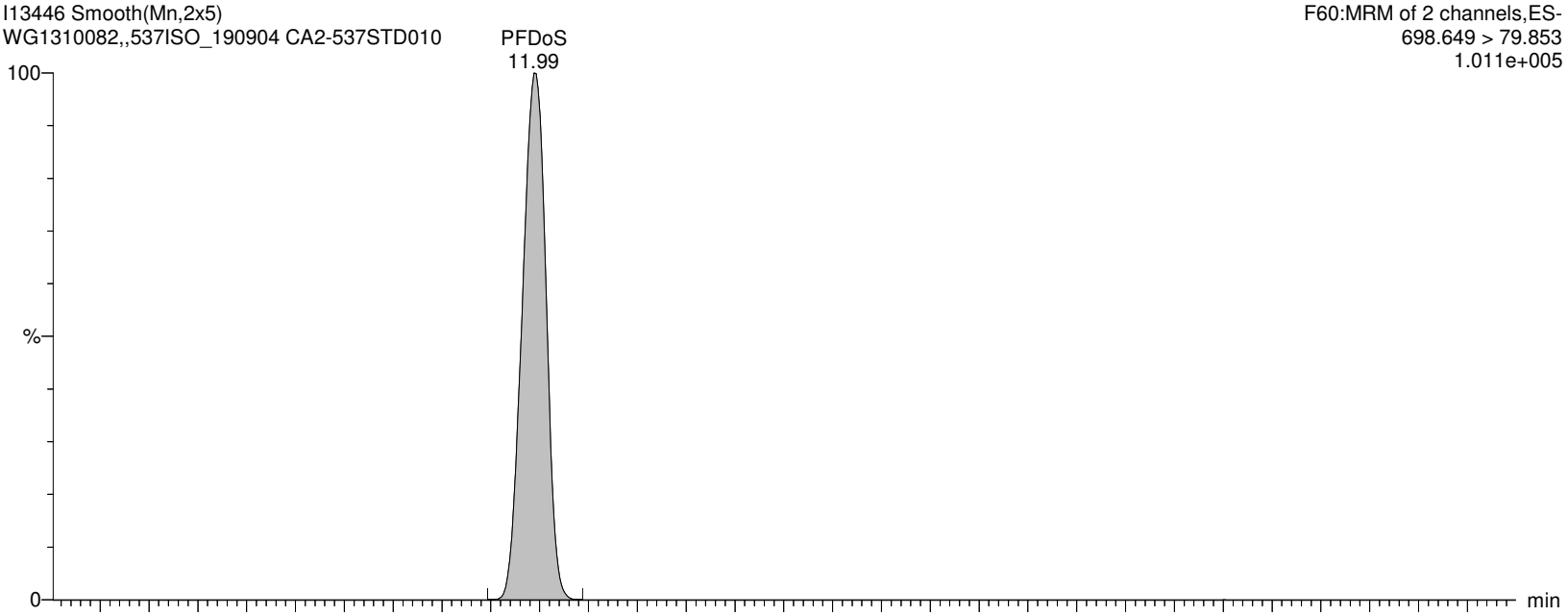


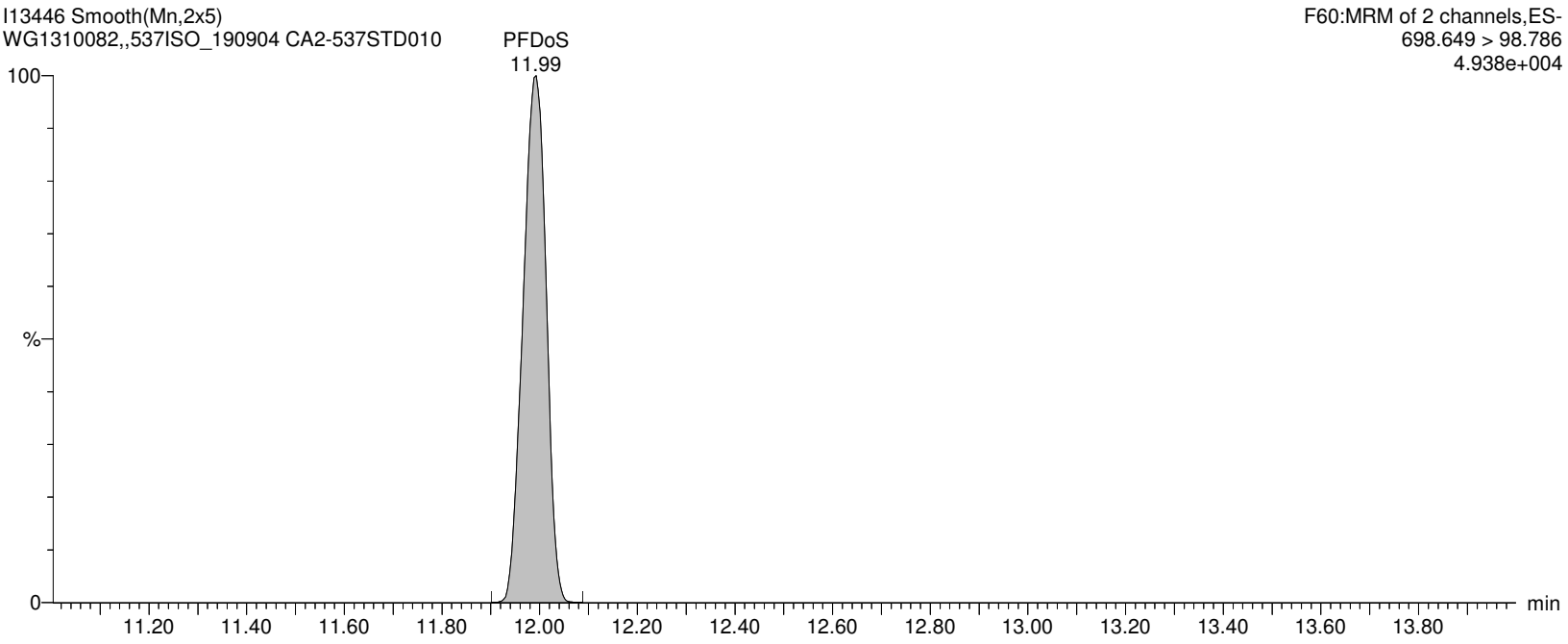



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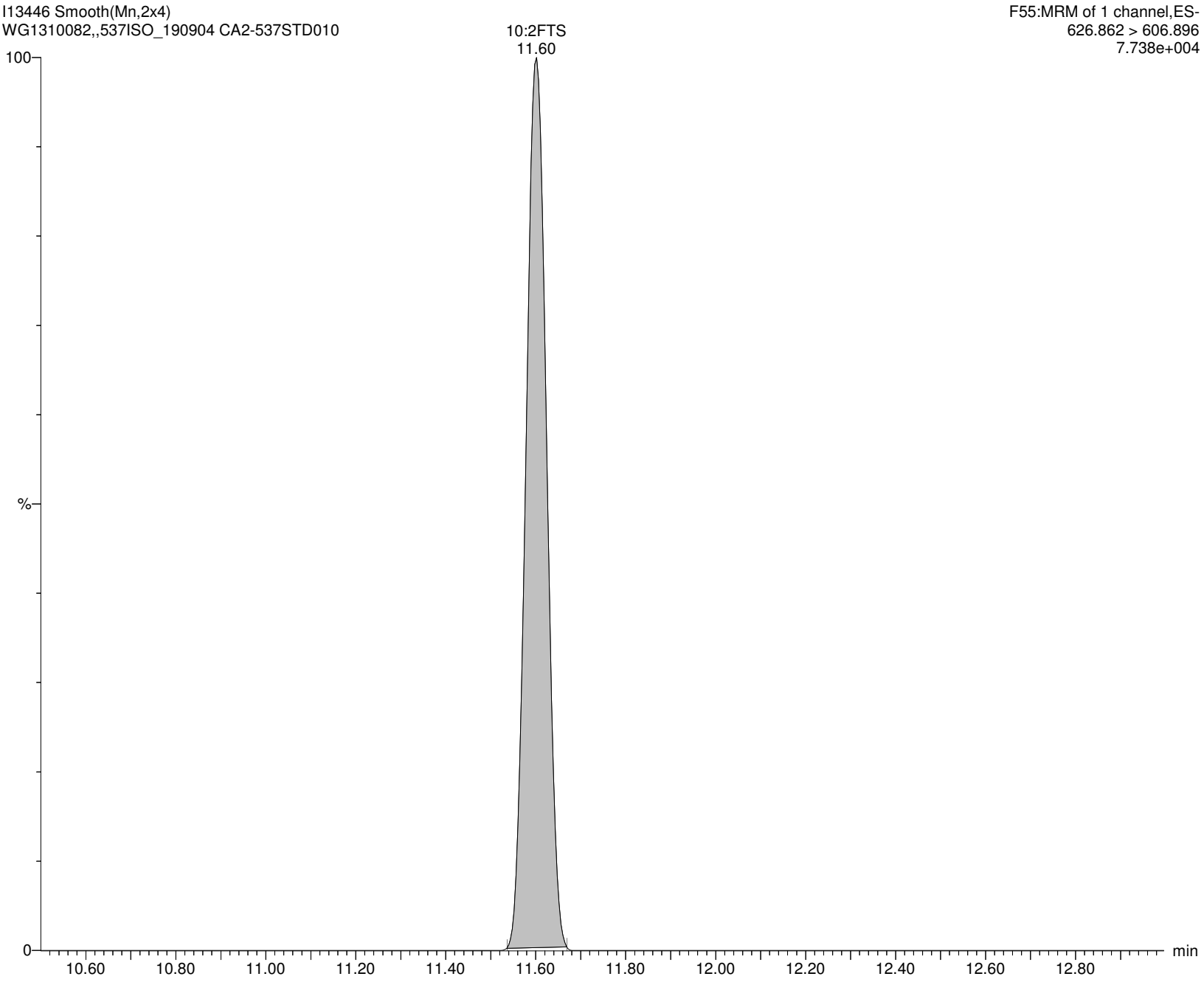
**User: LCMS02:JW**
**Vial: 1:B,3**
**Instrument: XEVO-TQSmicro#QEB0050**
**Inlet Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\LCMS_537_ISO_B**
**Tune Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\181009_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**10:2FTS**



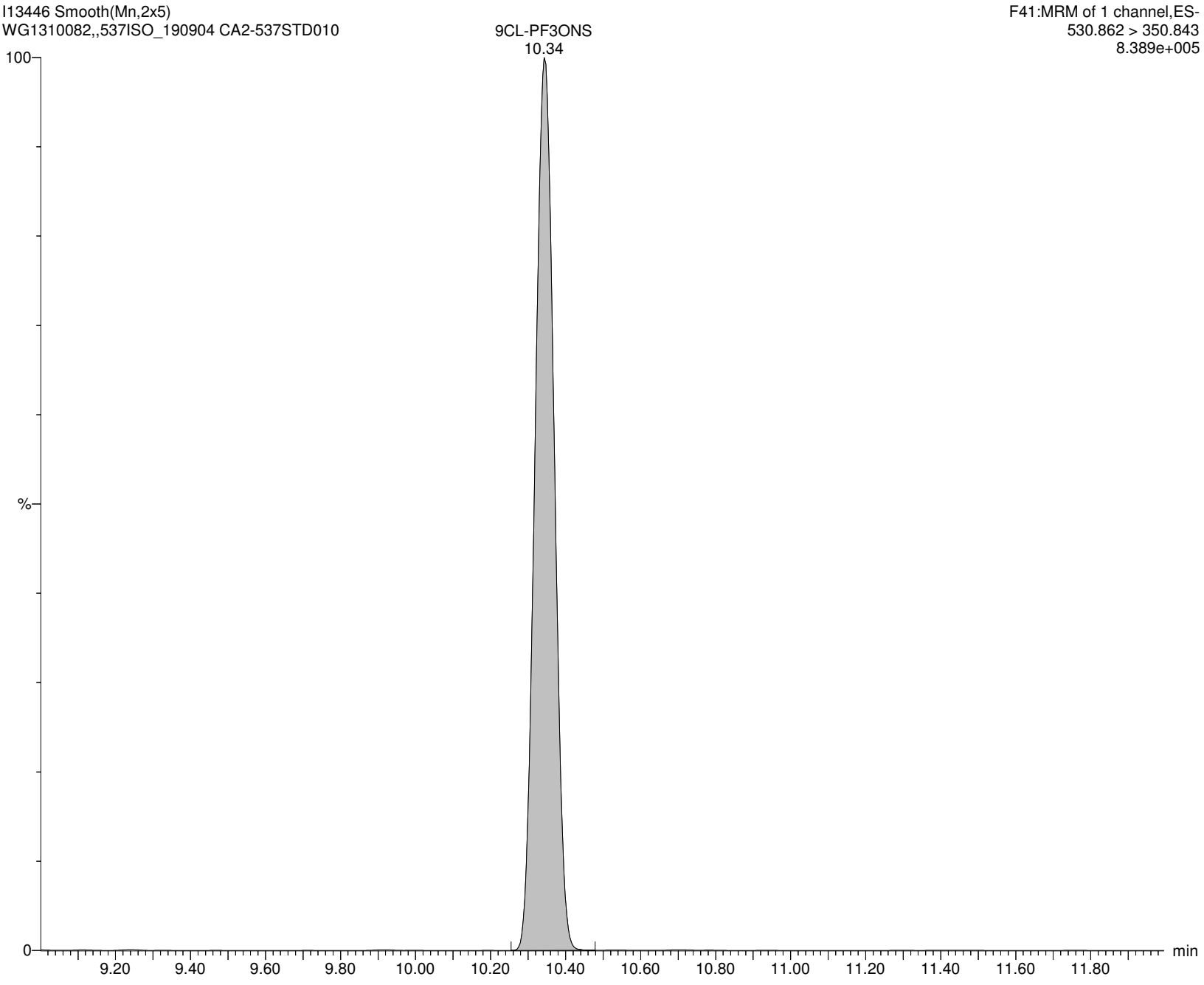


all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICV.qld
Last Altered: Monday, November 18, 2019 14:24:08 Eastern Standard Time
Printed: Monday, November 18, 2019 14:24:51 Eastern Standard Time

**Name: I13446**
**ID: CA2-537STD010**
**Date: 18-Nov-2019**
**Time: 14:05:52**
**Description: WG1310082,,537ISO_190904**
**User: LCMS02:JW**
**Vial: 1:B,3**
**Instrument: XEVO-TQSmicro#QEB0050**
**Inlet Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\LCMS_537_ISO_B**
**Tune Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\181009_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**9CL-PF3ONS**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICV.qld
Last Altered: Monday, November 18, 2019 14:24:08 Eastern Standard Time
Printed: Monday, November 18, 2019 14:24:51 Eastern Standard Time

**Name: I13446**
**ID: CA2-537STD010**
**Date: 18-Nov-2019**
**Time: 14:05:52**
**Description: WG1310082,,537ISO_190904**
**User: LCMS02:JW**
**Vial: 1:B,3**
**Instrument: XEVO-TQSmicro#QEB0050**
**Inlet Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\LCMS_537_ISO_B**
**Tune Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\181009_TUNE.IPR**
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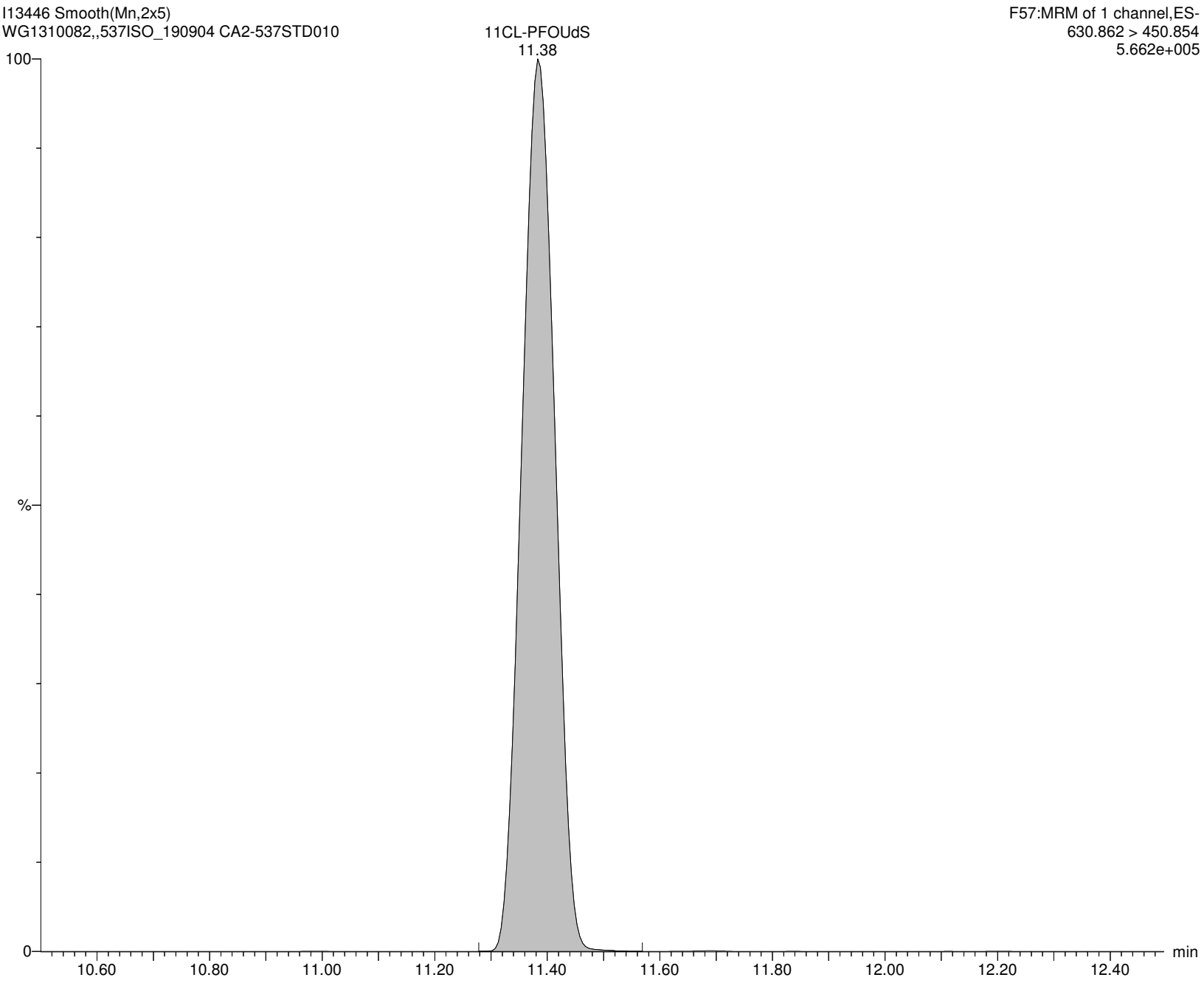
**11CL-PFOUdS**



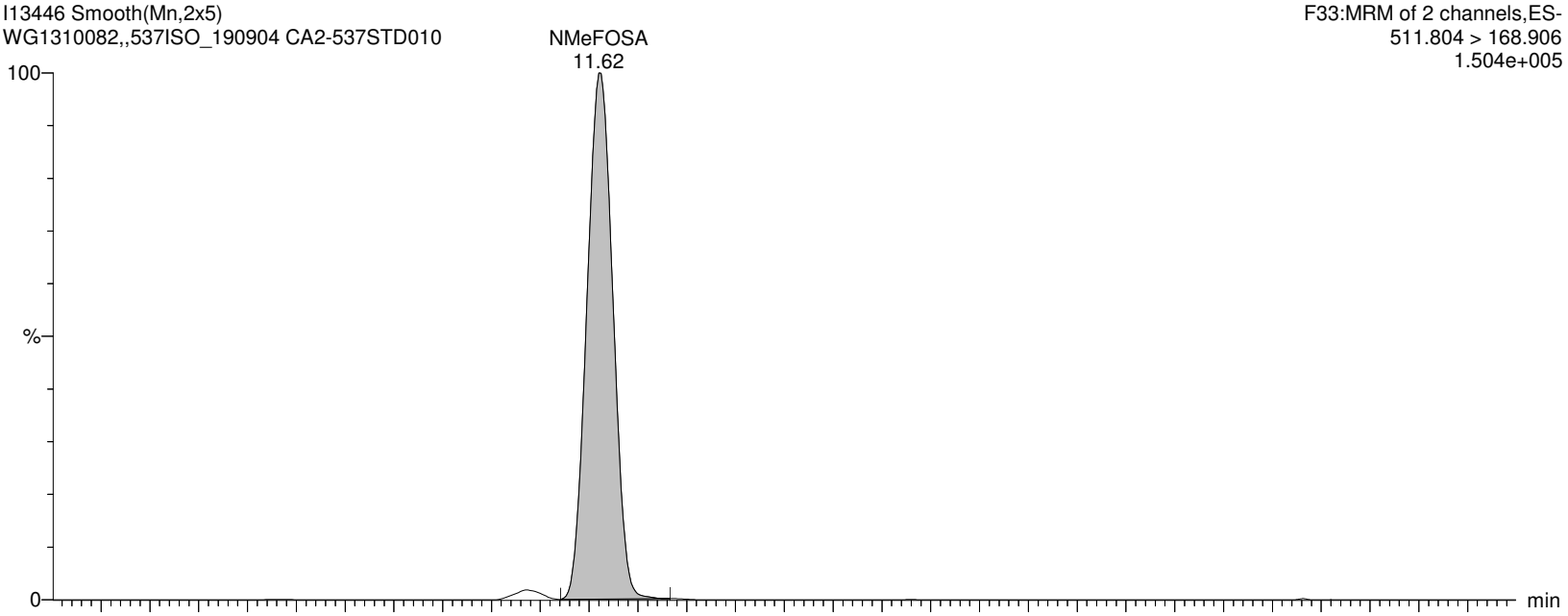


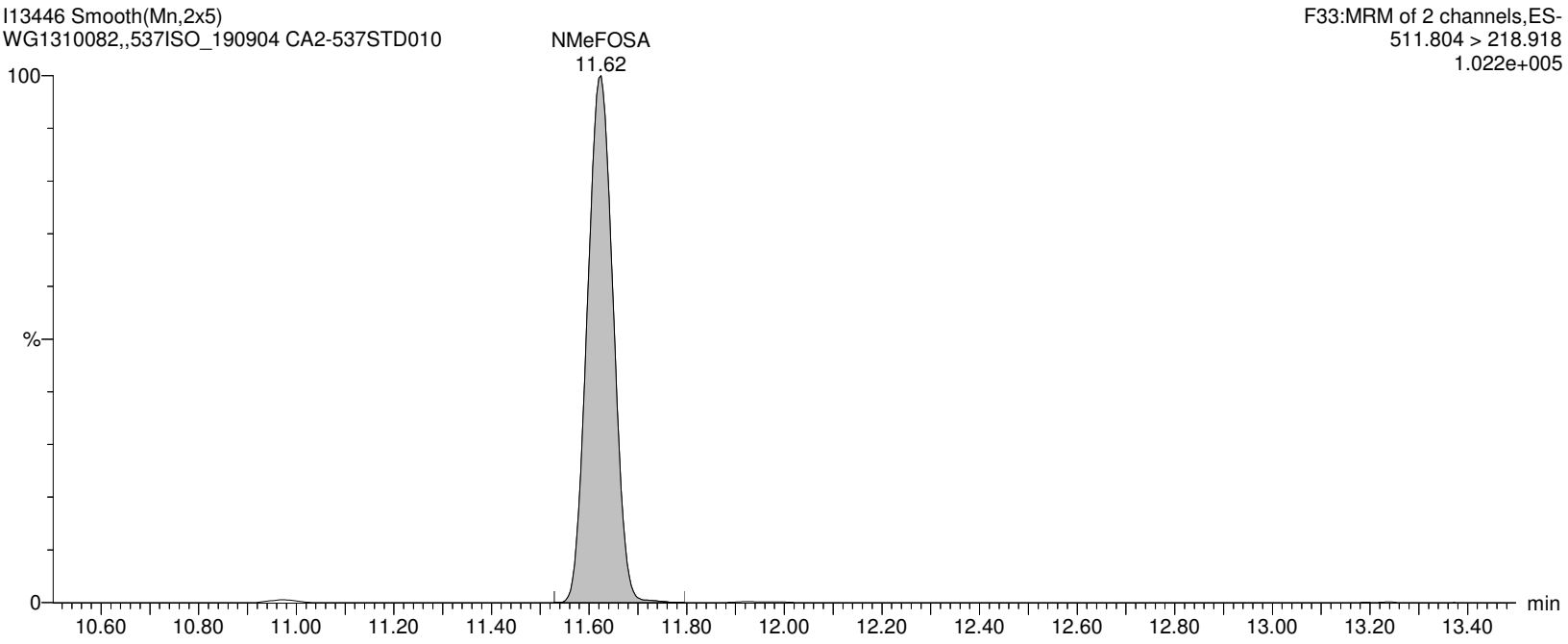
all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICV.qld
Last Altered: Monday, November 18, 2019 14:24:08 Eastern Standard Time
Printed: Monday, November 18, 2019 14:24:51 Eastern Standard Time

**Name: I13446**
**ID: CA2-537STD010**
**Date: 18-Nov-2019**
**Time: 14:05:52**
**Description: WG1310082,,537ISO_190904**
**User: LCMS02:JW**
**Vial: 1:B,3**
**Instrument: XEVO-TQSmicro#QEB0050**
**Inlet Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\LCMS_537_ISO_B**
**Tune Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\181009_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**NMeFOSA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICV.qld
Last Altered: Monday, November 18, 2019 14:24:08 Eastern Standard Time
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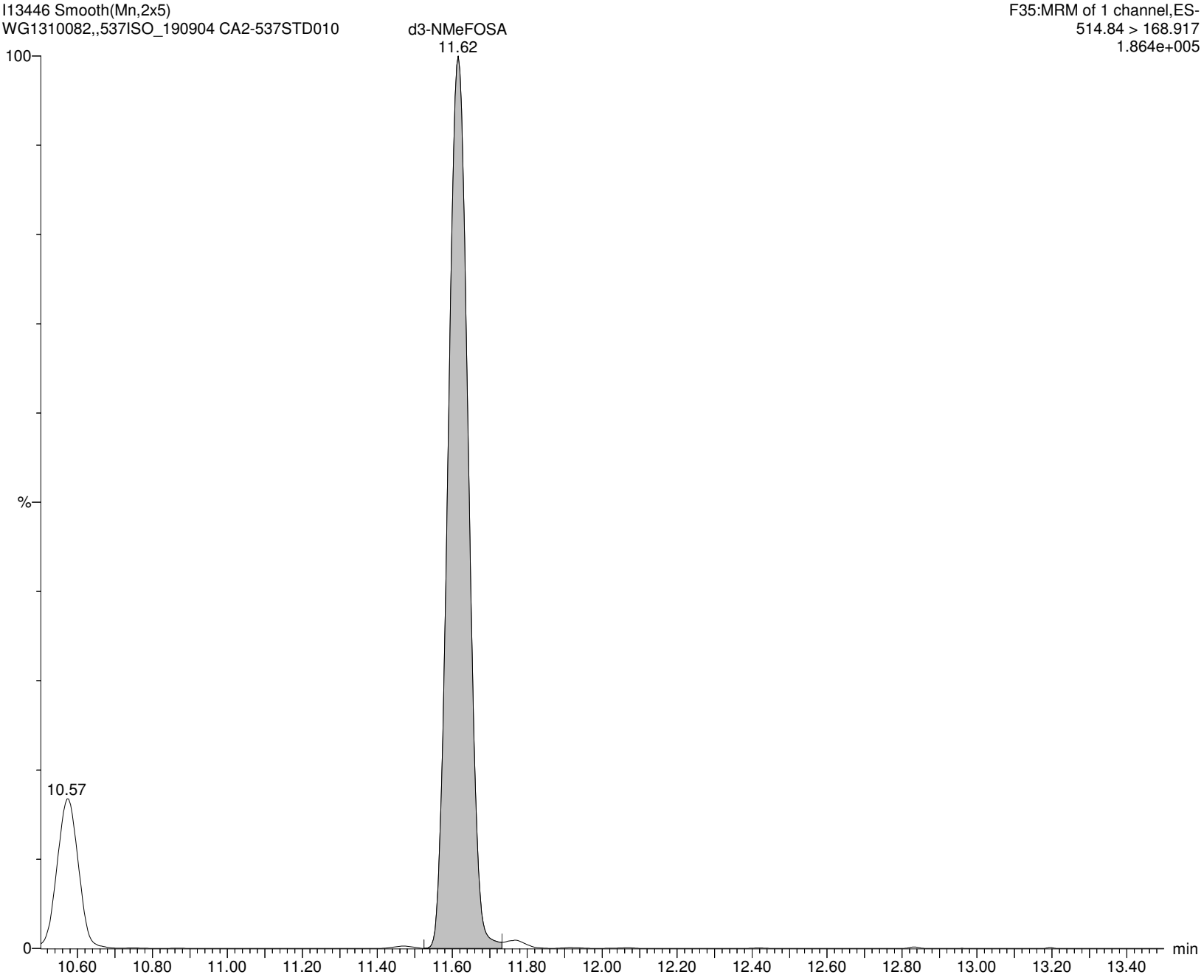
**Name: I13446**
**ID: CA2-537STD010**
**Date: 18-Nov-2019**
**Time: 14:05:52**
**Description: WG1310082,,537ISO_190904**
**User: LCMS02:JW**
**Vial: 1:B,3**
**Instrument: XEVO-TQSmicro#QEB0050**
**Inlet Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\LCMS_537_ISO_B**
**Tune Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\181009_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**d3-NMeFOSA**



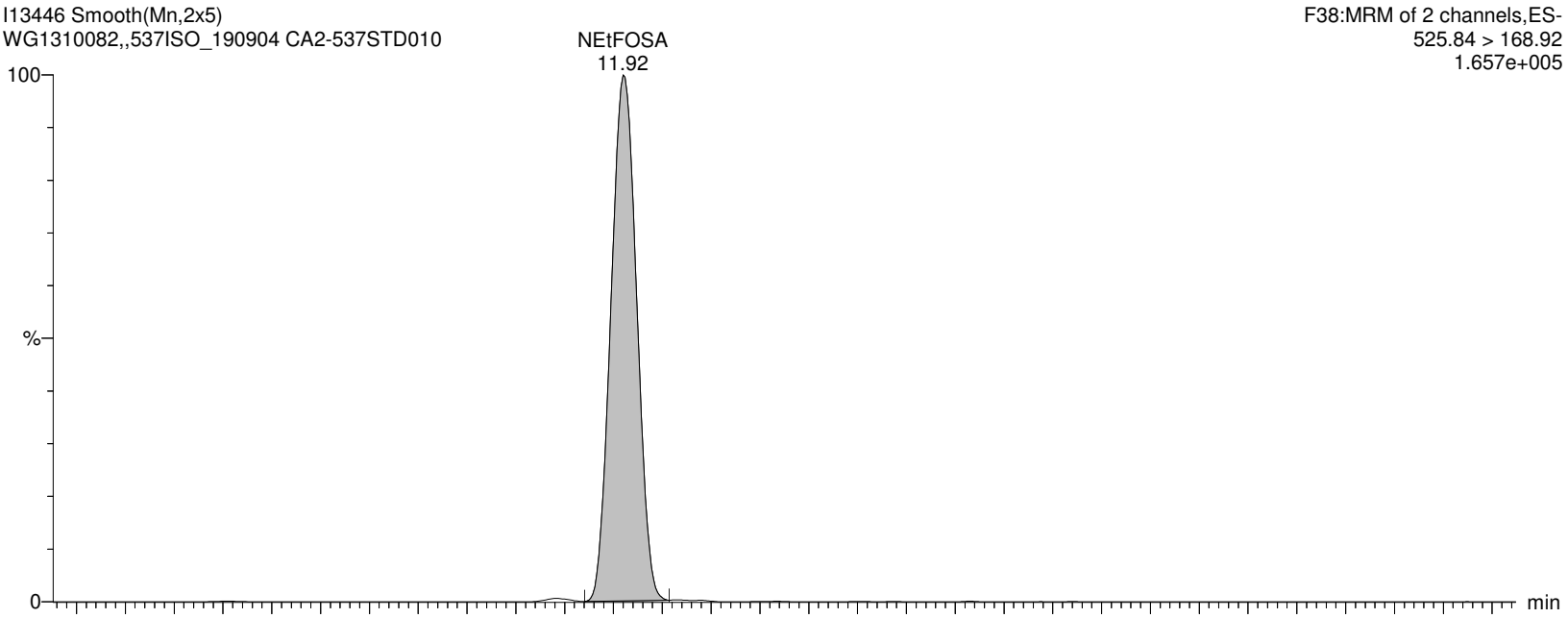


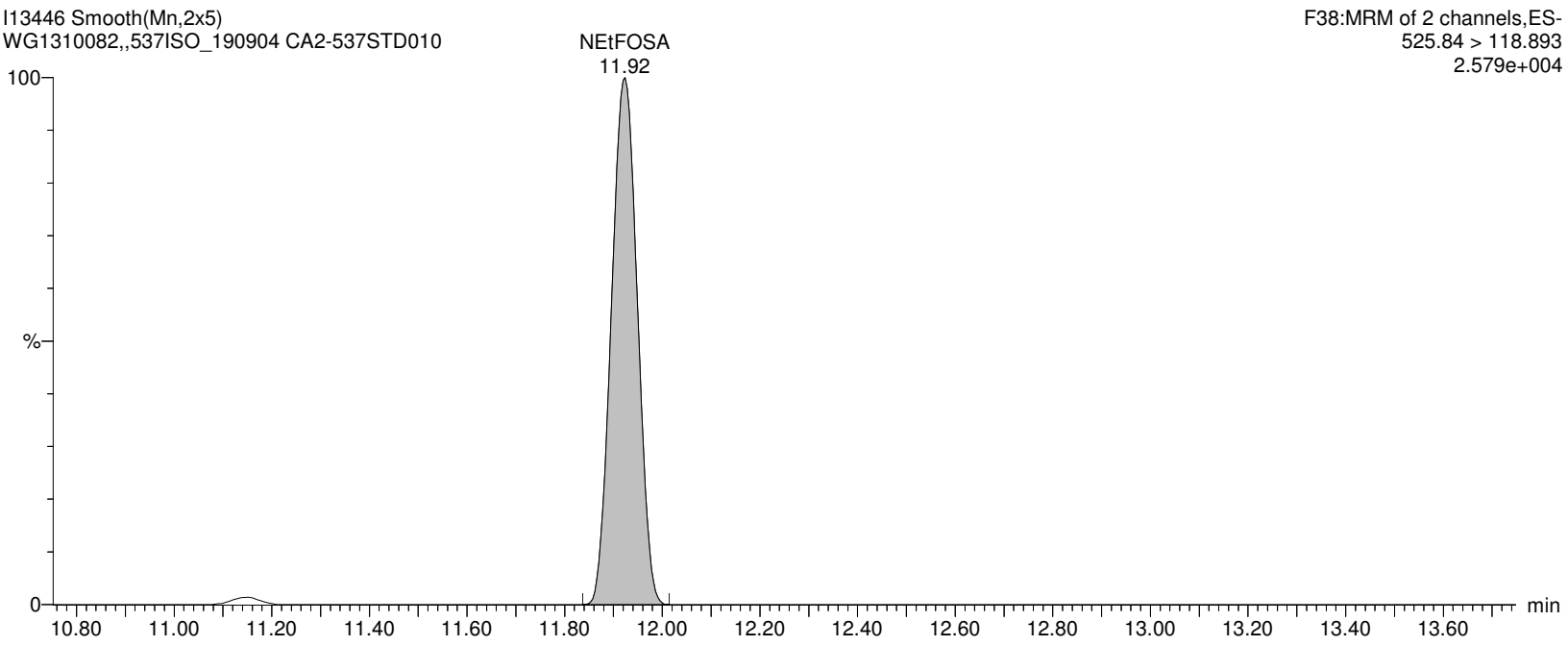
all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICV.qld
Last Altered: Monday, November 18, 2019 14:24:08 Eastern Standard Time
Printed: Monday, November 18, 2019 14:24:51 Eastern Standard Time

**Name: I13446**
**ID: CA2-537STD010**
**Date: 18-Nov-2019**
**Time: 14:05:52**
**Description: WG1310082,,537ISO_190904**
**User: LCMS02:JW**
**Vial: 1:B,3**
**Instrument: XEVO-TQSmicro#QEB0050**
**Inlet Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\LCMS_537_ISO_B**
**Tune Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\181009_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**NEtFOSA**



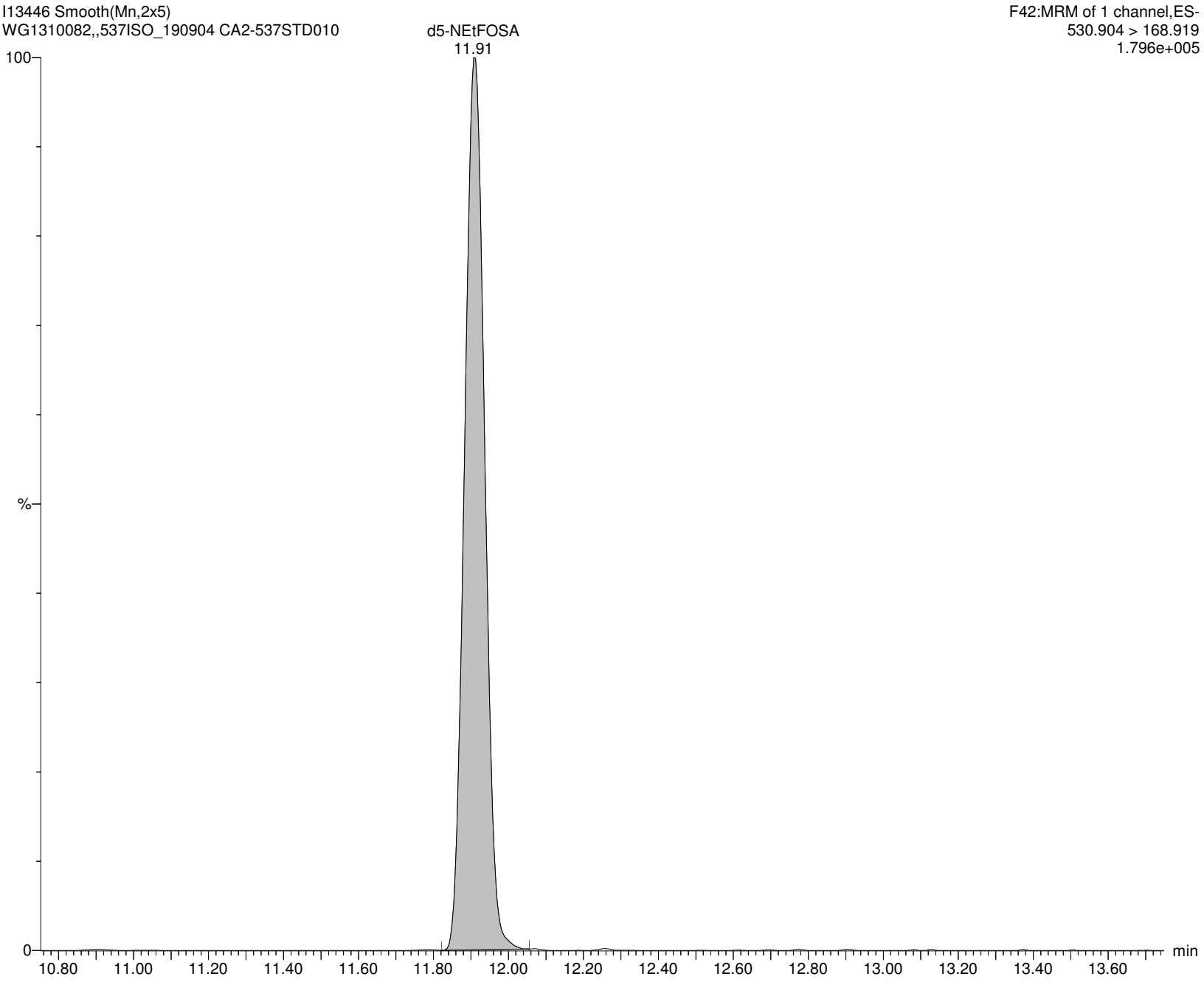


all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICV.qld
Last Altered: Monday, November 18, 2019 14:24:08 Eastern Standard Time
Printed: Monday, November 18, 2019 14:24:51 Eastern Standard Time

**Name: I13446**
**ID: CA2-537STD010**
**Date: 18-Nov-2019**
**Time: 14:05:52**
**Description: WG1310082,,537ISO_190904**
**User: LCMS02:JW**
**Vial: 1:B,3**
**Instrument: XEVO-TQSmicro#QEB0050**
**Inlet Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\LCMS_537_ISO_B**
**Tune Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\181009_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**d5-NEtFOSA**



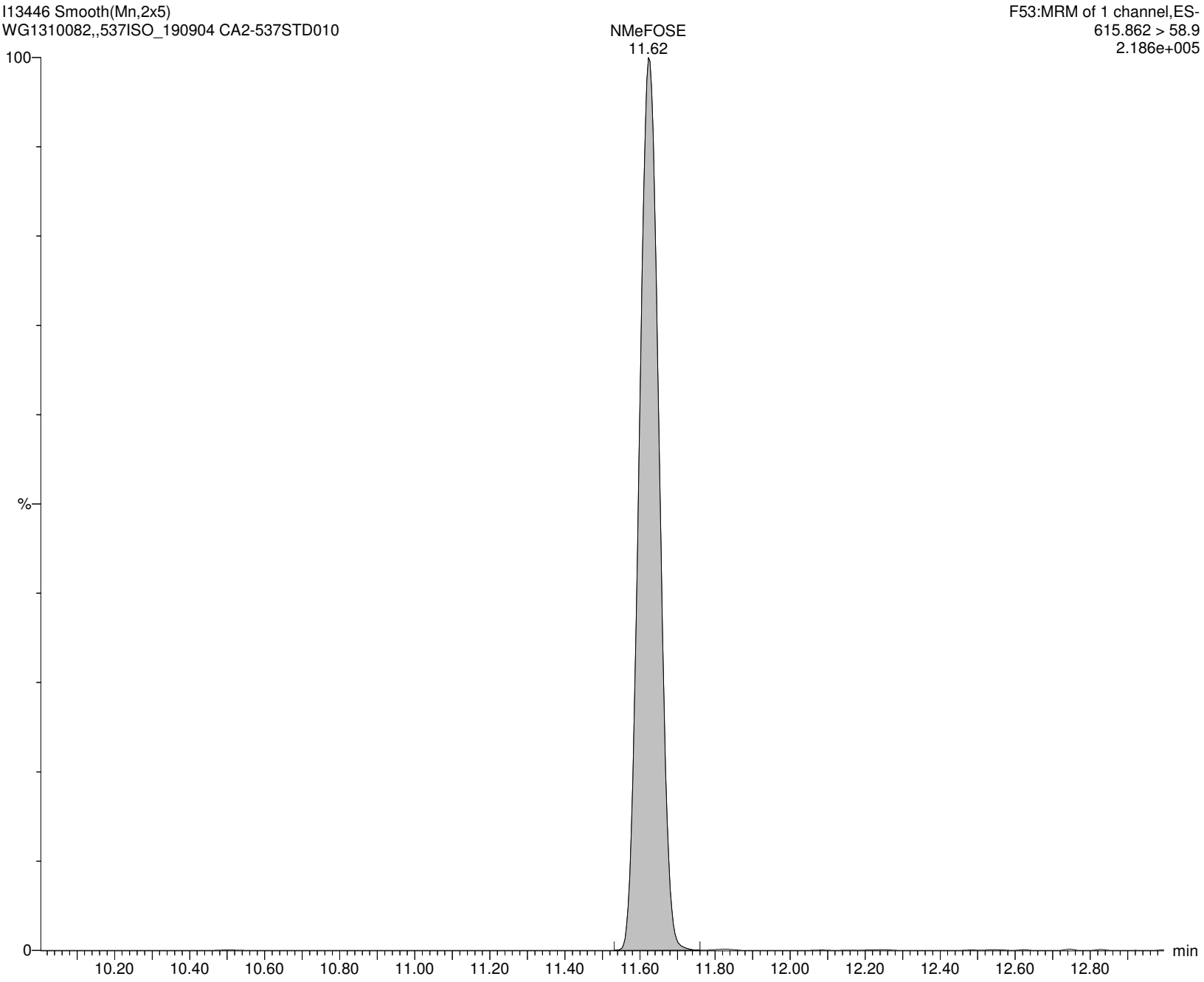


all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICV.qld
Last Altered: Monday, November 18, 2019 14:24:08 Eastern Standard Time
Printed: Monday, November 18, 2019 14:24:51 Eastern Standard Time

**Name: I13446**
**ID: CA2-537STD010**
**Date: 18-Nov-2019**
**Time: 14:05:52**
**Description: WG1310082,,537ISO_190904**
**User: LCMS02:JW**
**Vial: 1:B,3**
**Instrument: XEVO-TQSmicro#QEB0050**
**Inlet Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\LCMS_537_ISO_B**
**Tune Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\181009_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**NMeFOSE**



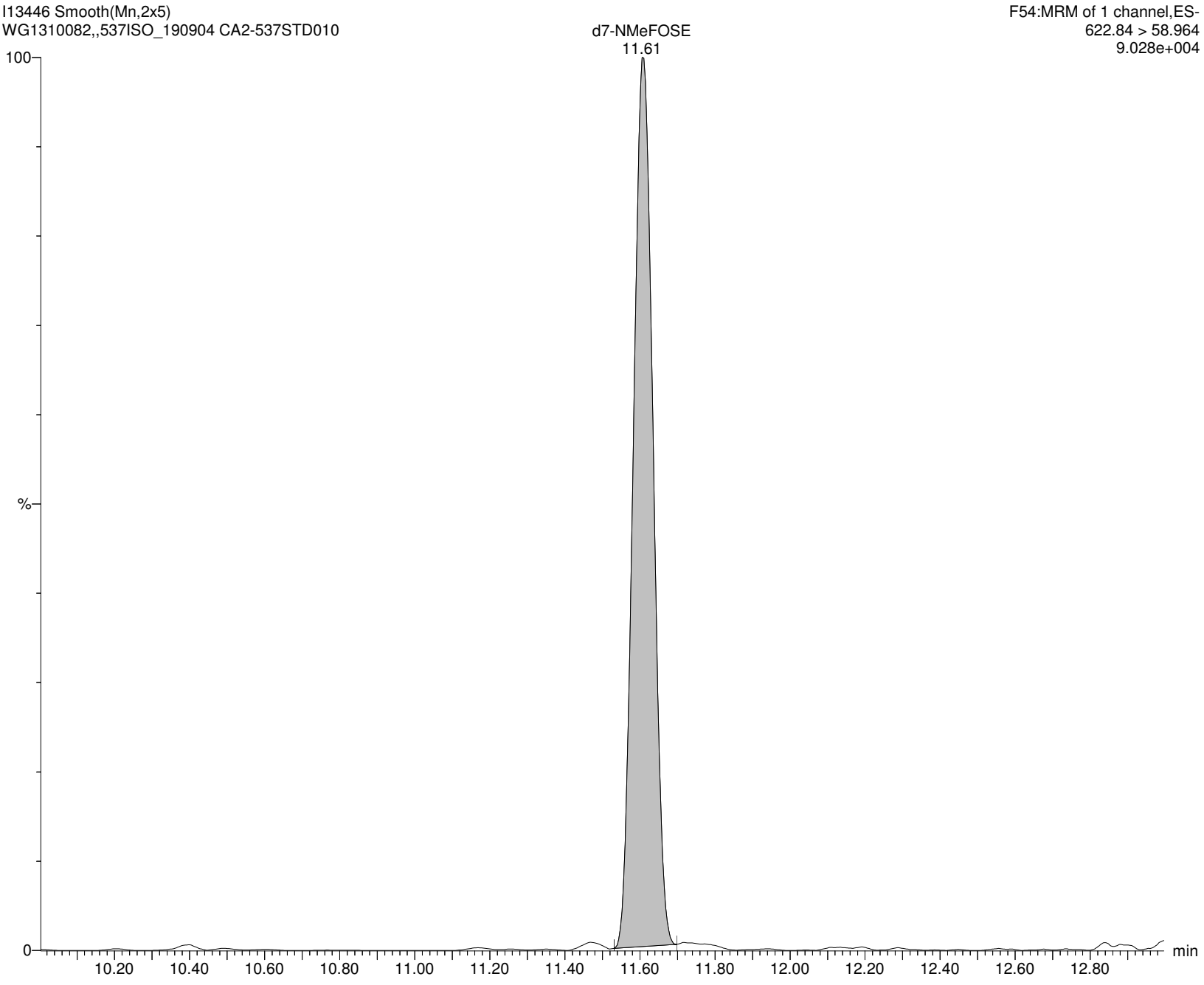


all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICV.qld
Last Altered: Monday, November 18, 2019 14:24:08 Eastern Standard Time
Printed: Monday, November 18, 2019 14:24:51 Eastern Standard Time

**Name: I13446**
**ID: CA2-537STD010**
**Date: 18-Nov-2019**
**Time: 14:05:52**
**Description: WG1310082,,537ISO_190904**
**User: LCMS02:JW**
**Vial: 1:B,3**
**Instrument: XEVO-TQSmicro#QEB0050**
**Inlet Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\LCMS_537_ISO_B**
**Tune Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\181009_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**d7-NMeFOSE**



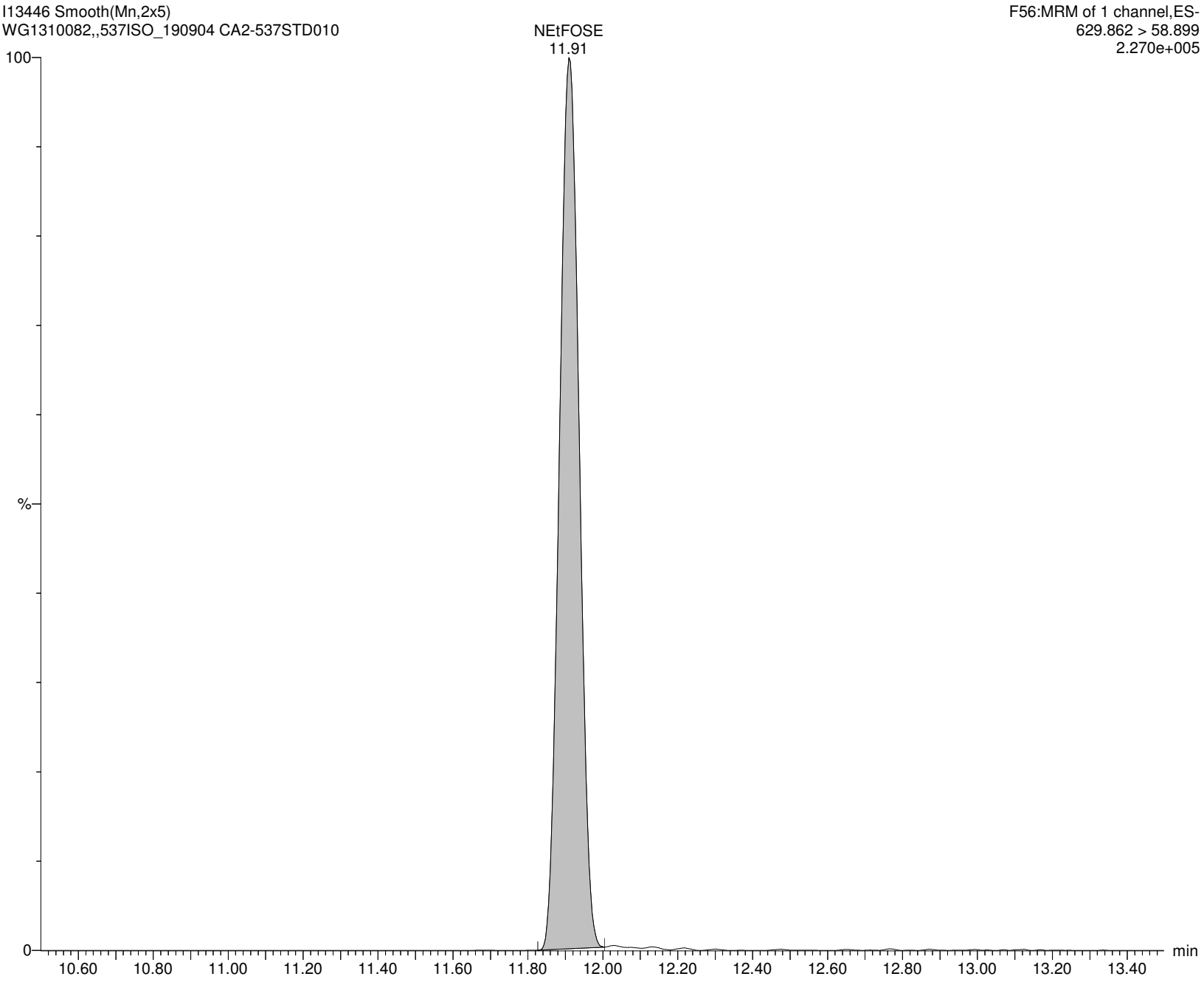


all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICV.qld
Last Altered: Monday, November 18, 2019 14:24:08 Eastern Standard Time
Printed: Monday, November 18, 2019 14:24:51 Eastern Standard Time

**Name: I13446**
**ID: CA2-537STD010**
**Date: 18-Nov-2019**
**Time: 14:05:52**
**Description: WG1310082,,537ISO_190904**
**User: LCMS02:JW**
**Vial: 1:B,3**
**Instrument: XEVO-TQSmicro#QEB0050**
**Inlet Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\LCMS_537_ISO_B**
**Tune Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\181009_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**NEtFOSE**



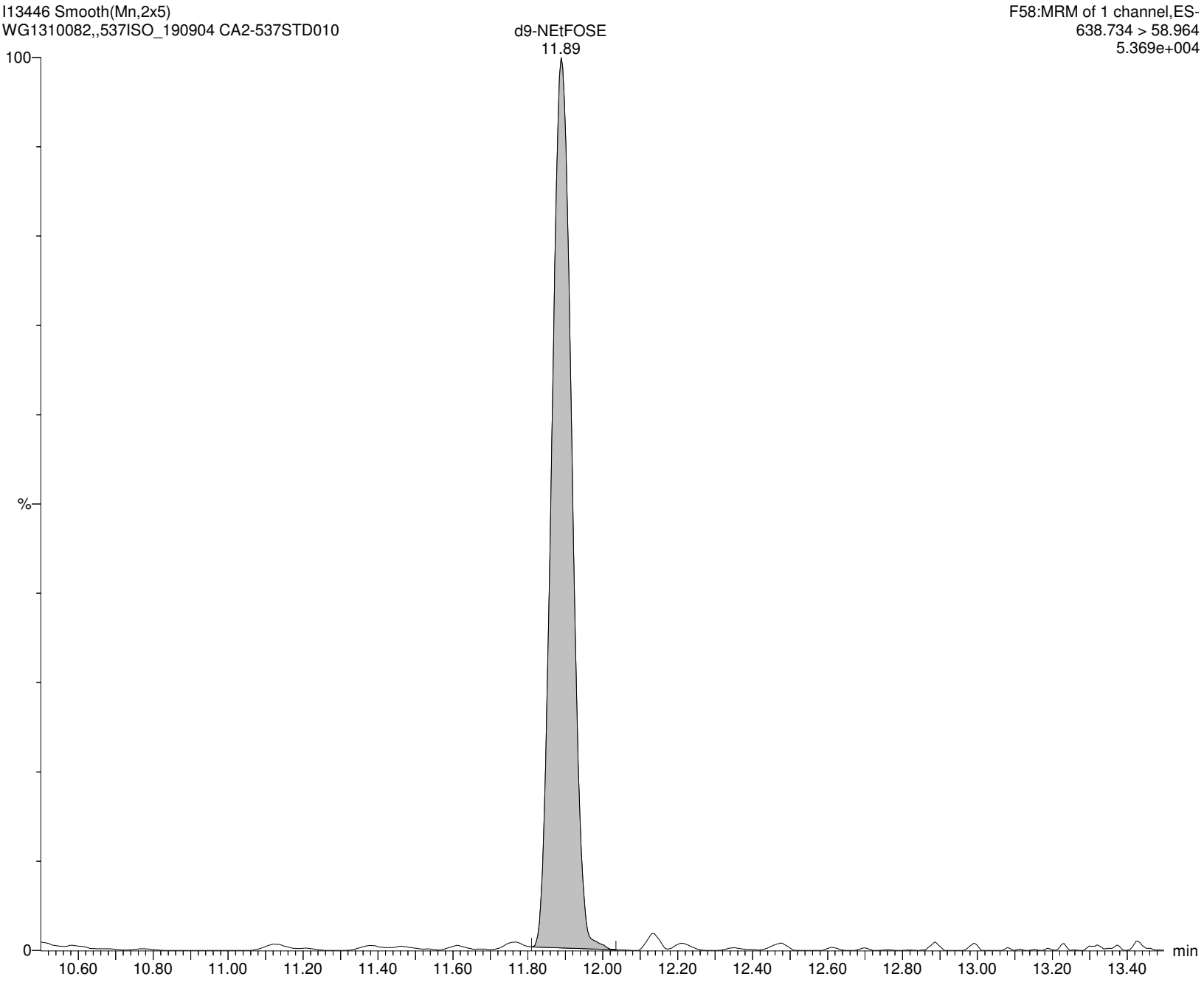


all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\WG1310082ICV.qld
Last Altered: Monday, November 18, 2019 14:24:08 Eastern Standard Time
Printed: Monday, November 18, 2019 14:24:51 Eastern Standard Time

**Name: I13446**
**ID: CA2-537STD010**
**Date: 18-Nov-2019**
**Time: 14:05:52**
**Description: WG1310082,,537ISO_190904**
**User: LCMS02:JW**
**Vial: 1:B,3**
**Instrument: XEVO-TQSmicro#QEB0050**
**Inlet Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\LCMS_537_ISO_B**
**Tune Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\181009_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**d9-NEtFOSE**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\TECHSTD.qld
Last Altered: Monday, November 18, 2019 14:39:57 Eastern Standard Time
Printed: Monday, November 18, 2019 14:47:32 Eastern Standard Time

**Method: C:\MassLynx\Data\2019\191118_537ISO.PRO\MethDB\537ISO_Q_191118_DOD .mdb 18 Nov 2019 13:42:01**
**Calibration: C:\MassLynx\Data\2019\191118_537ISO.PRO\CurveDB\191118_ISO_ICAL.cdb 18 Nov 2019 13:41:42**

**ID: TECHSTD_190520A**
**Name: I13447**
**Date: 18-Nov-2019**
**Time: 14:22:24**
**Description: WG1310082,,537ISO_TECHSTD_190520A**
**Instrument: XEVO-TQSmicro#QEB0050**
**User: LCMS02:JW**
**Inlet Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\LCMS_537_ISO_B**
**Tune Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\181009_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

| | Name | CAS | RT | Trace | Area | M Flag | Conc (ng/mL) | Ion Ratio | Ratio Flag | %Rec |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | br-PFOA | 335-67-1 | 8.97 | 412.989 > 368.9 | 60850 | M5 | 5.471 | 36.51 | NO | |
| 2 | L-PFOA | 335-67-1 | 9.19 | 412.989 > 368.9 | 412670 | | 37.100 | 10.04 | NO | |
| 3 | PFOA | 335-67-1 | | 412.989 > 368.9 | 473520 | | 42.570 | | na | |
| 4 | br-PFOS | 1763-23-1 | 9.74 | 498.989 > 80.294 | 13931 | M5 | 11.735 | 11.56 | NO | |
| 5 | L-PFOS | 1763-23-1 | 9.99 | 498.989 > 80.294 | 20493 | | 23.891 | 1.48 | YES | |
| 6 | PFOS | 1763-23-1 | | 498.989 > 80.294 | 34424 | | 35.625 | | na | |
| 7 | br-NMeFOSAA | 2355-31-9 | 10.80 | 570.053 > 418.917 | 5151 | M5 | 5.017 | 1.38 | NO | |
| 8 | L-NMeFOSAA | 2355-31-9 | 10.96 | 570.053 > 418.917 | 45978 | | 44.787 | 2.68 | NO | |
| 9 | NMeFOSAA | 2355-31-9 | | 570.053 > 418.917 | 51129 | | 49.805 | | na | |
| 10 | br-NEtFOSAA | 2991-50-6 | 11.10 | 583.989 > 418.927 | 6465 | M5 | 6.775 | 2.72 | NO | |
| 11 | L-NEtFOSAA | 2991-50-6 | 11.25 | 583.989 > 418.927 | 36796 | | 38.557 | 2.41 | NO | |
| 12 | NEtFOSAA | 2991-50-6 | | 583.989 > 418.927 | 43261 | | 45.331 | | na | |

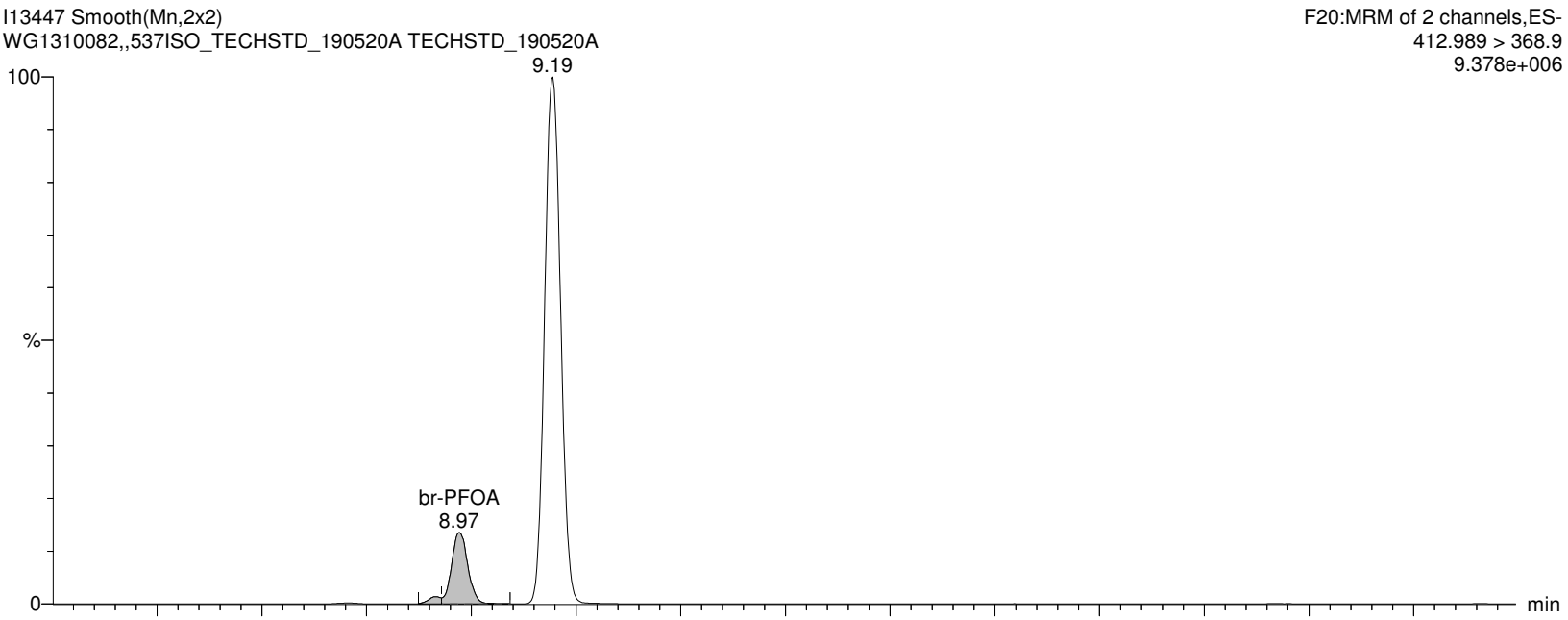

all concentration units in (ng/mL)

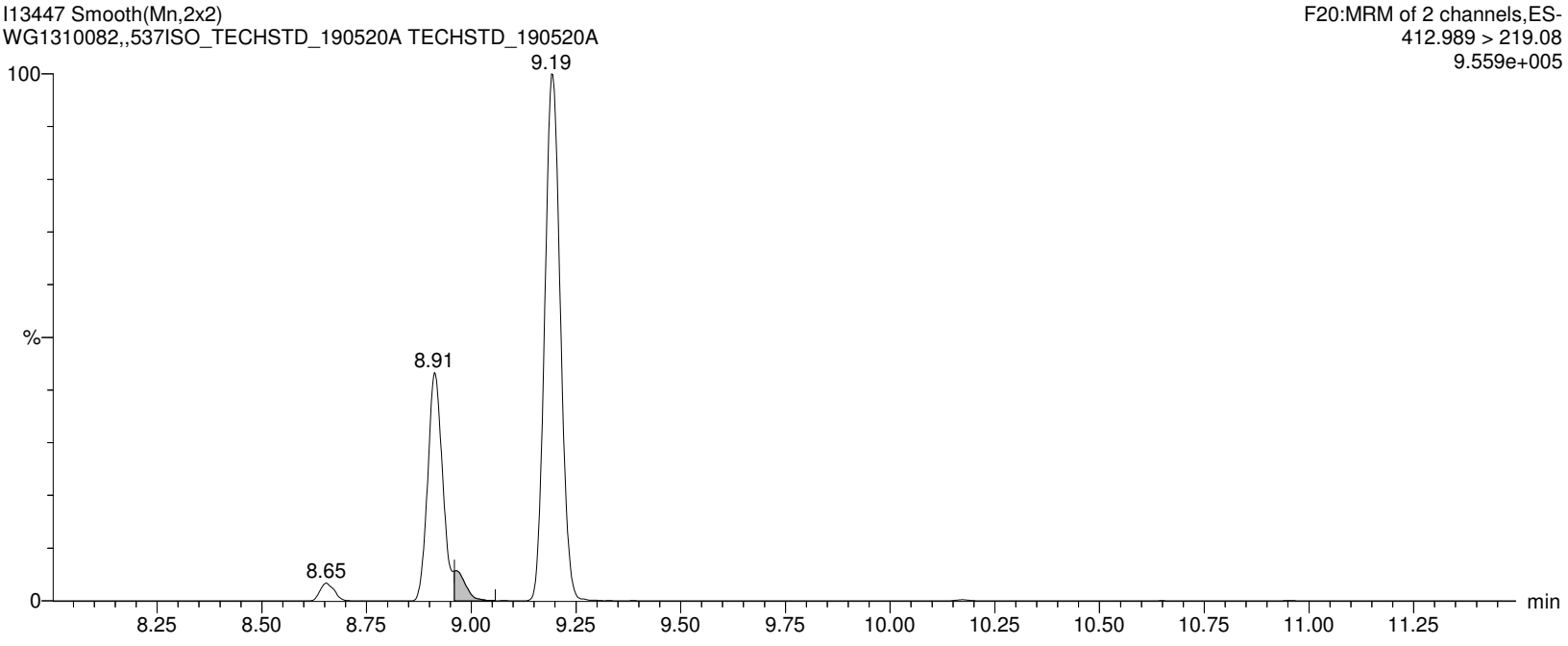
Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\TECHSTD.qld
Last Altered: Monday, November 18, 2019 14:39:57 Eastern Standard Time
Printed: Monday, November 18, 2019 14:47:32 Eastern Standard Time

**Method: C:\MassLynx\Data\2019\191118_537ISO.PRO\MethDB\537ISO_Q_191118_DOD .mdb 18 Nov 2019 13:42:01**
**Calibration: C:\MassLynx\Data\2019\191118_537ISO.PRO\CurveDB\191118_ISO_ICAL.cdb 18 Nov 2019 13:41:42**

**Name: I13447**
**ID: TECHSTD_190520A**
**Date: 18-Nov-2019**
**Time: 14:22:24**
**Description: WG1310082,,537ISO_TECHSTD_190520A**
**User: LCMS02:JW**
**Vial: 1:B,4**
**Instrument: XEVO-TQSmicro#QEB0050**
**Inlet Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\LCMS_537_ISO_B**
**Tune Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\181009_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**br-PFOA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\TECHSTD.qld
Last Altered: Monday, November 18, 2019 14:39:57 Eastern Standard Time
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**Name: I13447**
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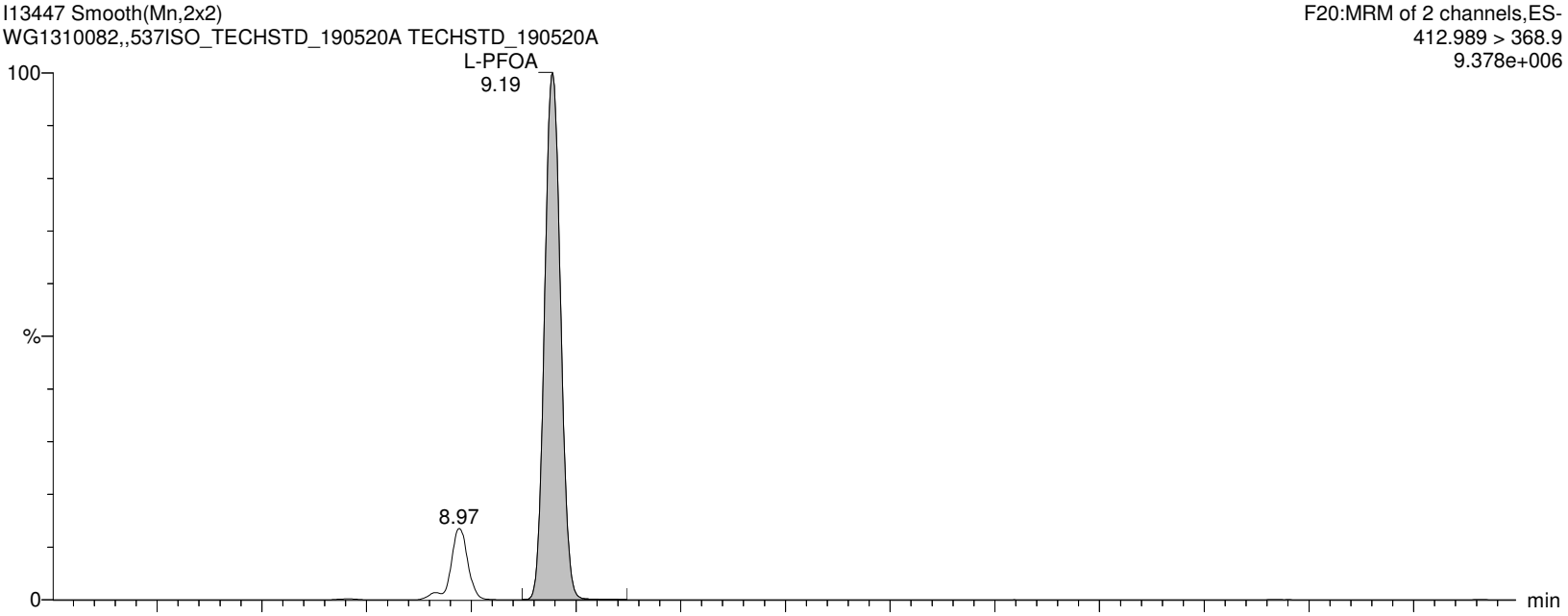
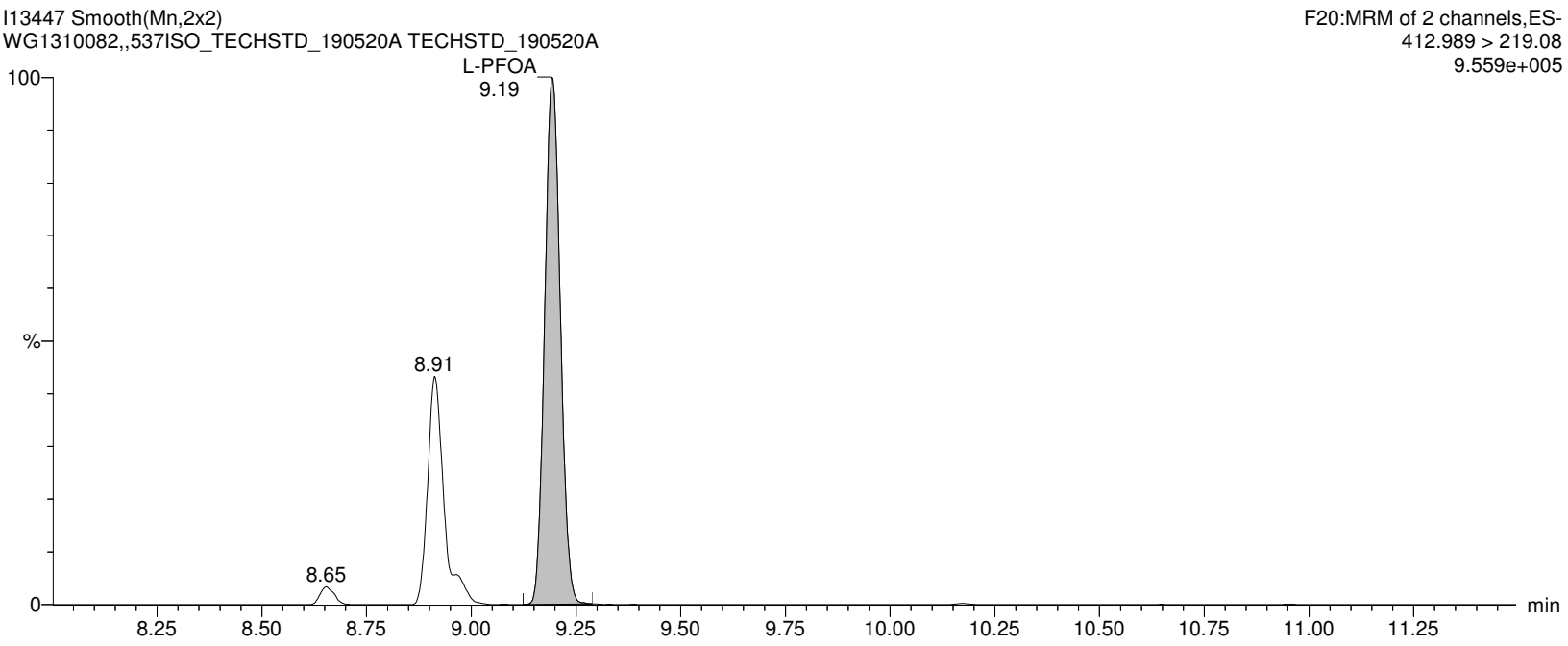
**Time: 14:22:24**
**Description: WG1310082,,537ISO_TECHSTD_190520A**
**User: LCMS02:JW**
**Vial: 1:B,4**
**Instrument: XEVO-TQSmicro#QEB0050**
**Inlet Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\LCMS_537_ISO_B**
**Tune Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\181009_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**L-PFOA**



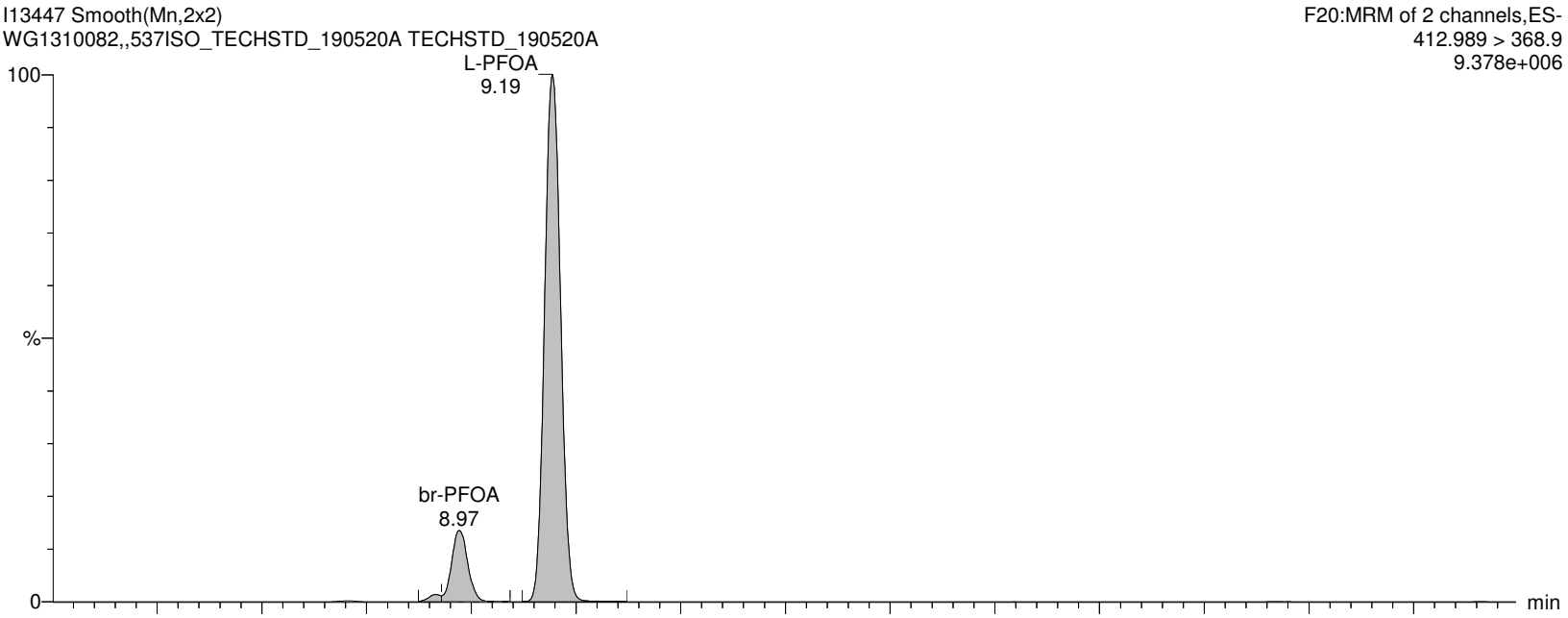


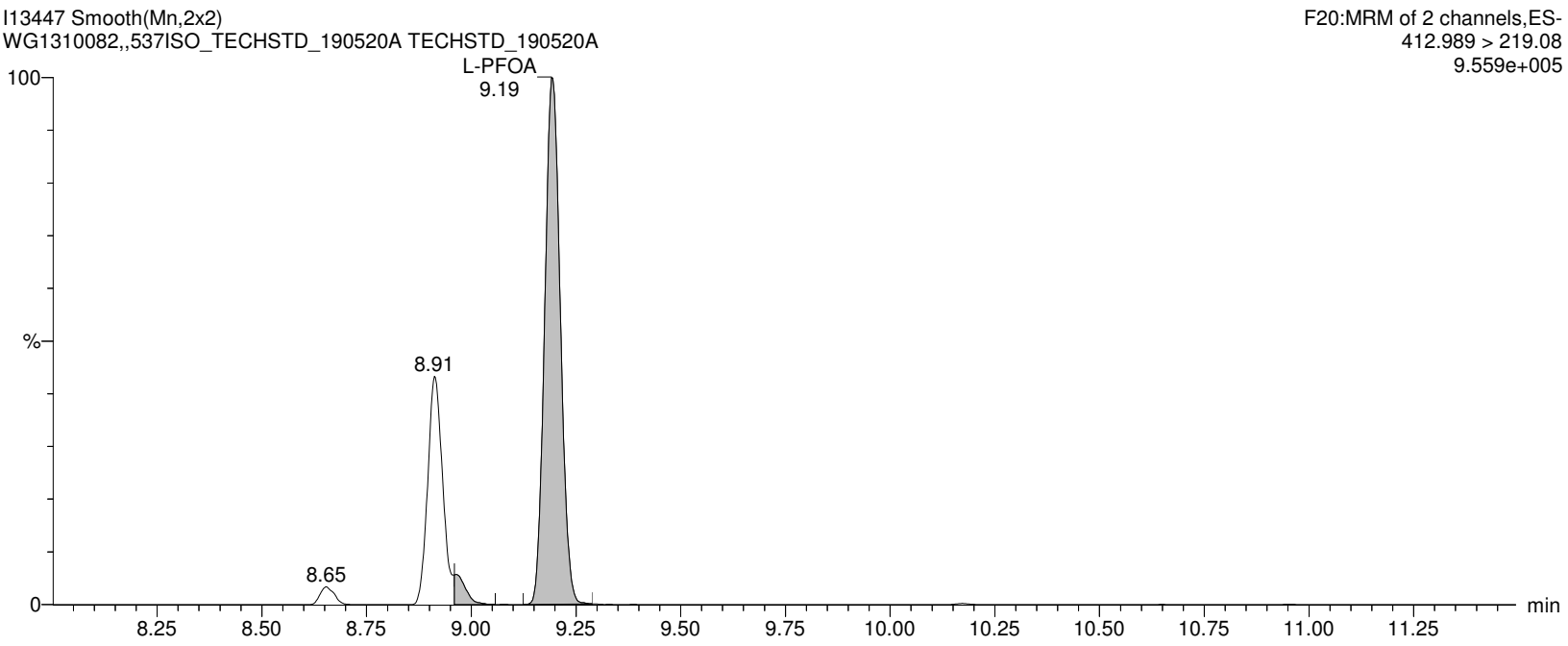
all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\TECHSTD.qld
Last Altered: Monday, November 18, 2019 14:39:57 Eastern Standard Time
Printed: Monday, November 18, 2019 14:47:32 Eastern Standard Time

**Name: I13447**
**ID: TECHSTD_190520A**
**Date: 18-Nov-2019**
**Time: 14:22:24**
**Description: WG1310082,,537ISO_TECHSTD_190520A**
**User: LCMS02:JW**
**Vial: 1:B,4**
**Instrument: XEVO-TQSmicro#QEB0050**
**Inlet Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\LCMS_537_ISO_B**
**Tune Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\181009_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**PFOA**



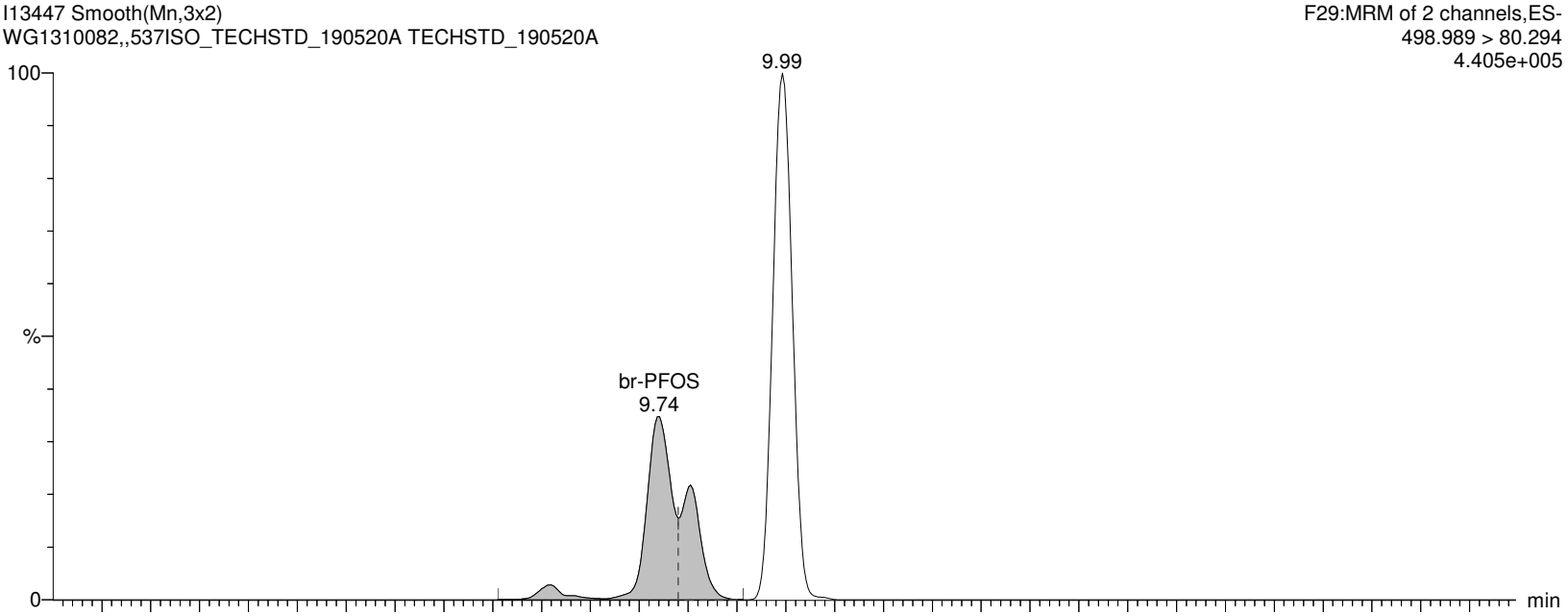


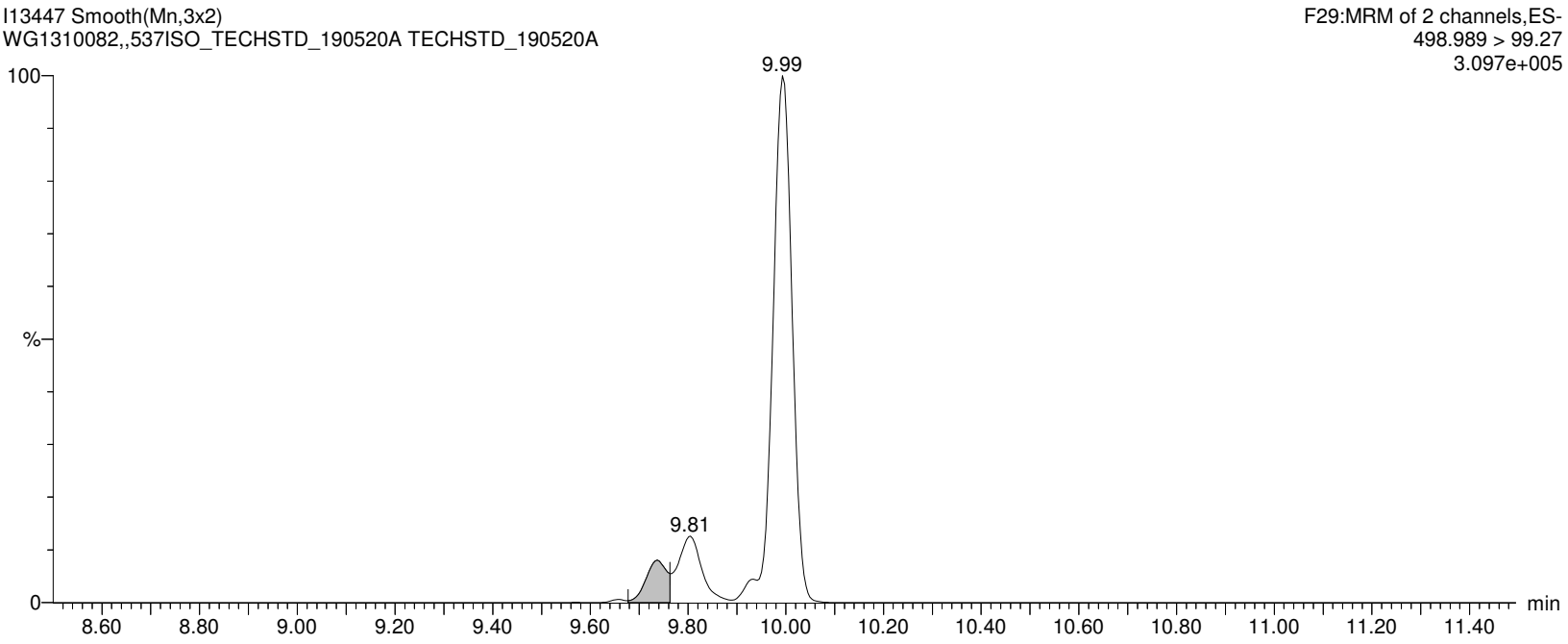
all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\TECHSTD.qld
Last Altered: Monday, November 18, 2019 14:39:57 Eastern Standard Time
Printed: Monday, November 18, 2019 14:47:32 Eastern Standard Time

**Name: I13447**
**ID: TECHSTD_190520A**
**Date: 18-Nov-2019**
**Time: 14:22:24**
**Description: WG1310082,,537ISO_TECHSTD_190520A**
**User: LCMS02:JW**
**Vial: 1:B,4**
**Instrument: XEVO-TQSmicro#QEB0050**
**Inlet Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\LCMS_537_ISO_B**
**Tune Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\181009_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**br-PFOS**



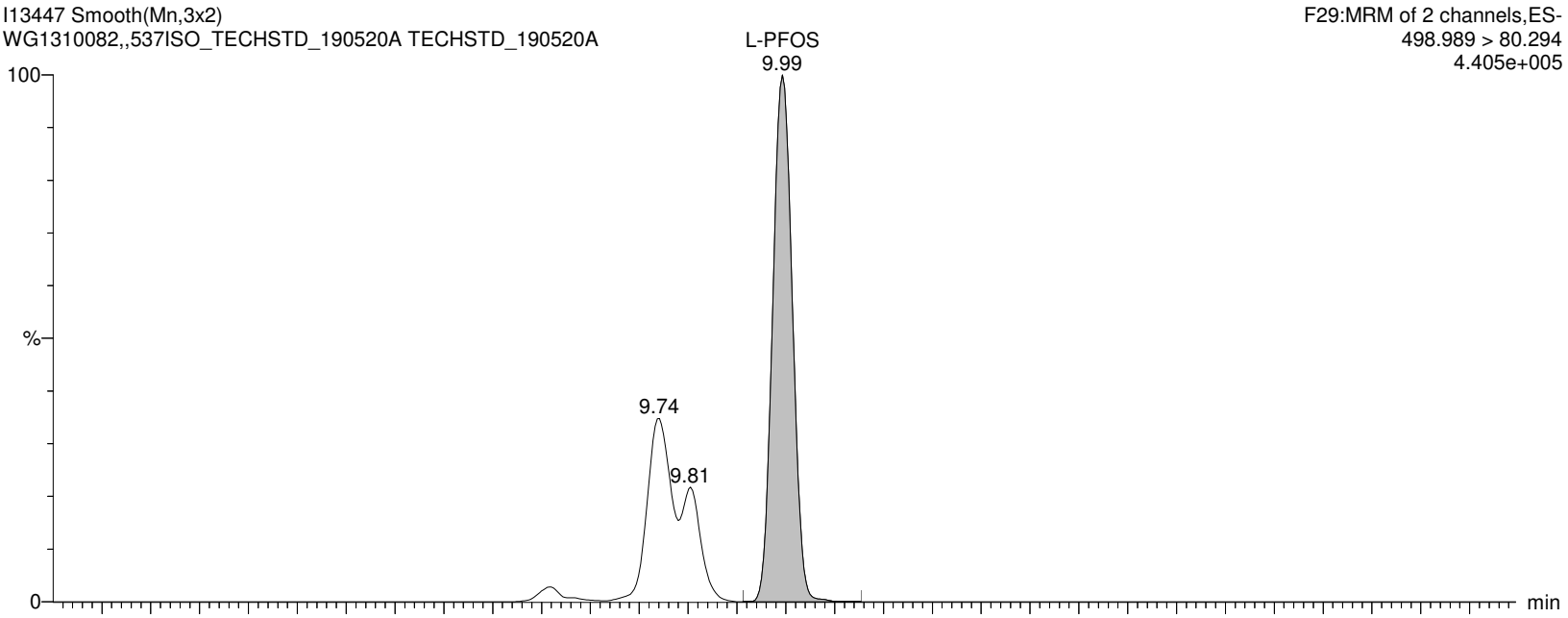


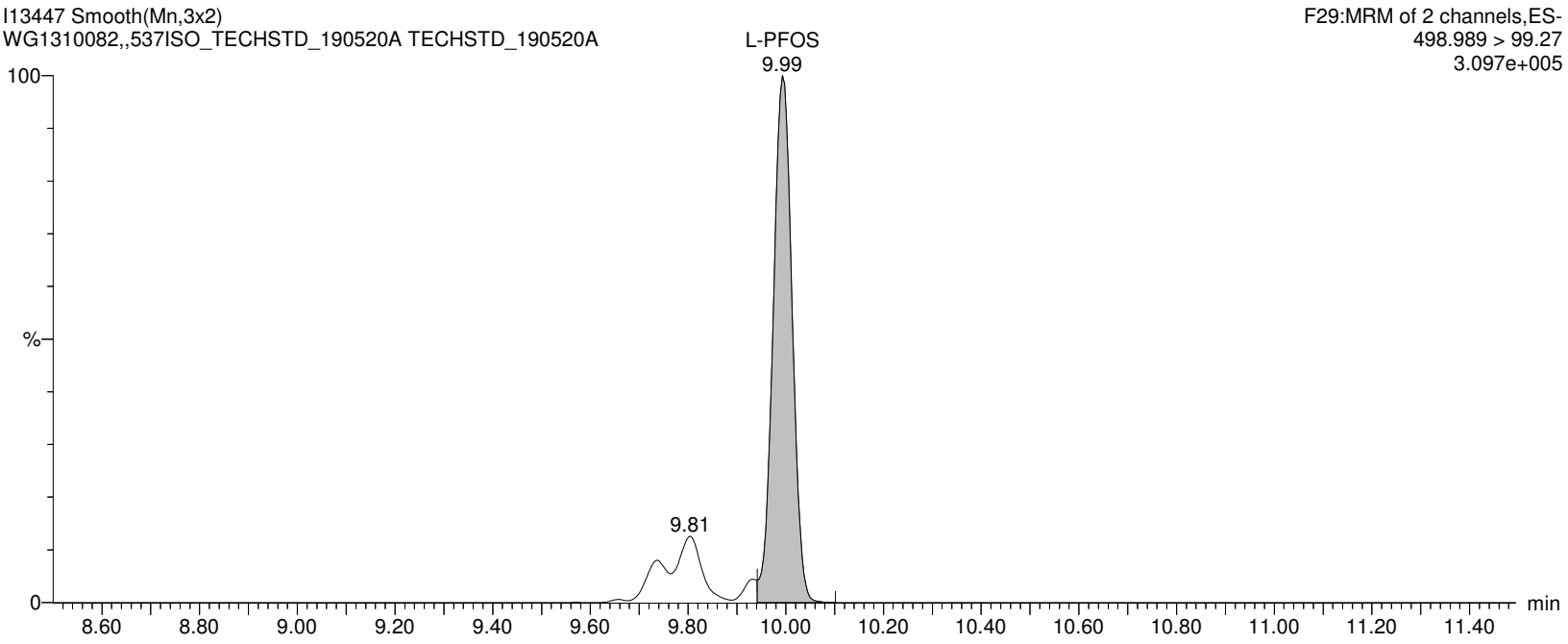
all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\TECHSTD.qld
Last Altered: Monday, November 18, 2019 14:39:57 Eastern Standard Time
Printed: Monday, November 18, 2019 14:47:32 Eastern Standard Time

**Name: I13447**
**ID: TECHSTD_190520A**
**Date: 18-Nov-2019**
**Time: 14:22:24**
**Description: WG1310082,,537ISO_TECHSTD_190520A**
**User: LCMS02:JW**
**Vial: 1:B,4**
**Instrument: XEVO-TQSmicro#QEB0050**
**Inlet Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\LCMS_537_ISO_B**
**Tune Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\181009_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**L-PFOS**



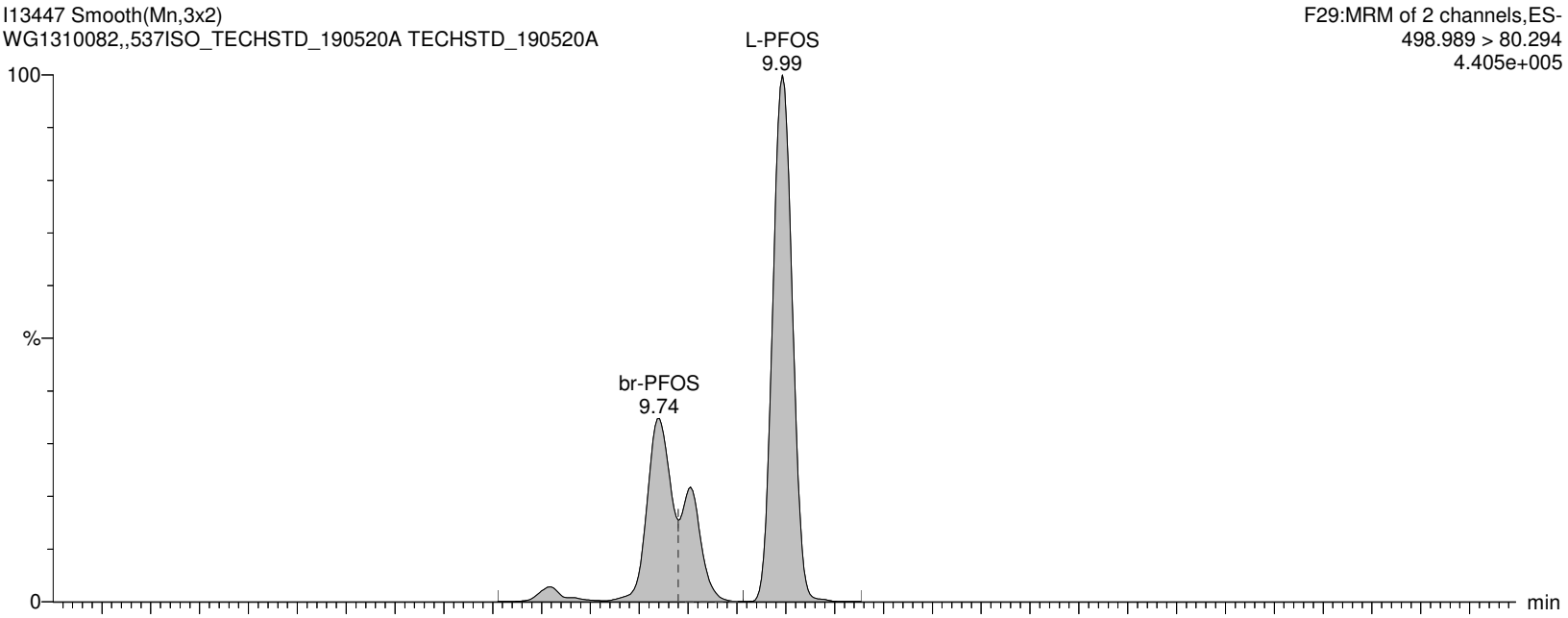


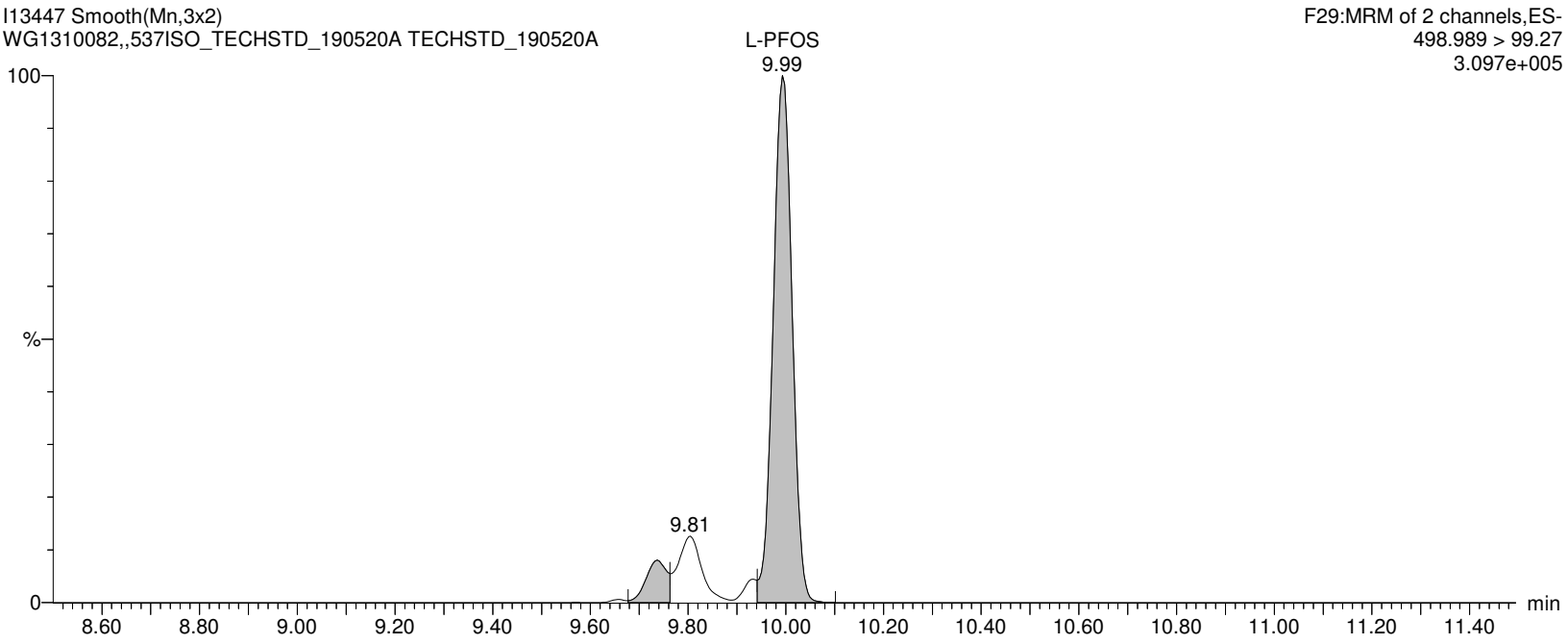
all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\TECHSTD.qld
Last Altered: Monday, November 18, 2019 14:39:57 Eastern Standard Time
Printed: Monday, November 18, 2019 14:47:32 Eastern Standard Time

**Name: I13447**
**ID: TECHSTD_190520A**
**Date: 18-Nov-2019**
**Time: 14:22:24**
**Description: WG1310082,,537ISO_TECHSTD_190520A**
**User: LCMS02:JW**
**Vial: 1:B,4**
**Instrument: XEVO-TQSmicro#QEB0050**
**Inlet Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\LCMS_537_ISO_B**
**Tune Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\181009_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**PFOS**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\TECHSTD.qld
Last Altered: Monday, November 18, 2019 14:39:57 Eastern Standard Time
Printed: Monday, November 18, 2019 14:47:32 Eastern Standard Time

**Name: I13447**
**ID: TECHSTD_190520A**
**Date: 18-Nov-2019**
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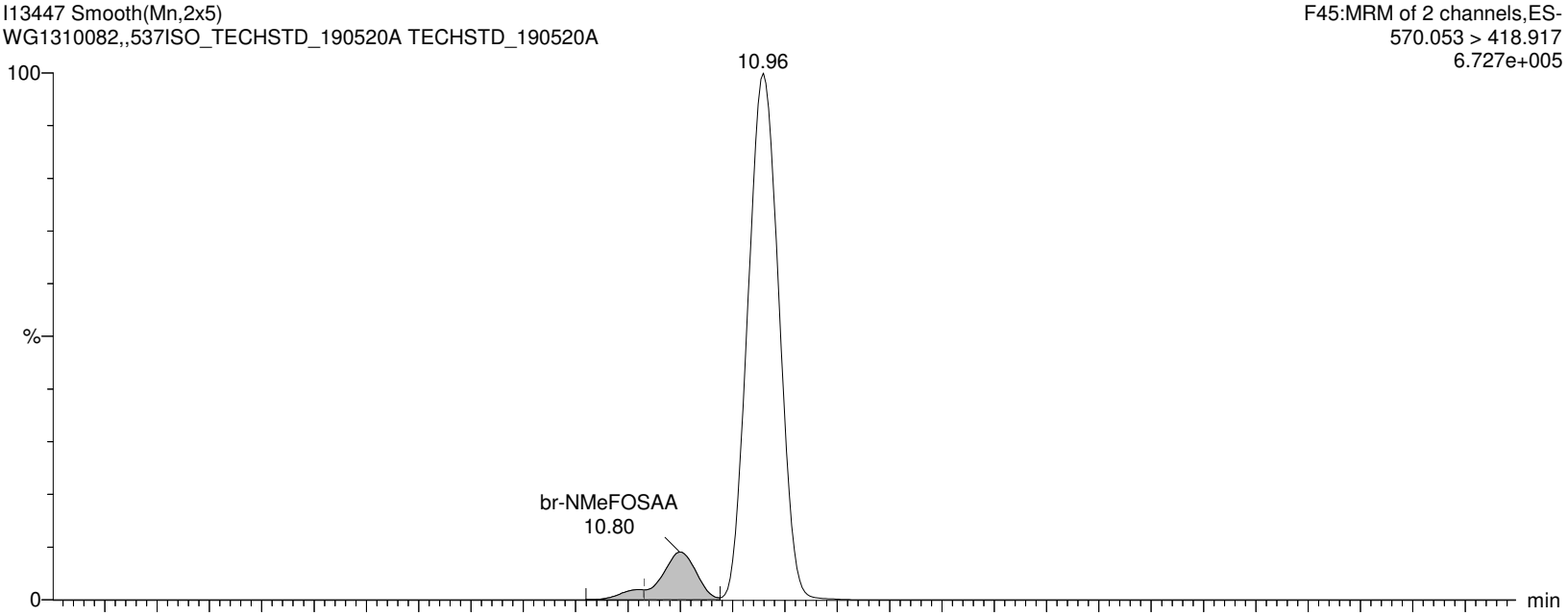
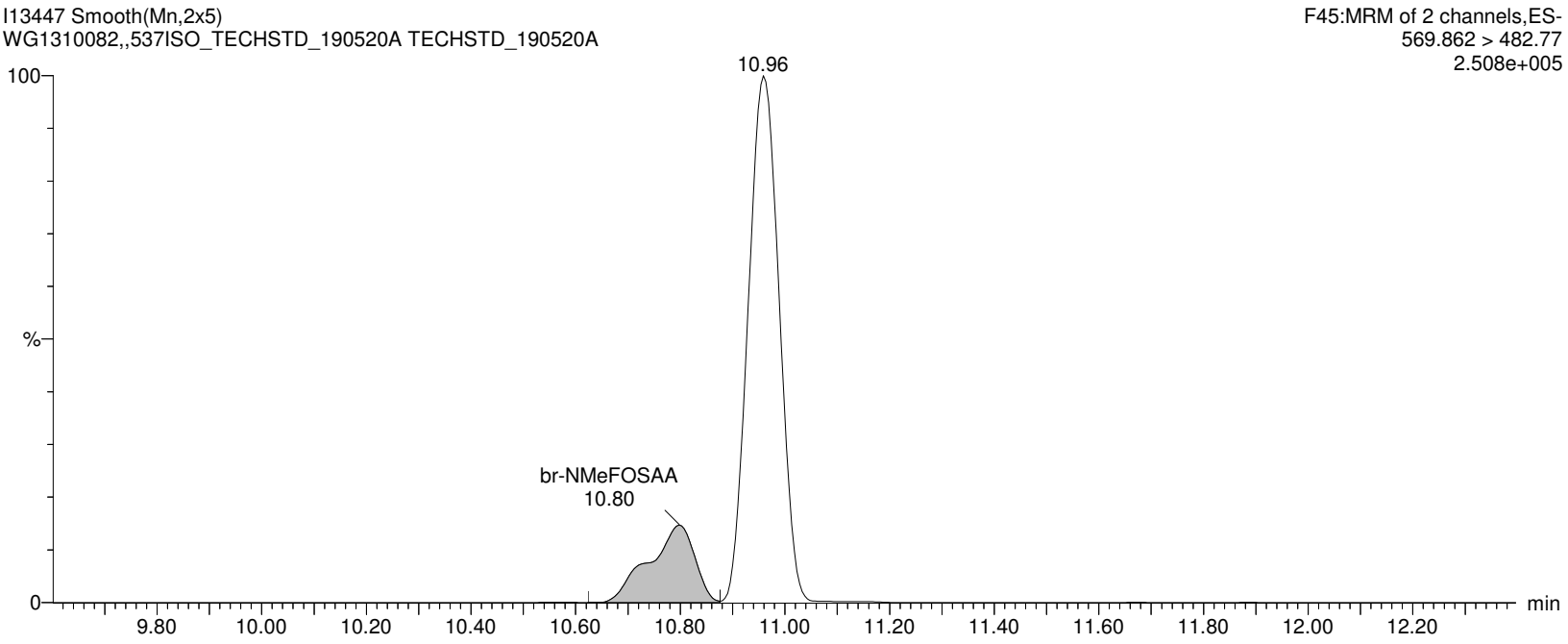
**User: LCMS02:JW**
**Vial: 1:B,4**
**Instrument: XEVO-TQSmicro#QEB0050**
**Inlet Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\LCMS_537_ISO_B**
**Tune Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\181009_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**br-NMeFOSAA**



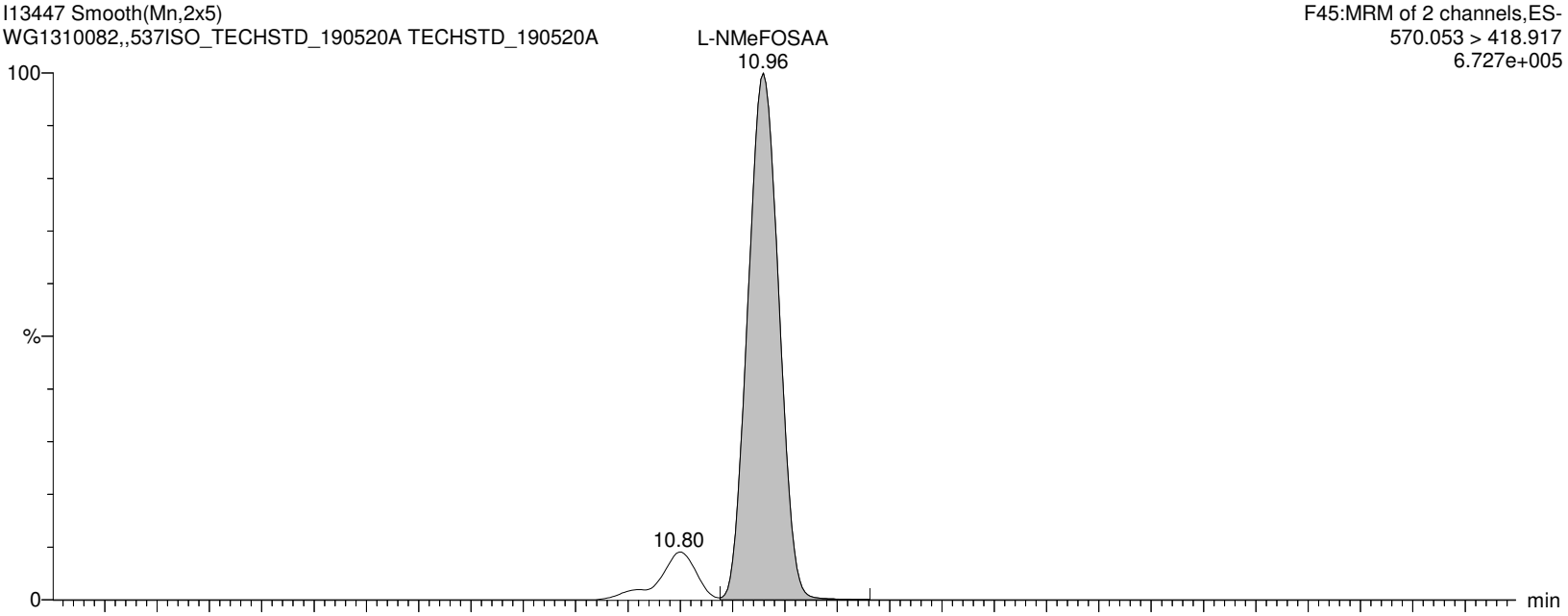


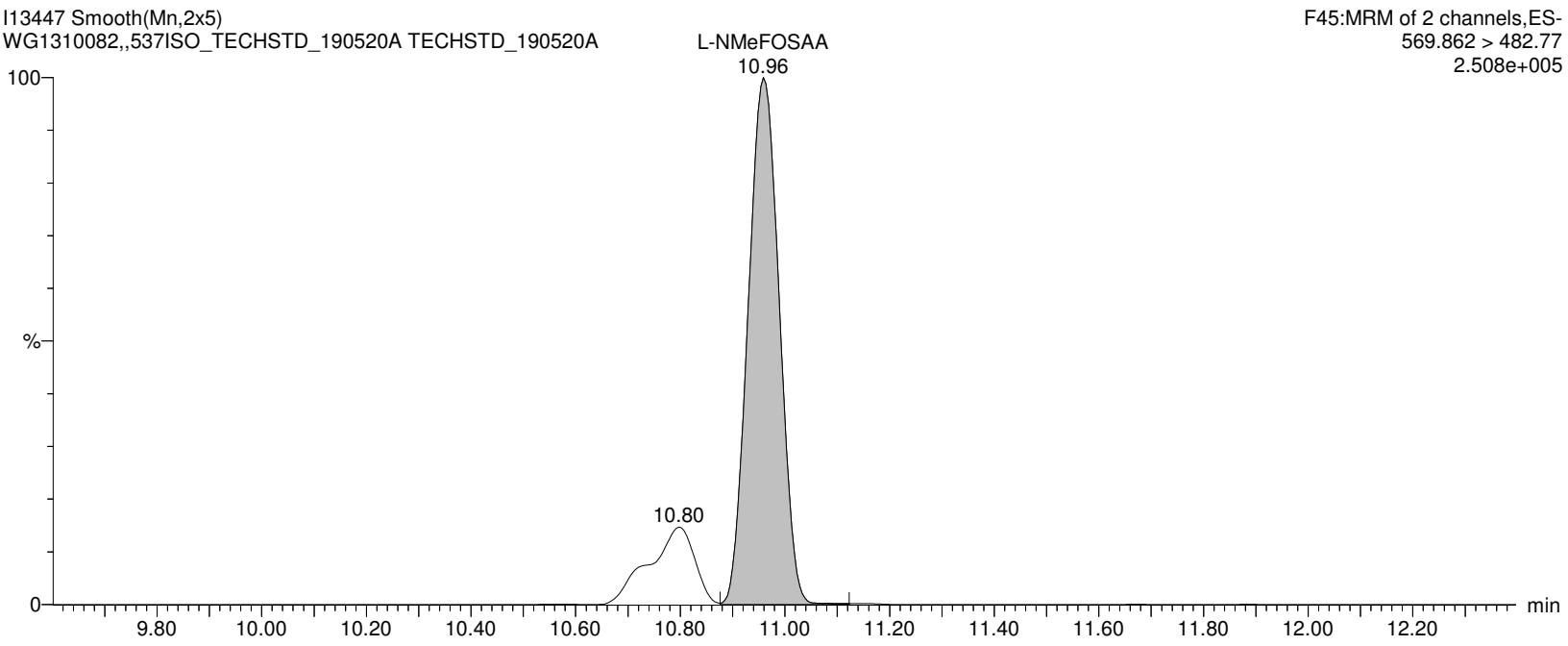
all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\TECHSTD.qld
Last Altered: Monday, November 18, 2019 14:39:57 Eastern Standard Time
Printed: Monday, November 18, 2019 14:47:32 Eastern Standard Time

**Name: I13447**
**ID: TECHSTD_190520A**
**Date: 18-Nov-2019**
**Time: 14:22:24**
**Description: WG1310082,,537ISO_TECHSTD_190520A**
**User: LCMS02:JW**
**Vial: 1:B,4**
**Instrument: XEVO-TQSmicro#QEB0050**
**Inlet Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\LCMS_537_ISO_B**
**Tune Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\181009_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**L-NMeFOSAA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\TECHSTD.qld
Last Altered: Monday, November 18, 2019 14:39:57 Eastern Standard Time
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**Name: I13447**
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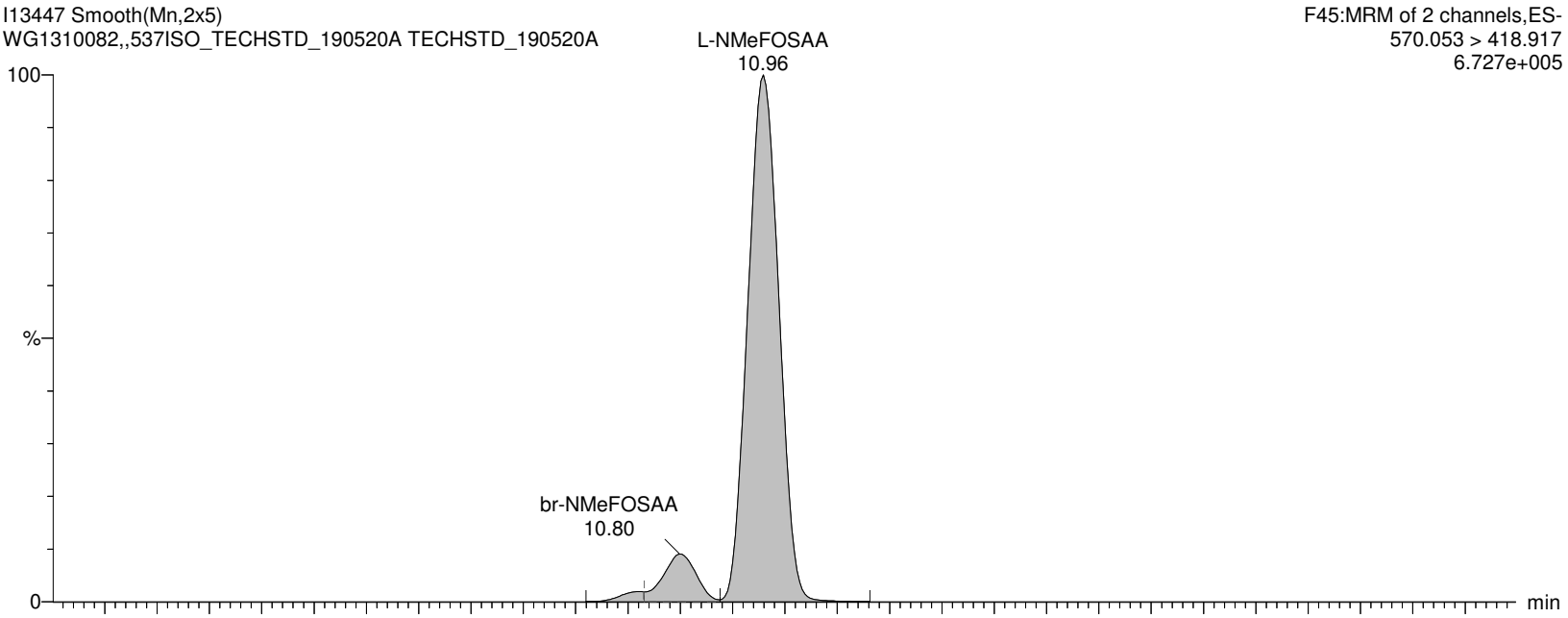
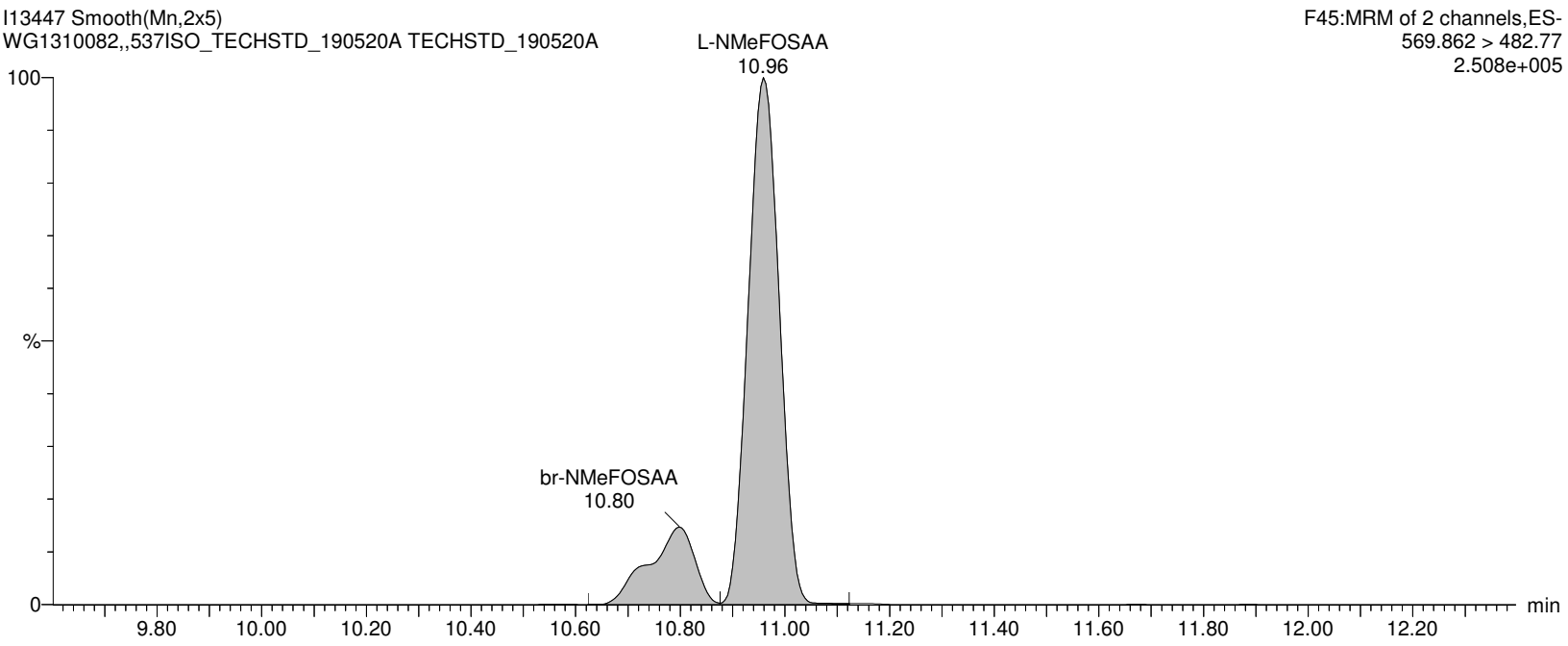
**User: LCMS02:JW**
**Vial: 1:B,4**
**Instrument: XEVO-TQSmicro#QEB0050**
**Inlet Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\LCMS_537_ISO_B**
**Tune Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\181009_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**NMeFOSAA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\TECHSTD.qld
Last Altered: Monday, November 18, 2019 14:39:57 Eastern Standard Time
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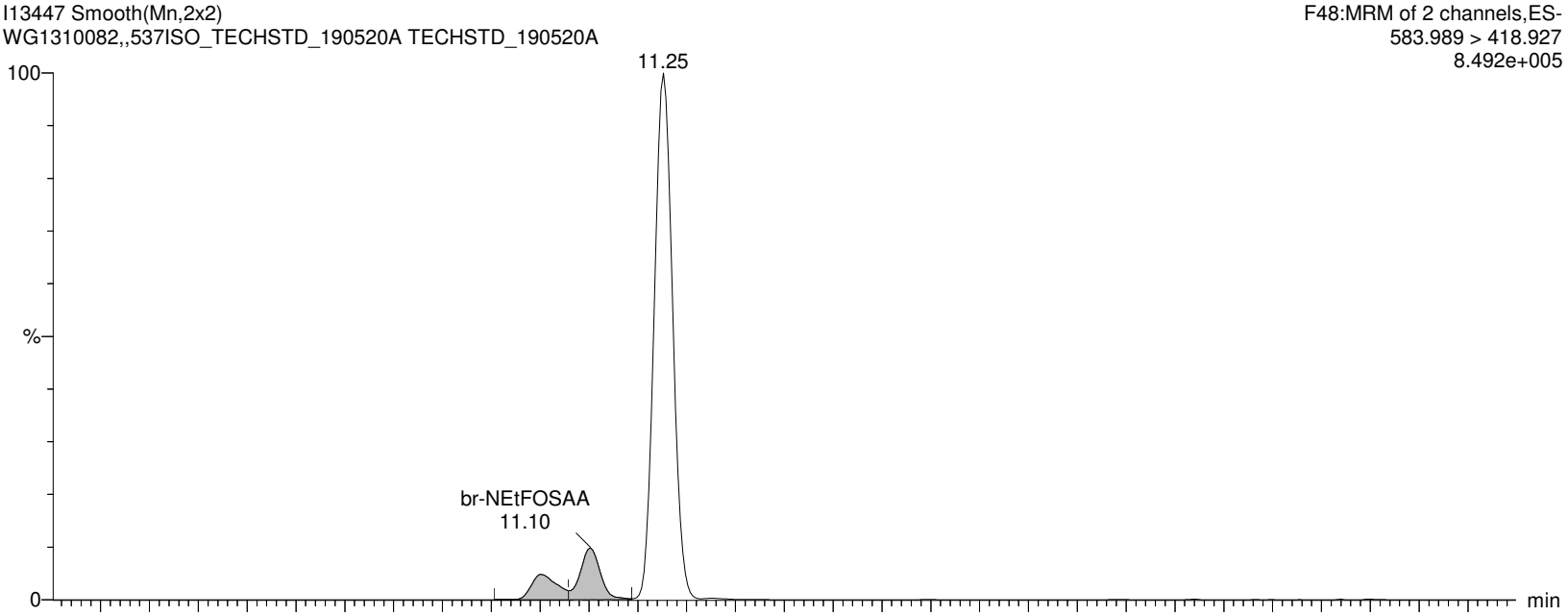
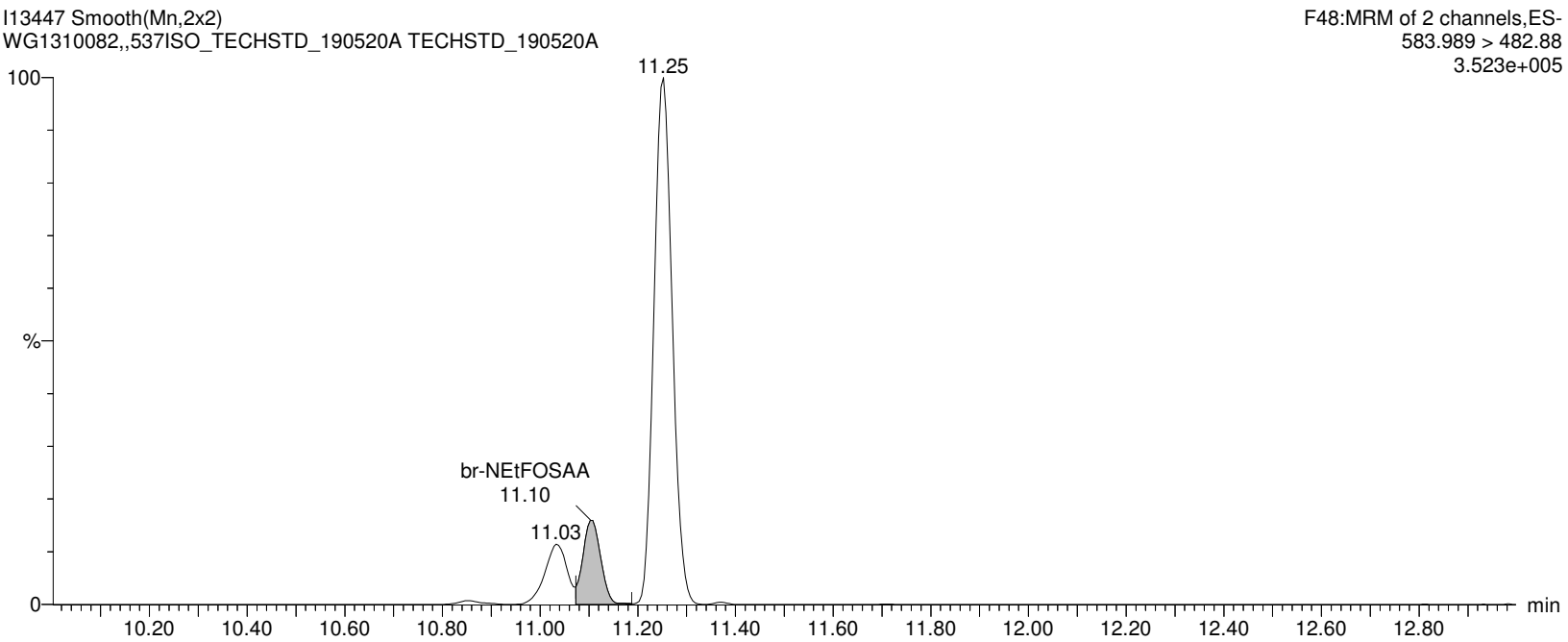
**User: LCMS02:JW**
**Vial: 1:B,4**
**Instrument: XEVO-TQSmicro#QEB0050**
**Inlet Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\LCMS_537_ISO_B**
**Tune Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\181009_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**br-NEtFOSAA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\TECHSTD.qld
Last Altered: Monday, November 18, 2019 14:39:57 Eastern Standard Time
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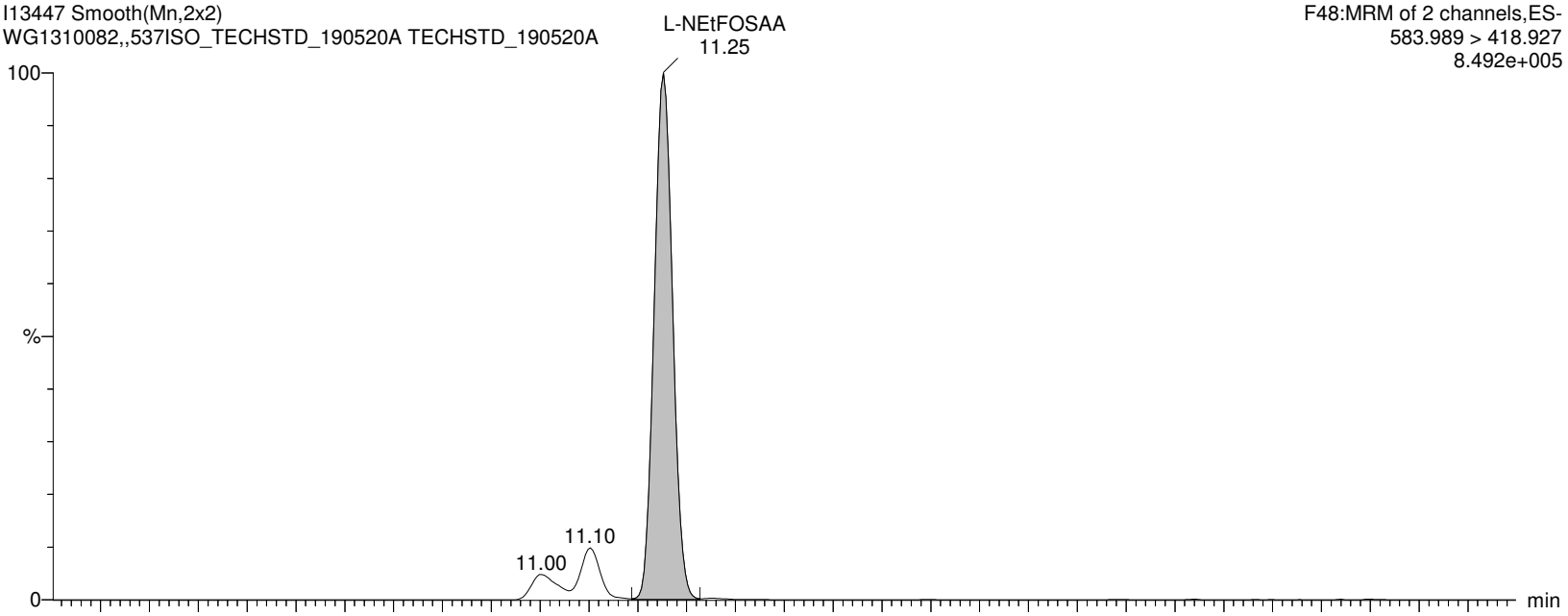
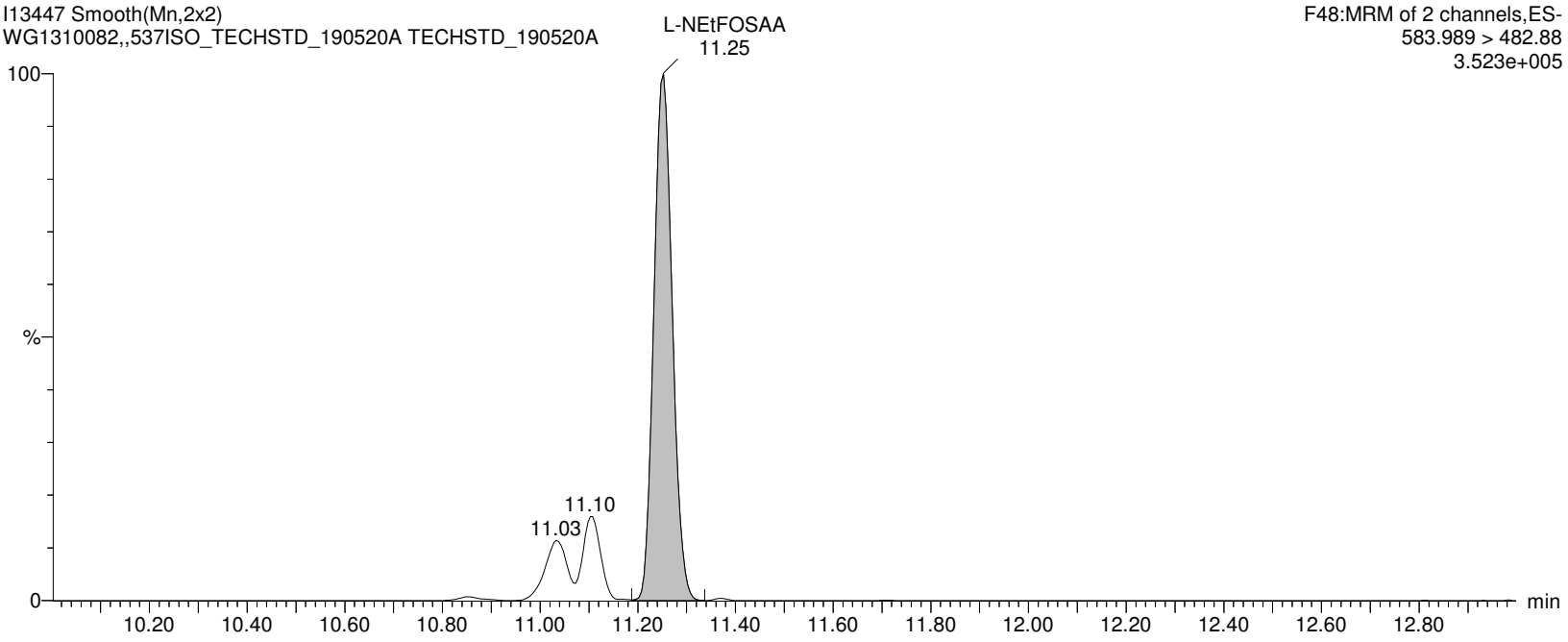
**Name: I13447**
**ID: TECHSTD_190520A**
**Date: 18-Nov-2019**
**Time: 14:22:24**
**Description: WG1310082,,537ISO_TECHSTD_190520A**
**User: LCMS02:JW**
**Vial: 1:B,4**
**Instrument: XEVO-TQSmicro#QEB0050**
**Inlet Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\LCMS_537_ISO_B**
**Tune Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\181009_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**L-NEtFOSAA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2019\191118_537ISO.PRO\Data\TECHSTD.qld
Last Altered: Monday, November 18, 2019 14:39:57 Eastern Standard Time
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**Name: I13447**
**ID: TECHSTD_190520A**
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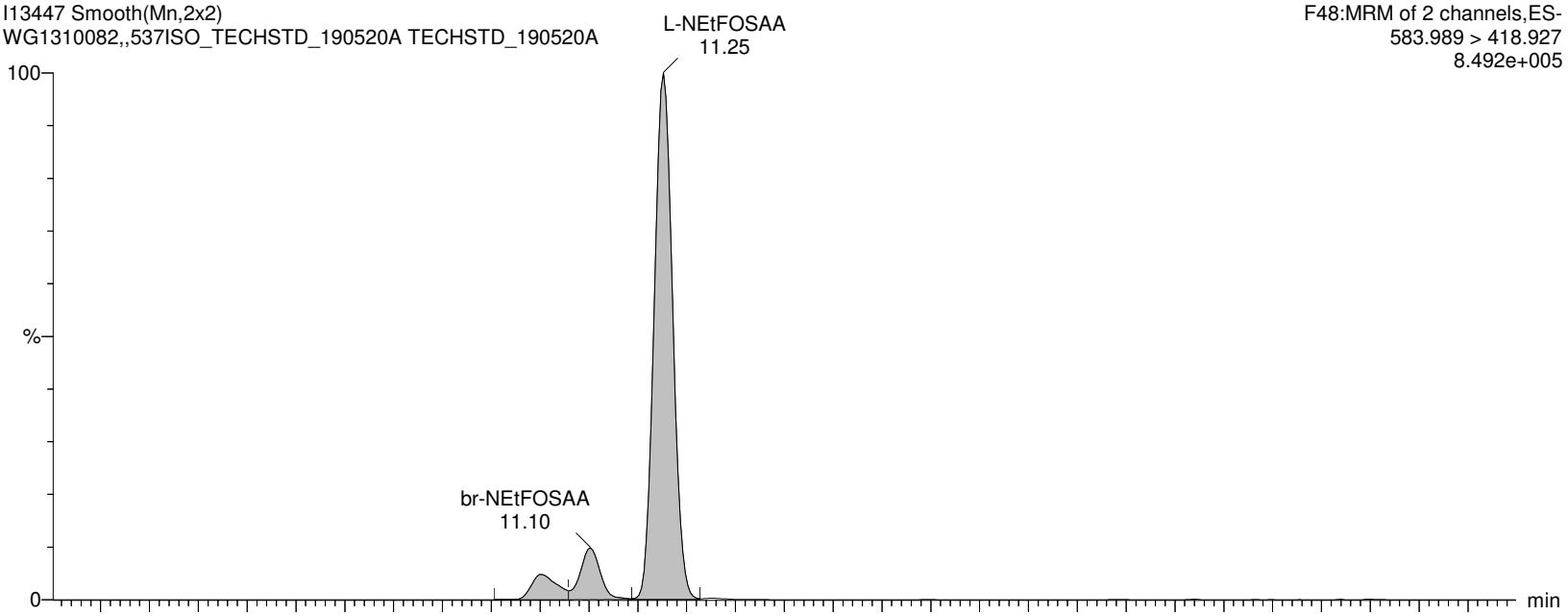
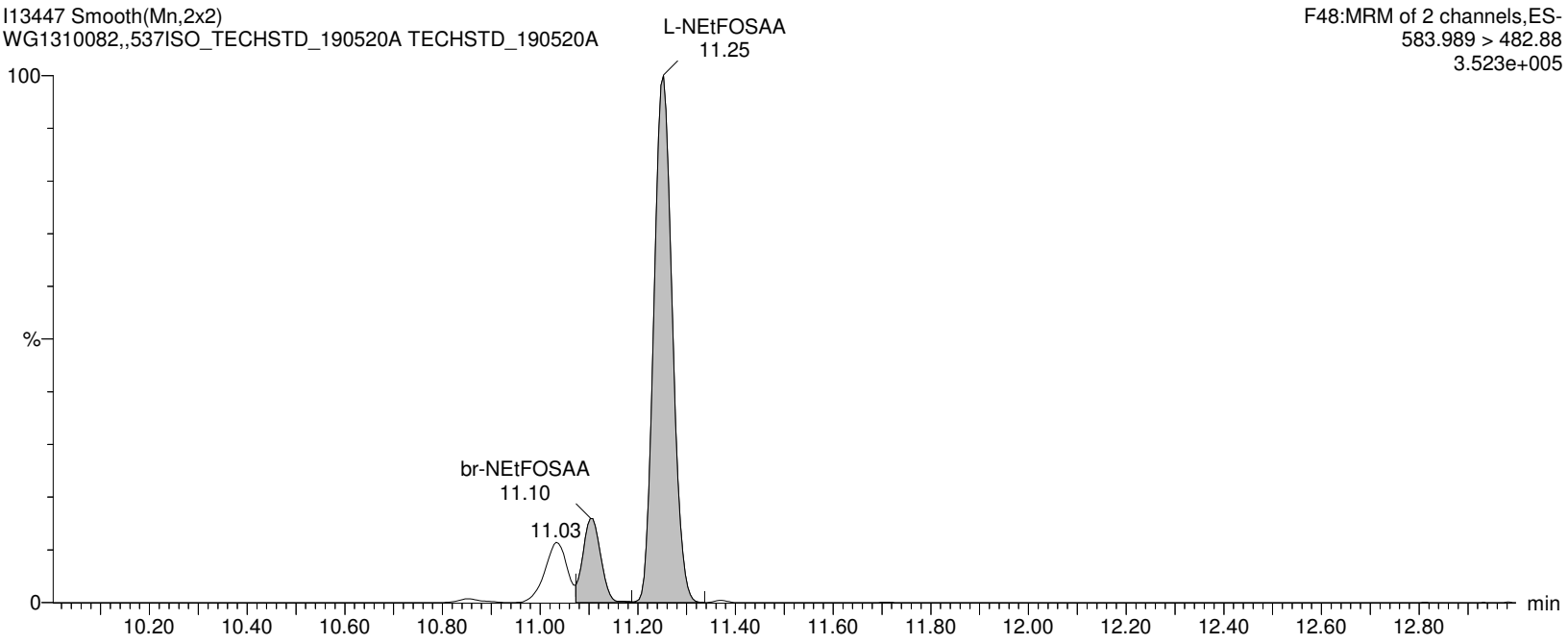
**Instrument: XEVO-TQSmicro#QEB0050**
**Inlet Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\LCMS_537_ISO_B**
**Tune Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\181009_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\2019\191118_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**NEtFOSAA**





all concentration units in (ng/mL)

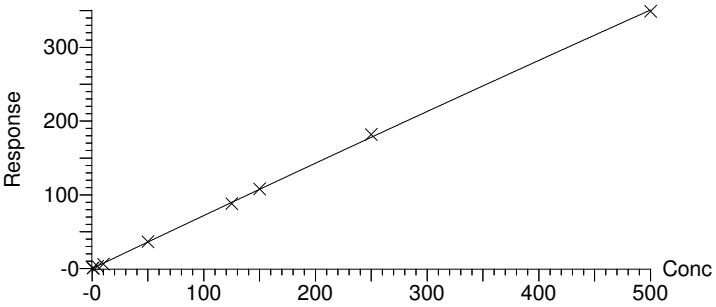
Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICAL_A.qld
Last Altered: Friday, February 28, 2020 09:12:40 Eastern Standard Time
Printed: Friday, February 28, 2020 09:28:57 Eastern Standard Time

**Method: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\MethDB\537ISO_Q_200227 .mdb 27 Feb 2020 12:38:15**
**Calibration: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\CurveDB\200227_537ISO_ICAL.cdb 28 Feb 2020 09:12:40**

**Compound name: PFBA**

| | Name | ID | Acq.Date | Acq.Time | RT | IS Area | Area | Conc (ng... | %Rec | RRF | 1º S/N | 2º S/N | (b/a) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | I18529 | IA2-537STD5.0 | 27-Feb-20 | 14:02:18 | 2.253 | 48319.531 | 14811.046 | 4.236 | 84.7 | 0.613 | 7841 | | 0.97 |
| 2 | I18530 | IA2-537STD10.0 | 27-Feb-20 | 14:18:52 | 2.248 | 48815.305 | 30644.713 | 8.679 | 86.8 | 0.628 | 14887 | | 0.98 |
| 3 | I18531 | IA2-537STD50.0 | 27-Feb-20 | 14:35:26 | 2.242 | 45938.719 | 167812.766 | 50.630 | 101.3 | 0.731 | 47049 | | 0.97 |
| 4 | I18532 | IA2-537STD125 | 27-Feb-20 | 14:51:56 | 2.237 | 44301.992 | 391222.625 | 122.941 | 98.4 | 0.706 | 73888 | | 0.92 |
| 5 | I18533 | IA2-537STD150 | 27-Feb-20 | 15:08:31 | 2.237 | 43835.754 | 473301.906 | 150.573 | 100.4 | 0.720 | 94877 | | 0.88 |
| 6 | I18534 | IA2-537STD250 | 27-Feb-20 | 15:25:04 | 2.231 | 42043.367 | 765723.938 | 255.646 | 102.3 | 0.729 | 148464 | | 0.85 |
| 7 | I18535 | IA2-537STD500 | 27-Feb-20 | 15:41:35 | 2.237 | 41222.156 | 1438832.625 | 497.417 | 99.5 | 0.698 | 91452 | | 0.70 |
| 8 | I18539 | IA2-537STD0.5 | 27-Feb-20 | 16:47:48 | 2.242 | 45001.730 | 1544.153 | 0.474 | 94.8 | 0.686 | 670 | | 0.88 |
| 9 | I18540 | IA2-537STD1.0 | 27-Feb-20 | 17:04:20 | 2.243 | 45026.121 | 2940.648 | 0.902 | 90.2 | 0.653 | 1666 | | 0.89 |

Compound name: PFBA
Coefficient of Determination: R^2 = 0.999537
Calibration curve: -4.42845e-005 * x^2 + 0.723741 * x
Response type: Internal Std ( Ref 3 ), Area * ( IS Conc. / IS Area )
Curve type: 2nd Order, Origin: Force, Weighting: 1/x, Axis trans: None





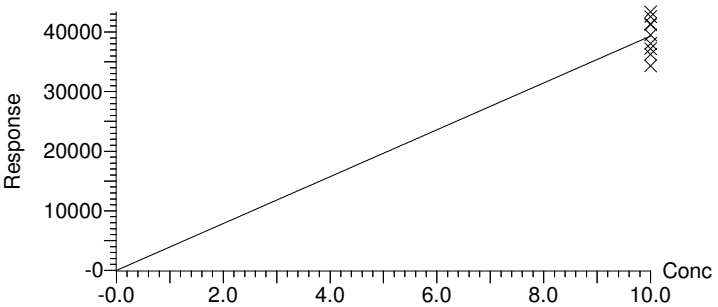
all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICAL_A.qld
Last Altered: Friday, February 28, 2020 09:12:40 Eastern Standard Time
Printed: Friday, February 28, 2020 09:28:57 Eastern Standard Time

**Compound name: M3PFBA**

| | Name | ID | Acq.Date | Acq.Time | RT | IS Area | Area | Conc (ng... | %Rec | RRF | 1º S/N | 2º S/N | (b/a) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | I18529 | IA2-537STD5.0 | 27-Feb-20 | 14:02:18 | 2.250 | | 41335.754 | 10.512 | 105.1 | 4133.575 | 7214 | | 0.97 |
| 2 | I18530 | IA2-537STD10.0 | 27-Feb-20 | 14:18:52 | 2.244 | | 41232.234 | 10.486 | 104.9 | 4123.223 | 3676 | | 0.98 |
| 3 | I18531 | IA2-537STD50.0 | 27-Feb-20 | 14:35:26 | 2.244 | | 39499.469 | 10.045 | 100.5 | 3949.947 | 6575 | | 0.95 |
| 4 | I18532 | IA2-537STD125 | 27-Feb-20 | 14:51:56 | 2.239 | | 38059.477 | 9.679 | 96.8 | 3805.948 | 18435 | | 0.88 |
| 5 | I18533 | IA2-537STD150 | 27-Feb-20 | 15:08:31 | 2.239 | | 37209.055 | 9.463 | 94.6 | 3720.905 | 13815 | | 0.84 |
| 6 | I18534 | IA2-537STD250 | 27-Feb-20 | 15:25:04 | 2.239 | | 36271.582 | 9.224 | 92.2 | 3627.158 | 10472 | | 0.79 |
| 7 | I18535 | IA2-537STD500 | 27-Feb-20 | 15:41:35 | 2.250 | | 34339.520 | 8.733 | 87.3 | 3433.952 | 2929 | | 0.63 |
| 8 | I18539 | IA2-537STD0.5 | 27-Feb-20 | 16:47:48 | 2.244 | | 42560.504 | 10.824 | 108.2 | 4256.050 | 26624 | | 0.87 |
| 9 | I18540 | IA2-537STD1.0 | 27-Feb-20 | 17:04:20 | 2.244 | | 43387.879 | 11.034 | 110.3 | 4338.788 | 34328 | | 0.85 |

Compound name: M3PFBA
Response Factor: 3932.17
RRF SD: 306.071, % Relative SD: 7.78377
Response type: External Std, Area
Curve type: RF





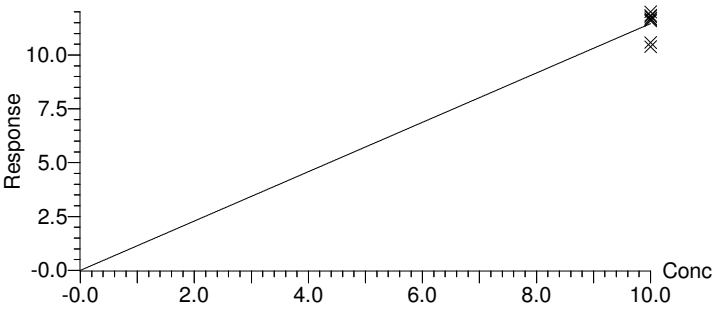
all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICAL_A.qld
Last Altered: Friday, February 28, 2020 09:12:40 Eastern Standard Time
Printed: Friday, February 28, 2020 09:28:57 Eastern Standard Time

**Compound name: MPFBA**

| | Name | ID | Acq.Date | Acq.Time | RT | IS Area | Area | Conc (ng... | %Rec | RRF | 1º S/N | 2º S/N | (b/a) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | I18529 | IA2-537STD5.0 | 27-Feb-20 | 14:02:18 | 2.252 | 41335.754 | 48319.531 | 10.202 | 102.0 | 1.169 | 23733 | | 0.96 |
| 2 | I18530 | IA2-537STD10.0 | 27-Feb-20 | 14:18:52 | 2.246 | 41232.234 | 48815.305 | 10.332 | 103.3 | 1.184 | 148389 | | 0.97 |
| 3 | I18531 | IA2-537STD50.0 | 27-Feb-20 | 14:35:26 | 2.241 | 39499.469 | 45938.719 | 10.150 | 101.5 | 1.163 | 15967 | | 0.97 |
| 4 | I18532 | IA2-537STD125 | 27-Feb-20 | 14:51:56 | 2.241 | 38059.477 | 44301.992 | 10.159 | 101.6 | 1.164 | 56598 | | 0.87 |
| 5 | I18533 | IA2-537STD150 | 27-Feb-20 | 15:08:31 | 2.241 | 37209.055 | 43835.754 | 10.281 | 102.8 | 1.178 | 30312 | | 0.83 |
| 6 | I18534 | IA2-537STD250 | 27-Feb-20 | 15:25:04 | 2.235 | 36271.582 | 42043.367 | 10.116 | 101.2 | 1.159 | 16177 | | 0.80 |
| 7 | I18535 | IA2-537STD500 | 27-Feb-20 | 15:41:35 | 2.246 | 34339.520 | 41222.156 | 10.476 | 104.8 | 1.200 | 24887 | | 0.63 |
| 8 | I18539 | IA2-537STD0.5 | 27-Feb-20 | 16:47:48 | 2.241 | 42560.504 | 45001.730 | 9.228 | 92.3 | 1.057 | 45632 | | 0.88 |
| 9 | I18540 | IA2-537STD1.0 | 27-Feb-20 | 17:04:20 | 2.241 | 43387.879 | 45026.121 | 9.057 | 90.6 | 1.038 | 65718 | | 0.87 |

Compound name: MPFBA
Response Factor: 1.14585
RRF SD: 0.0573549, % Relative SD: 5.00544
Response type: Internal Std ( Ref 2 ), Area * ( IS Conc. / IS Area )
Curve type: RF





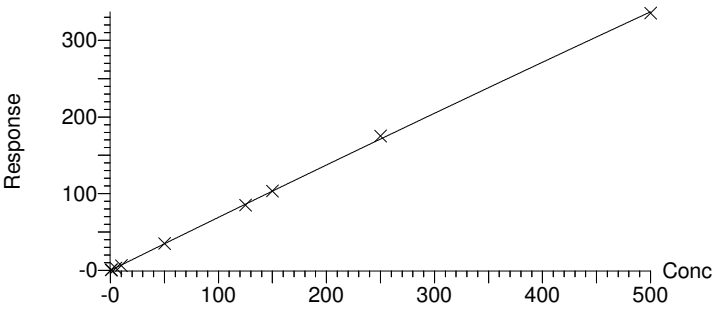
all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICAL_A.qld
Last Altered: Friday, February 28, 2020 09:12:40 Eastern Standard Time
Printed: Friday, February 28, 2020 09:28:57 Eastern Standard Time

**Compound name: PFPeA**

| | Name | ID | Acq.Date | Acq.Time | RT | IS Area | Area | Conc (ng... | %Rec | RRF | 1º S/N | 2º S/N | (b/a) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | I18529 | IA2-537STD5.0 | 27-Feb-20 | 14:02:18 | 5.214 | 66965.297 | 19873.592 | 4.267 | 85.3 | 0.594 | 5136 | | 0.97 |
| 2 | I18530 | IA2-537STD10.0 | 27-Feb-20 | 14:18:52 | 5.209 | 66535.883 | 40988.703 | 8.861 | 88.6 | 0.616 | 11094 | | 0.98 |
| 3 | I18531 | IA2-537STD50.0 | 27-Feb-20 | 14:35:26 | 5.207 | 61818.520 | 216821.125 | 50.578 | 101.2 | 0.701 | 59009 | | 0.96 |
| 4 | I18532 | IA2-537STD125 | 27-Feb-20 | 14:51:56 | 5.206 | 58331.801 | 496161.094 | 123.213 | 98.6 | 0.680 | 107836 | | 0.88 |
| 5 | I18533 | IA2-537STD150 | 27-Feb-20 | 15:08:31 | 5.207 | 57217.777 | 591135.188 | 149.905 | 99.9 | 0.689 | 135936 | | 0.80 |
| 6 | I18534 | IA2-537STD250 | 27-Feb-20 | 15:25:04 | 5.207 | 53491.770 | 936502.688 | 255.715 | 102.3 | 0.700 | 95057 | | 0.75 |
| 7 | I18535 | IA2-537STD500 | 27-Feb-20 | 15:41:35 | 5.207 | 50735.574 | 1701958.750 | 497.520 | 99.5 | 0.671 | 185285 | | 0.59 |
| 8 | I18539 | IA2-537STD0.5 | 27-Feb-20 | 16:47:48 | 5.204 | 61408.227 | 2211.104 | 0.518 | 103.5 | 0.720 | 485 | | 0.90 |
| 9 | I18540 | IA2-537STD1.0 | 27-Feb-20 | 17:04:20 | 5.209 | 61539.512 | 3950.195 | 0.923 | 92.3 | 0.642 | 1262 | | 0.81 |

Compound name: PFPeA
Coefficient of Determination: R^2 = 0.999602
Calibration curve: -4.29631e-005 * x^2 + 0.695633 * x
Response type: Internal Std ( Ref 5 ), Area * ( IS Conc. / IS Area )
Curve type: 2nd Order, Origin: Force, Weighting: 1/x, Axis trans: None





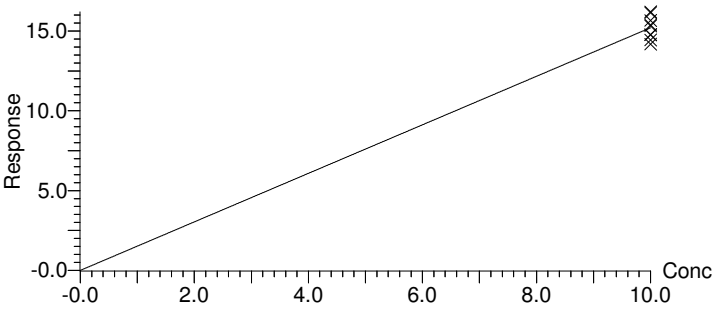
all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICAL_A.qld
Last Altered: Friday, February 28, 2020 09:12:40 Eastern Standard Time
Printed: Friday, February 28, 2020 09:28:57 Eastern Standard Time

**Compound name: M5PFPEA**

| | Name | ID | Acq.Date | Acq.Time | RT | IS Area | Area | Conc (ng... | %Rec | RRF | 1º S/N | 2º S/N | (b/a) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | I18529 | IA2-537STD5.0 | 27-Feb-20 | 14:02:18 | 5.212 | 41335.754 | 66965.297 | 10.656 | 106.6 | 1.620 | 11354 | | 0.99 |
| 2 | I18530 | IA2-537STD10.0 | 27-Feb-20 | 14:18:52 | 5.208 | 41232.234 | 66535.883 | 10.614 | 106.1 | 1.614 | 11899 | | 0.97 |
| 3 | I18531 | IA2-537STD50.0 | 27-Feb-20 | 14:35:26 | 5.205 | 39499.469 | 61818.520 | 10.294 | 102.9 | 1.565 | 11409 | | 0.97 |
| 4 | I18532 | IA2-537STD125 | 27-Feb-20 | 14:51:56 | 5.205 | 38059.477 | 58331.801 | 10.081 | 100.8 | 1.533 | 796 | | 0.88 |
| 5 | I18533 | IA2-537STD150 | 27-Feb-20 | 15:08:31 | 5.206 | 37209.055 | 57217.777 | 10.115 | 101.1 | 1.538 | 13622 | | 0.80 |
| 6 | I18534 | IA2-537STD250 | 27-Feb-20 | 15:25:04 | 5.206 | 36271.582 | 53491.770 | 9.701 | 97.0 | 1.475 | 5666 | | 0.74 |
| 7 | I18535 | IA2-537STD500 | 27-Feb-20 | 15:41:35 | 5.205 | 34339.520 | 50735.574 | 9.718 | 97.2 | 1.477 | 7455 | | 0.61 |
| 8 | I18539 | IA2-537STD0.5 | 27-Feb-20 | 16:47:48 | 5.205 | 42560.504 | 61408.227 | 9.491 | 94.9 | 1.443 | 6947 | | 0.85 |
| 9 | I18540 | IA2-537STD1.0 | 27-Feb-20 | 17:04:20 | 5.206 | 43387.879 | 61539.512 | 9.330 | 93.3 | 1.418 | 15985 | | 0.84 |

Compound name: M5PFPEA
Response Factor: 1.52029
RRF SD: 0.0719607, % Relative SD: 4.73336
Response type: Internal Std ( Ref 2 ), Area * ( IS Conc. / IS Area )
Curve type: RF





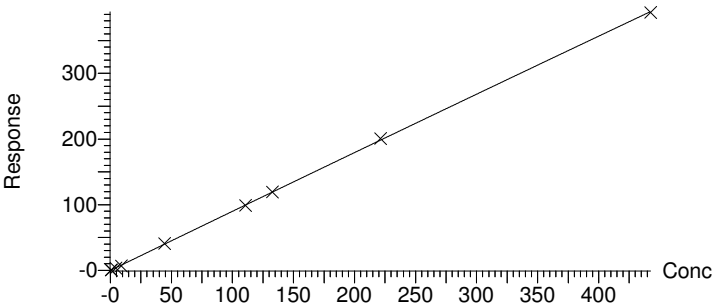
all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICAL_A.qld
Last Altered: Friday, February 28, 2020 09:12:40 Eastern Standard Time
Printed: Friday, February 28, 2020 09:28:57 Eastern Standard Time

**Compound name: PFBS**

| | Name | ID | Acq.Date | Acq.Time | RT | IS Area | Area | Conc (ng... | %Rec | RRF | 1º S/N | 2º S/N | (b/a) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | I18529 | IA2-537STD5.0 | 27-Feb-20 | 14:02:18 | 5.879 | 11904.475 | 3950.326 | 3.678 | 83.1 | 0.750 | 32 | 896 | 0.94 |
| 2 | I18530 | IA2-537STD10.0 | 27-Feb-20 | 14:18:52 | 5.872 | 11938.699 | 8430.388 | 7.828 | 88.5 | 0.798 | 4212 | 2319 | 0.98 |
| 3 | I18531 | IA2-537STD50.0 | 27-Feb-20 | 14:35:26 | 5.871 | 10926.120 | 44614.742 | 45.316 | 102.4 | 0.923 | 45541 | 6184 | 0.95 |
| 4 | I18532 | IA2-537STD125 | 27-Feb-20 | 14:51:56 | 5.870 | 10327.150 | 102270.000 | 110.111 | 99.5 | 0.895 | 19205 | 10965 | 0.86 |
| 5 | I18533 | IA2-537STD150 | 27-Feb-20 | 15:08:31 | 5.872 | 10162.224 | 121367.359 | 132.882 | 100.1 | 0.900 | 23094 | 13425 | 0.77 |
| 6 | I18534 | IA2-537STD250 | 27-Feb-20 | 15:25:04 | 5.872 | 9545.156 | 191488.766 | 223.808 | 101.2 | 0.907 | 10197 | 18037 | 0.72 |
| 7 | I18535 | IA2-537STD500 | 27-Feb-20 | 15:41:35 | 5.871 | 8726.213 | 342903.594 | 441.215 | 99.7 | 0.888 | 58178 | 26974 | 0.56 |
| 8 | I18539 | IA2-537STD0.5 | 27-Feb-20 | 16:47:48 | 5.866 | 10848.066 | 376.407 | 0.385 | 86.9 | 0.784 | 114 | 43 | 1.01 |
| 9 | I18540 | IA2-537STD1.0 | 27-Feb-20 | 17:04:20 | 5.874 | 11021.960 | 750.290 | 0.754 | 85.3 | 0.769 | 108 | 125 | 0.76 |

Compound name: PFBS
Coefficient of Determination: R^2 = 0.999644
Calibration curve: -2.63872e-005 * x^2 + 0.902271 * x
Response type: Internal Std ( Ref 7 ), Area * ( IS Conc. / IS Area )
Curve type: 2nd Order, Origin: Force, Weighting: 1/x, Axis trans: None





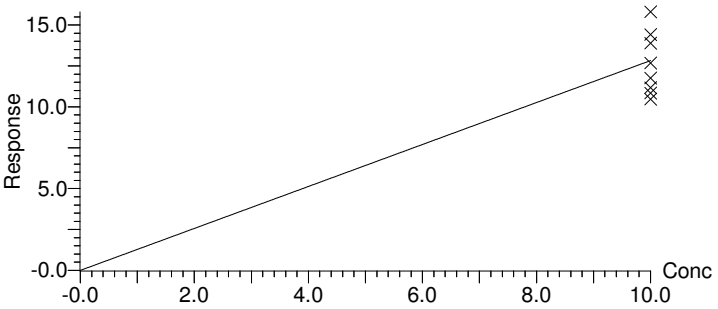
all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICAL_A.qld
Last Altered: Friday, February 28, 2020 09:12:40 Eastern Standard Time
Printed: Friday, February 28, 2020 09:28:57 Eastern Standard Time

**Compound name: M3PFBS**

| | Name | ID | Acq.Date | Acq.Time | RT | IS Area | Area | Conc (ng... | %Rec | RRF | 1º S/N | 2º S/N | (b/a) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | I18529 | IA2-537STD5.0 | 27-Feb-20 | 14:02:18 | 5.875 | 9391.129 | 11904.475 | 9.881 | 98.8 | 1.268 | 3549 | | 1.01 |
| 2 | I18530 | IA2-537STD10.0 | 27-Feb-20 | 14:18:52 | 5.872 | 10693.415 | 11938.699 | 8.703 | 87.0 | 1.116 | 2354 | | 0.96 |
| 3 | I18531 | IA2-537STD50.0 | 27-Feb-20 | 14:35:26 | 5.870 | 7867.362 | 10926.120 | 10.826 | 108.3 | 1.389 | 4067 | | 0.96 |
| 4 | I18532 | IA2-537STD125 | 27-Feb-20 | 14:51:56 | 5.870 | 8781.861 | 10327.150 | 9.167 | 91.7 | 1.176 | 622 | | 0.83 |
| 5 | I18533 | IA2-537STD150 | 27-Feb-20 | 15:08:31 | 5.872 | 7044.307 | 10162.224 | 11.245 | 112.5 | 1.443 | 3115 | | 0.75 |
| 6 | I18534 | IA2-537STD250 | 27-Feb-20 | 15:25:04 | 5.872 | 6617.794 | 9545.156 | 11.243 | 112.4 | 1.442 | 1820 | | 0.70 |
| 7 | I18535 | IA2-537STD500 | 27-Feb-20 | 15:41:35 | 5.870 | 5519.950 | 8726.213 | 12.323 | 123.2 | 1.581 | 533 | | 0.57 |
| 8 | I18539 | IA2-537STD0.5 | 27-Feb-20 | 16:47:48 | 5.868 | 10009.636 | 10848.066 | 8.448 | 84.5 | 1.084 | 1523 | | 0.84 |
| 9 | I18540 | IA2-537STD1.0 | 27-Feb-20 | 17:04:20 | 5.870 | 10521.385 | 11021.960 | 8.166 | 81.7 | 1.048 | 6602 | | 0.82 |

Compound name: M3PFBS
Response Factor: 1.28289
RRF SD: 0.188854, % Relative SD: 14.721
Response type: Internal Std ( Ref 32 ), Area * ( IS Conc. / IS Area )
Curve type: RF





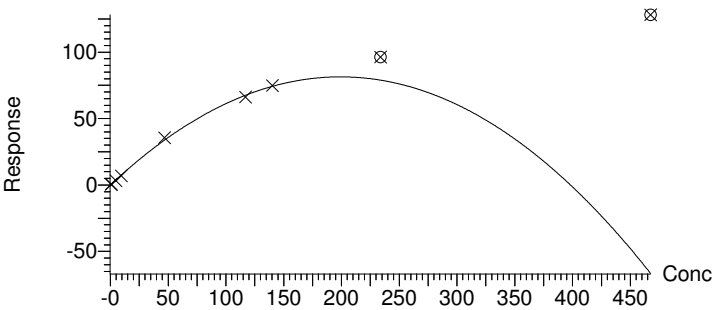
all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICAL_A.qld
Last Altered: Friday, February 28, 2020 09:12:40 Eastern Standard Time
Printed: Friday, February 28, 2020 09:28:57 Eastern Standard Time

**Compound name: 4:2FTS**

| | Name | ID | Acq.Date | Acq.Time | RT | IS Area | Area | Conc (ng... | %Rec | RRF | 1º S/N | 2º S/N | (b/a) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | I18529 | IA2-537STD5.0 | 27-Feb-20 | 14:02:18 | 7.054 | 5134.135 | 1758.998 | 4.234 | 90.6 | 0.733 | 115 | 97 | 0.99 |
| 2 | I18530 | IA2-537STD10.0 | 27-Feb-20 | 14:18:52 | 7.047 | 5498.780 | 3755.704 | 8.534 | 91.3 | 0.730 | 76365 | 410 | 1.16 |
| 3 | I18531 | IA2-537STD50.0 | 27-Feb-20 | 14:35:26 | 7.047 | 5880.164 | 20977.158 | 49.864 | 106.7 | 0.763 | 36776 | 372 | 1.04 |
| 4 | I18532 | IA2-537STD125 | 27-Feb-20 | 14:51:56 | 7.047 | 7283.949 | 48273.207 | 113.234 | 96.9 | 0.567 | 4792 | 5865 | 0.96 |
| 5 | I18533 | IA2-537STD150 | 27-Feb-20 | 15:08:31 | 7.047 | 7855.275 | 58728.438 | 142.184 | 101.4 | 0.533 | 10048 | 2917 | 0.98 |
| 6 | I18534 | IA2-537STD250 | 27-Feb-20 | 15:25:04 | 7.044 | 9988.708 | 96127.430 | | | 0.412 | 12322 | 15570 | 0.93 |
| 7 | I18535 | IA2-537STD500 | 27-Feb-20 | 15:41:35 | 7.036 | 13942.268 | 178618.781 | | | 0.274 | 36539 | 11504 | 0.86 |
| 8 | I18539 | IA2-537STD0.5 | 27-Feb-20 | 16:47:48 | 7.047 | 4735.668 | 182.277 | 0.471 | 100.8 | 0.823 | 14 | 9 | 1.01 |
| 9 | I18540 | IA2-537STD1.0 | 27-Feb-20 | 17:04:20 | 7.047 | 4760.724 | 294.253 | 0.757 | 81.0 | 0.661 | 25 | 187 | 1.13 |

Compound name: 4:2FTS
Coefficient of Determination: R^2 = 0.998242
Calibration curve: -0.0020539 * x^2 + 0.817851 * x
Response type: Internal Std ( Ref 9 ), Area * ( IS Conc. / IS Area )
Curve type: 2nd Order, Origin: Force, Weighting: 1/x, Axis trans: None





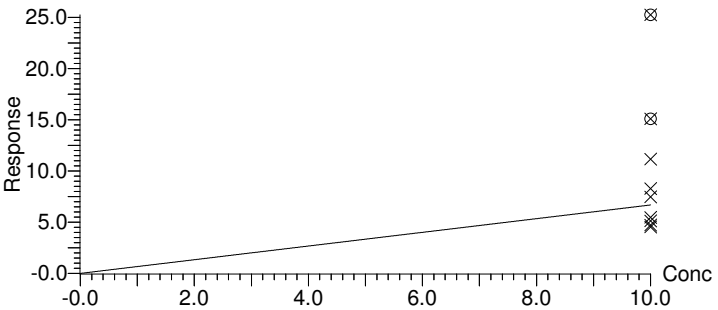
all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICAL_A.qld
Last Altered: Friday, February 28, 2020 09:12:40 Eastern Standard Time
Printed: Friday, February 28, 2020 09:28:57 Eastern Standard Time

**Compound name: M2-4:2FTS**

| | Name | ID | Acq.Date | Acq.Time | RT | IS Area | Area | Conc (ng... | %Rec | RRF | 1º S/N | 2º S/N | (b/a) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | I18529 | IA2-537STD5.0 | 27-Feb-20 | 14:02:18 | 7.054 | 9391.129 | 5134.135 | 8.180 | 81.8 | 0.547 | 2385 | | 1.08 |
| 2 | I18530 | IA2-537STD10.0 | 27-Feb-20 | 14:18:52 | 7.049 | 10693.415 | 5498.780 | 7.694 | 76.9 | 0.514 | 1125 | | 0.97 |
| 3 | I18531 | IA2-537STD50.0 | 27-Feb-20 | 14:35:26 | 7.050 | 7867.362 | 5880.164 | 11.183 | 111.8 | 0.747 | 117849 | | 0.95 |
| 4 | I18532 | IA2-537STD125 | 27-Feb-20 | 14:51:56 | 7.045 | 8781.861 | 7283.949 | 12.410 | 124.1 | 0.829 | 2128 | | 0.99 |
| 5 | I18533 | IA2-537STD150 | 27-Feb-20 | 15:08:31 | 7.049 | 7044.307 | 7855.275 | 16.685 | 166.8 | 1.115 | 589 | | 0.92 |
| 6 | I18534 | IA2-537STD250 | 27-Feb-20 | 15:25:04 | 7.044 | 6617.794 | 9988.708 | 22.583 | 225.8 | 1.509 | 25 | | 0.92 |
| 7 | I18535 | IA2-537STD500 | 27-Feb-20 | 15:41:35 | 7.039 | 5519.950 | 13942.268 | 37.791 | 377.9 | 2.526 | 3356 | | 0.82 |
| 8 | I18539 | IA2-537STD0.5 | 27-Feb-20 | 16:47:48 | 7.043 | 10009.636 | 4735.668 | 7.079 | 70.8 | 0.473 | 1947 | | 1.09 |
| 9 | I18540 | IA2-537STD1.0 | 27-Feb-20 | 17:04:20 | 7.044 | 10521.385 | 4760.724 | 6.770 | 67.7 | 0.452 | 89921 | | 1.03 |

Compound name: M2-4:2FTS
Response Factor: 0.668354
RRF SD: 0.243268, % Relative SD: 36.3981
Response type: Internal Std ( Ref 32 ), Area * ( IS Conc. / IS Area )
Curve type: RF





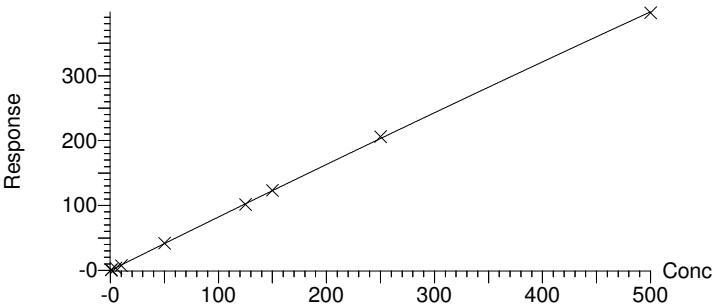
all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICAL_A.qld
Last Altered: Friday, February 28, 2020 09:12:40 Eastern Standard Time
Printed: Friday, February 28, 2020 09:28:57 Eastern Standard Time

**Compound name: PFHxA**

| | Name | ID | Acq.Date | Acq.Time | RT | IS Area | Area | Conc (ng... | %Rec | RRF | 1º S/N | 2º S/N | (b/a) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | I18529 | IA2-537STD5.0 | 27-Feb-20 | 14:02:18 | 7.135 | 76999.281 | 27586.533 | 4.323 | 86.5 | 0.717 | 919 | 55 | 1.04 |
| 2 | I18530 | IA2-537STD10.0 | 27-Feb-20 | 14:18:52 | 7.127 | 78150.375 | 57574.105 | 8.893 | 88.9 | 0.737 | 2491 | 274 | 1.05 |
| 3 | I18531 | IA2-537STD50.0 | 27-Feb-20 | 14:35:26 | 7.128 | 71174.070 | 298865.250 | 50.854 | 101.7 | 0.840 | 9760 | 1002 | 1.07 |
| 4 | I18532 | IA2-537STD125 | 27-Feb-20 | 14:51:56 | 7.126 | 65382.211 | 663067.563 | 123.517 | 98.8 | 0.811 | 17489 | 2422 | 1.04 |
| 5 | I18533 | IA2-537STD150 | 27-Feb-20 | 15:08:31 | 7.129 | 63412.773 | 781257.250 | 150.369 | 100.2 | 0.821 | 21067 | 1471 | 0.96 |
| 6 | I18534 | IA2-537STD250 | 27-Feb-20 | 15:25:04 | 7.125 | 59290.266 | 1222655.750 | 253.744 | 101.5 | 0.825 | 39226 | 4847 | 0.98 |
| 7 | I18535 | IA2-537STD500 | 27-Feb-20 | 15:41:35 | 7.117 | 53405.371 | 2120807.250 | 498.267 | 99.7 | 0.794 | 44683 | 9874 | 0.92 |
| 8 | I18539 | IA2-537STD0.5 | 27-Feb-20 | 16:47:48 | 7.126 | 72987.602 | 3317.243 | 0.548 | 109.7 | 0.909 | 185 | | 1.00 |
| 9 | I18540 | IA2-537STD1.0 | 27-Feb-20 | 17:04:20 | 7.125 | 73498.398 | 5980.390 | 0.982 | 98.2 | 0.814 | 343 | 37 | 1.04 |

Compound name: PFHxA
Coefficient of Determination: R^2 = 0.999697
Calibration curve: -6.42018e-005 * x^2 + 0.828982 * x
Response type: Internal Std ( Ref 11 ), Area * ( IS Conc. / IS Area )
Curve type: 2nd Order, Origin: Force, Weighting: 1/x, Axis trans: None





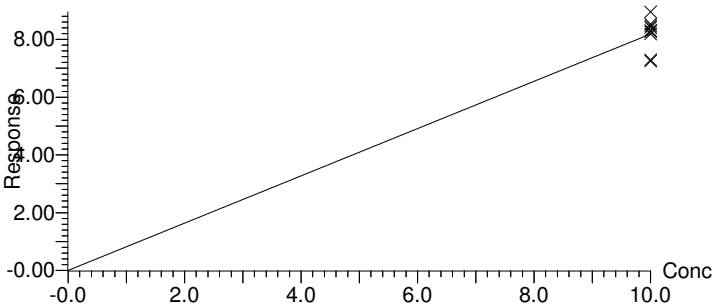
all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICAL_A.qld
Last Altered: Friday, February 28, 2020 09:12:40 Eastern Standard Time
Printed: Friday, February 28, 2020 09:28:57 Eastern Standard Time

**Compound name: M5PFHxA**

| | Name | ID | Acq.Date | Acq.Time | RT | IS Area | Area | Conc (ng... | %Rec | RRF | 1º S/N | 2º S/N | (b/a) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | I18529 | IA2-537STD5.0 | 27-Feb-20 | 14:02:18 | 7.135 | 93068.188 | 76999.281 | 10.105 | 101.1 | 0.827 | 24396 | | 1.00 |
| 2 | I18530 | IA2-537STD10.0 | 27-Feb-20 | 14:18:52 | 7.127 | 95398.117 | 78150.375 | 10.006 | 100.1 | 0.819 | 8457 | | 0.99 |
| 3 | I18531 | IA2-537STD50.0 | 27-Feb-20 | 14:35:26 | 7.128 | 84037.695 | 71174.070 | 10.345 | 103.4 | 0.847 | 14066 | | 1.00 |
| 4 | I18532 | IA2-537STD125 | 27-Feb-20 | 14:51:56 | 7.126 | 78699.977 | 65382.211 | 10.147 | 101.5 | 0.831 | 7348 | | 1.00 |
| 5 | I18533 | IA2-537STD150 | 27-Feb-20 | 15:08:31 | 7.127 | 75403.938 | 63412.773 | 10.272 | 102.7 | 0.841 | 1441 | | 0.99 |
| 6 | I18534 | IA2-537STD250 | 27-Feb-20 | 15:25:04 | 7.123 | 69458.313 | 59290.266 | 10.426 | 104.3 | 0.854 | 4428 | | 1.03 |
| 7 | I18535 | IA2-537STD500 | 27-Feb-20 | 15:41:35 | 7.117 | 59631.082 | 53405.371 | 10.939 | 109.4 | 0.896 | 2816 | | 0.92 |
| 8 | I18539 | IA2-537STD0.5 | 27-Feb-20 | 16:47:48 | 7.126 | 100127.297 | 72987.602 | 8.904 | 89.0 | 0.729 | 17513 | | 0.99 |
| 9 | I18540 | IA2-537STD1.0 | 27-Feb-20 | 17:04:20 | 7.125 | 101367.383 | 73498.398 | 8.856 | 88.6 | 0.725 | 17149 | | 0.96 |

Compound name: M5PFHxA
Response Factor: 0.818717
RRF SD: 0.0564222, % Relative SD: 6.89154
Response type: Internal Std ( Ref 21 ), Area * ( IS Conc. / IS Area )
Curve type: RF





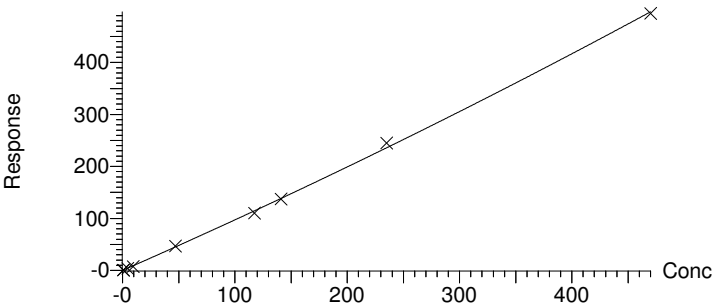
all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICAL_A.qld
Last Altered: Friday, February 28, 2020 09:12:40 Eastern Standard Time
Printed: Friday, February 28, 2020 09:28:57 Eastern Standard Time

**Compound name: PFPeS**

| | Name | ID | Acq.Date | Acq.Time | RT | IS Area | Area | Conc (ng... | %Rec | RRF | 1º S/N | 2º S/N | (b/a) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | I18529 | IA2-537STD5.0 | 27-Feb-20 | 14:02:18 | 7.451 | 11194.032 | 4435.511 | 4.172 | 88.8 | 0.843 | 95754 | 872 | 1.01 |
| 2 | I18530 | IA2-537STD10.0 | 27-Feb-20 | 14:18:52 | 7.441 | 12271.508 | 9210.342 | 7.896 | 84.0 | 0.798 | 3106 | 151 | 1.00 |
| 3 | I18531 | IA2-537STD50.0 | 27-Feb-20 | 14:35:26 | 7.439 | 10437.030 | 48996.762 | 48.892 | 104.0 | 0.999 | 8232 | 457748 | 1.08 |
| 4 | I18532 | IA2-537STD125 | 27-Feb-20 | 14:51:56 | 7.437 | 9613.386 | 106015.398 | 113.087 | 96.2 | 0.939 | 28573 | 5943 | 1.03 |
| 5 | I18533 | IA2-537STD150 | 27-Feb-20 | 15:08:31 | 7.436 | 9204.258 | 126270.188 | 139.785 | 99.1 | 0.973 | 30887 | 18302 | 1.06 |
| 6 | I18534 | IA2-537STD250 | 27-Feb-20 | 15:25:04 | 7.430 | 7778.292 | 190569.000 | 243.620 | 103.7 | 1.043 | 22300 | 49239 | 1.13 |
| 7 | I18535 | IA2-537STD500 | 27-Feb-20 | 15:41:35 | 7.415 | 6310.149 | 311894.594 | 467.221 | 99.4 | 1.052 | 37974 | 12514 | 1.16 |
| 8 | I18539 | IA2-537STD0.5 | 27-Feb-20 | 16:47:48 | 7.442 | 9377.617 | 449.997 | 0.506 | 107.6 | 1.021 | 5 | 3559 | 1.19 |
| 9 | I18540 | IA2-537STD1.0 | 27-Feb-20 | 17:04:20 | 7.434 | 10742.247 | 768.857 | 0.754 | 80.2 | 0.761 | 33 | 30 | 1.16 |

Compound name: PFPeS
Coefficient of Determination: R^2 = 0.999109
Calibration curve: 0.000233612 * x^2 + 0.948755 * x
Response type: Internal Std ( Ref 18 ), Area * ( IS Conc. / IS Area )
Curve type: 2nd Order, Origin: Force, Weighting: 1/x, Axis trans: None





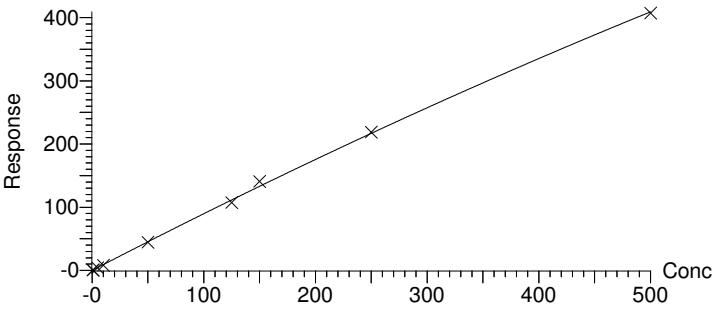
all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICAL_A.qld
Last Altered: Friday, February 28, 2020 09:12:40 Eastern Standard Time
Printed: Friday, February 28, 2020 09:28:57 Eastern Standard Time

**Compound name: PFHpA**

| | Name | ID | Acq.Date | Acq.Time | RT | IS Area | Area | Conc (ng... | %Rec | RRF | 1º S/N | 2º S/N | (b/a) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | I18529 | IA2-537STD5.0 | 27-Feb-20 | 14:02:18 | 8.409 | 90960.586 | 34572.805 | 4.147 | 82.9 | 0.760 | 362 | 225 | 0.97 |
| 2 | I18530 | IA2-537STD10.0 | 27-Feb-20 | 14:18:52 | 8.399 | 91953.430 | 73250.313 | 8.699 | 87.0 | 0.797 | 764 | 294631 | 1.02 |
| 3 | I18531 | IA2-537STD50.0 | 27-Feb-20 | 14:35:26 | 8.405 | 84239.859 | 374813.000 | 49.015 | 98.0 | 0.890 | 5586 | 643 | 0.94 |
| 4 | I18532 | IA2-537STD125 | 27-Feb-20 | 14:51:56 | 8.398 | 74685.898 | 801285.875 | 120.050 | 96.0 | 0.858 | 9545 | 1798 | 1.05 |
| 5 | I18533 | IA2-537STD150 | 27-Feb-20 | 15:08:31 | 8.403 | 69870.023 | 983604.688 | 158.889 | 105.9 | 0.939 | 12436 | 14428 | 1.03 |
| 6 | I18534 | IA2-537STD250 | 27-Feb-20 | 15:25:04 | 8.399 | 67410.773 | 1473721.125 | 251.986 | 100.8 | 0.874 | 14020 | 40878 | 1.01 |
| 7 | I18535 | IA2-537STD500 | 27-Feb-20 | 15:41:35 | 8.394 | 59526.586 | 2424789.250 | 497.361 | 99.5 | 0.815 | 23041 | 4179 | 1.01 |
| 8 | I18539 | IA2-537STD0.5 | 27-Feb-20 | 16:47:48 | 8.398 | 88785.359 | 4136.330 | 0.508 | 101.6 | 0.932 | 52 | 19371 | 1.09 |
| 9 | I18540 | IA2-537STD1.0 | 27-Feb-20 | 17:04:20 | 8.392 | 88560.258 | 6461.678 | 0.795 | 79.5 | 0.730 | 108 | 5 | 0.97 |

Compound name: PFHpA
Coefficient of Determination: R^2 = 0.998889
Calibration curve: -0.000197922 * x^2 + 0.917453 * x
Response type: Internal Std ( Ref 14 ), Area * ( IS Conc. / IS Area )
Curve type: 2nd Order, Origin: Force, Weighting: 1/x, Axis trans: None





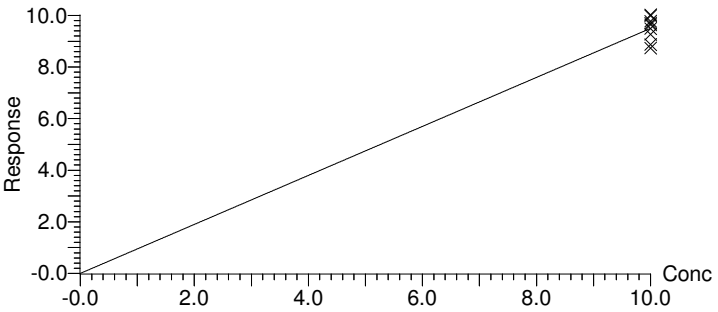
all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICAL_A.qld
Last Altered: Friday, February 28, 2020 09:12:40 Eastern Standard Time
Printed: Friday, February 28, 2020 09:28:57 Eastern Standard Time

**Compound name: M4PFHpA**

| | Name | ID | Acq.Date | Acq.Time | RT | IS Area | Area | Conc (ng... | %Rec | RRF | 1º S/N | 2º S/N | (b/a) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | I18529 | IA2-537STD5.0 | 27-Feb-20 | 14:02:18 | 8.405 | 93068.188 | 90960.586 | 10.290 | 102.9 | 0.977 | 23378 | | 1.02 |
| 2 | I18530 | IA2-537STD10.0 | 27-Feb-20 | 14:18:52 | 8.399 | 95398.117 | 91953.430 | 10.148 | 101.5 | 0.964 | 11553 | | 0.99 |
| 3 | I18531 | IA2-537STD50.0 | 27-Feb-20 | 14:35:26 | 8.402 | 84037.695 | 84239.859 | 10.554 | 105.5 | 1.002 | 1739164 | | 1.03 |
| 4 | I18532 | IA2-537STD125 | 27-Feb-20 | 14:51:56 | 8.398 | 78699.977 | 74685.898 | 9.991 | 99.9 | 0.949 | 1341 | | 1.00 |
| 5 | I18533 | IA2-537STD150 | 27-Feb-20 | 15:08:31 | 8.403 | 75403.938 | 69870.023 | 9.756 | 97.6 | 0.927 | 1392474 | | 1.02 |
| 6 | I18534 | IA2-537STD250 | 27-Feb-20 | 15:25:04 | 8.396 | 69458.313 | 67410.773 | 10.218 | 102.2 | 0.971 | 1304093 | | 1.11 |
| 7 | I18535 | IA2-537STD500 | 27-Feb-20 | 15:41:35 | 8.391 | 59631.082 | 59526.586 | 10.510 | 105.1 | 0.998 | 968 | | 1.08 |
| 8 | I18539 | IA2-537STD0.5 | 27-Feb-20 | 16:47:48 | 8.398 | 100127.297 | 88785.359 | 9.336 | 93.4 | 0.887 | 7137 | | 1.05 |
| 9 | I18540 | IA2-537STD1.0 | 27-Feb-20 | 17:04:20 | 8.392 | 101367.383 | 88560.258 | 9.198 | 92.0 | 0.874 | 2505 | | 1.00 |

Compound name: M4PFHpA
Response Factor: 0.949823
RRF SD: 0.0458482, % Relative SD: 4.82703
Response type: Internal Std ( Ref 21 ), Area * ( IS Conc. / IS Area )
Curve type: RF





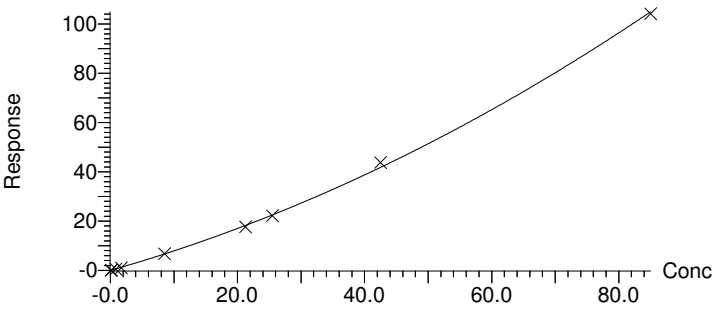
all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICAL_A.qld
Last Altered: Friday, February 28, 2020 09:12:40 Eastern Standard Time
Printed: Friday, February 28, 2020 09:28:57 Eastern Standard Time

**Compound name: br-PFHxS**

| | Name | ID | Acq.Date | Acq.Time | RT | IS Area | Area | Conc (ng... | %Rec | RRF | 1º S/N | 2º S/N | (b/a) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | I18529 | IA2-537STD5.0 | 27-Feb-20 | 14:02:18 | 8.328 | 11194.032 | 559.837 | 0.679 | 79.8 | 0.588 | 71 | | 0.58 |
| 2 | I18530 | IA2-537STD10.0 | 27-Feb-20 | 14:18:52 | 8.319 | 12271.508 | 1270.581 | 1.397 | 82.2 | 0.609 | 304 | | 0.60 |
| 3 | I18531 | IA2-537STD50.0 | 27-Feb-20 | 14:35:26 | 8.325 | 10437.030 | 6982.396 | 8.540 | 100.5 | 0.787 | 390 | 877 | 0.58 |
| 4 | I18532 | IA2-537STD125 | 27-Feb-20 | 14:51:56 | 8.321 | 9613.386 | 16964.984 | 20.643 | 97.1 | 0.830 | 1444 | 1017 | 0.59 |
| 5 | I18533 | IA2-537STD150 | 27-Feb-20 | 15:08:31 | 8.322 | 9204.258 | 20468.014 | 25.216 | 98.9 | 0.872 | 9263 | 521 | 0.61 |
| 6 | I18534 | IA2-537STD250 | 27-Feb-20 | 15:25:04 | 8.318 | 7778.292 | 34080.543 | 44.106 | 103.8 | 1.031 | 9050 | 1561 | 0.60 |
| 7 | I18535 | IA2-537STD500 | 27-Feb-20 | 15:41:35 | 8.313 | 6310.149 | 65752.359 | 84.562 | 99.5 | 1.226 | 7218 | 2159 | 0.60 |
| 8 | I18539 | IA2-537STD0.5 | 27-Feb-20 | 16:47:48 | 8.325 | 9377.617 | 52.373 | 0.076 | 89.6 | 0.657 | 80 | | 0.53 |
| 9 | I18540 | IA2-537STD1.0 | 27-Feb-20 | 17:04:20 | 8.315 | 10742.247 | 110.327 | 0.140 | 82.3 | 0.604 | 64 | | 0.63 |

Compound name: br-PFHxS
Coefficient of Determination: R^2 = 0.999175
Calibration curve: 0.00590398 * x^2 + 0.732997 * x
Response type: Internal Std ( Ref 18 ), Area * ( IS Conc. / IS Area )
Curve type: 2nd Order, Origin: Force, Weighting: 1/x, Axis trans: None





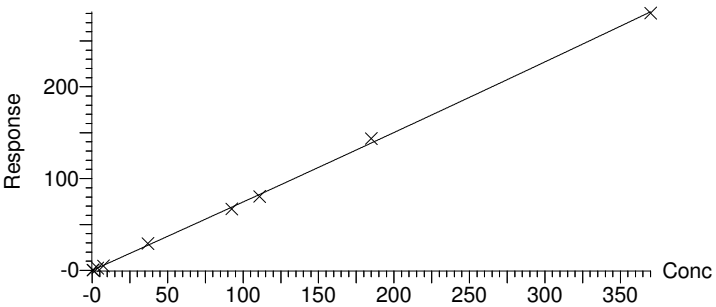
all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICAL_A.qld
Last Altered: Friday, February 28, 2020 09:12:40 Eastern Standard Time
Printed: Friday, February 28, 2020 09:28:57 Eastern Standard Time

**Compound name: L-PFHxS**

| | Name | ID | Acq.Date | Acq.Time | RT | IS Area | Area | Conc (ng... | %Rec | RRF | 1º S/N | 2º S/N | (b/a) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | I18529 | IA2-537STD5.0 | 27-Feb-20 | 14:02:18 | 8.565 | 11194.032 | 2784.762 | 3.364 | 90.9 | 0.672 | 532 | 181 | 0.98 |
| 2 | I18530 | IA2-537STD10.0 | 27-Feb-20 | 14:18:52 | 8.556 | 12271.508 | 5887.751 | 6.487 | 87.7 | 0.648 | 2217 | 1560 | 1.00 |
| 3 | I18531 | IA2-537STD50.0 | 27-Feb-20 | 14:35:26 | 8.562 | 10437.030 | 30587.240 | 39.517 | 106.8 | 0.792 | 2584 | 7938 | 0.97 |
| 4 | I18532 | IA2-537STD125 | 27-Feb-20 | 14:51:56 | 8.554 | 9613.386 | 64287.277 | 89.807 | 97.1 | 0.723 | 8299 | 8158 | 1.00 |
| 5 | I18533 | IA2-537STD150 | 27-Feb-20 | 15:08:31 | 8.559 | 9204.258 | 74057.070 | 107.897 | 97.2 | 0.725 | 50570 | 3897 | 1.01 |
| 6 | I18534 | IA2-537STD250 | 27-Feb-20 | 15:25:04 | 8.556 | 7778.292 | 111633.836 | 191.185 | 103.3 | 0.776 | 44077 | 10485 | 0.98 |
| 7 | I18535 | IA2-537STD500 | 27-Feb-20 | 15:41:35 | 8.547 | 6310.149 | 176928.781 | 368.313 | 99.5 | 0.758 | 29050 | 11721 | 1.02 |
| 8 | I18539 | IA2-537STD0.5 | 27-Feb-20 | 16:47:48 | 8.554 | 9377.617 | 324.156 | 0.468 | 126.4 | 0.934 | 836 | | 1.01 |
| 9 | I18540 | IA2-537STD1.0 | 27-Feb-20 | 17:04:20 | 8.552 | 10742.247 | 527.956 | 0.665 | 89.8 | 0.664 | 393 | | 0.95 |

Compound name: L-PFHxS
Coefficient of Determination: R^2 = 0.999089
Calibration curve: 5.97876e-005 * x^2 + 0.739255 * x
Response type: Internal Std ( Ref 18 ), Area * ( IS Conc. / IS Area )
Curve type: 2nd Order, Origin: Force, Weighting: 1/x, Axis trans: None





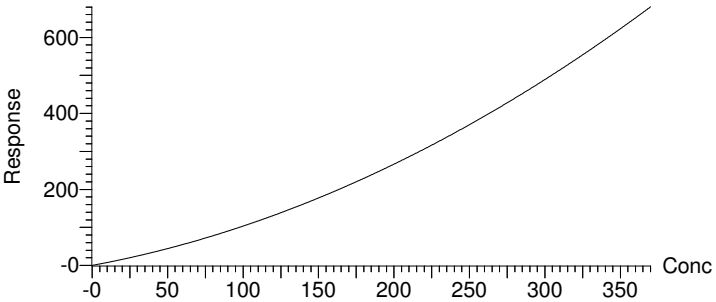
all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICAL_A.qld
Last Altered: Friday, February 28, 2020 09:12:40 Eastern Standard Time
Printed: Friday, February 28, 2020 09:28:57 Eastern Standard Time

**Compound name: PFHxS**

| | Name | ID | Acq.Date | Acq.Time | RT | IS Area | Area | ng/mL | %Rec | RRF | 1º S/N | 2º S/N | (b/a) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | I18529 | IA2-537STD5.0 | 27-Feb-20 | 14:02:18 | | 11194.032 | 3344.599 | 4.043 | | | | | |
| 2 | I18530 | IA2-537STD10.0 | 27-Feb-20 | 14:18:52 | | 12271.508 | 7158.332 | 7.884 | | | | | |
| 3 | I18531 | IA2-537STD50.0 | 27-Feb-20 | 14:35:26 | | 10437.030 | 37569.636 | 48.057 | | | | | |
| 4 | I18532 | IA2-537STD125 | 27-Feb-20 | 14:51:56 | | 9613.386 | 81252.261 | 110.450 | | | | | |
| 5 | I18533 | IA2-537STD150 | 27-Feb-20 | 15:08:31 | | 9204.258 | 94525.084 | 133.113 | | | | | |
| 6 | I18534 | IA2-537STD250 | 27-Feb-20 | 15:25:04 | | 7778.292 | 145714.379 | 235.291 | | | | | |
| 7 | I18535 | IA2-537STD500 | 27-Feb-20 | 15:41:35 | | 6310.149 | 242681.140 | 452.875 | | | | | |
| 8 | I18539 | IA2-537STD0.5 | 27-Feb-20 | 16:47:48 | | 9377.617 | 376.529 | 0.544 | | | | | |
| 9 | I18540 | IA2-537STD1.0 | 27-Feb-20 | 17:04:20 | | 10742.247 | 638.283 | 0.805 | | | | | |

Compound name: PFHxS
Coefficient of Determination: 0.000000
Calibration curve: 0.736126 * x
Response type: Internal Std ( Ref 18 ), Area * ( IS Conc. / IS Area )
Curve type: Linear, Origin: Force, Weighting: 1/x, Axis trans: None





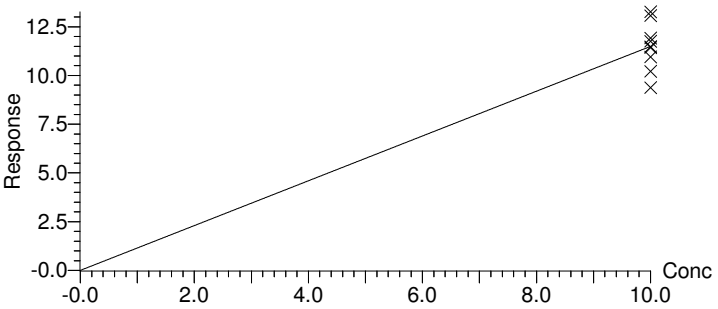
all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICAL_A.qld
Last Altered: Friday, February 28, 2020 09:12:40 Eastern Standard Time
Printed: Friday, February 28, 2020 09:28:57 Eastern Standard Time

**Compound name: M3PFHxS**

| | Name | ID | Acq.Date | Acq.Time | RT | IS Area | Area | Conc (ng... | %Rec | RRF | 1º S/N | 2º S/N | (b/a) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | I18529 | IA2-537STD5.0 | 27-Feb-20 | 14:02:18 | 8.565 | 9391.129 | 11194.032 | 10.371 | 103.7 | 1.192 | 243467 | | 0.93 |
| 2 | I18530 | IA2-537STD10.0 | 27-Feb-20 | 14:18:52 | 8.556 | 10693.415 | 12271.508 | 9.985 | 99.8 | 1.148 | 7 | | 0.96 |
| 3 | I18531 | IA2-537STD50.0 | 27-Feb-20 | 14:35:26 | 8.558 | 7867.362 | 10437.030 | 11.543 | 115.4 | 1.327 | 985 | | 1.08 |
| 4 | I18532 | IA2-537STD125 | 27-Feb-20 | 14:51:56 | 8.554 | 8781.861 | 9613.386 | 9.525 | 95.2 | 1.095 | 204538 | | 1.07 |
| 5 | I18533 | IA2-537STD150 | 27-Feb-20 | 15:08:31 | 8.556 | 7044.307 | 9204.258 | 11.369 | 113.7 | 1.307 | 165 | | 1.27 |
| 6 | I18534 | IA2-537STD250 | 27-Feb-20 | 15:25:04 | 8.552 | 6617.794 | 7778.292 | 10.227 | 102.3 | 1.175 | 316 | | 1.11 |
| 7 | I18535 | IA2-537STD500 | 27-Feb-20 | 15:41:35 | 8.551 | 5519.950 | 6310.149 | 9.946 | 99.5 | 1.143 | 95 | | 0.92 |
| 8 | I18539 | IA2-537STD0.5 | 27-Feb-20 | 16:47:48 | 8.558 | 10009.636 | 9377.617 | 8.151 | 81.5 | 0.937 | 306 | | 0.86 |
| 9 | I18540 | IA2-537STD1.0 | 27-Feb-20 | 17:04:20 | 8.548 | 10521.385 | 10742.247 | 8.883 | 88.8 | 1.021 | 166 | | 0.98 |

Compound name: M3PFHxS
Response Factor: 1.14932
RRF SD: 0.124153, % Relative SD: 10.8024
Response type: Internal Std ( Ref 32 ), Area * ( IS Conc. / IS Area )
Curve type: RF





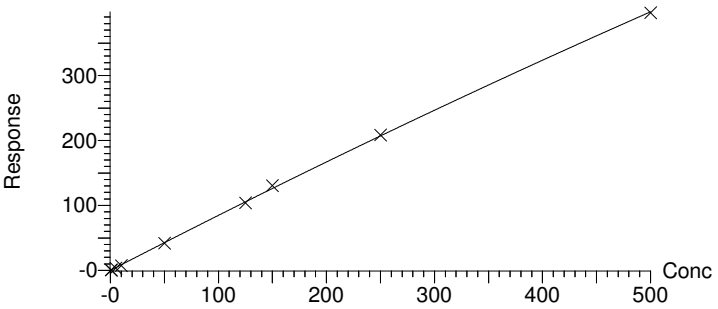
all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICAL_A.qld
Last Altered: Friday, February 28, 2020 09:12:40 Eastern Standard Time
Printed: Friday, February 28, 2020 09:28:57 Eastern Standard Time

**Compound name: br-PFOA**

| | Name | ID | Acq.Date | Acq.Time | RT | IS Area | Area | ng/mL | %Rec | RRF | 1º S/N | 2º S/N | (b/a) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | I18529 | IA2-537STD5.0 | 27-Feb-20 | 14:02:18 | | 92378.477 | | | | | | | |
| 2 | I18530 | IA2-537STD10.0 | 27-Feb-20 | 14:18:52 | | 93629.484 | | | | | | | |
| 3 | I18531 | IA2-537STD50.0 | 27-Feb-20 | 14:35:26 | | 83420.031 | | | | | | | |
| 4 | I18532 | IA2-537STD125 | 27-Feb-20 | 14:51:56 | | 75622.828 | | | | | | | |
| 5 | I18533 | IA2-537STD150 | 27-Feb-20 | 15:08:31 | | 72165.484 | | | | | | | |
| 6 | I18534 | IA2-537STD250 | 27-Feb-20 | 15:25:04 | | 67823.211 | | | | | | 1 | |
| 7 | I18535 | IA2-537STD500 | 27-Feb-20 | 15:41:35 | | 60240.891 | | | | | | | |
| 8 | I18539 | IA2-537STD0.5 | 27-Feb-20 | 16:47:48 | | 85646.797 | | | | | | | |
| 9 | I18540 | IA2-537STD1.0 | 27-Feb-20 | 17:04:20 | | 86720.586 | | | | | | | |

Compound name: L-PFOA
Coefficient of Determination: R^2 = 0.999473
Calibration curve: -0.000128513 * x^2 + 0.860482 * x
Response type: Internal Std ( Ref 23 ), Area * ( IS Conc. / IS Area )
Curve type: 2nd Order, Origin: Force, Weighting: 1/x, Axis trans: None





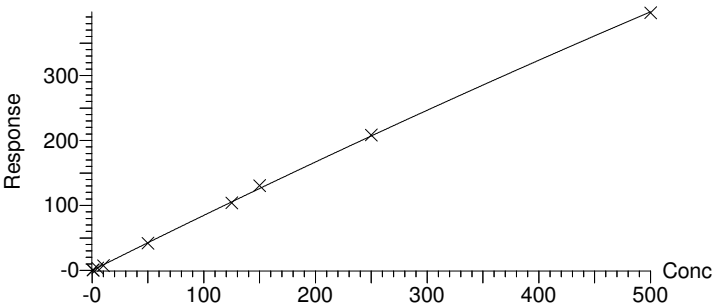
all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICAL_A.qld
Last Altered: Friday, February 28, 2020 09:12:40 Eastern Standard Time
Printed: Friday, February 28, 2020 09:28:57 Eastern Standard Time

**Compound name: L-PFOA**

| | Name | ID | Acq.Date | Acq.Time | RT | IS Area | Area | Conc (ng... | %Rec | RRF | 1º S/N | 2º S/N | (b/a) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | I18529 | IA2-537STD5.0 | 27-Feb-20 | 14:02:18 | 9.354 | 92378.477 | 33626.664 | 4.233 | 84.7 | 0.728 | 367 | 3 | 0.96 |
| 2 | I18530 | IA2-537STD10.0 | 27-Feb-20 | 14:18:52 | 9.347 | 93629.484 | 71443.797 | 8.879 | 88.8 | 0.763 | 652 | 230 | 0.98 |
| 3 | I18531 | IA2-537STD50.0 | 27-Feb-20 | 14:35:26 | 9.349 | 83420.031 | 350745.688 | 49.225 | 98.4 | 0.841 | 4181 | 900321 | 1.01 |
| 4 | I18532 | IA2-537STD125 | 27-Feb-20 | 14:51:56 | 9.341 | 75622.828 | 784709.063 | 122.845 | 98.3 | 0.830 | 10105 | 3202 | 1.05 |
| 5 | I18533 | IA2-537STD150 | 27-Feb-20 | 15:08:31 | 9.351 | 72165.484 | 941813.500 | 155.269 | 103.5 | 0.870 | 12020 | 3339 | 1.02 |
| 6 | I18534 | IA2-537STD250 | 27-Feb-20 | 15:25:04 | 9.342 | 67823.211 | 1412851.375 | 251.540 | 100.6 | 0.833 | 11766 | 2234 | 1.07 |
| 7 | I18535 | IA2-537STD500 | 27-Feb-20 | 15:41:35 | 9.341 | 60240.891 | 2389997.000 | 498.126 | 99.6 | 0.793 | 21642 | 8721 | 1.02 |
| 8 | I18539 | IA2-537STD0.5 | 27-Feb-20 | 16:47:48 | 9.345 | 85646.797 | 4059.672 | 0.551 | 110.2 | 0.948 | 65 | 1645 | 1.24 |
| 9 | I18540 | IA2-537STD1.0 | 27-Feb-20 | 17:04:20 | 9.334 | 86720.586 | 6073.813 | 0.814 | 81.4 | 0.700 | 78 | 20462 | 1.32 |

Compound name: L-PFOA
Coefficient of Determination: R^2 = 0.999473
Calibration curve: -0.000128513 * x^2 + 0.860482 * x
Response type: Internal Std ( Ref 23 ), Area * ( IS Conc. / IS Area )
Curve type: 2nd Order, Origin: Force, Weighting: 1/x, Axis trans: None





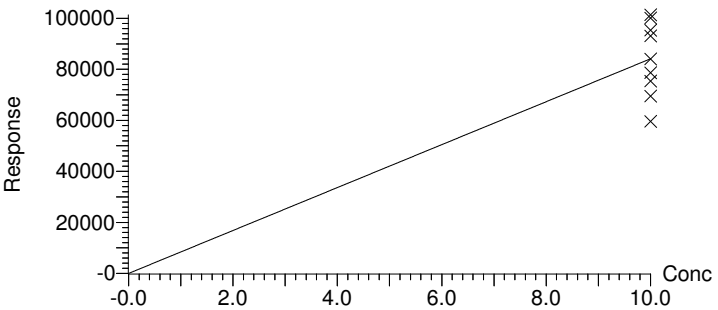
all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICAL_A.qld
Last Altered: Friday, February 28, 2020 09:12:40 Eastern Standard Time
Printed: Friday, February 28, 2020 09:28:57 Eastern Standard Time

**Compound name: M2PFOA**

| | Name | ID | Acq.Date | Acq.Time | RT | IS Area | Area | ng/mL | %Rec | RRF | 1º S/N | 2º S/N | (b/a) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | I18529 | IA2-537STD5.0 | 27-Feb-20 | 14:02:18 | 9.354 | | 93068.188 | 11.062 | 110.6 | 9306.819 | 661 | | 0.97 |
| 2 | I18530 | IA2-537STD10.0 | 27-Feb-20 | 14:18:52 | 9.347 | | 95398.117 | 11.339 | 113.4 | 9539.812 | 1112 | | 0.95 |
| 3 | I18531 | IA2-537STD50.0 | 27-Feb-20 | 14:35:26 | 9.349 | | 84037.695 | 9.989 | 99.9 | 8403.770 | 94245 | | 1.04 |
| 4 | I18532 | IA2-537STD125 | 27-Feb-20 | 14:51:56 | 9.341 | | 78699.977 | 9.354 | 93.5 | 7869.998 | 966 | | 1.05 |
| 5 | I18533 | IA2-537STD150 | 27-Feb-20 | 15:08:31 | 9.351 | | 75403.938 | 8.963 | 89.6 | 7540.394 | 2509 | | 1.01 |
| 6 | I18534 | IA2-537STD250 | 27-Feb-20 | 15:25:04 | 9.347 | | 69458.313 | 8.256 | 82.6 | 6945.831 | 4163 | | 0.95 |
| 7 | I18535 | IA2-537STD500 | 27-Feb-20 | 15:41:35 | 9.337 | | 59631.082 | 7.088 | 70.9 | 5963.108 | 6090 | | 1.14 |
| 8 | I18539 | IA2-537STD0.5 | 27-Feb-20 | 16:47:48 | 9.345 | | 100127.297 | 11.901 | 119.0 | 10012.730 | 2353753 | | 1.02 |
| 9 | I18540 | IA2-537STD1.0 | 27-Feb-20 | 17:04:20 | 9.338 | | 101367.383 | 12.049 | 120.5 | 10136.738 | 2376850 | | 0.97 |

Compound name: M2PFOA
Response Factor: 8413.24
RRF SD: 1449.57, % Relative SD: 17.2296
Response type: External Std, Area
Curve type: RF





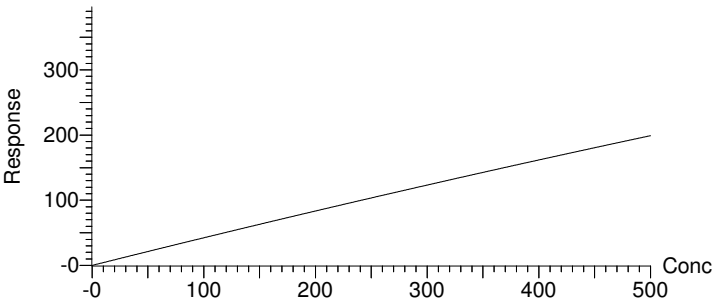
all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICAL_A.qld
Last Altered: Friday, February 28, 2020 09:12:40 Eastern Standard Time
Printed: Friday, February 28, 2020 09:28:57 Eastern Standard Time

**Compound name: PFOA**

| | Name | ID | Acq.Date | Acq.Time | RT | IS Area | Area | ng/mL | %Rec | RRF | 1º S/N | 2º S/N | (b/a) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | I18529 | IA2-537STD5.0 | 27-Feb-20 | 14:02:18 | | 92378.477 | 33626.664 | 4.233 | | | | | |
| 2 | I18530 | IA2-537STD10.0 | 27-Feb-20 | 14:18:52 | | 93629.484 | 71443.797 | 8.879 | | | | | |
| 3 | I18531 | IA2-537STD50.0 | 27-Feb-20 | 14:35:26 | | 83420.031 | 350745.688 | 49.225 | | | | | |
| 4 | I18532 | IA2-537STD125 | 27-Feb-20 | 14:51:56 | | 75622.828 | 784709.063 | 122.845 | | | | | |
| 5 | I18533 | IA2-537STD150 | 27-Feb-20 | 15:08:31 | | 72165.484 | 941813.500 | 155.269 | | | | | |
| 6 | I18534 | IA2-537STD250 | 27-Feb-20 | 15:25:04 | | 67823.211 | 1412851.375 | 251.540 | | | | | |
| 7 | I18535 | IA2-537STD500 | 27-Feb-20 | 15:41:35 | | 60240.891 | 2389997.000 | 498.126 | | | | | |
| 8 | I18539 | IA2-537STD0.5 | 27-Feb-20 | 16:47:48 | | 85646.797 | 4059.672 | 0.551 | | | | | |
| 9 | I18540 | IA2-537STD1.0 | 27-Feb-20 | 17:04:20 | | 86720.586 | 6073.813 | 0.814 | | | | | |

Compound name: PFOA
Coefficient of Determination: 0.000000
Calibration curve: 0.430241 * x
Response type: Internal Std ( Ref 23 ), Area * ( IS Conc. / IS Area )
Curve type: Linear, Origin: Force, Weighting: 1/x, Axis trans: None





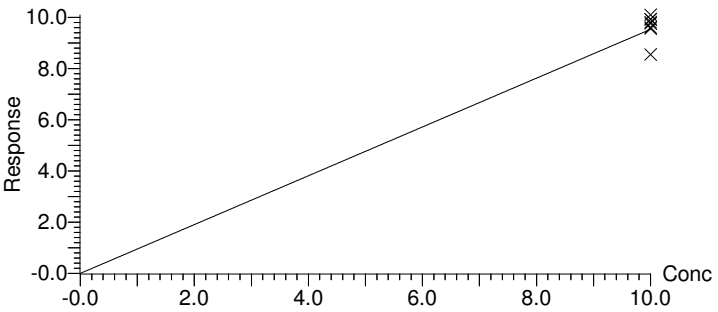
all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICAL_A.qld
Last Altered: Friday, February 28, 2020 09:12:40 Eastern Standard Time
Printed: Friday, February 28, 2020 09:28:57 Eastern Standard Time

**Compound name: M8PFOA**

| | Name | ID | Acq.Date | Acq.Time | RT | IS Area | Area | Conc (ng... | %Rec | RRF | 1º S/N | 2º S/N | (b/a) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | I18529 | IA2-537STD5.0 | 27-Feb-20 | 14:02:18 | 9.354 | 93068.188 | 92378.477 | 10.409 | 104.1 | 0.993 | 1937489 | | 0.94 |
| 2 | I18530 | IA2-537STD10.0 | 27-Feb-20 | 14:18:52 | 9.347 | 95398.117 | 93629.484 | 10.292 | 102.9 | 0.981 | 5075 | | 0.98 |
| 3 | I18531 | IA2-537STD50.0 | 27-Feb-20 | 14:35:26 | 9.349 | 84037.695 | 83420.031 | 10.410 | 104.1 | 0.993 | 1708300 | | 0.98 |
| 4 | I18532 | IA2-537STD125 | 27-Feb-20 | 14:51:56 | 9.341 | 78699.977 | 75622.828 | 10.077 | 100.8 | 0.961 | 1493437 | | 1.03 |
| 5 | I18533 | IA2-537STD150 | 27-Feb-20 | 15:08:31 | 9.351 | 75403.938 | 72165.484 | 10.036 | 100.4 | 0.957 | 1443650 | | 1.00 |
| 6 | I18534 | IA2-537STD250 | 27-Feb-20 | 15:25:04 | 9.343 | 69458.313 | 67823.211 | 10.240 | 102.4 | 0.976 | 1308445 | | 1.09 |
| 7 | I18535 | IA2-537STD500 | 27-Feb-20 | 15:41:35 | 9.337 | 59631.082 | 60240.891 | 10.594 | 105.9 | 1.010 | 1615 | | 1.03 |
| 8 | I18539 | IA2-537STD0.5 | 27-Feb-20 | 16:47:48 | 9.345 | 100127.297 | 85646.797 | 8.970 | 89.7 | 0.855 | 1757151 | | 0.96 |
| 9 | I18540 | IA2-537STD1.0 | 27-Feb-20 | 17:04:20 | 9.338 | 101367.383 | 86720.586 | 8.972 | 89.7 | 0.856 | 1742526 | | 0.97 |

Compound name: M8PFOA
Response Factor: 0.953581
RRF SD: 0.0579709, % Relative SD: 6.07929
Response type: Internal Std ( Ref 21 ), Area * ( IS Conc. / IS Area )
Curve type: RF





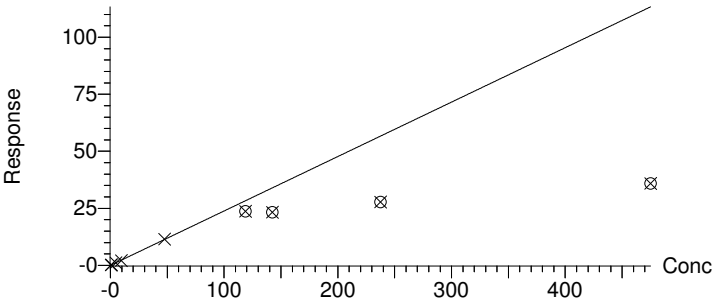
all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICAL_A.qld
Last Altered: Friday, February 28, 2020 09:12:40 Eastern Standard Time
Printed: Friday, February 28, 2020 09:28:57 Eastern Standard Time

**Compound name: 6:2FTS**

| | Name | ID | Acq.Date | Acq.Time | RT | IS Area | Area | Conc (ng... | %Rec | RRF | 1º S/N | 2º S/N | (b/a) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | I18529 | IA2-537STD5.0 | 27-Feb-20 | 14:02:18 | 9.312 | 3563.207 | 407.566 | 4.795 | 100.9 | 0.241 | 1648 | 714 | 1.00 |
| 2 | I18530 | IA2-537STD10.0 | 27-Feb-20 | 14:18:52 | 9.305 | 4355.449 | 908.136 | 8.740 | 92.0 | 0.219 | 19043 | 28471 | 0.93 |
| 3 | I18531 | IA2-537STD50.0 | 27-Feb-20 | 14:35:26 | 9.308 | 4256.029 | 4878.899 | 48.052 | 101.2 | 0.241 | 2258 | 4558 | 0.99 |
| 4 | I18532 | IA2-537STD125 | 27-Feb-20 | 14:51:56 | 9.300 | 4596.429 | 10866.652 | 99.099 | 83.5 | 0.199 | 2758 | 8612 | 0.99 |
| 5 | I18533 | IA2-537STD150 | 27-Feb-20 | 15:08:31 | 9.310 | 5548.471 | 12931.055 | 97.691 | 68.6 | 0.164 | 2700 | 4395 | 0.96 |
| 6 | I18534 | IA2-537STD250 | 27-Feb-20 | 15:25:04 | 9.301 | 7645.305 | 21260.941 | 116.569 | 49.1 | 0.117 | 13709 | 7994 | 0.99 |
| 7 | I18535 | IA2-537STD500 | 27-Feb-20 | 15:41:35 | 9.295 | 10648.935 | 38207.949 | 150.398 | 31.7 | 0.076 | 11971 | 8854 | 1.03 |
| 8 | I18539 | IA2-537STD0.5 | 27-Feb-20 | 16:47:48 | 9.316 | 4064.310 | 42.286 | 0.436 | 91.8 | 0.219 | 31 | 15 | 0.71 |
| 9 | I18540 | IA2-537STD1.0 | 27-Feb-20 | 17:04:20 | 9.297 | 3636.959 | 99.960 | 1.152 | 121.3 | 0.289 | 6 | 72 | 1.00 |

Compound name: 6:2FTS
Coefficient of Determination: R^2 = 0.997965
Calibration curve: 0.238564 * x
Response type: Internal Std ( Ref 25 ), Area * ( IS Conc. / IS Area )
Curve type: Linear, Origin: Force, Weighting: 1/x, Axis trans: None





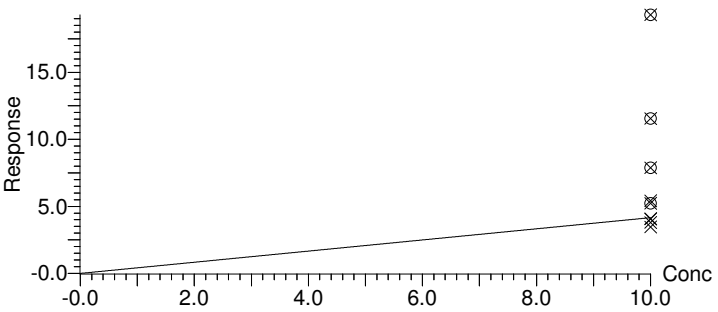
all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICAL_A.qld
Last Altered: Friday, February 28, 2020 09:12:40 Eastern Standard Time
Printed: Friday, February 28, 2020 09:28:57 Eastern Standard Time

**Compound name: M2-6:2FTS**

| | Name | ID | Acq.Date | Acq.Time | RT | IS Area | Area | Conc (ng... | %Rec | RRF | 1º S/N | 2º S/N | (b/a) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | I18529 | IA2-537STD5.0 | 27-Feb-20 | 14:02:18 | 9.308 | 9391.129 | 3563.207 | 9.123 | 91.2 | 0.379 | 292 | | 1.08 |
| 2 | I18530 | IA2-537STD10.0 | 27-Feb-20 | 14:18:52 | 9.305 | 10693.415 | 4355.449 | 9.794 | 97.9 | 0.407 | 93724 | | 0.99 |
| 3 | I18531 | IA2-537STD50.0 | 27-Feb-20 | 14:35:26 | 9.308 | 7867.362 | 4256.029 | 13.008 | 130.1 | 0.541 | 90984 | | 0.92 |
| 4 | I18532 | IA2-537STD125 | 27-Feb-20 | 14:51:56 | 9.304 | 8781.861 | 4596.429 | 12.585 | 125.9 | 0.523 | 97200 | | 0.79 |
| 5 | I18533 | IA2-537STD150 | 27-Feb-20 | 15:08:31 | 9.310 | 7044.307 | 5548.471 | 18.939 | 189.4 | 0.788 | 328 | | 1.01 |
| 6 | I18534 | IA2-537STD250 | 27-Feb-20 | 15:25:04 | 9.301 | 6617.794 | 7645.305 | 27.779 | 277.8 | 1.155 | 160134 | | 1.00 |
| 7 | I18535 | IA2-537STD500 | 27-Feb-20 | 15:41:35 | 9.295 | 5519.950 | 10648.935 | 46.387 | 463.9 | 1.929 | 221970 | | 1.05 |
| 8 | I18539 | IA2-537STD0.5 | 27-Feb-20 | 16:47:48 | 9.304 | 10009.636 | 4064.310 | 9.763 | 97.6 | 0.406 | 85639 | | 0.96 |
| 9 | I18540 | IA2-537STD1.0 | 27-Feb-20 | 17:04:20 | 9.297 | 10521.385 | 3636.959 | 8.312 | 83.1 | 0.346 | 40 | | 0.99 |

Compound name: M2-6:2FTS
Response Factor: 0.415882
RRF SD: 0.0742913, % Relative SD: 17.8635
Response type: Internal Std ( Ref 32 ), Area * ( IS Conc. / IS Area )
Curve type: RF





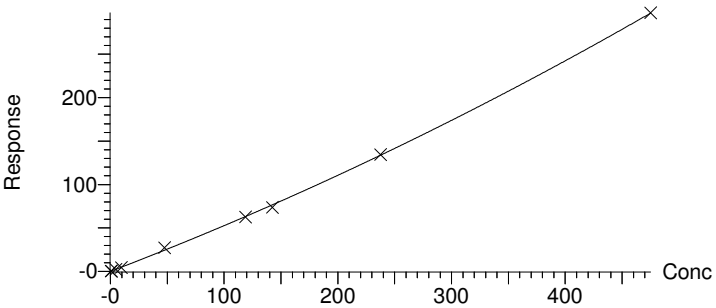
all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICAL_A.qld
Last Altered: Friday, February 28, 2020 09:12:40 Eastern Standard Time
Printed: Friday, February 28, 2020 09:28:57 Eastern Standard Time

**Compound name: PFHpS**

| | Name | ID | Acq.Date | Acq.Time | RT | IS Area | Area | Conc (ng... | %Rec | RRF | 1º S/N | 2º S/N | (b/a) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | I18529 | IA2-537STD5.0 | 27-Feb-20 | 14:02:18 | 9.435 | 11718.485 | 2526.212 | 4.300 | 90.5 | 0.454 | 54248 | 45543 | 1.27 |
| 2 | I18530 | IA2-537STD10.0 | 27-Feb-20 | 14:18:52 | 9.437 | 11646.159 | 5058.142 | 8.644 | 91.0 | 0.457 | 108221 | 108101 | 0.93 |
| 3 | I18531 | IA2-537STD50.0 | 27-Feb-20 | 14:35:26 | 9.439 | 10818.837 | 29451.385 | 52.941 | 111.5 | 0.573 | 11441 | 574035 | 0.97 |
| 4 | I18532 | IA2-537STD125 | 27-Feb-20 | 14:51:56 | 9.431 | 9250.913 | 58092.289 | 118.157 | 99.5 | 0.529 | 5013 | 16385 | 1.02 |
| 5 | I18533 | IA2-537STD150 | 27-Feb-20 | 15:08:31 | 9.441 | 9727.753 | 71784.641 | 137.523 | 96.5 | 0.518 | 1456090 | 953 | 0.98 |
| 6 | I18534 | IA2-537STD250 | 27-Feb-20 | 15:25:04 | 9.432 | 7525.810 | 101142.914 | 238.568 | 100.4 | 0.566 | 7659 | 12117 | 1.04 |
| 7 | I18535 | IA2-537STD500 | 27-Feb-20 | 15:41:35 | 9.431 | 5671.231 | 168801.906 | 475.440 | 100.1 | 0.627 | 2099 | 7713 | 1.01 |
| 8 | I18539 | IA2-537STD0.5 | 27-Feb-20 | 16:47:48 | 9.431 | 12059.226 | 292.711 | 0.485 | 102.1 | 0.511 | 6924 | 33 | 1.00 |
| 9 | I18540 | IA2-537STD1.0 | 27-Feb-20 | 17:04:20 | 9.420 | 9845.821 | 448.124 | 0.910 | 95.7 | 0.479 | 10216 | 11 | 1.05 |

Compound name: PFHpS
Coefficient of Determination: R^2 = 0.999237
Calibration curve: 0.000264716 * x^2 + 0.500186 * x
Response type: Internal Std ( Ref 33 ), Area * ( IS Conc. / IS Area )
Curve type: 2nd Order, Origin: Force, Weighting: 1/x, Axis trans: None





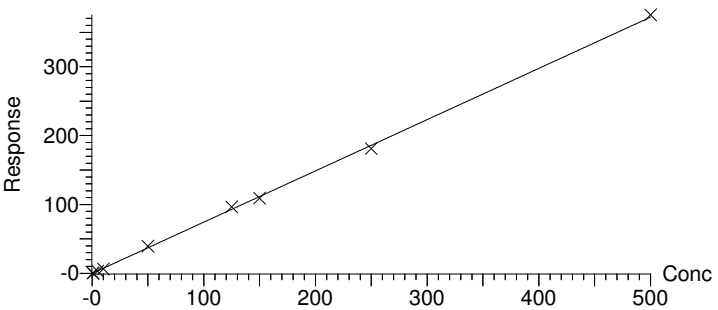
all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICAL_A.qld
Last Altered: Friday, February 28, 2020 09:12:40 Eastern Standard Time
Printed: Friday, February 28, 2020 09:28:57 Eastern Standard Time

**Compound name: PFNA**

| | Name | ID | Acq.Date | Acq.Time | RT | IS Area | Area | Conc (ng... | %Rec | RRF | 1º S/N | 2º S/N | (b/a) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | I18529 | IA2-537STD5.0 | 27-Feb-20 | 14:02:18 | 10.0... | 95964.969 | 31433.725 | 4.402 | 88.0 | 0.655 | 469 | 124798 | 0.95 |
| 2 | I18530 | IA2-537STD10.0 | 27-Feb-20 | 14:18:52 | 10.0... | 93872.930 | 62461.043 | 8.943 | 89.4 | 0.665 | 862 | 267286 | 0.92 |
| 3 | I18531 | IA2-537STD50.0 | 27-Feb-20 | 14:35:26 | 10.0... | 83156.852 | 327237.781 | 52.888 | 105.8 | 0.787 | 1813 | 5879 | 1.02 |
| 4 | I18532 | IA2-537STD125 | 27-Feb-20 | 14:51:56 | 10.0... | 71523.797 | 690355.500 | 129.723 | 103.8 | 0.772 | 7776 | 2698175 | 0.92 |
| 5 | I18533 | IA2-537STD150 | 27-Feb-20 | 15:08:31 | 10.1... | 71577.570 | 780272.625 | 146.509 | 97.7 | 0.727 | 13031 | 5605 | 0.90 |
| 6 | I18534 | IA2-537STD250 | 27-Feb-20 | 15:25:04 | 10.0... | 66425.828 | 1202890.625 | 243.380 | 97.4 | 0.724 | 16961 | 5077908 | 1.00 |
| 7 | I18535 | IA2-537STD500 | 27-Feb-20 | 15:41:35 | 10.0... | 51921.512 | 1948726.750 | 504.428 | 100.9 | 0.751 | 18476 | 34462 | 0.99 |
| 8 | I18539 | IA2-537STD0.5 | 27-Feb-20 | 16:47:48 | 10.0... | 84464.977 | 2719.855 | 0.433 | 86.6 | 0.644 | 38 | 17919 | 1.07 |
| 9 | I18540 | IA2-537STD1.0 | 27-Feb-20 | 17:04:20 | 10.0... | 86878.703 | 5135.311 | 0.794 | 79.4 | 0.591 | 60 | 31 | 1.00 |

Compound name: PFNA
Coefficient of Determination: R^2 = 0.999182
Calibration curve: 0.744055 * x
Response type: Internal Std ( Ref 28 ), Area * ( IS Conc. / IS Area )
Curve type: Linear, Origin: Force, Weighting: 1/x, Axis trans: None





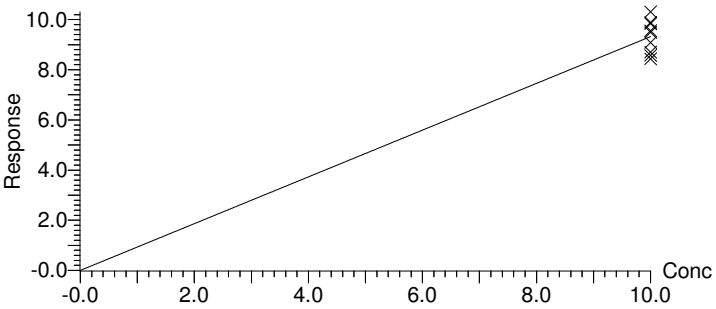
all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICAL_A.qld
Last Altered: Friday, February 28, 2020 09:12:40 Eastern Standard Time
Printed: Friday, February 28, 2020 09:28:57 Eastern Standard Time

**Compound name: M9PFNA**

| | Name | ID | Acq.Date | Acq.Time | RT | IS Area | Area | Conc (ng... | %Rec | RRF | 1º S/N | 2º S/N | (b/a) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | I18529 | IA2-537STD5.0 | 27-Feb-20 | 14:02:18 | 10.0... | 93068.188 | 95964.969 | 11.060 | 110.6 | 1.031 | 1602935 | | 0.90 |
| 2 | I18530 | IA2-537STD10.0 | 27-Feb-20 | 14:18:52 | 10.0... | 95398.117 | 93872.930 | 10.555 | 105.6 | 0.984 | 1560678 | | 0.92 |
| 3 | I18531 | IA2-537STD50.0 | 27-Feb-20 | 14:35:26 | 10.0... | 84037.695 | 83156.852 | 10.614 | 106.1 | 0.990 | 5320 | | 1.00 |
| 4 | I18532 | IA2-537STD125 | 27-Feb-20 | 14:51:56 | 10.0... | 78699.977 | 71523.797 | 9.748 | 97.5 | 0.909 | 2887 | | 0.91 |
| 5 | I18533 | IA2-537STD150 | 27-Feb-20 | 15:08:31 | 10.0... | 75403.938 | 71577.570 | 10.182 | 101.8 | 0.949 | 1201 | | 1.00 |
| 6 | I18534 | IA2-537STD250 | 27-Feb-20 | 15:25:04 | 10.0... | 69458.313 | 66425.828 | 10.258 | 102.6 | 0.956 | 1094826 | | 0.98 |
| 7 | I18535 | IA2-537STD500 | 27-Feb-20 | 15:41:35 | 10.0... | 59631.082 | 51921.512 | 9.340 | 93.4 | 0.871 | 4482 | | 0.96 |
| 8 | I18539 | IA2-537STD0.5 | 27-Feb-20 | 16:47:48 | 10.0... | 100127.297 | 84464.977 | 9.049 | 90.5 | 0.844 | 1391714 | | 0.92 |
| 9 | I18540 | IA2-537STD1.0 | 27-Feb-20 | 17:04:20 | 10.0... | 101367.383 | 86878.703 | 9.193 | 91.9 | 0.857 | 1468898 | | 0.96 |

Compound name: M9PFNA
Response Factor: 0.932269
RRF SD: 0.0656282, % Relative SD: 7.03961
Response type: Internal Std ( Ref 21 ), Area * ( IS Conc. / IS Area )
Curve type: RF





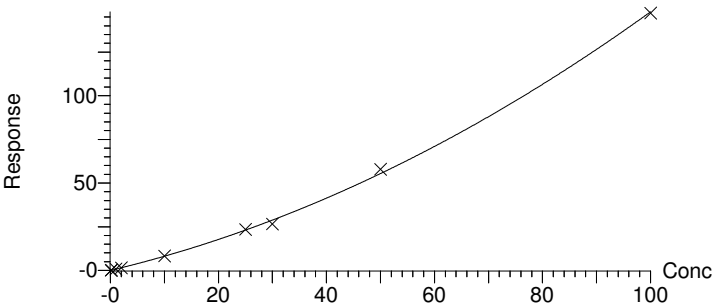
all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICAL_A.qld
Last Altered: Friday, February 28, 2020 09:12:40 Eastern Standard Time
Printed: Friday, February 28, 2020 09:28:57 Eastern Standard Time

**Compound name: br-PFOS**

| | Name | ID | Acq.Date | Acq.Time | RT | IS Area | Area | Conc (ng... | %Rec | RRF | 1º S/N | 2º S/N | (b/a) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | I18529 | IA2-537STD5.0 | 27-Feb-20 | 14:02:18 | 9.958 | 11718.485 | 783.779 | 0.900 | 90.0 | 0.669 | 105 | 2970 | 0.41 |
| 2 | I18530 | IA2-537STD10.0 | 27-Feb-20 | 14:18:52 | 9.887 | 11646.159 | 1640.697 | 1.877 | 93.8 | 0.704 | 519 | 38 | 2.43 |
| 3 | I18531 | IA2-537STD50.0 | 27-Feb-20 | 14:35:26 | 9.958 | 10818.837 | 8975.997 | 10.210 | 102.1 | 0.830 | 4011 | 195 | 0.40 |
| 4 | I18532 | IA2-537STD125 | 27-Feb-20 | 14:51:56 | 9.952 | 9250.913 | 21667.051 | 25.323 | 101.3 | 0.937 | 2924 | 2166 | 0.39 |
| 5 | I18533 | IA2-537STD150 | 27-Feb-20 | 15:08:31 | 9.959 | 9727.753 | 25841.545 | 28.096 | 93.7 | 0.885 | 3885 | 2088 | 0.41 |
| 6 | I18534 | IA2-537STD250 | 27-Feb-20 | 15:25:04 | 9.953 | 7525.810 | 43614.066 | 51.700 | 103.4 | 1.159 | 7922 | 2028 | 0.39 |
| 7 | I18535 | IA2-537STD500 | 27-Feb-20 | 15:41:35 | 9.952 | 5671.231 | 83526.133 | 99.682 | 99.7 | 1.473 | 8227 | 2878 | 0.40 |
| 8 | I18539 | IA2-537STD0.5 | 27-Feb-20 | 16:47:48 | 9.952 | 12059.226 | 99.985 | 0.112 | 112.4 | 0.829 | 1082 | 4 | 0.38 |
| 9 | I18540 | IA2-537STD1.0 | 27-Feb-20 | 17:04:20 | 9.942 | 9845.821 | 154.865 | 0.213 | 106.5 | 0.786 | 7 | 4 | 0.36 |

Compound name: br-PFOS
Coefficient of Determination: R^2 = 0.999045
Calibration curve: 0.00743162 * x^2 + 0.736714 * x
Response type: Internal Std ( Ref 33 ), Area * ( IS Conc. / IS Area )
Curve type: 2nd Order, Origin: Force, Weighting: 1/x, Axis trans: None





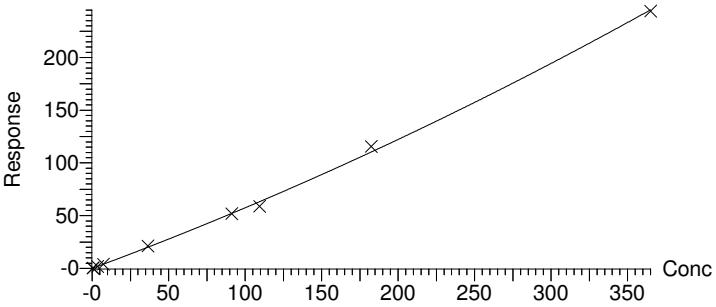
all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICAL_A.qld
Last Altered: Friday, February 28, 2020 09:12:40 Eastern Standard Time
Printed: Friday, February 28, 2020 09:28:57 Eastern Standard Time

**Compound name: L-PFOS**

| | Name | ID | Acq.Date | Acq.Time | RT | IS Area | Area | Conc (ng... | %Rec | RRF | 1º S/N | 2º S/N | (b/a) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | I18529 | IA2-537STD5.0 | 27-Feb-20 | 14:02:18 | 10.1... | 11718.485 | 2167.418 | 3.428 | 93.9 | 0.507 | 621 | 28154 | 0.93 |
| 2 | I18530 | IA2-537STD10.0 | 27-Feb-20 | 14:18:52 | 10.1... | 11646.159 | 4483.462 | 7.118 | 97.5 | 0.527 | 2820 | 339 | 0.92 |
| 3 | I18531 | IA2-537STD50.0 | 27-Feb-20 | 14:35:26 | 10.1... | 10818.837 | 22900.135 | 38.328 | 105.0 | 0.580 | 20112 | 1605 | 0.90 |
| 4 | I18532 | IA2-537STD125 | 27-Feb-20 | 14:51:56 | 10.1... | 9250.913 | 48143.723 | 91.054 | 99.8 | 0.570 | 12901 | 16620 | 0.96 |
| 5 | I18533 | IA2-537STD150 | 27-Feb-20 | 15:08:31 | 10.1... | 9727.753 | 57190.742 | 102.137 | 93.3 | 0.537 | 16869 | 14984 | 0.94 |
| 6 | I18534 | IA2-537STD250 | 27-Feb-20 | 15:25:04 | 10.1... | 7525.810 | 86943.906 | 190.076 | 104.2 | 0.633 | 30872 | 13362 | 0.92 |
| 7 | I18535 | IA2-537STD500 | 27-Feb-20 | 15:41:35 | 10.1... | 5671.231 | 138349.719 | 363.427 | 99.6 | 0.668 | 27041 | 15729 | 0.93 |
| 8 | I18539 | IA2-537STD0.5 | 27-Feb-20 | 16:47:48 | 10.1... | 12059.226 | 207.903 | 0.320 | 87.7 | 0.472 | 3885 | 60 | 0.93 |
| 9 | I18540 | IA2-537STD1.0 | 27-Feb-20 | 17:04:20 | 10.1... | 9845.821 | 402.574 | 0.759 | 104.0 | 0.560 | 29 | 30 | 0.90 |

Compound name: L-PFOS
Coefficient of Determination: R^2 = 0.998790
Calibration curve: 0.000366026 * x^2 + 0.538225 * x
Response type: Internal Std ( Ref 33 ), Area * ( IS Conc. / IS Area )
Curve type: 2nd Order, Origin: Force, Weighting: 1/x, Axis trans: None





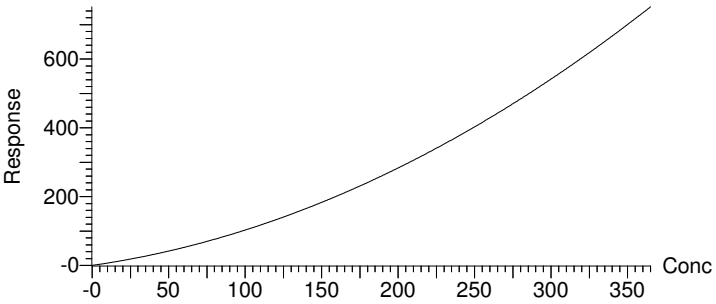
all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICAL_A.qld
Last Altered: Friday, February 28, 2020 09:12:40 Eastern Standard Time
Printed: Friday, February 28, 2020 09:28:57 Eastern Standard Time

**Compound name: PFOS**

| | Name | ID | Acq.Date | Acq.Time | RT | IS Area | Area | ng/mL | %Rec | RRF | 1º S/N | 2º S/N | (b/a) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | I18529 | IA2-537STD5.0 | 27-Feb-20 | 14:02:18 | | 11718.485 | 2951.197 | 4.328 | | | | | |
| 2 | I18530 | IA2-537STD10.0 | 27-Feb-20 | 14:18:52 | | 11646.159 | 6124.159 | 8.995 | | | | | |
| 3 | I18531 | IA2-537STD50.0 | 27-Feb-20 | 14:35:26 | | 10818.837 | 31876.132 | 48.538 | | | | | |
| 4 | I18532 | IA2-537STD125 | 27-Feb-20 | 14:51:56 | | 9250.913 | 69810.774 | 116.377 | | | | | |
| 5 | I18533 | IA2-537STD150 | 27-Feb-20 | 15:08:31 | | 9727.753 | 83032.287 | 130.233 | | | | | |
| 6 | I18534 | IA2-537STD250 | 27-Feb-20 | 15:25:04 | | 7525.810 | 130557.972 | 241.776 | | | | | |
| 7 | I18535 | IA2-537STD500 | 27-Feb-20 | 15:41:35 | | 5671.231 | 221875.852 | 463.109 | | | | | |
| 8 | I18539 | IA2-537STD0.5 | 27-Feb-20 | 16:47:48 | | 12059.226 | 307.888 | 0.433 | | | | | |
| 9 | I18540 | IA2-537STD1.0 | 27-Feb-20 | 17:04:20 | | 9845.821 | 557.439 | 0.972 | | | | | |

Compound name: PFOS
Coefficient of Determination: 0.000000
Calibration curve: 0.63747 * x
Response type: Internal Std ( Ref 33 ), Area * ( IS Conc. / IS Area )
Curve type: Linear, Origin: Force, Weighting: 1/x, Axis trans: None





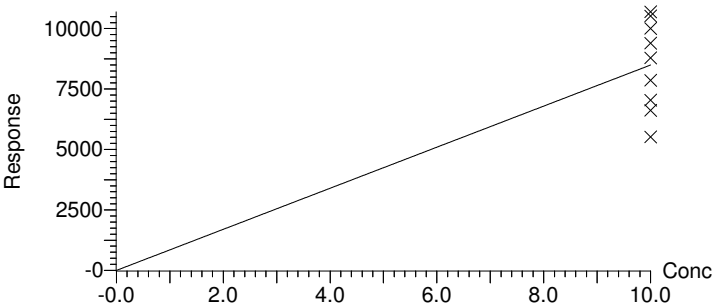
all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICAL_A.qld
Last Altered: Friday, February 28, 2020 09:12:40 Eastern Standard Time
Printed: Friday, February 28, 2020 09:28:57 Eastern Standard Time

**Compound name: M4PFOS**

| | Name | ID | Acq.Date | Acq.Time | RT | IS Area | Area | Conc (ng... | %Rec | RRF | 1º S/N | 2º S/N | (b/a) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | I18529 | IA2-537STD5.0 | 27-Feb-20 | 14:02:18 | 10.1... | | 9391.129 | 11.056 | 110.6 | 939.113 | 1378 | | 0.91 |
| 2 | I18530 | IA2-537STD10.0 | 27-Feb-20 | 14:18:52 | 10.1... | | 10693.415 | 12.589 | 125.9 | 1069.342 | 615 | | 0.95 |
| 3 | I18531 | IA2-537STD50.0 | 27-Feb-20 | 14:35:26 | 10.1... | | 7867.362 | 9.262 | 92.6 | 786.736 | 128486 | | 0.93 |
| 4 | I18532 | IA2-537STD125 | 27-Feb-20 | 14:51:56 | 10.1... | | 8781.861 | 10.339 | 103.4 | 878.186 | 621 | | 0.96 |
| 5 | I18533 | IA2-537STD150 | 27-Feb-20 | 15:08:31 | 10.1... | | 7044.307 | 8.293 | 82.9 | 704.431 | 114994 | | 0.94 |
| 6 | I18534 | IA2-537STD250 | 27-Feb-20 | 15:25:04 | 10.1... | | 6617.794 | 7.791 | 77.9 | 661.779 | 108137 | | 1.02 |
| 7 | I18535 | IA2-537STD500 | 27-Feb-20 | 15:41:35 | 10.1... | | 5519.950 | 6.499 | 65.0 | 551.995 | 88952 | | 0.94 |
| 8 | I18539 | IA2-537STD0.5 | 27-Feb-20 | 16:47:48 | 10.1... | | 10009.636 | 11.784 | 117.8 | 1000.964 | 170952 | | 0.91 |
| 9 | I18540 | IA2-537STD1.0 | 27-Feb-20 | 17:04:20 | 10.1... | | 10521.385 | 12.387 | 123.9 | 1052.139 | 918 | | 0.95 |

Compound name: M4PFOS
Response Factor: 849.409
RRF SD: 183.684, % Relative SD: 21.625
Response type: External Std, Area
Curve type: RF





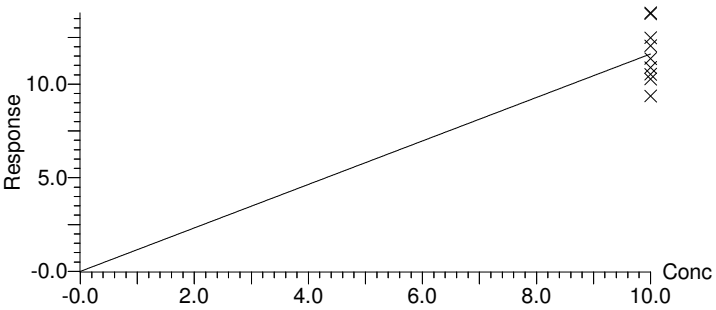
all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICAL_A.qld
Last Altered: Friday, February 28, 2020 09:12:40 Eastern Standard Time
Printed: Friday, February 28, 2020 09:28:57 Eastern Standard Time

**Compound name: M8PFOS**

| | Name | ID | Acq.Date | Acq.Time | RT | IS Area | Area | Conc (ng... | %Rec | RRF | 1º S/N | 2º S/N | (b/a) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | I18529 | IA2-537STD5.0 | 27-Feb-20 | 14:02:18 | 10.1... | 9391.129 | 11718.485 | 10.745 | 107.5 | 1.248 | 204497 | | 0.88 |
| 2 | I18530 | IA2-537STD10.0 | 27-Feb-20 | 14:18:52 | 10.1... | 10693.415 | 11646.159 | 9.378 | 93.8 | 1.089 | 719 | | 0.94 |
| 3 | I18531 | IA2-537STD50.0 | 27-Feb-20 | 14:35:26 | 10.1... | 7867.362 | 10818.837 | 11.842 | 118.4 | 1.375 | 397 | | 1.02 |
| 4 | I18532 | IA2-537STD125 | 27-Feb-20 | 14:51:56 | 10.1... | 8781.861 | 9250.913 | 9.071 | 90.7 | 1.053 | 150755 | | 0.94 |
| 5 | I18533 | IA2-537STD150 | 27-Feb-20 | 15:08:31 | 10.1... | 7044.307 | 9727.753 | 11.891 | 118.9 | 1.381 | 176 | | 0.94 |
| 6 | I18534 | IA2-537STD250 | 27-Feb-20 | 15:25:04 | 10.1... | 6617.794 | 7525.810 | 9.793 | 97.9 | 1.137 | 121071 | | 1.03 |
| 7 | I18535 | IA2-537STD500 | 27-Feb-20 | 15:41:35 | 10.1... | 5519.950 | 5671.231 | 8.847 | 88.5 | 1.027 | 312 | | 1.05 |
| 8 | I18539 | IA2-537STD0.5 | 27-Feb-20 | 16:47:48 | 10.1... | 10009.636 | 12059.226 | 10.374 | 103.7 | 1.205 | 722 | | 0.94 |
| 9 | I18540 | IA2-537STD1.0 | 27-Feb-20 | 17:04:20 | 10.1... | 10521.385 | 9845.821 | 8.058 | 80.6 | 0.936 | 160598 | | 0.86 |

Compound name: M8PFOS
Response Factor: 1.16129
RRF SD: 0.153934, % Relative SD: 13.2555
Response type: Internal Std ( Ref 32 ), Area * ( IS Conc. / IS Area )
Curve type: RF





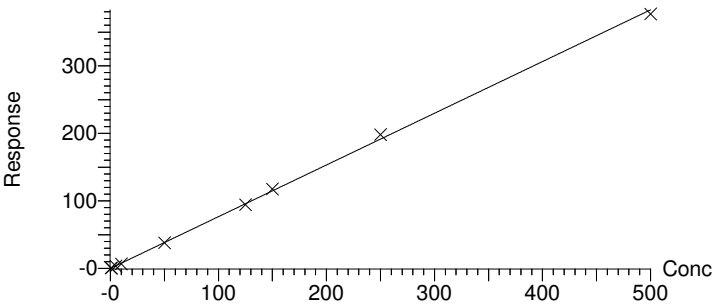
all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICAL_A.qld
Last Altered: Friday, February 28, 2020 09:12:40 Eastern Standard Time
Printed: Friday, February 28, 2020 09:28:57 Eastern Standard Time

**Compound name: PFDA**

| | Name | ID | Acq.Date | Acq.Time | RT | IS Area | Area | Conc (ng... | %Rec | RRF | 1º S/N | 2º S/N | (b/a) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | I18529 | IA2-537STD5.0 | 27-Feb-20 | 14:02:18 | 10.7... | 88966.984 | 28374.779 | 4.164 | 83.3 | 0.638 | 983 | 152 | 0.94 |
| 2 | I18530 | IA2-537STD10.0 | 27-Feb-20 | 14:18:52 | 10.7... | 88326.609 | 58492.285 | 8.646 | 86.5 | 0.662 | 2628 | 238367 | 0.87 |
| 3 | I18531 | IA2-537STD50.0 | 27-Feb-20 | 14:35:26 | 10.7... | 79103.945 | 301249.438 | 49.719 | 99.4 | 0.762 | 4184 | 1023 | 0.94 |
| 4 | I18532 | IA2-537STD125 | 27-Feb-20 | 14:51:56 | 10.7... | 65619.195 | 617393.063 | 122.835 | 98.3 | 0.753 | 7264 | 1641 | 0.93 |
| 5 | I18533 | IA2-537STD150 | 27-Feb-20 | 15:08:31 | 10.7... | 61123.406 | 719876.125 | 153.759 | 102.5 | 0.785 | 5129 | 4683 | 0.94 |
| 6 | I18534 | IA2-537STD250 | 27-Feb-20 | 15:25:04 | 10.7... | 53262.887 | 1056450.125 | 258.950 | 103.6 | 0.793 | 11616 | 4157687 | 1.05 |
| 7 | I18535 | IA2-537STD500 | 27-Feb-20 | 15:41:35 | 10.7... | 45589.348 | 1718521.000 | 492.133 | 98.4 | 0.754 | 15026 | 3396 | 0.97 |
| 8 | I18539 | IA2-537STD0.5 | 27-Feb-20 | 16:47:48 | 10.7... | 85360.250 | 3119.056 | 0.477 | 95.4 | 0.731 | 75 | 15236 | 0.97 |
| 9 | I18540 | IA2-537STD1.0 | 27-Feb-20 | 17:04:20 | 10.7... | 86921.727 | 5443.025 | 0.818 | 81.8 | 0.626 | 74 | 22569 | 0.94 |

Compound name: PFDA
Coefficient of Determination: R^2 = 0.999127
Calibration curve: 0.765965 * x
Response type: Internal Std ( Ref 36 ), Area * ( IS Conc. / IS Area )
Curve type: Linear, Origin: Force, Weighting: 1/x, Axis trans: None





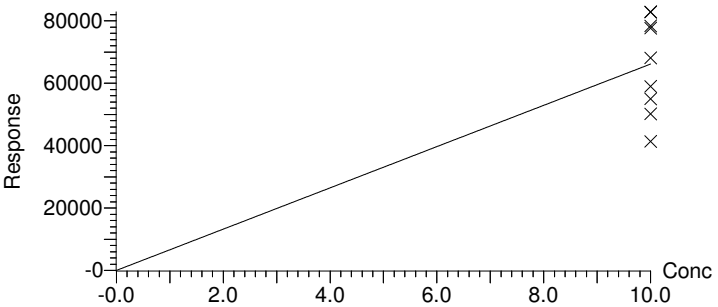
all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICAL_A.qld
Last Altered: Friday, February 28, 2020 09:12:40 Eastern Standard Time
Printed: Friday, February 28, 2020 09:28:57 Eastern Standard Time

**Compound name: M2PFDA**

| | Name | ID | Acq.Date | Acq.Time | RT | IS Area | Area | Conc (ng... | %Rec | RRF | 1º S/N | 2º S/N | (b/a) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | I18529 | IA2-537STD5.0 | 27-Feb-20 | 14:02:18 | 10.7... | | 77657.359 | 11.740 | 117.4 | 7765.736 | 17676 | | 0.96 |
| 2 | I18530 | IA2-537STD10.0 | 27-Feb-20 | 14:18:52 | 10.7... | | 78374.711 | 11.848 | 118.5 | 7837.471 | 15988 | | 1.01 |
| 3 | I18531 | IA2-537STD50.0 | 27-Feb-20 | 14:35:26 | 10.7... | | 68134.172 | 10.300 | 103.0 | 6813.417 | 15667 | | 0.95 |
| 4 | I18532 | IA2-537STD125 | 27-Feb-20 | 14:51:56 | 10.7... | | 59026.023 | 8.923 | 89.2 | 5902.602 | 14305 | | 0.93 |
| 5 | I18533 | IA2-537STD150 | 27-Feb-20 | 15:08:31 | 10.7... | | 54996.473 | 8.314 | 83.1 | 5499.647 | 13758 | | 0.94 |
| 6 | I18534 | IA2-537STD250 | 27-Feb-20 | 15:25:04 | 10.7... | | 50150.867 | 7.582 | 75.8 | 5015.087 | 10378 | | 1.03 |
| 7 | I18535 | IA2-537STD500 | 27-Feb-20 | 15:41:35 | 10.7... | | 41307.793 | 6.245 | 62.4 | 4130.779 | 9403 | | 0.97 |
| 8 | I18539 | IA2-537STD0.5 | 27-Feb-20 | 16:47:48 | 10.7... | | 82886.930 | 12.530 | 125.3 | 8288.693 | 13655 | | 0.98 |
| 9 | I18540 | IA2-537STD1.0 | 27-Feb-20 | 17:04:20 | 10.7... | | 82804.273 | 12.518 | 125.2 | 8280.427 | 11882 | | 0.96 |

Compound name: M2PFDA
Response Factor: 6614.87
RRF SD: 1537.67, % Relative SD: 23.2457
Response type: External Std, Area
Curve type: RF





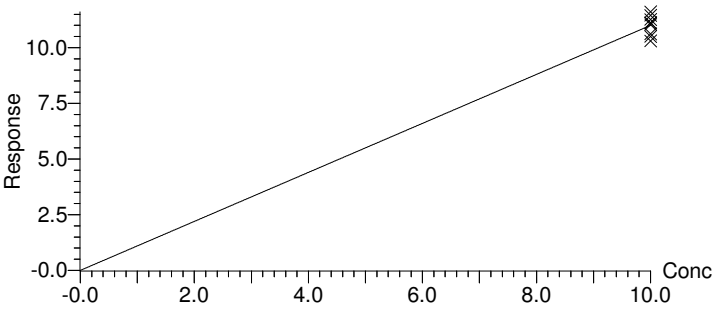
all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICAL_A.qld
Last Altered: Friday, February 28, 2020 09:12:40 Eastern Standard Time
Printed: Friday, February 28, 2020 09:28:57 Eastern Standard Time

**Compound name: M6PFDA**

| | Name | ID | Acq.Date | Acq.Time | RT | IS Area | Area | Conc (ng... | %Rec | RRF | 1º S/N | 2º S/N | (b/a) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | I18529 | IA2-537STD5.0 | 27-Feb-20 | 14:02:18 | 10.7... | 77657.359 | 88966.984 | 10.413 | 104.1 | 1.146 | 1653693 | | 0.96 |
| 2 | I18530 | IA2-537STD10.0 | 27-Feb-20 | 14:18:52 | 10.7... | 78374.711 | 88326.609 | 10.243 | 102.4 | 1.127 | 2058 | | 1.01 |
| 3 | I18531 | IA2-537STD50.0 | 27-Feb-20 | 14:35:26 | 10.7... | 68134.172 | 79103.945 | 10.552 | 105.5 | 1.161 | 8096 | | 0.93 |
| 4 | I18532 | IA2-537STD125 | 27-Feb-20 | 14:51:56 | 10.7... | 59026.023 | 65619.195 | 10.104 | 101.0 | 1.112 | 7804 | | 0.90 |
| 5 | I18533 | IA2-537STD150 | 27-Feb-20 | 15:08:31 | 10.7... | 54996.473 | 61123.406 | 10.102 | 101.0 | 1.111 | 1105754 | | 0.92 |
| 6 | I18534 | IA2-537STD250 | 27-Feb-20 | 15:25:04 | 10.7... | 50150.867 | 53262.887 | 9.653 | 96.5 | 1.062 | 980 | | 1.02 |
| 7 | I18535 | IA2-537STD500 | 27-Feb-20 | 15:41:35 | 10.7... | 41307.793 | 45589.348 | 10.031 | 100.3 | 1.104 | 826126 | | 0.98 |
| 8 | I18539 | IA2-537STD0.5 | 27-Feb-20 | 16:47:48 | 10.7... | 82886.930 | 85360.250 | 9.360 | 93.6 | 1.030 | 6398 | | 0.97 |
| 9 | I18540 | IA2-537STD1.0 | 27-Feb-20 | 17:04:20 | 10.7... | 82804.273 | 86921.727 | 9.541 | 95.4 | 1.050 | 4204 | | 0.97 |

Compound name: M6PFDA
Response Factor: 1.10022
RRF SD: 0.0443023, % Relative SD: 4.02667
Response type: Internal Std ( Ref 35 ), Area * ( IS Conc. / IS Area )
Curve type: RF





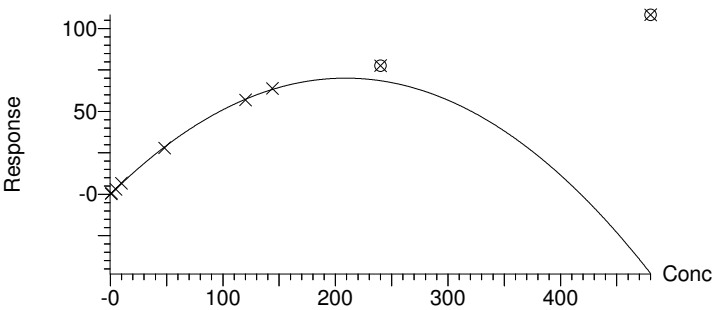
all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICAL_A.qld
Last Altered: Friday, February 28, 2020 09:12:40 Eastern Standard Time
Printed: Friday, February 28, 2020 09:28:57 Eastern Standard Time

**Compound name: 8:2FTS**

| | Name | ID | Acq.Date | Acq.Time | RT | IS Area | Area | Conc (ng... | %Rec | RRF | 1º S/N | 2º S/N | (b/a) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | I18529 | IA2-537STD5.0 | 27-Feb-20 | 14:02:18 | 10.7... | 2127.701 | 650.963 | 4.613 | 96.1 | 0.637 | 14177 | 510 | 1.03 |
| 2 | I18530 | IA2-537STD10.0 | 27-Feb-20 | 14:18:52 | 10.711 | 2138.415 | 1436.721 | 10.272 | 107.0 | 0.700 | 1196 | 538 | 0.95 |
| 3 | I18531 | IA2-537STD50.0 | 27-Feb-20 | 14:35:26 | 10.7... | 2351.443 | 6599.380 | 47.176 | 98.3 | 0.585 | 145218 | 1549 | 1.03 |
| 4 | I18532 | IA2-537STD125 | 27-Feb-20 | 14:51:56 | 10.7... | 2492.435 | 14184.246 | 118.395 | 98.7 | 0.474 | 7881 | 7934 | 0.99 |
| 5 | I18533 | IA2-537STD150 | 27-Feb-20 | 15:08:31 | 10.711 | 2549.115 | 16264.744 | 146.456 | 101.7 | 0.443 | 11566 | 218287 | 1.00 |
| 6 | I18534 | IA2-537STD250 | 27-Feb-20 | 15:25:04 | 10.7... | 3225.862 | 25025.311 | | | 0.323 | 8458 | 3760 | 0.96 |
| 7 | I18535 | IA2-537STD500 | 27-Feb-20 | 15:41:35 | 10.6... | 3821.055 | 41377.727 | | | 0.226 | 5174 | 10615 | 1.03 |
| 8 | I18539 | IA2-537STD0.5 | 27-Feb-20 | 16:47:48 | 10.7... | 1976.099 | 69.515 | 0.525 | 109.4 | 0.733 | 139 | 10 | 0.81 |
| 9 | I18540 | IA2-537STD1.0 | 27-Feb-20 | 17:04:20 | 10.7... | 2019.154 | 139.744 | 1.035 | 107.8 | 0.721 | 2970 | 1681 | 1.13 |

Compound name: 8:2FTS
Coefficient of Determination: R^2 = 0.999538
Calibration curve: -0.001604 * x^2 + 0.670578 * x
Response type: Internal Std ( Ref 38 ), Area * ( IS Conc. / IS Area )
Curve type: 2nd Order, Origin: Force, Weighting: 1/x, Axis trans: None





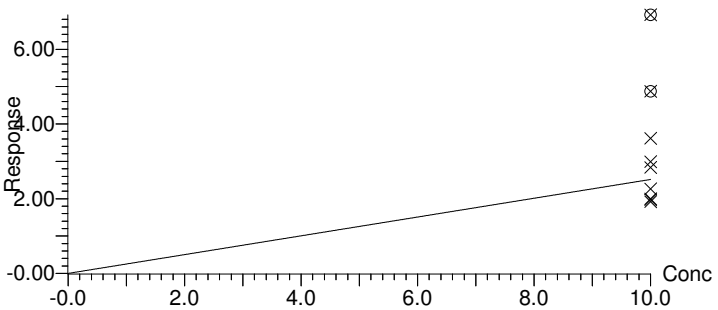
all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICAL_A.qld
Last Altered: Friday, February 28, 2020 09:12:40 Eastern Standard Time
Printed: Friday, February 28, 2020 09:28:57 Eastern Standard Time

**Compound name: M2-8:2FTS**

| | Name | ID | Acq.Date | Acq.Time | RT | IS Area | Area | Conc (ng... | %Rec | RRF | 1º S/N | 2º S/N | (b/a) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | I18529 | IA2-537STD5.0 | 27-Feb-20 | 14:02:18 | 10.7... | 9391.129 | 2127.701 | 9.009 | 90.1 | 0.227 | 39119 | | 0.89 |
| 2 | I18530 | IA2-537STD10.0 | 27-Feb-20 | 14:18:52 | 10.7... | 10693.415 | 2138.415 | 7.952 | 79.5 | 0.200 | 38513 | | 0.96 |
| 3 | I18531 | IA2-537STD50.0 | 27-Feb-20 | 14:35:26 | 10.7... | 7867.362 | 2351.443 | 11.885 | 118.8 | 0.299 | 42023 | | 1.03 |
| 4 | I18532 | IA2-537STD125 | 27-Feb-20 | 14:51:56 | 10.7... | 8781.861 | 2492.435 | 11.285 | 112.9 | 0.284 | 332 | | 1.02 |
| 5 | I18533 | IA2-537STD150 | 27-Feb-20 | 15:08:31 | 10.7... | 7044.307 | 2549.115 | 14.389 | 143.9 | 0.362 | 839 | | 1.01 |
| 6 | I18534 | IA2-537STD250 | 27-Feb-20 | 15:25:04 | 10.7... | 6617.794 | 3225.862 | 19.382 | 193.8 | 0.487 | 529 | | 0.95 |
| 7 | I18535 | IA2-537STD500 | 27-Feb-20 | 15:41:35 | 10.6... | 5519.950 | 3821.055 | 27.525 | 275.2 | 0.692 | 328 | | 1.01 |
| 8 | I18539 | IA2-537STD0.5 | 27-Feb-20 | 16:47:48 | 10.7... | 10009.636 | 1976.099 | 7.850 | 78.5 | 0.197 | 35453 | | 1.02 |
| 9 | I18540 | IA2-537STD1.0 | 27-Feb-20 | 17:04:20 | 10.7... | 10521.385 | 2019.154 | 7.631 | 76.3 | 0.192 | 424 | | 1.02 |

Compound name: M2-8:2FTS
Response Factor: 0.251491
RRF SD: 0.0648374, % Relative SD: 25.7812
Response type: Internal Std ( Ref 32 ), Area * ( IS Conc. / IS Area )
Curve type: RF





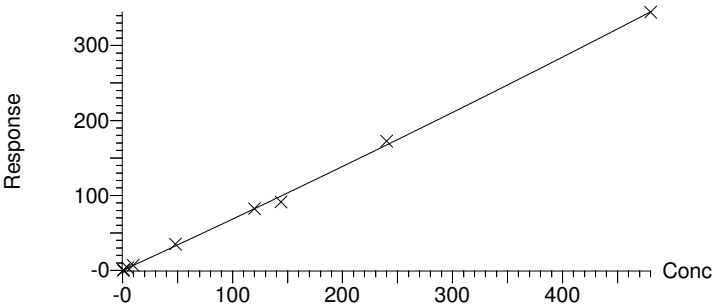
all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICAL_A.qld
Last Altered: Friday, February 28, 2020 09:12:40 Eastern Standard Time
Printed: Friday, February 28, 2020 09:28:57 Eastern Standard Time

**Compound name: PFNS**

| | Name | ID | Acq.Date | Acq.Time | RT | IS Area | Area | Conc (ng... | %Rec | RRF | 1º S/N | 2º S/N | (b/a) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | I18529 | IA2-537STD5.0 | 27-Feb-20 | 14:02:18 | 10.7... | 11718.485 | 4233.052 | 5.343 | 111.3 | 0.753 | 99222 | 53746 | 0.92 |
| 2 | I18530 | IA2-537STD10.0 | 27-Feb-20 | 14:18:52 | 10.7... | 11646.159 | 7887.980 | 10.013 | 104.3 | 0.706 | 182853 | 119099 | 0.86 |
| 3 | I18531 | IA2-537STD50.0 | 27-Feb-20 | 14:35:26 | 10.7... | 10818.837 | 38100.289 | 51.774 | 107.9 | 0.734 | 840530 | 2476 | 0.96 |
| 4 | I18532 | IA2-537STD125 | 27-Feb-20 | 14:51:56 | 10.7... | 9250.913 | 76053.859 | 119.787 | 99.8 | 0.685 | 1652081 | 2086 | 0.95 |
| 5 | I18533 | IA2-537STD150 | 27-Feb-20 | 15:08:31 | 10.7... | 9727.753 | 88918.977 | 132.956 | 92.3 | 0.635 | 1242 | 1405348 | 0.99 |
| 6 | I18534 | IA2-537STD250 | 27-Feb-20 | 15:25:04 | 10.7... | 7525.810 | 129895.969 | 247.351 | 103.1 | 0.719 | 773 | 9635 | 0.98 |
| 7 | I18535 | IA2-537STD500 | 27-Feb-20 | 15:41:35 | 10.7... | 5671.231 | 195337.875 | 479.273 | 99.8 | 0.718 | 2319 | 5039 | 0.99 |
| 8 | I18539 | IA2-537STD0.5 | 27-Feb-20 | 16:47:48 | 10.7... | 12059.226 | 220.333 | 0.270 | 56.3 | 0.381 | 6297 | 17 | 0.98 |
| 9 | I18540 | IA2-537STD1.0 | 27-Feb-20 | 17:04:20 | 10.7... | 9845.821 | 698.416 | 1.050 | 109.4 | 0.739 | 89 | 3 | 1.05 |

Compound name: PFNS
Coefficient of Determination: R^2 = 0.998519
Calibration curve: 8.99799e-005 * x^2 + 0.67554 * x
Response type: Internal Std ( Ref 33 ), Area * ( IS Conc. / IS Area )
Curve type: 2nd Order, Origin: Force, Weighting: 1/x, Axis trans: None





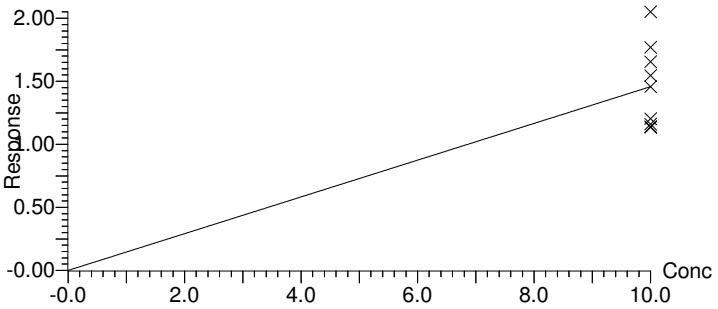
all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICAL_A.qld
Last Altered: Friday, February 28, 2020 09:12:40 Eastern Standard Time
Printed: Friday, February 28, 2020 09:28:57 Eastern Standard Time

**Compound name: d3-NMeFOSAA**

| | Name | ID | Acq.Date | Acq.Time | RT | IS Area | Area | Conc (ng... | %Rec | RRF | 1º S/N | 2º S/N | (b/a) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | I18529 | IA2-537STD5.0 | 27-Feb-20 | 14:02:18 | 11.085 | 77657.359 | 9001.986 | 7.953 | 79.5 | 0.116 | 430 | | 0.94 |
| 2 | I18530 | IA2-537STD10.0 | 27-Feb-20 | 14:18:52 | 11.087 | 78374.711 | 9429.717 | 8.255 | 82.5 | 0.120 | 180 | | 0.93 |
| 3 | I18531 | IA2-537STD50.0 | 27-Feb-20 | 14:35:26 | 11.084 | 68134.172 | 9927.184 | 9.996 | 100.0 | 0.146 | 625 | | 1.01 |
| 4 | I18532 | IA2-537STD125 | 27-Feb-20 | 14:51:56 | 11.079 | 59026.023 | 9126.865 | 10.609 | 106.1 | 0.155 | 171592 | | 0.88 |
| 5 | I18533 | IA2-537STD150 | 27-Feb-20 | 15:08:31 | 11.087 | 54996.473 | 9105.276 | 11.359 | 113.6 | 0.166 | 974 | | 0.98 |
| 6 | I18534 | IA2-537STD250 | 27-Feb-20 | 15:25:04 | 11.082 | 50150.867 | 8871.647 | 12.137 | 121.4 | 0.177 | 174469 | | 0.91 |
| 7 | I18535 | IA2-537STD500 | 27-Feb-20 | 15:41:35 | 11.079 | 41307.793 | 8472.627 | 14.073 | 140.7 | 0.205 | 160634 | | 0.95 |
| 8 | I18539 | IA2-537STD0.5 | 27-Feb-20 | 16:47:48 | 11.079 | 82886.930 | 9412.311 | 7.791 | 77.9 | 0.114 | 431 | | 0.98 |
| 9 | I18540 | IA2-537STD1.0 | 27-Feb-20 | 17:04:20 | 11.082 | 82804.273 | 9446.208 | 7.827 | 78.3 | 0.114 | 186025 | | 0.89 |

Compound name: d3-NMeFOSAA
Response Factor: 0.145752
RRF SD: 0.0326752, % Relative SD: 22.4184
Response type: Internal Std ( Ref 35 ), Area * ( IS Conc. / IS Area )
Curve type: RF





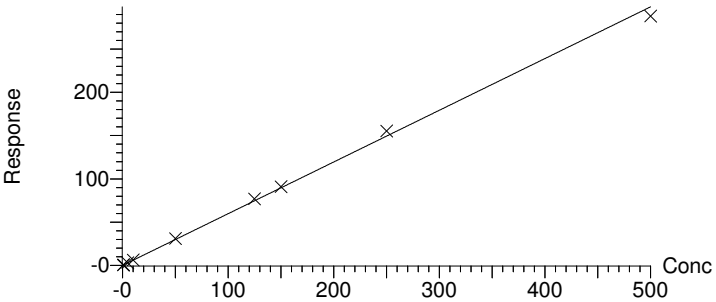
all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICAL_A.qld
Last Altered: Friday, February 28, 2020 09:12:40 Eastern Standard Time
Printed: Friday, February 28, 2020 09:28:57 Eastern Standard Time

**Compound name: NMeFOSAA**

| | Name | ID | Acq.Date | Acq.Time | RT | IS Area | Area | Conc (ng... | %Rec | RRF | 1º S/N | 2º S/N | (b/a) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | I18529 | IA2-537STD5.0 | 27-Feb-20 | 14:02:18 | 11.090 | 9001.986 | 2728.754 | 5.072 | 101.4 | 0.606 | 381 | 194 | 0.99 |
| 2 | I18530 | IA2-537STD10.0 | 27-Feb-20 | 14:18:52 | 11.087 | 9429.717 | 5986.672 | 10.623 | 106.2 | 0.635 | 1017 | 748 | 1.06 |
| 3 | I18531 | IA2-537STD50.0 | 27-Feb-20 | 14:35:26 | 11.090 | 9927.184 | 30740.287 | 51.815 | 103.6 | 0.619 | 2831 | 2718 | 0.96 |
| 4 | I18532 | IA2-537STD125 | 27-Feb-20 | 14:51:56 | 11.085 | 9126.865 | 70059.523 | 128.446 | 102.8 | 0.614 | 6843 | 3412 | 0.92 |
| 5 | I18533 | IA2-537STD150 | 27-Feb-20 | 15:08:31 | 11.092 | 9105.276 | 82880.930 | 152.312 | 101.5 | 0.607 | 9270 | 4240 | 0.98 |
| 6 | I18534 | IA2-537STD250 | 27-Feb-20 | 15:25:04 | 11.087 | 8871.647 | 137711.047 | 259.740 | 103.9 | 0.621 | 8677 | 4416 | 0.92 |
| 7 | I18535 | IA2-537STD500 | 27-Feb-20 | 15:41:35 | 11.079 | 8472.627 | 244027.031 | 481.941 | 96.4 | 0.576 | 9247 | 4715 | 1.05 |
| 8 | I18539 | IA2-537STD0.5 | 27-Feb-20 | 16:47:48 | 11.090 | 9412.311 | 298.161 | 0.530 | 106.0 | 0.634 | 62 | 10 | 0.94 |
| 9 | I18540 | IA2-537STD1.0 | 27-Feb-20 | 17:04:20 | 11.087 | 9446.208 | 576.220 | 1.021 | 102.1 | 0.610 | 75 | 99 | 1.04 |

Compound name: NMeFOSAA
Coefficient of Determination: R^2 = 0.998810
Calibration curve: 0.597621 * x
Response type: Internal Std ( Ref 40 ), Area * ( IS Conc. / IS Area )
Curve type: Linear, Origin: Force, Weighting: 1/x, Axis trans: None





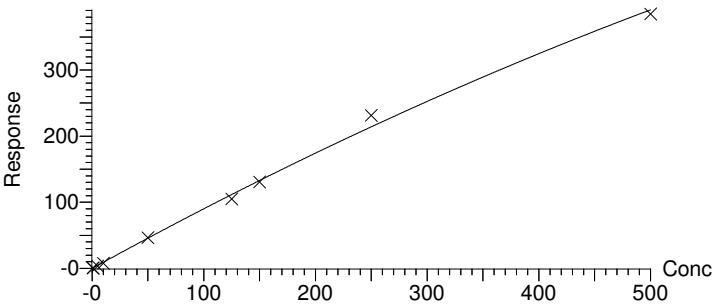
all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICAL_A.qld
Last Altered: Friday, February 28, 2020 09:12:40 Eastern Standard Time
Printed: Friday, February 28, 2020 09:28:57 Eastern Standard Time

**Compound name: PFUnA**

| | Name | ID | Acq.Date | Acq.Time | RT | IS Area | Area | Conc (ng... | %Rec | RRF | 1º S/N | 2º S/N | (b/a) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | I18529 | IA2-537STD5.0 | 27-Feb-20 | 14:02:18 | 11.255 | 83099.617 | 29479.420 | 3.814 | 76.3 | 0.709 | 614 | 92844 | 0.95 |
| 2 | I18530 | IA2-537STD10.0 | 27-Feb-20 | 14:18:52 | 11.252 | 79021.750 | 62609.438 | 8.532 | 85.3 | 0.792 | 1490 | 801 | 1.03 |
| 3 | I18531 | IA2-537STD50.0 | 27-Feb-20 | 14:35:26 | 11.255 | 64158.406 | 299291.375 | 50.928 | 101.9 | 0.933 | 6978 | 8868 | 0.96 |
| 4 | I18532 | IA2-537STD125 | 27-Feb-20 | 14:51:56 | 11.245 | 56477.063 | 593038.000 | 117.168 | 93.7 | 0.840 | 8003 | 4019 | 1.08 |
| 5 | I18533 | IA2-537STD150 | 27-Feb-20 | 15:08:31 | 11.258 | 52988.070 | 693444.688 | 147.520 | 98.3 | 0.872 | 12339 | 1078 | 0.99 |
| 6 | I18534 | IA2-537STD250 | 27-Feb-20 | 15:25:04 | 11.247 | 42395.594 | 979807.625 | 271.907 | 108.8 | 0.924 | 22013 | 855 | 1.13 |
| 7 | I18535 | IA2-537STD500 | 27-Feb-20 | 15:41:35 | 11.244 | 40741.063 | 1567241.750 | 490.197 | 98.0 | 0.769 | 12920 | 1409 | 1.06 |
| 8 | I18539 | IA2-537STD0.5 | 27-Feb-20 | 16:47:48 | 11.250 | 78990.391 | 2866.169 | 0.390 | 77.9 | 0.726 | 56 | 16246 | 0.94 |
| 9 | I18540 | IA2-537STD1.0 | 27-Feb-20 | 17:04:20 | 11.252 | 80848.156 | 5800.123 | 0.771 | 77.1 | 0.717 | 78 | 19925 | 0.99 |

Compound name: PFUnA
Coefficient of Determination: R^2 = 0.997157
Calibration curve: -0.000298734 * x^2 + 0.931191 * x
Response type: Internal Std ( Ref 43 ), Area * ( IS Conc. / IS Area )
Curve type: 2nd Order, Origin: Force, Weighting: 1/x, Axis trans: None





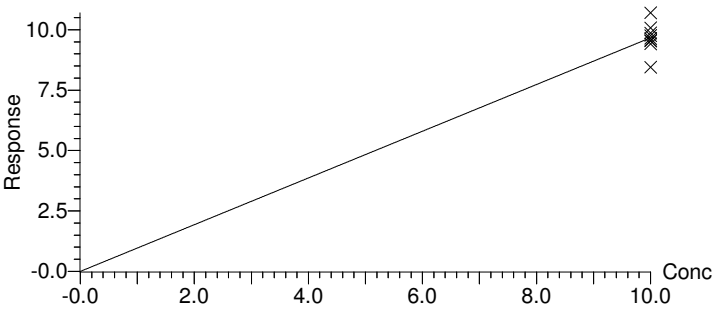
all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICAL_A.qld
Last Altered: Friday, February 28, 2020 09:12:40 Eastern Standard Time
Printed: Friday, February 28, 2020 09:28:57 Eastern Standard Time

**Compound name: M7-PFUDA**

| | Name | ID | Acq.Date | Acq.Time | RT | IS Area | Area | Conc (ng... | %Rec | RRF | 1º S/N | 2º S/N | (b/a) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | I18529 | IA2-537STD5.0 | 27-Feb-20 | 14:02:18 | 11.256 | 77657.359 | 83099.617 | 11.068 | 110.7 | 1.070 | 1273 | | 0.96 |
| 2 | I18530 | IA2-537STD10.0 | 27-Feb-20 | 14:18:52 | 11.253 | 78374.711 | 79021.750 | 10.429 | 104.3 | 1.008 | 1541792 | | 1.01 |
| 3 | I18531 | IA2-537STD50.0 | 27-Feb-20 | 14:35:26 | 11.255 | 68134.172 | 64158.406 | 9.740 | 97.4 | 0.942 | 1197830 | | 0.95 |
| 4 | I18532 | IA2-537STD125 | 27-Feb-20 | 14:51:56 | 11.245 | 59026.023 | 56477.063 | 9.897 | 99.0 | 0.957 | 1073319 | | 1.02 |
| 5 | I18533 | IA2-537STD150 | 27-Feb-20 | 15:08:31 | 11.253 | 54996.473 | 52988.070 | 9.966 | 99.7 | 0.963 | 1501 | | 1.07 |
| 6 | I18534 | IA2-537STD250 | 27-Feb-20 | 15:25:04 | 11.248 | 50150.867 | 42395.594 | 8.744 | 87.4 | 0.845 | 781839 | | 1.08 |
| 7 | I18535 | IA2-537STD500 | 27-Feb-20 | 15:41:35 | 11.245 | 41307.793 | 40741.063 | 10.201 | 102.0 | 0.986 | 6905 | | 1.01 |
| 8 | I18539 | IA2-537STD0.5 | 27-Feb-20 | 16:47:48 | 11.250 | 82886.930 | 78990.391 | 9.857 | 98.6 | 0.953 | 1543083 | | 0.95 |
| 9 | I18540 | IA2-537STD1.0 | 27-Feb-20 | 17:04:20 | 11.248 | 82804.273 | 80848.156 | 10.099 | 101.0 | 0.976 | 1582007 | | 1.04 |

Compound name: M7-PFUDA
Response Factor: 0.96681
RRF SD: 0.0597265, % Relative SD: 6.17769
Response type: Internal Std ( Ref 35 ), Area * ( IS Conc. / IS Area )
Curve type: RF





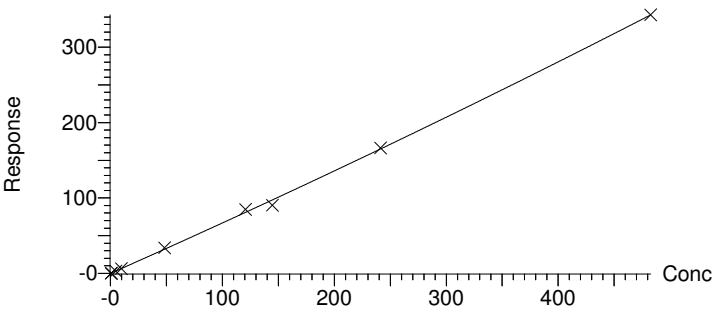
all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICAL_A.qld
Last Altered: Friday, February 28, 2020 09:12:40 Eastern Standard Time
Printed: Friday, February 28, 2020 09:28:57 Eastern Standard Time

**Compound name: PFDS**

| | Name | ID | Acq.Date | Acq.Time | RT | IS Area | Area | Conc (ng... | %Rec | RRF | 1º S/N | 2º S/N | (b/a) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | I18529 | IA2-537STD5.0 | 27-Feb-20 | 14:02:18 | 11.267 | 11718.485 | 3251.090 | 4.216 | 87.4 | 0.575 | 75644 | 50573 | 0.87 |
| 2 | I18530 | IA2-537STD10.0 | 27-Feb-20 | 14:18:52 | 11.264 | 11646.159 | 7533.778 | 9.822 | 101.8 | 0.670 | 179948 | 101257 | 0.90 |
| 3 | I18531 | IA2-537STD50.0 | 27-Feb-20 | 14:35:26 | 11.261 | 10818.837 | 36514.367 | 50.898 | 105.5 | 0.699 | 841804 | 10505 | 0.97 |
| 4 | I18532 | IA2-537STD125 | 27-Feb-20 | 14:51:56 | 11.256 | 9250.913 | 78685.211 | 126.685 | 105.0 | 0.705 | 1807037 | 918 | 0.95 |
| 5 | I18533 | IA2-537STD150 | 27-Feb-20 | 15:08:31 | 11.264 | 9727.753 | 87935.875 | 134.469 | 92.9 | 0.625 | 1973297 | 8626 | 1.03 |
| 6 | I18534 | IA2-537STD250 | 27-Feb-20 | 15:25:04 | 11.259 | 7525.810 | 125274.078 | 243.305 | 100.9 | 0.690 | 7166 | 1699592 | 0.99 |
| 7 | I18535 | IA2-537STD500 | 27-Feb-20 | 15:41:35 | 11.256 | 5671.231 | 194472.438 | 482.736 | 100.0 | 0.711 | 1798 | 6305 | 0.99 |
| 8 | I18539 | IA2-537STD0.5 | 27-Feb-20 | 16:47:48 | 11.272 | 12059.226 | 243.935 | 0.308 | 63.8 | 0.419 | 6648 | 7779 | 0.75 |
| 9 | I18540 | IA2-537STD1.0 | 27-Feb-20 | 17:04:20 | 11.259 | 9845.821 | 544.235 | 0.841 | 87.1 | 0.573 | 13163 | 3 | 1.09 |

Compound name: PFDS
Coefficient of Determination: R^2 = 0.998726
Calibration curve: 0.000109385 * x^2 + 0.657544 * x
Response type: Internal Std ( Ref 33 ), Area * ( IS Conc. / IS Area )
Curve type: 2nd Order, Origin: Force, Weighting: 1/x, Axis trans: None





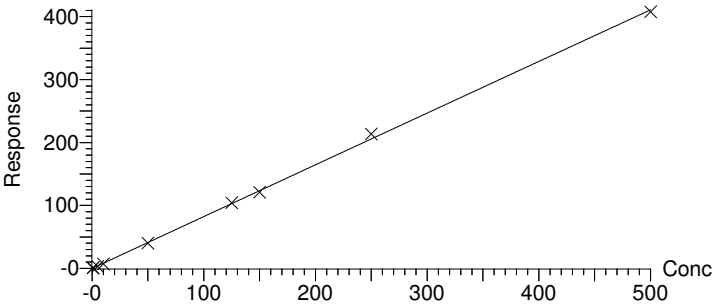
all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICAL_A.qld
Last Altered: Friday, February 28, 2020 09:12:40 Eastern Standard Time
Printed: Friday, February 28, 2020 09:28:57 Eastern Standard Time

**Compound name: FOSA**

| | Name | ID | Acq.Date | Acq.Time | RT | IS Area | Area | Conc (ng... | %Rec | RRF | 1º S/N | 2º S/N | (b/a) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | I18529 | IA2-537STD5.0 | 27-Feb-20 | 14:02:18 | 11.124 | 34159.688 | 10579.771 | 3.759 | 75.2 | 0.619 | 234727 | | 0.97 |
| 2 | I18530 | IA2-537STD10.0 | 27-Feb-20 | 14:18:52 | 11.121 | 32409.621 | 23803.600 | 8.913 | 89.1 | 0.734 | 535632 | | 1.07 |
| 3 | I18531 | IA2-537STD50.0 | 27-Feb-20 | 14:35:26 | 11.123 | 30321.623 | 122439.266 | 49.017 | 98.0 | 0.808 | 3630 | 14139 | 1.00 |
| 4 | I18532 | IA2-537STD125 | 27-Feb-20 | 14:51:56 | 11.118 | 26596.314 | 276516.375 | 126.264 | 101.0 | 0.832 | 4268 | 30995 | 0.95 |
| 5 | I18533 | IA2-537STD150 | 27-Feb-20 | 15:08:31 | 11.126 | 27181.514 | 328541.656 | 146.808 | 97.9 | 0.806 | 4819 | 25205 | 1.05 |
| 6 | I18534 | IA2-537STD250 | 27-Feb-20 | 15:25:04 | 11.121 | 23742.172 | 506613.313 | 259.349 | 103.7 | 0.854 | 4768 | 368 | 1.03 |
| 7 | I18535 | IA2-537STD500 | 27-Feb-20 | 15:41:35 | 11.118 | 21359.803 | 870578.125 | 496.089 | 99.2 | 0.815 | 6846 | 99852 | 1.03 |
| 8 | I18539 | IA2-537STD0.5 | 27-Feb-20 | 16:47:48 | 11.118 | 31314.320 | 918.424 | 0.356 | 71.2 | 0.587 | 37 | | 1.23 |
| 9 | I18540 | IA2-537STD1.0 | 27-Feb-20 | 17:04:20 | 11.121 | 29538.127 | 2302.018 | 0.946 | 94.6 | 0.779 | 55789 | | 1.09 |

Compound name: FOSA
Coefficient of Determination: R^2 = 0.999112
Calibration curve: -4.96794e-006 * x^2 + 0.824046 * x
Response type: Internal Std ( Ref 46 ), Area * ( IS Conc. / IS Area )
Curve type: 2nd Order, Origin: Force, Weighting: 1/x, Axis trans: None





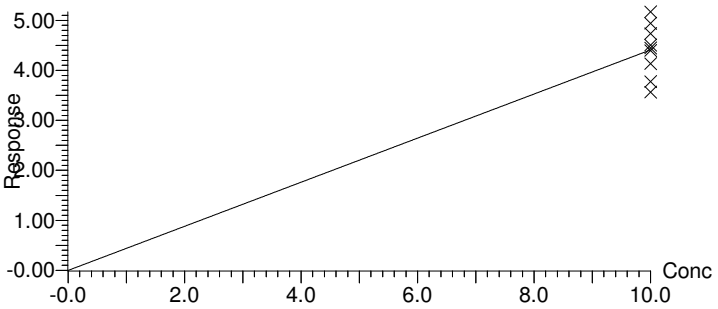
all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICAL_A.qld
Last Altered: Friday, February 28, 2020 09:12:40 Eastern Standard Time
Printed: Friday, February 28, 2020 09:28:57 Eastern Standard Time

**Compound name: M8FOSA**

| | Name | ID | Acq.Date | Acq.Time | RT | IS Area | Area | Conc (ng... | %Rec | RRF | 1º S/N | 2º S/N | (b/a) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | I18529 | IA2-537STD5.0 | 27-Feb-20 | 14:02:18 | 11.125 | 77657.359 | 34159.688 | 9.976 | 99.8 | 0.440 | 649746 | | 0.90 |
| 2 | I18530 | IA2-537STD10.0 | 27-Feb-20 | 14:18:52 | 11.122 | 78374.711 | 32409.621 | 9.379 | 93.8 | 0.414 | 3106 | | 0.98 |
| 3 | I18531 | IA2-537STD50.0 | 27-Feb-20 | 14:35:26 | 11.124 | 68134.172 | 30321.623 | 10.093 | 100.9 | 0.445 | 570515 | | 0.90 |
| 4 | I18532 | IA2-537STD125 | 27-Feb-20 | 14:51:56 | 11.114 | 59026.023 | 26596.314 | 10.219 | 102.2 | 0.451 | 498617 | | 1.03 |
| 5 | I18533 | IA2-537STD150 | 27-Feb-20 | 15:08:31 | 11.127 | 54996.473 | 27181.514 | 11.209 | 112.1 | 0.494 | 814 | | 0.98 |
| 6 | I18534 | IA2-537STD250 | 27-Feb-20 | 15:25:04 | 11.122 | 50150.867 | 23742.172 | 10.737 | 107.4 | 0.473 | 1051 | | 0.96 |
| 7 | I18535 | IA2-537STD500 | 27-Feb-20 | 15:41:35 | 11.119 | 41307.793 | 21359.803 | 11.728 | 117.3 | 0.517 | 393893 | | 0.98 |
| 8 | I18539 | IA2-537STD0.5 | 27-Feb-20 | 16:47:48 | 11.119 | 82886.930 | 31314.320 | 8.568 | 85.7 | 0.378 | 2169 | | 0.96 |
| 9 | I18540 | IA2-537STD1.0 | 27-Feb-20 | 17:04:20 | 11.116 | 82804.273 | 29538.127 | 8.090 | 80.9 | 0.357 | 560878 | | 1.02 |

Compound name: M8FOSA
Response Factor: 0.44092
RRF SD: 0.0520058, % Relative SD: 11.7948
Response type: Internal Std ( Ref 35 ), Area * ( IS Conc. / IS Area )
Curve type: RF





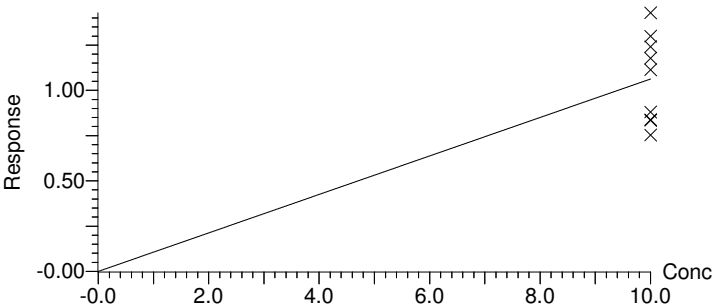
all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICAL_A.qld
Last Altered: Friday, February 28, 2020 09:12:40 Eastern Standard Time
Printed: Friday, February 28, 2020 09:28:57 Eastern Standard Time

**Compound name: d5-NEtFOSAA**

| | Name | ID | Acq.Date | Acq.Time | RT | IS Area | Area | Conc (ng... | %Rec | RRF | 1º S/N | 2º S/N | (b/a) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | I18529 | IA2-537STD5.0 | 27-Feb-20 | 14:02:18 | 11.374 | 77657.359 | 6482.268 | 7.854 | 78.5 | 0.083 | 2016 | | 0.84 |
| 2 | I18530 | IA2-537STD10.0 | 27-Feb-20 | 14:18:52 | 11.371 | 78374.711 | 6561.655 | 7.877 | 78.8 | 0.084 | 153389 | | 0.99 |
| 3 | I18531 | IA2-537STD50.0 | 27-Feb-20 | 14:35:26 | 11.368 | 68134.172 | 8024.498 | 11.081 | 110.8 | 0.118 | 234 | | 1.09 |
| 4 | I18532 | IA2-537STD125 | 27-Feb-20 | 14:51:56 | 11.363 | 59026.023 | 6574.735 | 10.480 | 104.8 | 0.111 | 852 | | 1.08 |
| 5 | I18533 | IA2-537STD150 | 27-Feb-20 | 15:08:31 | 11.376 | 54996.473 | 7148.122 | 12.229 | 122.3 | 0.130 | 160684 | | 0.89 |
| 6 | I18534 | IA2-537STD250 | 27-Feb-20 | 15:25:04 | 11.366 | 50150.867 | 6221.618 | 11.672 | 116.7 | 0.124 | 201 | | 1.11 |
| 7 | I18535 | IA2-537STD500 | 27-Feb-20 | 15:41:35 | 11.363 | 41307.793 | 5899.686 | 13.438 | 134.4 | 0.143 | 129545 | | 0.98 |
| 8 | I18539 | IA2-537STD0.5 | 27-Feb-20 | 16:47:48 | 11.363 | 82886.930 | 6238.703 | 7.082 | 70.8 | 0.075 | 284 | | 1.01 |
| 9 | I18540 | IA2-537STD1.0 | 27-Feb-20 | 17:04:20 | 11.371 | 82804.273 | 7293.184 | 8.287 | 82.9 | 0.088 | 178992 | | 0.91 |

Compound name: d5-NEtFOSAA
Response Factor: 0.106284
RRF SD: 0.0242209, % Relative SD: 22.7888
Response type: Internal Std ( Ref 35 ), Area * ( IS Conc. / IS Area )
Curve type: RF





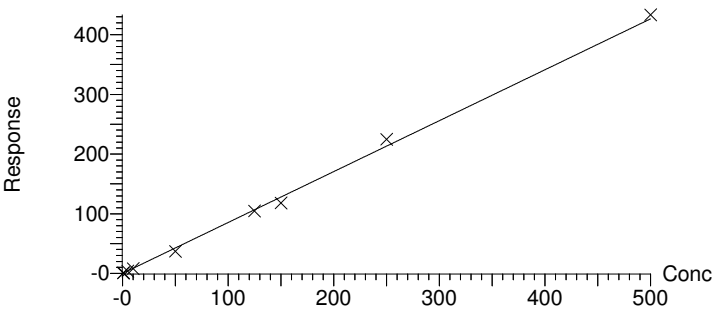
all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICAL_A.qld
Last Altered: Friday, February 28, 2020 09:12:40 Eastern Standard Time
Printed: Friday, February 28, 2020 09:28:57 Eastern Standard Time

**Compound name: NEtFOSAA**

| | Name | ID | Acq.Date | Acq.Time | RT | IS Area | Area | Conc (ng... | %Rec | RRF | 1º S/N | 2º S/N | (b/a) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | I18529 | IA2-537STD5.0 | 27-Feb-20 | 14:02:18 | 11.379 | 6482.268 | 2601.915 | 4.705 | 94.1 | 0.803 | 353 | 317 | 1.01 |
| 2 | I18530 | IA2-537STD10.0 | 27-Feb-20 | 14:18:52 | 11.376 | 6561.655 | 5451.490 | 9.739 | 97.4 | 0.831 | 653 | 40654 | 1.03 |
| 3 | I18531 | IA2-537STD50.0 | 27-Feb-20 | 14:35:26 | 11.379 | 8024.498 | 29531.371 | 43.142 | 86.3 | 0.736 | 3186 | 143 | 0.99 |
| 4 | I18532 | IA2-537STD125 | 27-Feb-20 | 14:51:56 | 11.374 | 6574.735 | 68870.625 | 122.796 | 98.2 | 0.838 | 5270 | 3013 | 0.95 |
| 5 | I18533 | IA2-537STD150 | 27-Feb-20 | 15:08:31 | 11.382 | 7148.122 | 84147.008 | 137.999 | 92.0 | 0.785 | 8278 | 3339 | 0.98 |
| 6 | I18534 | IA2-537STD250 | 27-Feb-20 | 15:25:04 | 11.376 | 6221.618 | 139937.203 | 263.670 | 105.5 | 0.900 | 10536 | 3915 | 1.02 |
| 7 | I18535 | IA2-537STD500 | 27-Feb-20 | 15:41:35 | 11.374 | 5899.686 | 255610.016 | 507.901 | 101.6 | 0.867 | 17562 | 4997 | 0.98 |
| 8 | I18539 | IA2-537STD0.5 | 27-Feb-20 | 16:47:48 | 11.379 | 6238.703 | 320.936 | 0.603 | 120.6 | 1.029 | 40 | 6 | 0.86 |
| 9 | I18540 | IA2-537STD1.0 | 27-Feb-20 | 17:04:20 | 11.376 | 7293.184 | 587.363 | 0.944 | 94.4 | 0.805 | 64 | 48 | 0.95 |

Compound name: NEtFOSAA
Coefficient of Determination: R^2 = 0.997328
Calibration curve: 0.853041 * x
Response type: Internal Std ( Ref 47 ), Area * ( IS Conc. / IS Area )
Curve type: Linear, Origin: Force, Weighting: 1/x, Axis trans: None





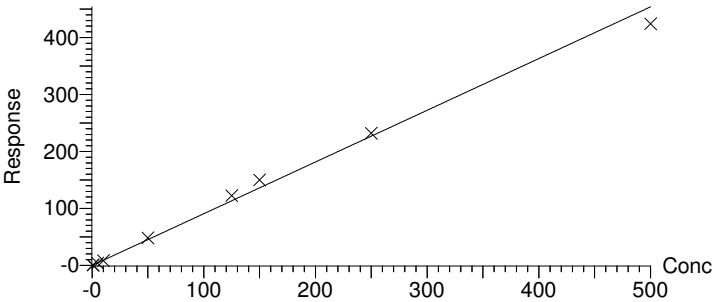
all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICAL_A.qld
Last Altered: Friday, February 28, 2020 09:12:40 Eastern Standard Time
Printed: Friday, February 28, 2020 09:28:57 Eastern Standard Time

**Compound name: PFDoA**

| | Name | ID | Acq.Date | Acq.Time | RT | IS Area | Area | Conc (ng... | %Rec | RRF | 1º S/N | 2º S/N | (b/a) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | I18529 | IA2-537STD5.0 | 27-Feb-20 | 14:02:18 | 11.722 | 81236.000 | 32628.197 | 4.424 | 88.5 | 0.803 | 616 | 142 | 1.12 |
| 2 | I18530 | IA2-537STD10.0 | 27-Feb-20 | 14:18:52 | 11.723 | 81836.984 | 70172.727 | 9.445 | 94.4 | 0.857 | 1746 | 446 | 0.95 |
| 3 | I18531 | IA2-537STD50.0 | 27-Feb-20 | 14:35:26 | 11.722 | 71010.172 | 342918.719 | 53.190 | 106.4 | 0.966 | 7607 | 620115 | 1.07 |
| 4 | I18532 | IA2-537STD125 | 27-Feb-20 | 14:51:56 | 11.718 | 58892.871 | 721807.313 | 134.996 | 108.0 | 0.981 | 10137 | 769 | 1.01 |
| 5 | I18533 | IA2-537STD150 | 27-Feb-20 | 15:08:31 | 11.723 | 57896.809 | 869214.063 | 165.361 | 110.2 | 1.001 | 10995 | 539 | 1.05 |
| 6 | I18534 | IA2-537STD250 | 27-Feb-20 | 15:25:04 | 11.719 | 55620.824 | 1291296.375 | 255.712 | 102.3 | 0.929 | 14424 | 9133 | 1.14 |
| 7 | I18535 | IA2-537STD500 | 27-Feb-20 | 15:41:35 | 11.713 | 47330.496 | 2006536.125 | 466.947 | 93.4 | 0.848 | 16882 | 4080 | 1.12 |
| 8 | I18539 | IA2-537STD0.5 | 27-Feb-20 | 16:47:48 | 11.717 | 77519.445 | 3773.728 | 0.536 | 107.2 | 0.974 | 64 | 5022 | 1.09 |
| 9 | I18540 | IA2-537STD1.0 | 27-Feb-20 | 17:04:20 | 11.723 | 81292.922 | 6560.292 | 0.889 | 88.9 | 0.807 | 154 | 4 | 1.02 |

Compound name: PFDoA
Coefficient of Determination: R^2 = 0.995334
Calibration curve: 0.9079 * x
Response type: Internal Std ( Ref 50 ), Area * ( IS Conc. / IS Area )
Curve type: Linear, Origin: Force, Weighting: 1/x, Axis trans: None





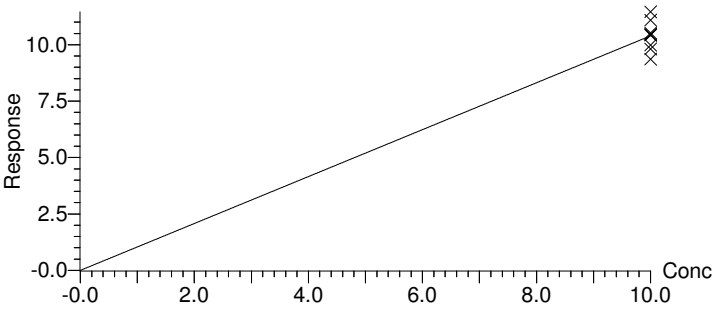
all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICAL_A.qld
Last Altered: Friday, February 28, 2020 09:12:40 Eastern Standard Time
Printed: Friday, February 28, 2020 09:28:57 Eastern Standard Time

**Compound name: MPFDOA**

| | Name | ID | Acq.Date | Acq.Time | RT | IS Area | Area | Conc (ng... | %Rec | RRF | 1º S/N | 2º S/N | (b/a) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | I18529 | IA2-537STD5.0 | 27-Feb-20 | 14:02:18 | 11.726 | 77657.359 | 81236.000 | 10.064 | 100.6 | 1.046 | 2241 | | 0.95 |
| 2 | I18530 | IA2-537STD10.0 | 27-Feb-20 | 14:18:52 | 11.723 | 78374.711 | 81836.984 | 10.046 | 100.5 | 1.044 | 674 | | 0.94 |
| 3 | I18531 | IA2-537STD50.0 | 27-Feb-20 | 14:35:26 | 11.722 | 68134.172 | 71010.172 | 10.027 | 100.3 | 1.042 | 1910 | | 1.06 |
| 4 | I18532 | IA2-537STD125 | 27-Feb-20 | 14:51:56 | 11.718 | 59026.023 | 58892.871 | 9.599 | 96.0 | 0.998 | 1444 | | 0.97 |
| 5 | I18533 | IA2-537STD150 | 27-Feb-20 | 15:08:31 | 11.723 | 54996.473 | 57896.809 | 10.128 | 101.3 | 1.053 | 1751 | | 1.01 |
| 6 | I18534 | IA2-537STD250 | 27-Feb-20 | 15:25:04 | 11.719 | 50150.867 | 55620.824 | 10.670 | 106.7 | 1.109 | 8340 | | 1.10 |
| 7 | I18535 | IA2-537STD500 | 27-Feb-20 | 15:41:35 | 11.713 | 41307.793 | 47330.496 | 11.023 | 110.2 | 1.146 | 986956 | | 1.12 |
| 8 | I18539 | IA2-537STD0.5 | 27-Feb-20 | 16:47:48 | 11.717 | 82886.930 | 77519.445 | 8.998 | 90.0 | 0.935 | 1780140 | | 0.99 |
| 9 | I18540 | IA2-537STD1.0 | 27-Feb-20 | 17:04:20 | 11.723 | 82804.273 | 81292.922 | 9.445 | 94.5 | 0.982 | 1865449 | | 0.94 |

Compound name: MPFDOA
Response Factor: 1.03942
RRF SD: 0.0635766, % Relative SD: 6.11652
Response type: Internal Std ( Ref 35 ), Area * ( IS Conc. / IS Area )
Curve type: RF





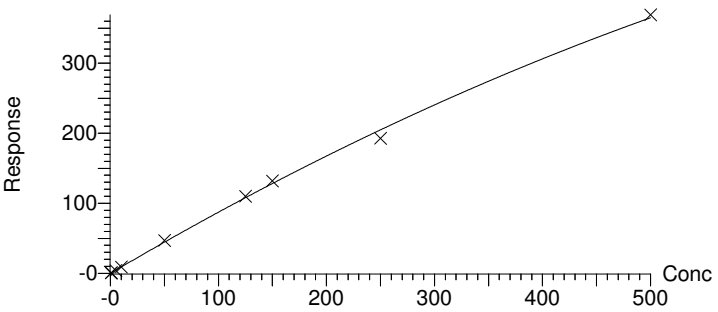
all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICAL_A.qld
Last Altered: Friday, February 28, 2020 09:12:40 Eastern Standard Time
Printed: Friday, February 28, 2020 09:28:57 Eastern Standard Time

**Compound name: PFTrDA**

| | Name | ID | Acq.Date | Acq.Time | RT | IS Area | Area | Conc (ng... | %Rec | RRF | 1º S/N | 2º S/N | (b/a) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | I18529 | IA2-537STD5.0 | 27-Feb-20 | 14:02:18 | 12.1... | 81236.000 | 33142.918 | 4.496 | 89.9 | 0.816 | 772 | 536 | 1.00 |
| 2 | I18530 | IA2-537STD10.0 | 27-Feb-20 | 14:18:52 | 12.1... | 81836.984 | 74049.422 | 9.993 | 99.9 | 0.905 | 1251 | 203 | 1.13 |
| 3 | I18531 | IA2-537STD50.0 | 27-Feb-20 | 14:35:26 | 12.1... | 71010.172 | 333977.594 | 52.841 | 105.7 | 0.941 | 6822 | 1567 | 0.98 |
| 4 | I18532 | IA2-537STD125 | 27-Feb-20 | 14:51:56 | 12.1... | 58892.871 | 648499.688 | 127.558 | 102.0 | 0.881 | 9640 | 8914 | 1.00 |
| 5 | I18533 | IA2-537STD150 | 27-Feb-20 | 15:08:31 | 12.1... | 57896.809 | 765332.750 | 154.889 | 103.3 | 0.881 | 8041 | 1462 | 0.97 |
| 6 | I18534 | IA2-537STD250 | 27-Feb-20 | 15:25:04 | 12.1... | 55620.824 | 1070954.250 | 233.305 | 93.3 | 0.770 | 298 | 3241 | 0.98 |
| 7 | I18535 | IA2-537STD500 | 27-Feb-20 | 15:41:35 | 12.1... | 47330.496 | 1746415.250 | 507.675 | 101.5 | 0.738 | 17884 | 7296 | 1.09 |
| 8 | I18539 | IA2-537STD0.5 | 27-Feb-20 | 16:47:48 | 12.1... | 77519.445 | 4260.305 | 0.605 | 120.9 | 1.099 | 64 | 93 | 0.94 |
| 9 | I18540 | IA2-537STD1.0 | 27-Feb-20 | 17:04:20 | 12.1... | 81292.922 | 7109.269 | 0.962 | 96.2 | 0.875 | 79 | 126 | 1.34 |

Compound name: PFTrDA
Coefficient of Determination: R^2 = 0.998574
Calibration curve: -0.000358951 * x^2 + 0.90904 * x
Response type: Internal Std ( Ref 50 ), Area * ( IS Conc. / IS Area )
Curve type: 2nd Order, Origin: Force, Weighting: 1/x, Axis trans: None





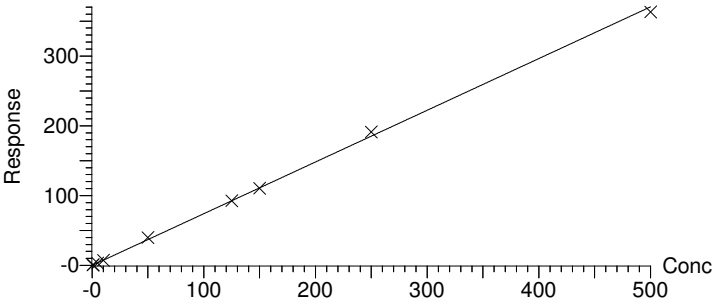
all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICAL_A.qld
Last Altered: Friday, February 28, 2020 09:12:40 Eastern Standard Time
Printed: Friday, February 28, 2020 09:28:57 Eastern Standard Time

**Compound name: PFTA**

| | Name | ID | Acq.Date | Acq.Time | RT | IS Area | Area | Conc (ng... | %Rec | RRF | 1º S/N | 2º S/N | (b/a) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | I18529 | IA2-537STD5.0 | 27-Feb-20 | 14:02:18 | 12.4... | 87989.719 | 30204.764 | 4.633 | 92.7 | 0.687 | 928 | 44 | 1.11 |
| 2 | I18530 | IA2-537STD10.0 | 27-Feb-20 | 14:18:52 | 12.4... | 89896.859 | 65072.117 | 9.770 | 97.7 | 0.724 | 2328 | 2 | 1.07 |
| 3 | I18531 | IA2-537STD50.0 | 27-Feb-20 | 14:35:26 | 12.4... | 81471.898 | 324915.094 | 53.825 | 107.7 | 0.798 | 8968 | 1510 | 1.06 |
| 4 | I18532 | IA2-537STD125 | 27-Feb-20 | 14:51:56 | 12.4... | 73635.820 | 680591.875 | 124.745 | 99.8 | 0.739 | 16363 | 3972 | 1.03 |
| 5 | I18533 | IA2-537STD150 | 27-Feb-20 | 15:08:31 | 12.4... | 69408.695 | 766911.938 | 149.127 | 99.4 | 0.737 | 23210 | 7647 | 1.02 |
| 6 | I18534 | IA2-537STD250 | 27-Feb-20 | 15:25:04 | 12.4... | 61592.461 | 1176527.250 | 257.810 | 103.1 | 0.764 | 34557 | 3587 | 1.05 |
| 7 | I18535 | IA2-537STD500 | 27-Feb-20 | 15:41:35 | 12.4... | 52678.184 | 1913145.000 | 490.164 | 98.0 | 0.726 | 50430 | 11549 | 1.07 |
| 8 | I18539 | IA2-537STD0.5 | 27-Feb-20 | 16:47:48 | 12.4... | 88012.680 | 3156.608 | 0.484 | 96.8 | 0.717 | 116 | 163 | 1.17 |
| 9 | I18540 | IA2-537STD1.0 | 27-Feb-20 | 17:04:20 | 12.4... | 82218.711 | 5741.126 | 0.942 | 94.2 | 0.698 | 277 | 11 | 1.06 |

Compound name: PFTA
Coefficient of Determination: R^2 = 0.999278
Calibration curve: 0.740927 * x
Response type: Internal Std ( Ref 53 ), Area * ( IS Conc. / IS Area )
Curve type: Linear, Origin: Force, Weighting: 1/x, Axis trans: None





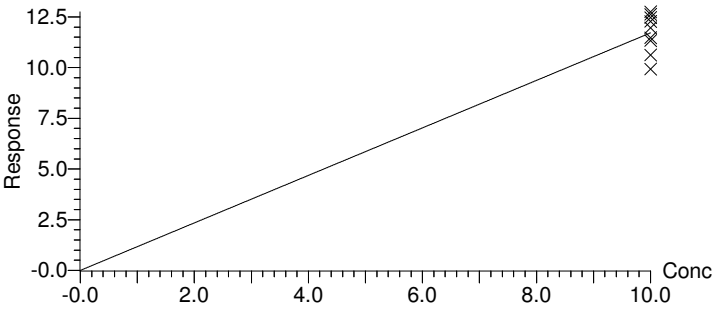
all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICAL_A.qld
Last Altered: Friday, February 28, 2020 09:12:40 Eastern Standard Time
Printed: Friday, February 28, 2020 09:28:57 Eastern Standard Time

**Compound name: M2PFTEDA**

| | Name | ID | Acq.Date | Acq.Time | RT | IS Area | Area | Conc (ng... | %Rec | RRF | 1º S/N | 2º S/N | (b/a) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | I18529 | IA2-537STD5.0 | 27-Feb-20 | 14:02:18 | 12.4... | 77657.359 | 87989.719 | 9.672 | 96.7 | 1.133 | 10474 | | 1.08 |
| 2 | I18530 | IA2-537STD10.0 | 27-Feb-20 | 14:18:52 | 12.4... | 78374.711 | 89896.859 | 9.791 | 97.9 | 1.147 | 5759 | | 1.04 |
| 3 | I18531 | IA2-537STD50.0 | 27-Feb-20 | 14:35:26 | 12.4... | 68134.172 | 81471.898 | 10.207 | 102.1 | 1.196 | 8161 | | 1.05 |
| 4 | I18532 | IA2-537STD125 | 27-Feb-20 | 14:51:56 | 12.4... | 59026.023 | 73635.820 | 10.649 | 106.5 | 1.248 | 2690 | | 1.07 |
| 5 | I18533 | IA2-537STD150 | 27-Feb-20 | 15:08:31 | 12.4... | 54996.473 | 69408.695 | 10.773 | 107.7 | 1.262 | 7 | | 0.99 |
| 6 | I18534 | IA2-537STD250 | 27-Feb-20 | 15:25:04 | 12.4... | 50150.867 | 61592.461 | 10.483 | 104.8 | 1.228 | 3698 | | 1.08 |
| 7 | I18535 | IA2-537STD500 | 27-Feb-20 | 15:41:35 | 12.4... | 41307.793 | 52678.184 | 10.886 | 108.9 | 1.275 | 1670 | | 0.94 |
| 8 | I18539 | IA2-537STD0.5 | 27-Feb-20 | 16:47:48 | 12.4... | 82886.930 | 88012.680 | 9.064 | 90.6 | 1.062 | 8729 | | 1.03 |
| 9 | I18540 | IA2-537STD1.0 | 27-Feb-20 | 17:04:20 | 12.4... | 82804.273 | 82218.711 | 8.476 | 84.8 | 0.993 | 16052 | | 1.04 |

Compound name: M2PFTEDA
Response Factor: 1.17151
RRF SD: 0.0965226, % Relative SD: 8.23918
Response type: Internal Std ( Ref 35 ), Area * ( IS Conc. / IS Area )
Curve type: RF





all concentration units in (ng/mL)

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Last Altered: Friday, February 28, 2020 09:12:40 Eastern Standard Time
Printed: Friday, February 28, 2020 09:27:47 Eastern Standard Time

**Method: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\MethDB\537ISO_Q_200227 .mdb 27 Feb 2020 12:38:15**
**Calibration: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\CurveDB\200227_537ISO_ICAL.cdb 28 Feb 2020 09:12:40**

**ID: IA2-537STD5.0**
**Name: I18529**
**Date: 27-Feb-2020**
**Time: 14:02:18**
**Description: WG1345050,,537_200120_3**
**Instrument: XEVO-TQSmicro#QEA0276**
**User: LCMS01:SG**
**Inlet Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\LCMS_537_ISO_MeOH**
**Tune Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\190709_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

| | Name | CAS | RT | Trace | Area | M Flag | Conc (ng/mL) | Ion Ratio | Ratio Flag | %Rec |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | PFBA | 375-22-4 | 2.25 | 212.926 > 169.111 | 14811 | | 4.236 | | na | 84.7 |
| 2 | M3PFBA | INT STD | 2.25 | 215.926 > 172.122 | 41336 | | 10.512 | | na | 105.1 |
| 3 | MPFBA | INT STD | 2.25 | 216.926 > 172.137 | 48320 | | 10.202 | | na | 102.0 |
| 4 | PFPeA | 2706-90-3 | 5.21 | 262.926 > 219.002 | 19874 | | 4.267 | | na | 85.3 |
| 5 | M5PFPEA | INT STD | 5.21 | 267.989 > 223.081 | 66965 | | 10.656 | | na | 106.6 |
| 6 | PFBS | 375-73-5 | 5.88 | 298.926 > 79.923 | 3950 | | 3.678 | 2.03 | NO | 83.1 |
| 7 | M3PFBS | INT STD | 5.88 | 301.989 > 80.254 | 11904 | | 9.881 | | na | 98.8 |
| 8 | 4:2FTS | 757124-72-4 | 7.05 | 326.926 > 306.957 | 1759 | | 4.234 | 1.86 | NO | 90.6 |
| 9 | M2-4:2FTS | INT STD | 7.05 | 329.117 > 309.079 | 5134 | | 8.180 | | na | 81.8 |
| 10 | PFHxA | 307-24-4 | 7.13 | 312.989 > 269.028 | 27587 | | 4.323 | 16.82 | NO | 86.5 |
| 11 | M5PFHxA | INT STD | 7.13 | 317.989 > 273.045 | 76999 | | 10.105 | | na | 101.1 |
| 12 | PFPeS | 2706-91-4 | 7.45 | 348.926 > 80.251 | 4436 | | 4.172 | 2.37 | NO | 88.8 |
| 13 | PFHpA | 375-85-9 | 8.41 | 362.926 > 319.014 | 34573 | | 4.147 | 5.71 | NO | 82.9 |
| 14 | M4PFHpA | INT STD | 8.41 | 366.926 > 321.979 | 90961 | | 10.290 | | na | 102.9 |
| 15 | br-PFHxS | 355-46-4 | 8.33 | 398.904 > 79.915 | 560 | M5 | 0.679 | | YES | 79.8 |
| 16 | L-PFHxS | 355-46-4 | 8.57 | 398.904 > 79.915 | 2785 | | 3.364 | 2.08 | NO | 90.9 |
| 17 | PFHxS | 355-46-4 | | 398.904 > 79.915 | 3345 | | 4.043 | | na | |
| 18 | M3PFHxS | INT STD | 8.57 | 401.926 > 80.317 | 11194 | | 10.371 | | na | 103.7 |
| 19 | br-PFOA | 335-67-1 | | 412.989 > 368.9 | | | ND | | YES | |
| 20 | L-PFOA | 335-67-1 | 9.35 | 412.989 > 368.9 | 33627 | | 4.233 | 7.96 | NO | 84.7 |
| 21 | M2PFOA | INT STD | 9.35 | 415.032 > 369.968 | 93068 | | 11.062 | | na | 110.6 |
| 22 | PFOA | 335-67-1 | | 412.989 > 368.9 | 33627 | | 4.233 | | na | |
| 23 | M8PFOA | INT STD | 9.35 | 420.989 > 375.979 | 92378 | | 10.409 | | na | 104.1 |
| 24 | 6:2FTS | 27619-97-2 | 9.31 | 426.989 > 406.921 | 408 | | 4.795 | 0.70 | NO | 100.9 |
| 25 | M2-6:2FTS | INT STD | 9.31 | 428.989 > 408.917 | 3563 | | 9.123 | | na | 91.2 |
| 26 | PFHpS | 375-92-8 | 9.44 | 448.926 > 80.257 | 2526 | | 4.300 | 1.17 | NO | 90.5 |
| 27 | PFNA | 375-95-1 | 10.10 | 462.989 > 418.931 | 31434 | | 4.402 | 4.19 | NO | 88.0 |
| 28 | M9PFNA | INT STD | 10.10 | 472.053 > 426.947 | 95965 | | 11.060 | | na | 110.6 |
| 29 | br-PFOS | 1763-23-1 | 9.96 | 498.968 > 79.918 | 784 | M5 | 0.900 | 4.02 | NO | 90.0 |
| 30 | L-PFOS | 1763-23-1 | 10.15 | 498.968 > 79.918 | 2167 | | 3.428 | 1.41 | NO | 93.9 |
| 31 | PFOS | 1763-23-1 | | 498.968 > 79.918 | 2951 | | 4.328 | | na | |
| 32 | M4PFOS | INT STD | 10.15 | 503.032 > 80.306 | 9391 | | 11.056 | | na | 110.6 |
| 33 | M8PFOS | INT STD | 10.15 | 507.053 > 80.294 | 11718 | | 10.745 | | na | 107.5 |
| 34 | PFDA | 335-76-2 | 10.72 | 513.053 > 468.906 | 28375 | | 4.164 | 6.31 | NO | 83.3 |
| 35 | M2PFDA | INT STD | 10.72 | 515.053 > 469.934 | 77657 | | 11.740 | | na | 117.4 |
| 36 | M6PFDA | INT STD | 10.72 | 519.053 > 473.931 | 88967 | | 10.413 | | na | 104.1 |
| 37 | 8:2FTS | 39108-34-4 | 10.71 | 527.032 > 507.079 | 651 | | 4.613 | 1.53 | NO | 96.1 |
| 38 | M2-8:2FTS | INT STD | 10.71 | 529.053 > 508.945 | 2128 | | 9.009 | | na | 90.1 |
| 39 | PFNS | 68259-12-1 | 10.74 | 548.989 > 80.249 | 4233 | | 5.343 | 1.85 | NO | 111.3 |


all concentration units in (ng/mL)

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Printed: Friday, February 28, 2020 09:27:47 Eastern Standard Time

**ID: IA2-537STD5.0**
**Name: I18529**
**Date: 27-Feb-2020**
**Time: 14:02:18**
**Description: WG1345050,,537_200120_3**
**Instrument: XEVO-TQSmicro#QEA0276**
**User: LCMS01:SG**
**Inlet Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\LCMS_537_ISO_MeOH**
**Tune Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\190709_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

| | Name | CAS | RT | Trace | Area | M Flag | Conc (ng/mL) | Ion Ratio | Ratio Flag | %Rec |
|---|---|---|---|---|---|---|---|---|---|---|
| 40 | d3-NMeFOSAA | INT STD | 11.08 | 573.096 > 418.987 | 9002 | | 7.953 | | na | 79.5 |
| 41 | NMeFOSAA | 2355-31-9 | 11.09 | 570.053 > 418.917 | 2729 | | 5.072 | 3.39 | NO | 101.4 |
| 42 | PFUnA | 2058-94-8 | 11.26 | 562.989 > 518.903 | 29479 | | 3.814 | 7.27 | NO | 76.3 |
| 43 | M7-PFUDA | INT STD | 11.26 | 570.053 > 524.923 | 83100 | | 11.068 | | na | 110.7 |
| 44 | PFDS | 335-77-3 | 11.27 | 598.926 > 80.314 | 3251 | | 4.216 | 1.60 | NO | 87.4 |
| 45 | FOSA | 754-91-6 | 11.12 | 497.989 > 78.245 | 10580 | | 3.759 | | YES | 75.2 |
| 46 | M8FOSA | INT STD | 11.12 | 506.053 > 78.286 | 34160 | | 9.976 | | na | 99.8 |
| 47 | d5-NEtFOSAA | INT STD | 11.37 | 589.117 > 418.929 | 6482 | | 7.854 | | na | 78.5 |
| 48 | NEtFOSAA | 2991-50-6 | 11.38 | 583.989 > 418.927 | 2602 | | 4.705 | 3.34 | NO | 94.1 |
| 49 | PFDoA | 307-55-1 | 11.72 | 612.989 > 568.967 | 32628 | | 4.424 | 12.83 | NO | 88.5 |
| 50 | MPFDOA | INT STD | 11.73 | 614.989 > 569.92 | 81236 | | 10.064 | | na | 100.6 |
| 51 | PFTrDA | 72629-94-8 | 12.13 | 663.053 > 618.969 | 33143 | | 4.496 | 11.35 | NO | 89.9 |
| 52 | PFTA | 376-06-7 | 12.48 | 713.053 > 668.976 | 30205 | | 4.633 | 9.27 | NO | 92.7 |
| 53 | M2PFTEDA | INT STD | 12.48 | 715.053 > 669.945 | 87990 | | 9.672 | | na | 96.7 |


all concentration units in (ng/mL)

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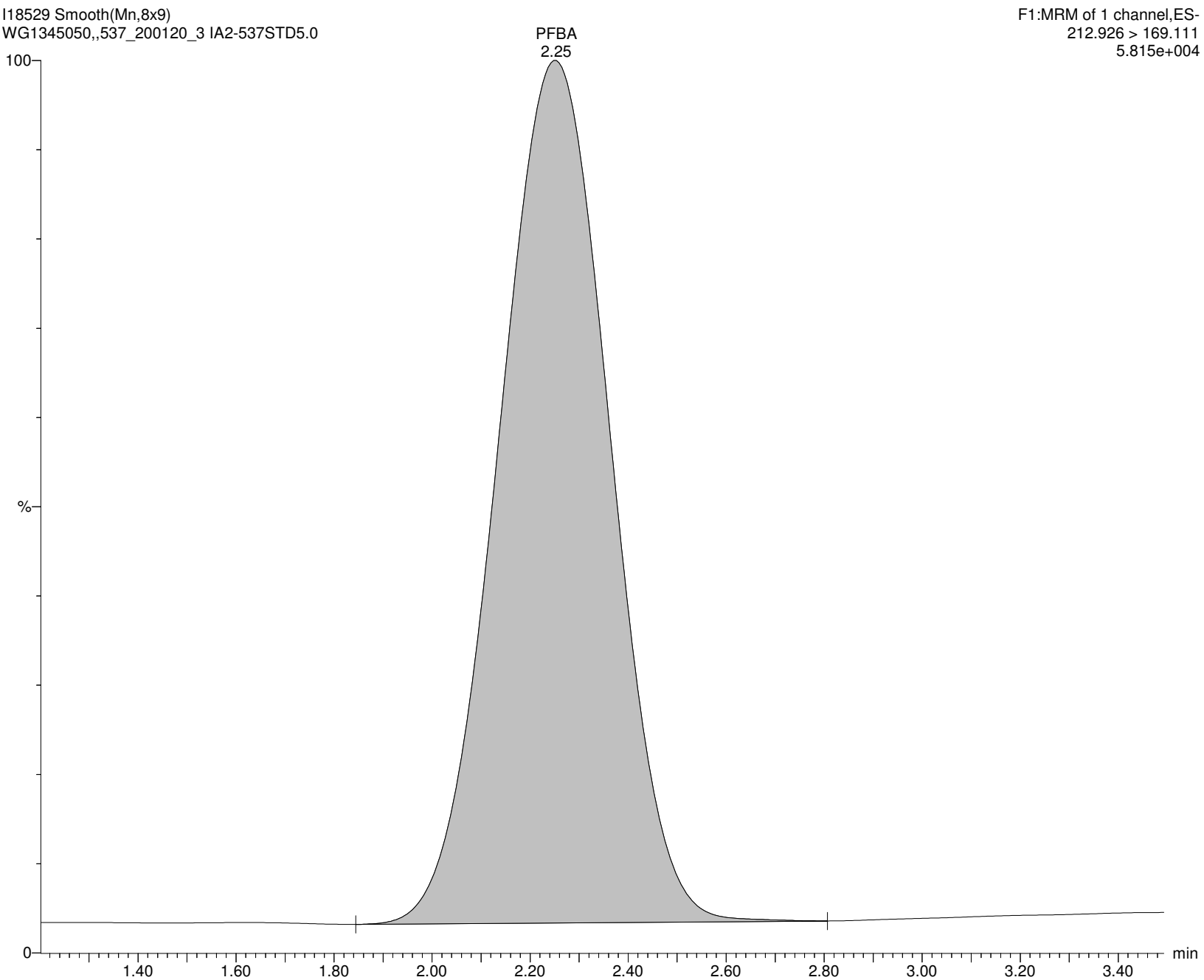
**MS Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**PFBA**





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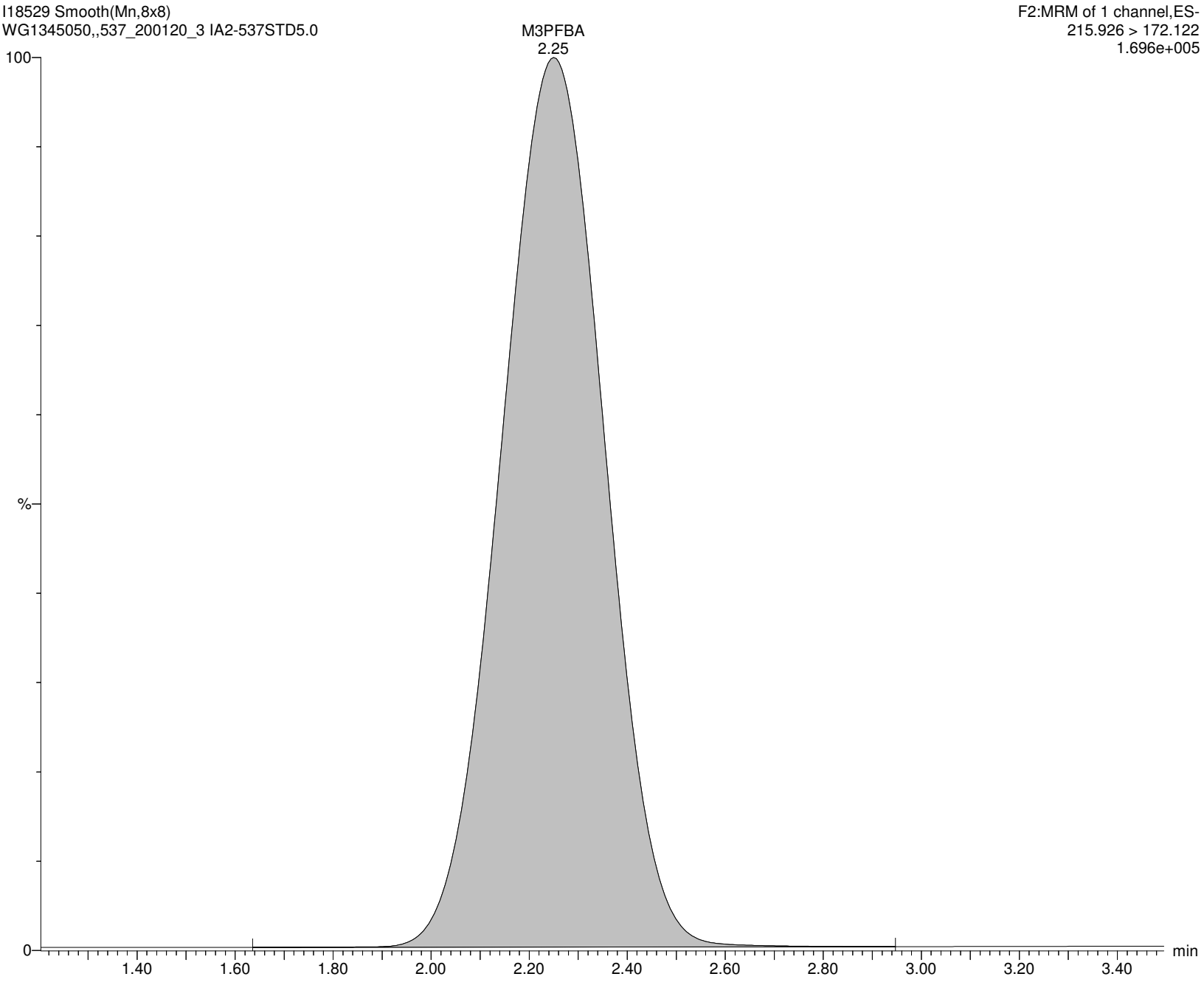
**M3PFBA**





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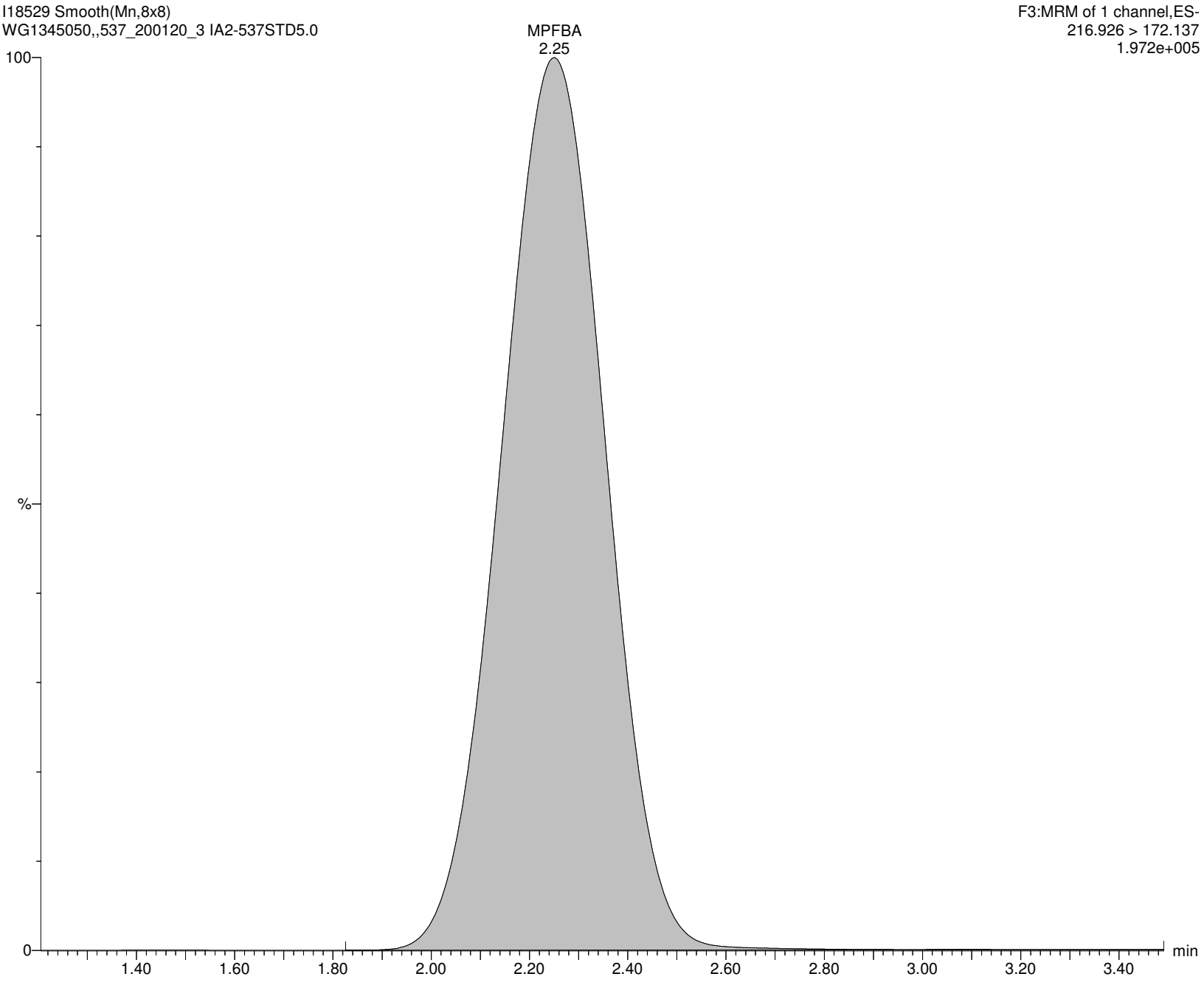
**MPFBA**





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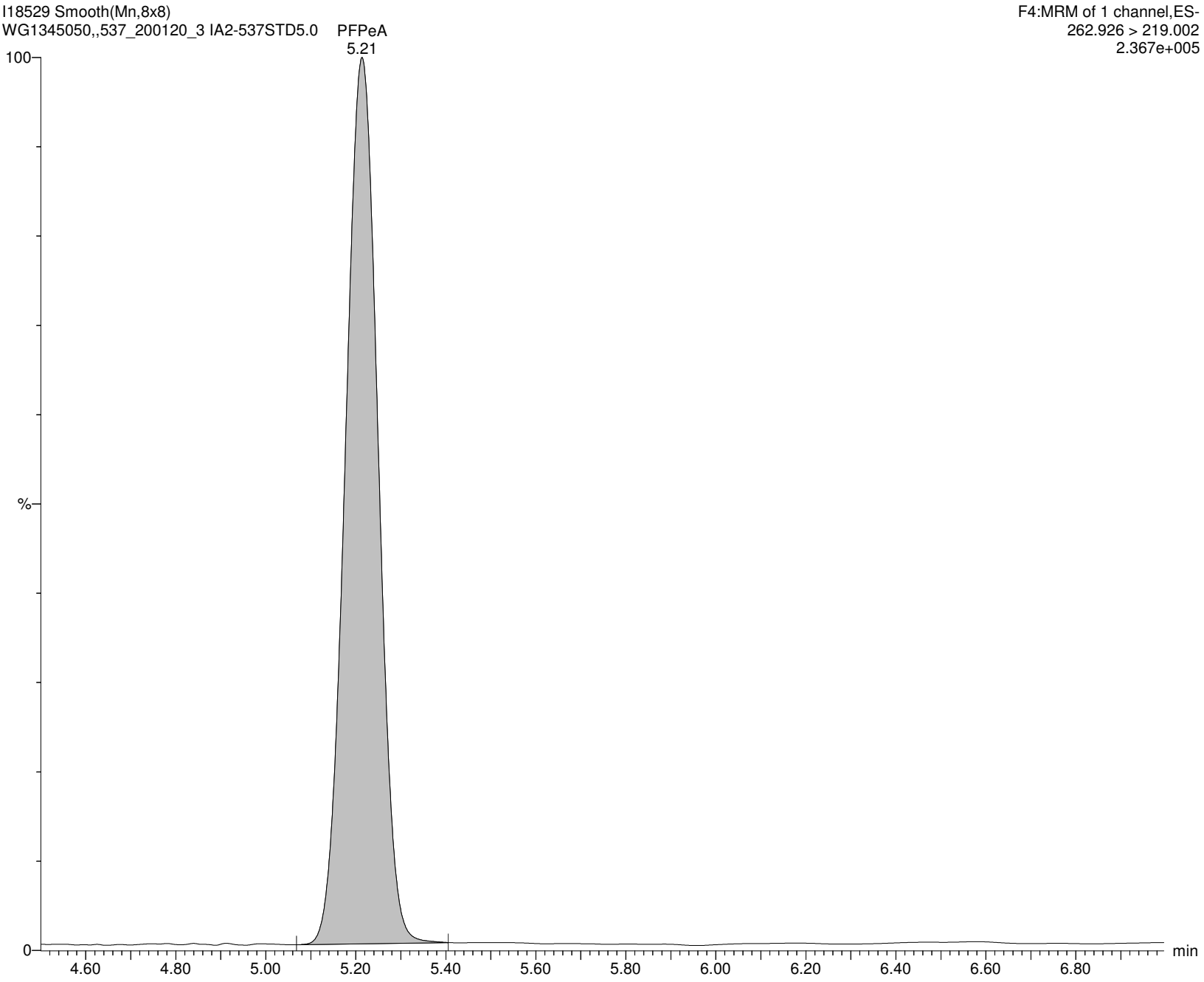
**PFPeA**





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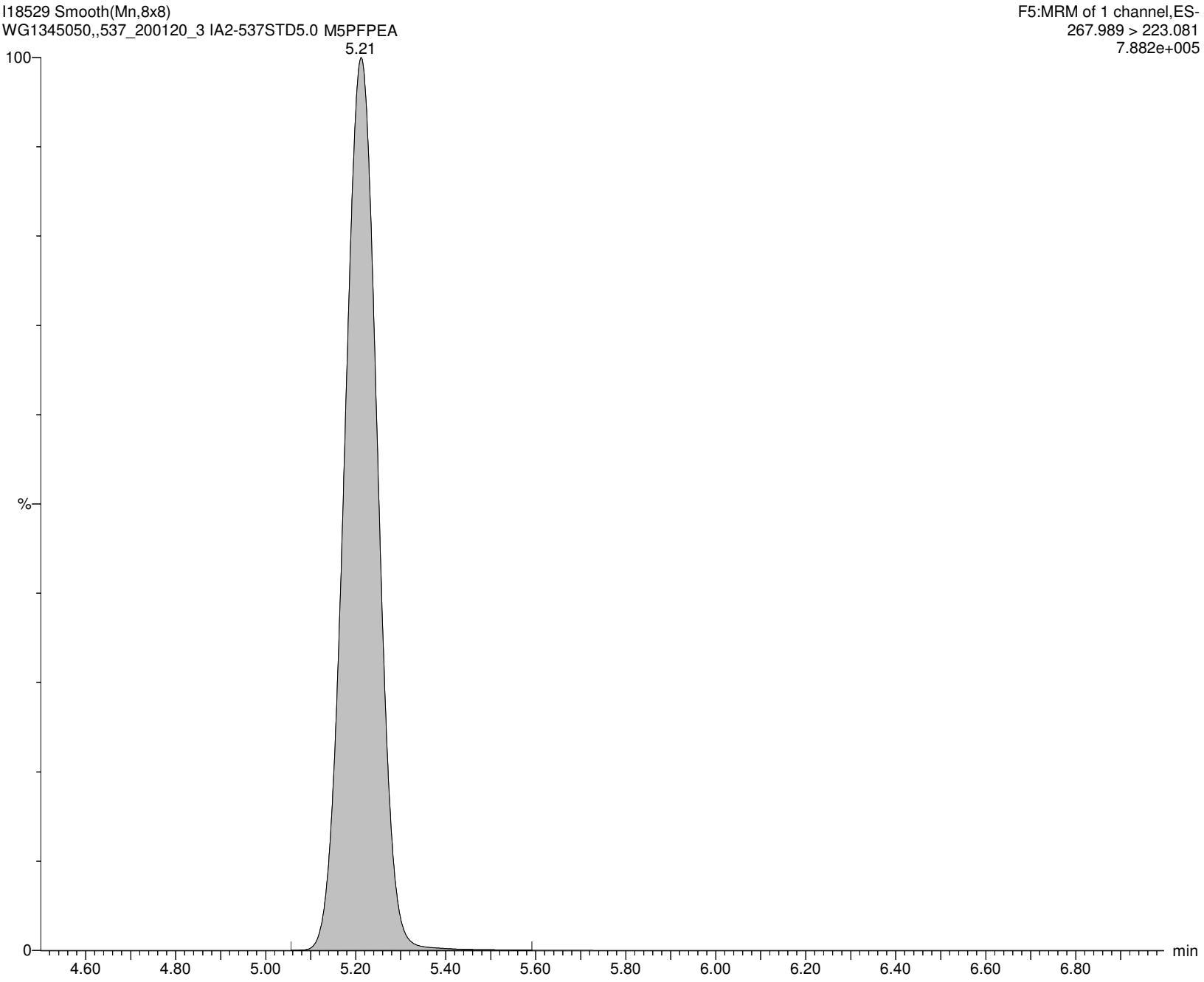
**M5PFPEA**





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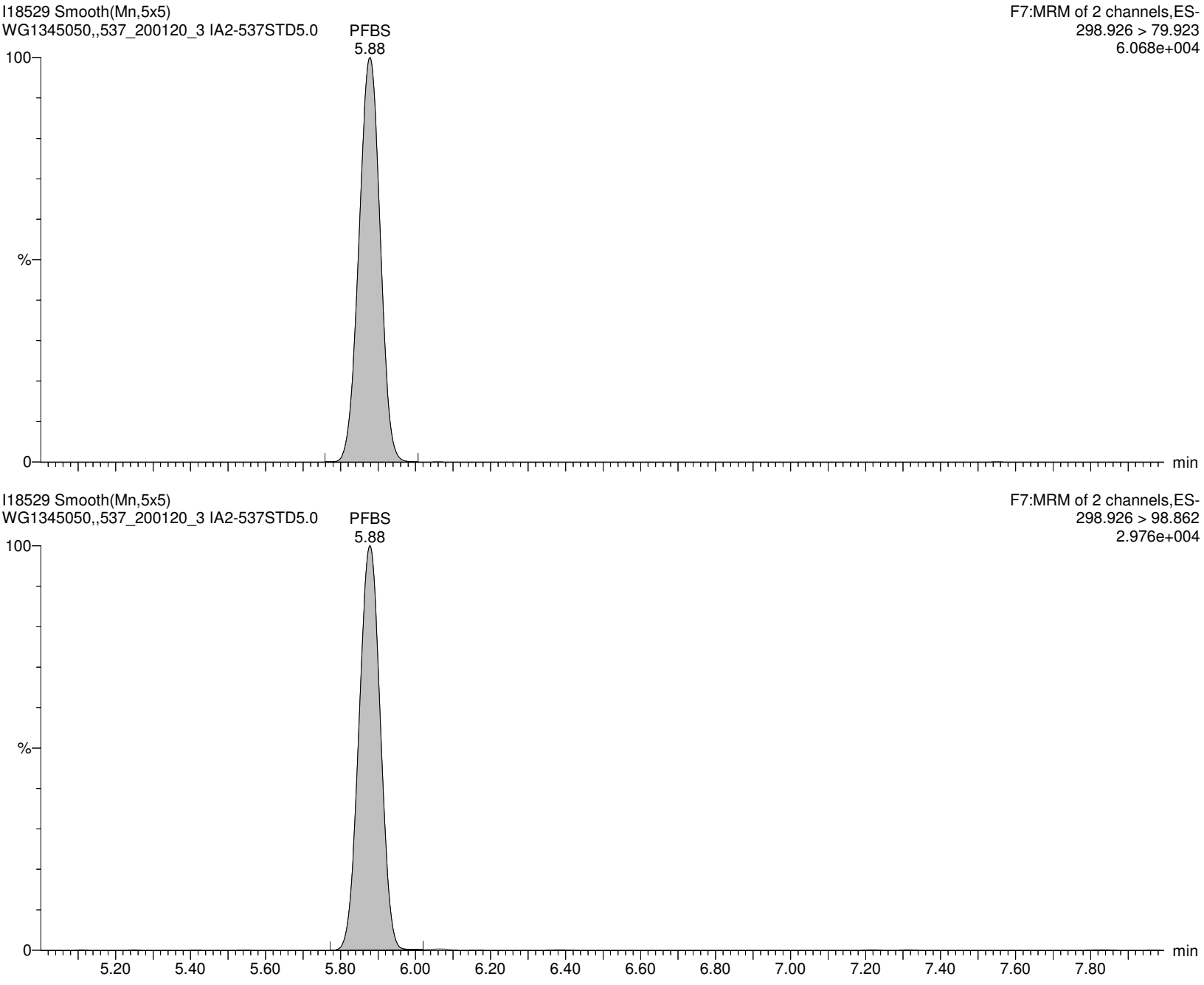
**PFBS**





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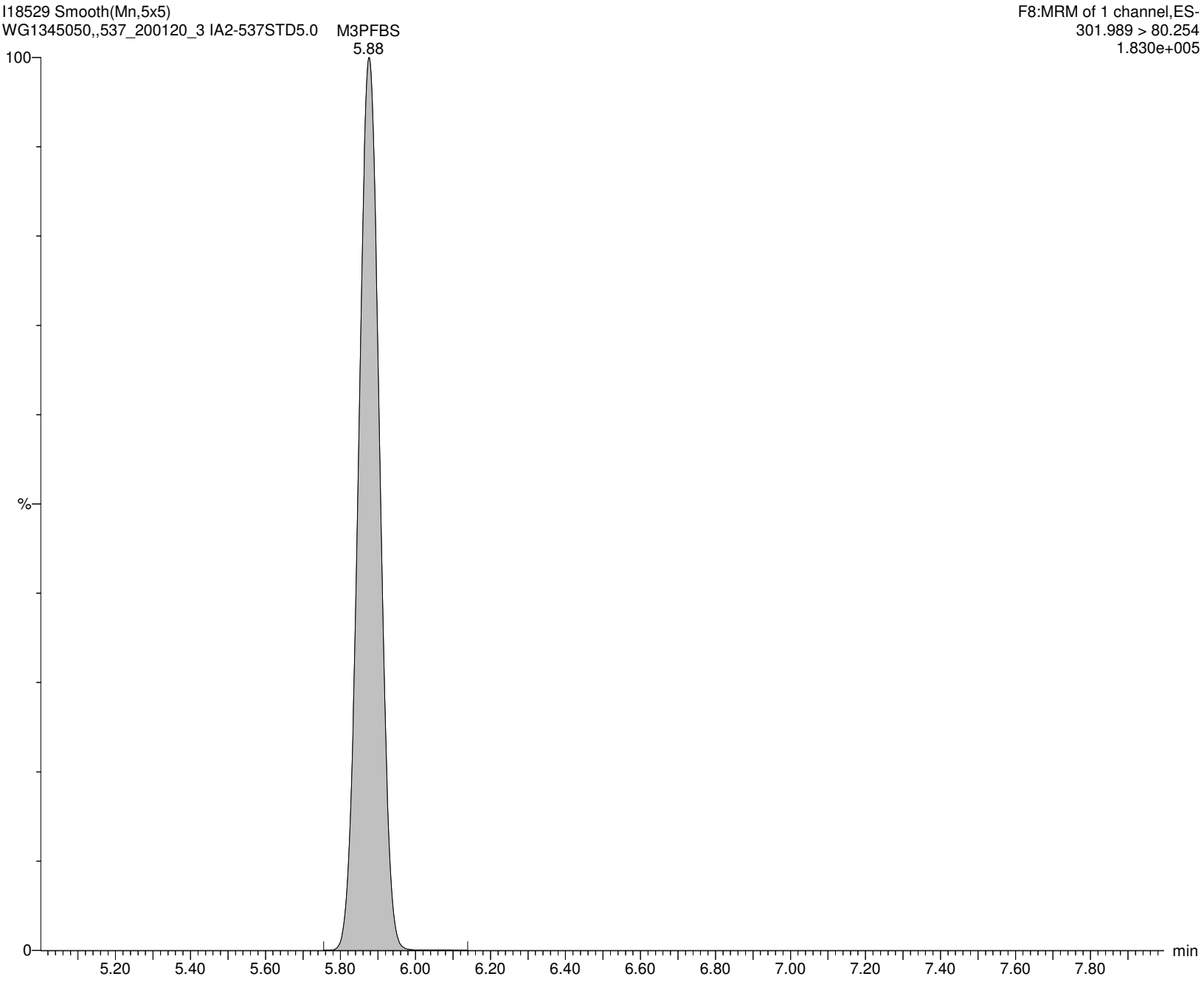
**M3PFBS**





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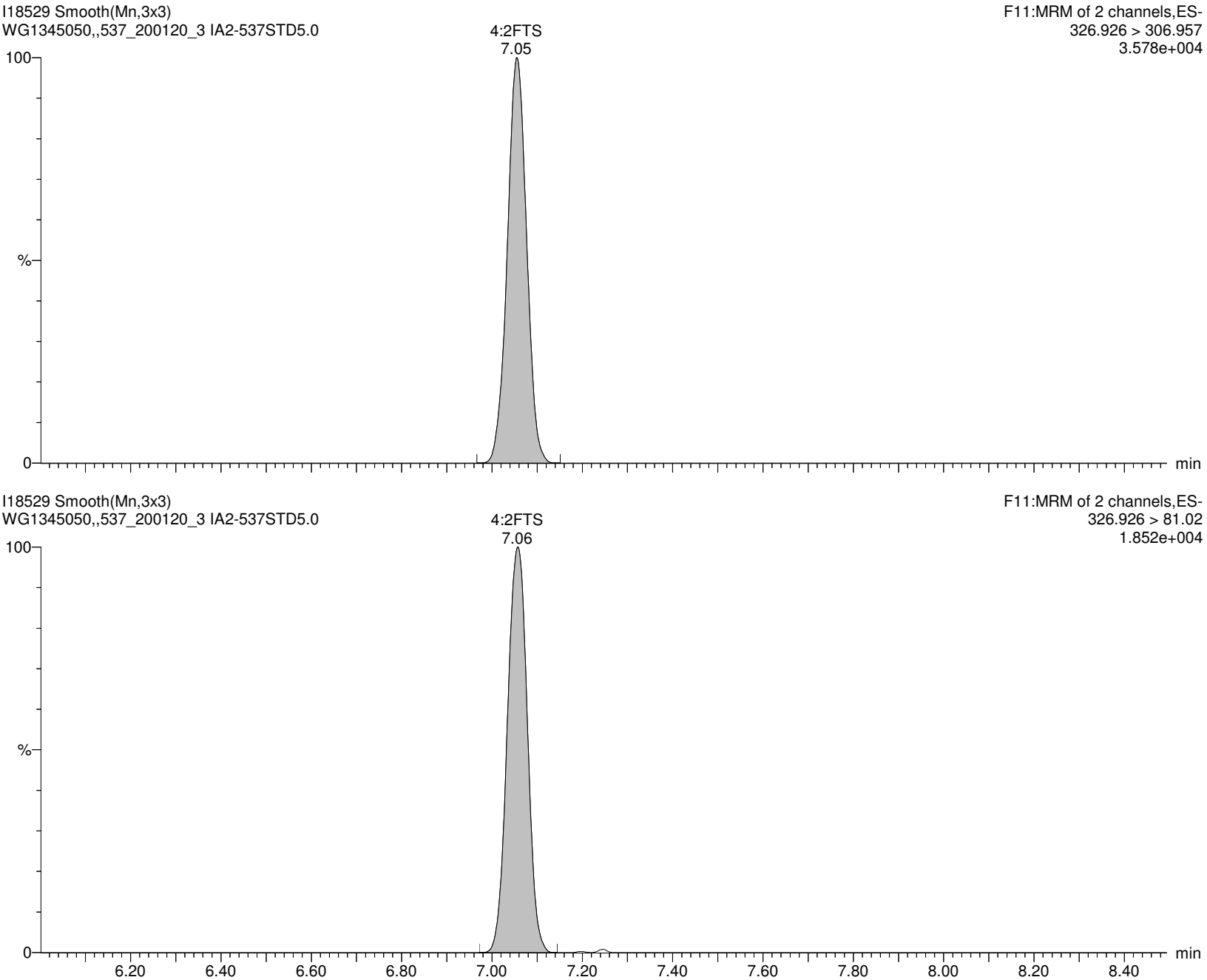
**4:2FTS**





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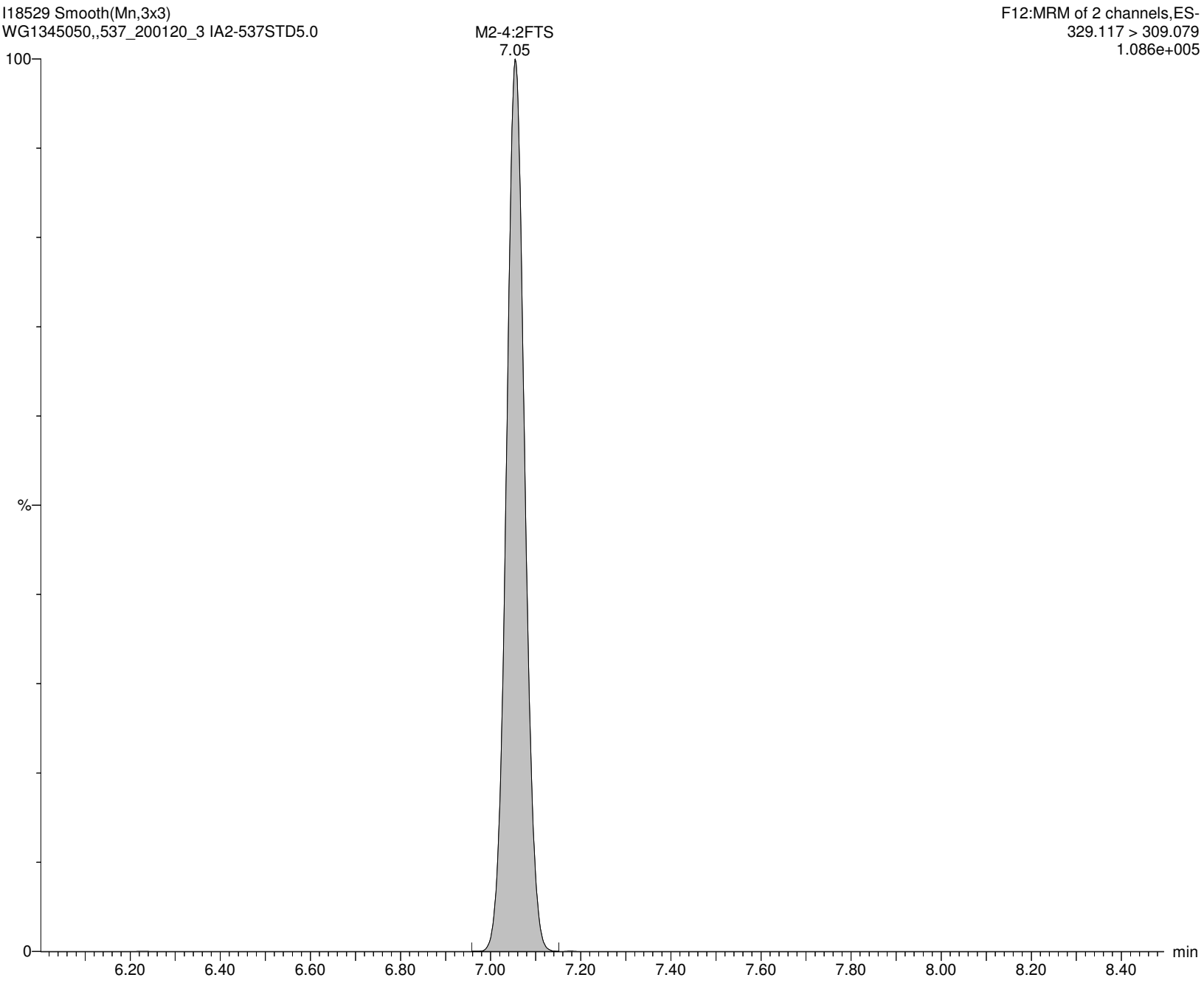
**User: LCMS01:SG**
**Vial: 1:A,4**
**Instrument: XEVO-TQSmicro#QEA0276**
**Inlet Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\LCMS_537_ISO_MeOH**
**Tune Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\190709_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**M2-4:2FTS**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICAL_A.qld
Last Altered: Friday, February 28, 2020 09:12:40 Eastern Standard Time
Printed: Friday, February 28, 2020 09:27:47 Eastern Standard Time

**Name: I18529**
**ID: IA2-537STD5.0**
**Date: 27-Feb-2020**
**Time: 14:02:18**
**Description: WG1345050,,537_200120_3**
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**Vial: 1:A,4**
**Instrument: XEVO-TQSmicro#QEA0276**
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**Tune Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\190709_TUNE.IPR**
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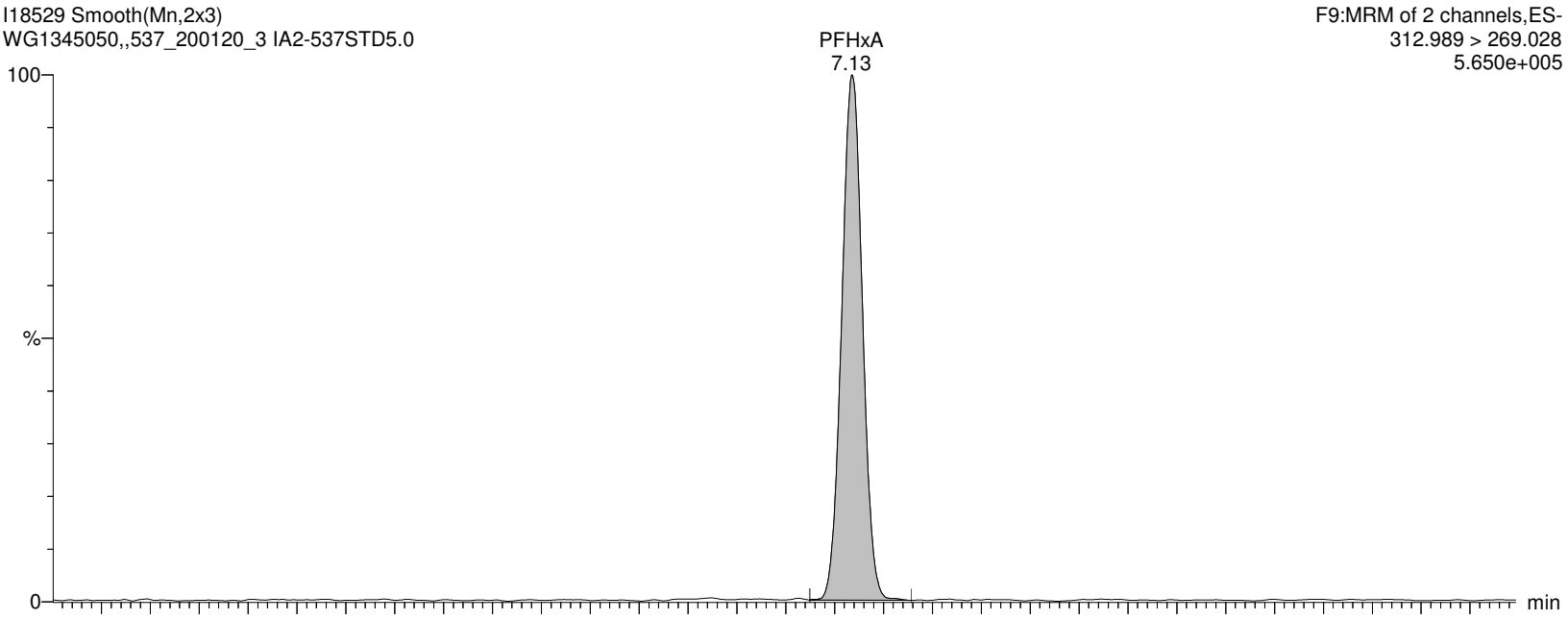
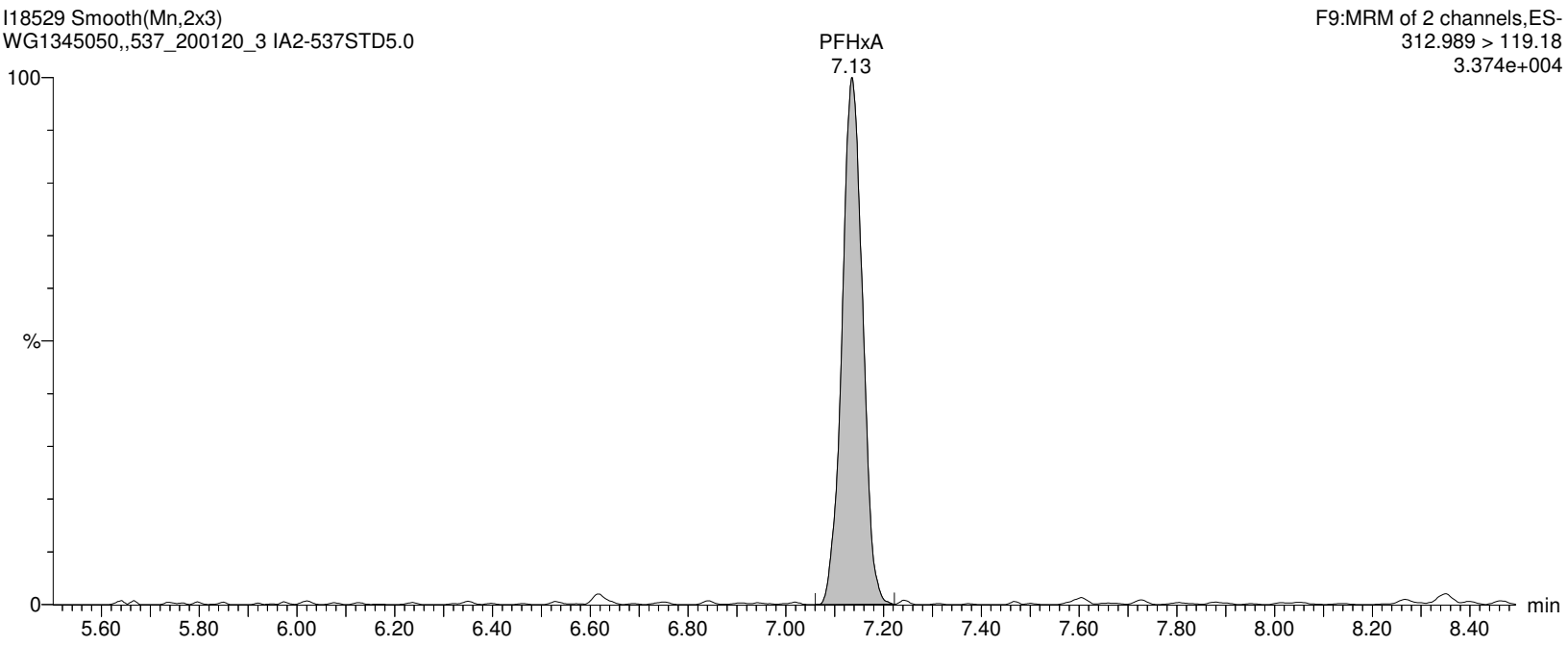
**PFHxA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
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Last Altered: Friday, February 28, 2020 09:12:40 Eastern Standard Time
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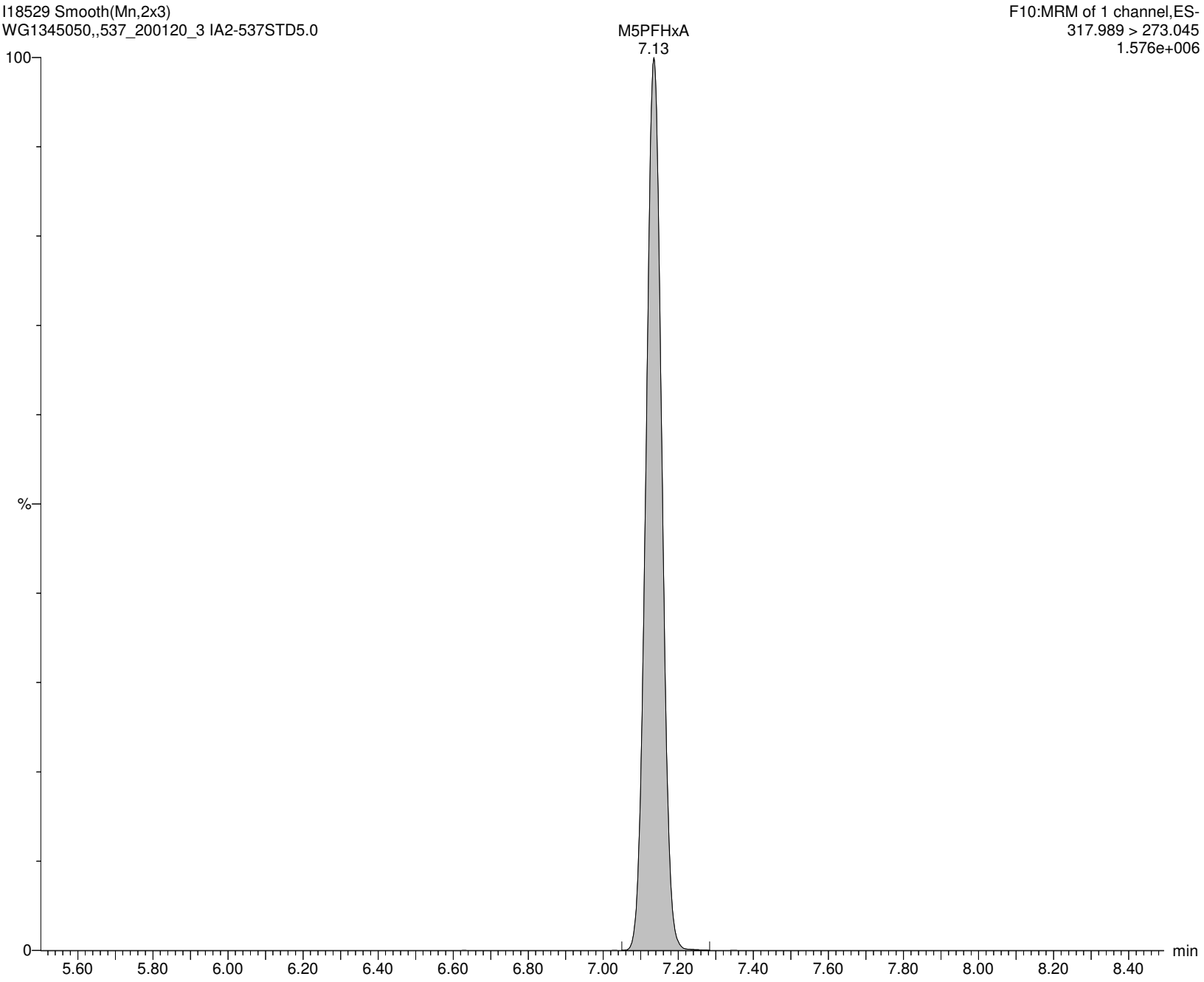
**M5PFHxA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICAL_A.qld
Last Altered: Friday, February 28, 2020 09:12:40 Eastern Standard Time
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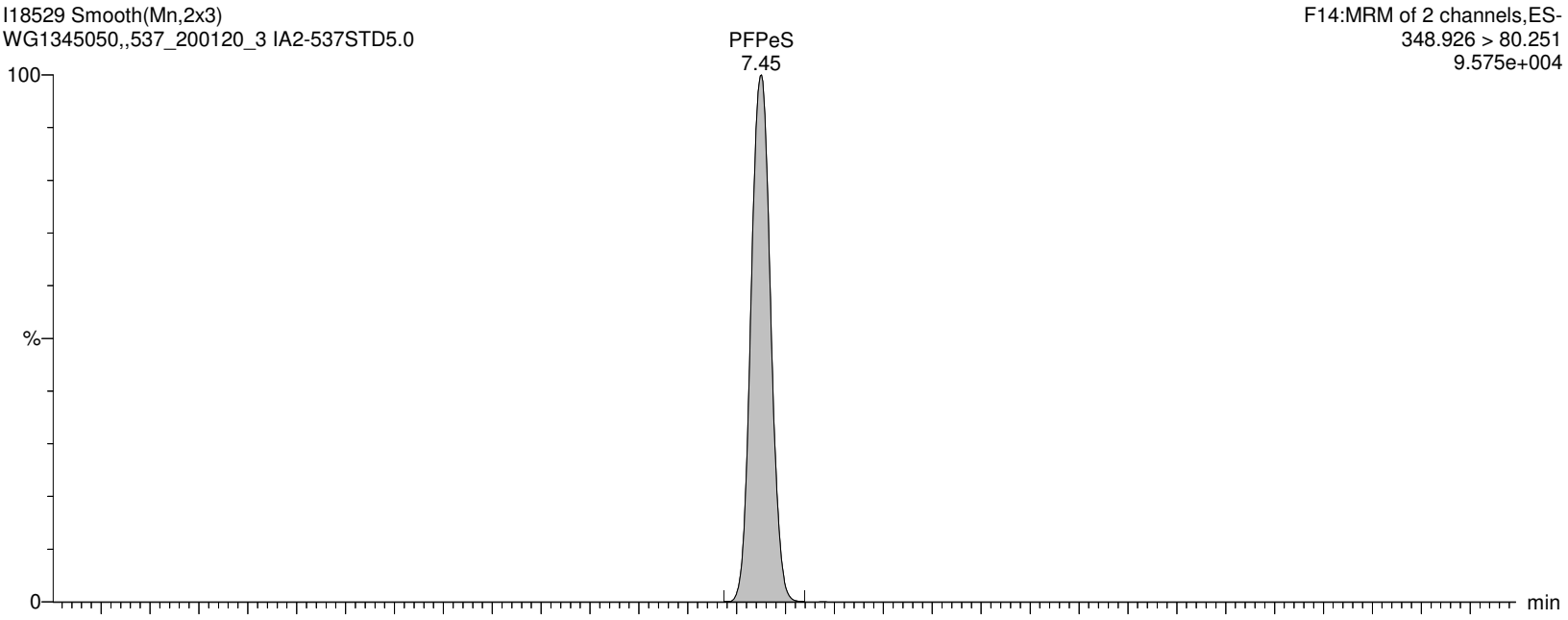
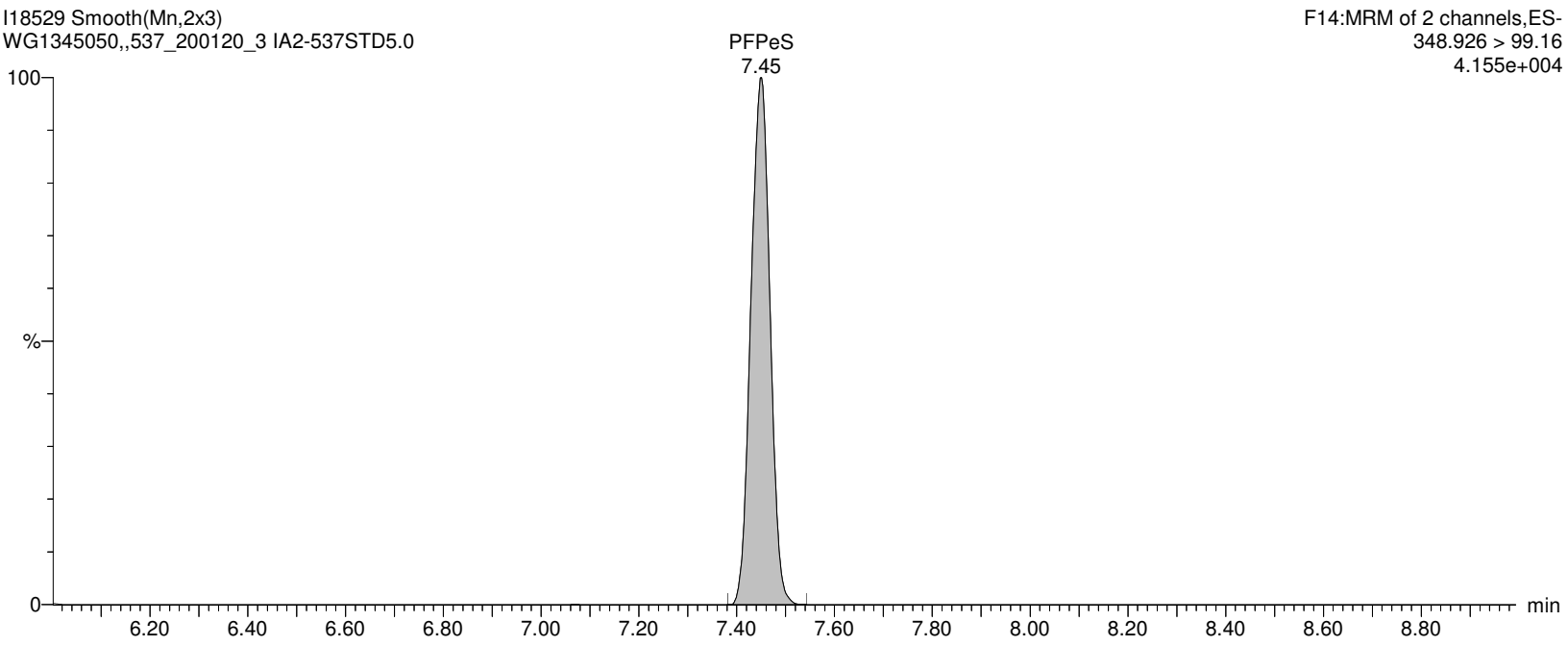
**PFPeS**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICAL_A.qld
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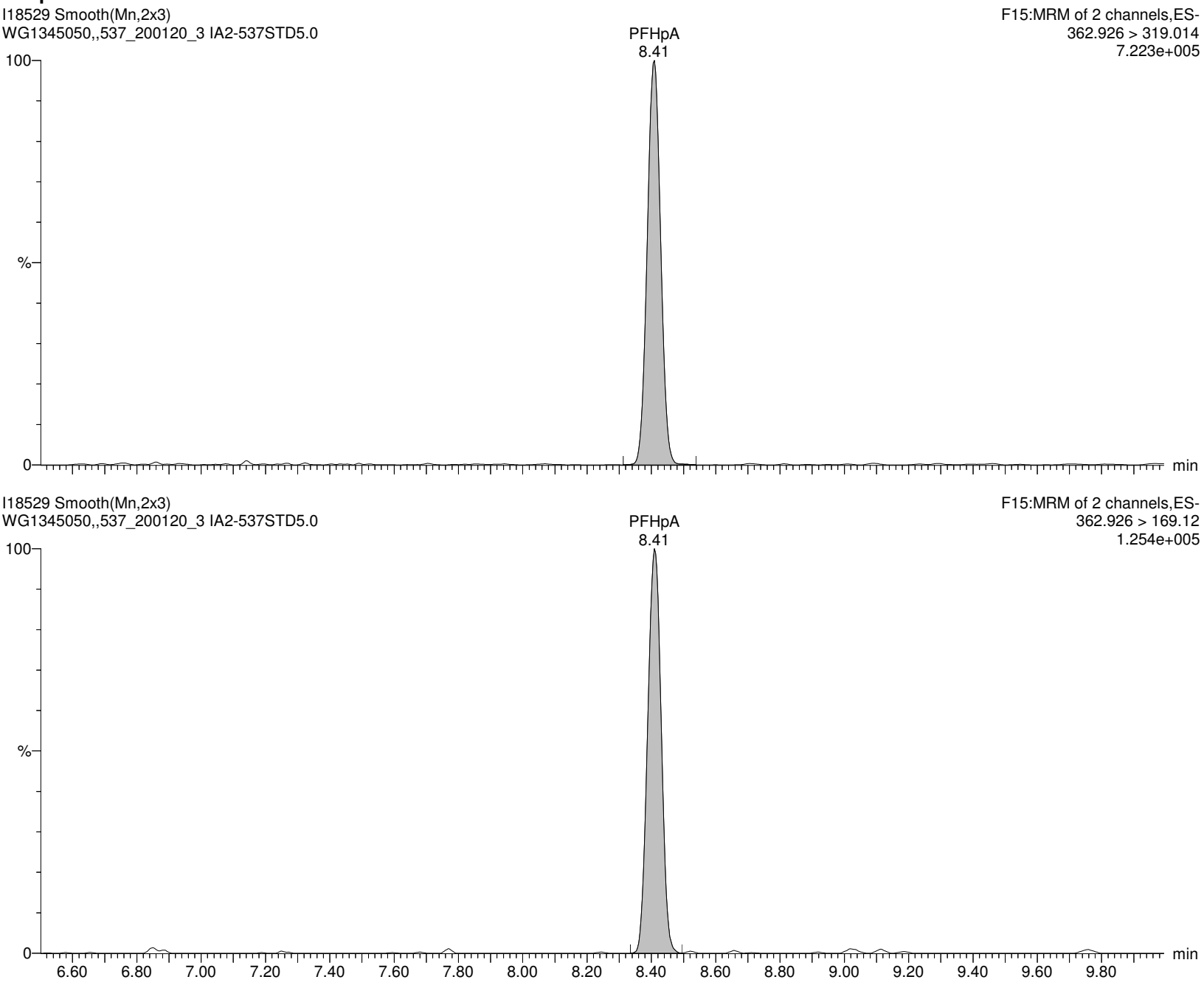



all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICAL_A.qld
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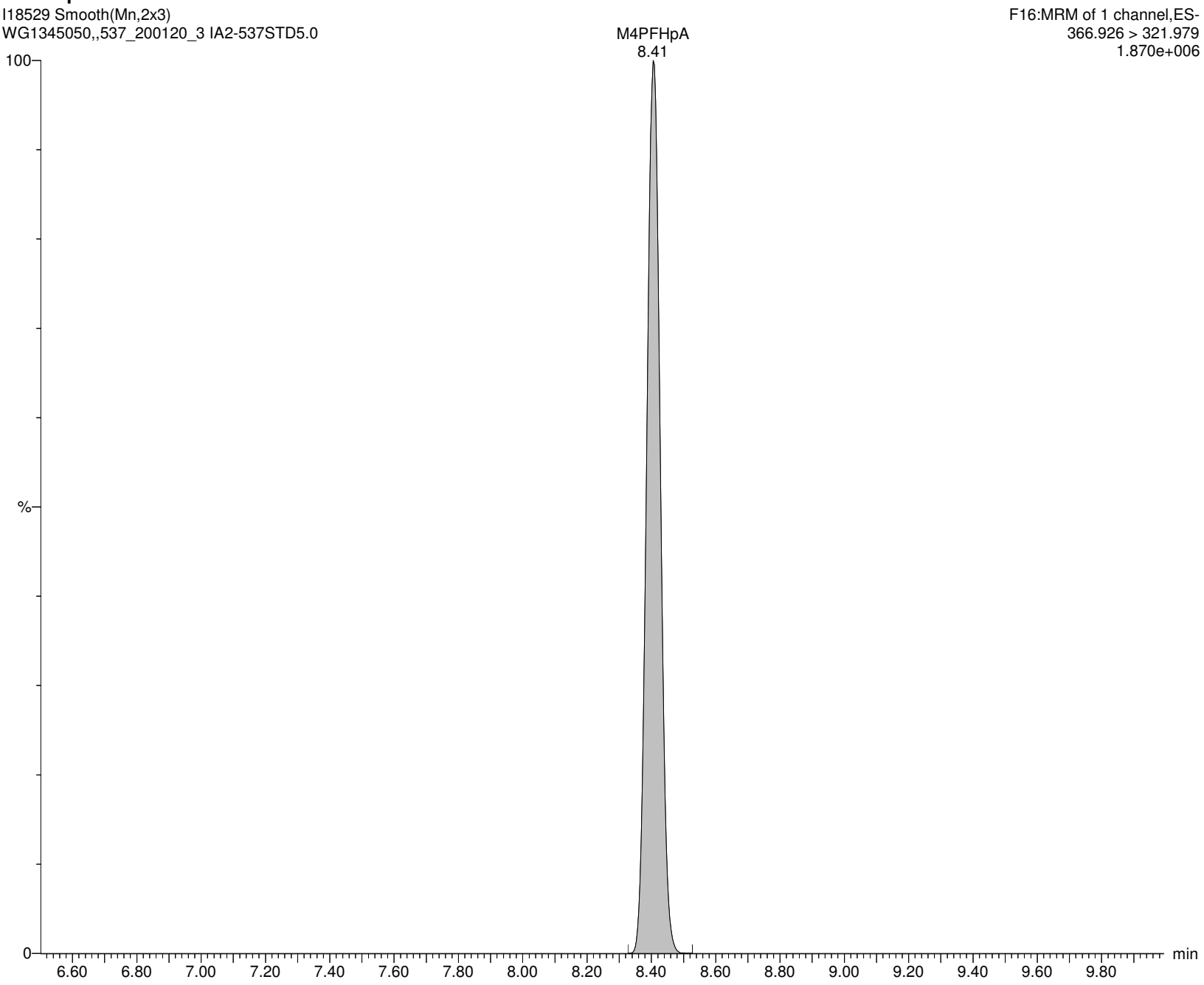
**M4PFHpA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICAL_A.qld
Last Altered: Friday, February 28, 2020 09:12:40 Eastern Standard Time
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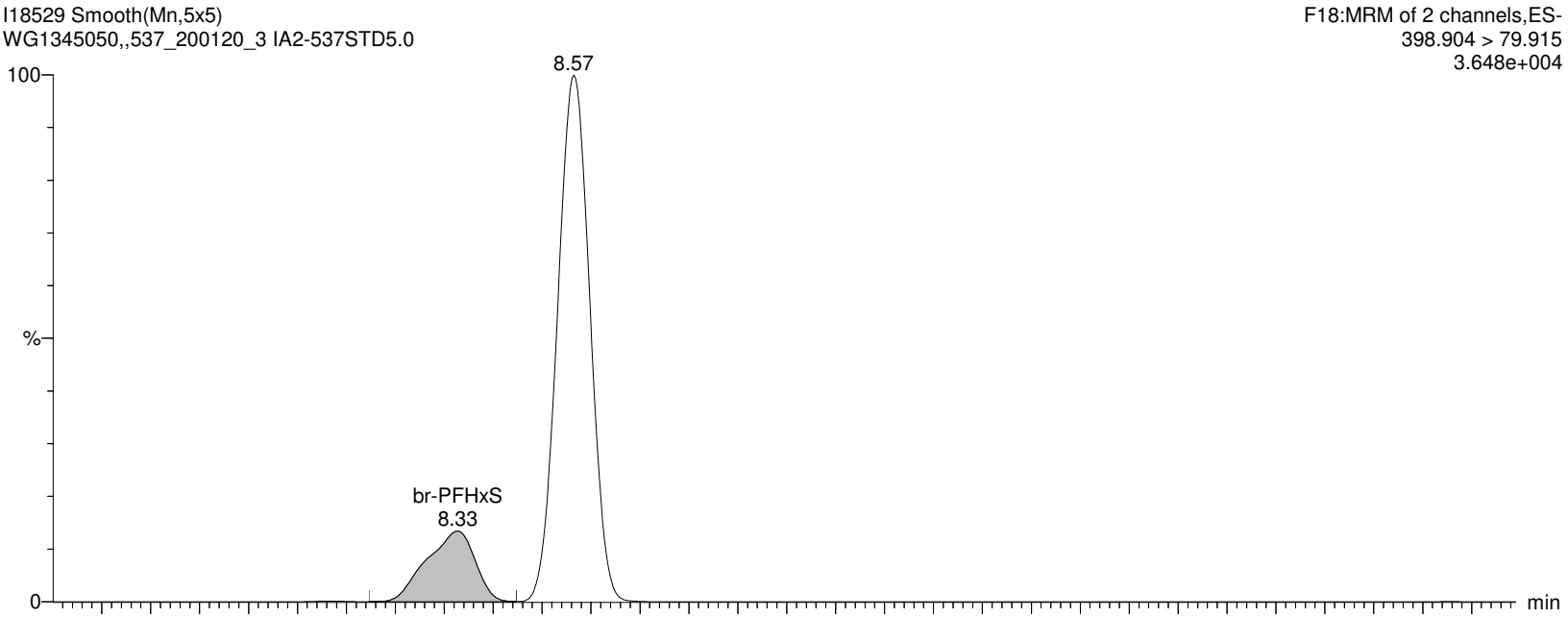
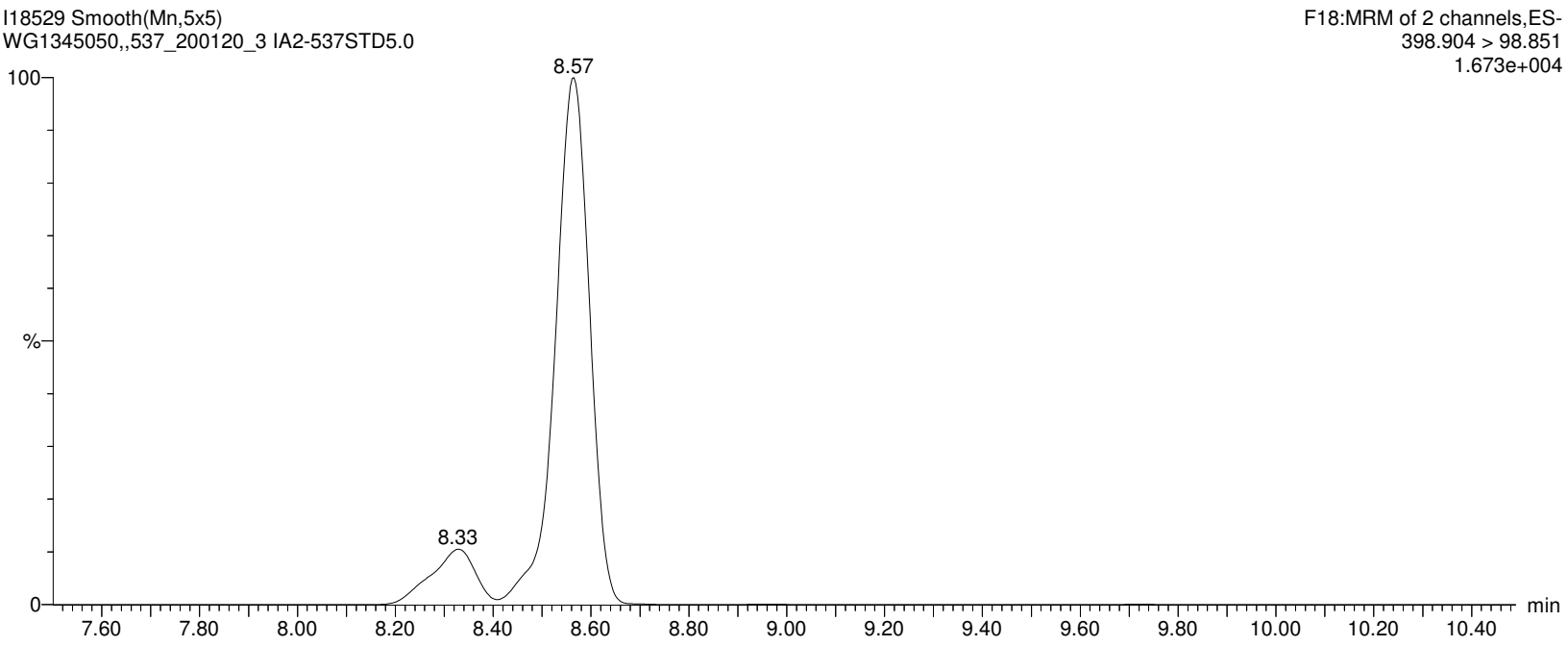
**br-PFHxS**





all concentration units in (ng/mL)

Alpha Analytical Inc.
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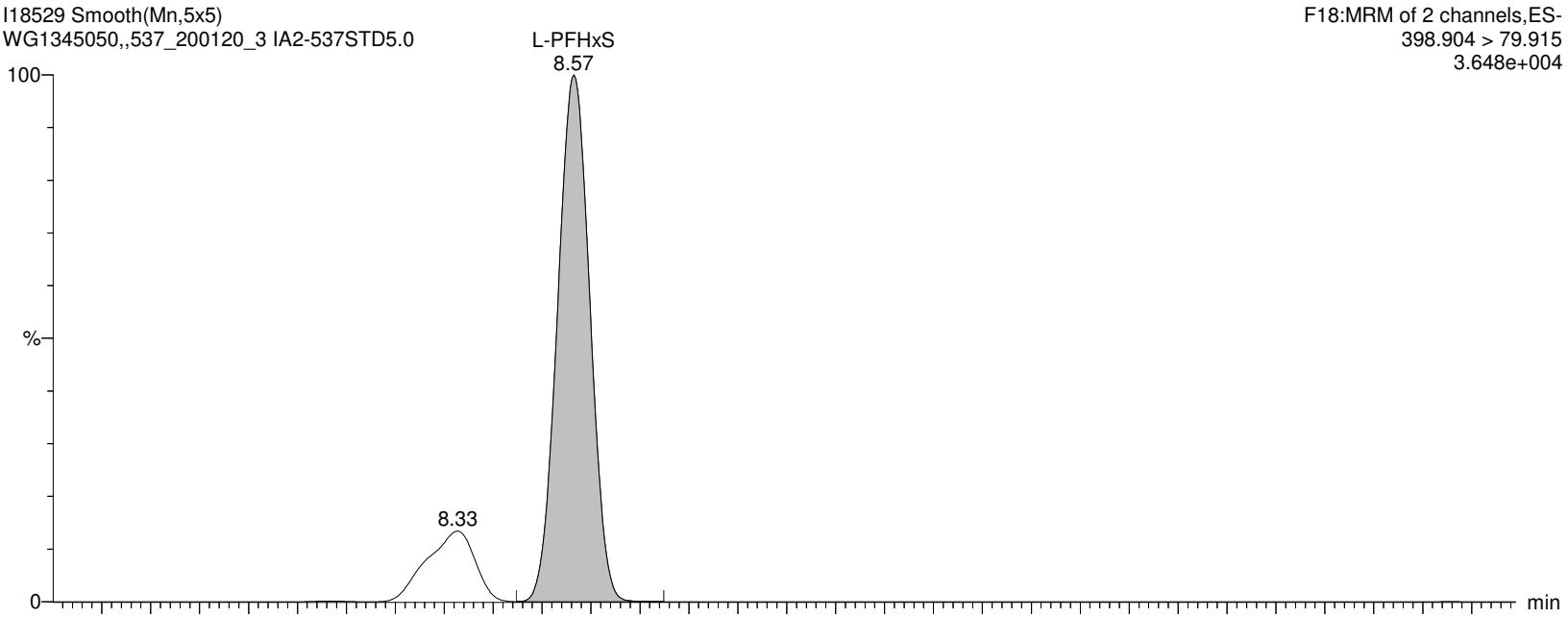
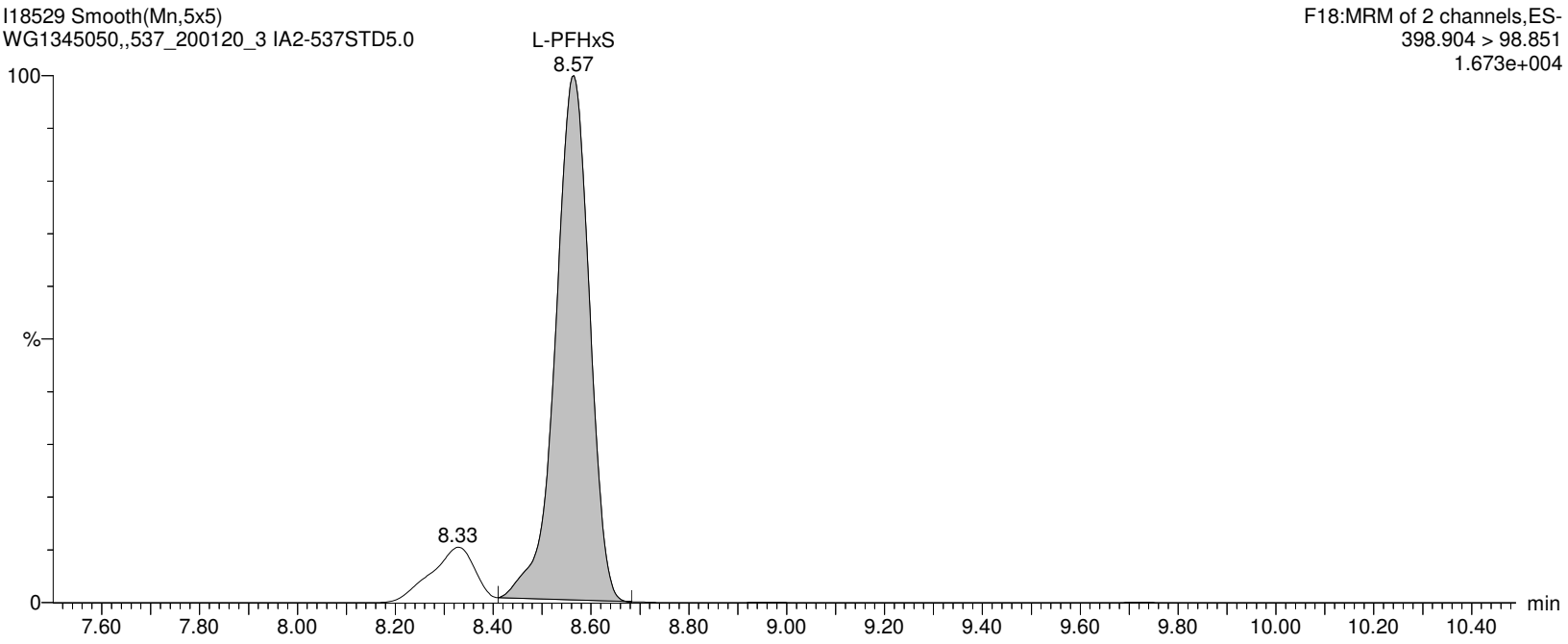
**L-PFHxS**





all concentration units in (ng/mL)

Alpha Analytical Inc.
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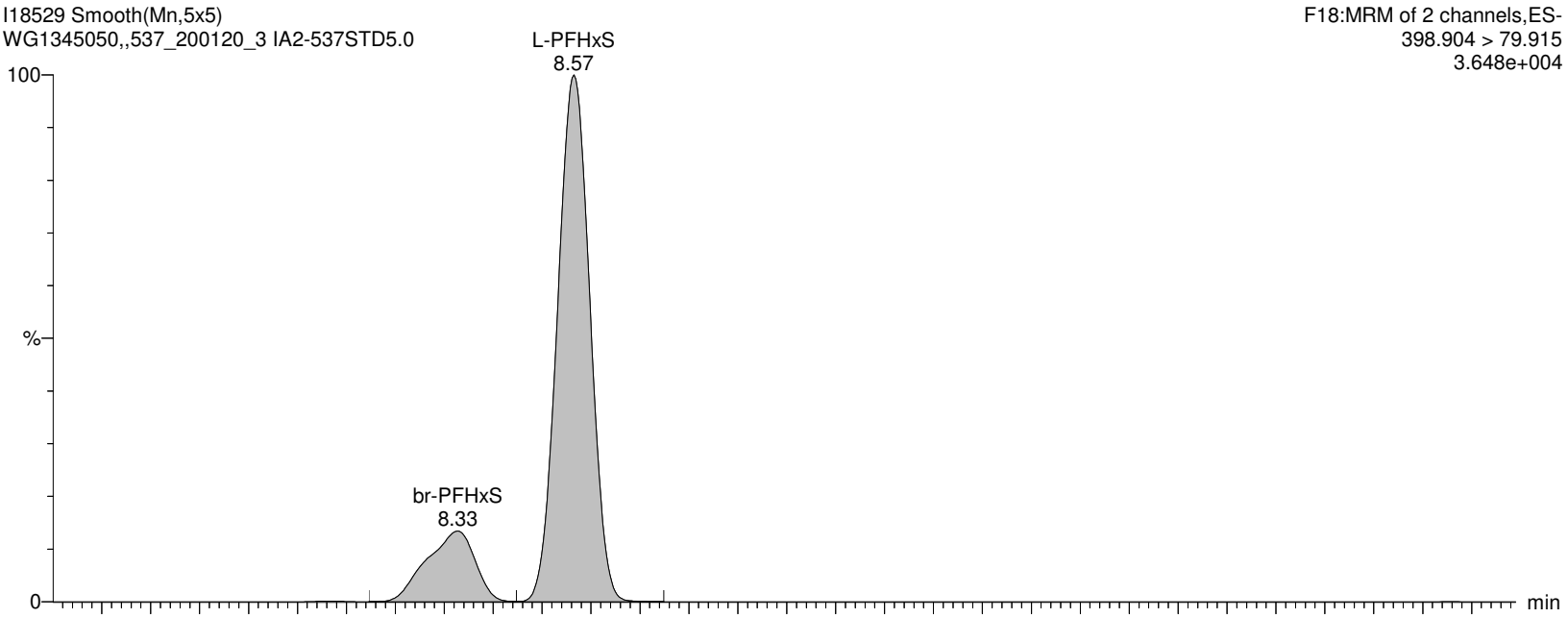
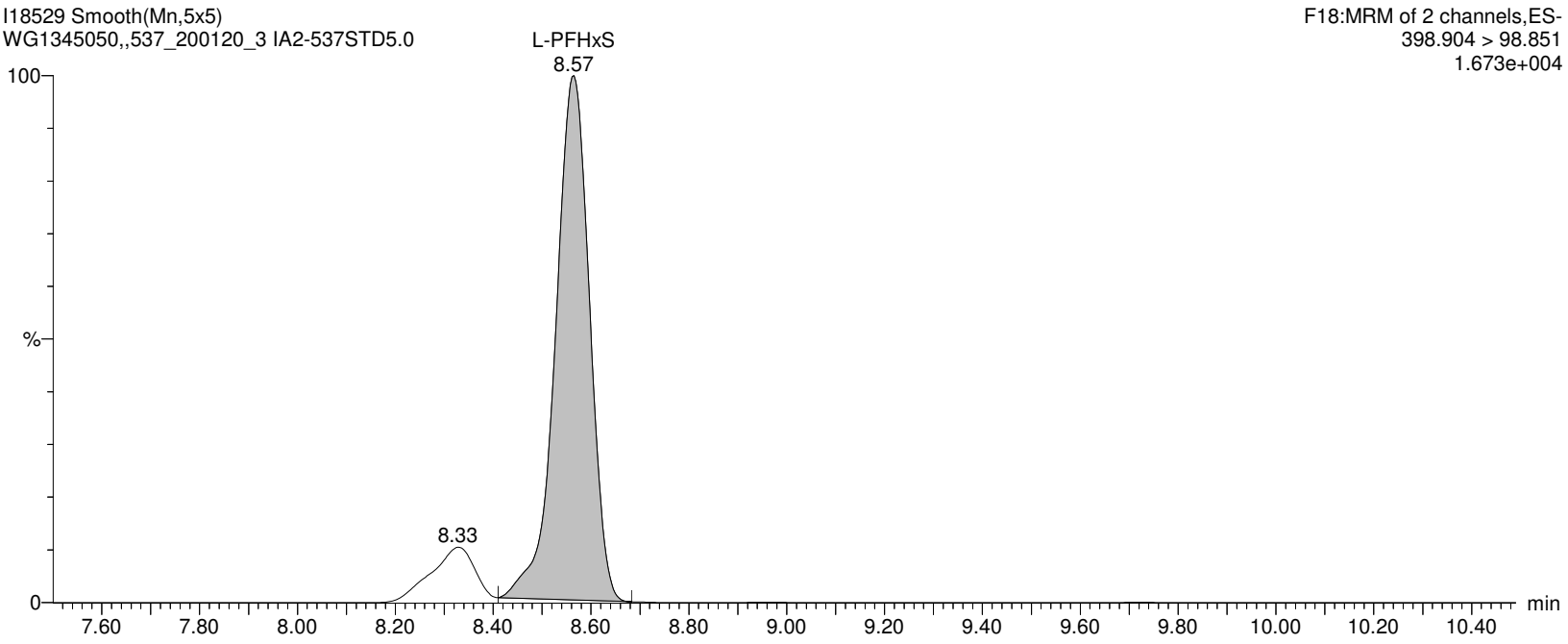
**PFHxS**





all concentration units in (ng/mL)

Alpha Analytical Inc.
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Last Altered: Friday, February 28, 2020 09:12:40 Eastern Standard Time
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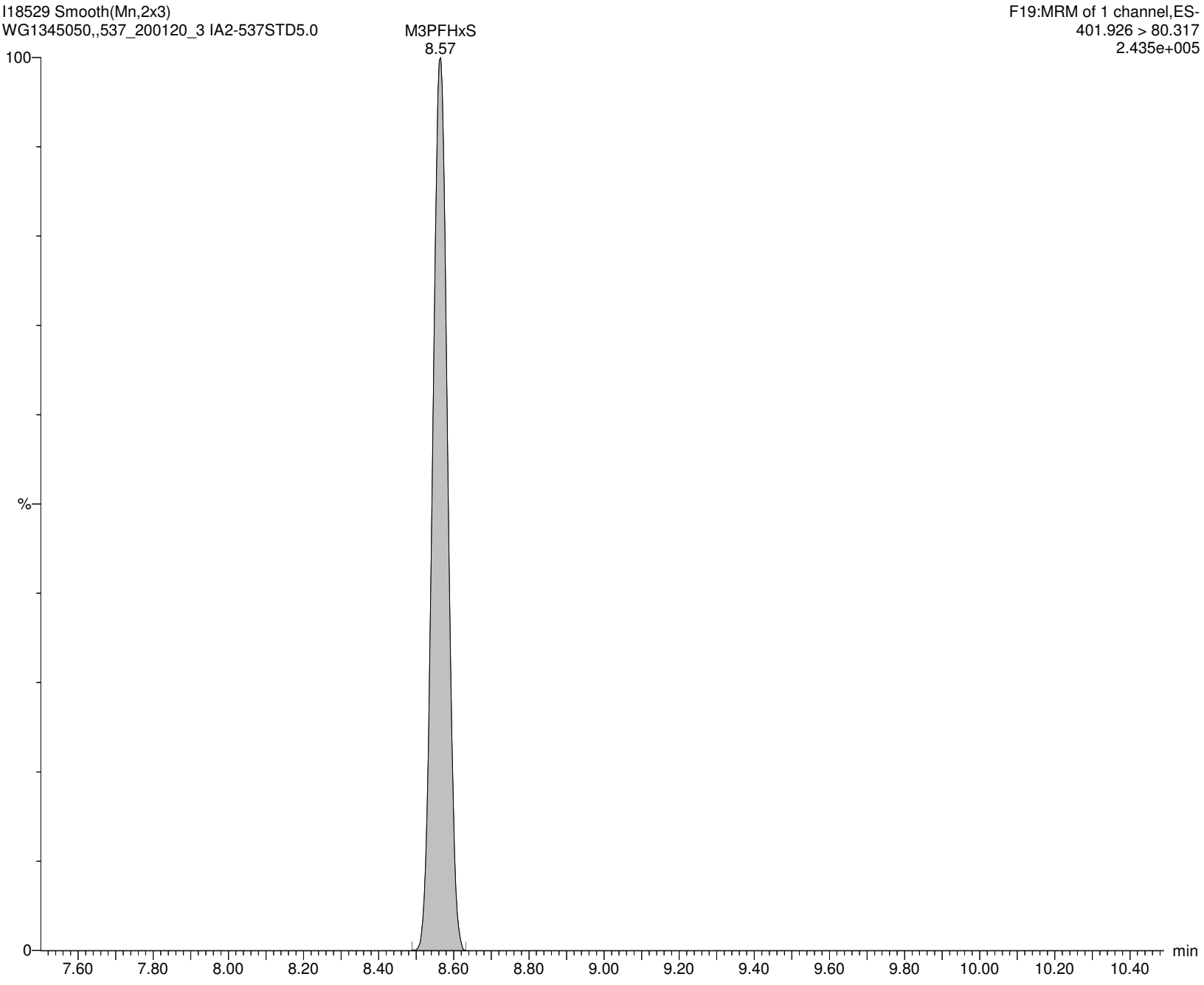



all concentration units in (ng/mL)

Alpha Analytical Inc.
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Last Altered: Friday, February 28, 2020 09:12:40 Eastern Standard Time
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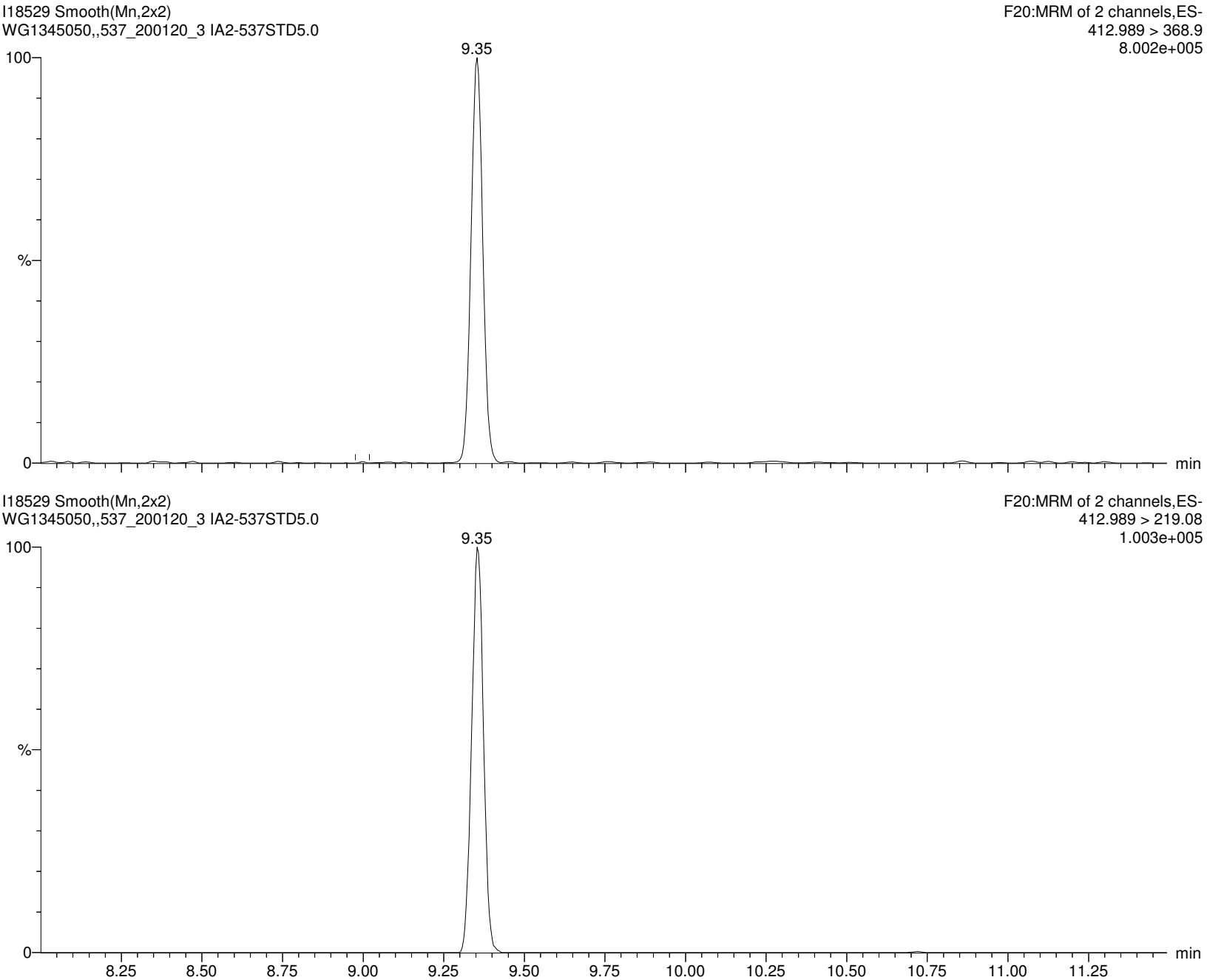
**br-PFOA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
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Last Altered: Friday, February 28, 2020 09:12:40 Eastern Standard Time
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**Inlet Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\LCMS_537_ISO_MeOH**
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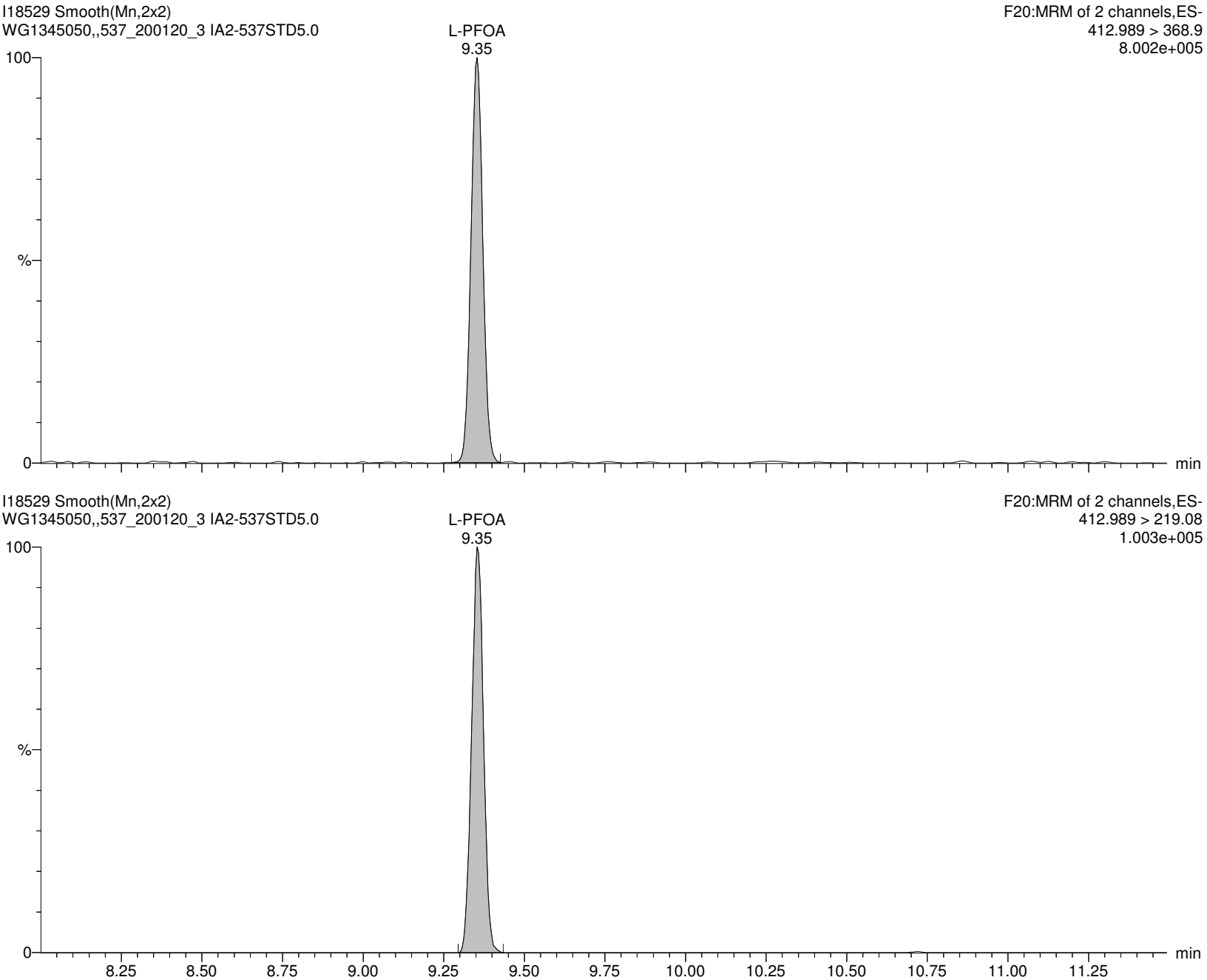
**L-PFOA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
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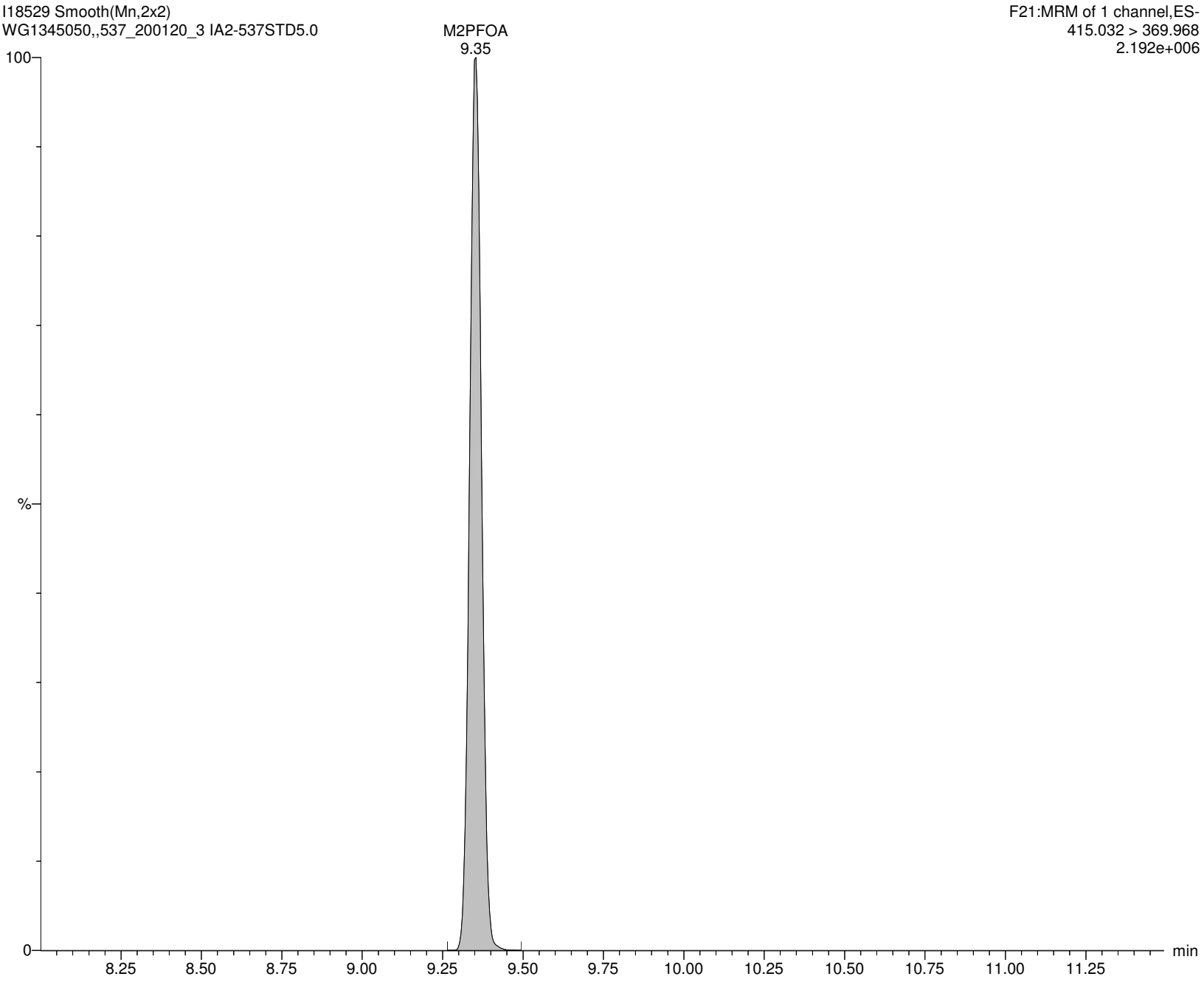



all concentration units in (ng/mL)

Alpha Analytical Inc.
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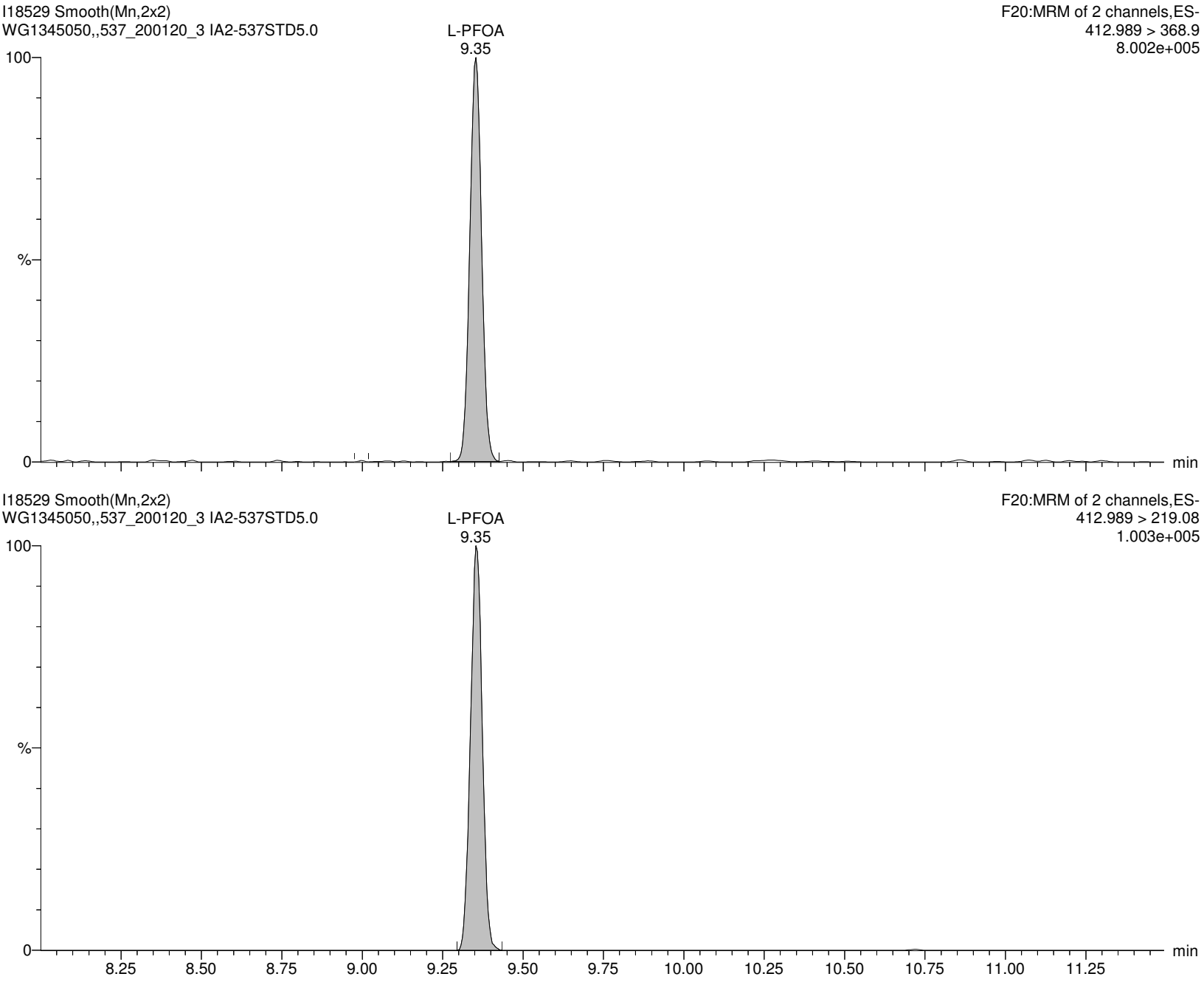



all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICAL_A.qld
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**Instrument: XEVO-TQSmicro#QEA0276**
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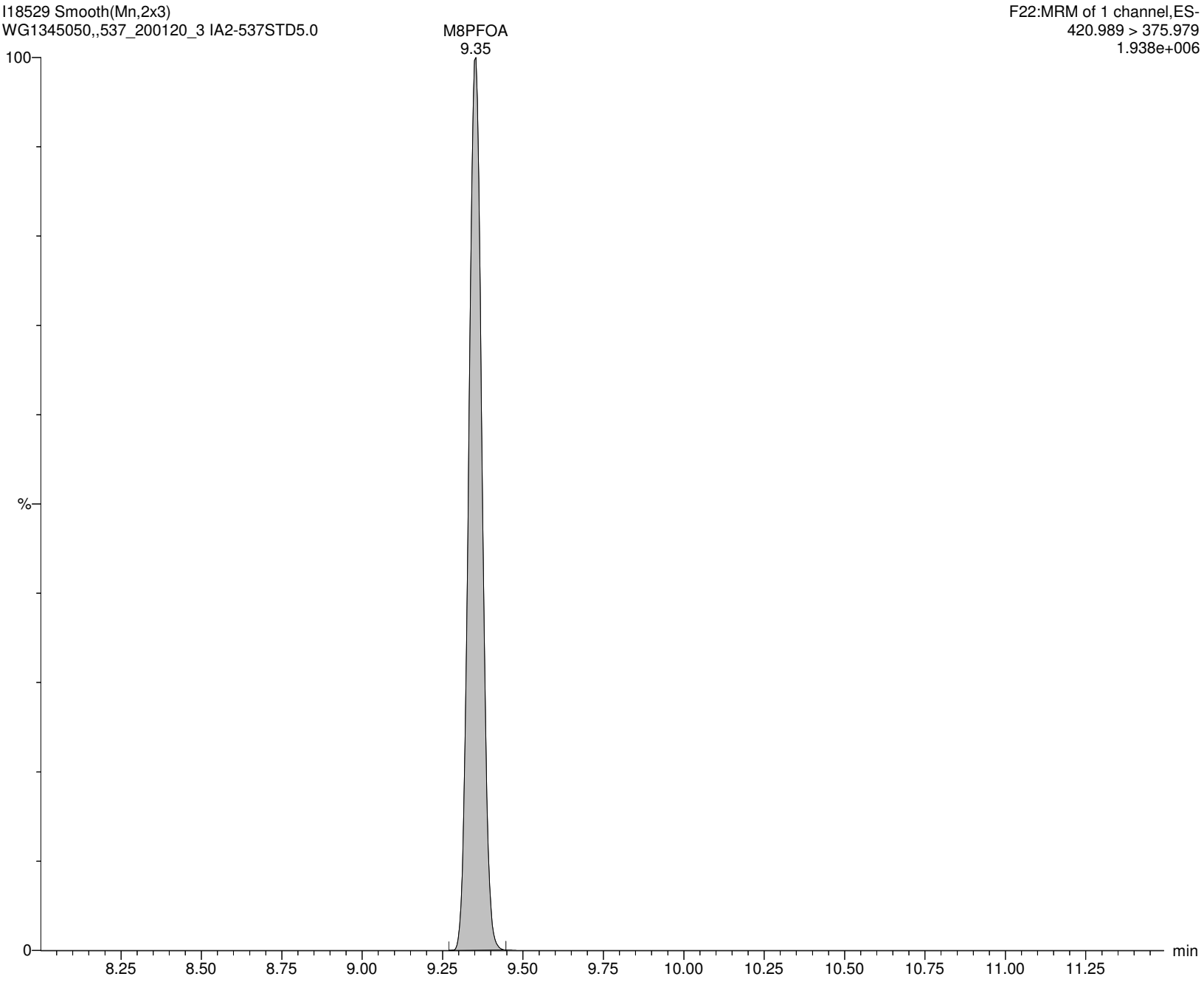



all concentration units in (ng/mL)

Alpha Analytical Inc.
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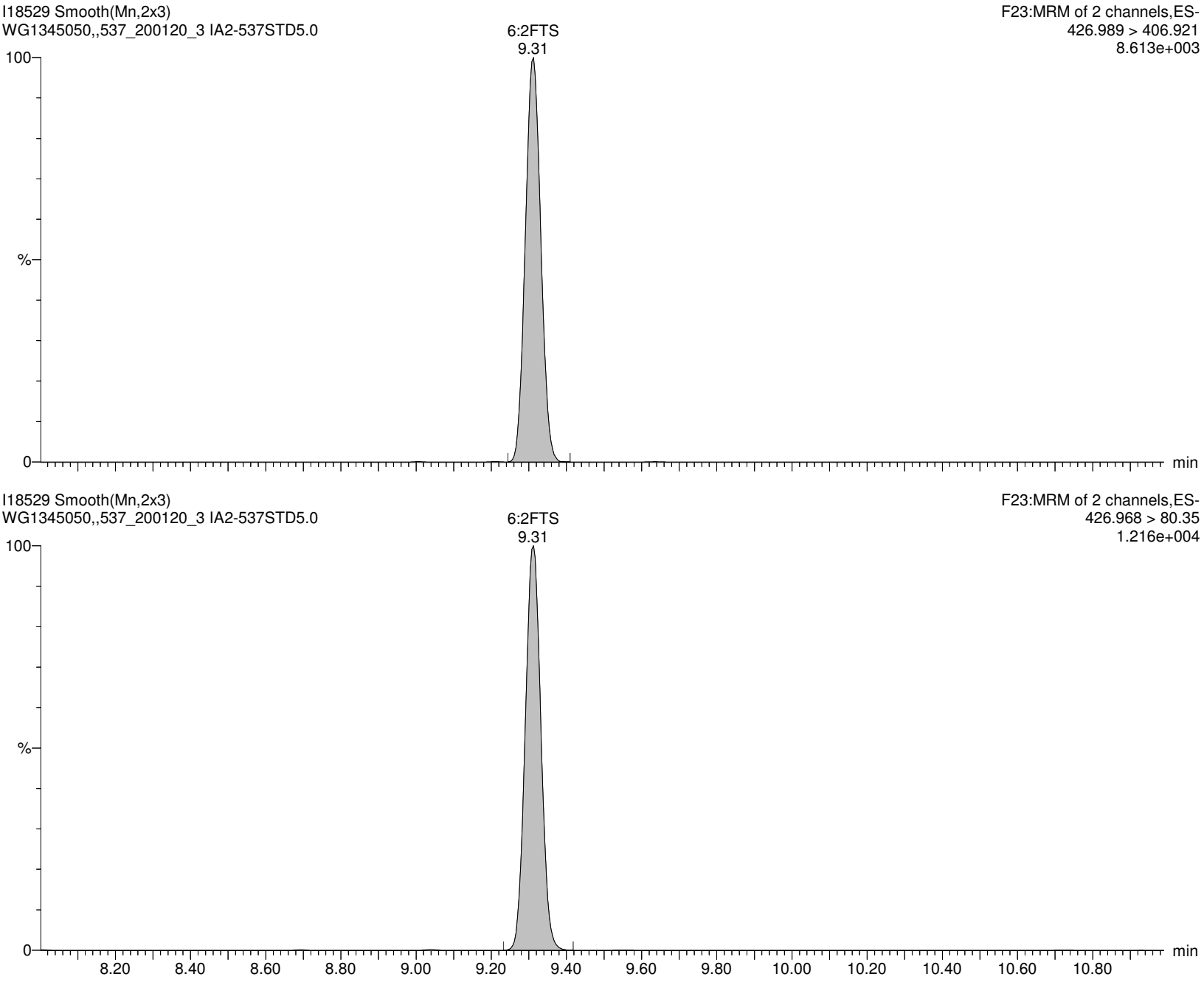
**6:2FTS**



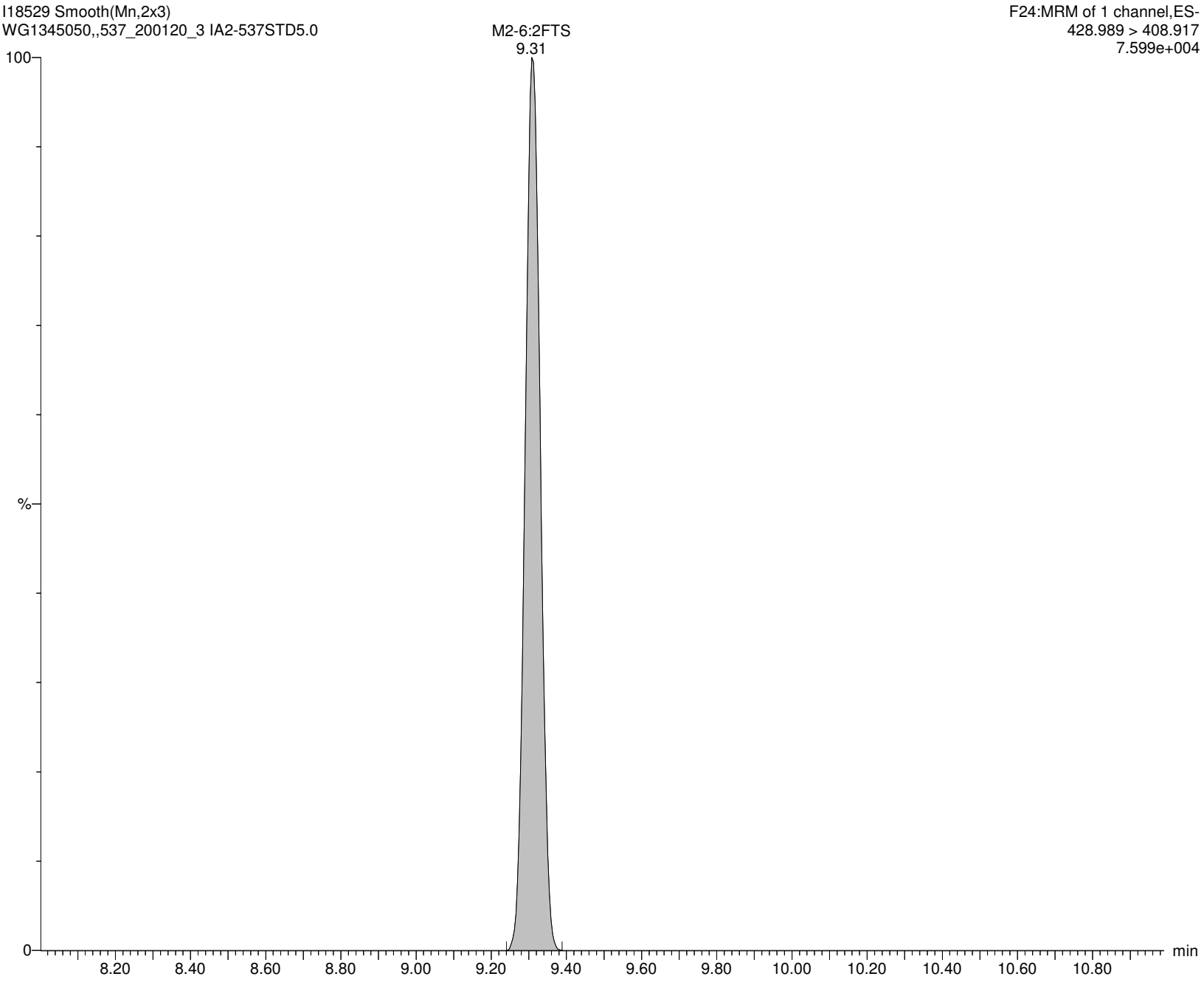


all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICAL_A.qld
Last Altered: Friday, February 28, 2020 09:12:40 Eastern Standard Time
Printed: Friday, February 28, 2020 09:27:47 Eastern Standard Time

**Name: I18529**
**ID: IA2-537STD5.0**
**Date: 27-Feb-2020**
**Time: 14:02:18**
**Description: WG1345050,,537_200120_3**
**User: LCMS01:SG**
**Vial: 1:A,4**
**Instrument: XEVO-TQSmicro#QEA0276**
**Inlet Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\LCMS_537_ISO_MeOH**
**Tune Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\190709_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**M2-6:2FTS**





all concentration units in (ng/mL)

Alpha Analytical Inc.
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**Description: WG1345050,,537_200120_3**
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**Vial: 1:A,4**
**Instrument: XEVO-TQSmicro#QEA0276**
**Inlet Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\LCMS_537_ISO_MeOH**
**Tune Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\190709_TUNE.IPR**
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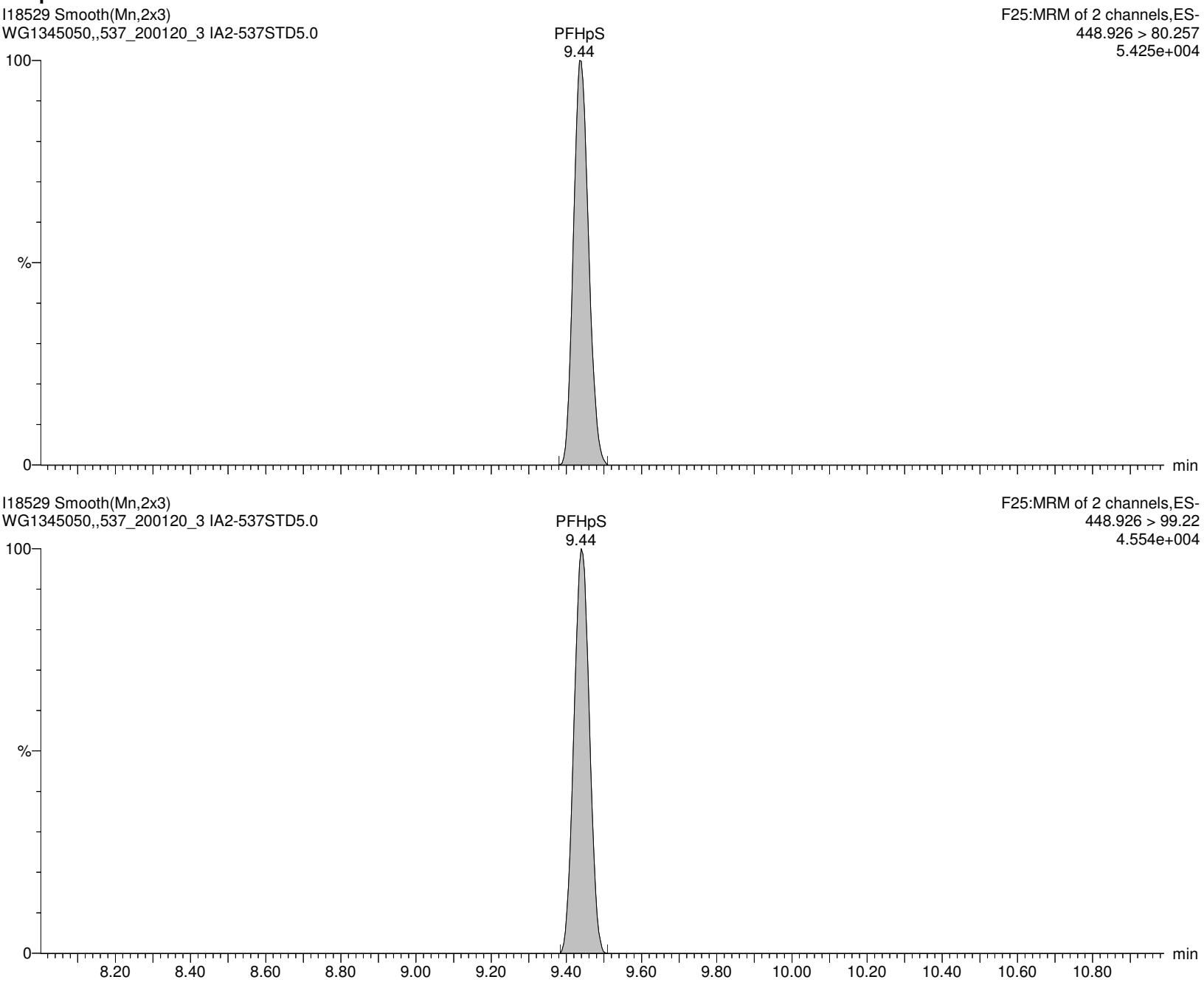



all concentration units in (ng/mL)

Alpha Analytical Inc.
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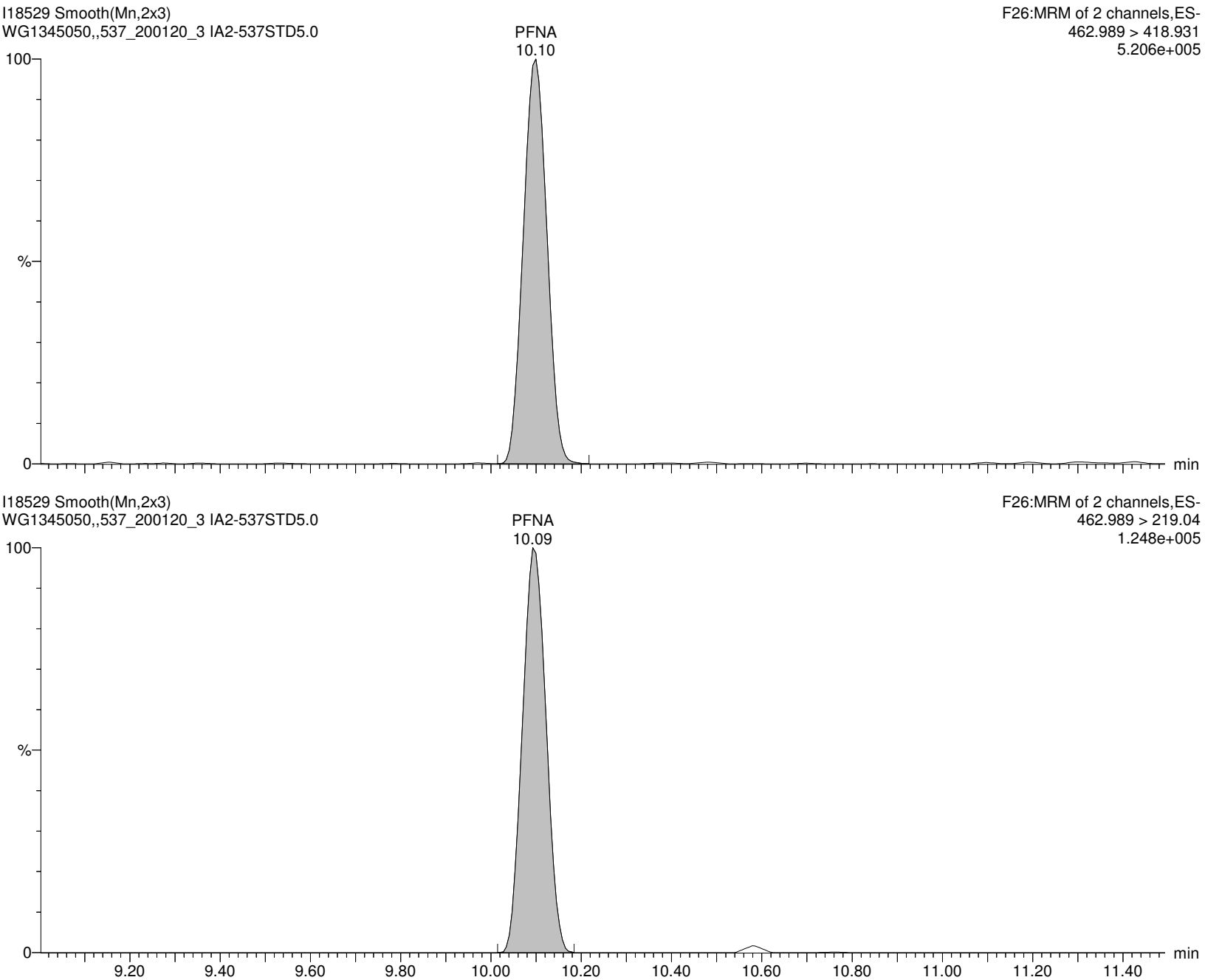
**PFNA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
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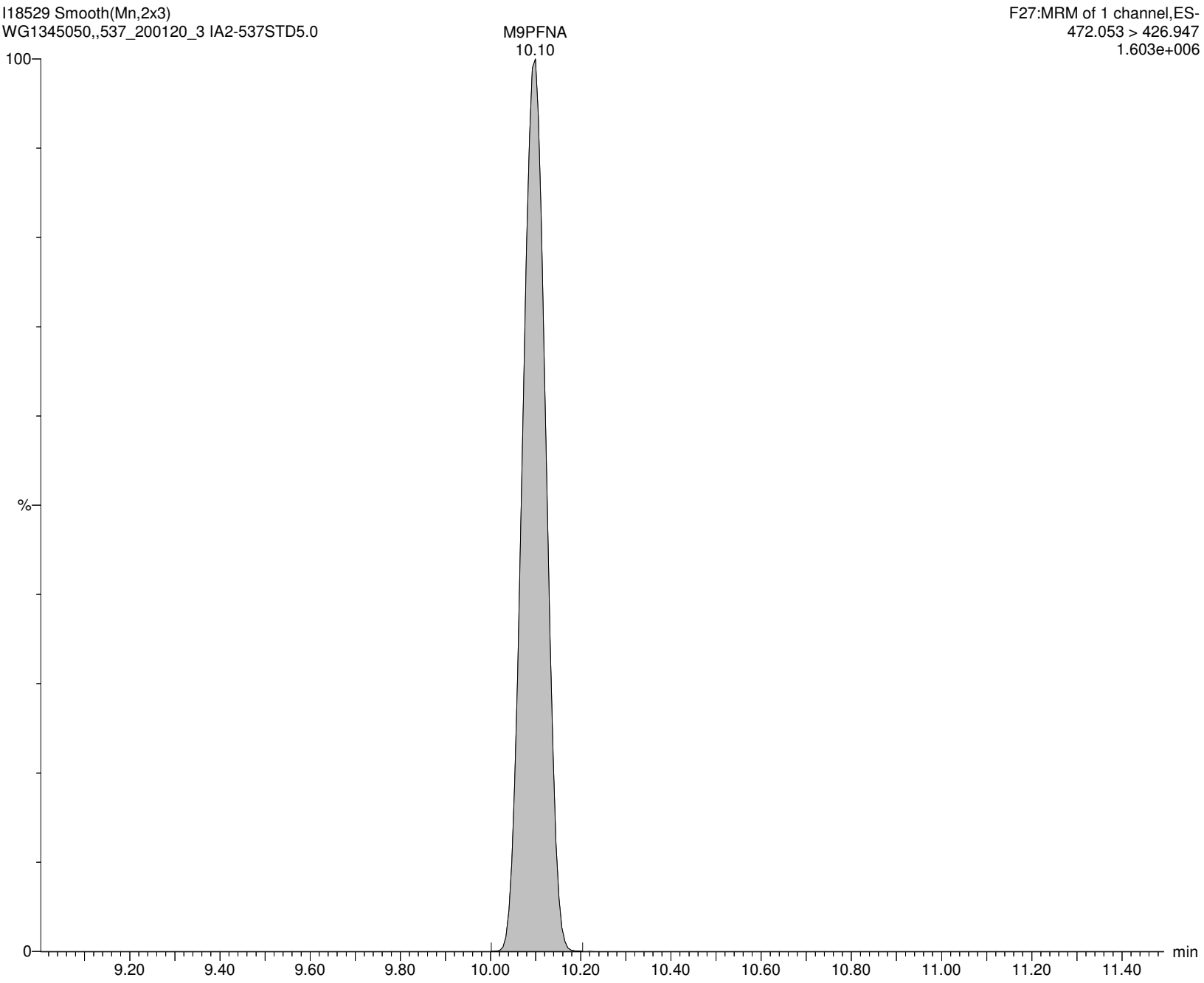
**M9PFNA**





all concentration units in (ng/mL)

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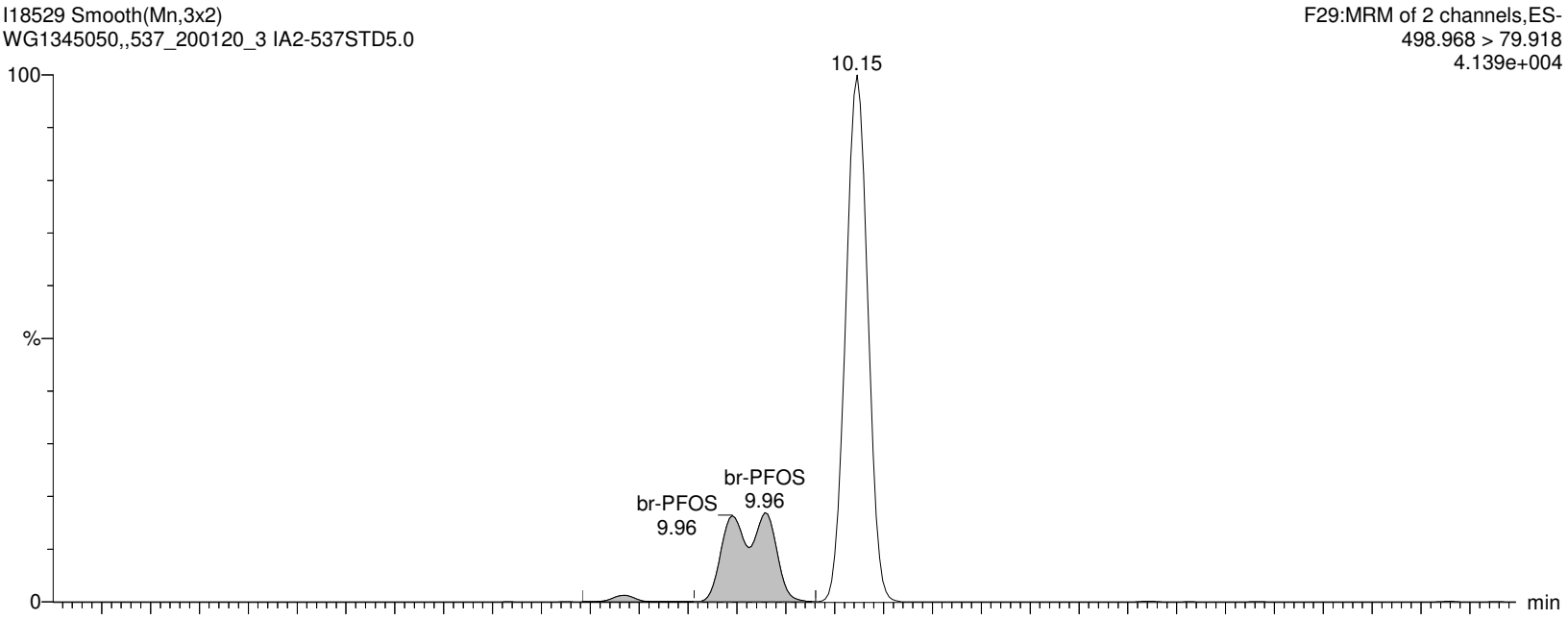
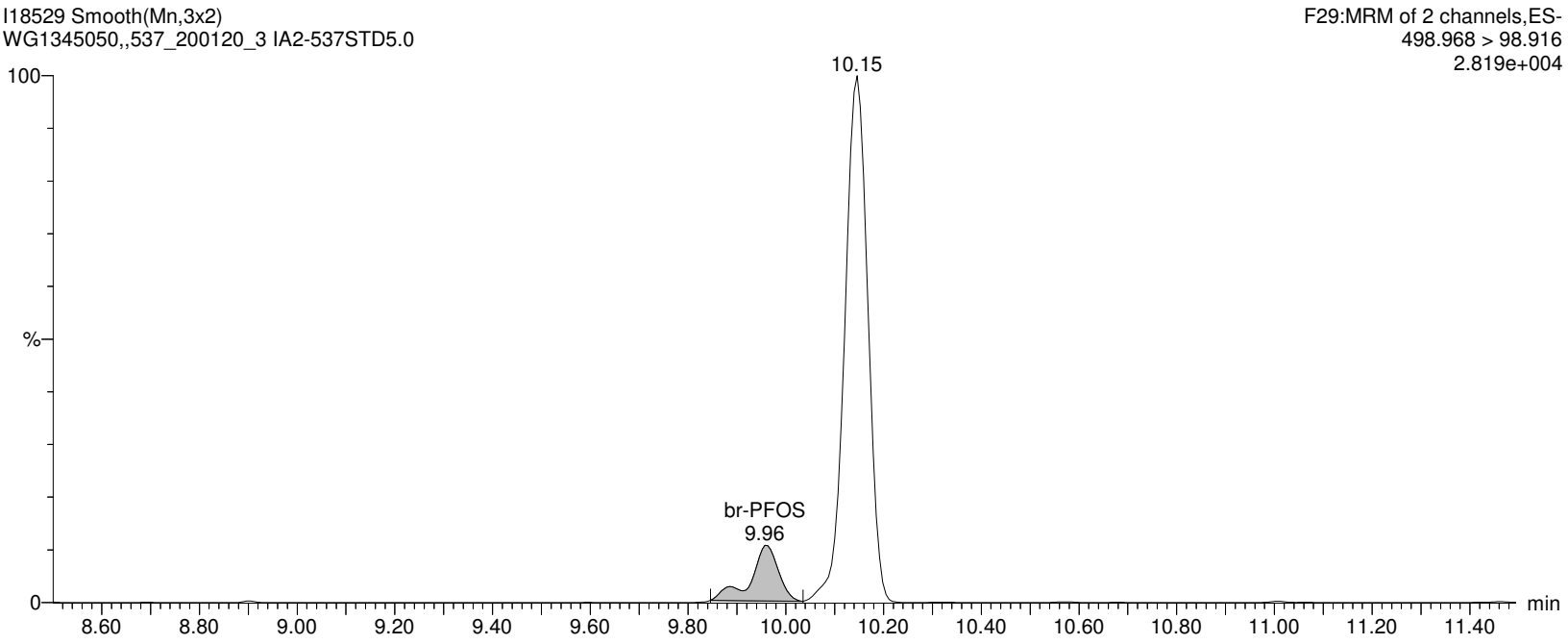
**br-PFOS**





all concentration units in (ng/mL)

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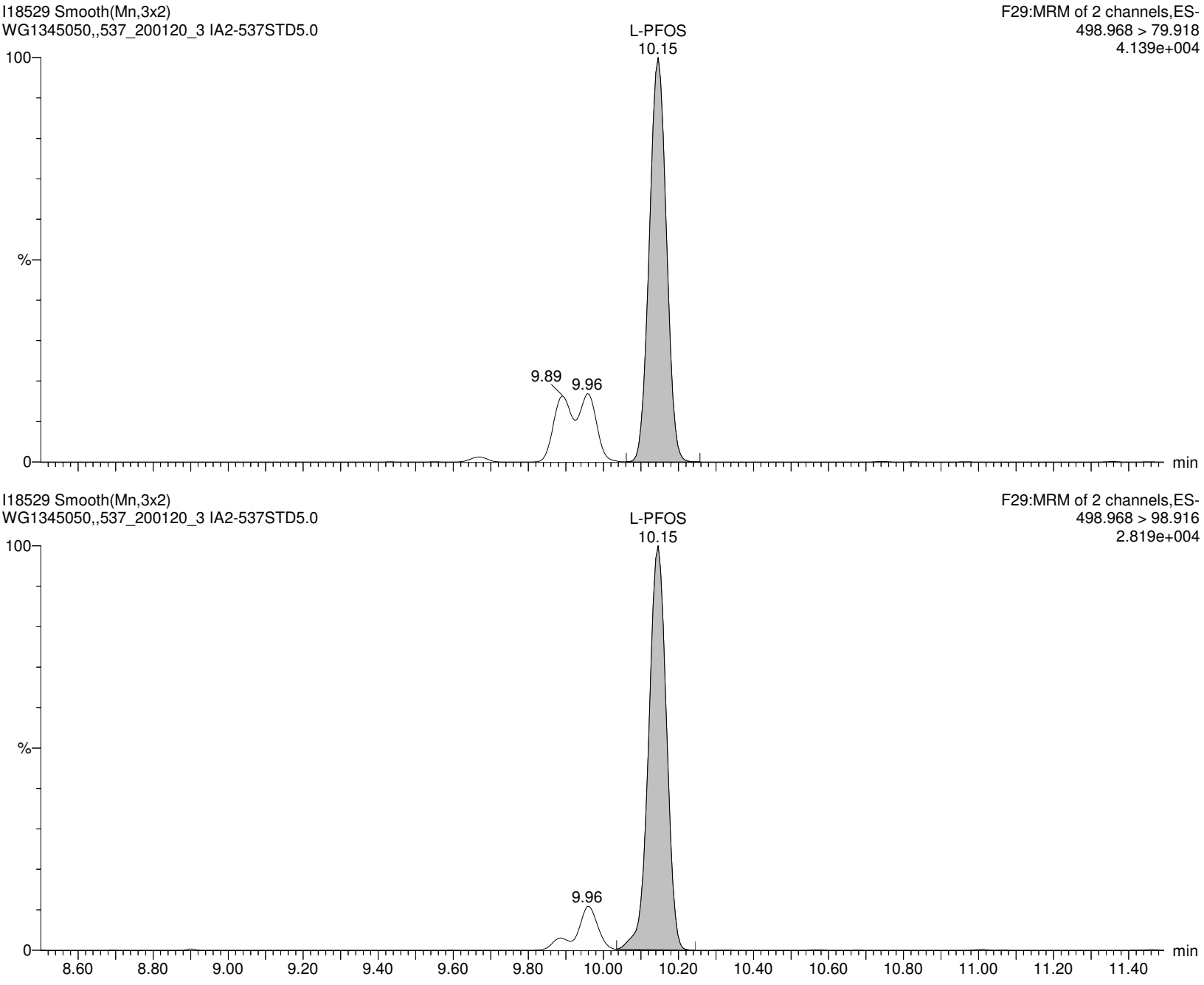



all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICAL_A.qld
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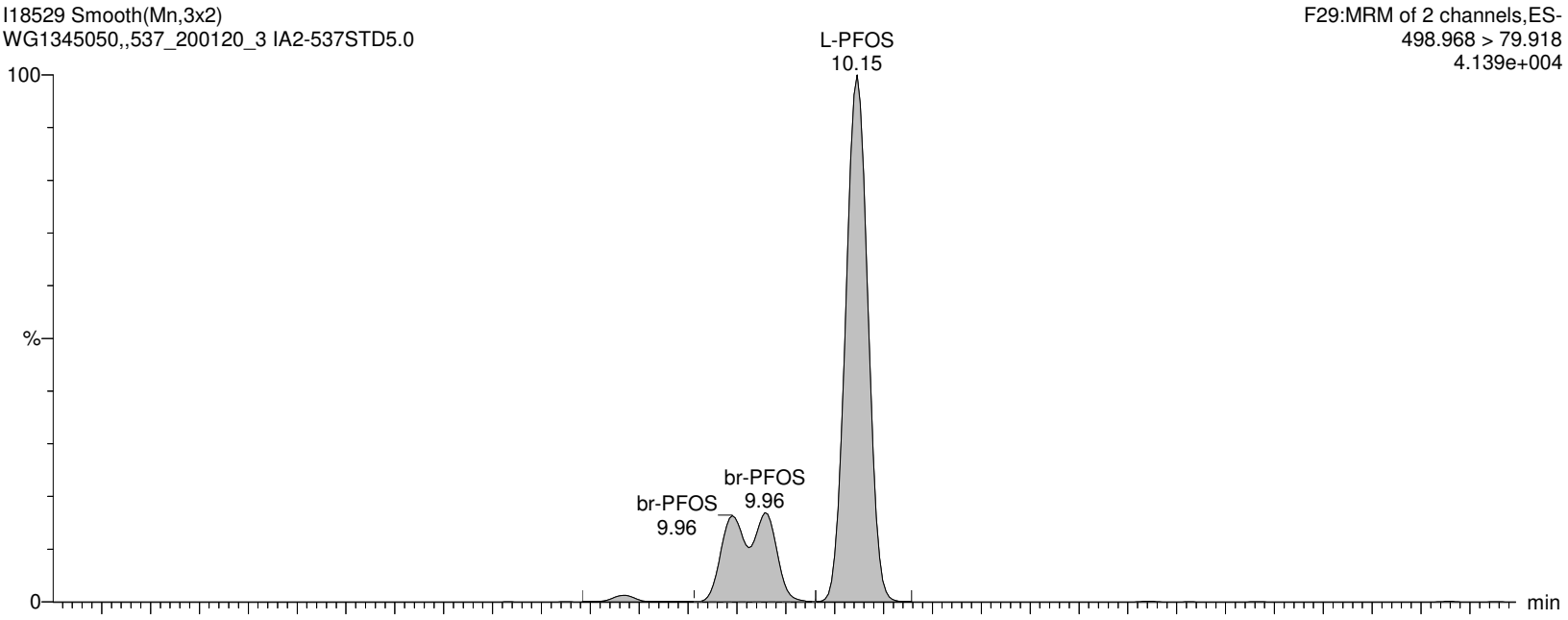
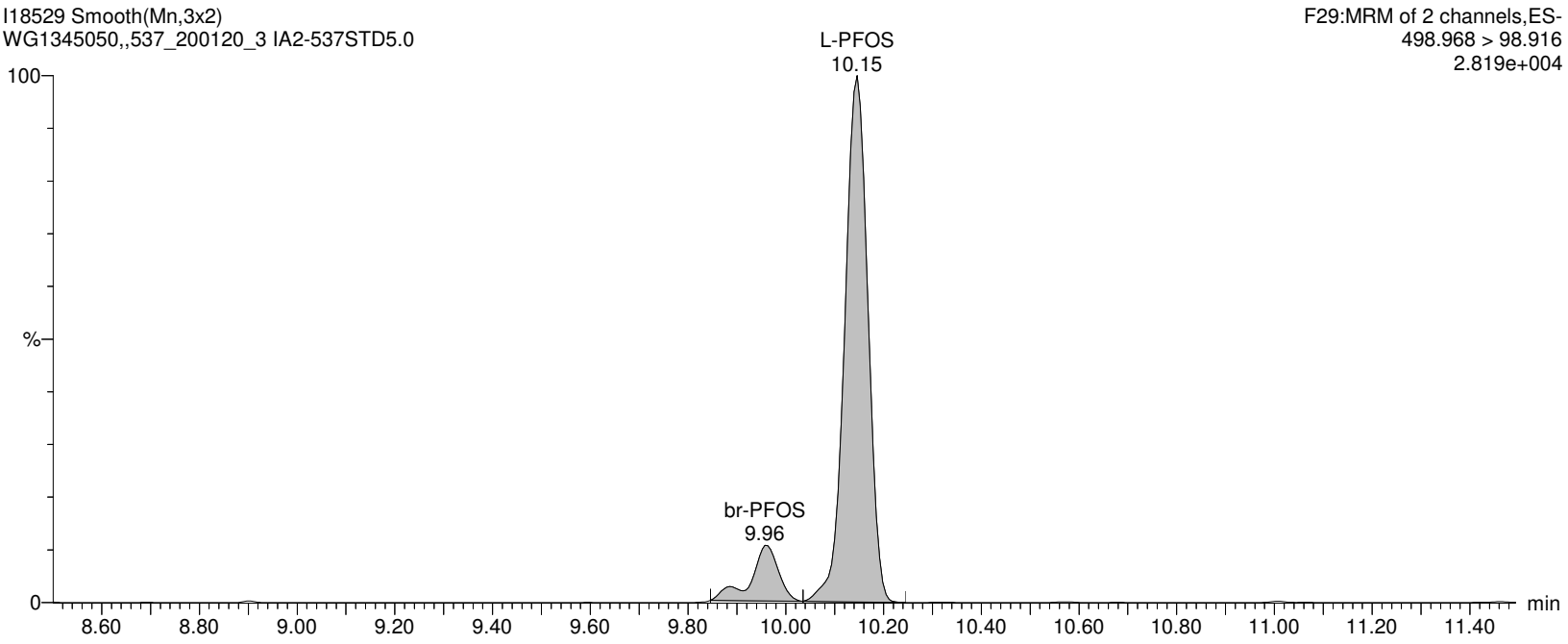
**PFOS**





all concentration units in (ng/mL)

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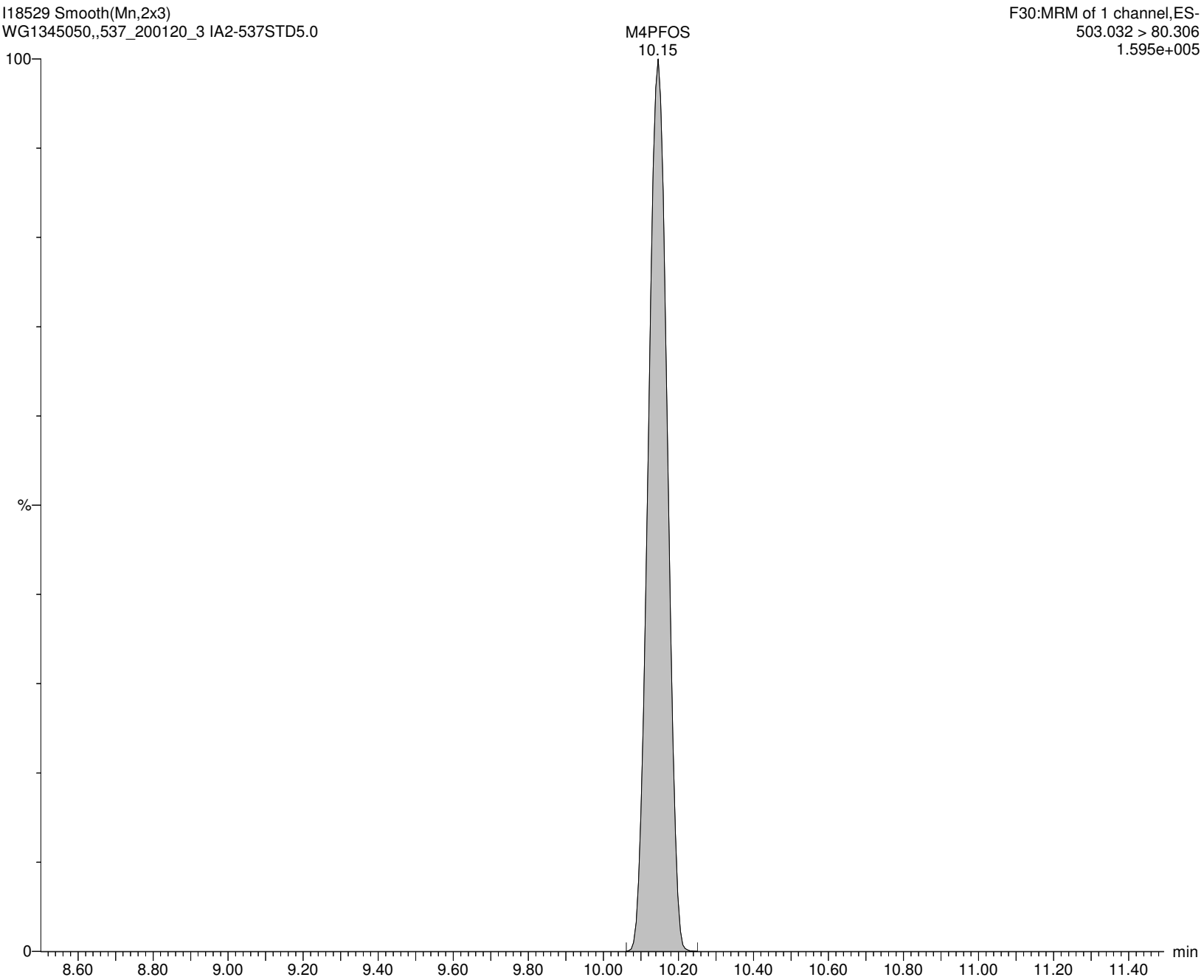



all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICAL_A.qld
Last Altered: Friday, February 28, 2020 09:12:40 Eastern Standard Time
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**Vial: 1:A,4**
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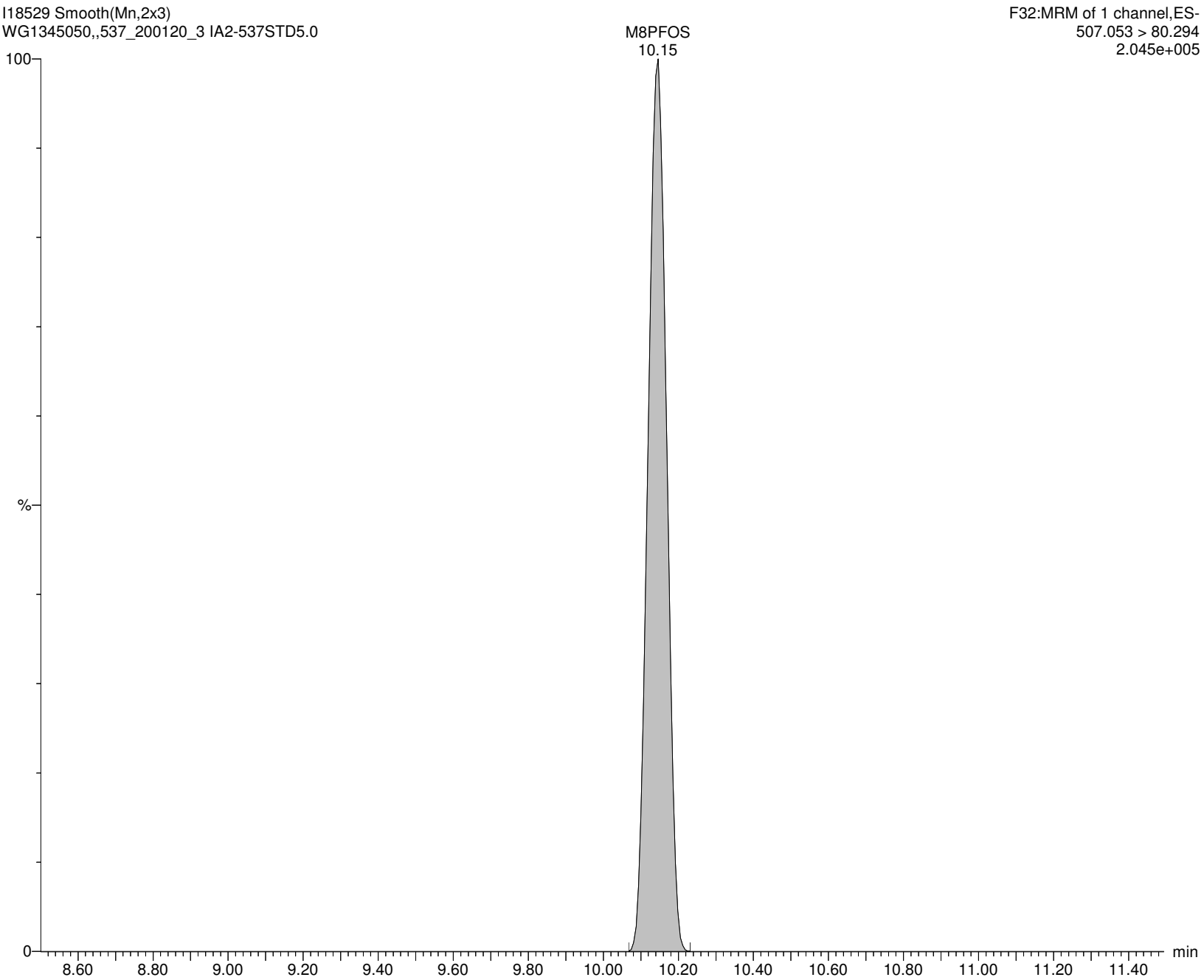
**M8PFOS**





all concentration units in (ng/mL)

Alpha Analytical Inc.
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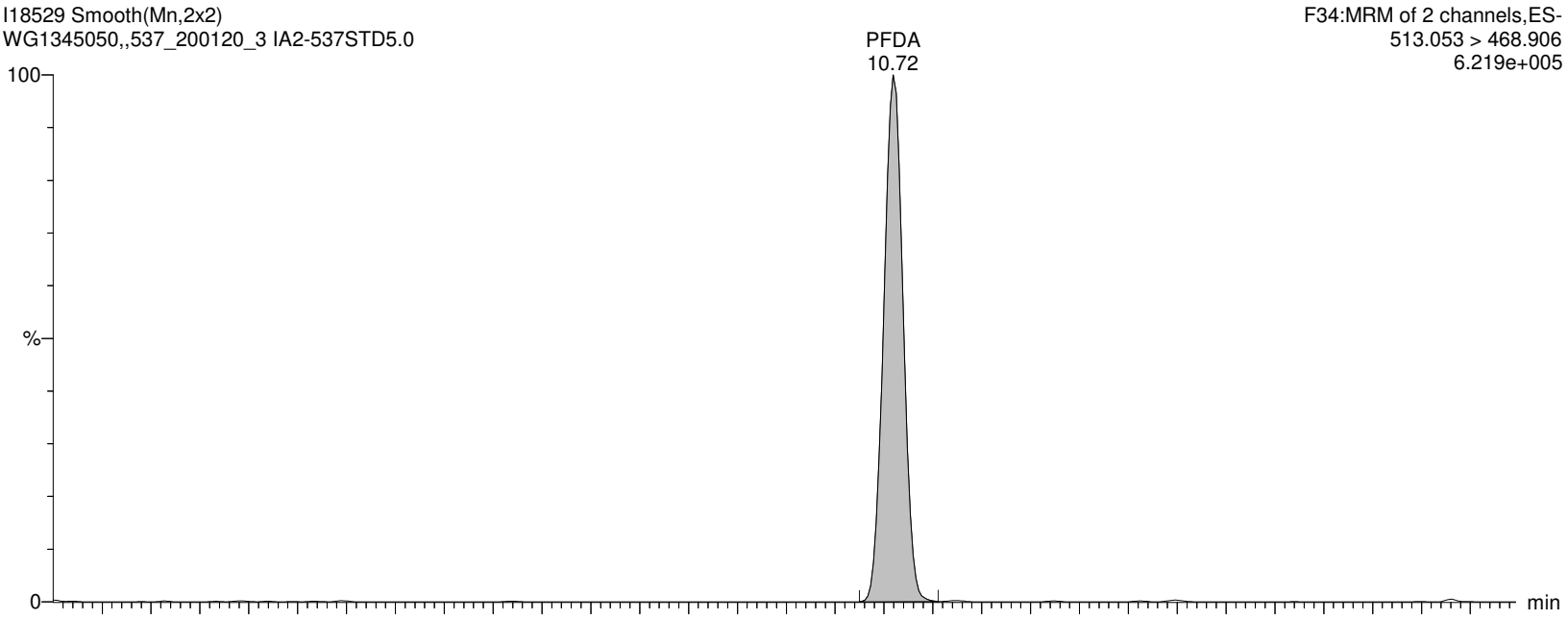


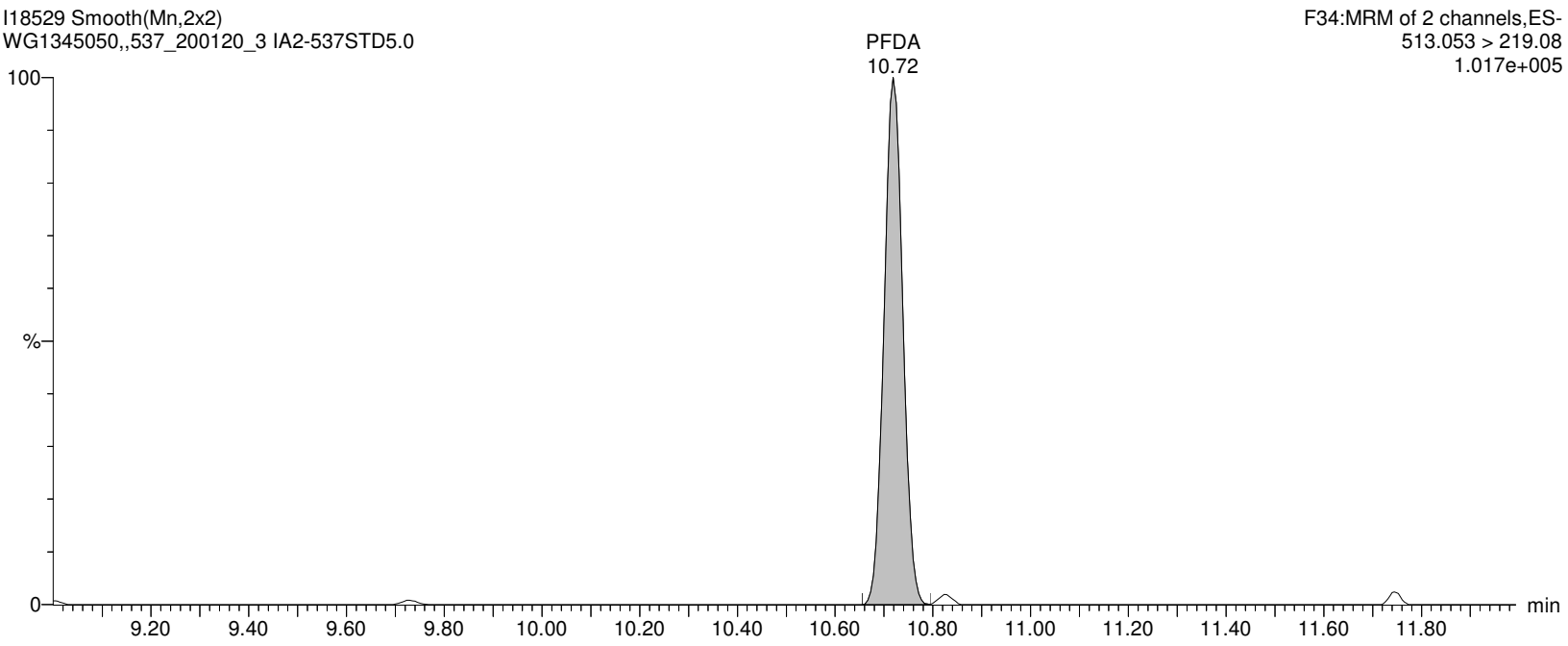



all concentration units in (ng/mL)

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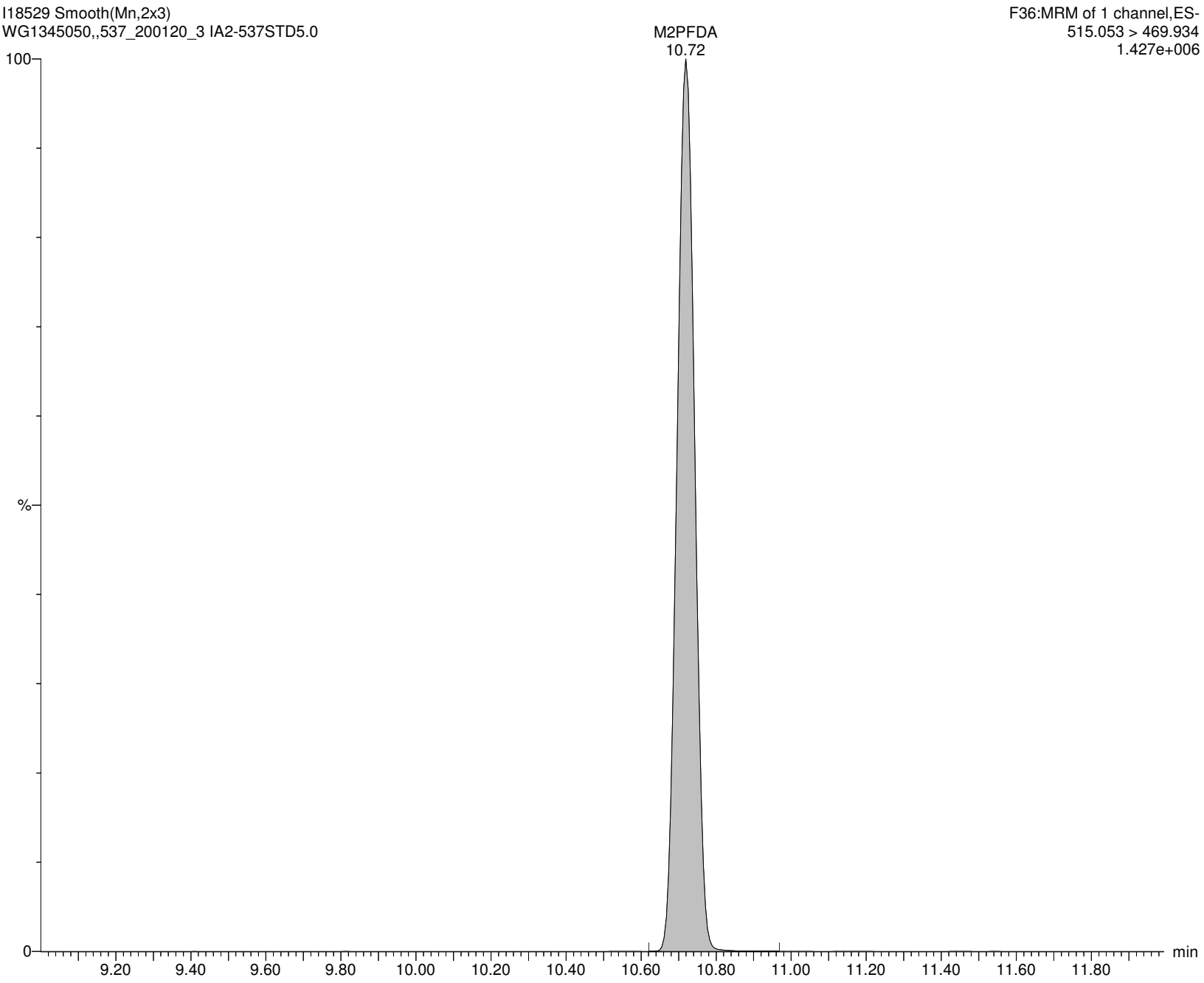



all concentration units in (ng/mL)

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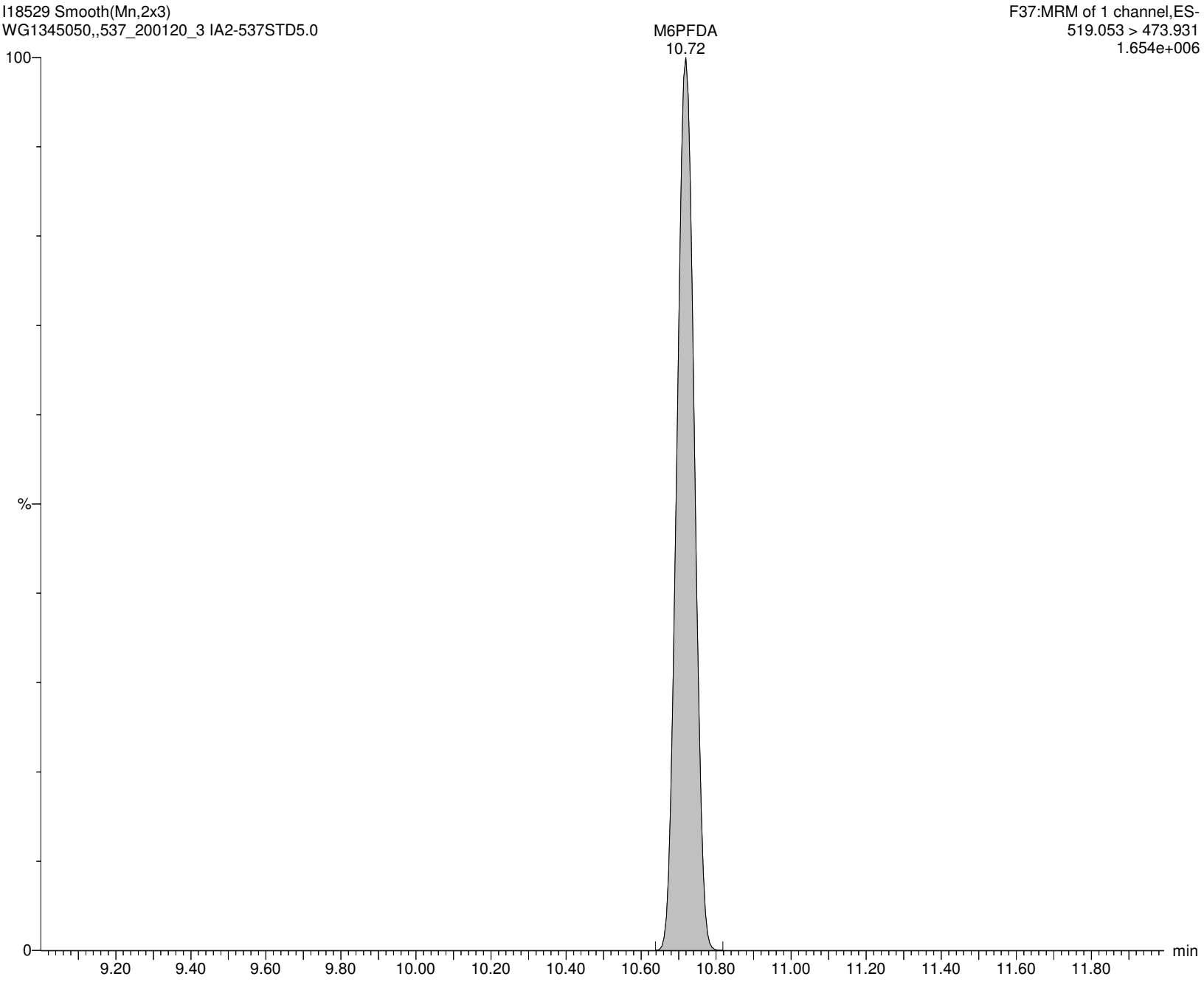
**M6PFDA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
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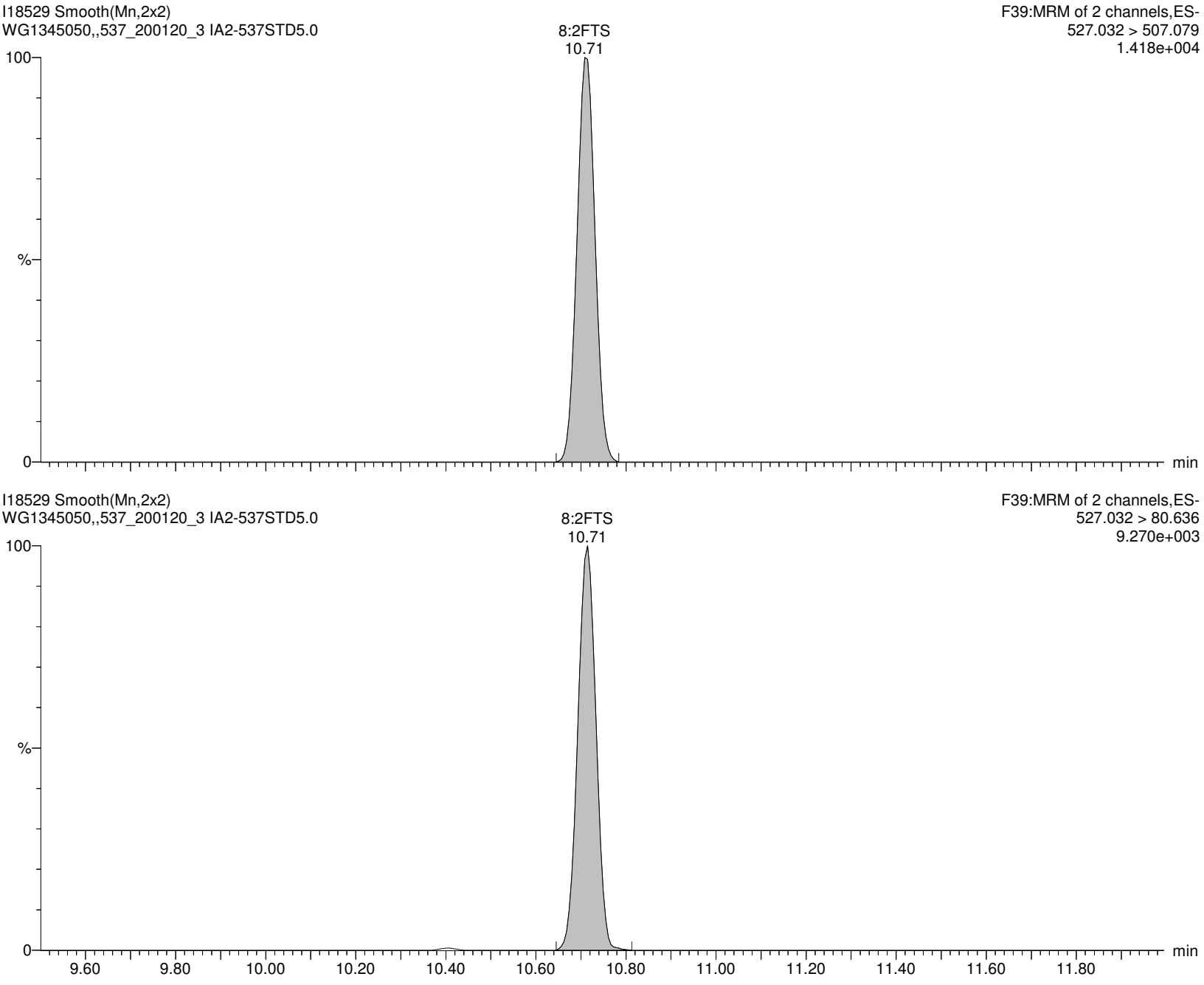
**8:2FTS**





all concentration units in (ng/mL)

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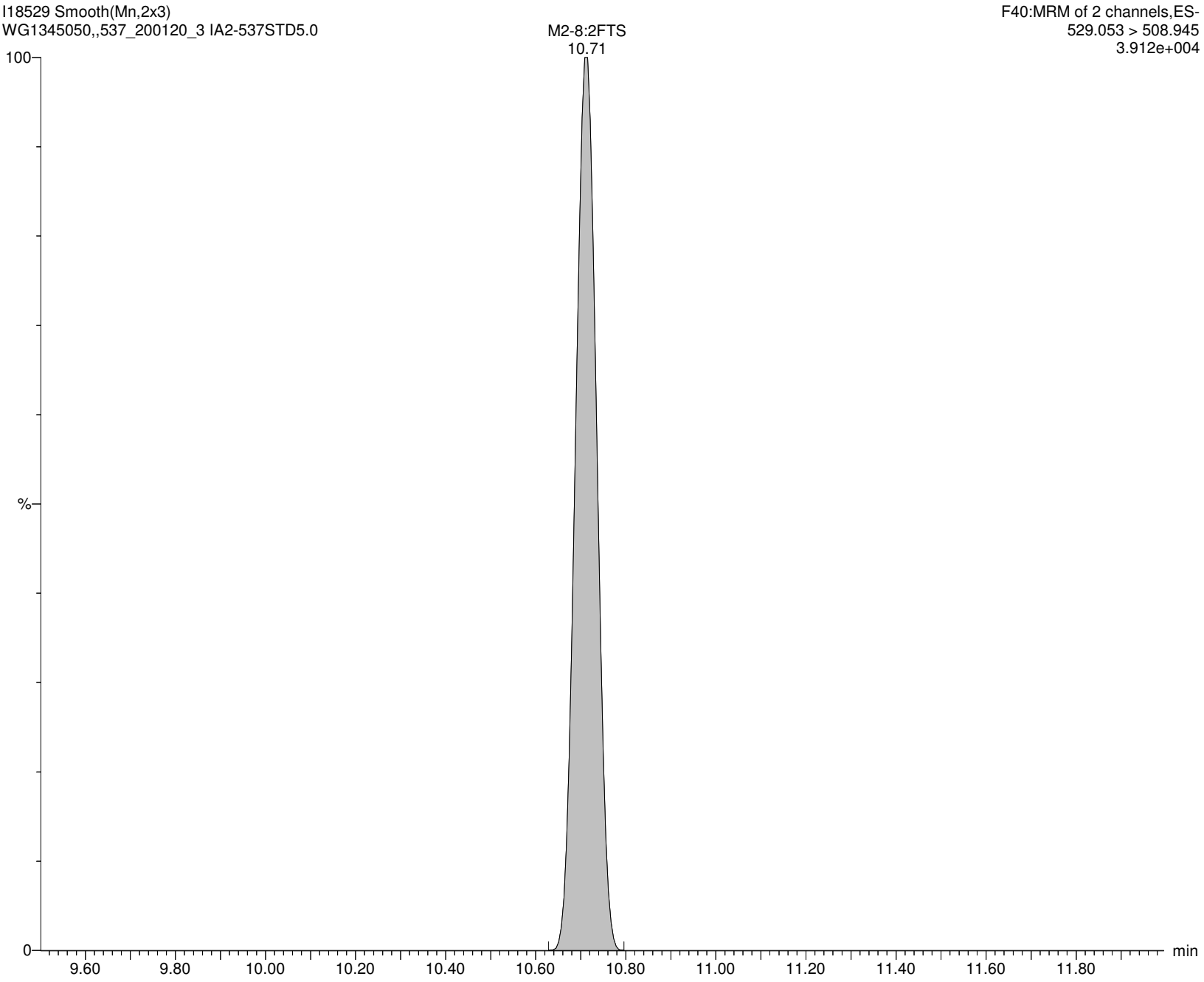
**M2-8:2FTS**





all concentration units in (ng/mL)

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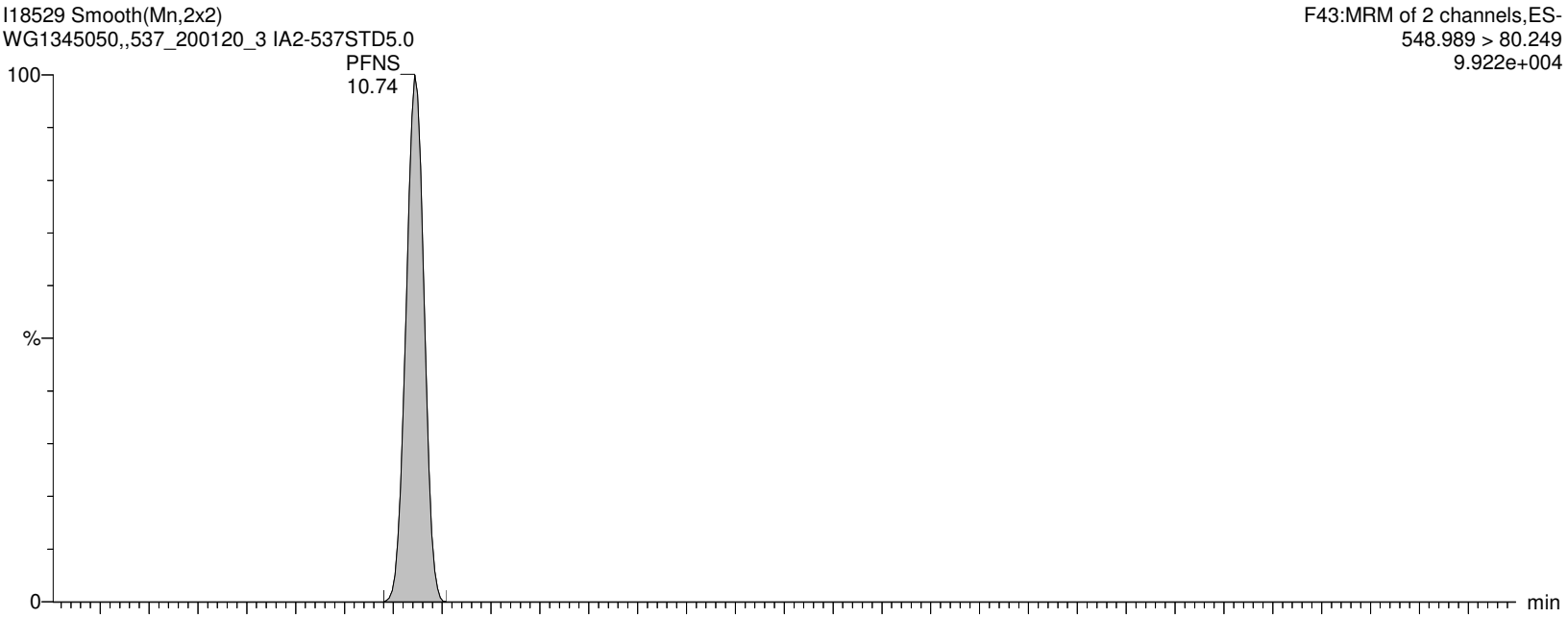
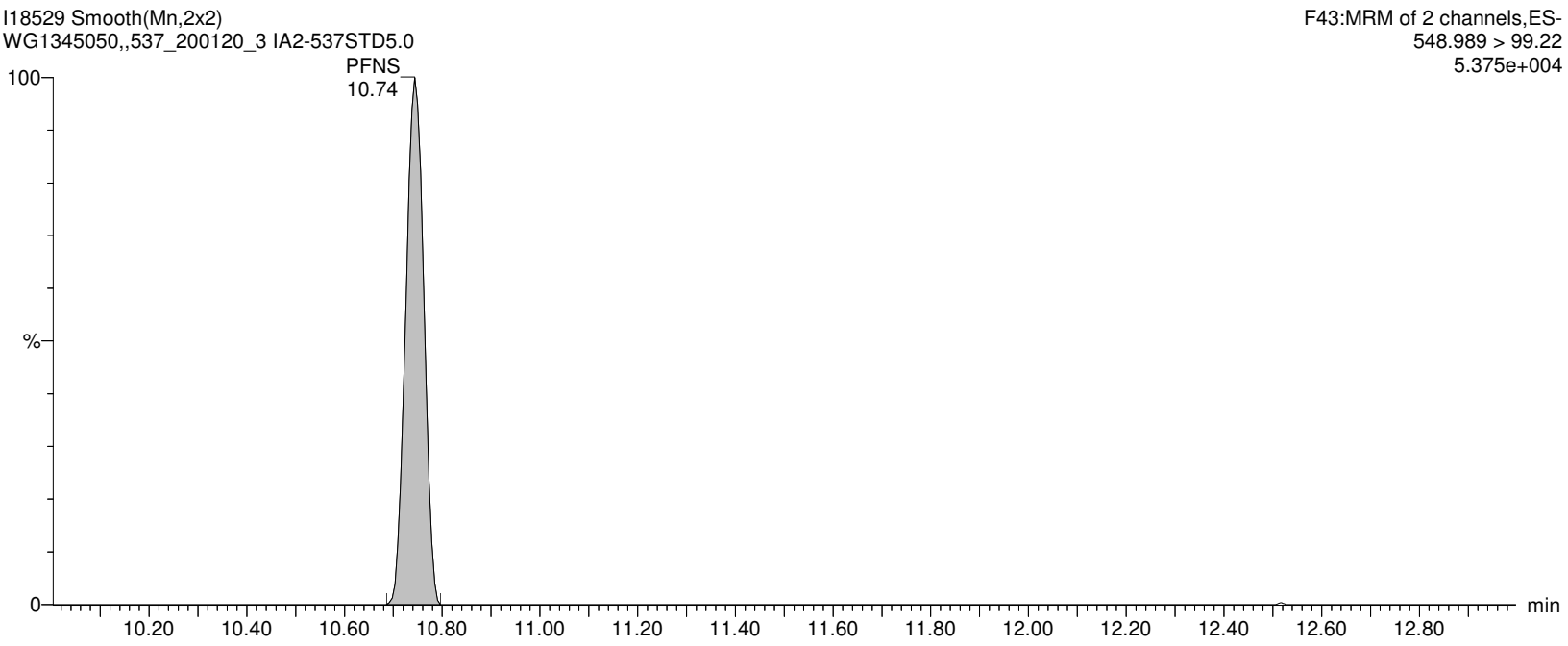
**PFNS**





all concentration units in (ng/mL)

Alpha Analytical Inc.
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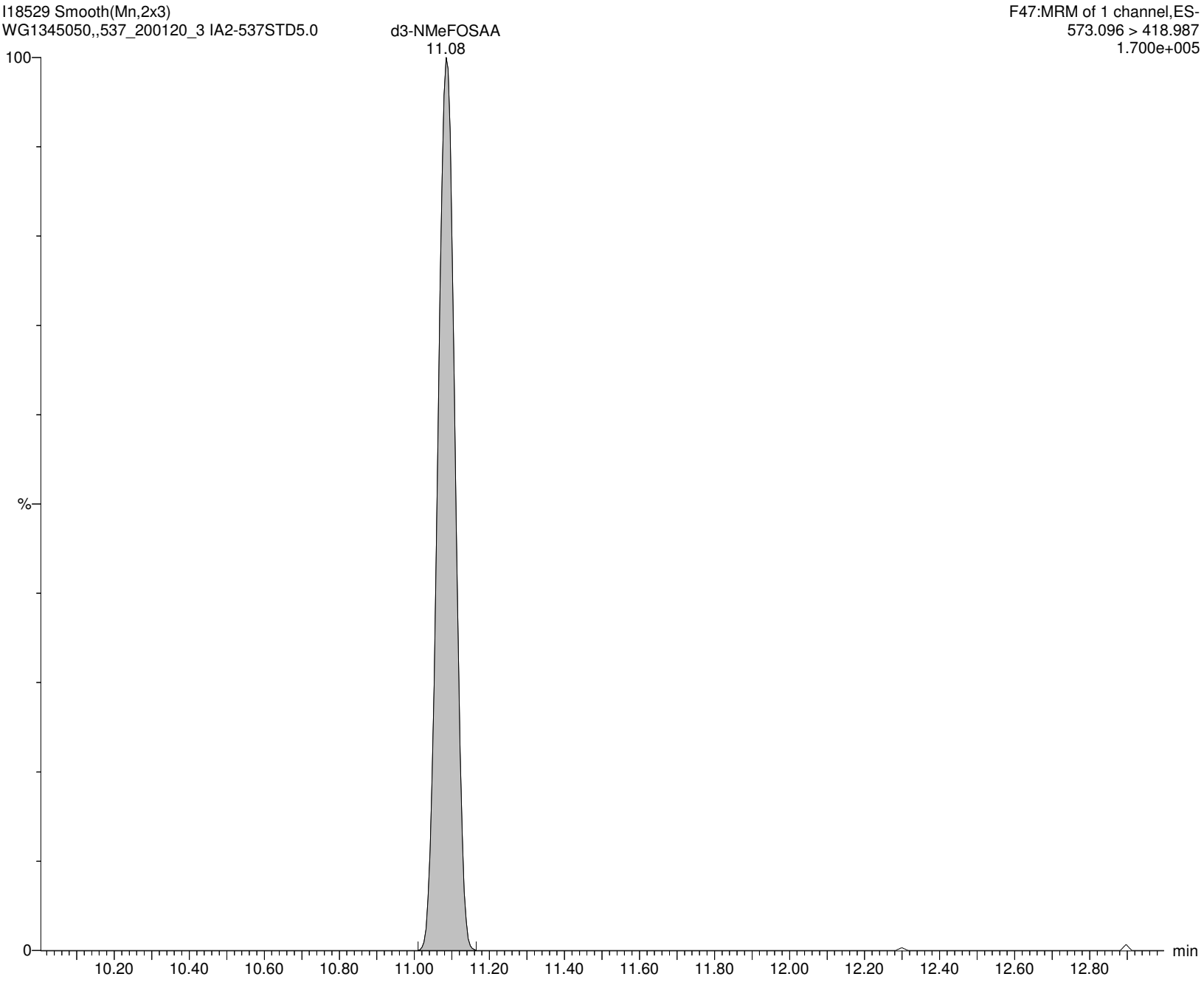
**d3-NMeFOSAA**



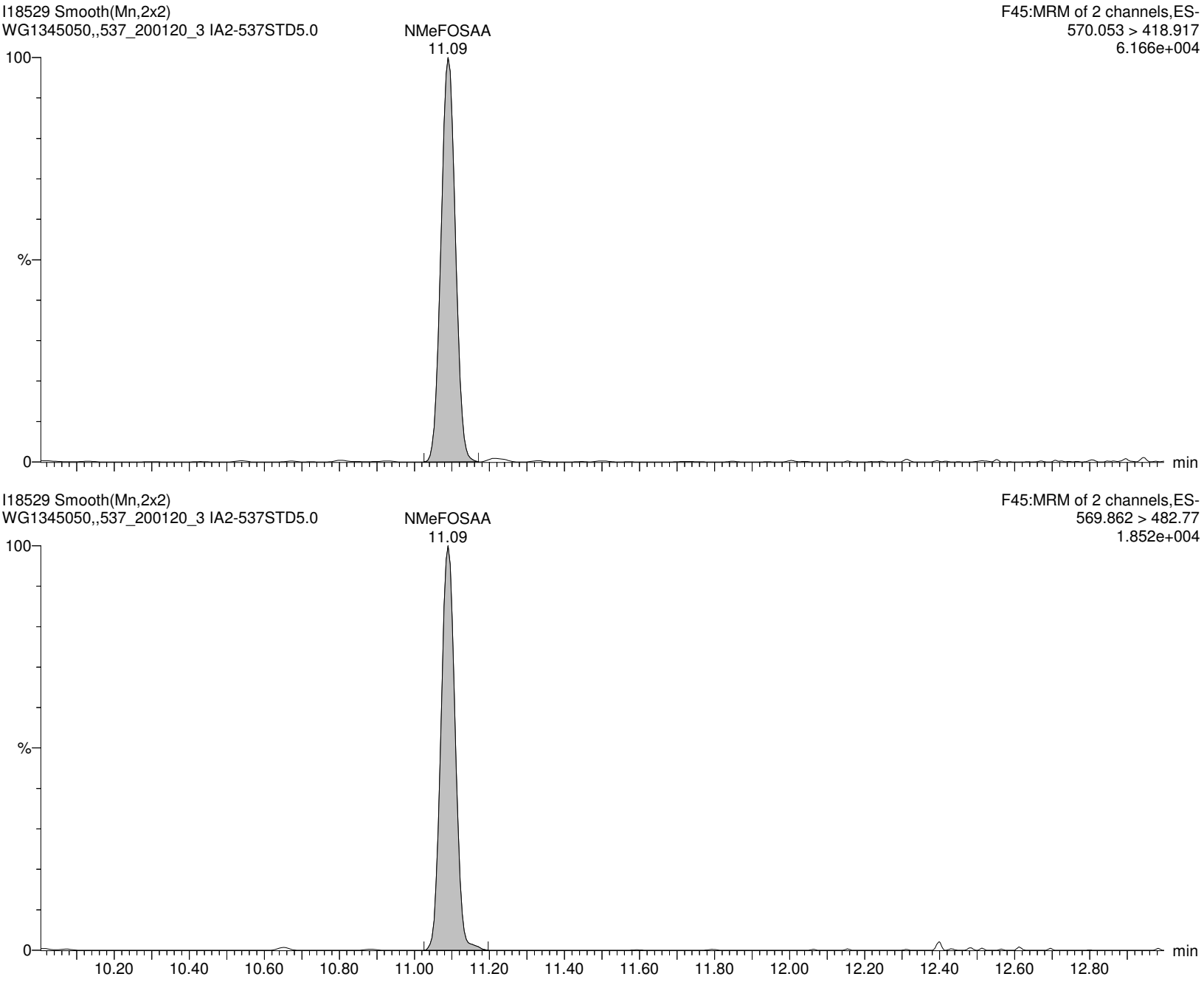


all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICAL_A.qld
Last Altered: Friday, February 28, 2020 09:12:40 Eastern Standard Time
Printed: Friday, February 28, 2020 09:27:47 Eastern Standard Time

**Name: I18529**
**ID: IA2-537STD5.0**
**Date: 27-Feb-2020**
**Time: 14:02:18**
**Description: WG1345050,,537_200120_3**
**User: LCMS01:SG**
**Vial: 1:A,4**
**Instrument: XEVO-TQSmicro#QEA0276**
**Inlet Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\LCMS_537_ISO_MeOH**
**Tune Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\190709_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**NMeFOSAA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICAL_A.qld
Last Altered: Friday, February 28, 2020 09:12:40 Eastern Standard Time
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**Description: WG1345050,,537_200120_3**
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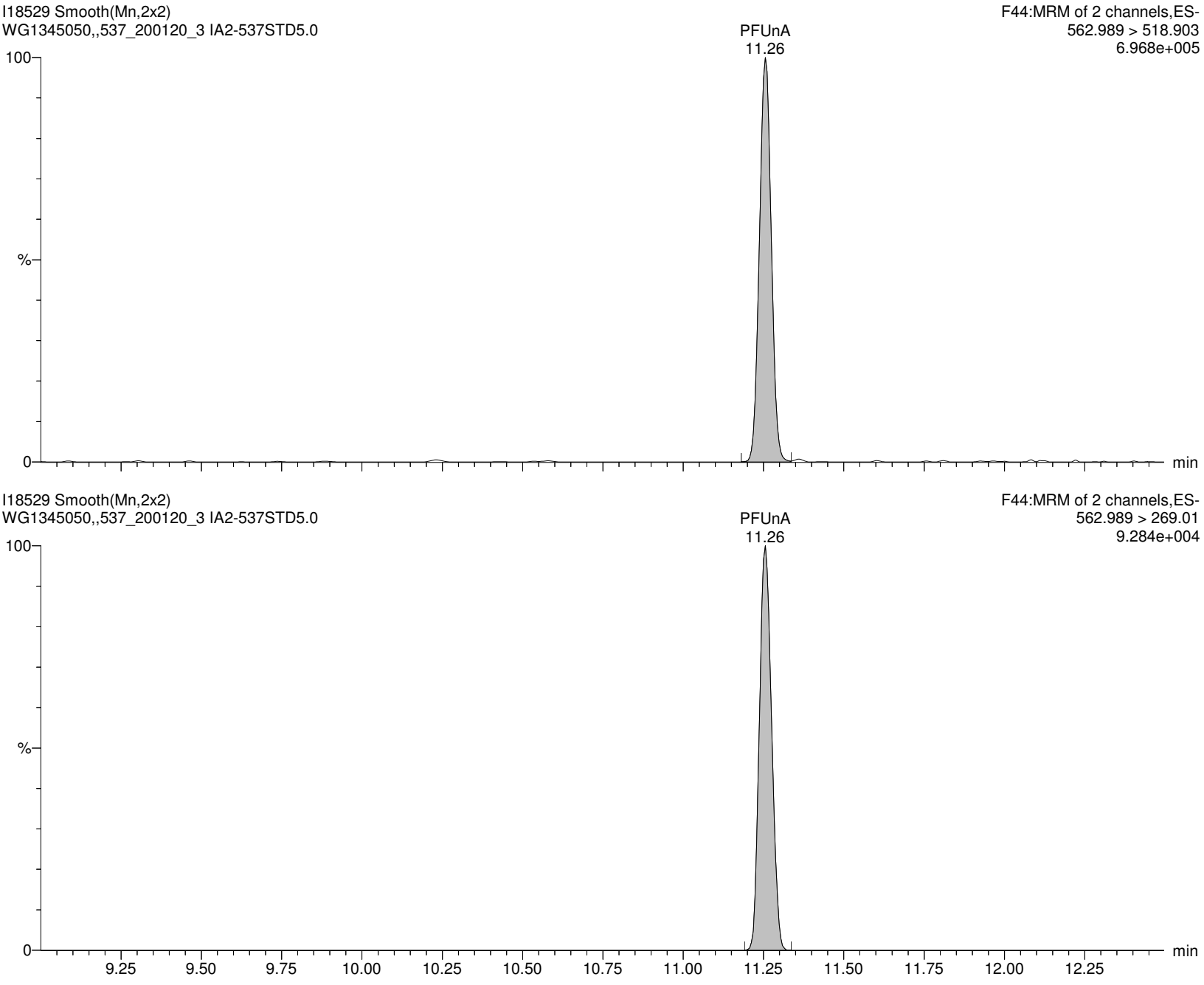
**Vial: 1:A,4**
**Instrument: XEVO-TQSmicro#QEA0276**
**Inlet Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\LCMS_537_ISO_MeOH**
**Tune Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\190709_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**PFUnA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICAL_A.qld
Last Altered: Friday, February 28, 2020 09:12:40 Eastern Standard Time
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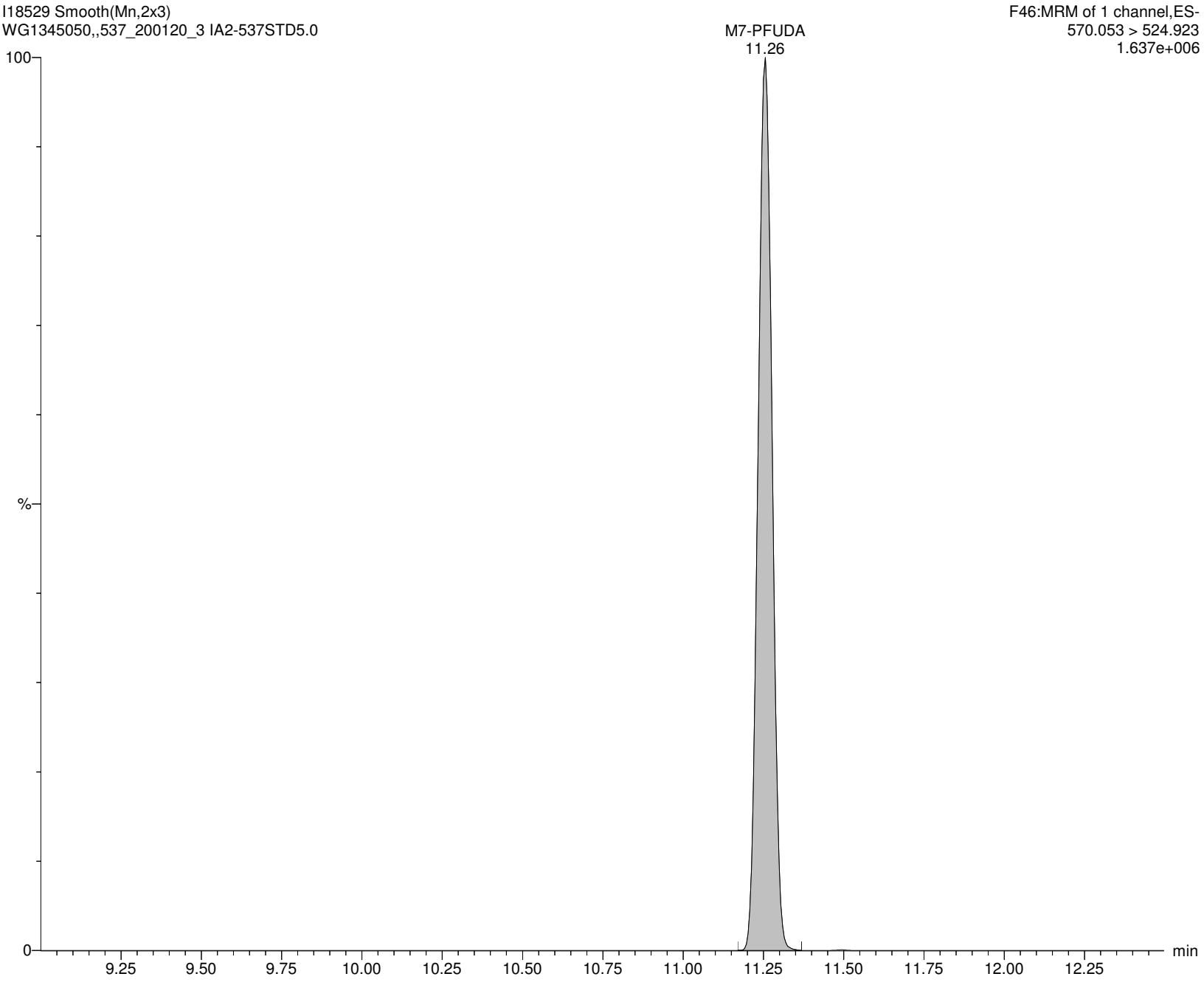
**Inlet Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\LCMS_537_ISO_MeOH**
**Tune Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\190709_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**M7-PFUDA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICAL_A.qld
Last Altered: Friday, February 28, 2020 09:12:40 Eastern Standard Time
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**Vial: 1:A,4**
**Instrument: XEVO-TQSmicro#QEA0276**
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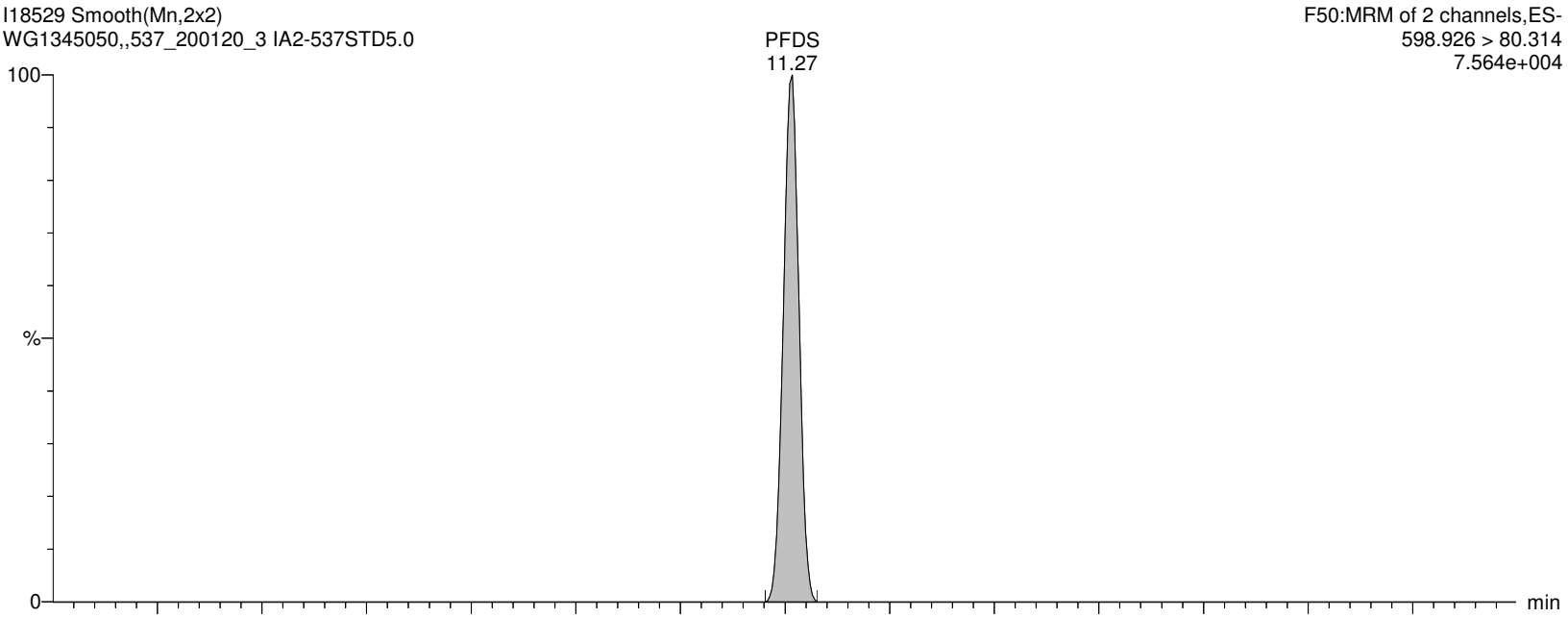
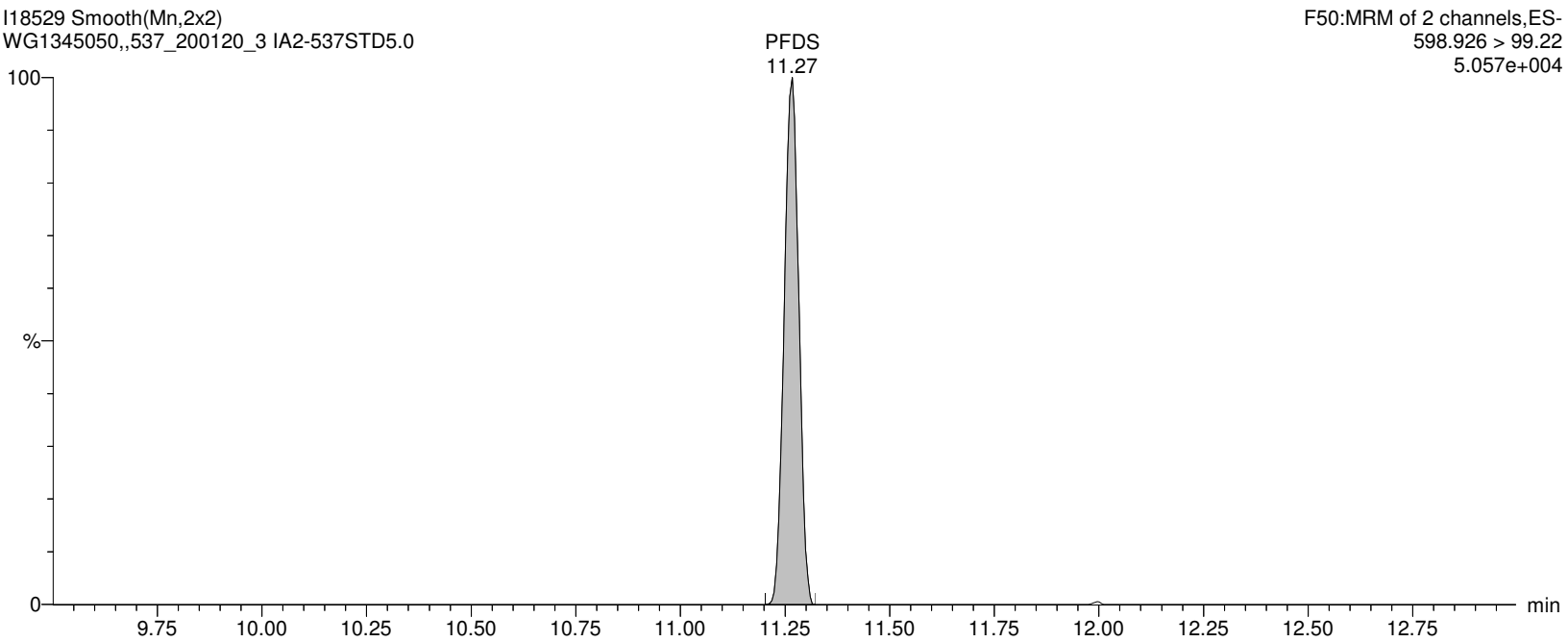
**MS Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**PFDS**





all concentration units in (ng/mL)

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**Vial: 1:A,4**
**Instrument: XEVO-TQSmicro#QEA0276**
**Inlet Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\LCMS_537_ISO_MeOH**
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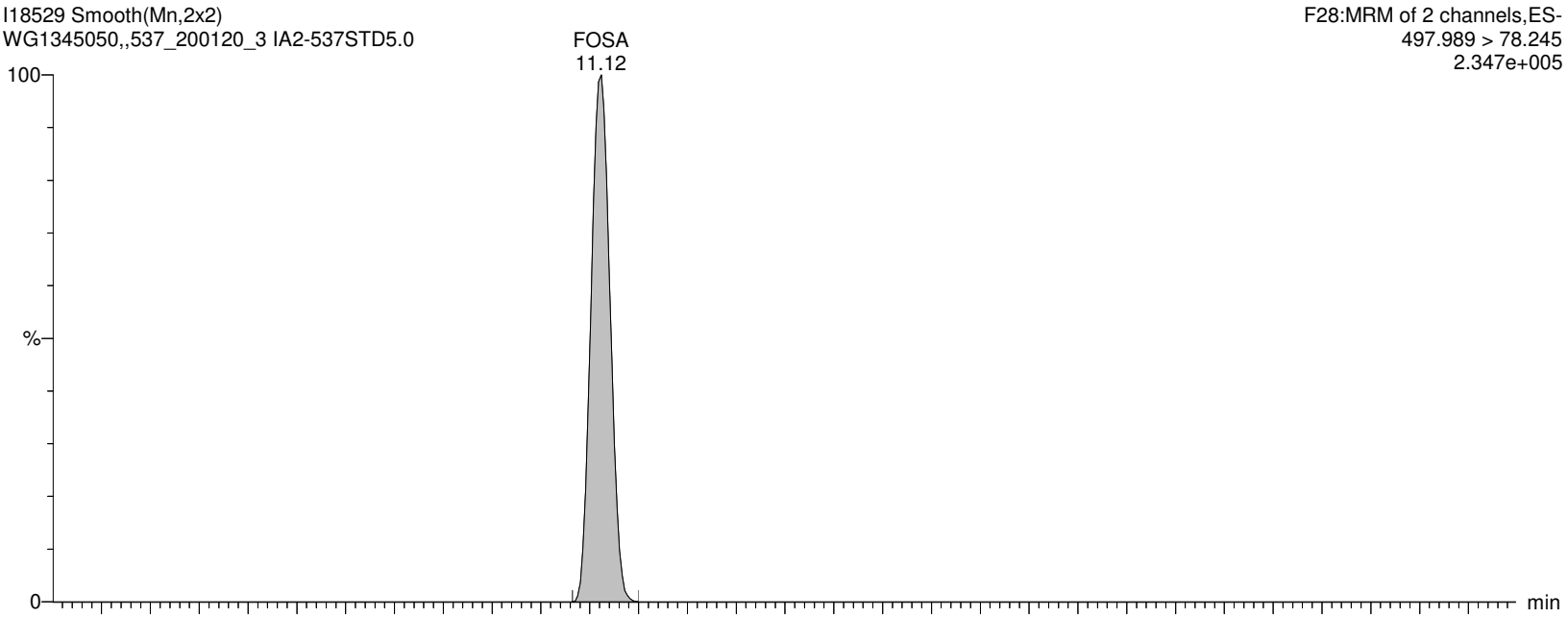
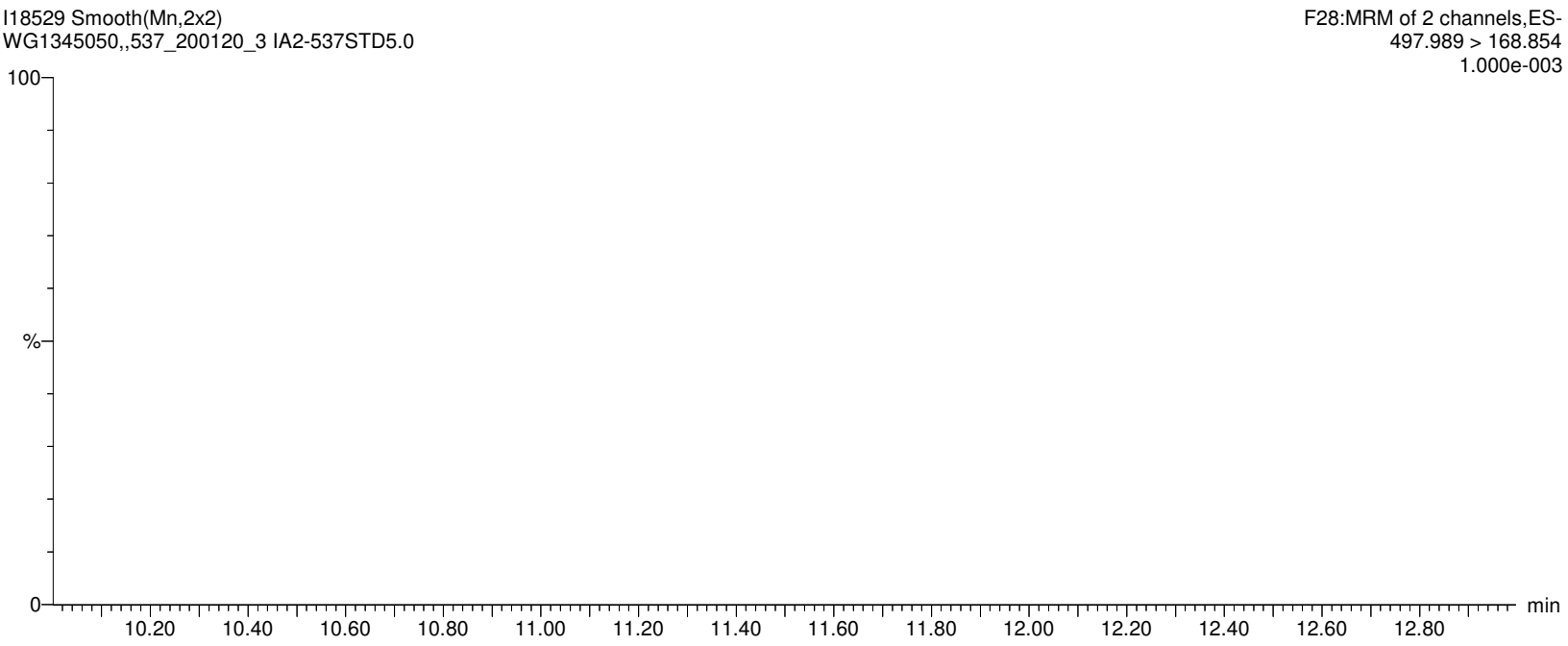
**MS Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**FOSA**





all concentration units in (ng/mL)

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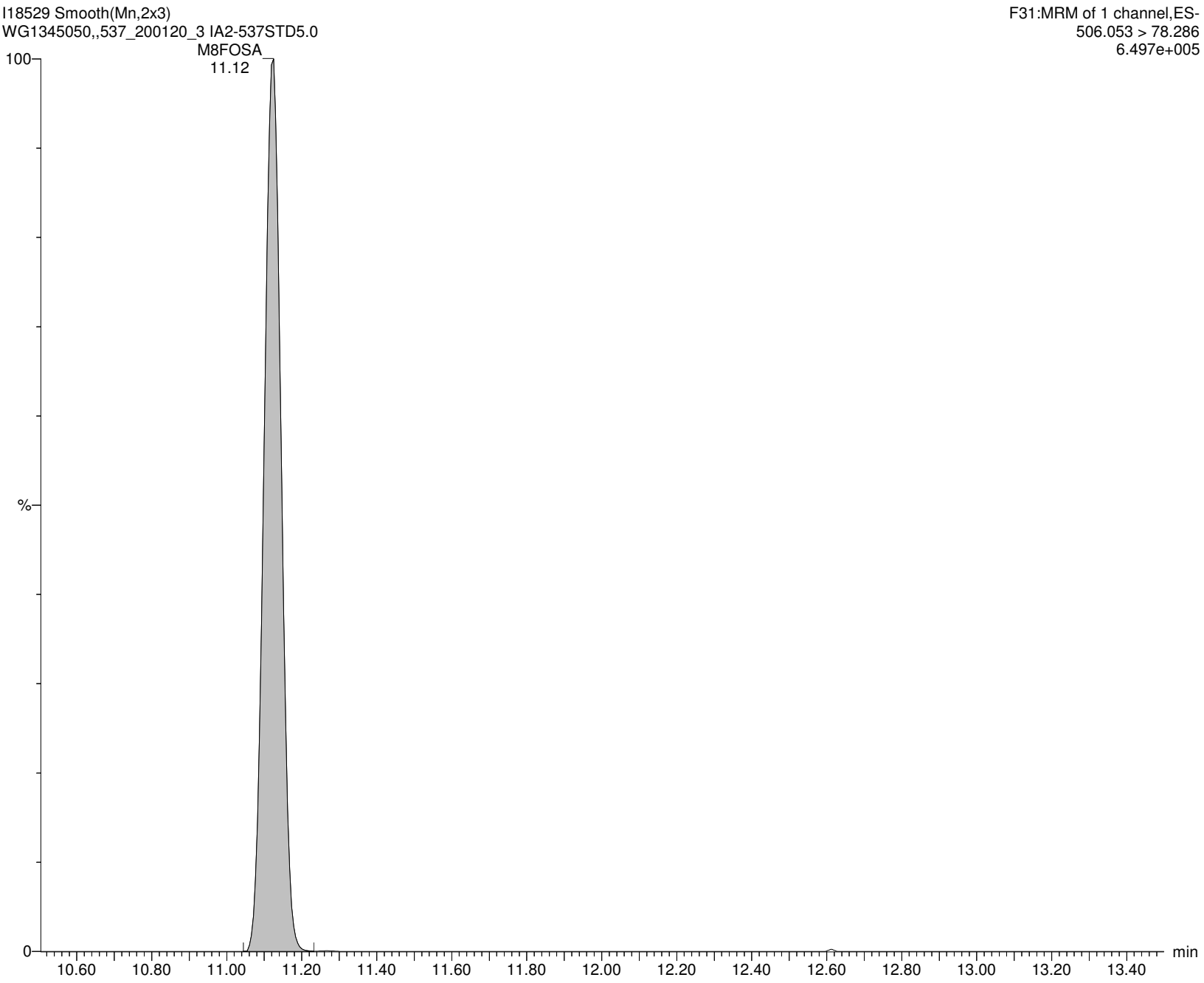
**M8FOSA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICAL_A.qld
Last Altered: Friday, February 28, 2020 09:12:40 Eastern Standard Time
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**Vial: 1:A,4**
**Instrument: XEVO-TQSmicro#QEA0276**
**Inlet Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\LCMS_537_ISO_MeOH**
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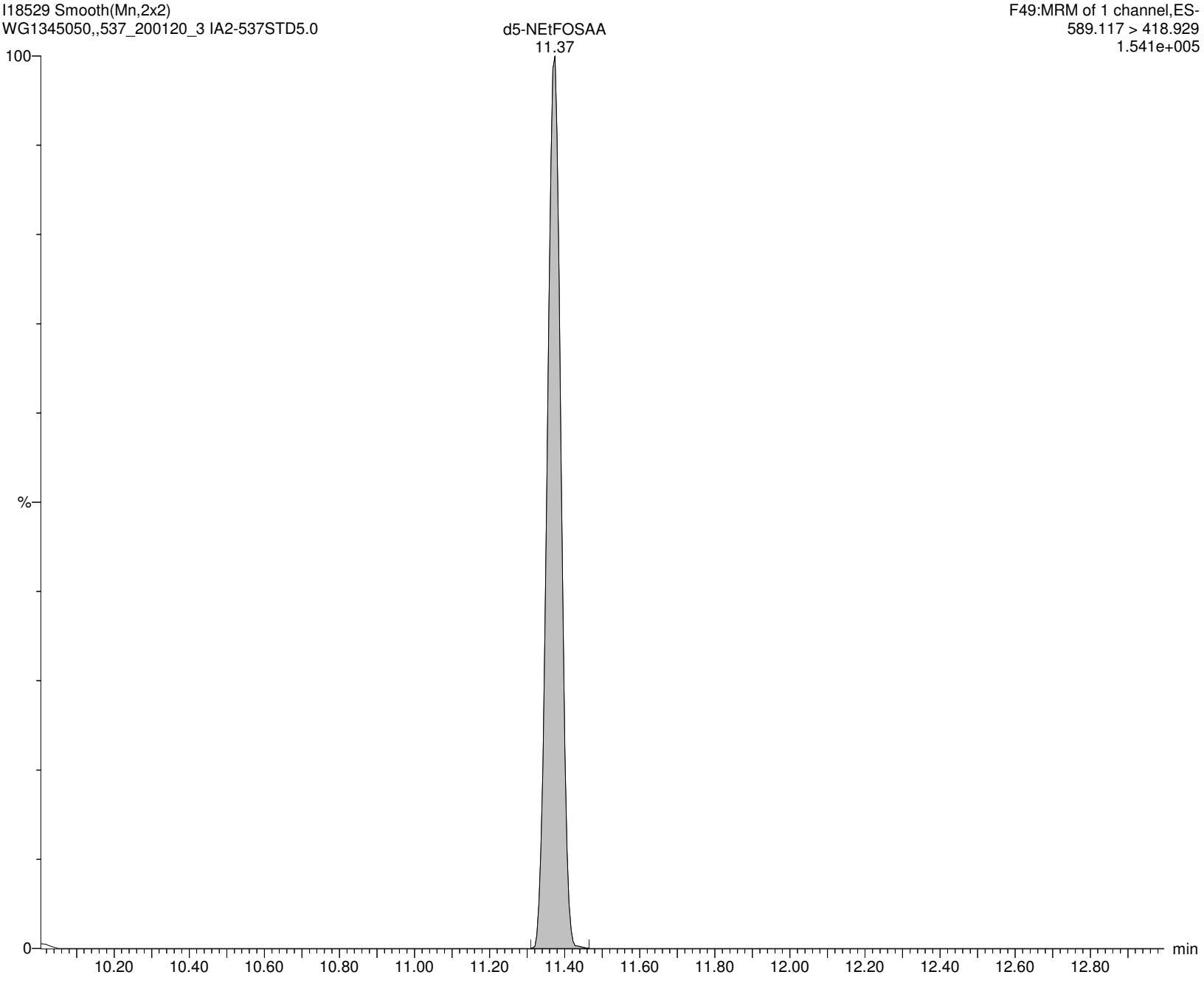
**d5-NEtFOSAA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICAL_A.qld
Last Altered: Friday, February 28, 2020 09:12:40 Eastern Standard Time
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**Description: WG1345050,,537_200120_3**
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**Instrument: XEVO-TQSmicro#QEA0276**
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**Tune Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\190709_TUNE.IPR**
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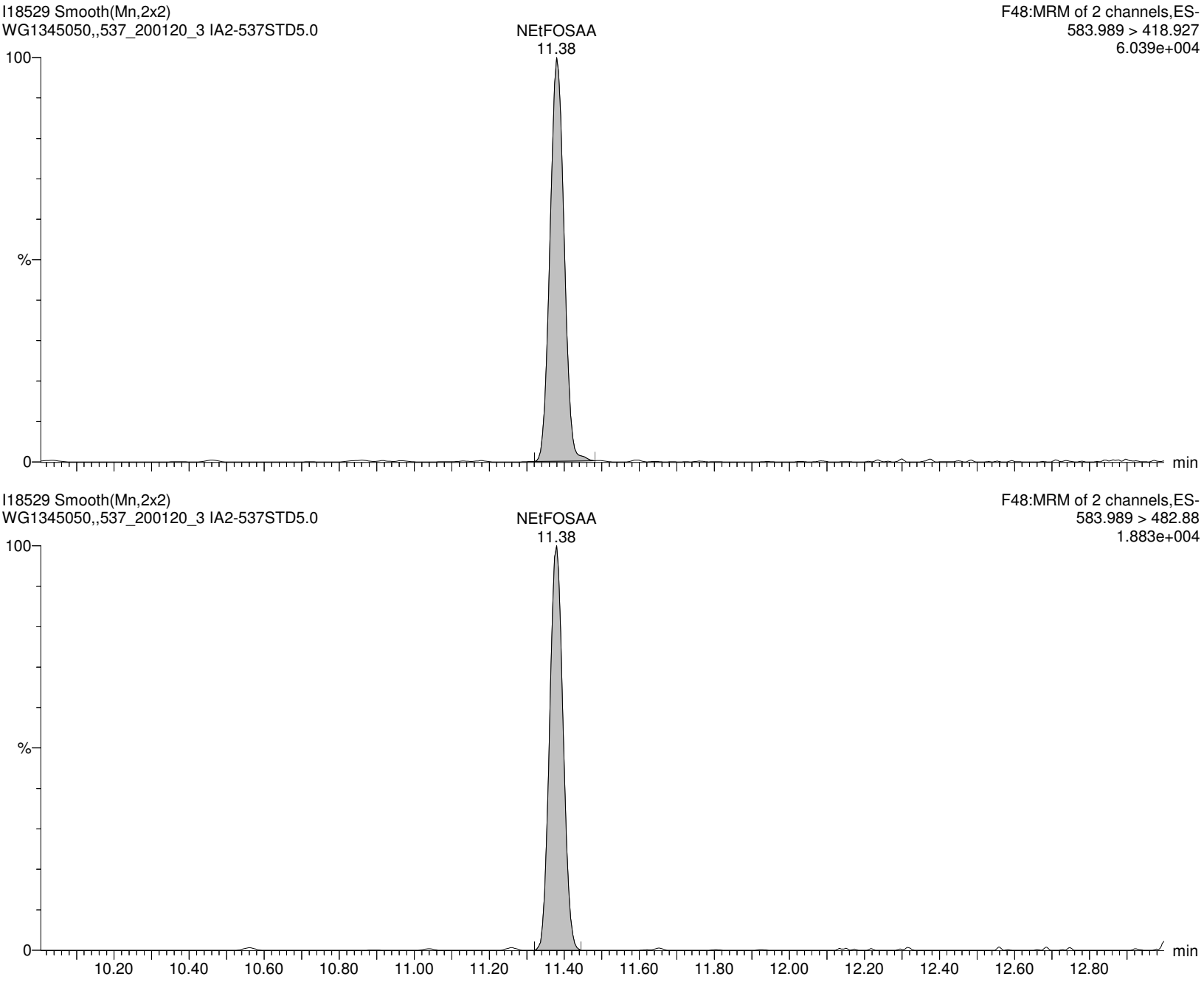
**NEtFOSAA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICAL_A.qld
Last Altered: Friday, February 28, 2020 09:12:40 Eastern Standard Time
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**Time: 14:02:18**
**Description: WG1345050,,537_200120_3**
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**Instrument: XEVO-TQSmicro#QEA0276**
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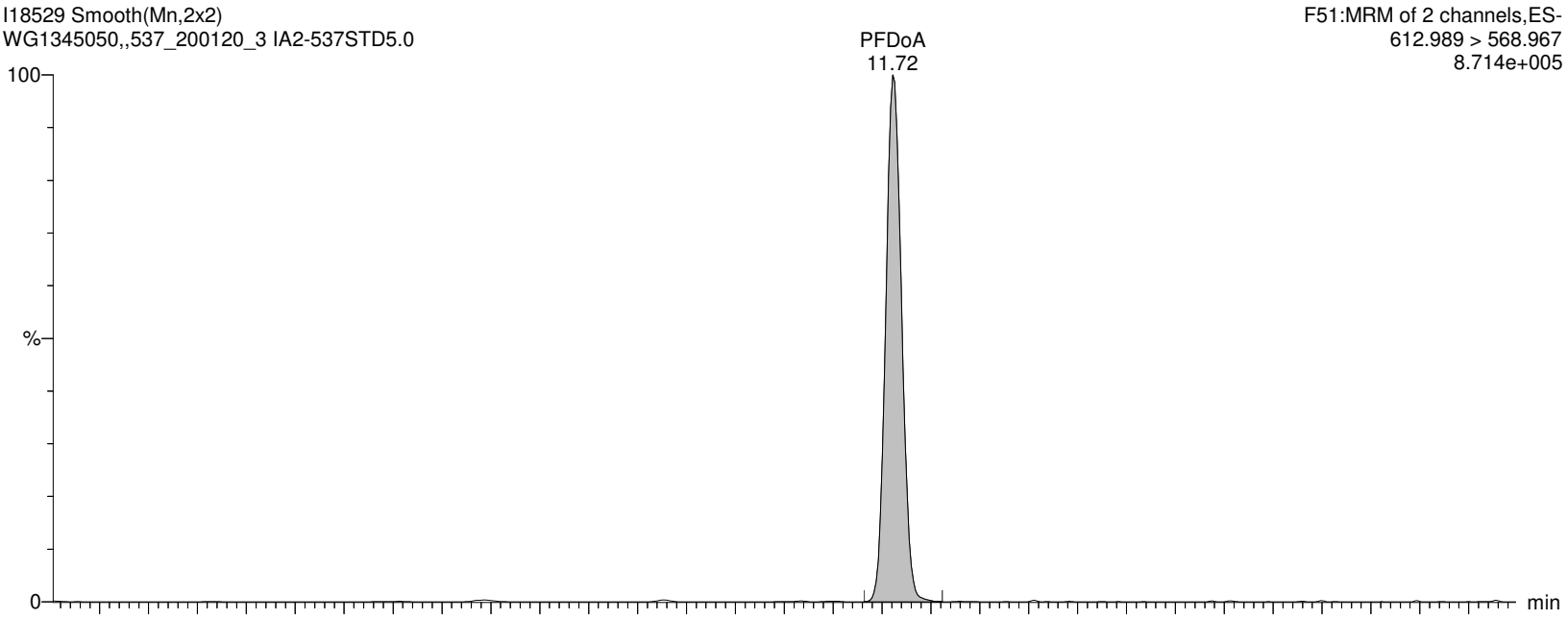
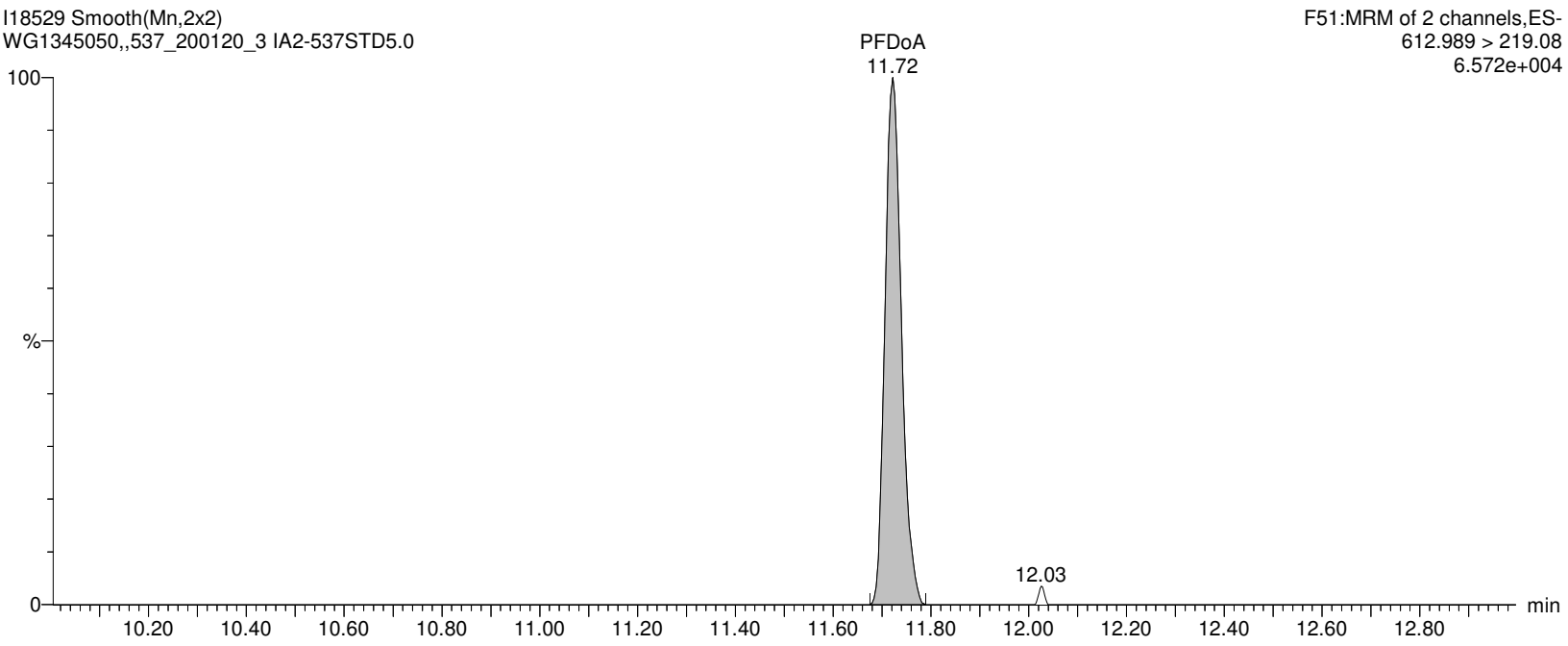
**PFDoA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICAL_A.qld
Last Altered: Friday, February 28, 2020 09:12:40 Eastern Standard Time
Printed: Friday, February 28, 2020 09:27:47 Eastern Standard Time

**Name: I18529**
**ID: IA2-537STD5.0**
**Date: 27-Feb-2020**
**Time: 14:02:18**
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**Vial: 1:A,4**
**Instrument: XEVO-TQSmicro#QEA0276**
**Inlet Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\LCMS_537_ISO_MeOH**
**Tune Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\190709_TUNE.IPR**
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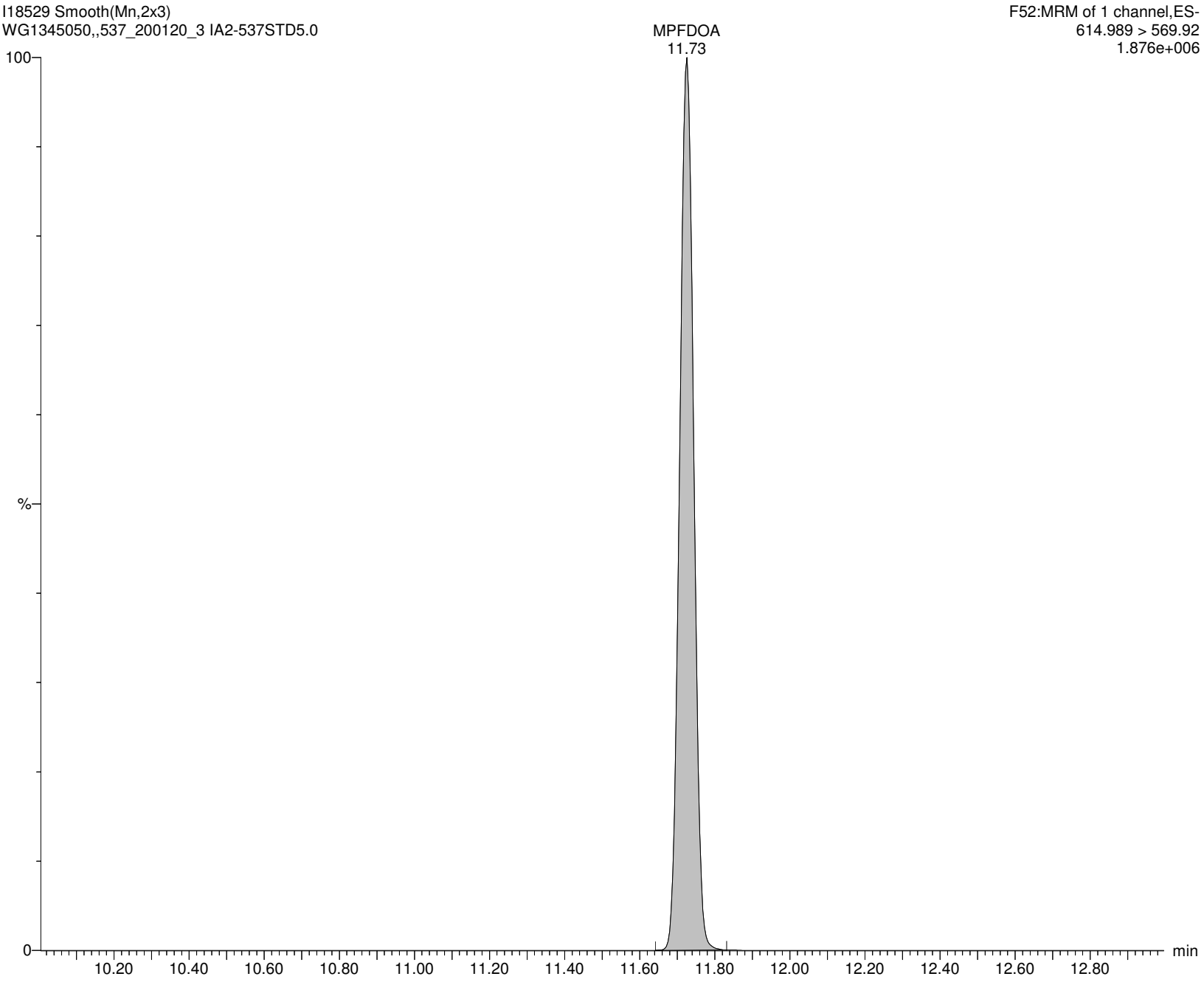
**MPFDOA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICAL_A.qld
Last Altered: Friday, February 28, 2020 09:12:40 Eastern Standard Time
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**Name: I18529**
**ID: IA2-537STD5.0**
**Date: 27-Feb-2020**
**Time: 14:02:18**
**Description: WG1345050,,537_200120_3**
**User: LCMS01:SG**
**Vial: 1:A,4**
**Instrument: XEVO-TQSmicro#QEA0276**
**Inlet Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\LCMS_537_ISO_MeOH**
**Tune Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\190709_TUNE.IPR**
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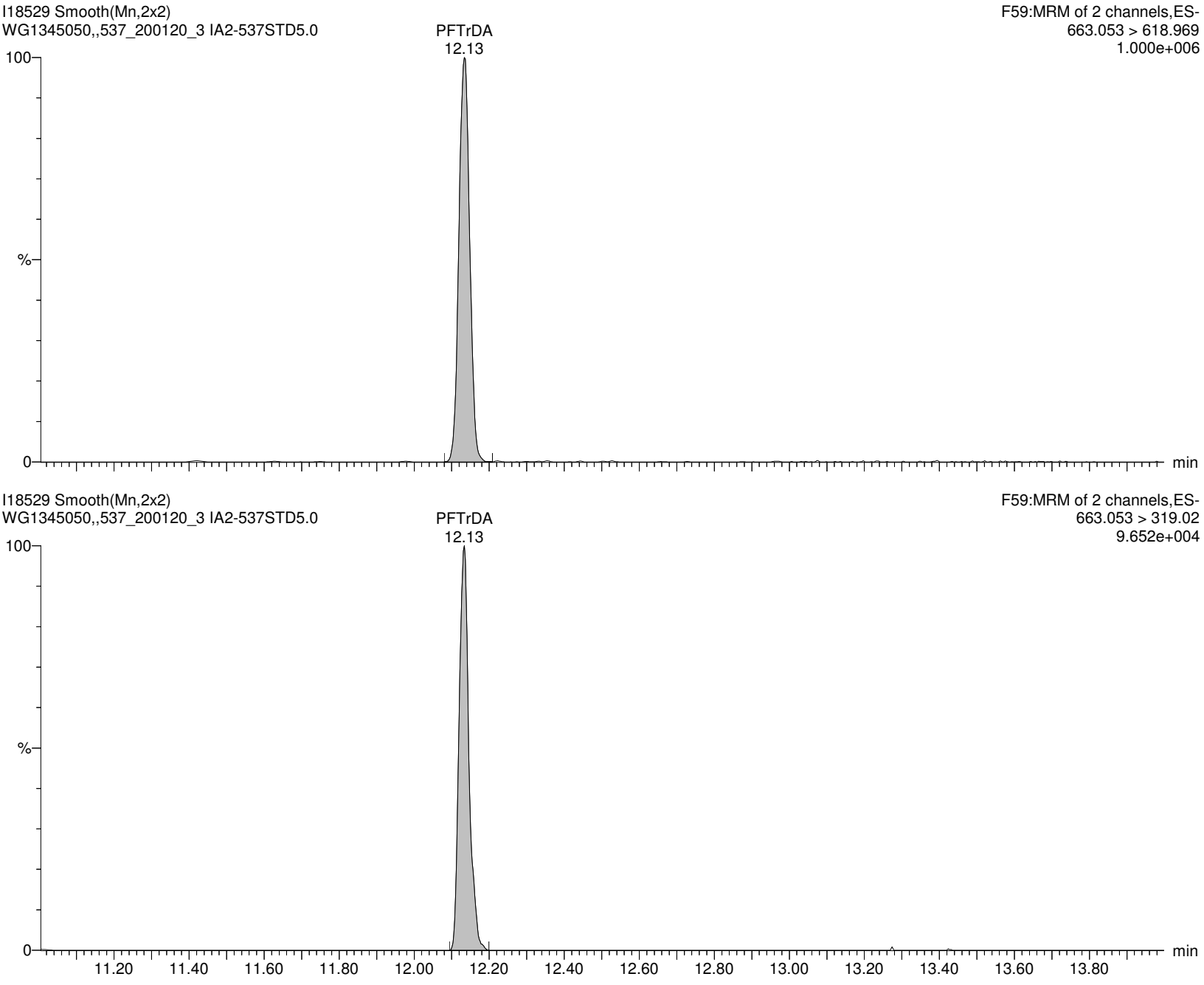
**PFTrDA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICAL_A.qld
Last Altered: Friday, February 28, 2020 09:12:40 Eastern Standard Time
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**ID: IA2-537STD5.0**
**Date: 27-Feb-2020**
**Time: 14:02:18**
**Description: WG1345050,,537_200120_3**
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**Vial: 1:A,4**
**Instrument: XEVO-TQSmicro#QEA0276**
**Inlet Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\LCMS_537_ISO_MeOH**
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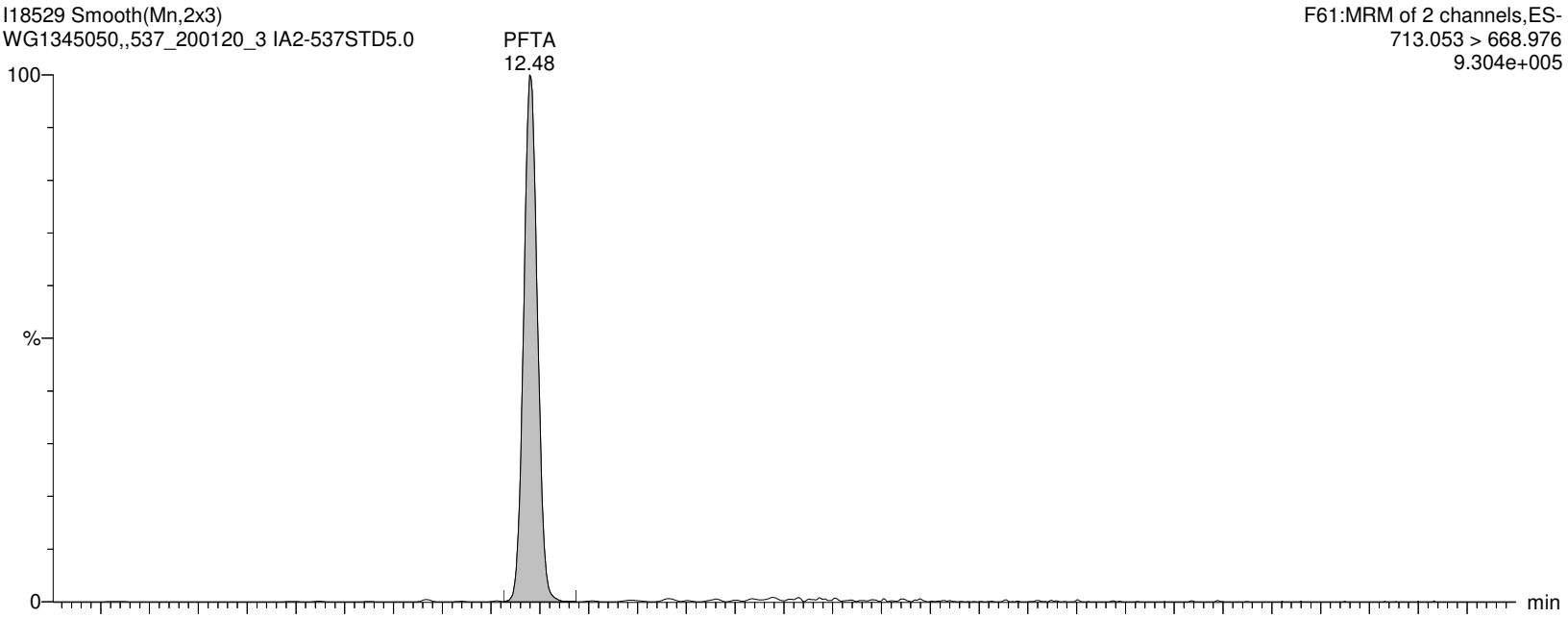
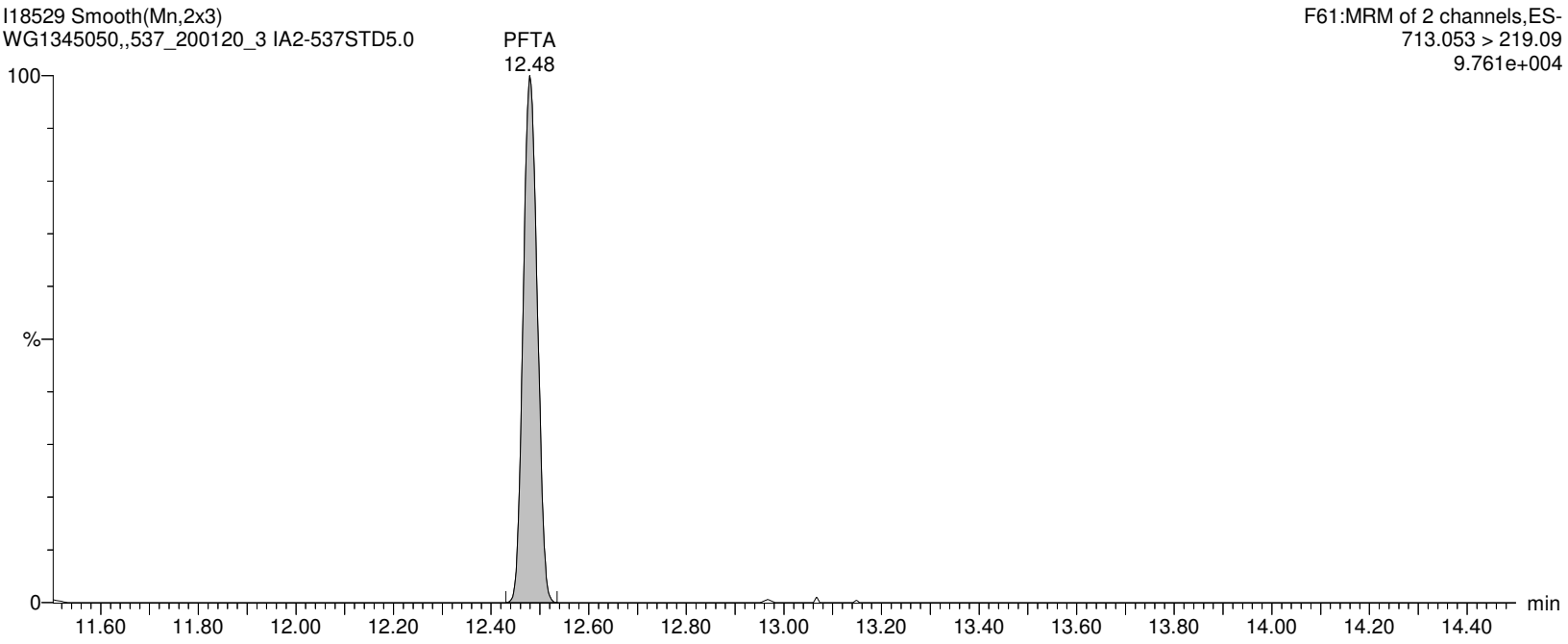
**PFTA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICAL_A.qld
Last Altered: Friday, February 28, 2020 09:12:40 Eastern Standard Time
Printed: Friday, February 28, 2020 09:27:47 Eastern Standard Time

**Name: I18529**
**ID: IA2-537STD5.0**
**Date: 27-Feb-2020**
**Time: 14:02:18**
**Description: WG1345050,,537_200120_3**
**User: LCMS01:SG**
**Vial: 1:A,4**
**Instrument: XEVO-TQSmicro#QEA0276**
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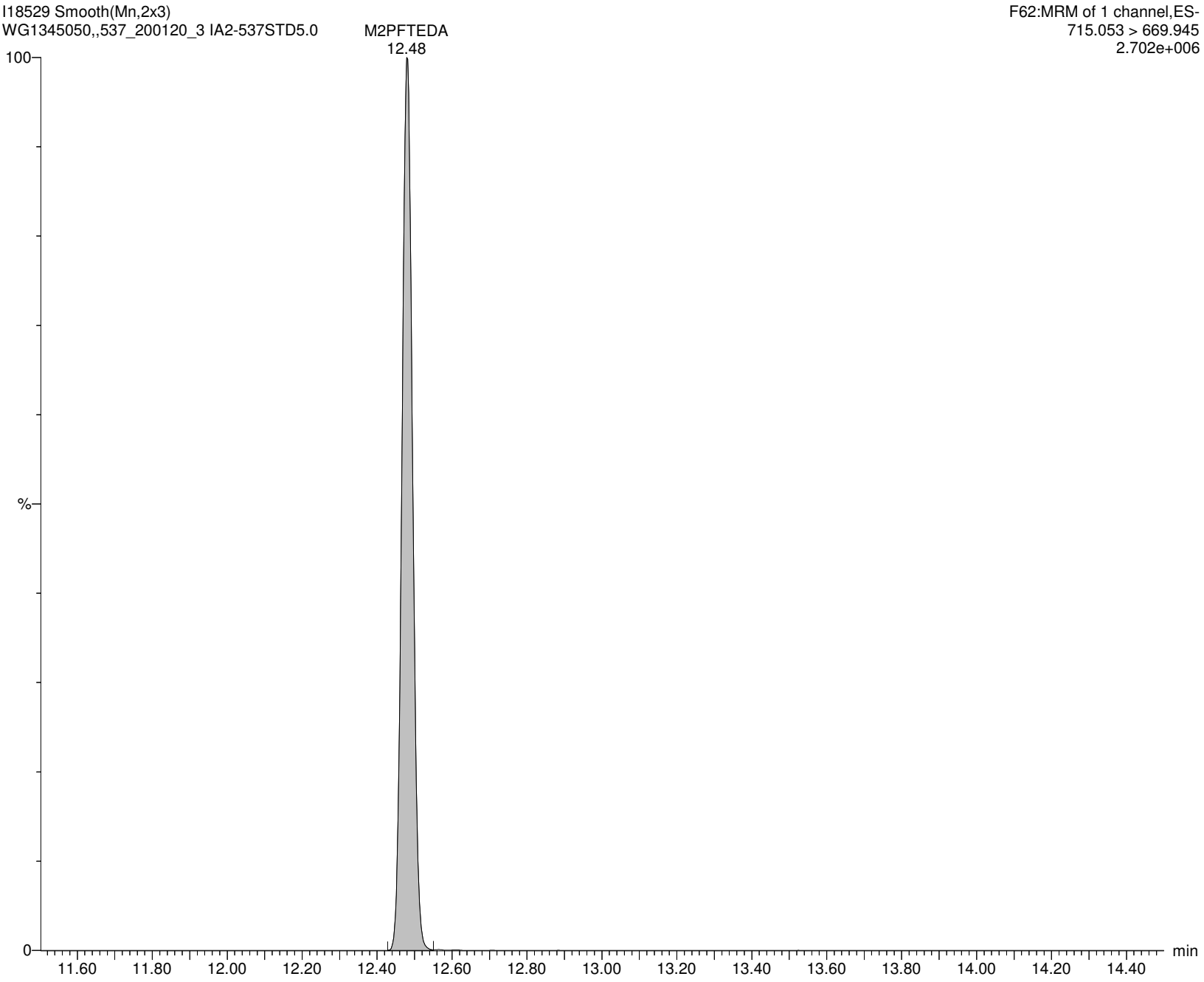
**M2PFTEDA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICAL_A.qld
Last Altered: Friday, February 28, 2020 09:12:40 Eastern Standard Time
Printed: Friday, February 28, 2020 09:27:49 Eastern Standard Time

**Method: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\MethDB\537ISO_Q_200227 .mdb 27 Feb 2020 12:38:15**
**Calibration: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\CurveDB\200227_537ISO_ICAL.cdb 28 Feb 2020 09:12:40**

**ID: IA2-537STD10.0**
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**User: LCMS01:SG**
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**Tune Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\190709_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

| | Name | CAS | RT | Trace | Area | M Flag | Conc (ng/mL) | Ion Ratio | Ratio Flag | %Rec |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | PFBA | 375-22-4 | 2.25 | 212.926 > 169.111 | 30645 | | 8.679 | | na | 86.8 |
| 2 | M3PFBA | INT STD | 2.24 | 215.926 > 172.122 | 41232 | | 10.486 | | na | 104.9 |
| 3 | MPFBA | INT STD | 2.25 | 216.926 > 172.137 | 48815 | | 10.332 | | na | 103.3 |
| 4 | PFPeA | 2706-90-3 | 5.21 | 262.926 > 219.002 | 40989 | | 8.861 | | na | 88.6 |
| 5 | M5PFPEA | INT STD | 5.21 | 267.989 > 223.081 | 66536 | | 10.614 | | na | 106.1 |
| 6 | PFBS | 375-73-5 | 5.87 | 298.926 > 79.923 | 8430 | | 7.828 | 2.04 | NO | 88.5 |
| 7 | M3PFBS | INT STD | 5.87 | 301.989 > 80.254 | 11939 | | 8.703 | | na | 87.0 |
| 8 | 4:2FTS | 757124-72-4 | 7.05 | 326.926 > 306.957 | 3756 | | 8.534 | 1.78 | NO | 91.3 |
| 9 | M2-4:2FTS | INT STD | 7.05 | 329.117 > 309.079 | 5499 | | 7.694 | | na | 76.9 |
| 10 | PFHxA | 307-24-4 | 7.13 | 312.989 > 269.028 | 57574 | | 8.893 | 17.18 | NO | 88.9 |
| 11 | M5PFHxA | INT STD | 7.13 | 317.989 > 273.045 | 78150 | | 10.006 | | na | 100.1 |
| 12 | PFPeS | 2706-91-4 | 7.44 | 348.926 > 80.251 | 9210 | | 7.896 | 2.35 | NO | 84.0 |
| 13 | PFHpA | 375-85-9 | 8.40 | 362.926 > 319.014 | 73250 | | 8.699 | 5.16 | NO | 87.0 |
| 14 | M4PFHpA | INT STD | 8.40 | 366.926 > 321.979 | 91953 | | 10.148 | | na | 101.5 |
| 15 | br-PFHxS | 355-46-4 | 8.32 | 398.904 > 79.915 | 1271 | | 1.397 | | YES | 82.2 |
| 16 | L-PFHxS | 355-46-4 | 8.56 | 398.904 > 79.915 | 5888 | | 6.487 | 2.11 | NO | 87.7 |
| 17 | PFHxS | 355-46-4 | | 398.904 > 79.915 | 7158 | | 7.884 | | na | |
| 18 | M3PFHxS | INT STD | 8.56 | 401.926 > 80.317 | 12272 | | 9.985 | | na | 99.8 |
| 19 | br-PFOA | 335-67-1 | | 412.989 > 368.9 | | | ND | | YES | |
| 20 | L-PFOA | 335-67-1 | 9.35 | 412.989 > 368.9 | 71444 | | 8.879 | 9.40 | NO | 88.8 |
| 21 | M2PFOA | INT STD | 9.35 | 415.032 > 369.968 | 95398 | | 11.339 | | na | 113.4 |
| 22 | PFOA | 335-67-1 | | 412.989 > 368.9 | 71444 | | 8.879 | | na | |
| 23 | M8PFOA | INT STD | 9.35 | 420.989 > 375.979 | 93629 | | 10.292 | | na | 102.9 |
| 24 | 6:2FTS | 27619-97-2 | 9.31 | 426.989 > 406.921 | 908 | | 8.740 | 0.66 | NO | 92.0 |
| 25 | M2-6:2FTS | INT STD | 9.31 | 428.989 > 408.917 | 4355 | | 9.794 | | na | 97.9 |
| 26 | PFHpS | 375-92-8 | 9.44 | 448.926 > 80.257 | 5058 | | 8.644 | 1.04 | NO | 91.0 |
| 27 | PFNA | 375-95-1 | 10.10 | 462.989 > 418.931 | 62461 | | 8.943 | 3.98 | NO | 89.4 |
| 28 | M9PFNA | INT STD | 10.10 | 472.053 > 426.947 | 93873 | | 10.555 | | na | 105.6 |
| 29 | br-PFOS | 1763-23-1 | 9.89 | 498.968 > 79.918 | 1641 | M5 | 1.877 | 3.83 | NO | 93.8 |
| 30 | L-PFOS | 1763-23-1 | 10.14 | 498.968 > 79.918 | 4483 | | 7.118 | 1.35 | NO | 97.5 |
| 31 | PFOS | 1763-23-1 | | 498.968 > 79.918 | 6124 | | 8.995 | | na | |
| 32 | M4PFOS | INT STD | 10.14 | 503.032 > 80.306 | 10693 | | 12.589 | | na | 125.9 |
| 33 | M8PFOS | INT STD | 10.14 | 507.053 > 80.294 | 11646 | | 9.378 | | na | 93.8 |
| 34 | PFDA | 335-76-2 | 10.72 | 513.053 > 468.906 | 58492 | | 8.646 | 5.48 | NO | 86.5 |
| 35 | M2PFDA | INT STD | 10.72 | 515.053 > 469.934 | 78375 | | 11.848 | | na | 118.5 |
| 36 | M6PFDA | INT STD | 10.72 | 519.053 > 473.931 | 88327 | | 10.243 | | na | 102.4 |
| 37 | 8:2FTS | 39108-34-4 | 10.71 | 527.032 > 507.079 | 1437 | | 10.272 | 1.67 | NO | 107.0 |
| 38 | M2-8:2FTS | INT STD | 10.71 | 529.053 > 508.945 | 2138 | | 7.952 | | na | 79.5 |
| 39 | PFNS | 68259-12-1 | 10.75 | 548.989 > 80.249 | 7888 | | 10.013 | 1.52 | NO | 104.3 |


all concentration units in (ng/mL)

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**ID: IA2-537STD10.0**
**Name: I18530**
**Date: 27-Feb-2020**
**Time: 14:18:52**
**Description: WG1345050,,537_200120_4**
**Instrument: XEVO-TQSmicro#QEA0276**
**User: LCMS01:SG**
**Inlet Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\LCMS_537_ISO_MeOH**
**Tune Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\190709_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

| | Name | CAS | RT | Trace | Area | M Flag | Conc (ng/mL) | Ion Ratio | Ratio Flag | %Rec |
|---|---|---|---|---|---|---|---|---|---|---|
| 40 | d3-NMeFOSAA | INT STD | 11.09 | 573.096 > 418.987 | 9430 | | 8.255 | | na | 82.5 |
| 41 | NMeFOSAA | 2355-31-9 | 11.09 | 570.053 > 418.917 | 5987 | | 10.623 | 3.00 | NO | 106.2 |
| 42 | PFUnA | 2058-94-8 | 11.25 | 562.989 > 518.903 | 62609 | | 8.532 | 7.77 | NO | 85.3 |
| 43 | M7-PFUDA | INT STD | 11.25 | 570.053 > 524.923 | 79022 | | 10.429 | | na | 104.3 |
| 44 | PFDS | 335-77-3 | 11.26 | 598.926 > 80.314 | 7534 | | 9.822 | 1.76 | NO | 101.8 |
| 45 | FOSA | 754-91-6 | 11.12 | 497.989 > 78.245 | 23804 | | 8.913 | | YES | 89.1 |
| 46 | M8FOSA | INT STD | 11.12 | 506.053 > 78.286 | 32410 | | 9.379 | | na | 93.8 |
| 47 | d5-NEtFOSAA | INT STD | 11.37 | 589.117 > 418.929 | 6562 | | 7.877 | | na | 78.8 |
| 48 | NEtFOSAA | 2991-50-6 | 11.38 | 583.989 > 418.927 | 5451 | | 9.739 | 3.11 | NO | 97.4 |
| 49 | PFDoA | 307-55-1 | 11.72 | 612.989 > 568.967 | 70173 | | 9.445 | 15.05 | NO | 94.4 |
| 50 | MPFDOA | INT STD | 11.72 | 614.989 > 569.92 | 81837 | | 10.046 | | na | 100.5 |
| 51 | PFTrDA | 72629-94-8 | 12.13 | 663.053 > 618.969 | 74049 | | 9.993 | 11.36 | NO | 99.9 |
| 52 | PFTA | 376-06-7 | 12.48 | 713.053 > 668.976 | 65072 | | 9.770 | 9.37 | NO | 97.7 |
| 53 | M2PFTEDA | INT STD | 12.48 | 715.053 > 669.945 | 89897 | | 9.791 | | na | 97.9 |


all concentration units in (ng/mL)

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**Name: I18530**
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**Date: 27-Feb-2020**
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**Instrument: XEVO-TQSmicro#QEA0276**
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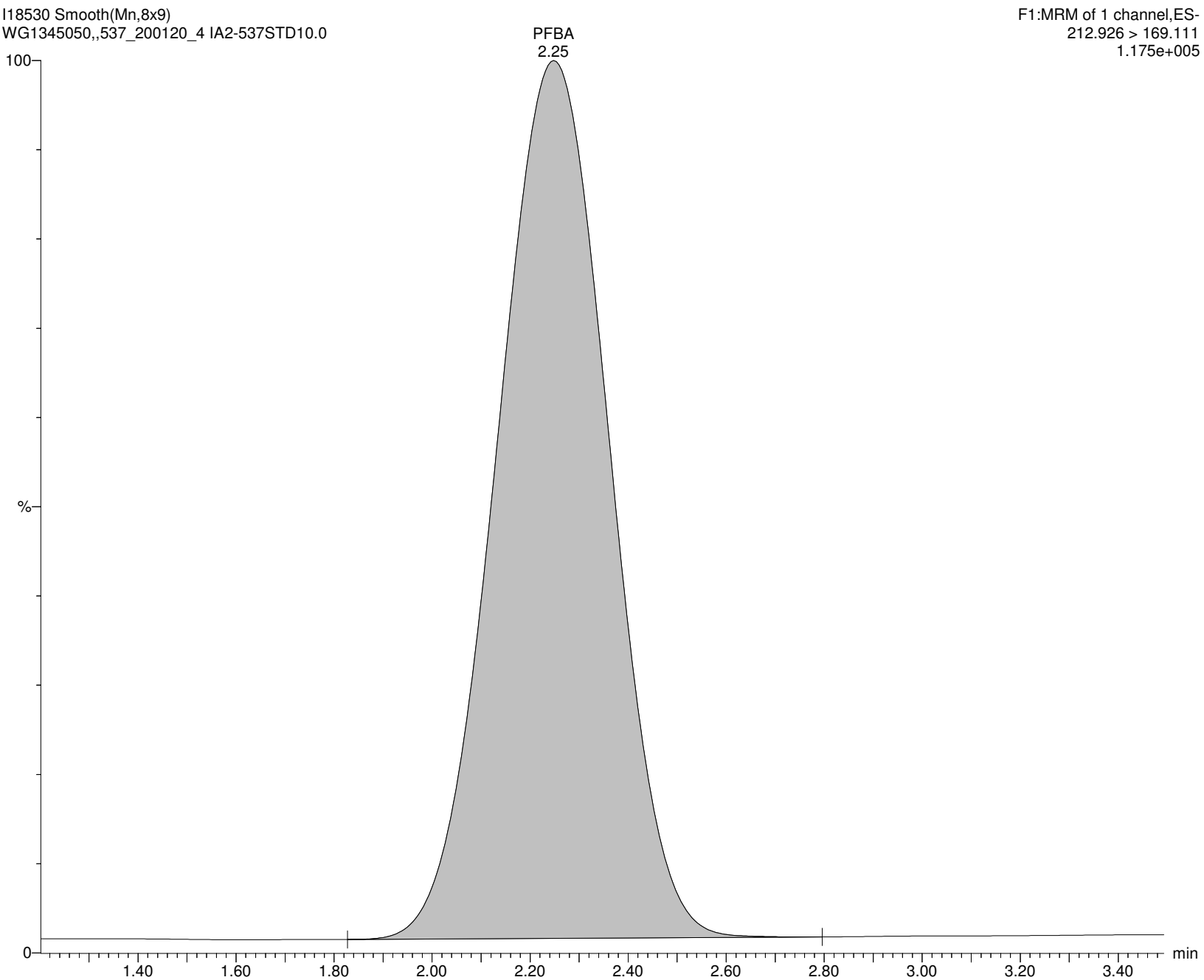
**MS Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**PFBA**





all concentration units in (ng/mL)

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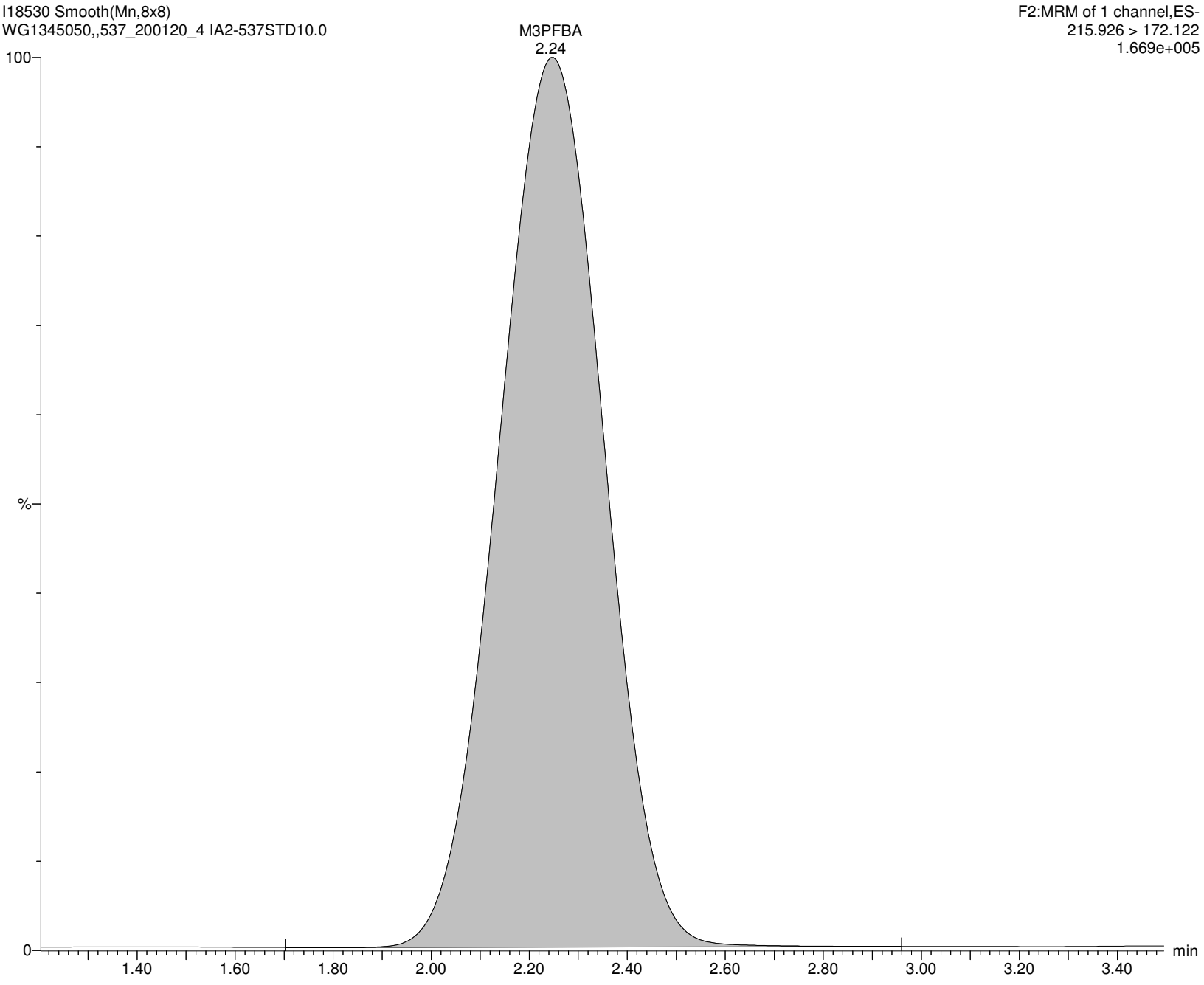
**M3PFBA**





all concentration units in (ng/mL)

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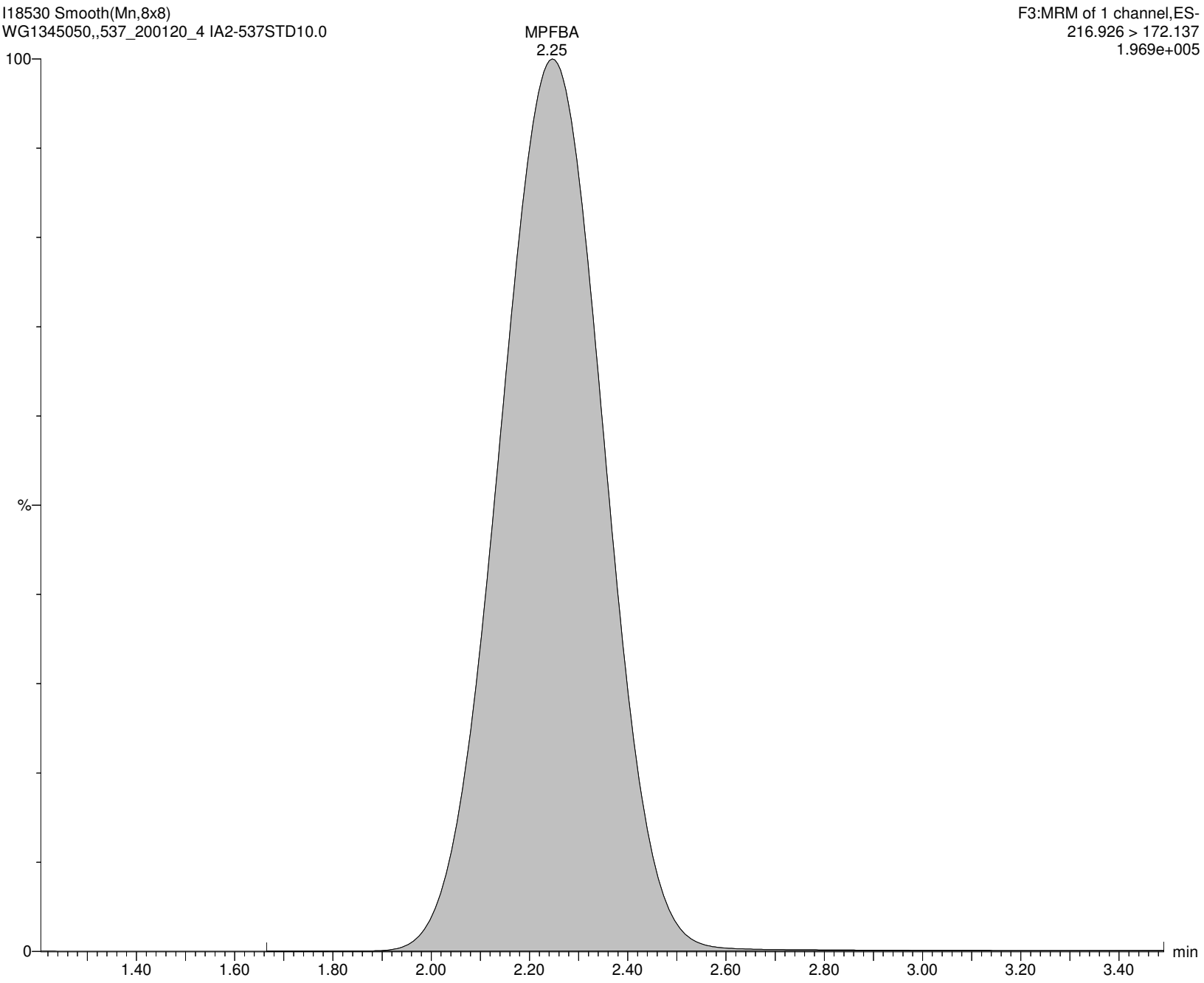
**MPFBA**





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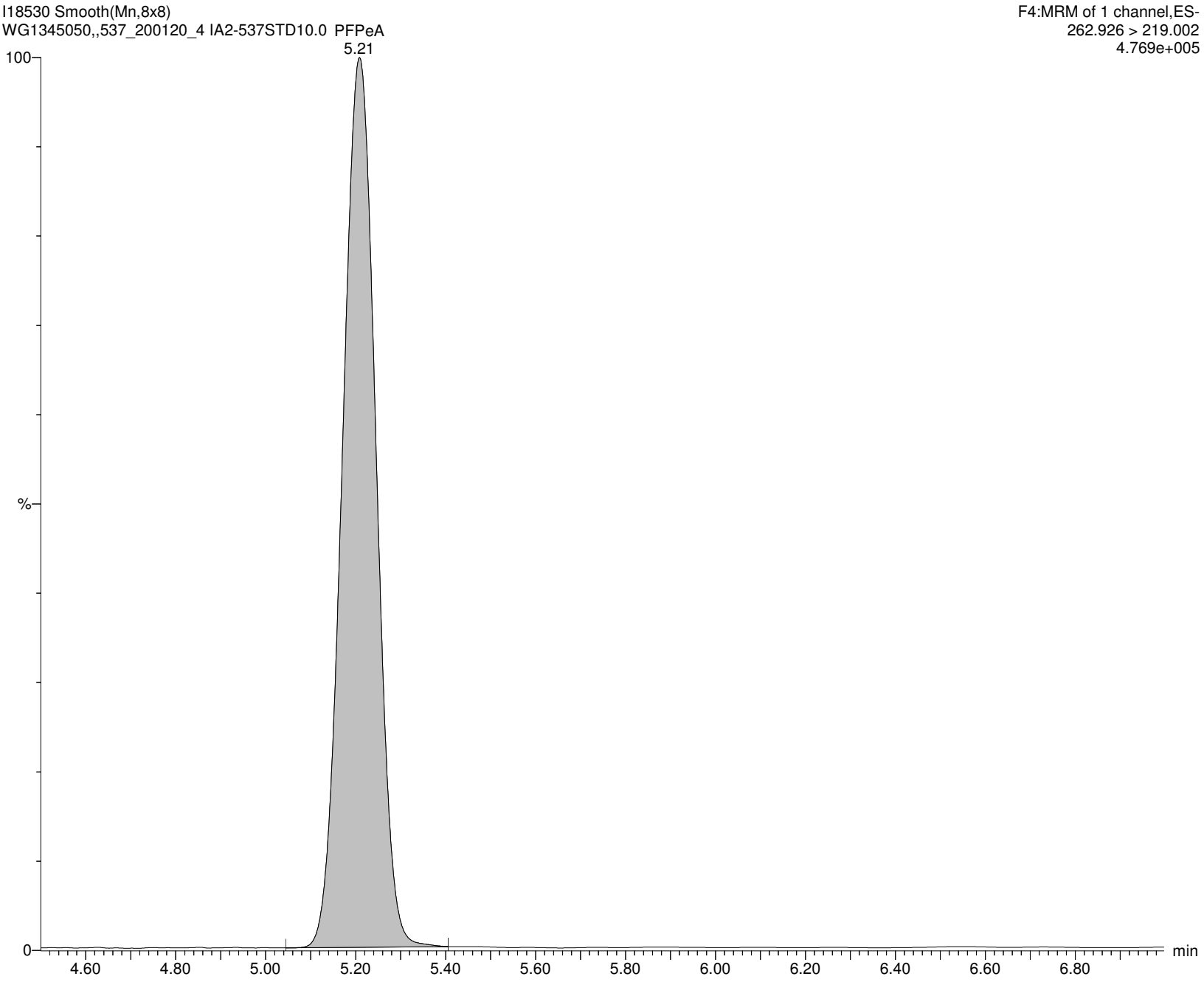
**PFPeA**





all concentration units in (ng/mL)

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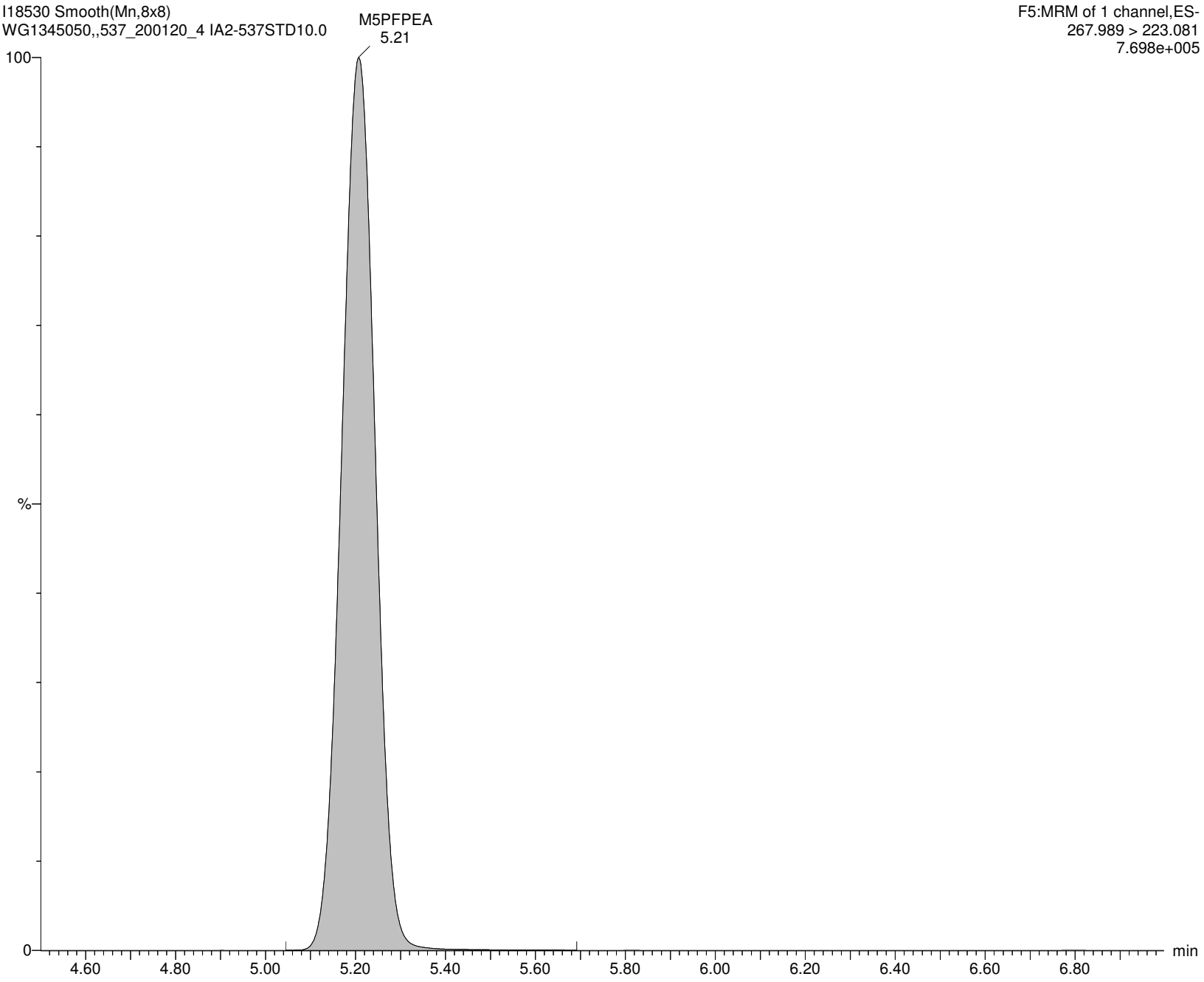
**M5PFPEA**





all concentration units in (ng/mL)

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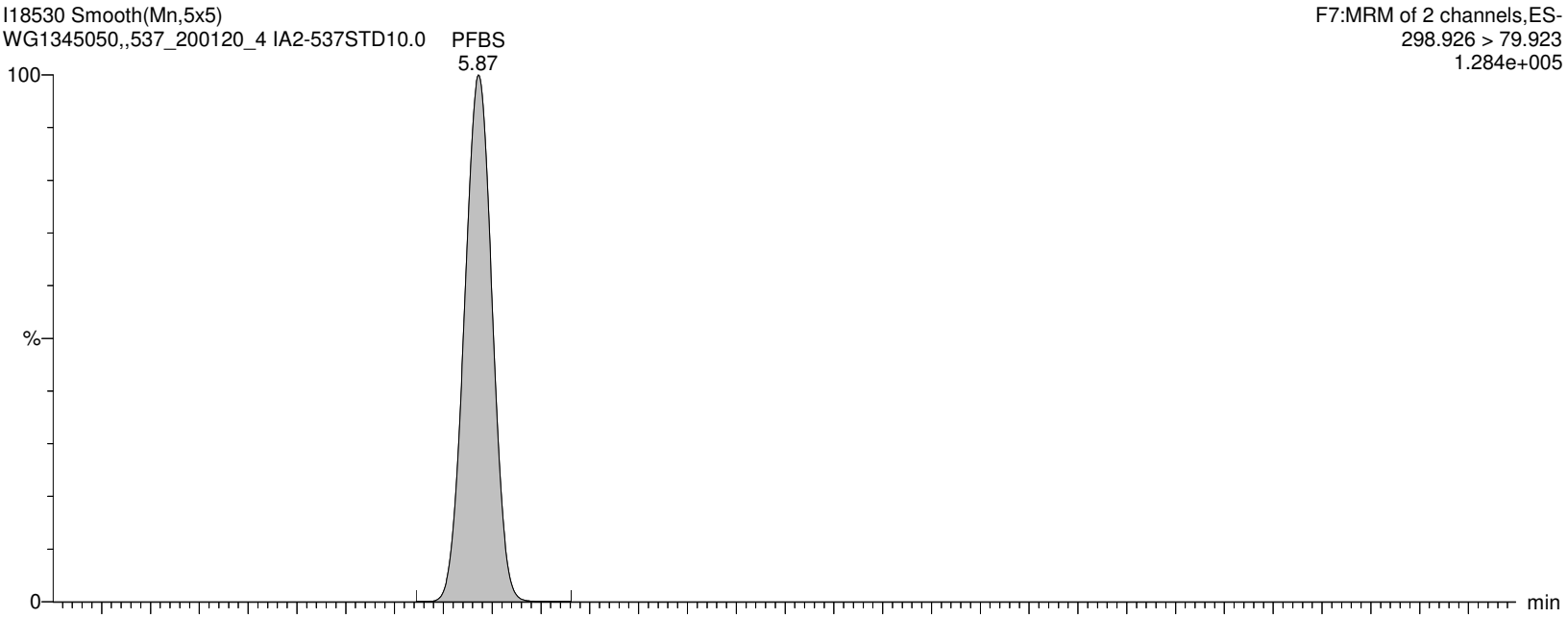
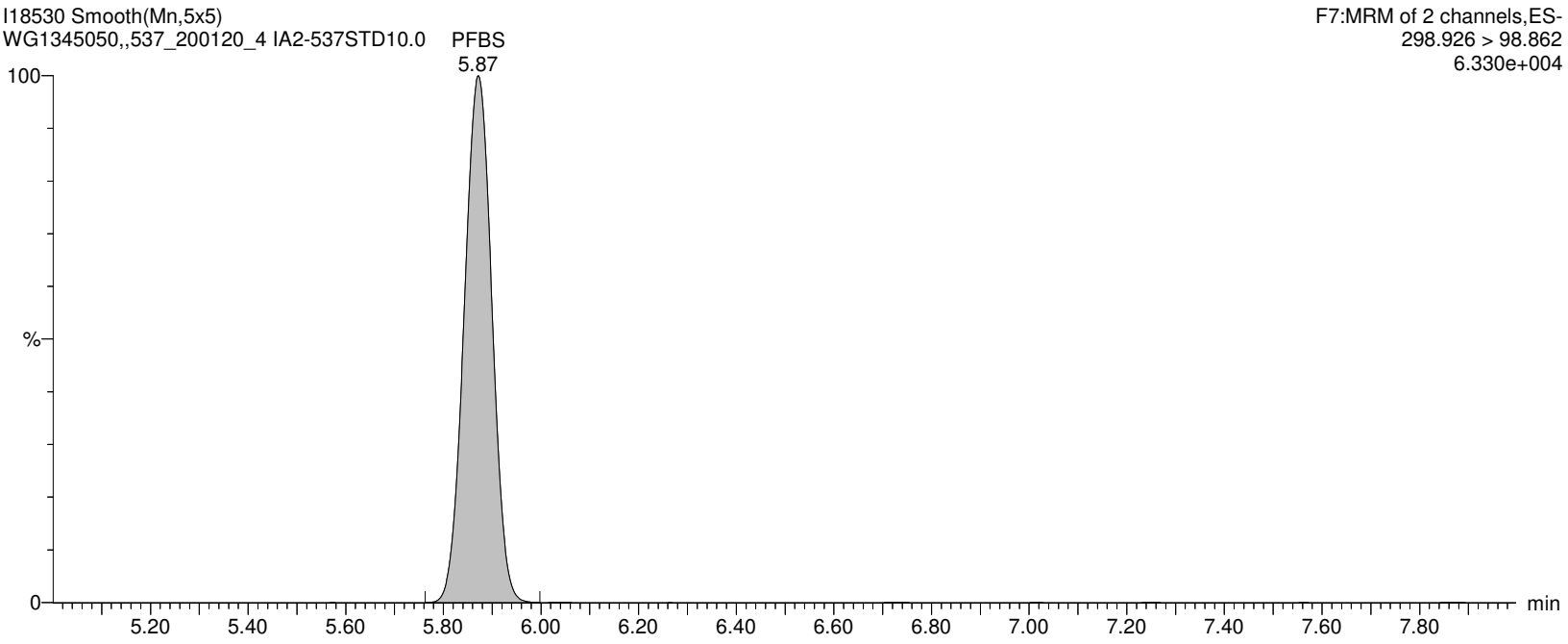
**PFBS**





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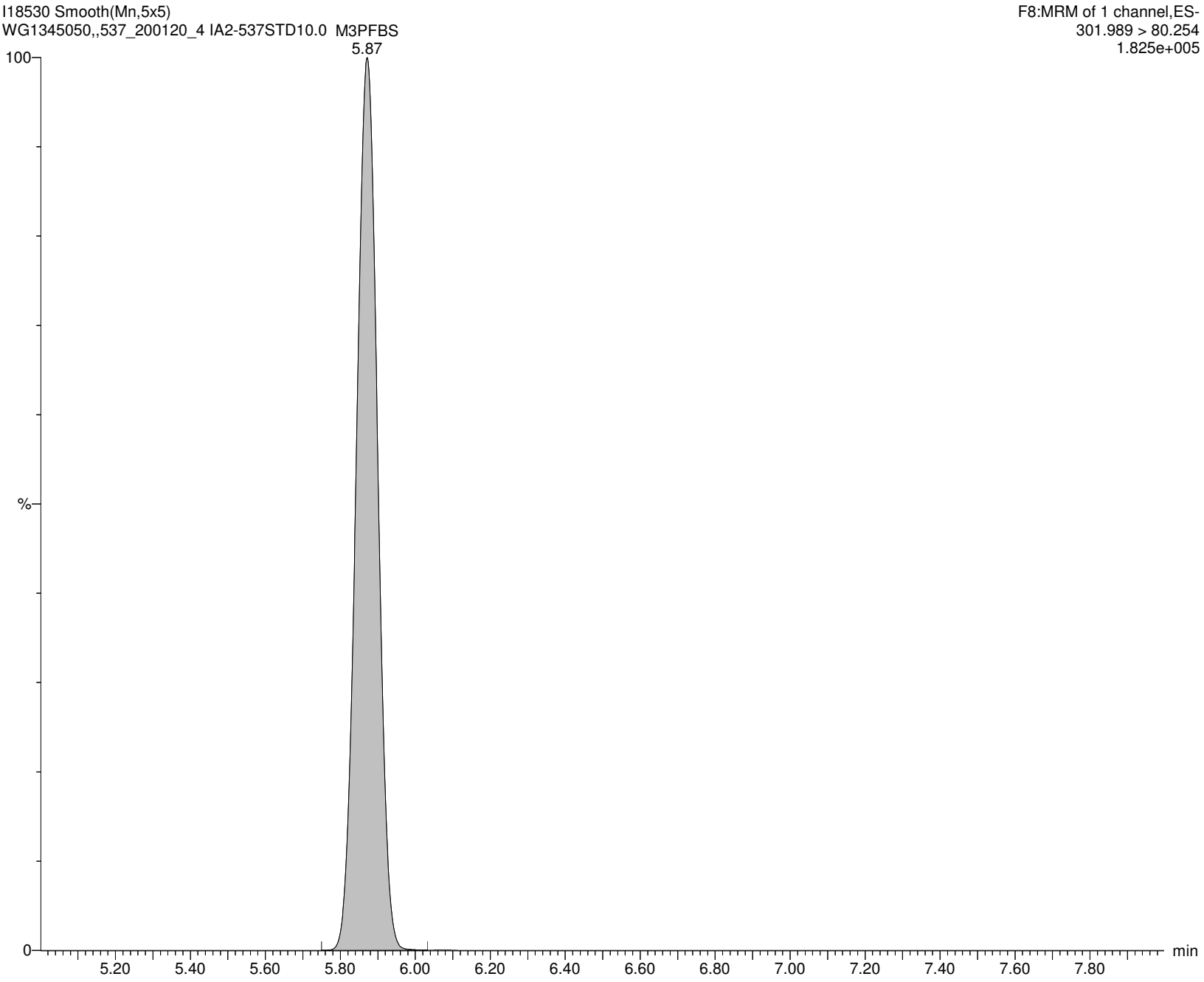



all concentration units in (ng/mL)

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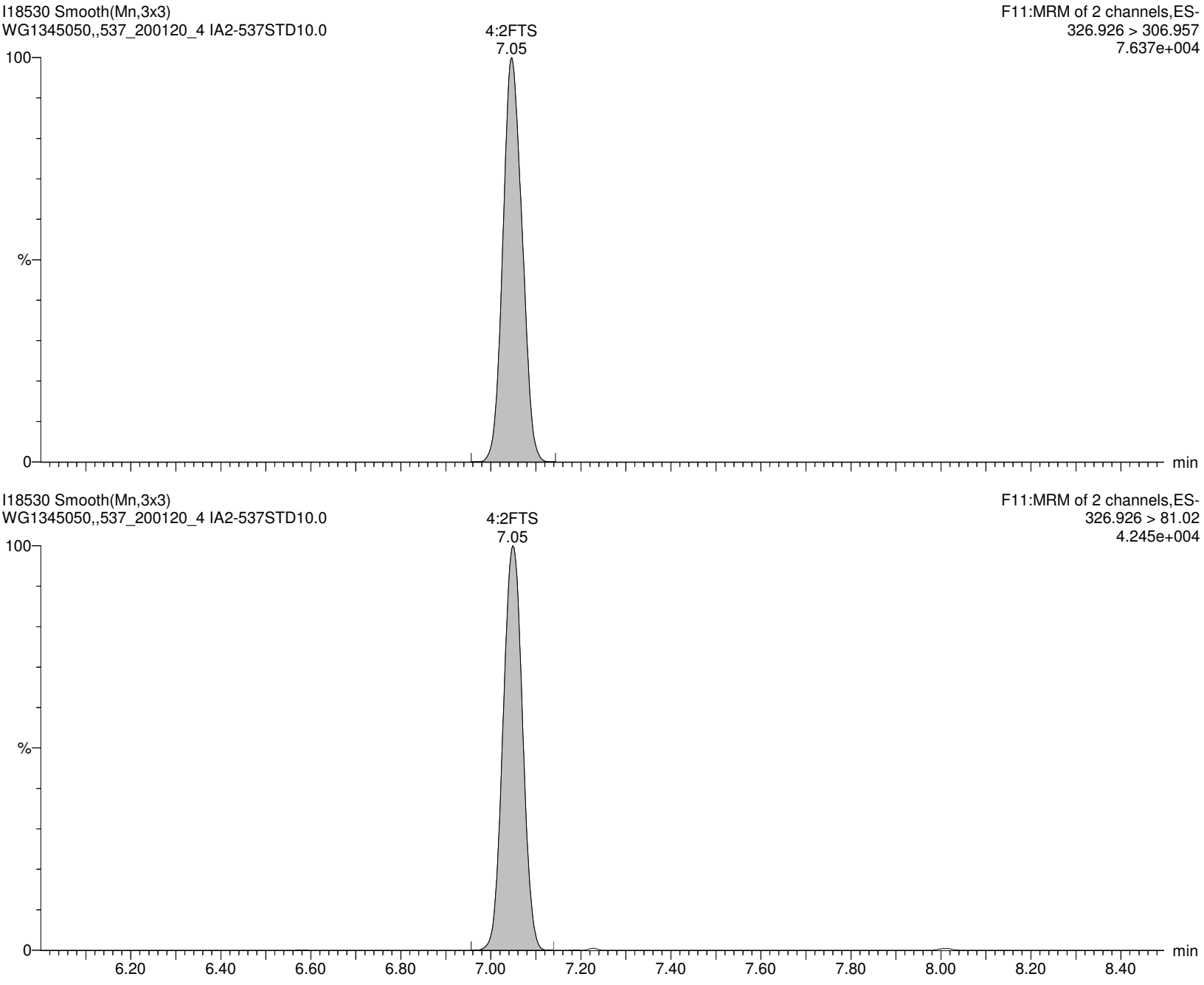



all concentration units in (ng/mL)

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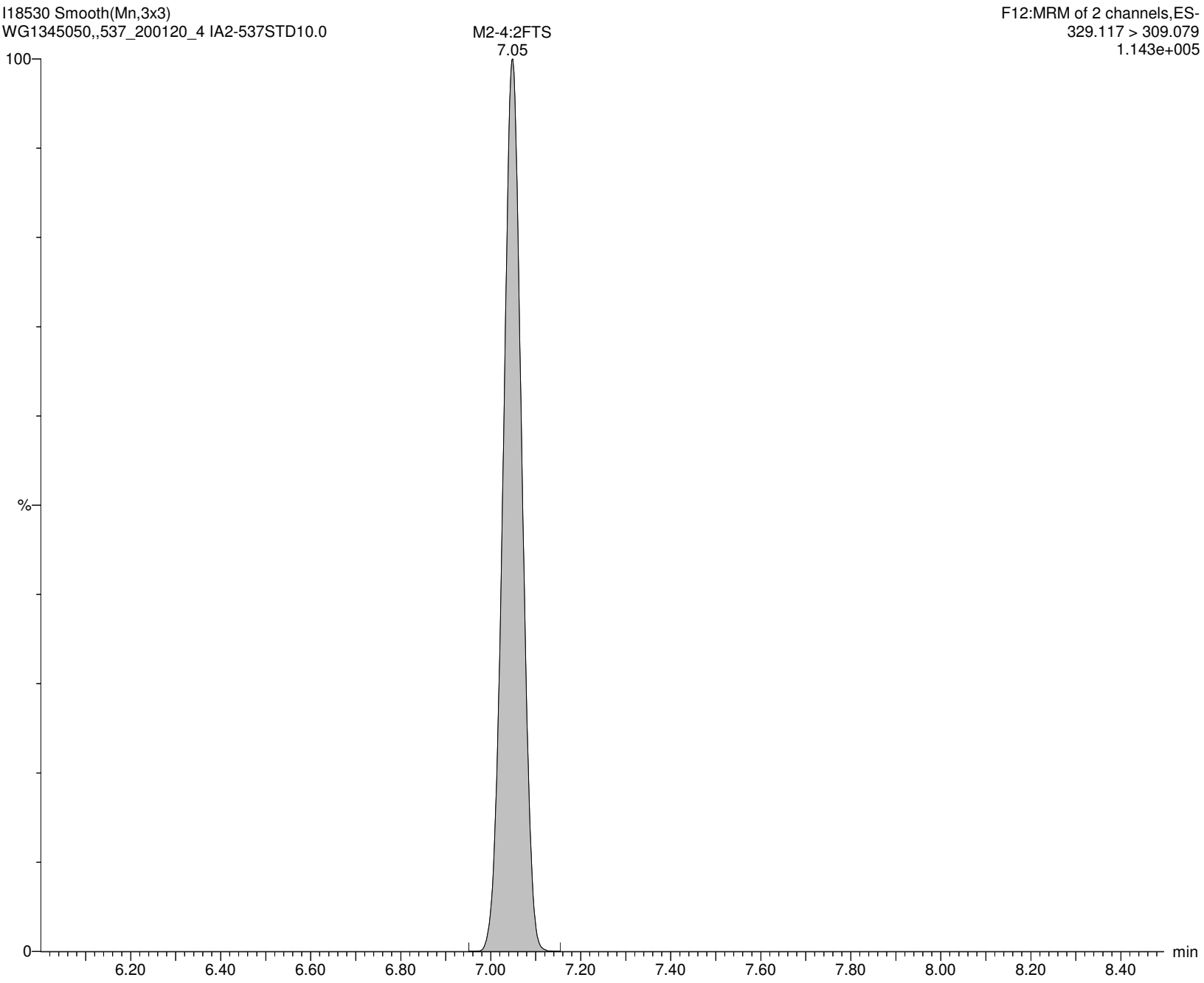
**M2-4:2FTS**





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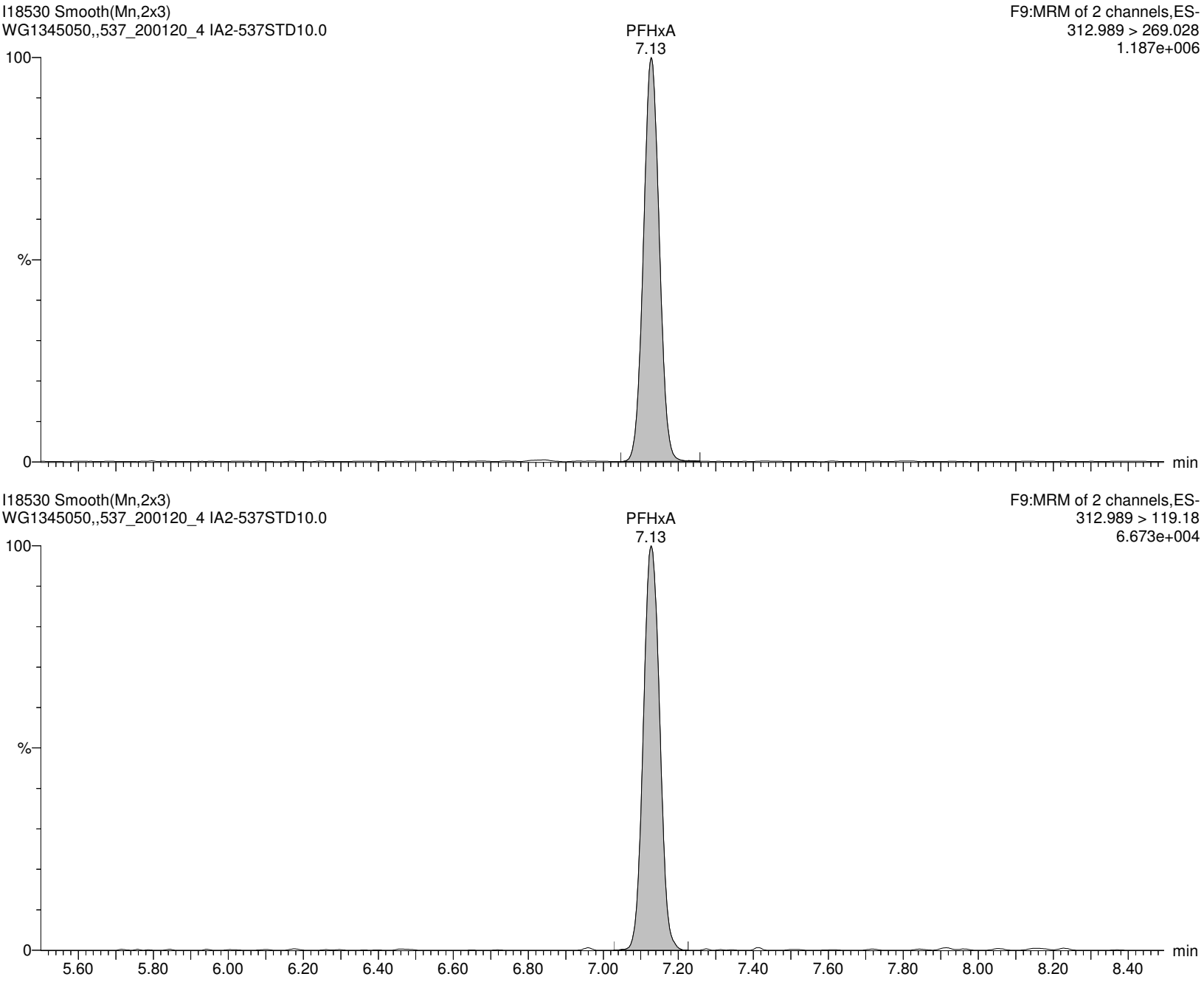



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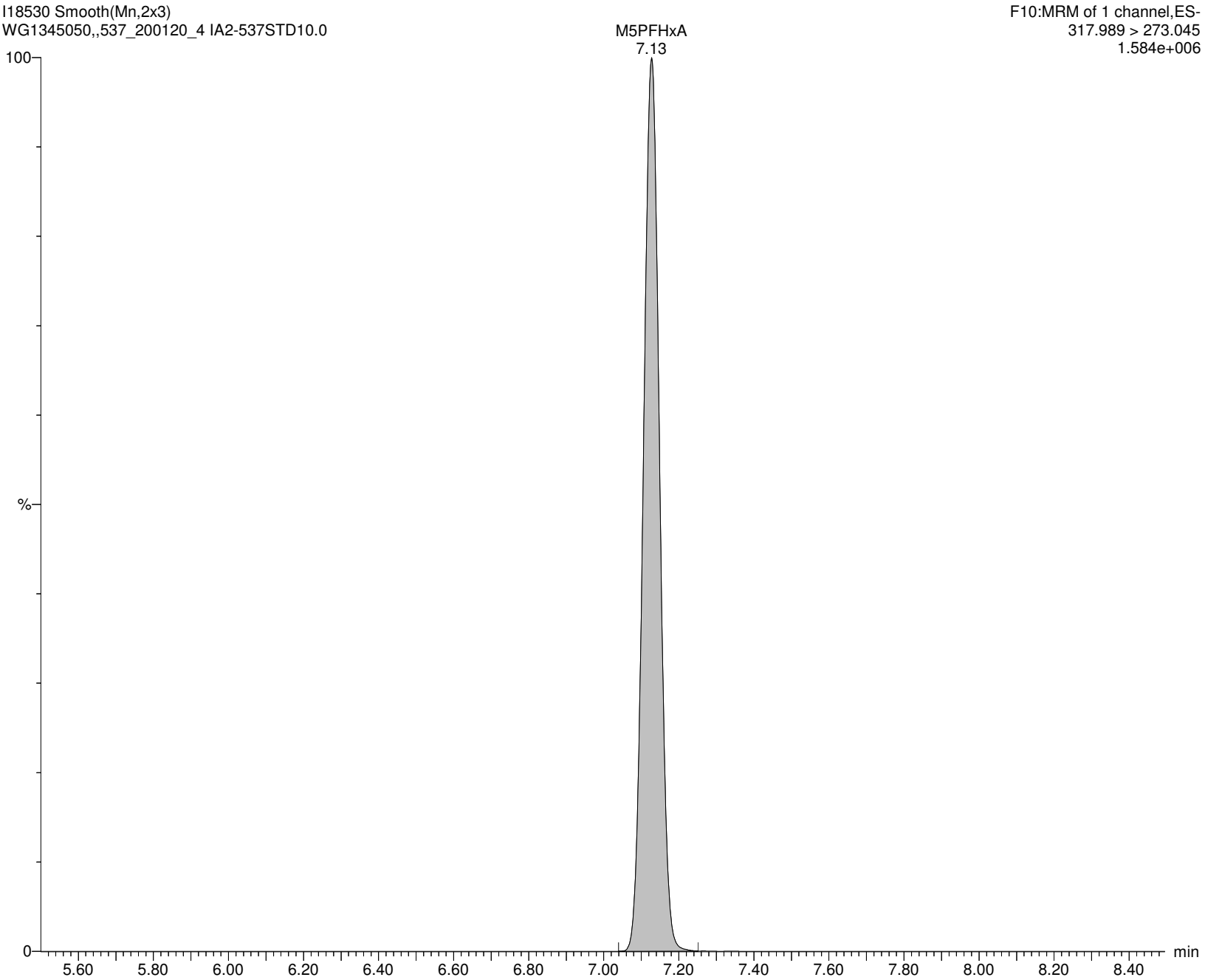



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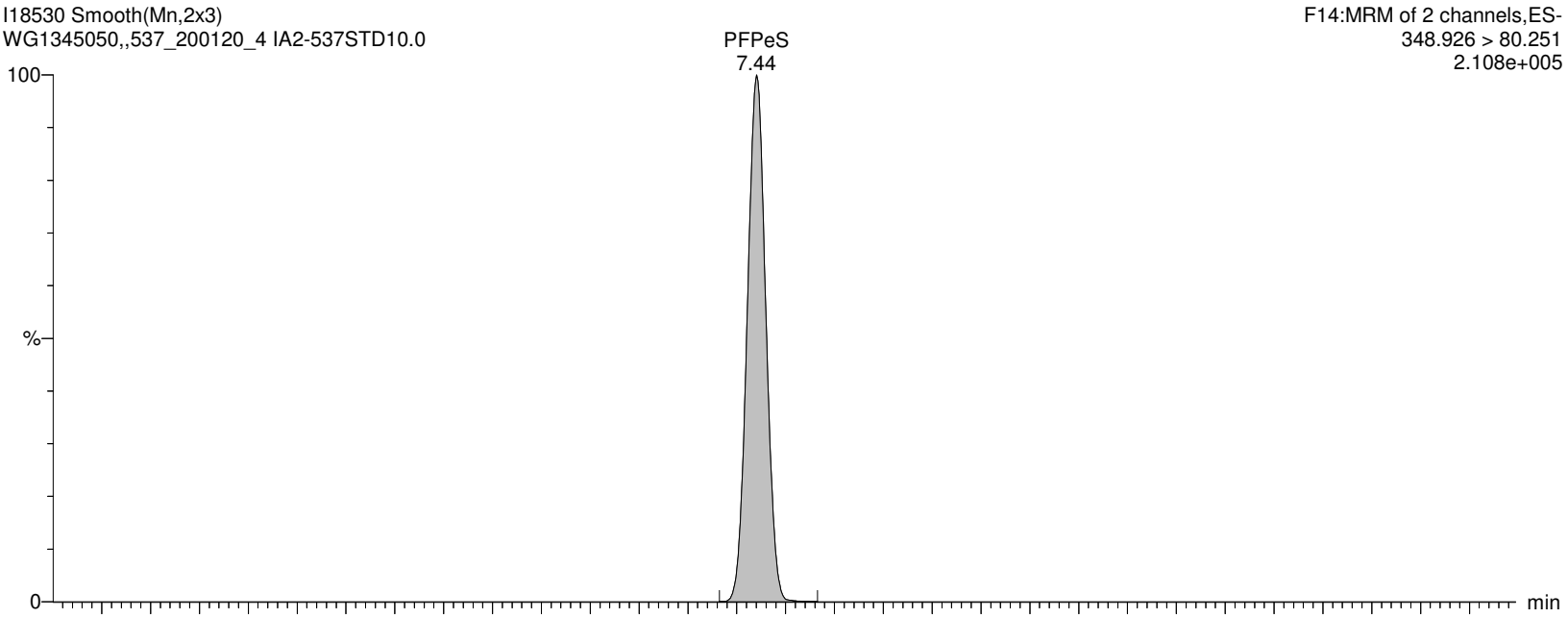


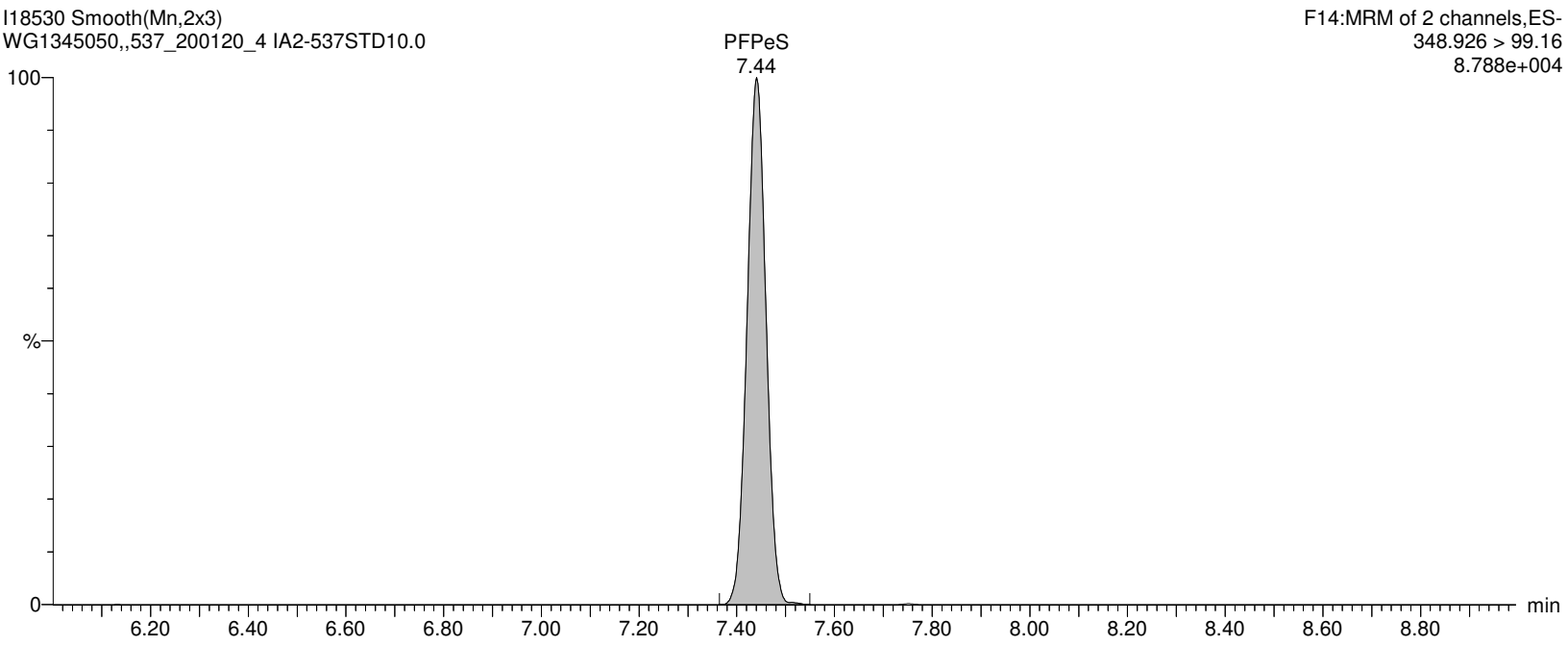



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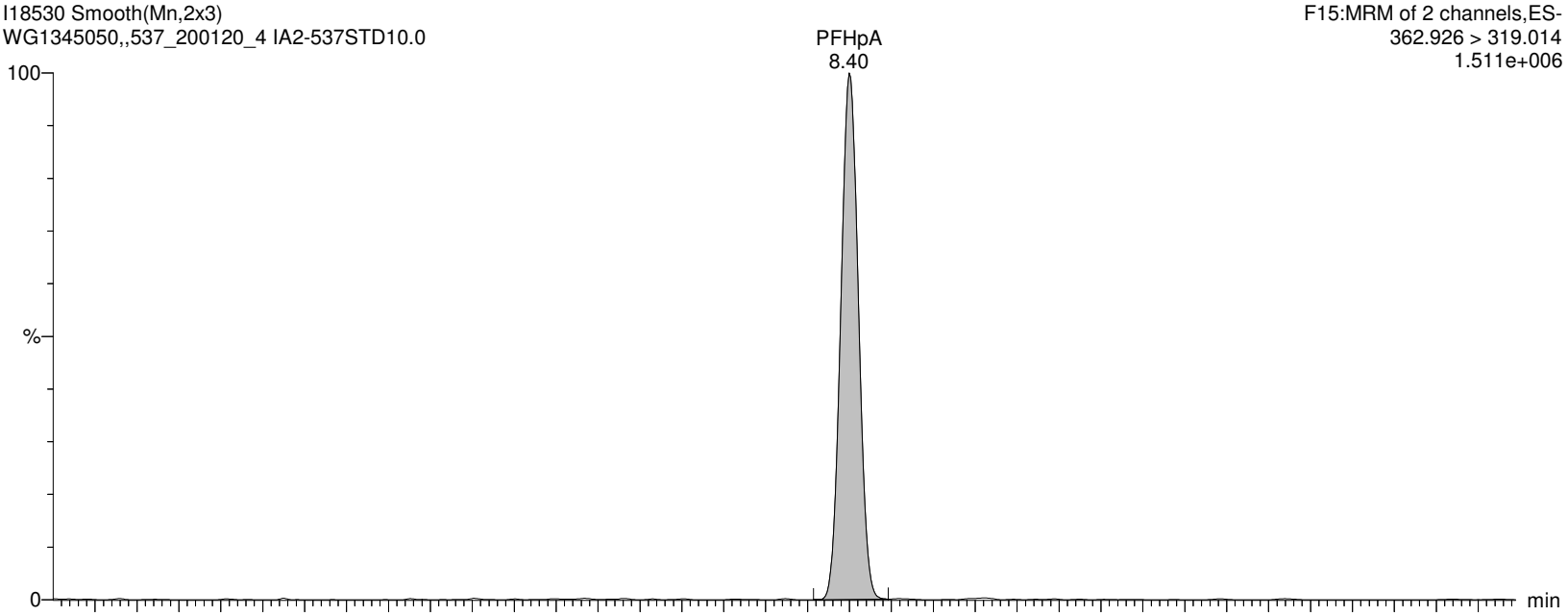
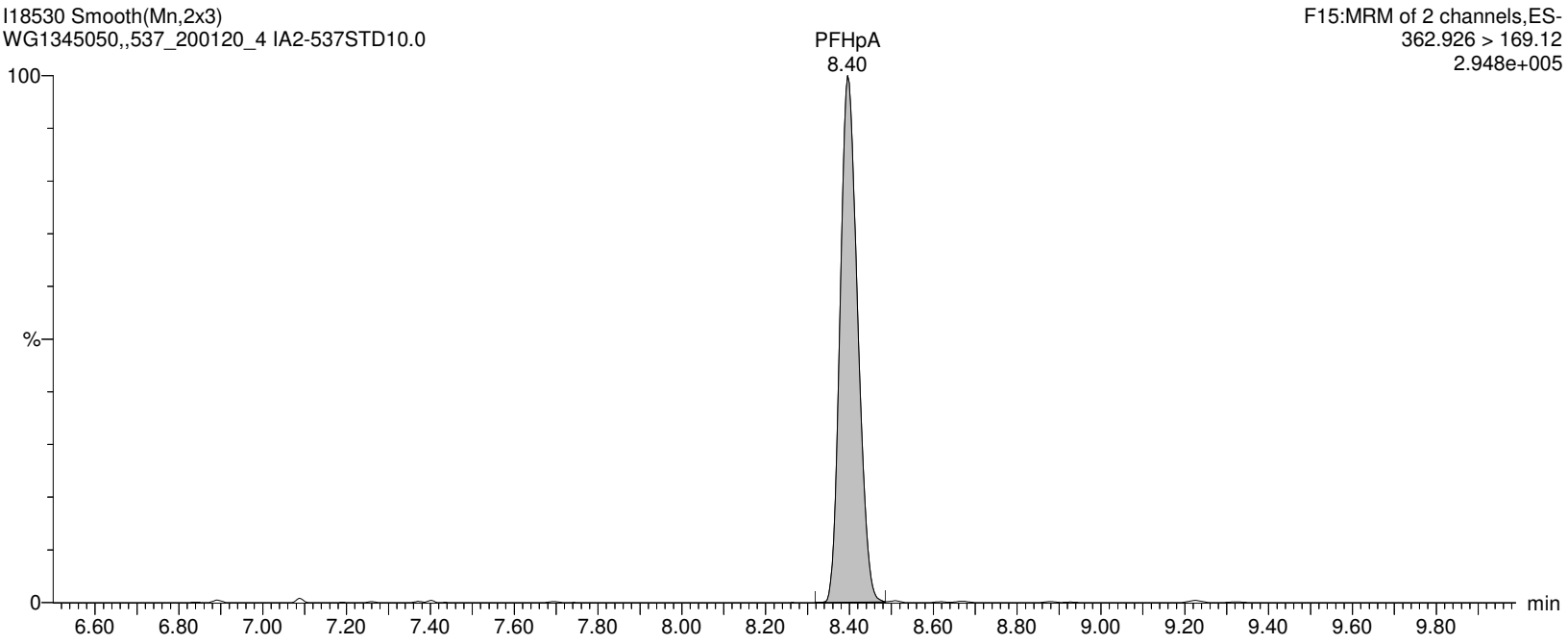
**PFHpA**



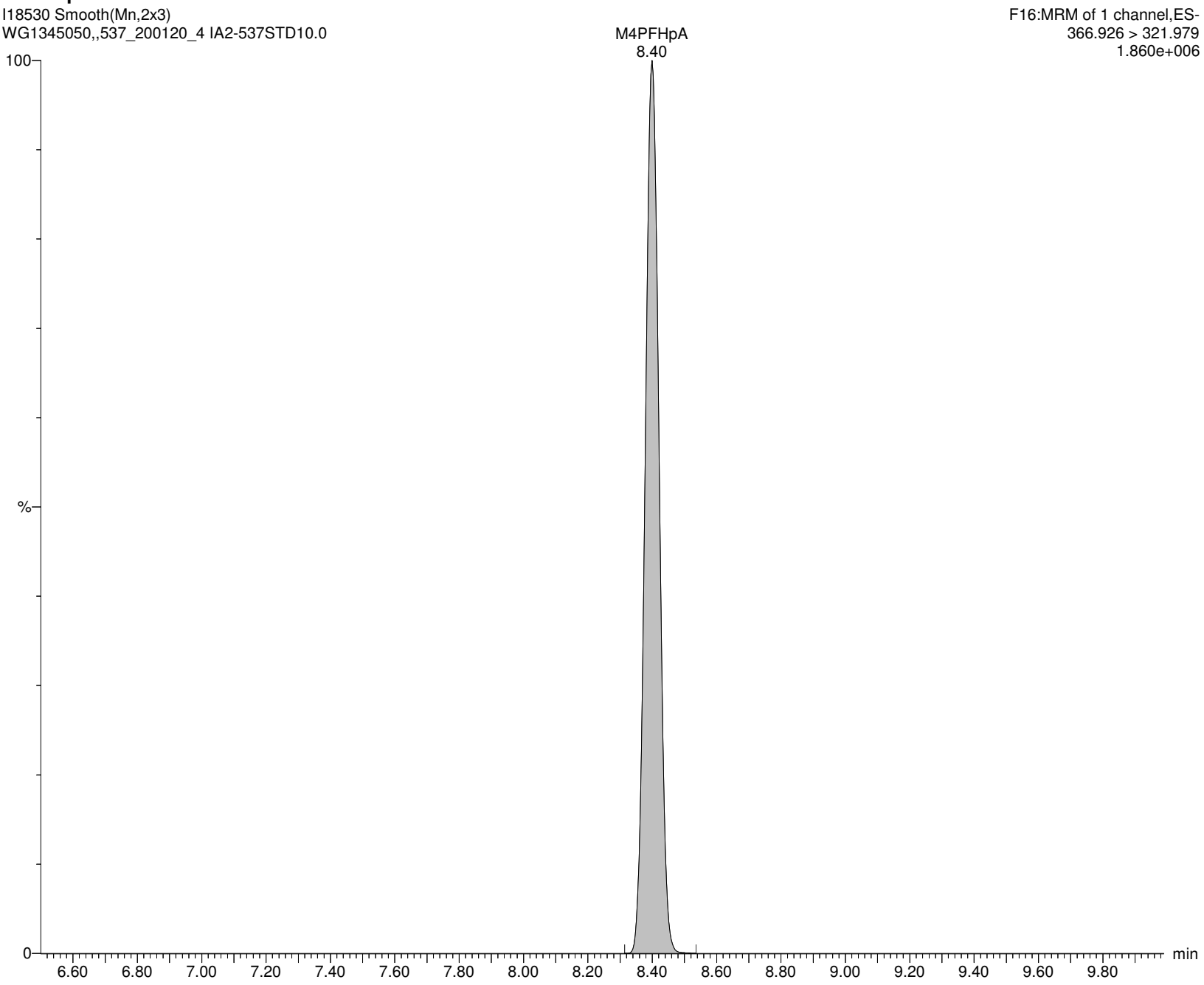


all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICAL_A.qld
Last Altered: Friday, February 28, 2020 09:12:40 Eastern Standard Time
Printed: Friday, February 28, 2020 09:27:49 Eastern Standard Time

**Name: I18530**
**ID: IA2-537STD10.0**
**Date: 27-Feb-2020**
**Time: 14:18:52**
**Description: WG1345050,,537_200120_4**
**User: LCMS01:SG**
**Vial: 1:A,5**
**Instrument: XEVO-TQSmicro#QEA0276**
**Inlet Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\LCMS_537_ISO_MeOH**
**Tune Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\190709_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**M4PFHpA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
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Last Altered: Friday, February 28, 2020 09:12:40 Eastern Standard Time
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**Vial: 1:A,5**
**Instrument: XEVO-TQSmicro#QEA0276**
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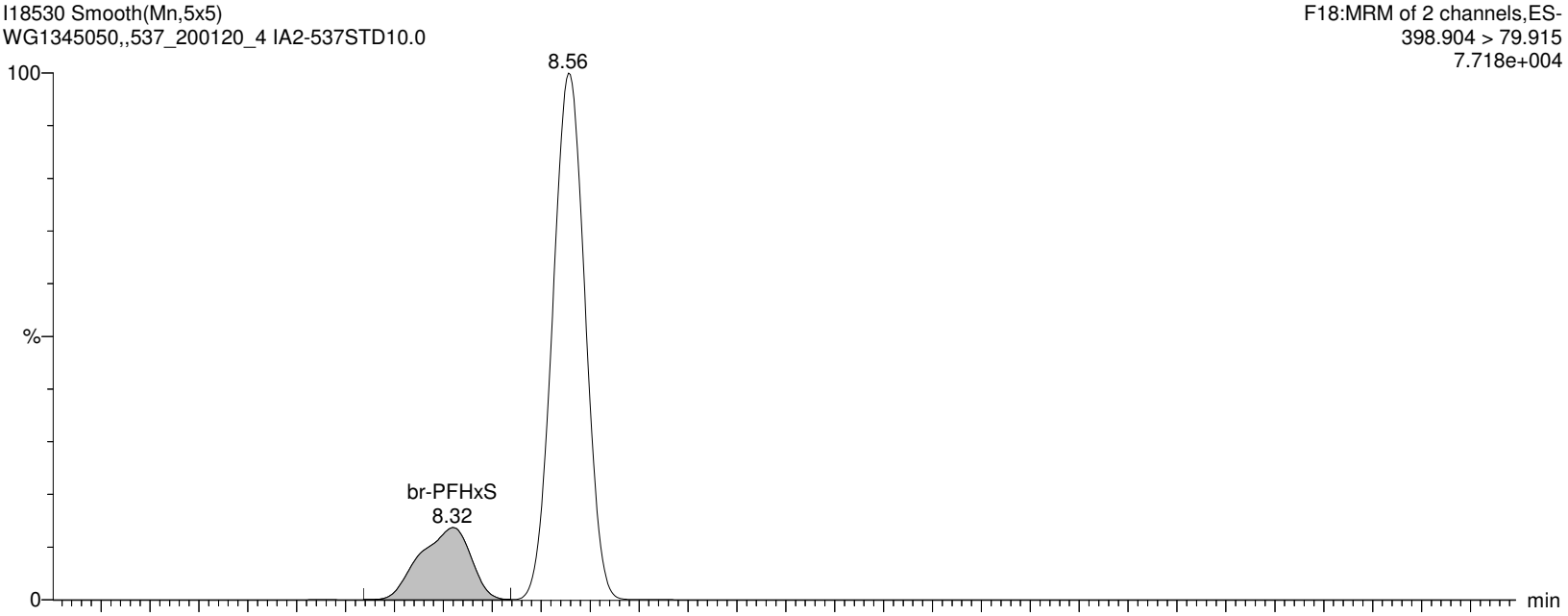
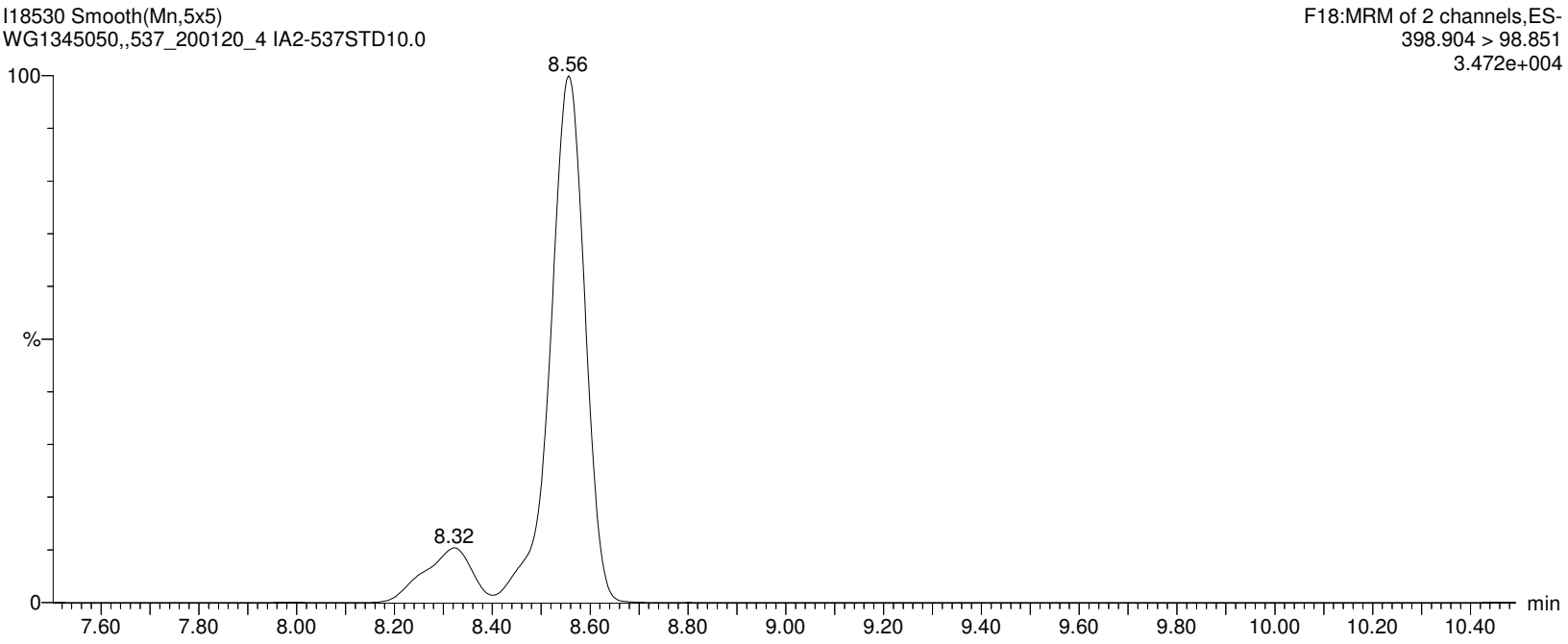
**br-PFHxS**





all concentration units in (ng/mL)

Alpha Analytical Inc.
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Last Altered: Friday, February 28, 2020 09:12:40 Eastern Standard Time
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**Instrument: XEVO-TQSmicro#QEA0276**
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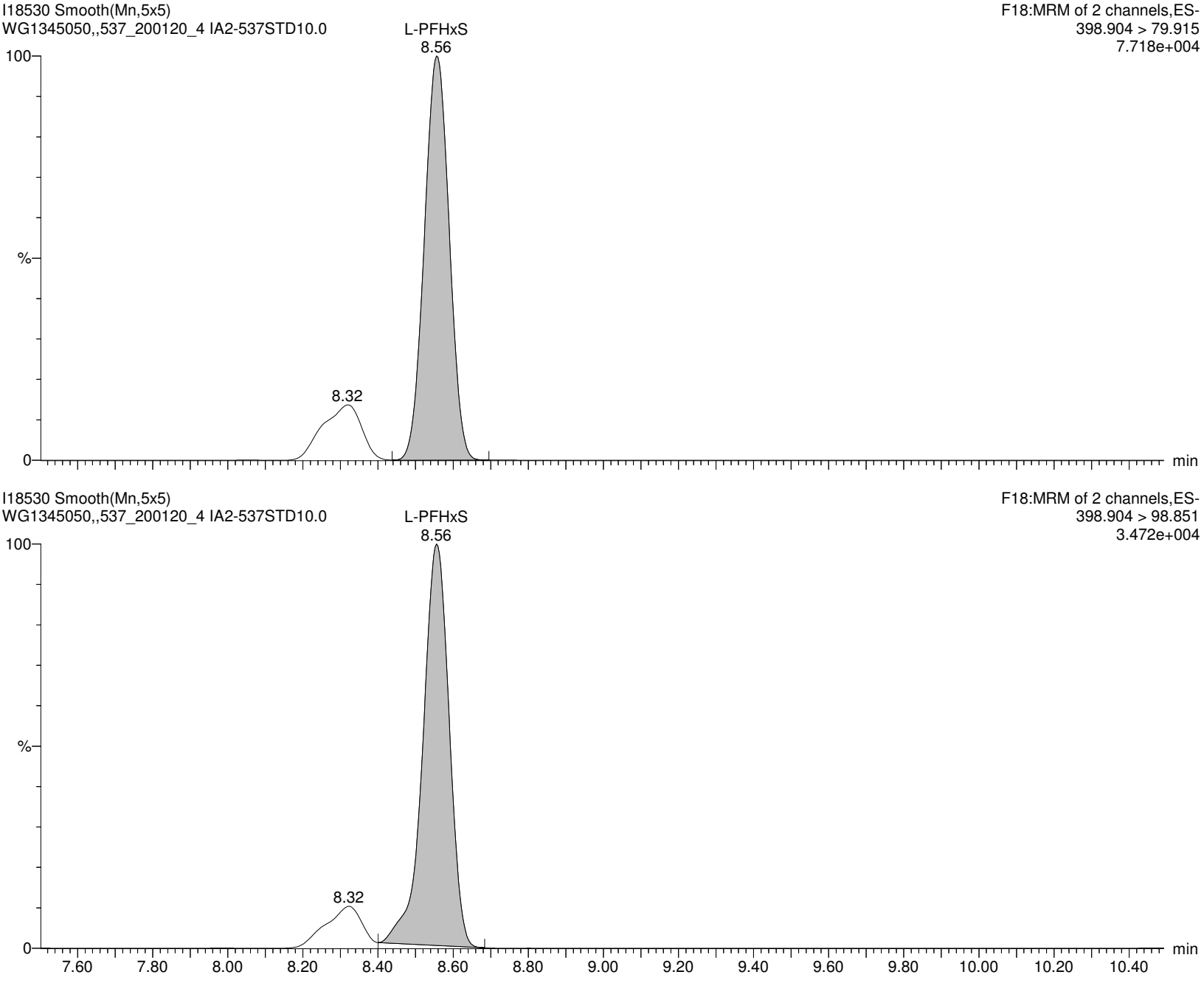
**L-PFHxS**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICAL_A.qld
Last Altered: Friday, February 28, 2020 09:12:40 Eastern Standard Time
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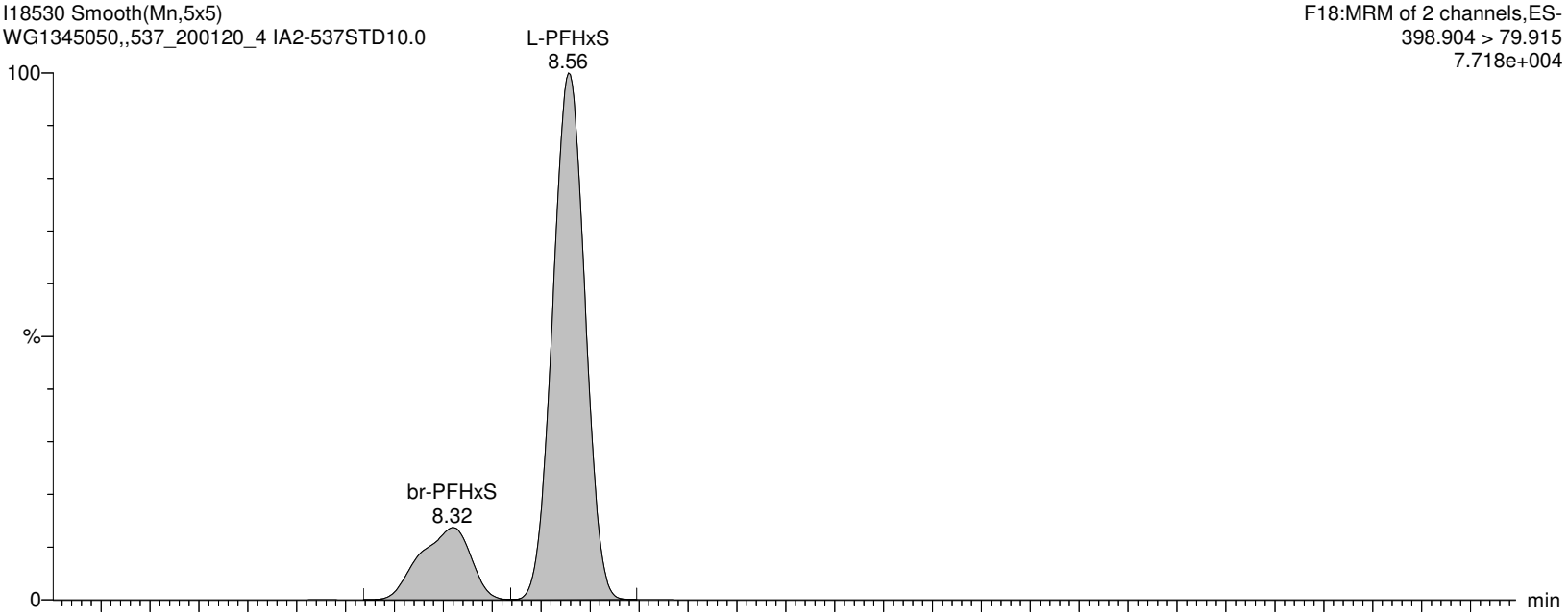
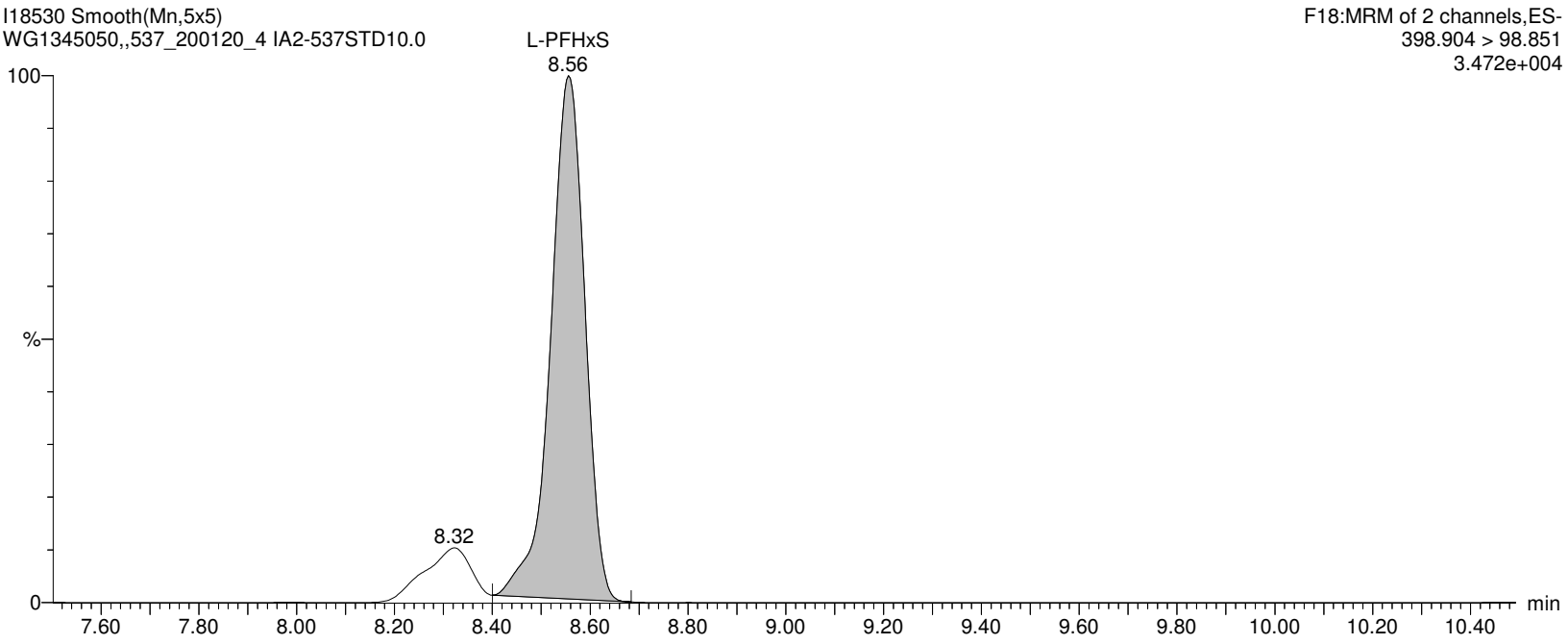
**PFHxS**





all concentration units in (ng/mL)

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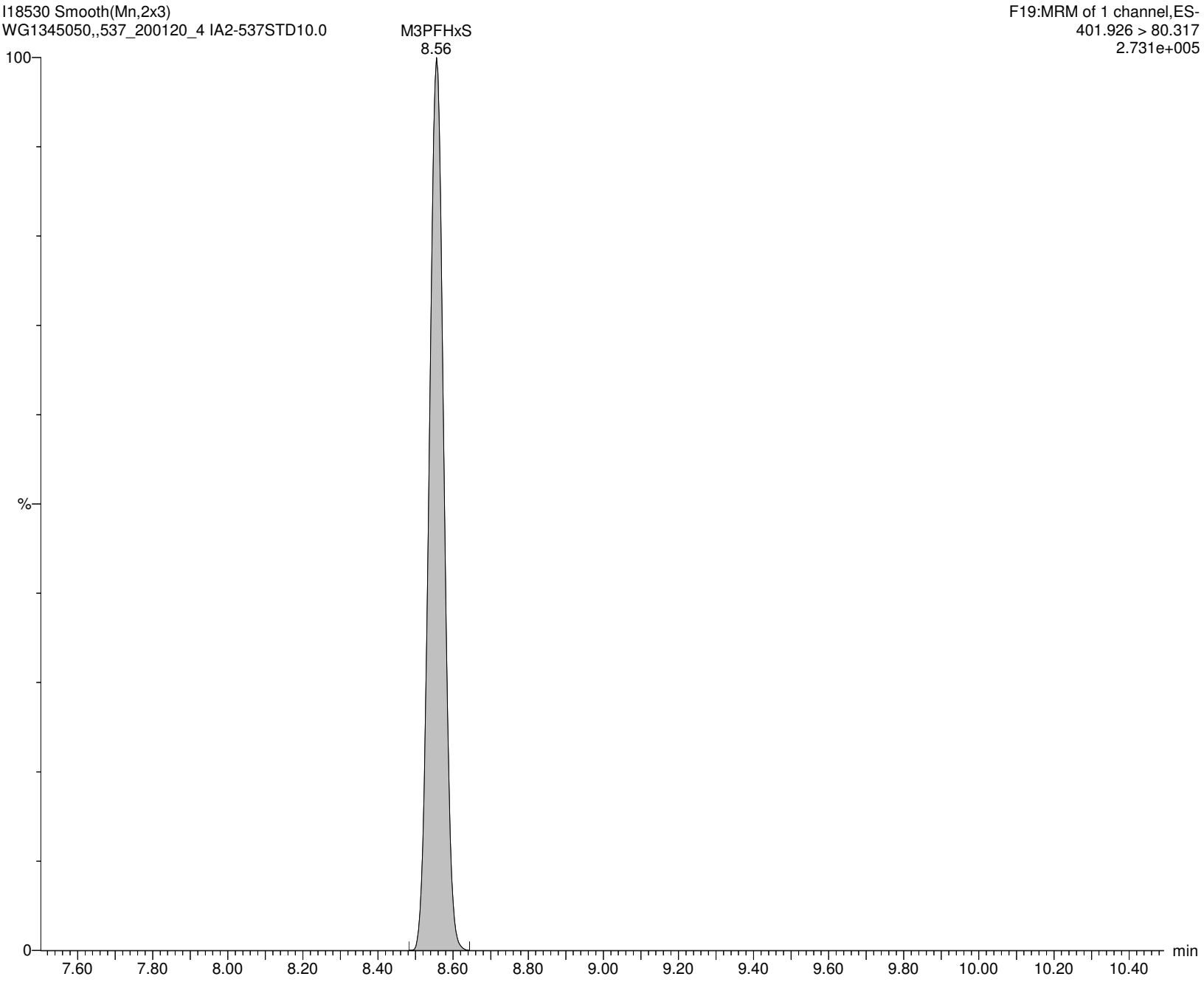
**M3PFHxS**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICAL_A.qld
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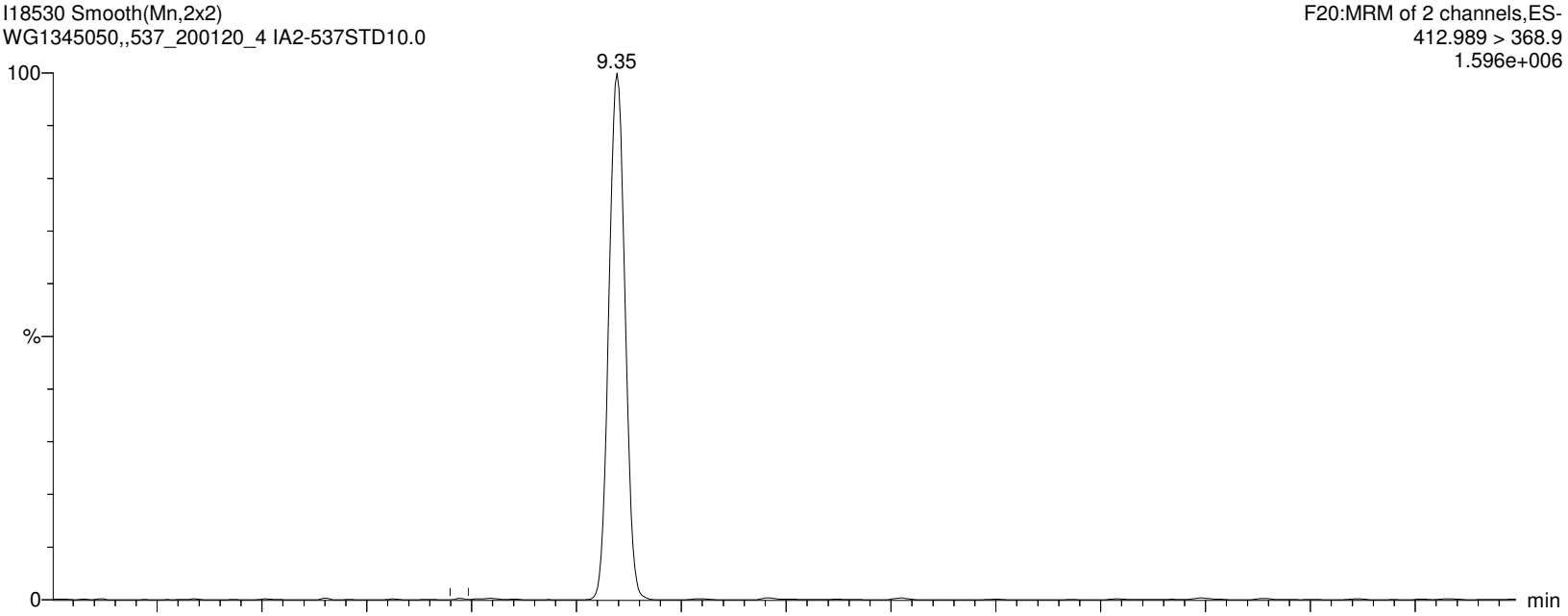
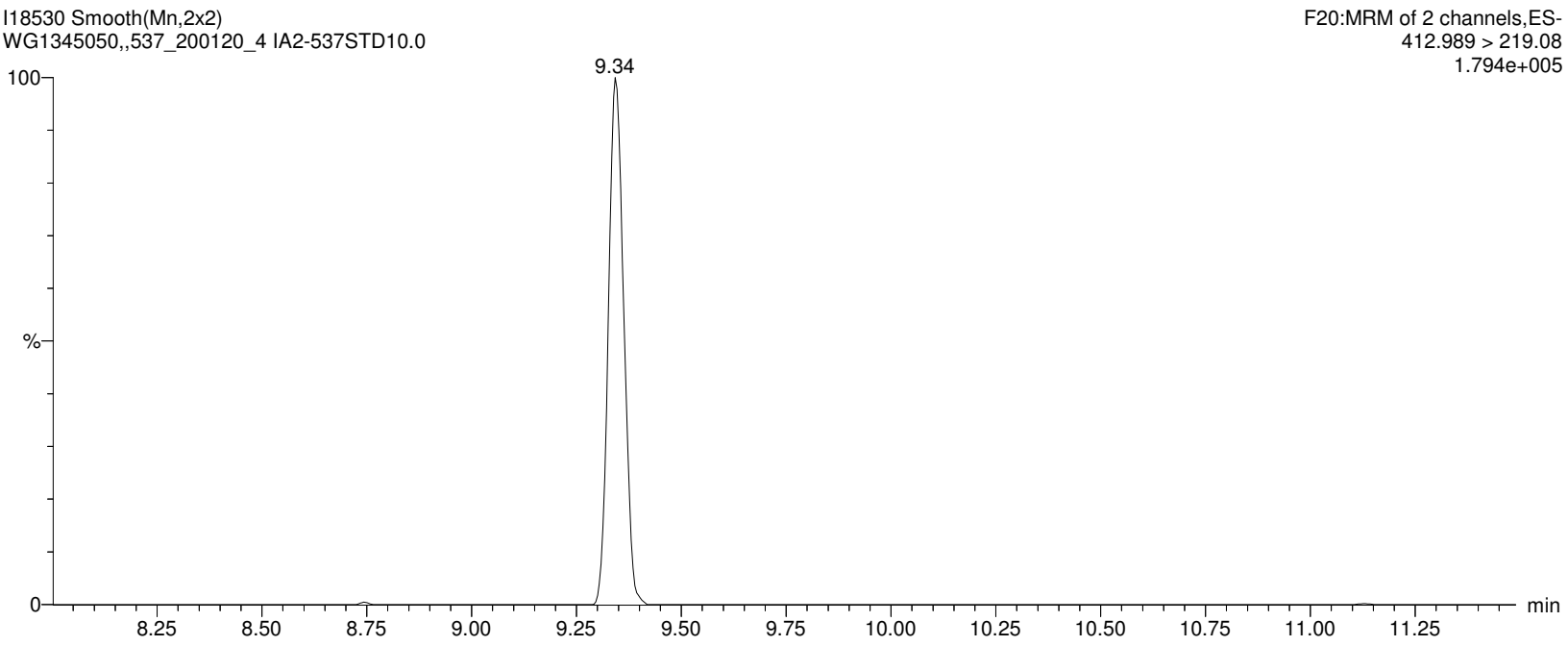
**br-PFOA**





all concentration units in (ng/mL)

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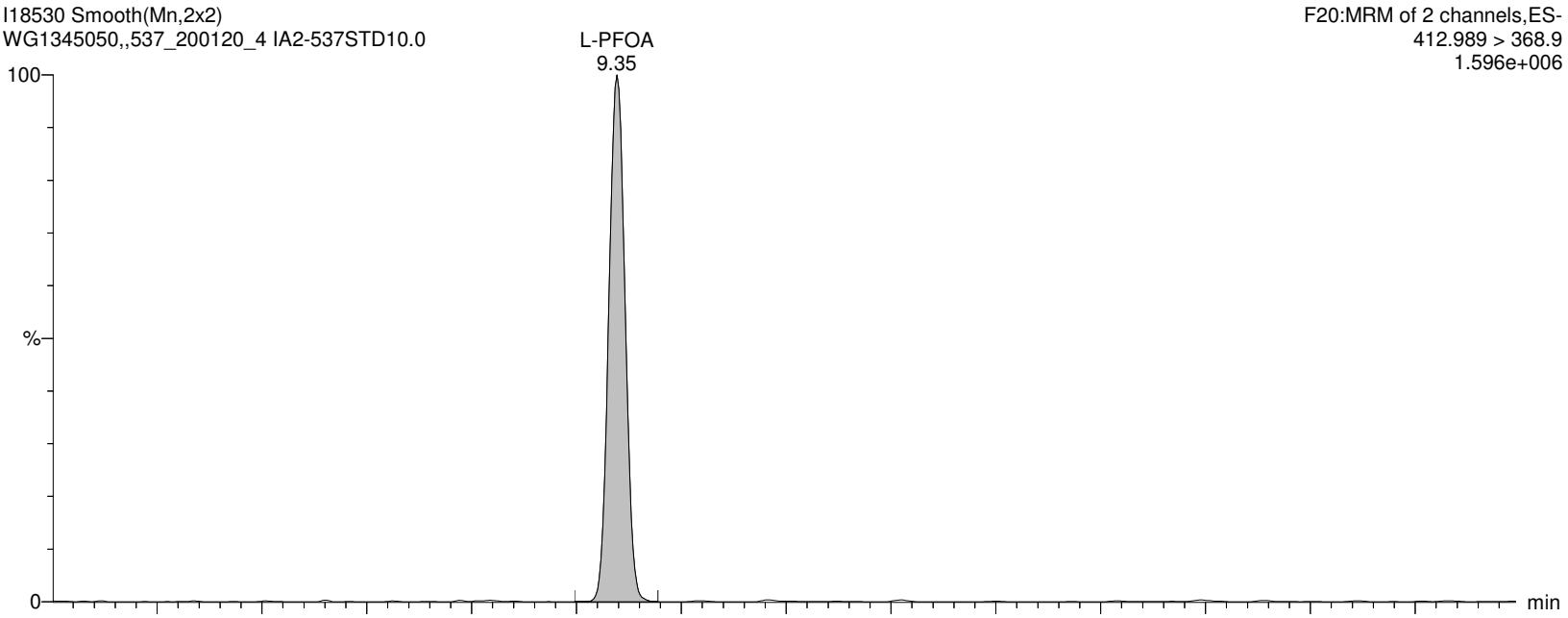
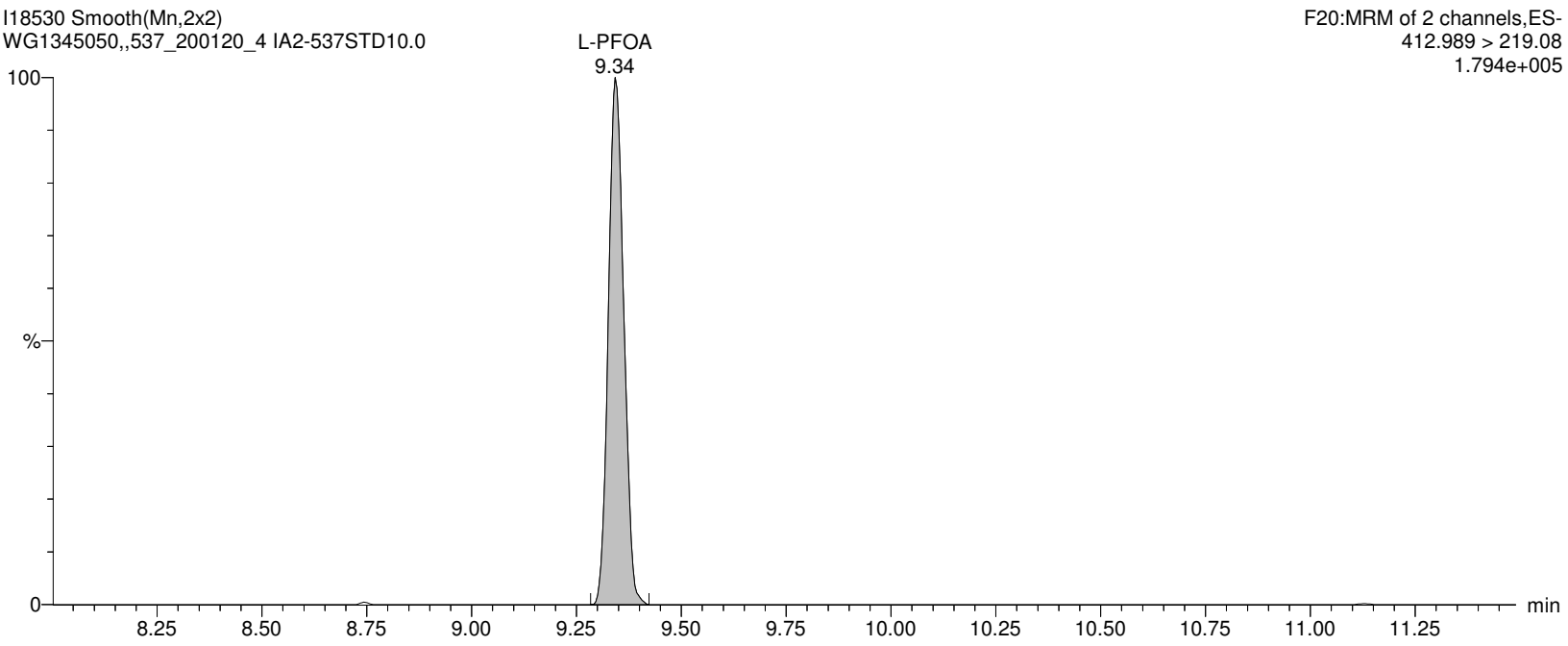
**L-PFOA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICAL_A.qld
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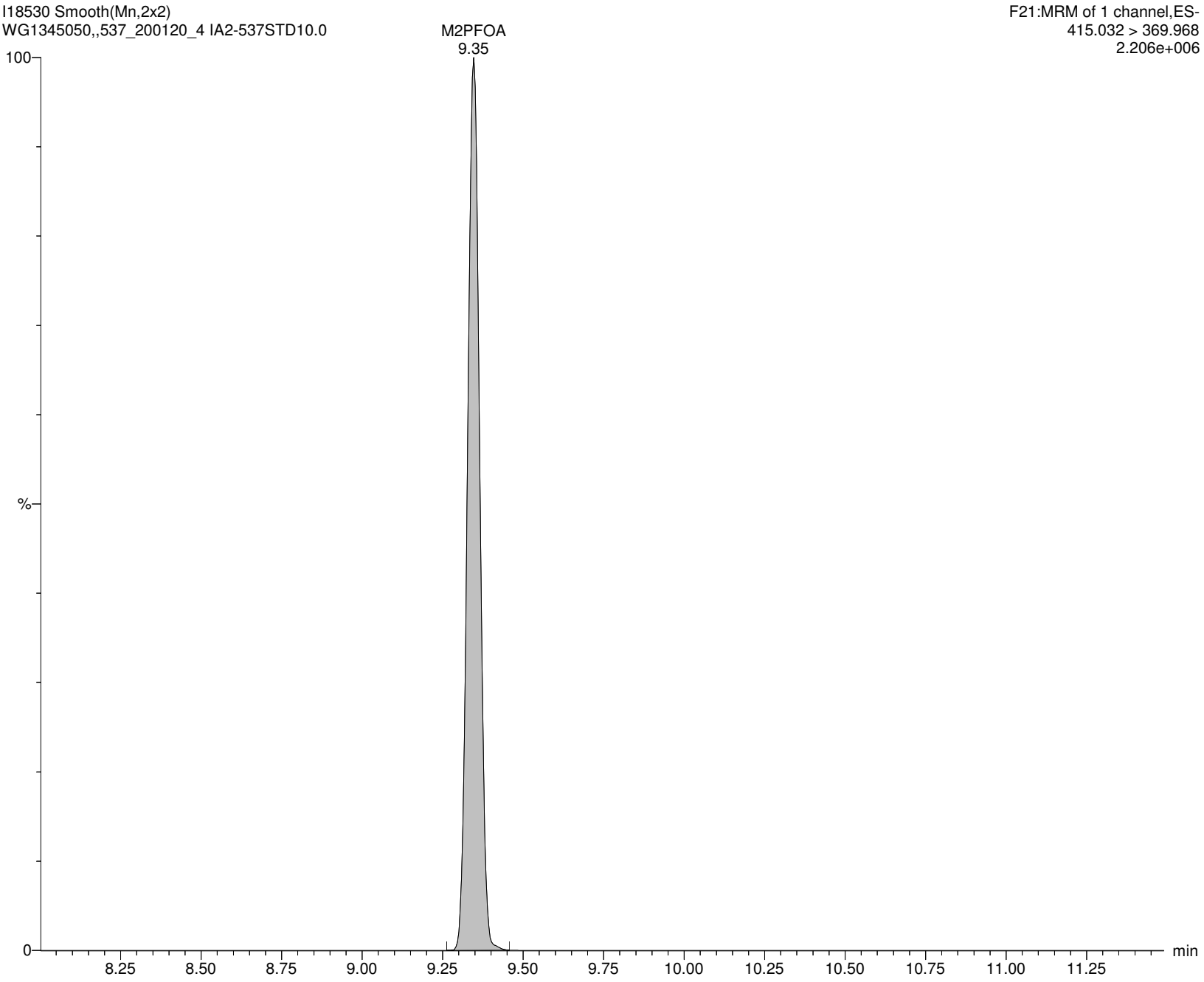
**M2PFOA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICAL_A.qld
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**Vial: 1:A,5**
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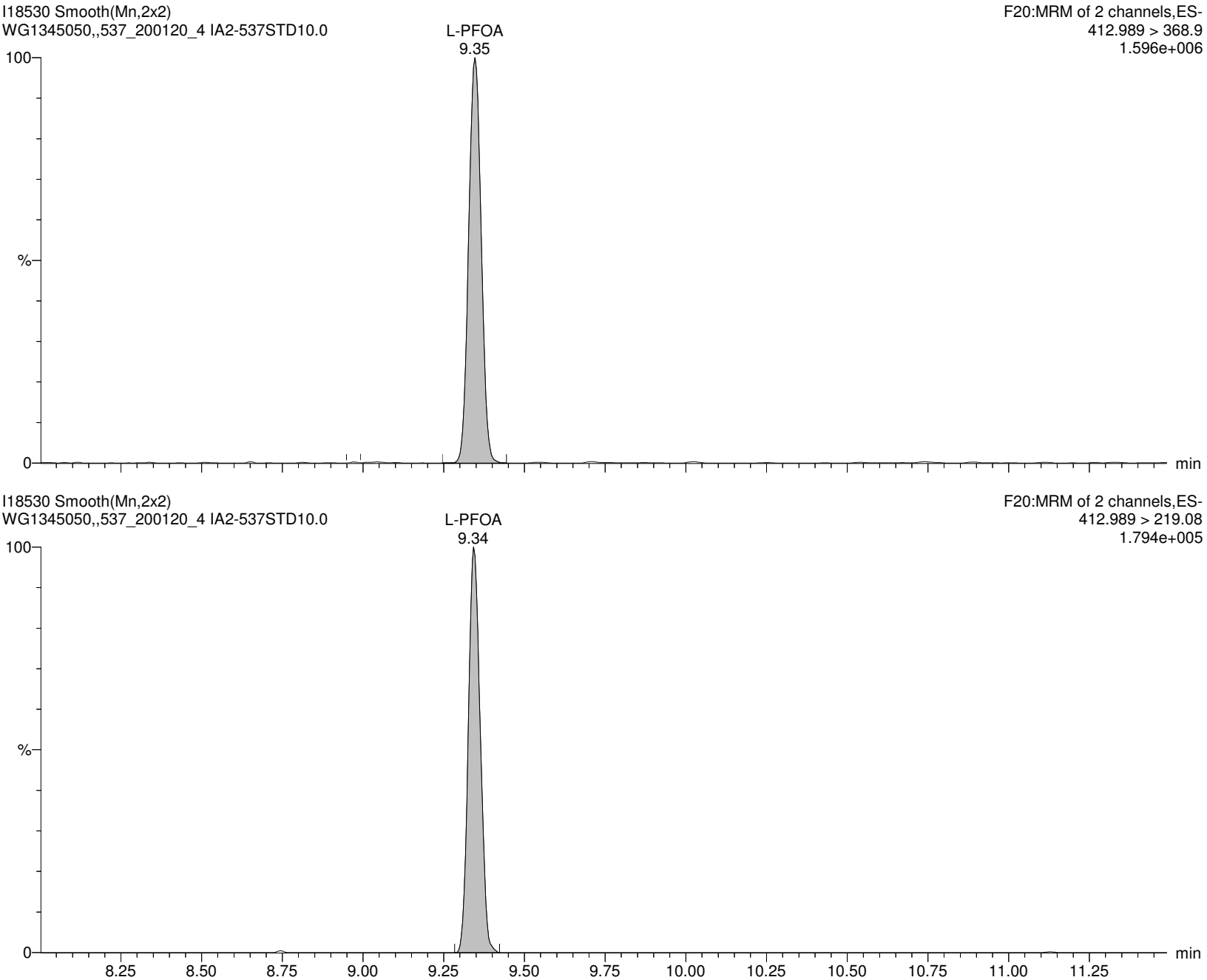



all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICAL_A.qld
Last Altered: Friday, February 28, 2020 09:12:40 Eastern Standard Time
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**Instrument: XEVO-TQSmicro#QEA0276**
**Inlet Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\LCMS_537_ISO_MeOH**
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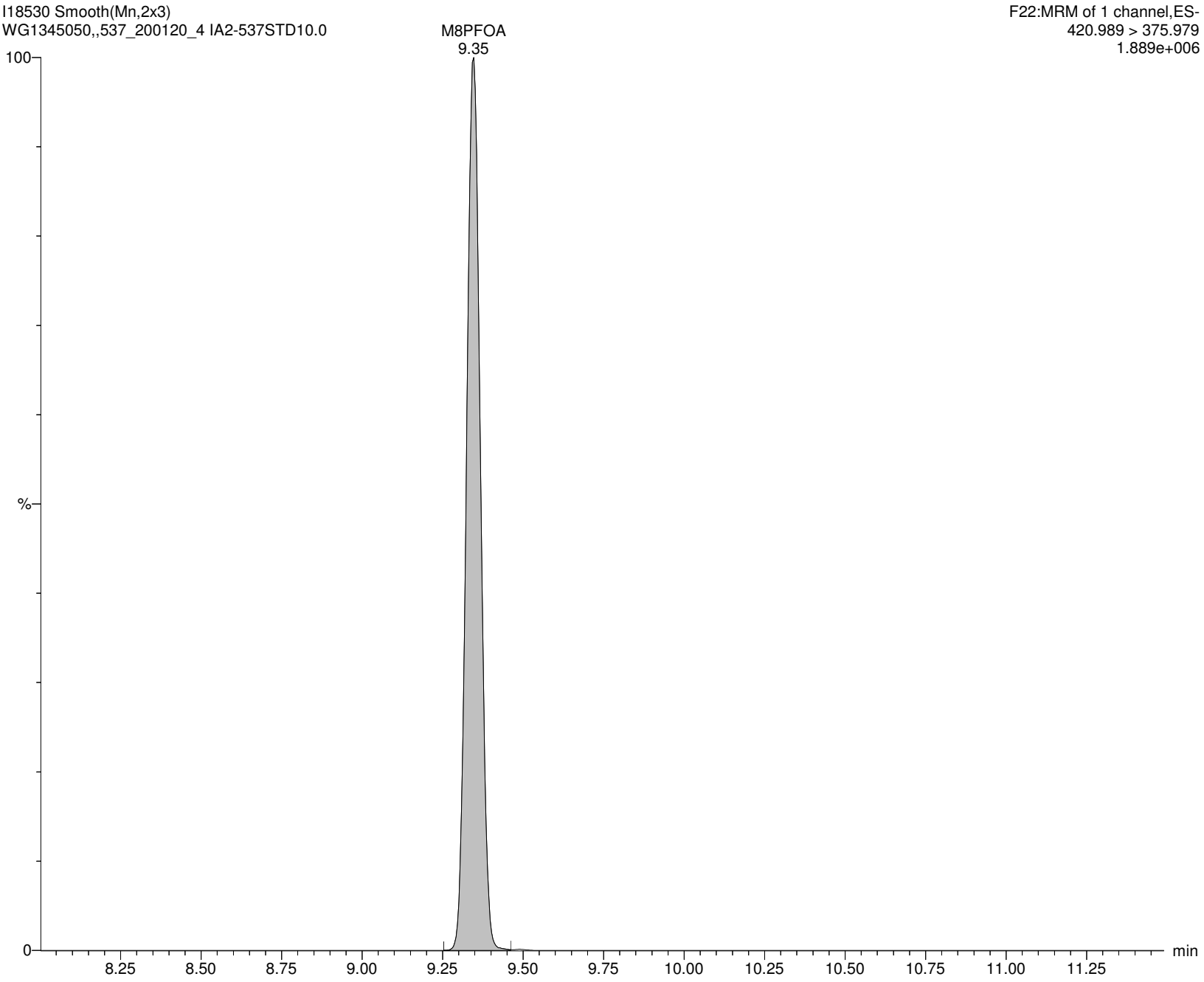
**M8PFOA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICAL_A.qld
Last Altered: Friday, February 28, 2020 09:12:40 Eastern Standard Time
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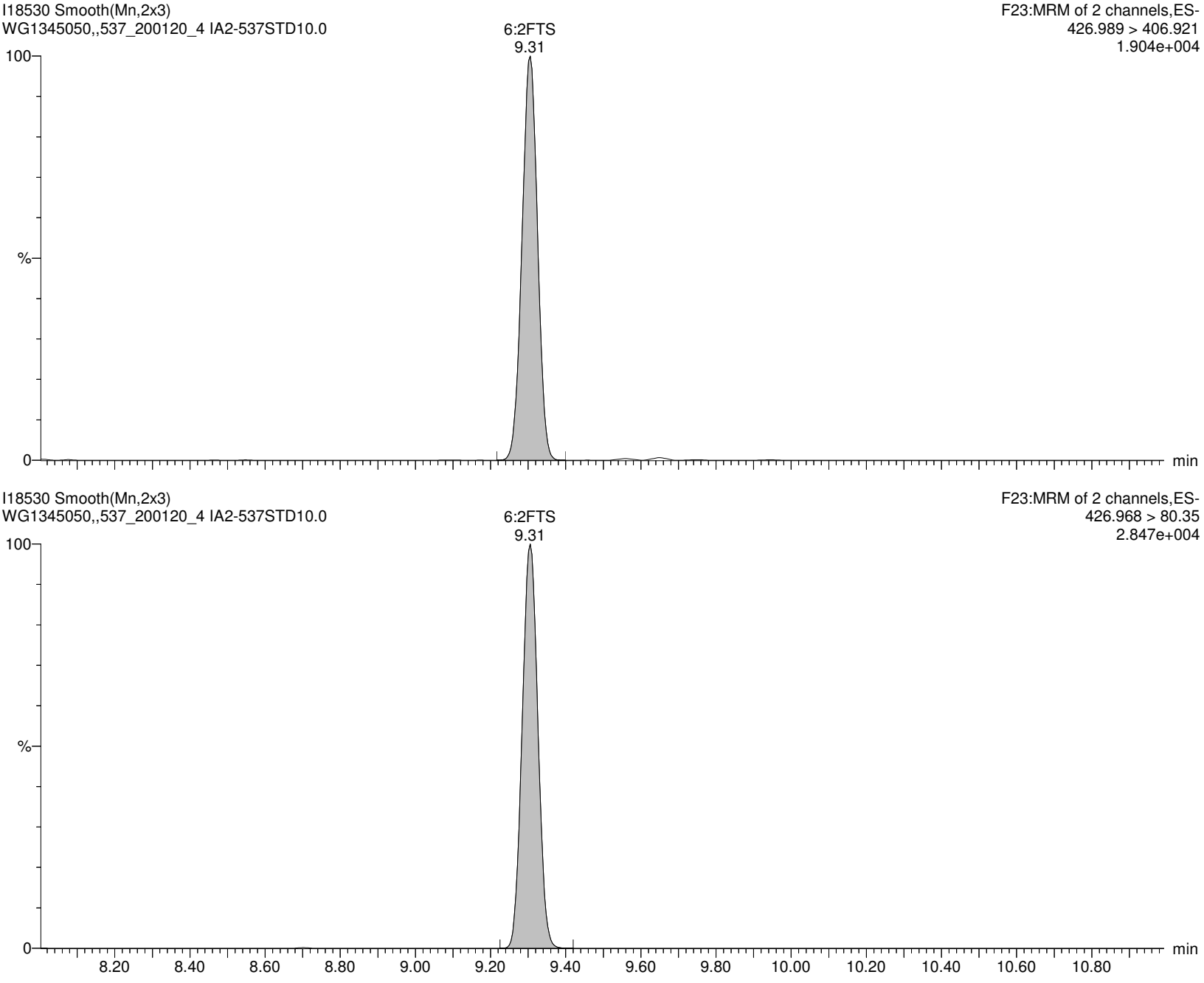
**6:2FTS**





all concentration units in (ng/mL)

Alpha Analytical Inc.
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**Instrument: XEVO-TQSmicro#QEA0276**
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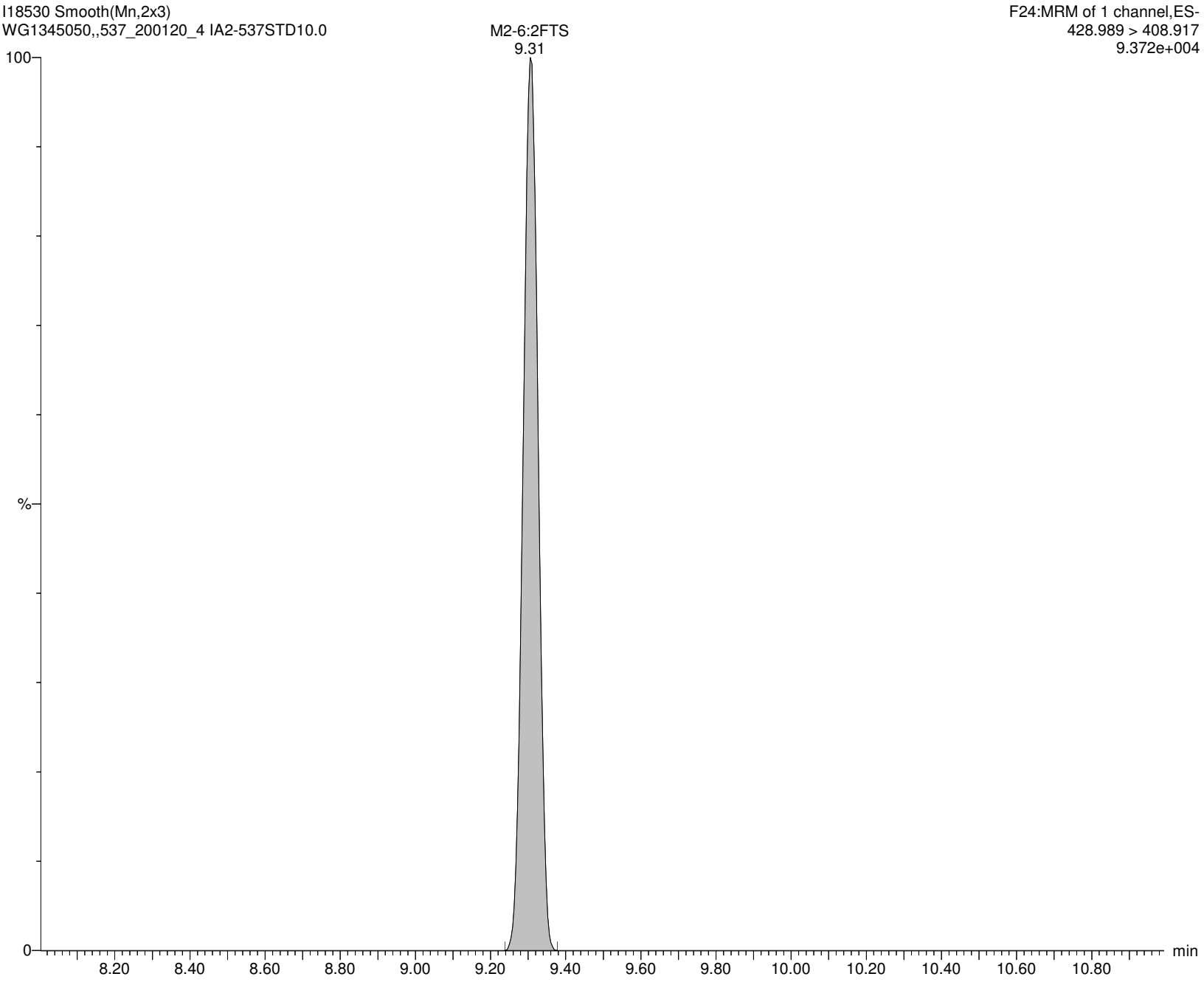
**M2-6:2FTS**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICAL_A.qld
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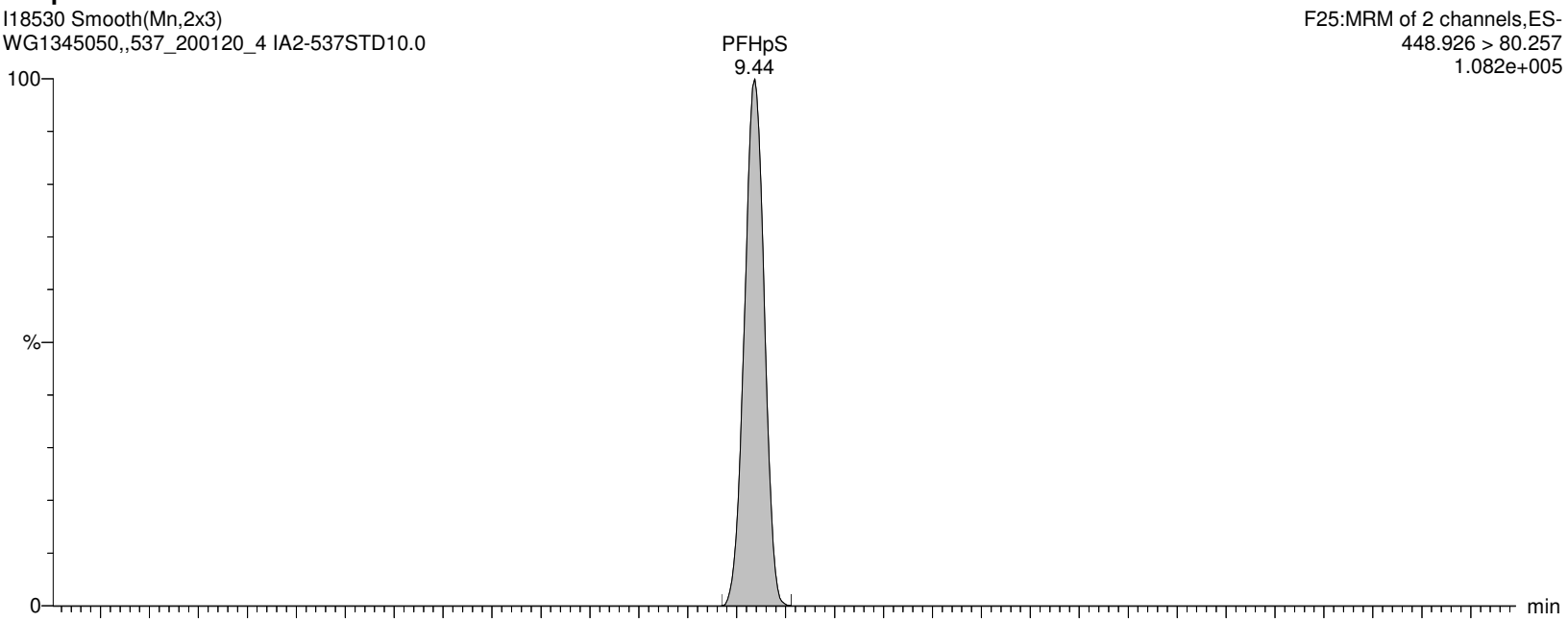
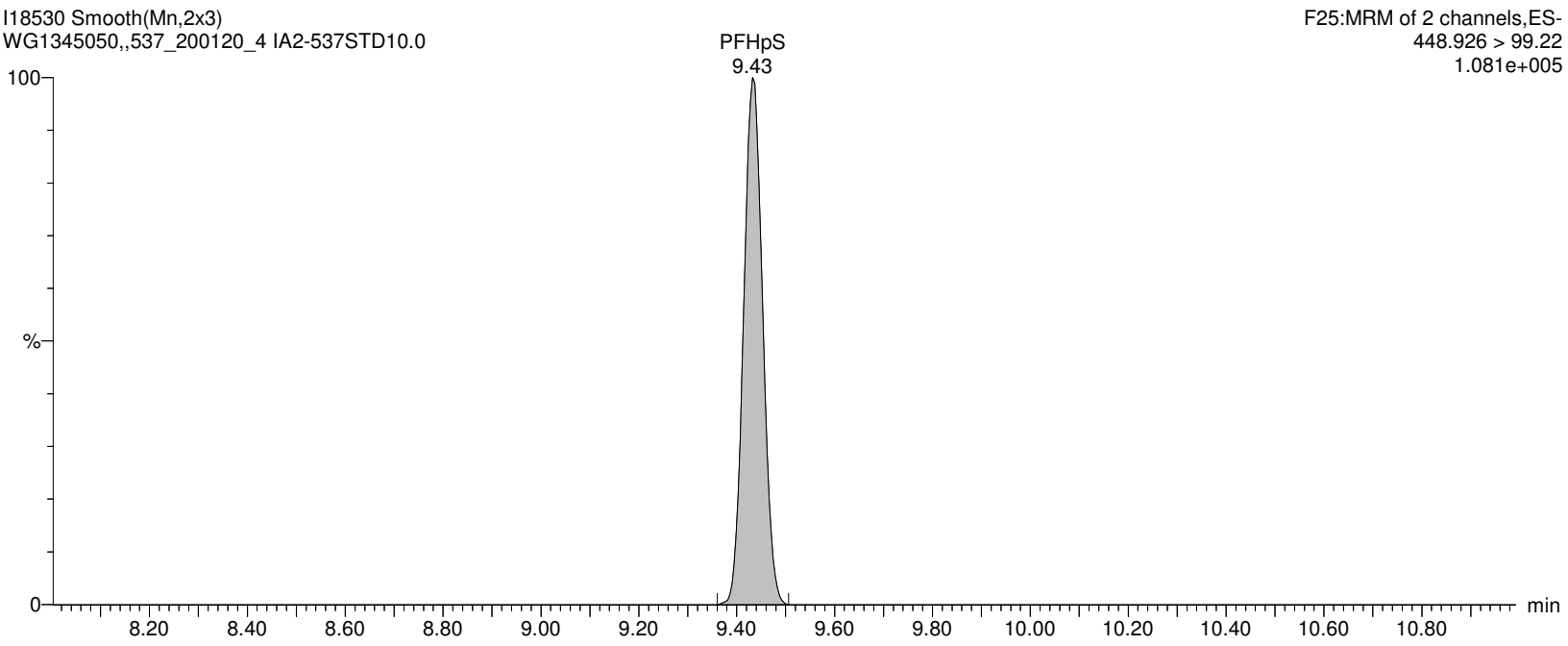
**PFHpS**





all concentration units in (ng/mL)

Alpha Analytical Inc.
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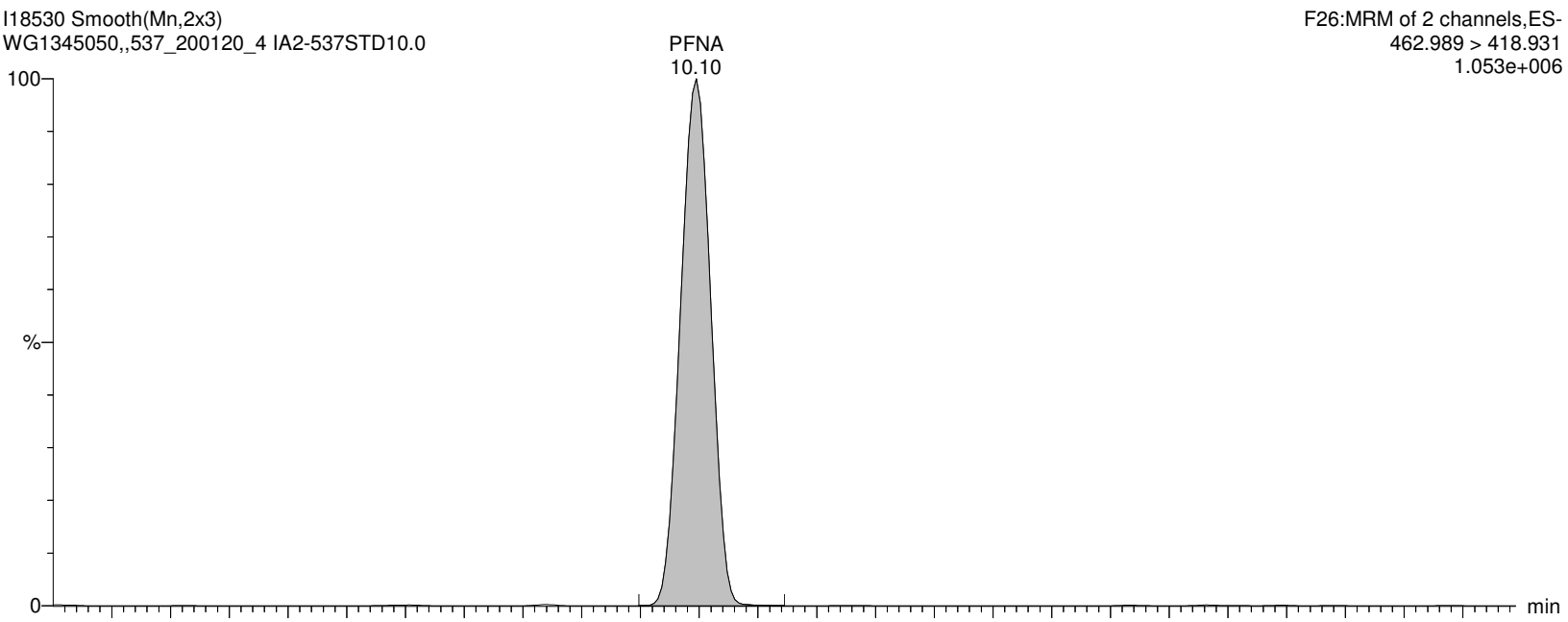


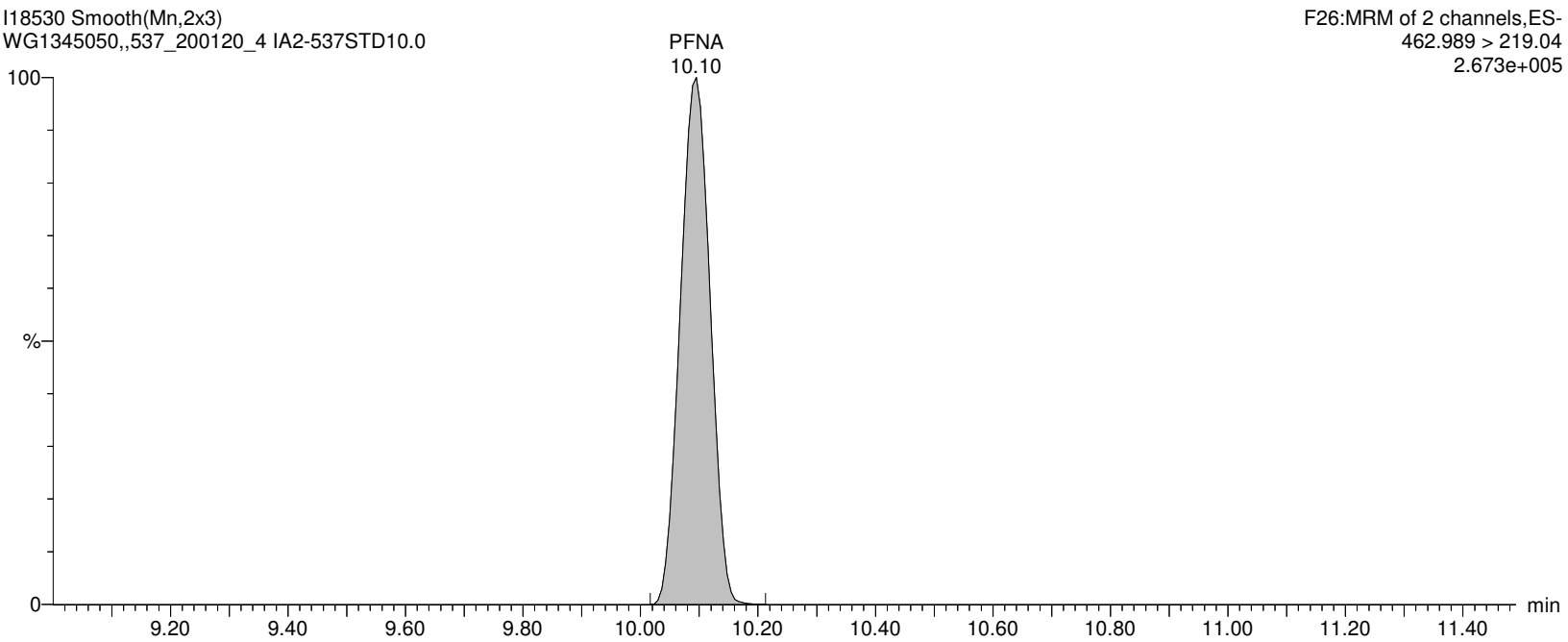



all concentration units in (ng/mL)

Alpha Analytical Inc.
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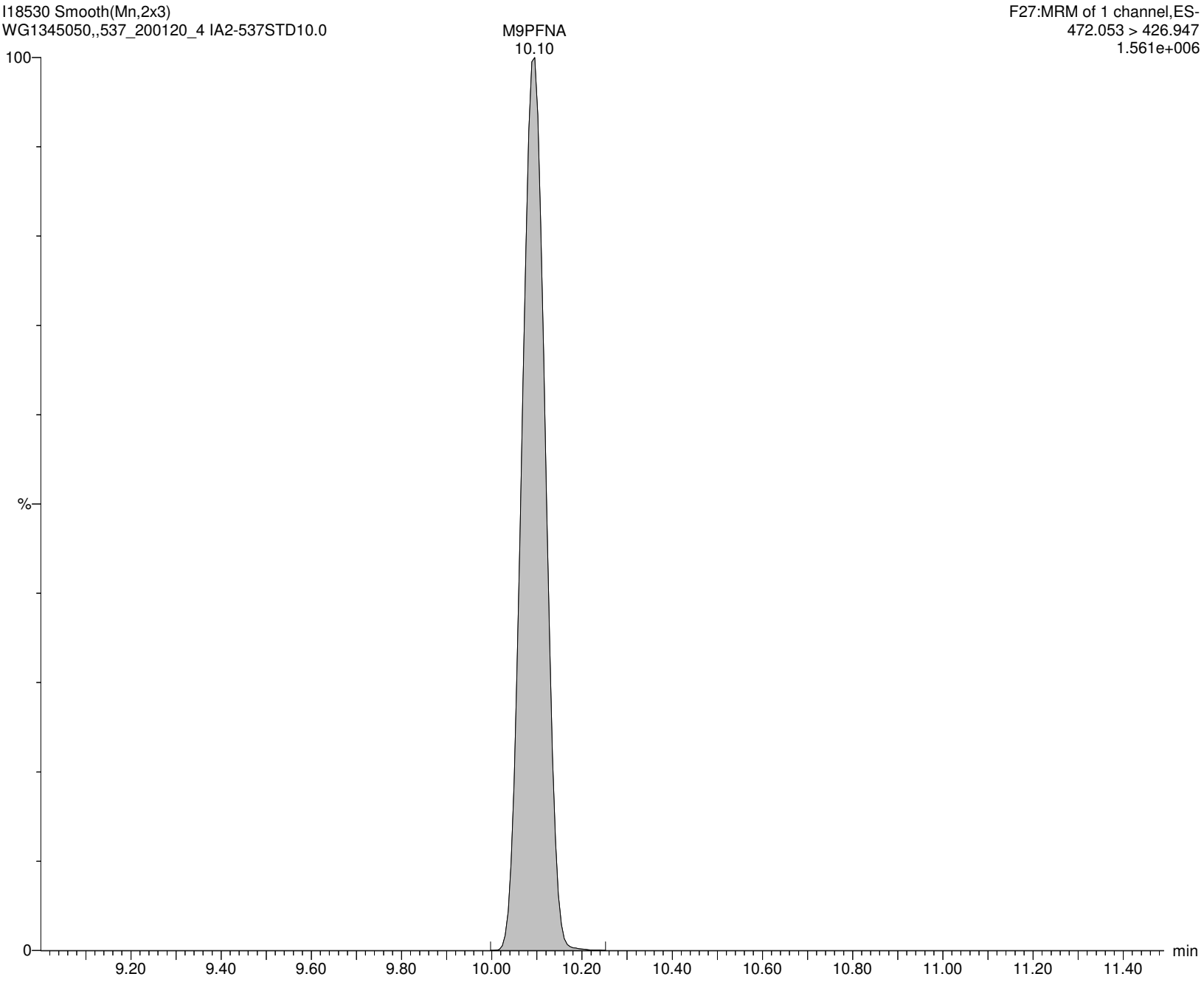
**M9PFNA**



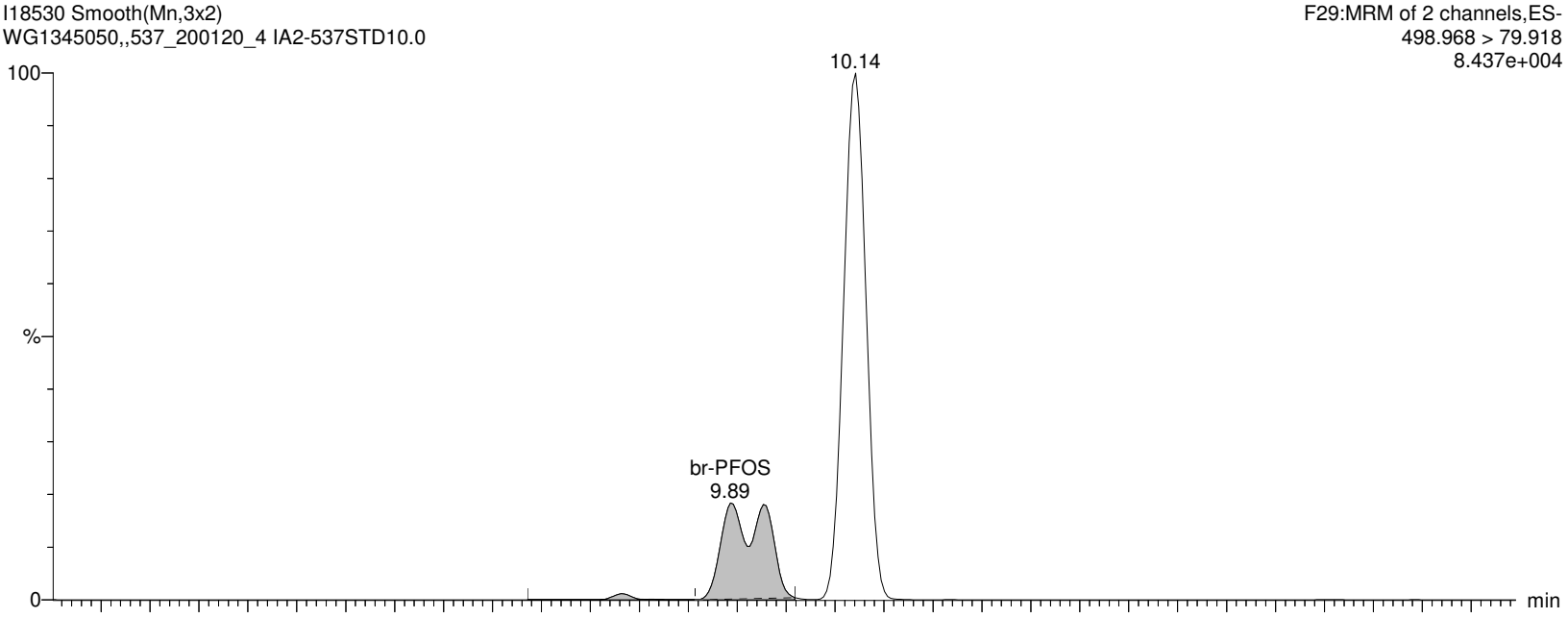


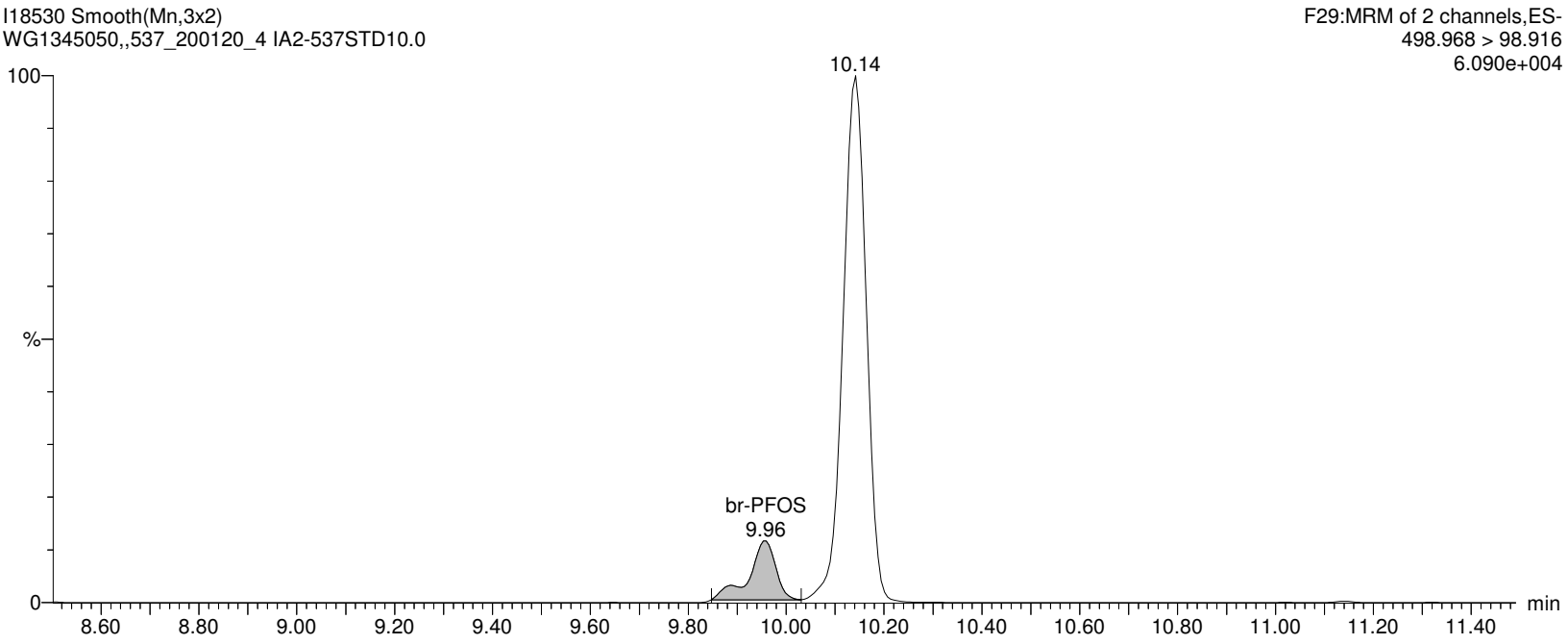
all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICAL_A.qld
Last Altered: Friday, February 28, 2020 09:12:40 Eastern Standard Time
Printed: Friday, February 28, 2020 09:27:49 Eastern Standard Time

**Name: I18530**
**ID: IA2-537STD10.0**
**Date: 27-Feb-2020**
**Time: 14:18:52**
**Description: WG1345050,,537_200120_4**
**User: LCMS01:SG**
**Vial: 1:A,5**
**Instrument: XEVO-TQSmicro#QEA0276**
**Inlet Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\LCMS_537_ISO_MeOH**
**Tune Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\190709_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**br-PFOS**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICAL_A.qld
Last Altered: Friday, February 28, 2020 09:12:40 Eastern Standard Time
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**Date: 27-Feb-2020**
**Time: 14:18:52**
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**Vial: 1:A,5**
**Instrument: XEVO-TQSmicro#QEA0276**
**Inlet Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\LCMS_537_ISO_MeOH**
**Tune Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\190709_TUNE.IPR**
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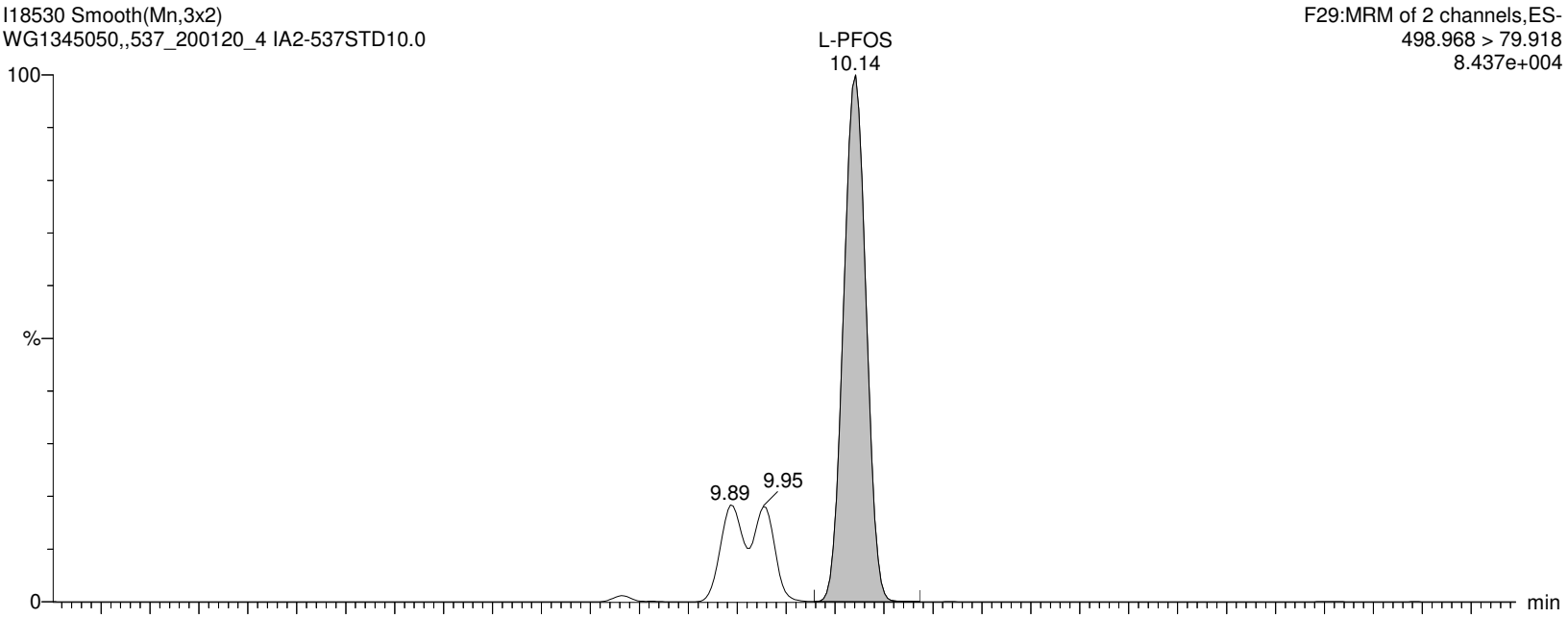


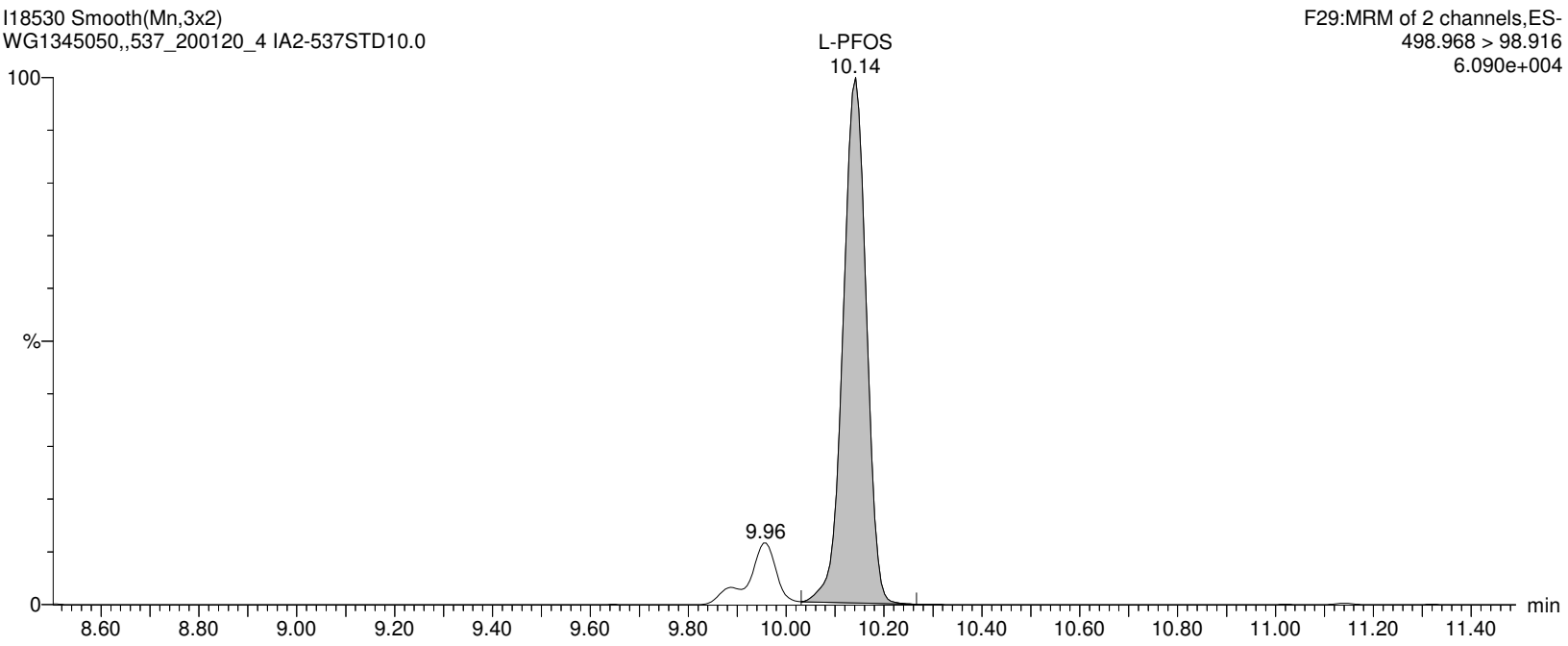



all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICAL_A.qld
Last Altered: Friday, February 28, 2020 09:12:40 Eastern Standard Time
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**Name: I18530**
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**Time: 14:18:52**
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**Vial: 1:A,5**
**Instrument: XEVO-TQSmicro#QEA0276**
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**Tune Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\190709_TUNE.IPR**
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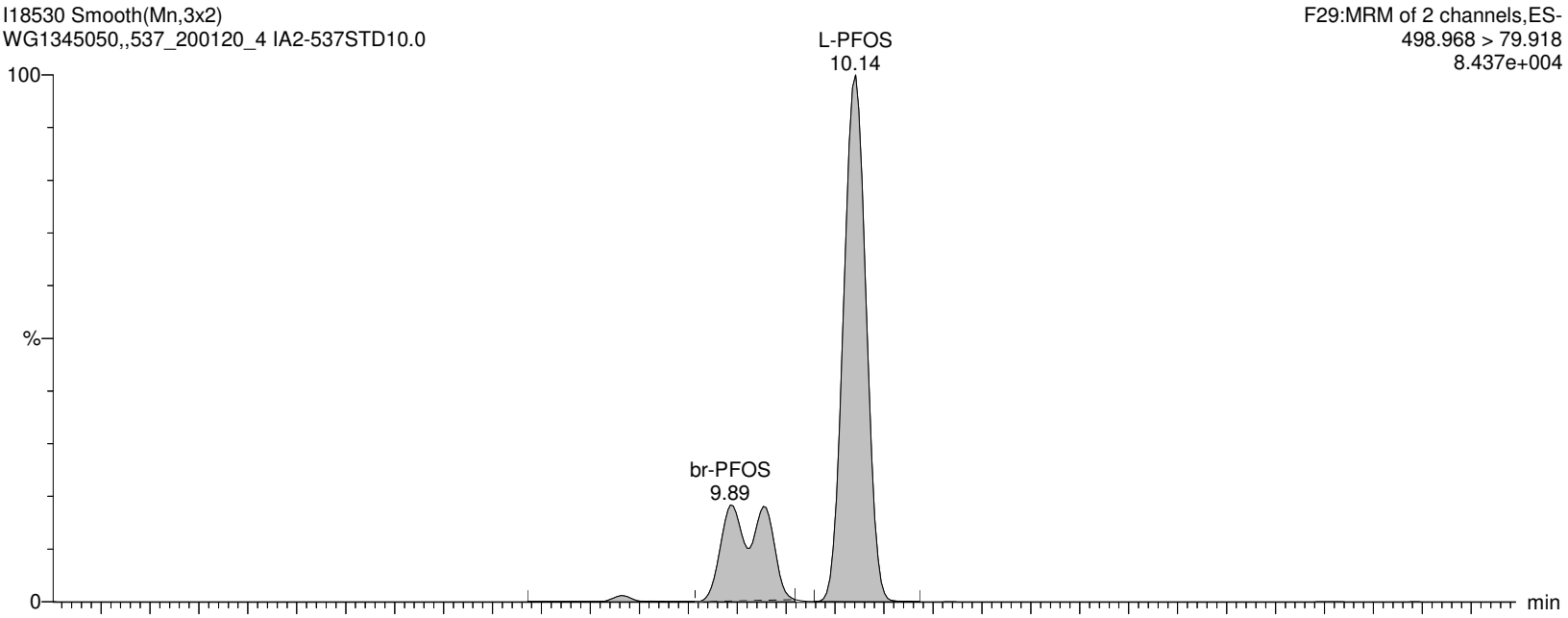
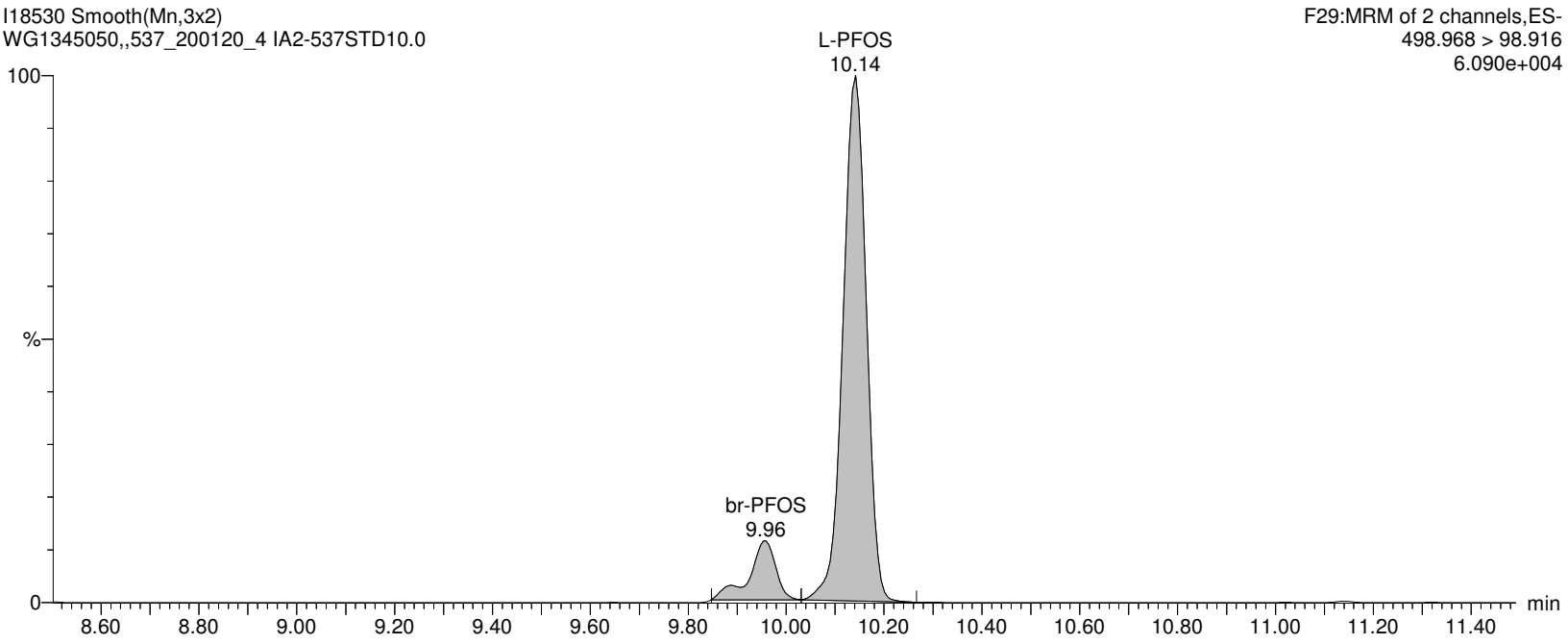
**PFOS**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICAL_A.qld
Last Altered: Friday, February 28, 2020 09:12:40 Eastern Standard Time
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**User: LCMS01:SG**
**Vial: 1:A,5**
**Instrument: XEVO-TQSmicro#QEA0276**
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**Tune Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\190709_TUNE.IPR**
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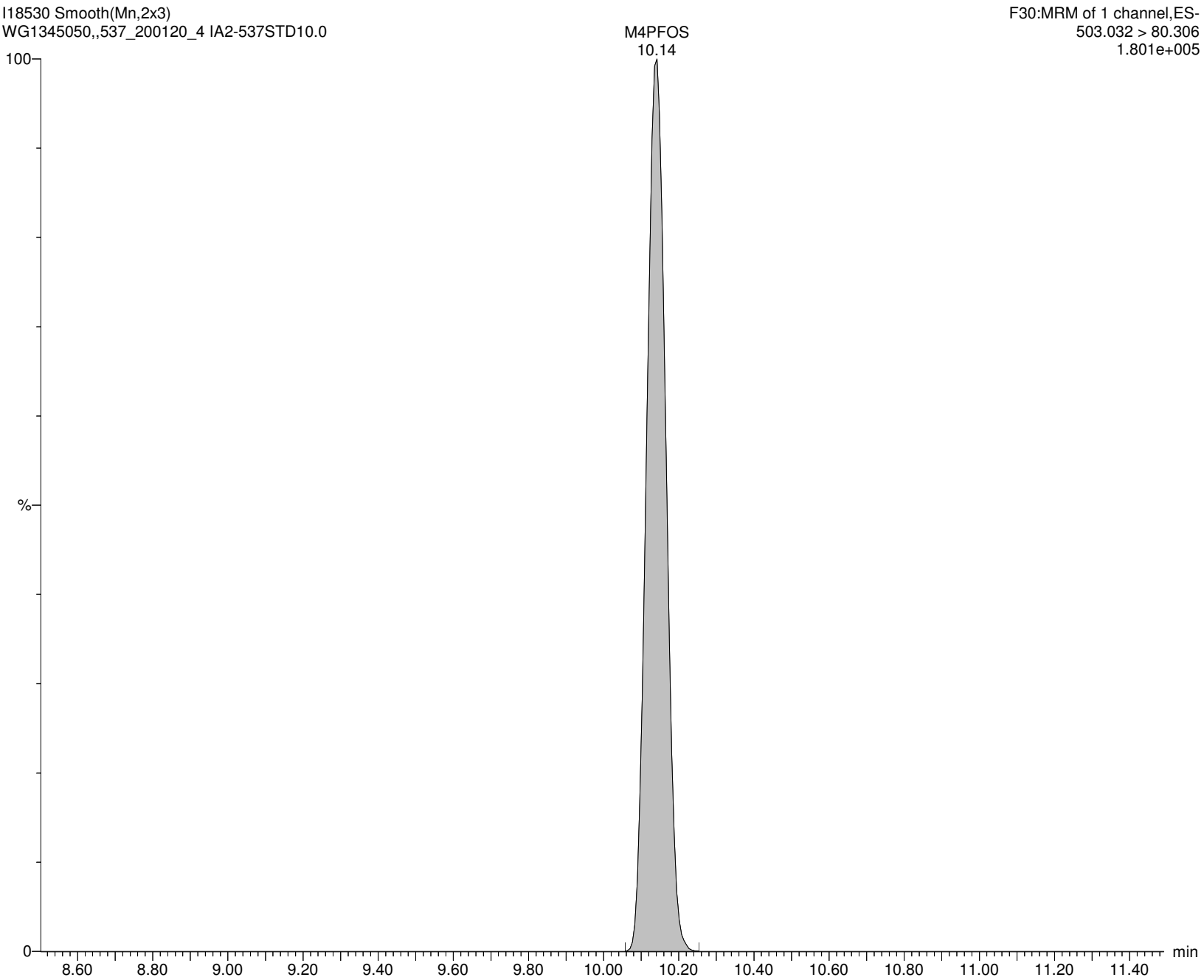
**M4PFOS**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICAL_A.qld
Last Altered: Friday, February 28, 2020 09:12:40 Eastern Standard Time
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**User: LCMS01:SG**
**Vial: 1:A,5**
**Instrument: XEVO-TQSmicro#QEA0276**
**Inlet Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\LCMS_537_ISO_MeOH**
**Tune Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\190709_TUNE.IPR**
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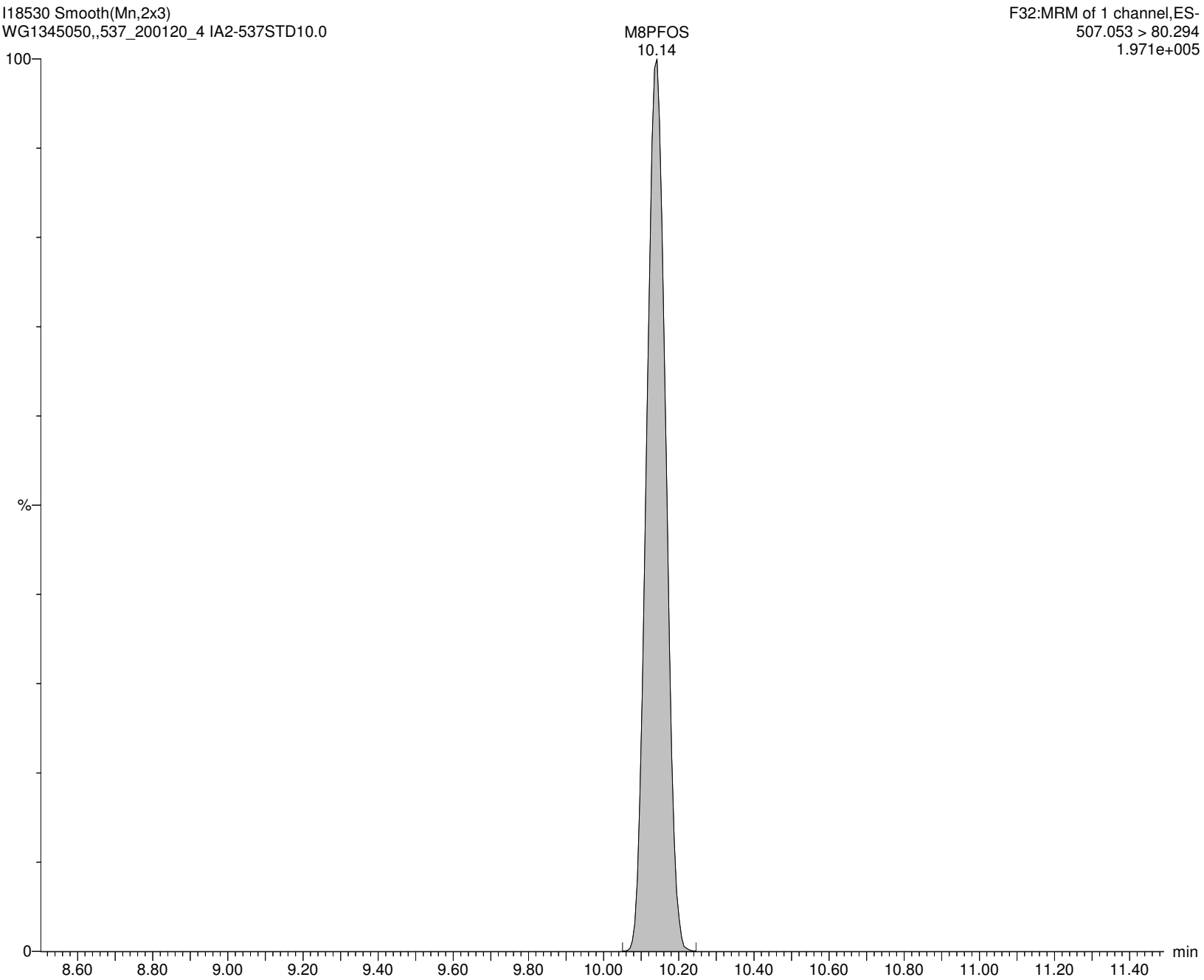
**M8PFOS**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICAL_A.qld
Last Altered: Friday, February 28, 2020 09:12:40 Eastern Standard Time
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**Vial: 1:A,5**
**Instrument: XEVO-TQSmicro#QEA0276**
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**Tune Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\190709_TUNE.IPR**
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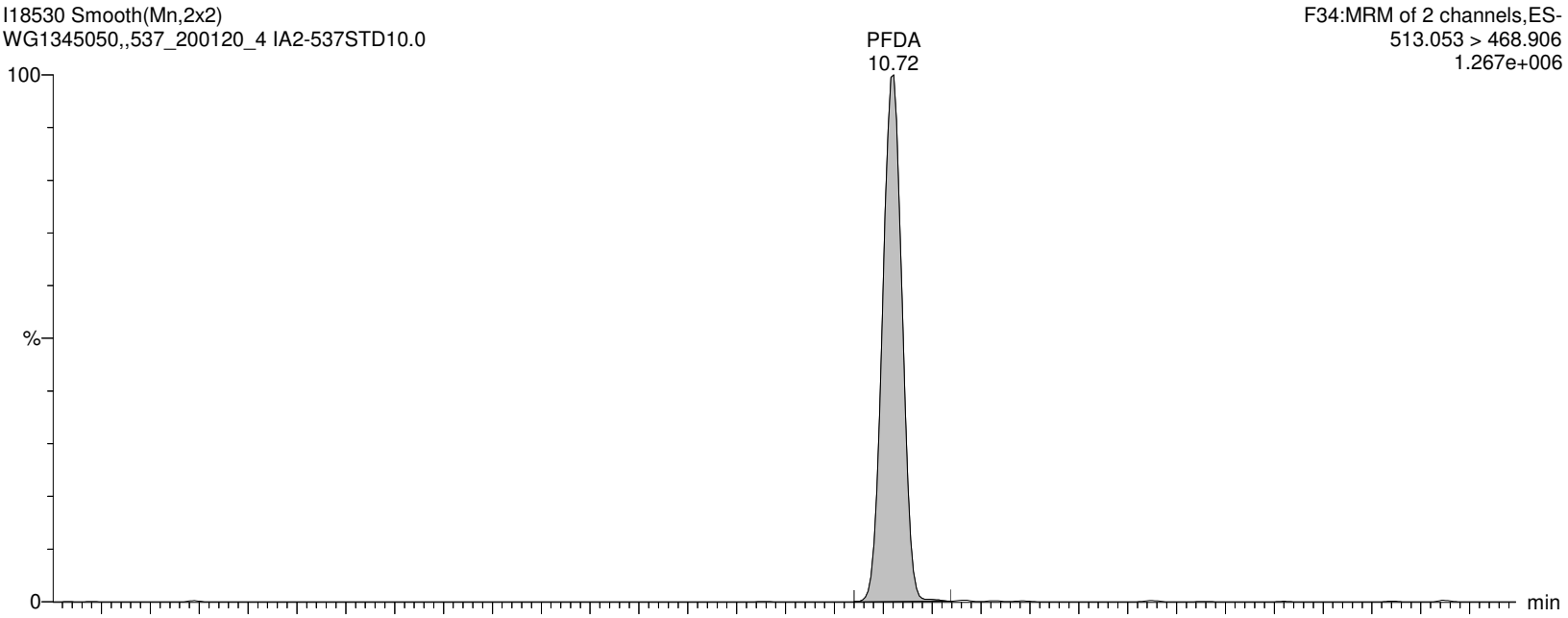
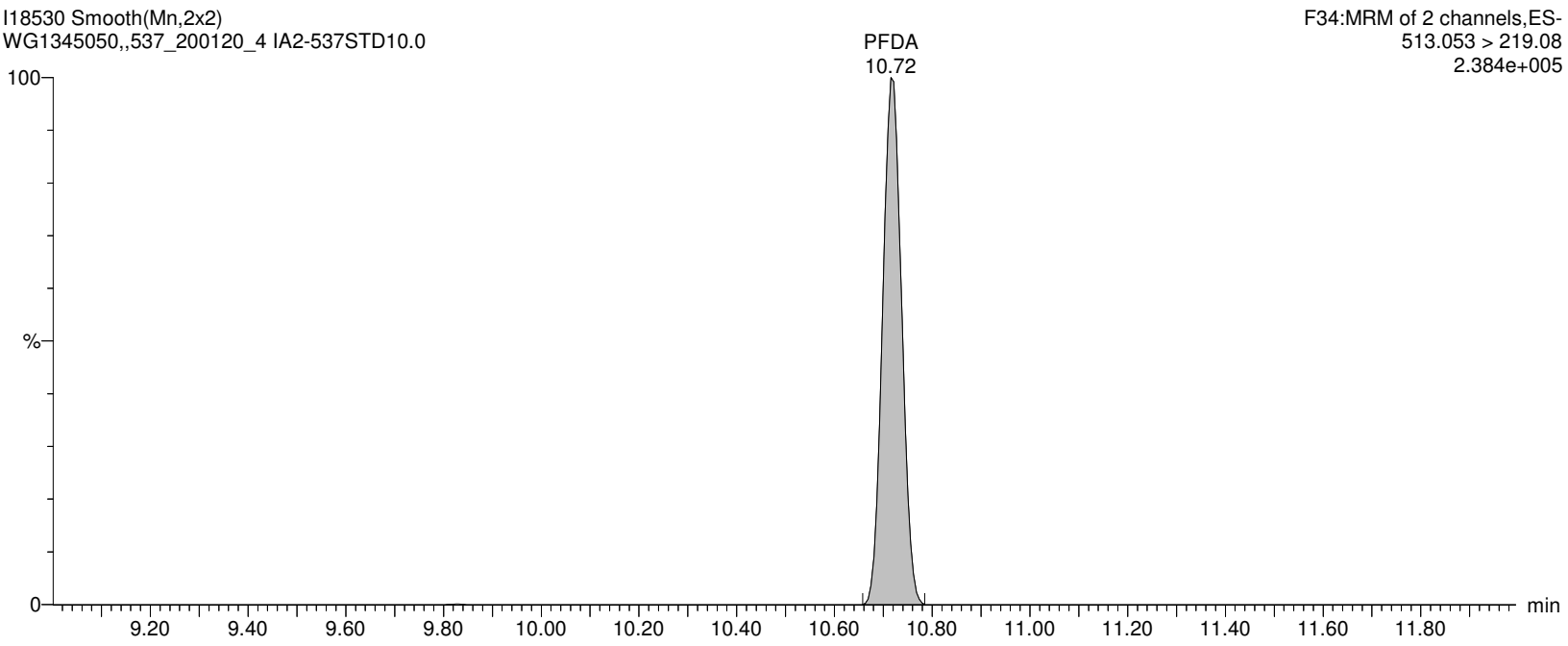
**PFDA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICAL_A.qld
Last Altered: Friday, February 28, 2020 09:12:40 Eastern Standard Time
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**Date: 27-Feb-2020**
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**Vial: 1:A,5**
**Instrument: XEVO-TQSmicro#QEA0276**
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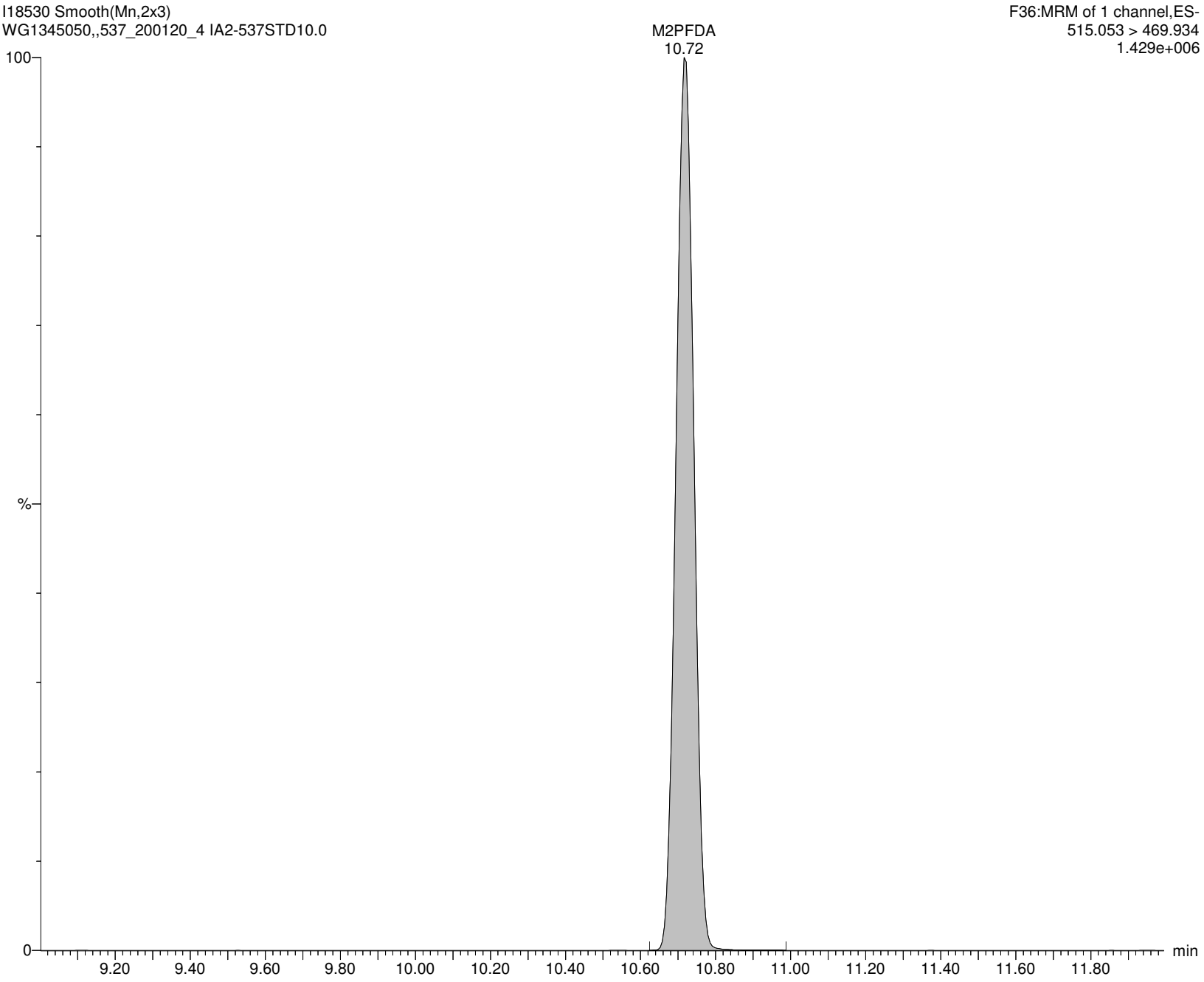
**M2PFDA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICAL_A.qld
Last Altered: Friday, February 28, 2020 09:12:40 Eastern Standard Time
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**Date: 27-Feb-2020**
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**User: LCMS01:SG**
**Vial: 1:A,5**
**Instrument: XEVO-TQSmicro#QEA0276**
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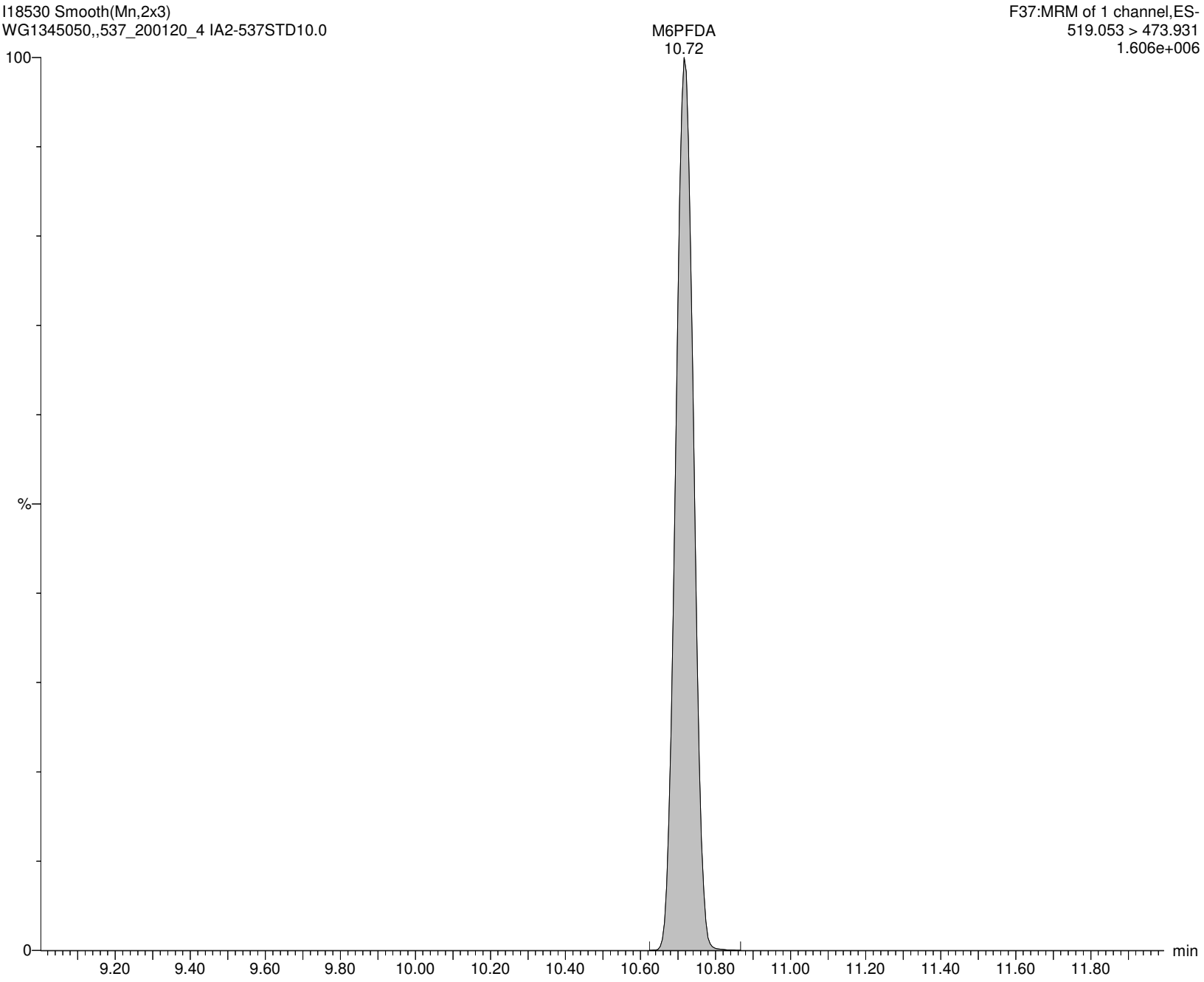
**M6PFDA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICAL_A.qld
Last Altered: Friday, February 28, 2020 09:12:40 Eastern Standard Time
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**Date: 27-Feb-2020**
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**Vial: 1:A,5**
**Instrument: XEVO-TQSmicro#QEA0276**
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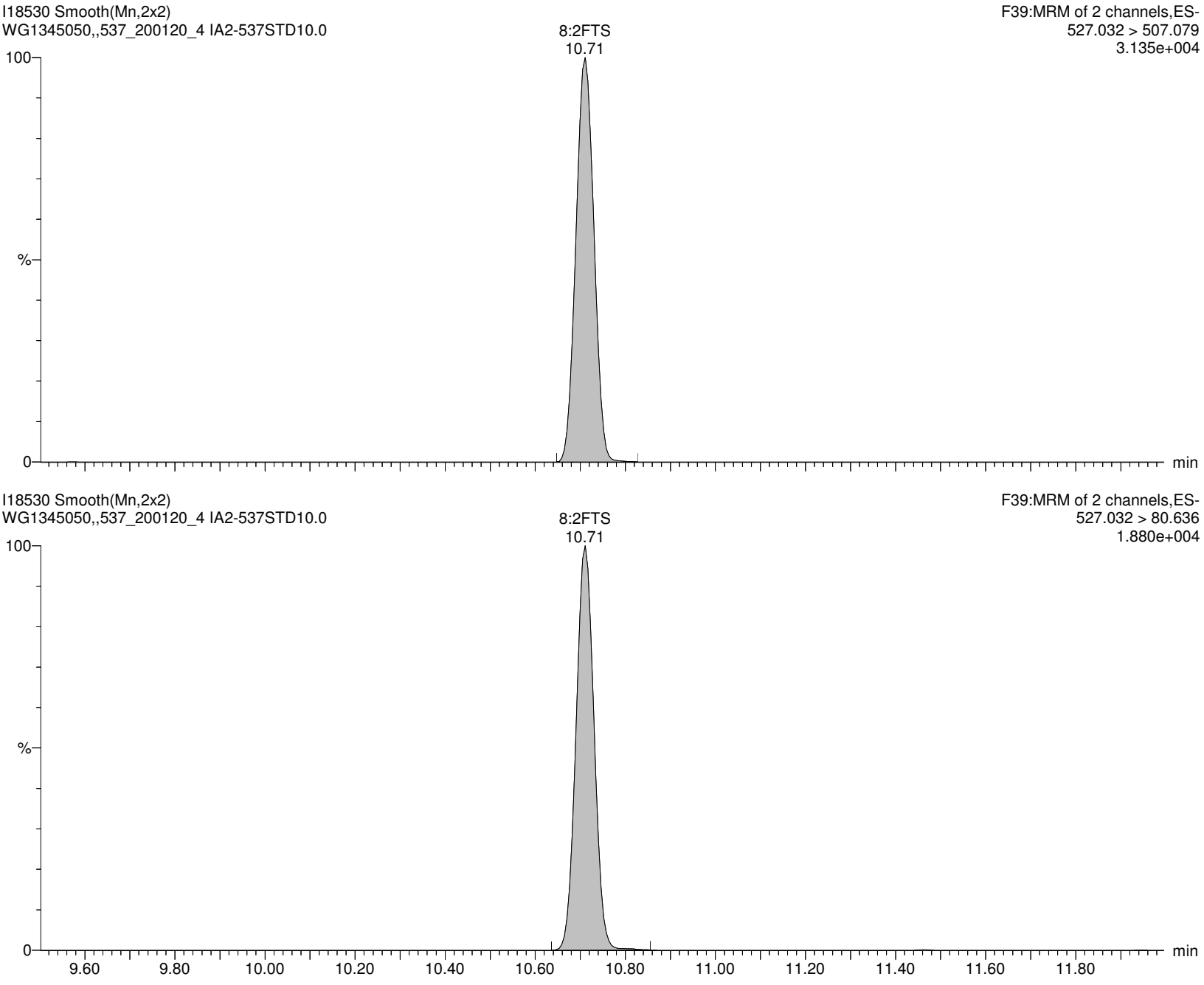
**8:2FTS**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICAL_A.qld
Last Altered: Friday, February 28, 2020 09:12:40 Eastern Standard Time
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**Inlet Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\LCMS_537_ISO_MeOH**
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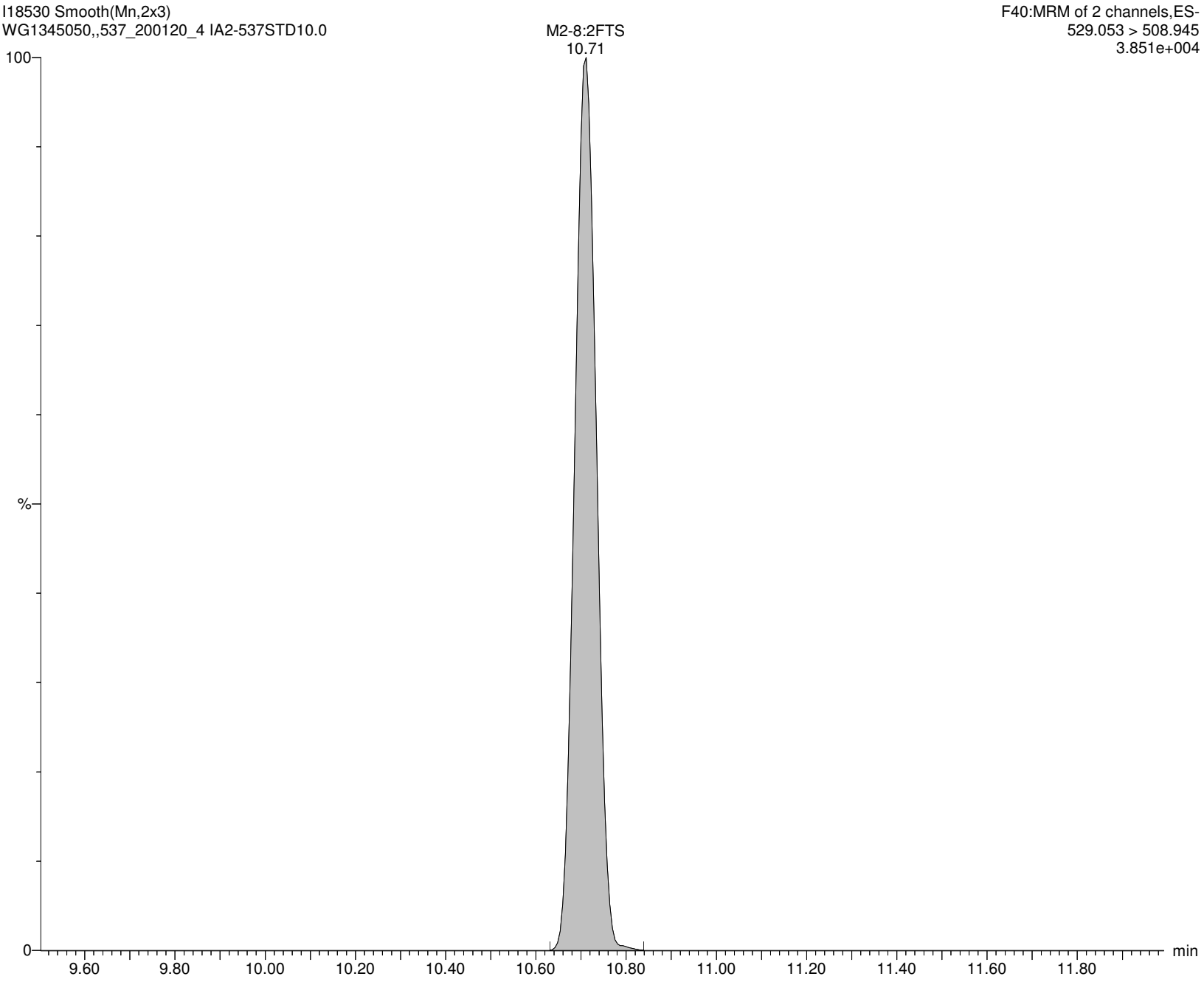
**M2-8:2FTS**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICAL_A.qld
Last Altered: Friday, February 28, 2020 09:12:40 Eastern Standard Time
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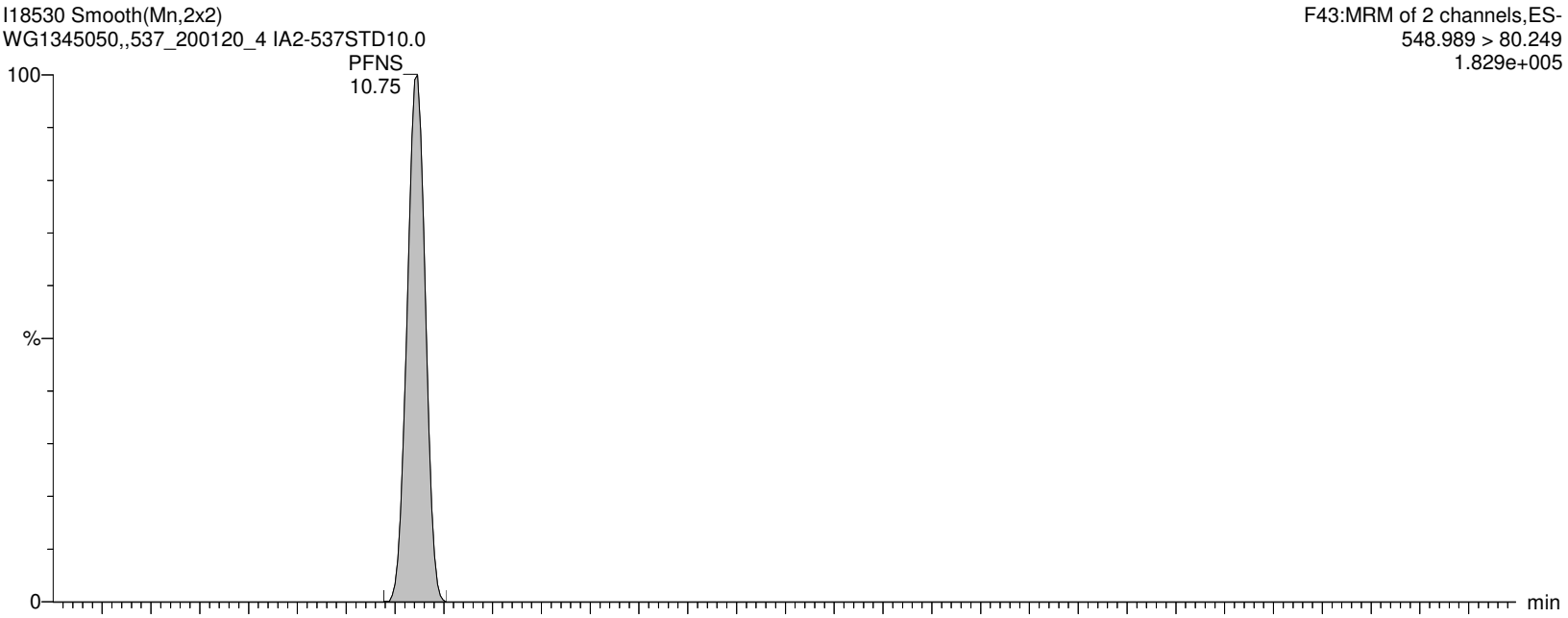


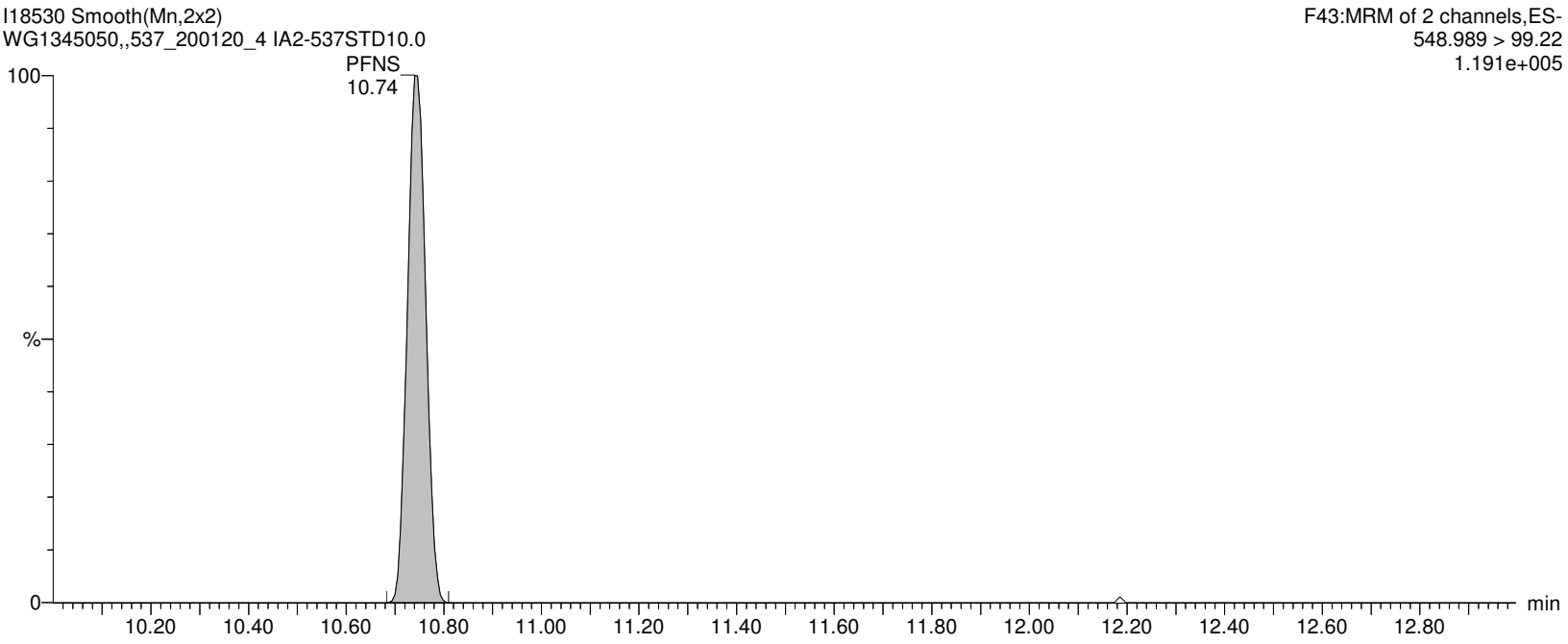



all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICAL_A.qld
Last Altered: Friday, February 28, 2020 09:12:40 Eastern Standard Time
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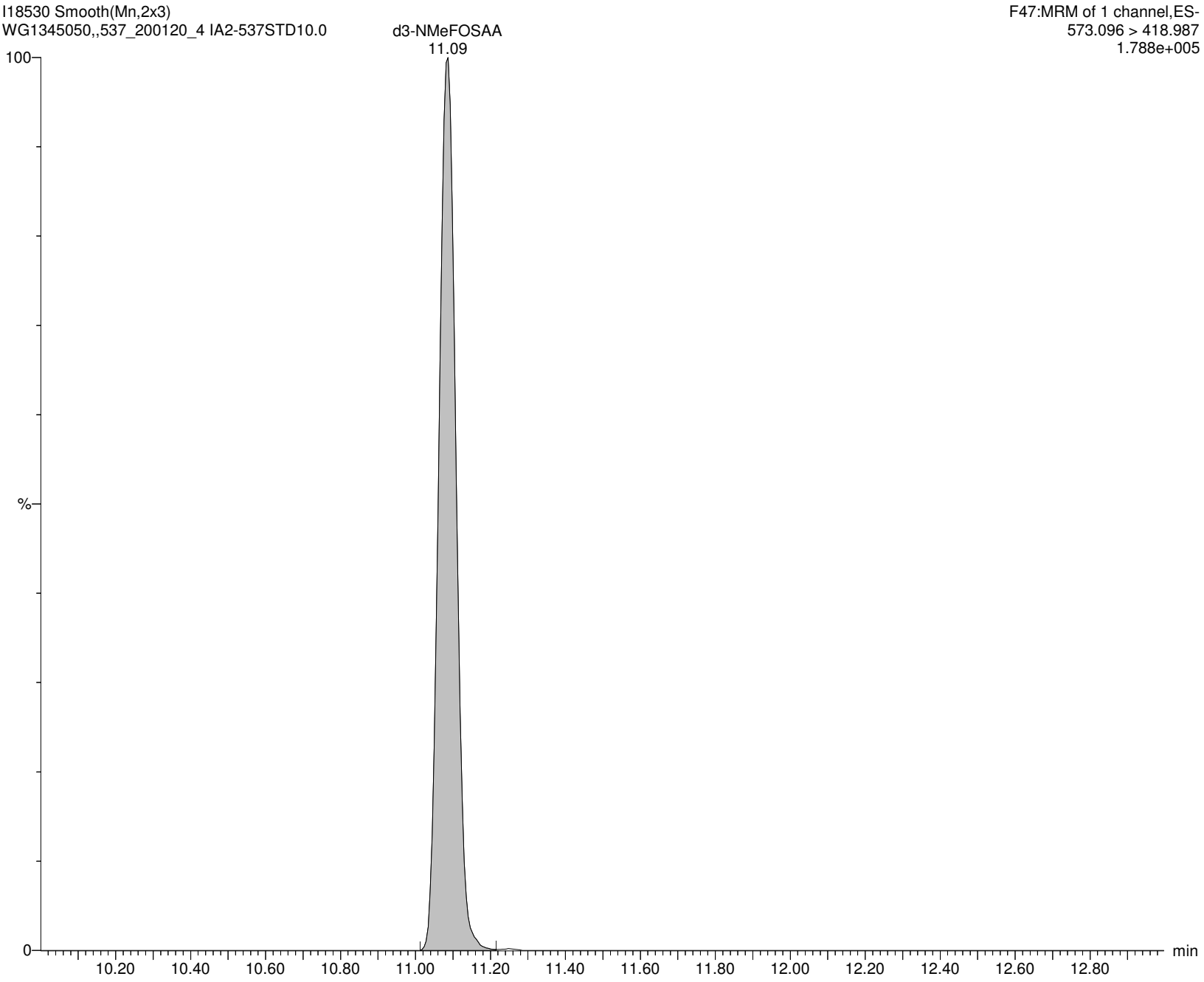
**d3-NMeFOSAA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICAL_A.qld
Last Altered: Friday, February 28, 2020 09:12:40 Eastern Standard Time
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**Vial: 1:A,5**
**Instrument: XEVO-TQSmicro#QEA0276**
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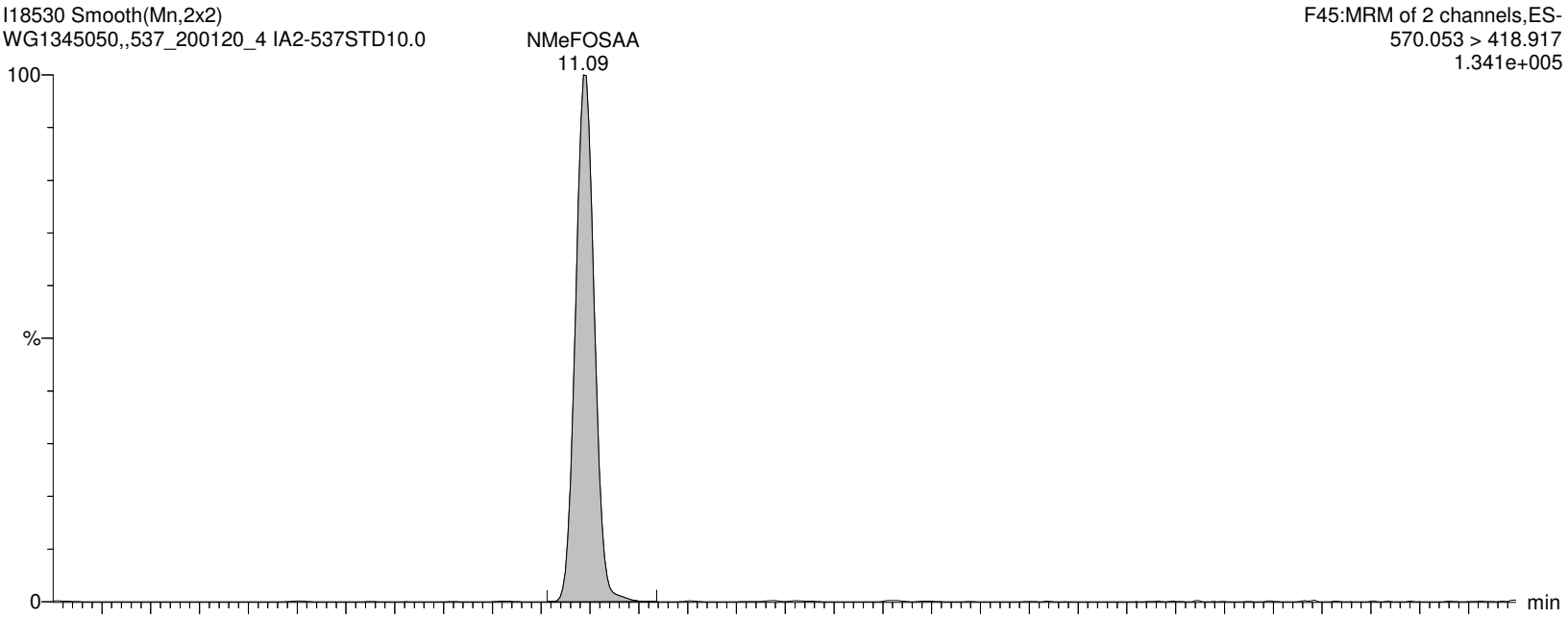
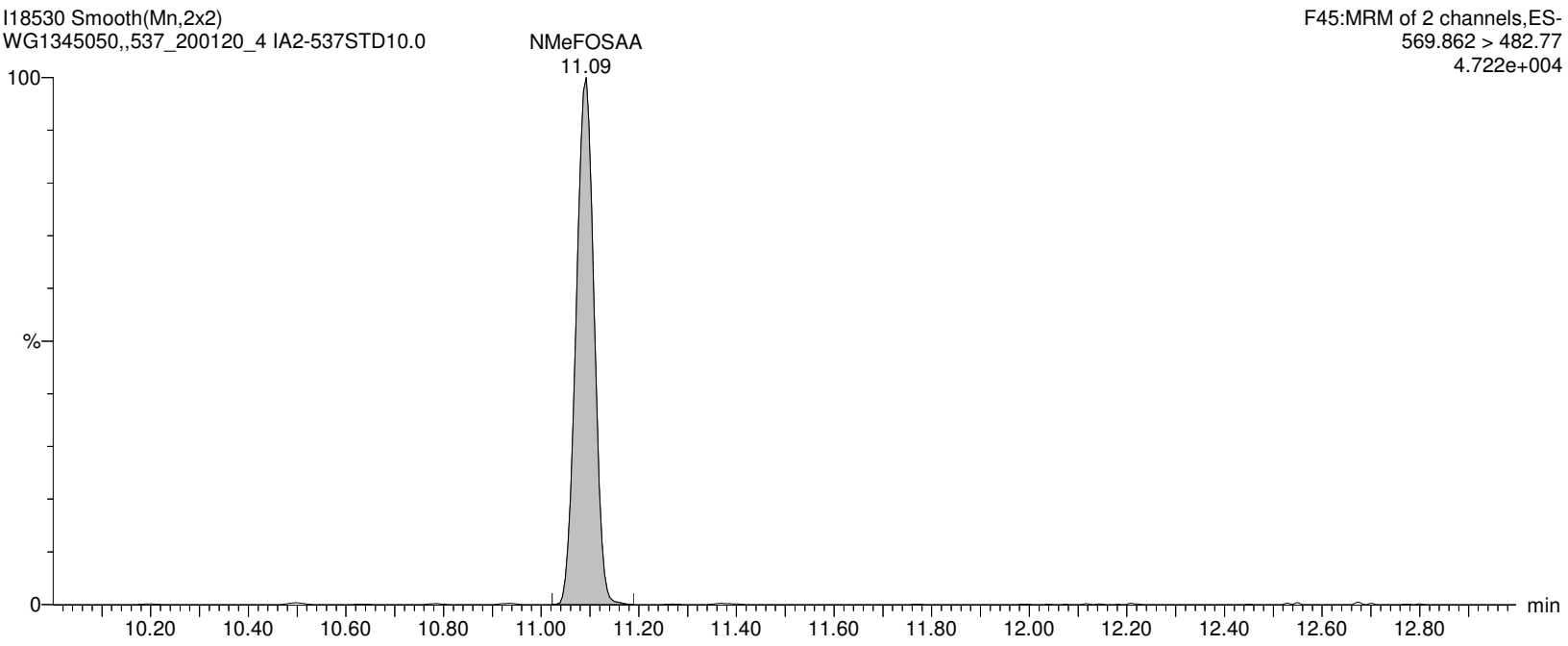
**NMeFOSAA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICAL_A.qld
Last Altered: Friday, February 28, 2020 09:12:40 Eastern Standard Time
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**Vial: 1:A,5**
**Instrument: XEVO-TQSmicro#QEA0276**
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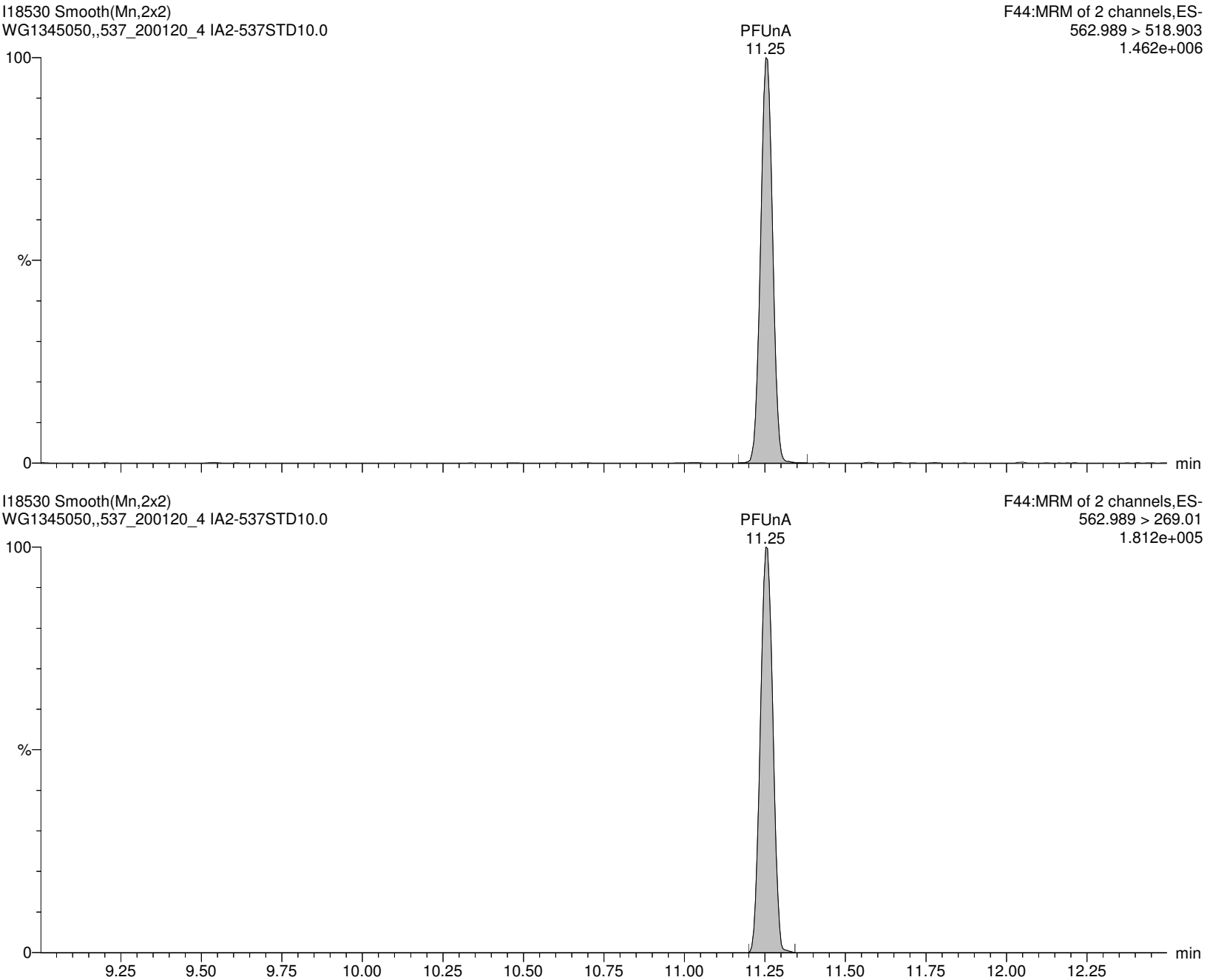



all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICAL_A.qld
Last Altered: Friday, February 28, 2020 09:12:40 Eastern Standard Time
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**Vial: 1:A,5**
**Instrument: XEVO-TQSmicro#QEA0276**
**Inlet Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\LCMS_537_ISO_MeOH**
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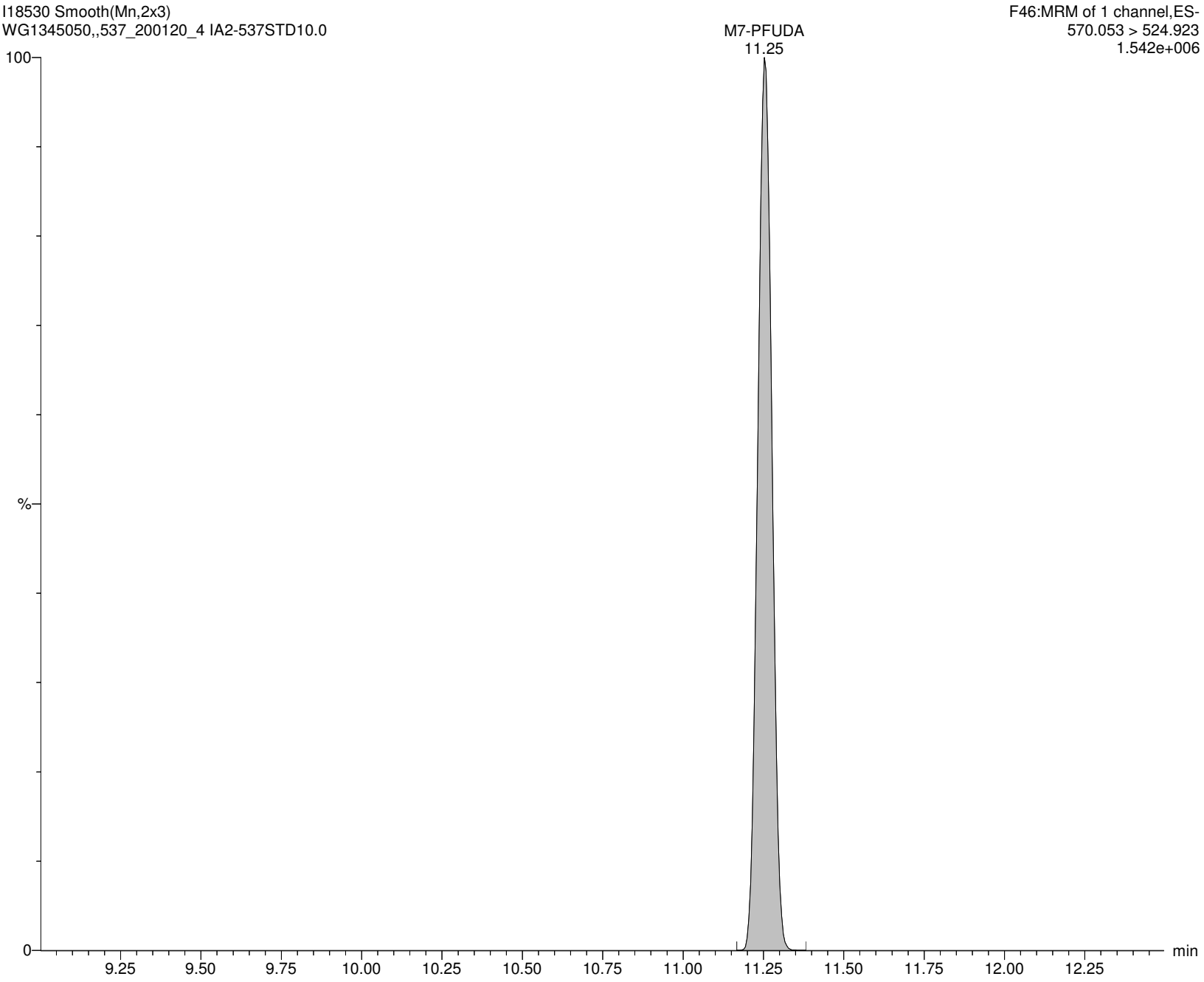
**M7-PFUDA**



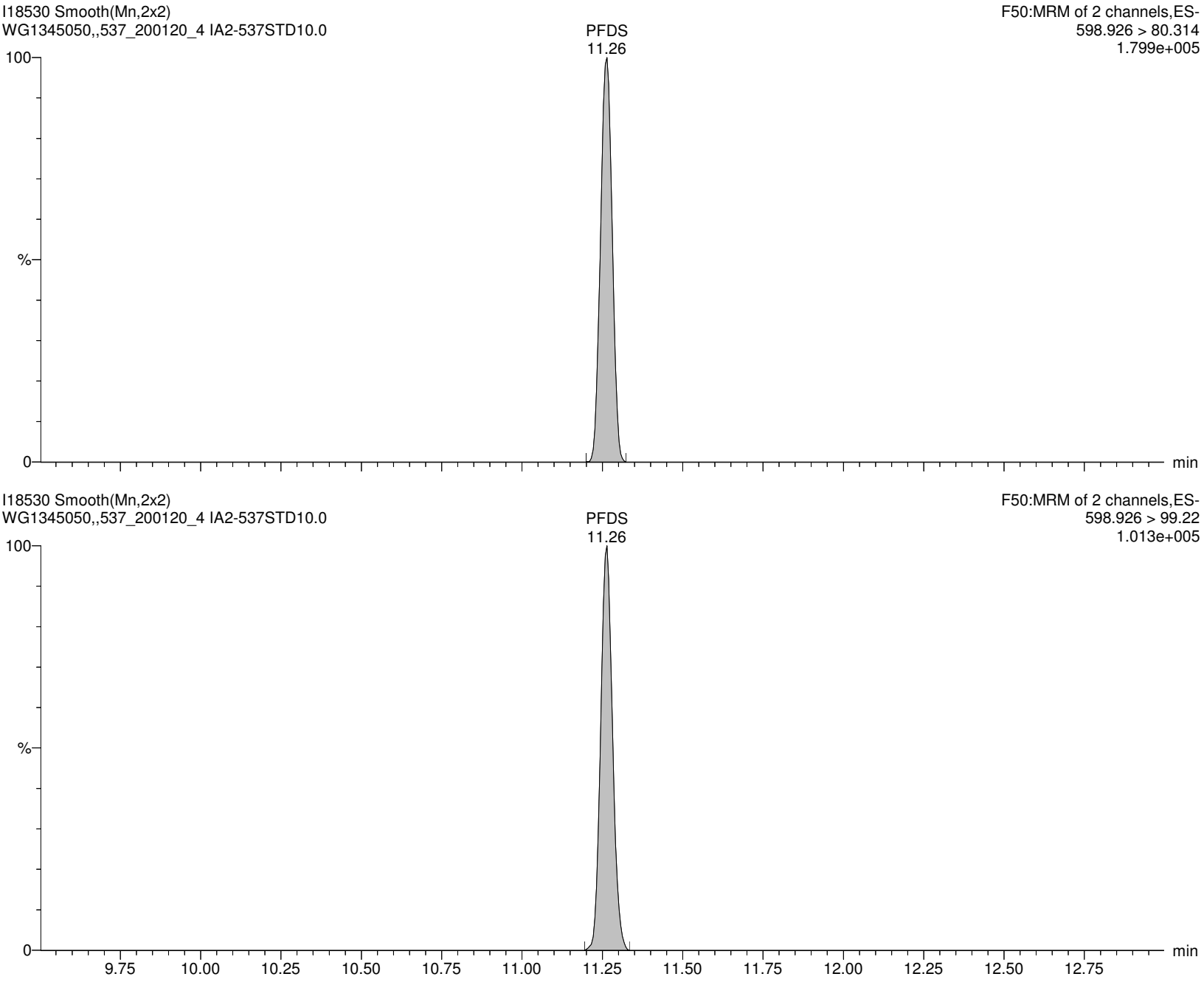


all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICAL_A.qld
Last Altered: Friday, February 28, 2020 09:12:40 Eastern Standard Time
Printed: Friday, February 28, 2020 09:27:49 Eastern Standard Time

**Name: I18530**
**ID: IA2-537STD10.0**
**Date: 27-Feb-2020**
**Time: 14:18:52**
**Description: WG1345050,,537_200120_4**
**User: LCMS01:SG**
**Vial: 1:A,5**
**Instrument: XEVO-TQSmicro#QEA0276**
**Inlet Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\LCMS_537_ISO_MeOH**
**Tune Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\190709_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**PFDS**





all concentration units in (ng/mL)

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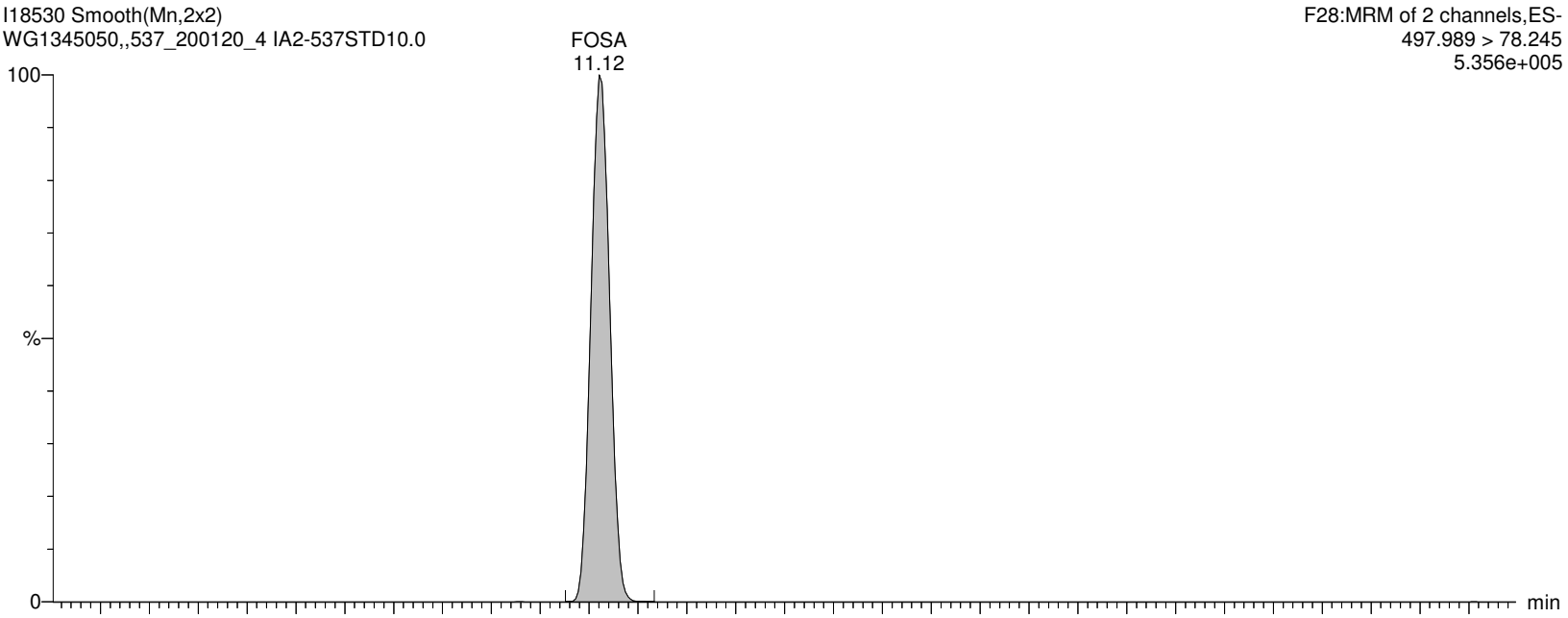
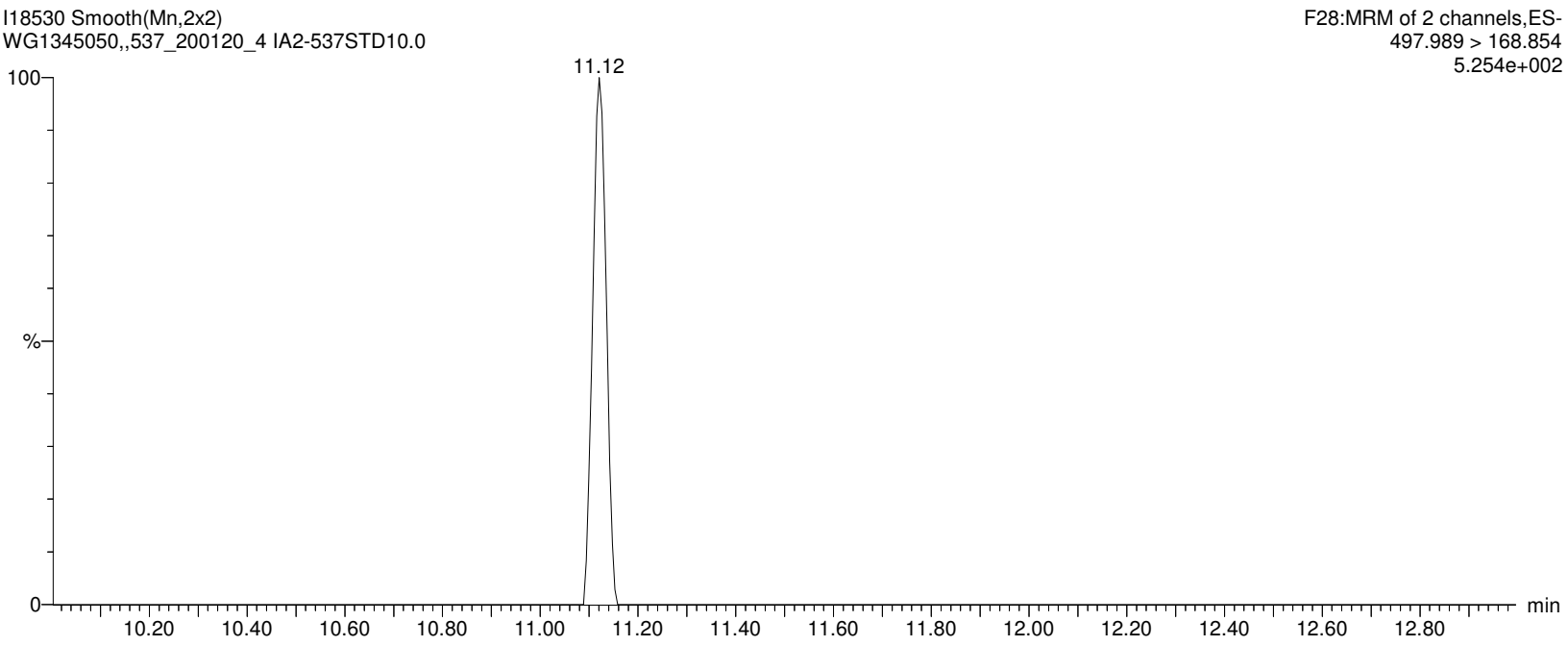
**FOSA**





all concentration units in (ng/mL)

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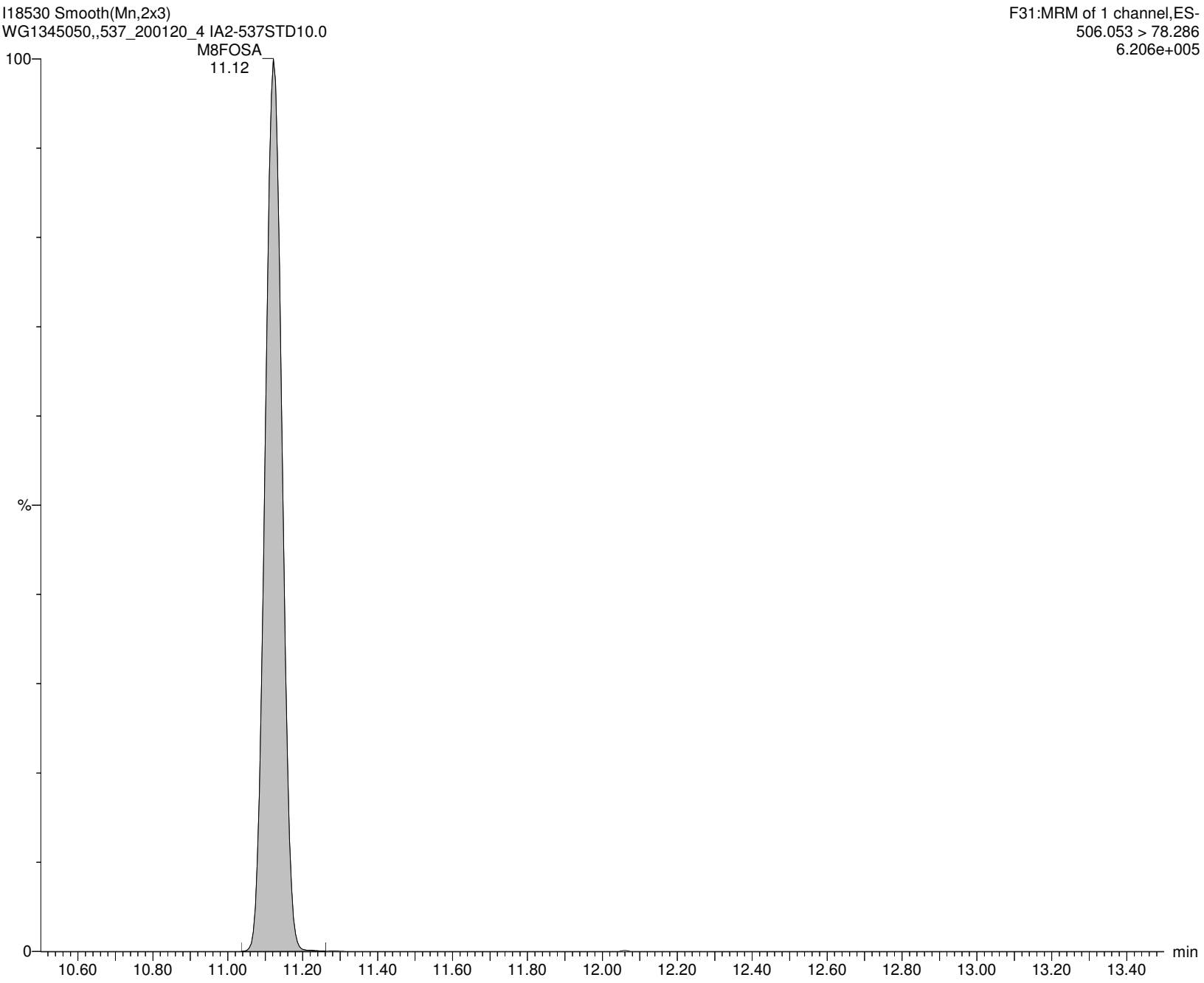
**M8FOSA**





all concentration units in (ng/mL)

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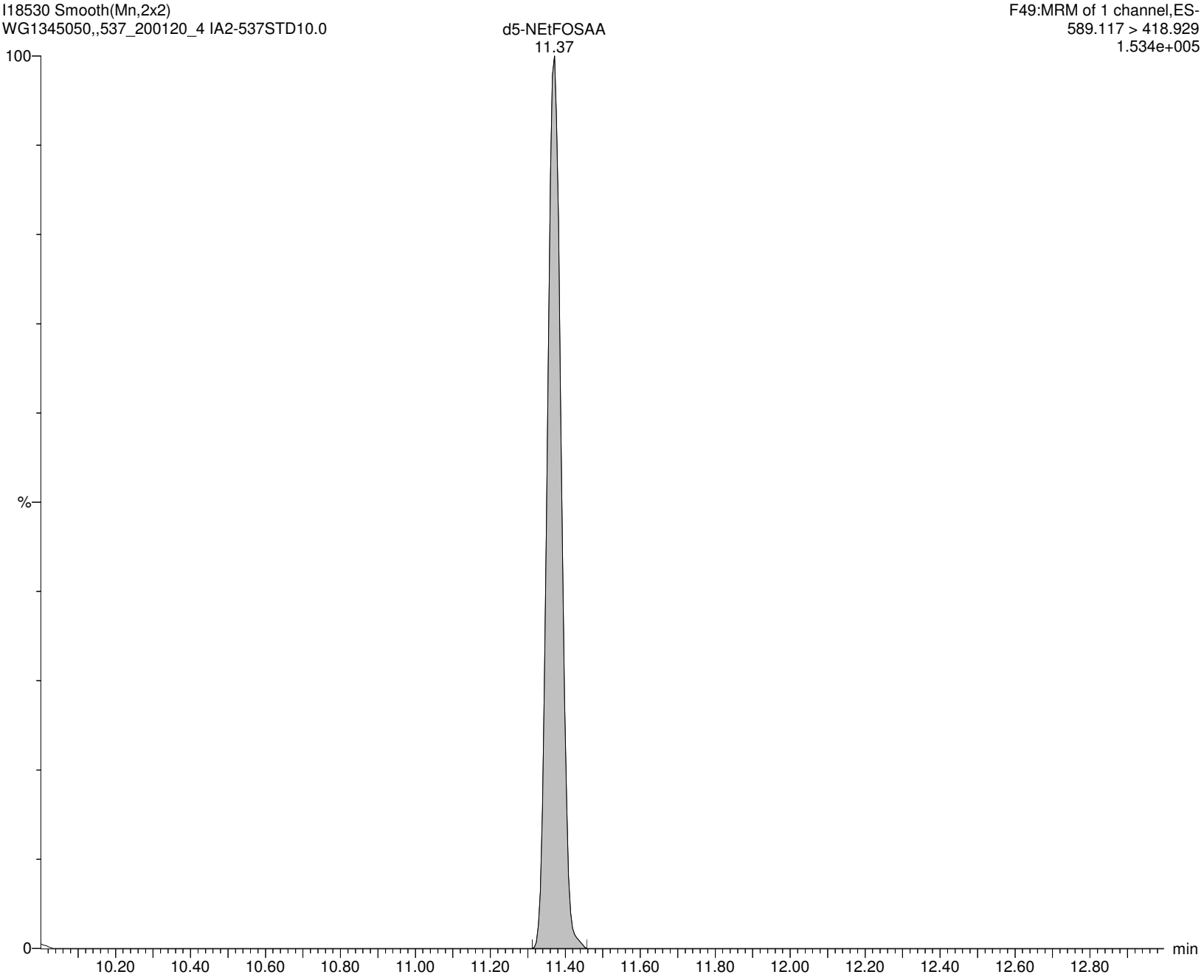
**d5-NEtFOSAA**





all concentration units in (ng/mL)

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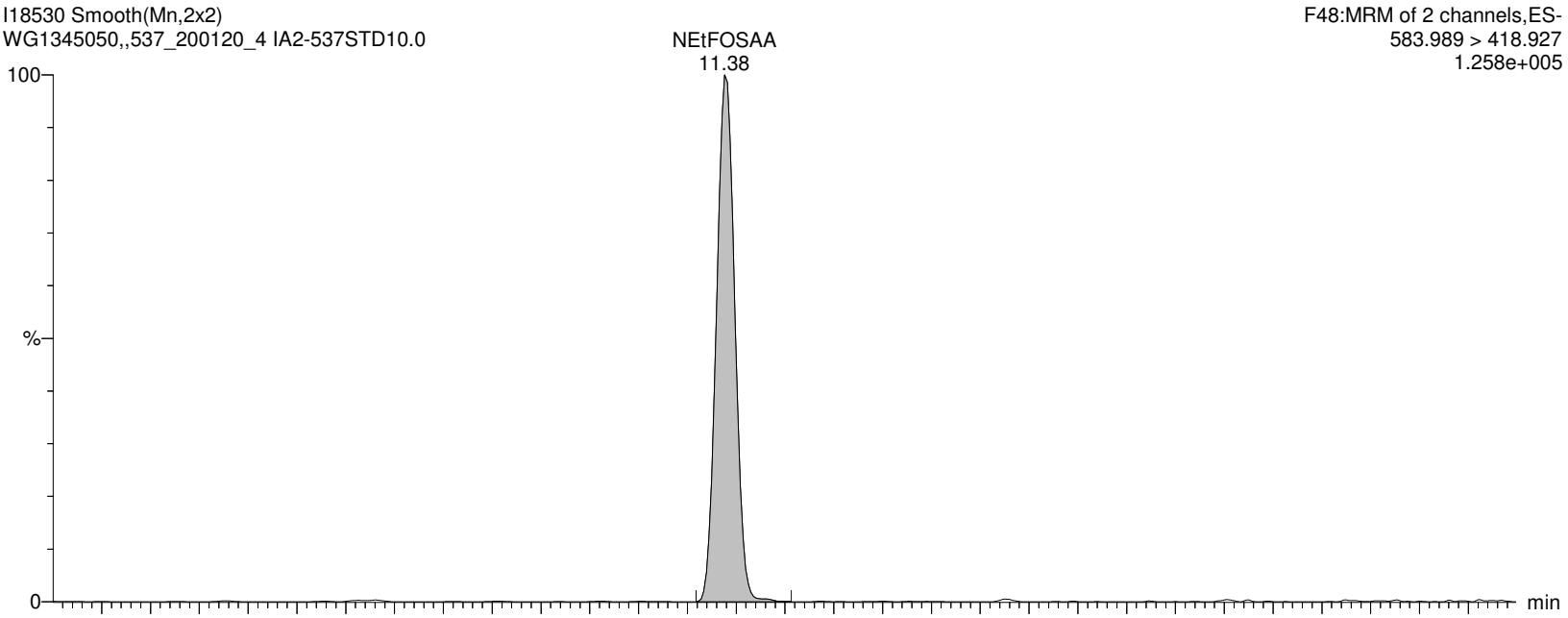
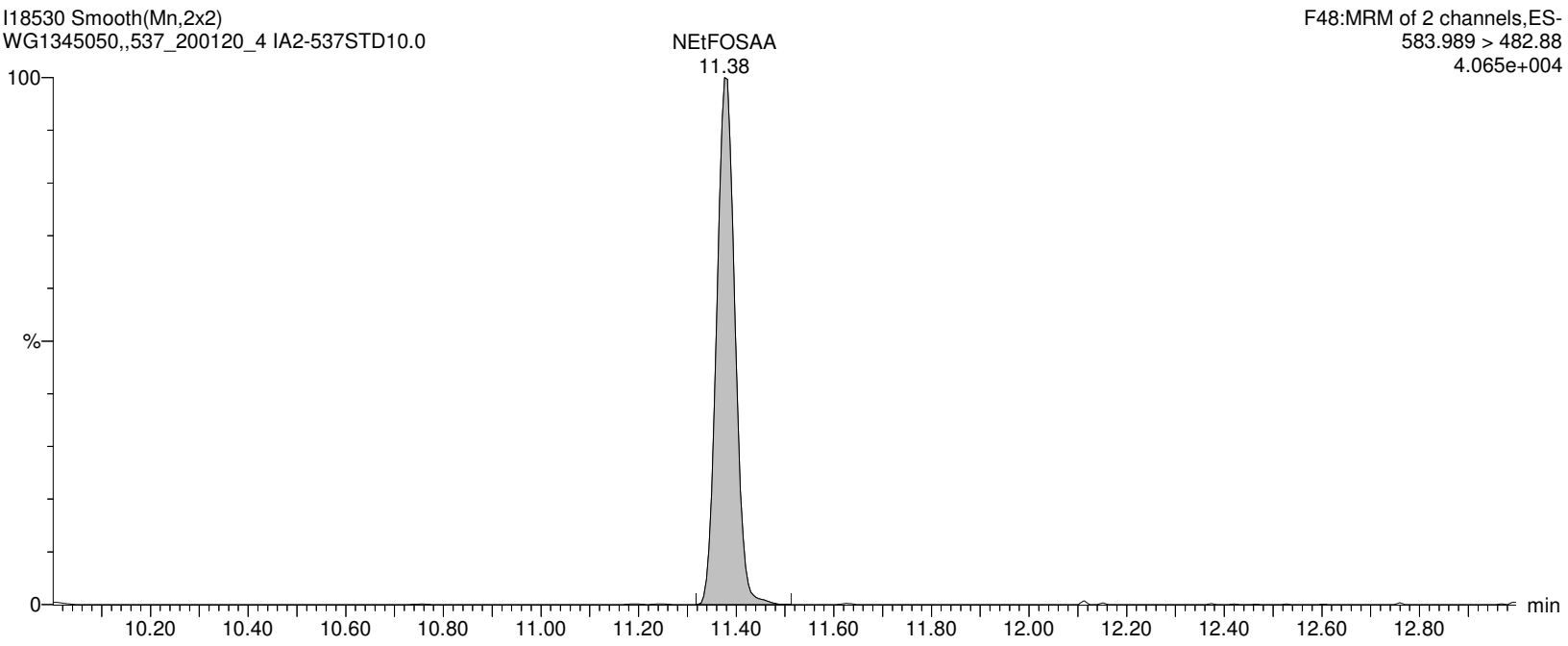
**NEtFOSAA**





all concentration units in (ng/mL)

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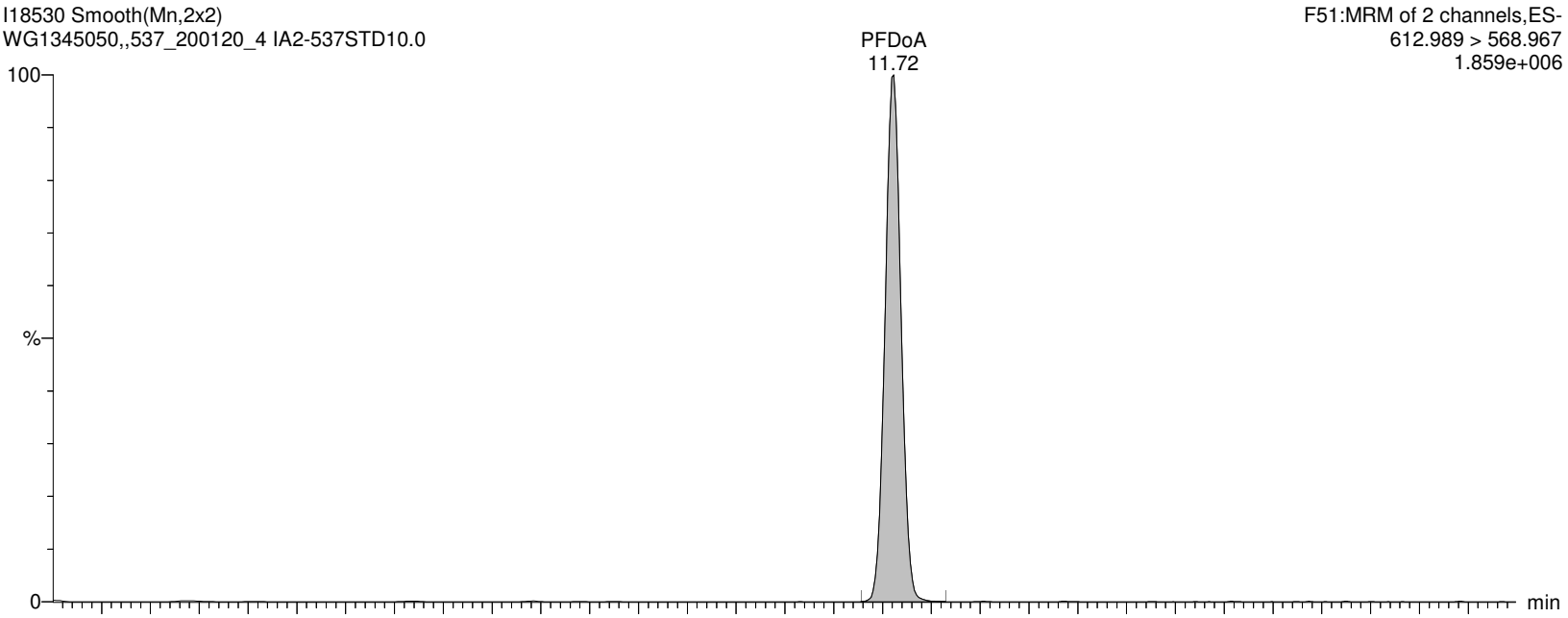
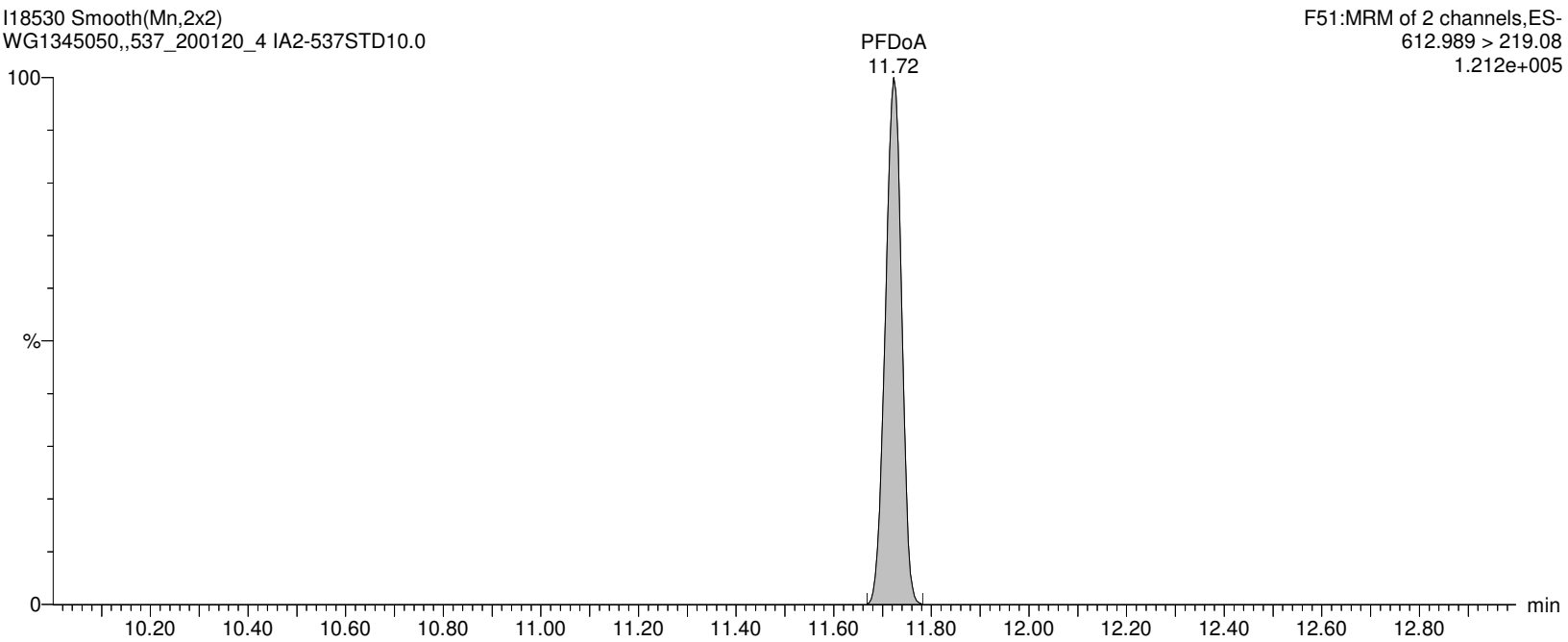
**PFDoA**





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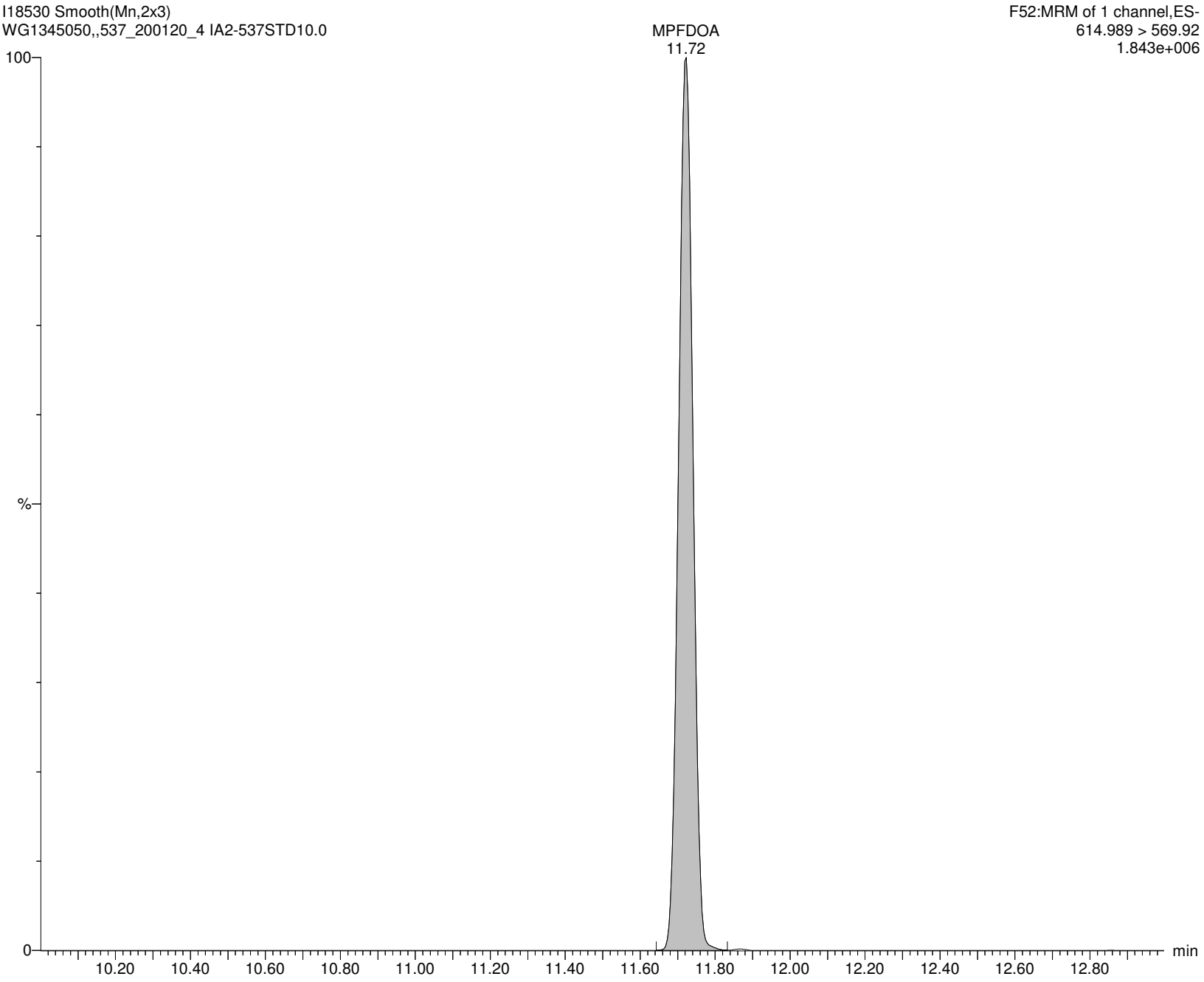
**MPFDOA**





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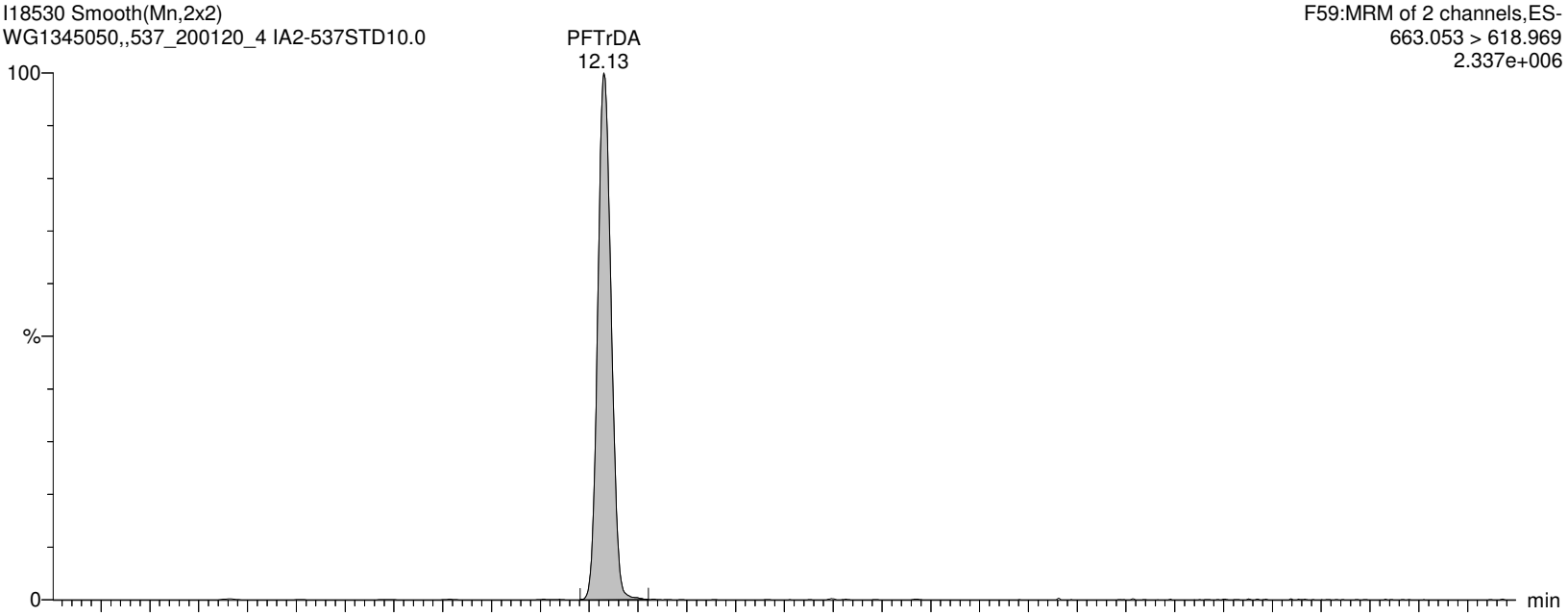
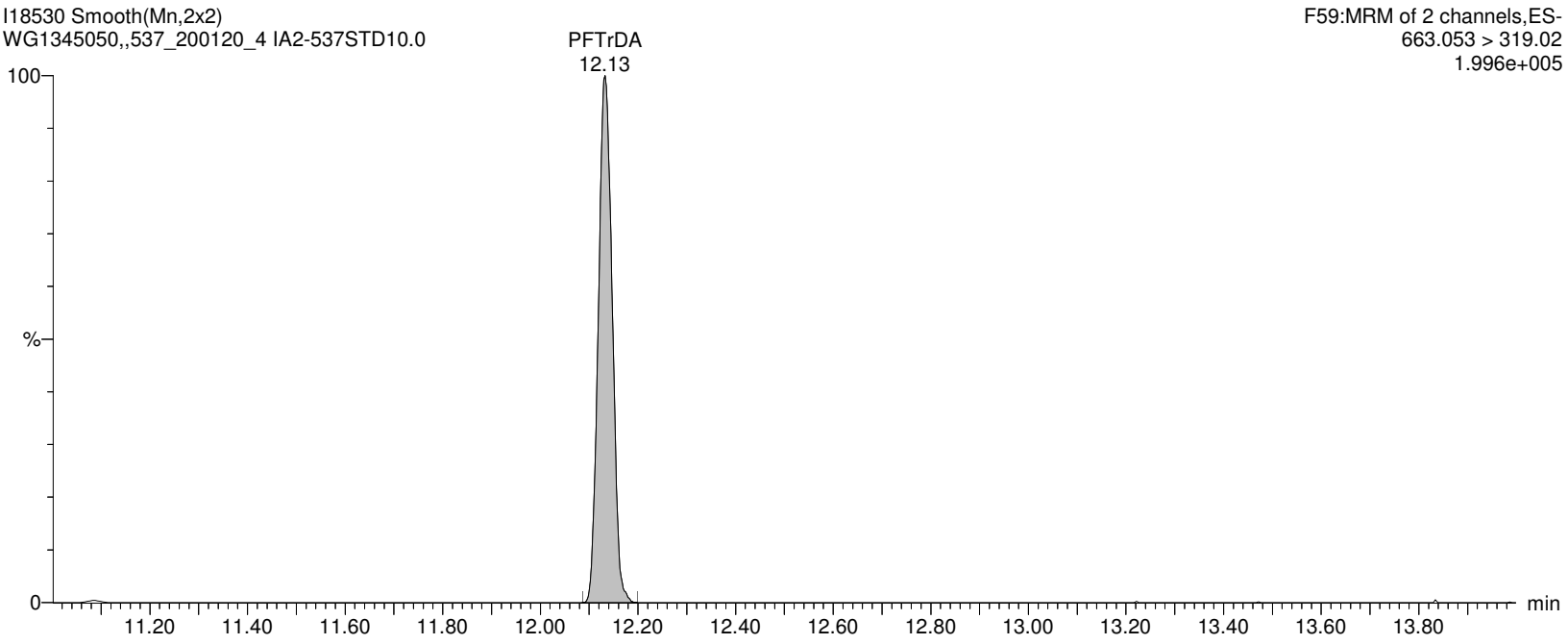
**PFTrDA**





all concentration units in (ng/mL)

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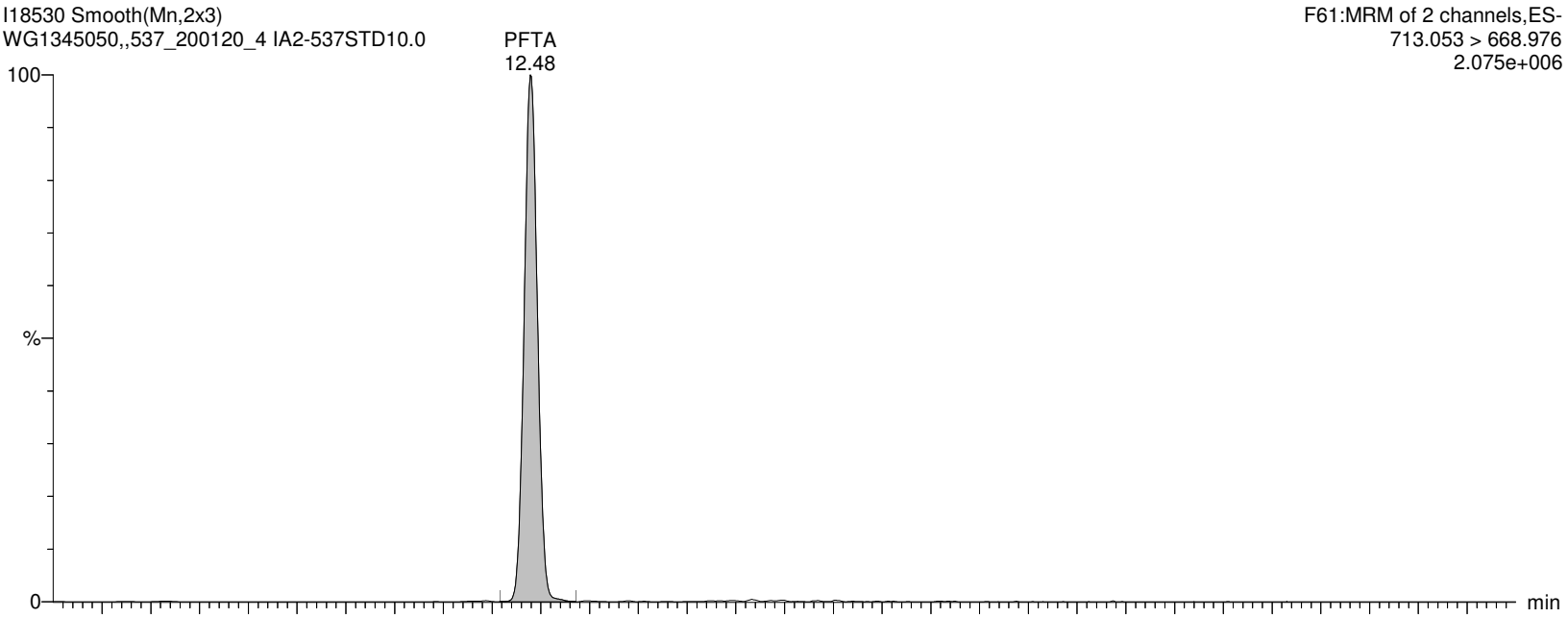
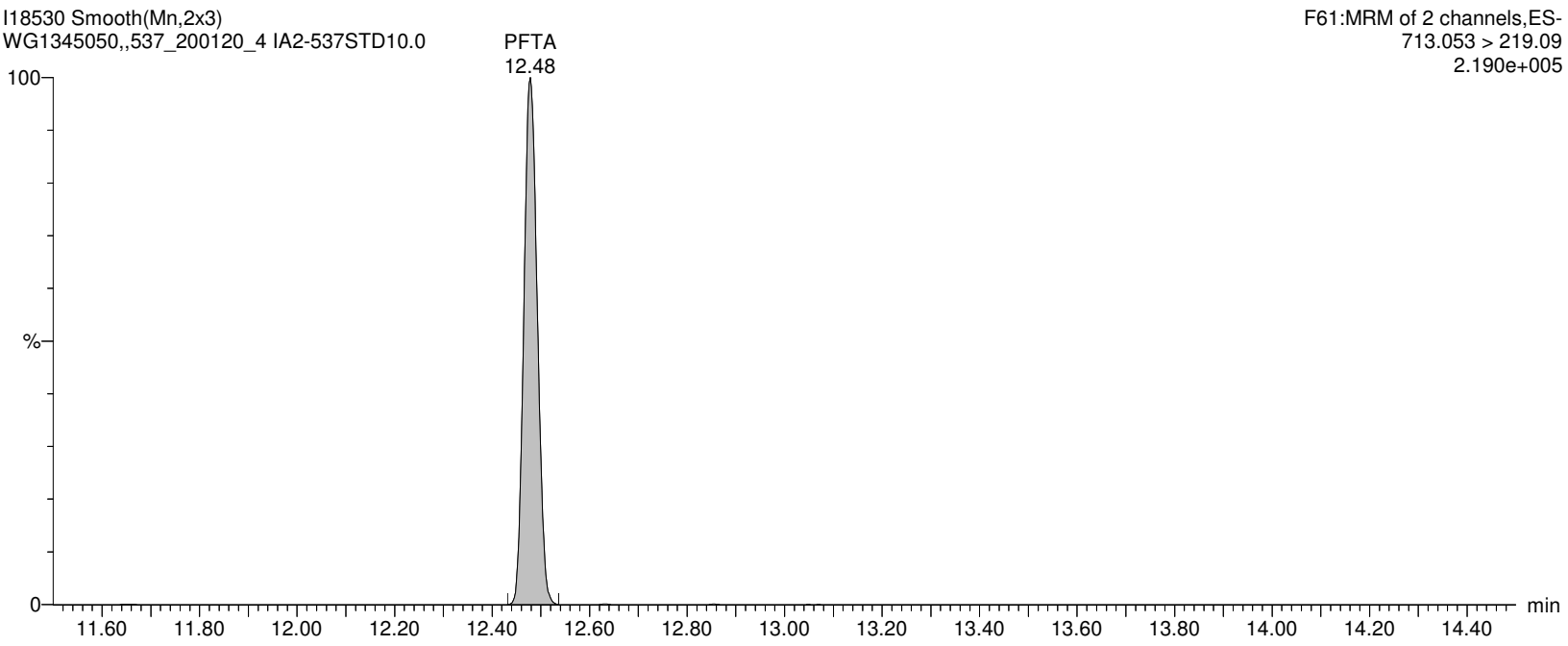
**PFTA**





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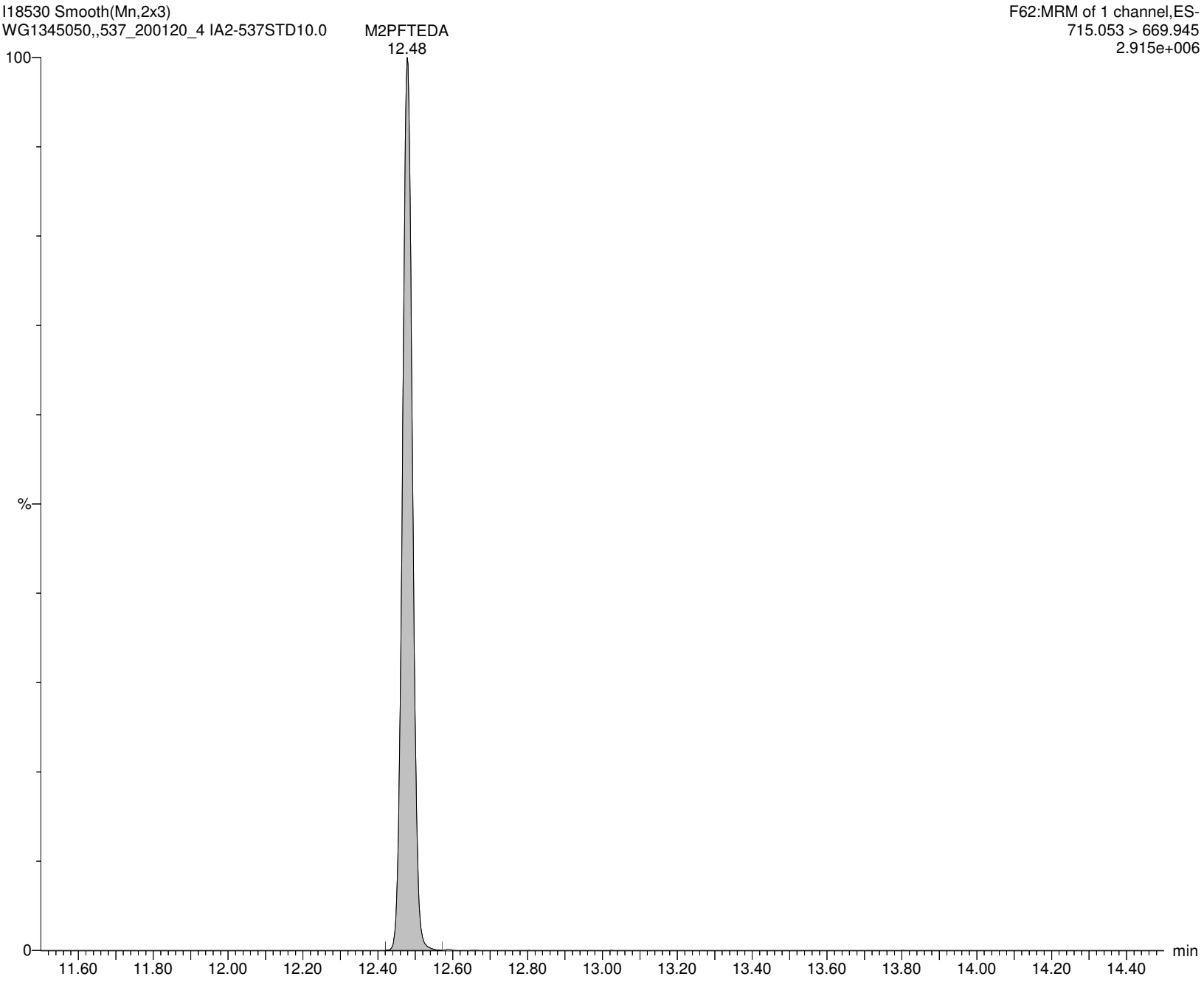
**M2PFTEDA**





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Last Altered: Friday, February 28, 2020 09:12:40 Eastern Standard Time
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**Method: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\MethDB\537ISO_Q_200227 .mdb 27 Feb 2020 12:38:15**
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**ID: IA2-537STD50.0**
**Name: I18531**
**Date: 27-Feb-2020**
**Time: 14:35:26**
**Description: WG1345050,,537_200120_5**
**Instrument: XEVO-TQSmicro#QEA0276**
**User: LCMS01:SG**
**Inlet Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\LCMS_537_ISO_MeOH**
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**MS Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

| | Name | CAS | RT | Trace | Area | M Flag | Conc (ng/mL) | Ion Ratio | Ratio Flag | %Rec |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | PFBA | 375-22-4 | 2.24 | 212.926 > 169.111 | 167813 | | 50.630 | | na | 101.3 |
| 2 | M3PFBA | INT STD | 2.24 | 215.926 > 172.122 | 39499 | | 10.045 | | na | 100.5 |
| 3 | MPFBA | INT STD | 2.24 | 216.926 > 172.137 | 45939 | | 10.150 | | na | 101.5 |
| 4 | PFPeA | 2706-90-3 | 5.21 | 262.926 > 219.002 | 216821 | | 50.578 | | na | 101.2 |
| 5 | M5PFPEA | INT STD | 5.20 | 267.989 > 223.081 | 61819 | | 10.294 | | na | 102.9 |
| 6 | PFBS | 375-73-5 | 5.87 | 298.926 > 79.923 | 44615 | | 45.316 | 2.02 | NO | 102.4 |
| 7 | M3PFBS | INT STD | 5.87 | 301.989 > 80.254 | 10926 | | 10.826 | | na | 108.3 |
| 8 | 4:2FTS | 757124-72-4 | 7.05 | 326.926 > 306.957 | 20977 | | 49.864 | 1.80 | NO | 106.7 |
| 9 | M2-4:2FTS | INT STD | 7.05 | 329.117 > 309.079 | 5880 | | 11.183 | | na | 111.8 |
| 10 | PFHxA | 307-24-4 | 7.13 | 312.989 > 269.028 | 298865 | | 50.854 | 17.33 | NO | 101.7 |
| 11 | M5PFHxA | INT STD | 7.13 | 317.989 > 273.045 | 71174 | | 10.345 | | na | 103.4 |
| 12 | PFPeS | 2706-91-4 | 7.44 | 348.926 > 80.251 | 48997 | | 48.892 | 2.37 | NO | 104.0 |
| 13 | PFHpA | 375-85-9 | 8.41 | 362.926 > 319.014 | 374813 | | 49.015 | 5.19 | NO | 98.0 |
| 14 | M4PFHpA | INT STD | 8.40 | 366.926 > 321.979 | 84240 | | 10.554 | | na | 105.5 |
| 15 | br-PFHxS | 355-46-4 | 8.32 | 398.904 > 79.915 | 6982 | | 8.540 | 3.03 | NO | 100.5 |
| 16 | L-PFHxS | 355-46-4 | 8.56 | 398.904 > 79.915 | 30587 | | 39.517 | 2.04 | NO | 106.8 |
| 17 | PFHxS | 355-46-4 | | 398.904 > 79.915 | 37570 | | 48.057 | | na | |
| 18 | M3PFHxS | INT STD | 8.56 | 401.926 > 80.317 | 10437 | | 11.543 | | na | 115.4 |
| 19 | br-PFOA | 335-67-1 | | 412.989 > 368.9 | | | ND | | YES | |
| 20 | L-PFOA | 335-67-1 | 9.35 | 412.989 > 368.9 | 350746 | | 49.225 | 8.57 | NO | 98.4 |
| 21 | M2PFOA | INT STD | 9.35 | 415.032 > 369.968 | 84038 | | 9.989 | | na | 99.9 |
| 22 | PFOA | 335-67-1 | | 412.989 > 368.9 | 350746 | | 49.225 | | na | |
| 23 | M8PFOA | INT STD | 9.35 | 420.989 > 375.979 | 83420 | | 10.410 | | na | 104.1 |
| 24 | 6:2FTS | 27619-97-2 | 9.31 | 426.989 > 406.921 | 4879 | | 48.052 | 0.70 | NO | 101.2 |
| 25 | M2-6:2FTS | INT STD | 9.31 | 428.989 > 408.917 | 4256 | | 13.008 | | na | 130.1 |
| 26 | PFHpS | 375-92-8 | 9.44 | 448.926 > 80.257 | 29451 | | 52.941 | 1.09 | NO | 111.5 |
| 27 | PFNA | 375-95-1 | 10.09 | 462.989 > 418.931 | 327238 | | 52.888 | 4.24 | NO | 105.8 |
| 28 | M9PFNA | INT STD | 10.09 | 472.053 > 426.947 | 83157 | | 10.614 | | na | 106.1 |
| 29 | br-PFOS | 1763-23-1 | 9.96 | 498.968 > 79.918 | 8976 | M5 | 10.210 | 3.75 | NO | 102.1 |
| 30 | L-PFOS | 1763-23-1 | 10.15 | 498.968 > 79.918 | 22900 | | 38.328 | 1.37 | NO | 105.0 |
| 31 | PFOS | 1763-23-1 | | 498.968 > 79.918 | 31876 | | 48.538 | | na | |
| 32 | M4PFOS | INT STD | 10.15 | 503.032 > 80.306 | 7867 | | 9.262 | | na | 92.6 |
| 33 | M8PFOS | INT STD | 10.14 | 507.053 > 80.294 | 10819 | | 11.842 | | na | 118.4 |
| 34 | PFDA | 335-76-2 | 10.72 | 513.053 > 468.906 | 301249 | | 49.719 | 5.97 | NO | 99.4 |
| 35 | M2PFDA | INT STD | 10.72 | 515.053 > 469.934 | 68134 | | 10.300 | | na | 103.0 |
| 36 | M6PFDA | INT STD | 10.72 | 519.053 > 473.931 | 79104 | | 10.552 | | na | 105.5 |
| 37 | 8:2FTS | 39108-34-4 | 10.71 | 527.032 > 507.079 | 6599 | | 47.176 | 1.68 | NO | 98.3 |
| 38 | M2-8:2FTS | INT STD | 10.71 | 529.053 > 508.945 | 2351 | | 11.885 | | na | 118.8 |
| 39 | PFNS | 68259-12-1 | 10.74 | 548.989 > 80.249 | 38100 | | 51.774 | 1.56 | NO | 107.9 |


all concentration units in (ng/mL)

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| | Name | CAS | RT | Trace | Area | M Flag | Conc (ng/mL) | Ion Ratio | Ratio Flag | %Rec |
|---|---|---|---|---|---|---|---|---|---|---|
| 40 | d3-NMeFOSAA | INT STD | 11.08 | 573.096 > 418.987 | 9927 | | 9.996 | | na | 100.0 |
| 41 | NMeFOSAA | 2355-31-9 | 11.09 | 570.053 > 418.917 | 30740 | | 51.815 | 2.80 | NO | 103.6 |
| 42 | PFUnA | 2058-94-8 | 11.26 | 562.989 > 518.903 | 299291 | | 50.928 | 7.86 | NO | 101.9 |
| 43 | M7-PFUDA | INT STD | 11.26 | 570.053 > 524.923 | 64158 | | 9.740 | | na | 97.4 |
| 44 | PFDS | 335-77-3 | 11.26 | 598.926 > 80.314 | 36514 | | 50.898 | 1.55 | NO | 105.5 |
| 45 | FOSA | 754-91-6 | 11.12 | 497.989 > 78.245 | 122439 | | 49.017 | 192.48 | NO | 98.0 |
| 46 | M8FOSA | INT STD | 11.12 | 506.053 > 78.286 | 30322 | | 10.093 | | na | 100.9 |
| 47 | d5-NEtFOSAA | INT STD | 11.37 | 589.117 > 418.929 | 8024 | | 11.081 | | na | 110.8 |
| 48 | NEtFOSAA | 2991-50-6 | 11.38 | 583.989 > 418.927 | 29531 | | 43.142 | 3.13 | NO | 86.3 |
| 49 | PFDoA | 307-55-1 | 11.72 | 612.989 > 568.967 | 342919 | | 53.190 | 14.17 | NO | 106.4 |
| 50 | MPFDOA | INT STD | 11.72 | 614.989 > 569.92 | 71010 | | 10.027 | | na | 100.3 |
| 51 | PFTrDA | 72629-94-8 | 12.13 | 663.053 > 618.969 | 333978 | | 52.841 | 12.06 | NO | 105.7 |
| 52 | PFTA | 376-06-7 | 12.48 | 713.053 > 668.976 | 324915 | | 53.825 | 9.06 | NO | 107.7 |
| 53 | M2PFTEDA | INT STD | 12.48 | 715.053 > 669.945 | 81472 | | 10.207 | | na | 102.1 |


all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICAL_A.qld
Last Altered: Friday, February 28, 2020 09:12:40 Eastern Standard Time
Printed: Friday, February 28, 2020 09:27:51 Eastern Standard Time

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**Date: 27-Feb-2020**
**Time: 14:35:26**
**Description: WG1345050,,537_200120_5**
**User: LCMS01:SG**
**Vial: 1:A,6**
**Instrument: XEVO-TQSmicro#QEA0276**
**Inlet Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\LCMS_537_ISO_MeOH**
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**MS Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

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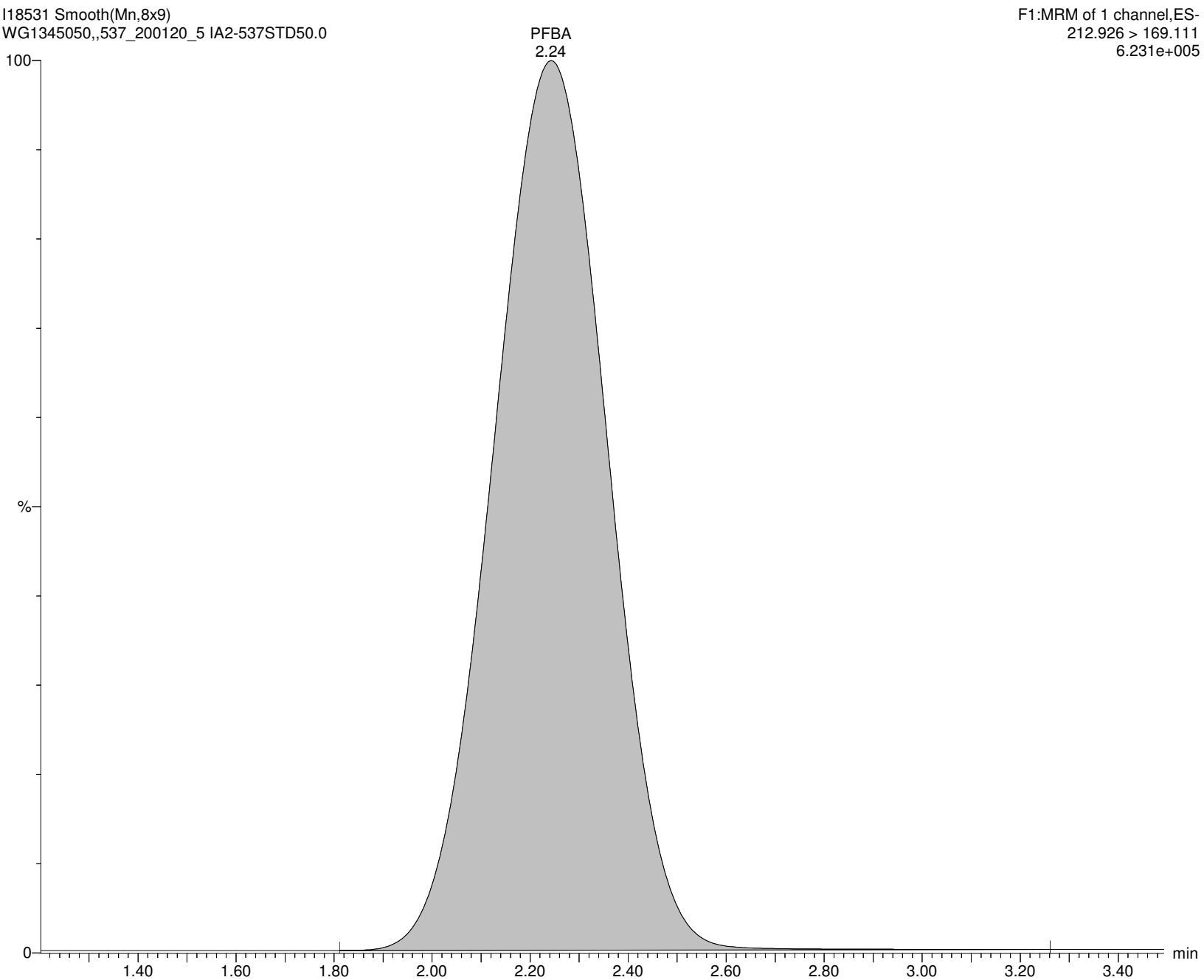



all concentration units in (ng/mL)

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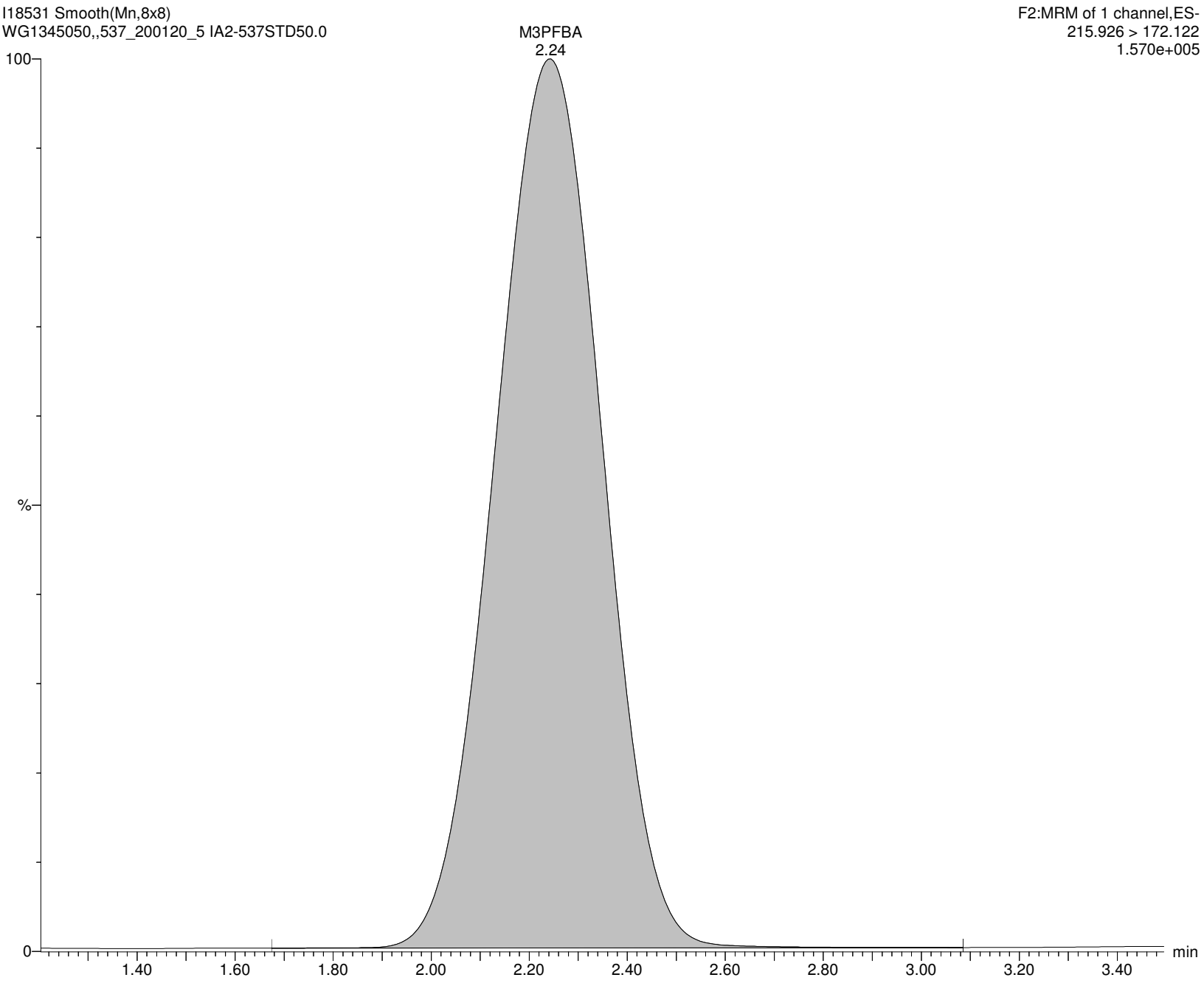



all concentration units in (ng/mL)

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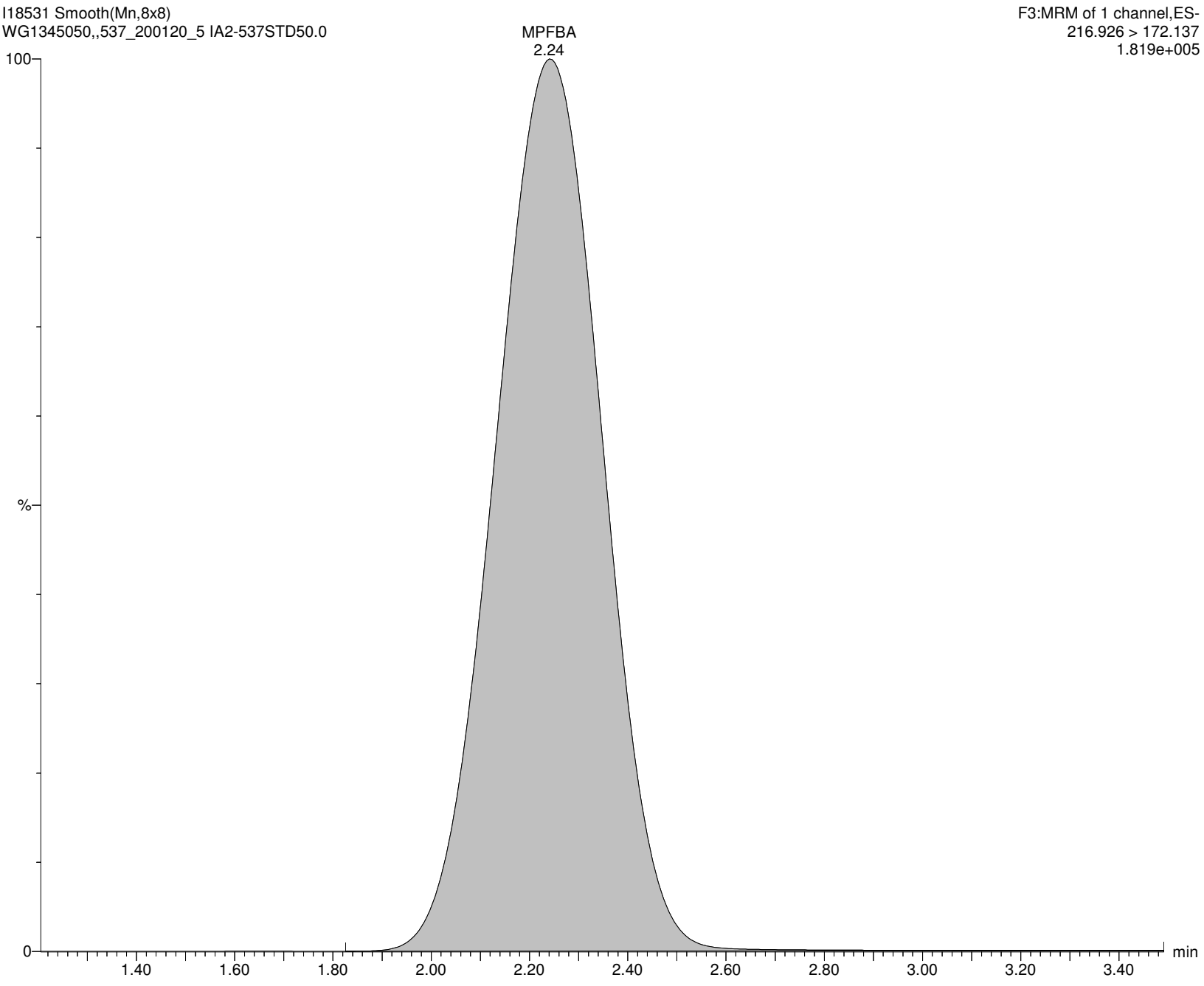



all concentration units in (ng/mL)

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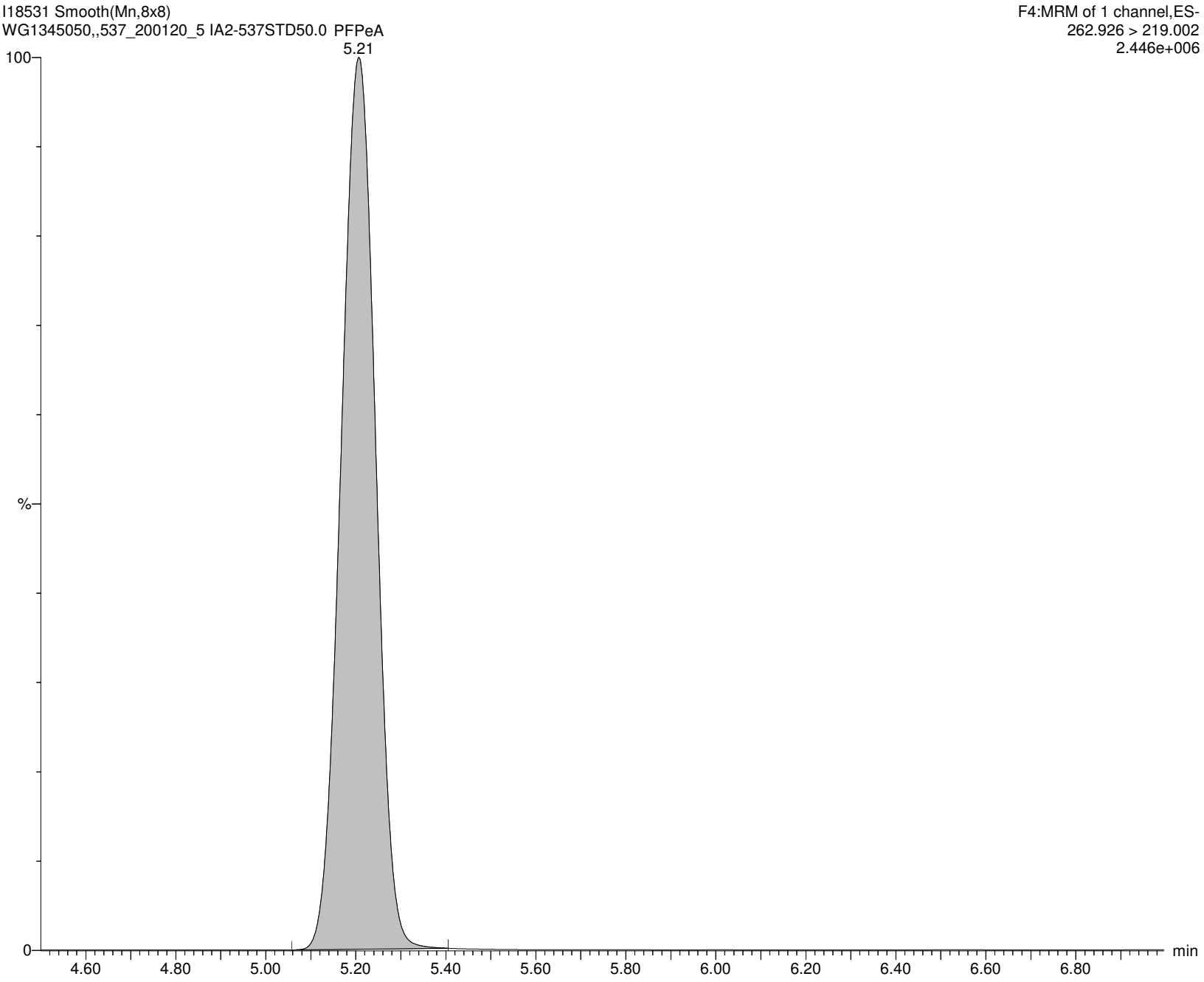



all concentration units in (ng/mL)

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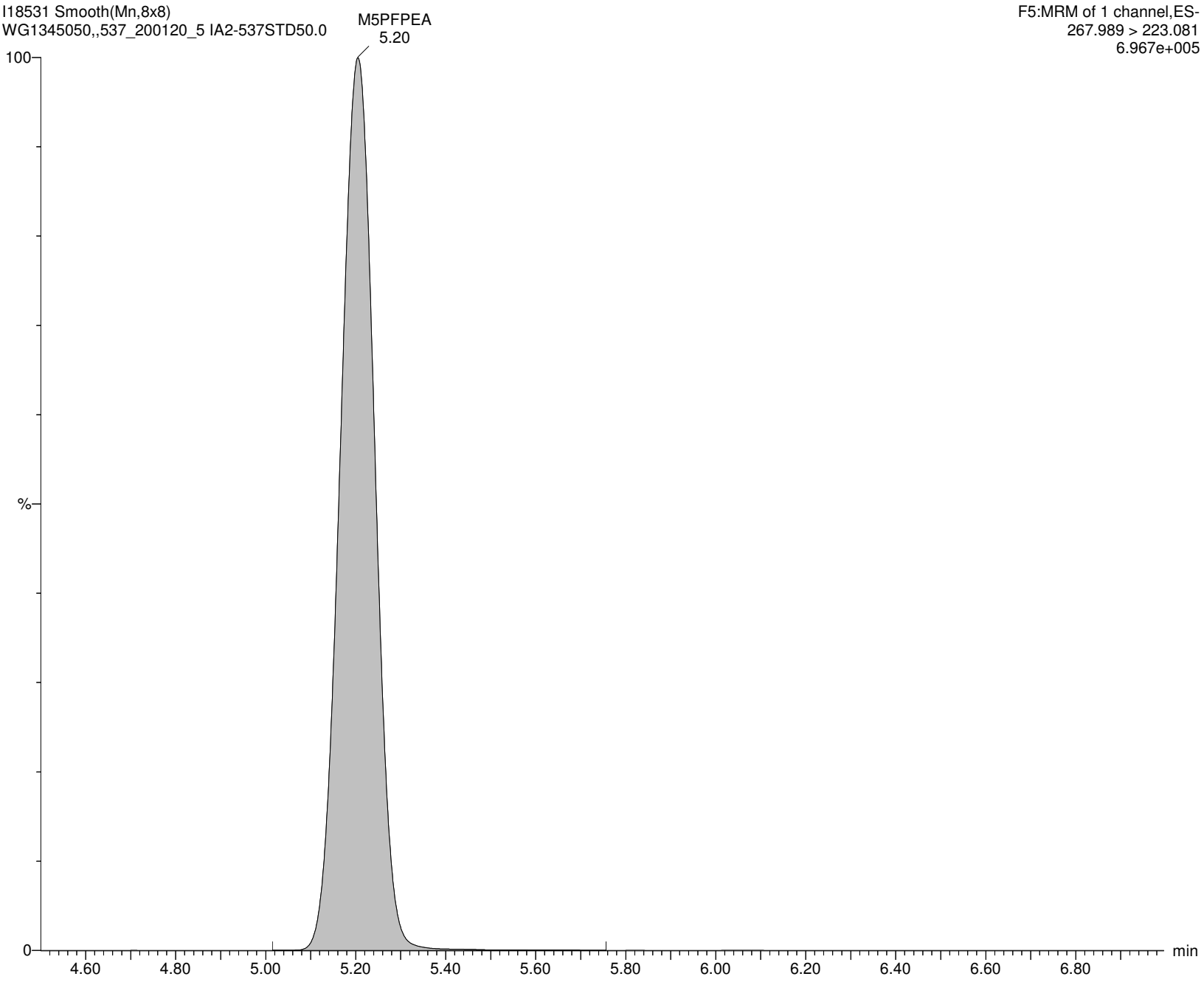
**M5PFPEA**





all concentration units in (ng/mL)

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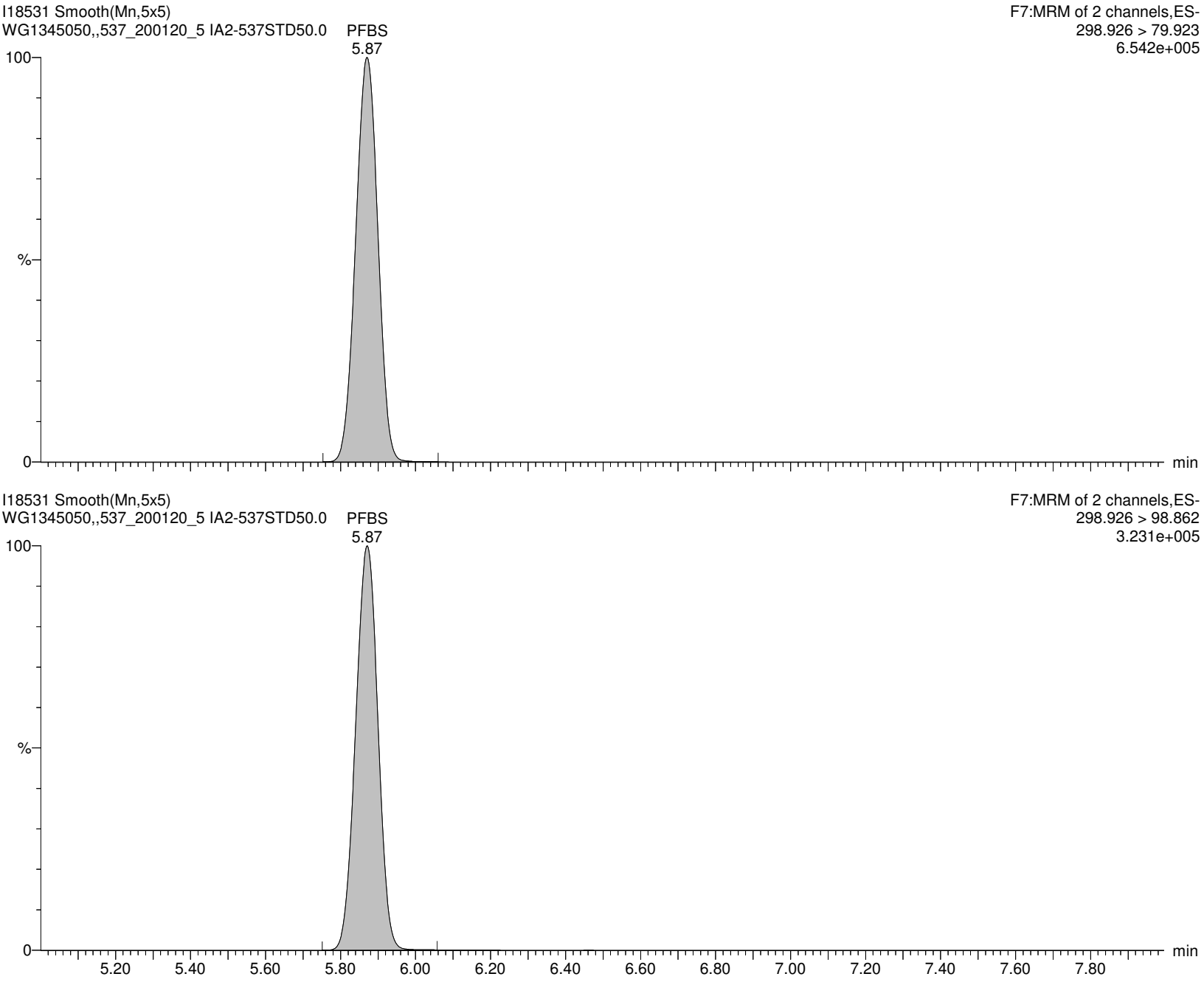



all concentration units in (ng/mL)

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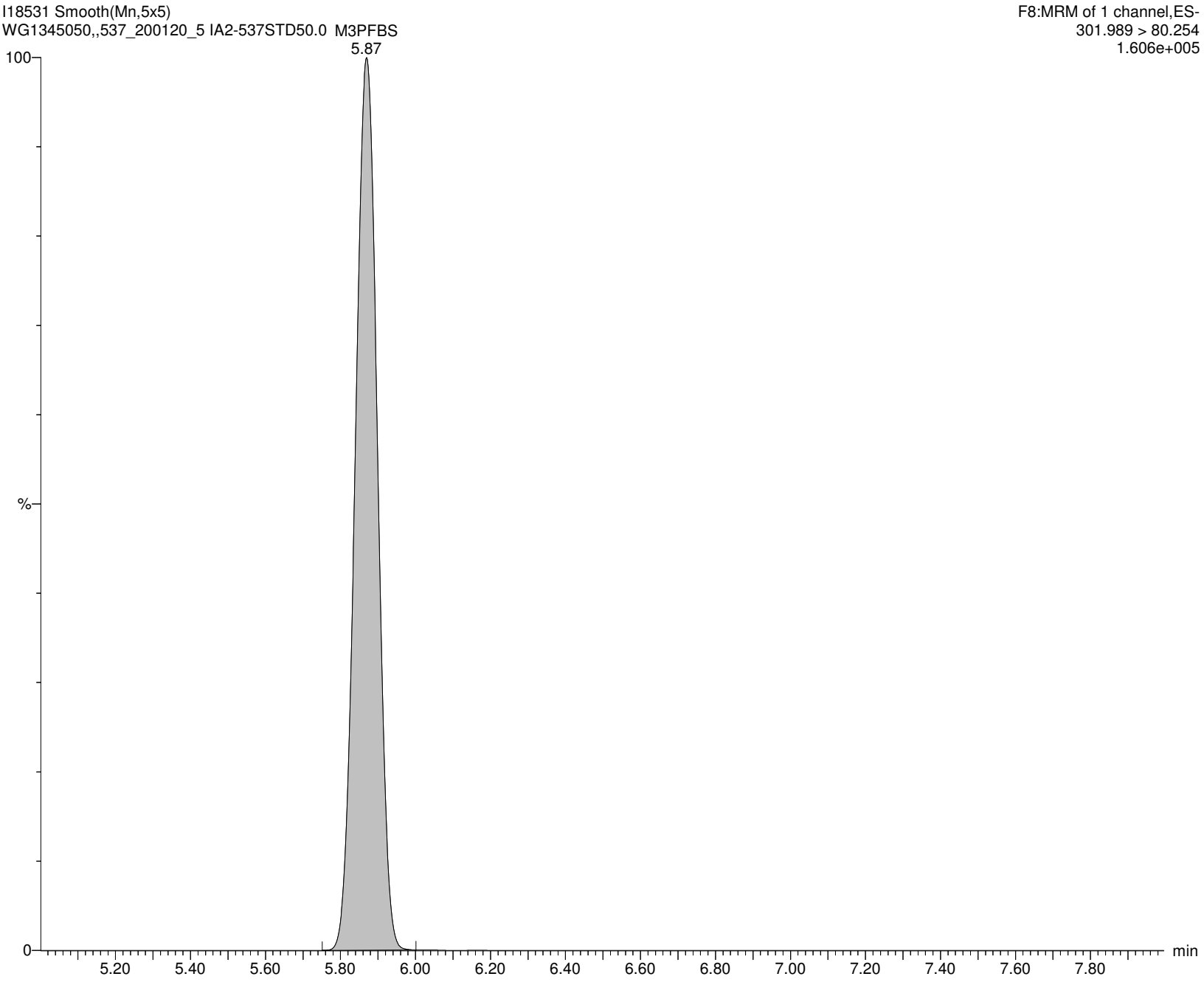



all concentration units in (ng/mL)

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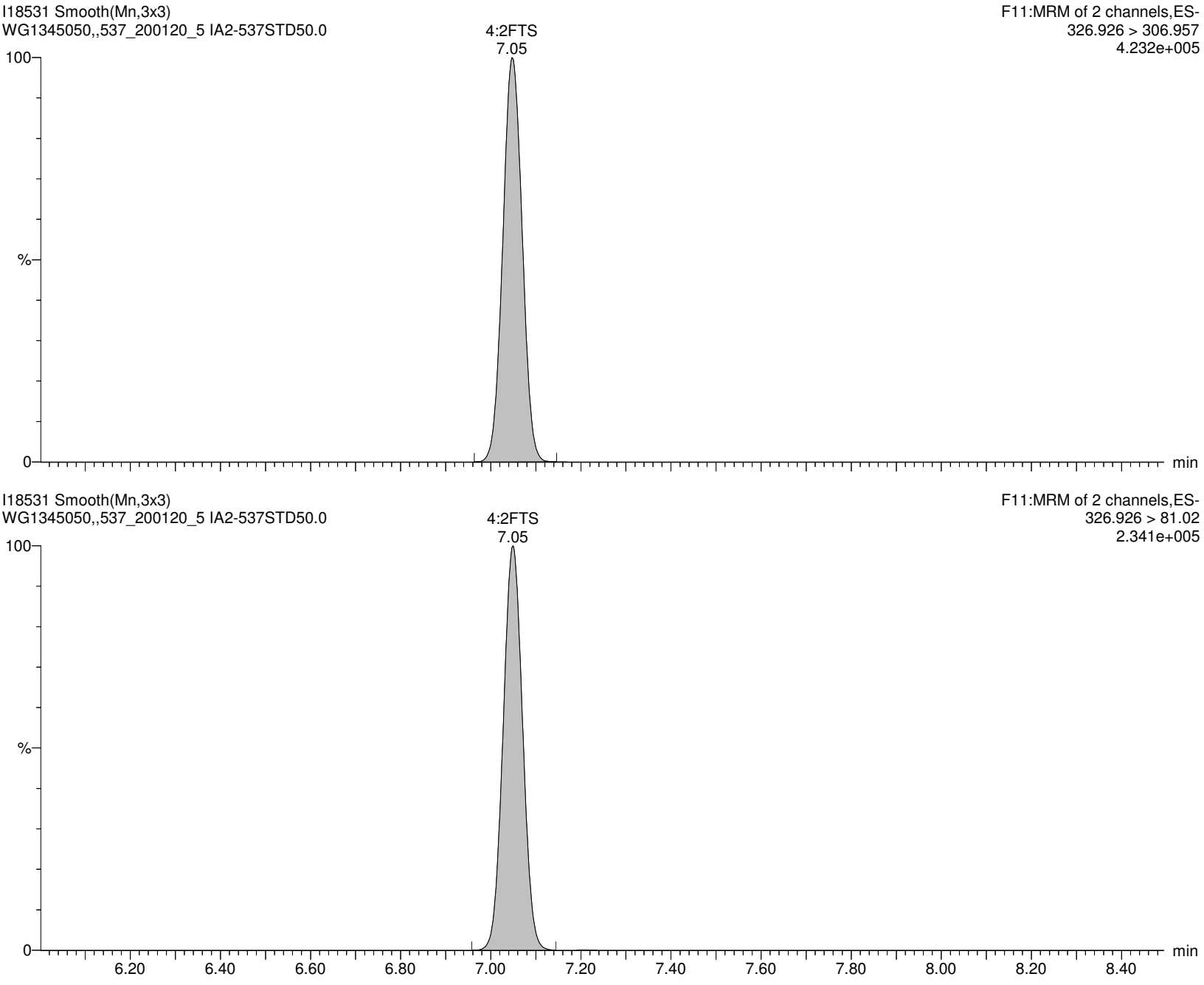
**4:2FTS**





all concentration units in (ng/mL)

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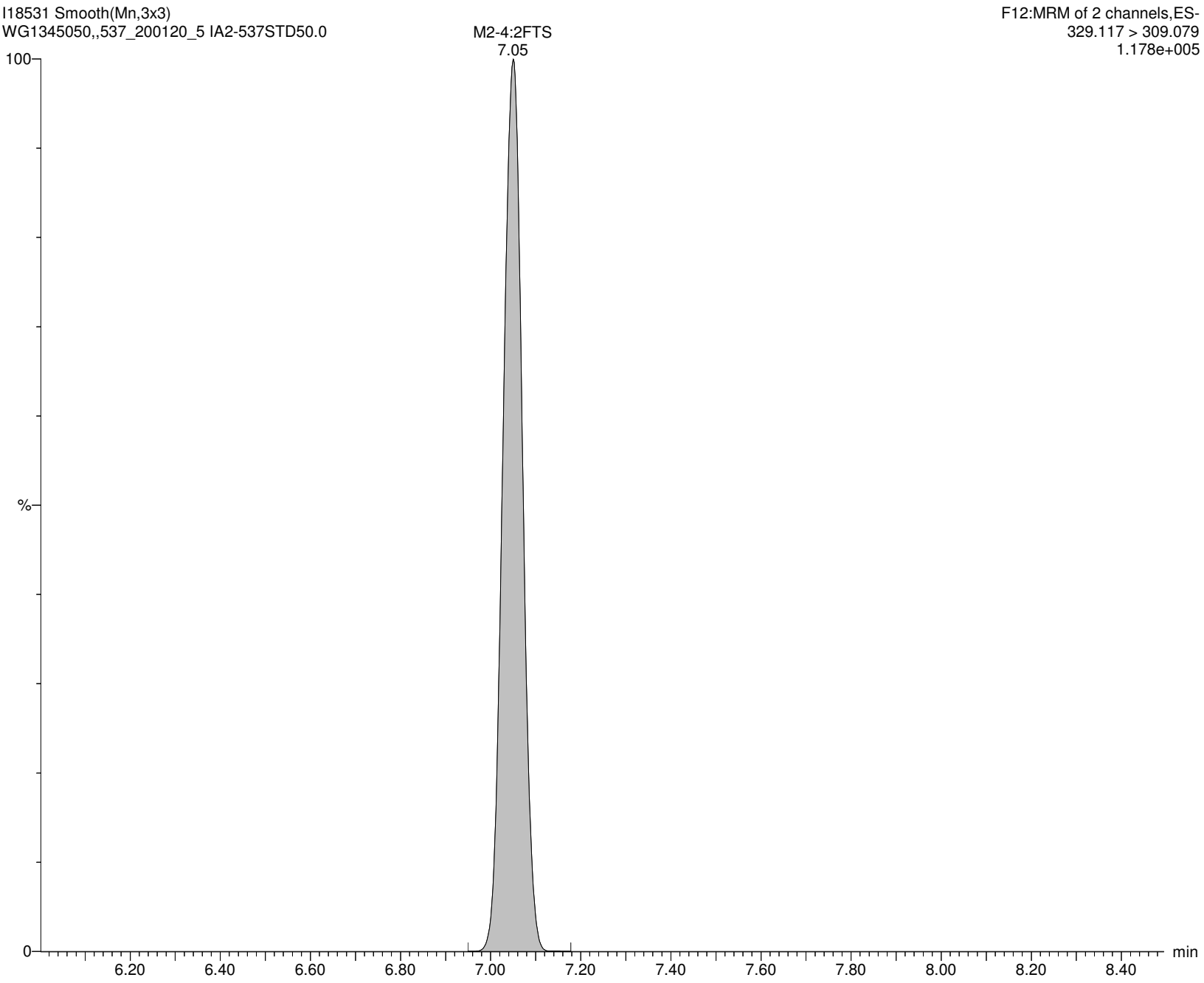
**M2-4:2FTS**





all concentration units in (ng/mL)

Alpha Analytical Inc.
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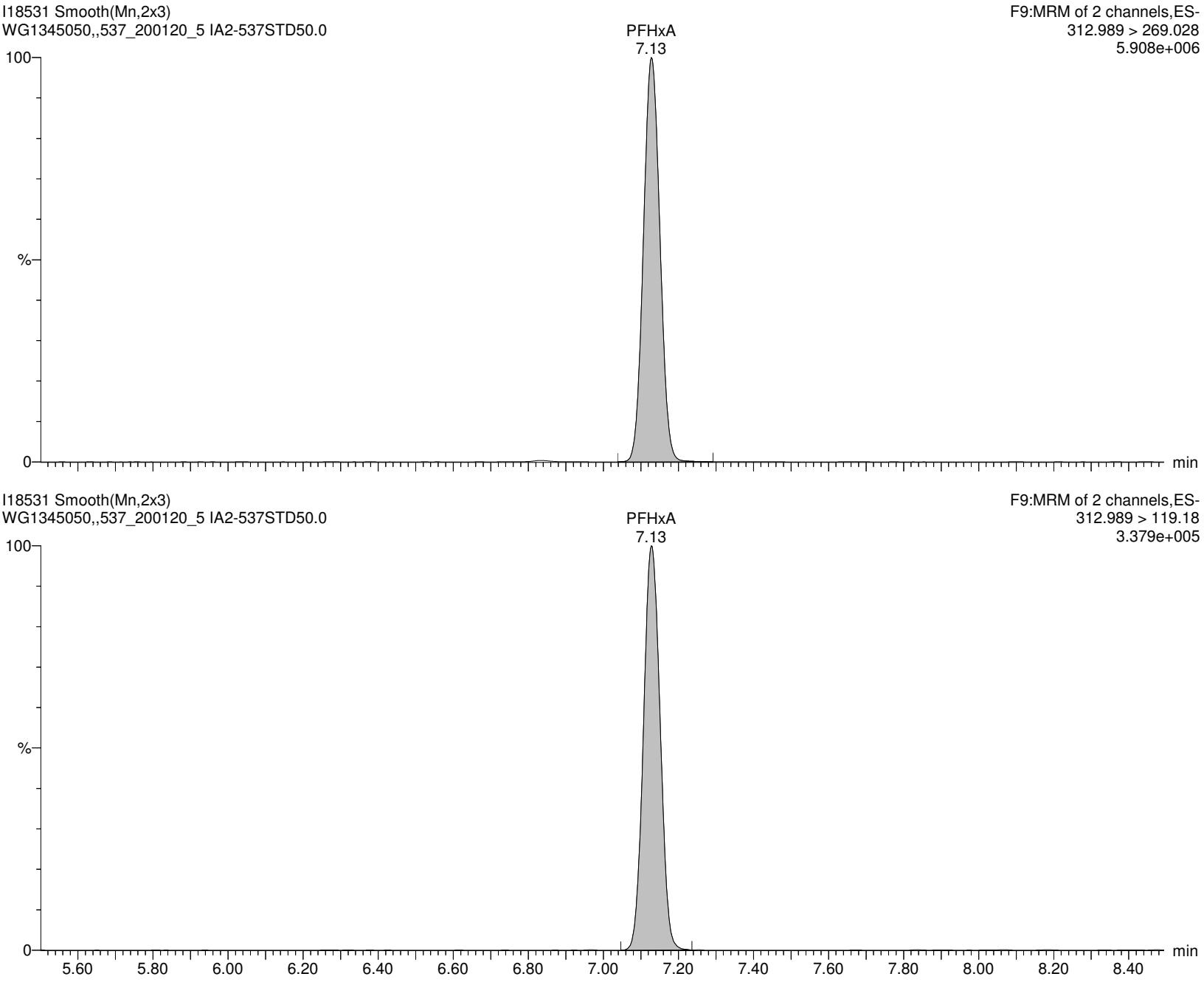



all concentration units in (ng/mL)

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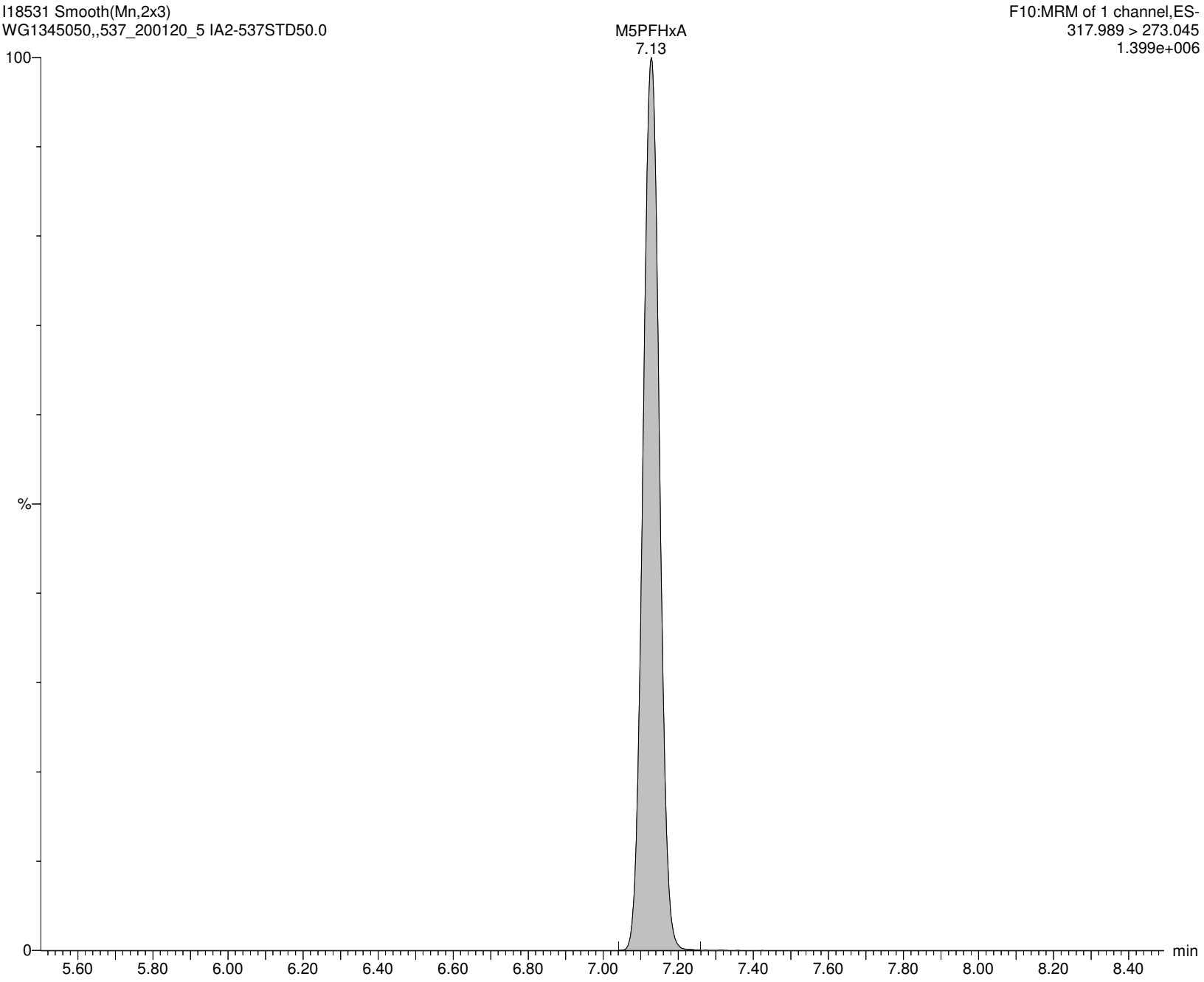



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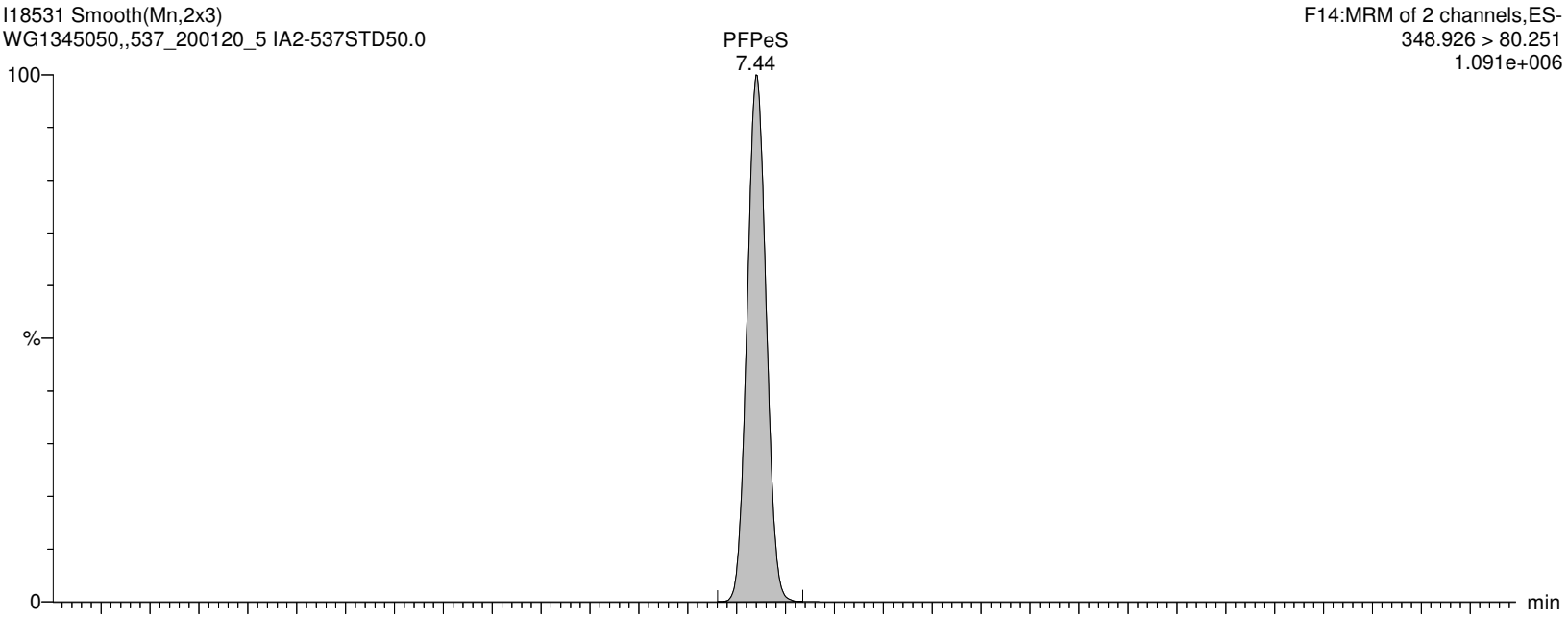


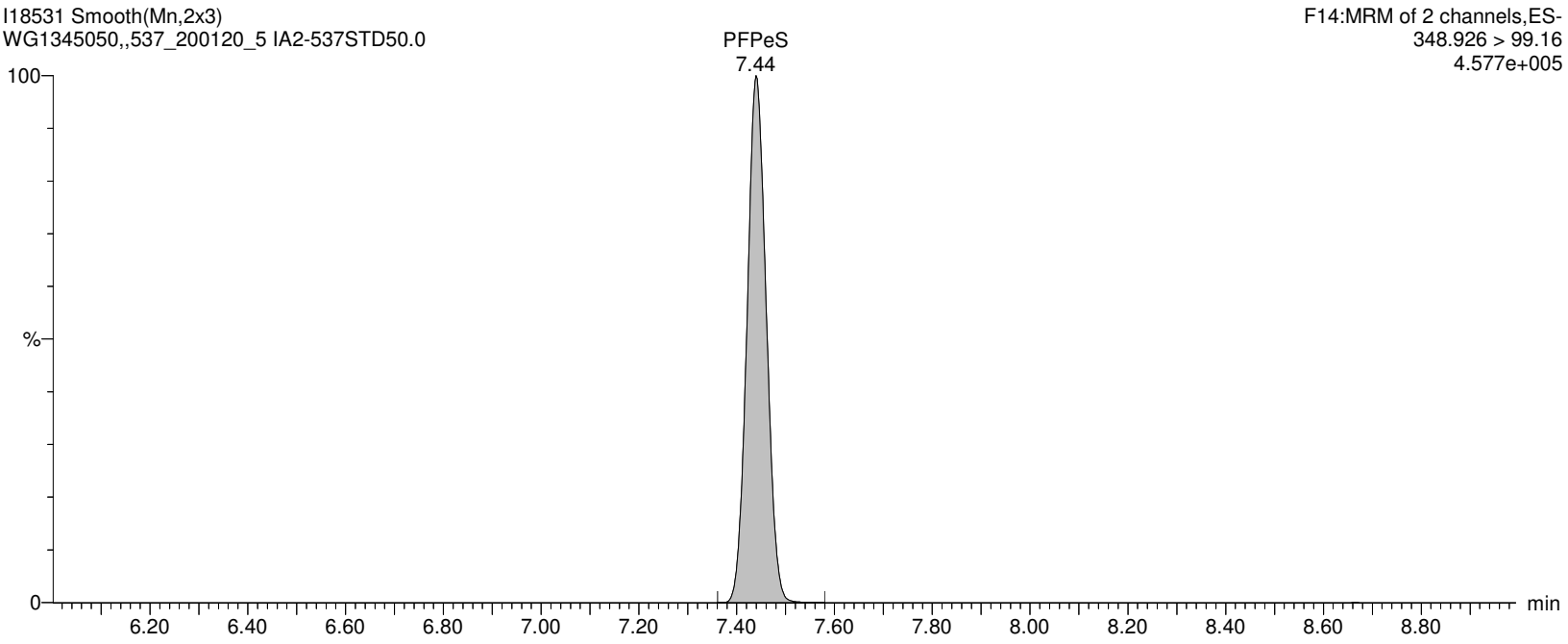



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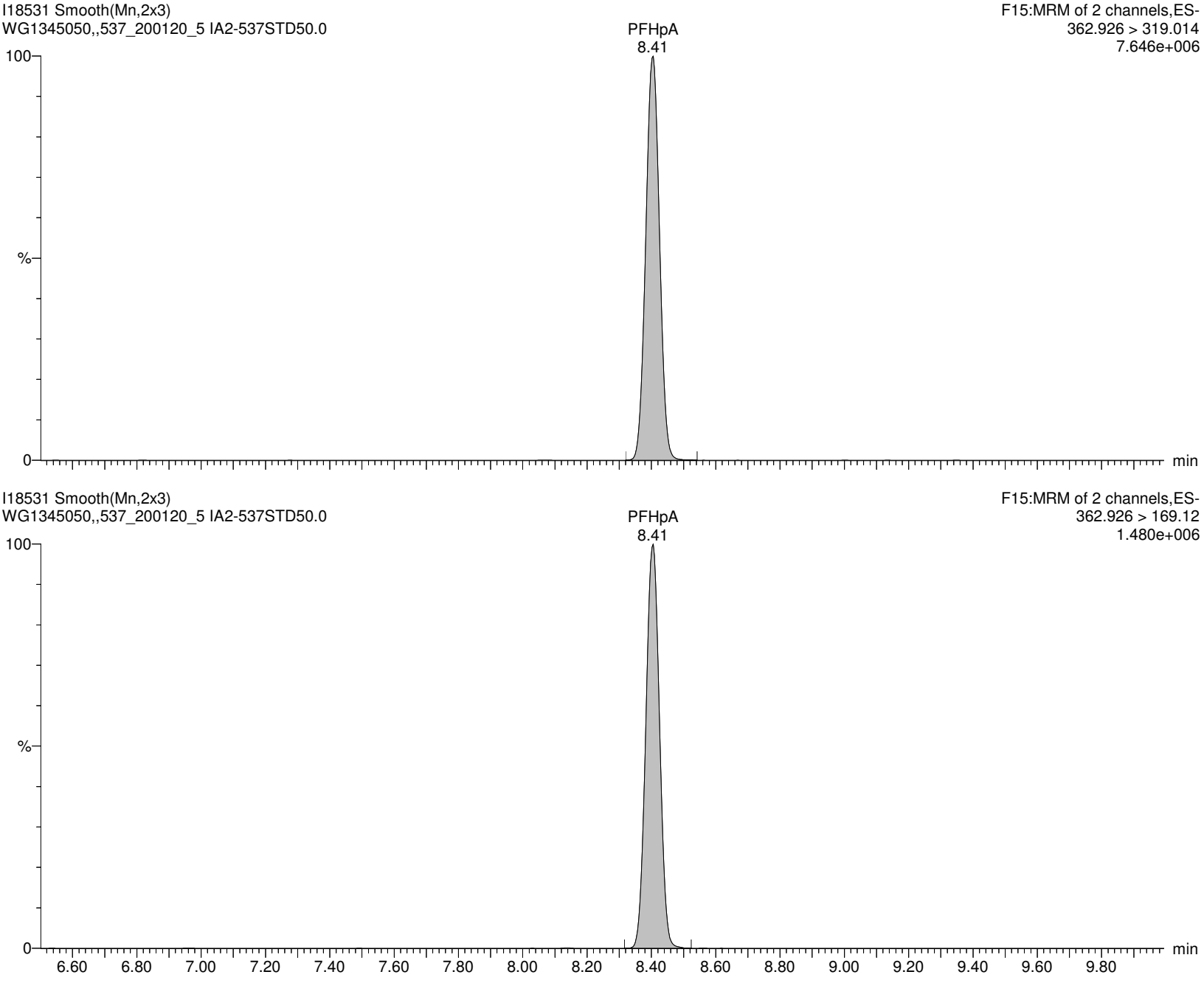



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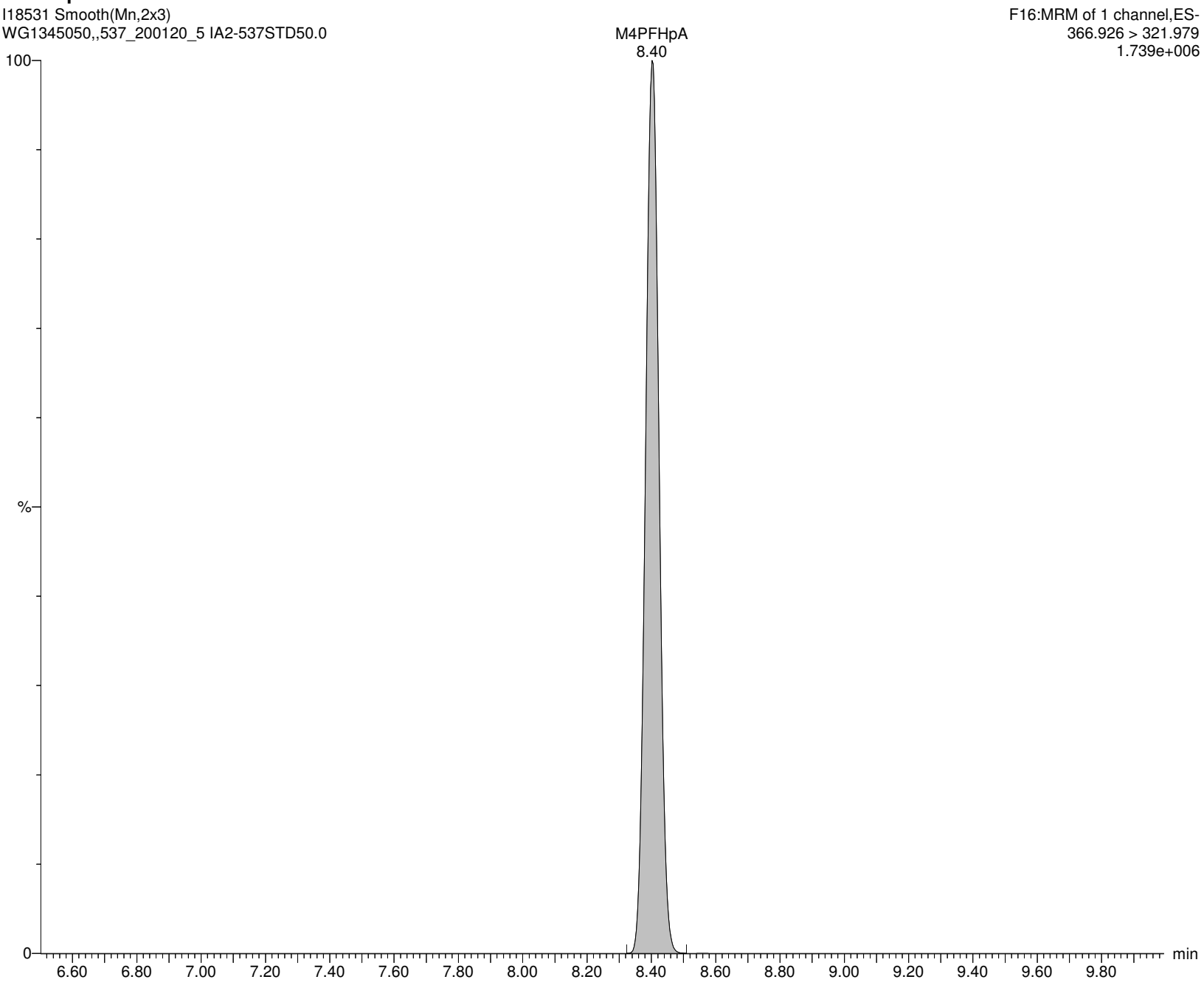



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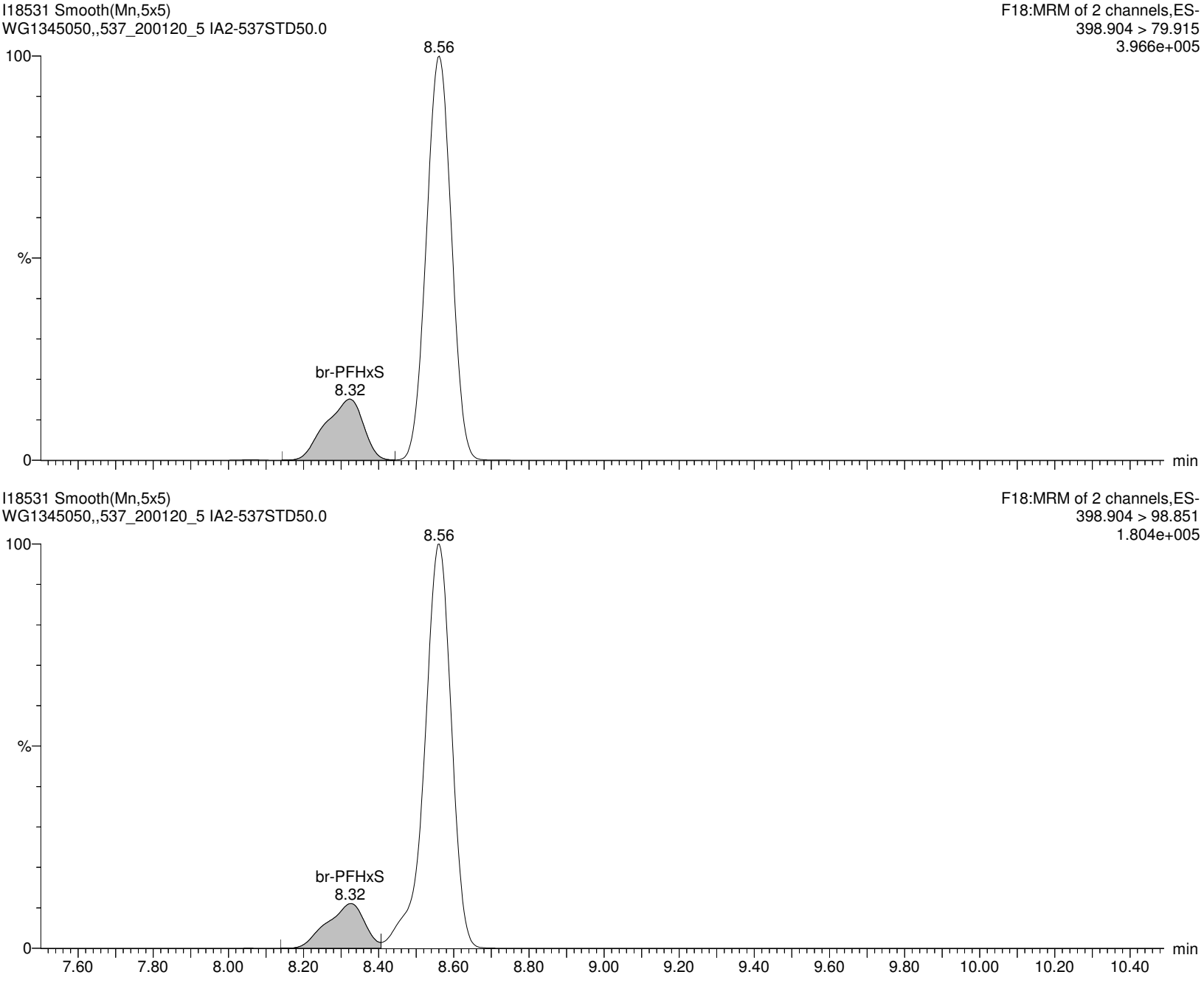



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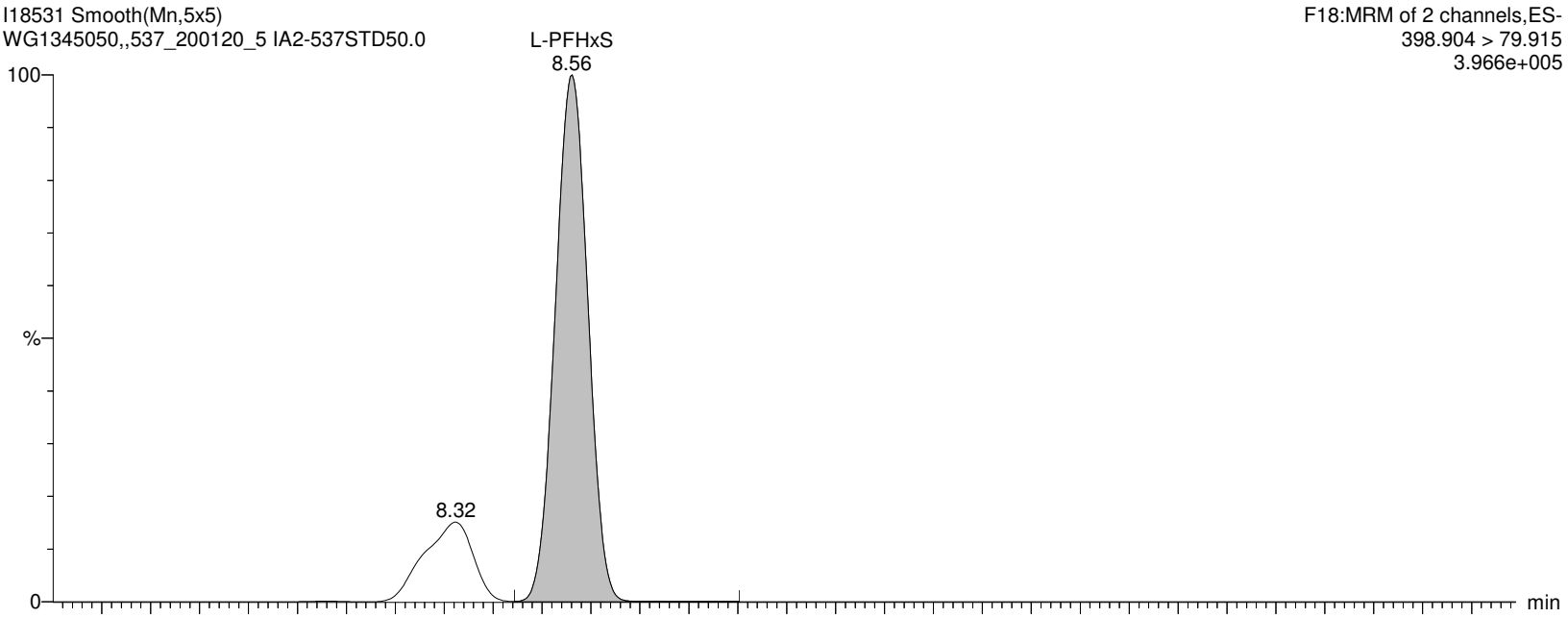
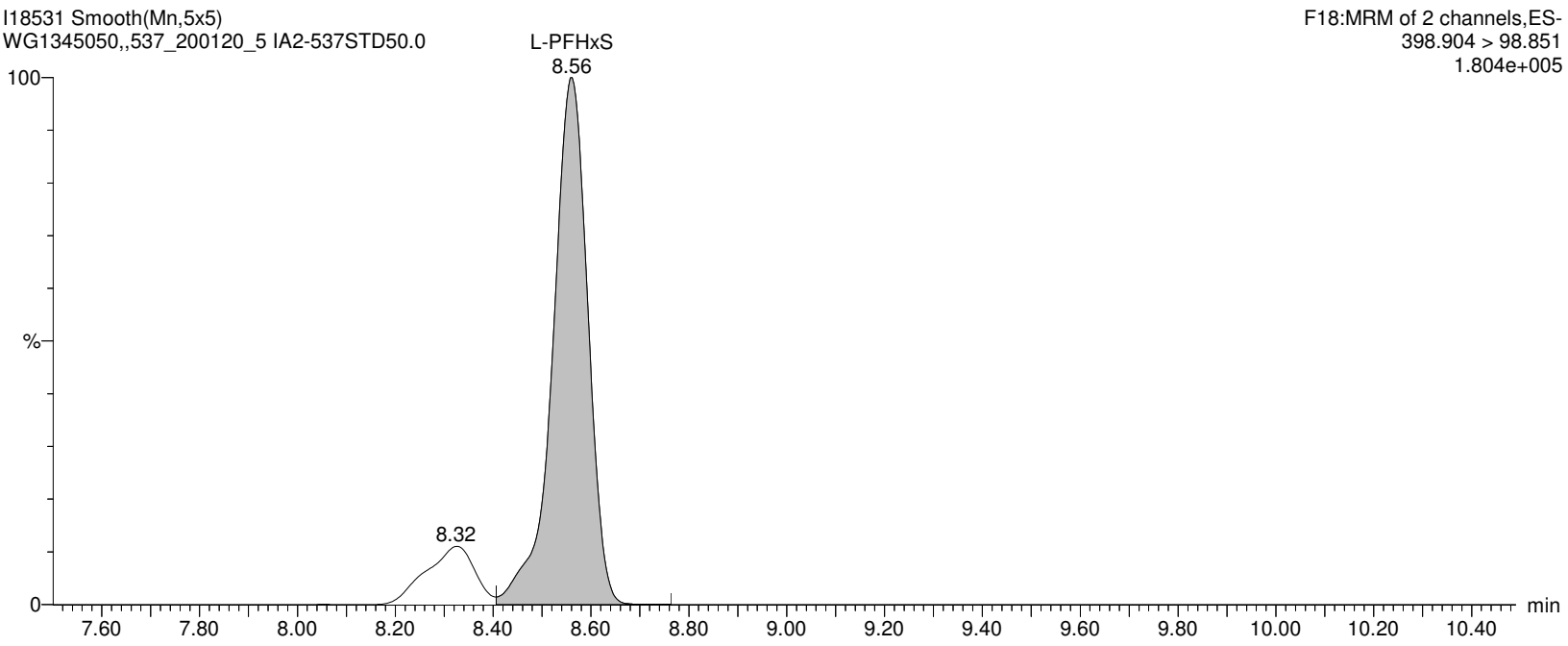
**L-PFHxS**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICAL_A.qld
Last Altered: Friday, February 28, 2020 09:12:40 Eastern Standard Time
Printed: Friday, February 28, 2020 09:27:51 Eastern Standard Time

**Name: I18531**
**ID: IA2-537STD50.0**
**Date: 27-Feb-2020**
**Time: 14:35:26**
**Description: WG1345050,,537_200120_5**
**User: LCMS01:SG**
**Vial: 1:A,6**
**Instrument: XEVO-TQSmicro#QEA0276**
**Inlet Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\LCMS_537_ISO_MeOH**
**Tune Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\190709_TUNE.IPR**
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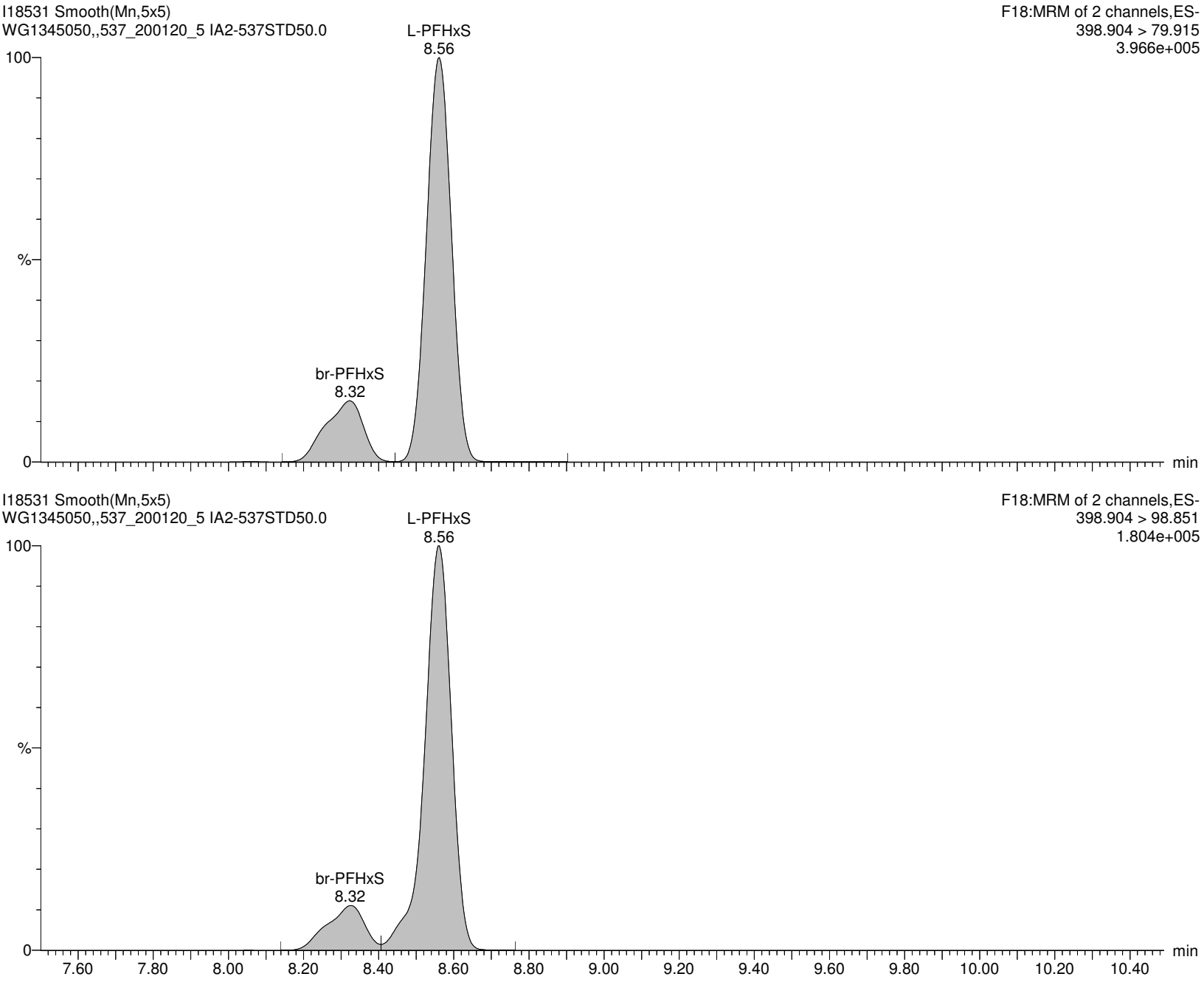
**PFHxS**





all concentration units in (ng/mL)

Alpha Analytical Inc.
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Last Altered: Friday, February 28, 2020 09:12:40 Eastern Standard Time
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**Vial: 1:A,6**
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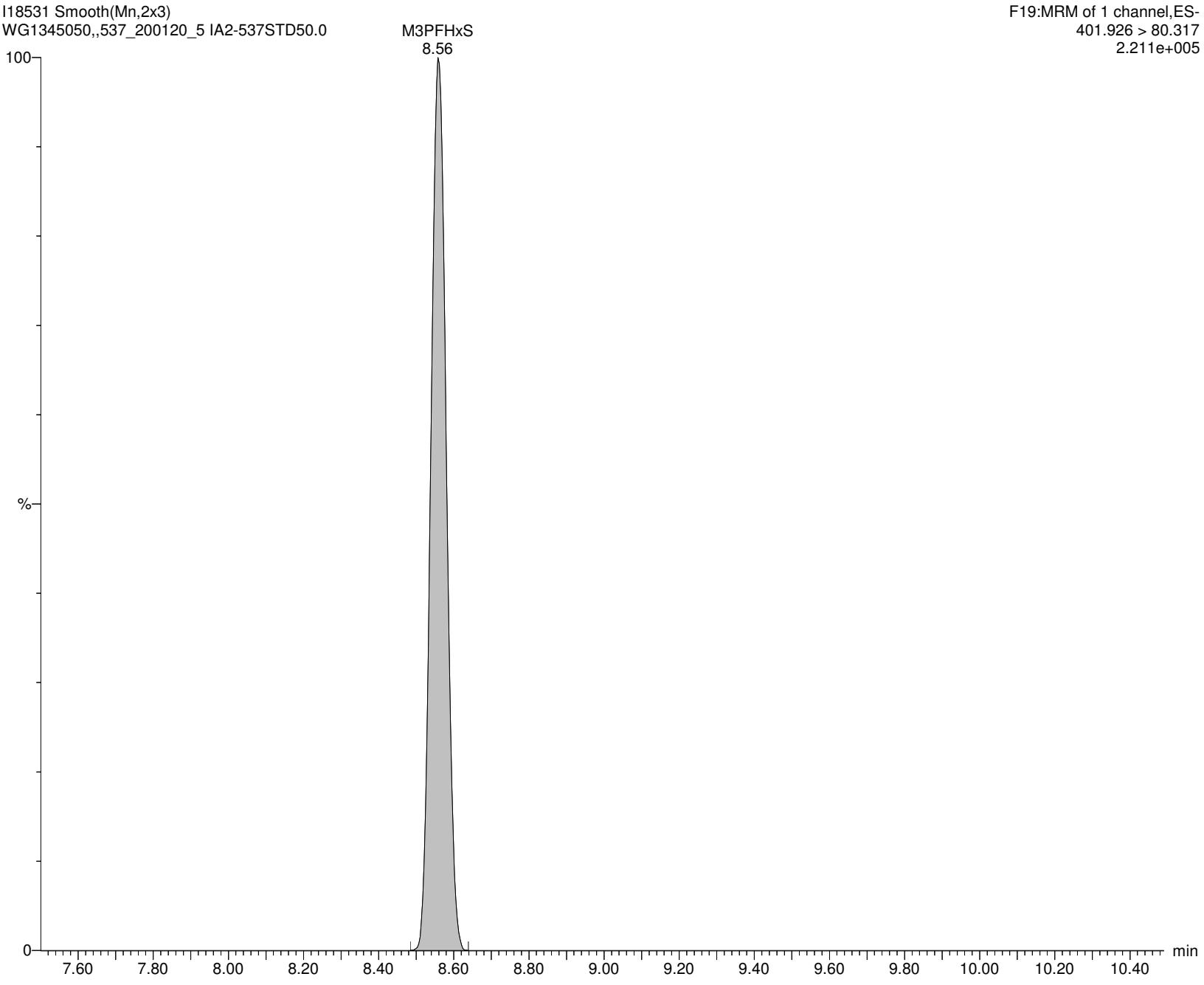
**M3PFHxS**





all concentration units in (ng/mL)

Alpha Analytical Inc.
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Last Altered: Friday, February 28, 2020 09:12:40 Eastern Standard Time
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**Vial: 1:A,6**
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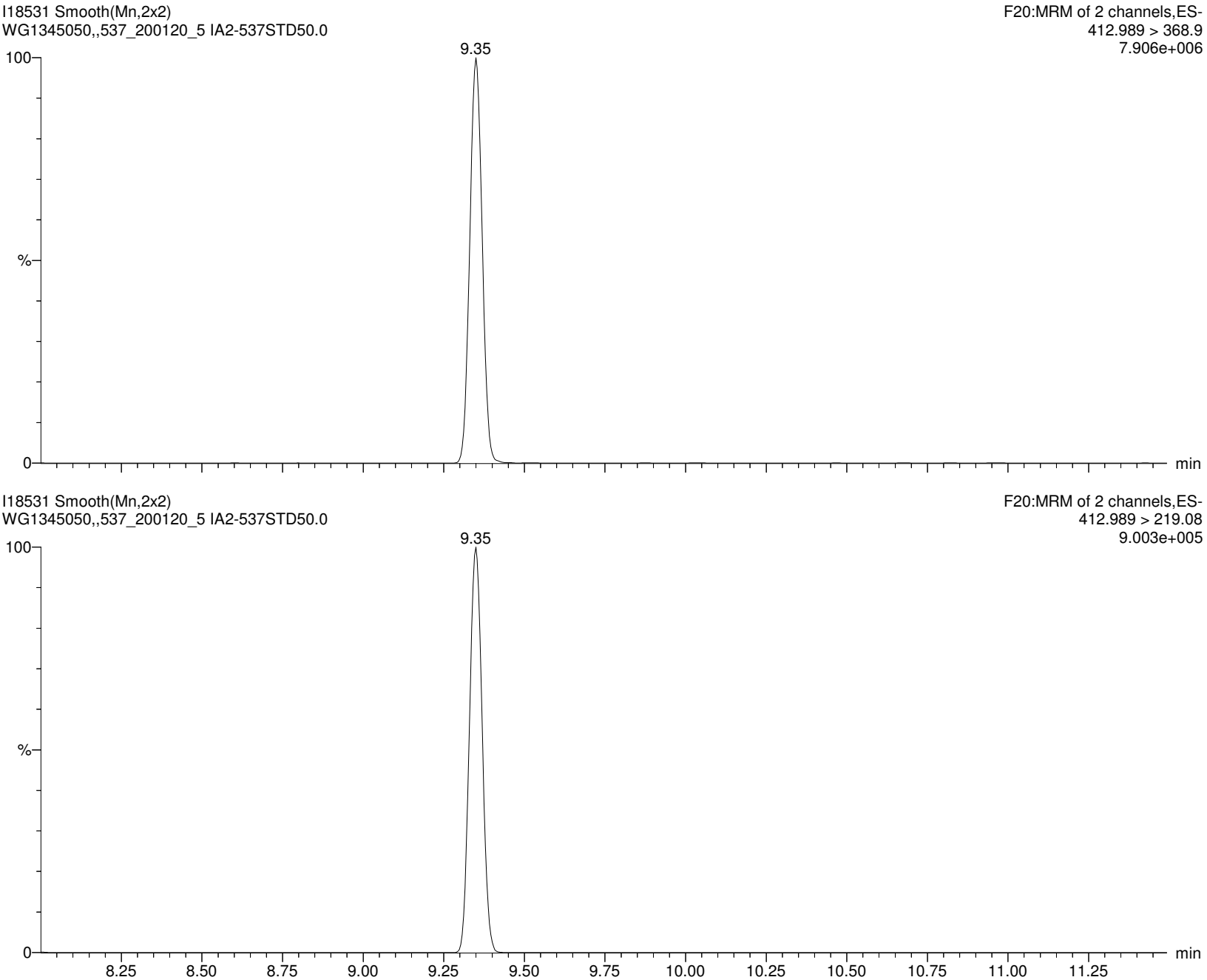
**br-PFOA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICAL_A.qld
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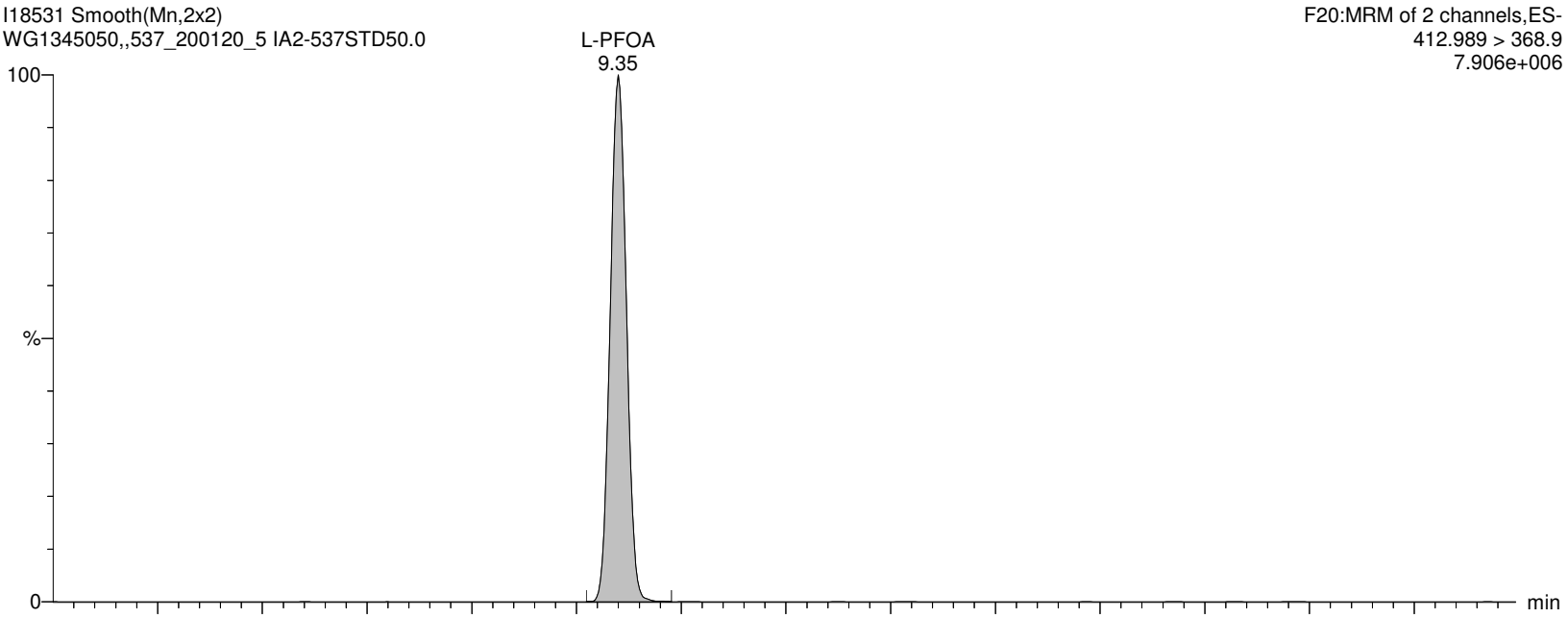
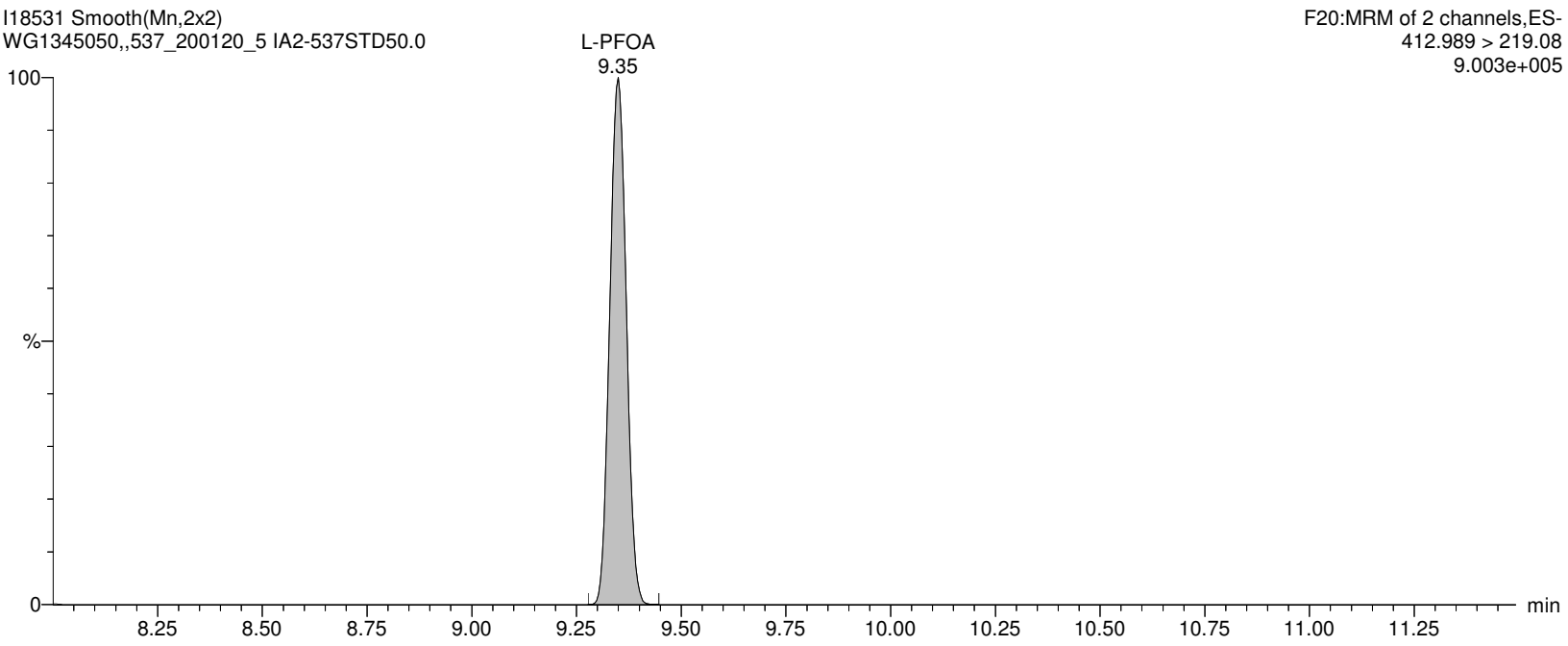
**L-PFOA**





all concentration units in (ng/mL)

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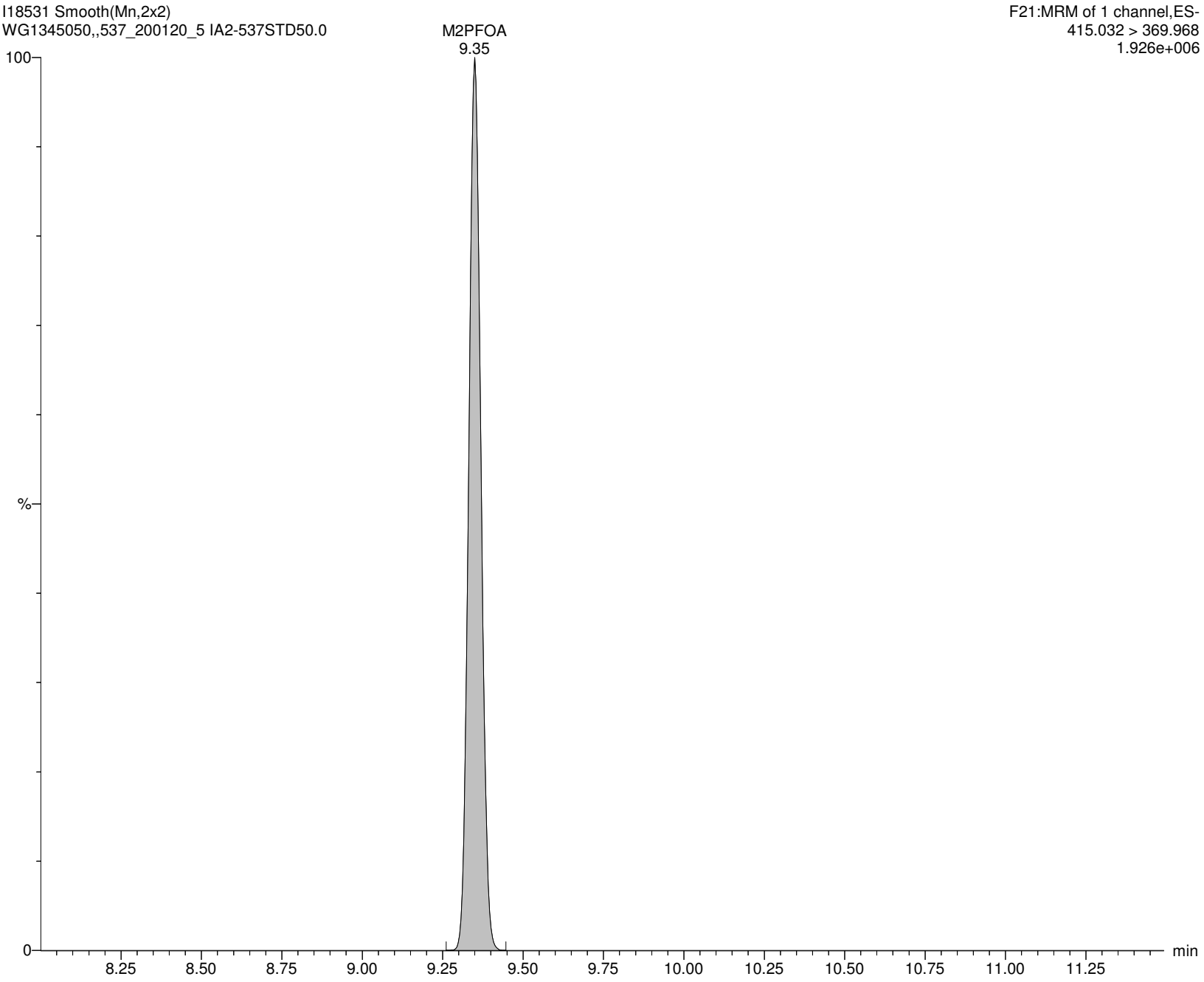
**M2PFOA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICAL_A.qld
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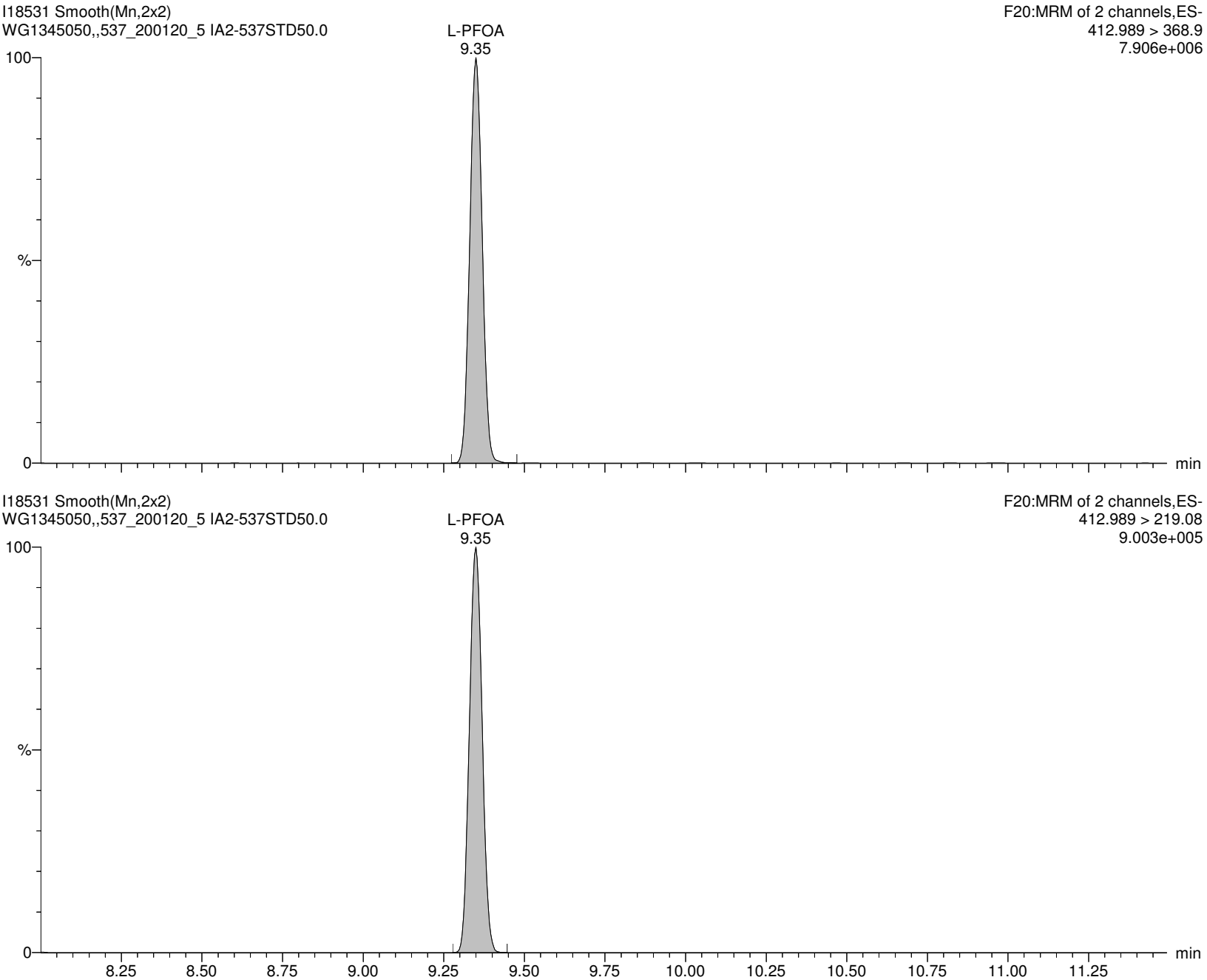
**PFOA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICAL_A.qld
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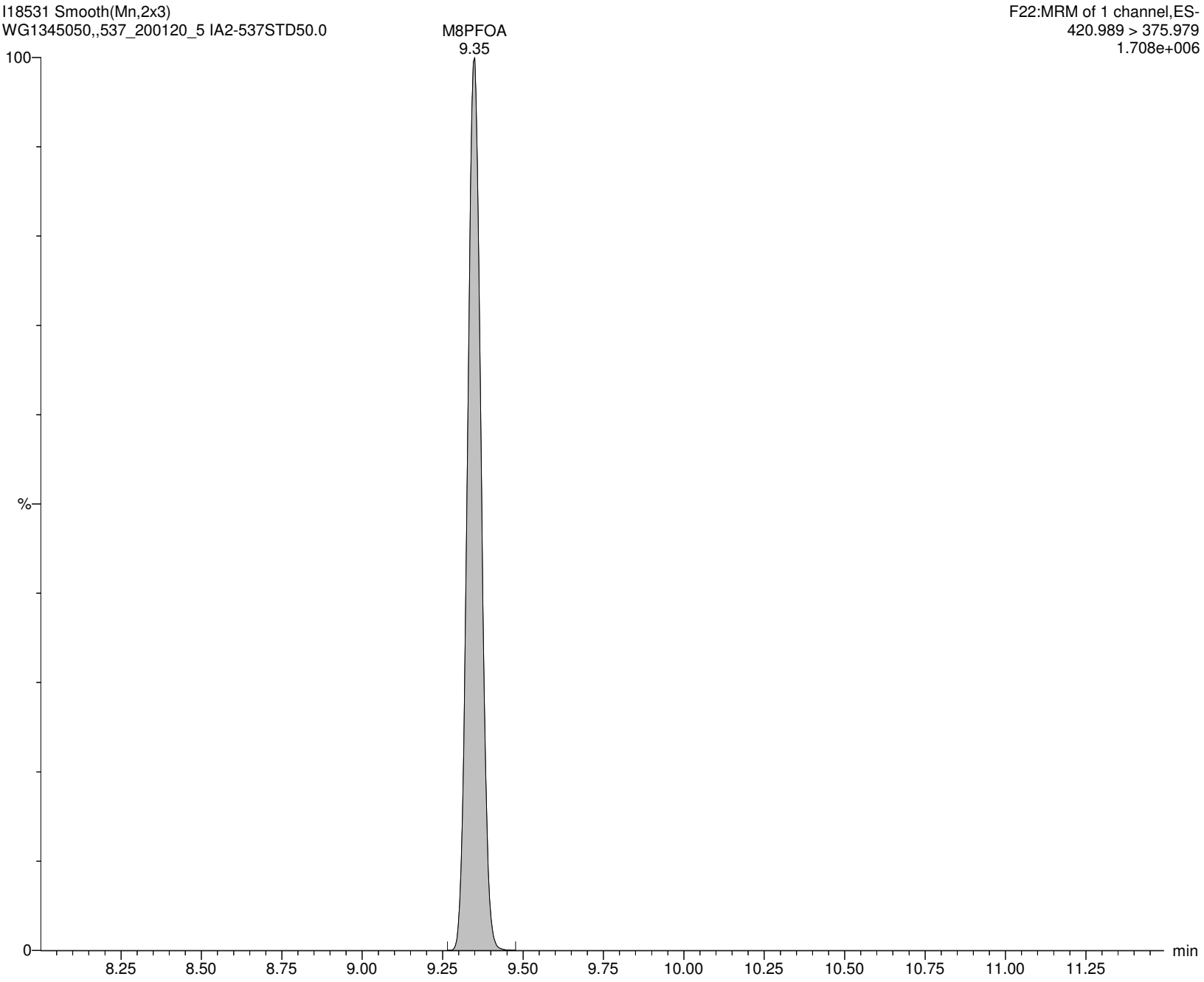
**M8PFOA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICAL_A.qld
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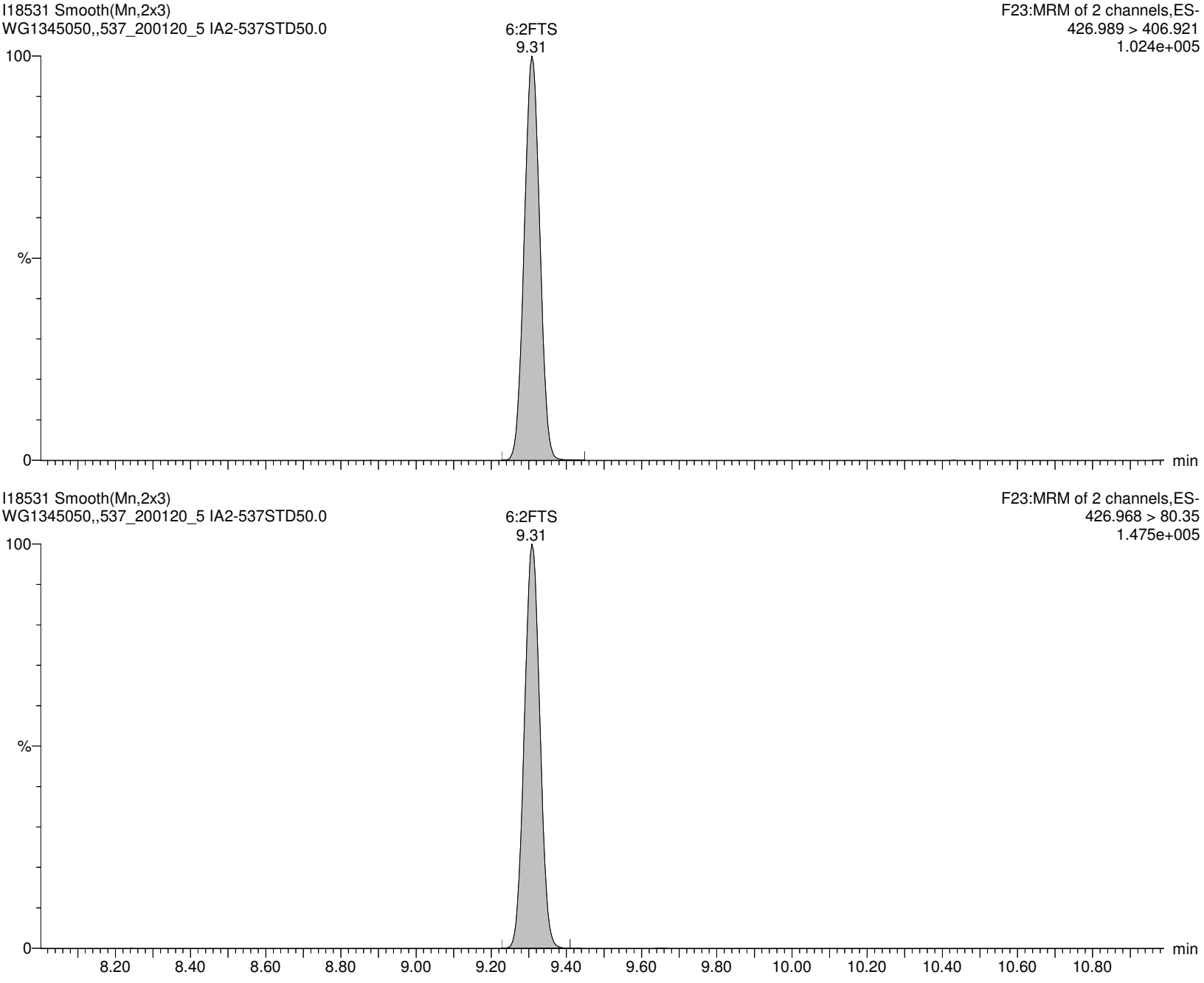
**6:2FTS**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICAL_A.qld
Last Altered: Friday, February 28, 2020 09:12:40 Eastern Standard Time
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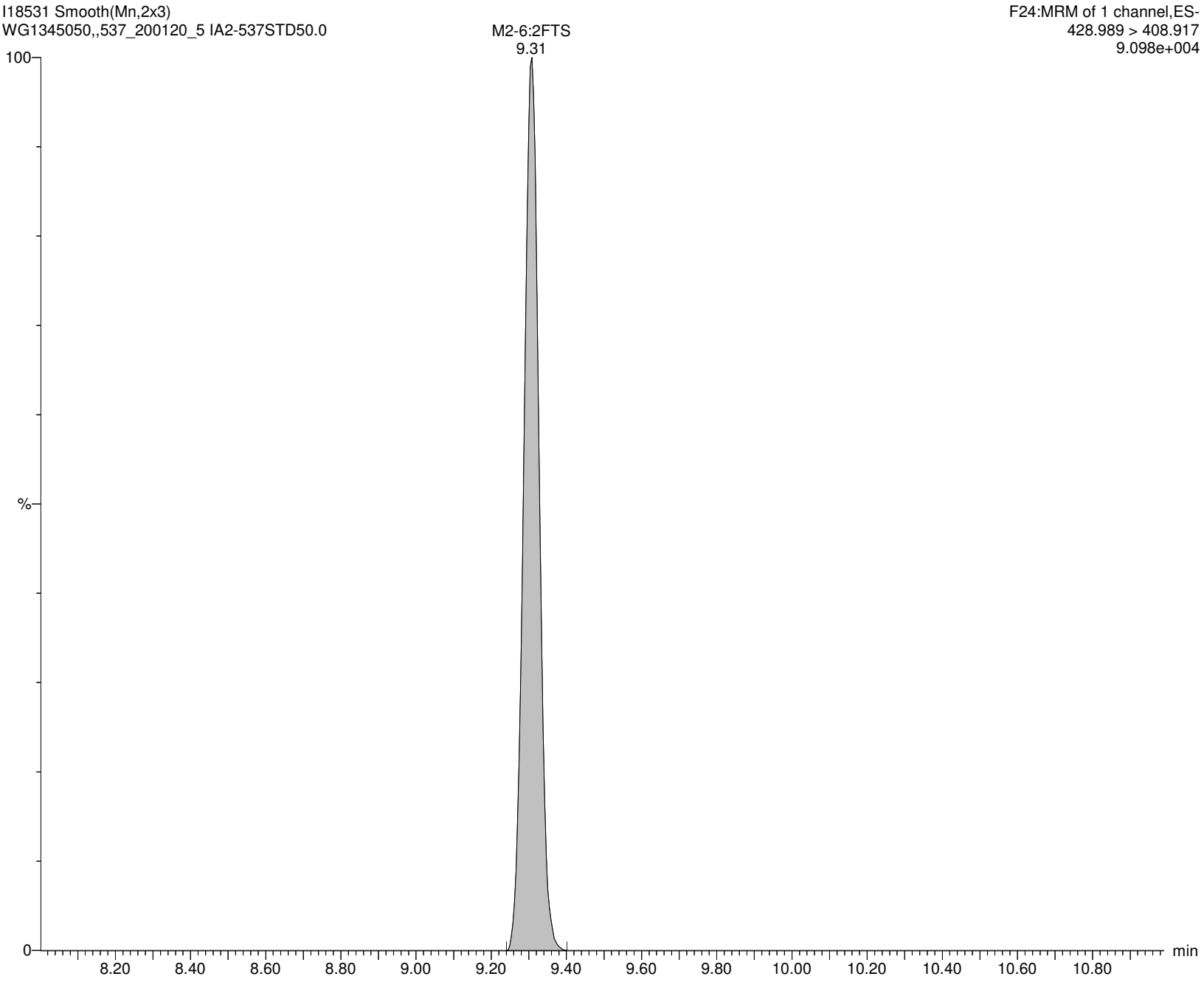
**M2-6:2FTS**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICAL_A.qld
Last Altered: Friday, February 28, 2020 09:12:40 Eastern Standard Time
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**Vial: 1:A,6**
**Instrument: XEVO-TQSmicro#QEA0276**
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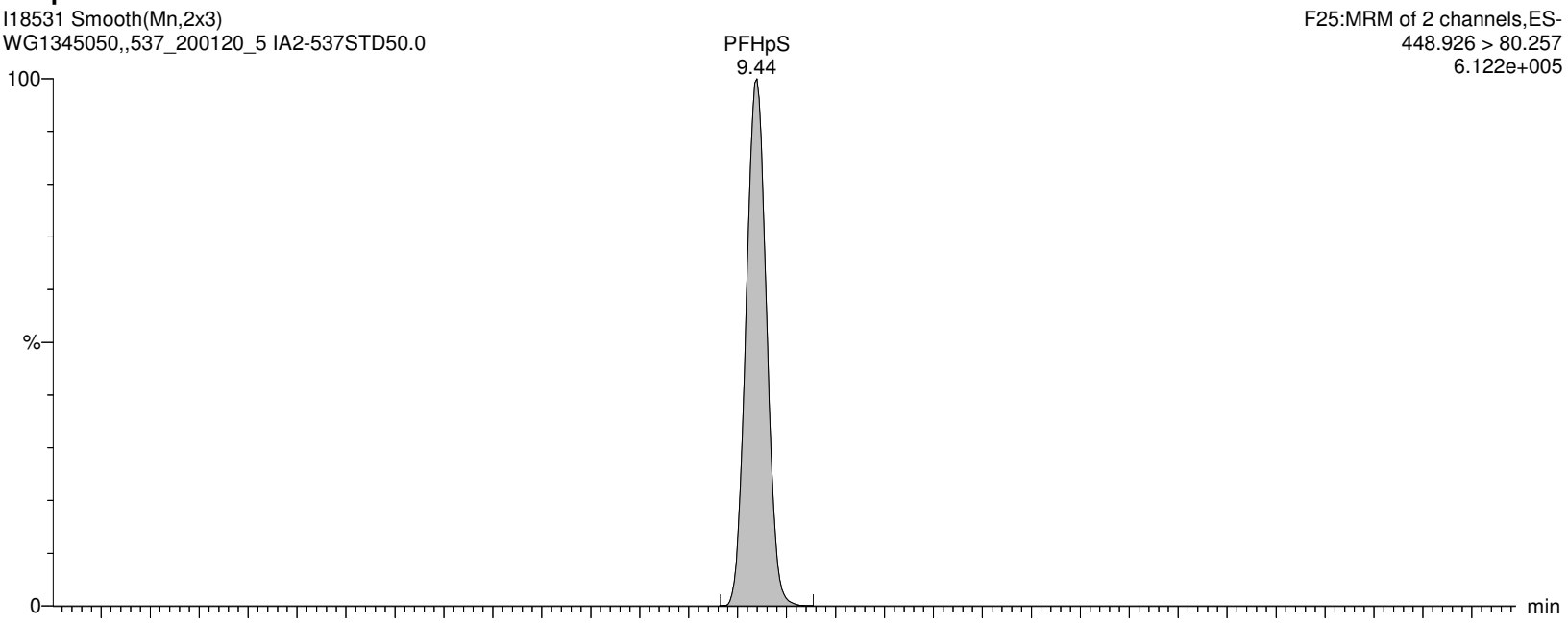
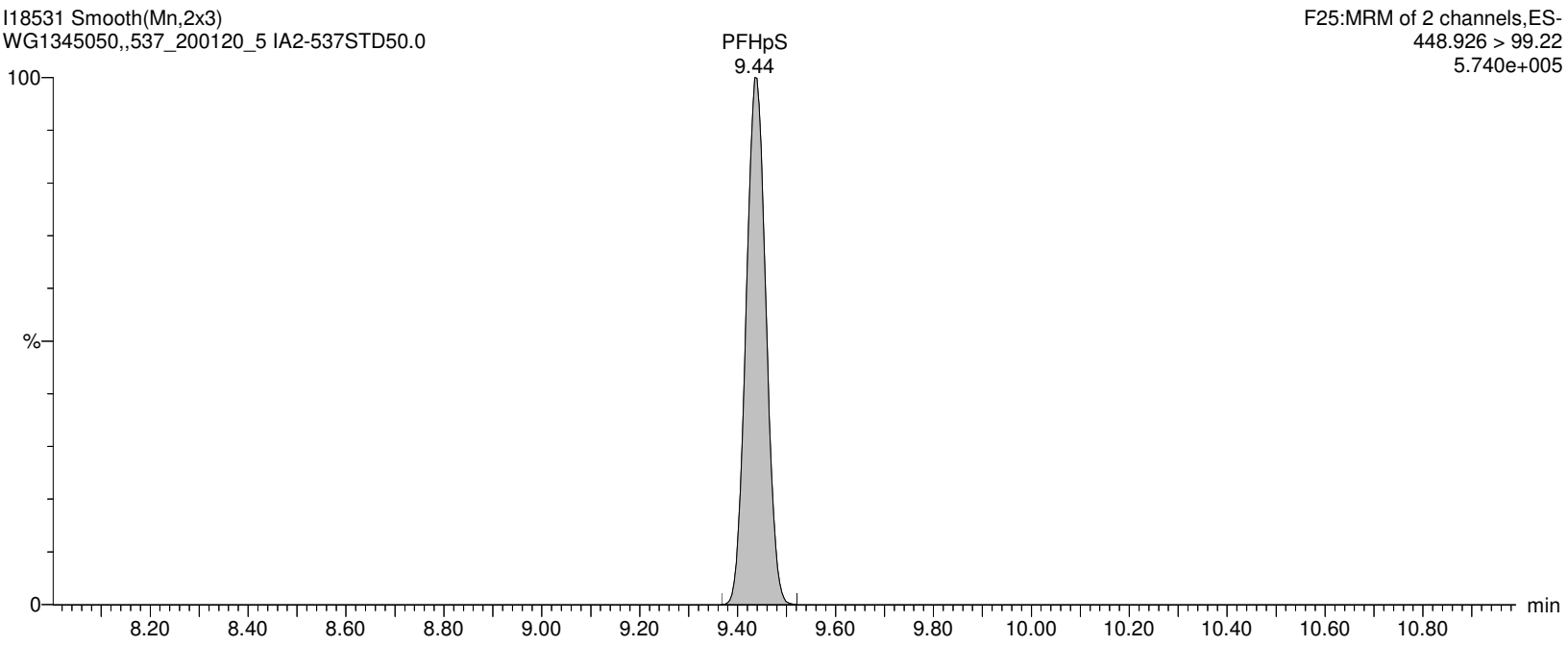
**PFHpS**





all concentration units in (ng/mL)

Alpha Analytical Inc.
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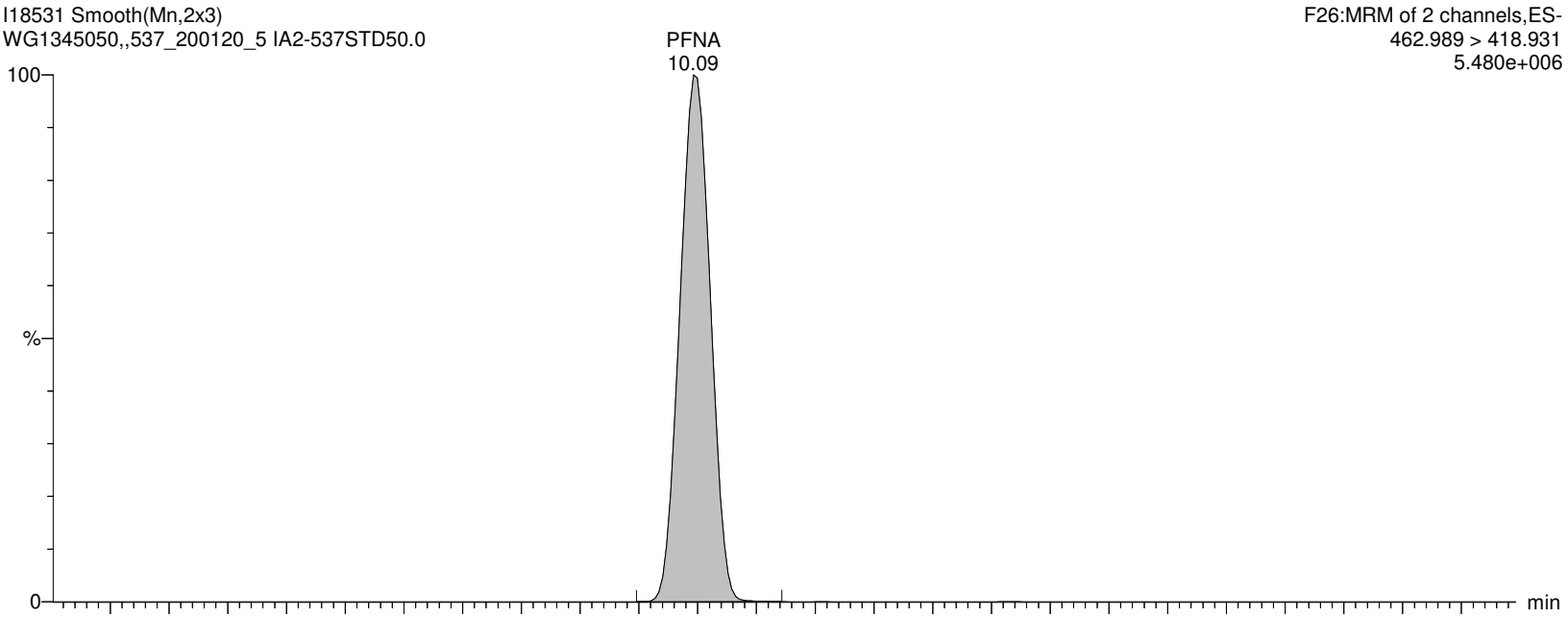


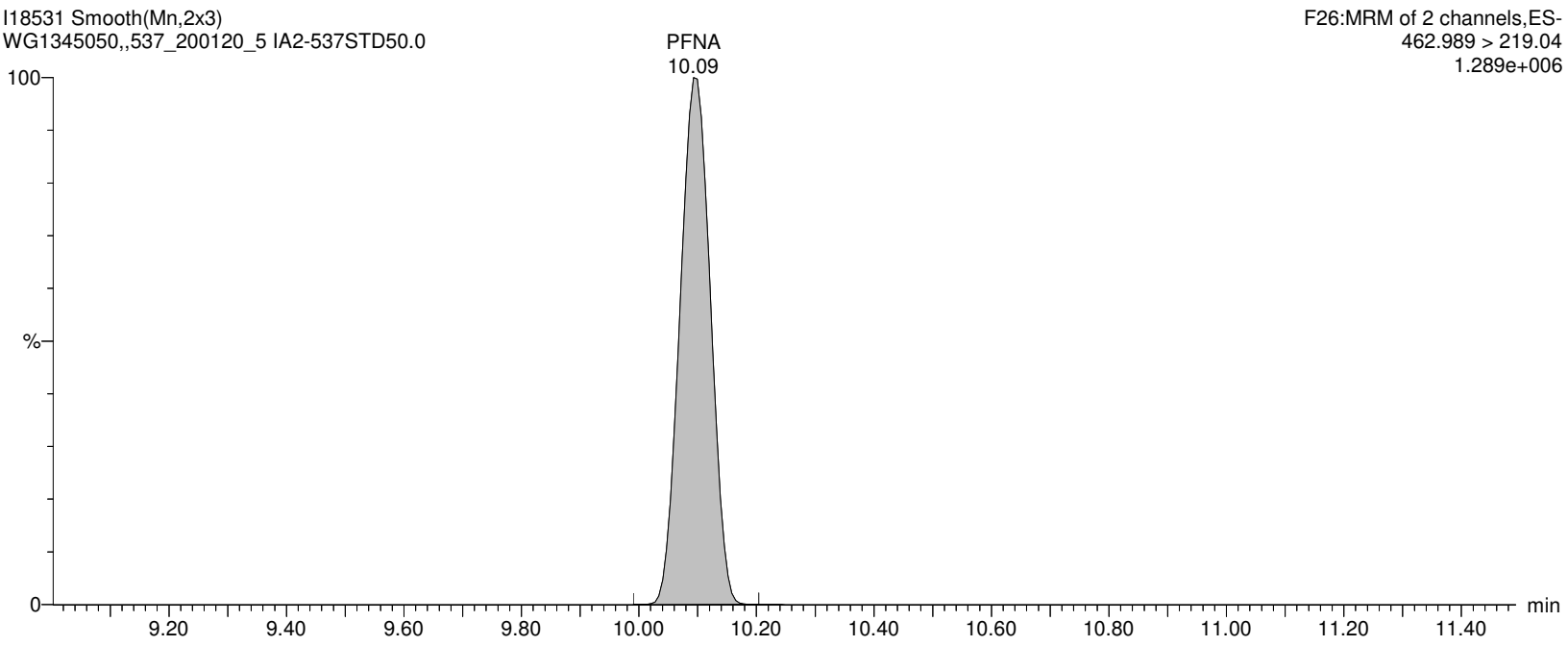



all concentration units in (ng/mL)

Alpha Analytical Inc.
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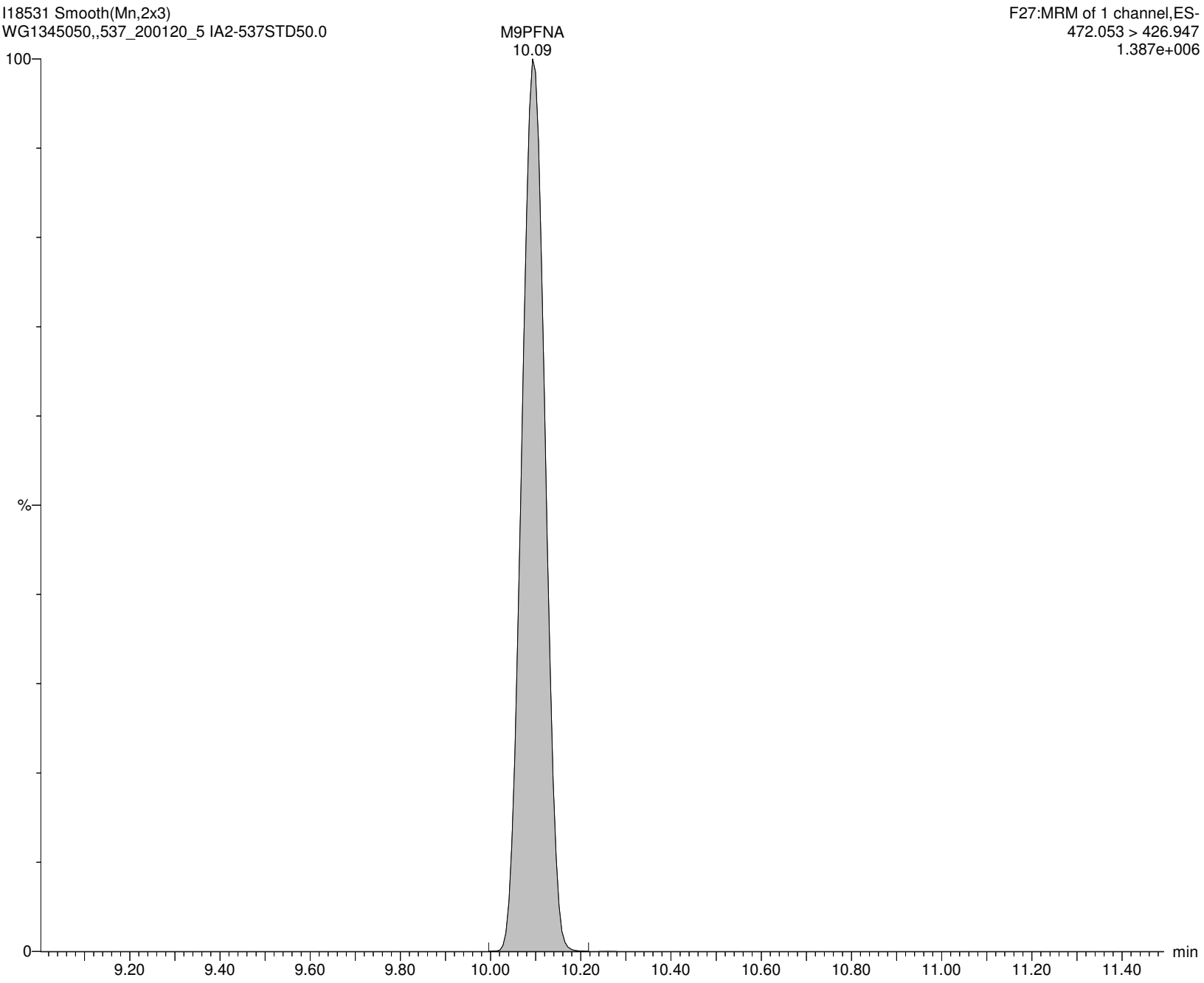
**M9PFNA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
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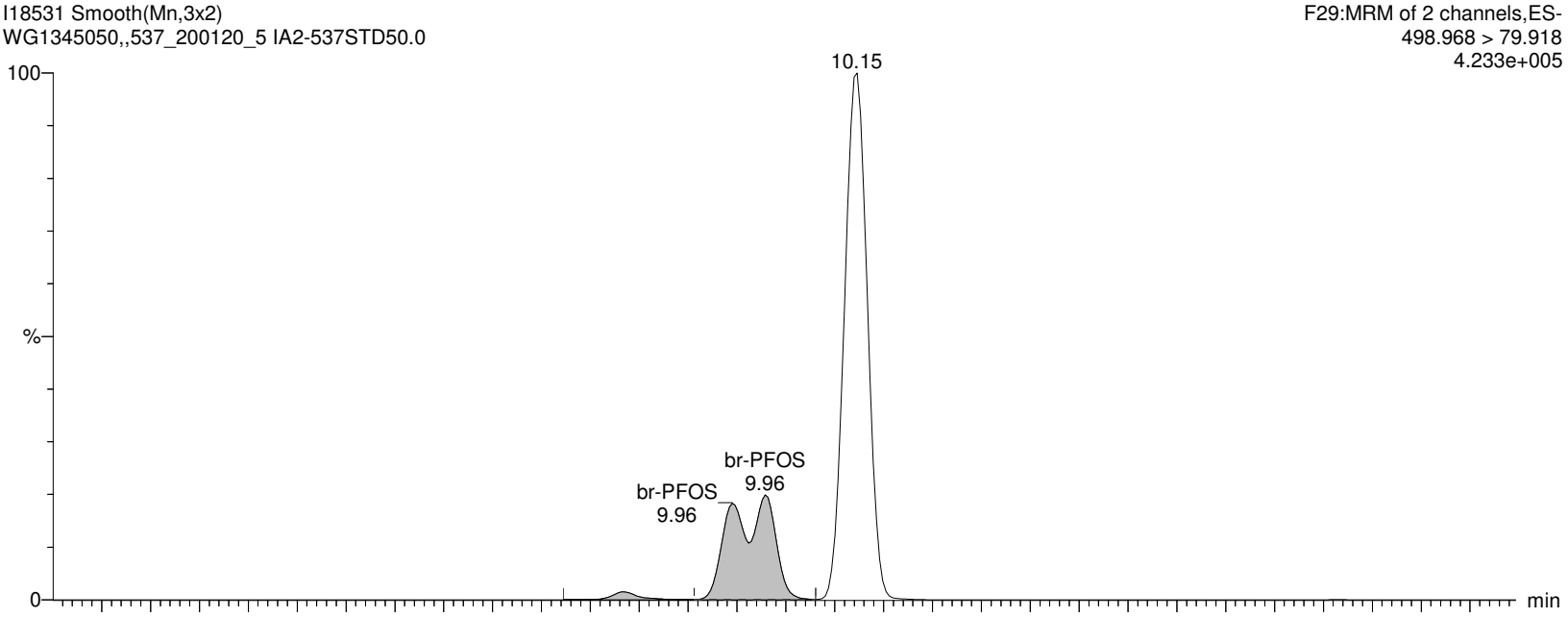
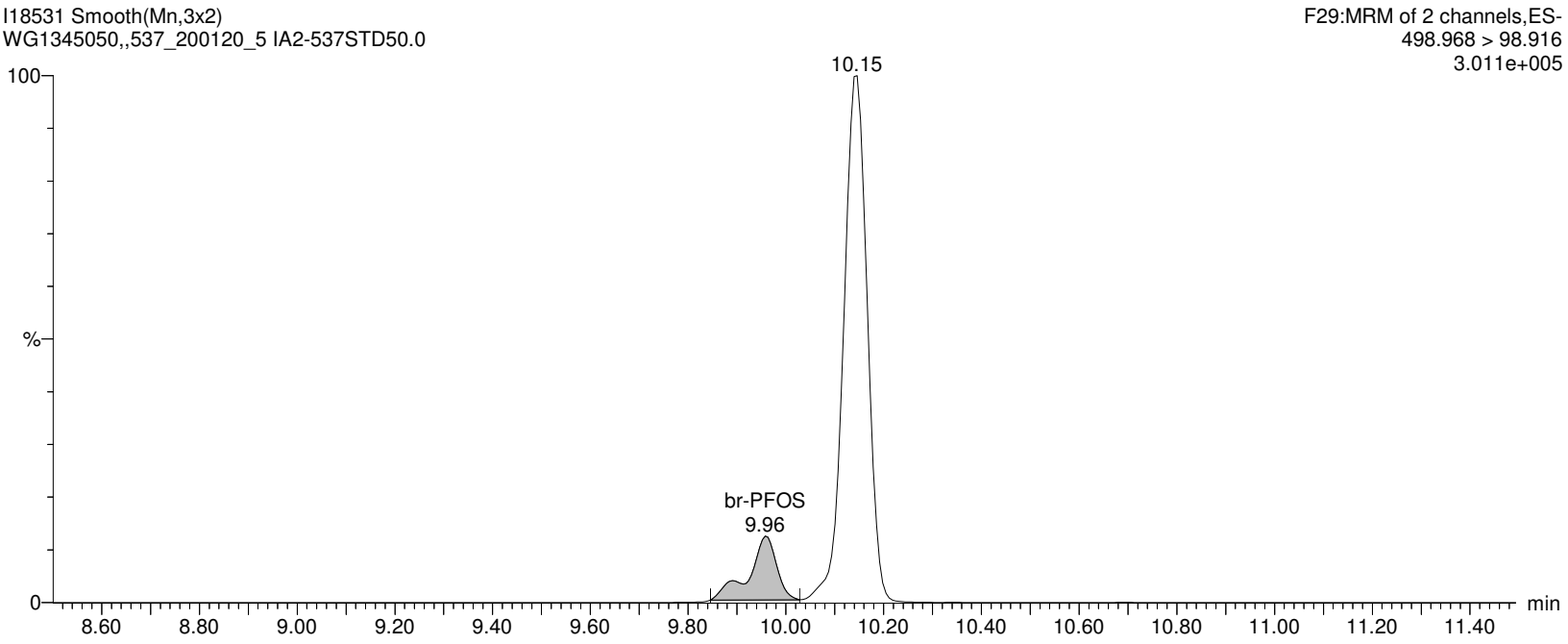
**br-PFOS**





all concentration units in (ng/mL)

Alpha Analytical Inc.
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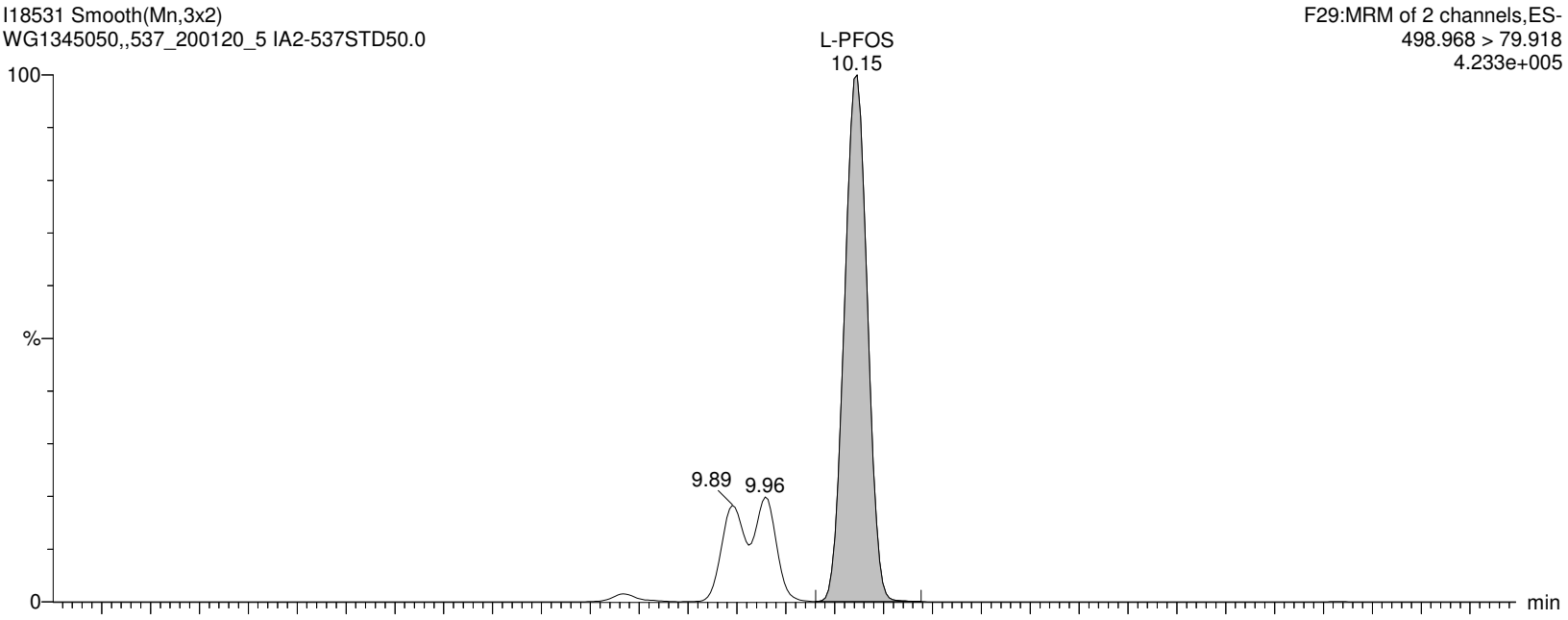
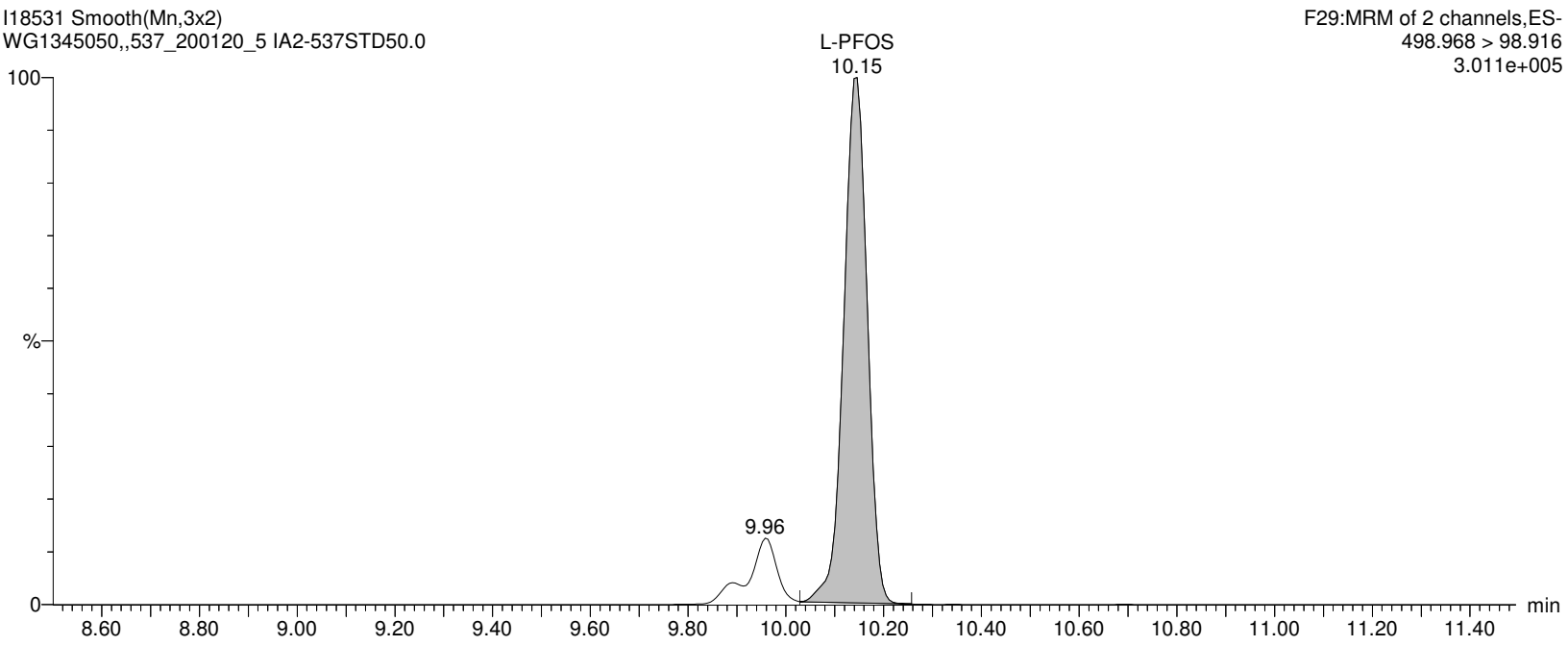
**L-PFOS**





all concentration units in (ng/mL)

Alpha Analytical Inc.
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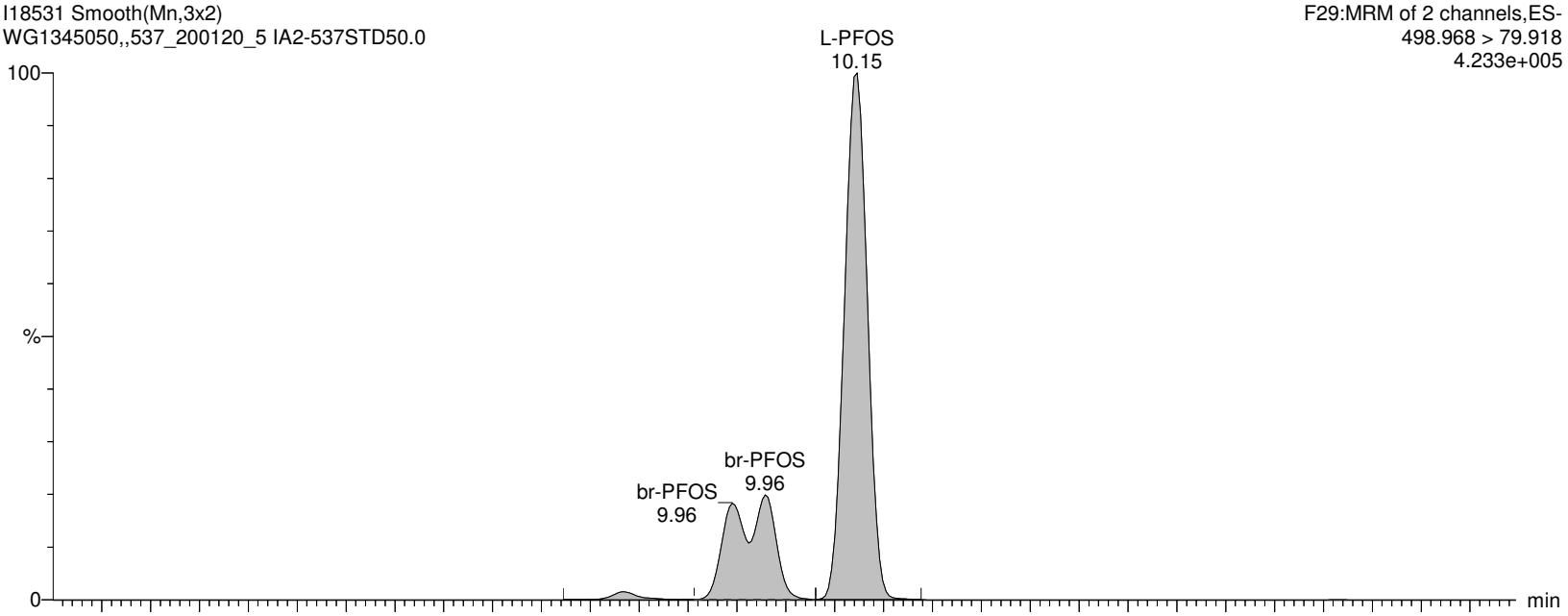


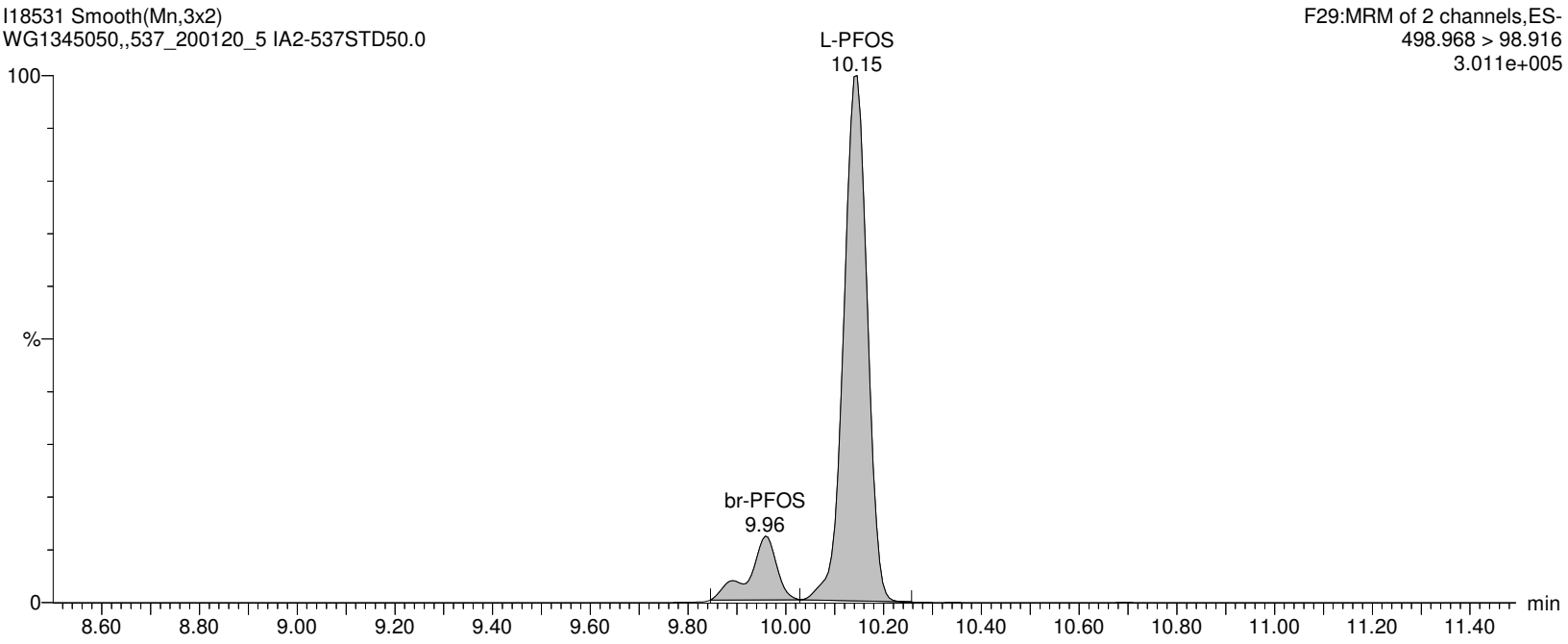



all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICAL_A.qld
Last Altered: Friday, February 28, 2020 09:12:40 Eastern Standard Time
Printed: Friday, February 28, 2020 09:27:51 Eastern Standard Time

**Name: I18531**
**ID: IA2-537STD50.0**
**Date: 27-Feb-2020**
**Time: 14:35:26**
**Description: WG1345050,,537_200120_5**
**User: LCMS01:SG**
**Vial: 1:A,6**
**Instrument: XEVO-TQSmicro#QEA0276**
**Inlet Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\LCMS_537_ISO_MeOH**
**Tune Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\190709_TUNE.IPR**
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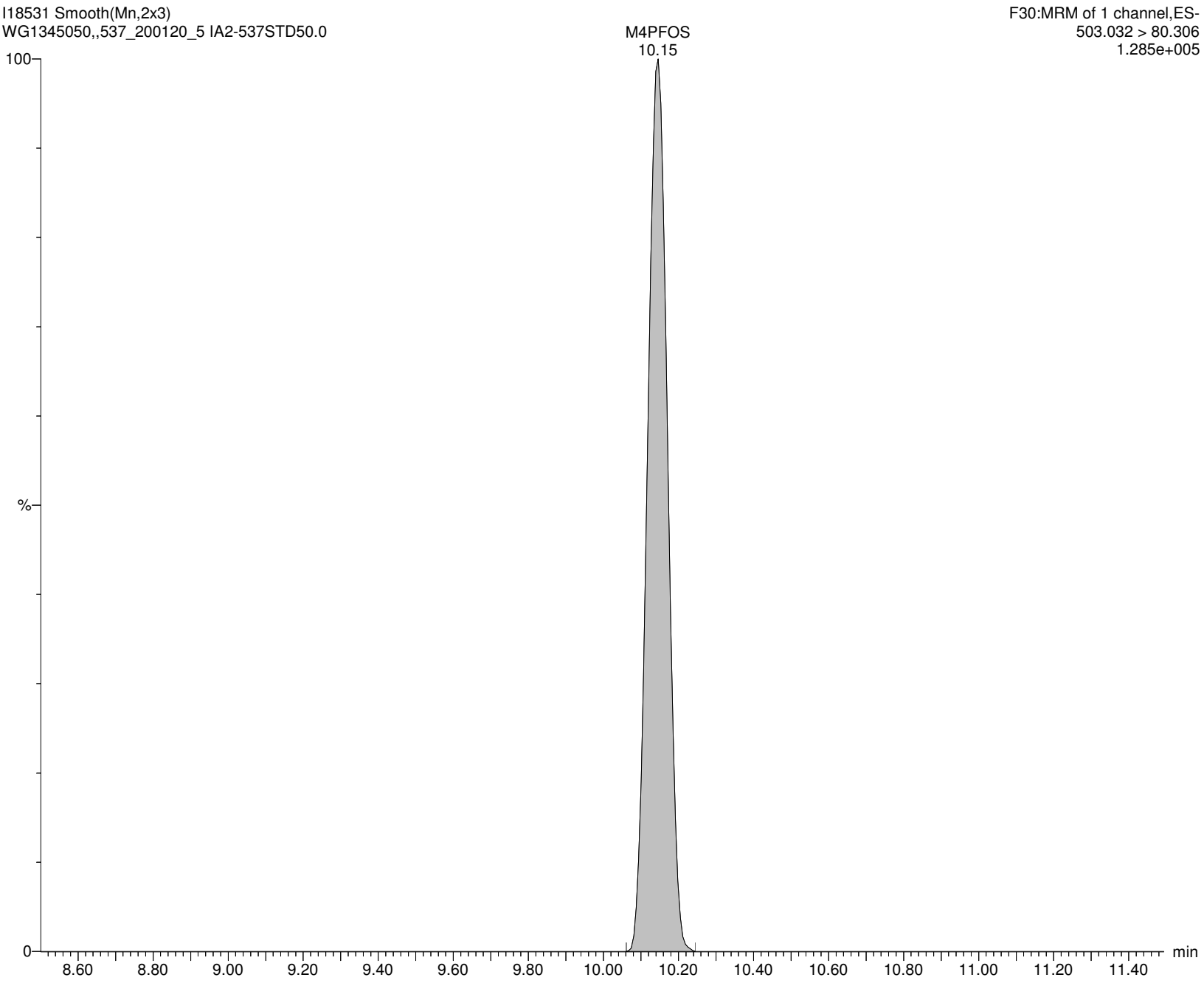



all concentration units in (ng/mL)

Alpha Analytical Inc.
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Last Altered: Friday, February 28, 2020 09:12:40 Eastern Standard Time
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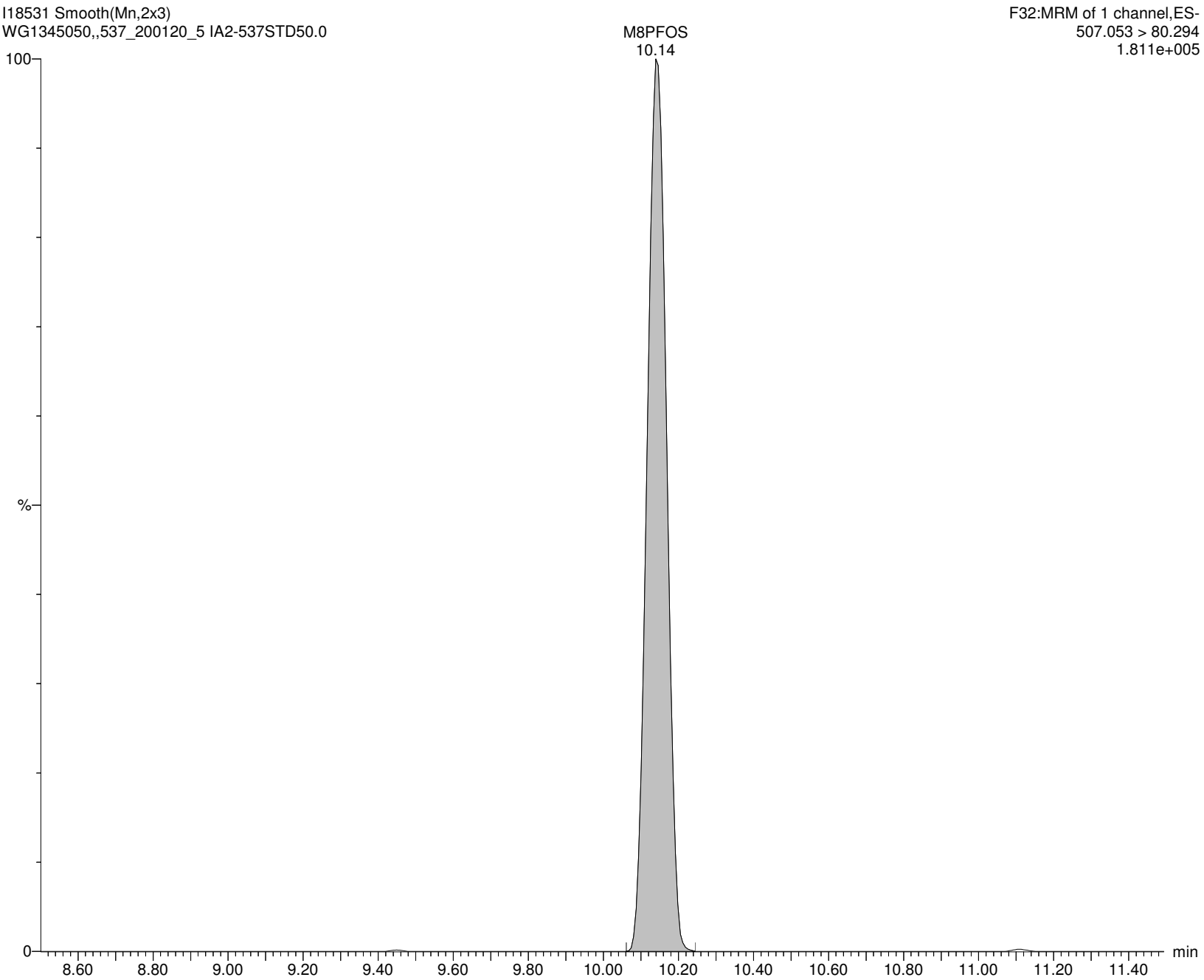
**M8PFOS**





all concentration units in (ng/mL)

Alpha Analytical Inc.
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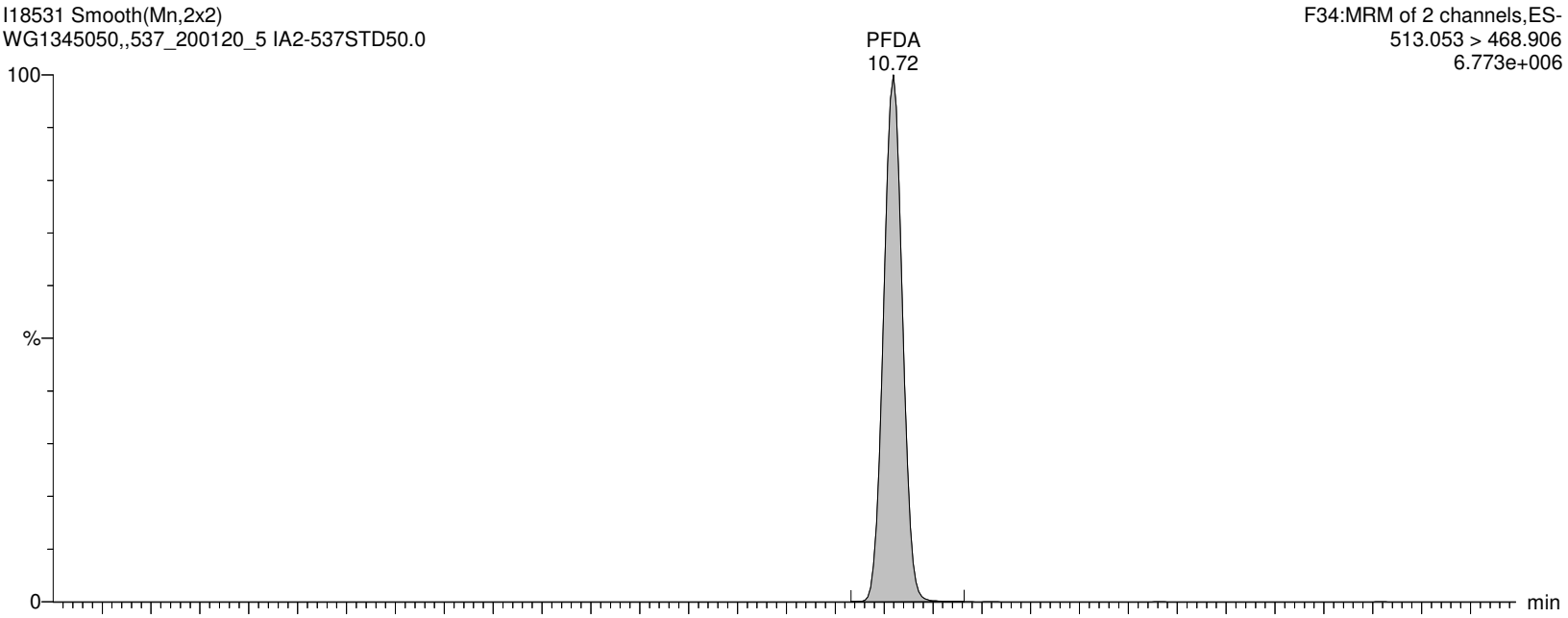
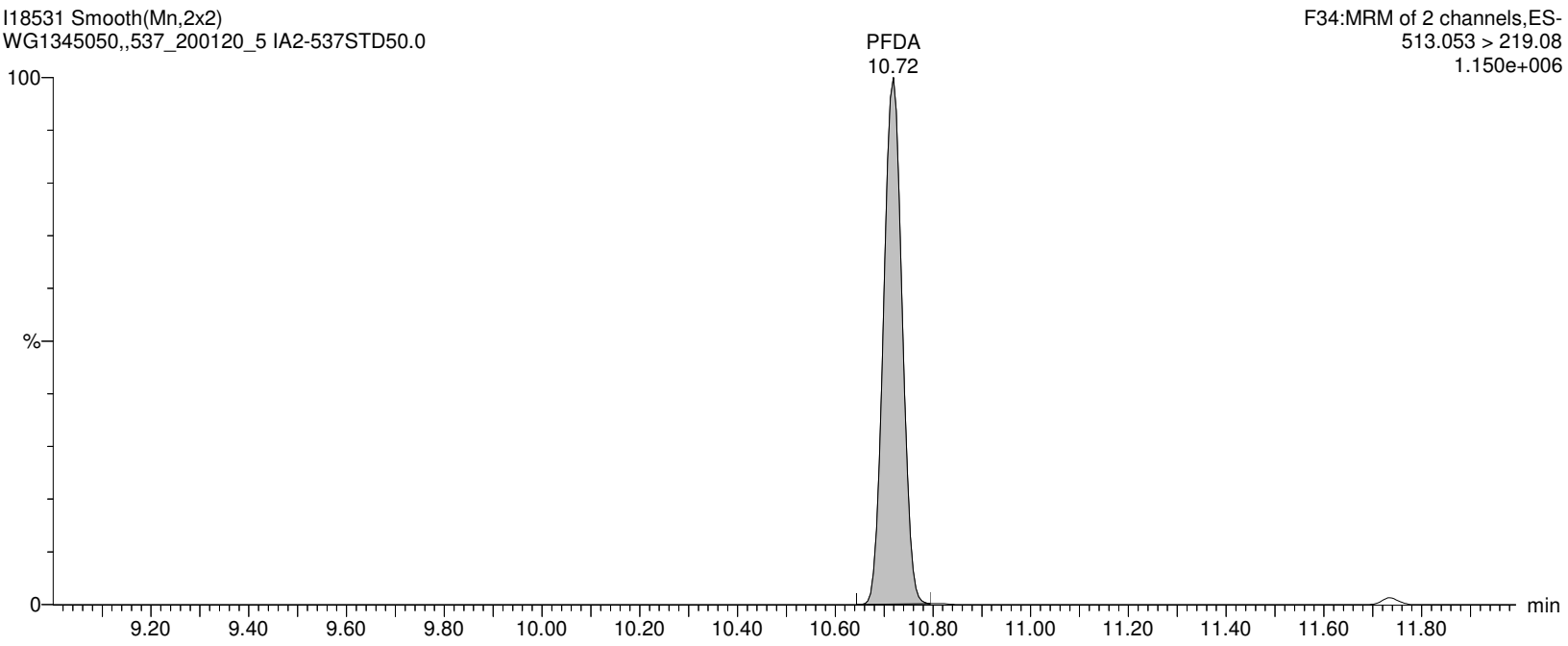
**PFDA**





all concentration units in (ng/mL)

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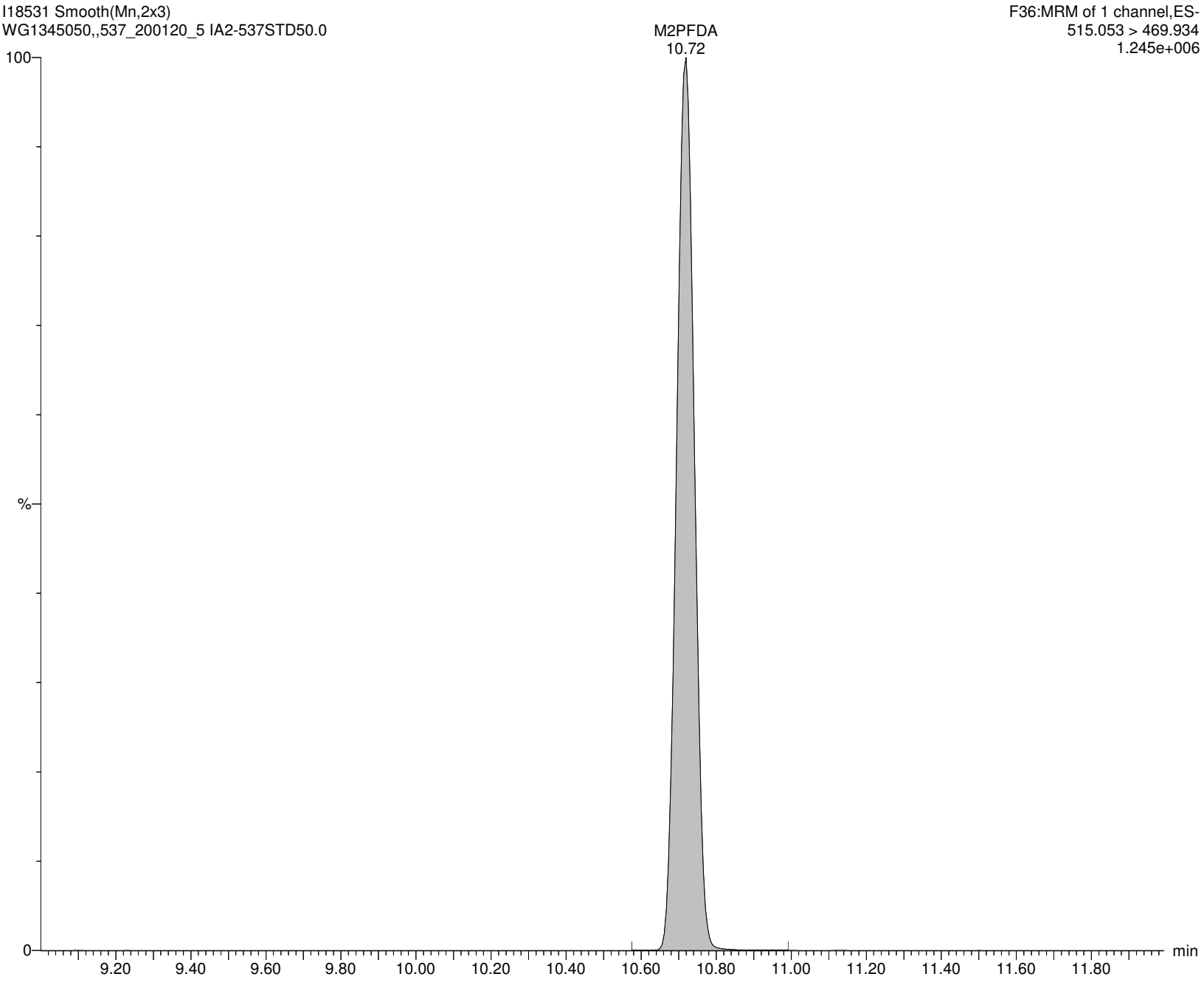
**M2PFDA**





all concentration units in (ng/mL)

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Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICAL_A.qld
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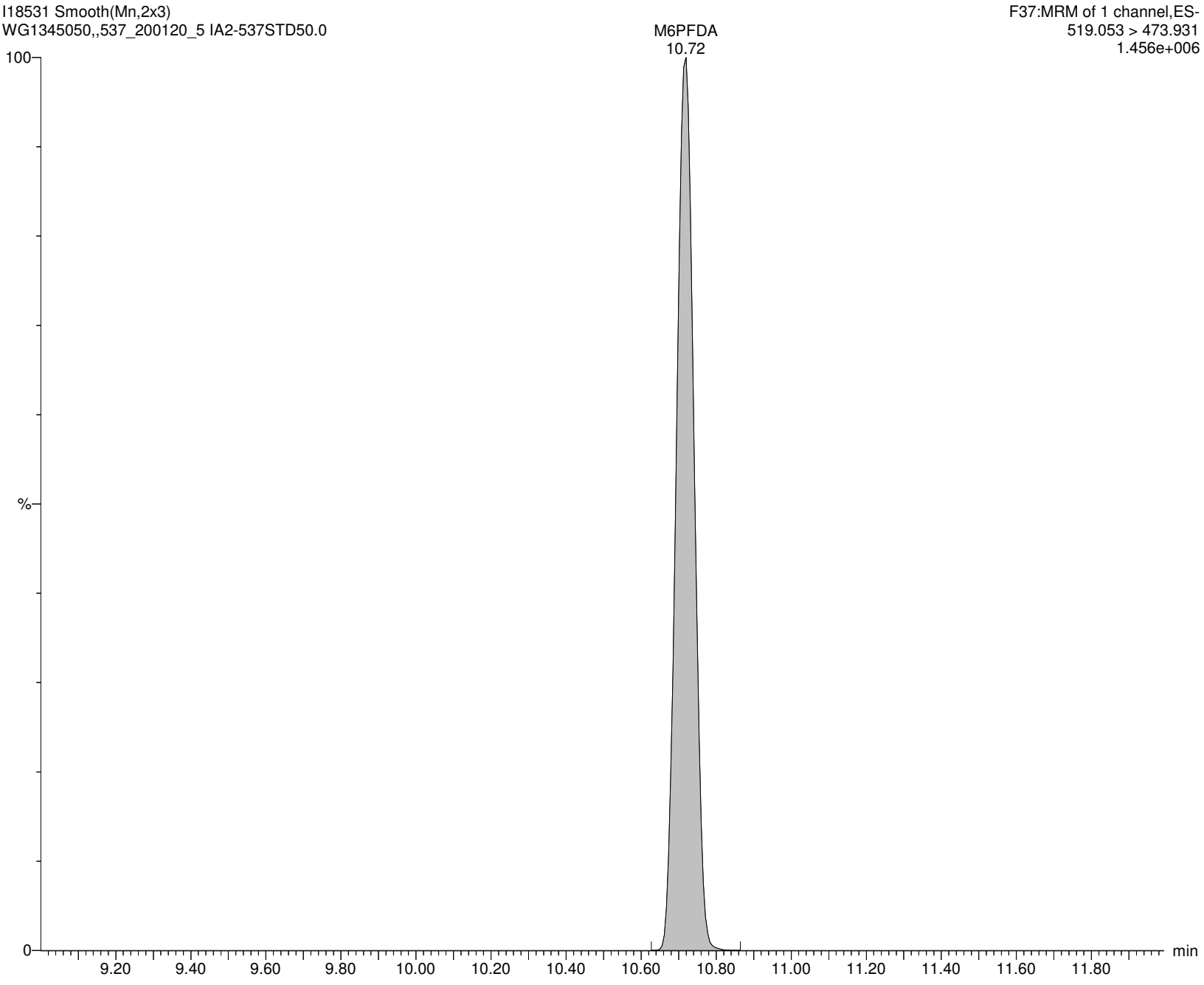
**M6PFDA**





all concentration units in (ng/mL)

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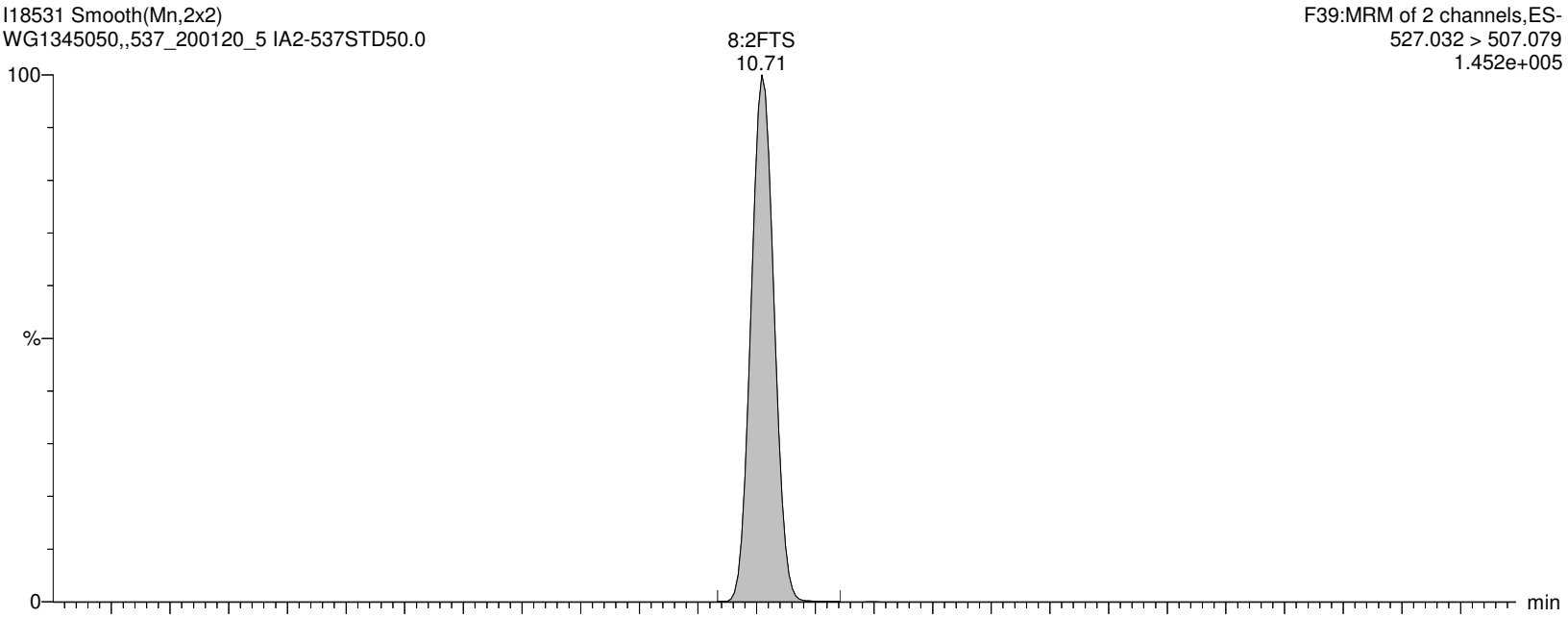
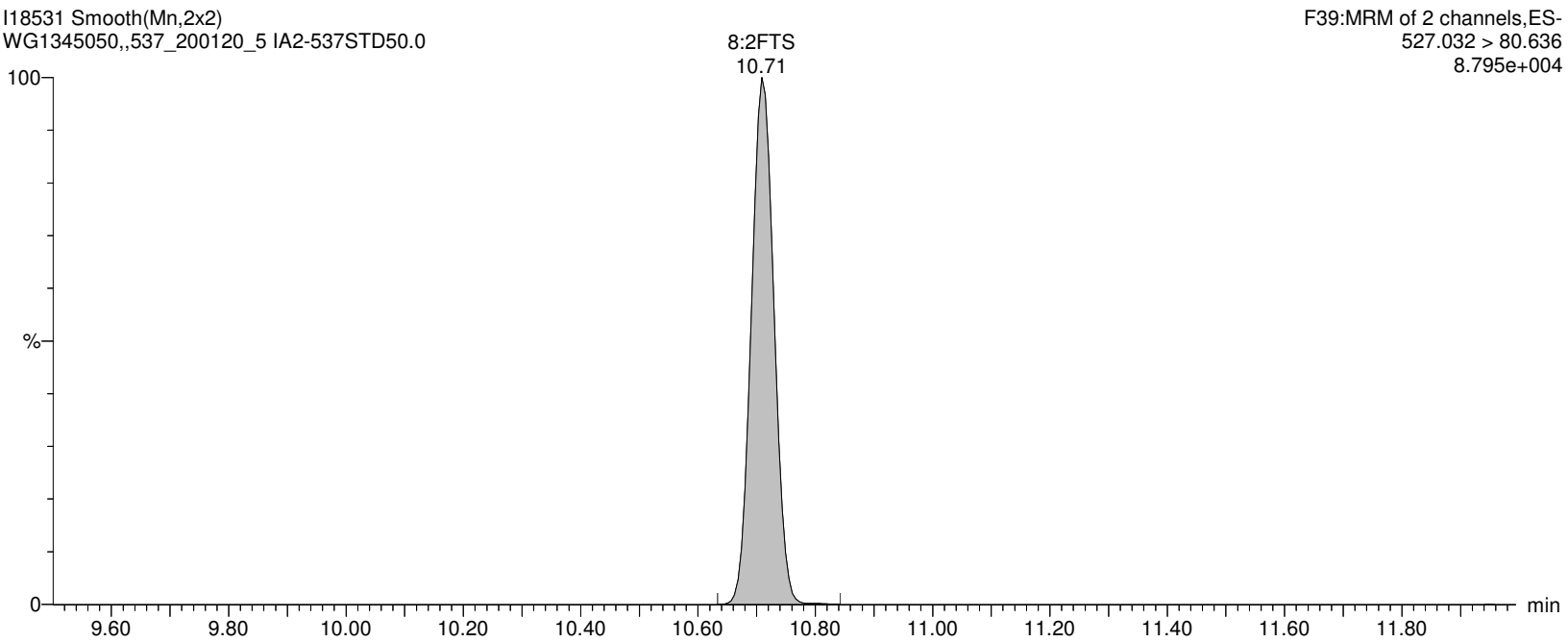
**8:2FTS**





all concentration units in (ng/mL)

Alpha Analytical Inc.
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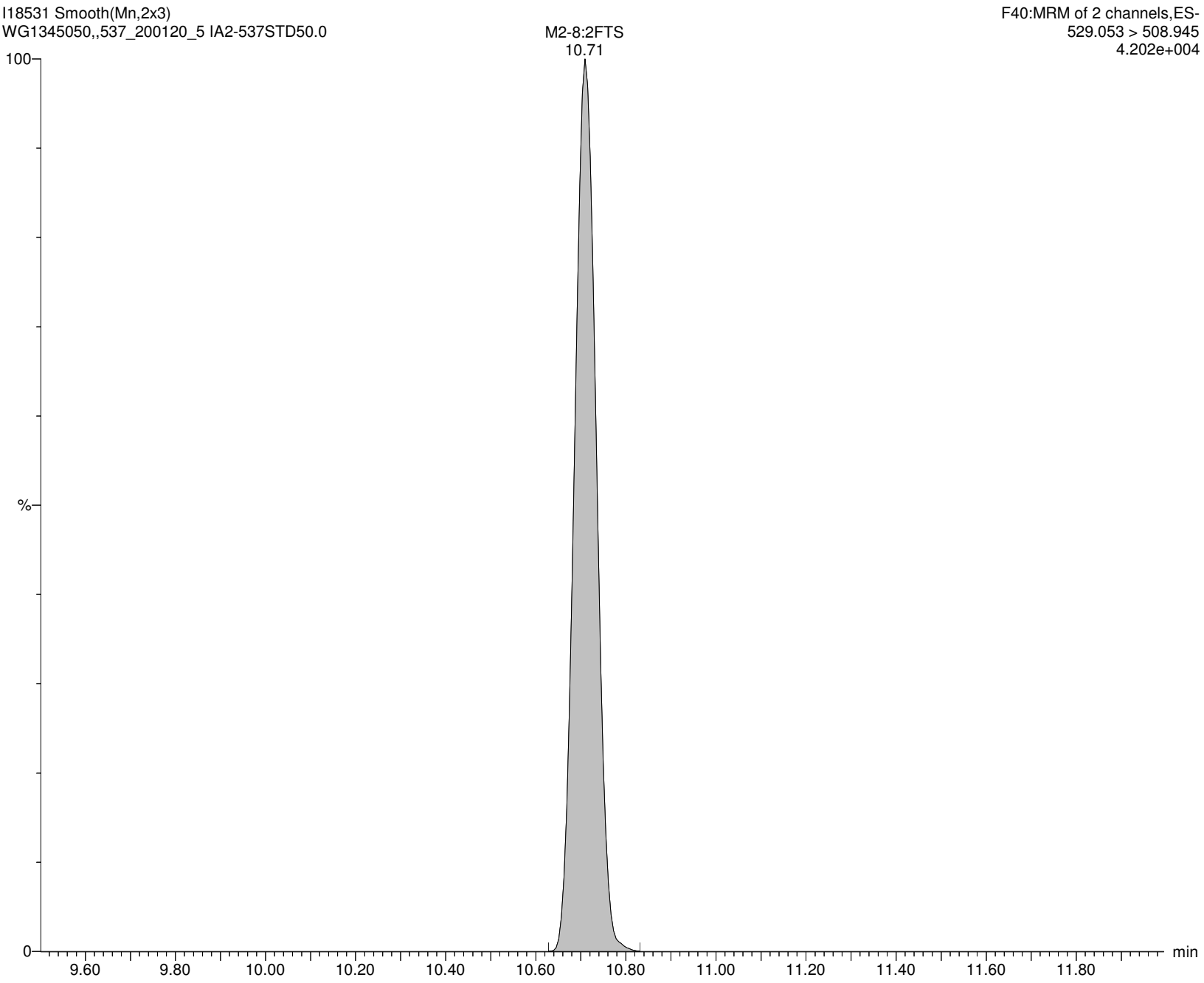
**M2-8:2FTS**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICAL_A.qld
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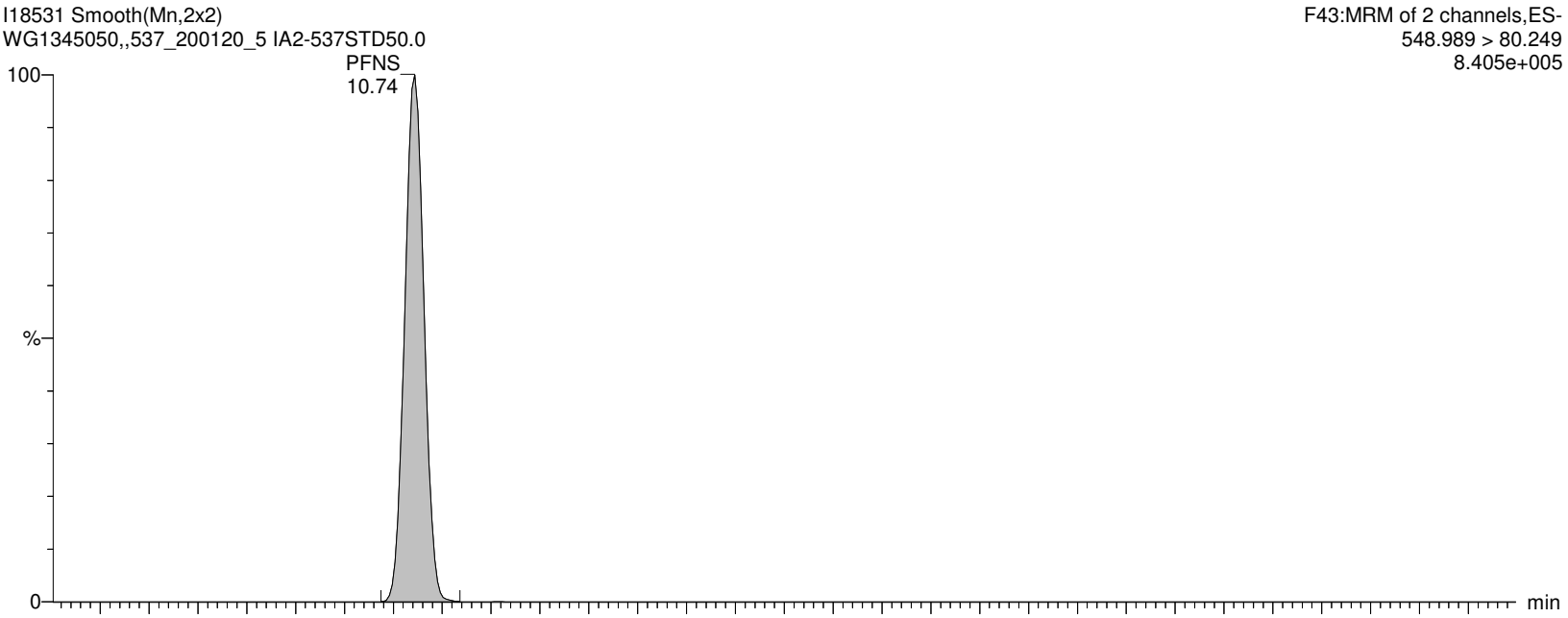


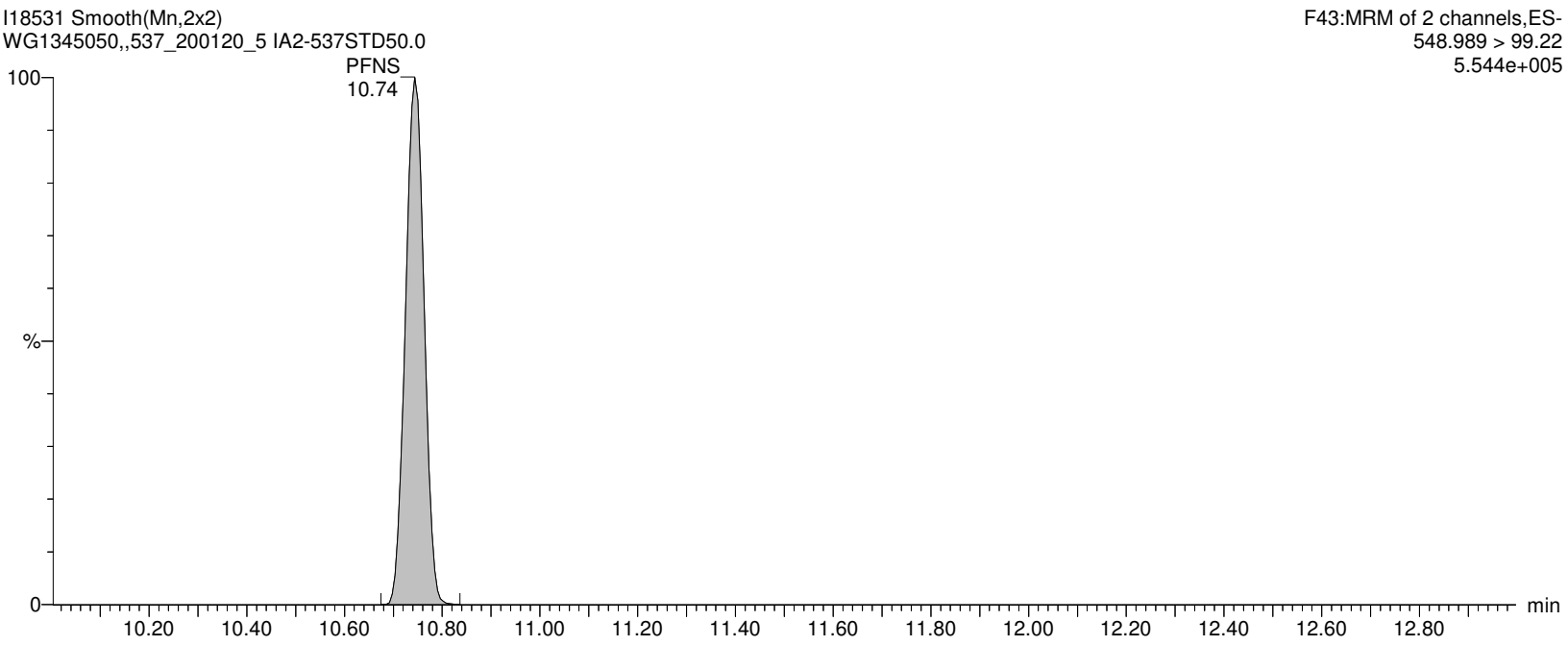



all concentration units in (ng/mL)

Alpha Analytical Inc.
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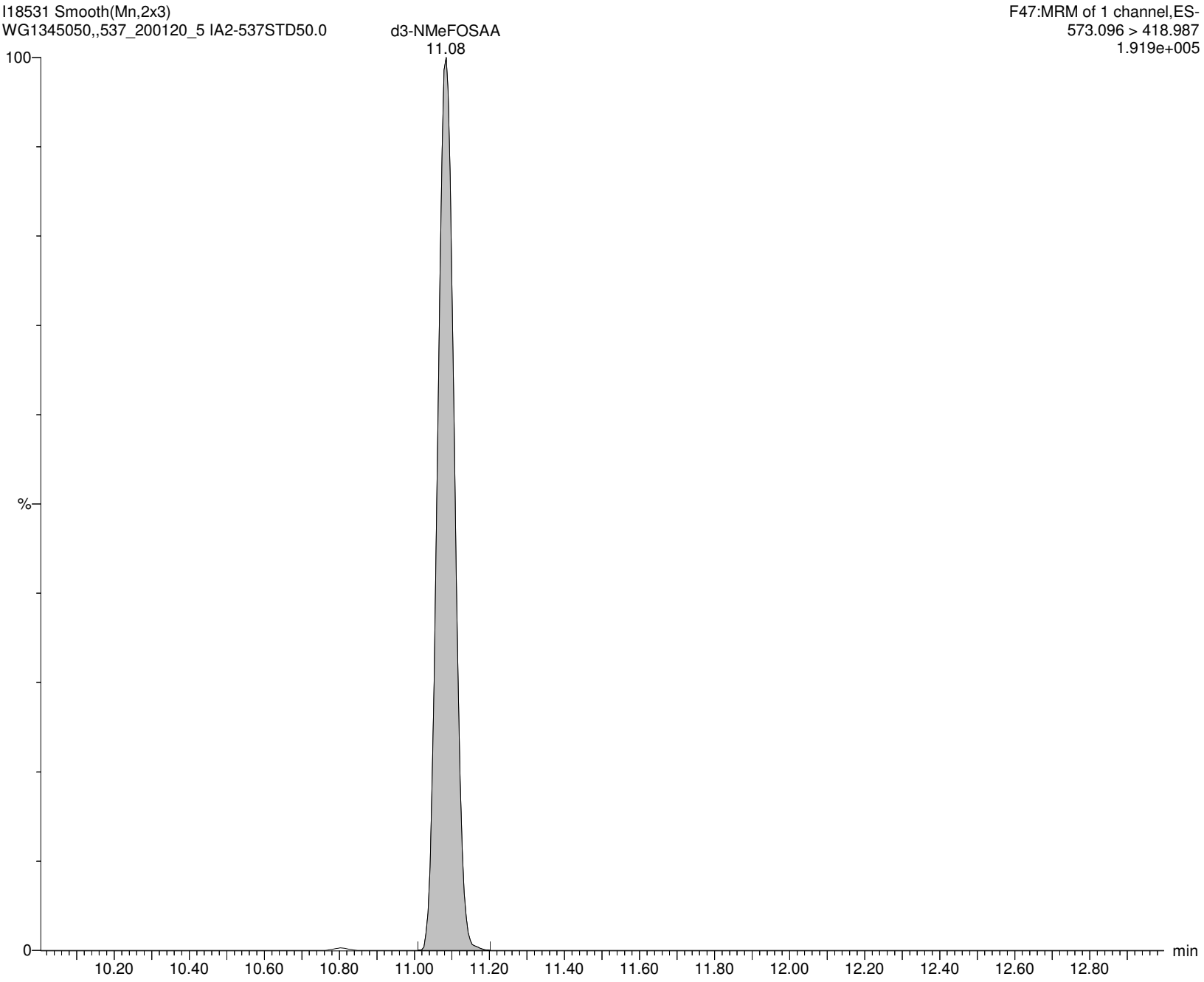
**d3-NMeFOSAA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICAL_A.qld
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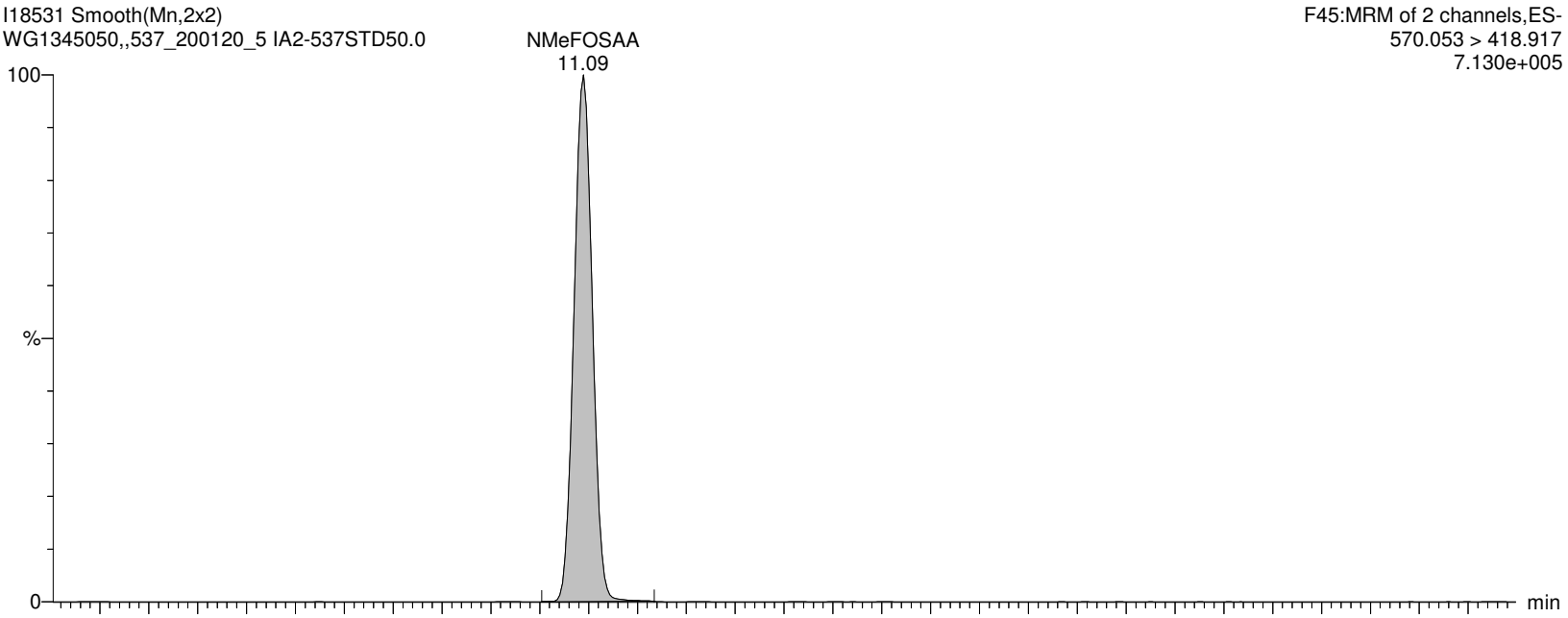


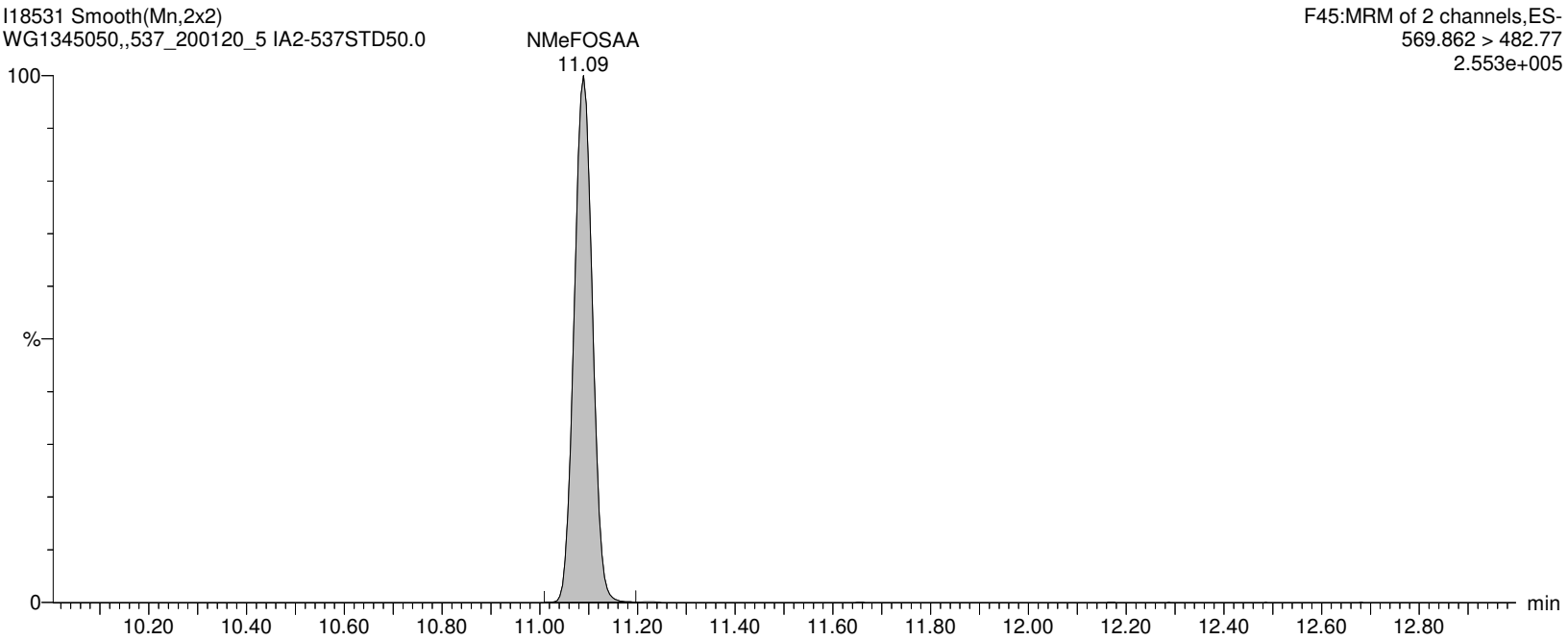



all concentration units in (ng/mL)

Alpha Analytical Inc.
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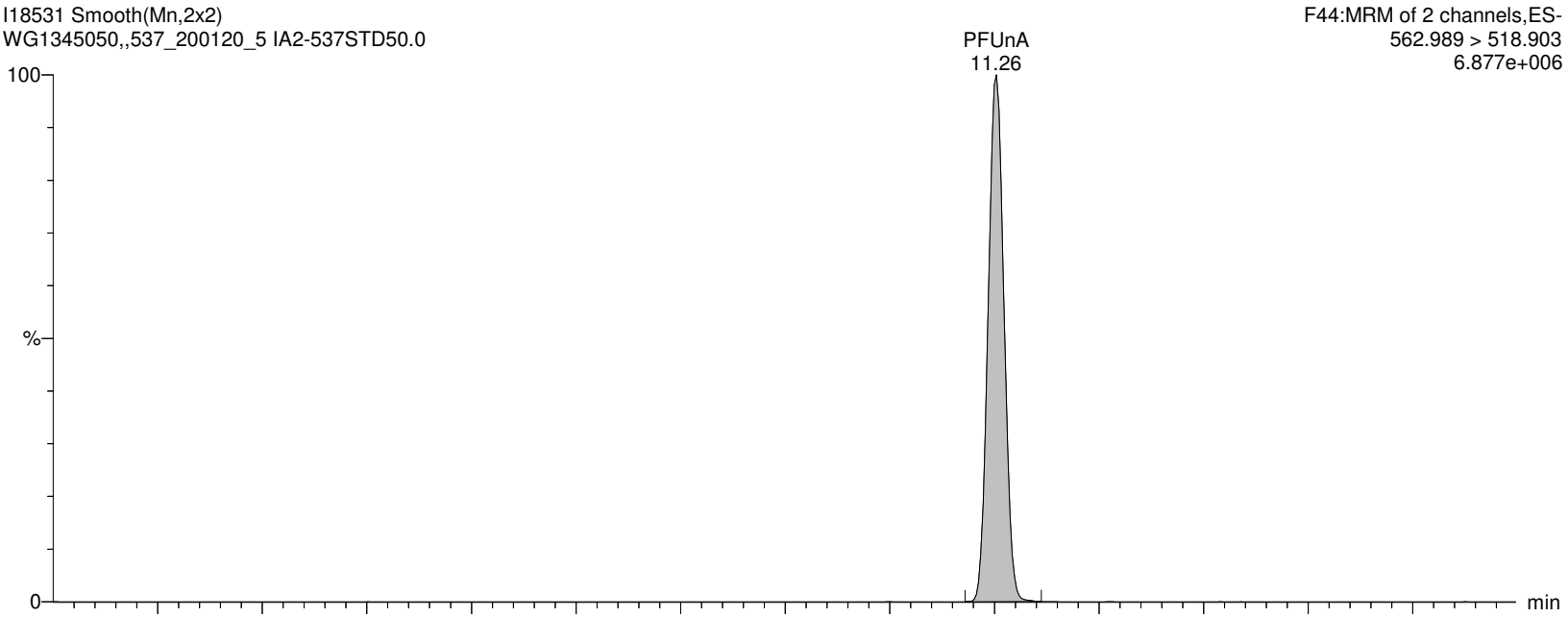


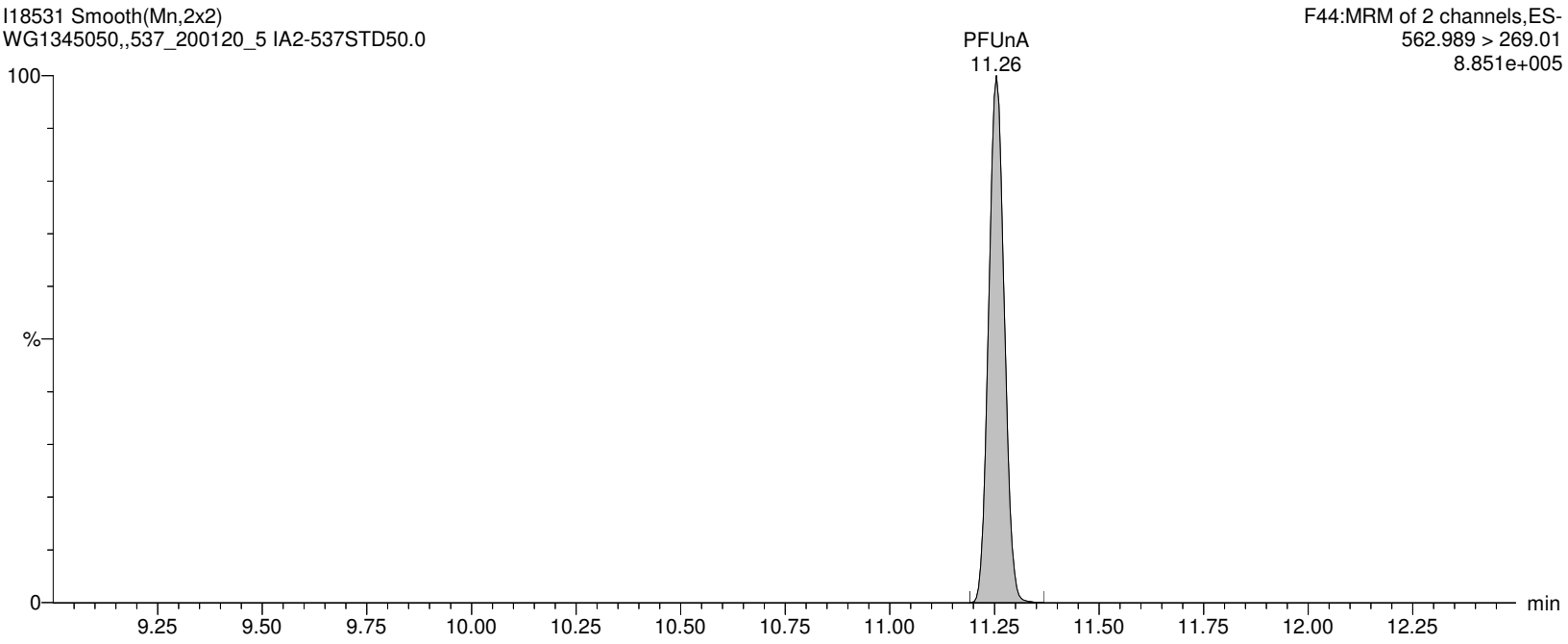



all concentration units in (ng/mL)

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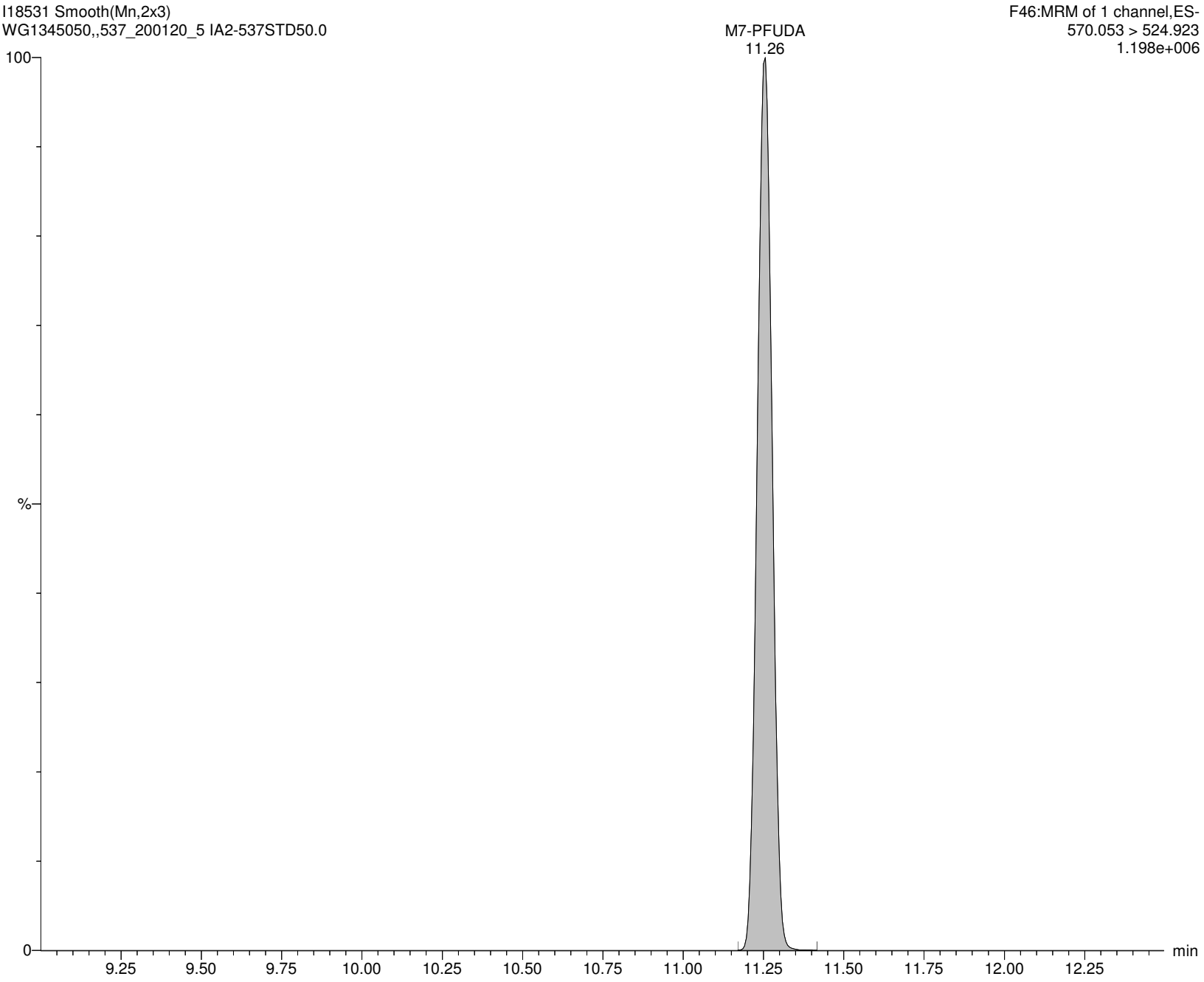



all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICAL_A.qld
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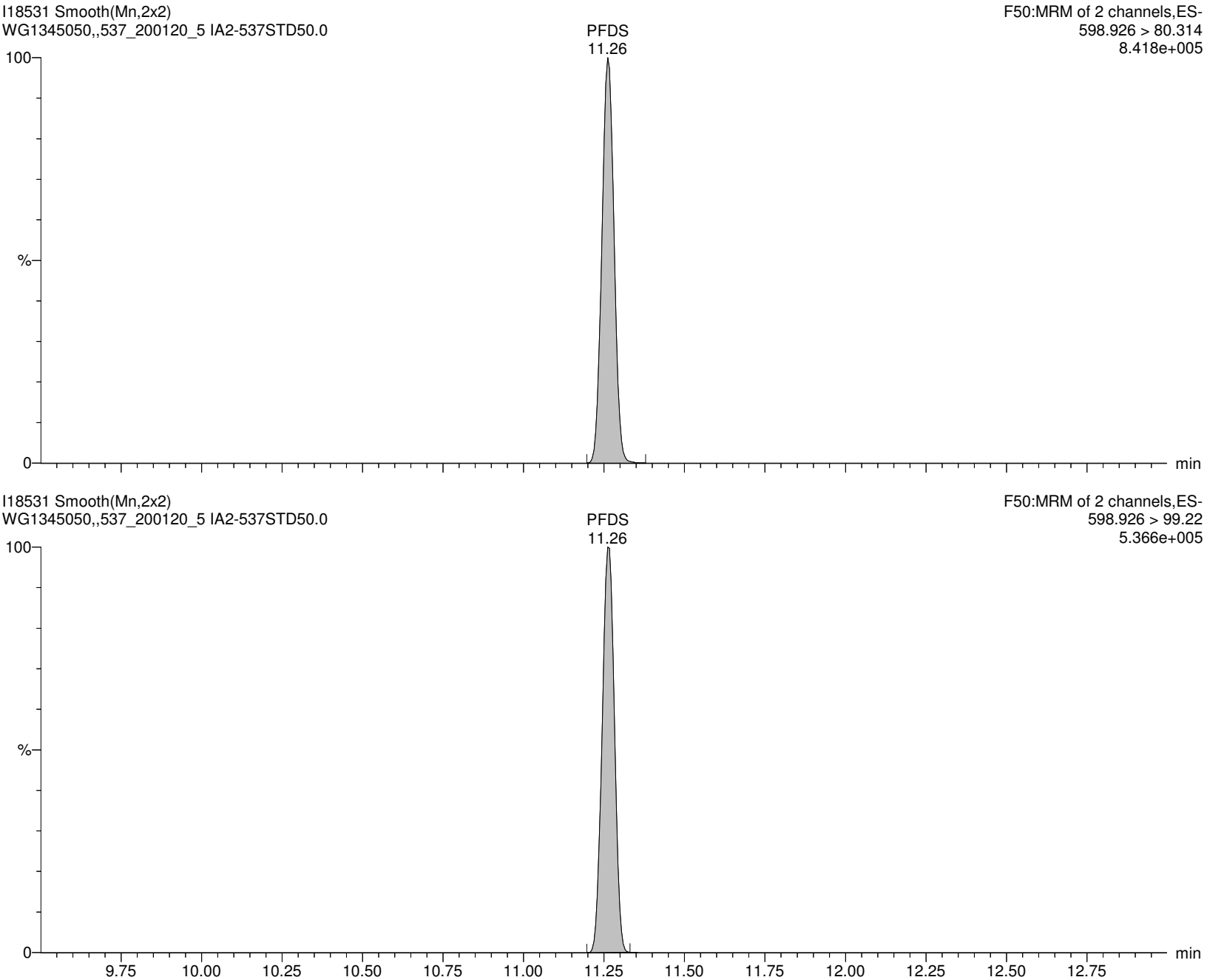



all concentration units in (ng/mL)

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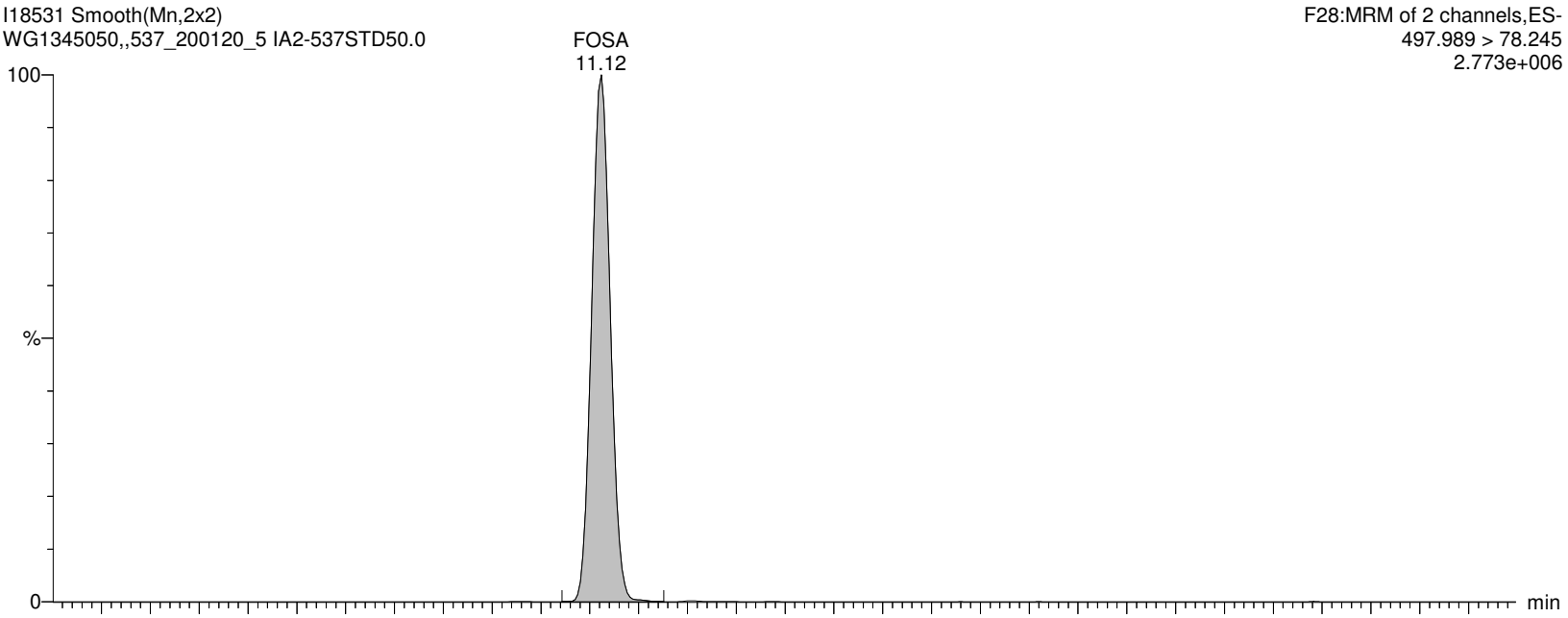
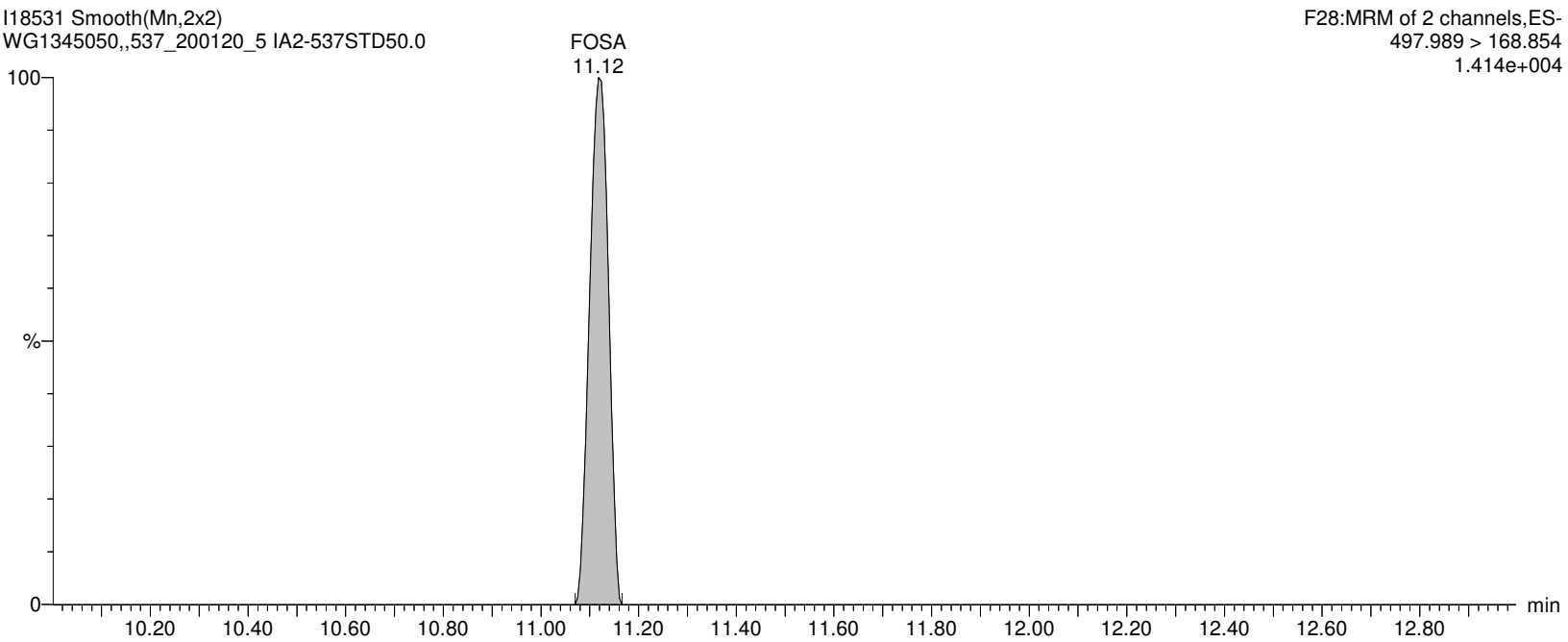
**FOSA**





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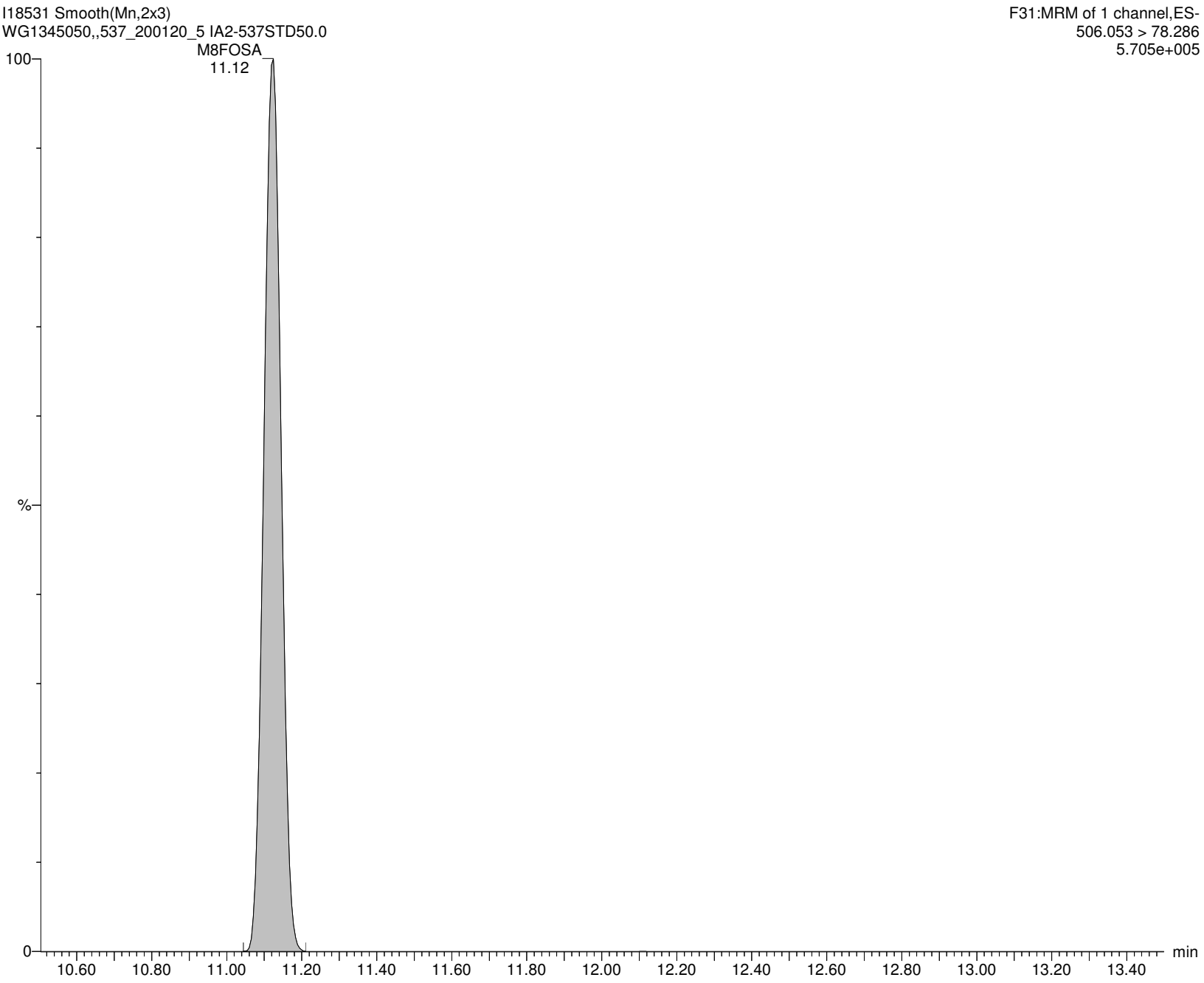
**M8FOSA**



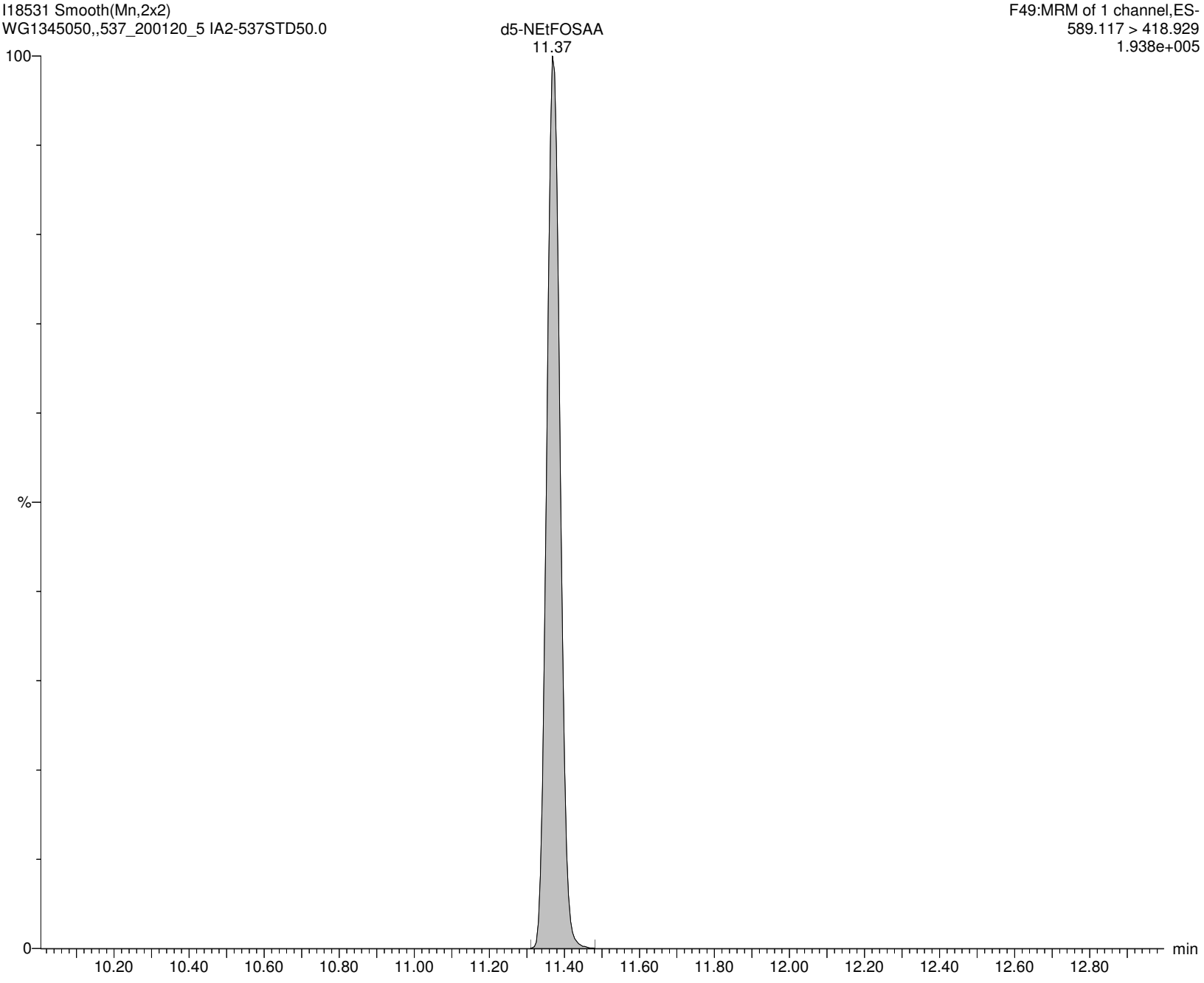


all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICAL_A.qld
Last Altered: Friday, February 28, 2020 09:12:40 Eastern Standard Time
Printed: Friday, February 28, 2020 09:27:51 Eastern Standard Time

**Name: I18531**
**ID: IA2-537STD50.0**
**Date: 27-Feb-2020**
**Time: 14:35:26**
**Description: WG1345050,,537_200120_5**
**User: LCMS01:SG**
**Vial: 1:A,6**
**Instrument: XEVO-TQSmicro#QEA0276**
**Inlet Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\LCMS_537_ISO_MeOH**
**Tune Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\190709_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**d5-NEtFOSAA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
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Last Altered: Friday, February 28, 2020 09:12:40 Eastern Standard Time
Printed: Friday, February 28, 2020 09:27:51 Eastern Standard Time

**Name: I18531**
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**Time: 14:35:26**
**Description: WG1345050,,537_200120_5**
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**Vial: 1:A,6**
**Instrument: XEVO-TQSmicro#QEA0276**
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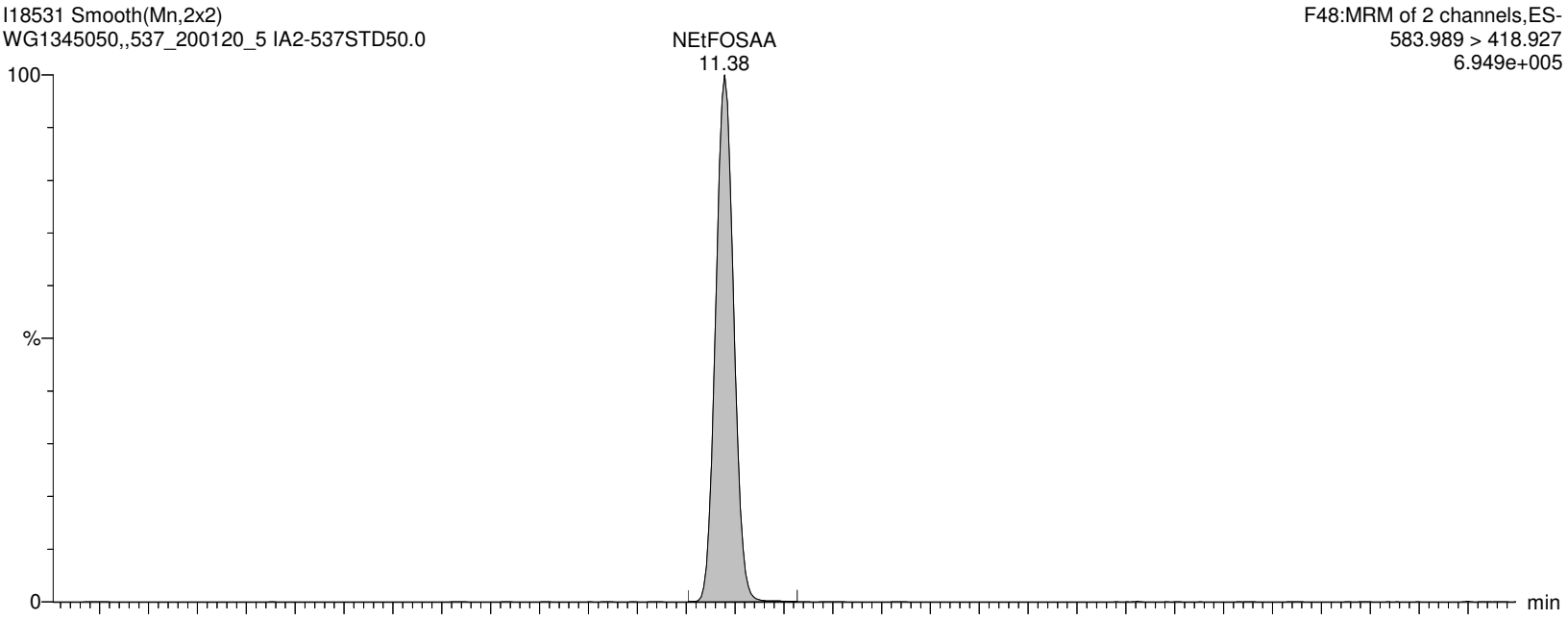
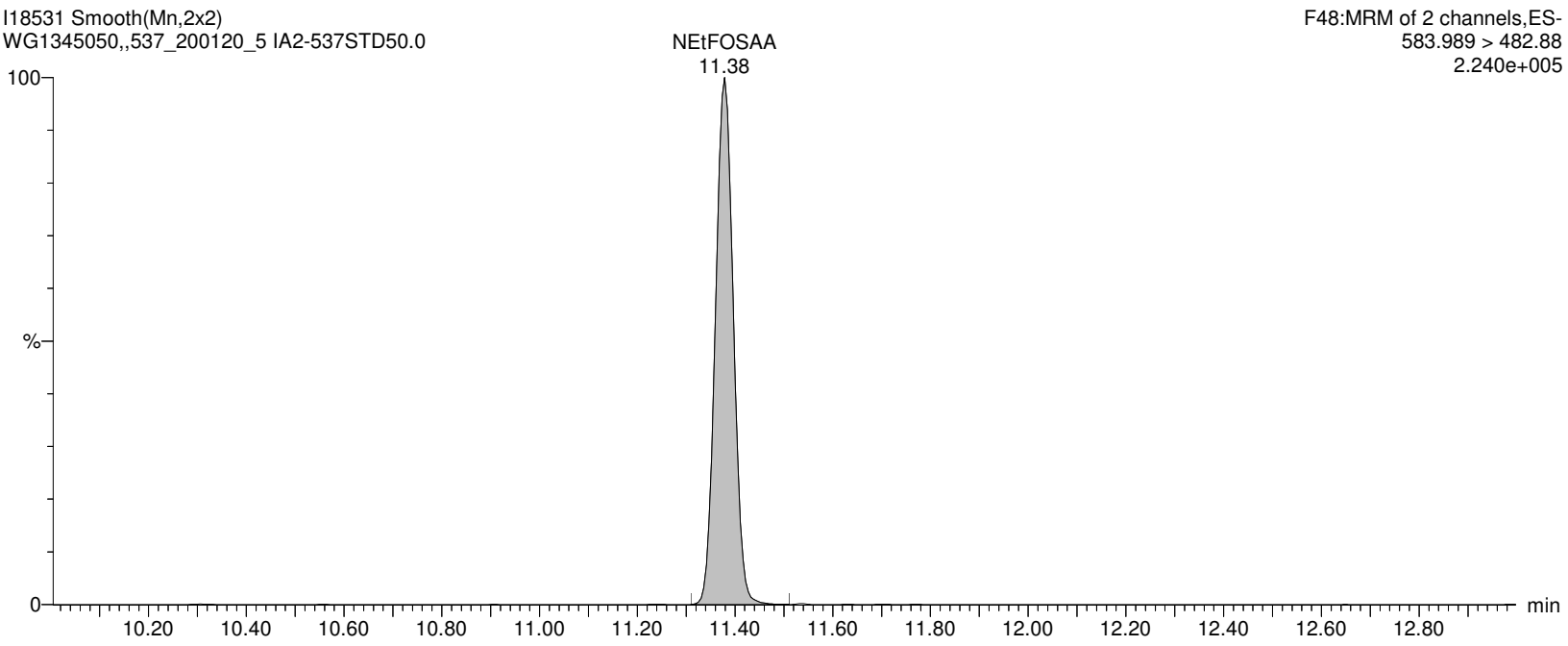
**NEtFOSAA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
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Last Altered: Friday, February 28, 2020 09:12:40 Eastern Standard Time
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**Name: I18531**
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**Time: 14:35:26**
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**Vial: 1:A,6**
**Instrument: XEVO-TQSmicro#QEA0276**
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**Tune Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\190709_TUNE.IPR**
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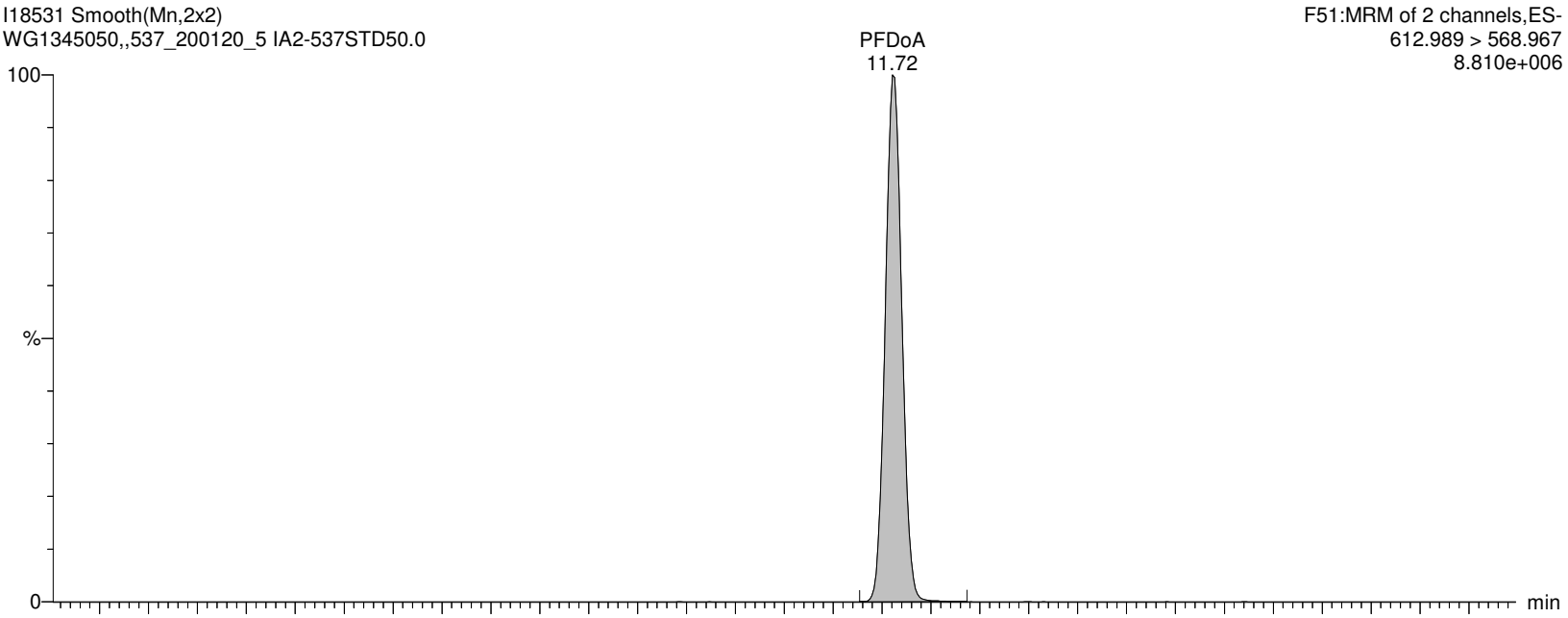
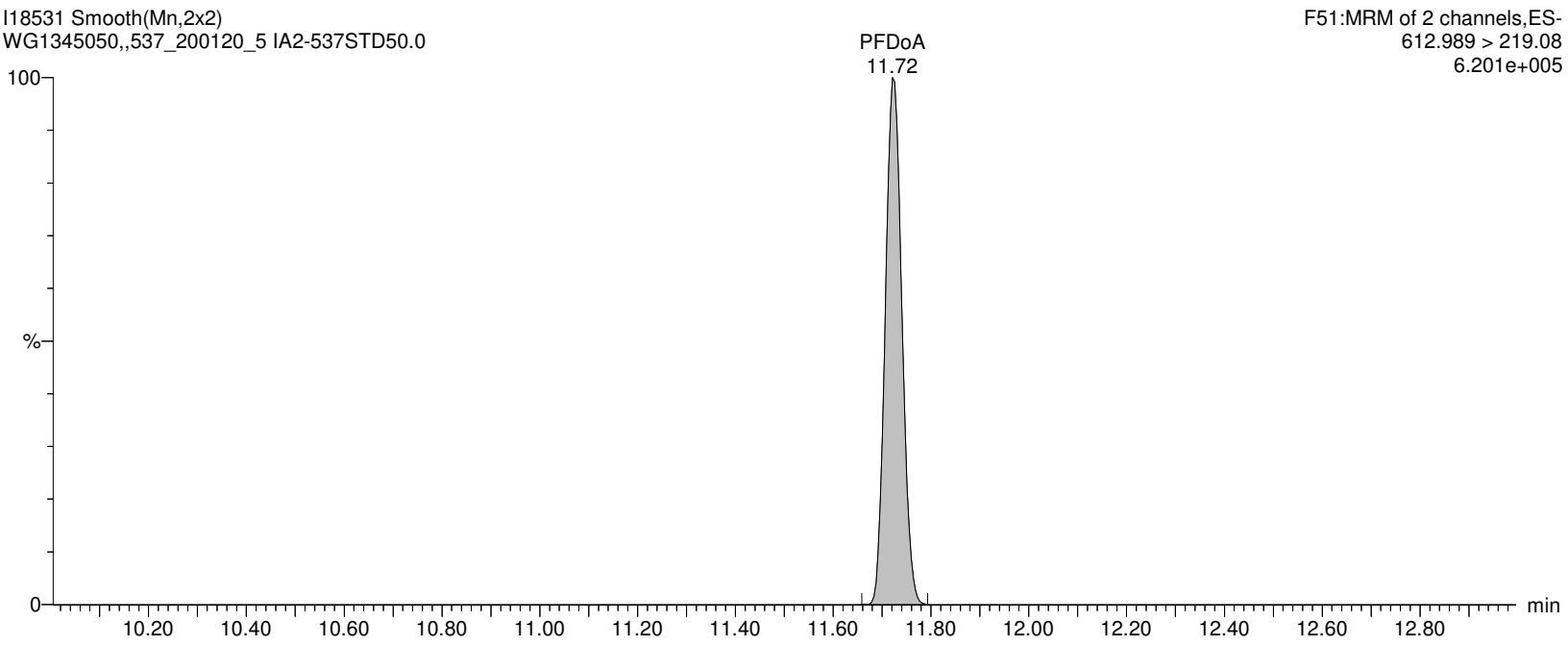
**PFDoA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
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Last Altered: Friday, February 28, 2020 09:12:40 Eastern Standard Time
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**Inlet Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\LCMS_537_ISO_MeOH**
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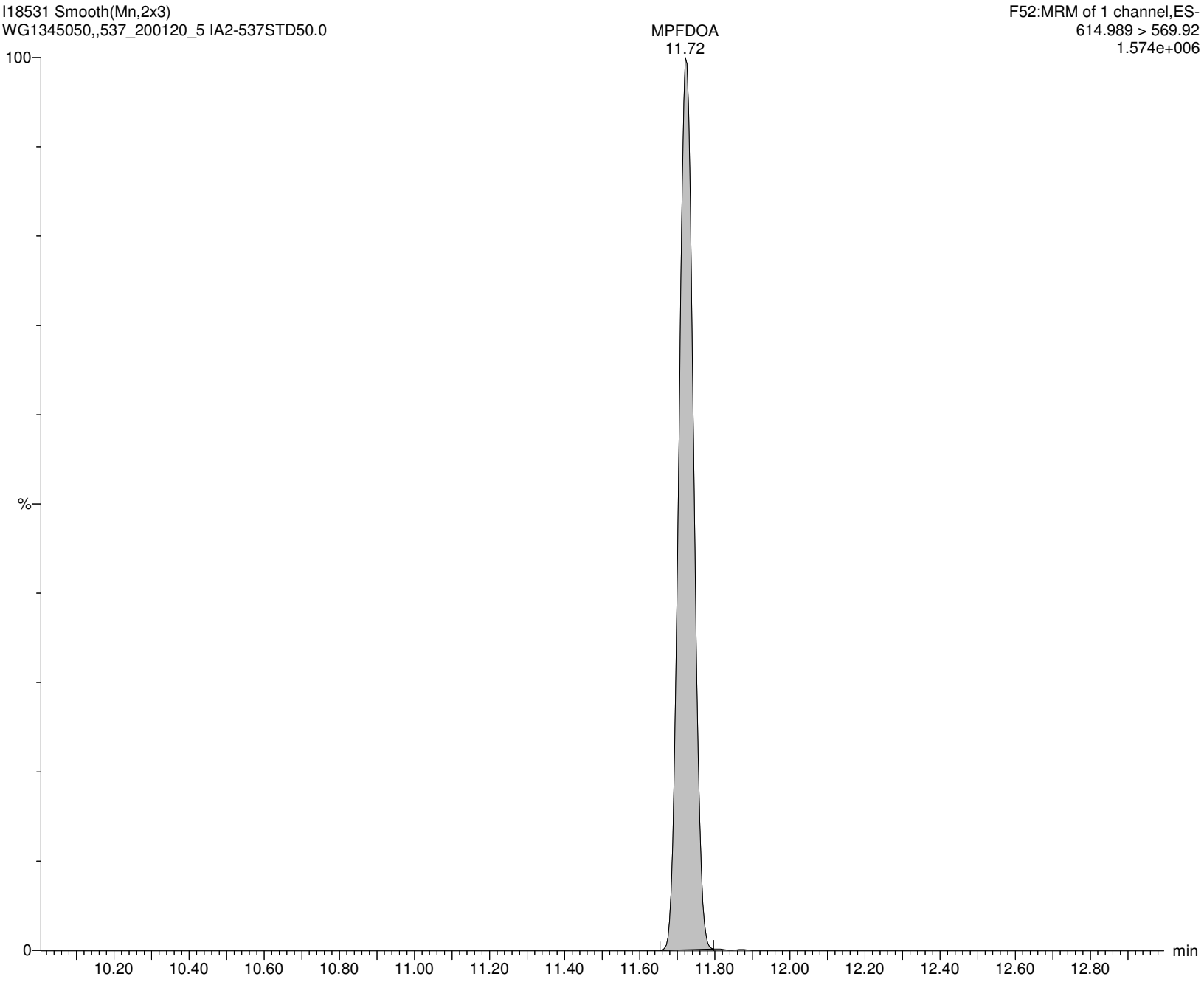



all concentration units in (ng/mL)

Alpha Analytical Inc.
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Last Altered: Friday, February 28, 2020 09:12:40 Eastern Standard Time
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**Instrument: XEVO-TQSmicro#QEA0276**
**Inlet Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\LCMS_537_ISO_MeOH**
**Tune Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\190709_TUNE.IPR**
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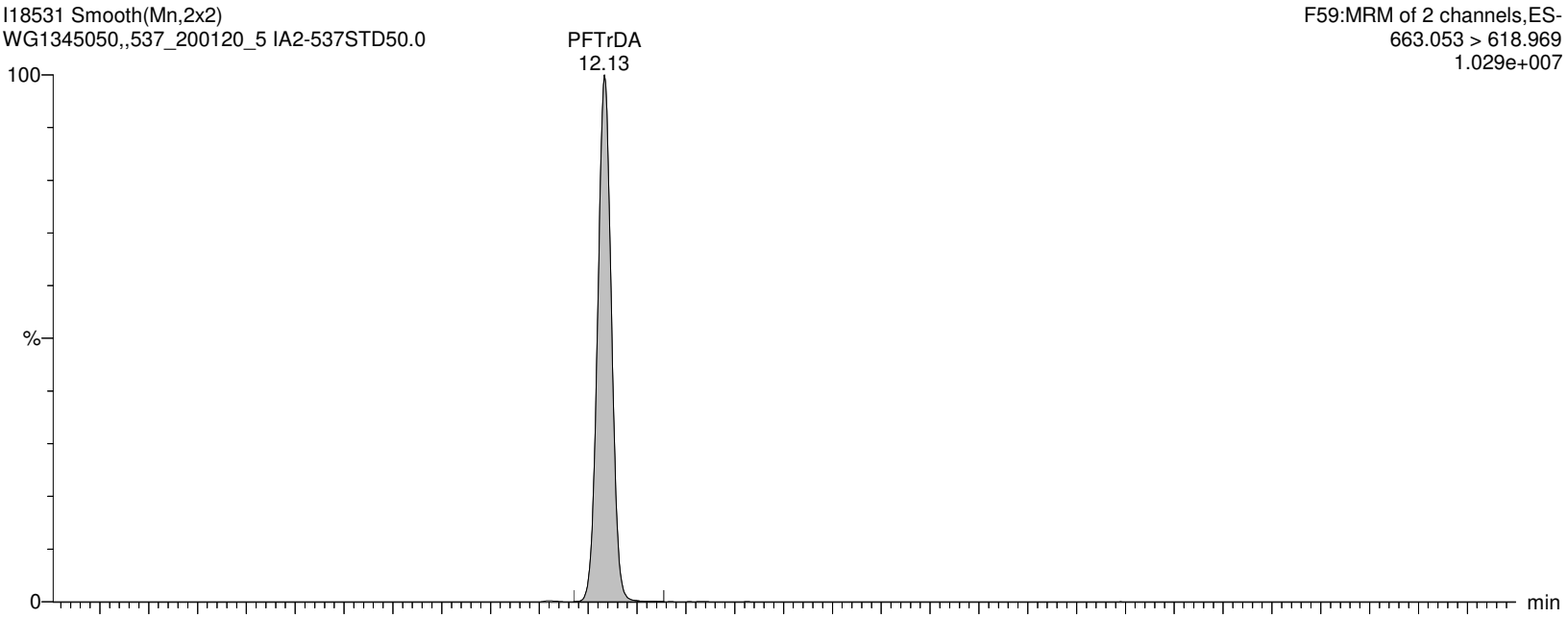
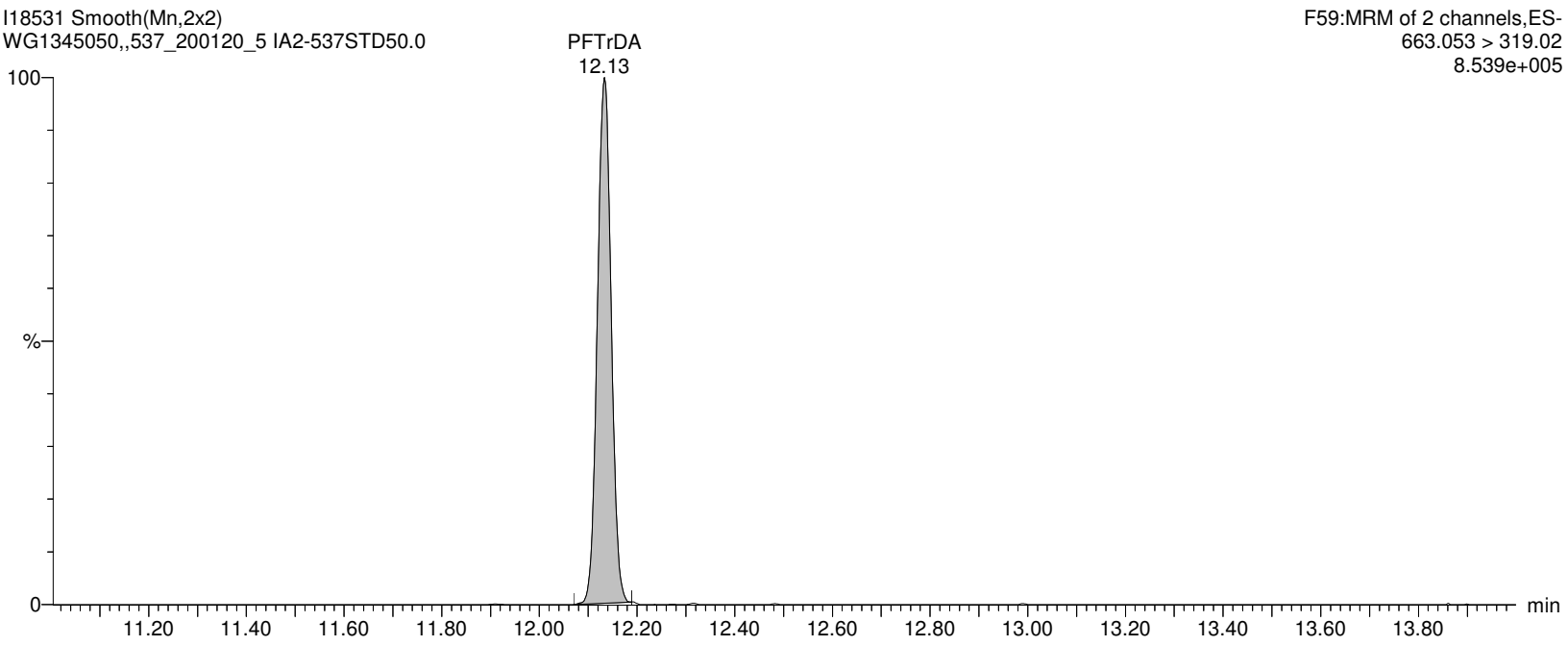
**PFTrDA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICAL_A.qld
Last Altered: Friday, February 28, 2020 09:12:40 Eastern Standard Time
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**ID: IA2-537STD50.0**
**Date: 27-Feb-2020**
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**Description: WG1345050,,537_200120_5**
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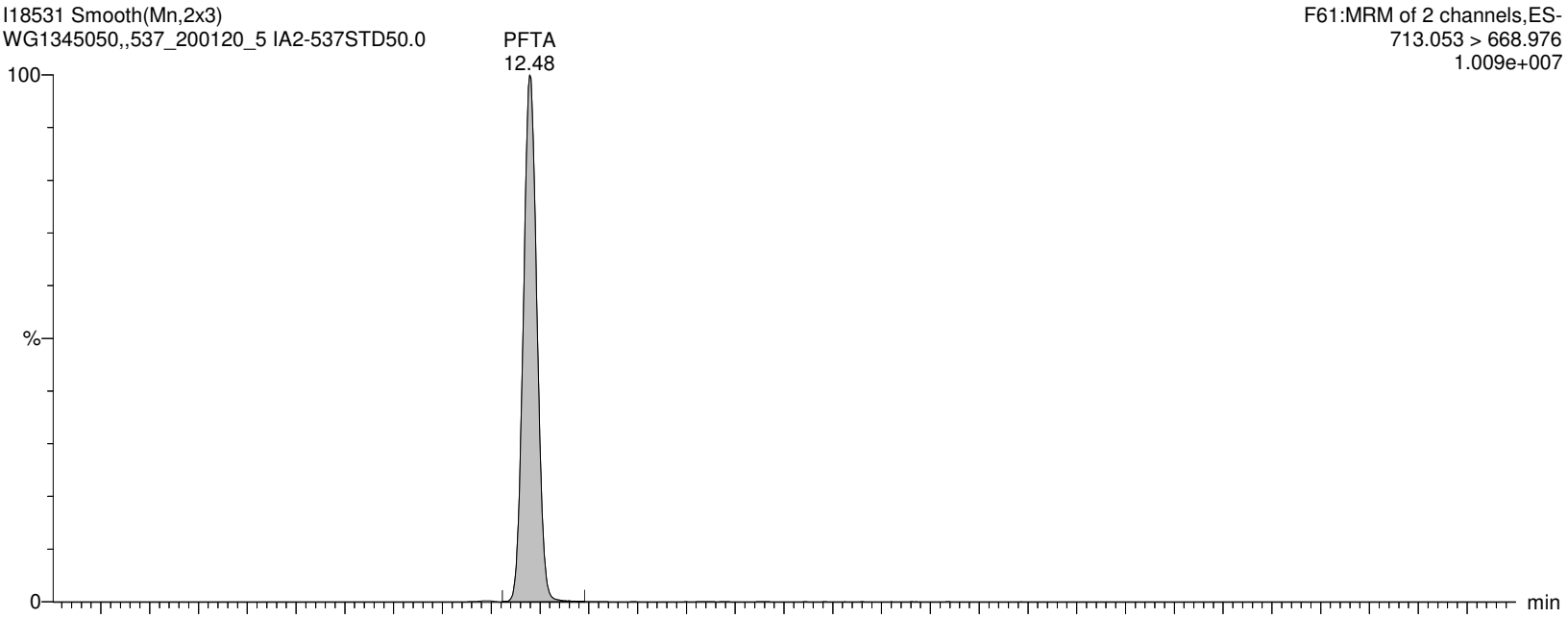
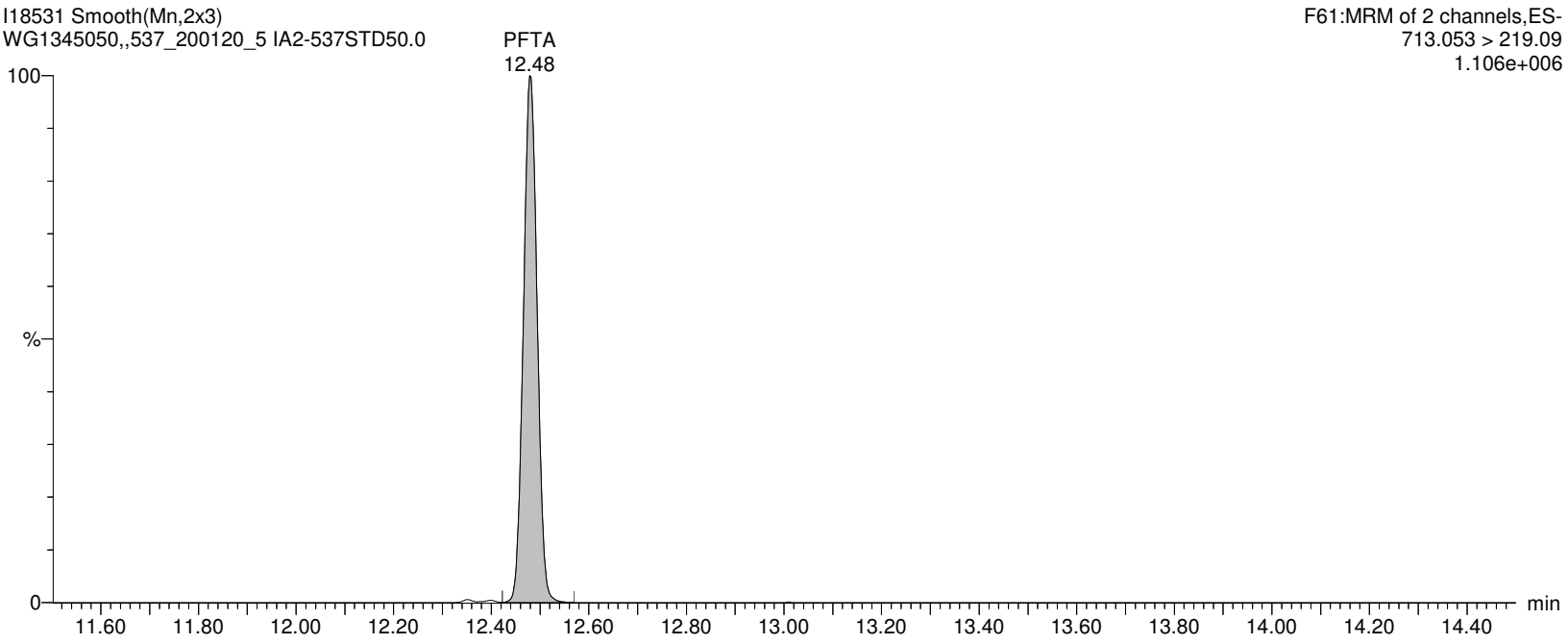
**Vial: 1:A,6**
**Instrument: XEVO-TQSmicro#QEA0276**
**Inlet Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\LCMS_537_ISO_MeOH**
**Tune Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\190709_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**PFTA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICAL_A.qld
Last Altered: Friday, February 28, 2020 09:12:40 Eastern Standard Time
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**Name: I18531**
**ID: IA2-537STD50.0**
**Date: 27-Feb-2020**
**Time: 14:35:26**
**Description: WG1345050,,537_200120_5**
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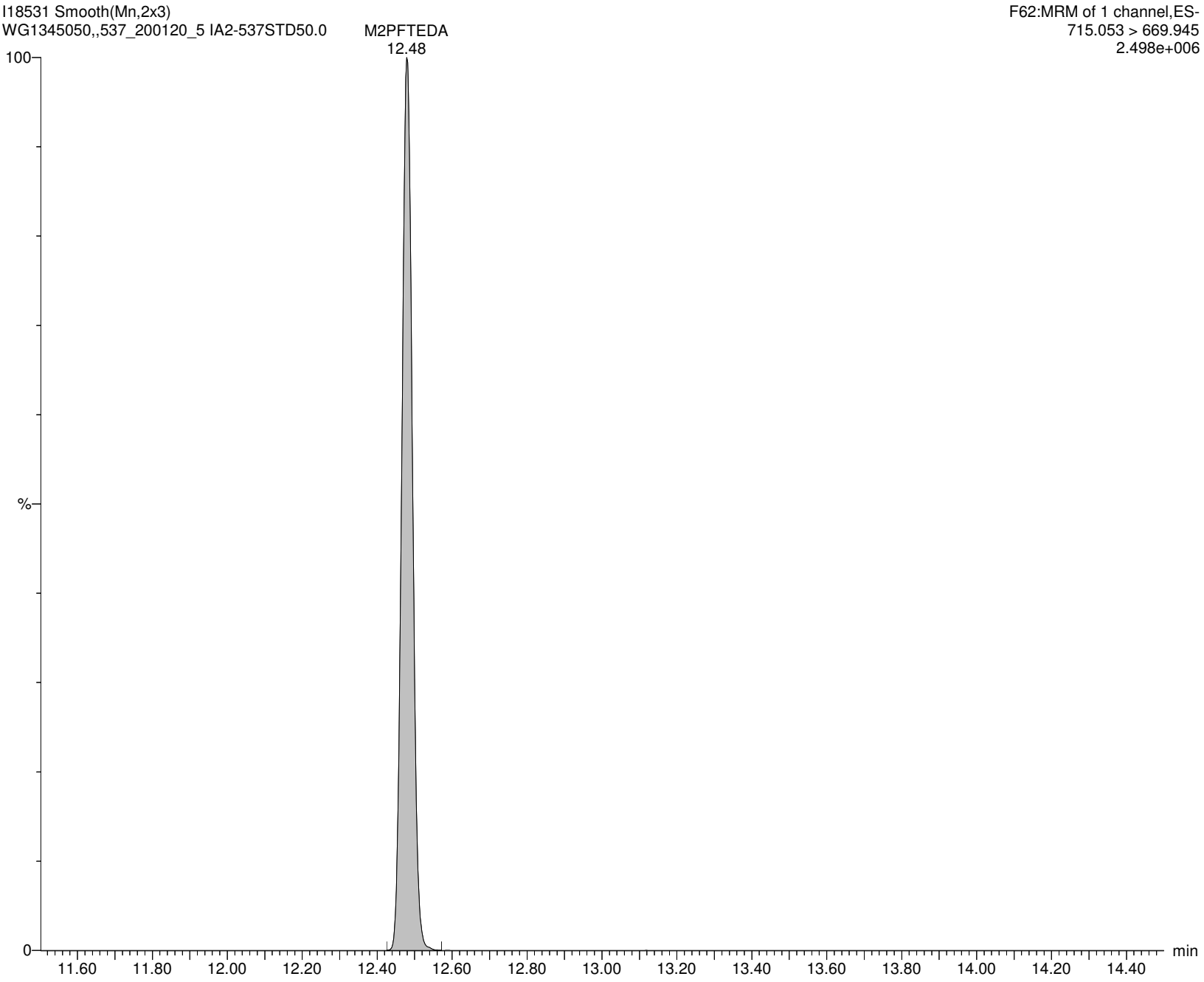
**Vial: 1:A,6**
**Instrument: XEVO-TQSmicro#QEA0276**
**Inlet Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\LCMS_537_ISO_MeOH**
**Tune Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\190709_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**M2PFTEDA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICAL_A.qld
Last Altered: Friday, February 28, 2020 09:12:40 Eastern Standard Time
Printed: Friday, February 28, 2020 09:27:52 Eastern Standard Time

**Method: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\MethDB\537ISO_Q_200227 .mdb 27 Feb 2020 12:38:15**
**Calibration: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\CurveDB\200227_537ISO_ICAL.cdb 28 Feb 2020 09:12:40**

**ID: IA2-537STD125**
**Name: I18532**
**Date: 27-Feb-2020**
**Time: 14:51:56**
**Description: WG1345050,,537_200120_6**
**Instrument: XEVO-TQSmicro#QEA0276**
**User: LCMS01:SG**
**Inlet Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\LCMS_537_ISO_MeOH**
**Tune Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\190709_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

| | Name | CAS | RT | Trace | Area | M Flag | Conc (ng/mL) | Ion Ratio | Ratio Flag | %Rec |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | PFBA | 375-22-4 | 2.24 | 212.926 > 169.111 | 391223 | | 122.941 | | na | 98.4 |
| 2 | M3PFBA | INT STD | 2.24 | 215.926 > 172.122 | 38059 | | 9.679 | | na | 96.8 |
| 3 | MPFBA | INT STD | 2.24 | 216.926 > 172.137 | 44302 | | 10.159 | | na | 101.6 |
| 4 | PFPeA | 2706-90-3 | 5.21 | 262.926 > 219.002 | 496161 | | 123.213 | | na | 98.6 |
| 5 | M5PFPEA | INT STD | 5.20 | 267.989 > 223.081 | 58332 | | 10.081 | | na | 100.8 |
| 6 | PFBS | 375-73-5 | 5.87 | 298.926 > 79.923 | 102270 | | 110.111 | 2.02 | NO | 99.5 |
| 7 | M3PFBS | INT STD | 5.87 | 301.989 > 80.254 | 10327 | | 9.167 | | na | 91.7 |
| 8 | 4:2FTS | 757124-72-4 | 7.05 | 326.926 > 306.957 | 48273 | | 113.234 | 1.75 | NO | 96.9 |
| 9 | M2-4:2FTS | INT STD | 7.05 | 329.117 > 309.079 | 7284 | | 12.410 | | na | 124.1 |
| 10 | PFHxA | 307-24-4 | 7.13 | 312.989 > 269.028 | 663068 | | 123.517 | 17.37 | NO | 98.8 |
| 11 | M5PFHxA | INT STD | 7.13 | 317.989 > 273.045 | 65382 | | 10.147 | | na | 101.5 |
| 12 | PFPeS | 2706-91-4 | 7.44 | 348.926 > 80.251 | 106015 | | 113.087 | 2.35 | NO | 96.2 |
| 13 | PFHpA | 375-85-9 | 8.40 | 362.926 > 319.014 | 801286 | | 120.050 | 5.05 | NO | 96.0 |
| 14 | M4PFHpA | INT STD | 8.40 | 366.926 > 321.979 | 74686 | | 9.991 | | na | 99.9 |
| 15 | br-PFHxS | 355-46-4 | 8.32 | 398.904 > 79.915 | 16965 | | 20.643 | 2.99 | NO | 97.1 |
| 16 | L-PFHxS | 355-46-4 | 8.55 | 398.904 > 79.915 | 64287 | | 89.807 | 1.98 | NO | 97.1 |
| 17 | PFHxS | 355-46-4 | | 398.904 > 79.915 | 81252 | | 110.450 | | na | |
| 18 | M3PFHxS | INT STD | 8.55 | 401.926 > 80.317 | 9613 | | 9.525 | | na | 95.2 |
| 19 | br-PFOA | 335-67-1 | | 412.989 > 368.9 | | | ND | | YES | |
| 20 | L-PFOA | 335-67-1 | 9.34 | 412.989 > 368.9 | 784709 | | 122.845 | 8.14 | NO | 98.3 |
| 21 | M2PFOA | INT STD | 9.34 | 415.032 > 369.968 | 78700 | | 9.354 | | na | 93.5 |
| 22 | PFOA | 335-67-1 | | 412.989 > 368.9 | 784709 | | 122.845 | | na | |
| 23 | M8PFOA | INT STD | 9.34 | 420.989 > 375.979 | 75623 | | 10.077 | | na | 100.8 |
| 24 | 6:2FTS | 27619-97-2 | 9.30 | 426.989 > 406.921 | 10867 | | 99.099 | 0.68 | NO | 83.5 |
| 25 | M2-6:2FTS | INT STD | 9.30 | 428.989 > 408.917 | 4596 | | 12.585 | | na | 125.9 |
| 26 | PFHpS | 375-92-8 | 9.43 | 448.926 > 80.257 | 58092 | | 118.157 | 1.06 | NO | 99.5 |
| 27 | PFNA | 375-95-1 | 10.09 | 462.989 > 418.931 | 690356 | | 129.723 | 4.20 | NO | 103.8 |
| 28 | M9PFNA | INT STD | 10.09 | 472.053 > 426.947 | 71524 | | 9.748 | | na | 97.5 |
| 29 | br-PFOS | 1763-23-1 | 9.95 | 498.968 > 79.918 | 21667 | M5 | 25.323 | 3.91 | NO | 101.3 |
| 30 | L-PFOS | 1763-23-1 | 10.14 | 498.968 > 79.918 | 48144 | | 91.054 | 1.34 | NO | 99.8 |
| 31 | PFOS | 1763-23-1 | | 498.968 > 79.918 | 69811 | | 116.377 | | na | |
| 32 | M4PFOS | INT STD | 10.14 | 503.032 > 80.306 | 8782 | | 10.339 | | na | 103.4 |
| 33 | M8PFOS | INT STD | 10.14 | 507.053 > 80.294 | 9251 | | 9.071 | | na | 90.7 |
| 34 | PFDA | 335-76-2 | 10.71 | 513.053 > 468.906 | 617393 | | 122.835 | 5.54 | NO | 98.3 |
| 35 | M2PFDA | INT STD | 10.71 | 515.053 > 469.934 | 59026 | | 8.923 | | na | 89.2 |
| 36 | M6PFDA | INT STD | 10.71 | 519.053 > 473.931 | 65619 | | 10.104 | | na | 101.0 |
| 37 | 8:2FTS | 39108-34-4 | 10.70 | 527.032 > 507.079 | 14184 | | 118.395 | 1.68 | NO | 98.7 |
| 38 | M2-8:2FTS | INT STD | 10.70 | 529.053 > 508.945 | 2492 | | 11.285 | | na | 112.9 |
| 39 | PFNS | 68259-12-1 | 10.74 | 548.989 > 80.249 | 76054 | | 119.787 | 1.40 | NO | 99.8 |


all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICAL_A.qld
Last Altered: Friday, February 28, 2020 09:12:40 Eastern Standard Time
Printed: Friday, February 28, 2020 09:27:52 Eastern Standard Time

**ID: IA2-537STD125**
**Name: I18532**
**Date: 27-Feb-2020**
**Time: 14:51:56**
**Description: WG1345050,,537_200120_6**
**Instrument: XEVO-TQSmicro#QEA0276**
**User: LCMS01:SG**
**Inlet Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\LCMS_537_ISO_MeOH**
**Tune Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\190709_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

| | Name | CAS | RT | Trace | Area | M Flag | Conc (ng/mL) | Ion Ratio | Ratio Flag | %Rec |
|---|---|---|---|---|---|---|---|---|---|---|
| 40 | d3-NMeFOSAA | INT STD | 11.08 | 573.096 > 418.987 | 9127 | | 10.609 | | na | 106.1 |
| 41 | NMeFOSAA | 2355-31-9 | 11.08 | 570.053 > 418.917 | 70060 | | 128.446 | 2.80 | NO | 102.8 |
| 42 | PFUnA | 2058-94-8 | 11.24 | 562.989 > 518.903 | 593038 | | 117.168 | 7.69 | NO | 93.7 |
| 43 | M7-PFUDA | INT STD | 11.25 | 570.053 > 524.923 | 56477 | | 9.897 | | na | 99.0 |
| 44 | PFDS | 335-77-3 | 11.26 | 598.926 > 80.314 | 78685 | | 126.685 | 1.64 | NO | 105.0 |
| 45 | FOSA | 754-91-6 | 11.12 | 497.989 > 78.245 | 276516 | | 126.264 | 201.90 | NO | 101.0 |
| 46 | M8FOSA | INT STD | 11.11 | 506.053 > 78.286 | 26596 | | 10.219 | | na | 102.2 |
| 47 | d5-NEtFOSAA | INT STD | 11.36 | 589.117 > 418.929 | 6575 | | 10.480 | | na | 104.8 |
| 48 | NEtFOSAA | 2991-50-6 | 11.37 | 583.989 > 418.927 | 68871 | | 122.796 | 3.11 | NO | 98.2 |
| 49 | PFDoA | 307-55-1 | 11.72 | 612.989 > 568.967 | 721807 | | 134.996 | 13.89 | NO | 108.0 |
| 50 | MPFDOA | INT STD | 11.72 | 614.989 > 569.92 | 58893 | | 9.599 | | na | 96.0 |
| 51 | PFTrDA | 72629-94-8 | 12.13 | 663.053 > 618.969 | 648500 | | 127.558 | 11.92 | NO | 102.0 |
| 52 | PFTA | 376-06-7 | 12.48 | 713.053 > 668.976 | 680592 | | 124.745 | 8.84 | NO | 99.8 |
| 53 | M2PFTEDA | INT STD | 12.48 | 715.053 > 669.945 | 73636 | | 10.649 | | na | 106.5 |


all concentration units in (ng/mL)

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**Date: 27-Feb-2020**
**Time: 14:51:56**
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**Vial: 1:A,7**
**Instrument: XEVO-TQSmicro#QEA0276**
**Inlet Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\LCMS_537_ISO_MeOH**
**Tune Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\190709_TUNE.IPR**
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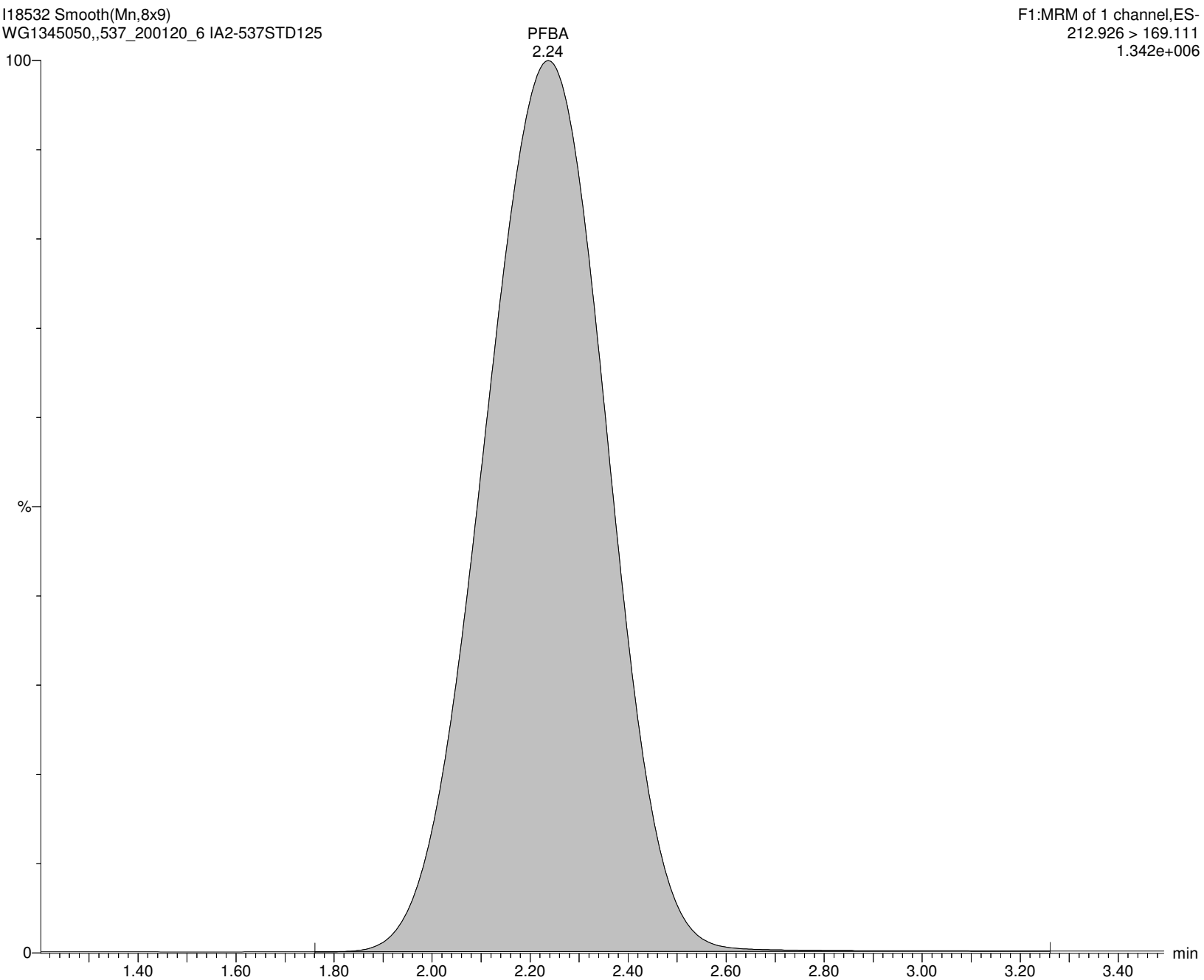
**PFBA**





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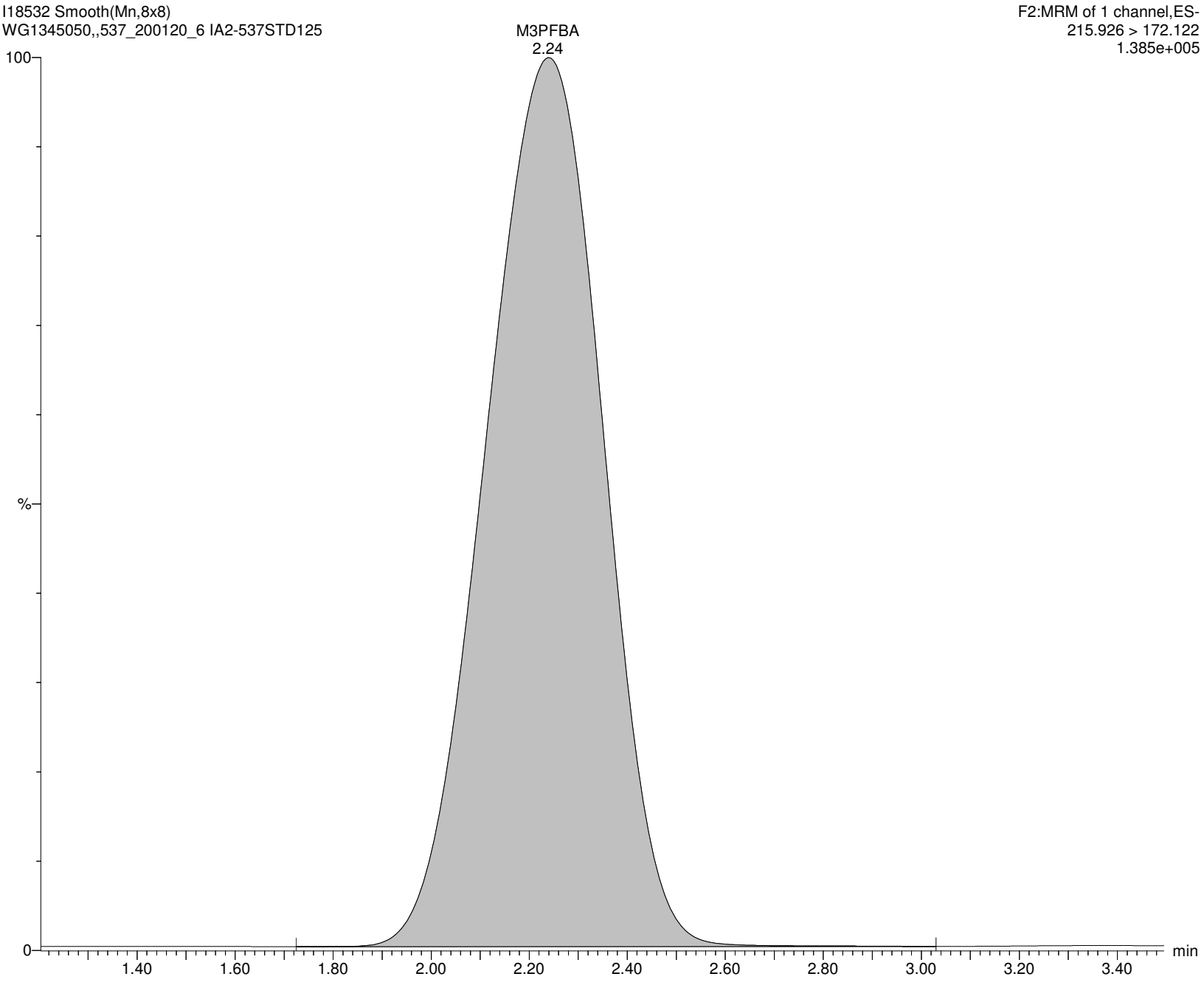
**M3PFBA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICAL_A.qld
Last Altered: Friday, February 28, 2020 09:12:40 Eastern Standard Time
Printed: Friday, February 28, 2020 09:27:52 Eastern Standard Time

**Name: I18532**
**ID: IA2-537STD125**
**Date: 27-Feb-2020**
**Time: 14:51:56**
**Description: WG1345050,,537_200120_6**
**User: LCMS01:SG**
**Vial: 1:A,7**
**Instrument: XEVO-TQSmicro#QEA0276**
**Inlet Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\LCMS_537_ISO_MeOH**
**Tune Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\190709_TUNE.IPR**
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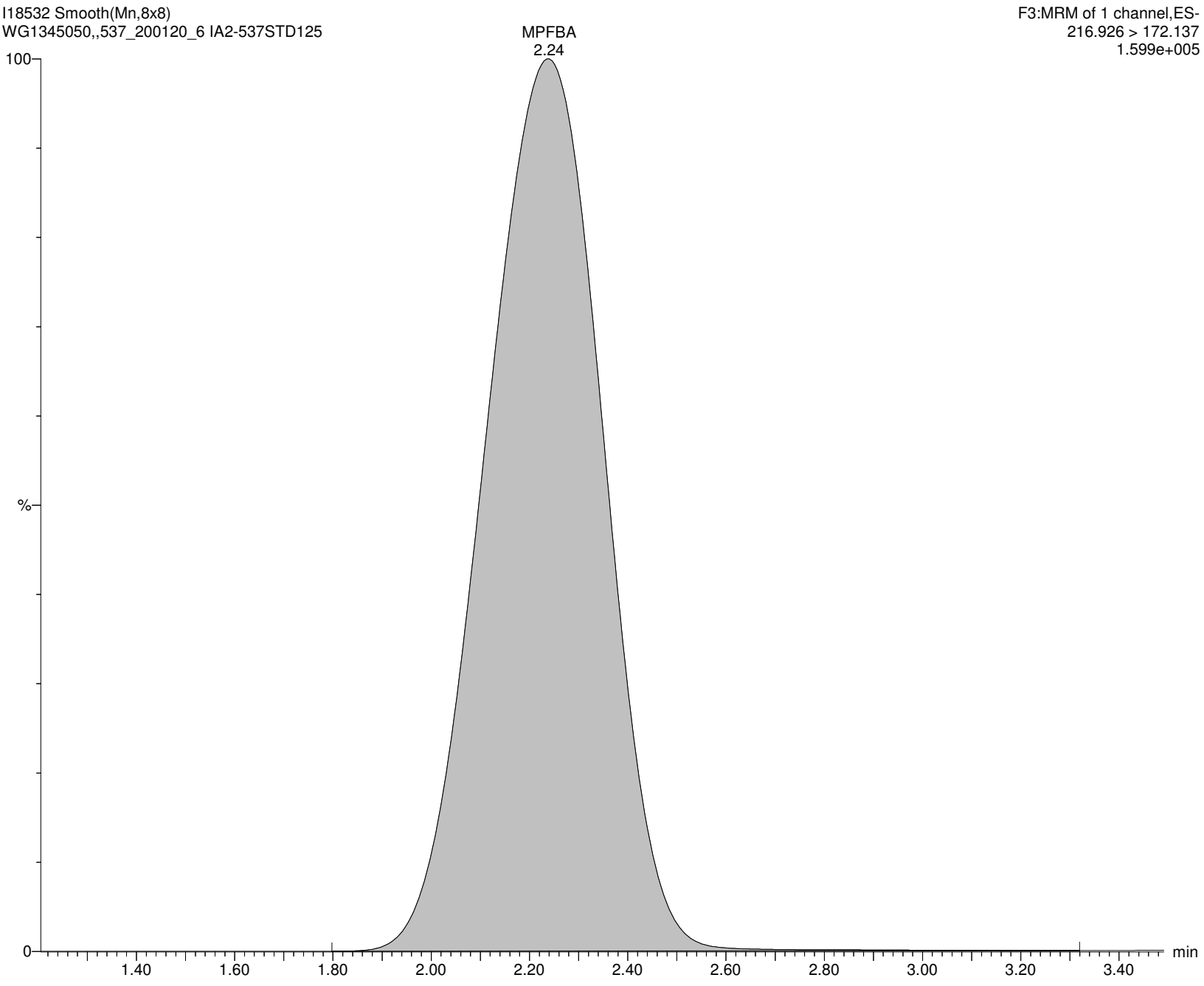
**MPFBA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
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Last Altered: Friday, February 28, 2020 09:12:40 Eastern Standard Time
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**Vial: 1:A,7**
**Instrument: XEVO-TQSmicro#QEA0276**
**Inlet Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\LCMS_537_ISO_MeOH**
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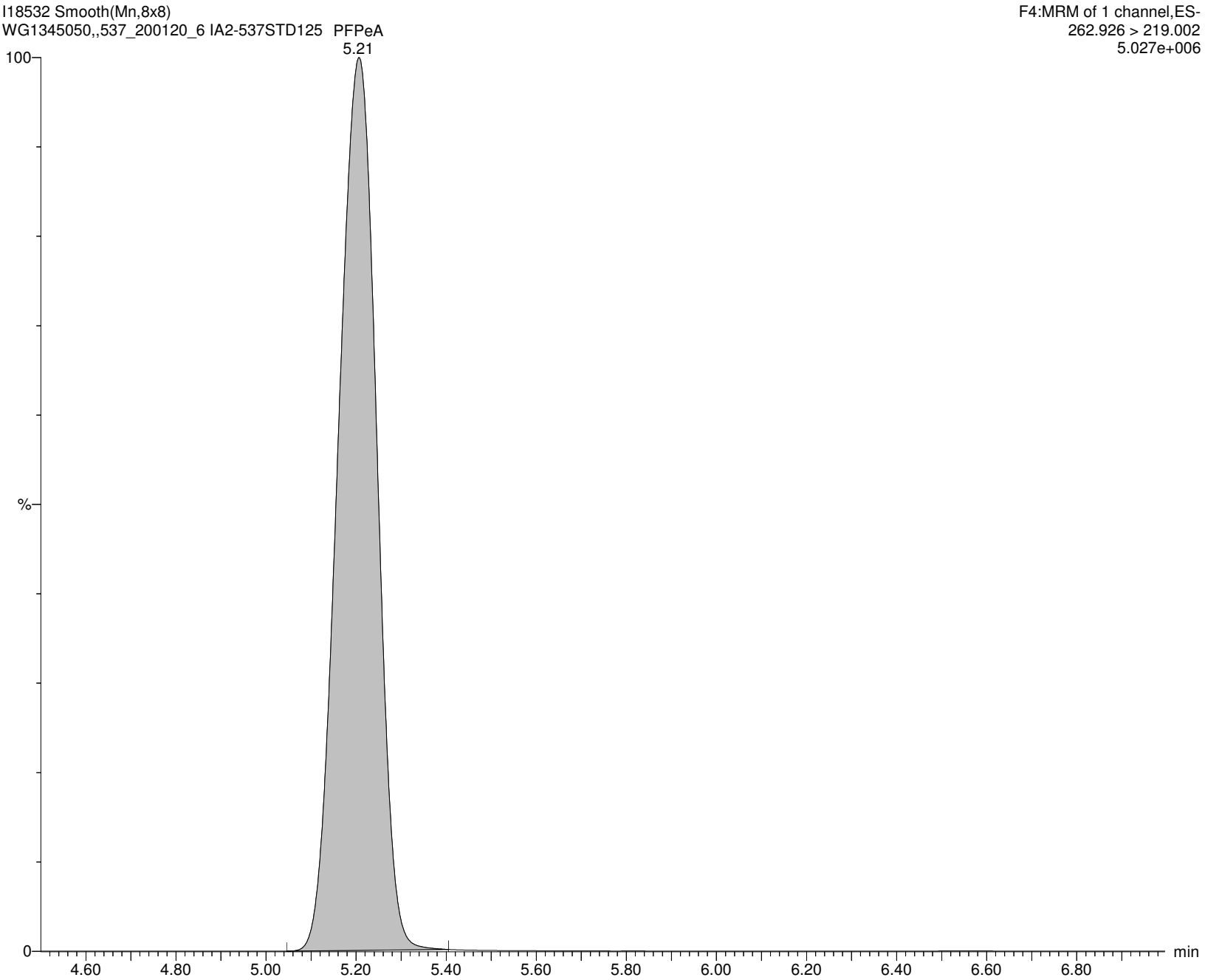



all concentration units in (ng/mL)

Alpha Analytical Inc.
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Last Altered: Friday, February 28, 2020 09:12:40 Eastern Standard Time
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**Vial: 1:A,7**
**Instrument: XEVO-TQSmicro#QEA0276**
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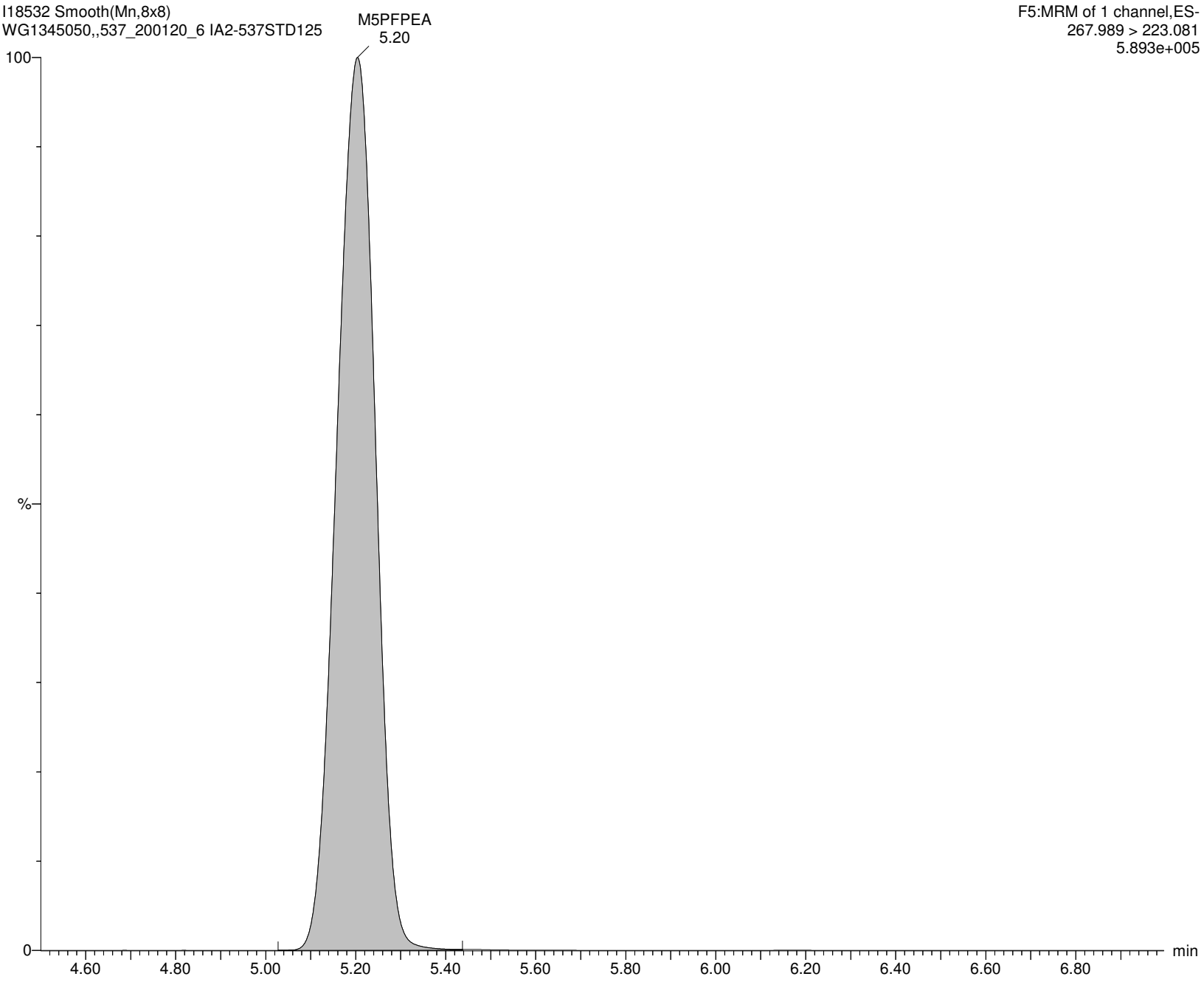
**M5PFPEA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICAL_A.qld
Last Altered: Friday, February 28, 2020 09:12:40 Eastern Standard Time
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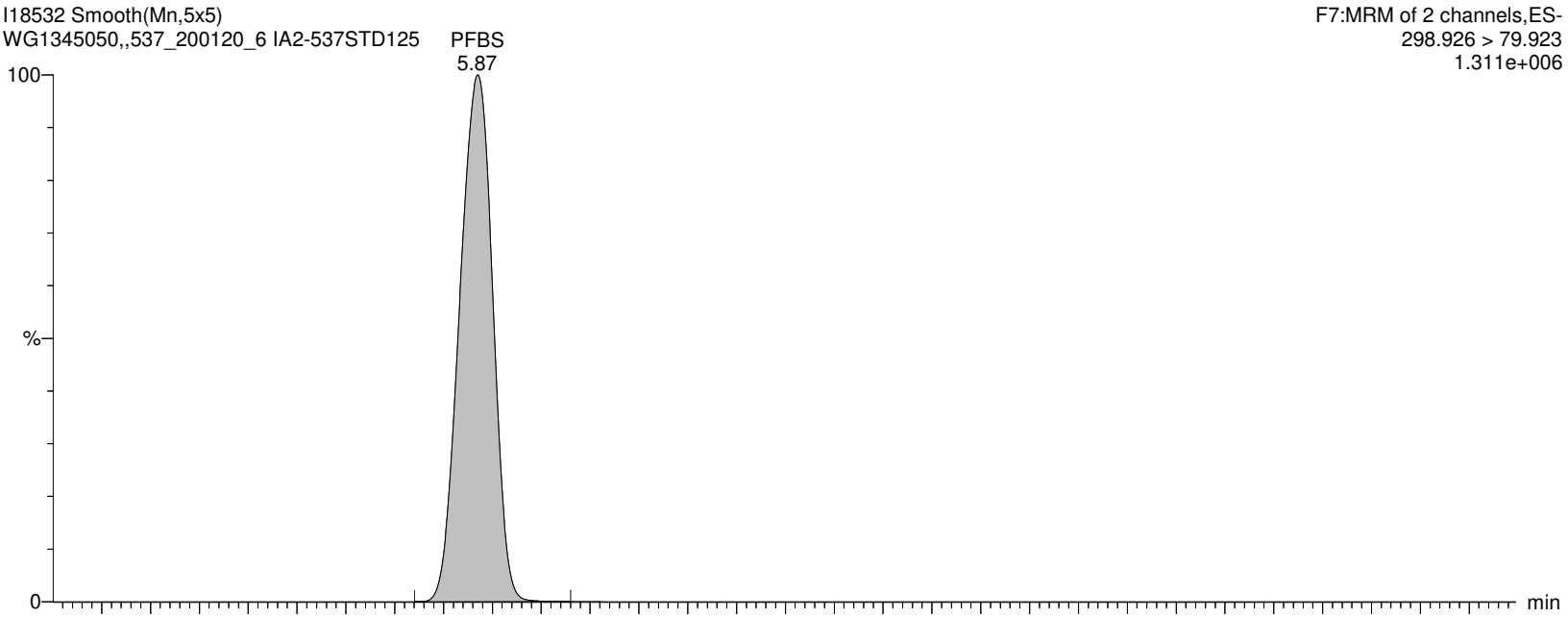
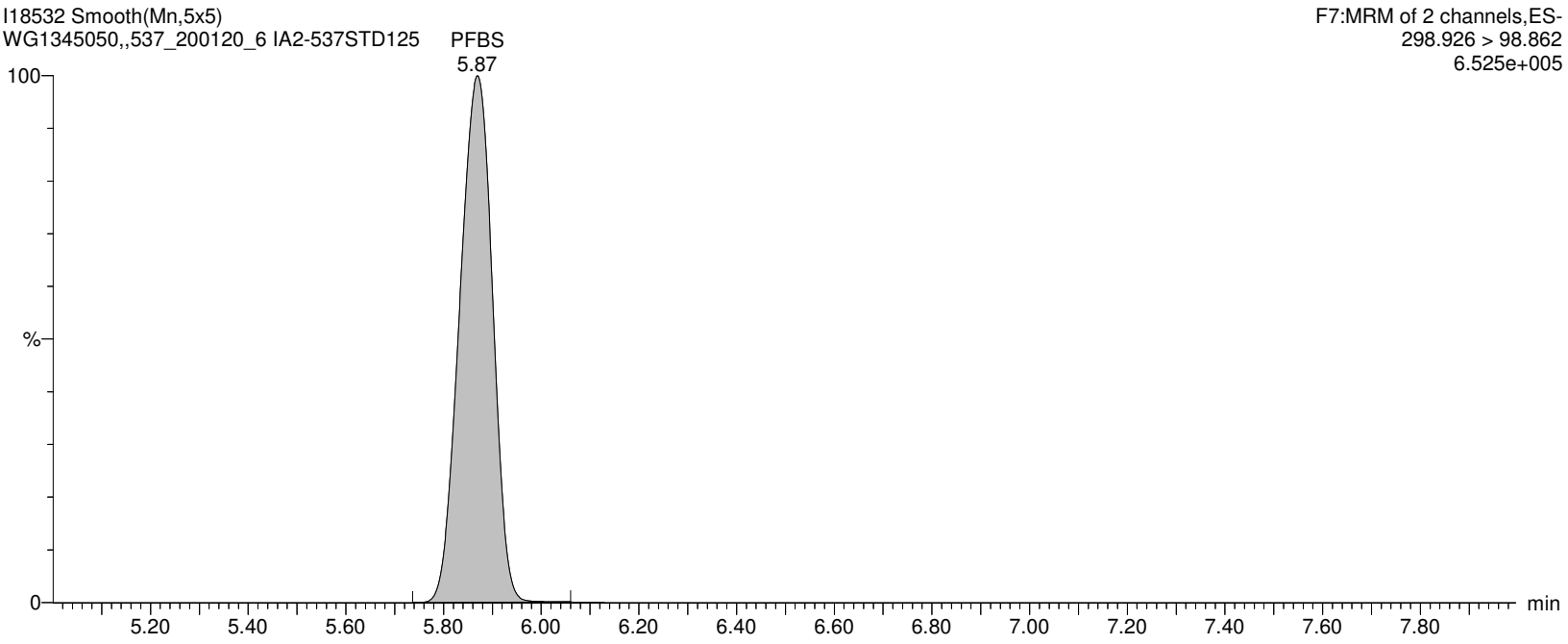
**PFBS**





all concentration units in (ng/mL)

Alpha Analytical Inc.
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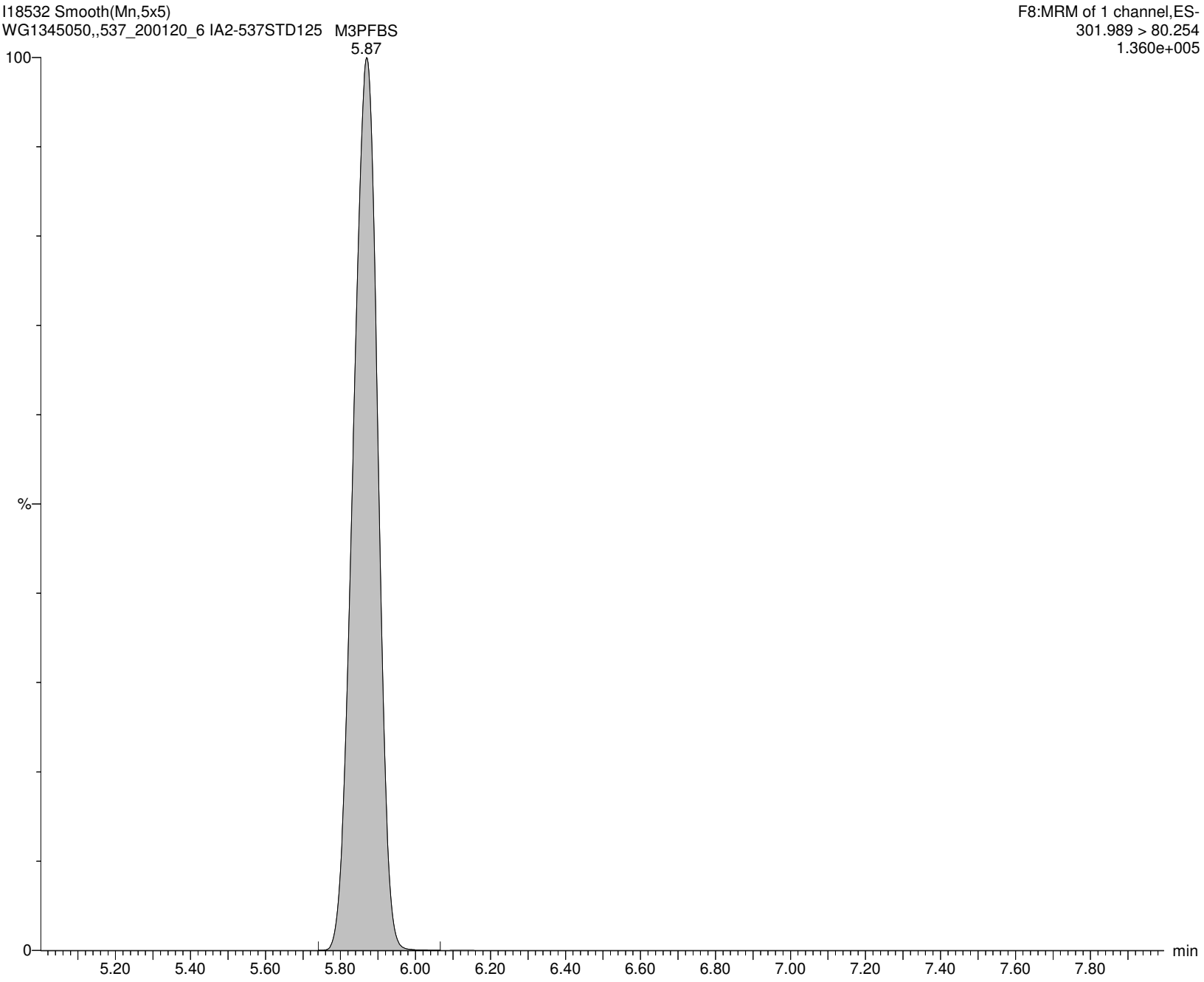
**M3PFBS**





all concentration units in (ng/mL)

Alpha Analytical Inc.
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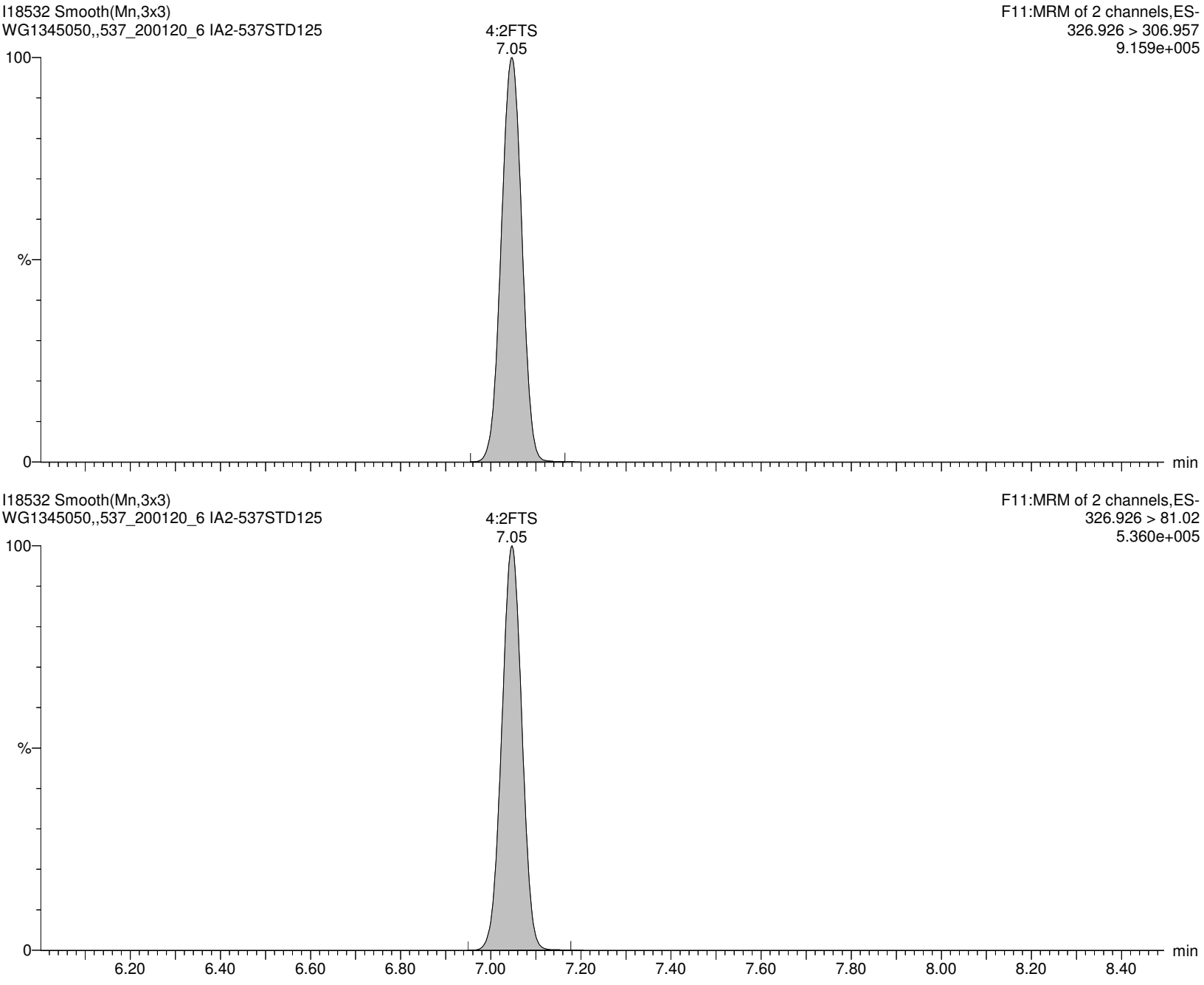
**4:2FTS**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICAL_A.qld
Last Altered: Friday, February 28, 2020 09:12:40 Eastern Standard Time
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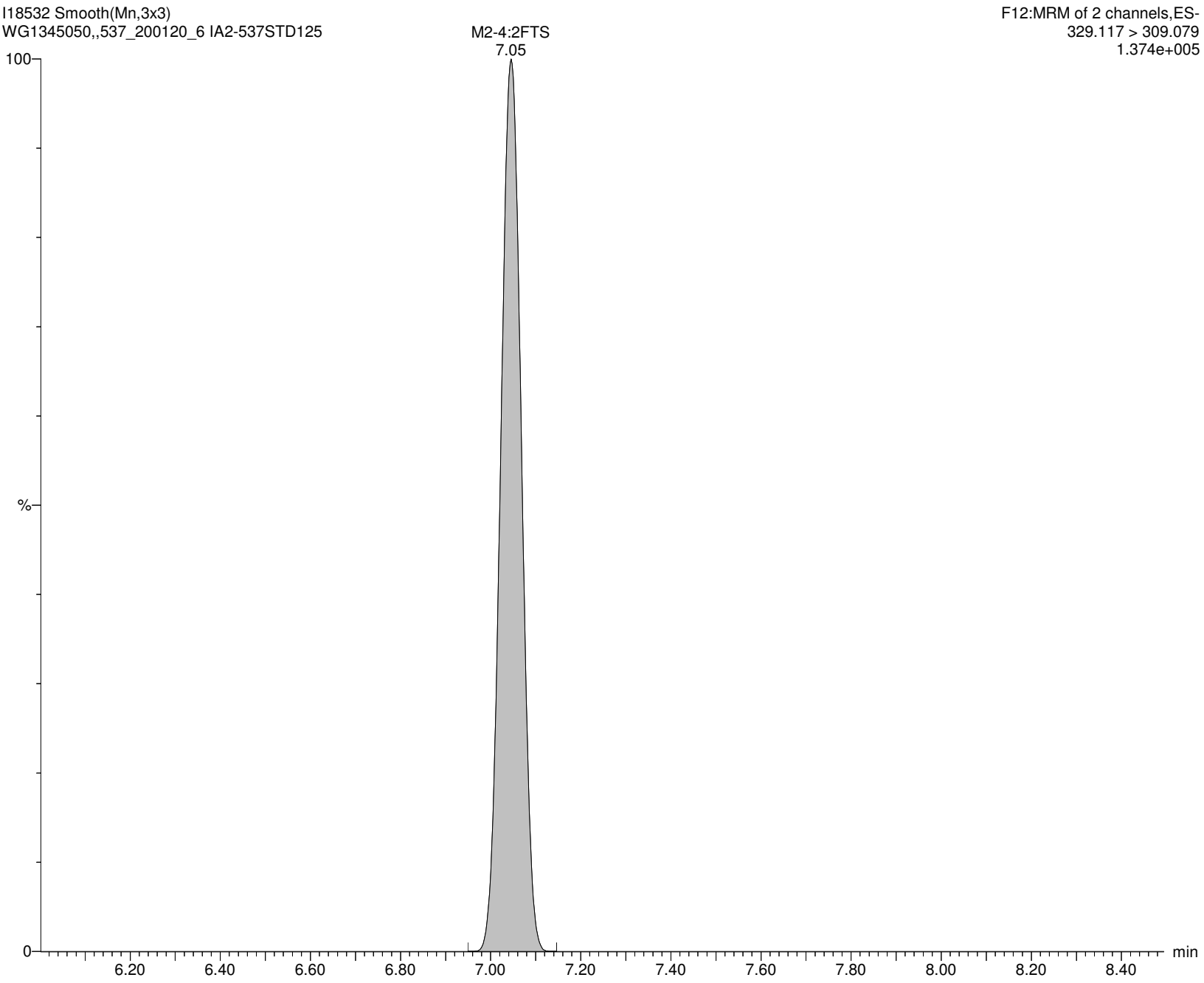
**M2-4:2FTS**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICAL_A.qld
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**Vial: 1:A,7**
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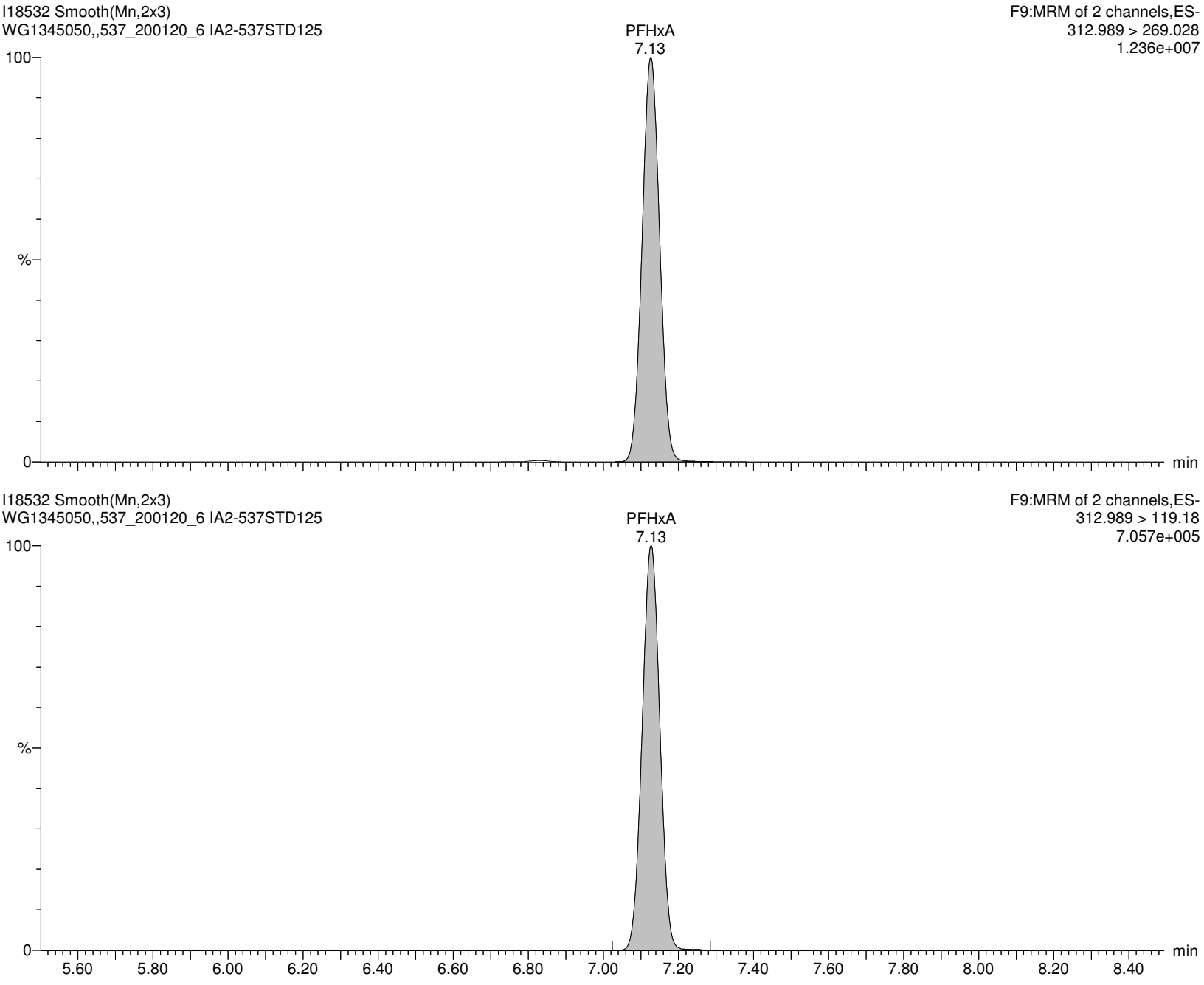
**PFHxA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICAL_A.qld
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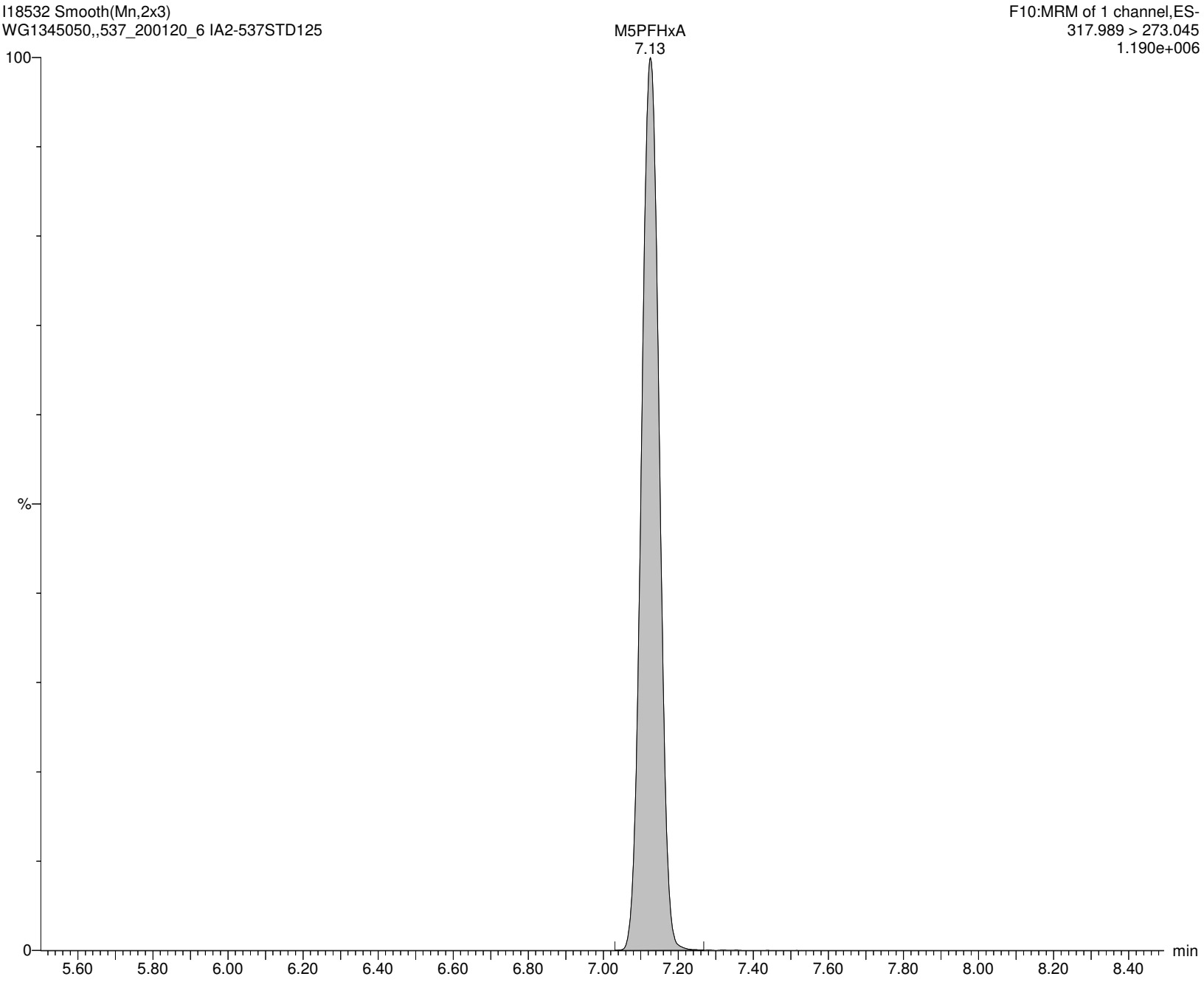
**M5PFHxA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICAL_A.qld
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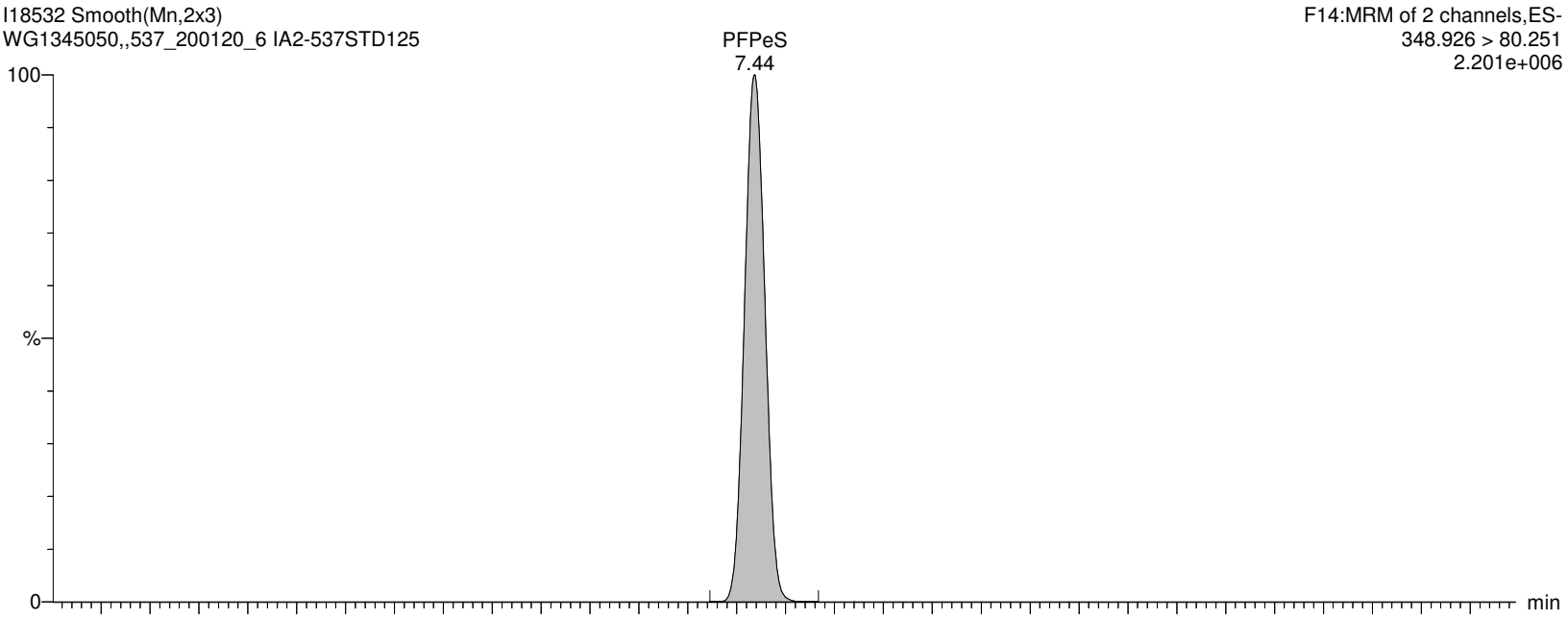
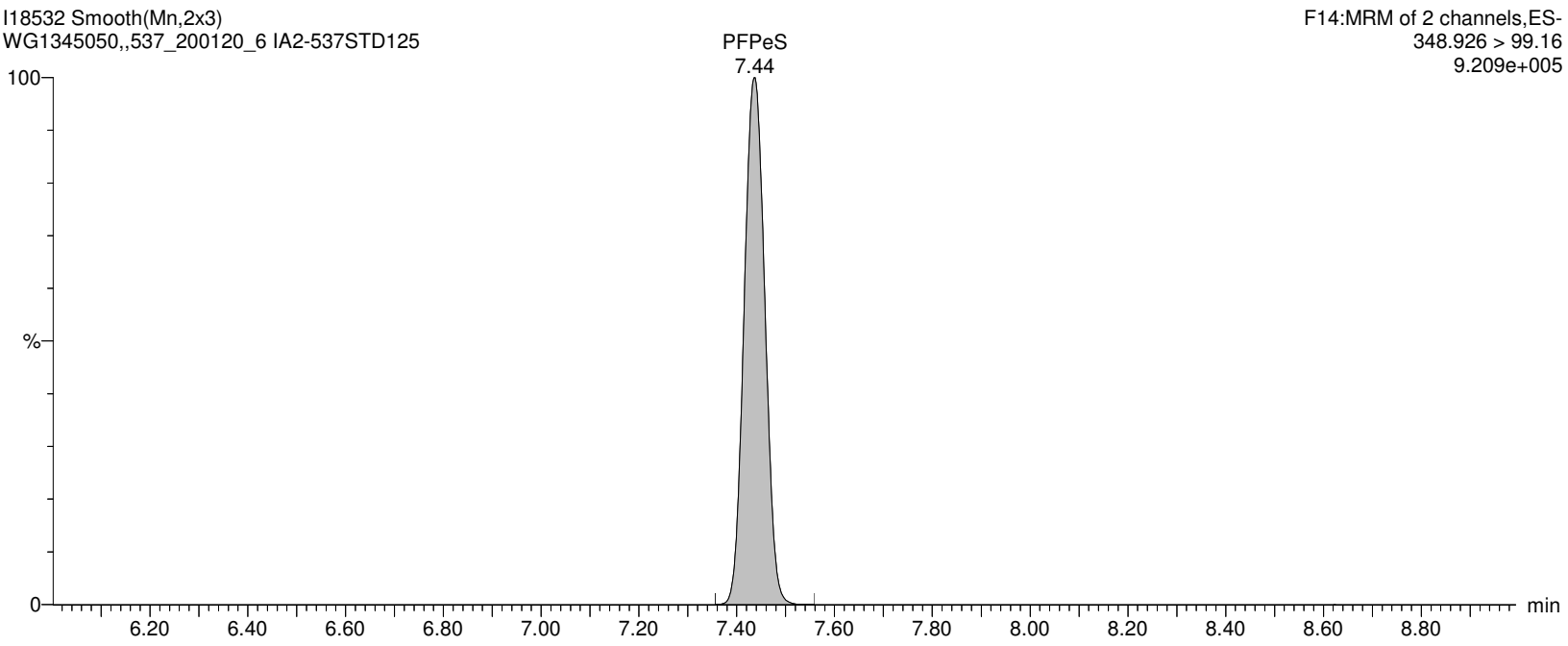
**PFPeS**





all concentration units in (ng/mL)

Alpha Analytical Inc.
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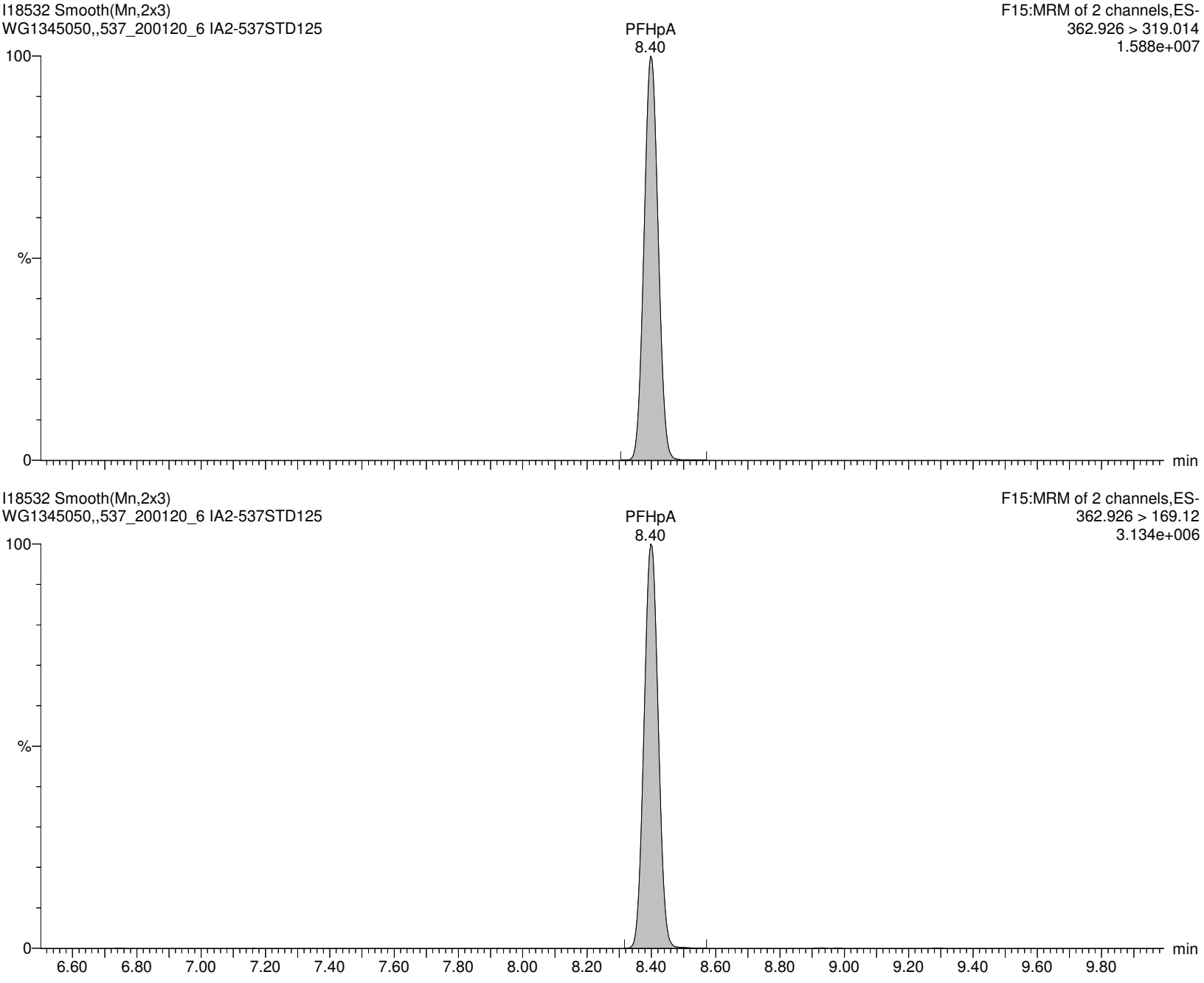
**PFHpA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
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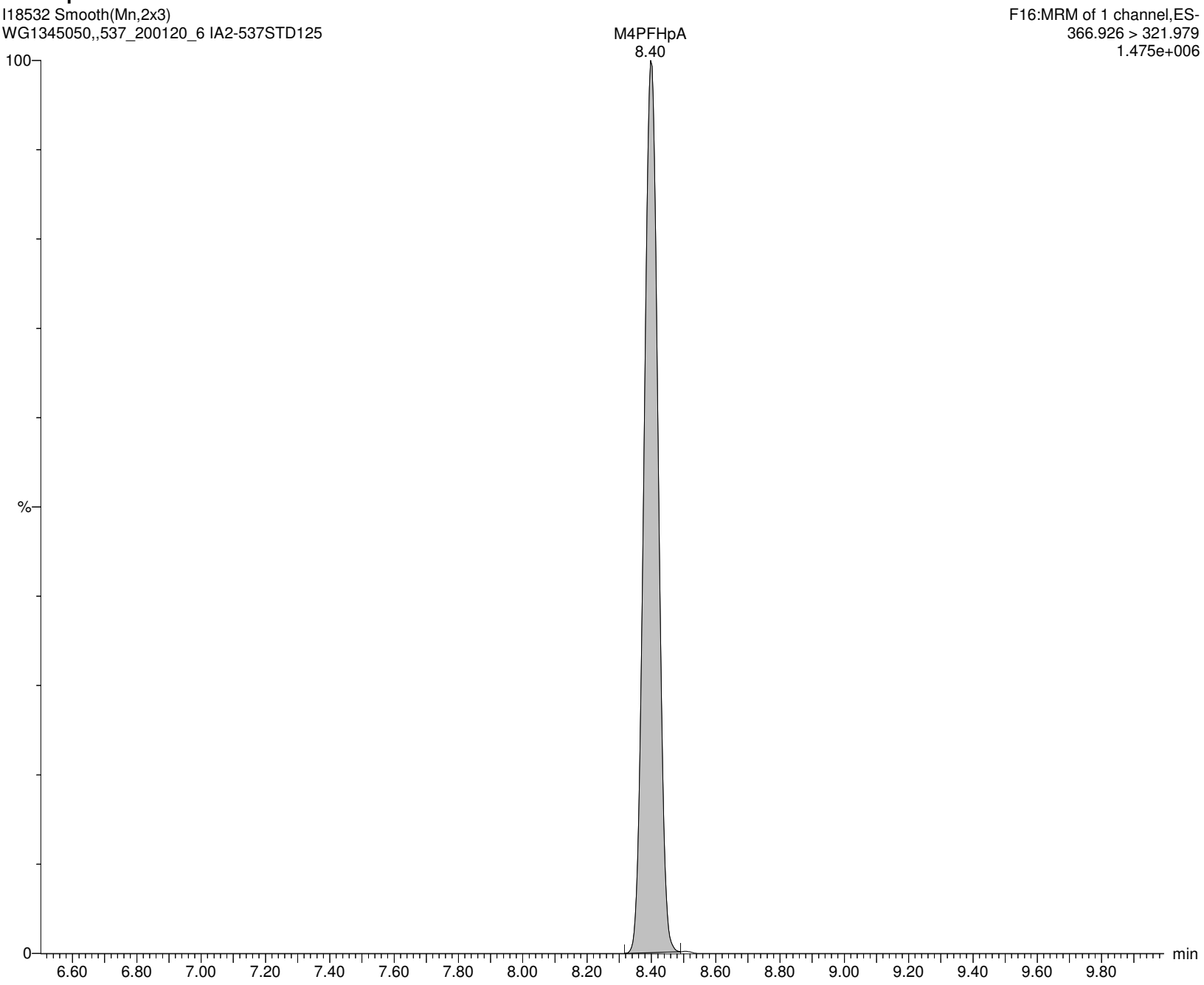
**M4PFHpA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
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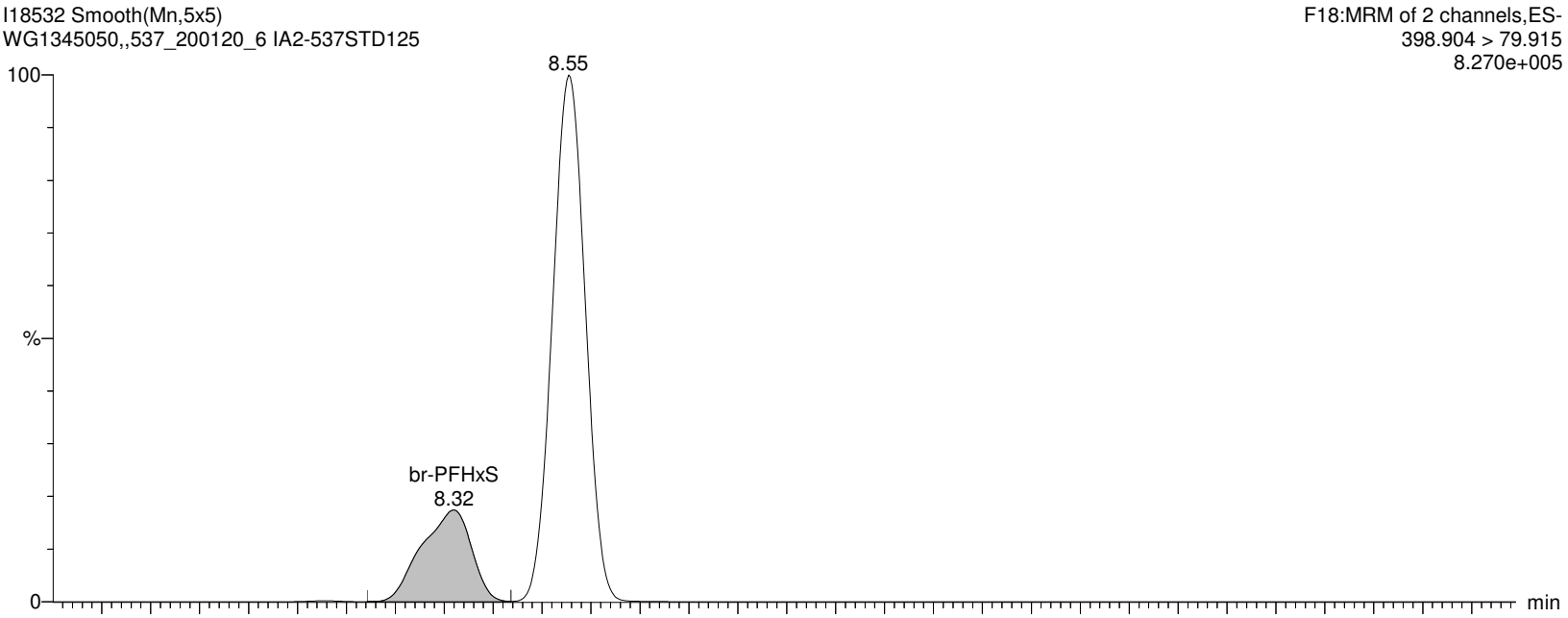
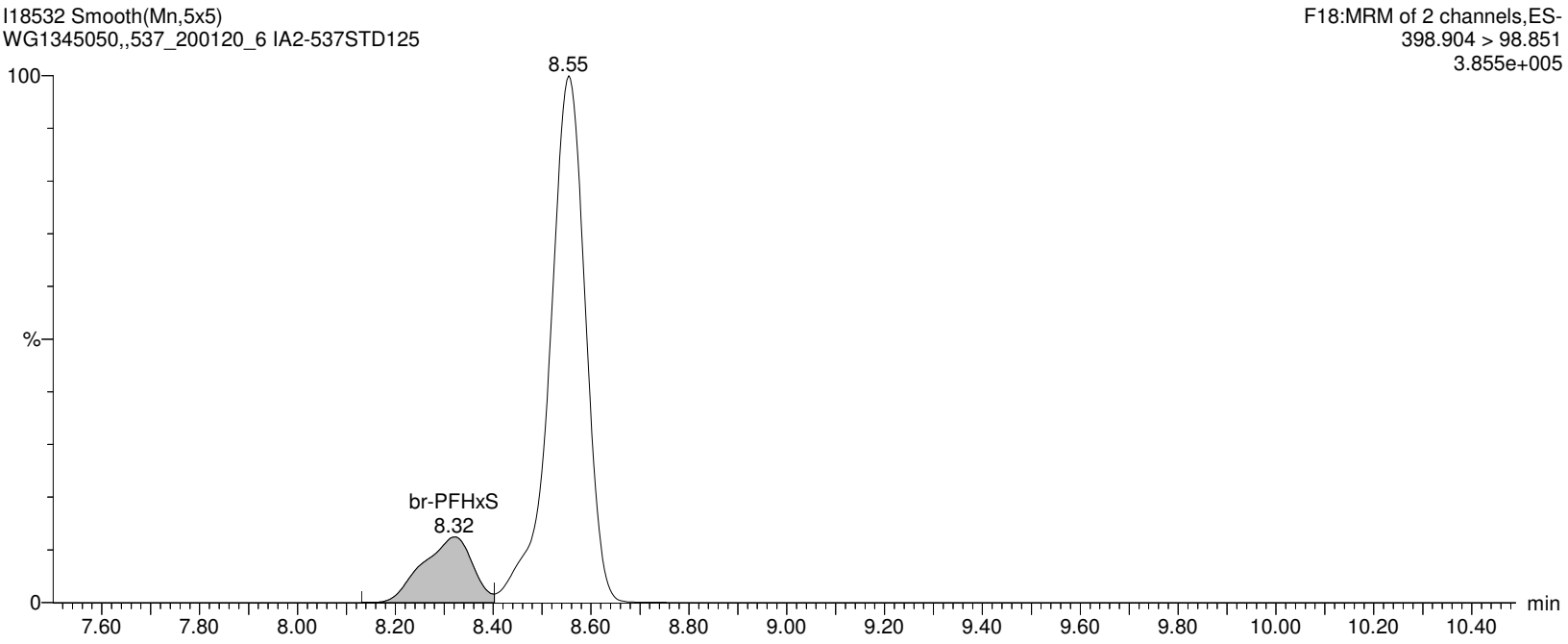
**br-PFHxS**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICAL_A.qld
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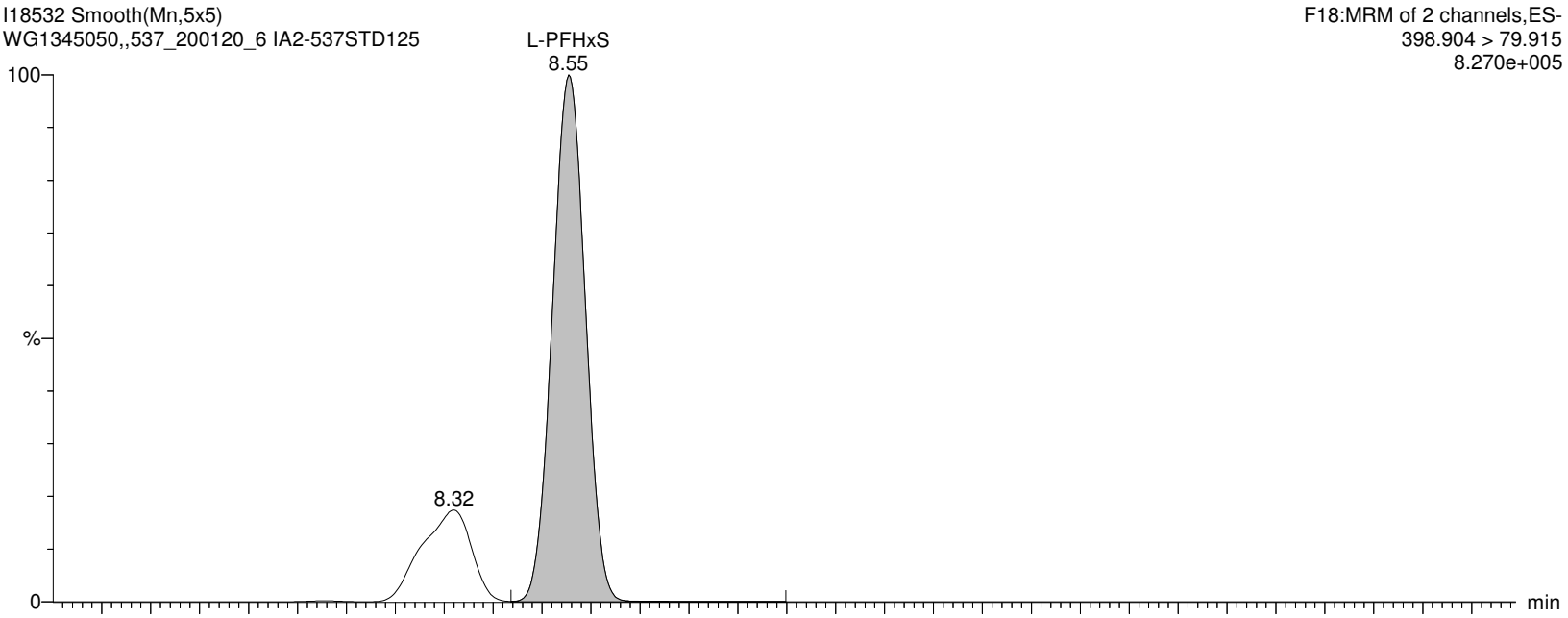
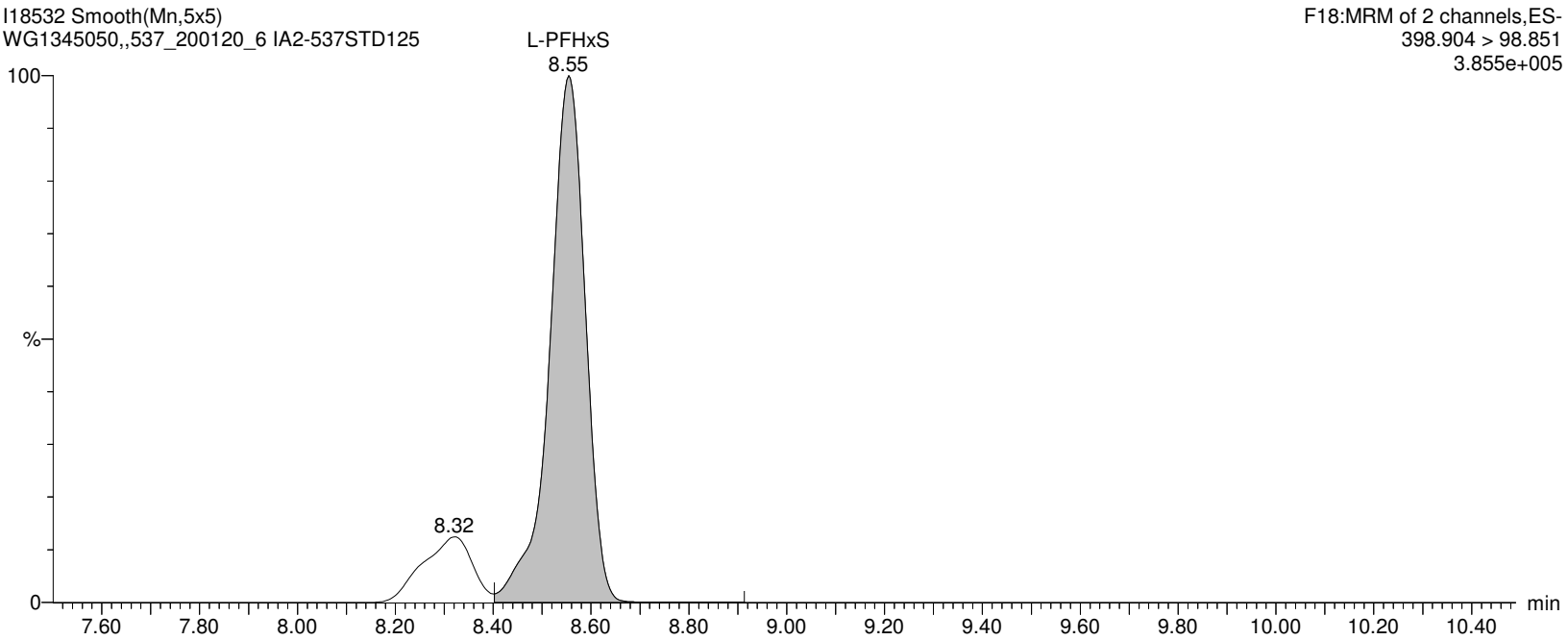
**L-PFHxS**





all concentration units in (ng/mL)

Alpha Analytical Inc.
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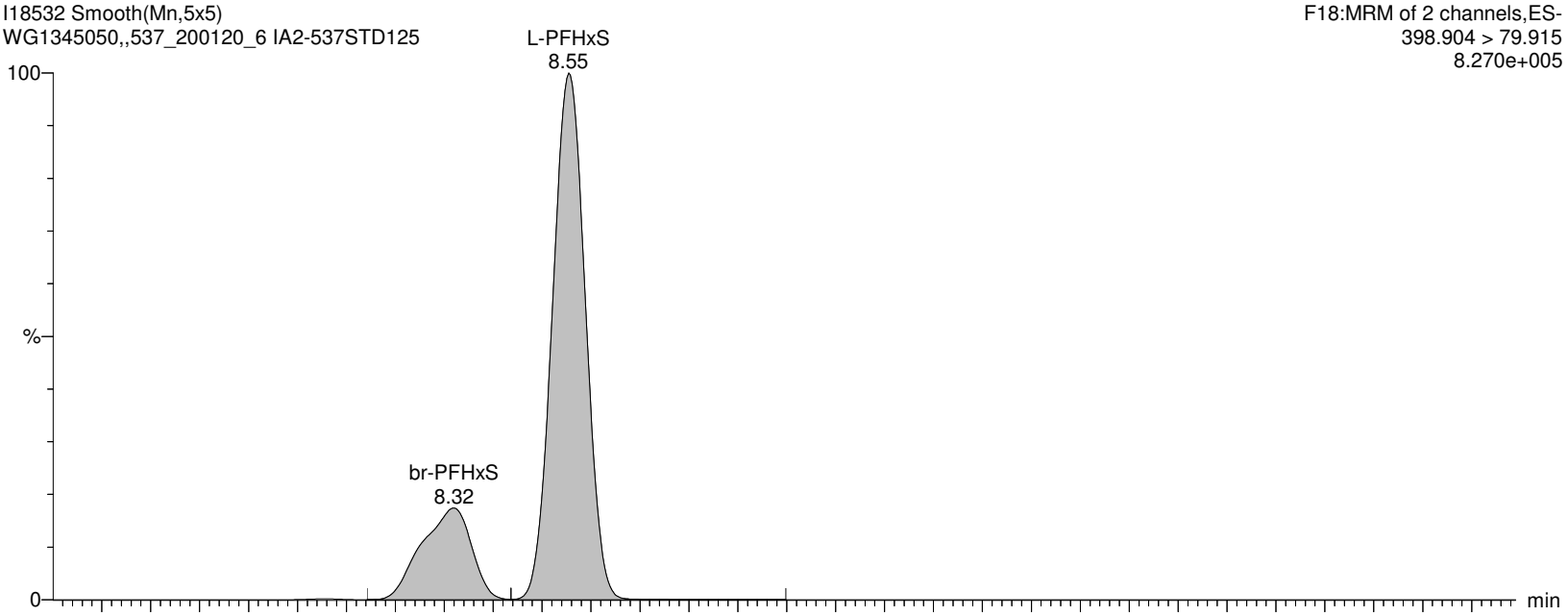
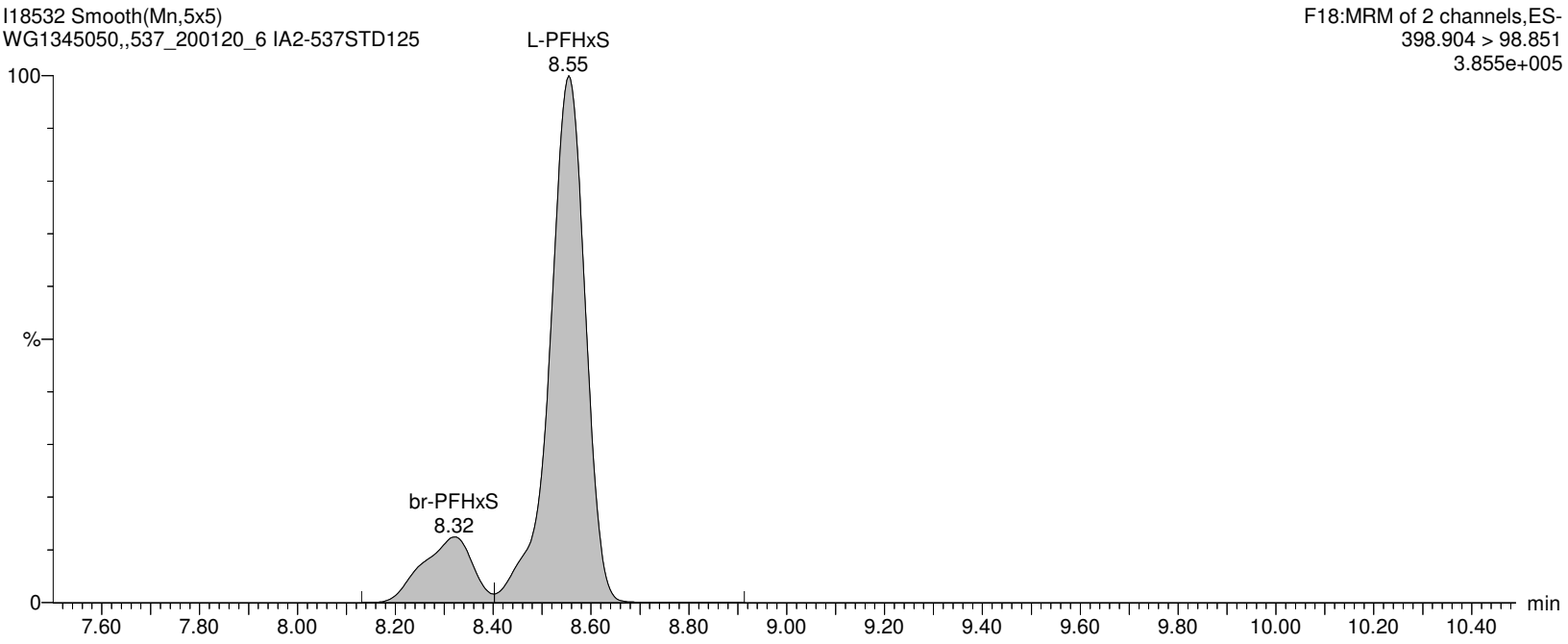
**PFHxS**





all concentration units in (ng/mL)

Alpha Analytical Inc.
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**Inlet Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\LCMS_537_ISO_MeOH**
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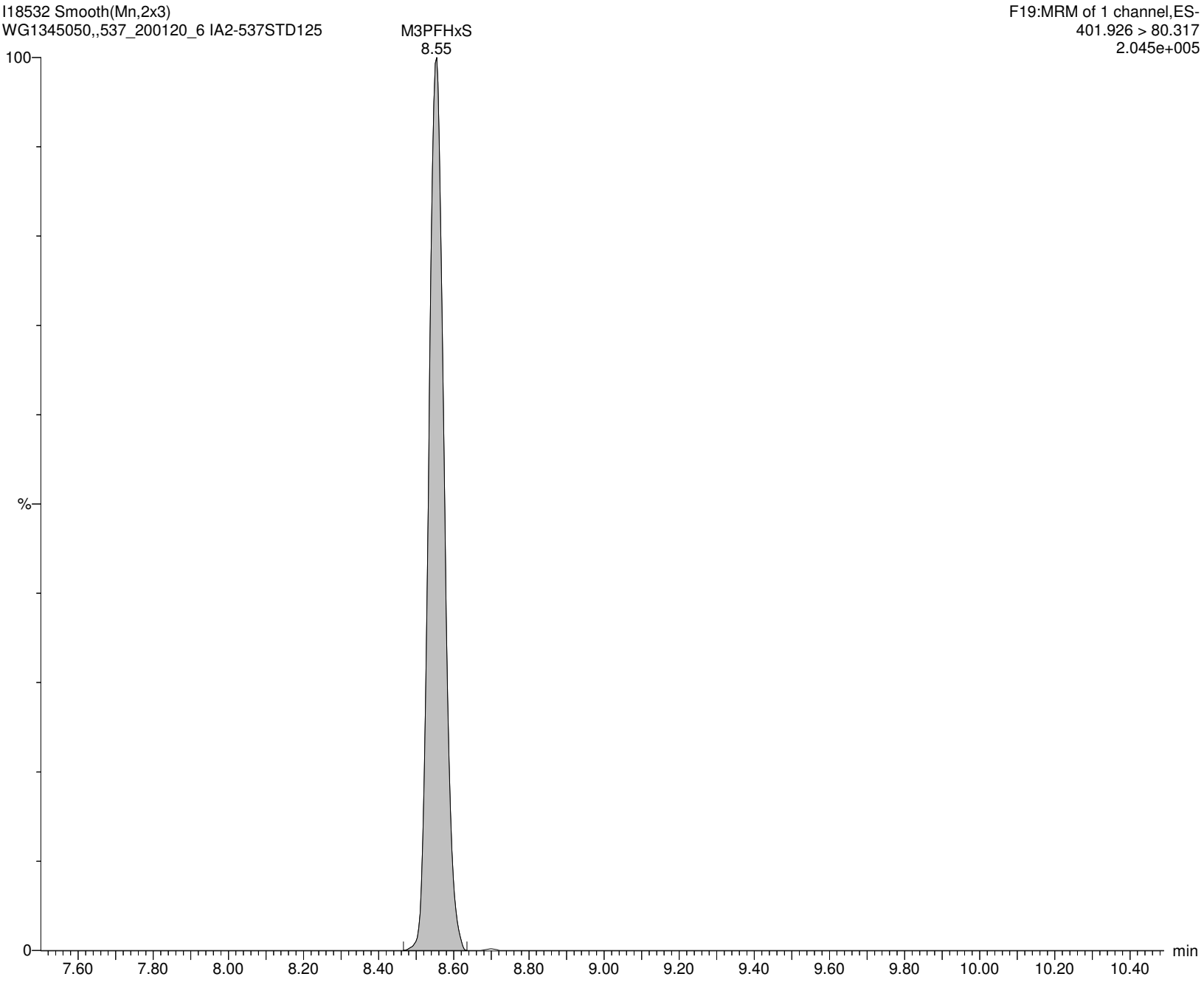



all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICAL_A.qld
Last Altered: Friday, February 28, 2020 09:12:40 Eastern Standard Time
Printed: Friday, February 28, 2020 09:27:52 Eastern Standard Time

**Name: I18532**
**ID: IA2-537STD125**
**Date: 27-Feb-2020**
**Time: 14:51:56**
**Description: WG1345050,,537_200120_6**
**User: LCMS01:SG**
**Vial: 1:A,7**
**Instrument: XEVO-TQSmicro#QEA0276**
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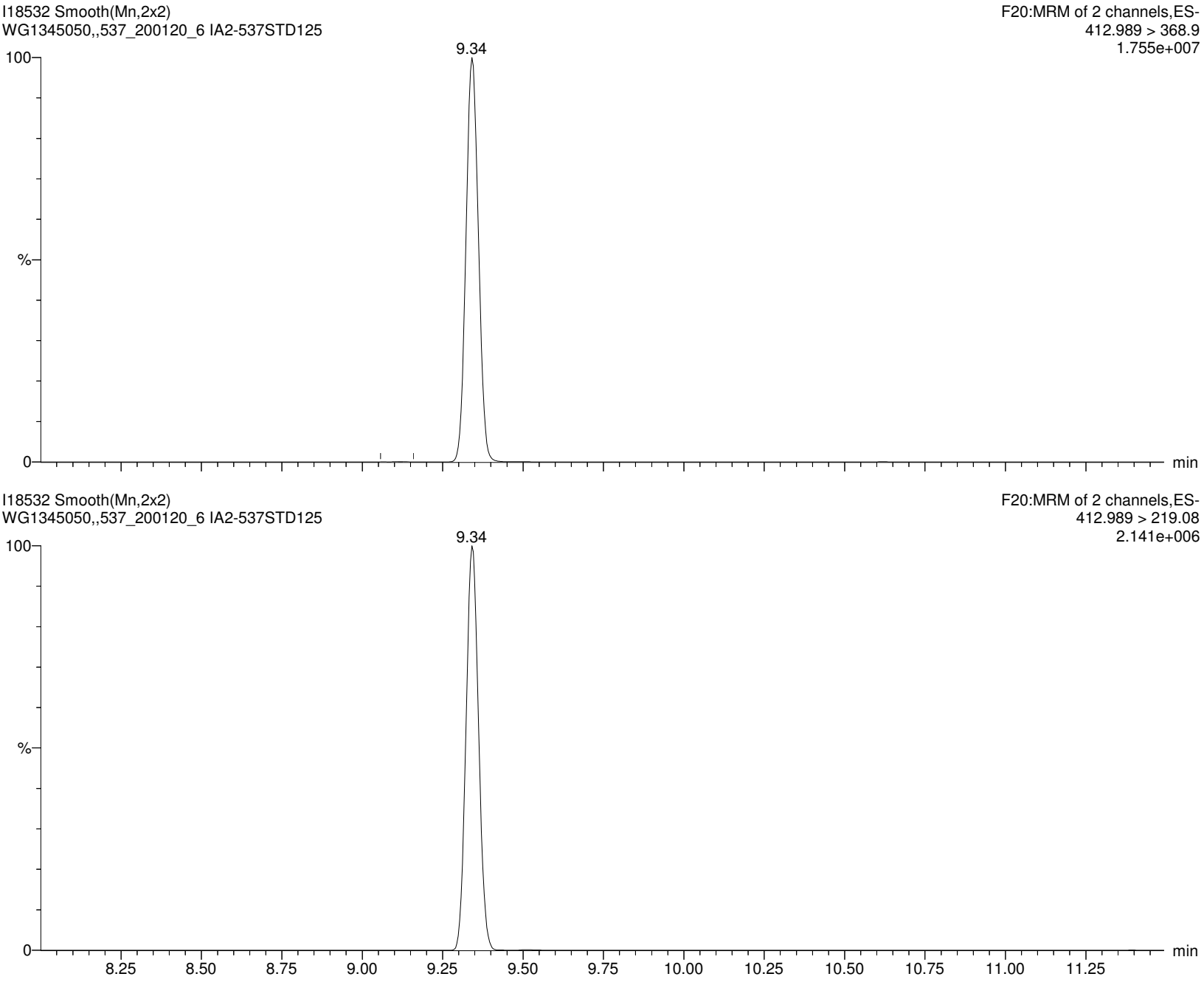
**br-PFOA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
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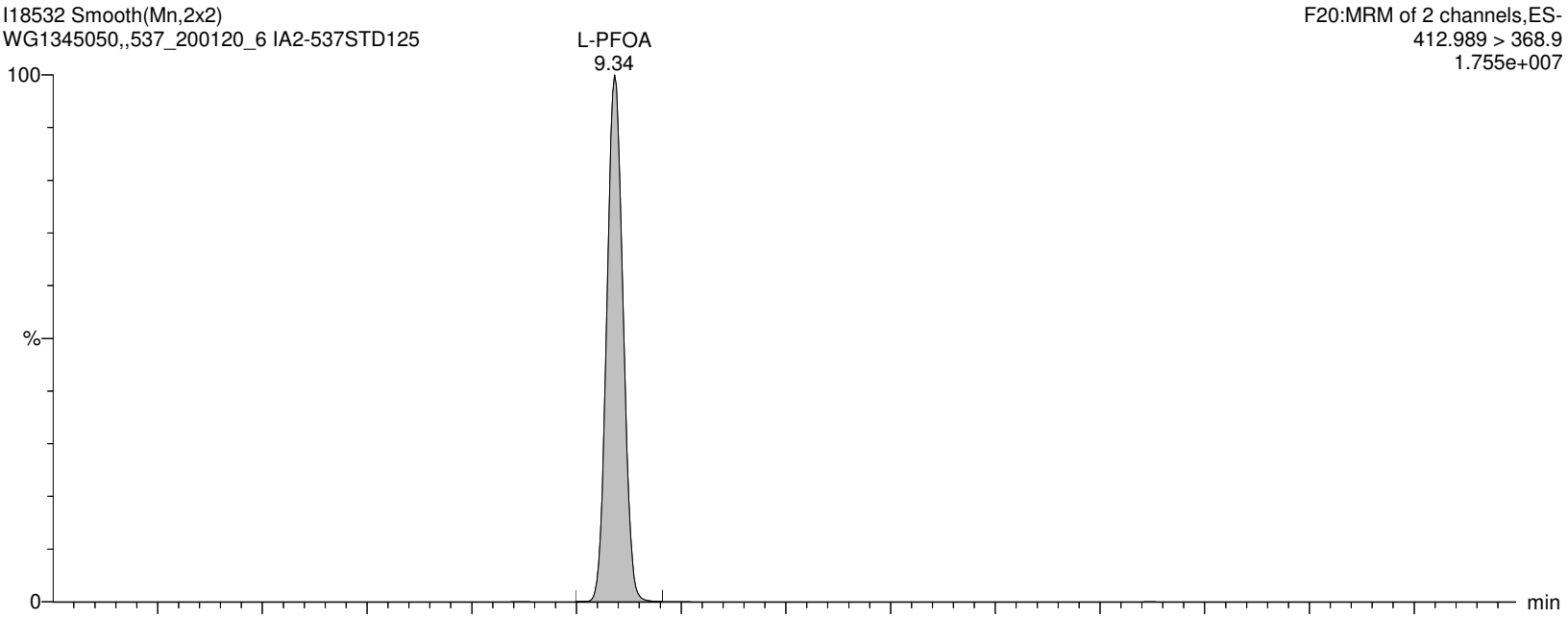
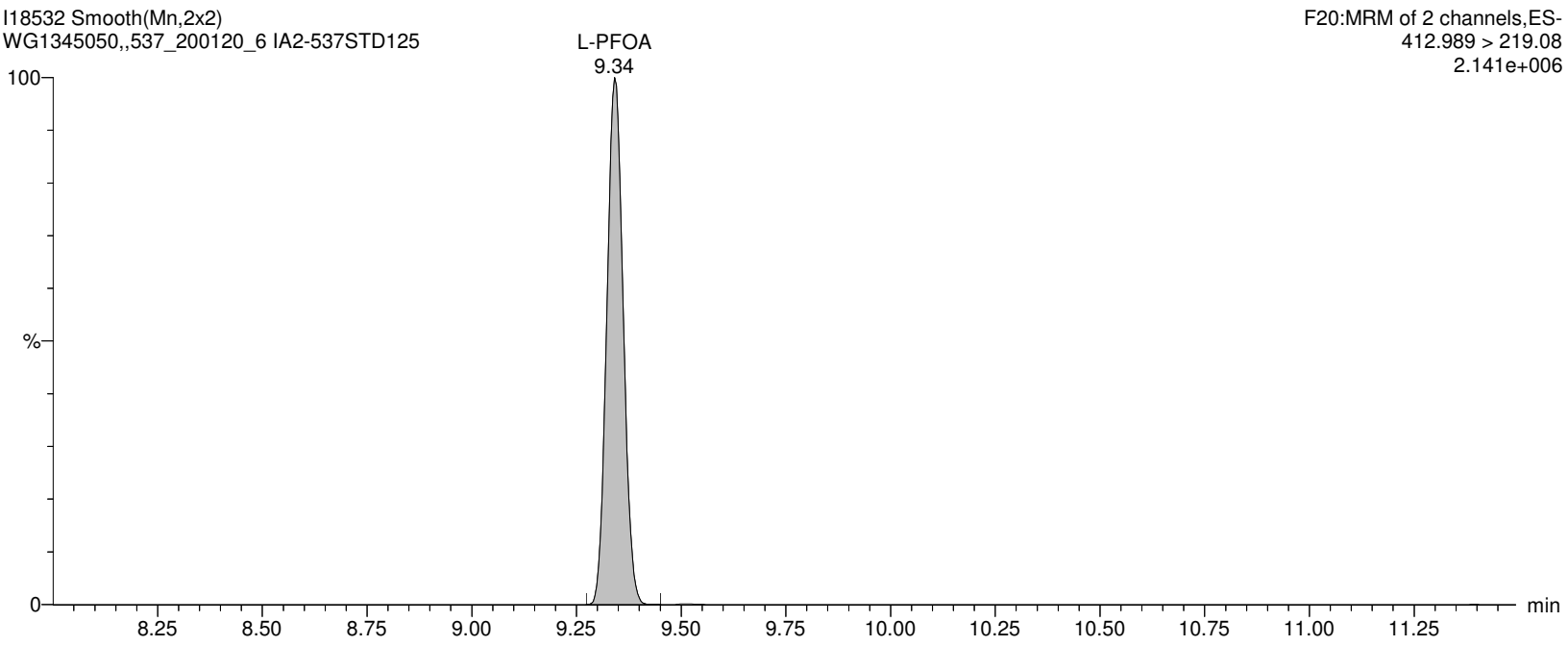
**L-PFOA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICAL_A.qld
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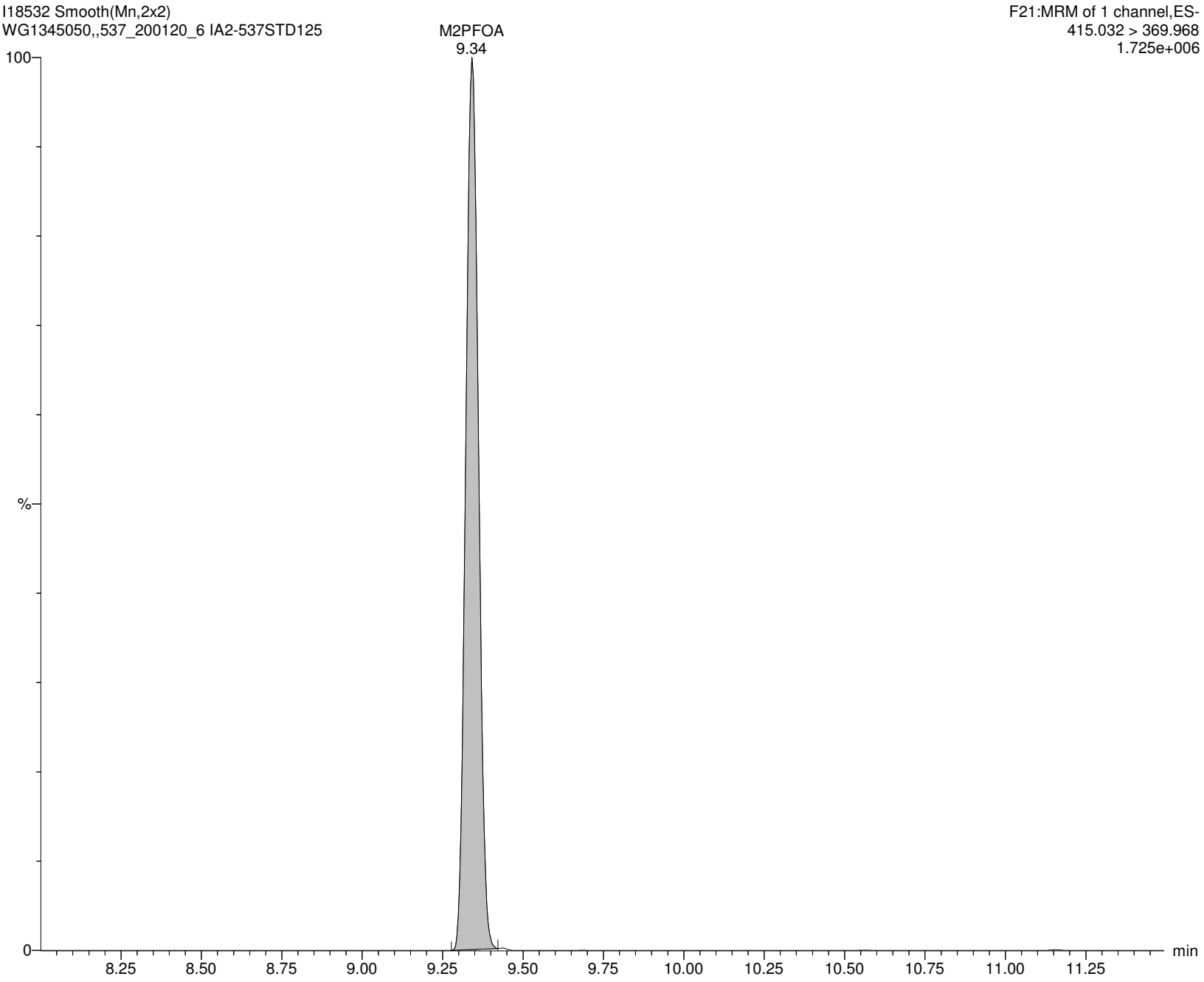
**M2PFOA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
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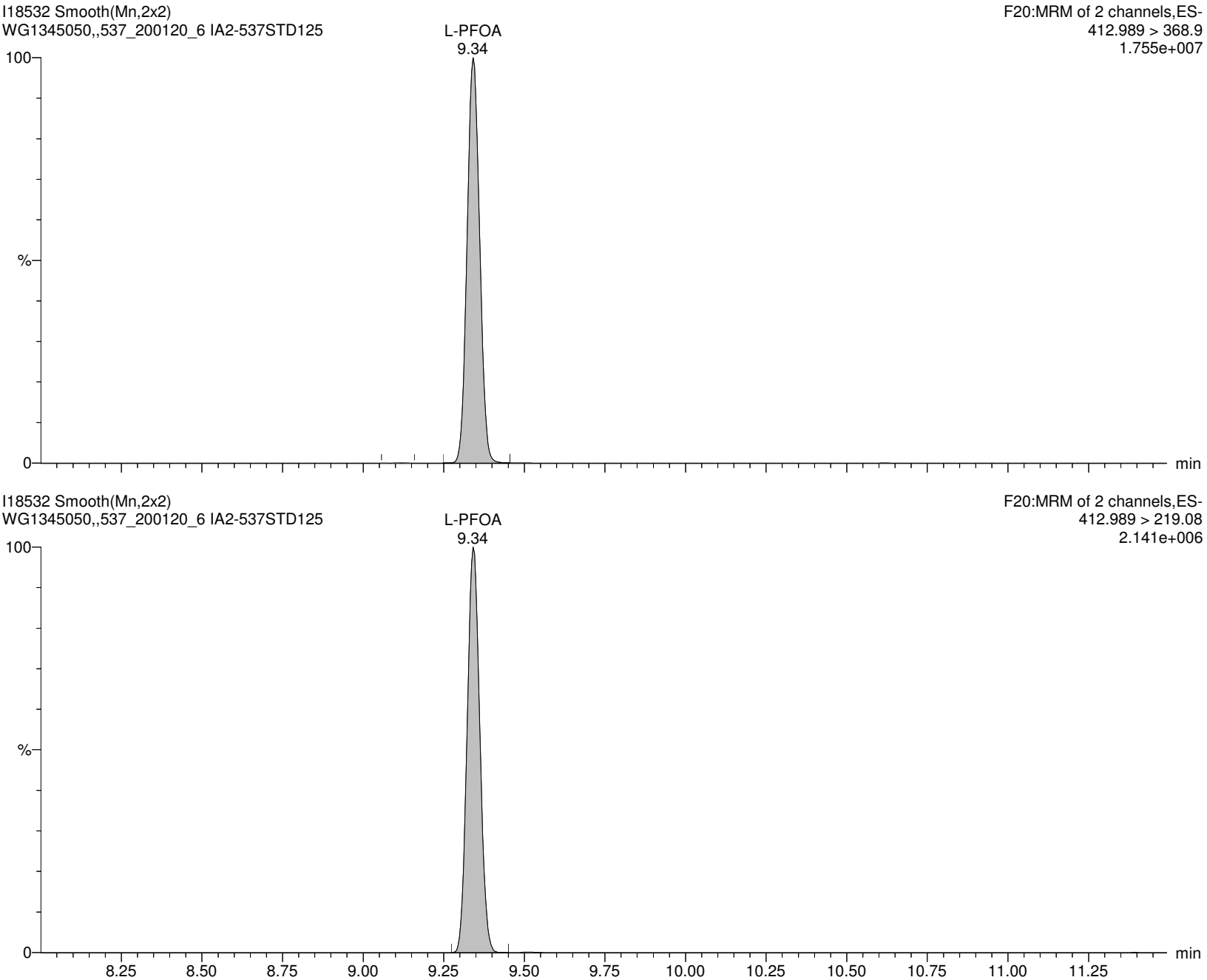
**PFOA**





all concentration units in (ng/mL)

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Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICAL_A.qld
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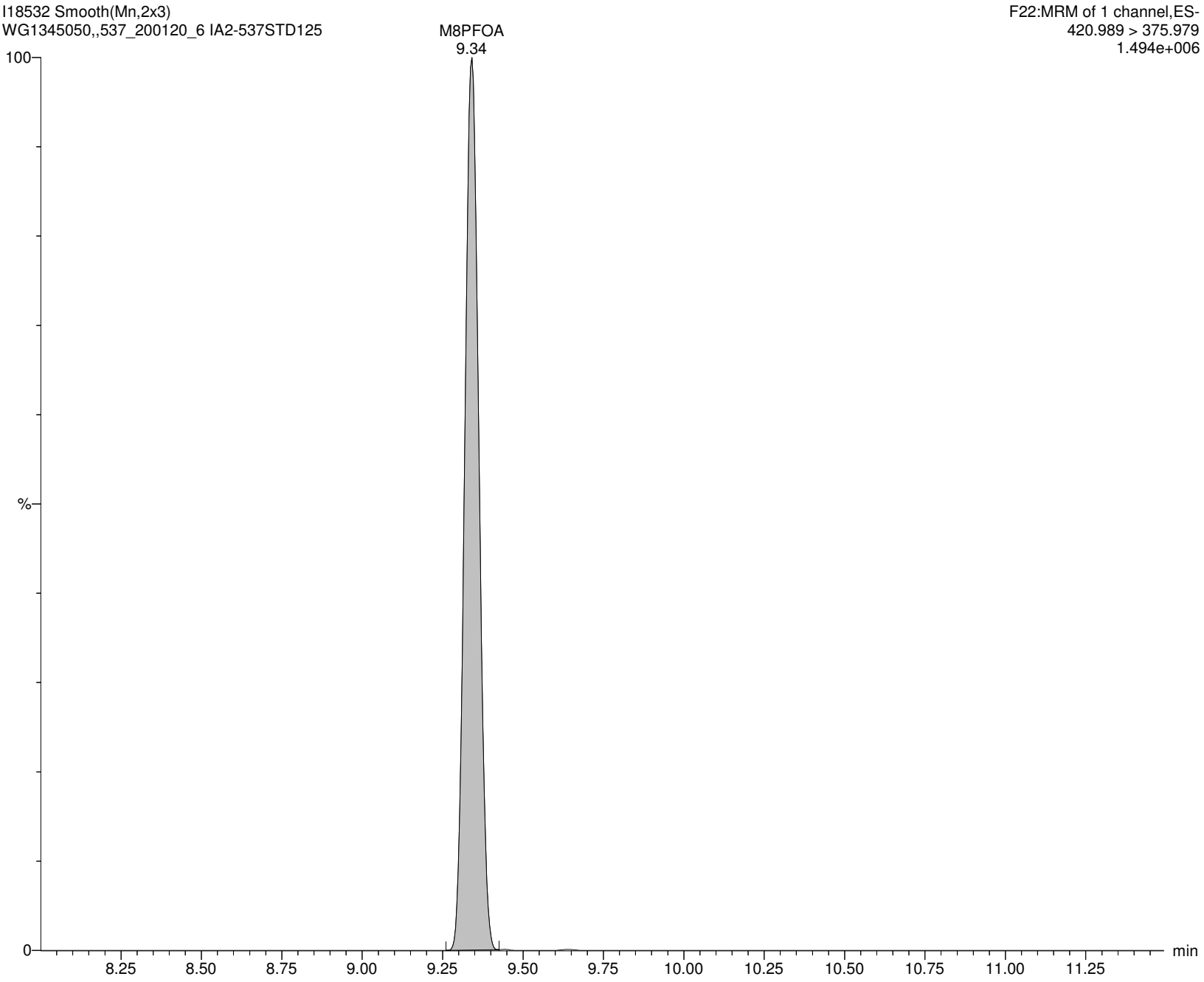
**M8PFOA**





all concentration units in (ng/mL)

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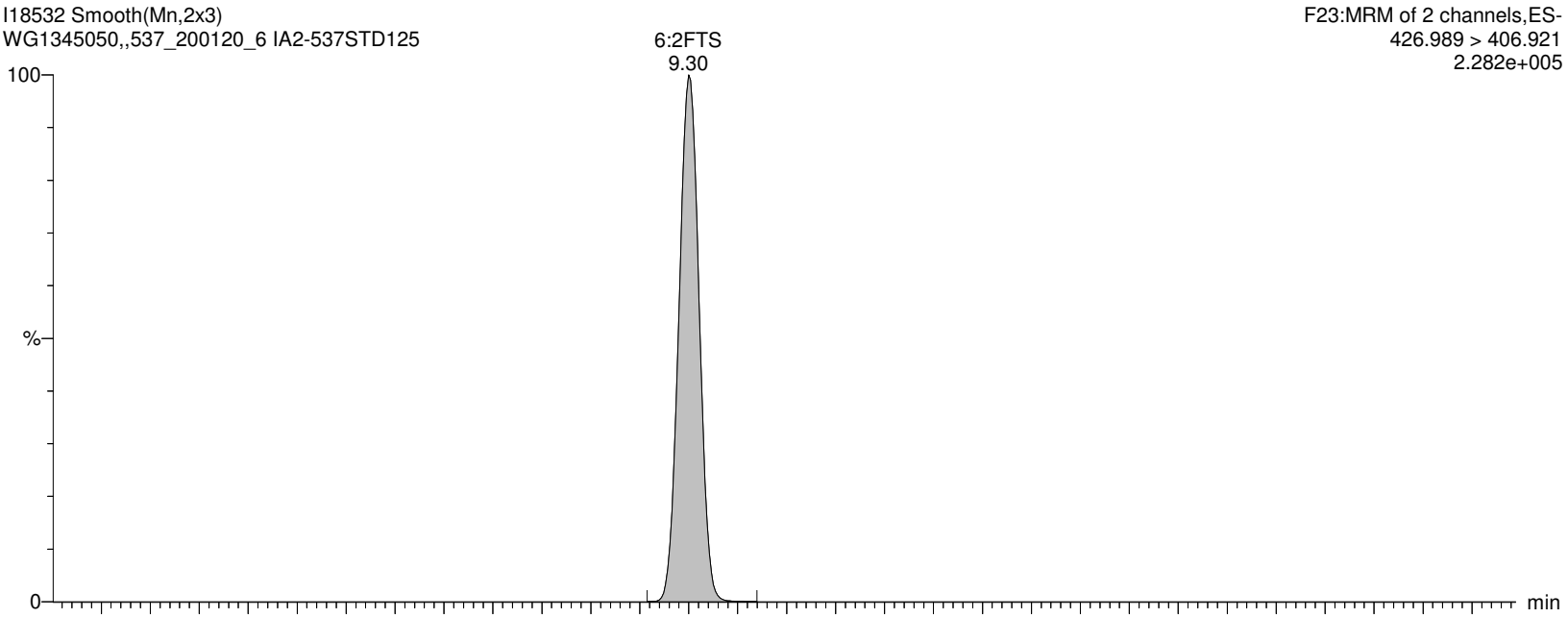
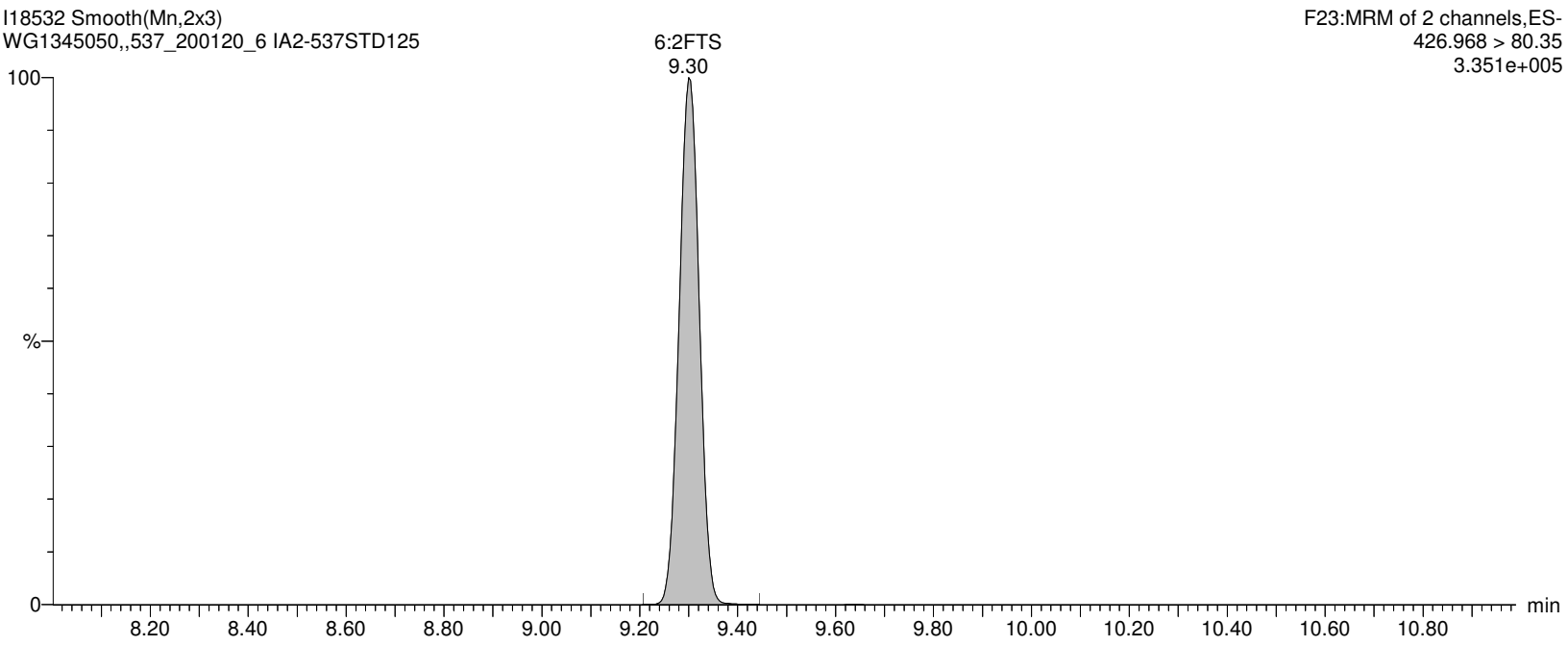
**6:2FTS**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICAL_A.qld
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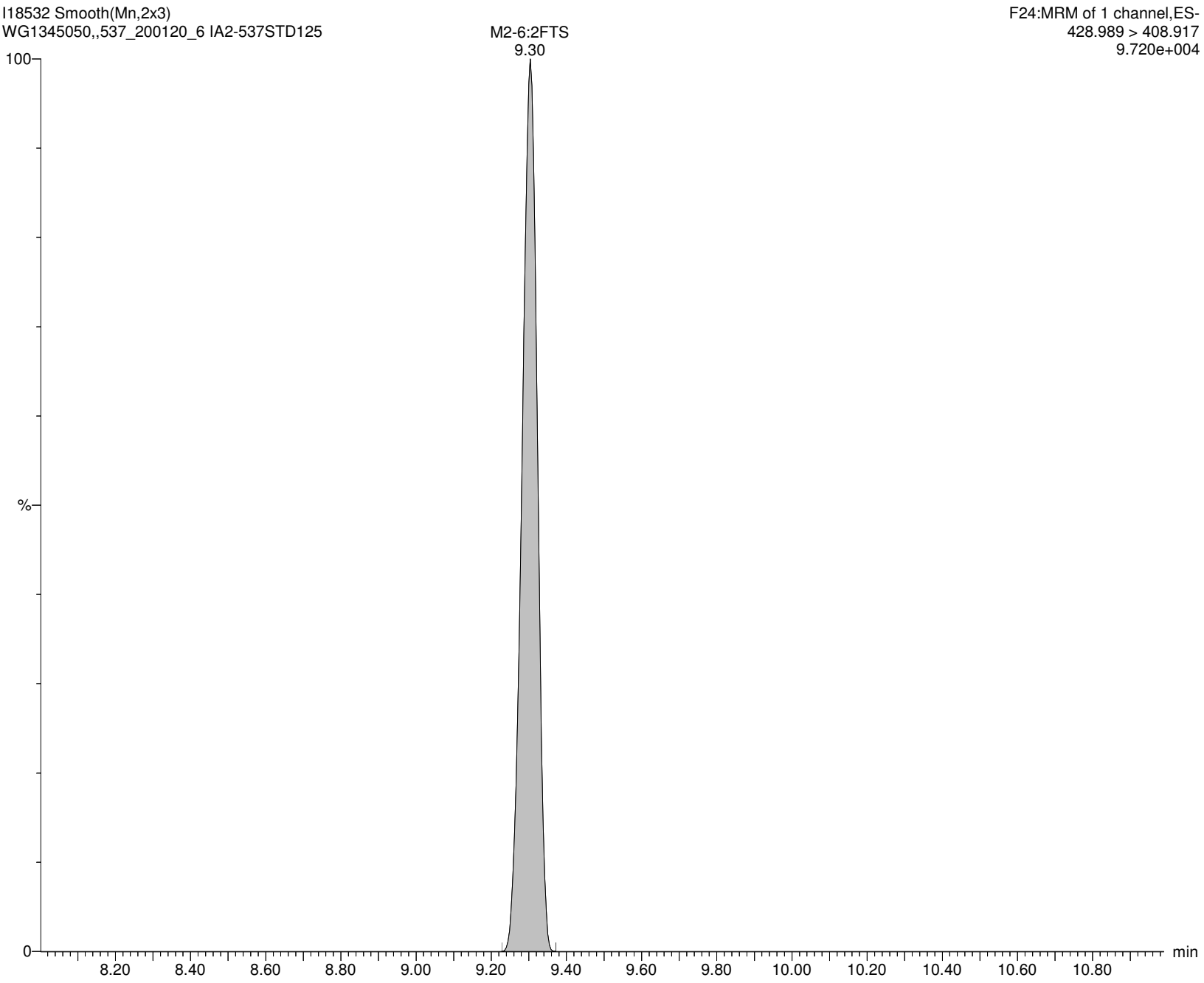
**M2-6:2FTS**





all concentration units in (ng/mL)

Alpha Analytical Inc.
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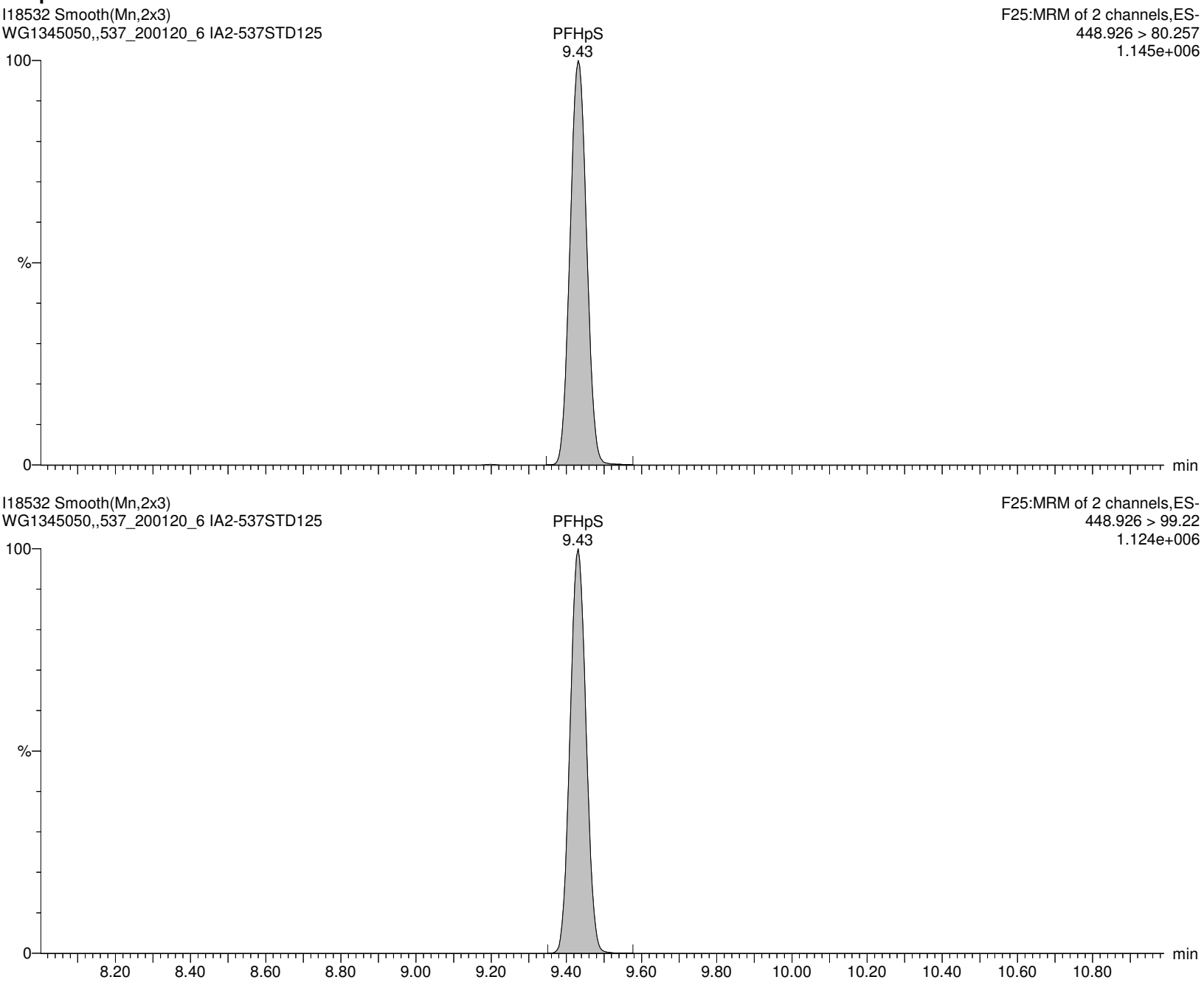
**PFHpS**





all concentration units in (ng/mL)

Alpha Analytical Inc.
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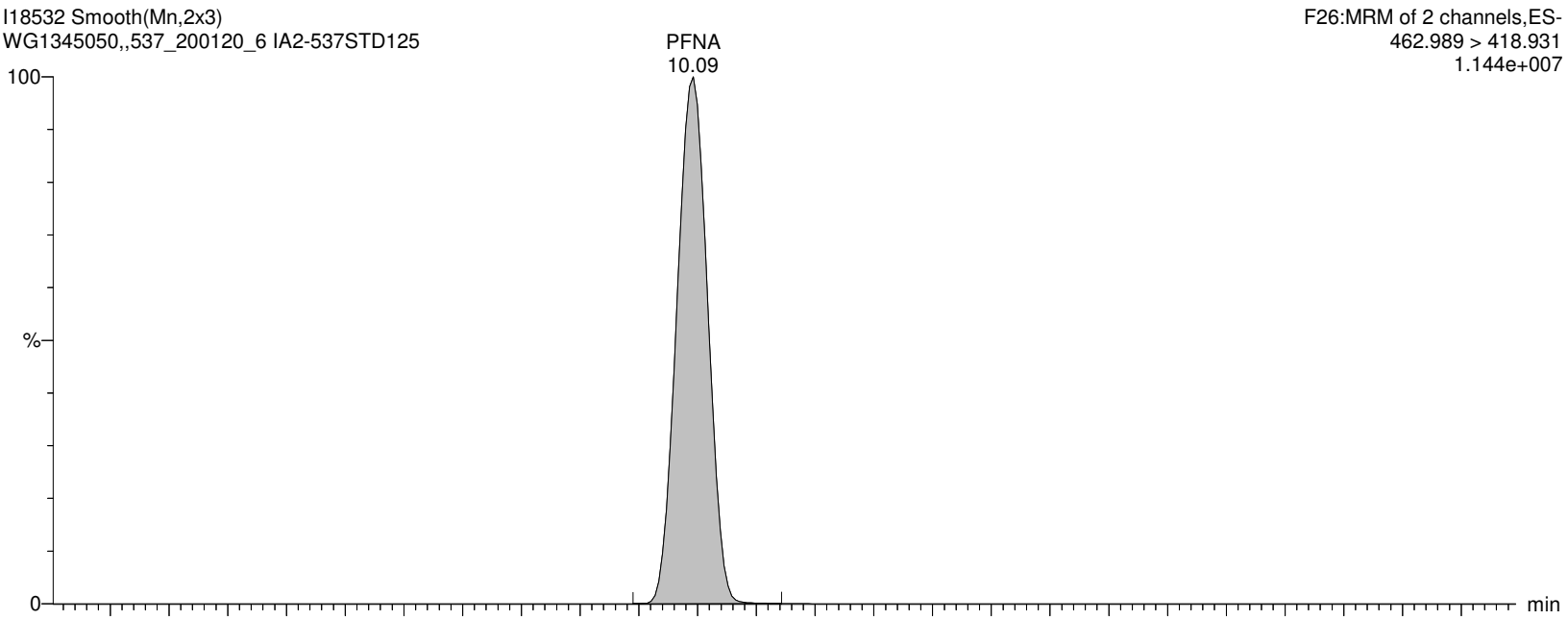


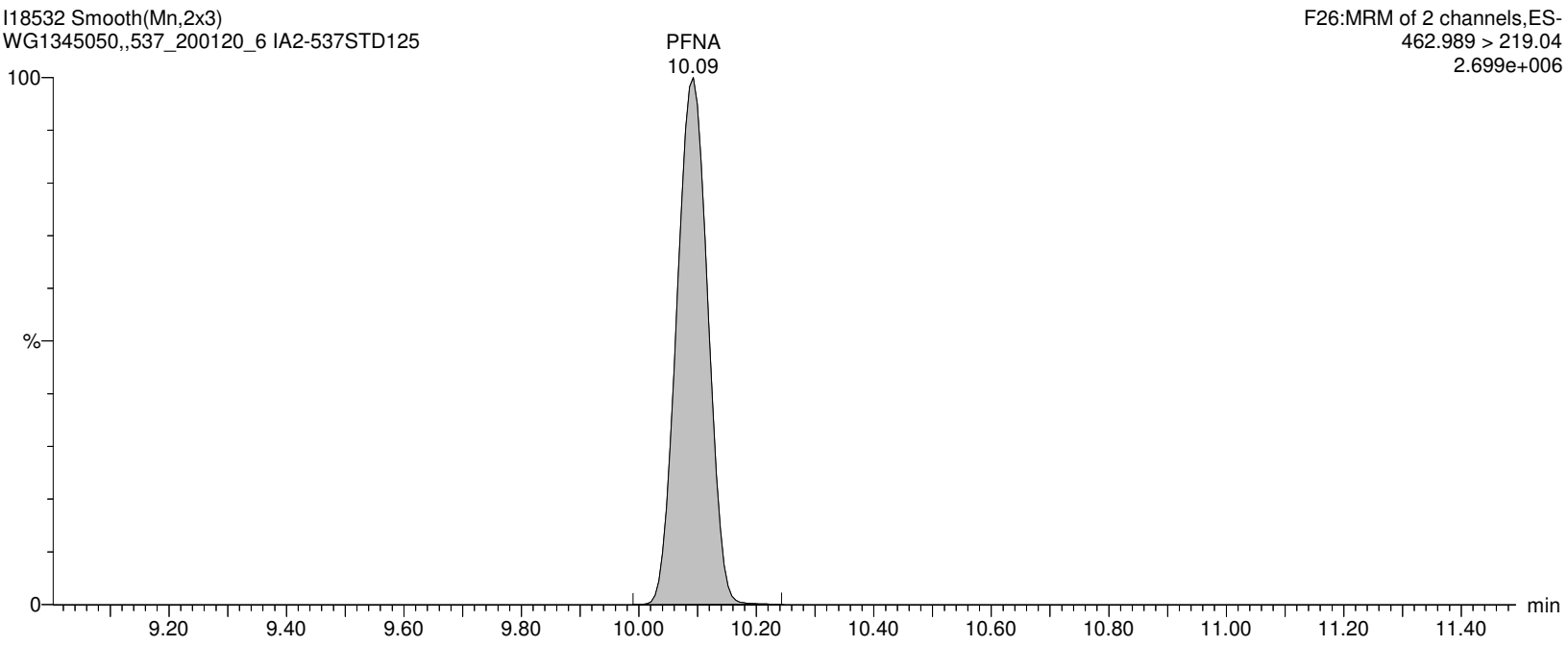



all concentration units in (ng/mL)

Alpha Analytical Inc.
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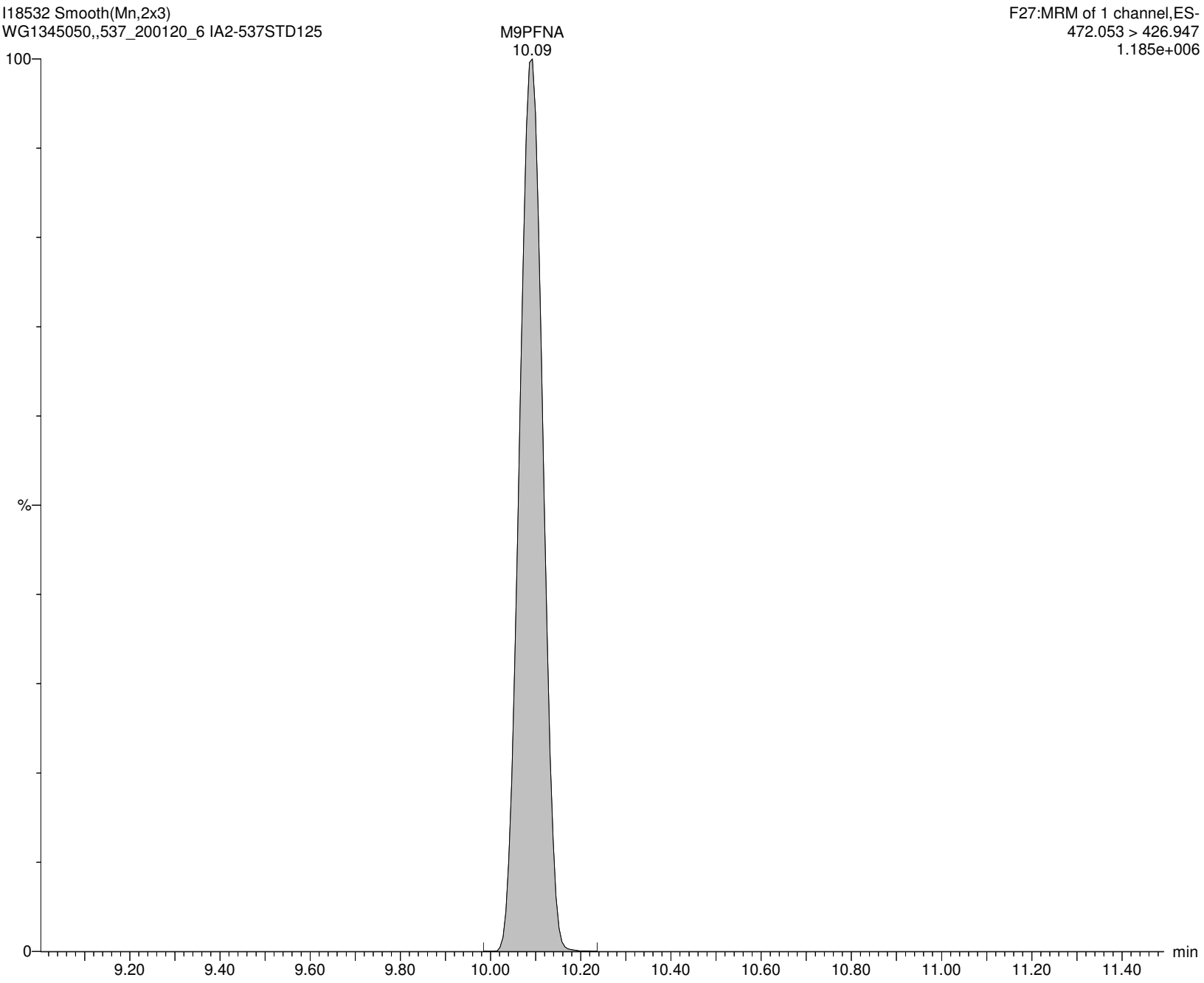



all concentration units in (ng/mL)

Alpha Analytical Inc.
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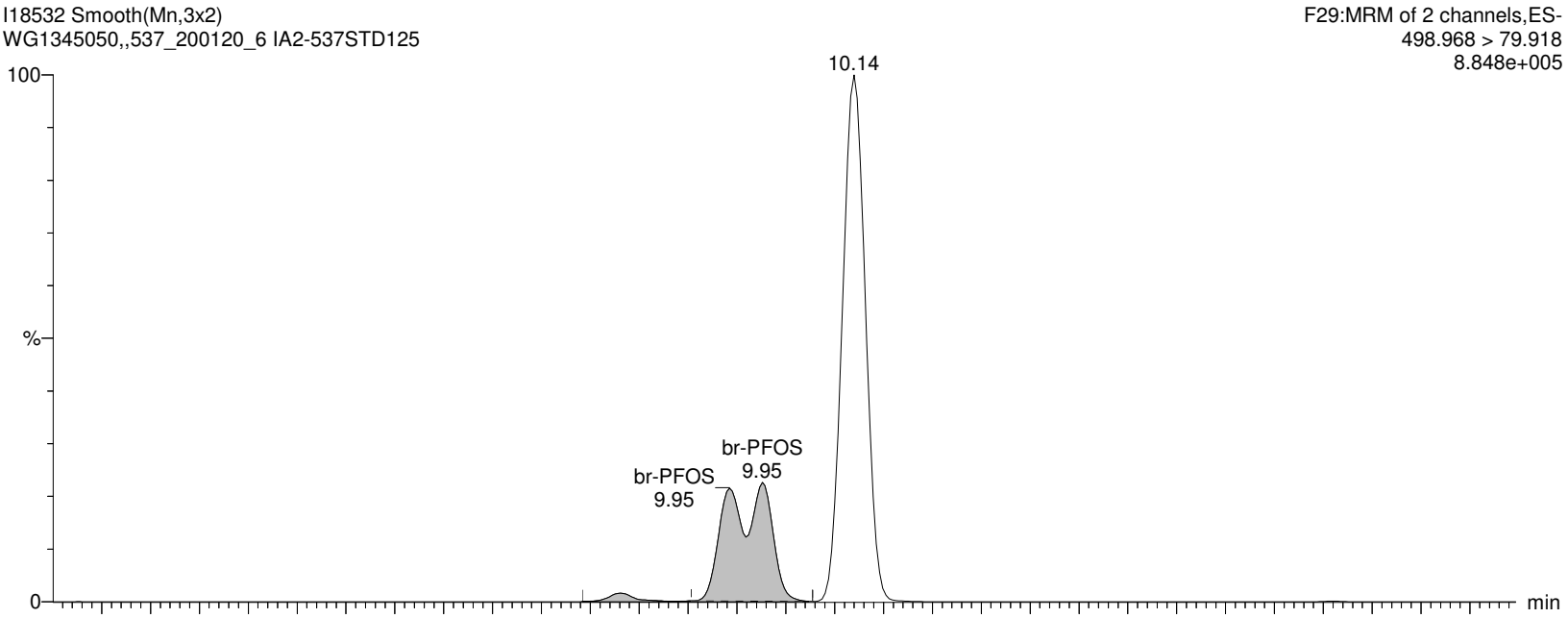
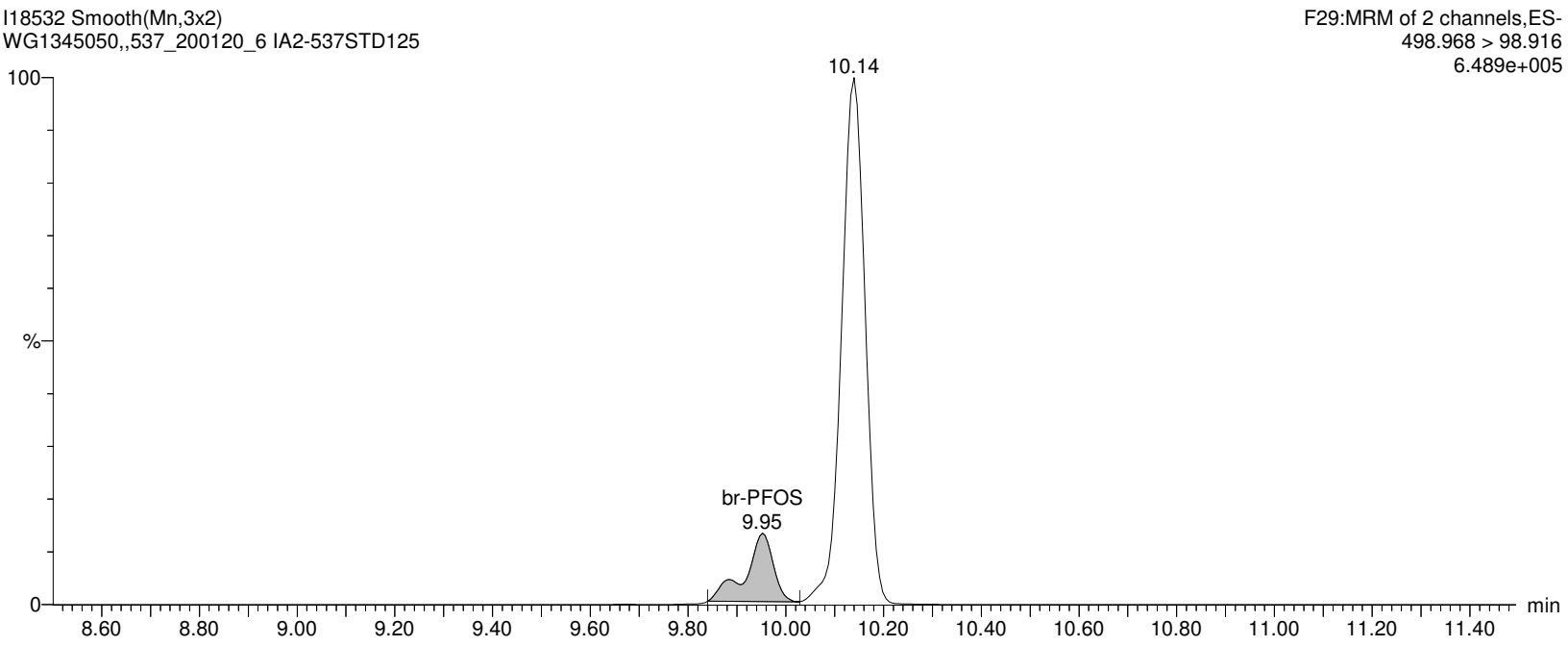
**br-PFOS**





all concentration units in (ng/mL)

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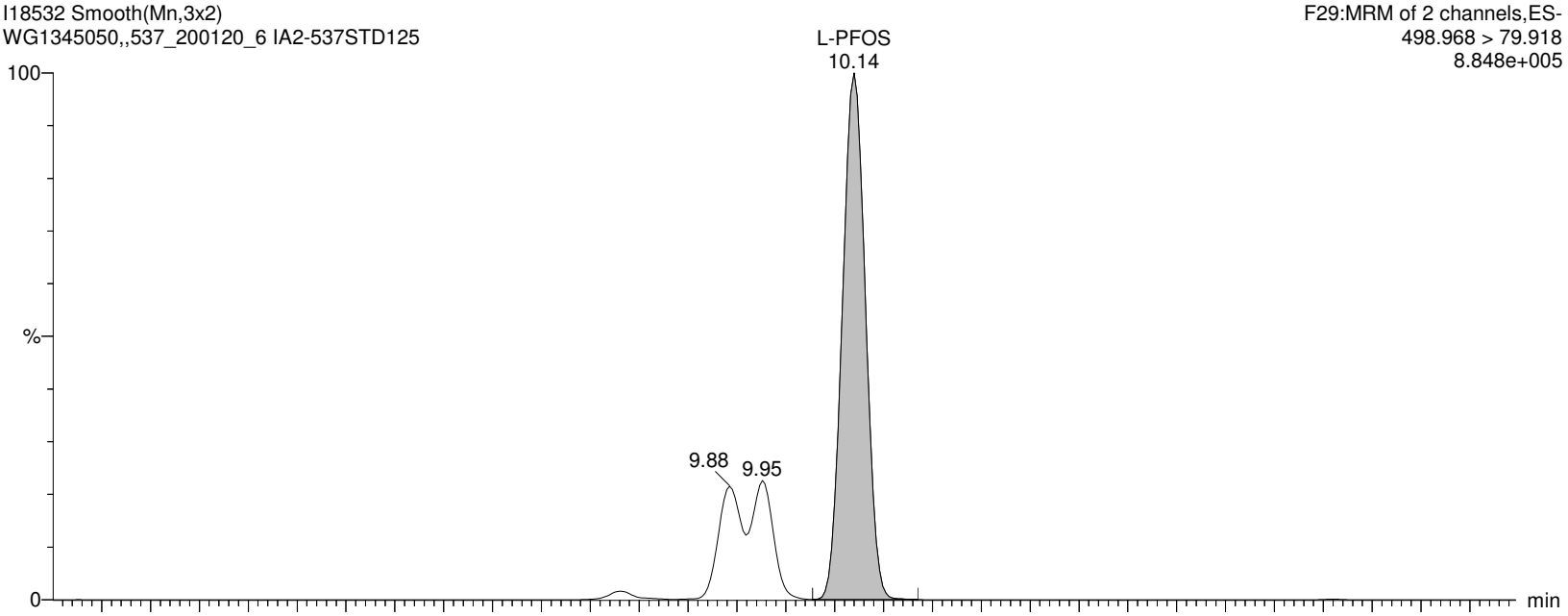
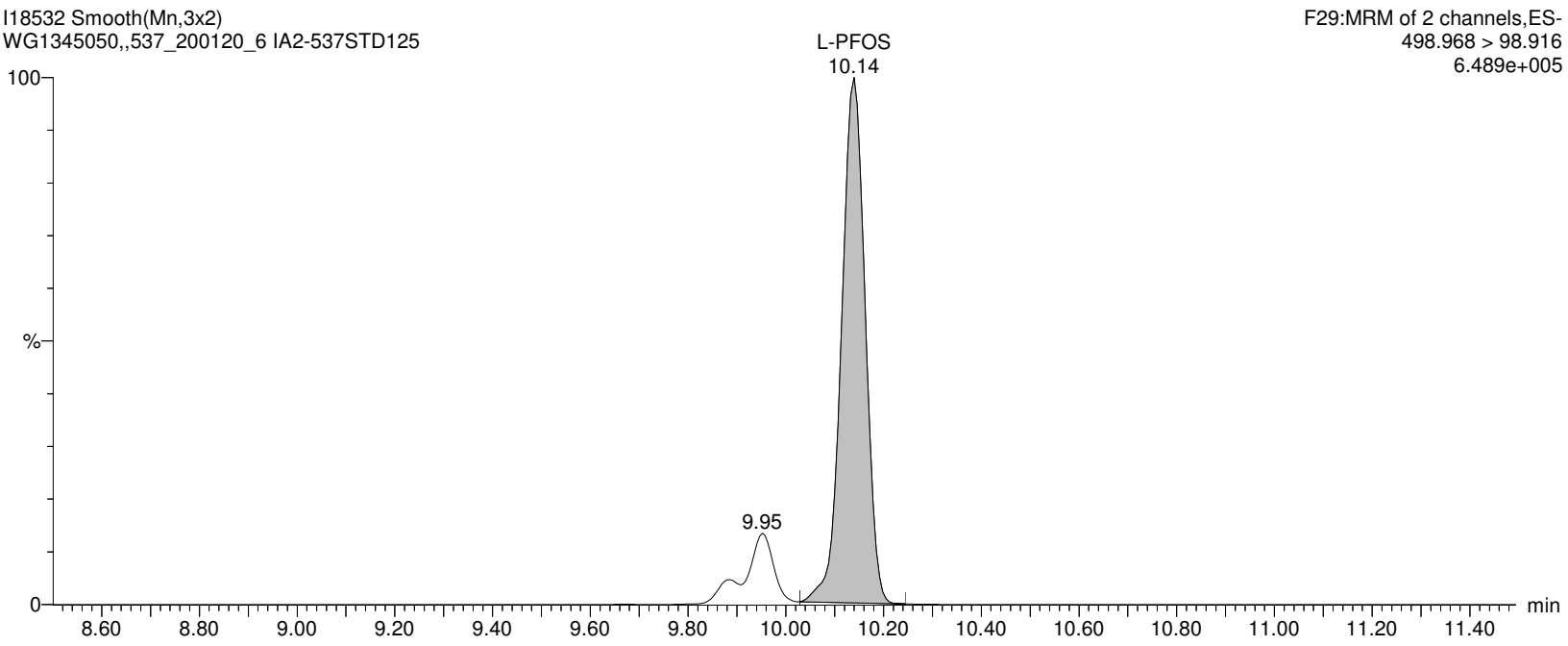
**L-PFOS**





all concentration units in (ng/mL)

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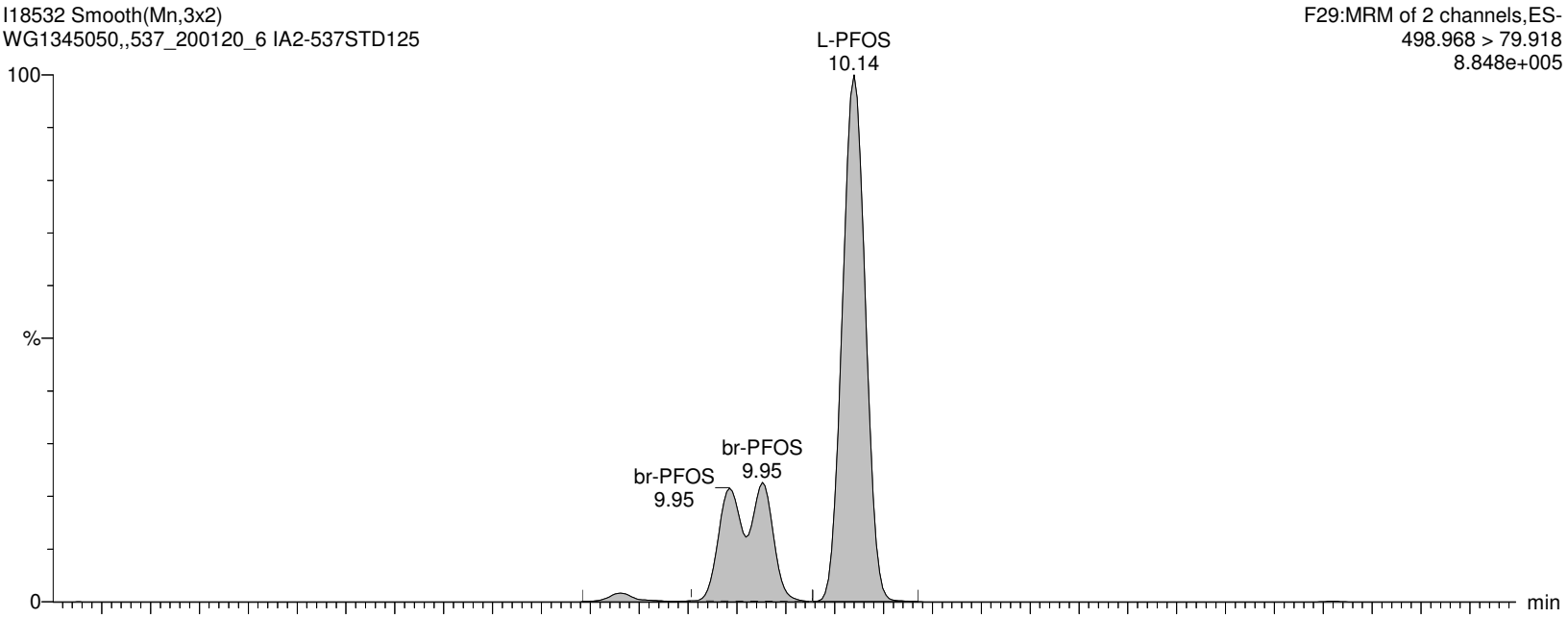
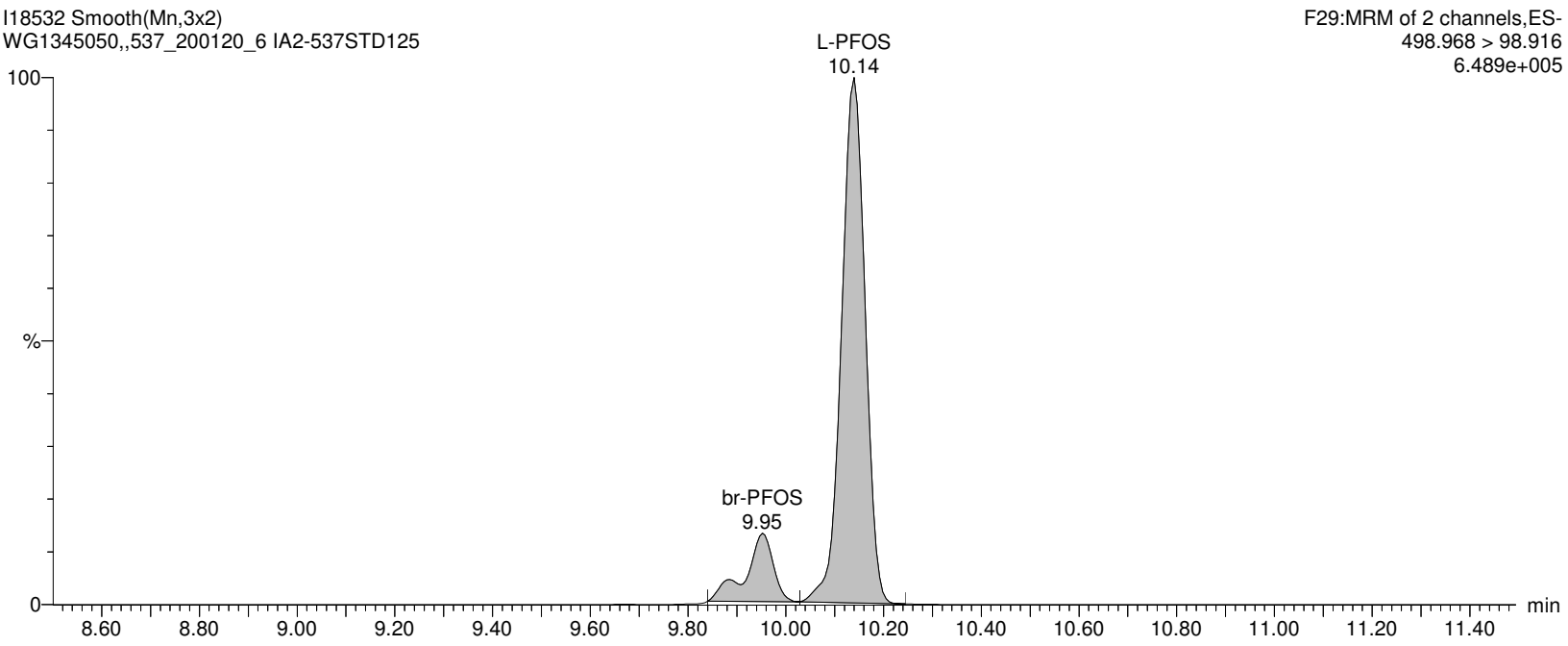
**PFOS**





all concentration units in (ng/mL)

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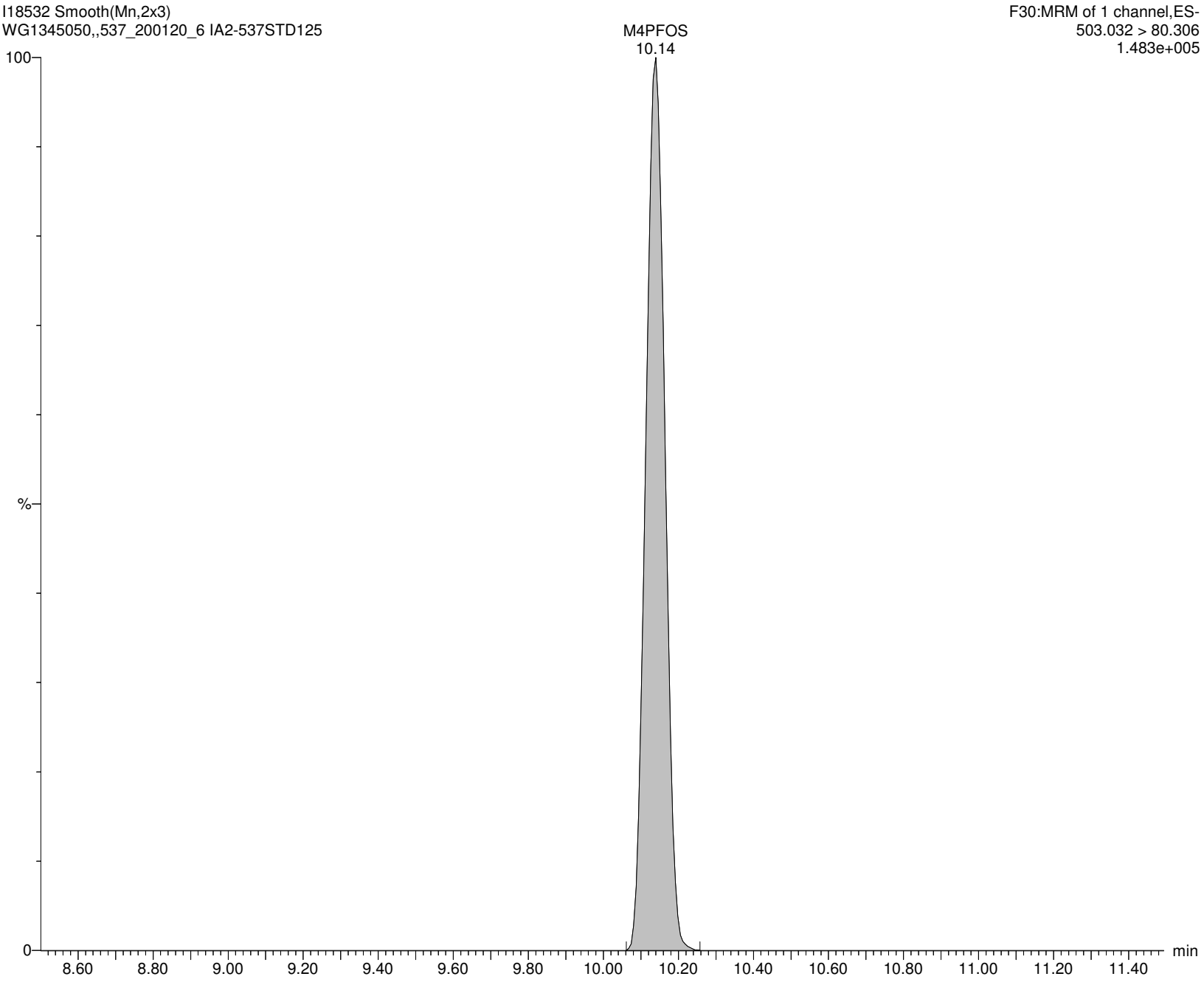
**M4PFOS**





all concentration units in (ng/mL)

Alpha Analytical Inc.
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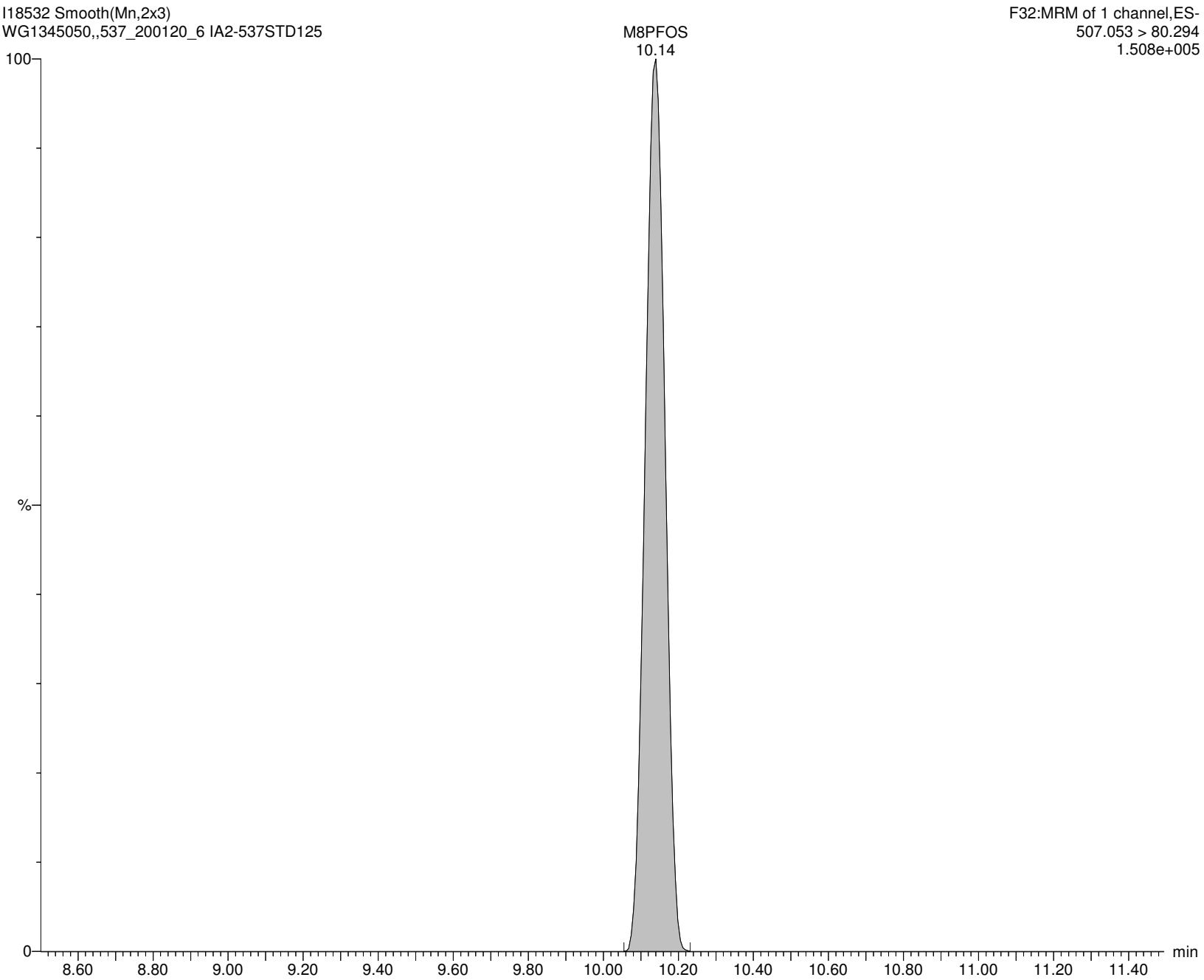



all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICAL_A.qld
Last Altered: Friday, February 28, 2020 09:12:40 Eastern Standard Time
Printed: Friday, February 28, 2020 09:27:52 Eastern Standard Time

**Name: I18532**
**ID: IA2-537STD125**
**Date: 27-Feb-2020**
**Time: 14:51:56**
**Description: WG1345050,,537_200120_6**
**User: LCMS01:SG**
**Vial: 1:A,7**
**Instrument: XEVO-TQSmicro#QEA0276**
**Inlet Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\LCMS_537_ISO_MeOH**
**Tune Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\190709_TUNE.IPR**
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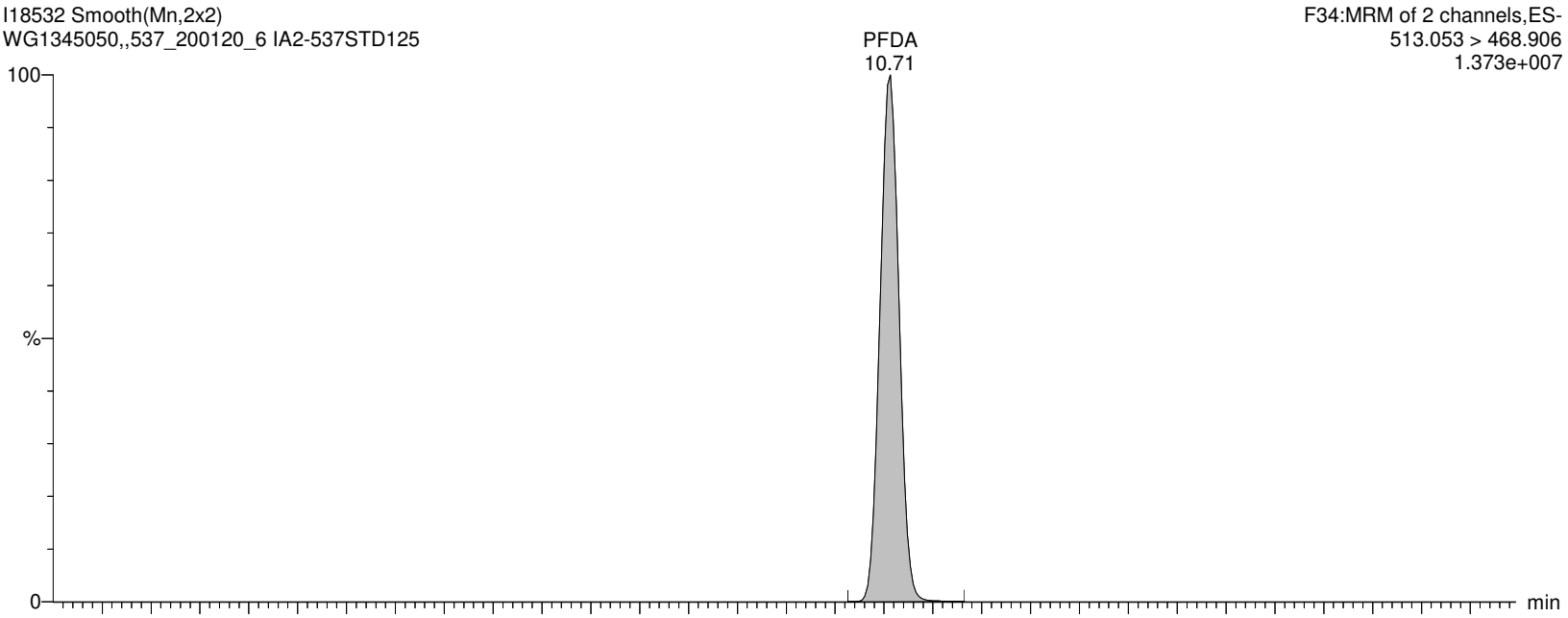


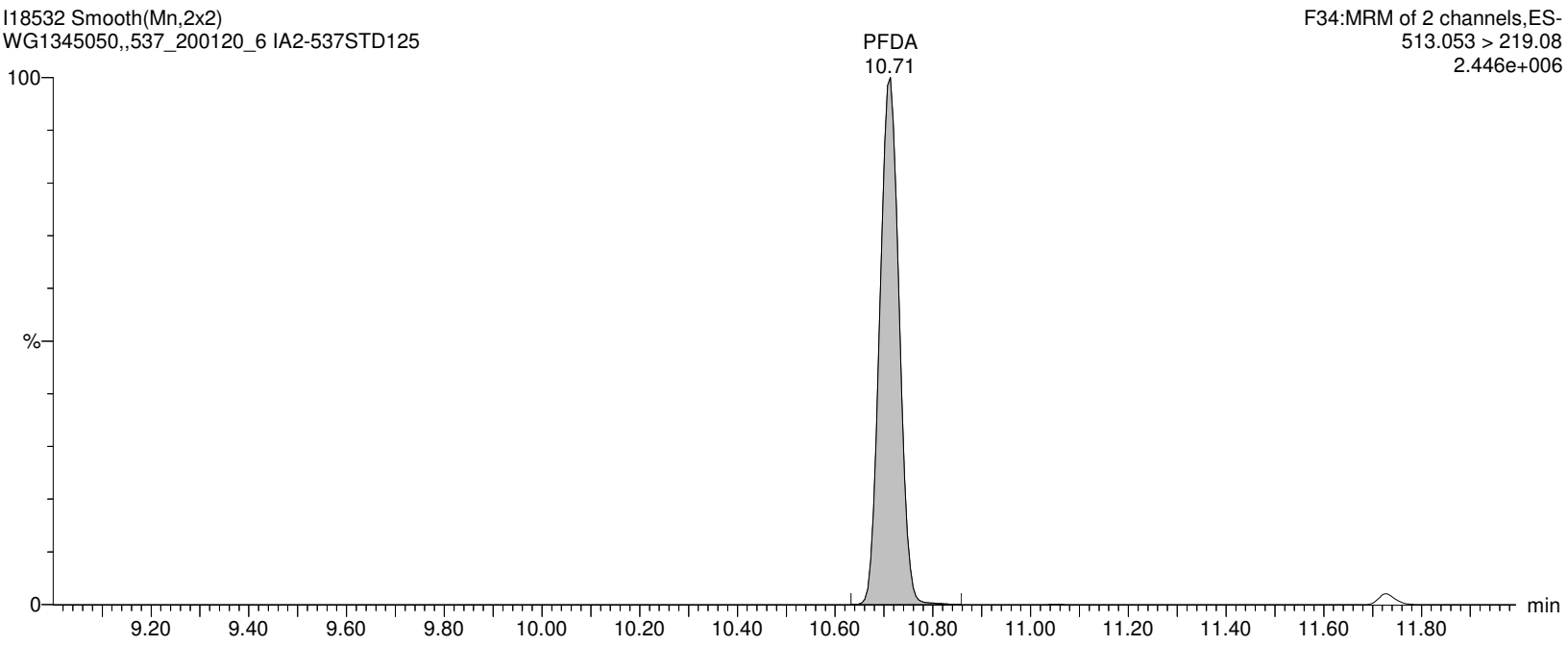



all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICAL_A.qld
Last Altered: Friday, February 28, 2020 09:12:40 Eastern Standard Time
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**Date: 27-Feb-2020**
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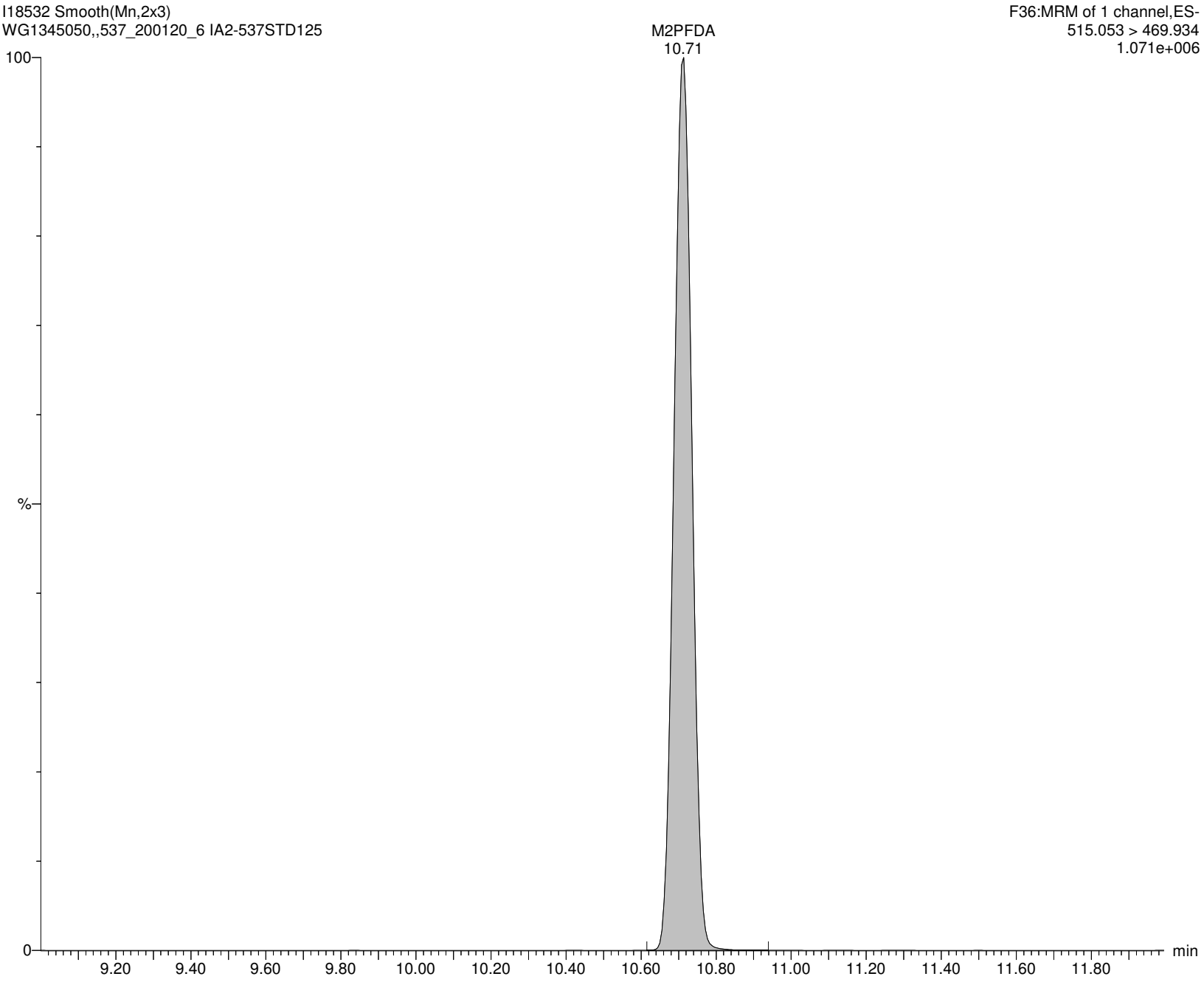
**Description: WG1345050,,537_200120_6**
**User: LCMS01:SG**
**Vial: 1:A,7**
**Instrument: XEVO-TQSmicro#QEA0276**
**Inlet Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\LCMS_537_ISO_MeOH**
**Tune Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\190709_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**M2PFDA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
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Last Altered: Friday, February 28, 2020 09:12:40 Eastern Standard Time
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**Vial: 1:A,7**
**Instrument: XEVO-TQSmicro#QEA0276**
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**Tune Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\190709_TUNE.IPR**
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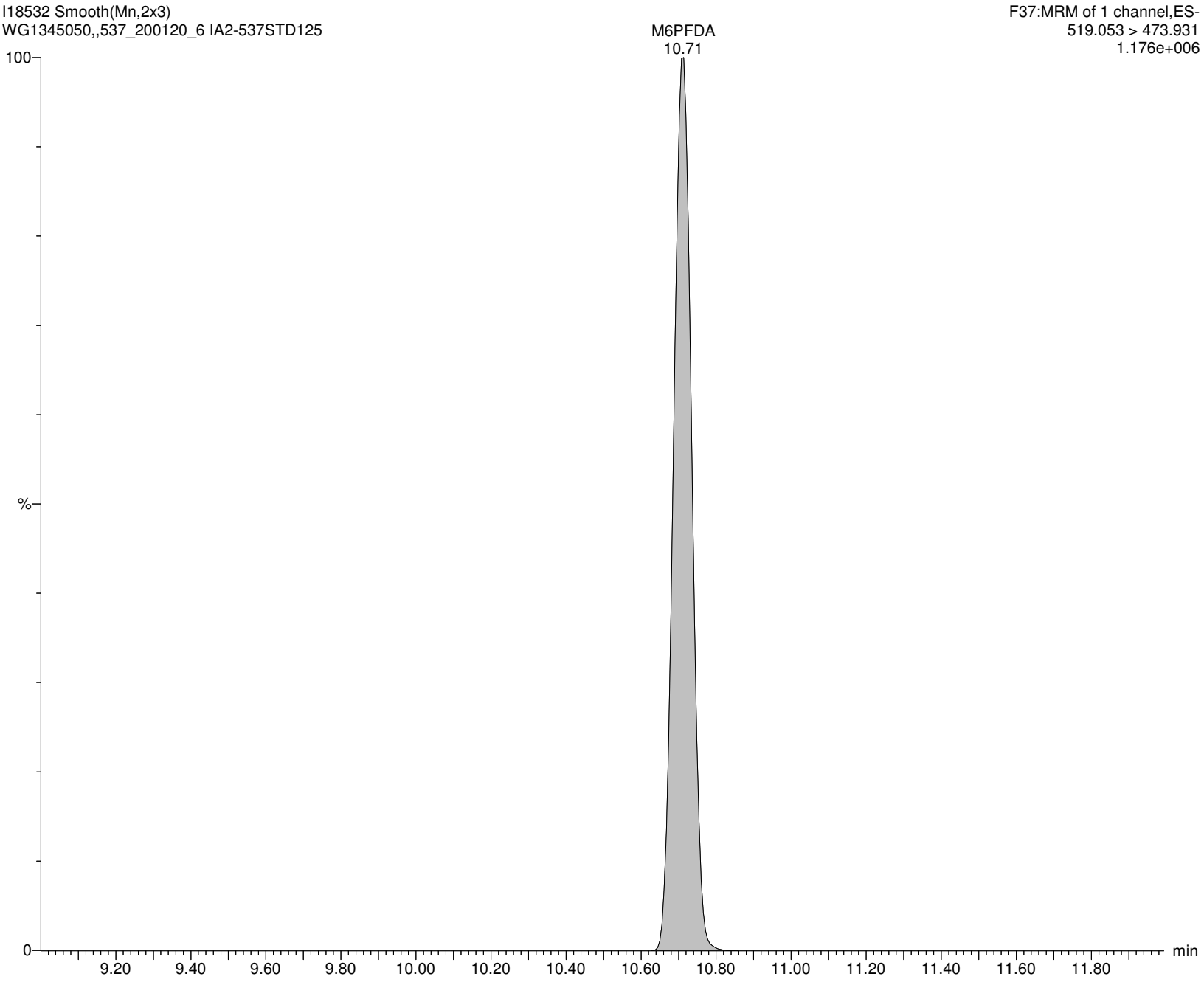
**M6PFDA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
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Last Altered: Friday, February 28, 2020 09:12:40 Eastern Standard Time
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**Vial: 1:A,7**
**Instrument: XEVO-TQSmicro#QEA0276**
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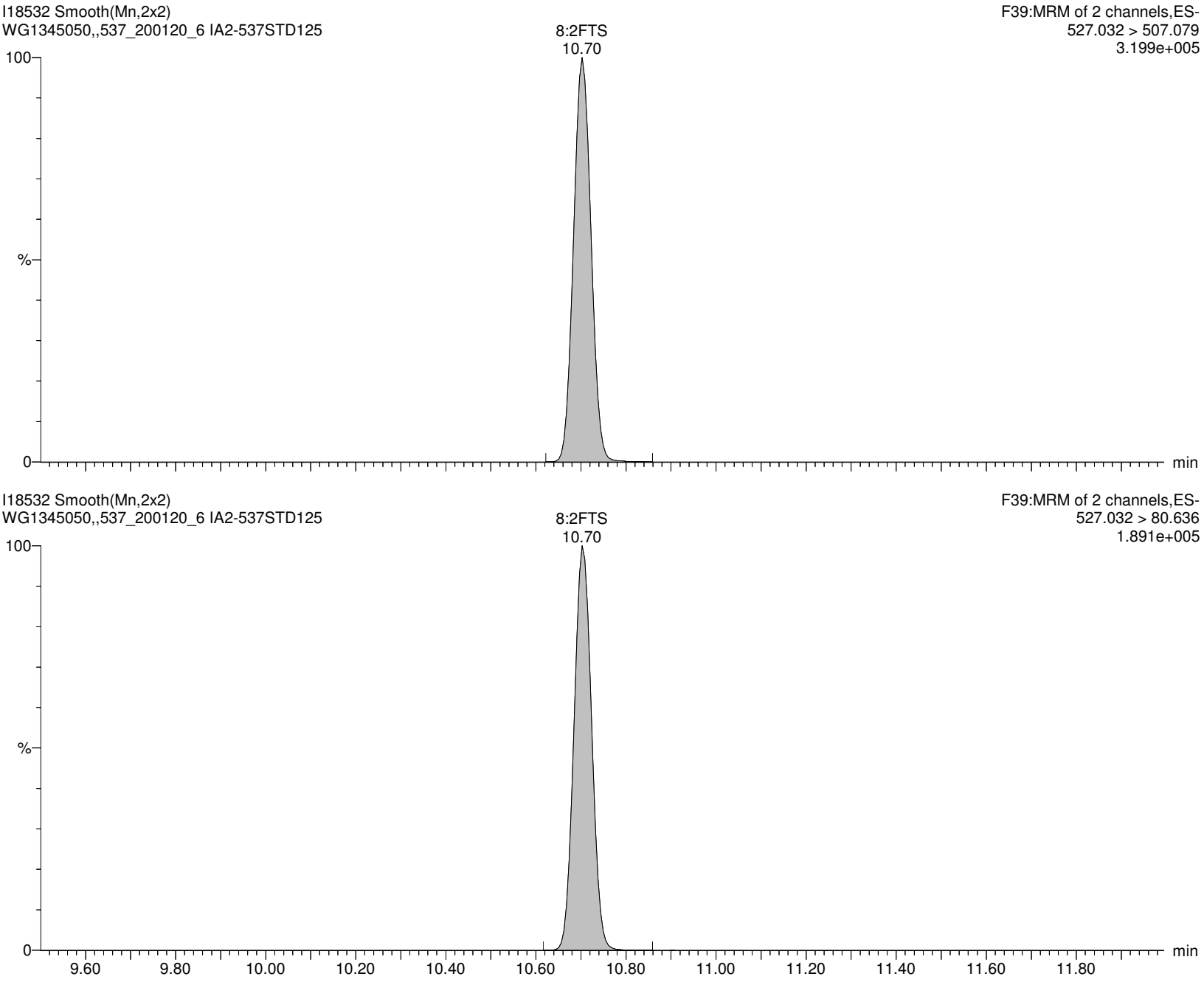
**8:2FTS**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICAL_A.qld
Last Altered: Friday, February 28, 2020 09:12:40 Eastern Standard Time
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**Instrument: XEVO-TQSmicro#QEA0276**
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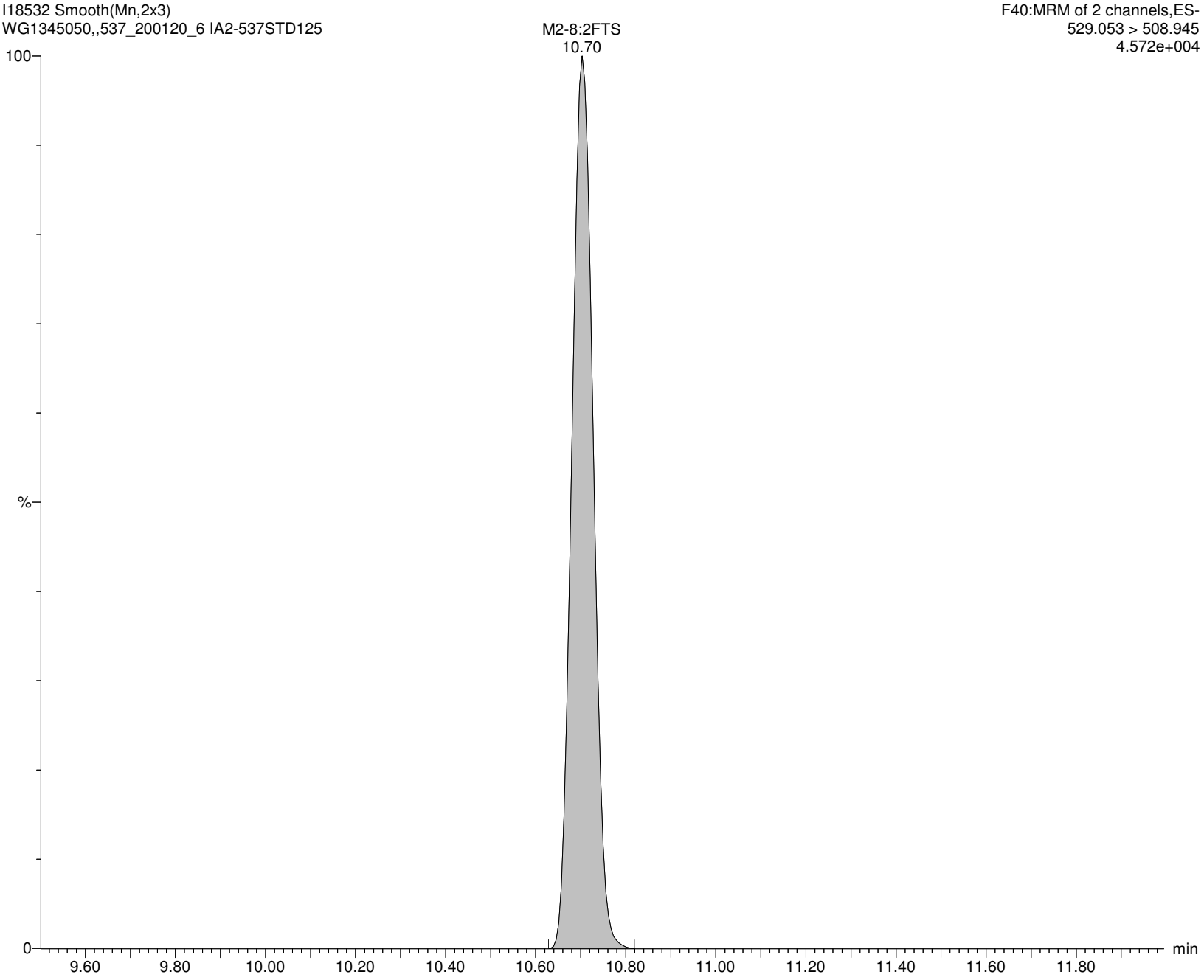
**M2-8:2FTS**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICAL_A.qld
Last Altered: Friday, February 28, 2020 09:12:40 Eastern Standard Time
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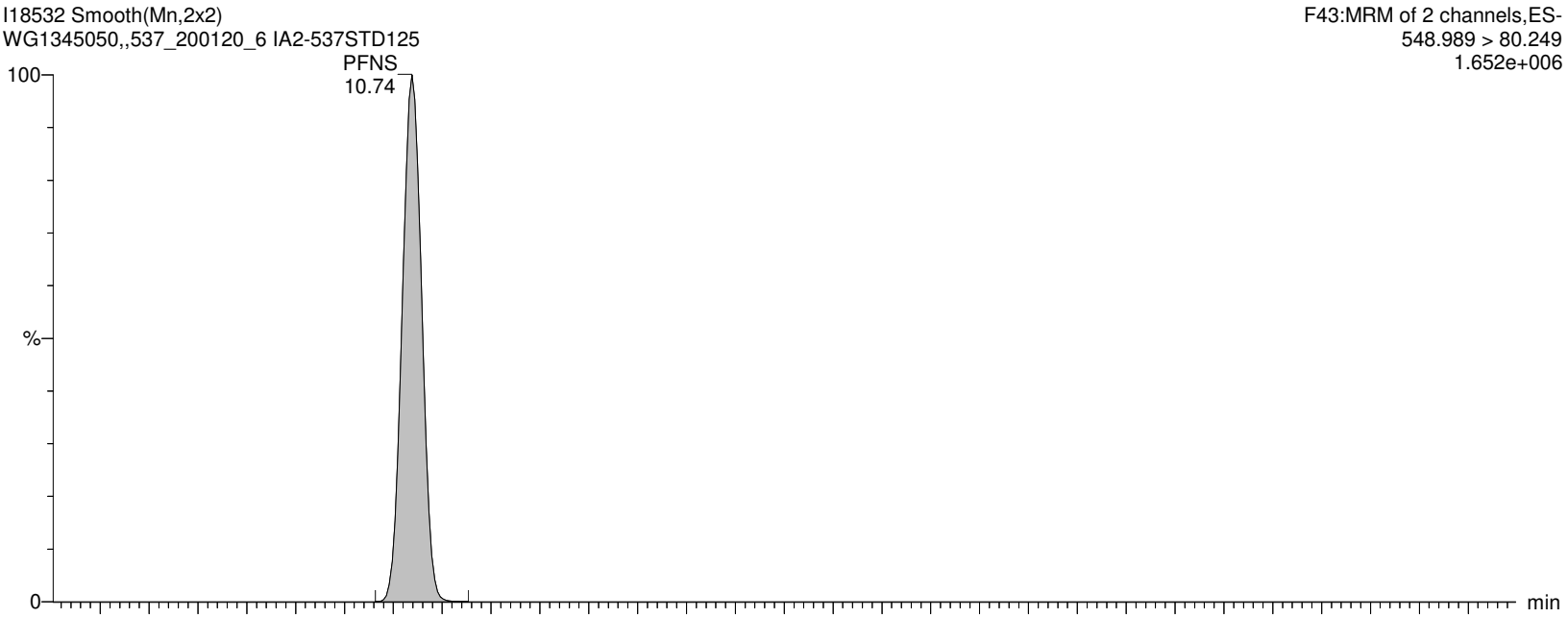
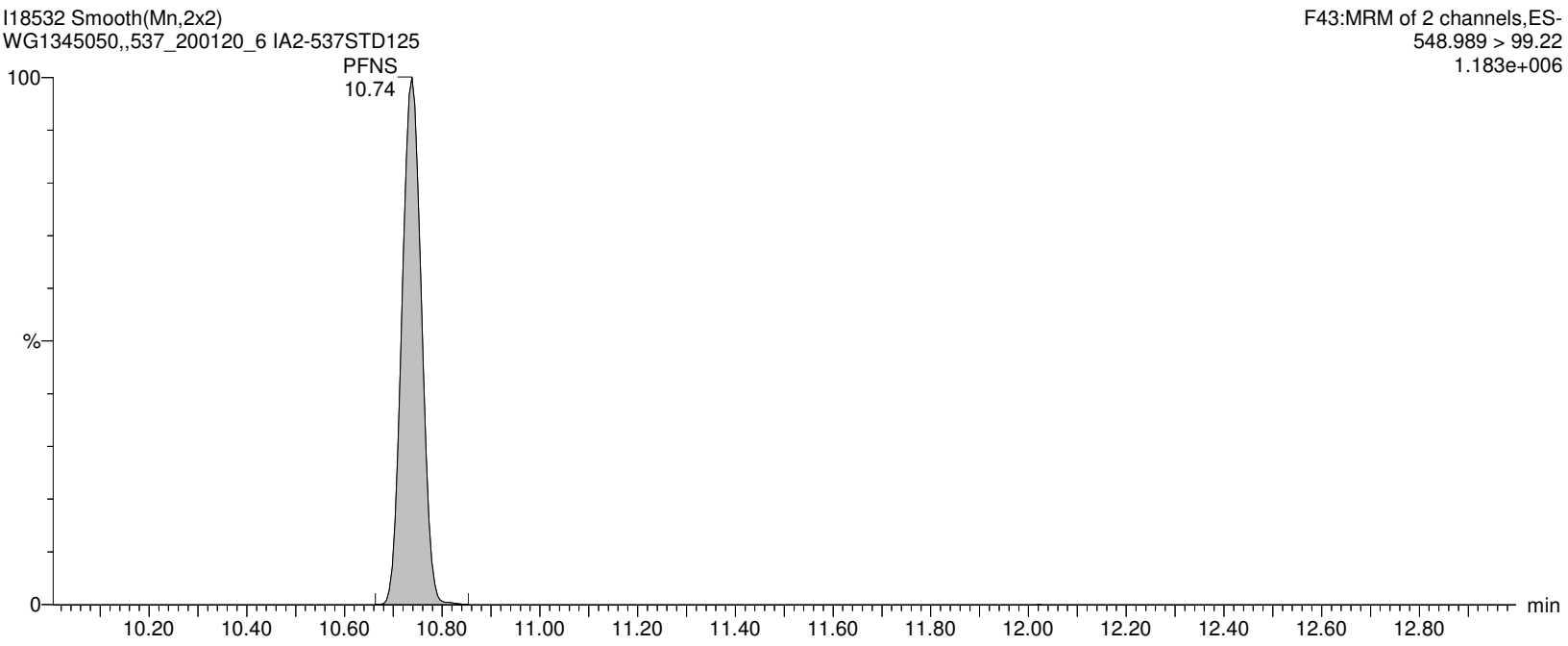
**PFNS**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICAL_A.qld
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**Vial: 1:A,7**
**Instrument: XEVO-TQSmicro#QEA0276**
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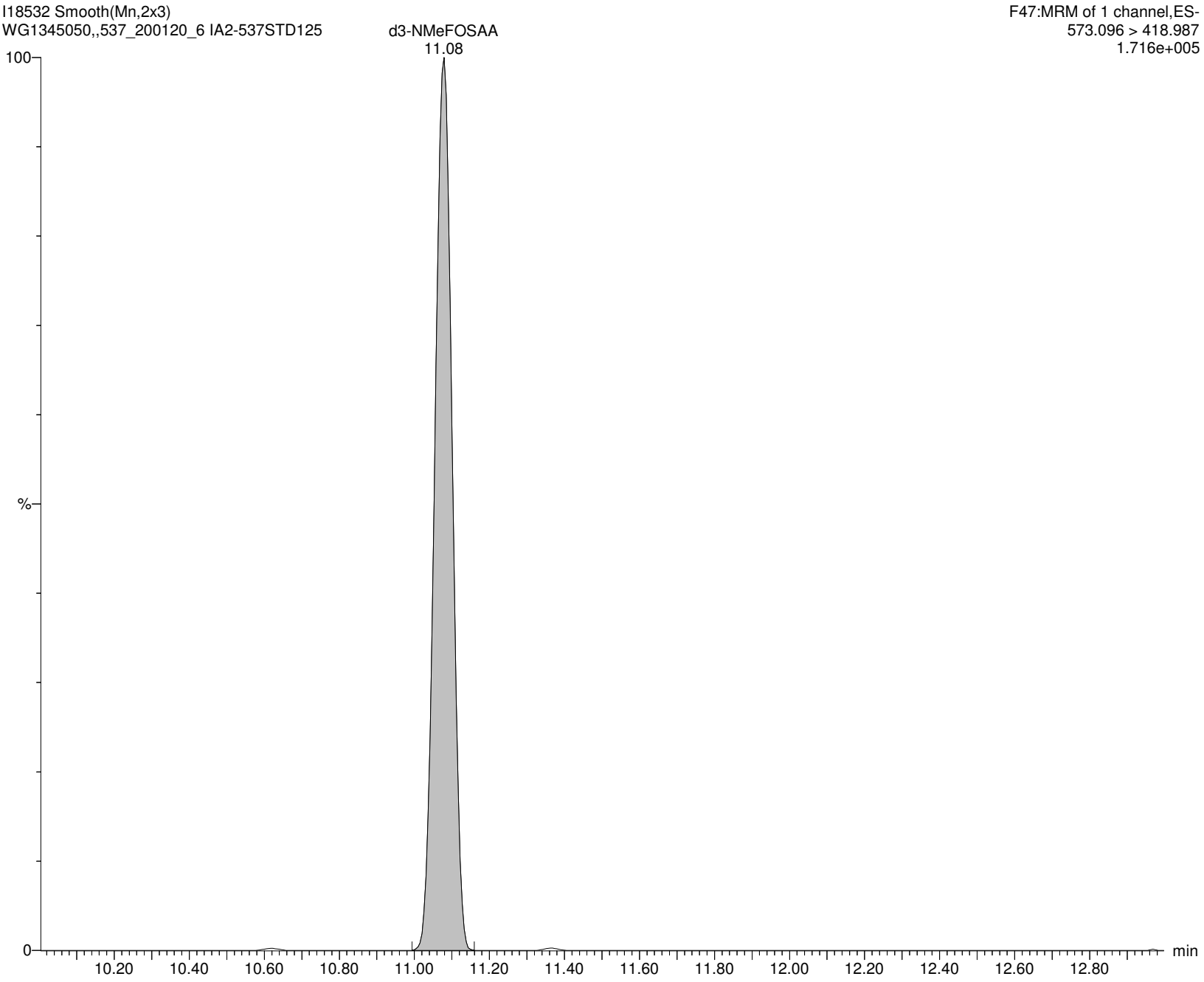
**d3-NMeFOSAA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICAL_A.qld
Last Altered: Friday, February 28, 2020 09:12:40 Eastern Standard Time
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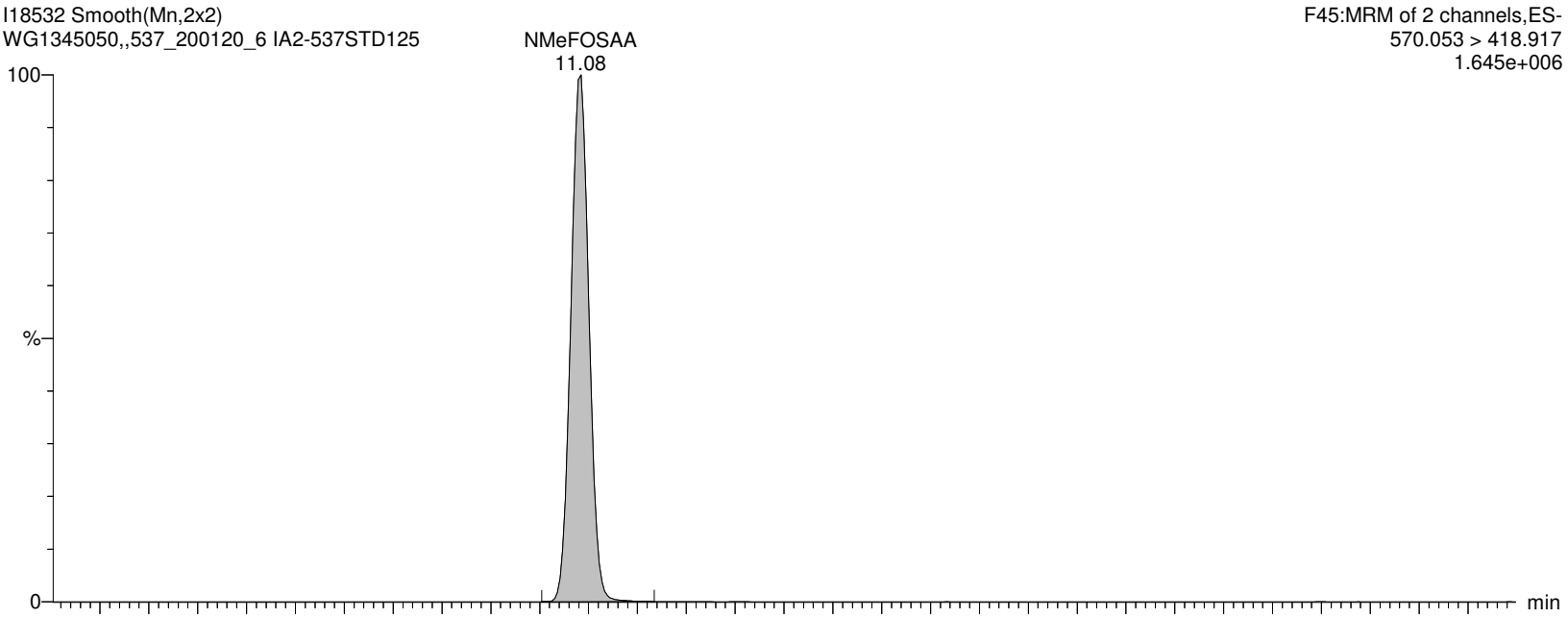
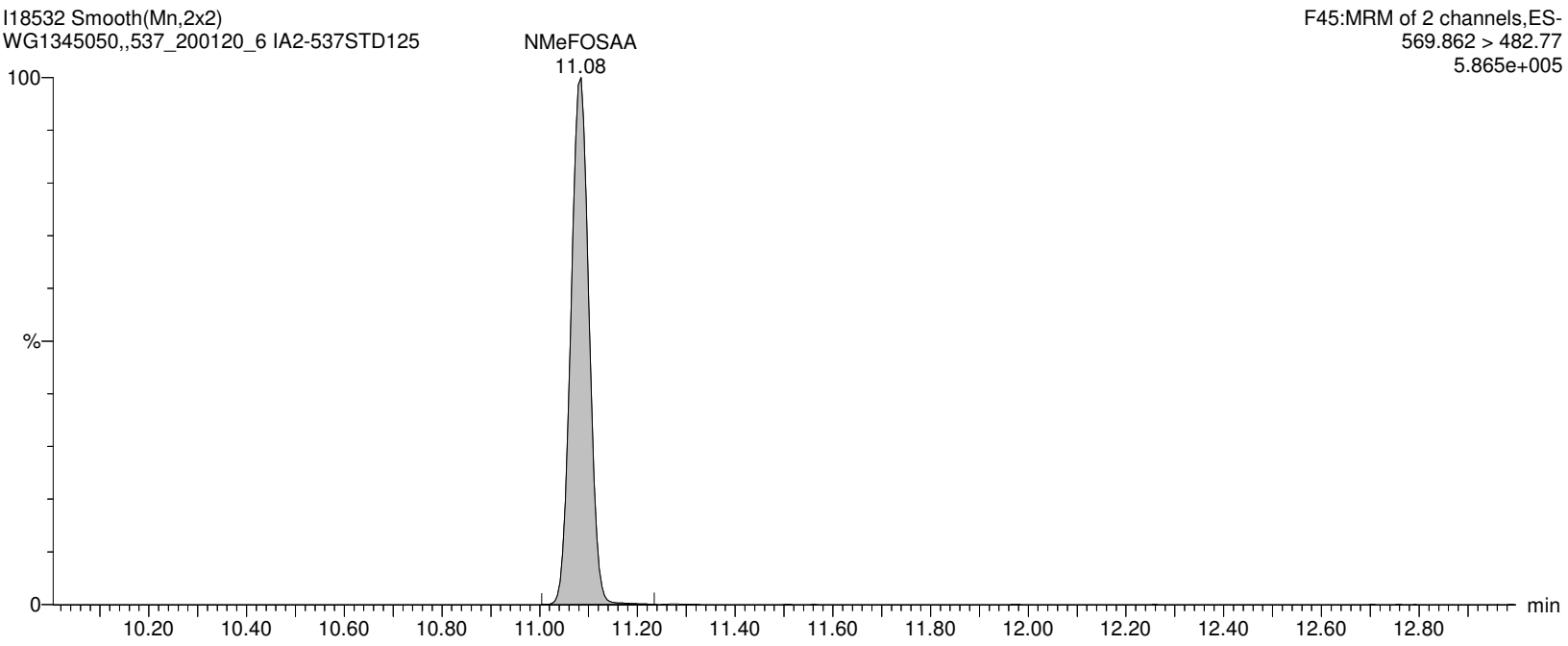
**NMeFOSAA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICAL_A.qld
Last Altered: Friday, February 28, 2020 09:12:40 Eastern Standard Time
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**Inlet Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\LCMS_537_ISO_MeOH**
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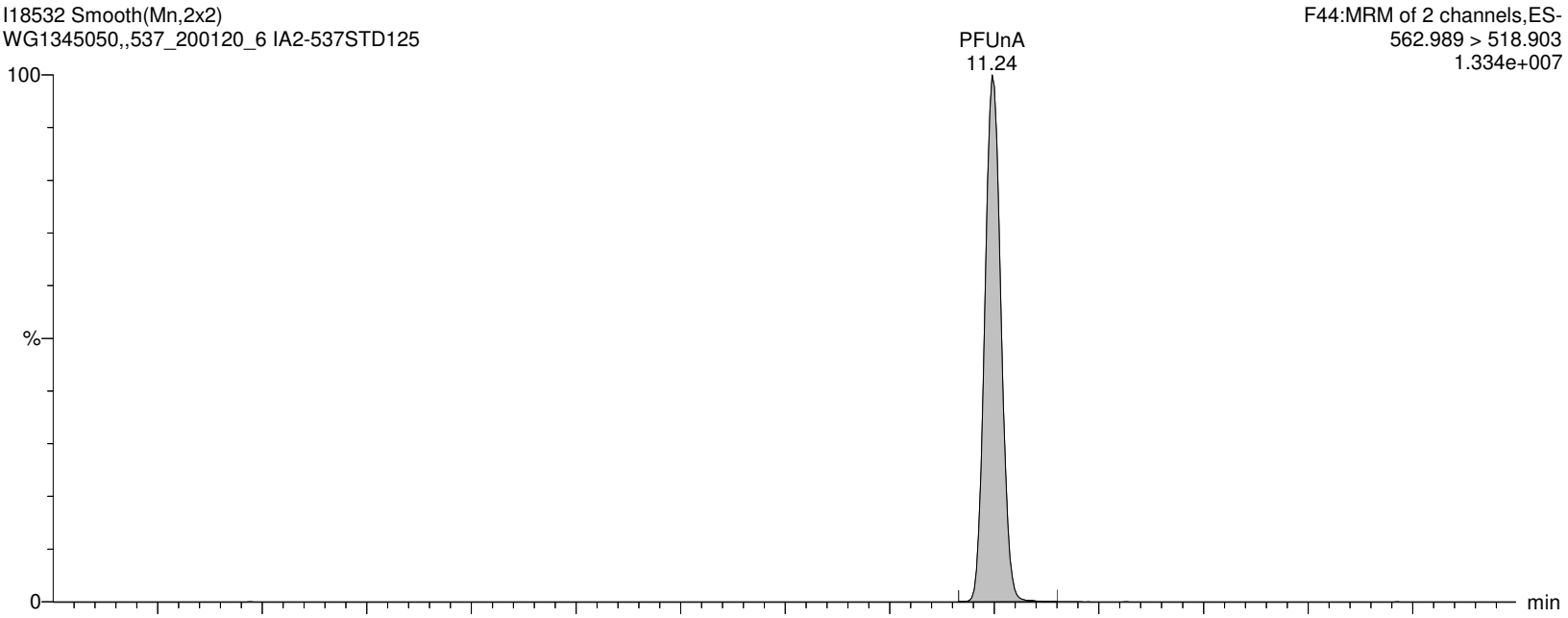
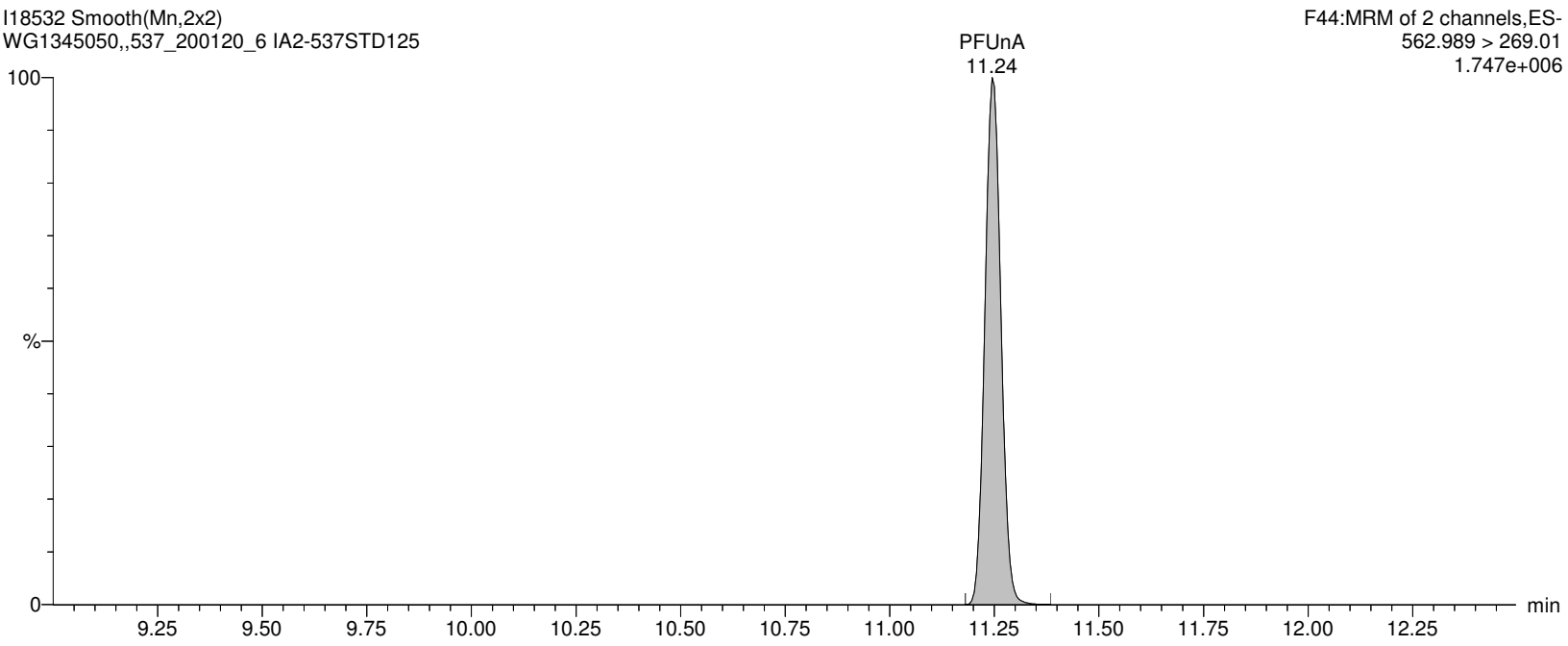
**PFUnA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICAL_A.qld
Last Altered: Friday, February 28, 2020 09:12:40 Eastern Standard Time
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**Date: 27-Feb-2020**
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**Vial: 1:A,7**
**Instrument: XEVO-TQSmicro#QEA0276**
**Inlet Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\LCMS_537_ISO_MeOH**
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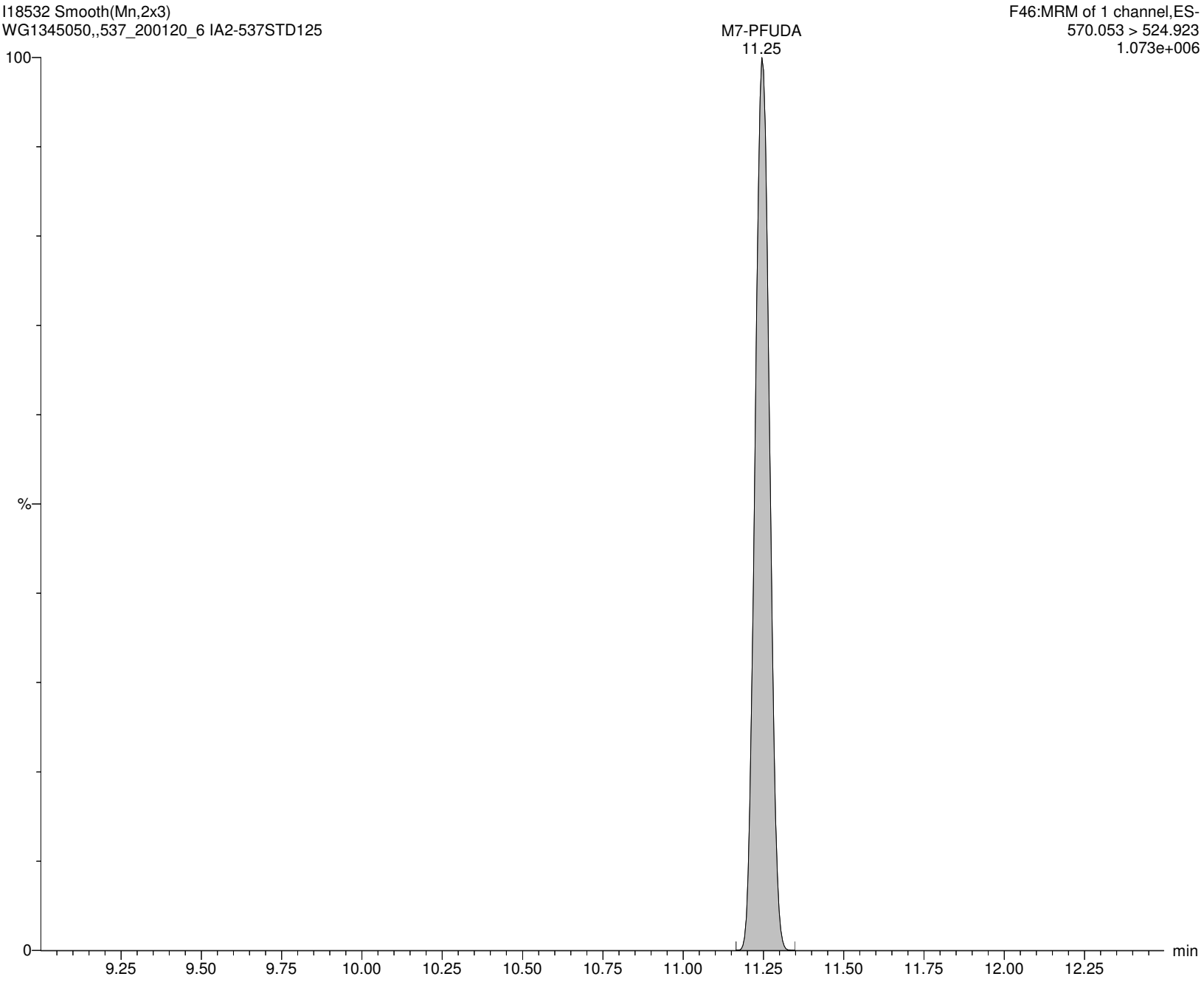
**M7-PFUDA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
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Last Altered: Friday, February 28, 2020 09:12:40 Eastern Standard Time
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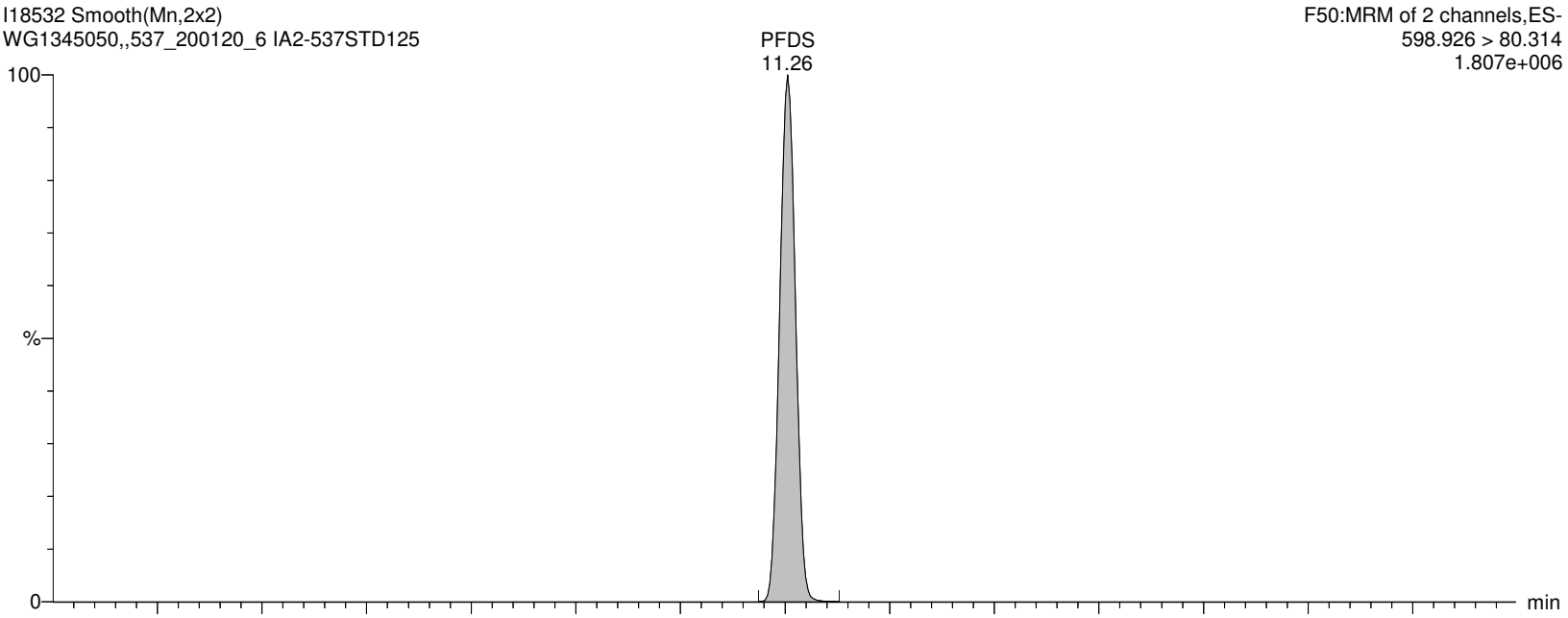


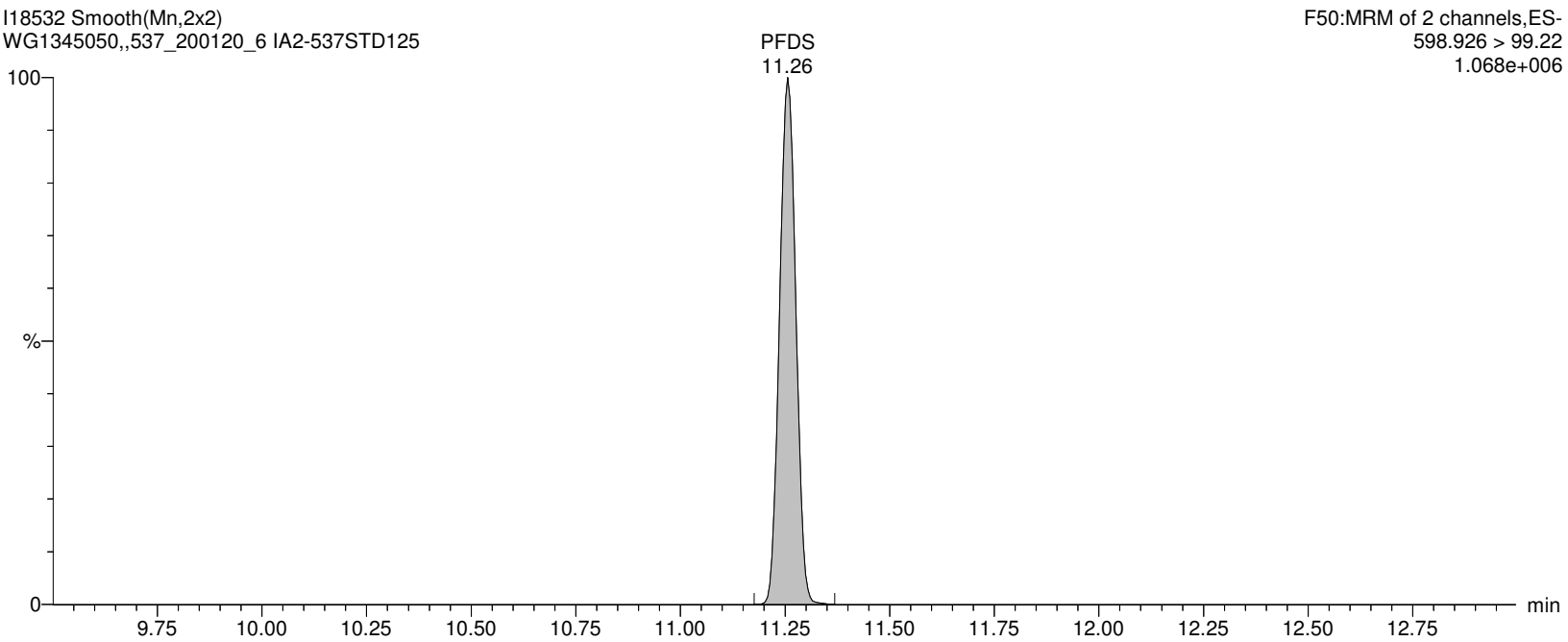



all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICAL_A.qld
Last Altered: Friday, February 28, 2020 09:12:40 Eastern Standard Time
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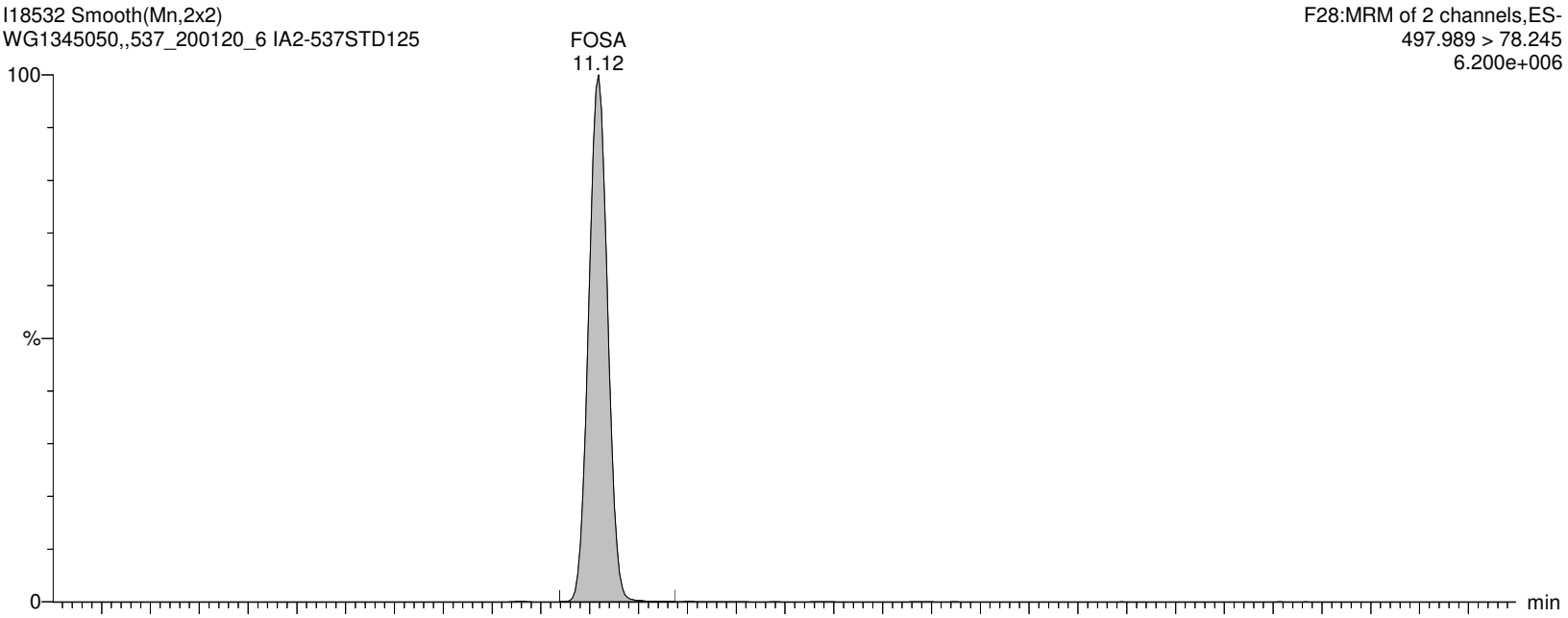
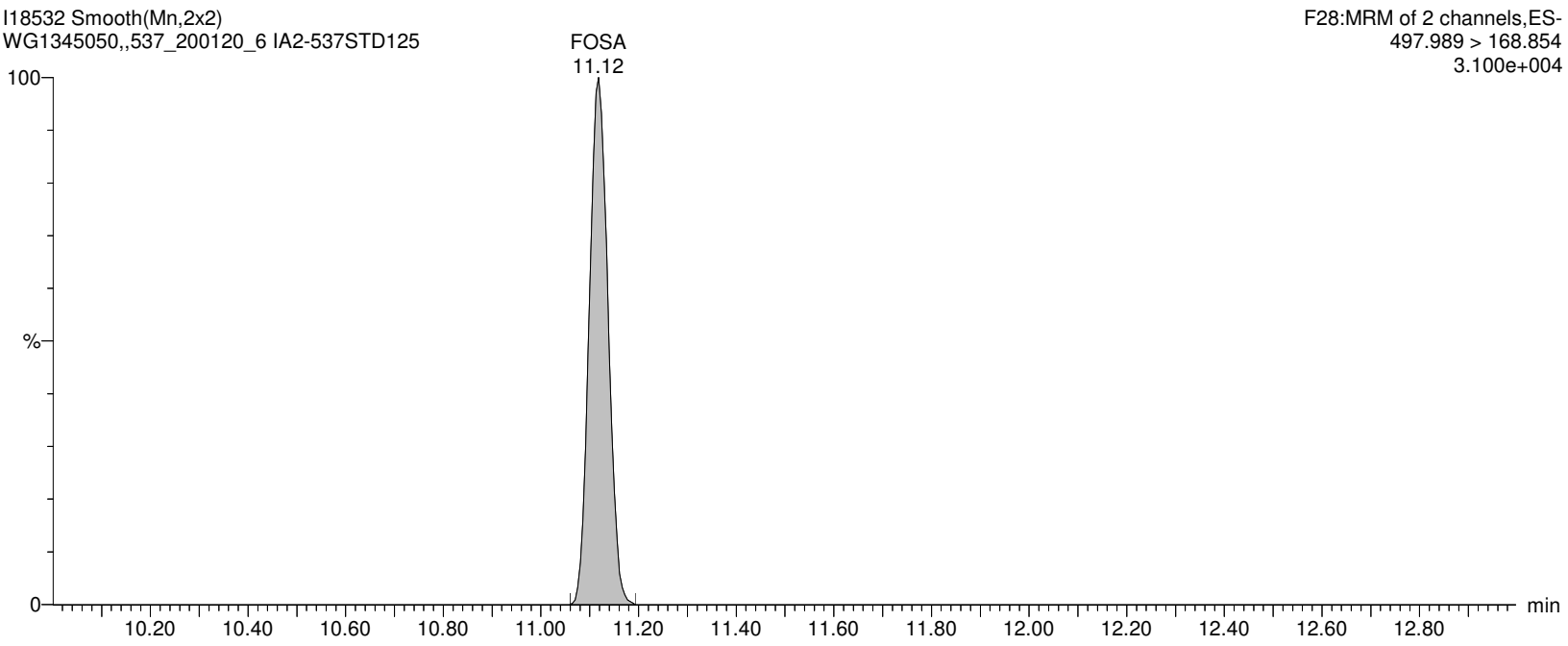
**FOSA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
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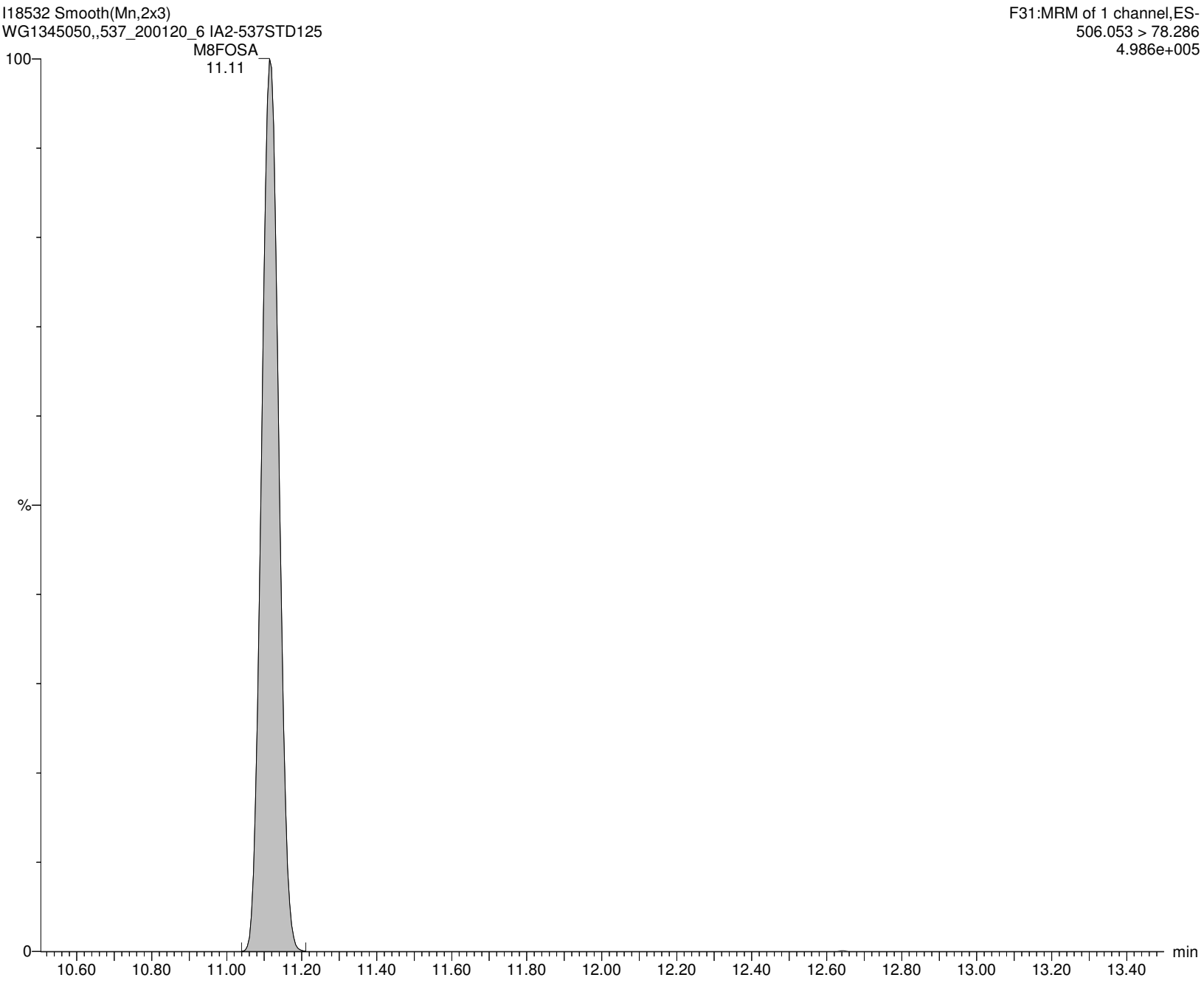



all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICAL_A.qld
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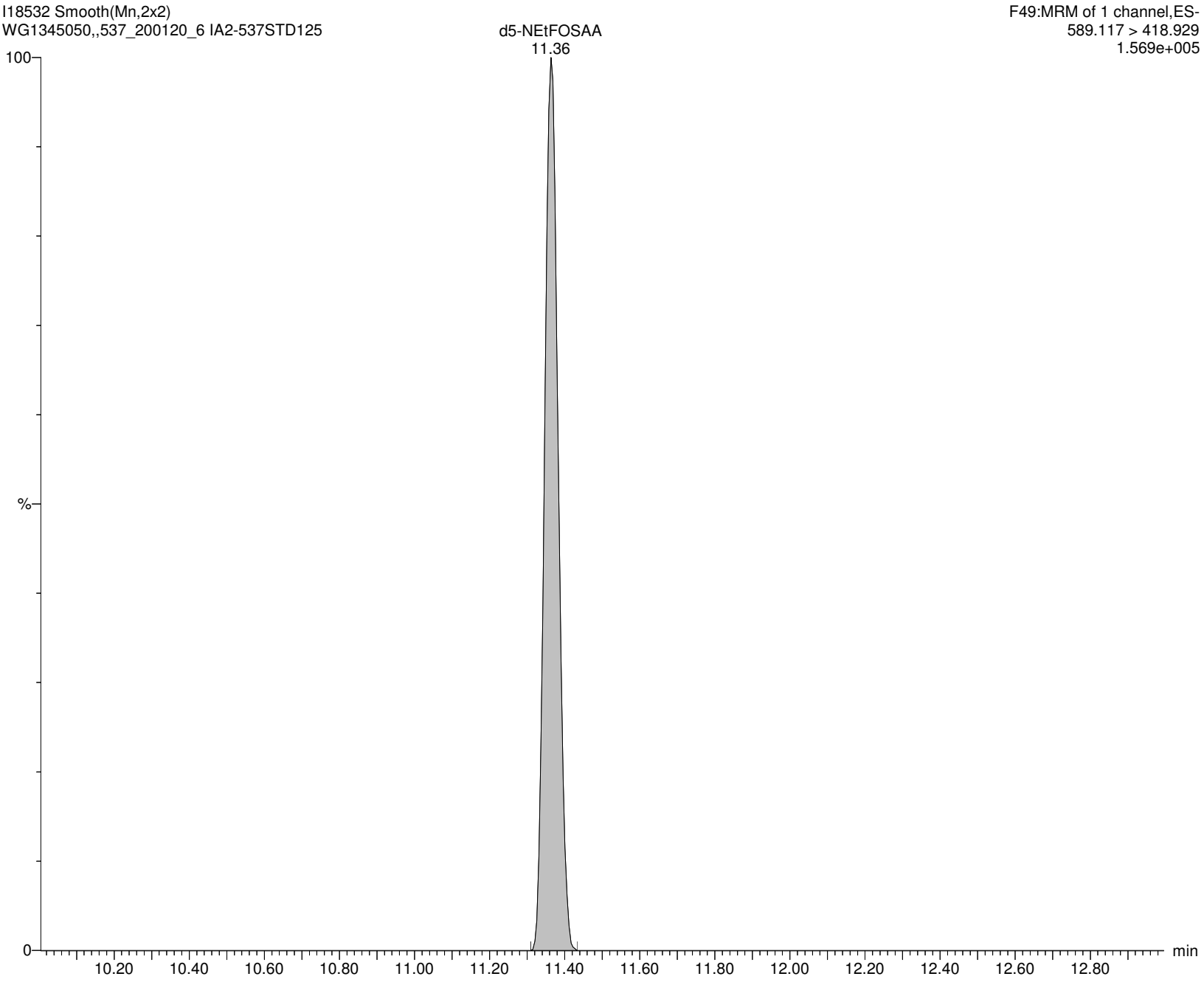
**d5-NEtFOSAA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICAL_A.qld
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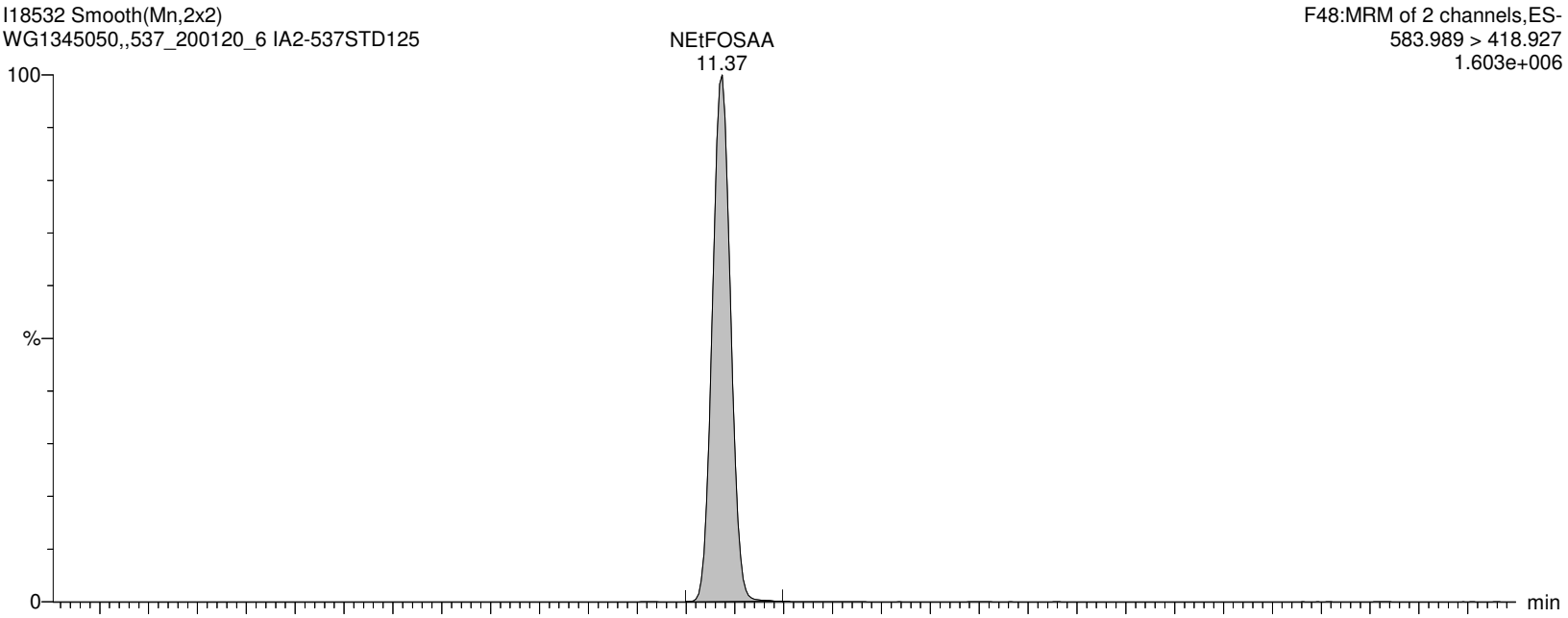
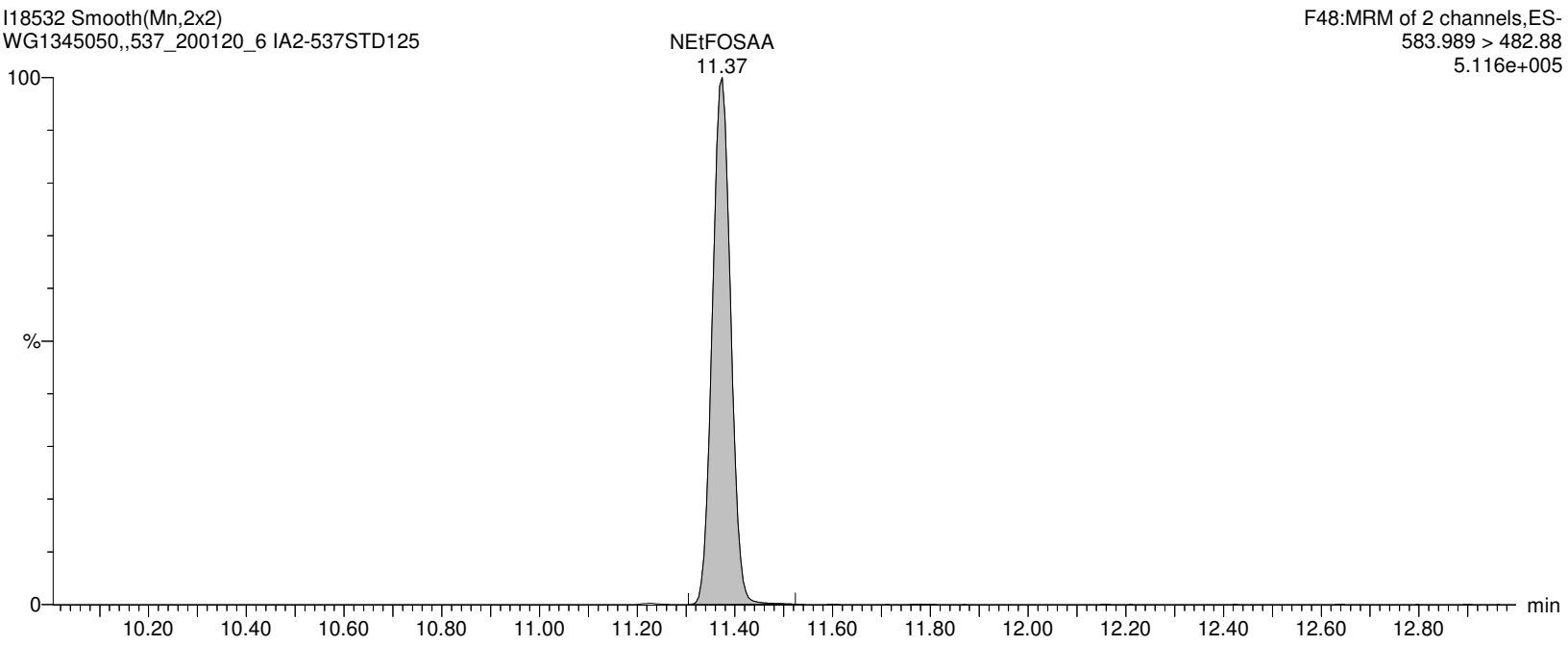
**NEtFOSAA**



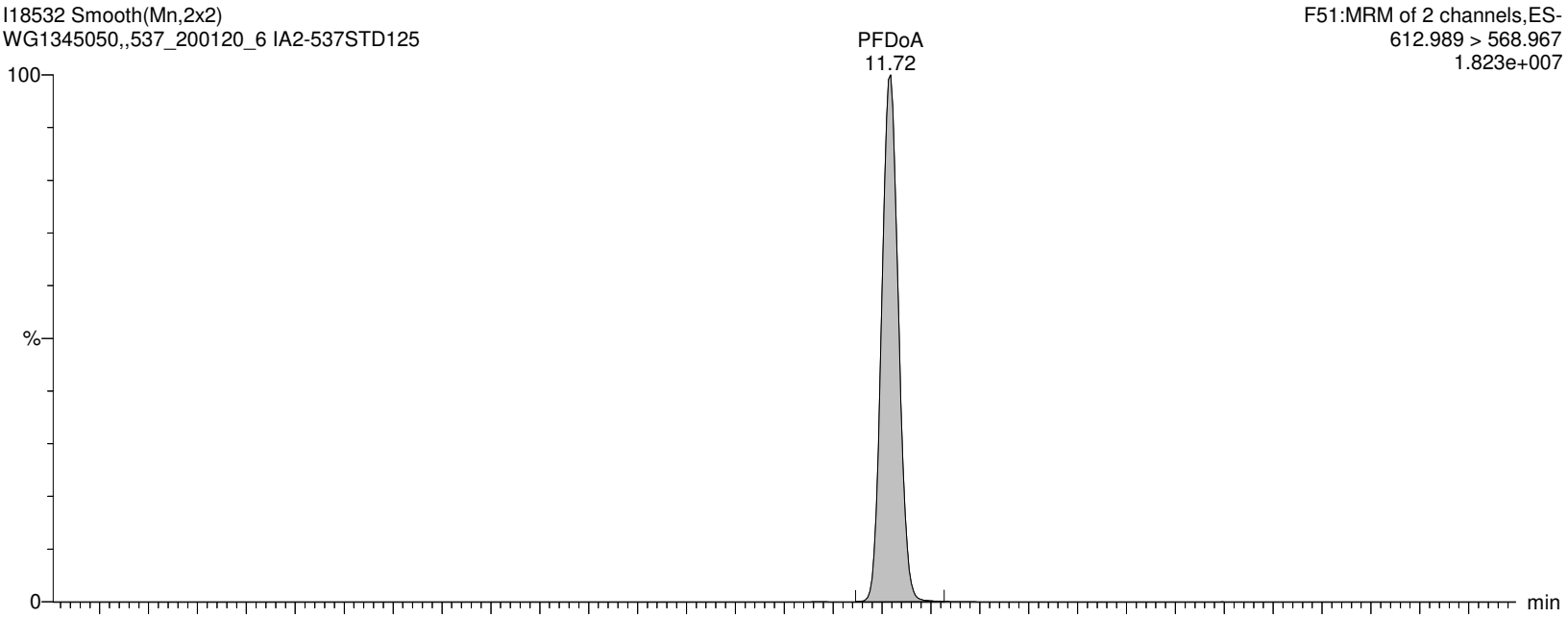


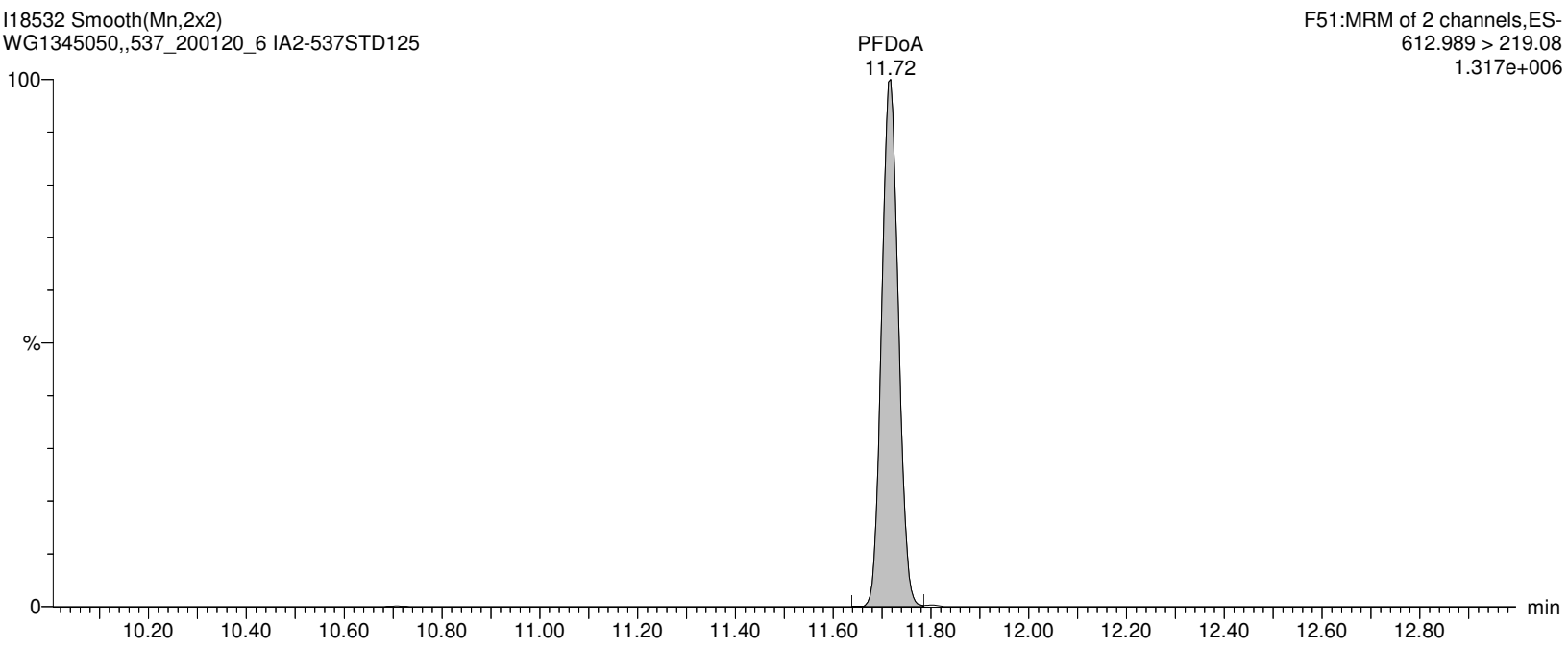
all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICAL_A.qld
Last Altered: Friday, February 28, 2020 09:12:40 Eastern Standard Time
Printed: Friday, February 28, 2020 09:27:52 Eastern Standard Time

**Name: I18532**
**ID: IA2-537STD125**
**Date: 27-Feb-2020**
**Time: 14:51:56**
**Description: WG1345050,,537_200120_6**
**User: LCMS01:SG**
**Vial: 1:A,7**
**Instrument: XEVO-TQSmicro#QEA0276**
**Inlet Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\LCMS_537_ISO_MeOH**
**Tune Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\190709_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**PFDoA**





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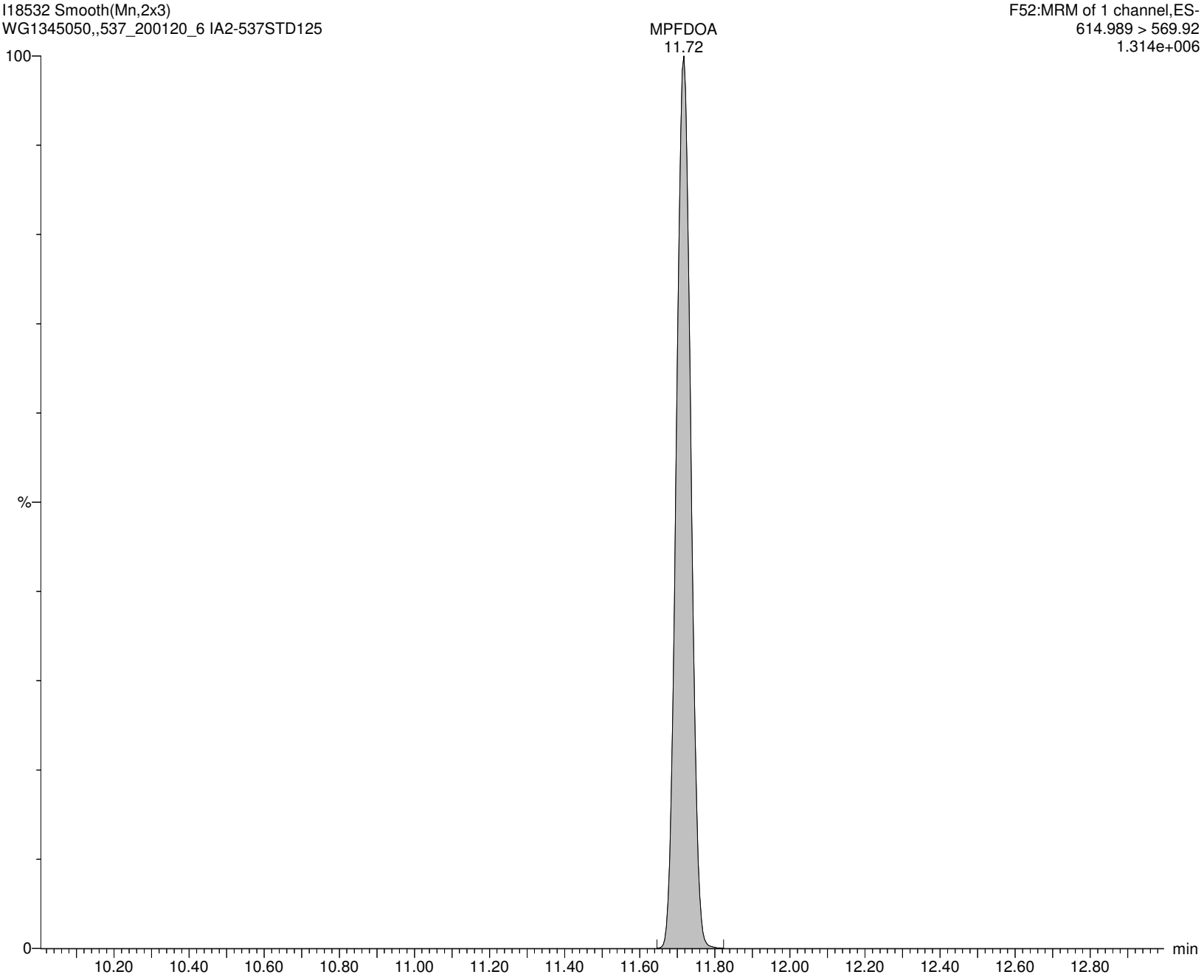



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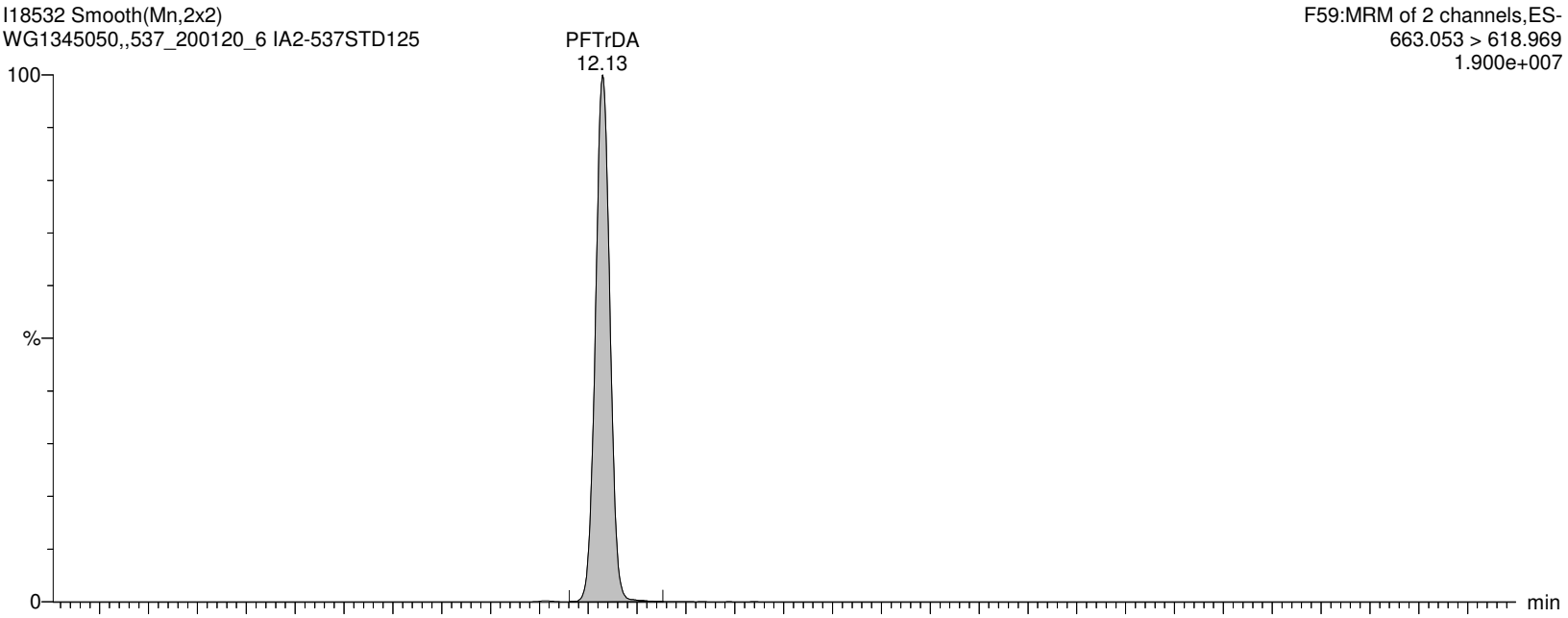


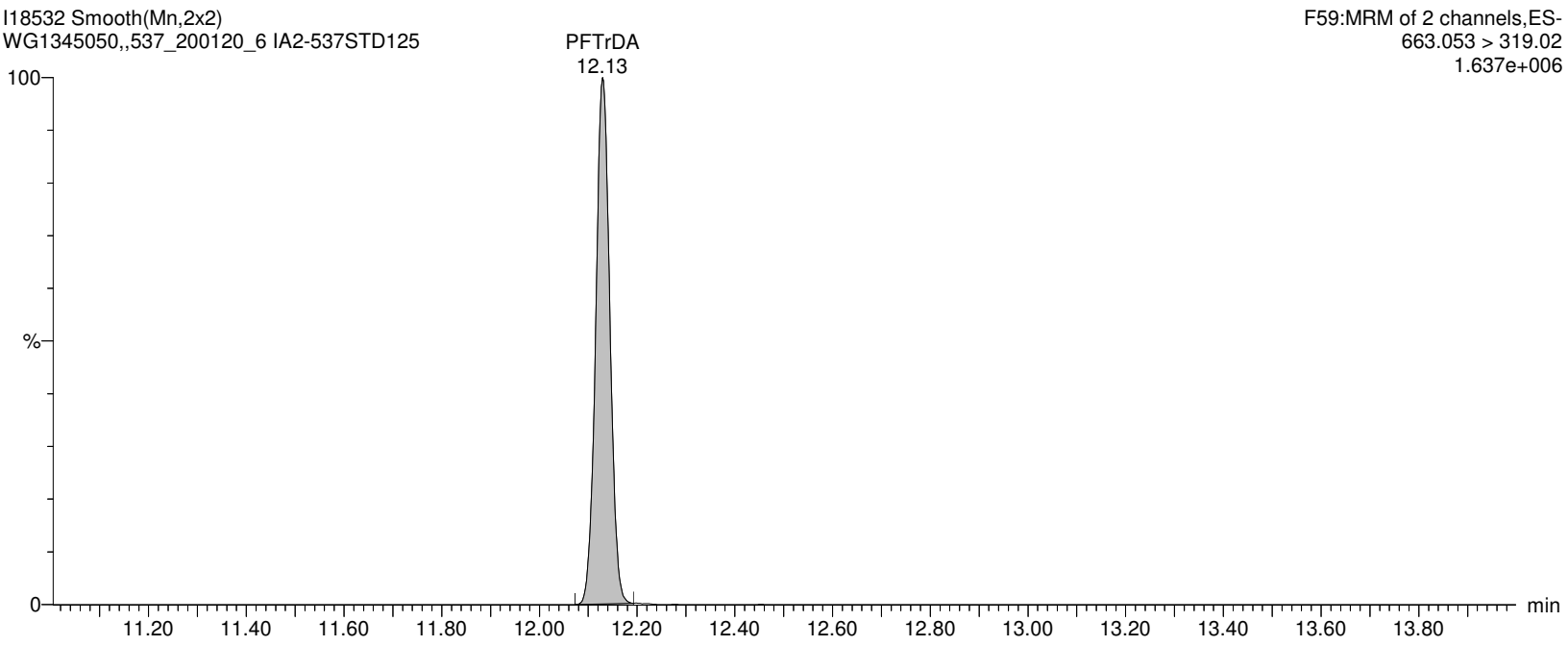



all concentration units in (ng/mL)

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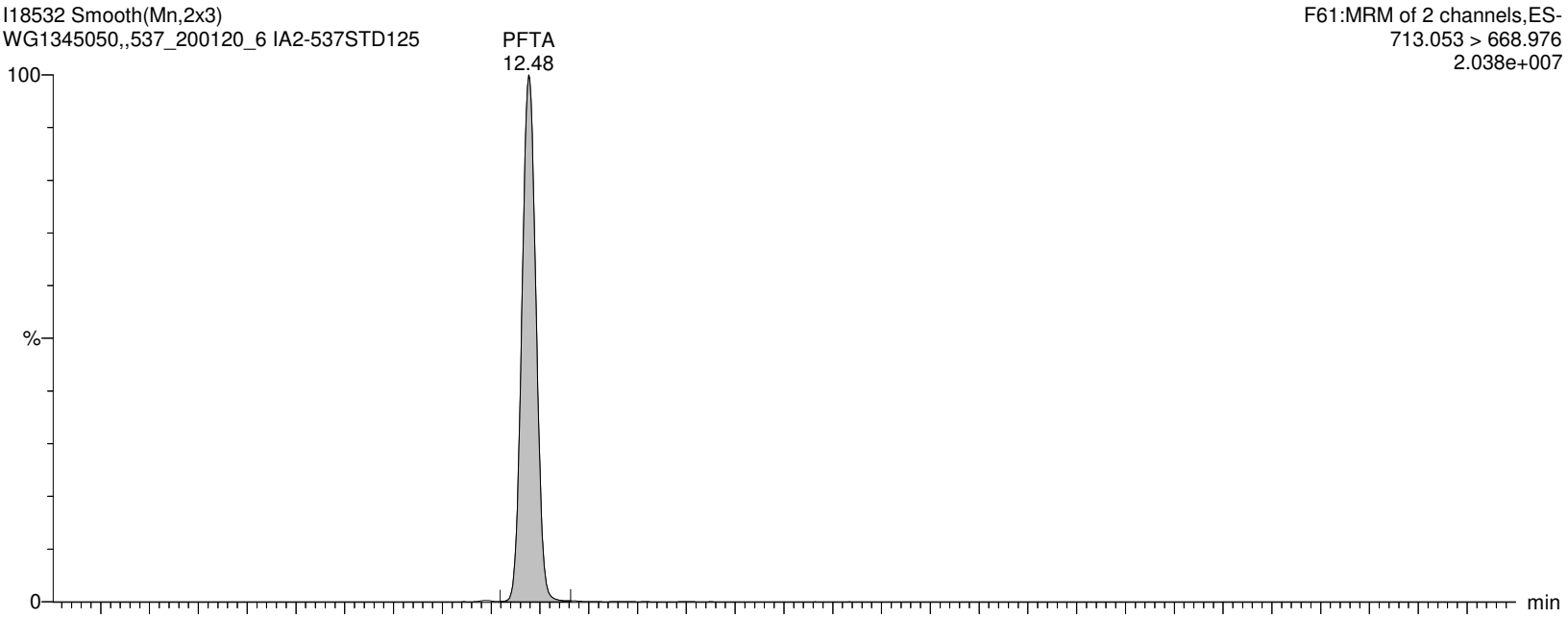
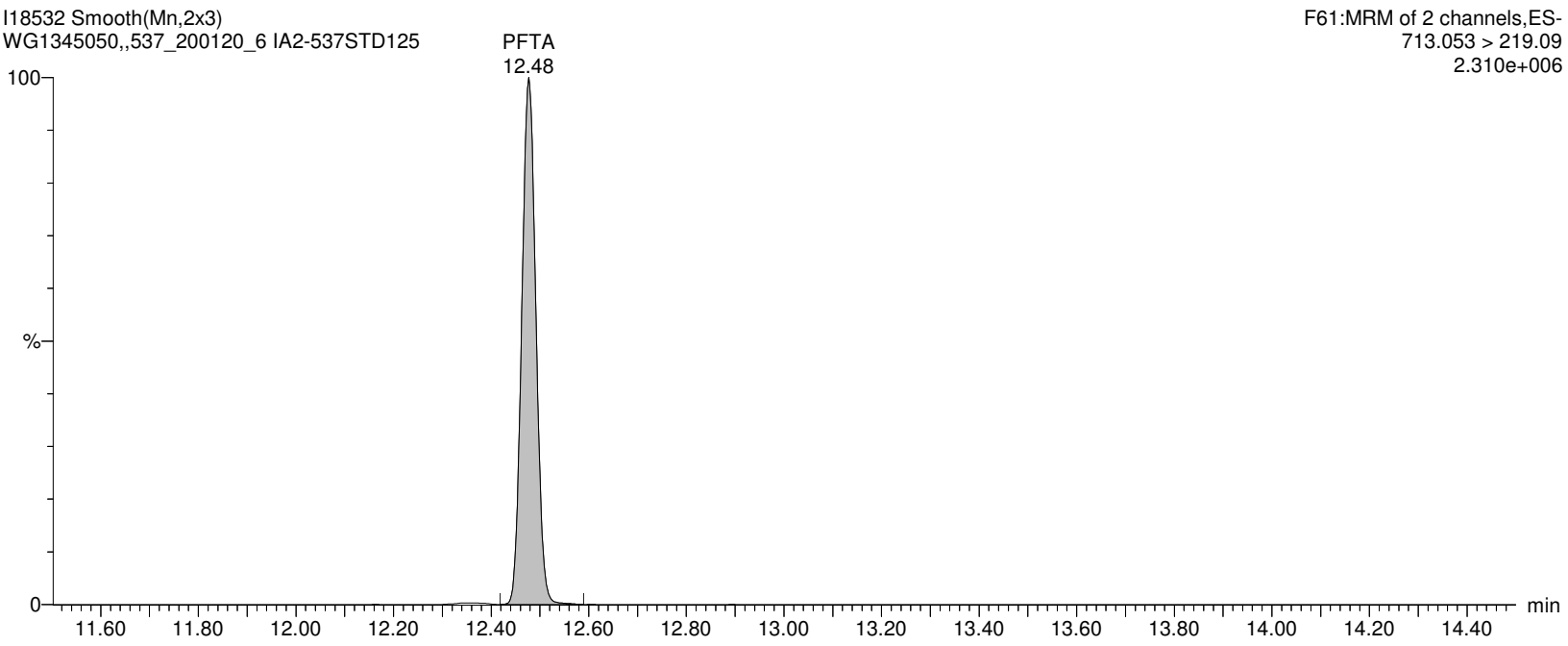
**MS Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**PFTA**





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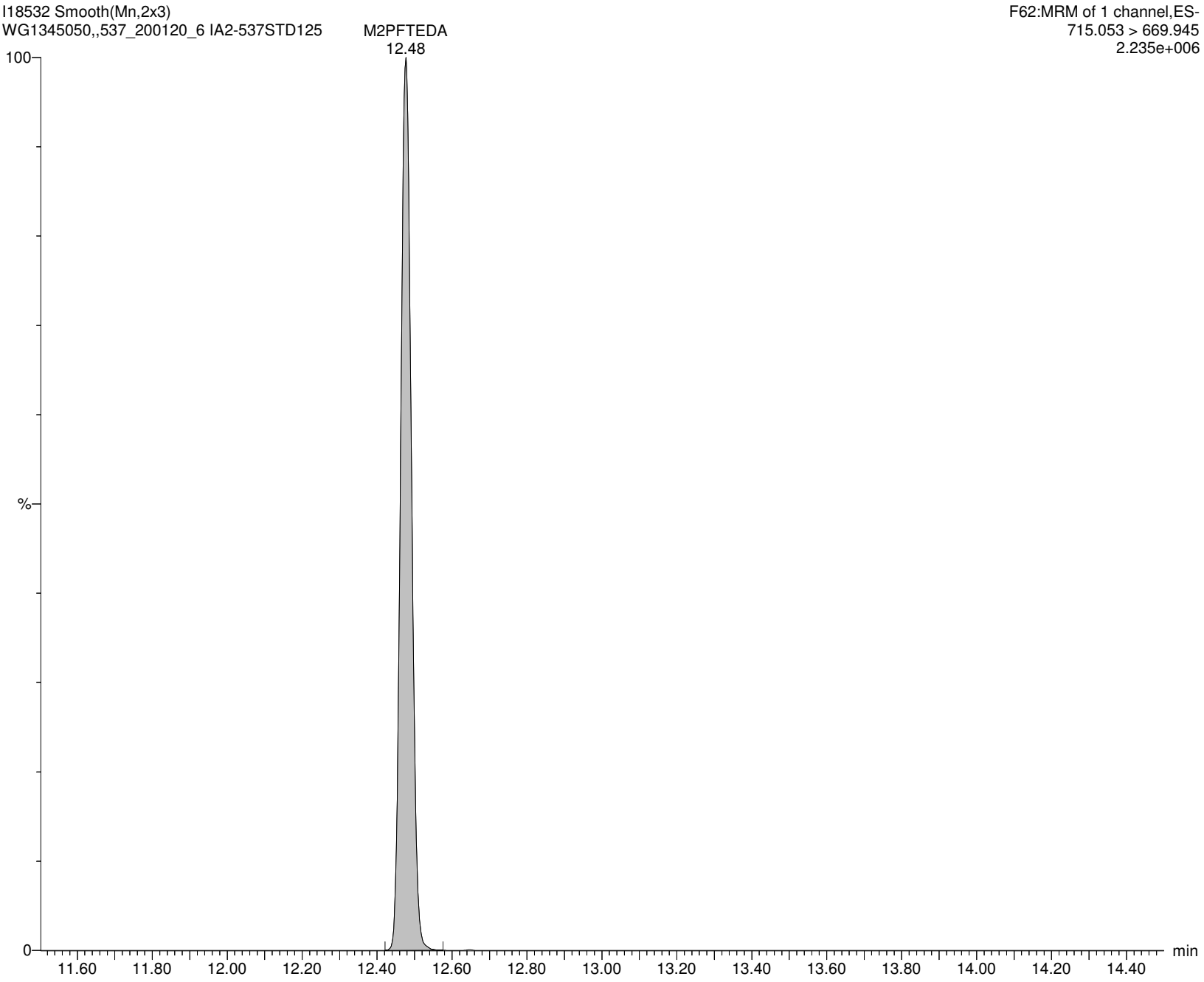
**MS Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**M2PFTEDA**





all concentration units in (ng/mL)

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Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICAL_A.qld
Last Altered: Friday, February 28, 2020 09:12:40 Eastern Standard Time
Printed: Friday, February 28, 2020 09:27:54 Eastern Standard Time

**Method: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\MethDB\537ISO_Q_200227 .mdb 27 Feb 2020 12:38:15**
**Calibration: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\CurveDB\200227_537ISO_ICAL.cdb 28 Feb 2020 09:12:40**

**ID: IA2-537STD150**
**Name: I18533**
**Date: 27-Feb-2020**
**Time: 15:08:31**
**Description: WG1345050,,537_200120_7**
**Instrument: XEVO-TQSmicro#QEA0276**
**User: LCMS01:SG**
**Inlet Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\LCMS_537_ISO_MeOH**
**Tune Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\190709_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

| | Name | CAS | RT | Trace | Area | M Flag | Conc (ng/mL) | Ion Ratio | Ratio Flag | %Rec |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | PFBA | 375-22-4 | 2.24 | 212.926 > 169.111 | 473302 | | 150.573 | | na | 100.4 |
| 2 | M3PFBA | INT STD | 2.24 | 215.926 > 172.122 | 37209 | | 9.463 | | na | 94.6 |
| 3 | MPFBA | INT STD | 2.24 | 216.926 > 172.137 | 43836 | | 10.281 | | na | 102.8 |
| 4 | PFPeA | 2706-90-3 | 5.21 | 262.926 > 219.002 | 591135 | | 149.905 | | na | 99.9 |
| 5 | M5PFPEA | INT STD | 5.21 | 267.989 > 223.081 | 57218 | | 10.115 | | na | 101.1 |
| 6 | PFBS | 375-73-5 | 5.87 | 298.926 > 79.923 | 121367 | | 132.882 | 2.04 | NO | 100.1 |
| 7 | M3PFBS | INT STD | 5.87 | 301.989 > 80.254 | 10162 | | 11.245 | | na | 112.5 |
| 8 | 4:2FTS | 757124-72-4 | 7.05 | 326.926 > 306.957 | 58728 | | 142.184 | 1.75 | NO | 101.4 |
| 9 | M2-4:2FTS | INT STD | 7.05 | 329.117 > 309.079 | 7855 | | 16.685 | | na | 166.8 |
| 10 | PFHxA | 307-24-4 | 7.13 | 312.989 > 269.028 | 781257 | | 150.369 | 17.15 | NO | 100.2 |
| 11 | M5PFHxA | INT STD | 7.13 | 317.989 > 273.045 | 63413 | | 10.272 | | na | 102.7 |
| 12 | PFPeS | 2706-91-4 | 7.44 | 348.926 > 80.251 | 126270 | | 139.785 | 2.36 | NO | 99.1 |
| 13 | PFHpA | 375-85-9 | 8.40 | 362.926 > 319.014 | 983605 | | 158.889 | 5.12 | NO | 105.9 |
| 14 | M4PFHpA | INT STD | 8.40 | 366.926 > 321.979 | 69870 | | 9.756 | | na | 97.6 |
| 15 | br-PFHxS | 355-46-4 | 8.32 | 398.904 > 79.915 | 20468 | | 25.216 | 2.94 | NO | 98.9 |
| 16 | L-PFHxS | 355-46-4 | 8.56 | 398.904 > 79.915 | 74057 | | 107.897 | 1.98 | NO | 97.2 |
| 17 | PFHxS | 355-46-4 | | 398.904 > 79.915 | 94525 | | 133.113 | | na | |
| 18 | M3PFHxS | INT STD | 8.56 | 401.926 > 80.317 | 9204 | | 11.369 | | na | 113.7 |
| 19 | br-PFOA | 335-67-1 | | 412.989 > 368.9 | | | ND | | YES | |
| 20 | L-PFOA | 335-67-1 | 9.35 | 412.989 > 368.9 | 941814 | | 155.269 | 8.57 | NO | 103.5 |
| 21 | M2PFOA | INT STD | 9.35 | 415.032 > 369.968 | 75404 | | 8.963 | | na | 89.6 |
| 22 | PFOA | 335-67-1 | | 412.989 > 368.9 | 941814 | | 155.269 | | na | |
| 23 | M8PFOA | INT STD | 9.35 | 420.989 > 375.979 | 72165 | | 10.036 | | na | 100.4 |
| 24 | 6:2FTS | 27619-97-2 | 9.31 | 426.989 > 406.921 | 12931 | | 97.691 | 0.69 | NO | 68.6 |
| 25 | M2-6:2FTS | INT STD | 9.31 | 428.989 > 408.917 | 5548 | | 18.939 | | na | 189.4 |
| 26 | PFHpS | 375-92-8 | 9.44 | 448.926 > 80.257 | 71785 | | 137.523 | 1.08 | NO | 96.5 |
| 27 | PFNA | 375-95-1 | 10.10 | 462.989 > 418.931 | 780273 | | 146.509 | 4.07 | NO | 97.7 |
| 28 | M9PFNA | INT STD | 10.10 | 472.053 > 426.947 | 71578 | | 10.182 | | na | 101.8 |
| 29 | br-PFOS | 1763-23-1 | 9.96 | 498.968 > 79.918 | 25842 | M5 | 28.096 | 3.86 | NO | 93.7 |
| 30 | L-PFOS | 1763-23-1 | 10.15 | 498.968 > 79.918 | 57191 | | 102.137 | 1.37 | NO | 93.3 |
| 31 | PFOS | 1763-23-1 | | 498.968 > 79.918 | 83032 | | 130.233 | | na | |
| 32 | M4PFOS | INT STD | 10.15 | 503.032 > 80.306 | 7044 | | 8.293 | | na | 82.9 |
| 33 | M8PFOS | INT STD | 10.15 | 507.053 > 80.294 | 9728 | | 11.891 | | na | 118.9 |
| 34 | PFDA | 335-76-2 | 10.72 | 513.053 > 468.906 | 719876 | | 153.759 | 5.88 | NO | 102.5 |
| 35 | M2PFDA | INT STD | 10.72 | 515.053 > 469.934 | 54996 | | 8.314 | | na | 83.1 |
| 36 | M6PFDA | INT STD | 10.72 | 519.053 > 473.931 | 61123 | | 10.102 | | na | 101.0 |
| 37 | 8:2FTS | 39108-34-4 | 10.71 | 527.032 > 507.079 | 16265 | | 146.456 | 1.65 | NO | 101.7 |
| 38 | M2-8:2FTS | INT STD | 10.71 | 529.053 > 508.945 | 2549 | | 14.389 | | na | 143.9 |
| 39 | PFNS | 68259-12-1 | 10.75 | 548.989 > 80.249 | 88919 | | 132.956 | 1.37 | NO | 92.3 |


all concentration units in (ng/mL)

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Printed: Friday, February 28, 2020 09:27:54 Eastern Standard Time

**ID: IA2-537STD150**
**Name: I18533**
**Date: 27-Feb-2020**
**Time: 15:08:31**
**Description: WG1345050,,537_200120_7**
**Instrument: XEVO-TQSmicro#QEA0276**
**User: LCMS01:SG**
**Inlet Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\LCMS_537_ISO_MeOH**
**Tune Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\190709_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

| | Name | CAS | RT | Trace | Area | M Flag | Conc (ng/mL) | Ion Ratio | Ratio Flag | %Rec |
|---|---|---|---|---|---|---|---|---|---|---|
| 40 | d3-NMeFOSAA | INT STD | 11.09 | 573.096 > 418.987 | 9105 | | 11.359 | | na | 113.6 |
| 41 | NMeFOSAA | 2355-31-9 | 11.09 | 570.053 > 418.917 | 82881 | | 152.312 | 2.82 | NO | 101.5 |
| 42 | PFUnA | 2058-94-8 | 11.26 | 562.989 > 518.903 | 693445 | | 147.520 | 7.38 | NO | 98.3 |
| 43 | M7-PFUDA | INT STD | 11.25 | 570.053 > 524.923 | 52988 | | 9.966 | | na | 99.7 |
| 44 | PFDS | 335-77-3 | 11.26 | 598.926 > 80.314 | 87936 | | 134.469 | 1.65 | NO | 92.9 |
| 45 | FOSA | 754-91-6 | 11.13 | 497.989 > 78.245 | 328542 | | 146.808 | 290.24 | NO | 97.9 |
| 46 | M8FOSA | INT STD | 11.13 | 506.053 > 78.286 | 27182 | | 11.209 | | na | 112.1 |
| 47 | d5-NEtFOSAA | INT STD | 11.38 | 589.117 > 418.929 | 7148 | | 12.229 | | na | 122.3 |
| 48 | NEtFOSAA | 2991-50-6 | 11.38 | 583.989 > 418.927 | 84147 | | 137.999 | 3.06 | NO | 92.0 |
| 49 | PFDoA | 307-55-1 | 11.72 | 612.989 > 568.967 | 869214 | | 165.361 | 15.03 | NO | 110.2 |
| 50 | MPFDOA | INT STD | 11.72 | 614.989 > 569.92 | 57897 | | 10.128 | | na | 101.3 |
| 51 | PFTrDA | 72629-94-8 | 12.14 | 663.053 > 618.969 | 765333 | | 154.889 | 11.40 | NO | 103.3 |
| 52 | PFTA | 376-06-7 | 12.48 | 713.053 > 668.976 | 766912 | | 149.127 | 8.78 | NO | 99.4 |
| 53 | M2PFTEDA | INT STD | 12.48 | 715.053 > 669.945 | 69409 | | 10.773 | | na | 107.7 |


all concentration units in (ng/mL)

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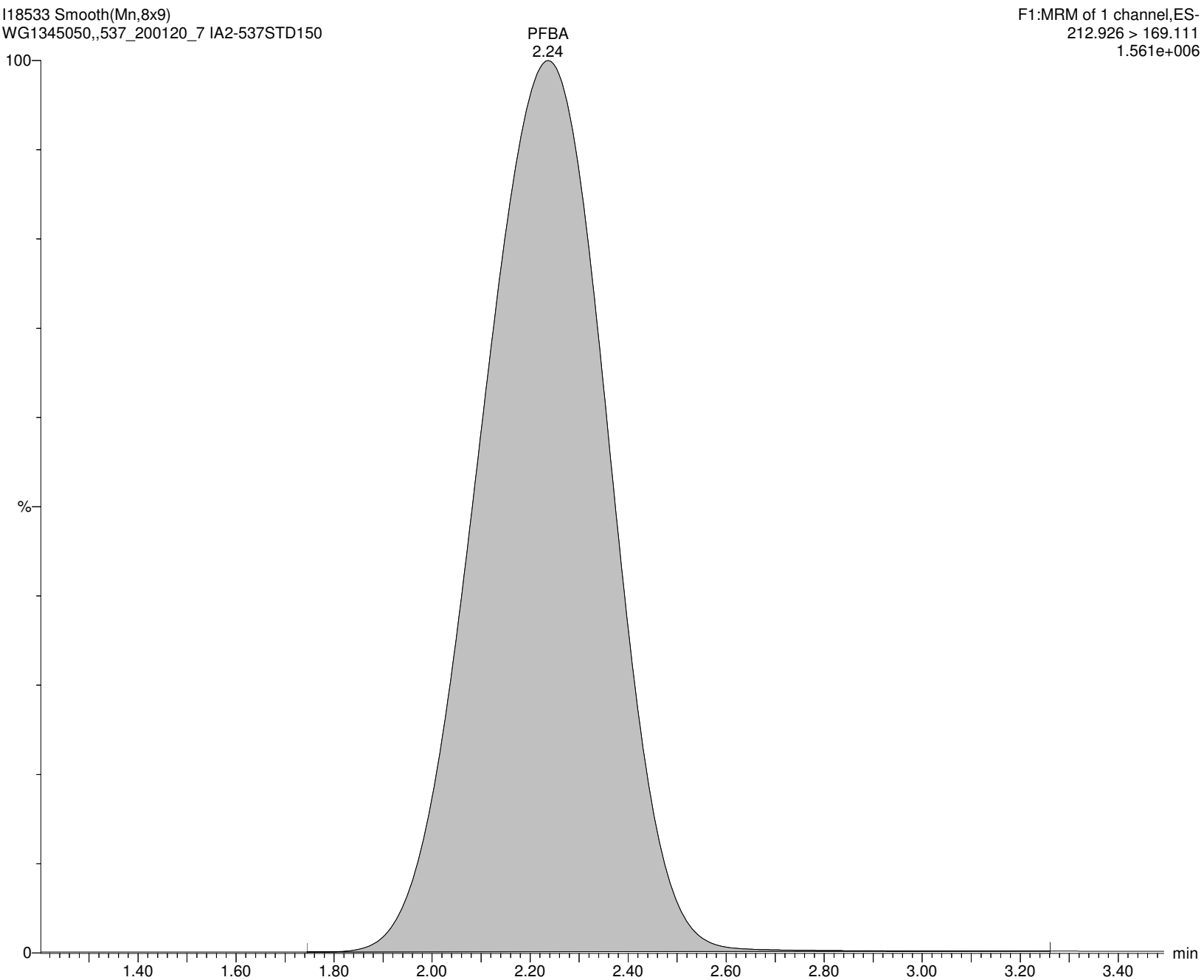
**PFBA**





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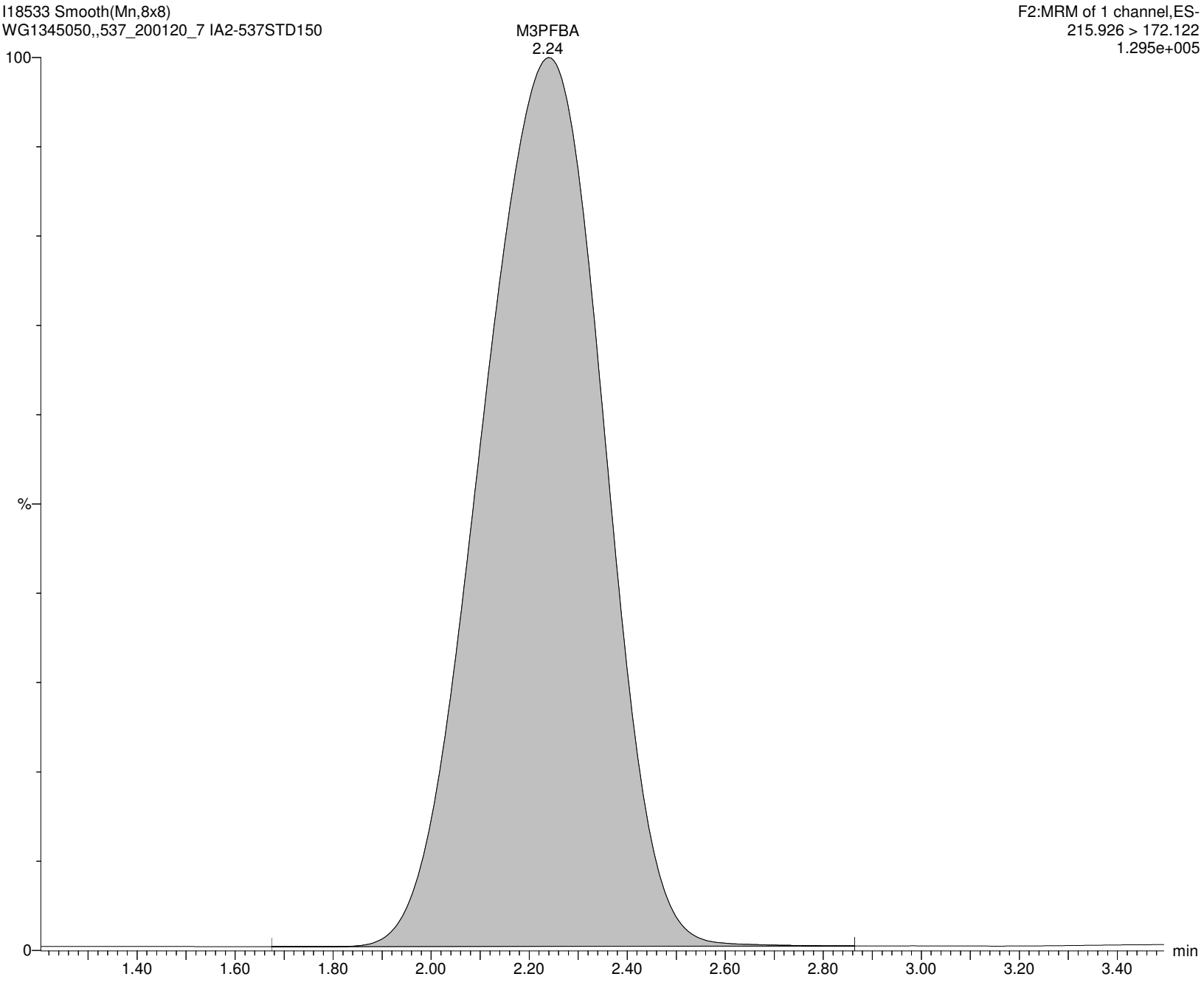
**M3PFBA**





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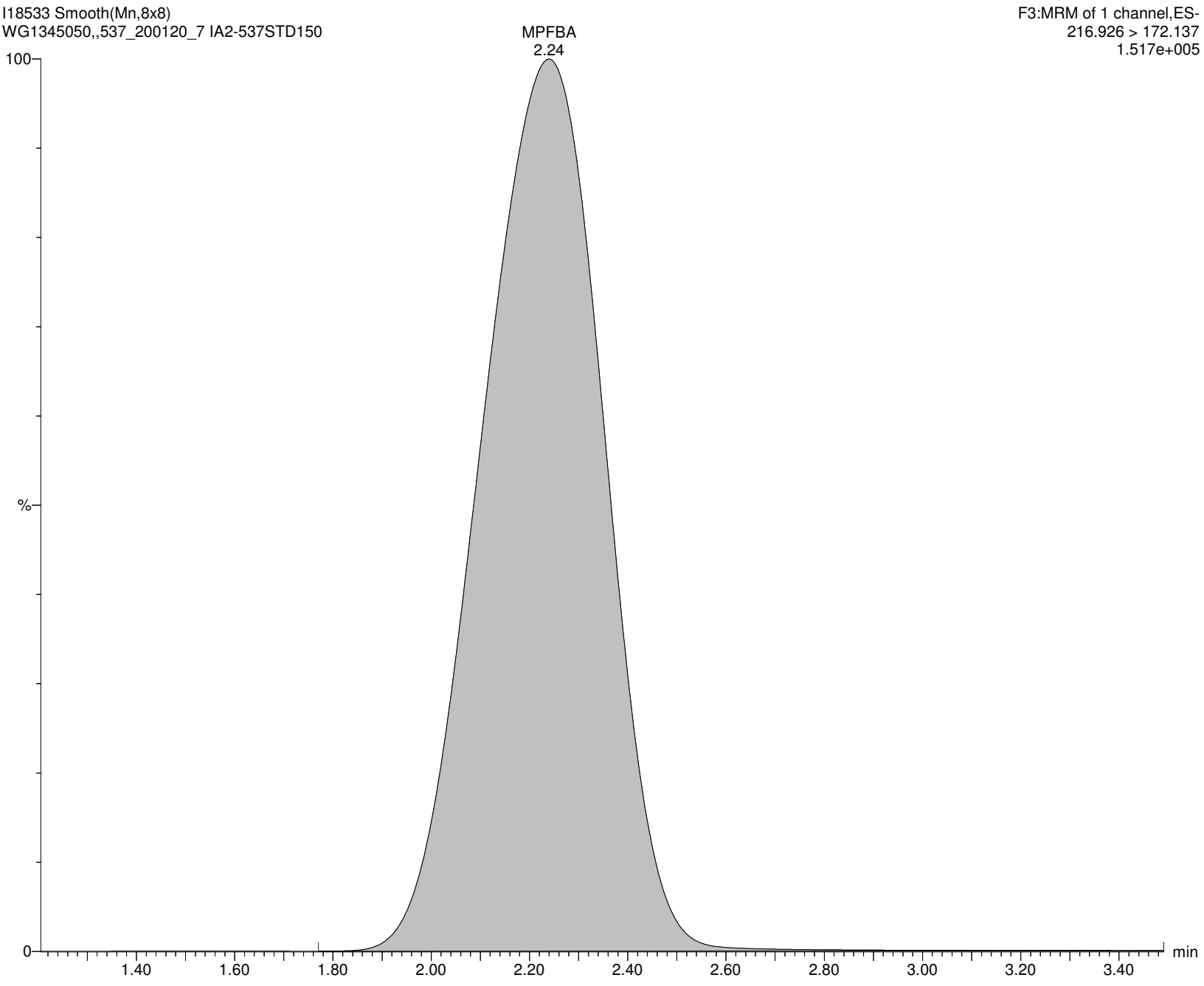
**MPFBA**





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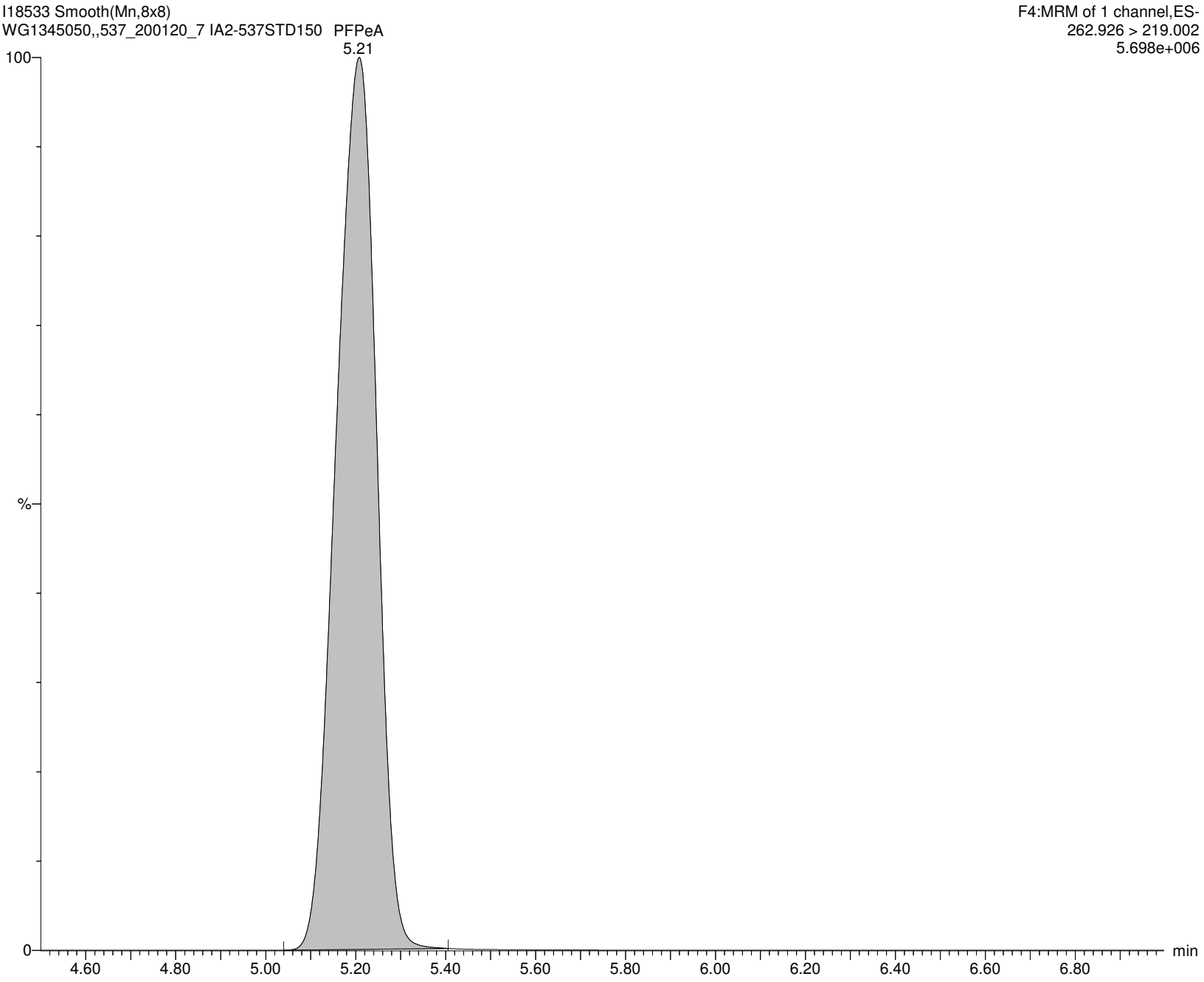
**MS Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**PFPeA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICAL_A.qld
Last Altered: Friday, February 28, 2020 09:12:40 Eastern Standard Time
Printed: Friday, February 28, 2020 09:27:54 Eastern Standard Time

**Name: I18533**
**ID: IA2-537STD150**
**Date: 27-Feb-2020**
**Time: 15:08:31**
**Description: WG1345050,,537_200120_7**
**User: LCMS01:SG**
**Vial: 1:A,8**
**Instrument: XEVO-TQSmicro#QEA0276**
**Inlet Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\LCMS_537_ISO_MeOH**
**Tune Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\190709_TUNE.IPR**
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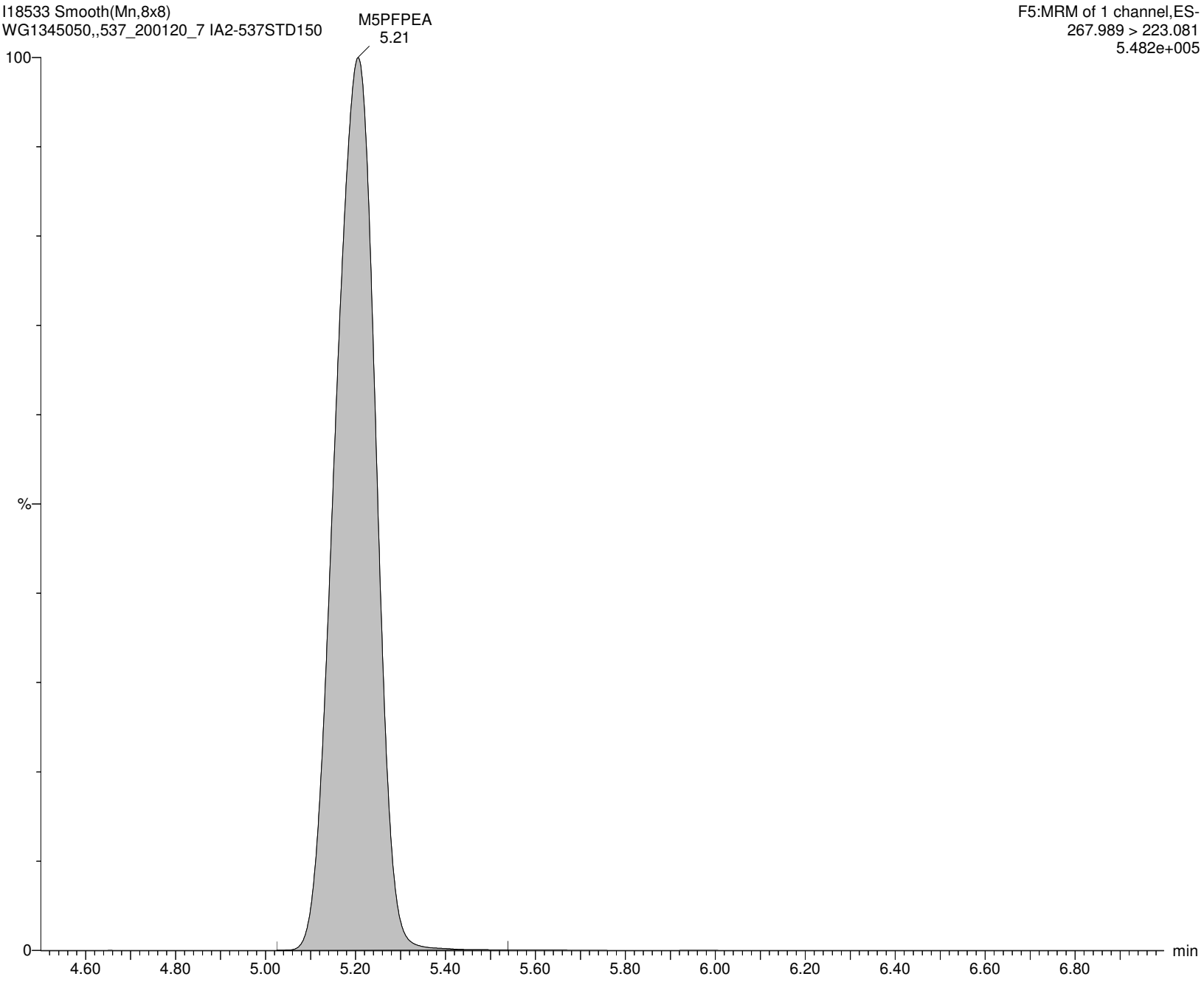
**M5PFPEA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
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Last Altered: Friday, February 28, 2020 09:12:40 Eastern Standard Time
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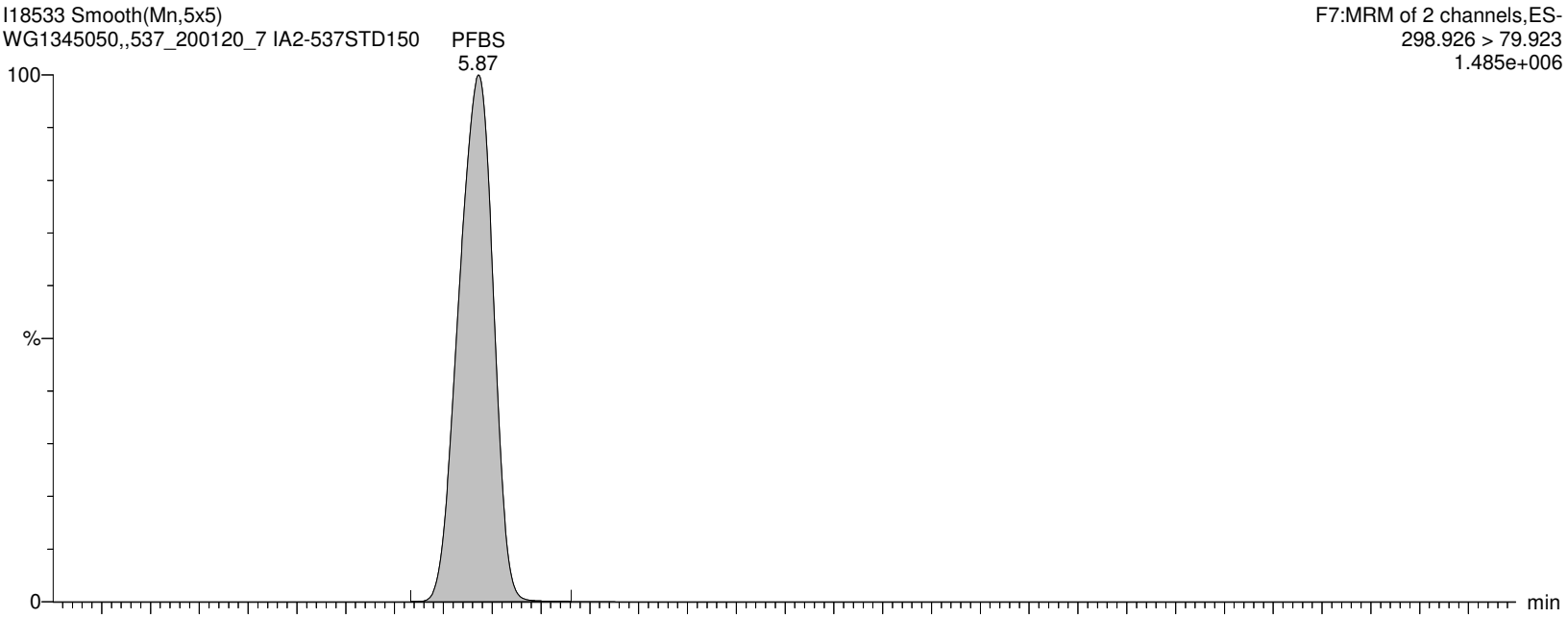
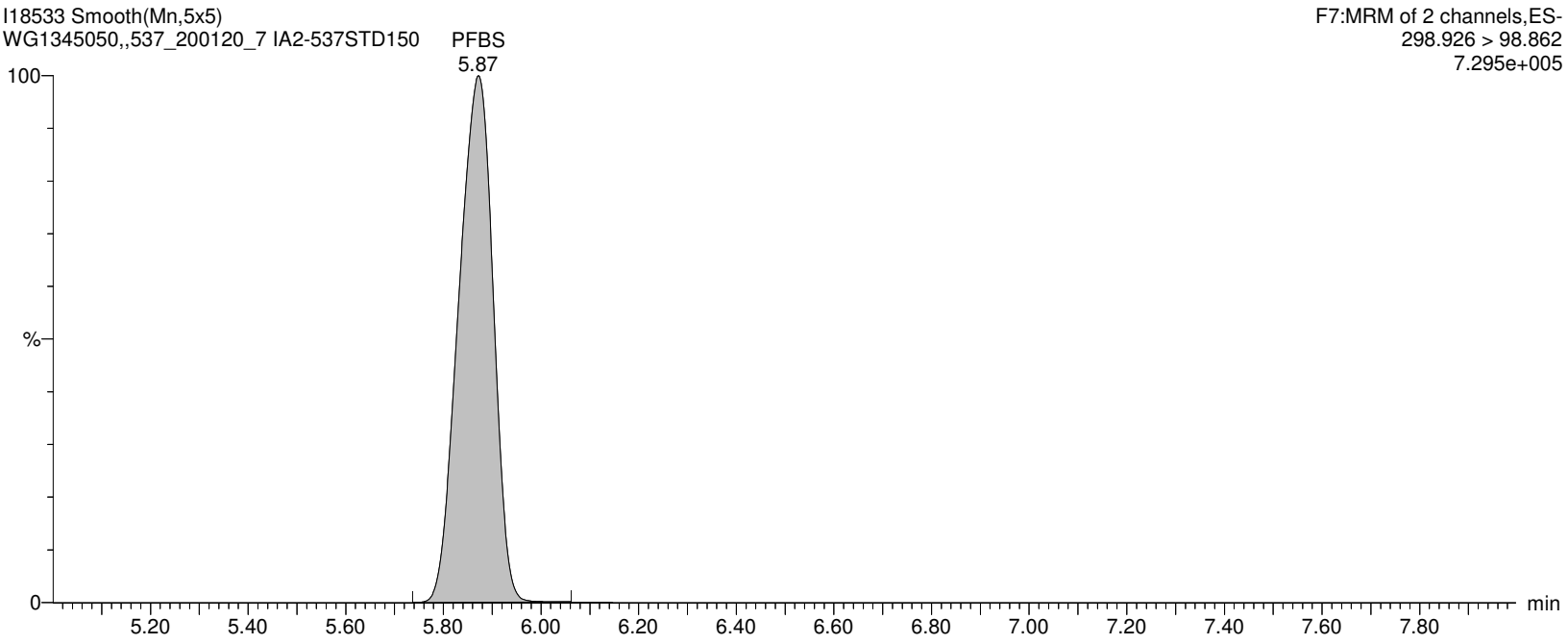
**PFBS**





all concentration units in (ng/mL)

Alpha Analytical Inc.
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**Vial: 1:A,8**
**Instrument: XEVO-TQSmicro#QEA0276**
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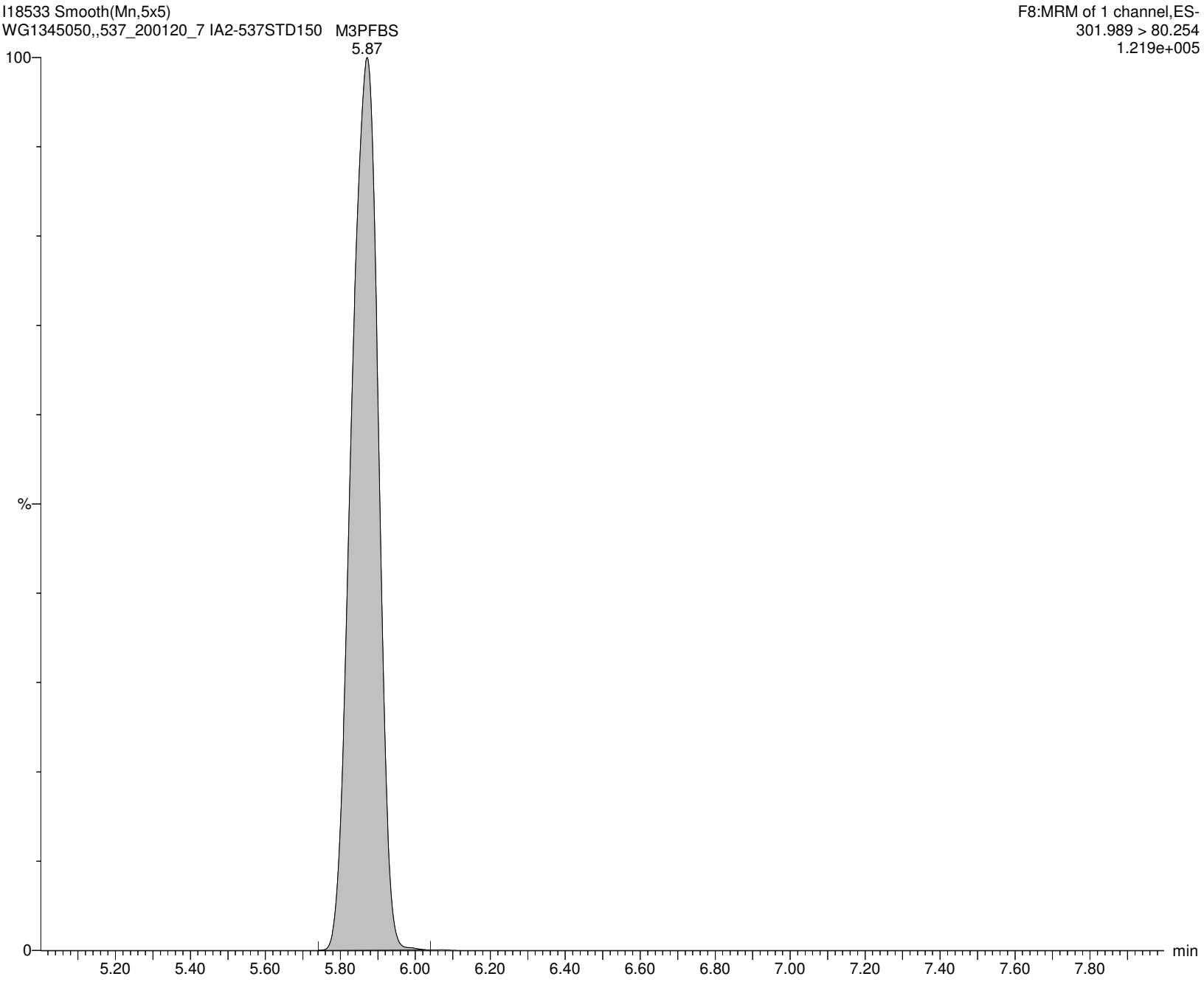
**M3PFBS**





all concentration units in (ng/mL)

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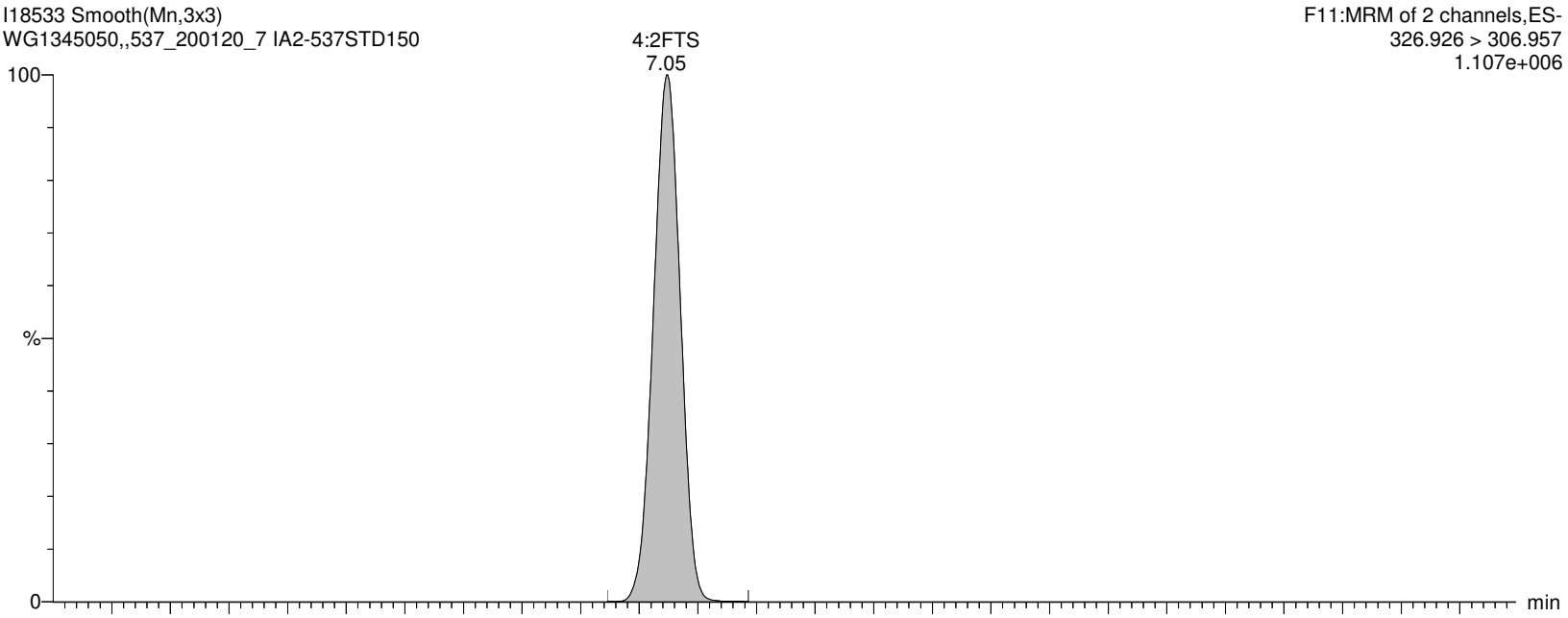
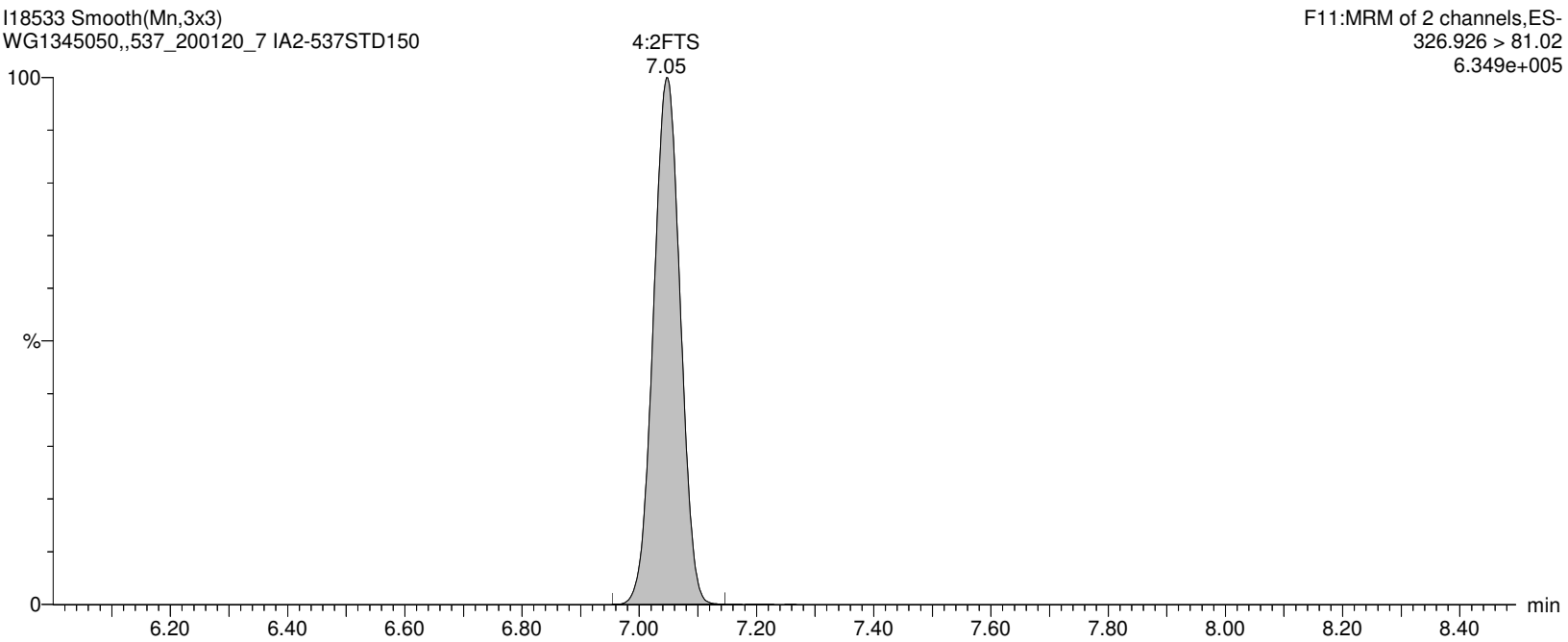
**4:2FTS**





all concentration units in (ng/mL)

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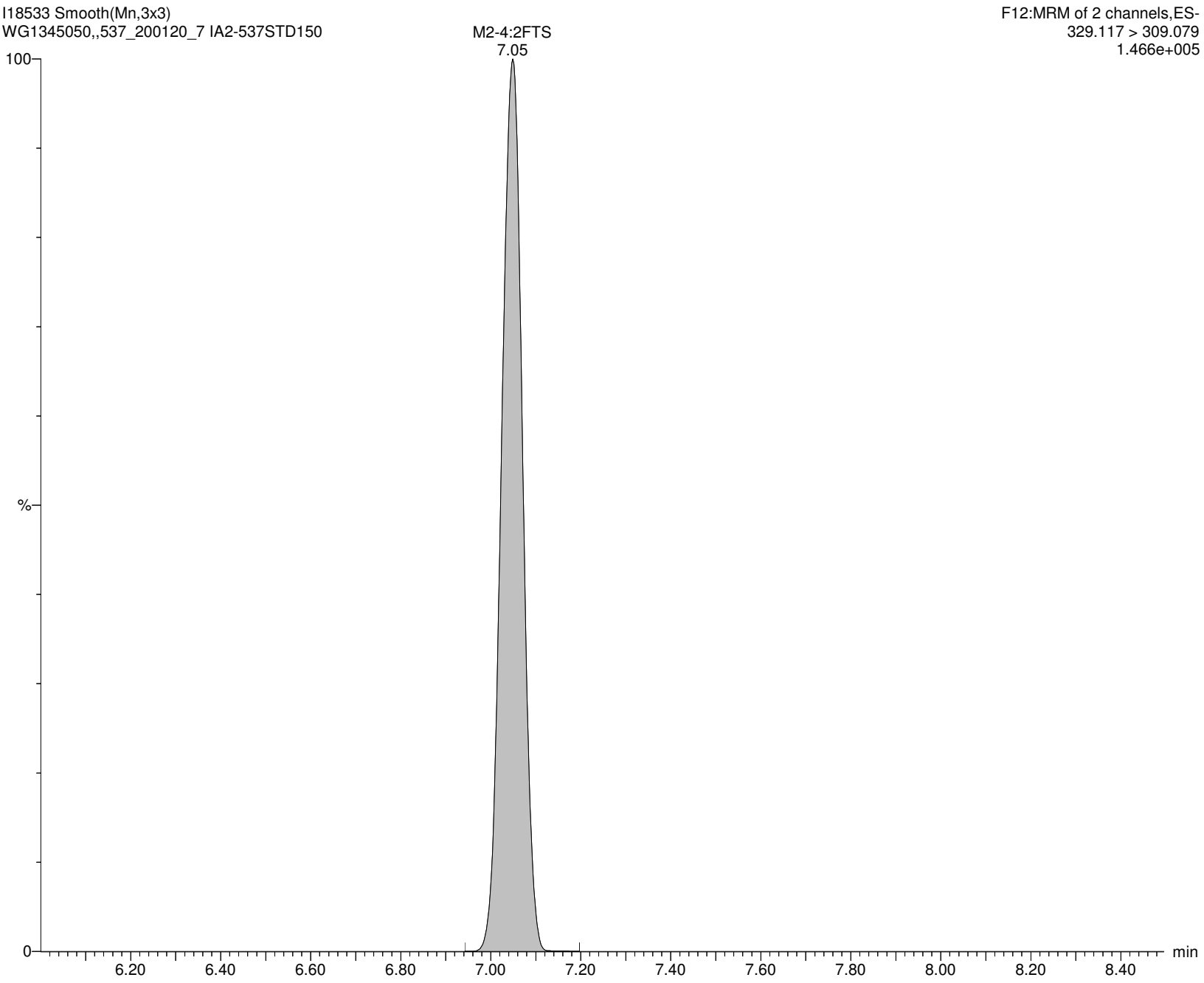
**M2-4:2FTS**





all concentration units in (ng/mL)

Alpha Analytical Inc.
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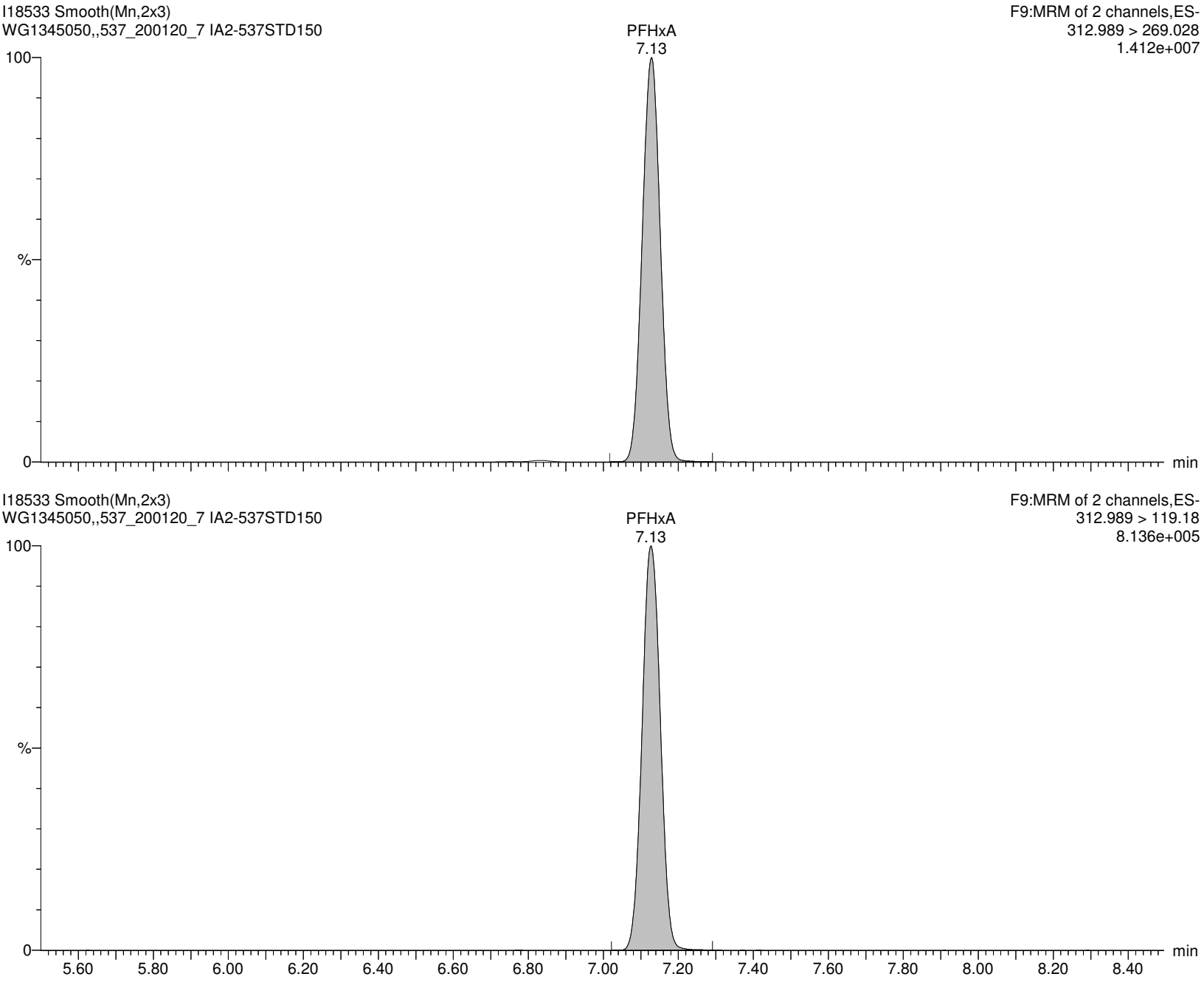
**PFHxA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
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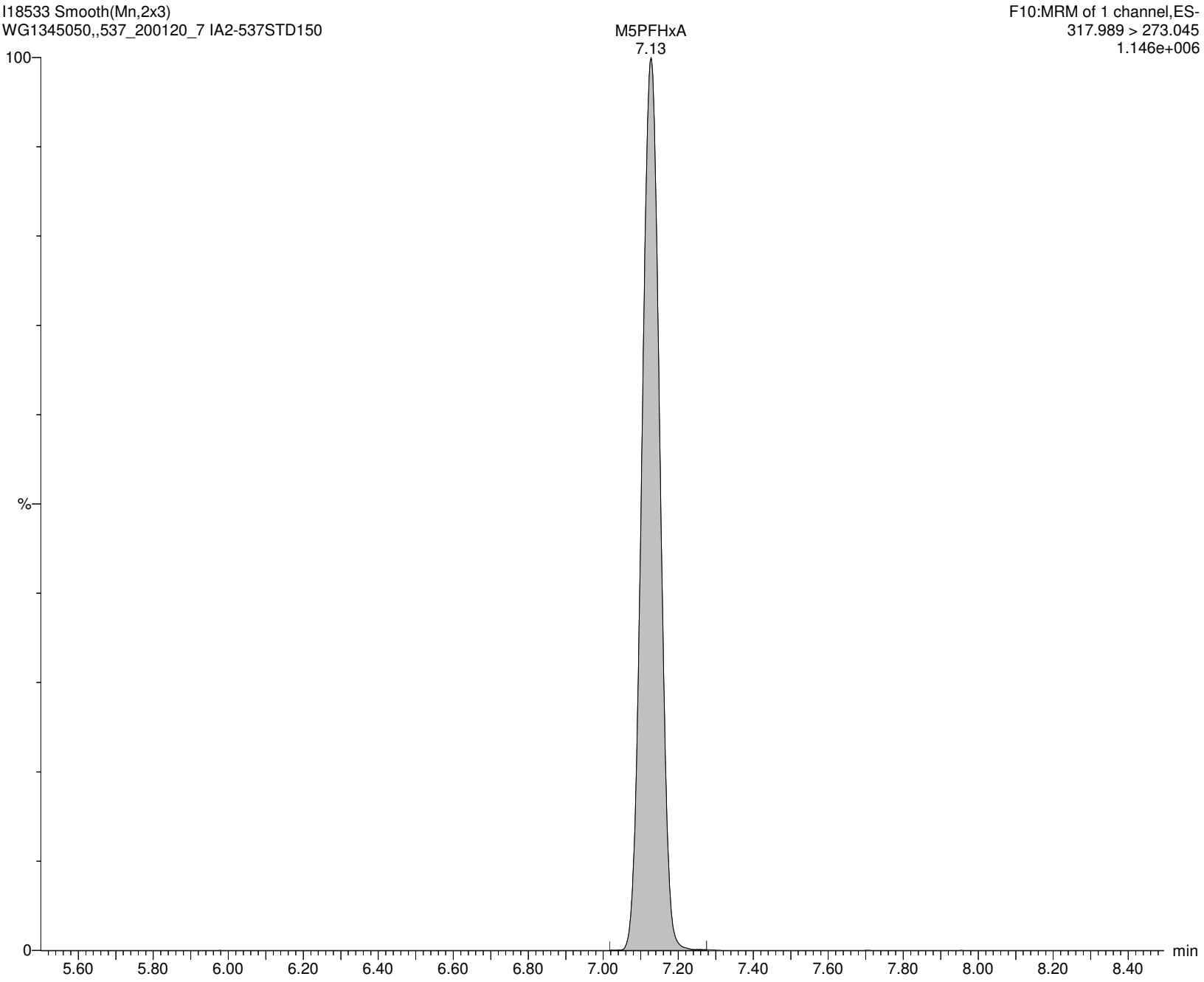
**M5PFHxA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
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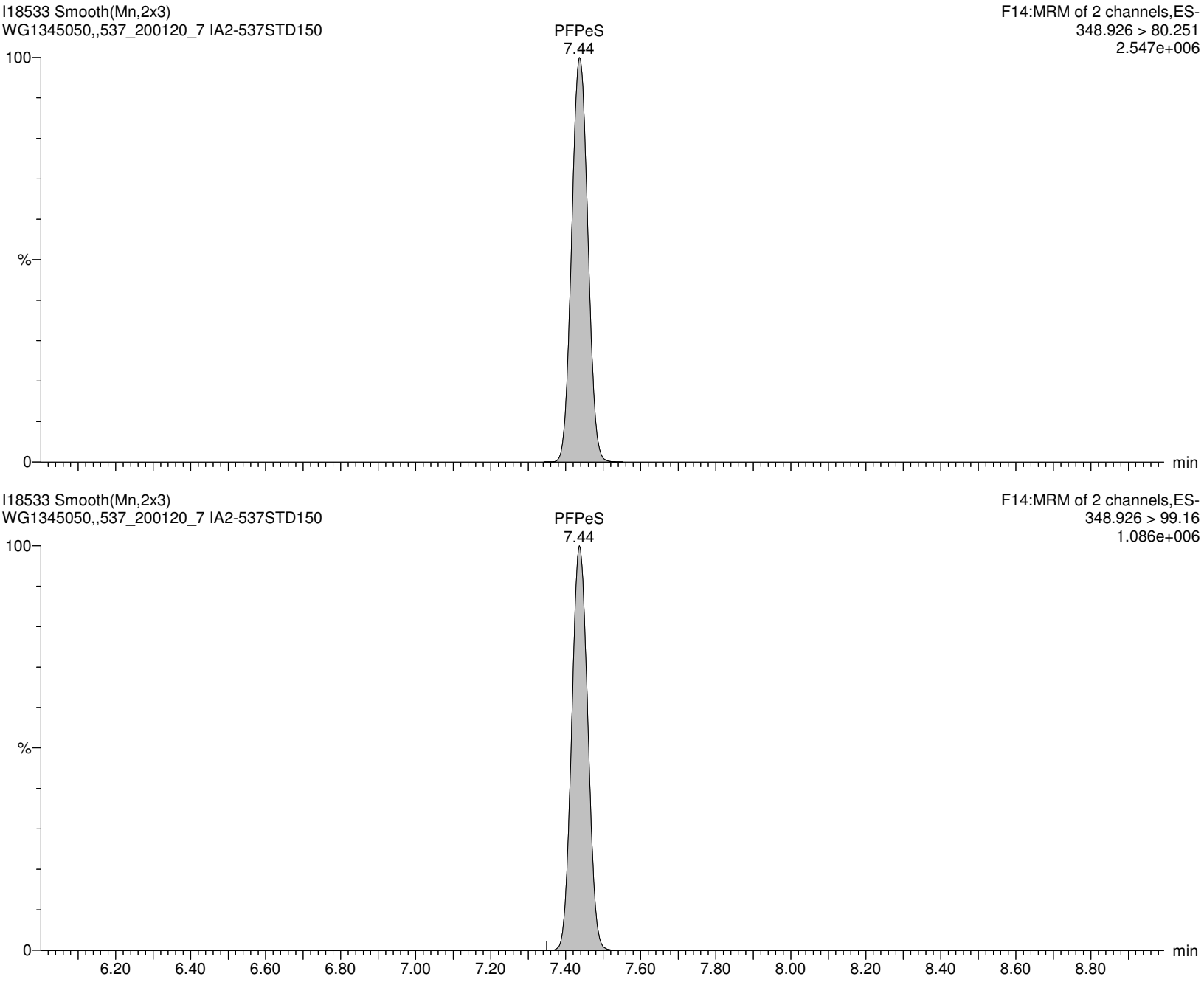



all concentration units in (ng/mL)

Alpha Analytical Inc.
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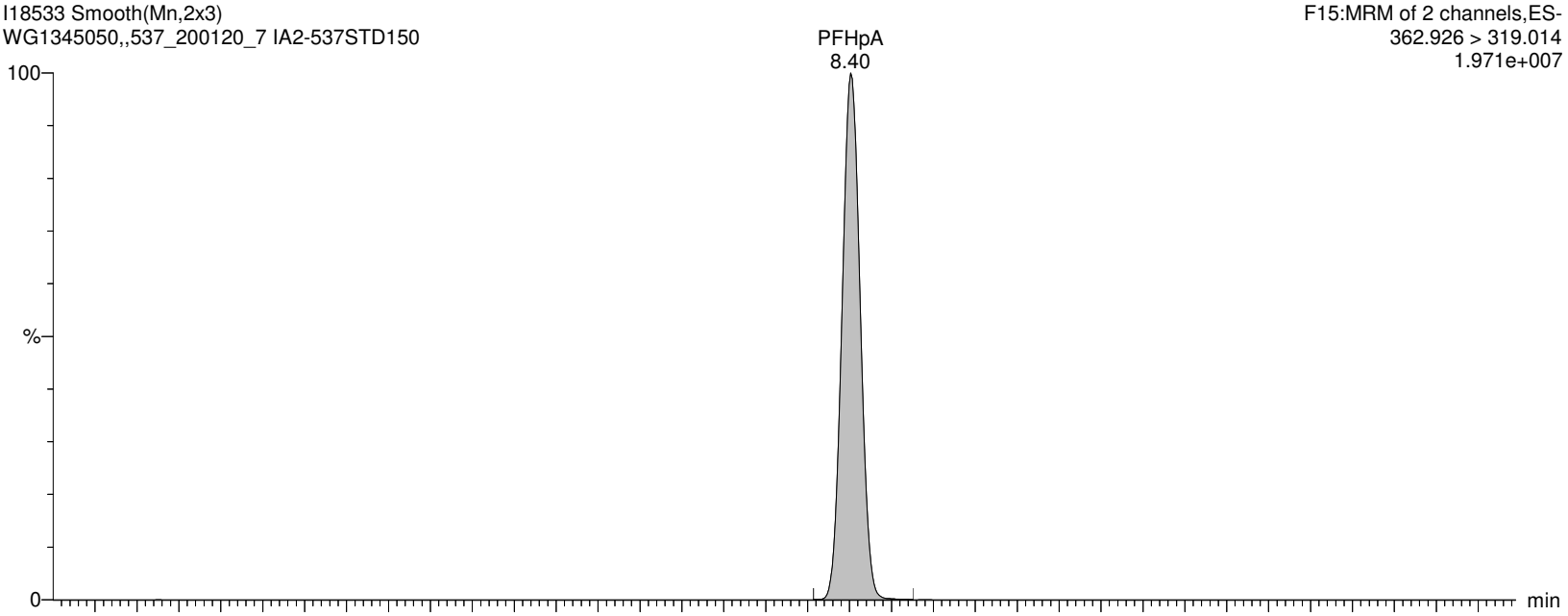
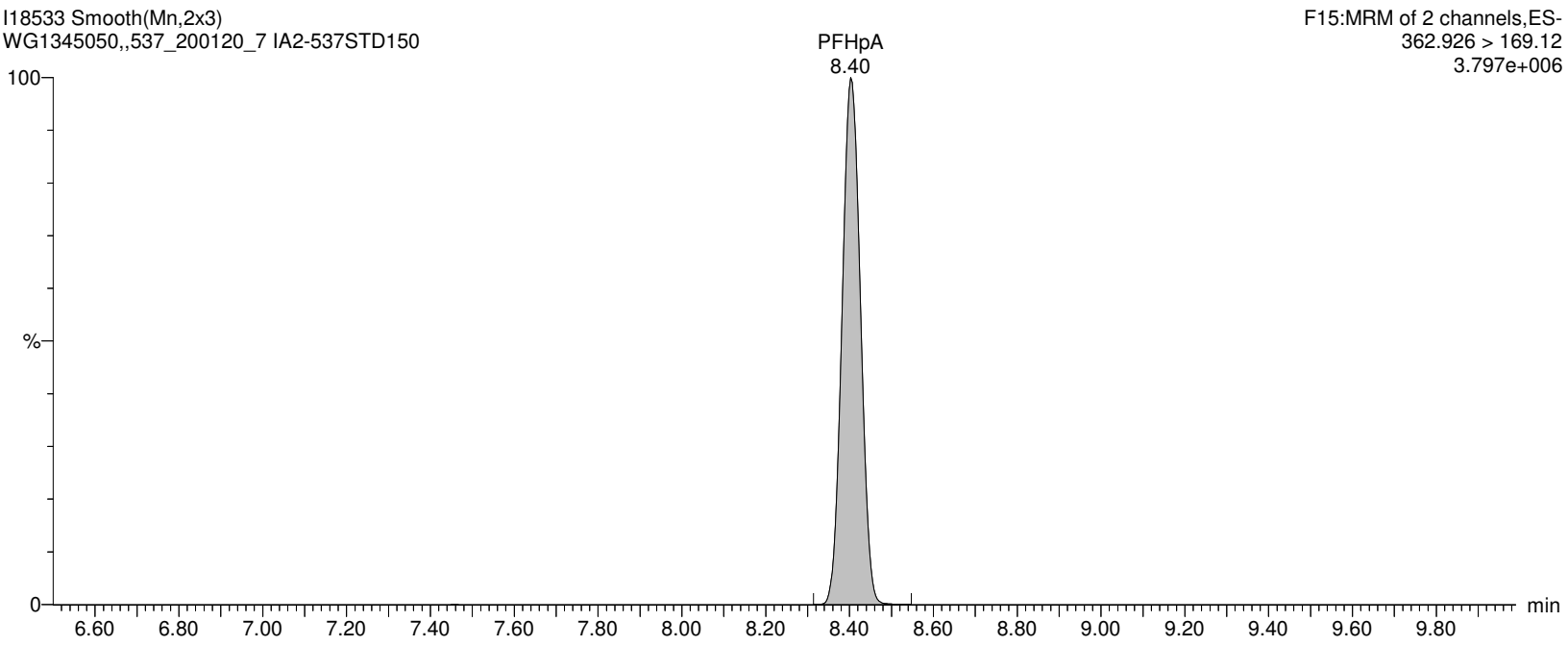
**PFHpA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
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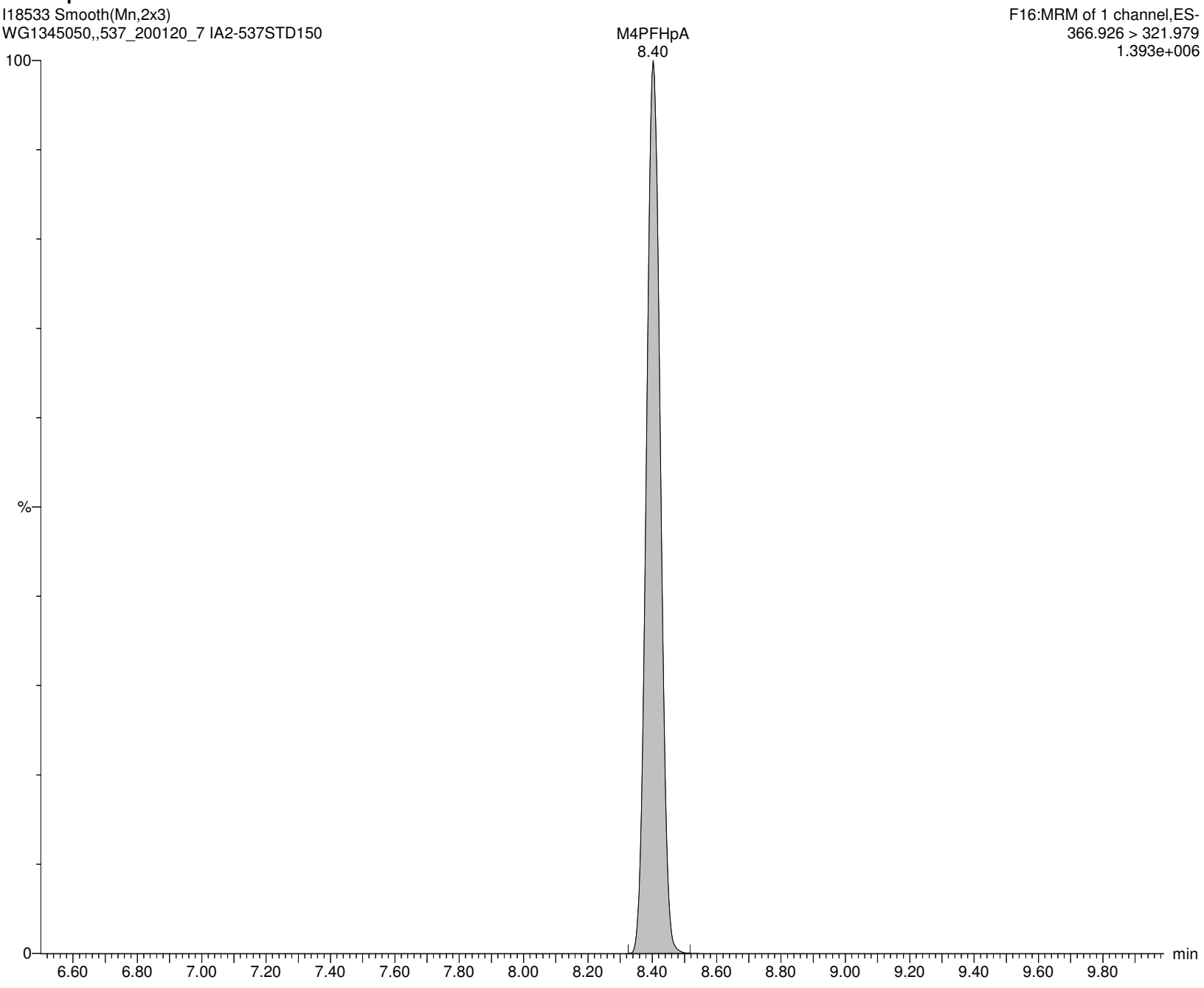



all concentration units in (ng/mL)

Alpha Analytical Inc.
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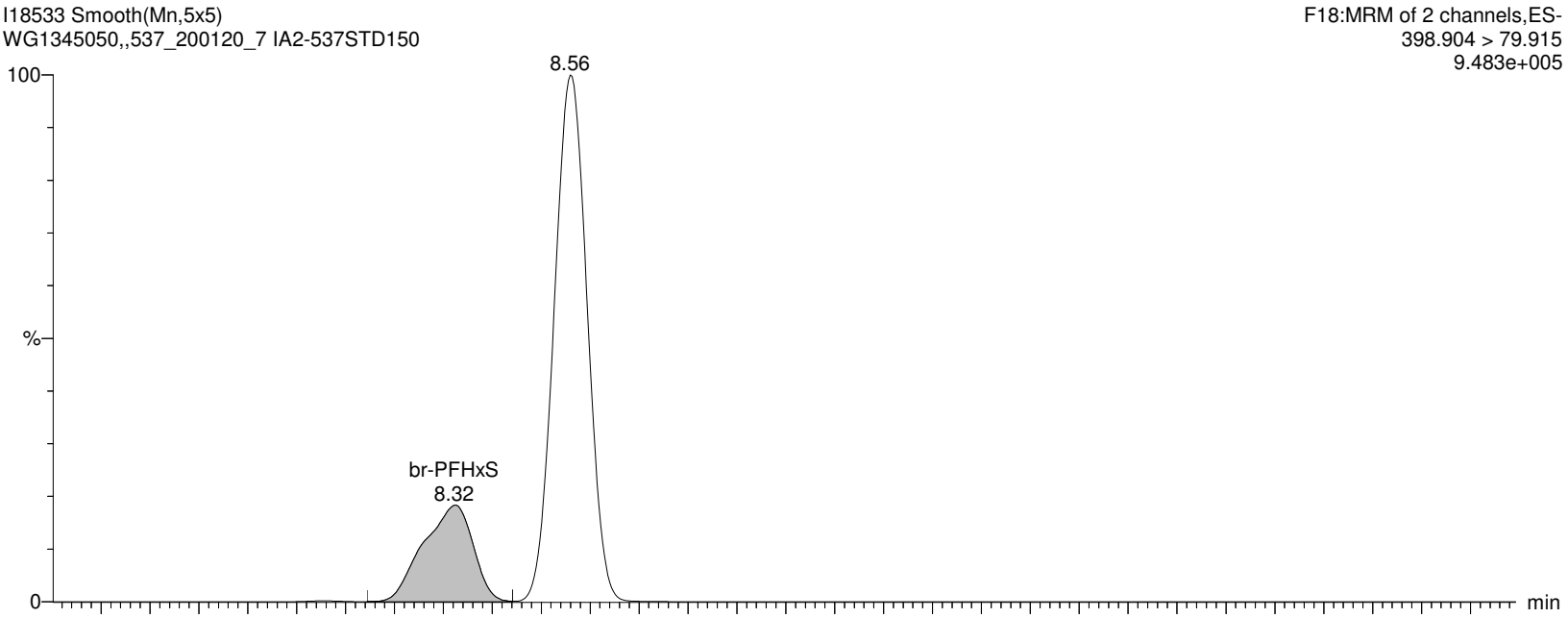
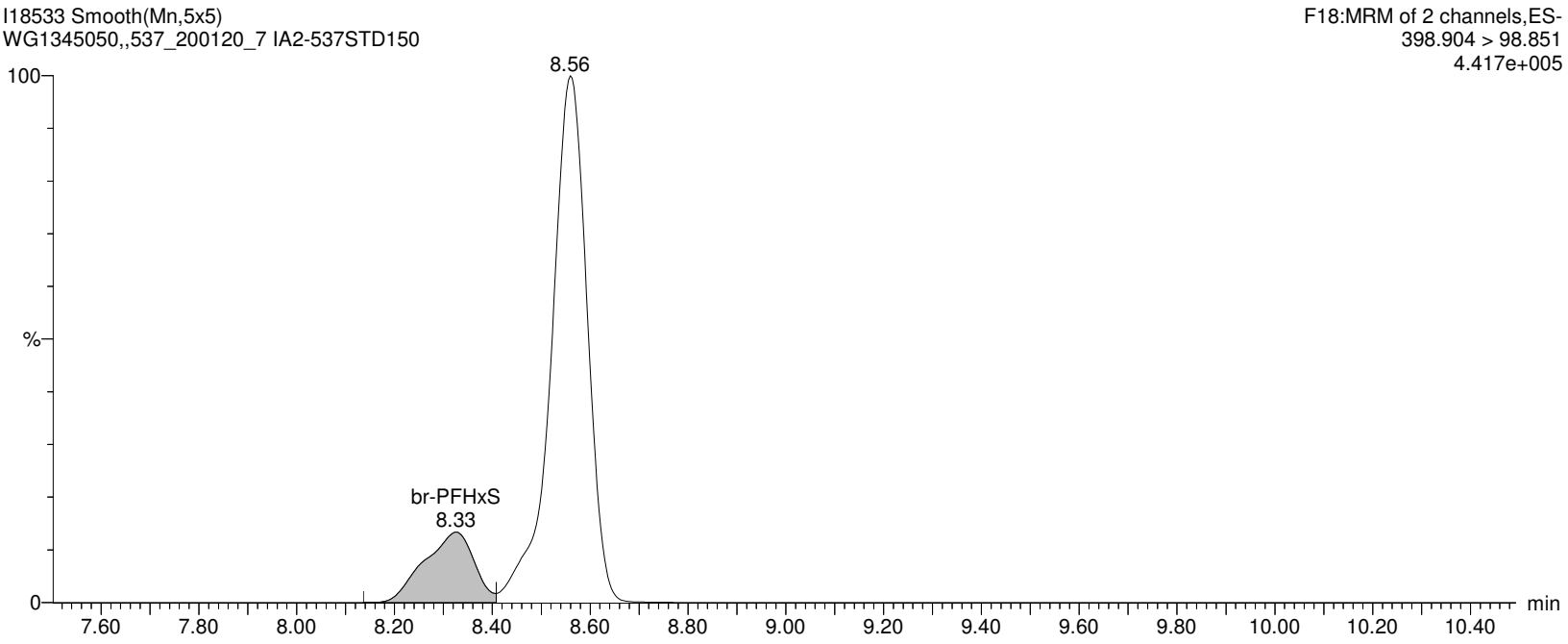
**br-PFHxS**





all concentration units in (ng/mL)

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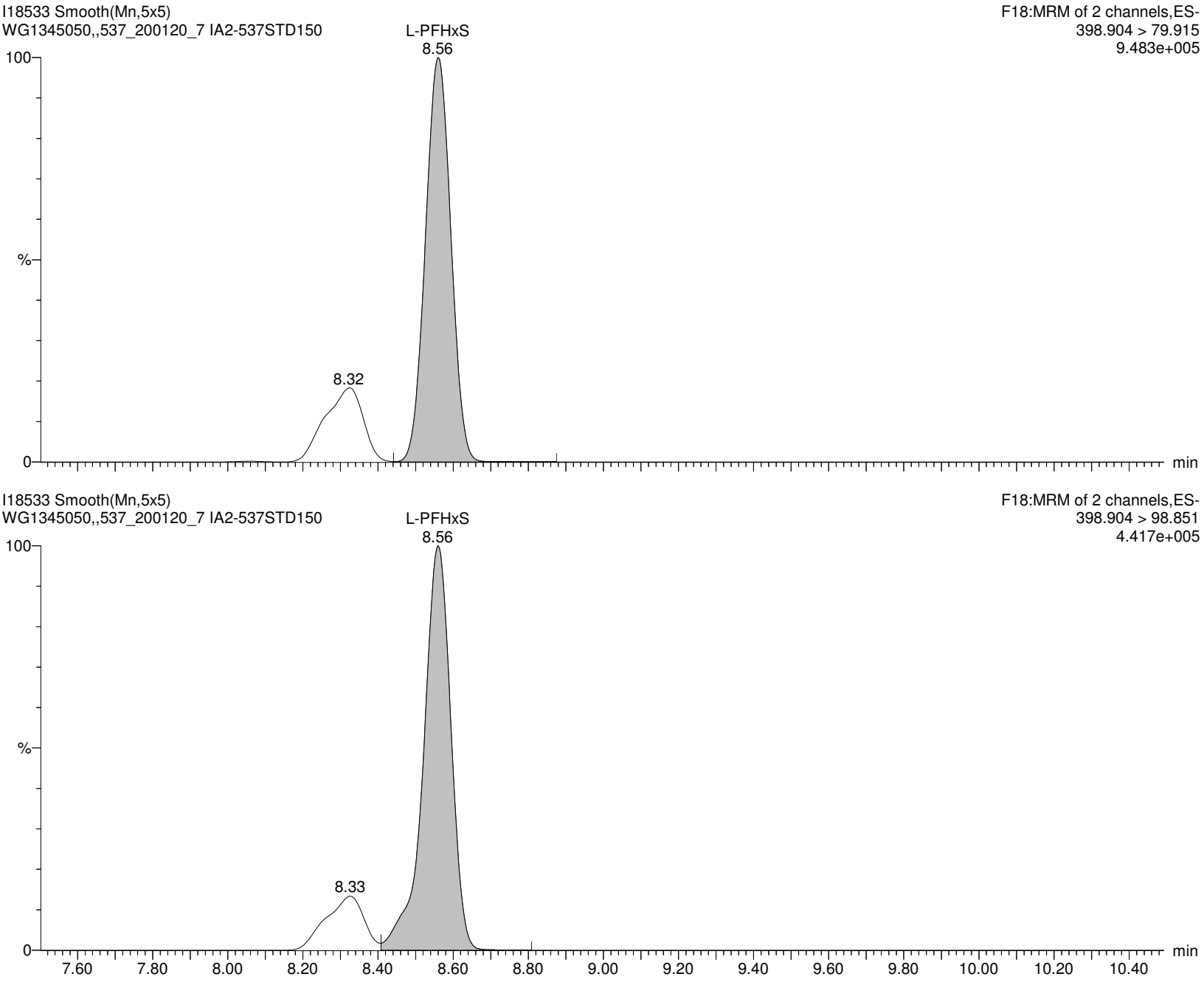
**L-PFHxS**





all concentration units in (ng/mL)

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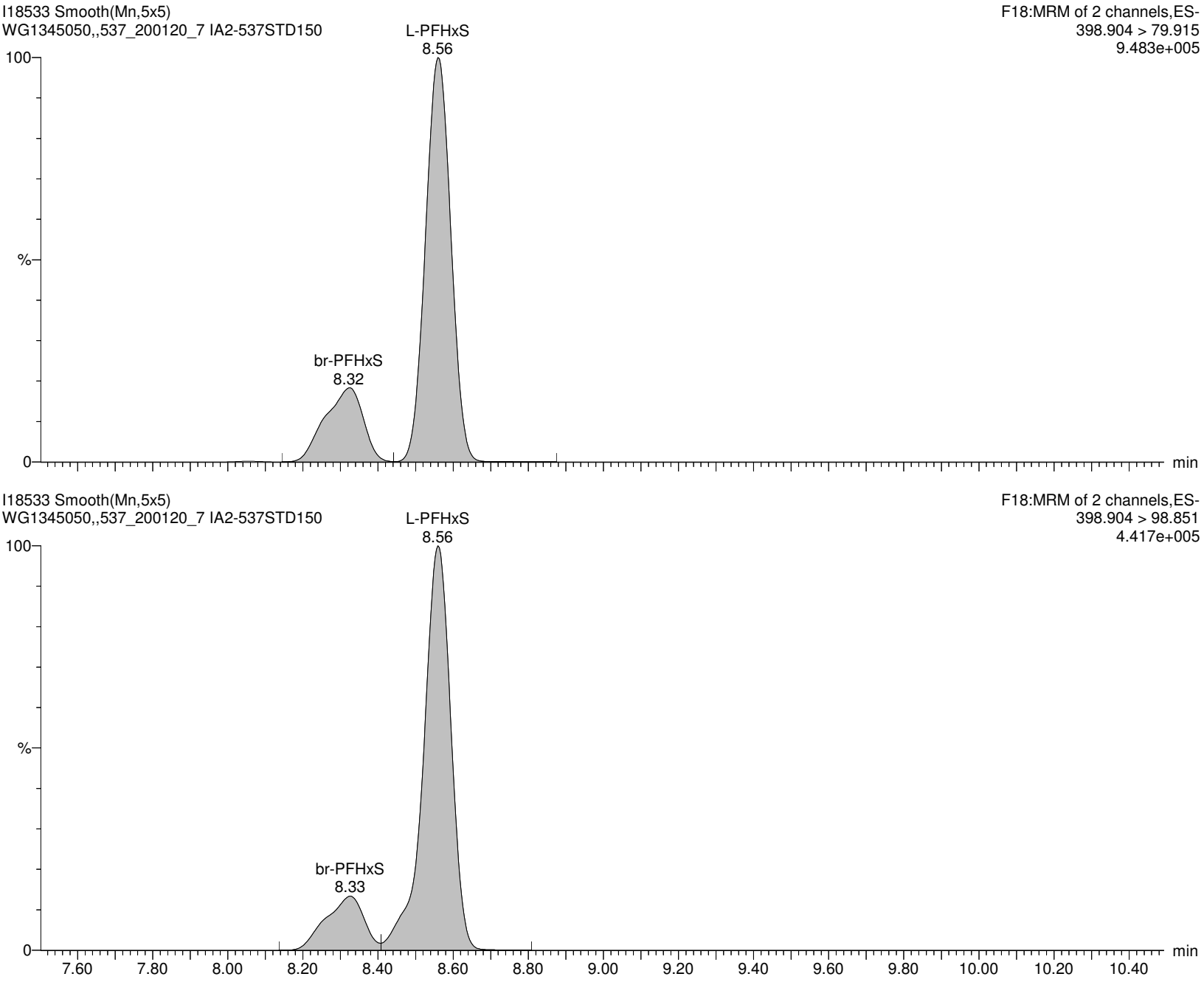



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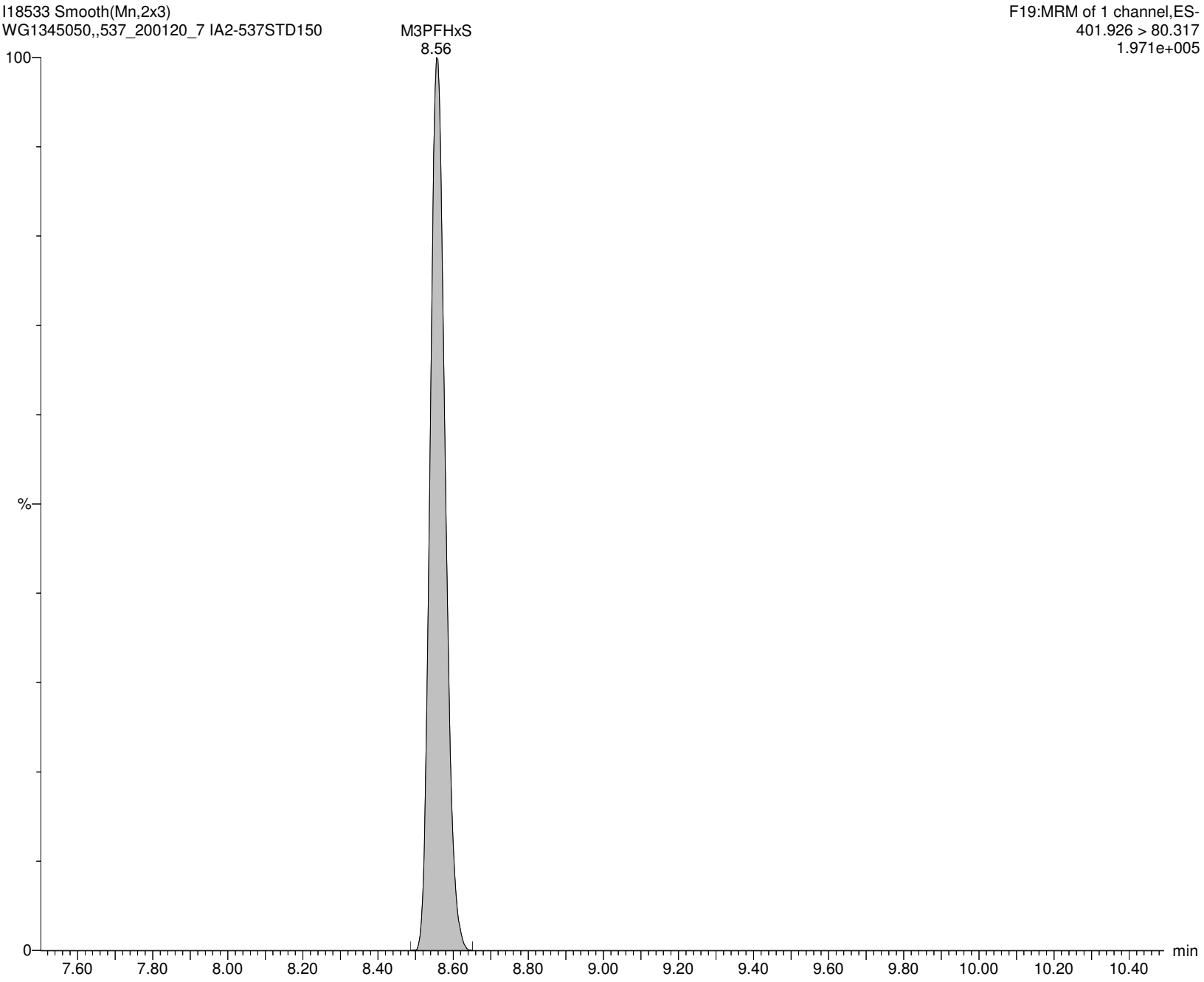
**M3PFHxS**





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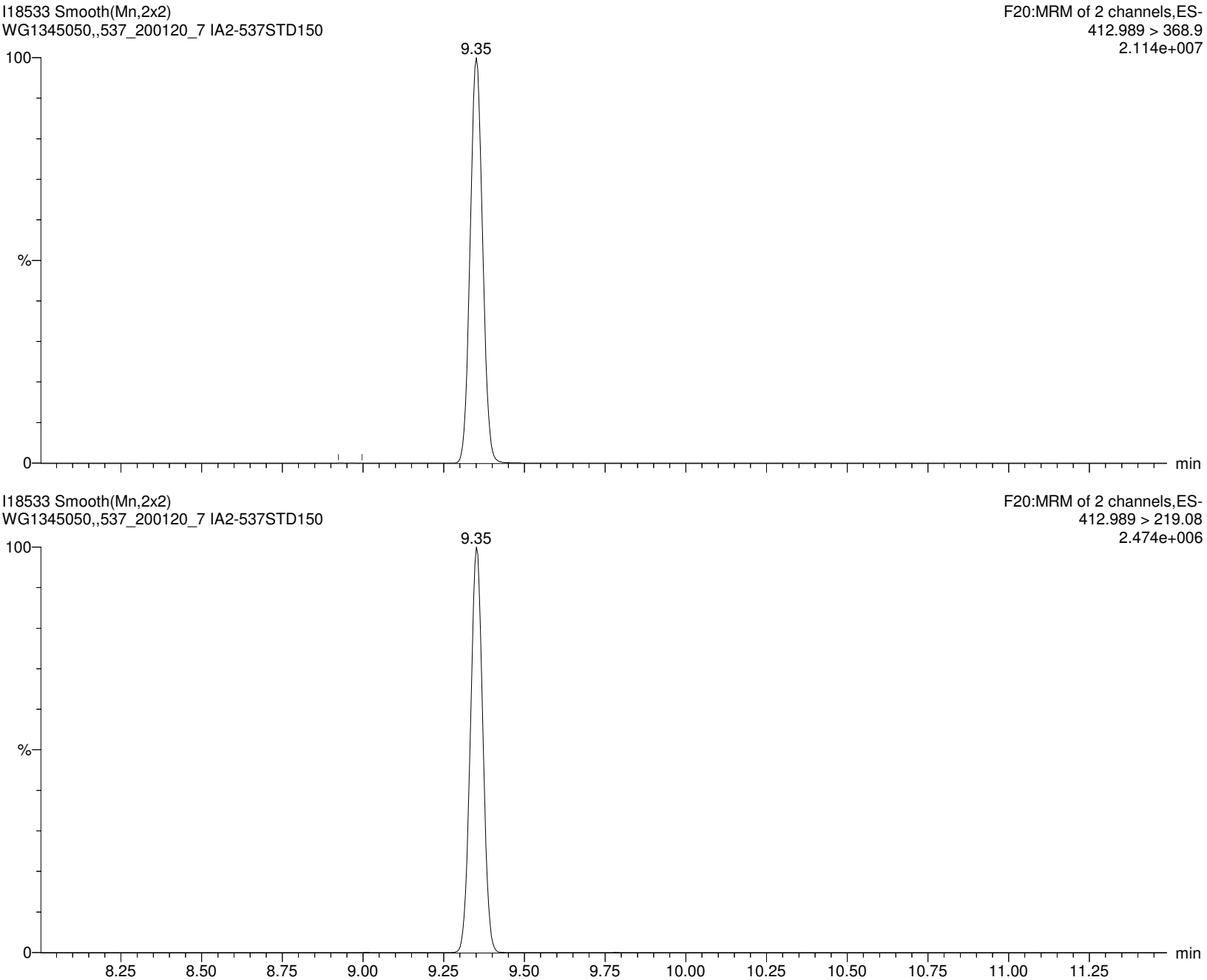
**br-PFOA**





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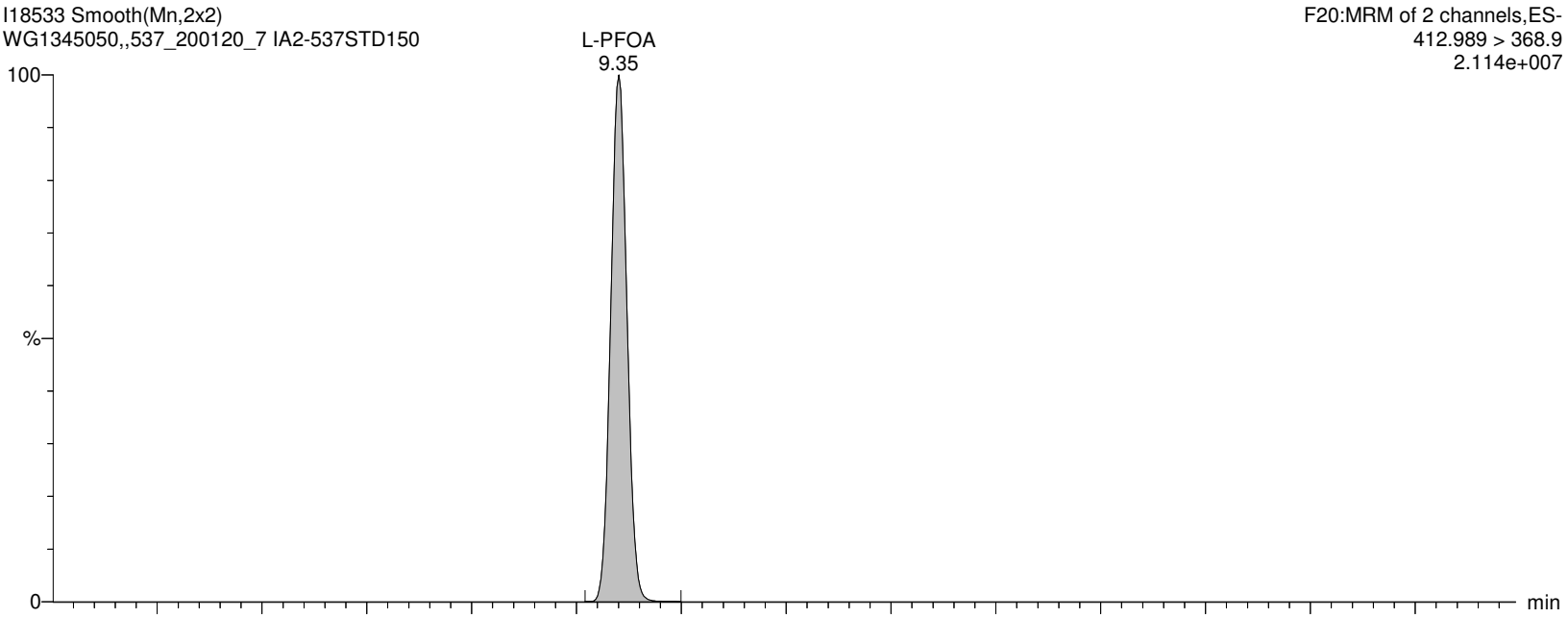
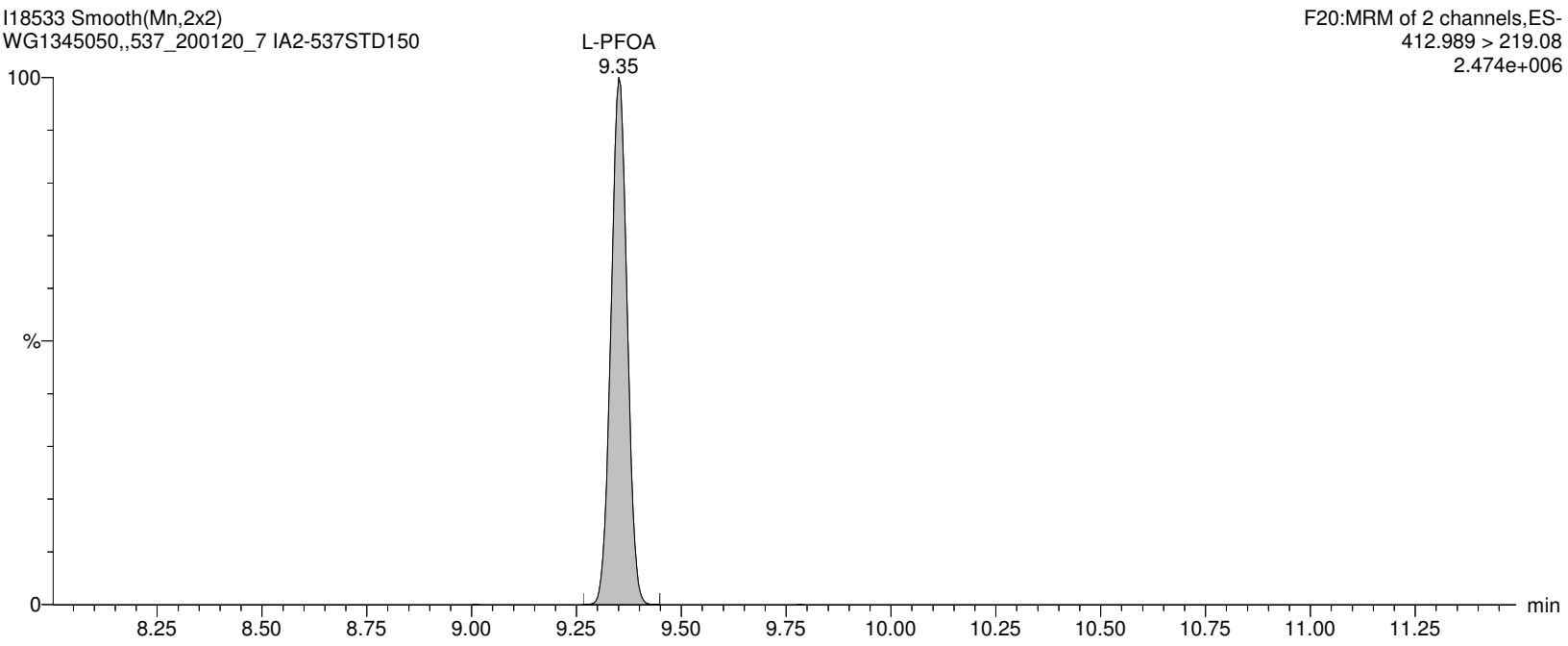
**L-PFOA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICAL_A.qld
Last Altered: Friday, February 28, 2020 09:12:40 Eastern Standard Time
Printed: Friday, February 28, 2020 09:27:54 Eastern Standard Time

**Name: I18533**
**ID: IA2-537STD150**
**Date: 27-Feb-2020**
**Time: 15:08:31**
**Description: WG1345050,,537_200120_7**
**User: LCMS01:SG**
**Vial: 1:A,8**
**Instrument: XEVO-TQSmicro#QEA0276**
**Inlet Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\LCMS_537_ISO_MeOH**
**Tune Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\190709_TUNE.IPR**
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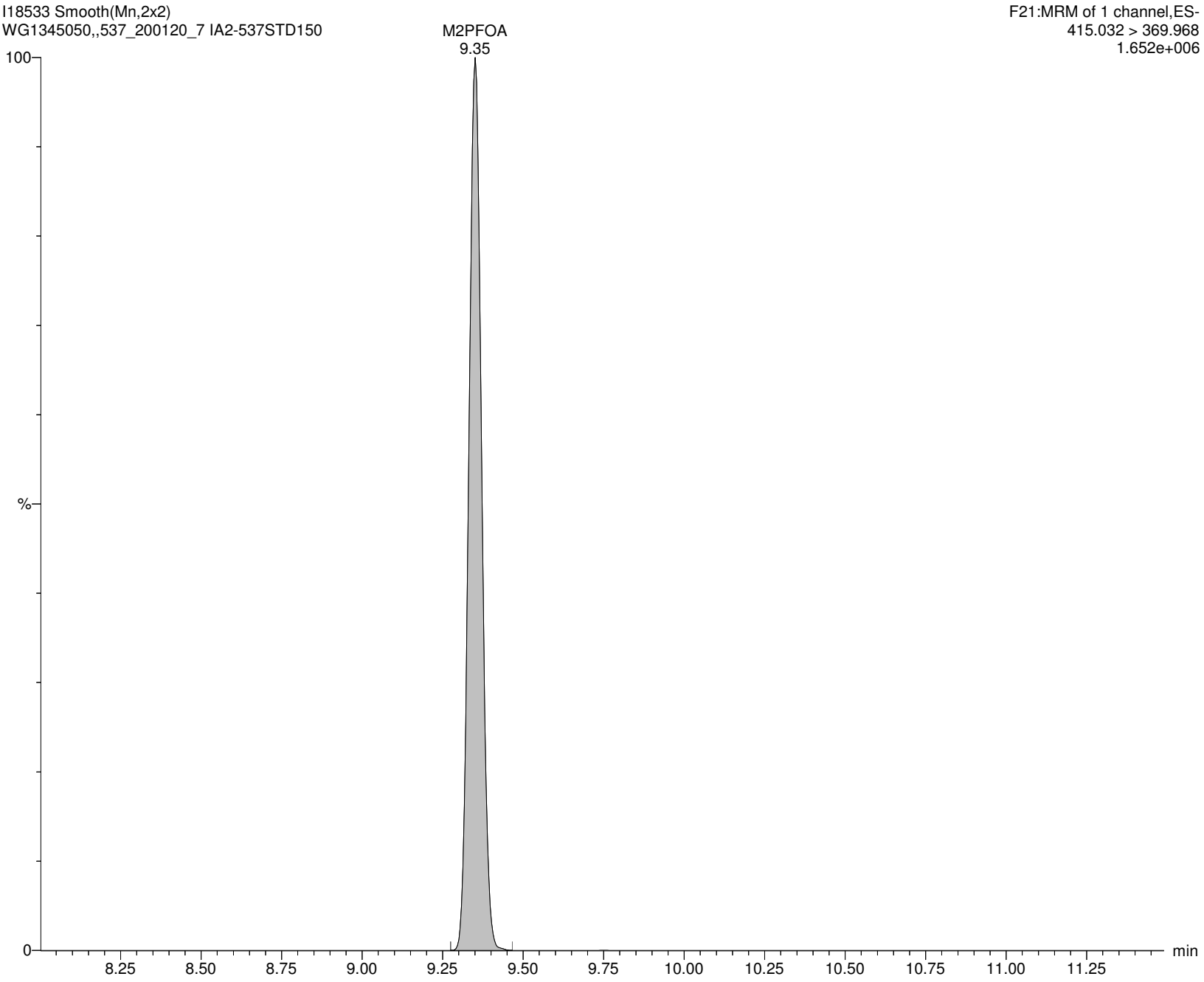



all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICAL_A.qld
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**Vial: 1:A,8**
**Instrument: XEVO-TQSmicro#QEA0276**
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**Tune Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\190709_TUNE.IPR**
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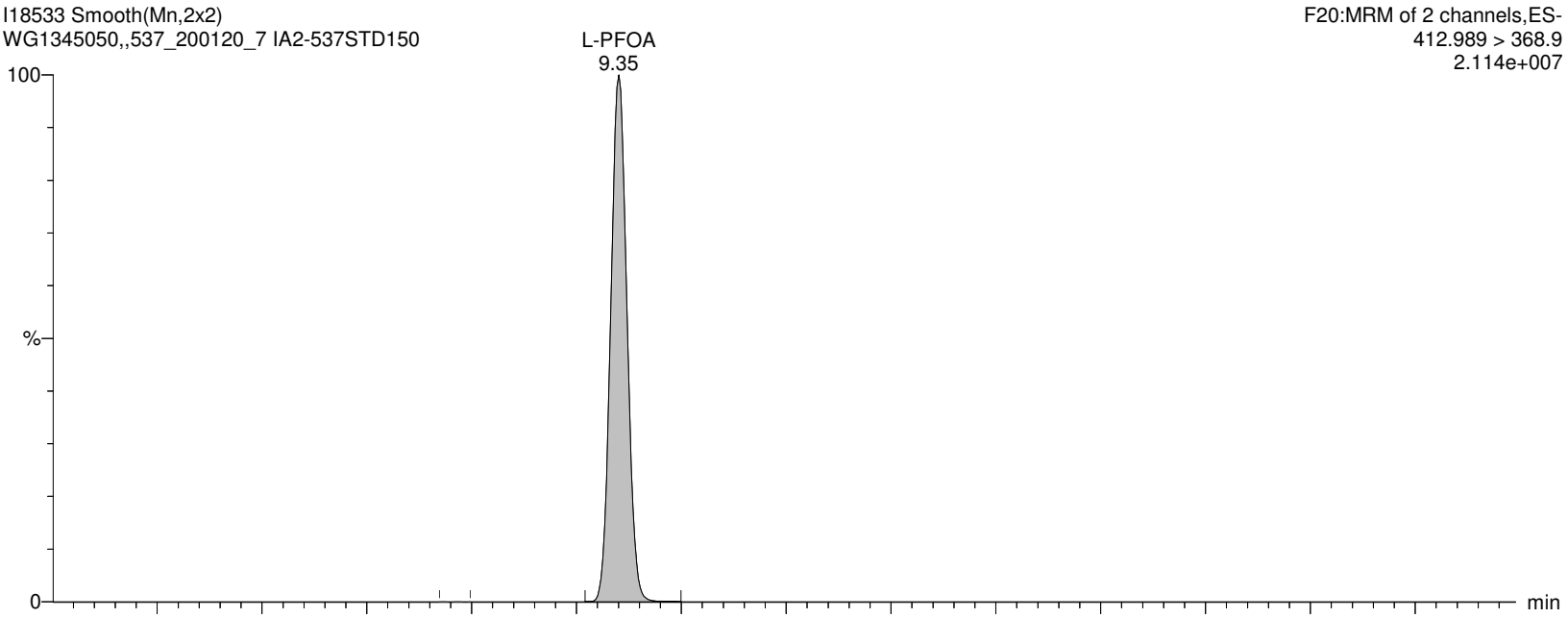
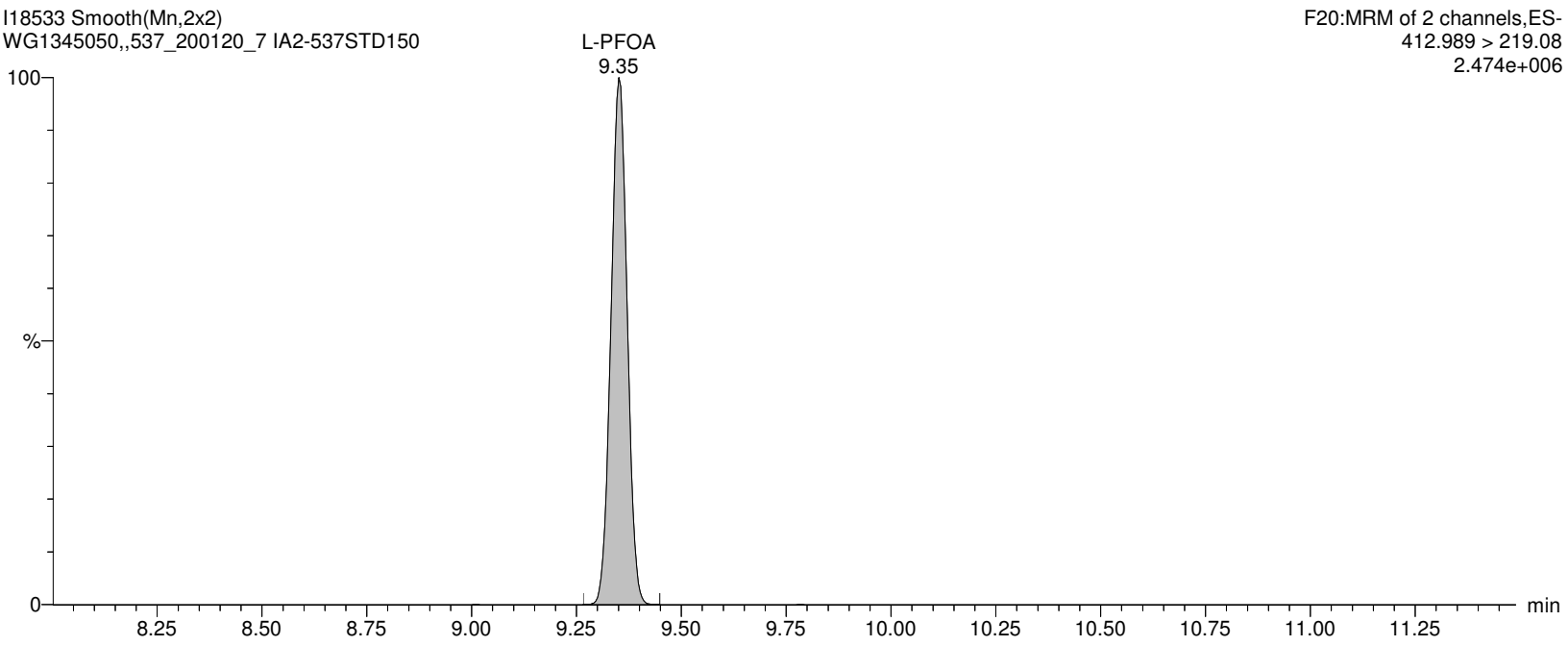
**PFOA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
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**Vial: 1:A,8**
**Instrument: XEVO-TQSmicro#QEA0276**
**Inlet Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\LCMS_537_ISO_MeOH**
**Tune Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\190709_TUNE.IPR**
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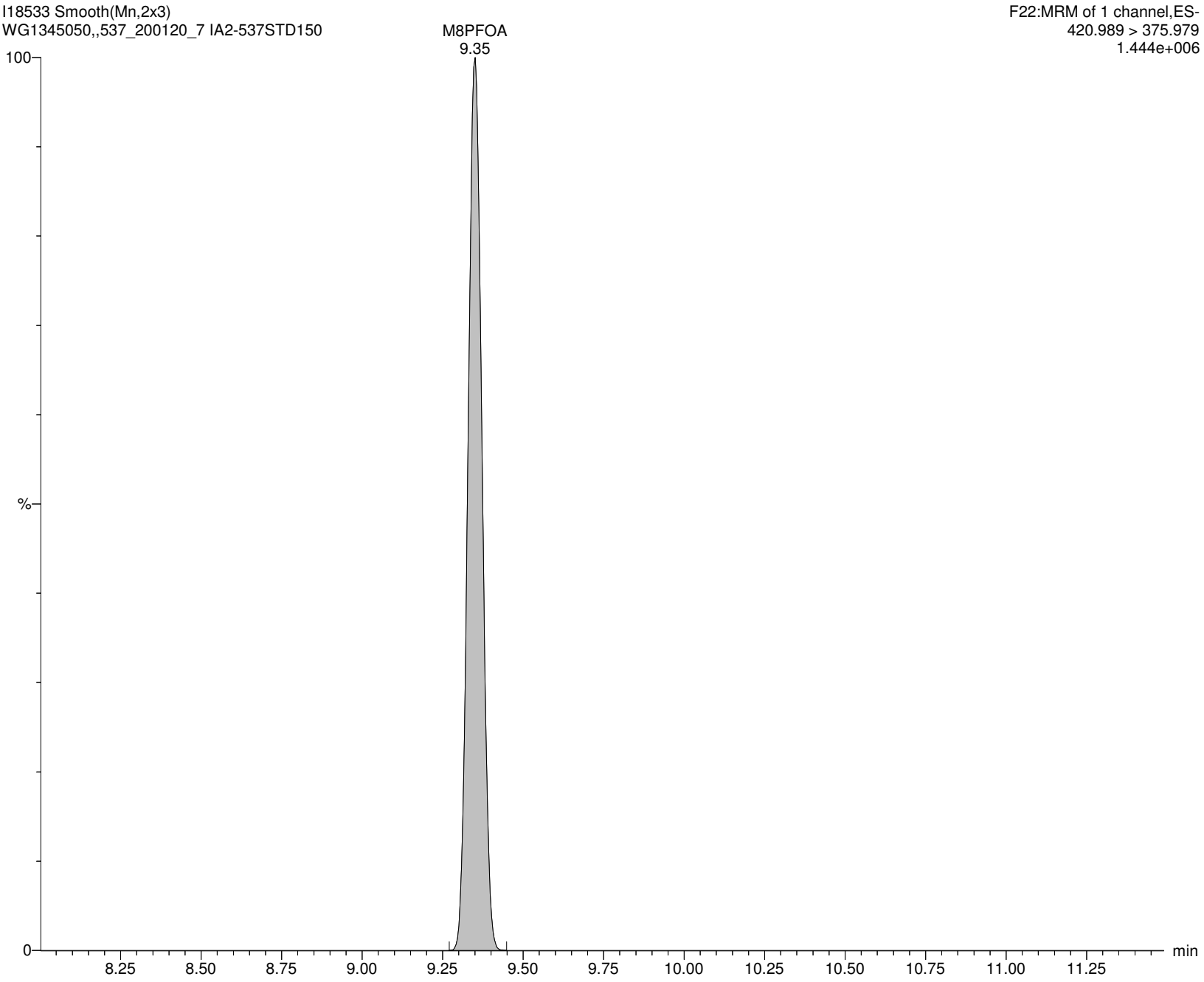
**M8PFOA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
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Last Altered: Friday, February 28, 2020 09:12:40 Eastern Standard Time
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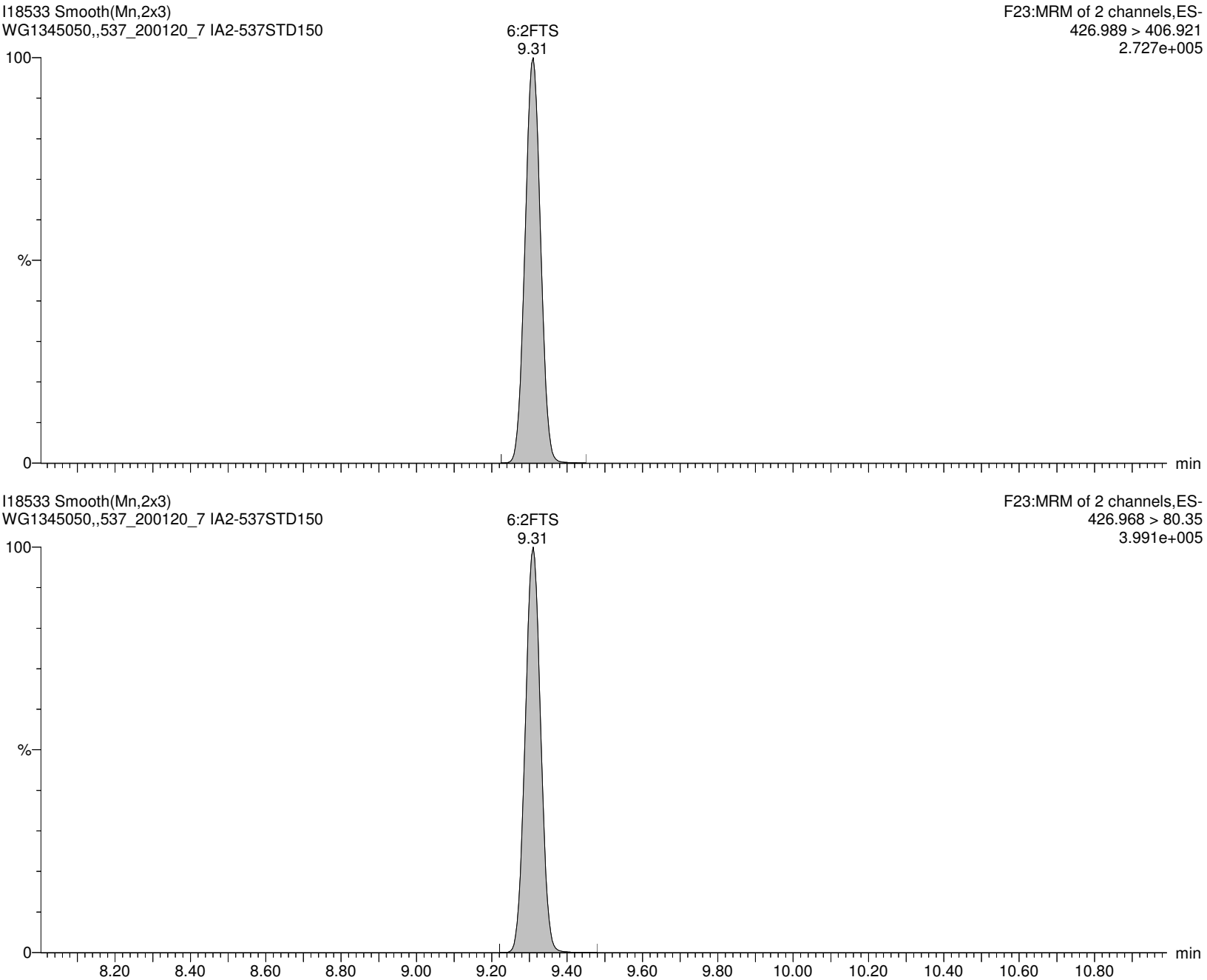
**6:2FTS**





all concentration units in (ng/mL)

Alpha Analytical Inc.
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Last Altered: Friday, February 28, 2020 09:12:40 Eastern Standard Time
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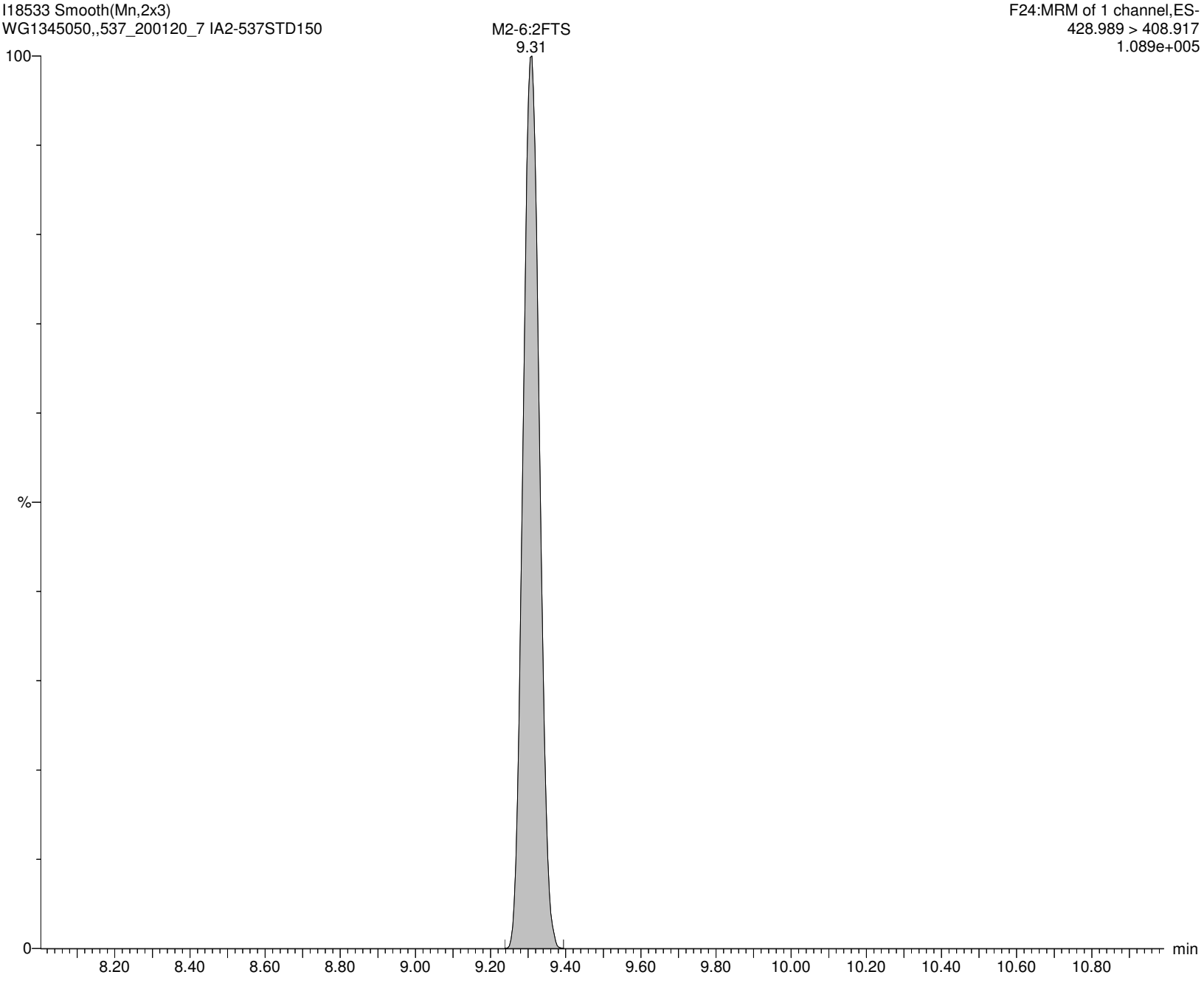
**M2-6:2FTS**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICAL_A.qld
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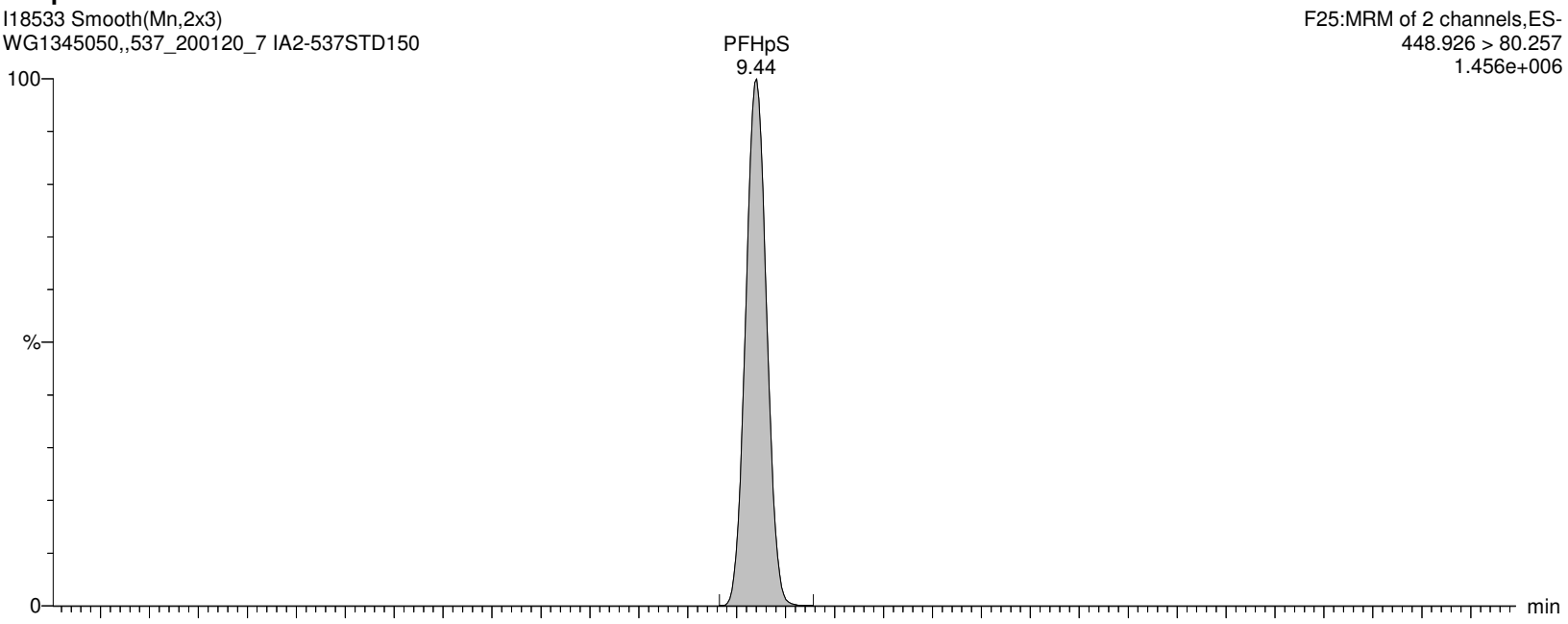


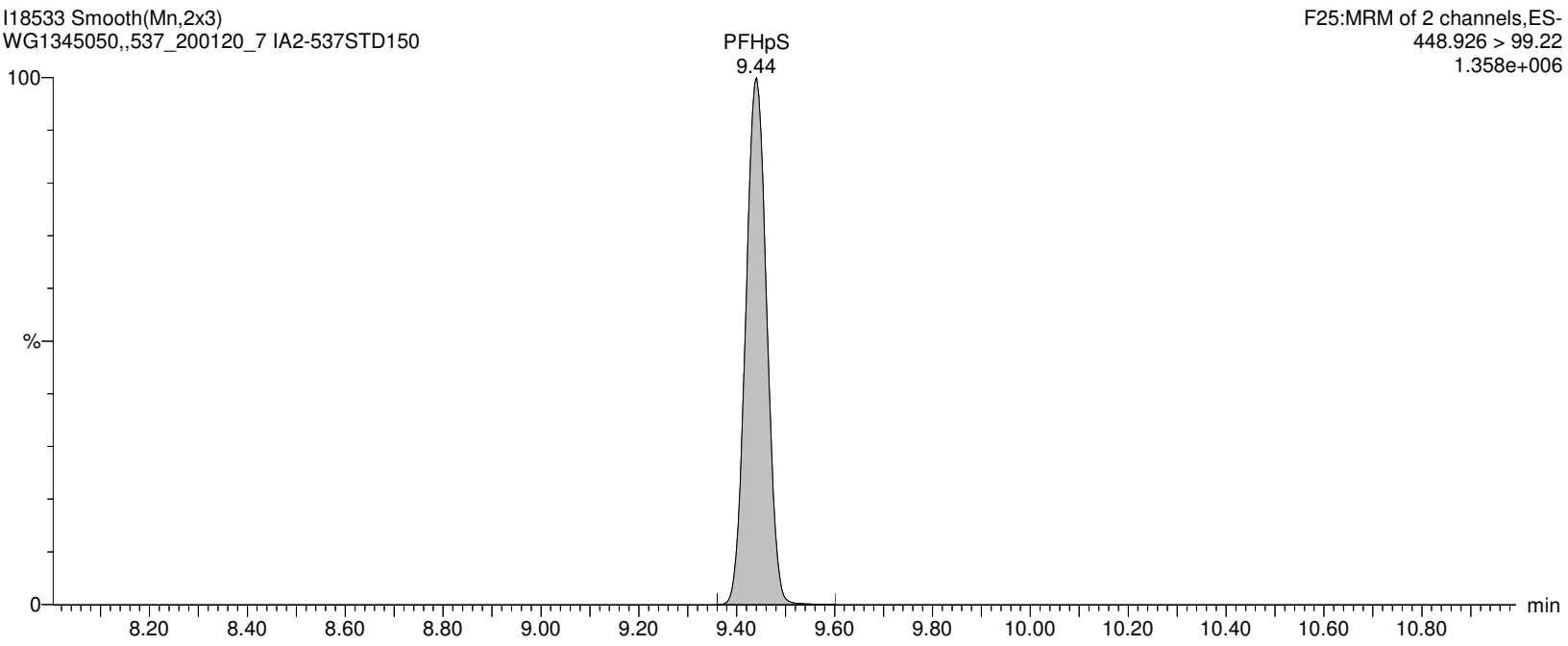



all concentration units in (ng/mL)

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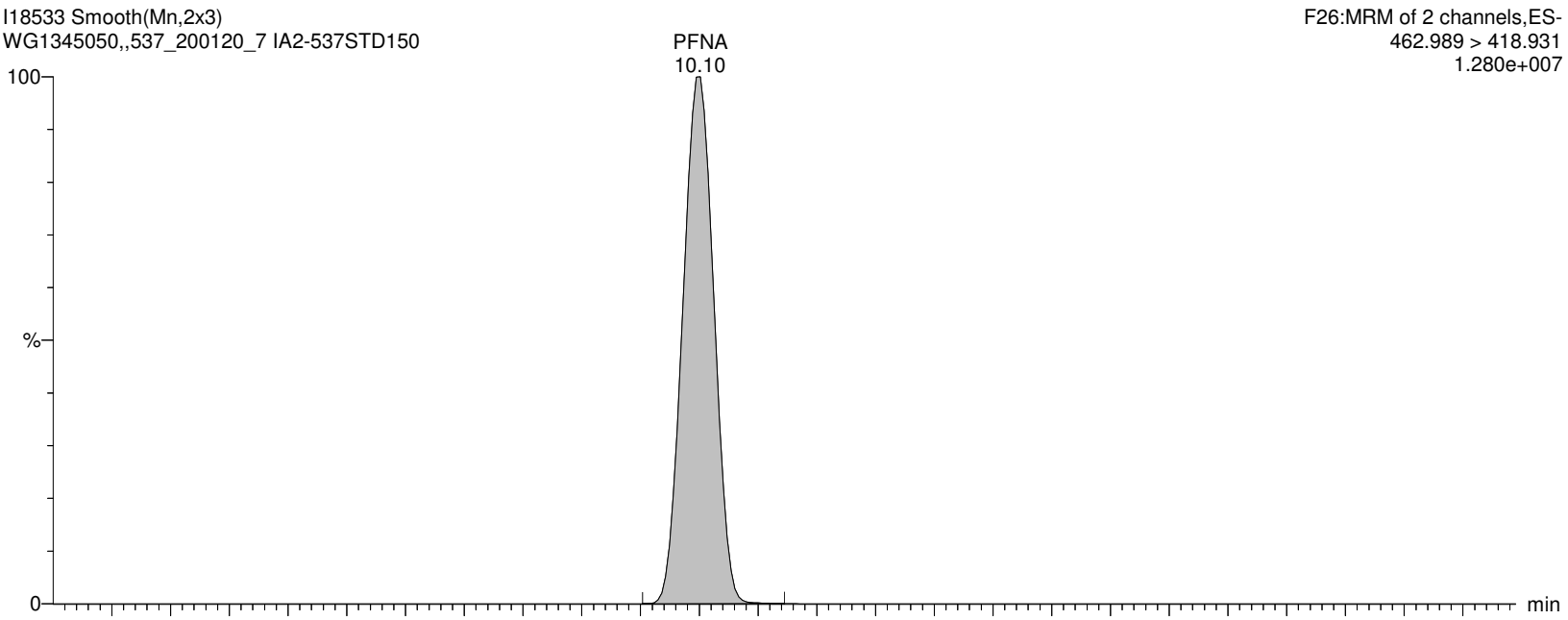


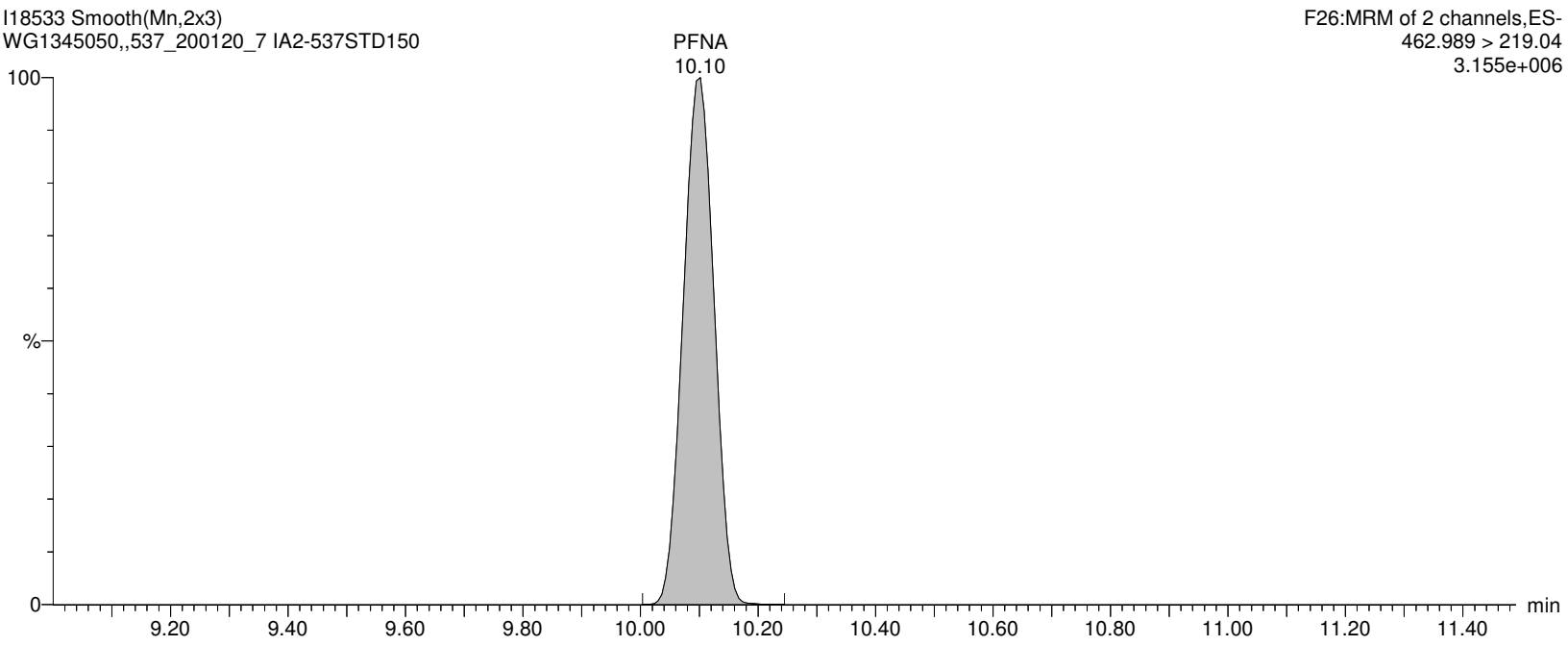



all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICAL_A.qld
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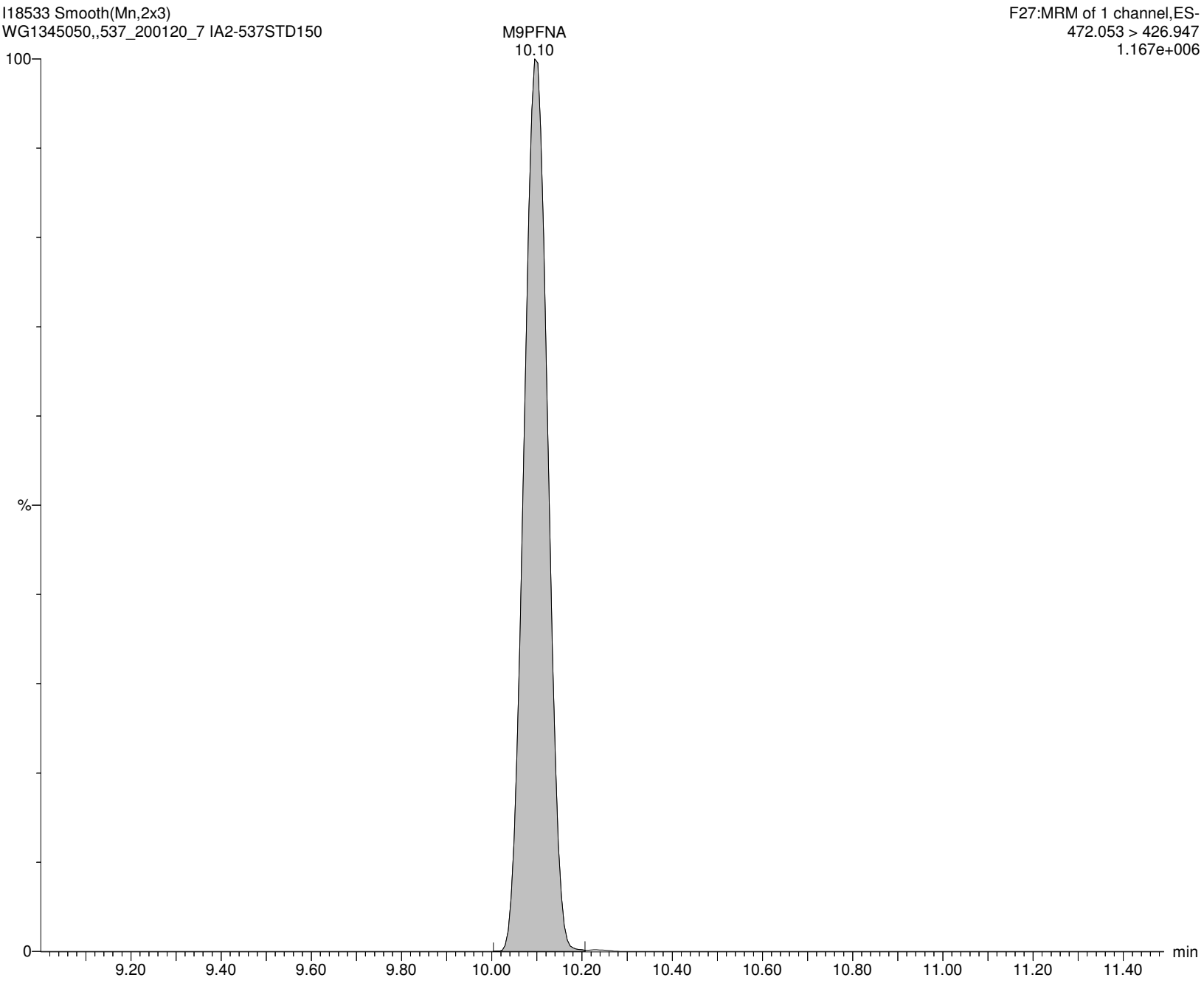



all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICAL_A.qld
Last Altered: Friday, February 28, 2020 09:12:40 Eastern Standard Time
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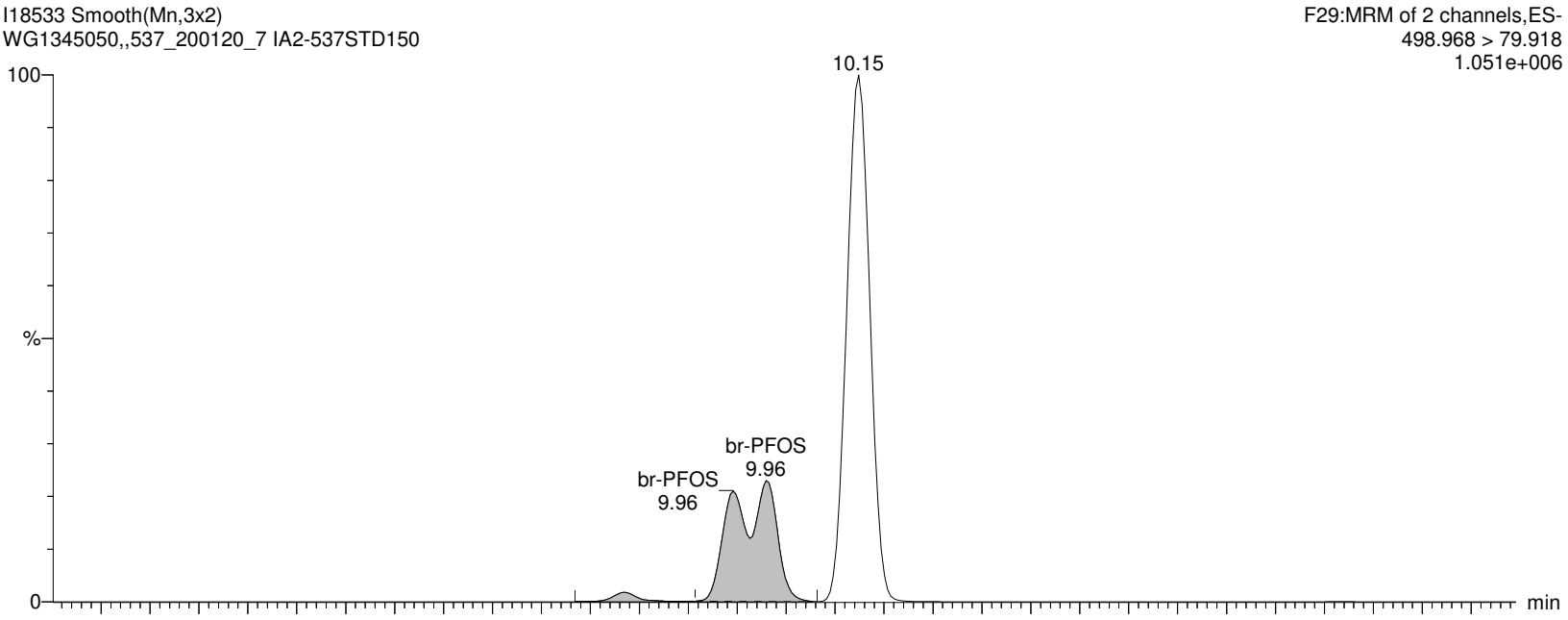
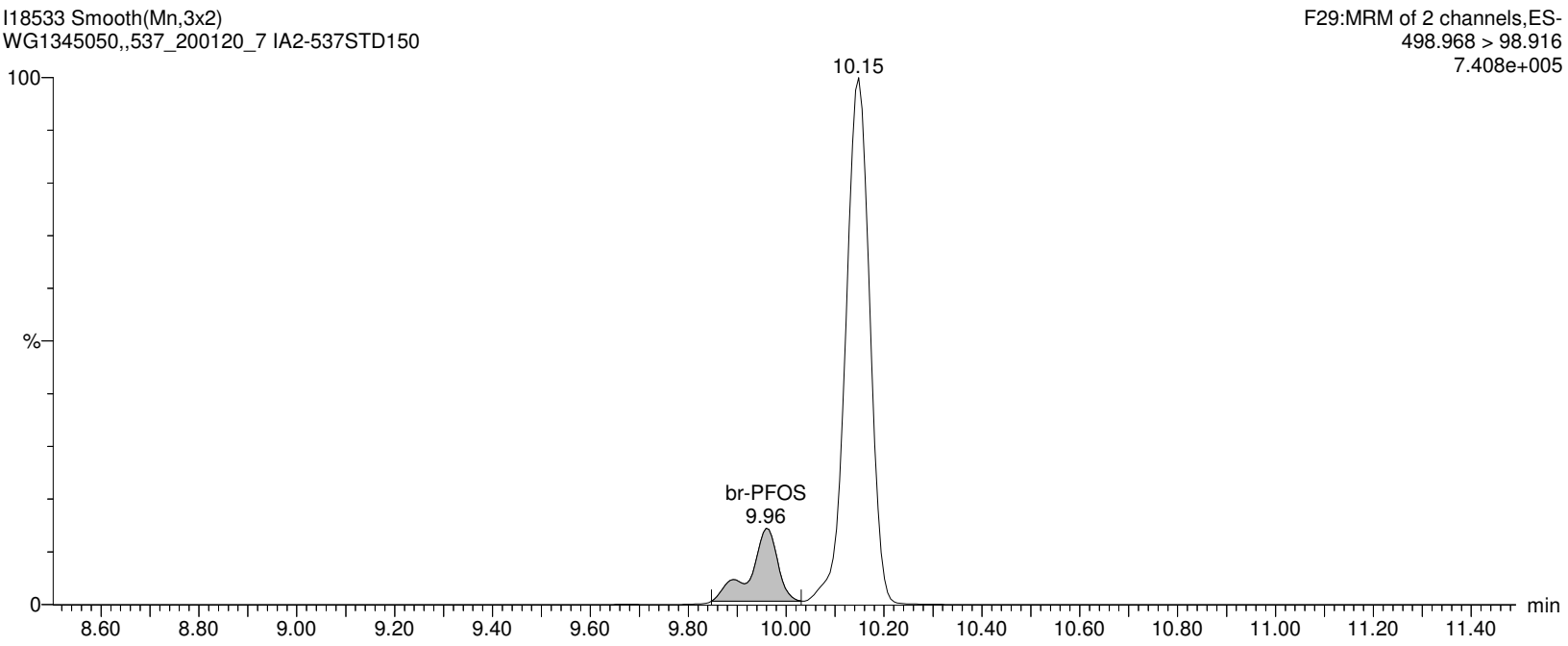
**br-PFOS**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICAL_A.qld
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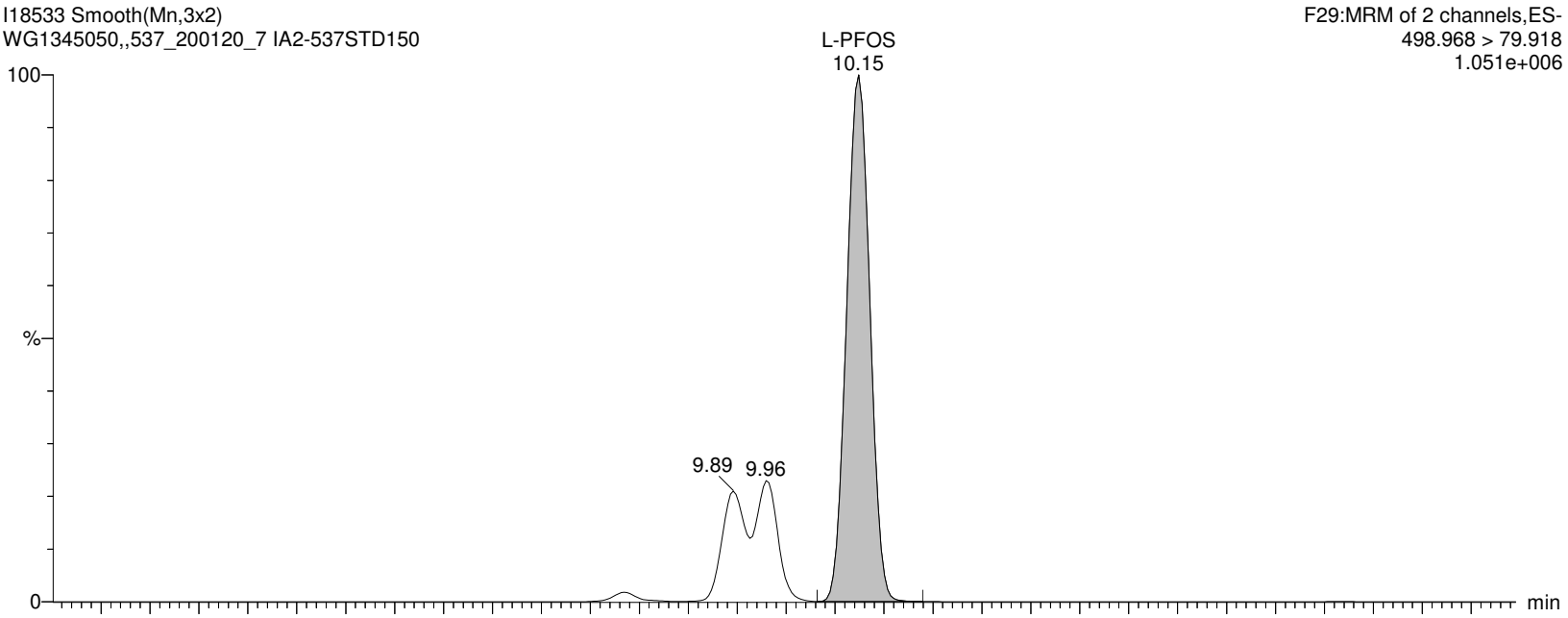
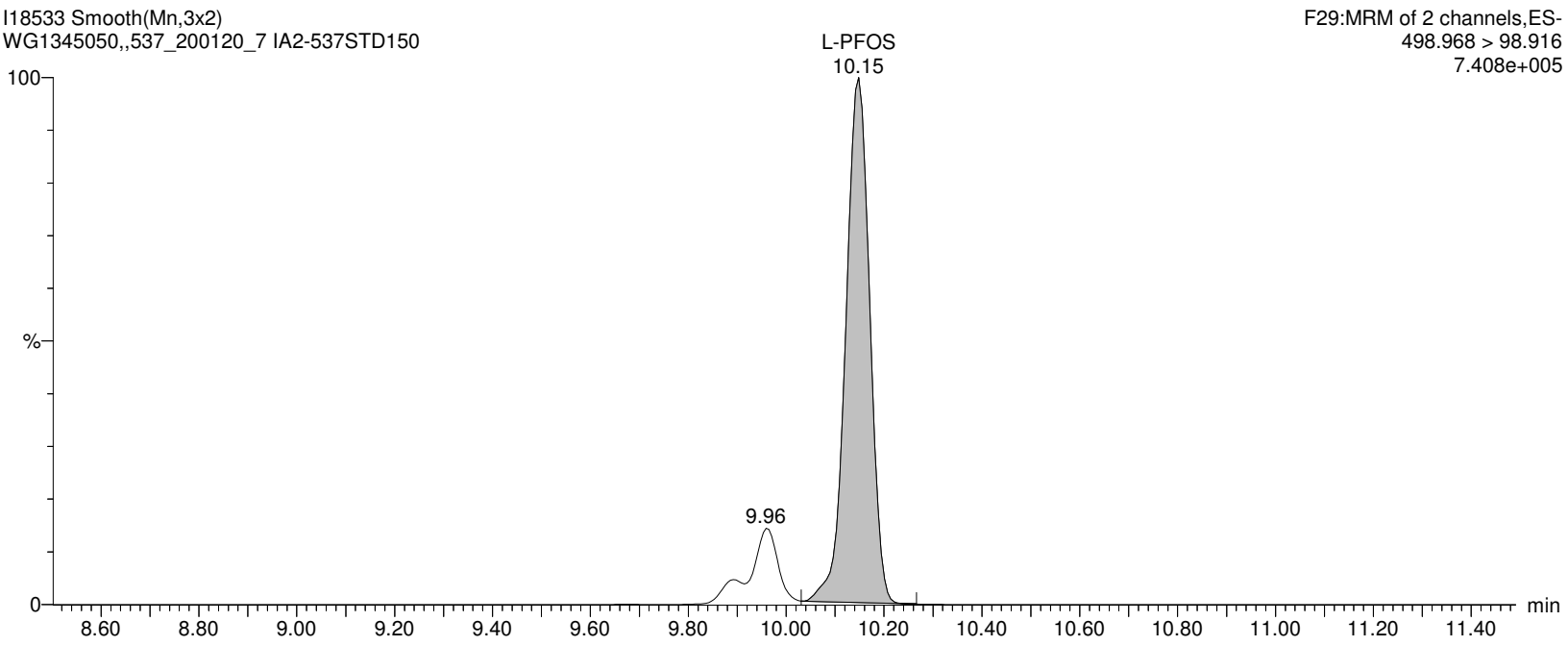
**MS Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**L-PFOS**





all concentration units in (ng/mL)

Alpha Analytical Inc.
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**MS Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

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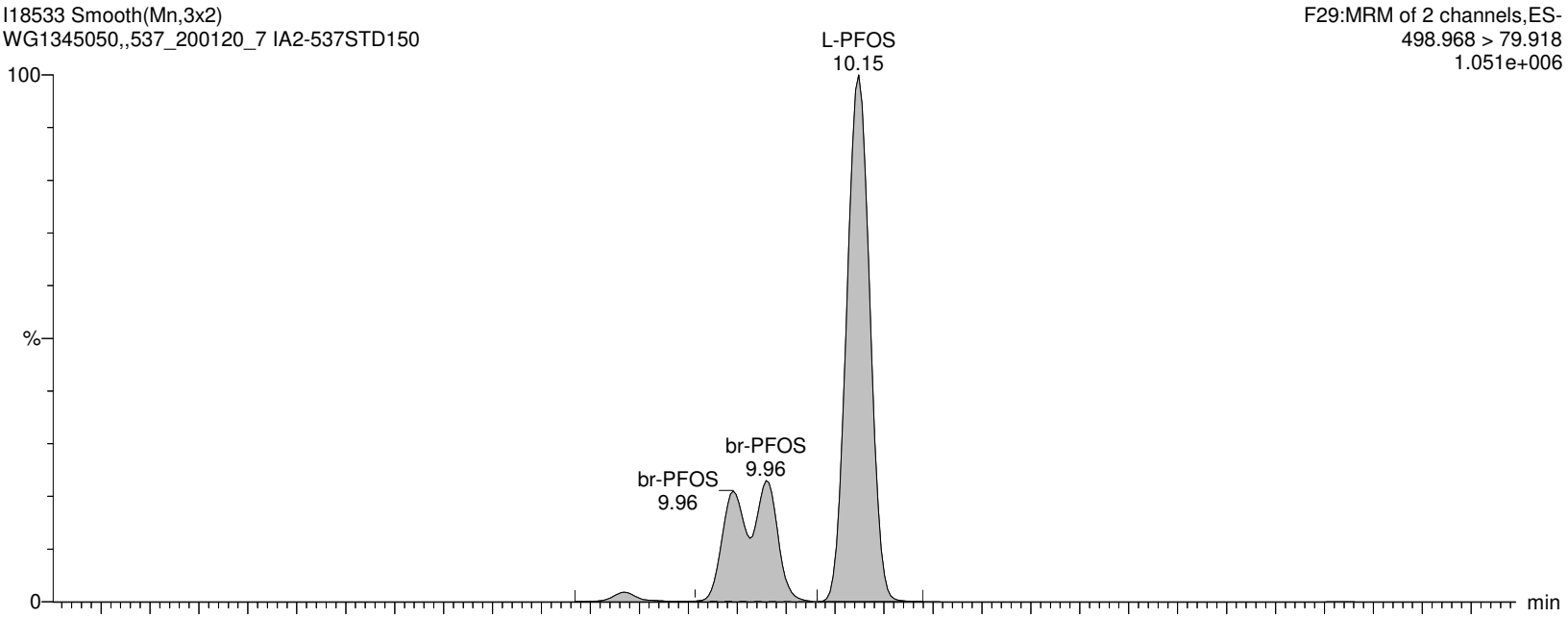


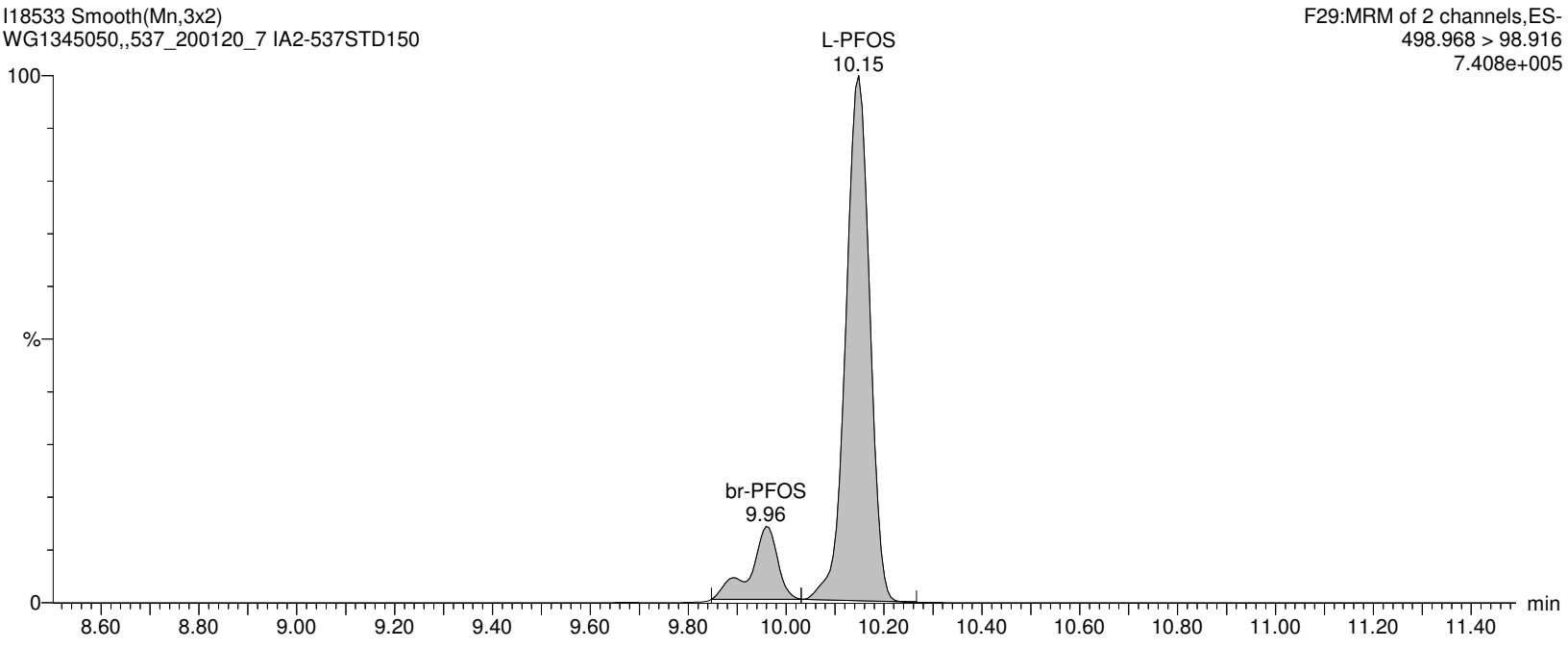



all concentration units in (ng/mL)

Alpha Analytical Inc.
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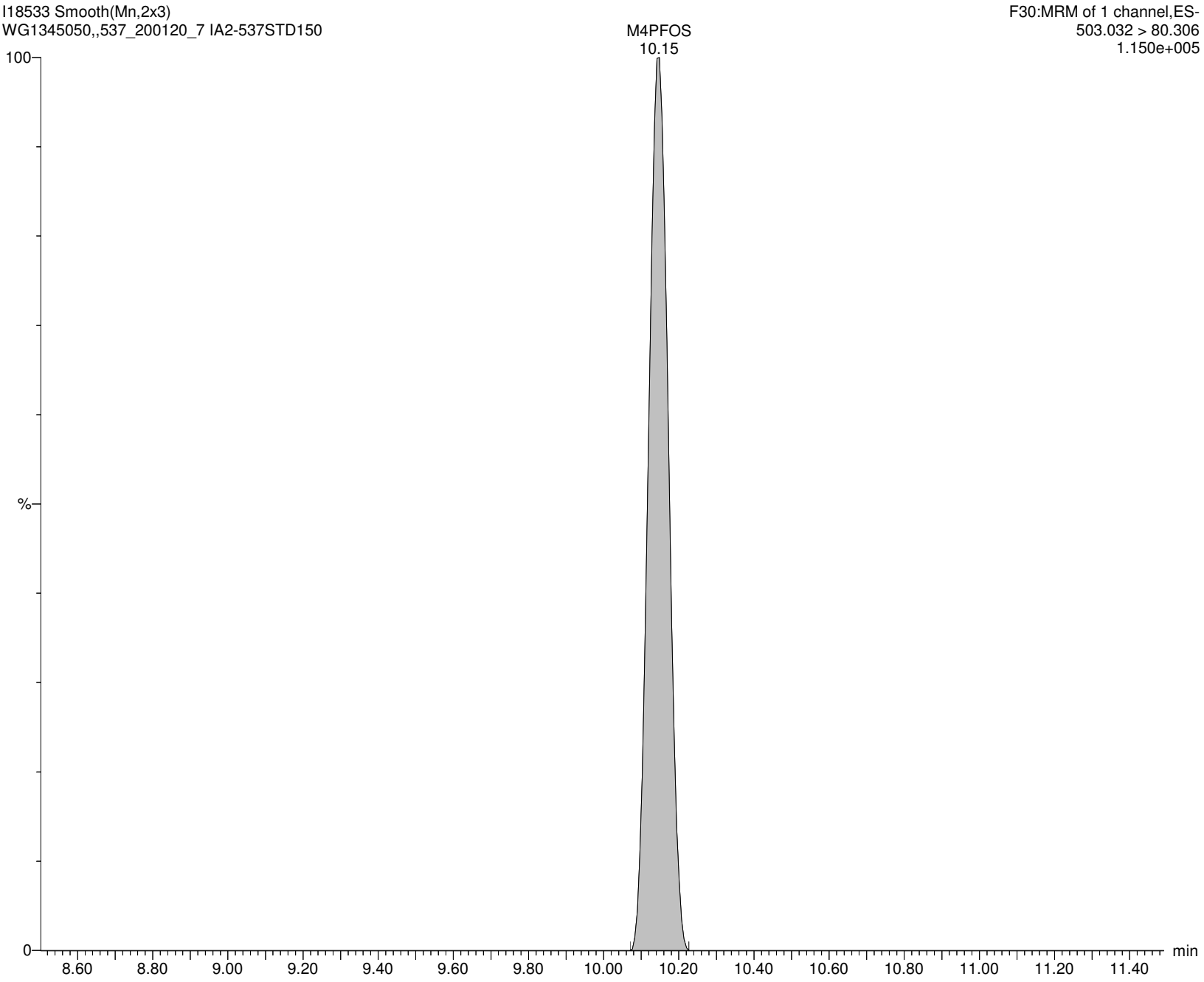
**M4PFOS**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICAL_A.qld
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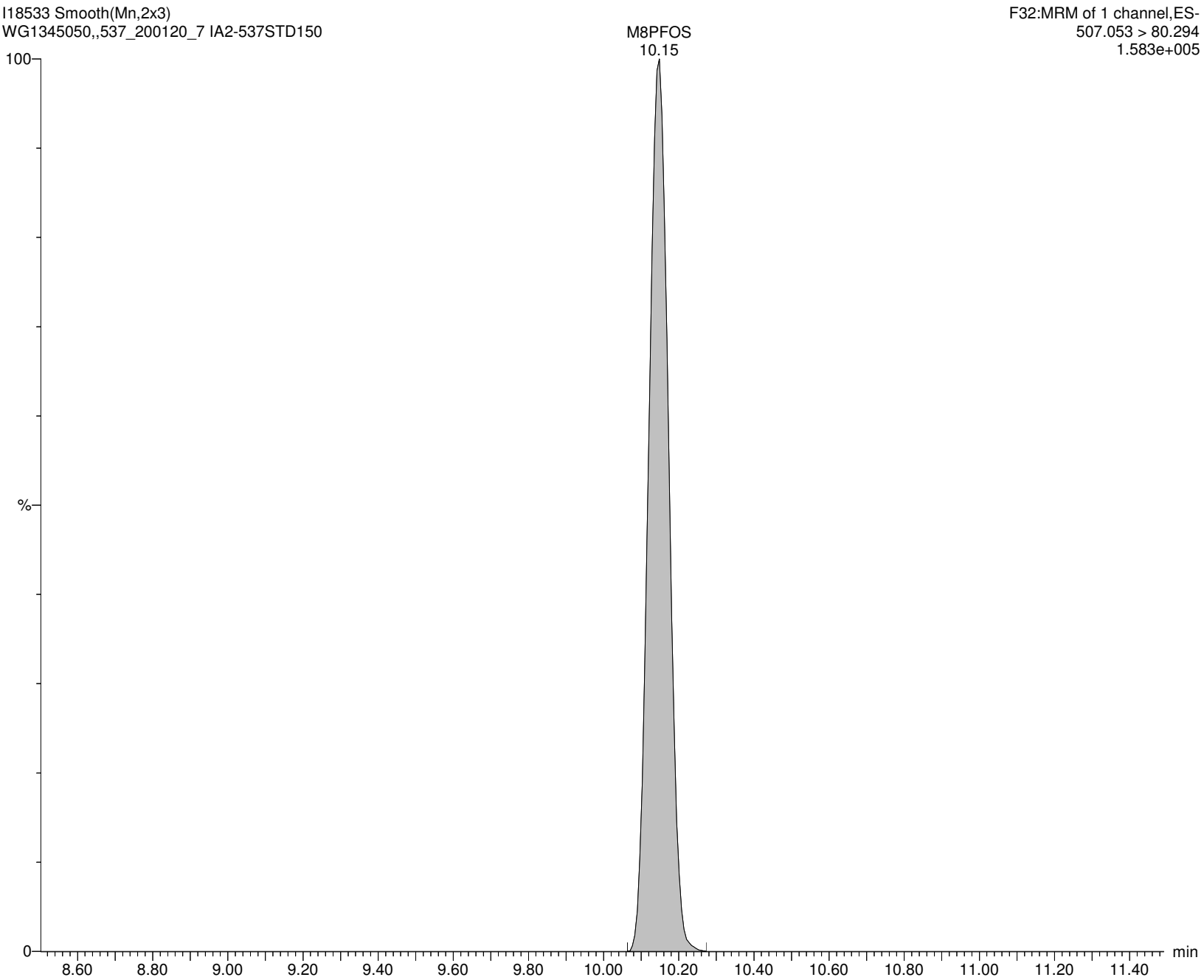



all concentration units in (ng/mL)

Alpha Analytical Inc.
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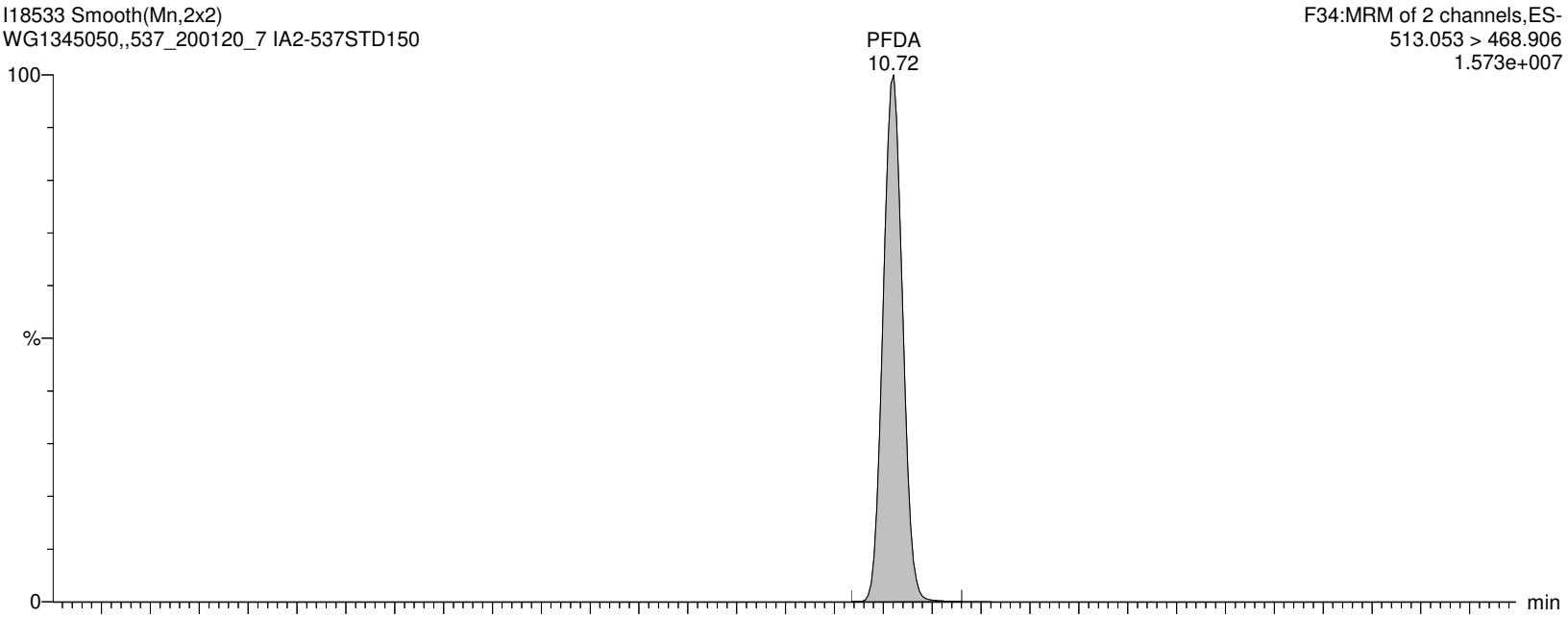


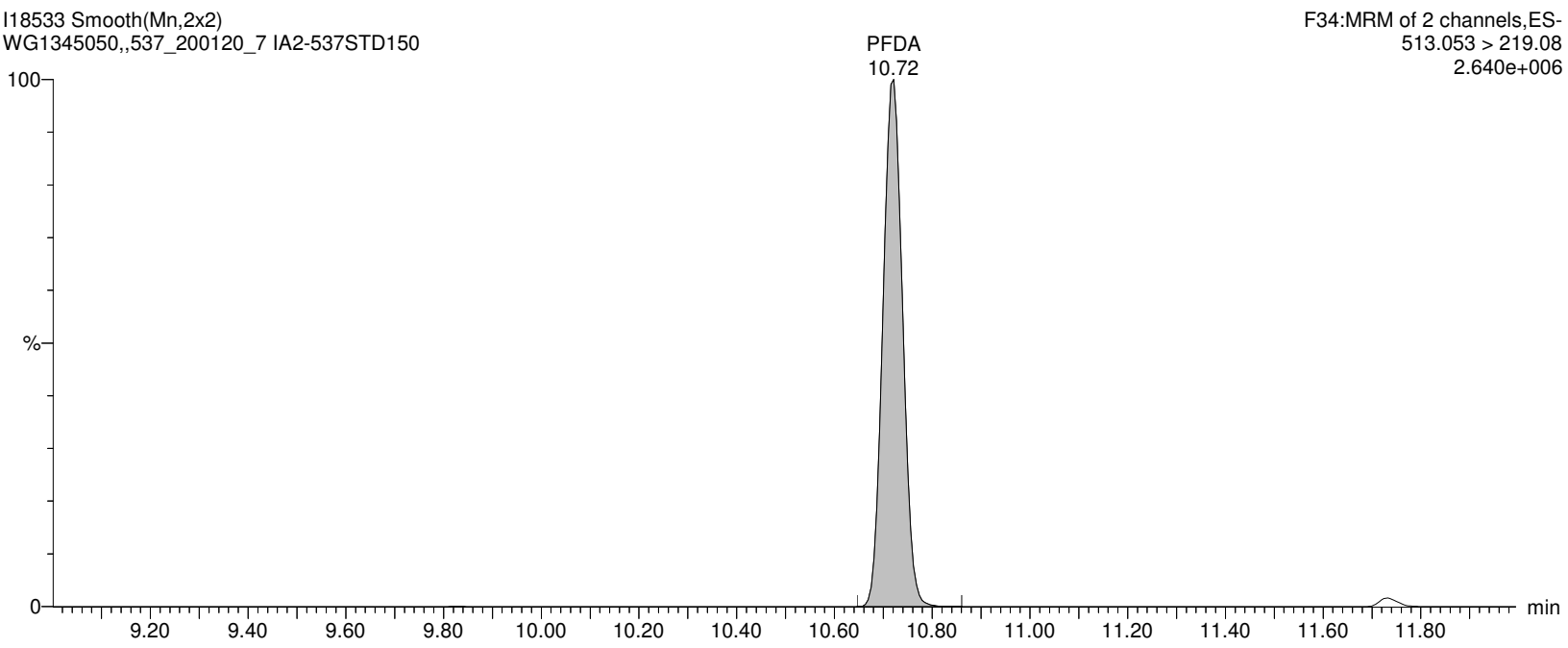



all concentration units in (ng/mL)

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**Instrument: XEVO-TQSmicro#QEA0276**
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**Tune Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\190709_TUNE.IPR**
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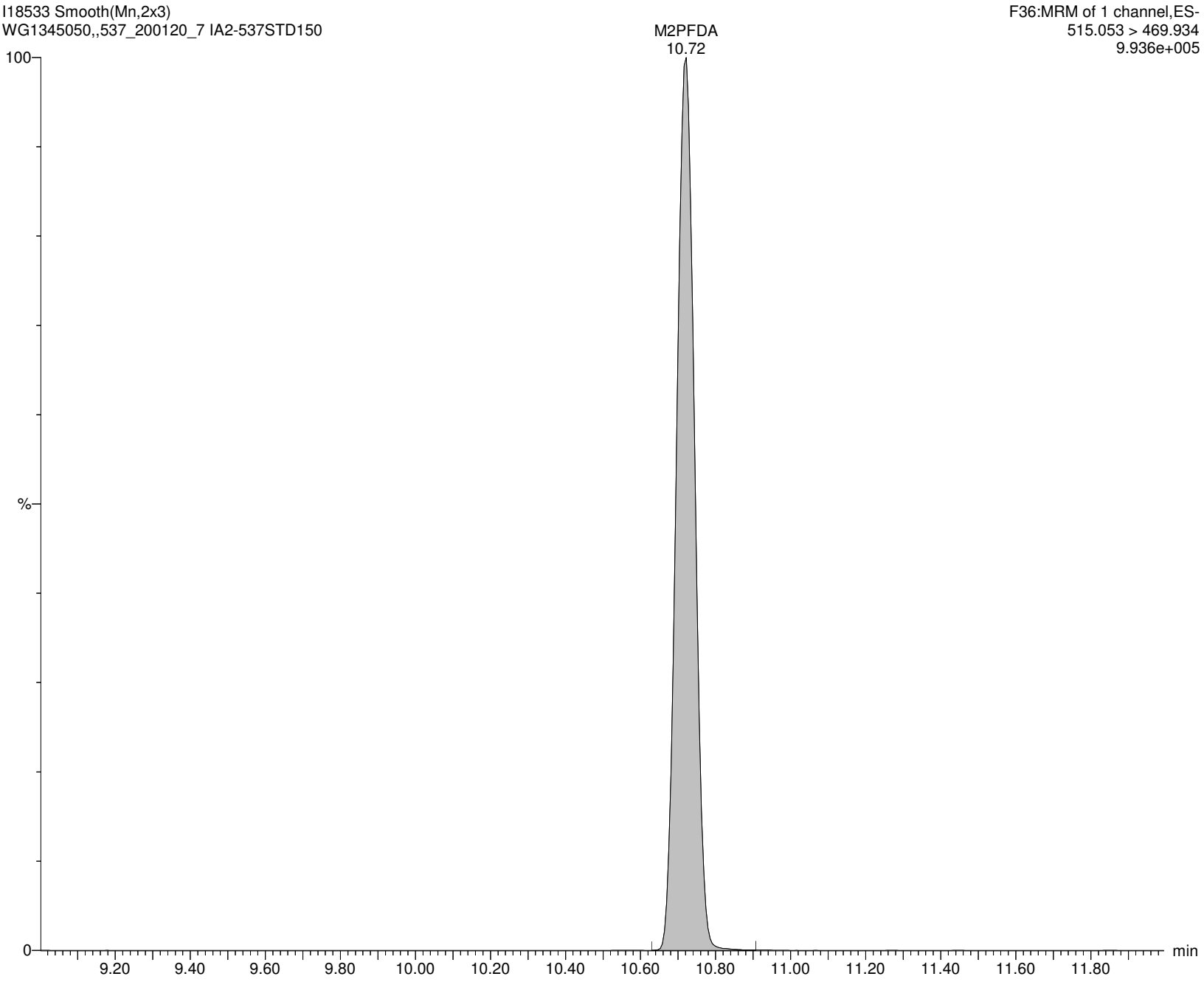



all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICAL_A.qld
Last Altered: Friday, February 28, 2020 09:12:40 Eastern Standard Time
Printed: Friday, February 28, 2020 09:27:54 Eastern Standard Time

**Name: I18533**
**ID: IA2-537STD150**
**Date: 27-Feb-2020**
**Time: 15:08:31**
**Description: WG1345050,,537_200120_7**
**User: LCMS01:SG**
**Vial: 1:A,8**
**Instrument: XEVO-TQSmicro#QEA0276**
**Inlet Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\LCMS_537_ISO_MeOH**
**Tune Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\190709_TUNE.IPR**
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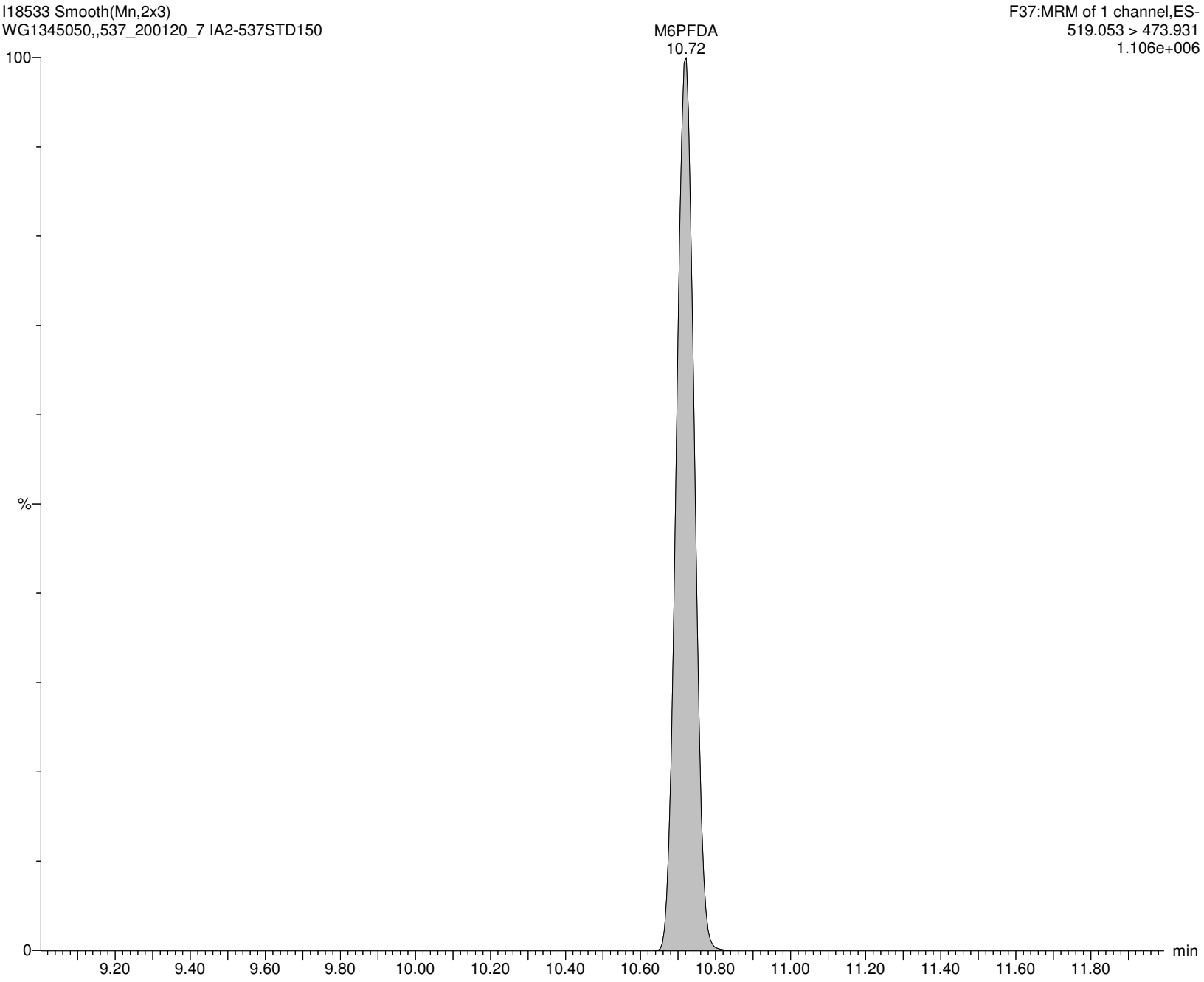
**M6PFDA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
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Last Altered: Friday, February 28, 2020 09:12:40 Eastern Standard Time
Printed: Friday, February 28, 2020 09:27:54 Eastern Standard Time

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**Vial: 1:A,8**
**Instrument: XEVO-TQSmicro#QEA0276**
**Inlet Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\LCMS_537_ISO_MeOH**
**Tune Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\190709_TUNE.IPR**
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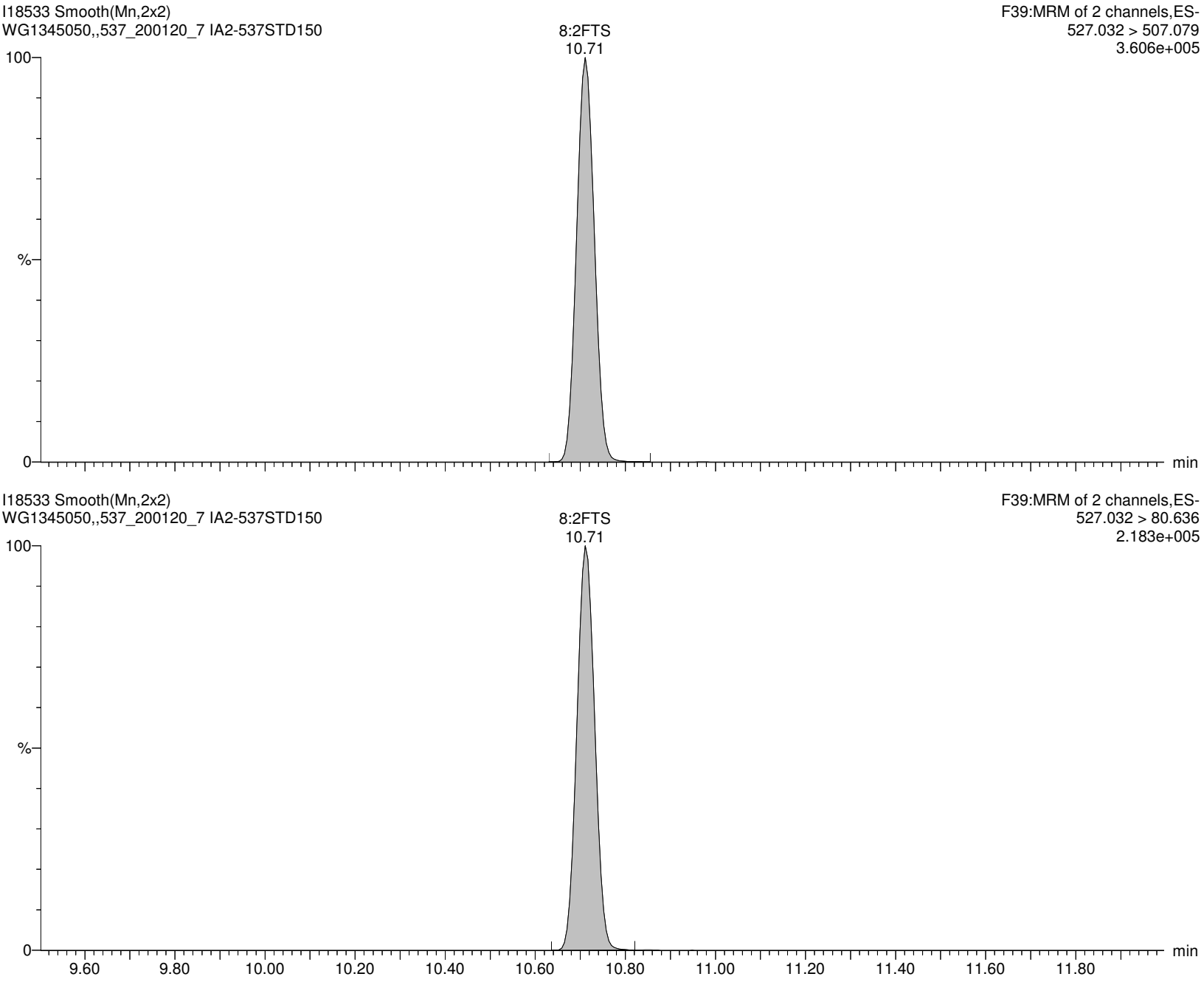
**8:2FTS**





all concentration units in (ng/mL)

Alpha Analytical Inc.
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Last Altered: Friday, February 28, 2020 09:12:40 Eastern Standard Time
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**Name: I18533**
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**Vial: 1:A,8**
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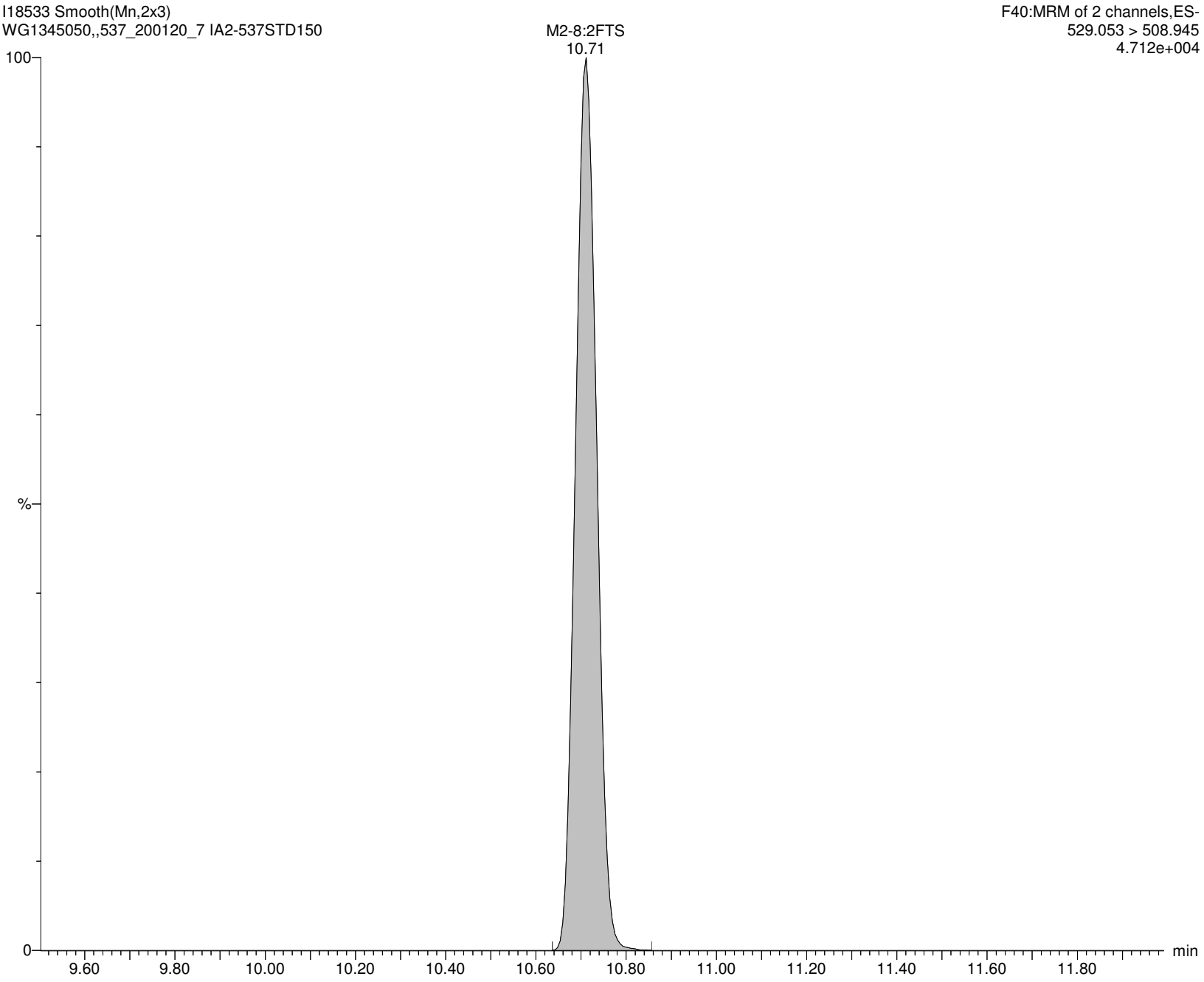
**M2-8:2FTS**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICAL_A.qld
Last Altered: Friday, February 28, 2020 09:12:40 Eastern Standard Time
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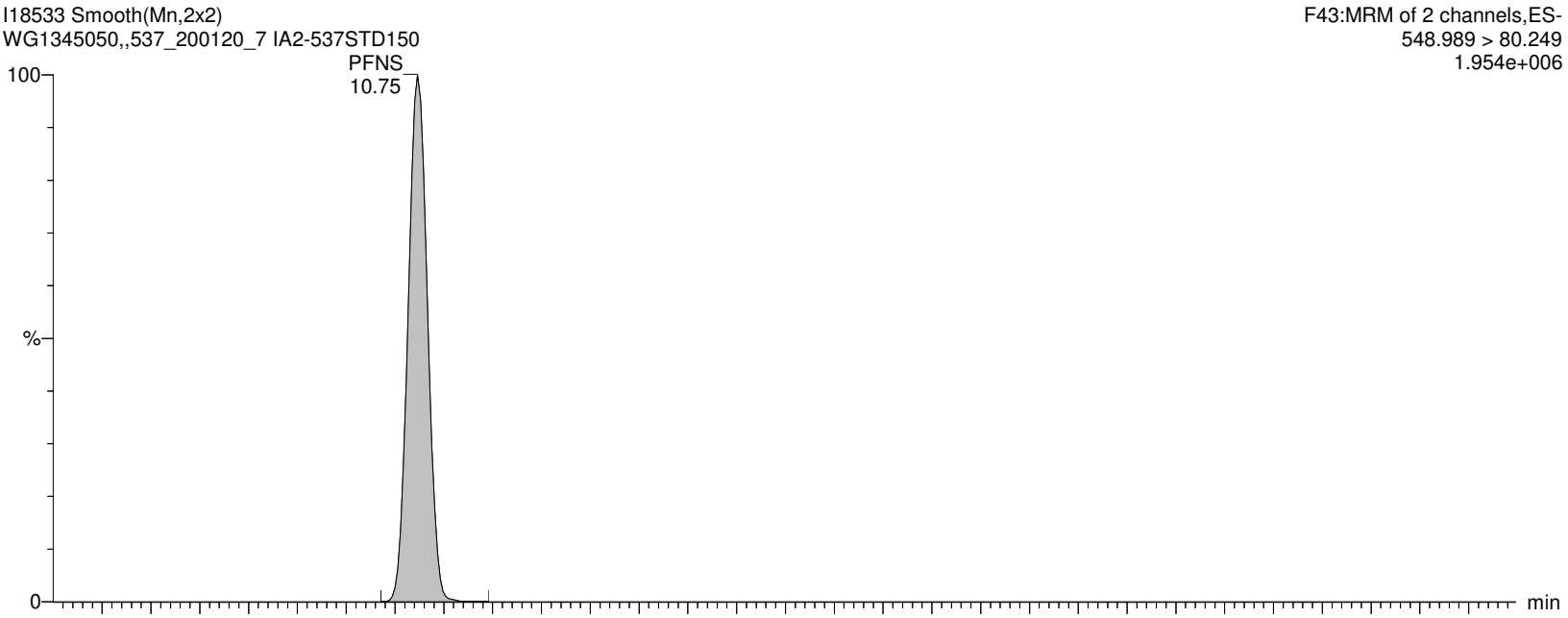


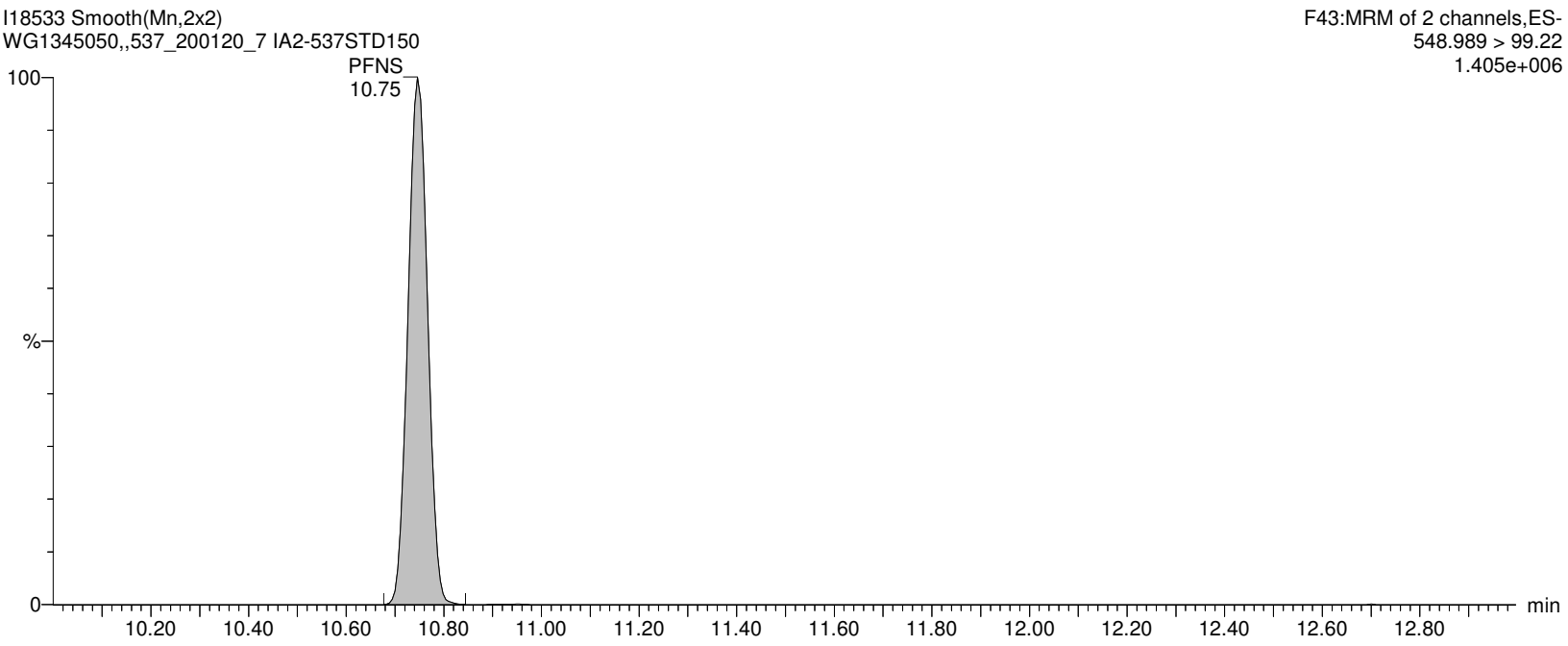



all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICAL_A.qld
Last Altered: Friday, February 28, 2020 09:12:40 Eastern Standard Time
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**Instrument: XEVO-TQSmicro#QEA0276**
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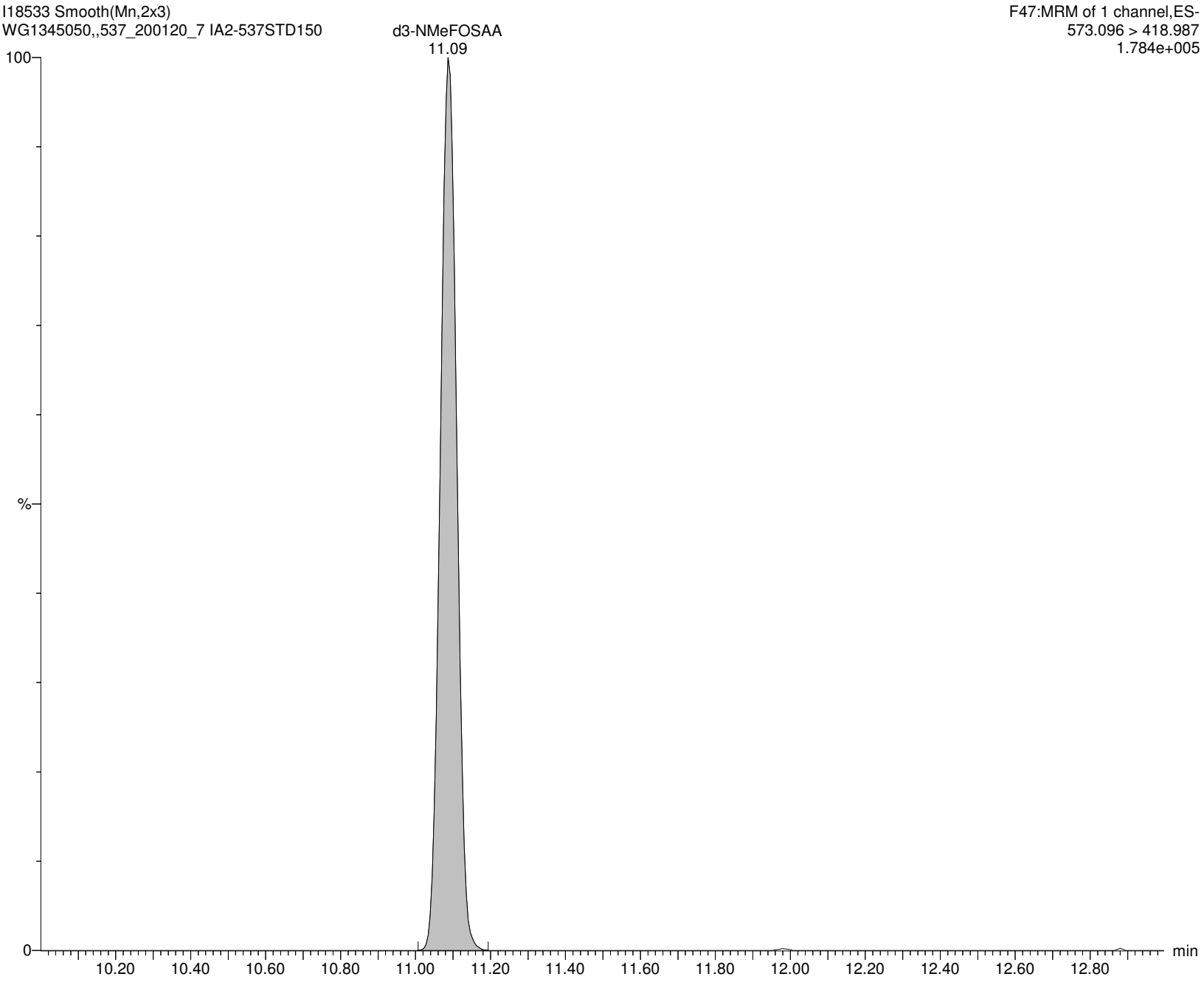
**d3-NMeFOSAA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICAL_A.qld
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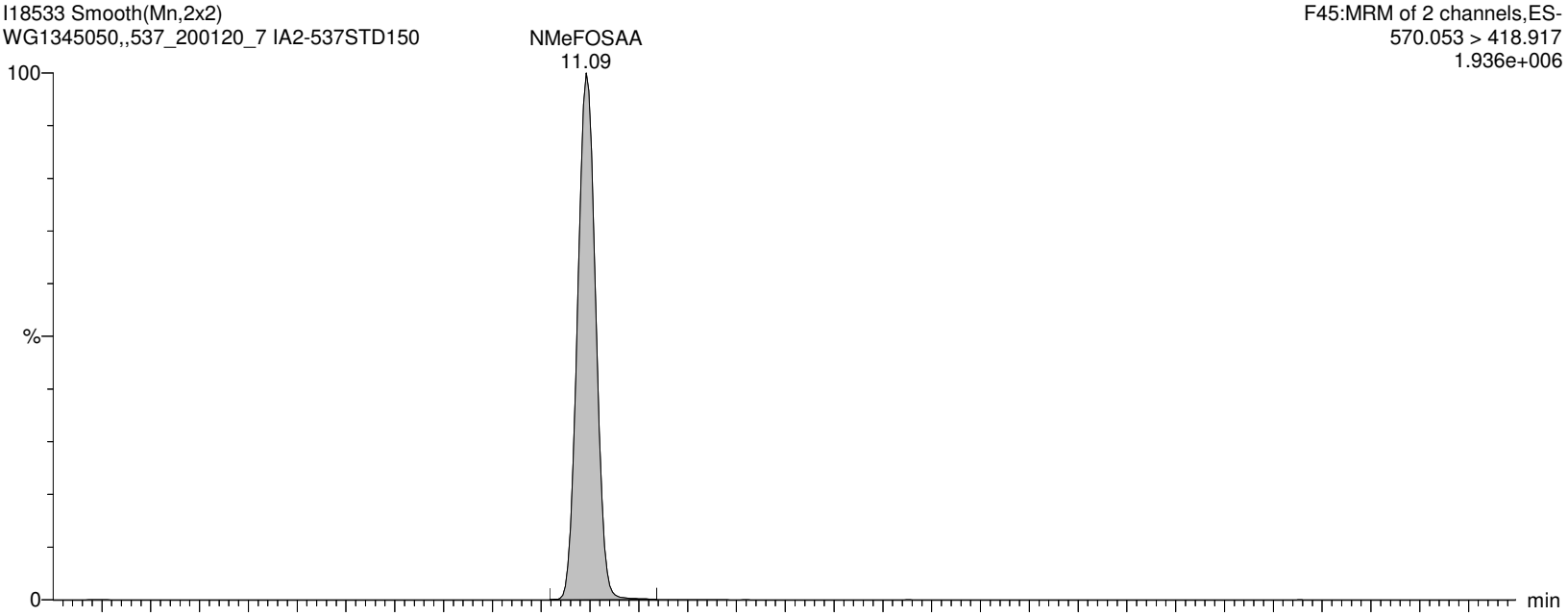
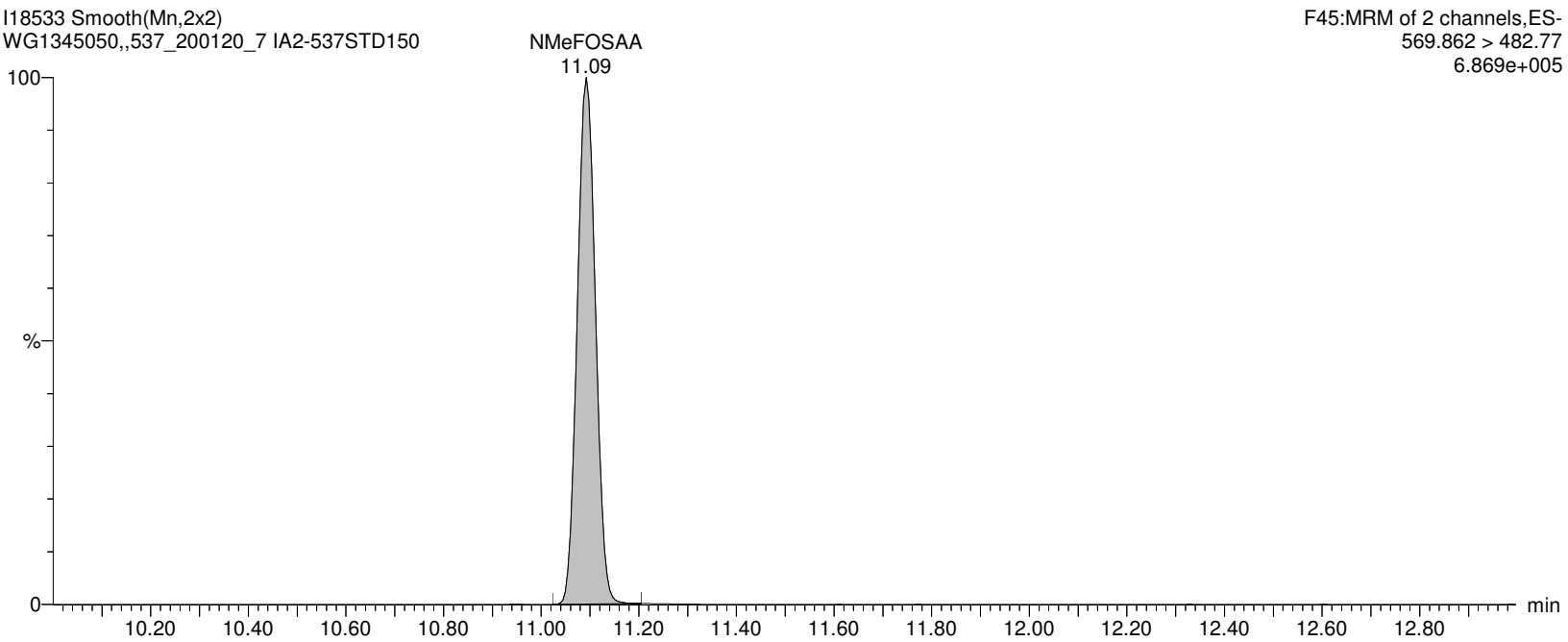
**NMeFOSAA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICAL_A.qld
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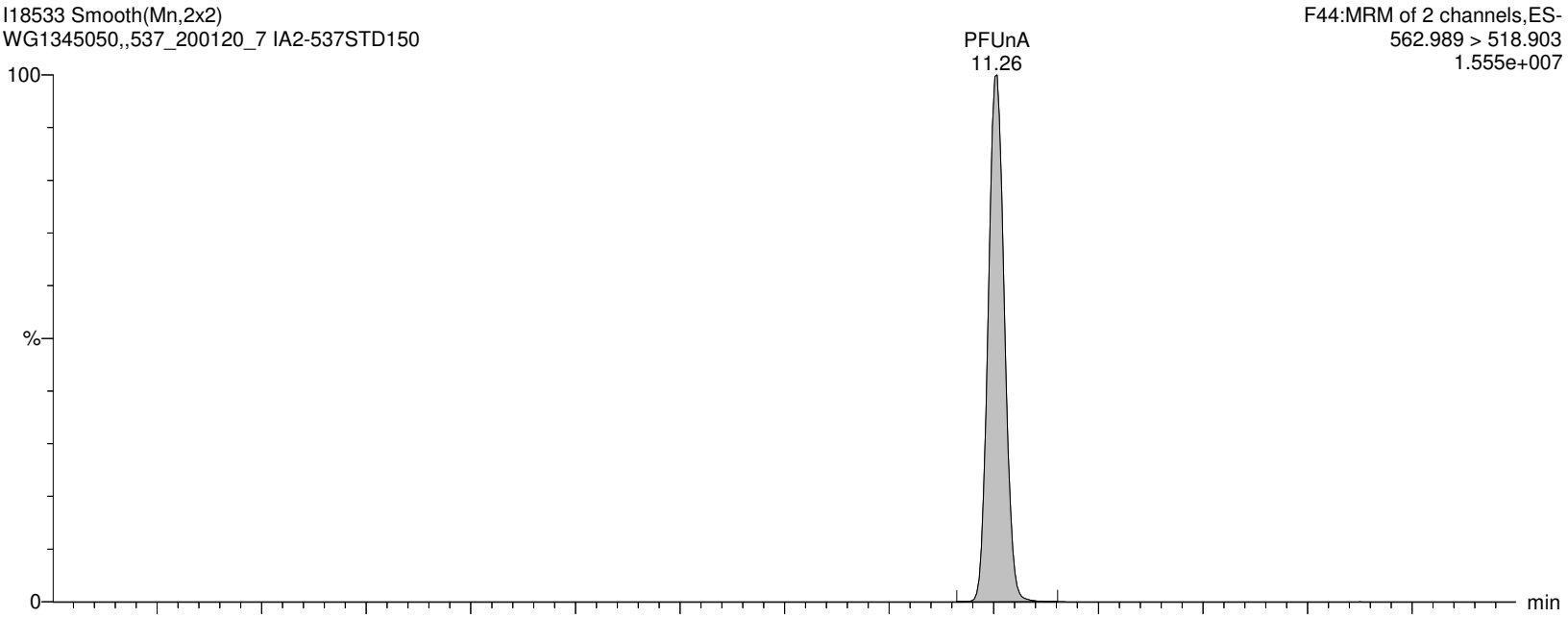
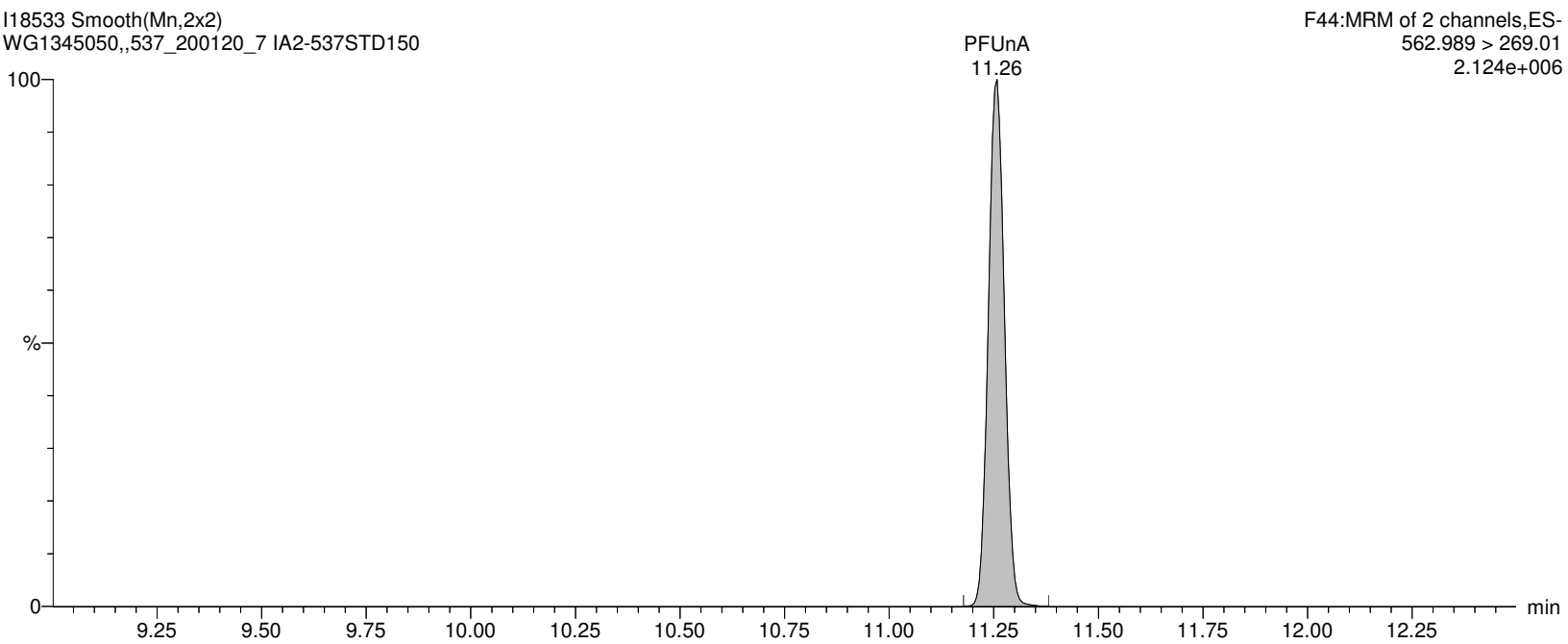
**PFUnA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICAL_A.qld
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**Vial: 1:A,8**
**Instrument: XEVO-TQSmicro#QEA0276**
**Inlet Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\LCMS_537_ISO_MeOH**
**Tune Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\190709_TUNE.IPR**
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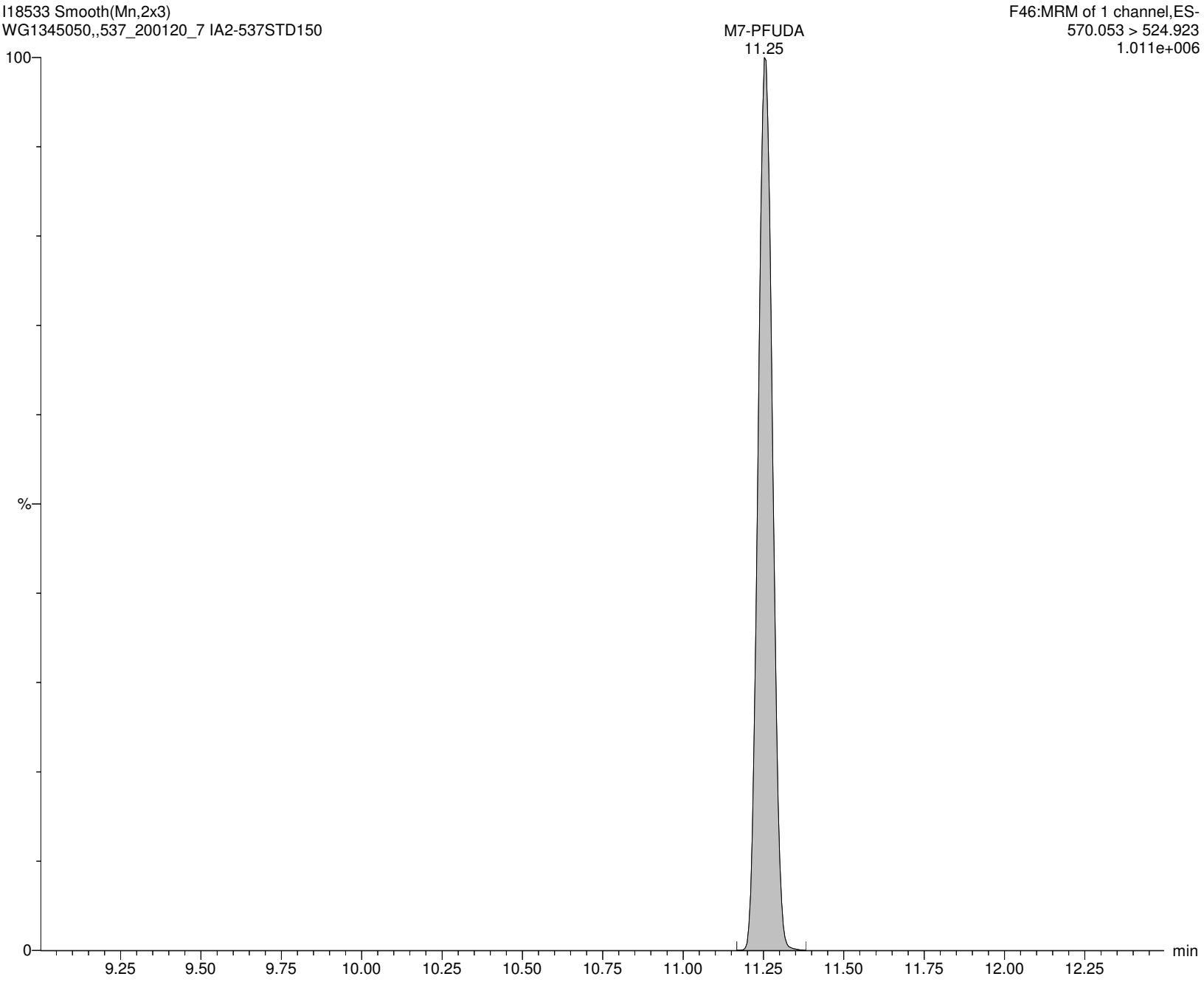
**M7-PFUDA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
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Last Altered: Friday, February 28, 2020 09:12:40 Eastern Standard Time
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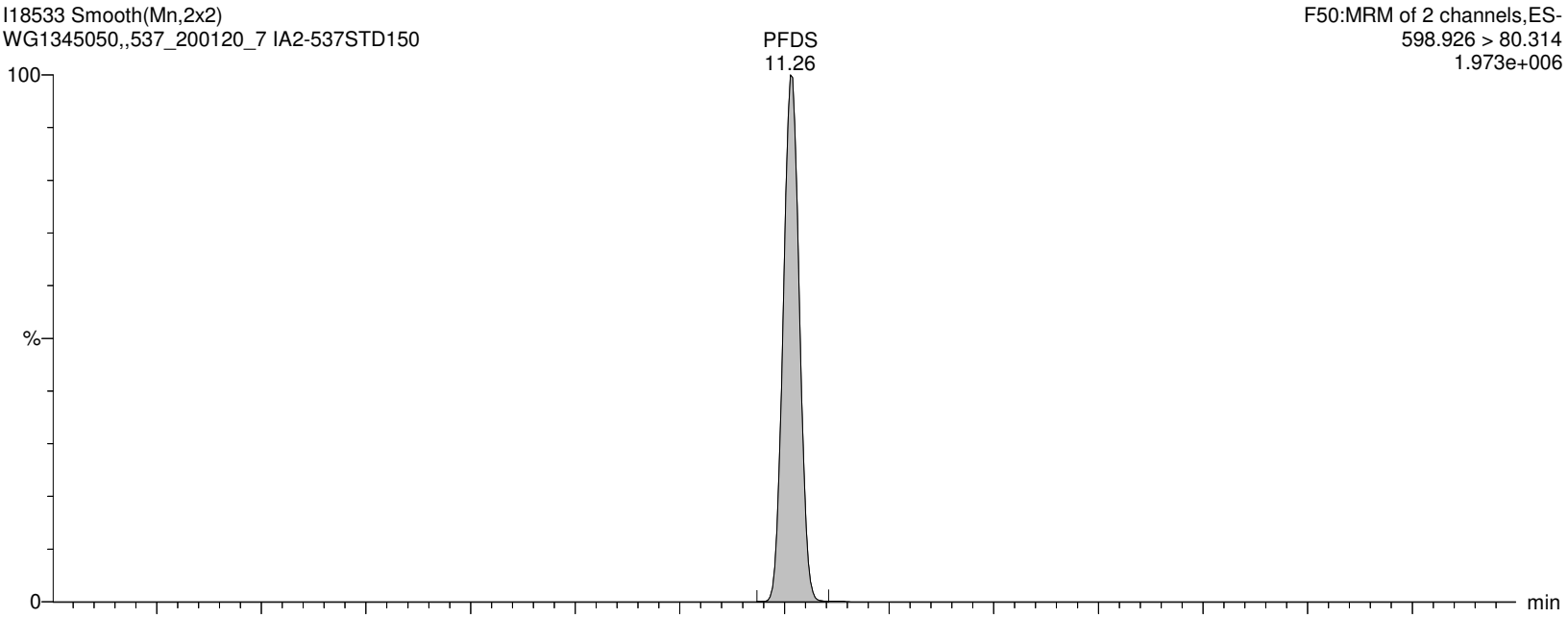
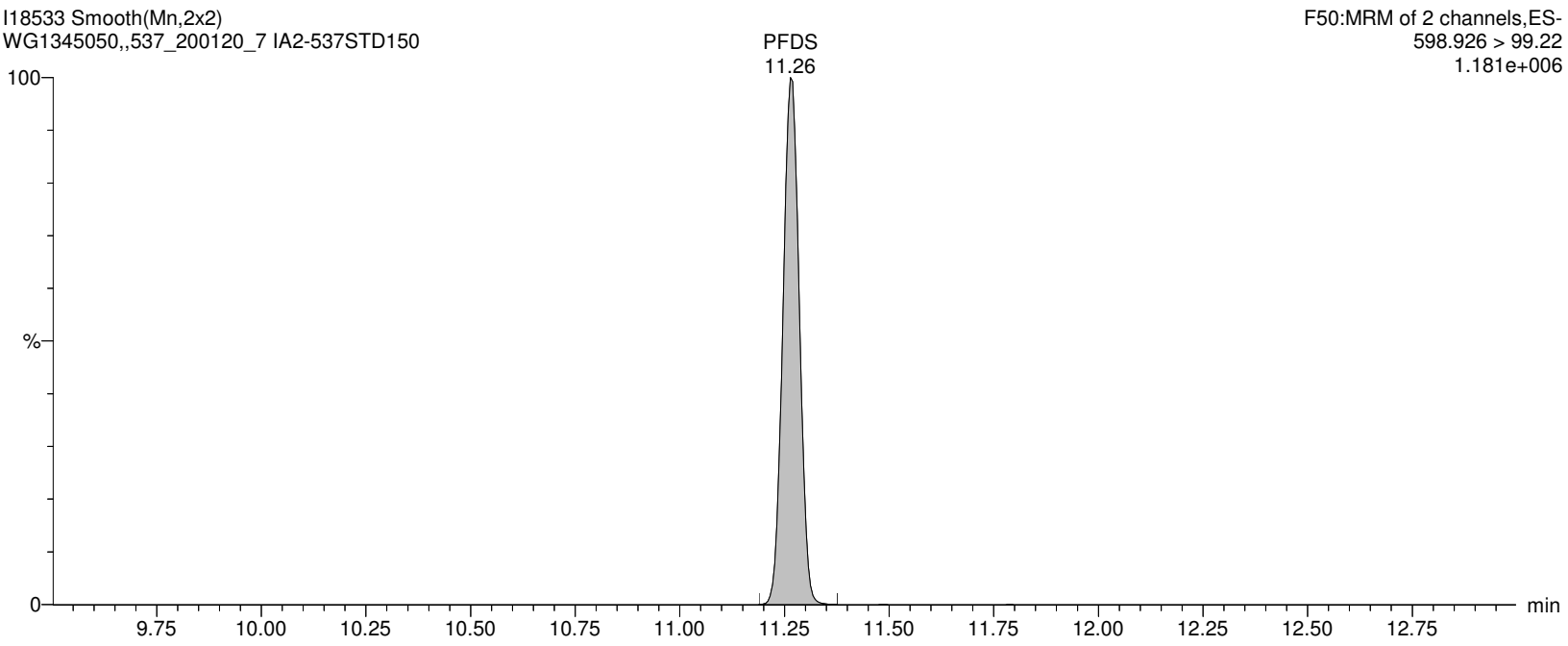
**PFDS**





all concentration units in (ng/mL)

Alpha Analytical Inc.
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Last Altered: Friday, February 28, 2020 09:12:40 Eastern Standard Time
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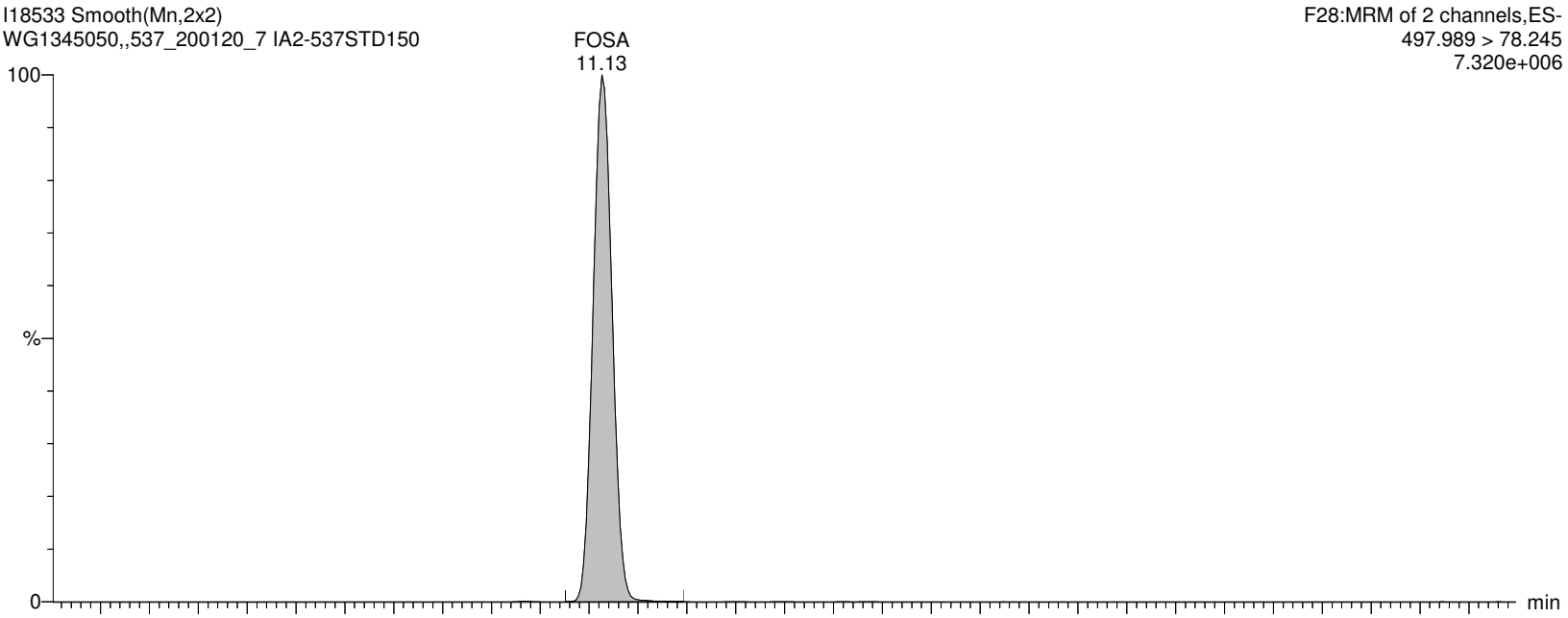


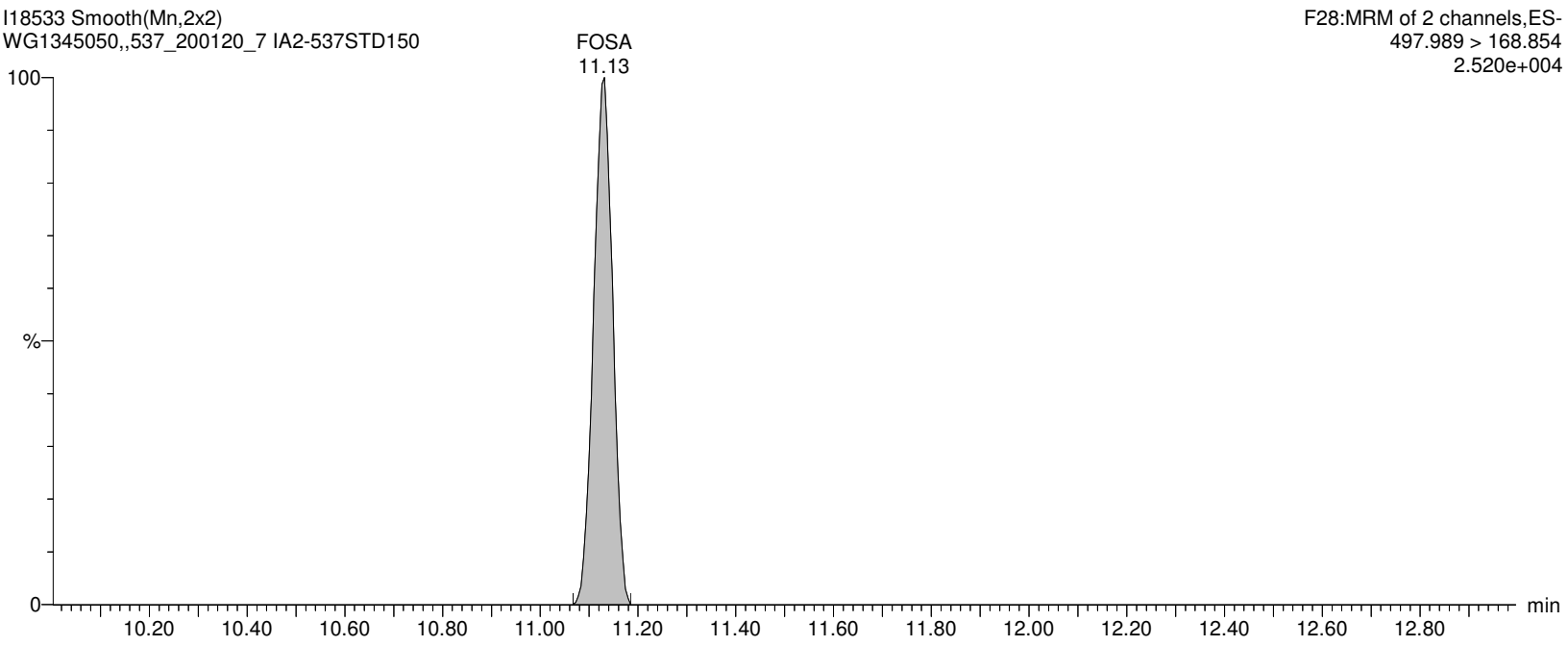



all concentration units in (ng/mL)

Alpha Analytical Inc.
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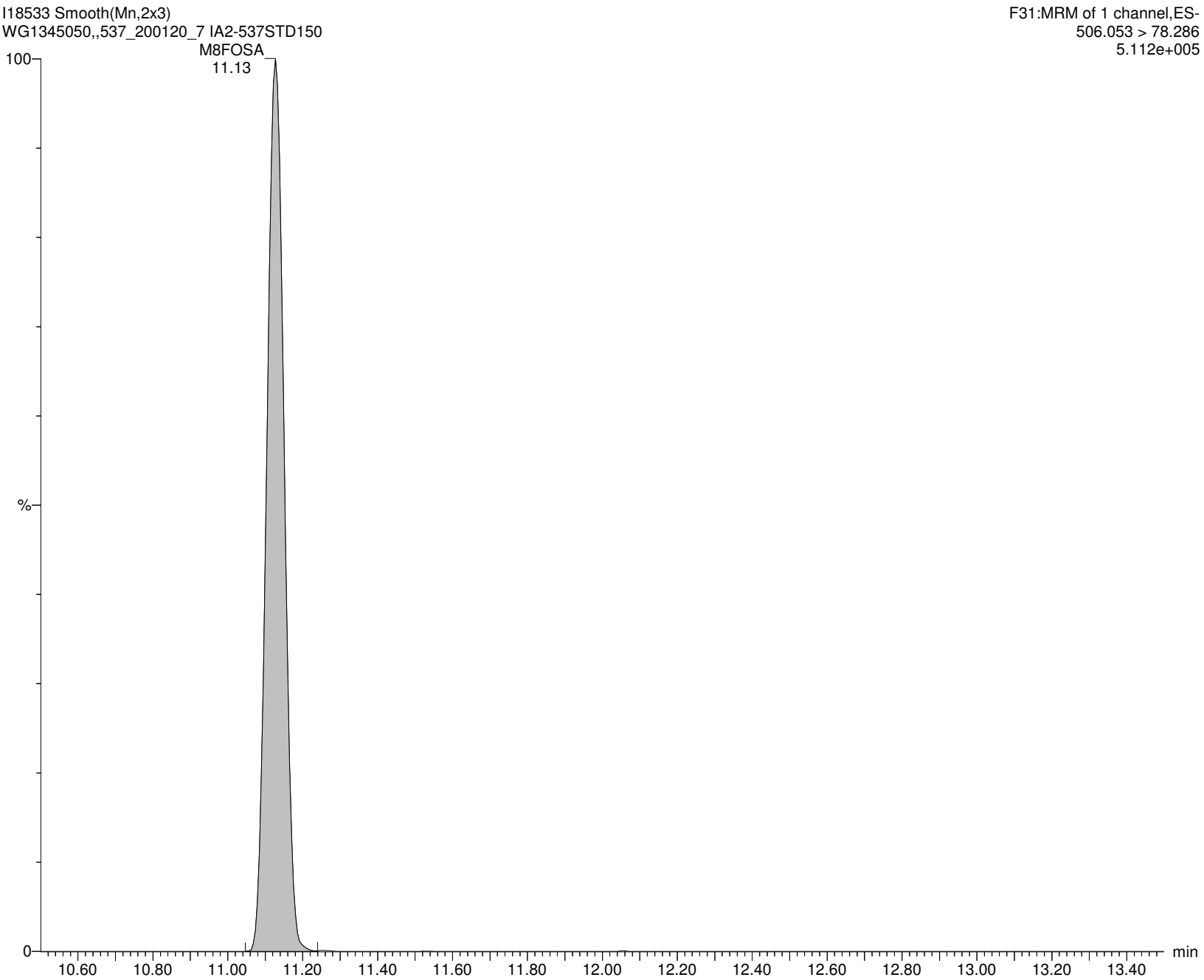
**M8FOSA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
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Last Altered: Friday, February 28, 2020 09:12:40 Eastern Standard Time
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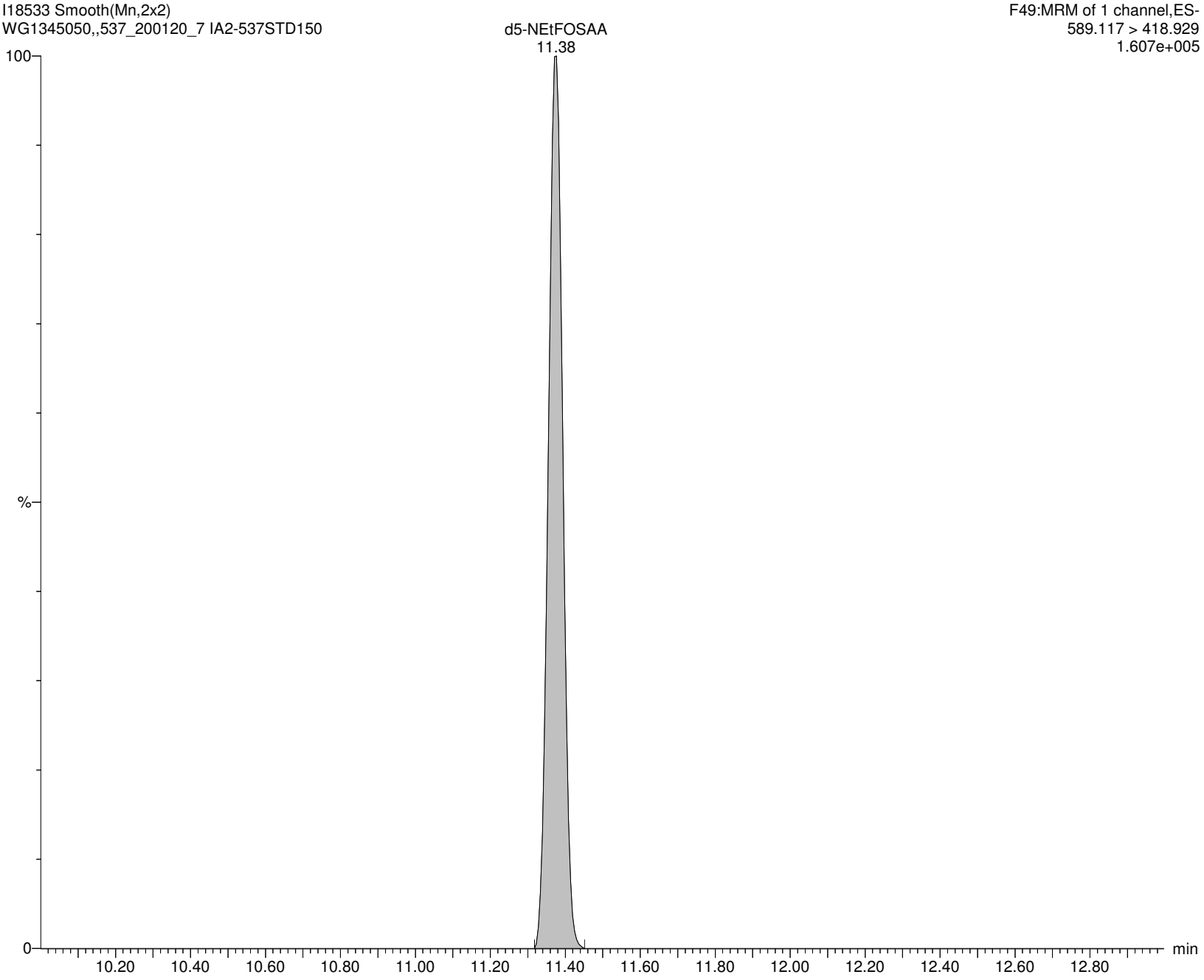



all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICAL_A.qld
Last Altered: Friday, February 28, 2020 09:12:40 Eastern Standard Time
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**Instrument: XEVO-TQSmicro#QEA0276**
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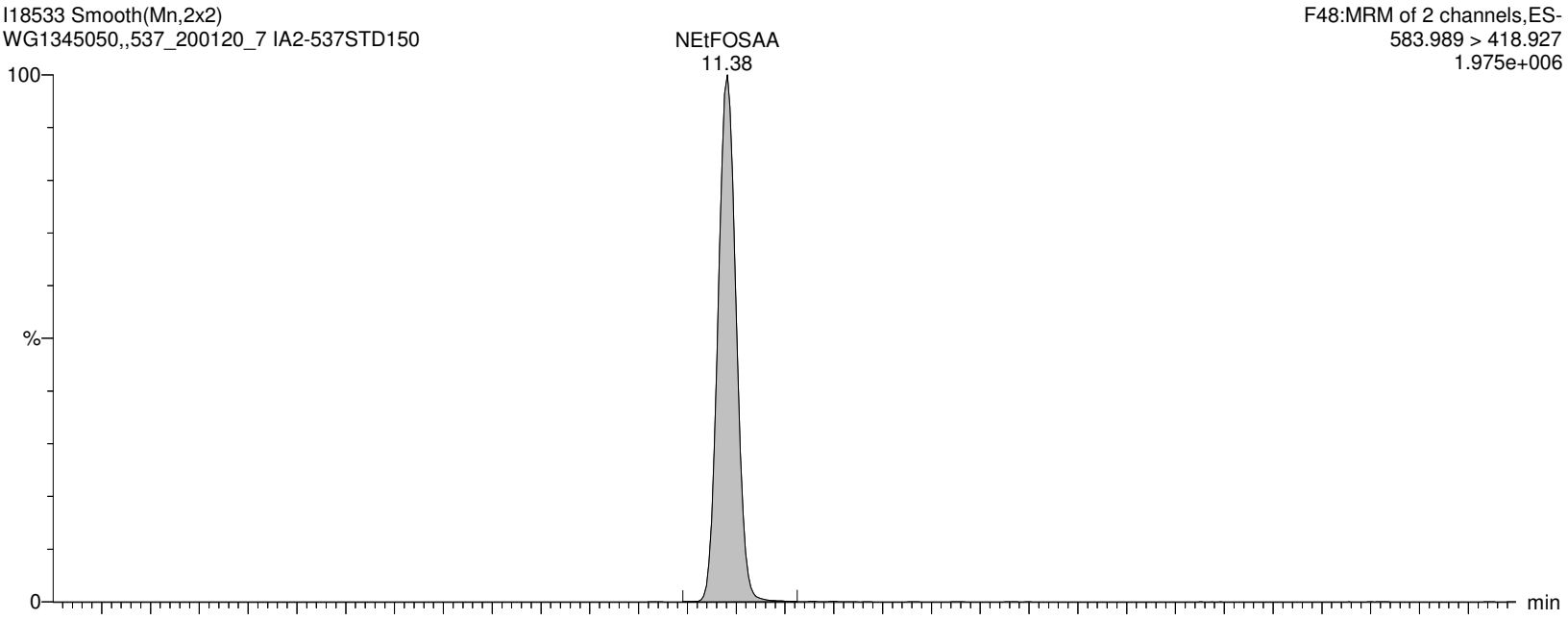
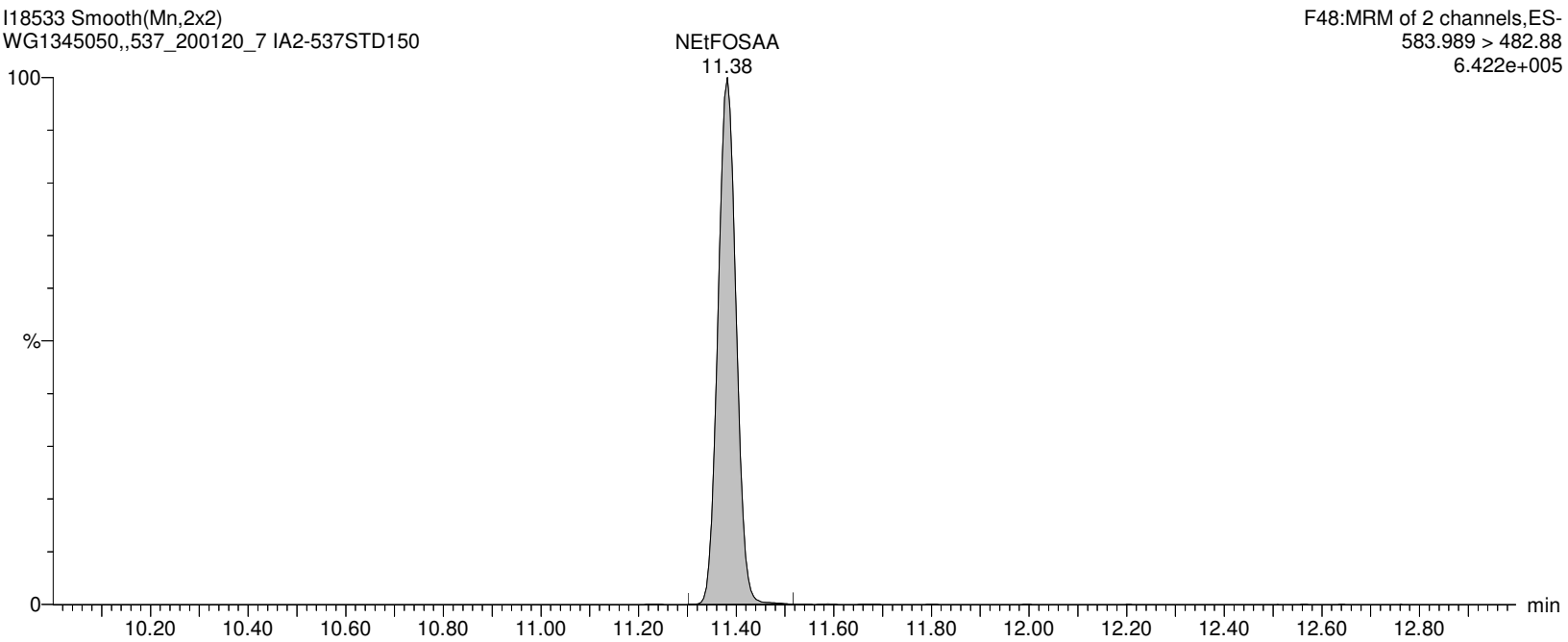
**NEtFOSAA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
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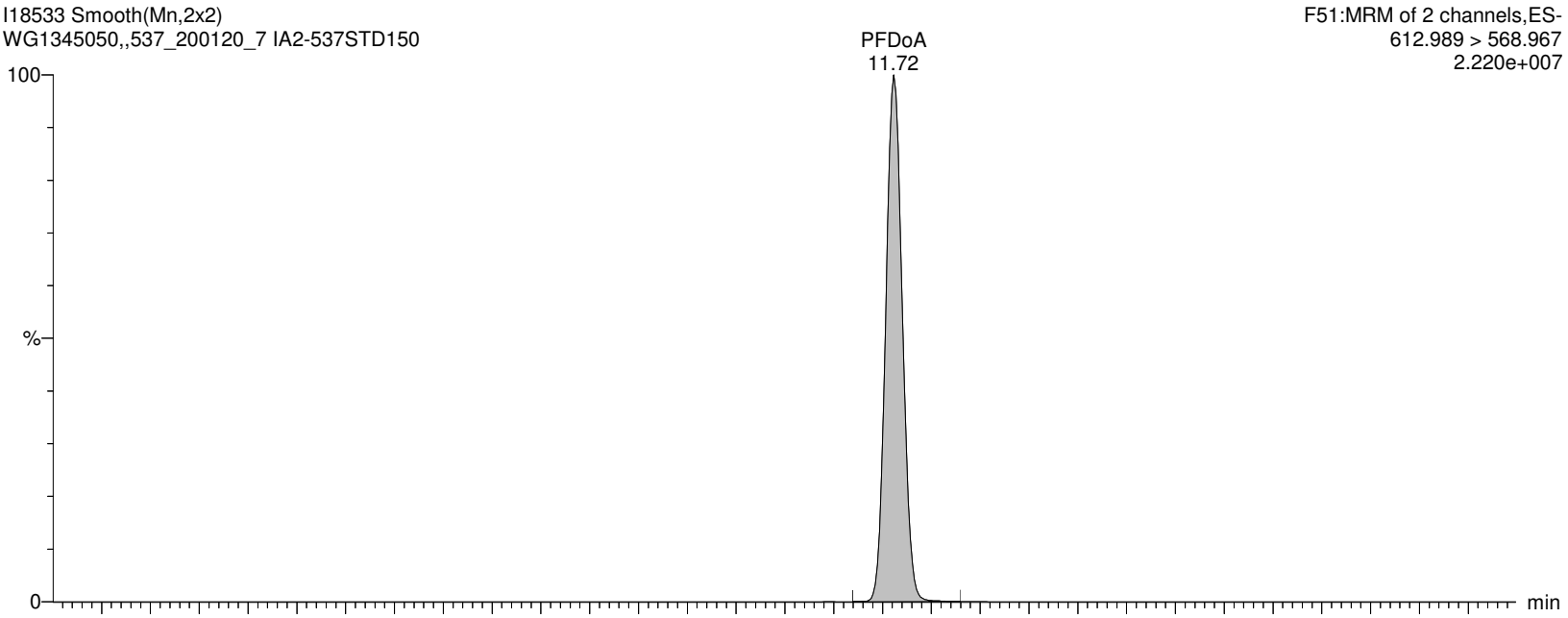


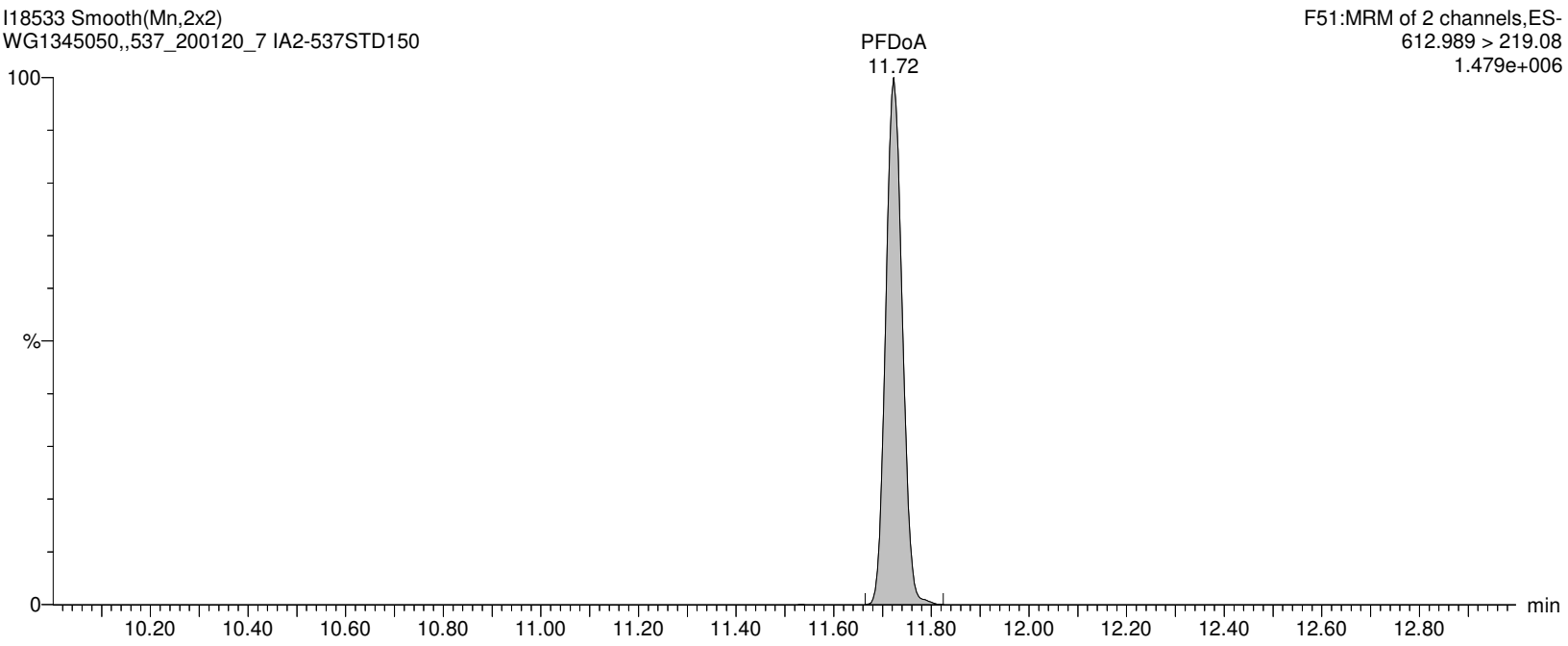



all concentration units in (ng/mL)

Alpha Analytical Inc.
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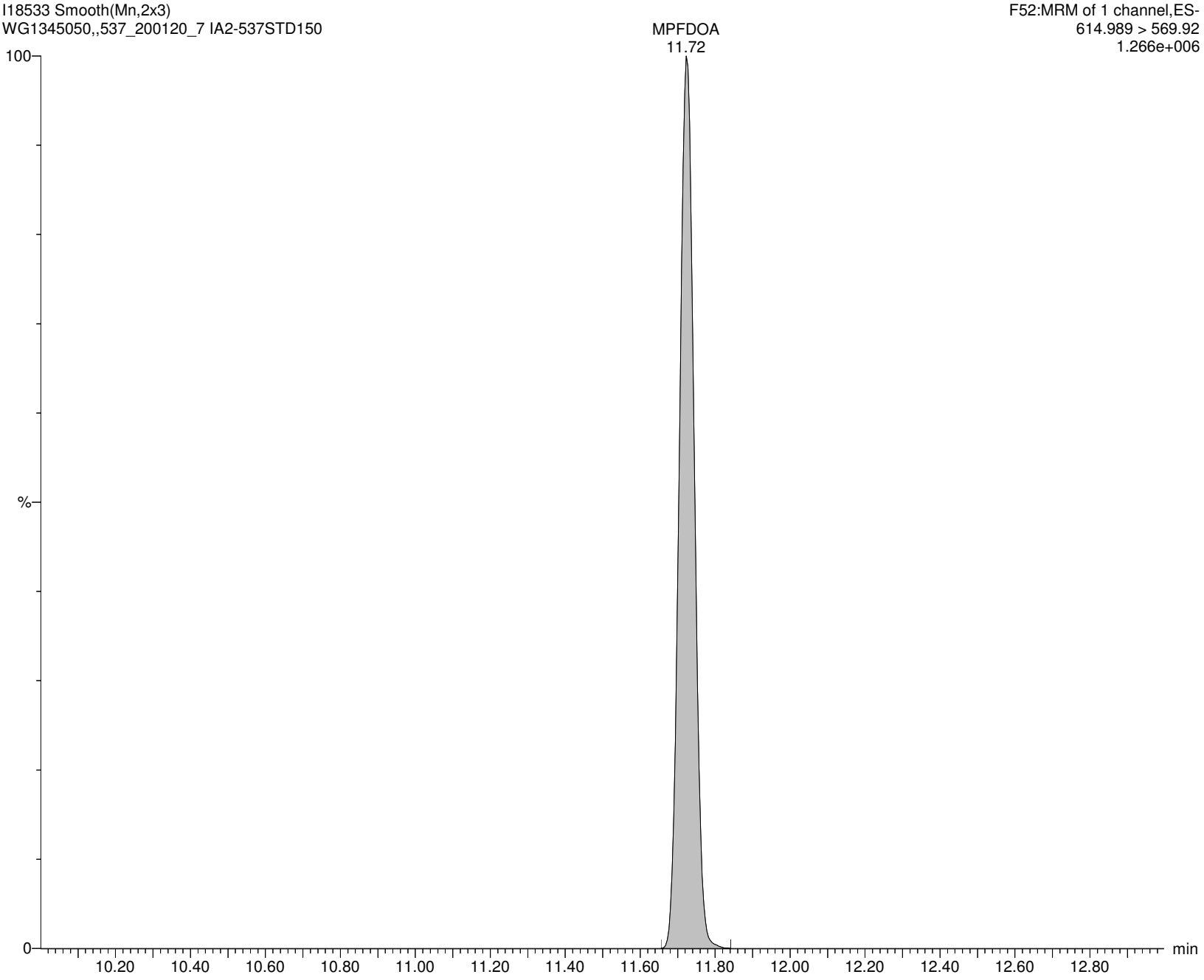
**MS Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**MPFDOA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICAL_A.qld
Last Altered: Friday, February 28, 2020 09:12:40 Eastern Standard Time
Printed: Friday, February 28, 2020 09:27:54 Eastern Standard Time

**Name: I18533**
**ID: IA2-537STD150**
**Date: 27-Feb-2020**
**Time: 15:08:31**
**Description: WG1345050,,537_200120_7**
**User: LCMS01:SG**
**Vial: 1:A,8**
**Instrument: XEVO-TQSmicro#QEA0276**
**Inlet Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\LCMS_537_ISO_MeOH**
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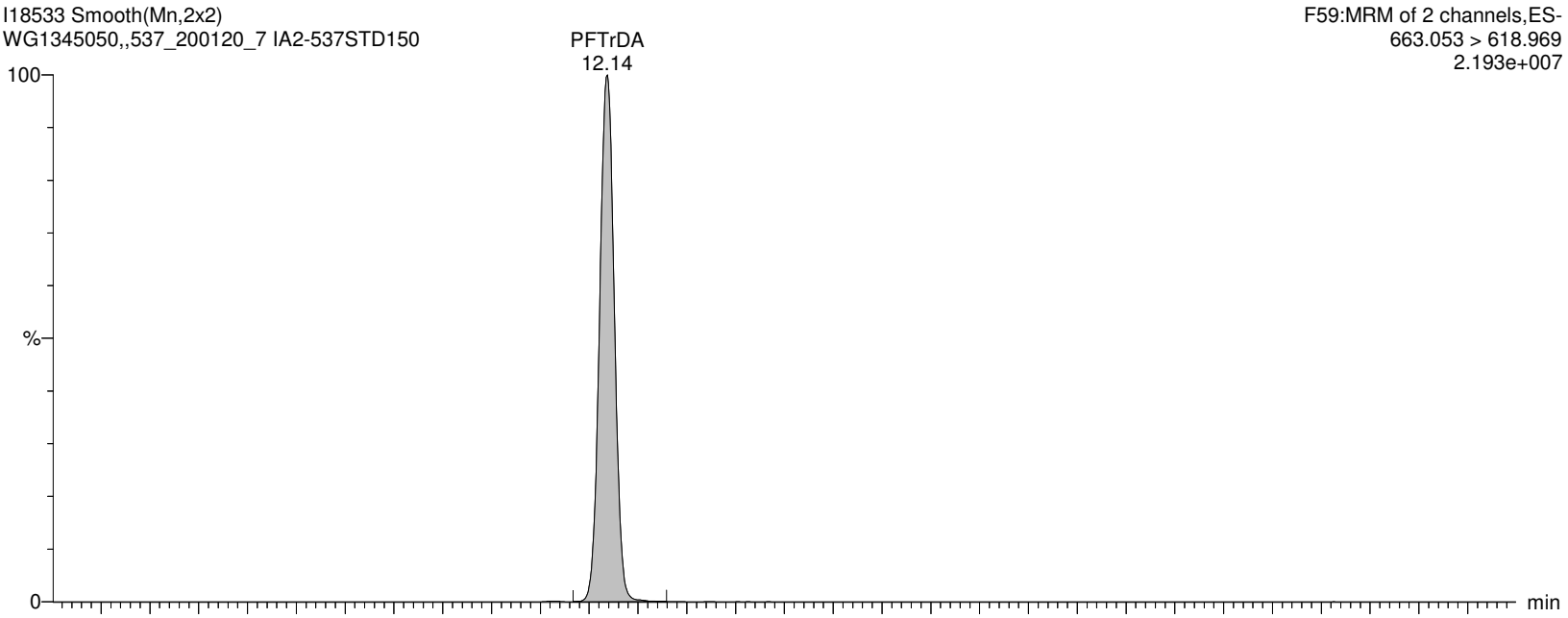


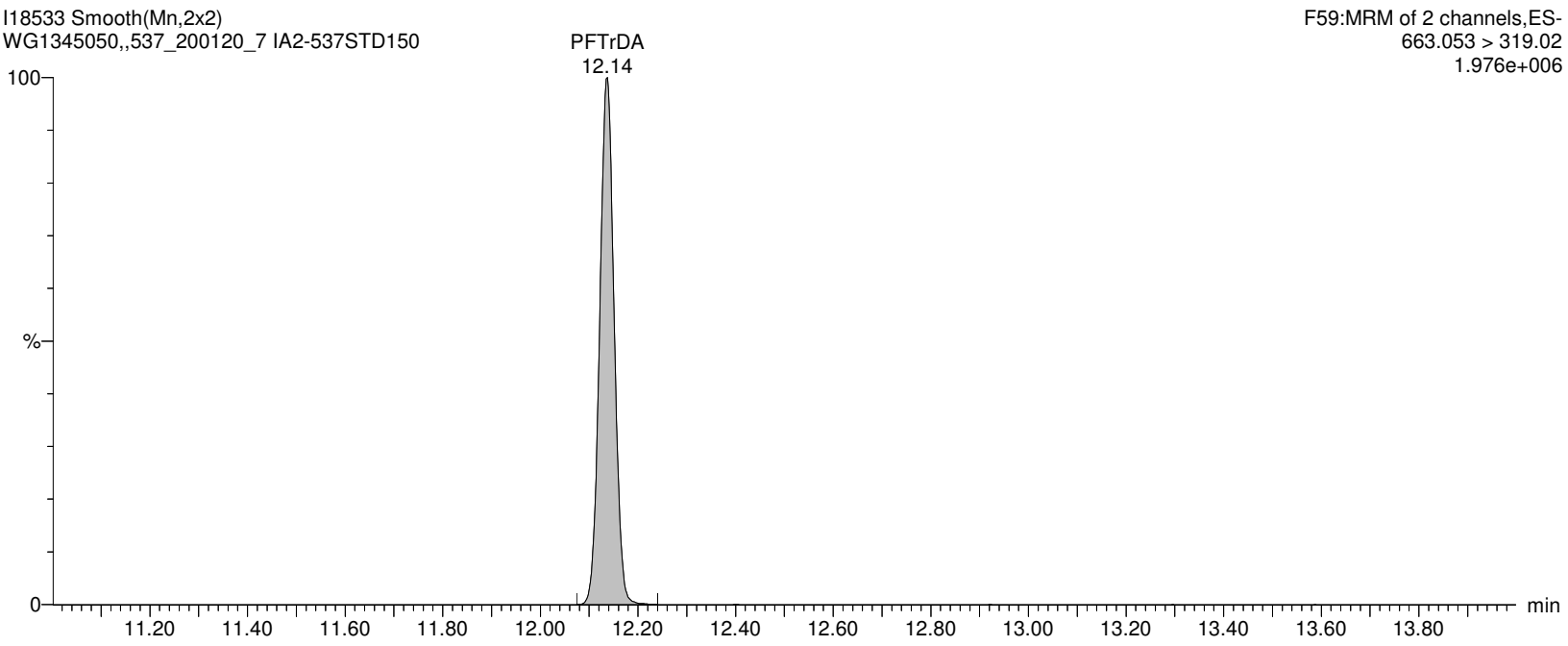



all concentration units in (ng/mL)

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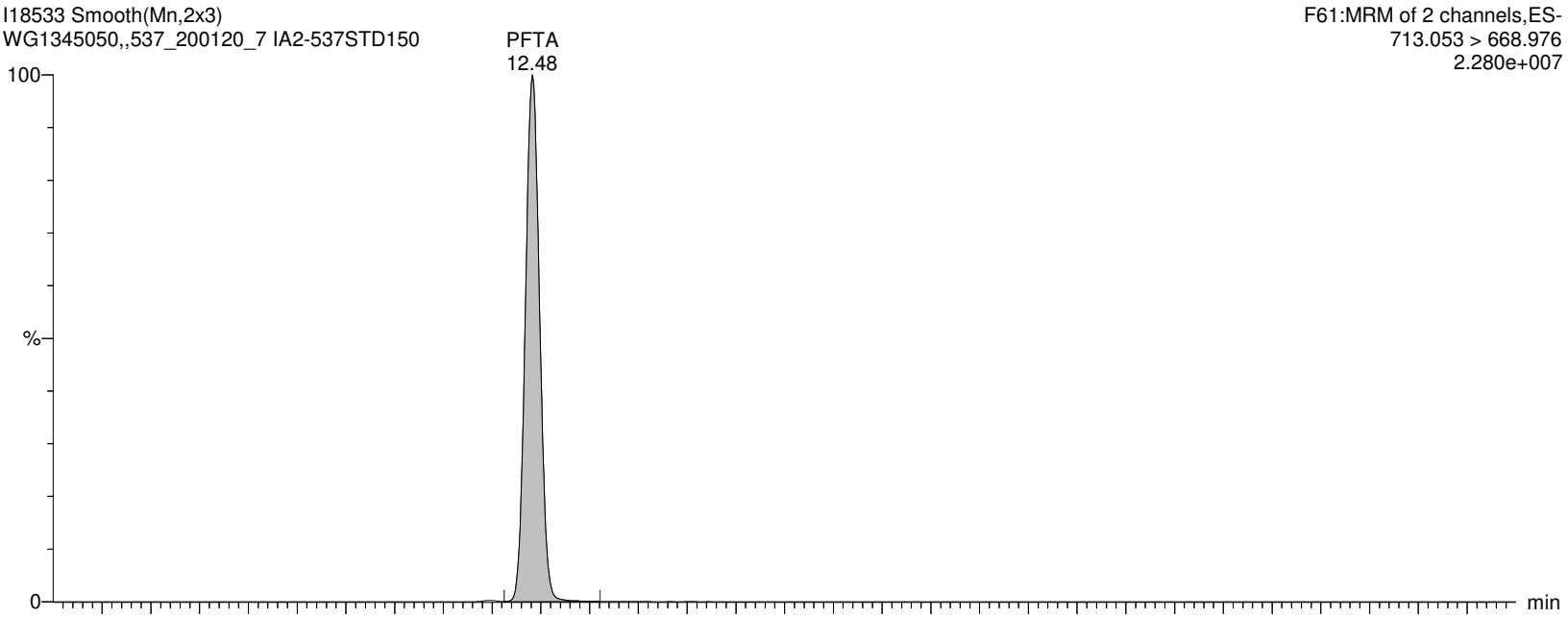
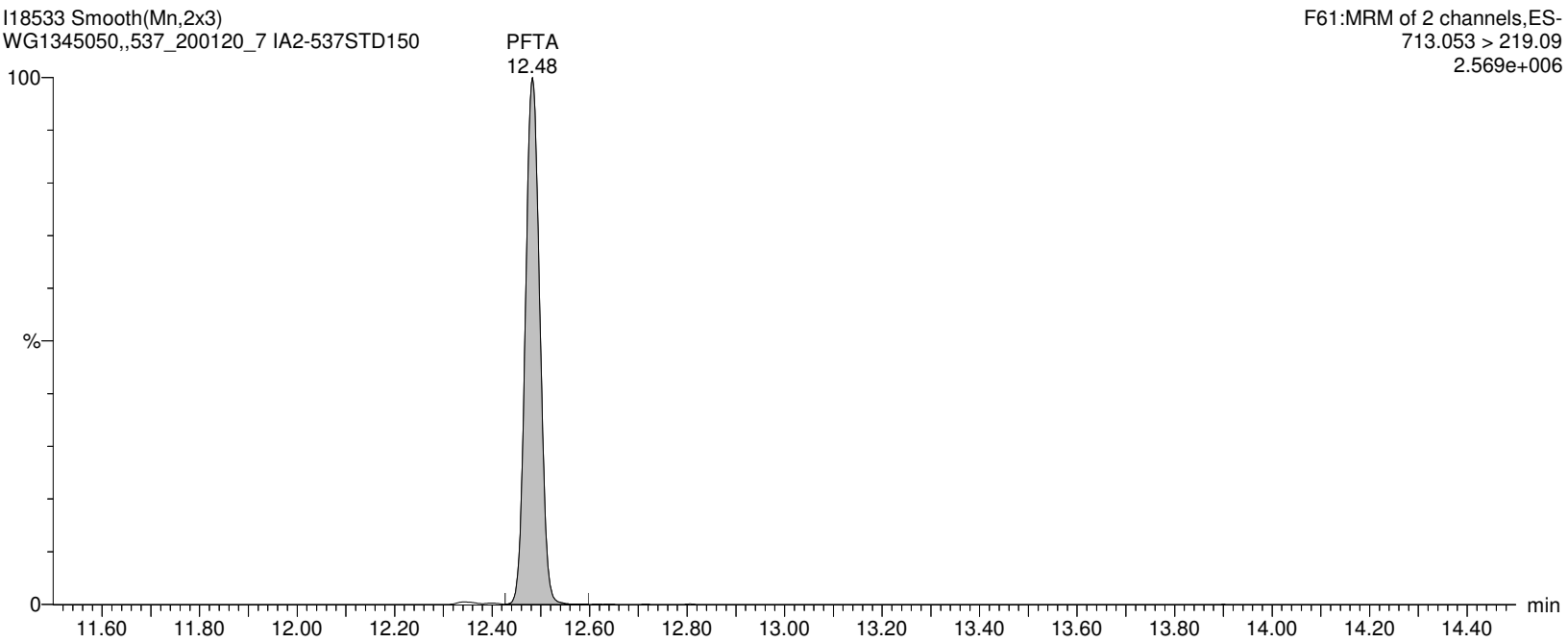
**PFTA**





all concentration units in (ng/mL)

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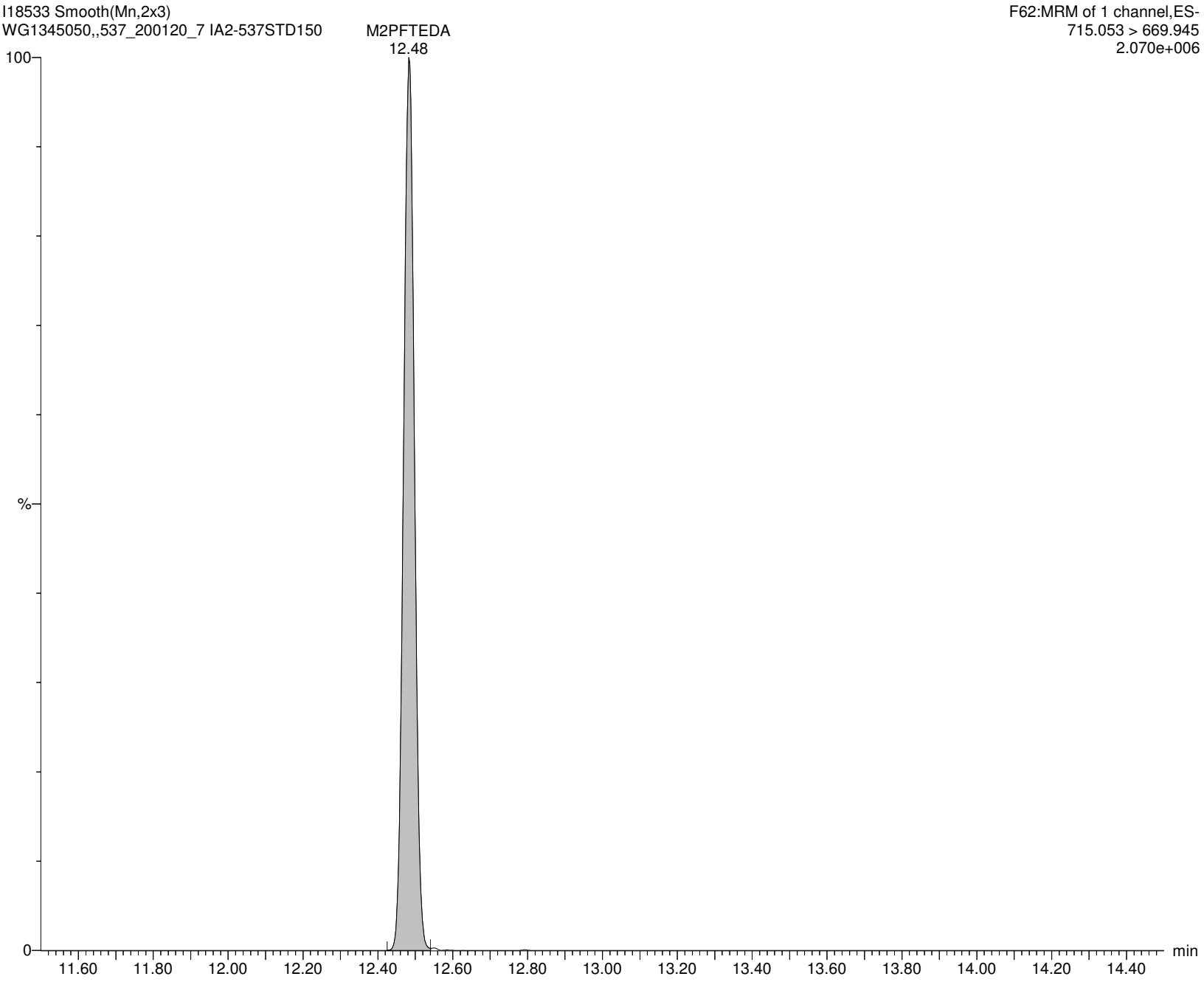
**MS Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**M2PFTEDA**





all concentration units in (ng/mL)

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Last Altered: Friday, February 28, 2020 09:12:40 Eastern Standard Time
Printed: Friday, February 28, 2020 09:27:55 Eastern Standard Time

**Method: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\MethDB\537ISO_Q_200227 .mdb 27 Feb 2020 12:38:15**
**Calibration: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\CurveDB\200227_537ISO_ICAL.cdb 28 Feb 2020 09:12:40**

**ID: IA2-537STD250**
**Name: I18534**
**Date: 27-Feb-2020**
**Time: 15:25:04**
**Description: WG1345050,,537_200120_8**
**Instrument: XEVO-TQSmicro#QEA0276**
**User: LCMS01:SG**
**Inlet Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\LCMS_537_ISO_MeOH**
**Tune Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\190709_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

| | Name | CAS | RT | Trace | Area | M Flag | Conc (ng/mL) | Ion Ratio | Ratio Flag | %Rec |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | PFBA | 375-22-4 | 2.23 | 212.926 > 169.111 | 765724 | | 255.646 | | na | 102.3 |
| 2 | M3PFBA | INT STD | 2.24 | 215.926 > 172.122 | 36272 | | 9.224 | | na | 92.2 |
| 3 | MPFBA | INT STD | 2.24 | 216.926 > 172.137 | 42043 | | 10.116 | | na | 101.2 |
| 4 | PFPeA | 2706-90-3 | 5.21 | 262.926 > 219.002 | 936503 | | 255.715 | | na | 102.3 |
| 5 | M5PFPEA | INT STD | 5.21 | 267.989 > 223.081 | 53492 | | 9.701 | | na | 97.0 |
| 6 | PFBS | 375-73-5 | 5.87 | 298.926 > 79.923 | 191489 | | 223.808 | 2.03 | NO | 101.2 |
| 7 | M3PFBS | INT STD | 5.87 | 301.989 > 80.254 | 9545 | | 11.243 | | na | 112.4 |
| 8 | 4:2FTS | 757124-72-4 | 7.04 | 326.926 > 306.957 | 96127 | | ND | 1.81 | NO | |
| 9 | M2-4:2FTS | INT STD | 7.04 | 329.117 > 309.079 | 9989 | | 22.583 | | na | 225.8 |
| 10 | PFHxA | 307-24-4 | 7.12 | 312.989 > 269.028 | 1222656 | | 253.744 | 17.17 | NO | 101.5 |
| 11 | M5PFHxA | INT STD | 7.12 | 317.989 > 273.045 | 59290 | | 10.426 | | na | 104.3 |
| 12 | PFPeS | 2706-91-4 | 7.43 | 348.926 > 80.251 | 190569 | | 243.620 | 2.35 | NO | 103.7 |
| 13 | PFHpA | 375-85-9 | 8.40 | 362.926 > 319.014 | 1473721 | | 251.986 | 5.17 | NO | 100.8 |
| 14 | M4PFHpA | INT STD | 8.40 | 366.926 > 321.979 | 67411 | | 10.218 | | na | 102.2 |
| 15 | br-PFHxS | 355-46-4 | 8.32 | 398.904 > 79.915 | 34081 | | 44.106 | 2.99 | NO | 103.8 |
| 16 | L-PFHxS | 355-46-4 | 8.56 | 398.904 > 79.915 | 111634 | | 191.185 | 1.98 | NO | 103.3 |
| 17 | PFHxS | 355-46-4 | | 398.904 > 79.915 | 145714 | | 235.291 | | na | |
| 18 | M3PFHxS | INT STD | 8.55 | 401.926 > 80.317 | 7778 | | 10.227 | | na | 102.3 |
| 19 | br-PFOA | 335-67-1 | | 412.989 > 368.9 | | | ND | 0.00 | NO | |
| 20 | L-PFOA | 335-67-1 | 9.34 | 412.989 > 368.9 | 1412851 | | 251.540 | 8.25 | NO | 100.6 |
| 21 | M2PFOA | INT STD | 9.35 | 415.032 > 369.968 | 69458 | | 8.256 | | na | 82.6 |
| 22 | PFOA | 335-67-1 | | 412.989 > 368.9 | 1412851 | | 251.540 | | na | |
| 23 | M8PFOA | INT STD | 9.34 | 420.989 > 375.979 | 67823 | | 10.240 | | na | 102.4 |
| 24 | 6:2FTS | 27619-97-2 | 9.30 | 426.989 > 406.921 | 21261 | | 116.569 | 0.69 | NO | 49.1 |
| 25 | M2-6:2FTS | INT STD | 9.30 | 428.989 > 408.917 | 7645 | | 27.779 | | na | 277.8 |
| 26 | PFHpS | 375-92-8 | 9.43 | 448.926 > 80.257 | 101143 | | 238.568 | 1.05 | NO | 100.4 |
| 27 | PFNA | 375-95-1 | 10.09 | 462.989 > 418.931 | 1202891 | | 243.380 | 3.90 | NO | 97.4 |
| 28 | M9PFNA | INT STD | 10.09 | 472.053 > 426.947 | 66426 | | 10.258 | | na | 102.6 |
| 29 | br-PFOS | 1763-23-1 | 9.95 | 498.968 > 79.918 | 43614 | M5 | 51.700 | 3.97 | NO | 103.4 |
| 30 | L-PFOS | 1763-23-1 | 10.14 | 498.968 > 79.918 | 86944 | | 190.076 | 1.36 | NO | 104.2 |
| 31 | PFOS | 1763-23-1 | | 498.968 > 79.918 | 130558 | | 241.776 | | na | |
| 32 | M4PFOS | INT STD | 10.14 | 503.032 > 80.306 | 6618 | | 7.791 | | na | 77.9 |
| 33 | M8PFOS | INT STD | 10.14 | 507.053 > 80.294 | 7526 | | 9.793 | | na | 97.9 |
| 34 | PFDA | 335-76-2 | 10.71 | 513.053 > 468.906 | 1056450 | | 258.950 | 5.55 | NO | 103.6 |
| 35 | M2PFDA | INT STD | 10.71 | 515.053 > 469.934 | 50151 | | 7.582 | | na | 75.8 |
| 36 | M6PFDA | INT STD | 10.71 | 519.053 > 473.931 | 53263 | | 9.653 | | na | 96.5 |
| 37 | 8:2FTS | 39108-34-4 | 10.71 | 527.032 > 507.079 | 25025 | | ND | 1.65 | NO | |
| 38 | M2-8:2FTS | INT STD | 10.71 | 529.053 > 508.945 | 3226 | | 19.382 | | na | 193.8 |
| 39 | PFNS | 68259-12-1 | 10.74 | 548.989 > 80.249 | 129896 | | 247.351 | 1.48 | NO | 103.1 |


all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICAL_A.qld
Last Altered: Friday, February 28, 2020 09:12:40 Eastern Standard Time
Printed: Friday, February 28, 2020 09:27:55 Eastern Standard Time

**ID: IA2-537STD250**
**Name: I18534**
**Date: 27-Feb-2020**
**Time: 15:25:04**
**Description: WG1345050,,537_200120_8**
**Instrument: XEVO-TQSmicro#QEA0276**
**User: LCMS01:SG**
**Inlet Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\LCMS_537_ISO_MeOH**
**Tune Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\190709_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

| | Name | CAS | RT | Trace | Area | M Flag | Conc (ng/mL) | Ion Ratio | Ratio Flag | %Rec |
|---|---|---|---|---|---|---|---|---|---|---|
| 40 | d3-NMeFOSAA | INT STD | 11.08 | 573.096 > 418.987 | 8872 | | 12.137 | | na | 121.4 |
| 41 | NMeFOSAA | 2355-31-9 | 11.09 | 570.053 > 418.917 | 137711 | | 259.740 | 2.77 | NO | 103.9 |
| 42 | PFUnA | 2058-94-8 | 11.25 | 562.989 > 518.903 | 979808 | | 271.907 | 7.16 | NO | 108.8 |
| 43 | M7-PFUDA | INT STD | 11.25 | 570.053 > 524.923 | 42396 | | 8.744 | | na | 87.4 |
| 44 | PFDS | 335-77-3 | 11.26 | 598.926 > 80.314 | 125274 | | 243.305 | 1.60 | NO | 100.9 |
| 45 | FOSA | 754-91-6 | 11.12 | 497.989 > 78.245 | 506613 | | 259.349 | 189.16 | NO | 103.7 |
| 46 | M8FOSA | INT STD | 11.12 | 506.053 > 78.286 | 23742 | | 10.737 | | na | 107.4 |
| 47 | d5-NEtFOSAA | INT STD | 11.37 | 589.117 > 418.929 | 6222 | | 11.672 | | na | 116.7 |
| 48 | NEtFOSAA | 2991-50-6 | 11.38 | 583.989 > 418.927 | 139937 | | 263.670 | 3.17 | NO | 105.5 |
| 49 | PFDoA | 307-55-1 | 11.72 | 612.989 > 568.967 | 1291296 | | 255.712 | 13.71 | NO | 102.3 |
| 50 | MPFDOA | INT STD | 11.72 | 614.989 > 569.92 | 55621 | | 10.670 | | na | 106.7 |
| 51 | PFTrDA | 72629-94-8 | 12.13 | 663.053 > 618.969 | 1070954 | | 233.305 | 11.52 | NO | 93.3 |
| 52 | PFTA | 376-06-7 | 12.48 | 713.053 > 668.976 | 1176527 | | 257.810 | 8.74 | NO | 103.1 |
| 53 | M2PFTEDA | INT STD | 12.48 | 715.053 > 669.945 | 61592 | | 10.483 | | na | 104.8 |


all concentration units in (ng/mL)

Alpha Analytical Inc.
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Last Altered: Friday, February 28, 2020 09:12:40 Eastern Standard Time
Printed: Friday, February 28, 2020 09:27:55 Eastern Standard Time

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**Name: I18534**
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**Date: 27-Feb-2020**
**Time: 15:25:04**
**Description: WG1345050,,537_200120_8**
**User: LCMS01:SG**
**Vial: 1:B,1**
**Instrument: XEVO-TQSmicro#QEA0276**
**Inlet Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\LCMS_537_ISO_MeOH**
**Tune Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\190709_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

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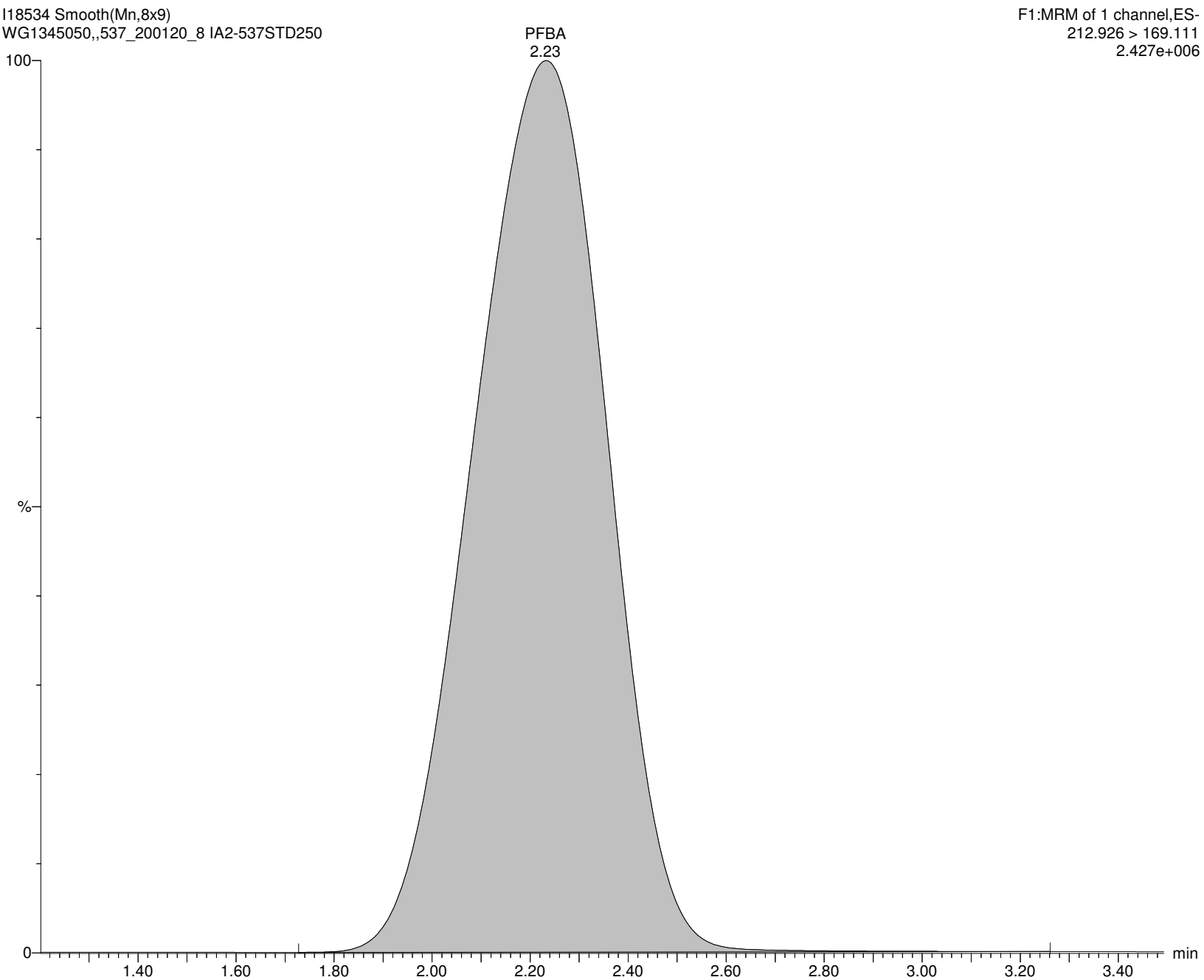



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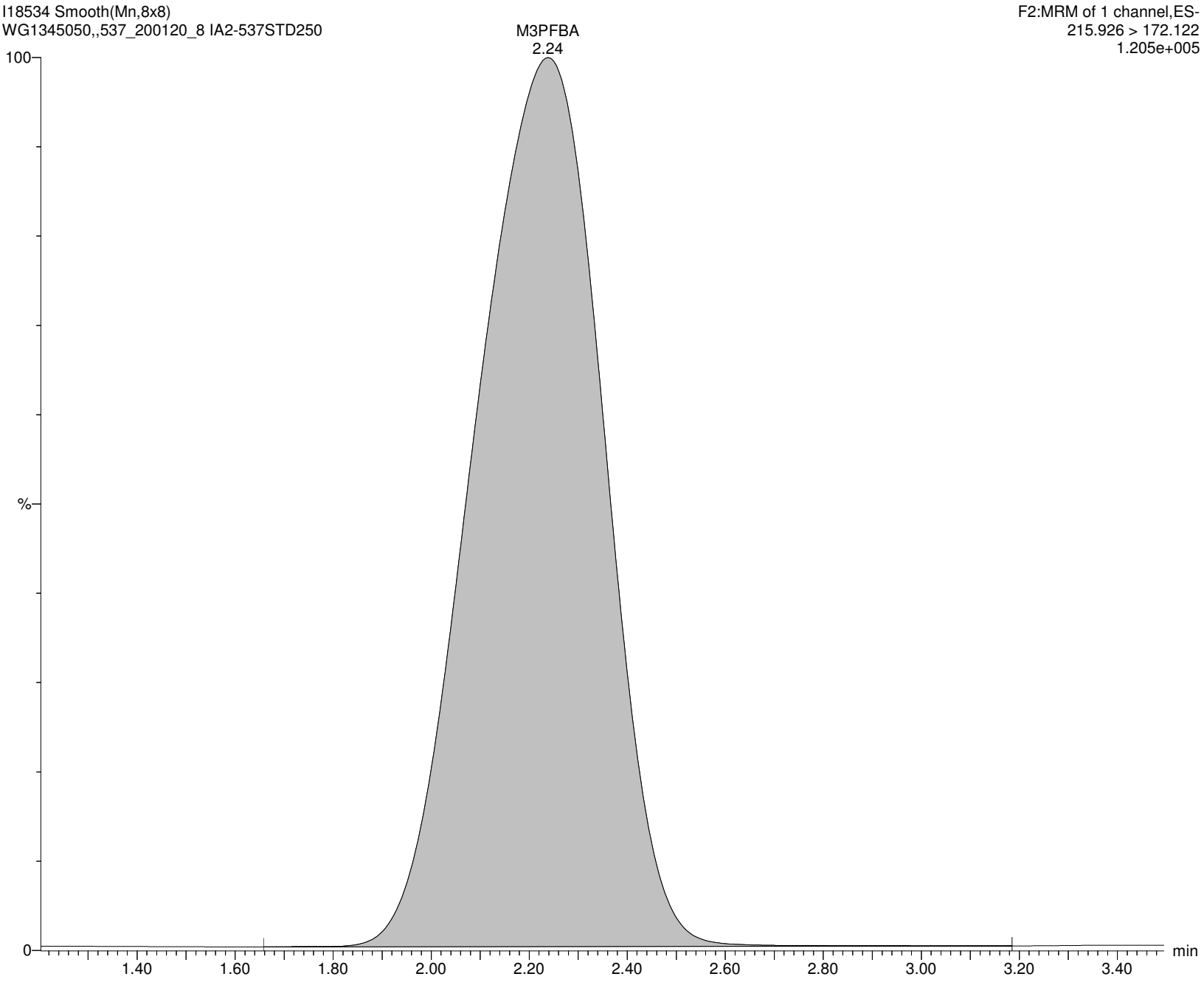
**M3PFBA**





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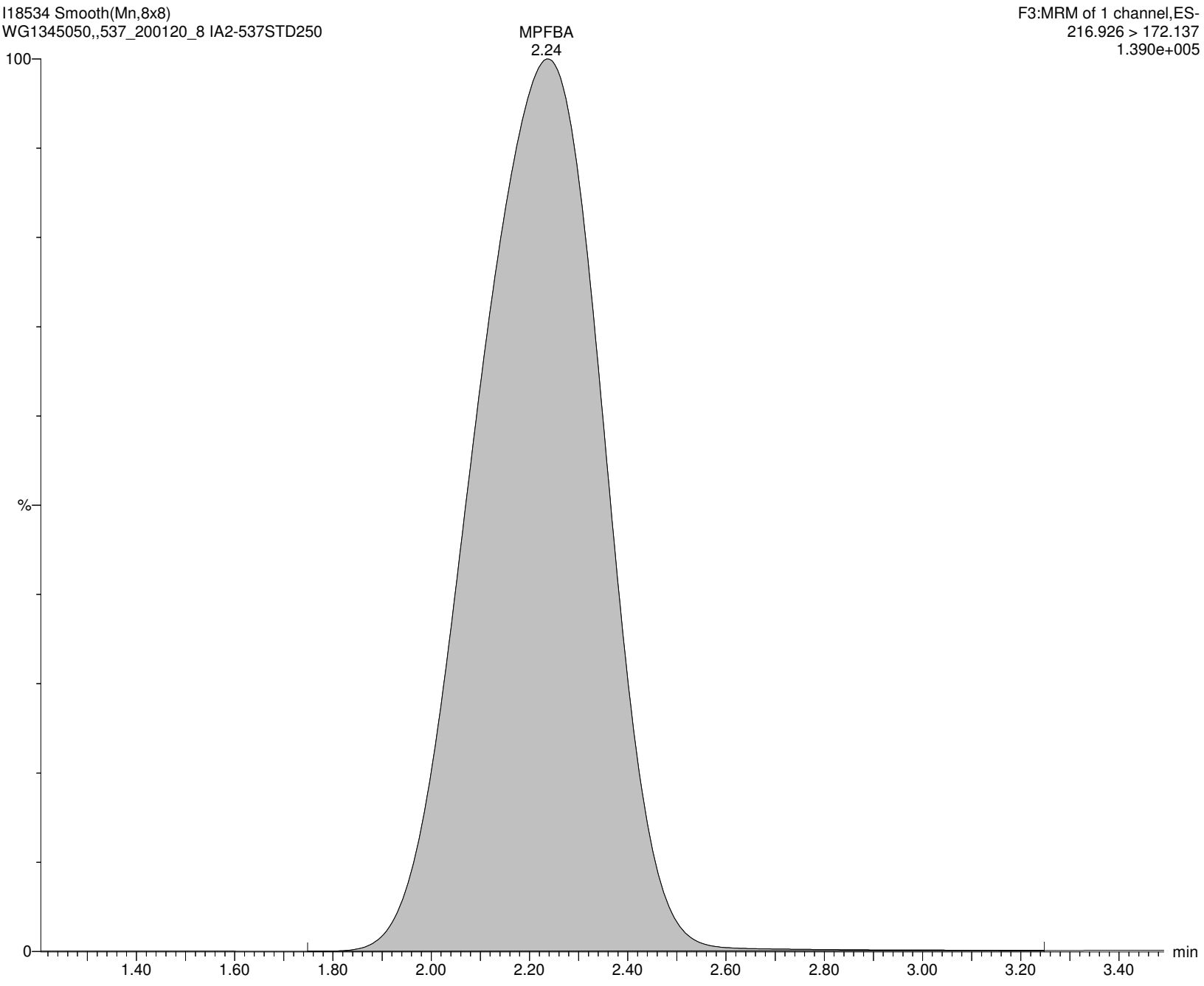
**MPFBA**





all concentration units in (ng/mL)

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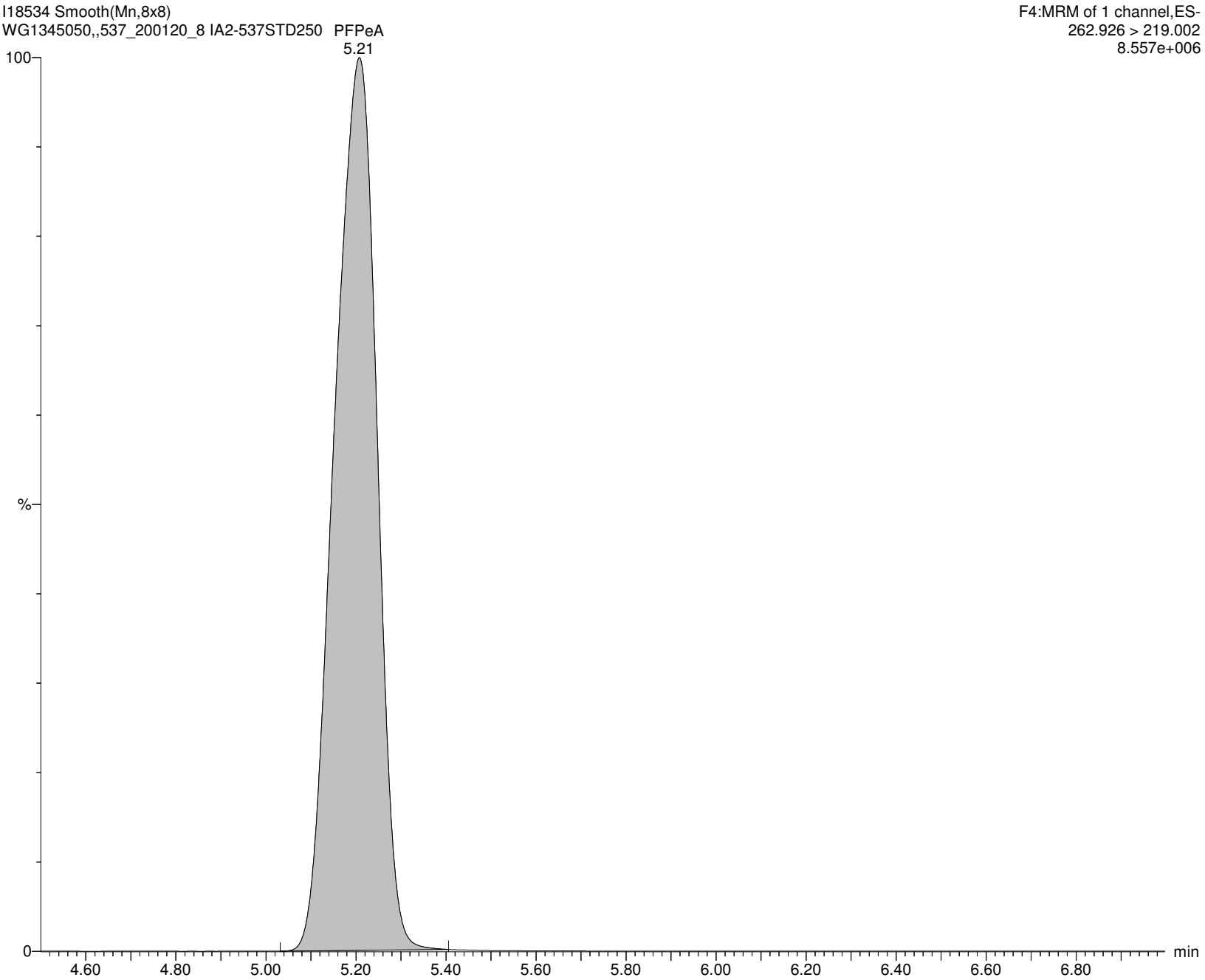
**PFPeA**





all concentration units in (ng/mL)

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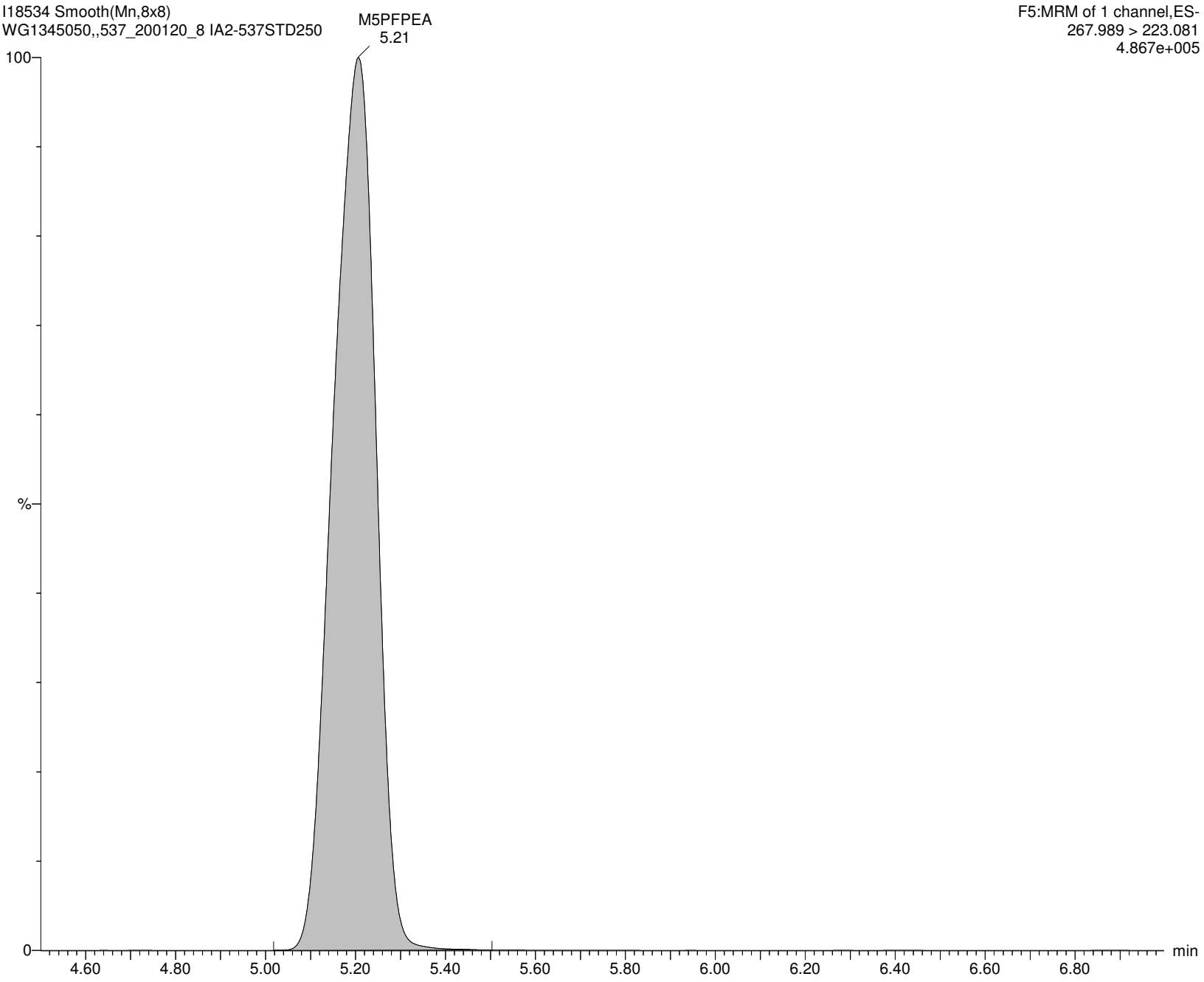
**MS Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**M5PFPEA**





all concentration units in (ng/mL)

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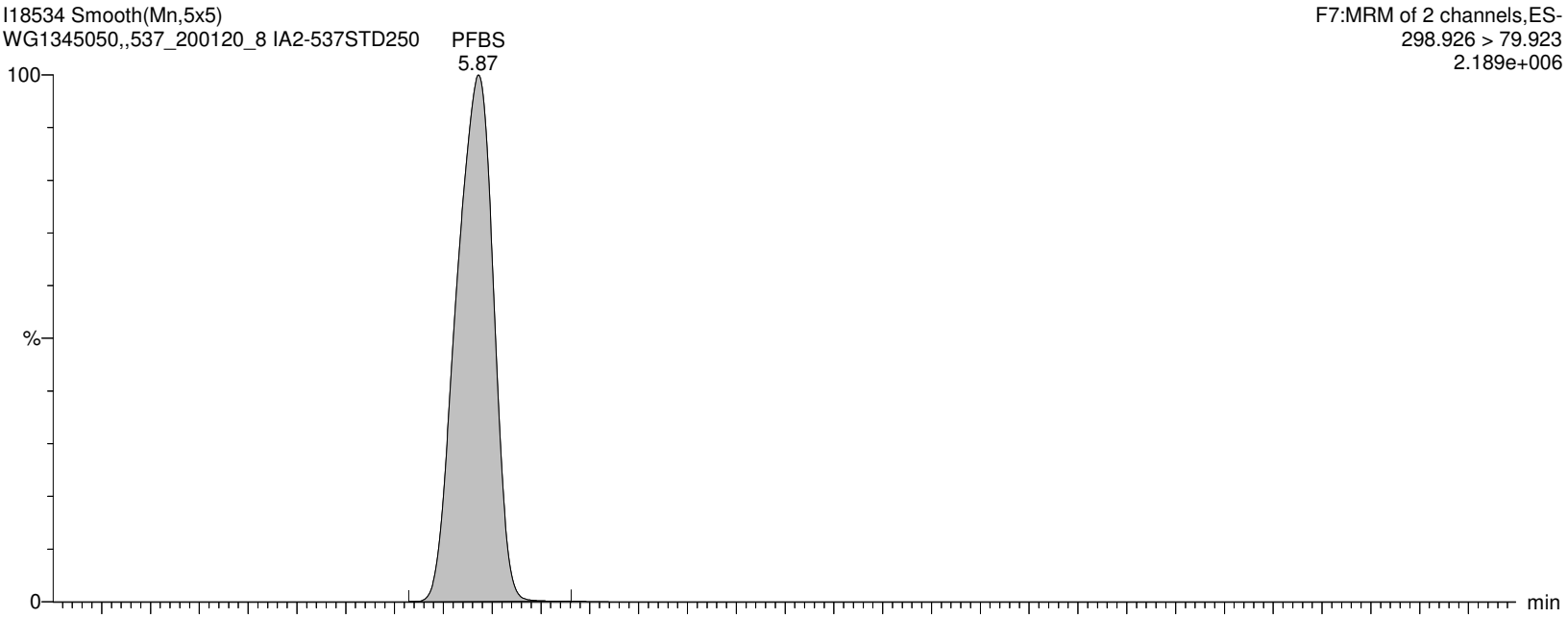
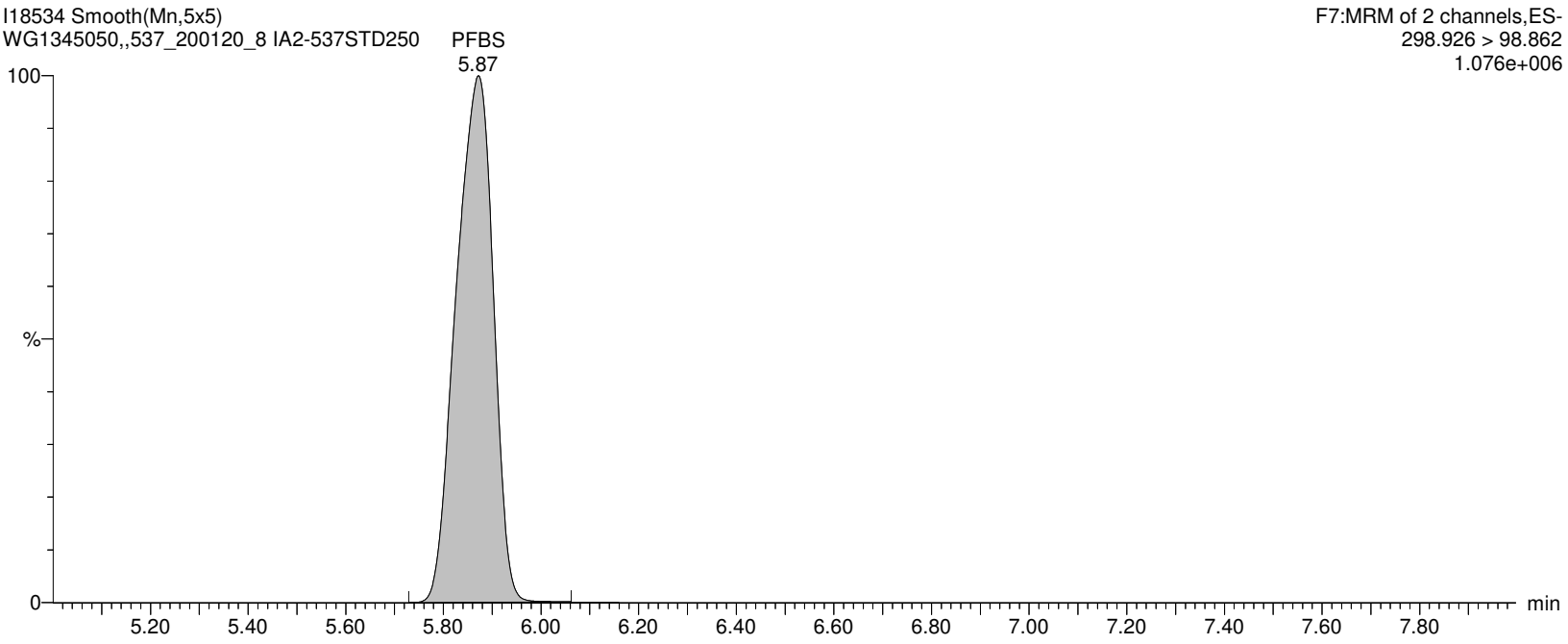
**MS Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**PFBS**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICAL_A.qld
Last Altered: Friday, February 28, 2020 09:12:40 Eastern Standard Time
Printed: Friday, February 28, 2020 09:27:55 Eastern Standard Time

**Name: I18534**
**ID: IA2-537STD250**
**Date: 27-Feb-2020**
**Time: 15:25:04**
**Description: WG1345050,,537_200120_8**
**User: LCMS01:SG**
**Vial: 1:B,1**
**Instrument: XEVO-TQSmicro#QEA0276**
**Inlet Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\LCMS_537_ISO_MeOH**
**Tune Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\190709_TUNE.IPR**
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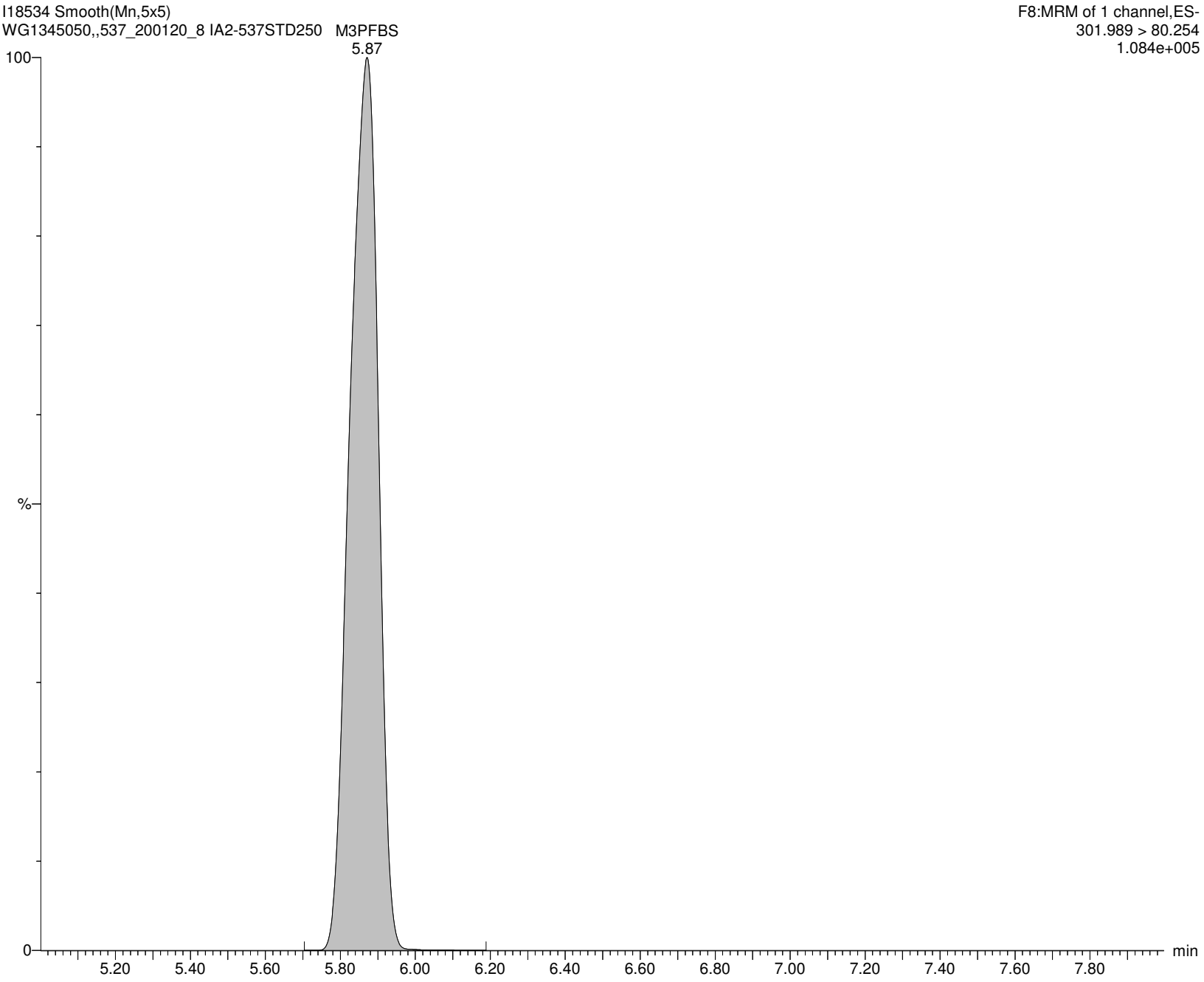
**M3PFBS**





all concentration units in (ng/mL)

Alpha Analytical Inc.
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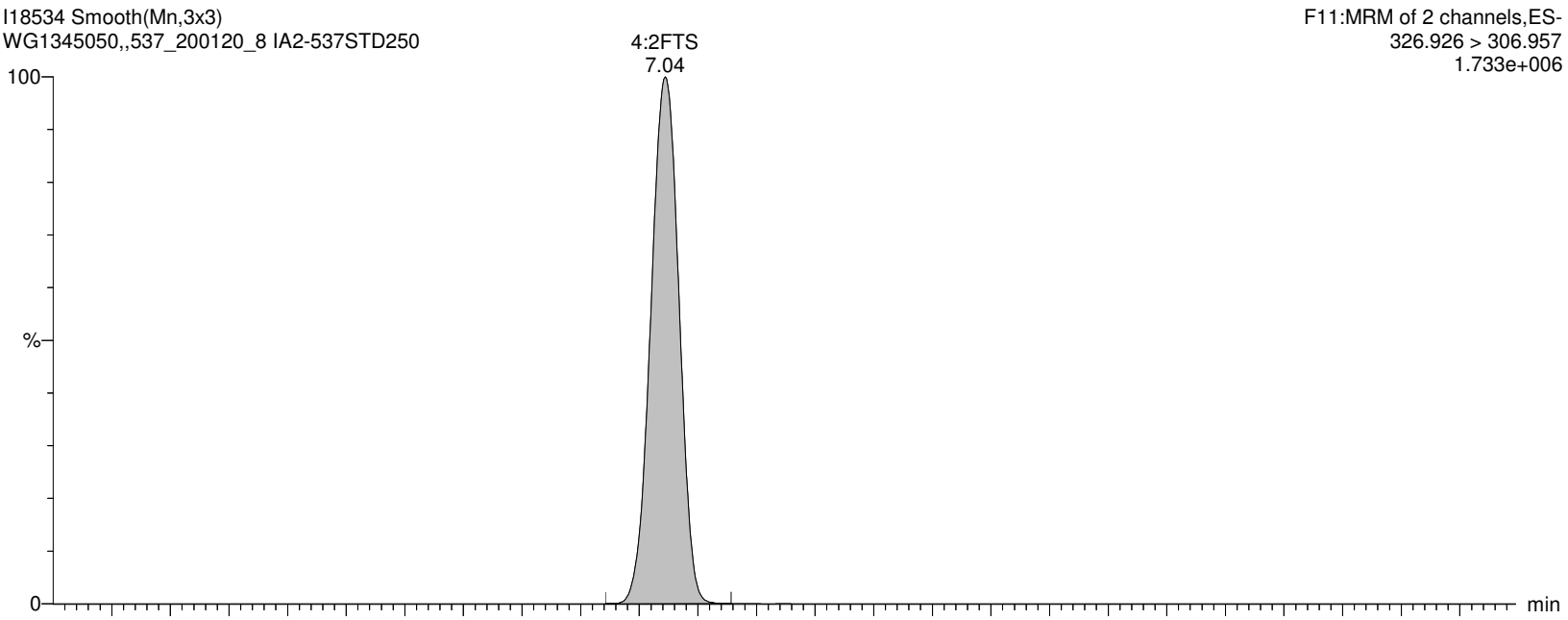
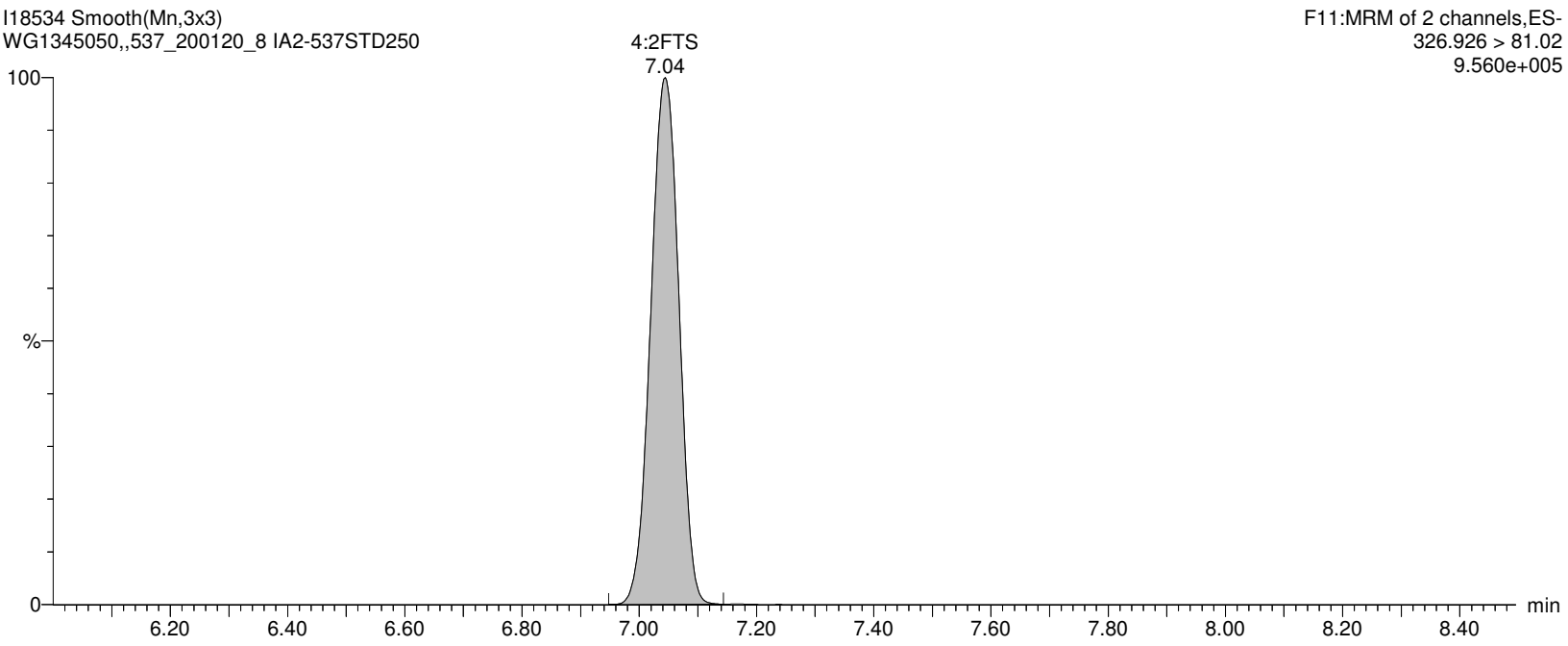
**4:2FTS**





all concentration units in (ng/mL)

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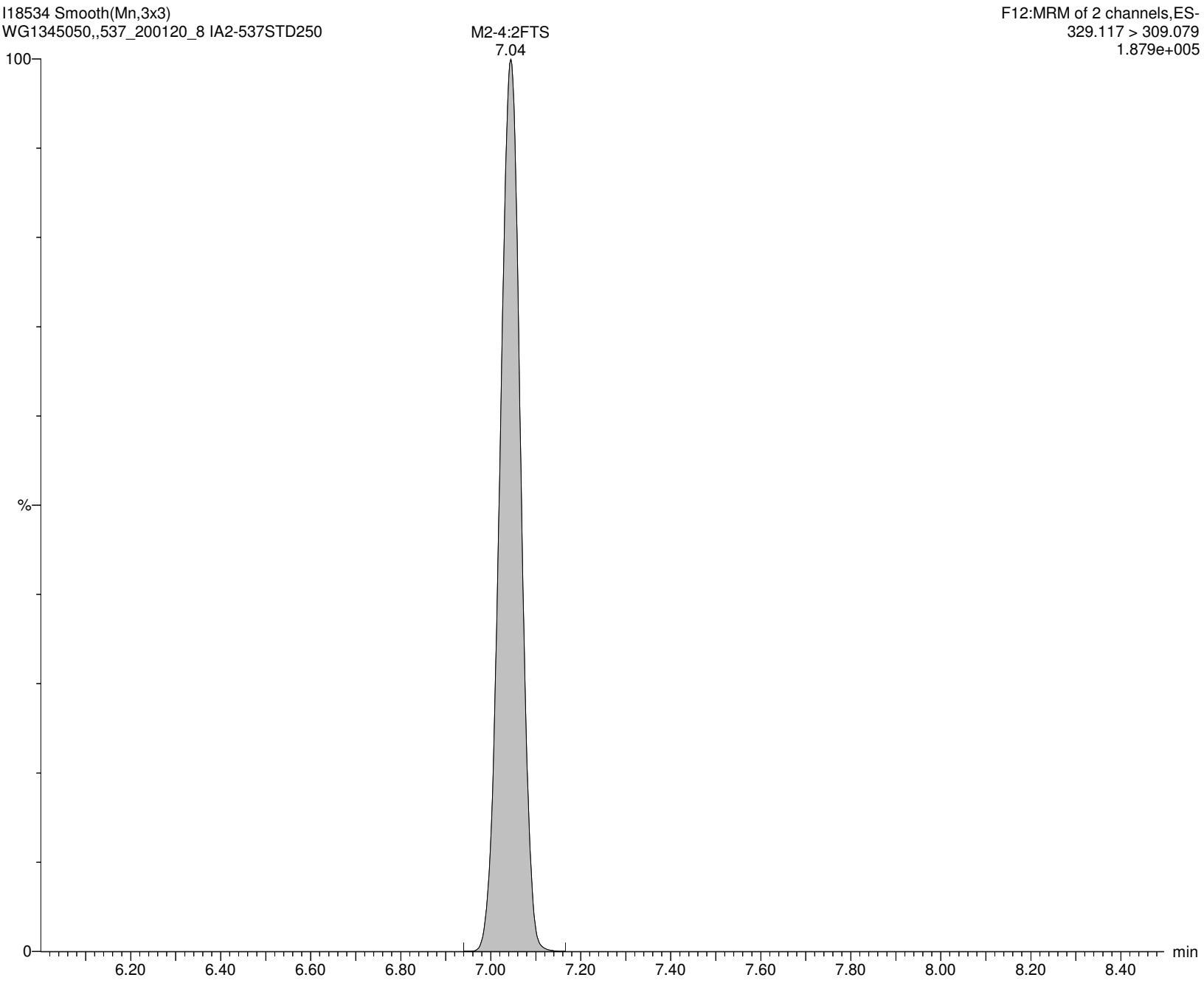
**M2-4:2FTS**





all concentration units in (ng/mL)

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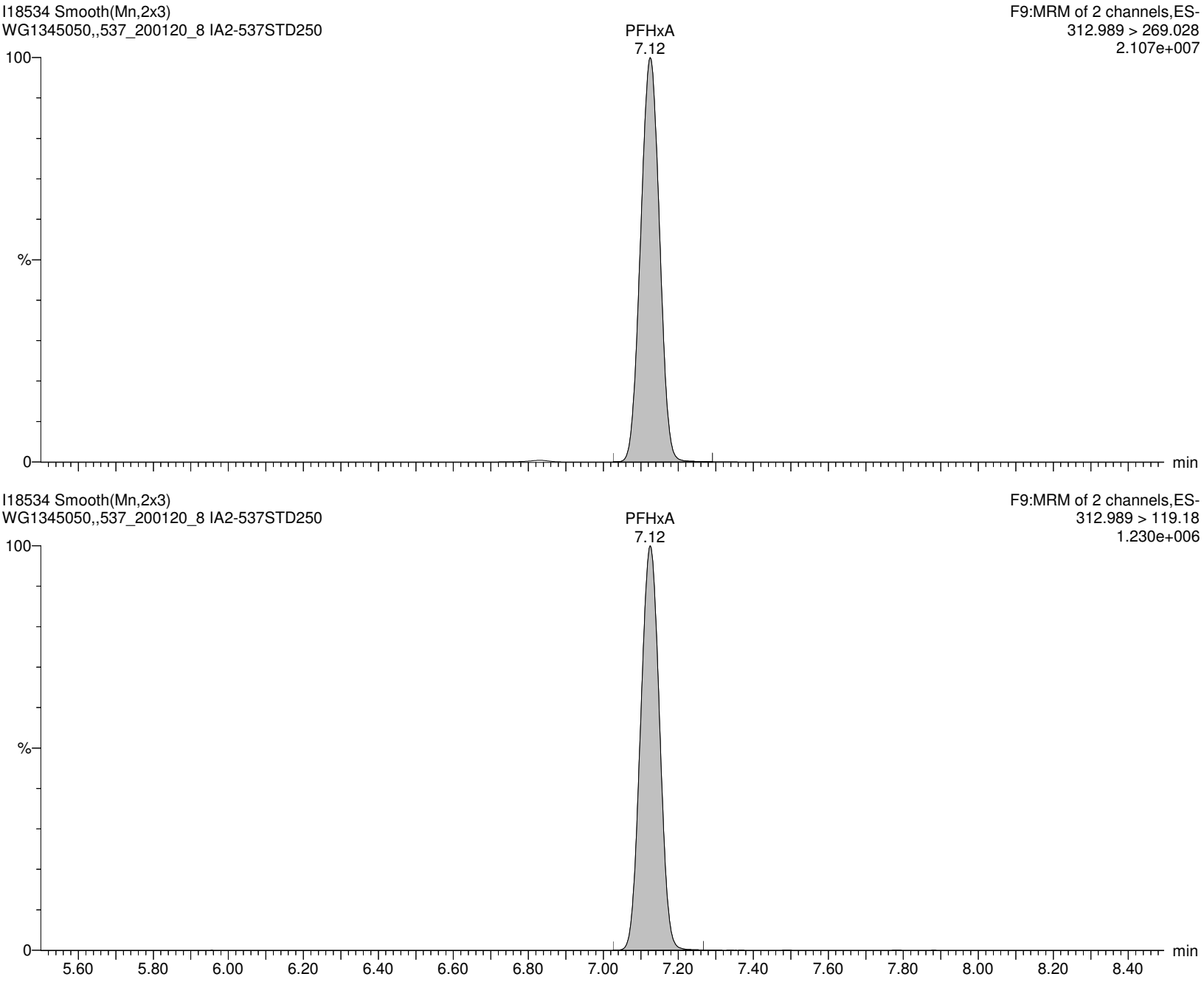
**PFHxA**





all concentration units in (ng/mL)

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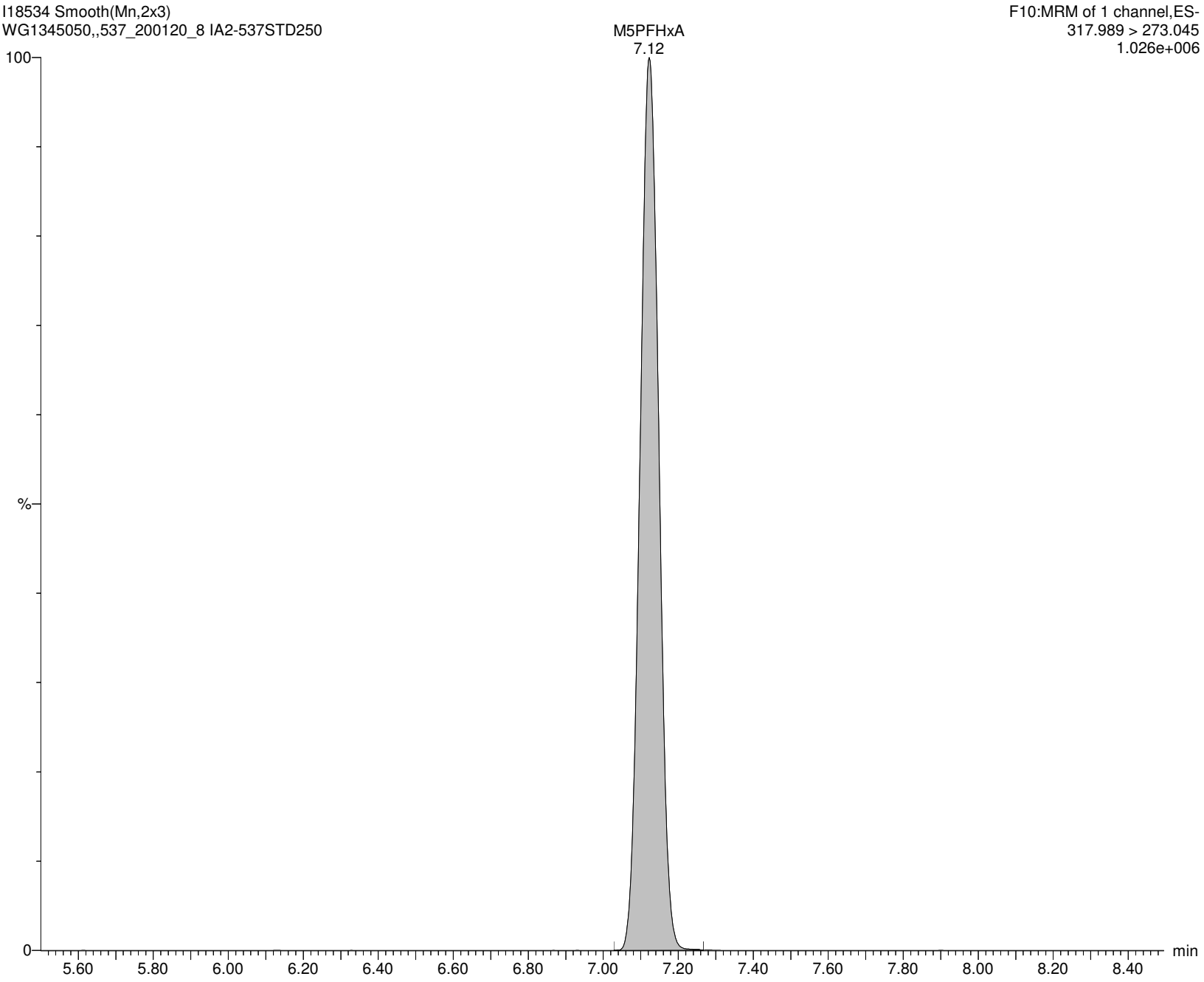
**M5PFHxA**





all concentration units in (ng/mL)

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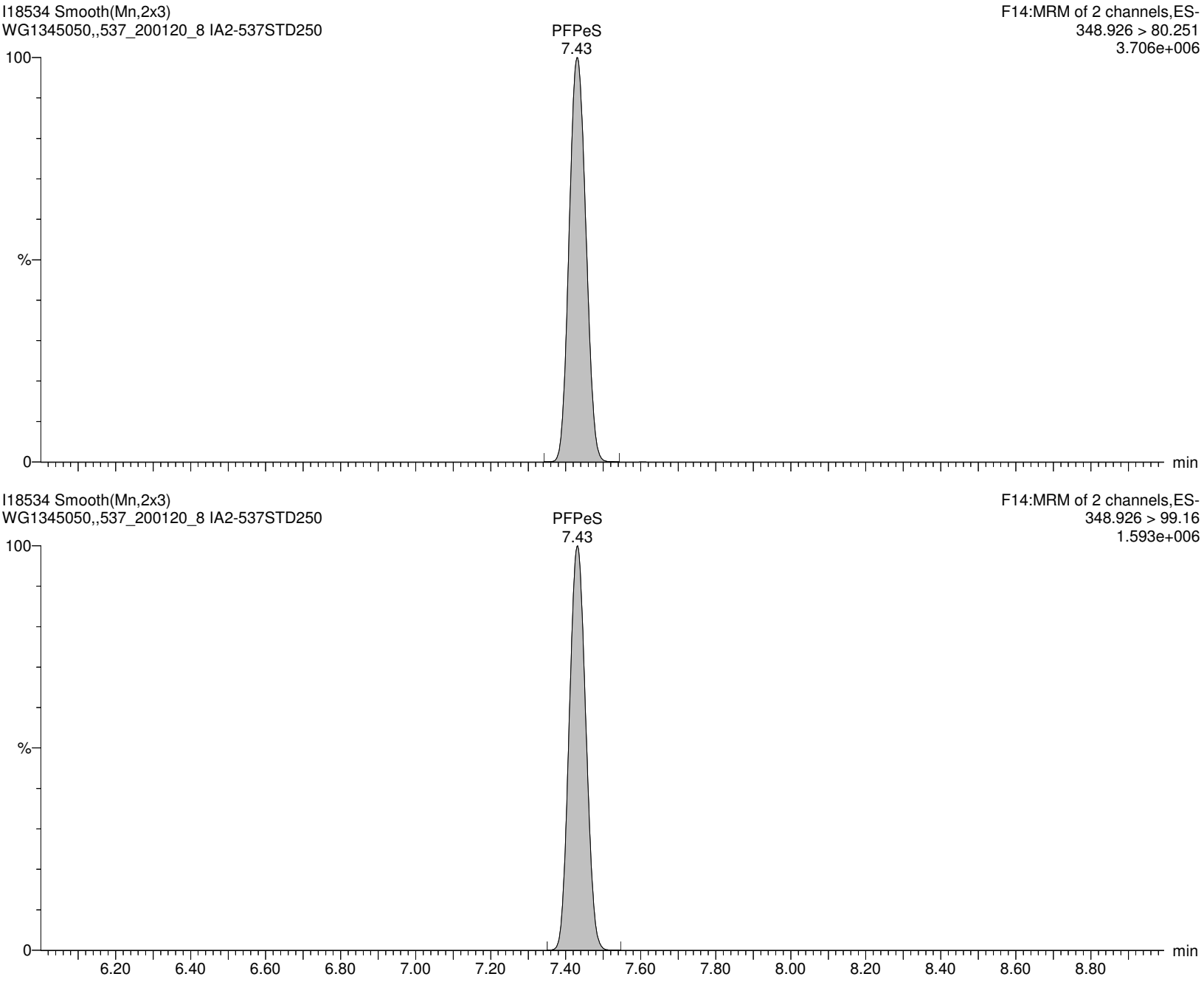
**PFPeS**





all concentration units in (ng/mL)

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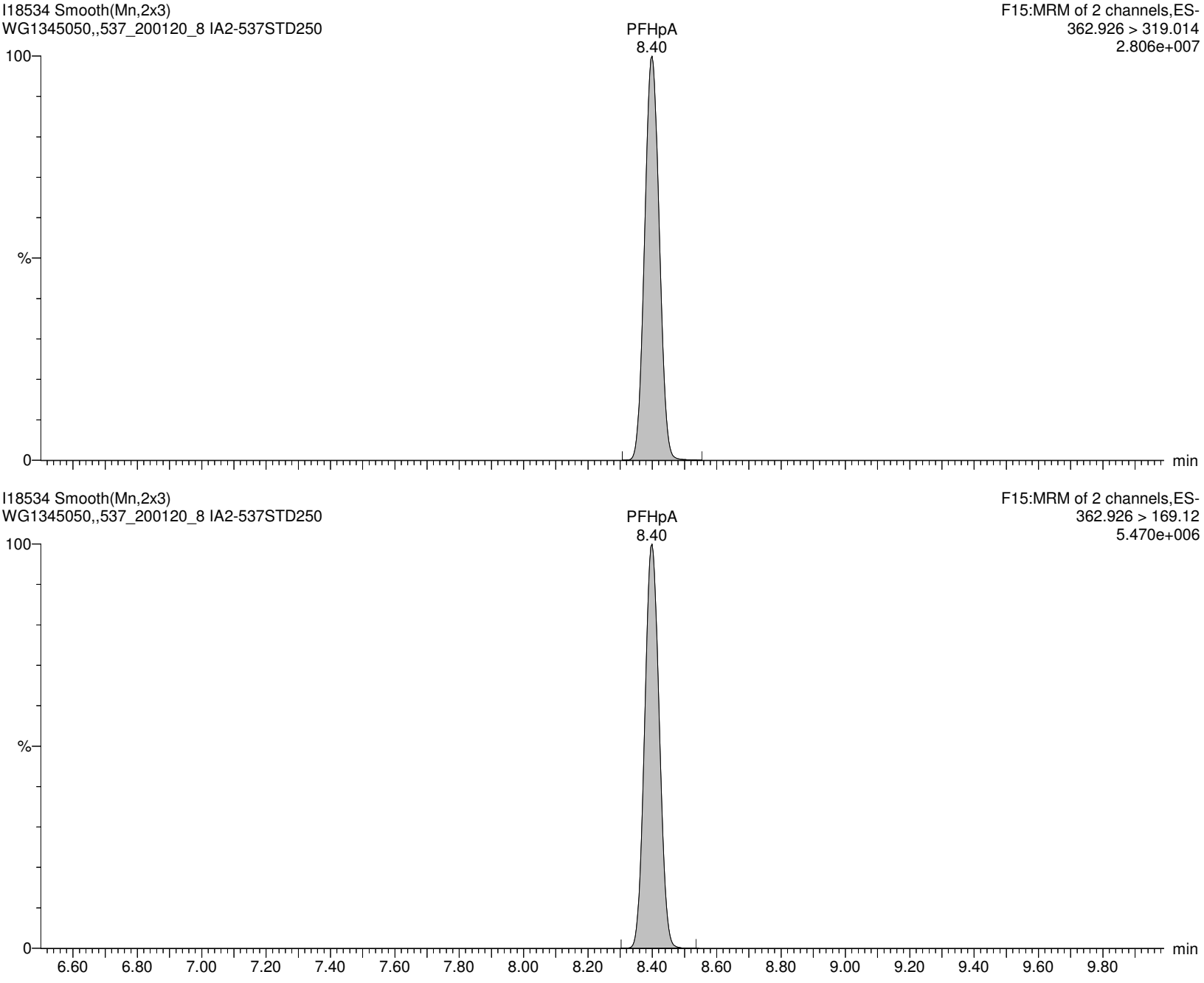
**PFHpA**





all concentration units in (ng/mL)

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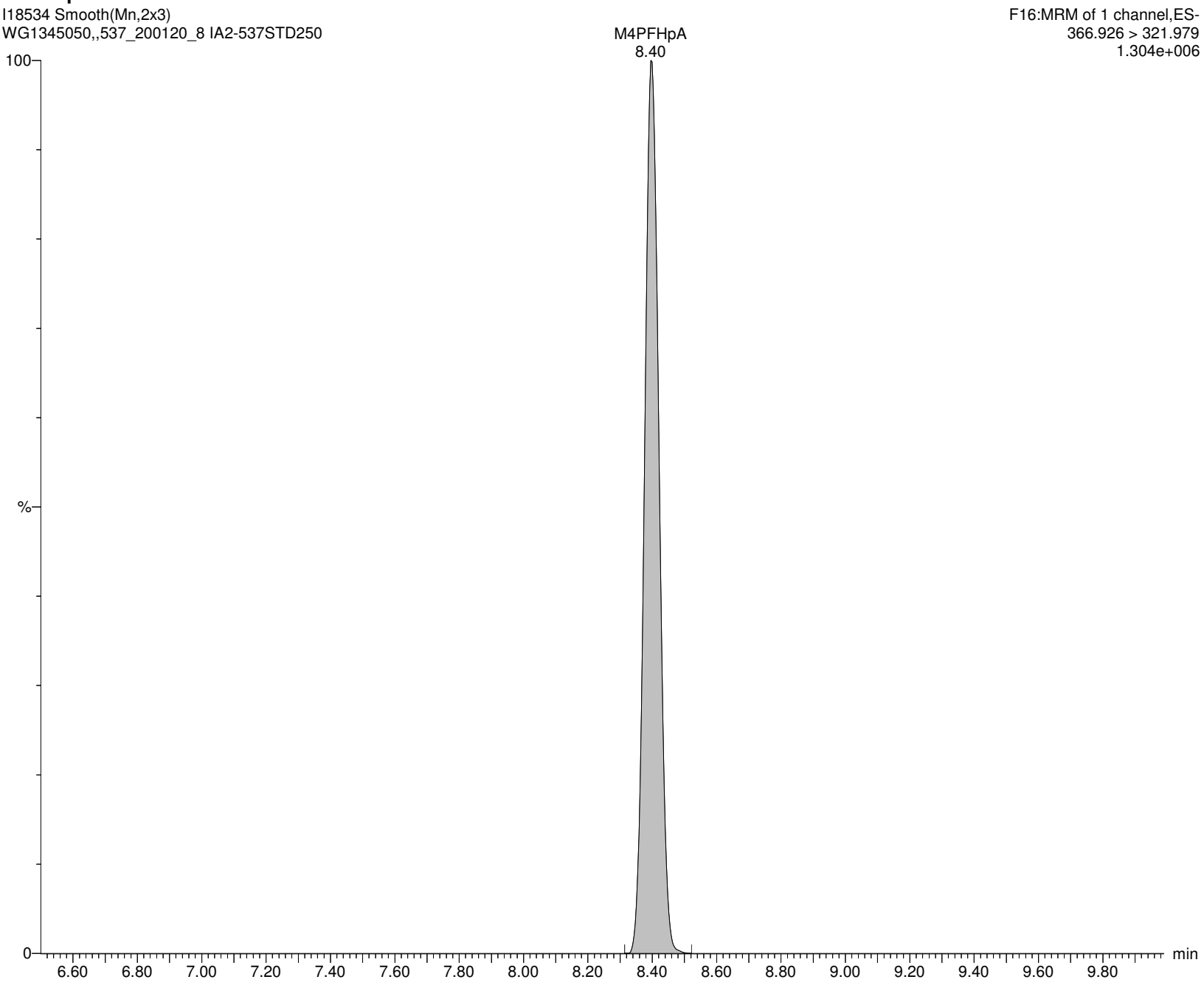
**M4PFHpA**





all concentration units in (ng/mL)

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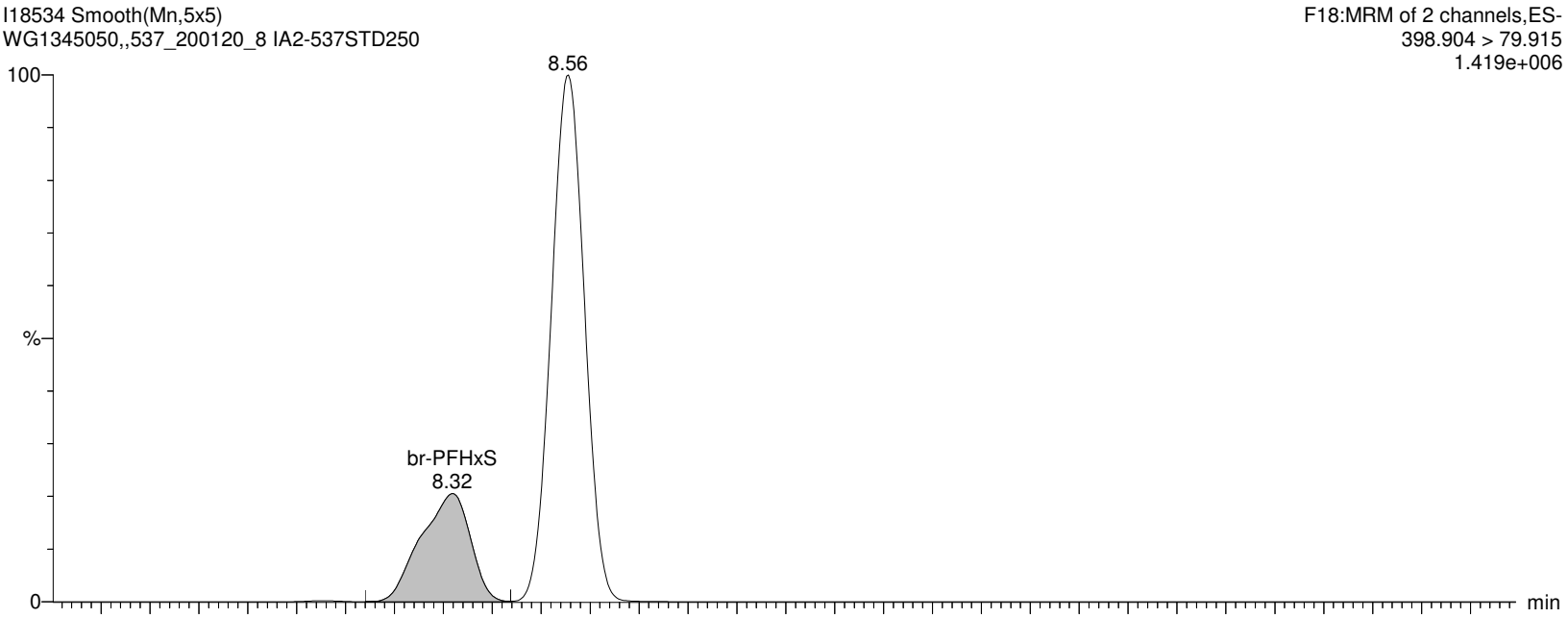
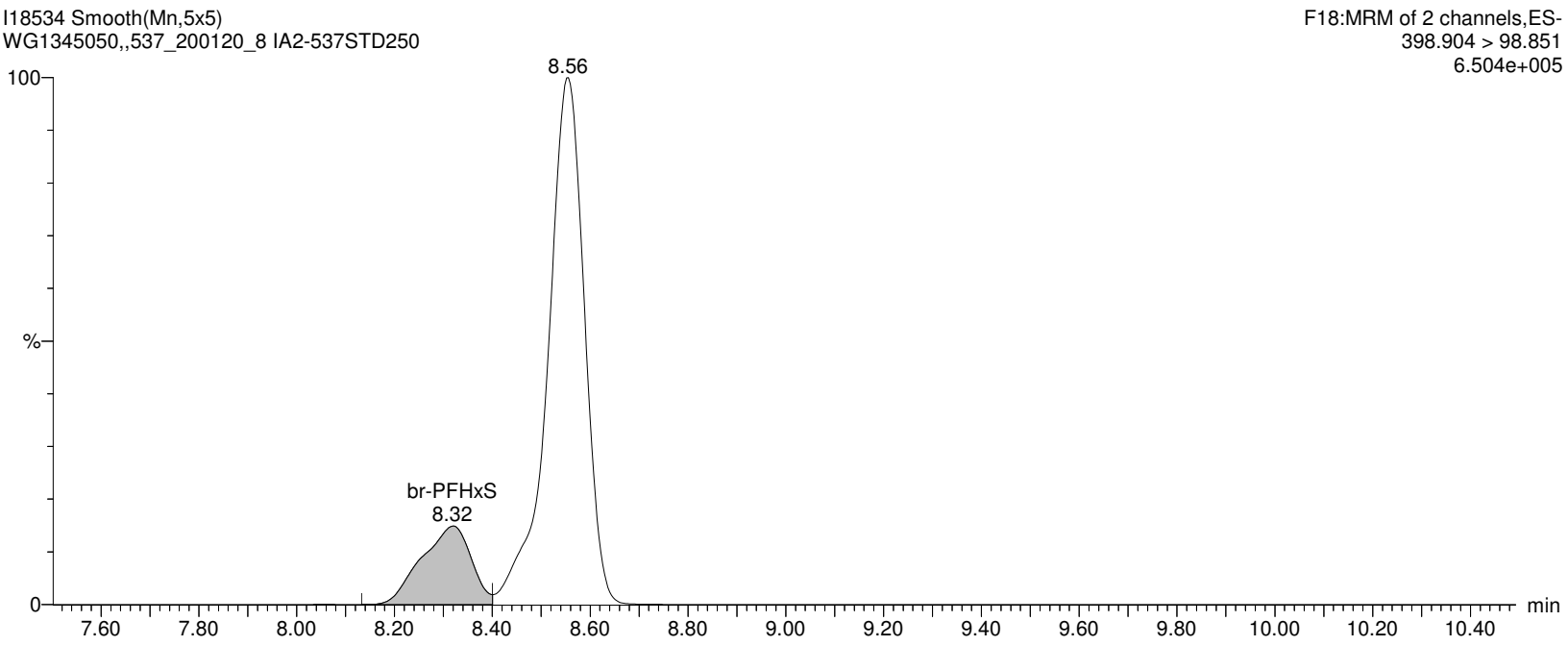
**br-PFHxS**





all concentration units in (ng/mL)

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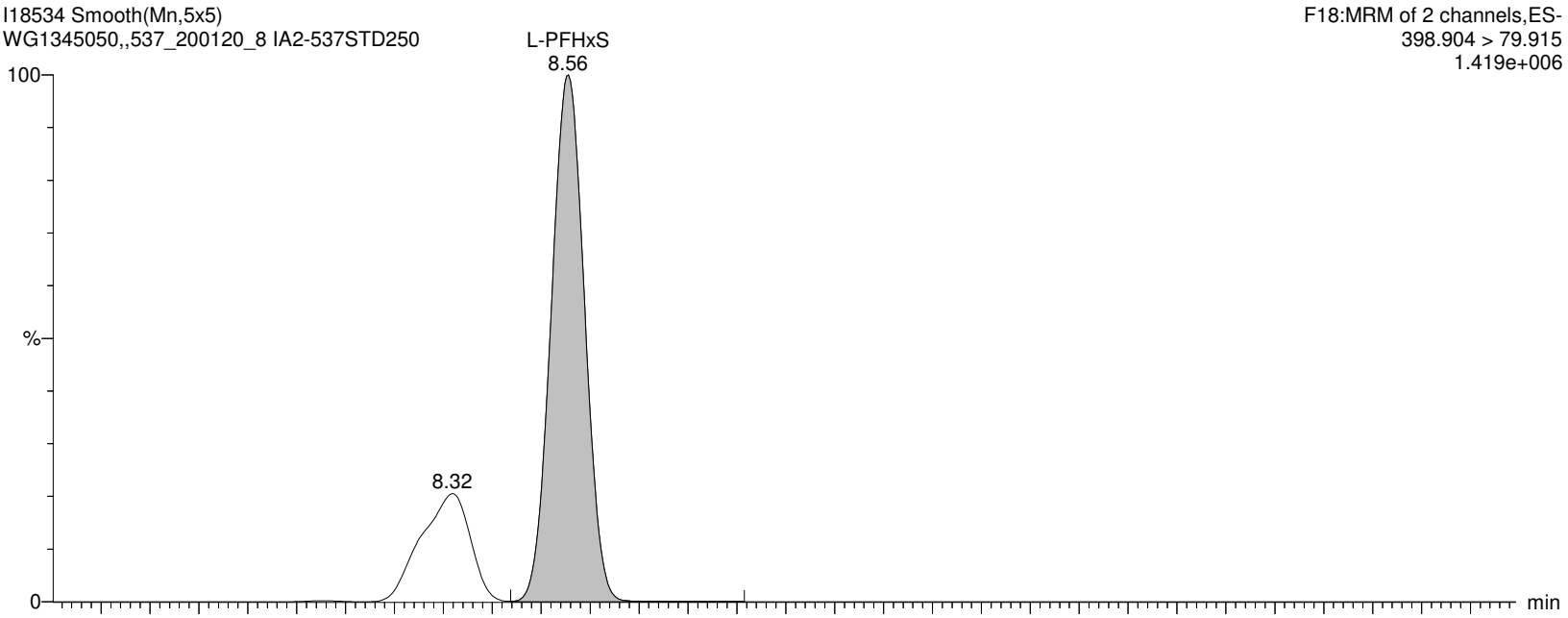
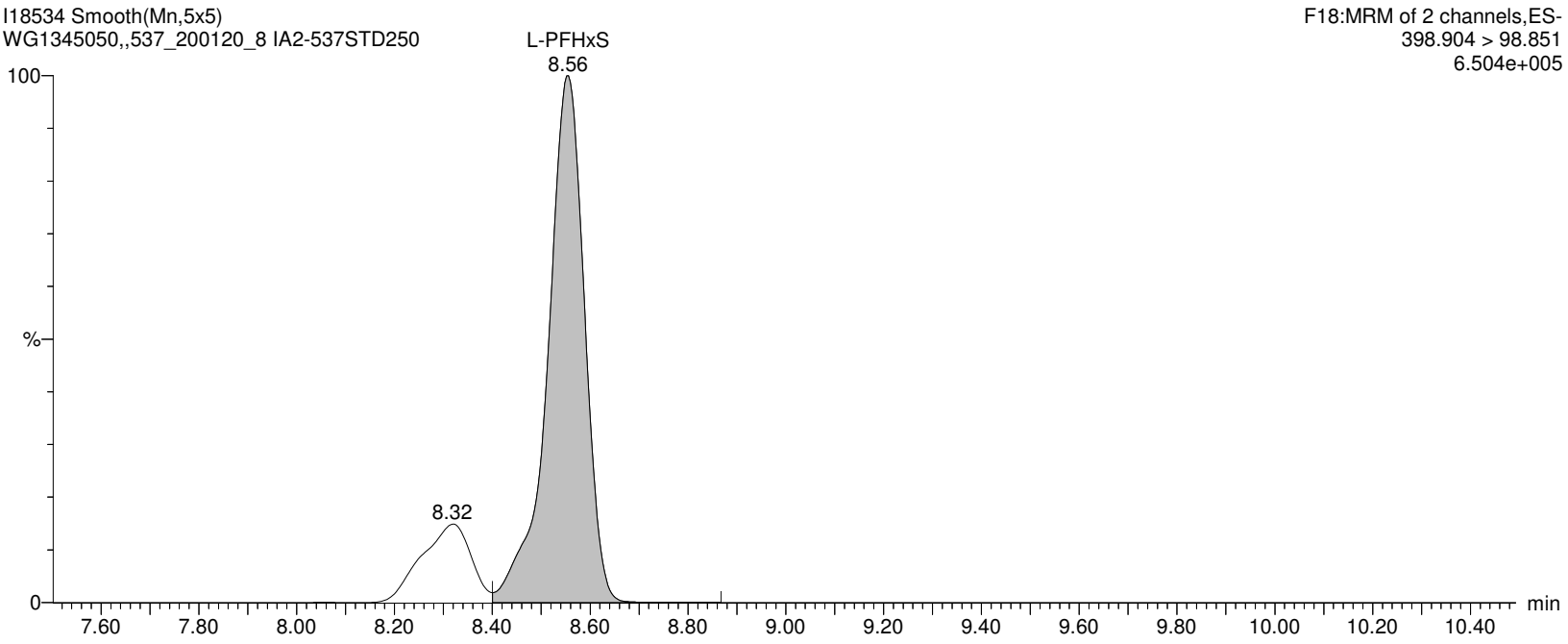
**L-PFHxS**





all concentration units in (ng/mL)

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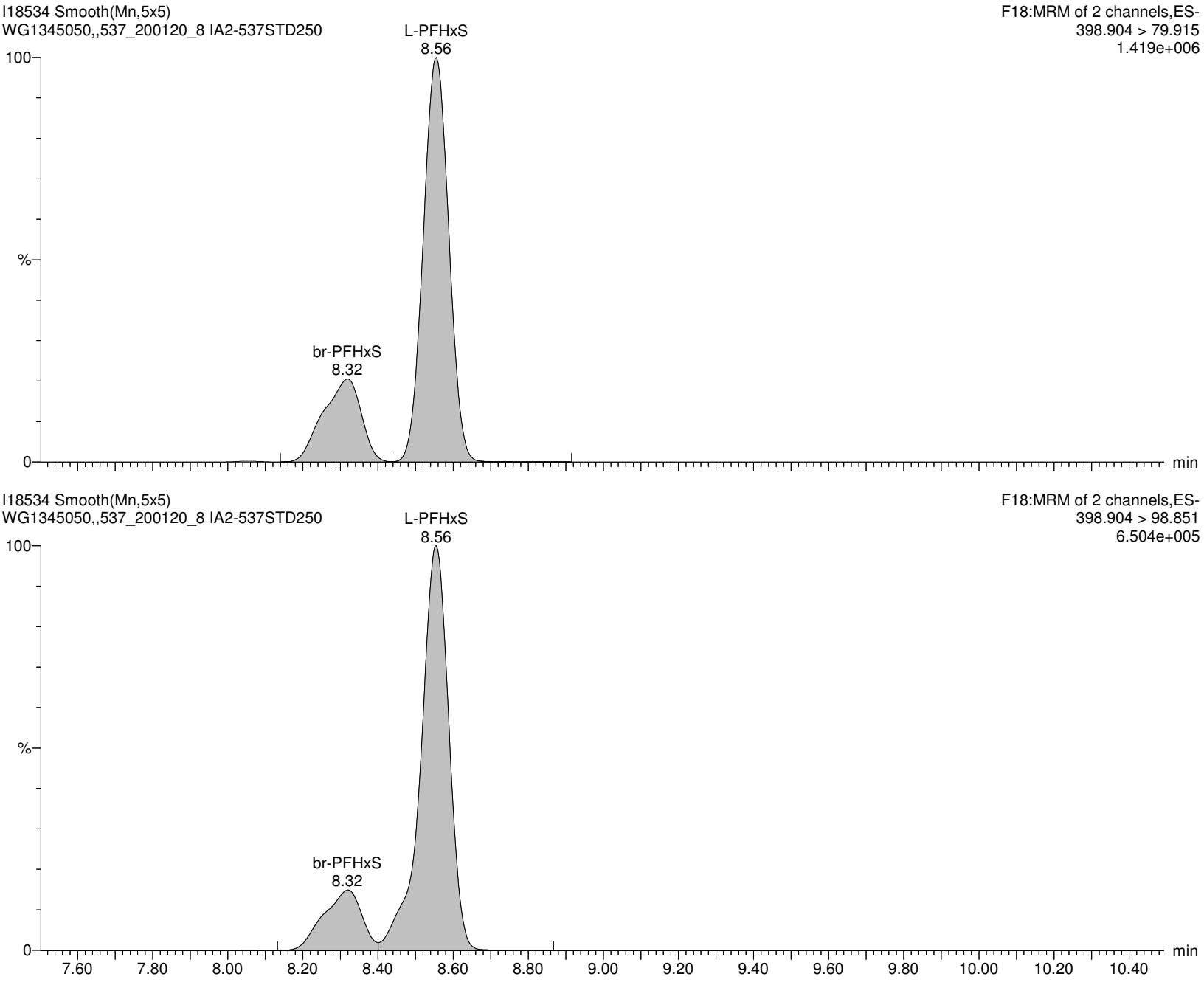
**PFHxS**





all concentration units in (ng/mL)

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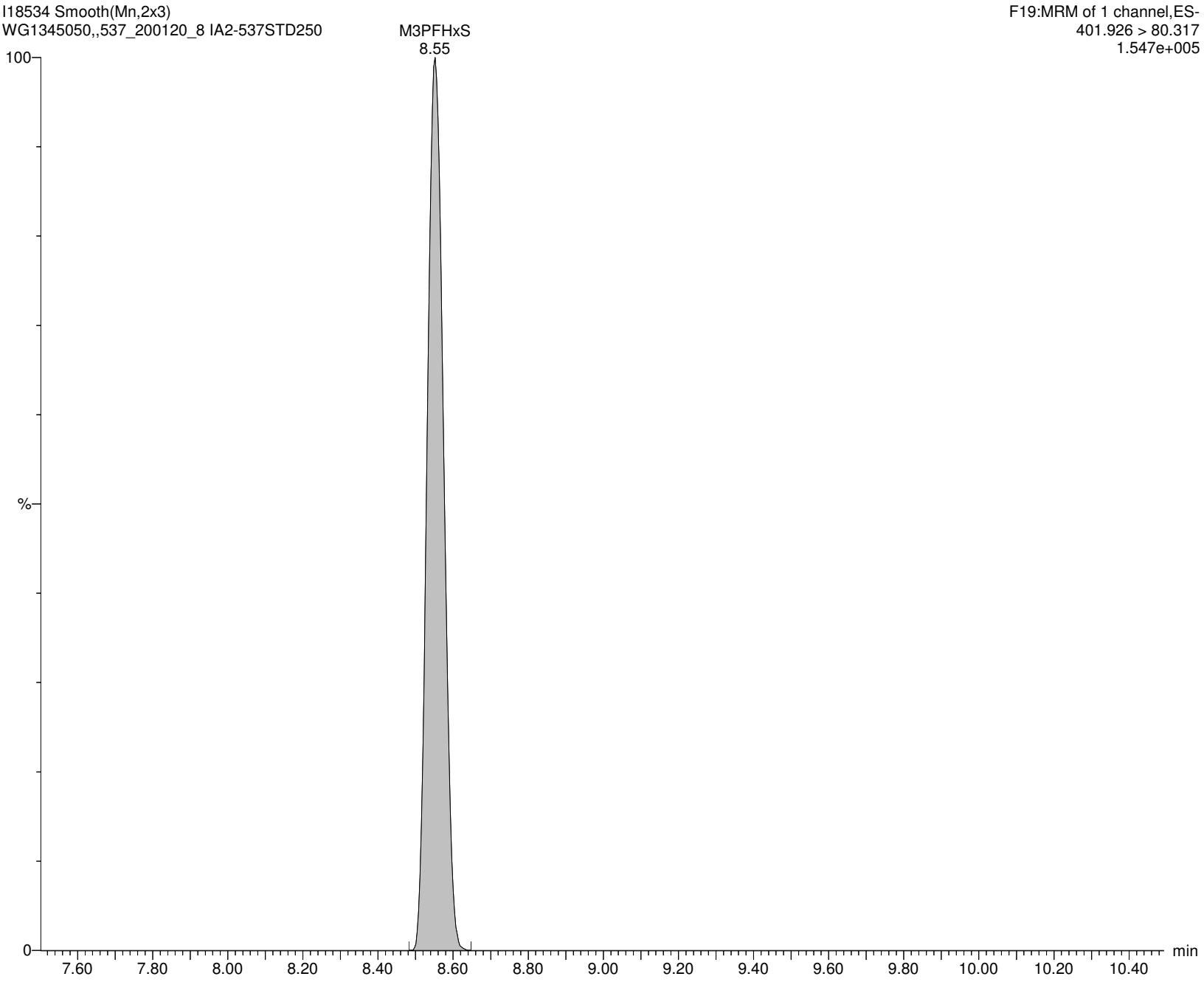



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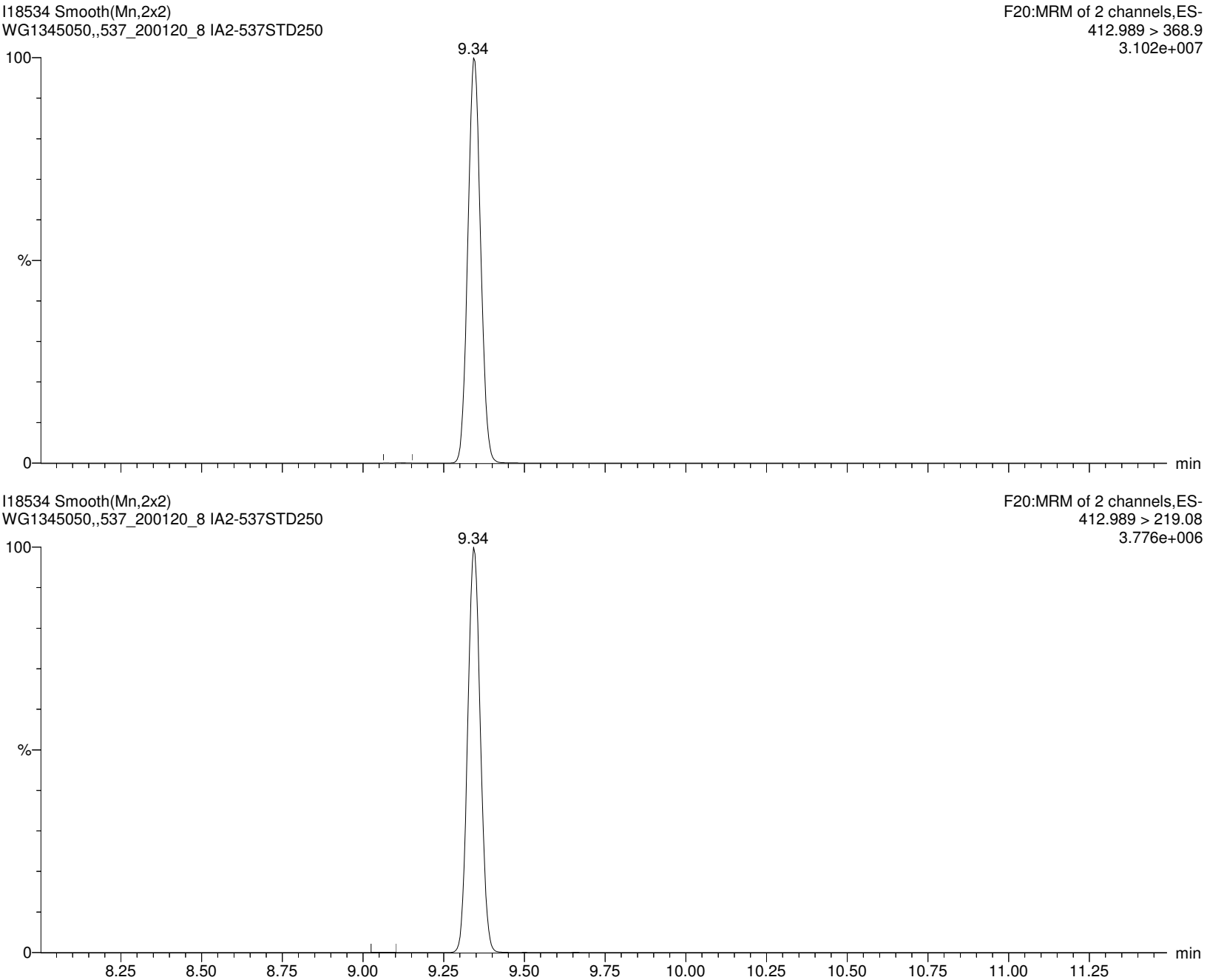
**br-PFOA**





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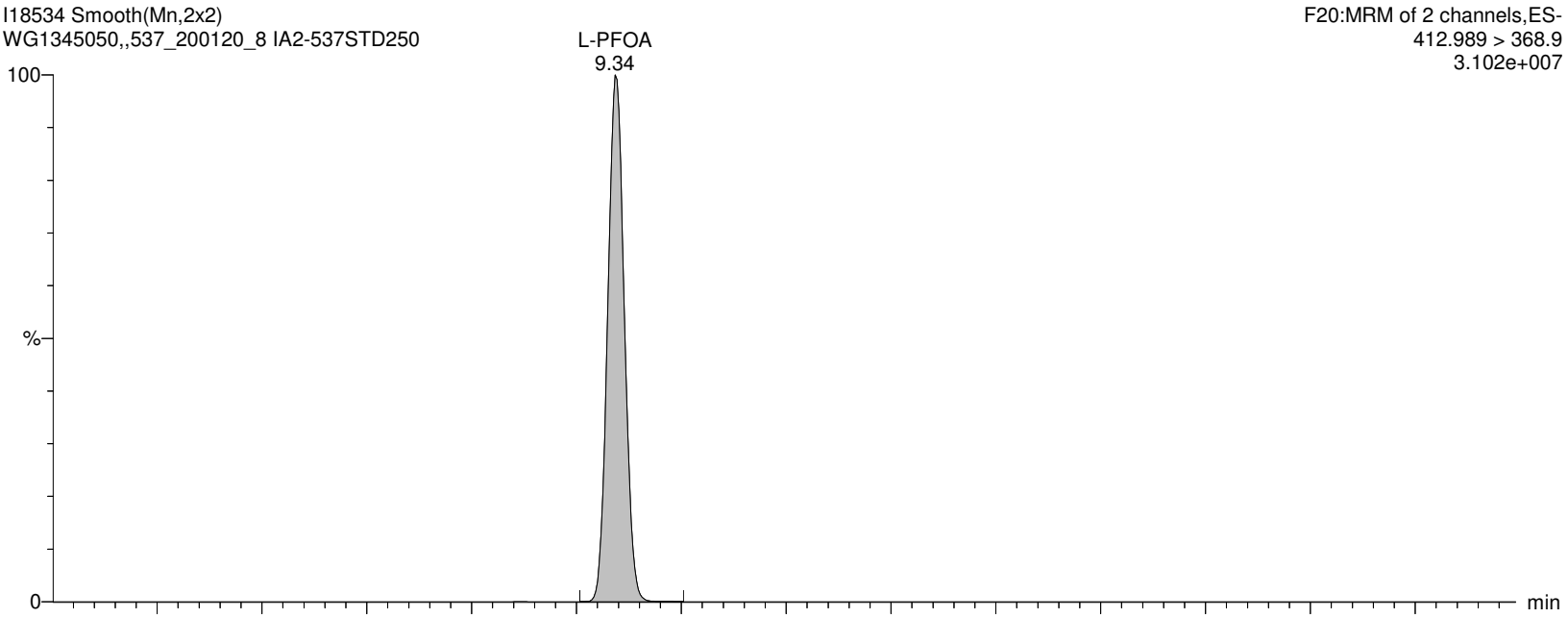


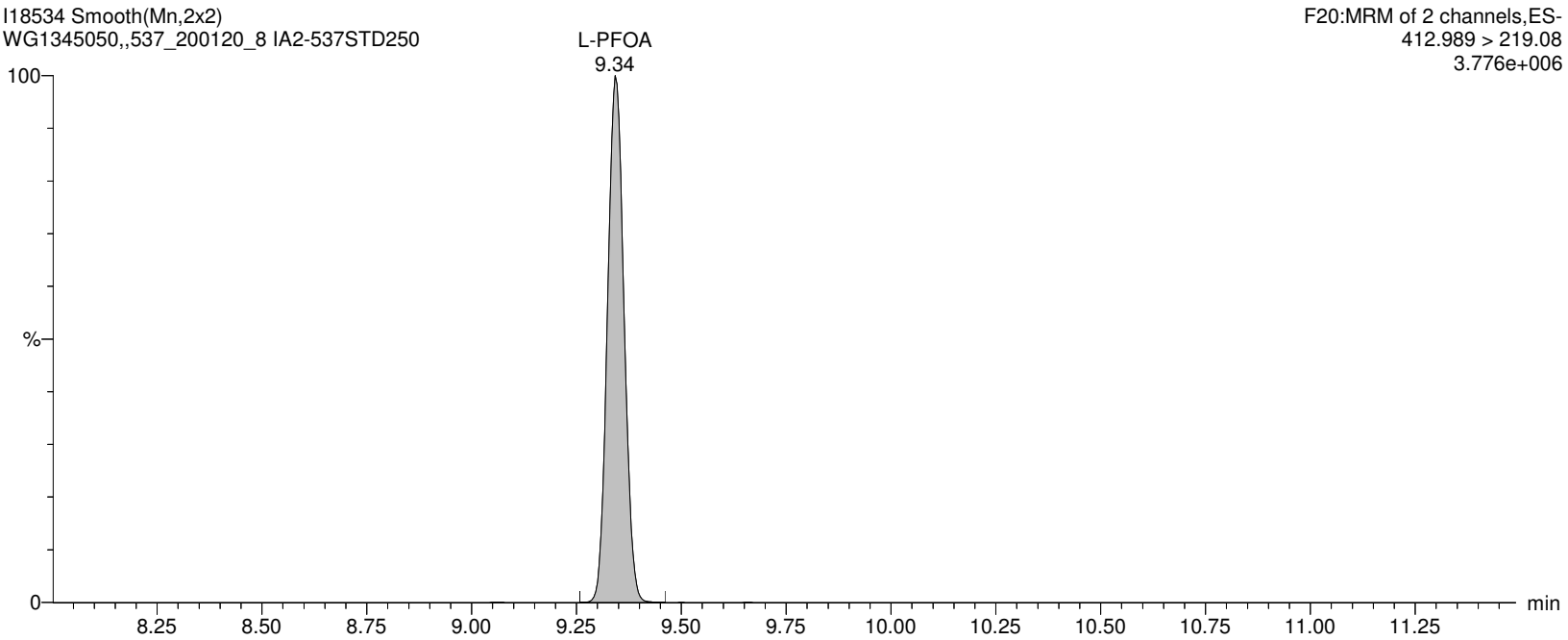



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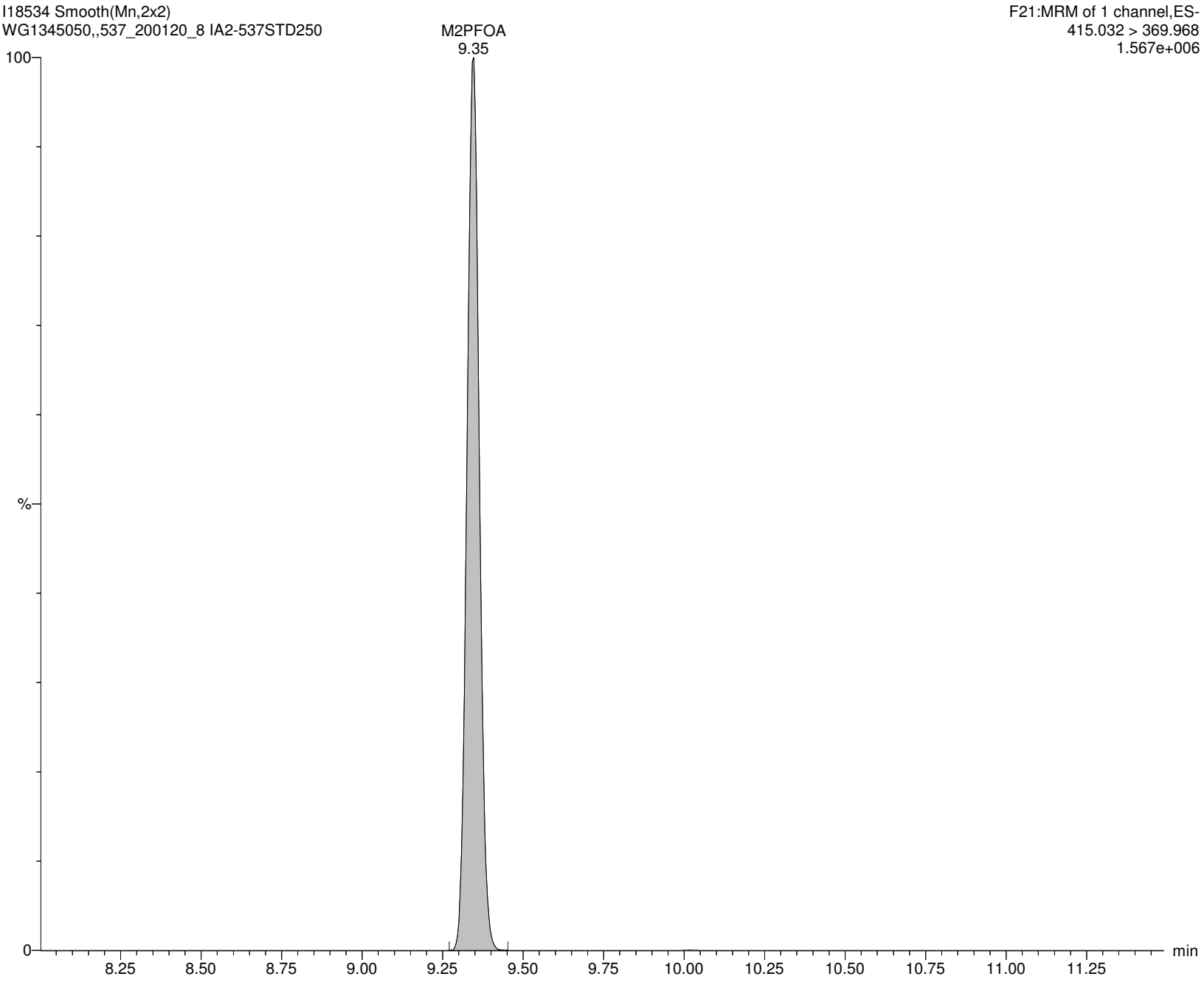



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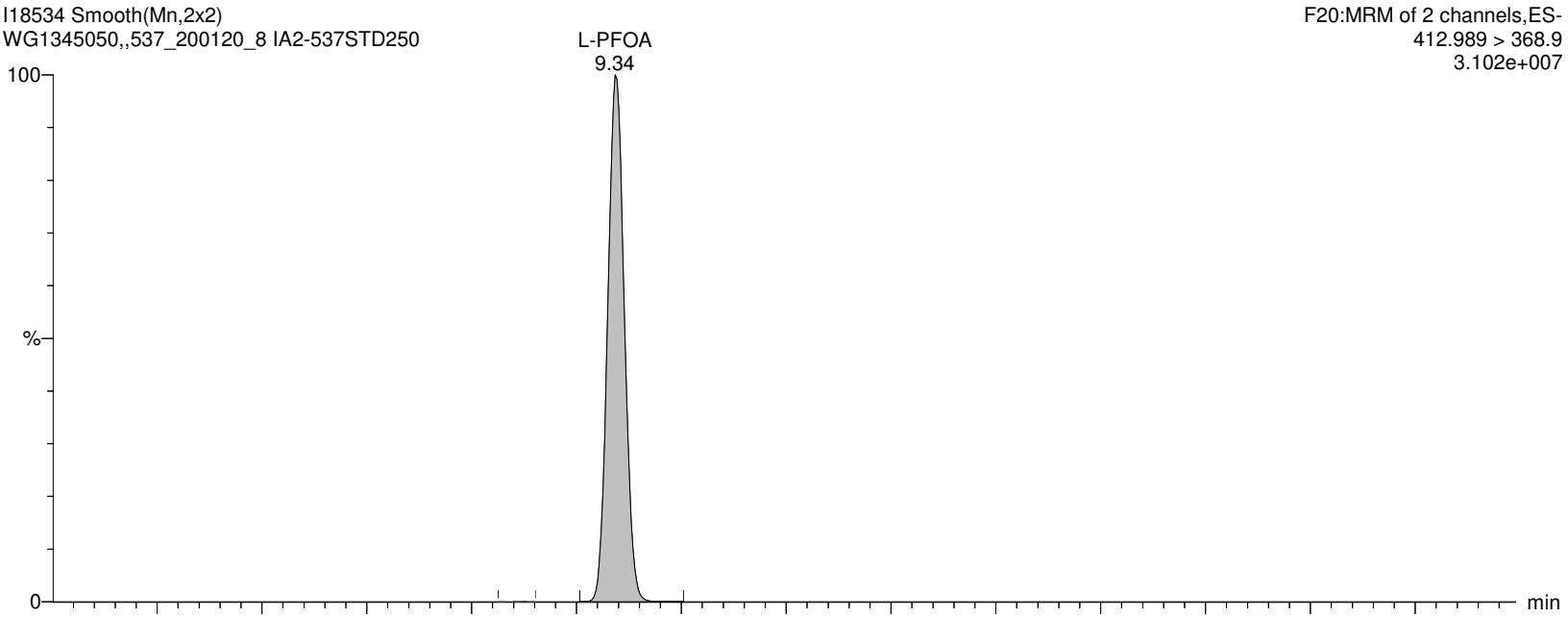


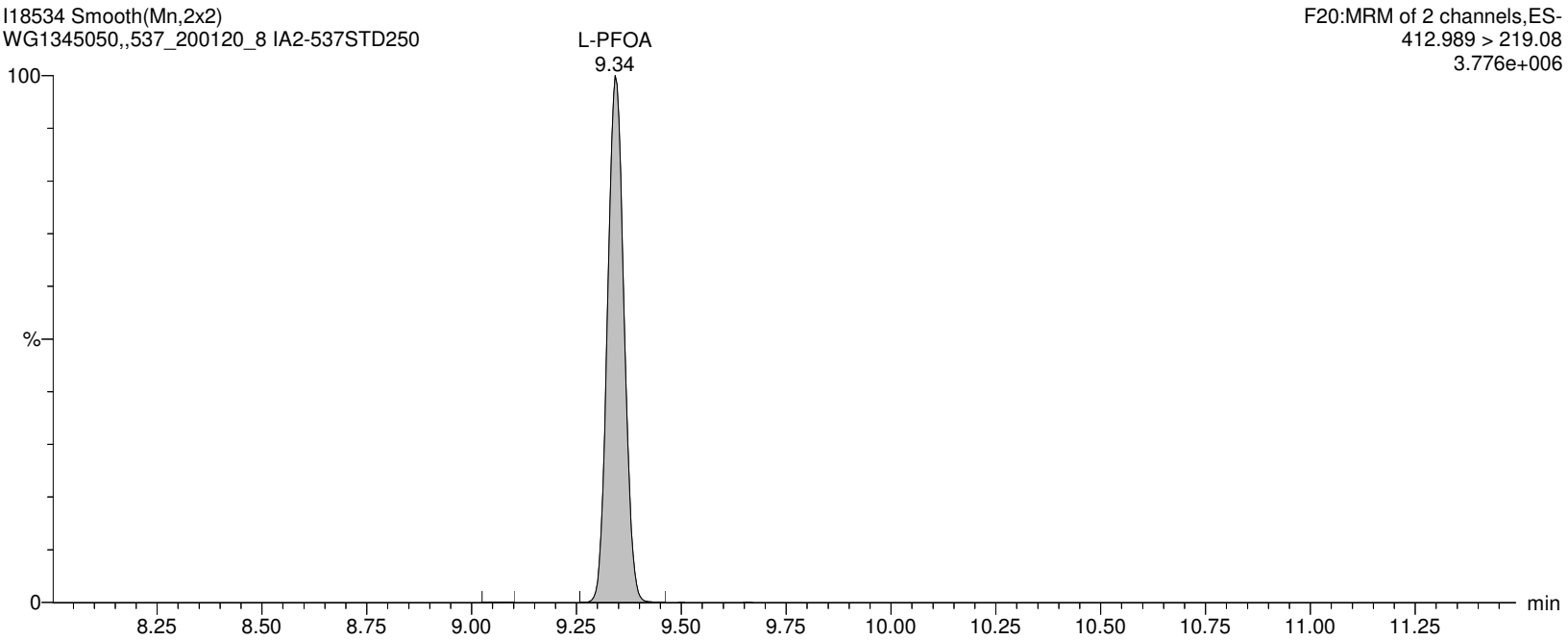



all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICAL_A.qld
Last Altered: Friday, February 28, 2020 09:12:40 Eastern Standard Time
Printed: Friday, February 28, 2020 09:27:55 Eastern Standard Time

**Name: I18534**
**ID: IA2-537STD250**
**Date: 27-Feb-2020**
**Time: 15:25:04**
**Description: WG1345050,,537_200120_8**
**User: LCMS01:SG**
**Vial: 1:B,1**
**Instrument: XEVO-TQSmicro#QEA0276**
**Inlet Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\LCMS_537_ISO_MeOH**
**Tune Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\190709_TUNE.IPR**
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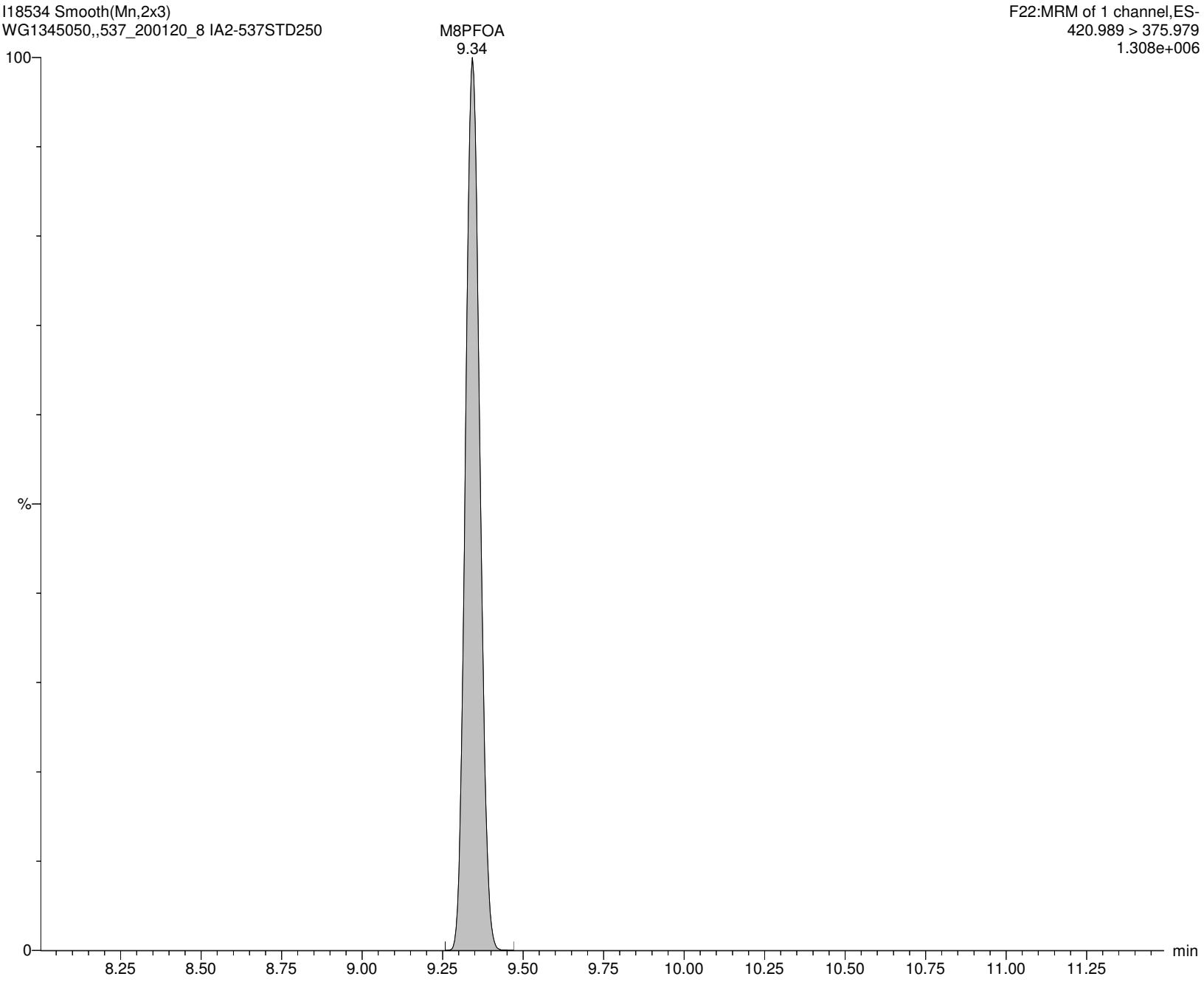
**M8PFOA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
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Last Altered: Friday, February 28, 2020 09:12:40 Eastern Standard Time
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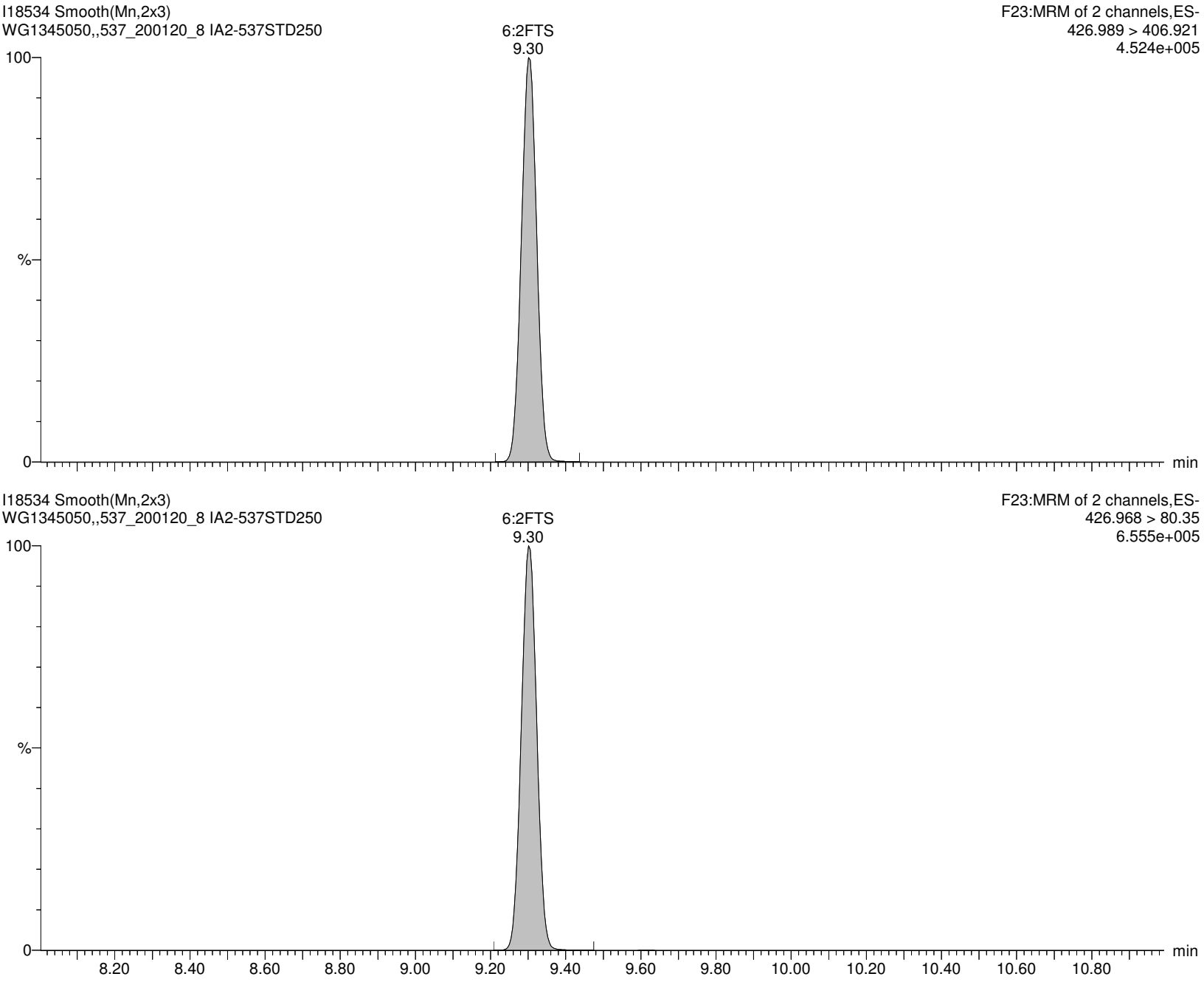
**6:2FTS**





all concentration units in (ng/mL)

Alpha Analytical Inc.
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Last Altered: Friday, February 28, 2020 09:12:40 Eastern Standard Time
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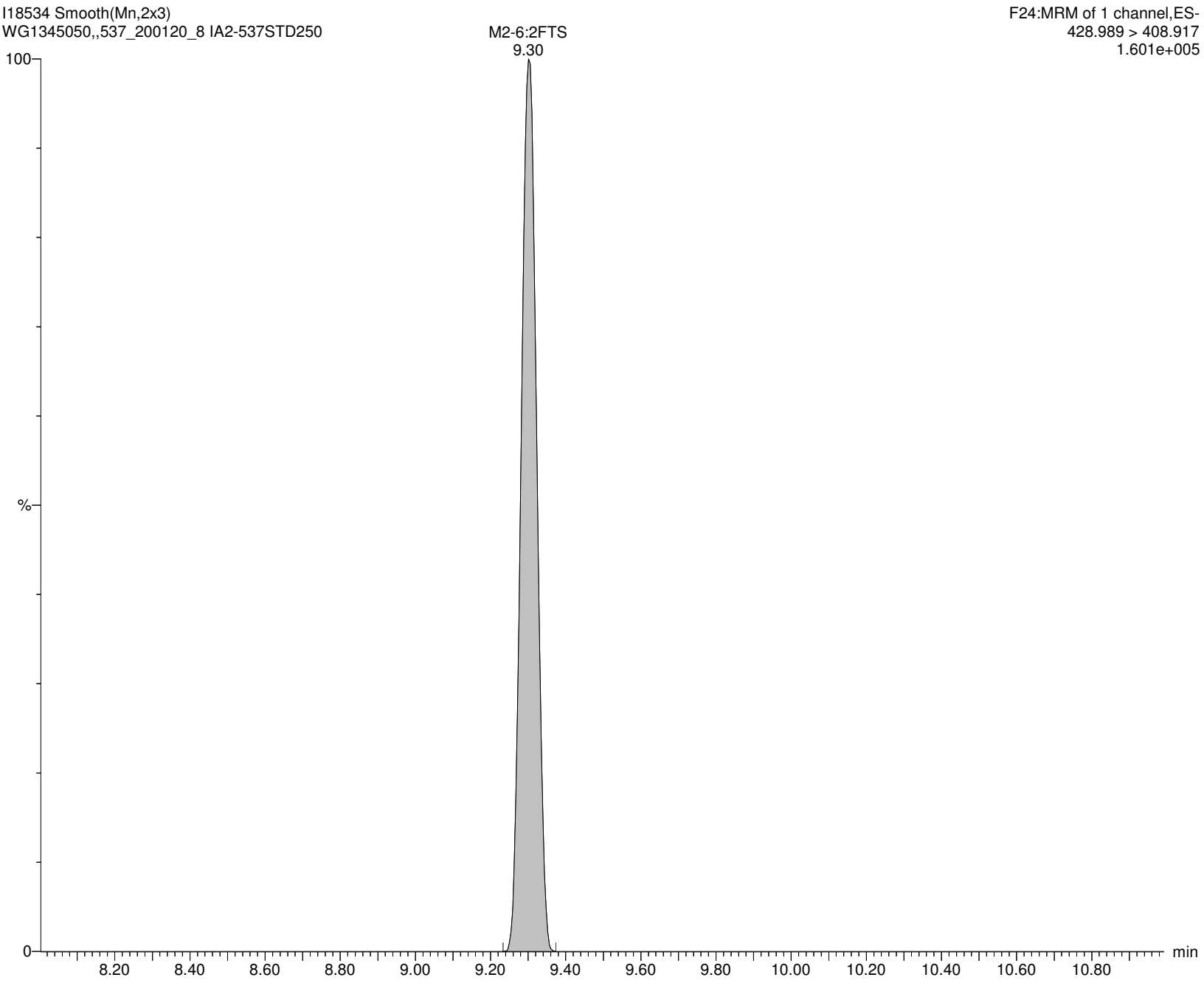
**M2-6:2FTS**





all concentration units in (ng/mL)

Alpha Analytical Inc.
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Last Altered: Friday, February 28, 2020 09:12:40 Eastern Standard Time
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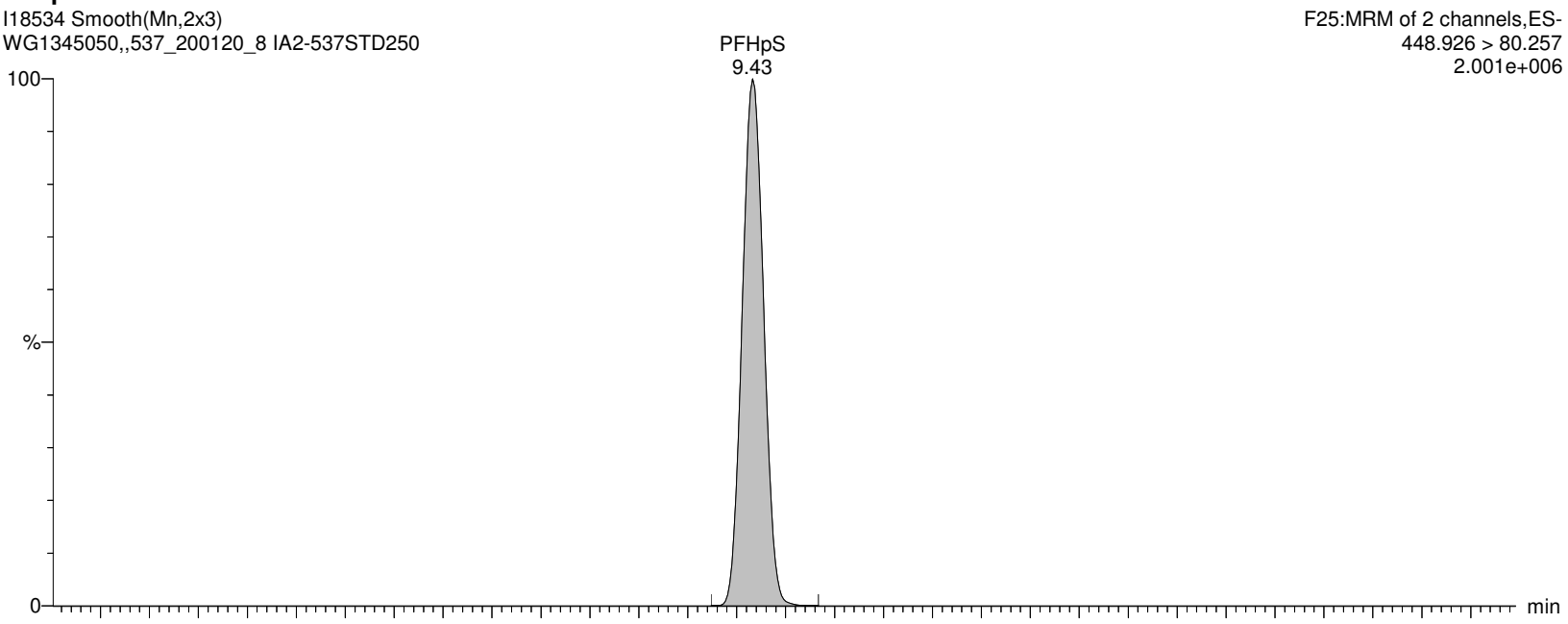


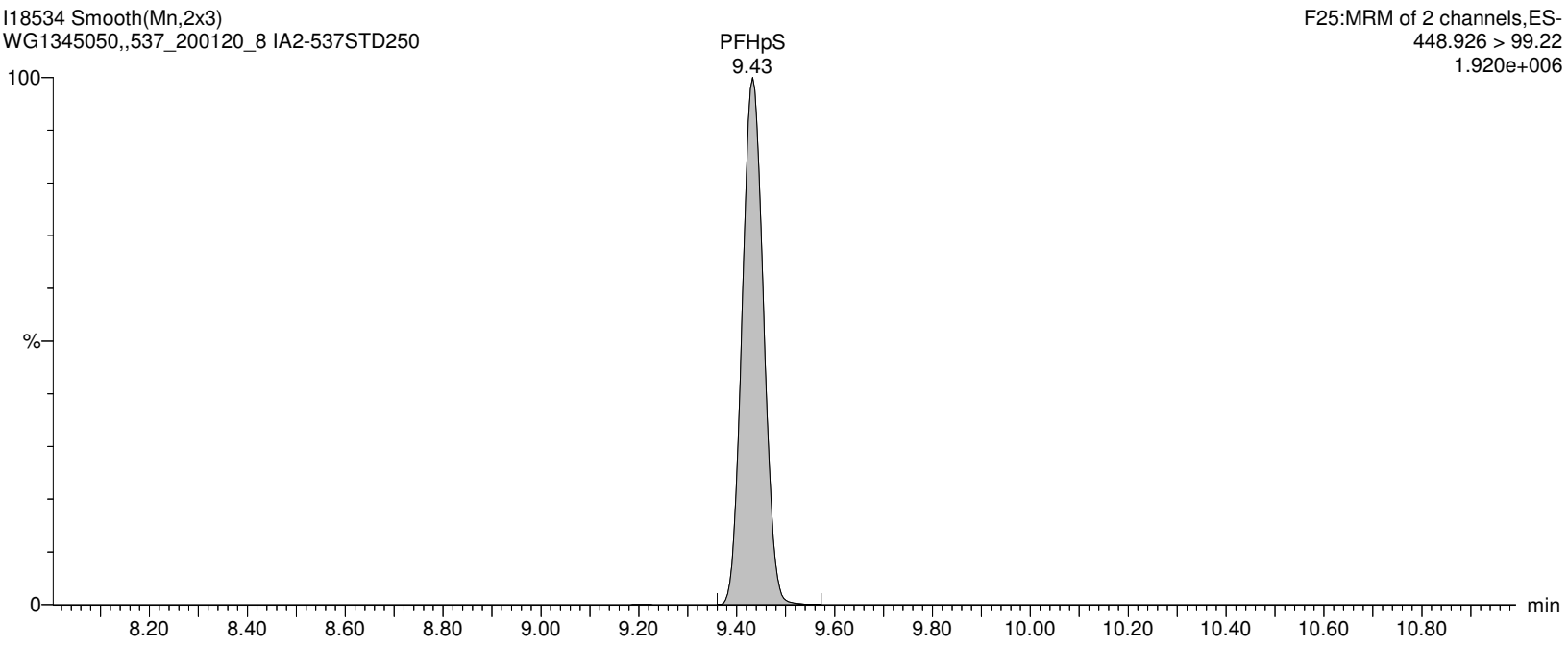



all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICAL_A.qld
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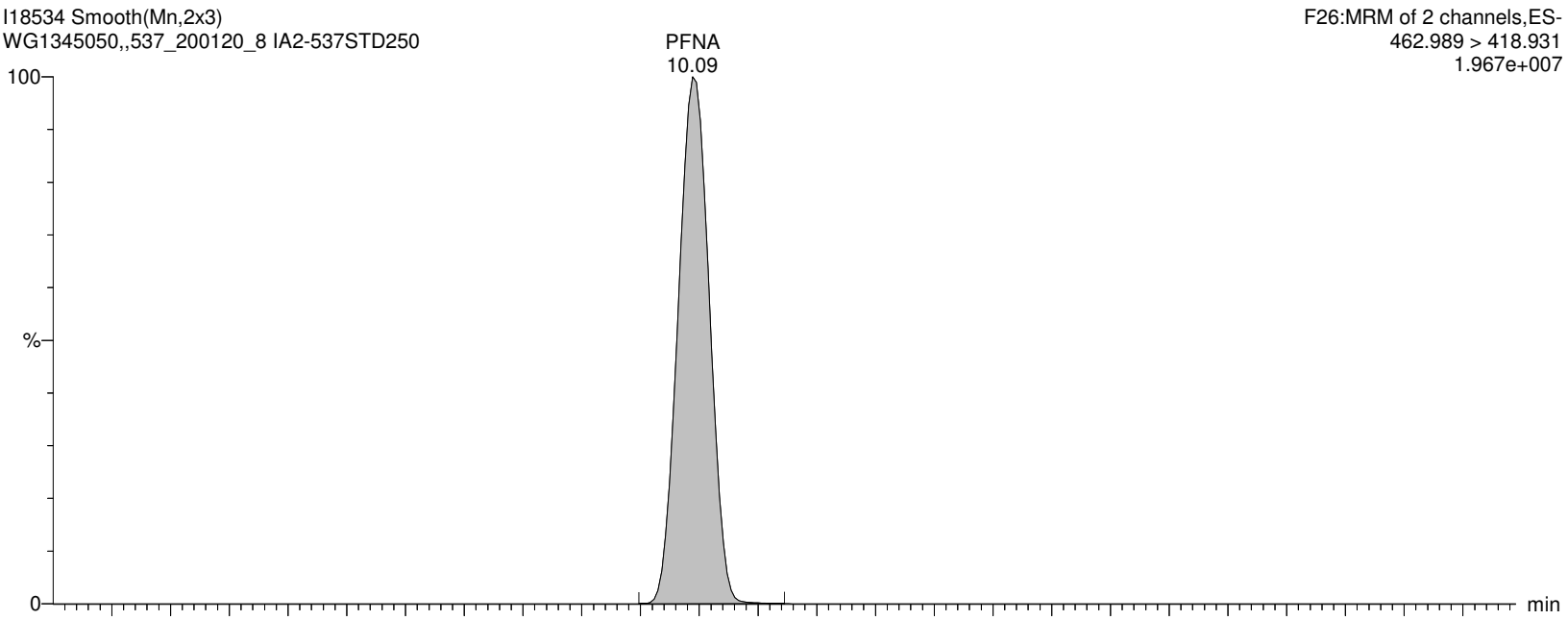


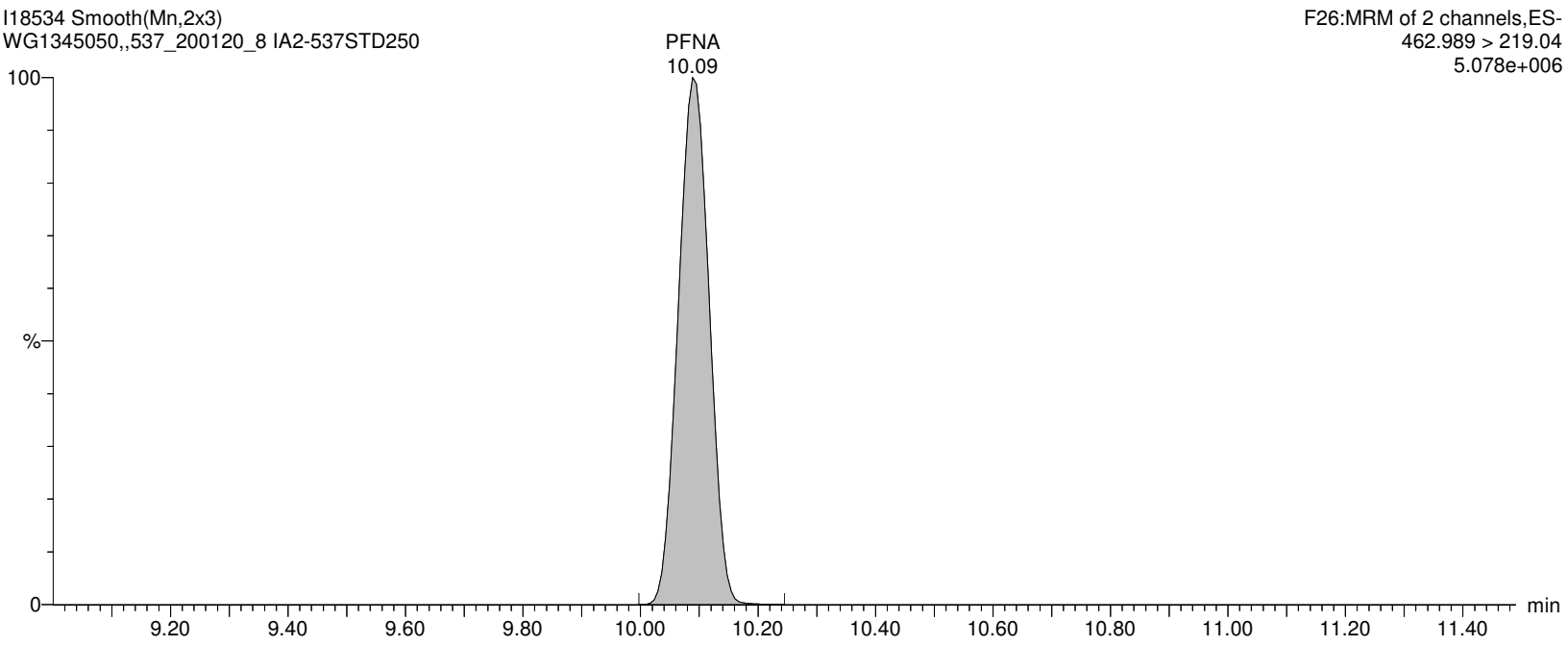



all concentration units in (ng/mL)

Alpha Analytical Inc.
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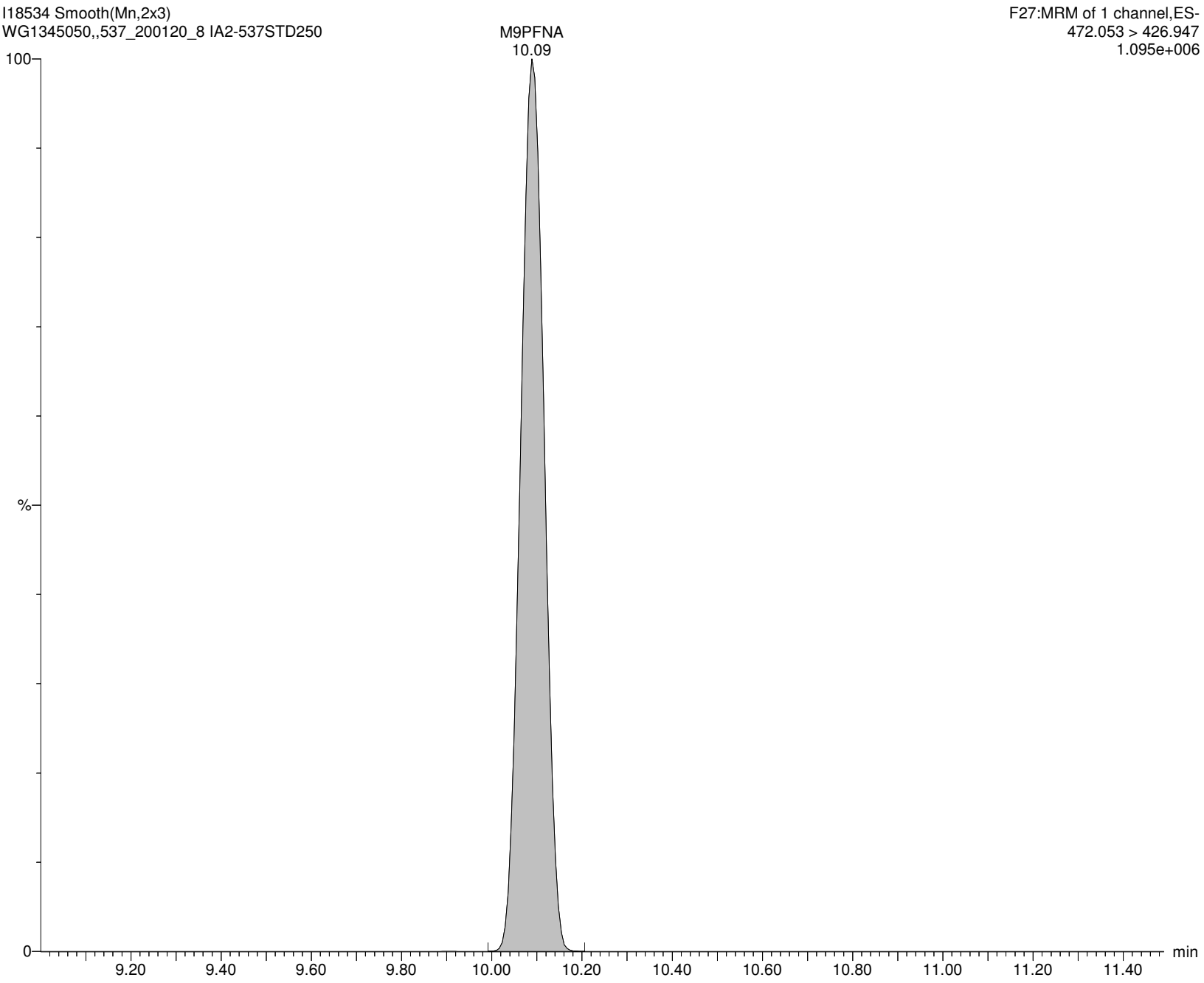



all concentration units in (ng/mL)

Alpha Analytical Inc.
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Last Altered: Friday, February 28, 2020 09:12:40 Eastern Standard Time
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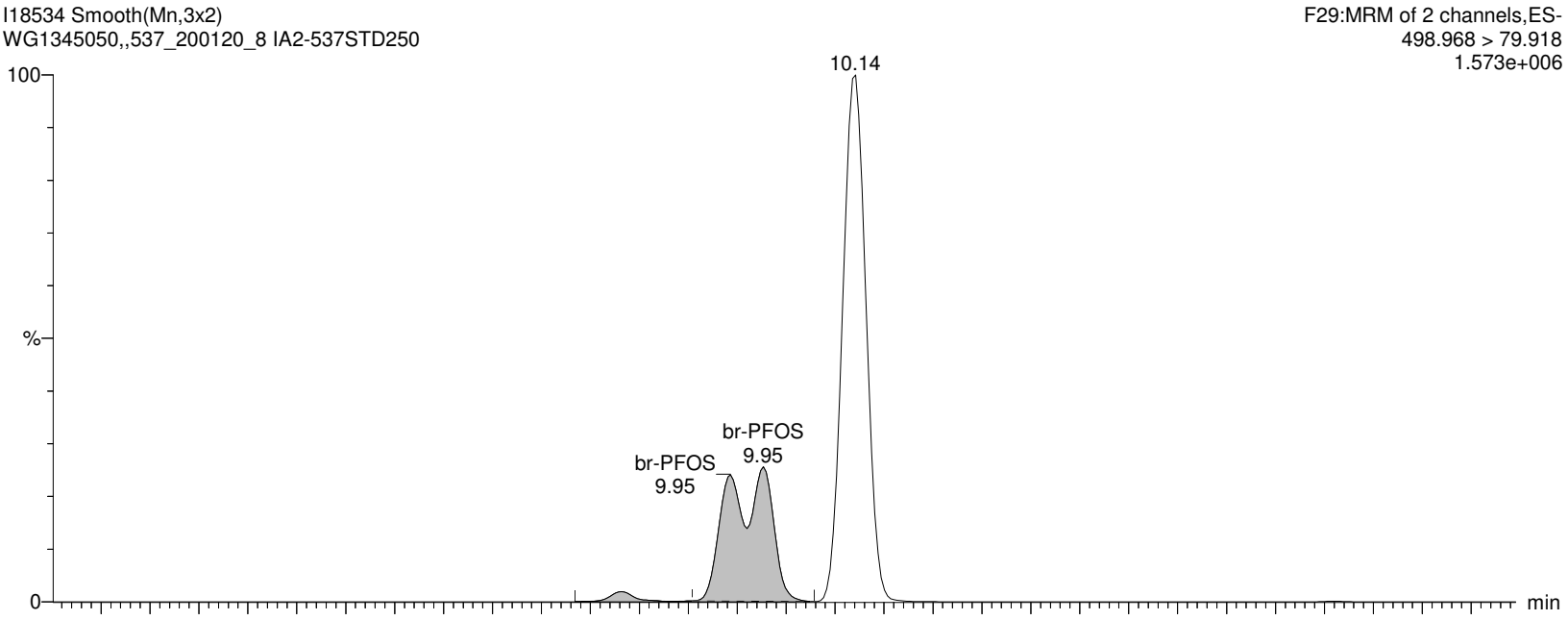
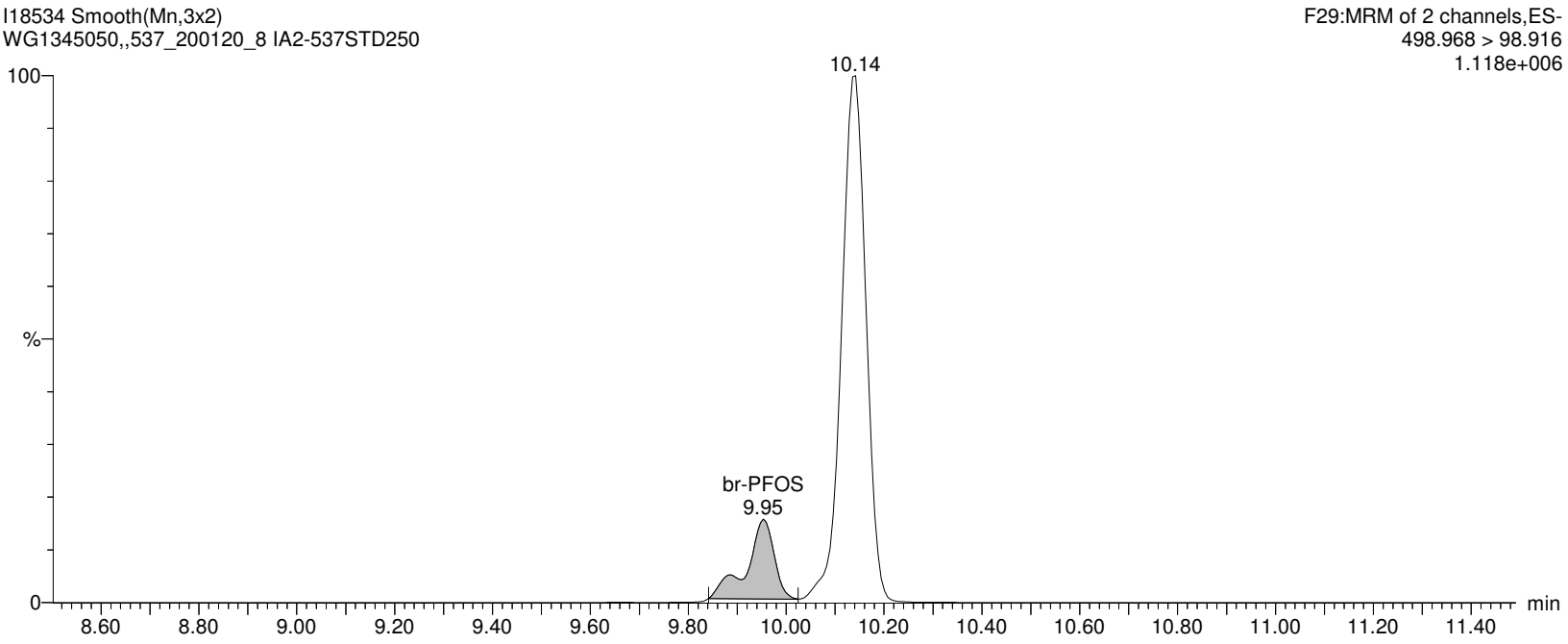
**br-PFOS**





all concentration units in (ng/mL)

Alpha Analytical Inc.
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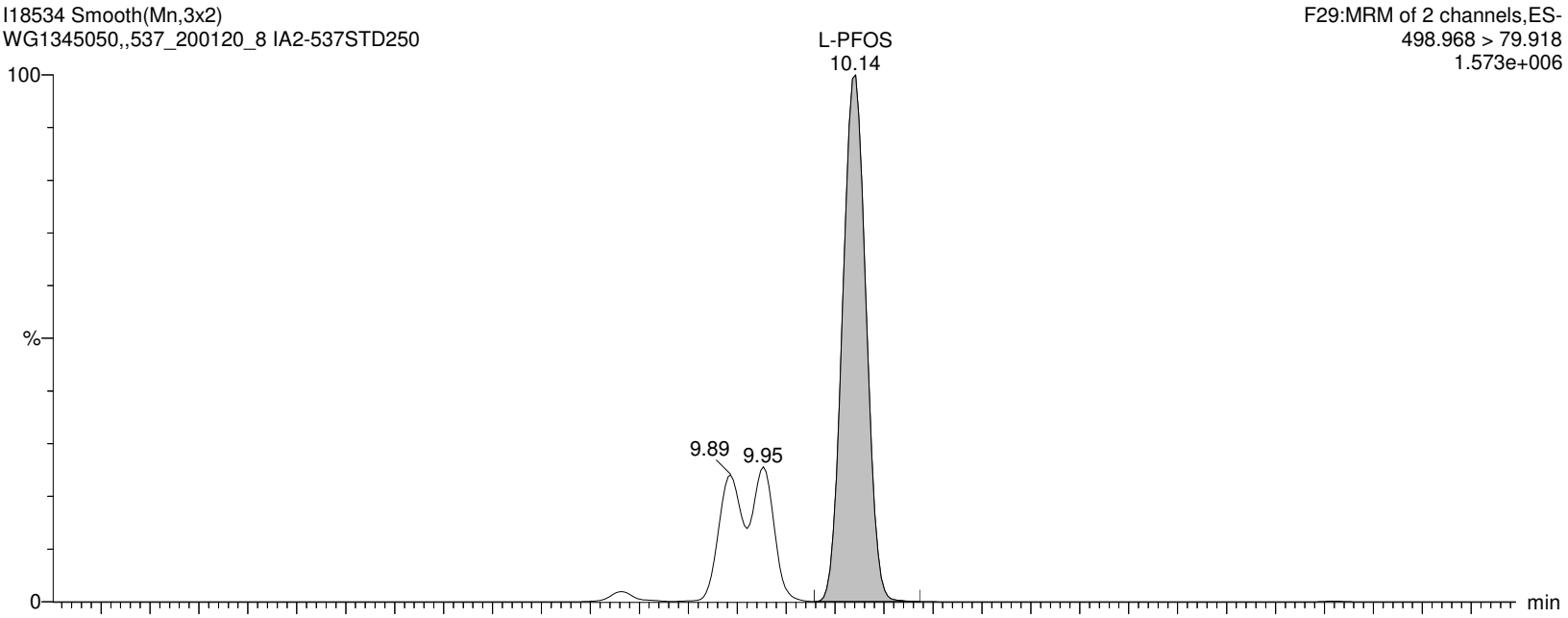


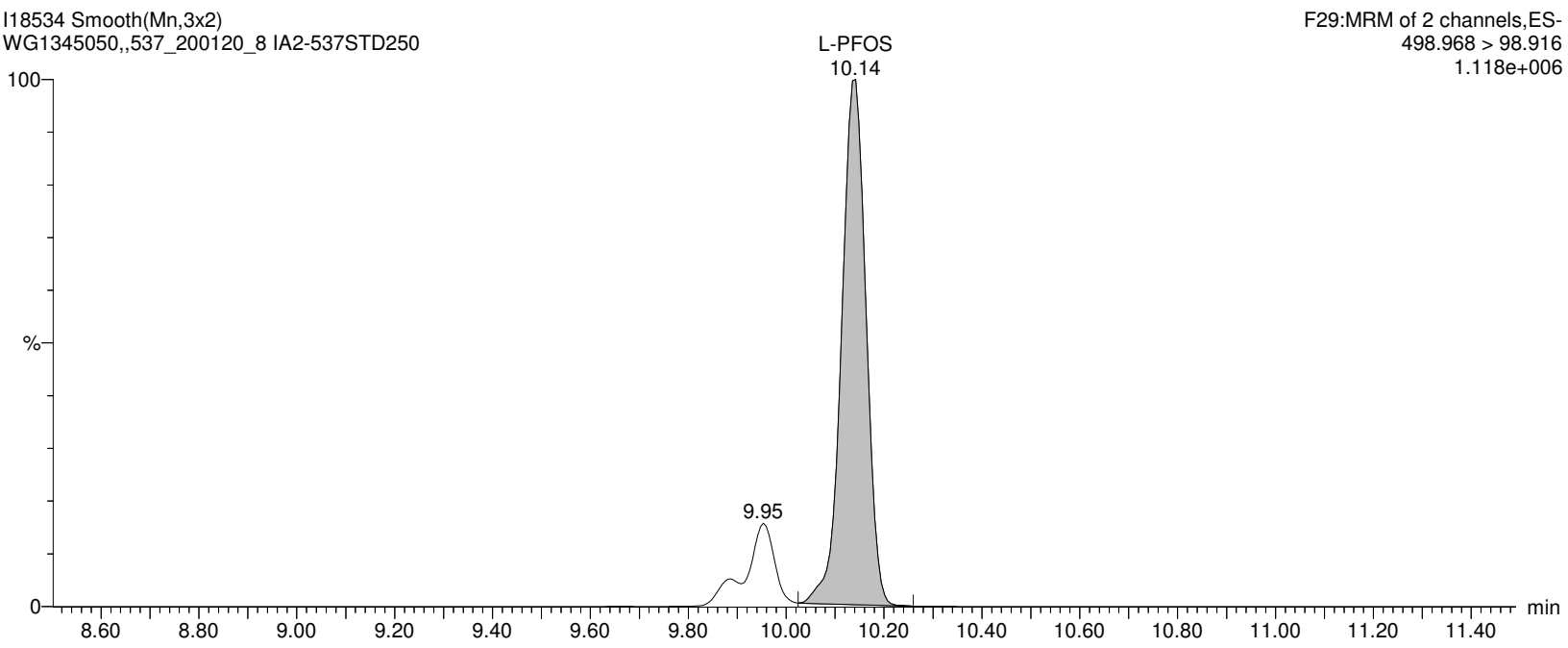



all concentration units in (ng/mL)

Alpha Analytical Inc.
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Last Altered: Friday, February 28, 2020 09:12:40 Eastern Standard Time
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**Instrument: XEVO-TQSmicro#QEA0276**
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**MS Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

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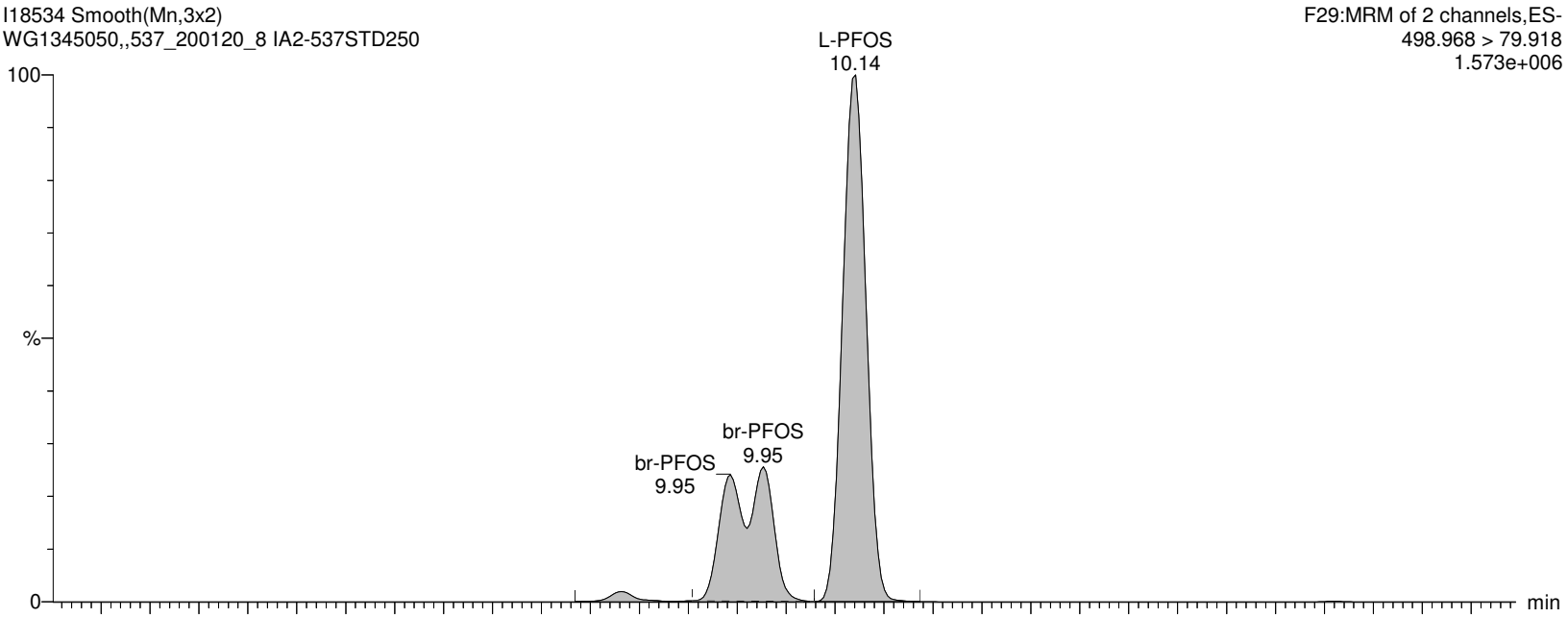


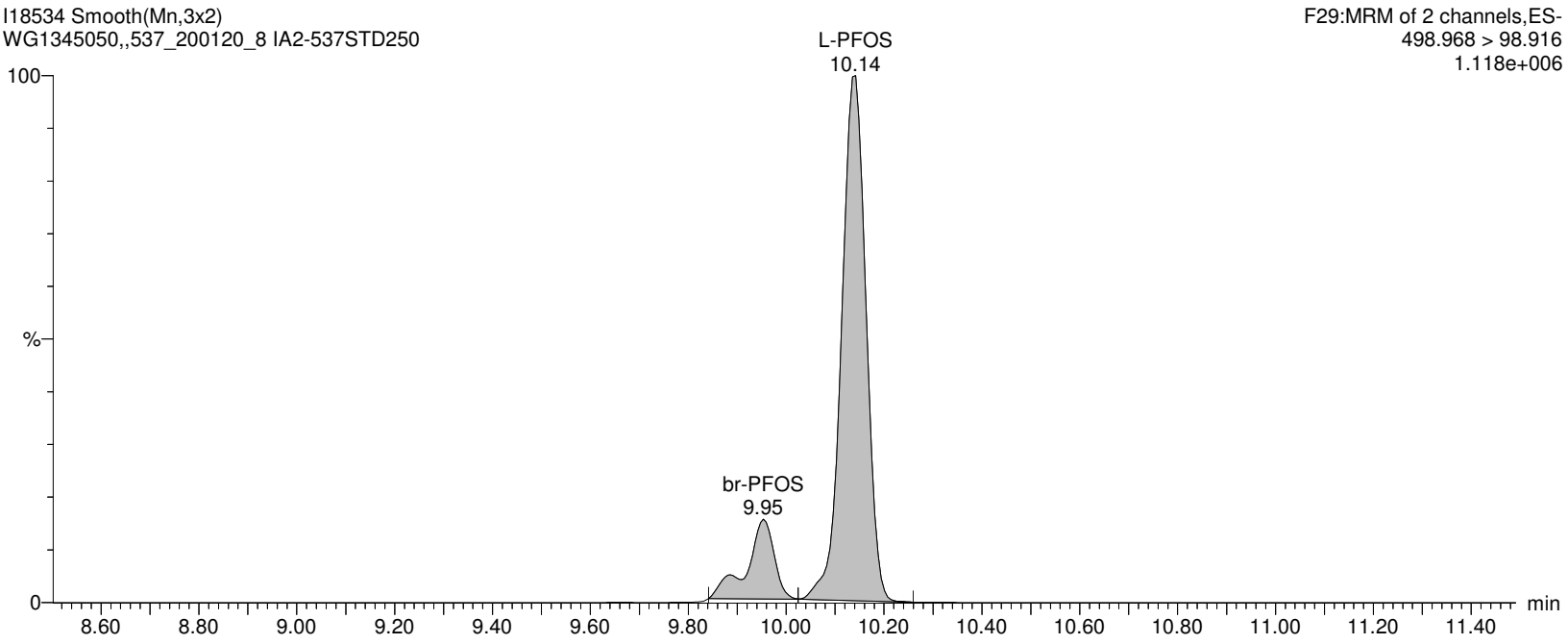



all concentration units in (ng/mL)

Alpha Analytical Inc.
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**Instrument: XEVO-TQSmicro#QEA0276**
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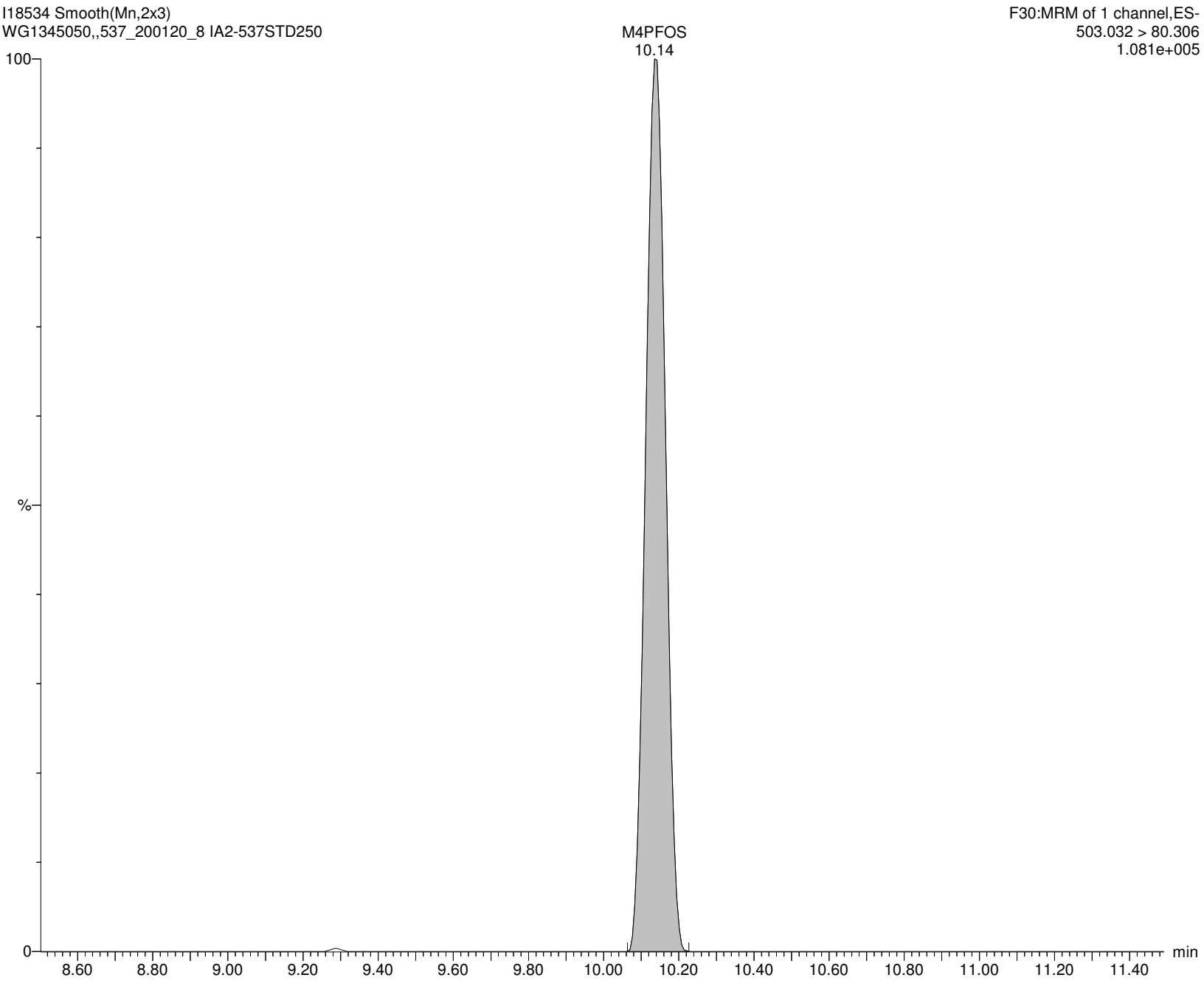



all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICAL_A.qld
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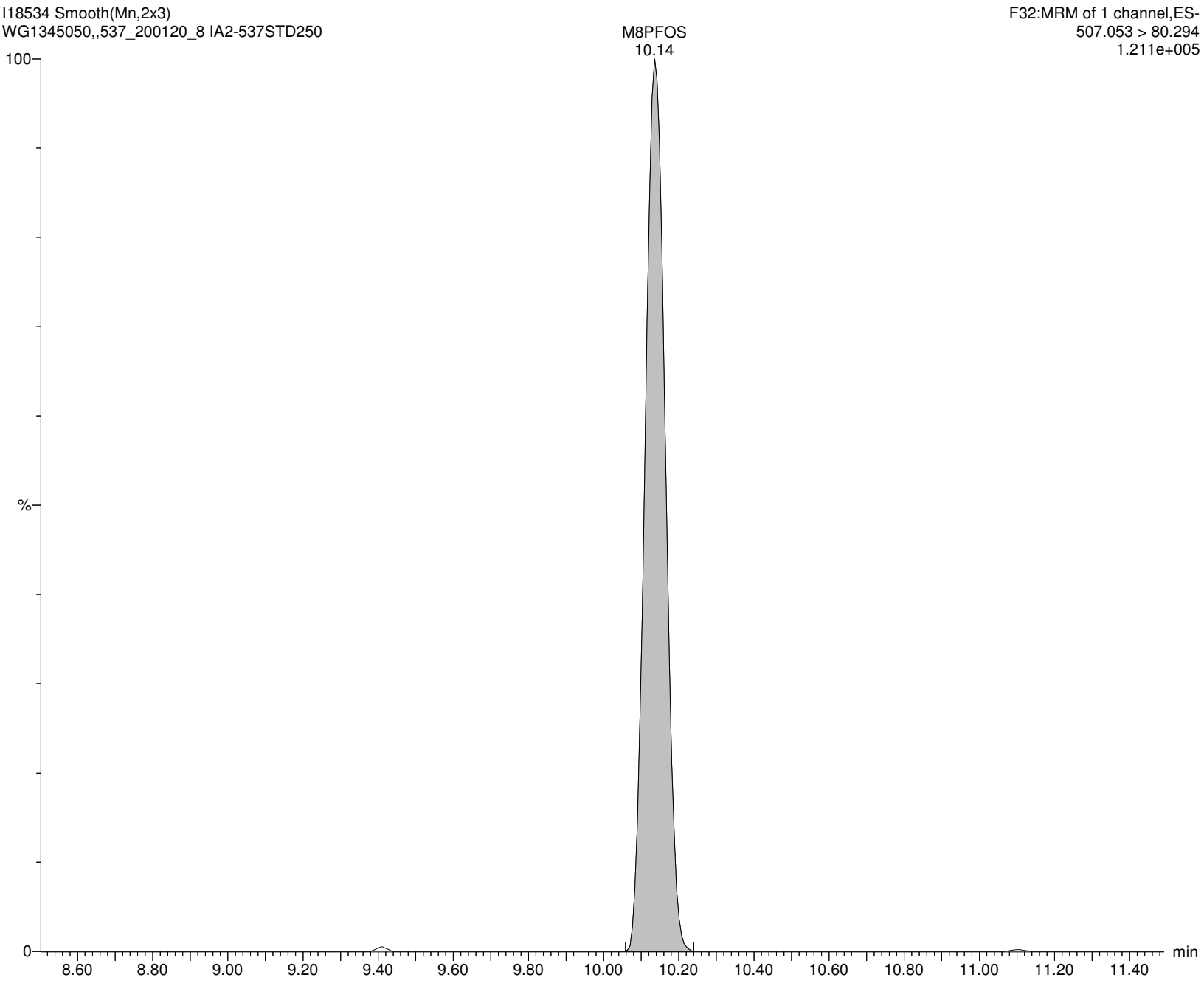
**M8PFOS**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICAL_A.qld
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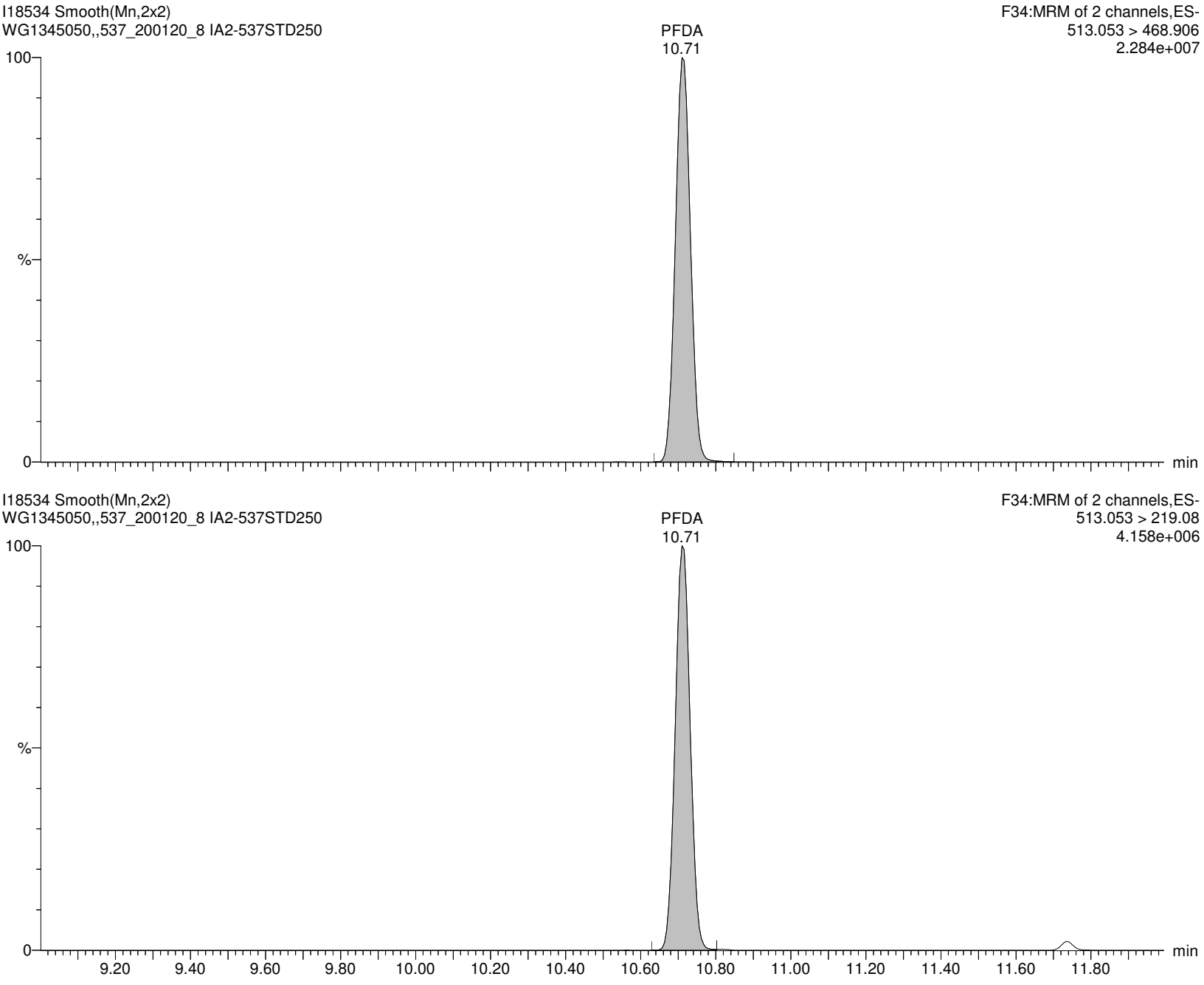
**PFDA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICAL_A.qld
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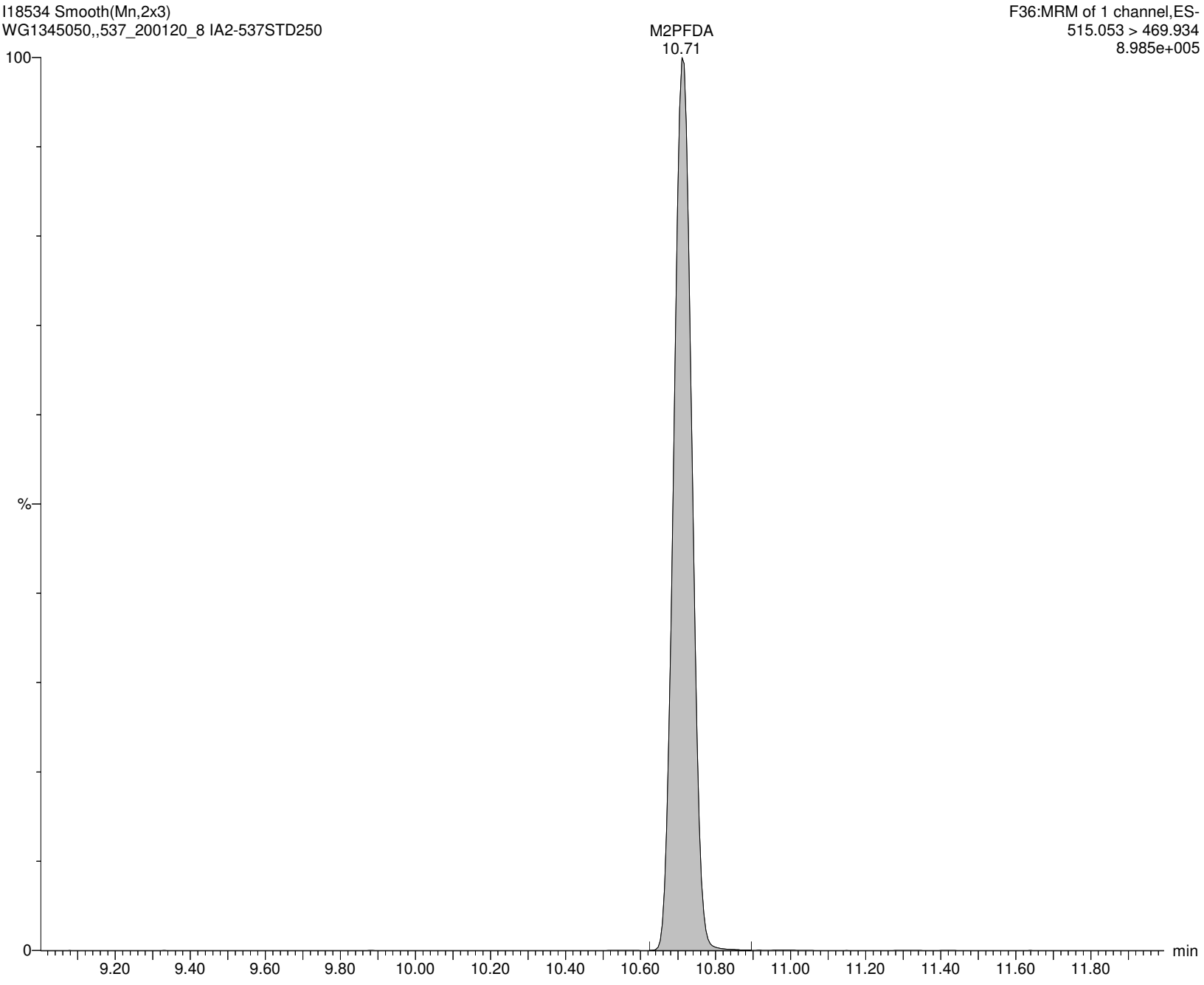
**M2PFDA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICAL_A.qld
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**Instrument: XEVO-TQSmicro#QEA0276**
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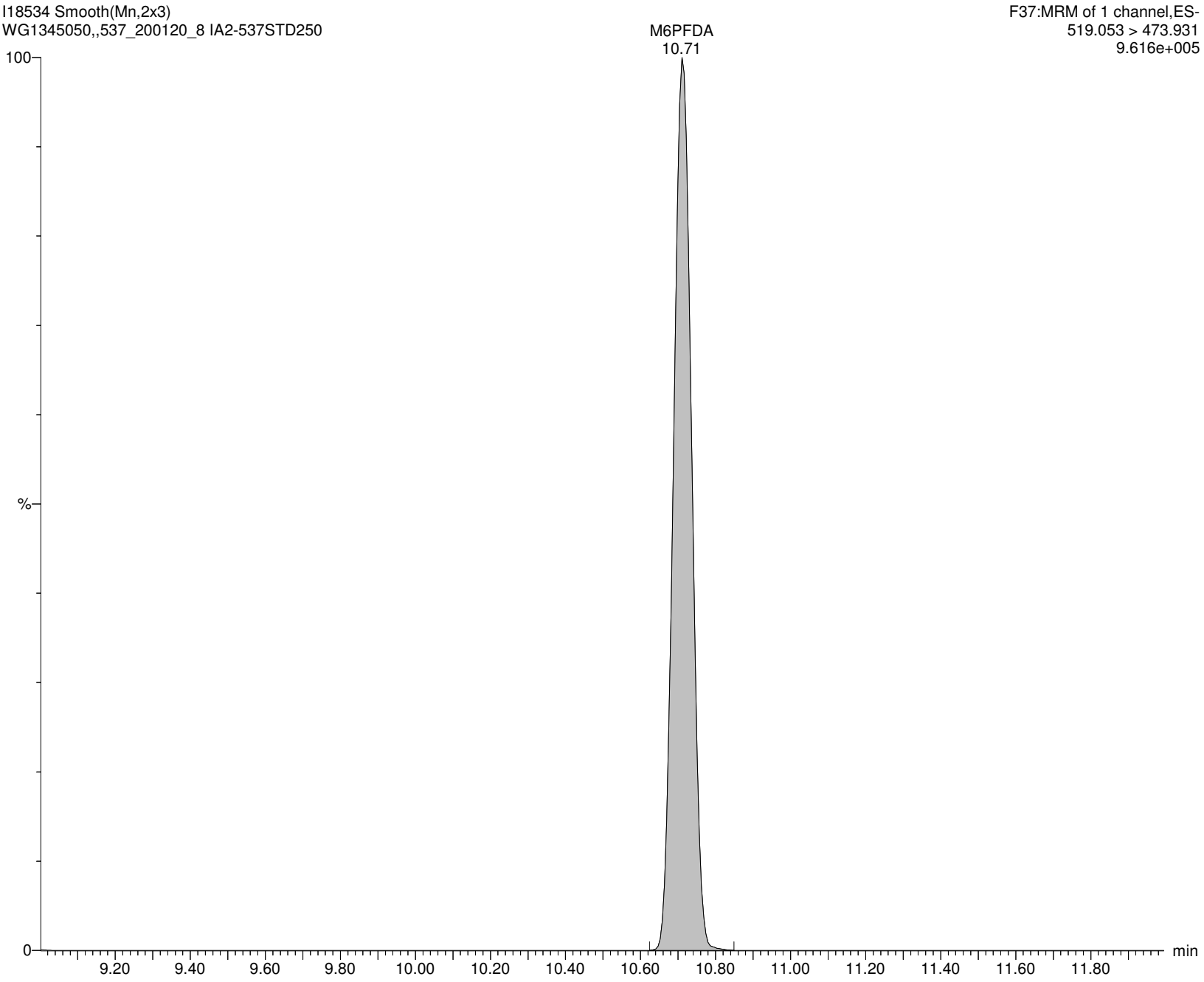
**M6PFDA**





all concentration units in (ng/mL)

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Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICAL_A.qld
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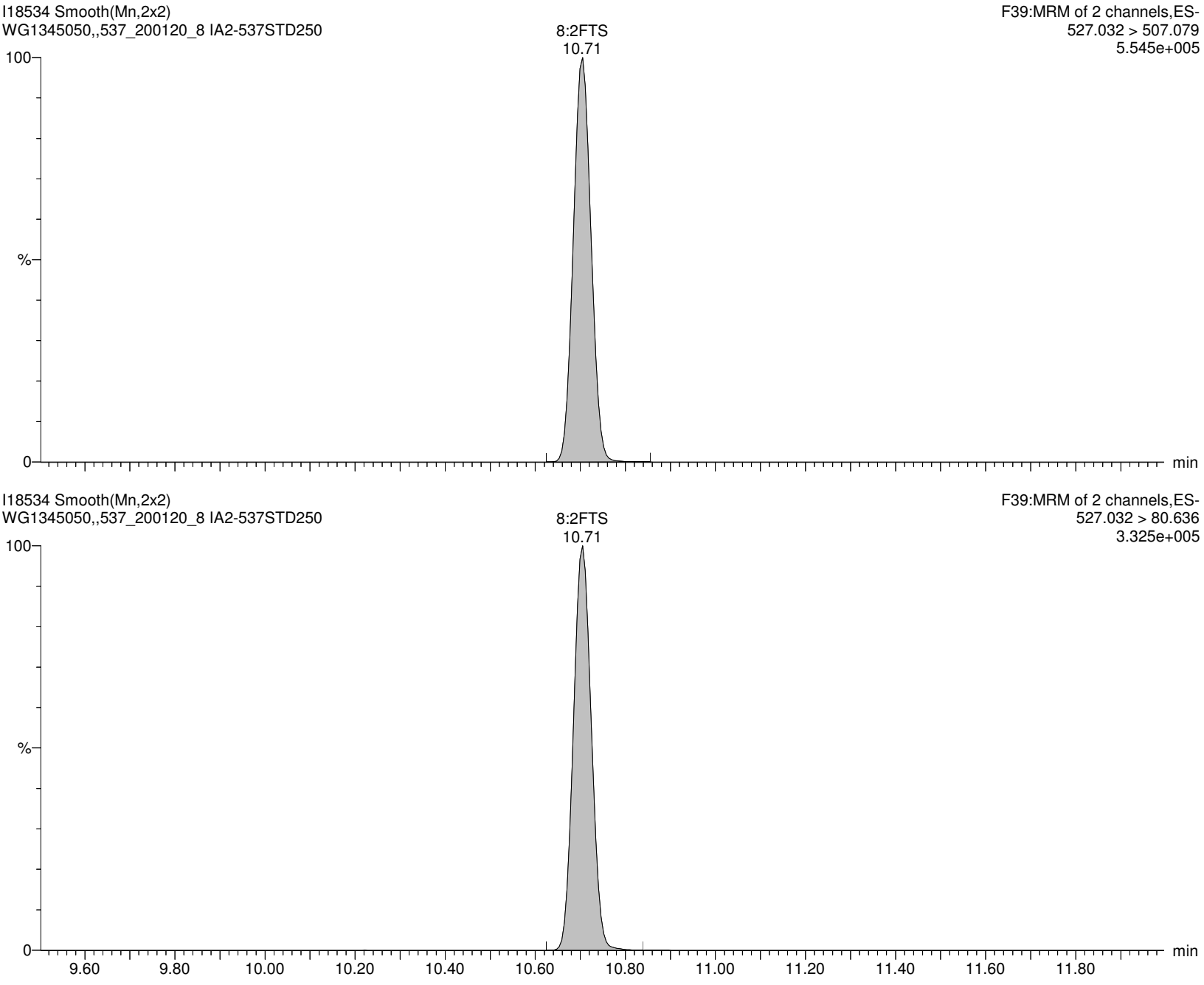
**8:2FTS**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICAL_A.qld
Last Altered: Friday, February 28, 2020 09:12:40 Eastern Standard Time
Printed: Friday, February 28, 2020 09:27:55 Eastern Standard Time

**Name: I18534**
**ID: IA2-537STD250**
**Date: 27-Feb-2020**
**Time: 15:25:04**
**Description: WG1345050,,537_200120_8**
**User: LCMS01:SG**
**Vial: 1:B,1**
**Instrument: XEVO-TQSmicro#QEA0276**
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**Tune Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\190709_TUNE.IPR**
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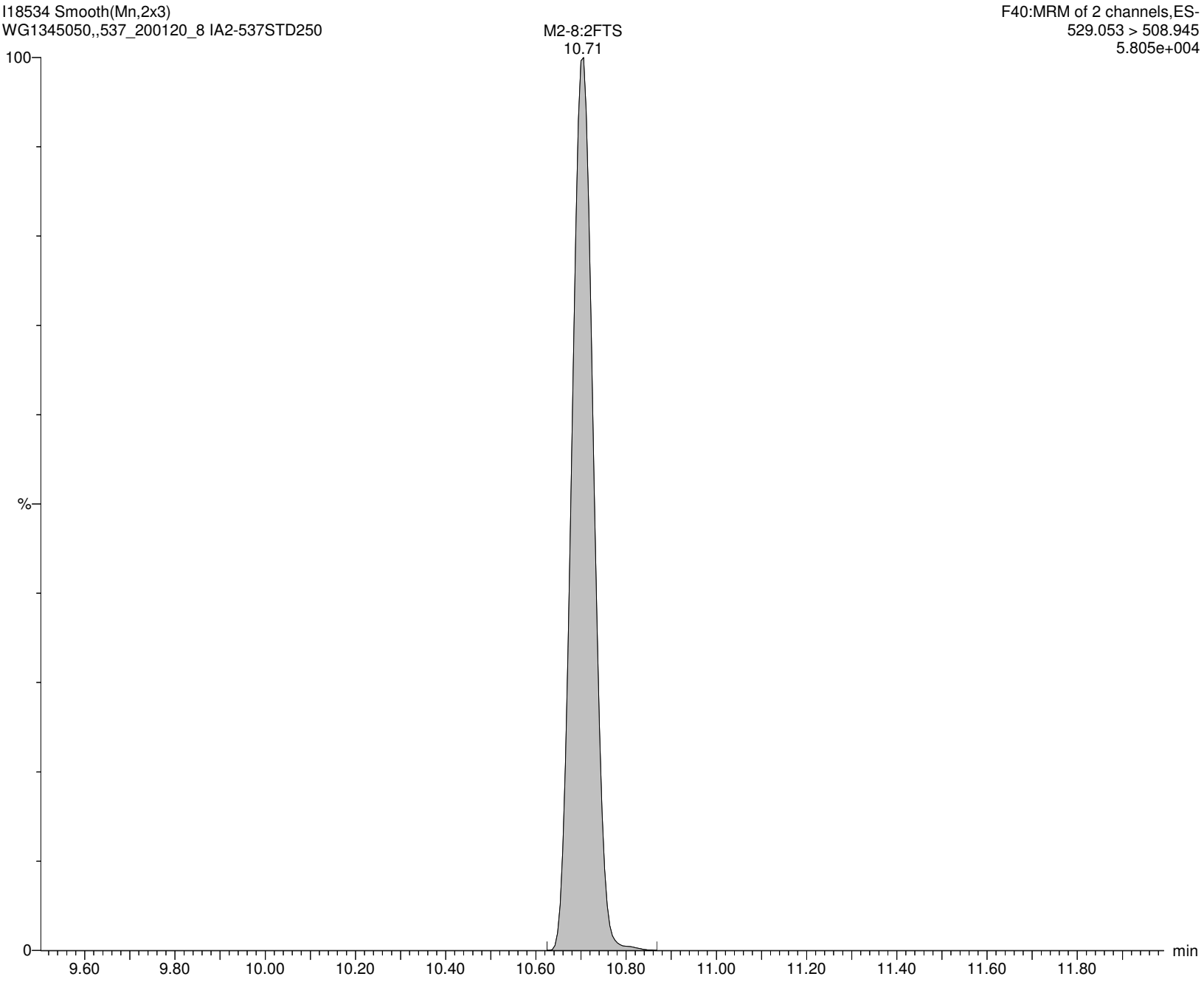
**M2-8:2FTS**





all concentration units in (ng/mL)

Alpha Analytical Inc.
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Last Altered: Friday, February 28, 2020 09:12:40 Eastern Standard Time
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**Vial: 1:B,1**
**Instrument: XEVO-TQSmicro#QEA0276**
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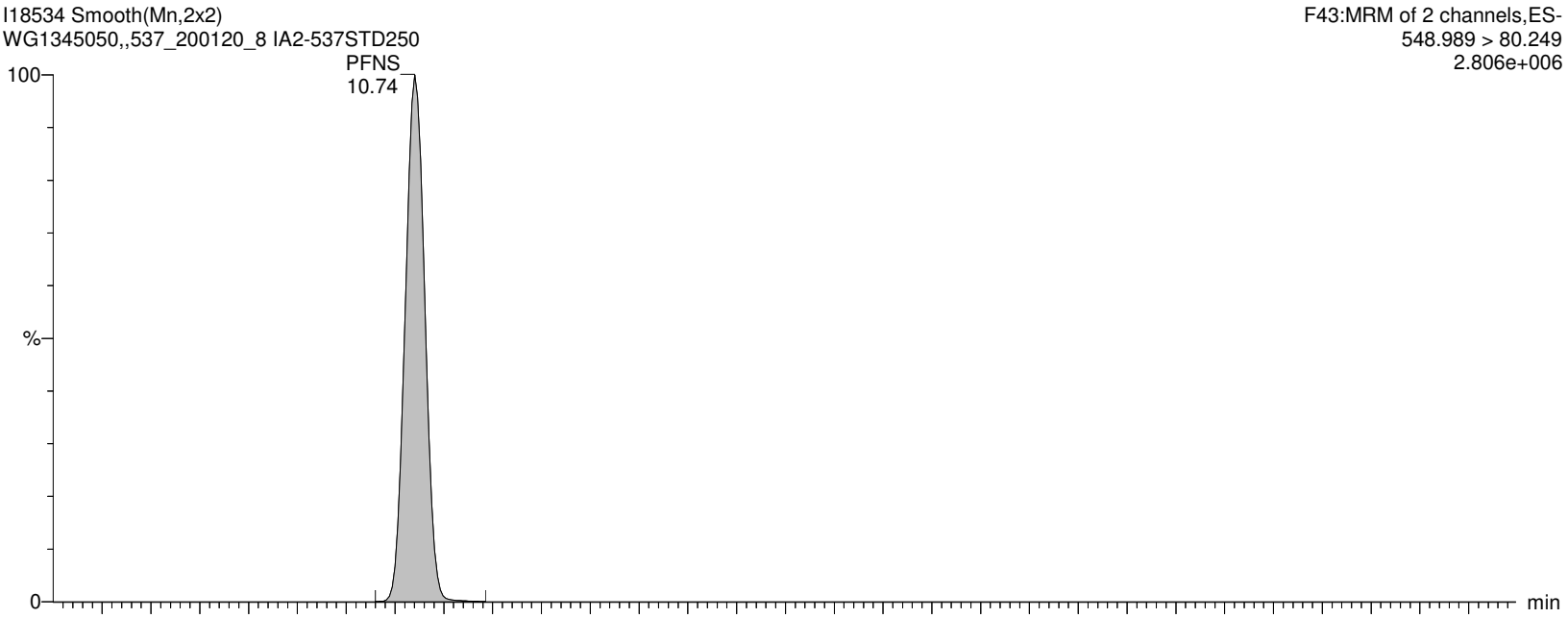
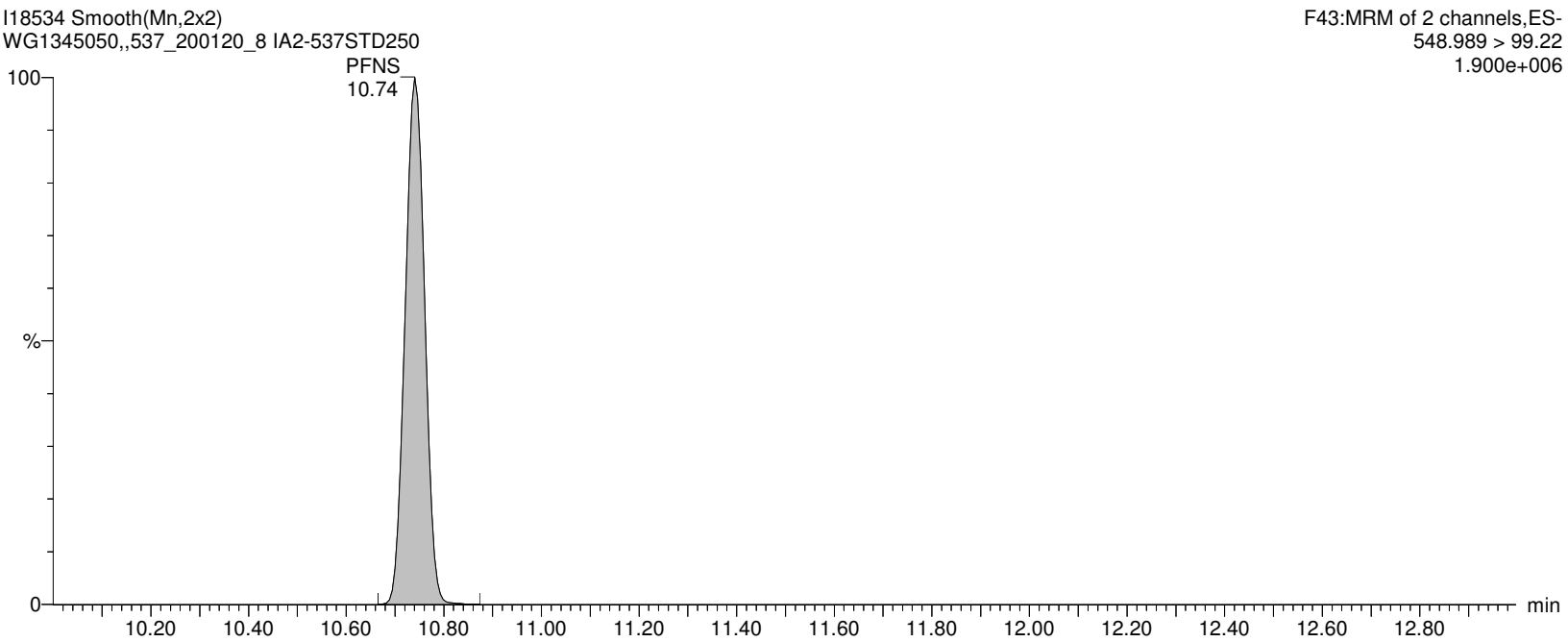
**PFNS**





all concentration units in (ng/mL)

Alpha Analytical Inc.
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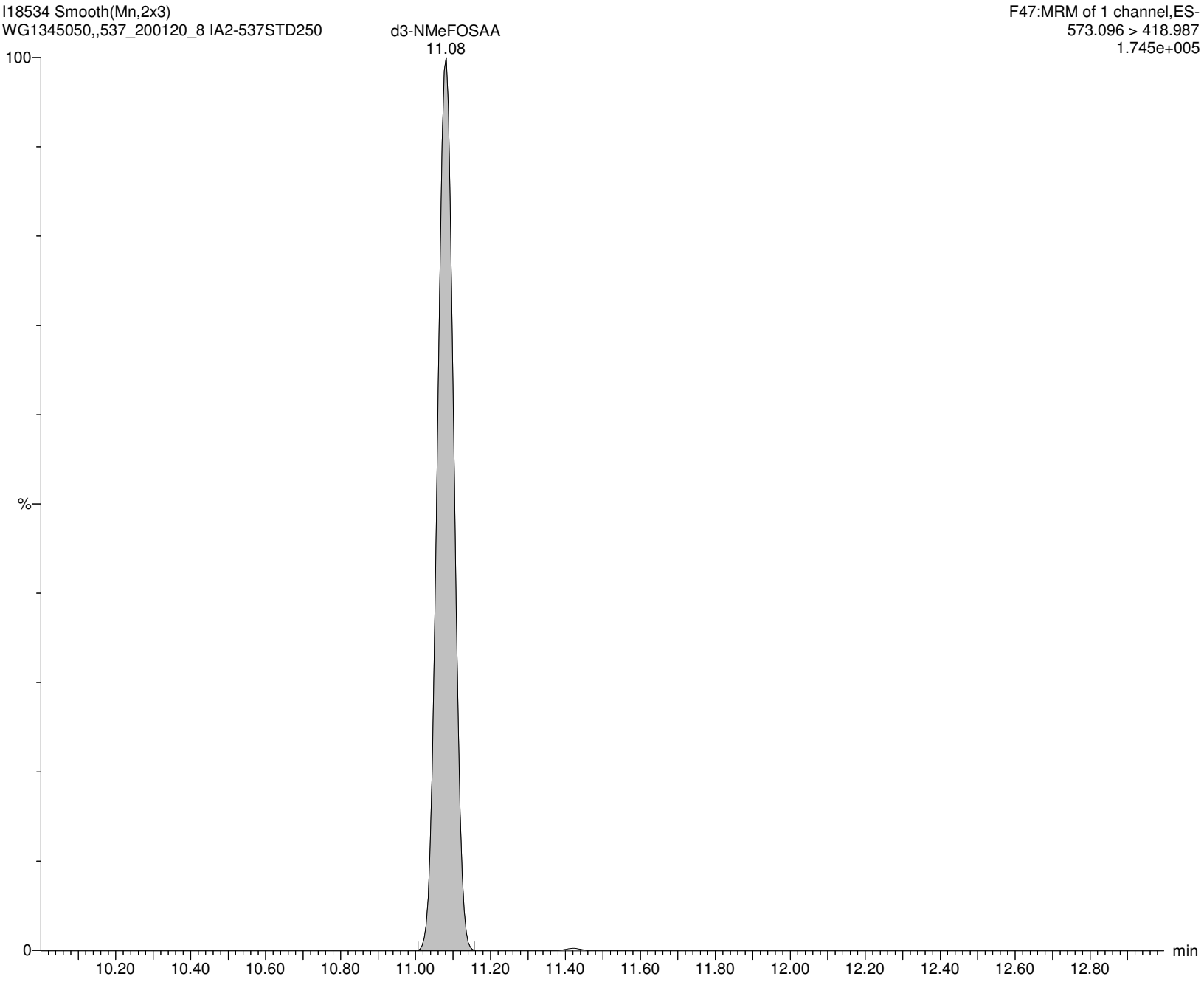



all concentration units in (ng/mL)

Alpha Analytical Inc.
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**Vial: 1:B,1**
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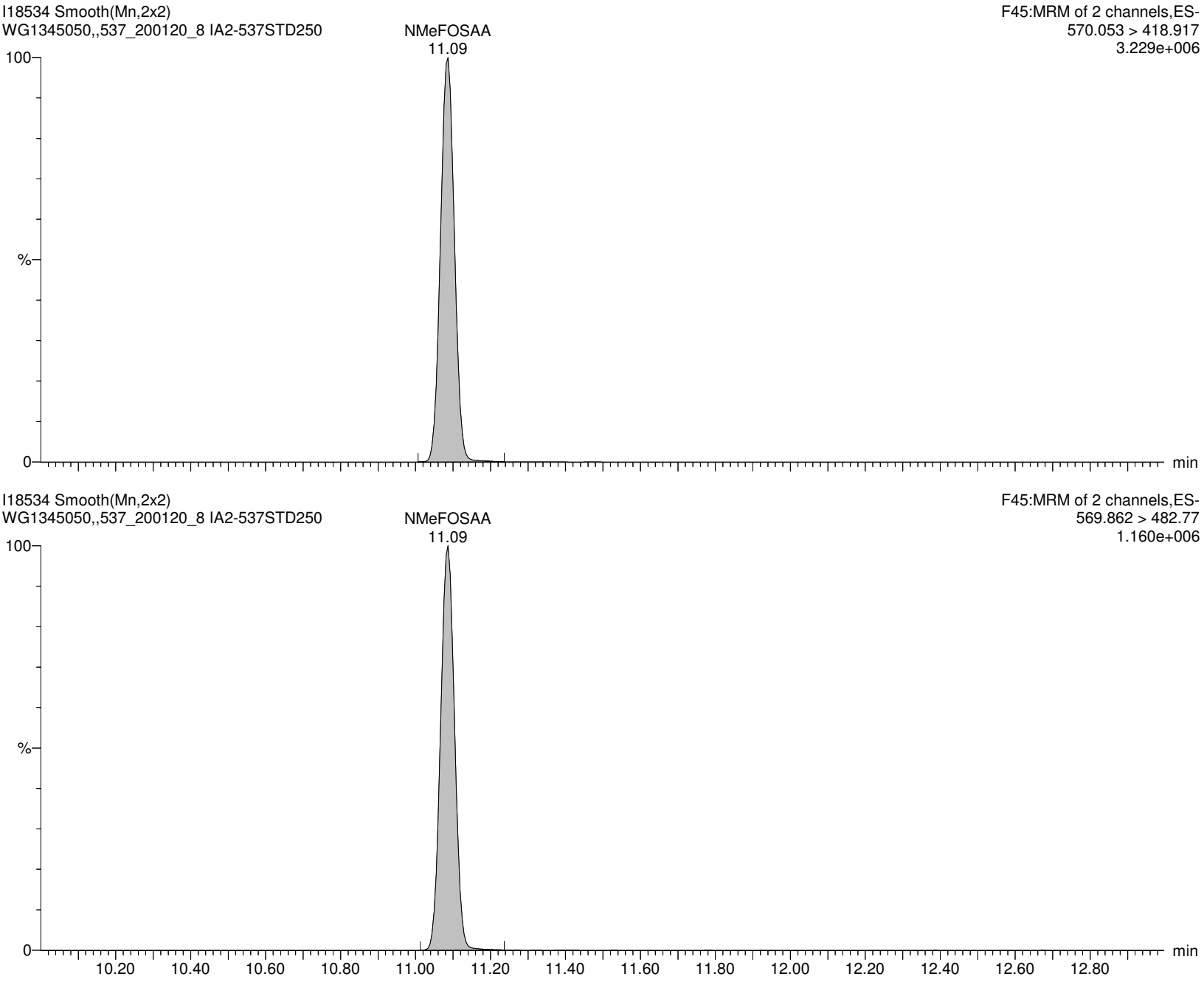
**NMeFOSAA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
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**Vial: 1:B,1**
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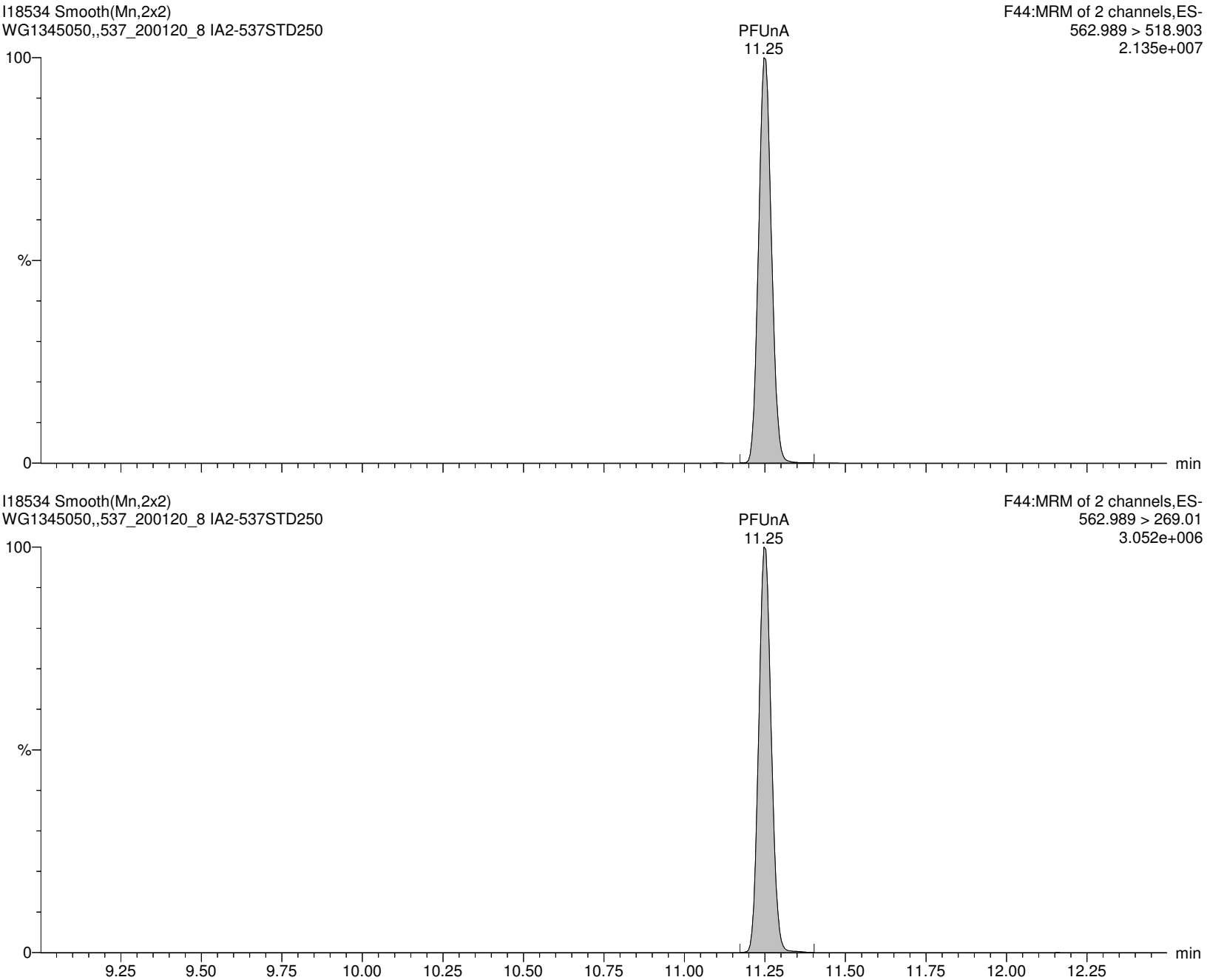
**PFUnA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
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**Vial: 1:B,1**
**Instrument: XEVO-TQSmicro#QEA0276**
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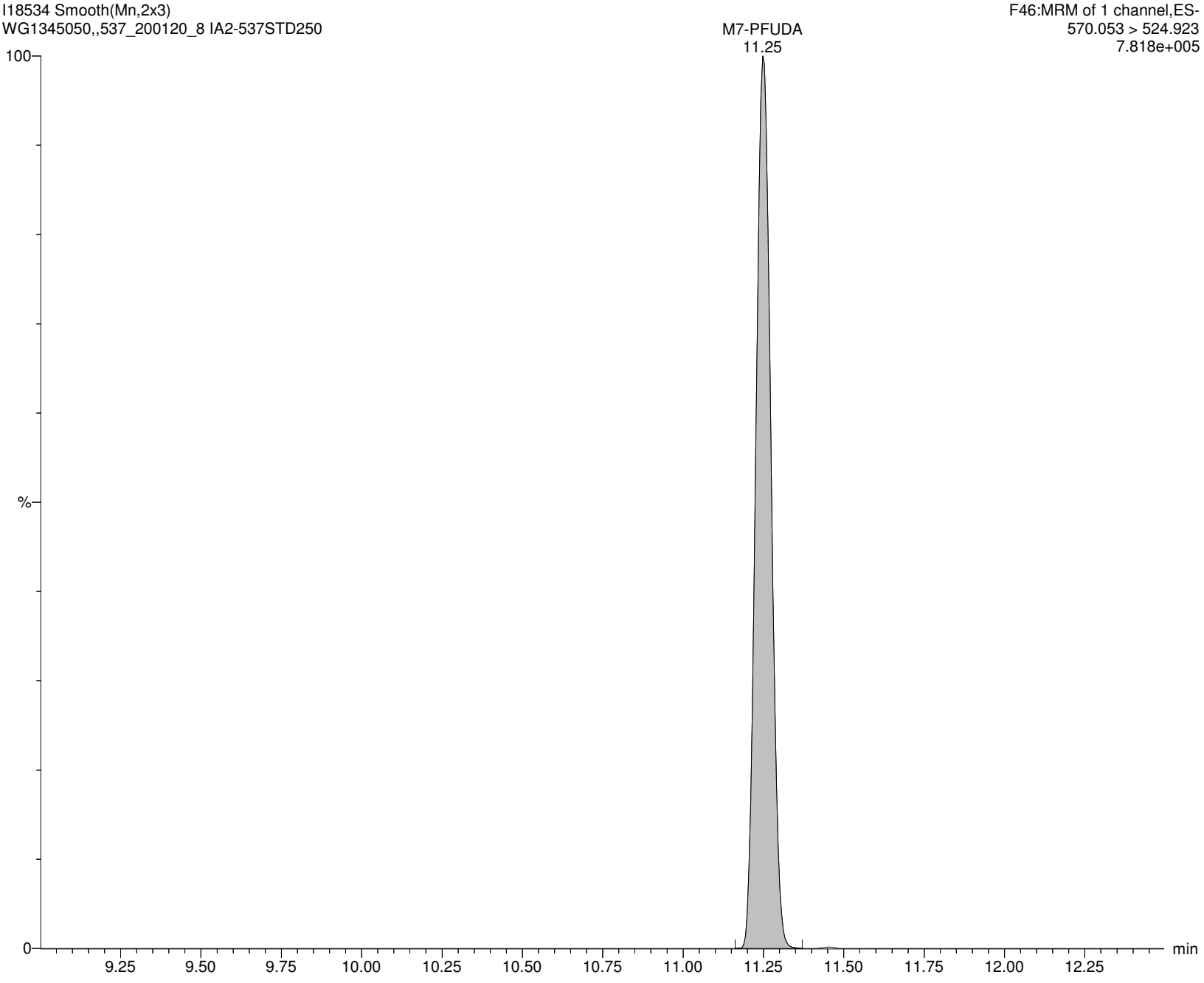
**M7-PFUDA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
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Last Altered: Friday, February 28, 2020 09:12:40 Eastern Standard Time
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**Vial: 1:B,1**
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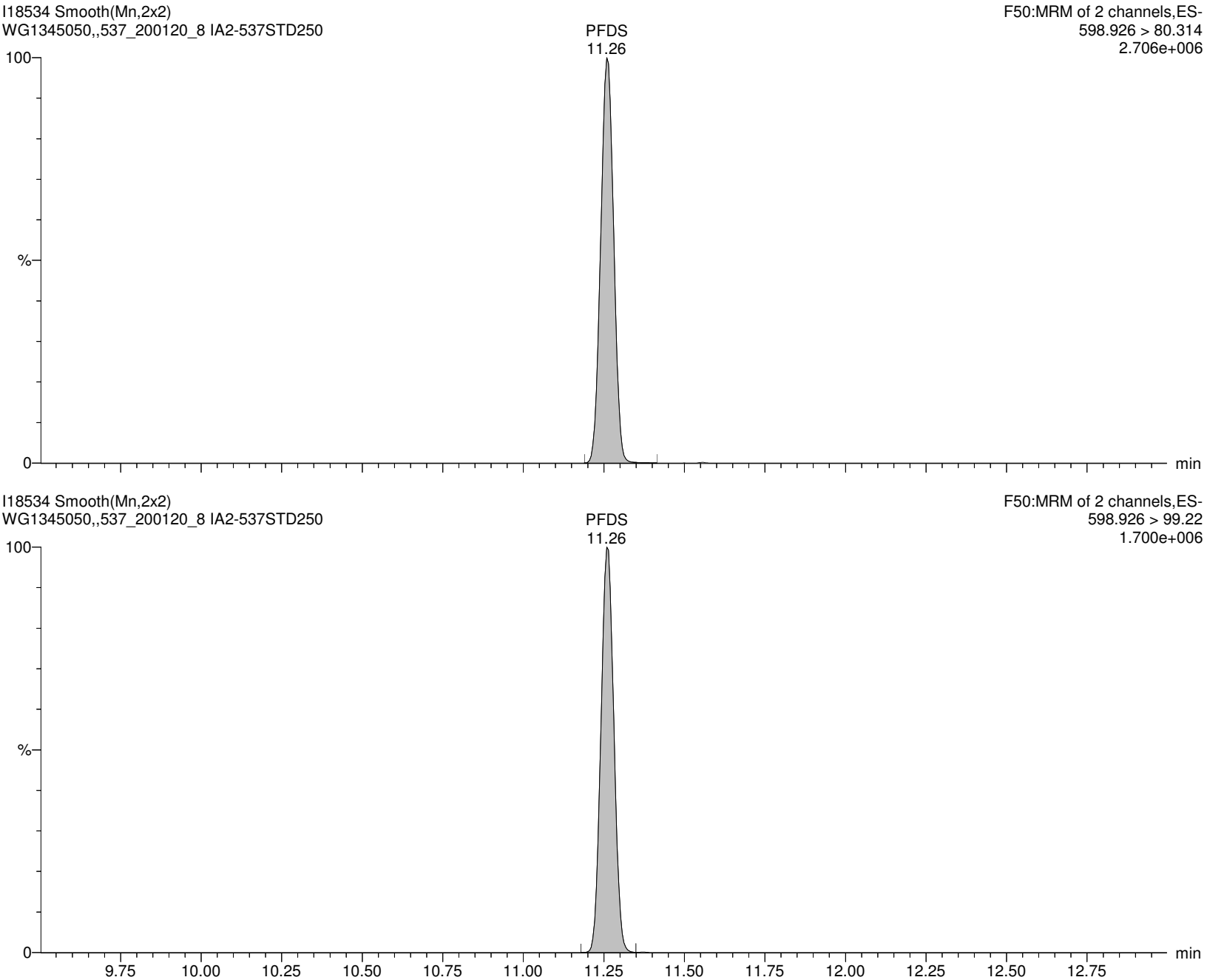
**PFDS**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICAL_A.qld
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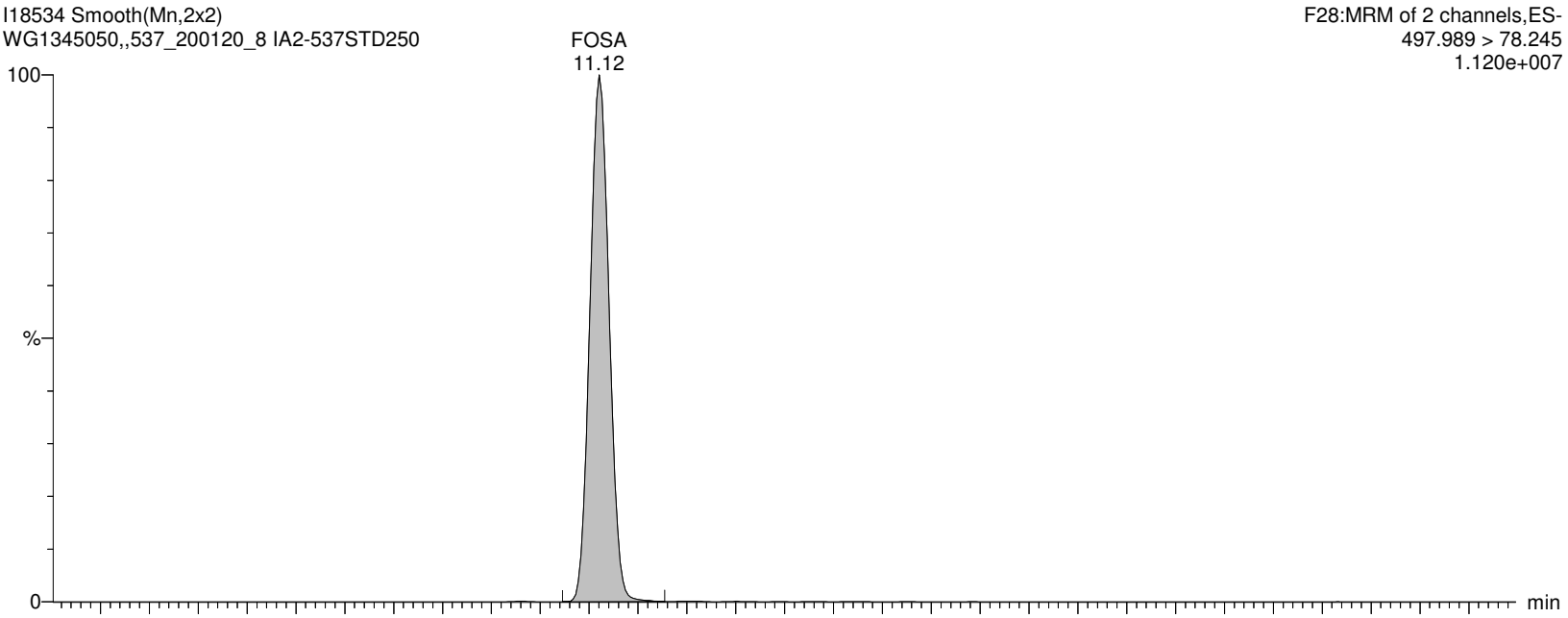
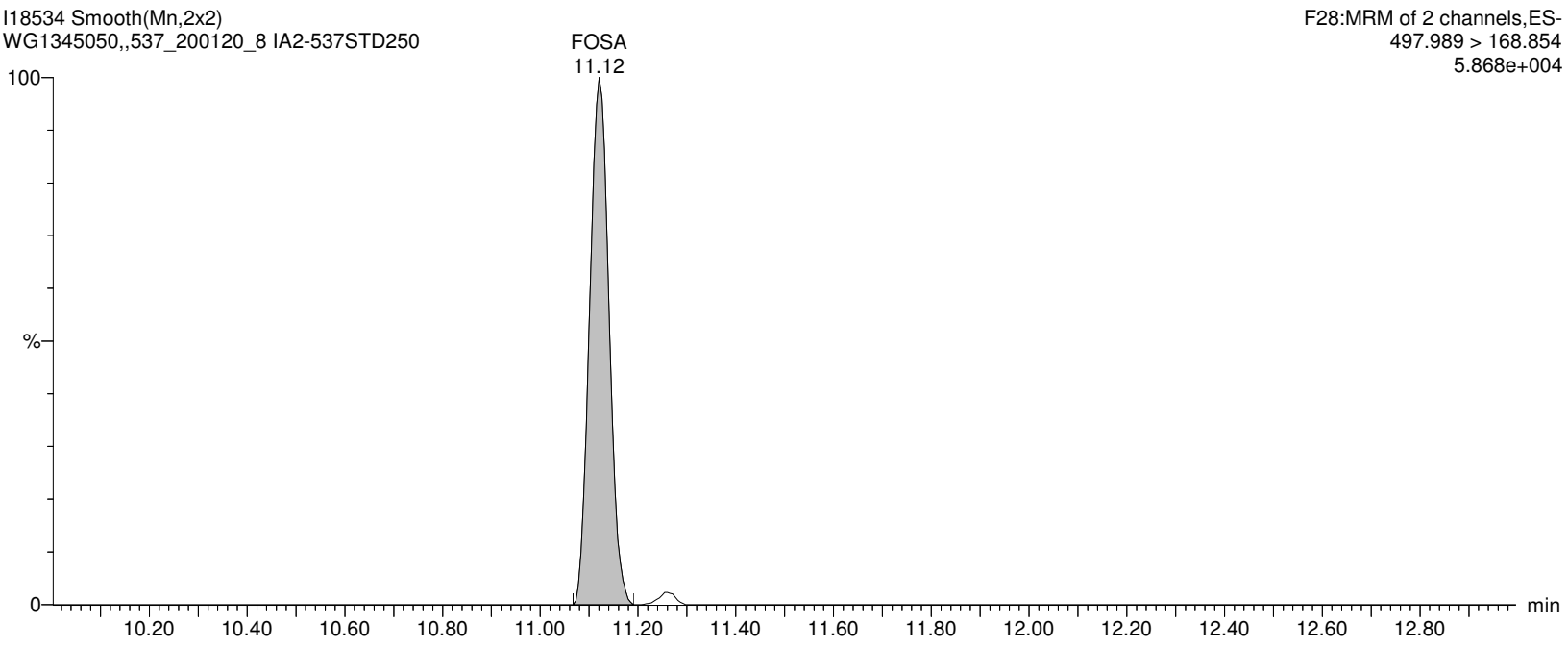
**FOSA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICAL_A.qld
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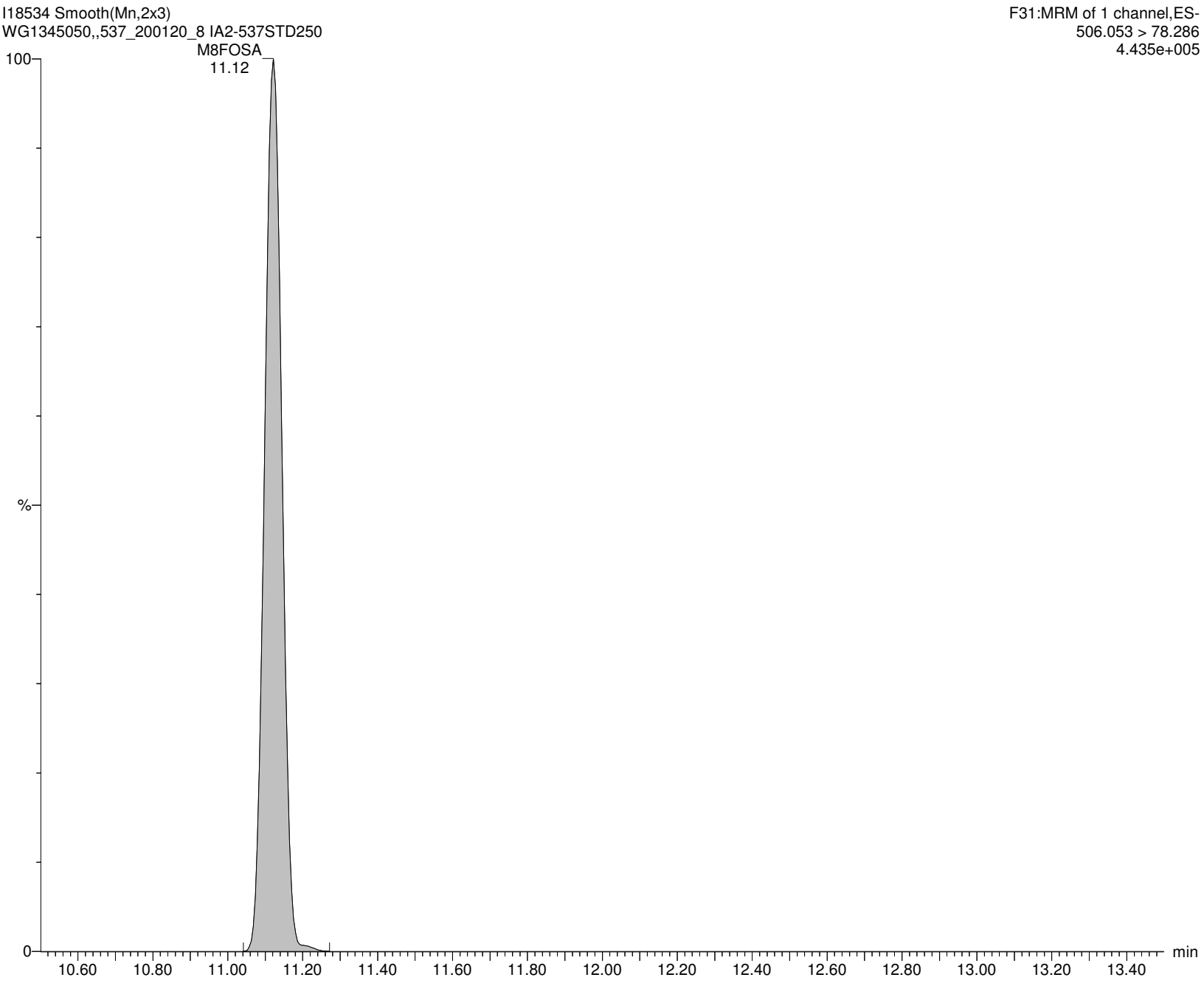
**M8FOSA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
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**Date: 27-Feb-2020**
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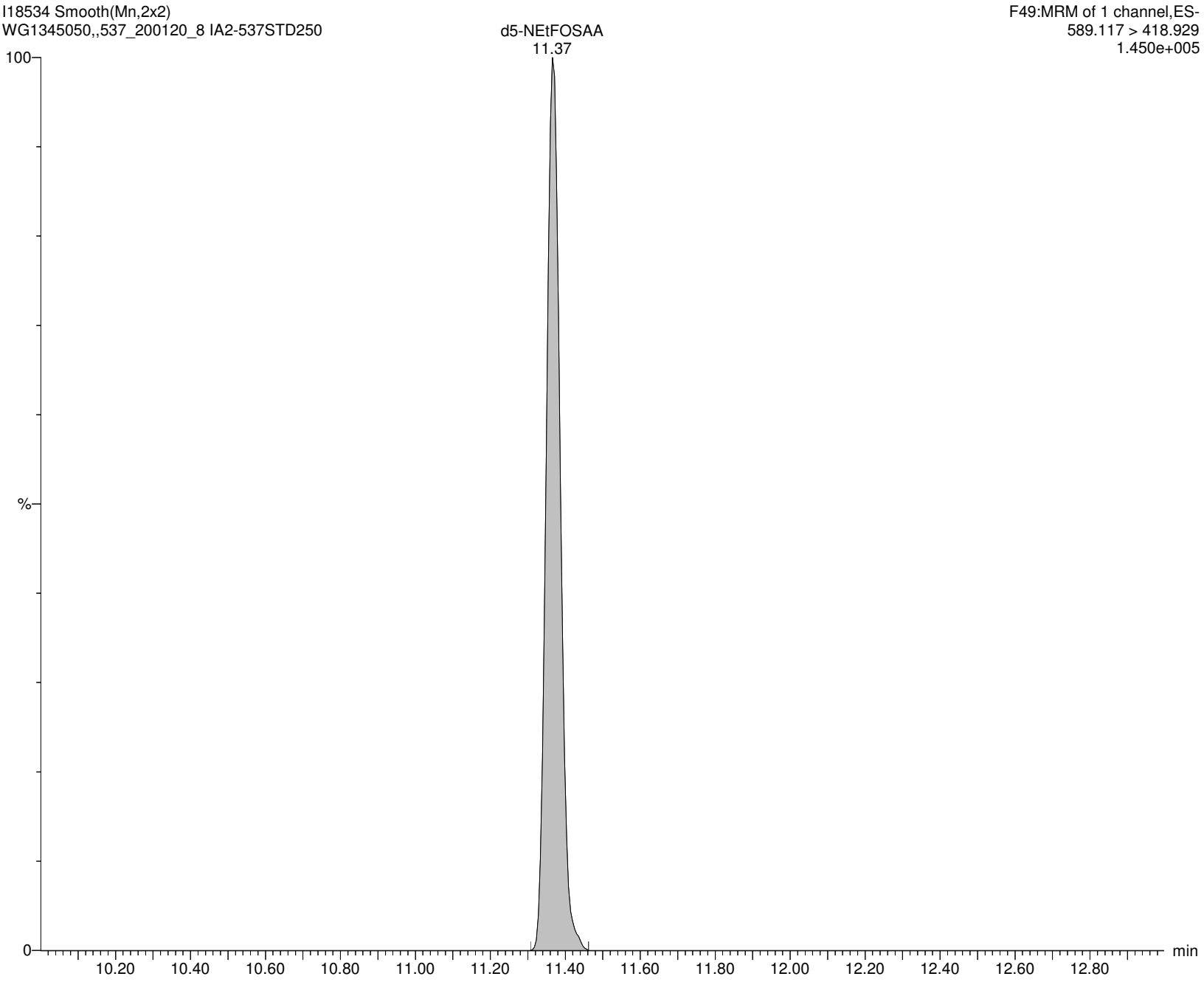
**d5-NEtFOSAA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
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Last Altered: Friday, February 28, 2020 09:12:40 Eastern Standard Time
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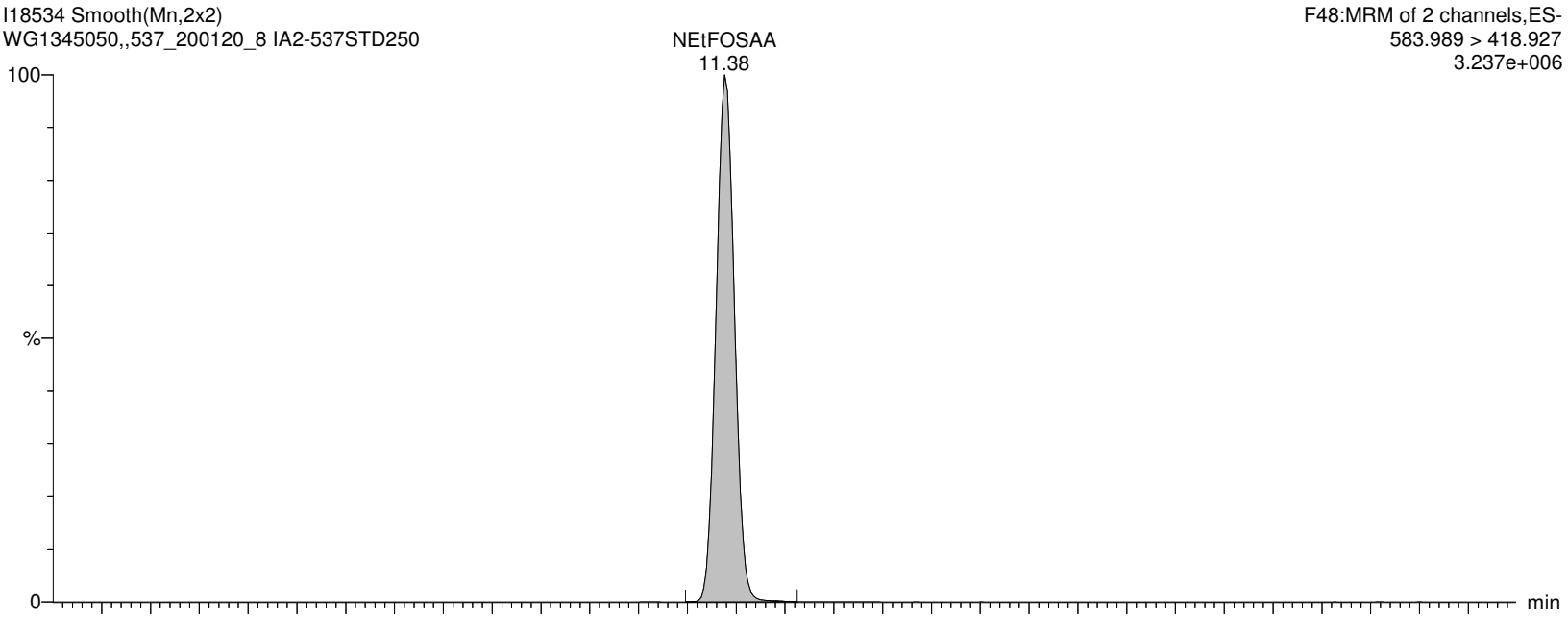
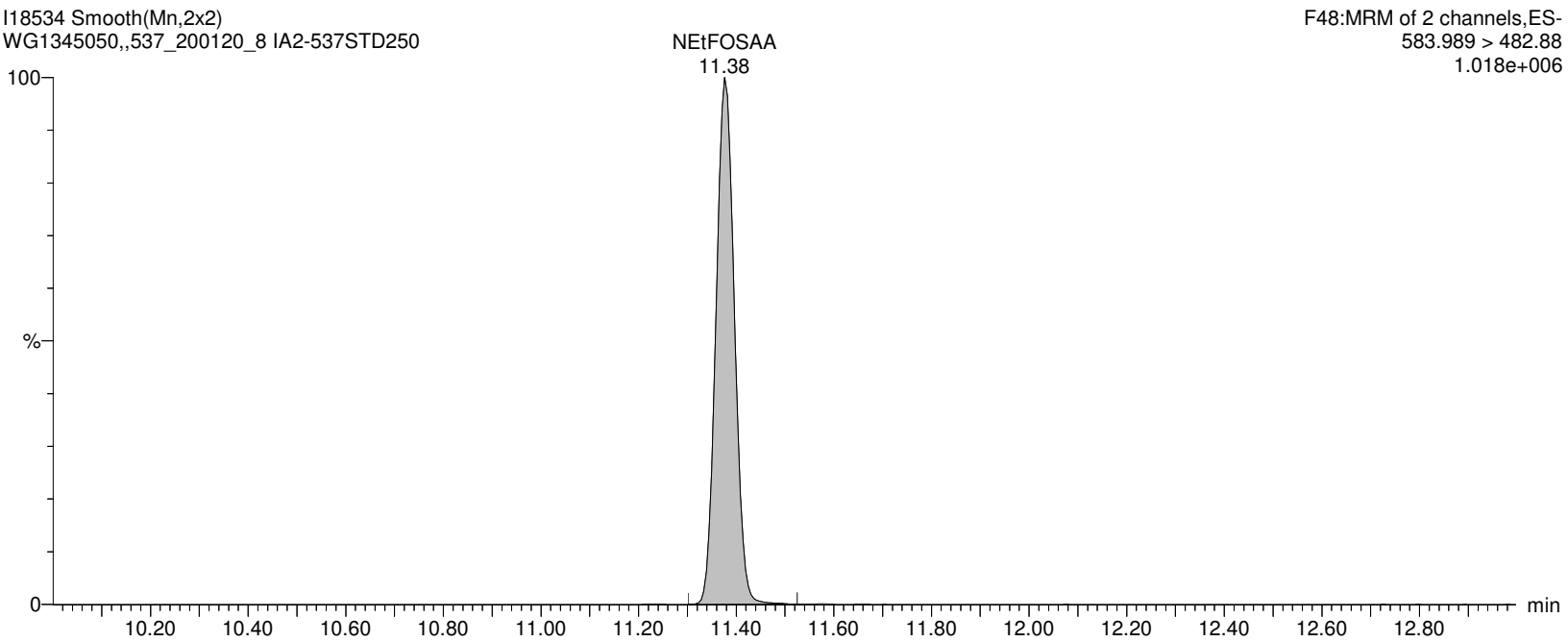
**NEtFOSAA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
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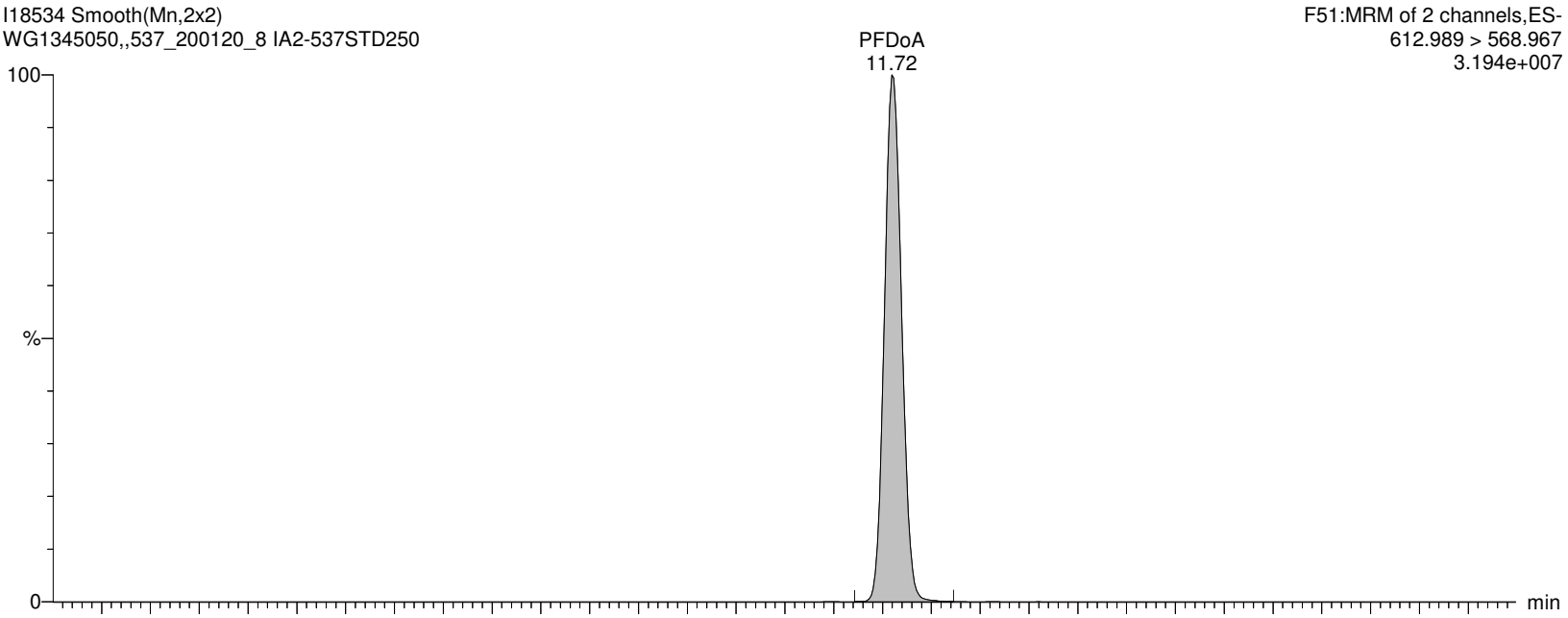
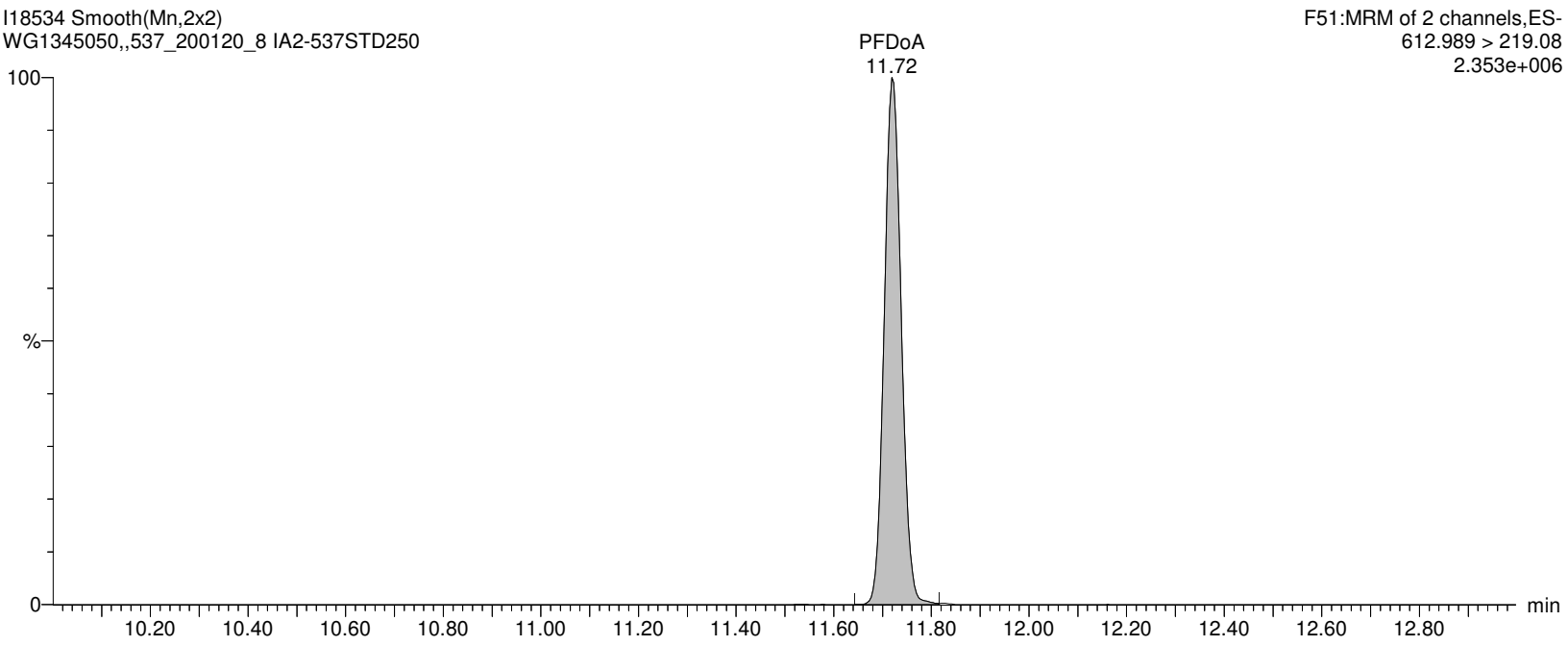
**PFDoA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
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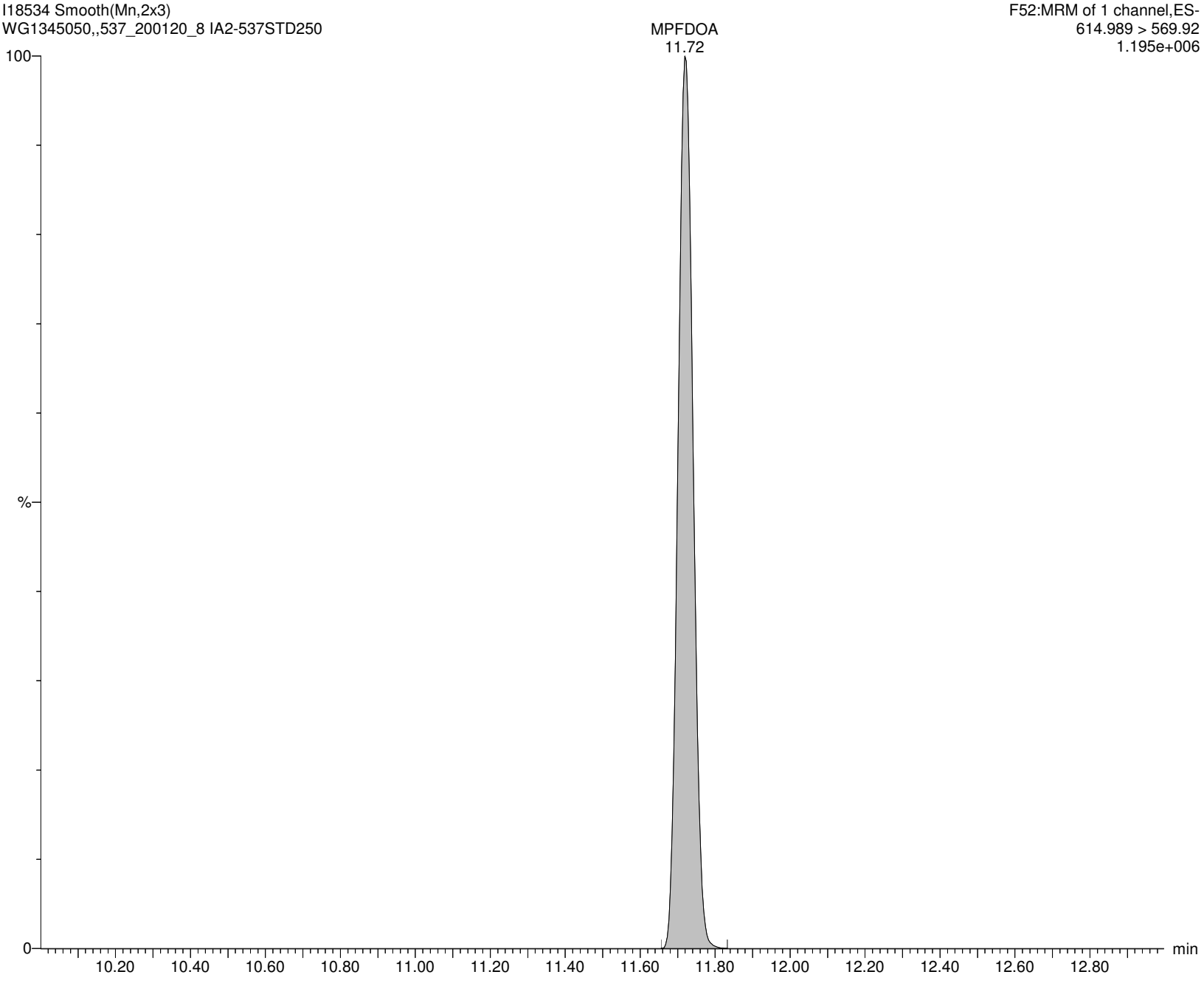
**MPFDOA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
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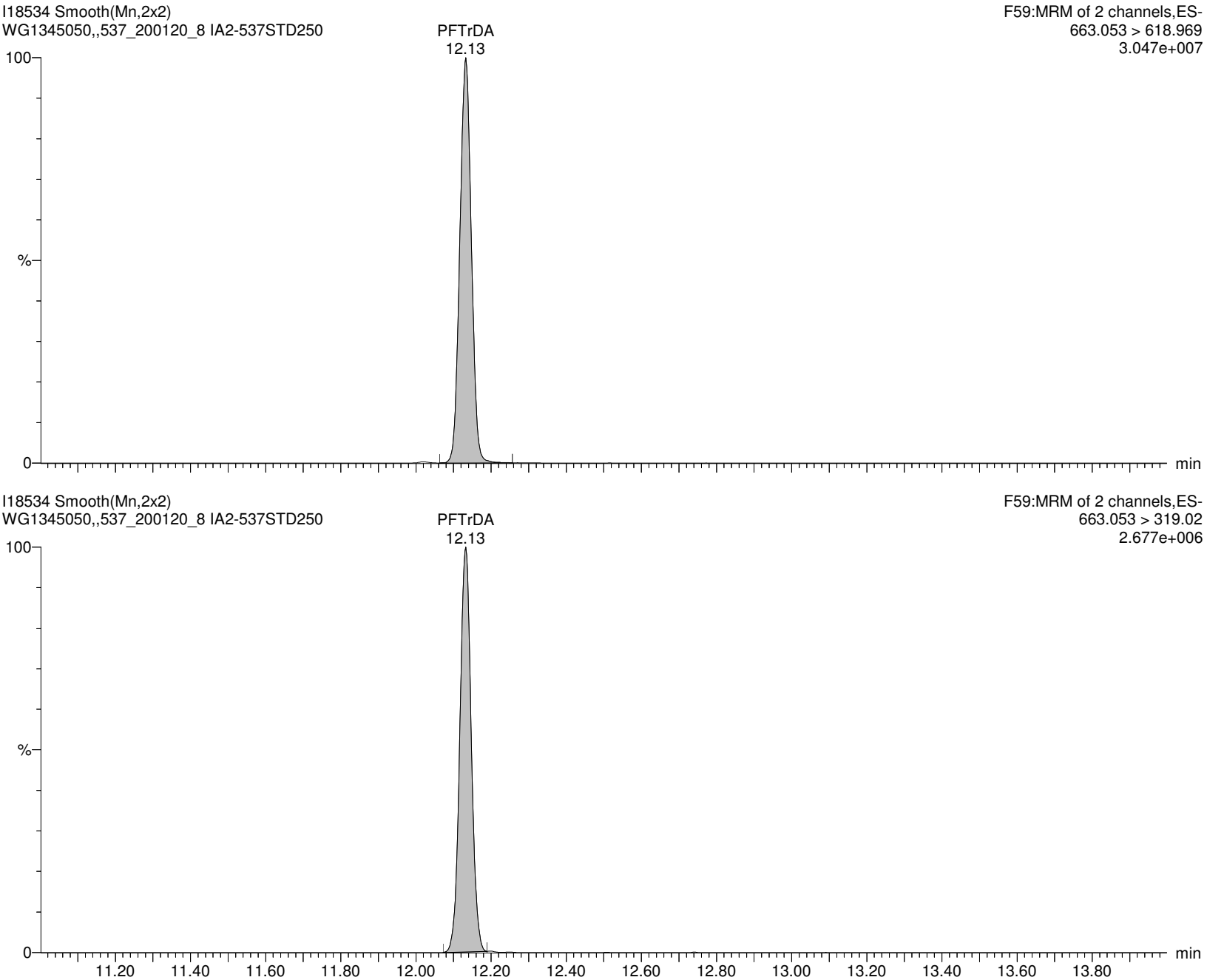



all concentration units in (ng/mL)

Alpha Analytical Inc.
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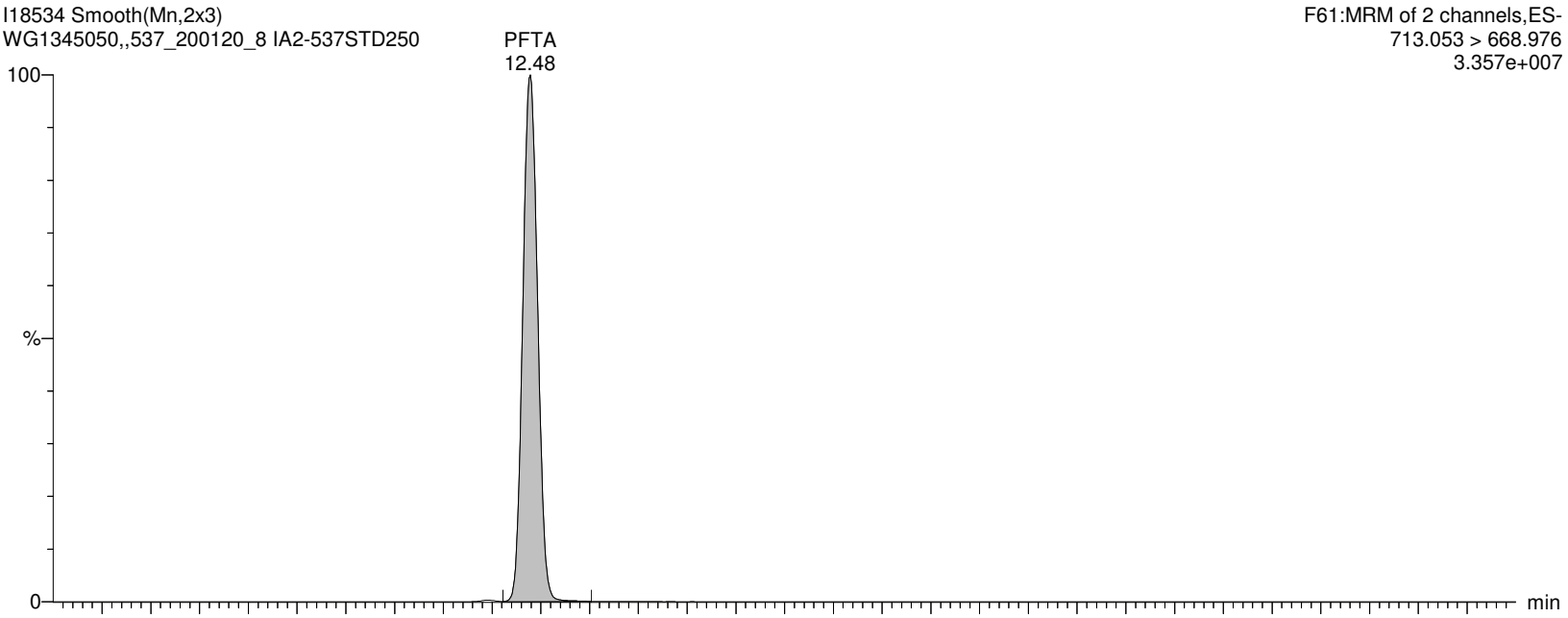
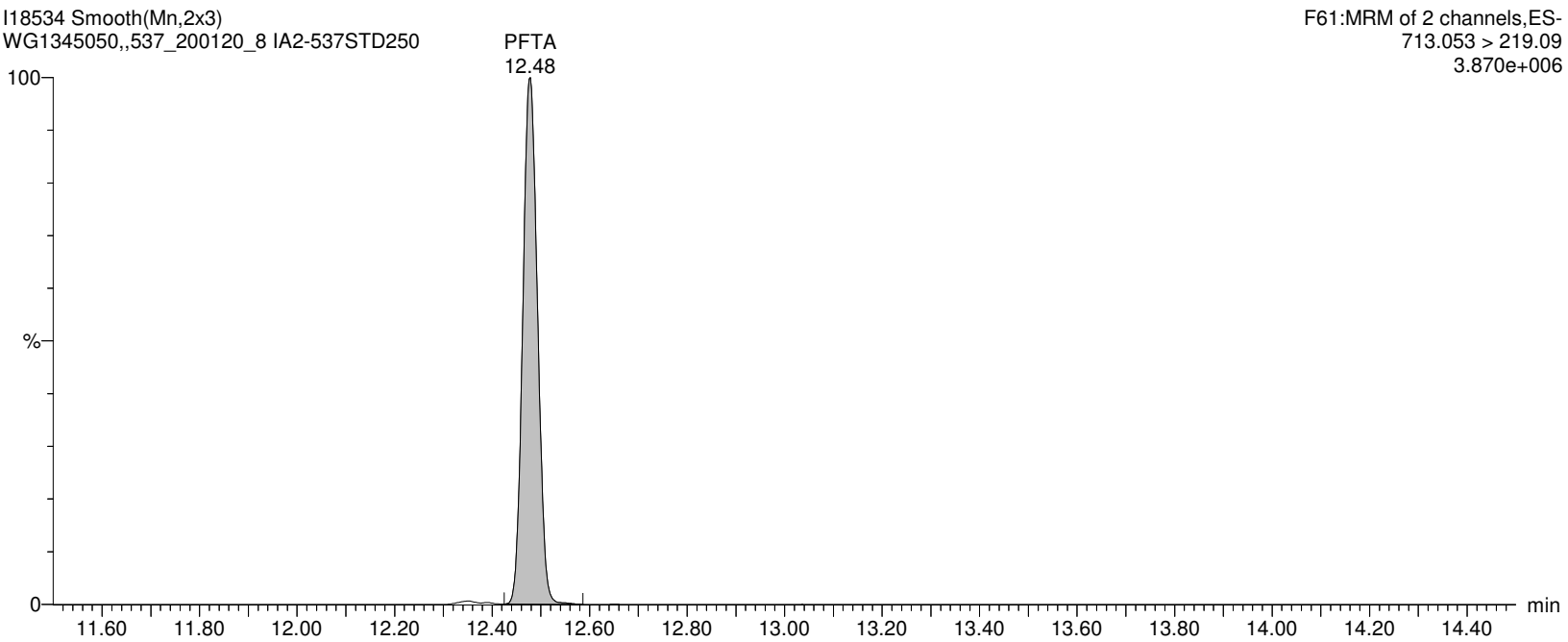
**PFTA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
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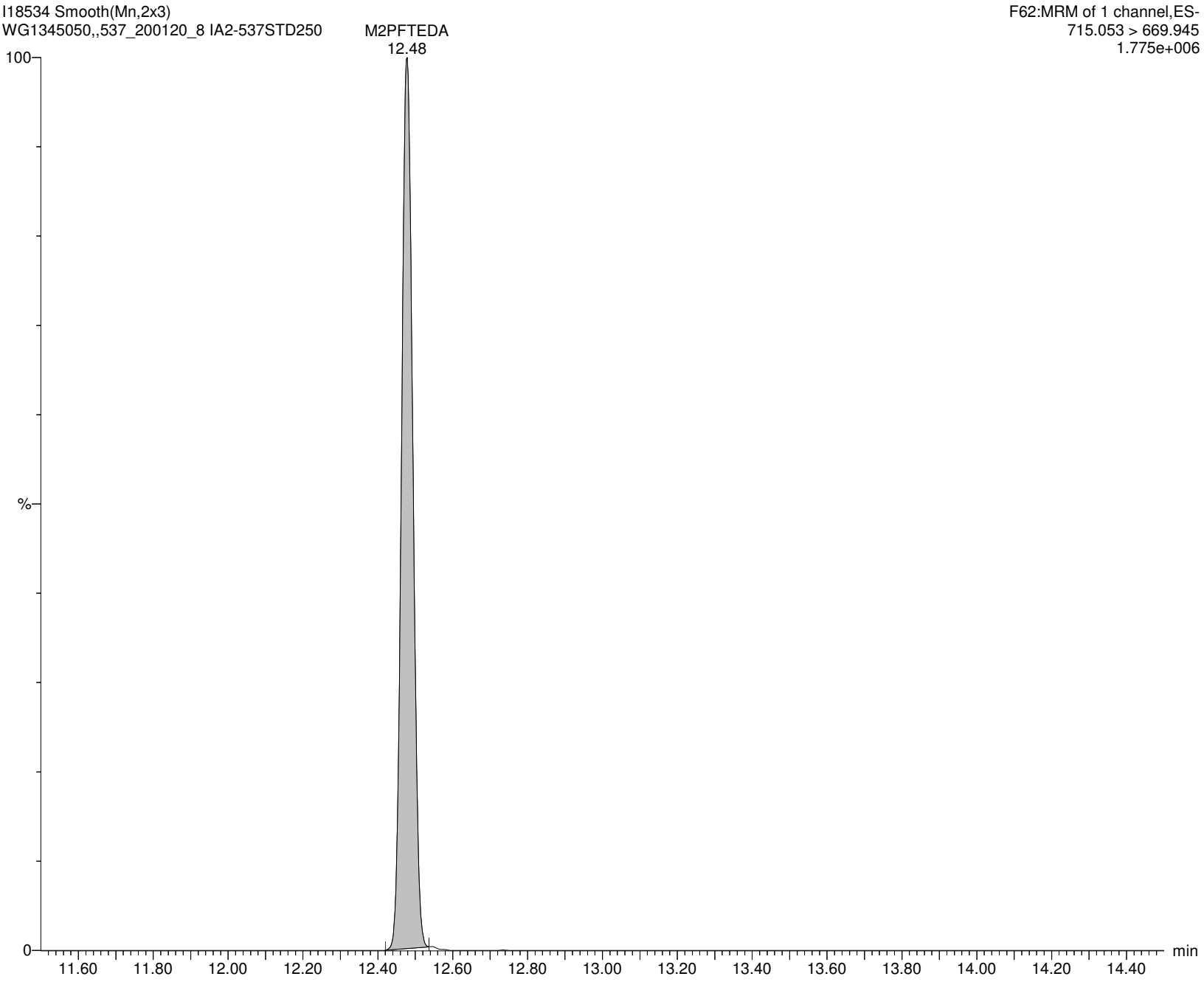
**Inlet Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\LCMS_537_ISO_MeOH**
**Tune Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\190709_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**M2PFTEDA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICAL_A.qld
Last Altered: Friday, February 28, 2020 09:12:40 Eastern Standard Time
Printed: Friday, February 28, 2020 09:27:57 Eastern Standard Time

**Method: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\MethDB\537ISO_Q_200227 .mdb 27 Feb 2020 12:38:15**
**Calibration: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\CurveDB\200227_537ISO_ICAL.cdb 28 Feb 2020 09:12:40**

**ID: IA2-537STD500**
**Name: I18535**
**Date: 27-Feb-2020**
**Time: 15:41:35**
**Description: WG1345050,,537_200120_9**
**Instrument: XEVO-TQSmicro#QEA0276**
**User: LCMS01:SG**
**Inlet Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\LCMS_537_ISO_MeOH**
**Tune Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\190709_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

| | Name | CAS | RT | Trace | Area | M Flag | Conc (ng/mL) | Ion Ratio | Ratio Flag | %Rec |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | PFBA | 375-22-4 | 2.24 | 212.926 > 169.111 | 1438833 | | 497.417 | | na | 99.5 |
| 2 | M3PFBA | INT STD | 2.25 | 215.926 > 172.122 | 34340 | | 8.733 | | na | 87.3 |
| 3 | MPFBA | INT STD | 2.25 | 216.926 > 172.137 | 41222 | | 10.476 | | na | 104.8 |
| 4 | PFPeA | 2706-90-3 | 5.21 | 262.926 > 219.002 | 1701959 | | 497.520 | | na | 99.5 |
| 5 | M5PFPEA | INT STD | 5.20 | 267.989 > 223.081 | 50736 | | 9.718 | | na | 97.2 |
| 6 | PFBS | 375-73-5 | 5.87 | 298.926 > 79.923 | 342904 | | 441.215 | 2.03 | NO | 99.7 |
| 7 | M3PFBS | INT STD | 5.87 | 301.989 > 80.254 | 8726 | | 12.323 | | na | 123.2 |
| 8 | 4:2FTS | 757124-72-4 | 7.04 | 326.926 > 306.957 | 178619 | | ND | 1.78 | NO | |
| 9 | M2-4:2FTS | INT STD | 7.04 | 329.117 > 309.079 | 13942 | | 37.791 | | na | 377.9 |
| 10 | PFHxA | 307-24-4 | 7.12 | 312.989 > 269.028 | 2120807 | | 498.267 | 17.20 | NO | 99.7 |
| 11 | M5PFHxA | INT STD | 7.12 | 317.989 > 273.045 | 53405 | | 10.939 | | na | 109.4 |
| 12 | PFPeS | 2706-91-4 | 7.41 | 348.926 > 80.251 | 311895 | | 467.221 | 2.36 | NO | 99.4 |
| 13 | PFHpA | 375-85-9 | 8.39 | 362.926 > 319.014 | 2424789 | | 497.361 | 5.01 | NO | 99.5 |
| 14 | M4PFHpA | INT STD | 8.39 | 366.926 > 321.979 | 59527 | | 10.510 | | na | 105.1 |
| 15 | br-PFHxS | 355-46-4 | 8.31 | 398.904 > 79.915 | 65752 | | 84.562 | 2.98 | NO | 99.5 |
| 16 | L-PFHxS | 355-46-4 | 8.55 | 398.904 > 79.915 | 176929 | | 368.313 | 1.94 | NO | 99.5 |
| 17 | PFHxS | 355-46-4 | | 398.904 > 79.915 | 242681 | | 452.875 | | na | |
| 18 | M3PFHxS | INT STD | 8.55 | 401.926 > 80.317 | 6310 | | 9.946 | | na | 99.5 |
| 19 | br-PFOA | 335-67-1 | | 412.989 > 368.9 | | | ND | | YES | |
| 20 | L-PFOA | 335-67-1 | 9.34 | 412.989 > 368.9 | 2389997 | | 498.126 | 8.32 | NO | 99.6 |
| 21 | M2PFOA | INT STD | 9.34 | 415.032 > 369.968 | 59631 | | 7.088 | | na | 70.9 |
| 22 | PFOA | 335-67-1 | | 412.989 > 368.9 | 2389997 | | 498.126 | | na | |
| 23 | M8PFOA | INT STD | 9.34 | 420.989 > 375.979 | 60241 | | 10.594 | | na | 105.9 |
| 24 | 6:2FTS | 27619-97-2 | 9.30 | 426.989 > 406.921 | 38208 | | 150.398 | 0.70 | NO | 31.7 |
| 25 | M2-6:2FTS | INT STD | 9.30 | 428.989 > 408.917 | 10649 | | 46.387 | | na | 463.9 |
| 26 | PFHpS | 375-92-8 | 9.43 | 448.926 > 80.257 | 168802 | | 475.440 | 1.07 | NO | 100.1 |
| 27 | PFNA | 375-95-1 | 10.09 | 462.989 > 418.931 | 1948727 | | 504.428 | 3.91 | NO | 100.9 |
| 28 | M9PFNA | INT STD | 10.09 | 472.053 > 426.947 | 51922 | | 9.340 | | na | 93.4 |
| 29 | br-PFOS | 1763-23-1 | 9.95 | 498.968 > 79.918 | 83526 | M5 | 99.682 | 3.44 | NO | 99.7 |
| 30 | L-PFOS | 1763-23-1 | 10.14 | 498.968 > 79.918 | 138350 | | 363.427 | 1.31 | NO | 99.6 |
| 31 | PFOS | 1763-23-1 | | 498.968 > 79.918 | 221876 | | 463.109 | | na | |
| 32 | M4PFOS | INT STD | 10.14 | 503.032 > 80.306 | 5520 | | 6.499 | | na | 65.0 |
| 33 | M8PFOS | INT STD | 10.13 | 507.053 > 80.294 | 5671 | | 8.847 | | na | 88.5 |
| 34 | PFDA | 335-76-2 | 10.71 | 513.053 > 468.906 | 1718521 | | 492.133 | 5.71 | NO | 98.4 |
| 35 | M2PFDA | INT STD | 10.71 | 515.053 > 469.934 | 41308 | | 6.245 | | na | 62.4 |
| 36 | M6PFDA | INT STD | 10.71 | 519.053 > 473.931 | 45589 | | 10.031 | | na | 100.3 |
| 37 | 8:2FTS | 39108-34-4 | 10.70 | 527.032 > 507.079 | 41378 | | ND | 1.60 | NO | |
| 38 | M2-8:2FTS | INT STD | 10.70 | 529.053 > 508.945 | 3821 | | 27.525 | | na | 275.2 |
| 39 | PFNS | 68259-12-1 | 10.74 | 548.989 > 80.249 | 195338 | | 479.273 | 1.47 | NO | 99.8 |


all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICAL_A.qld
Last Altered: Friday, February 28, 2020 09:12:40 Eastern Standard Time
Printed: Friday, February 28, 2020 09:27:57 Eastern Standard Time

**ID: IA2-537STD500**
**Name: I18535**
**Date: 27-Feb-2020**
**Time: 15:41:35**
**Description: WG1345050,,537_200120_9**
**Instrument: XEVO-TQSmicro#QEA0276**
**User: LCMS01:SG**
**Inlet Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\LCMS_537_ISO_MeOH**
**Tune Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\190709_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

| | Name | CAS | RT | Trace | Area | M Flag | Conc (ng/mL) | Ion Ratio | Ratio Flag | %Rec |
|---|---|---|---|---|---|---|---|---|---|---|
| 40 | d3-NMeFOSAA | INT STD | 11.08 | 573.096 > 418.987 | 8473 | | 14.073 | | na | 140.7 |
| 41 | NMeFOSAA | 2355-31-9 | 11.08 | 570.053 > 418.917 | 244027 | | 481.941 | 2.69 | NO | 96.4 |
| 42 | PFUnA | 2058-94-8 | 11.24 | 562.989 > 518.903 | 1567242 | | 490.197 | 7.46 | NO | 98.0 |
| 43 | M7-PFUDA | INT STD | 11.24 | 570.053 > 524.923 | 40741 | | 10.201 | | na | 102.0 |
| 44 | PFDS | 335-77-3 | 11.26 | 598.926 > 80.314 | 194472 | | 482.736 | 1.63 | NO | 100.0 |
| 45 | FOSA | 754-91-6 | 11.12 | 497.989 > 78.245 | 870578 | | 496.089 | 190.46 | NO | 99.2 |
| 46 | M8FOSA | INT STD | 11.12 | 506.053 > 78.286 | 21360 | | 11.728 | | na | 117.3 |
| 47 | d5-NEtFOSAA | INT STD | 11.36 | 589.117 > 418.929 | 5900 | | 13.438 | | na | 134.4 |
| 48 | NEtFOSAA | 2991-50-6 | 11.37 | 583.989 > 418.927 | 255610 | | 507.901 | 3.12 | NO | 101.6 |
| 49 | PFDoA | 307-55-1 | 11.71 | 612.989 > 568.967 | 2006536 | | 466.947 | 13.48 | NO | 93.4 |
| 50 | MPFDOA | INT STD | 11.71 | 614.989 > 569.92 | 47330 | | 11.023 | | na | 110.2 |
| 51 | PFTrDA | 72629-94-8 | 12.13 | 663.053 > 618.969 | 1746415 | | 507.675 | 11.80 | NO | 101.5 |
| 52 | PFTA | 376-06-7 | 12.47 | 713.053 > 668.976 | 1913145 | | 490.164 | 8.93 | NO | 98.0 |
| 53 | M2PFTEDA | INT STD | 12.48 | 715.053 > 669.945 | 52678 | | 10.886 | | na | 108.9 |


all concentration units in (ng/mL)

Alpha Analytical Inc.
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**Method: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\MethDB\537ISO_Q_200227 .mdb 27 Feb 2020 12:38:15**
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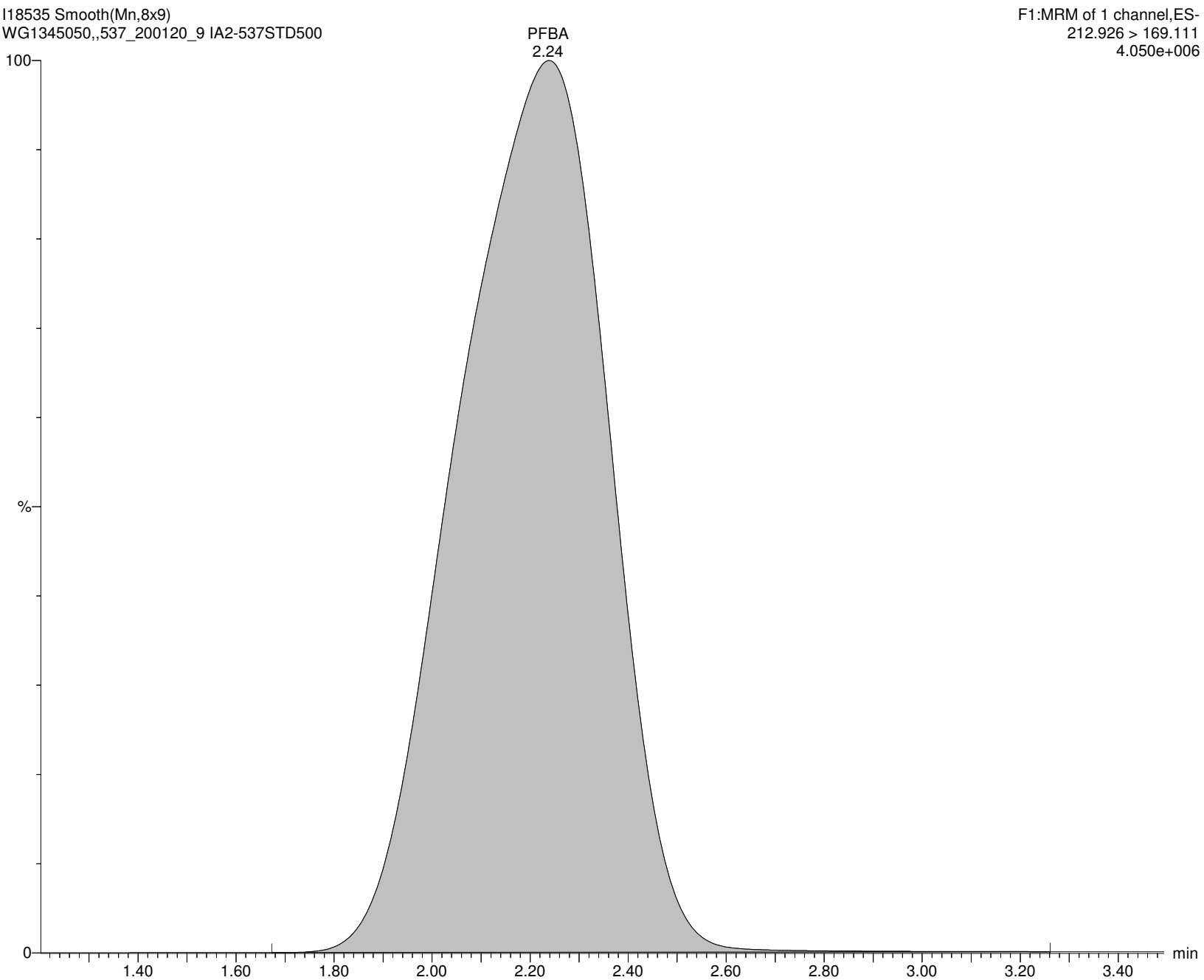
**User: LCMS01:SG**
**Vial: 1:B,2**
**Instrument: XEVO-TQSmicro#QEA0276**
**Inlet Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\LCMS_537_ISO_MeOH**
**Tune Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\190709_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**PFBA**





all concentration units in (ng/mL)

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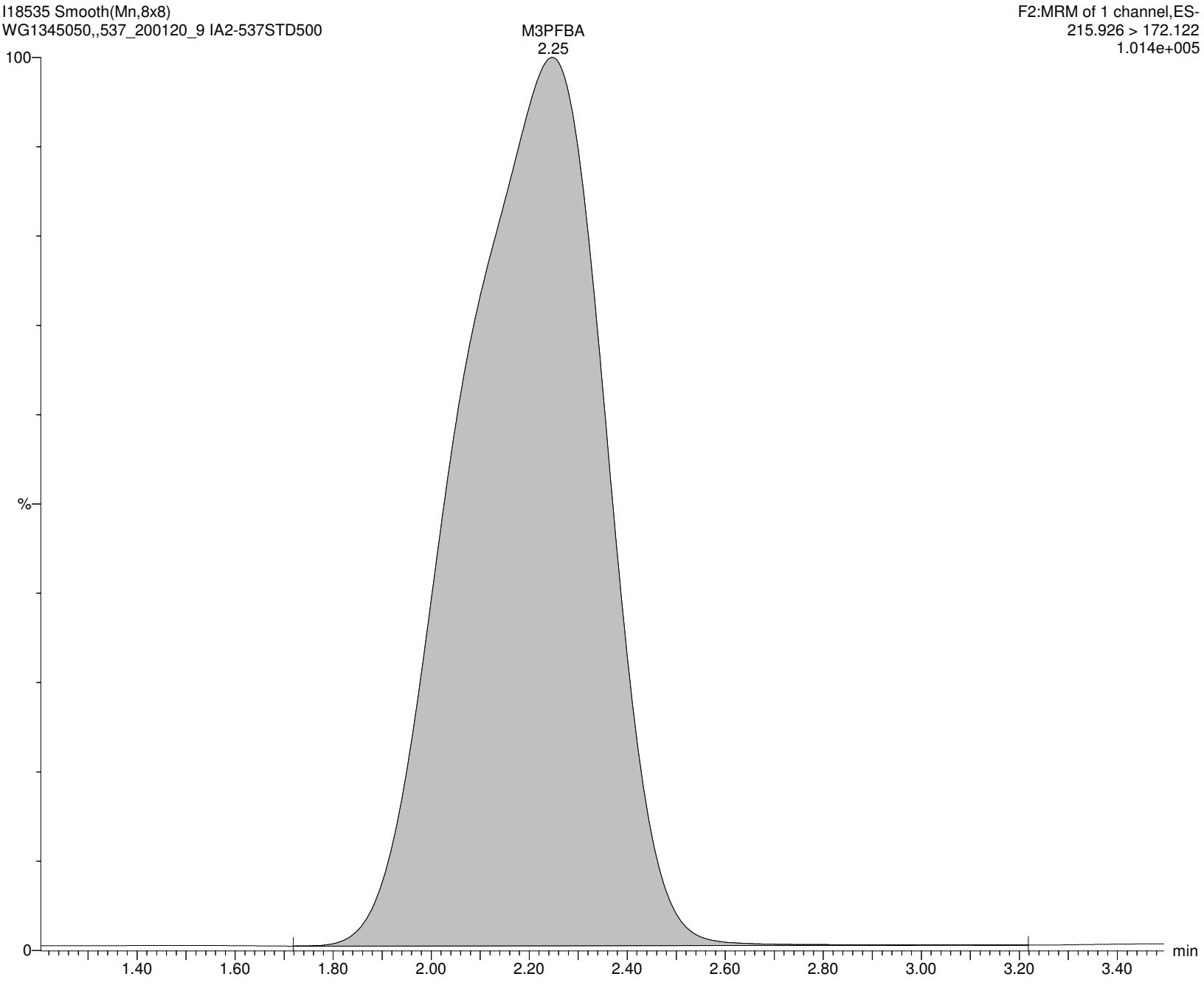
**M3PFBA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICAL_A.qld
Last Altered: Friday, February 28, 2020 09:12:40 Eastern Standard Time
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**Vial: 1:B,2**
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**Inlet Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\LCMS_537_ISO_MeOH**
**Tune Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\190709_TUNE.IPR**
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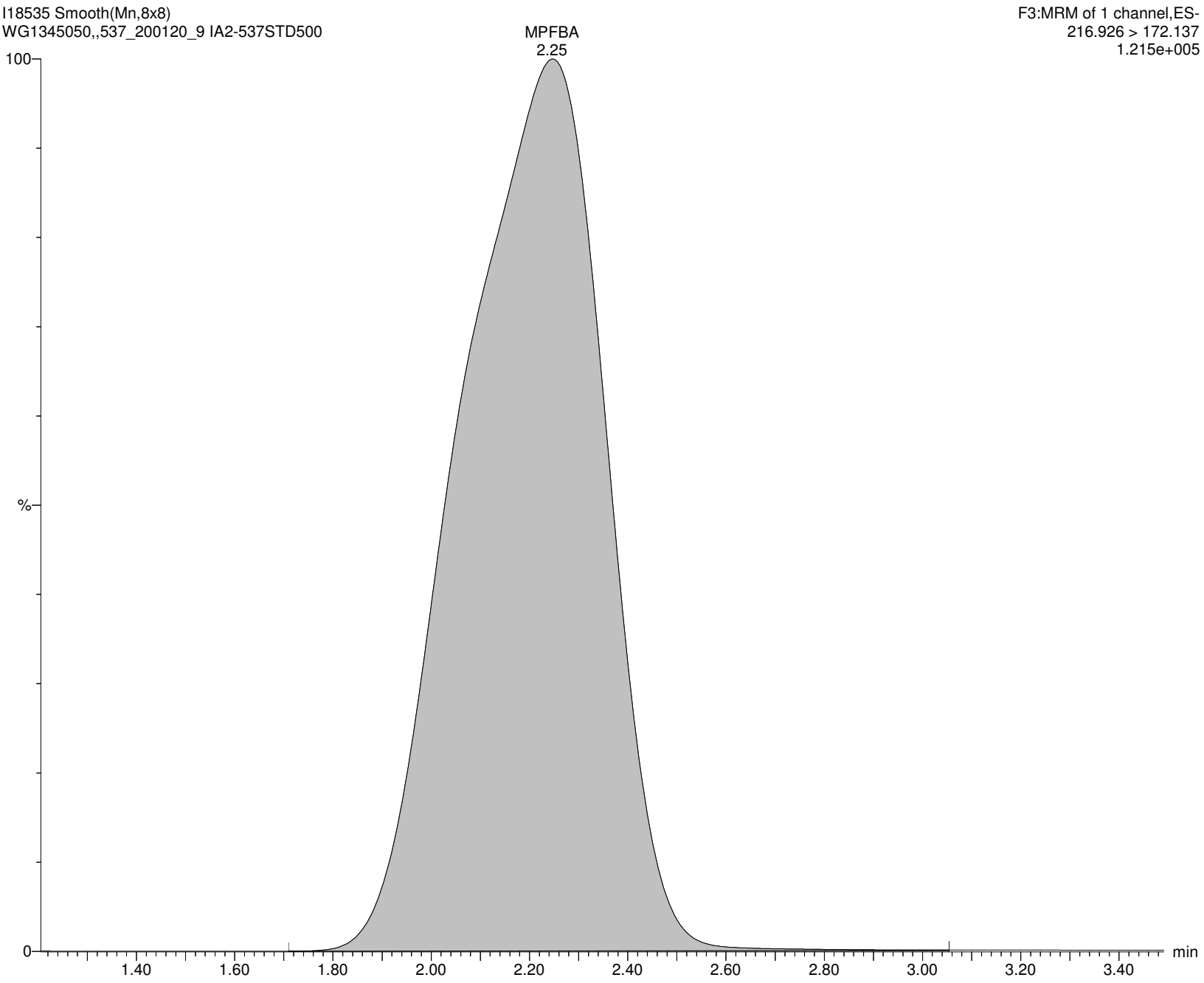
**MPFBA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
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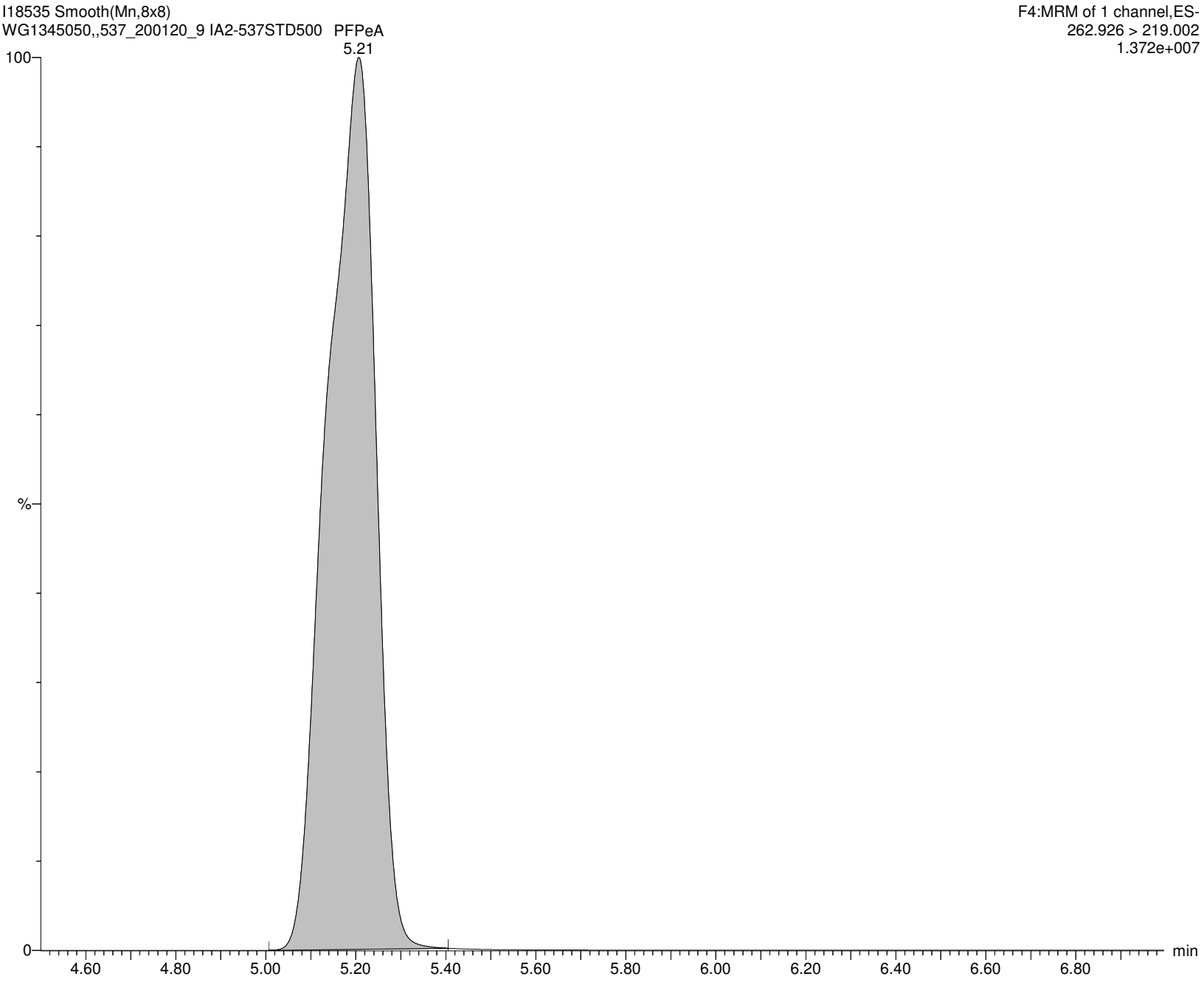
**Inlet Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\LCMS_537_ISO_MeOH**
**Tune Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\190709_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**PFPeA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICAL_A.qld
Last Altered: Friday, February 28, 2020 09:12:40 Eastern Standard Time
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**Instrument: XEVO-TQSmicro#QEA0276**
**Inlet Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\LCMS_537_ISO_MeOH**
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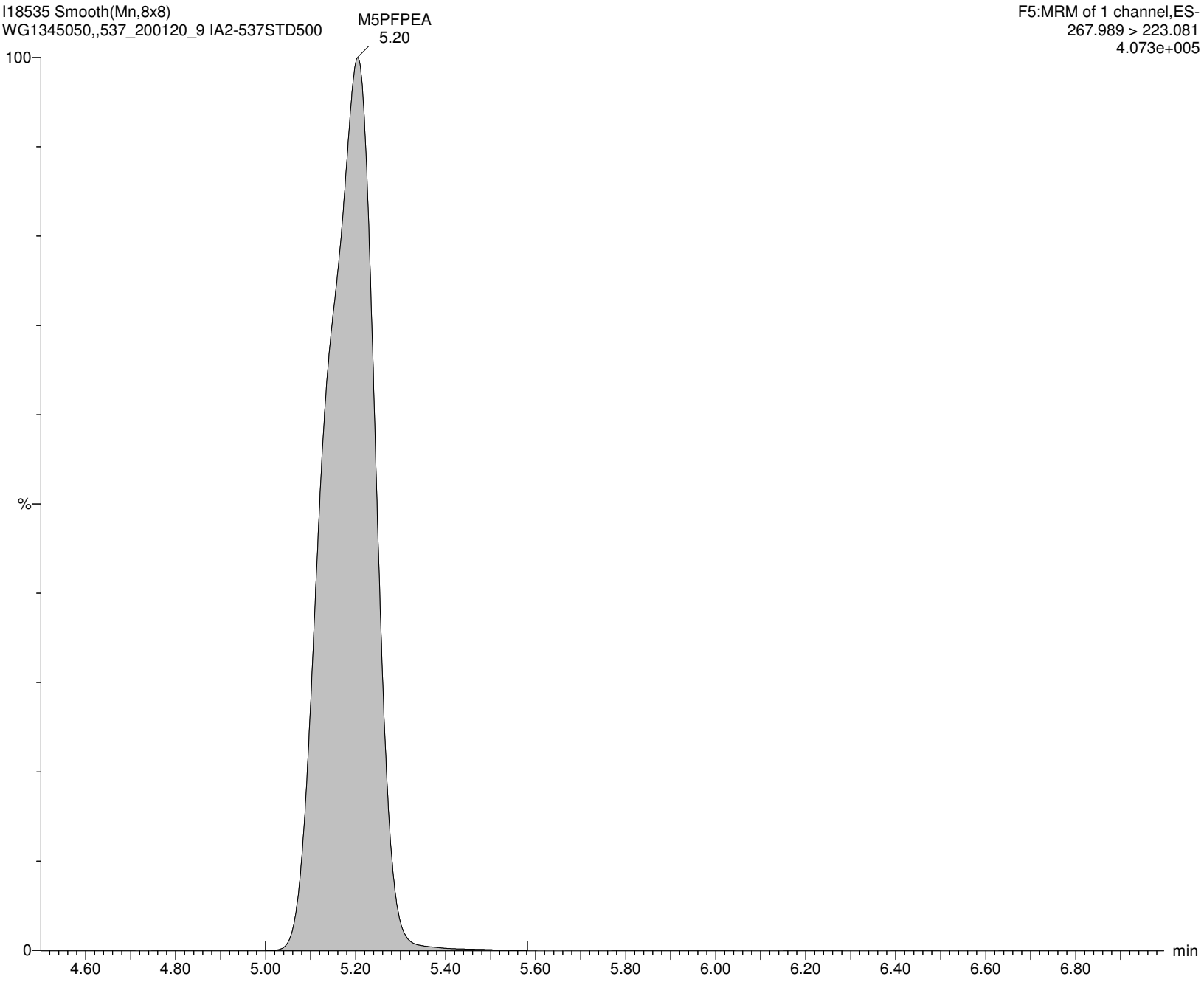
**M5PFPEA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
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Last Altered: Friday, February 28, 2020 09:12:40 Eastern Standard Time
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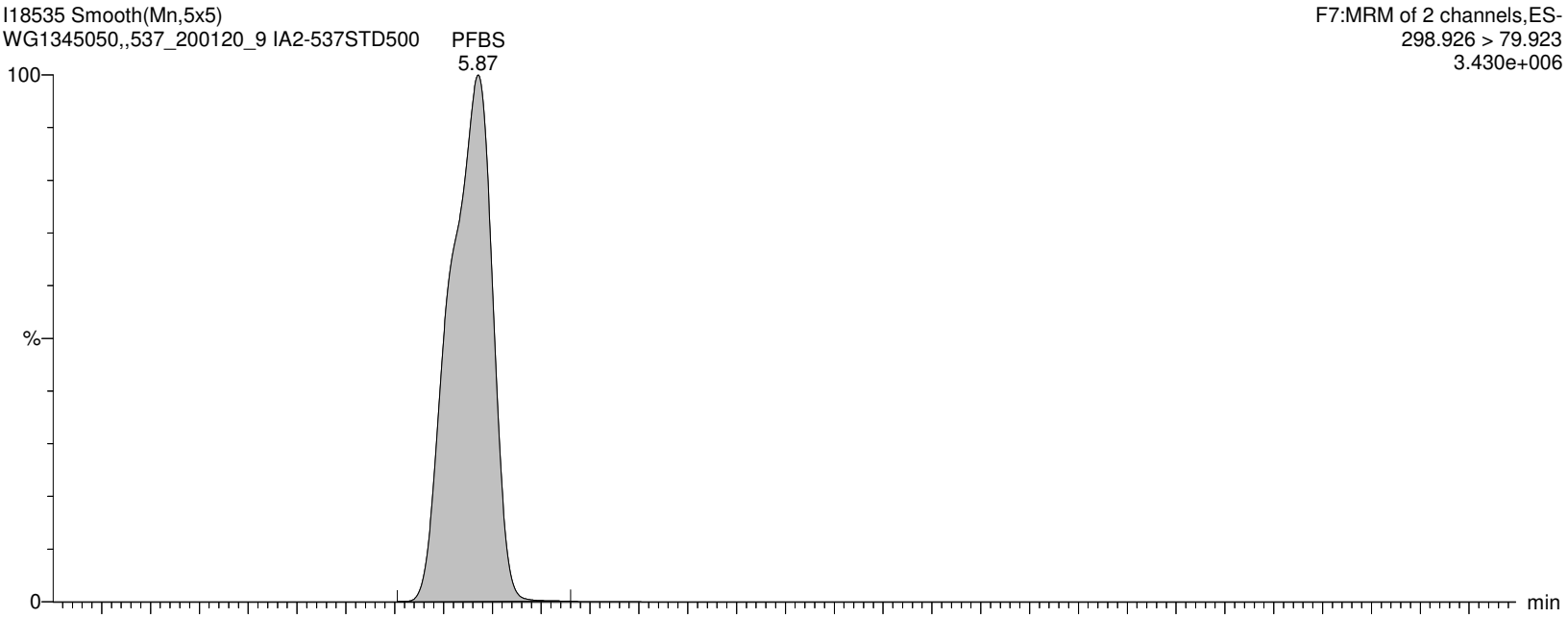
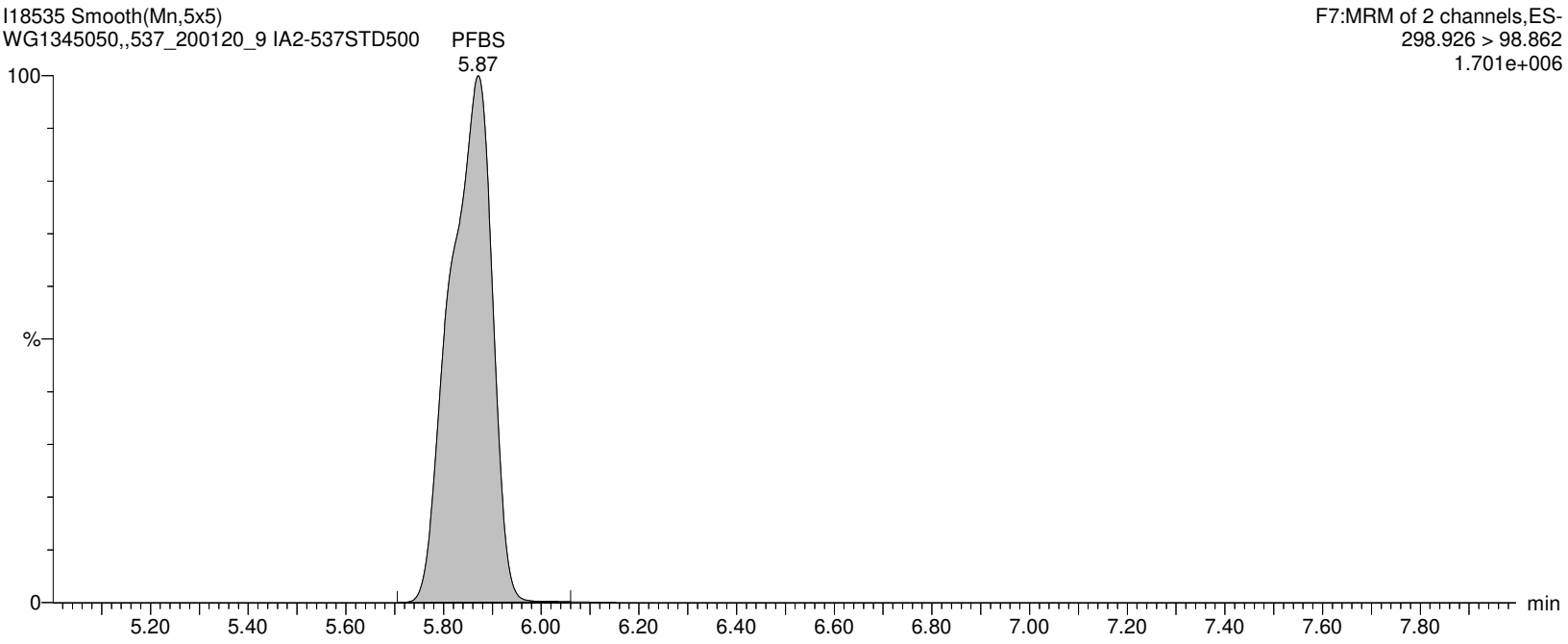
**PFBS**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICAL_A.qld
Last Altered: Friday, February 28, 2020 09:12:40 Eastern Standard Time
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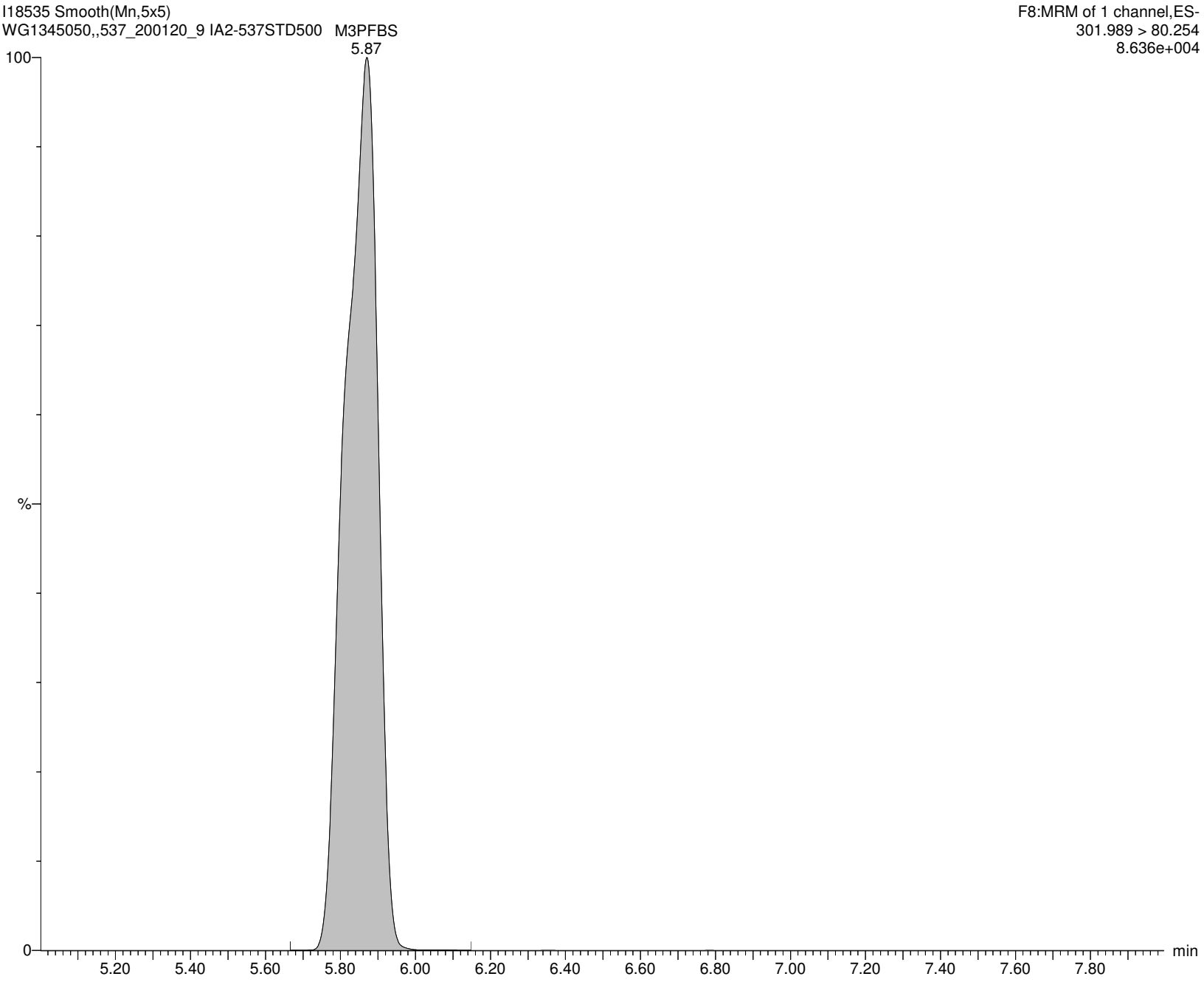
**MS Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**M3PFBS**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICAL_A.qld
Last Altered: Friday, February 28, 2020 09:12:40 Eastern Standard Time
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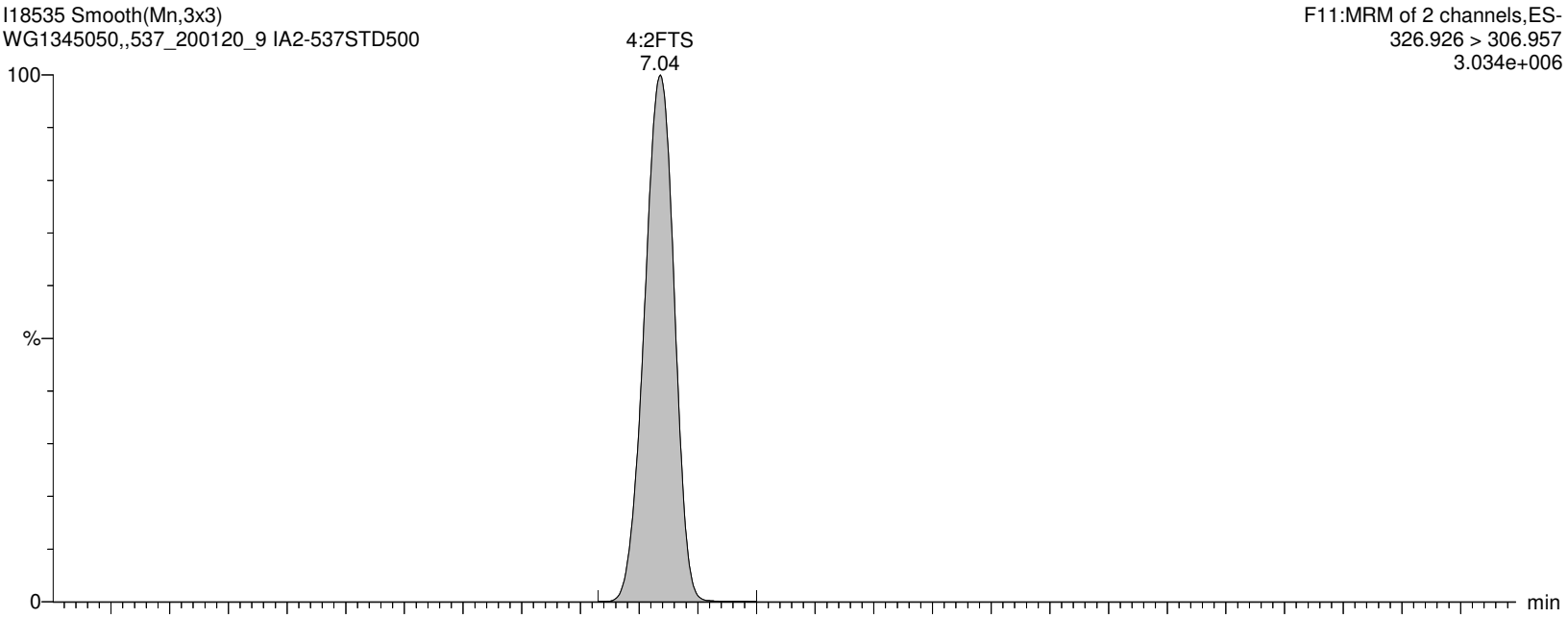
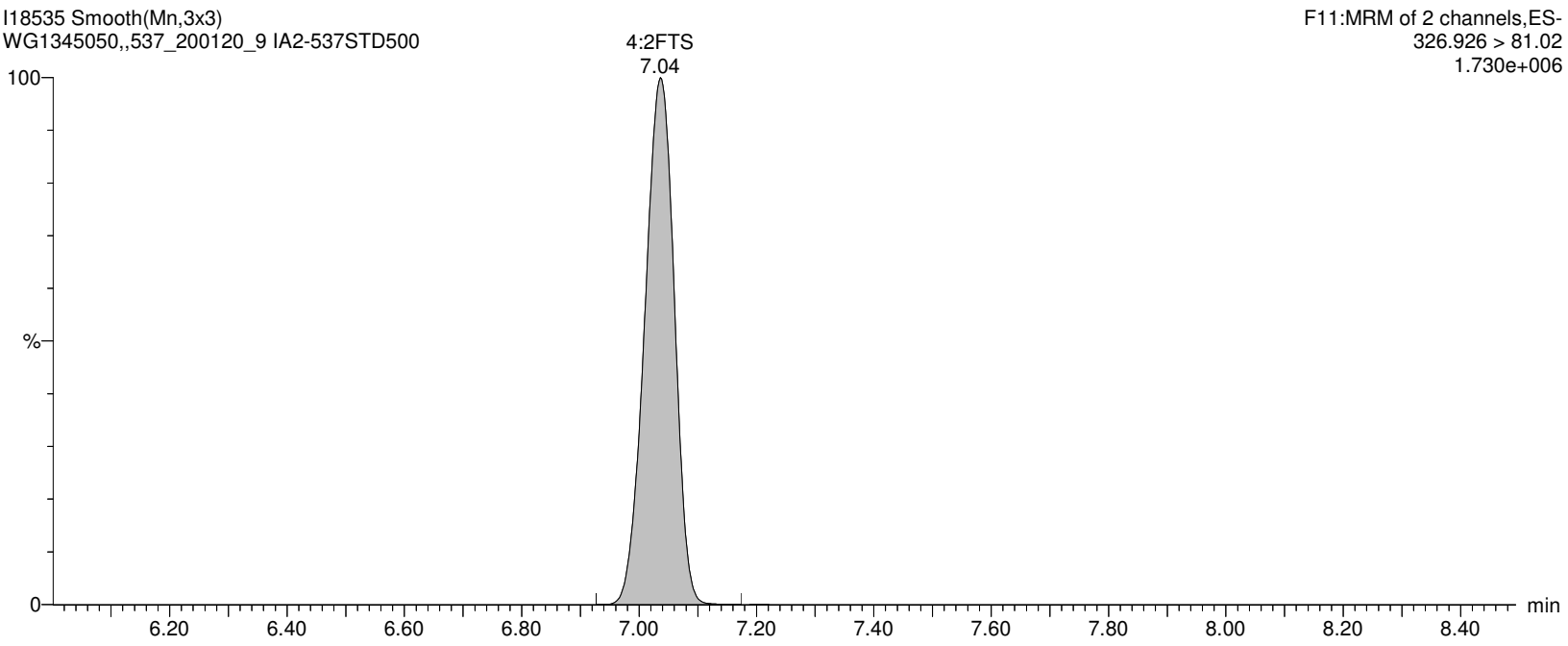
**MS Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**4:2FTS**





all concentration units in (ng/mL)

Alpha Analytical Inc.
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Last Altered: Friday, February 28, 2020 09:12:40 Eastern Standard Time
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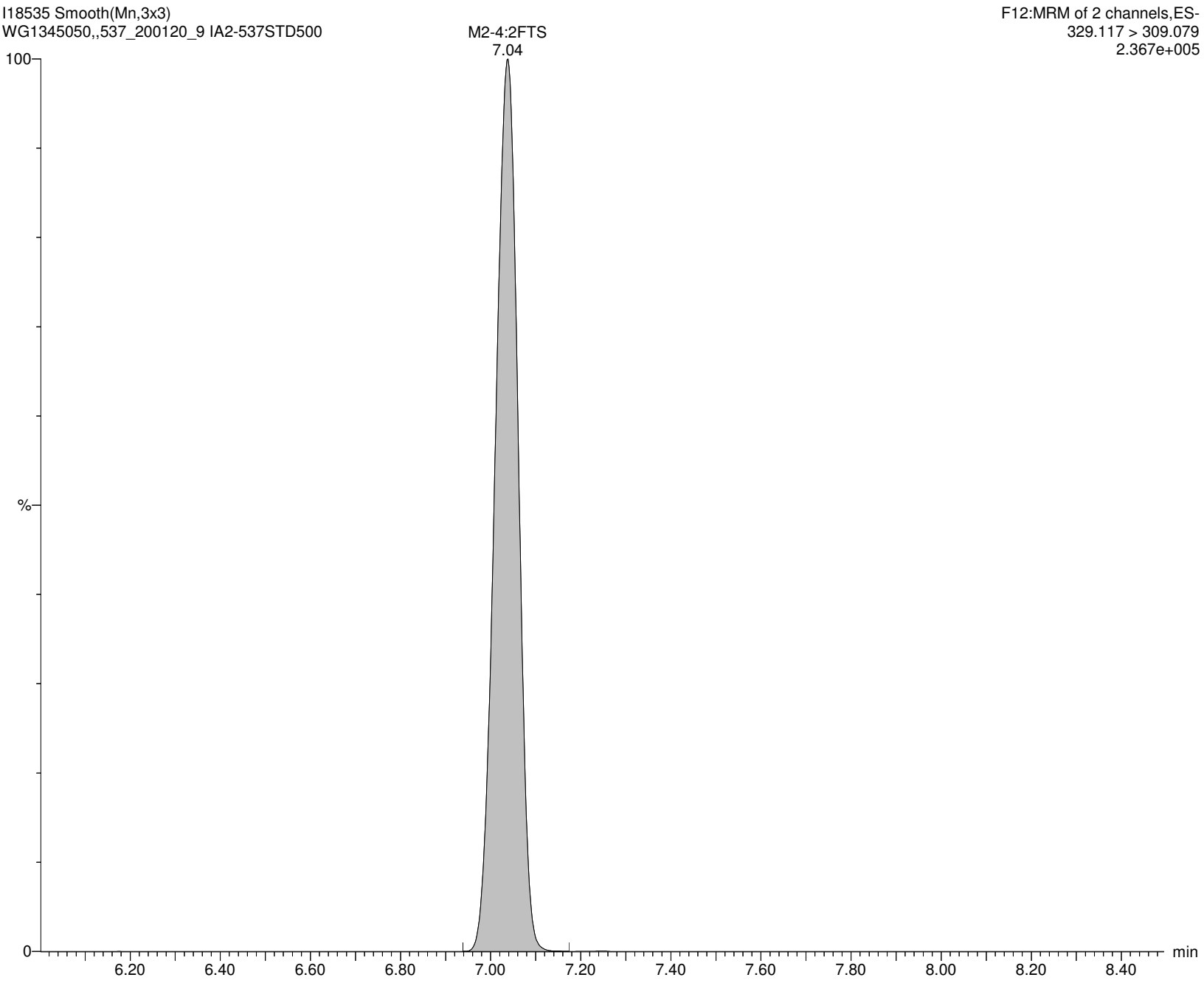
**M2-4:2FTS**





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Printed: Friday, February 28, 2020 09:27:57 Eastern Standard Time

**Name: I18535**
**ID: IA2-537STD500**
**Date: 27-Feb-2020**
**Time: 15:41:35**
**Description: WG1345050,,537_200120_9**
**User: LCMS01:SG**
**Vial: 1:B,2**
**Instrument: XEVO-TQSmicro#QEA0276**
**Inlet Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\LCMS_537_ISO_MeOH**
**Tune Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\190709_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

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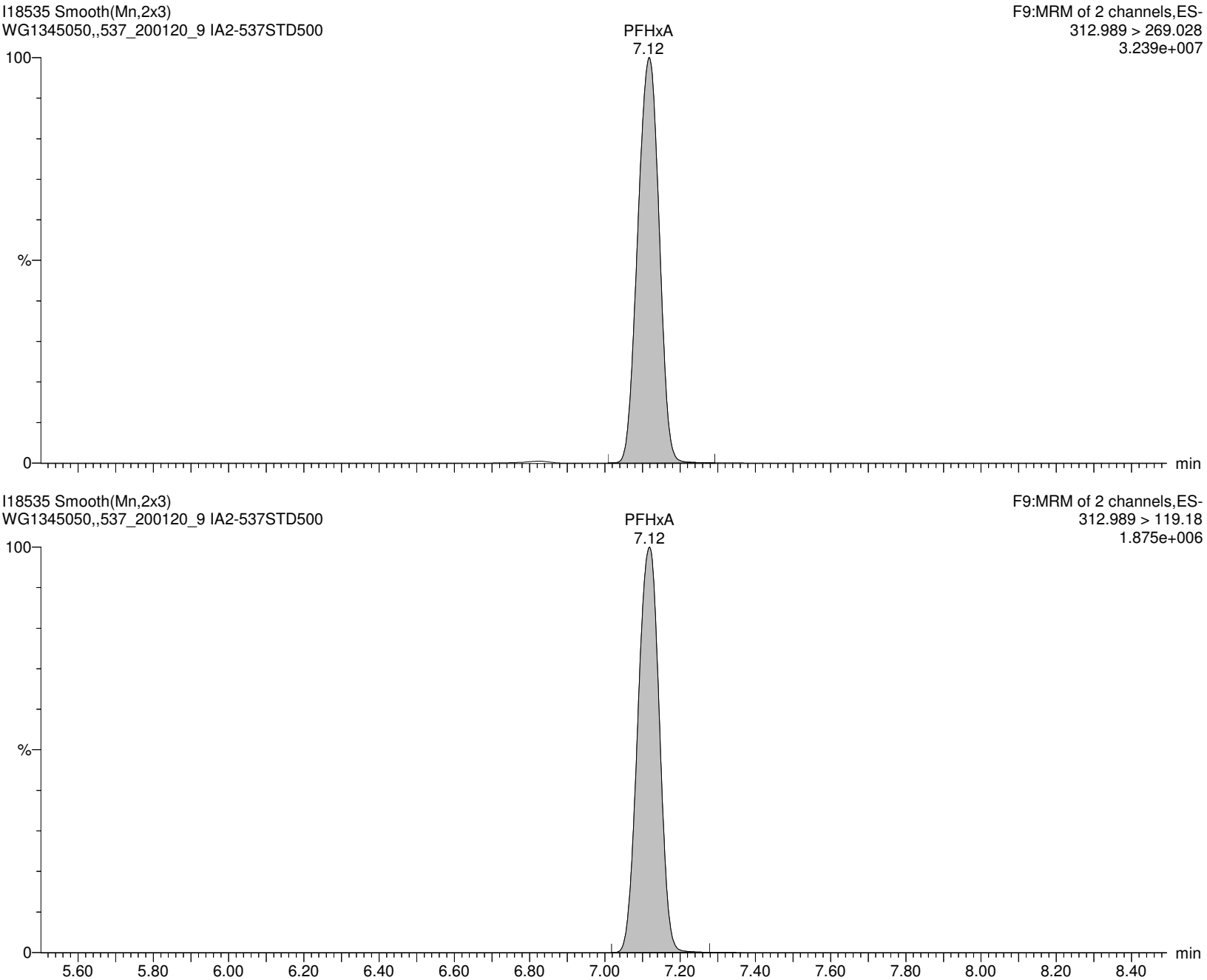



all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICAL_A.qld
Last Altered: Friday, February 28, 2020 09:12:40 Eastern Standard Time
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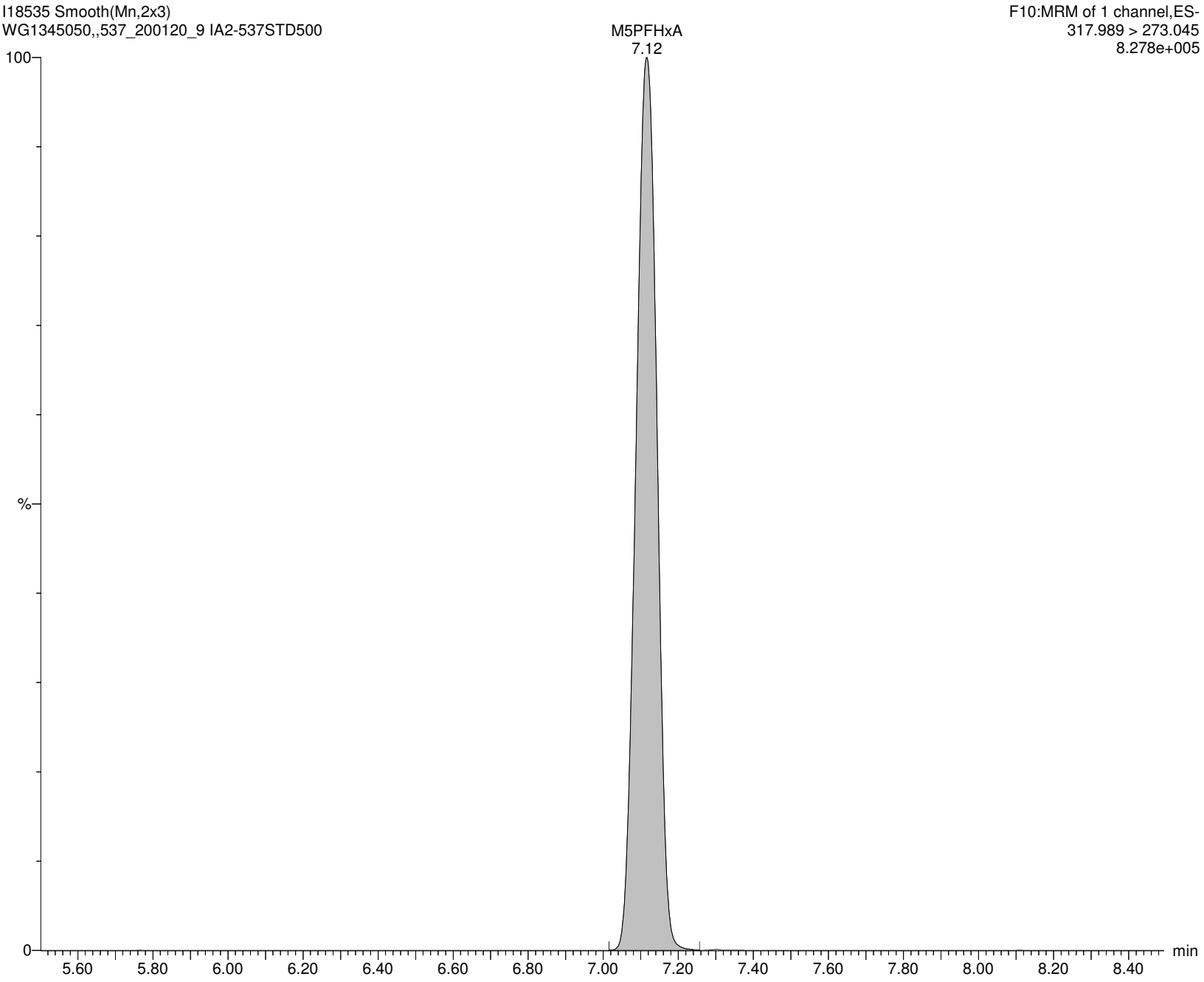
**M5PFHxA**





all concentration units in (ng/mL)

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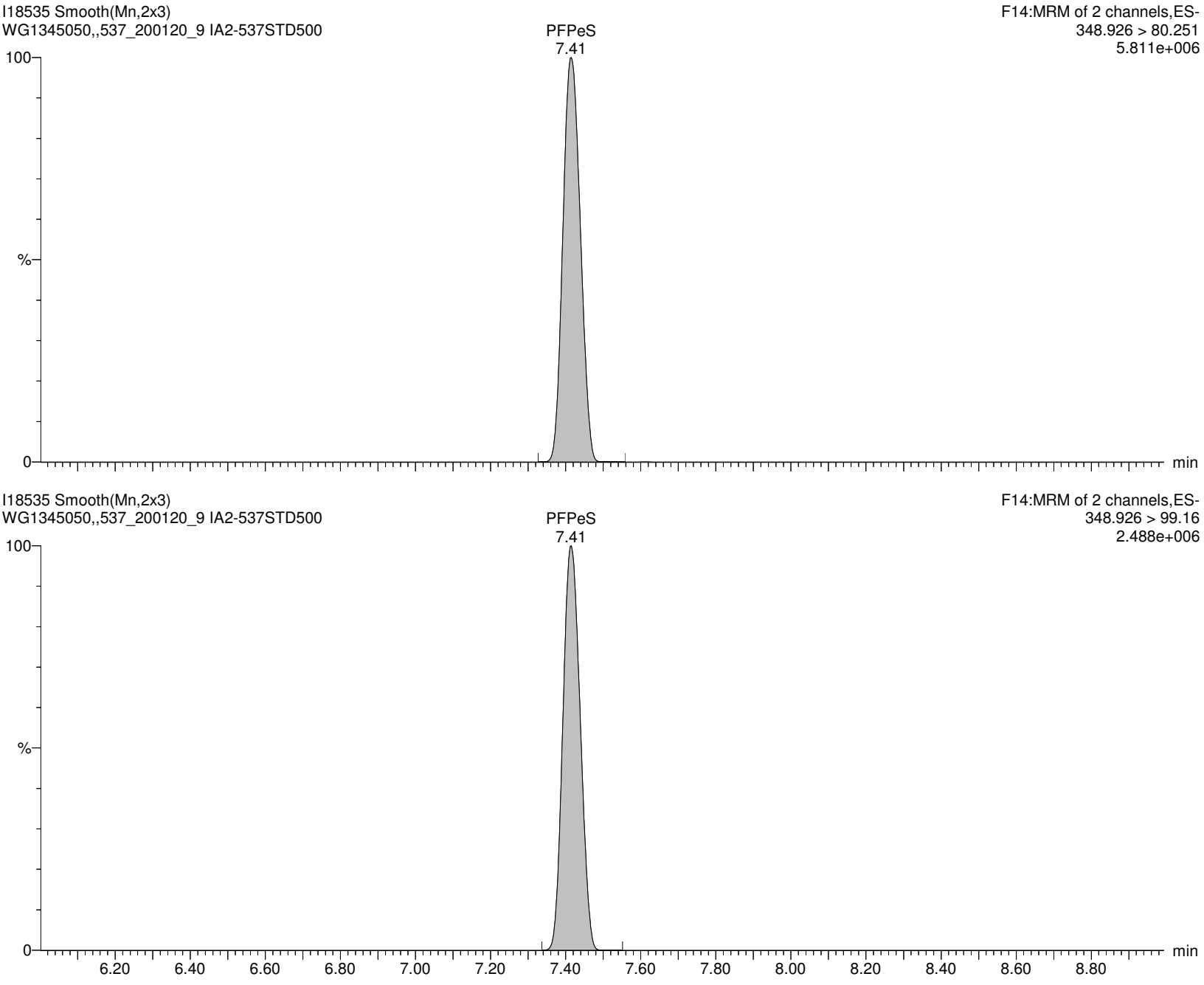



all concentration units in (ng/mL)

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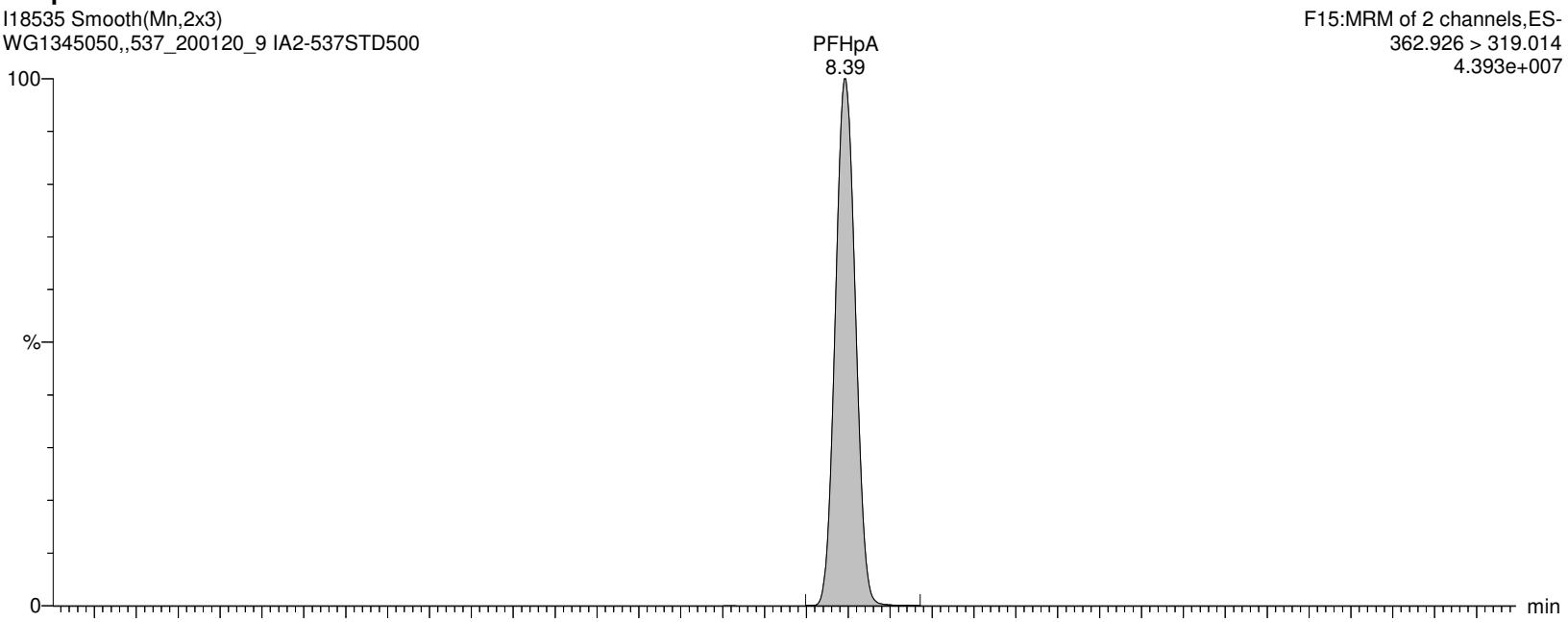
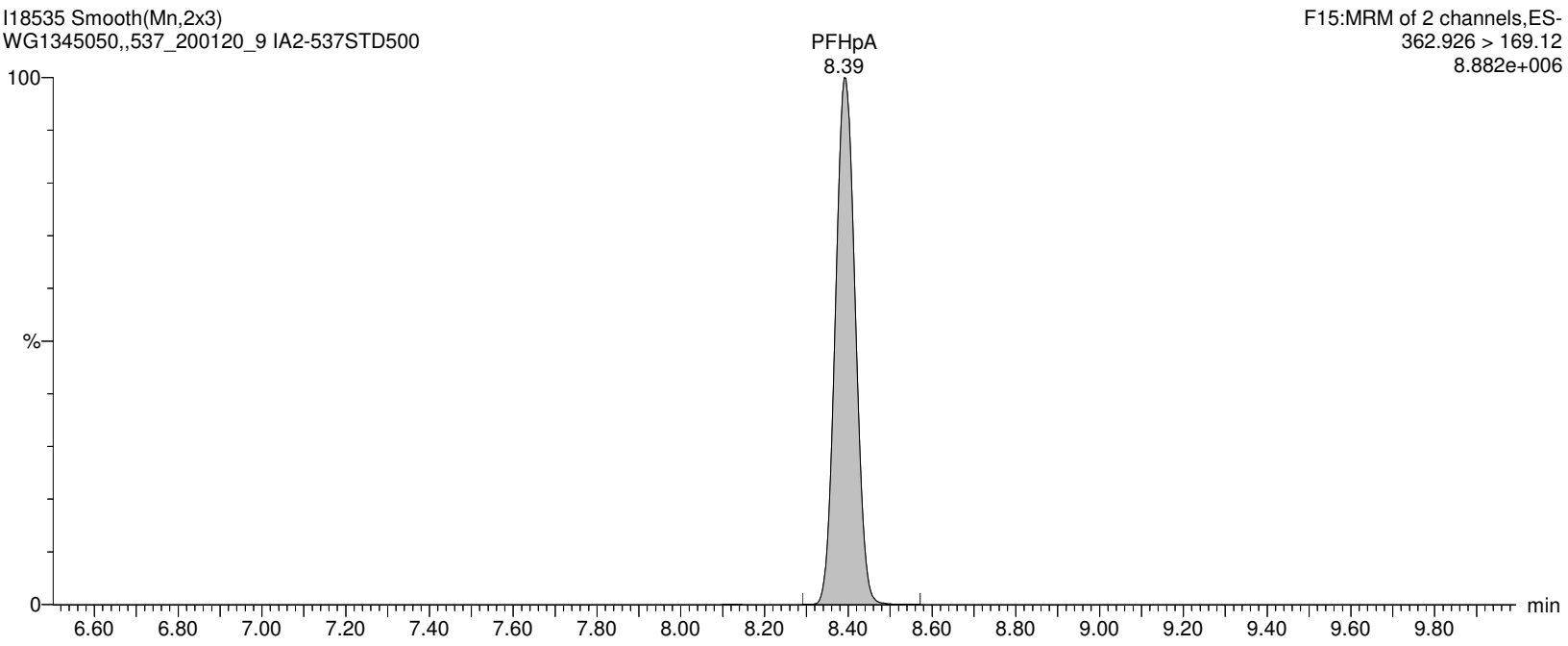
**PFHpA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
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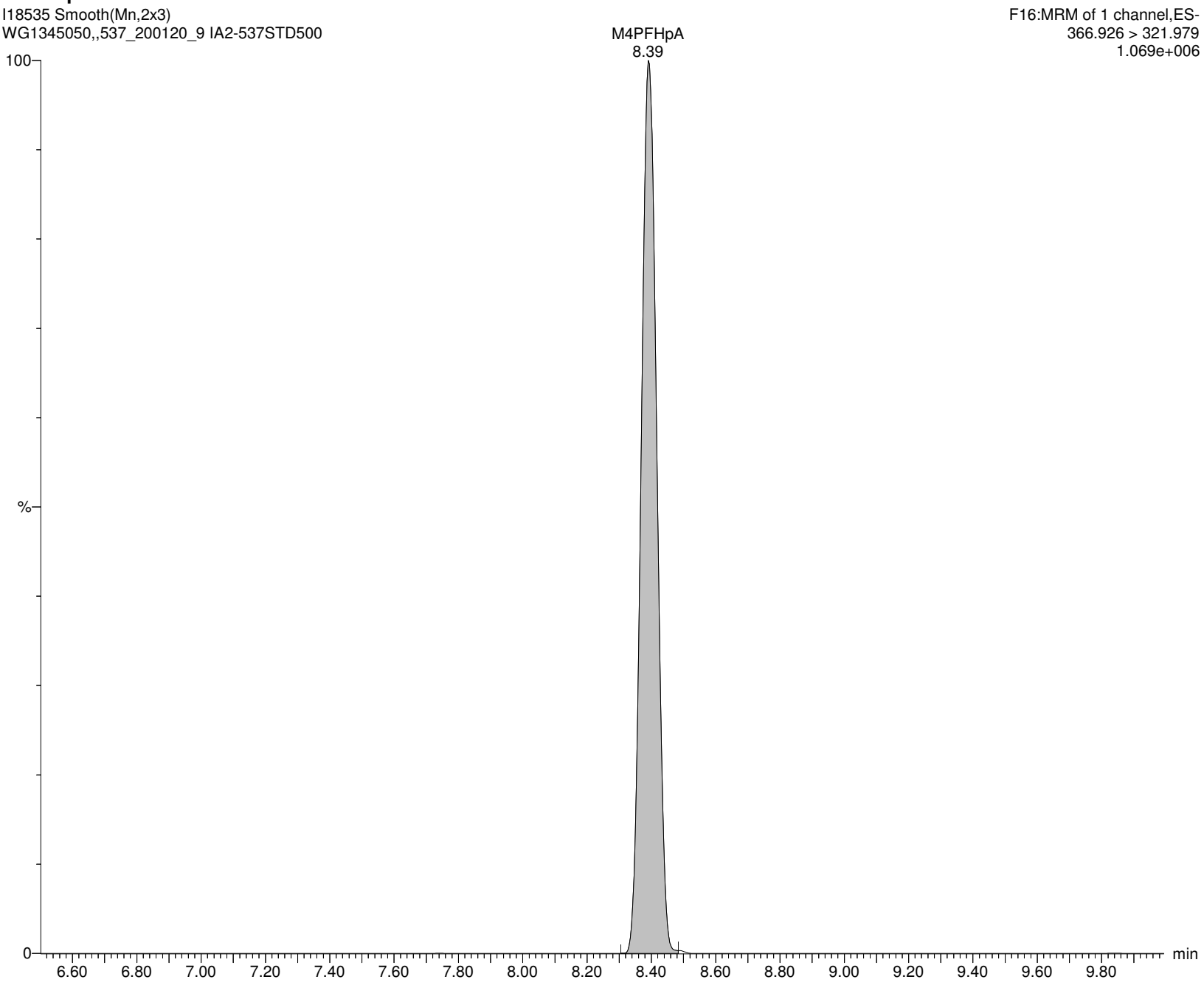



all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICAL_A.qld
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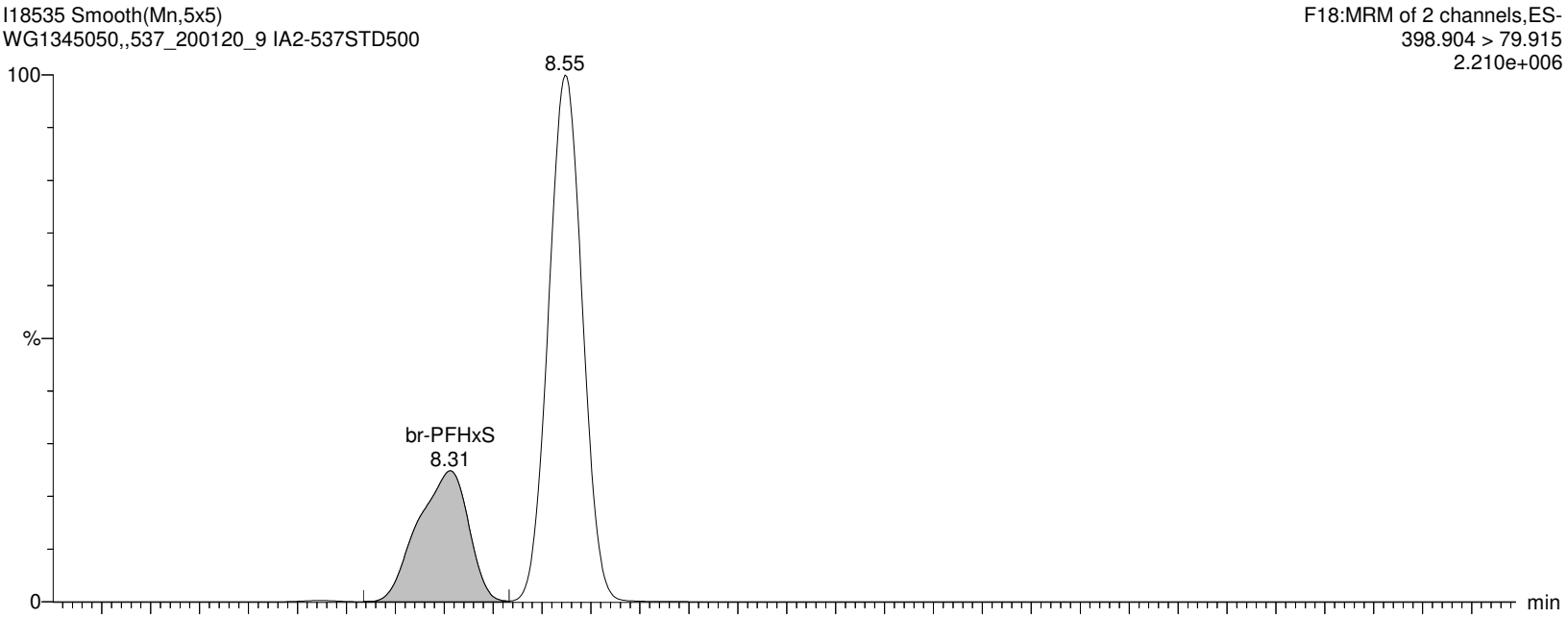
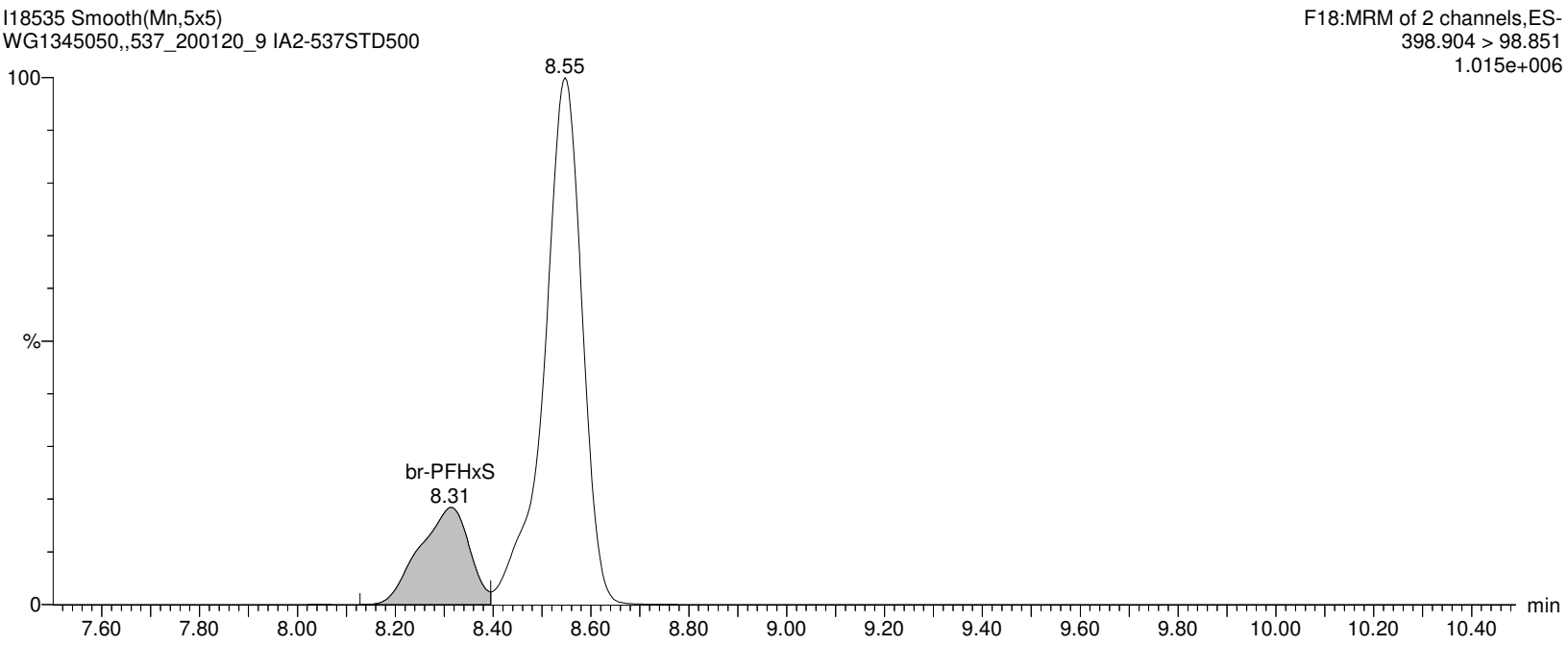
**br-PFHxS**





all concentration units in (ng/mL)

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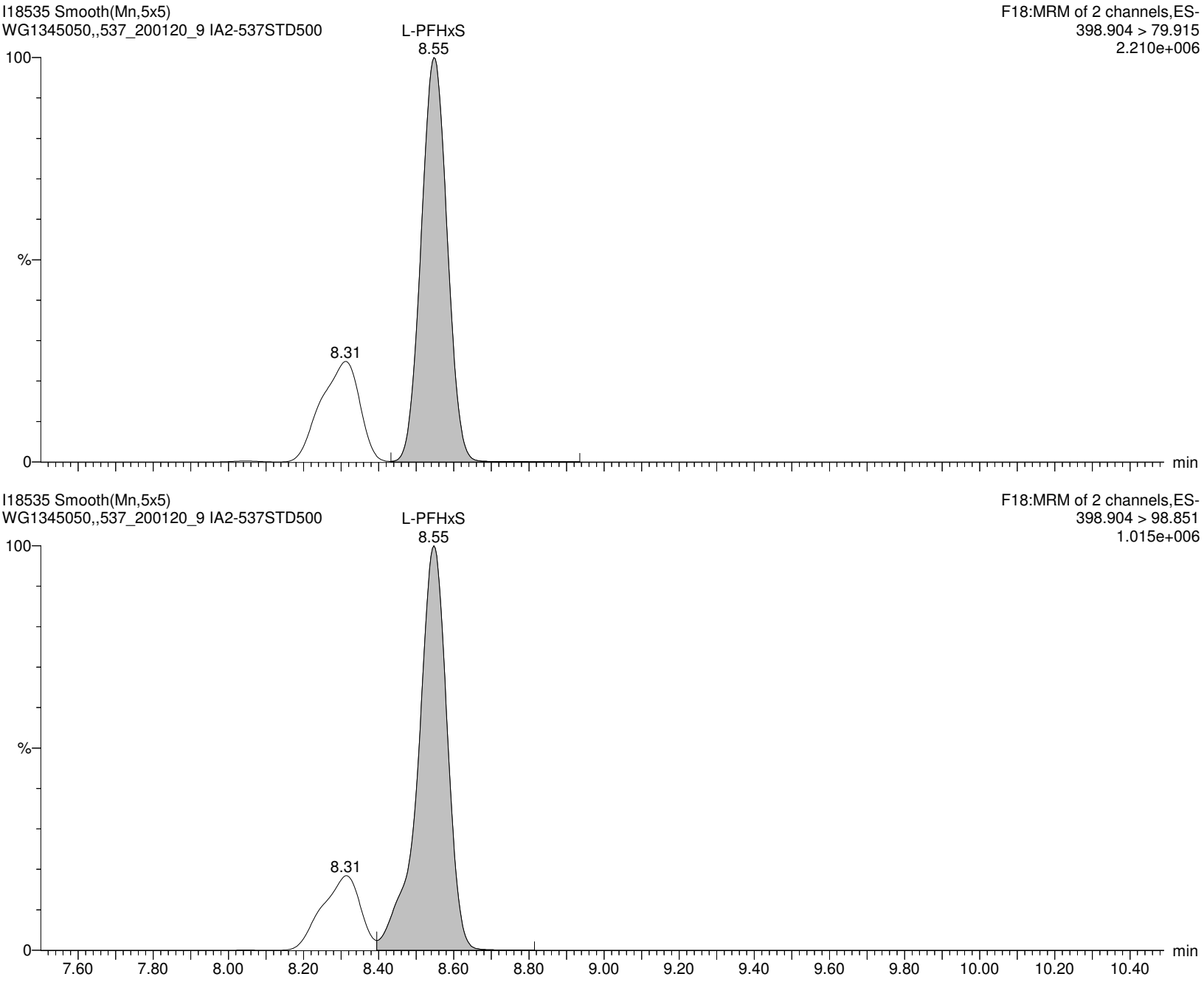
**L-PFHxS**





all concentration units in (ng/mL)

Alpha Analytical Inc.
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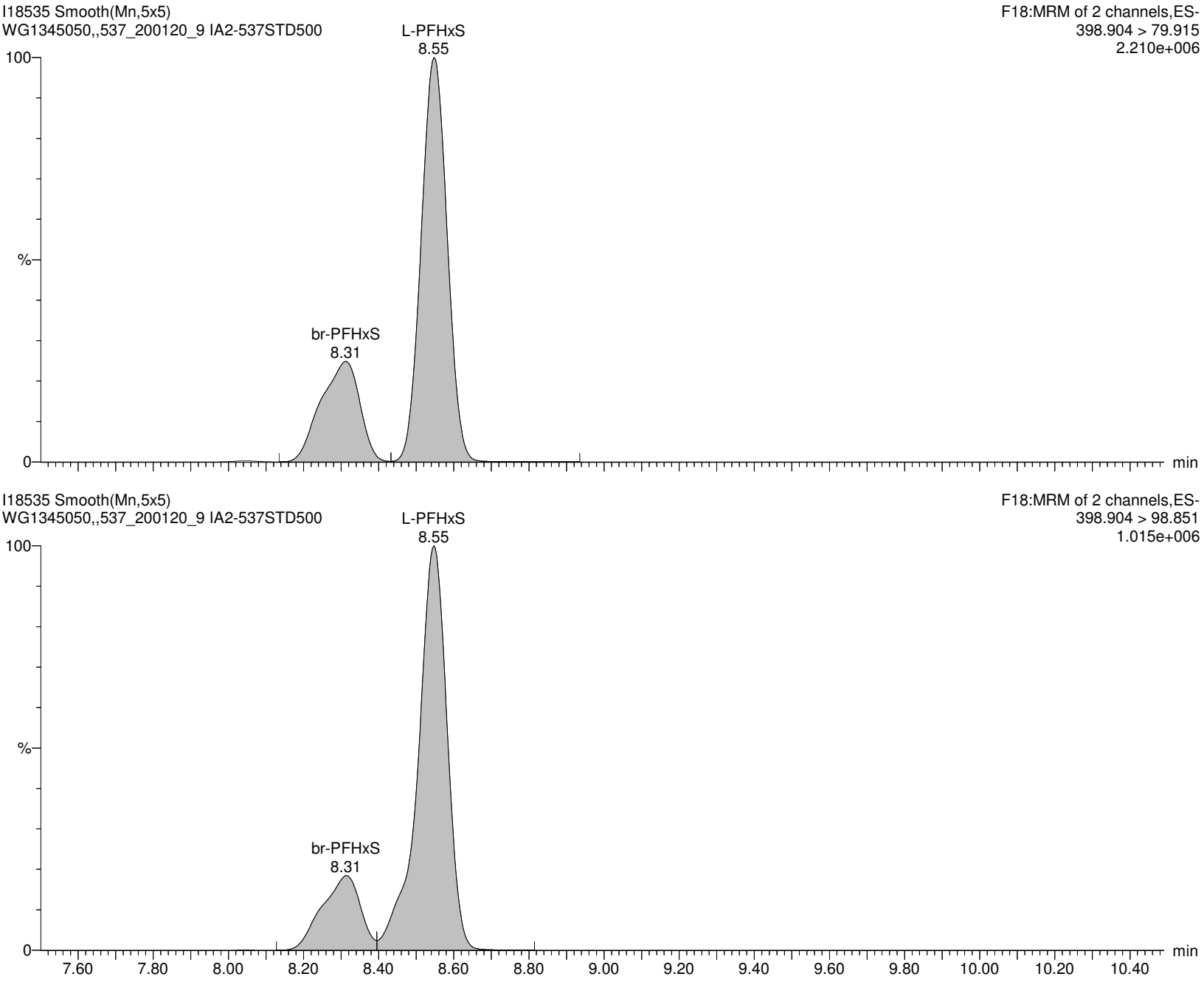



all concentration units in (ng/mL)

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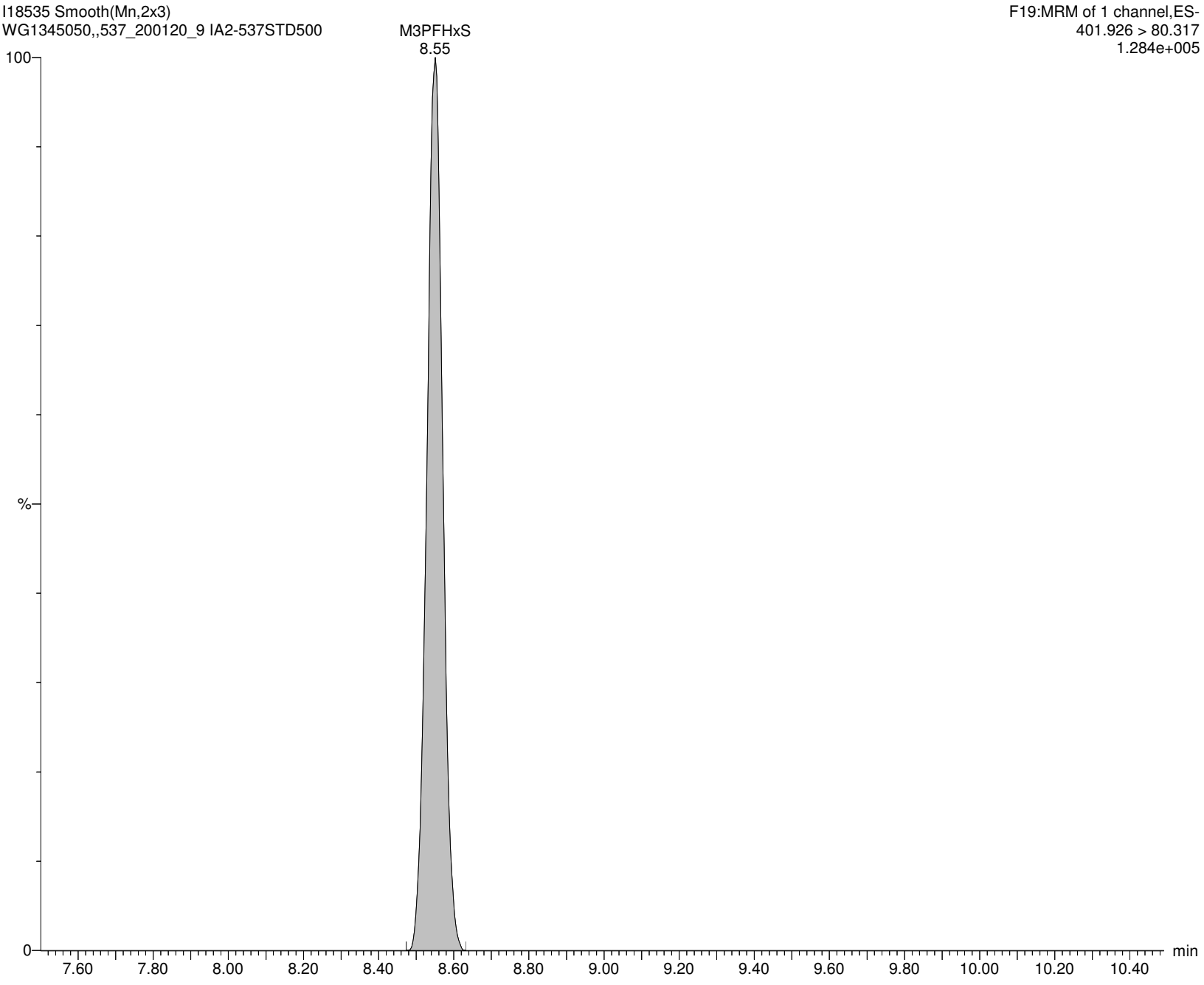
**M3PFHxS**





all concentration units in (ng/mL)

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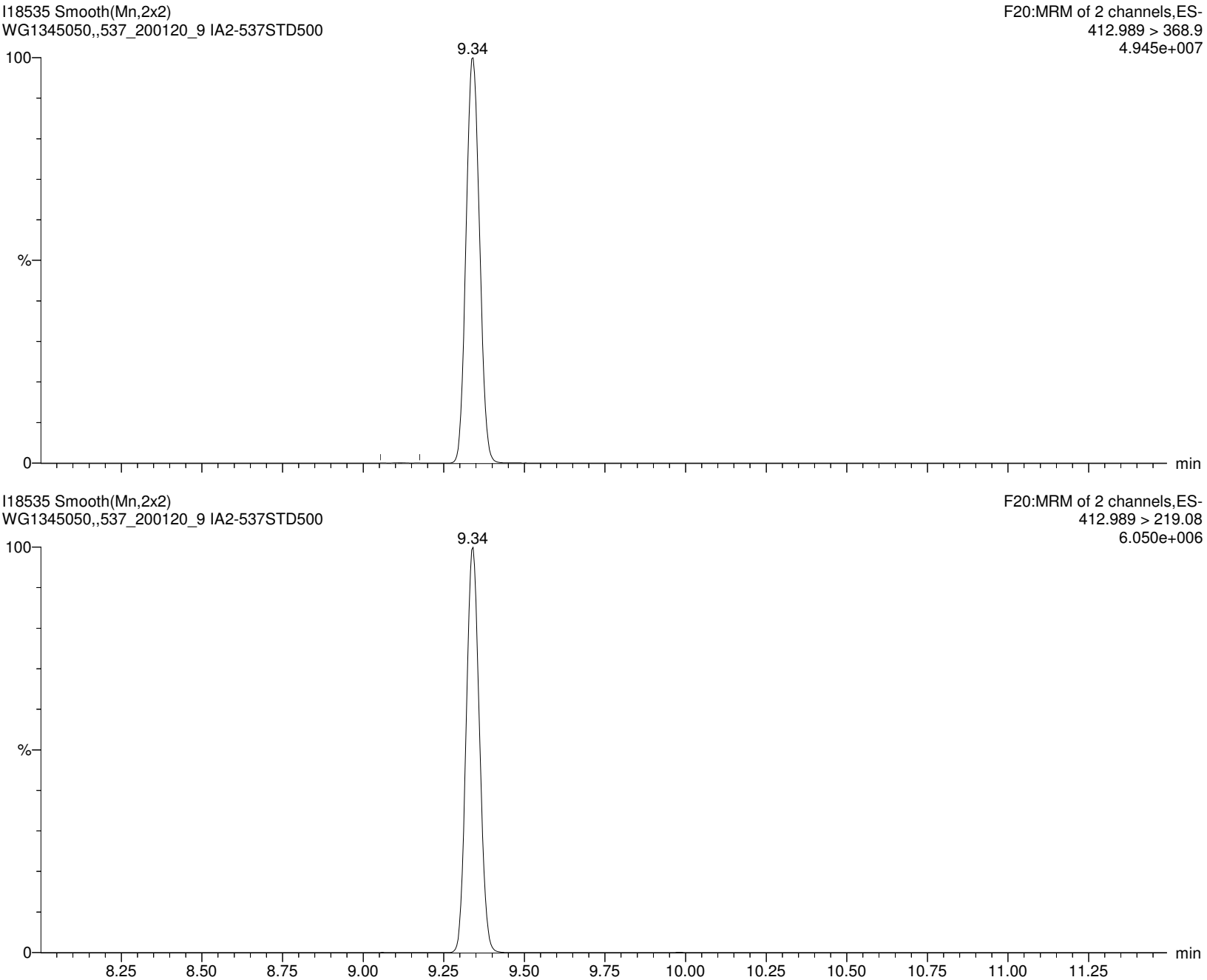



all concentration units in (ng/mL)

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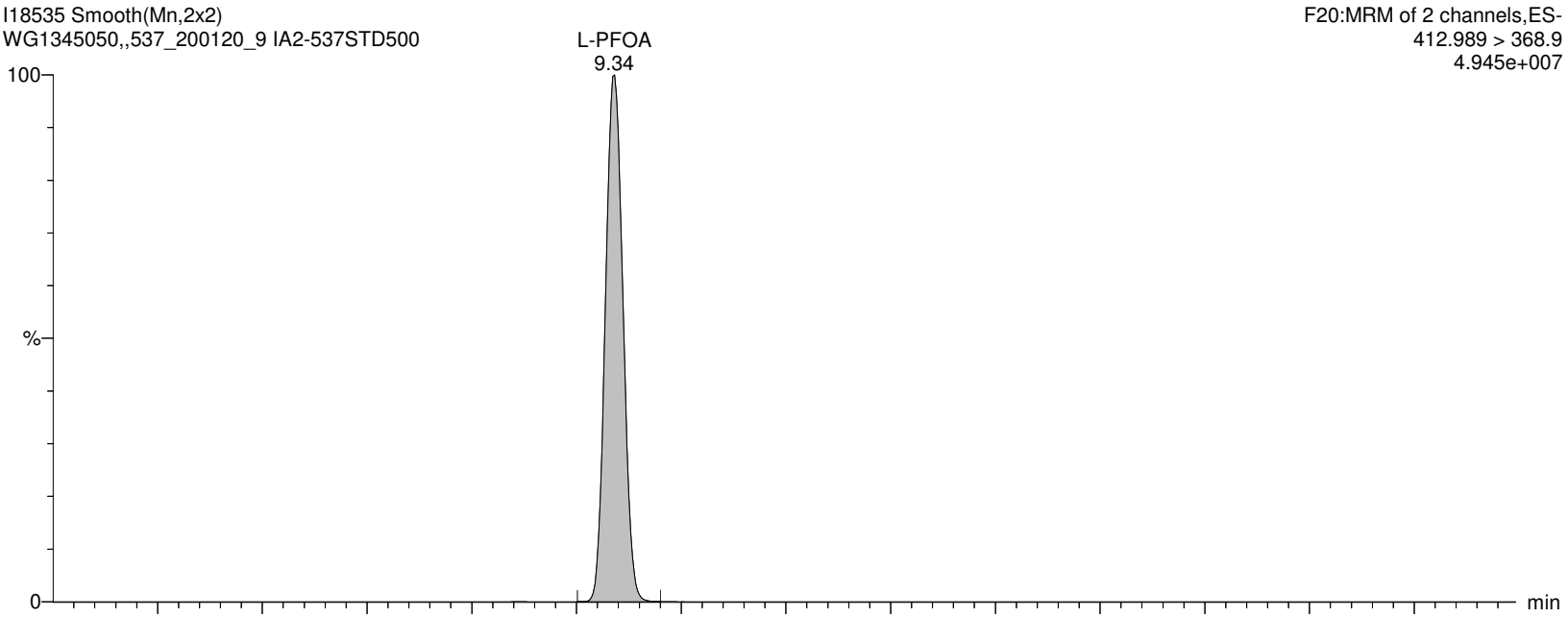


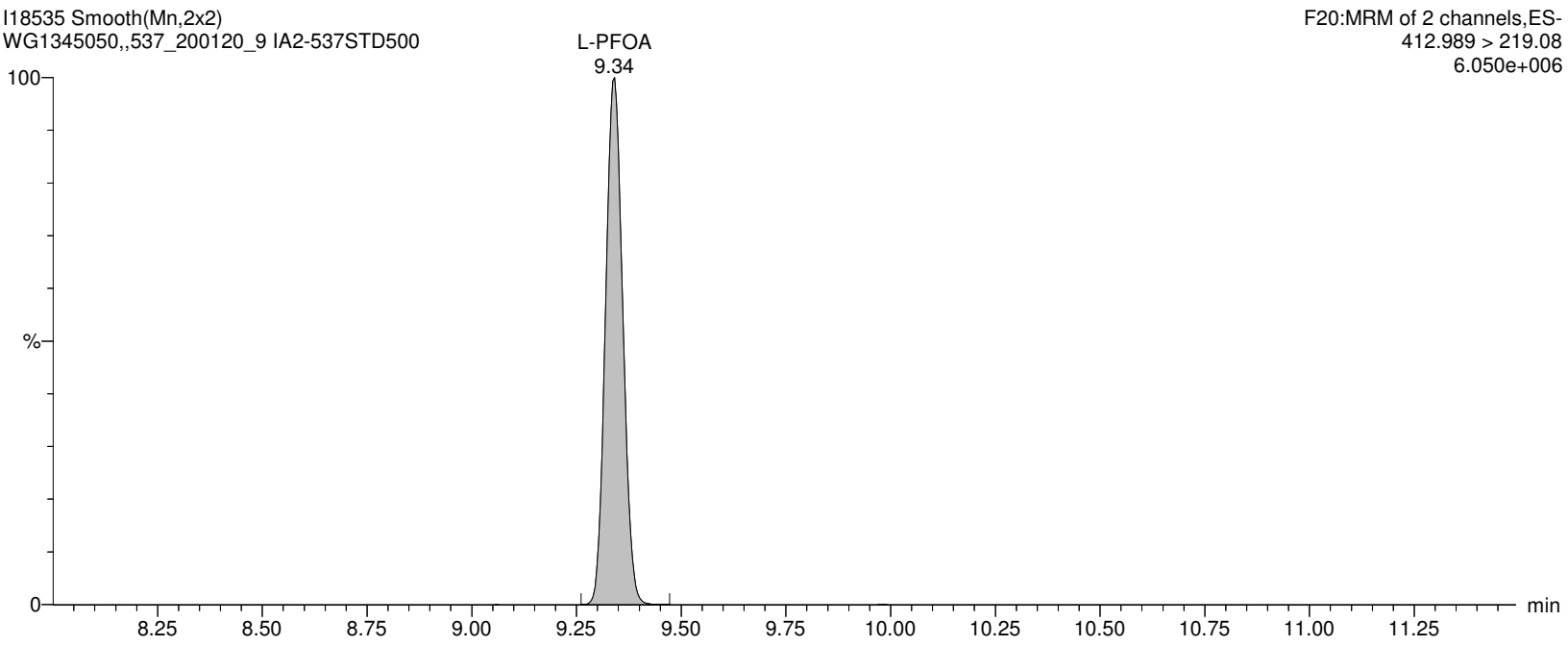



all concentration units in (ng/mL)

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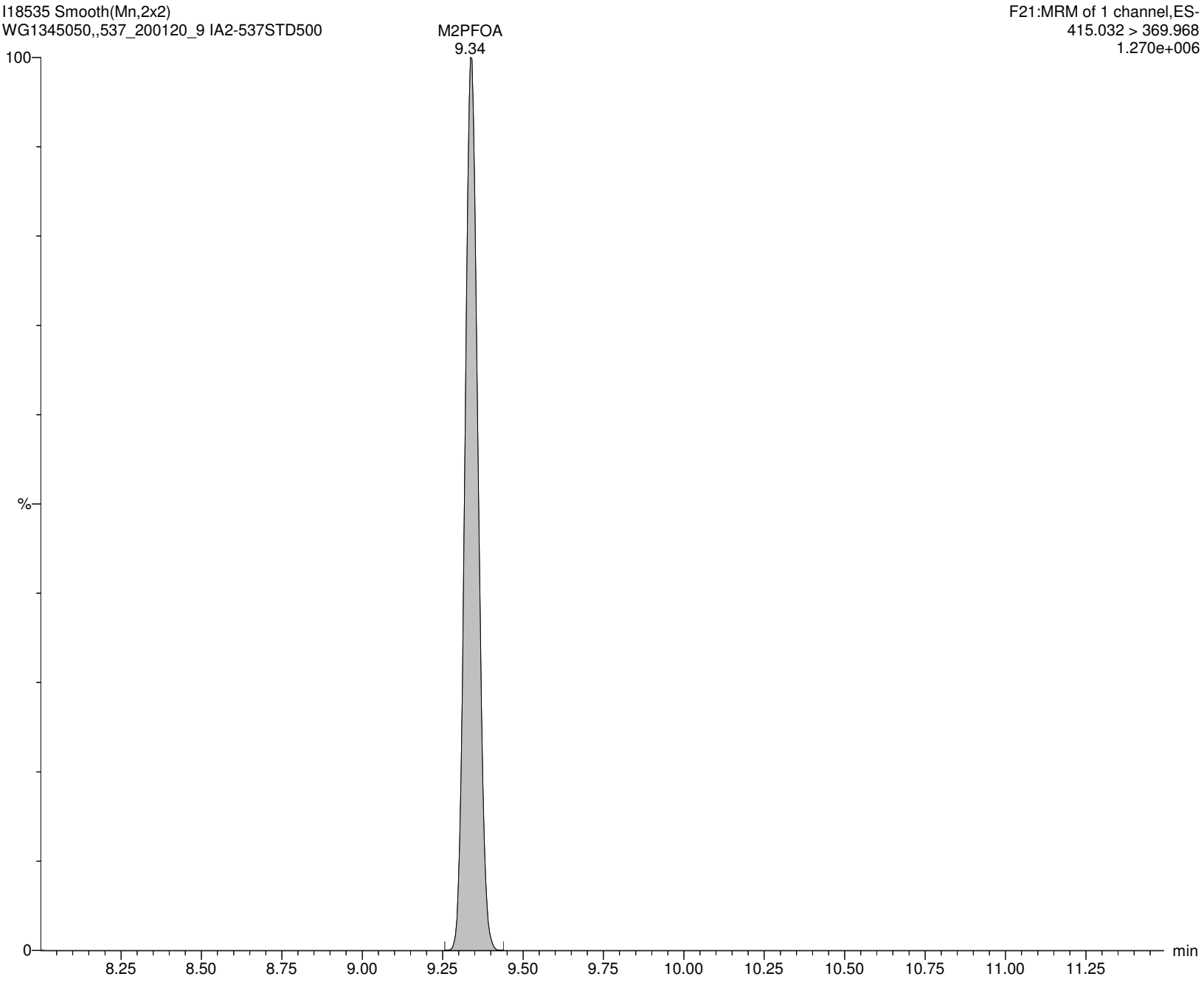



all concentration units in (ng/mL)

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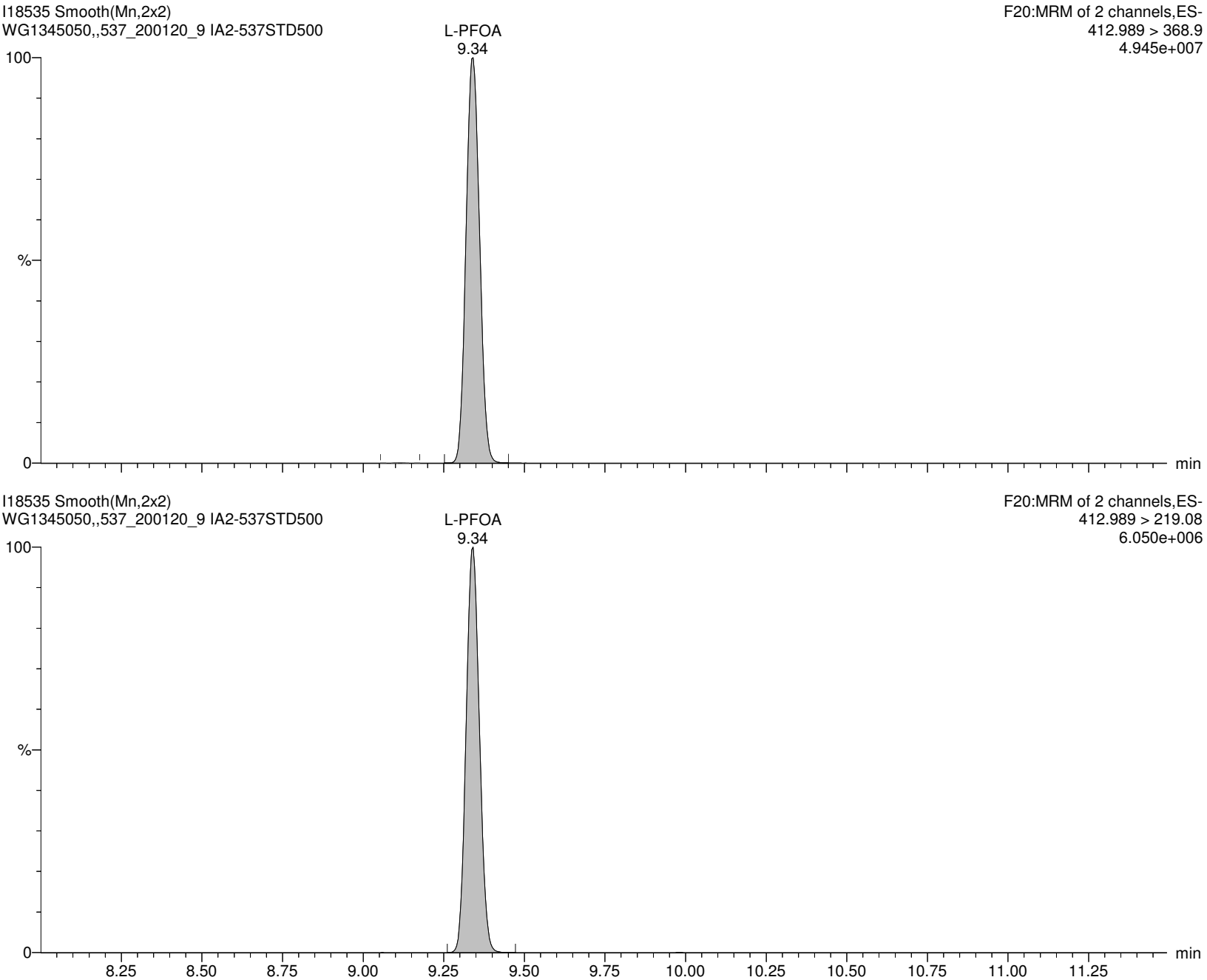



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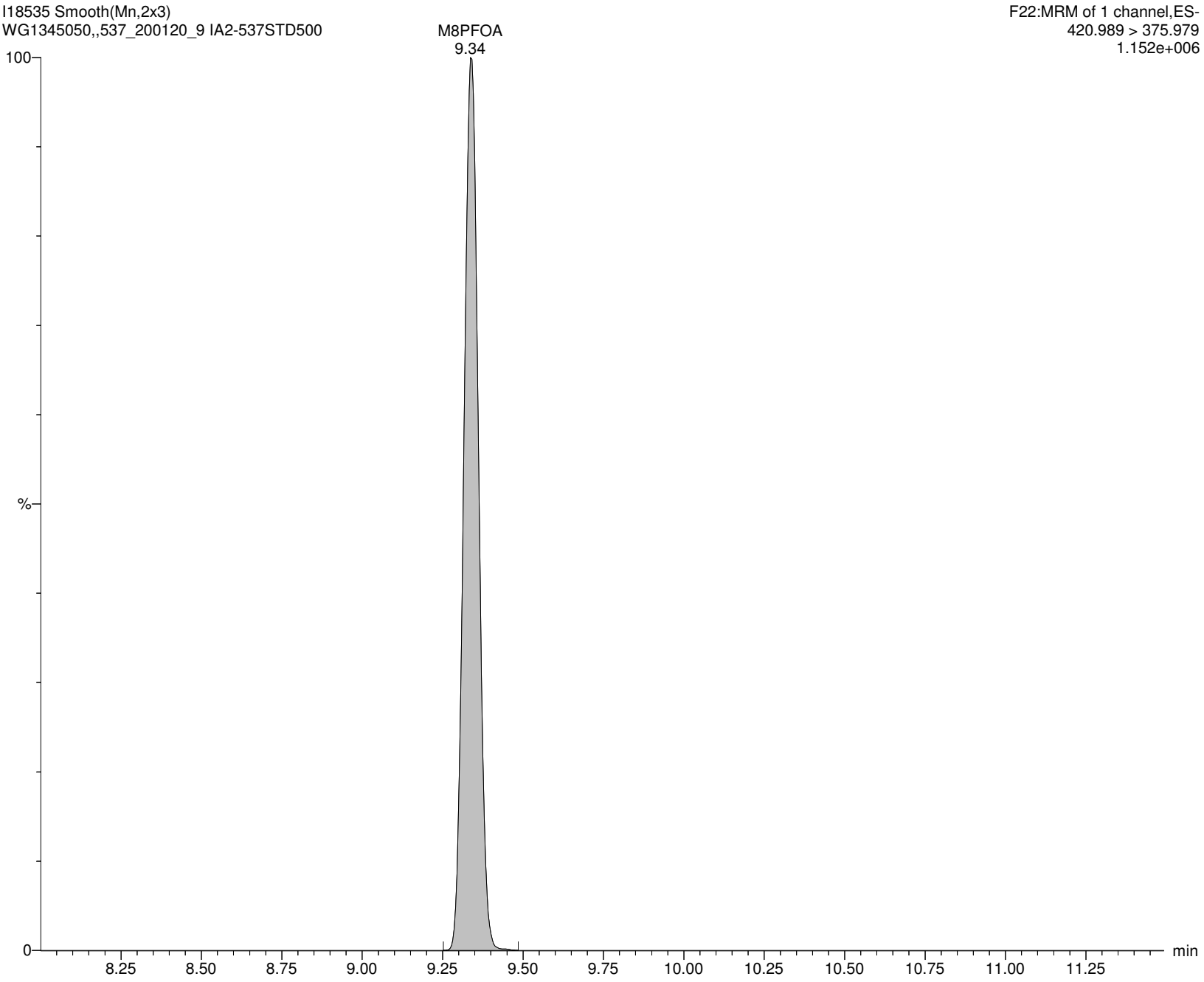



all concentration units in (ng/mL)

Alpha Analytical Inc.
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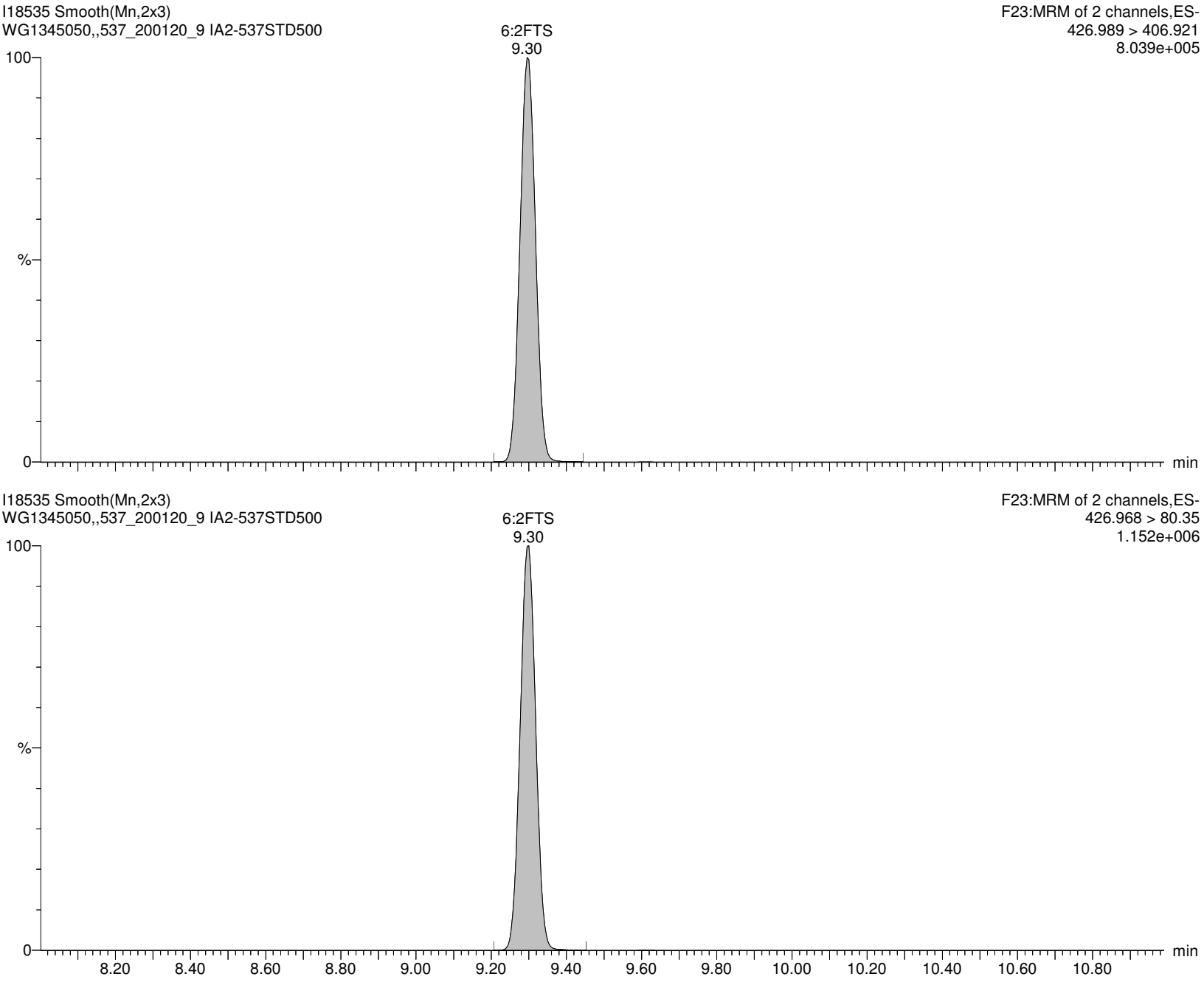



all concentration units in (ng/mL)

Alpha Analytical Inc.
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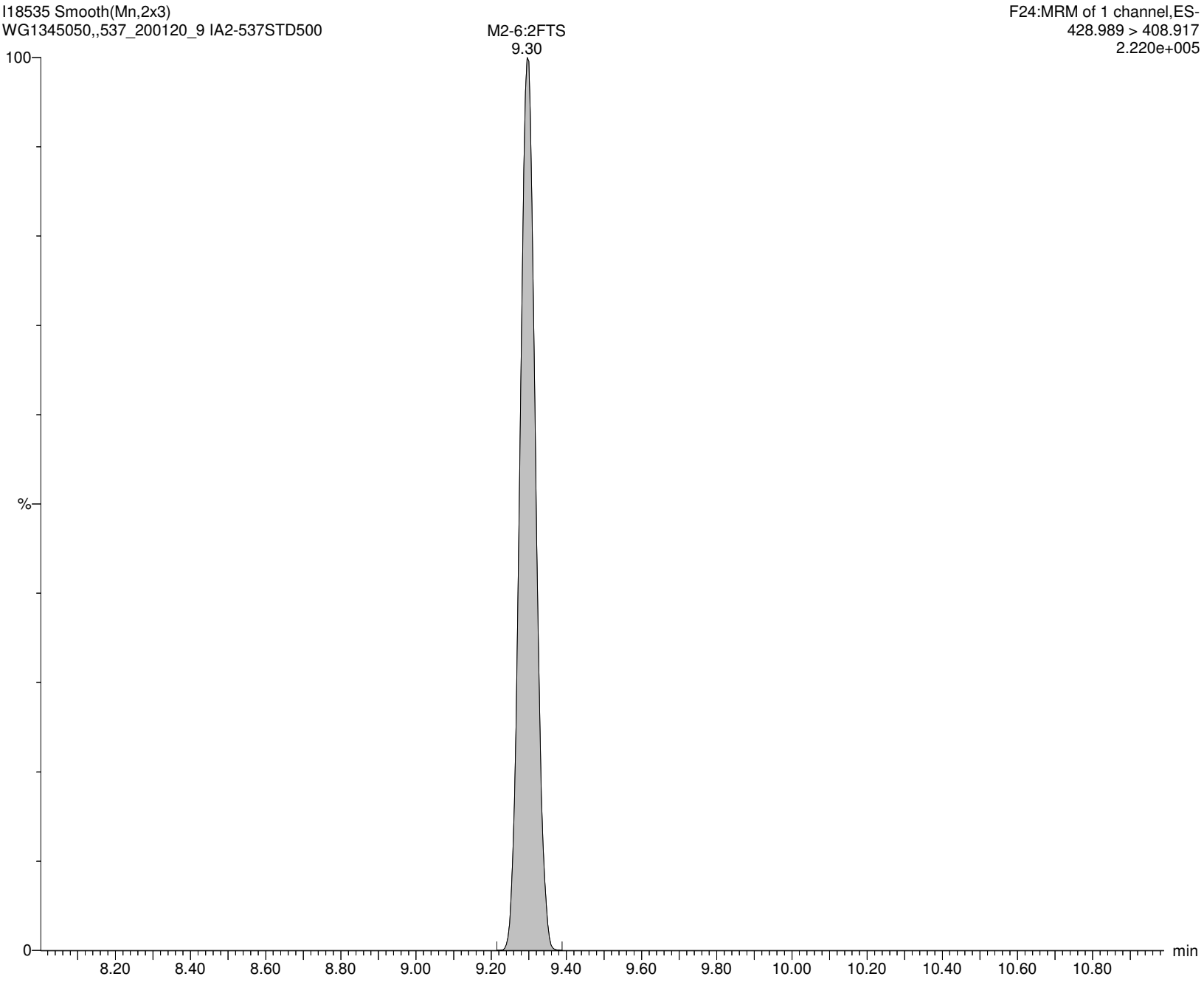
**M2-6:2FTS**





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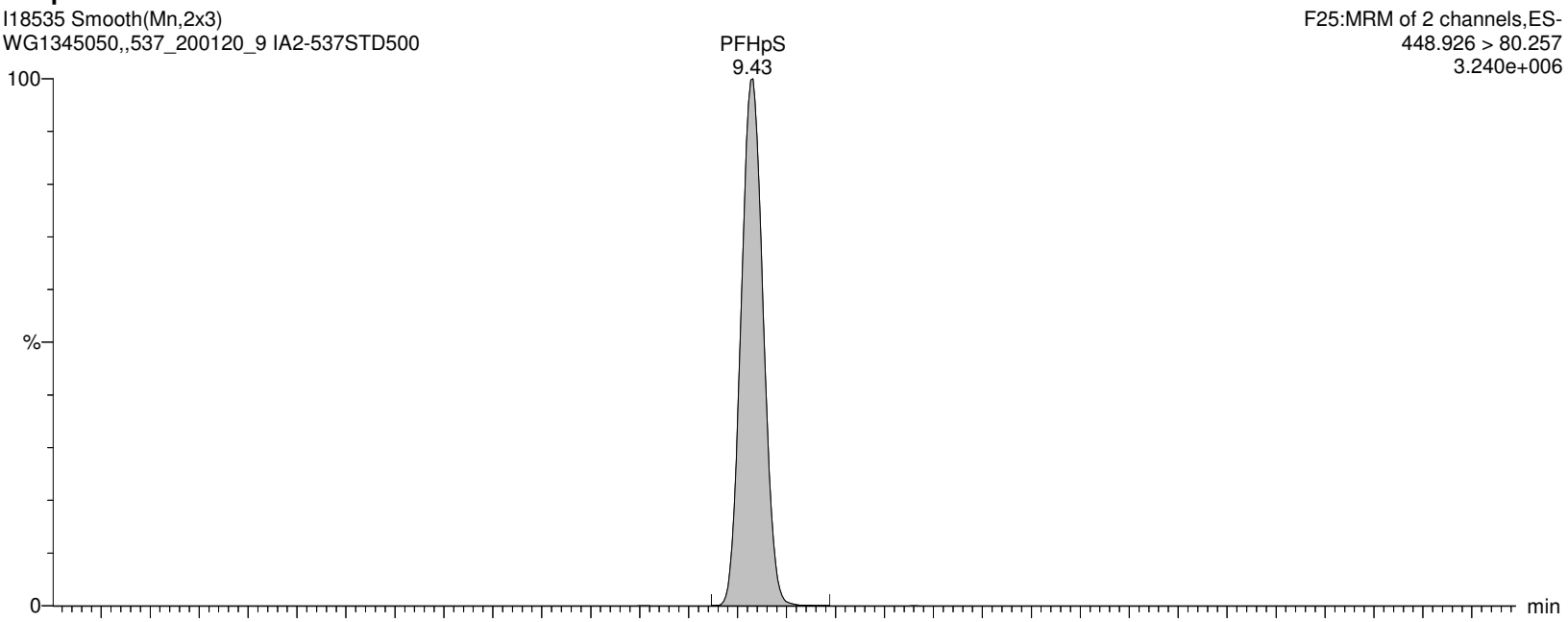


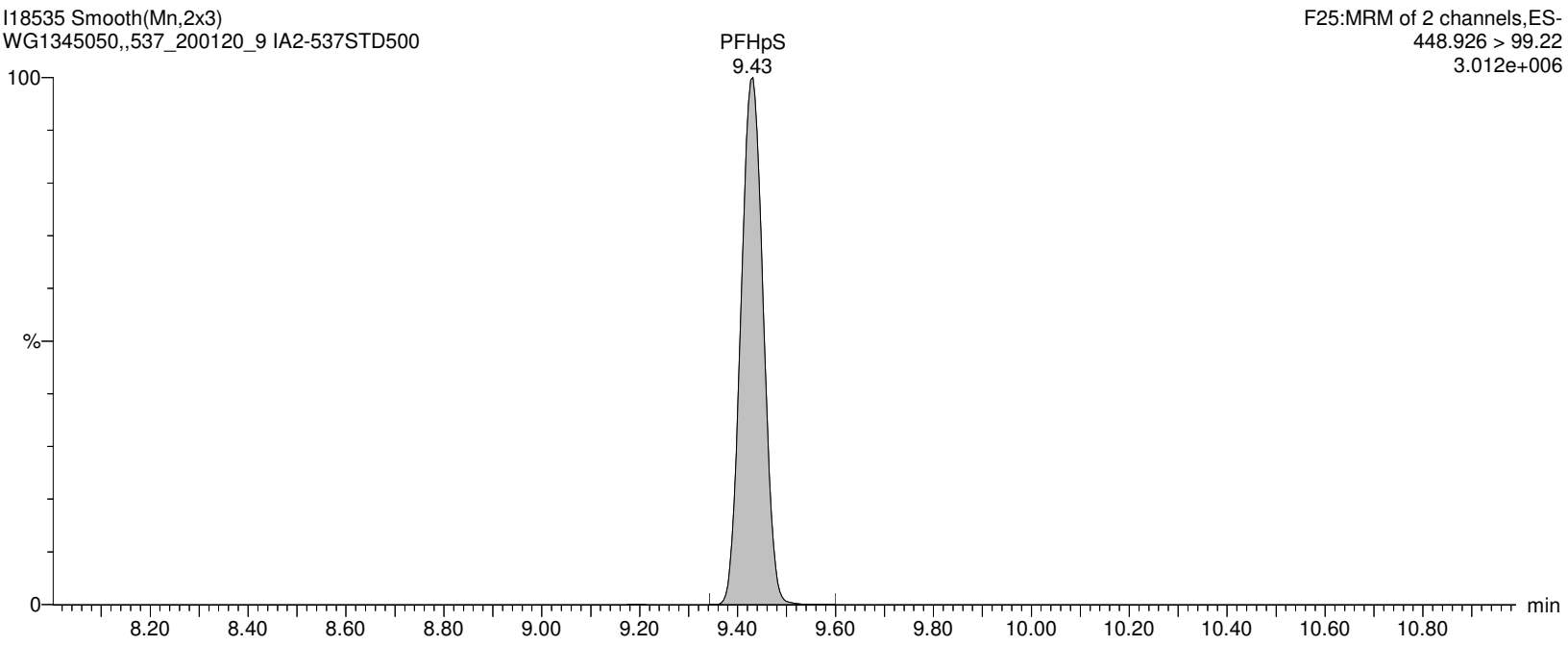



all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICAL_A.qld
Last Altered: Friday, February 28, 2020 09:12:40 Eastern Standard Time
Printed: Friday, February 28, 2020 09:27:57 Eastern Standard Time

**Name: I18535**
**ID: IA2-537STD500**
**Date: 27-Feb-2020**
**Time: 15:41:35**
**Description: WG1345050,,537_200120_9**
**User: LCMS01:SG**
**Vial: 1:B,2**
**Instrument: XEVO-TQSmicro#QEA0276**
**Inlet Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\LCMS_537_ISO_MeOH**
**Tune Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\190709_TUNE.IPR**
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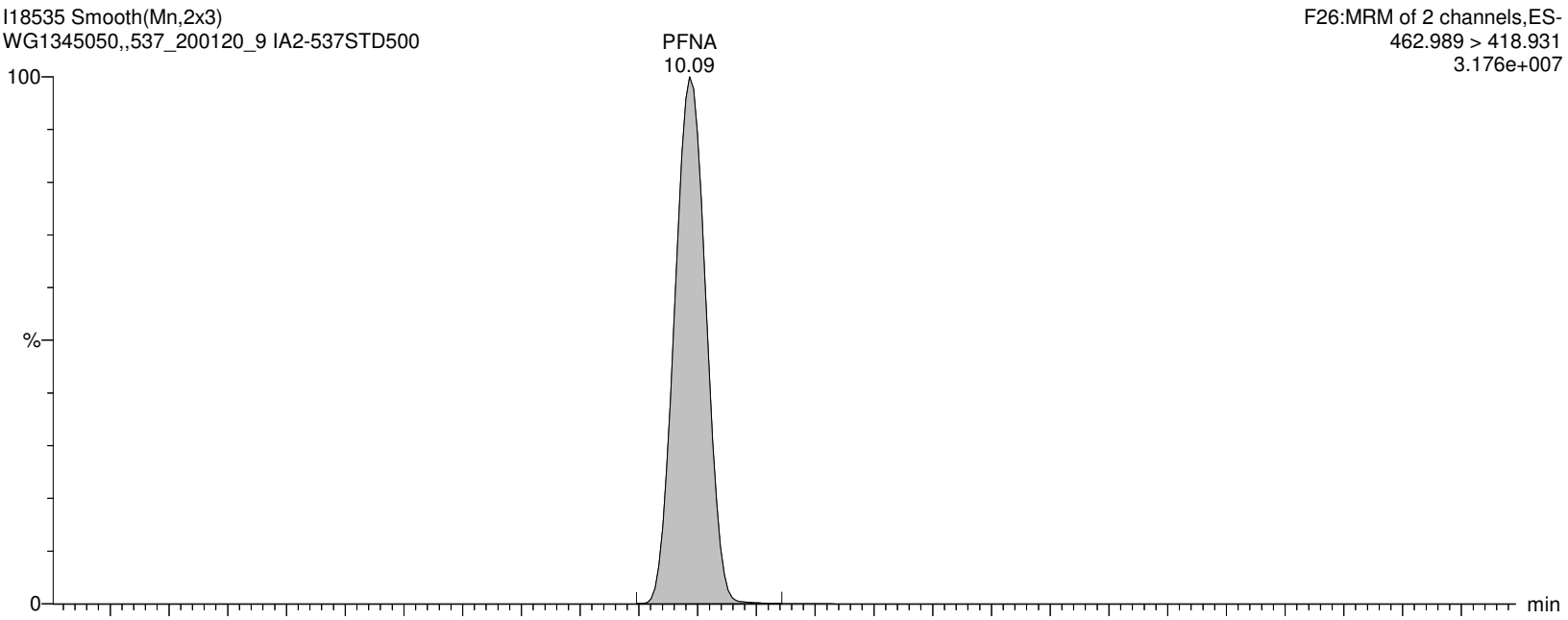


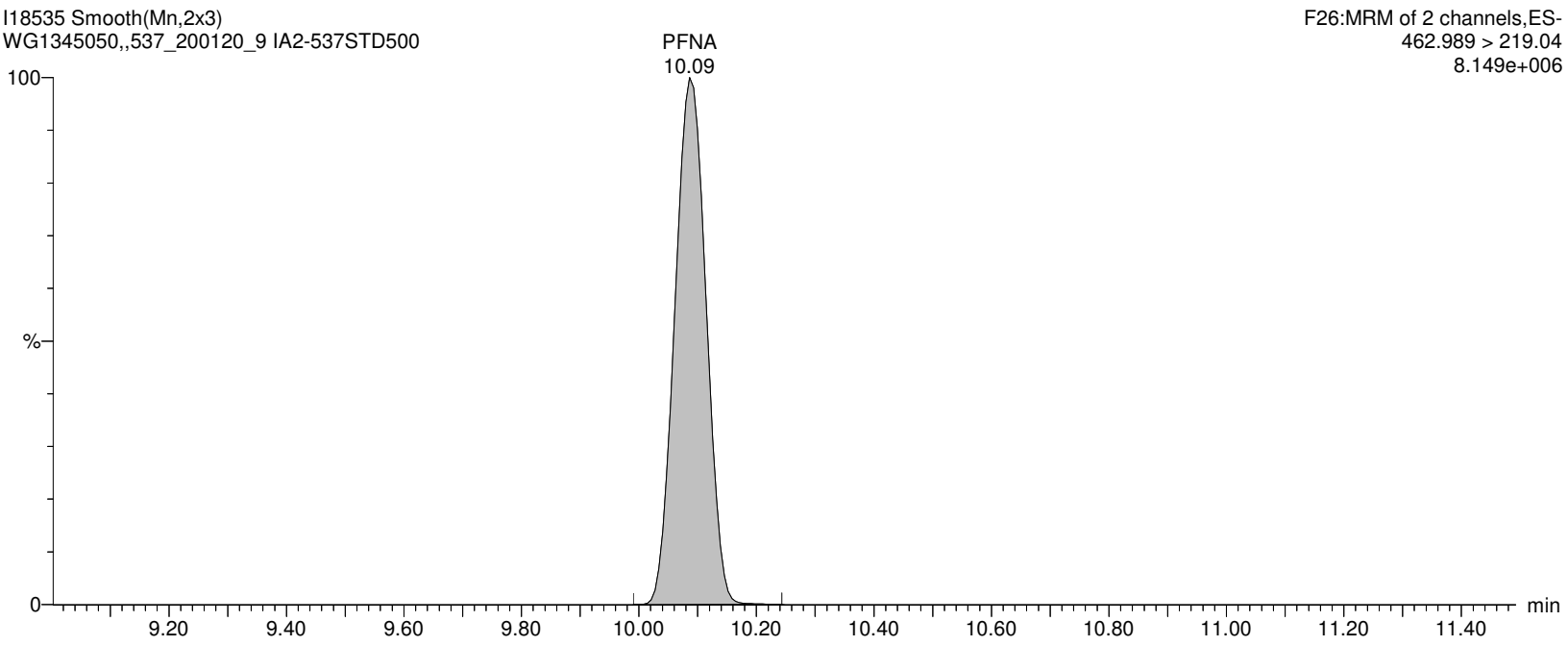



all concentration units in (ng/mL)

Alpha Analytical Inc.
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Last Altered: Friday, February 28, 2020 09:12:40 Eastern Standard Time
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**Vial: 1:B,2**
**Instrument: XEVO-TQSmicro#QEA0276**
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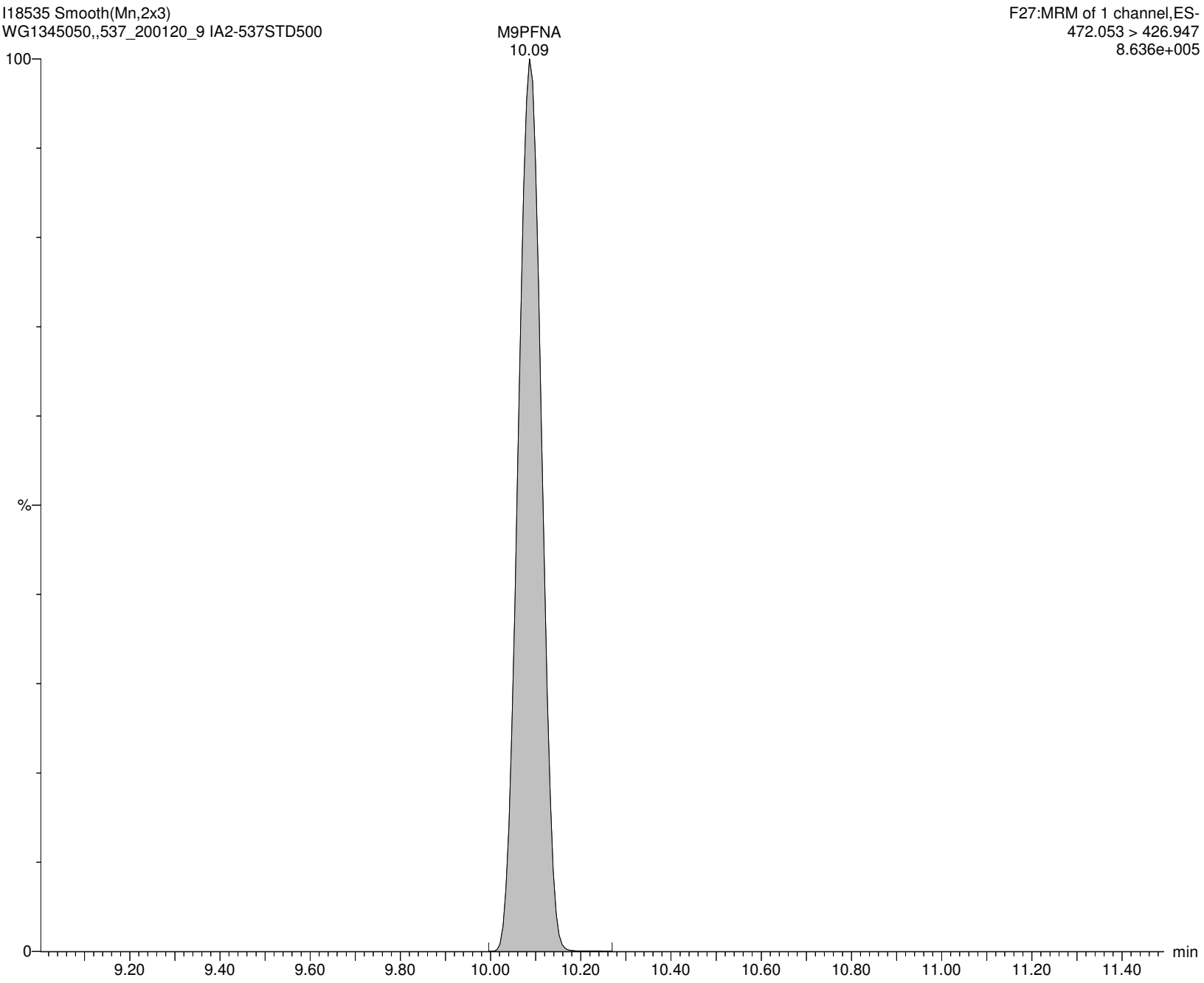
**M9PFNA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
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Last Altered: Friday, February 28, 2020 09:12:40 Eastern Standard Time
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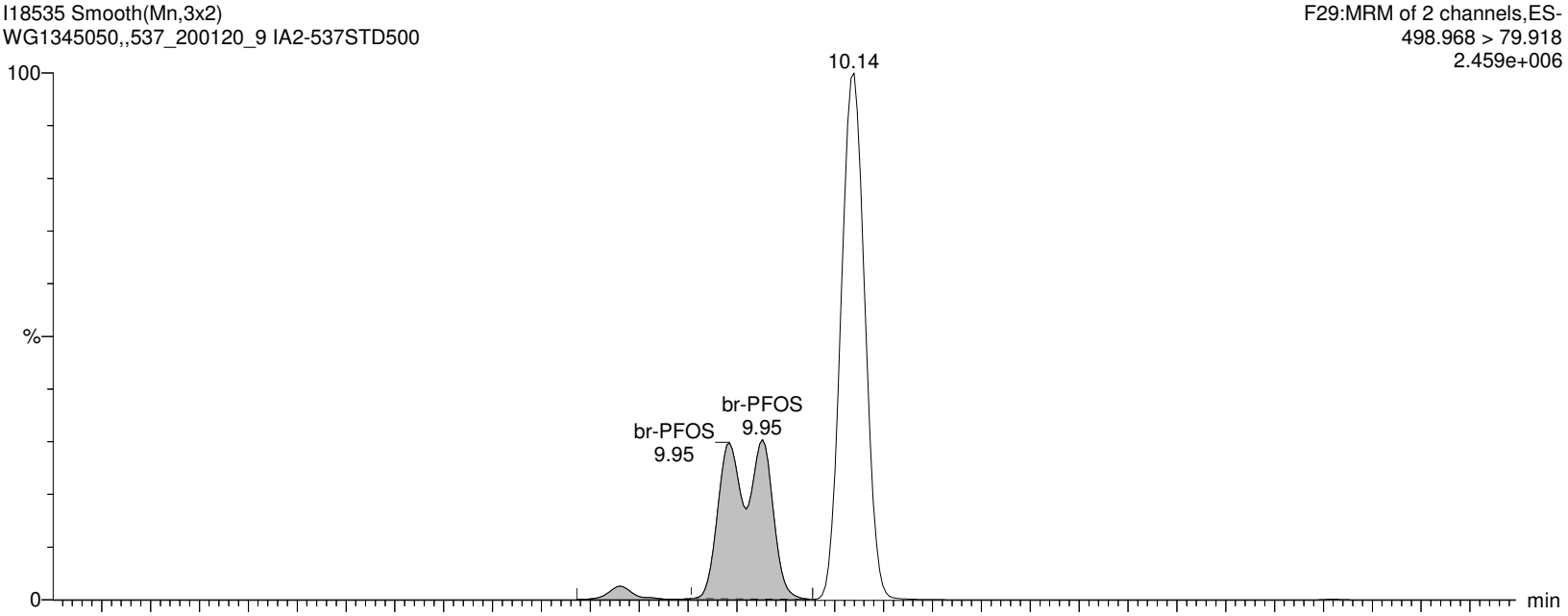
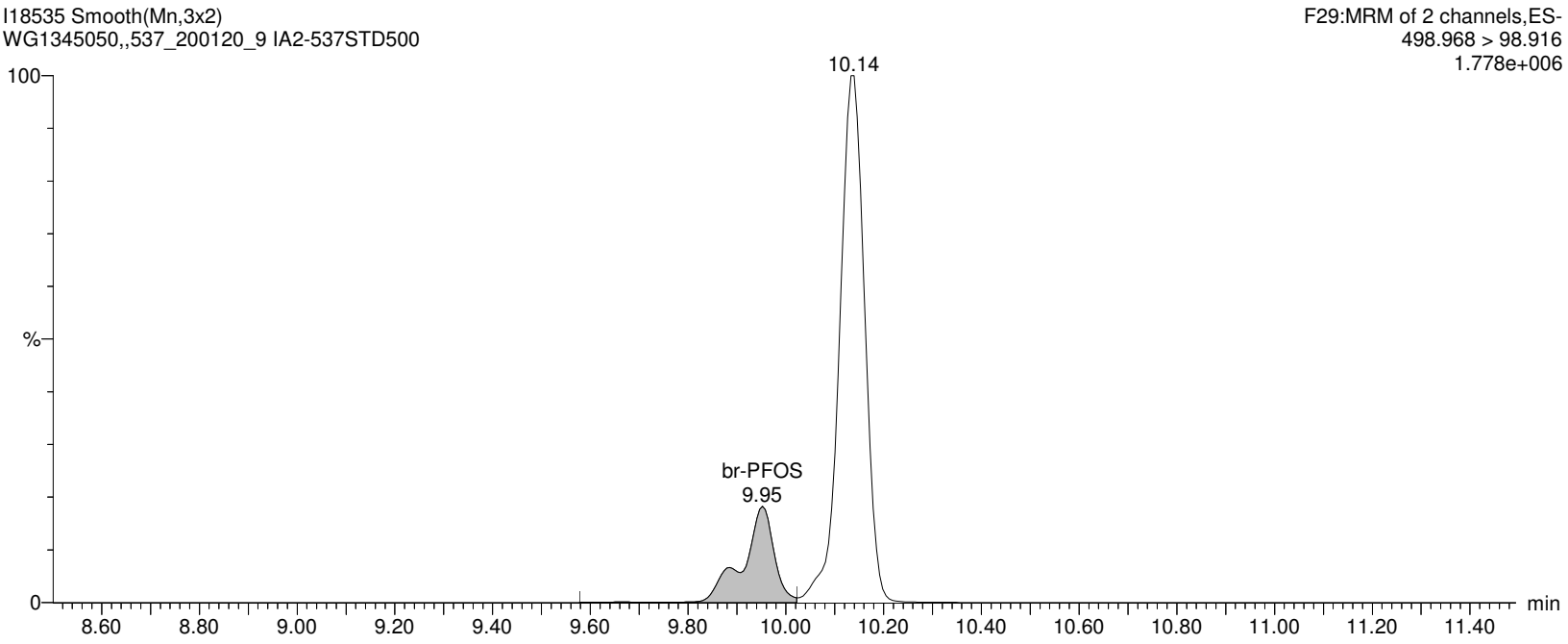
**br-PFOS**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICAL_A.qld
Last Altered: Friday, February 28, 2020 09:12:40 Eastern Standard Time
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**Tune Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\190709_TUNE.IPR**
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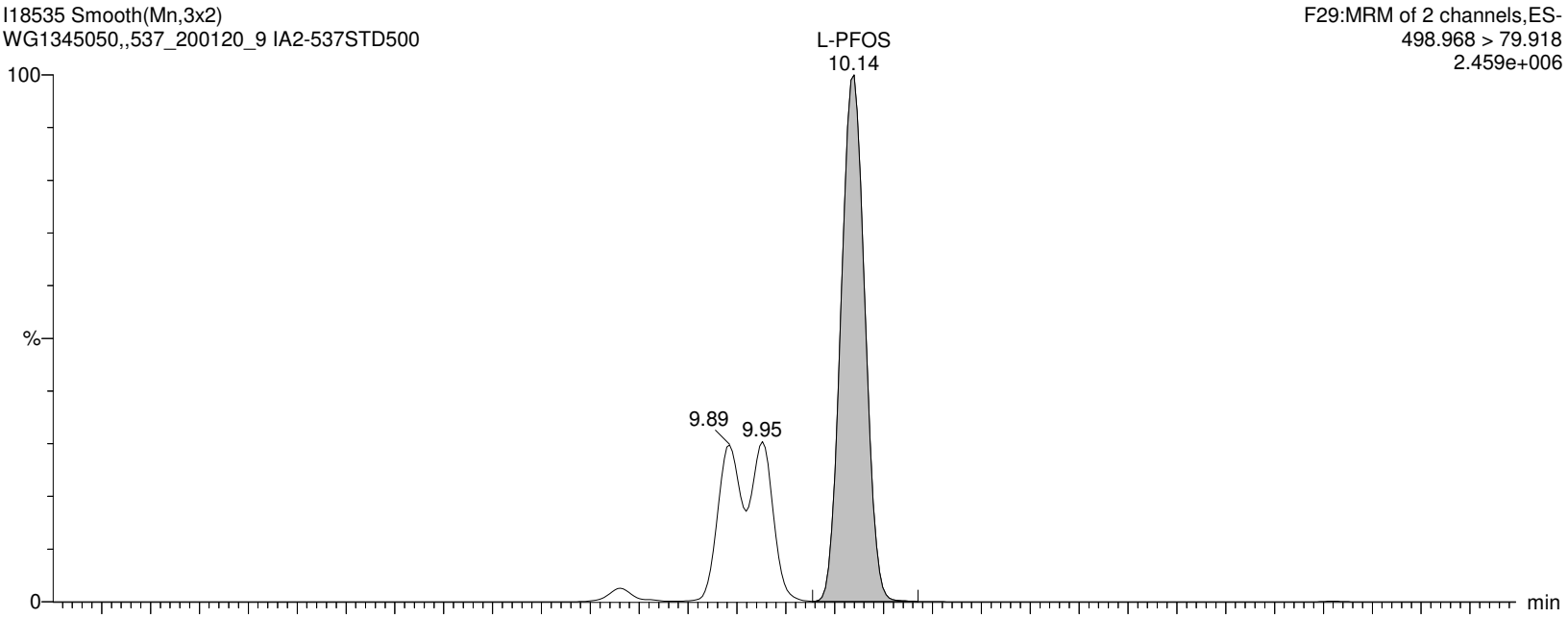


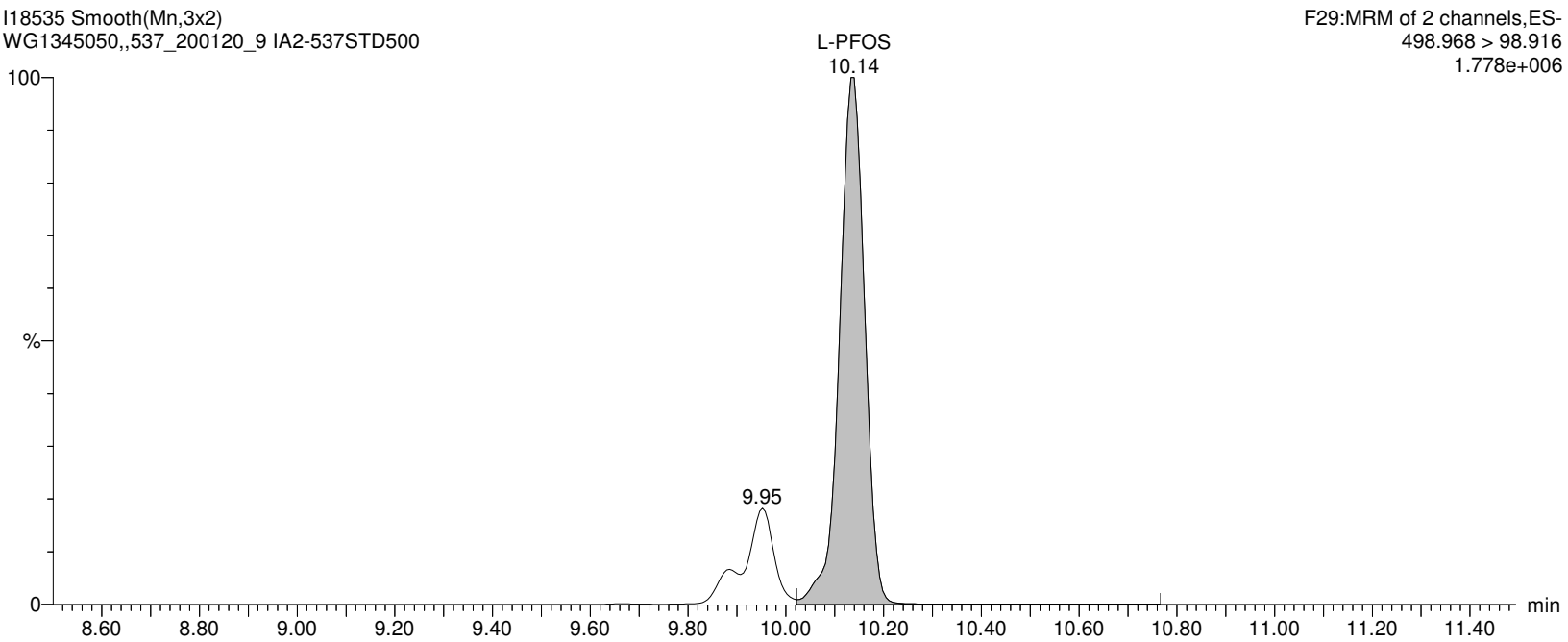



all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICAL_A.qld
Last Altered: Friday, February 28, 2020 09:12:40 Eastern Standard Time
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**Instrument: XEVO-TQSmicro#QEA0276**
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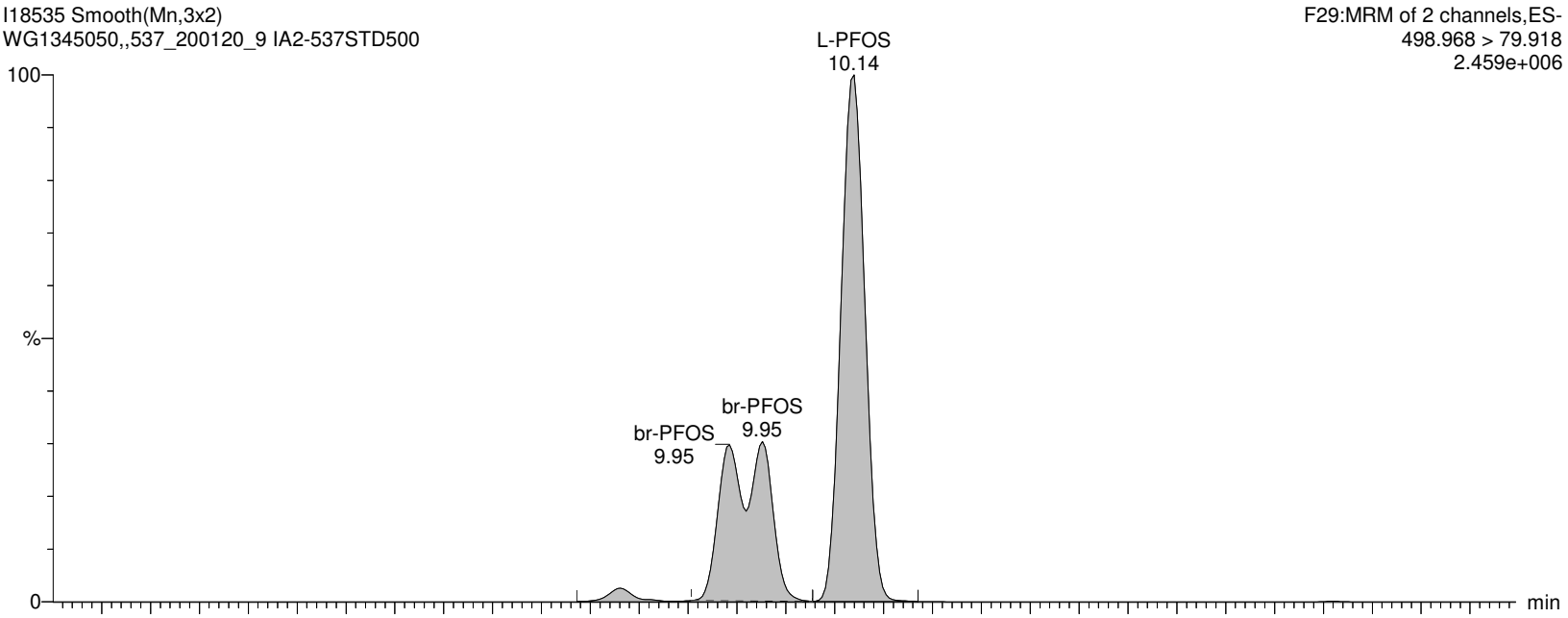
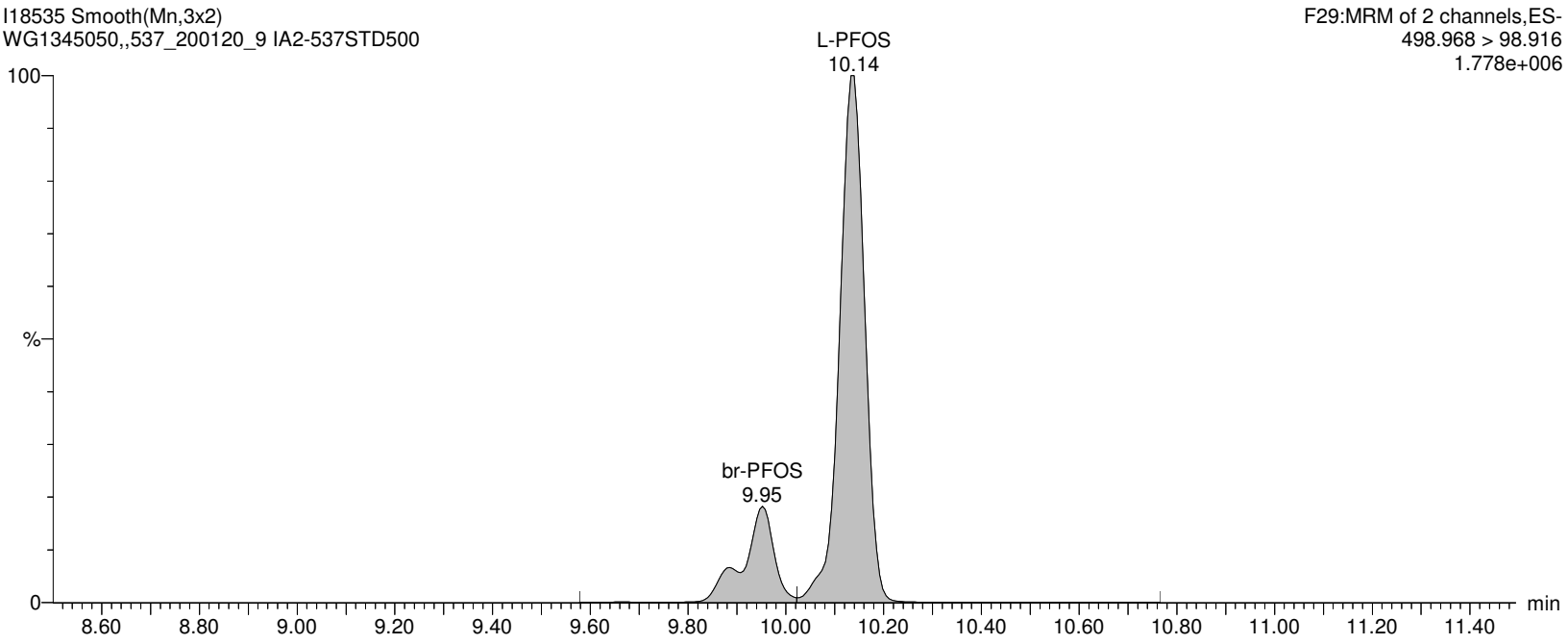
**MS Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**PFOS**





all concentration units in (ng/mL)

Alpha Analytical Inc.
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Last Altered: Friday, February 28, 2020 09:12:40 Eastern Standard Time
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**Vial: 1:B,2**
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**Tune Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\190709_TUNE.IPR**
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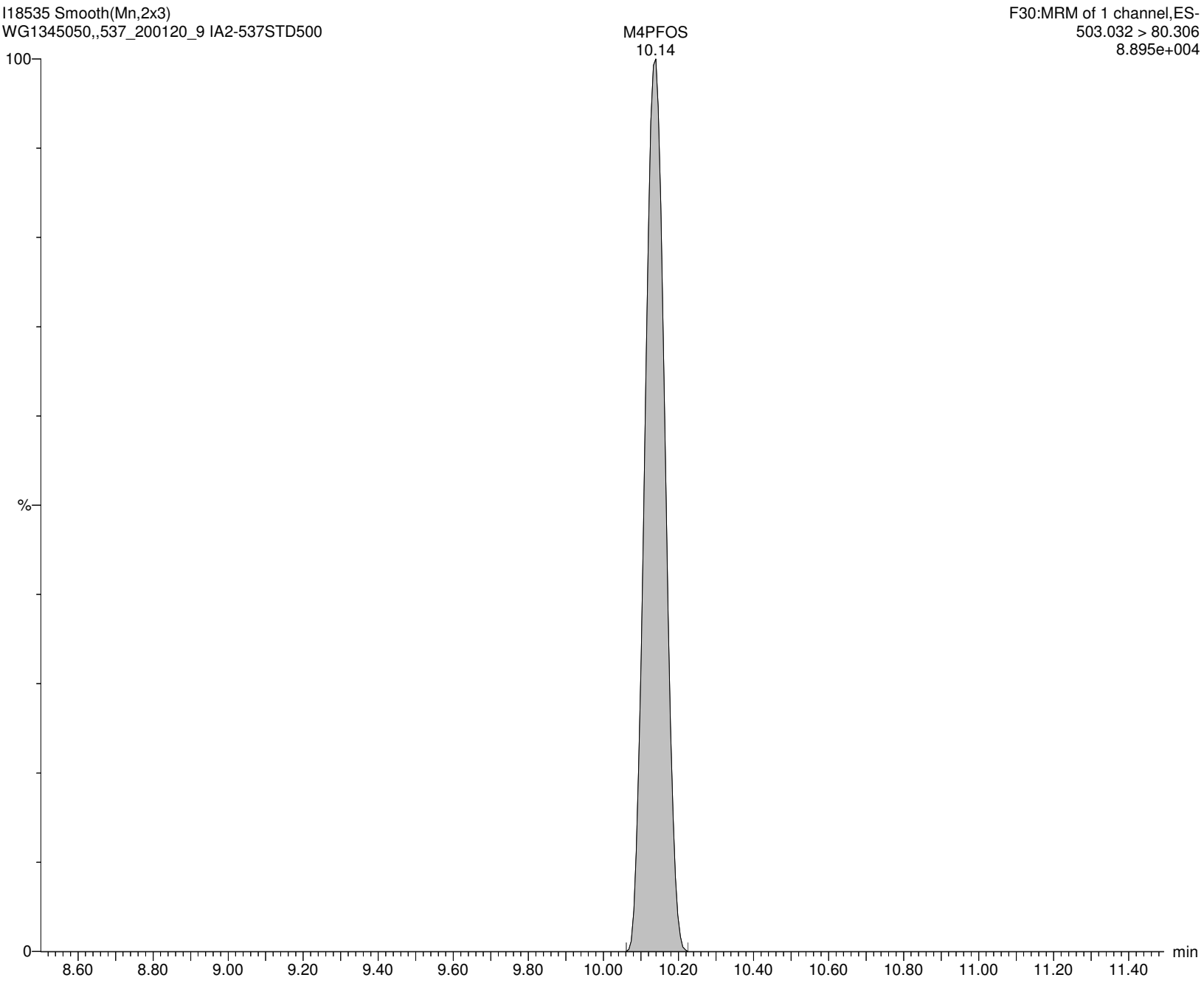
**M4PFOS**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICAL_A.qld
Last Altered: Friday, February 28, 2020 09:12:40 Eastern Standard Time
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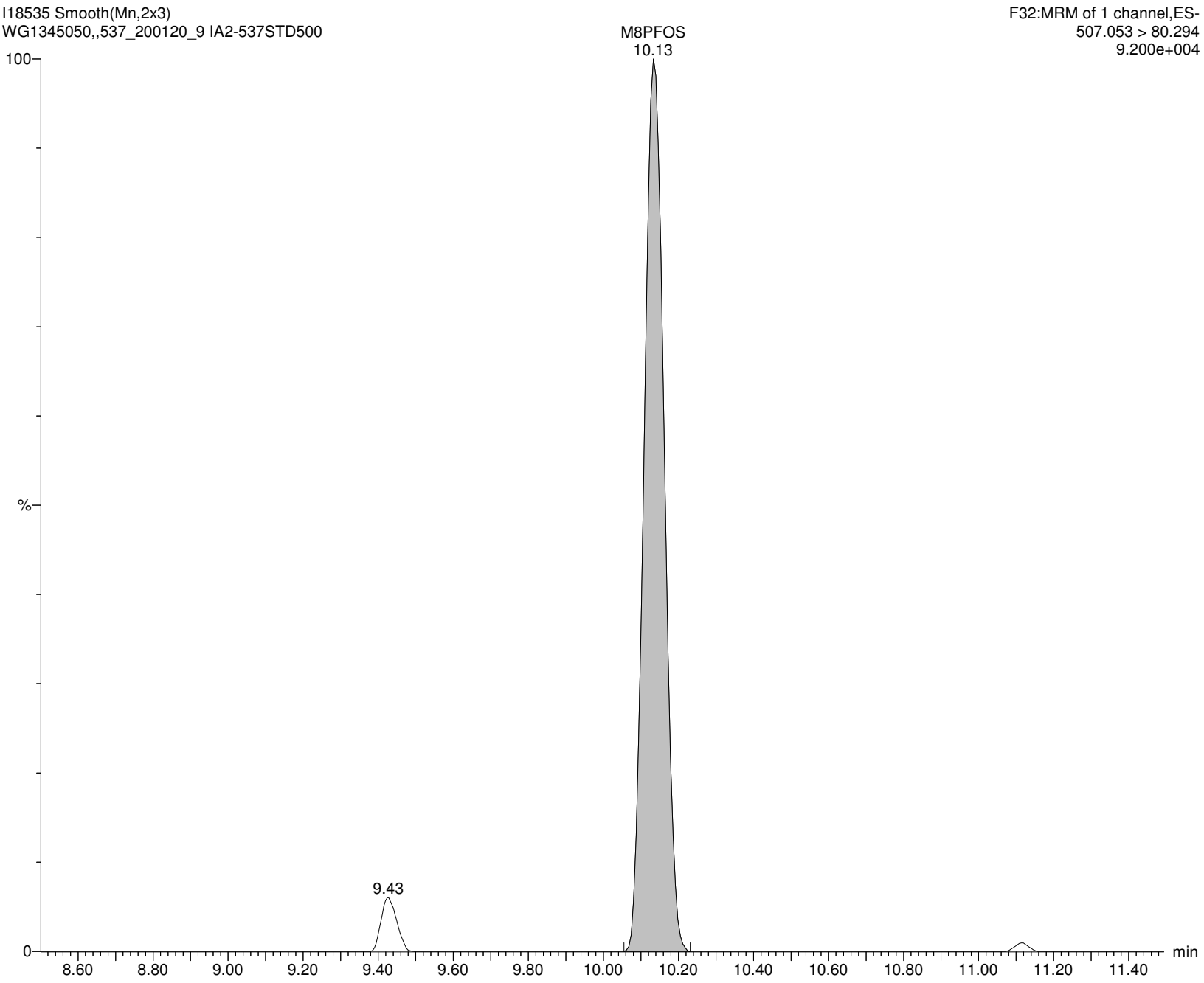
**M8PFOS**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICAL_A.qld
Last Altered: Friday, February 28, 2020 09:12:40 Eastern Standard Time
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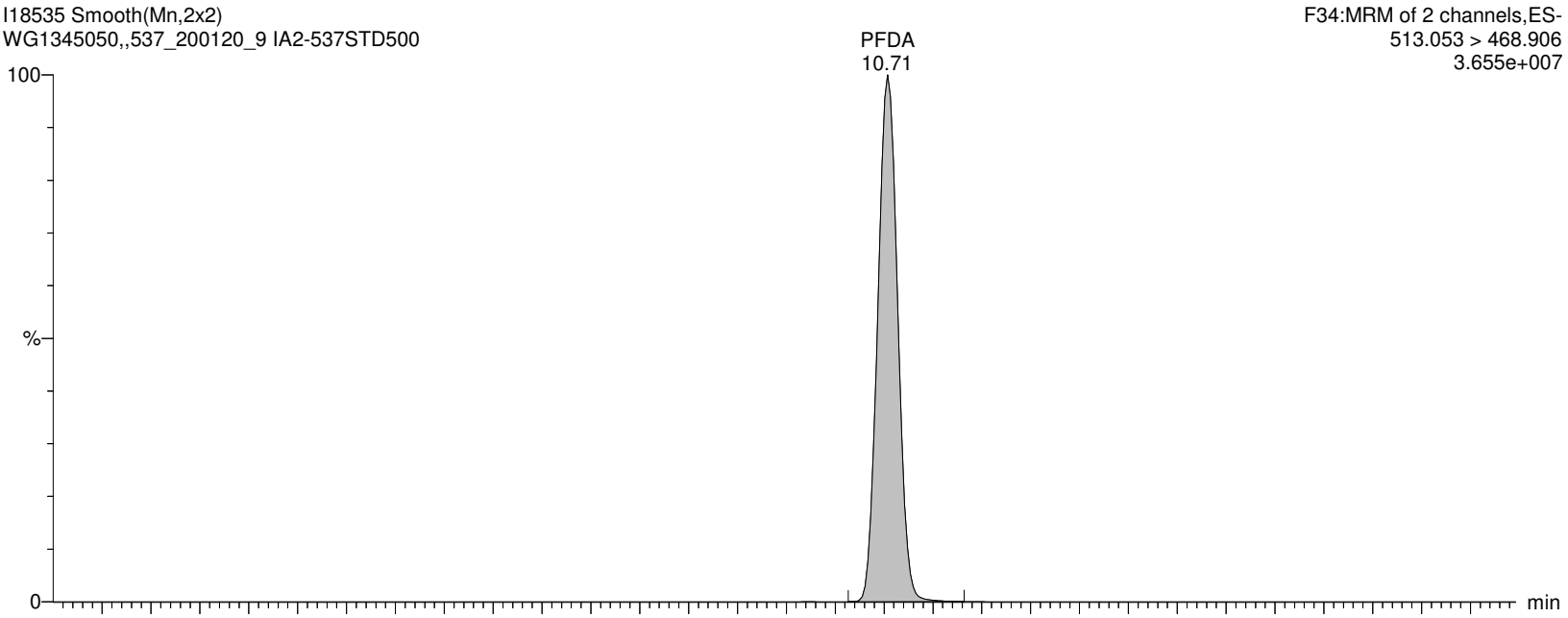
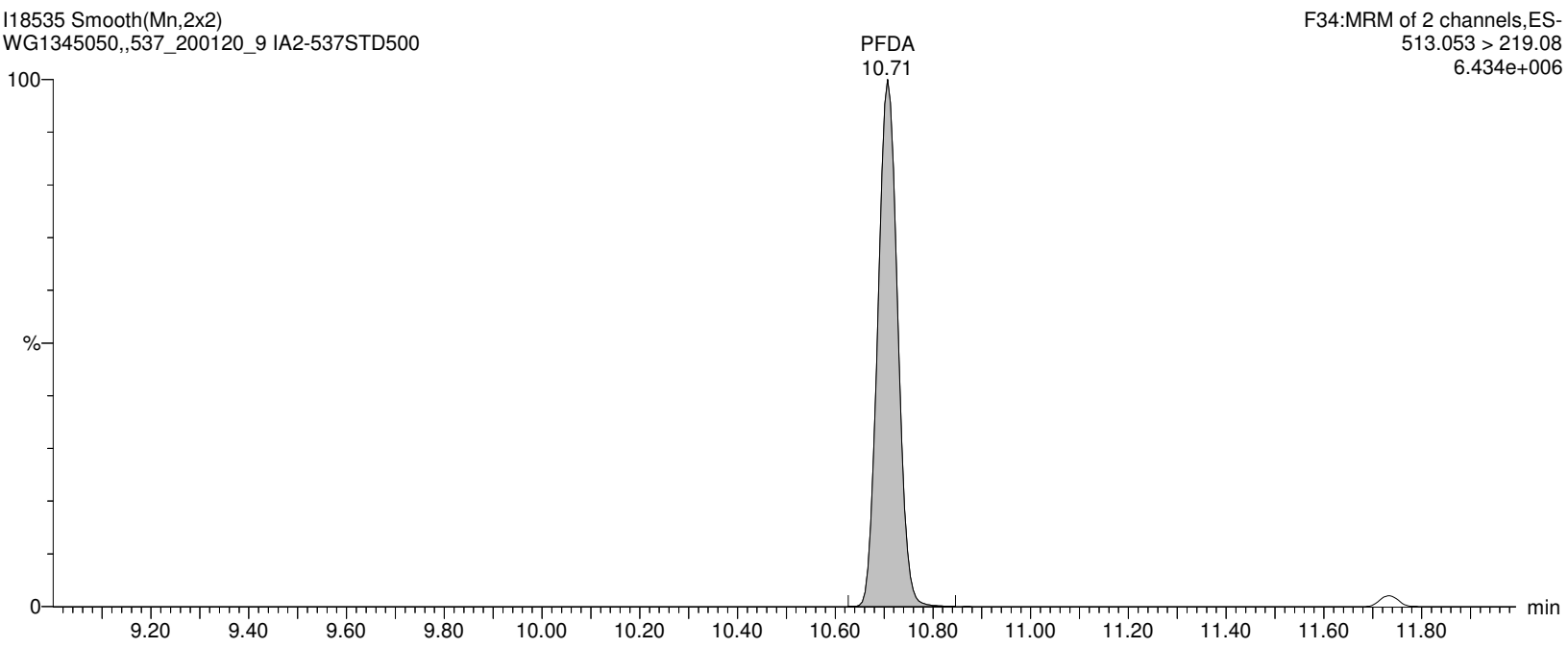
**PFDA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICAL_A.qld
Last Altered: Friday, February 28, 2020 09:12:40 Eastern Standard Time
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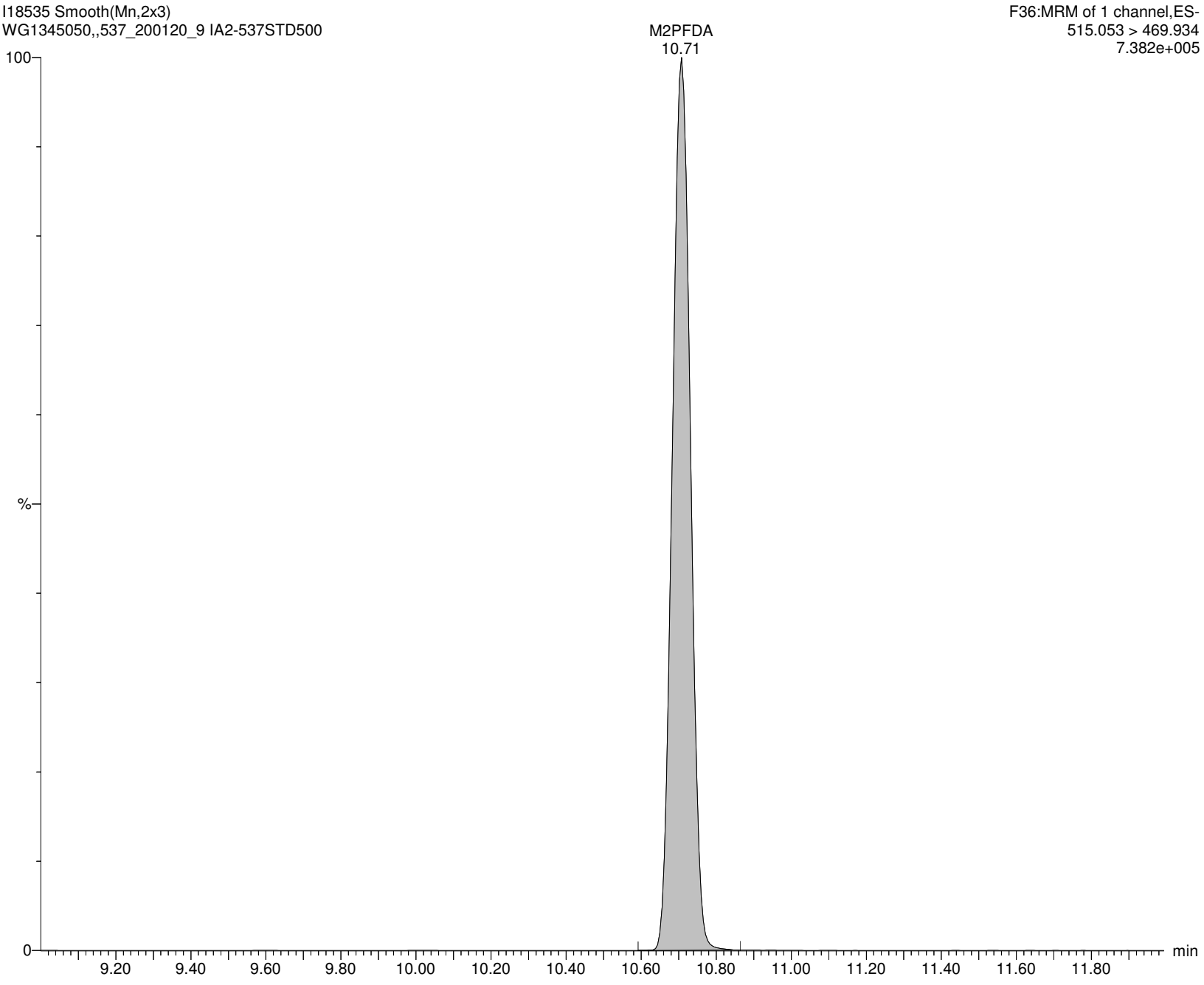



all concentration units in (ng/mL)

Alpha Analytical Inc.
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Last Altered: Friday, February 28, 2020 09:12:40 Eastern Standard Time
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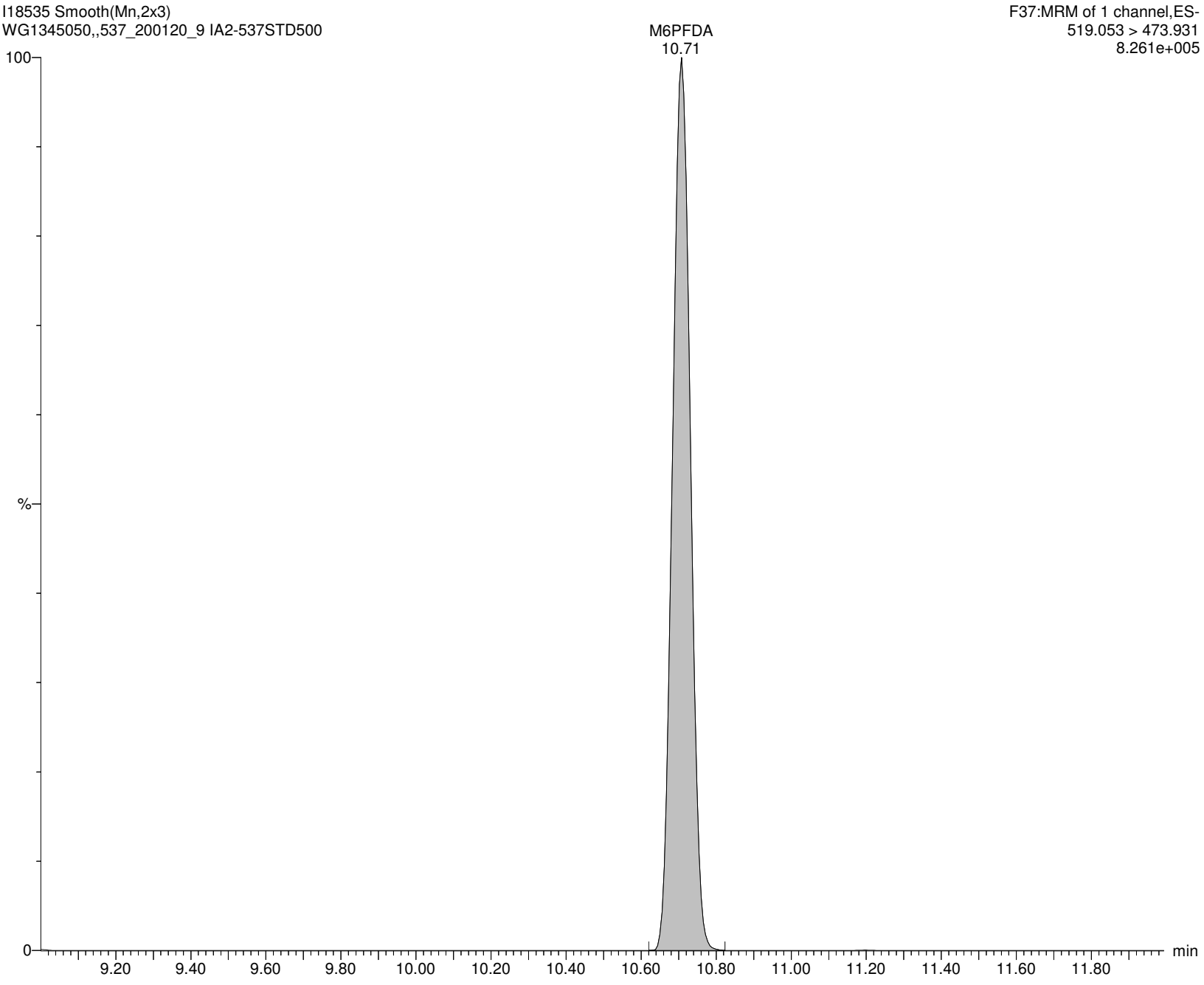
**M6PFDA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
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**Tune Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\190709_TUNE.IPR**
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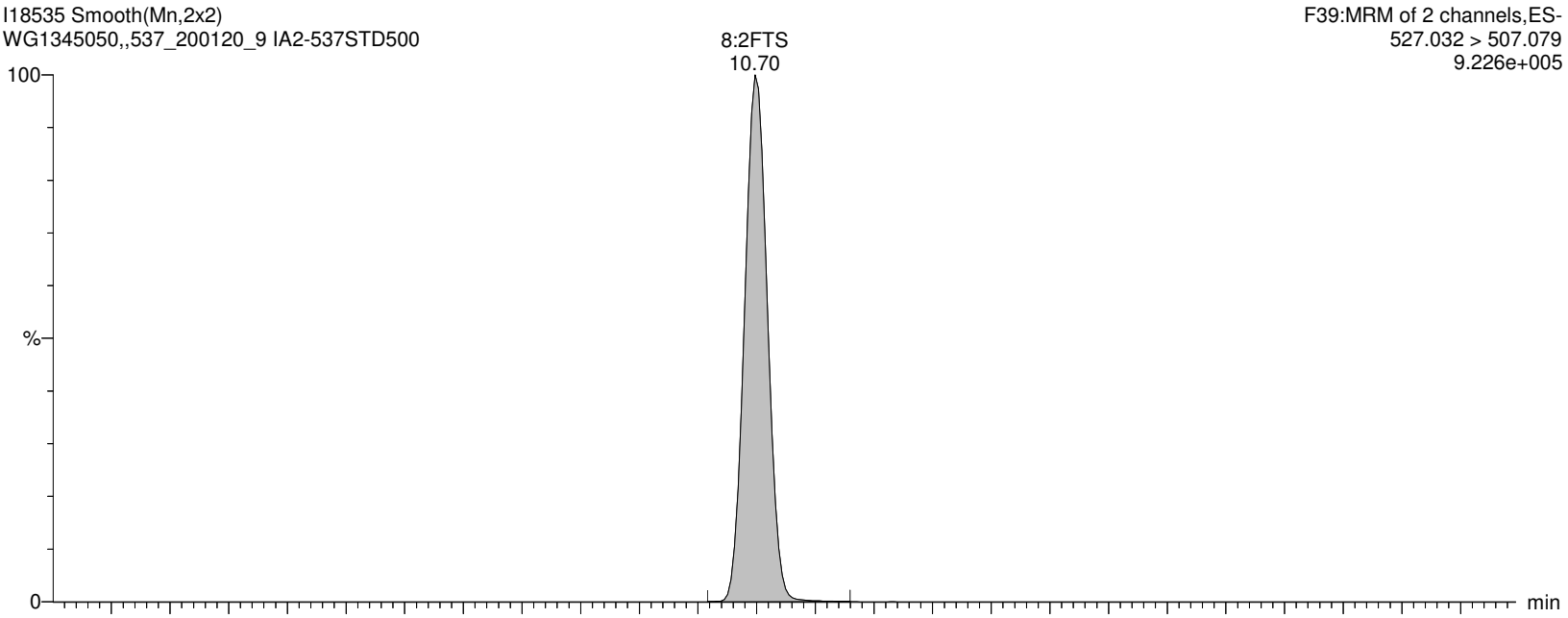


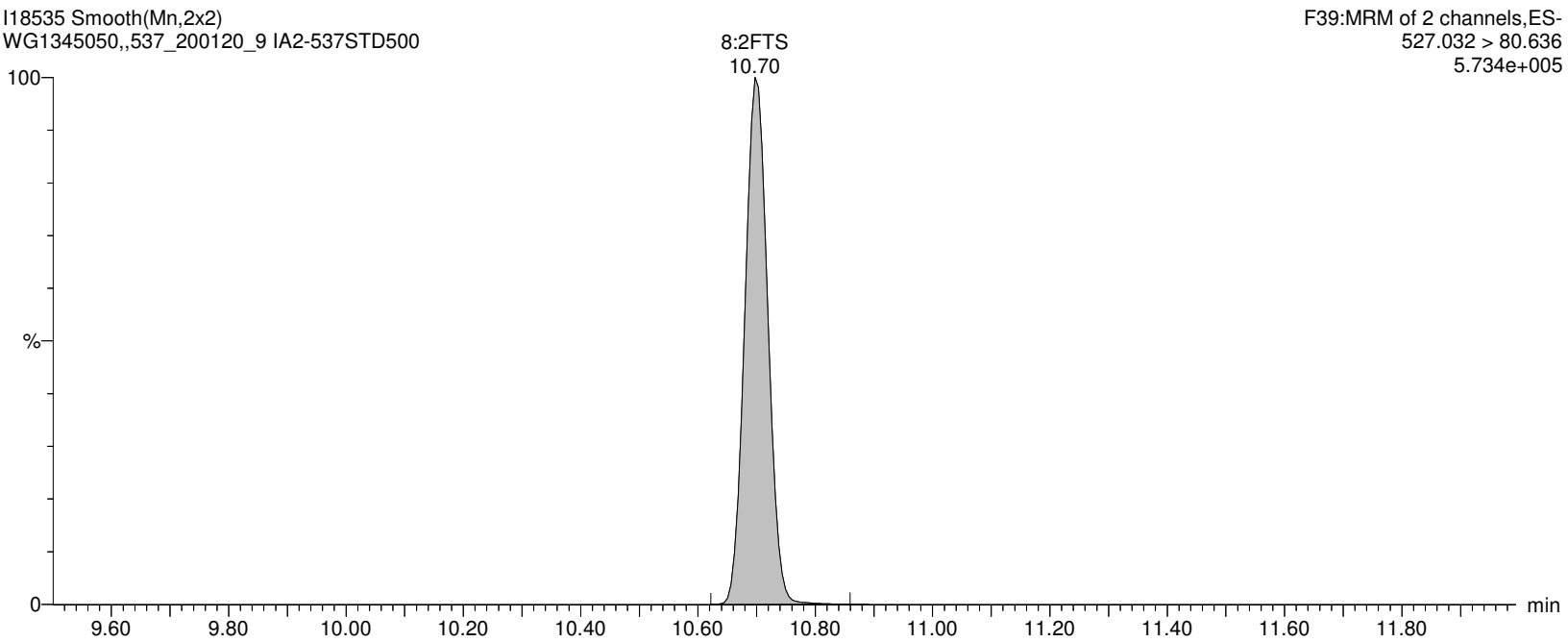



all concentration units in (ng/mL)

Alpha Analytical Inc.
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Last Altered: Friday, February 28, 2020 09:12:40 Eastern Standard Time
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**Vial: 1:B,2**
**Instrument: XEVO-TQSmicro#QEA0276**
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**Tune Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\190709_TUNE.IPR**
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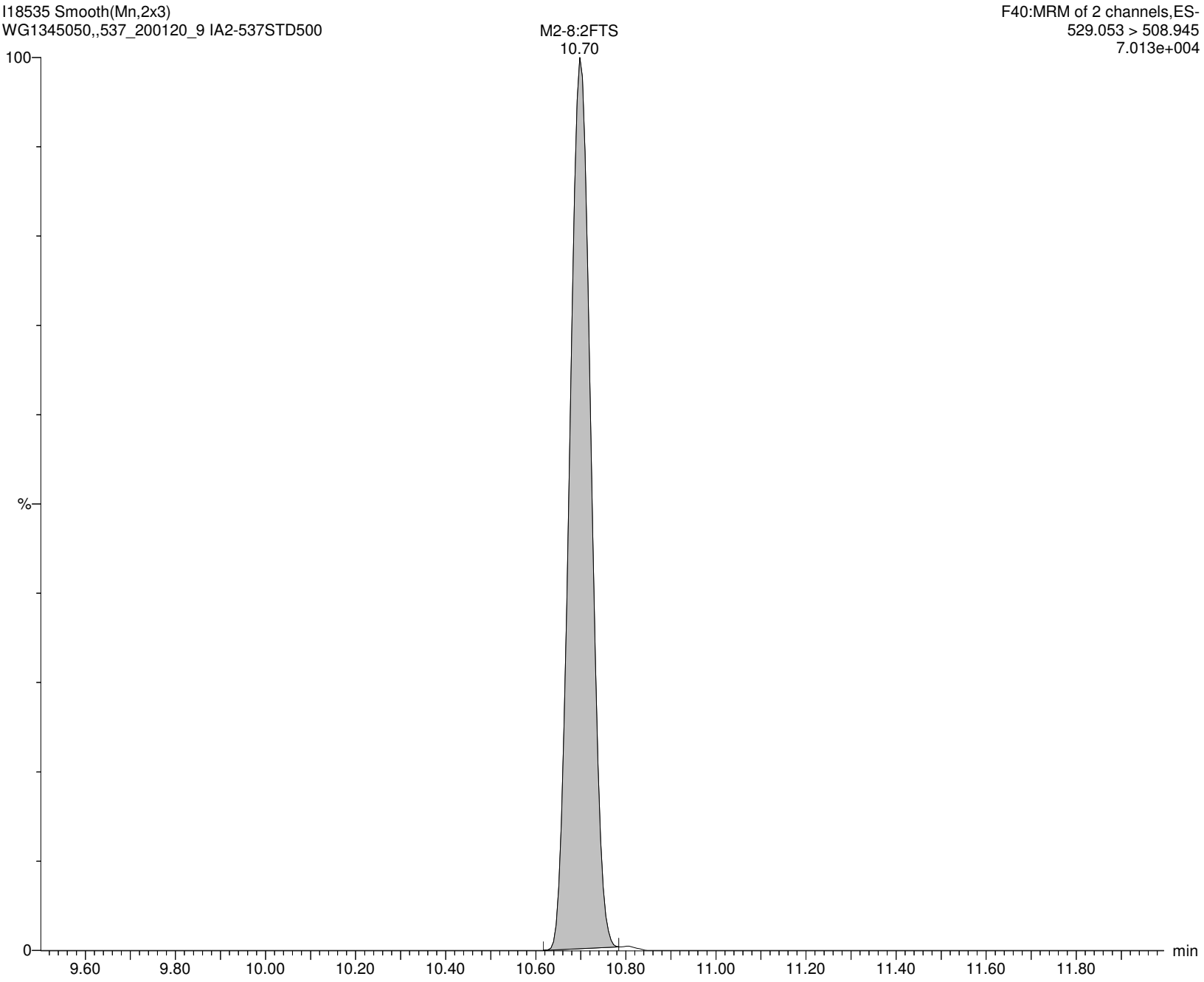
**M2-8:2FTS**





all concentration units in (ng/mL)

Alpha Analytical Inc.
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Last Altered: Friday, February 28, 2020 09:12:40 Eastern Standard Time
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**Vial: 1:B,2**
**Instrument: XEVO-TQSmicro#QEA0276**
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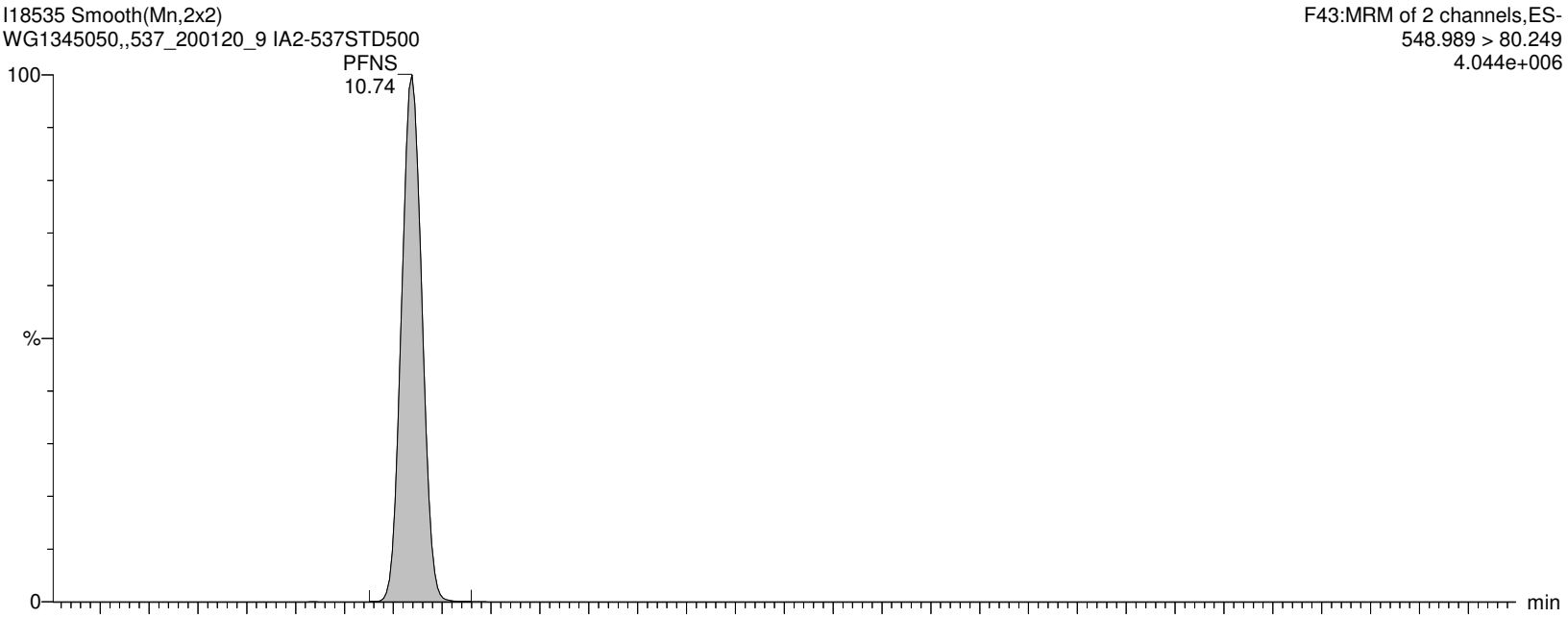
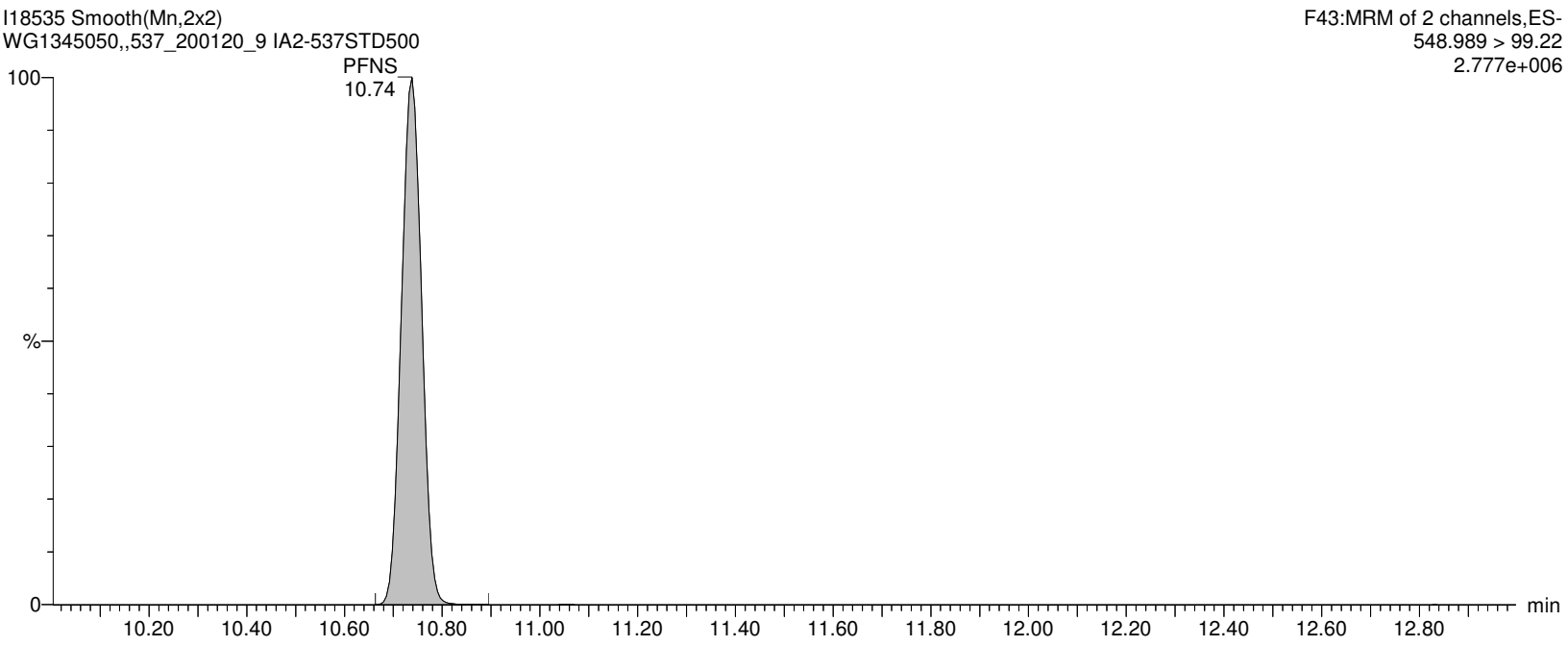
**PFNS**





all concentration units in (ng/mL)

Alpha Analytical Inc.
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Last Altered: Friday, February 28, 2020 09:12:40 Eastern Standard Time
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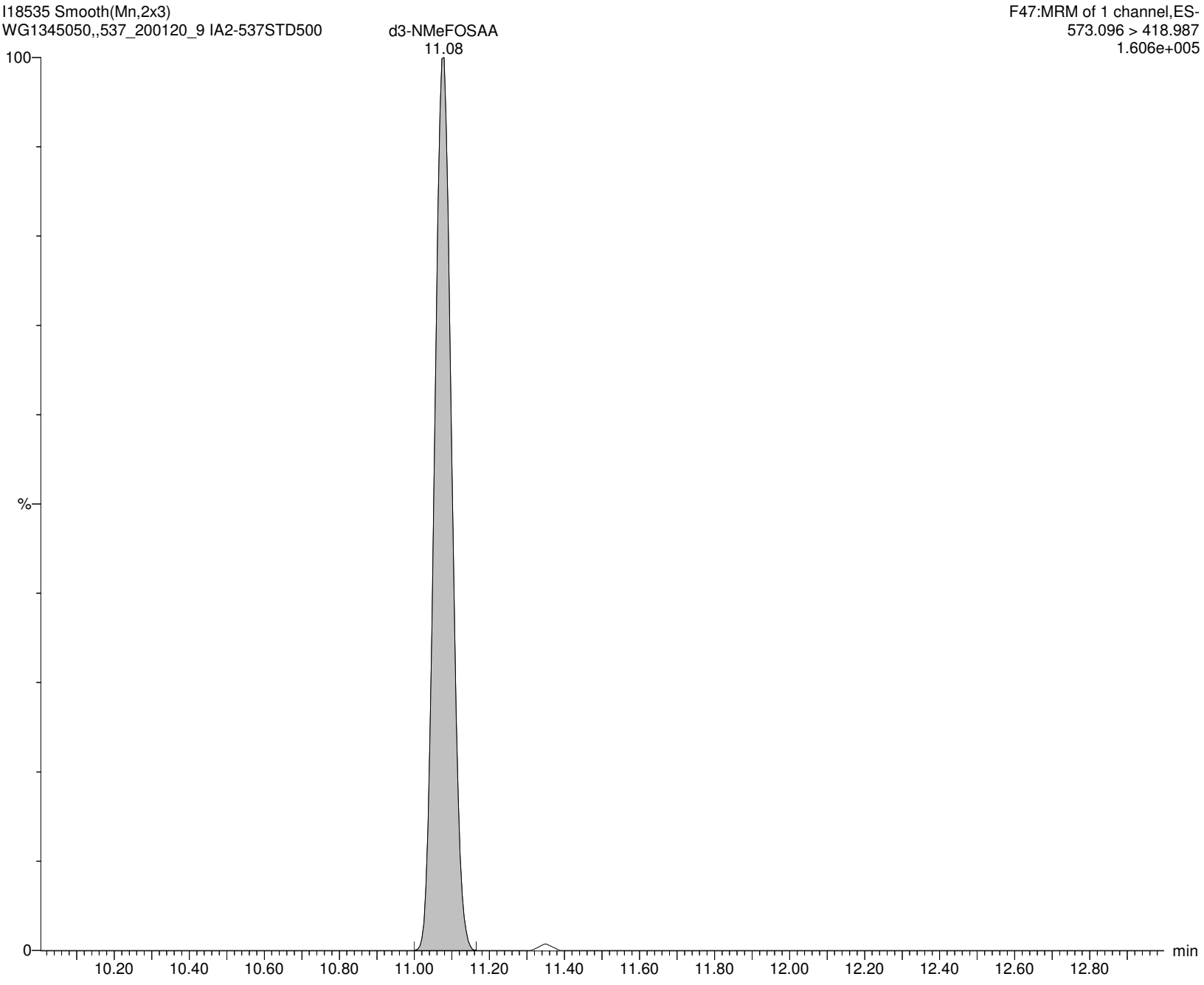



all concentration units in (ng/mL)

Alpha Analytical Inc.
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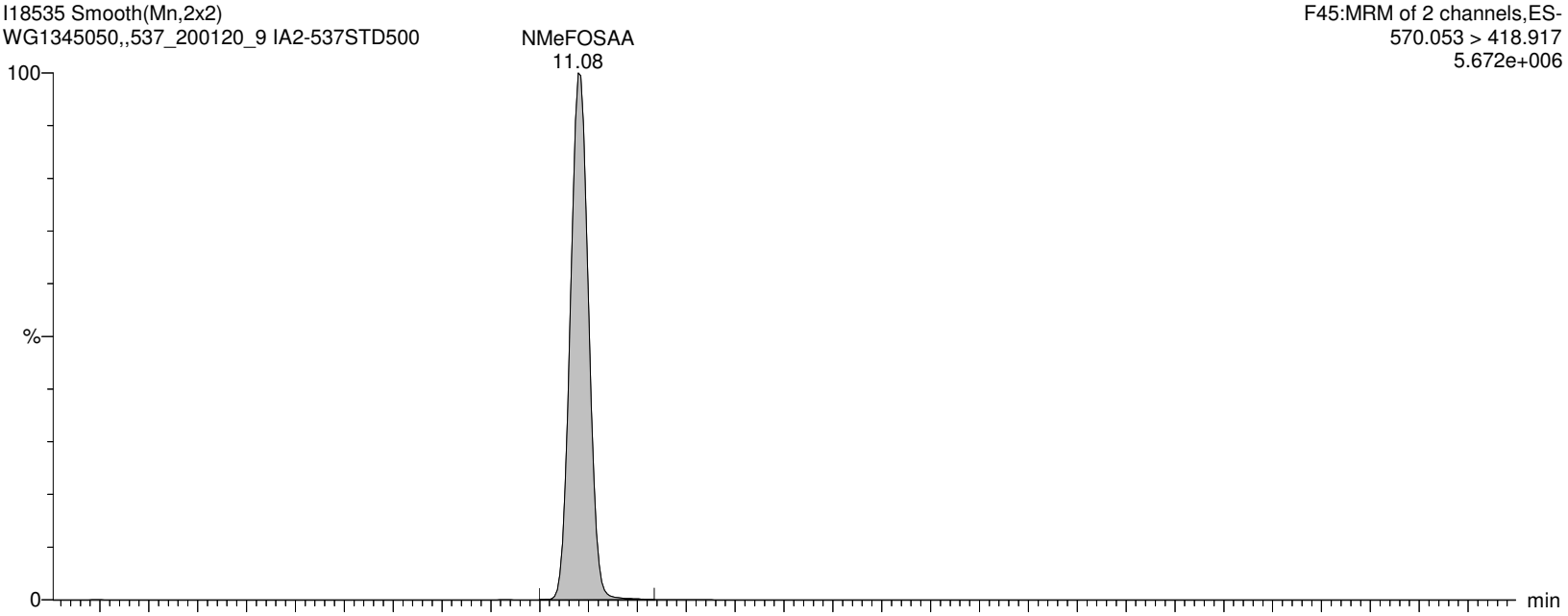
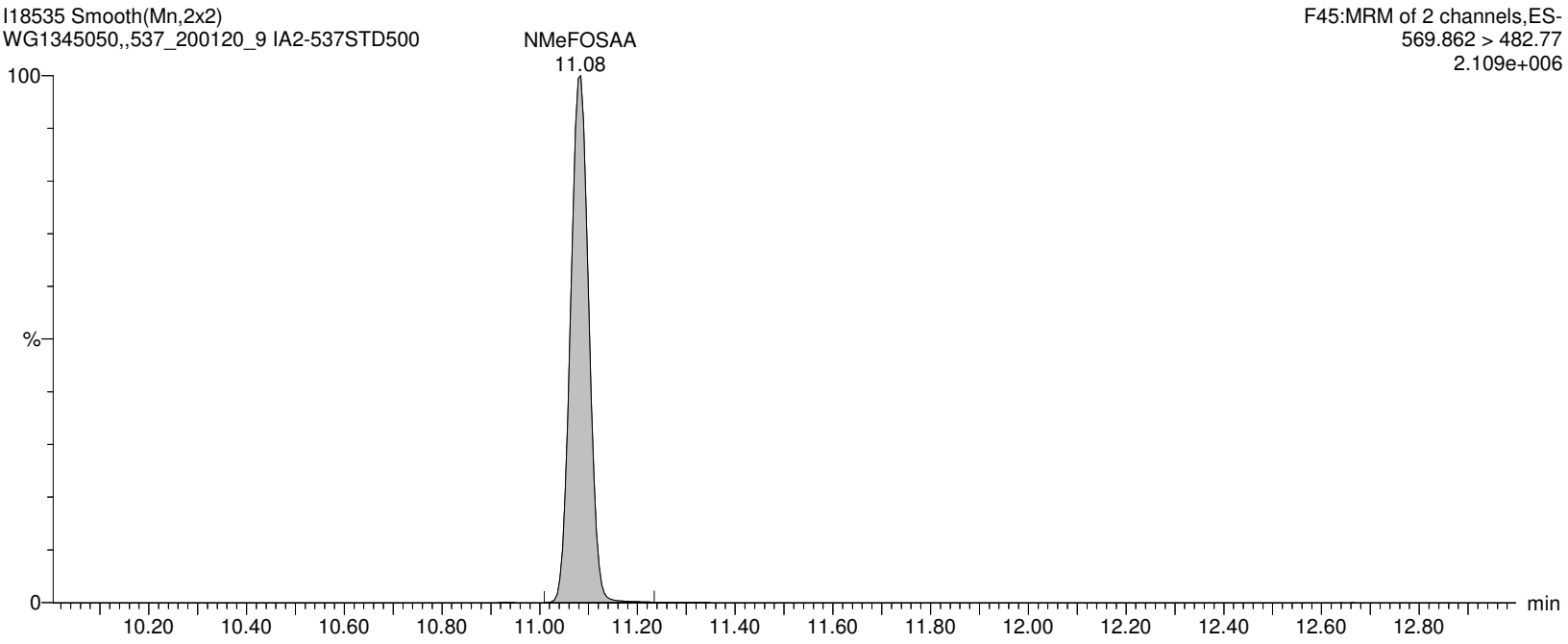
**Vial: 1:B,2**
**Instrument: XEVO-TQSmicro#QEA0276**
**Inlet Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\LCMS_537_ISO_MeOH**
**Tune Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\190709_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**NMeFOSAA**



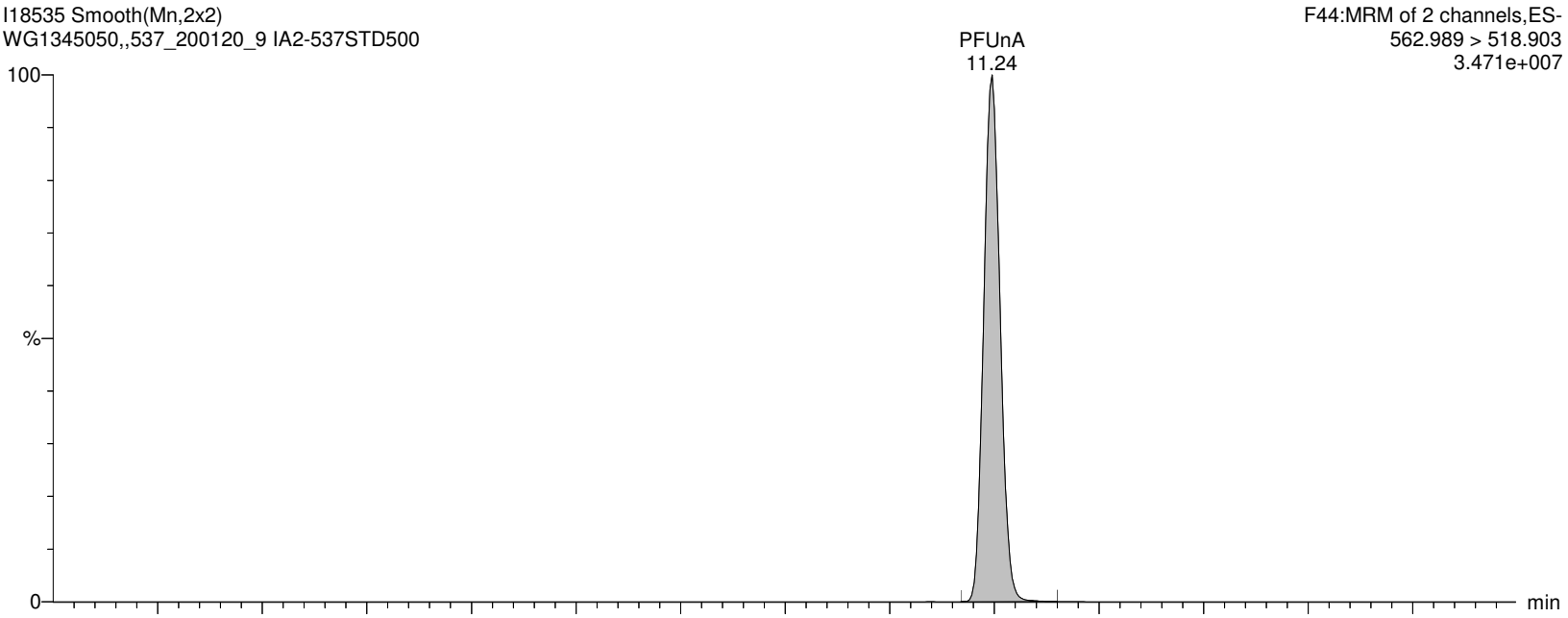


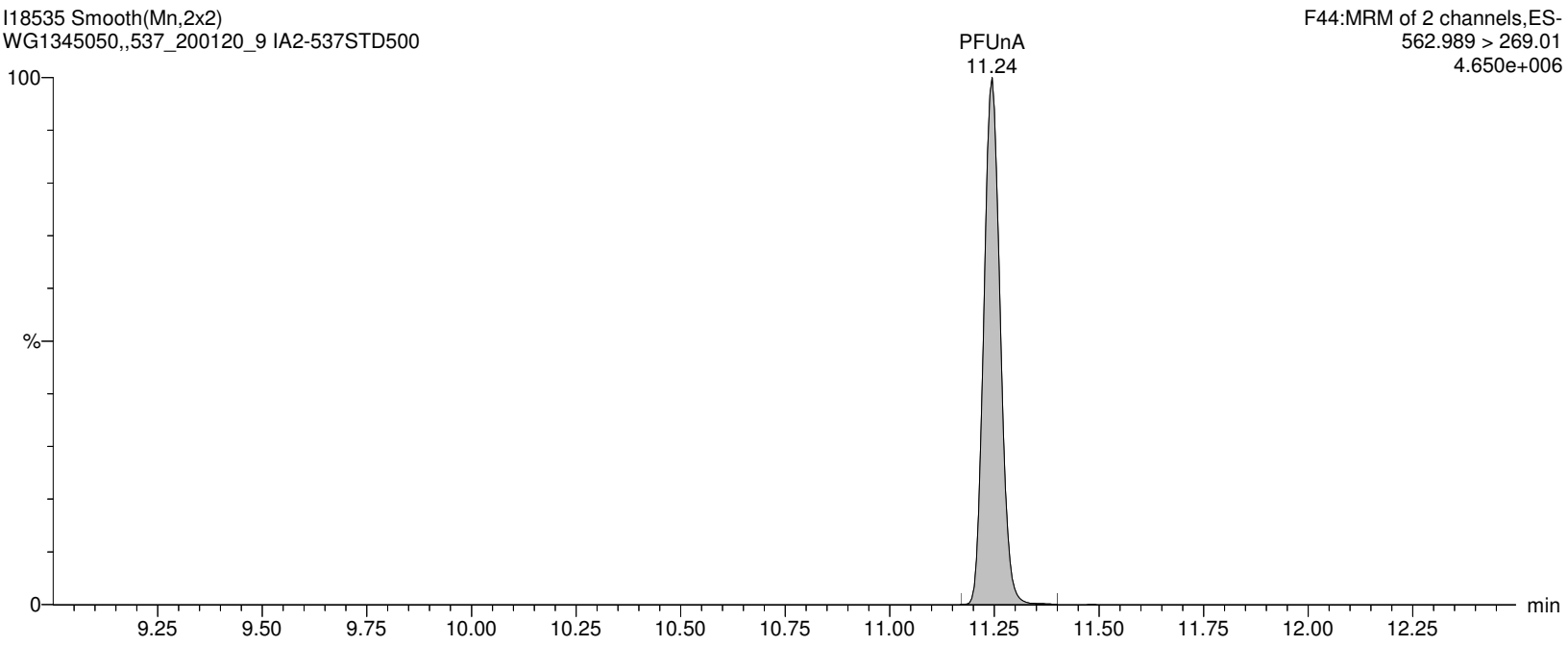
all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICAL_A.qld
Last Altered: Friday, February 28, 2020 09:12:40 Eastern Standard Time
Printed: Friday, February 28, 2020 09:27:57 Eastern Standard Time

**Name: I18535**
**ID: IA2-537STD500**
**Date: 27-Feb-2020**
**Time: 15:41:35**
**Description: WG1345050,,537_200120_9**
**User: LCMS01:SG**
**Vial: 1:B,2**
**Instrument: XEVO-TQSmicro#QEA0276**
**Inlet Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\LCMS_537_ISO_MeOH**
**Tune Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\190709_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**PFUnA**



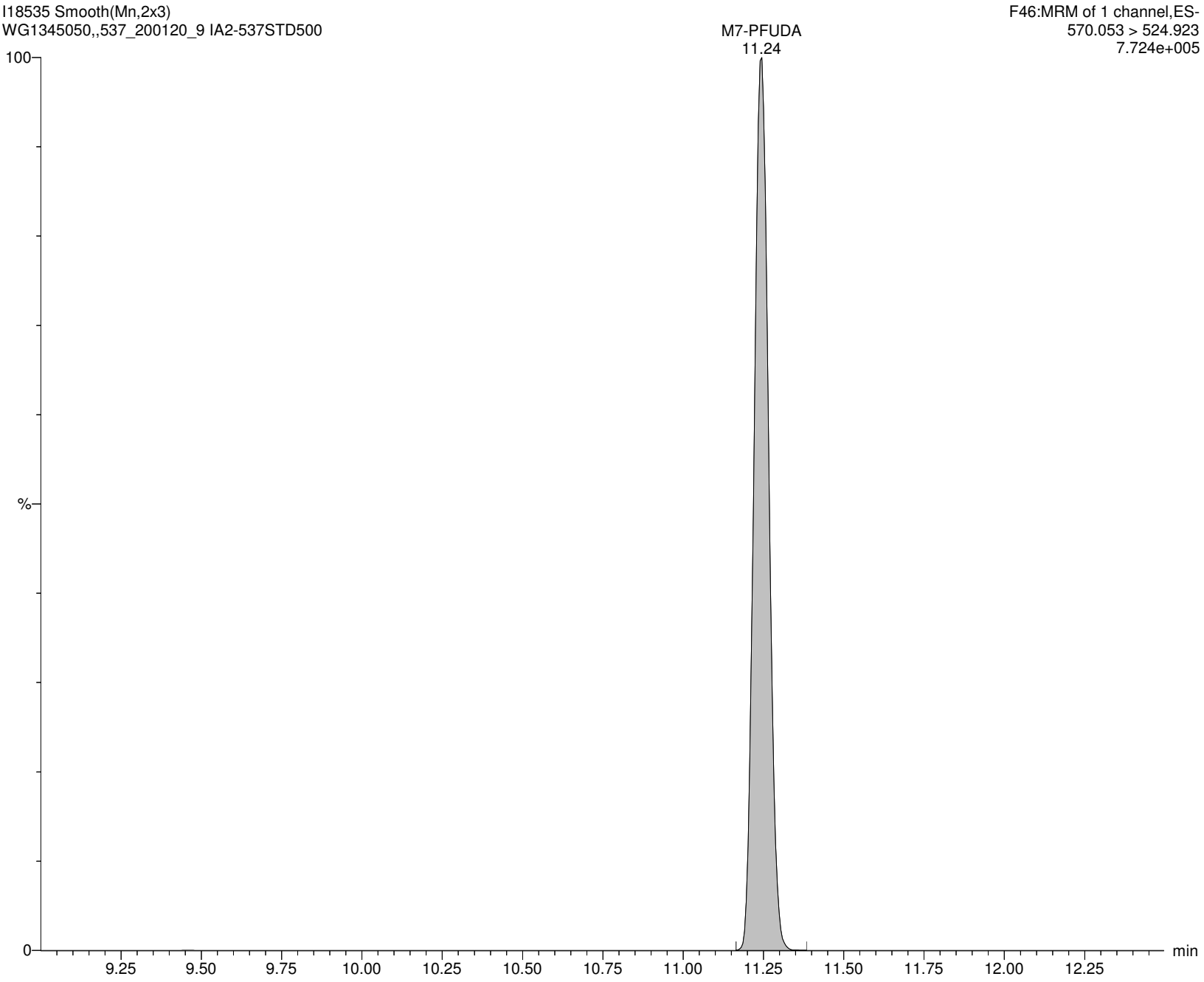


all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICAL_A.qld
Last Altered: Friday, February 28, 2020 09:12:40 Eastern Standard Time
Printed: Friday, February 28, 2020 09:27:57 Eastern Standard Time

**Name: I18535**
**ID: IA2-537STD500**
**Date: 27-Feb-2020**
**Time: 15:41:35**
**Description: WG1345050,,537_200120_9**
**User: LCMS01:SG**
**Vial: 1:B,2**
**Instrument: XEVO-TQSmicro#QEA0276**
**Inlet Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\LCMS_537_ISO_MeOH**
**Tune Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\190709_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**M7-PFUDA**



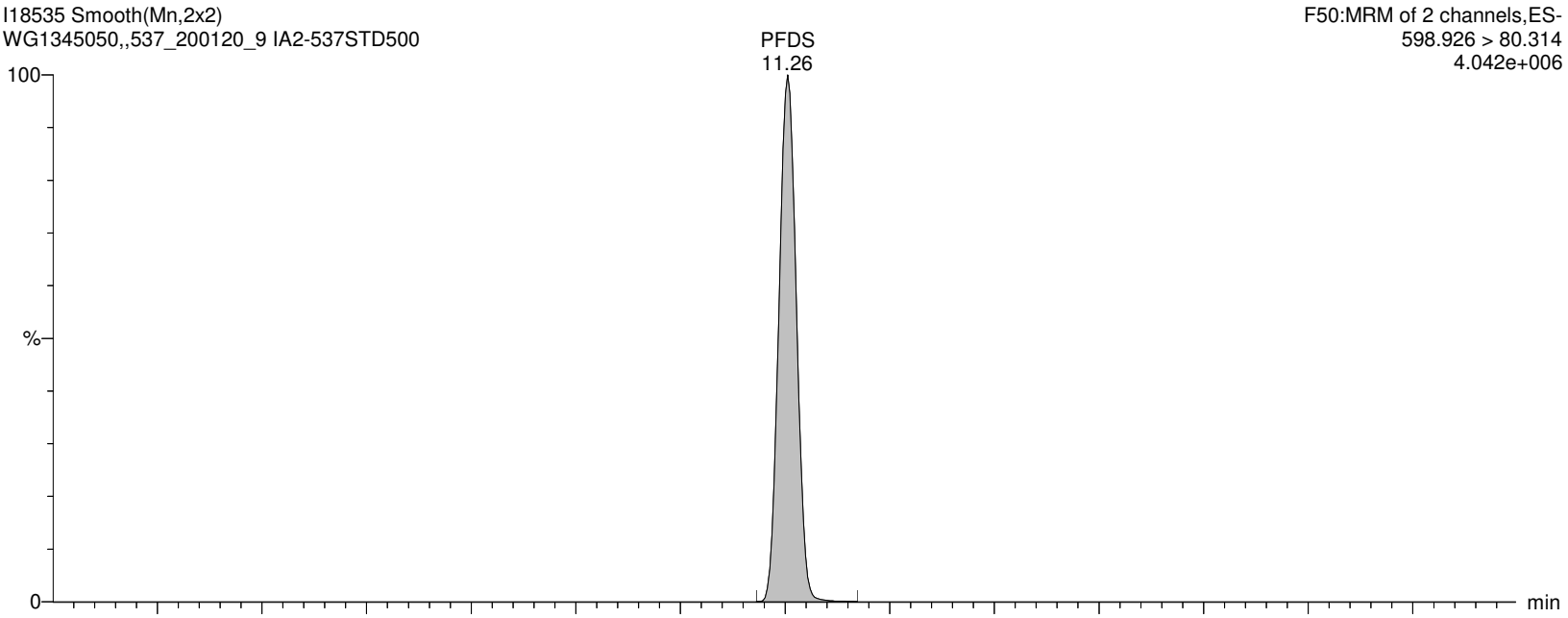


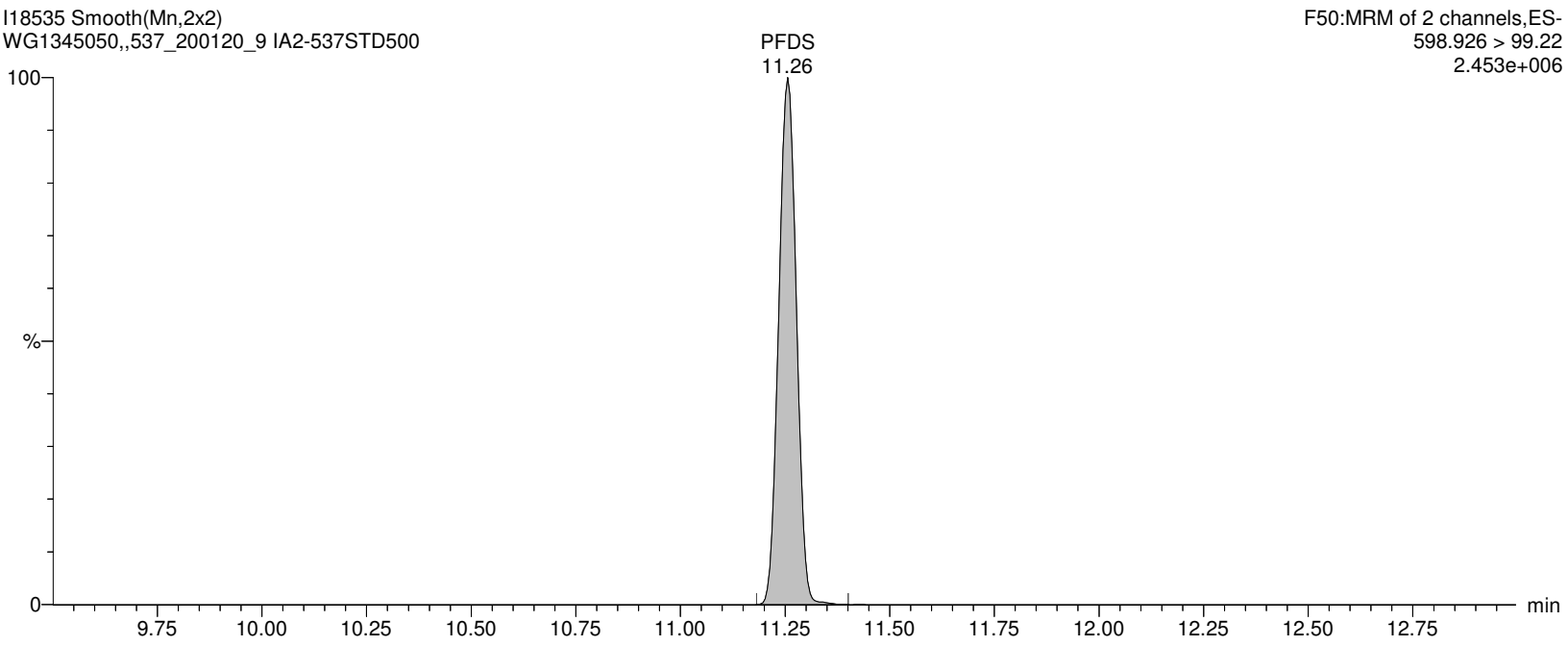
all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICAL_A.qld
Last Altered: Friday, February 28, 2020 09:12:40 Eastern Standard Time
Printed: Friday, February 28, 2020 09:27:57 Eastern Standard Time

**Name: I18535**
**ID: IA2-537STD500**
**Date: 27-Feb-2020**
**Time: 15:41:35**
**Description: WG1345050,,537_200120_9**
**User: LCMS01:SG**
**Vial: 1:B,2**
**Instrument: XEVO-TQSmicro#QEA0276**
**Inlet Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\LCMS_537_ISO_MeOH**
**Tune Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\190709_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**PFDS**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICAL_A.qld
Last Altered: Friday, February 28, 2020 09:12:40 Eastern Standard Time
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**Name: I18535**
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**Date: 27-Feb-2020**
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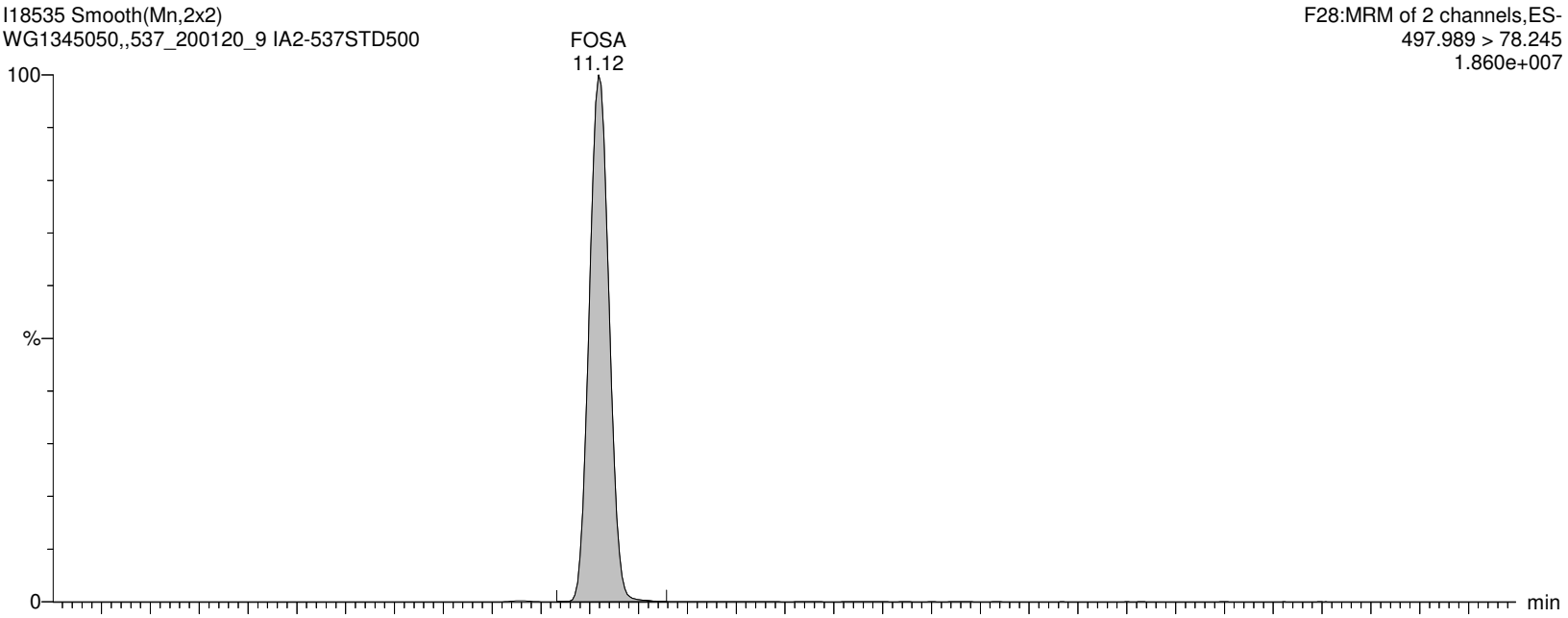
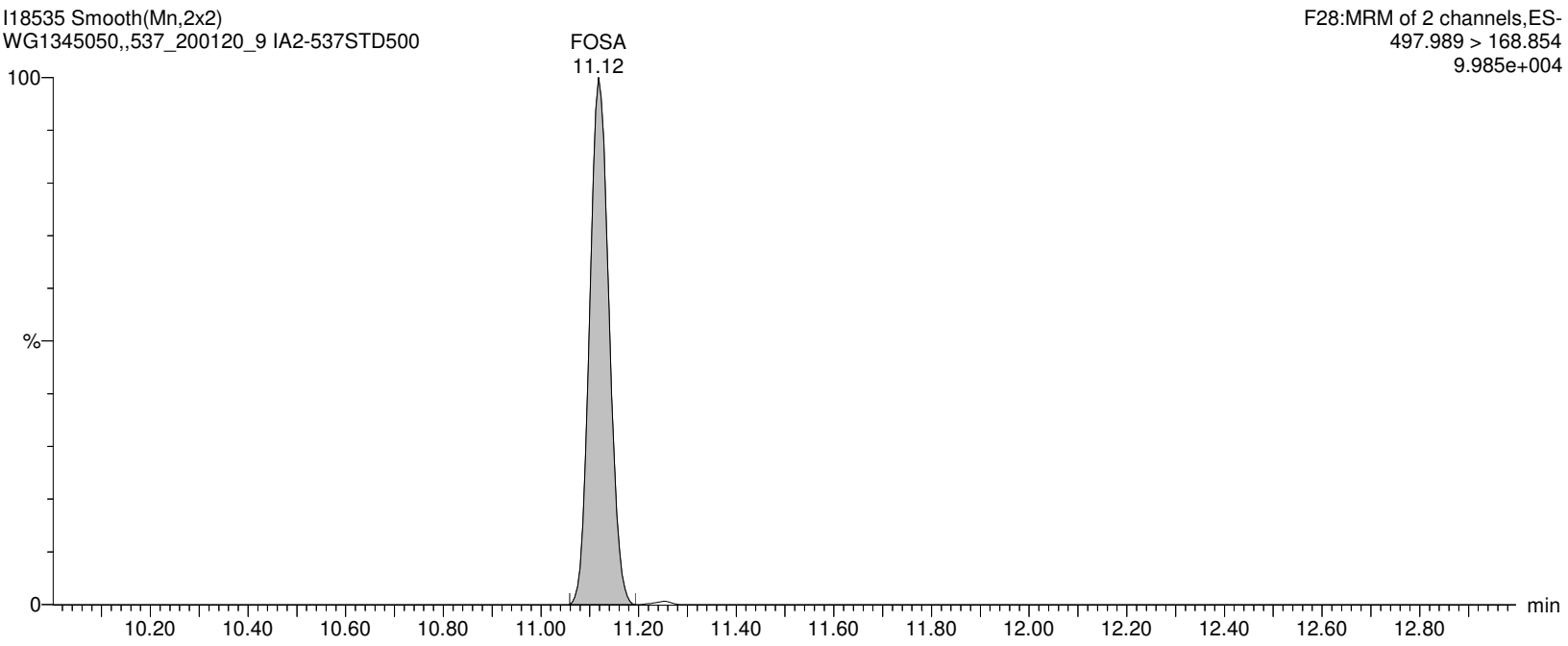
**Description: WG1345050,,537_200120_9**
**User: LCMS01:SG**
**Vial: 1:B,2**
**Instrument: XEVO-TQSmicro#QEA0276**
**Inlet Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\LCMS_537_ISO_MeOH**
**Tune Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\190709_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**FOSA**



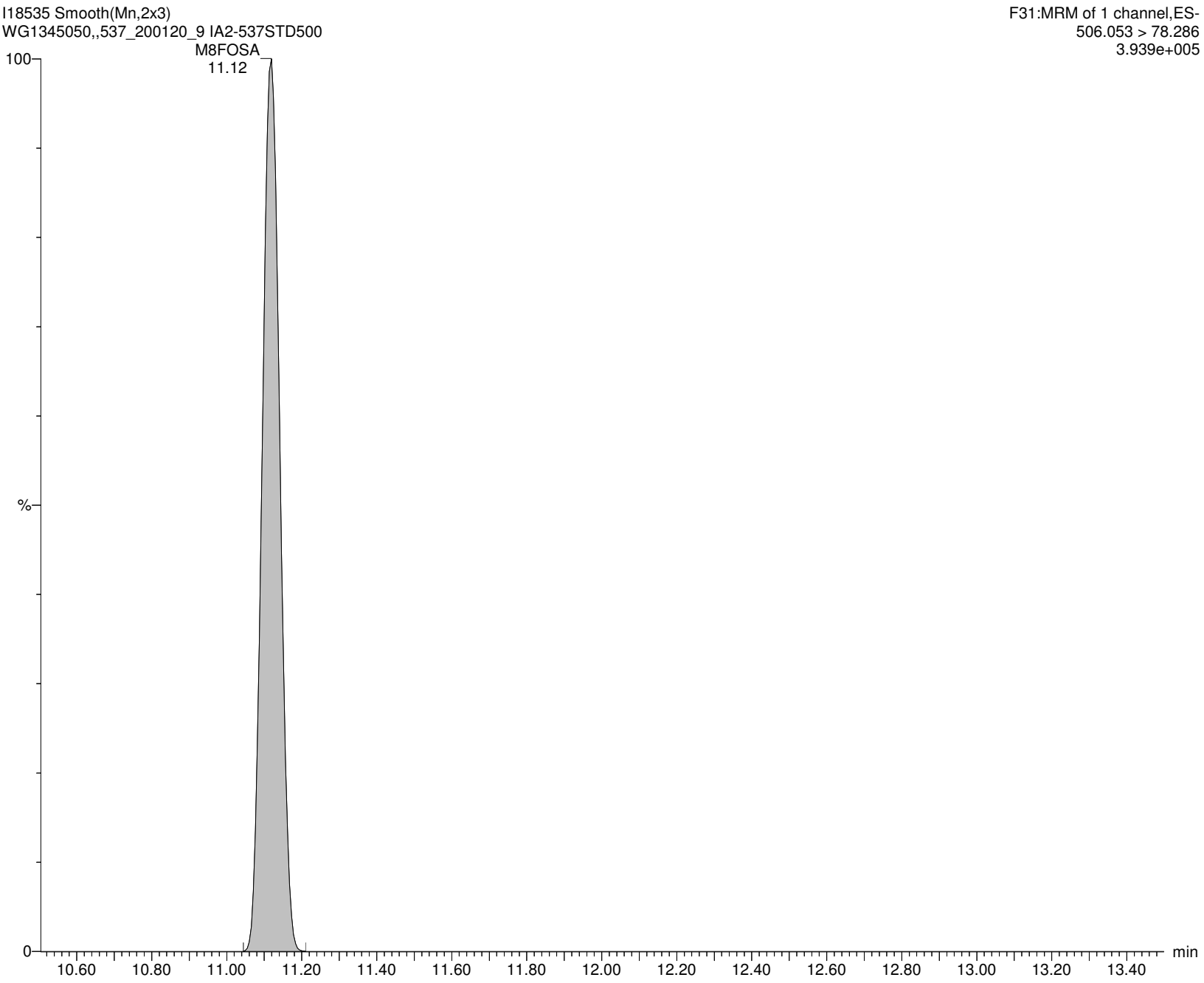


all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICAL_A.qld
Last Altered: Friday, February 28, 2020 09:12:40 Eastern Standard Time
Printed: Friday, February 28, 2020 09:27:57 Eastern Standard Time

**Name: I18535**
**ID: IA2-537STD500**
**Date: 27-Feb-2020**
**Time: 15:41:35**
**Description: WG1345050,,537_200120_9**
**User: LCMS01:SG**
**Vial: 1:B,2**
**Instrument: XEVO-TQSmicro#QEA0276**
**Inlet Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\LCMS_537_ISO_MeOH**
**Tune Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\190709_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**M8FOSA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICAL_A.qld
Last Altered: Friday, February 28, 2020 09:12:40 Eastern Standard Time
Printed: Friday, February 28, 2020 09:27:57 Eastern Standard Time

**Name: I18535**
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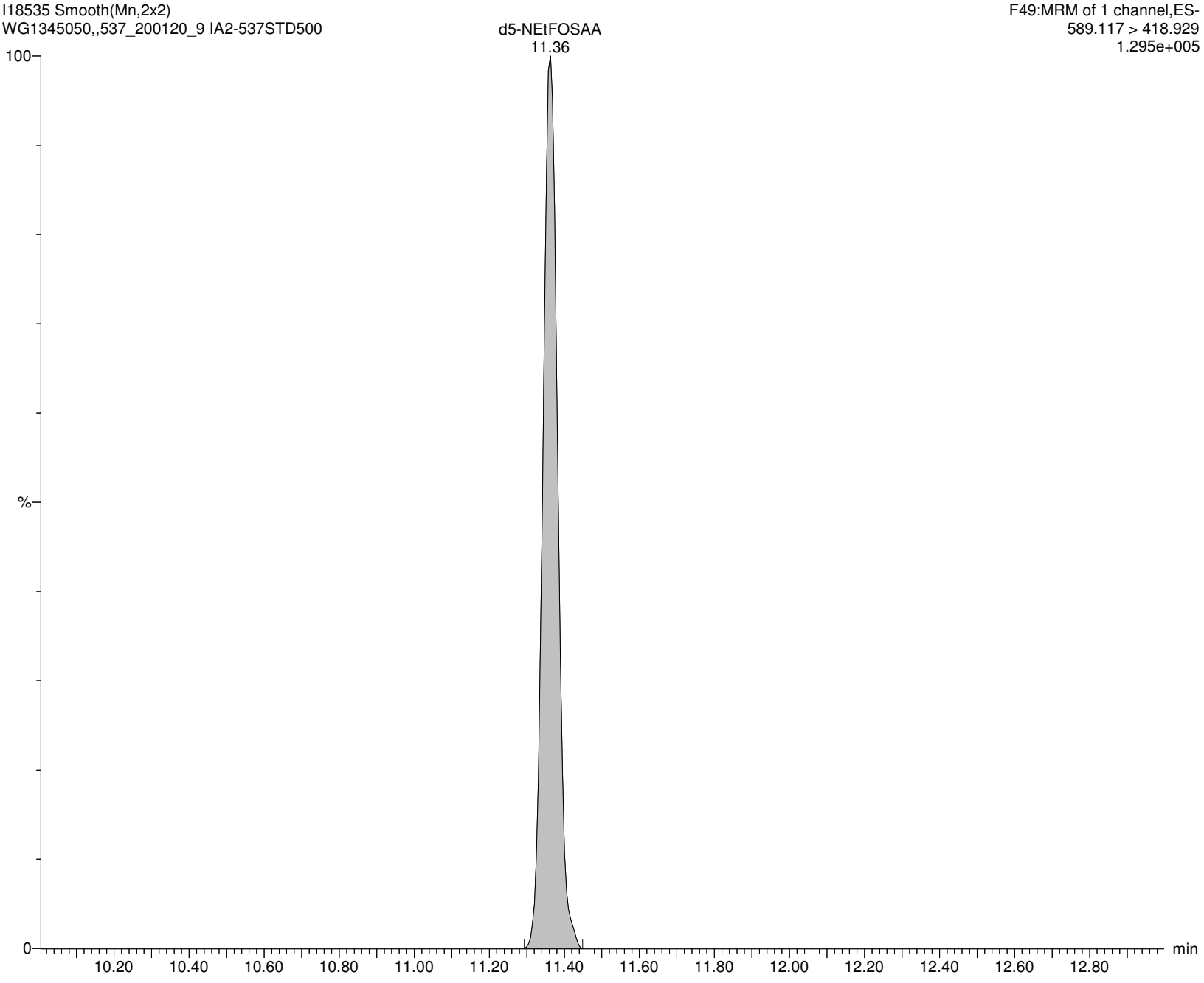
**Date: 27-Feb-2020**
**Time: 15:41:35**
**Description: WG1345050,,537_200120_9**
**User: LCMS01:SG**
**Vial: 1:B,2**
**Instrument: XEVO-TQSmicro#QEA0276**
**Inlet Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\LCMS_537_ISO_MeOH**
**Tune Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\190709_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**d5-NEtFOSAA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICAL_A.qld
Last Altered: Friday, February 28, 2020 09:12:40 Eastern Standard Time
Printed: Friday, February 28, 2020 09:27:57 Eastern Standard Time

**Name: I18535**
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**Date: 27-Feb-2020**
**Time: 15:41:35**
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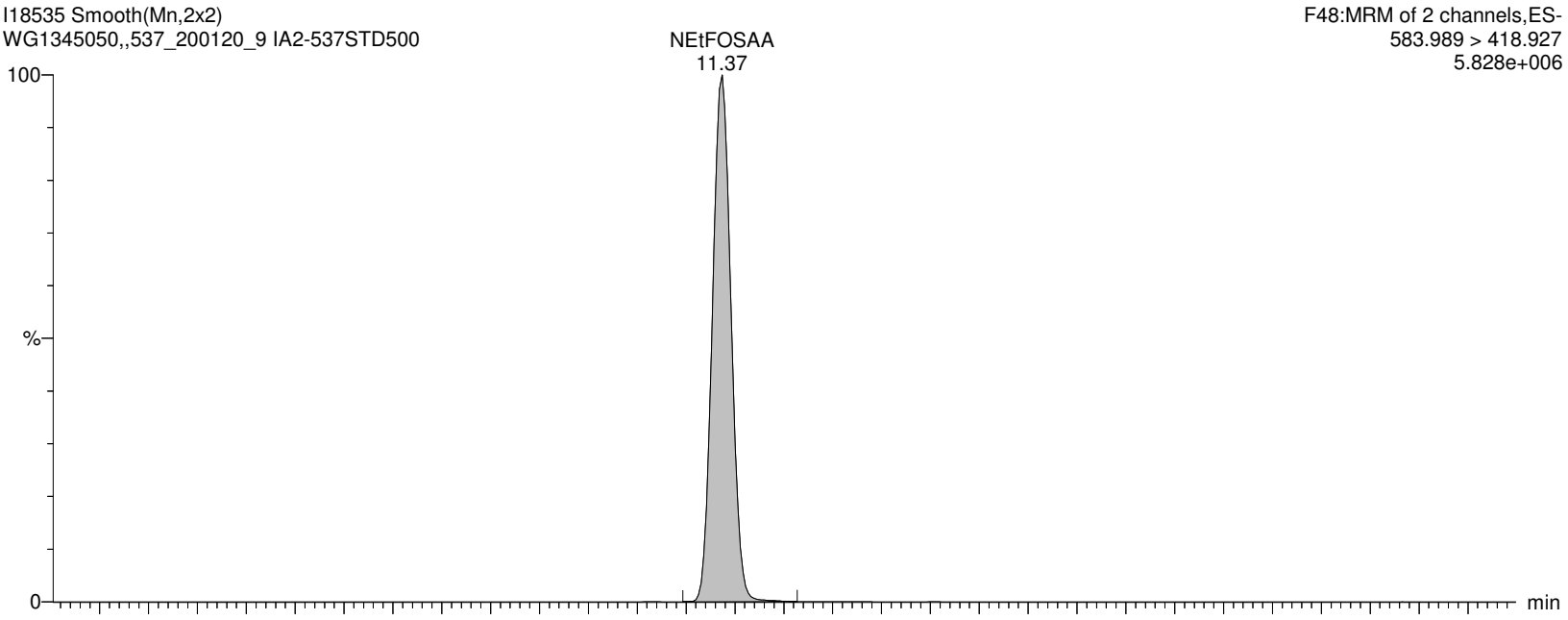
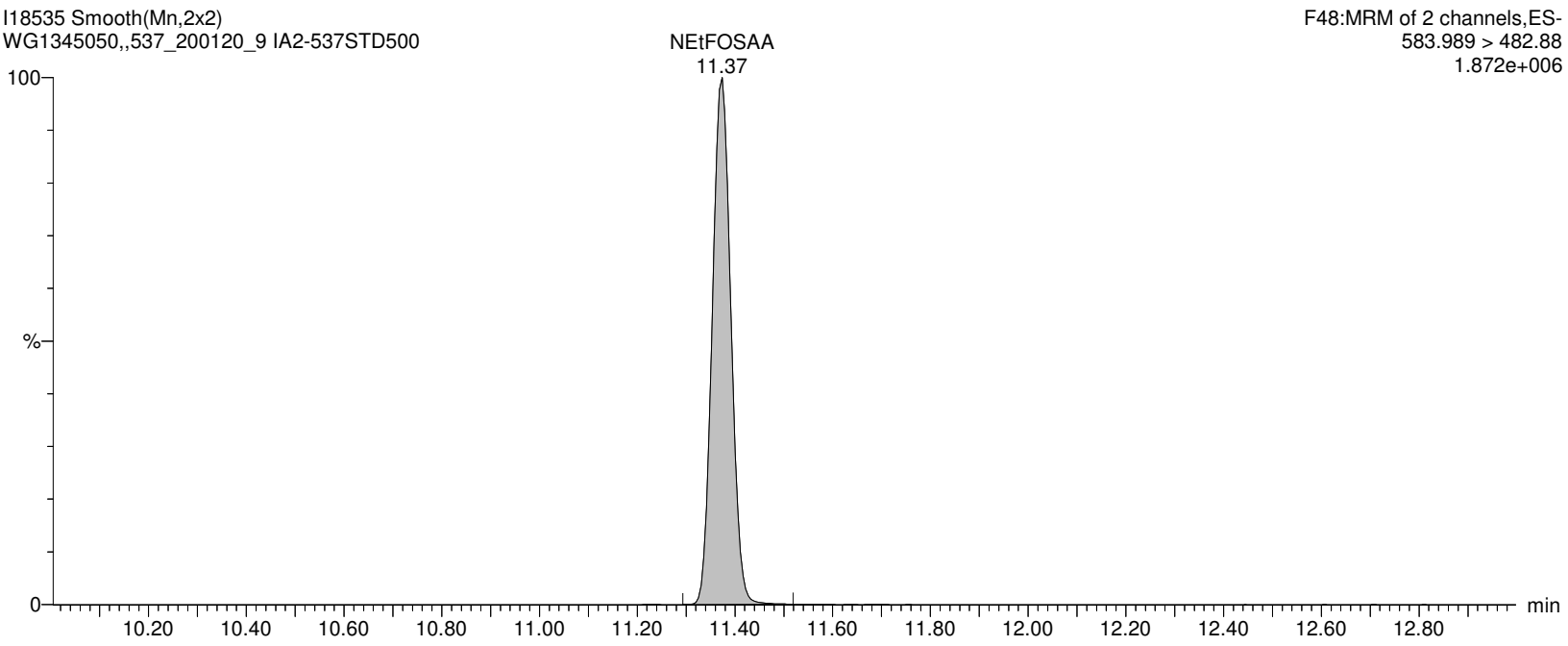
**Vial: 1:B,2**
**Instrument: XEVO-TQSmicro#QEA0276**
**Inlet Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\LCMS_537_ISO_MeOH**
**Tune Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\190709_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**NEtFOSAA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICAL_A.qld
Last Altered: Friday, February 28, 2020 09:12:40 Eastern Standard Time
Printed: Friday, February 28, 2020 09:27:57 Eastern Standard Time

**Name: I18535**
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**Date: 27-Feb-2020**
**Time: 15:41:35**
**Description: WG1345050,,537_200120_9**
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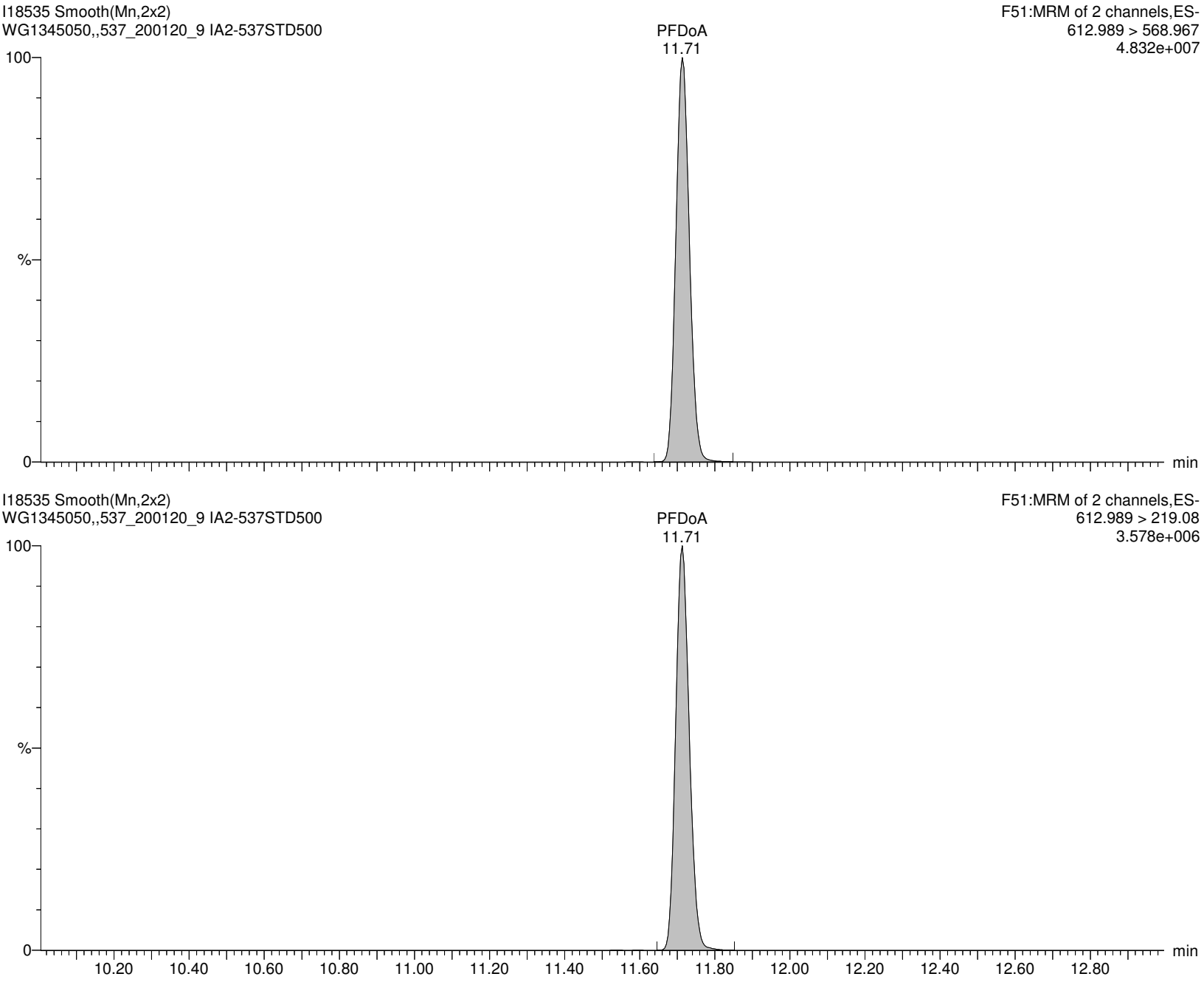
**Vial: 1:B,2**
**Instrument: XEVO-TQSmicro#QEA0276**
**Inlet Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\LCMS_537_ISO_MeOH**
**Tune Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\190709_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**PFDoA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICAL_A.qld
Last Altered: Friday, February 28, 2020 09:12:40 Eastern Standard Time
Printed: Friday, February 28, 2020 09:27:57 Eastern Standard Time

**Name: I18535**
**ID: IA2-537STD500**
**Date: 27-Feb-2020**
**Time: 15:41:35**
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**User: LCMS01:SG**
**Vial: 1:B,2**
**Instrument: XEVO-TQSmicro#QEA0276**
**Inlet Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\LCMS_537_ISO_MeOH**
**Tune Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\190709_TUNE.IPR**
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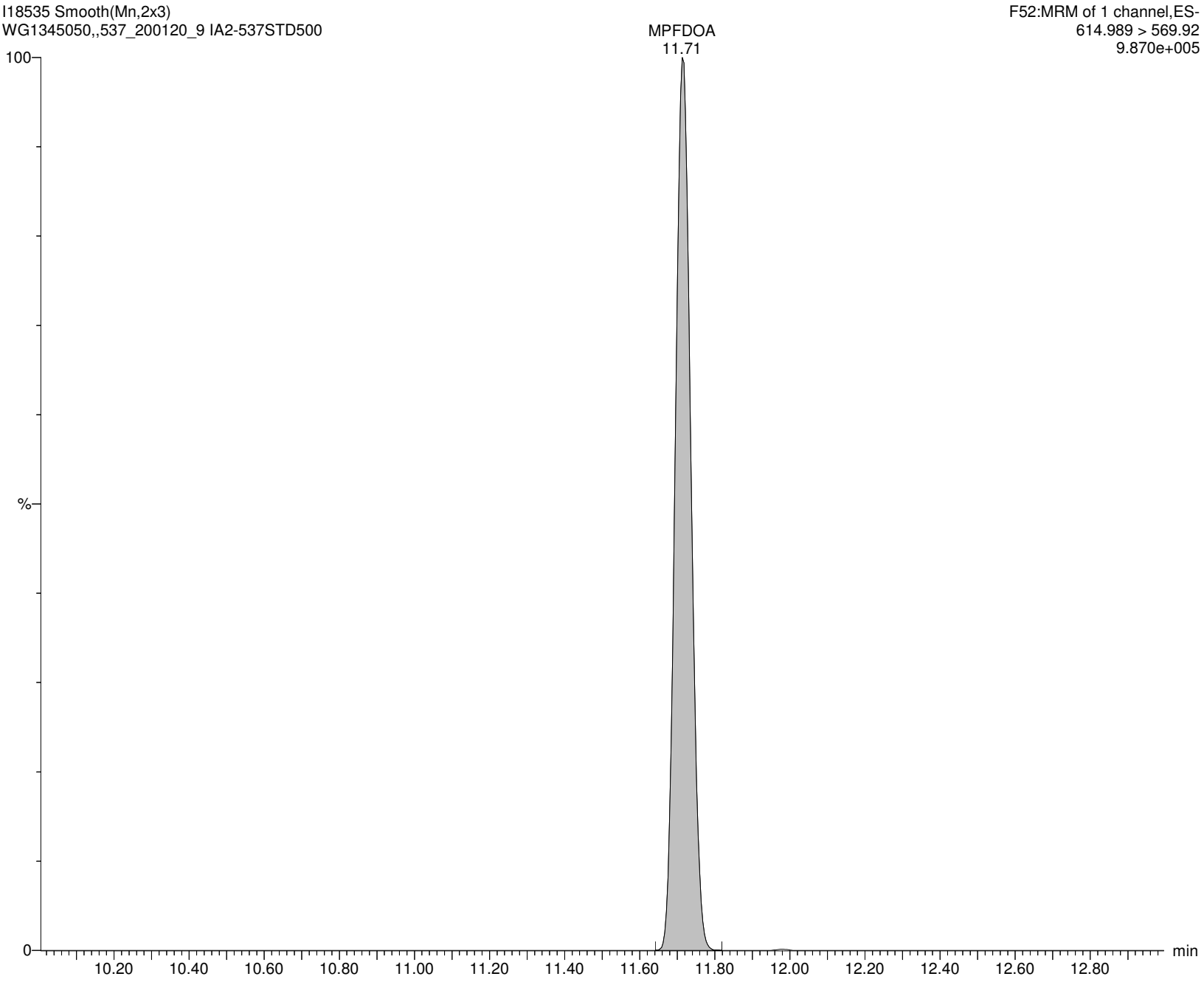
**MPFDOA**



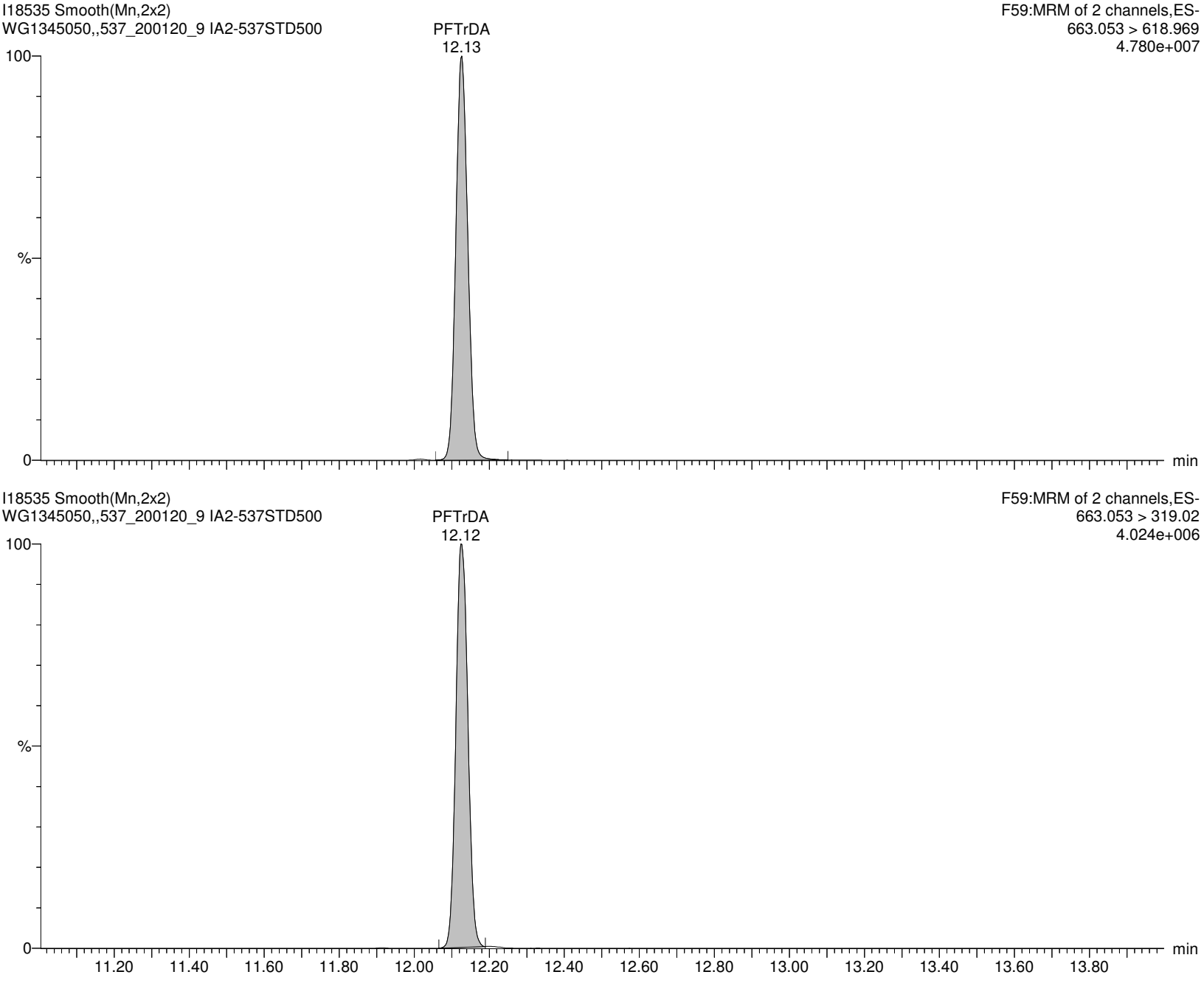


all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICAL_A.qld
Last Altered: Friday, February 28, 2020 09:12:40 Eastern Standard Time
Printed: Friday, February 28, 2020 09:27:57 Eastern Standard Time

**Name: I18535**
**ID: IA2-537STD500**
**Date: 27-Feb-2020**
**Time: 15:41:35**
**Description: WG1345050,,537_200120_9**
**User: LCMS01:SG**
**Vial: 1:B,2**
**Instrument: XEVO-TQSmicro#QEA0276**
**Inlet Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\LCMS_537_ISO_MeOH**
**Tune Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\190709_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**PFTrDA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICAL_A.qld
Last Altered: Friday, February 28, 2020 09:12:40 Eastern Standard Time
Printed: Friday, February 28, 2020 09:27:57 Eastern Standard Time

**Name: I18535**
**ID: IA2-537STD500**
**Date: 27-Feb-2020**
**Time: 15:41:35**
**Description: WG1345050,,537_200120_9**
**User: LCMS01:SG**
**Vial: 1:B,2**
**Instrument: XEVO-TQSmicro#QEA0276**
**Inlet Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\LCMS_537_ISO_MeOH**
**Tune Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\190709_TUNE.IPR**
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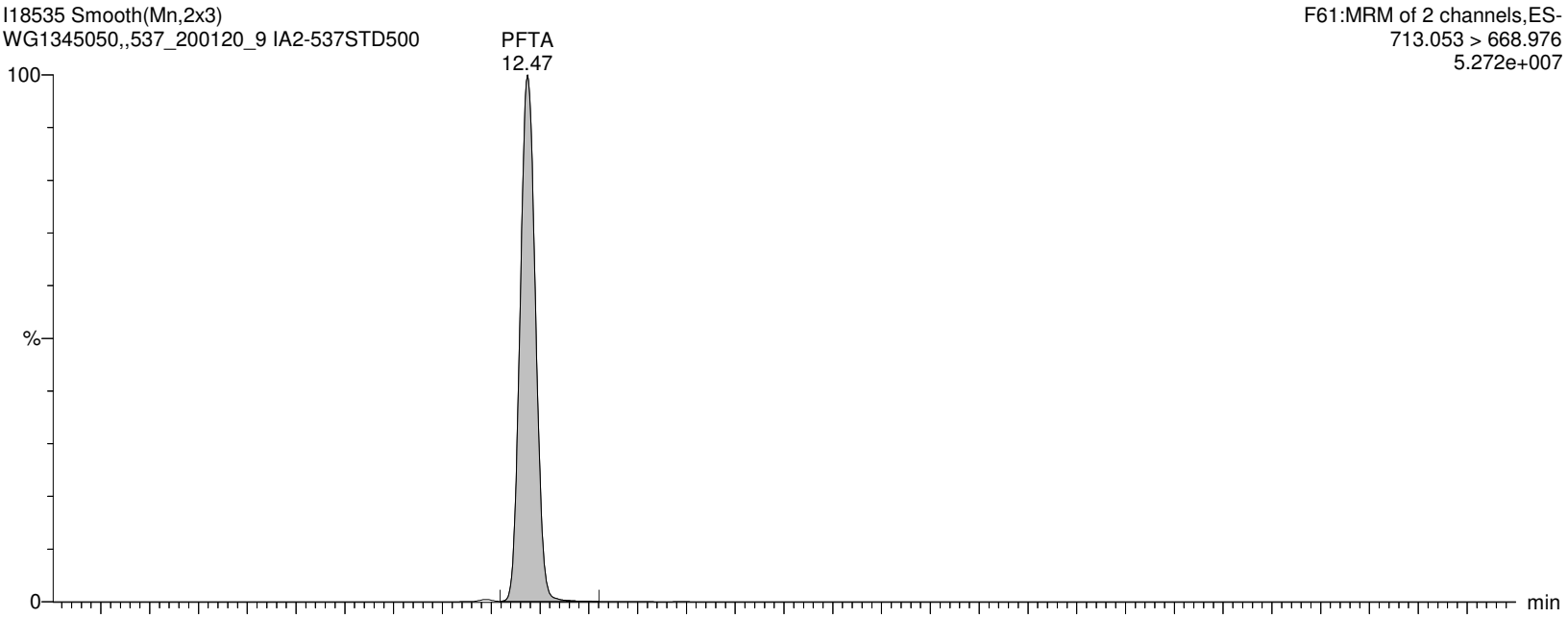
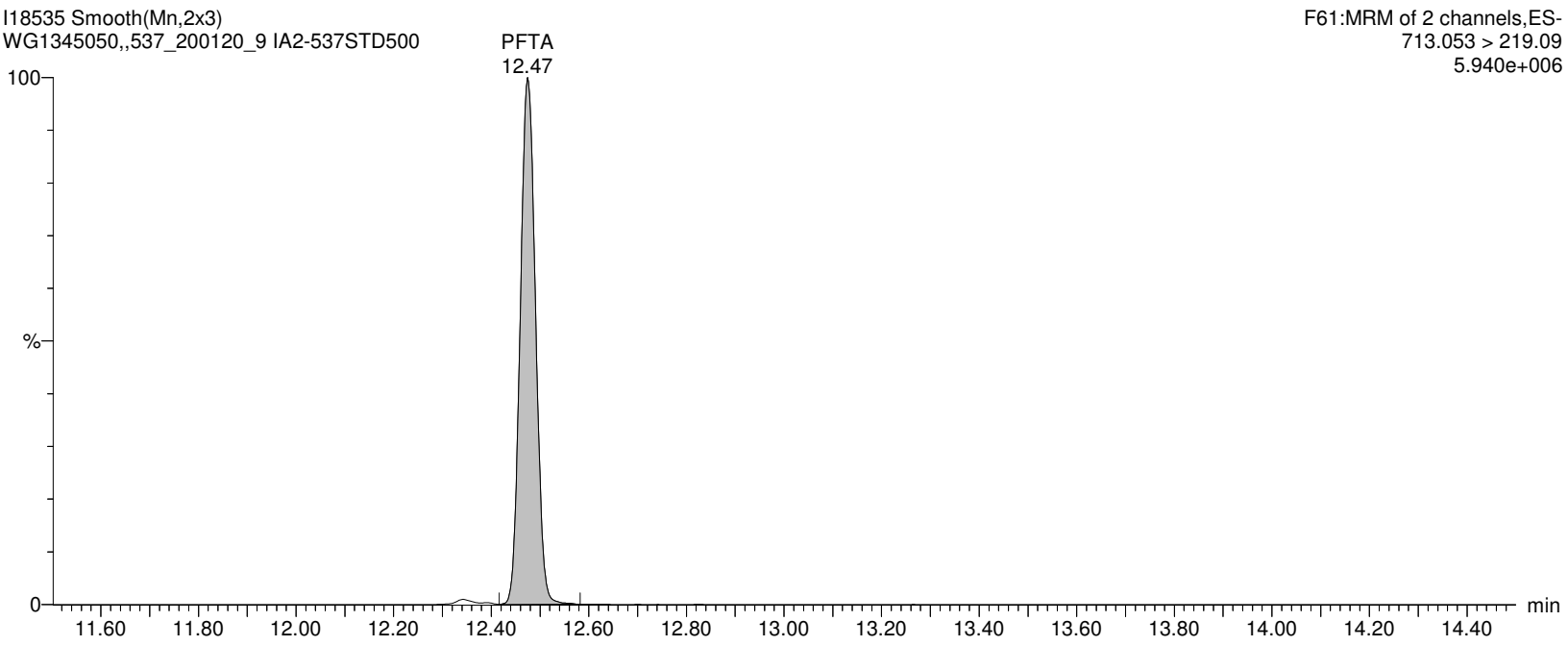
**PFTA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICAL_A.qld
Last Altered: Friday, February 28, 2020 09:12:40 Eastern Standard Time
Printed: Friday, February 28, 2020 09:27:57 Eastern Standard Time

**Name: I18535**
**ID: IA2-537STD500**
**Date: 27-Feb-2020**
**Time: 15:41:35**
**Description: WG1345050,,537_200120_9**
**User: LCMS01:SG**
**Vial: 1:B,2**
**Instrument: XEVO-TQSmicro#QEA0276**
**Inlet Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\LCMS_537_ISO_MeOH**
**Tune Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\190709_TUNE.IPR**
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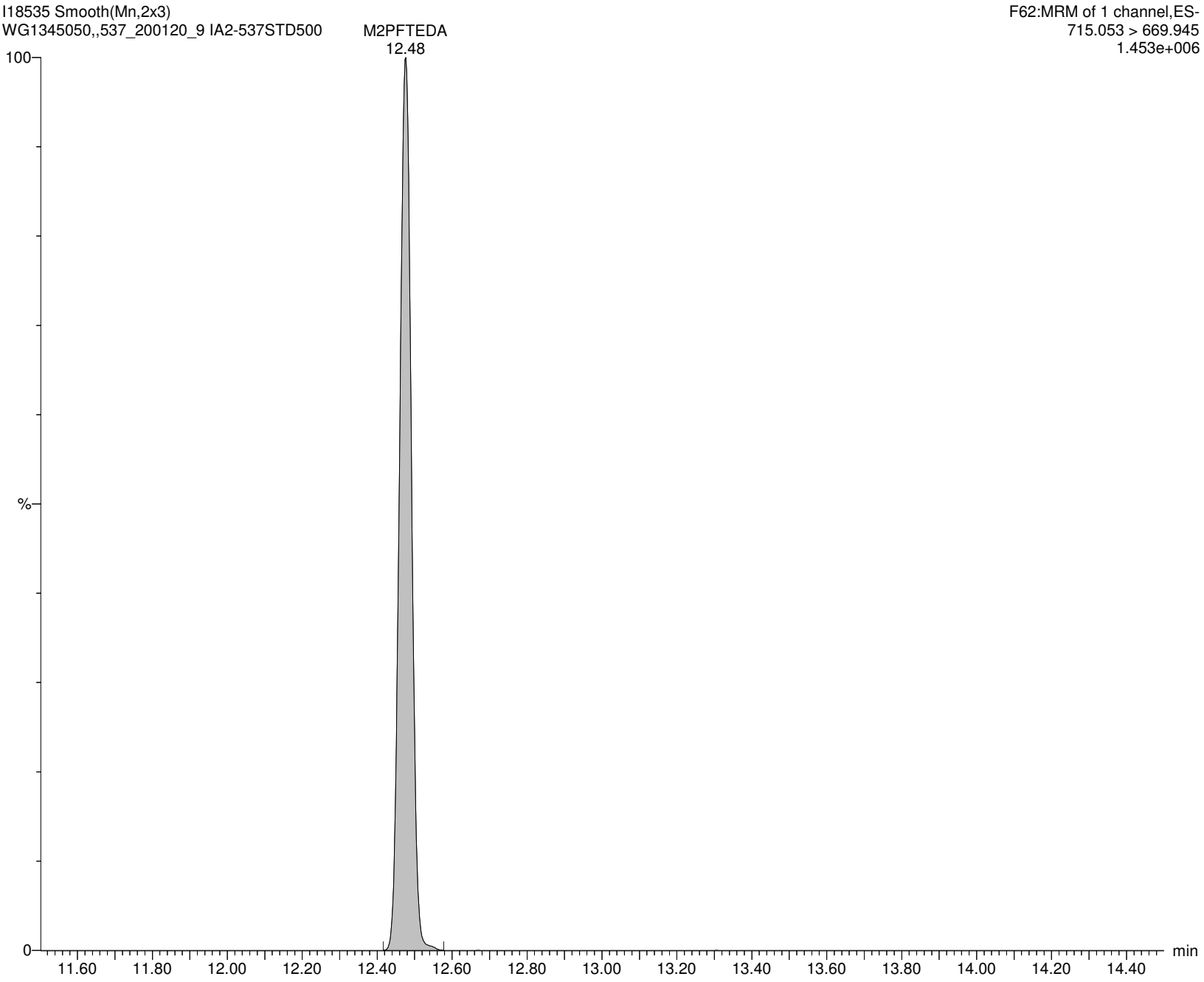
**M2PFTEDA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICAL_A.qld
Last Altered: Friday, February 28, 2020 09:12:40 Eastern Standard Time
Printed: Friday, February 28, 2020 09:27:59 Eastern Standard Time

**Method: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\MethDB\537ISO_Q_200227 .mdb 27 Feb 2020 12:38:15**
**Calibration: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\CurveDB\200227_537ISO_ICAL.cdb 28 Feb 2020 09:12:40**

**ID: IA2-537STD0.5**
**Name: I18539**
**Date: 27-Feb-2020**
**Time: 16:47:48**
**Description: WG1345050,,537_200120_1**
**Instrument: XEVO-TQSmicro#QEA0276**
**User: LCMS01:JW**
**Inlet Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\LCMS_537_ISO_MeOH**
**Tune Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\190709_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

| | Name | CAS | RT | Trace | Area | M Flag | Conc (ng/mL) | Ion Ratio | Ratio Flag | %Rec |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | PFBA | 375-22-4 | 2.24 | 212.926 > 169.111 | 1544 | | 0.474 | | na | 94.8 |
| 2 | M3PFBA | INT STD | 2.24 | 215.926 > 172.122 | 42561 | | 10.824 | | na | 108.2 |
| 3 | MPFBA | INT STD | 2.24 | 216.926 > 172.137 | 45002 | | 9.228 | | na | 92.3 |
| 4 | PFPeA | 2706-90-3 | 5.20 | 262.926 > 219.002 | 2211 | | 0.518 | | na | 103.5 |
| 5 | M5PFPEA | INT STD | 5.20 | 267.989 > 223.081 | 61408 | | 9.491 | | na | 94.9 |
| 6 | PFBS | 375-73-5 | 5.87 | 298.926 > 79.923 | 376 | | 0.385 | 1.83 | NO | 86.9 |
| 7 | M3PFBS | INT STD | 5.87 | 301.989 > 80.254 | 10848 | | 8.448 | | na | 84.5 |
| 8 | 4:2FTS | 757124-72-4 | 7.05 | 326.926 > 306.957 | 182 | | 0.471 | 1.66 | NO | 100.8 |
| 9 | M2-4:2FTS | INT STD | 7.04 | 329.117 > 309.079 | 4736 | | 7.079 | | na | 70.8 |
| 10 | PFHxA | 307-24-4 | 7.13 | 312.989 > 269.028 | 3317 | | 0.548 | | YES | 109.7 |
| 11 | M5PFHxA | INT STD | 7.13 | 317.989 > 273.045 | 72988 | | 8.904 | | na | 89.0 |
| 12 | PFPeS | 2706-91-4 | 7.44 | 348.926 > 80.251 | 450 | | 0.506 | 2.99 | NO | 107.6 |
| 13 | PFHpA | 375-85-9 | 8.40 | 362.926 > 319.014 | 4136 | | 0.508 | 5.51 | NO | 101.6 |
| 14 | M4PFHpA | INT STD | 8.40 | 366.926 > 321.979 | 88785 | | 9.336 | | na | 93.4 |
| 15 | br-PFHxS | 355-46-4 | 8.32 | 398.904 > 79.915 | 52 | M2 | 0.076 | | YES | 89.6 |
| 16 | L-PFHxS | 355-46-4 | 8.55 | 398.904 > 79.915 | 324 | M2 | 0.468 | | YES | 126.4 |
| 17 | PFHxS | 355-46-4 | | 398.904 > 79.915 | 377 | | 0.544 | | na | |
| 18 | M3PFHxS | INT STD | 8.56 | 401.926 > 80.317 | 9378 | | 8.151 | | na | 81.5 |
| 19 | br-PFOA | 335-67-1 | | 412.989 > 368.9 | | | ND | | YES | |
| 20 | L-PFOA | 335-67-1 | 9.35 | 412.989 > 368.9 | 4060 | | 0.551 | 12.74 | YES | 110.2 |
| 21 | M2PFOA | INT STD | 9.35 | 415.032 > 369.968 | 100127 | | 11.901 | | na | 119.0 |
| 22 | PFOA | 335-67-1 | | 412.989 > 368.9 | 4060 | | 0.551 | | na | |
| 23 | M8PFOA | INT STD | 9.35 | 420.989 > 375.979 | 85647 | | 8.970 | | na | 89.7 |
| 24 | 6:2FTS | 27619-97-2 | 9.32 | 426.989 > 406.921 | 42 | M2 | 0.436 | 0.77 | NO | 91.8 |
| 25 | M2-6:2FTS | INT STD | 9.30 | 428.989 > 408.917 | 4064 | | 9.763 | | na | 97.6 |
| 26 | PFHpS | 375-92-8 | 9.43 | 448.926 > 80.257 | 293 | | 0.485 | 1.32 | NO | 102.1 |
| 27 | PFNA | 375-95-1 | 10.09 | 462.989 > 418.931 | 2720 | | 0.433 | 2.64 | NO | 86.6 |
| 28 | M9PFNA | INT STD | 10.09 | 472.053 > 426.947 | 84465 | | 9.049 | | na | 90.5 |
| 29 | br-PFOS | 1763-23-1 | 9.95 | 498.968 > 79.918 | 100 | M5 | 0.112 | 6.43 | YES | 112.4 |
| 30 | L-PFOS | 1763-23-1 | 10.14 | 498.968 > 79.918 | 208 | | 0.320 | 1.17 | NO | 87.7 |
| 31 | PFOS | 1763-23-1 | | 498.968 > 79.918 | 308 | | 0.433 | | na | |
| 32 | M4PFOS | INT STD | 10.14 | 503.032 > 80.306 | 10010 | | 11.784 | | na | 117.8 |
| 33 | M8PFOS | INT STD | 10.14 | 507.053 > 80.294 | 12059 | | 10.374 | | na | 103.7 |
| 34 | PFDA | 335-76-2 | 10.71 | 513.053 > 468.906 | 3119 | | 0.477 | 5.42 | NO | 95.4 |
| 35 | M2PFDA | INT STD | 10.71 | 515.053 > 469.934 | 82887 | | 12.530 | | na | 125.3 |
| 36 | M6PFDA | INT STD | 10.71 | 519.053 > 473.931 | 85360 | | 9.360 | | na | 93.6 |
| 37 | 8:2FTS | 39108-34-4 | 10.71 | 527.032 > 507.079 | 70 | | 0.525 | 1.93 | NO | 109.4 |
| 38 | M2-8:2FTS | INT STD | 10.70 | 529.053 > 508.945 | 1976 | | 7.850 | | na | 78.5 |
| 39 | PFNS | 68259-12-1 | 10.74 | 548.989 > 80.249 | 220 | | 0.270 | 1.28 | NO | 56.3 |


all concentration units in (ng/mL)

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**ID: IA2-537STD0.5**
**Name: I18539**
**Date: 27-Feb-2020**
**Time: 16:47:48**
**Description: WG1345050,,537_200120_1**
**Instrument: XEVO-TQSmicro#QEA0276**
**User: LCMS01:JW**
**Inlet Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\LCMS_537_ISO_MeOH**
**Tune Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\190709_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

| | Name | CAS | RT | Trace | Area | M Flag | Conc (ng/mL) | Ion Ratio | Ratio Flag | %Rec |
|---|---|---|---|---|---|---|---|---|---|---|
| 40 | d3-NMeFOSAA | INT STD | 11.08 | 573.096 > 418.987 | 9412 | | 7.791 | | na | 77.9 |
| 41 | NMeFOSAA | 2355-31-9 | 11.09 | 570.053 > 418.917 | 298 | | 0.530 | 3.25 | NO | 106.0 |
| 42 | PFUnA | 2058-94-8 | 11.25 | 562.989 > 518.903 | 2866 | | 0.390 | 4.89 | NO | 77.9 |
| 43 | M7-PFUDA | INT STD | 11.25 | 570.053 > 524.923 | 78990 | | 9.857 | | na | 98.6 |
| 44 | PFDS | 335-77-3 | 11.27 | 598.926 > 80.314 | 244 | | 0.308 | 0.83 | NO | 63.8 |
| 45 | FOSA | 754-91-6 | 11.12 | 497.989 > 78.245 | 918 | | 0.356 | | YES | 71.2 |
| 46 | M8FOSA | INT STD | 11.12 | 506.053 > 78.286 | 31314 | | 8.568 | | na | 85.7 |
| 47 | d5-NEtFOSAA | INT STD | 11.36 | 589.117 > 418.929 | 6239 | | 7.082 | | na | 70.8 |
| 48 | NEtFOSAA | 2991-50-6 | 11.38 | 583.989 > 418.927 | 321 | | 0.603 | 2.60 | NO | 120.6 |
| 49 | PFDoA | 307-55-1 | 11.72 | 612.989 > 568.967 | 3774 | | 0.536 | 20.43 | YES | 107.2 |
| 50 | MPFDOA | INT STD | 11.72 | 614.989 > 569.92 | 77519 | | 8.998 | | na | 90.0 |
| 51 | PFTrDA | 72629-94-8 | 12.13 | 663.053 > 618.969 | 4260 | | 0.605 | 27.71 | YES | 120.9 |
| 52 | PFTA | 376-06-7 | 12.48 | 713.053 > 668.976 | 3157 | | 0.484 | 7.48 | NO | 96.8 |
| 53 | M2PFTEDA | INT STD | 12.48 | 715.053 > 669.945 | 88013 | | 9.064 | | na | 90.6 |


all concentration units in (ng/mL)

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**Calibration: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\CurveDB\200227_537ISO_ICAL.cdb 28 Feb 2020 09:12:40**

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**Vial: 1:B,5**
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**Inlet Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\LCMS_537_ISO_MeOH**
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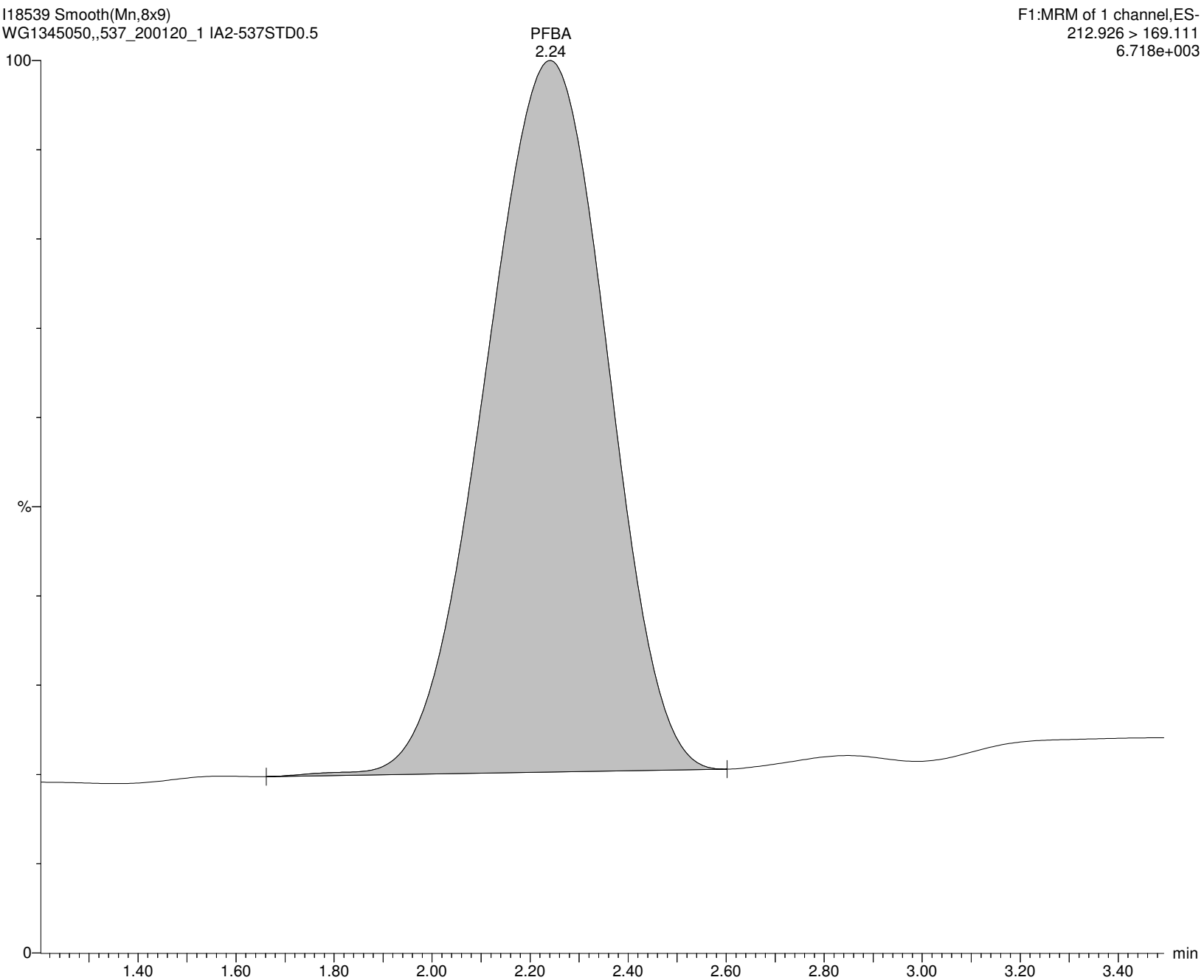
**MS Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**PFBA**





all concentration units in (ng/mL)

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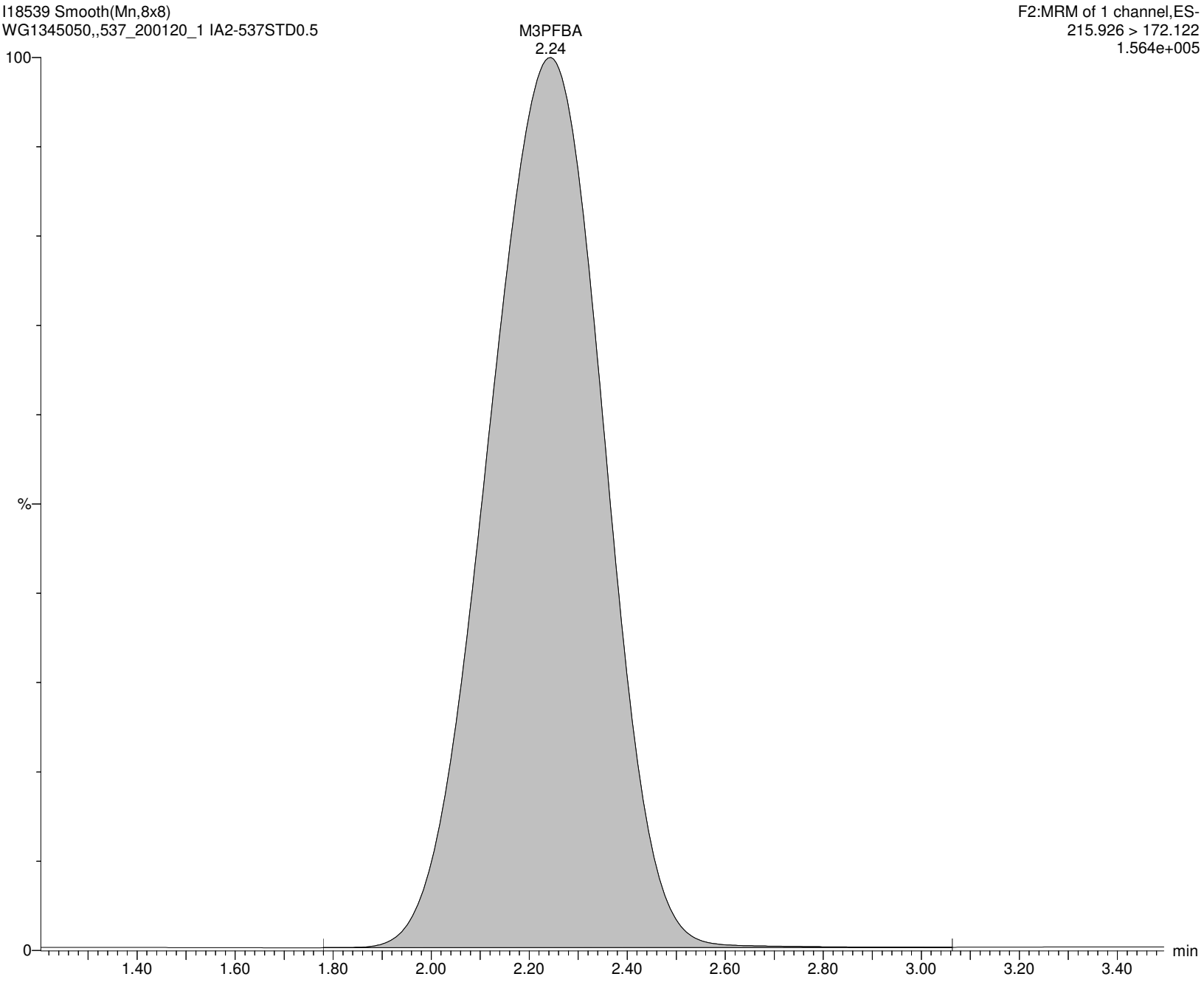
**M3PFBA**





all concentration units in (ng/mL)

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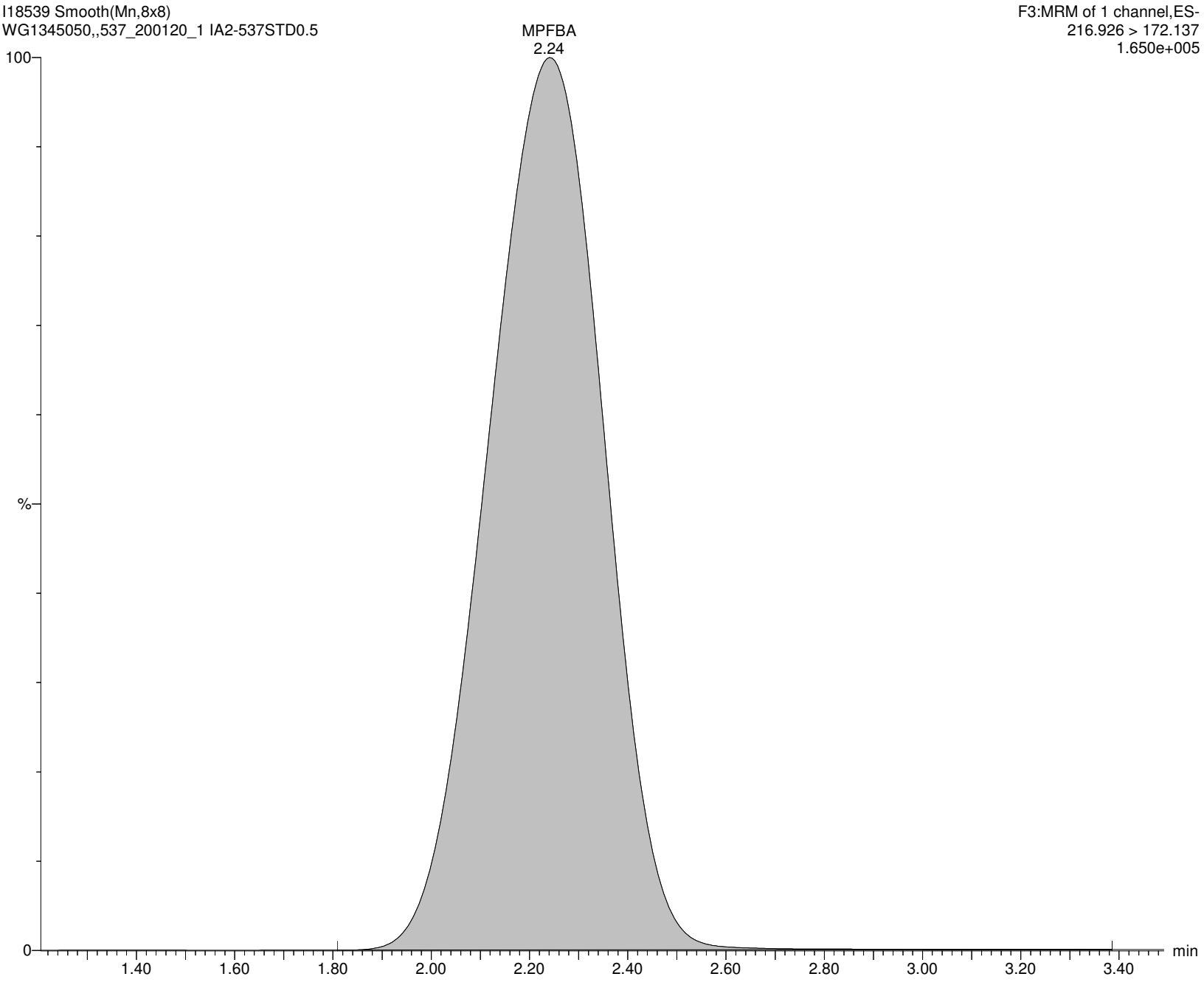
**MPFBA**





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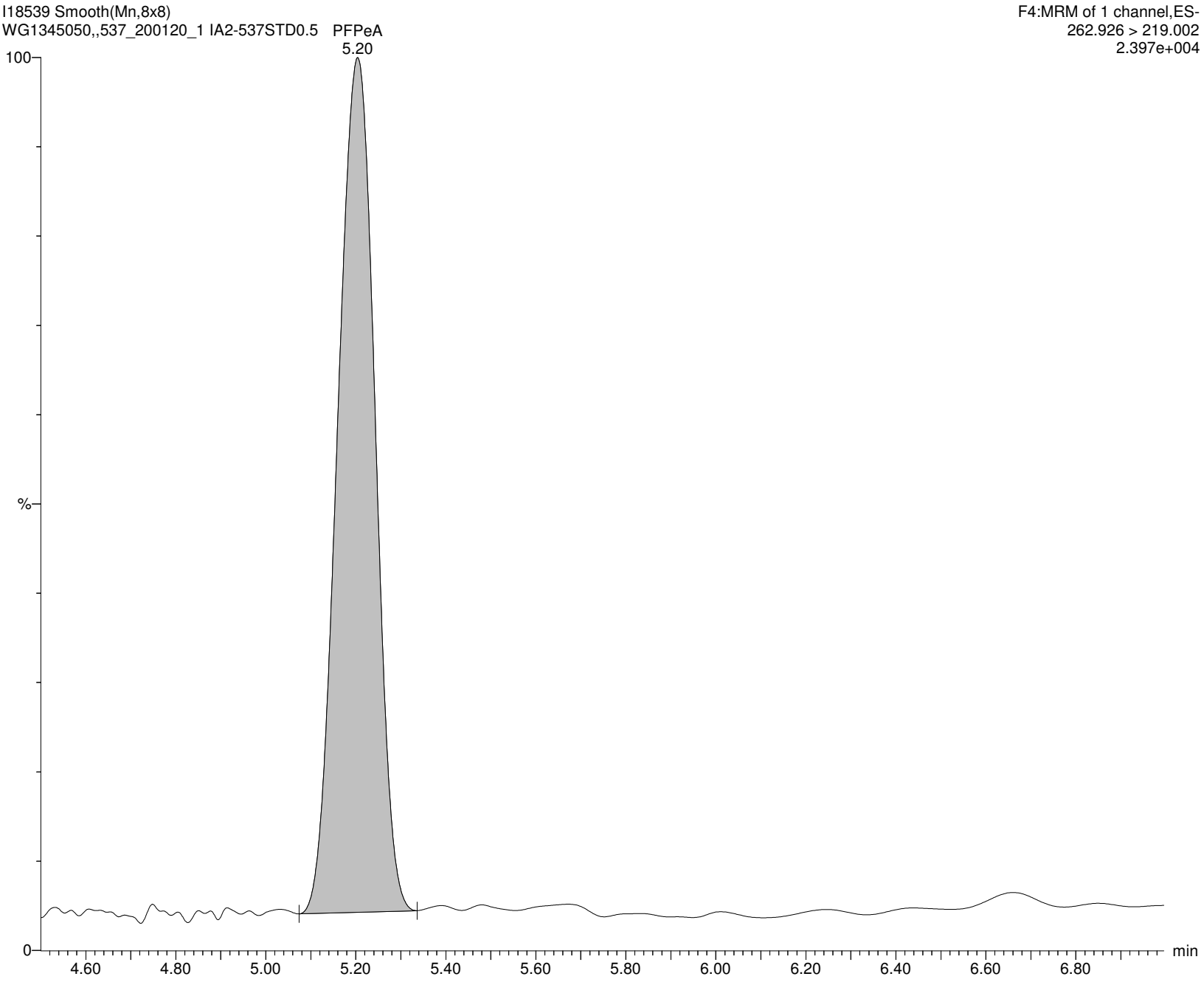
**PFPeA**





all concentration units in (ng/mL)

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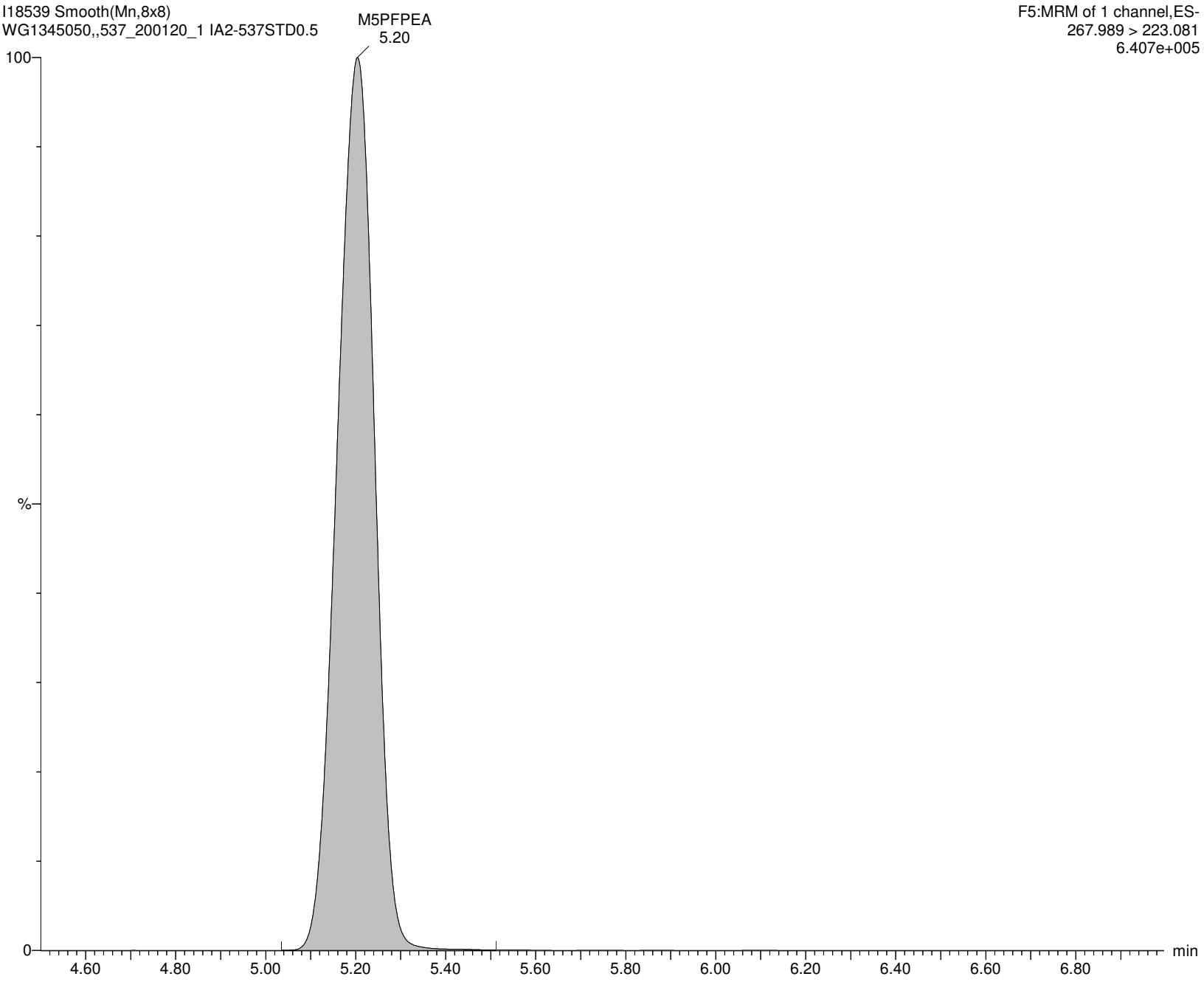
**M5PFPEA**





all concentration units in (ng/mL)

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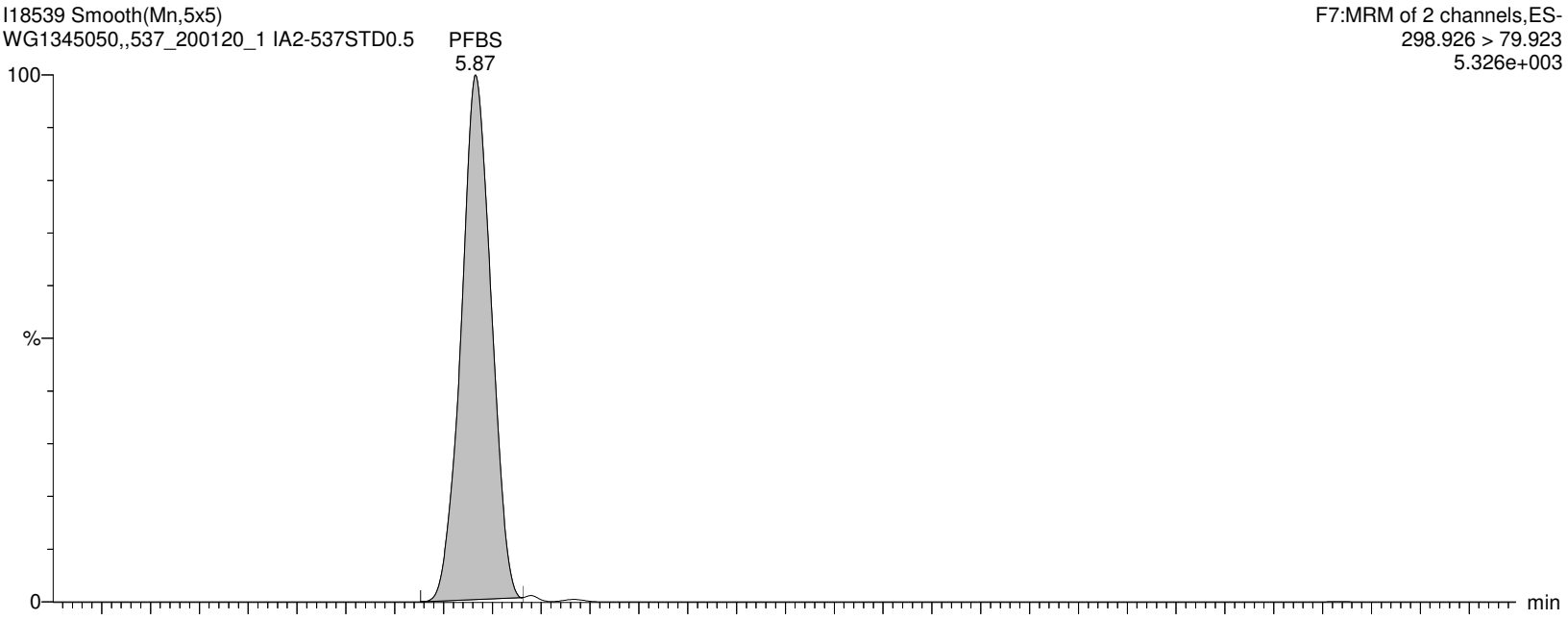
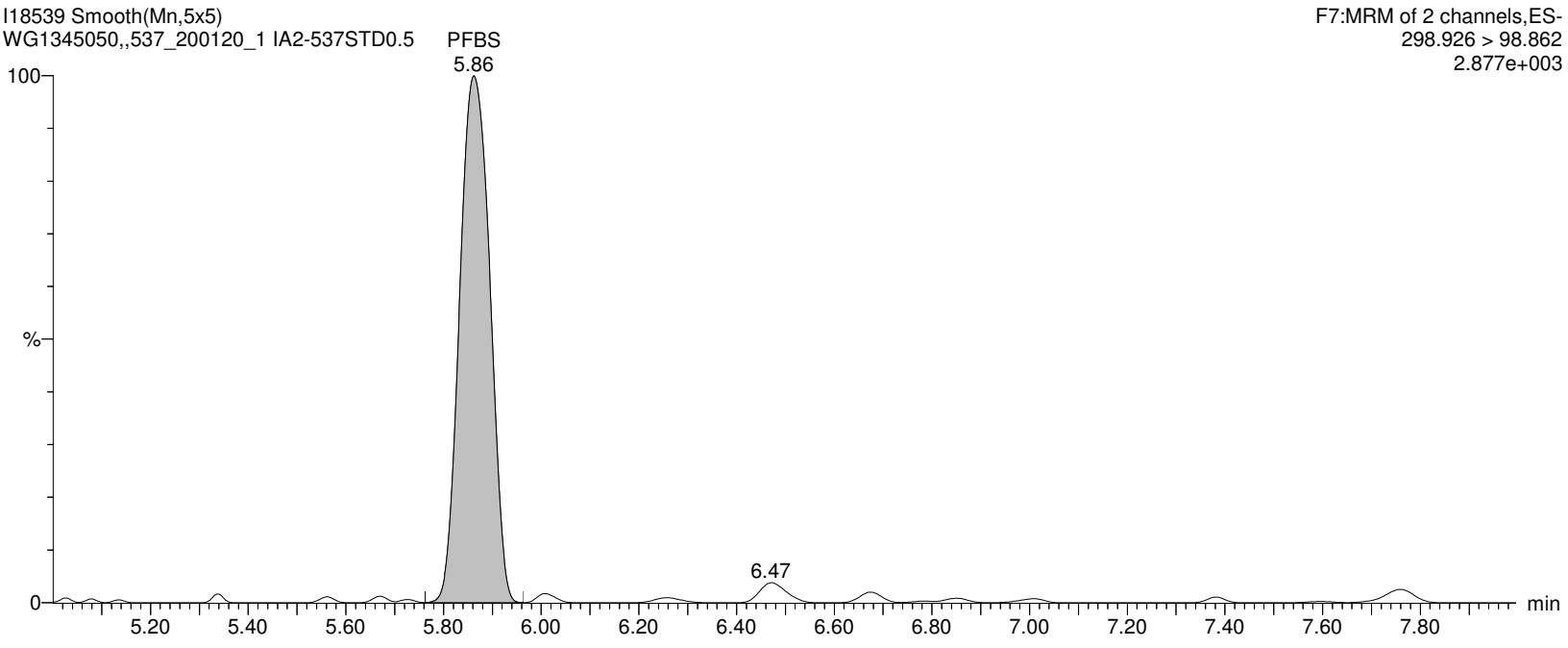
**PFBS**





all concentration units in (ng/mL)

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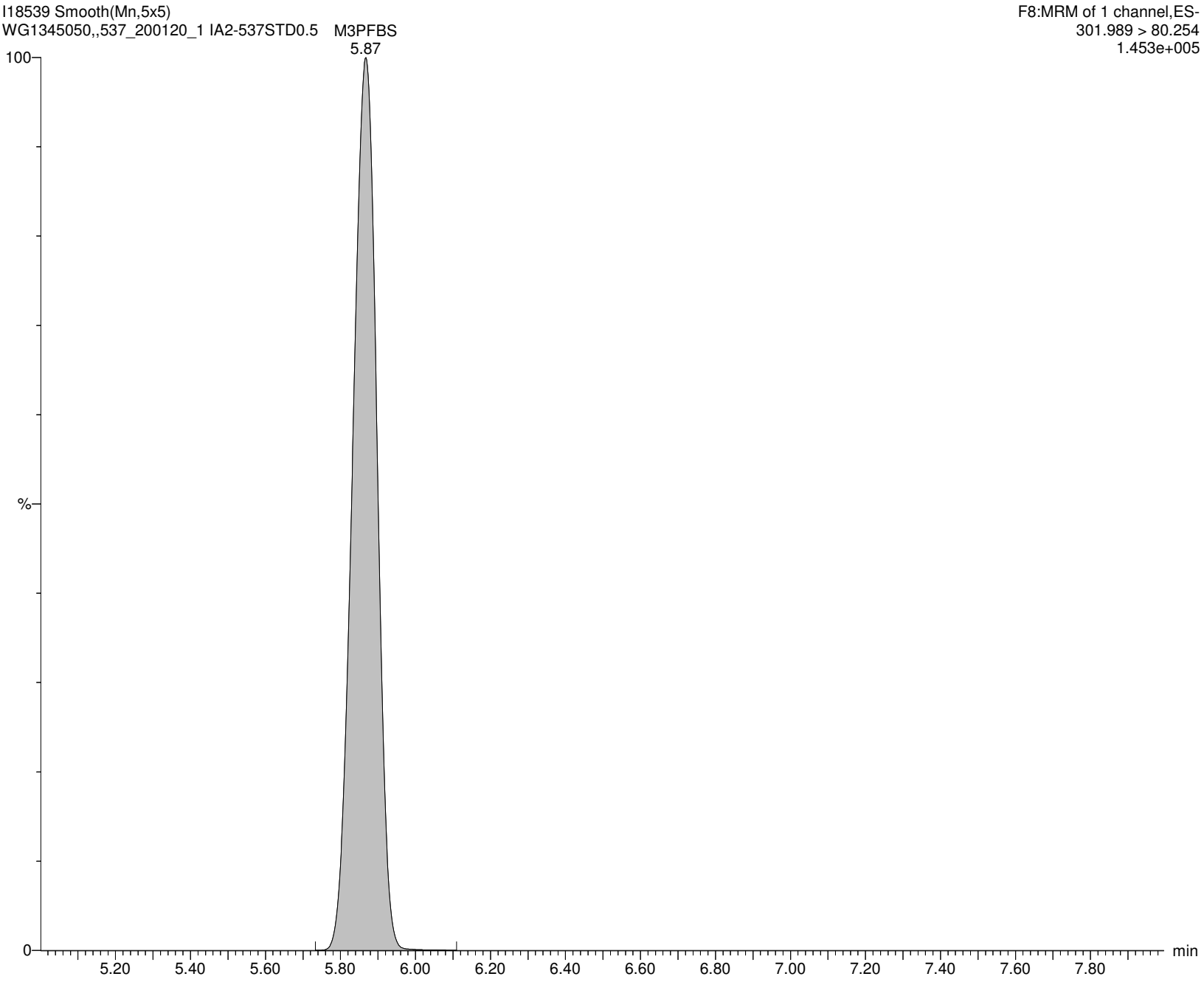
**M3PFBS**





all concentration units in (ng/mL)

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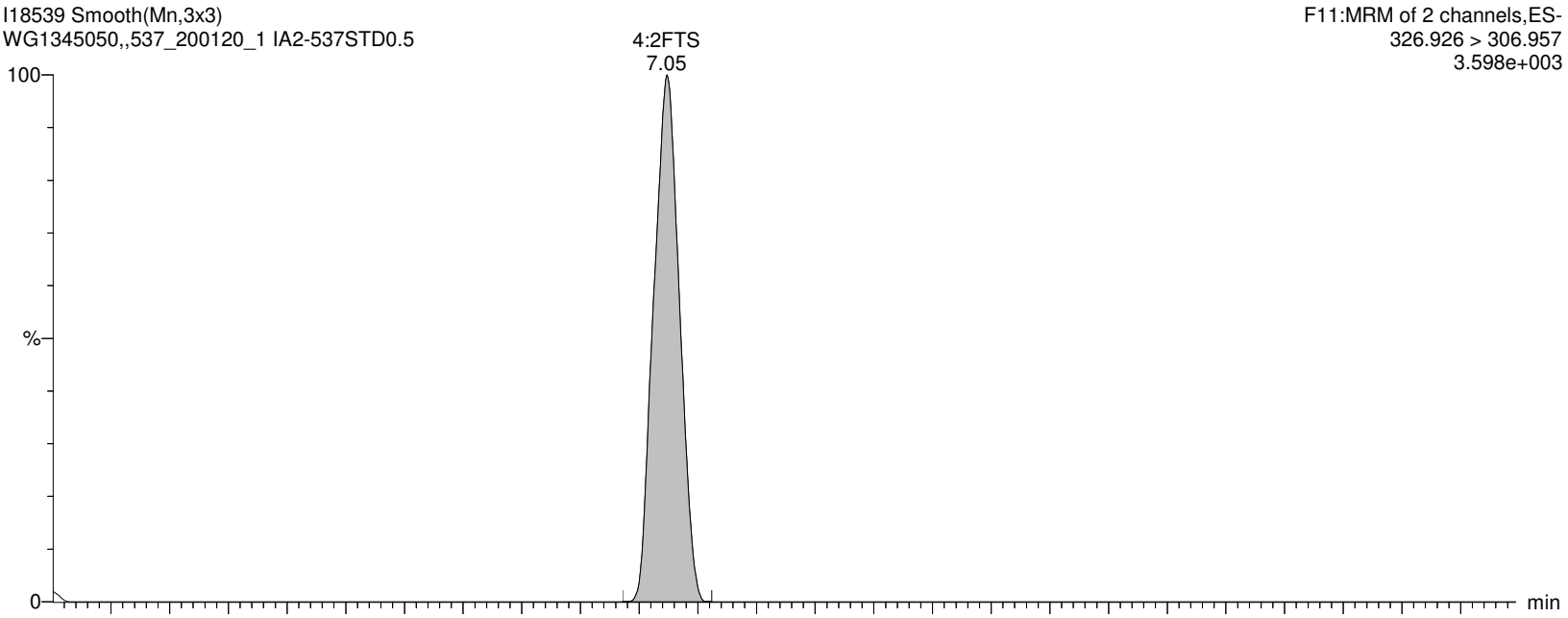
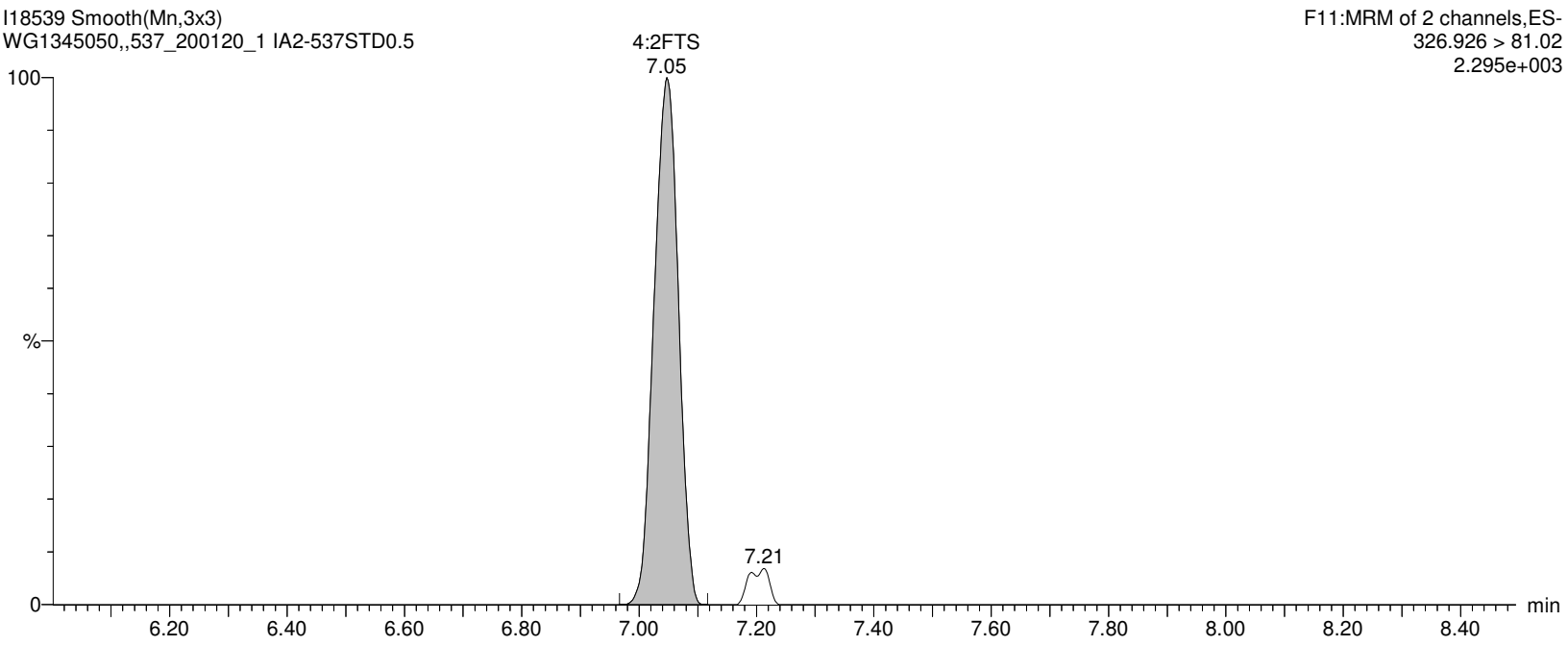
**4:2FTS**





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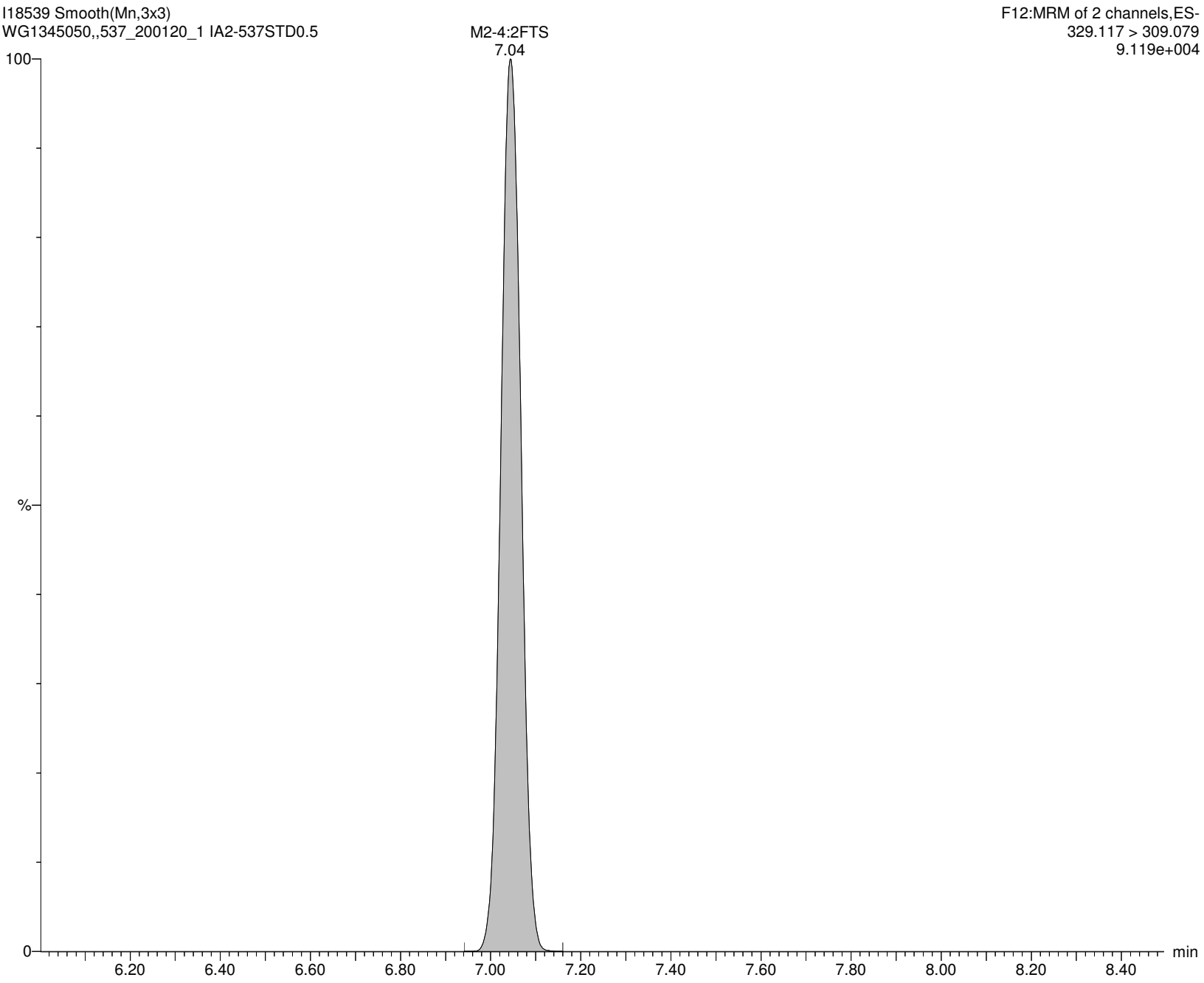
**M2-4:2FTS**





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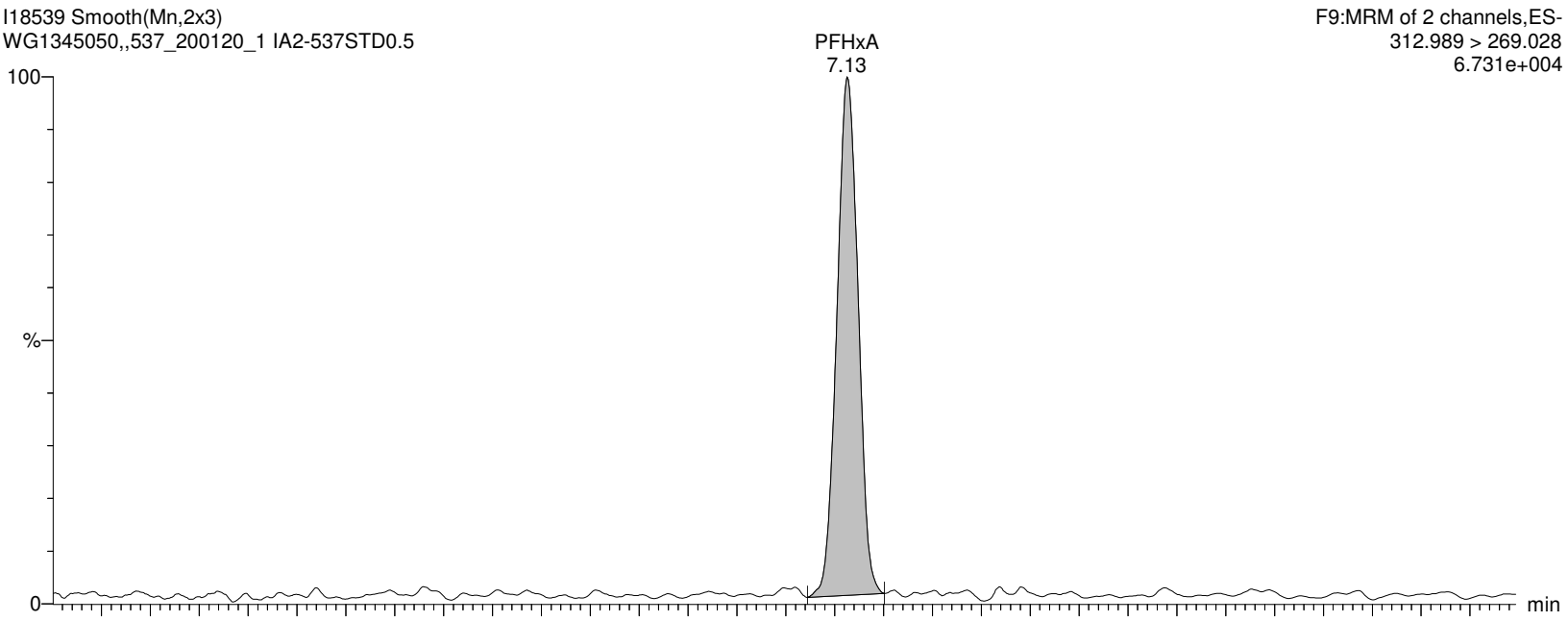
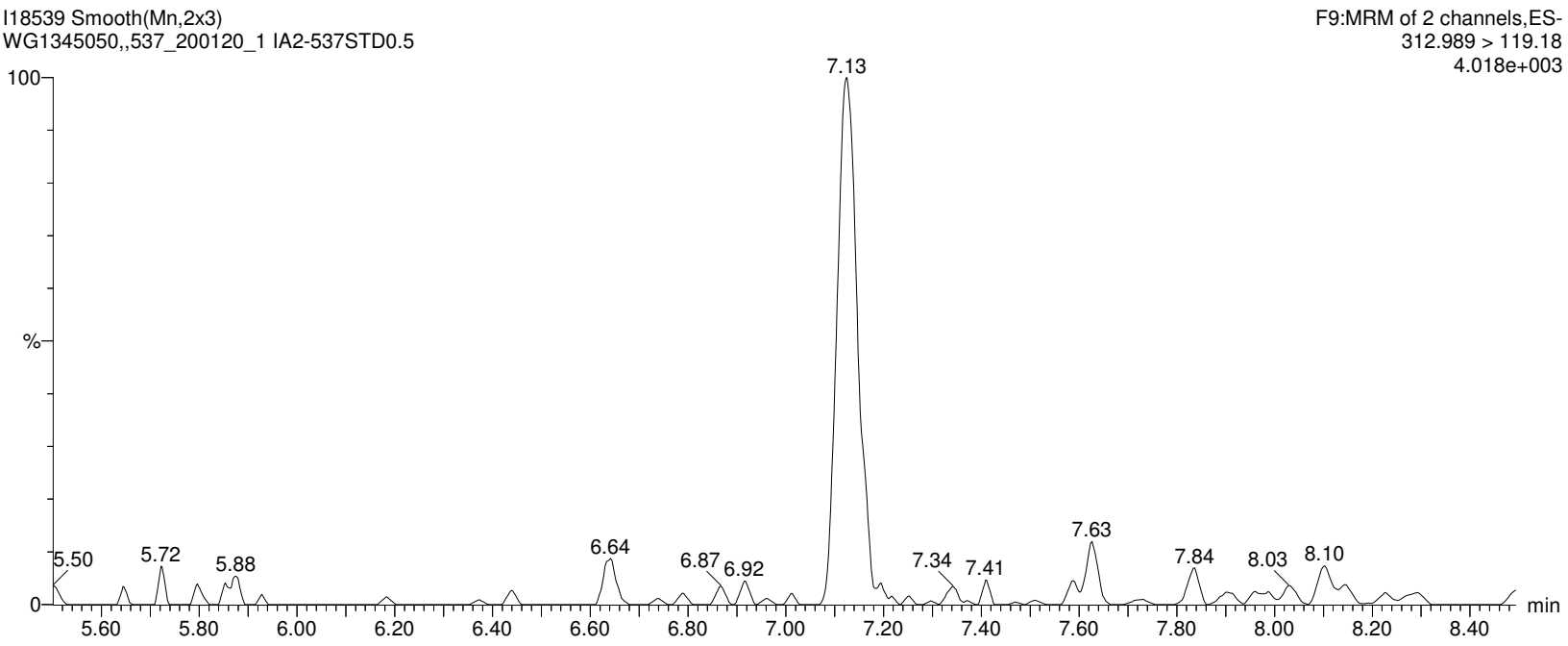
**PFHxA**





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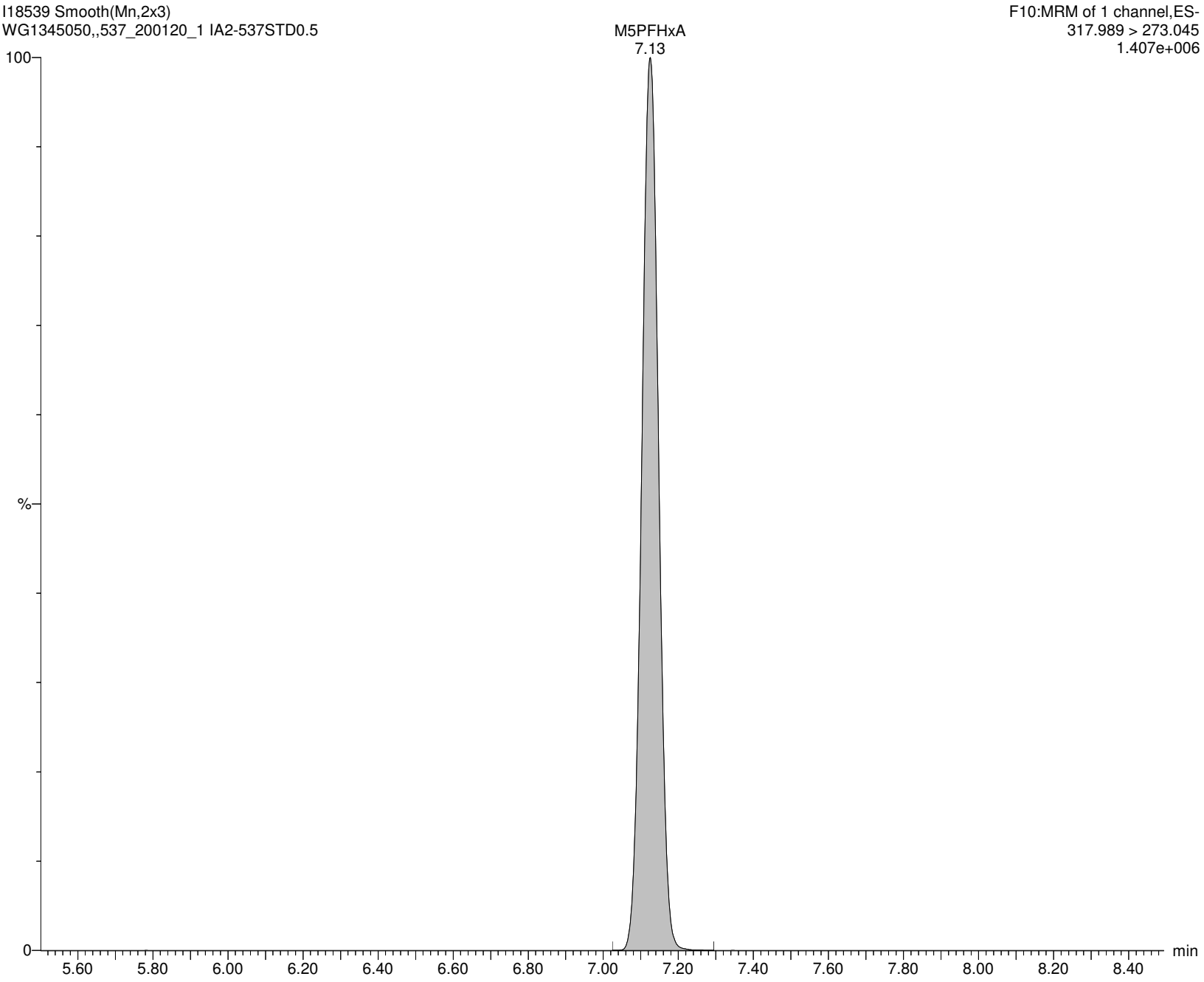
**M5PFHxA**





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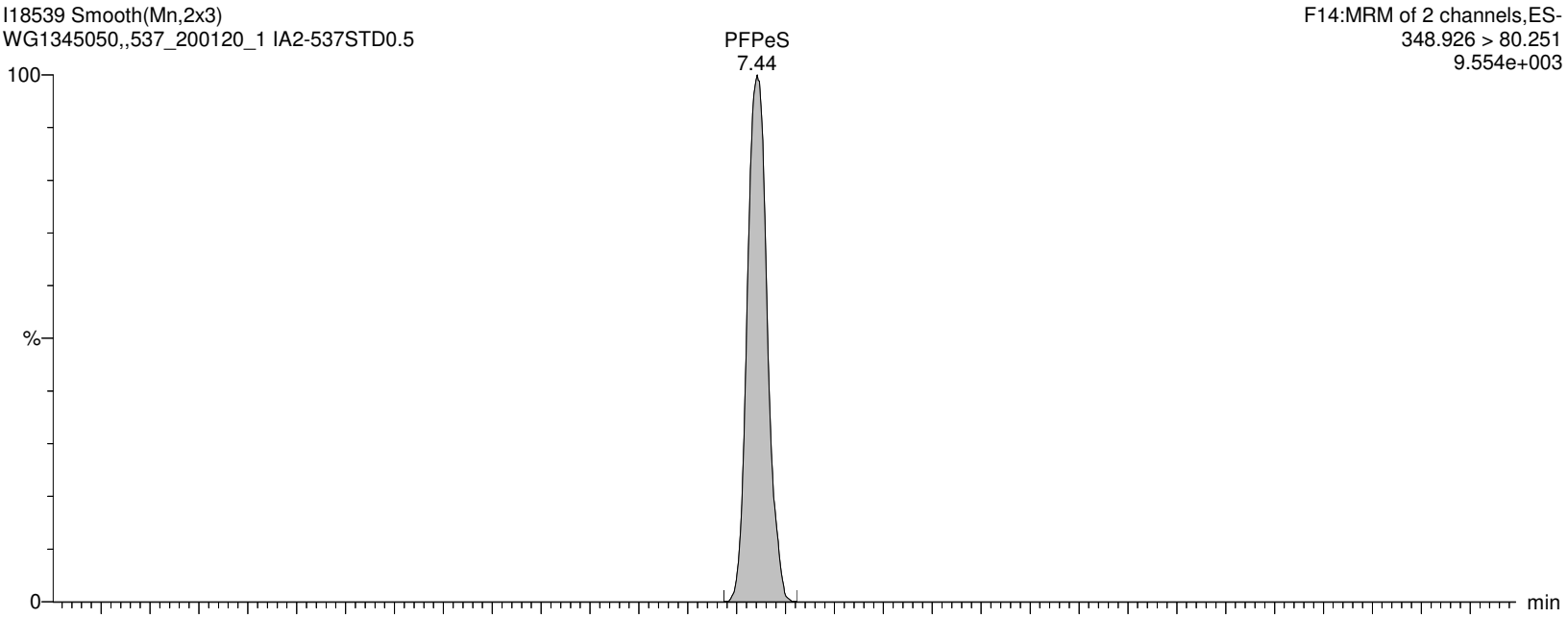


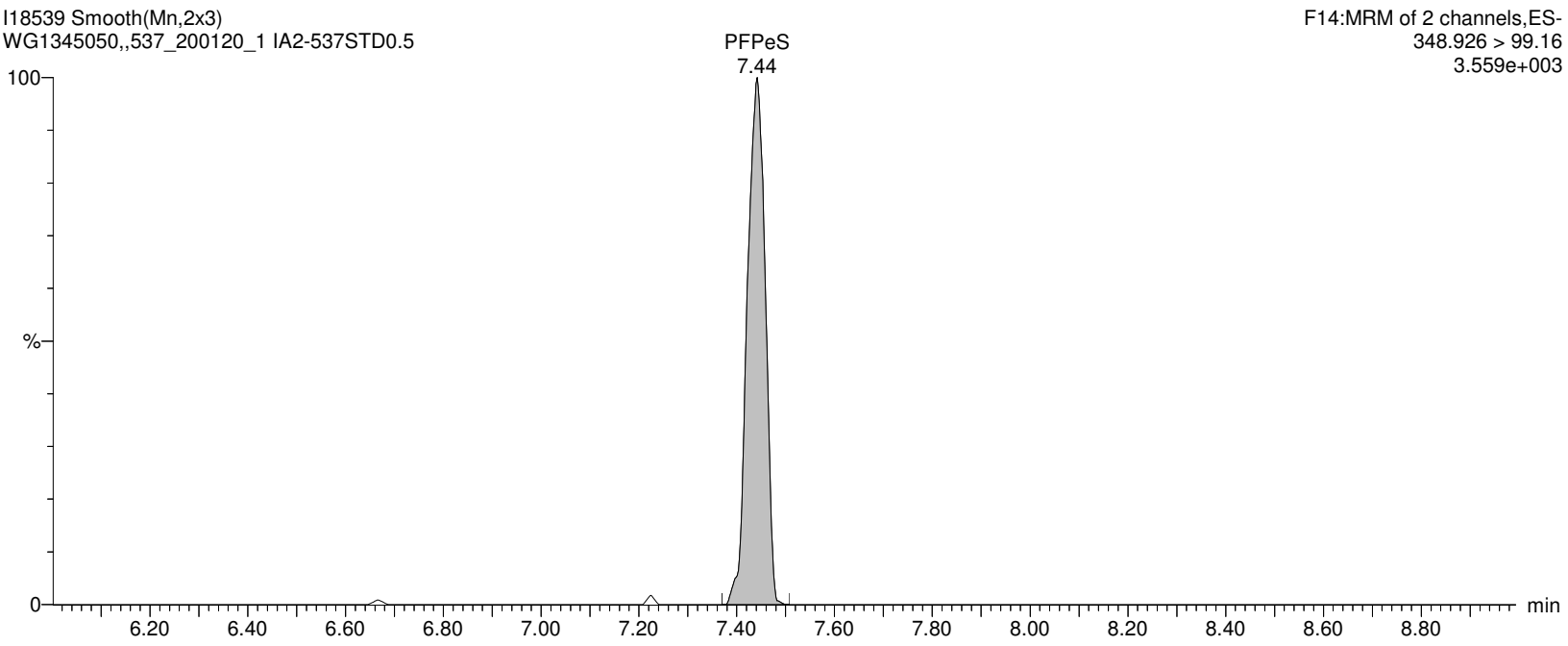



all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICAL_A.qld
Last Altered: Friday, February 28, 2020 09:12:40 Eastern Standard Time
Printed: Friday, February 28, 2020 09:27:59 Eastern Standard Time

**Name: I18539**
**ID: IA2-537STD0.5**
**Date: 27-Feb-2020**
**Time: 16:47:48**
**Description: WG1345050,,537_200120_1**
**User: LCMS01:JW**
**Vial: 1:B,5**
**Instrument: XEVO-TQSmicro#QEA0276**
**Inlet Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\LCMS_537_ISO_MeOH**
**Tune Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\190709_TUNE.IPR**
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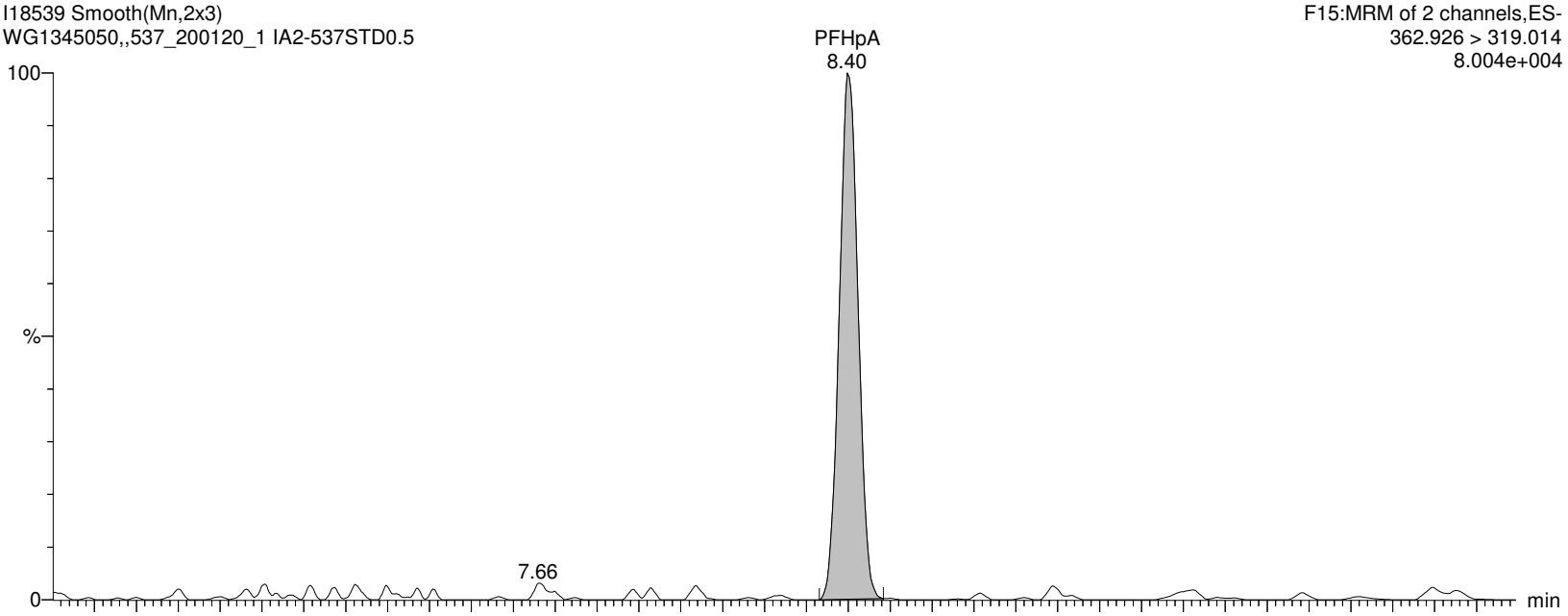


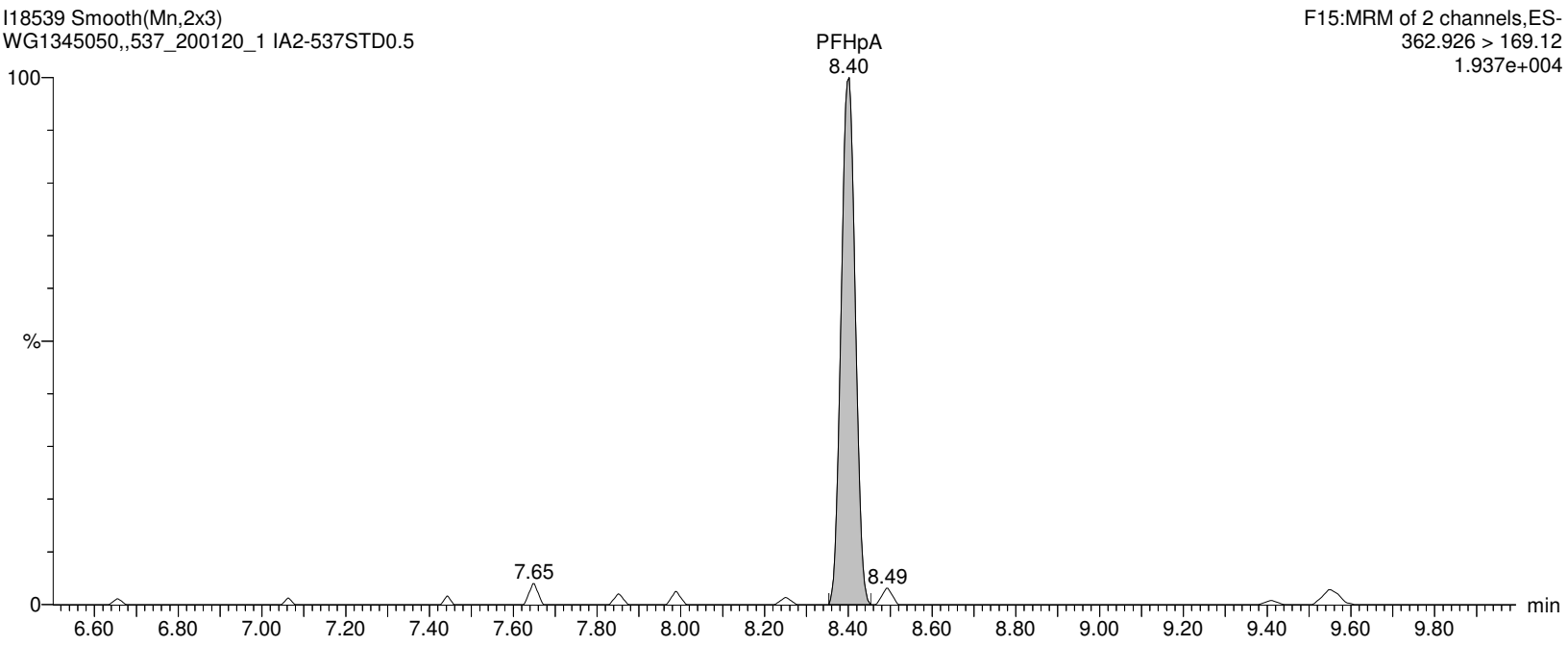



all concentration units in (ng/mL)

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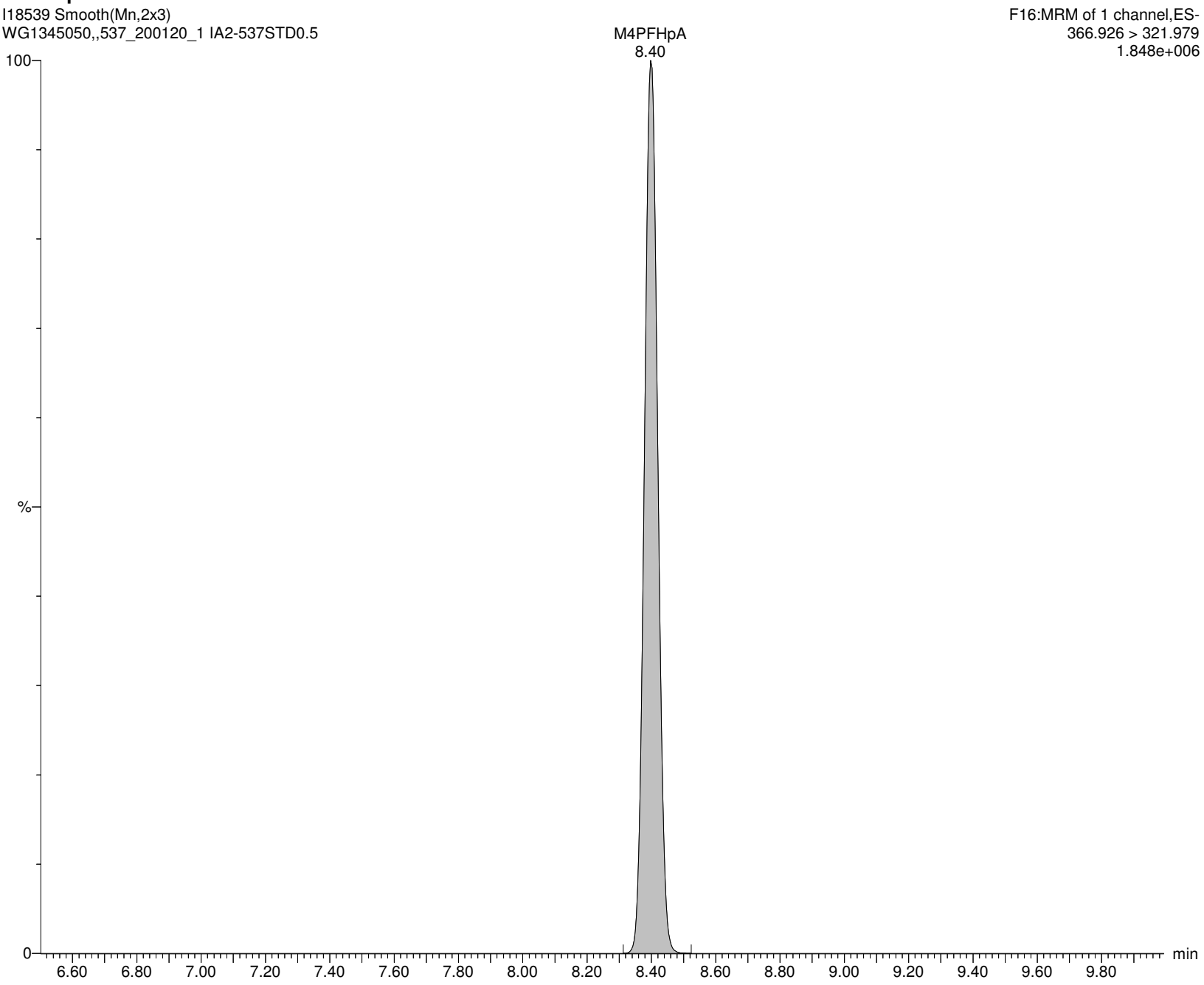



all concentration units in (ng/mL)

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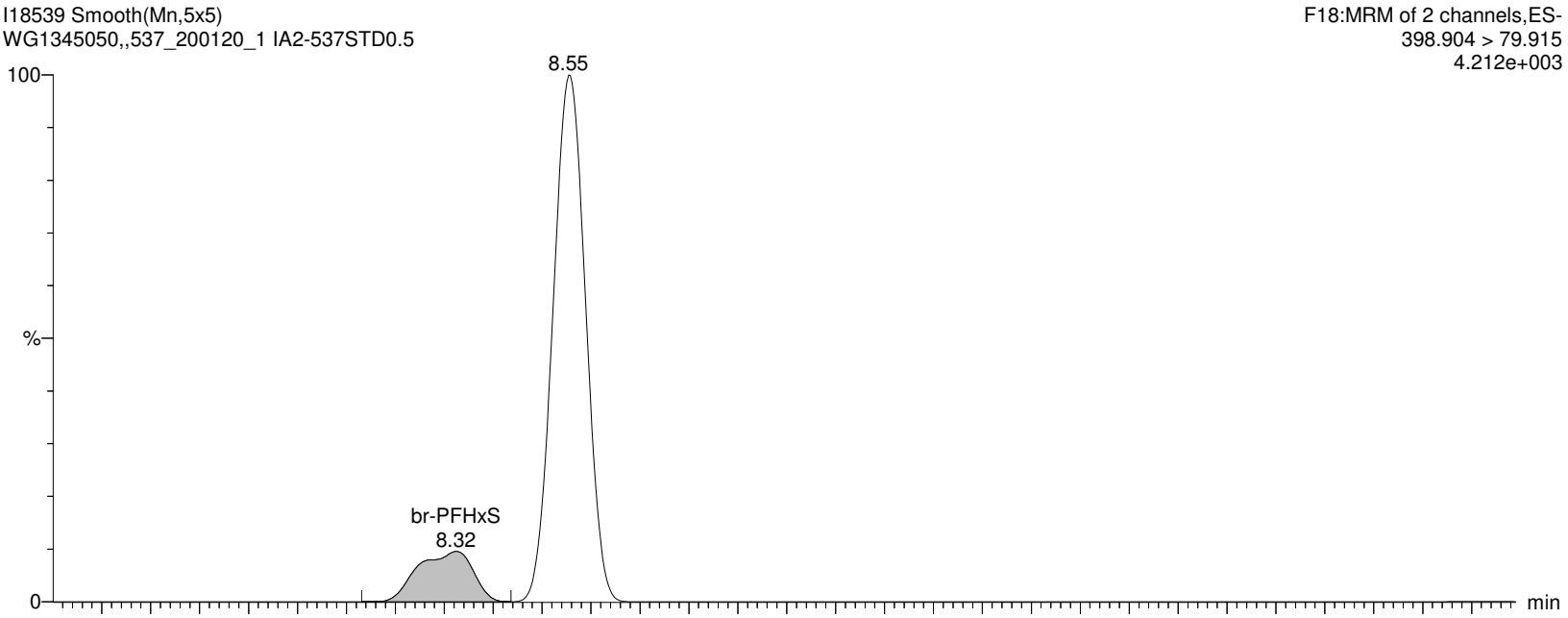
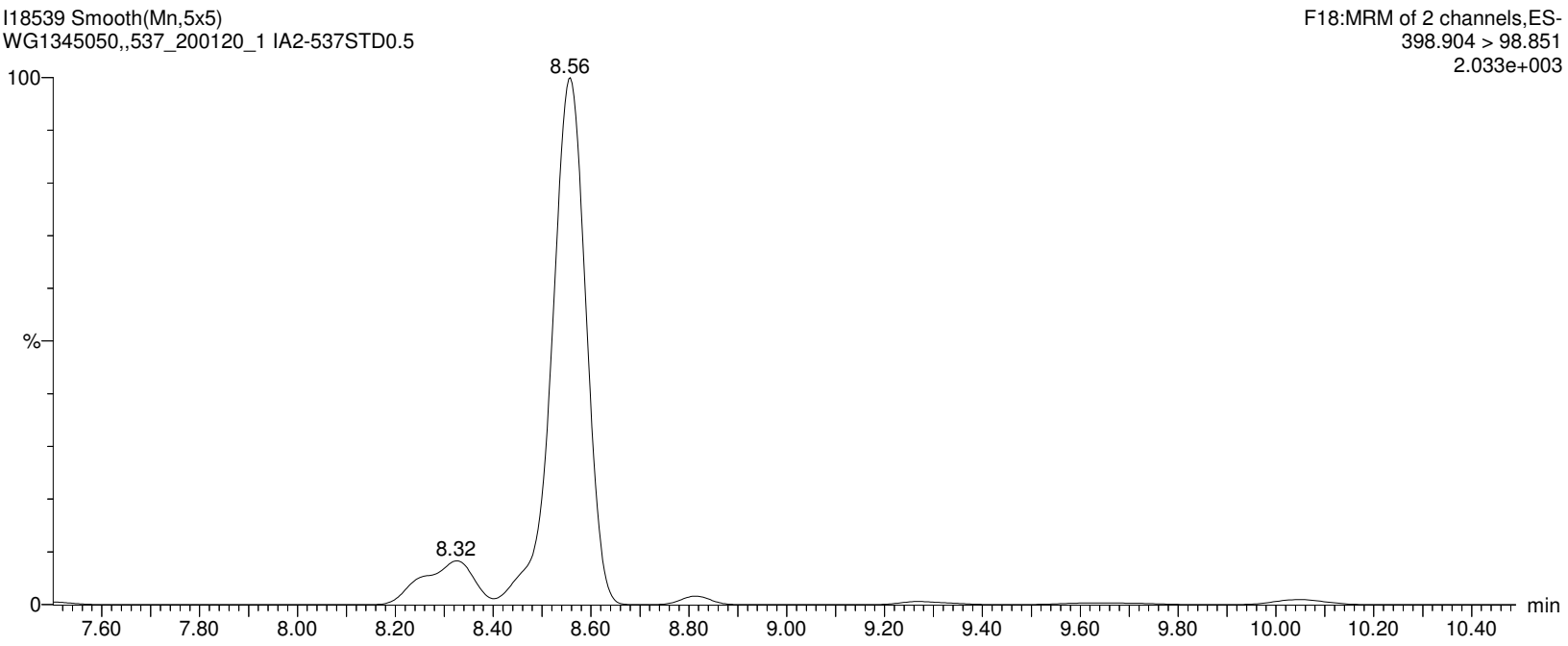
**br-PFHxS**





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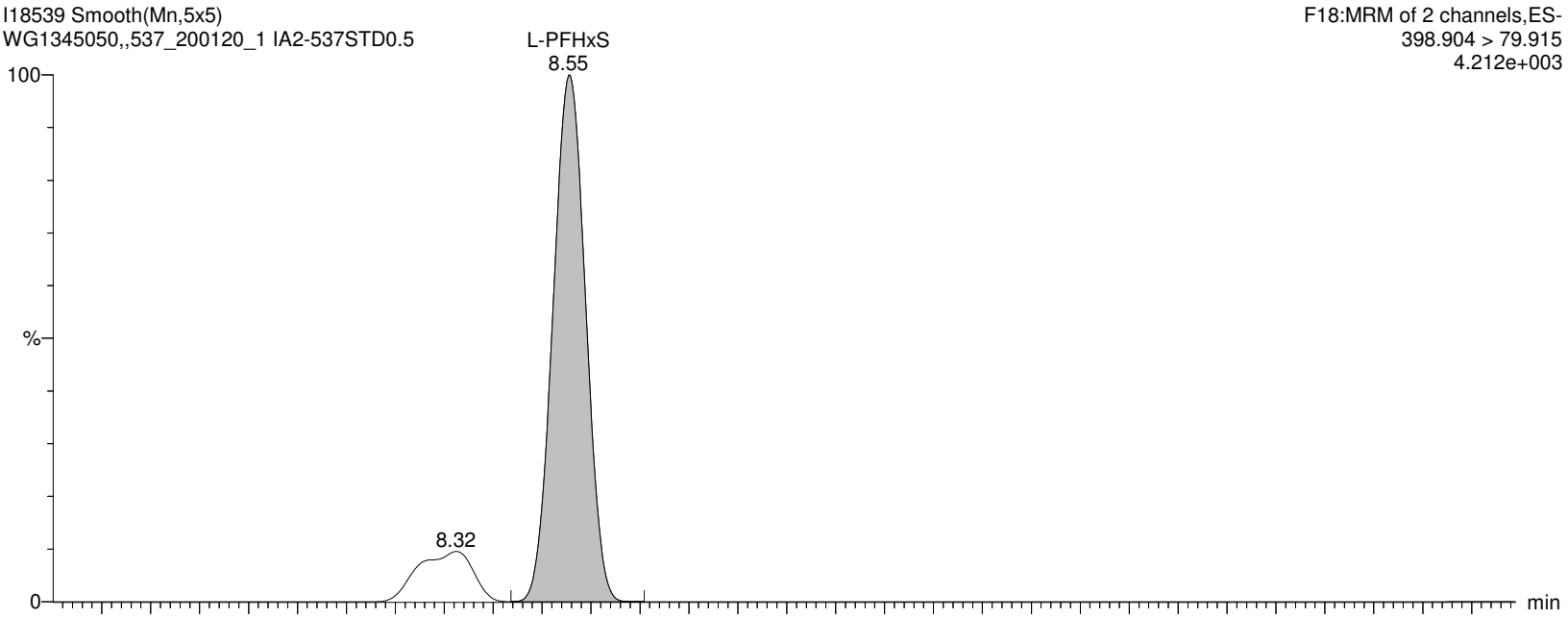
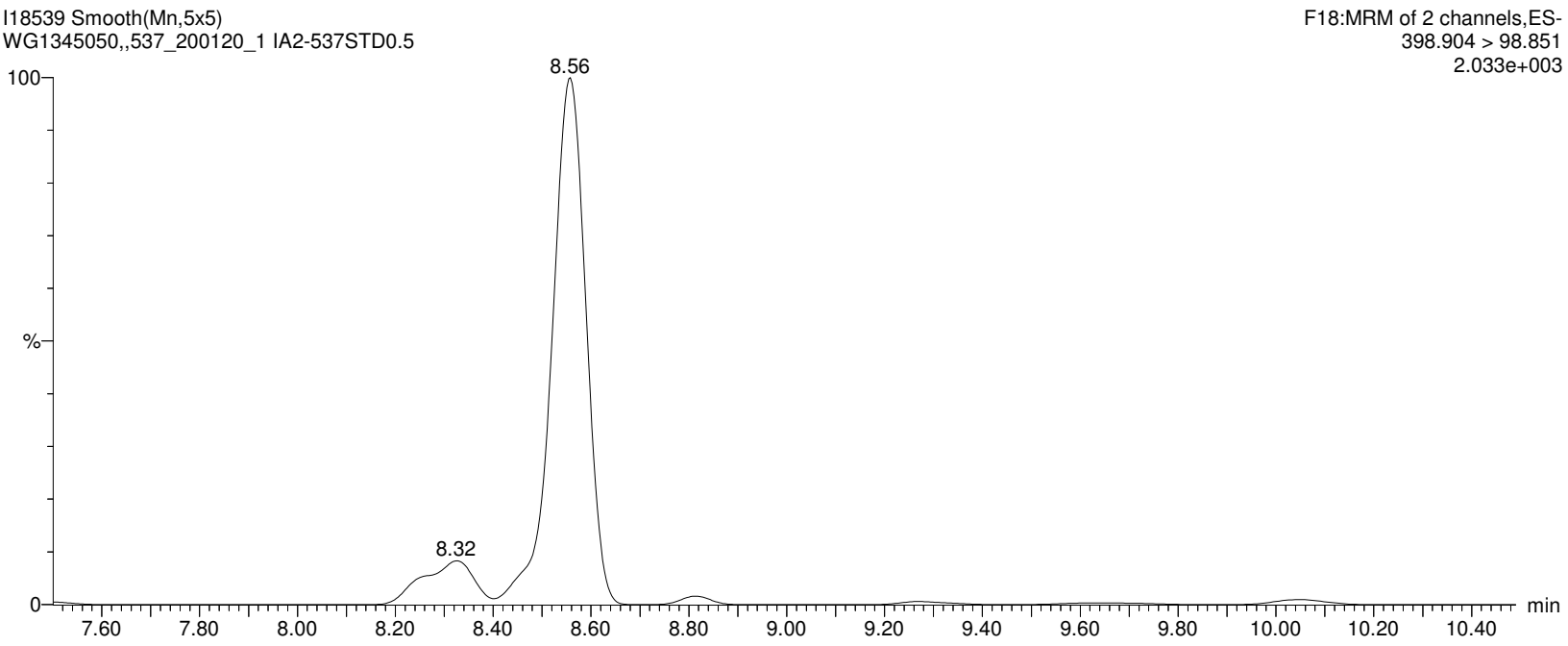
**L-PFHxS**





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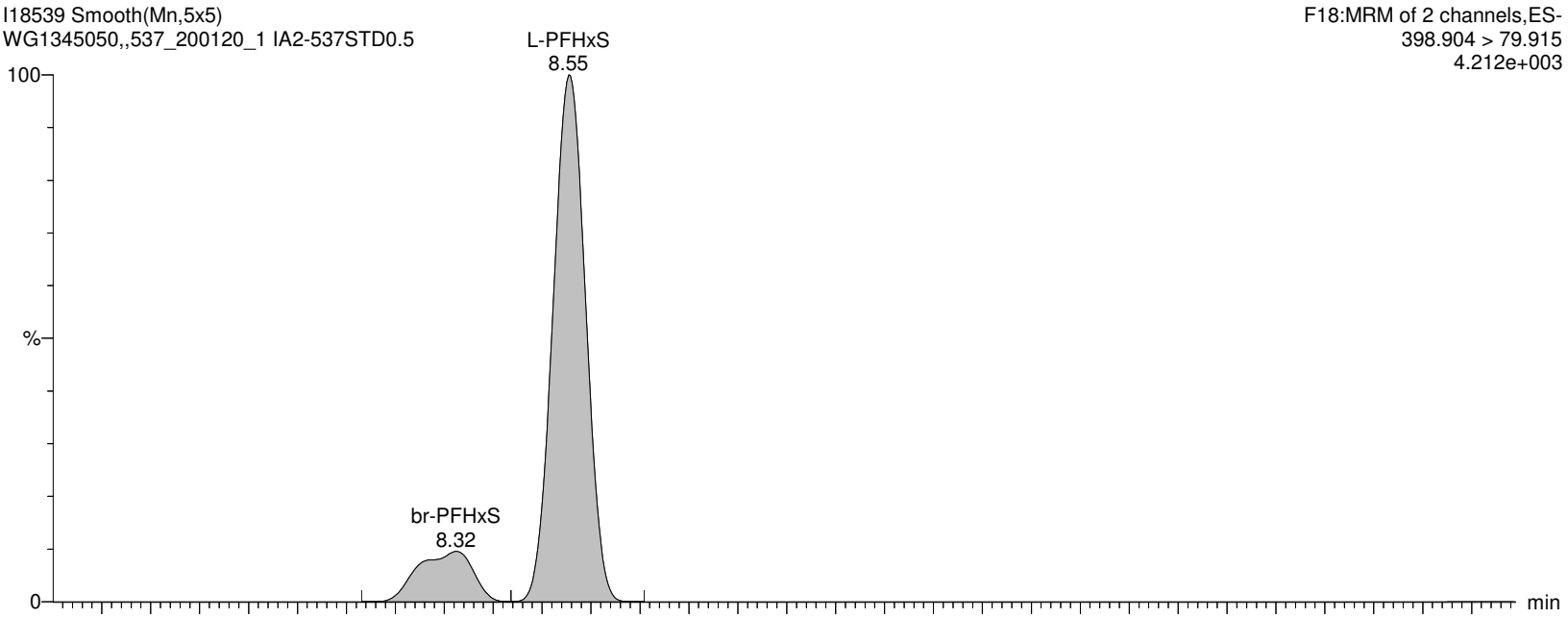


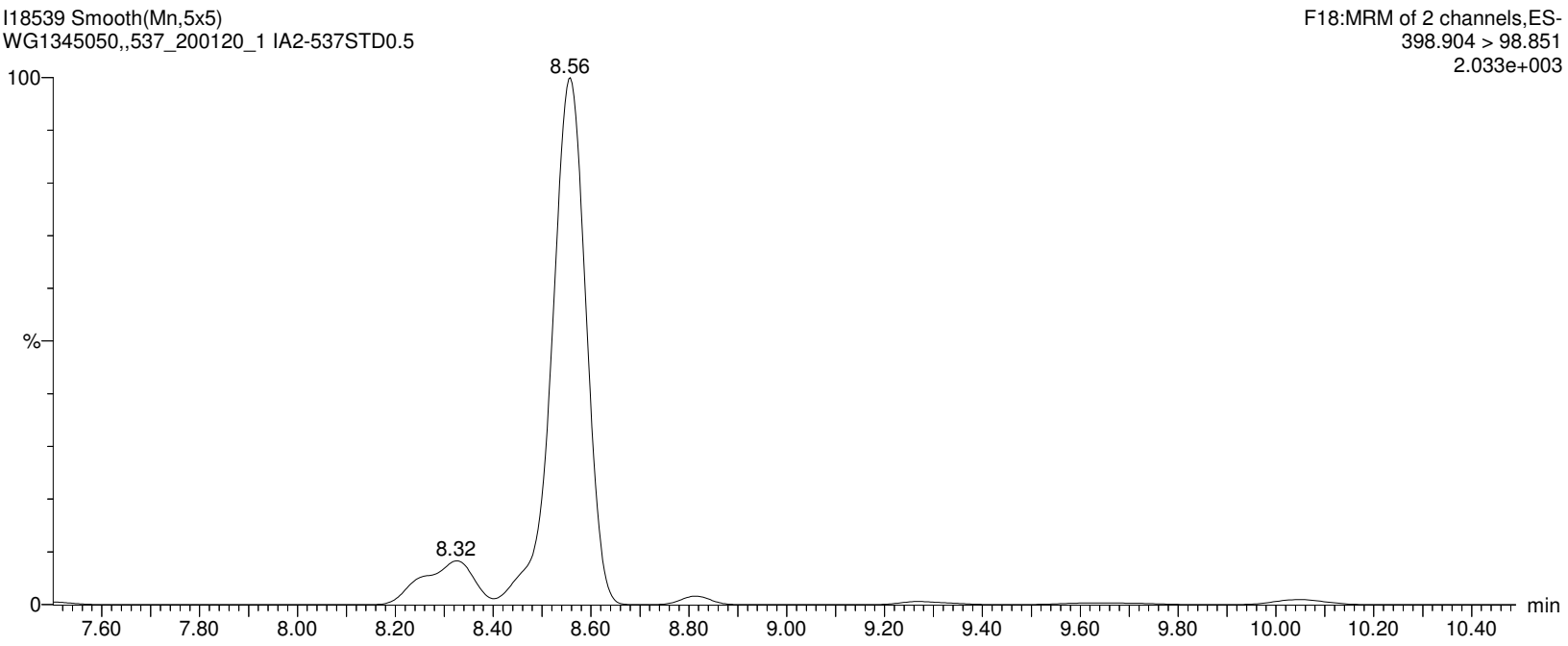



all concentration units in (ng/mL)

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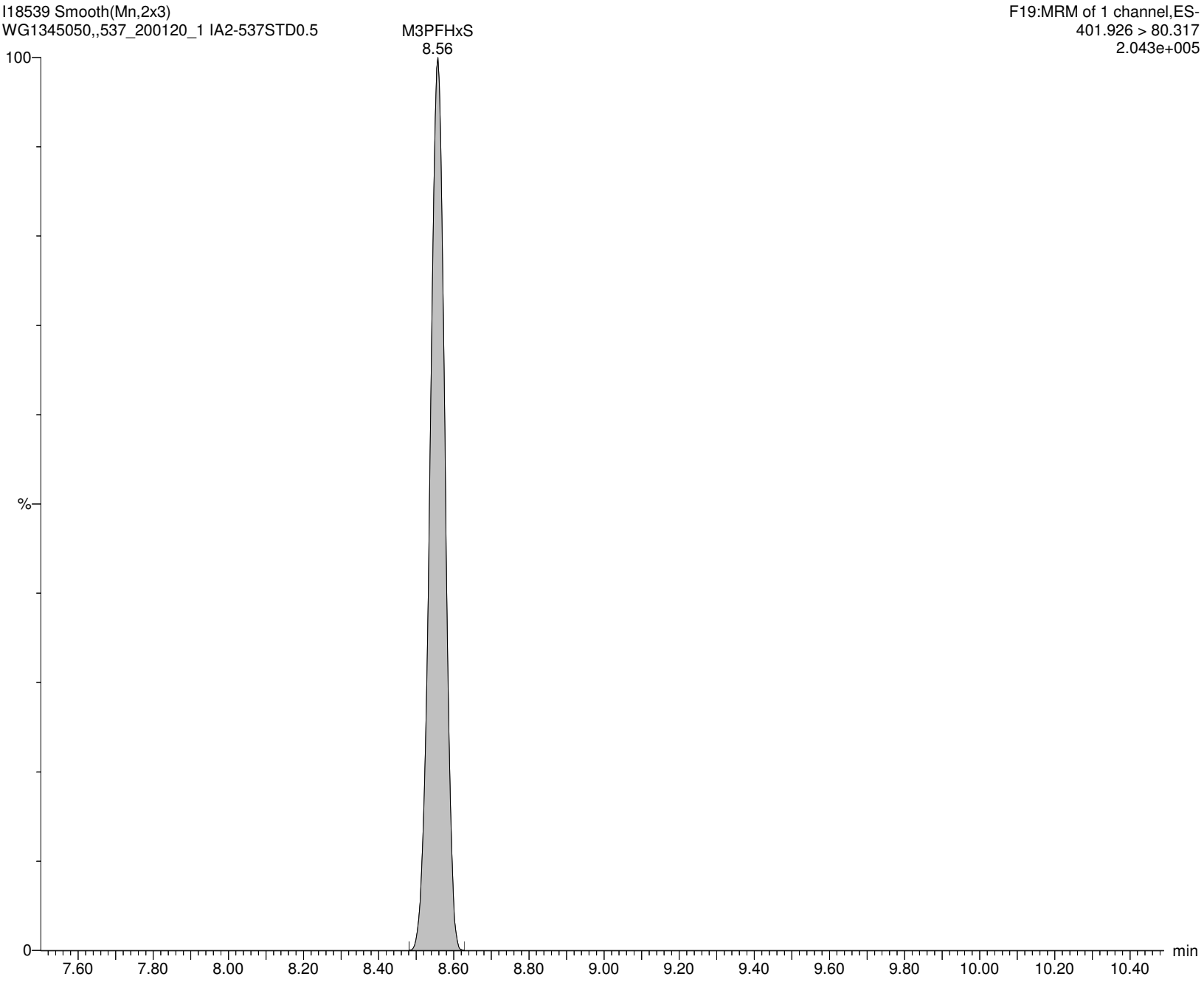
**M3PFHxS**





all concentration units in (ng/mL)

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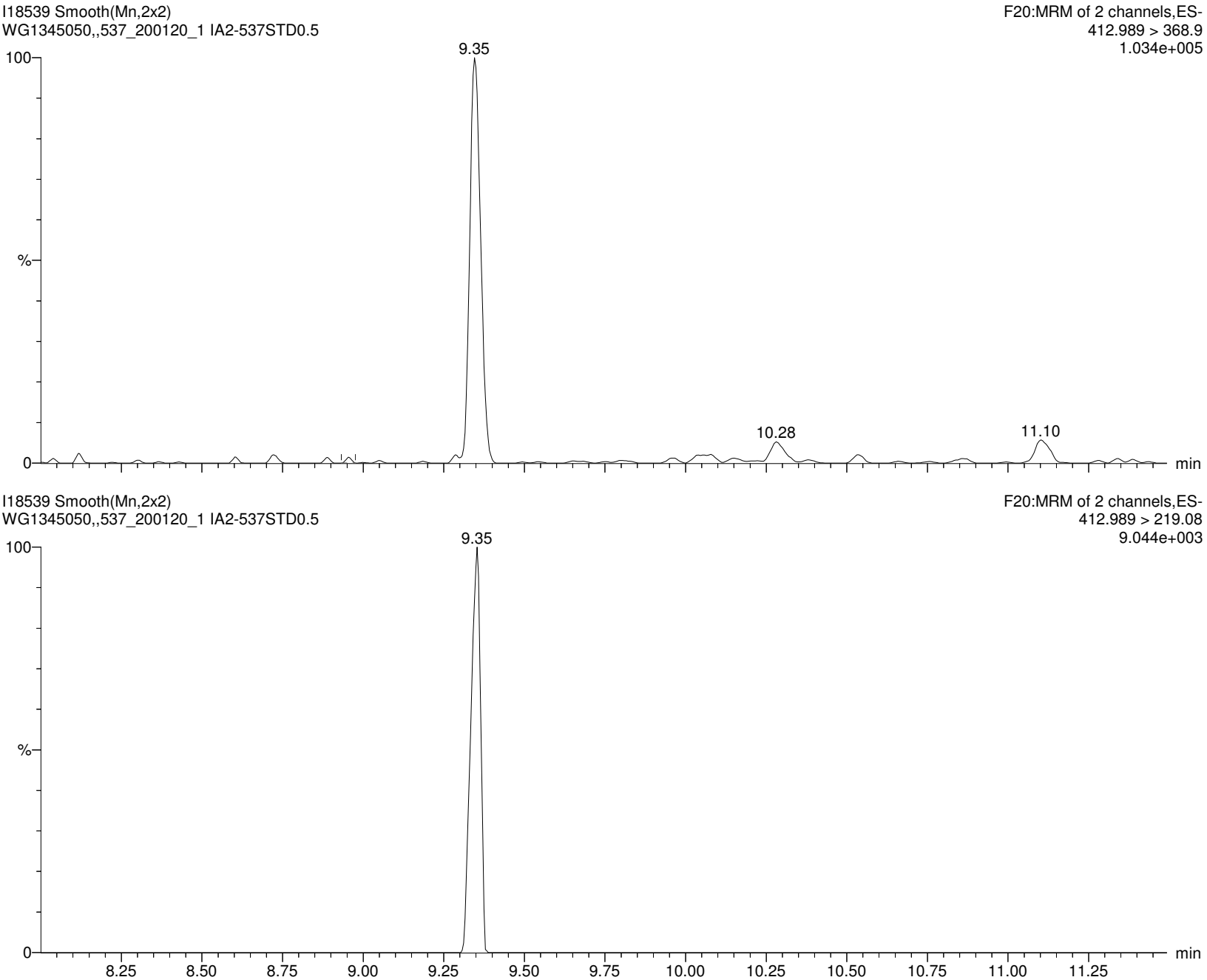



all concentration units in (ng/mL)

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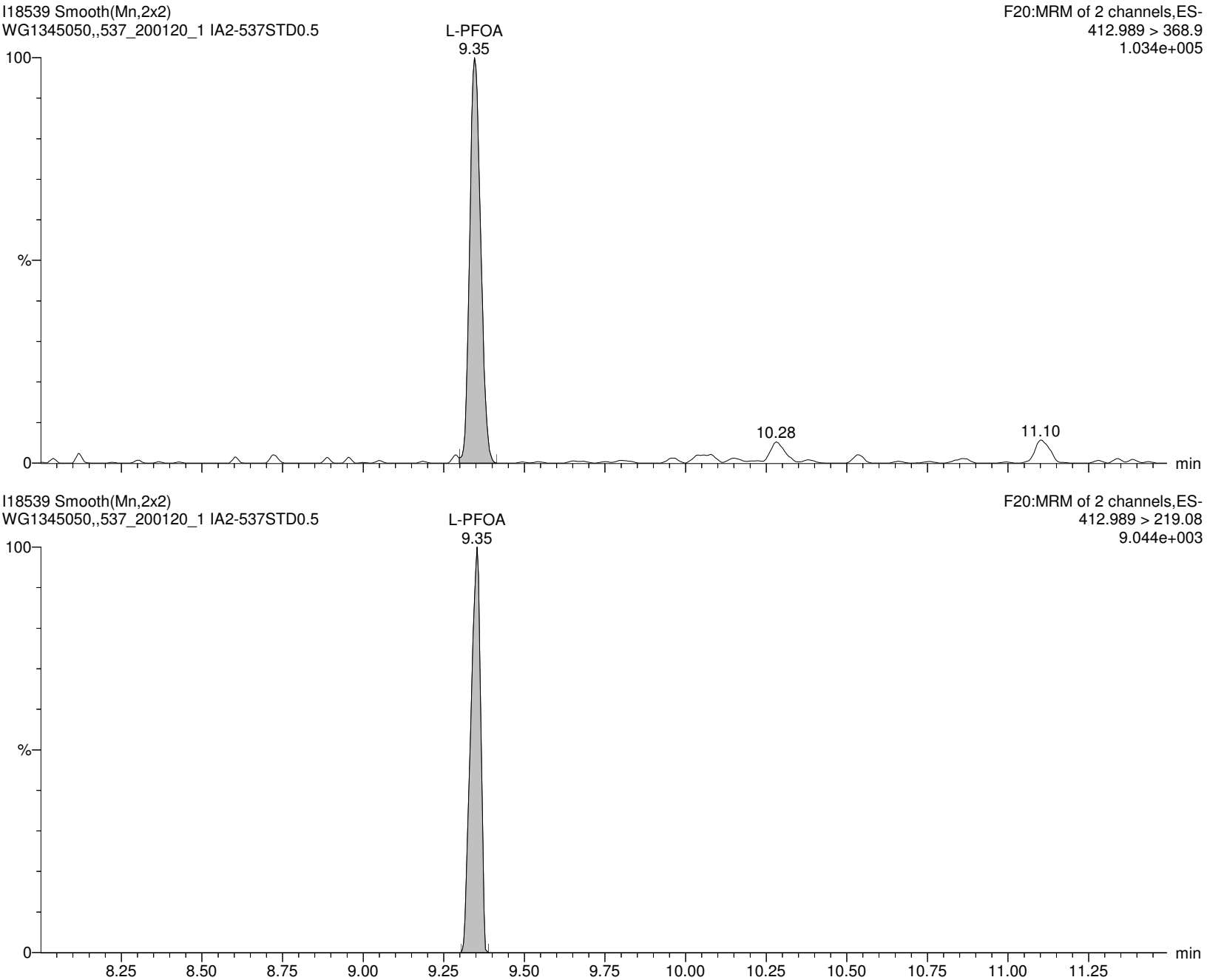
**L-PFOA**





all concentration units in (ng/mL)

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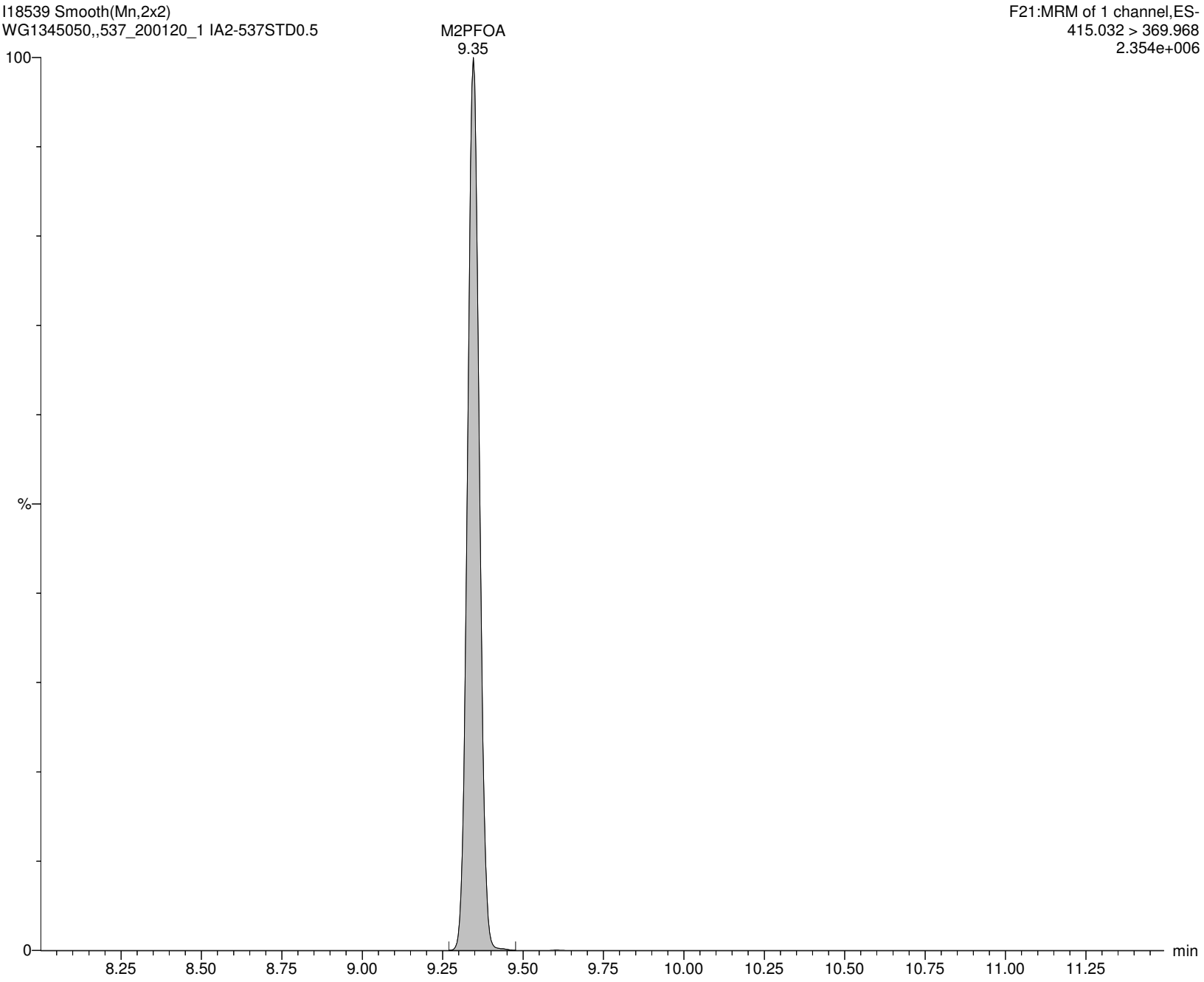



all concentration units in (ng/mL)

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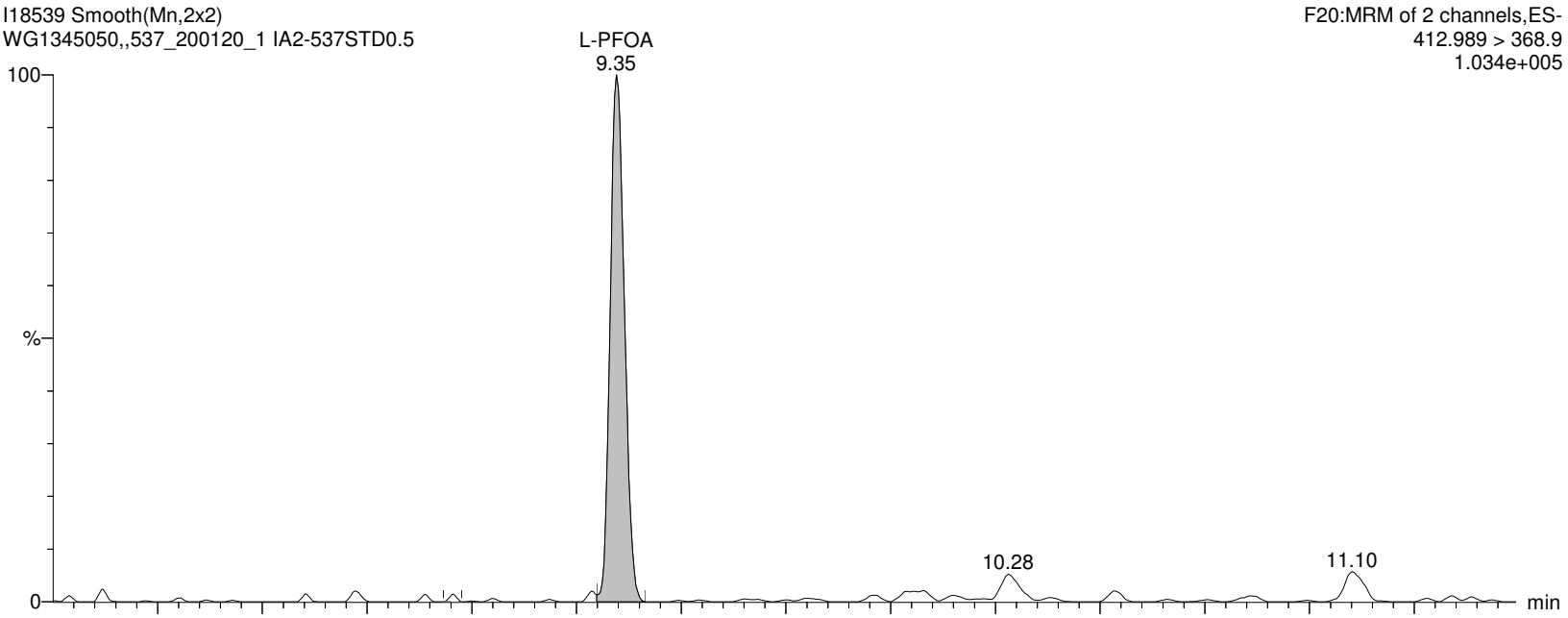


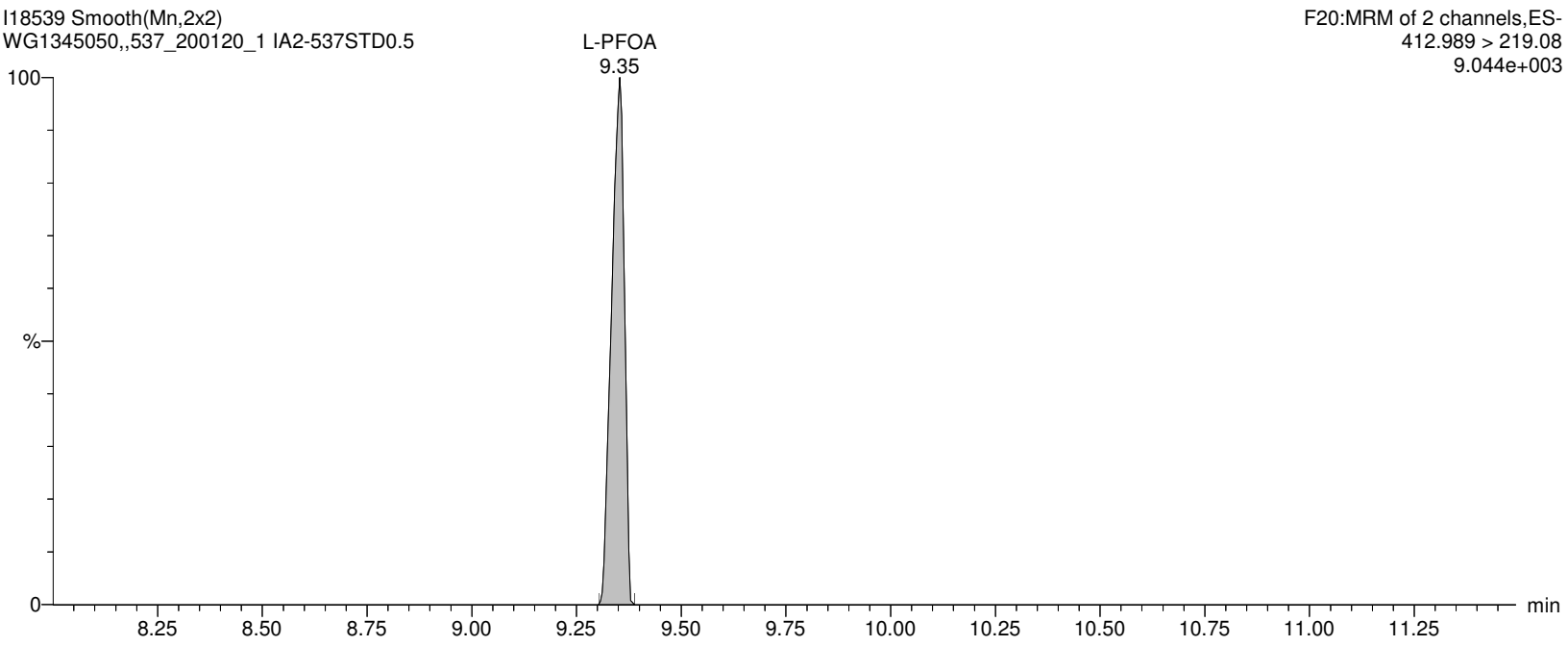



all concentration units in (ng/mL)

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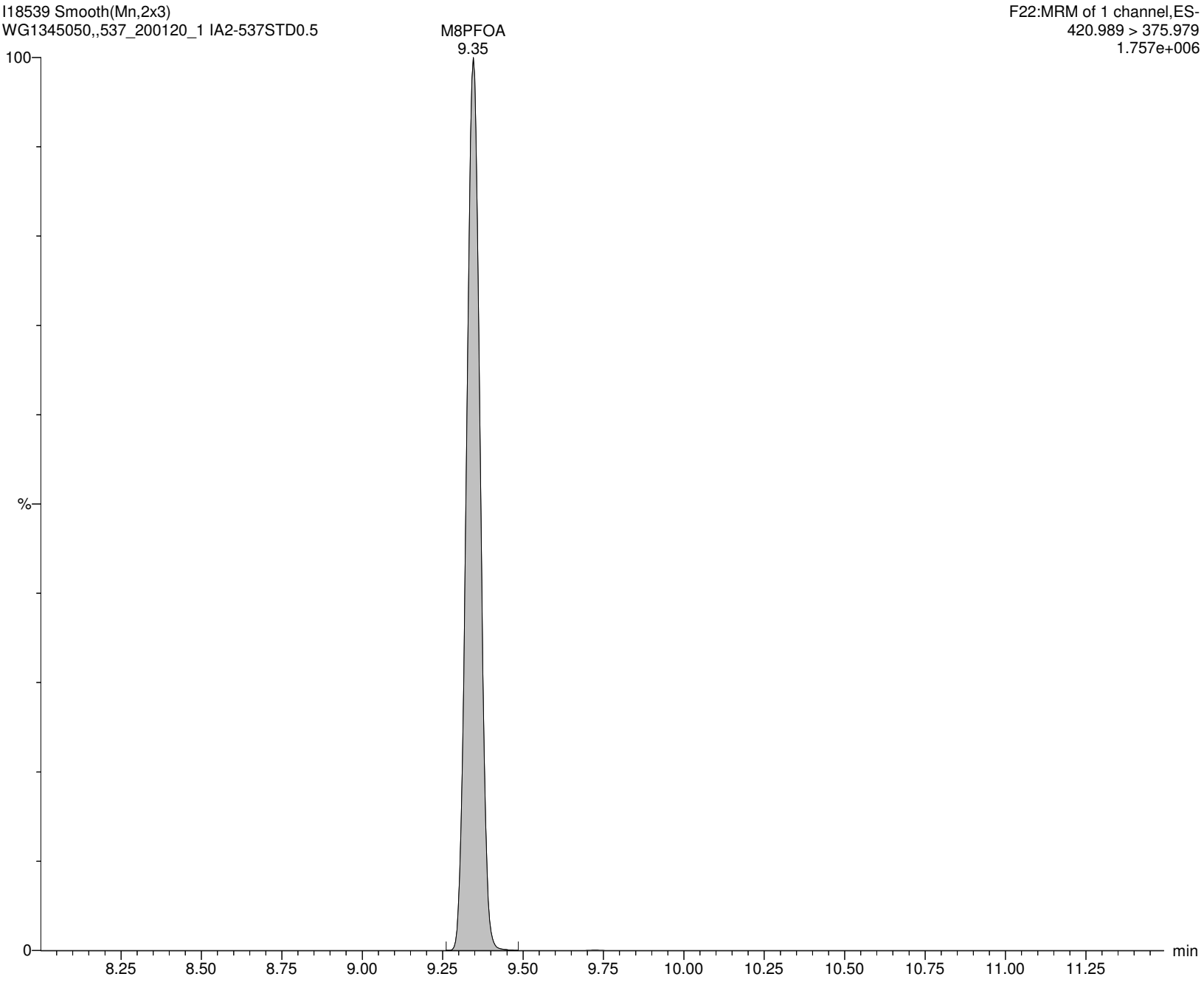



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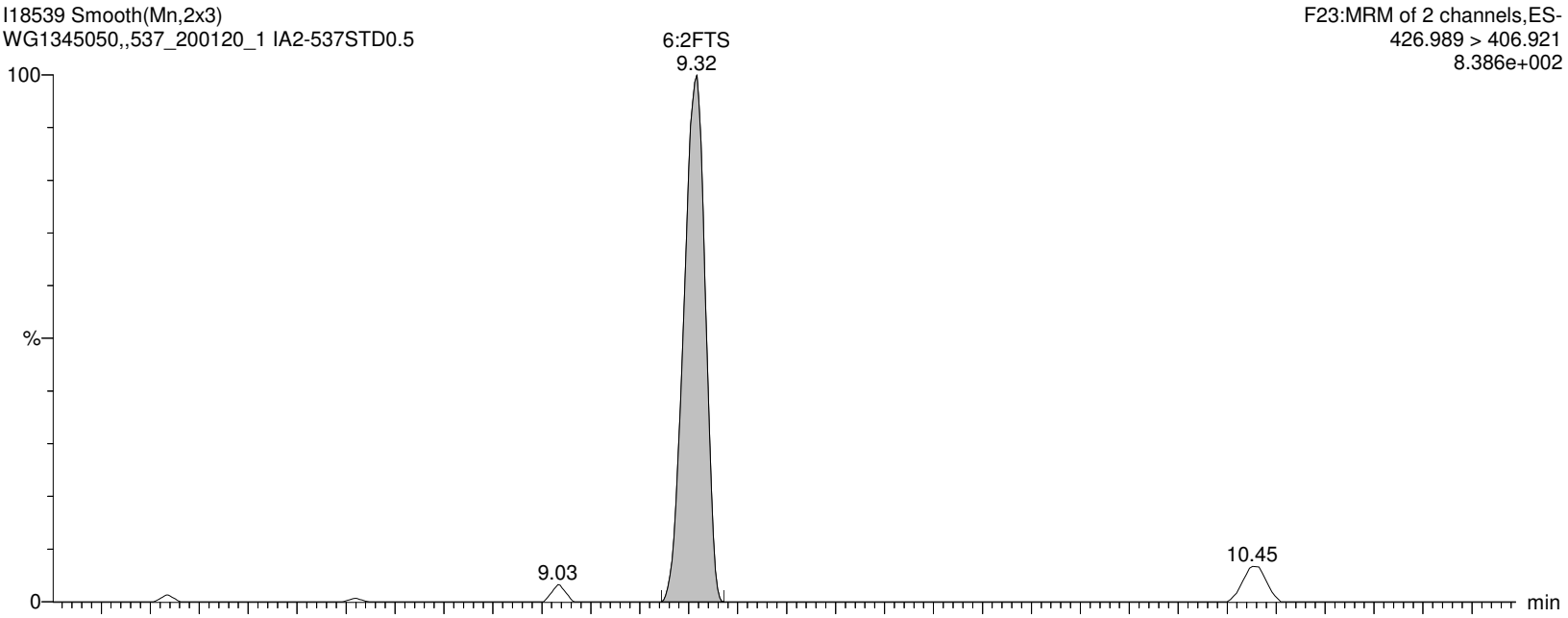


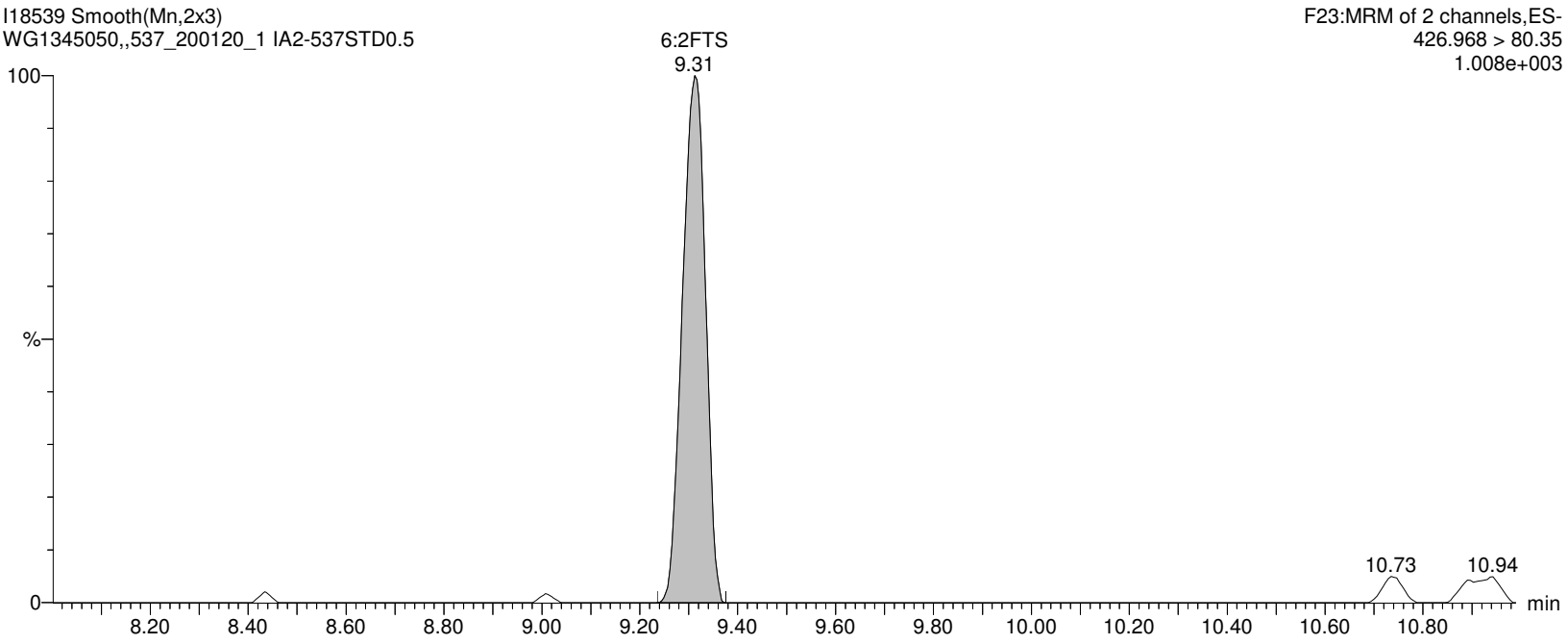



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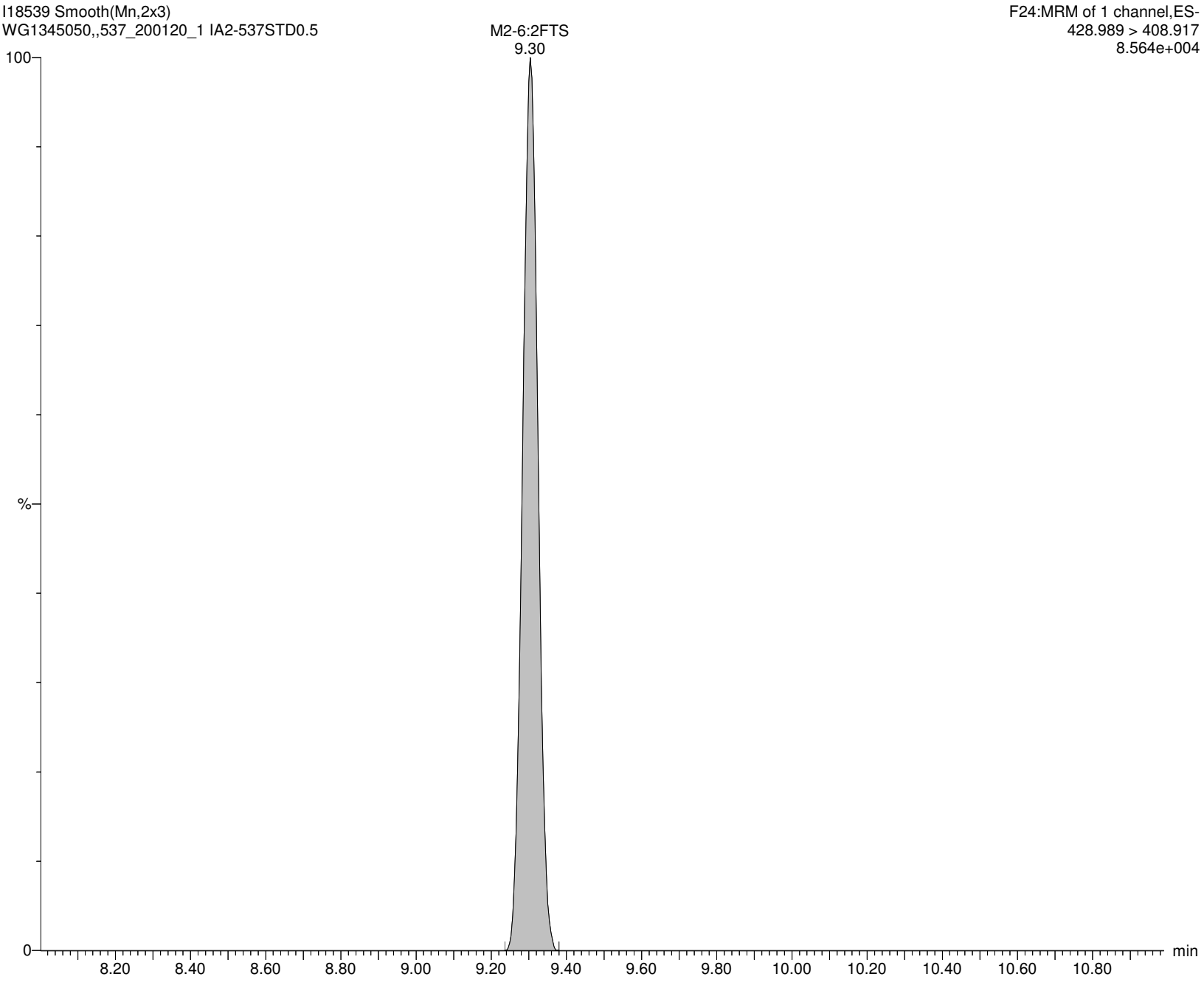
**M2-6:2FTS**





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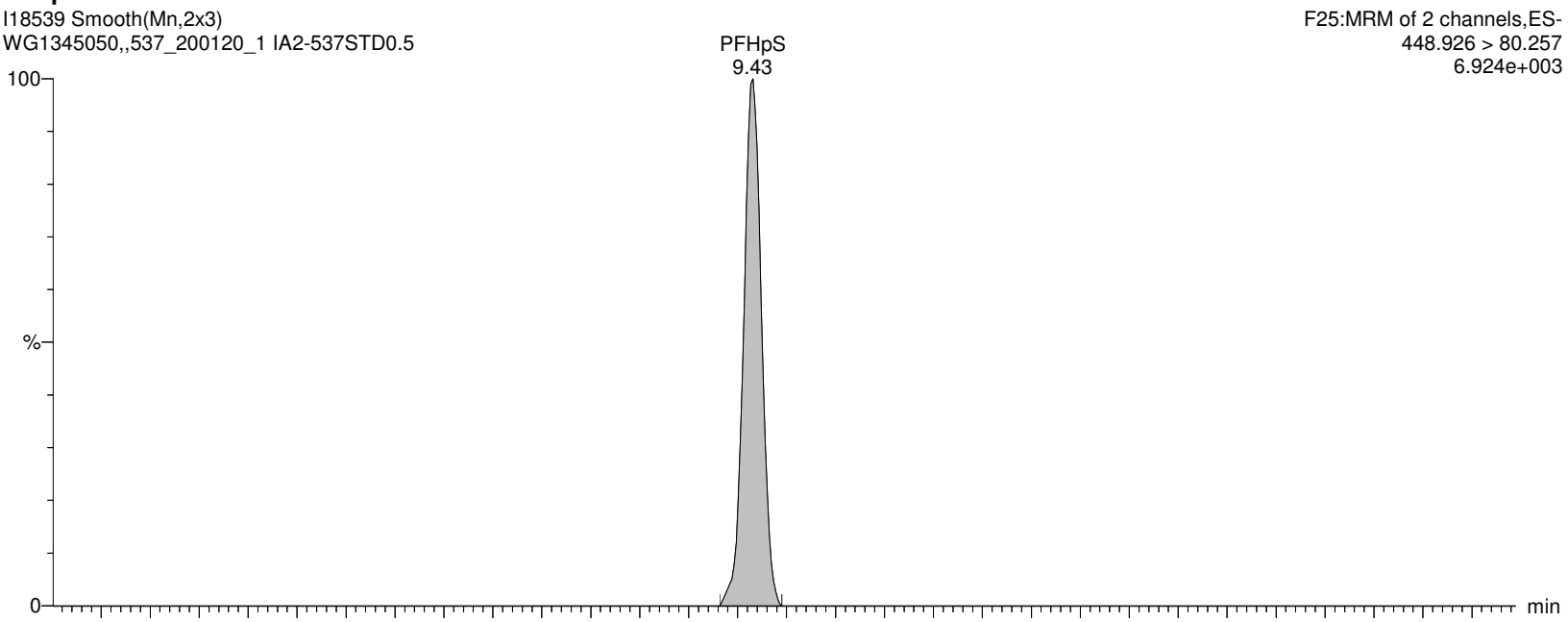
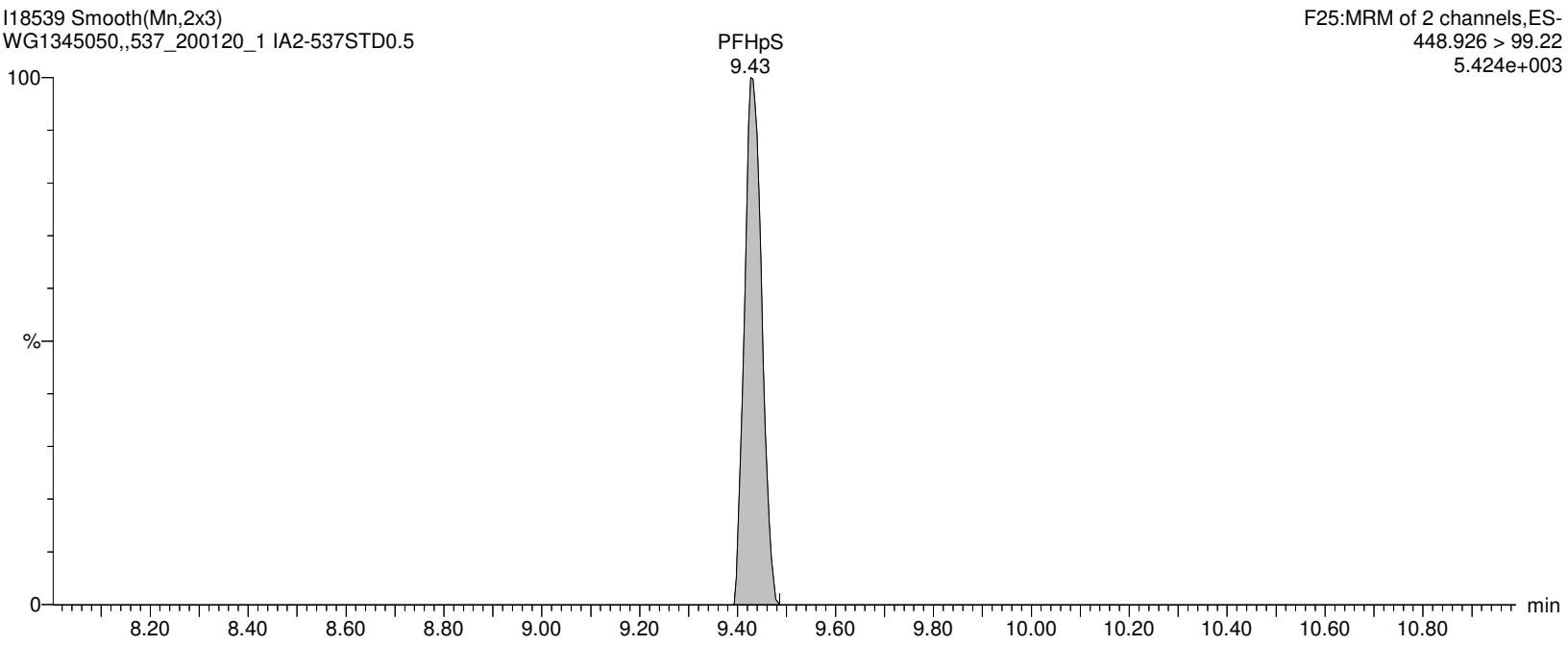
**PFHpS**





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**Tune Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\190709_TUNE.IPR**
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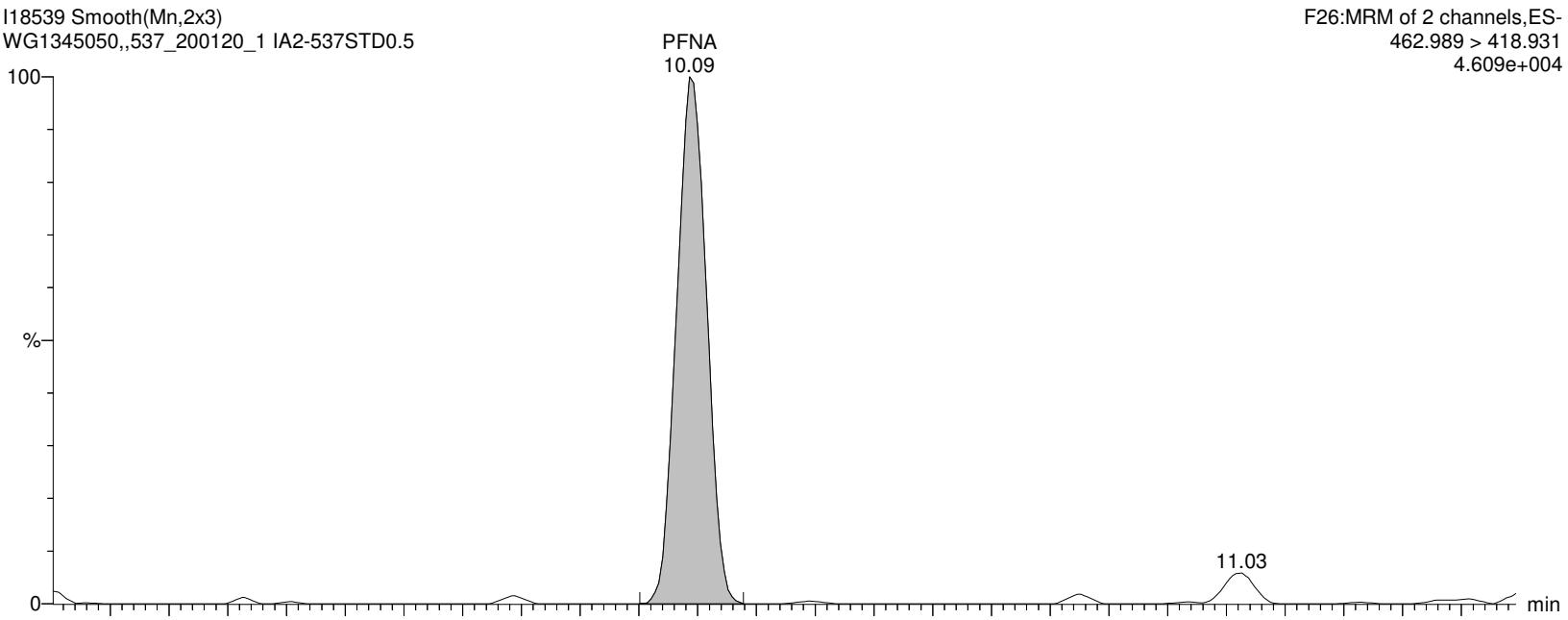


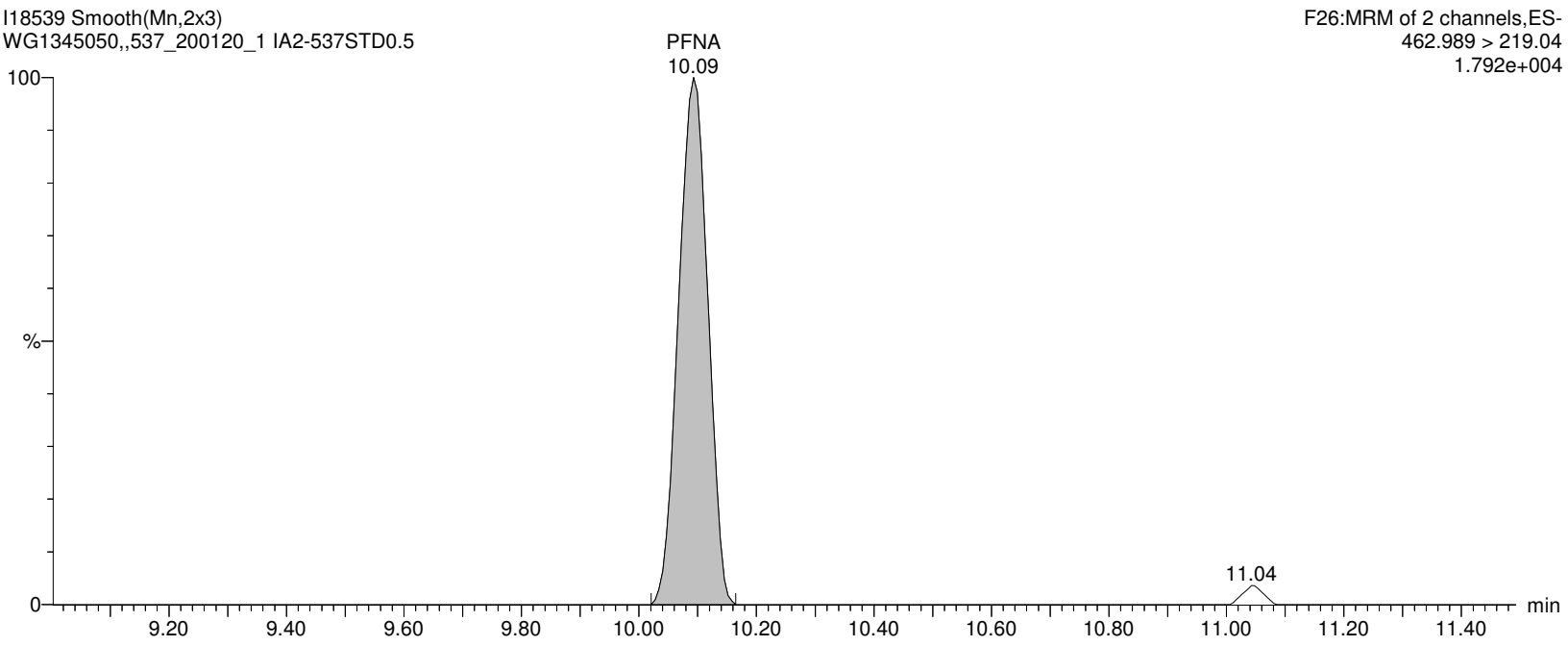



all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICAL_A.qld
Last Altered: Friday, February 28, 2020 09:12:40 Eastern Standard Time
Printed: Friday, February 28, 2020 09:27:59 Eastern Standard Time

**Name: I18539**
**ID: IA2-537STD0.5**
**Date: 27-Feb-2020**
**Time: 16:47:48**
**Description: WG1345050,,537_200120_1**
**User: LCMS01:JW**
**Vial: 1:B,5**
**Instrument: XEVO-TQSmicro#QEA0276**
**Inlet Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\LCMS_537_ISO_MeOH**
**Tune Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\190709_TUNE.IPR**
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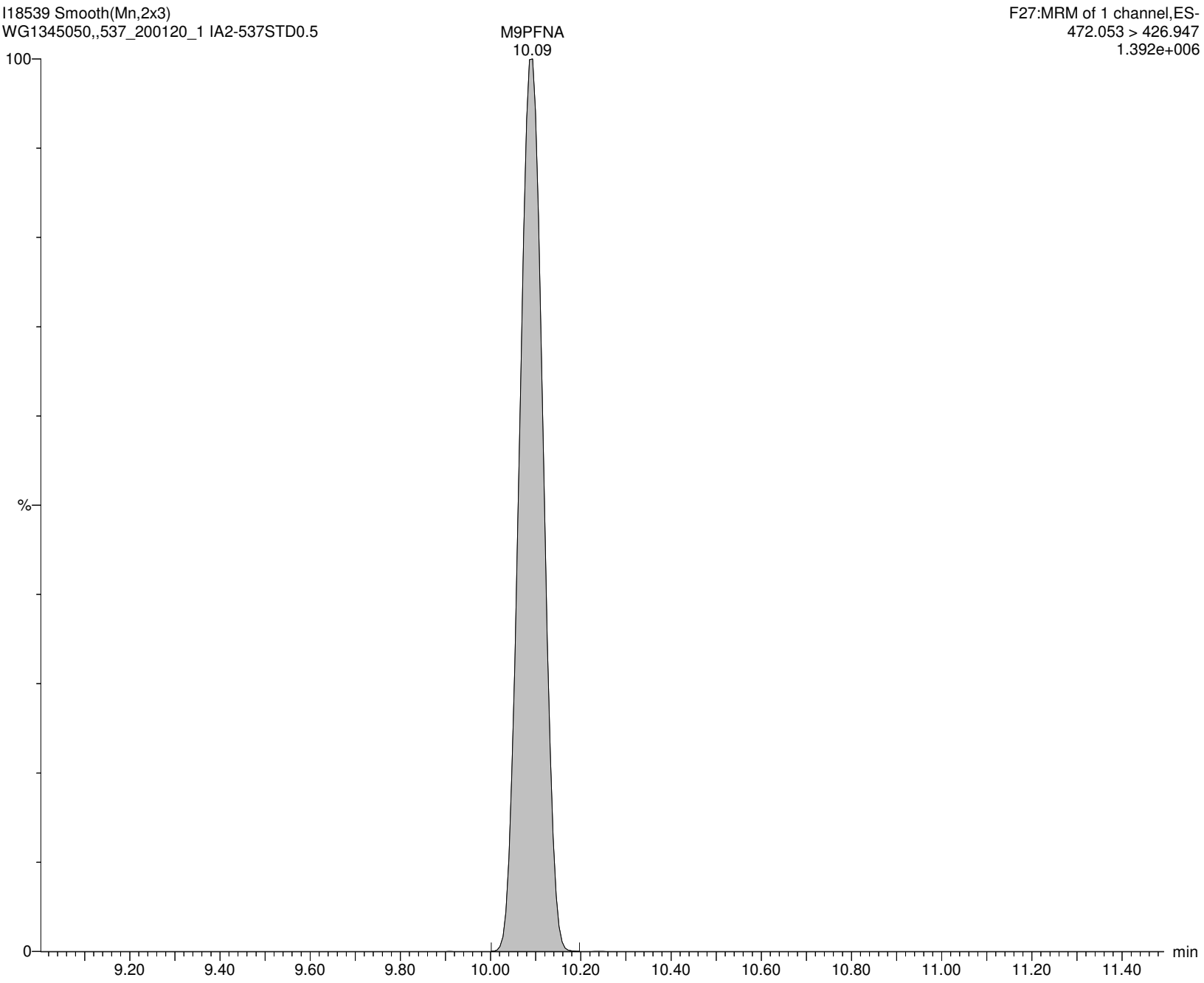



all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICAL_A.qld
Last Altered: Friday, February 28, 2020 09:12:40 Eastern Standard Time
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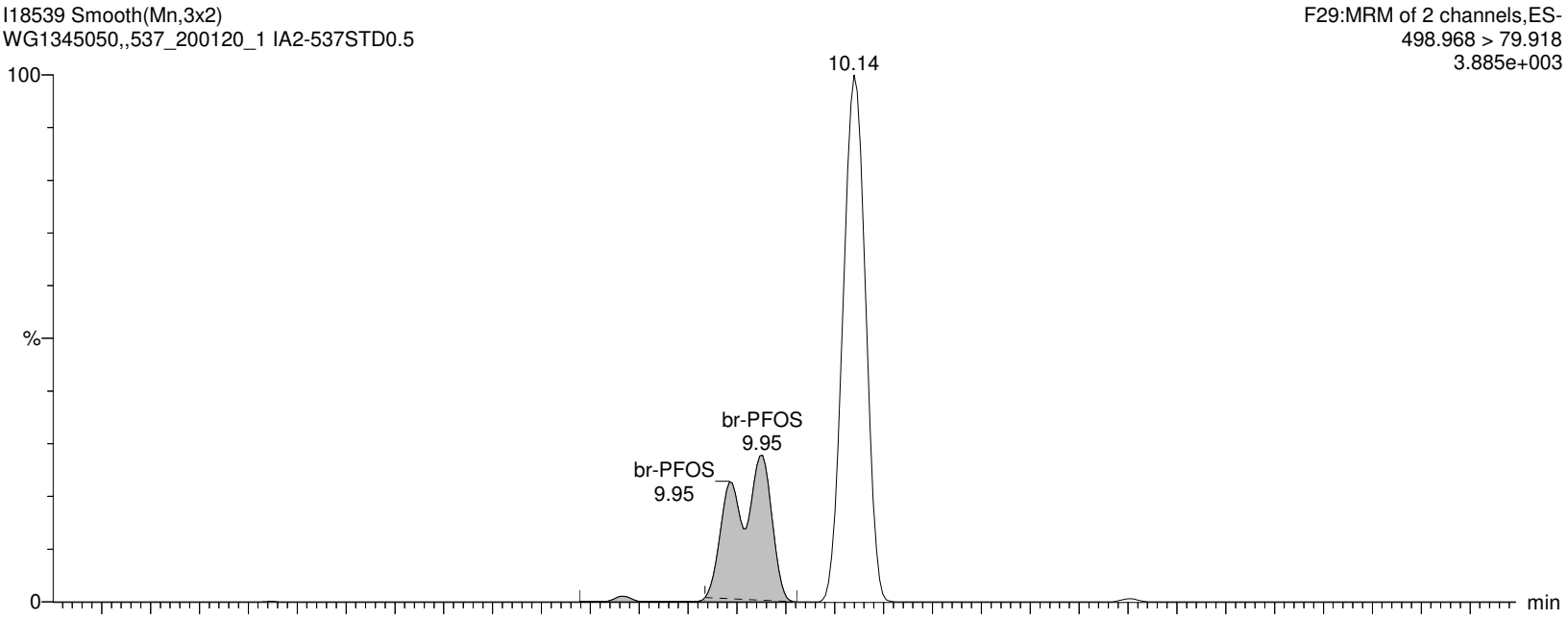


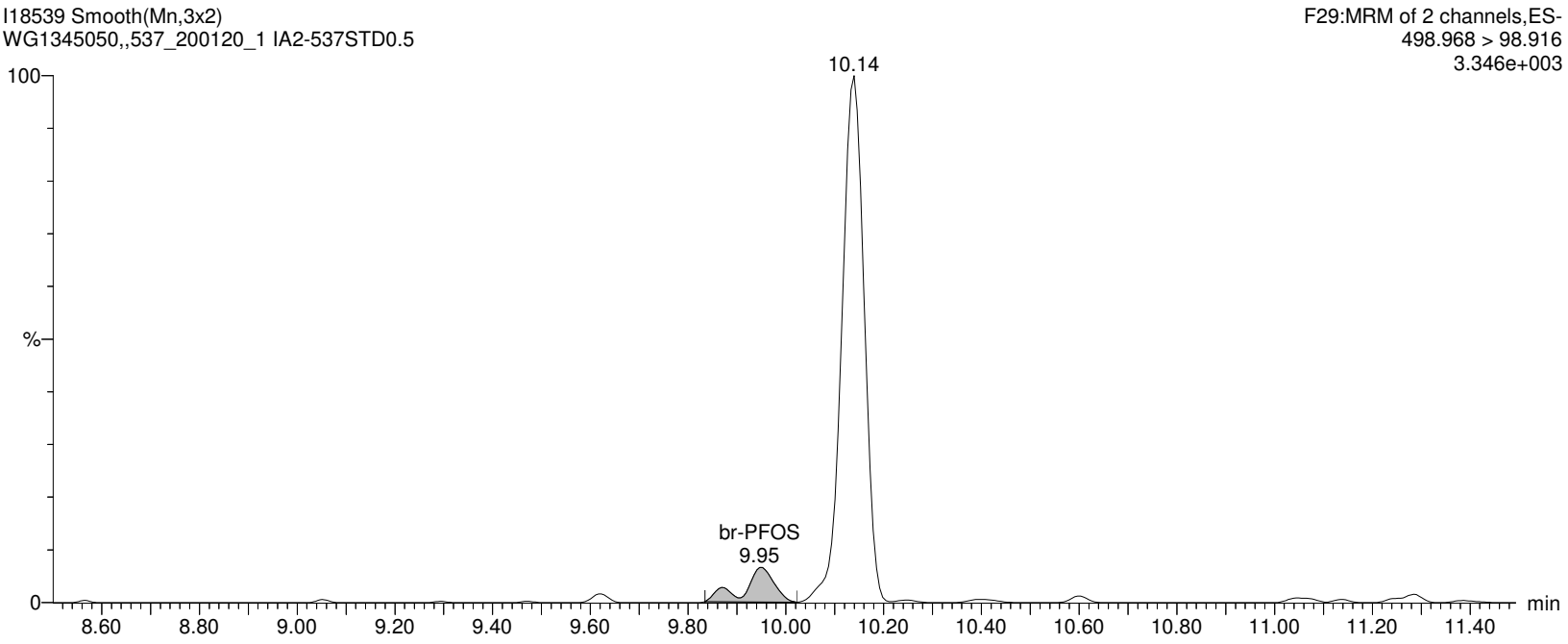



all concentration units in (ng/mL)

Alpha Analytical Inc.
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Last Altered: Friday, February 28, 2020 09:12:40 Eastern Standard Time
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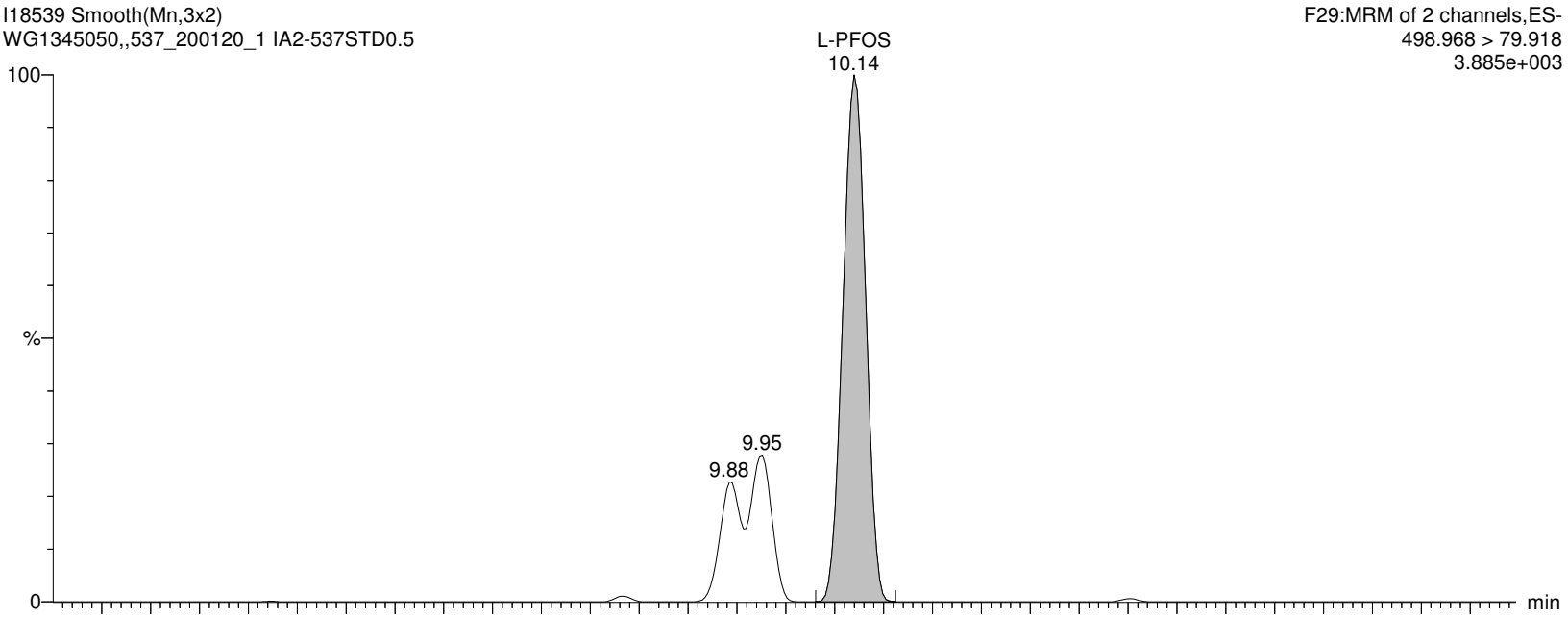


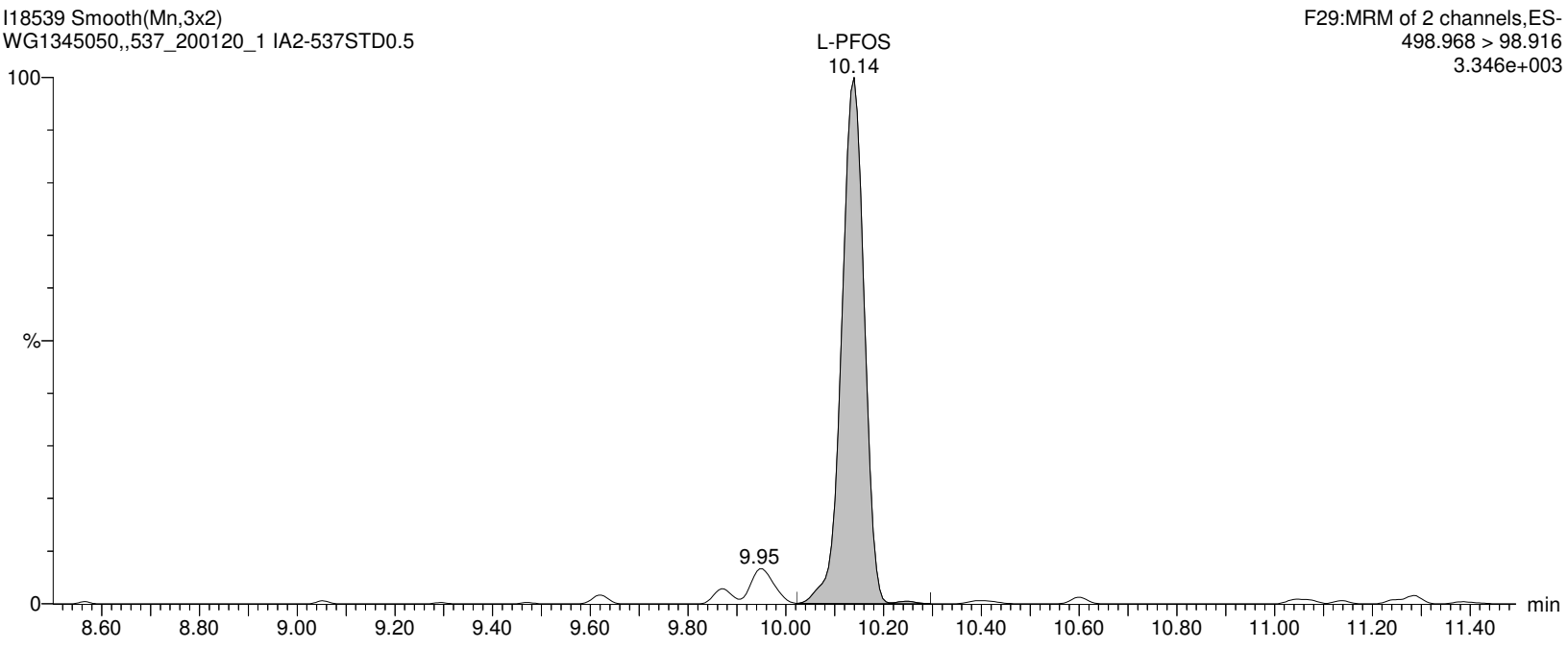



all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICAL_A.qld
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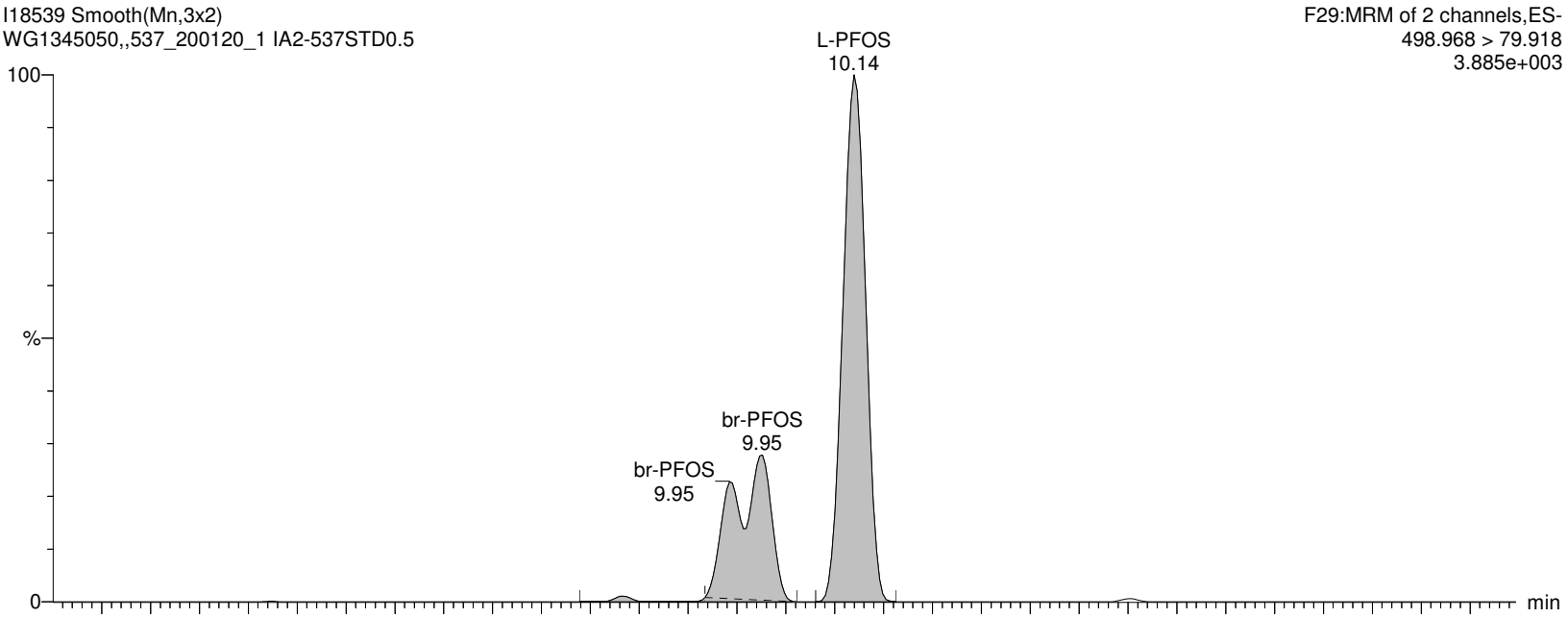
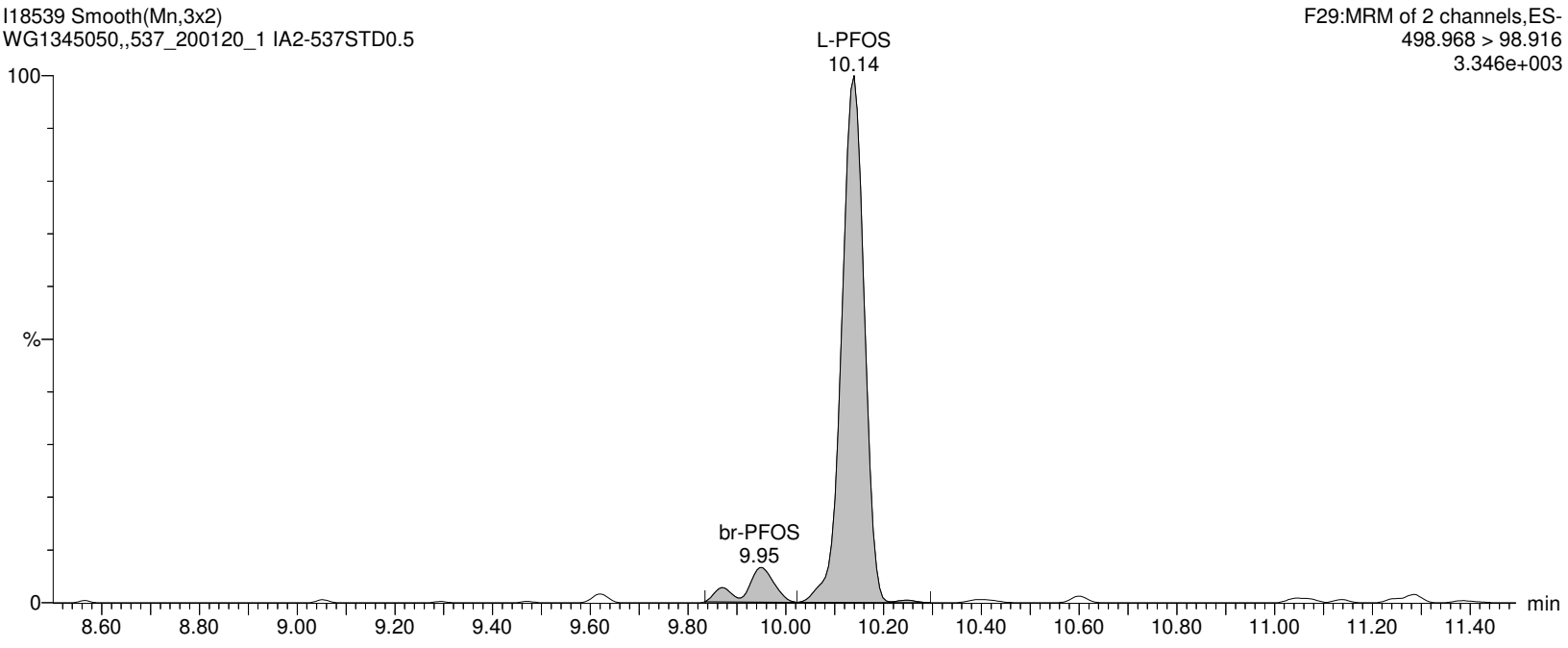
**MS Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**PFOS**





all concentration units in (ng/mL)

Alpha Analytical Inc.
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**Vial: 1:B,5**
**Instrument: XEVO-TQSmicro#QEA0276**
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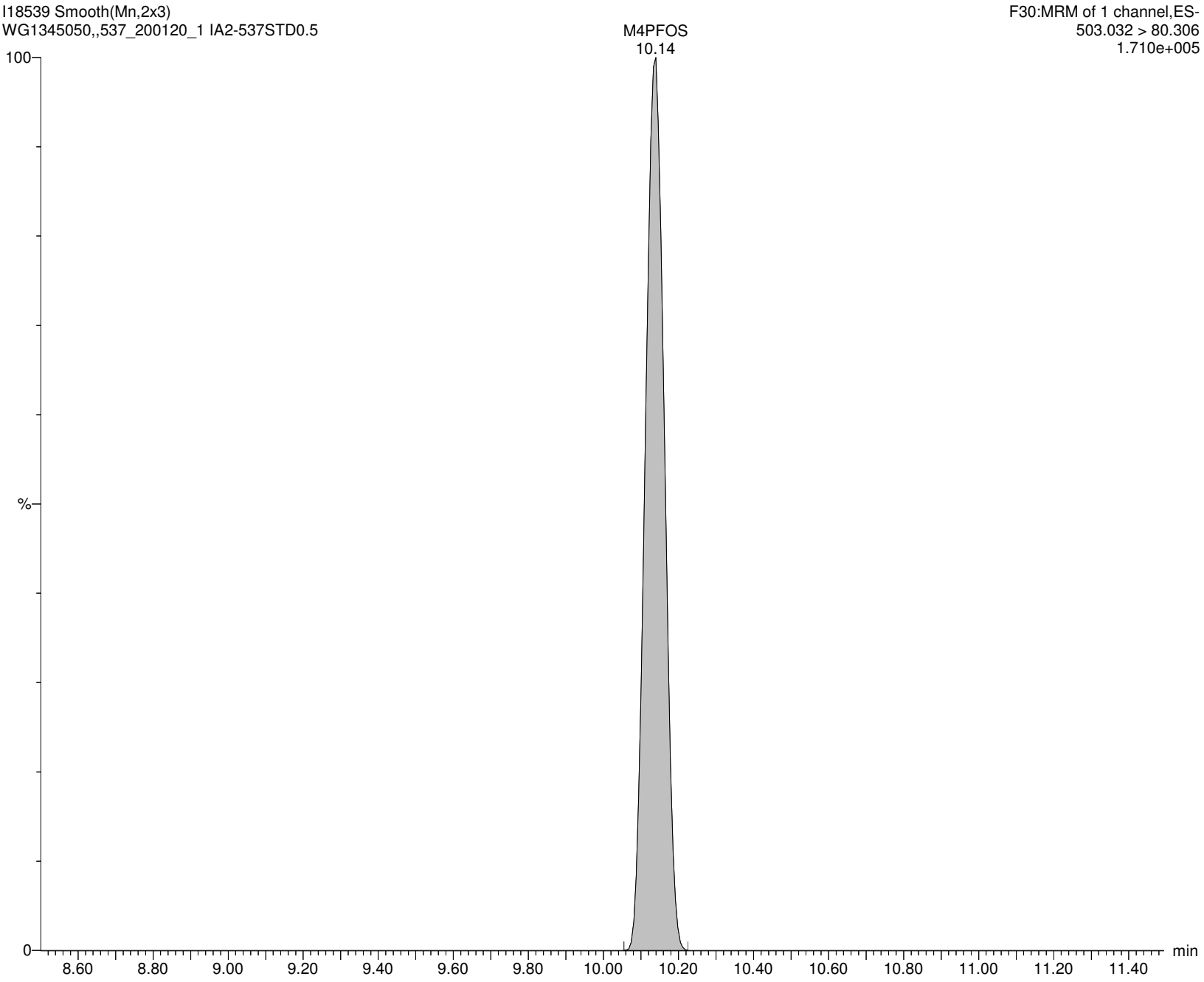
**M4PFOS**





all concentration units in (ng/mL)

Alpha Analytical Inc.
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Last Altered: Friday, February 28, 2020 09:12:40 Eastern Standard Time
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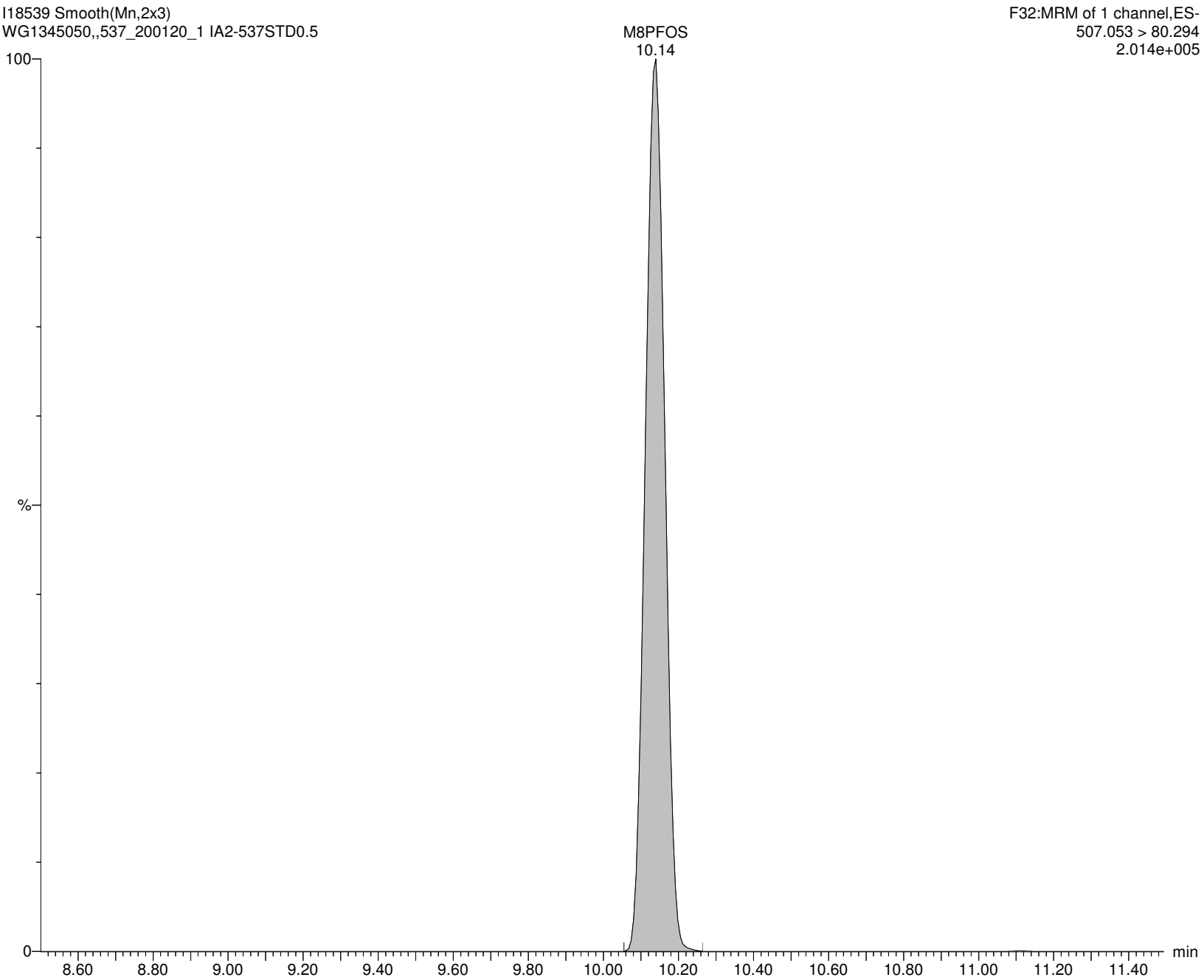
**M8PFOS**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICAL_A.qld
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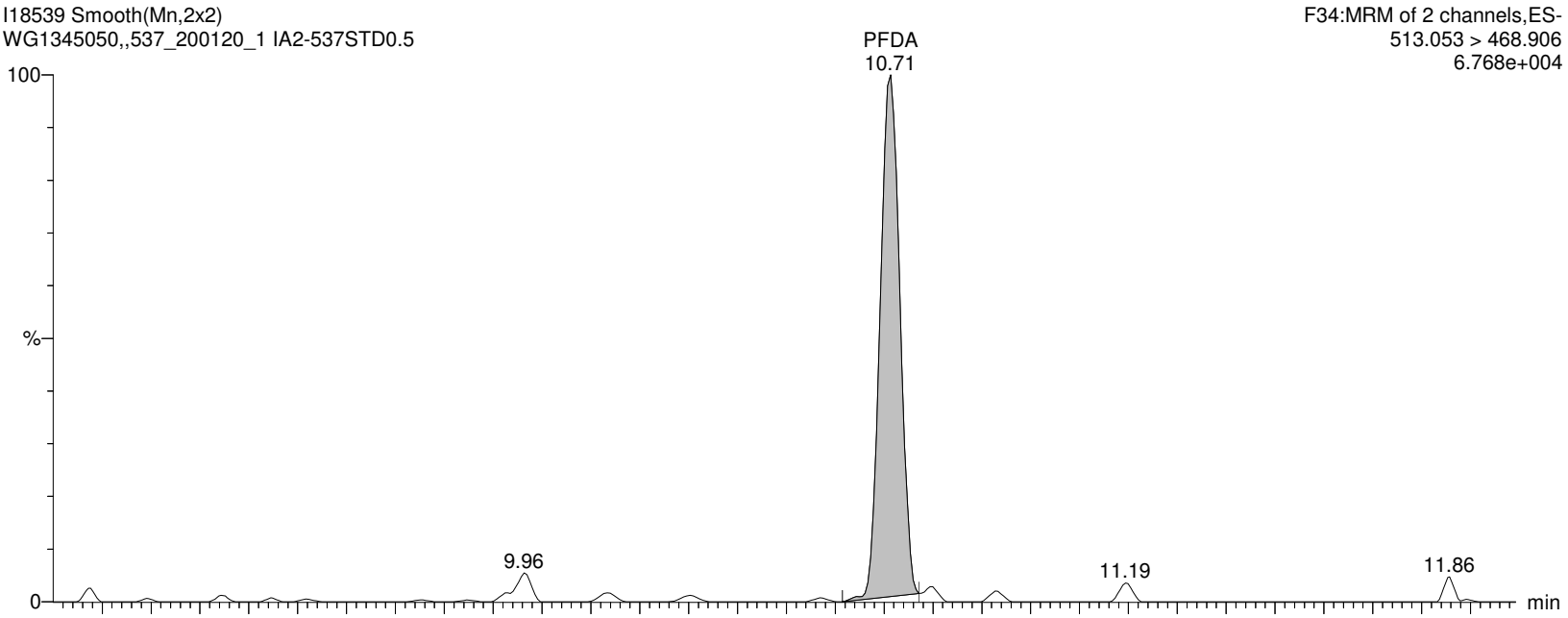
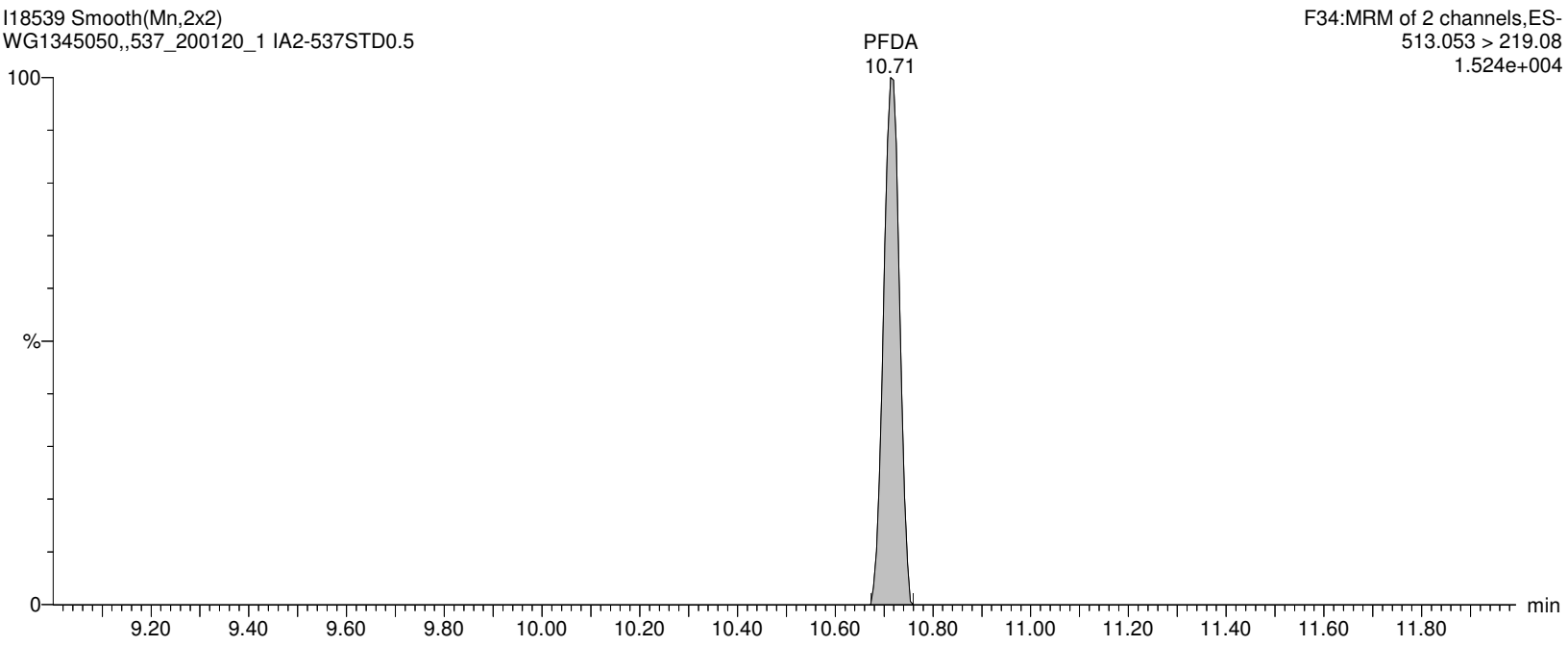
**PFDA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICAL_A.qld
Last Altered: Friday, February 28, 2020 09:12:40 Eastern Standard Time
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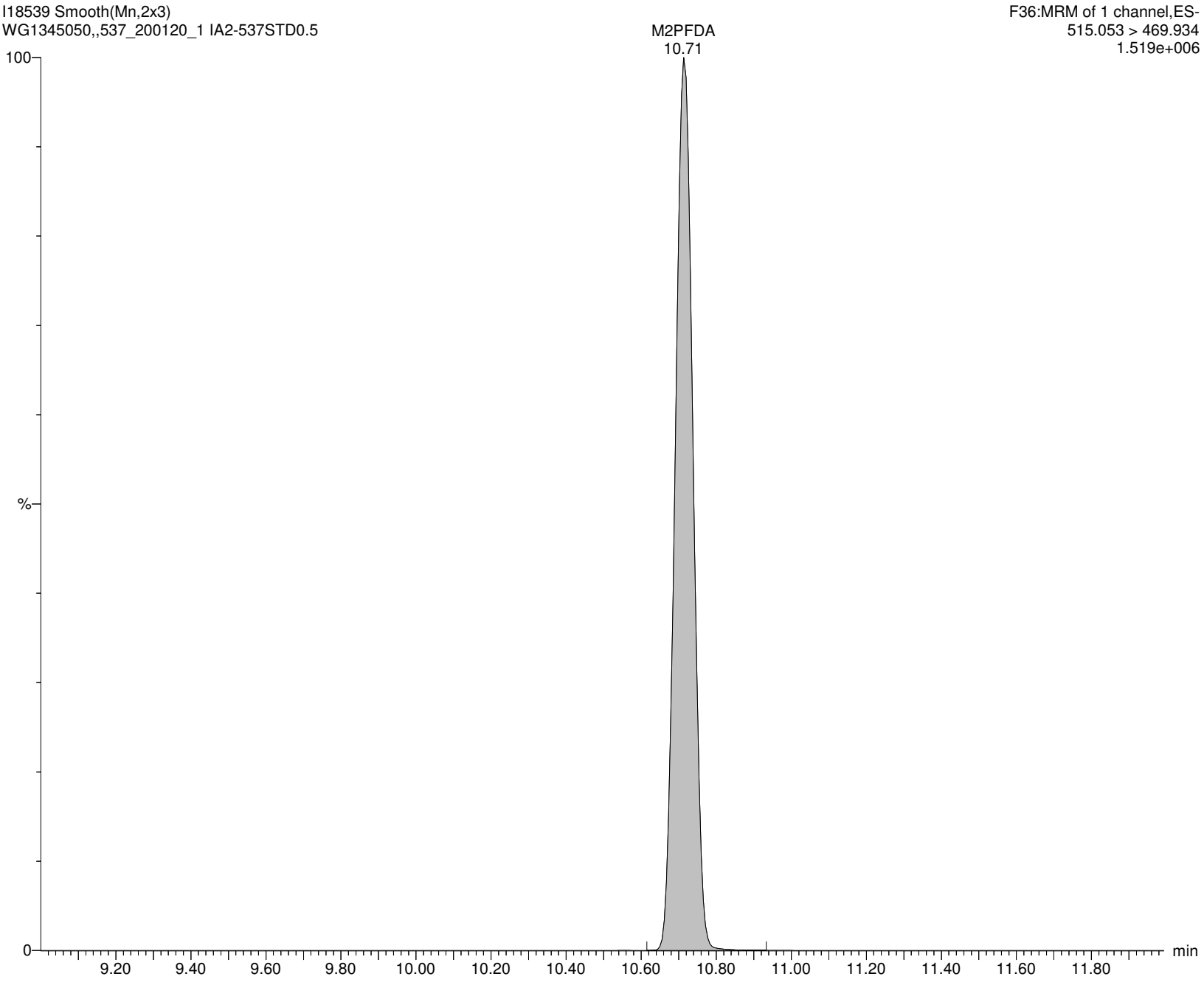
**M2PFDA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
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Last Altered: Friday, February 28, 2020 09:12:40 Eastern Standard Time
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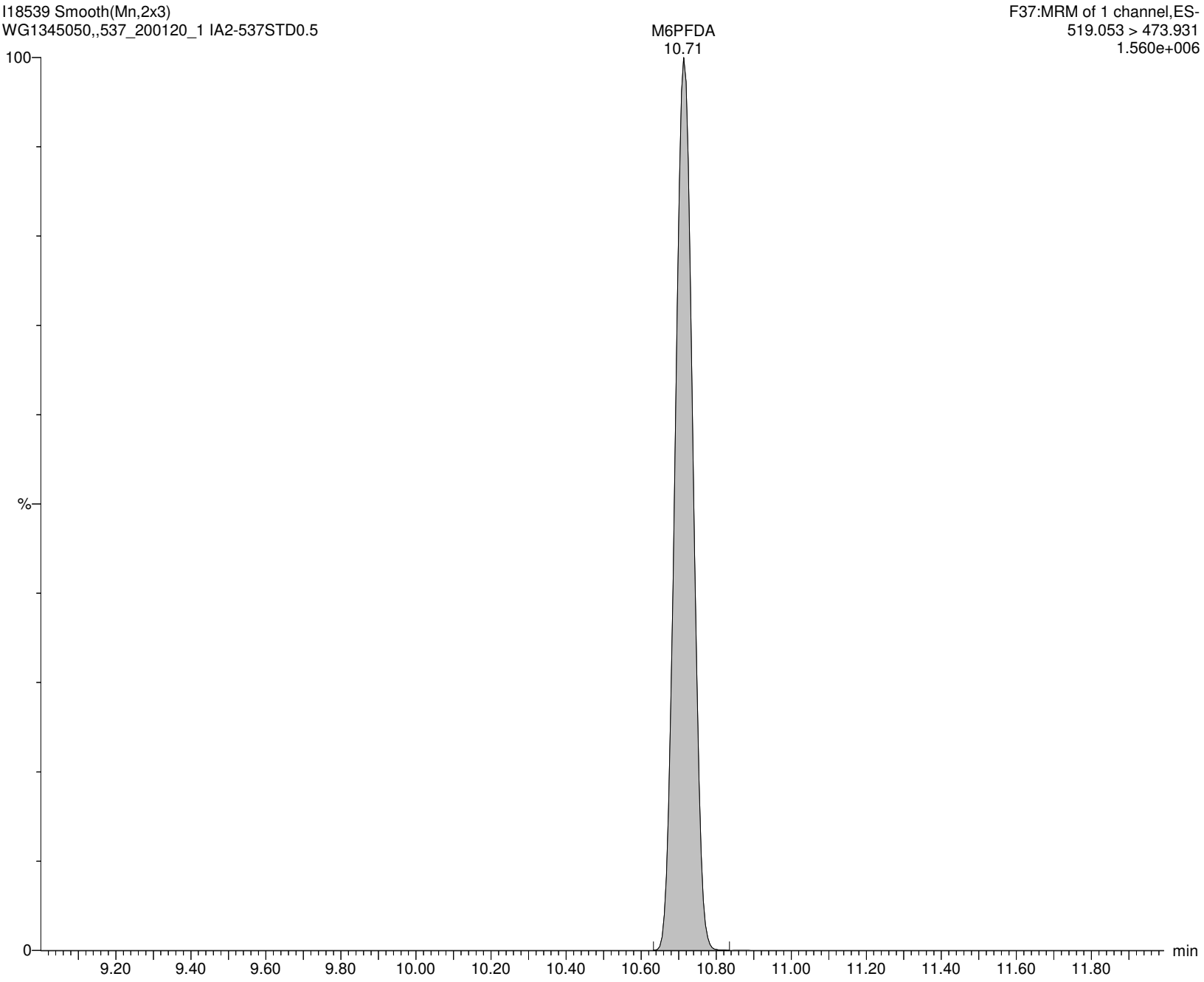



all concentration units in (ng/mL)

Alpha Analytical Inc.
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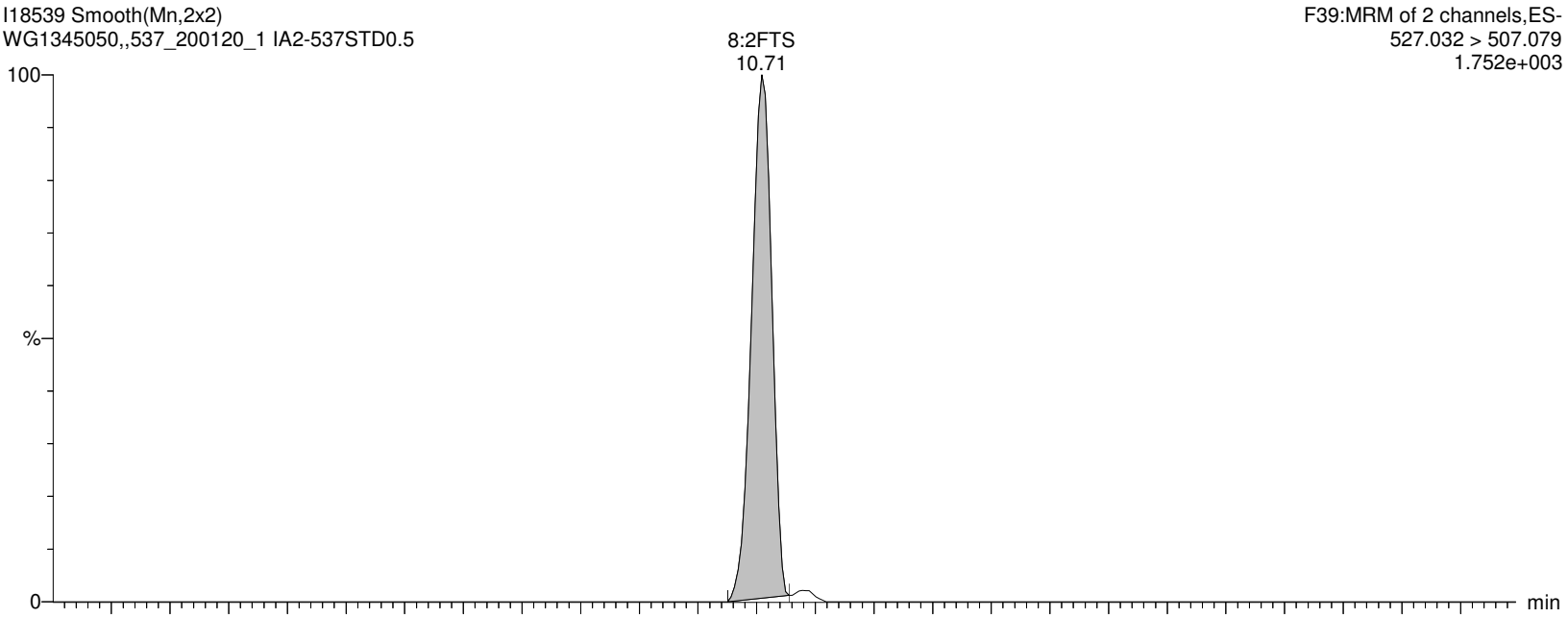
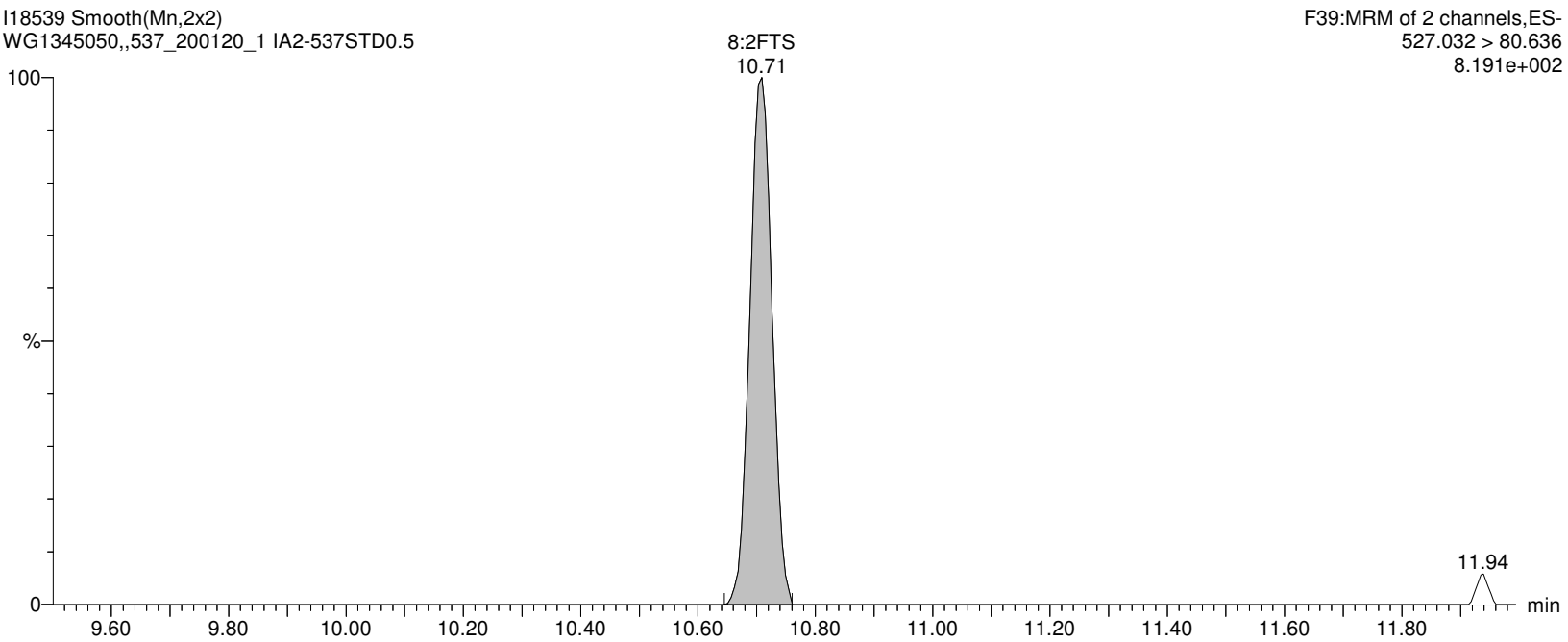
**8:2FTS**





all concentration units in (ng/mL)

Alpha Analytical Inc.
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Last Altered: Friday, February 28, 2020 09:12:40 Eastern Standard Time
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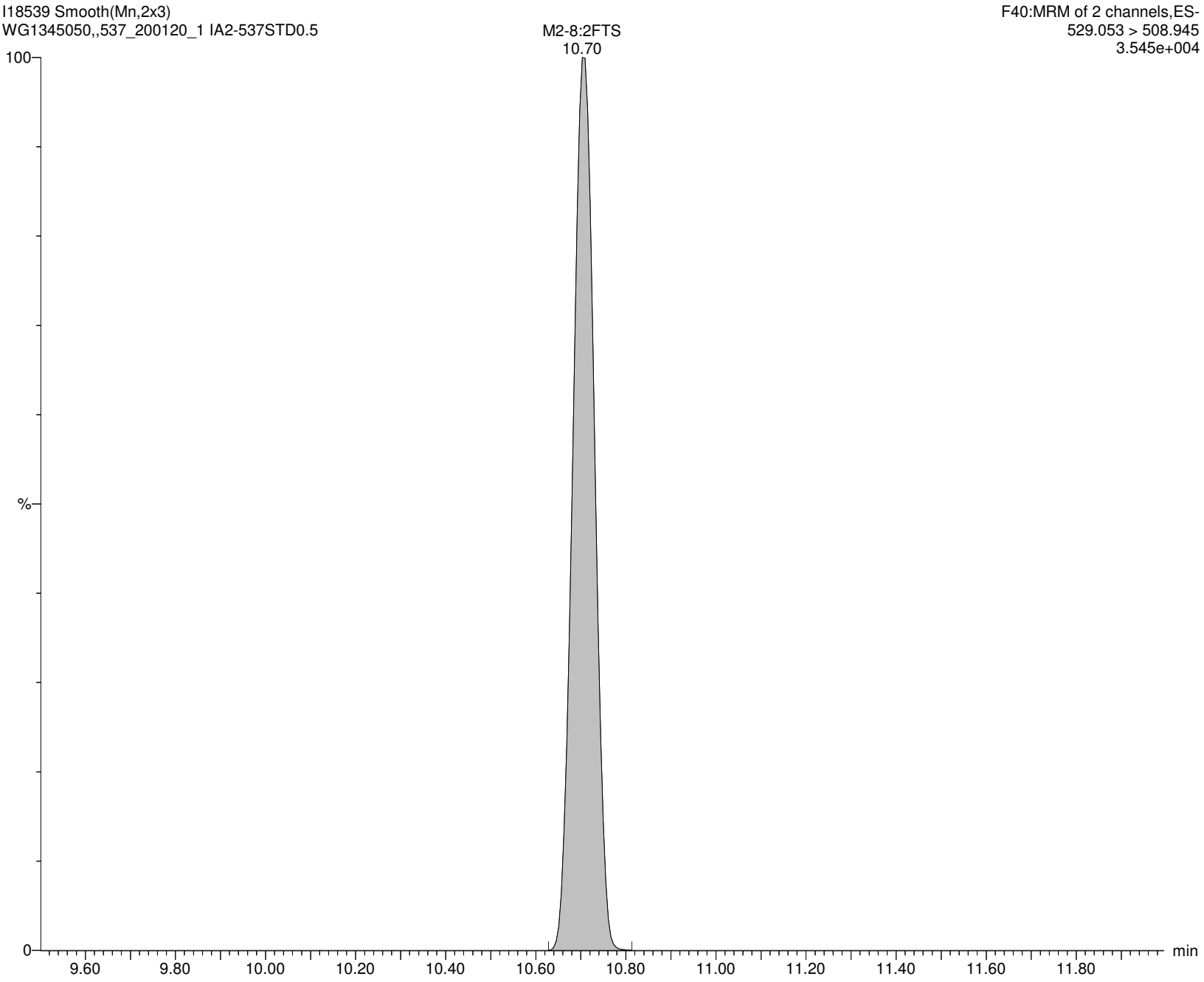
**M2-8:2FTS**





all concentration units in (ng/mL)

Alpha Analytical Inc.
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Last Altered: Friday, February 28, 2020 09:12:40 Eastern Standard Time
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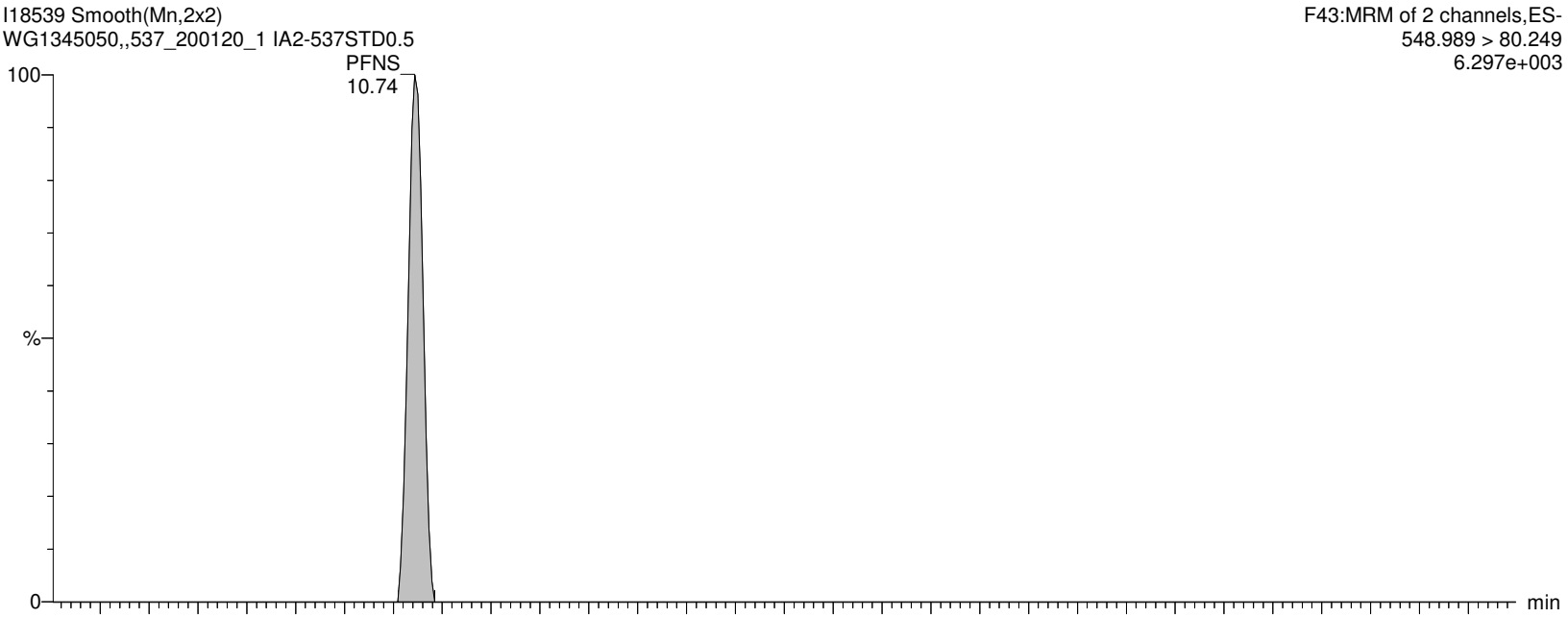


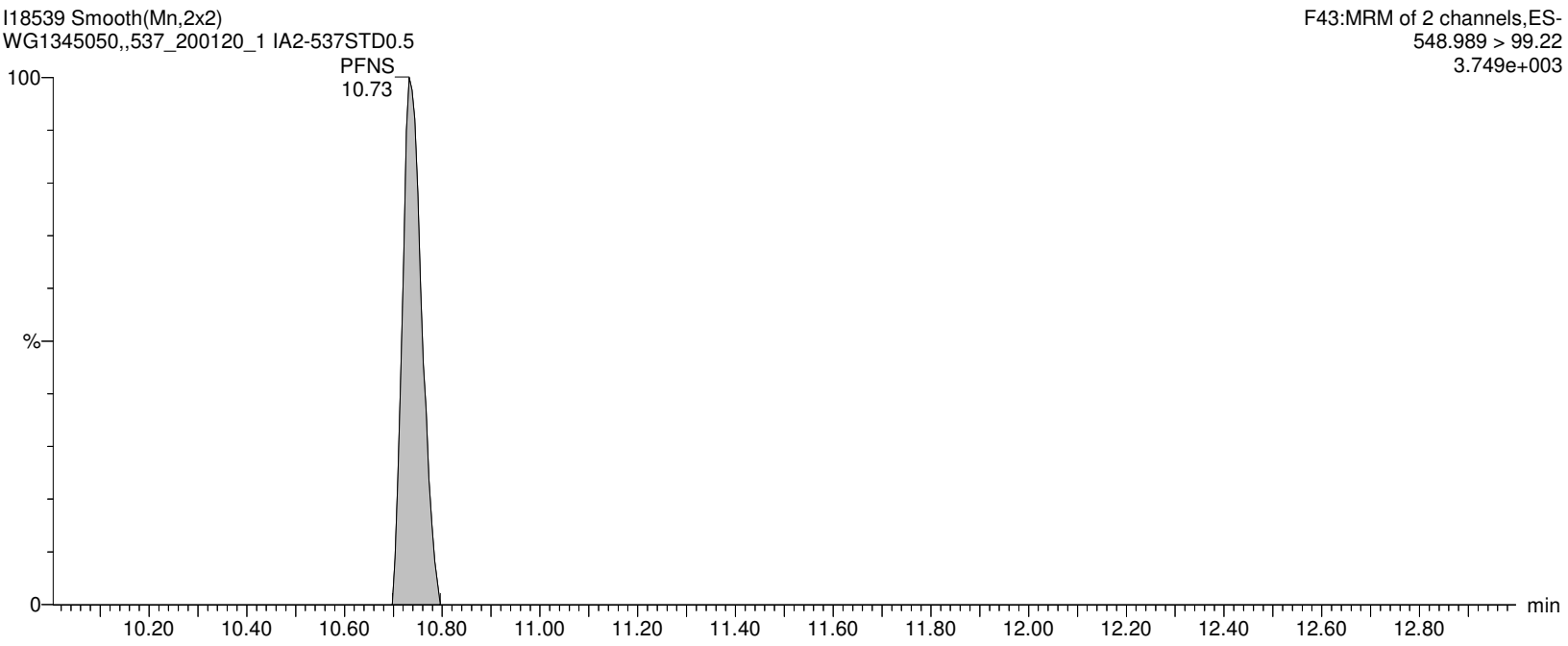



all concentration units in (ng/mL)

Alpha Analytical Inc.
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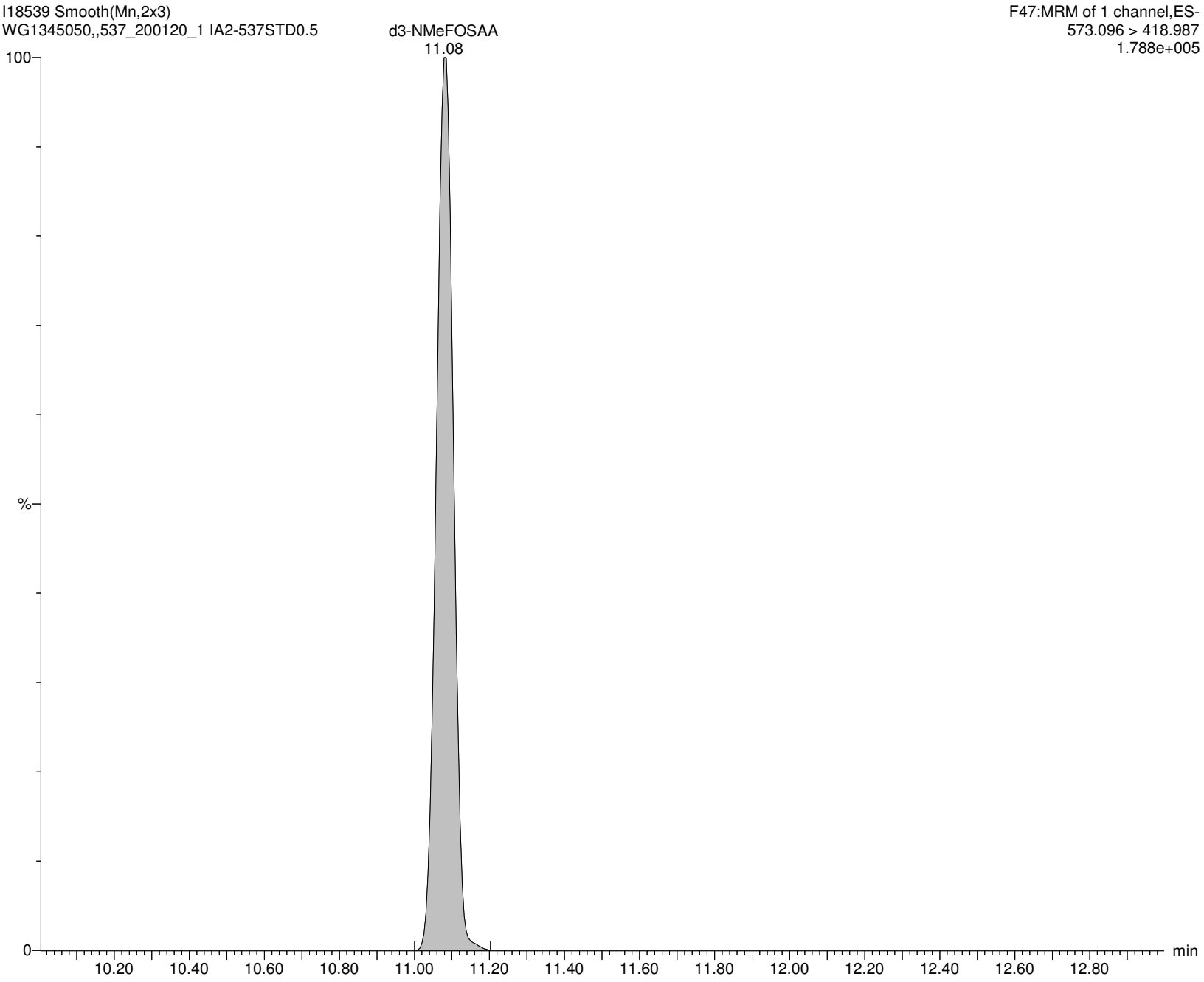
**d3-NMeFOSAA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
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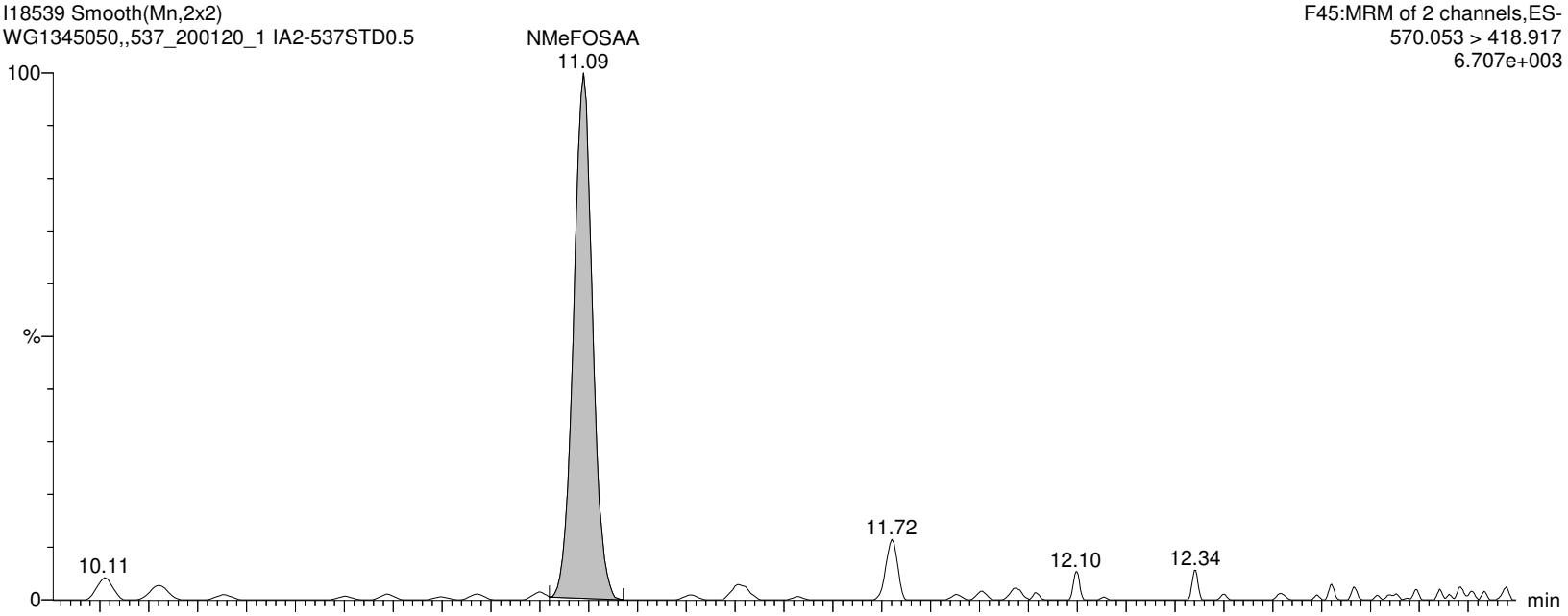
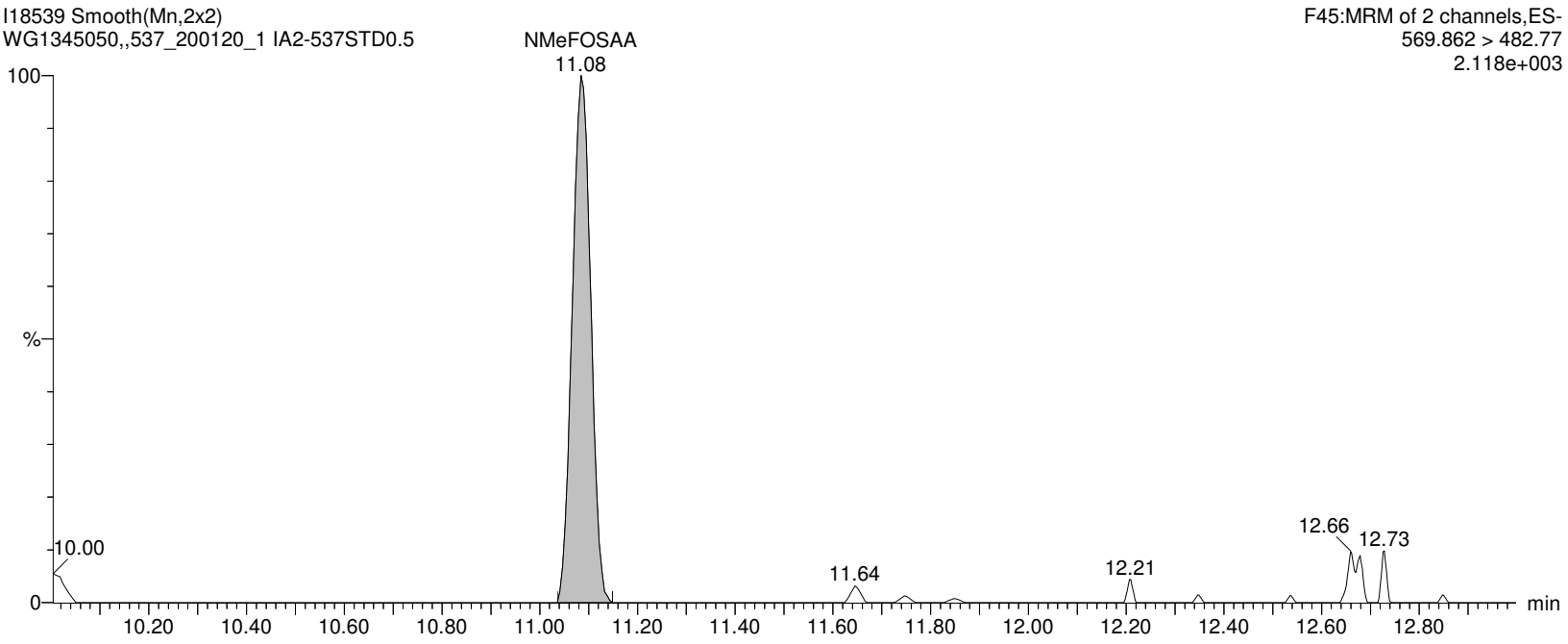
**NMeFOSAA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
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**Date: 27-Feb-2020**
**Time: 16:47:48**
**Description: WG1345050,,537_200120_1**
**User: LCMS01:JW**
**Vial: 1:B,5**
**Instrument: XEVO-TQSmicro#QEA0276**
**Inlet Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\LCMS_537_ISO_MeOH**
**Tune Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\190709_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

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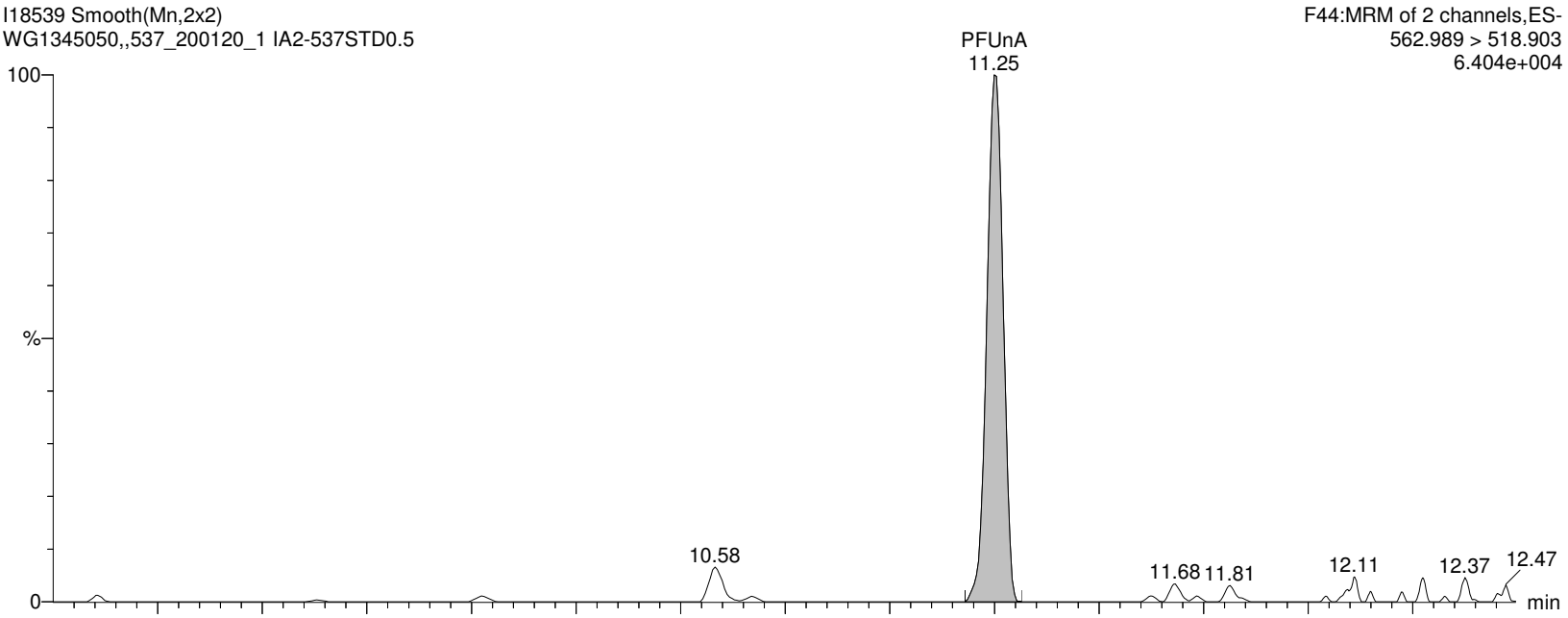
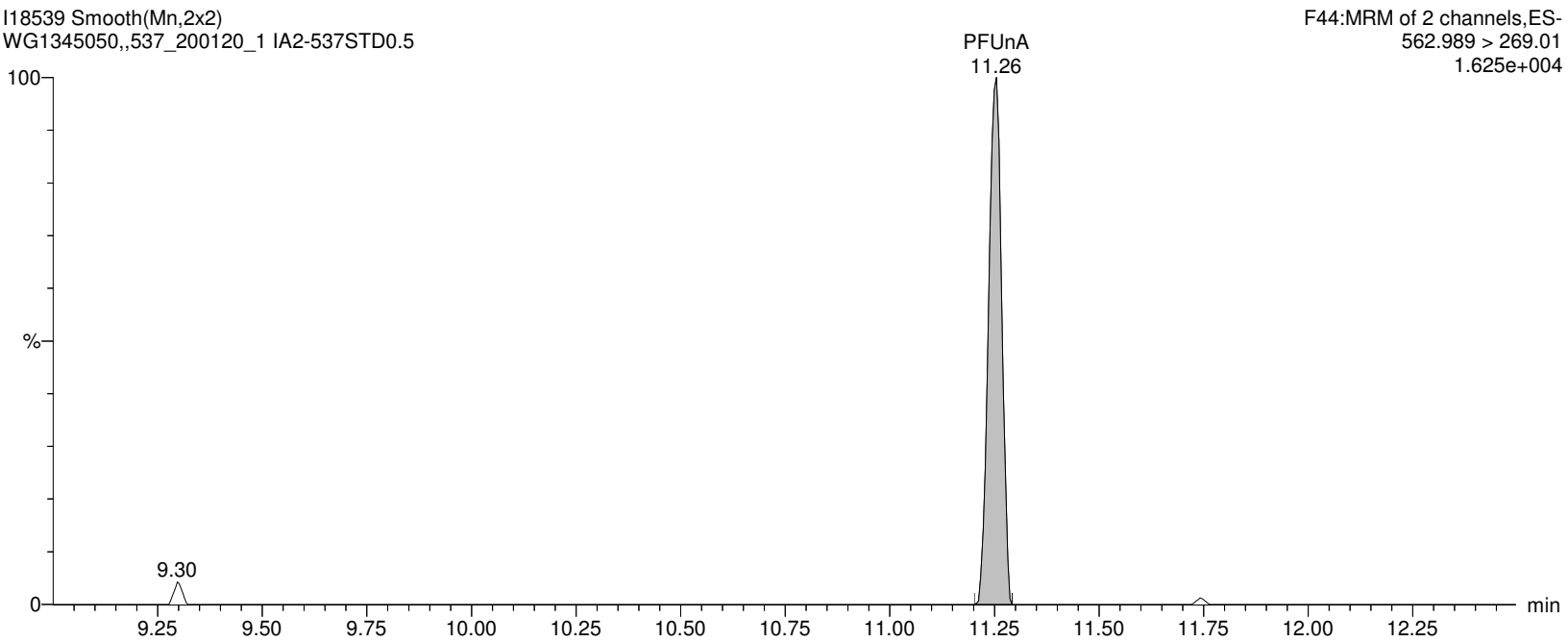


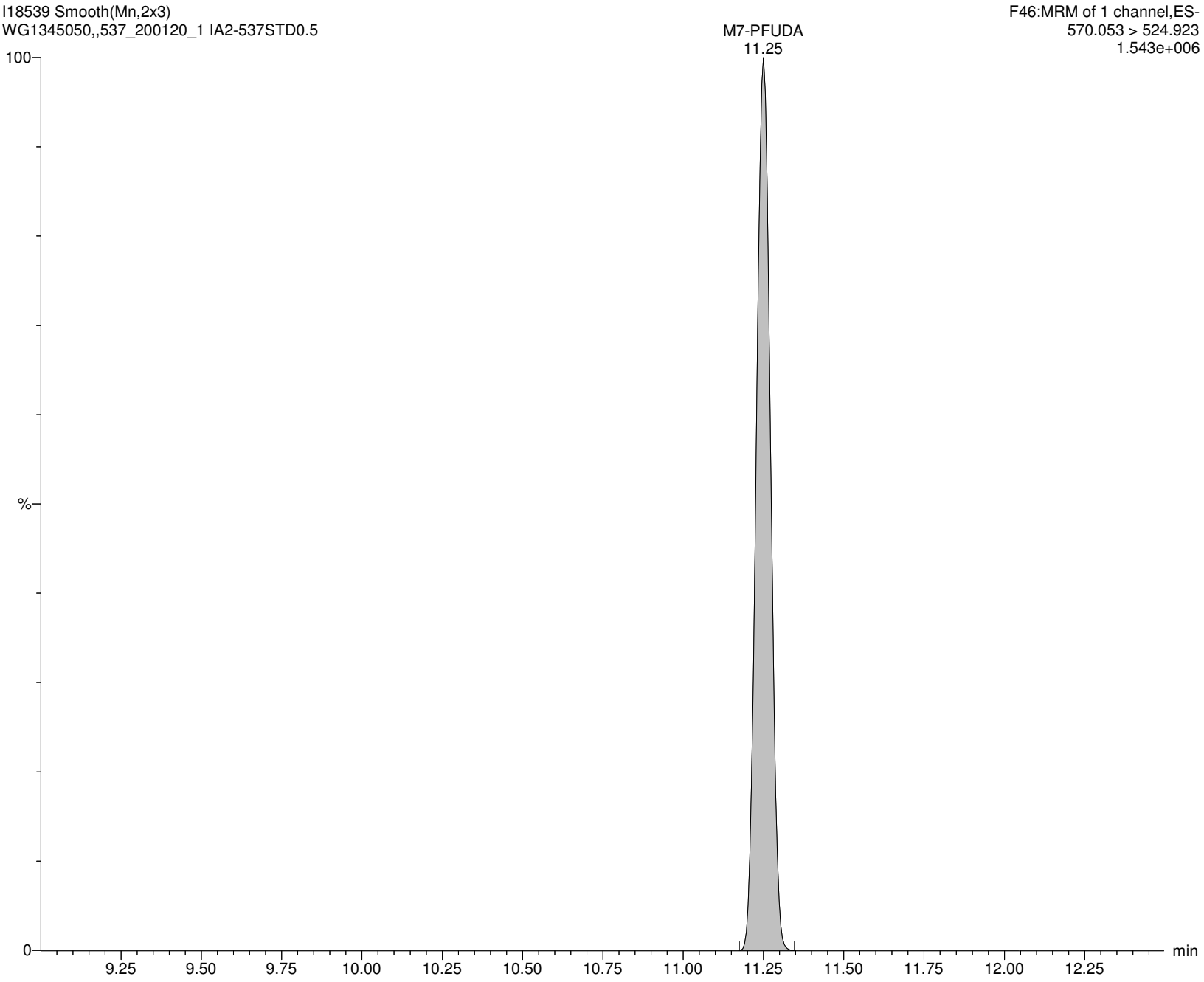


all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICAL_A.qld
Last Altered: Friday, February 28, 2020 09:12:40 Eastern Standard Time
Printed: Friday, February 28, 2020 09:27:59 Eastern Standard Time

**Name: I18539**
**ID: IA2-537STD0.5**
**Date: 27-Feb-2020**
**Time: 16:47:48**
**Description: WG1345050,,537_200120_1**
**User: LCMS01:JW**
**Vial: 1:B,5**
**Instrument: XEVO-TQSmicro#QEA0276**
**Inlet Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\LCMS_537_ISO_MeOH**
**Tune Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\190709_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**M7-PFUDA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICAL_A.qld
Last Altered: Friday, February 28, 2020 09:12:40 Eastern Standard Time
Printed: Friday, February 28, 2020 09:27:59 Eastern Standard Time

**Name: I18539**
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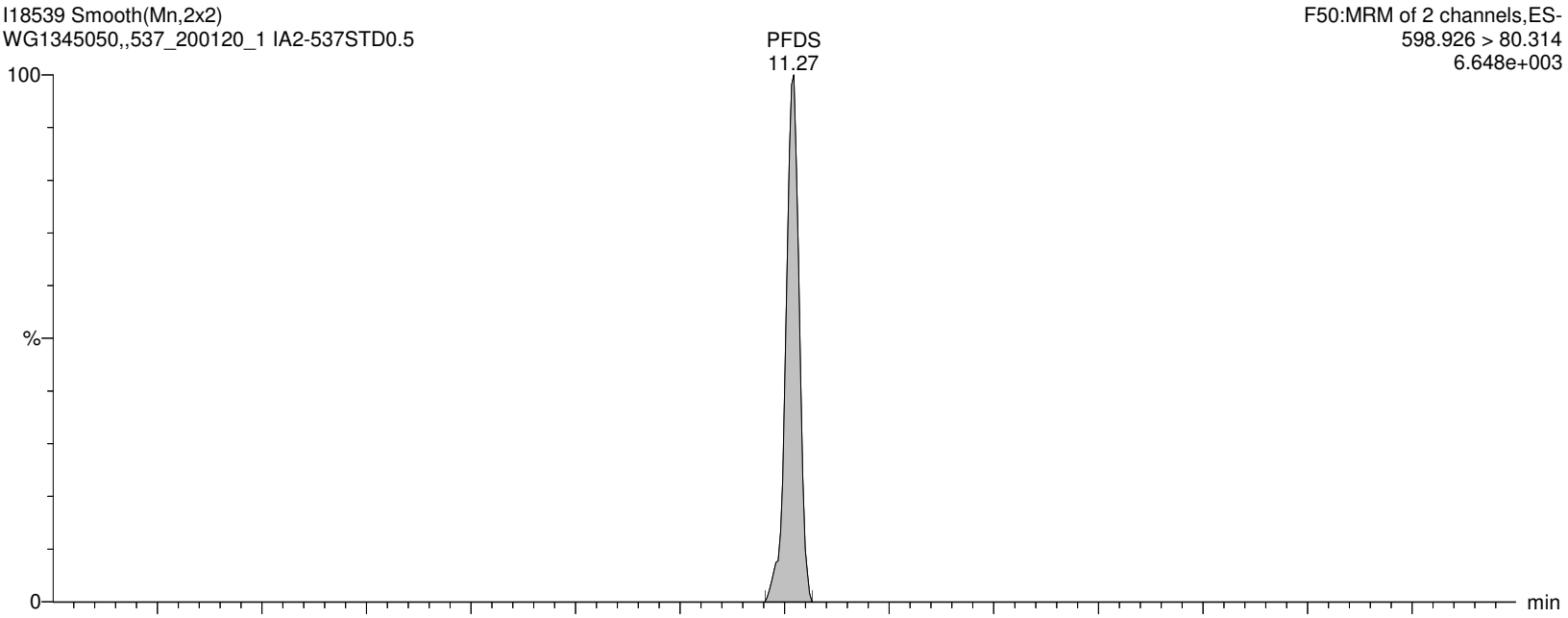
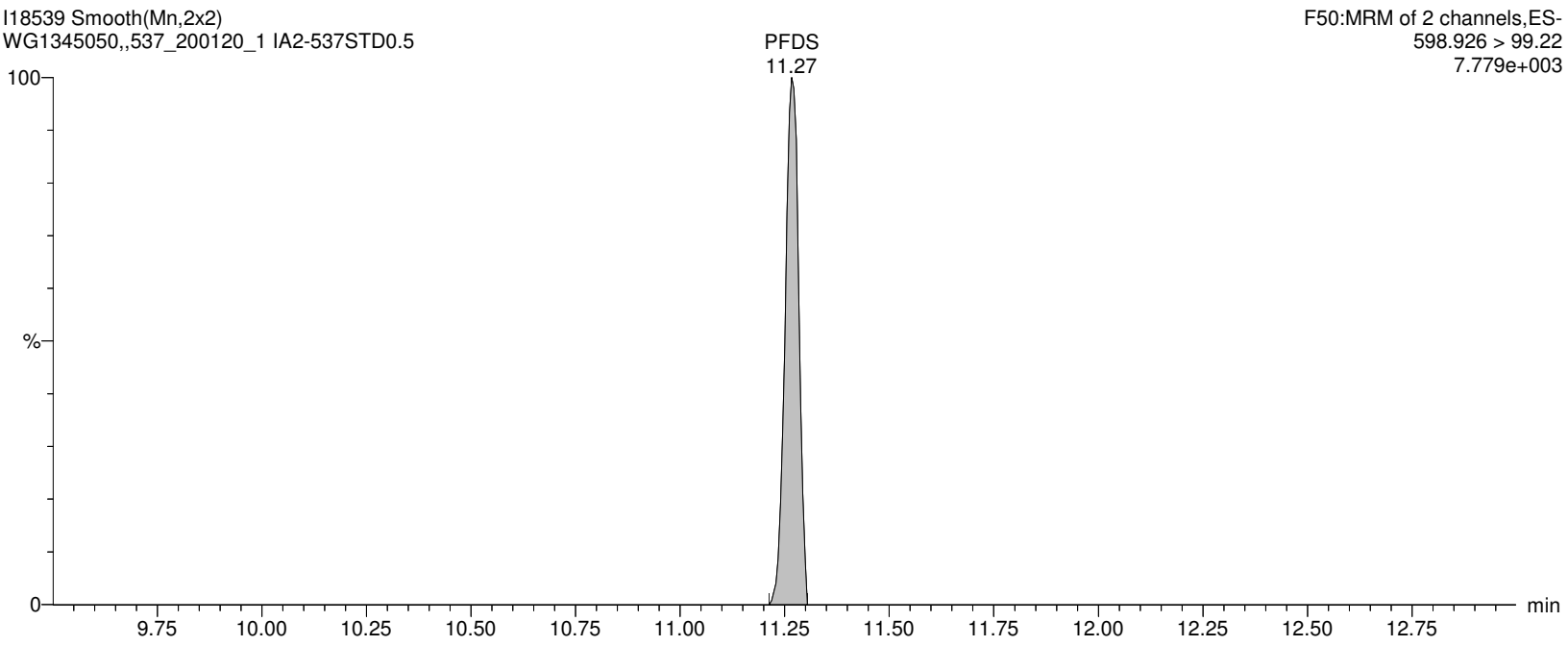
**User: LCMS01:JW**
**Vial: 1:B,5**
**Instrument: XEVO-TQSmicro#QEA0276**
**Inlet Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\LCMS_537_ISO_MeOH**
**Tune Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\190709_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**PFDS**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICAL_A.qld
Last Altered: Friday, February 28, 2020 09:12:40 Eastern Standard Time
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**Name: I18539**
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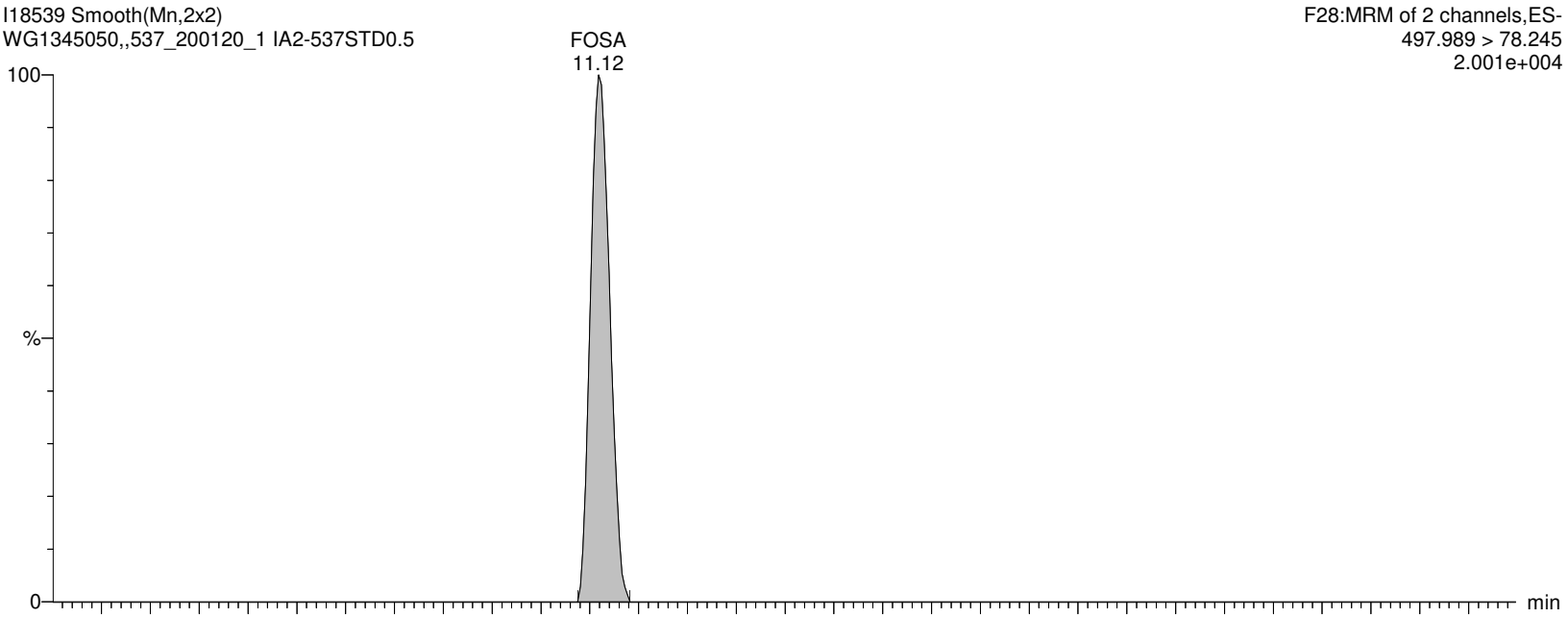
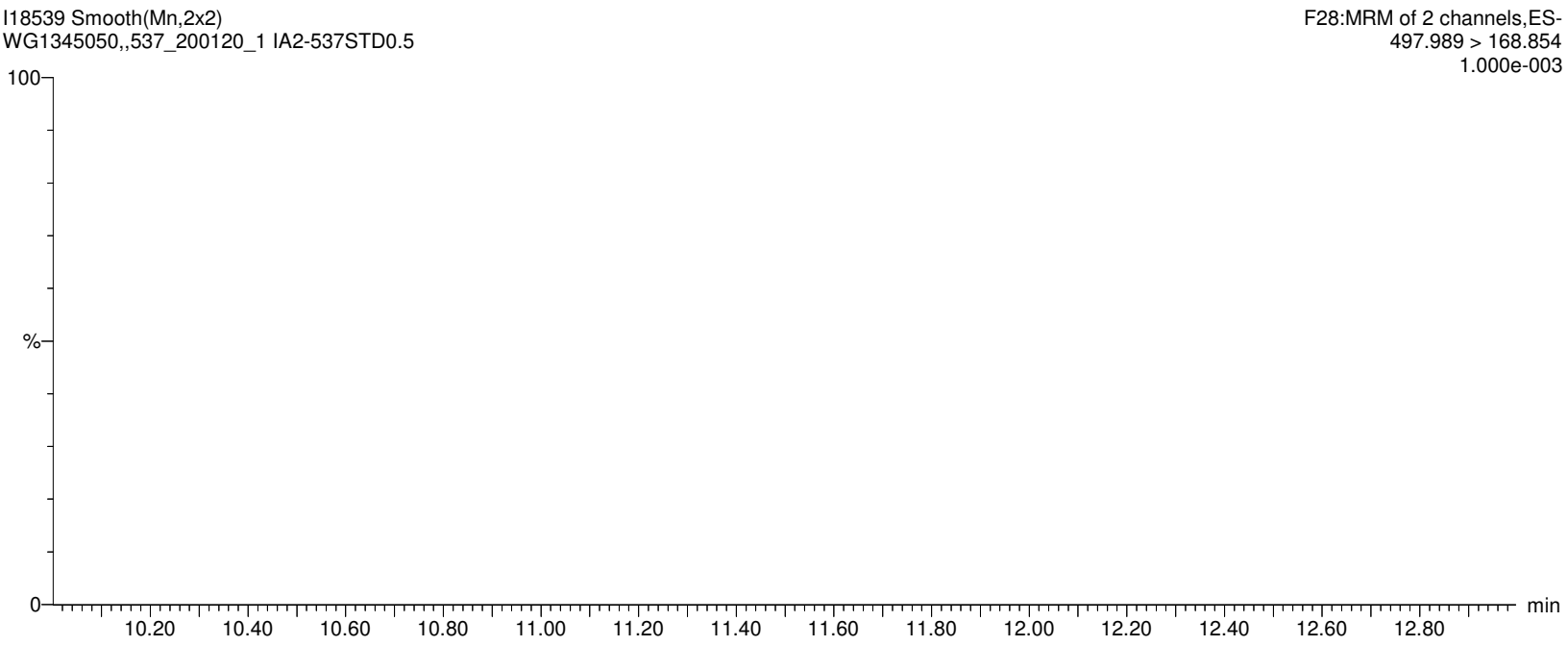
**Instrument: XEVO-TQSmicro#QEA0276**
**Inlet Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\LCMS_537_ISO_MeOH**
**Tune Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\190709_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**FOSA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICAL_A.qld
Last Altered: Friday, February 28, 2020 09:12:40 Eastern Standard Time
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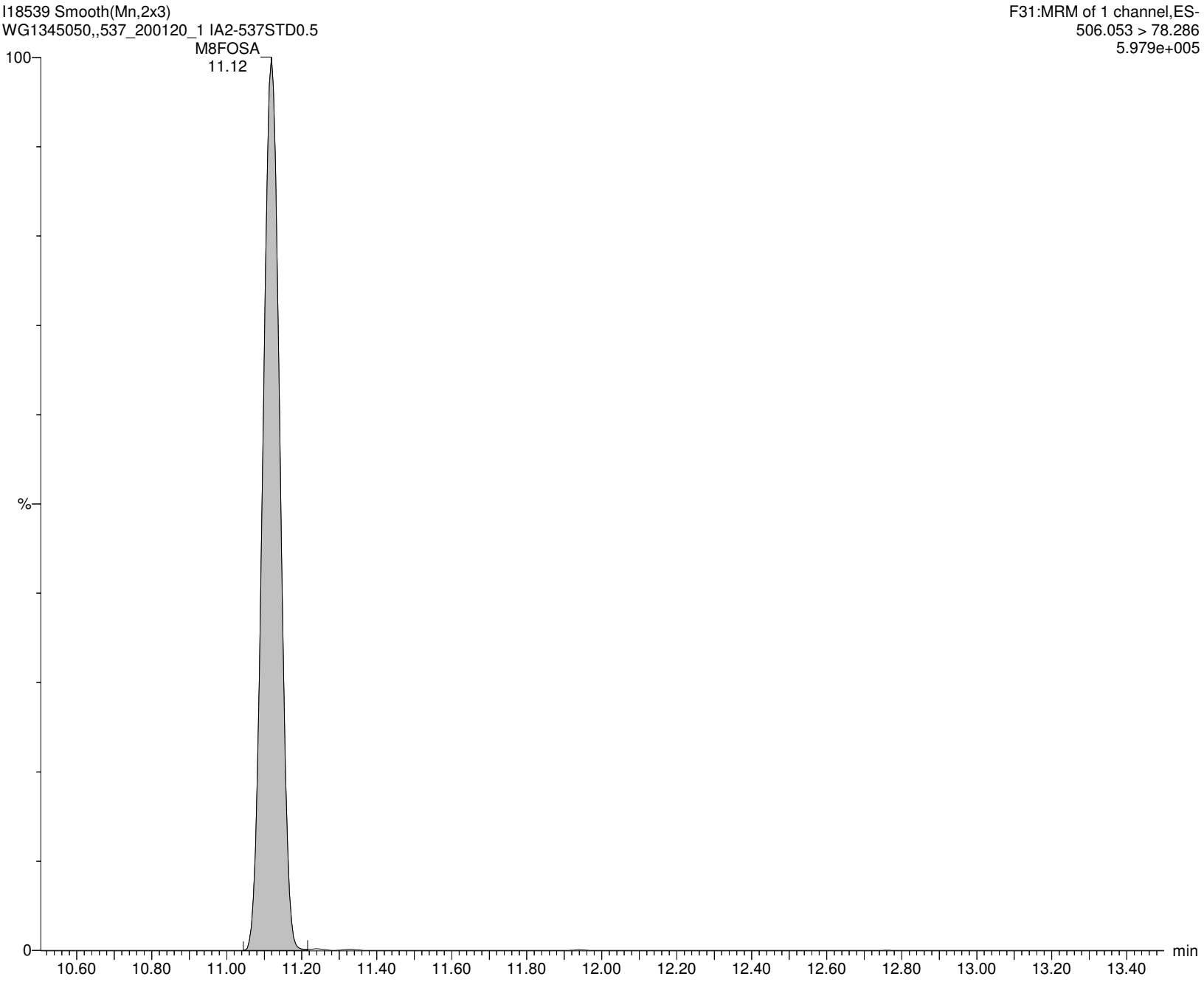
**Inlet Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\LCMS_537_ISO_MeOH**
**Tune Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\190709_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**M8FOSA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICAL_A.qld
Last Altered: Friday, February 28, 2020 09:12:40 Eastern Standard Time
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**Name: I18539**
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**Vial: 1:B,5**
**Instrument: XEVO-TQSmicro#QEA0276**
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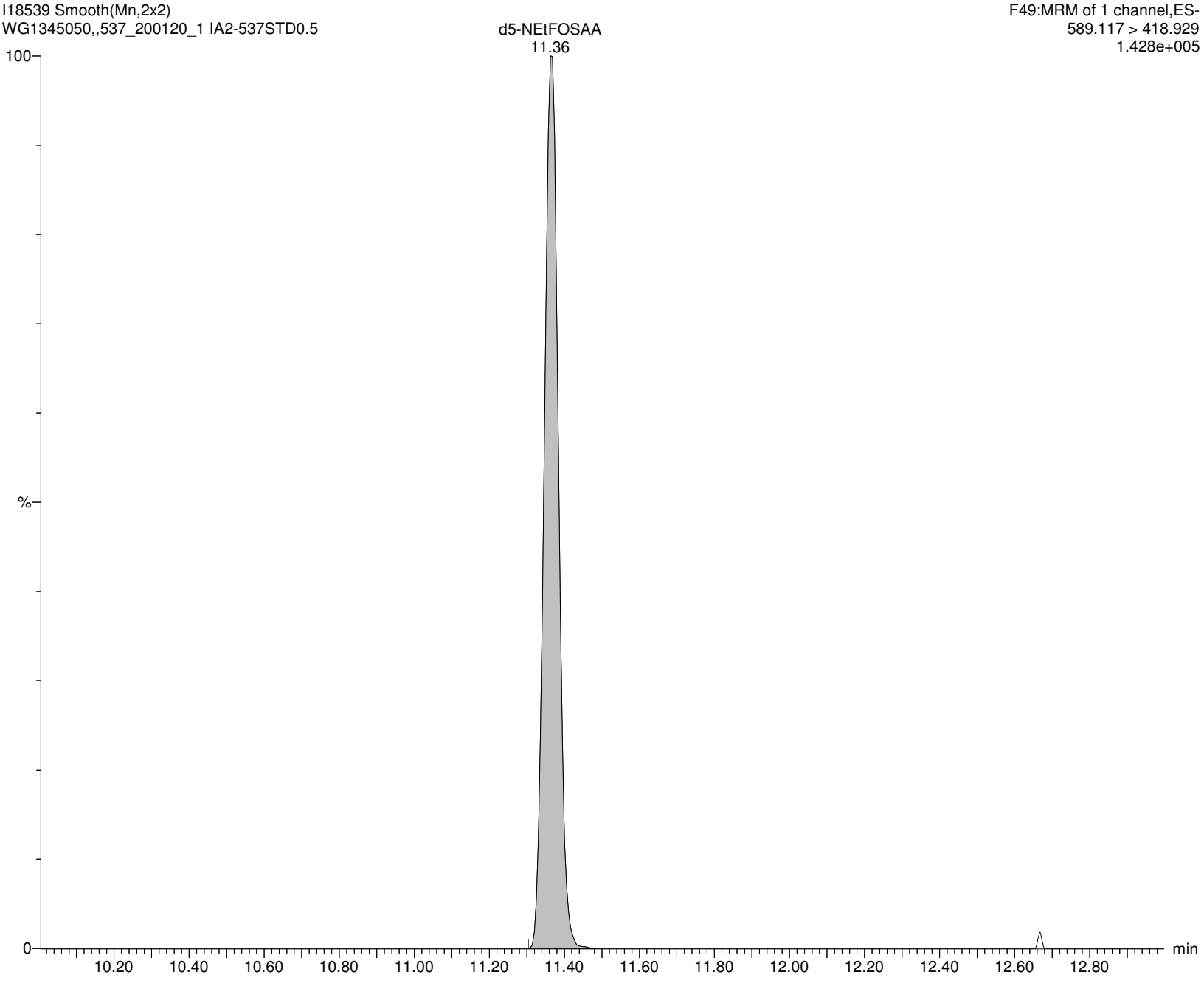
**d5-NEtFOSAA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICAL_A.qld
Last Altered: Friday, February 28, 2020 09:12:40 Eastern Standard Time
Printed: Friday, February 28, 2020 09:27:59 Eastern Standard Time

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**Time: 16:47:48**
**Description: WG1345050,,537_200120_1**
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**Vial: 1:B,5**
**Instrument: XEVO-TQSmicro#QEA0276**
**Inlet Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\LCMS_537_ISO_MeOH**
**Tune Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\190709_TUNE.IPR**
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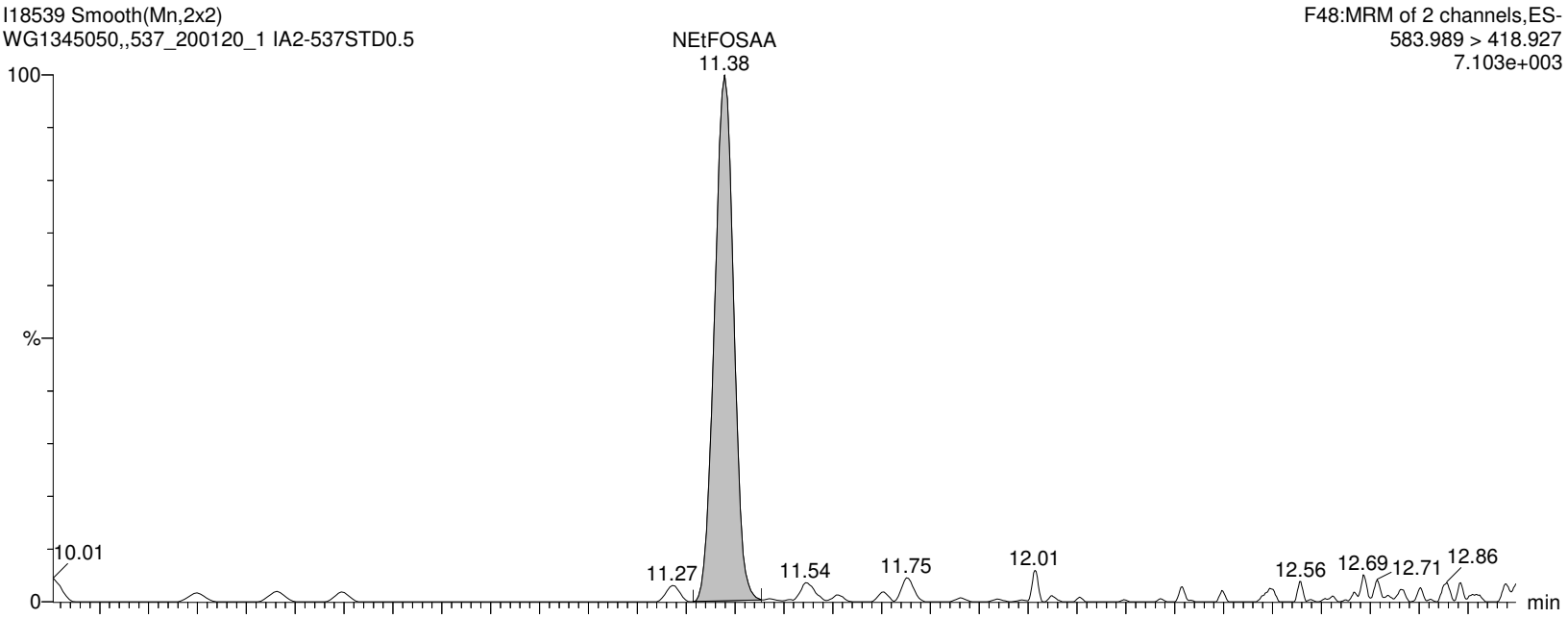
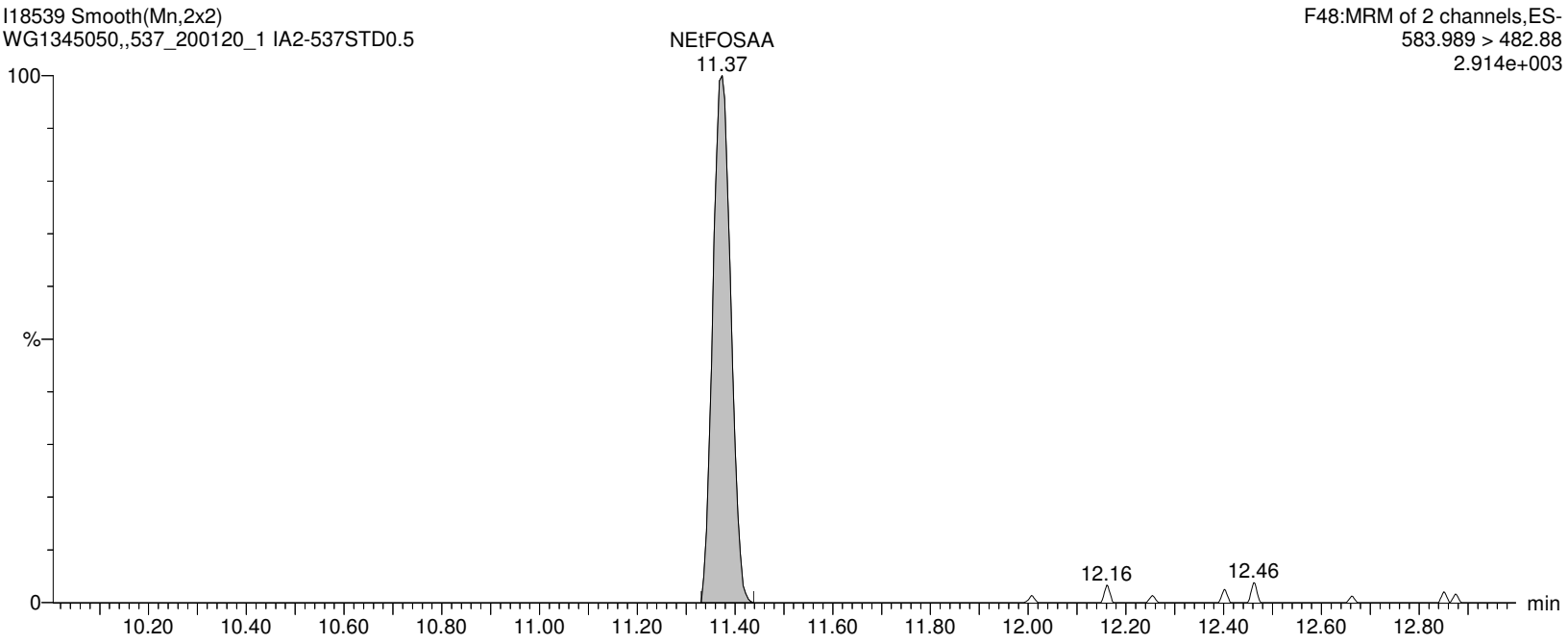
**NEtFOSAA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICAL_A.qld
Last Altered: Friday, February 28, 2020 09:12:40 Eastern Standard Time
Printed: Friday, February 28, 2020 09:27:59 Eastern Standard Time

**Name: I18539**
**ID: IA2-537STD0.5**
**Date: 27-Feb-2020**
**Time: 16:47:48**
**Description: WG1345050,,537_200120_1**
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**Vial: 1:B,5**
**Instrument: XEVO-TQSmicro#QEA0276**
**Inlet Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\LCMS_537_ISO_MeOH**
**Tune Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\190709_TUNE.IPR**
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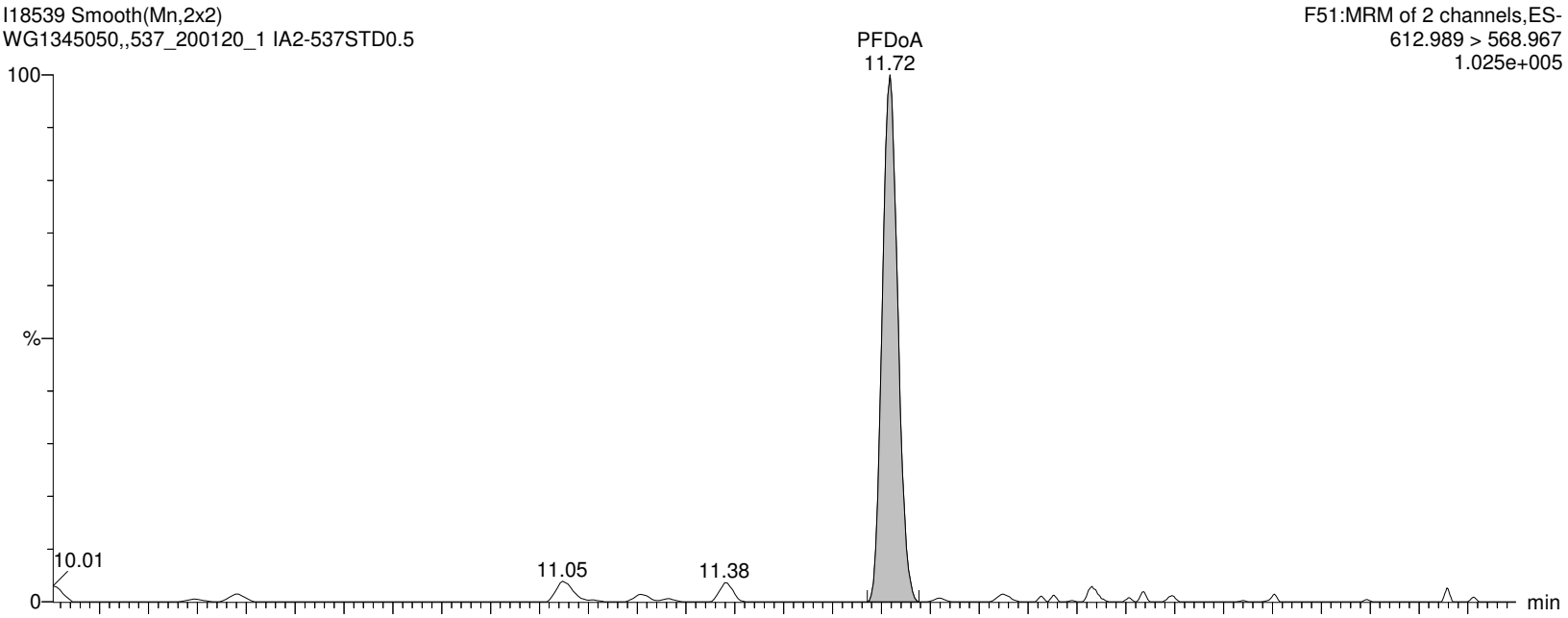
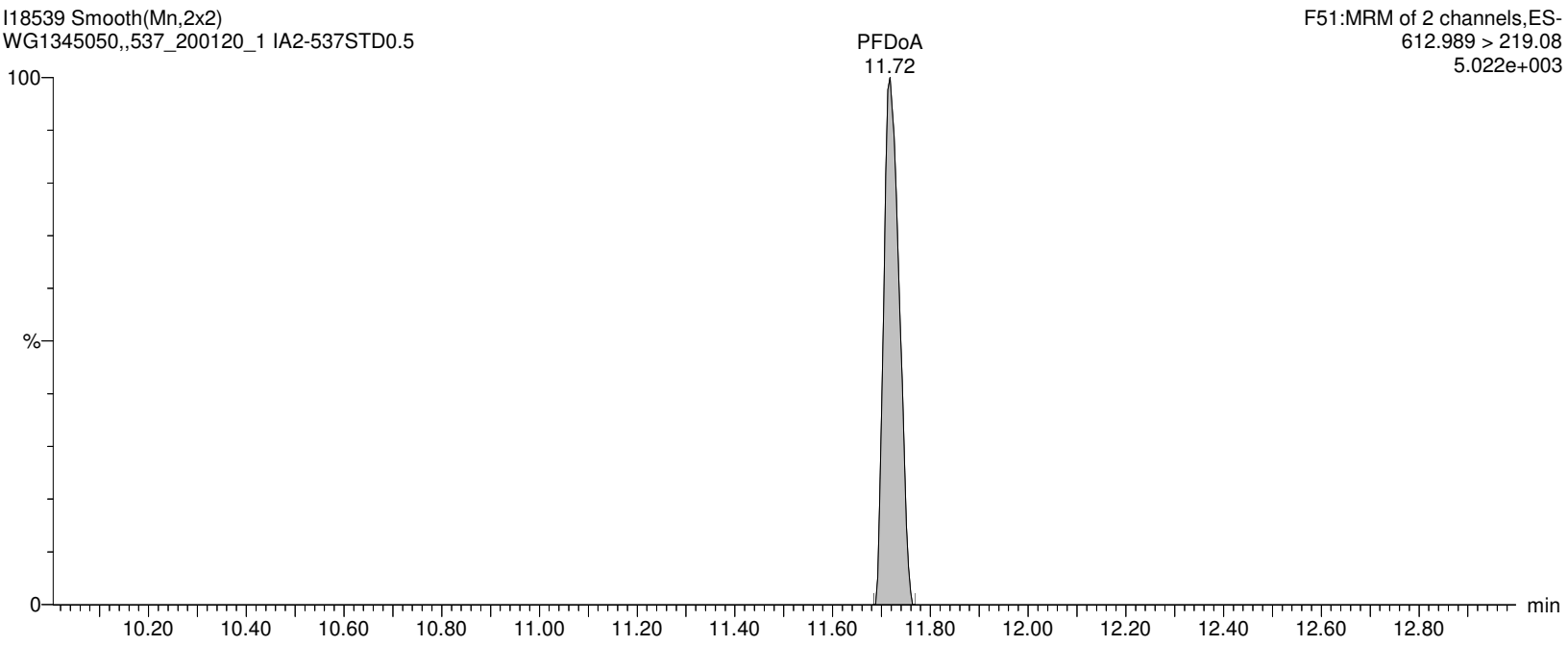
**PFDoA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICAL_A.qld
Last Altered: Friday, February 28, 2020 09:12:40 Eastern Standard Time
Printed: Friday, February 28, 2020 09:27:59 Eastern Standard Time

**Name: I18539**
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**Date: 27-Feb-2020**
**Time: 16:47:48**
**Description: WG1345050,,537_200120_1**
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**Vial: 1:B,5**
**Instrument: XEVO-TQSmicro#QEA0276**
**Inlet Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\LCMS_537_ISO_MeOH**
**Tune Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\190709_TUNE.IPR**
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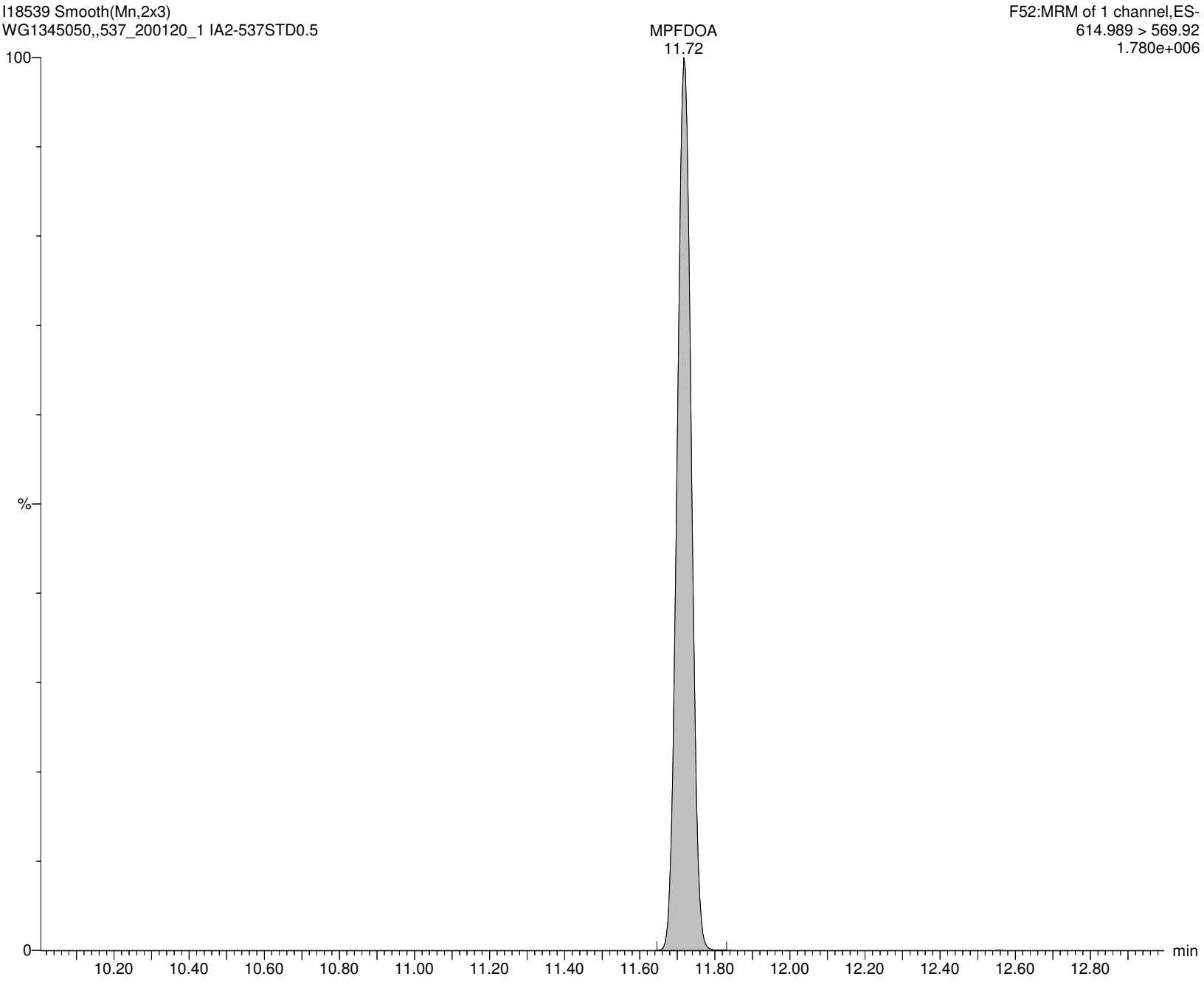
**MPFDOA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICAL_A.qld
Last Altered: Friday, February 28, 2020 09:12:40 Eastern Standard Time
Printed: Friday, February 28, 2020 09:27:59 Eastern Standard Time

**Name: I18539**
**ID: IA2-537STD0.5**
**Date: 27-Feb-2020**
**Time: 16:47:48**
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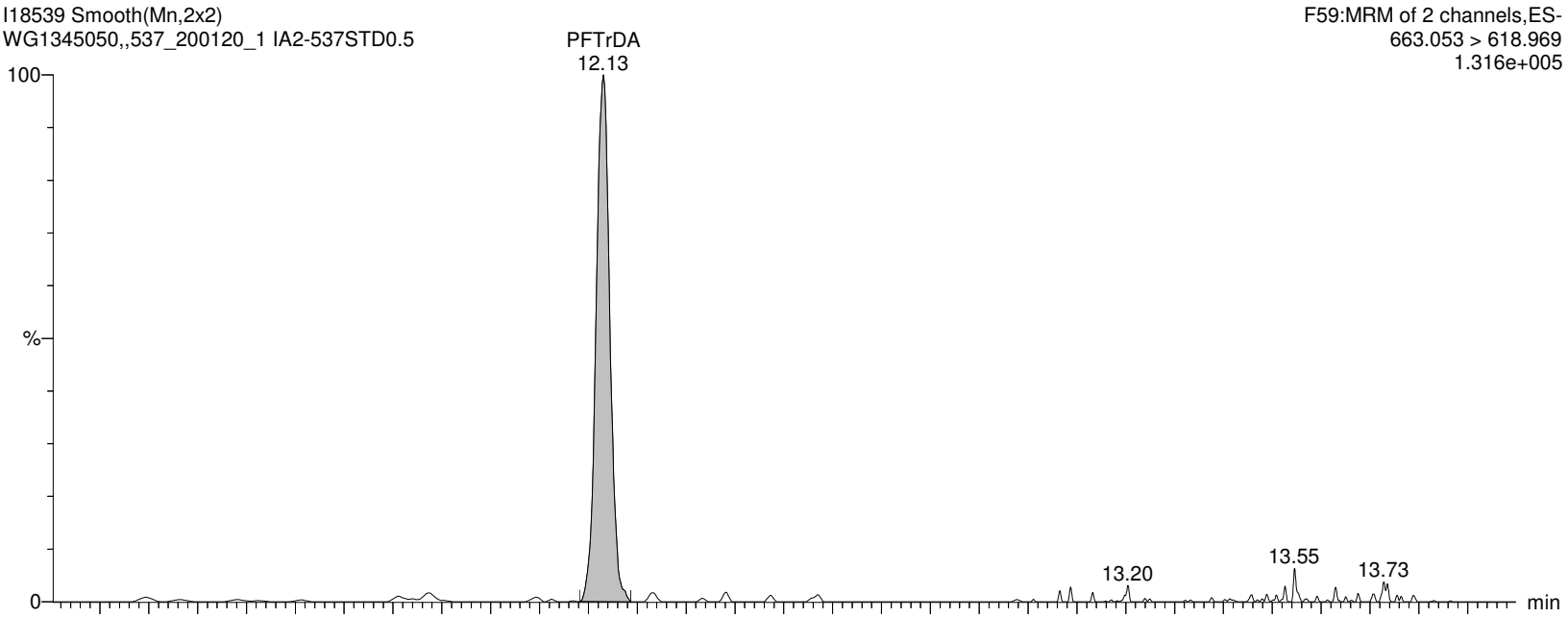
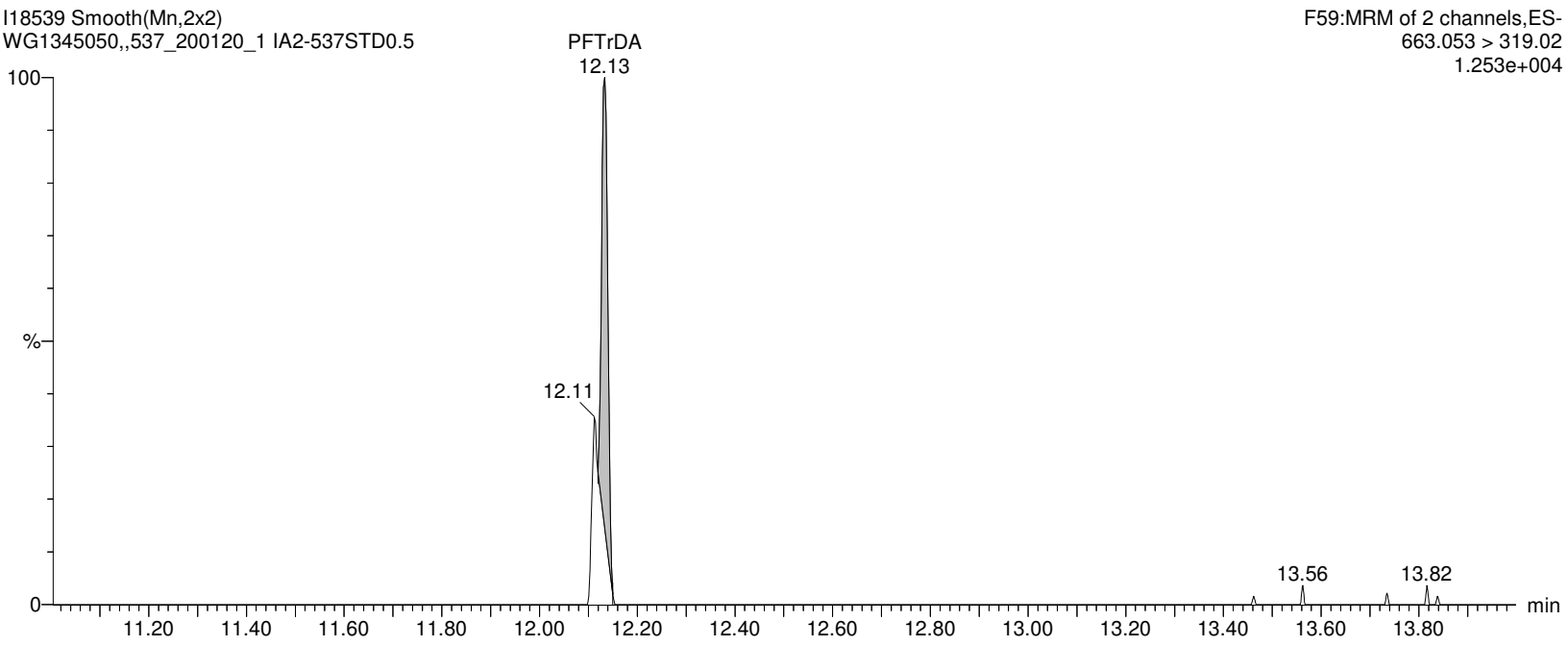
**User: LCMS01:JW**
**Vial: 1:B,5**
**Instrument: XEVO-TQSmicro#QEA0276**
**Inlet Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\LCMS_537_ISO_MeOH**
**Tune Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\190709_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**PFTrDA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICAL_A.qld
Last Altered: Friday, February 28, 2020 09:12:40 Eastern Standard Time
Printed: Friday, February 28, 2020 09:27:59 Eastern Standard Time

**Name: I18539**
**ID: IA2-537STD0.5**
**Date: 27-Feb-2020**
**Time: 16:47:48**
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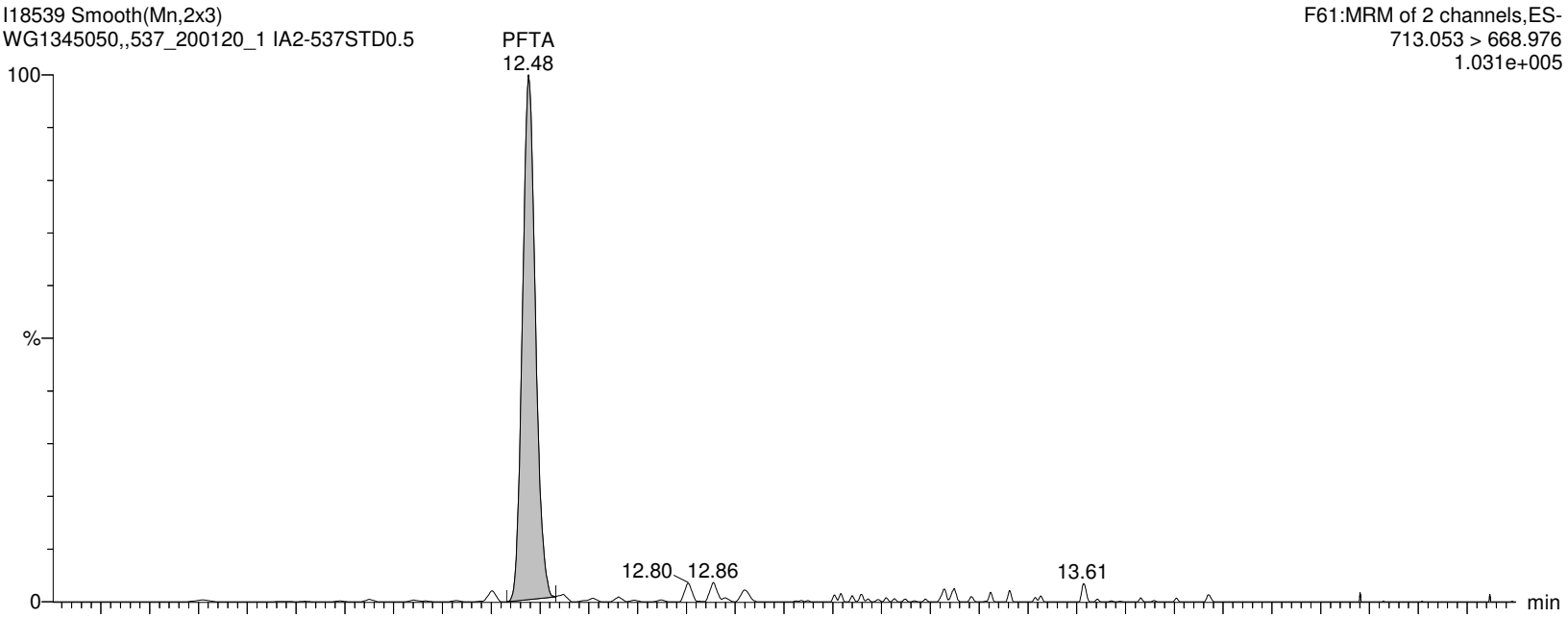
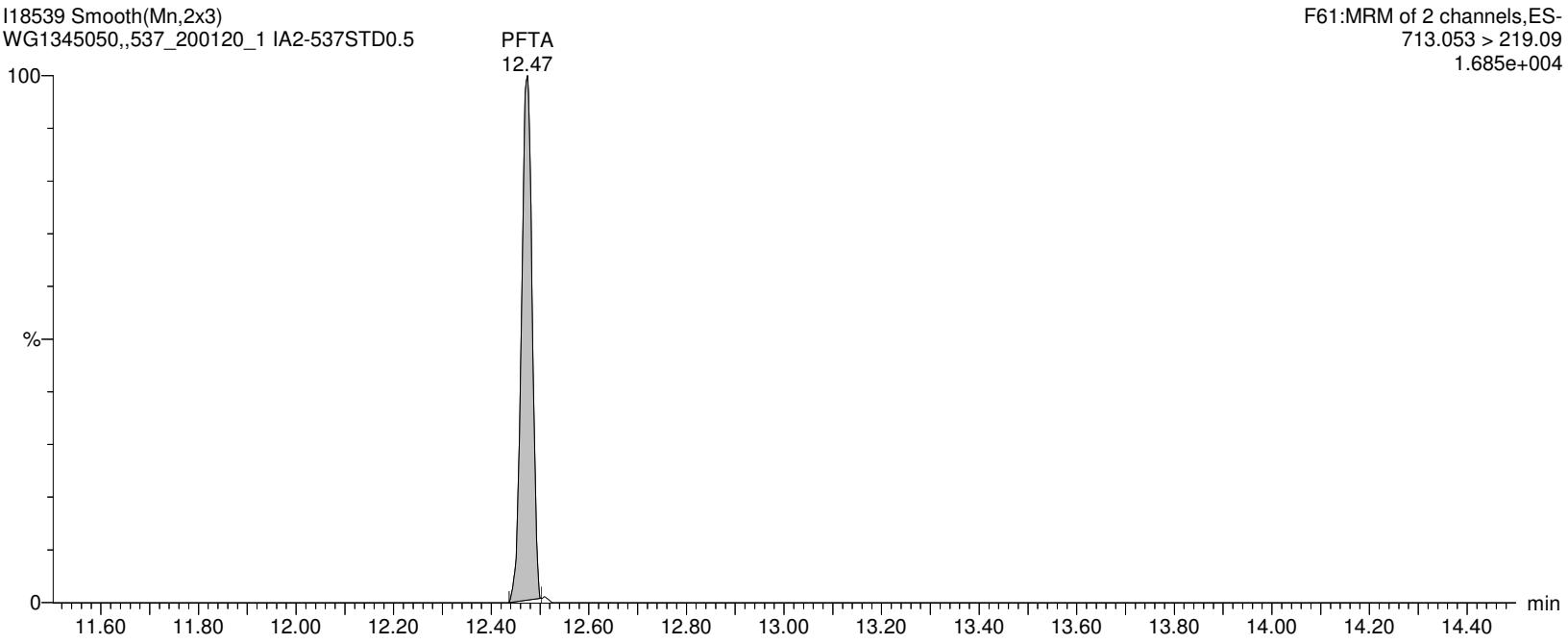
**Vial: 1:B,5**
**Instrument: XEVO-TQSmicro#QEA0276**
**Inlet Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\LCMS_537_ISO_MeOH**
**Tune Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\190709_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**PFTA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICAL_A.qld
Last Altered: Friday, February 28, 2020 09:12:40 Eastern Standard Time
Printed: Friday, February 28, 2020 09:27:59 Eastern Standard Time

**Name: I18539**
**ID: IA2-537STD0.5**
**Date: 27-Feb-2020**
**Time: 16:47:48**
**Description: WG1345050,,537_200120_1**
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**Vial: 1:B,5**
**Instrument: XEVO-TQSmicro#QEA0276**
**Inlet Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\LCMS_537_ISO_MeOH**
**Tune Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\190709_TUNE.IPR**
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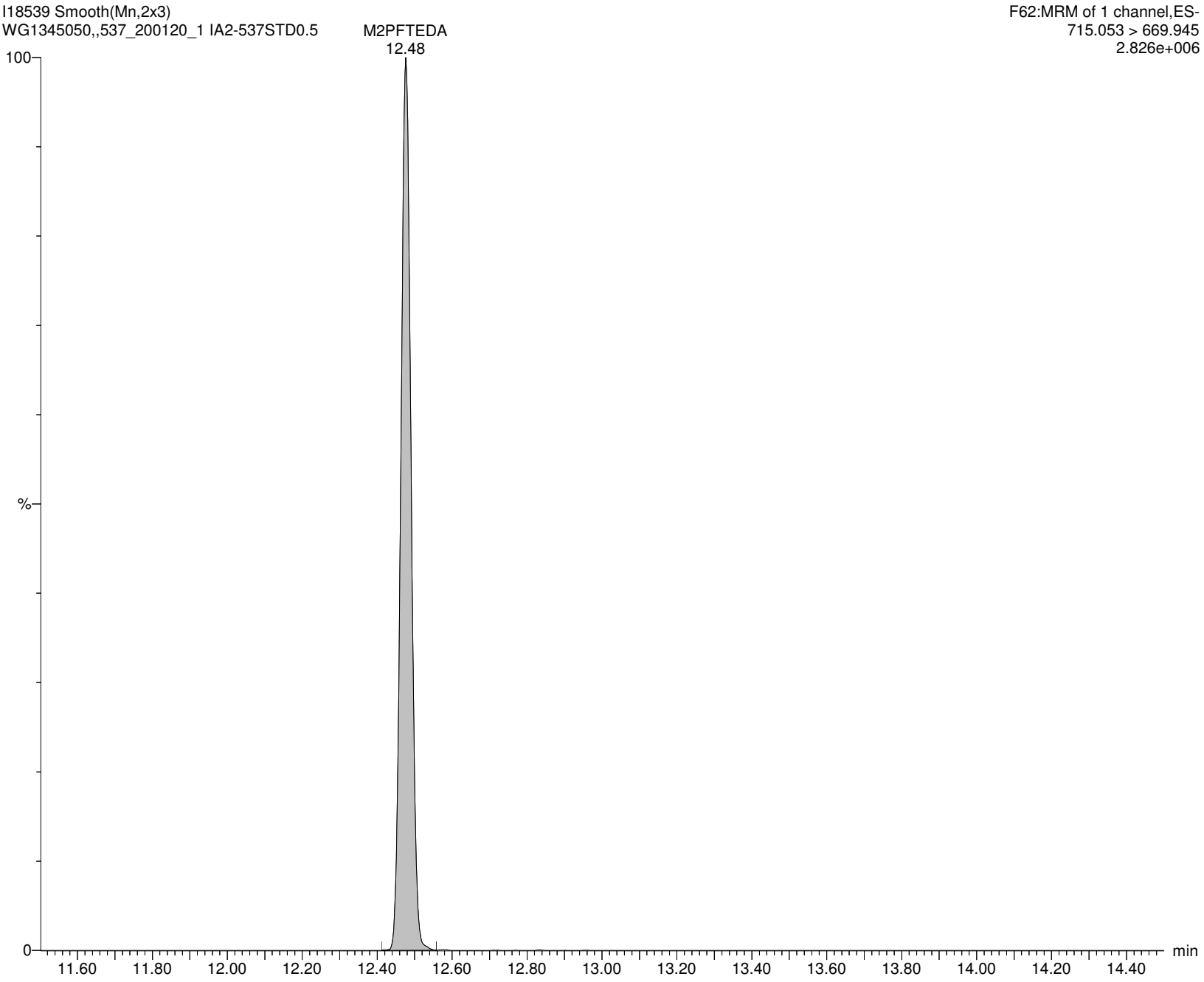
**M2PFTEDA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICAL_A.qld
Last Altered: Friday, February 28, 2020 09:12:40 Eastern Standard Time
Printed: Friday, February 28, 2020 09:28:00 Eastern Standard Time

**Method: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\MethDB\537ISO_Q_200227 .mdb 27 Feb 2020 12:38:15**
**Calibration: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\CurveDB\200227_537ISO_ICAL.cdb 28 Feb 2020 09:12:40**

**ID: IA2-537STD1.0**
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**Time: 17:04:20**
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**Instrument: XEVO-TQSmicro#QEA0276**
**User: LCMS01:JW**
**Inlet Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\LCMS_537_ISO_MeOH**
**Tune Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\190709_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

| | Name | CAS | RT | Trace | Area | M Flag | Conc (ng/mL) | Ion Ratio | Ratio Flag | %Rec |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | PFBA | 375-22-4 | 2.24 | 212.926 > 169.111 | 2941 | | 0.902 | | na | 90.2 |
| 2 | M3PFBA | INT STD | 2.24 | 215.926 > 172.122 | 43388 | | 11.034 | | na | 110.3 |
| 3 | MPFBA | INT STD | 2.24 | 216.926 > 172.137 | 45026 | | 9.057 | | na | 90.6 |
| 4 | PFPeA | 2706-90-3 | 5.21 | 262.926 > 219.002 | 3950 | | 0.923 | | na | 92.3 |
| 5 | M5PFPEA | INT STD | 5.21 | 267.989 > 223.081 | 61540 | | 9.330 | | na | 93.3 |
| 6 | PFBS | 375-73-5 | 5.87 | 298.926 > 79.923 | 750 | | 0.754 | 1.95 | NO | 85.3 |
| 7 | M3PFBS | INT STD | 5.87 | 301.989 > 80.254 | 11022 | | 8.166 | | na | 81.7 |
| 8 | 4:2FTS | 757124-72-4 | 7.05 | 326.926 > 306.957 | 294 | | 0.757 | 2.12 | NO | 81.0 |
| 9 | M2-4:2FTS | INT STD | 7.04 | 329.117 > 309.079 | 4761 | | 6.770 | | na | 67.7 |
| 10 | PFHxA | 307-24-4 | 7.12 | 312.989 > 269.028 | 5980 | | 0.982 | 17.06 | NO | 98.2 |
| 11 | M5PFHxA | INT STD | 7.13 | 317.989 > 273.045 | 73498 | | 8.856 | | na | 88.6 |
| 12 | PFPeS | 2706-91-4 | 7.43 | 348.926 > 80.251 | 769 | | 0.754 | 2.08 | NO | 80.2 |
| 13 | PFHpA | 375-85-9 | 8.39 | 362.926 > 319.014 | 6462 | | 0.795 | 5.76 | NO | 79.5 |
| 14 | M4PFHpA | INT STD | 8.39 | 366.926 > 321.979 | 88560 | | 9.198 | | na | 92.0 |
| 15 | br-PFHxS | 355-46-4 | 8.31 | 398.904 > 79.915 | 110 | M2 | 0.140 | | YES | 82.3 |
| 16 | L-PFHxS | 355-46-4 | 8.55 | 398.904 > 79.915 | 528 | | 0.665 | | YES | 89.8 |
| 17 | PFHxS | 355-46-4 | | 398.904 > 79.915 | 638 | | 0.805 | | na | |
| 18 | M3PFHxS | INT STD | 8.55 | 401.926 > 80.317 | 10742 | | 8.883 | | na | 88.8 |
| 19 | br-PFOA | 335-67-1 | | 412.989 > 368.9 | | | ND | | YES | |
| 20 | L-PFOA | 335-67-1 | 9.33 | 412.989 > 368.9 | 6074 | | 0.814 | 6.94 | NO | 81.4 |
| 21 | M2PFOA | INT STD | 9.34 | 415.032 > 369.968 | 101367 | | 12.049 | | na | 120.5 |
| 22 | PFOA | 335-67-1 | | 412.989 > 368.9 | 6074 | | 0.814 | | na | |
| 23 | M8PFOA | INT STD | 9.34 | 420.989 > 375.979 | 86721 | | 8.972 | | na | 89.7 |
| 24 | 6:2FTS | 27619-97-2 | 9.30 | 426.989 > 406.921 | 100 | | 1.152 | 0.91 | NO | 121.3 |
| 25 | M2-6:2FTS | INT STD | 9.30 | 428.989 > 408.917 | 3637 | | 8.312 | | na | 83.1 |
| 26 | PFHpS | 375-92-8 | 9.42 | 448.926 > 80.257 | 448 | | 0.910 | 1.24 | NO | 95.7 |
| 27 | PFNA | 375-95-1 | 10.08 | 462.989 > 418.931 | 5135 | | 0.794 | 3.06 | NO | 79.4 |
| 28 | M9PFNA | INT STD | 10.08 | 472.053 > 426.947 | 86879 | | 9.193 | | na | 91.9 |
| 29 | br-PFOS | 1763-23-1 | 9.94 | 498.968 > 79.918 | 155 | M5 | 0.213 | 2.99 | NO | 106.5 |
| 30 | L-PFOS | 1763-23-1 | 10.14 | 498.968 > 79.918 | 403 | | 0.759 | 1.26 | NO | 104.0 |
| 31 | PFOS | 1763-23-1 | | 498.968 > 79.918 | 557 | | 0.972 | | na | |
| 32 | M4PFOS | INT STD | 10.13 | 503.032 > 80.306 | 10521 | | 12.387 | | na | 123.9 |
| 33 | M8PFOS | INT STD | 10.14 | 507.053 > 80.294 | 9846 | | 8.058 | | na | 80.6 |
| 34 | PFDA | 335-76-2 | 10.71 | 513.053 > 468.906 | 5443 | | 0.818 | 5.77 | NO | 81.8 |
| 35 | M2PFDA | INT STD | 10.71 | 515.053 > 469.934 | 82804 | | 12.518 | | na | 125.2 |
| 36 | M6PFDA | INT STD | 10.71 | 519.053 > 473.931 | 86922 | | 9.541 | | na | 95.4 |
| 37 | 8:2FTS | 39108-34-4 | 10.70 | 527.032 > 507.079 | 140 | | 1.035 | 1.77 | NO | 107.8 |
| 38 | M2-8:2FTS | INT STD | 10.70 | 529.053 > 508.945 | 2019 | | 7.631 | | na | 76.3 |
| 39 | PFNS | 68259-12-1 | 10.73 | 548.989 > 80.249 | 698 | | 1.050 | 3.37 | YES | 109.4 |


all concentration units in (ng/mL)

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Printed: Friday, February 28, 2020 09:28:00 Eastern Standard Time

**ID: IA2-537STD1.0**
**Name: I18540**
**Date: 27-Feb-2020**
**Time: 17:04:20**
**Description: WG1345050,,537_200120_2**
**Instrument: XEVO-TQSmicro#QEA0276**
**User: LCMS01:JW**
**Inlet Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\LCMS_537_ISO_MeOH**
**Tune Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\190709_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

| | Name | CAS | RT | Trace | Area | M Flag | Conc (ng/mL) | Ion Ratio | Ratio Flag | %Rec |
|---|---|---|---|---|---|---|---|---|---|---|
| 40 | d3-NMeFOSAA | INT STD | 11.08 | 573.096 > 418.987 | 9446 | | 7.827 | | na | 78.3 |
| 41 | NMeFOSAA | 2355-31-9 | 11.09 | 570.053 > 418.917 | 576 | | 1.021 | 2.13 | NO | 102.1 |
| 42 | PFUnA | 2058-94-8 | 11.25 | 562.989 > 518.903 | 5800 | | 0.771 | 7.38 | NO | 77.1 |
| 43 | M7-PFUDA | INT STD | 11.25 | 570.053 > 524.923 | 80848 | | 10.099 | | na | 101.0 |
| 44 | PFDS | 335-77-3 | 11.26 | 598.926 > 80.314 | 544 | | 0.841 | 1.92 | NO | 87.1 |
| 45 | FOSA | 754-91-6 | 11.12 | 497.989 > 78.245 | 2302 | | 0.946 | | YES | 94.6 |
| 46 | M8FOSA | INT STD | 11.12 | 506.053 > 78.286 | 29538 | | 8.090 | | na | 80.9 |
| 47 | d5-NEtFOSAA | INT STD | 11.37 | 589.117 > 418.929 | 7293 | | 8.287 | | na | 82.9 |
| 48 | NEtFOSAA | 2991-50-6 | 11.38 | 583.989 > 418.927 | 587 | | 0.944 | 3.50 | NO | 94.4 |
| 49 | PFDoA | 307-55-1 | 11.72 | 612.989 > 568.967 | 6560 | | 0.889 | 11.89 | NO | 88.9 |
| 50 | MPFDOA | INT STD | 11.72 | 614.989 > 569.92 | 81293 | | 9.445 | | na | 94.5 |
| 51 | PFTrDA | 72629-94-8 | 12.13 | 663.053 > 618.969 | 7109 | | 0.962 | 13.34 | NO | 96.2 |
| 52 | PFTA | 376-06-7 | 12.48 | 713.053 > 668.976 | 5741 | | 0.942 | 8.03 | NO | 94.2 |
| 53 | M2PFTEDA | INT STD | 12.48 | 715.053 > 669.945 | 82219 | | 8.476 | | na | 84.8 |


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**Calibration: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\CurveDB\200227_537ISO_ICAL.cdb 28 Feb 2020 09:12:40**

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**Date: 27-Feb-2020**
**Time: 17:04:20**
**Description: WG1345050,,537_200120_2**
**User: LCMS01:JW**
**Vial: 1:B,6**
**Instrument: XEVO-TQSmicro#QEA0276**
**Inlet Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\LCMS_537_ISO_MeOH**
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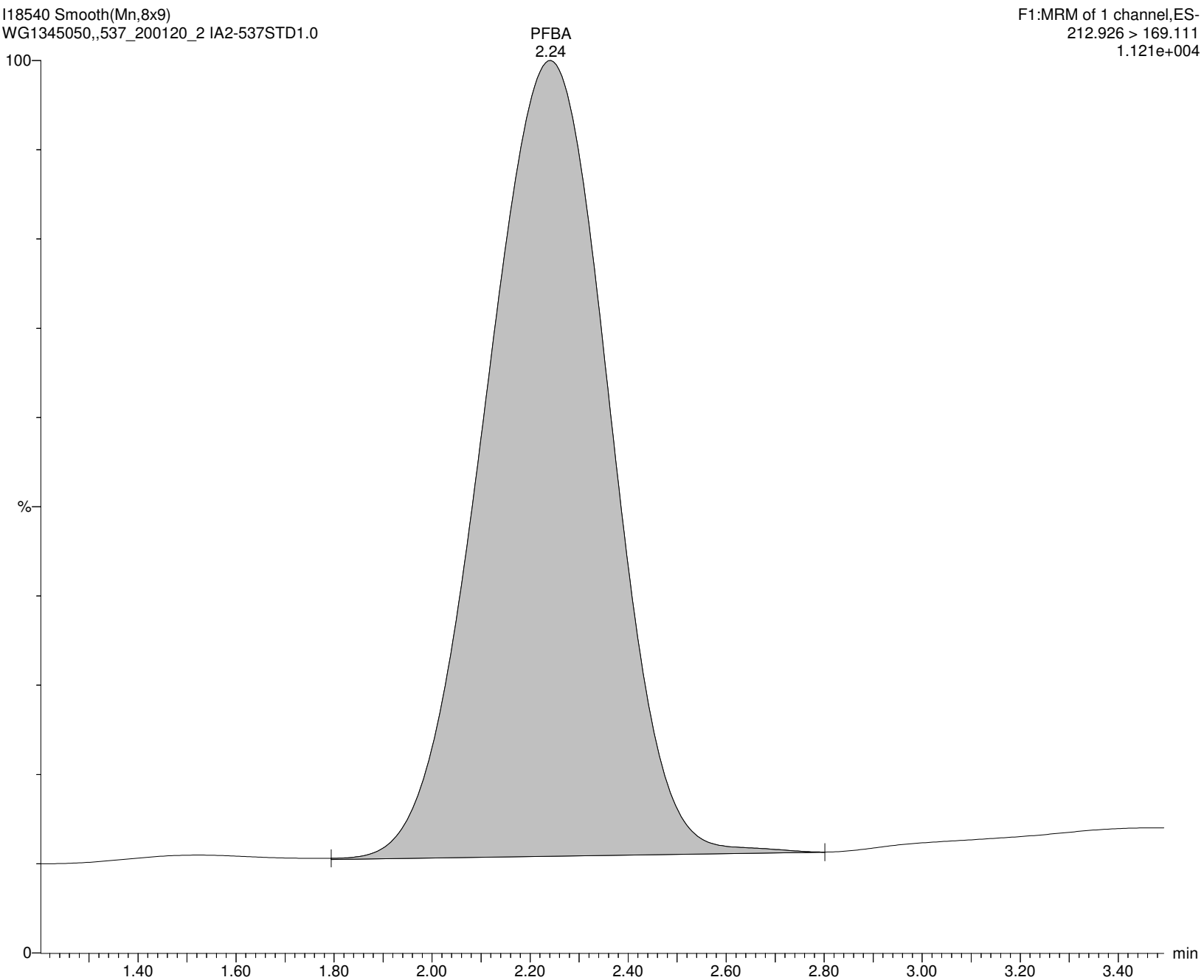
**MS Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**PFBA**





all concentration units in (ng/mL)

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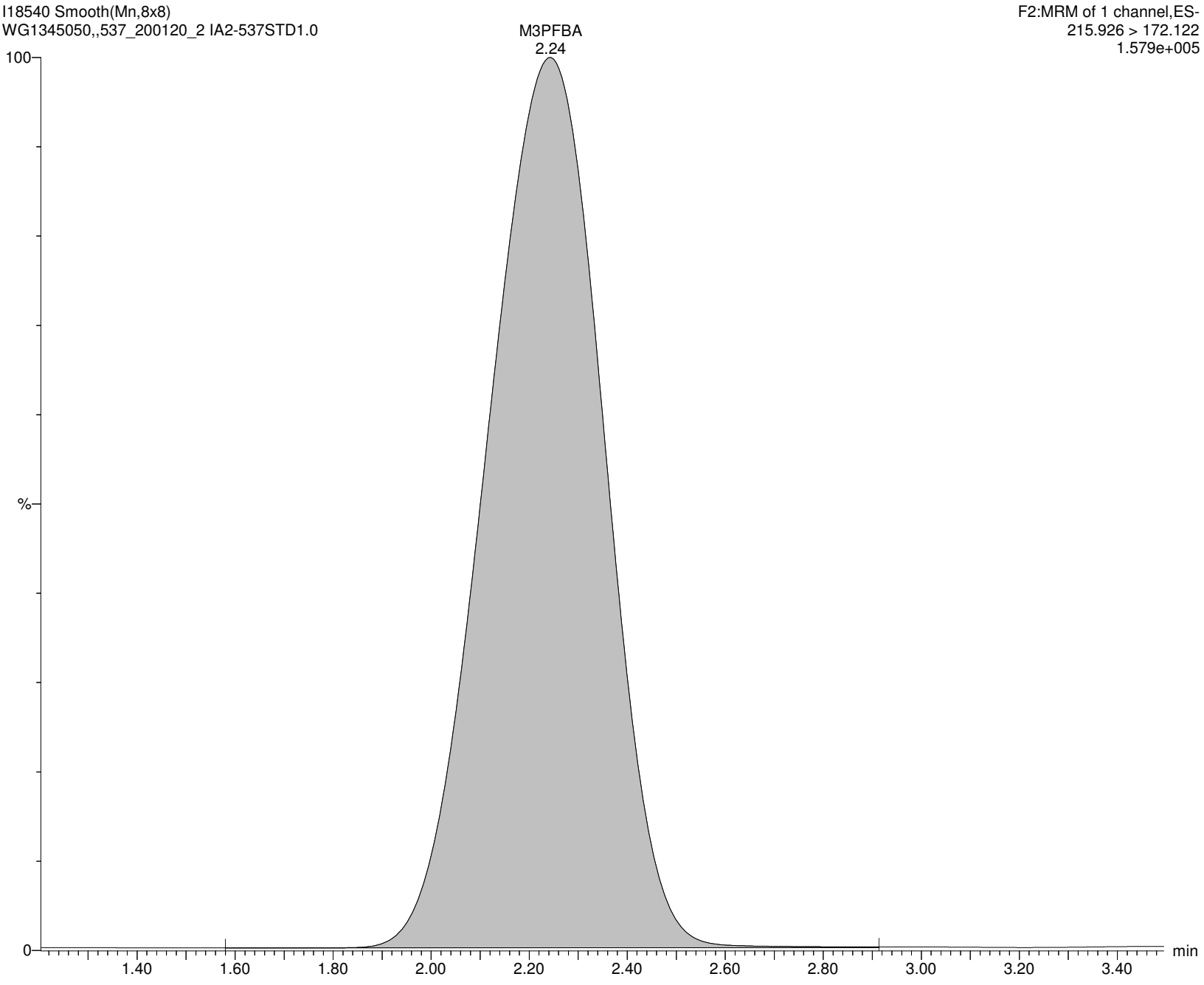
**M3PFBA**





all concentration units in (ng/mL)

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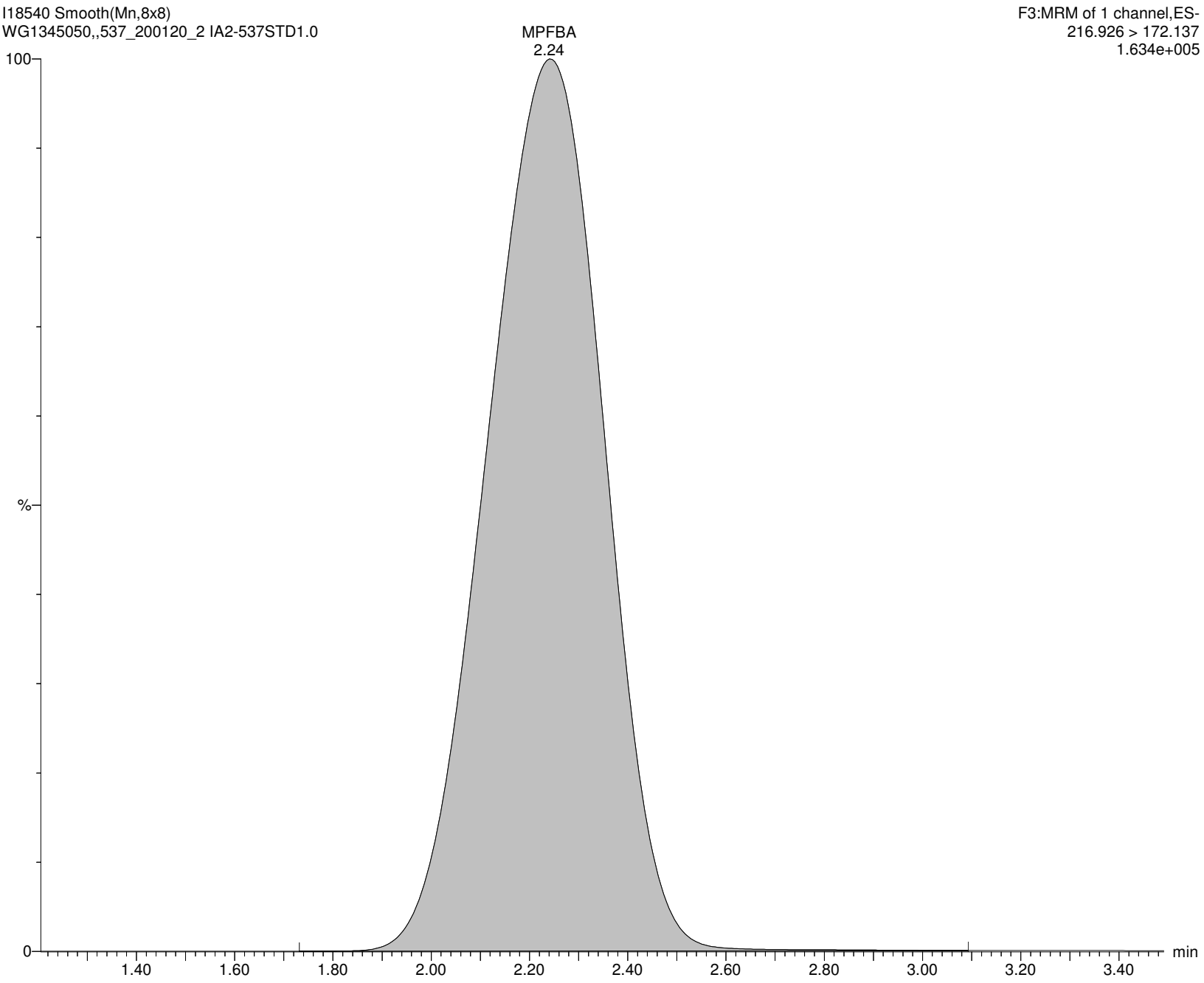
**MPFBA**





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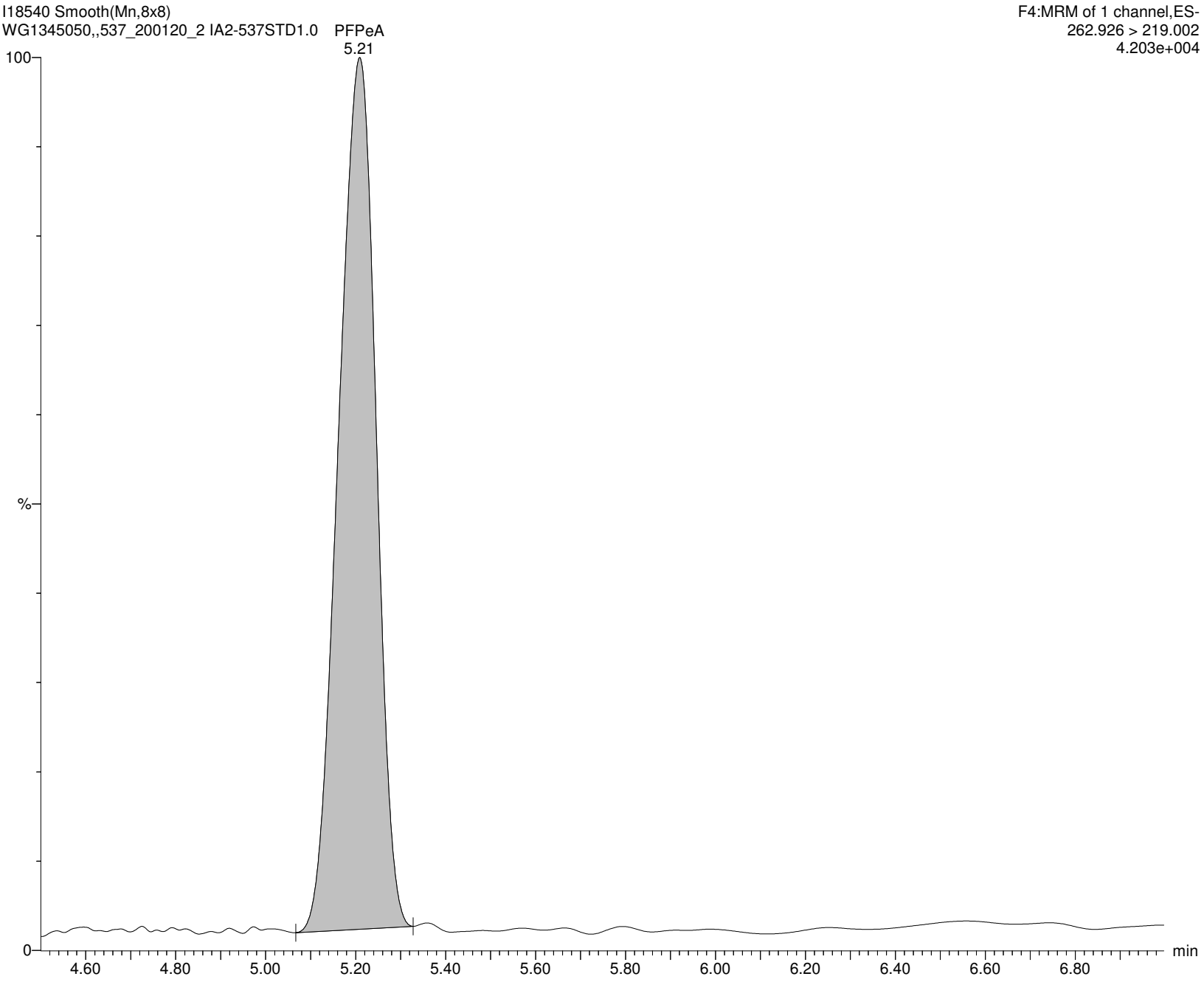
**PFPeA**





all concentration units in (ng/mL)

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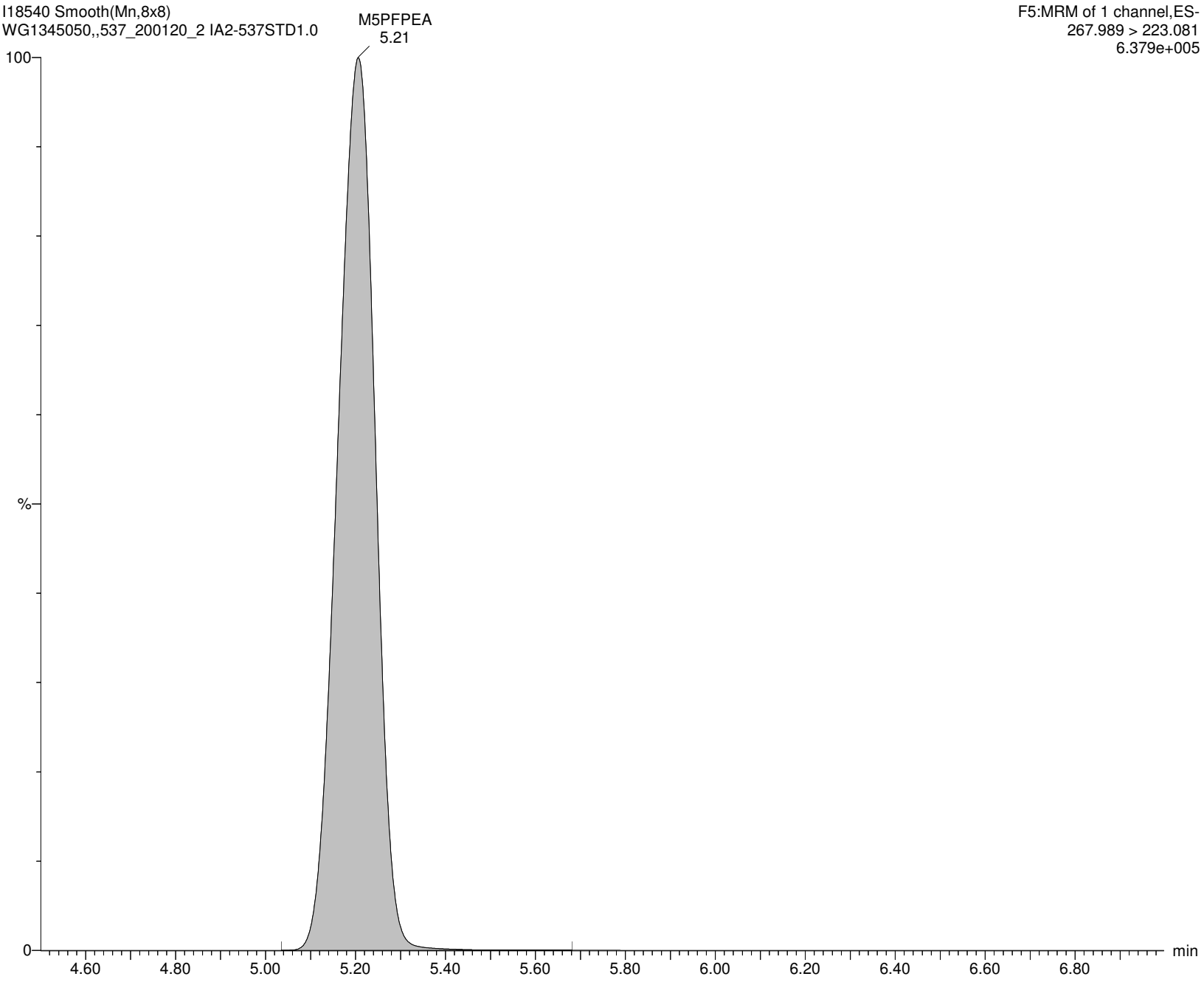
**M5PFPEA**





all concentration units in (ng/mL)

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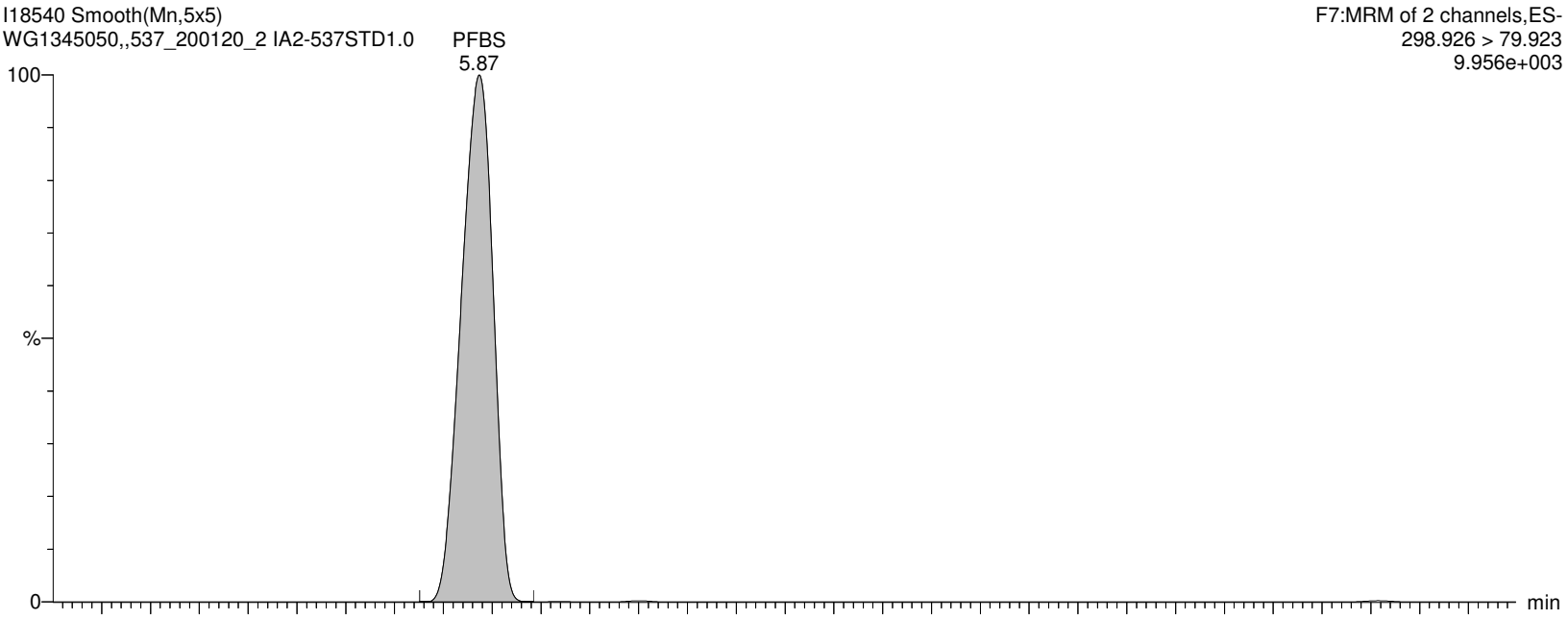
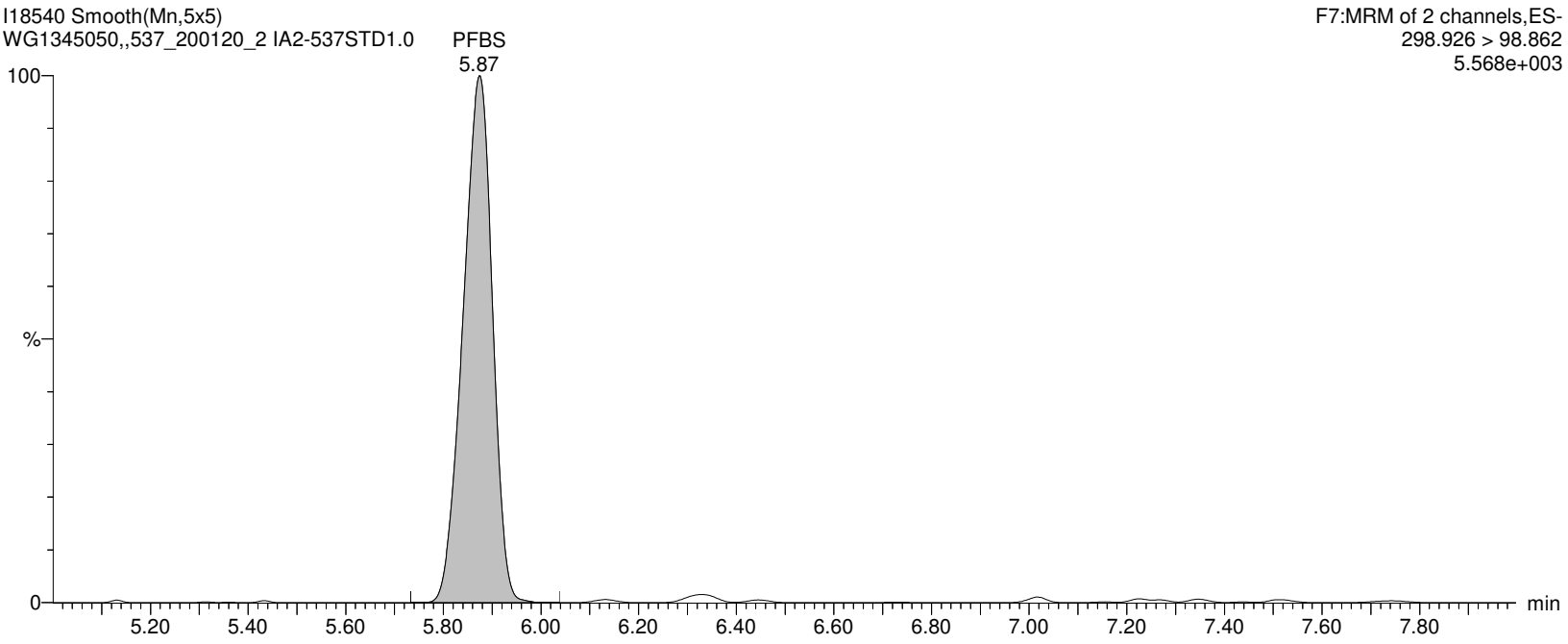
**PFBS**





all concentration units in (ng/mL)

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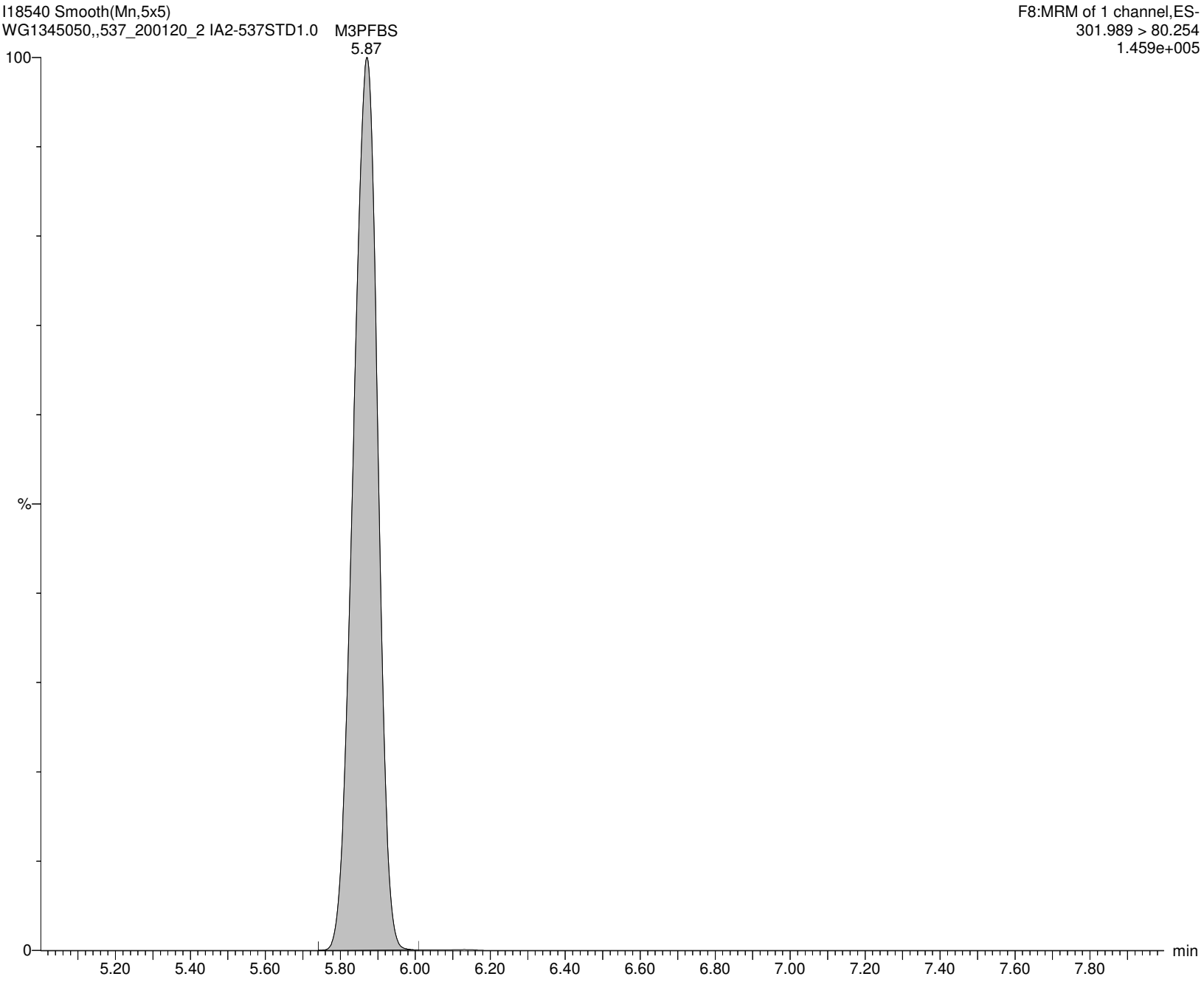
**M3PFBS**





all concentration units in (ng/mL)

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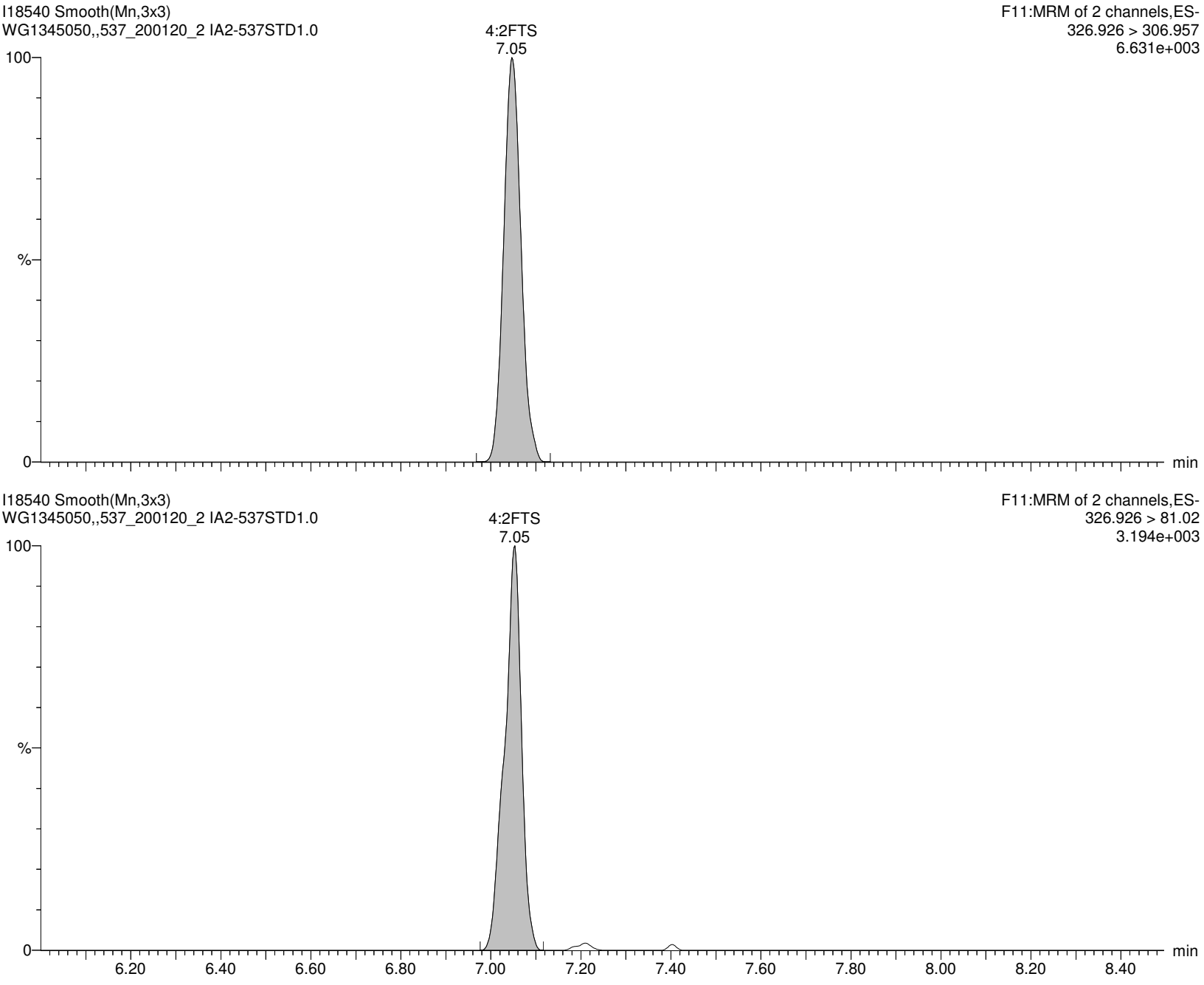
**4:2FTS**





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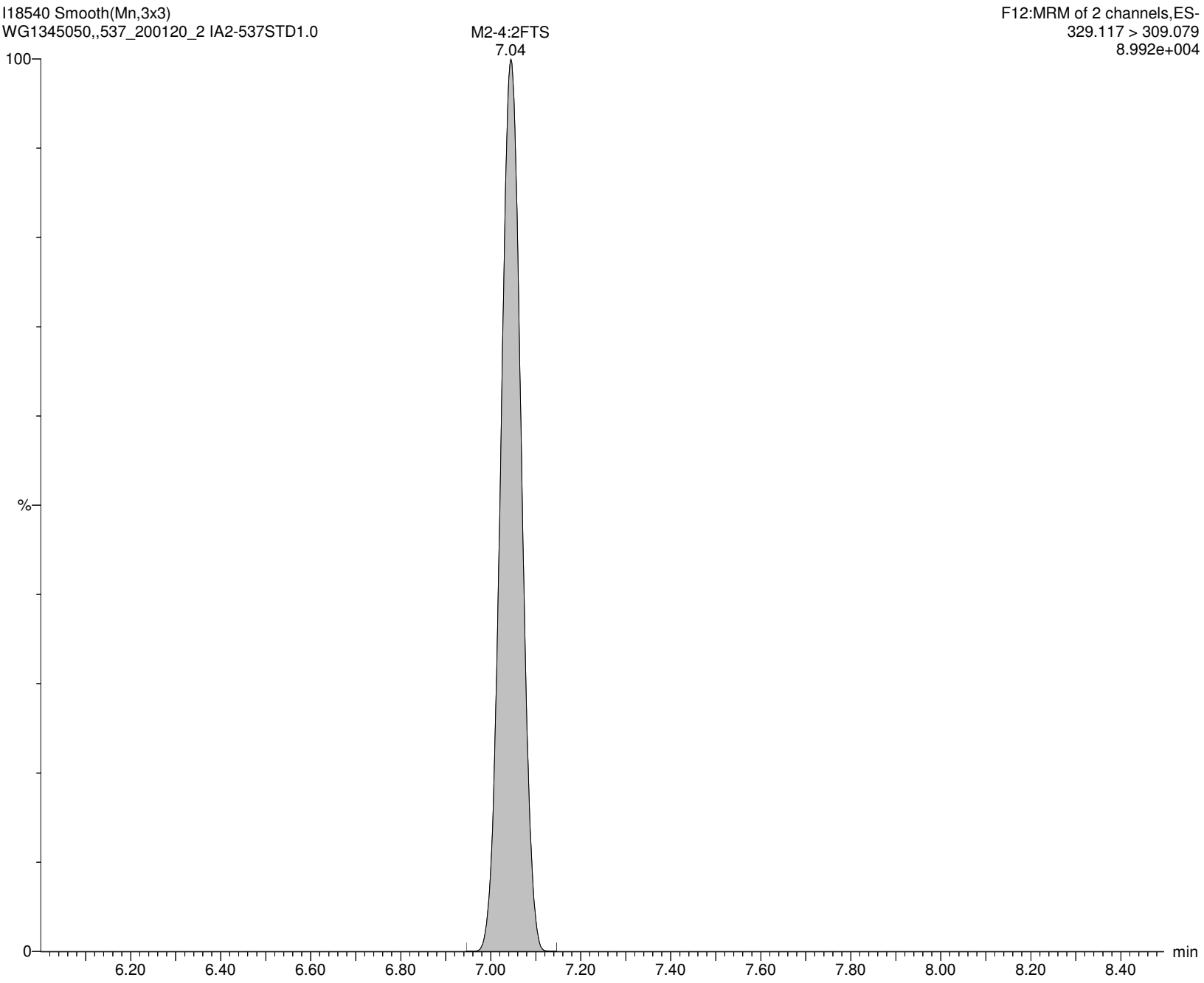
**M2-4:2FTS**





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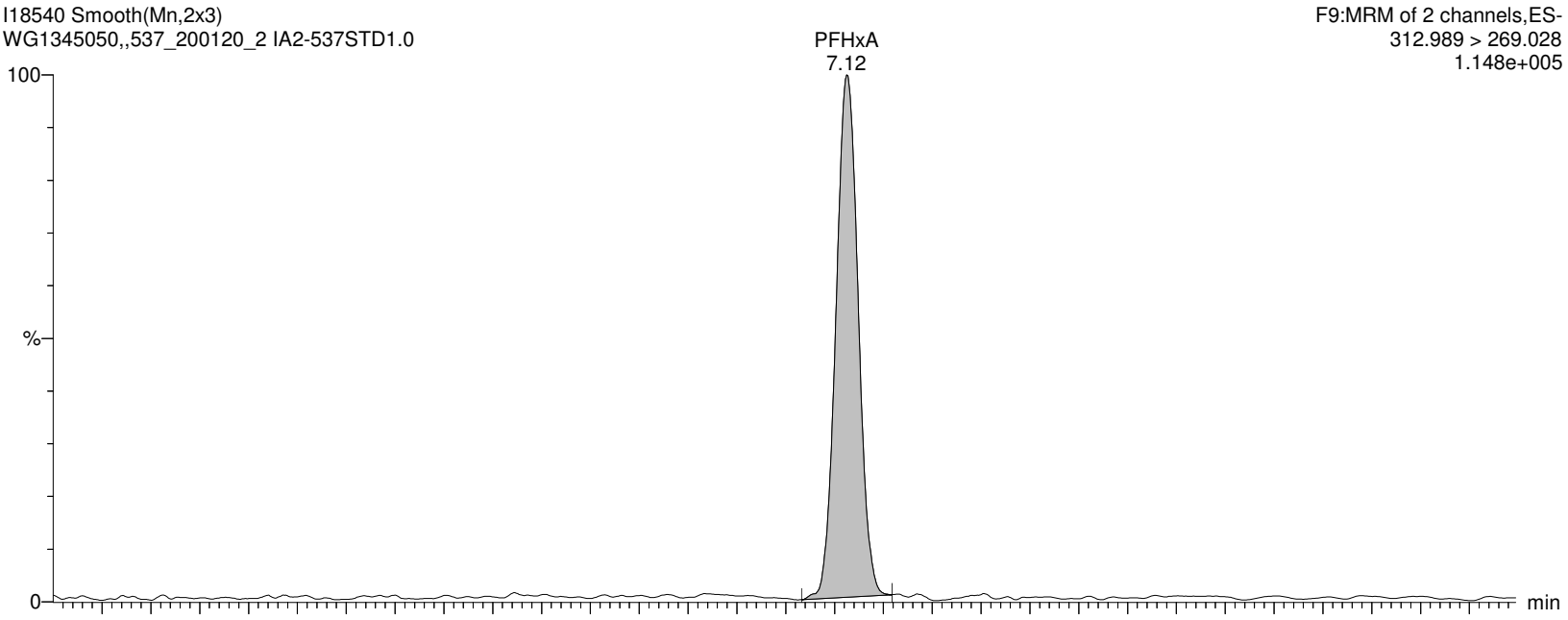
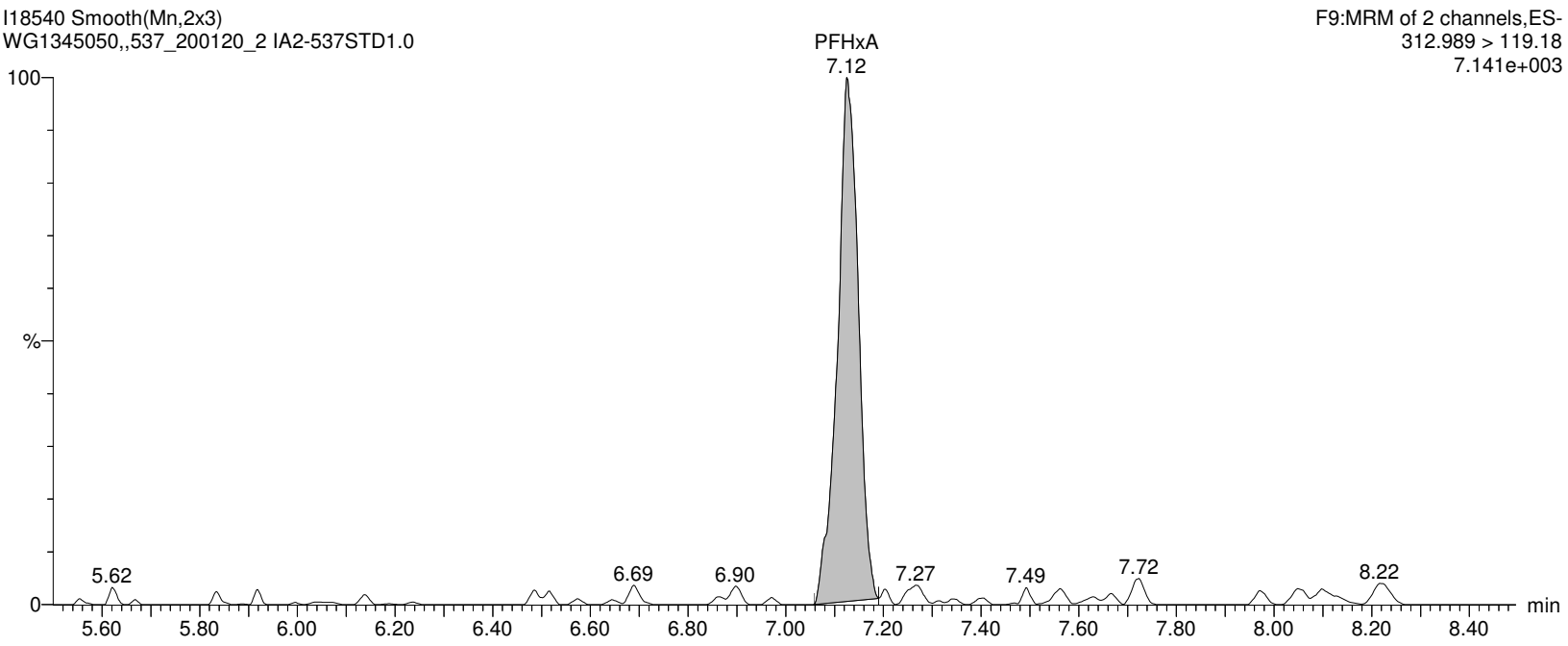
**PFHxA**





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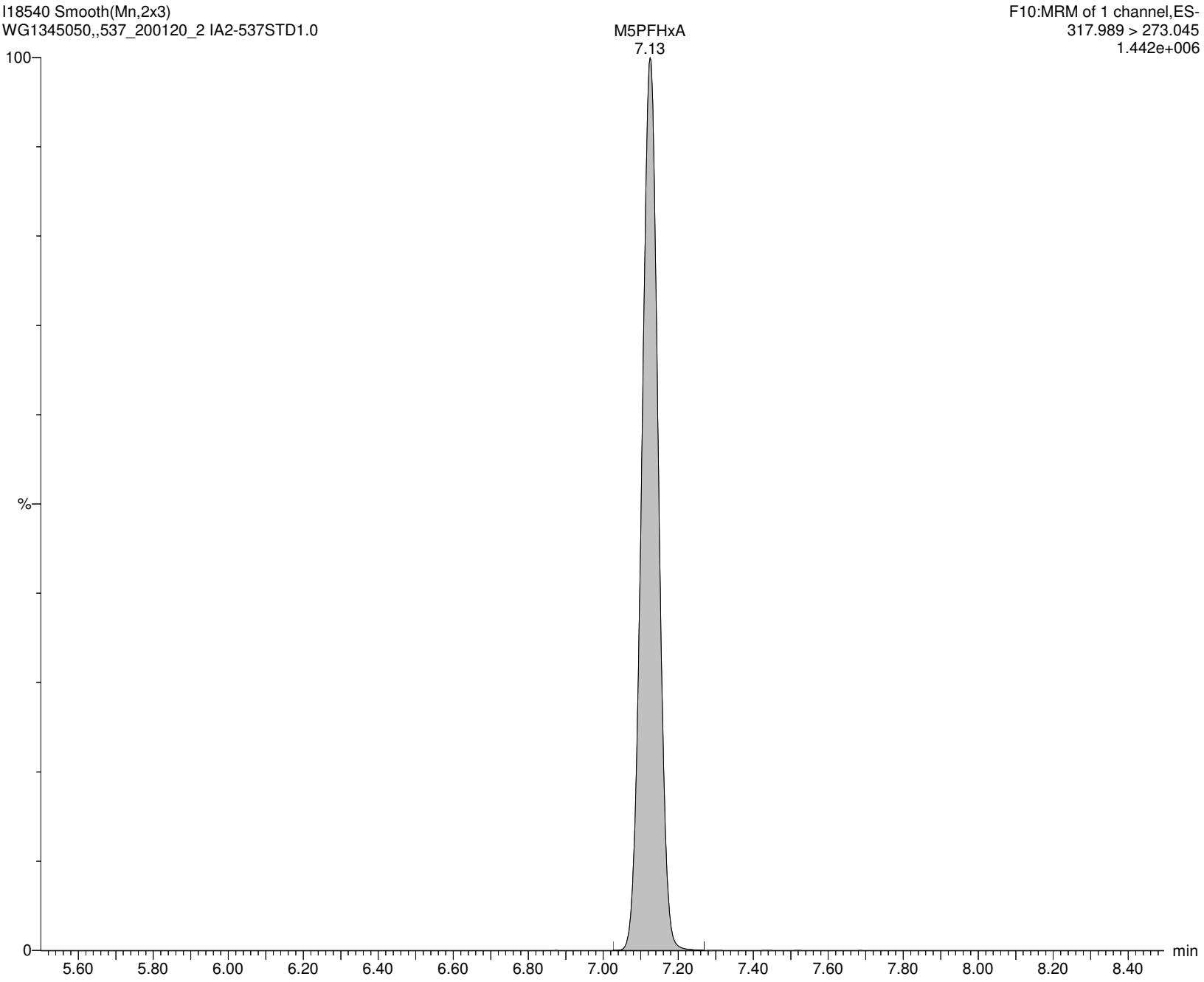
**M5PFHxA**





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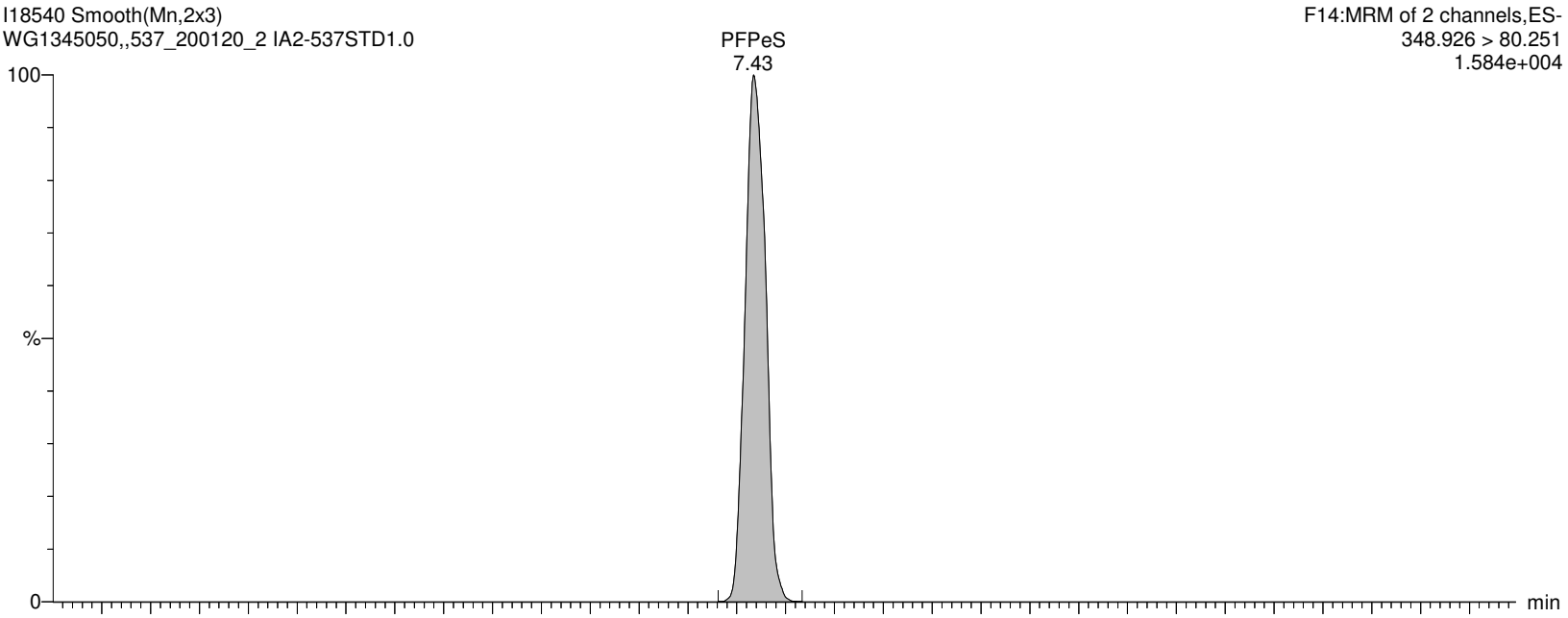
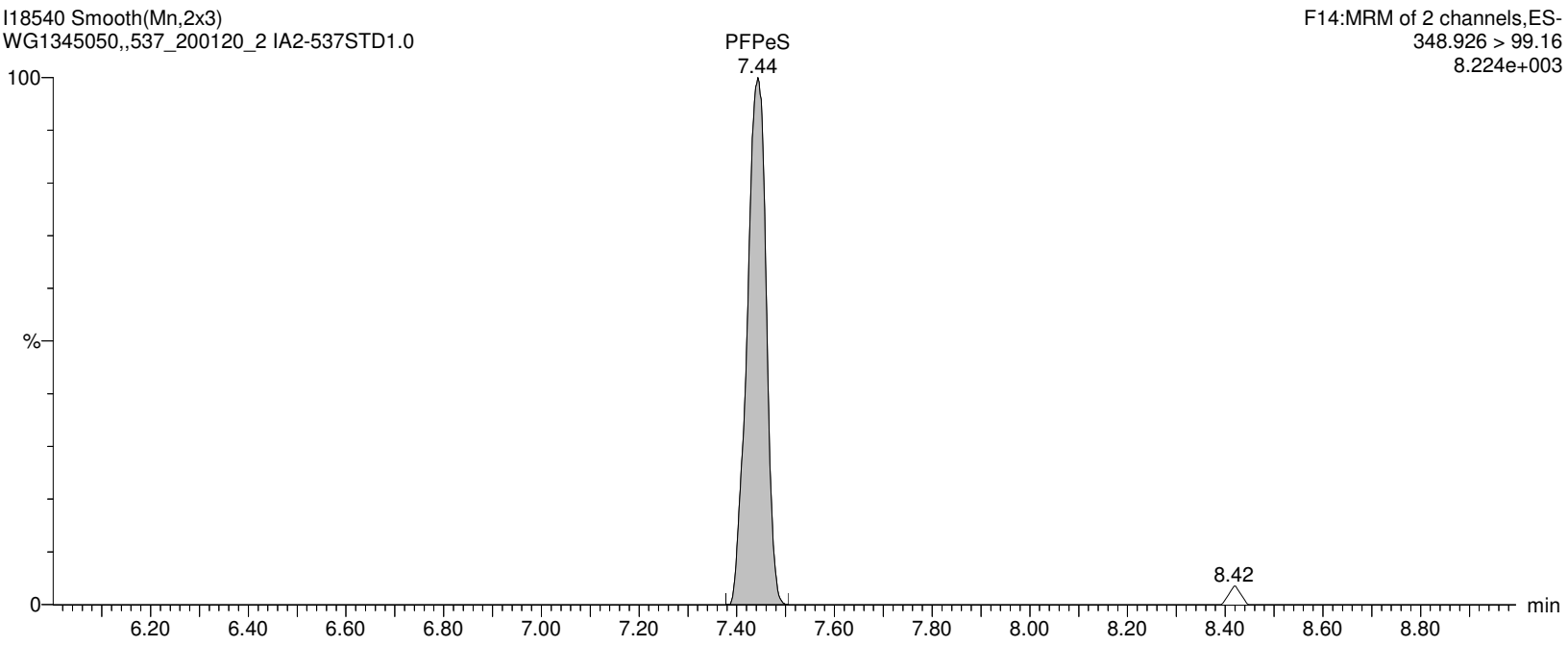
**PFPeS**





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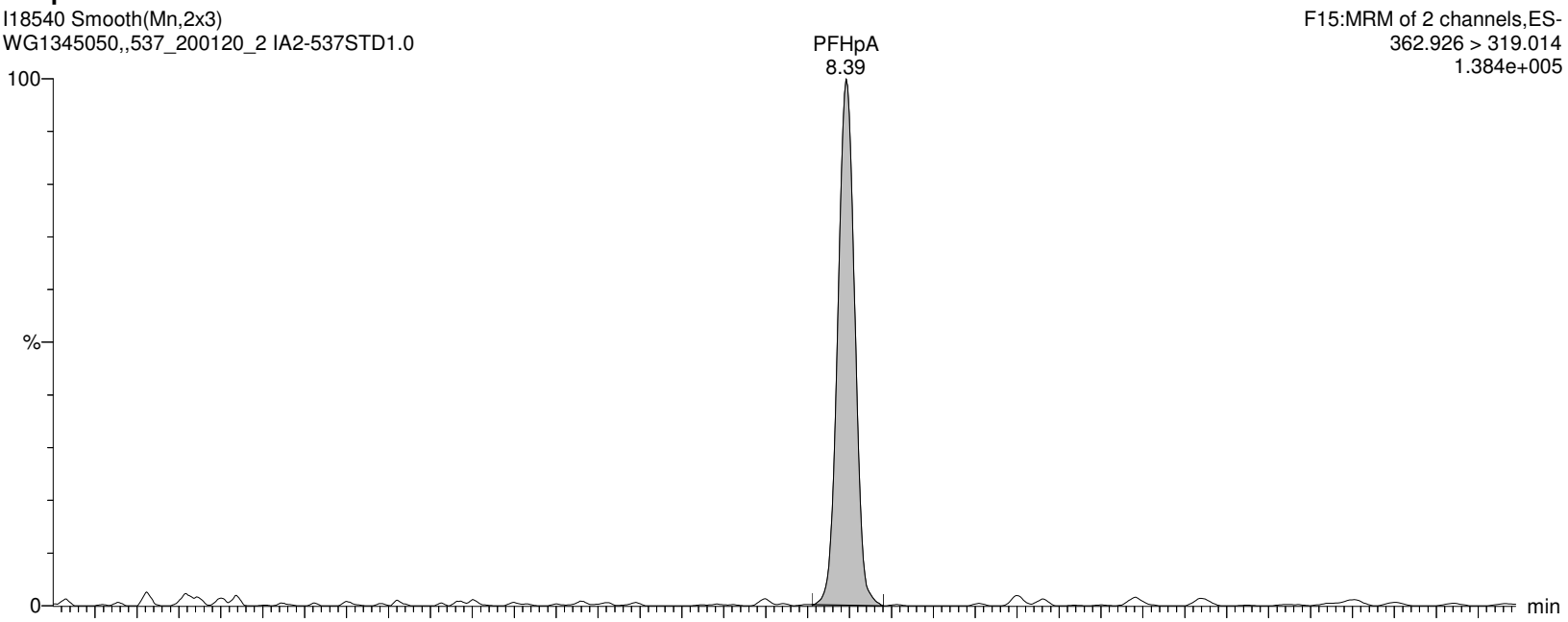


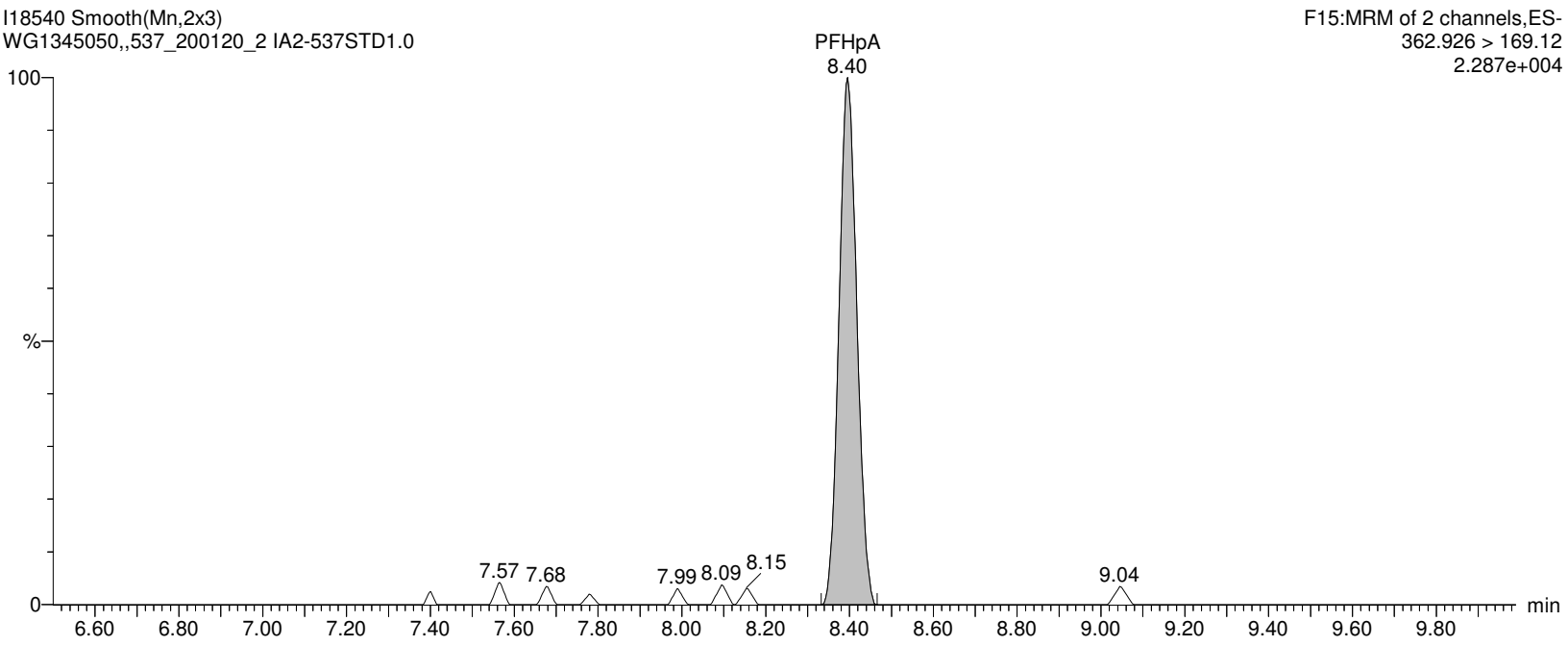



all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICAL_A.qld
Last Altered: Friday, February 28, 2020 09:12:40 Eastern Standard Time
Printed: Friday, February 28, 2020 09:28:00 Eastern Standard Time

**Name: I18540**
**ID: IA2-537STD1.0**
**Date: 27-Feb-2020**
**Time: 17:04:20**
**Description: WG1345050,,537_200120_2**
**User: LCMS01:JW**
**Vial: 1:B,6**
**Instrument: XEVO-TQSmicro#QEA0276**
**Inlet Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\LCMS_537_ISO_MeOH**
**Tune Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\190709_TUNE.IPR**
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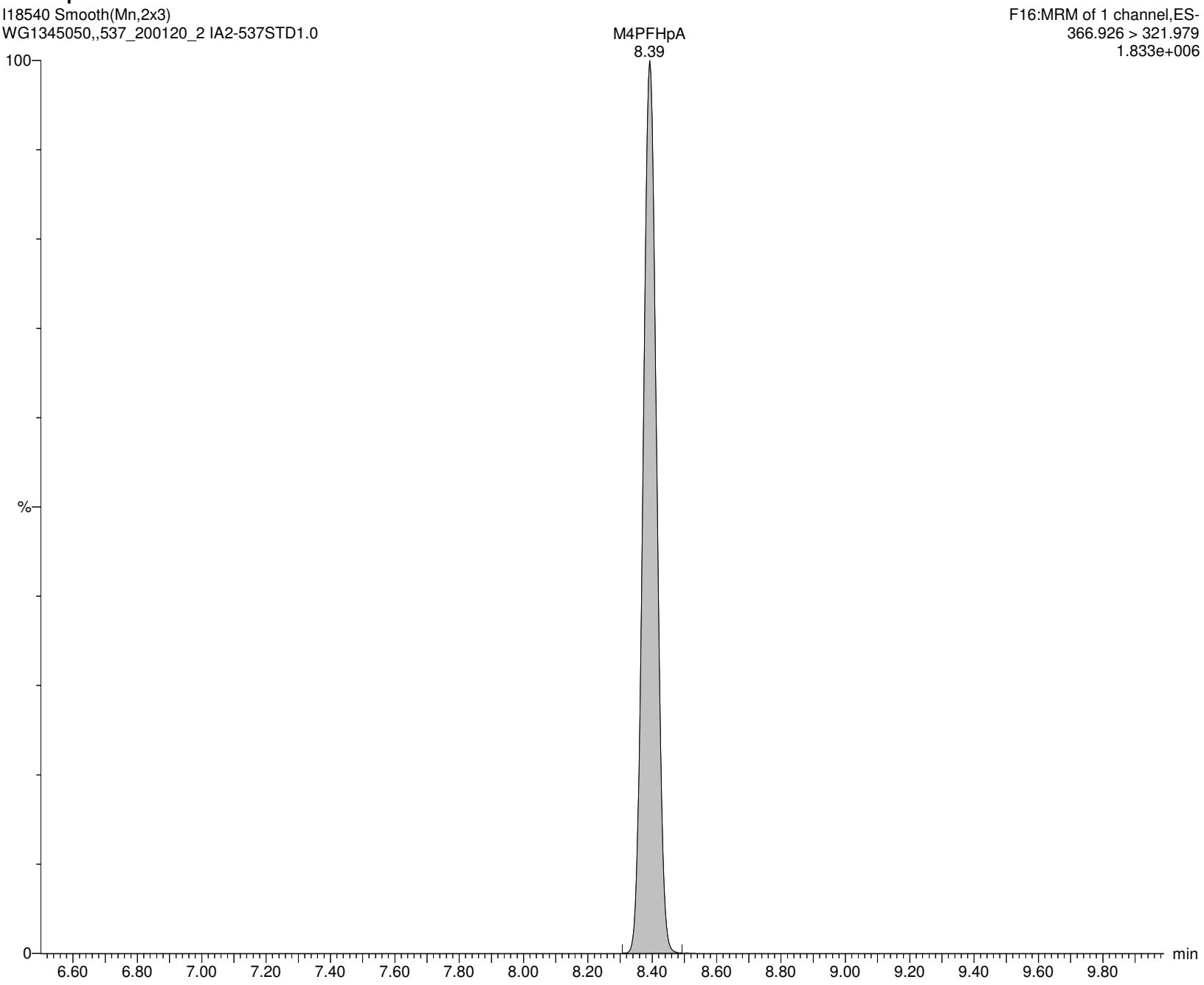
**M4PFHpA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICAL_A.qld
Last Altered: Friday, February 28, 2020 09:12:40 Eastern Standard Time
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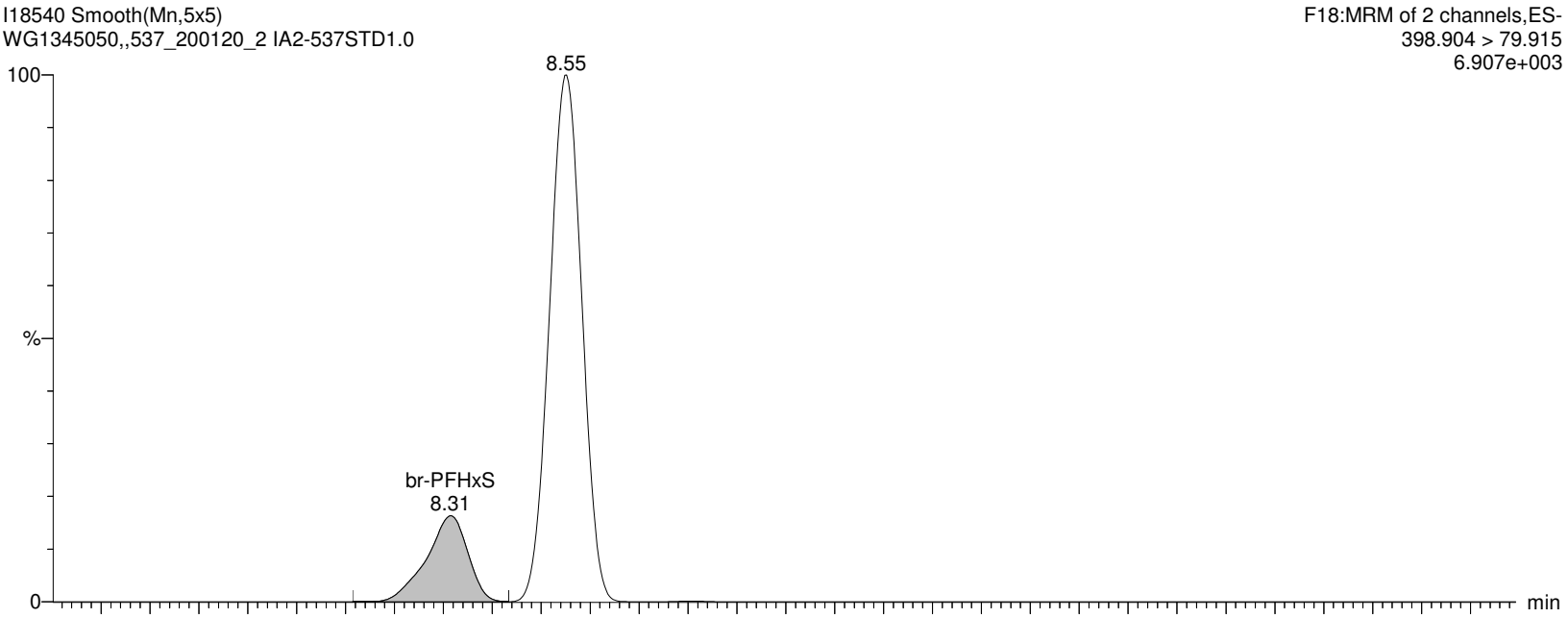


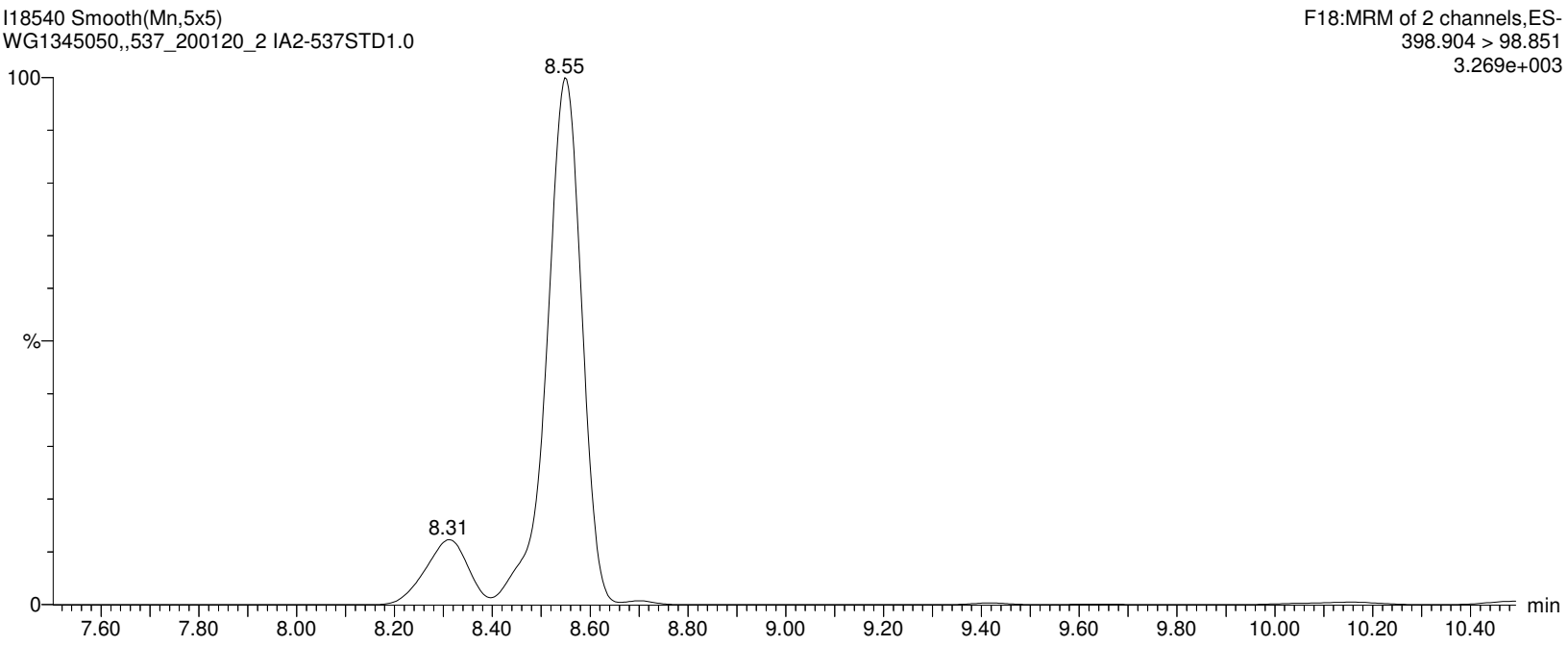



all concentration units in (ng/mL)

Alpha Analytical Inc.
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**Instrument: XEVO-TQSmicro#QEA0276**
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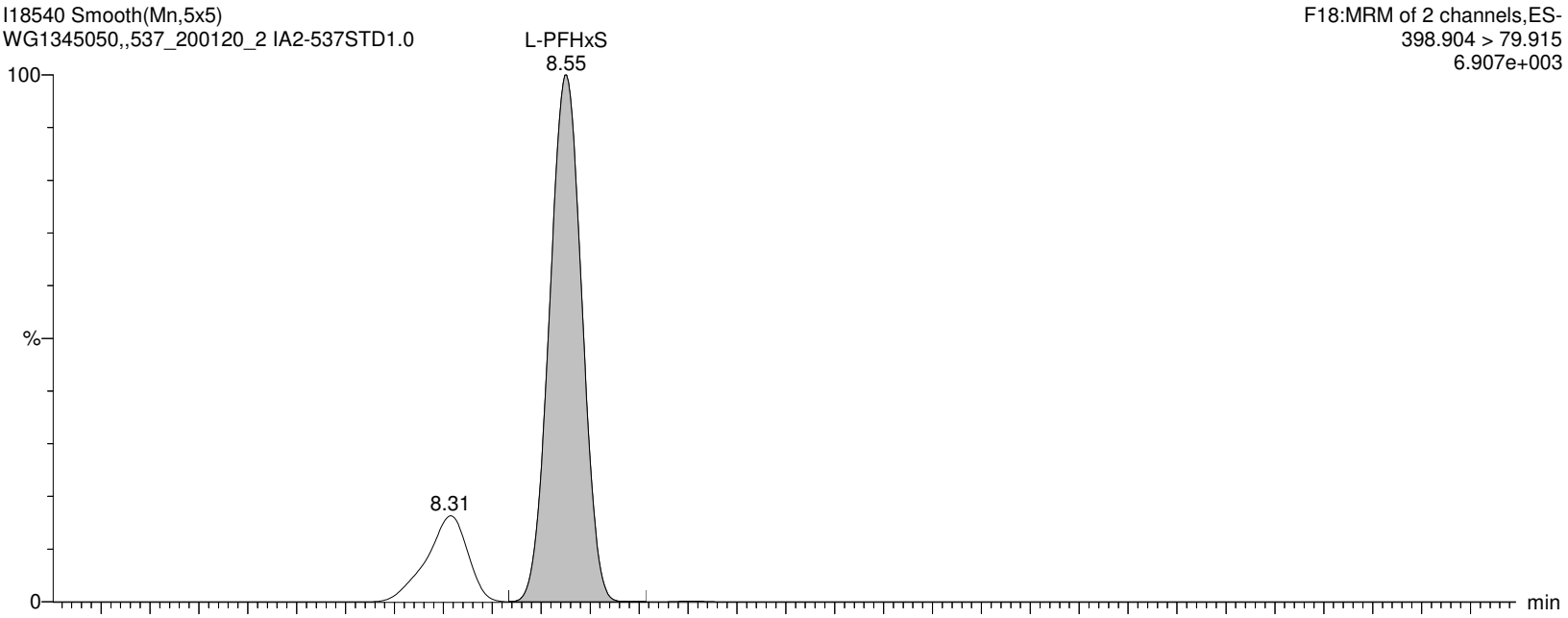


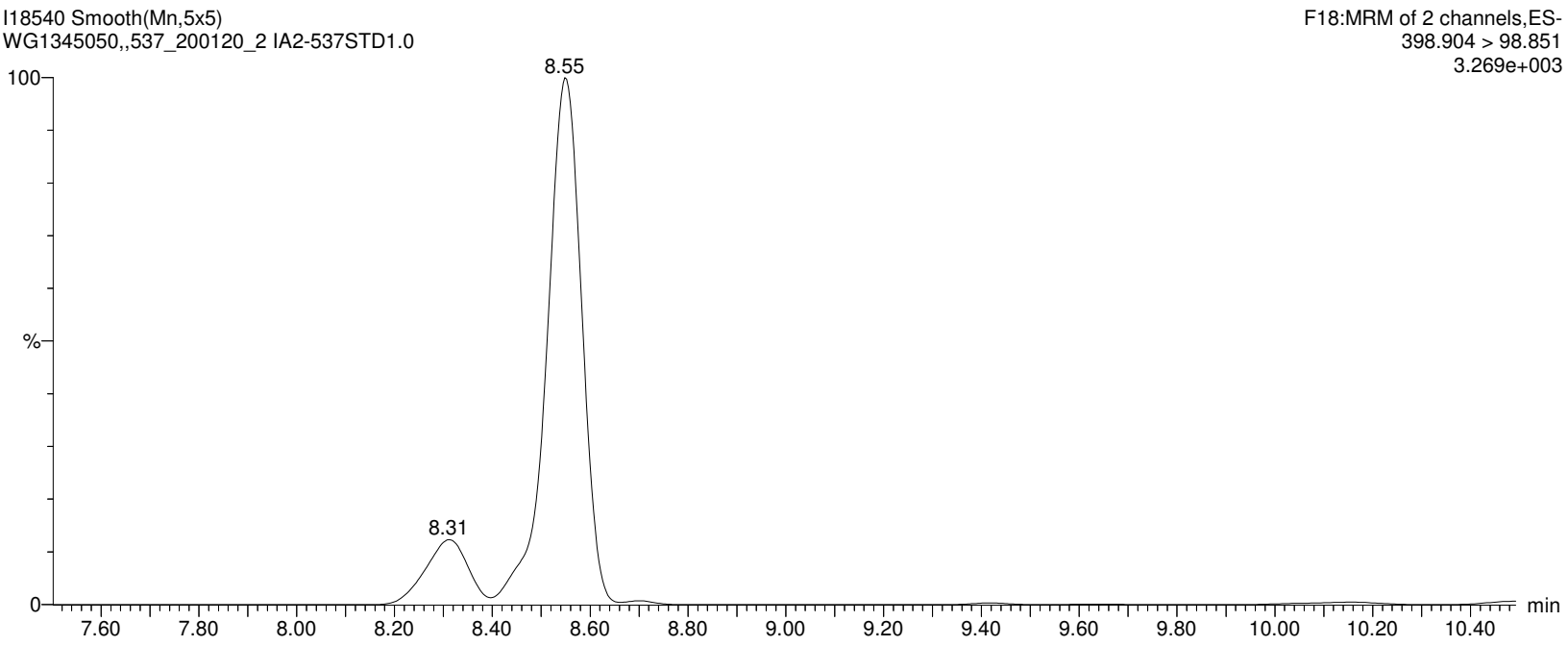



all concentration units in (ng/mL)

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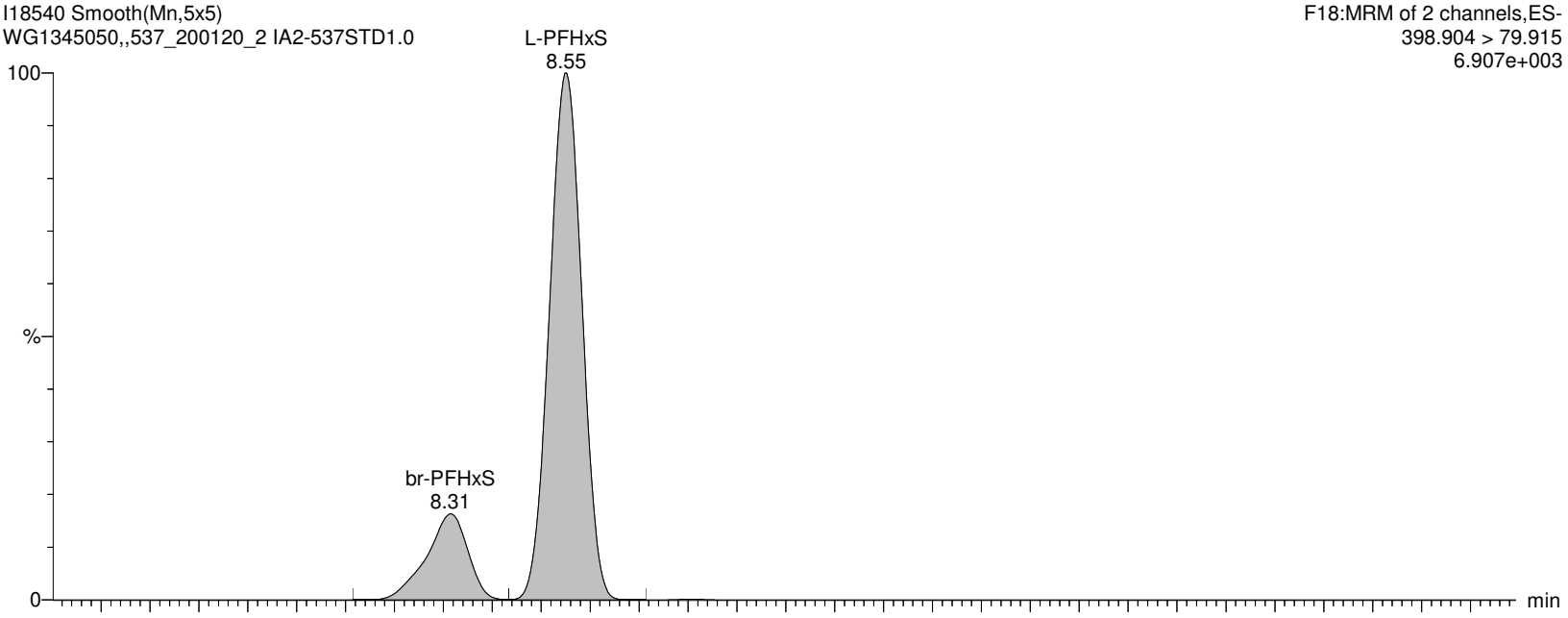
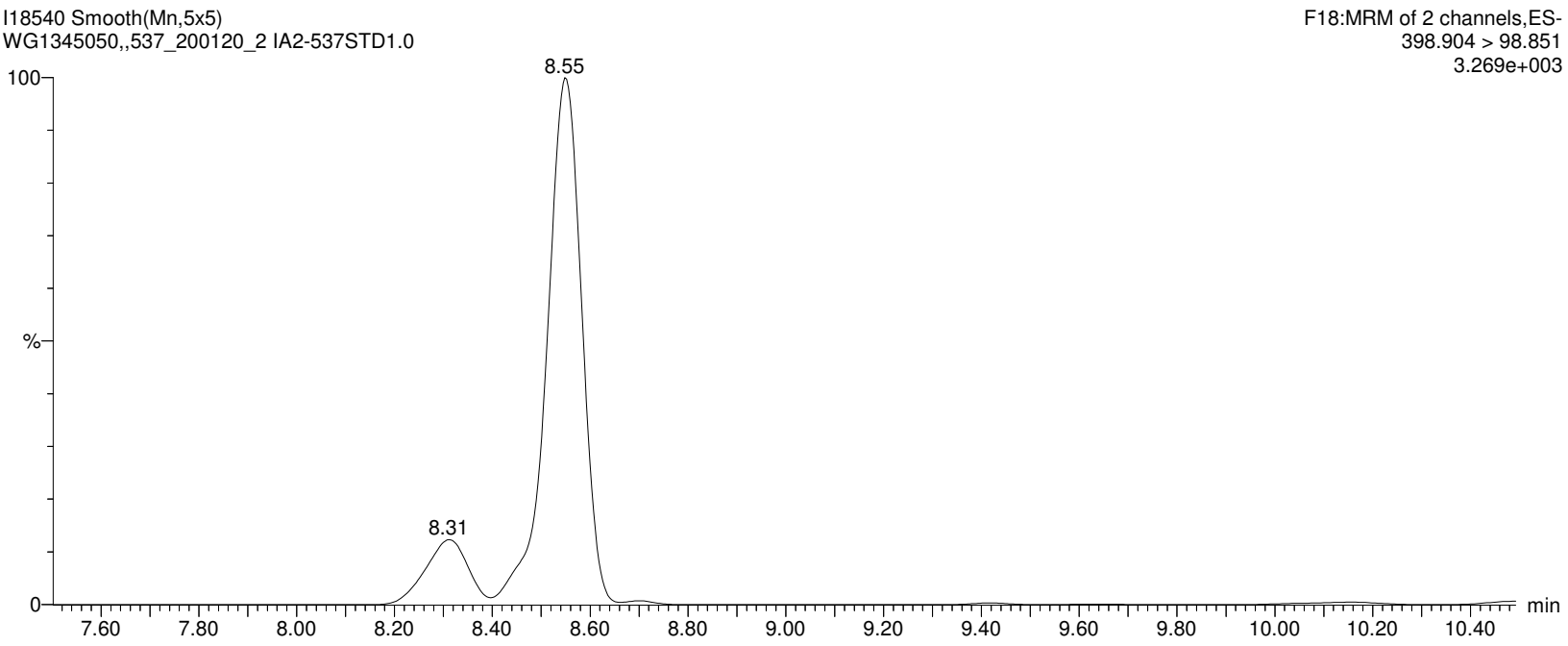
**PFHxS**





all concentration units in (ng/mL)

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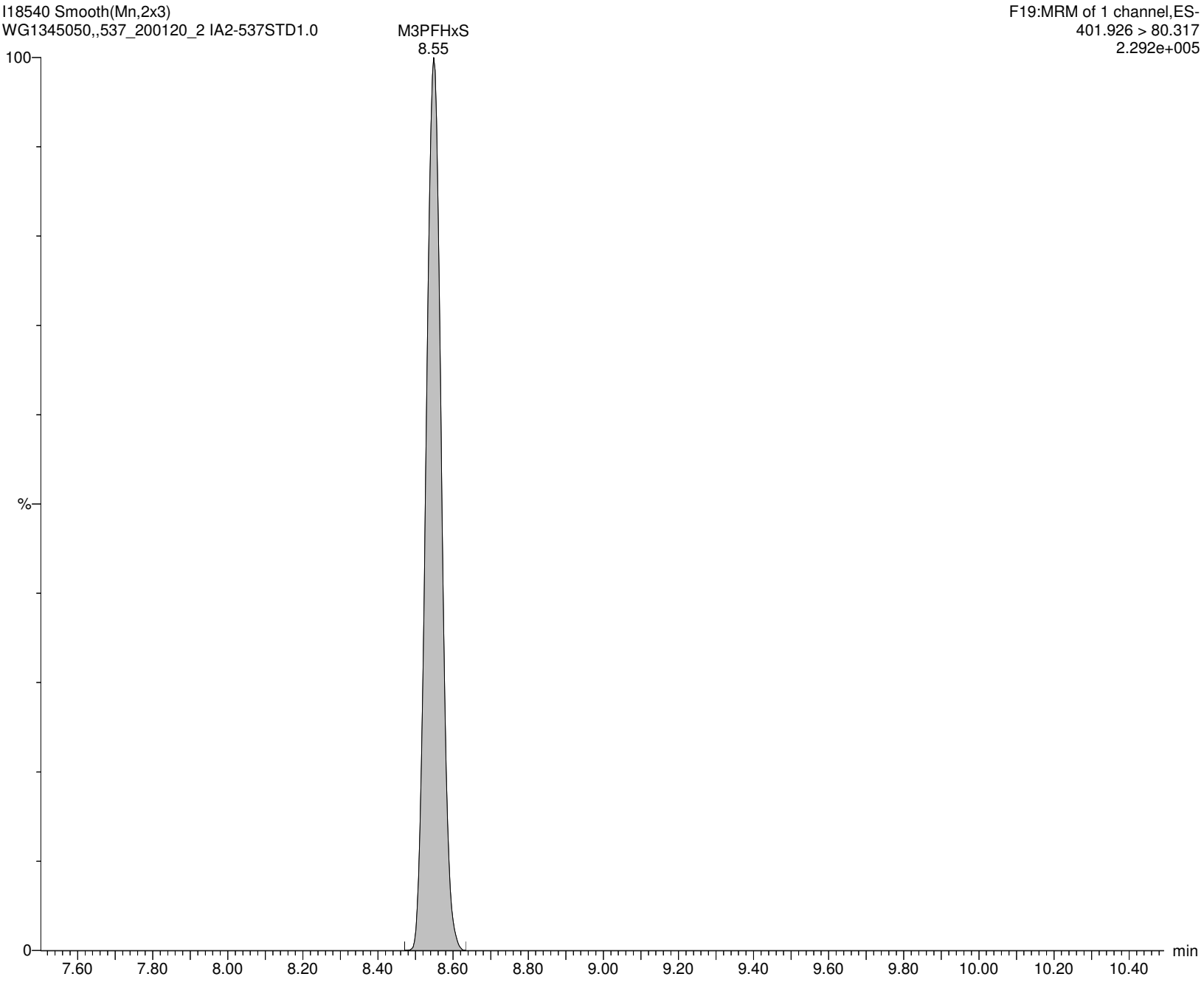
**M3PFHxS**





all concentration units in (ng/mL)

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Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICAL_A.qld
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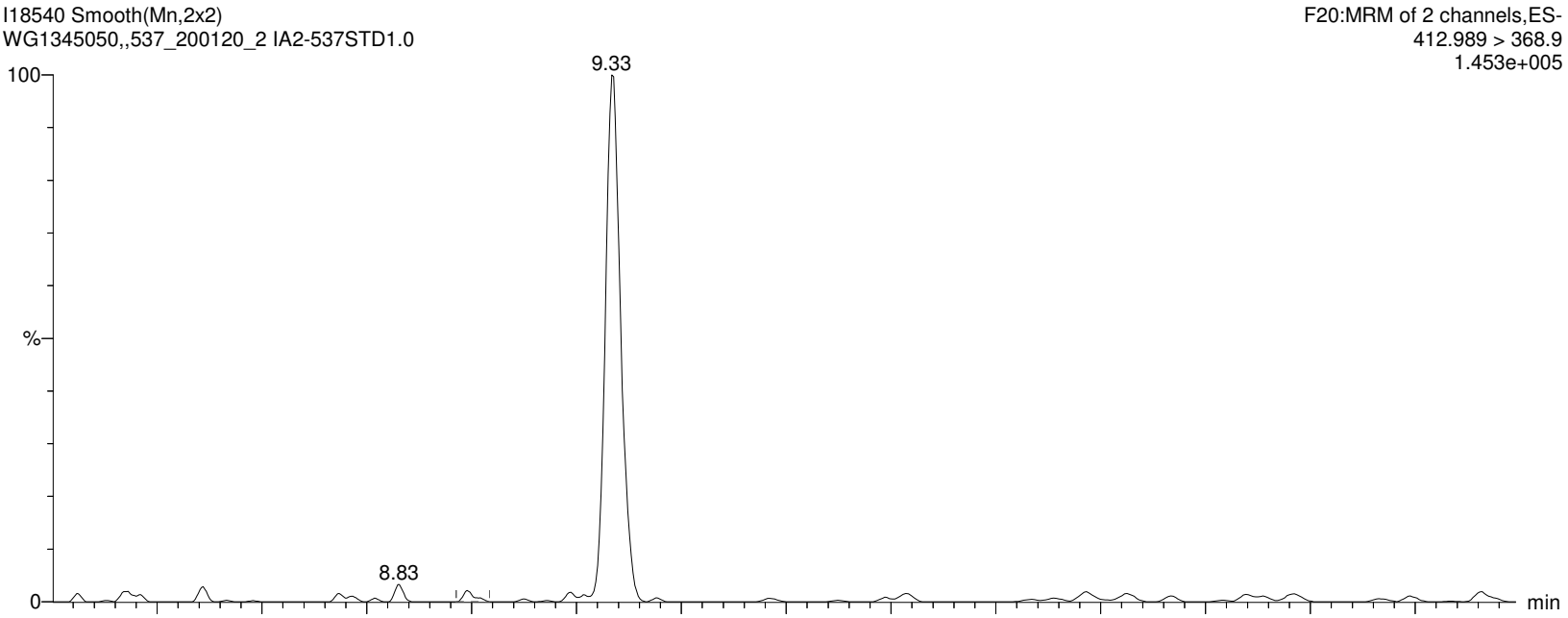
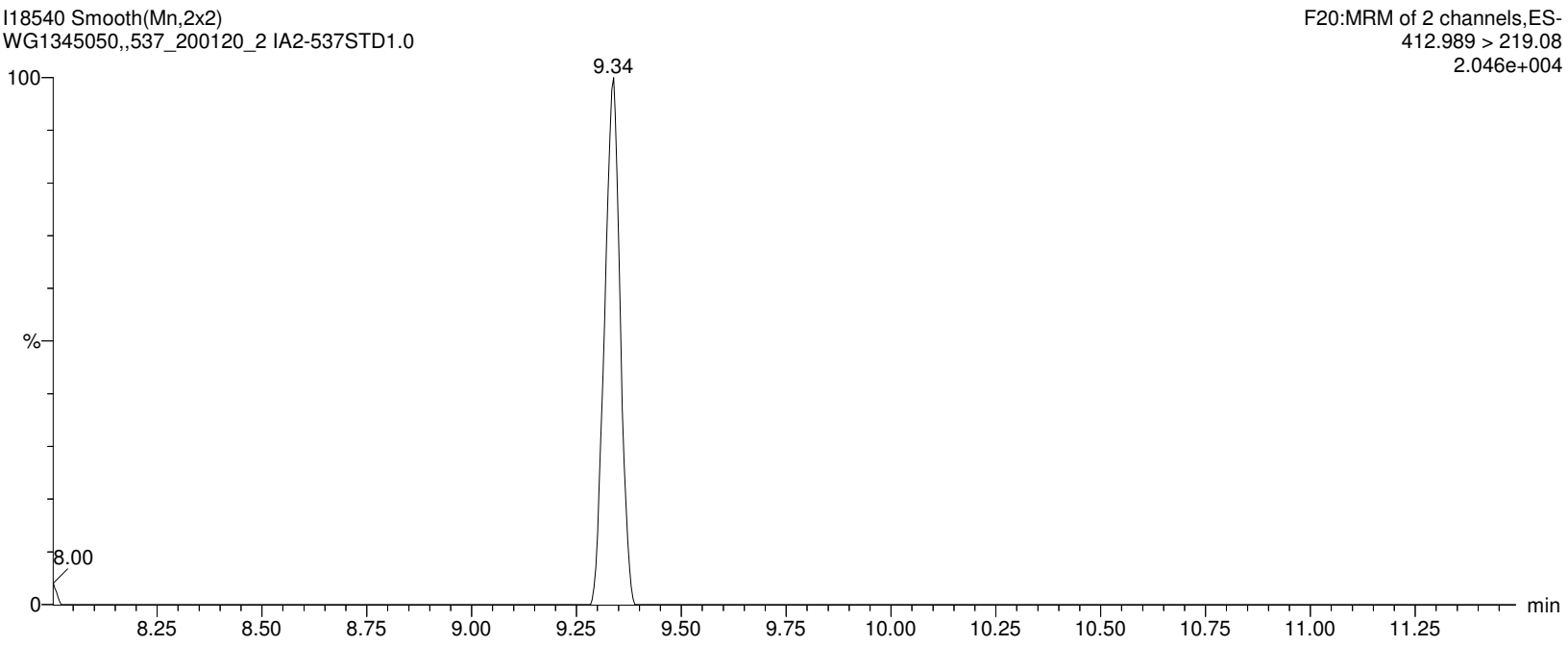
**br-PFOA**





all concentration units in (ng/mL)

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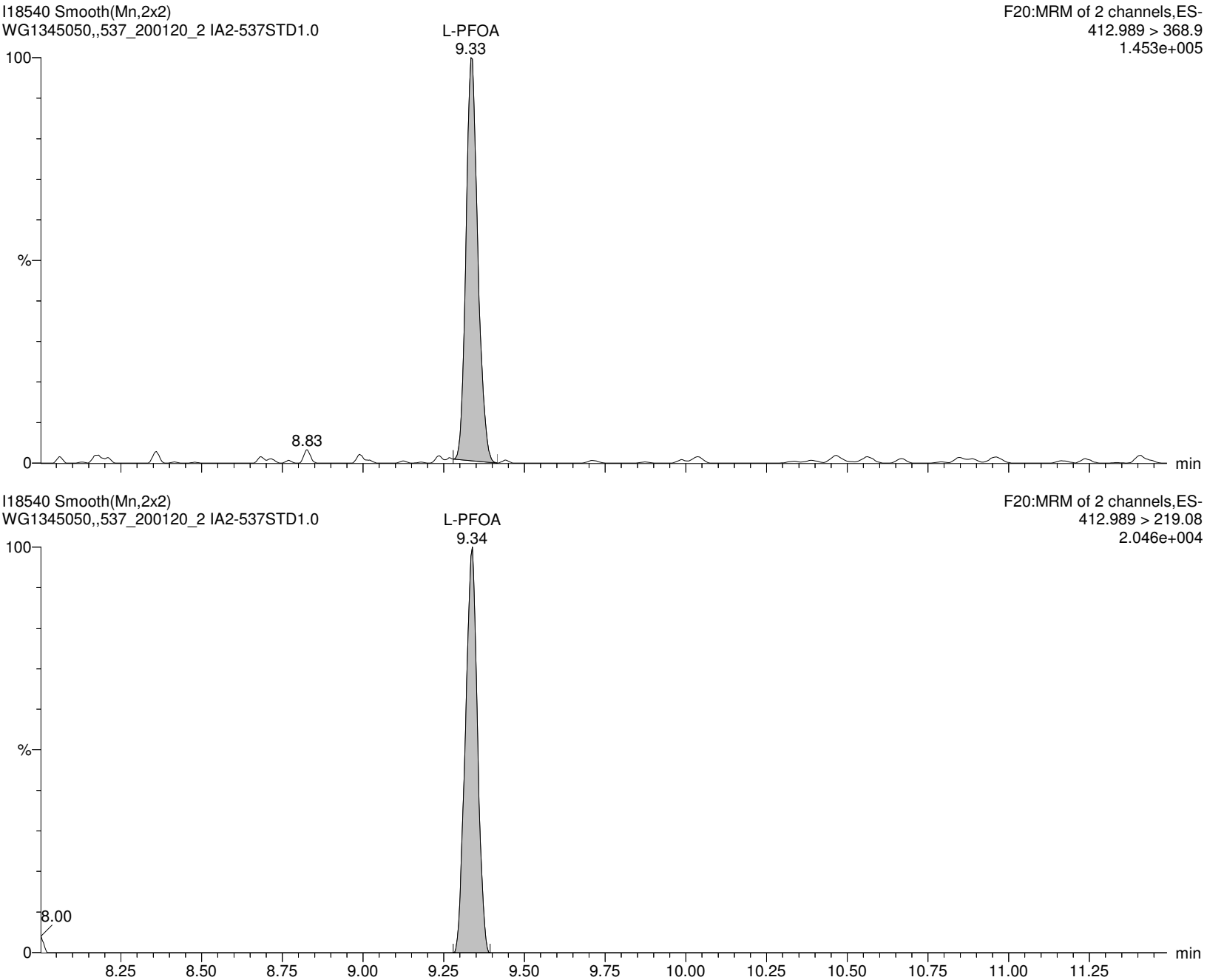
**L-PFOA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICAL_A.qld
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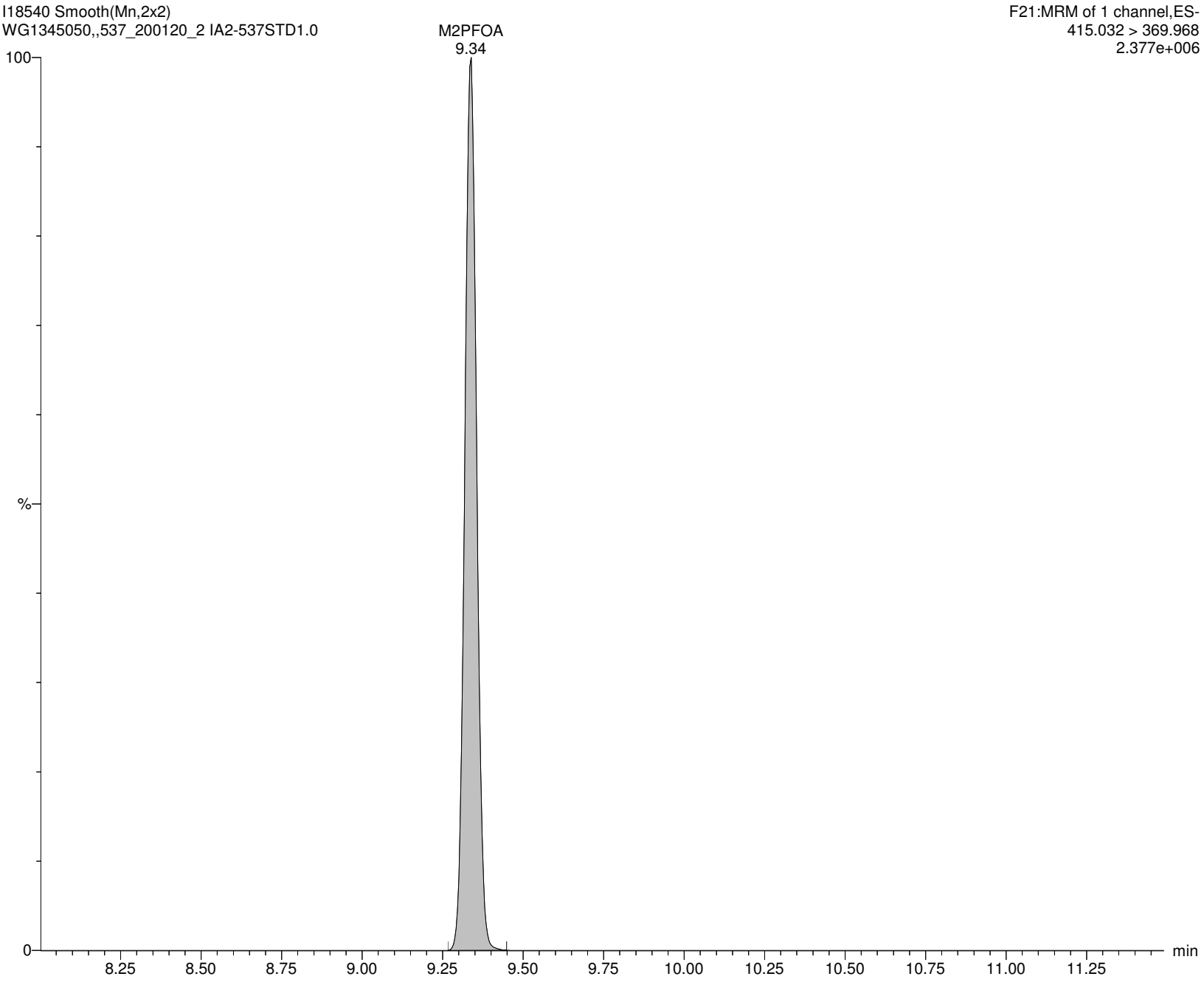
**M2PFOA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
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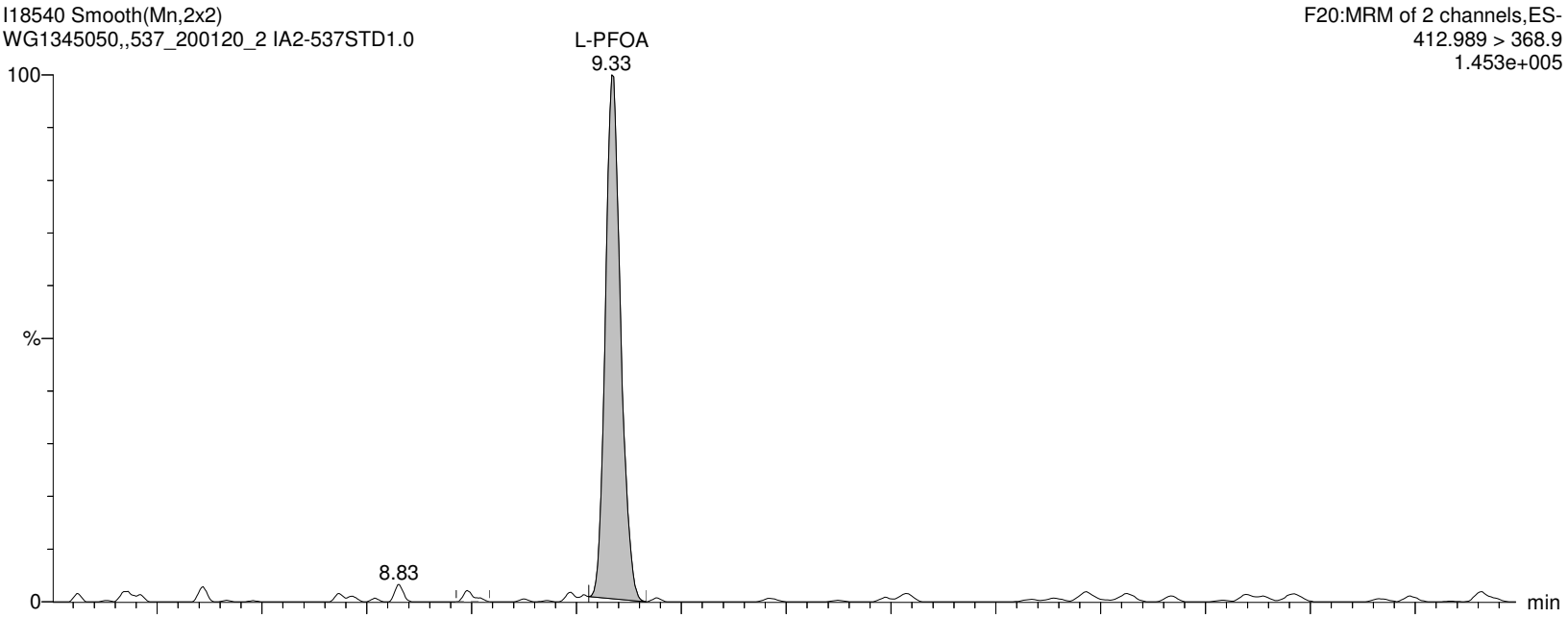
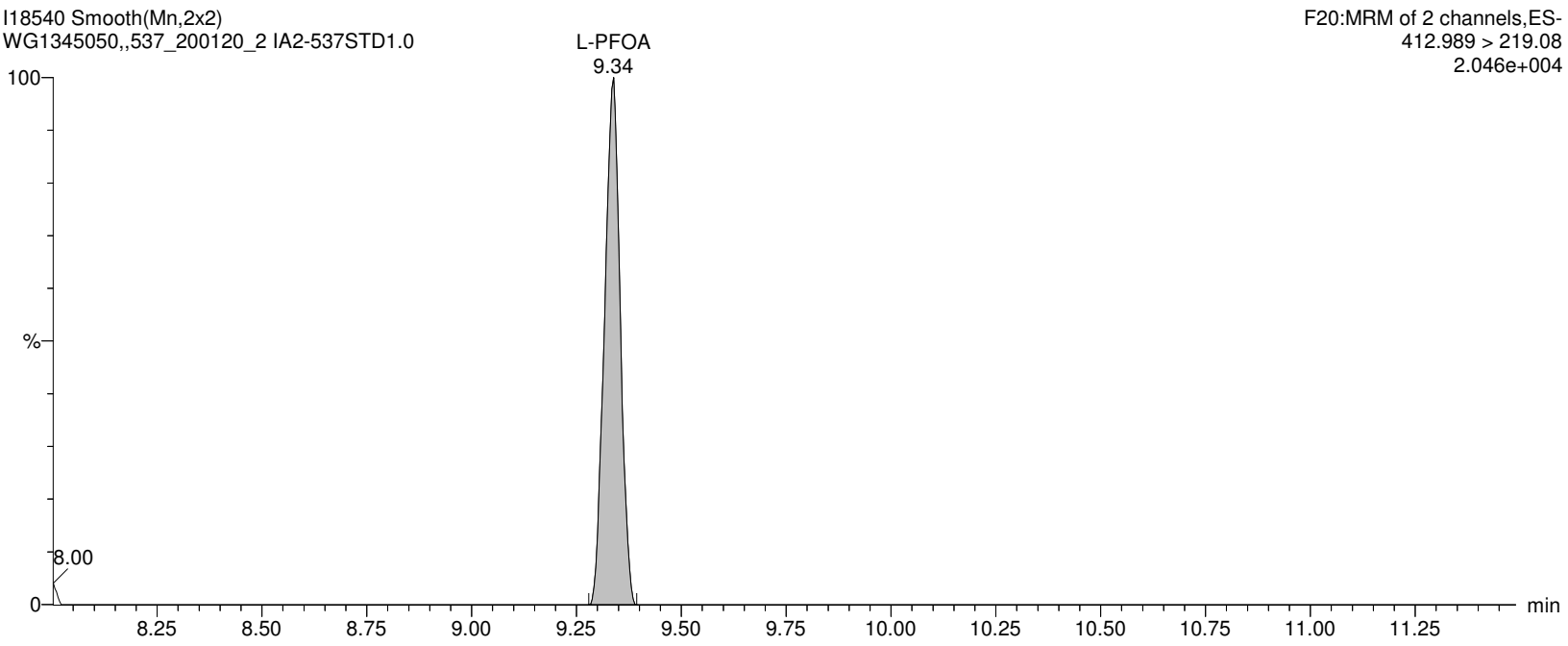
**PFOA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
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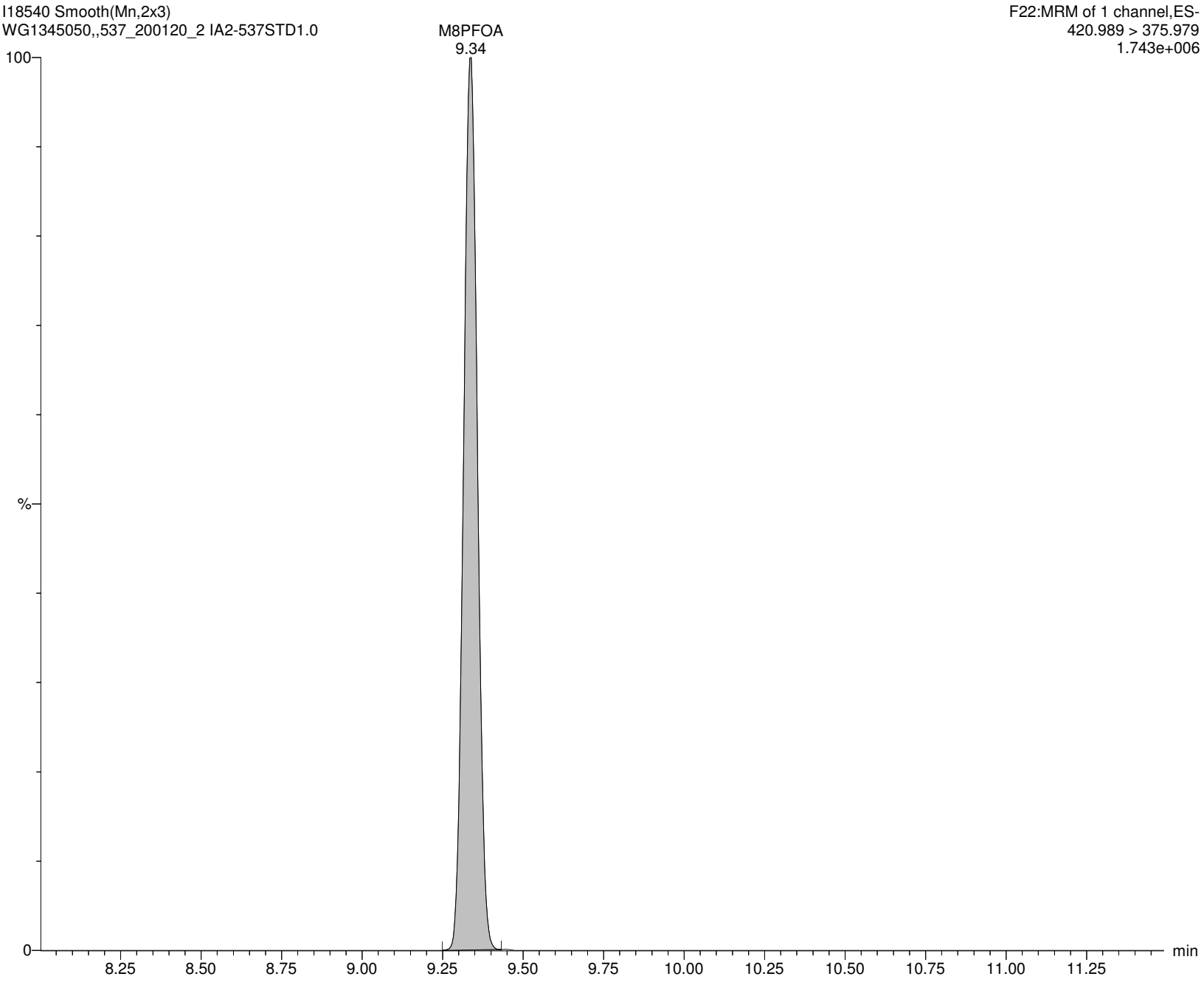



all concentration units in (ng/mL)

Alpha Analytical Inc.
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Last Altered: Friday, February 28, 2020 09:12:40 Eastern Standard Time
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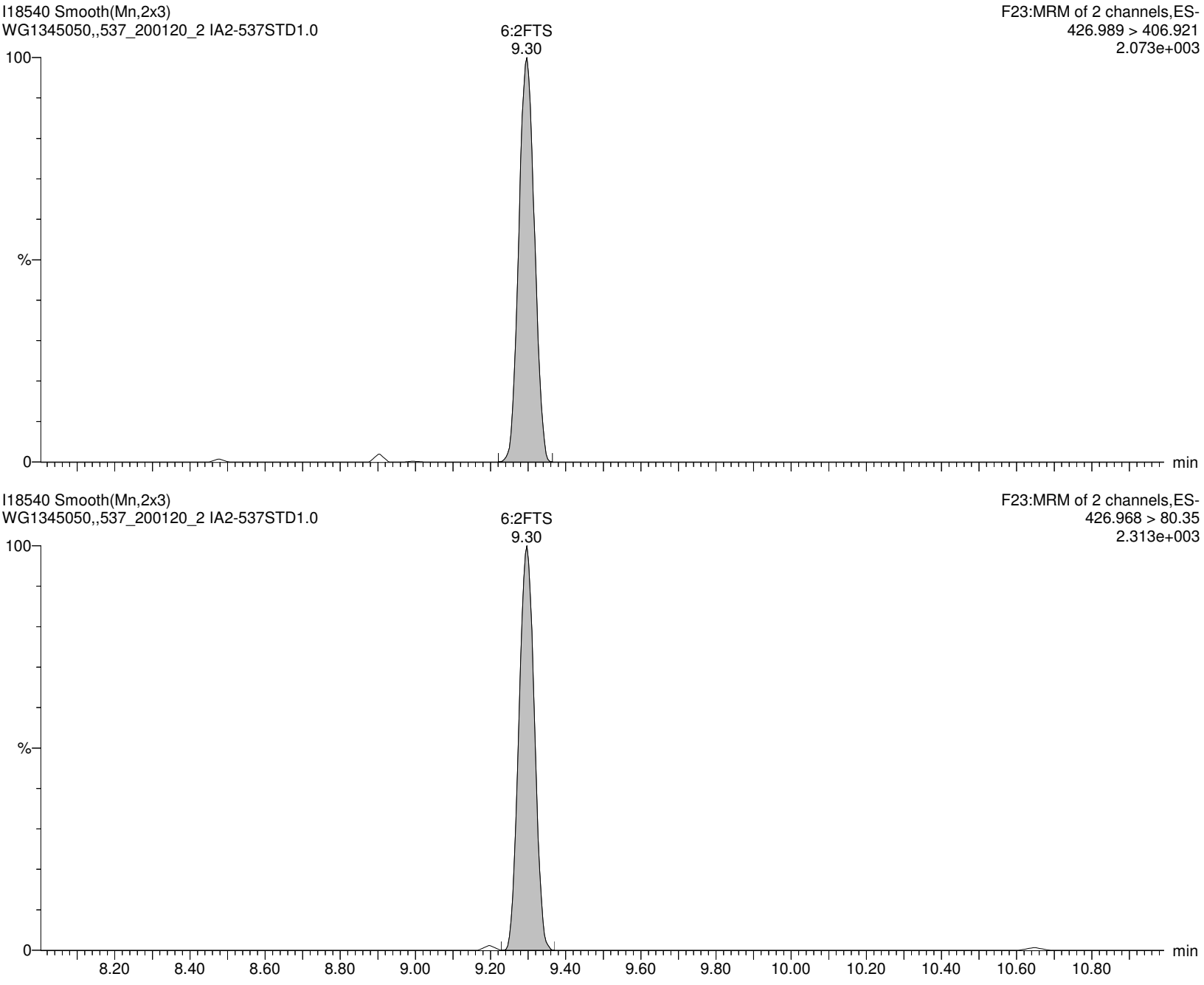



all concentration units in (ng/mL)

Alpha Analytical Inc.
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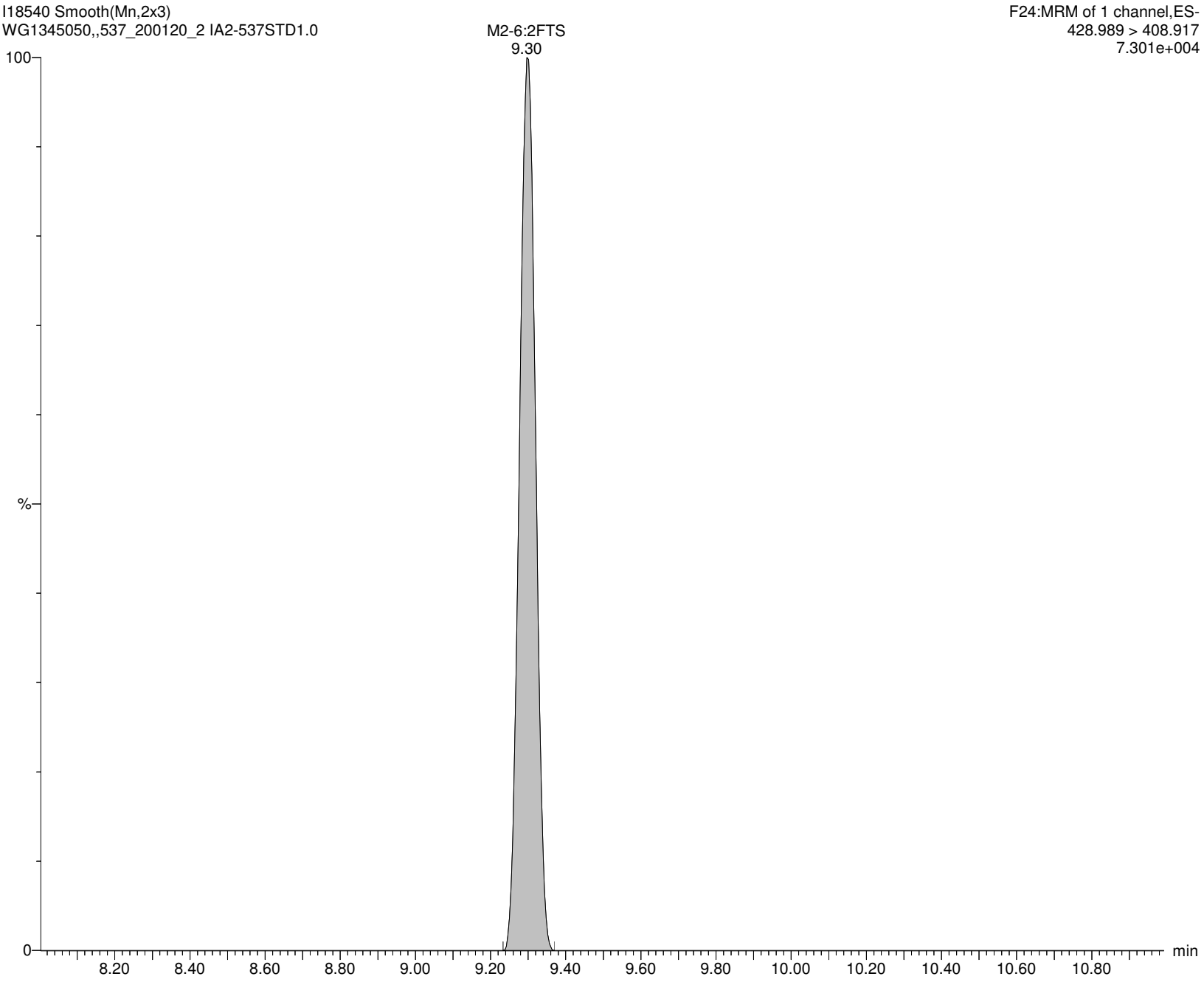
**M2-6:2FTS**





all concentration units in (ng/mL)

Alpha Analytical Inc.
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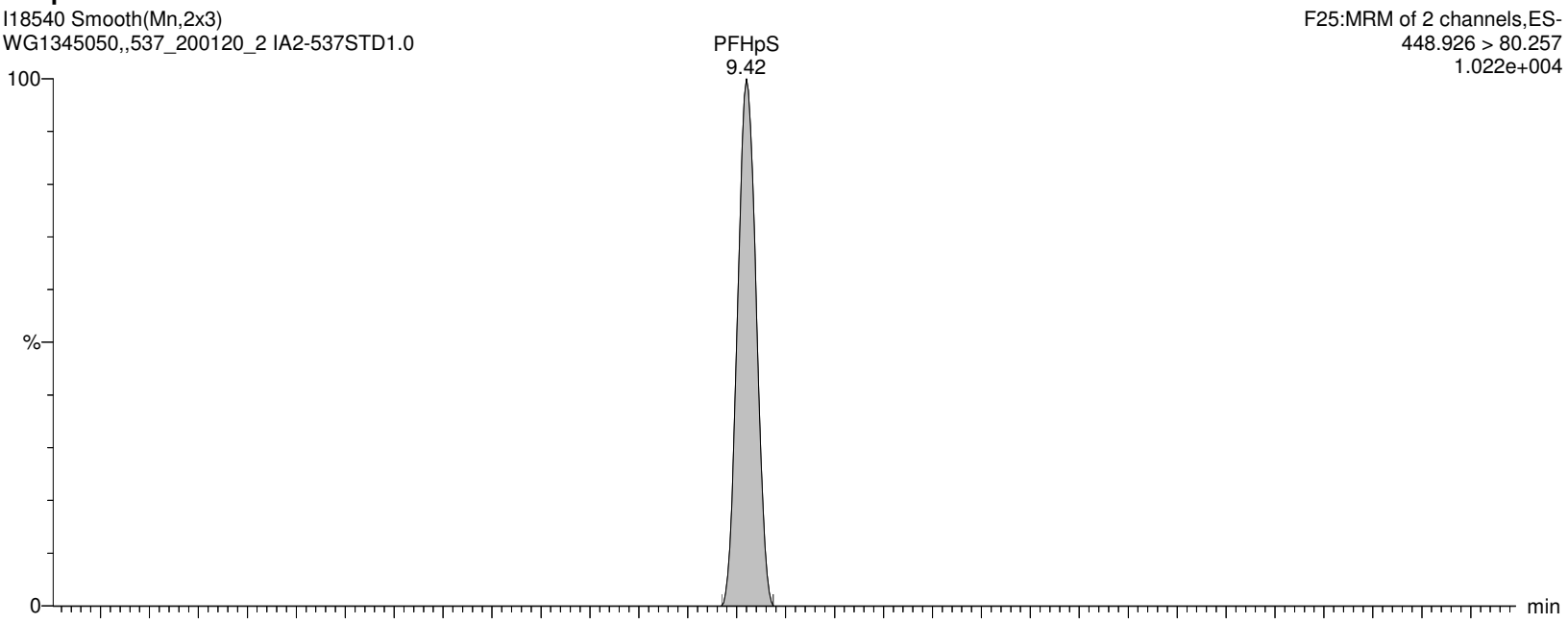
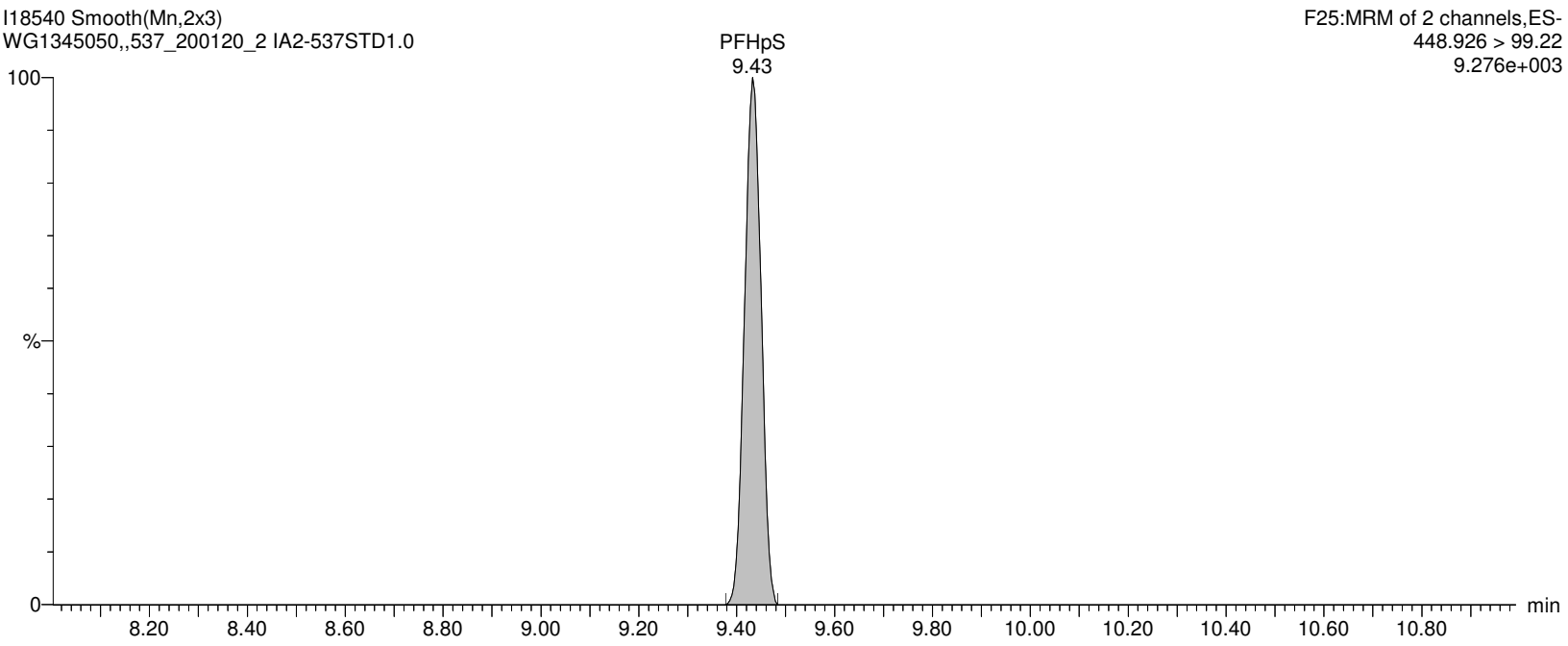
**PFHpS**





all concentration units in (ng/mL)

Alpha Analytical Inc.
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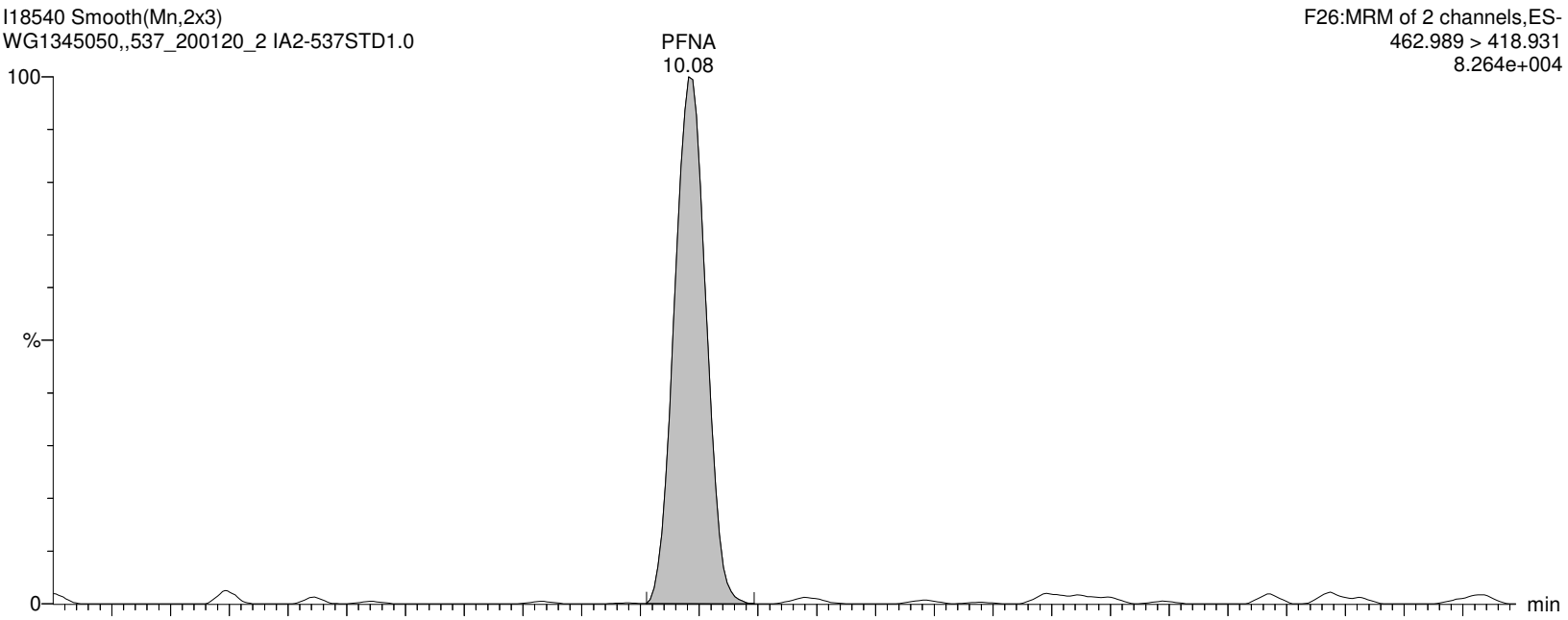


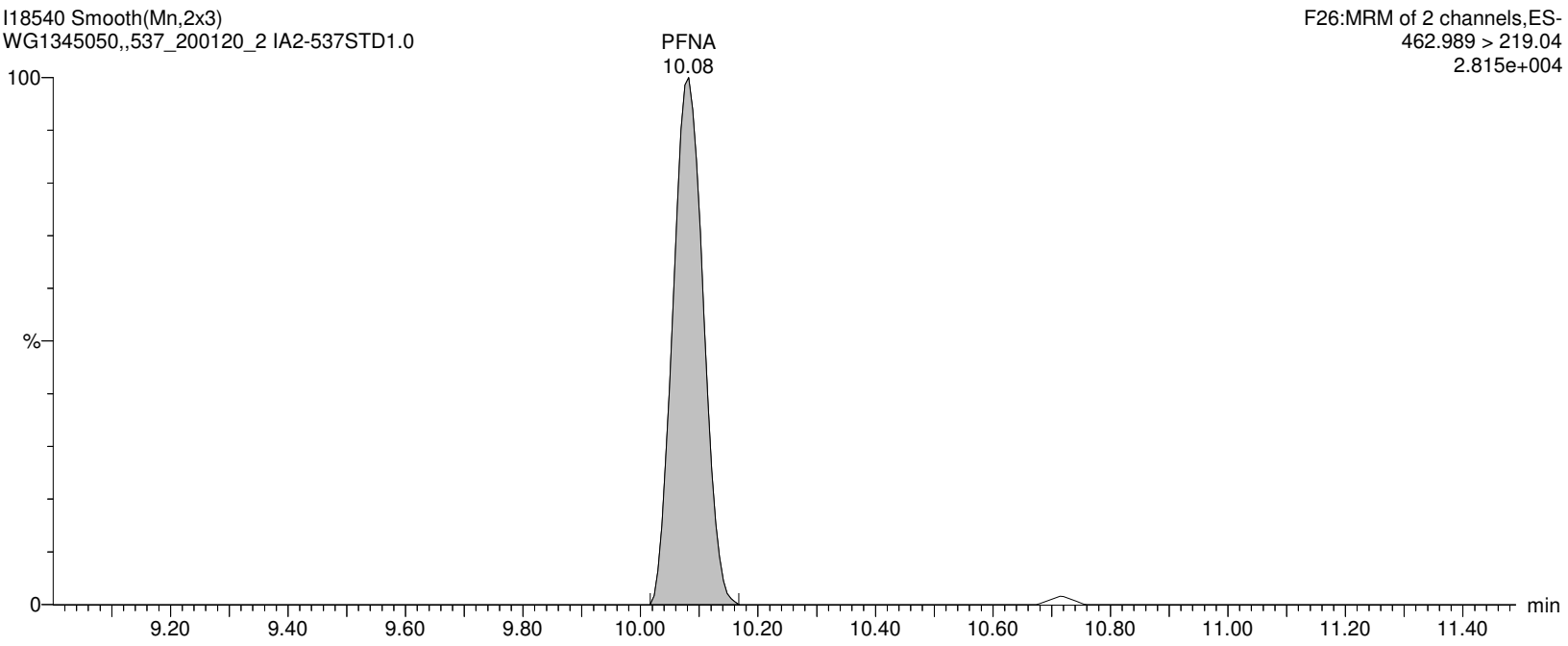



all concentration units in (ng/mL)

Alpha Analytical Inc.
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**Description: WG1345050,,537_200120_2**
**User: LCMS01:JW**
**Vial: 1:B,6**
**Instrument: XEVO-TQSmicro#QEA0276**
**Inlet Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\LCMS_537_ISO_MeOH**
**Tune Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\190709_TUNE.IPR**
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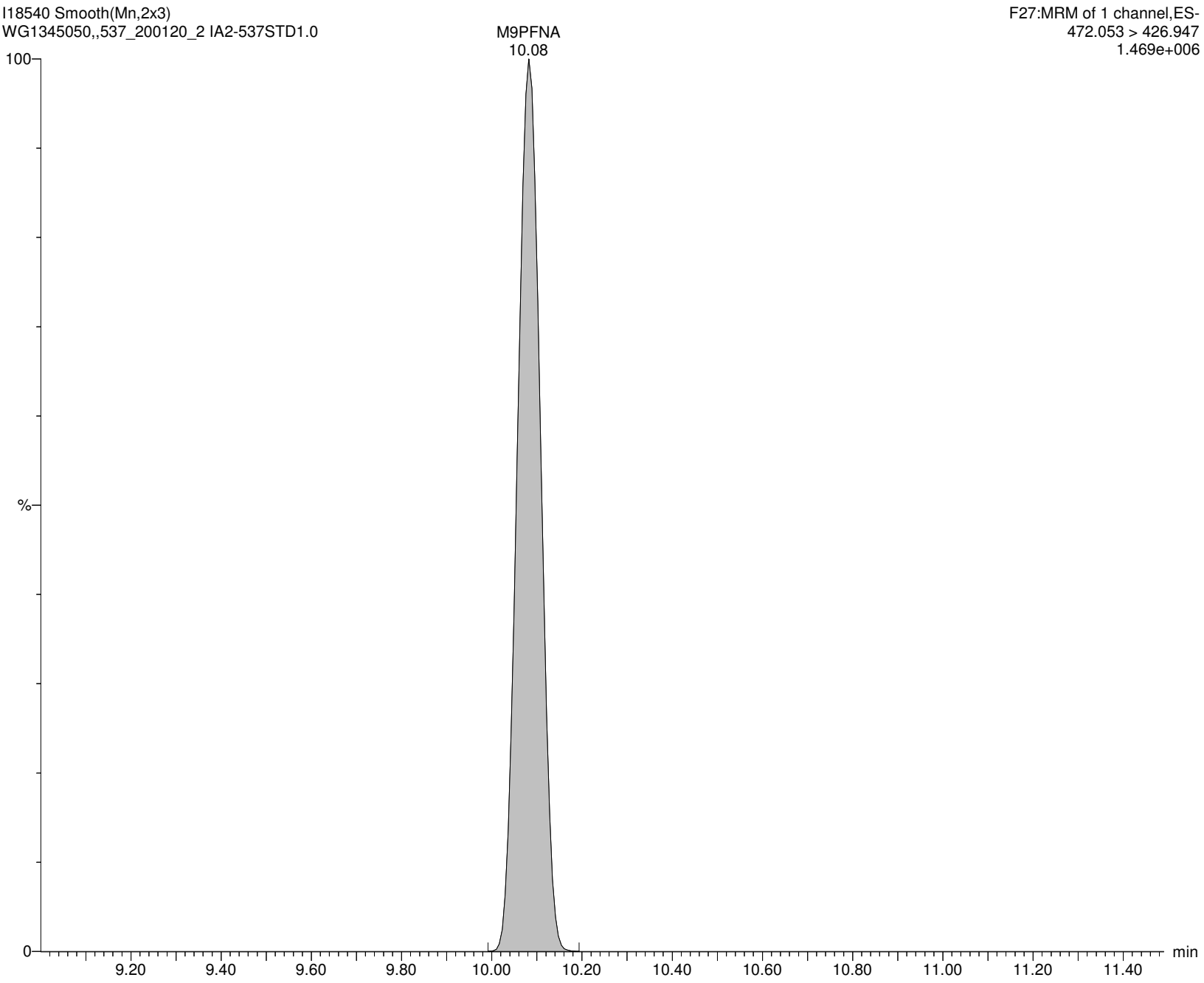



all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICAL_A.qld
Last Altered: Friday, February 28, 2020 09:12:40 Eastern Standard Time
Printed: Friday, February 28, 2020 09:28:00 Eastern Standard Time

**Name: I18540**
**ID: IA2-537STD1.0**
**Date: 27-Feb-2020**
**Time: 17:04:20**
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**Vial: 1:B,6**
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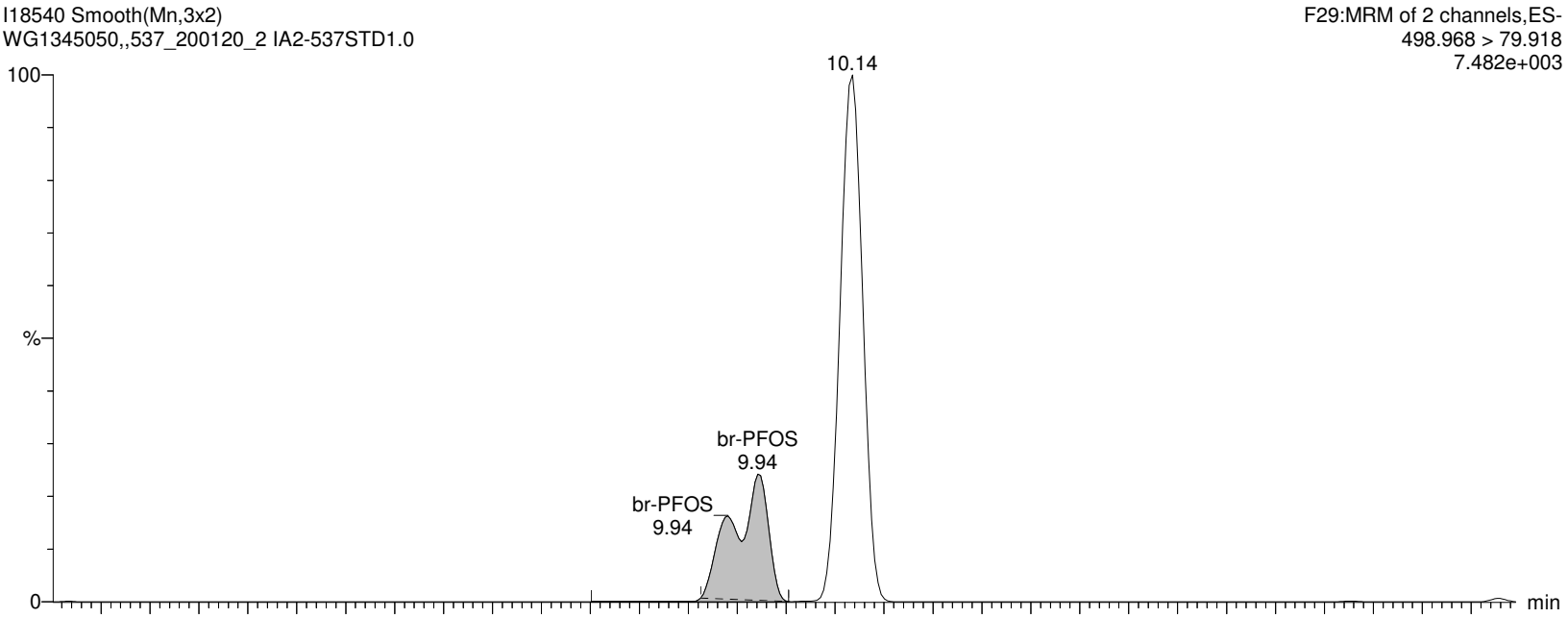


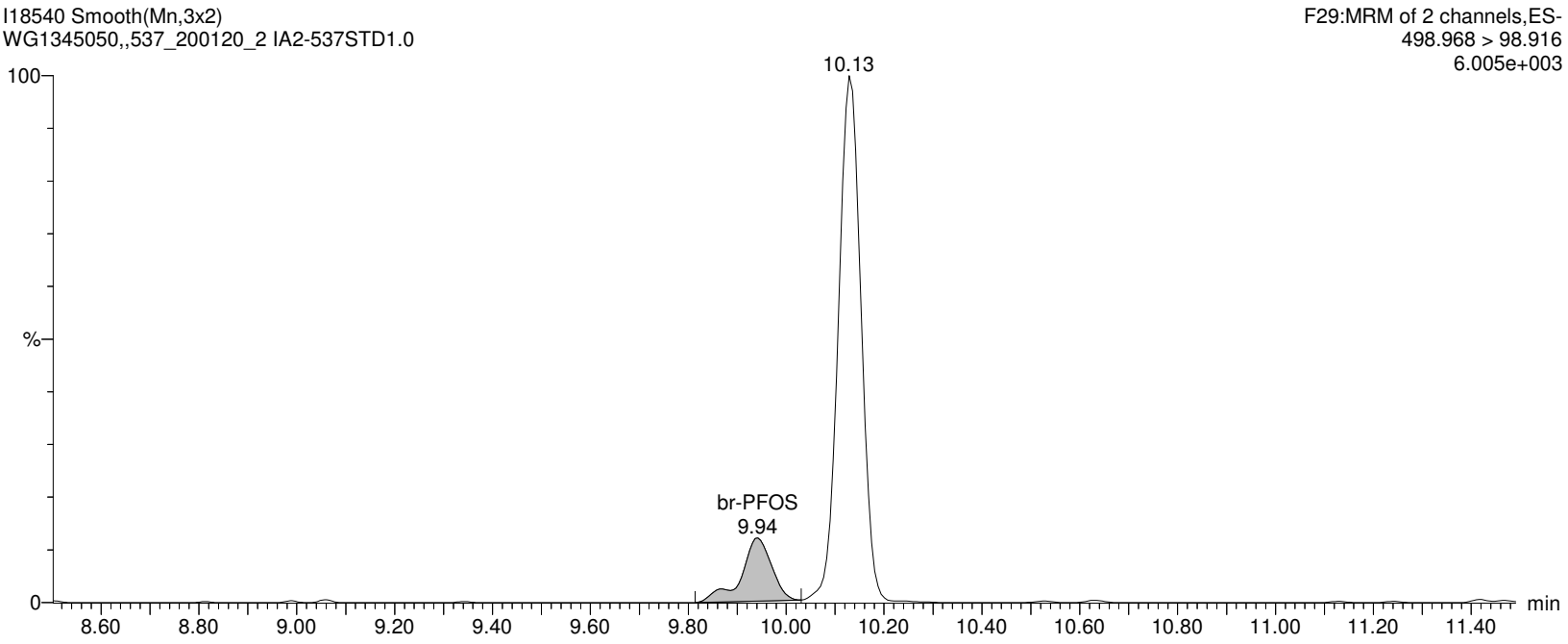



all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICAL_A.qld
Last Altered: Friday, February 28, 2020 09:12:40 Eastern Standard Time
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**Vial: 1:B,6**
**Instrument: XEVO-TQSmicro#QEA0276**
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**Tune Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\190709_TUNE.IPR**
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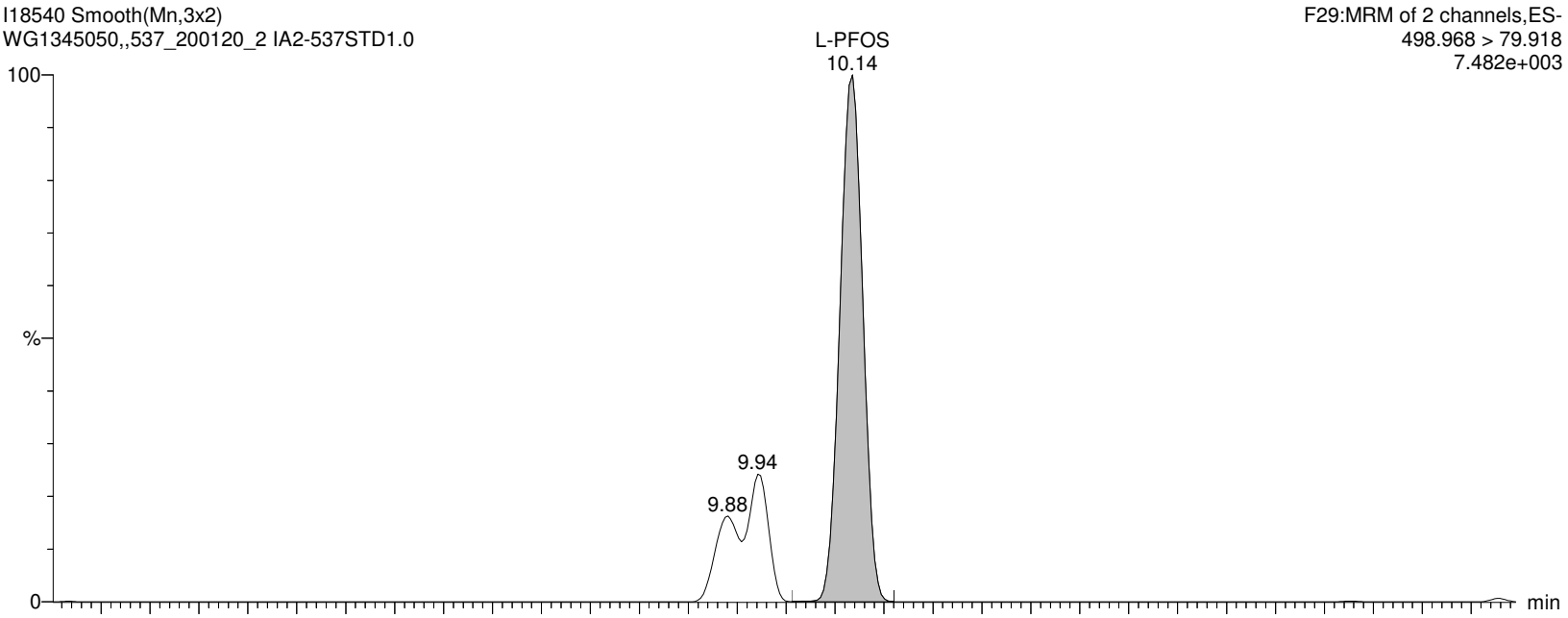


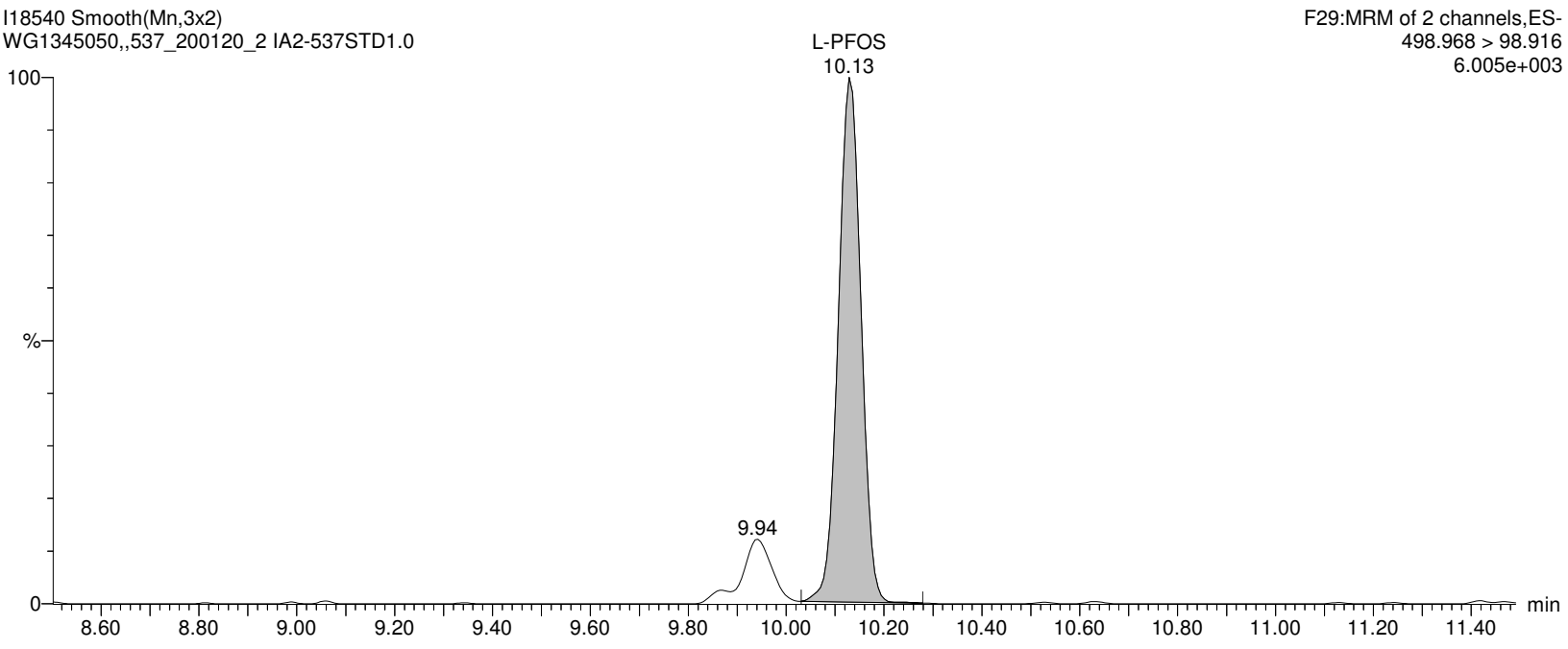



all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICAL_A.qld
Last Altered: Friday, February 28, 2020 09:12:40 Eastern Standard Time
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**Vial: 1:B,6**
**Instrument: XEVO-TQSmicro#QEA0276**
**Inlet Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\LCMS_537_ISO_MeOH**
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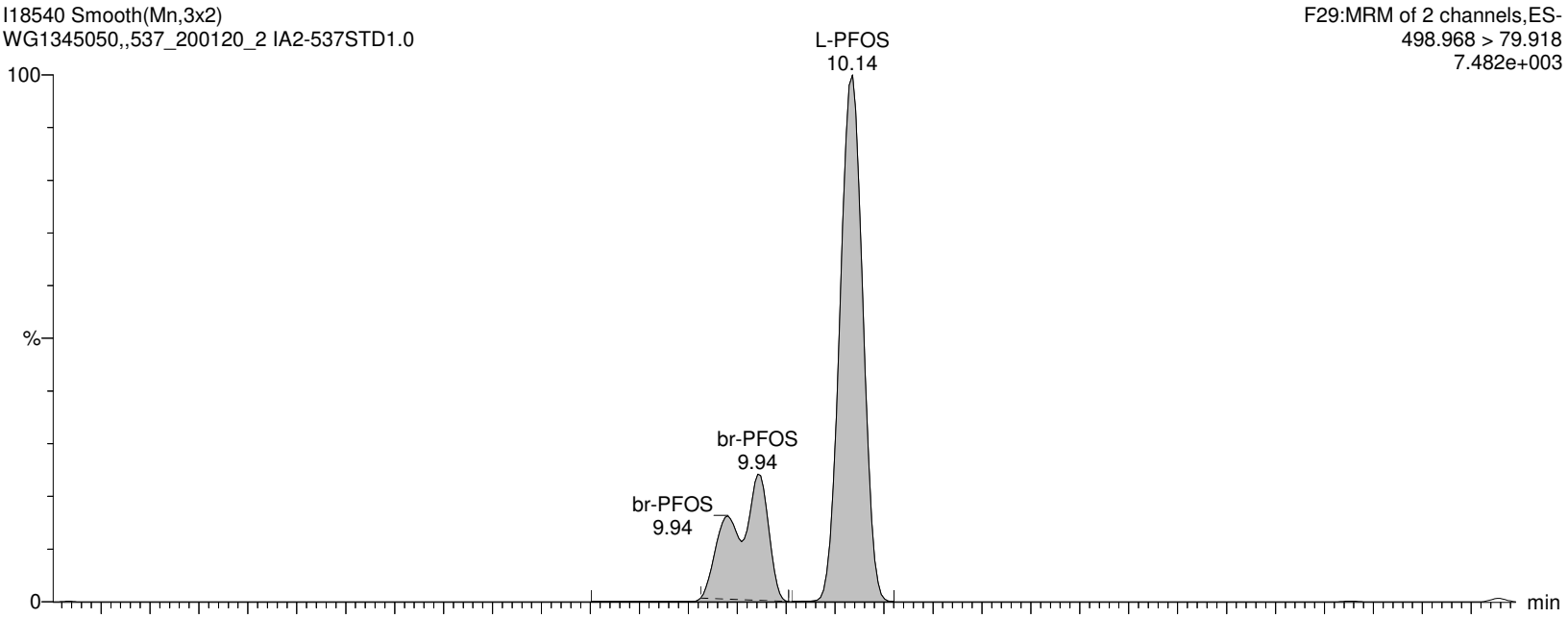
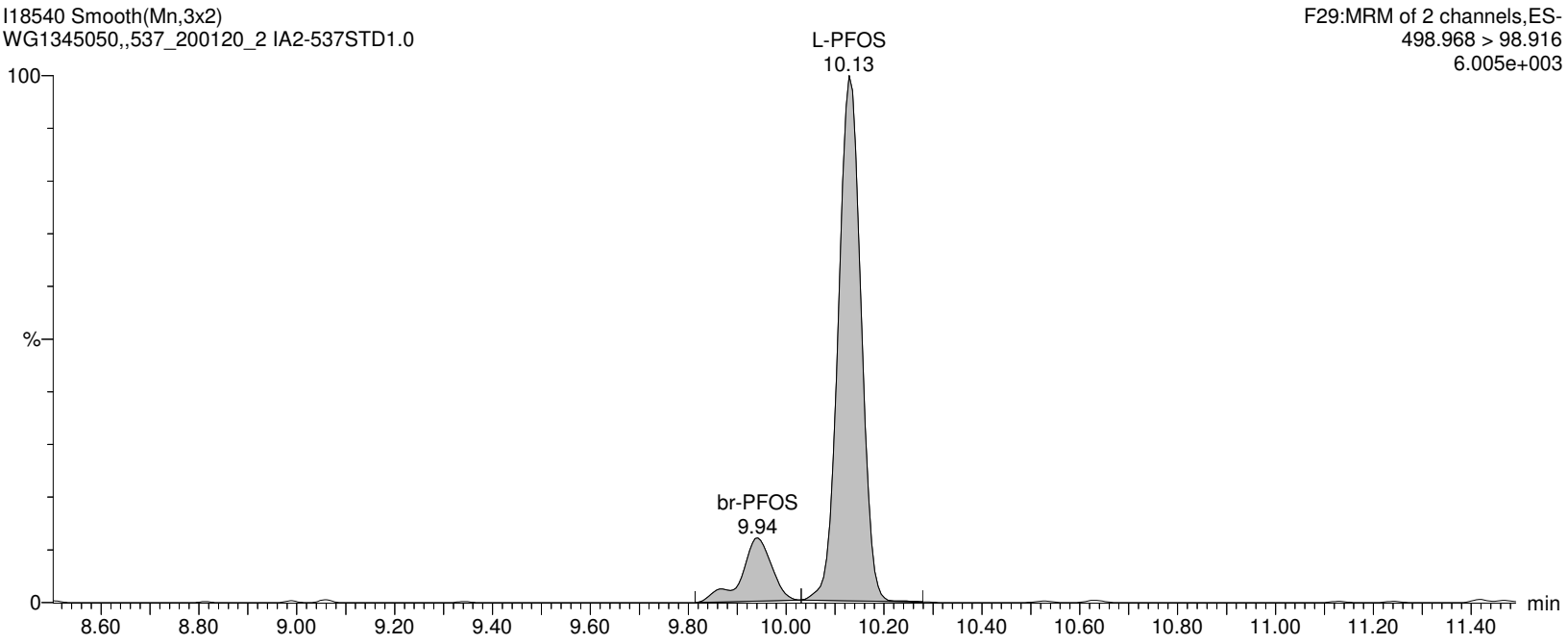
**PFOS**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICAL_A.qld
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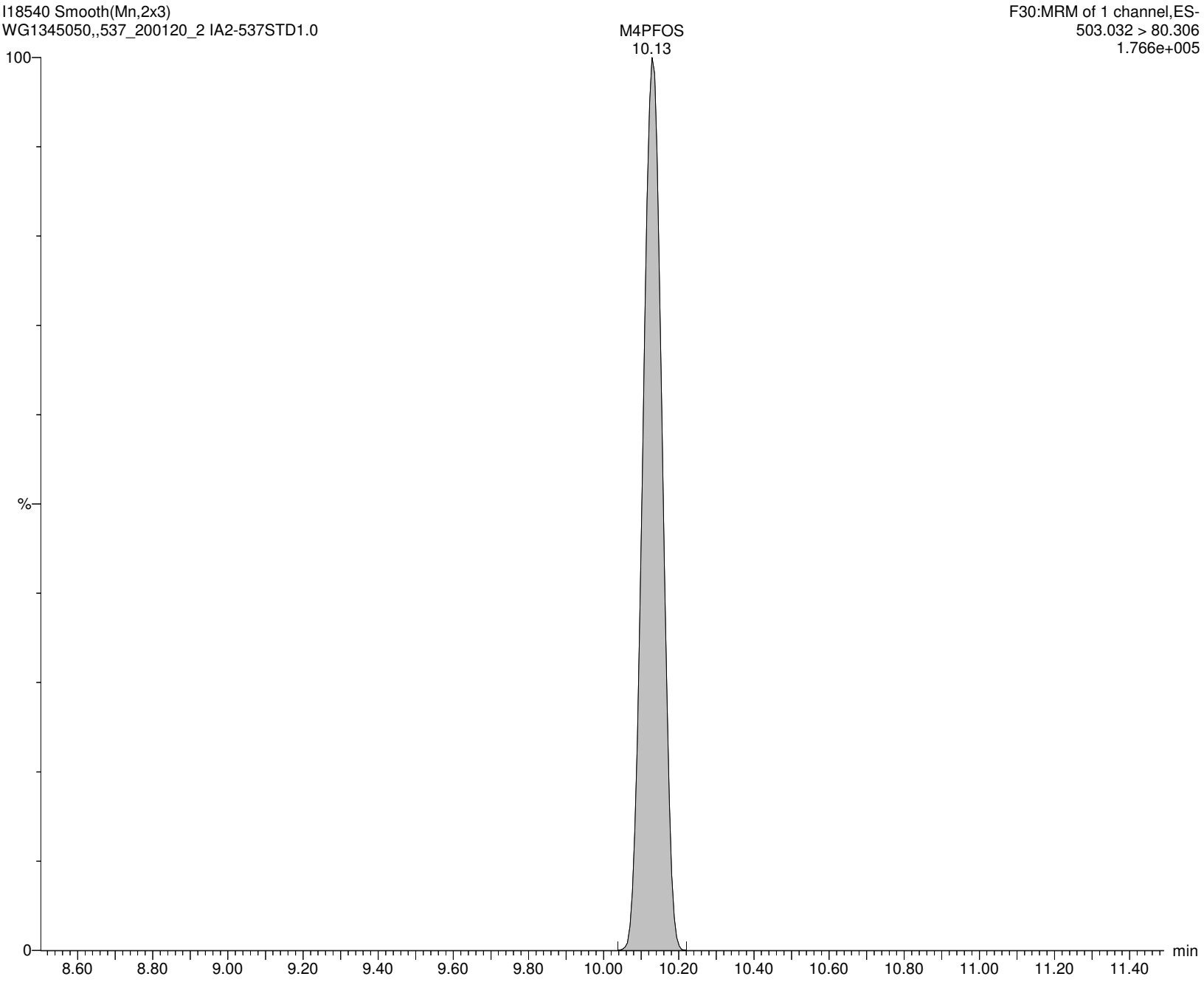
**M4PFOS**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICAL_A.qld
Last Altered: Friday, February 28, 2020 09:12:40 Eastern Standard Time
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**Vial: 1:B,6**
**Instrument: XEVO-TQSmicro#QEA0276**
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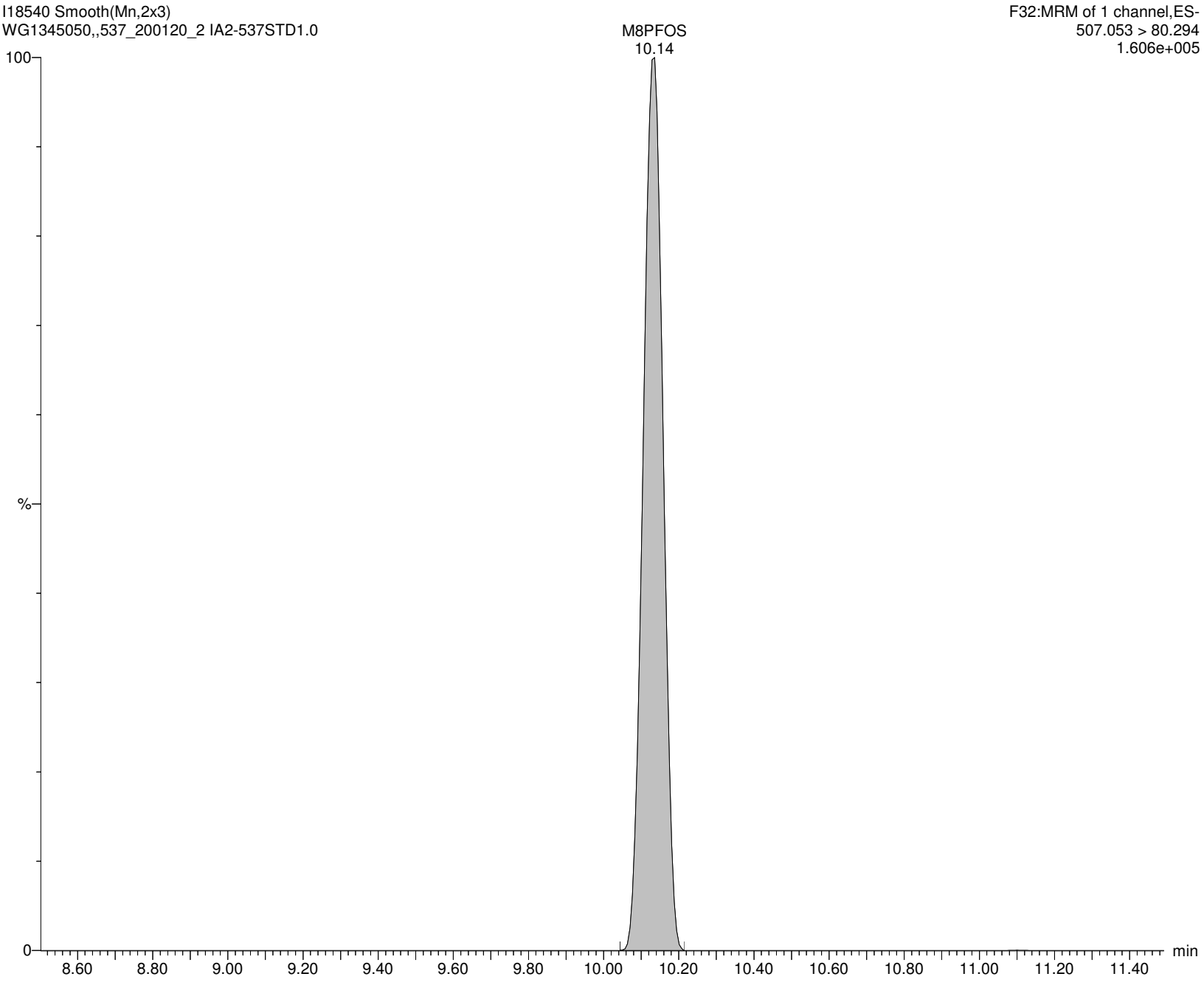



all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICAL_A.qld
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**Vial: 1:B,6**
**Instrument: XEVO-TQSmicro#QEA0276**
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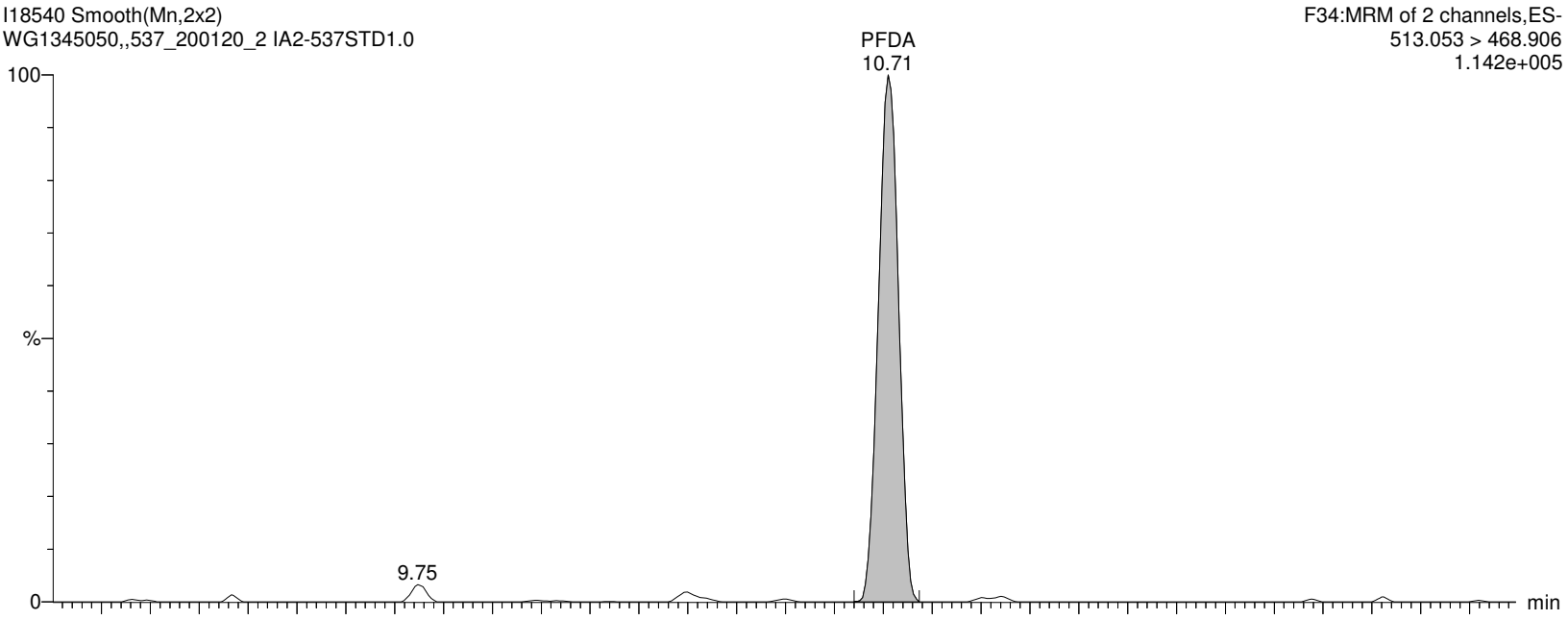
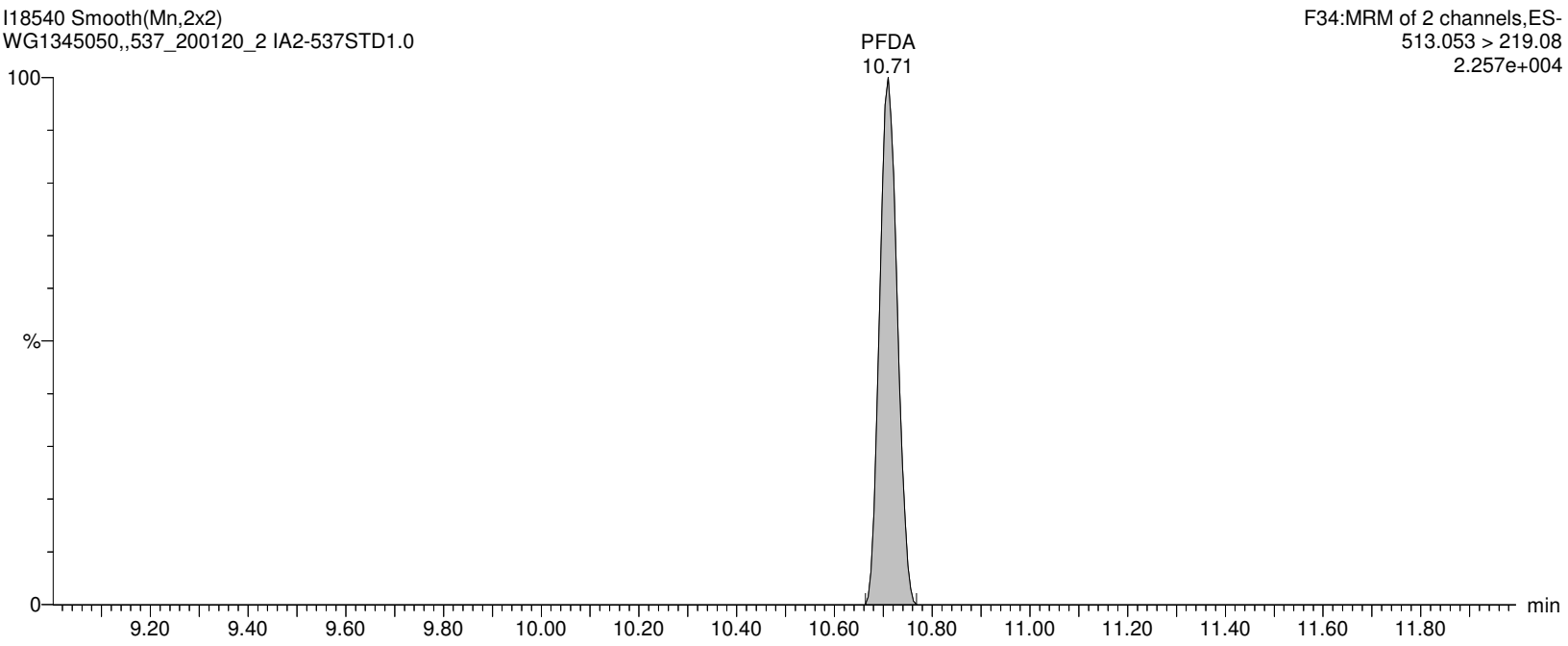
**PFDA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICAL_A.qld
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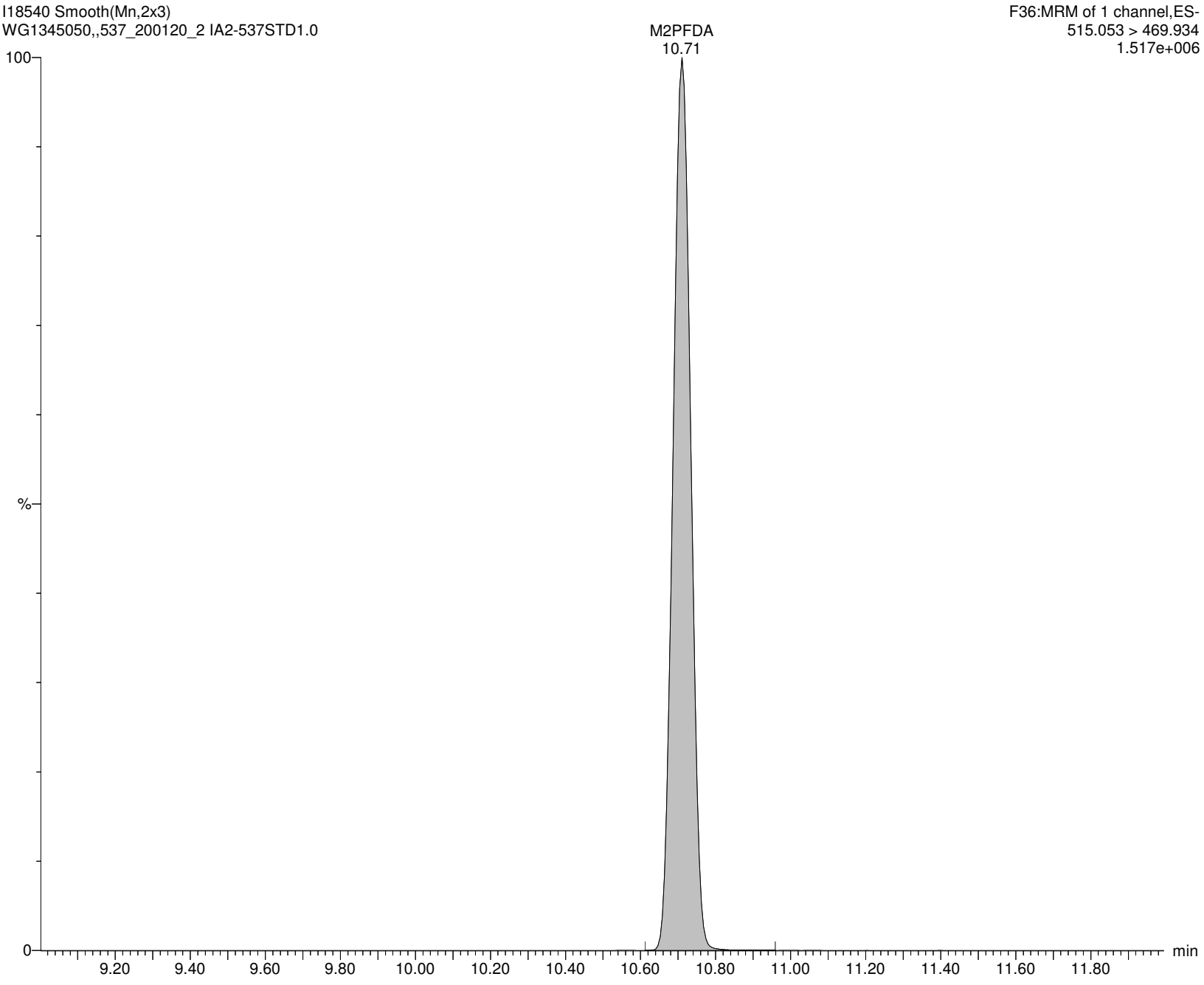
**M2PFDA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICAL_A.qld
Last Altered: Friday, February 28, 2020 09:12:40 Eastern Standard Time
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**Vial: 1:B,6**
**Instrument: XEVO-TQSmicro#QEA0276**
**Inlet Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\LCMS_537_ISO_MeOH**
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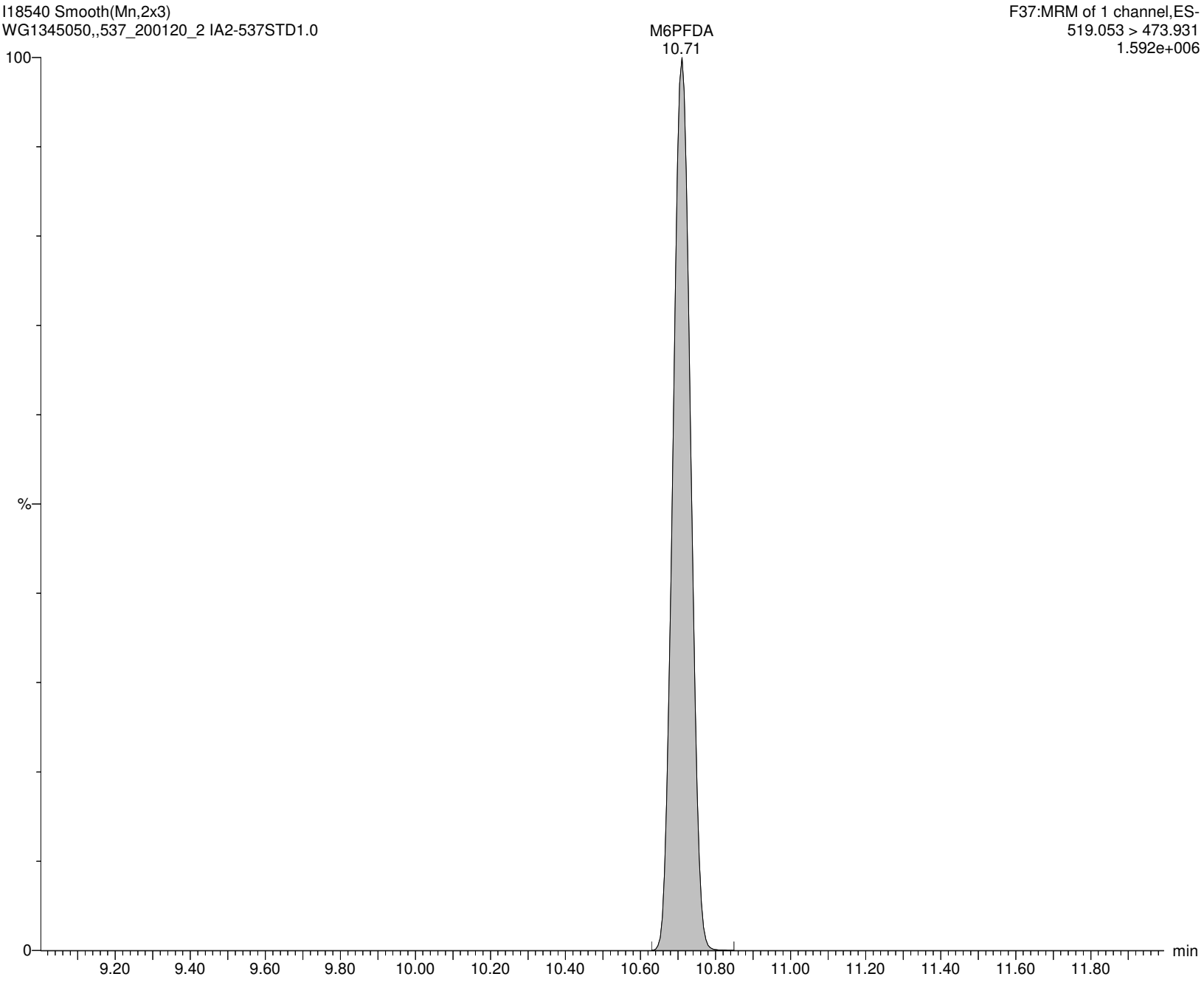



all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICAL_A.qld
Last Altered: Friday, February 28, 2020 09:12:40 Eastern Standard Time
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**Name: I18540**
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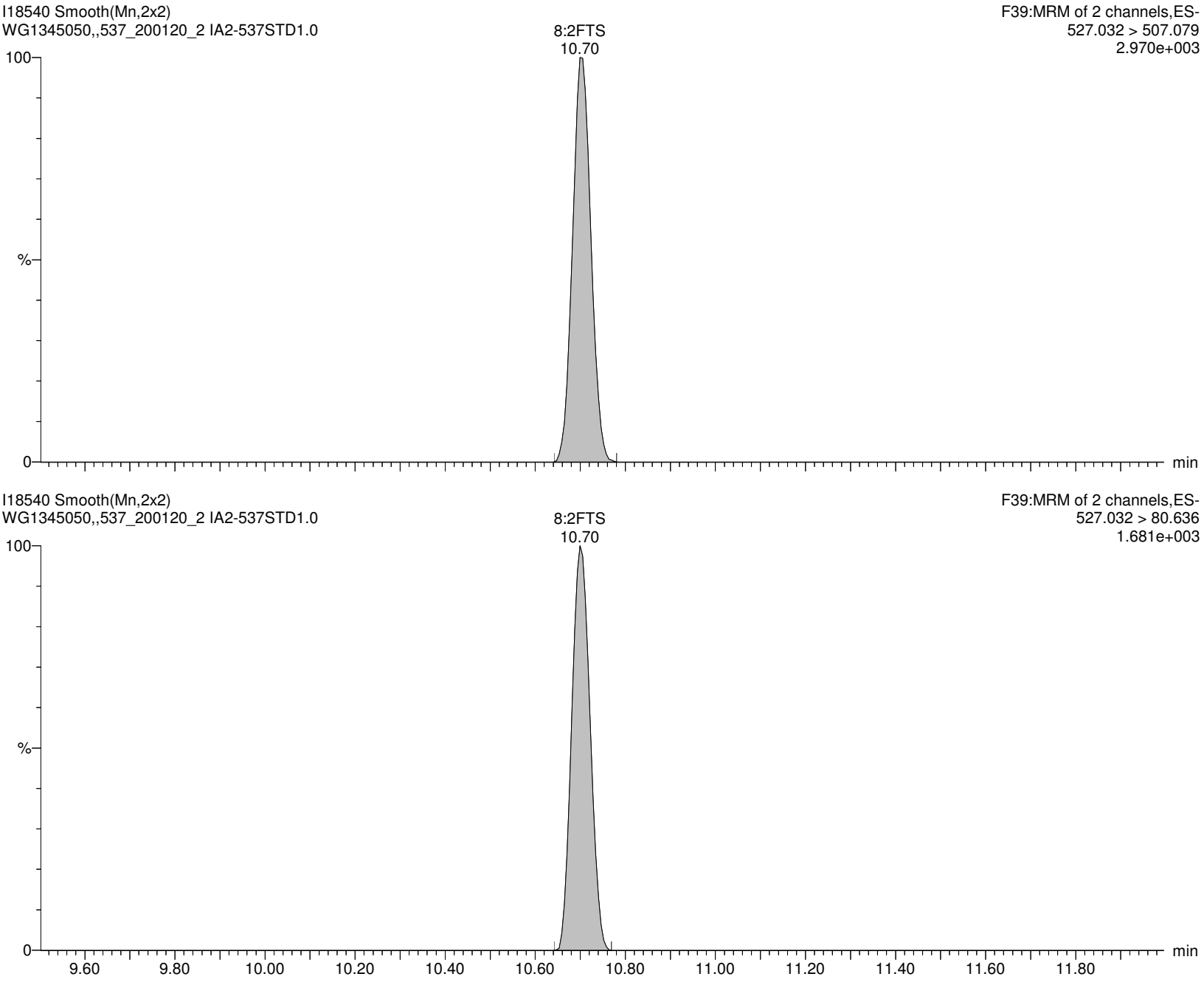



all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICAL_A.qld
Last Altered: Friday, February 28, 2020 09:12:40 Eastern Standard Time
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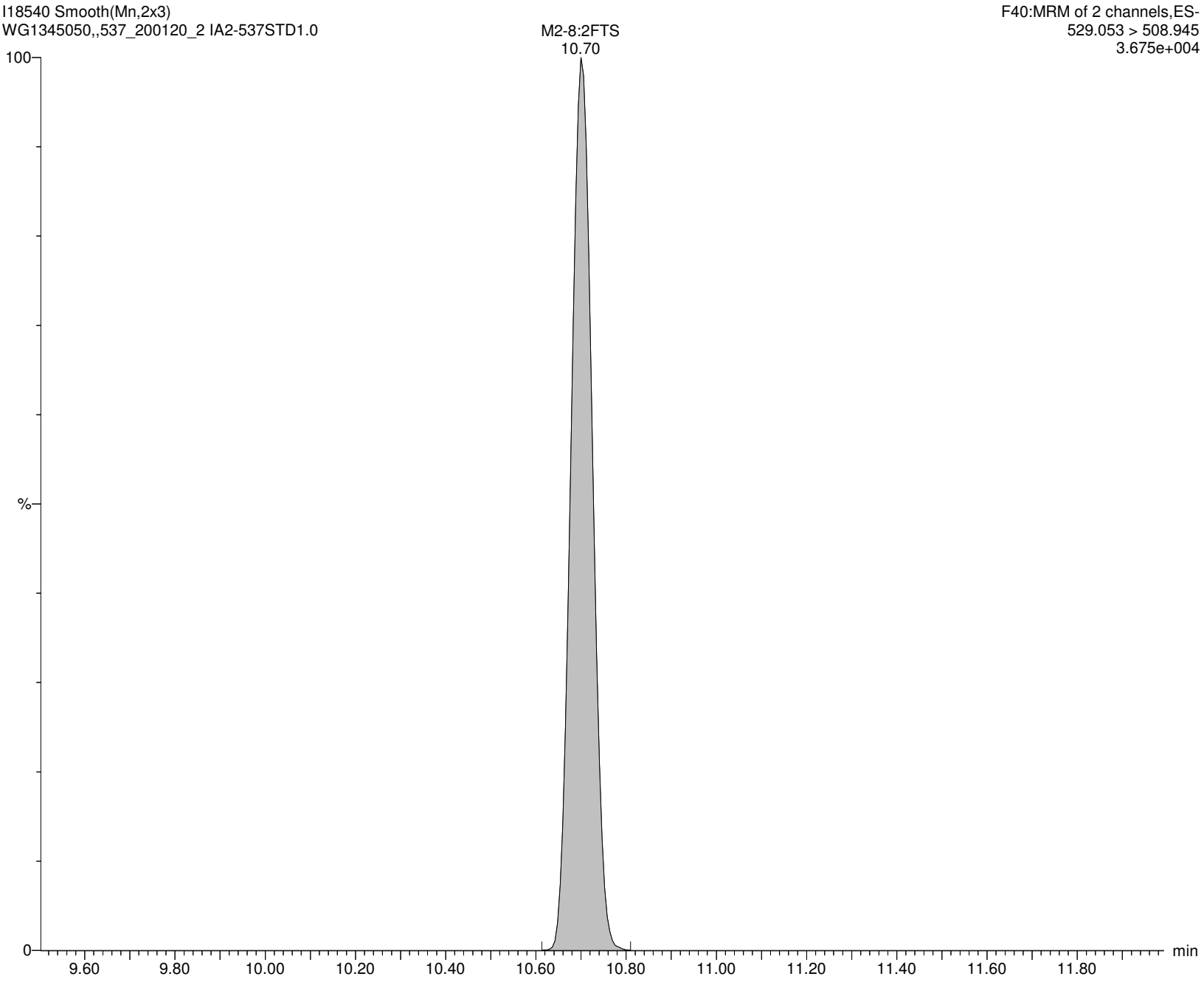
**M2-8:2FTS**





all concentration units in (ng/mL)

Alpha Analytical Inc.
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Last Altered: Friday, February 28, 2020 09:12:40 Eastern Standard Time
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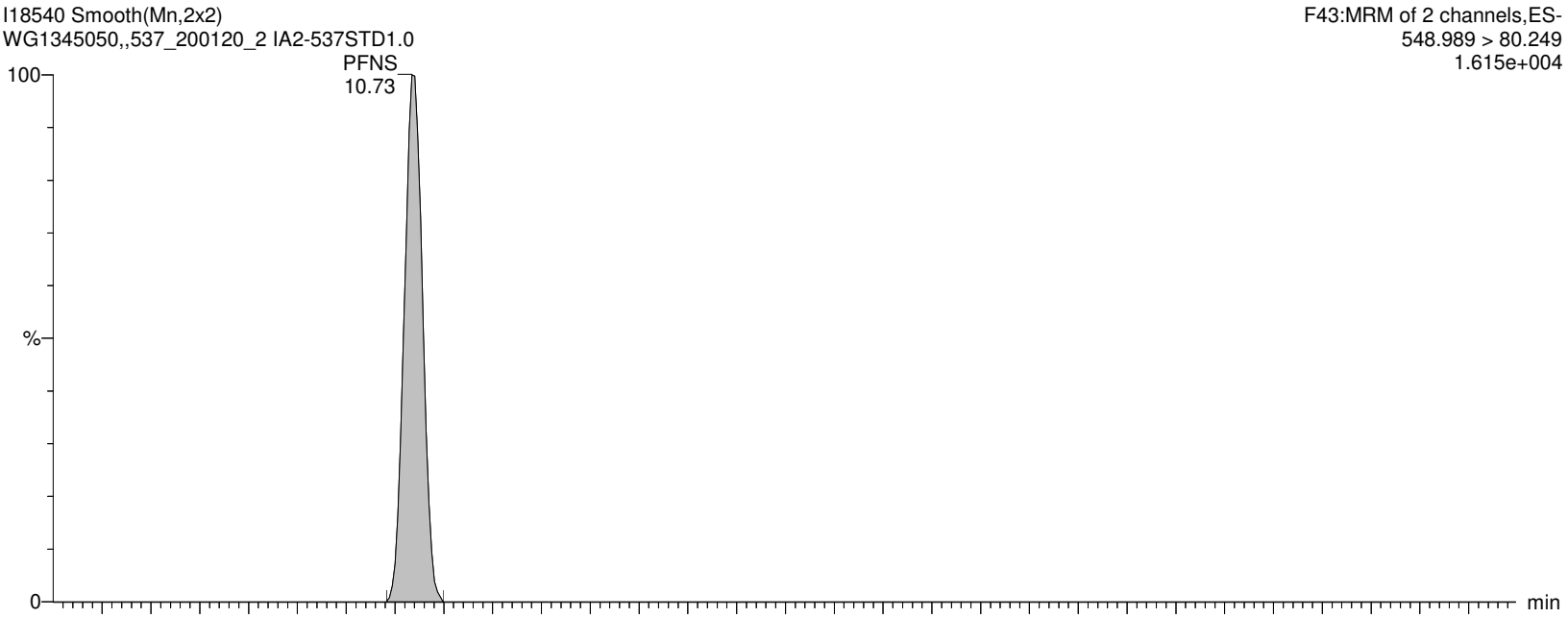
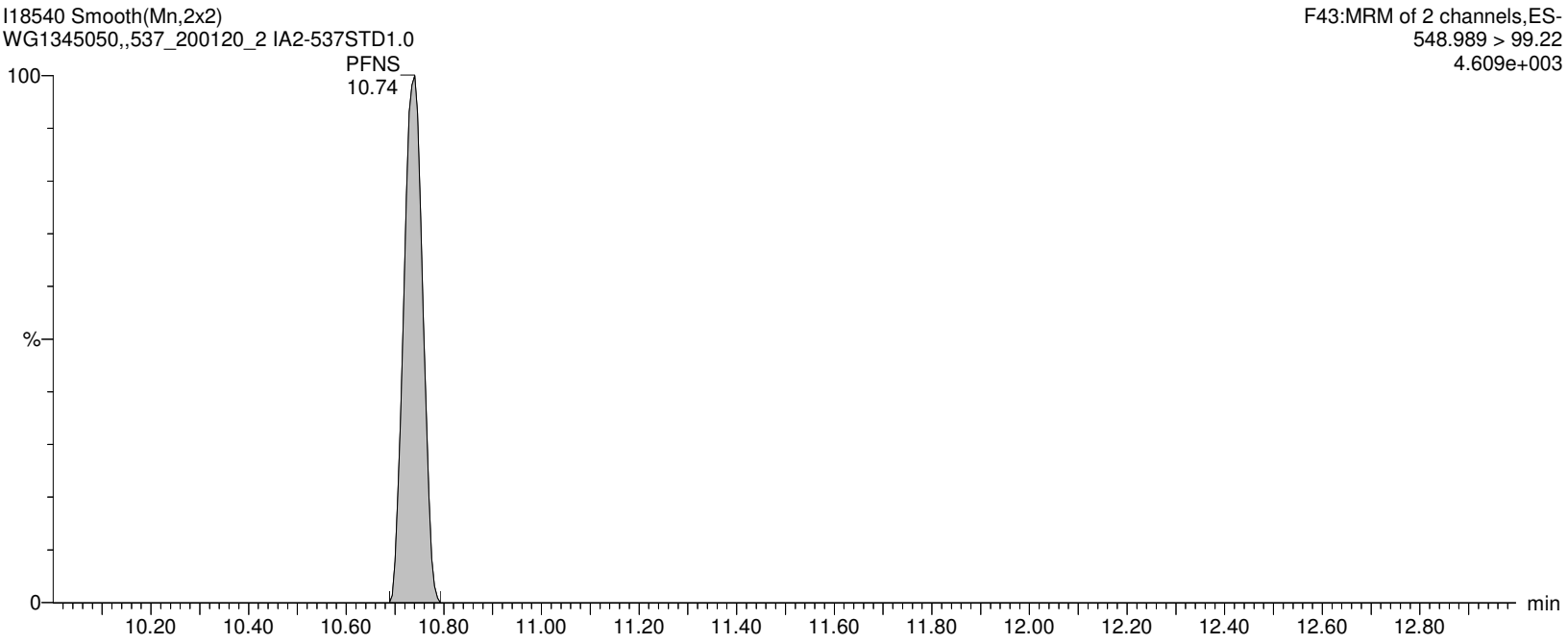
**PFNS**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICAL_A.qld
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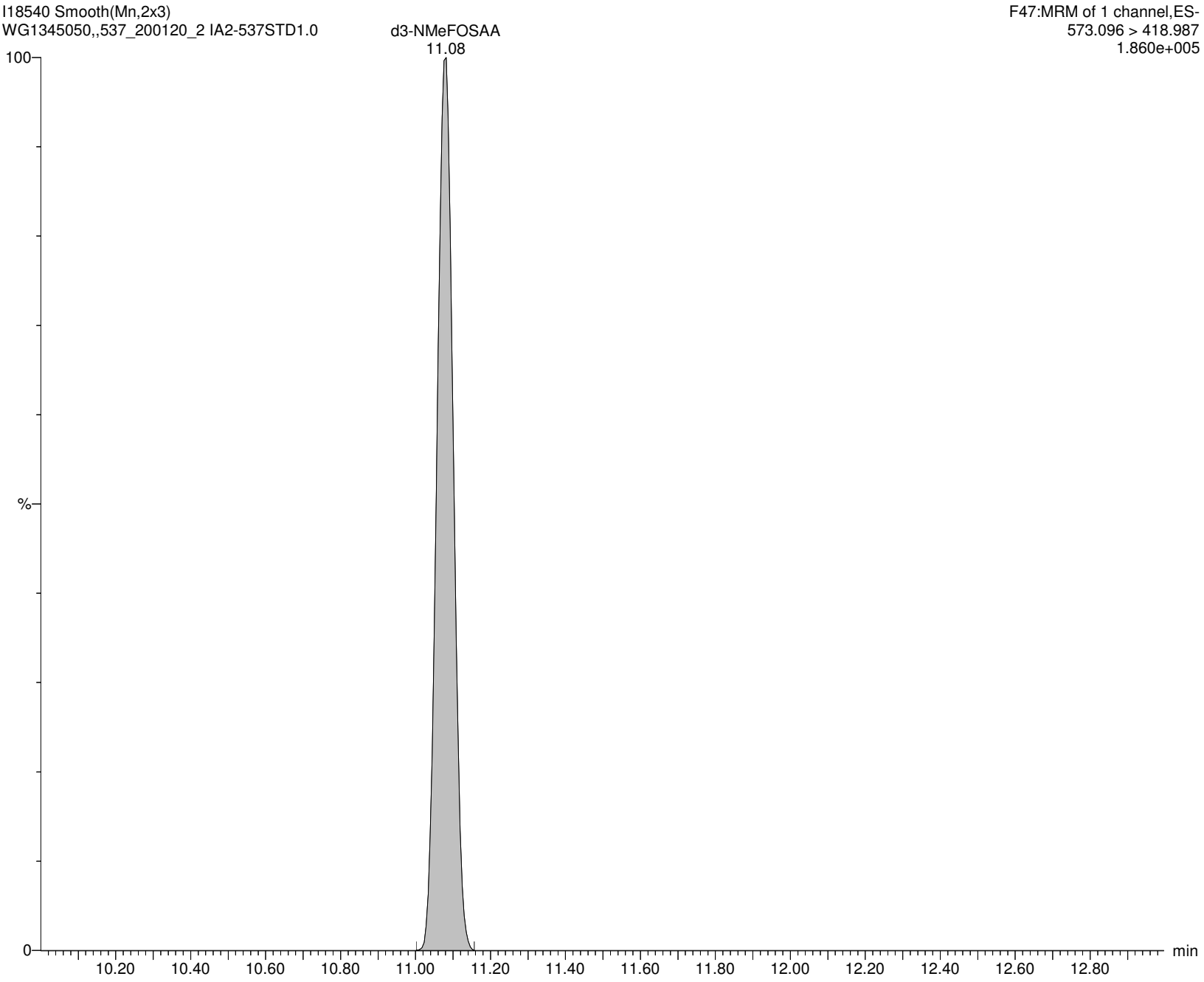



all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICAL_A.qld
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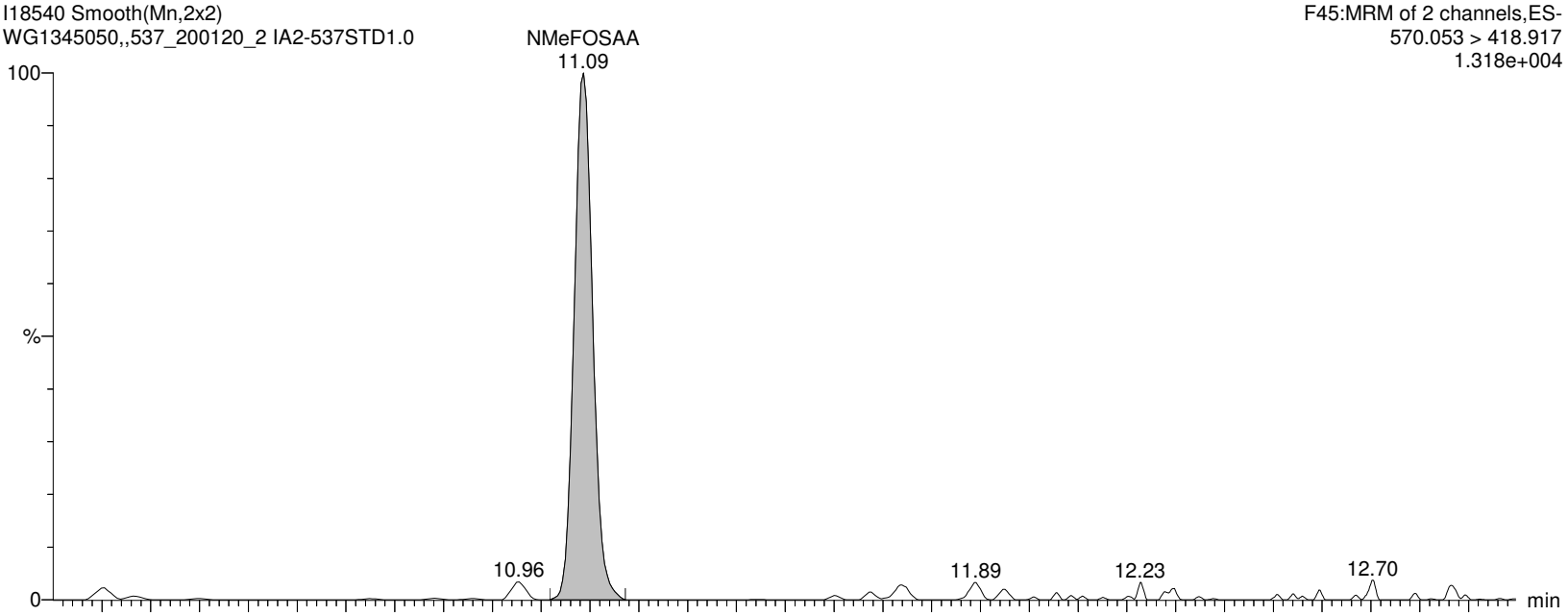
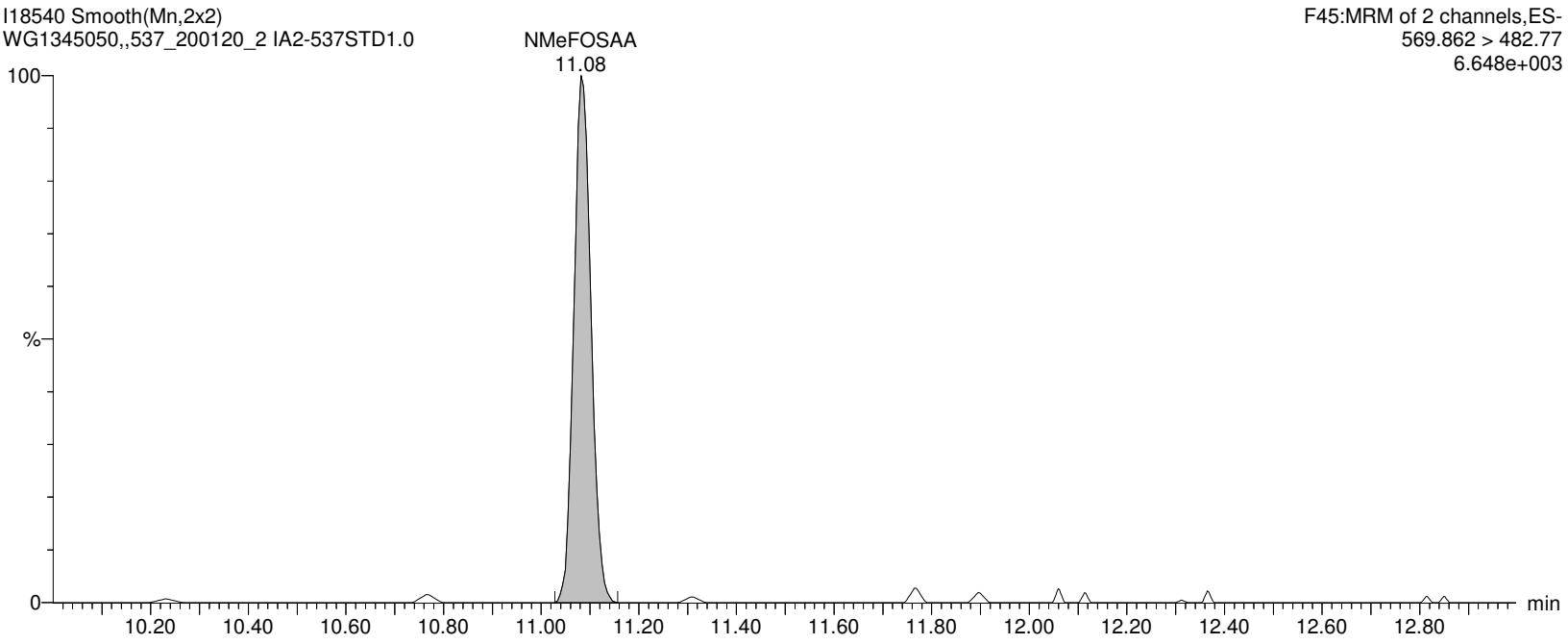
**NMeFOSAA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICAL_A.qld
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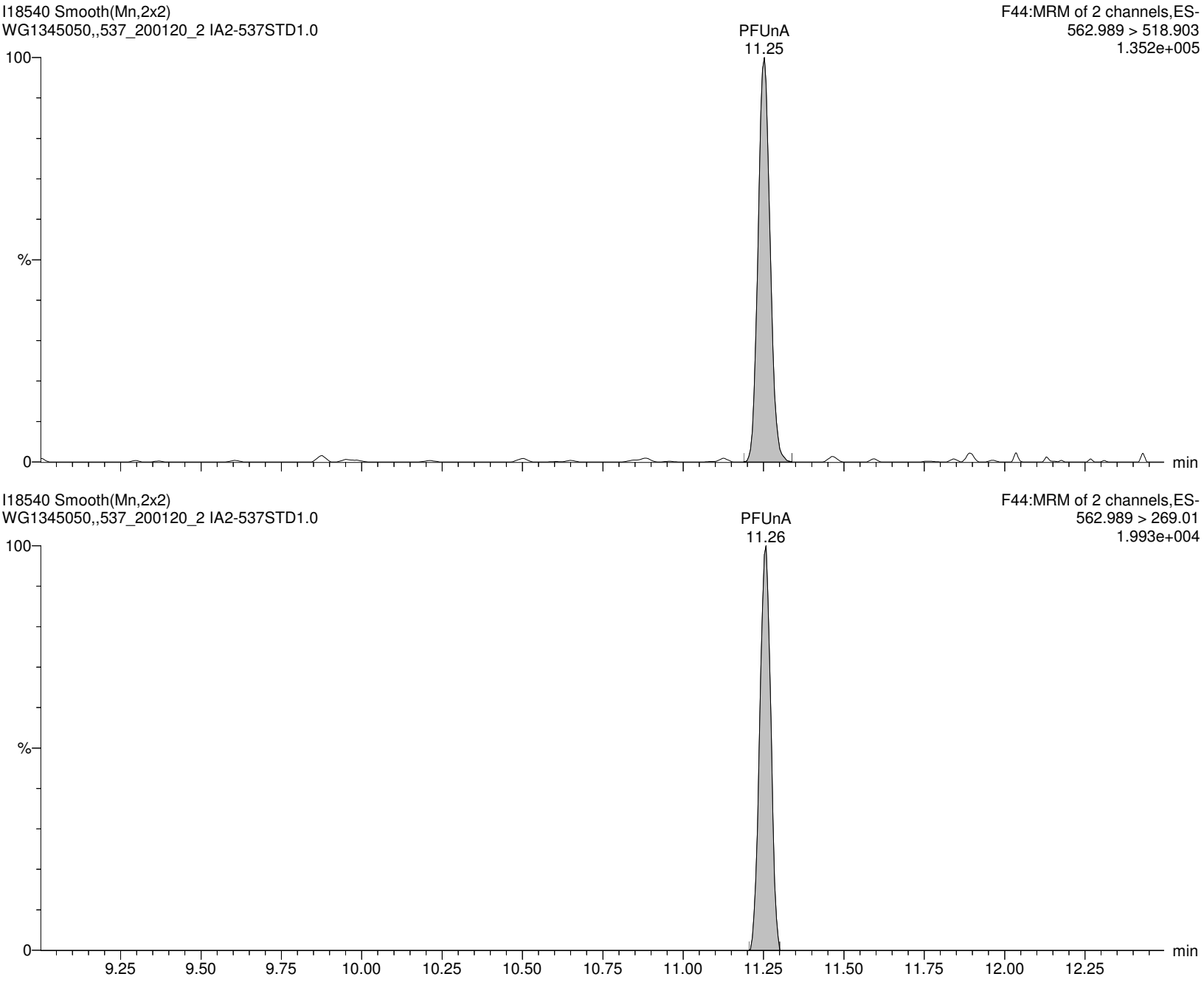



all concentration units in (ng/mL)

Alpha Analytical Inc.
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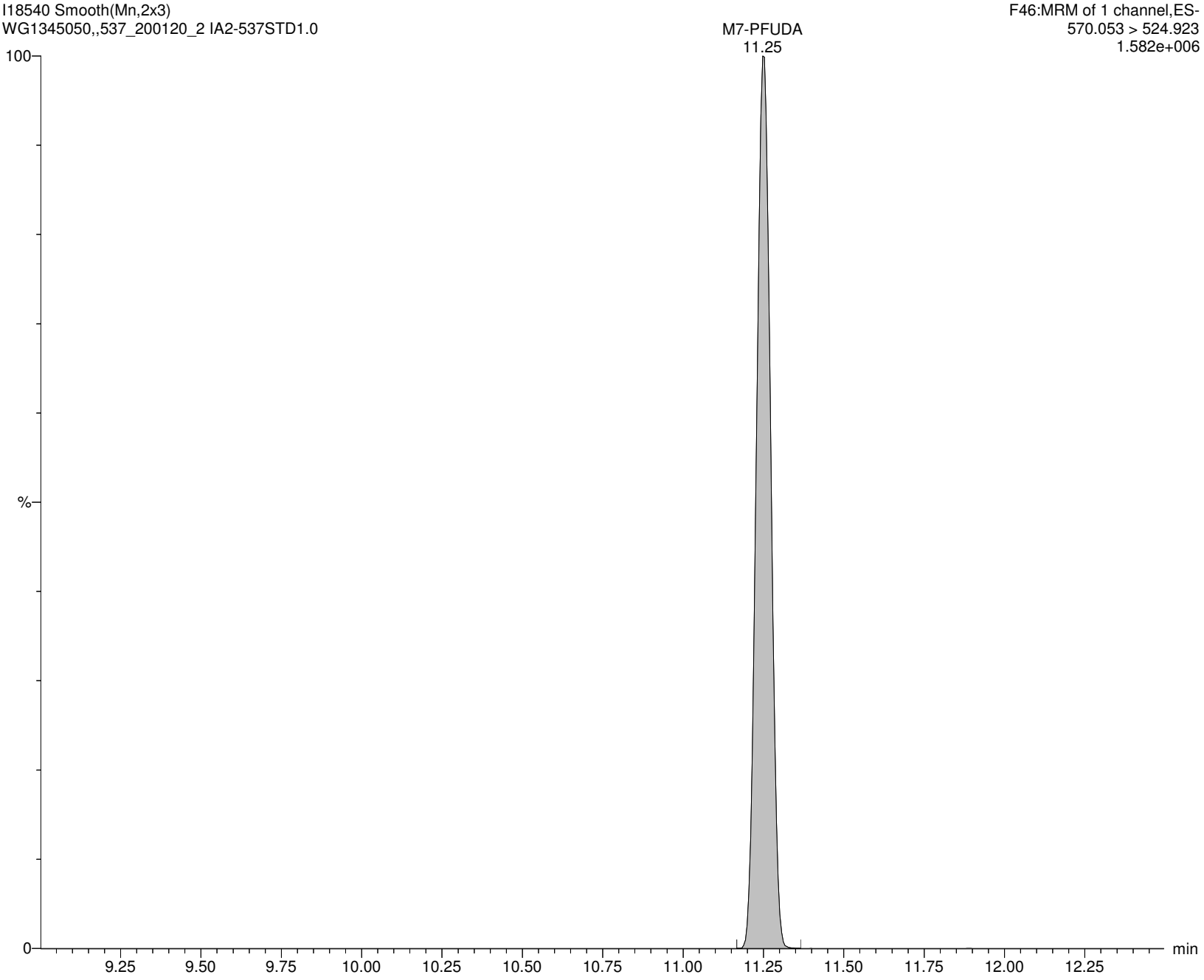
**MS Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**M7-PFUDA**



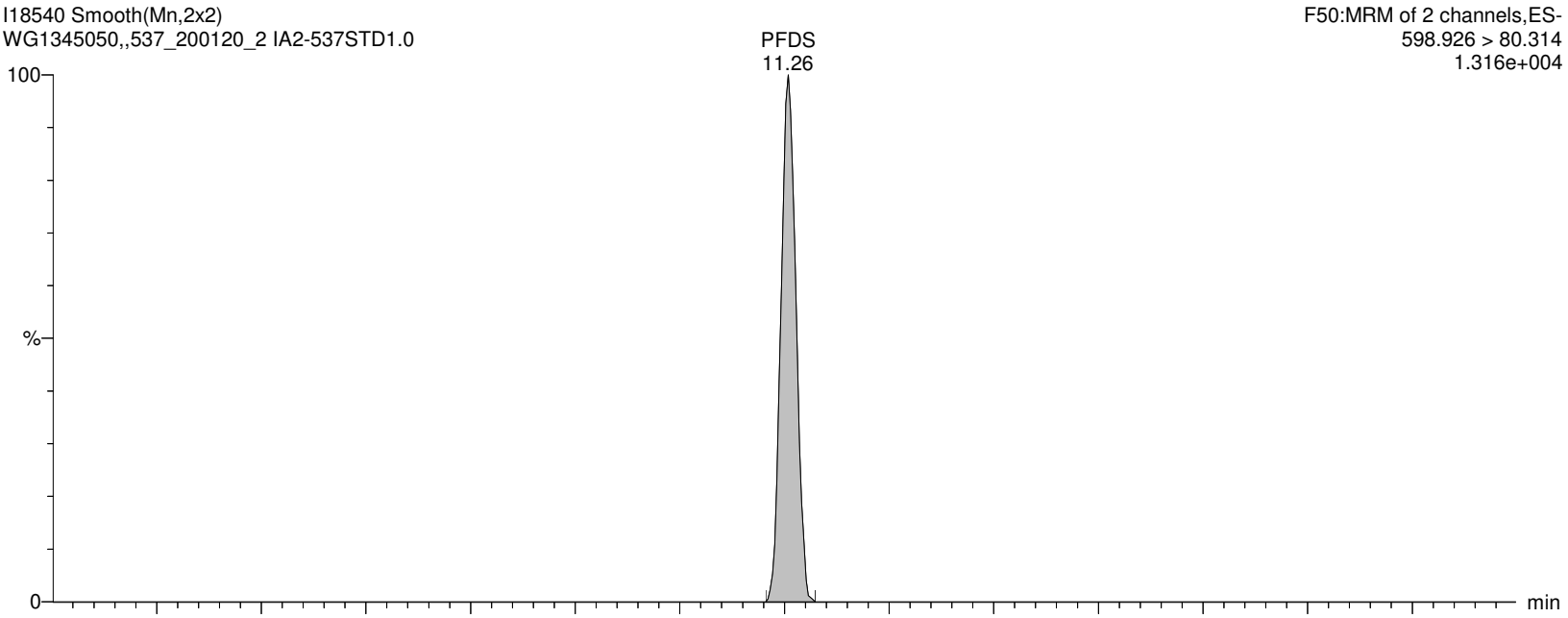


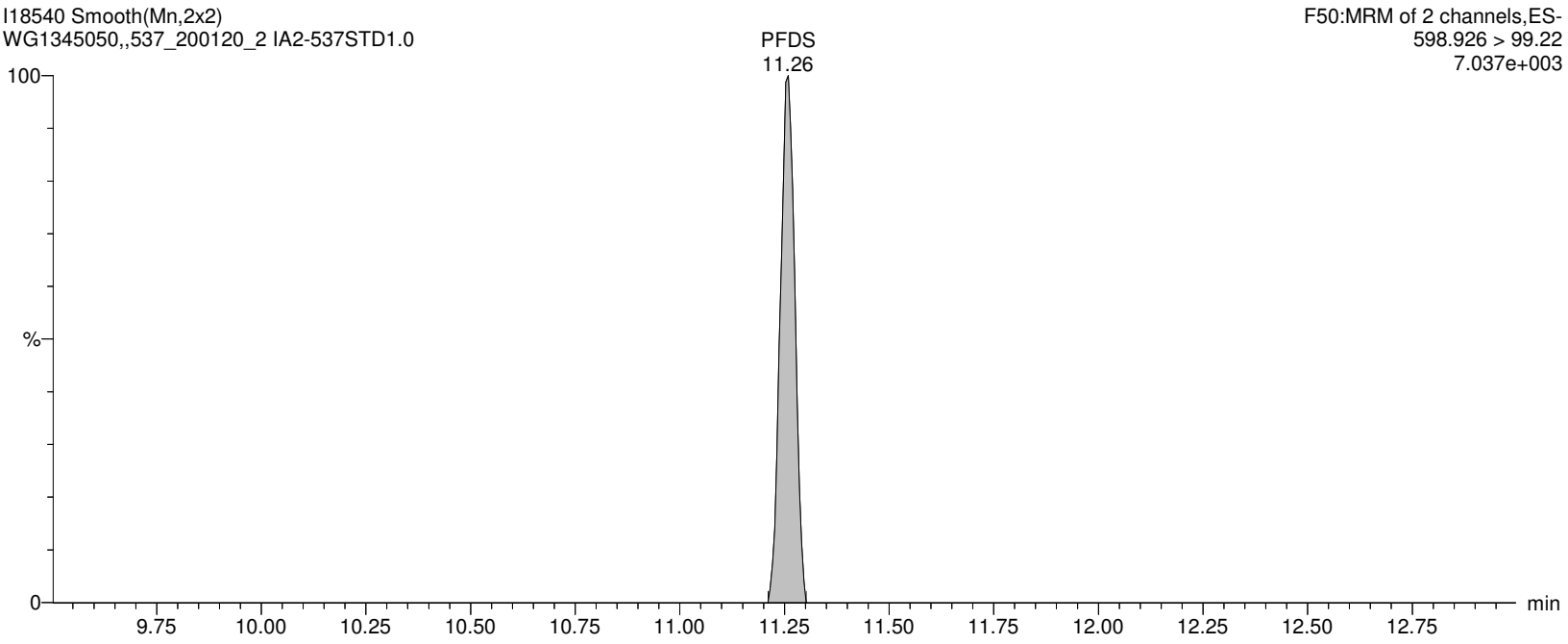
all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICAL_A.qld
Last Altered: Friday, February 28, 2020 09:12:40 Eastern Standard Time
Printed: Friday, February 28, 2020 09:28:00 Eastern Standard Time

**Name: I18540**
**ID: IA2-537STD1.0**
**Date: 27-Feb-2020**
**Time: 17:04:20**
**Description: WG1345050,,537_200120_2**
**User: LCMS01:JW**
**Vial: 1:B,6**
**Instrument: XEVO-TQSmicro#QEA0276**
**Inlet Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\LCMS_537_ISO_MeOH**
**Tune Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\190709_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**PFDS**



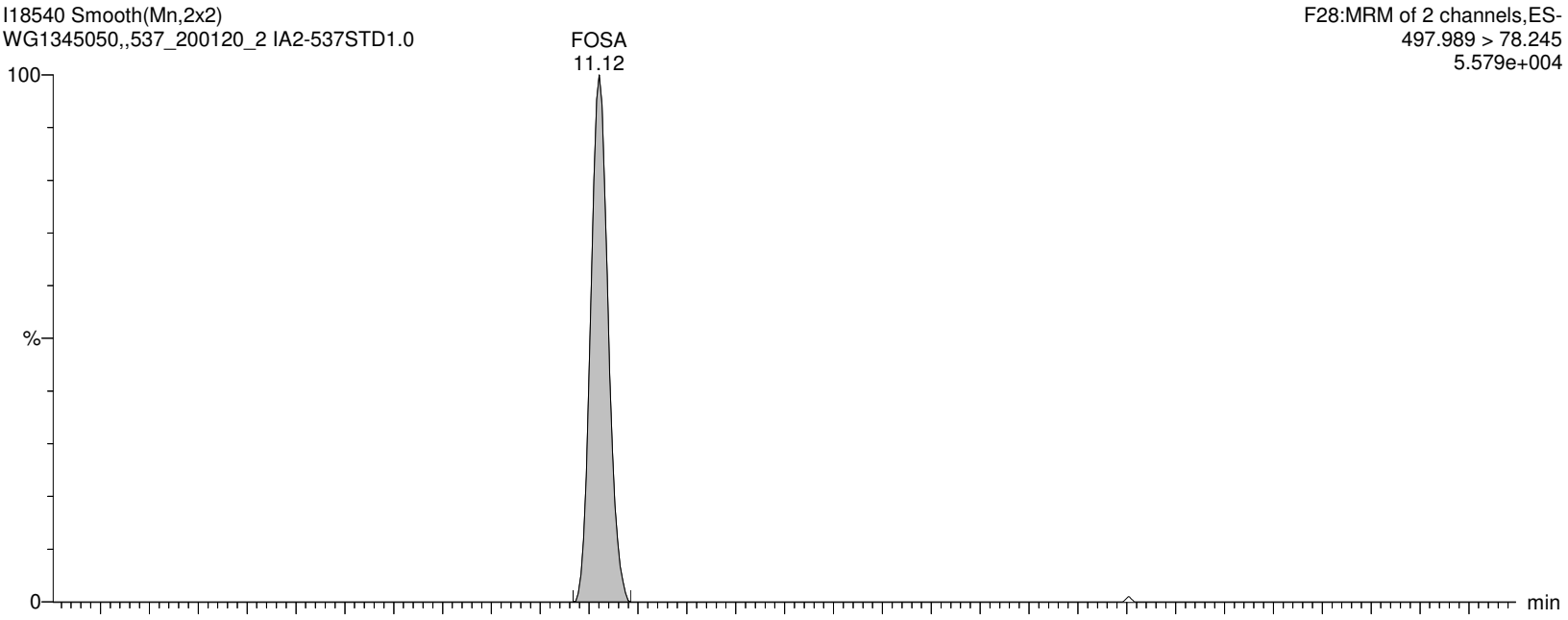


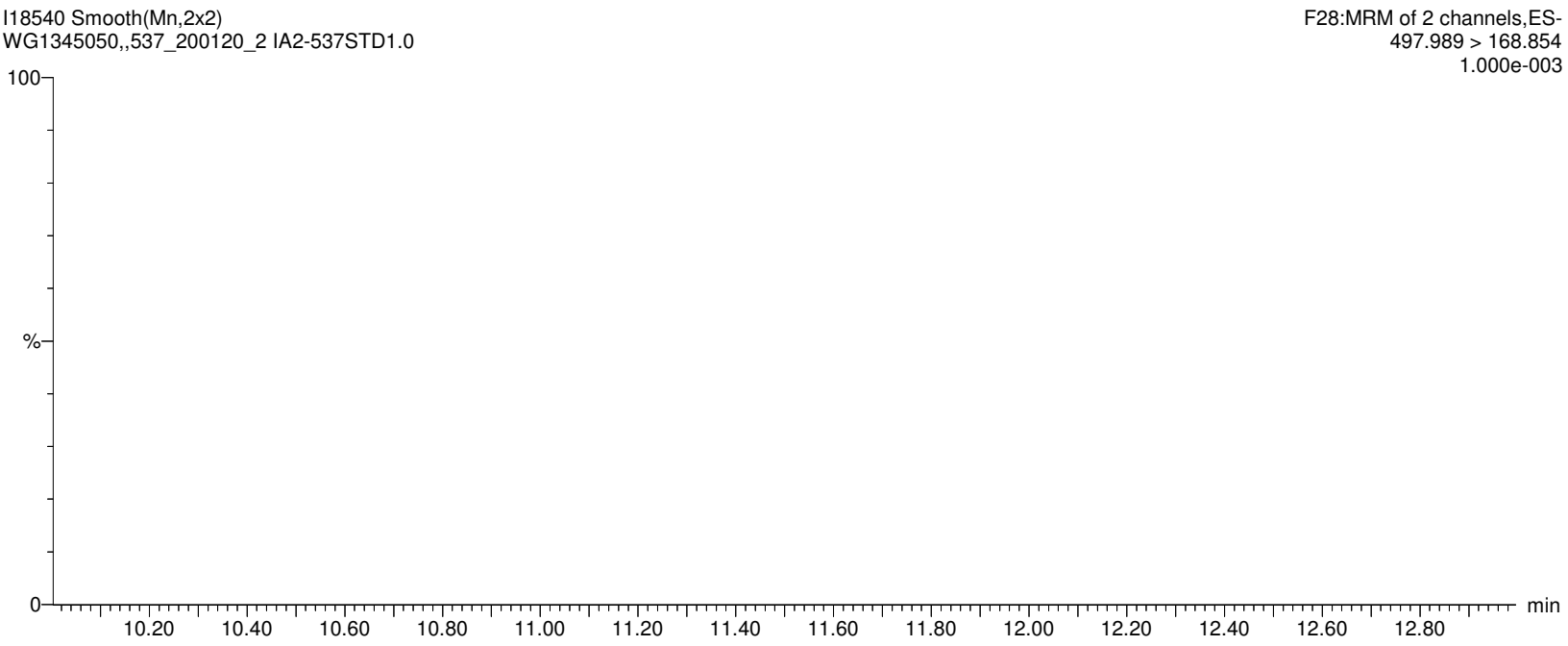
all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICAL_A.qld
Last Altered: Friday, February 28, 2020 09:12:40 Eastern Standard Time
Printed: Friday, February 28, 2020 09:28:00 Eastern Standard Time

**Name: I18540**
**ID: IA2-537STD1.0**
**Date: 27-Feb-2020**
**Time: 17:04:20**
**Description: WG1345050,,537_200120_2**
**User: LCMS01:JW**
**Vial: 1:B,6**
**Instrument: XEVO-TQSmicro#QEA0276**
**Inlet Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\LCMS_537_ISO_MeOH**
**Tune Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\190709_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**FOSA**



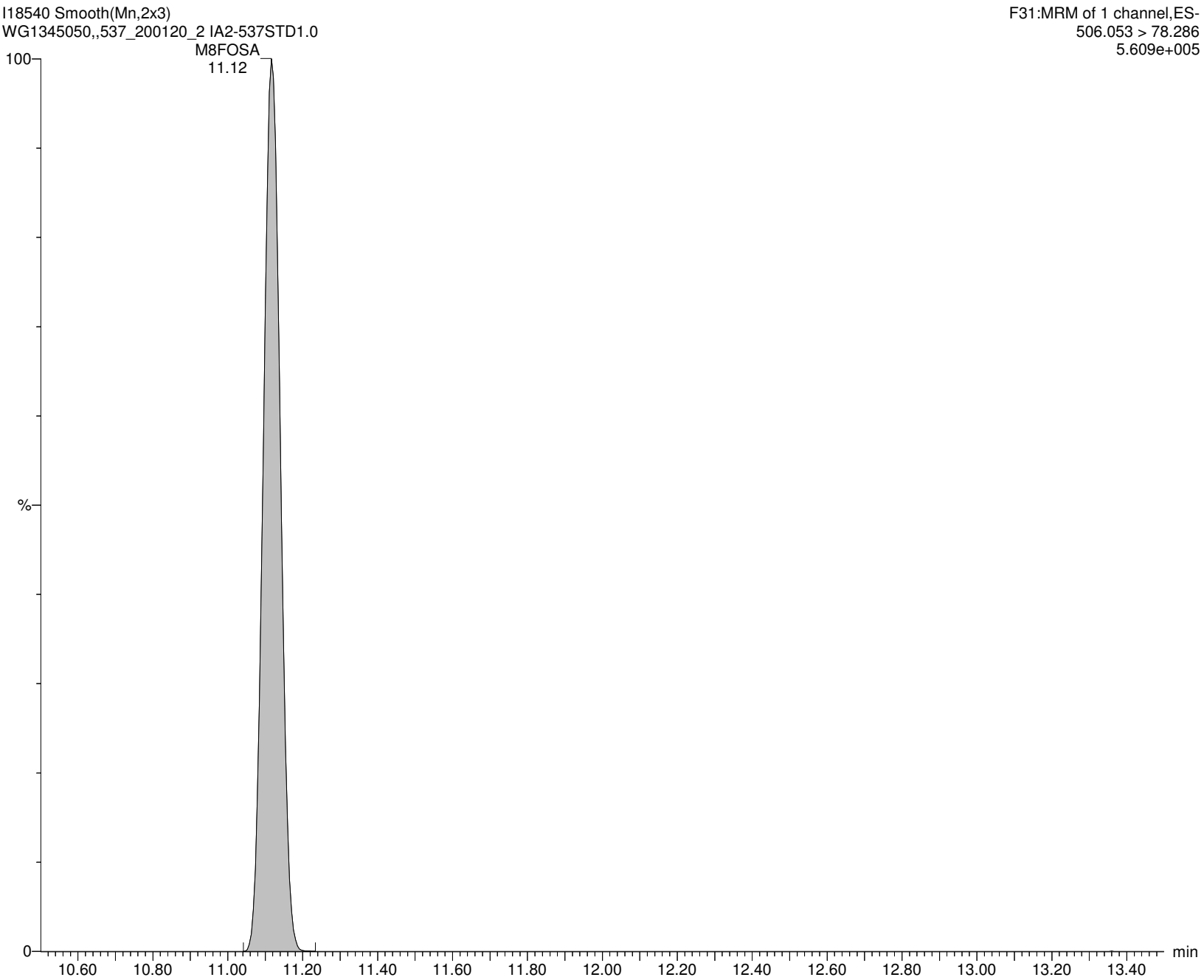


all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICAL_A.qld
Last Altered: Friday, February 28, 2020 09:12:40 Eastern Standard Time
Printed: Friday, February 28, 2020 09:28:00 Eastern Standard Time

**Name: I18540**
**ID: IA2-537STD1.0**
**Date: 27-Feb-2020**
**Time: 17:04:20**
**Description: WG1345050,,537_200120_2**
**User: LCMS01:JW**
**Vial: 1:B,6**
**Instrument: XEVO-TQSmicro#QEA0276**
**Inlet Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\LCMS_537_ISO_MeOH**
**Tune Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\190709_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**M8FOSA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICAL_A.qld
Last Altered: Friday, February 28, 2020 09:12:40 Eastern Standard Time
Printed: Friday, February 28, 2020 09:28:00 Eastern Standard Time

**Name: I18540**
**ID: IA2-537STD1.0**
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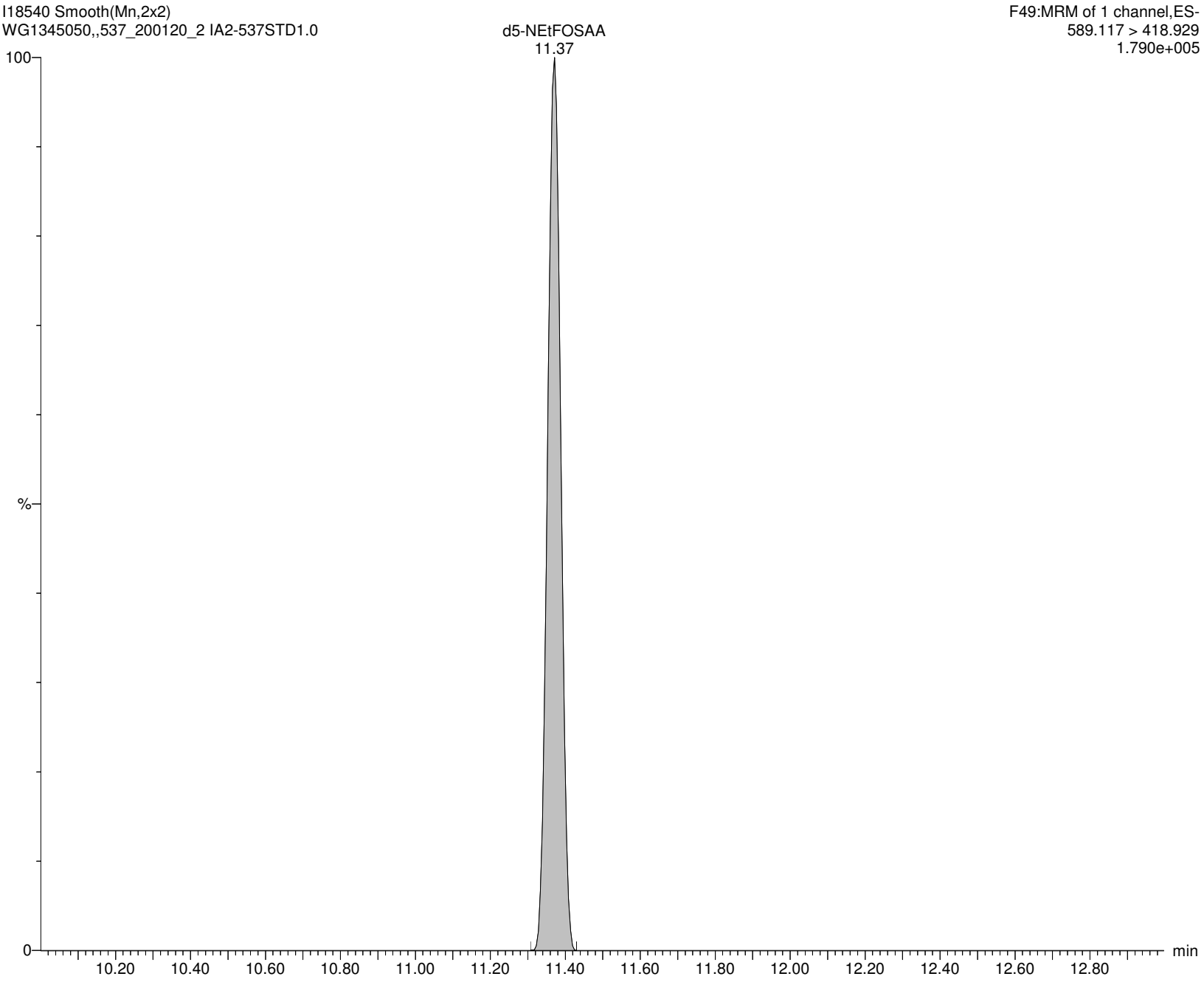
**Tune Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\190709_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**d5-NEtFOSAA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICAL_A.qld
Last Altered: Friday, February 28, 2020 09:12:40 Eastern Standard Time
Printed: Friday, February 28, 2020 09:28:00 Eastern Standard Time

**Name: I18540**
**ID: IA2-537STD1.0**
**Date: 27-Feb-2020**
**Time: 17:04:20**
**Description: WG1345050,,537_200120_2**
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**Vial: 1:B,6**
**Instrument: XEVO-TQSmicro#QEA0276**
**Inlet Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\LCMS_537_ISO_MeOH**
**Tune Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\190709_TUNE.IPR**
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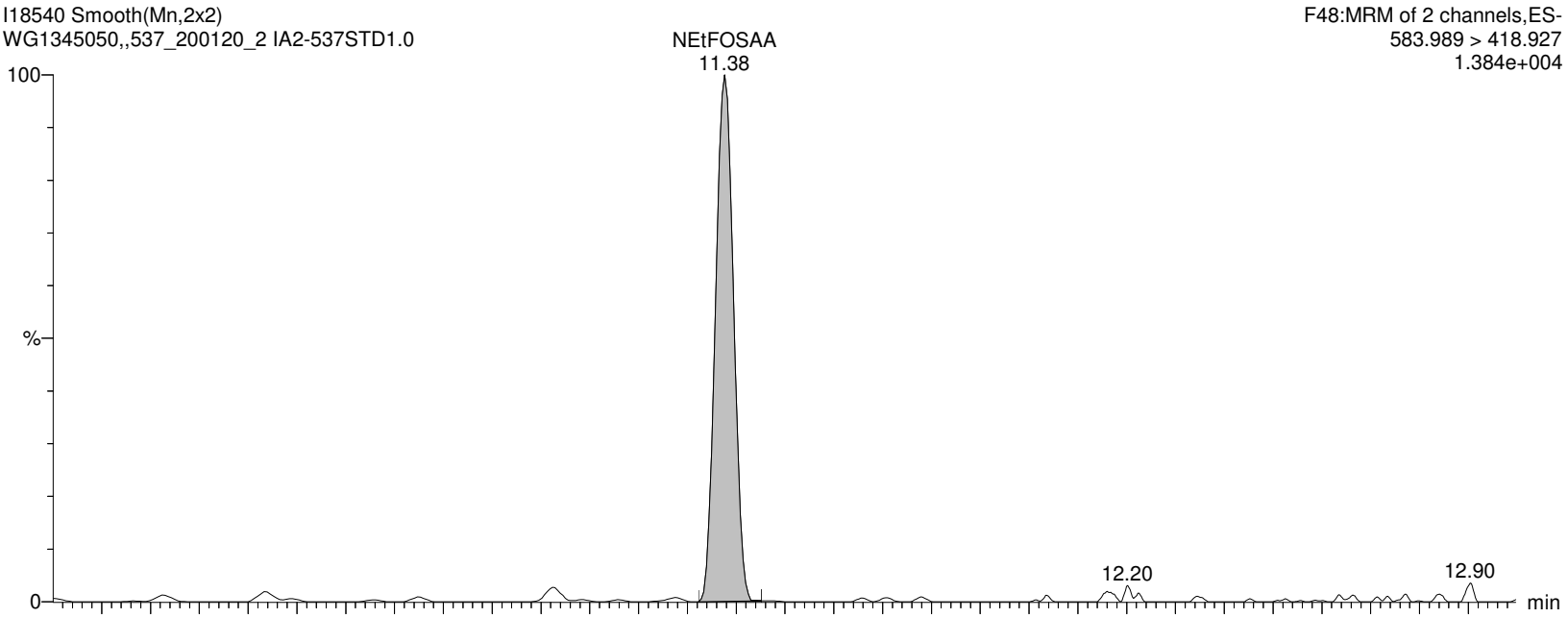
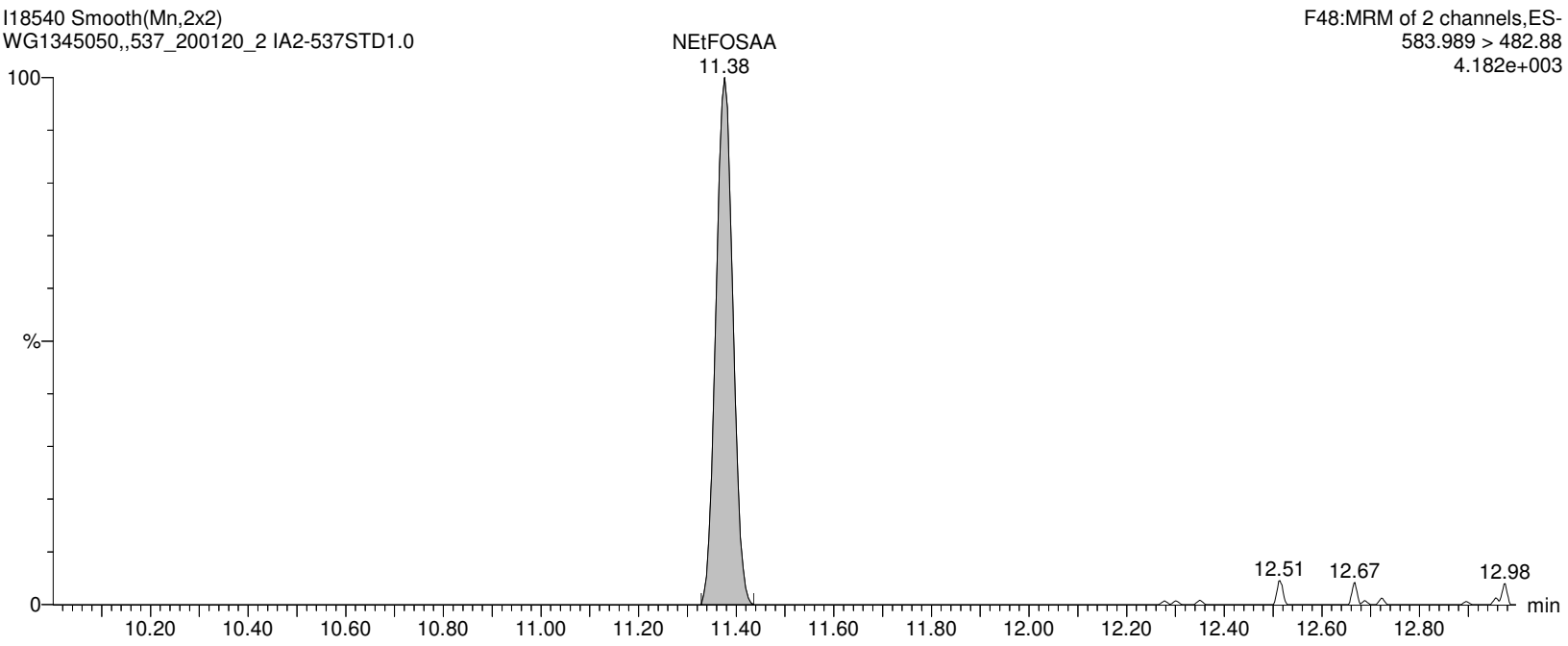
**NEtFOSAA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICAL_A.qld
Last Altered: Friday, February 28, 2020 09:12:40 Eastern Standard Time
Printed: Friday, February 28, 2020 09:28:00 Eastern Standard Time

**Name: I18540**
**ID: IA2-537STD1.0**
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**Vial: 1:B,6**
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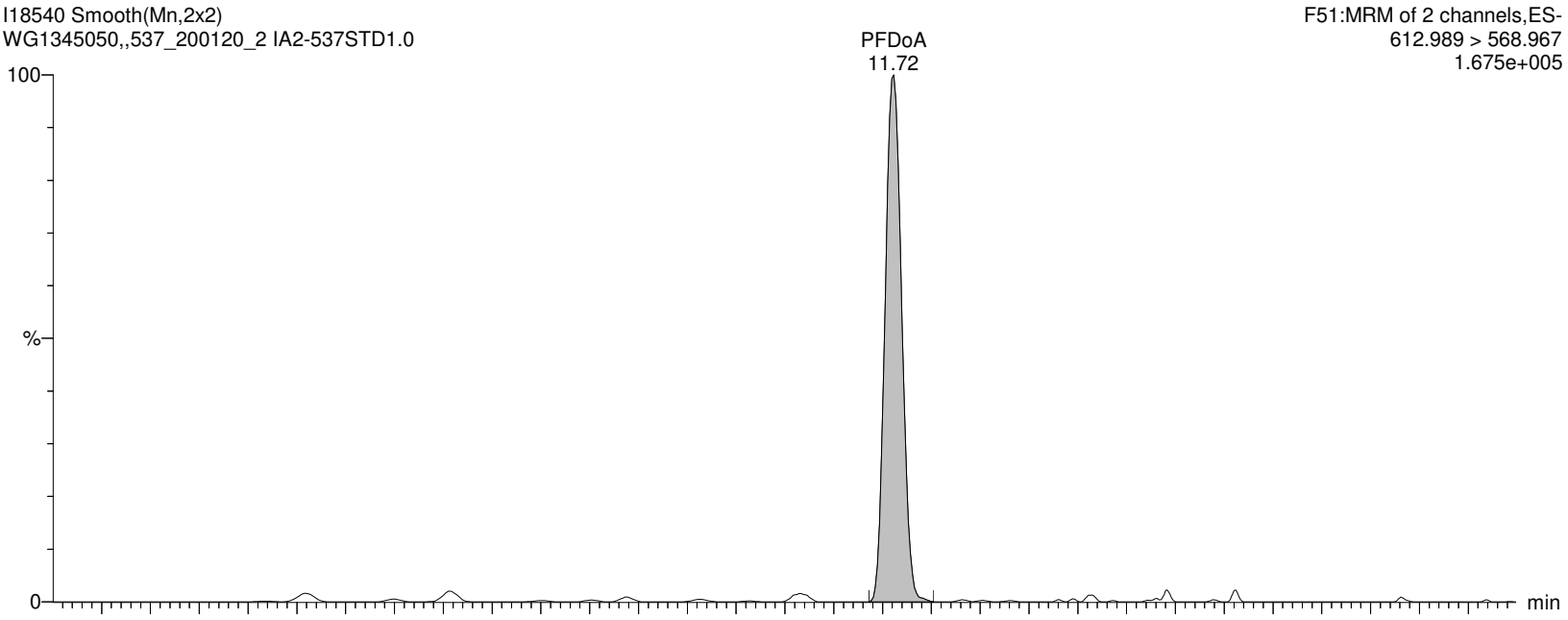
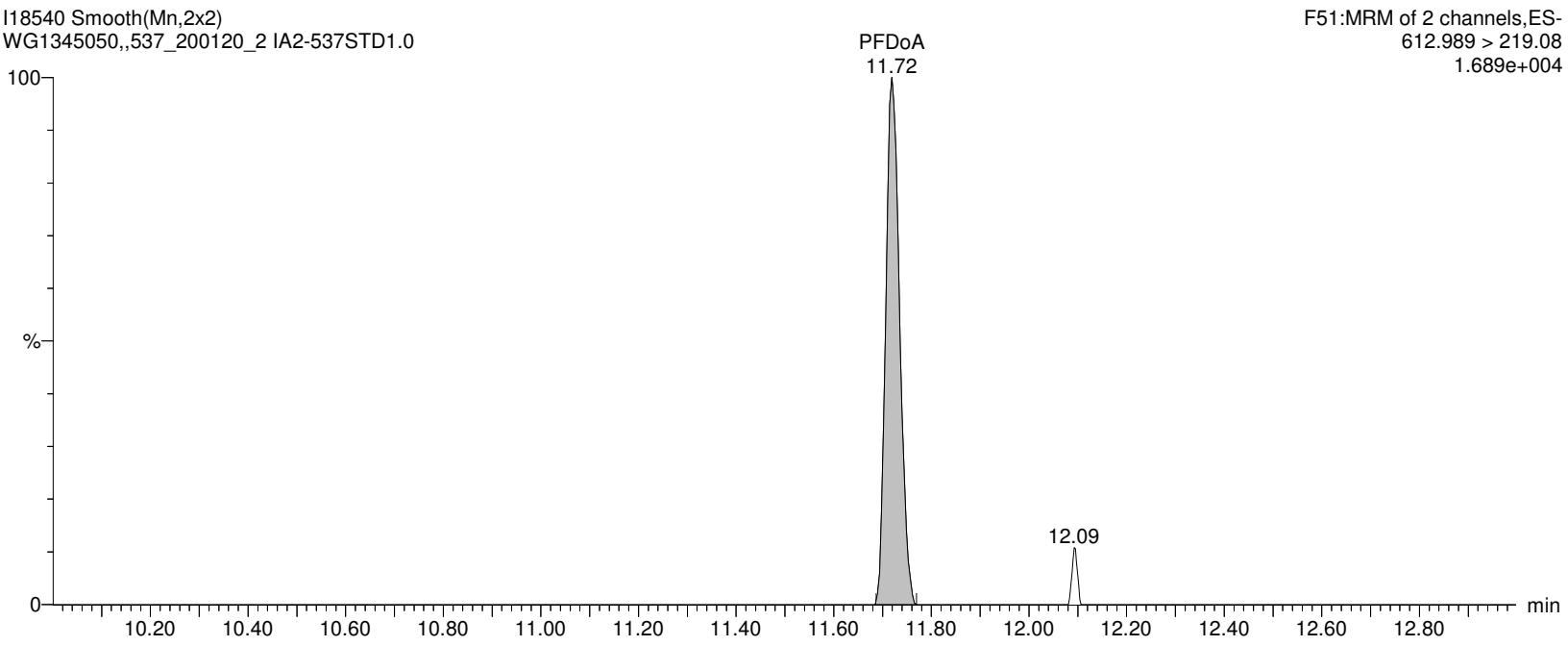
**Tune Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\190709_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**PFDoA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICAL_A.qld
Last Altered: Friday, February 28, 2020 09:12:40 Eastern Standard Time
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**Name: I18540**
**ID: IA2-537STD1.0**
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**User: LCMS01:JW**
**Vial: 1:B,6**
**Instrument: XEVO-TQSmicro#QEA0276**
**Inlet Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\LCMS_537_ISO_MeOH**
**Tune Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\190709_TUNE.IPR**
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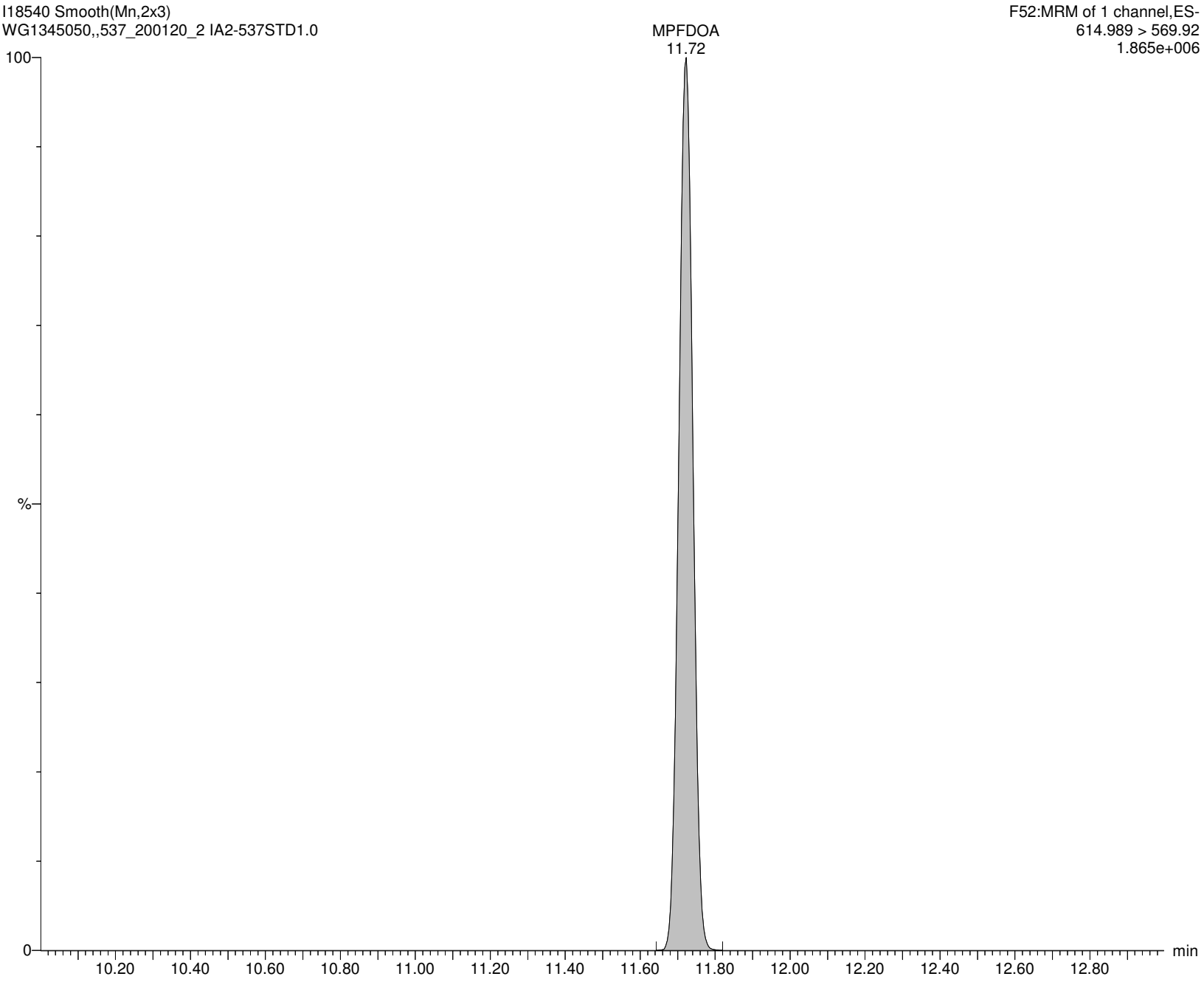
**MPFDOA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICAL_A.qld
Last Altered: Friday, February 28, 2020 09:12:40 Eastern Standard Time
Printed: Friday, February 28, 2020 09:28:00 Eastern Standard Time

**Name: I18540**
**ID: IA2-537STD1.0**
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**User: LCMS01:JW**
**Vial: 1:B,6**
**Instrument: XEVO-TQSmicro#QEA0276**
**Inlet Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\LCMS_537_ISO_MeOH**
**Tune Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\190709_TUNE.IPR**
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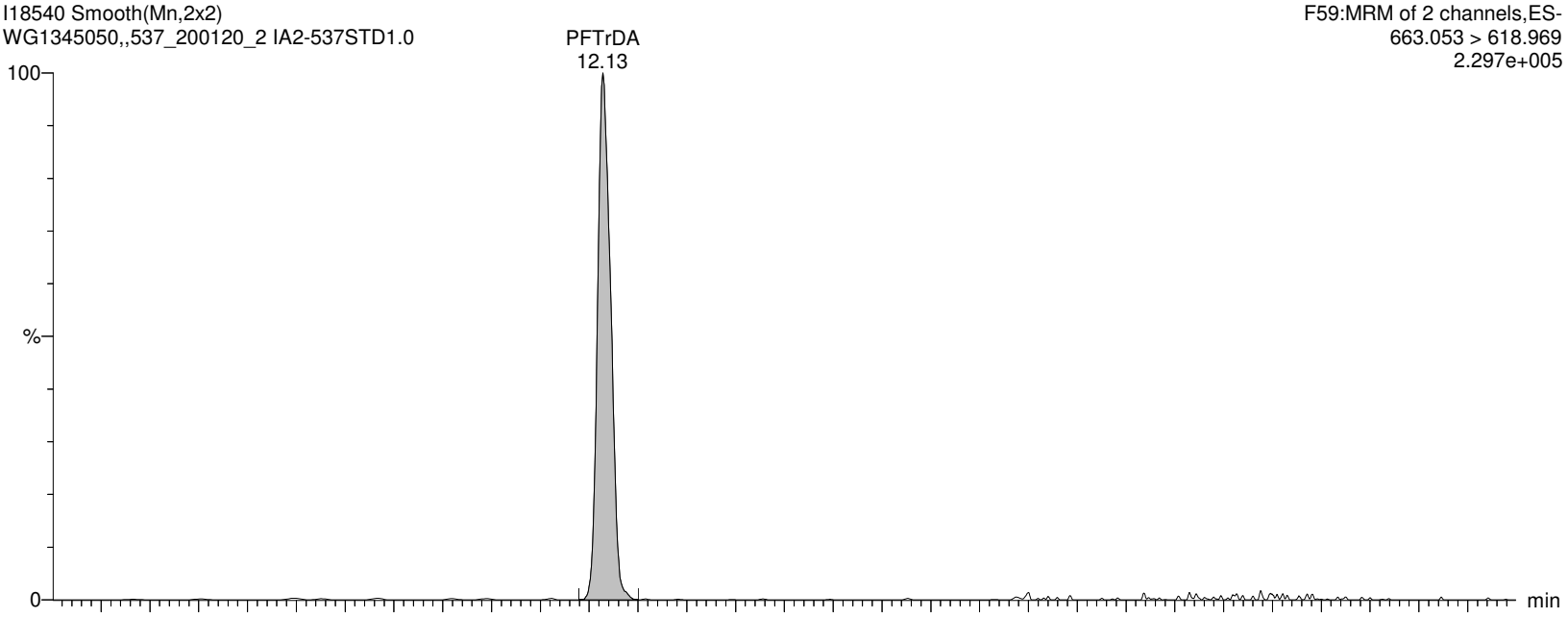
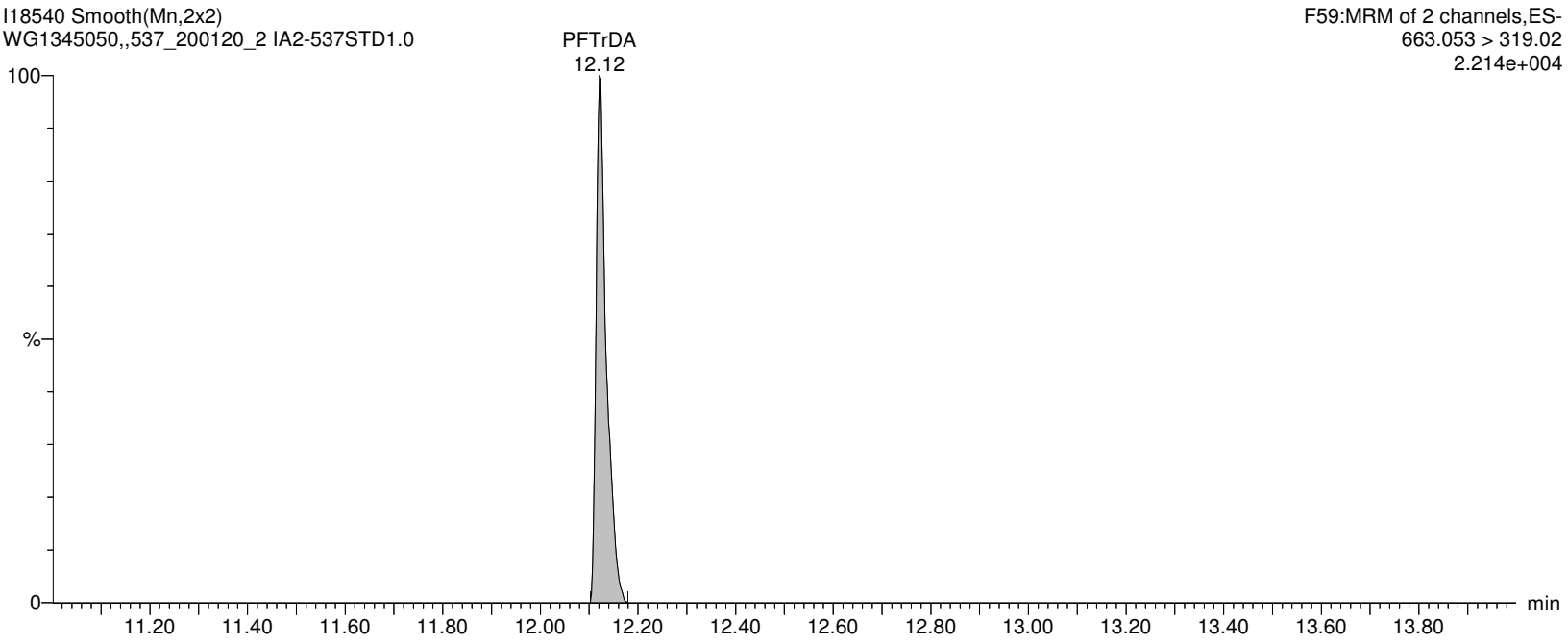
**PFTrDA**



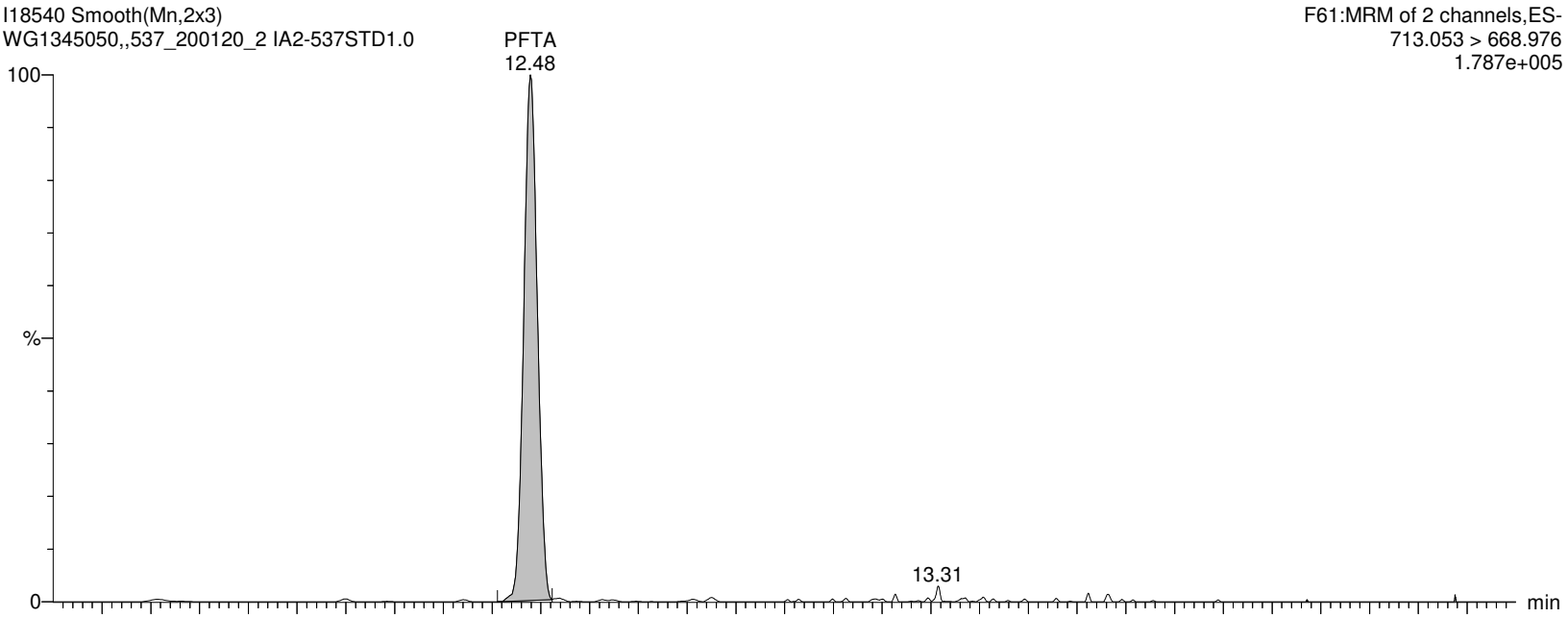


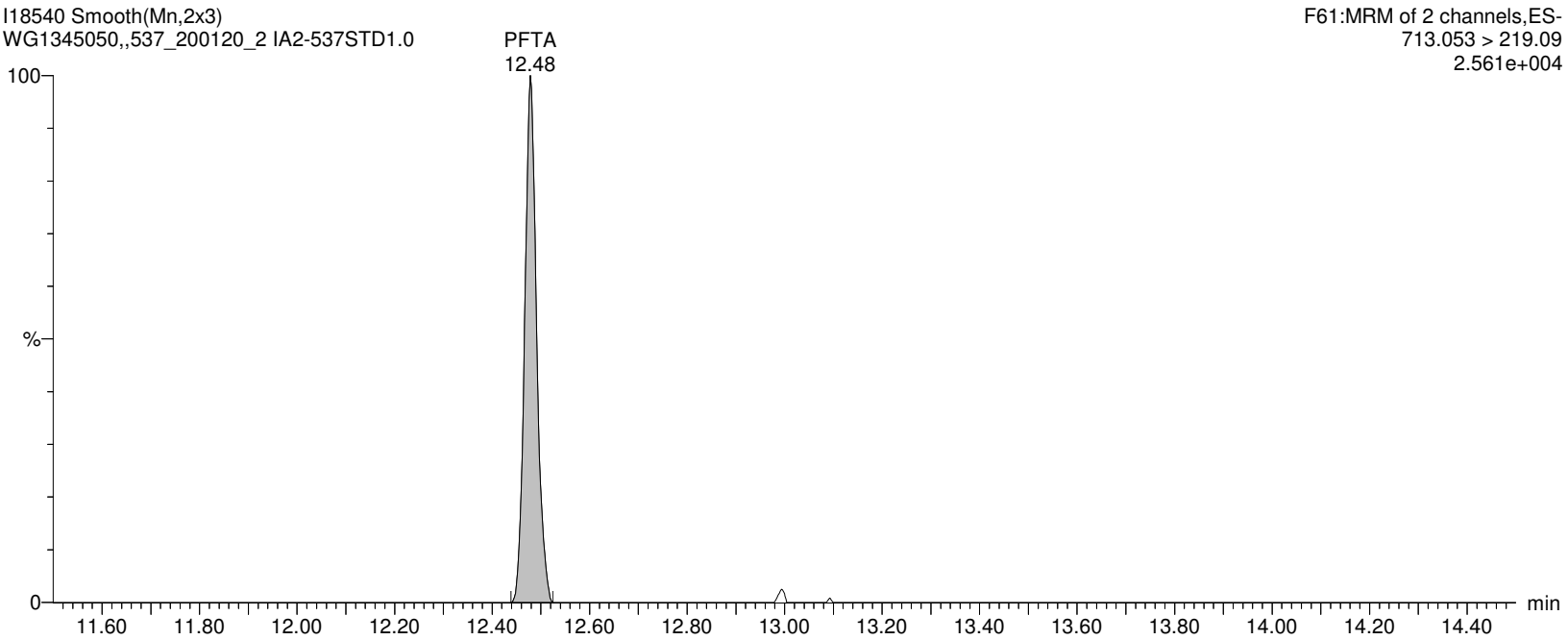
all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICAL_A.qld
Last Altered: Friday, February 28, 2020 09:12:40 Eastern Standard Time
Printed: Friday, February 28, 2020 09:28:00 Eastern Standard Time

**Name: I18540**
**ID: IA2-537STD1.0**
**Date: 27-Feb-2020**
**Time: 17:04:20**
**Description: WG1345050,,537_200120_2**
**User: LCMS01:JW**
**Vial: 1:B,6**
**Instrument: XEVO-TQSmicro#QEA0276**
**Inlet Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\LCMS_537_ISO_MeOH**
**Tune Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\190709_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**PFTA**



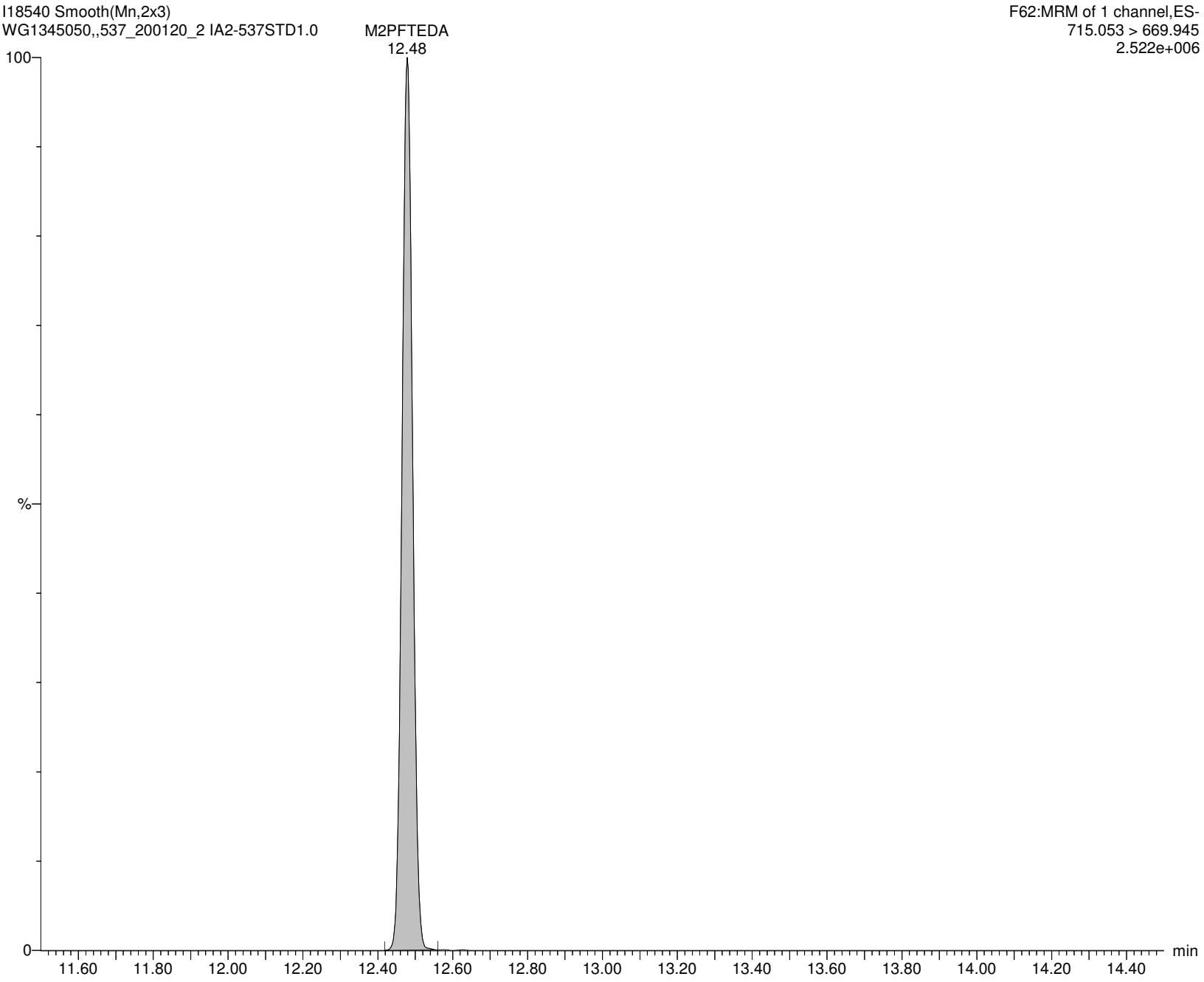


all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICAL_A.qld
Last Altered: Friday, February 28, 2020 09:12:40 Eastern Standard Time
Printed: Friday, February 28, 2020 09:28:00 Eastern Standard Time

**Name: I18540**
**ID: IA2-537STD1.0**
**Date: 27-Feb-2020**
**Time: 17:04:20**
**Description: WG1345050,,537_200120_2**
**User: LCMS01:JW**
**Vial: 1:B,6**
**Instrument: XEVO-TQSmicro#QEA0276**
**Inlet Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\LCMS_537_ISO_MeOH**
**Tune Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\190709_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**M2PFTEDA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICV.qld
Last Altered: Friday, February 28, 2020 09:22:22 Eastern Standard Time
Printed: Friday, February 28, 2020 09:23:05 Eastern Standard Time

**Method: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\MethDB\537ISO_Q_200227 .mdb 28 Feb 2020 09:16:06**
**Calibration: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\CurveDB\200227_537ISO_ICAL.cdb 28 Feb 2020 09:12:40**

**ID: CA2-537STD010**
**Name: I18543**
**Date: 27-Feb-2020**
**Time: 18:59:36**
**Description: WG1345050,,537ISO_ICV_200120**
**Instrument: XEVO-TQSmicro#QEA0276**
**User: LCMS01:JW**
**Inlet Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\LCMS_537_ISO_MeOH**
**Tune Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\190709_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

| | Name | CAS | RT | Trace | Area | M Flag | Conc (ng/mL) | Ion Ratio | Ratio Flag | %Rec |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | PFBA | 375-22-4 | 2.26 | 212.926 > 169.111 | 34910 | | 9.812 | | na | 98.1 |
| 2 | M3PFBA | INT STD | 2.26 | 215.926 > 172.122 | 47344 | | 12.040 | | na | 120.4 |
| 3 | MPFBA | INT STD | 2.26 | 216.926 > 172.137 | 49190 | | 9.067 | | na | 90.7 |
| 4 | PFPeA | 2706-90-3 | 5.22 | 262.926 > 219.002 | 47625 | | 10.434 | | na | 104.3 |
| 5 | M5PFPEA | INT STD | 5.22 | 267.989 > 223.081 | 65657 | | 9.122 | | na | 91.2 |
| 6 | PFBS | 375-73-5 | 5.88 | 298.926 > 79.923 | 10825 | | 10.461 | 1.98 | NO | 118.2 |
| 7 | M3PFBS | INT STD | 5.88 | 301.989 > 80.254 | 11472 | | 8.381 | | na | 83.8 |
| 8 | 4:2FTS | 757124-72-4 | 7.05 | 326.926 > 306.957 | 4756 | | 10.949 | 1.81 | NO | 117.1 |
| 9 | M2-4:2FTS | INT STD | 7.05 | 329.117 > 309.079 | 5462 | | 7.660 | | na | 76.6 |
| 10 | PFHxA | 307-24-4 | 7.13 | 312.989 > 269.028 | 68523 | | 10.817 | 17.48 | NO | 108.2 |
| 11 | M5PFHxA | INT STD | 7.13 | 317.989 > 273.045 | 76480 | | 8.354 | | na | 83.5 |
| 12 | PFPeS | 2706-91-4 | 7.44 | 348.926 > 80.251 | 11363 | | 10.552 | 2.36 | NO | 112.3 |
| 13 | PFHpA | 375-85-9 | 8.40 | 362.926 > 319.014 | 78630 | | 9.631 | 4.71 | NO | 96.3 |
| 14 | M4PFHpA | INT STD | 8.40 | 366.926 > 321.979 | 89176 | | 8.396 | | na | 84.0 |
| 15 | br-PFHxS | 355-46-4 | 8.32 | 398.904 > 79.915 | 1326 | | 1.578 | | YES | 92.8 |
| 16 | L-PFHxS | 355-46-4 | 8.55 | 398.904 > 79.915 | 8264 | | 9.867 | 2.09 | NO | 133.3 |
| 17 | PFHxS | 355-46-4 | | 398.904 > 79.915 | 9590 | | 11.445 | | na | |
| 18 | M3PFHxS | INT STD | 8.55 | 401.926 > 80.317 | 11320 | | 9.232 | | na | 92.3 |
| 19 | br-PFOA | 335-67-1 | | 412.989 > 368.9 | | | ND | 0.00 | NO | |
| 20 | L-PFOA | 335-67-1 | 9.34 | 412.989 > 368.9 | 76133 | | 9.765 | 8.73 | NO | 97.7 |
| 21 | M2PFOA | INT STD | 9.34 | 415.032 > 369.968 | 111820 | | 13.291 | | na | 132.9 |
| 22 | PFOA | 335-67-1 | | 412.989 > 368.9 | 76133 | | 9.765 | | na | |
| 23 | M8PFOA | INT STD | 9.34 | 420.989 > 375.979 | 90739 | | 8.510 | | na | 85.1 |
| 24 | 6:2FTS | 27619-97-2 | 9.30 | 426.989 > 406.921 | 1016 | | 9.141 | 0.66 | NO | 96.2 |
| 25 | M2-6:2FTS | INT STD | 9.30 | 428.989 > 408.917 | 4657 | | 10.495 | | na | 105.0 |
| 26 | PFHpS | 375-92-8 | 9.43 | 448.926 > 80.257 | 6661 | | 11.382 | 1.13 | NO | 119.8 |
| 27 | PFNA | 375-95-1 | 10.09 | 462.989 > 418.931 | 73439 | | 10.842 | 4.13 | NO | 108.4 |
| 28 | M9PFNA | INT STD | 10.09 | 472.053 > 426.947 | 91037 | | 8.733 | | na | 87.3 |
| 29 | br-PFOS | 1763-23-1 | 9.88 | 498.968 > 79.918 | 2317 | m5 | 2.634 | 4.08 | NO | 131.7 |
| 30 | L-PFOS | 1763-23-1 | 10.13 | 498.968 > 79.918 | 4434 | | 7.049 | 1.33 | NO | 96.6 |
| 31 | PFOS | 1763-23-1 | | 498.968 > 79.918 | 6751 | | 9.684 | | na | |
| 32 | M4PFOS | INT STD | 10.13 | 503.032 > 80.306 | 10669 | | 12.560 | | na | 125.6 |
| 33 | M8PFOS | INT STD | 10.13 | 507.053 > 80.294 | 11631 | | 9.387 | | na | 93.9 |
| 34 | PFDA | 335-76-2 | 10.71 | 513.053 > 468.906 | 67936 | | 10.038 | 5.62 | NO | 100.4 |
| 35 | M2PFDA | INT STD | 10.71 | 515.053 > 469.934 | 84890 | | 12.833 | | na | 128.3 |
| 36 | M6PFDA | INT STD | 10.71 | 519.053 > 473.931 | 88354 | | 9.460 | | na | 94.6 |
| 37 | 8:2FTS | 39108-34-4 | 10.70 | 527.032 > 507.079 | 1632 | | 10.551 | 1.74 | NO | 109.9 |
| 38 | M2-8:2FTS | INT STD | 10.70 | 529.053 > 508.945 | 2367 | | 8.821 | | na | 88.2 |
| 39 | PFNS | 68259-12-1 | 10.73 | 548.989 > 80.249 | 8515 | | 10.822 | 1.49 | NO | 112.7 |


all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICV.qld
Last Altered: Friday, February 28, 2020 09:22:22 Eastern Standard Time
Printed: Friday, February 28, 2020 09:23:05 Eastern Standard Time

**ID: CA2-537STD010**
**Name: I18543**
**Date: 27-Feb-2020**
**Time: 18:59:36**
**Description: WG1345050,,537ISO_ICV_200120**
**Instrument: XEVO-TQSmicro#QEA0276**
**User: LCMS01:JW**
**Inlet Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\LCMS_537_ISO_MeOH**
**Tune Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\190709_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

| | Name | CAS | RT | Trace | Area | M Flag | Conc (ng/mL) | Ion Ratio | Ratio Flag | %Rec |
|---|---|---|---|---|---|---|---|---|---|---|
| 40 | d3-NMeFOSAA | INT STD | 11.08 | 573.096 > 418.987 | 10414 | | 8.417 | | na | 84.2 |
| 41 | NMeFOSAA | 2355-31-9 | 11.08 | 570.053 > 418.917 | 6546 | | 10.518 | 2.66 | NO | 105.2 |
| 42 | PFUnA | 2058-94-8 | 11.25 | 562.989 > 518.903 | 63605 | | 8.781 | 8.18 | NO | 87.8 |
| 43 | M7-PFUDA | INT STD | 11.25 | 570.053 > 524.923 | 78006 | | 9.505 | | na | 95.0 |
| 44 | PFDS | 335-77-3 | 11.26 | 598.926 > 80.314 | 8246 | | 10.763 | 1.48 | NO | 111.5 |
| 45 | FOSA | 754-91-6 | 11.11 | 497.989 > 78.245 | 26078 | | 10.864 | 293.16 | NO | 108.6 |
| 46 | M8FOSA | INT STD | 11.11 | 506.053 > 78.286 | 29132 | | 7.783 | | na | 77.8 |
| 47 | d5-NEtFOSAA | INT STD | 11.37 | 589.117 > 418.929 | 6900 | | 7.648 | | na | 76.5 |
| 48 | NEtFOSAA | 2991-50-6 | 11.37 | 583.989 > 418.927 | 6172 | | 10.486 | 3.14 | NO | 104.9 |
| 49 | PFDoA | 307-55-1 | 11.72 | 612.989 > 568.967 | 72435 | | 10.061 | 14.77 | NO | 100.6 |
| 50 | MPFDOA | INT STD | 11.72 | 614.989 > 569.92 | 79297 | | 8.987 | | na | 89.9 |
| 51 | PFTrDA | 72629-94-8 | 12.13 | 663.053 > 618.969 | 72136 | | 10.047 | 12.01 | NO | 100.5 |
| 52 | PFTA | 376-06-7 | 12.48 | 713.053 > 668.976 | 79001 | | 11.867 | 9.21 | NO | 118.7 |
| 53 | M2PFTEDA | INT STD | 12.48 | 715.053 > 669.945 | 89847 | | 9.035 | | na | 90.3 |

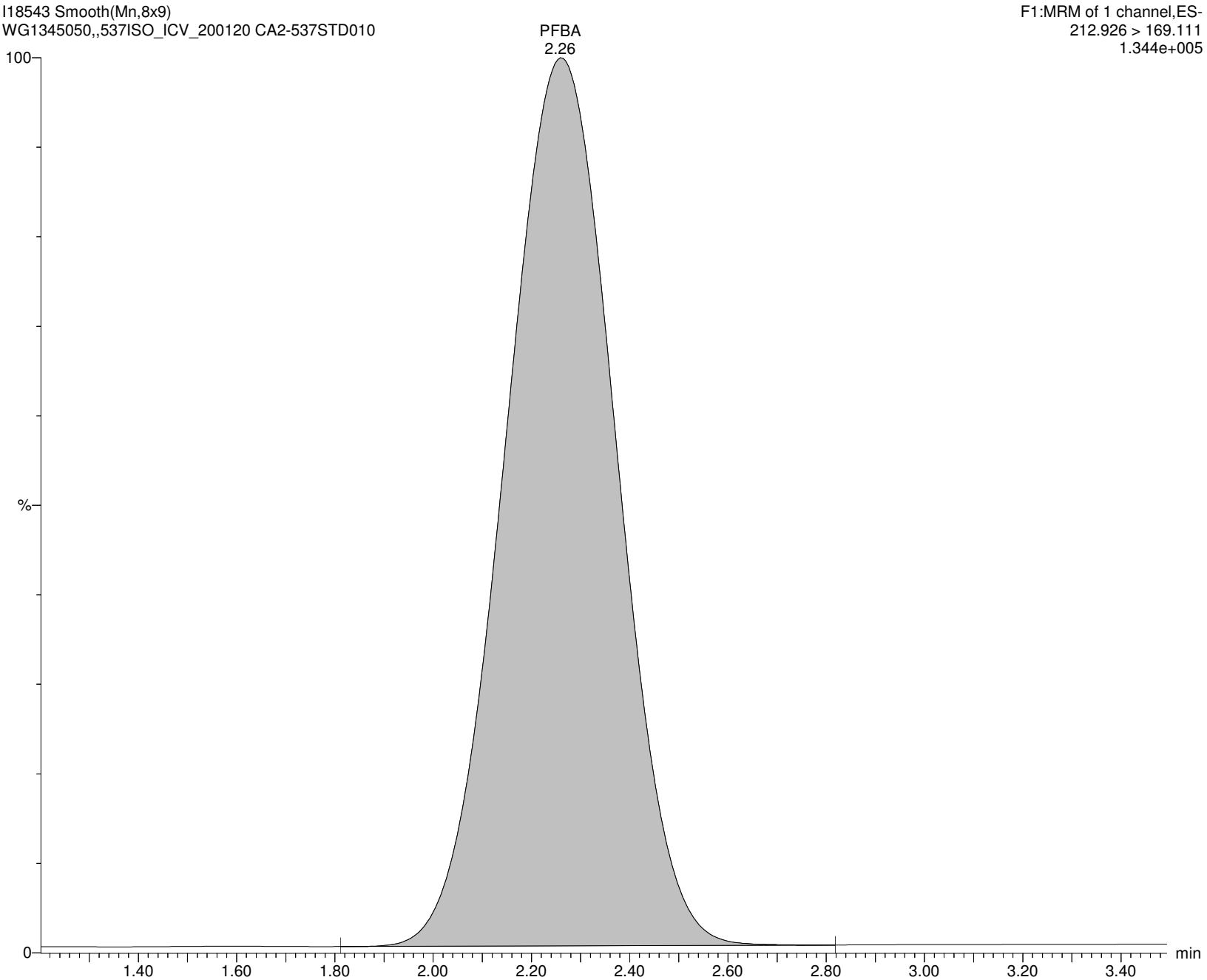

all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICV.qld
Last Altered: Friday, February 28, 2020 09:22:22 Eastern Standard Time
Printed: Friday, February 28, 2020 09:23:05 Eastern Standard Time

**Method: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\MethDB\537ISO_Q_200227 .mdb 28 Feb 2020 09:16:06**
**Calibration: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\CurveDB\200227_537ISO_ICAL.cdb 28 Feb 2020 09:12:40**

**Name: I18543**
**ID: CA2-537STD010**
**Date: 27-Feb-2020**
**Time: 18:59:36**
**Description: WG1345050,,537ISO_ICV_200120**
**User: LCMS01:JW**
**Vial: 1:B,7**
**Instrument: XEVO-TQSmicro#QEA0276**
**Inlet Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\LCMS_537_ISO_MeOH**
**Tune Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\190709_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**PFBA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
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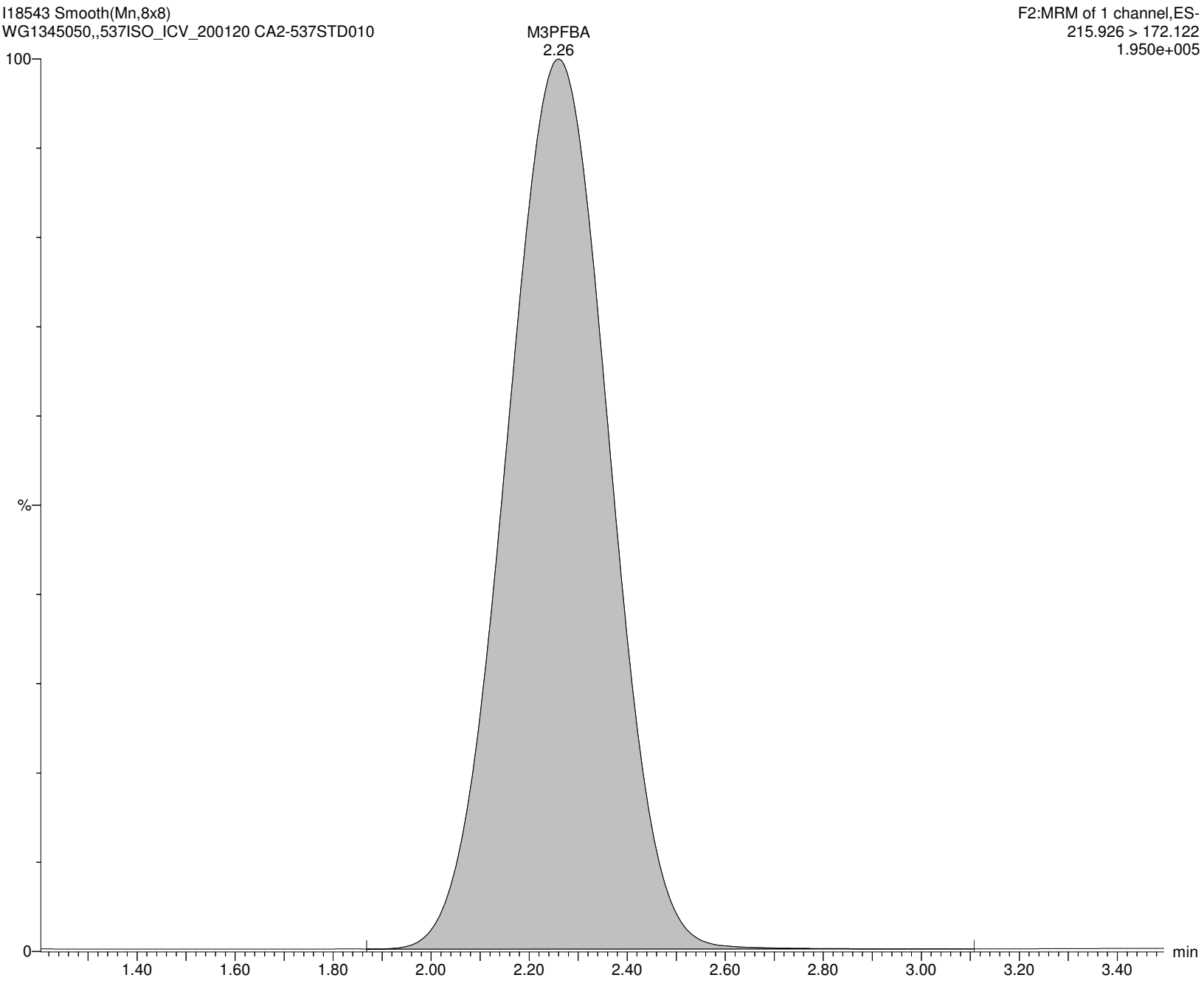
**M3PFBA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICV.qld
Last Altered: Friday, February 28, 2020 09:22:22 Eastern Standard Time
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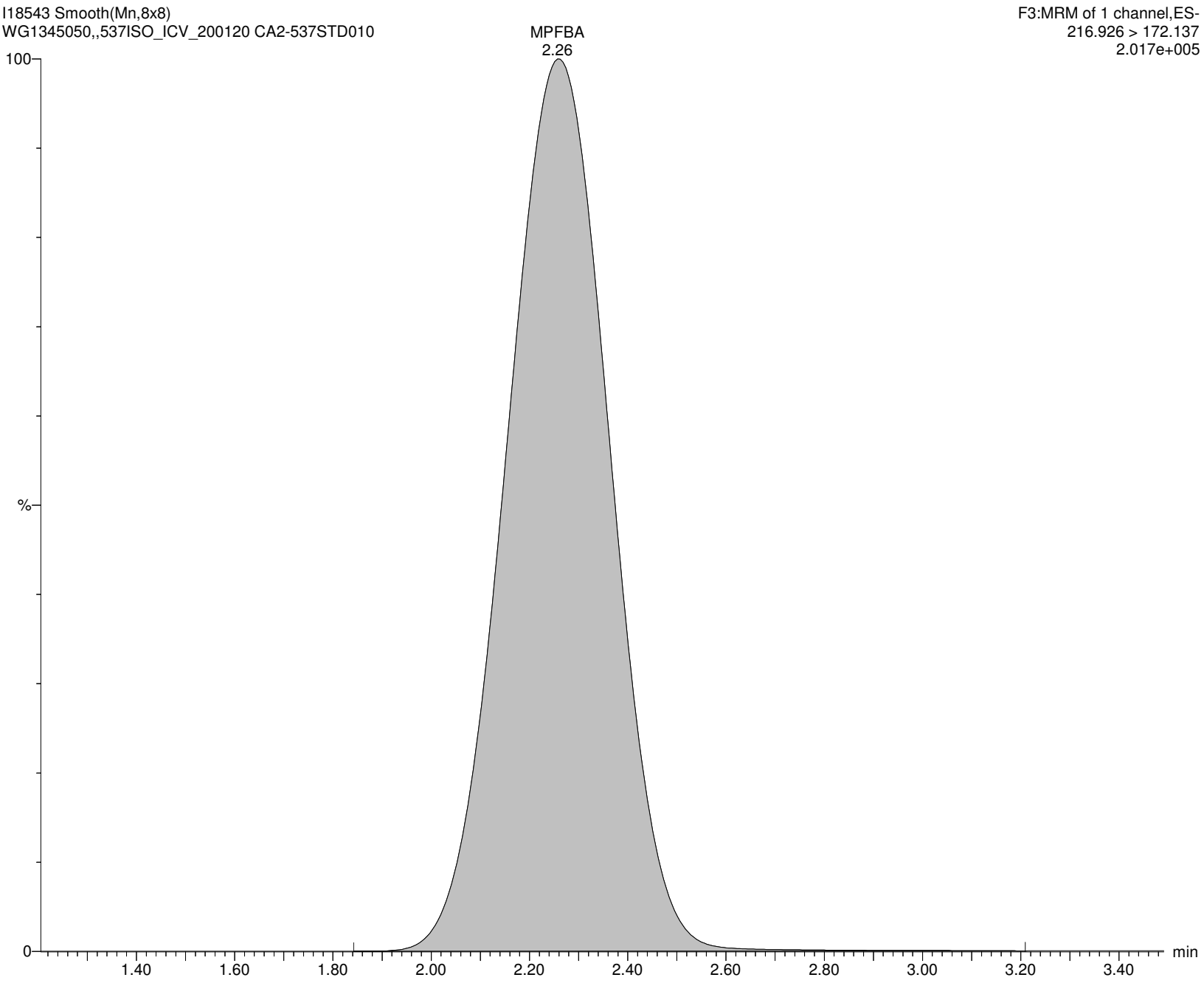
**MS Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**MPFBA**





all concentration units in (ng/mL)

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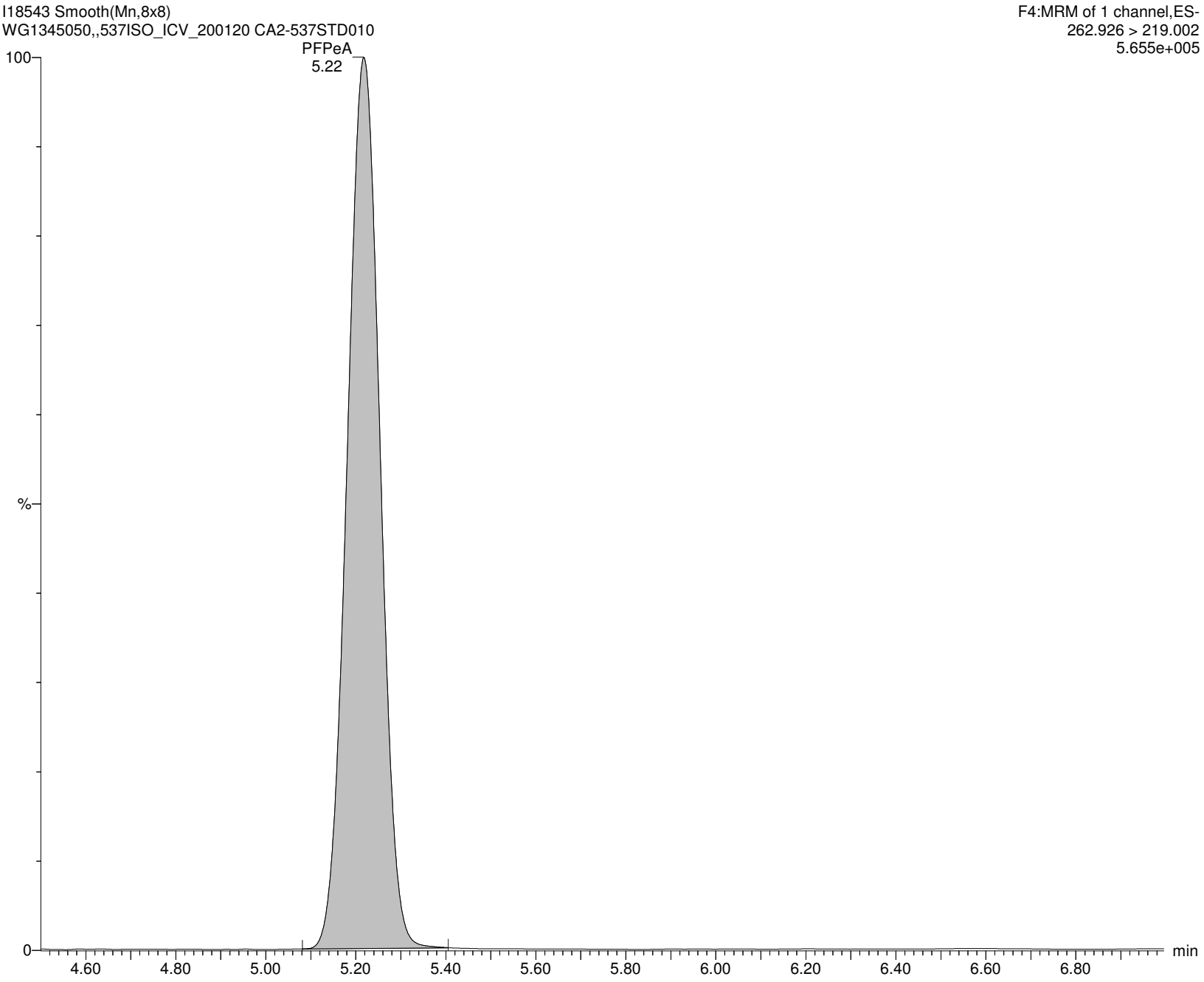
**PFPeA**





all concentration units in (ng/mL)

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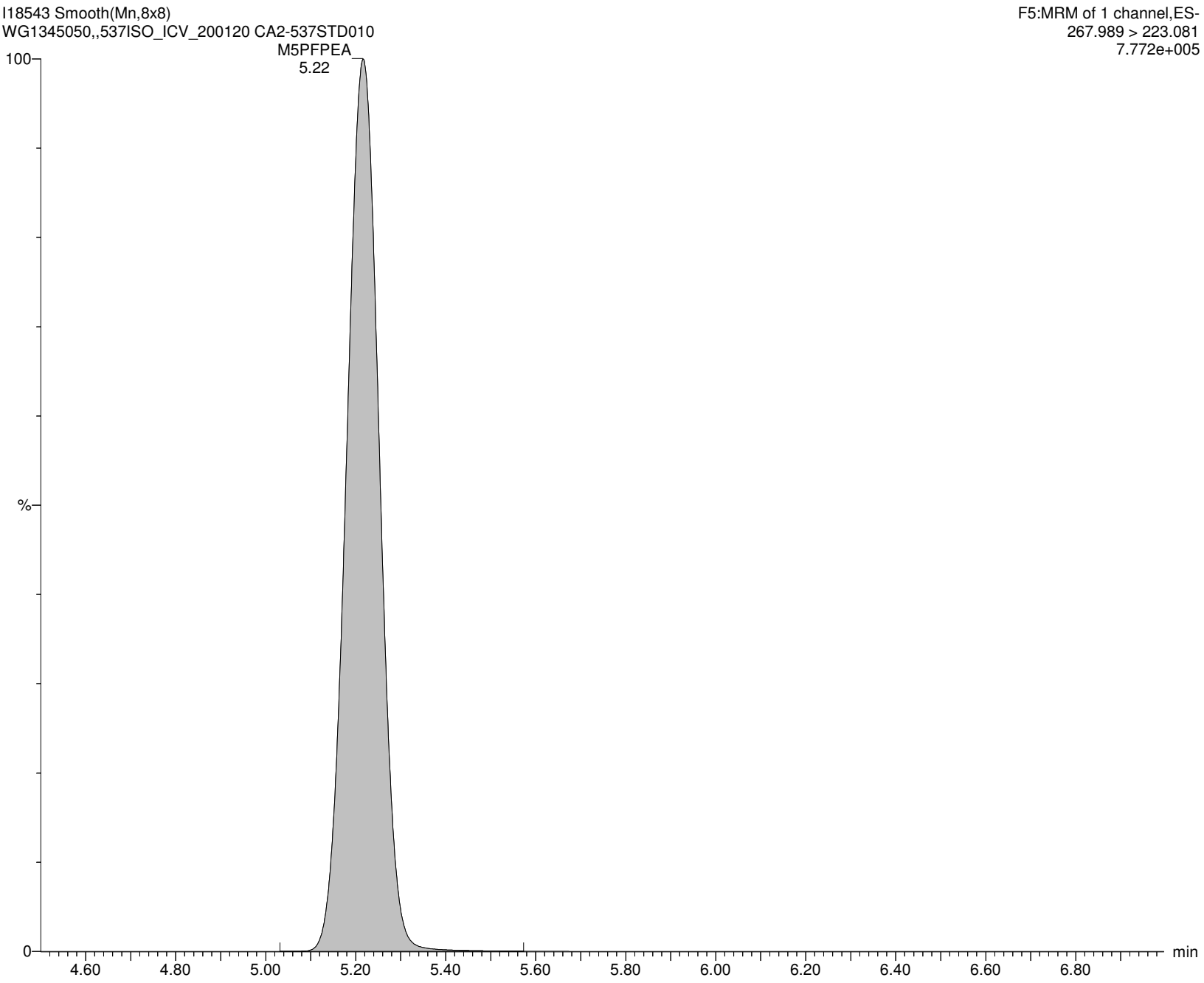
**M5PFPEA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
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**Instrument: XEVO-TQSmicro#QEA0276**
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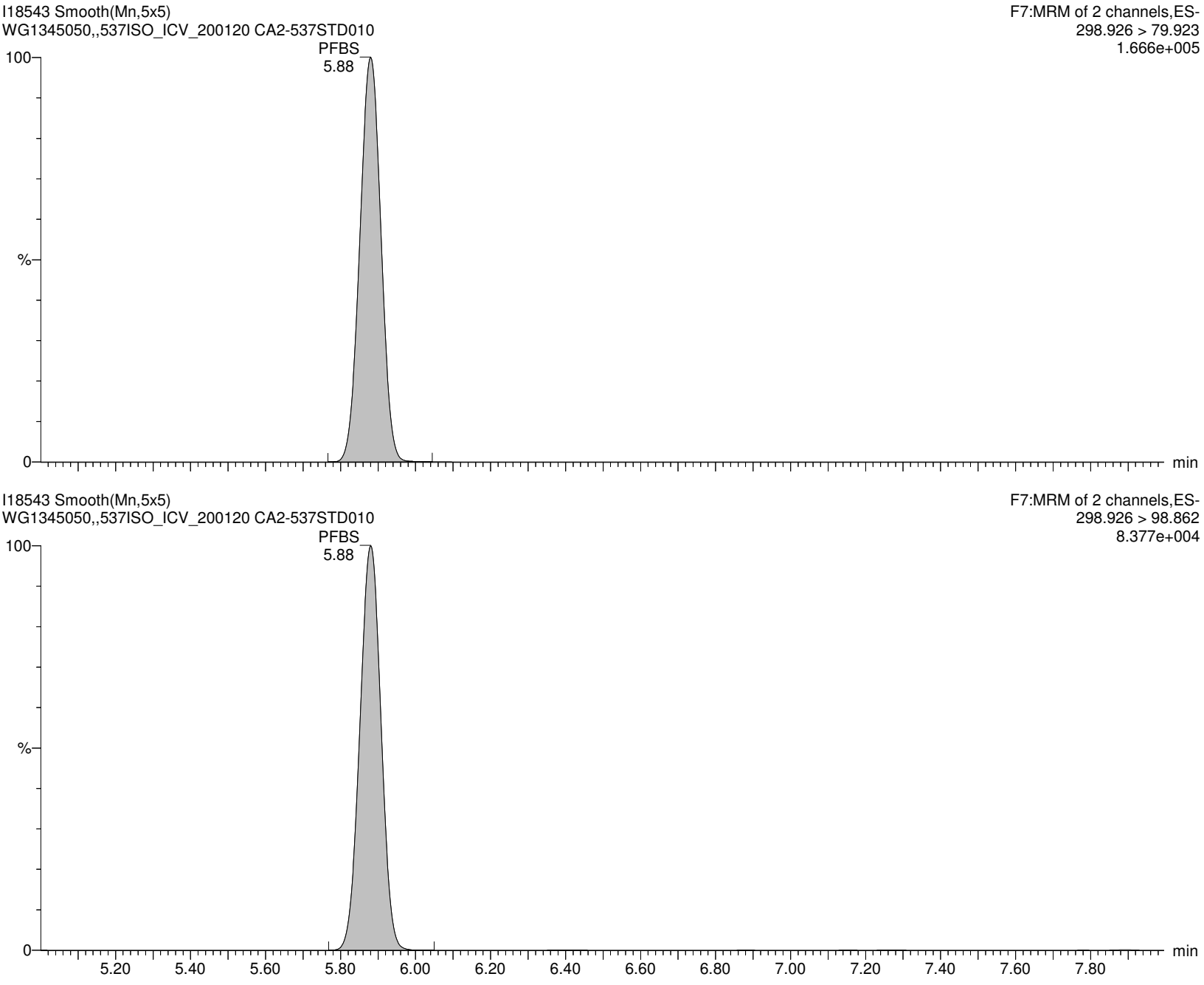
**PFBS**





all concentration units in (ng/mL)

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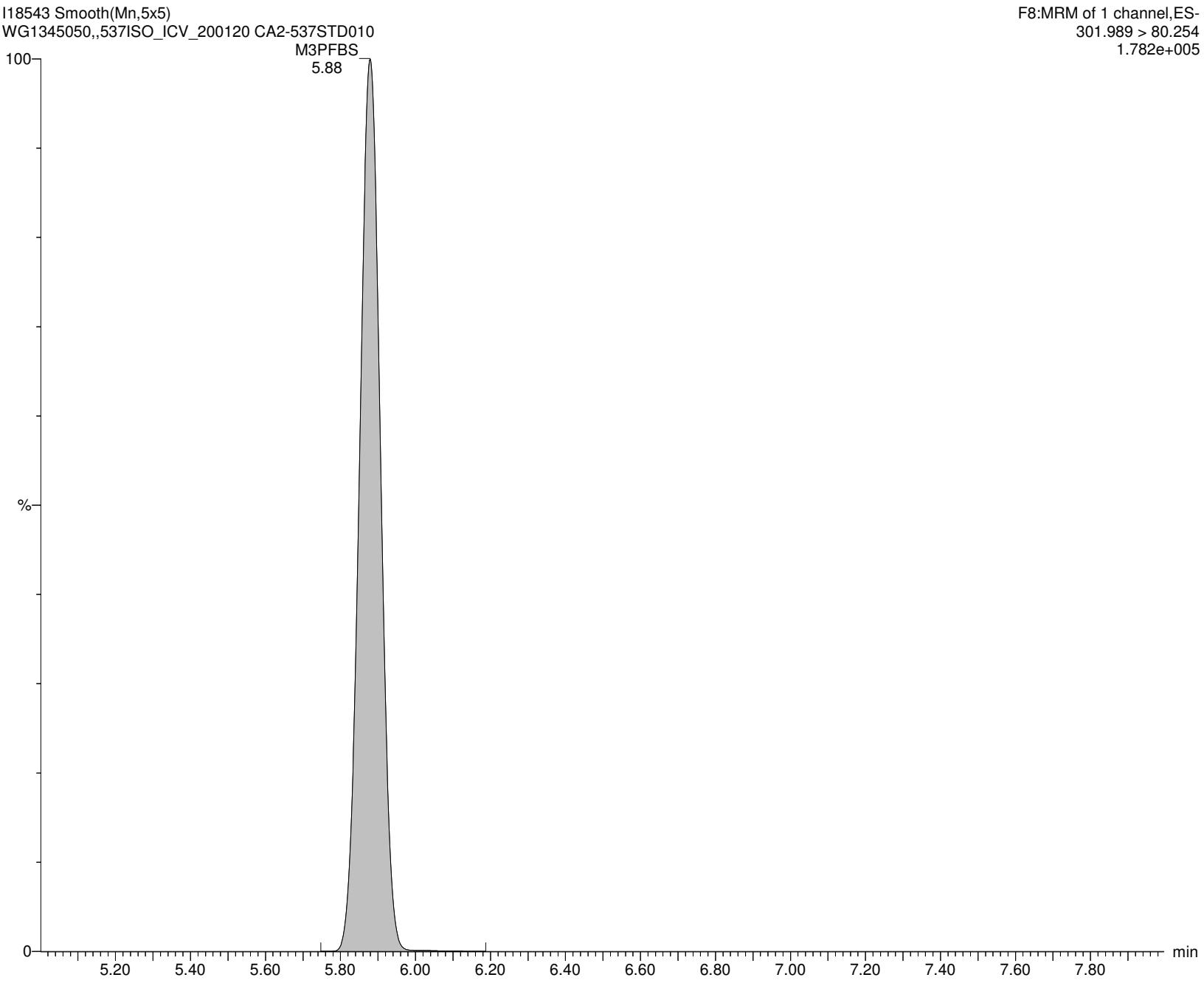
**M3PFBS**





all concentration units in (ng/mL)

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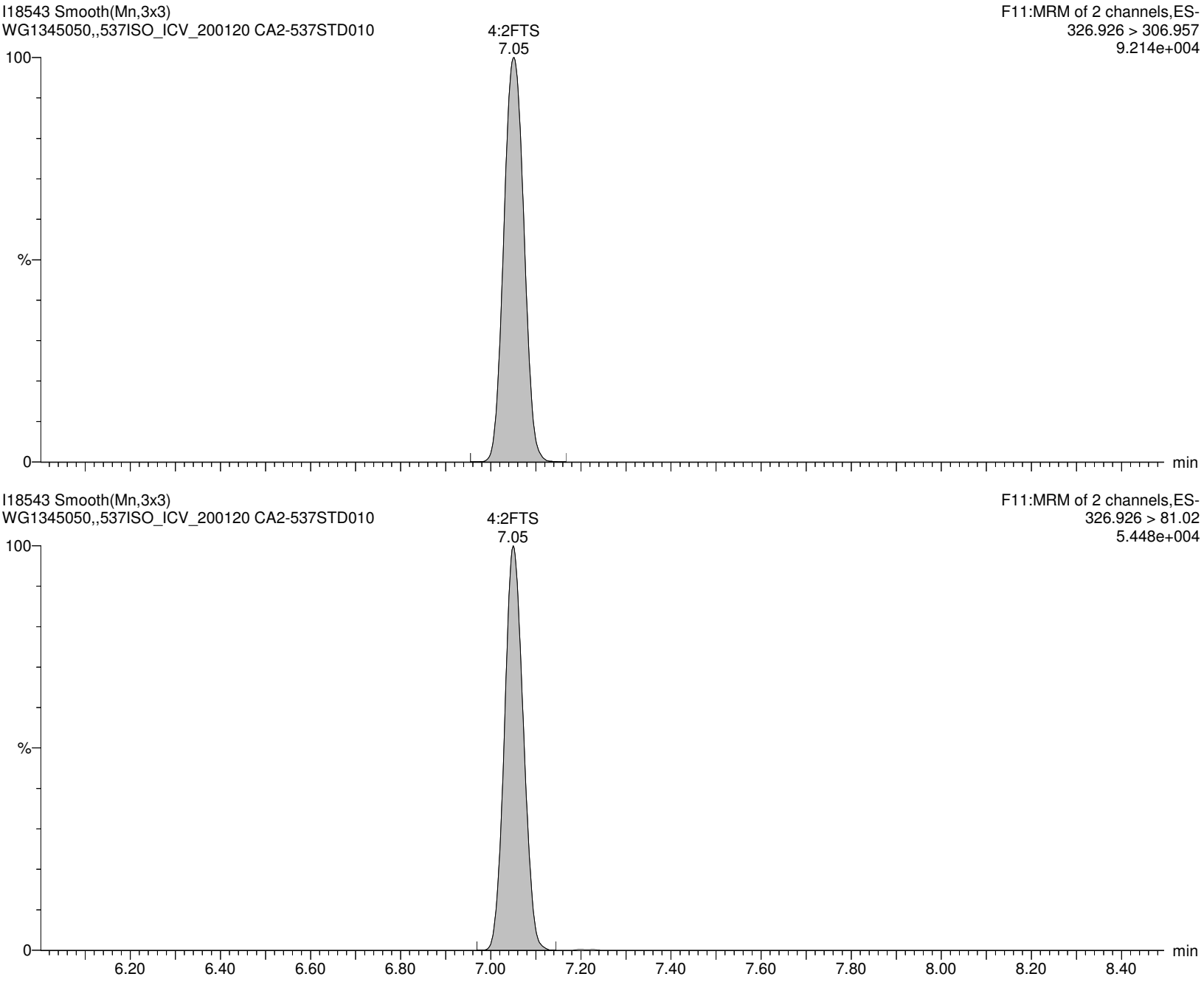
**4:2FTS**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICV.qld
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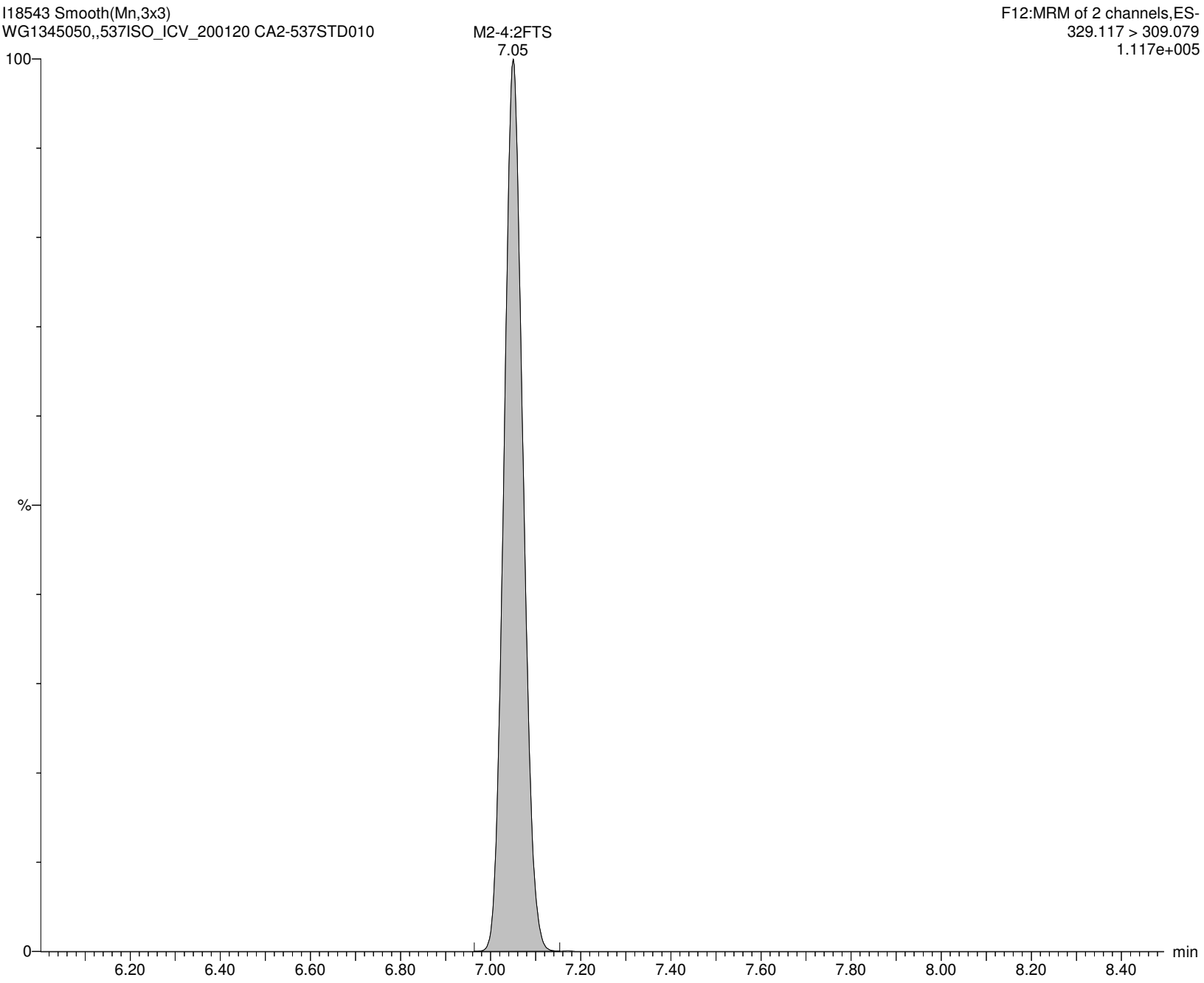
**M2-4:2FTS**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICV.qld
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**Instrument: XEVO-TQSmicro#QEA0276**
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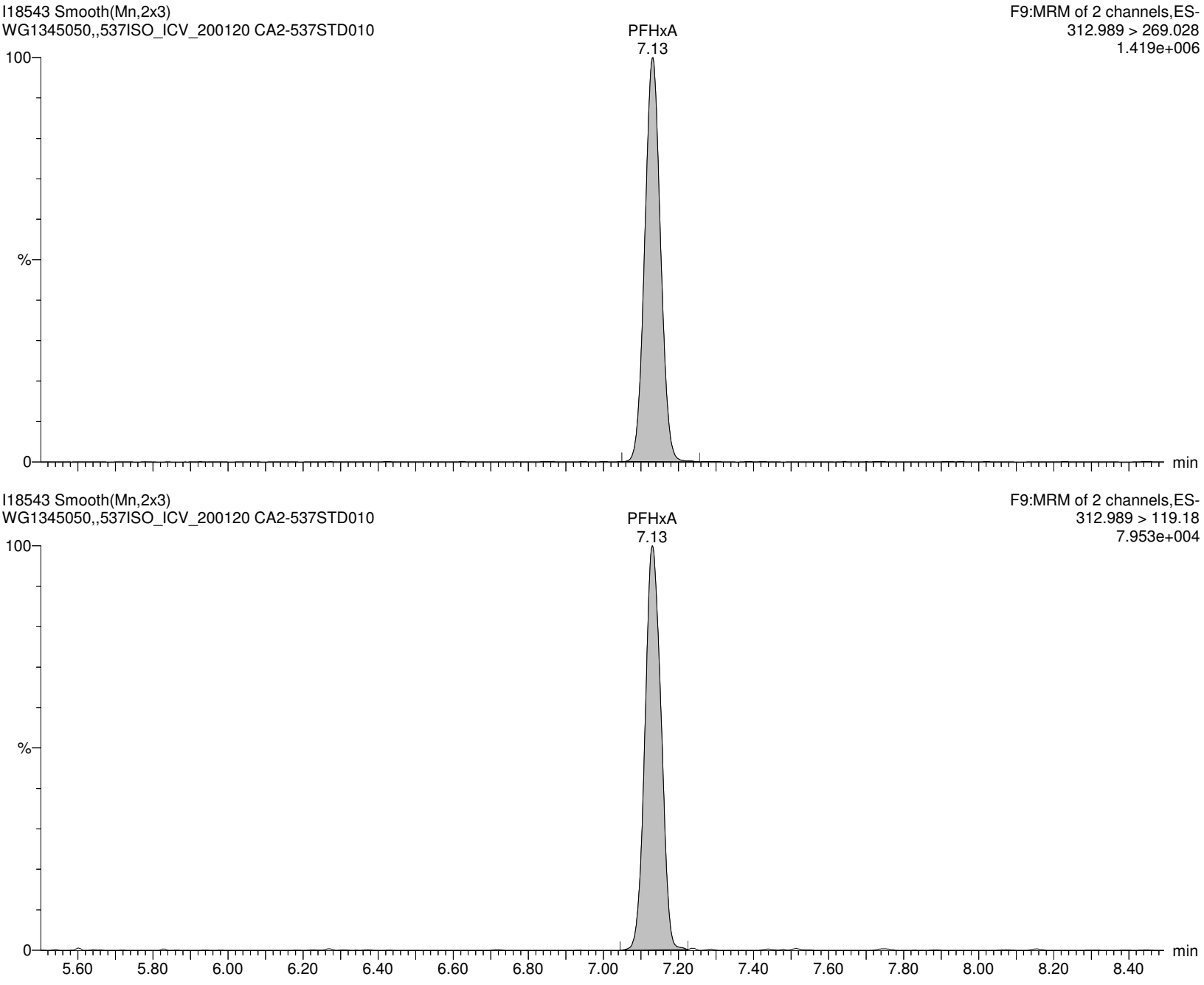
**PFHxA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
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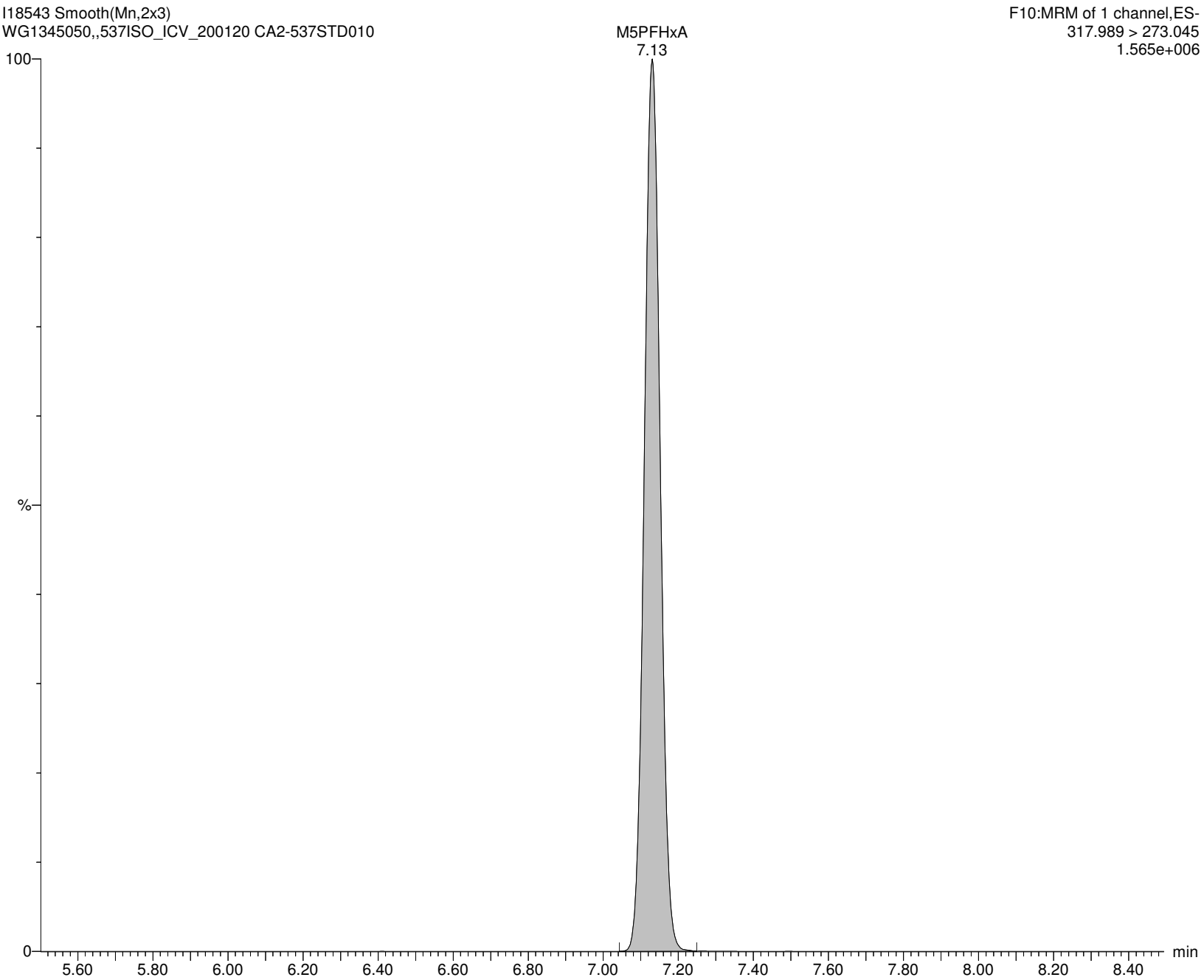
**M5PFHxA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICV.qld
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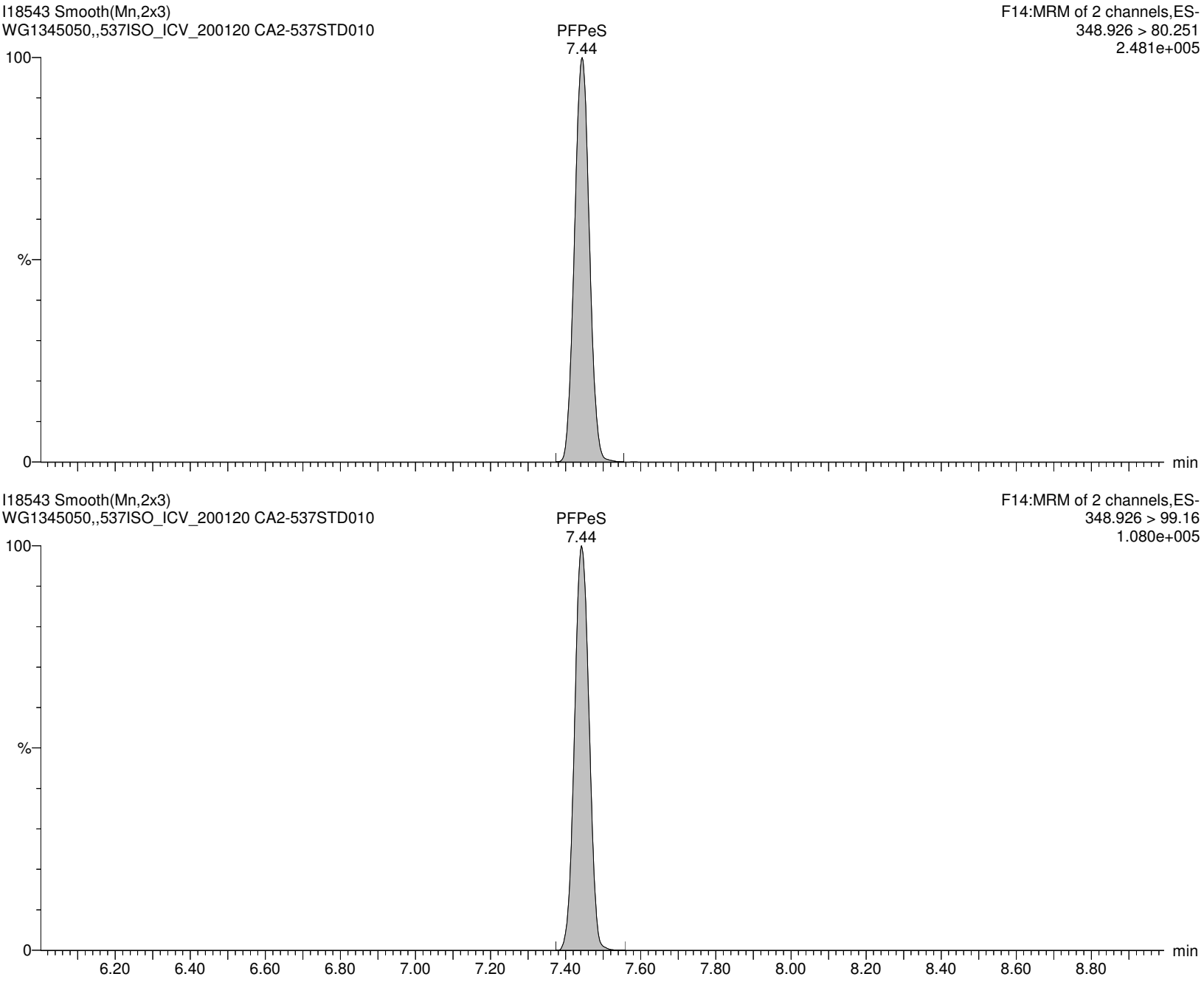
**PFPeS**





all concentration units in (ng/mL)

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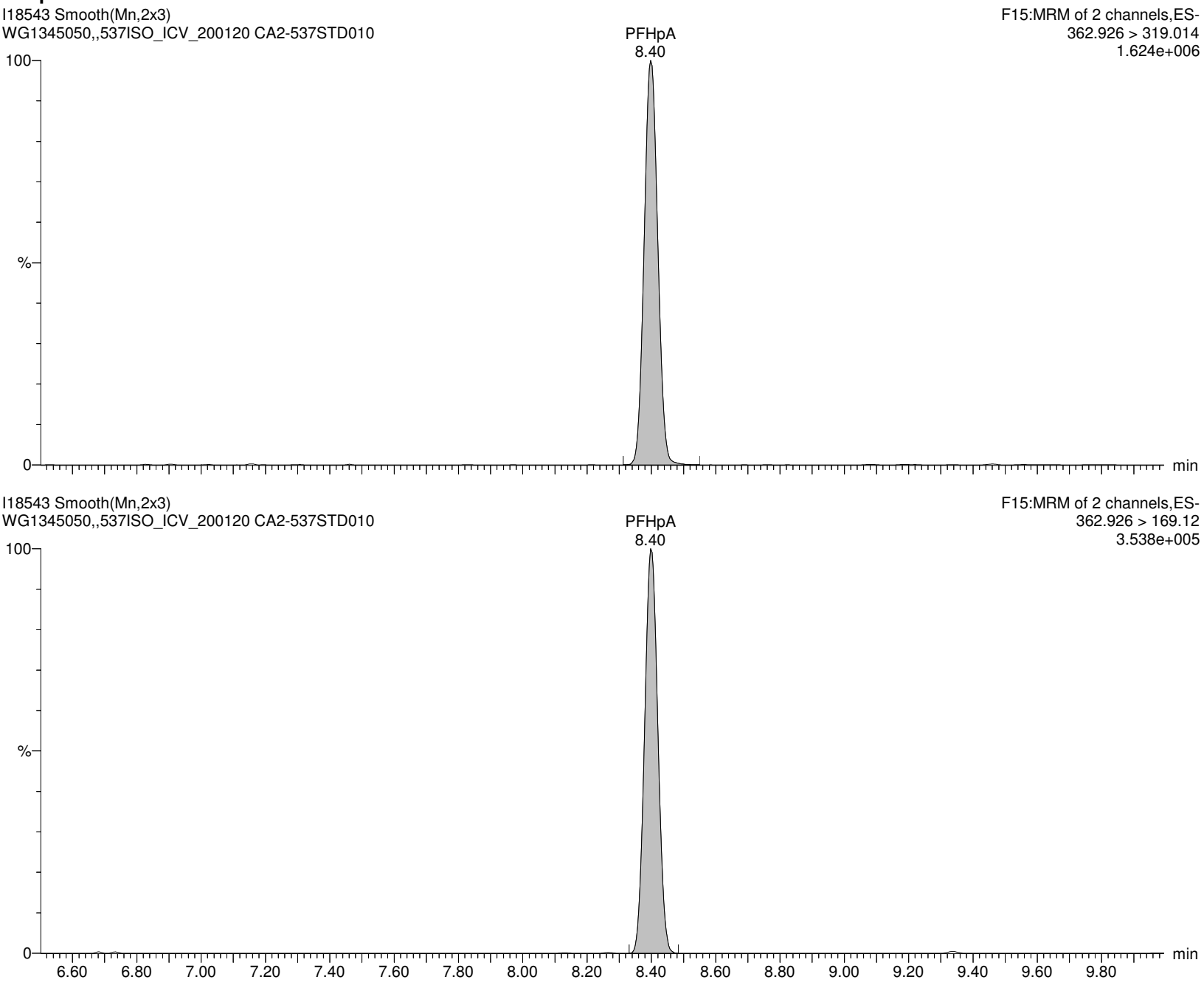
**PFHpA**





all concentration units in (ng/mL)

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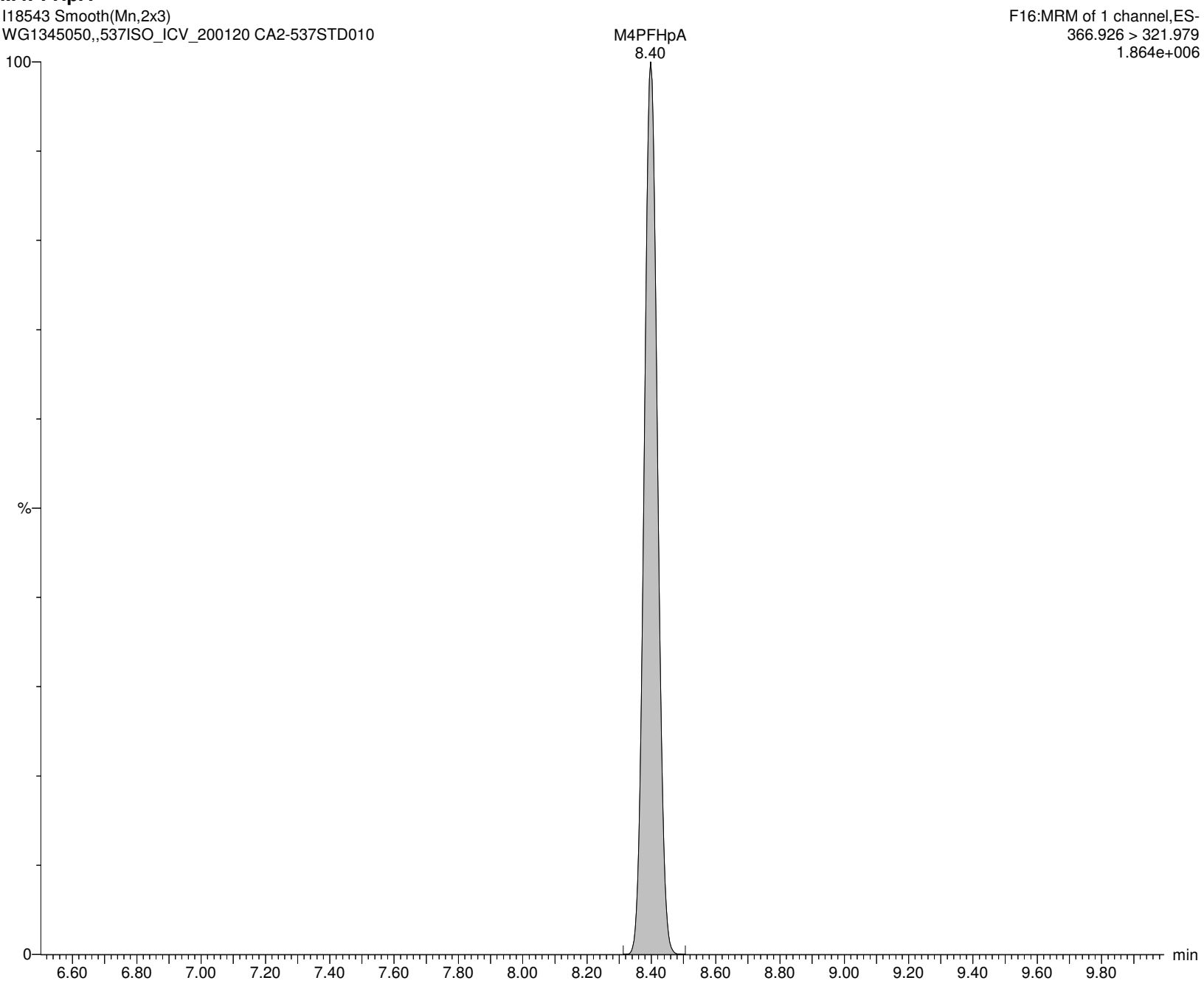
**M4PFHpA**





all concentration units in (ng/mL)

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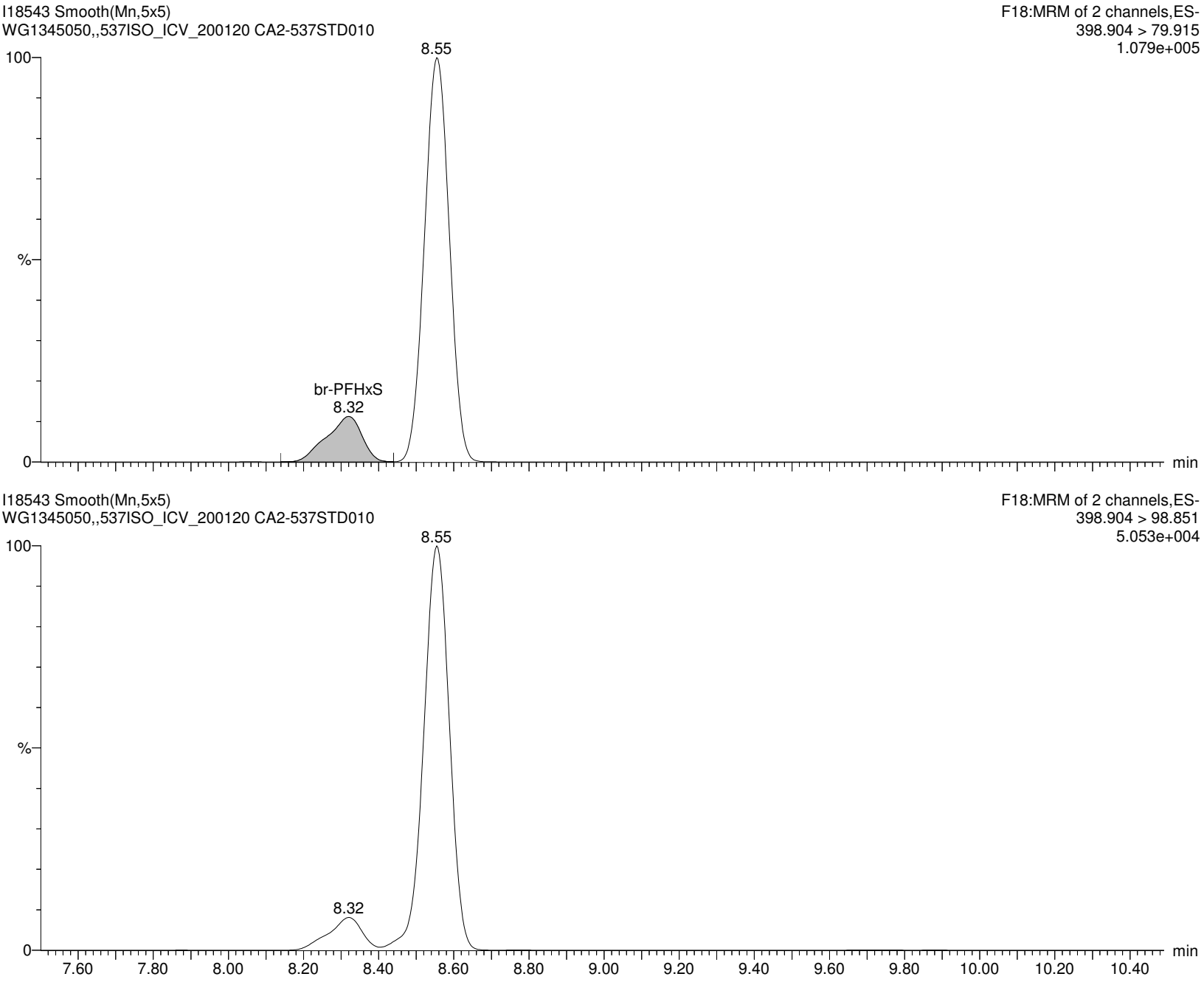
**br-PFHxS**





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**Vial: 1:B,7**
**Instrument: XEVO-TQSmicro#QEA0276**
**Inlet Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\LCMS_537_ISO_MeOH**
**Tune Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\190709_TUNE.IPR**
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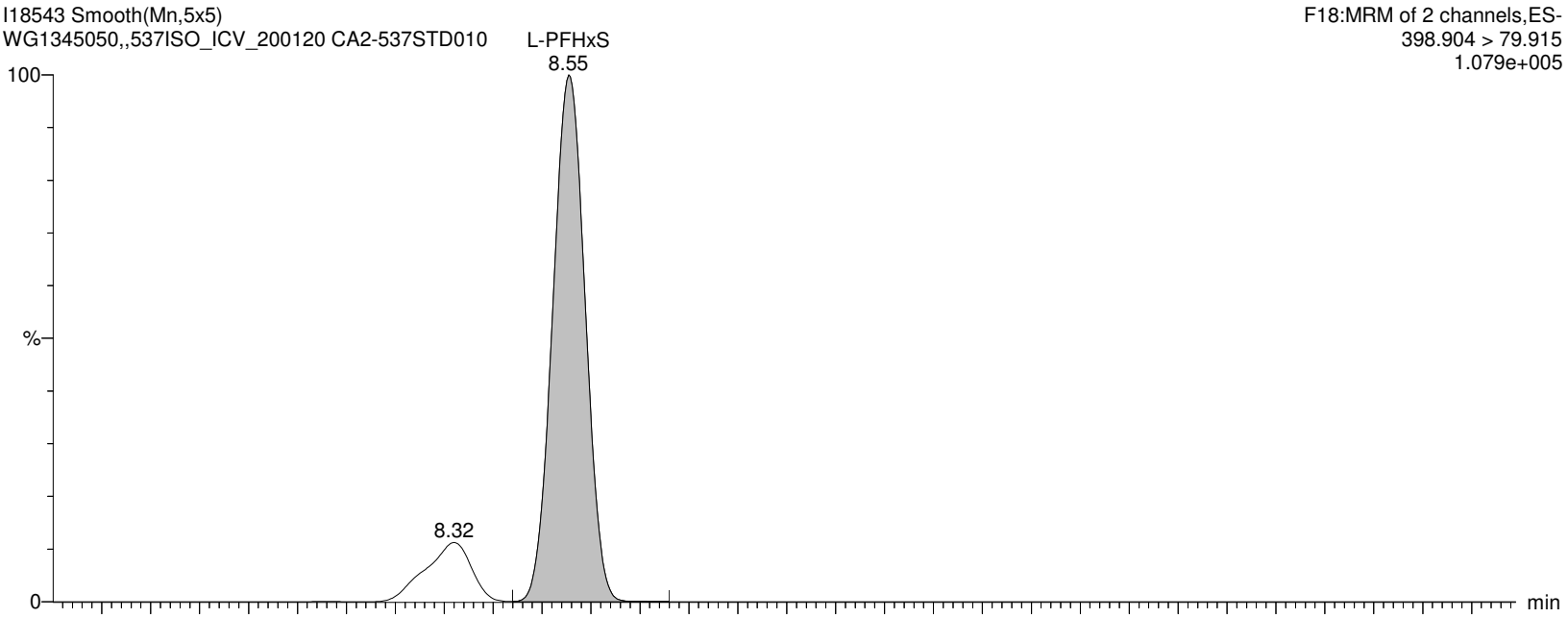


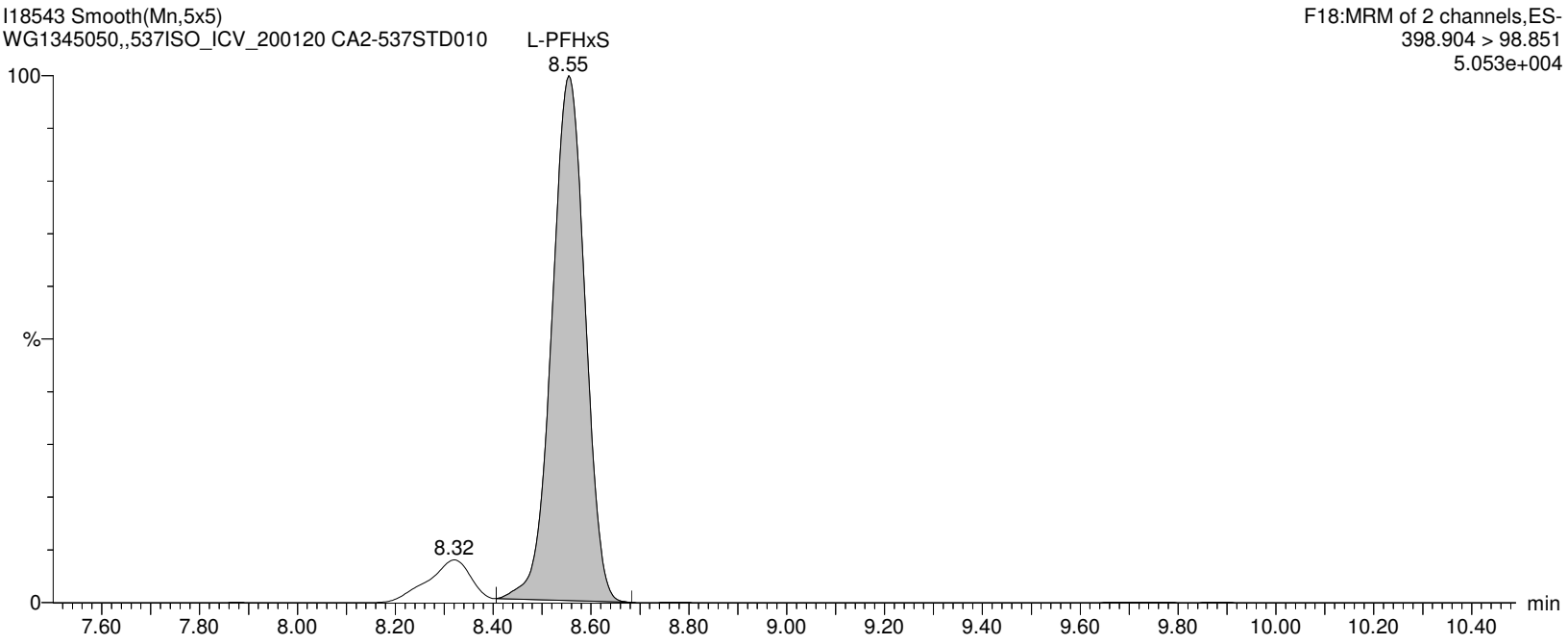



all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICV.qld
Last Altered: Friday, February 28, 2020 09:22:22 Eastern Standard Time
Printed: Friday, February 28, 2020 09:23:05 Eastern Standard Time

**Name: I18543**
**ID: CA2-537STD010**
**Date: 27-Feb-2020**
**Time: 18:59:36**
**Description: WG1345050,,537ISO_ICV_200120**
**User: LCMS01:JW**
**Vial: 1:B,7**
**Instrument: XEVO-TQSmicro#QEA0276**
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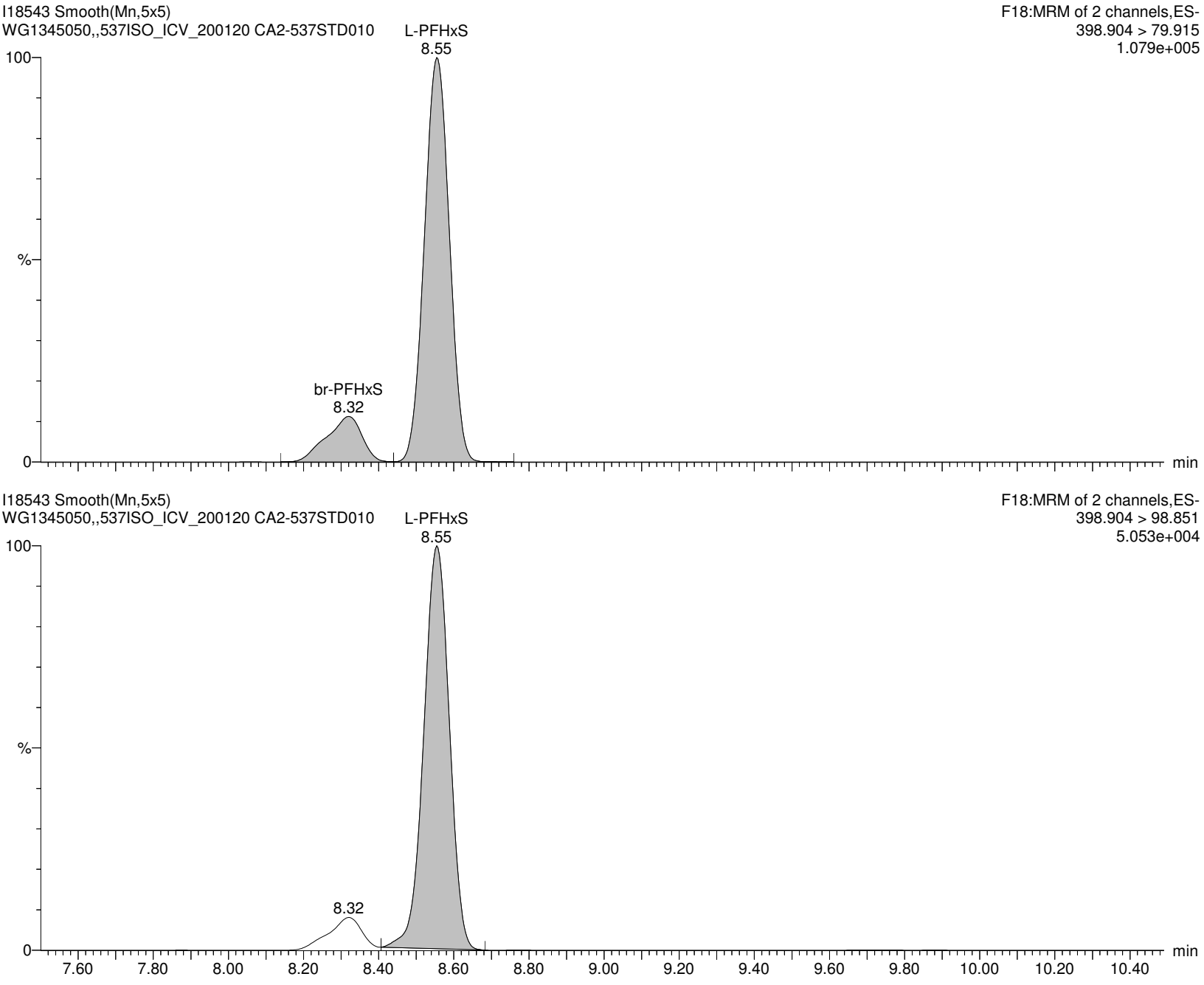
**PFHxS**





all concentration units in (ng/mL)

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**Vial: 1:B,7**
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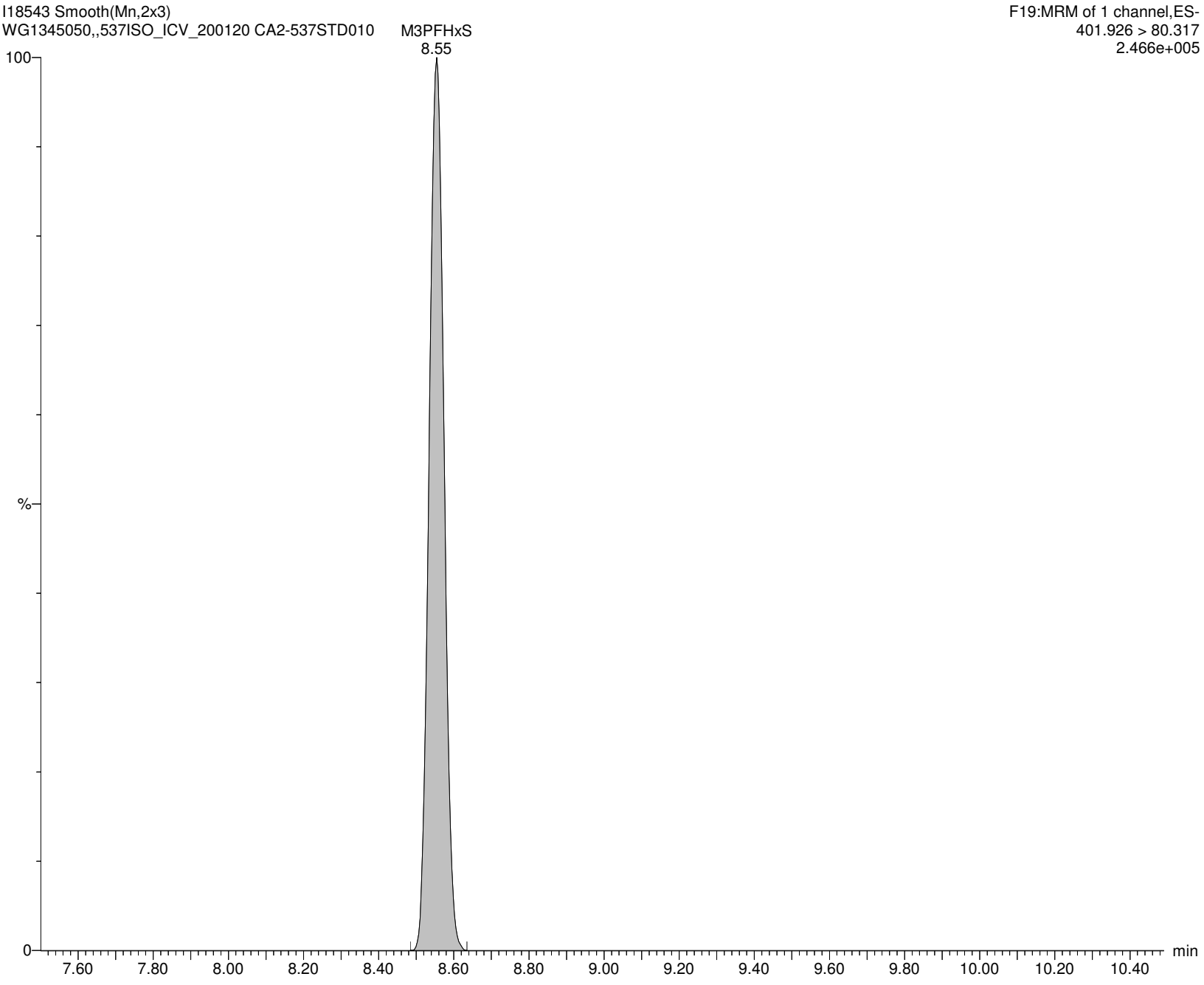
**M3PFHxS**





all concentration units in (ng/mL)

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**Vial: 1:B,7**
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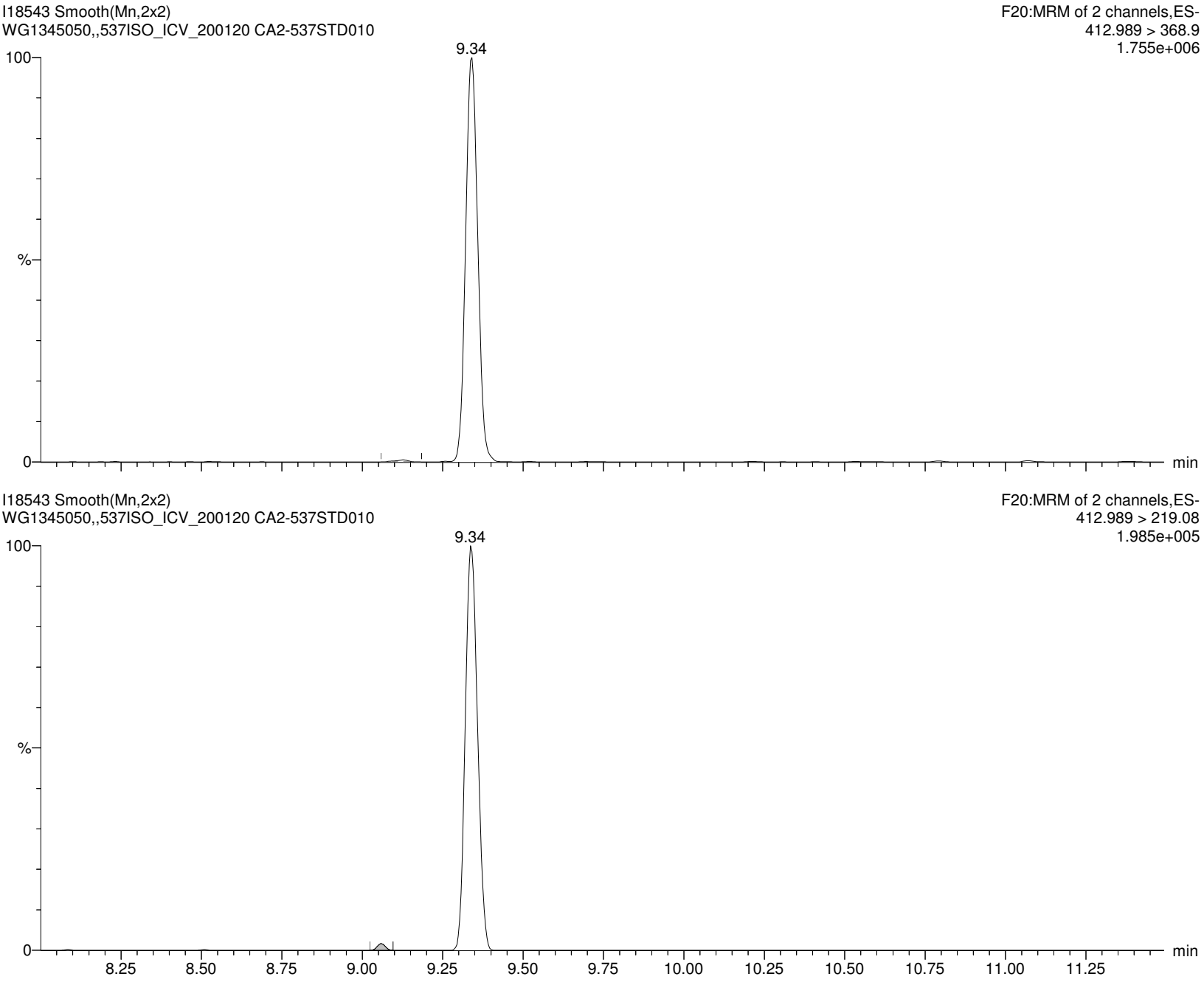



all concentration units in (ng/mL)

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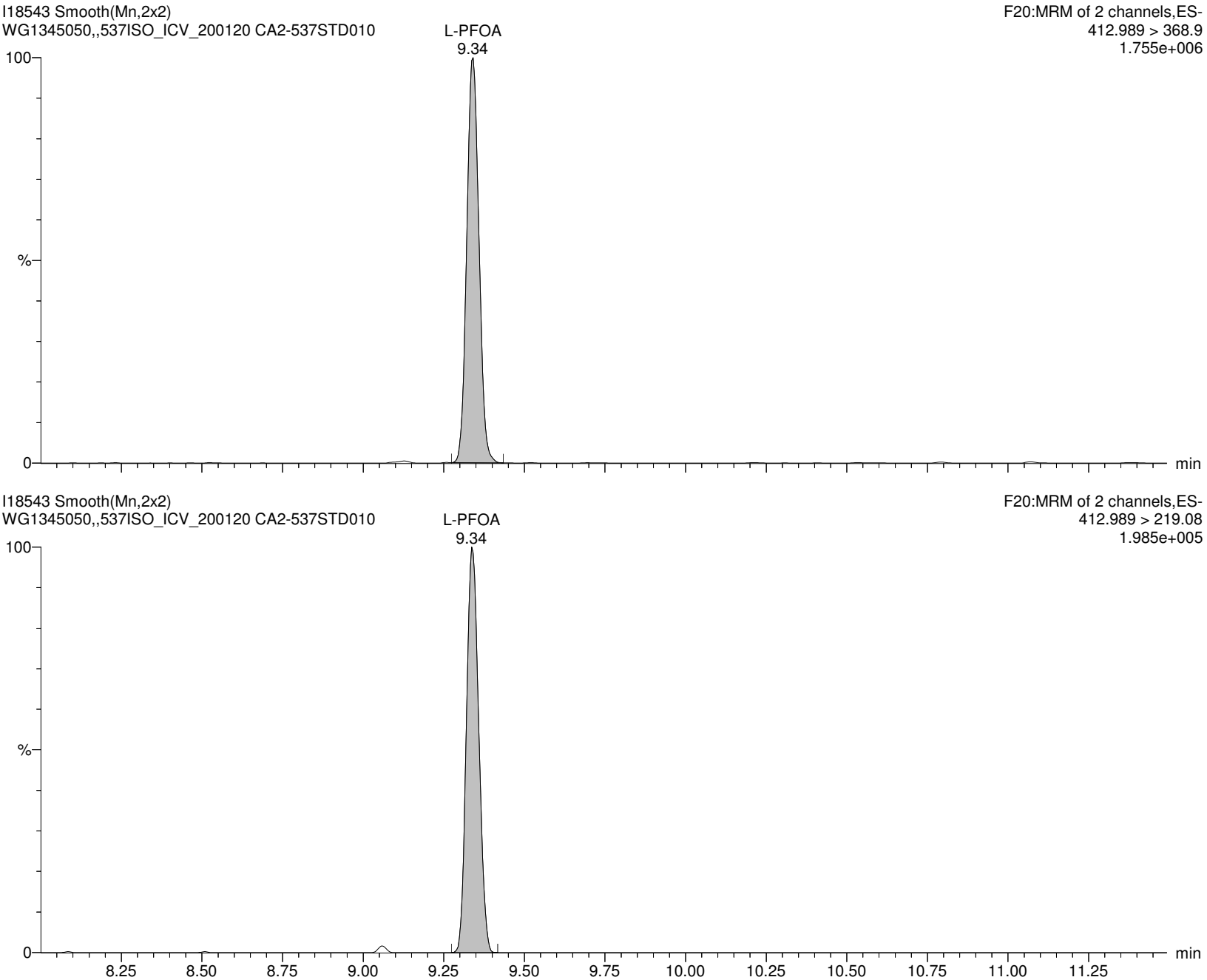



all concentration units in (ng/mL)

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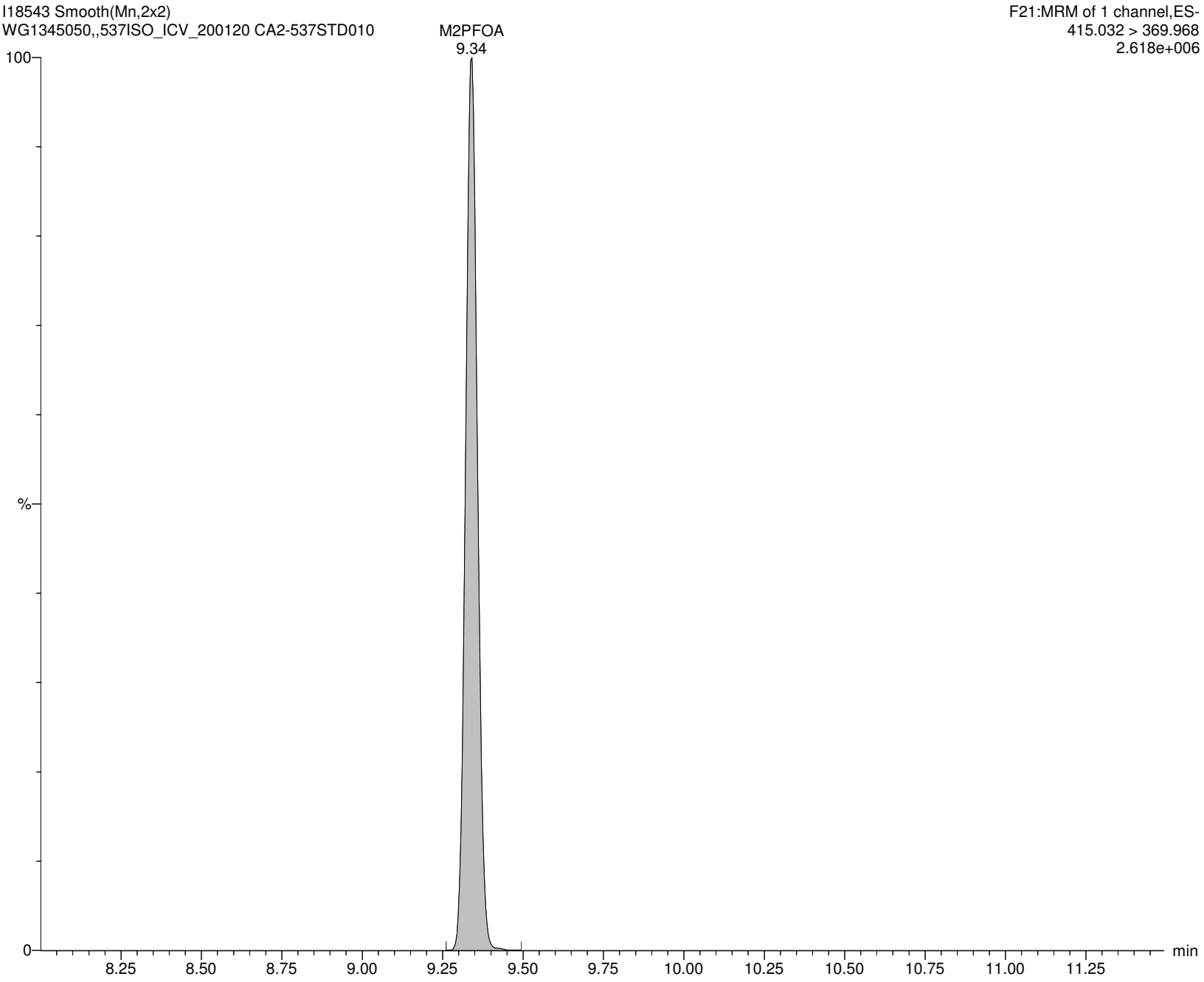
**M2PFOA**





all concentration units in (ng/mL)

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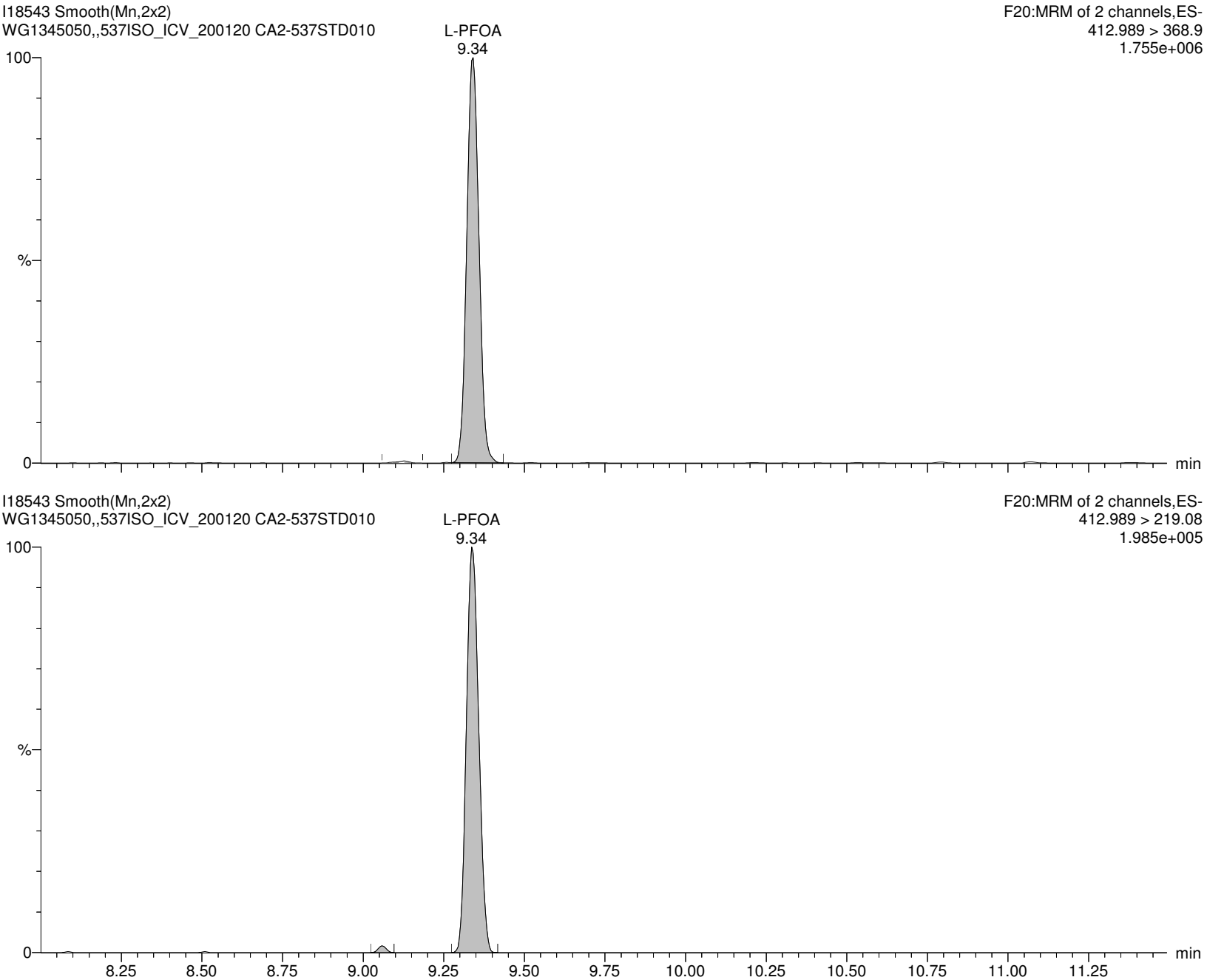



all concentration units in (ng/mL)

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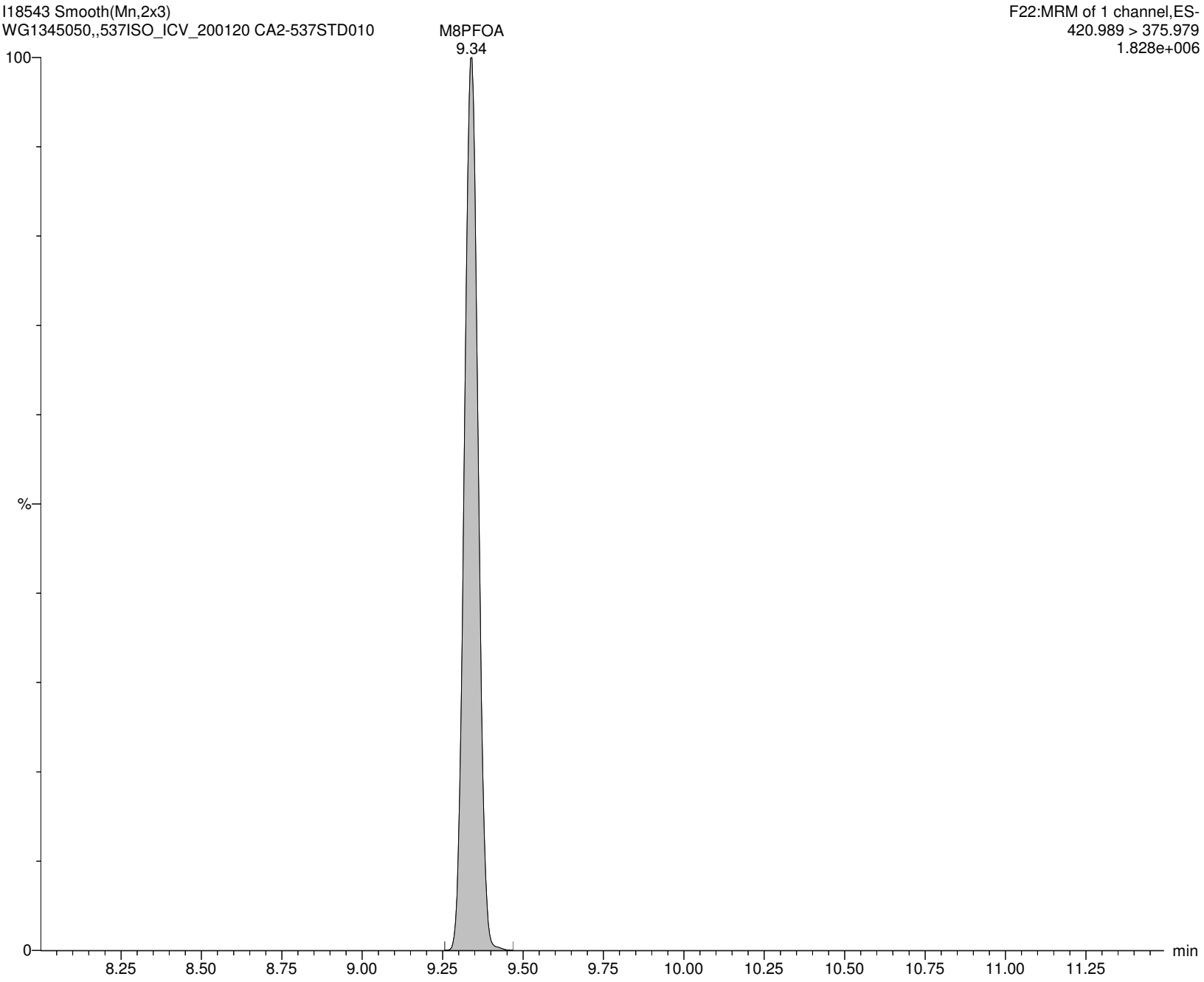
**M8PFOA**





all concentration units in (ng/mL)

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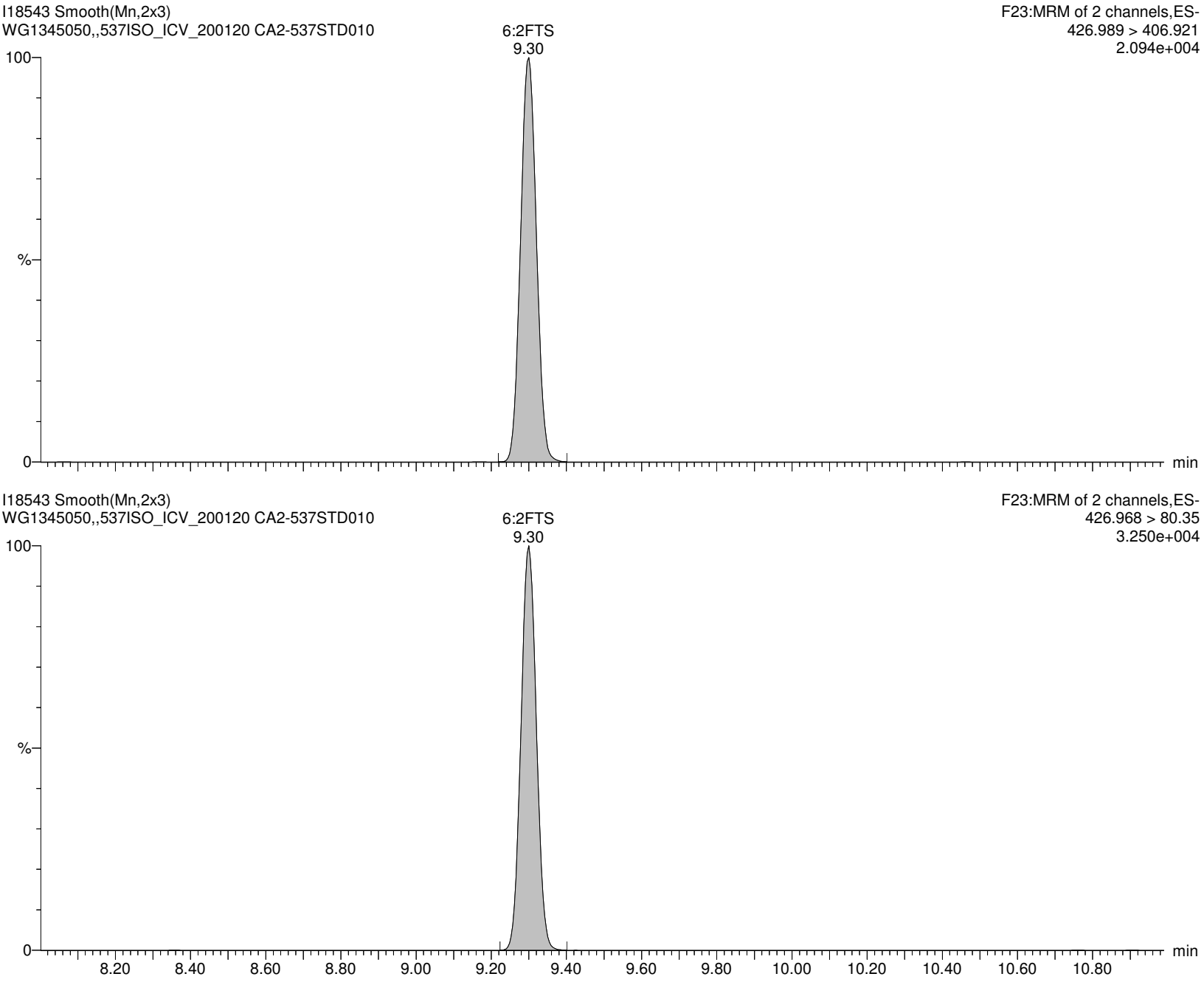
**6:2FTS**





all concentration units in (ng/mL)

Alpha Analytical Inc.
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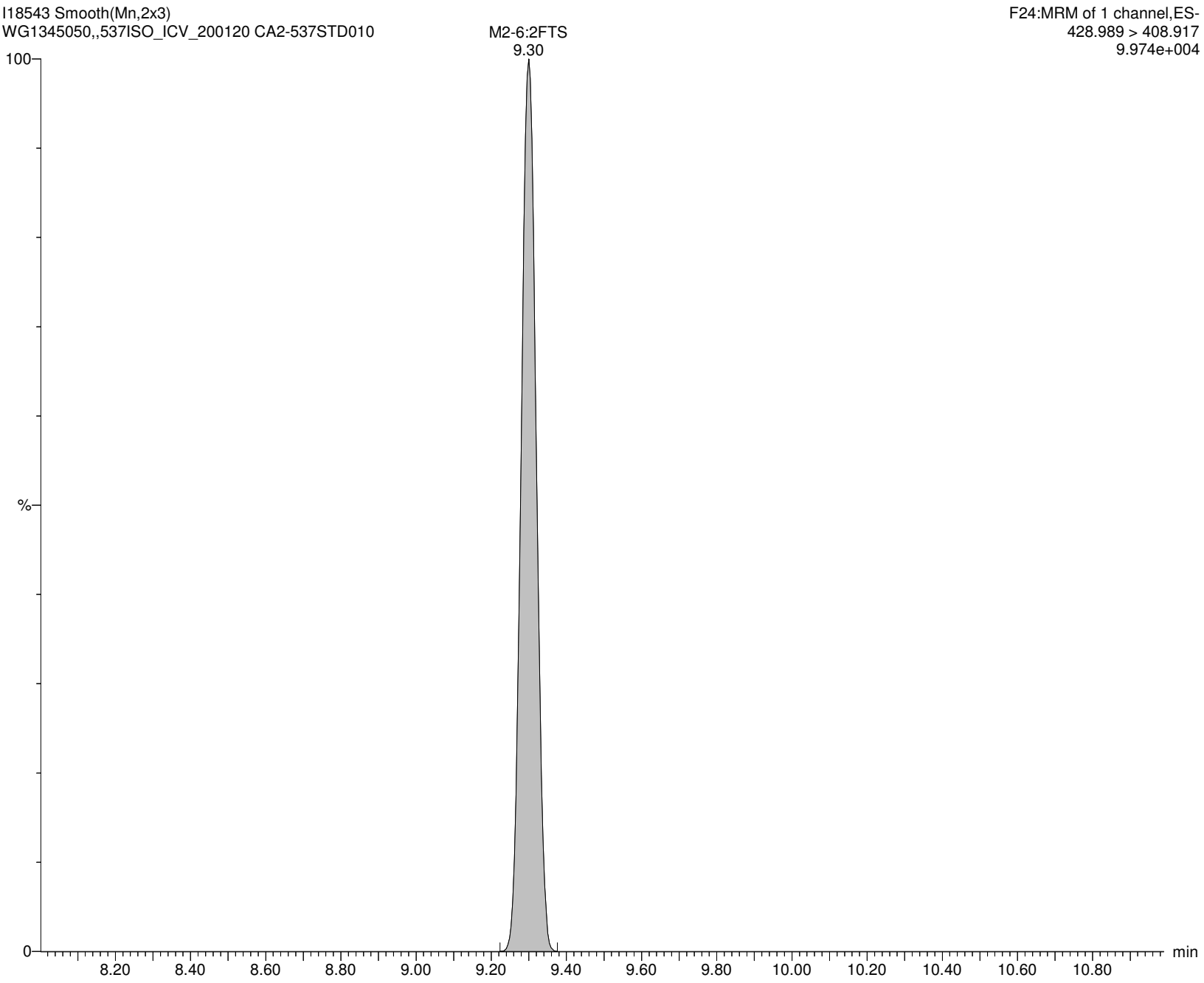
**M2-6:2FTS**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICV.qld
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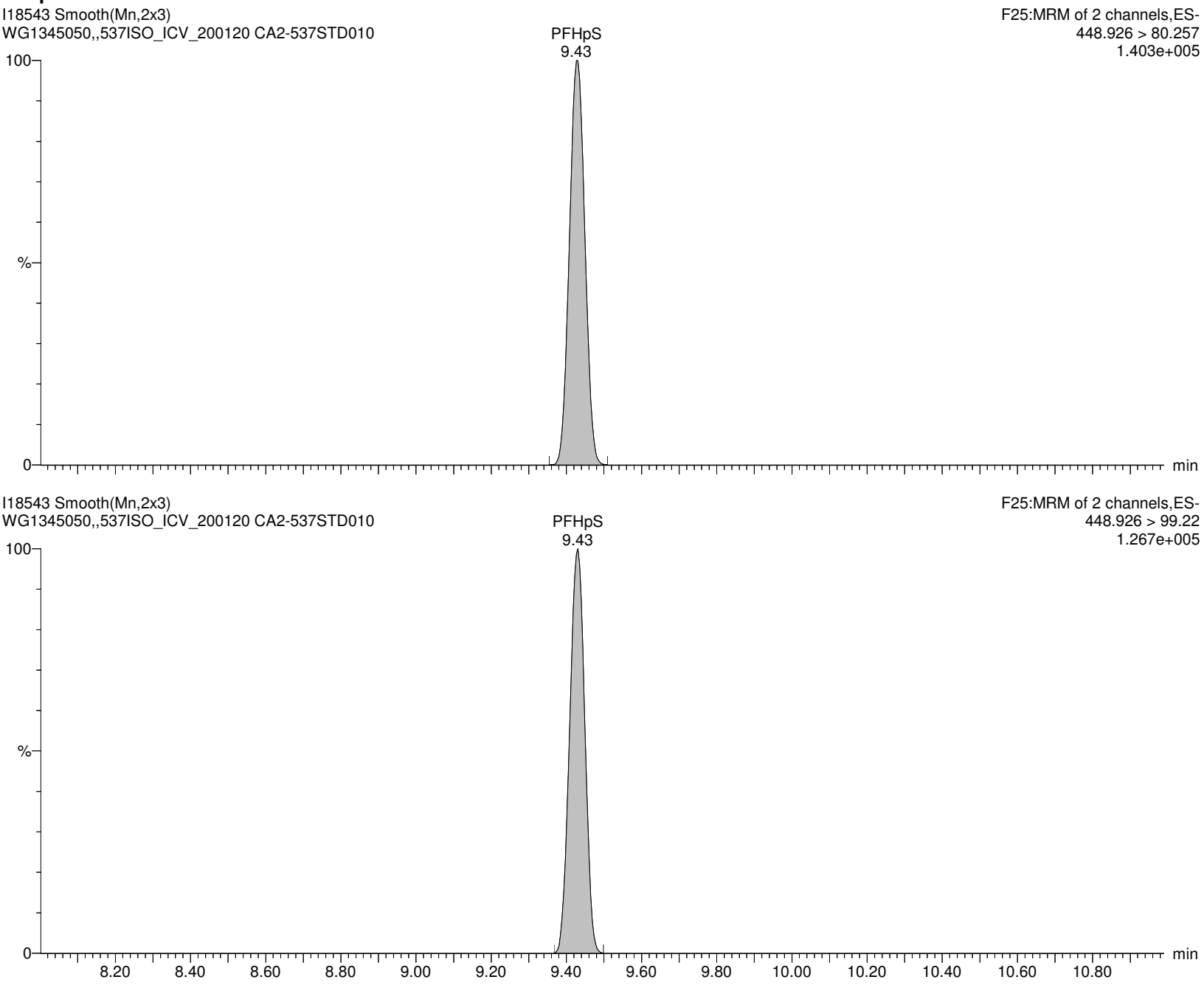
**MS Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**PFHpS**





all concentration units in (ng/mL)

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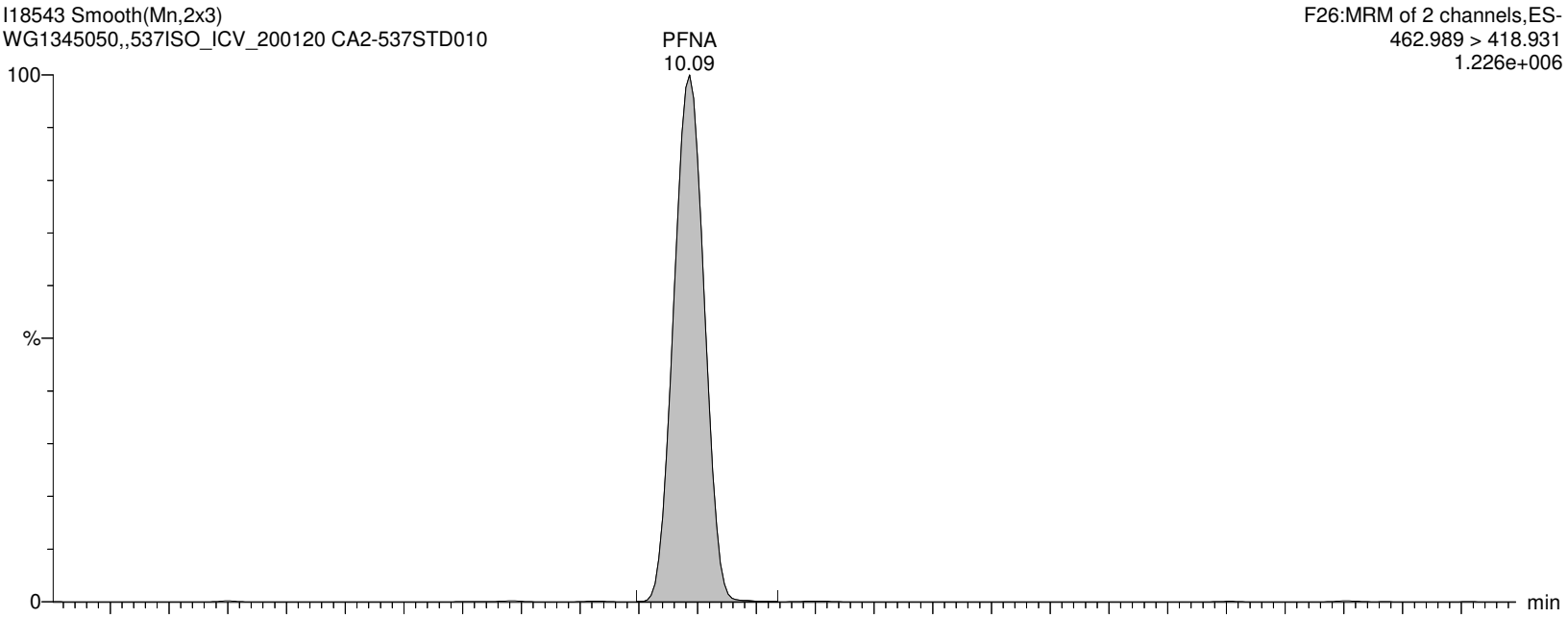
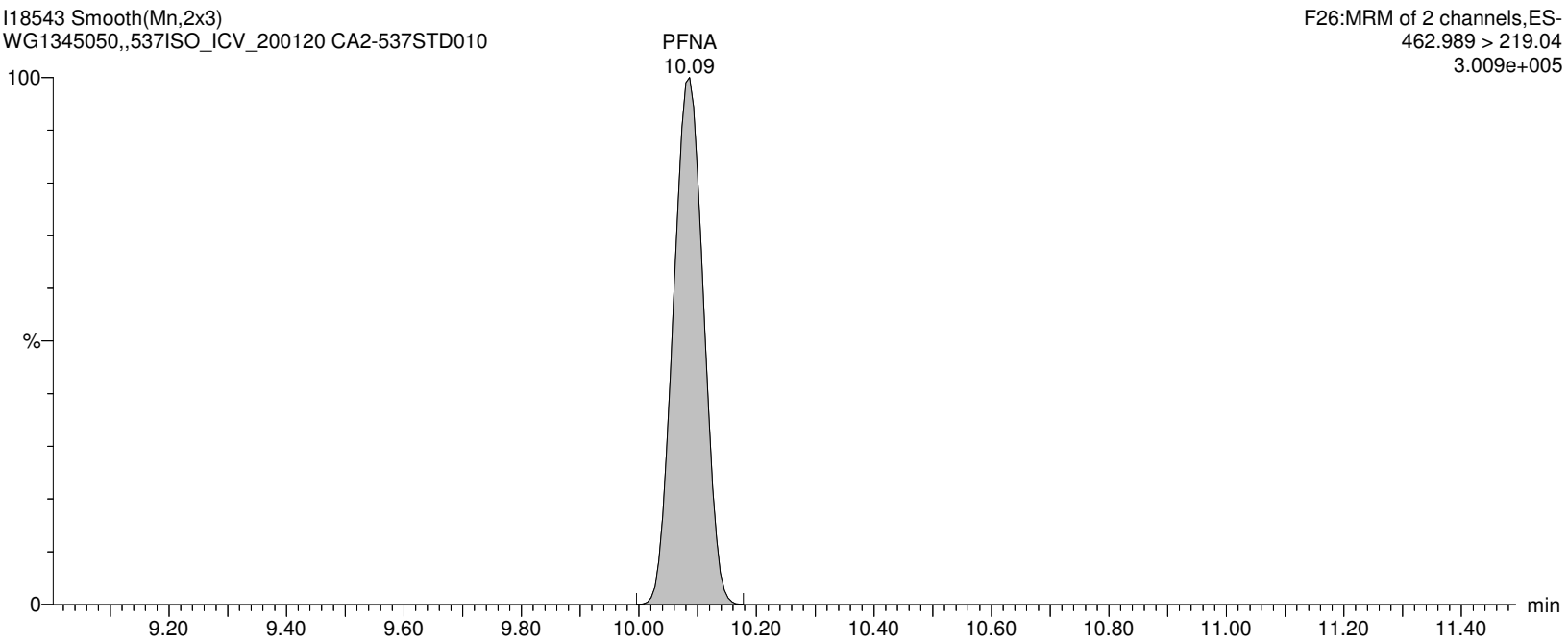
**PFNA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
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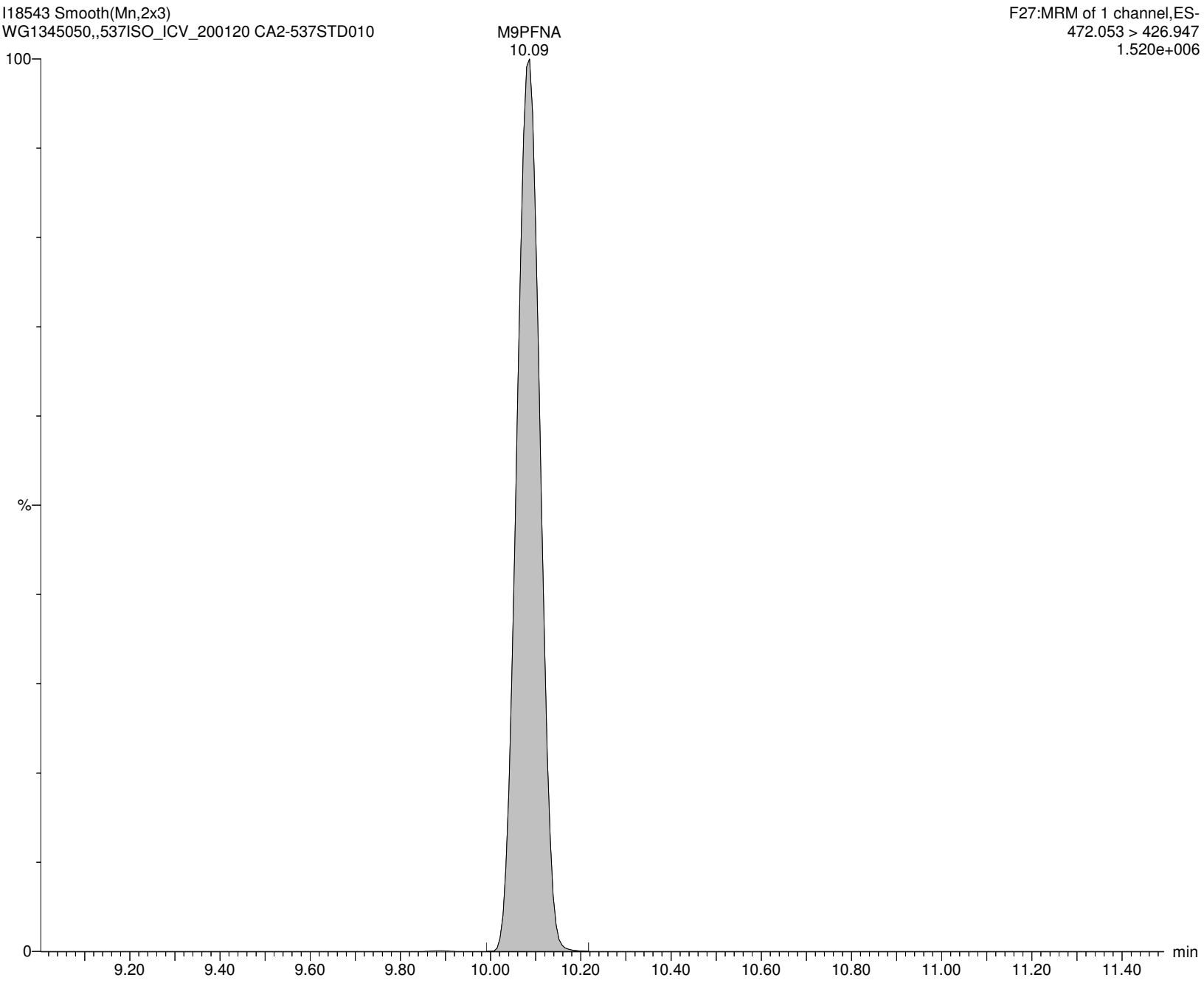



all concentration units in (ng/mL)

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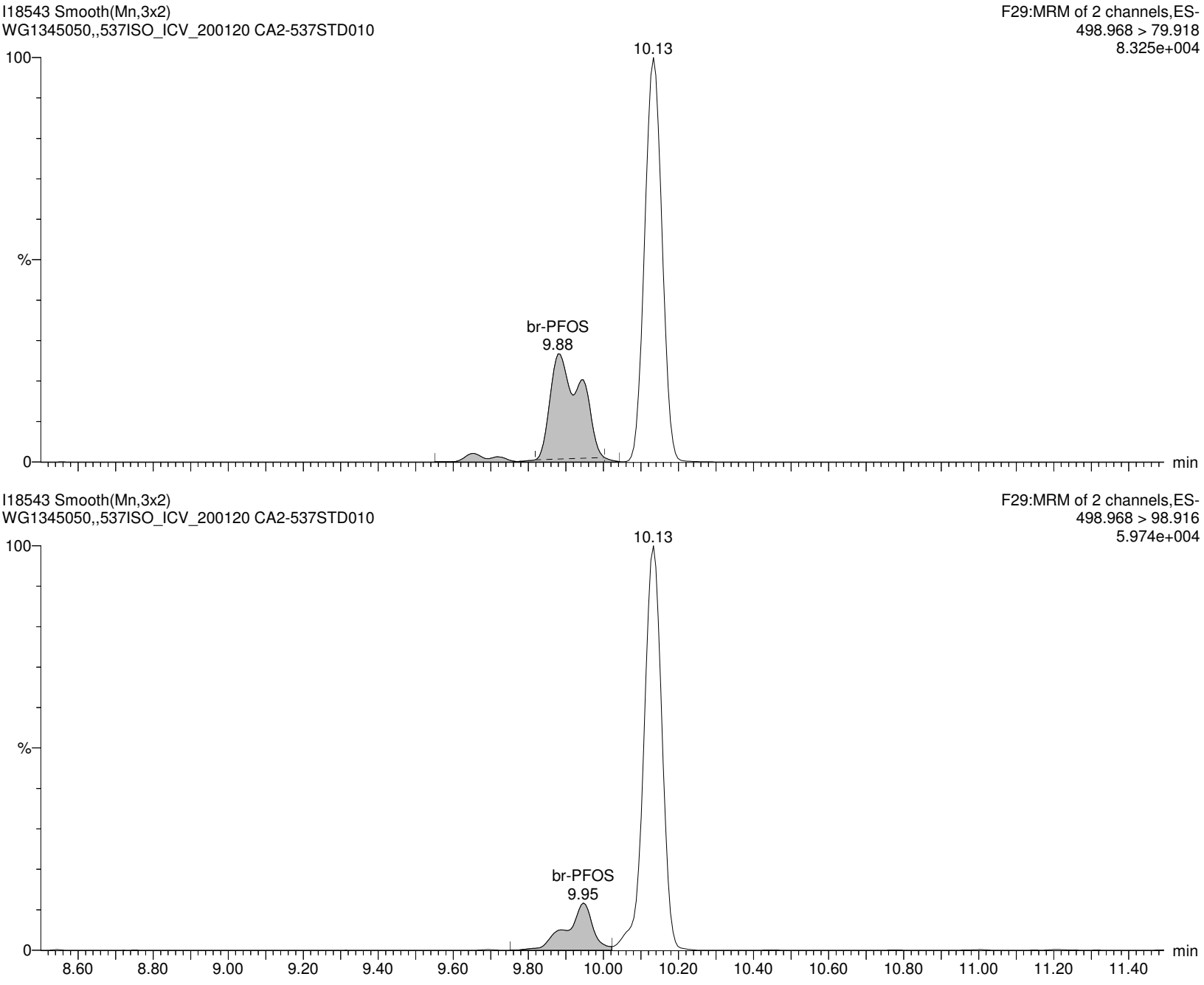
**br-PFOS**





all concentration units in (ng/mL)

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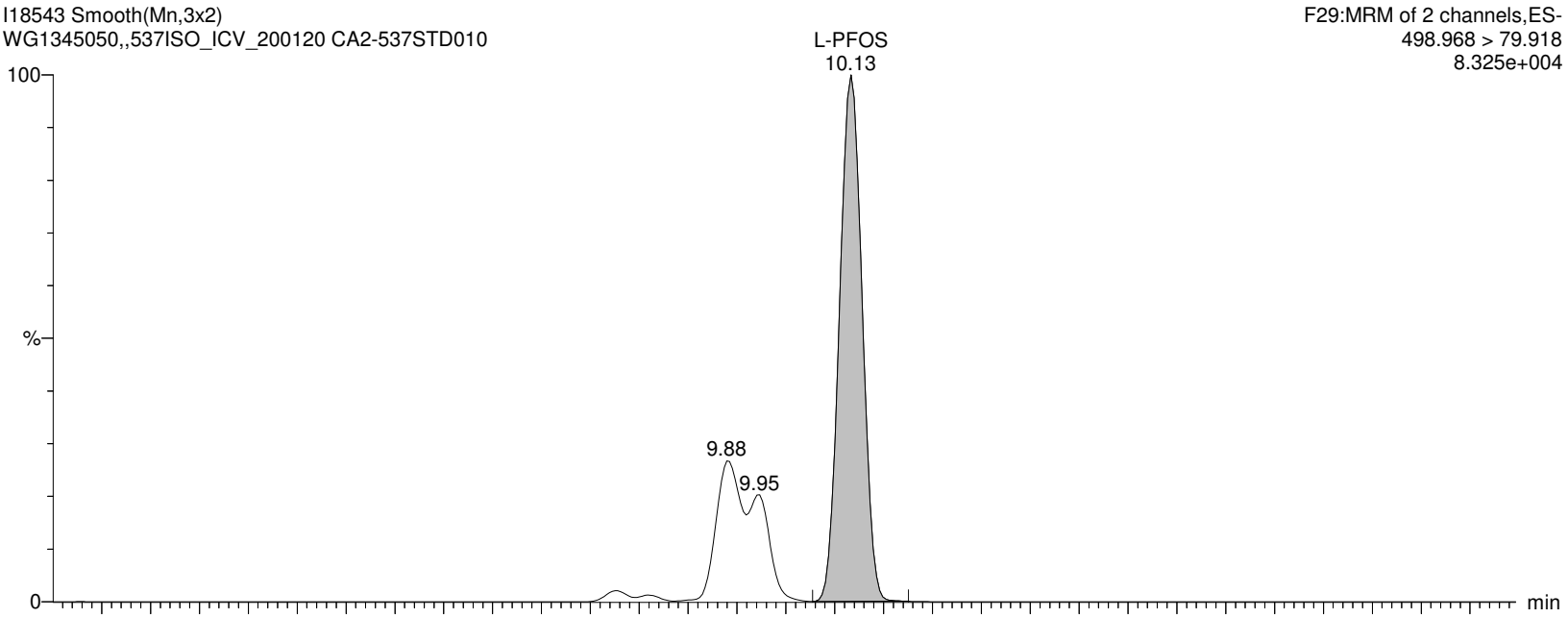
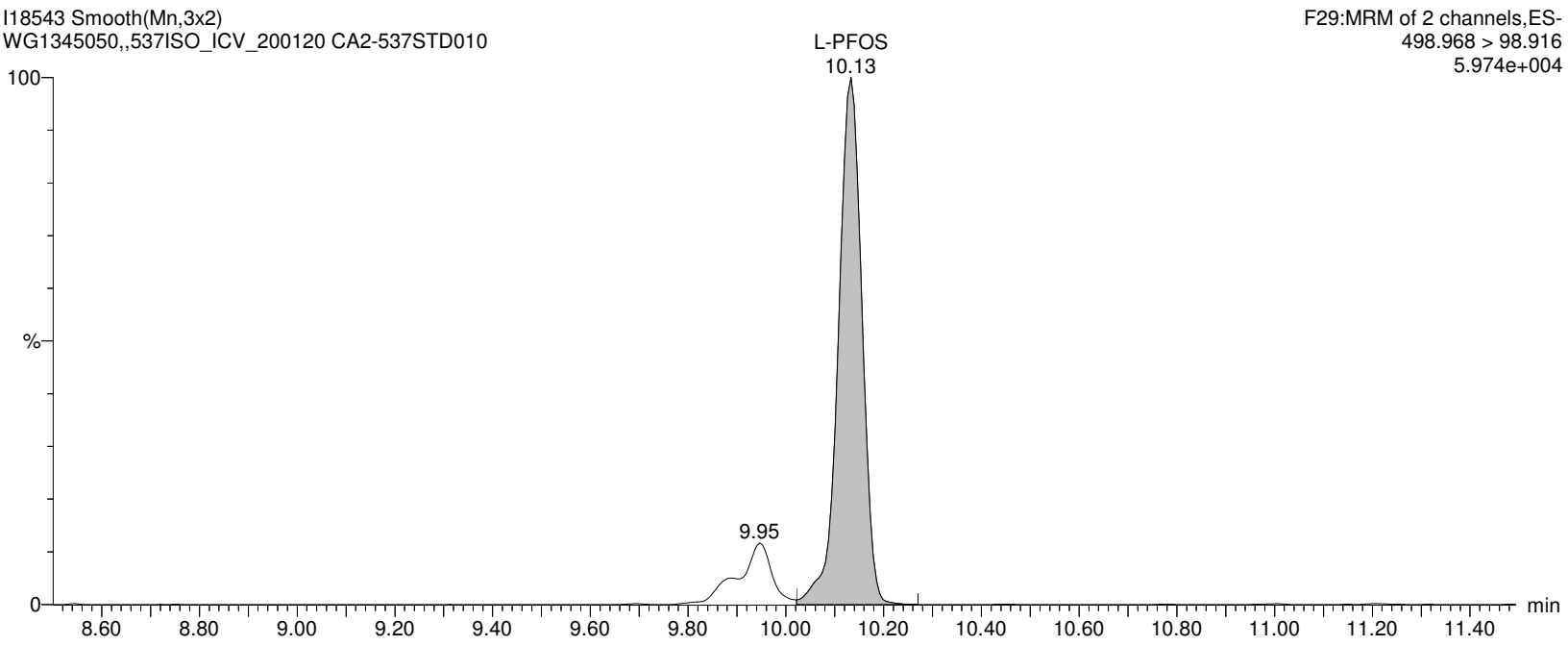
**L-PFOS**





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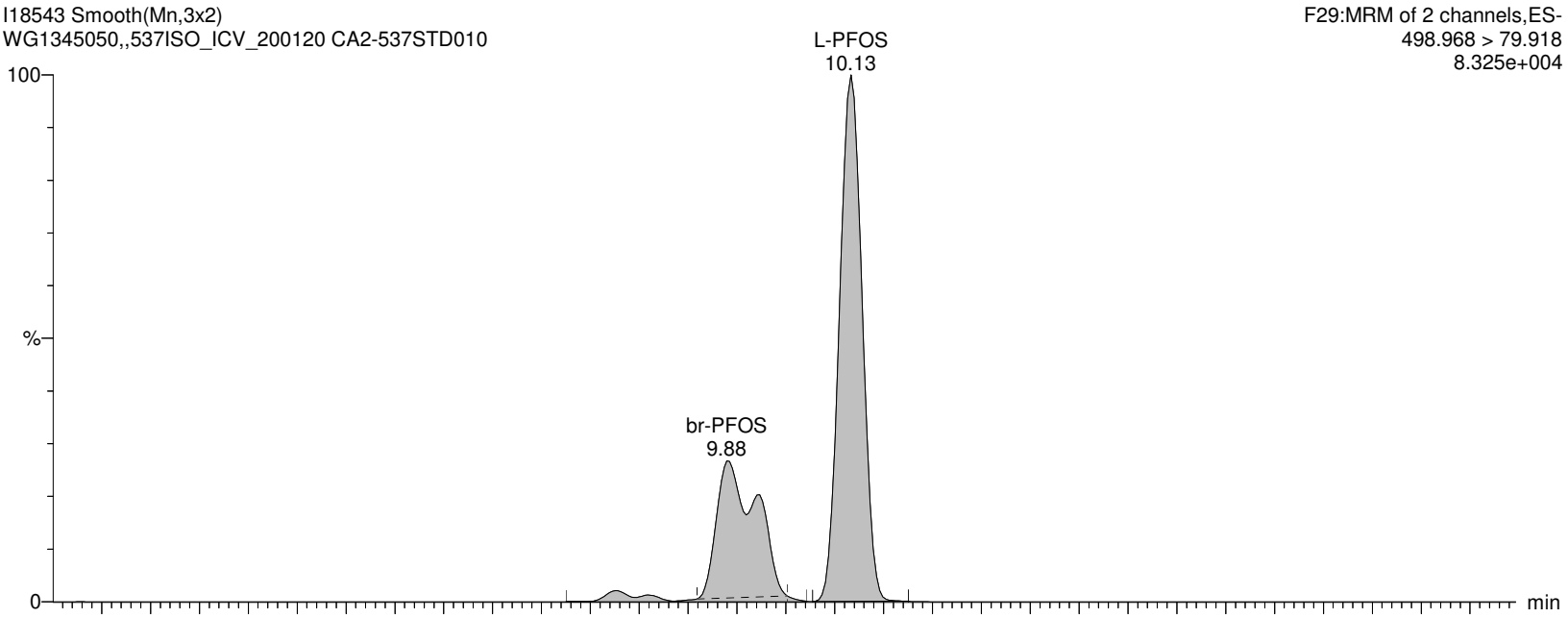


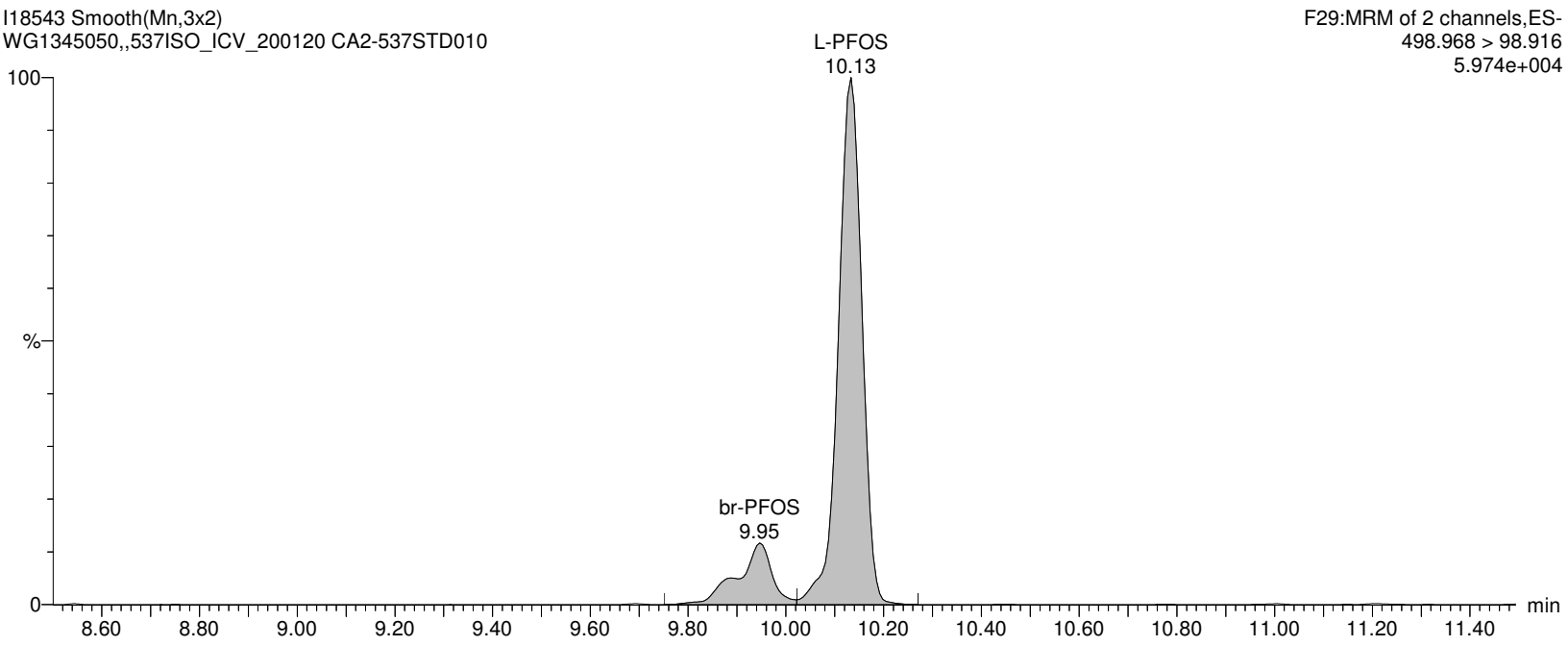



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**Vial: 1:B,7**
**Instrument: XEVO-TQSmicro#QEA0276**
**Inlet Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\LCMS_537_ISO_MeOH**
**Tune Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\190709_TUNE.IPR**
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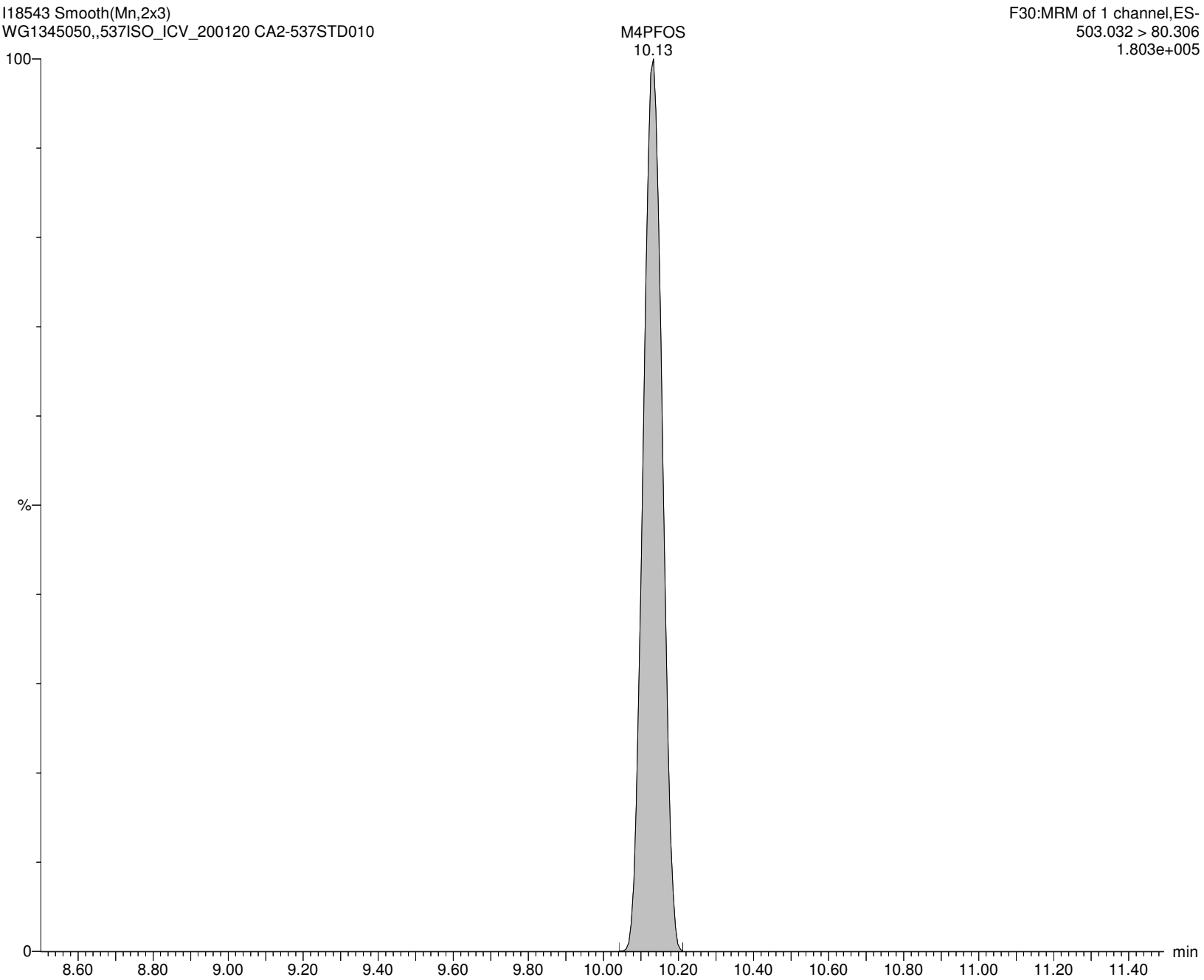



all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICV.qld
Last Altered: Friday, February 28, 2020 09:22:22 Eastern Standard Time
Printed: Friday, February 28, 2020 09:23:05 Eastern Standard Time

**Name: I18543**
**ID: CA2-537STD010**
**Date: 27-Feb-2020**
**Time: 18:59:36**
**Description: WG1345050,,537ISO_ICV_200120**
**User: LCMS01:JW**
**Vial: 1:B,7**
**Instrument: XEVO-TQSmicro#QEA0276**
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**Tune Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\190709_TUNE.IPR**
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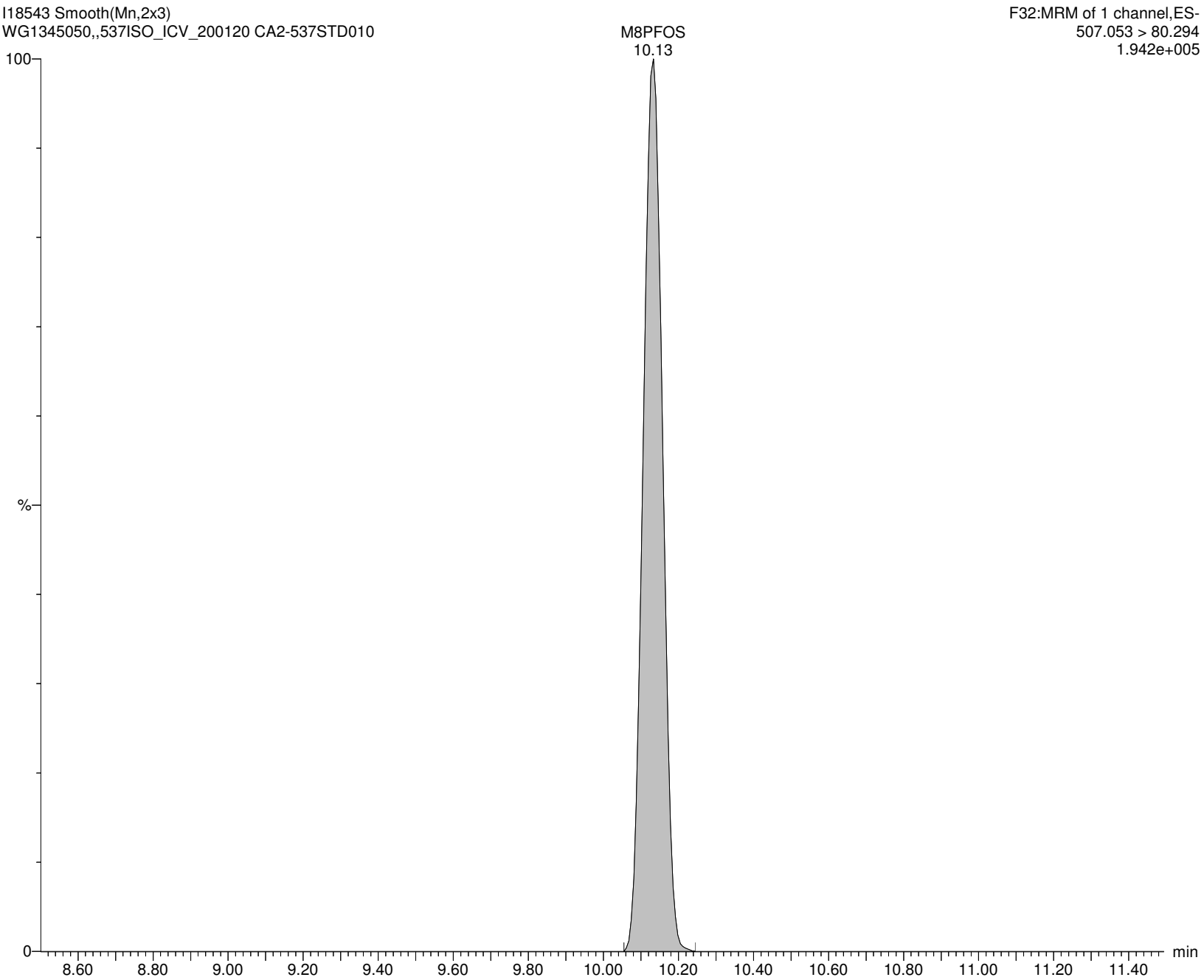
**M8PFOS**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICV.qld
Last Altered: Friday, February 28, 2020 09:22:22 Eastern Standard Time
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**User: LCMS01:JW**
**Vial: 1:B,7**
**Instrument: XEVO-TQSmicro#QEA0276**
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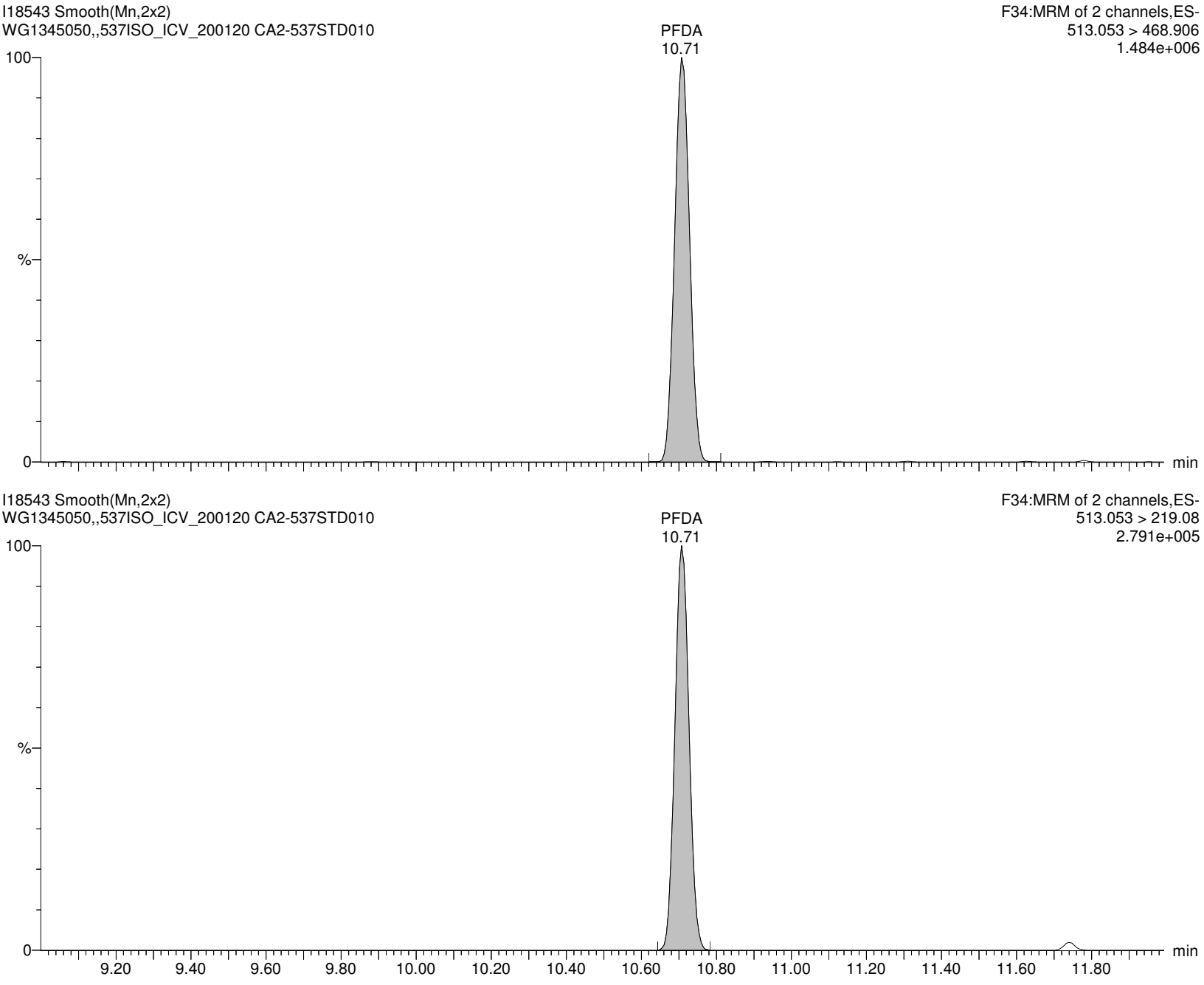
**PFDA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICV.qld
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**Vial: 1:B,7**
**Instrument: XEVO-TQSmicro#QEA0276**
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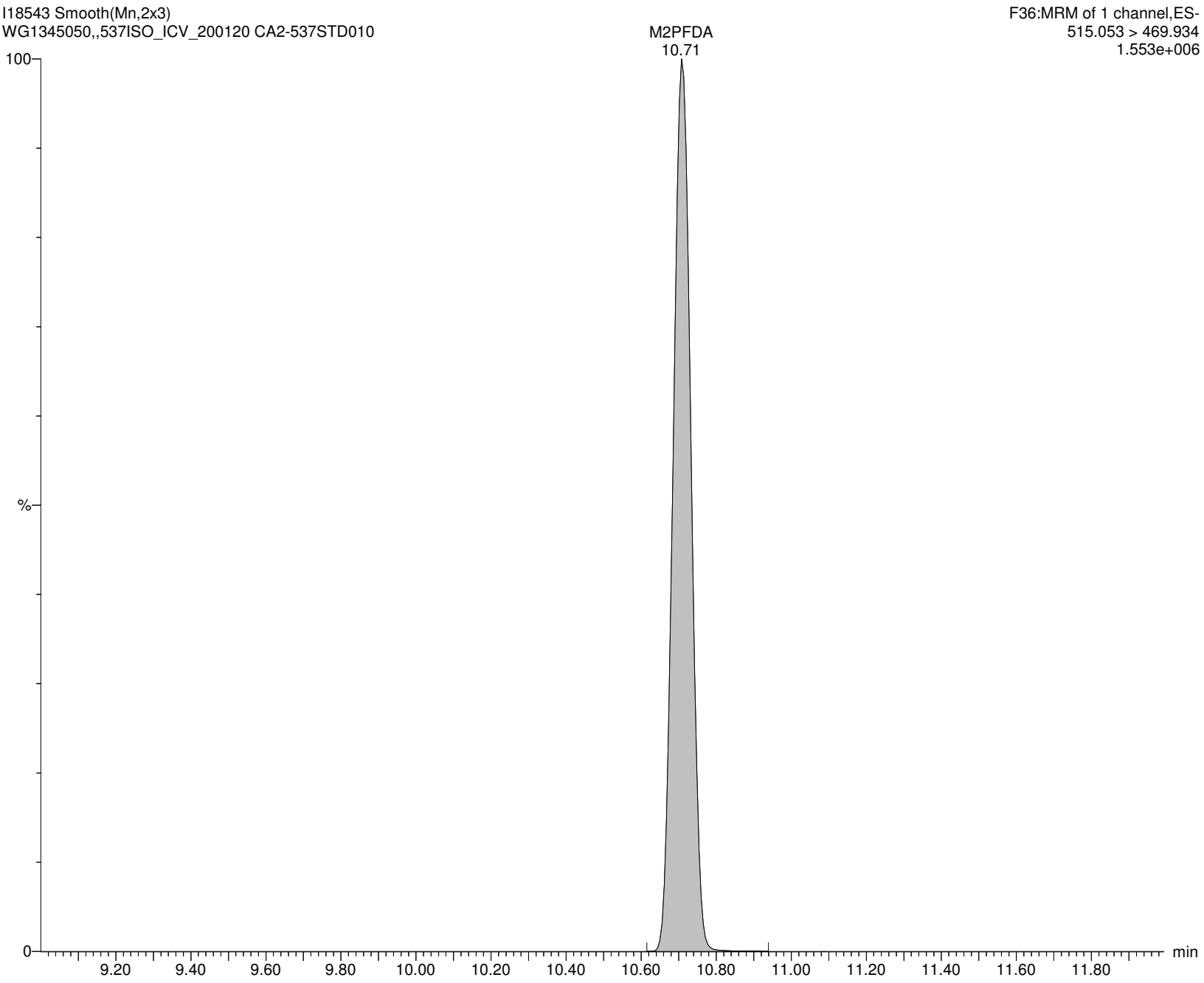
**M2PFDA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICV.qld
Last Altered: Friday, February 28, 2020 09:22:22 Eastern Standard Time
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**Vial: 1:B,7**
**Instrument: XEVO-TQSmicro#QEA0276**
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**Tune Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\190709_TUNE.IPR**
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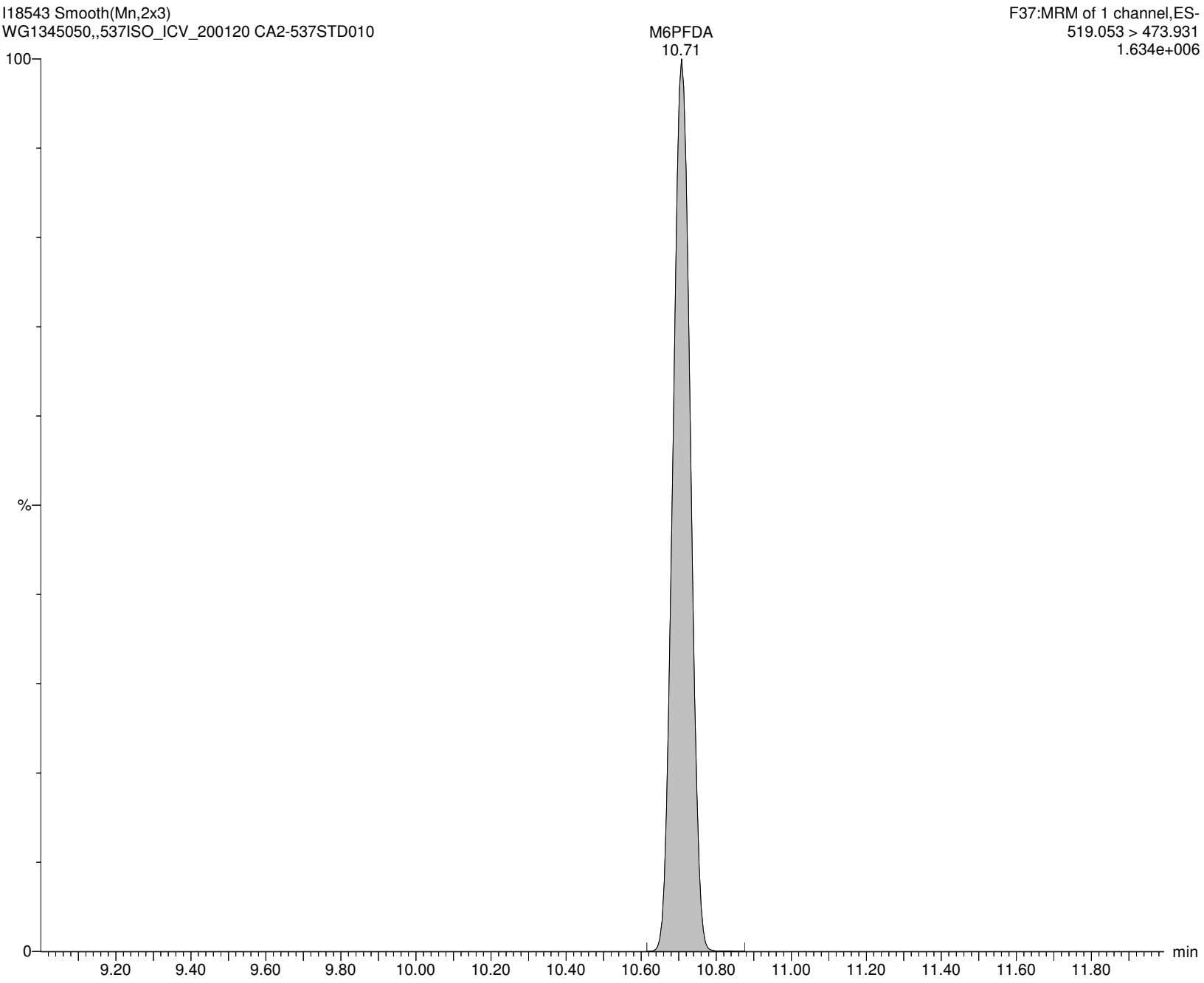
**M6PFDA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICV.qld
Last Altered: Friday, February 28, 2020 09:22:22 Eastern Standard Time
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**Vial: 1:B,7**
**Instrument: XEVO-TQSmicro#QEA0276**
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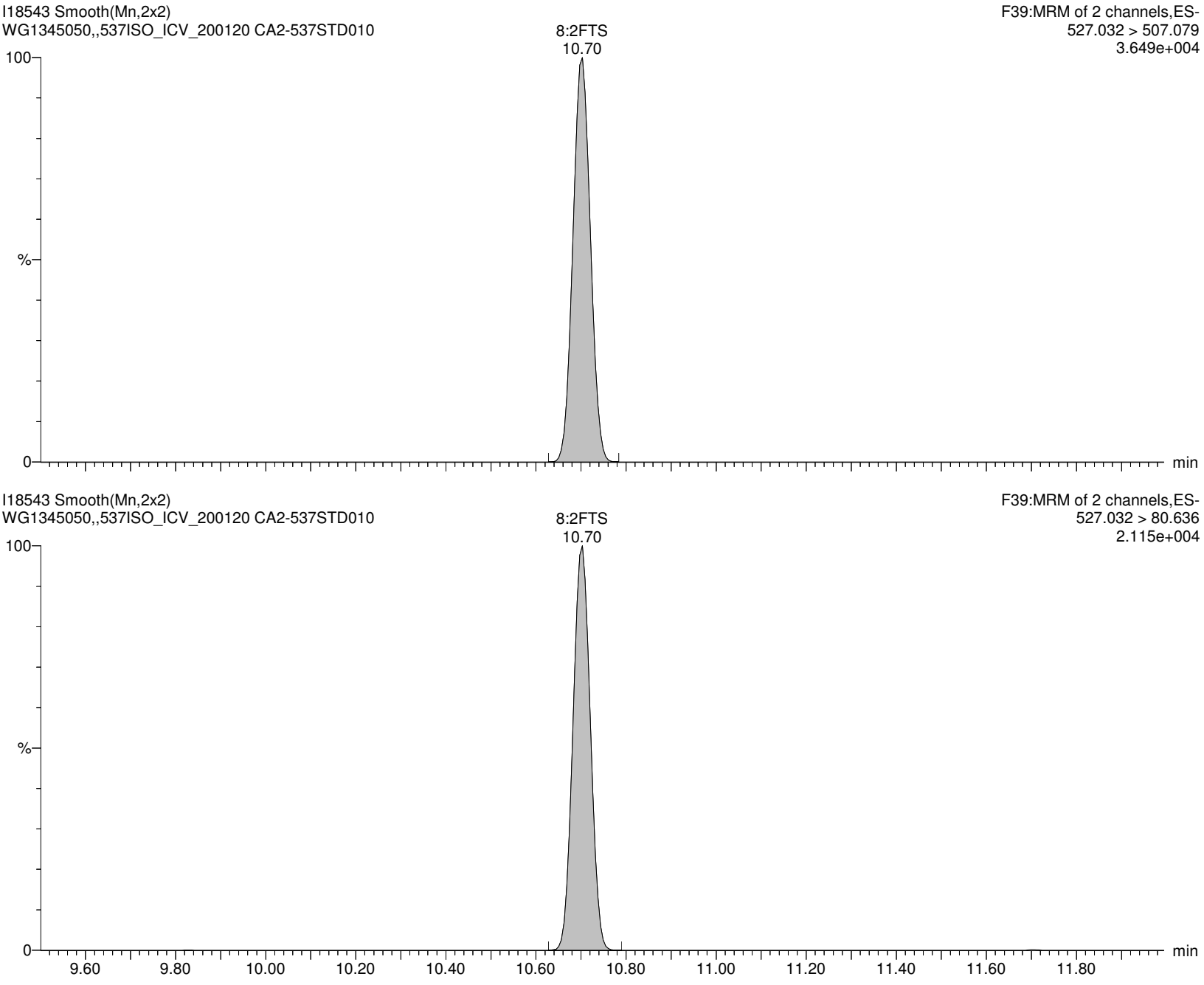
**8:2FTS**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICV.qld
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**Vial: 1:B,7**
**Instrument: XEVO-TQSmicro#QEA0276**
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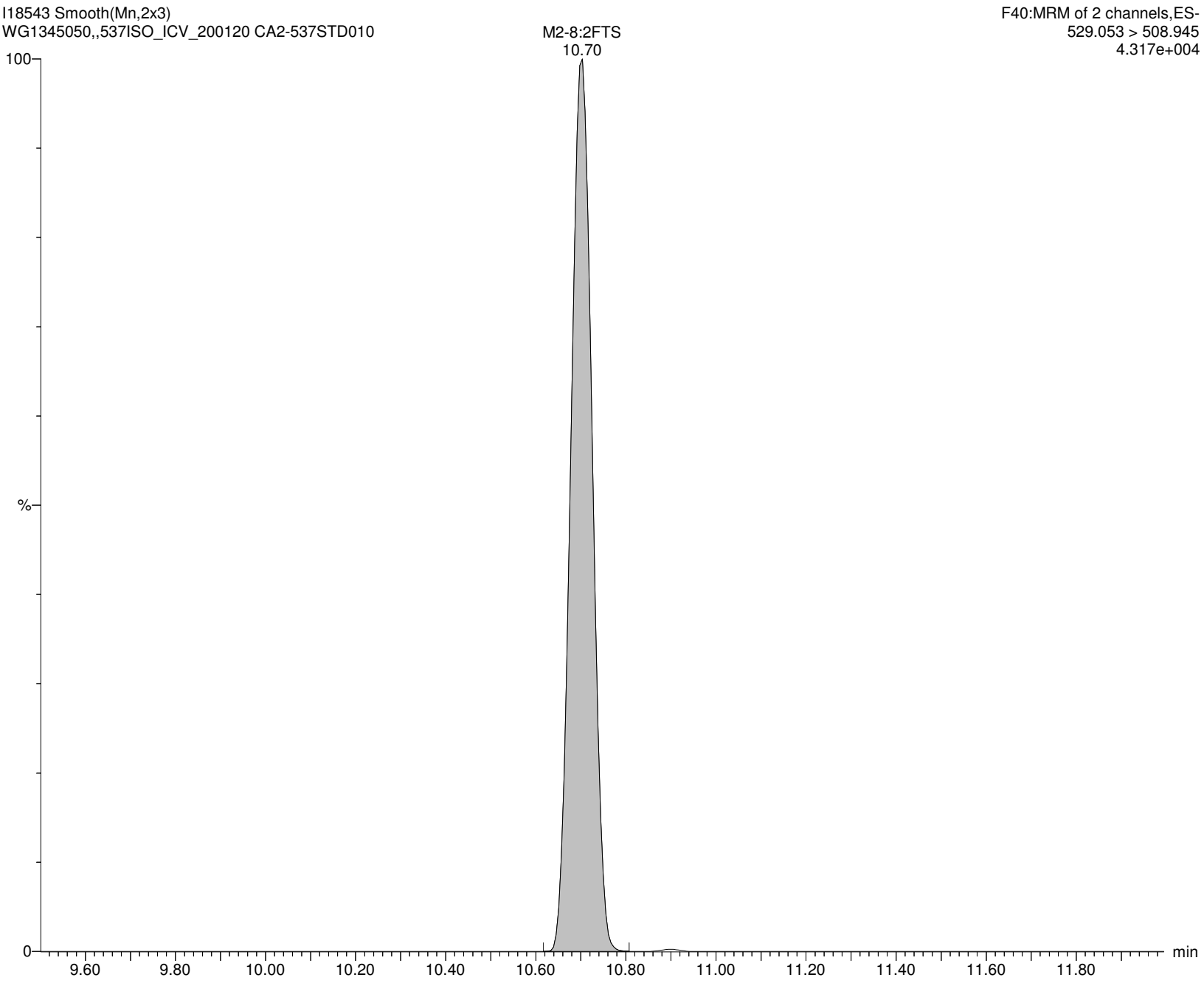
**M2-8:2FTS**





all concentration units in (ng/mL)

Alpha Analytical Inc.
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**Instrument: XEVO-TQSmicro#QEA0276**
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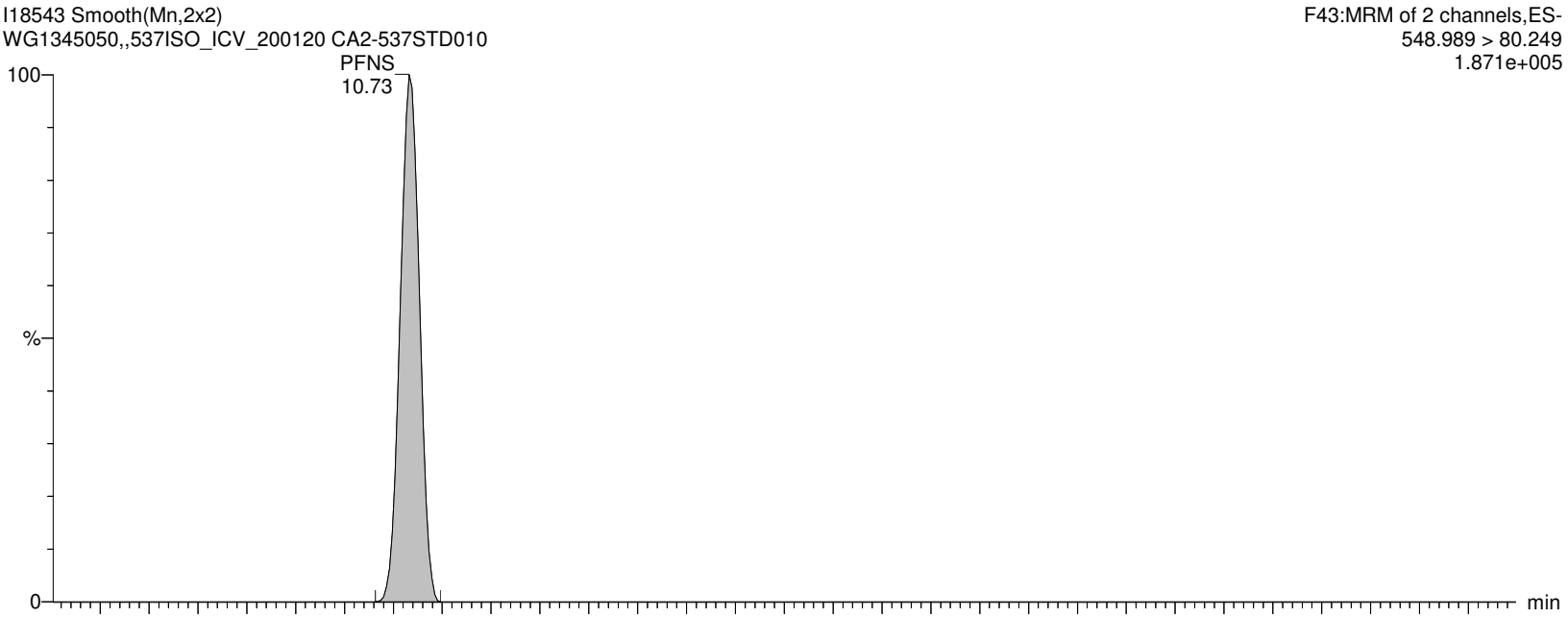
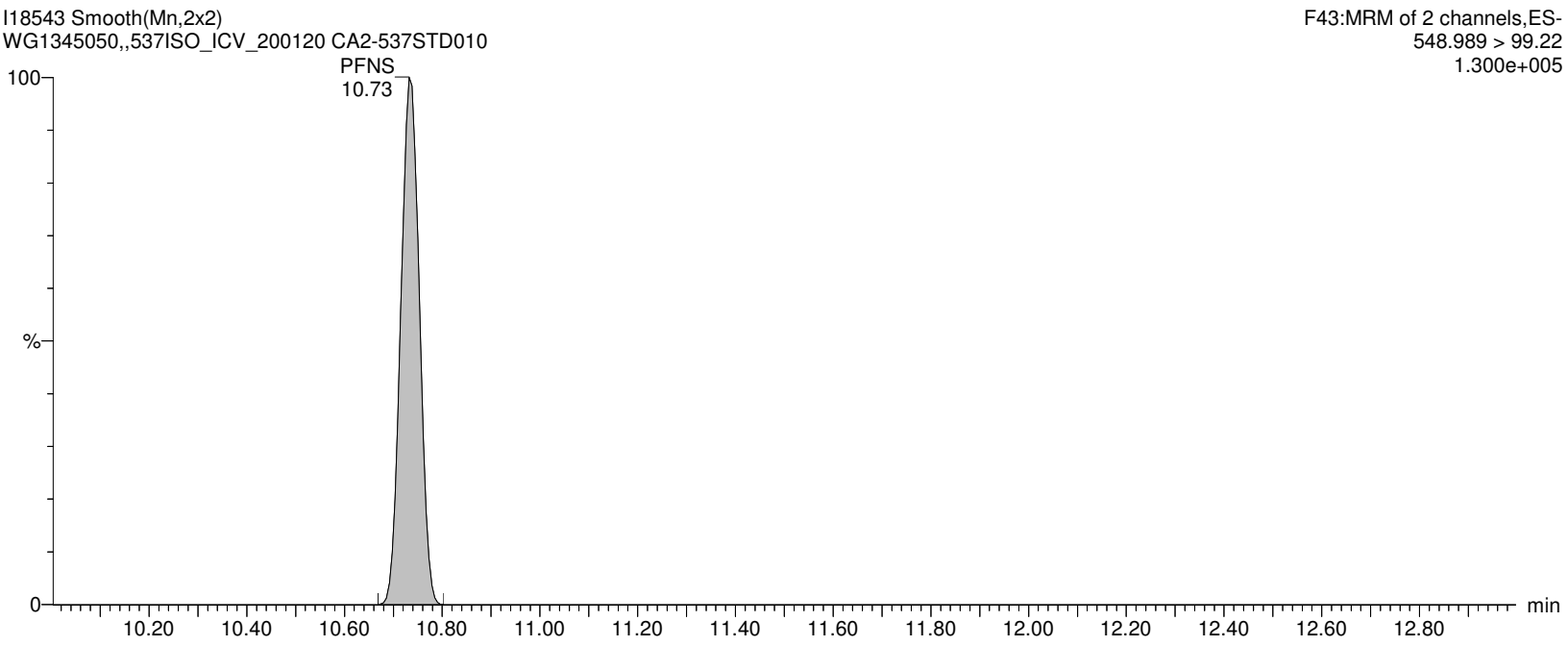
**PFNS**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICV.qld
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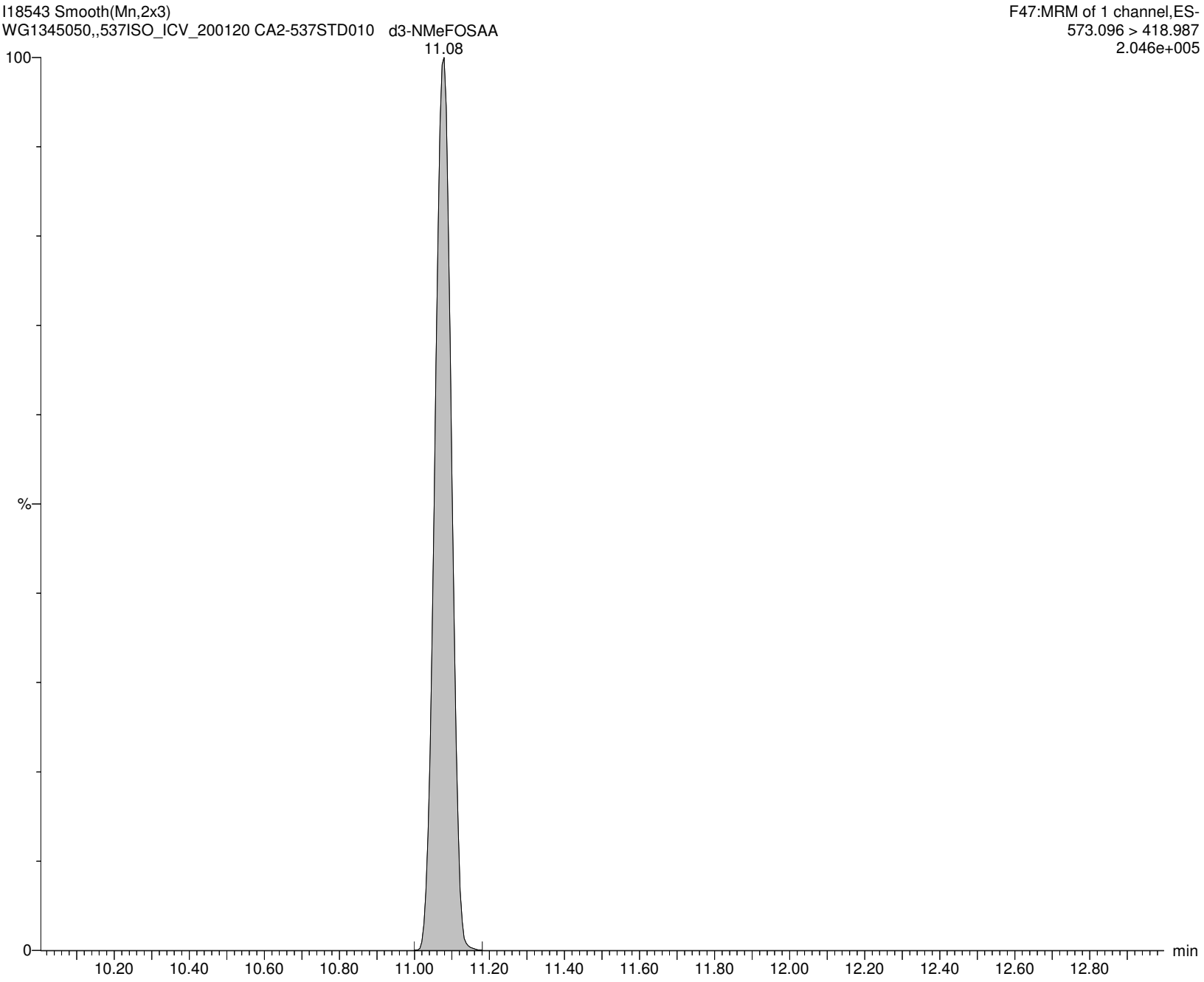
**d3-NMeFOSAA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICV.qld
Last Altered: Friday, February 28, 2020 09:22:22 Eastern Standard Time
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**Vial: 1:B,7**
**Instrument: XEVO-TQSmicro#QEA0276**
**Inlet Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\LCMS_537_ISO_MeOH**
**Tune Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\190709_TUNE.IPR**
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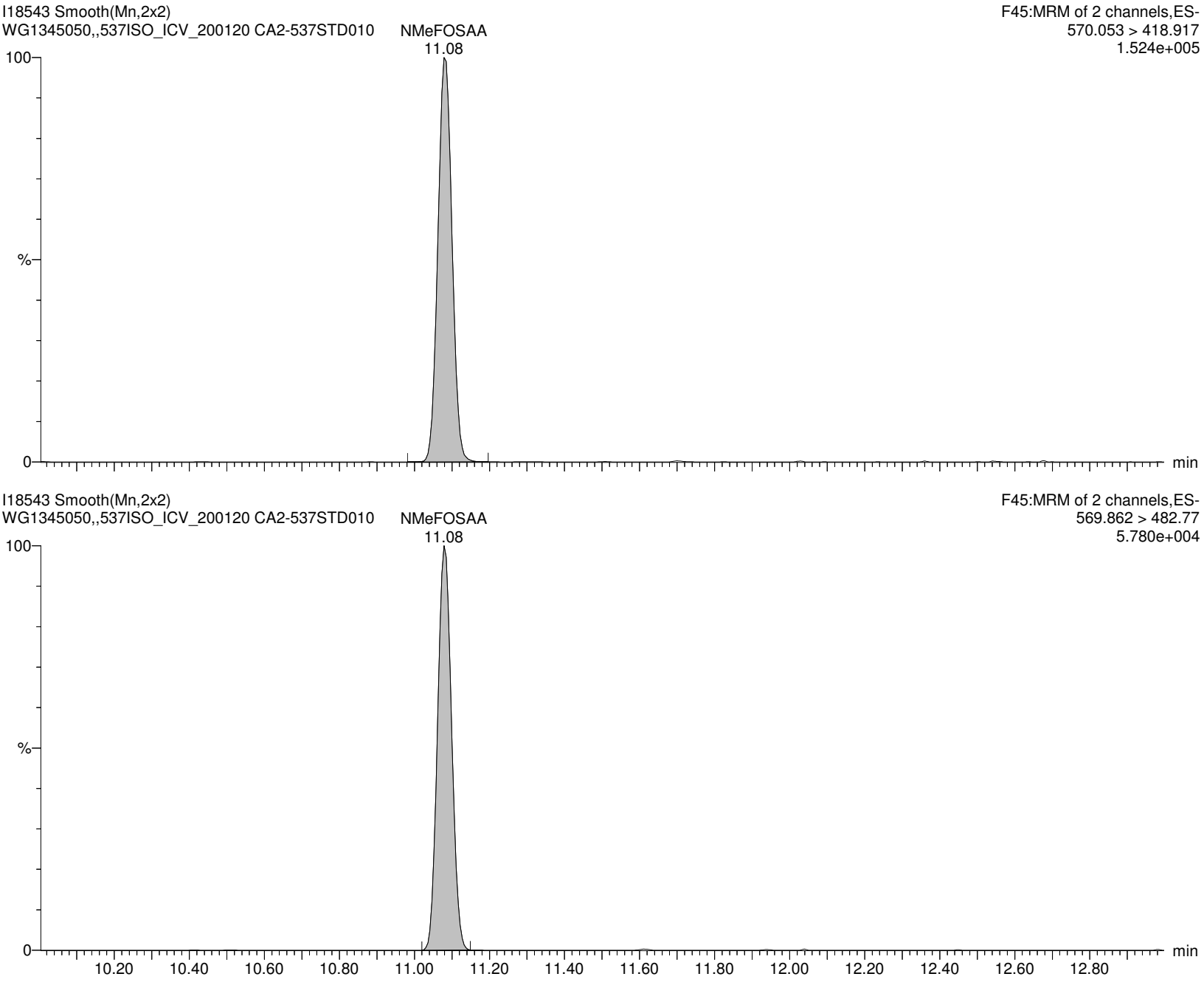
**NMeFOSAA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICV.qld
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**User: LCMS01:JW**
**Vial: 1:B,7**
**Instrument: XEVO-TQSmicro#QEA0276**
**Inlet Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\LCMS_537_ISO_MeOH**
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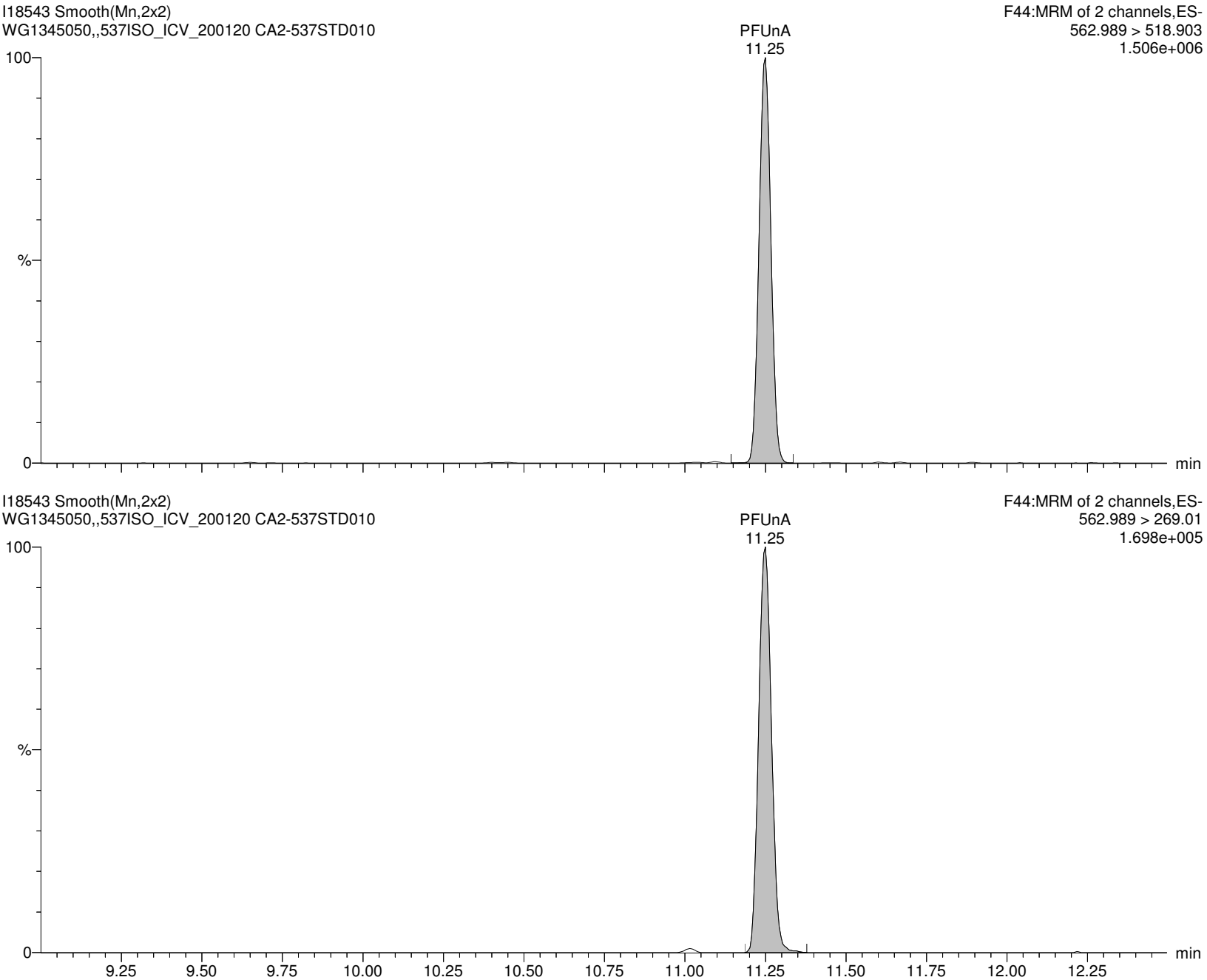



all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICV.qld
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**Vial: 1:B,7**
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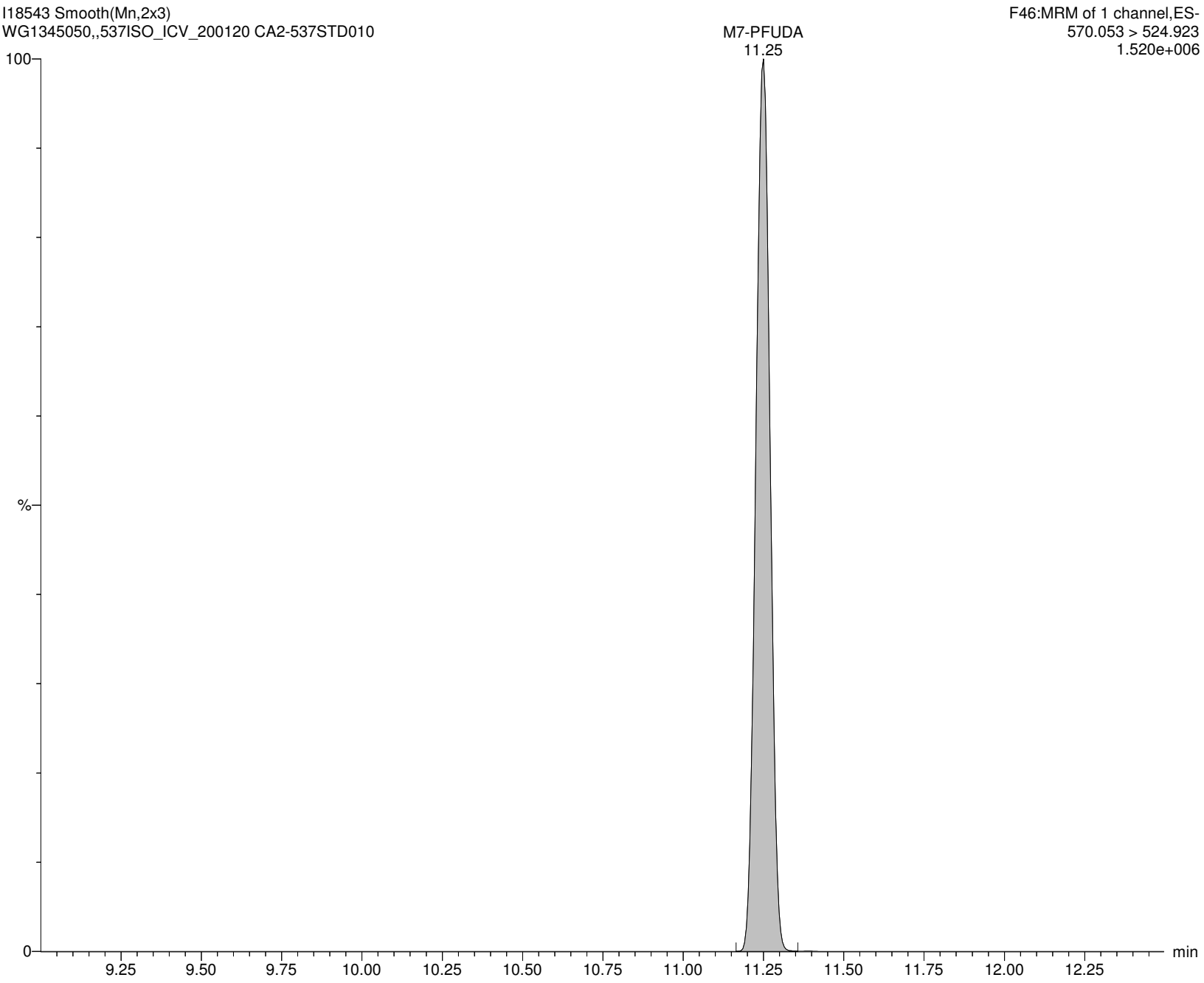
**M7-PFUDA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICV.qld
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**Vial: 1:B,7**
**Instrument: XEVO-TQSmicro#QEA0276**
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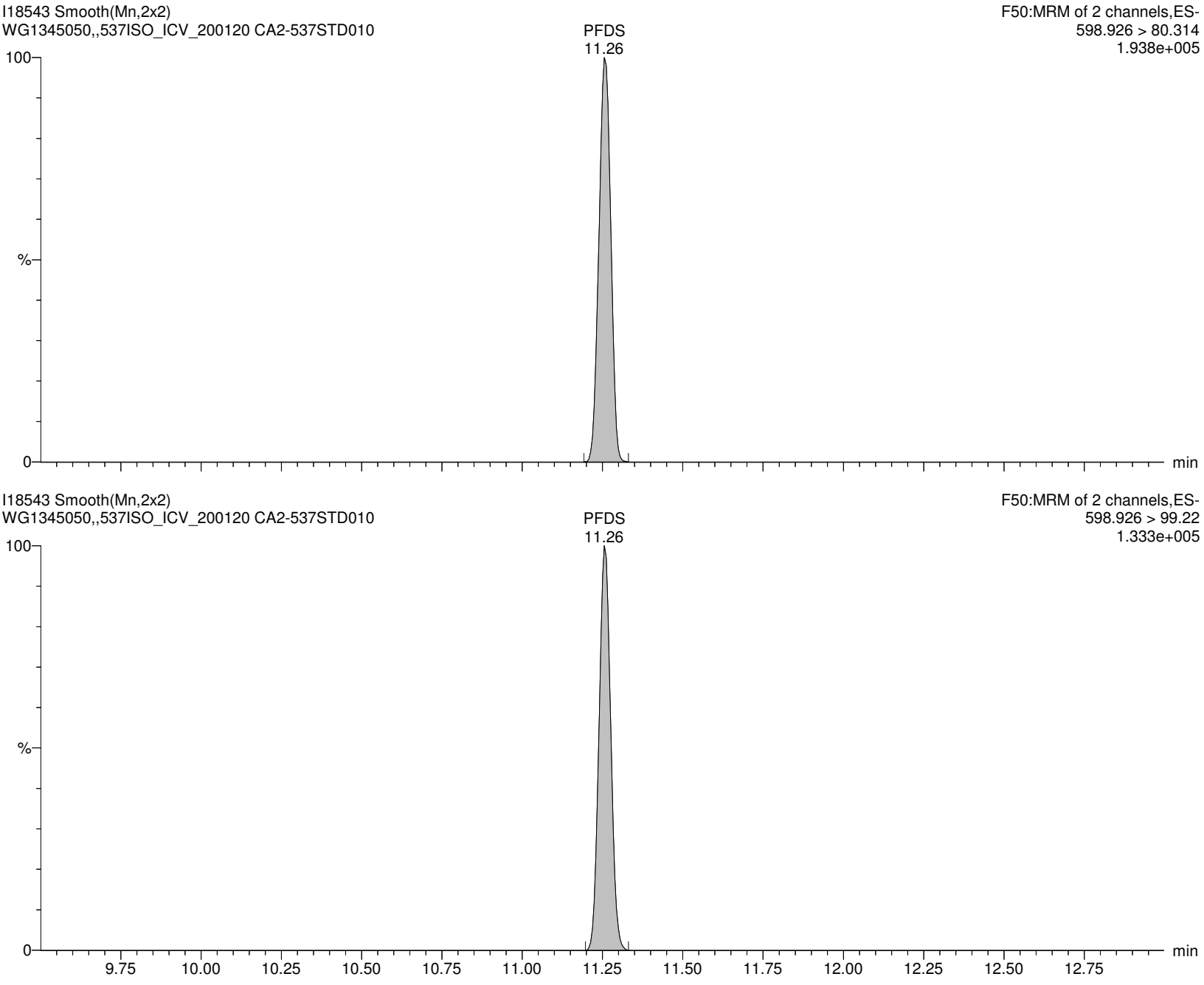
**PFDS**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICV.qld
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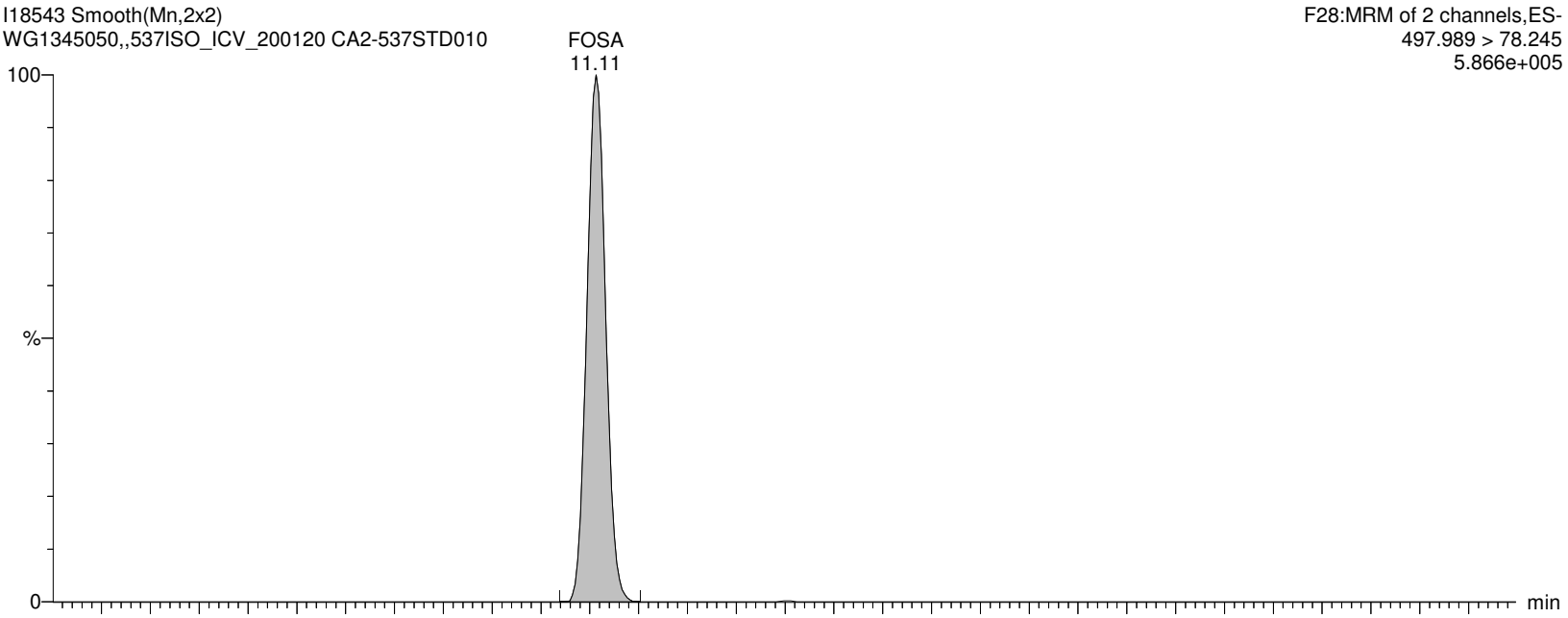
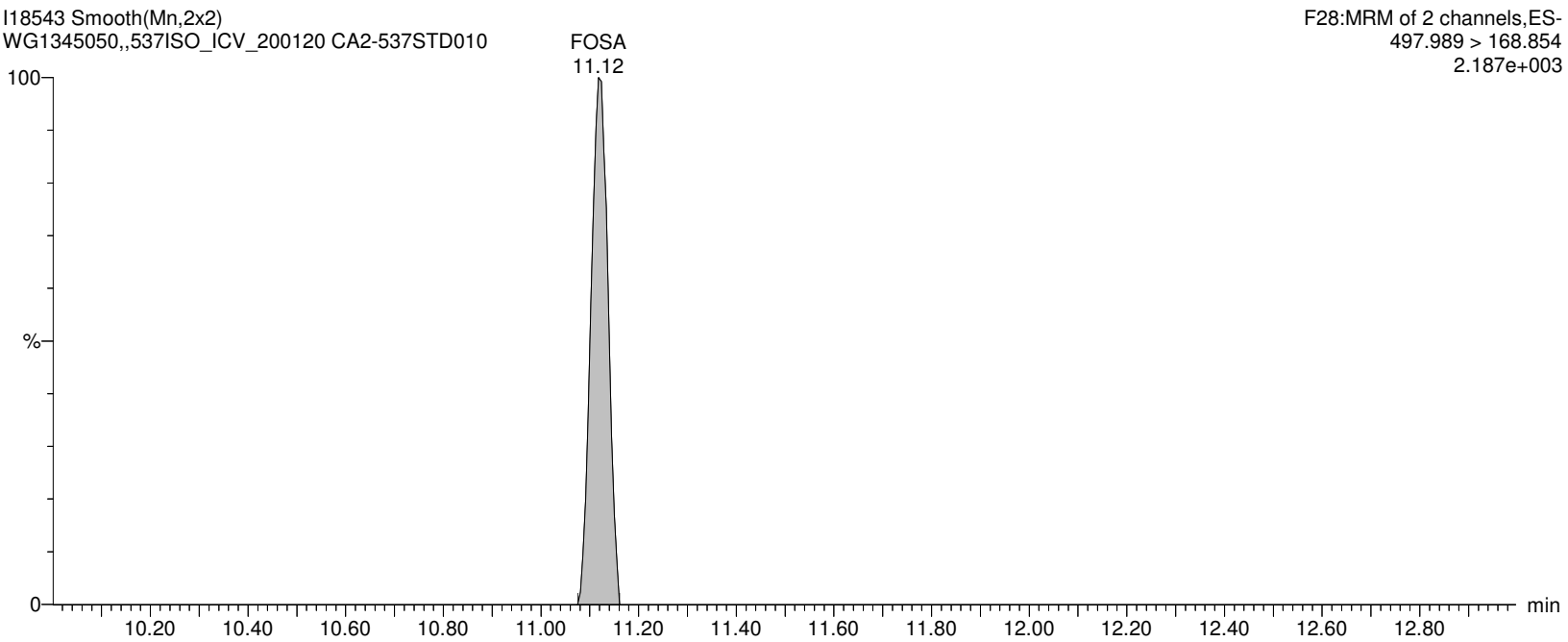
**FOSA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICV.qld
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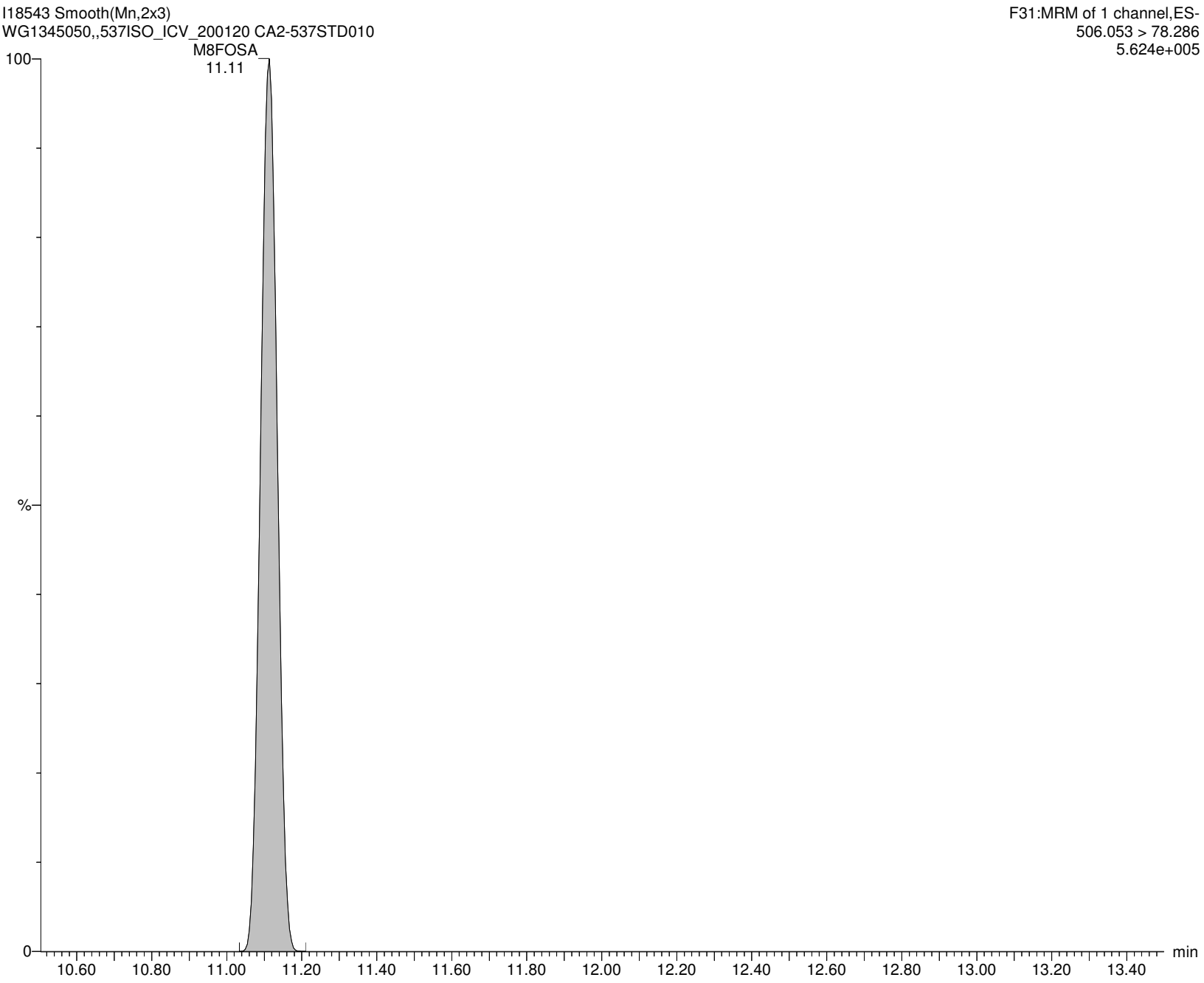
**M8FOSA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICV.qld
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**Instrument: XEVO-TQSmicro#QEA0276**
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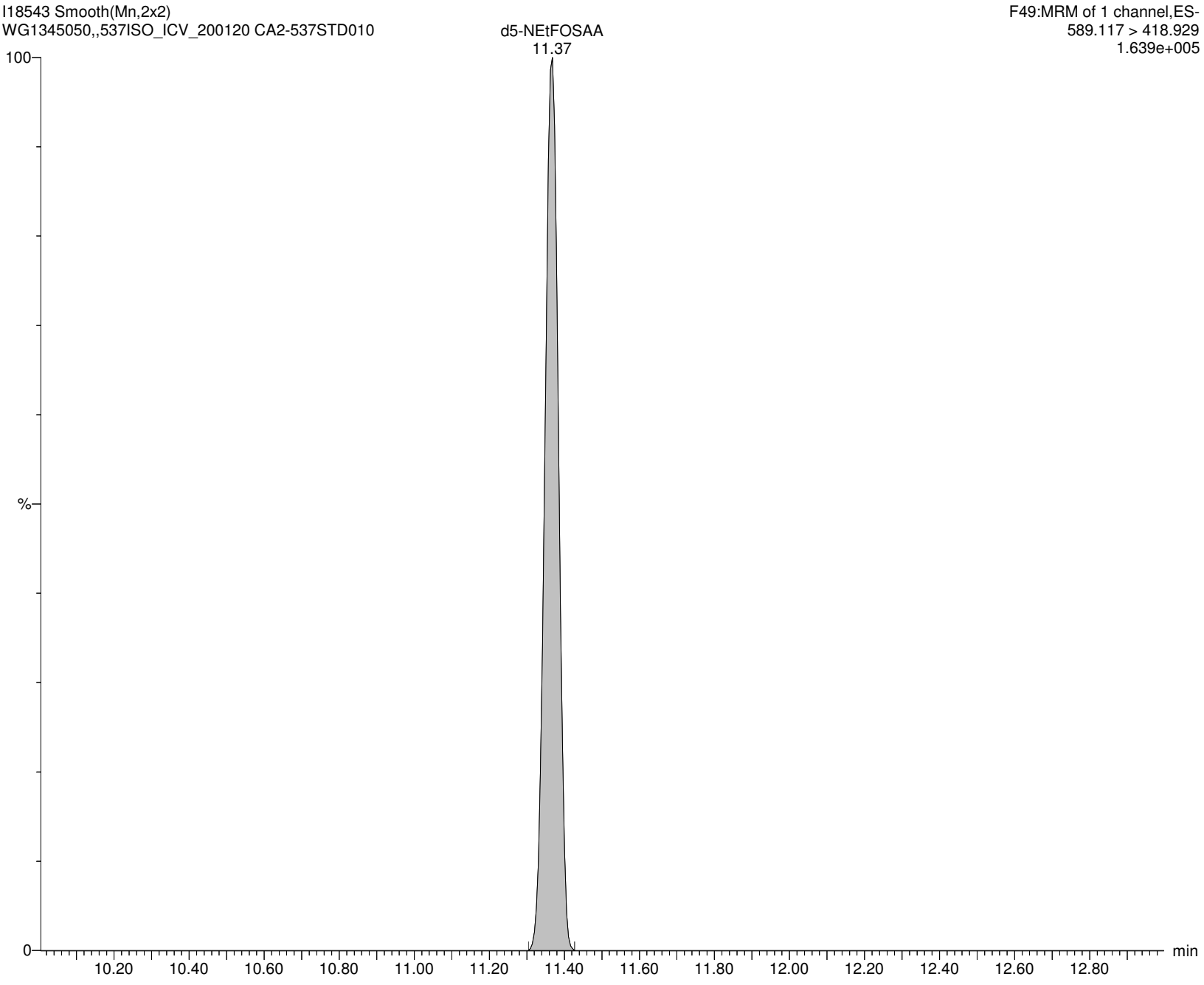
**d5-NEtFOSAA**





all concentration units in (ng/mL)

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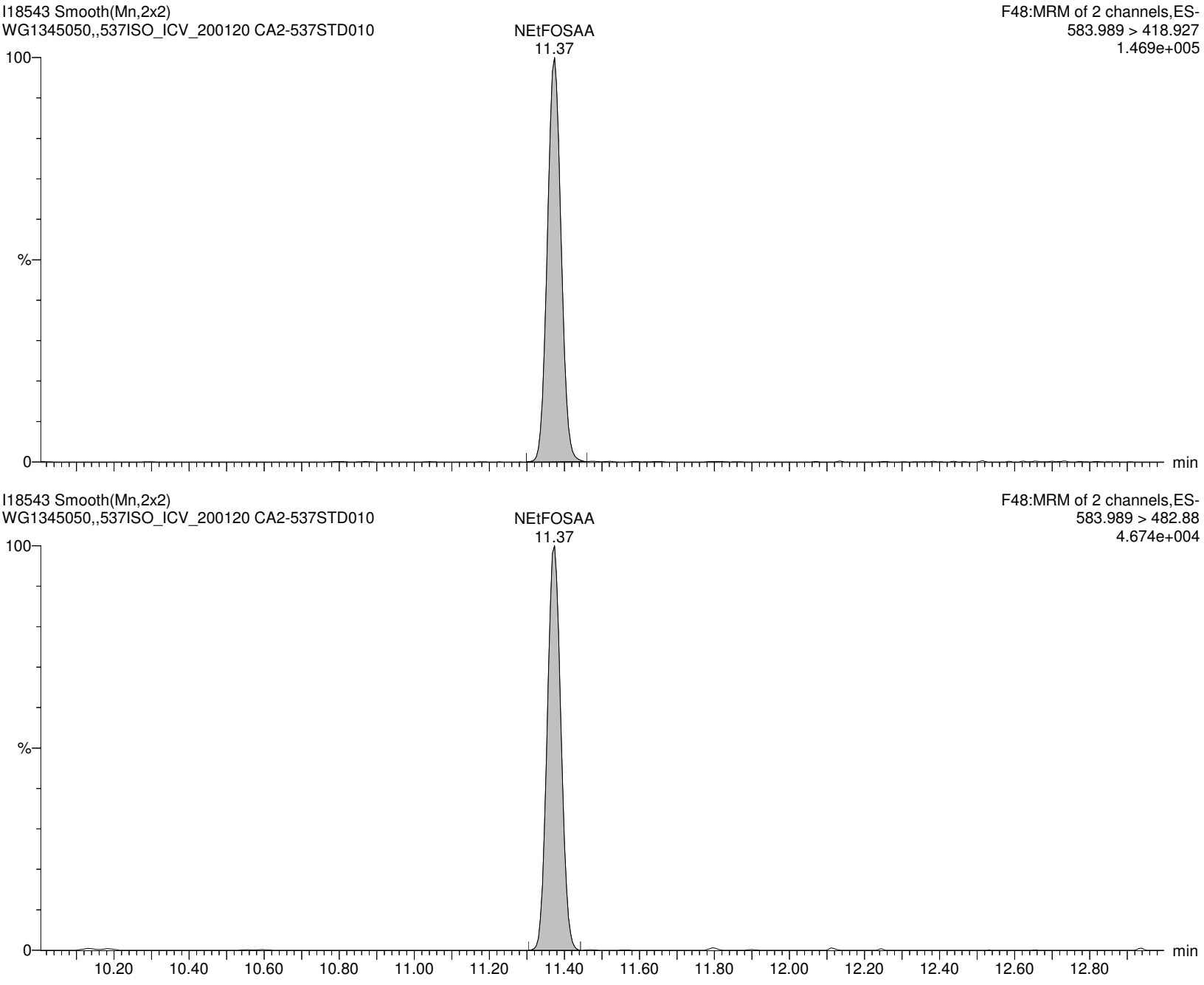
**NEtFOSAA**



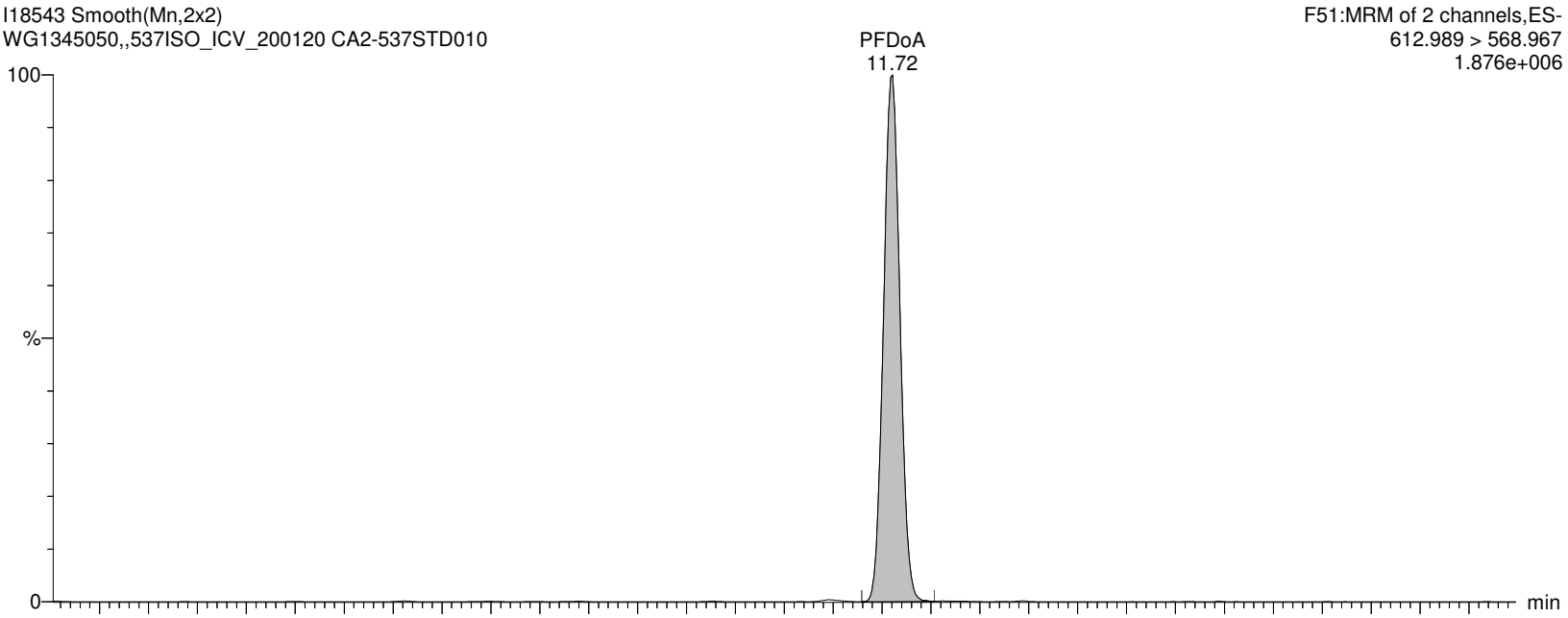


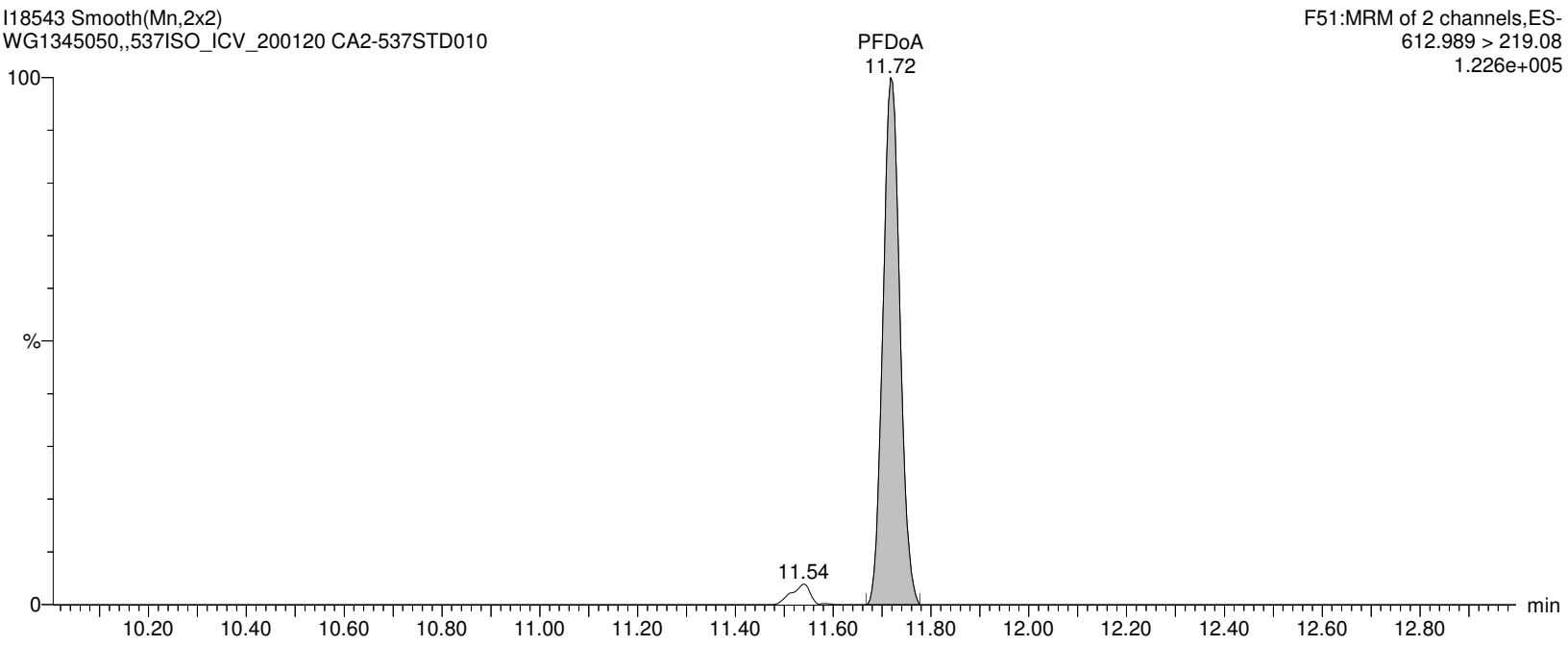
all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050ICV.qld
Last Altered: Friday, February 28, 2020 09:22:22 Eastern Standard Time
Printed: Friday, February 28, 2020 09:23:05 Eastern Standard Time

**Name: I18543**
**ID: CA2-537STD010**
**Date: 27-Feb-2020**
**Time: 18:59:36**
**Description: WG1345050,,537ISO_ICV_200120**
**User: LCMS01:JW**
**Vial: 1:B,7**
**Instrument: XEVO-TQSmicro#QEA0276**
**Inlet Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\LCMS_537_ISO_MeOH**
**Tune Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\190709_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**PFDoA**





all concentration units in (ng/mL)

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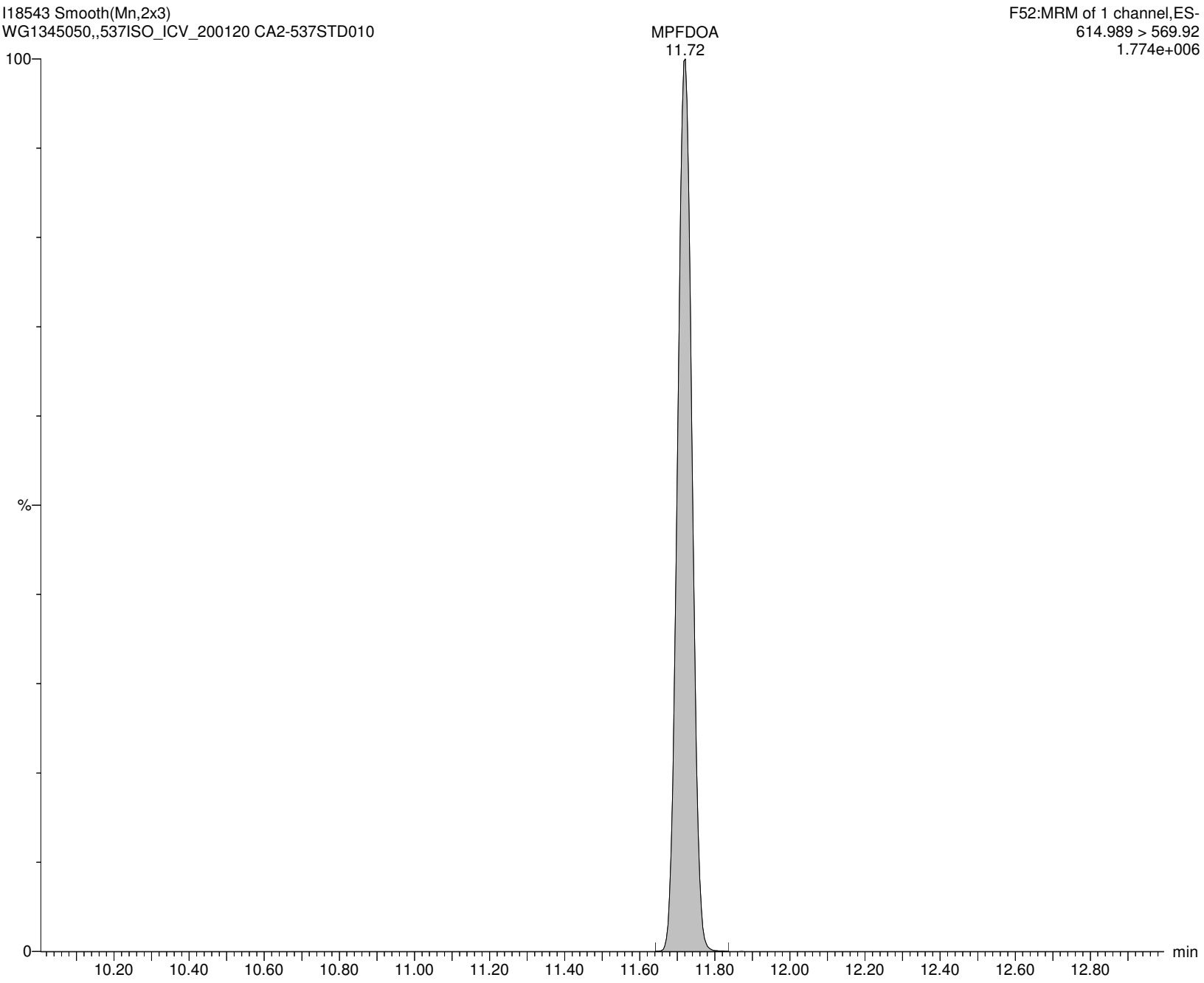
**Inlet Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\LCMS_537_ISO_MeOH**
**Tune Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\190709_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**MPFDOA**





all concentration units in (ng/mL)

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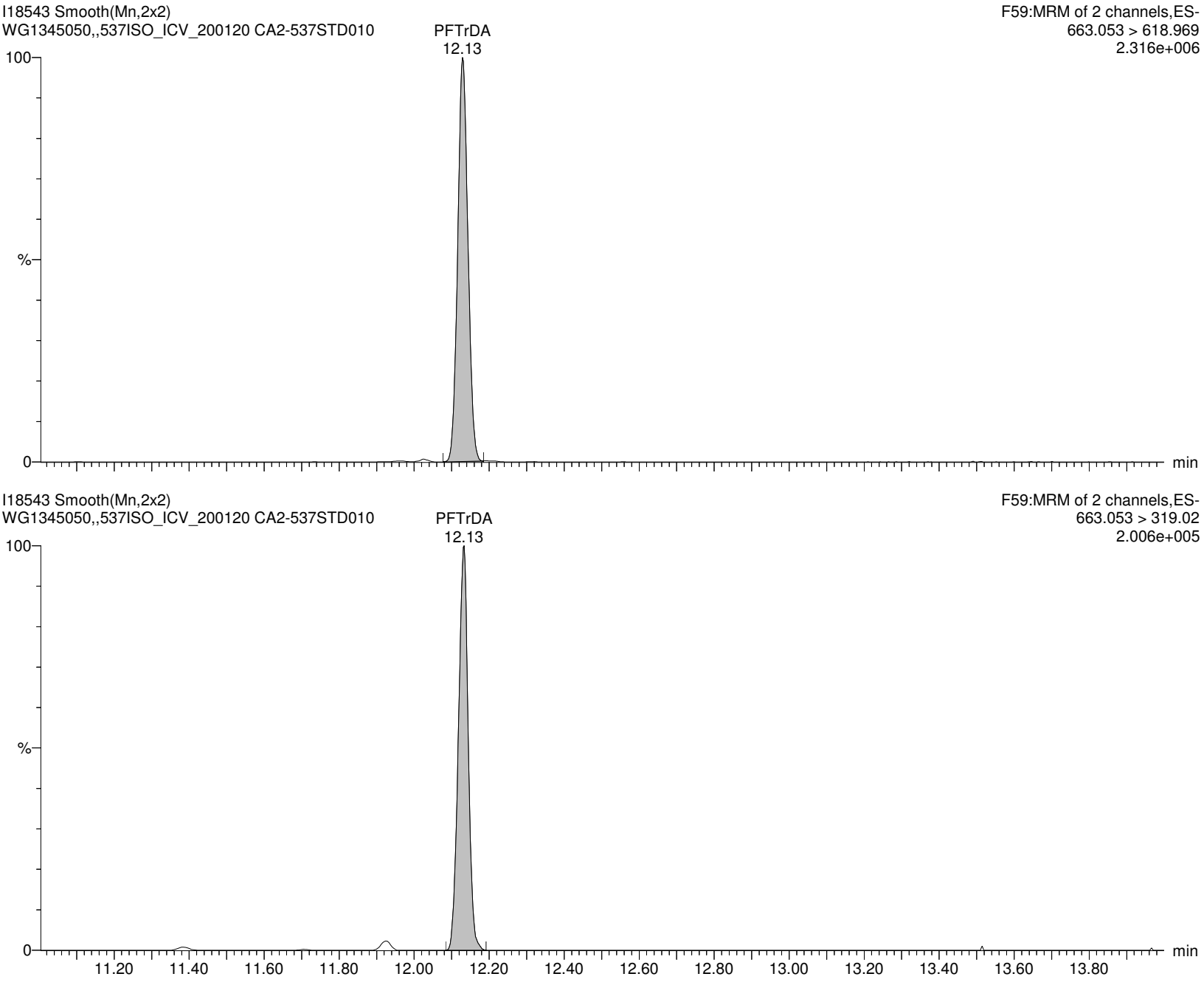
**MS Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**PFTrDA**





all concentration units in (ng/mL)

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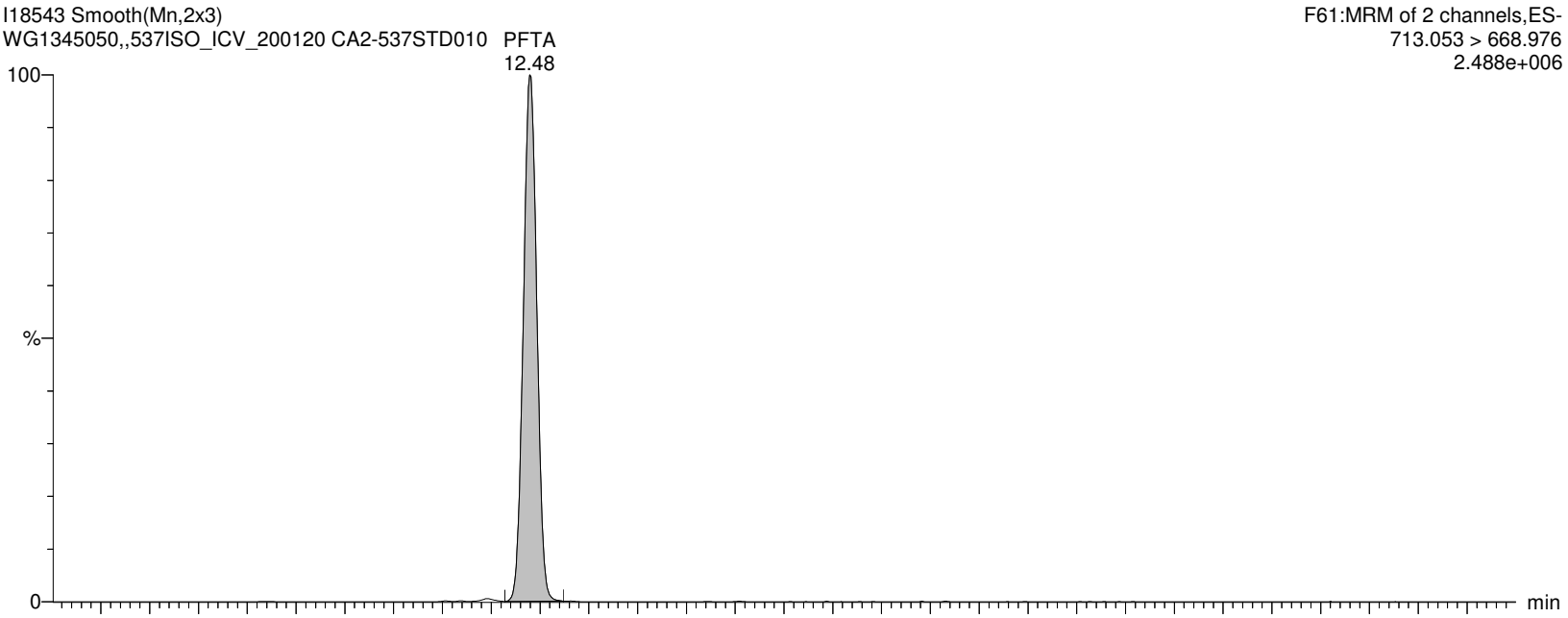
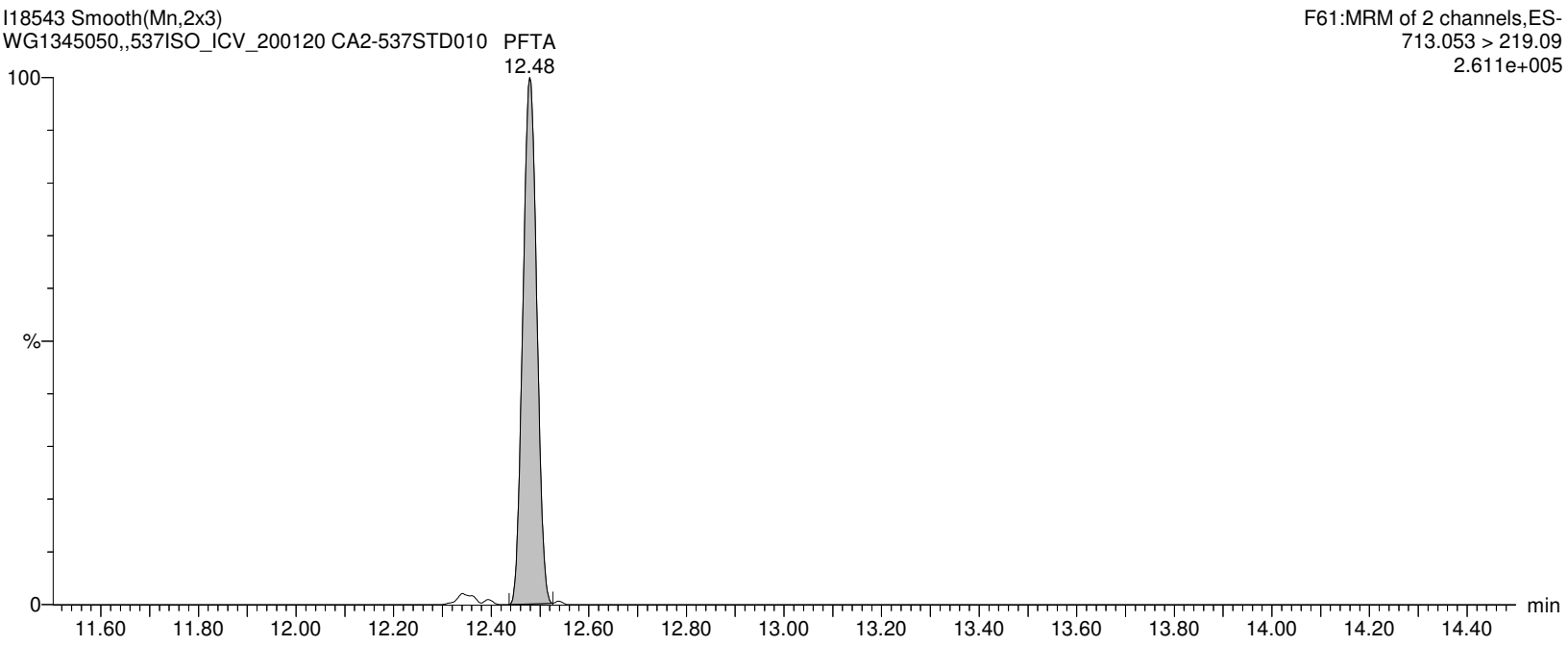
**PFTA**





all concentration units in (ng/mL)

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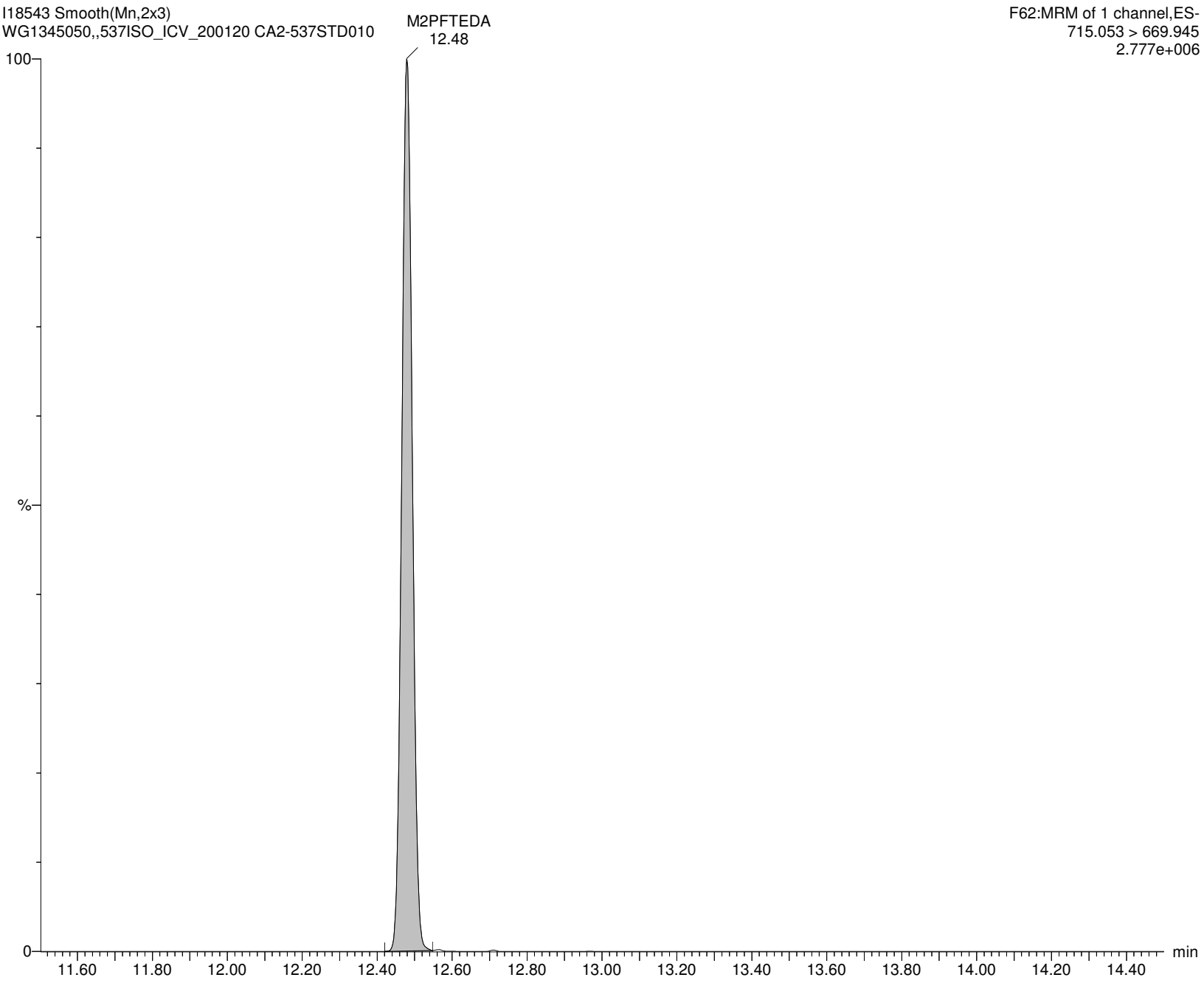
**MS Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**M2PFTEDA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\Data\WG1345050_TECHSTD.qld
Last Altered: Friday, February 28, 2020 09:24:30 Eastern Standard Time
Printed: Friday, February 28, 2020 09:24:39 Eastern Standard Time

**Method: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\MethDB\537ISO_Q_200227 .mdb 28 Feb 2020 09:16:06**
**Calibration: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\CurveDB\200227_537ISO_ICAL.cdb 28 Feb 2020 09:12:40**

**ID: TECHSTD_190520A**
**Name: I18542**
**Date: 27-Feb-2020**
**Time: 18:42:21**
**Description: WG1345050,,537ISO_TECHSTD_190520A**
**Instrument: XEVO-TQSmicro#QEA0276**
**User: LCMS01:JW**
**Inlet Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\LCMS_537_ISO_MeOH**
**Tune Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\190709_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

| | Name | CAS | RT | Trace | Area | M Flag | Conc (ng/mL) | Ion Ratio | Ratio Flag | %Rec |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | br-PFOA | 335-67-1 | 9.12 | 412.989 > 368.9 | 9948 | m5 | 1.273 | 2.93 | NO | |
| 2 | br-PFOS | 1763-23-1 | 9.88 | 498.968 > 79.918 | 3220 | M5 | 4.035 | 3.81 | NO | |
| 3 | NMeFOSAA | 2355-31-9 | 11.08 | 570.053 > 418.917 | 8493 | m5 | 13.883 | 2.96 | NO | |
| 4 | NEtFOSAA | 2991-50-6 | 11.37 | 583.989 > 418.927 | 7979 | m5 | 11.627 | 3.47 | NO | |


all concentration units in (ng/mL)

Alpha Analytical Inc.
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**Method: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\MethDB\537ISO_Q_200227 .mdb 28 Feb 2020 09:16:06**
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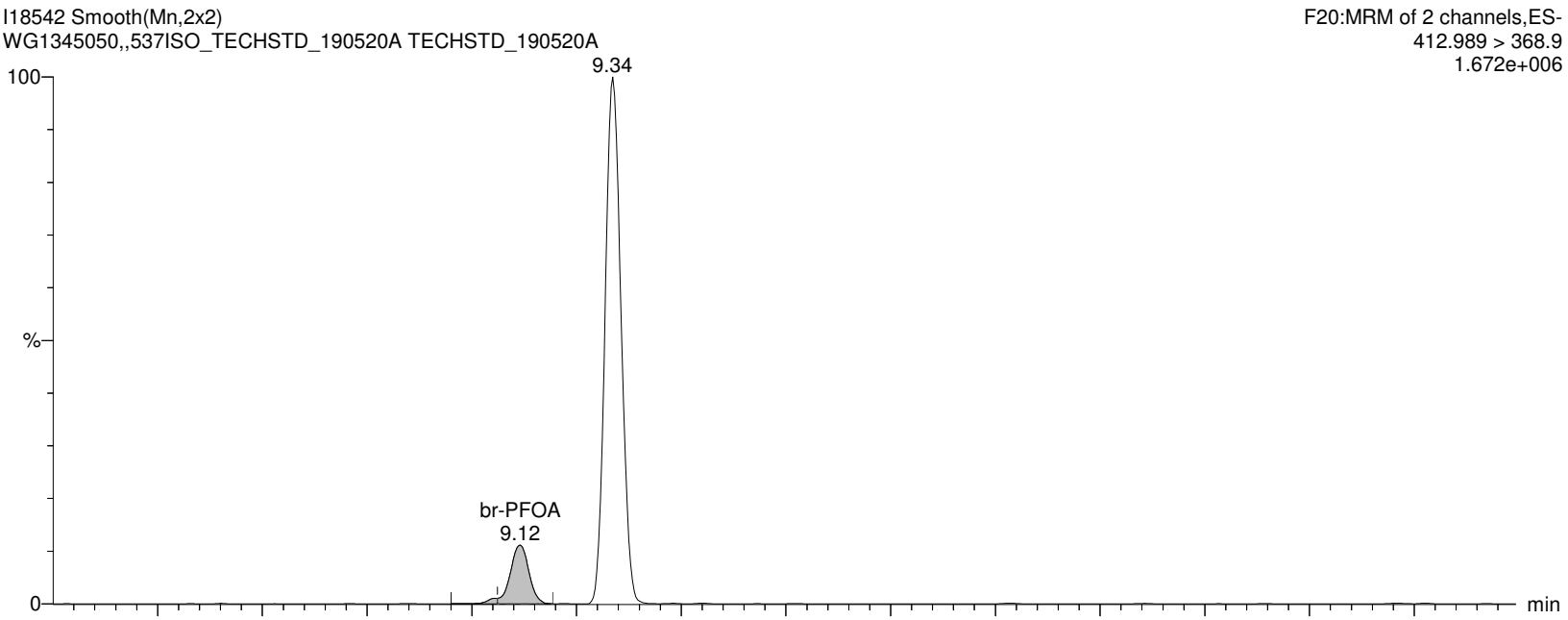
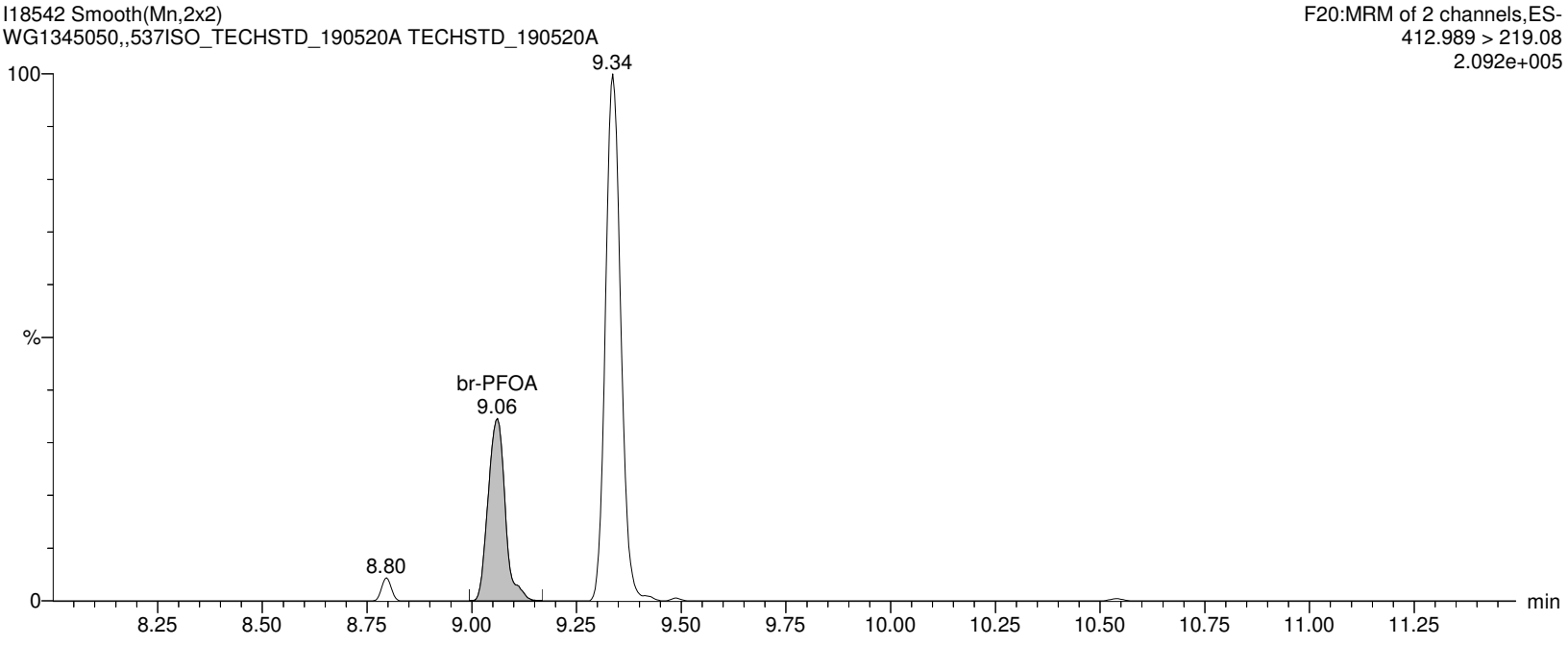
**MS Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**br-PFOA**





all concentration units in (ng/mL)

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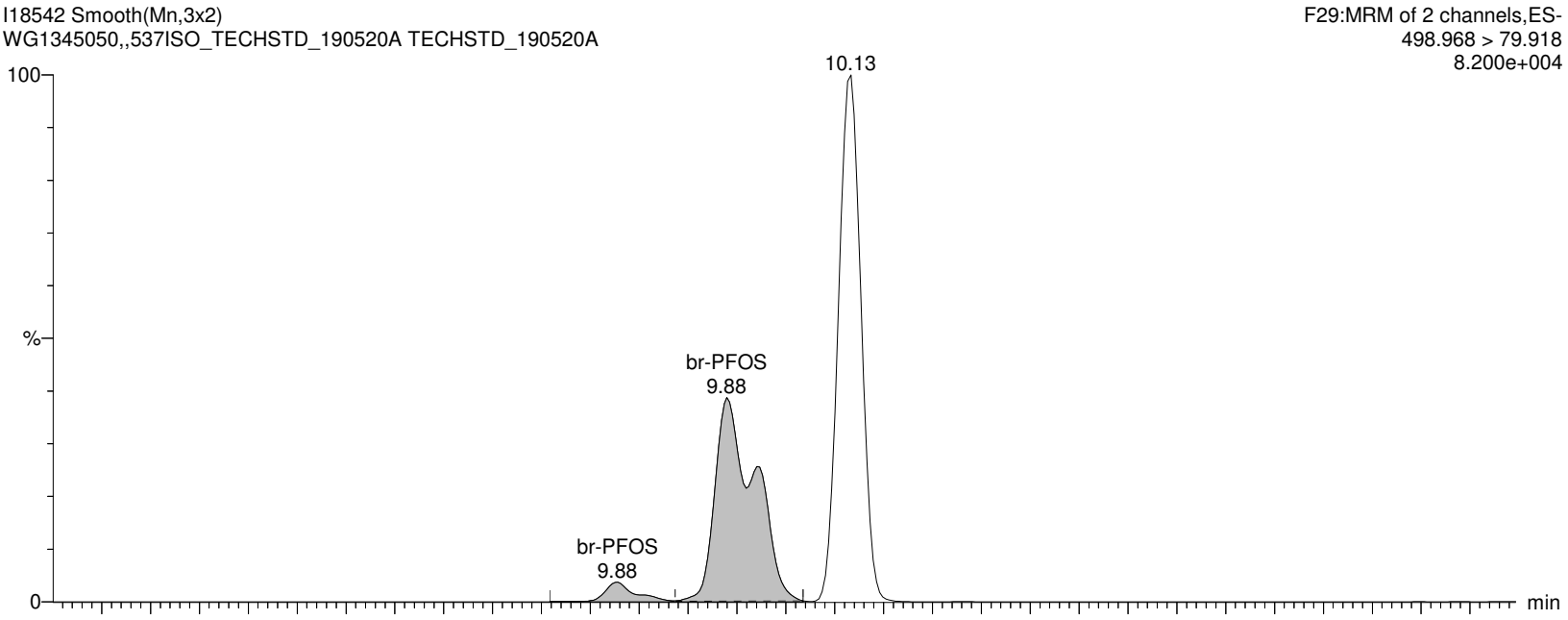
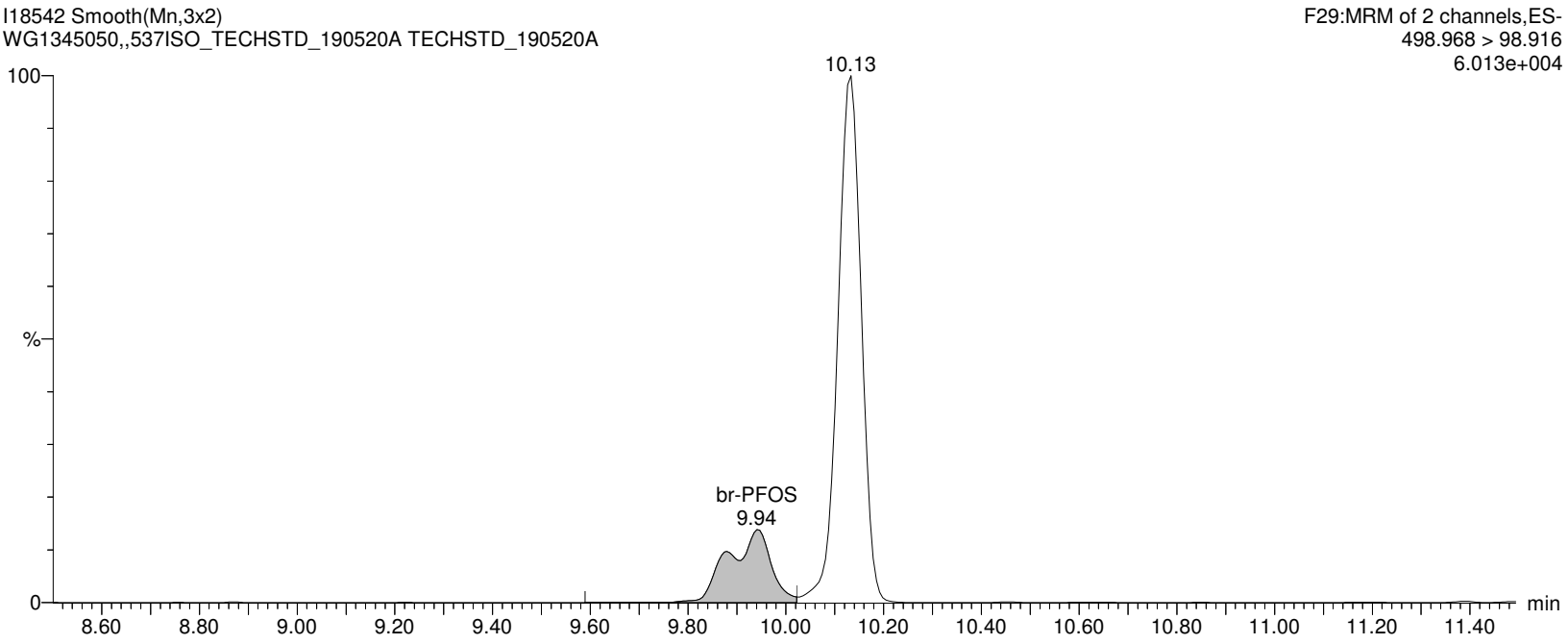
**MS Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**br-PFOS**





all concentration units in (ng/mL)

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**User: LCMS01:JW**
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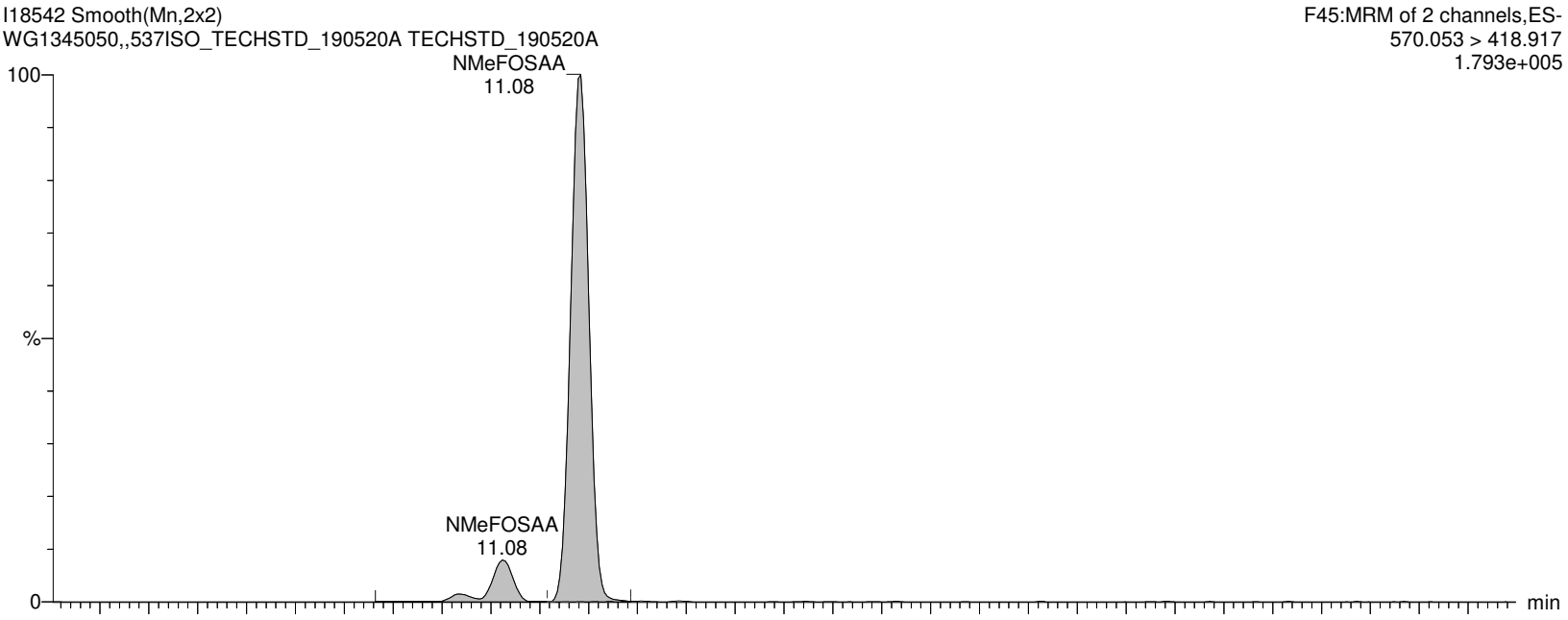
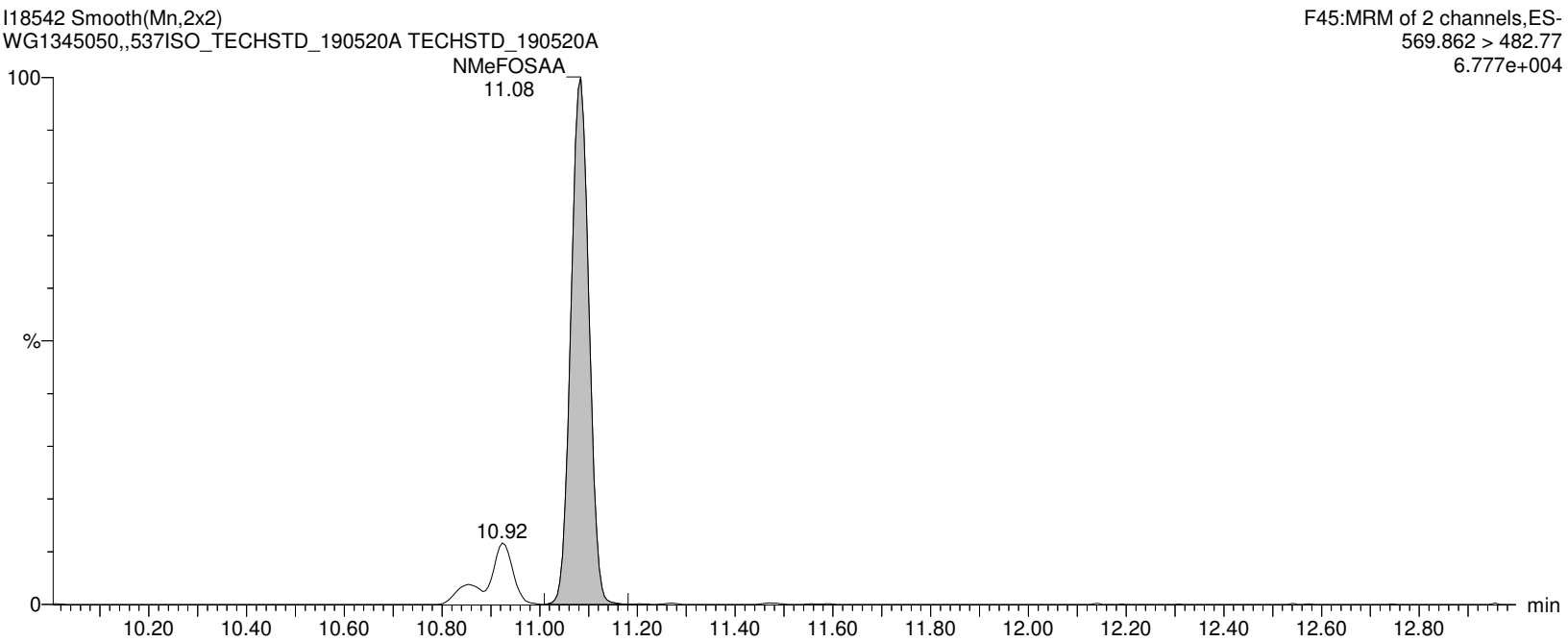
**Inlet Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\LCMS_537_ISO_MeOH**
**Tune Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\190709_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**NMeFOSAA**





all concentration units in (ng/mL)

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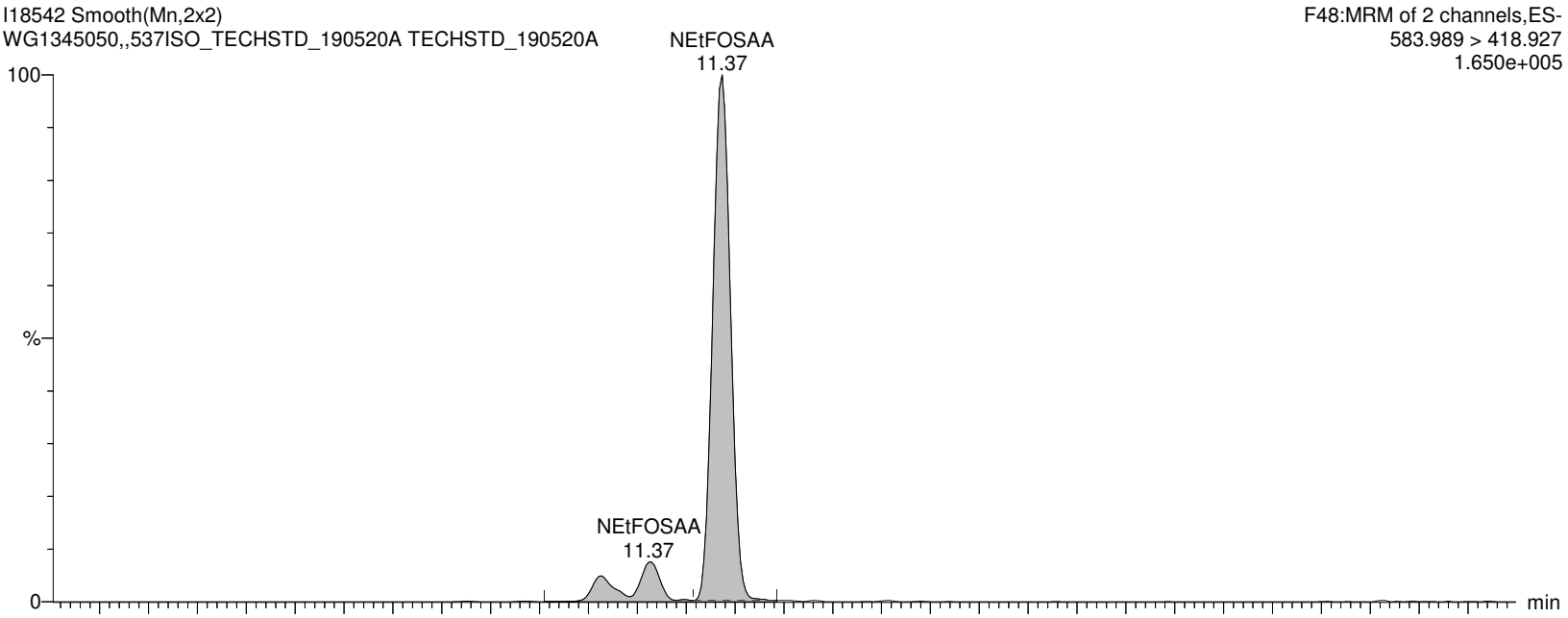
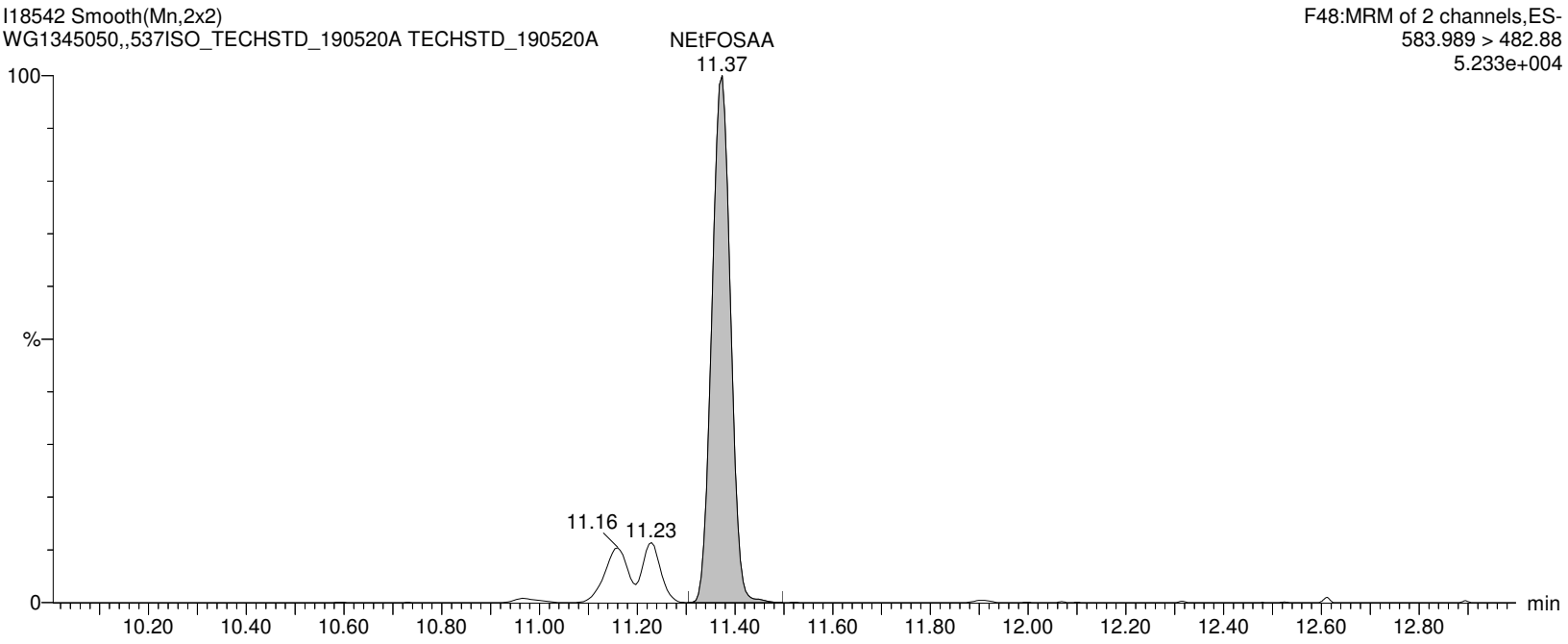
**MS Method Name: C:\MassLynx\Data\200227_537ISO_ICAL.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**NEtFOSAA**





all concentration units in (ng/mL)

# Continuing Calibration

# Calibration Verification Summary
# Form 7
# Semivolatiles

| | | | | | |
|---|---|---|---|---|---|
| **Client** | : Soils Engineering Services, Inc. | **Lab Number** | : L2009793 | | |
| **Project Name** | : GROSSINGERS | **Project Number** | : 9313 | | |
| **Instrument ID** | : LCMS01 | **Calibration Date** | : 03/09/20 12:48 | | |
| **Lab File ID** | : I19069 | **Init. Calib. Date(s)** | : 02/27/20 | 02/27/20 | |
| **Sample No** | : WG1348805-1 | **Init. Calib. Times** | : 14:02 | 17:04 | |
| **Channel** | : | | | | |

| Compound | Concentration (ng/ml) | True Value (ng/ml) | % Recovery | QC Limits |
|---|---|---|---|---|
| Perfluorobutanoic Acid (PFBA) | 0.533 | 0.500 | 106.7 | 50-150 |
| Perfluoropentanoic Acid (PFPeA) | 0.584 | 0.500 | 116.7 | 50-150 |
| Perfluorobutanesulfonic Acid (PFBS) | 0.427 | 0.440 | 96.6 | 50-150 |
| Perfluorohexanoic Acid (PFHxA) | 0.593 | 0.500 | 118.6 | 50-150 |
| 1H,1H,2H,2H-Perfluorohexanesulfonic Acid (4:2FTS) | 0.593 | 0.470 | 126.8 | 50-150 |
| Perfluoropentanesulfonic Acid (PFPeS) | 0.502 | 0.470 | 106.8 | 50-150 |
| Perfluoroheptanoic Acid (PFHpA) | 0.476 | 0.500 | 95.3 | 50-150 |
| Perfluorohexanesulfonic Acid-Branched (br-PFHxS) | 0.089 | 0.086 | 104.8 | 50-150 |
| Perfluorohexanesulfonic Acid-Linear (L-PFHxS) | 0.427 | 0.370 | 115.4 | 50-150 |
| Perfluorohexanesulfonic Acid (PFHxS) | 0.516 | 0.460 | - | 50-150 |
| Perfluorooctanoic Acid-Branched (br-PFOA) | | | - | 50-150 |
| Perfluorooctanoic Acid-Linear (L-PFOA) | 0.553 | | 110.6 | 50-150 |
| Perfluorooctanoic Acid (PFOA) | 0.553 | 0.500 | - | 50-150 |
| 1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS) | 0.493 | 0.480 | 103.8 | 50-150 |
| Perfluoroheptanesulfonic Acid (PFHpS) | 0.473 | 0.480 | 99.7 | 50-150 |
| Perfluorononanoic Acid (PFNA) | 0.380 | 0.500 | 76 | 50-150 |
| Perfluorooctanesulfonic Acid-Branched (br-PFOS) | 0.127 | 0.098 | 127.2 | 50-150 |
| Perfluorooctanesulfonic Acid-Linear (L-PFOS) | 0.488 | 0.365 | 133.6 | 50-150 |
| Perfluorooctanesulfonic Acid (PFOS) | 0.615 | 0.460 | - | 50-150 |
| Perfluorodecanoic Acid (PFDA) | 0.467 | 0.500 | 93.4 | 50-150 |
| 1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS) | 0.626 | 0.480 | 130.5 | 50-150 |
| Perfluorononanesulfonic Acid (PFNS) | 0.361 | 0.480 | 75.2 | 50-150 |
| N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA) | 0.481 | 0.500 | 96.3 | 50-150 |
| Perfluoroundecanoic Acid (PFUnA) | 0.498 | 0.500 | 99.5 | 50-150 |
| Perfluorodecanesulfonic Acid (PFDS) | 0.327 | 0.480 | 67.9 | 50-150 |
| Perfluorooctanesulfonamide (FOSA) | 0.316 | 0.500 | 63.2 | 50-150 |
| N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA) | 0.484 | 0.500 | 96.8 | 50-150 |
| Perfluorododecanoic Acid (PFDoA) | 0.520 | 0.500 | 104.1 | 50-150 |
| Perfluorotridecanoic Acid (PFTrDA) | 0.549 | 0.500 | 109.8 | 50-150 |
| Perfluorotetradecanoic Acid (PFTA) | 0.490 | 0.500 | 98 | 50-150 |
| Perfluoro[13C4]Butanoic Acid (MPFBA) | 10.075 | 10.000 | 100.7 | 50-150 |
| Perfluoro[13C5]Pentanoic Acid (M5PFPEA) | 9.907 | 10.000 | 99.1 | 50-150 |
| Perfluoro[2,3,4-13C3]Butanesulfonic Acid (M3PFBS) | 9.178 | 10.000 | 91.8 | 50-150 |
| 1H,1H,2H,2H-Perfluoro[1,2-13C2]Hexanesulfonic Acid (M2-4:2FTS) | 7.387 | 10.000 | 73.9 | 50-150 |
| Perfluoro[1,2,3,4,6-13C5]Hexanoic Acid (M5PFHxA) | 9.471 | 10.000 | 94.7 | 50-150 |
| Perfluoro[1,2,3,4-13C4]Heptanoic Acid (M4PFHpA) | 10.371 | 10.000 | 103.7 | 50-150 |
| Perfluoro[1,2,3-13C3]Hexanesulfonic Acid (M3PFHxS) | 9.375 | 10.000 | 93.7 | 50-150 |
| Perfluoro[13C8]Octanoic Acid (M8PFOA) | 10.852 | 10.000 | 108.5 | 50-150 |
| 1H,1H,2H,2H-Perfluoro[1,2-13C2]Octanesulfonic Acid (M2-6:2FTS) | 11.040 | 10.000 | 110.4 | 50-150 |
| Perfluoro[13C9]Nonanoic Acid (M9PFNA) | 10.976 | 10.000 | 109.8 | 50-150 |
| Perfluoro[13C8]Octanesulfonic Acid (M8PFOS) | 9.427 | 10.000 | 94.3 | 50-150 |
| Perfluoro[1,2,3,4,5,6-13C6]Decanoic Acid (M6PFDA) | 10.843 | 10.000 | 108.4 | 50-150 |
| 1H,1H,2H,2H-Perfluoro[1,2-13C2]Decanesulfonic Acid (M2-8:2FTS) | 9.264 | 10.000 | 92.6 | 50-150 |

*** Value outside of QC limits.**

# Calibration Verification Summary
# Form 7
# Semivolatiles

| | | | | |
|---|---|---|---|---|
| **Client** | : Soils Engineering Services, Inc. | **Lab Number** | : L2009793 | |
| **Project Name** | : GROSSINGERS | **Project Number** | : 9313 | |
| **Instrument ID** | : LCMS01 | **Calibration Date** | : 03/09/20 12:48 | |
| **Lab File ID** | : I19069 | **Init. Calib. Date(s)** | : 02/27/20 | 02/27/20 |
| **Sample No** | : WG1348805-1 | **Init. Calib. Times** | : 14:02 | 17:04 |
| **Channel** | : | | | |

| Compound | Concentration (ng/ml) | True Value (ng/ml) | % Recovery | QC Limits |
|---|---|---|---|---|
| N-Deuteriomethylperfluoro-1-octanesulfonamidoacetic Acid (d3-NMeFOSAA) | 12.120 | 10.000 | 121.2 | 50-150 |
| Perfluoro[1,2,3,4,5,6,7-13C7]Undecanoic Acid (M7-PFUDA) | 11.708 | 10.000 | 117.1 | 50-150 |
| Perfluoro[13C8]Octanesulfonamide (M8FOSA) | 9.120 | 10.000 | 91.2 | 50-150 |
| N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA) | 9.929 | 10.000 | 99.3 | 50-150 |
| Perfluoro[1,2-13C2]Dodecanoic Acid (MPFDOA) | 10.940 | 10.000 | 109.4 | 50-150 |
| Perfluoro[1,2-13C2]Tetradecanoic Acid (M2PFTEDA) | 9.869 | 10.000 | 98.7 | 50-150 |
| M4PFOS | 16.220 | | 162.2 | |
| M2PFDA | 17.400 | | 174 | |
| M2PFOA | 15.711 | | 157.1 | |
| M3PFBA | 14.343 | | 143.4 | |

*** Value outside of QC limits.**

# Calibration Verification Summary
# Form 7
# Semivolatiles

| | | | | | |
|---|---|---|---|---|---|
| **Client** | : Soils Engineering Services, Inc. | **Lab Number** | : L2009793 | | |
| **Project Name** | : GROSSINGERS | **Project Number** | : 9313 | | |
| **Instrument ID** | : LCMS01 | **Calibration Date** | : 03/09/20 17:03 | | |
| **Lab File ID** | : I19084 | **Init. Calib. Date(s)** | : 02/27/20 | 02/27/20 | |
| **Sample No** | : WG1348805-2 | **Init. Calib. Times** | : 14:02 | 17:04 | |
| **Channel** | : | | | | |

| Compound | Concentration (ng/ml) | True Value (ng/ml) | % Recovery | QC Limits |
|---|---|---|---|---|
| Perfluorobutanoic Acid (PFBA) | 9.994 | 10.000 | 99.9 | 70-130 |
| Perfluoropentanoic Acid (PFPeA) | 10.231 | 10.000 | 102.3 | 70-130 |
| Perfluorobutanesulfonic Acid (PFBS) | 8.999 | 8.850 | 101.7 | 70-130 |
| Perfluorohexanoic Acid (PFHxA) | 9.987 | 10.000 | 99.9 | 70-130 |
| 1H,1H,2H,2H-Perfluorohexanesulfonic Acid (4:2FTS) | 9.797 | 9.350 | 104.8 | 70-130 |
| Perfluoropentanesulfonic Acid (PFPeS) | 9.615 | 9.400 | 102.3 | 70-130 |
| Perfluoroheptanoic Acid (PFHpA) | 9.313 | 10.000 | 93.1 | 70-130 |
| Perfluorohexanesulfonic Acid-Branched (br-PFHxS) | 1.800 | 1.720 | 105.9 | 70-130 |
| Perfluorohexanesulfonic Acid-Linear (L-PFHxS) | 7.981 | 7.400 | 107.8 | 70-130 |
| Perfluorohexanesulfonic Acid (PFHxS) | 9.780 | 9.120 | - | 70-130 |
| Perfluorooctanoic Acid-Branched (br-PFOA) | | | - | 70-130 |
| Perfluorooctanoic Acid-Linear (L-PFOA) | 9.769 | 10.000 | 97.7 | 70-130 |
| Perfluorooctanoic Acid (PFOA) | 9.769 | 10.000 | - | 70-130 |
| 1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS) | 10.659 | 9.500 | 112.2 | 70-130 |
| Perfluoroheptanesulfonic Acid (PFHpS) | 10.246 | 9.500 | 107.9 | 70-130 |
| Perfluorononanoic Acid (PFNA) | 10.325 | 10.000 | 103.2 | 70-130 |
| Perfluorooctanesulfonic Acid-Branched (br-PFOS) | 2.049 | 1.960 | 102.5 | 70-130 |
| Perfluorooctanesulfonic Acid-Linear (L-PFOS) | 7.593 | 7.300 | 104 | 70-130 |
| Perfluorooctanesulfonic Acid (PFOS) | 9.642 | 9.260 | - | 70-130 |
| Perfluorodecanoic Acid (PFDA) | 9.763 | 10.000 | 97.6 | 70-130 |
| 1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS) | 10.128 | 9.600 | 105.5 | 70-130 |
| Perfluorononanesulfonic Acid (PFNS) | 11.304 | 9.600 | 117.8 | 70-130 |
| N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA) | 10.956 | 10.000 | 109.6 | 70-130 |
| Perfluoroundecanoic Acid (PFUnA) | 9.863 | 10.000 | 98.6 | 70-130 |
| Perfluorodecanesulfonic Acid (PFDS) | 10.227 | 9.650 | 106 | 70-130 |
| Perfluorooctanesulfonamide (FOSA) | 9.515 | 10.000 | 95.1 | 70-130 |
| N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA) | 9.814 | 10.000 | 98.1 | 70-130 |
| Perfluorododecanoic Acid (PFDoA) | 10.768 | 10.000 | 107.7 | 70-130 |
| Perfluorotridecanoic Acid (PFTrDA) | 10.608 | 10.000 | 106.1 | 70-130 |
| Perfluorotetradecanoic Acid (PFTA) | 11.152 | 10.000 | 111.5 | 70-130 |
| Perfluoro[13C4]Butanoic Acid (MPFBA) | 9.856 | 10.000 | 98.6 | 50-150 |
| Perfluoro[13C5]Pentanoic Acid (M5PFPEA) | 10.427 | 10.000 | 104.3 | 50-150 |
| Perfluoro[2,3,4-13C3]Butanesulfonic Acid (M3PFBS) | 8.697 | 10.000 | 87 | 50-150 |
| 1H,1H,2H,2H-Perfluoro[1,2-13C2]Hexanesulfonic Acid (M2-4:2FTS) | 7.179 | 10.000 | 71.8 | 50-150 |
| Perfluoro[1,2,3,4,6-13C5]Hexanoic Acid (M5PFHxA) | 9.115 | 10.000 | 91.1 | 50-150 |
| Perfluoro[1,2,3,4-13C4]Heptanoic Acid (M4PFHpA) | 9.726 | 10.000 | 97.3 | 50-150 |
| Perfluoro[1,2,3-13C3]Hexanesulfonic Acid (M3PFHxS) | 9.421 | 10.000 | 94.2 | 50-150 |
| Perfluoro[13C8]Octanoic Acid (M8PFOA) | 9.665 | 10.000 | 96.6 | 50-150 |
| 1H,1H,2H,2H-Perfluoro[1,2-13C2]Octanesulfonic Acid (M2-6:2FTS) | 9.721 | 10.000 | 97.2 | 50-150 |
| Perfluoro[13C9]Nonanoic Acid (M9PFNA) | 10.502 | 10.000 | 105 | 50-150 |
| Perfluoro[13C8]Octanesulfonic Acid (M8PFOS) | 10.145 | 10.000 | 101.5 | 50-150 |
| Perfluoro[1,2,3,4,5,6-13C6]Decanoic Acid (M6PFDA) | 9.889 | 10.000 | 98.9 | 50-150 |
| 1H,1H,2H,2H-Perfluoro[1,2-13C2]Decanesulfonic Acid (M2-8:2FTS) | 9.379 | 10.000 | 93.8 | 50-150 |

*** Value outside of QC limits.**

# Calibration Verification Summary
# Form 7
# Semivolatiles

| | | | | |
|---|---|---|---|---|
| **Client** | : Soils Engineering Services, Inc. | **Lab Number** | : L2009793 | |
| **Project Name** | : GROSSINGERS | **Project Number** | : 9313 | |
| **Instrument ID** | : LCMS01 | **Calibration Date** | : 03/09/20 17:03 | |
| **Lab File ID** | : I19084 | **Init. Calib. Date(s)** | : 02/27/20 | 02/27/20 |
| **Sample No** | : WG1348805-2 | **Init. Calib. Times** | : 14:02 | 17:04 |
| **Channel** | : | | | |

| Compound | Concentration (ng/ml) | True Value (ng/ml) | % Recovery | QC Limits |
|---|---|---|---|---|
| N-Deuteriomethylperfluoro-1-octanesulfonamidoacetic Acid (d3-NMeFOSAA) | 11.353 | 10.000 | 113.5 | 50-150 |
| Perfluoro[1,2,3,4,5,6,7-13C7]Undecanoic Acid (M7-PFUDA) | 10.414 | 10.000 | 104.1 | 50-150 |
| Perfluoro[13C8]Octanesulfonamide (M8FOSA) | 8.428 | 10.000 | 84.3 | 50-150 |
| N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA) | 10.465 | 10.000 | 104.6 | 50-150 |
| Perfluoro[1,2-13C2]Dodecanoic Acid (MPFDOA) | 10.073 | 10.000 | 100.7 | 50-150 |
| Perfluoro[1,2-13C2]Tetradecanoic Acid (M2PFTEDA) | 9.281 | 10.000 | 92.8 | 50-150 |
| M4PFOS | 15.739 | | 157.4 | |
| M2PFDA | 16.312 | | 163.1 | |
| M2PFOA | 15.053 | | 150.5 | |
| M3PFBA | 12.346 | | 123.5 | |

*** Value outside of QC limits.**

# Calibration Verification Summary
# Form 7
# Semivolatiles

| | | | | |
|---|---|---|---|---|
| **Client** | : Soils Engineering Services, Inc. | **Lab Number** | : L2009793 | |
| **Project Name** | : GROSSINGERS | **Project Number** | : 9313 | |
| **Instrument ID** | : LCMS01 | **Calibration Date** | : 03/09/20 20:21 | |
| **Lab File ID** | : I19096 | **Init. Calib. Date(s)** | : 02/27/20 | 02/27/20 |
| **Sample No** | : WG1348805-3 | **Init. Calib. Times** | : 14:02 | 17:04 |
| **Channel** | : | | | |

| Compound | Concentration (ng/ml) | True Value (ng/ml) | % Recovery | QC Limits |
|---|---|---|---|---|
| Perfluorobutanoic Acid (PFBA) | 0.497 | 0.500 | 99.3 | 50-150 |
| Perfluoropentanoic Acid (PFPeA) | 0.551 | 0.500 | 110.1 | 50-150 |
| Perfluorobutanesulfonic Acid (PFBS) | 0.457 | 0.440 | 103.3 | 50-150 |
| Perfluorohexanoic Acid (PFHxA) | 0.561 | 0.500 | 112.1 | 50-150 |
| 1H,1H,2H,2H-Perfluorohexanesulfonic Acid (4:2FTS) | 0.434 | 0.470 | 92.9 | 50-150 |
| Perfluoropentanesulfonic Acid (PFPeS) | 0.485 | 0.470 | 103.2 | 50-150 |
| Perfluoroheptanoic Acid (PFHpA) | 0.476 | 0.500 | 95.2 | 50-150 |
| Perfluorohexanesulfonic Acid-Branched (br-PFHxS) | 0.082 | 0.086 | 96.7 | 50-150 |
| Perfluorohexanesulfonic Acid-Linear (L-PFHxS) | 0.458 | 0.370 | 123.9 | 50-150 |
| Perfluorohexanesulfonic Acid (PFHxS) | 0.541 | 0.460 | - | 50-150 |
| Perfluorooctanoic Acid-Branched (br-PFOA) | | | - | 50-150 |
| Perfluorooctanoic Acid-Linear (L-PFOA) | 0.548 | | 109.6 | 50-150 |
| Perfluorooctanoic Acid (PFOA) | 0.548 | 0.500 | - | 50-150 |
| 1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS) | 0.611 | 0.480 | 128.7 | 50-150 |
| Perfluoroheptanesulfonic Acid (PFHpS) | 0.285 | 0.480 | 60 | 50-150 |
| Perfluorononanoic Acid (PFNA) | 0.558 | 0.500 | 111.6 | 50-150 |
| Perfluorooctanesulfonic Acid-Branched (br-PFOS) | 0.143 | 0.098 | 142.8 | 50-150 |
| Perfluorooctanesulfonic Acid-Linear (L-PFOS) | 0.438 | 0.365 | 120 | 50-150 |
| Perfluorooctanesulfonic Acid (PFOS) | 0.581 | 0.460 | - | 50-150 |
| Perfluorodecanoic Acid (PFDA) | 0.595 | 0.500 | 119 | 50-150 |
| 1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS) | 0.627 | 0.480 | 130.7 | 50-150 |
| Perfluorononanesulfonic Acid (PFNS) | 0.407 | 0.480 | 84.8 | 50-150 |
| N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA) | 0.643 | 0.500 | 128.6 | 50-150 |
| Perfluoroundecanoic Acid (PFUnA) | 0.496 | 0.500 | 99.1 | 50-150 |
| Perfluorodecanesulfonic Acid (PFDS) | 0.328 | 0.480 | 68 | 50-150 |
| Perfluorooctanesulfonamide (FOSA) | 0.619 | 0.500 | 123.7 | 50-150 |
| N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA) | 0.382 | 0.500 | 76.4 | 50-150 |
| Perfluorododecanoic Acid (PFDoA) | 0.552 | 0.500 | 110.5 | 50-150 |
| Perfluorotridecanoic Acid (PFTrDA) | 0.550 | 0.500 | 109.9 | 50-150 |
| Perfluorotetradecanoic Acid (PFTA) | 0.493 | 0.500 | 98.6 | 50-150 |
| Perfluoro[13C4]Butanoic Acid (MPFBA) | 10.187 | 10.000 | 101.9 | 50-150 |
| Perfluoro[13C5]Pentanoic Acid (M5PFPEA) | 10.554 | 10.000 | 105.5 | 50-150 |
| Perfluoro[2,3,4-13C3]Butanesulfonic Acid (M3PFBS) | 9.801 | 10.000 | 98 | 50-150 |
| 1H,1H,2H,2H-Perfluoro[1,2-13C2]Hexanesulfonic Acid (M2-4:2FTS) | 7.455 | 10.000 | 74.5 | 50-150 |
| Perfluoro[1,2,3,4,6-13C5]Hexanoic Acid (M5PFHxA) | 9.482 | 10.000 | 94.8 | 50-150 |
| Perfluoro[1,2,3,4-13C4]Heptanoic Acid (M4PFHpA) | 10.152 | 10.000 | 101.5 | 50-150 |
| Perfluoro[1,2,3-13C3]Hexanesulfonic Acid (M3PFHxS) | 10.110 | 10.000 | 101.1 | 50-150 |
| Perfluoro[13C8]Octanoic Acid (M8PFOA) | 9.704 | 10.000 | 97 | 50-150 |
| 1H,1H,2H,2H-Perfluoro[1,2-13C2]Octanesulfonic Acid (M2-6:2FTS) | 10.158 | 10.000 | 101.6 | 50-150 |
| Perfluoro[13C9]Nonanoic Acid (M9PFNA) | 10.139 | 10.000 | 101.4 | 50-150 |
| Perfluoro[13C8]Octanesulfonic Acid (M8PFOS) | 11.270 | 10.000 | 112.7 | 50-150 |
| Perfluoro[1,2,3,4,5,6-13C6]Decanoic Acid (M6PFDA) | 9.700 | 10.000 | 97 | 50-150 |
| 1H,1H,2H,2H-Perfluoro[1,2-13C2]Decanesulfonic Acid (M2-8:2FTS) | 9.400 | 10.000 | 94 | 50-150 |

*** Value outside of QC limits.**

# Calibration Verification Summary
# Form 7
# Semivolatiles

| | | | | |
|---|---|---|---|---|
| **Client** | : Soils Engineering Services, Inc. | **Lab Number** | : L2009793 | |
| **Project Name** | : GROSSINGERS | **Project Number** | : 9313 | |
| **Instrument ID** | : LCMS01 | **Calibration Date** | : 03/09/20 20:21 | |
| **Lab File ID** | : I19096 | **Init. Calib. Date(s)** | : 02/27/20 | 02/27/20 |
| **Sample No** | : WG1348805-3 | **Init. Calib. Times** | : 14:02 | 17:04 |
| **Channel** | : | | | |

| Compound | Concentration (ng/ml) | True Value (ng/ml) | % Recovery | QC Limits |
|---|---|---|---|---|
| N-Deuteriomethylperfluoro-1-octanesulfonamidoacetic Acid (d3-NMeFOSAA) | 9.927 | 10.000 | 99.3 | 50-150 |
| Perfluoro[1,2,3,4,5,6,7-13C7]Undecanoic Acid (M7-PFUDA) | 11.345 | 10.000 | 113.4 | 50-150 |
| Perfluoro[13C8]Octanesulfonamide (M8FOSA) | 8.506 | 10.000 | 85.1 | 50-150 |
| N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA) | 9.996 | 10.000 | 100 | 50-150 |
| Perfluoro[1,2-13C2]Dodecanoic Acid (MPFDOA) | 9.711 | 10.000 | 97.1 | 50-150 |
| Perfluoro[1,2-13C2]Tetradecanoic Acid (M2PFTEDA) | 9.277 | 10.000 | 92.8 | 50-150 |
| M4PFOS | 14.017 | | 140.2 | |
| M2PFDA | 15.791 | | 157.9 | |
| M2PFOA | 14.649 | | 146.5 | |
| M3PFBA | 12.513 | | 125.1 | |

*** Value outside of QC limits.**

# Calibration Verification Summary
# Form 7
# Semivolatiles

| | | | | | |
|---|---|---|---|---|---|
| **Client** | : Soils Engineering Services, Inc. | **Lab Number** | : L2009793 | | |
| **Project Name** | : GROSSINGERS | **Project Number** | : 9313 | | |
| **Instrument ID** | : LCMS02 | **Calibration Date** | : 03/10/20 10:15 | | |
| **Lab File ID** | : I20398 | **Init. Calib. Date(s)** | : 11/18/19 | 11/18/19 | |
| **Sample No** | : WG1348954-1 | **Init. Calib. Times** | : 10:24 | 12:49 | |
| **Channel** | : | | | | |

| Compound | Concentration (ng/ml) | True Value (ng/ml) | % Recovery | QC Limits |
|---|---|---|---|---|
| Perfluorobutanoic Acid (PFBA) | 0.480 | 0.500 | 96.1 | 50-150 |
| Perfluoropentanoic Acid (PFPeA) | 0.530 | 0.500 | 105.9 | 50-150 |
| Perfluorobutanesulfonic Acid (PFBS) | 0.372 | 0.440 | 84.1 | 50-150 |
| Perfluorohexanoic Acid (PFHxA) | 0.559 | 0.500 | 111.8 | 50-150 |
| 1H,1H,2H,2H-Perfluorohexanesulfonic Acid (4:2FTS) | 0.410 | 0.470 | 87.7 | 50-150 |
| Perfluoropentanesulfonic Acid (PFPeS) | 0.391 | 0.470 | 83.2 | 50-150 |
| Perfluoroheptanoic Acid (PFHpA) | 0.485 | 0.500 | 96.9 | 50-150 |
| Perfluorohexanesulfonic Acid-Branched (br-PFHxS) | 0.054 | 0.086 | 63.1 | 50-150 |
| Perfluorohexanesulfonic Acid-Linear (L-PFHxS) | 0.268 | 0.370 | 72.5 | 50-150 |
| Perfluorohexanesulfonic Acid (PFHxS) | 0.322 | 0.460 | - | 50-150 |
| Perfluorooctanoic Acid-Branched (br-PFOA) | | | - | 50-150 |
| Perfluorooctanoic Acid-Linear (L-PFOA) | 0.503 | | 100.6 | 50-150 |
| Perfluorooctanoic Acid (PFOA) | 0.503 | 0.500 | - | 50-150 |
| 1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS) | 0.532 | 0.480 | 112 | 50-150 |
| Perfluoroheptanesulfonic Acid (PFHpS) | 0.457 | 0.480 | 96.2 | 50-150 |
| Perfluorononanoic Acid (PFNA) | 0.464 | 0.500 | 92.9 | 50-150 |
| Perfluorooctanesulfonic Acid-Branched (br-PFOS) | 0.066 | 0.098 | 65.7 | 50-150 |
| Perfluorooctanesulfonic Acid-Linear (L-PFOS) | 0.306 | 0.365 | 83.8 | 50-150 |
| Perfluorooctanesulfonic Acid (PFOS) | 0.371 | 0.460 | - | 50-150 |
| Perfluorodecanoic Acid (PFDA) | 0.463 | 0.500 | 92.5 | 50-150 |
| 1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS) | 0.504 | 0.480 | 105.1 | 50-150 |
| Perfluorononanesulfonic Acid (PFNS) | 0.380 | 0.480 | 79.2 | 50-150 |
| N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA) | 0.494 | 0.500 | - | 50-150 |
| N-Methyl Perfluorooctanesulfonamidoacetic Acid-Branched (br-NMeFOSAA) | | | - | 50-150 |
| N-Methyl Perfluorooctanesulfonamidoacetic Acid-Linear (L-NMeFOSAA) | 0.494 | 0.500 | 98.9 | 50-150 |
| Perfluoroundecanoic Acid (PFUnA) | 0.459 | 0.500 | 91.7 | 50-150 |
| Perfluorodecanesulfonic Acid (PFDS) | 0.388 | 0.480 | 80.4 | 50-150 |
| Perfluorooctanesulfonamide (FOSA) | 0.409 | 0.500 | 81.7 | 50-150 |
| N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA) | 0.340 | 0.500 | - | 50-150 |
| N-Ethyl Perfluorooctanesulfonamidoacetic Acid-Branched (br-NEtFOSAA) | | | - | 50-150 |
| N-Ethyl Perfluorooctanesulfonamidoacetic Acid-Linear (L-NEtFOSAA) | 0.340 | 0.500 | 68 | 50-150 |
| Perfluorododecanoic Acid (PFDoA) | 0.467 | 0.500 | 93.4 | 50-150 |
| Perfluorotridecanoic Acid (PFTrDA) | 0.536 | 0.500 | 107.1 | 50-150 |
| Perfluorotetradecanoic Acid (PFTA) | 0.481 | 0.500 | 96.2 | 50-150 |
| Perfluoro[13C4]Butanoic Acid (MPFBA) | 10.742 | 10.000 | 107.4 | 50-150 |
| Perfluoro[13C5]Pentanoic Acid (M5PFPEA) | 11.227 | 10.000 | 112.3 | 50-150 |
| Perfluoro[2,3,4-13C3]Butanesulfonic Acid (M3PFBS) | 9.505 | 10.000 | 95.1 | 50-150 |
| 1H,1H,2H,2H-Perfluoro[1,2-13C2]Hexanesulfonic Acid (M2-4:2FTS) | 9.268 | 10.000 | 92.7 | 50-150 |
| Perfluoro[1,2,3,4,6-13C5]Hexanoic Acid (M5PFHxA) | 11.006 | 10.000 | 110.1 | 50-150 |
| Perfluoro[1,2,3,4-13C4]Heptanoic Acid (M4PFHpA) | 11.491 | 10.000 | 114.9 | 50-150 |
| Perfluoro[1,2,3-13C3]Hexanesulfonic Acid (M3PFHxS) | 9.979 | 10.000 | 99.8 | 50-150 |
| Perfluoro[13C8]Octanoic Acid (M8PFOA) | 11.354 | 10.000 | 113.5 | 50-150 |
| 1H,1H,2H,2H-Perfluoro[1,2-13C2]Octanesulfonic Acid (M2-6:2FTS) | 8.973 | 10.000 | 89.7 | 50-150 |

***** Value outside of QC limits.

# Calibration Verification Summary
# Form 7
# Semivolatiles

| | | | | | |
|---|---|---|---|---|---|
| **Client** | : Soils Engineering Services, Inc. | **Lab Number** | : L2009793 | | |
| **Project Name** | : GROSSINGERS | **Project Number** | : 9313 | | |
| **Instrument ID** | : LCMS02 | **Calibration Date** | : 03/10/20 10:15 | | |
| **Lab File ID** | : I20398 | **Init. Calib. Date(s)** | : 11/18/19 | 11/18/19 | |
| **Sample No** | : WG1348954-1 | **Init. Calib. Times** | : 10:24 | 12:49 | |
| **Channel** | : | | | | |

| Compound | Concentration (ng/ml) | True Value (ng/ml) | % Recovery | QC Limits |
|---|---|---|---|---|
| Perfluoro[13C9]Nonanoic Acid (M9PFNA) | 11.930 | 10.000 | 119.3 | 50-150 |
| Perfluoro[13C8]Octanesulfonic Acid (M8PFOS) | 10.141 | 10.000 | 101.4 | 50-150 |
| Perfluoro[1,2,3,4,5,6-13C6]Decanoic Acid (M6PFDA) | 11.049 | 10.000 | 110.5 | 50-150 |
| 1H,1H,2H,2H-Perfluoro[1,2-13C2]Decanesulfonic Acid (M2-8:2FTS) | 11.696 | 10.000 | 117 | 50-150 |
| N-Deuteriomethylperfluoro-1-octanesulfonamidoacetic Acid (d3-NMeFOSAA) | 9.396 | 10.000 | 94 | 50-150 |
| Perfluoro[1,2,3,4,5,6,7-13C7]Undecanoic Acid (M7-PFUDA) | 12.204 | 10.000 | 122 | 50-150 |
| Perfluoro[13C8]Octanesulfonamide (M8FOSA) | 8.380 | 10.000 | 83.8 | 50-150 |
| N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA) | 9.954 | 10.000 | 99.5 | 50-150 |
| Perfluoro[1,2-13C2]Dodecanoic Acid (MPFDOA) | 10.643 | 10.000 | 106.4 | 50-150 |
| Perfluoro[1,2-13C2]Tetradecanoic Acid (M2PFTEDA) | 10.738 | 10.000 | 107.4 | 50-150 |
| M4PFOS | 12.606 | | 126.1 | |
| M2PFDA | 13.211 | | 132.1 | |
| M2PFOA | 11.575 | | 115.8 | |
| M3PFBA | 10.830 | | 108.3 | |

*** Value outside of QC limits.**

# Calibration Verification Summary
# Form 7
# Semivolatiles

| | | | | | |
|---|---|---|---|---|---|
| **Client** | : Soils Engineering Services, Inc. | **Lab Number** | : L2009793 | | |
| **Project Name** | : GROSSINGERS | **Project Number** | : 9313 | | |
| **Instrument ID** | : LCMS02 | **Calibration Date** | : 03/10/20 21:04 | | |
| **Lab File ID** | : I20434 | **Init. Calib. Date(s)** | : 11/18/19 | 11/18/19 | |
| **Sample No** | : WG1348954-3 | **Init. Calib. Times** | : 10:24 | 12:49 | |
| **Channel** | : | | | | |

| Compound | Concentration (ng/ml) | True Value (ng/ml) | % Recovery | QC Limits |
|---|---|---|---|---|
| Perfluorobutanoic Acid (PFBA) | 0.463 | 0.500 | 92.6 | 50-150 |
| Perfluoropentanoic Acid (PFPeA) | 0.515 | 0.500 | 102.9 | 50-150 |
| Perfluorobutanesulfonic Acid (PFBS) | 0.370 | 0.440 | 83.7 | 50-150 |
| Perfluorohexanoic Acid (PFHxA) | 0.550 | 0.500 | 109.9 | 50-150 |
| 1H,1H,2H,2H-Perfluorohexanesulfonic Acid (4:2FTS) | 0.491 | 0.470 | 105 | 50-150 |
| Perfluoropentanesulfonic Acid (PFPeS) | 0.359 | 0.470 | 76.5 | 50-150 |
| Perfluoroheptanoic Acid (PFHpA) | 0.477 | 0.500 | 95.3 | 50-150 |
| Perfluorohexanesulfonic Acid-Branched (br-PFHxS) | 0.062 | 0.086 | 73.3 | 50-150 |
| Perfluorohexanesulfonic Acid-Linear (L-PFHxS) | 0.316 | 0.370 | 85.4 | 50-150 |
| Perfluorohexanesulfonic Acid (PFHxS) | 0.378 | 0.460 | - | 50-150 |
| Perfluorooctanoic Acid-Branched (br-PFOA) | | | - | 50-150 |
| Perfluorooctanoic Acid-Linear (L-PFOA) | 0.536 | | 107.2 | 50-150 |
| Perfluorooctanoic Acid (PFOA) | 0.536 | 0.500 | - | 50-150 |
| 1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS) | 0.311 | 0.480 | 65.4 | 50-150 |
| Perfluoroheptanesulfonic Acid (PFHpS) | 0.532 | 0.480 | 112 | 50-150 |
| Perfluorononanoic Acid (PFNA) | 0.479 | 0.500 | 95.8 | 50-150 |
| Perfluorooctanesulfonic Acid-Branched (br-PFOS) | 0.083 | 0.098 | 83.1 | 50-150 |
| Perfluorooctanesulfonic Acid-Linear (L-PFOS) | 0.380 | 0.365 | 104.1 | 50-150 |
| Perfluorooctanesulfonic Acid (PFOS) | 0.463 | 0.460 | - | 50-150 |
| Perfluorodecanoic Acid (PFDA) | 0.471 | 0.500 | 94.2 | 50-150 |
| 1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS) | 0.342 | 0.480 | 71.2 | 50-150 |
| Perfluorononanesulfonic Acid (PFNS) | 0.573 | 0.480 | 119.4 | 50-150 |
| N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA) | 0.593 | 0.500 | - | 50-150 |
| N-Methyl Perfluorooctanesulfonamidoacetic Acid-Branched (br-NMeFOSAA) | | | - | 50-150 |
| N-Methyl Perfluorooctanesulfonamidoacetic Acid-Linear (L-NMeFOSAA) | 0.593 | 0.500 | 118.6 | 50-150 |
| Perfluoroundecanoic Acid (PFUnA) | 0.520 | 0.500 | 104.1 | 50-150 |
| Perfluorodecanesulfonic Acid (PFDS) | 0.398 | 0.480 | 82.4 | 50-150 |
| Perfluorooctanesulfonamide (FOSA) | 0.480 | 0.500 | 95.9 | 50-150 |
| N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA) | 0.308 | 0.500 | - | 50-150 |
| N-Ethyl Perfluorooctanesulfonamidoacetic Acid-Branched (br-NEtFOSAA) | | | - | 50-150 |
| N-Ethyl Perfluorooctanesulfonamidoacetic Acid-Linear (L-NEtFOSAA) | 0.308 | 0.500 | 61.6 | 50-150 |
| Perfluorododecanoic Acid (PFDoA) | 0.484 | 0.500 | 96.8 | 50-150 |
| Perfluorotridecanoic Acid (PFTrDA) | 0.588 | 0.500 | 117.6 | 50-150 |
| Perfluorotetradecanoic Acid (PFTA) | 0.501 | 0.500 | 100.2 | 50-150 |
| Perfluoro[13C4]Butanoic Acid (MPFBA) | 10.831 | 10.000 | 108.3 | 50-150 |
| Perfluoro[13C5]Pentanoic Acid (M5PFPEA) | 11.528 | 10.000 | 115.3 | 50-150 |
| Perfluoro[2,3,4-13C3]Butanesulfonic Acid (M3PFBS) | 9.971 | 10.000 | 99.7 | 50-150 |
| 1H,1H,2H,2H-Perfluoro[1,2-13C2]Hexanesulfonic Acid (M2-4:2FTS) | 9.955 | 10.000 | 99.5 | 50-150 |
| Perfluoro[1,2,3,4,6-13C5]Hexanoic Acid (M5PFHxA) | 10.624 | 10.000 | 106.2 | 50-150 |
| Perfluoro[1,2,3,4-13C4]Heptanoic Acid (M4PFHpA) | 10.935 | 10.000 | 109.4 | 50-150 |
| Perfluoro[1,2,3-13C3]Hexanesulfonic Acid (M3PFHxS) | 10.702 | 10.000 | 107 | 50-150 |
| Perfluoro[13C8]Octanoic Acid (M8PFOA) | 10.822 | 10.000 | 108.2 | 50-150 |
| 1H,1H,2H,2H-Perfluoro[1,2-13C2]Octanesulfonic Acid (M2-6:2FTS) | 10.998 | 10.000 | 110 | 50-150 |

*** Value outside of QC limits.**

# Calibration Verification Summary
# Form 7
# Semivolatiles

| | | | | | |
|---|---|---|---|---|---|
| **Client** | : Soils Engineering Services, Inc. | **Lab Number** | : L2009793 | | |
| **Project Name** | : GROSSINGERS | **Project Number** | : 9313 | | |
| **Instrument ID** | : LCMS02 | **Calibration Date** | : 03/10/20 21:04 | | |
| **Lab File ID** | : I20434 | **Init. Calib. Date(s)** | : 11/18/19 | 11/18/19 | |
| **Sample No** | : WG1348954-3 | **Init. Calib. Times** | : 10:24 | 12:49 | |
| **Channel** | : | | | | |

| Compound | Concentration (ng/ml) | True Value (ng/ml) | % Recovery | QC Limits |
|---|---|---|---|---|
| Perfluoro[13C9]Nonanoic Acid (M9PFNA) | 11.597 | 10.000 | 116 | 50-150 |
| Perfluoro[13C8]Octanesulfonic Acid (M8PFOS) | 10.266 | 10.000 | 102.7 | 50-150 |
| Perfluoro[1,2,3,4,5,6-13C6]Decanoic Acid (M6PFDA) | 11.170 | 10.000 | 111.7 | 50-150 |
| 1H,1H,2H,2H-Perfluoro[1,2-13C2]Decanesulfonic Acid (M2-8:2FTS) | 12.082 | 10.000 | 120.8 | 50-150 |
| N-Deuteriomethylperfluoro-1-octanesulfonamidoacetic Acid (d3-NMeFOSAA) | 9.626 | 10.000 | 96.3 | 50-150 |
| Perfluoro[1,2,3,4,5,6,7-13C7]Undecanoic Acid (M7-PFUDA) | 11.668 | 10.000 | 116.7 | 50-150 |
| Perfluoro[13C8]Octanesulfonamide (M8FOSA) | 8.439 | 10.000 | 84.4 | 50-150 |
| N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA) | 9.135 | 10.000 | 91.3 | 50-150 |
| Perfluoro[1,2-13C2]Dodecanoic Acid (MPFDOA) | 10.273 | 10.000 | 102.7 | 50-150 |
| Perfluoro[1,2-13C2]Tetradecanoic Acid (M2PFTEDA) | 9.993 | 10.000 | 99.9 | 50-150 |
| M4PFOS | 12.434 | | 124.3 | |
| M2PFDA | 14.004 | | 140 | |
| M2PFOA | 12.504 | | 125 | |
| M3PFBA | 10.937 | | 109.4 | |
| 2,3,3,3-Tetrafluoro-2-[1,1,2,2,3,3,3-Heptafluoropropoxy]-Propanoic Acid (HFPO-DA) | 7.251 | 0.500 | 72.5 | 50-150 |
| 2,3,3,3-Tetrafluoro-2-[1,1,2,2,3,3,3-Heptafluoropropoxy]-13C3-Propanoic Acid (M3HFPO-DA) | 74.998 | 10.000 | 37.5* | 50-150 |
| 4,8-Dioxa-3h-Perfluorononanoic Acid (ADONA) | 0.448 | 0.500 | 94.7 | 50-150 |
| Perfluorohexadecanoic Acid (PFHxDA) | 0.669 | 0.500 | 133.7 | 50-150 |
| Perfluorooctadecanoic Acid (PFODA) | 0.638 | 0.500 | 127.5 | 50-150 |
| Perfluoro[13C2]Hexadecanoic Acid (M2PFHxDA) | 7.165 | 10.000 | 71.6 | 50-150 |
| Perfluorododecane Sulfonic Acid (PFDoDS) | 0.491 | 0.500 | 98.3 | 50-150 |
| 1H,1H,2H,2H-Perfluorododecanesulfonic Acid (10:2FTS) | 0.534 | 0.500 | 110.8 | 50-150 |
| 9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid (9Cl-PF3ONS) | 0.439 | 0.500 | 94.2 | 50-150 |
| 11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS) | 0.445 | 0.500 | 94.5 | 50-150 |

*** Value outside of QC limits.**

# Calibration Verification Summary
# Form 7
# Semivolatiles

| | | | | | |
|---|---|---|---|---|---|
| **Client** | : Soils Engineering Services, Inc. | **Lab Number** | : L2009793 | | |
| **Project Name** | : GROSSINGERS | **Project Number** | : 9313 | | |
| **Instrument ID** | : LCMS02 | **Calibration Date** | : 03/10/20 23:50 | | |
| **Lab File ID** | : I20444 | **Init. Calib. Date(s)** | : 11/18/19 | 11/18/19 | |
| **Sample No** | : WG1348954-4 | **Init. Calib. Times** | : 10:24 | 12:49 | |
| **Channel** | : | | | | |

| Compound | Concentration (ng/ml) | True Value (ng/ml) | % Recovery | QC Limits |
|---|---|---|---|---|
| Perfluorobutanoic Acid (PFBA) | 9.032 | 10.000 | 90.3 | 70-130 |
| Perfluoropentanoic Acid (PFPeA) | 9.376 | 10.000 | 93.8 | 70-130 |
| Perfluorobutanesulfonic Acid (PFBS) | 7.758 | 8.850 | 87.7 | 70-130 |
| Perfluorohexanoic Acid (PFHxA) | 8.886 | 10.000 | 88.9 | 70-130 |
| 1H,1H,2H,2H-Perfluorohexanesulfonic Acid (4:2FTS) | 8.820 | 9.350 | 94.3 | 70-130 |
| Perfluoropentanesulfonic Acid (PFPeS) | 7.450 | 9.400 | 79.3 | 70-130 |
| Perfluoroheptanoic Acid (PFHpA) | 9.097 | 10.000 | 91 | 70-130 |
| Perfluorohexanesulfonic Acid-Branched (br-PFHxS) | 1.404 | 1.720 | 82.6 | 70-130 |
| Perfluorohexanesulfonic Acid-Linear (L-PFHxS) | 6.638 | 7.400 | 89.7 | 70-130 |
| Perfluorohexanesulfonic Acid (PFHxS) | 8.042 | 9.120 | - | 70-130 |
| Perfluorooctanoic Acid-Branched (br-PFOA) | | | - | 70-130 |
| Perfluorooctanoic Acid-Linear (L-PFOA) | 8.946 | 10.000 | 89.5 | 70-130 |
| Perfluorooctanoic Acid (PFOA) | 8.946 | 10.000 | - | 70-130 |
| 1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS) | 9.992 | 9.500 | 105.2 | 70-130 |
| Perfluoroheptanesulfonic Acid (PFHpS) | 9.326 | 9.500 | 98.2 | 70-130 |
| Perfluorononanoic Acid (PFNA) | 9.236 | 10.000 | 92.4 | 70-130 |
| Perfluorooctanesulfonic Acid-Branched (br-PFOS) | 1.672 | 1.960 | 83.6 | 70-130 |
| Perfluorooctanesulfonic Acid-Linear (L-PFOS) | 6.504 | 7.300 | 89.1 | 70-130 |
| Perfluorooctanesulfonic Acid (PFOS) | 8.176 | 9.260 | - | 70-130 |
| Perfluorodecanoic Acid (PFDA) | 9.264 | 10.000 | 92.6 | 70-130 |
| 1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS) | 9.312 | 9.600 | 97 | 70-130 |
| Perfluorononanesulfonic Acid (PFNS) | 9.480 | 9.600 | 98.8 | 70-130 |
| N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA) | 9.896 | 10.000 | - | 70-130 |
| N-Methyl Perfluorooctanesulfonamidoacetic Acid-Branched (br-NMeFOSAA) | | | - | 70-130 |
| N-Methyl Perfluorooctanesulfonamidoacetic Acid-Linear (L-NMeFOSAA) | 9.896 | 10.000 | 99 | 70-130 |
| Perfluoroundecanoic Acid (PFUnA) | 9.540 | 10.000 | 95.4 | 70-130 |
| Perfluorodecanesulfonic Acid (PFDS) | 9.362 | 9.650 | 97 | 70-130 |
| Perfluorooctanesulfonamide (FOSA) | 8.780 | 10.000 | 87.8 | 70-130 |
| N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA) | 8.789 | 10.000 | - | 70-130 |
| N-Ethyl Perfluorooctanesulfonamidoacetic Acid-Branched (br-NEtFOSAA) | | | - | 70-130 |
| N-Ethyl Perfluorooctanesulfonamidoacetic Acid-Linear (L-NEtFOSAA) | 8.789 | 10.000 | 87.9 | 70-130 |
| Perfluorododecanoic Acid (PFDoA) | 9.545 | 10.000 | 95.5 | 70-130 |
| Perfluorotridecanoic Acid (PFTrDA) | 10.778 | 10.000 | 107.8 | 70-130 |
| Perfluorotetradecanoic Acid (PFTA) | 9.671 | 10.000 | 96.7 | 70-130 |
| Perfluoro[13C4]Butanoic Acid (MPFBA) | 10.849 | 10.000 | 108.5 | 50-150 |
| Perfluoro[13C5]Pentanoic Acid (M5PFPEA) | 11.477 | 10.000 | 114.8 | 50-150 |
| Perfluoro[2,3,4-13C3]Butanesulfonic Acid (M3PFBS) | 10.750 | 10.000 | 107.5 | 50-150 |
| 1H,1H,2H,2H-Perfluoro[1,2-13C2]Hexanesulfonic Acid (M2-4:2FTS) | 12.382 | 10.000 | 123.8 | 50-150 |
| Perfluoro[1,2,3,4,6-13C5]Hexanoic Acid (M5PFHxA) | 10.900 | 10.000 | 109 | 50-150 |
| Perfluoro[1,2,3,4-13C4]Heptanoic Acid (M4PFHpA) | 11.064 | 10.000 | 110.6 | 50-150 |
| Perfluoro[1,2,3-13C3]Hexanesulfonic Acid (M3PFHxS) | 11.530 | 10.000 | 115.3 | 50-150 |
| Perfluoro[13C8]Octanoic Acid (M8PFOA) | 11.341 | 10.000 | 113.4 | 50-150 |
| 1H,1H,2H,2H-Perfluoro[1,2-13C2]Octanesulfonic Acid (M2-6:2FTS) | 12.232 | 10.000 | 122.3 | 50-150 |

*** Value outside of QC limits.**

# Calibration Verification Summary
# Form 7
# Semivolatiles

| | | | | | |
|---|---|---|---|---|---|
| **Client** | : Soils Engineering Services, Inc. | **Lab Number** | : L2009793 | | |
| **Project Name** | : GROSSINGERS | **Project Number** | : 9313 | | |
| **Instrument ID** | : LCMS02 | **Calibration Date** | : 03/10/20 23:50 | | |
| **Lab File ID** | : I20444 | **Init. Calib. Date(s)** | : 11/18/19 | 11/18/19 | |
| **Sample No** | : WG1348954-4 | **Init. Calib. Times** | : 10:24 | 12:49 | |
| **Channel** | : | | | | |

| Compound | Concentration (ng/ml) | True Value (ng/ml) | % Recovery | QC Limits |
|---|---|---|---|---|
| Perfluoro[13C9]Nonanoic Acid (M9PFNA) | 11.681 | 10.000 | 116.8 | 50-150 |
| Perfluoro[13C8]Octanesulfonic Acid (M8PFOS) | 11.426 | 10.000 | 114.3 | 50-150 |
| Perfluoro[1,2,3,4,5,6-13C6]Decanoic Acid (M6PFDA) | 11.035 | 10.000 | 110.3 | 50-150 |
| 1H,1H,2H,2H-Perfluoro[1,2-13C2]Decanesulfonic Acid (M2-8:2FTS) | 14.191 | 10.000 | 141.9 | 50-150 |
| N-Deuteriomethylperfluoro-1-octanesulfonamidoacetic Acid (d3-NMeFOSAA) | 10.928 | 10.000 | 109.3 | 50-150 |
| Perfluoro[1,2,3,4,5,6,7-13C7]Undecanoic Acid (M7-PFUDA) | 11.795 | 10.000 | 117.9 | 50-150 |
| Perfluoro[13C8]Octanesulfonamide (M8FOSA) | 8.329 | 10.000 | 83.3 | 50-150 |
| N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA) | 9.794 | 10.000 | 97.9 | 50-150 |
| Perfluoro[1,2-13C2]Dodecanoic Acid (MPFDOA) | 10.782 | 10.000 | 107.8 | 50-150 |
| Perfluoro[1,2-13C2]Tetradecanoic Acid (M2PFTEDA) | 10.640 | 10.000 | 106.4 | 50-150 |
| M4PFOS | 11.337 | | 113.4 | |
| M2PFDA | 13.622 | | 136.2 | |
| M2PFOA | 12.175 | | 121.8 | |
| M3PFBA | 10.940 | | 109.4 | |
| 2,3,3,3-Tetrafluoro-2-[1,1,2,2,3,3,3-Heptafluoropropoxy]-Propanoic Acid (HFPO-DA) | 211.308 | 10.000 | 105.7 | 70-130 |
| 2,3,3,3-Tetrafluoro-2-[1,1,2,2,3,3,3-Heptafluoropropoxy]-13C3-Propanoic Acid (M3HFPO-DA) | 109.580 | 10.000 | 54.8 | 50-150 |
| 4,8-Dioxa-3h-Perfluorononanoic Acid (ADONA) | 8.287 | 10.000 | 87.6 | 70-130 |
| Perfluorohexadecanoic Acid (PFHxDA) | 10.846 | 10.000 | 108.5 | 70-130 |
| Perfluorooctadecanoic Acid (PFODA) | 12.136 | 10.000 | 121.4 | 70-130 |
| Perfluoro[13C2]Hexadecanoic Acid (M2PFHxDA) | 8.035 | 10.000 | 80.4 | 50-150 |
| Perfluorododecane Sulfonic Acid (PFDoDS) | 10.933 | 10.000 | 109.3 | 70-130 |
| 1H,1H,2H,2H-Perfluorododecanesulfonic Acid (10:2FTS) | 10.632 | 10.000 | 110.3 | 70-130 |
| 9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid (9Cl-PF3ONS) | 8.694 | 10.000 | 93.3 | 70-130 |
| 11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS) | 8.612 | 10.000 | 91.4 | 70-130 |

*** Value outside of QC limits.**

# Calibration Verification Summary
# Form 7
# Semivolatiles

| | | | | | |
|---|---|---|---|---|---|
| **Client** | : Soils Engineering Services, Inc. | **Lab Number** | : L2009793 | | |
| **Project Name** | : GROSSINGERS | **Project Number** | : 9313 | | |
| **Instrument ID** | : LCMS02 | **Calibration Date** | : 03/11/20 03:27 | | |
| **Lab File ID** | : I20457 | **Init. Calib. Date(s)** | : 11/18/19 | 11/18/19 | |
| **Sample No** | : WG1348954-5 | **Init. Calib. Times** | : 10:24 | 12:49 | |
| **Channel** | : | | | | |

| Compound | Concentration (ng/ml) | True Value (ng/ml) | % Recovery | QC Limits |
|---|---|---|---|---|
| Perfluorobutanoic Acid (PFBA) | 0.466 | 0.500 | 93.2 | 50-150 |
| Perfluoropentanoic Acid (PFPeA) | 0.521 | 0.500 | 104.3 | 50-150 |
| Perfluorobutanesulfonic Acid (PFBS) | 0.411 | 0.440 | 92.8 | 50-150 |
| Perfluorohexanoic Acid (PFHxA) | 0.543 | 0.500 | 108.7 | 50-150 |
| 1H,1H,2H,2H-Perfluorohexanesulfonic Acid (4:2FTS) | 0.409 | 0.470 | 87.5 | 50-150 |
| Perfluoropentanesulfonic Acid (PFPeS) | 0.298 | 0.470 | 63.4 | 50-150 |
| Perfluoroheptanoic Acid (PFHpA) | 0.484 | 0.500 | 96.7 | 50-150 |
| Perfluorohexanesulfonic Acid-Branched (br-PFHxS) | 0.058 | 0.086 | 68.4 | 50-150 |
| Perfluorohexanesulfonic Acid-Linear (L-PFHxS) | 0.238 | 0.370 | 64.3 | 50-150 |
| Perfluorohexanesulfonic Acid (PFHxS) | 0.296 | 0.460 | - | 50-150 |
| Perfluorooctanoic Acid-Branched (br-PFOA) | | | - | 50-150 |
| Perfluorooctanoic Acid-Linear (L-PFOA) | 0.491 | | 98.3 | 50-150 |
| Perfluorooctanoic Acid (PFOA) | 0.491 | 0.500 | - | 50-150 |
| 1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS) | 0.454 | 0.480 | 95.7 | 50-150 |
| Perfluoroheptanesulfonic Acid (PFHpS) | 0.426 | 0.480 | 89.6 | 50-150 |
| Perfluorononanoic Acid (PFNA) | 0.472 | 0.500 | 94.4 | 50-150 |
| Perfluorooctanesulfonic Acid-Branched (br-PFOS) | 0.019 | 0.098 | 18.8* | 50-150 |
| Perfluorooctanesulfonic Acid-Linear (L-PFOS) | 0.253 | 0.365 | 69.3 | 50-150 |
| Perfluorooctanesulfonic Acid (PFOS) | 0.272 | 0.460 | - | 50-150 |
| Perfluorodecanoic Acid (PFDA) | 0.493 | 0.500 | 98.6 | 50-150 |
| 1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS) | 0.366 | 0.480 | 76.3 | 50-150 |
| Perfluorononanesulfonic Acid (PFNS) | 0.354 | 0.480 | 73.8 | 50-150 |
| N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA) | 0.732 | 0.500 | - | 50-150 |
| N-Methyl Perfluorooctanesulfonamidoacetic Acid-Branched (br-NMeFOSAA) | | | - | 50-150 |
| N-Methyl Perfluorooctanesulfonamidoacetic Acid-Linear (L-NMeFOSAA) | 0.732 | 0.500 | 146.3 | 50-150 |
| Perfluoroundecanoic Acid (PFUnA) | 0.517 | 0.500 | 103.5 | 50-150 |
| Perfluorodecanesulfonic Acid (PFDS) | 0.487 | 0.480 | 100.9 | 50-150 |
| Perfluorooctanesulfonamide (FOSA) | 0.425 | 0.500 | 85.1 | 50-150 |
| N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA) | 0.512 | 0.500 | - | 50-150 |
| N-Ethyl Perfluorooctanesulfonamidoacetic Acid-Branched (br-NEtFOSAA) | | | - | 50-150 |
| N-Ethyl Perfluorooctanesulfonamidoacetic Acid-Linear (L-NEtFOSAA) | 0.512 | 0.500 | 102.5 | 50-150 |
| Perfluorododecanoic Acid (PFDoA) | 0.528 | 0.500 | 105.6 | 50-150 |
| Perfluorotridecanoic Acid (PFTrDA) | 0.577 | 0.500 | 115.5 | 50-150 |
| Perfluorotetradecanoic Acid (PFTA) | 0.527 | 0.500 | 105.4 | 50-150 |
| Perfluoro[13C4]Butanoic Acid (MPFBA) | 10.742 | 10.000 | 107.4 | 50-150 |
| Perfluoro[13C5]Pentanoic Acid (M5PFPEA) | 11.301 | 10.000 | 113 | 50-150 |
| Perfluoro[2,3,4-13C3]Butanesulfonic Acid (M3PFBS) | 9.728 | 10.000 | 97.3 | 50-150 |
| 1H,1H,2H,2H-Perfluoro[1,2-13C2]Hexanesulfonic Acid (M2-4:2FTS) | 10.258 | 10.000 | 102.6 | 50-150 |
| Perfluoro[1,2,3,4,6-13C5]Hexanoic Acid (M5PFHxA) | 10.799 | 10.000 | 108 | 50-150 |
| Perfluoro[1,2,3,4-13C4]Heptanoic Acid (M4PFHpA) | 10.990 | 10.000 | 109.9 | 50-150 |
| Perfluoro[1,2,3-13C3]Hexanesulfonic Acid (M3PFHxS) | 10.565 | 10.000 | 105.7 | 50-150 |
| Perfluoro[13C8]Octanoic Acid (M8PFOA) | 11.187 | 10.000 | 111.9 | 50-150 |
| 1H,1H,2H,2H-Perfluoro[1,2-13C2]Octanesulfonic Acid (M2-6:2FTS) | 10.417 | 10.000 | 104.2 | 50-150 |

*** Value outside of QC limits.**

# Calibration Verification Summary
# Form 7
# Semivolatiles

| | | | | | |
|---|---|---|---|---|---|
| **Client** | : Soils Engineering Services, Inc. | **Lab Number** | : L2009793 | | |
| **Project Name** | : GROSSINGERS | **Project Number** | : 9313 | | |
| **Instrument ID** | : LCMS02 | **Calibration Date** | : 03/11/20 03:27 | | |
| **Lab File ID** | : I20457 | **Init. Calib. Date(s)** | : 11/18/19 | 11/18/19 | |
| **Sample No** | : WG1348954-5 | **Init. Calib. Times** | : 10:24 | 12:49 | |
| **Channel** | : | | | | |

| Compound | Concentration (ng/ml) | True Value (ng/ml) | % Recovery | QC Limits |
|---|---|---|---|---|
| Perfluoro[13C9]Nonanoic Acid (M9PFNA) | 11.601 | 10.000 | 116 | 50-150 |
| Perfluoro[13C8]Octanesulfonic Acid (M8PFOS) | 10.754 | 10.000 | 107.5 | 50-150 |
| Perfluoro[1,2,3,4,5,6-13C6]Decanoic Acid (M6PFDA) | 11.068 | 10.000 | 110.7 | 50-150 |
| 1H,1H,2H,2H-Perfluoro[1,2-13C2]Decanesulfonic Acid (M2-8:2FTS) | 12.468 | 10.000 | 124.7 | 50-150 |
| N-Deuteriomethylperfluoro-1-octanesulfonamidoacetic Acid (d3-NMeFOSAA) | 10.426 | 10.000 | 104.3 | 50-150 |
| Perfluoro[1,2,3,4,5,6,7-13C7]Undecanoic Acid (M7-PFUDA) | 11.861 | 10.000 | 118.6 | 50-150 |
| Perfluoro[13C8]Octanesulfonamide (M8FOSA) | 8.564 | 10.000 | 85.6 | 50-150 |
| N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA) | 9.030 | 10.000 | 90.3 | 50-150 |
| Perfluoro[1,2-13C2]Dodecanoic Acid (MPFDOA) | 10.132 | 10.000 | 101.3 | 50-150 |
| Perfluoro[1,2-13C2]Tetradecanoic Acid (M2PFTEDA) | 10.356 | 10.000 | 103.6 | 50-150 |
| M4PFOS | 12.841 | | 128.4 | |
| M2PFDA | 14.517 | | 145.2 | |
| M2PFOA | 12.740 | | 127.4 | |
| M3PFBA | 11.498 | | 115 | |
| 2,3,3,3-Tetrafluoro-2-[1,1,2,2,3,3,3-Heptafluoropropoxy]-Propanoic Acid (HFPO-DA) | 7.973 | 0.500 | 79.7 | 50-150 |
| 2,3,3,3-Tetrafluoro-2-[1,1,2,2,3,3,3-Heptafluoropropoxy]-13C3-Propanoic Acid (M3HFPO-DA) | 73.651 | 10.000 | 36.8* | 50-150 |
| 4,8-Dioxa-3h-Perfluorononanoic Acid (ADONA) | 0.440 | 0.500 | 93 | 50-150 |
| Perfluorohexadecanoic Acid (PFHxDA) | 0.960 | 0.500 | 191.9* | 50-150 |
| Perfluorooctadecanoic Acid (PFODA) | 0.822 | 0.500 | 164.5* | 50-150 |
| Perfluoro[13C2]Hexadecanoic Acid (M2PFHxDA) | 6.121 | 10.000 | 61.2 | 50-150 |
| Perfluorododecane Sulfonic Acid (PFDoDS) | 0.535 | 0.500 | 107.1 | 50-150 |
| 1H,1H,2H,2H-Perfluorododecanesulfonic Acid (10:2FTS) | 0.378 | 0.500 | 78.4 | 50-150 |
| 9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid (9Cl-PF3ONS) | 0.478 | 0.500 | 102.6 | 50-150 |
| 11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS) | 0.481 | 0.500 | 102 | 50-150 |

*** Value outside of QC limits.**

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Last Altered: Tuesday, March 10, 2020 12:33:31 Eastern Daylight Time
Printed: Tuesday, March 10, 2020 20:11:25 Eastern Daylight Time

**Method: C:\MassLynx\Data\200309_537ISO.PRO\MethDB\537ISO_Q_200227 .mdb 28 Feb 2020 10:16:06**
**Calibration: C:\MassLynx\Data\200309_537ISO.PRO\CurveDB\200227_537ISO_ICAL.cdb 28 Feb 2020 10:12:40**

**ID: WG1348805-1,537ILOW**
**Name: I19069**
**Date: 09-Mar-2020**
**Time: 12:48:24**
**Description: WG1348805,WG1346657,ICAL16567,537ILOW**
**Instrument: XEVO-TQSmicro#QEA0276**
**User: LCMS01:JW**
**Inlet Method Name: C:\MassLynx\Data\200309_537ISO.PRO\ACQUDB\LCMS_537_ISO_MeOH**
**Tune Method Name: C:\MassLynx\Data\200309_537ISO.PRO\ACQUDB\190709_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\200309_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

| | Name | CAS | RT | Trace | Area | M Flag | Conc (ng/mL) | Ion Ratio | Ratio Flag | %Rec |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | PFBA | 375-22-4 | 2.21 | 212.926 > 169.111 | 2513 | | 0.533 | | na | 106.7 |
| 2 | M3PFBA | INT STD | 2.21 | 215.926 > 172.122 | 56400 | | 14.343 | | na | 143.4 |
| 3 | MPFBA | INT STD | 2.21 | 216.926 > 172.137 | 65109 | | 10.075 | | na | 100.7 |
| 4 | PFPeA | 2706-90-3 | 5.16 | 262.926 > 219.002 | 3449 | M4 | 0.584 | | na | 116.7 |
| 5 | M5PFPEA | INT STD | 5.16 | 267.989 > 223.081 | 84945 | | 9.907 | | na | 99.1 |
| 6 | PFBS | 375-73-5 | 5.83 | 298.926 > 79.923 | 625 | | 0.427 | 2.07 | NO | 96.6 |
| 7 | M3PFBS | INT STD | 5.83 | 301.989 > 80.254 | 16222 | | 9.178 | | na | 91.8 |
| 8 | 4:2FTS | 757124-72-4 | 7.00 | 326.926 > 306.957 | 329 | | 0.593 | 2.05 | NO | 126.8 |
| 9 | M2-4:2FTS | INT STD | 7.00 | 329.117 > 309.079 | 6801 | | 7.387 | | na | 73.9 |
| 10 | PFHxA | 307-24-4 | 7.08 | 312.989 > 269.028 | 5038 | | 0.593 | 17.44 | NO | 118.6 |
| 11 | M5PFHxA | INT STD | 7.08 | 317.989 > 273.045 | 102494 | | 9.471 | | na | 94.7 |
| 12 | PFPeS | 2706-91-4 | 7.39 | 348.926 > 80.251 | 707 | | 0.502 | 2.69 | NO | 106.8 |
| 13 | PFHpA | 375-85-9 | 8.35 | 362.926 > 319.014 | 5691 | | 0.476 | 6.05 | NO | 95.3 |
| 14 | M4PFHpA | INT STD | 8.35 | 366.926 > 321.979 | 130202 | | 10.371 | | na | 103.7 |
| 15 | br-PFHxS | 355-46-4 | 8.27 | 398.904 > 79.915 | 97 | M2 | 0.089 | | YES | 104.8 |
| 16 | L-PFHxS | 355-46-4 | 8.51 | 398.904 > 79.915 | 469 | | 0.427 | | YES | 115.4 |
| 17 | PFHxS | 355-46-4 | | 398.904 > 79.915 | 566 | | 0.516 | | na | |
| 18 | M3PFHxS | INT STD | 8.50 | 401.926 > 80.317 | 14844 | | 9.375 | | na | 93.7 |
| 19 | br-PFOA | 335-67-1 | | 412.989 > 368.9 | | | ND | | YES | |
| 20 | L-PFOA | 335-67-1 | 9.29 | 412.989 > 368.9 | 6511 | | 0.553 | 9.44 | NO | 110.6 |
| 21 | M2PFOA | INT STD | 9.30 | 415.032 > 369.968 | 132182 | | 15.711 | | na | 157.1 |
| 22 | PFOA | 335-67-1 | | 412.989 > 368.9 | 6511 | | 0.553 | | na | |
| 23 | M8PFOA | INT STD | 9.29 | 420.989 > 375.979 | 136789 | | 10.852 | | na | 108.5 |
| 24 | 6:2FTS | 27619-97-2 | 9.25 | 426.989 > 406.921 | 74 | | 0.493 | 0.80 | NO | 103.8 |
| 25 | M2-6:2FTS | INT STD | 9.25 | 428.989 > 408.917 | 6326 | | 11.040 | | na | 110.4 |
| 26 | PFHpS | 375-92-8 | 9.40 | 448.926 > 80.257 | 357 | | 0.473 | 0.79 | NO | 99.7 |
| 27 | PFNA | 375-95-1 | 10.05 | 462.989 > 418.931 | 3825 | | 0.380 | 3.76 | NO | 76.0 |
| 28 | M9PFNA | INT STD | 10.04 | 472.053 > 426.947 | 135258 | | 10.976 | | na | 109.8 |
| 29 | br-PFOS | 1763-23-1 | 9.91 | 498.968 > 79.918 | 141 | M5 | 0.127 | 3.90 | NO | 127.2 |
| 30 | L-PFOS | 1763-23-1 | 10.09 | 498.968 > 79.918 | 396 | | 0.488 | 1.39 | NO | 133.6 |
| 31 | PFOS | 1763-23-1 | | 498.968 > 79.918 | 538 | | 0.615 | | na | |
| 32 | M4PFOS | INT STD | 10.09 | 503.032 > 80.306 | 13777 | | 16.220 | | na | 162.2 |
| 33 | M8PFOS | INT STD | 10.09 | 507.053 > 80.294 | 15083 | | 9.427 | | na | 94.3 |
| 34 | PFDA | 335-76-2 | 10.66 | 513.053 > 468.906 | 4913 | | 0.467 | 6.93 | NO | 93.4 |
| 35 | M2PFDA | INT STD | 10.66 | 515.053 > 469.934 | 115096 | | 17.400 | | na | 174.0 |
| 36 | M6PFDA | INT STD | 10.66 | 519.053 > 473.931 | 137311 | | 10.843 | | na | 108.4 |
| 37 | 8:2FTS | 39108-34-4 | 10.66 | 527.032 > 507.079 | 135 | | 0.626 | 2.10 | NO | 130.5 |
| 38 | M2-8:2FTS | INT STD | 10.66 | 529.053 > 508.945 | 3210 | | 9.264 | | na | 92.6 |
| 39 | PFNS | 68259-12-1 | 10.68 | 548.989 > 80.249 | 368 | | 0.361 | 1.16 | NO | 75.2 |


all concentration units in (ng/mL)

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Printed: Tuesday, March 10, 2020 20:11:25 Eastern Daylight Time

**ID: WG1348805-1,537ILOW**
**Name: I19069**
**Date: 09-Mar-2020**
**Time: 12:48:24**
**Description: WG1348805,WG1346657,ICAL16567,537ILOW**
**Instrument: XEVO-TQSmicro#QEA0276**
**User: LCMS01:JW**
**Inlet Method Name: C:\MassLynx\Data\200309_537ISO.PRO\ACQUDB\LCMS_537_ISO_MeOH**
**Tune Method Name: C:\MassLynx\Data\200309_537ISO.PRO\ACQUDB\190709_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\200309_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

| | Name | CAS | RT | Trace | Area | M Flag | Conc (ng/mL) | Ion Ratio | Ratio Flag | %Rec |
|---|---|---|---|---|---|---|---|---|---|---|
| 40 | d3-NMeFOSAA | INT STD | 11.04 | 573.096 > 418.987 | 20332 | | 12.120 | | na | 121.2 |
| 41 | NMeFOSAA | 2355-31-9 | 11.05 | 570.053 > 418.917 | 585 | | 0.481 | 2.77 | NO | 96.3 |
| 42 | PFUnA | 2058-94-8 | 11.20 | 562.989 > 518.903 | 6038 | | 0.498 | 7.72 | NO | 99.5 |
| 43 | M7-PFUDA | INT STD | 11.20 | 570.053 > 524.923 | 130281 | | 11.708 | | na | 117.1 |
| 44 | PFDS | 335-77-3 | 11.21 | 598.926 > 80.314 | 325 | | 0.327 | 1.59 | NO | 67.9 |
| 45 | FOSA | 754-91-6 | 11.10 | 497.989 > 78.245 | 1205 | | 0.316 | | YES | 63.2 |
| 46 | M8FOSA | INT STD | 11.10 | 506.053 > 78.286 | 46284 | | 9.120 | | na | 91.2 |
| 47 | d5-NEtFOSAA | INT STD | 11.33 | 589.117 > 418.929 | 12146 | | 9.929 | | na | 99.3 |
| 48 | NEtFOSAA | 2991-50-6 | 11.34 | 583.989 > 418.927 | 501 | | 0.484 | 3.13 | NO | 96.8 |
| 49 | PFDoA | 307-55-1 | 11.67 | 612.989 > 568.967 | 6184 | | 0.520 | 17.12 | NO | 104.1 |
| 50 | MPFDOA | INT STD | 11.67 | 614.989 > 569.92 | 130884 | | 10.940 | | na | 109.4 |
| 51 | PFTrDA | 72629-94-8 | 12.08 | 663.053 > 618.969 | 6530 | | 0.549 | | YES | 109.8 |
| 52 | PFTA | 376-06-7 | 12.43 | 713.053 > 668.976 | 4830 | | 0.490 | 8.84 | NO | 98.0 |
| 53 | M2PFTEDA | INT STD | 12.43 | 715.053 > 669.945 | 133070 | | 9.869 | | na | 98.7 |


all concentration units in (ng/mL)

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**Method: C:\MassLynx\Data\200309_537ISO.PRO\MethDB\537ISO_Q_200227 .mdb 28 Feb 2020 10:16:06**
**Calibration: C:\MassLynx\Data\200309_537ISO.PRO\CurveDB\200227_537ISO_ICAL.cdb 28 Feb 2020 10:12:40**

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**Vial: 1:A,2**
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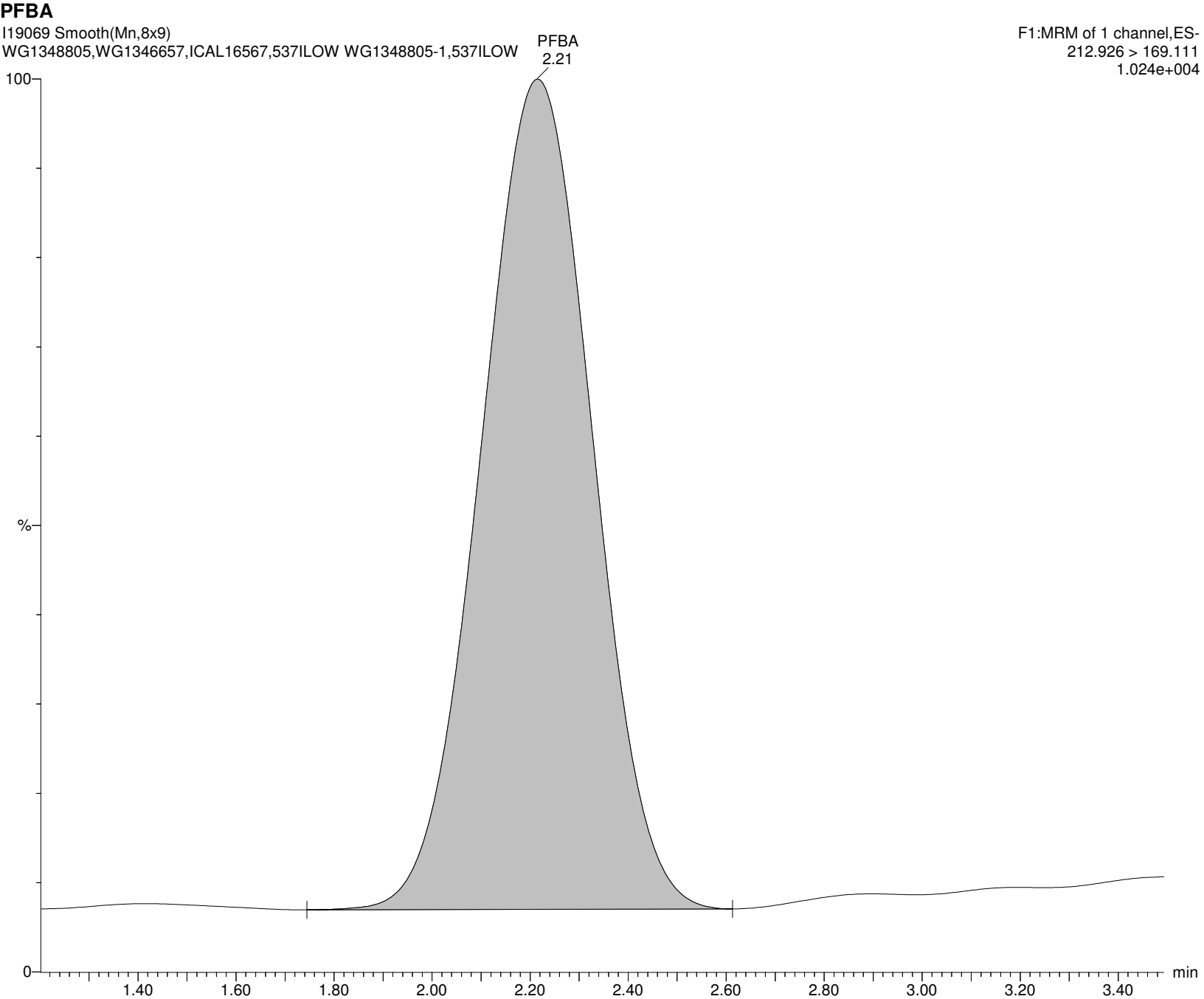
**MS Method Name: C:\MassLynx\Data\200309_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**PFBA**





all concentration units in (ng/mL)

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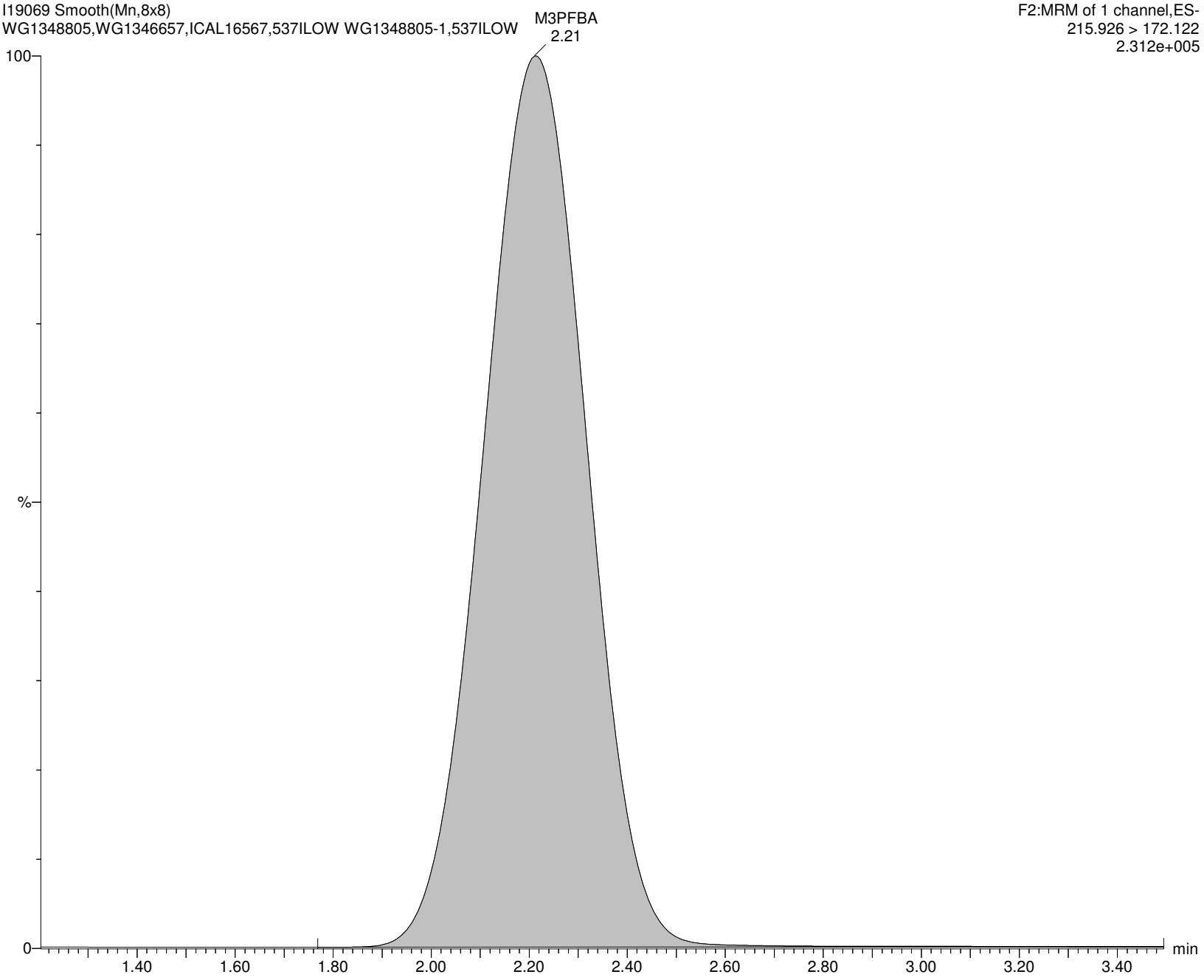
**M3PFBA**





all concentration units in (ng/mL)

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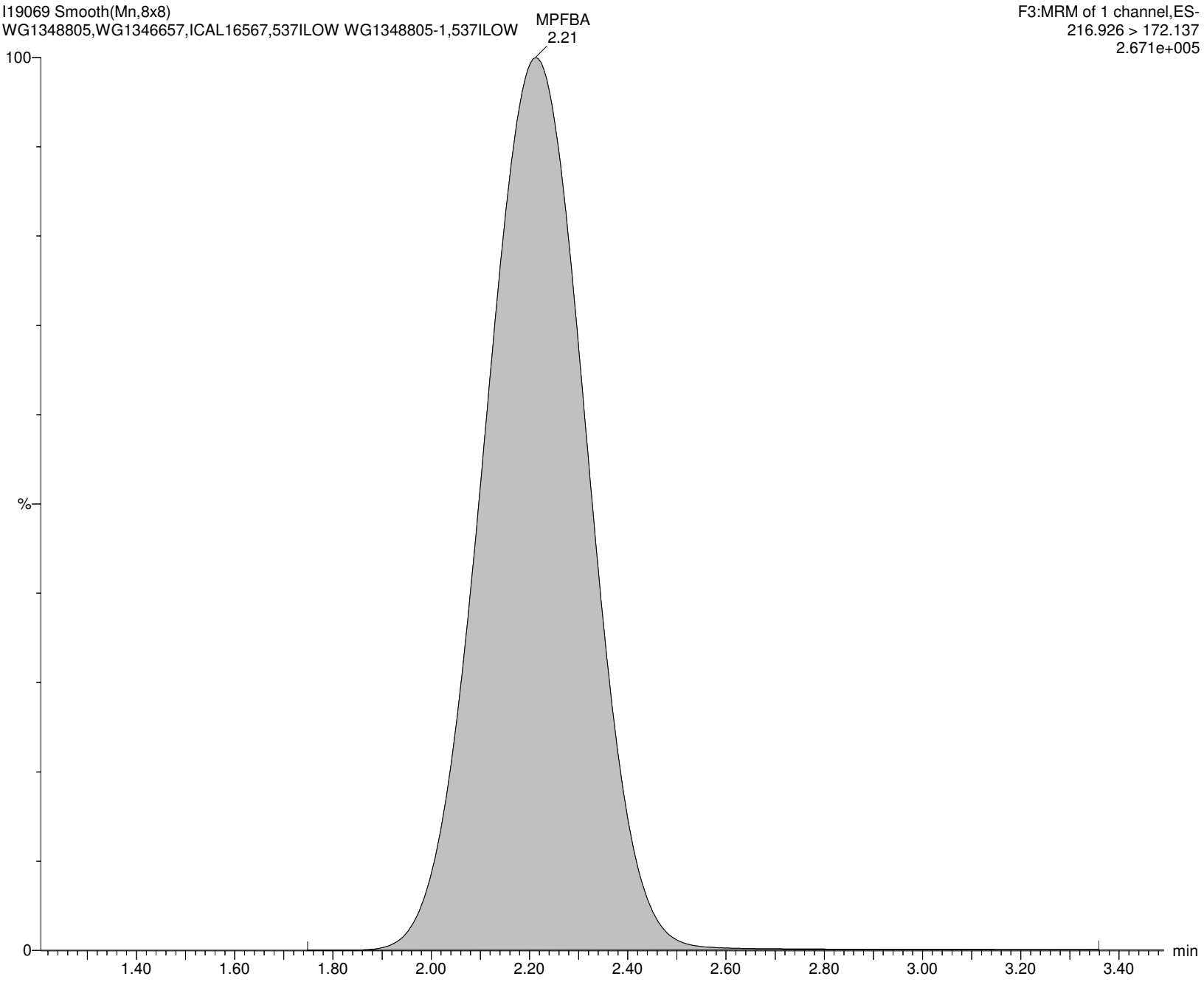
**MPFBA**





all concentration units in (ng/mL)

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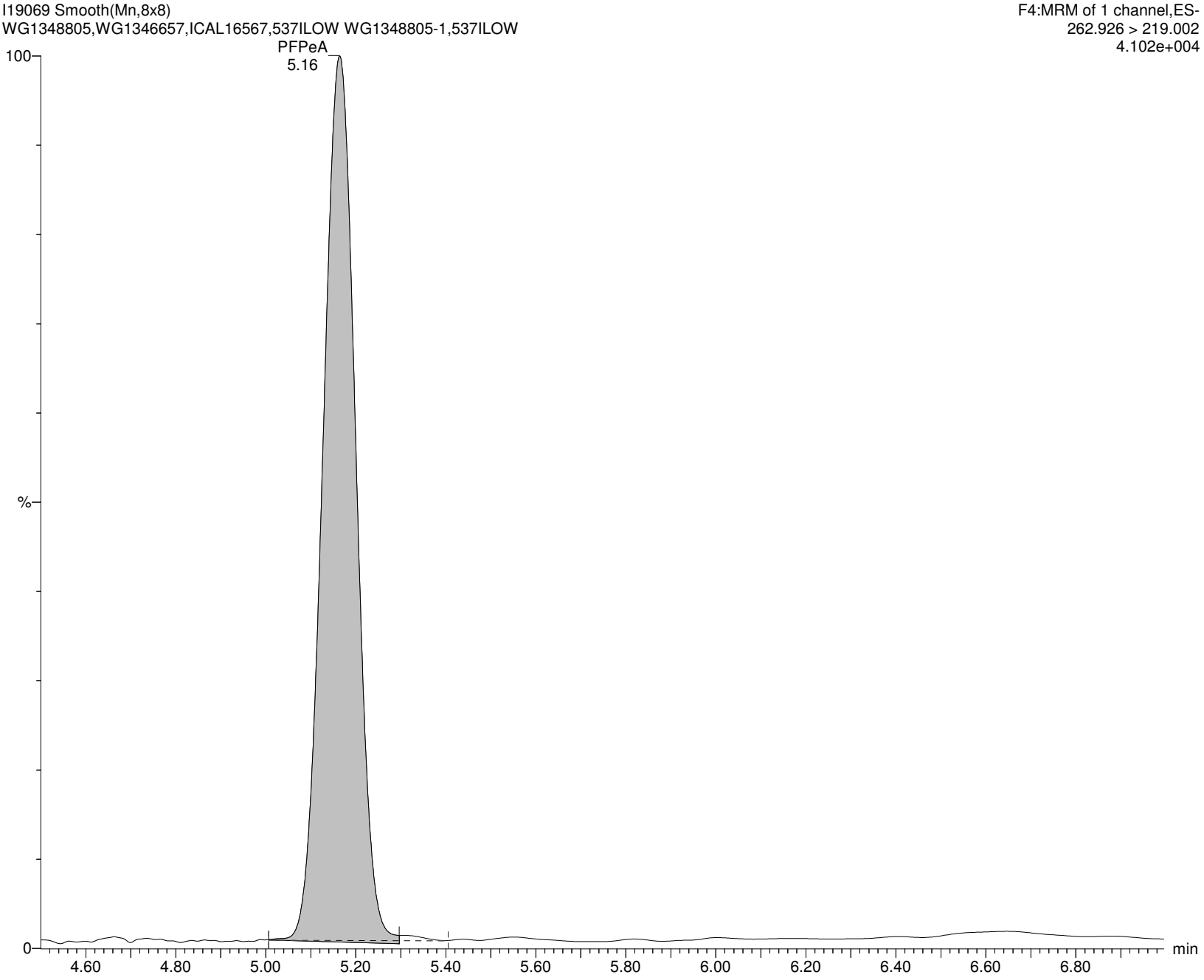
**PFPeA**





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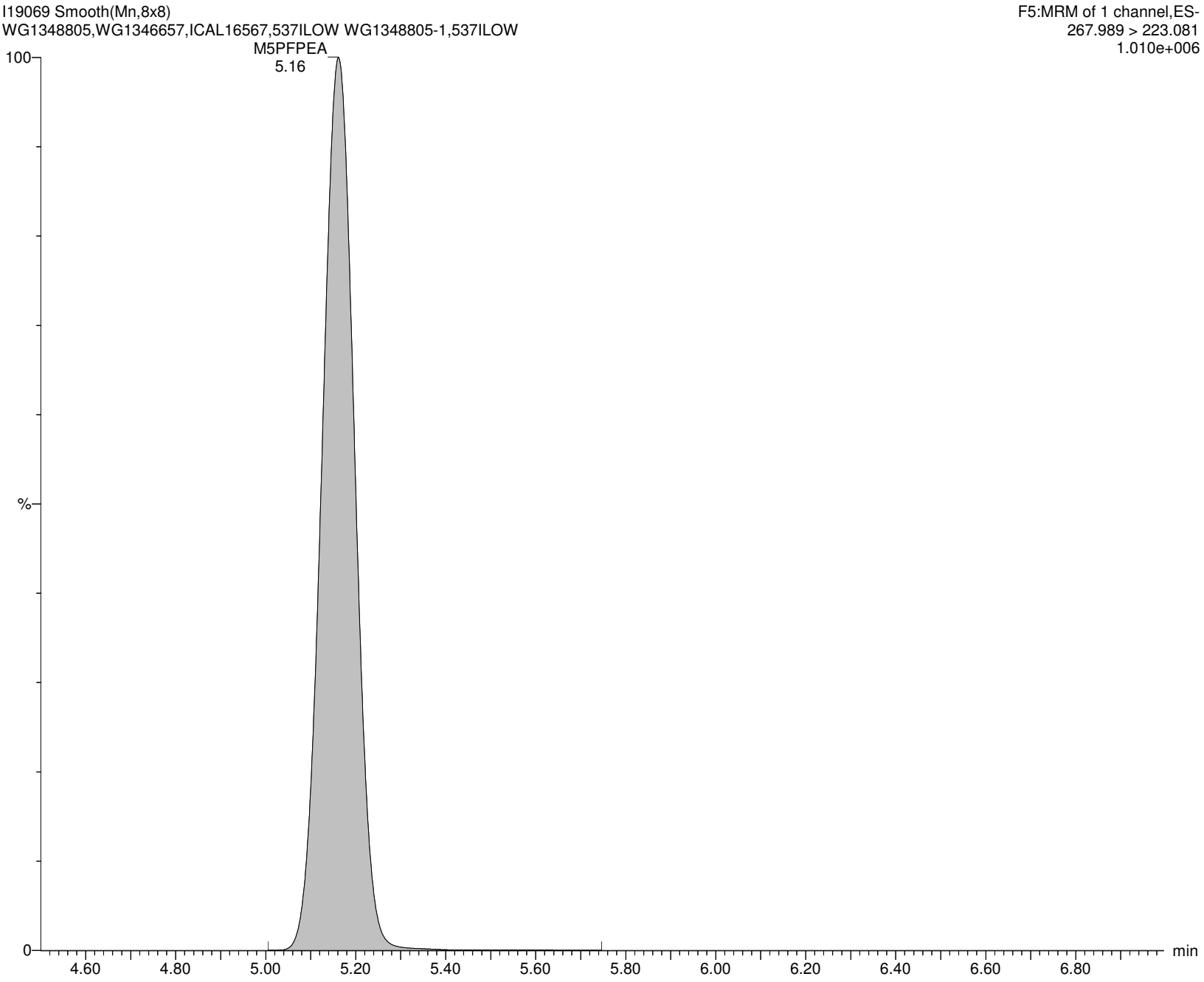
**M5PFPEA**





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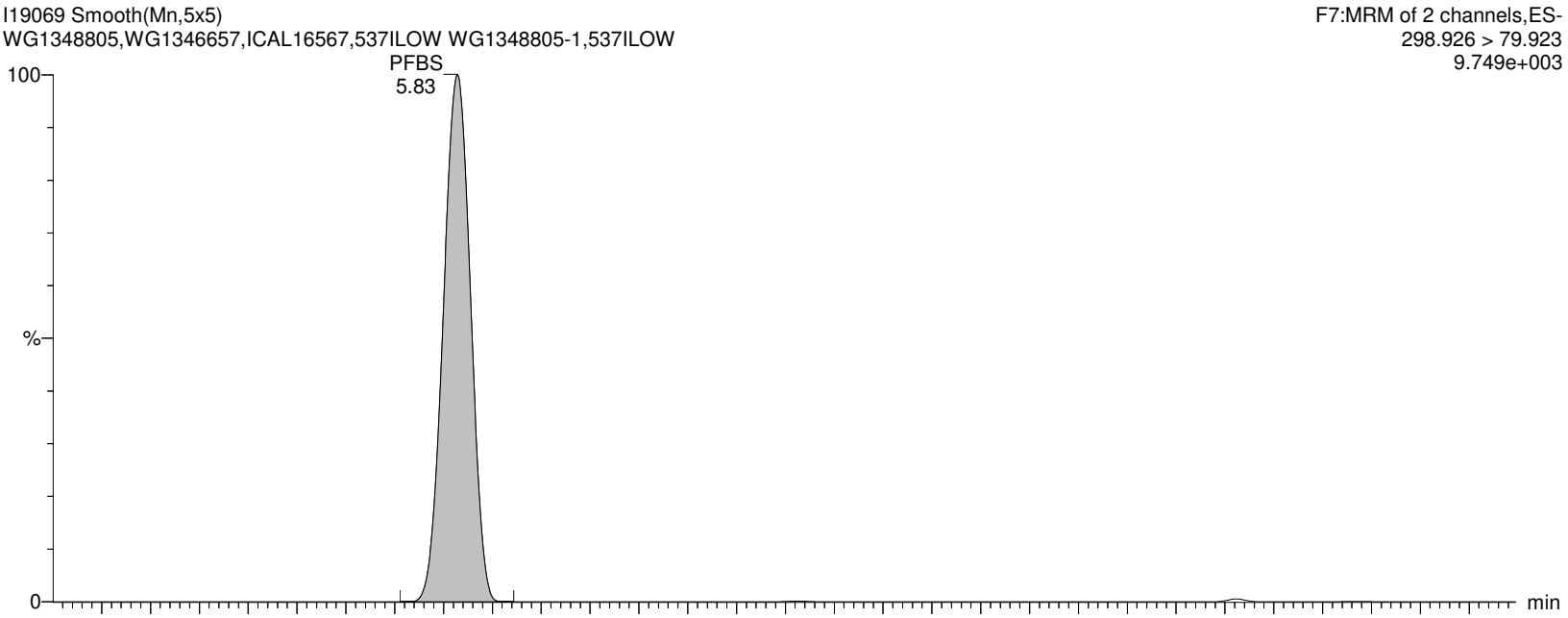
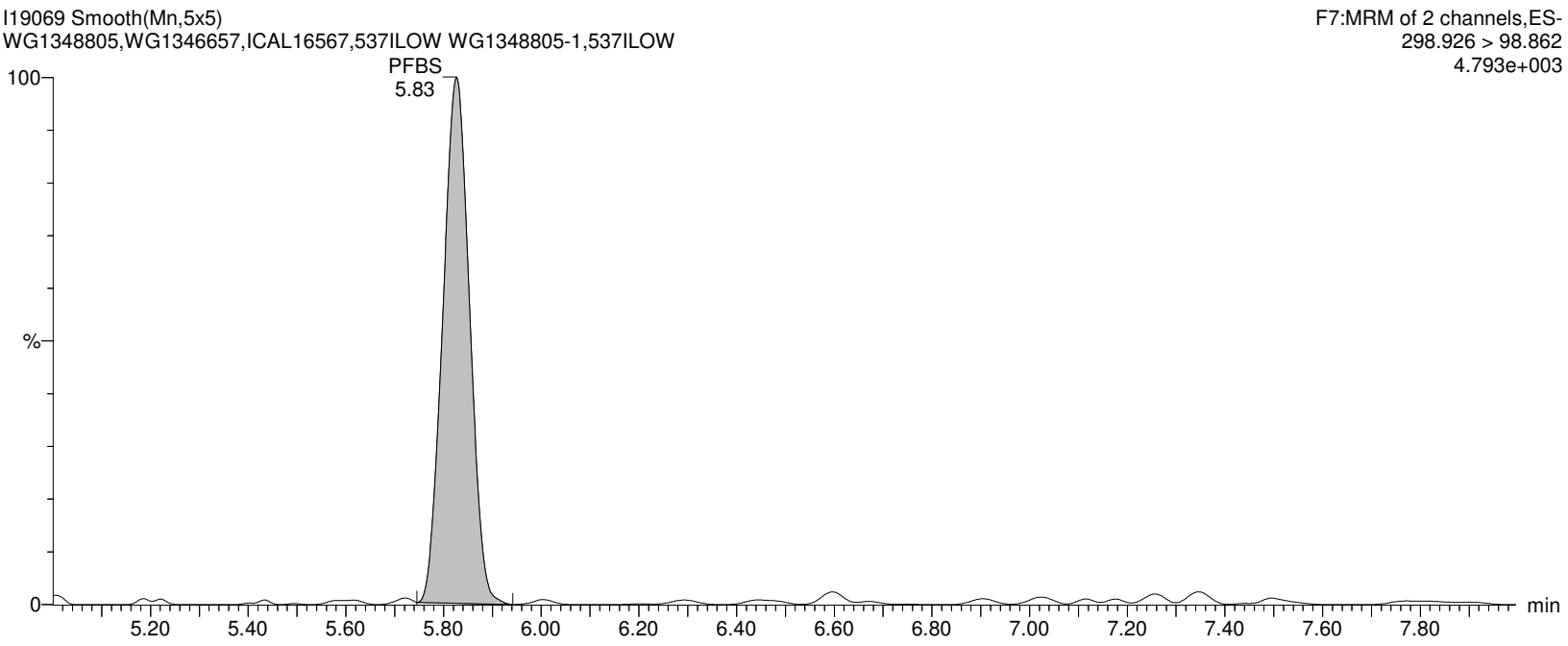
**PFBS**





all concentration units in (ng/mL)

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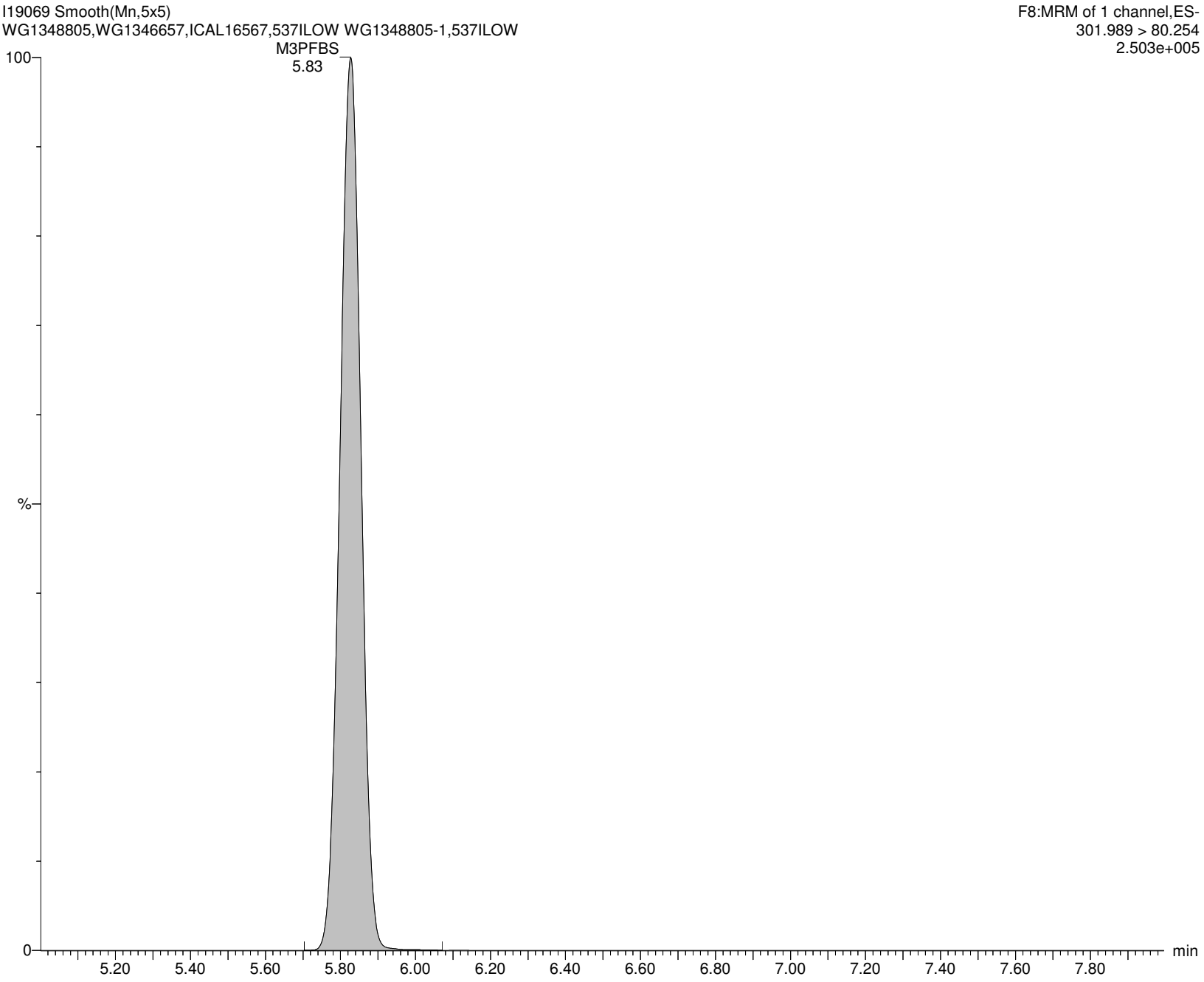
**M3PFBS**





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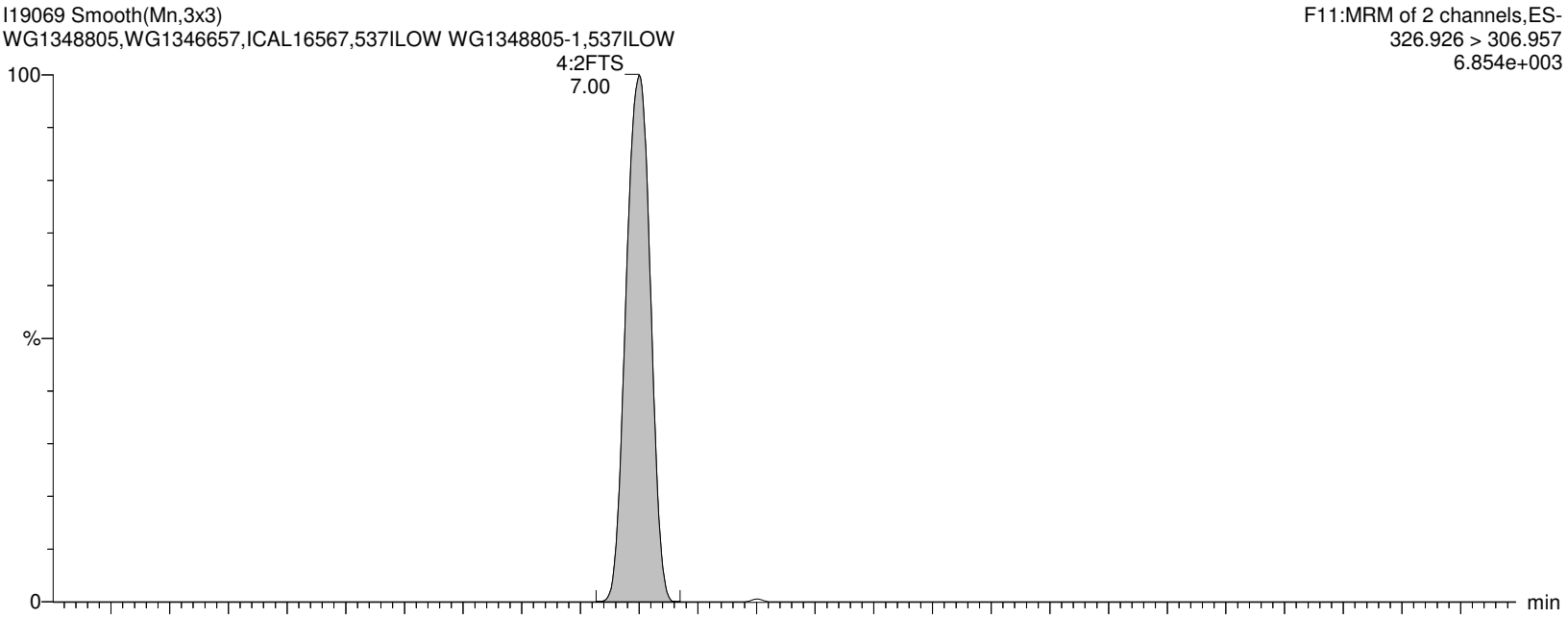
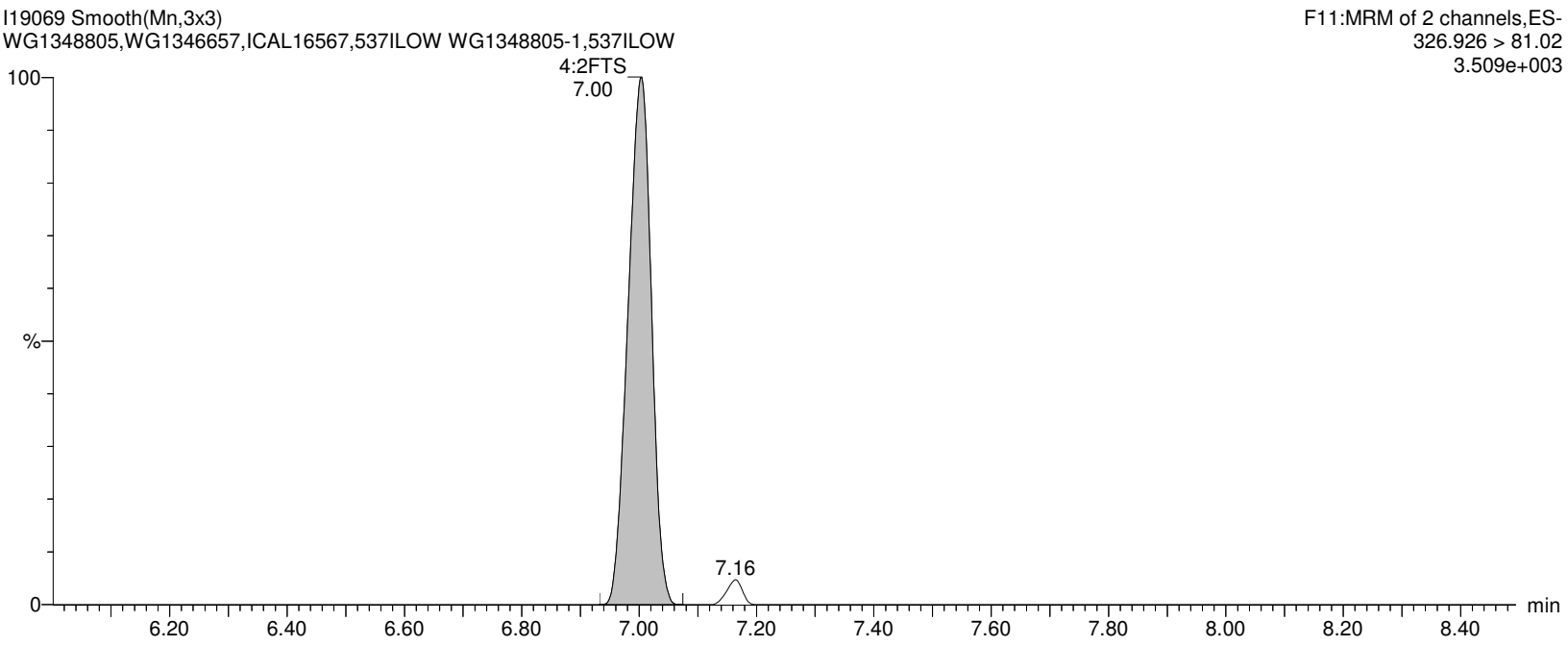
**MS Method Name: C:\MassLynx\Data\200309_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**4:2FTS**



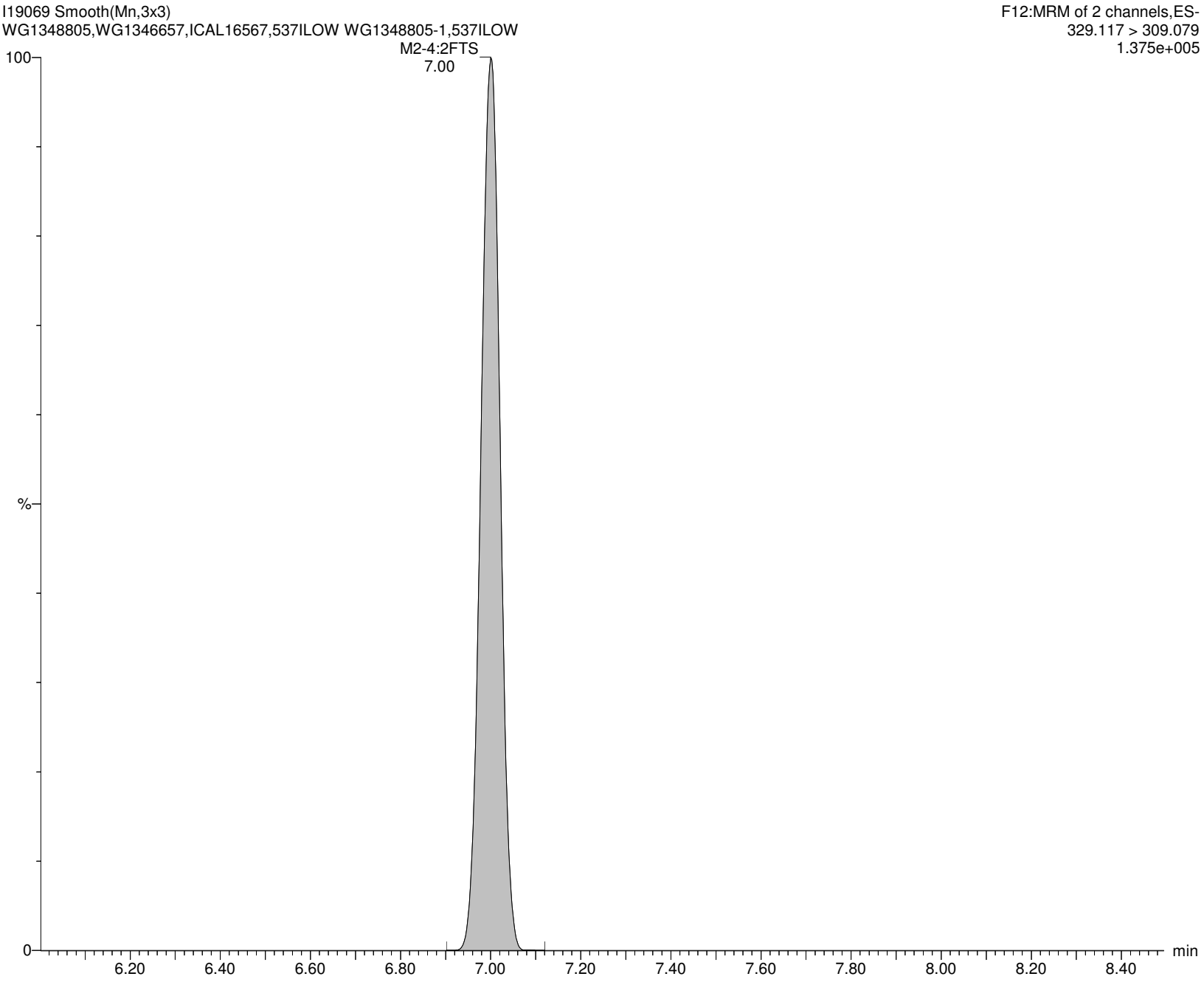


all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200309_537ISO.PRO\Data\WG1348805-1.qld
Last Altered: Tuesday, March 10, 2020 12:33:31 Eastern Daylight Time
Printed: Tuesday, March 10, 2020 20:11:25 Eastern Daylight Time

**Name: I19069**
**ID: WG1348805-1,537ILOW**
**Date: 09-Mar-2020**
**Time: 12:48:24**
**Description: WG1348805,WG1346657,ICAL16567,537ILOW**
**User: LCMS01:JW**
**Vial: 1:A,2**
**Instrument: XEVO-TQSmicro#QEA0276**
**Inlet Method Name: C:\MassLynx\Data\200309_537ISO.PRO\ACQUDB\LCMS_537_ISO_MeOH**
**Tune Method Name: C:\MassLynx\Data\200309_537ISO.PRO\ACQUDB\190709_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\200309_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**M2-4:2FTS**





all concentration units in (ng/mL)

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**Vial: 1:A,2**
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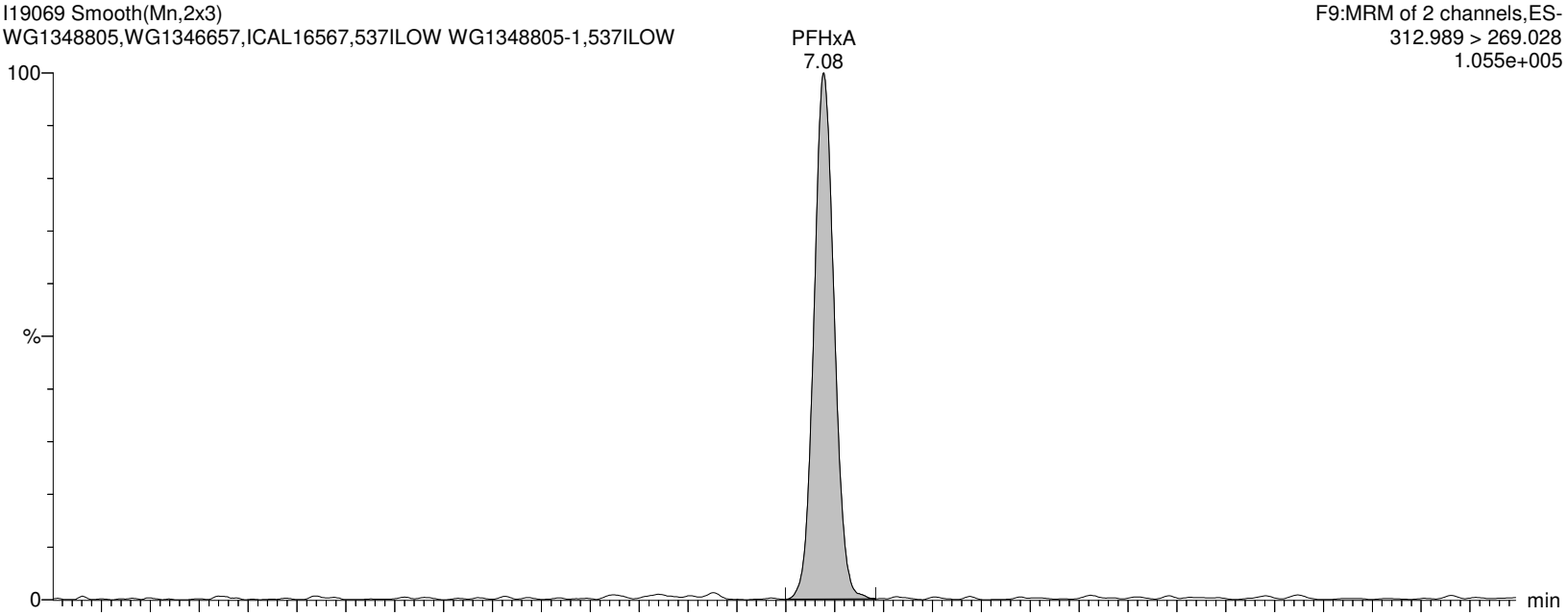
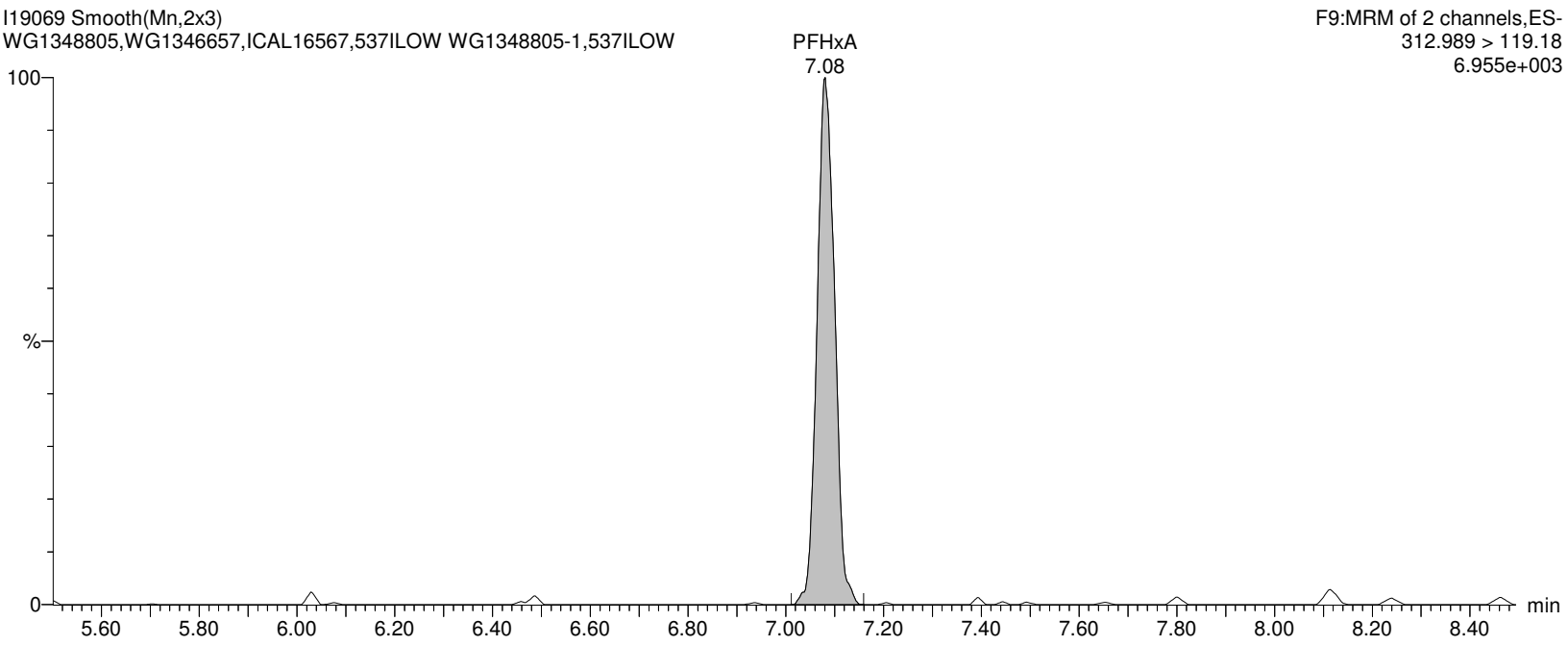
**PFHxA**





all concentration units in (ng/mL)

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**Vial: 1:A,2**
**Instrument: XEVO-TQSmicro#QEA0276**
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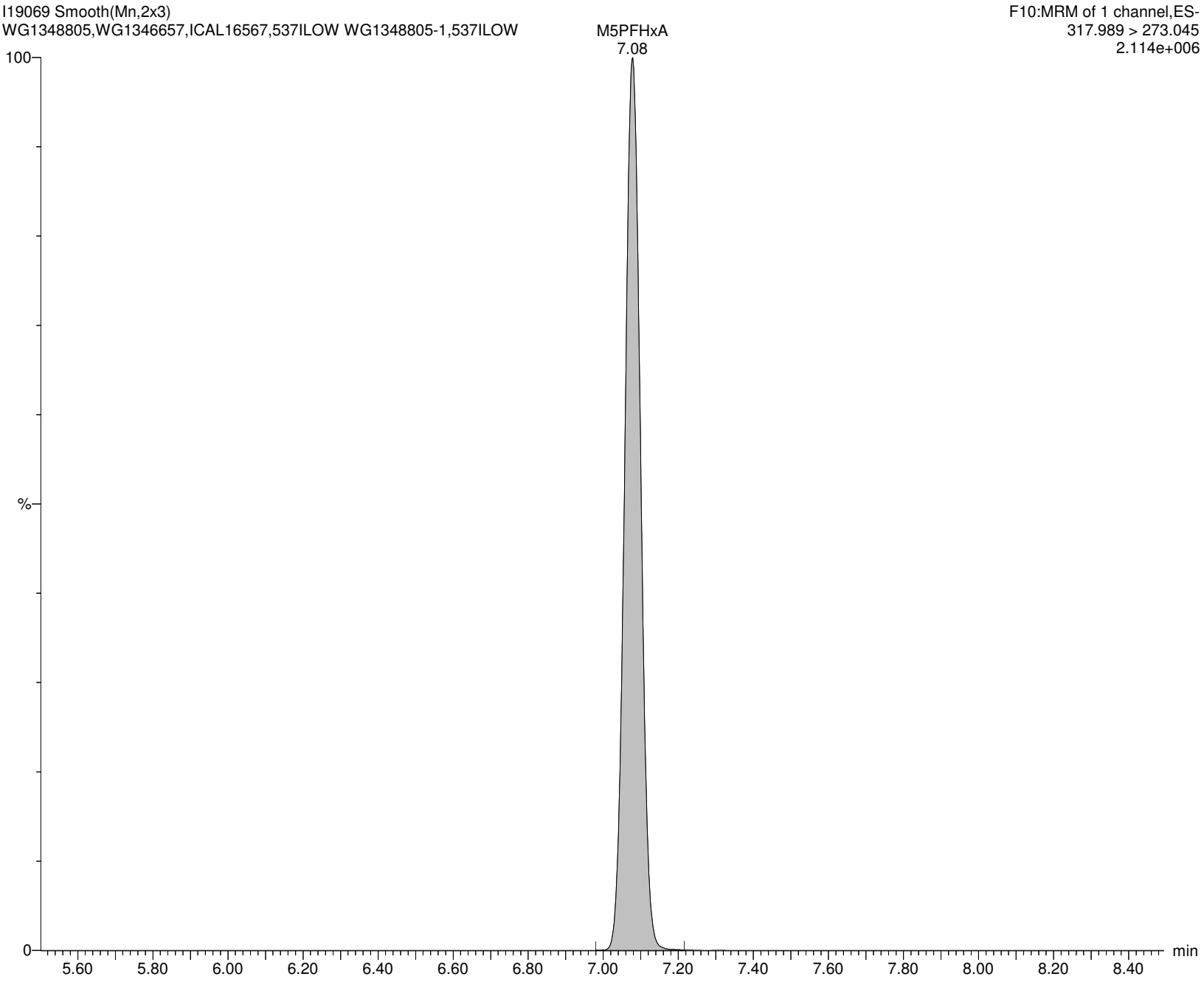



all concentration units in (ng/mL)

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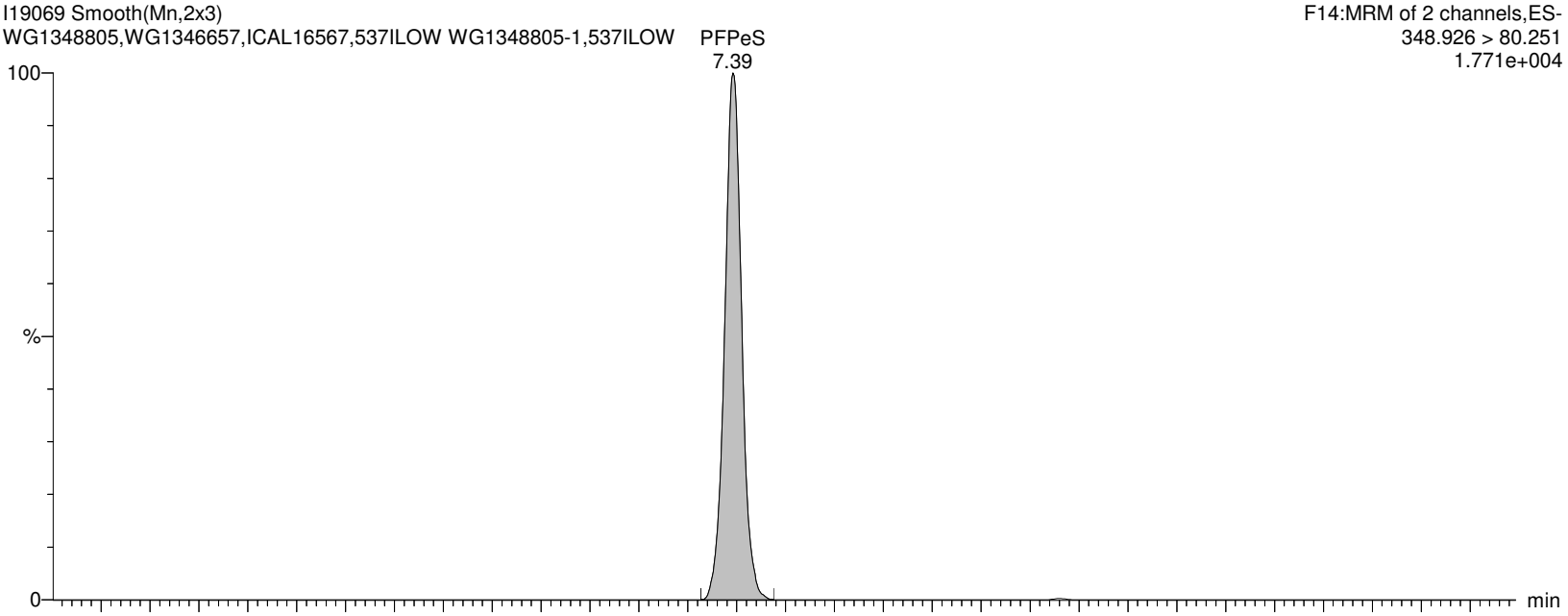


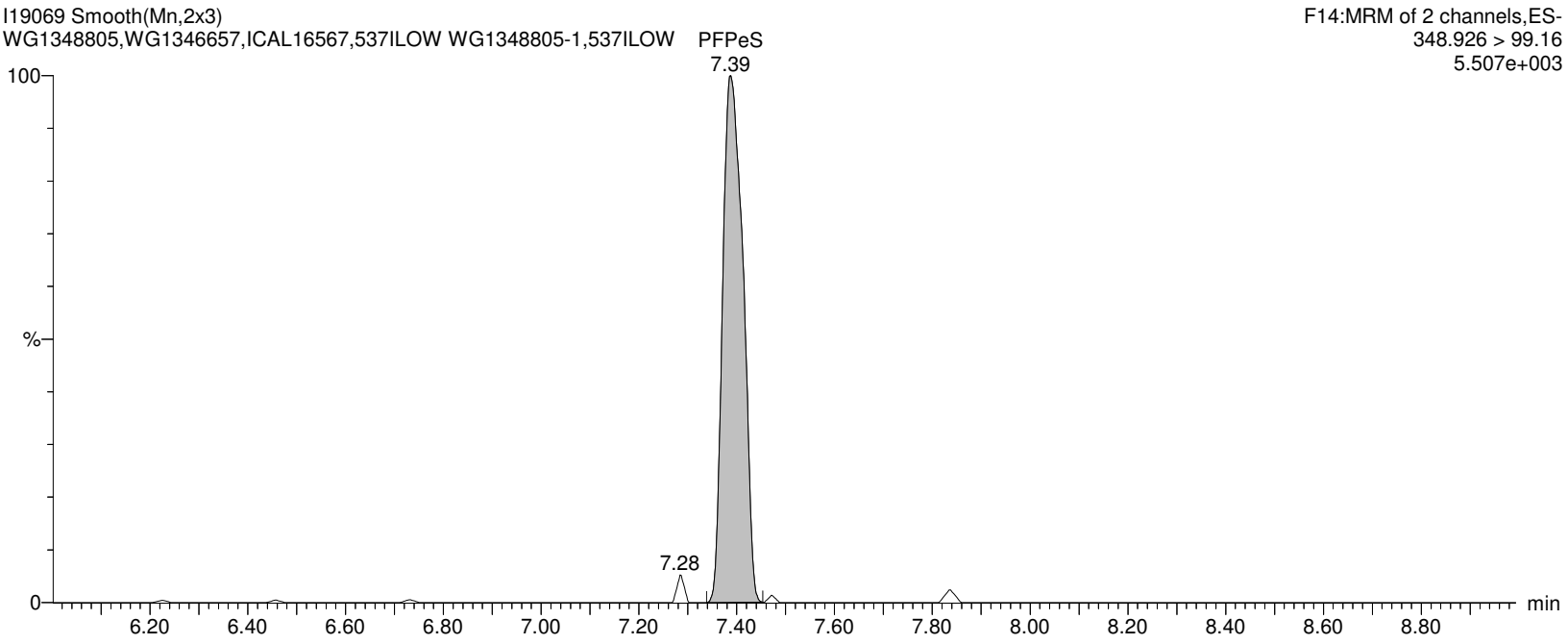



all concentration units in (ng/mL)

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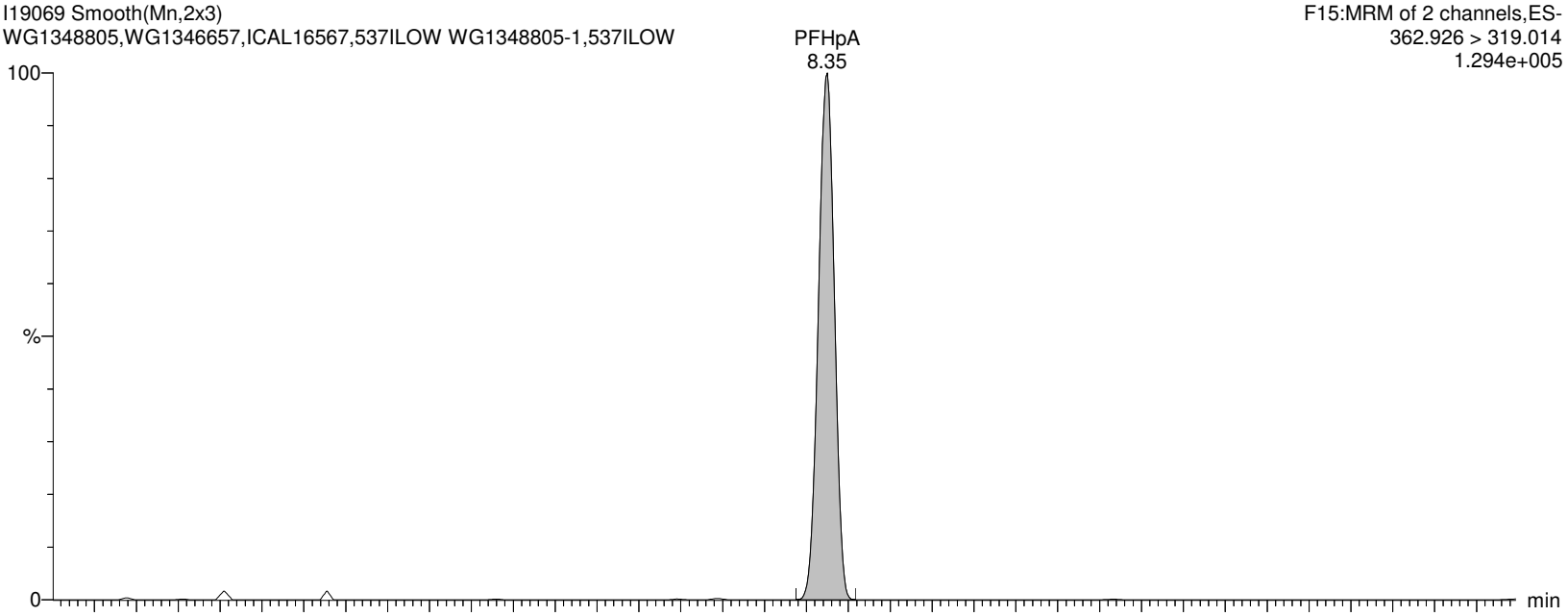
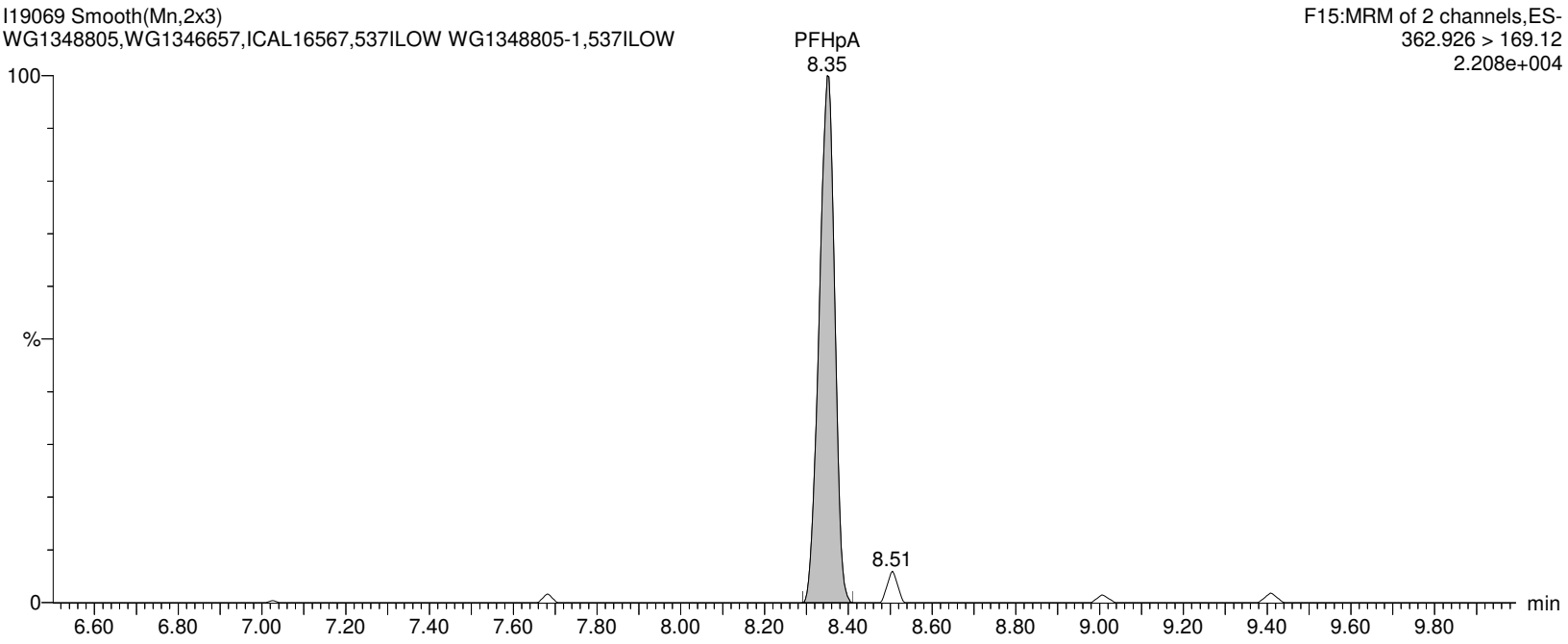
**PFHpA**





all concentration units in (ng/mL)

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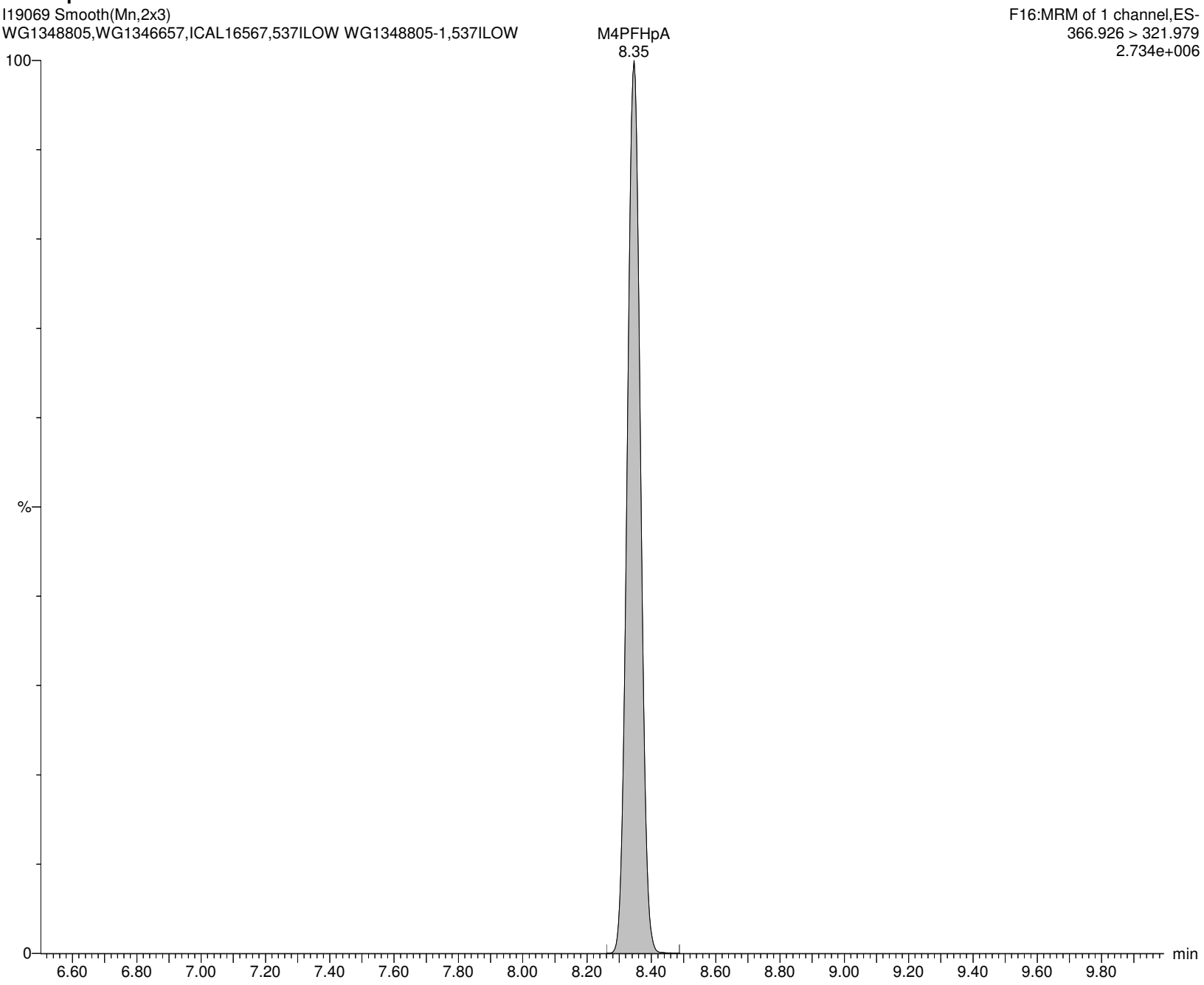
**M4PFHpA**





all concentration units in (ng/mL)

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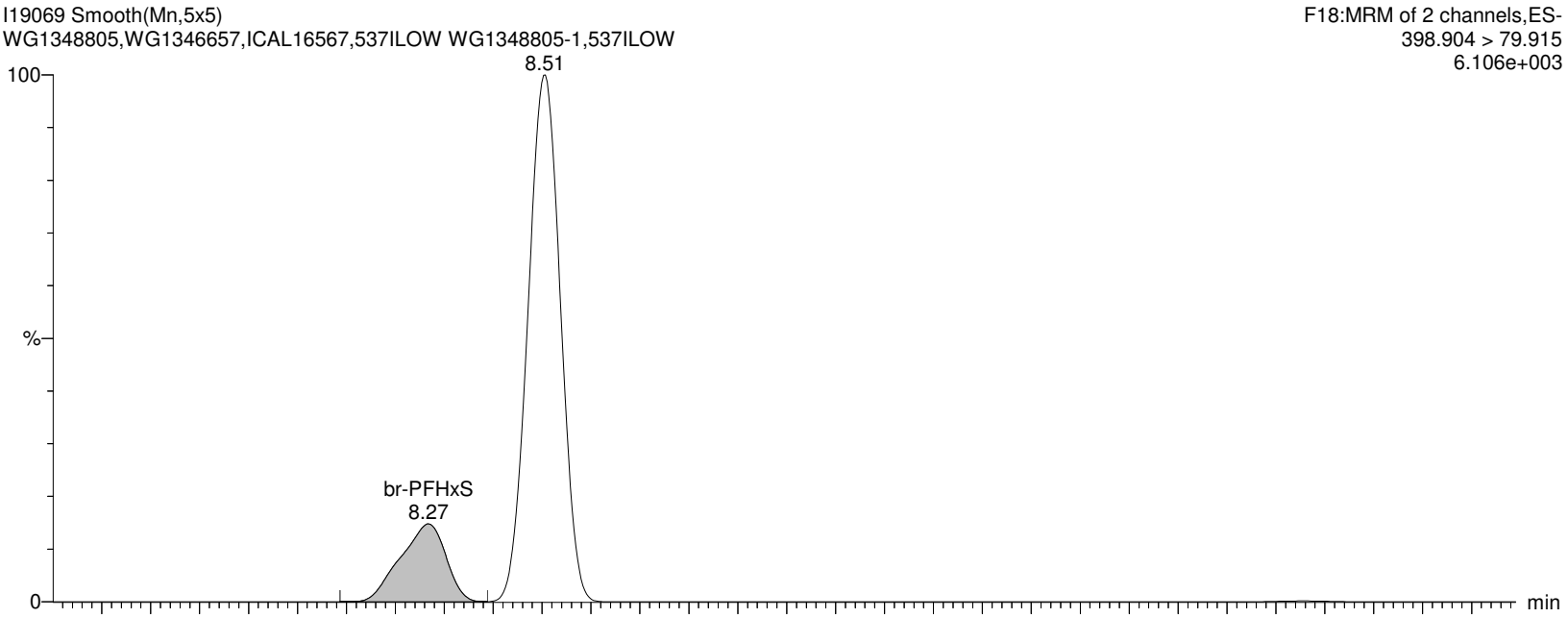
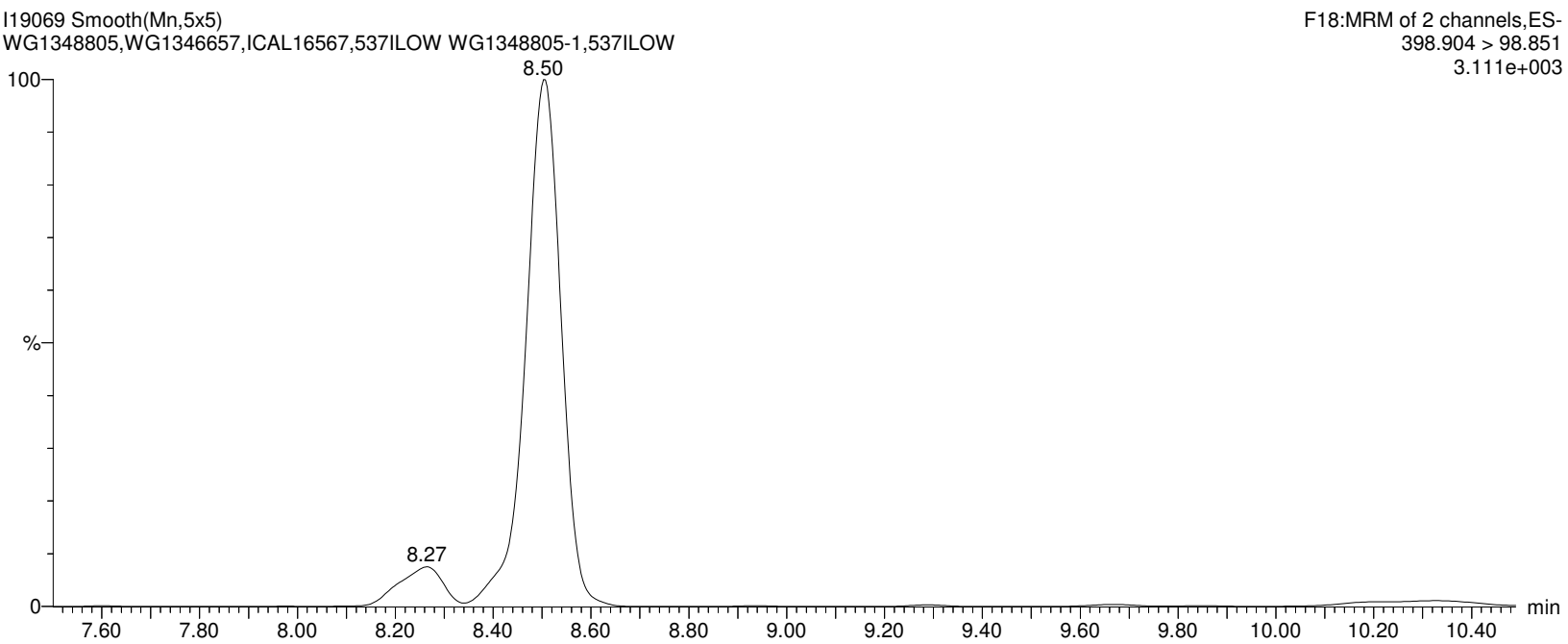
**br-PFHxS**





all concentration units in (ng/mL)

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**Inlet Method Name: C:\MassLynx\Data\200309_537ISO.PRO\ACQUDB\LCMS_537_ISO_MeOH**
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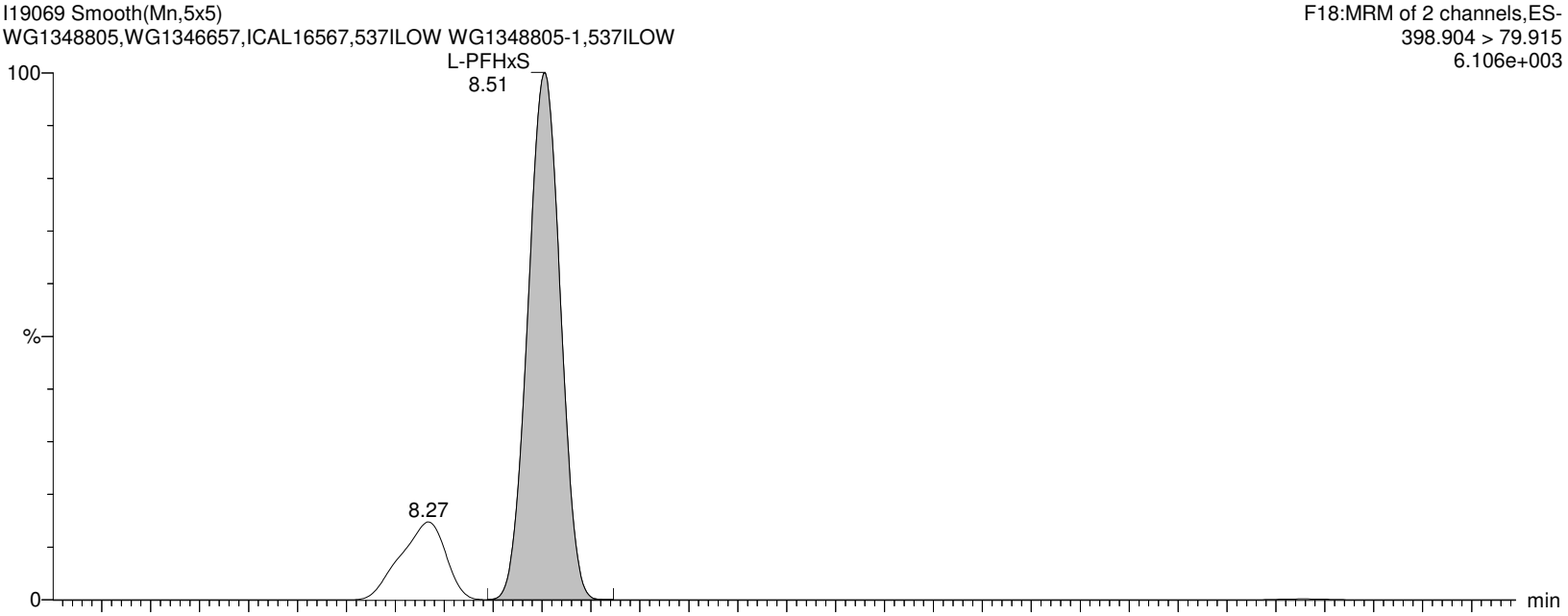
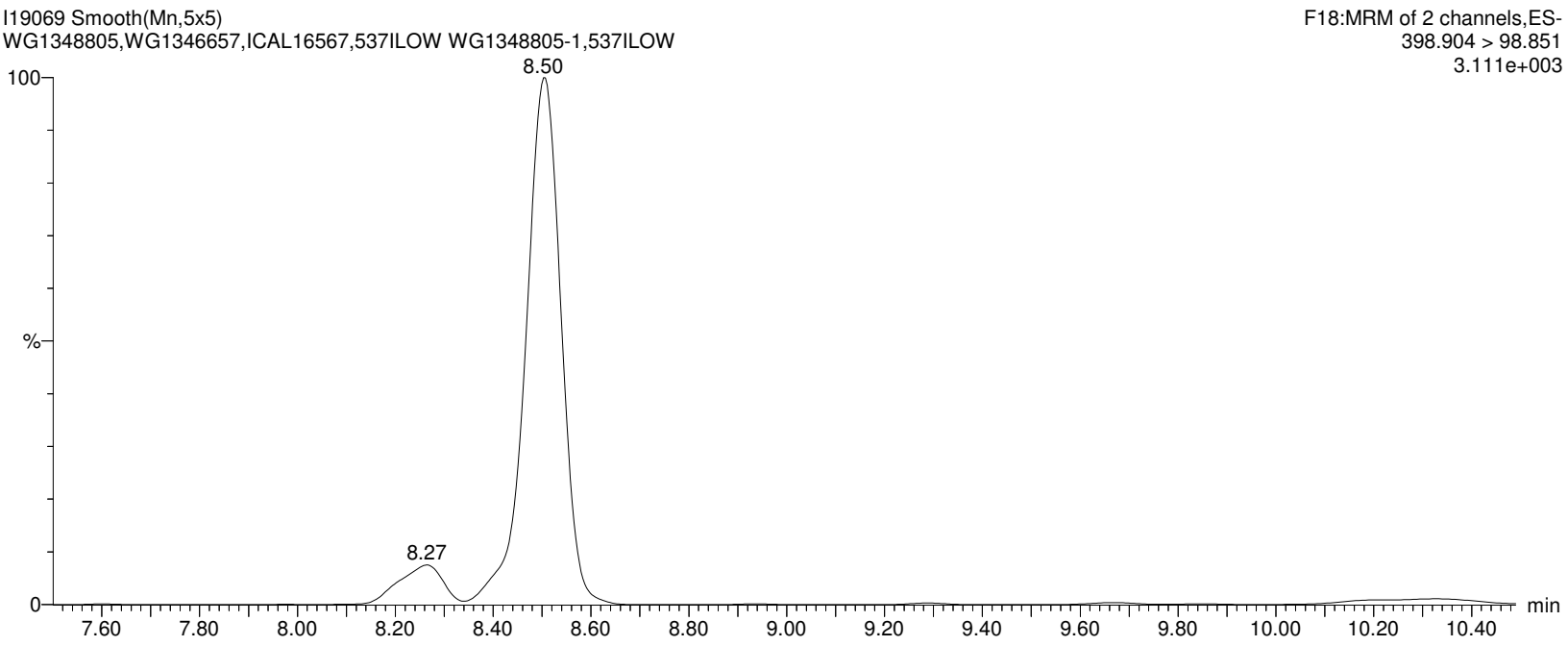
**L-PFHxS**





all concentration units in (ng/mL)

Alpha Analytical Inc.
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**Instrument: XEVO-TQSmicro#QEA0276**
**Inlet Method Name: C:\MassLynx\Data\200309_537ISO.PRO\ACQUDB\LCMS_537_ISO_MeOH**
**Tune Method Name: C:\MassLynx\Data\200309_537ISO.PRO\ACQUDB\190709_TUNE.IPR**
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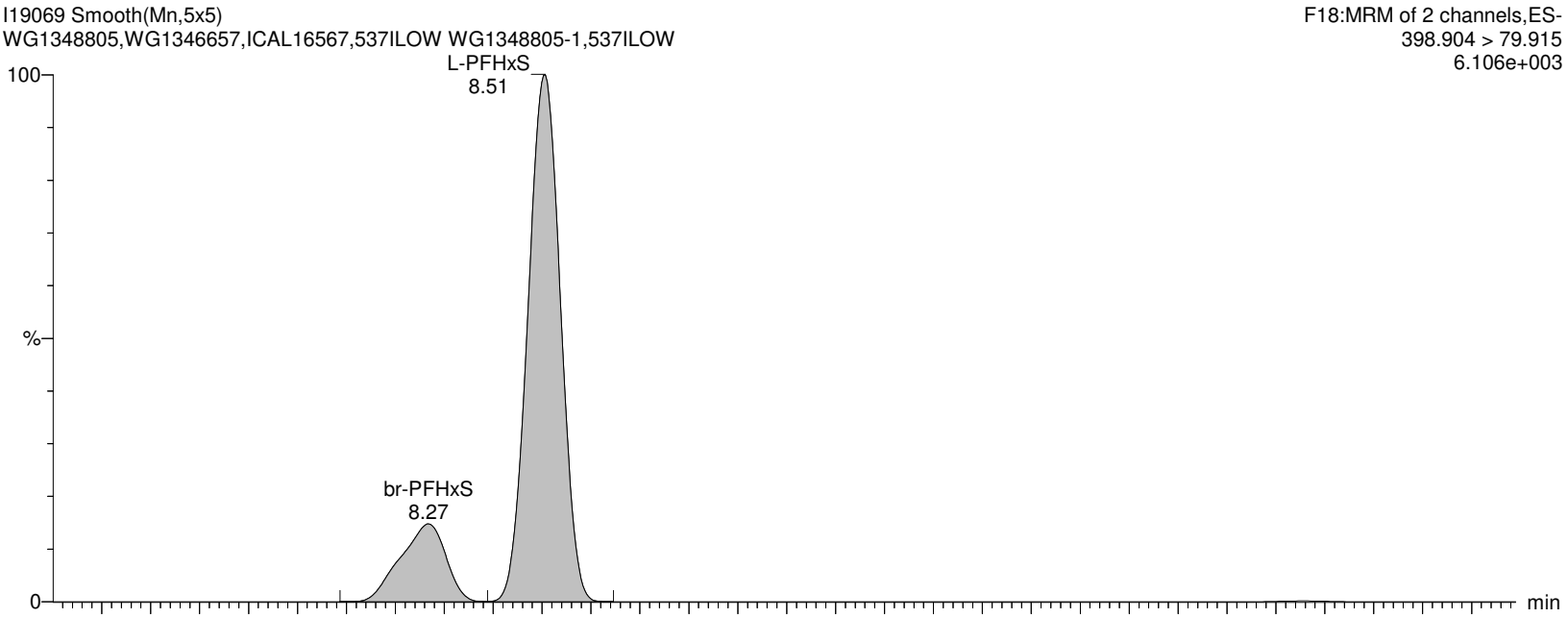
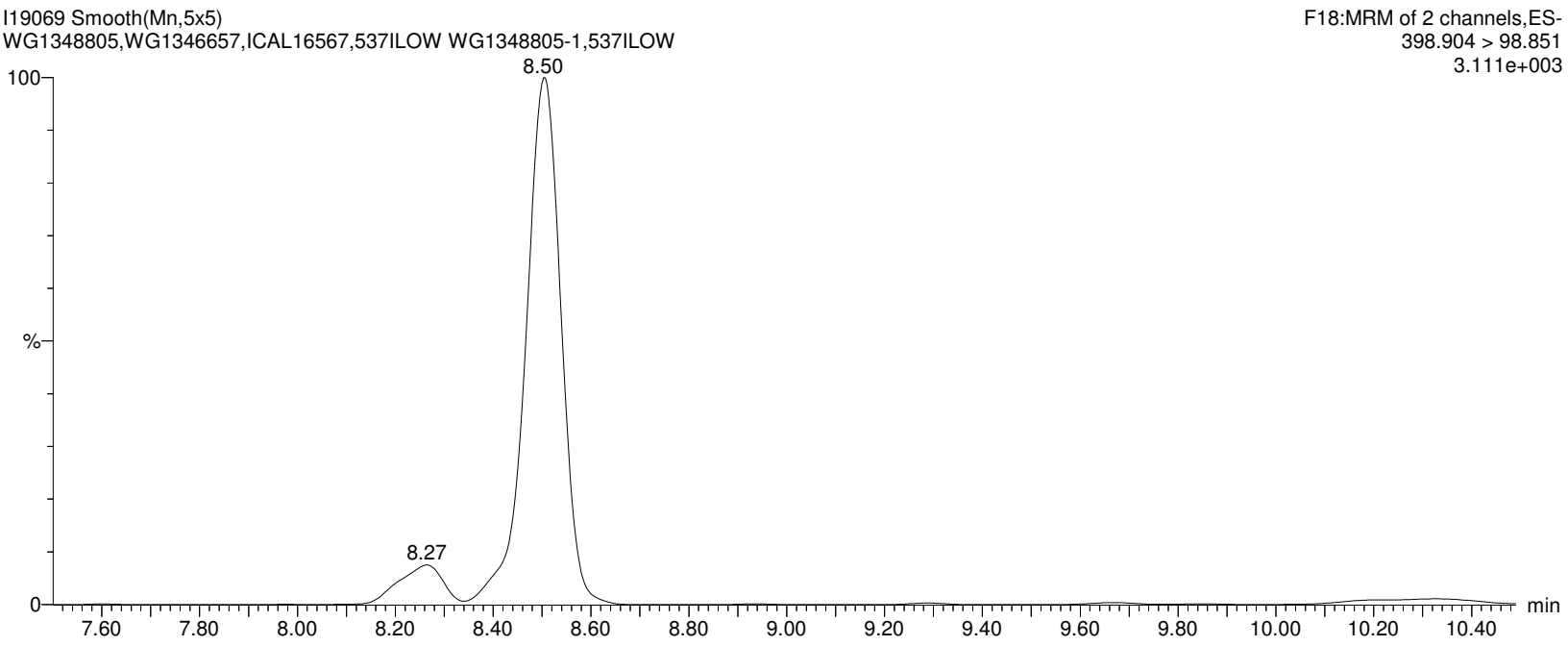
**PFHxS**





all concentration units in (ng/mL)

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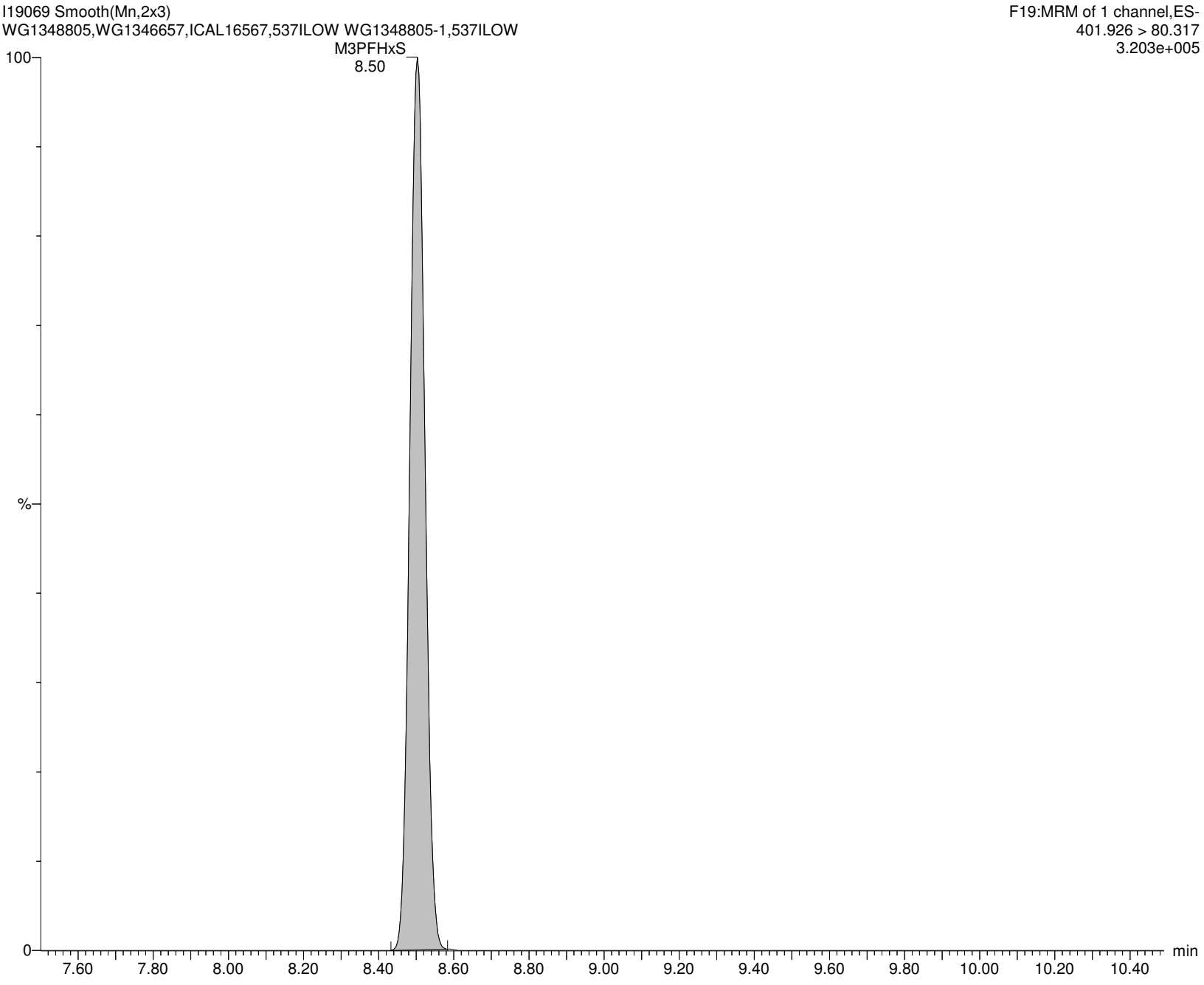



all concentration units in (ng/mL)

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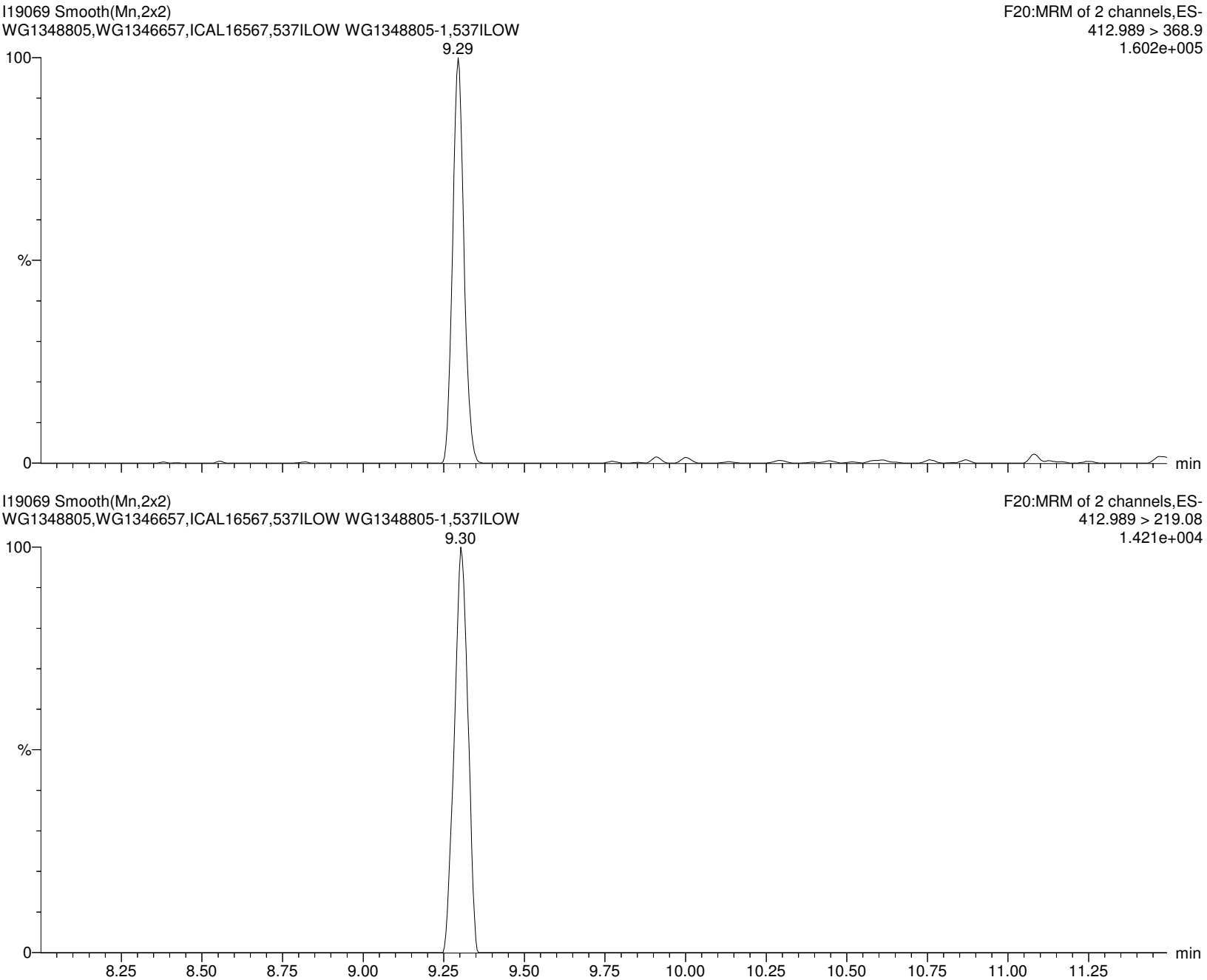
**br-PFOA**





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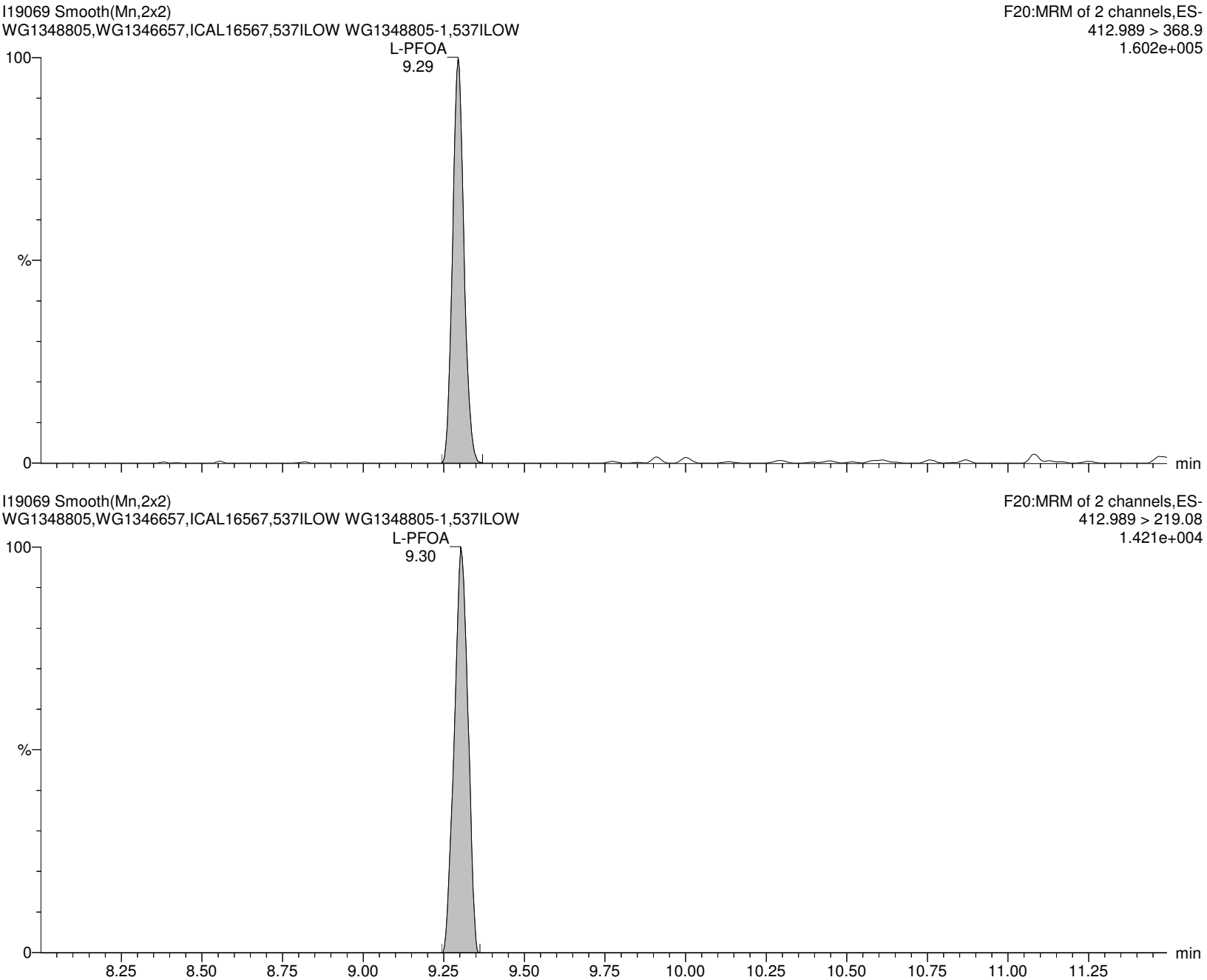
**L-PFOA**





all concentration units in (ng/mL)

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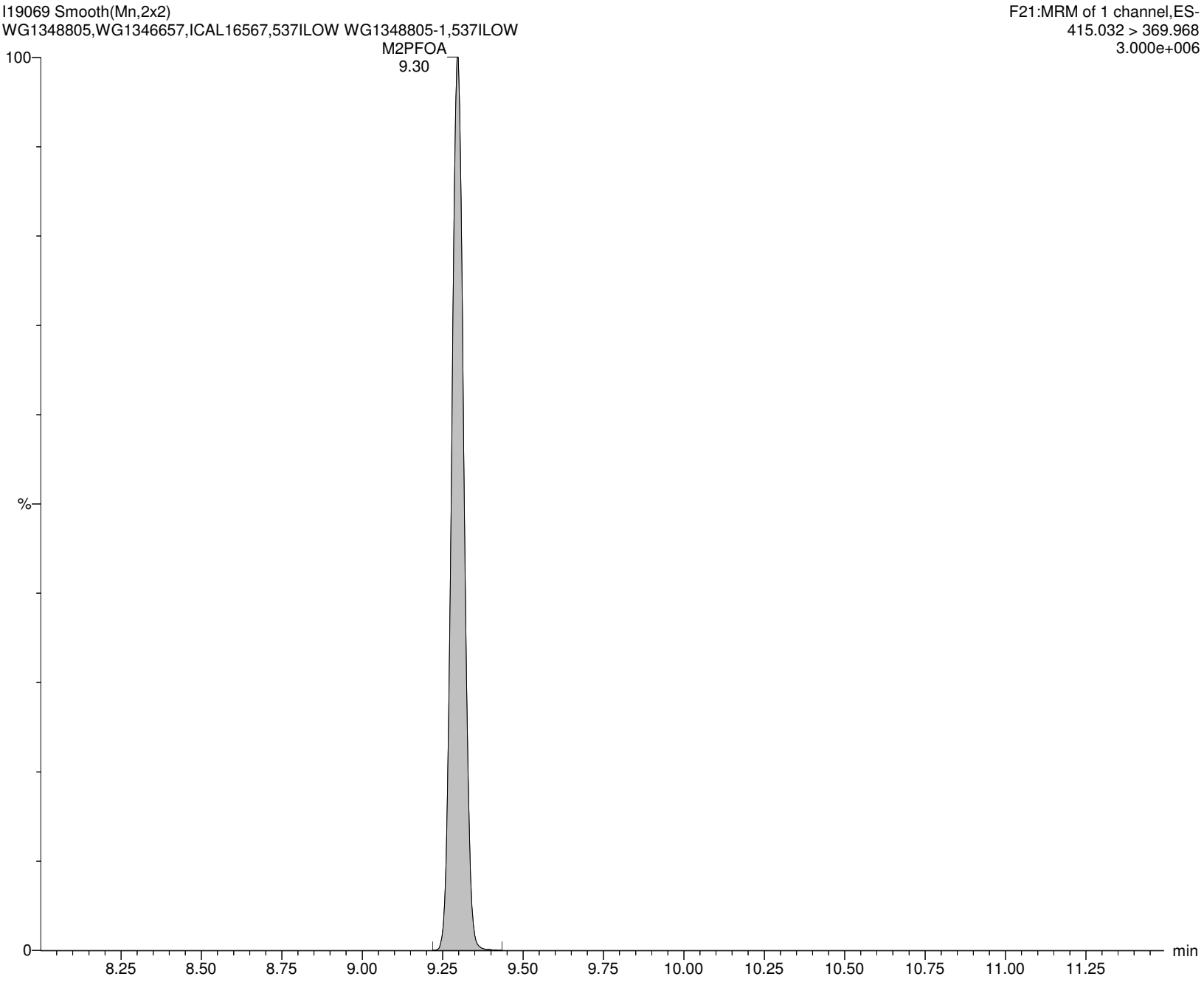



all concentration units in (ng/mL)

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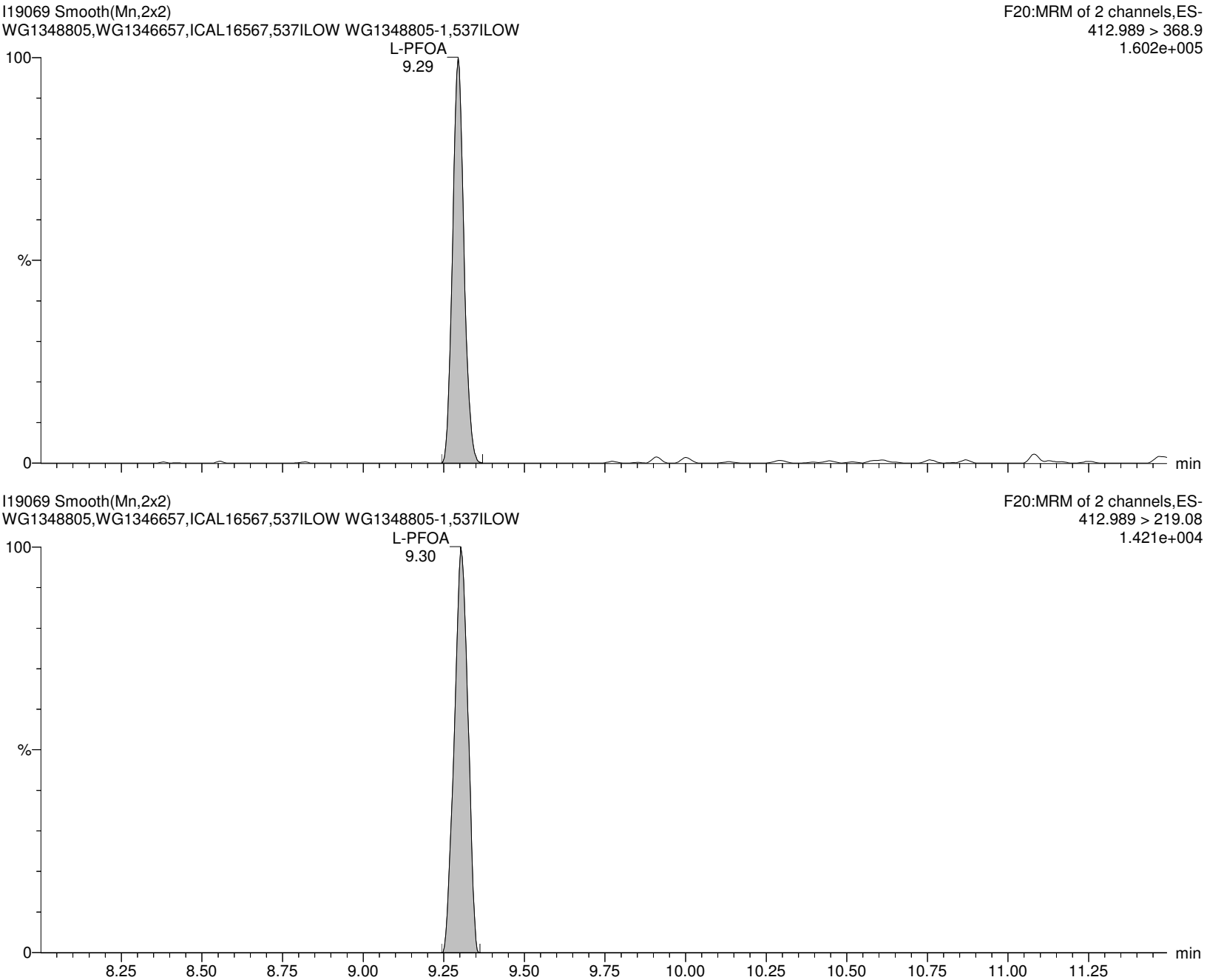
**PFOA**





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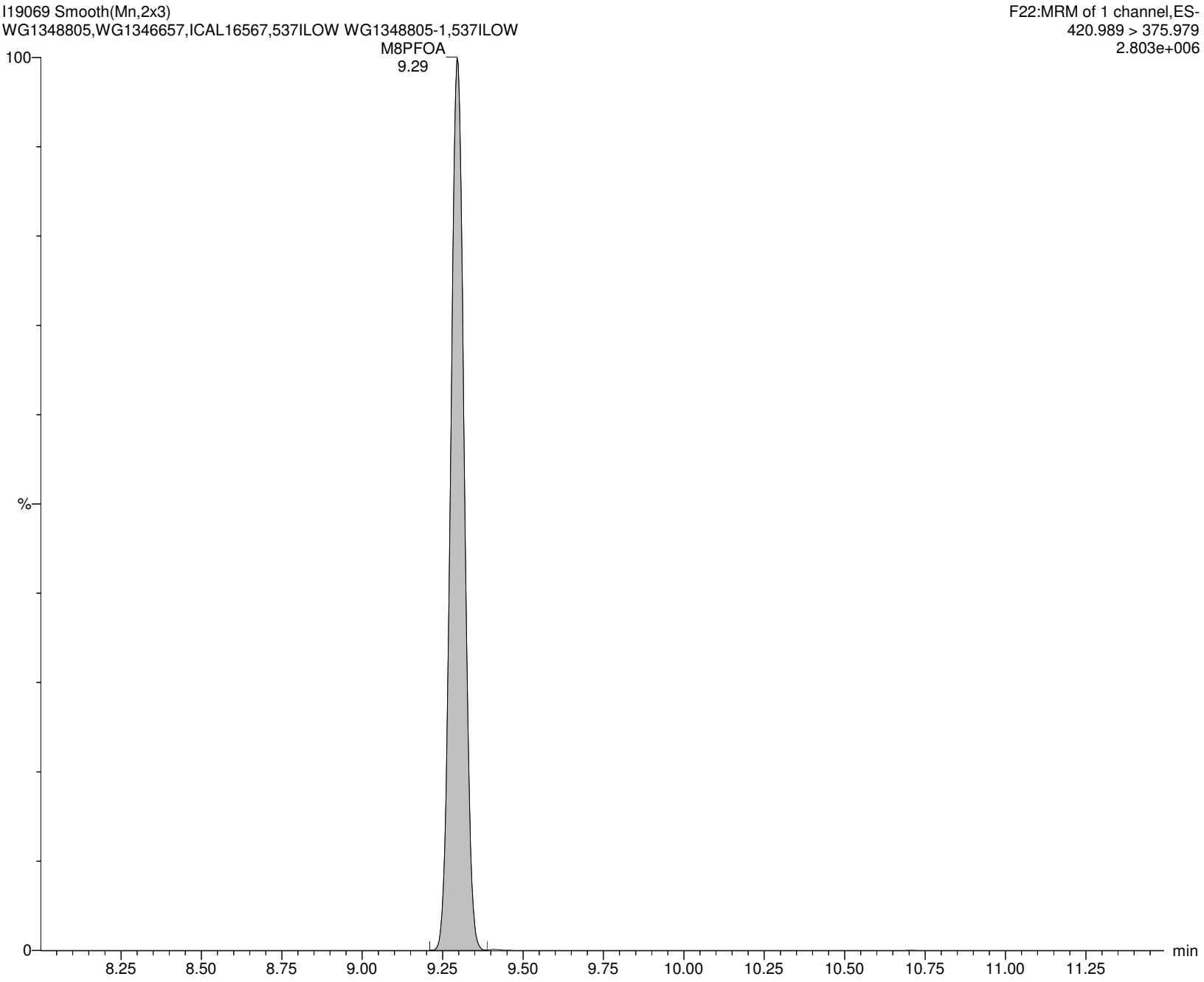
**M8PFOA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200309_537ISO.PRO\Data\WG1348805-1.qld
Last Altered: Tuesday, March 10, 2020 12:33:31 Eastern Daylight Time
Printed: Tuesday, March 10, 2020 20:11:25 Eastern Daylight Time

**Name: I19069**
**ID: WG1348805-1,537ILOW**
**Date: 09-Mar-2020**
**Time: 12:48:24**
**Description: WG1348805,WG1346657,ICAL16567,537ILOW**
**User: LCMS01:JW**
**Vial: 1:A,2**
**Instrument: XEVO-TQSmicro#QEA0276**
**Inlet Method Name: C:\MassLynx\Data\200309_537ISO.PRO\ACQUDB\LCMS_537_ISO_MeOH**
**Tune Method Name: C:\MassLynx\Data\200309_537ISO.PRO\ACQUDB\190709_TUNE.IPR**
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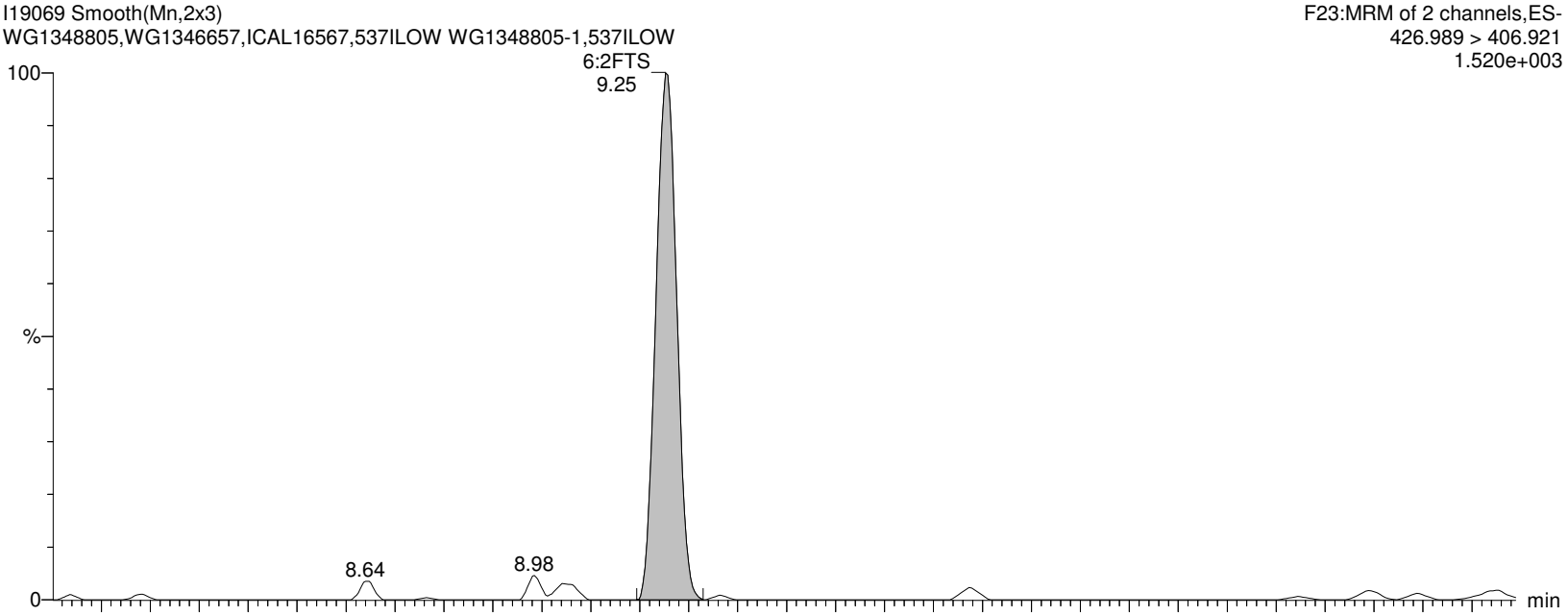
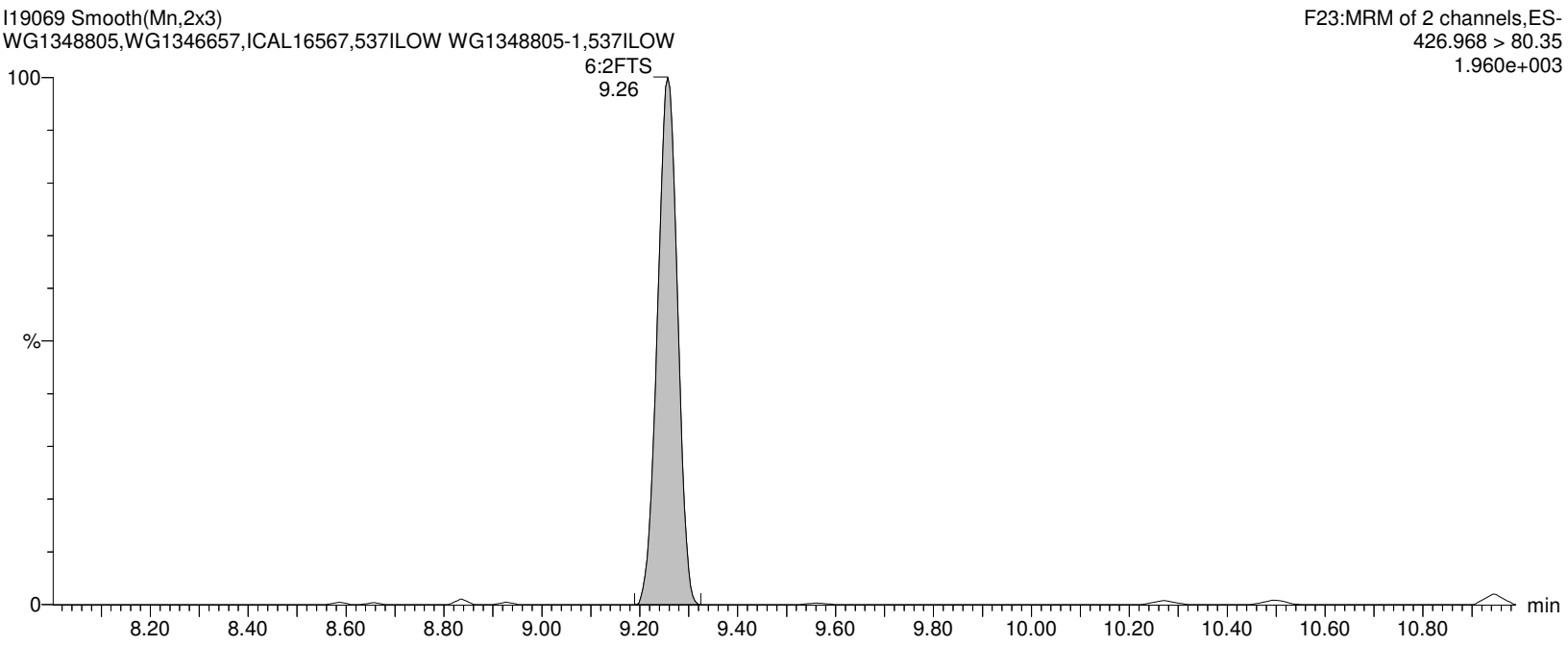
**6:2FTS**





all concentration units in (ng/mL)

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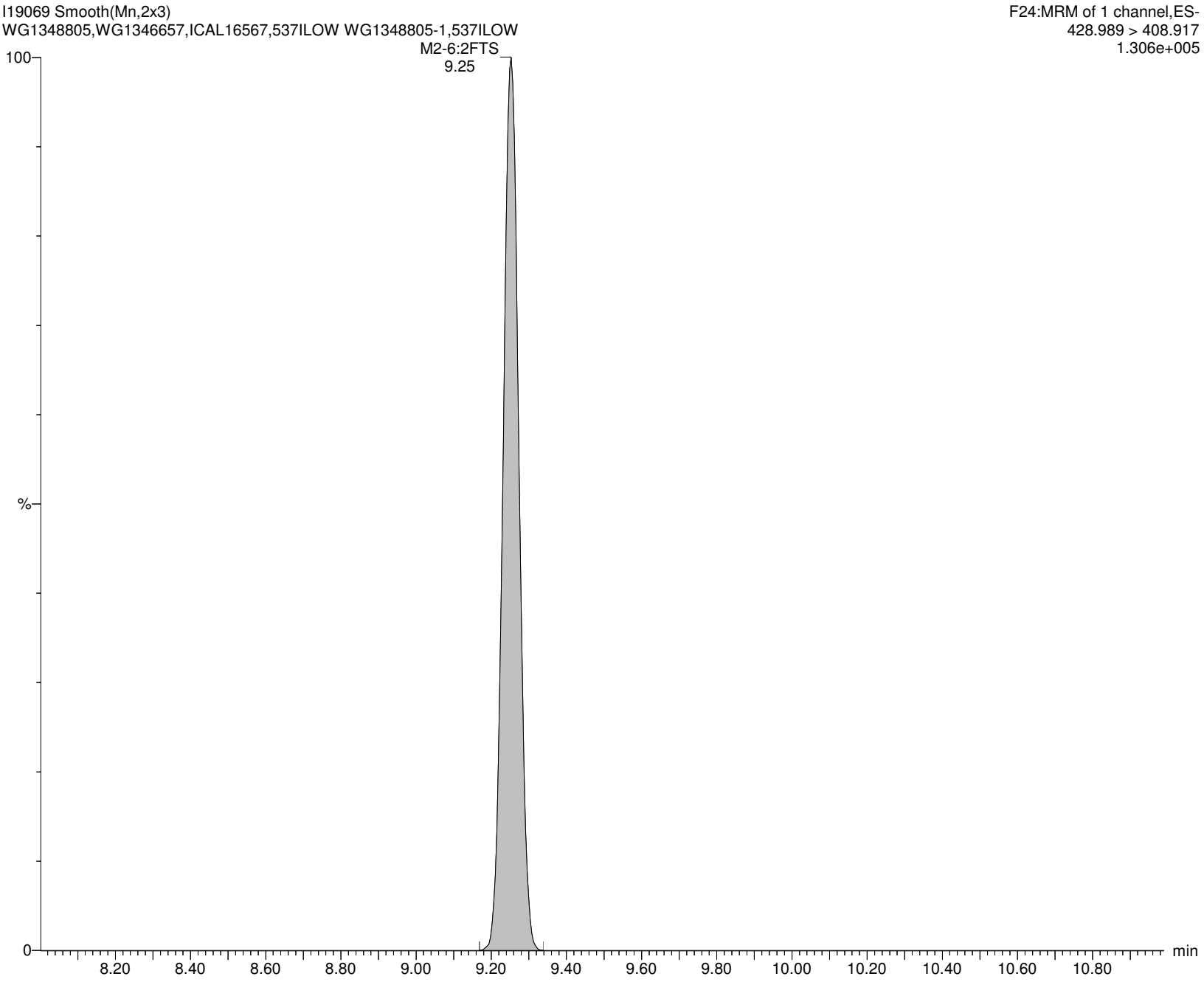
**M2-6:2FTS**





all concentration units in (ng/mL)

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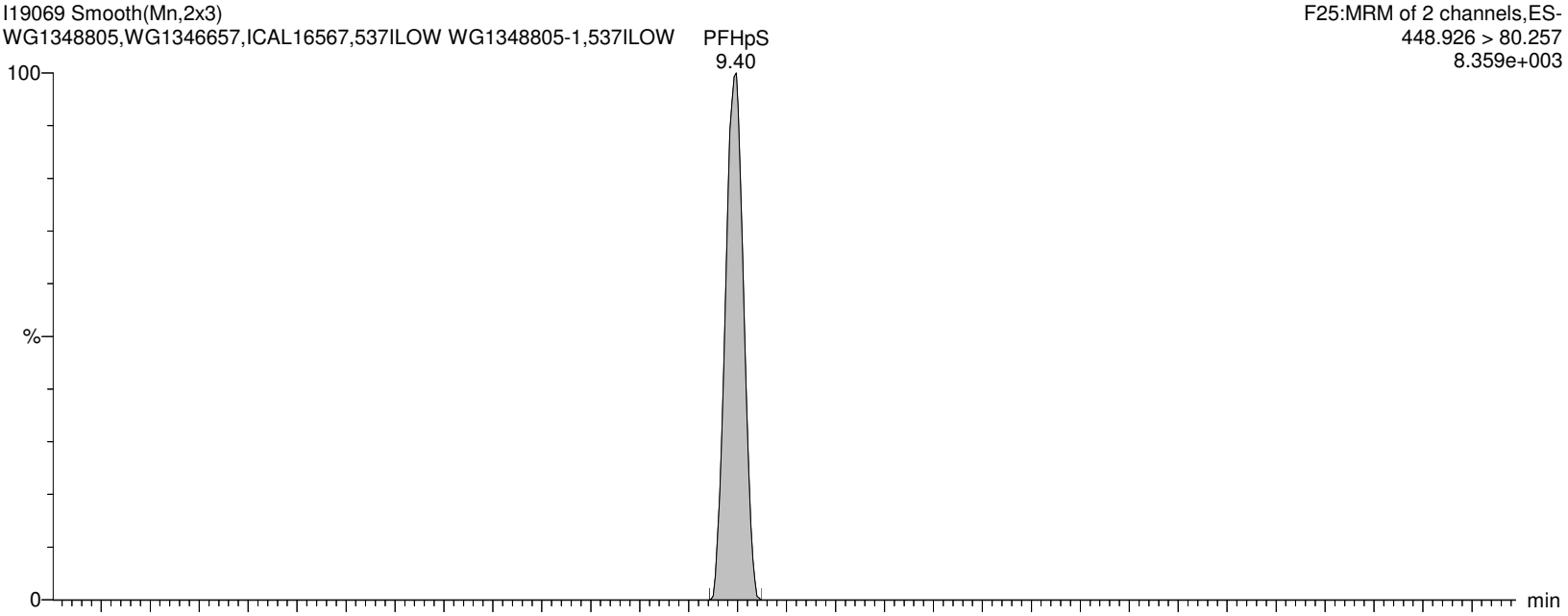
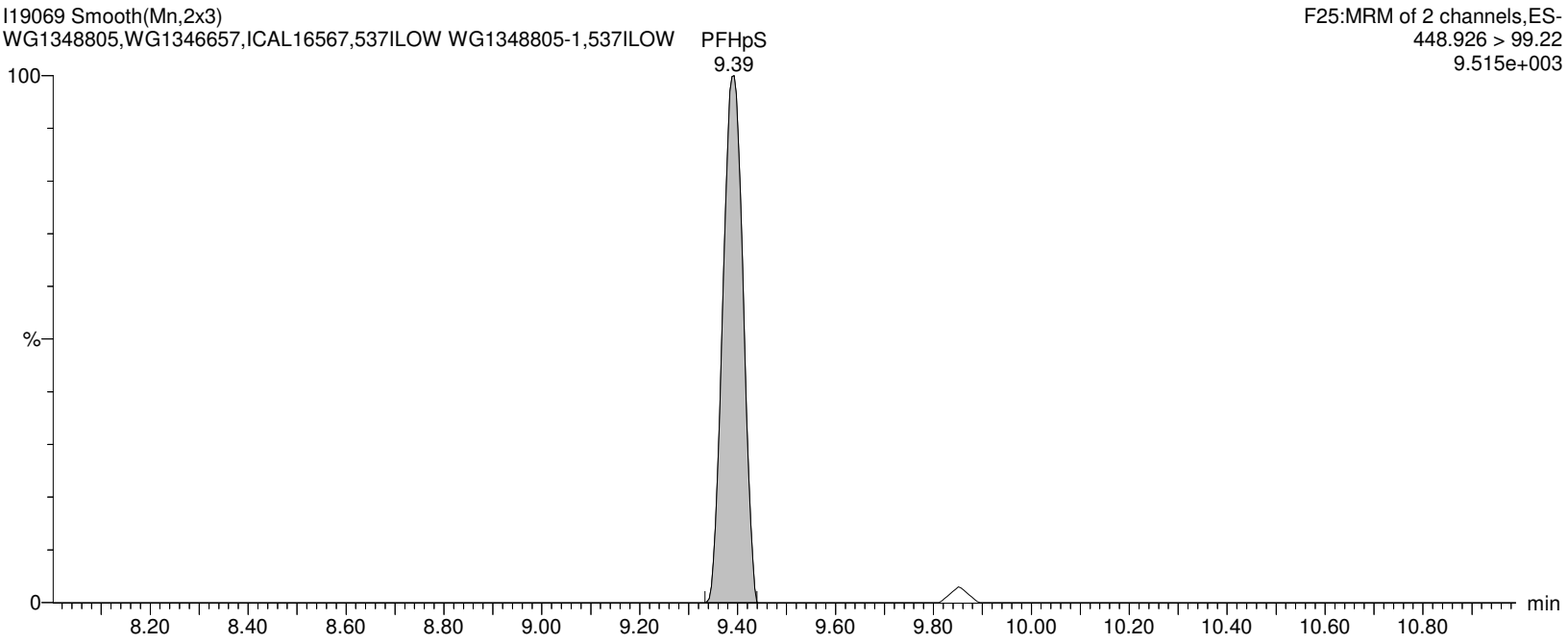
**PFHpS**





all concentration units in (ng/mL)

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**MS Method Name: C:\MassLynx\Data\200309_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

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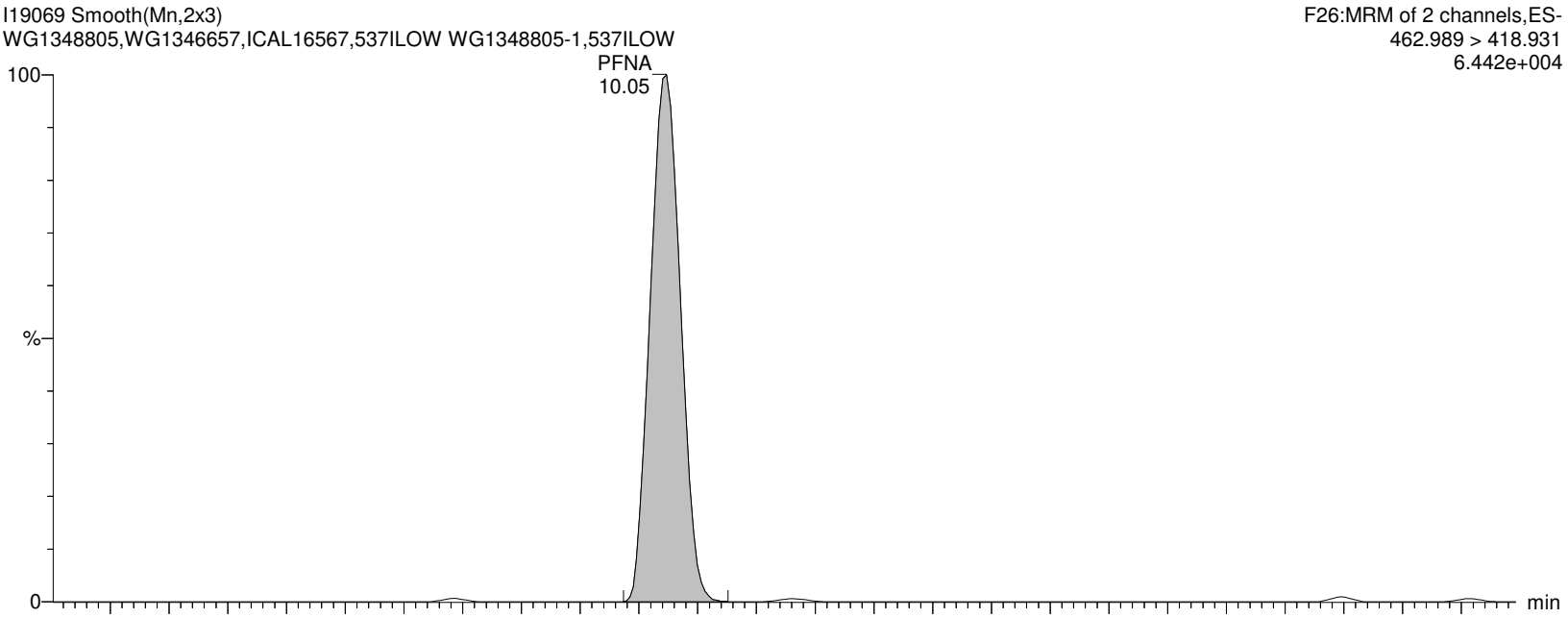


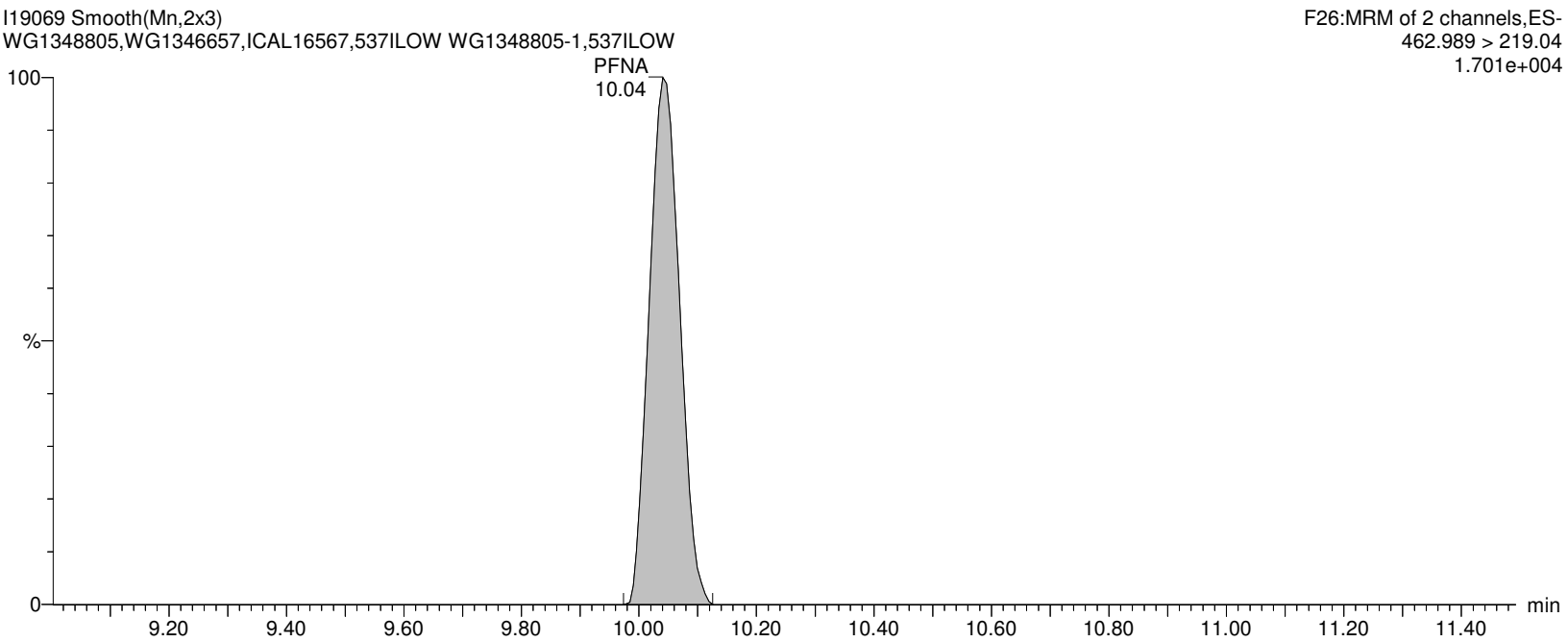



all concentration units in (ng/mL)

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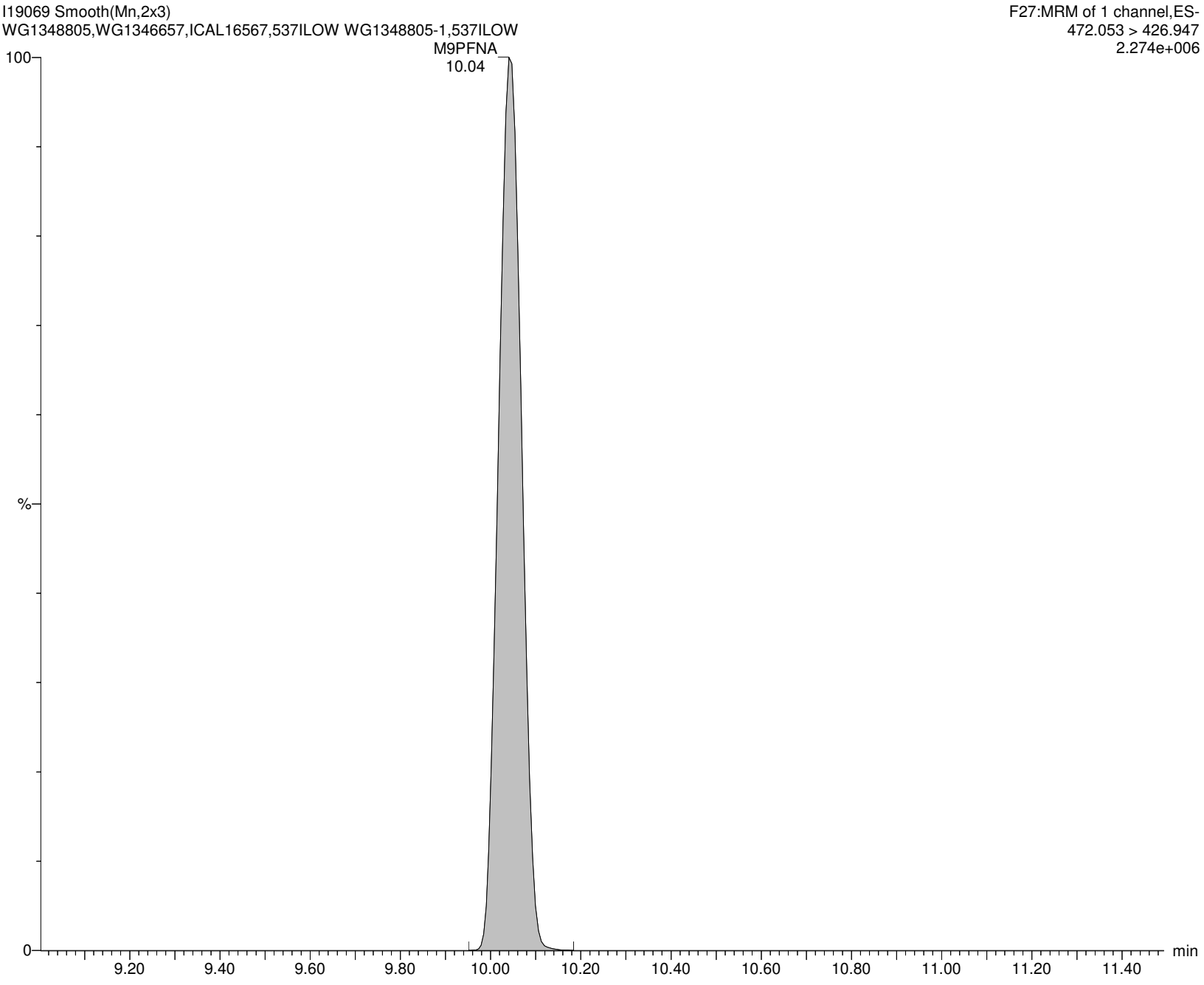
**MS Method Name: C:\MassLynx\Data\200309_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**M9PFNA**





all concentration units in (ng/mL)

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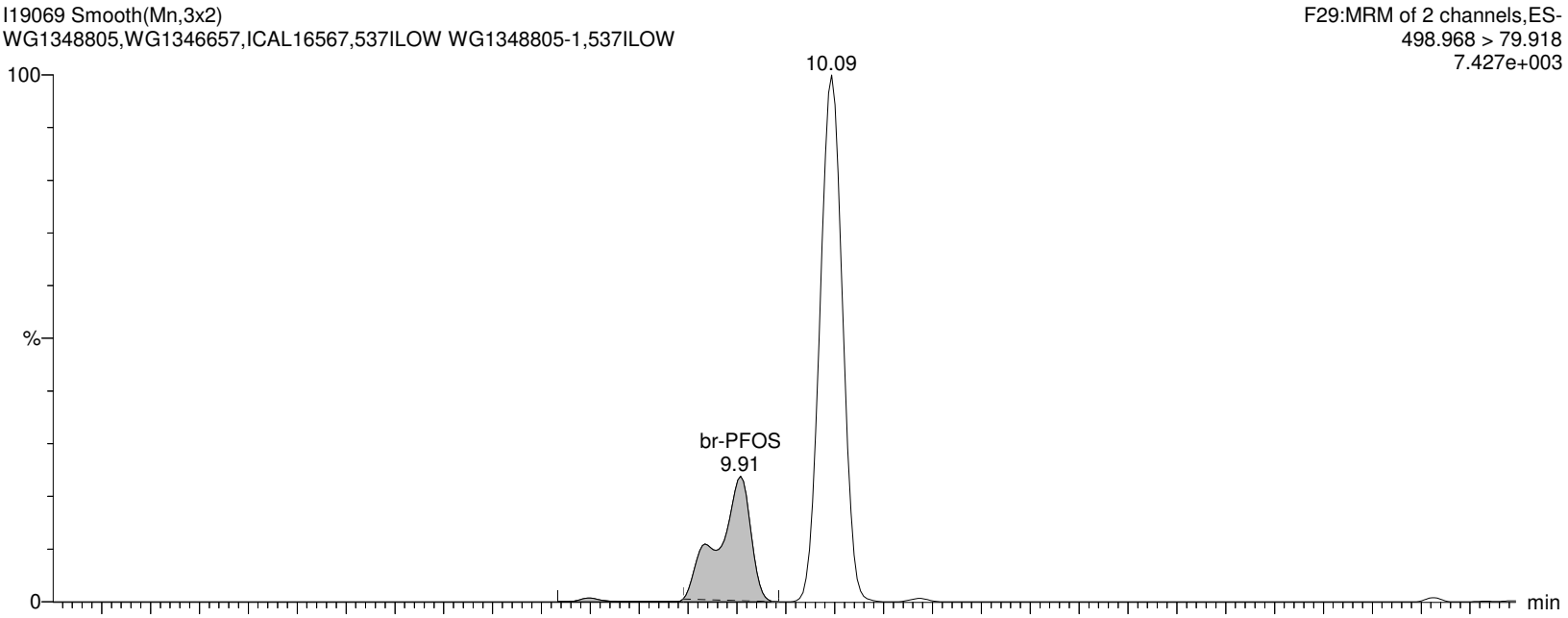
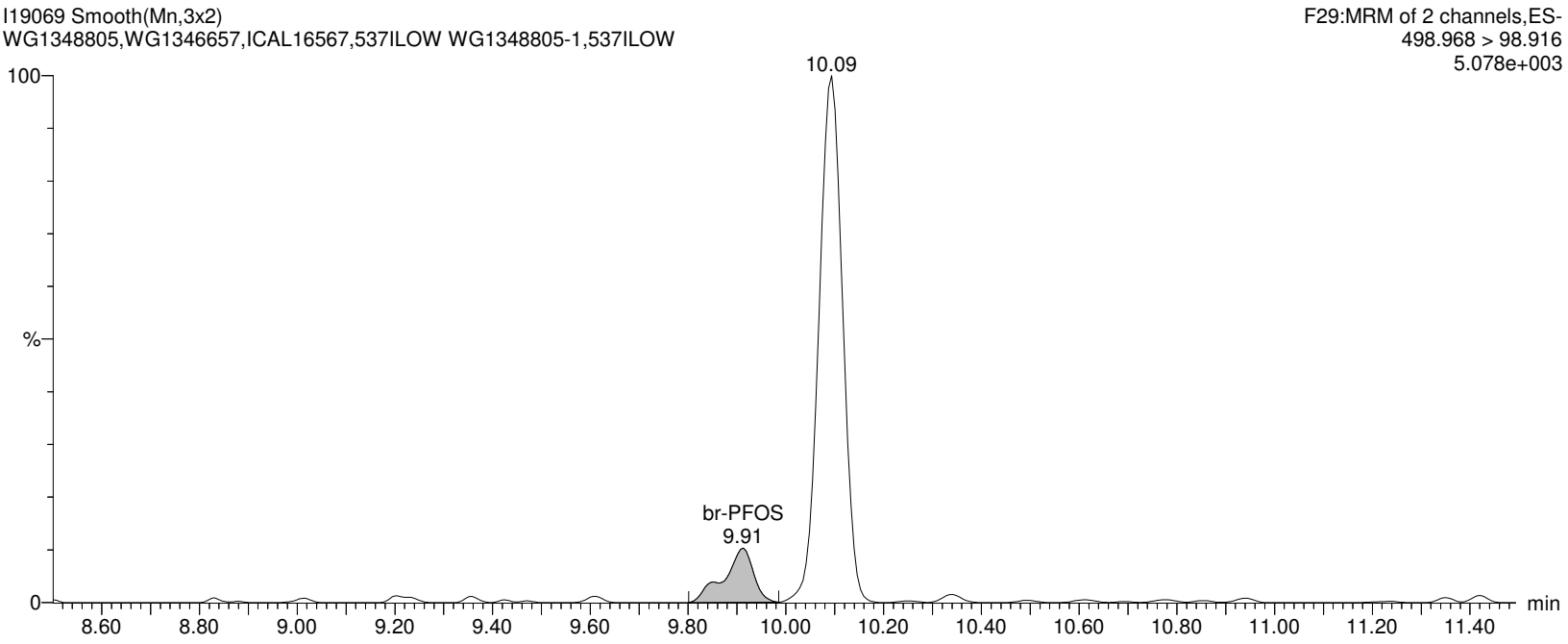
**br-PFOS**





all concentration units in (ng/mL)

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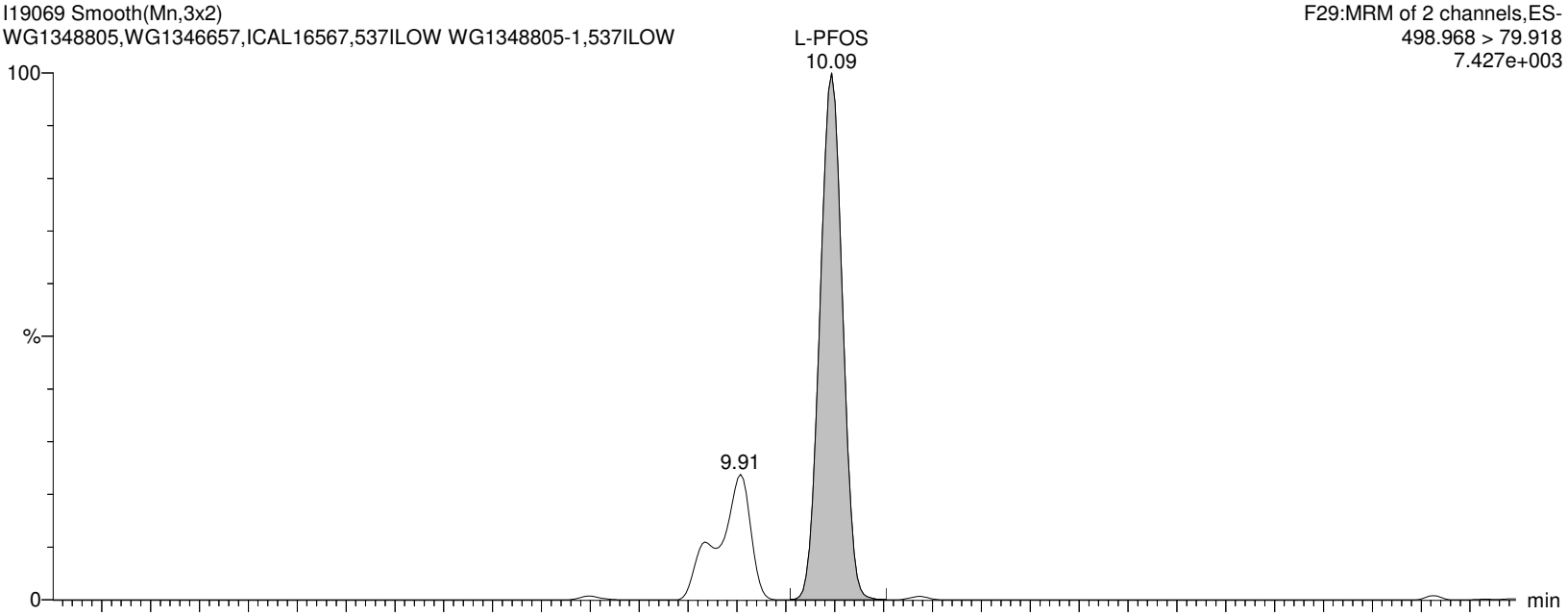
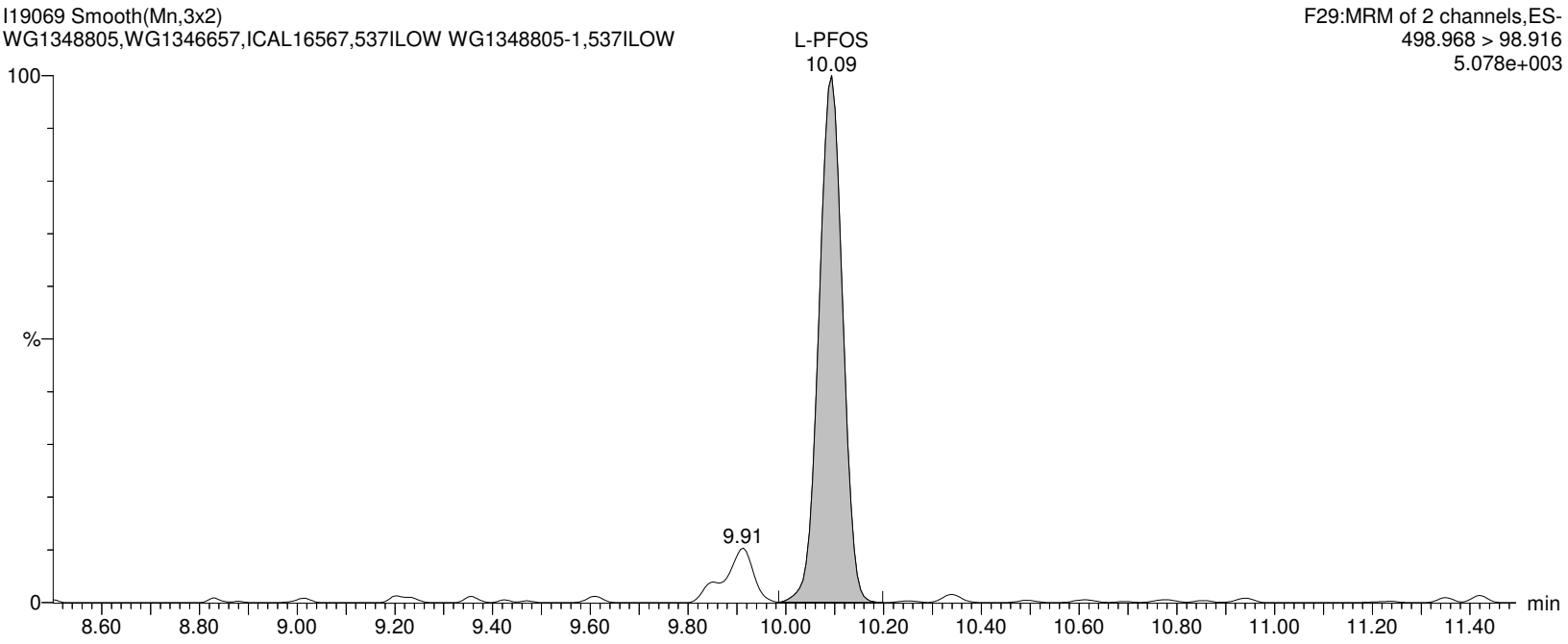
**MS Method Name: C:\MassLynx\Data\200309_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**L-PFOS**





all concentration units in (ng/mL)

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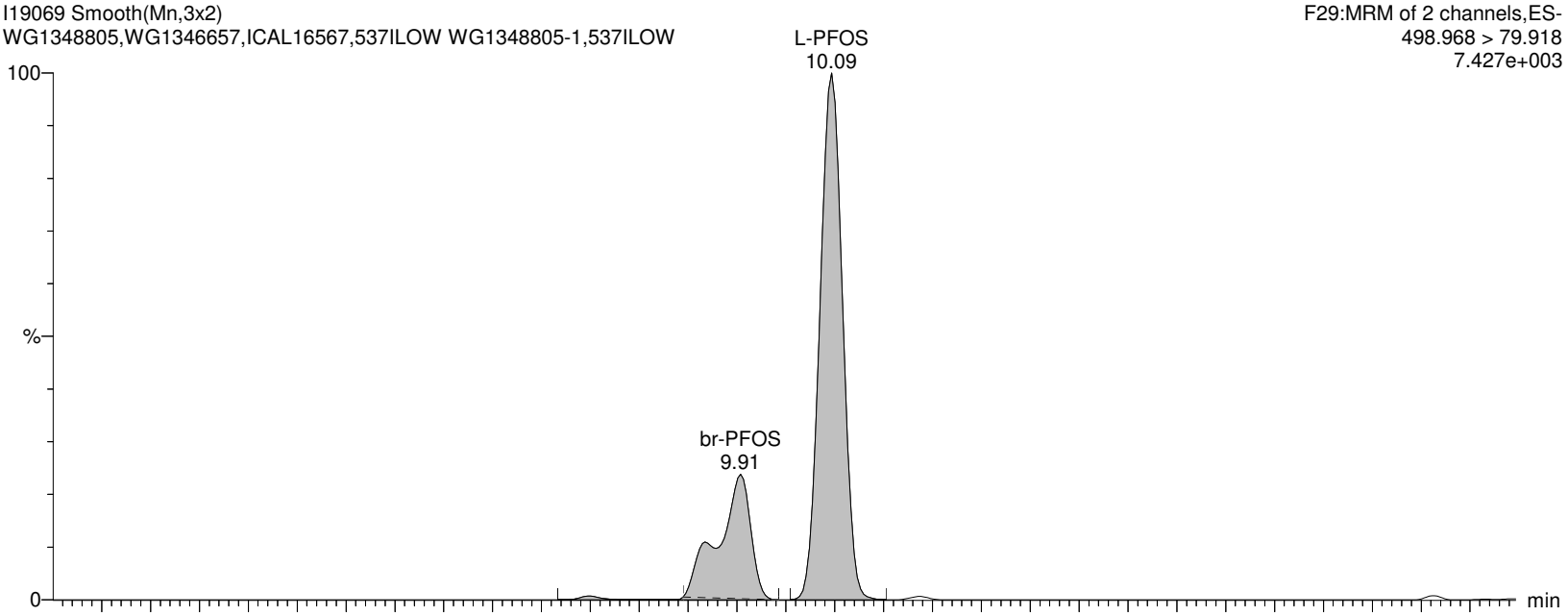
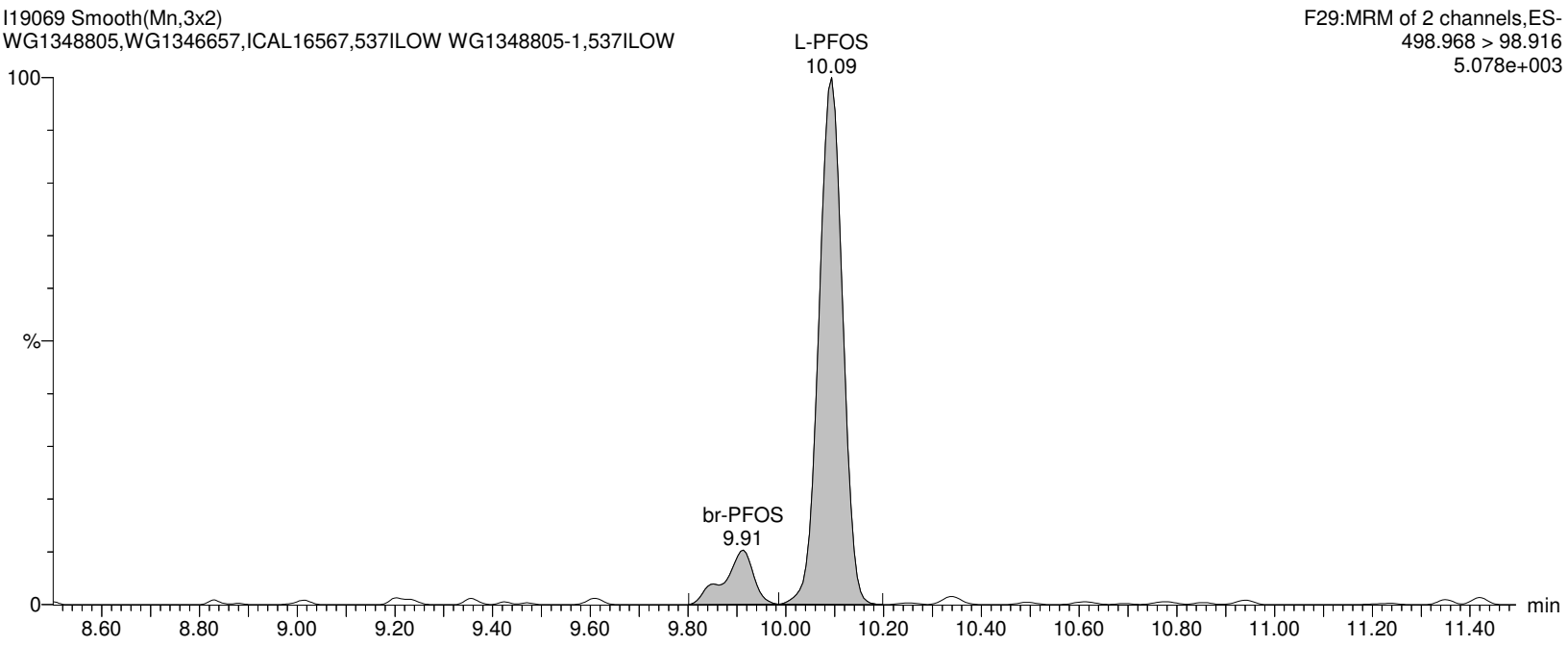
**MS Method Name: C:\MassLynx\Data\200309_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**PFOS**





all concentration units in (ng/mL)

Alpha Analytical Inc.
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**MS Method Name: C:\MassLynx\Data\200309_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

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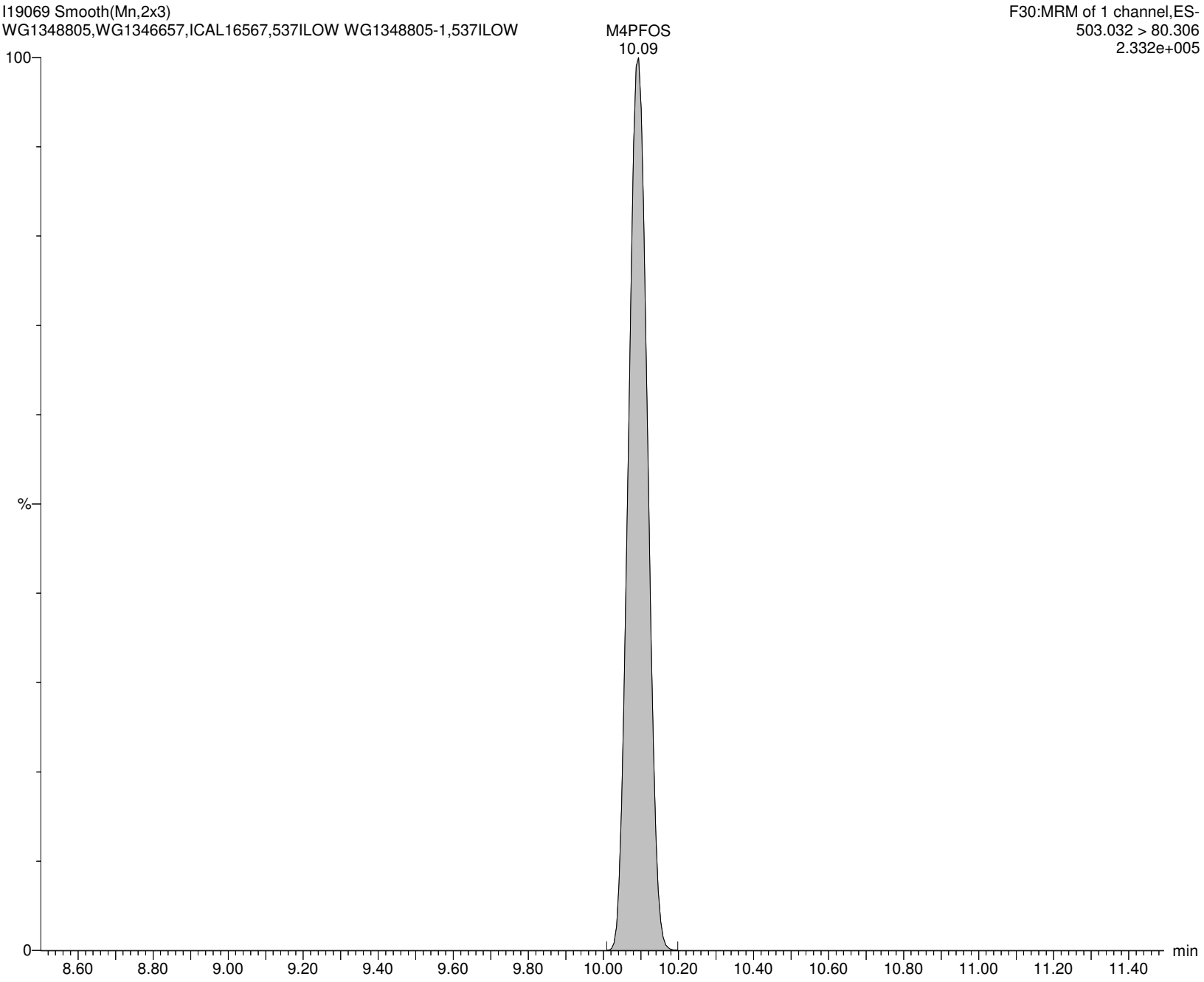



all concentration units in (ng/mL)

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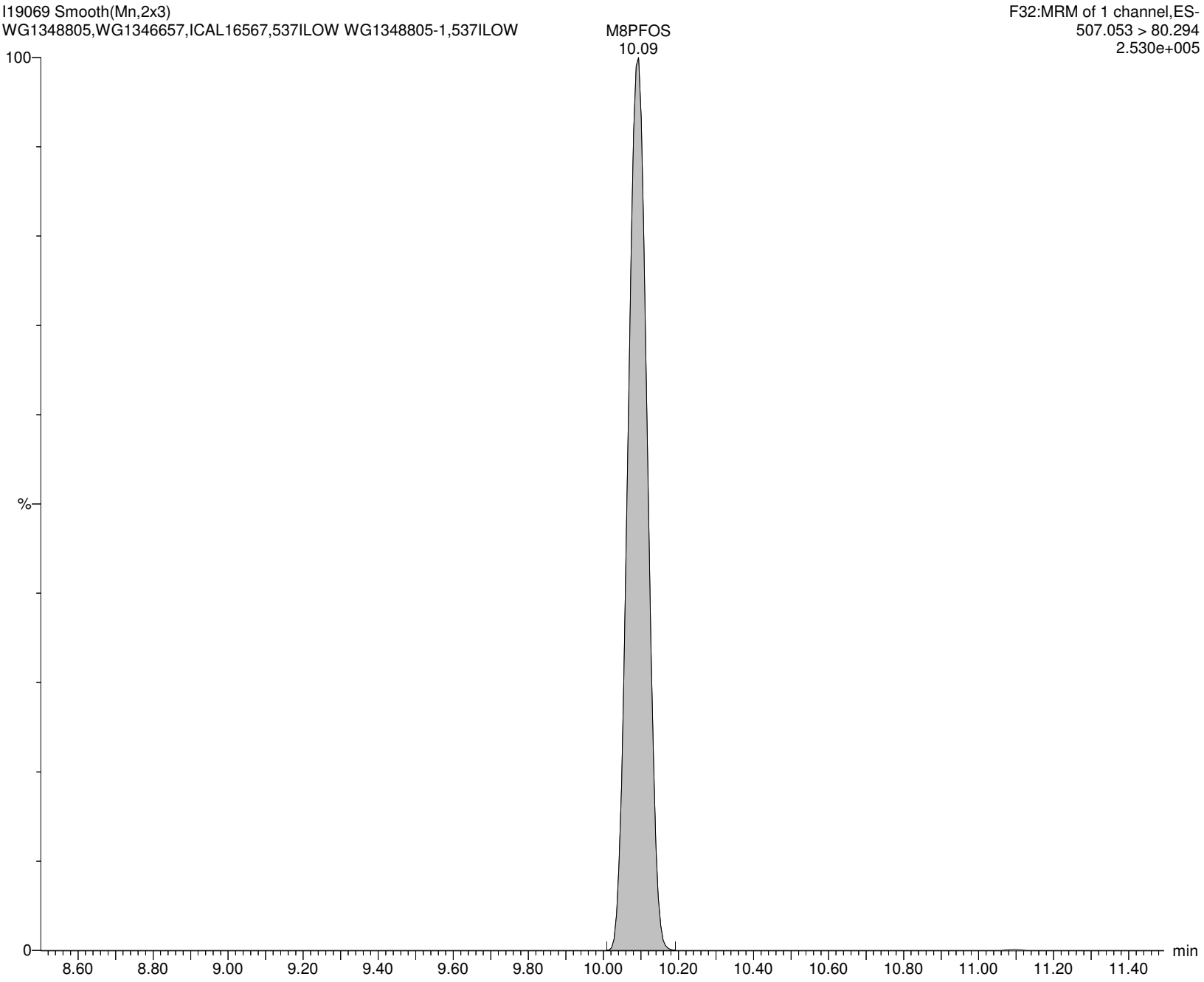
**M8PFOS**





all concentration units in (ng/mL)

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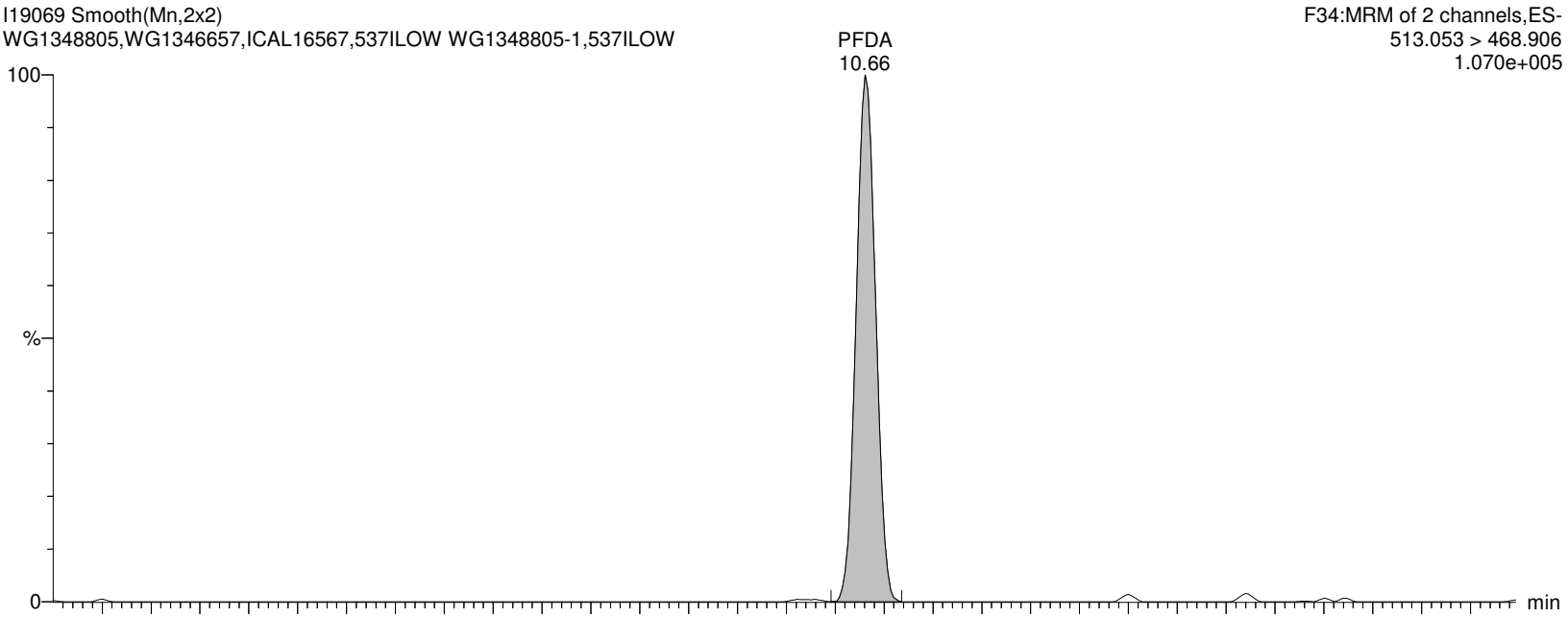
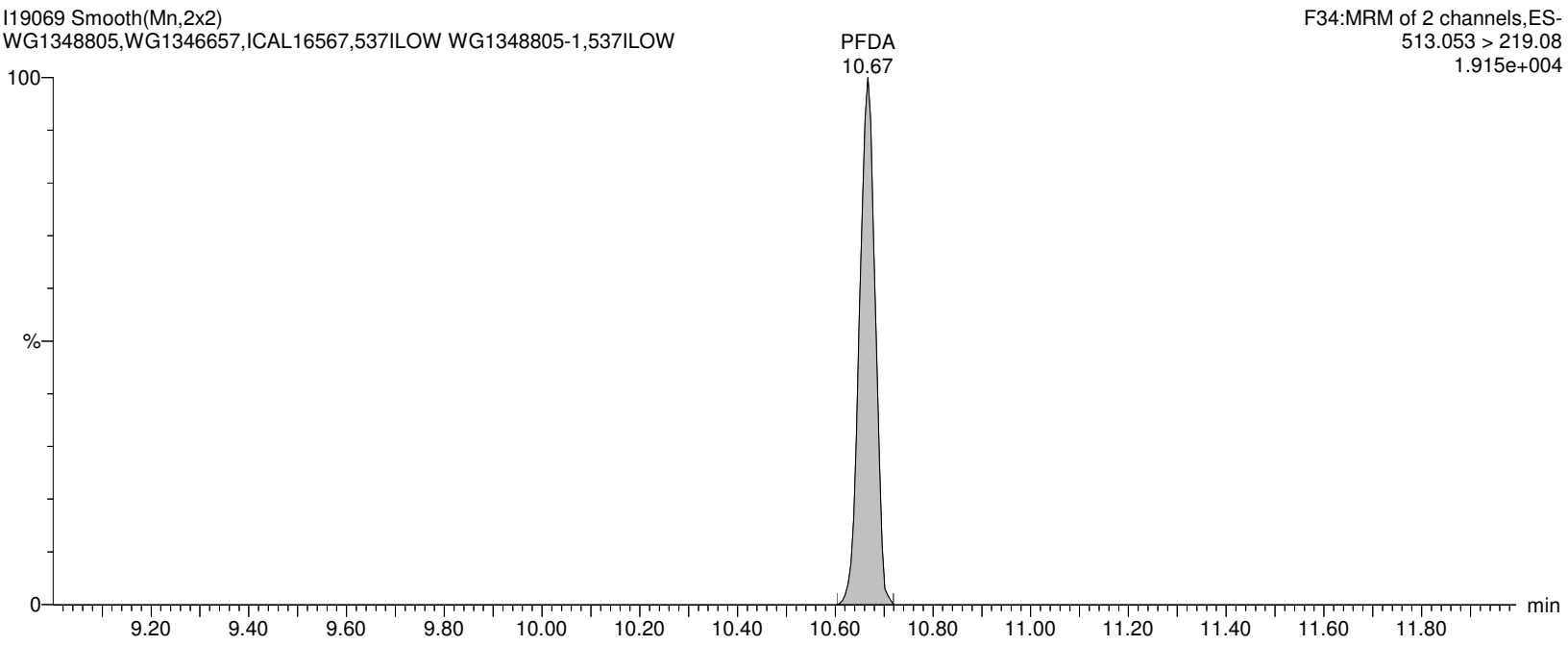
**PFDA**





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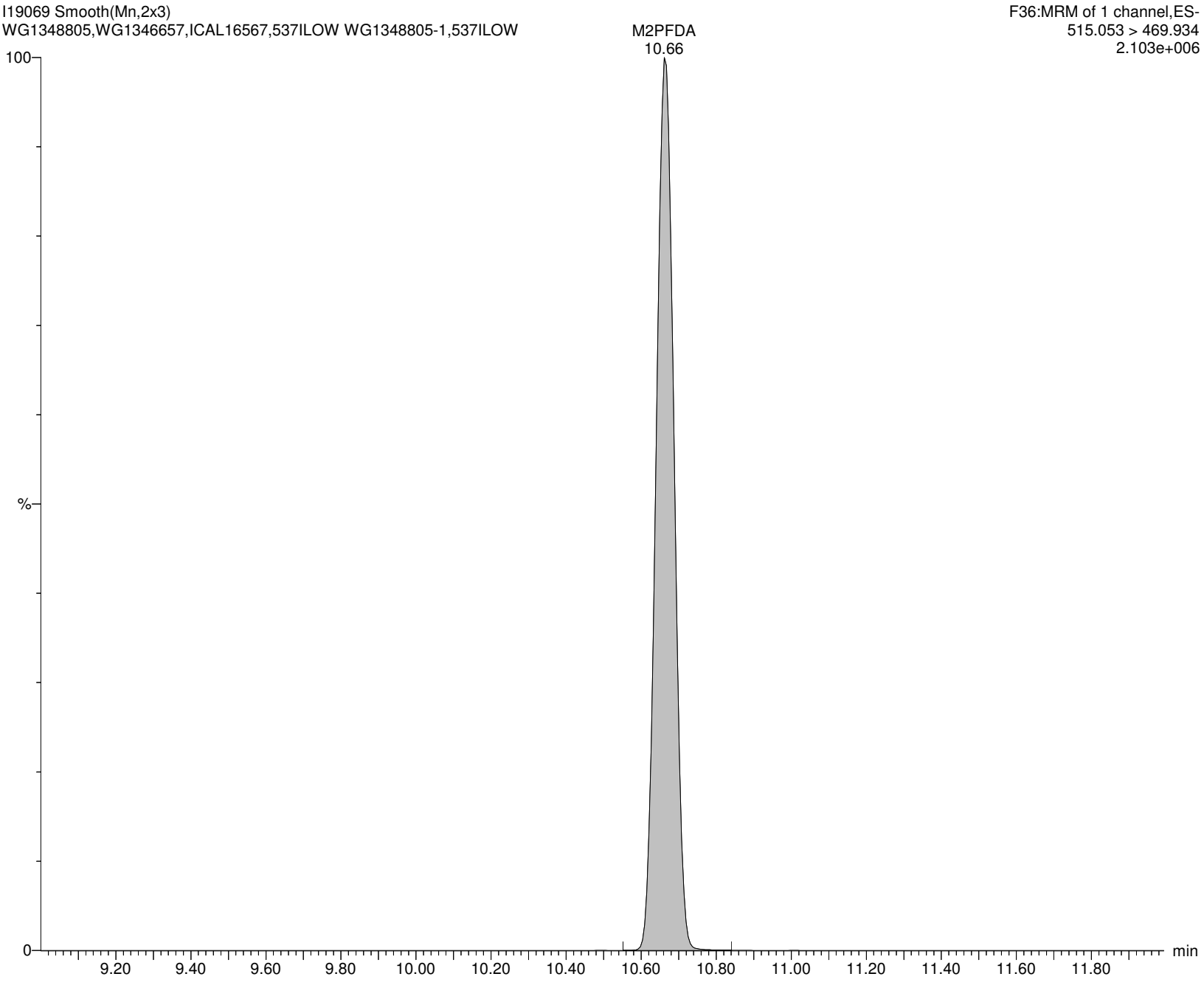



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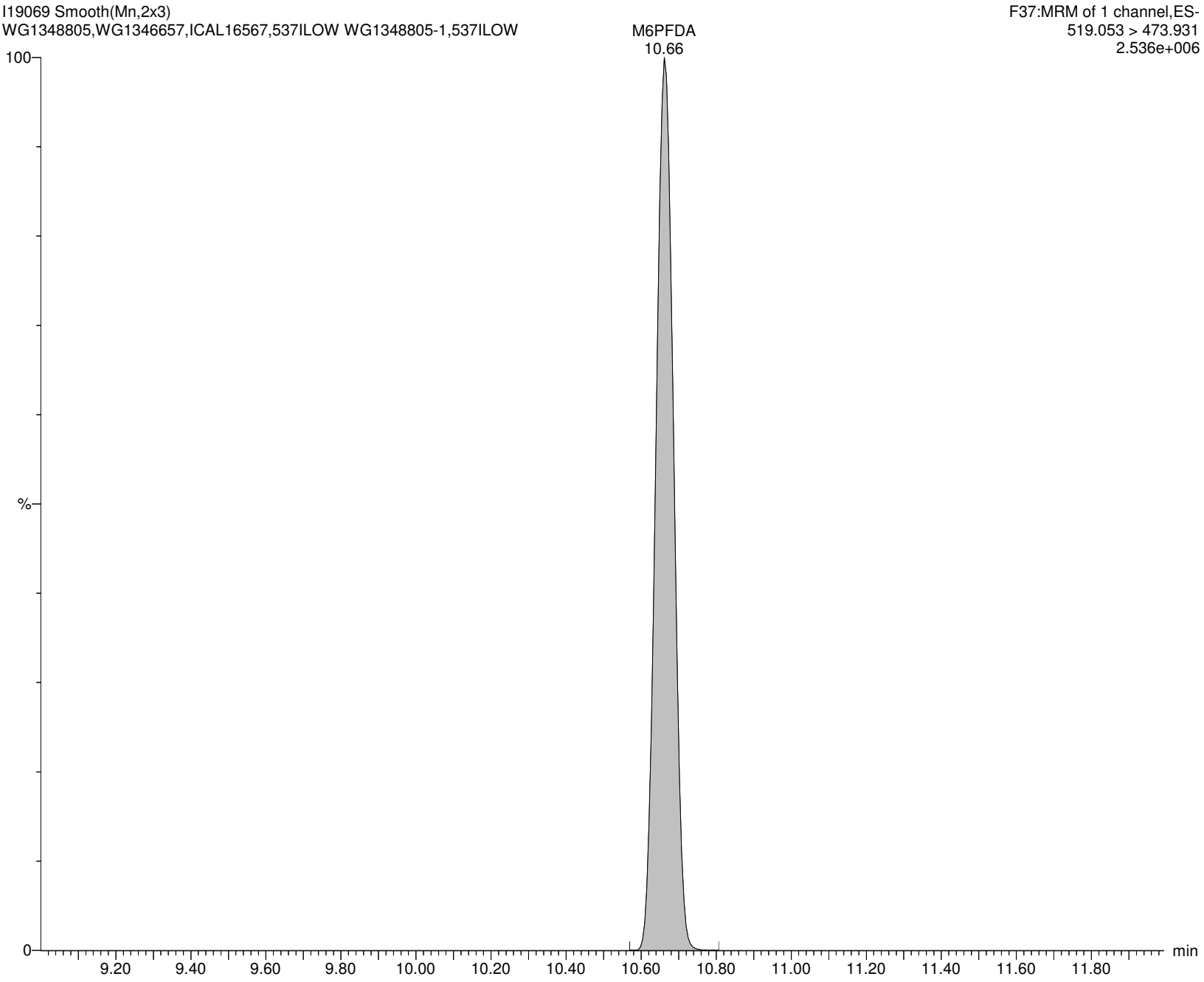



all concentration units in (ng/mL)

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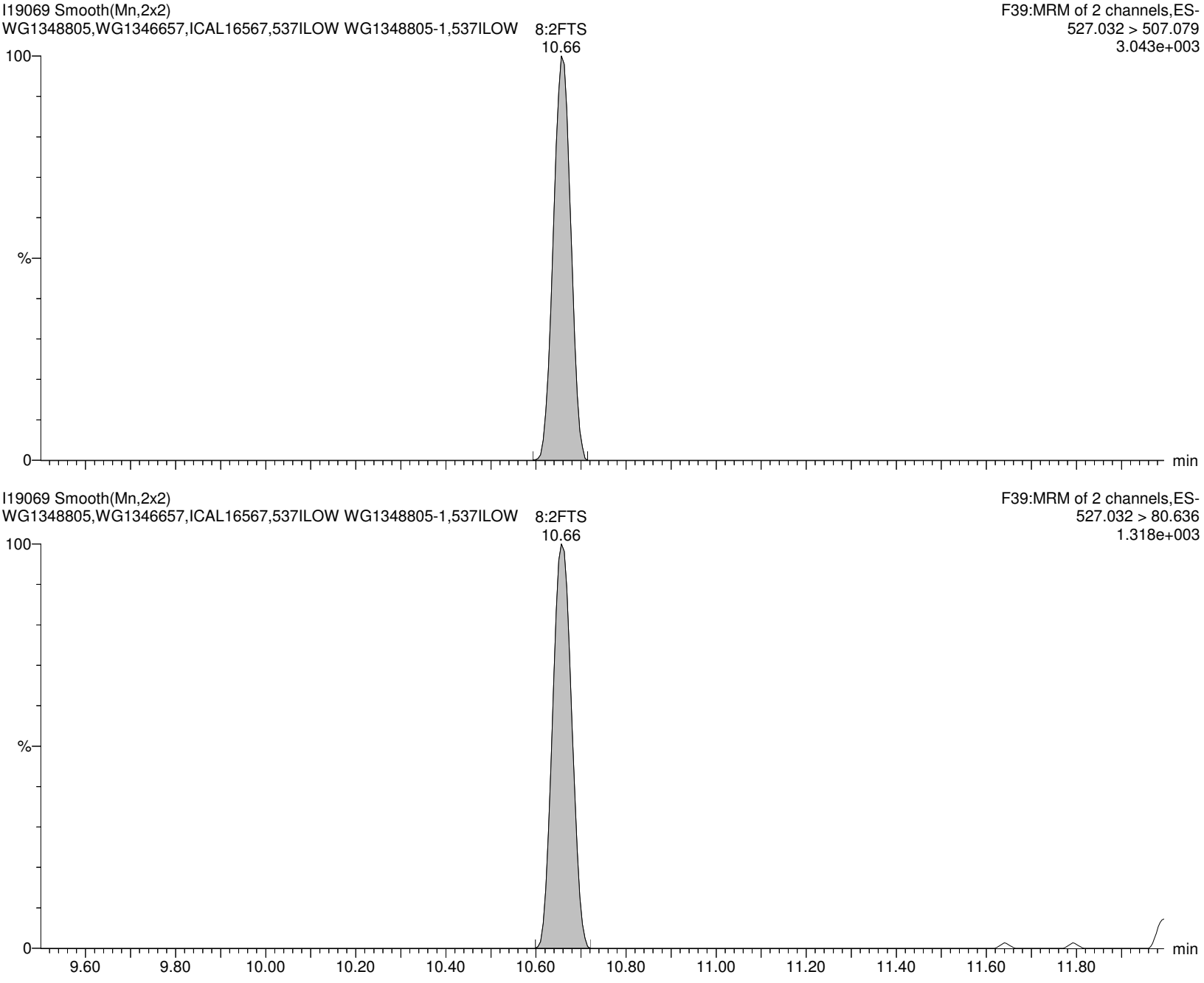



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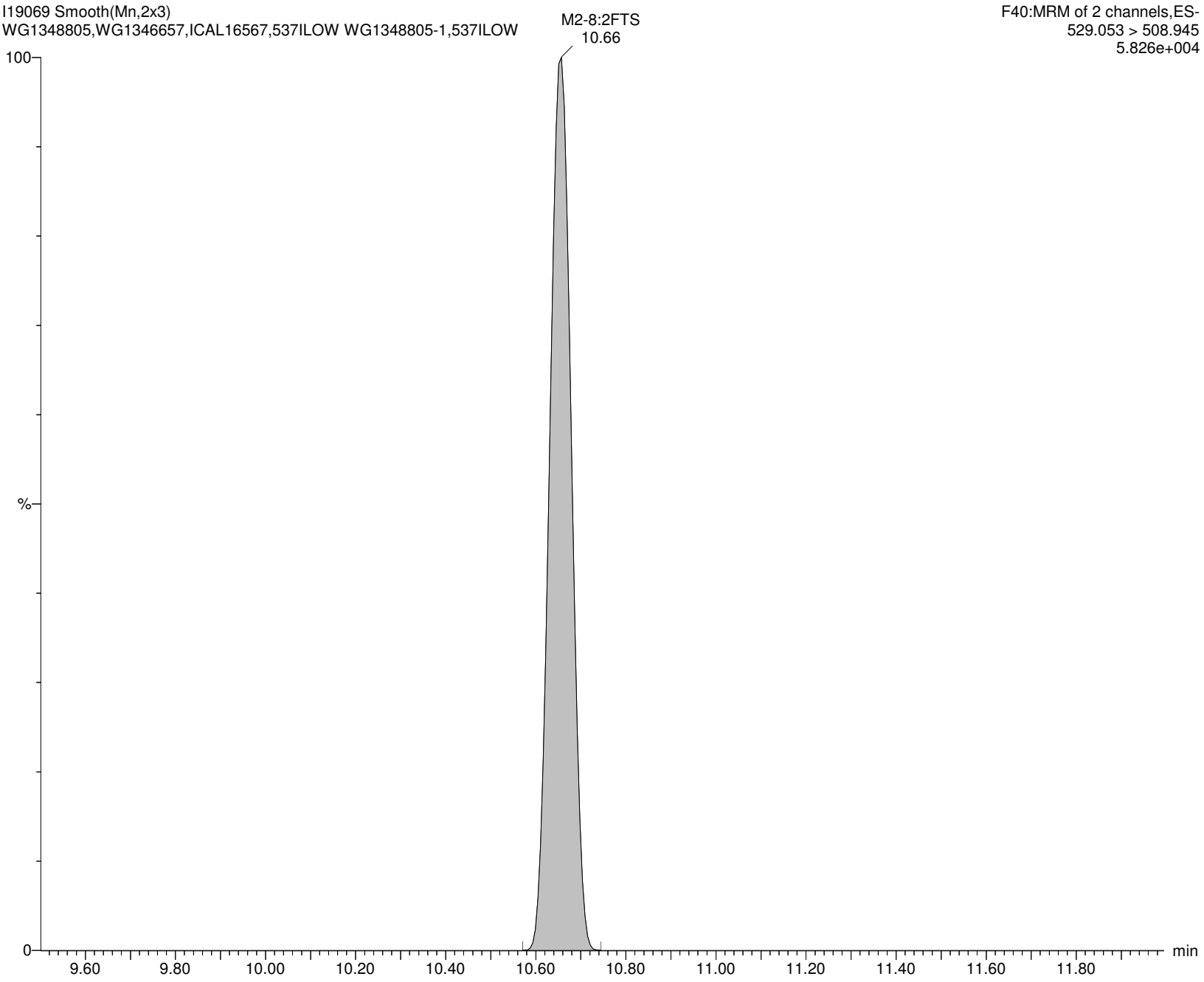
**M2-8:2FTS**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200309_537ISO.PRO\Data\WG1348805-1.qld
Last Altered: Tuesday, March 10, 2020 12:33:31 Eastern Daylight Time
Printed: Tuesday, March 10, 2020 20:11:25 Eastern Daylight Time

**Name: I19069**
**ID: WG1348805-1,537ILOW**
**Date: 09-Mar-2020**
**Time: 12:48:24**
**Description: WG1348805,WG1346657,ICAL16567,537ILOW**
**User: LCMS01:JW**
**Vial: 1:A,2**
**Instrument: XEVO-TQSmicro#QEA0276**
**Inlet Method Name: C:\MassLynx\Data\200309_537ISO.PRO\ACQUDB\LCMS_537_ISO_MeOH**
**Tune Method Name: C:\MassLynx\Data\200309_537ISO.PRO\ACQUDB\190709_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\200309_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

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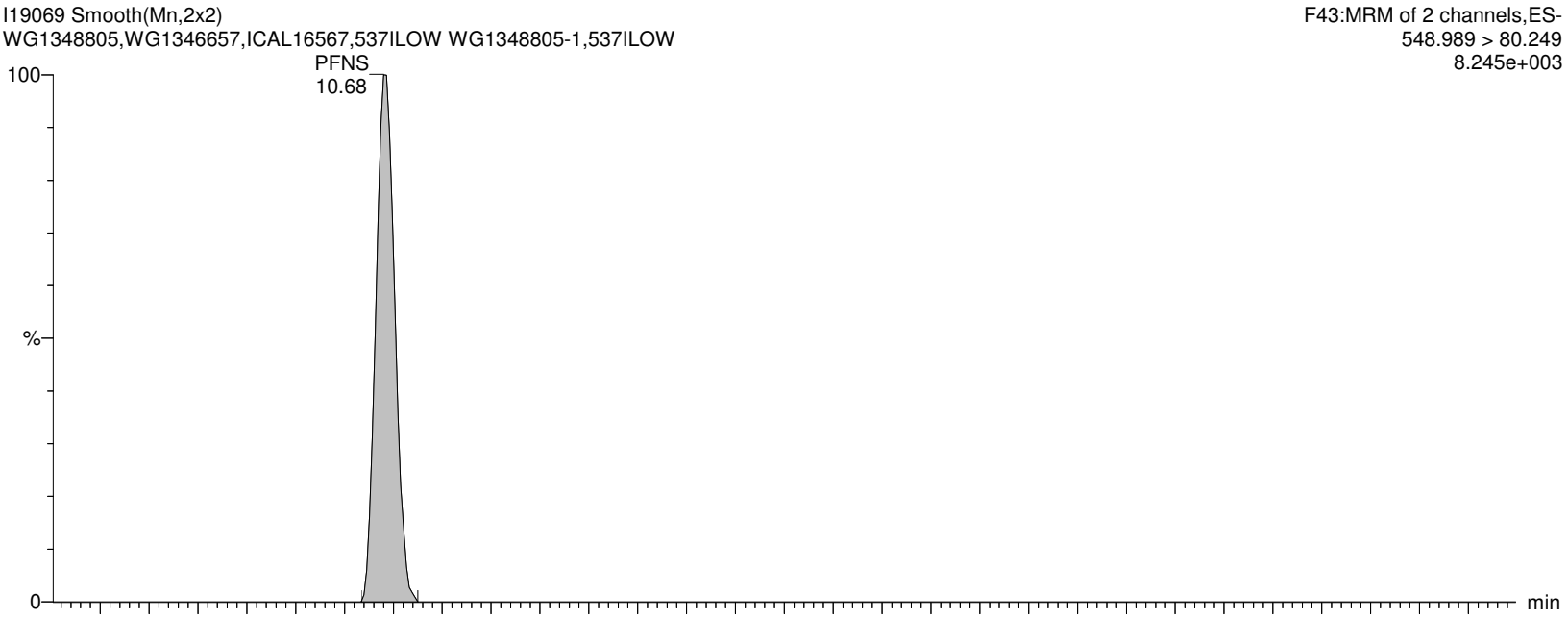


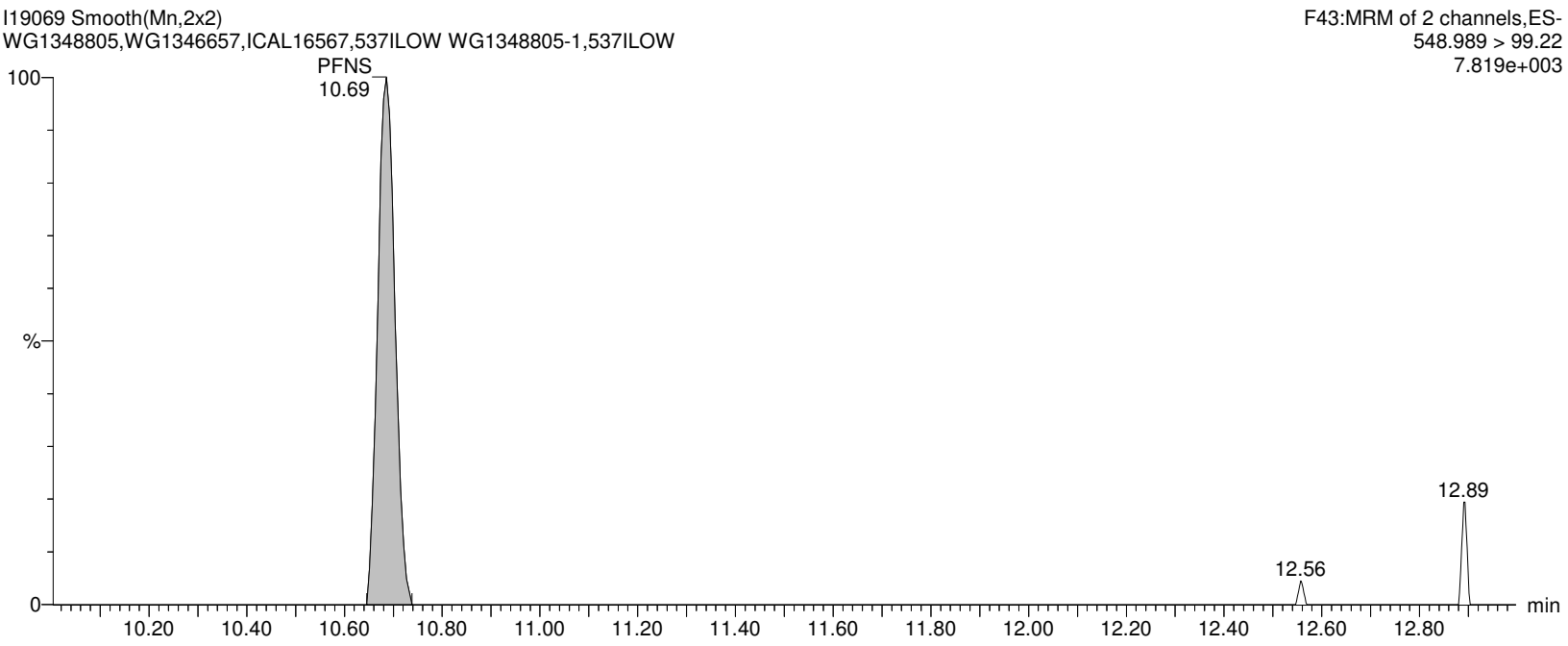



all concentration units in (ng/mL)

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**Vial: 1:A,2**
**Instrument: XEVO-TQSmicro#QEA0276**
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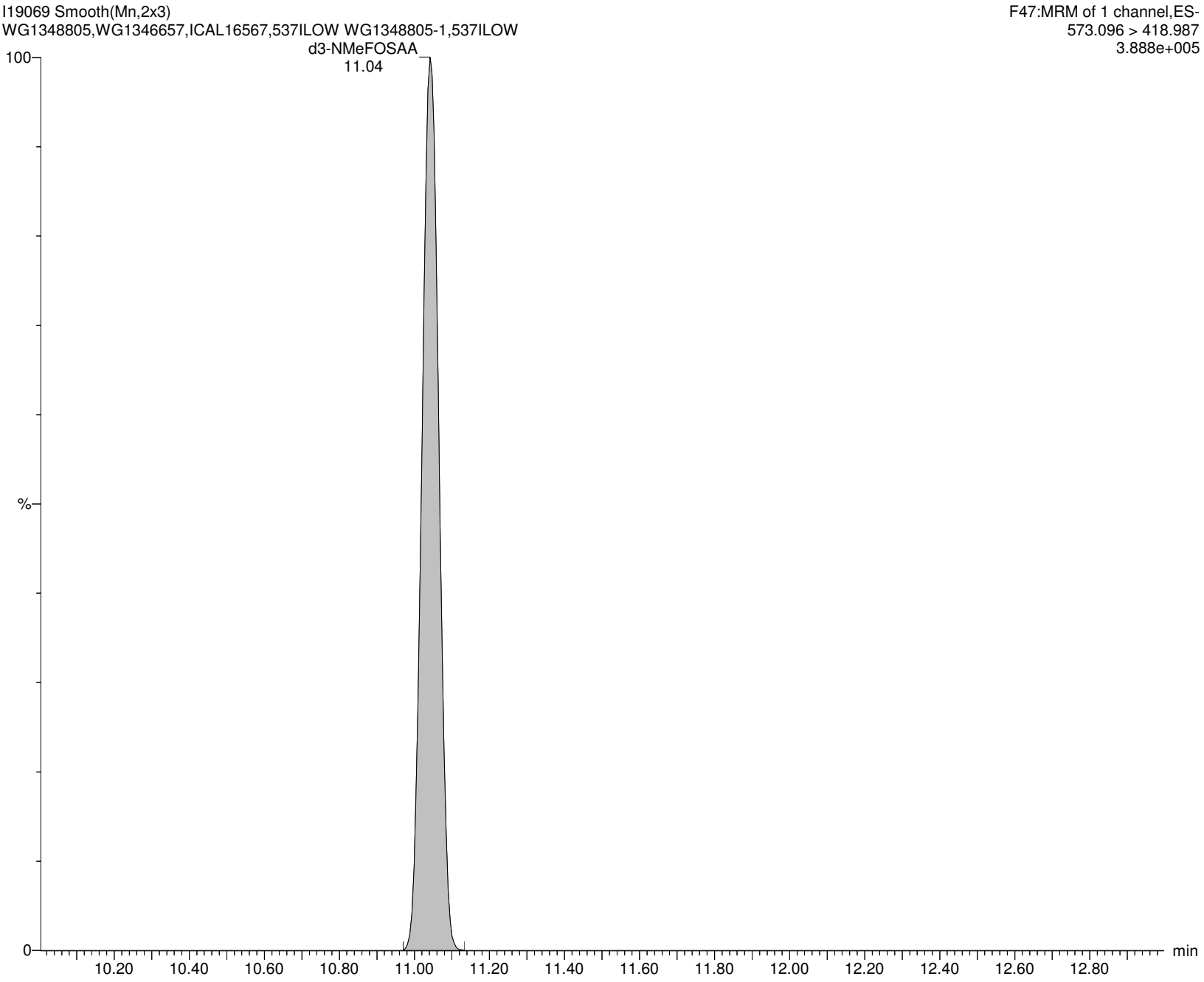
**MS Method Name: C:\MassLynx\Data\200309_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**d3-NMeFOSAA**





all concentration units in (ng/mL)

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**Vial: 1:A,2**
**Instrument: XEVO-TQSmicro#QEA0276**
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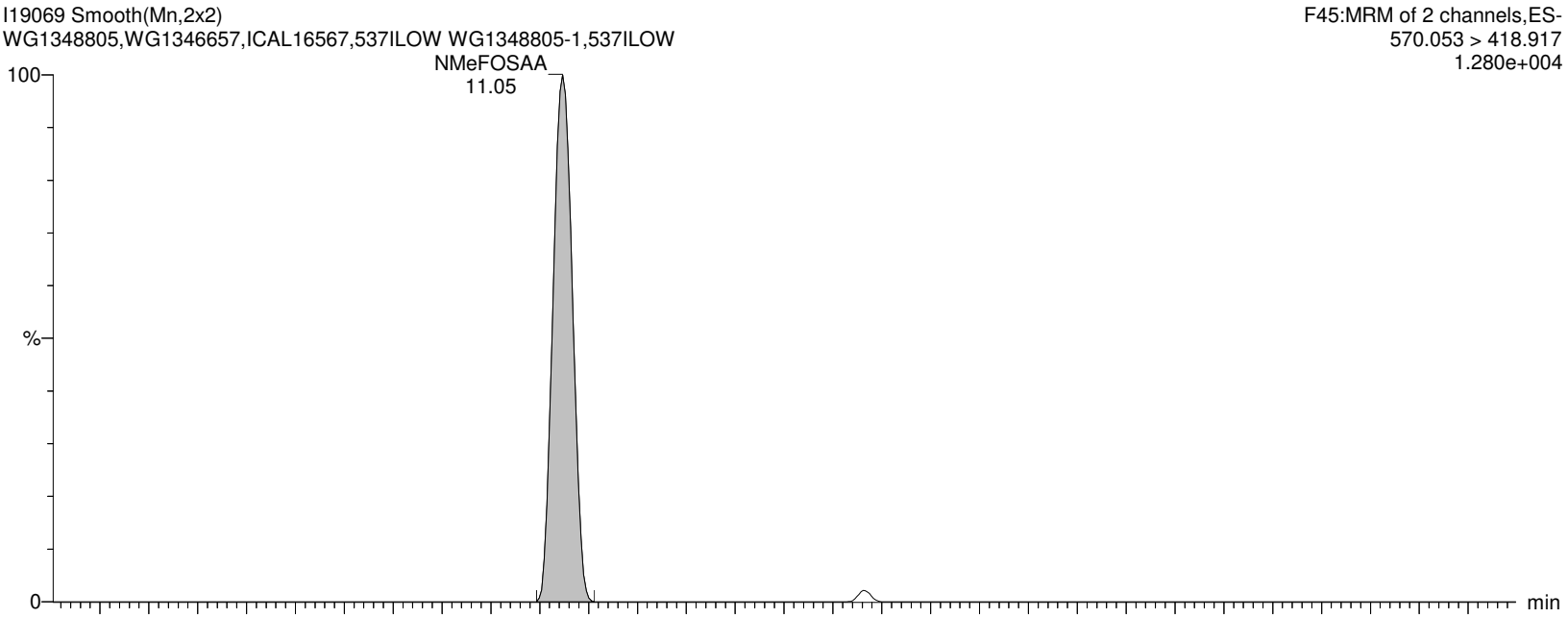
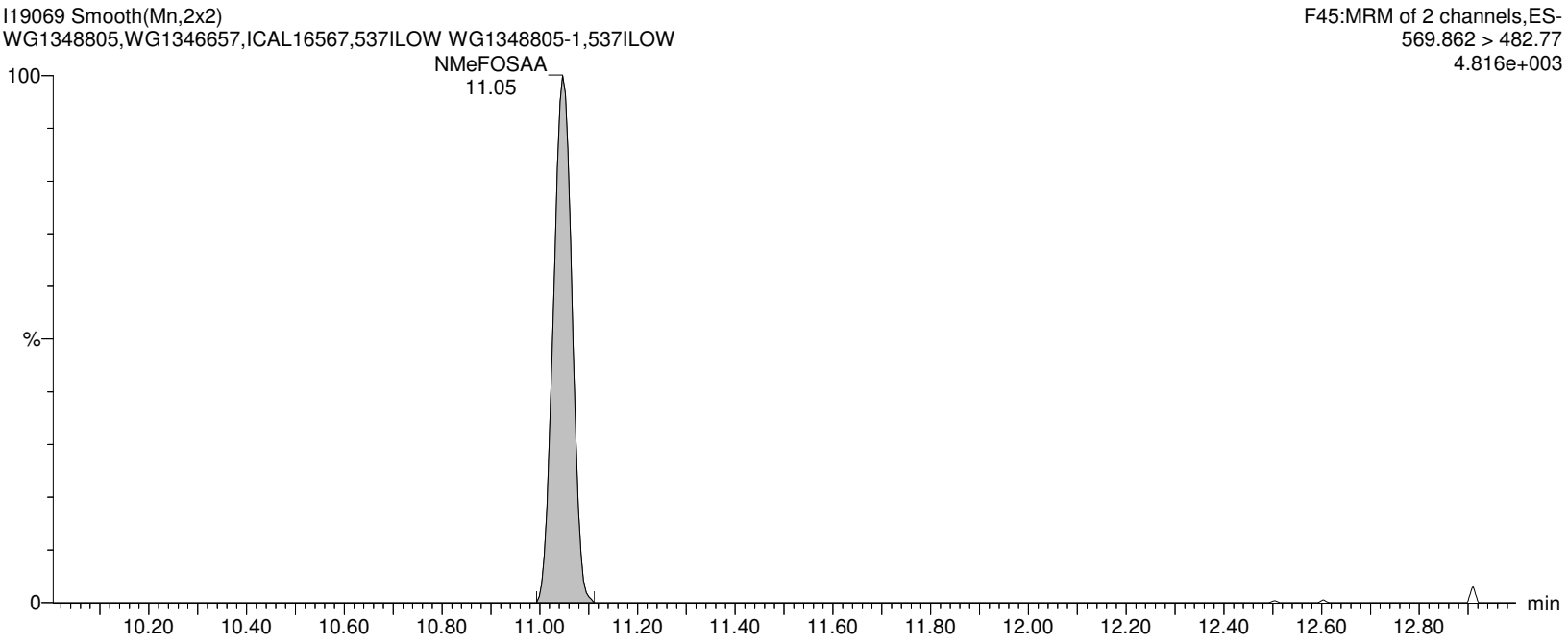
**NMeFOSAA**





all concentration units in (ng/mL)

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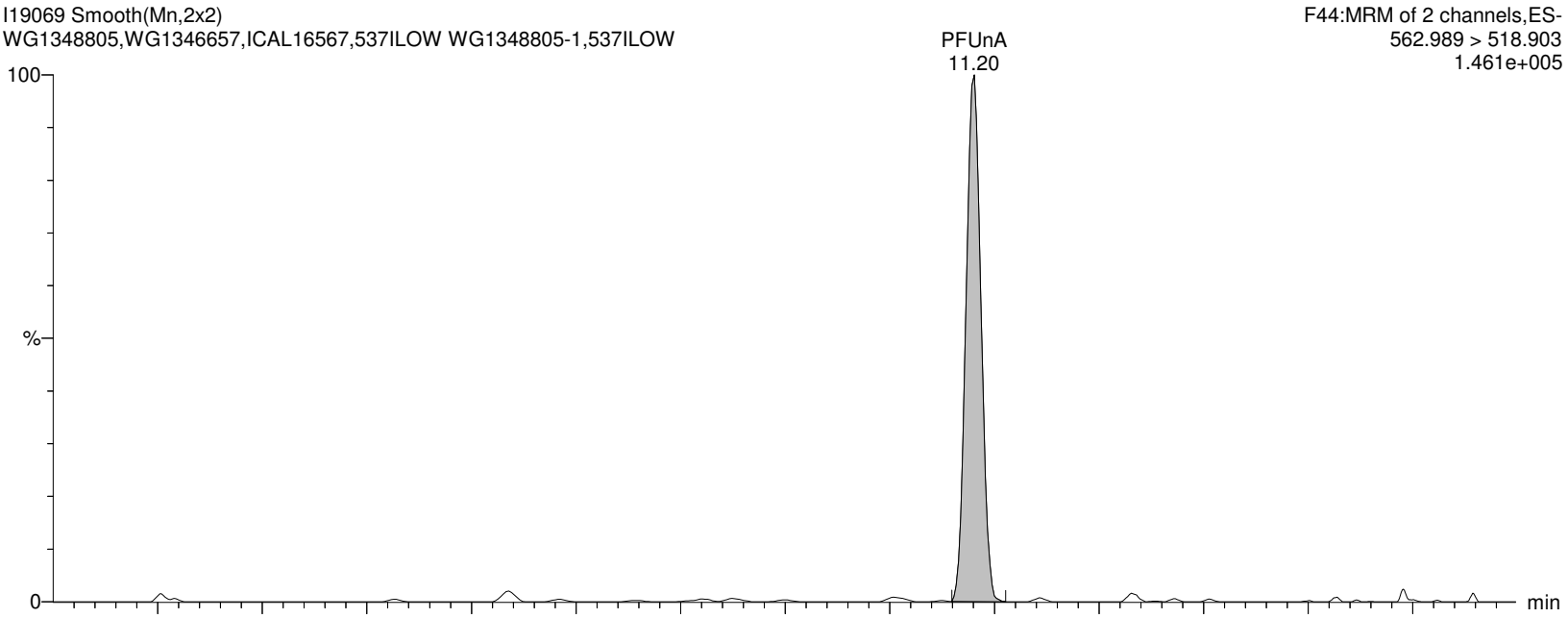
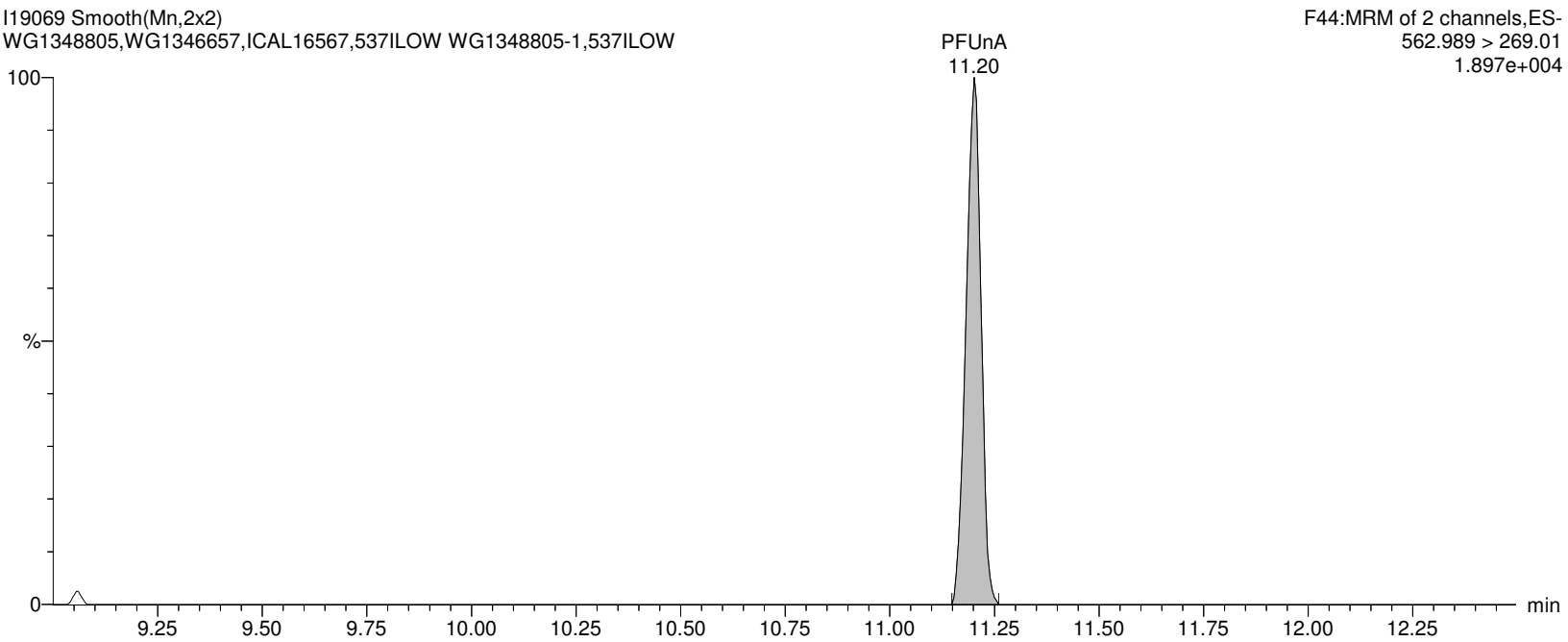
**PFUnA**





all concentration units in (ng/mL)

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**User: LCMS01:JW**
**Vial: 1:A,2**
**Instrument: XEVO-TQSmicro#QEA0276**
**Inlet Method Name: C:\MassLynx\Data\200309_537ISO.PRO\ACQUDB\LCMS_537_ISO_MeOH**
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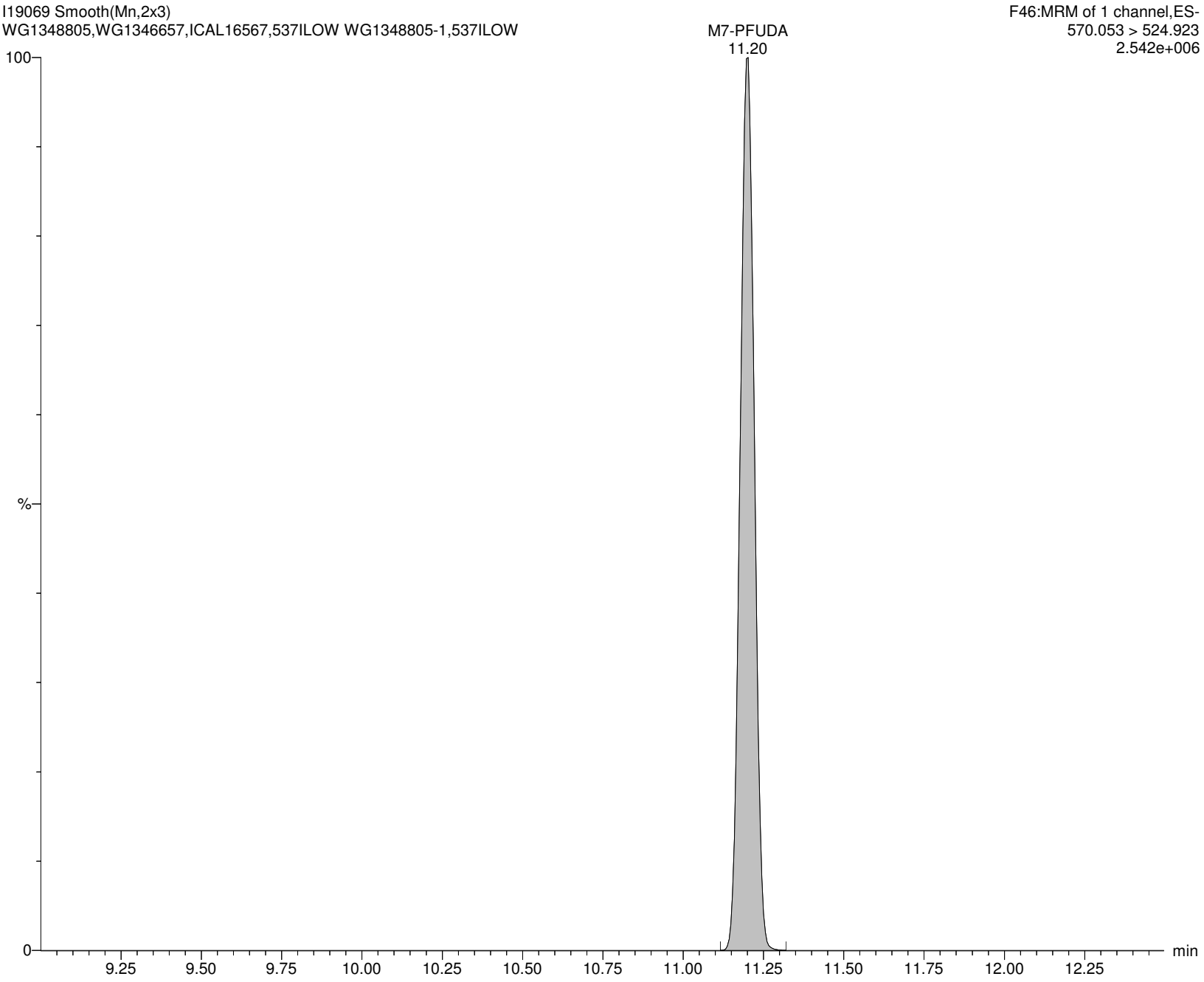
**MS Method Name: C:\MassLynx\Data\200309_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**M7-PFUDA**





all concentration units in (ng/mL)

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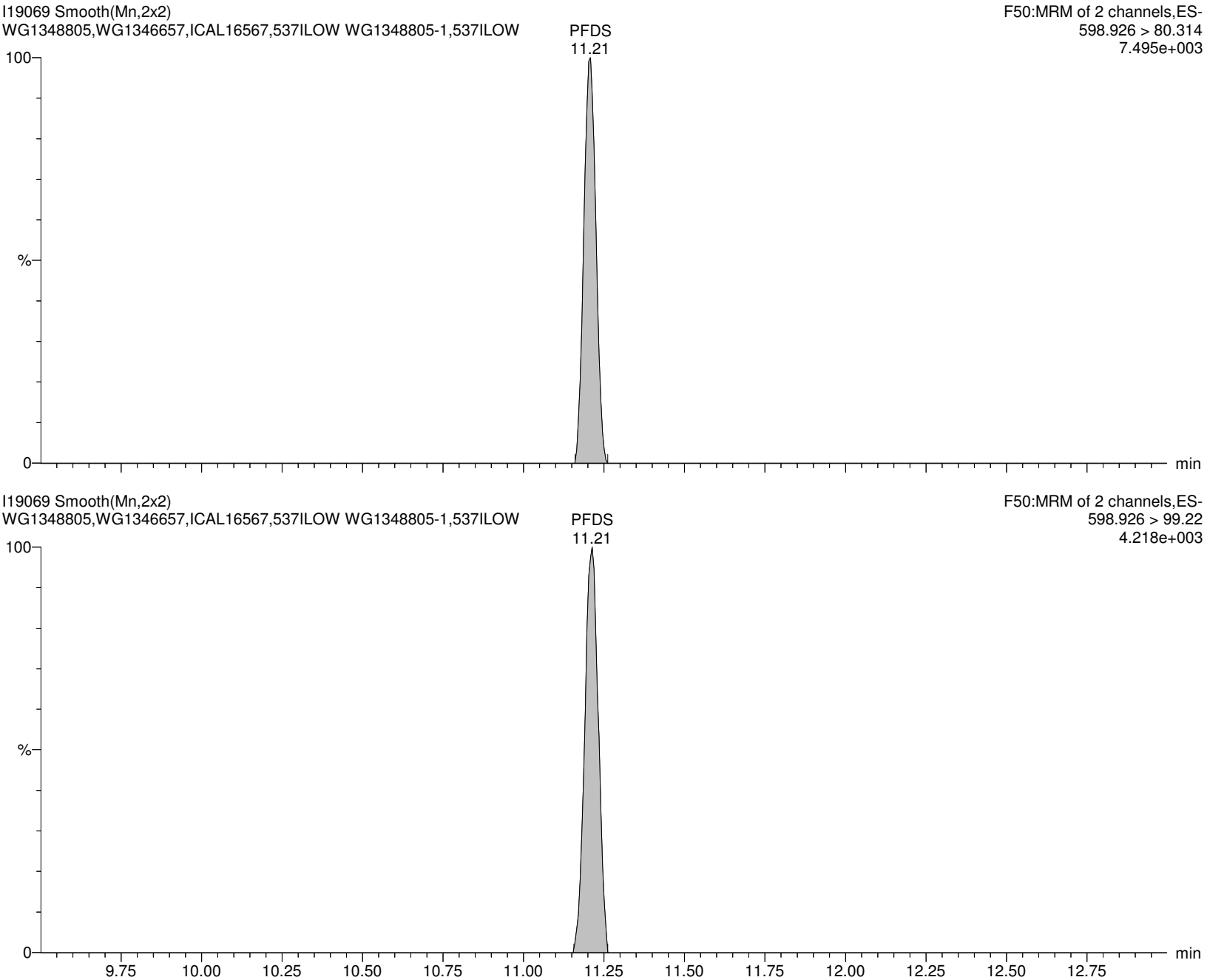
**PFDS**





all concentration units in (ng/mL)

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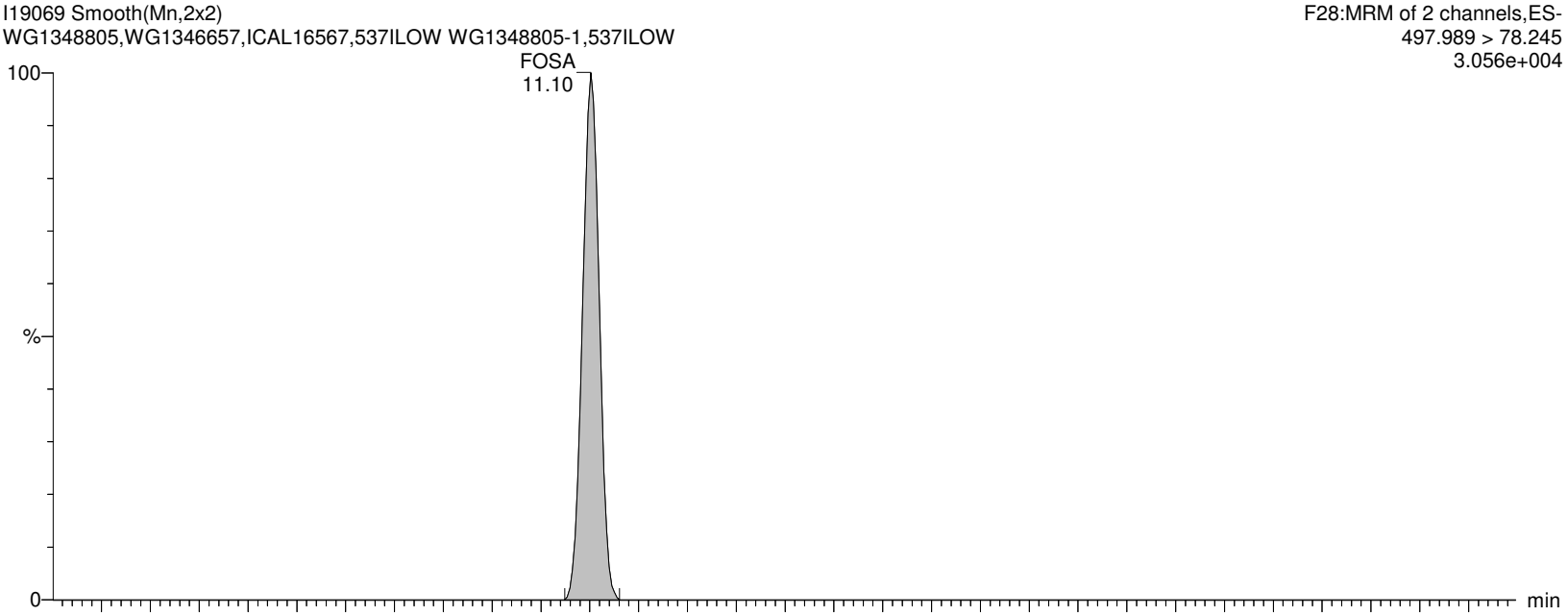
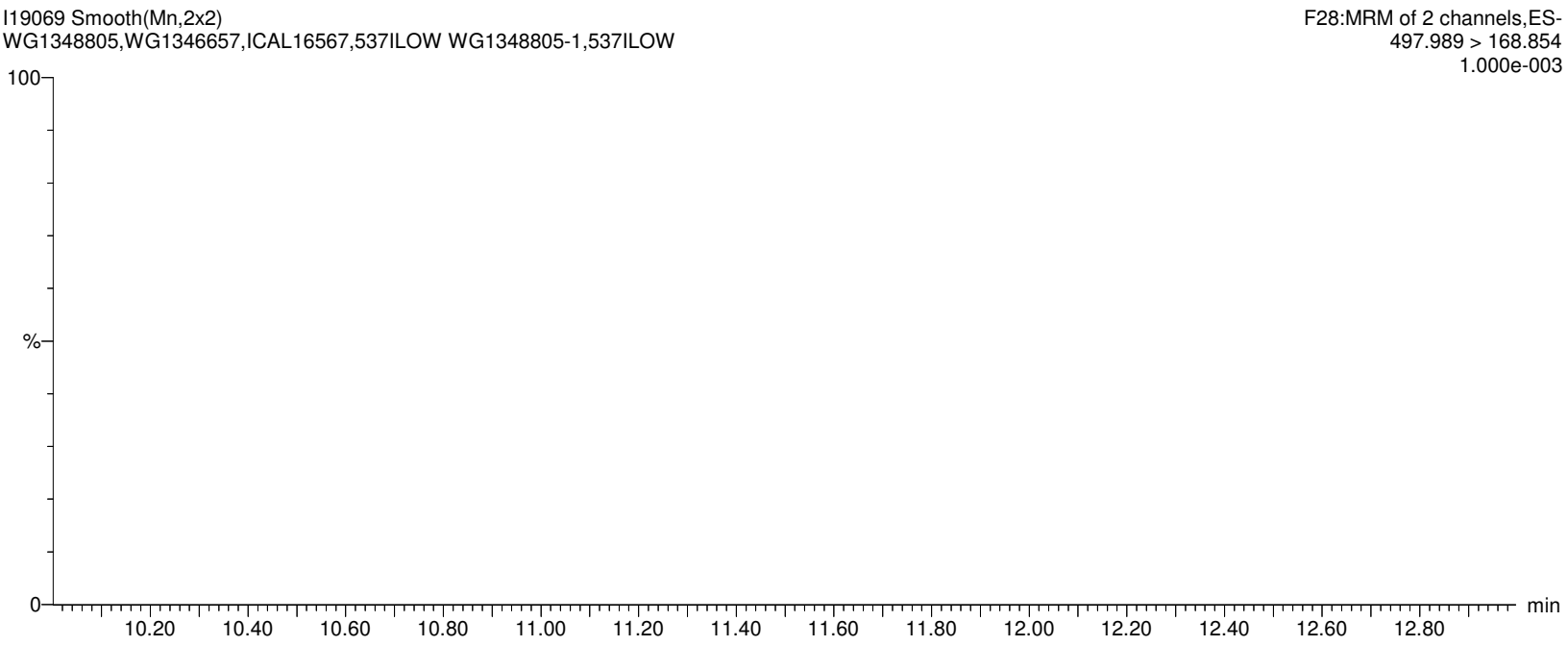
**FOSA**





all concentration units in (ng/mL)

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**Instrument: XEVO-TQSmicro#QEA0276**
**Inlet Method Name: C:\MassLynx\Data\200309_537ISO.PRO\ACQUDB\LCMS_537_ISO_MeOH**
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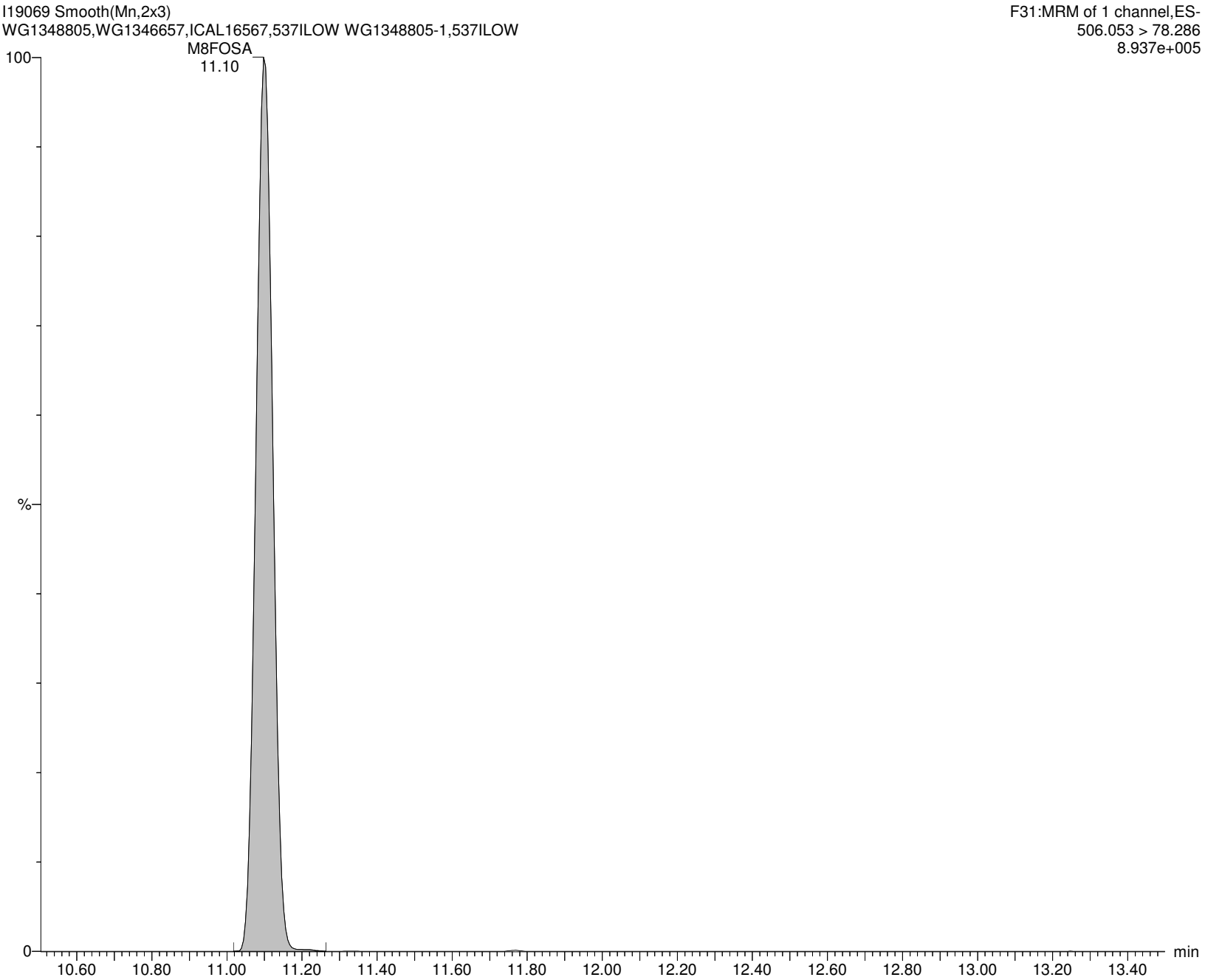
**M8FOSA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200309_537ISO.PRO\Data\WG1348805-1.qld
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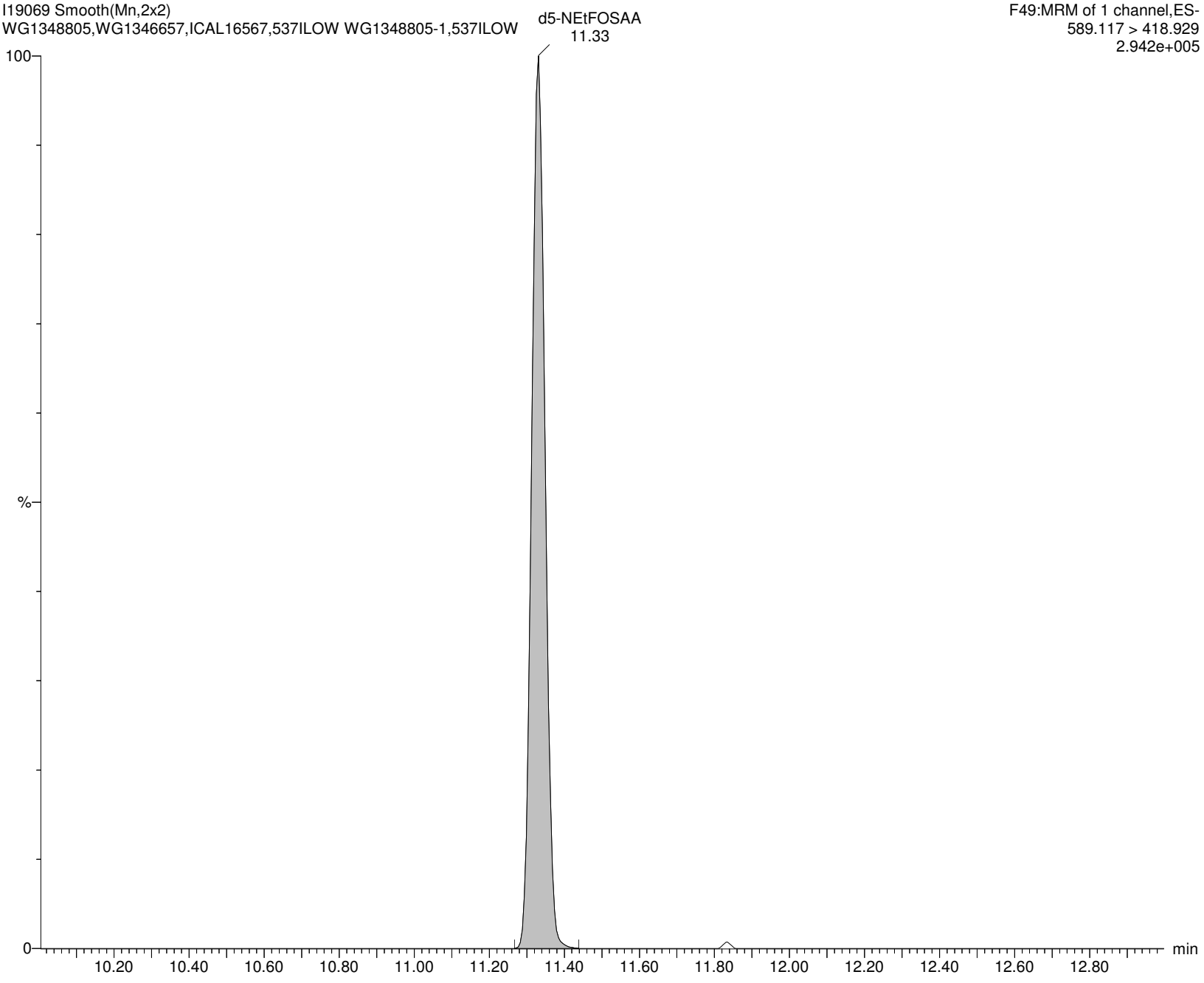



all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200309_537ISO.PRO\Data\WG1348805-1.qld
Last Altered: Tuesday, March 10, 2020 12:33:31 Eastern Daylight Time
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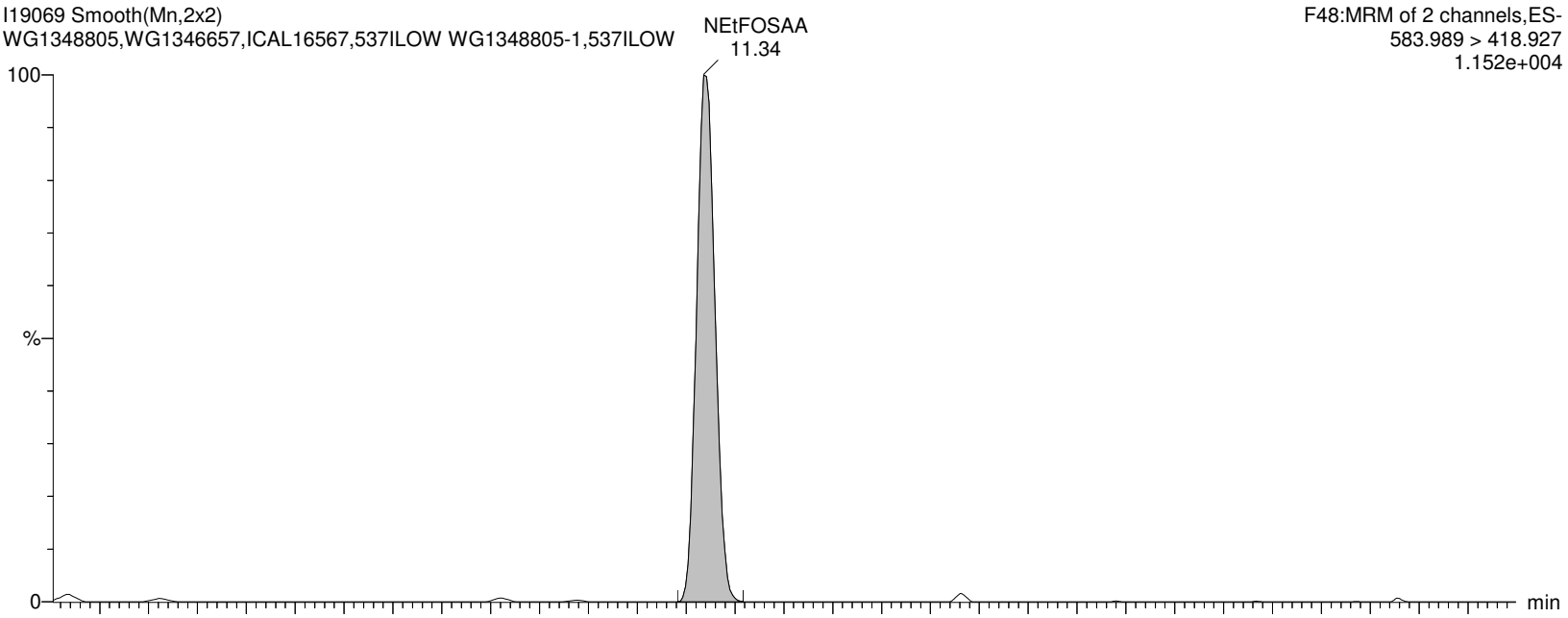
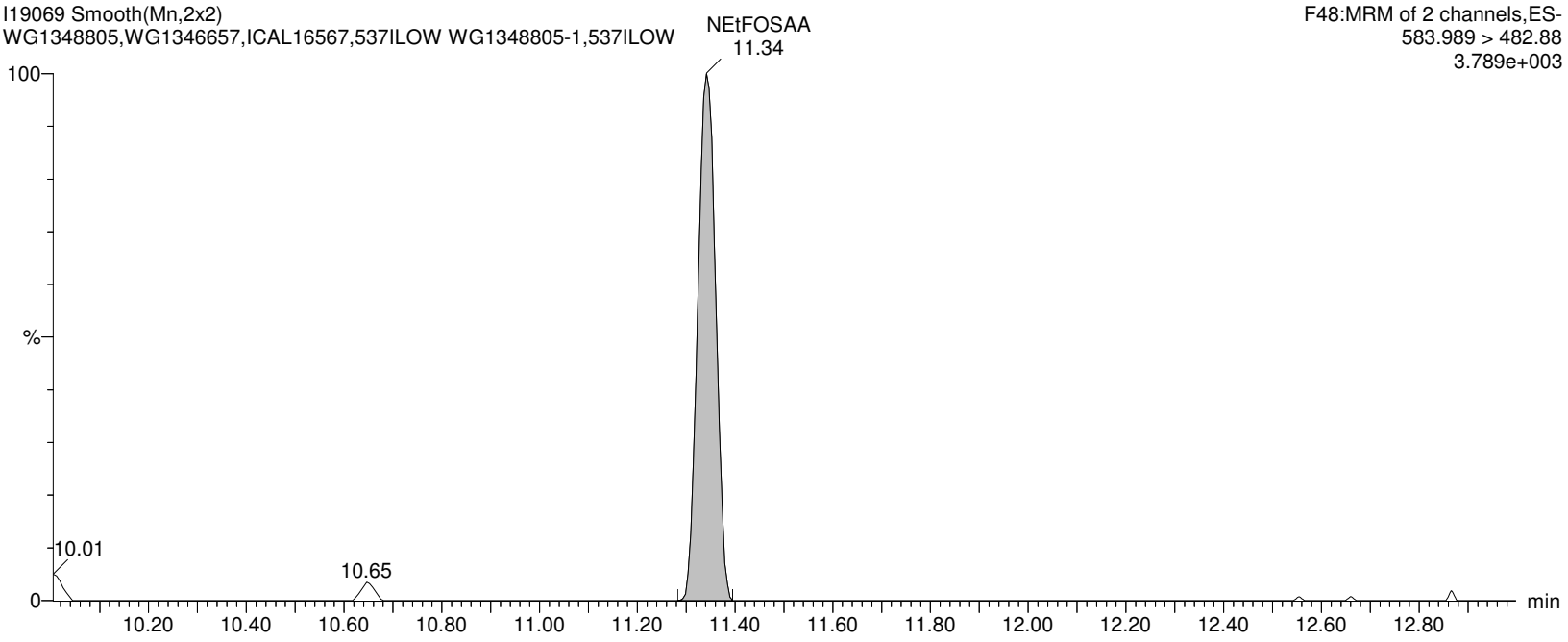
**MS Method Name: C:\MassLynx\Data\200309_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**NEtFOSAA**





all concentration units in (ng/mL)

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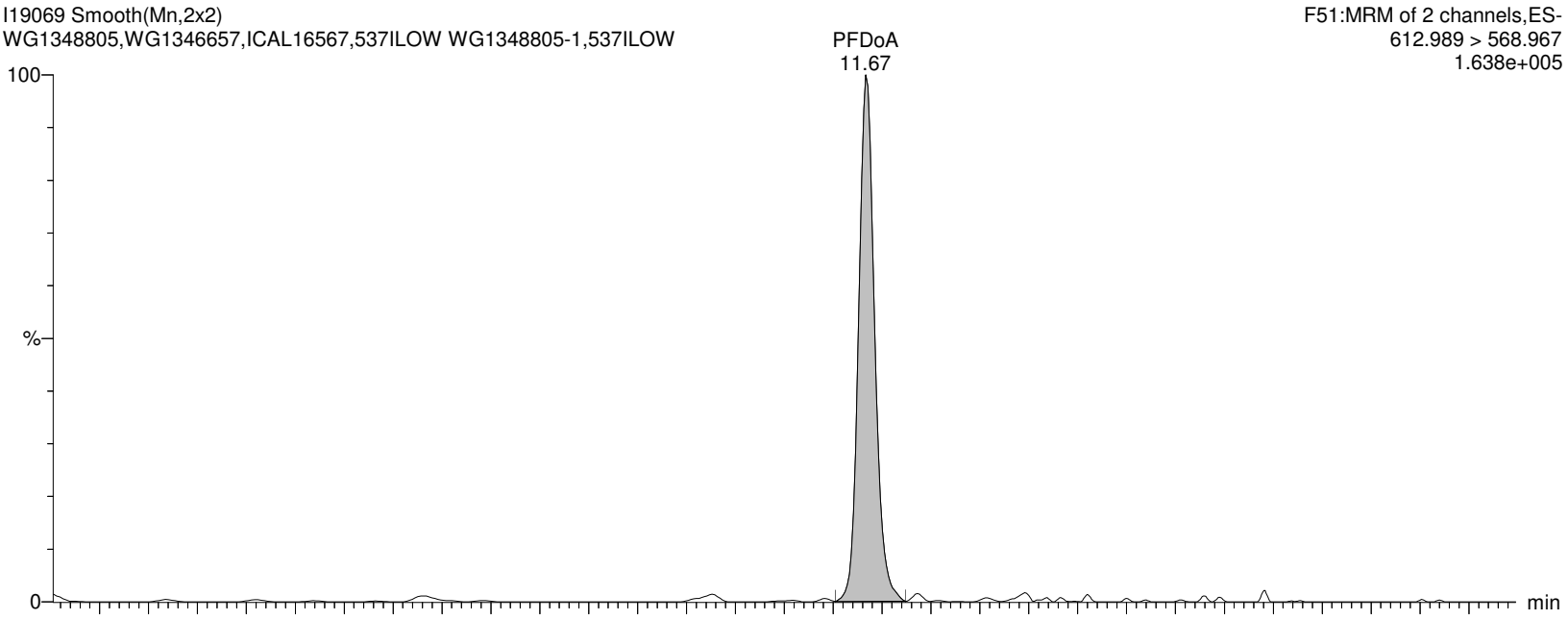
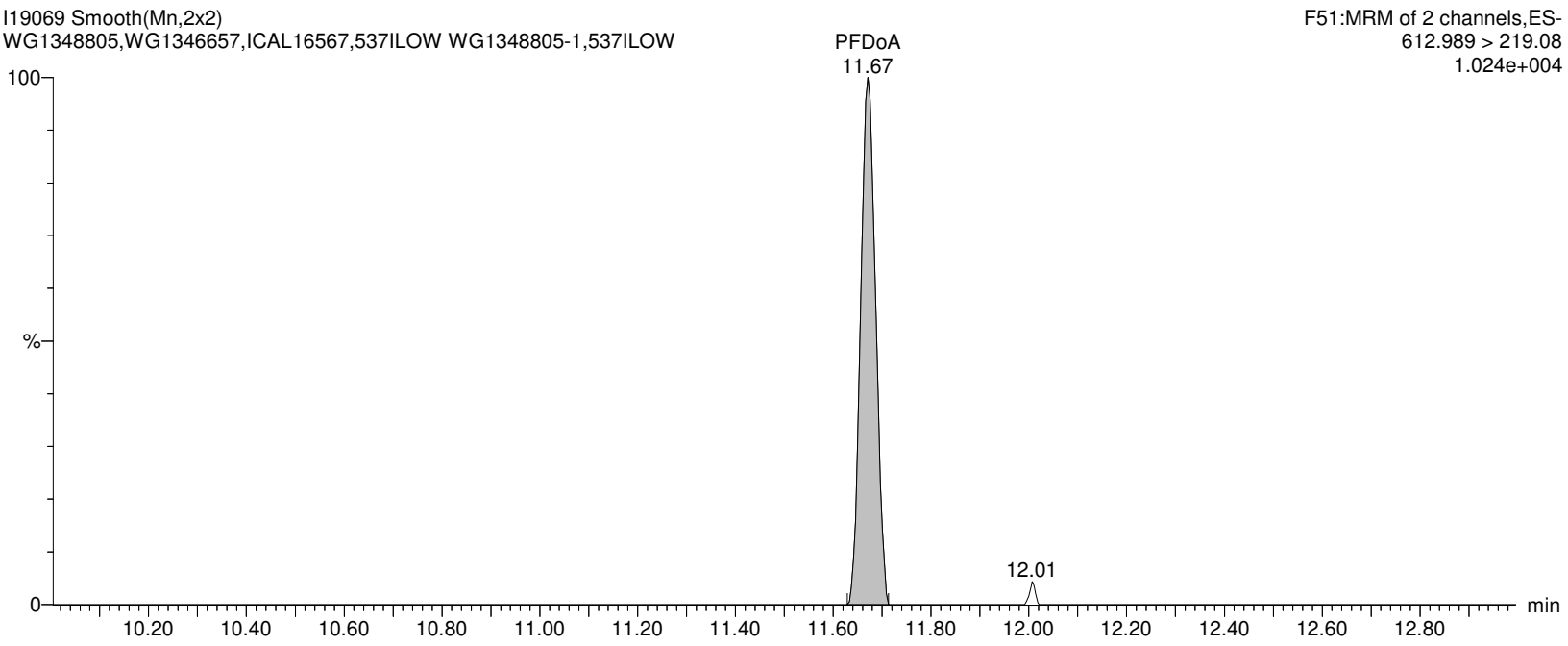
**PFDoA**





all concentration units in (ng/mL)

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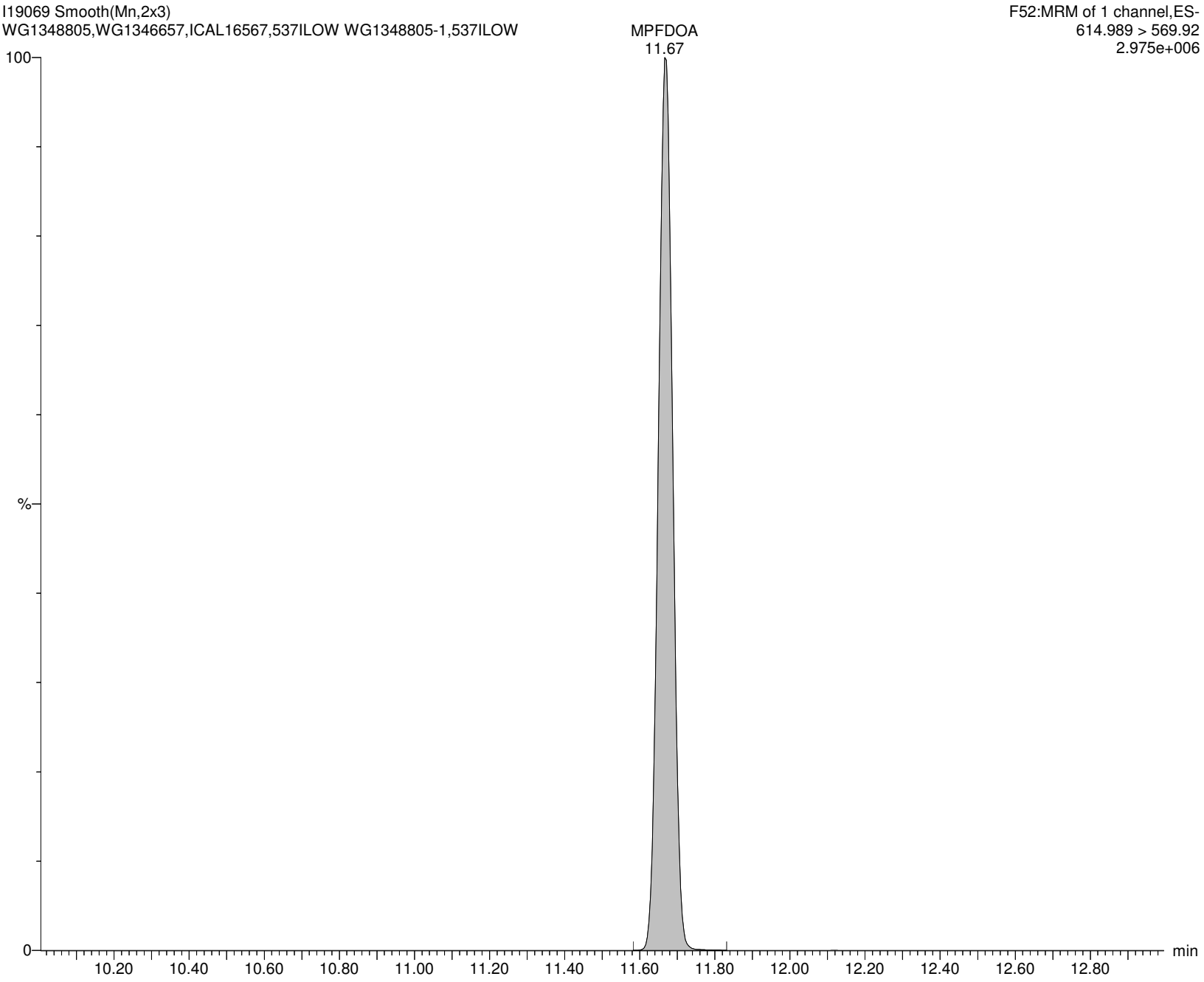



all concentration units in (ng/mL)

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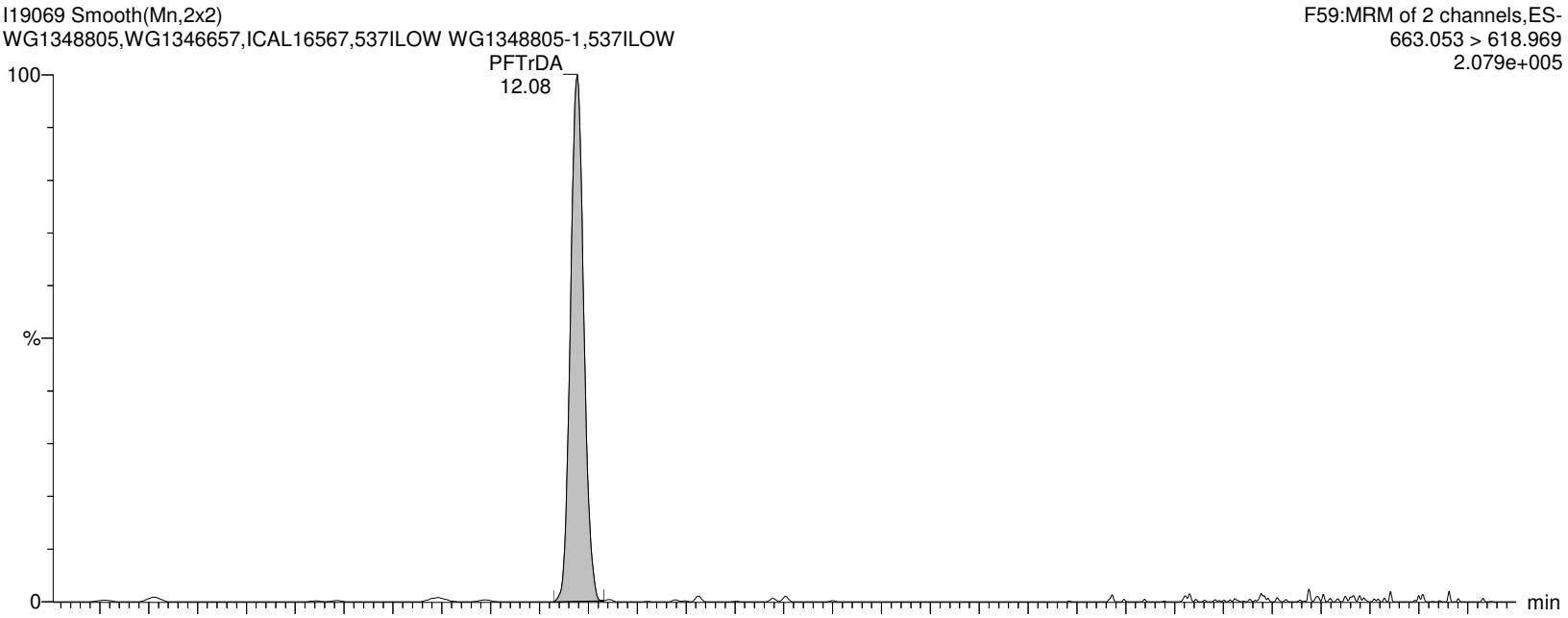


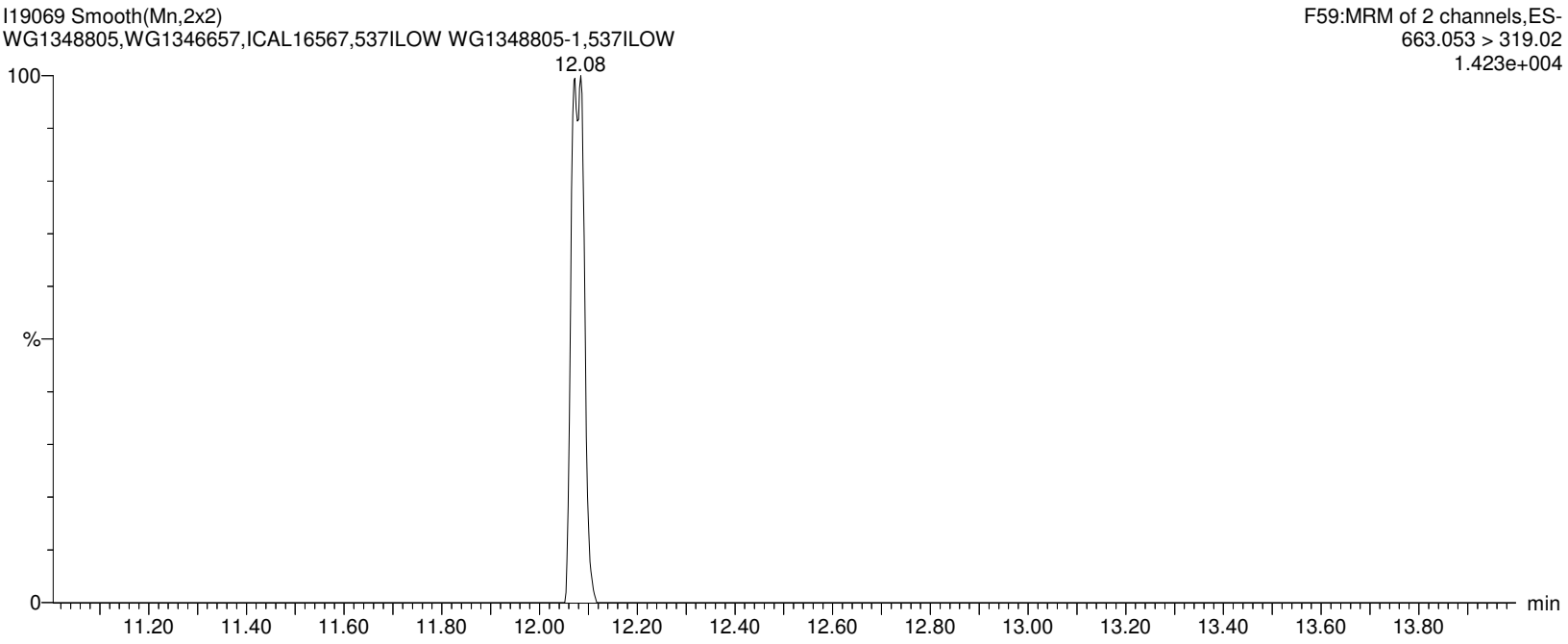



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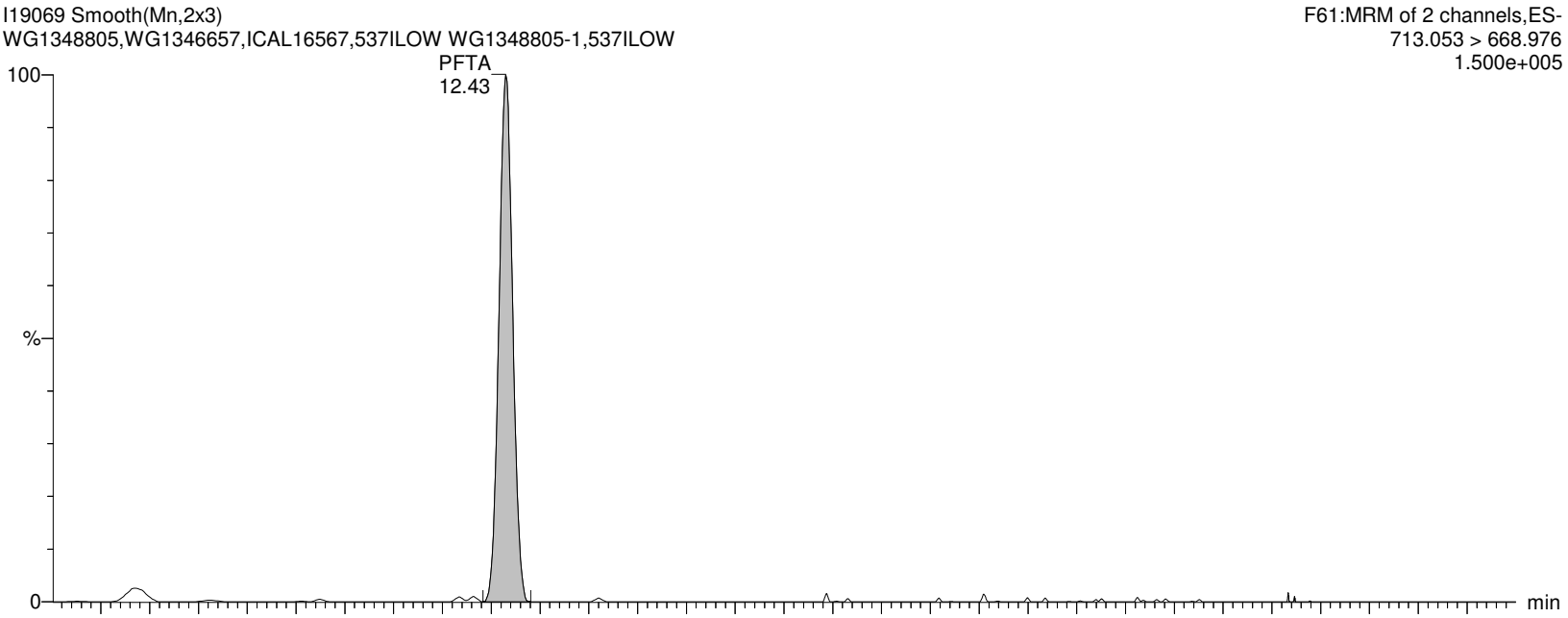


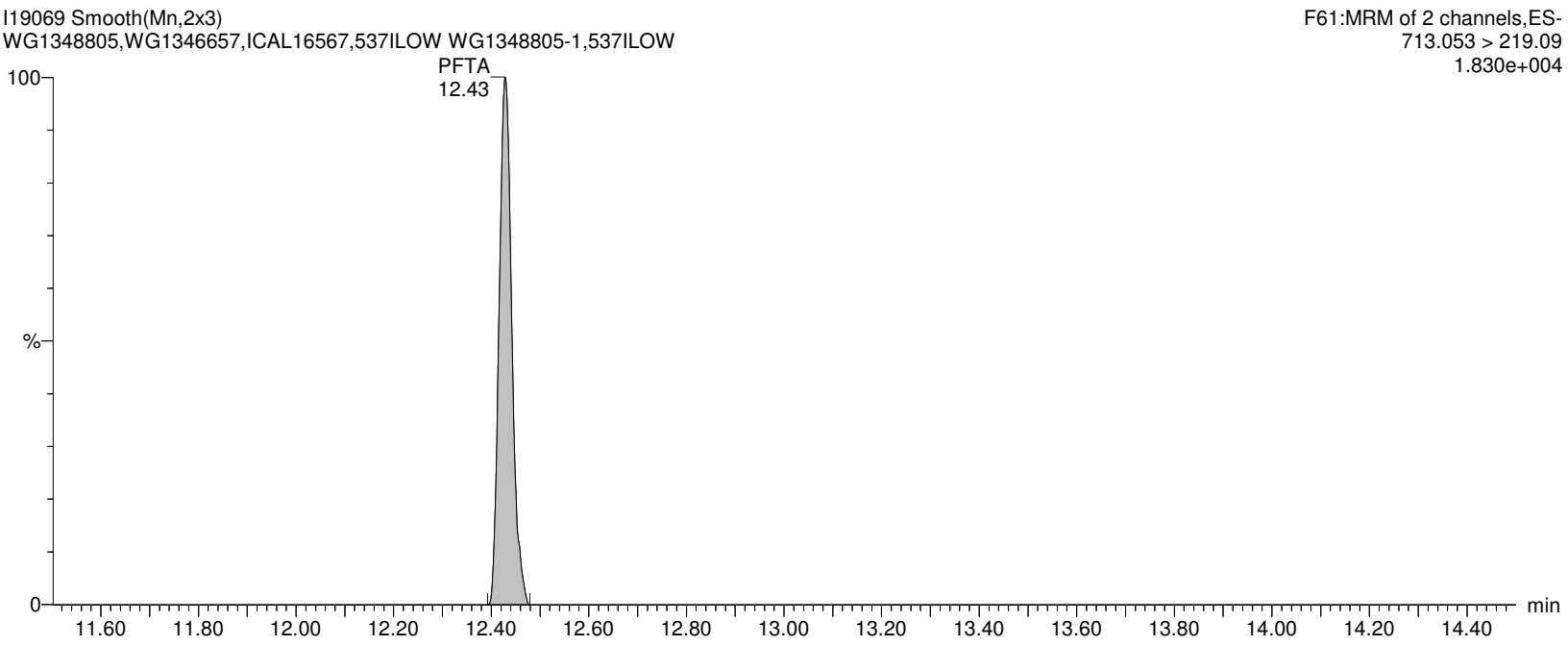



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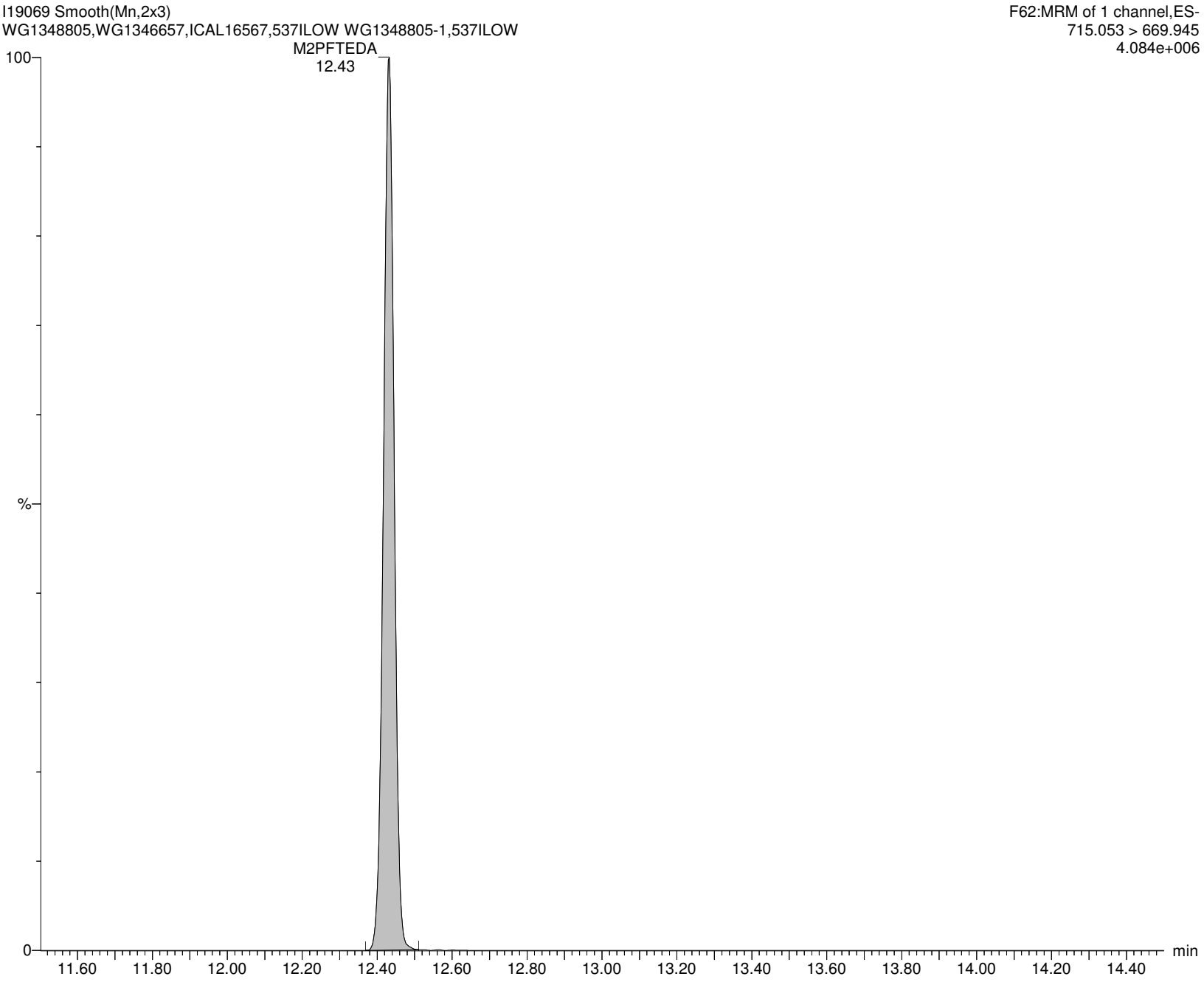
**User: LCMS01:JW**
**Vial: 1:A,2**
**Instrument: XEVO-TQSmicro#QEA0276**
**Inlet Method Name: C:\MassLynx\Data\200309_537ISO.PRO\ACQUDB\LCMS_537_ISO_MeOH**
**Tune Method Name: C:\MassLynx\Data\200309_537ISO.PRO\ACQUDB\190709_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\200309_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**M2PFTEDA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200309_537ISO.PRO\Data\WG1348805A.qld
Last Altered: Tuesday, March 10, 2020 20:06:08 Eastern Daylight Time
Printed: Tuesday, March 10, 2020 20:08:36 Eastern Daylight Time

**Method: C:\MassLynx\Data\200309_537ISO.PRO\MethDB\537ISO_Q_200227 .mdb 28 Feb 2020 10:16:06**
**Calibration: C:\MassLynx\Data\200309_537ISO.PRO\CurveDB\200227_537ISO_ICAL.cdb 28 Feb 2020 10:12:40**

**ID: WG1348805-2,537IMED**
**Name: I19084**
**Date: 09-Mar-2020**
**Time: 17:03:03**
**Description: WG1348805,WG1347919,ICAL16567,537IMED**
**Instrument: XEVO-TQSmicro#QEA0276**
**User: LCMS01:JW**
**Inlet Method Name: C:\MassLynx\Data\200309_537ISO.PRO\ACQUDB\LCMS_537_ISO_MeOH**
**Tune Method Name: C:\MassLynx\Data\200309_537ISO.PRO\ACQUDB\190709_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\200309_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

| | Name | CAS | RT | Trace | Area | M Flag | Conc (ng/mL) | Ion Ratio | Ratio Flag | %Rec |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | PFBA | 375-22-4 | 2.21 | 212.926 > 169.111 | 39632 | | 9.994 | | na | 99.9 |
| 2 | M3PFBA | INT STD | 2.21 | 215.926 > 172.122 | 48546 | | 12.346 | | na | 123.5 |
| 3 | MPFBA | INT STD | 2.21 | 216.926 > 172.137 | 54828 | | 9.856 | | na | 98.6 |
| 4 | PFPeA | 2706-90-3 | 5.17 | 262.926 > 219.002 | 54736 | M4 | 10.231 | | na | 102.3 |
| 5 | M5PFPEA | INT STD | 5.17 | 267.989 > 223.081 | 76954 | | 10.427 | | na | 104.3 |
| 6 | PFBS | 375-73-5 | 5.84 | 298.926 > 79.923 | 12109 | | 8.999 | 2.01 | NO | 101.7 |
| 7 | M3PFBS | INT STD | 5.84 | 301.989 > 80.254 | 14917 | | 8.697 | | na | 87.0 |
| 8 | 4:2FTS | 757124-72-4 | 7.01 | 326.926 > 306.957 | 5013 | | 9.797 | 1.79 | NO | 104.8 |
| 9 | M2-4:2FTS | INT STD | 7.01 | 329.117 > 309.079 | 6414 | | 7.179 | | na | 71.8 |
| 10 | PFHxA | 307-24-4 | 7.09 | 312.989 > 269.028 | 78183 | | 9.987 | 17.37 | NO | 99.9 |
| 11 | M5PFHxA | INT STD | 7.09 | 317.989 > 273.045 | 94507 | | 9.115 | | na | 91.1 |
| 12 | PFPeS | 2706-91-4 | 7.41 | 348.926 > 80.251 | 13235 | | 9.615 | 2.34 | NO | 102.3 |
| 13 | PFHpA | 375-85-9 | 8.36 | 362.926 > 319.014 | 99767 | | 9.313 | 4.98 | NO | 93.1 |
| 14 | M4PFHpA | INT STD | 8.36 | 366.926 > 321.979 | 116995 | | 9.726 | | na | 97.3 |
| 15 | br-PFHxS | 355-46-4 | 8.28 | 398.904 > 79.915 | 1937 | | 1.800 | | YES | 105.9 |
| 16 | L-PFHxS | 355-46-4 | 8.52 | 398.904 > 79.915 | 8546 | | 7.981 | 2.03 | NO | 107.8 |
| 17 | PFHxS | 355-46-4 | | 398.904 > 79.915 | 10483 | | 9.780 | | na | |
| 18 | M3PFHxS | INT STD | 8.52 | 401.926 > 80.317 | 14475 | | 9.421 | | na | 94.2 |
| 19 | br-PFOA | 335-67-1 | | 412.989 > 368.9 | | | ND | | YES | |
| 20 | L-PFOA | 335-67-1 | 9.30 | 412.989 > 368.9 | 97973 | | 9.769 | 8.84 | NO | 97.7 |
| 21 | M2PFOA | INT STD | 9.30 | 415.032 > 369.968 | 126646 | | 15.053 | | na | 150.5 |
| 22 | PFOA | 335-67-1 | | 412.989 > 368.9 | 97973 | | 9.769 | | na | |
| 23 | M8PFOA | INT STD | 9.30 | 420.989 > 375.979 | 116717 | | 9.665 | | na | 96.6 |
| 24 | 6:2FTS | 27619-97-2 | 9.26 | 426.989 > 406.921 | 1374 | | 10.659 | 0.73 | NO | 112.2 |
| 25 | M2-6:2FTS | INT STD | 9.26 | 428.989 > 408.917 | 5405 | | 9.721 | | na | 97.2 |
| 26 | PFHpS | 375-92-8 | 9.39 | 448.926 > 80.257 | 8116 | | 10.246 | 1.10 | NO | 107.9 |
| 27 | PFNA | 375-95-1 | 10.05 | 462.989 > 418.931 | 95258 | | 10.325 | 4.08 | NO | 103.2 |
| 28 | M9PFNA | INT STD | 10.05 | 472.053 > 426.947 | 123999 | | 10.502 | | na | 105.0 |
| 29 | br-PFOS | 1763-23-1 | 9.91 | 498.968 > 79.918 | 2427 | M5 | 2.049 | 4.06 | NO | 102.5 |
| 30 | L-PFOS | 1763-23-1 | 10.09 | 498.968 > 79.918 | 6470 | | 7.593 | 1.30 | NO | 104.0 |
| 31 | PFOS | 1763-23-1 | | 498.968 > 79.918 | 8897 | | 9.642 | | na | |
| 32 | M4PFOS | INT STD | 10.09 | 503.032 > 80.306 | 13369 | | 15.739 | | na | 157.4 |
| 33 | M8PFOS | INT STD | 10.09 | 507.053 > 80.294 | 15751 | | 10.145 | | na | 101.5 |
| 34 | PFDA | 335-76-2 | 10.67 | 513.053 > 468.906 | 87790 | | 9.763 | 5.76 | NO | 97.6 |
| 35 | M2PFDA | INT STD | 10.67 | 515.053 > 469.934 | 107899 | | 16.312 | | na | 163.1 |
| 36 | M6PFDA | INT STD | 10.67 | 519.053 > 473.931 | 117398 | | 9.889 | | na | 98.9 |
| 37 | 8:2FTS | 39108-34-4 | 10.66 | 527.032 > 507.079 | 2090 | | 10.128 | 1.68 | NO | 105.5 |
| 38 | M2-8:2FTS | INT STD | 10.66 | 529.053 > 508.945 | 3153 | | 9.379 | | na | 93.8 |
| 39 | PFNS | 68259-12-1 | 10.70 | 548.989 > 80.249 | 12046 | | 11.304 | 1.60 | NO | 117.8 |


all concentration units in (ng/mL)

Alpha Analytical Inc.
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Last Altered: Tuesday, March 10, 2020 20:06:08 Eastern Daylight Time
Printed: Tuesday, March 10, 2020 20:08:36 Eastern Daylight Time

**ID: WG1348805-2,537IMED**
**Name: I19084**
**Date: 09-Mar-2020**
**Time: 17:03:03**
**Description: WG1348805,WG1347919,ICAL16567,537IMED**
**Instrument: XEVO-TQSmicro#QEA0276**
**User: LCMS01:JW**
**Inlet Method Name: C:\MassLynx\Data\200309_537ISO.PRO\ACQUDB\LCMS_537_ISO_MeOH**
**Tune Method Name: C:\MassLynx\Data\200309_537ISO.PRO\ACQUDB\190709_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\200309_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

| | Name | CAS | RT | Trace | Area | M Flag | Conc (ng/mL) | Ion Ratio | Ratio Flag | %Rec |
|---|---|---|---|---|---|---|---|---|---|---|
| 40 | d3-NMeFOSAA | INT STD | 11.05 | 573.096 > 418.987 | 17854 | | 11.353 | | na | 113.5 |
| 41 | NMeFOSAA | 2355-31-9 | 11.05 | 570.053 > 418.917 | 11689 | | 10.956 | 2.64 | NO | 109.6 |
| 42 | PFUnA | 2058-94-8 | 11.21 | 562.989 > 518.903 | 99453 | | 9.863 | 8.08 | NO | 98.6 |
| 43 | M7-PFUDA | INT STD | 11.21 | 570.053 > 524.923 | 108632 | | 10.414 | | na | 104.1 |
| 44 | PFDS | 335-77-3 | 11.22 | 598.926 > 80.314 | 10609 | | 10.227 | 1.72 | NO | 106.0 |
| 45 | FOSA | 754-91-6 | 11.11 | 497.989 > 78.245 | 31435 | | 9.515 | 358.79 | NO | 95.1 |
| 46 | M8FOSA | INT STD | 11.10 | 506.053 > 78.286 | 40095 | | 8.428 | | na | 84.3 |
| 47 | d5-NEtFOSAA | INT STD | 11.34 | 589.117 > 418.929 | 12001 | | 10.465 | | na | 104.6 |
| 48 | NEtFOSAA | 2991-50-6 | 11.35 | 583.989 > 418.927 | 10047 | | 9.814 | 3.05 | NO | 98.1 |
| 49 | PFDoA | 307-55-1 | 11.68 | 612.989 > 568.967 | 110441 | | 10.768 | 13.76 | NO | 107.7 |
| 50 | MPFDOA | INT STD | 11.68 | 614.989 > 569.92 | 112969 | | 10.073 | | na | 100.7 |
| 51 | PFTrDA | 72629-94-8 | 12.09 | 663.053 > 618.969 | 108481 | | 10.608 | 12.09 | NO | 106.1 |
| 52 | PFTA | 376-06-7 | 12.44 | 713.053 > 668.976 | 96942 | | 11.152 | 9.66 | NO | 111.5 |
| 53 | M2PFTEDA | INT STD | 12.44 | 715.053 > 669.945 | 117320 | | 9.281 | | na | 92.8 |


all concentration units in (ng/mL)

Alpha Analytical Inc.
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Last Altered: Tuesday, March 10, 2020 20:06:08 Eastern Daylight Time
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**Method: C:\MassLynx\Data\200309_537ISO.PRO\MethDB\537ISO_Q_200227 .mdb 28 Feb 2020 10:16:06**
**Calibration: C:\MassLynx\Data\200309_537ISO.PRO\CurveDB\200227_537ISO_ICAL.cdb 28 Feb 2020 10:12:40**

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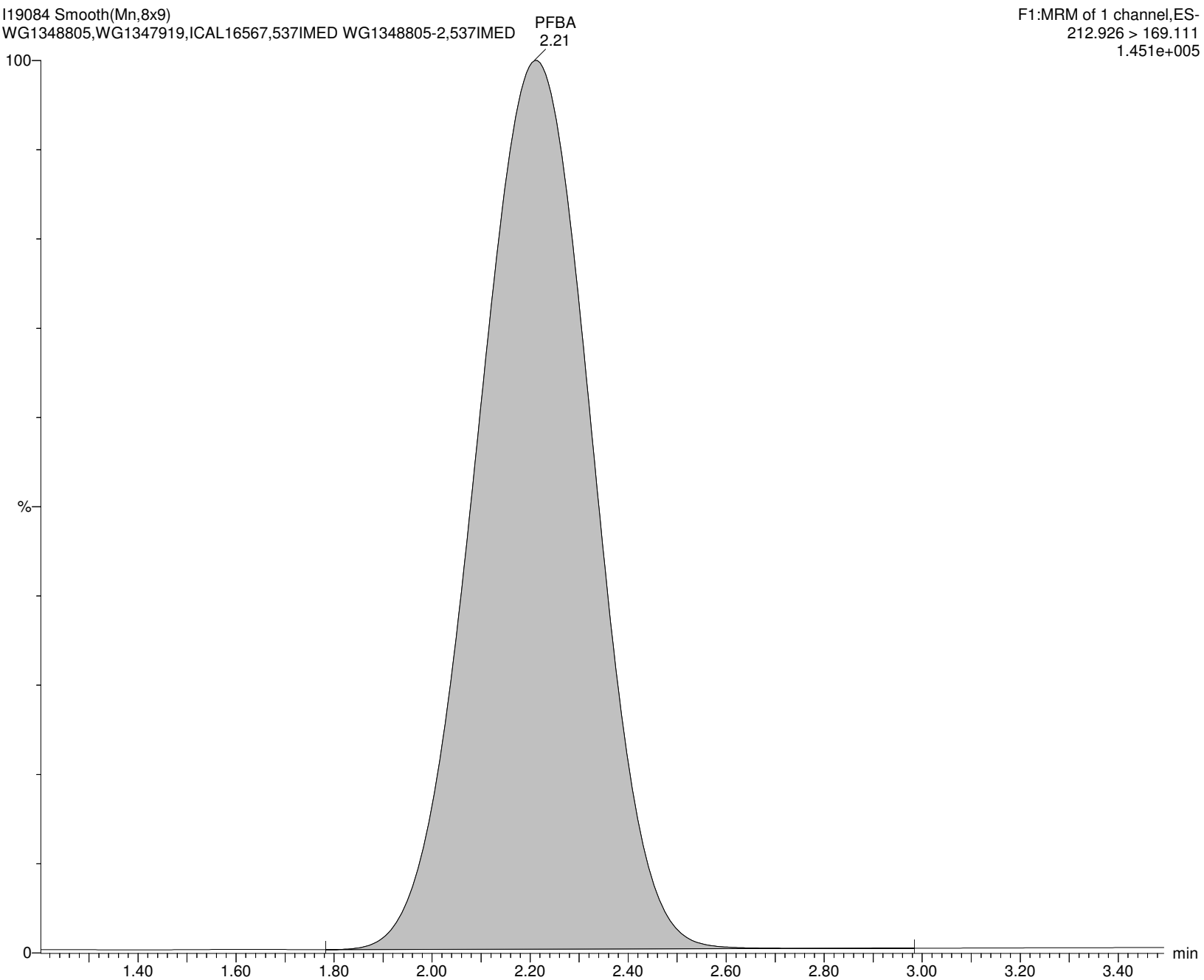
**Date: 09-Mar-2020**
**Time: 17:03:03**
**Description: WG1348805,WG1347919,ICAL16567,537IMED**
**User: LCMS01:JW**
**Vial: 1:A,3**
**Instrument: XEVO-TQSmicro#QEA0276**
**Inlet Method Name: C:\MassLynx\Data\200309_537ISO.PRO\ACQUDB\LCMS_537_ISO_MeOH**
**Tune Method Name: C:\MassLynx\Data\200309_537ISO.PRO\ACQUDB\190709_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\200309_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**PFBA**





all concentration units in (ng/mL)

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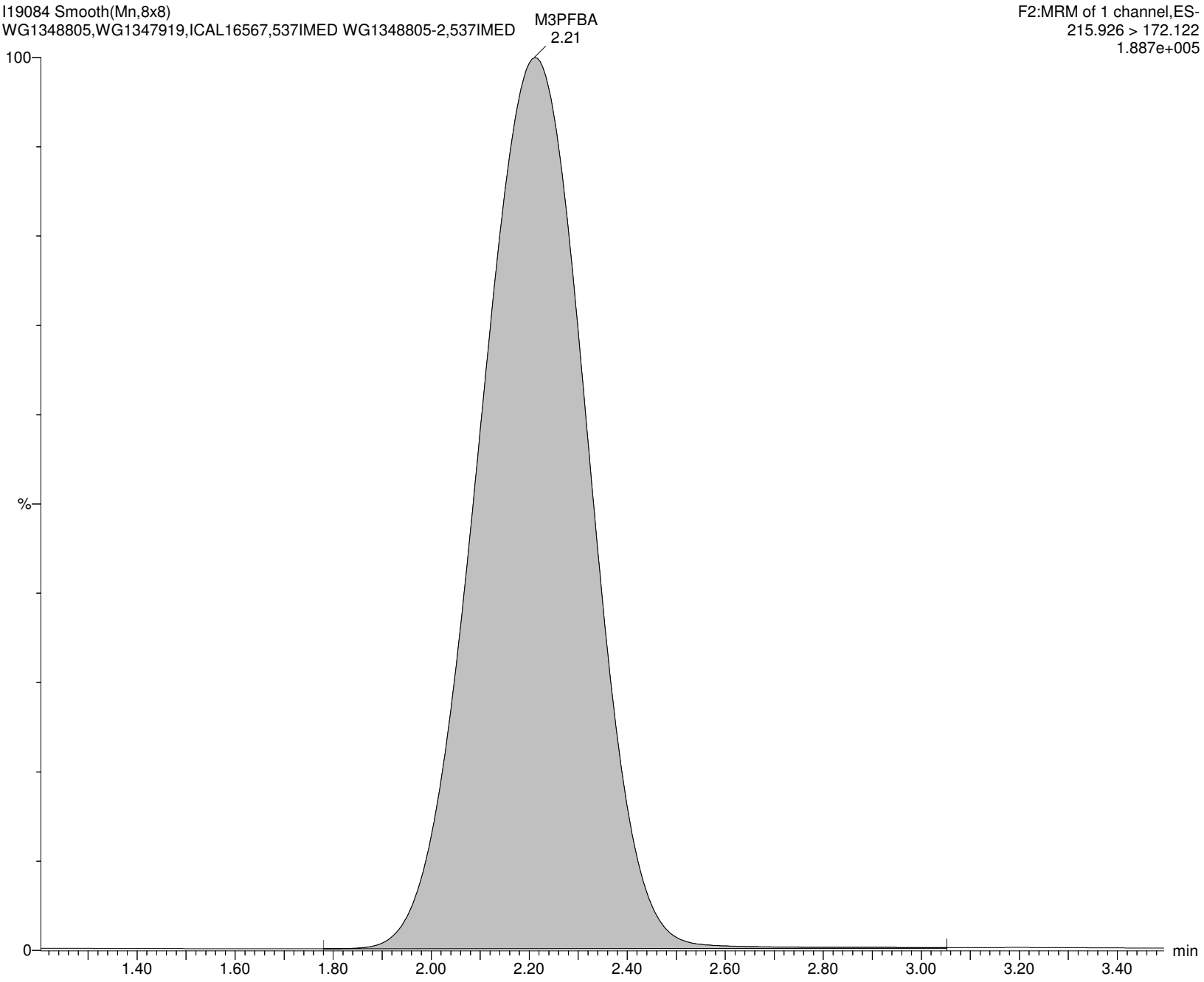
**MS Method Name: C:\MassLynx\Data\200309_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**M3PFBA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
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**Instrument: XEVO-TQSmicro#QEA0276**
**Inlet Method Name: C:\MassLynx\Data\200309_537ISO.PRO\ACQUDB\LCMS_537_ISO_MeOH**
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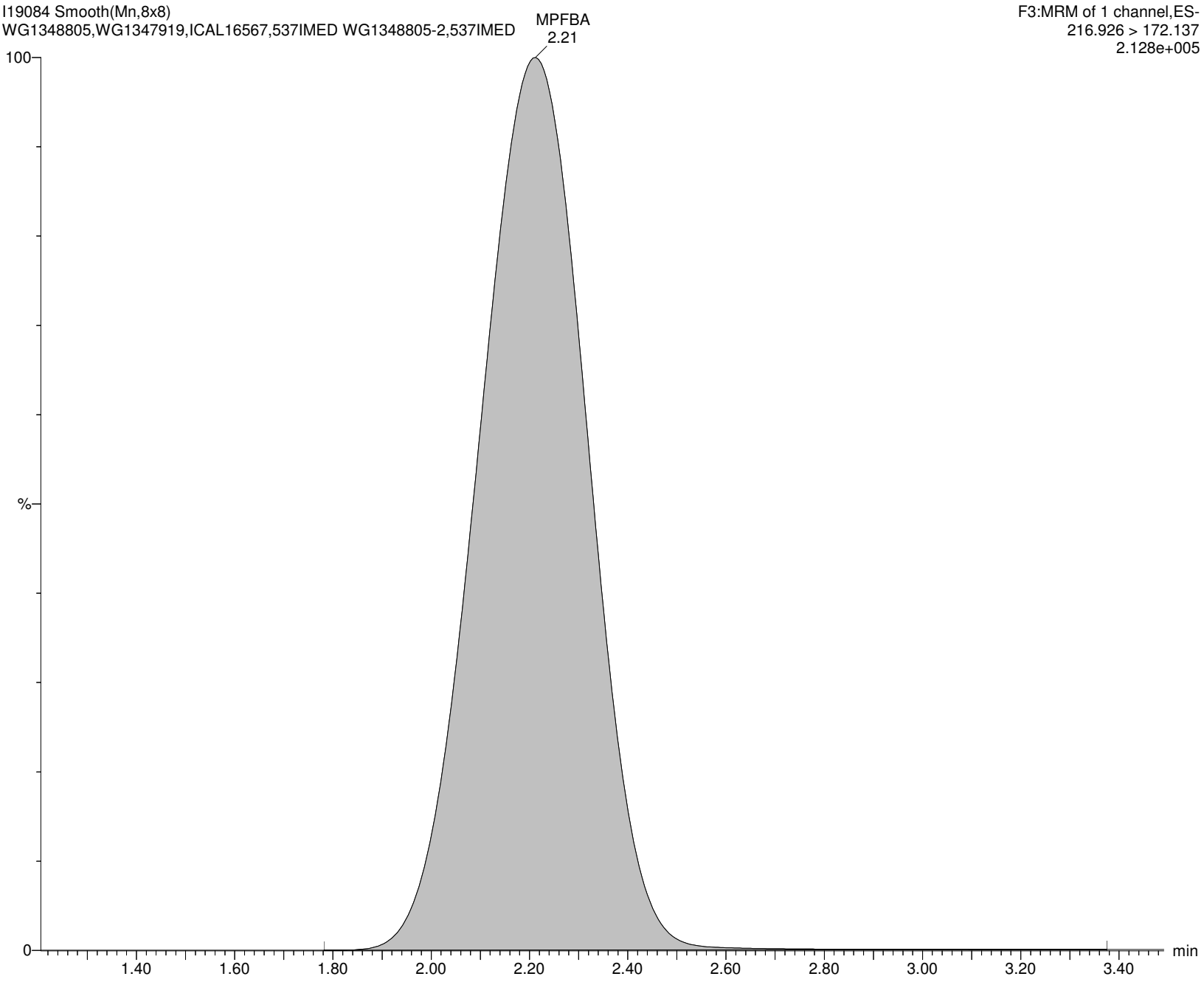
**MS Method Name: C:\MassLynx\Data\200309_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**MPFBA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
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Last Altered: Tuesday, March 10, 2020 20:06:08 Eastern Daylight Time
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**Description: WG1348805,WG1347919,ICAL16567,537IMED**
**User: LCMS01:JW**
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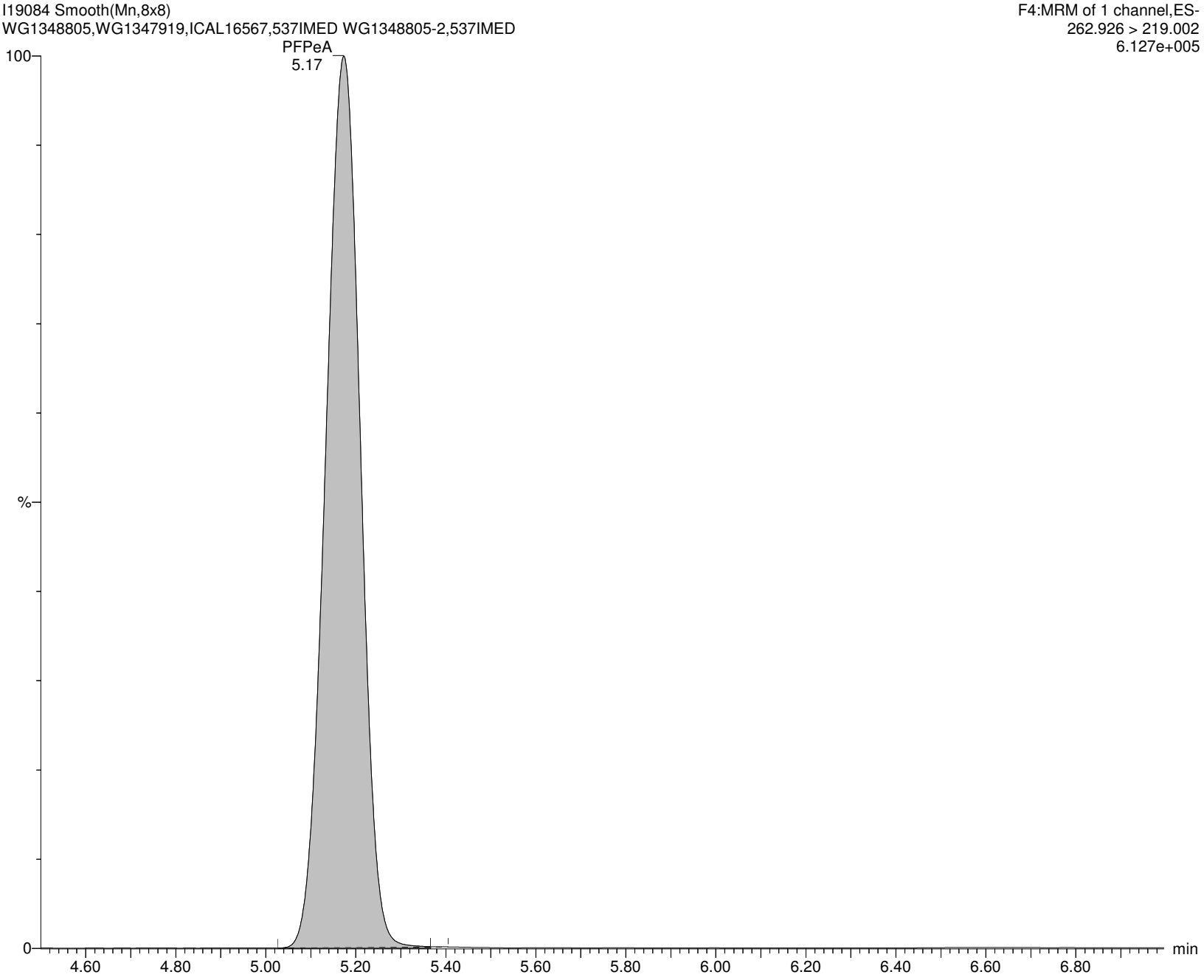
**Instrument: XEVO-TQSmicro#QEA0276**
**Inlet Method Name: C:\MassLynx\Data\200309_537ISO.PRO\ACQUDB\LCMS_537_ISO_MeOH**
**Tune Method Name: C:\MassLynx\Data\200309_537ISO.PRO\ACQUDB\190709_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\200309_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**PFPeA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200309_537ISO.PRO\Data\WG1348805A.qld
Last Altered: Tuesday, March 10, 2020 20:06:08 Eastern Daylight Time
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**Date: 09-Mar-2020**
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**Description: WG1348805,WG1347919,ICAL16567,537IMED**
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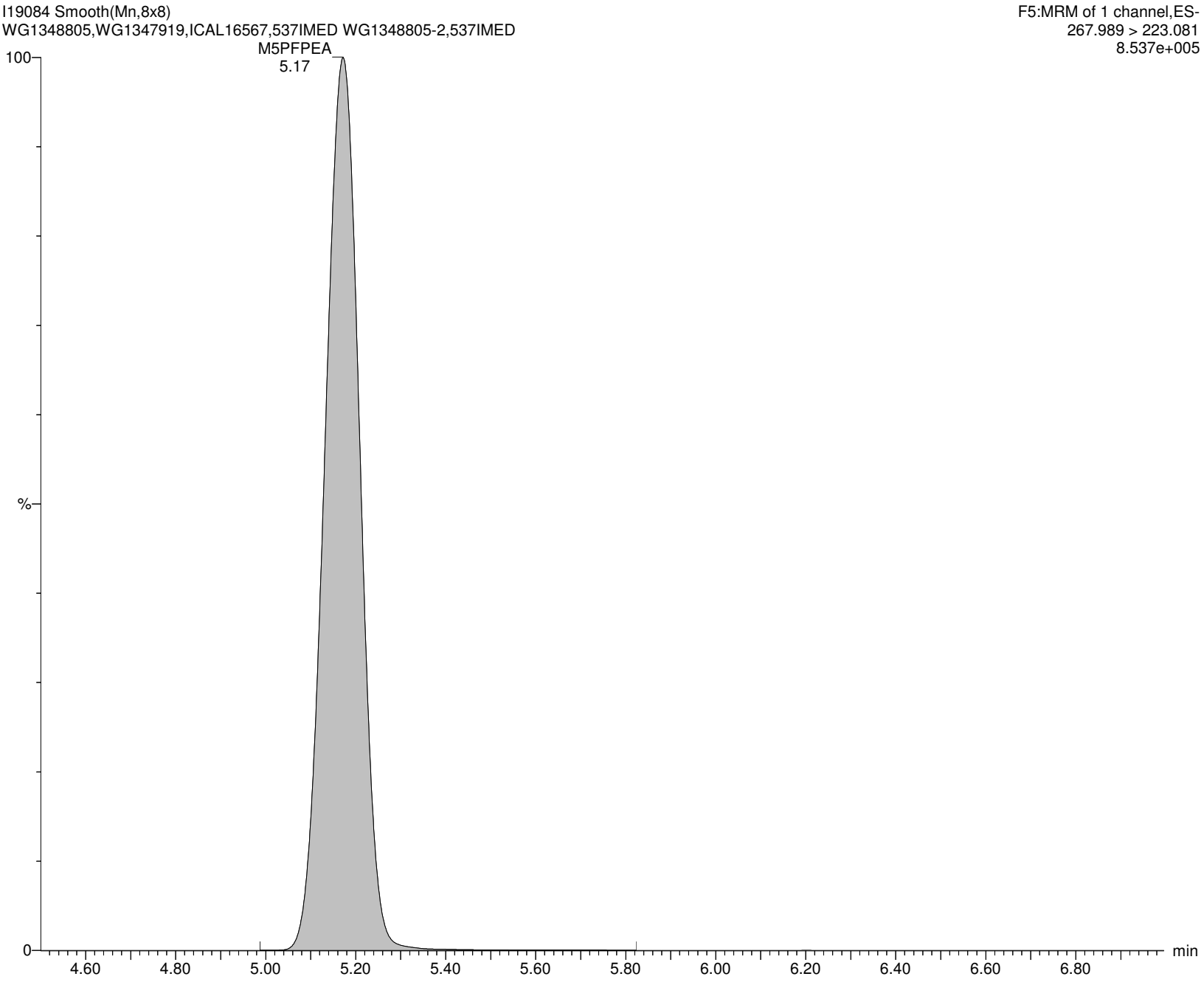
**Instrument: XEVO-TQSmicro#QEA0276**
**Inlet Method Name: C:\MassLynx\Data\200309_537ISO.PRO\ACQUDB\LCMS_537_ISO_MeOH**
**Tune Method Name: C:\MassLynx\Data\200309_537ISO.PRO\ACQUDB\190709_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\200309_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**M5PFPEA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200309_537ISO.PRO\Data\WG1348805A.qld
Last Altered: Tuesday, March 10, 2020 20:06:08 Eastern Daylight Time
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**Name: I19084**
**ID: WG1348805-2,537IMED**
**Date: 09-Mar-2020**
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**Instrument: XEVO-TQSmicro#QEA0276**
**Inlet Method Name: C:\MassLynx\Data\200309_537ISO.PRO\ACQUDB\LCMS_537_ISO_MeOH**
**Tune Method Name: C:\MassLynx\Data\200309_537ISO.PRO\ACQUDB\190709_TUNE.IPR**
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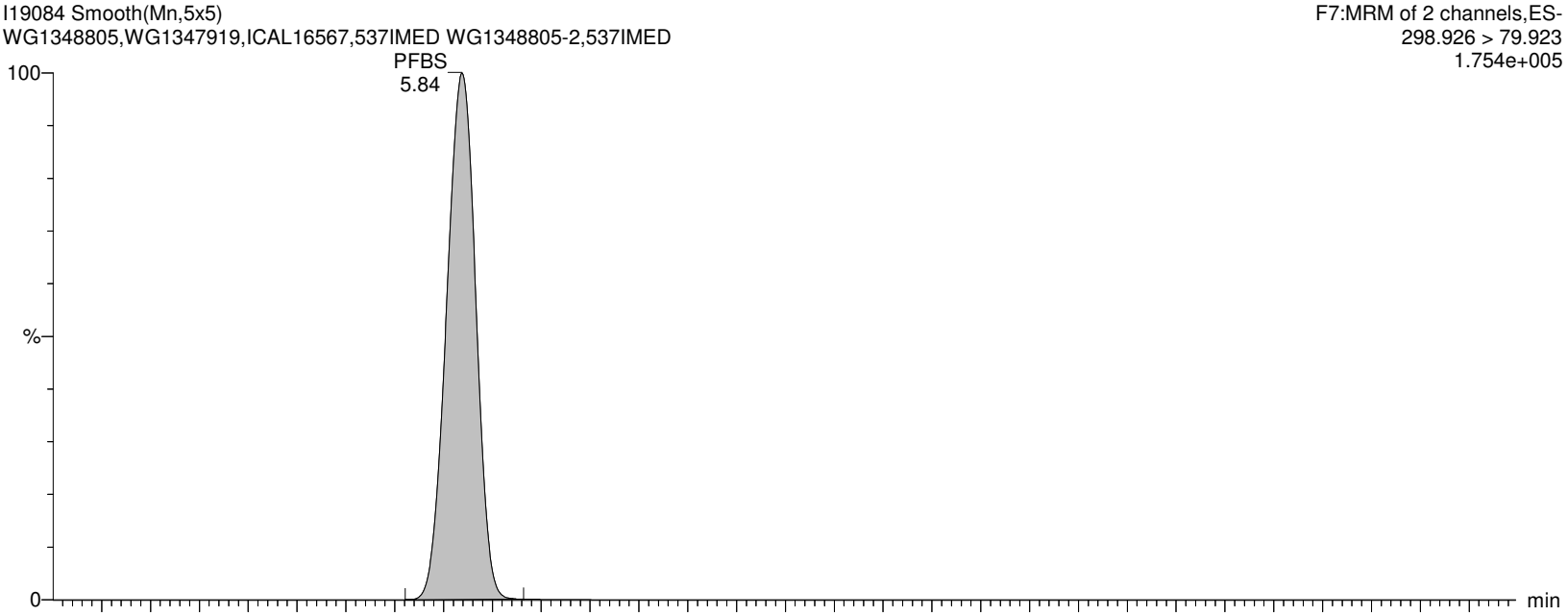
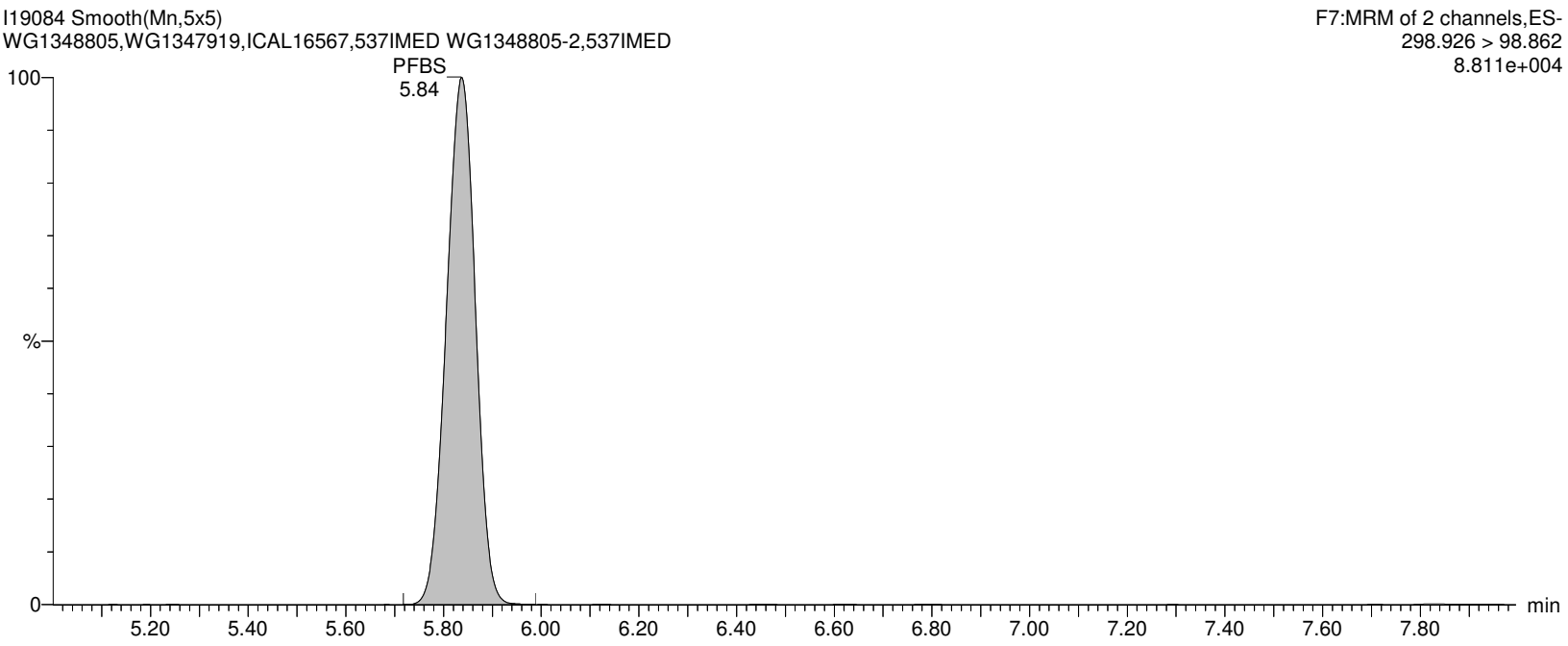
**PFBS**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200309_537ISO.PRO\Data\WG1348805A.qld
Last Altered: Tuesday, March 10, 2020 20:06:08 Eastern Daylight Time
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**Name: I19084**
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**Date: 09-Mar-2020**
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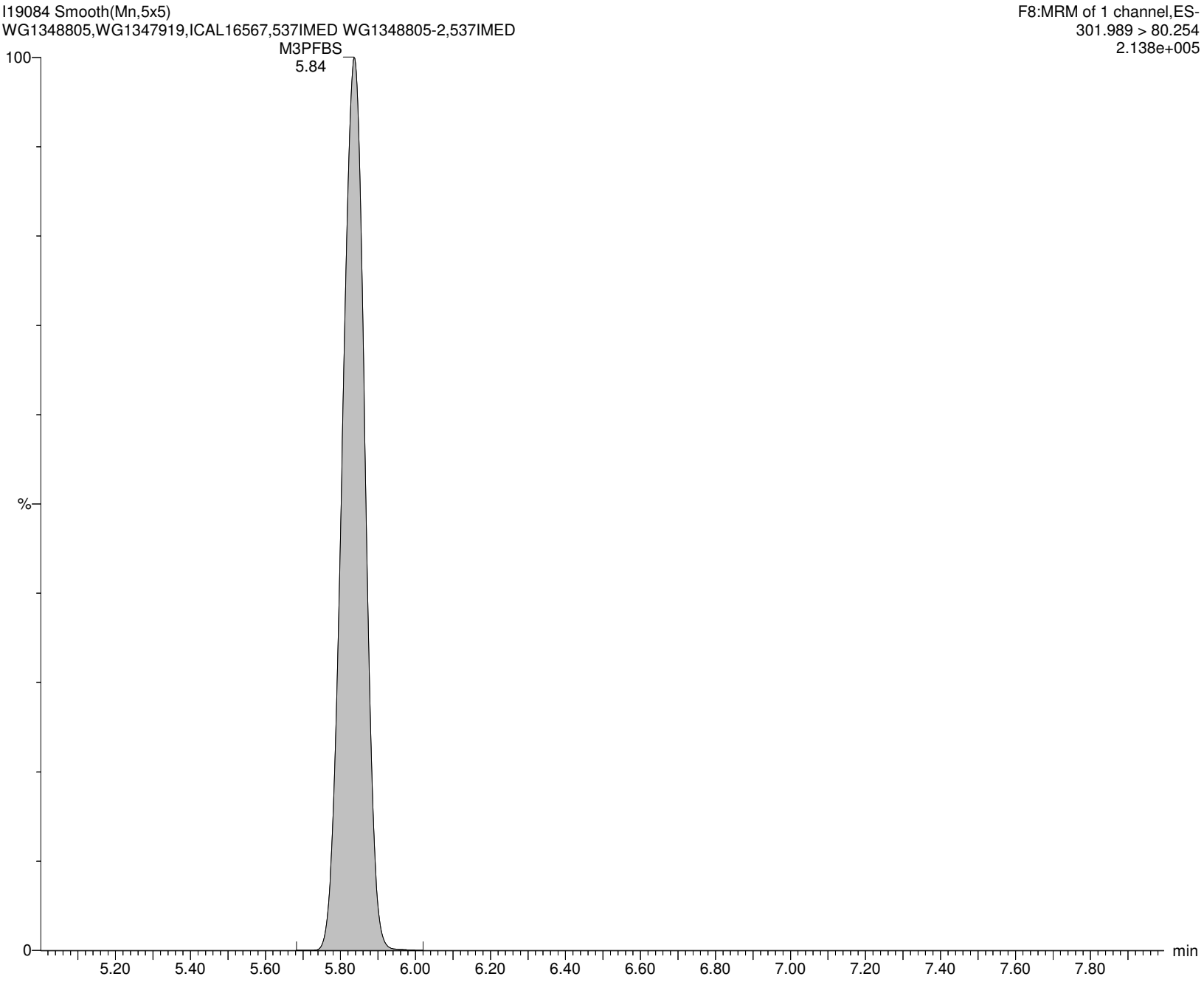
**MS Method Name: C:\MassLynx\Data\200309_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**M3PFBS**





all concentration units in (ng/mL)

Alpha Analytical Inc.
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Last Altered: Tuesday, March 10, 2020 20:06:08 Eastern Daylight Time
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**User: LCMS01:JW**
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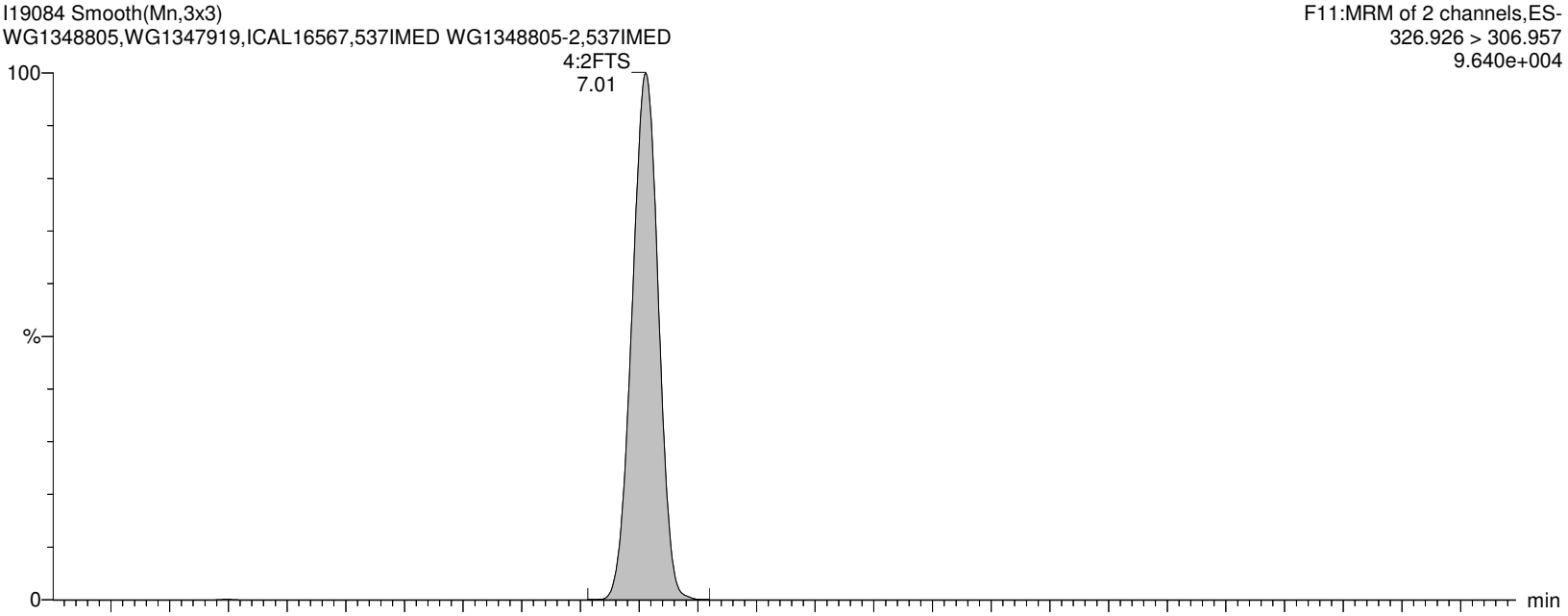
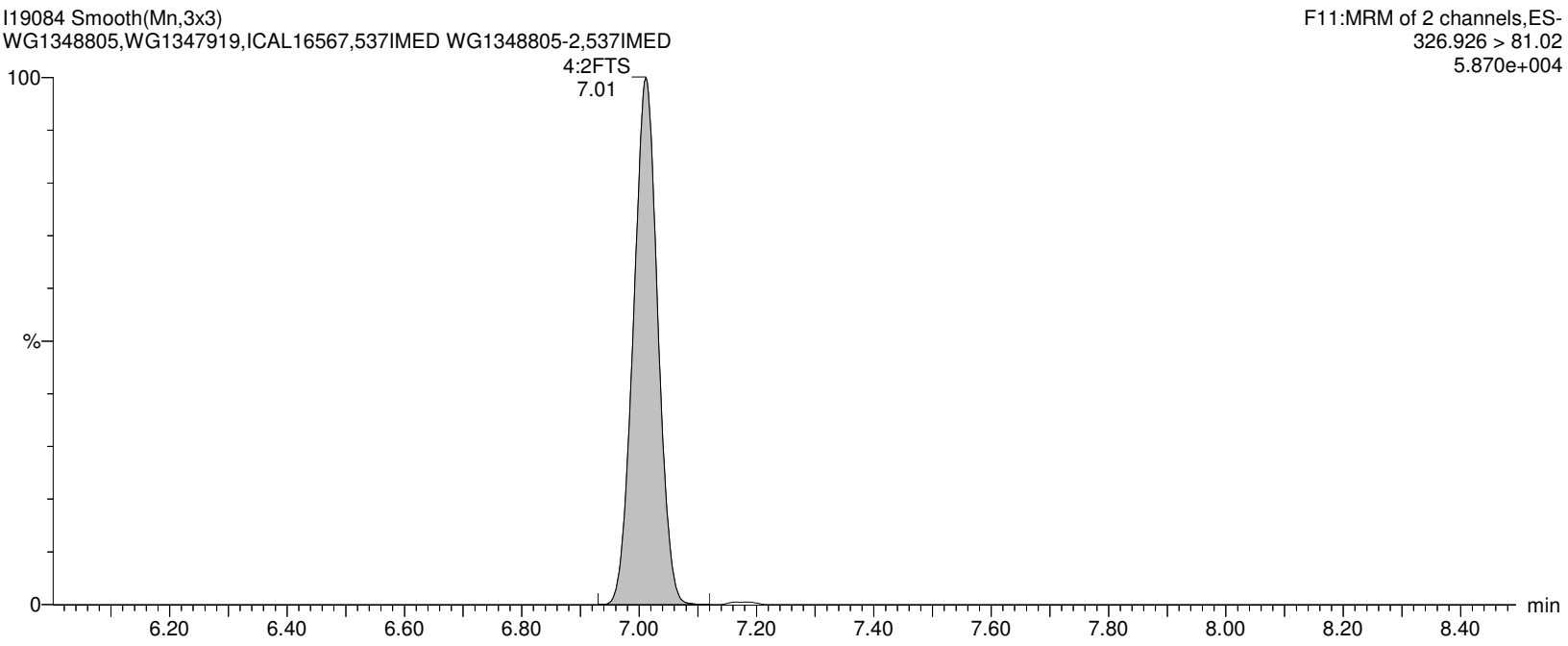
**MS Method Name: C:\MassLynx\Data\200309_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**4:2FTS**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200309_537ISO.PRO\Data\WG1348805A.qld
Last Altered: Tuesday, March 10, 2020 20:06:08 Eastern Daylight Time
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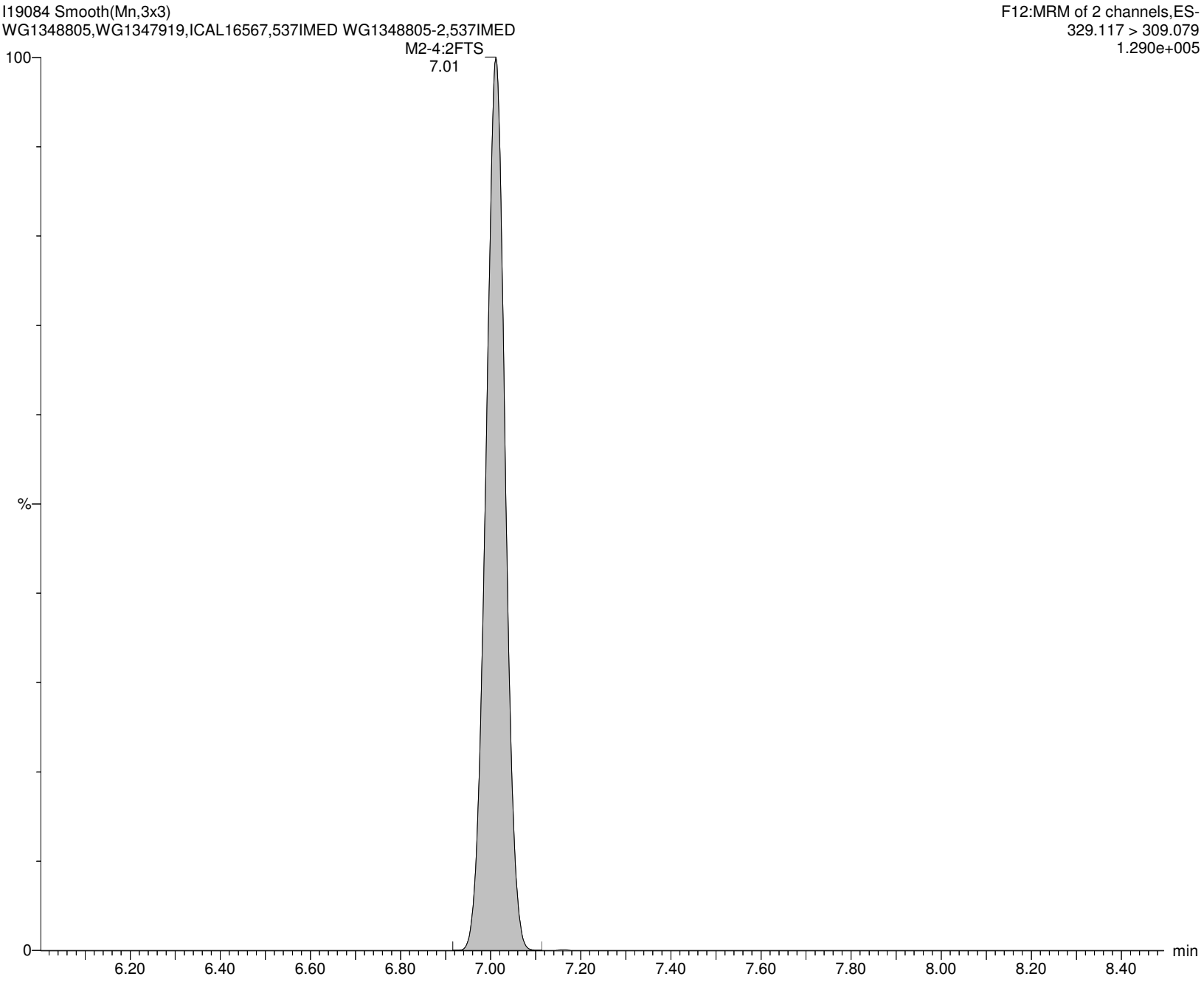
**MS Method Name: C:\MassLynx\Data\200309_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**M2-4:2FTS**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200309_537ISO.PRO\Data\WG1348805A.qld
Last Altered: Tuesday, March 10, 2020 20:06:08 Eastern Daylight Time
Printed: Tuesday, March 10, 2020 20:08:36 Eastern Daylight Time

**Name: I19084**
**ID: WG1348805-2,537IMED**
**Date: 09-Mar-2020**
**Time: 17:03:03**
**Description: WG1348805,WG1347919,ICAL16567,537IMED**
**User: LCMS01:JW**
**Vial: 1:A,3**
**Instrument: XEVO-TQSmicro#QEA0276**
**Inlet Method Name: C:\MassLynx\Data\200309_537ISO.PRO\ACQUDB\LCMS_537_ISO_MeOH**
**Tune Method Name: C:\MassLynx\Data\200309_537ISO.PRO\ACQUDB\190709_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\200309_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

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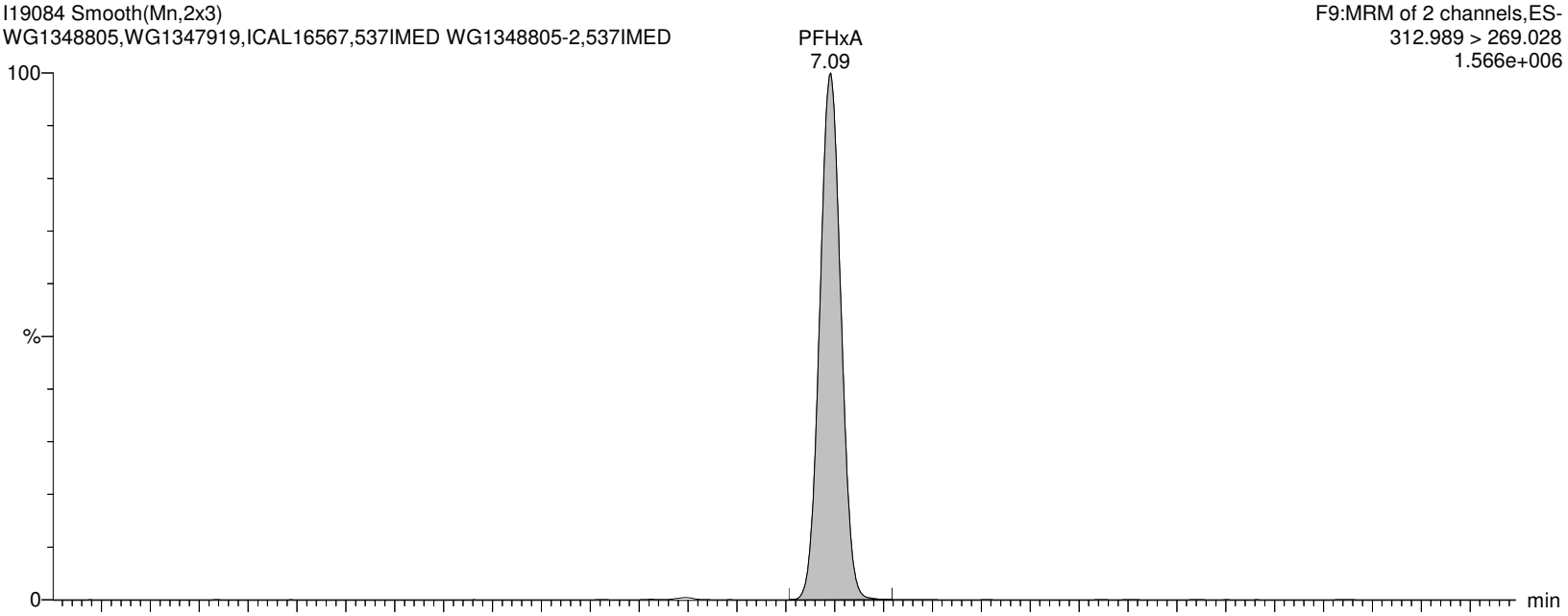


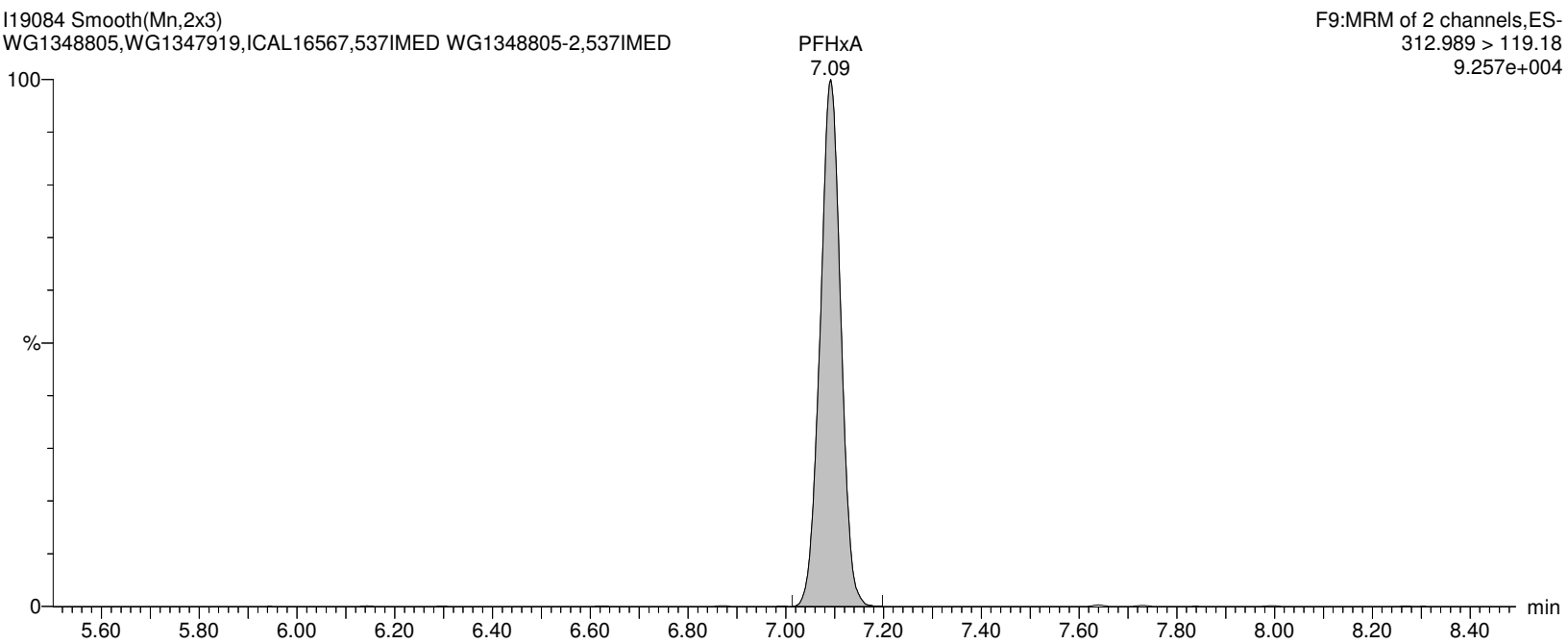



all concentration units in (ng/mL)

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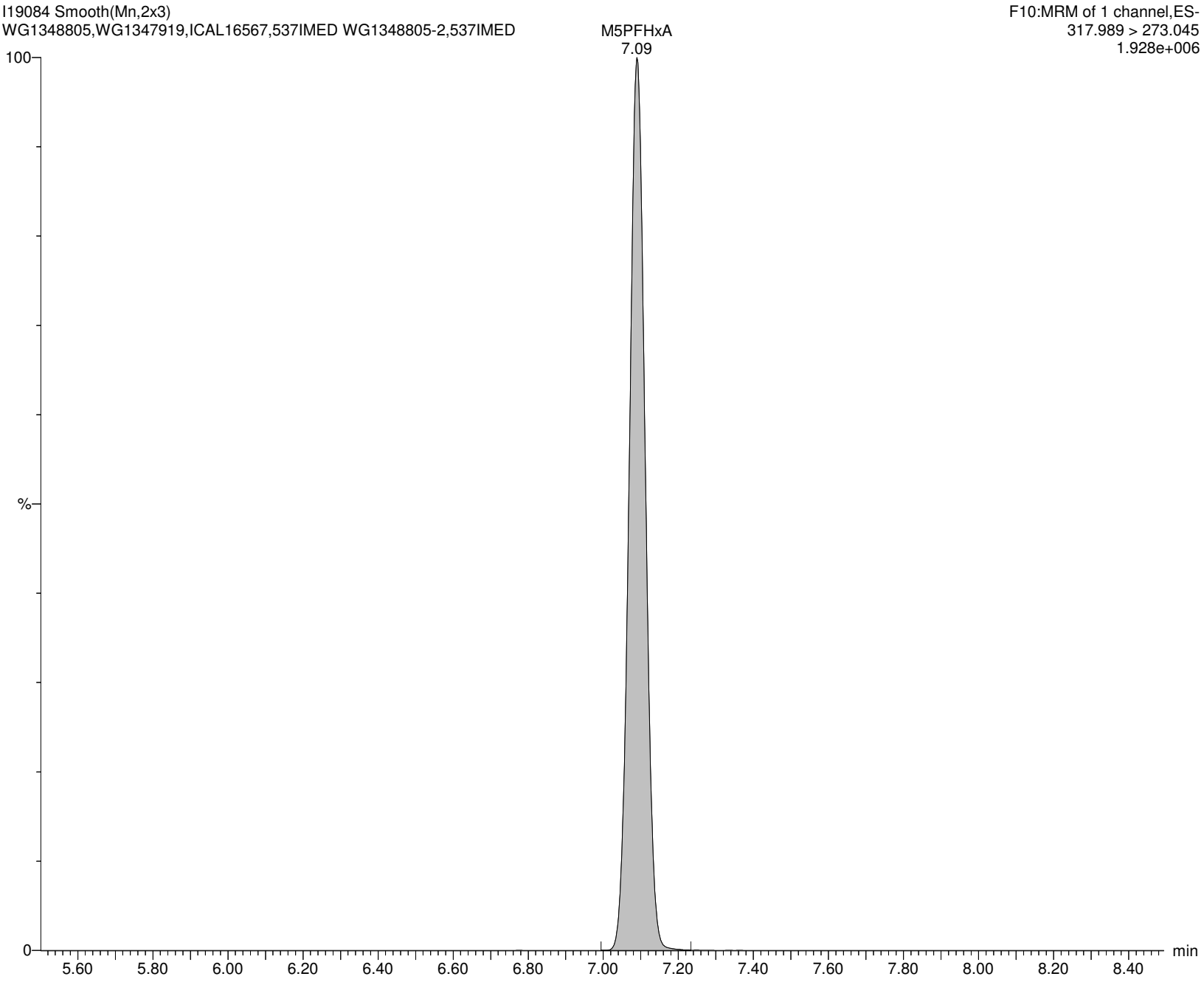



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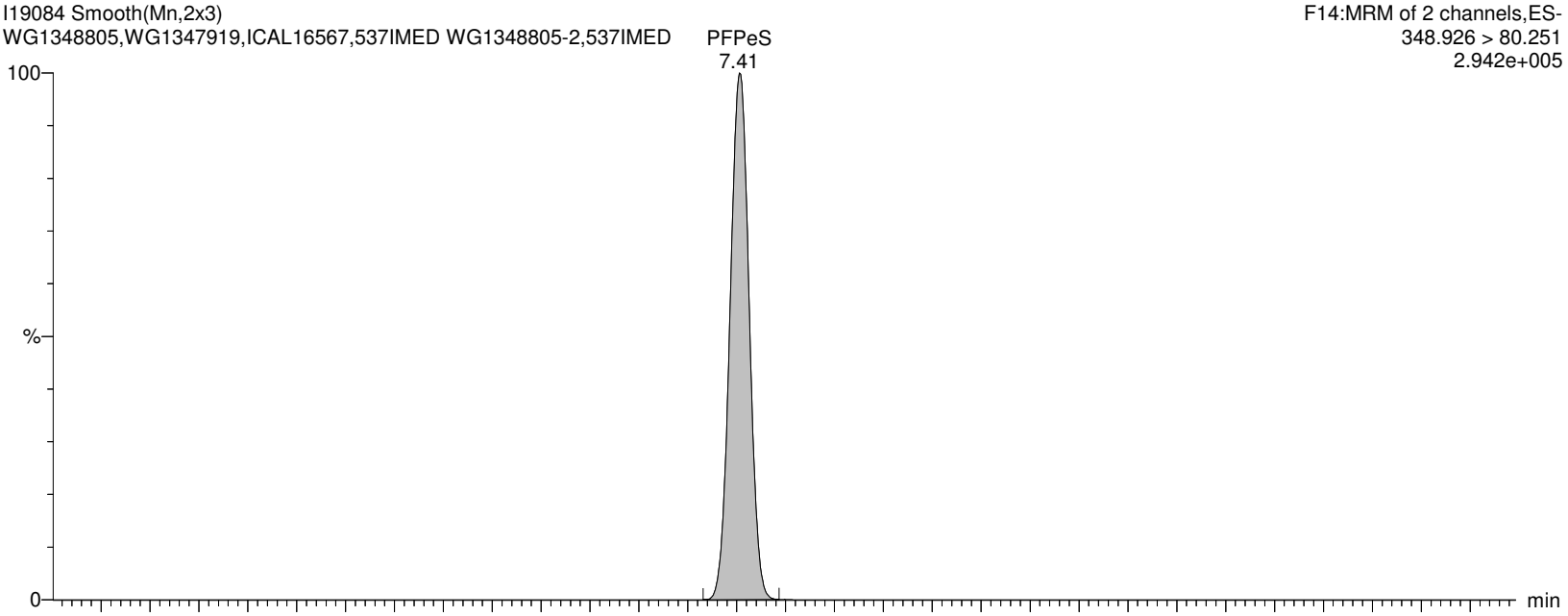


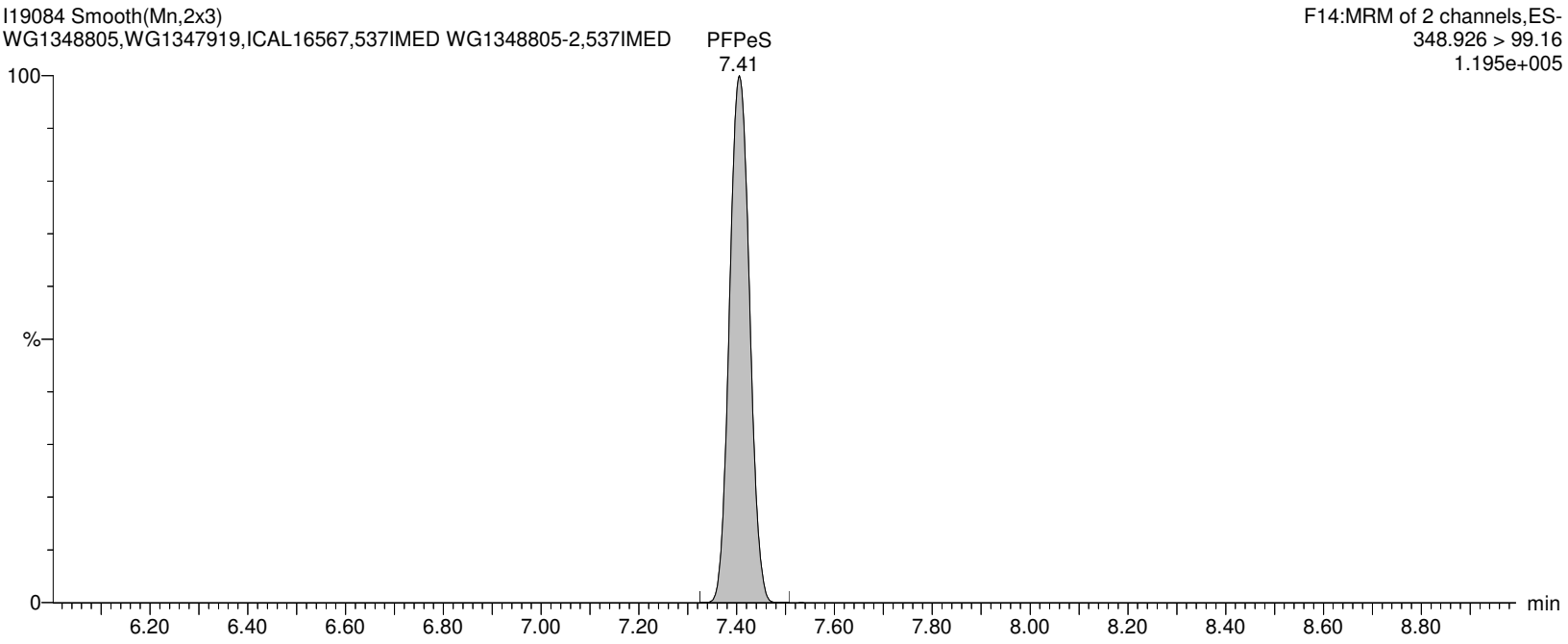



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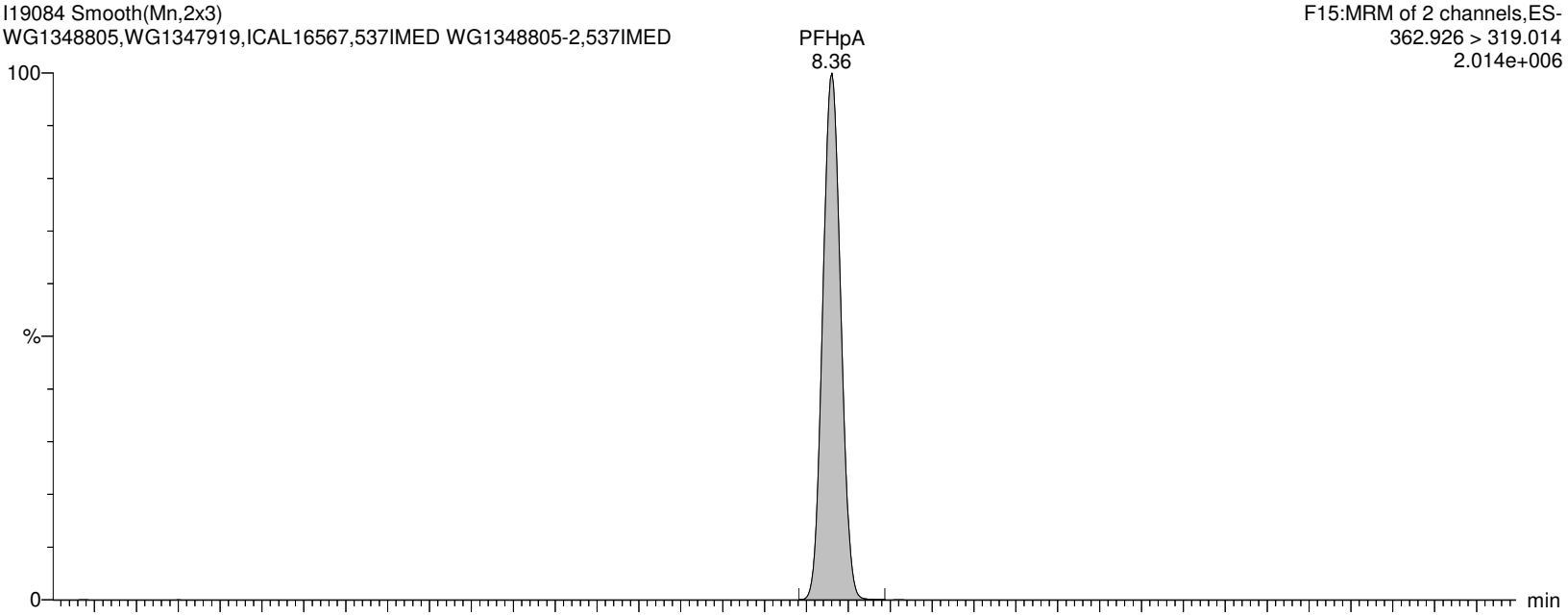


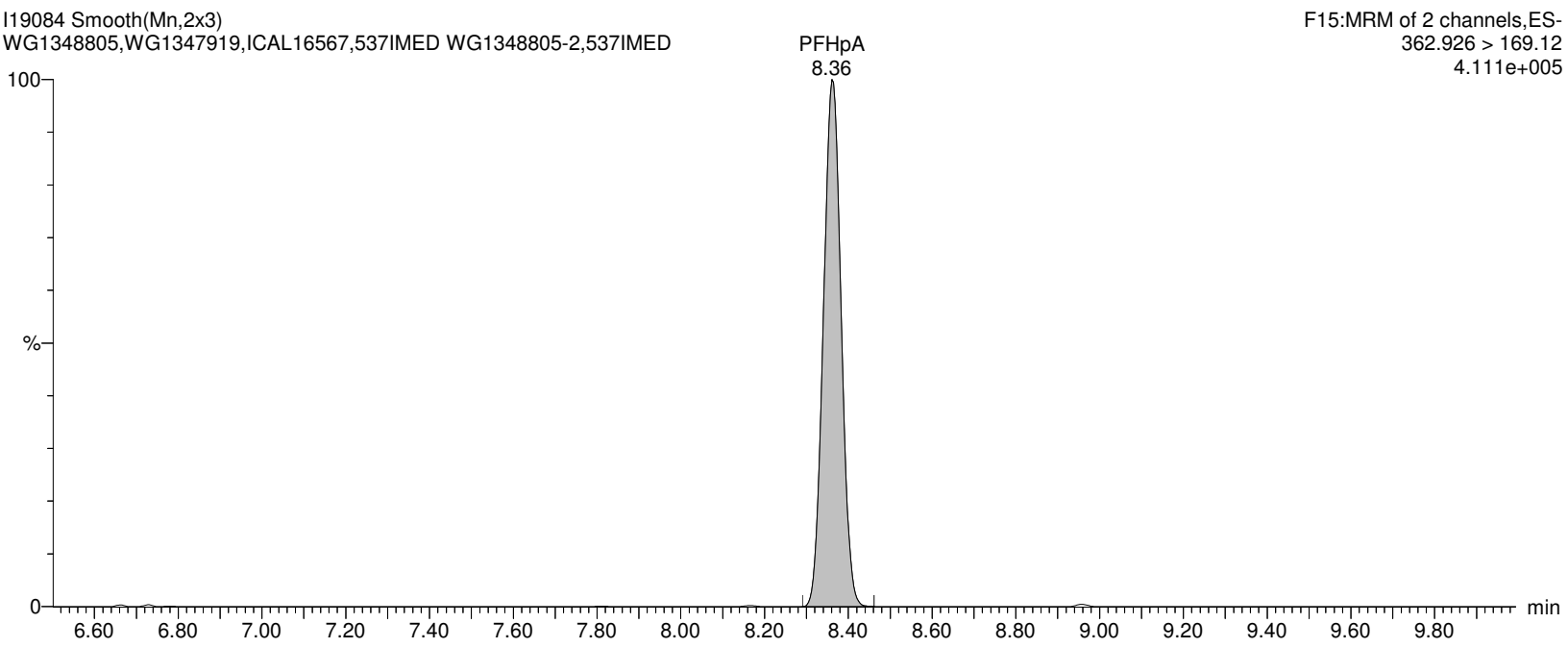



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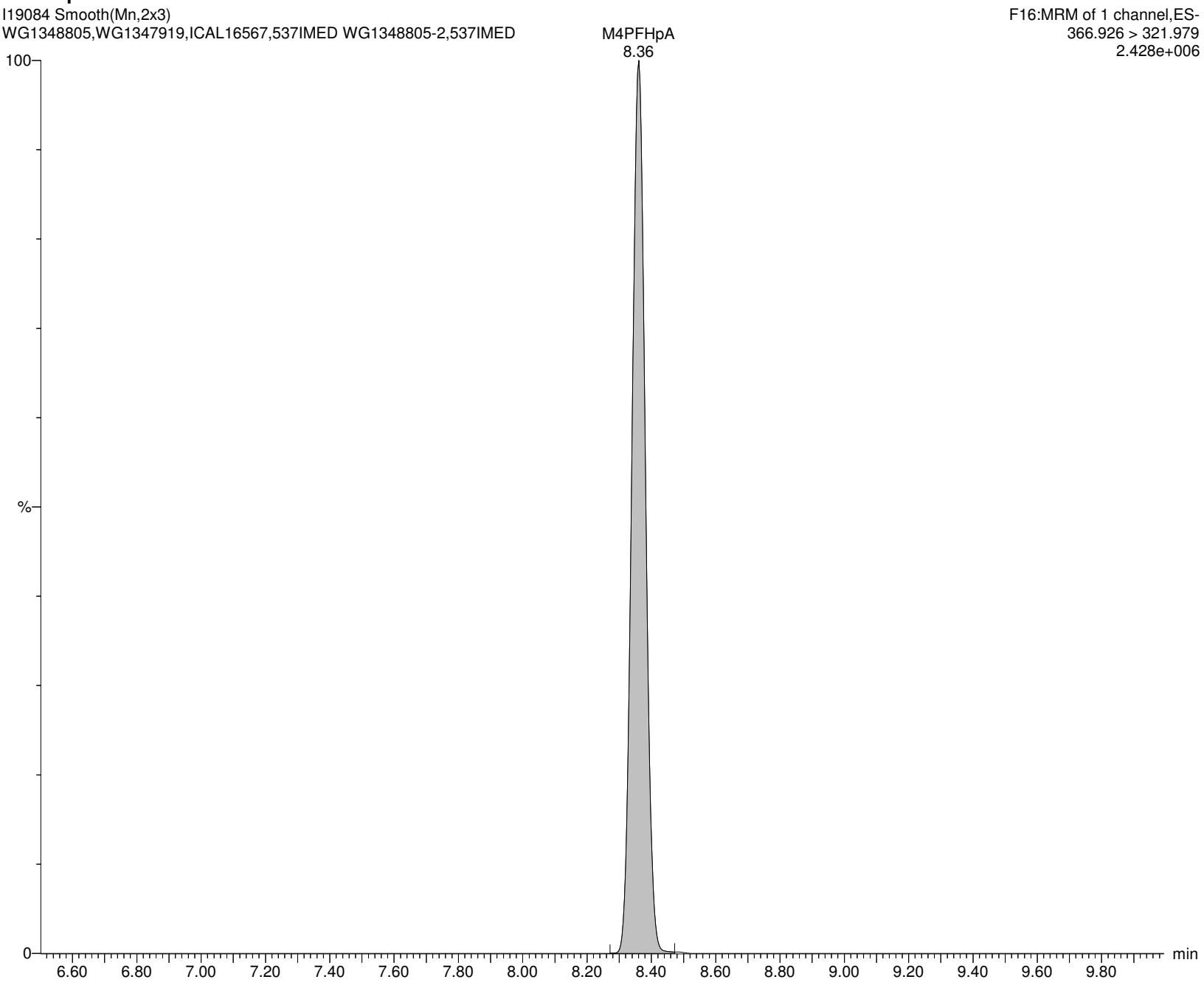
**M4PFHpA**





all concentration units in (ng/mL)

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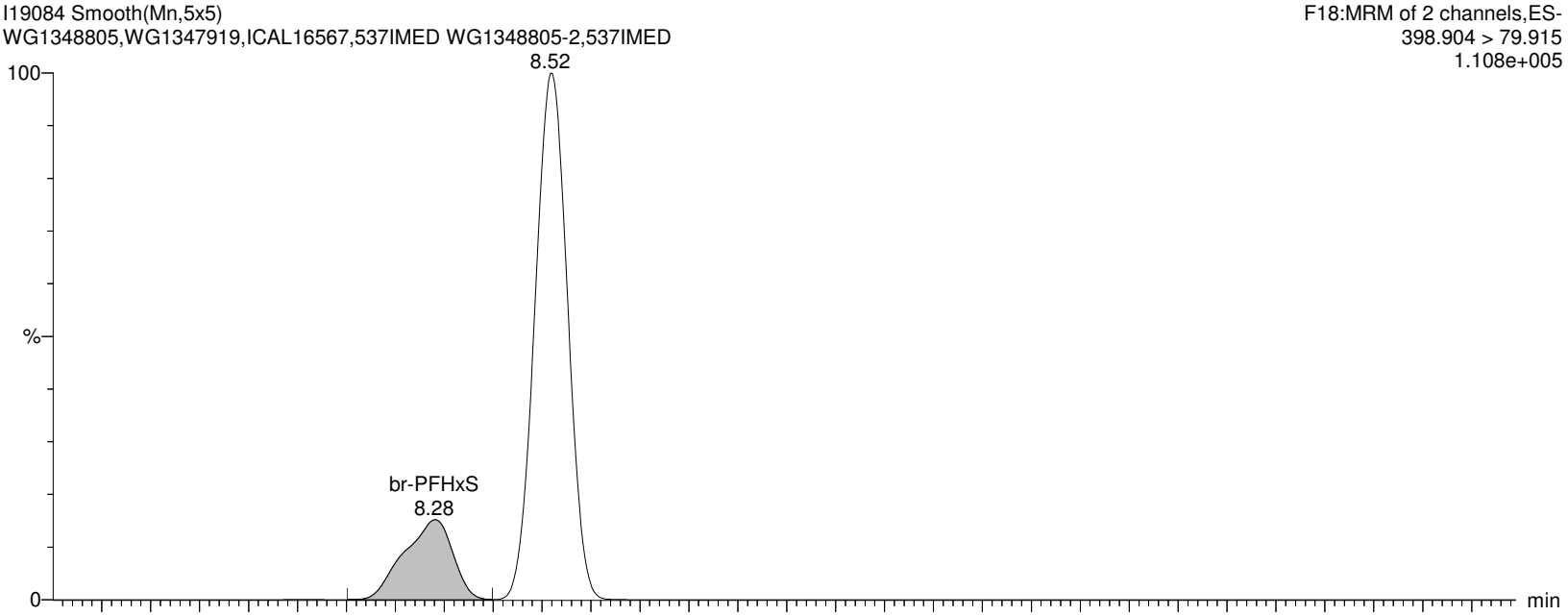
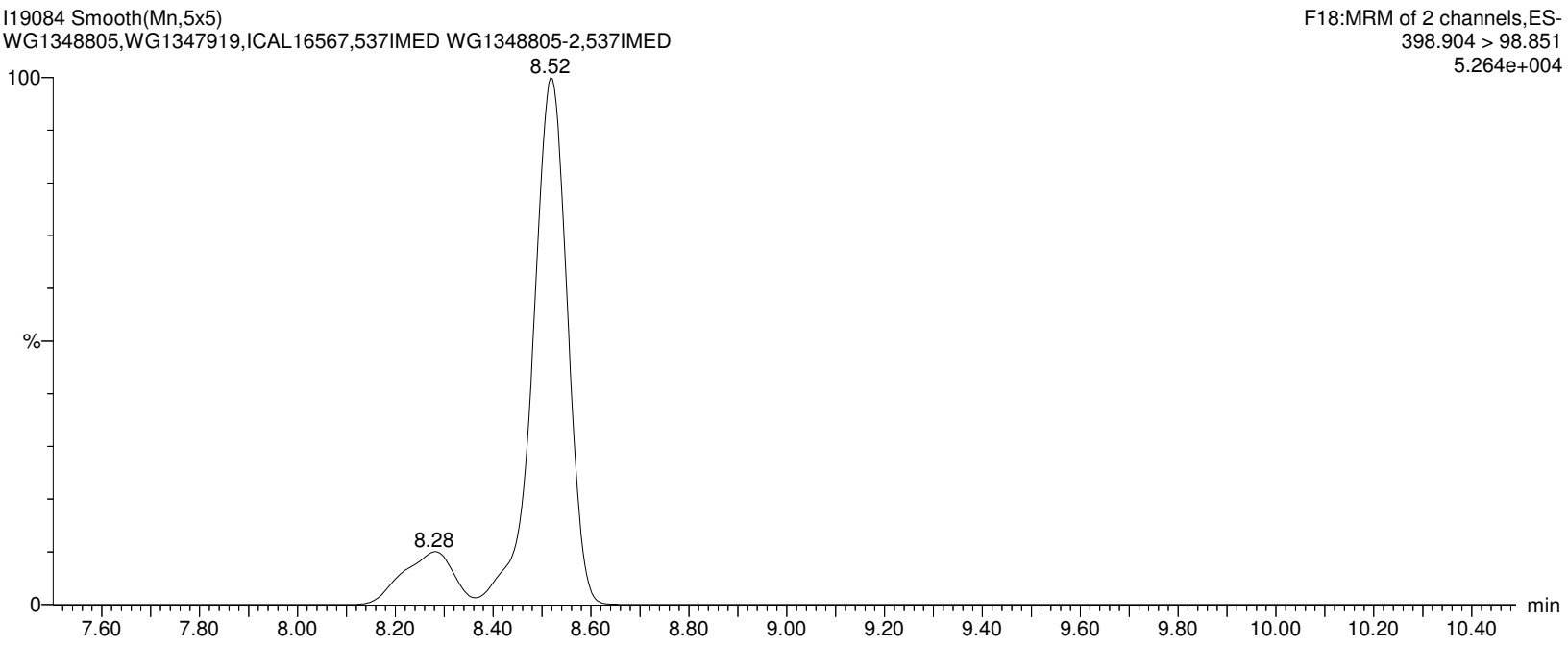
**br-PFHxS**





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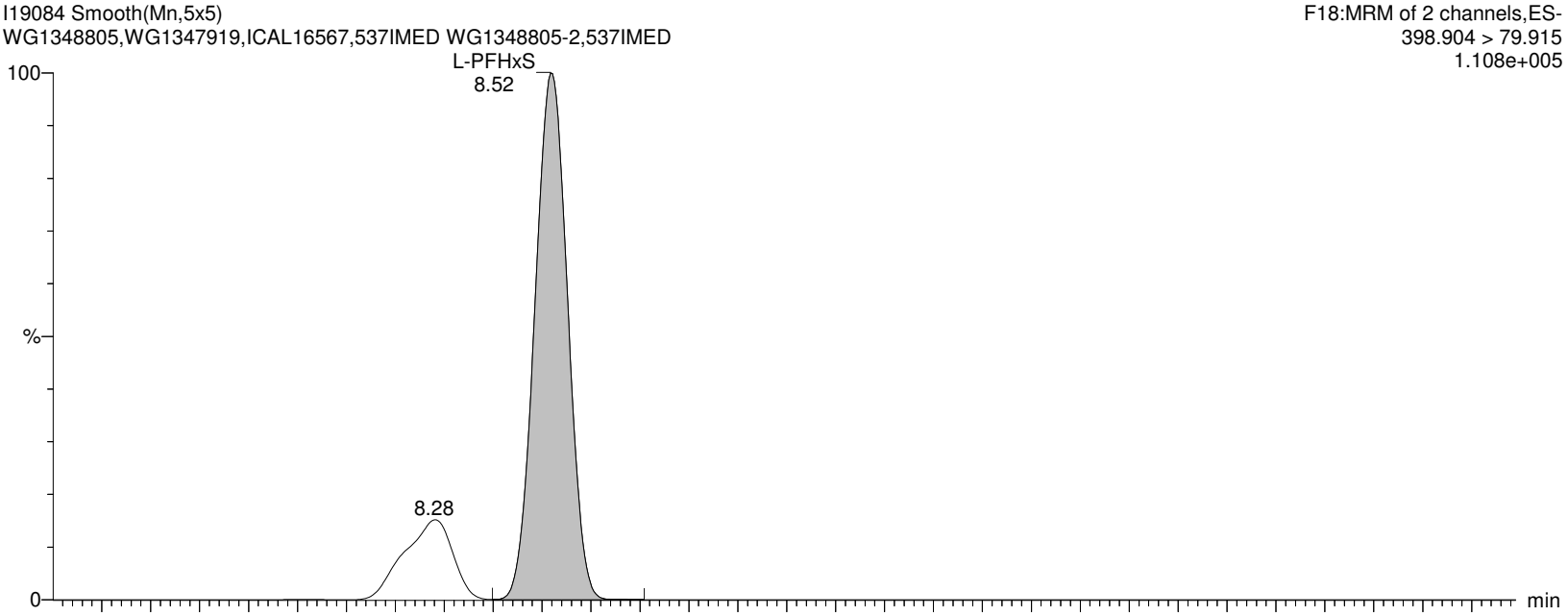
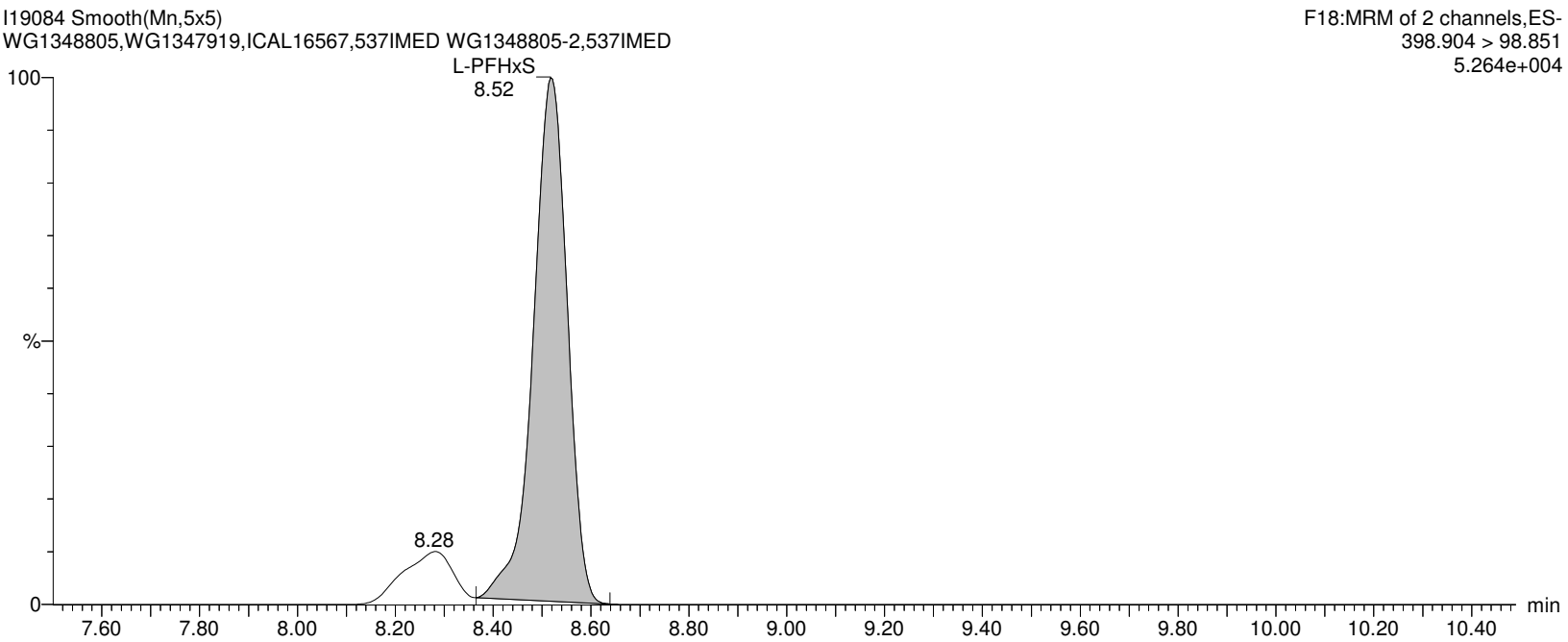
**L-PFHxS**





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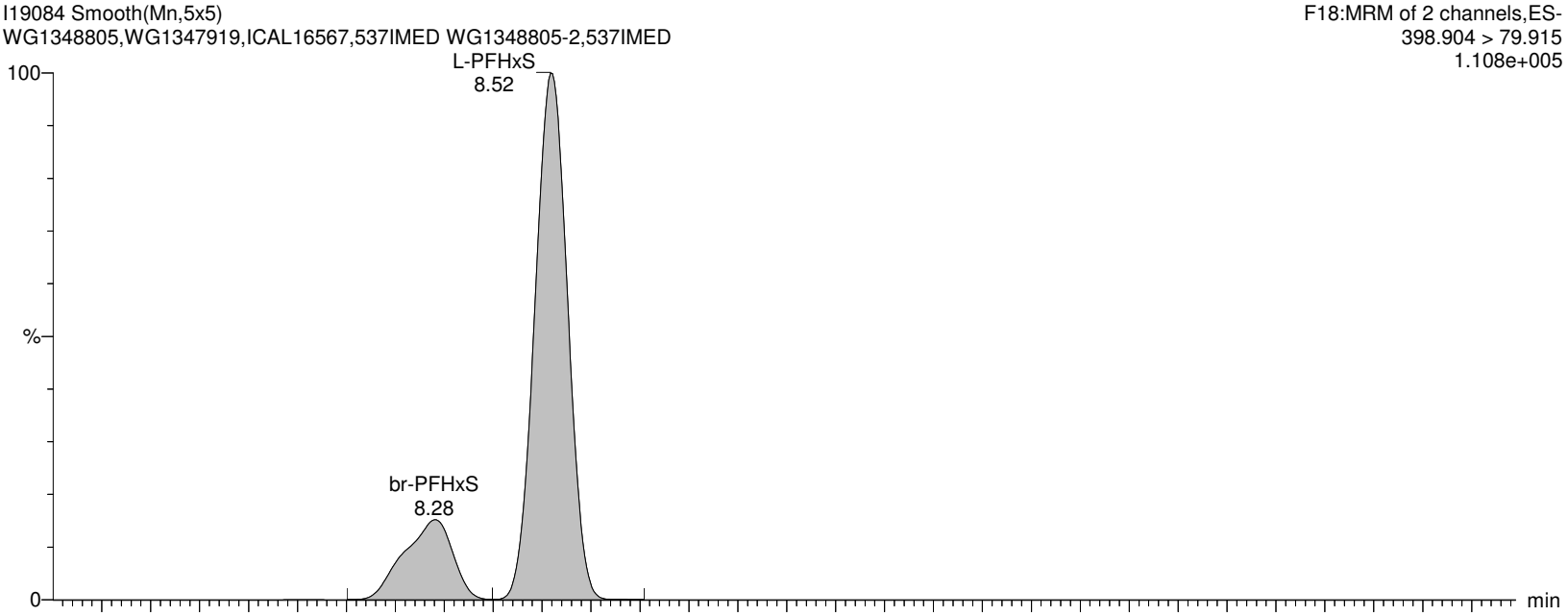
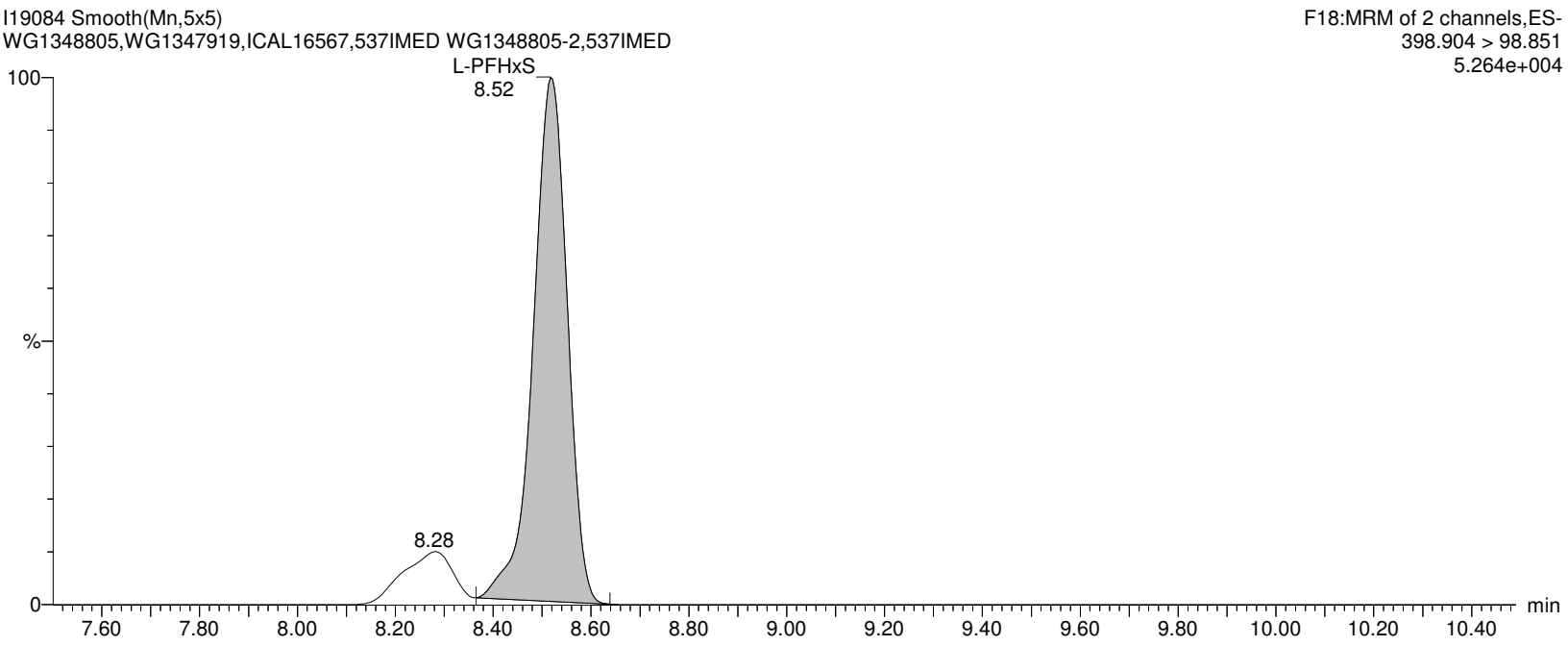
**PFHxS**





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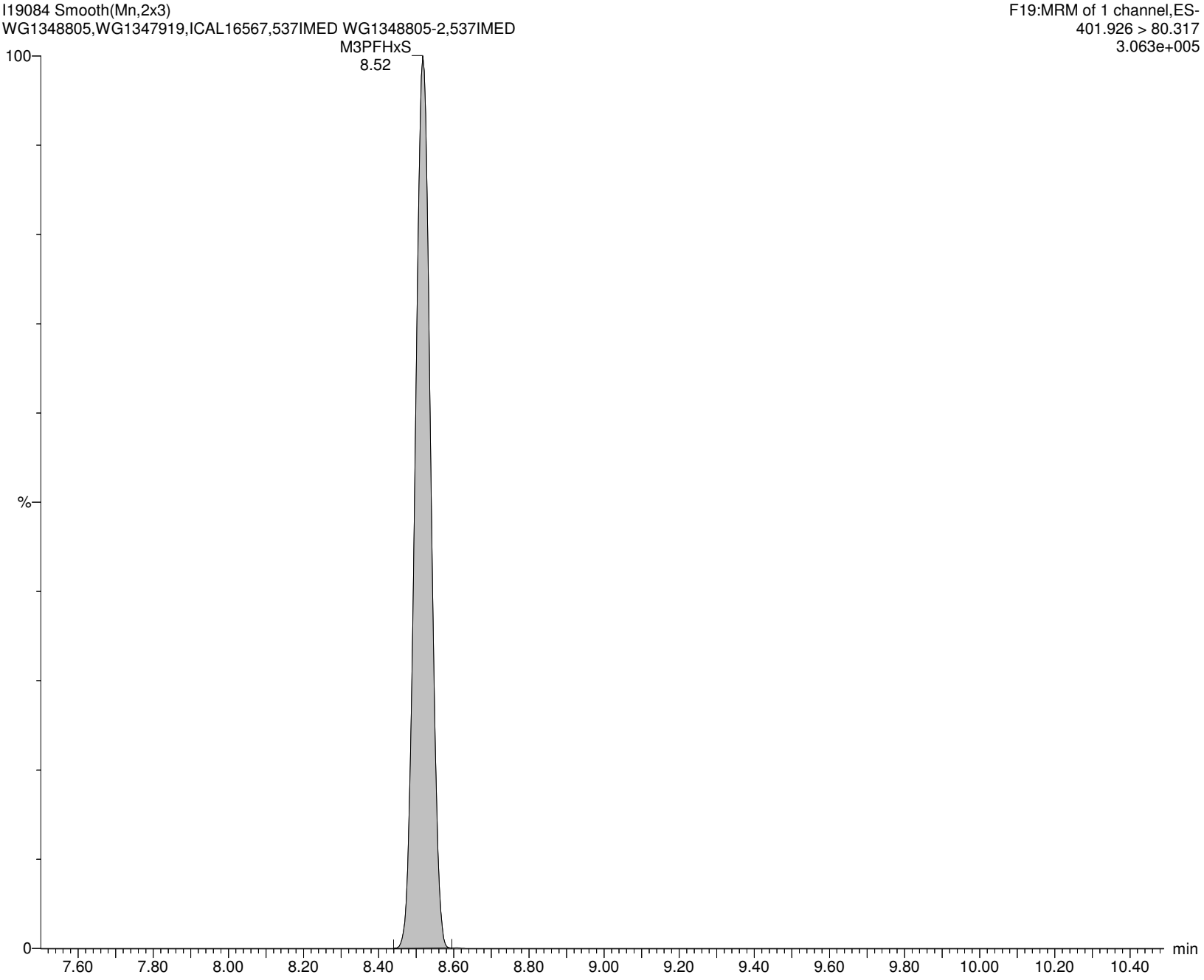



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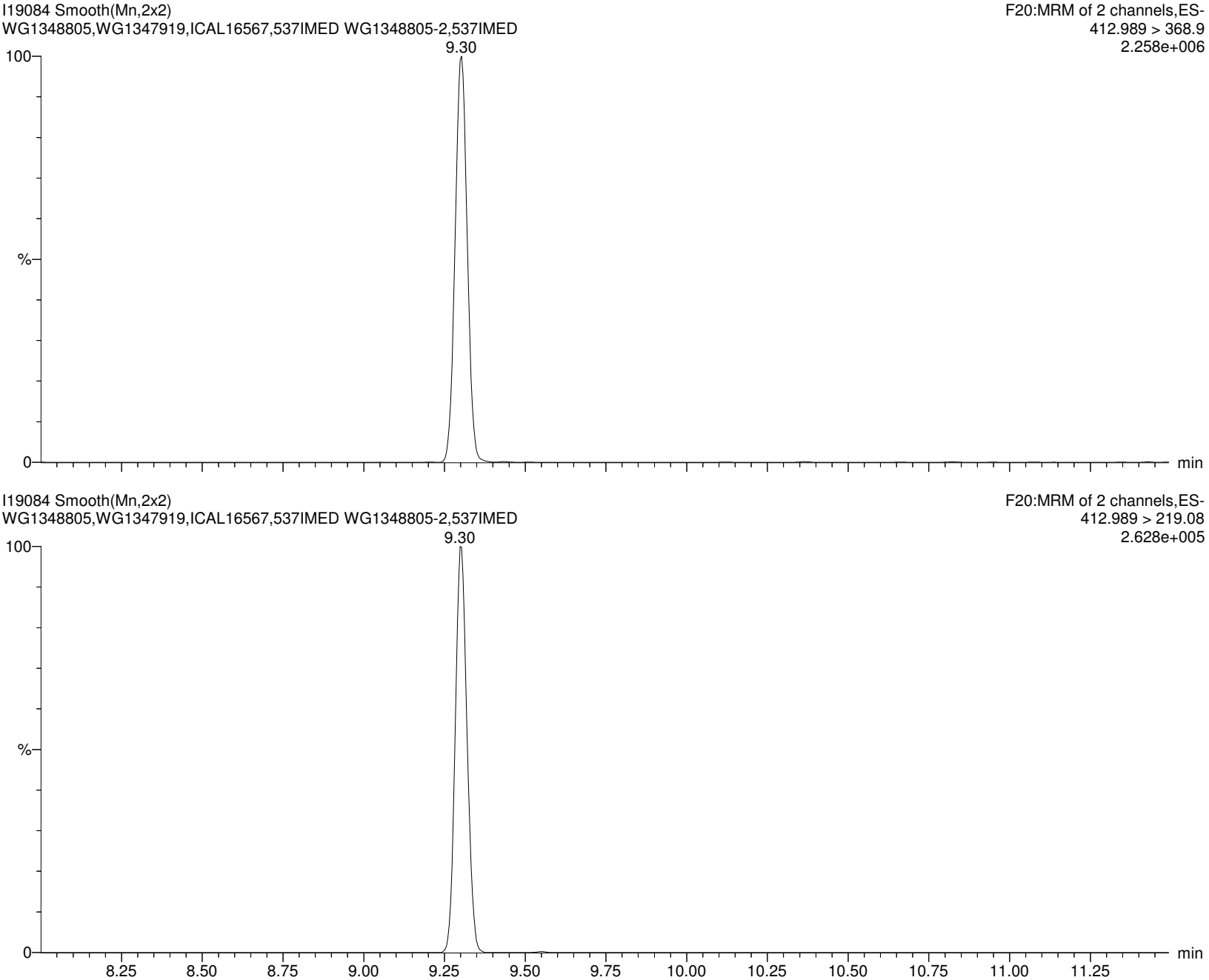



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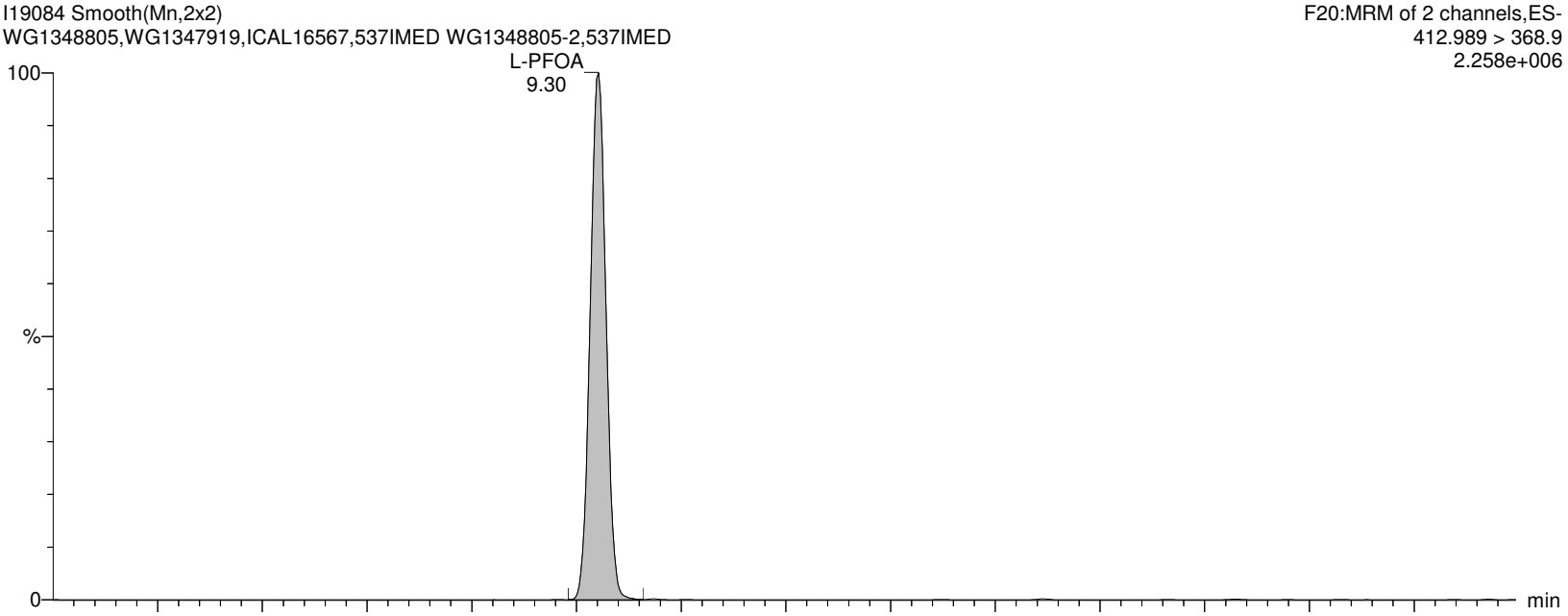


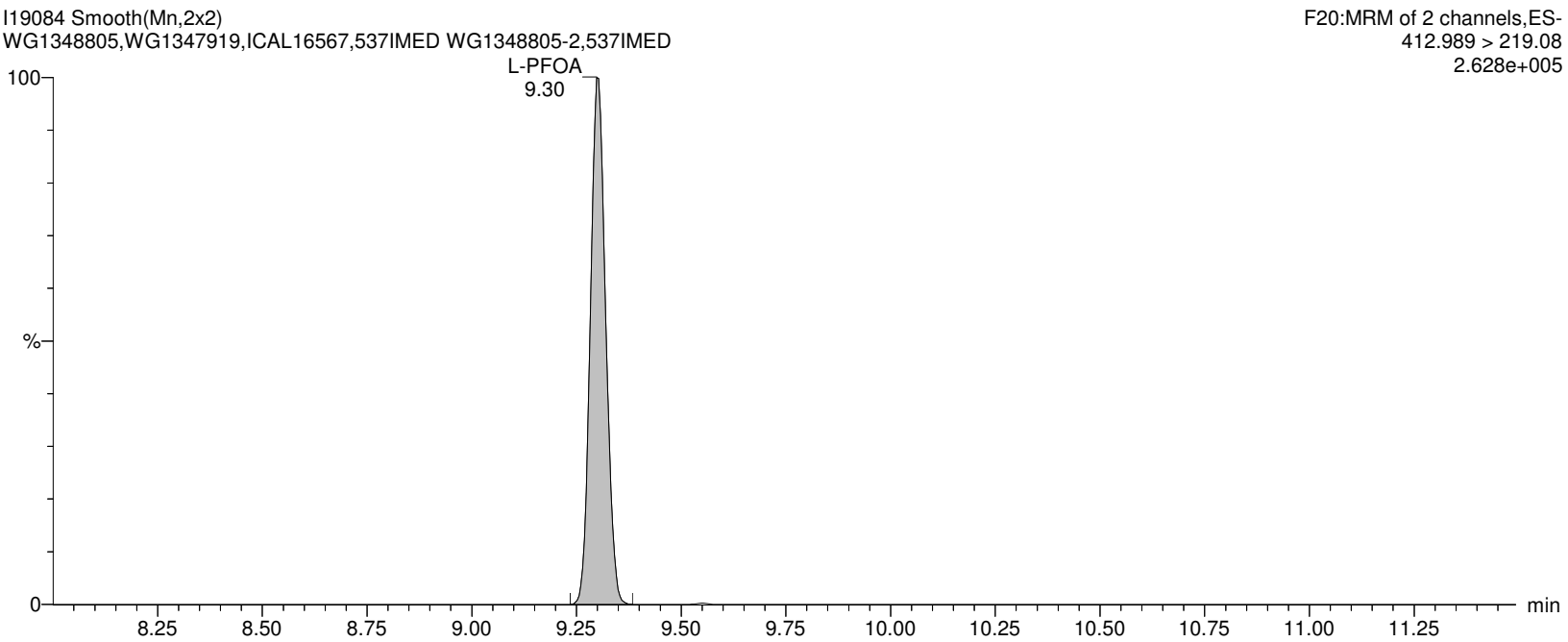



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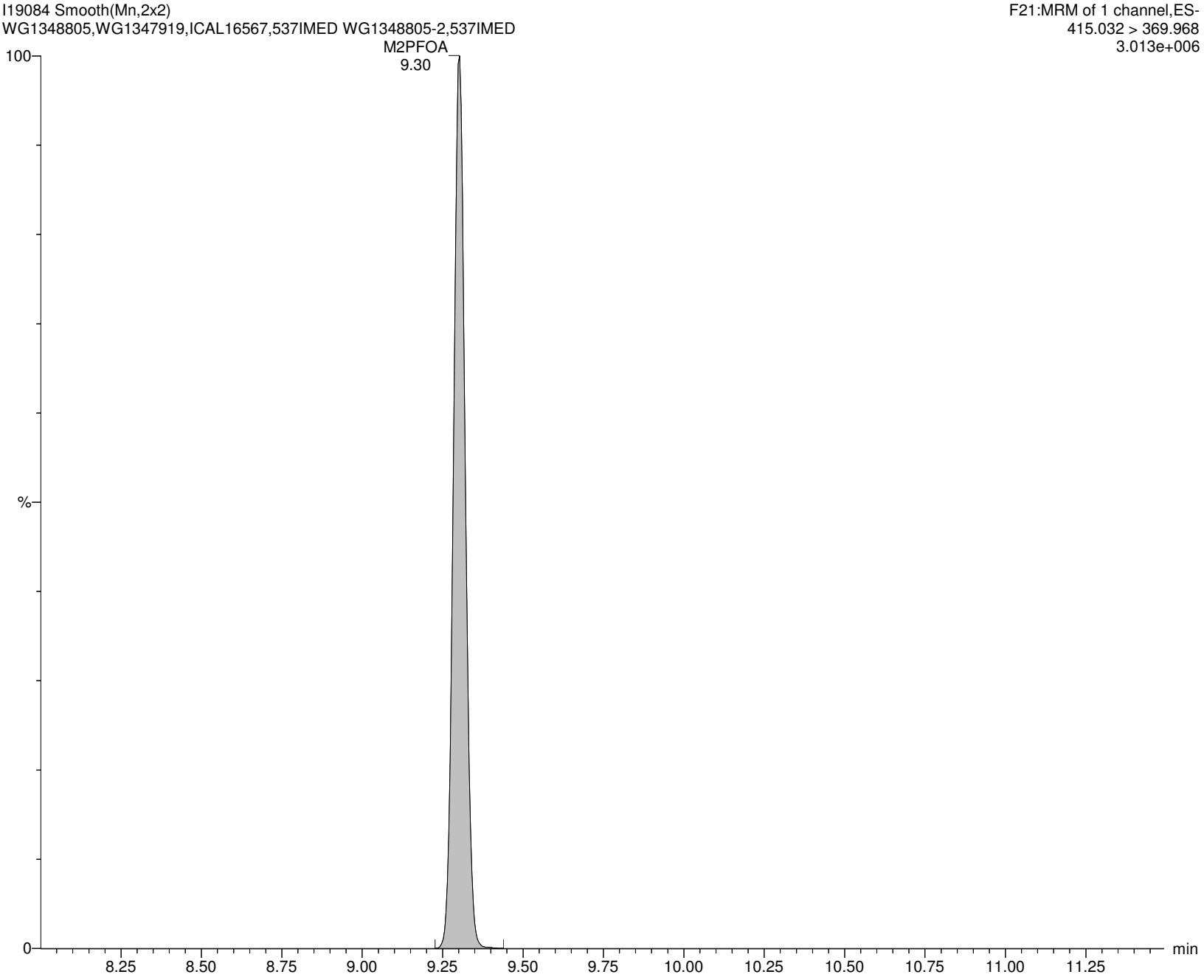



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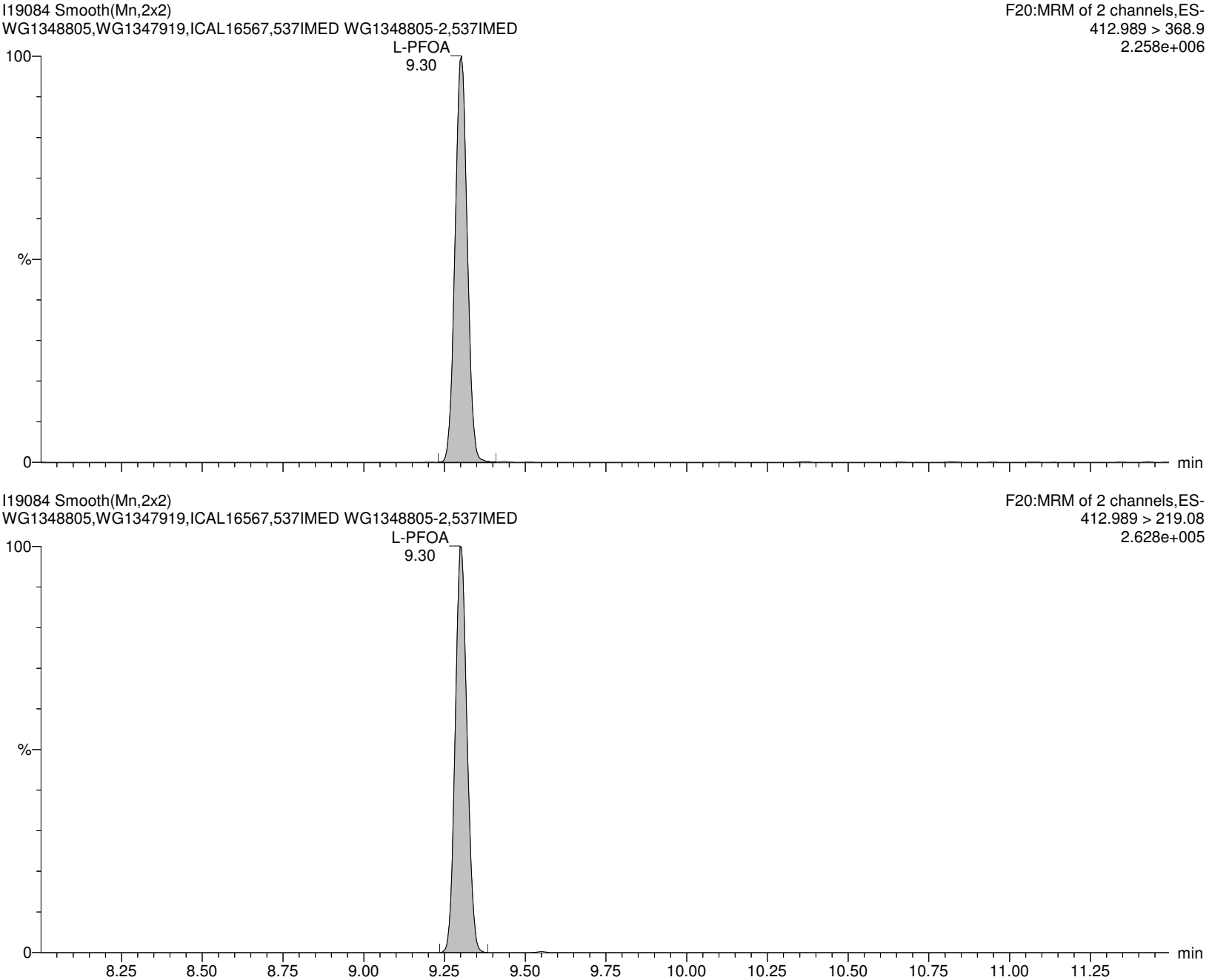



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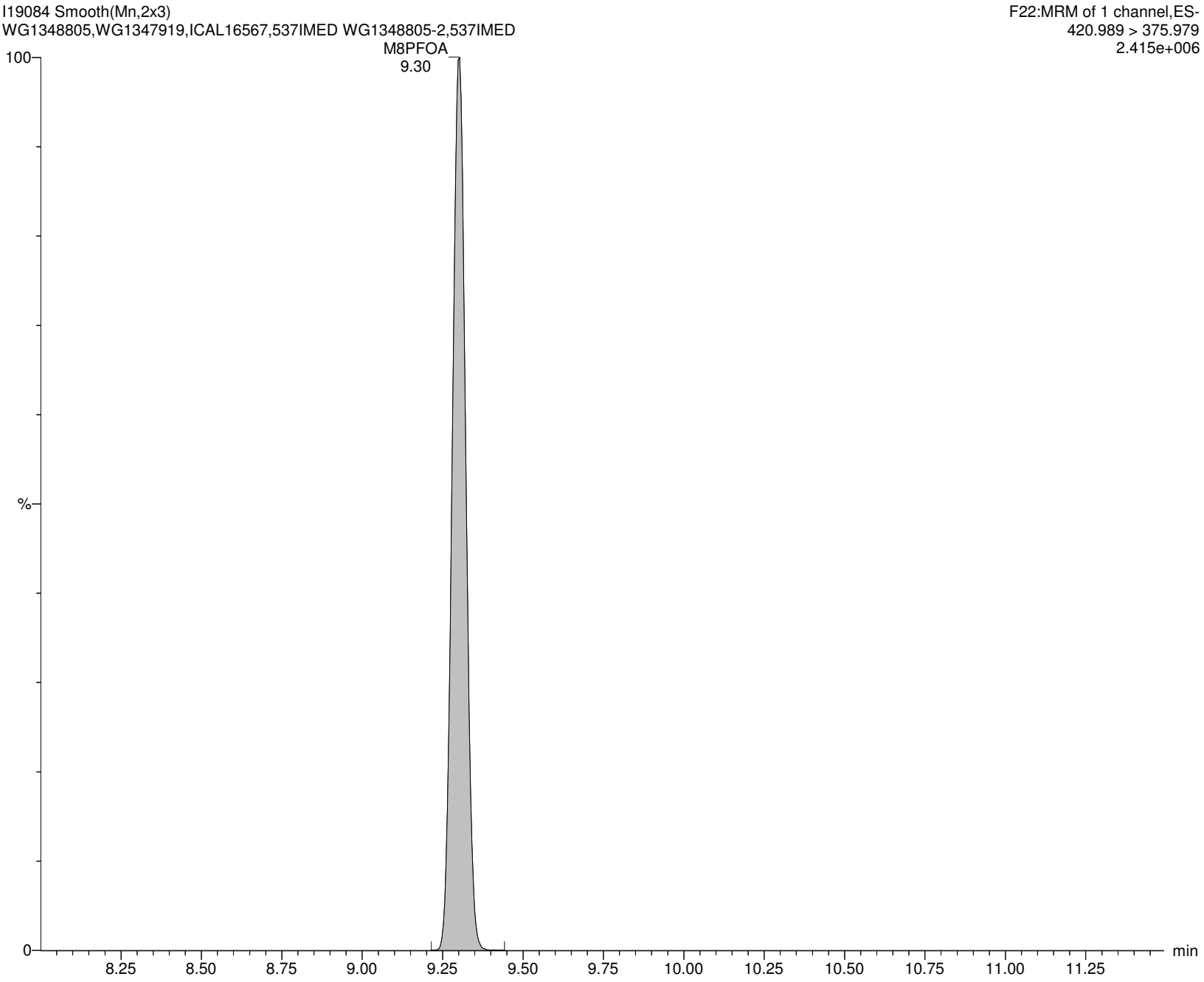



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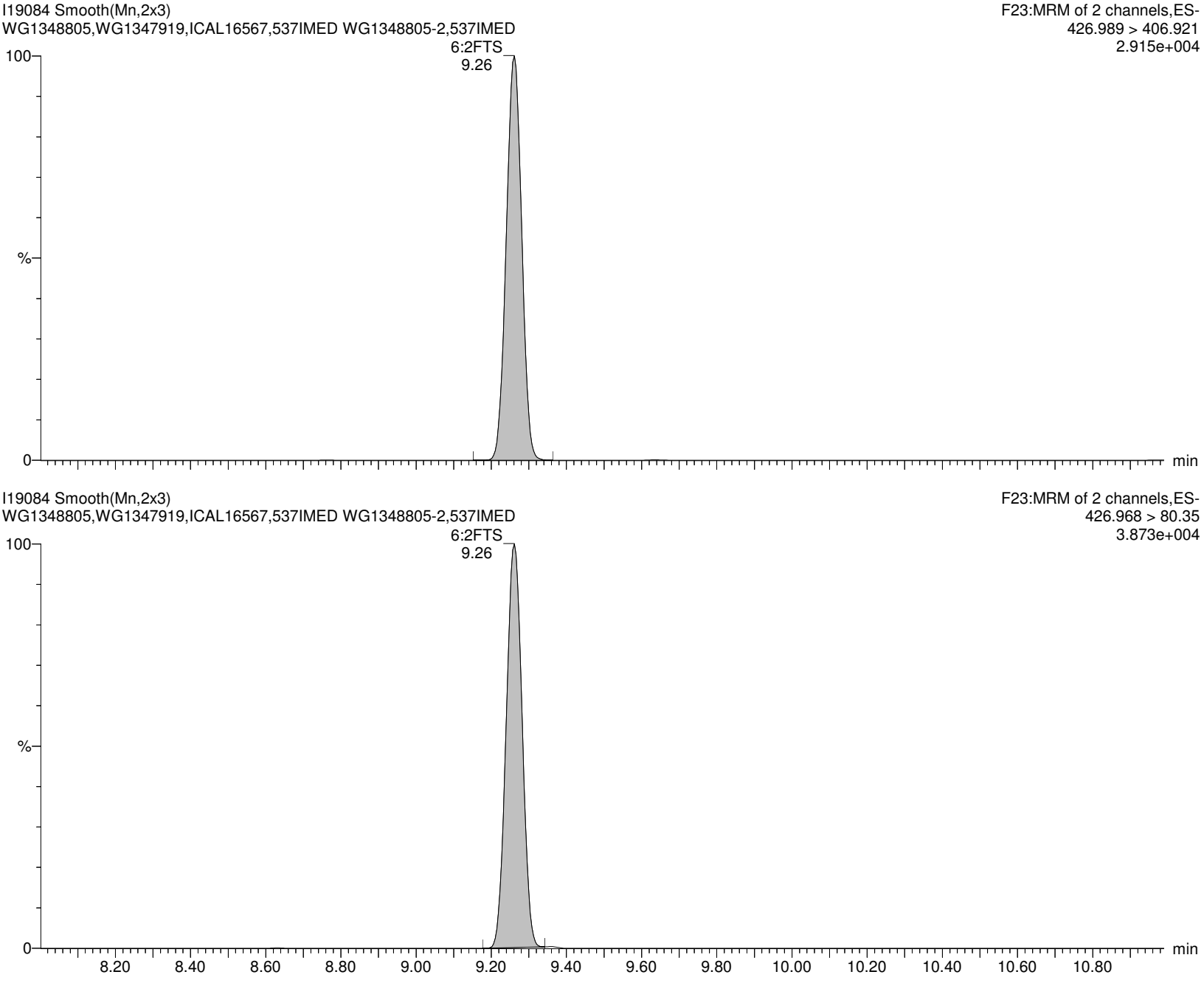



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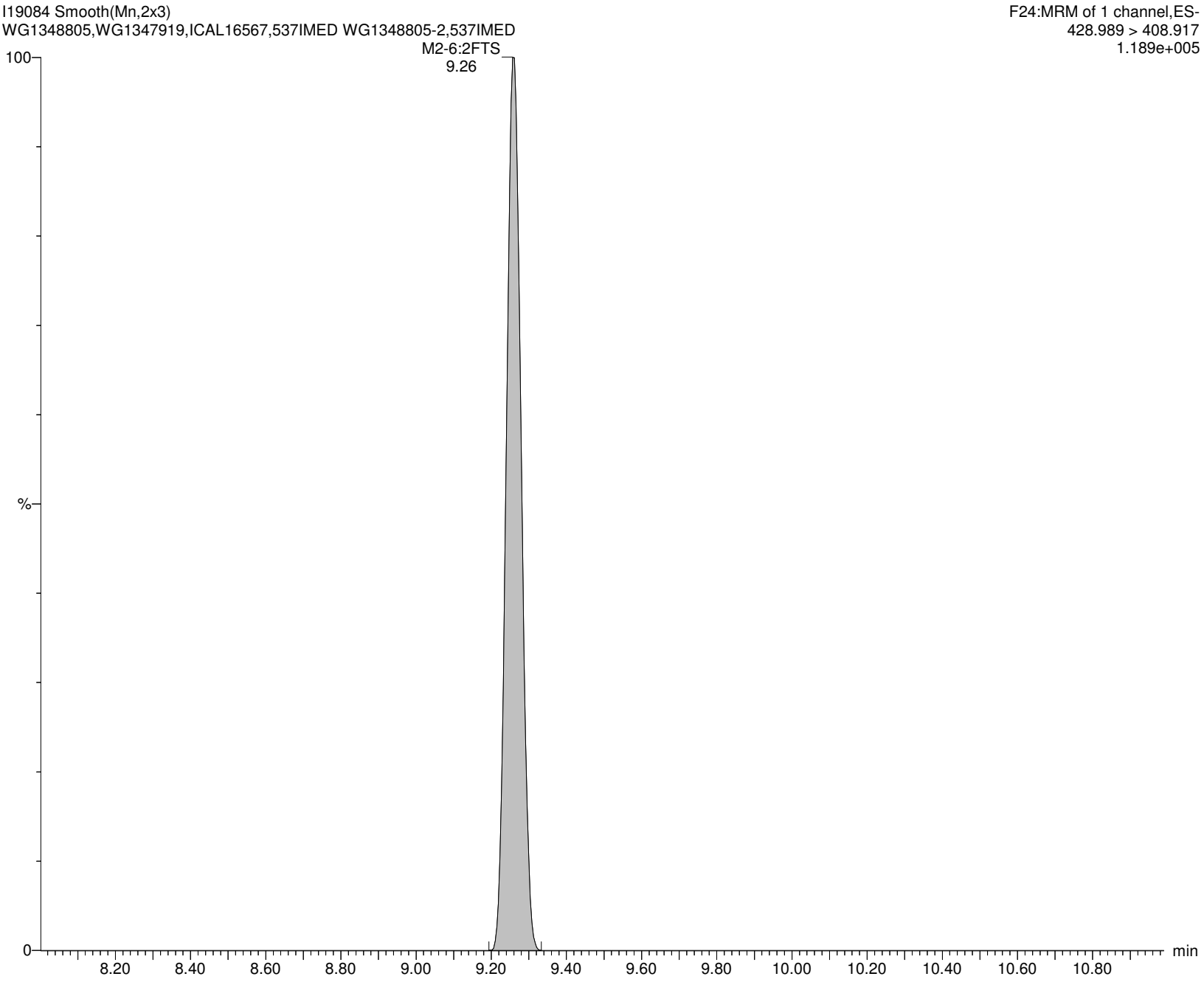
Printed: Tuesday, March 10, 2020 20:08:36 Eastern Daylight Time

**Name: I19084**
**ID: WG1348805-2,537IMED**
**Date: 09-Mar-2020**
**Time: 17:03:03**
**Description: WG1348805,WG1347919,ICAL16567,537IMED**
**User: LCMS01:JW**
**Vial: 1:A,3**
**Instrument: XEVO-TQSmicro#QEA0276**
**Inlet Method Name: C:\MassLynx\Data\200309_537ISO.PRO\ACQUDB\LCMS_537_ISO_MeOH**
**Tune Method Name: C:\MassLynx\Data\200309_537ISO.PRO\ACQUDB\190709_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\200309_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**M2-6:2FTS**





all concentration units in (ng/mL)

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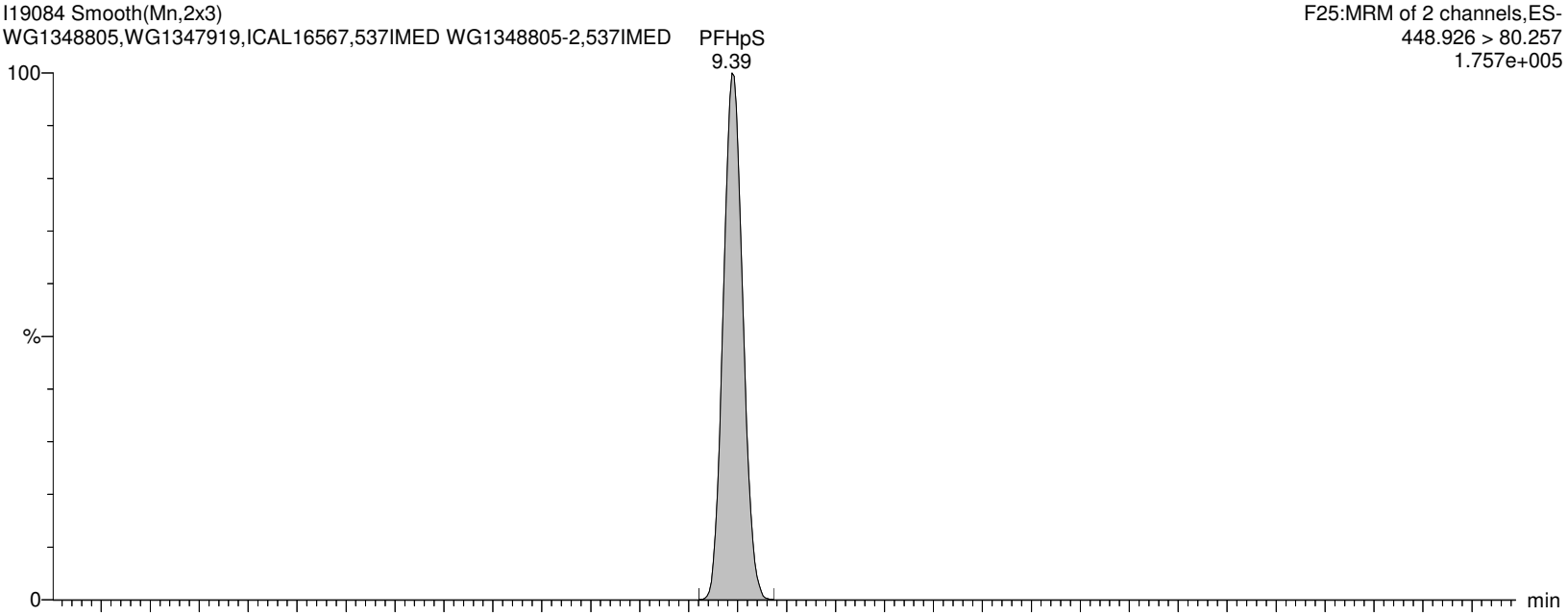


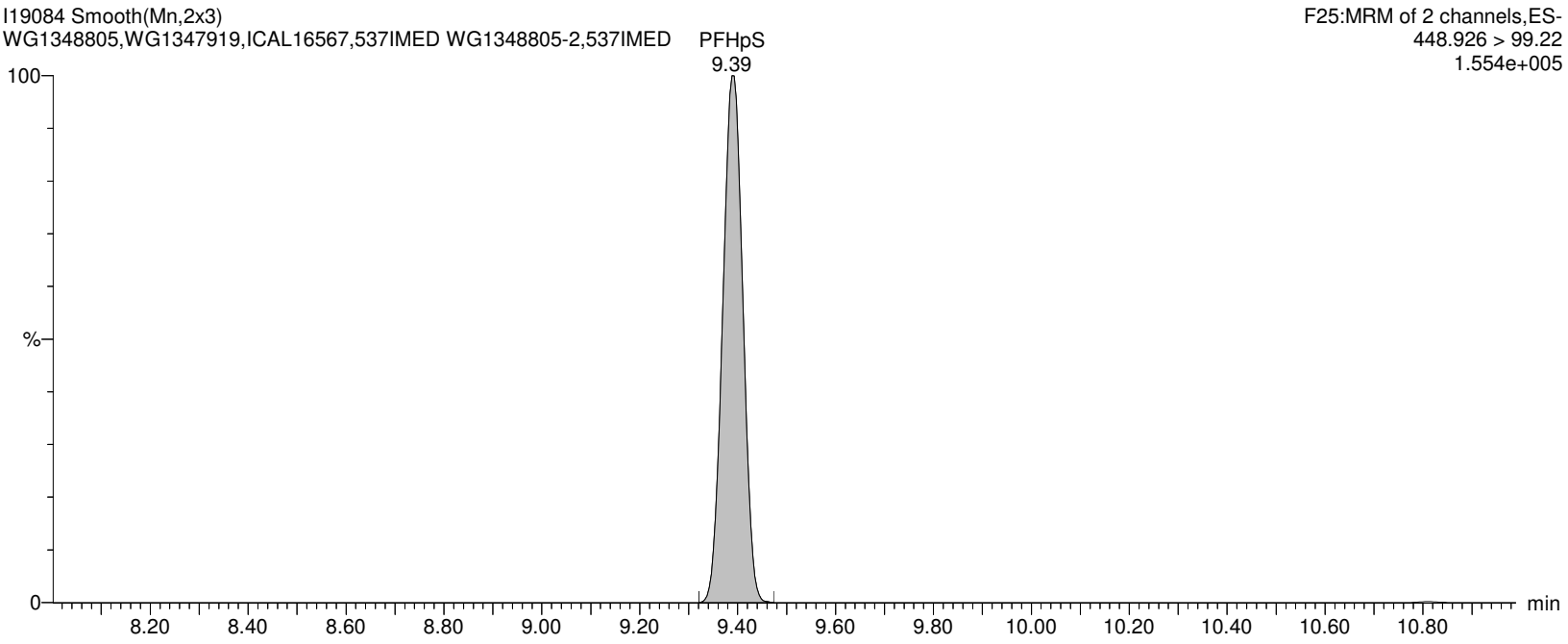



all concentration units in (ng/mL)

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**MS Method Name: C:\MassLynx\Data\200309_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

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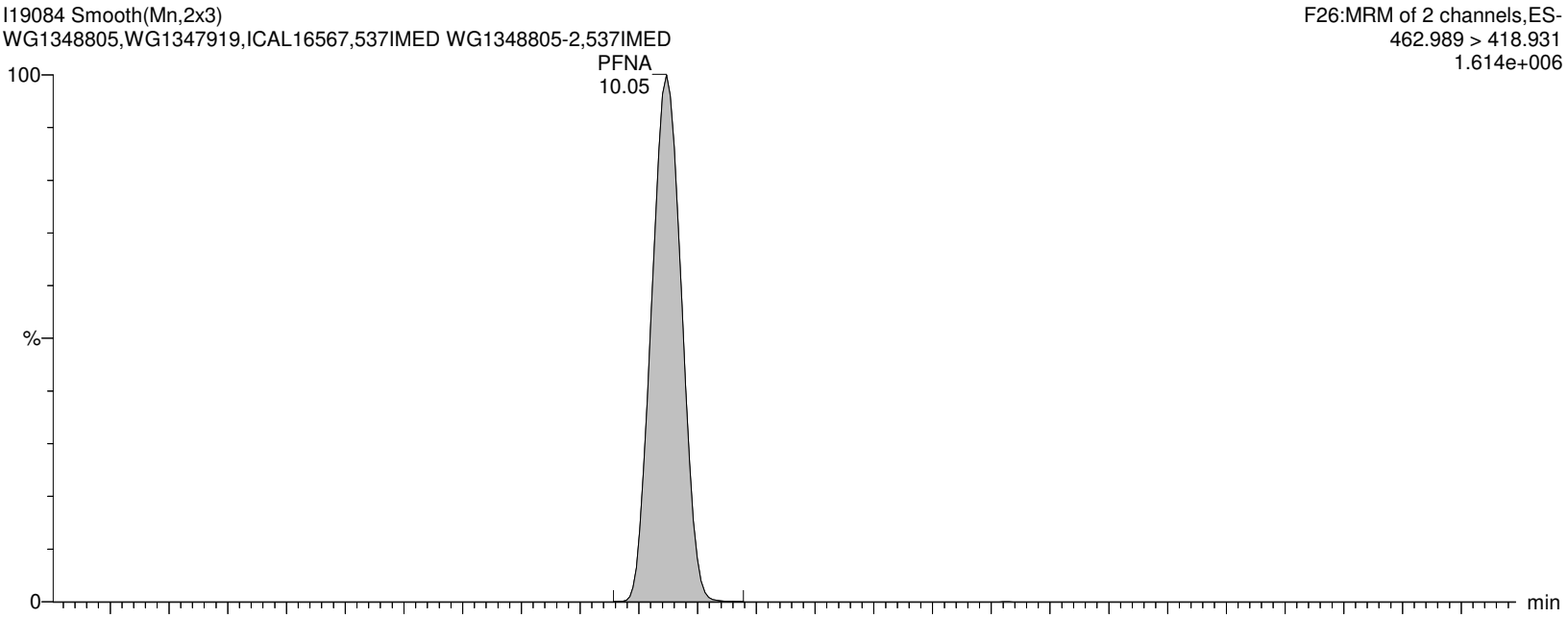


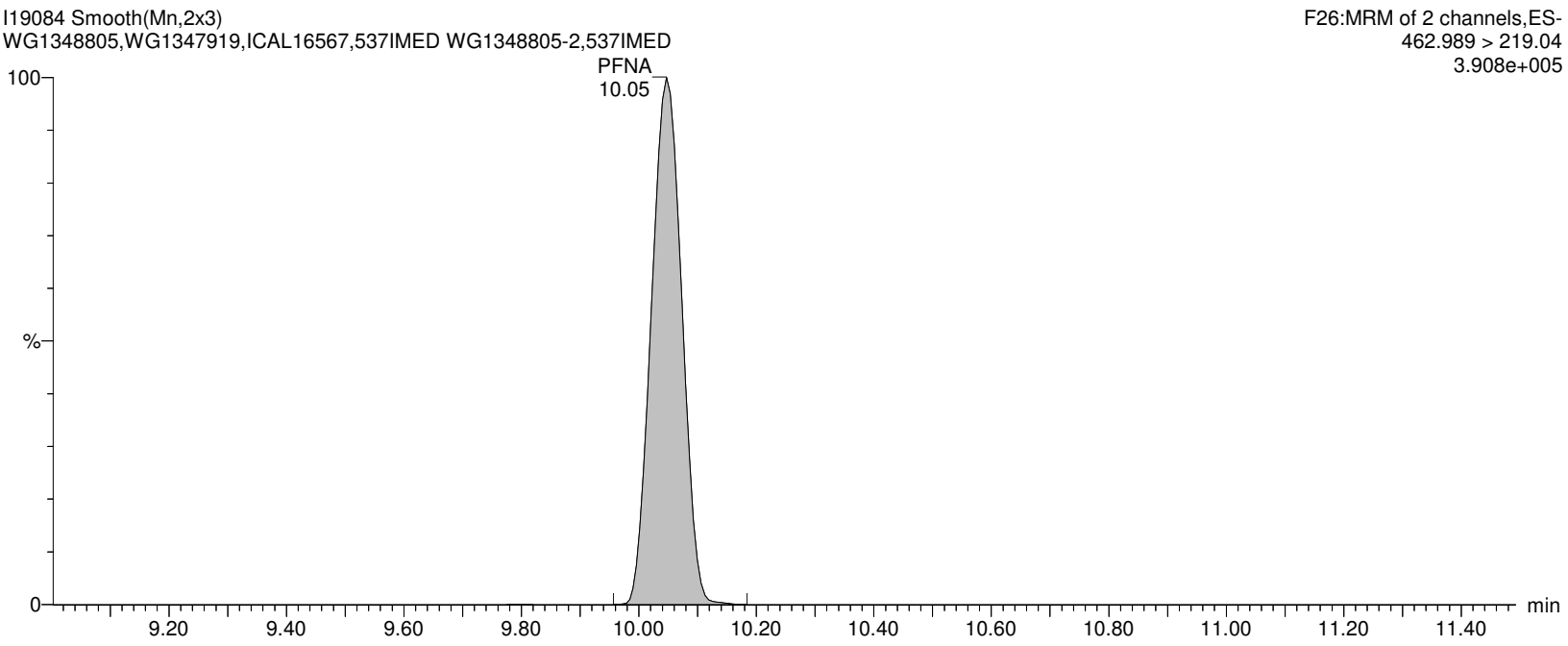



all concentration units in (ng/mL)

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**Instrument: XEVO-TQSmicro#QEA0276**
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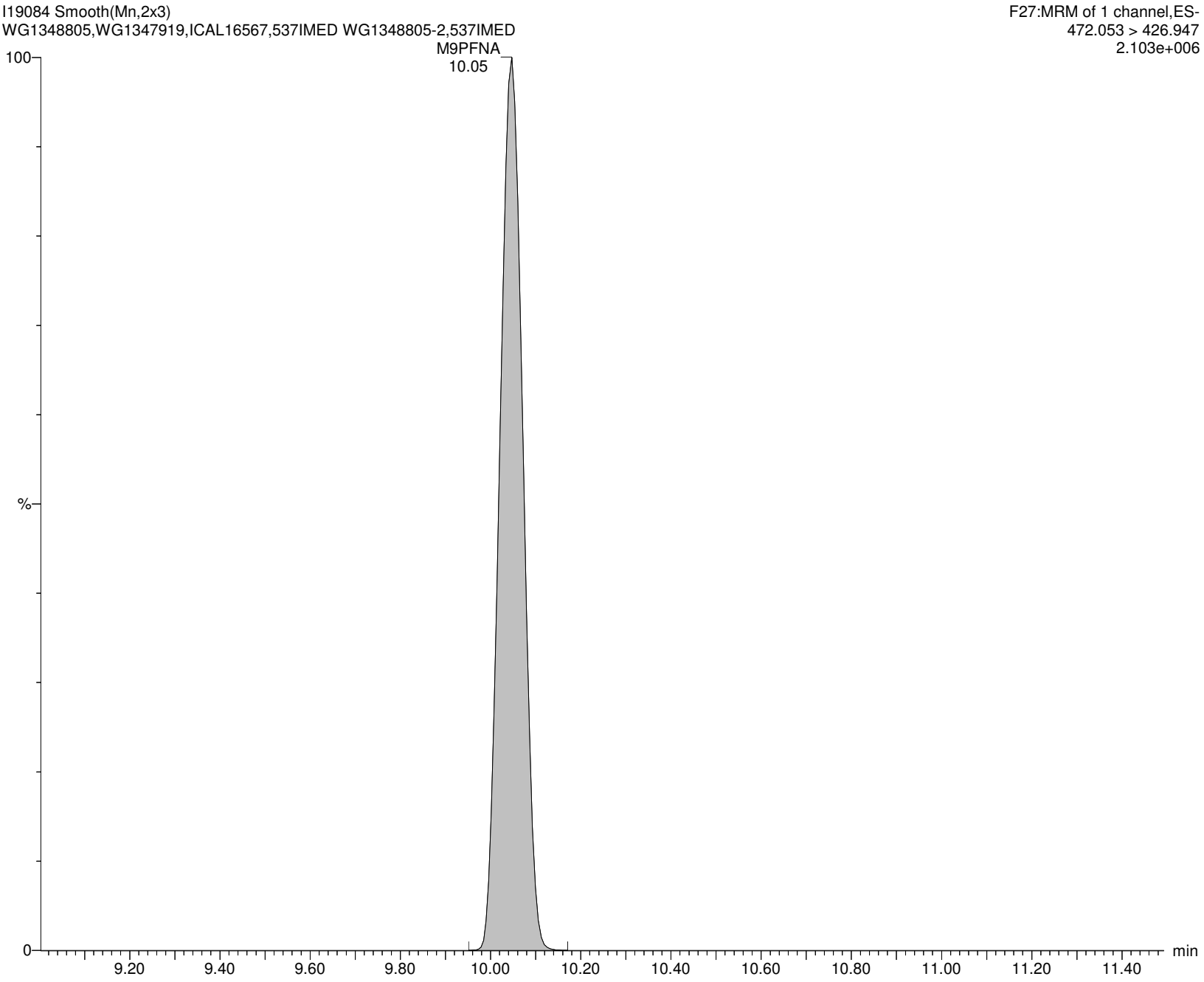
**M9PFNA**





all concentration units in (ng/mL)

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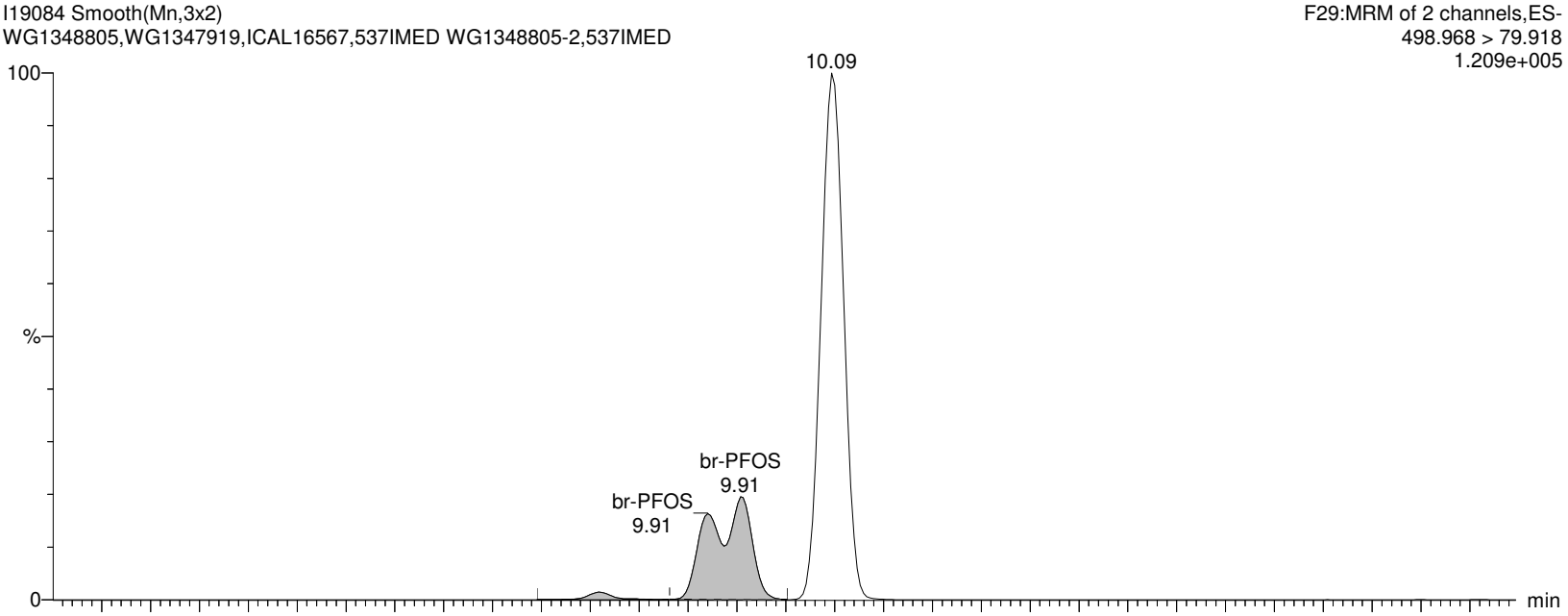
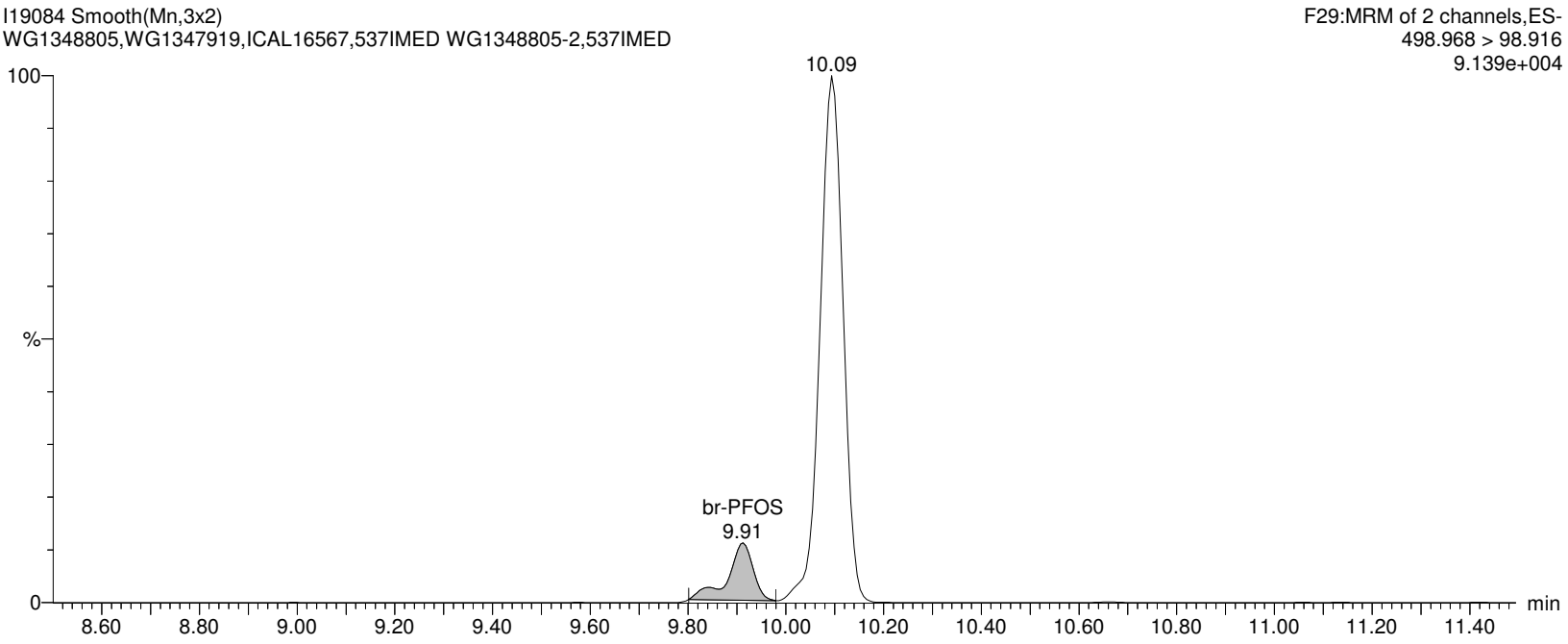
**br-PFOS**





all concentration units in (ng/mL)

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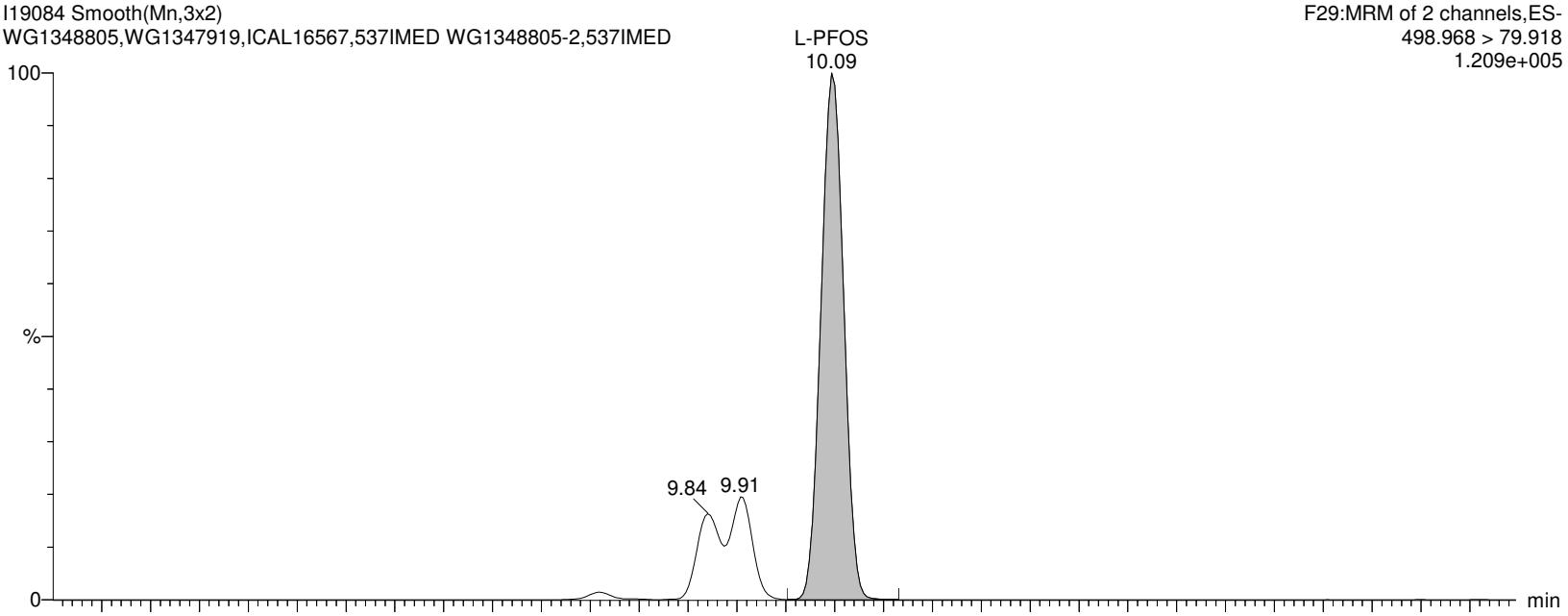
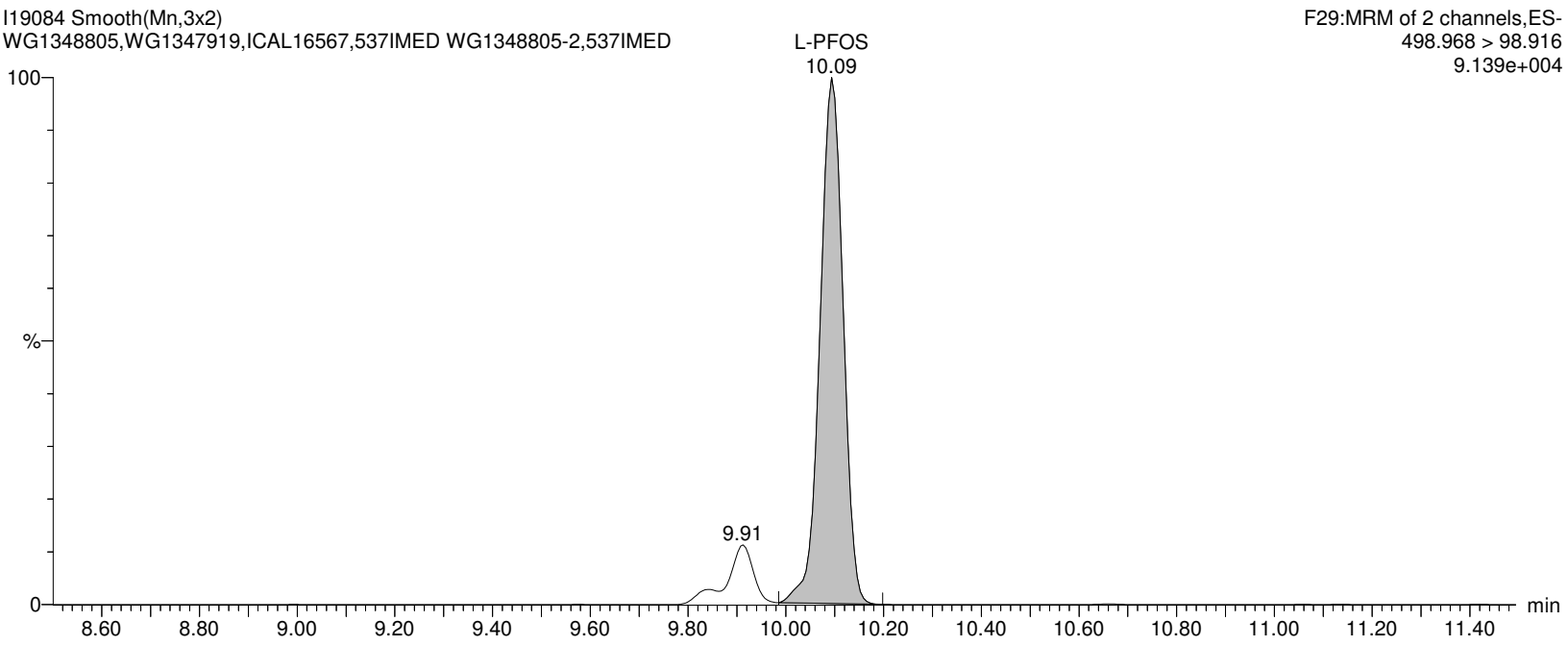
**L-PFOS**





all concentration units in (ng/mL)

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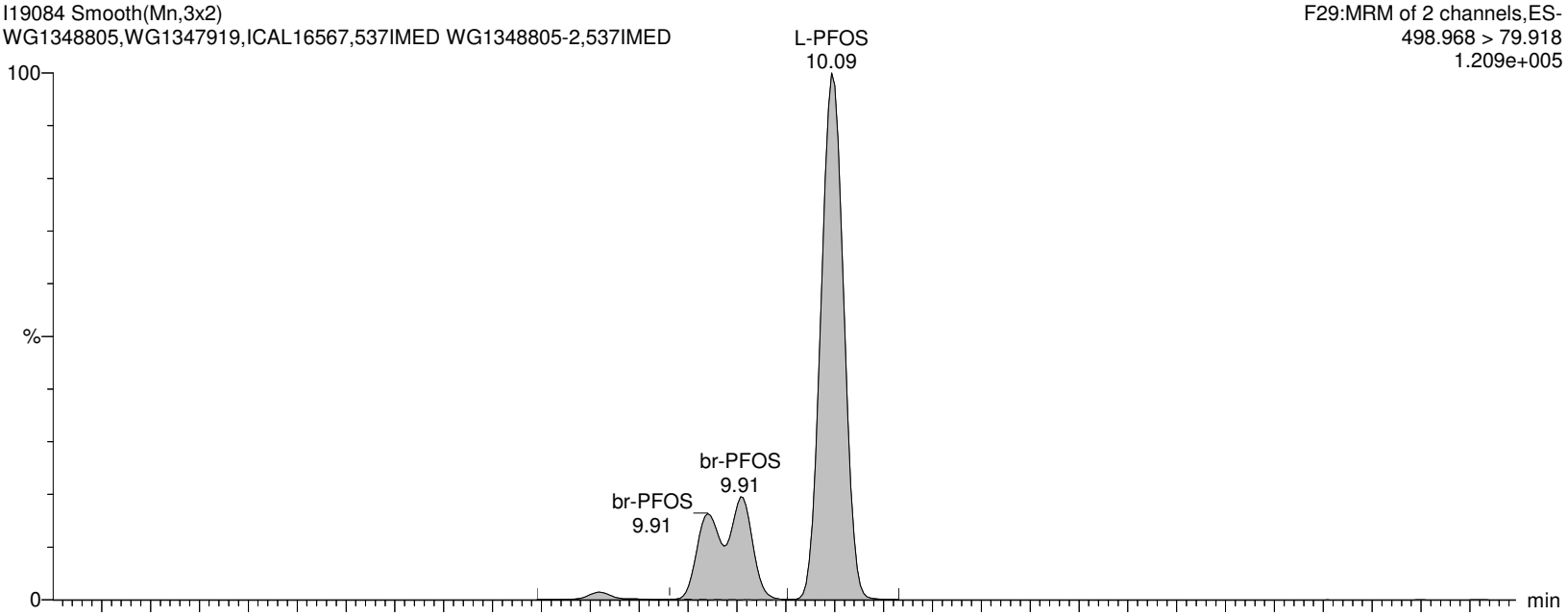
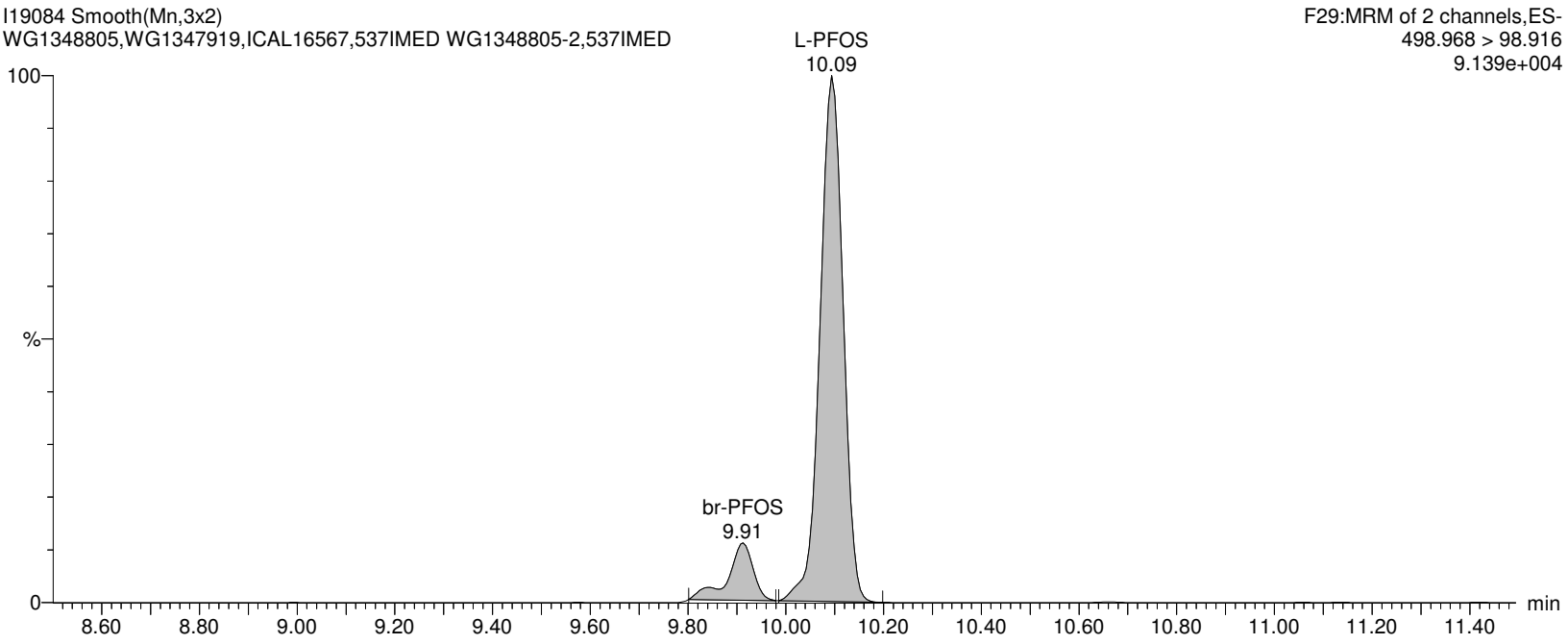
**PFOS**





all concentration units in (ng/mL)

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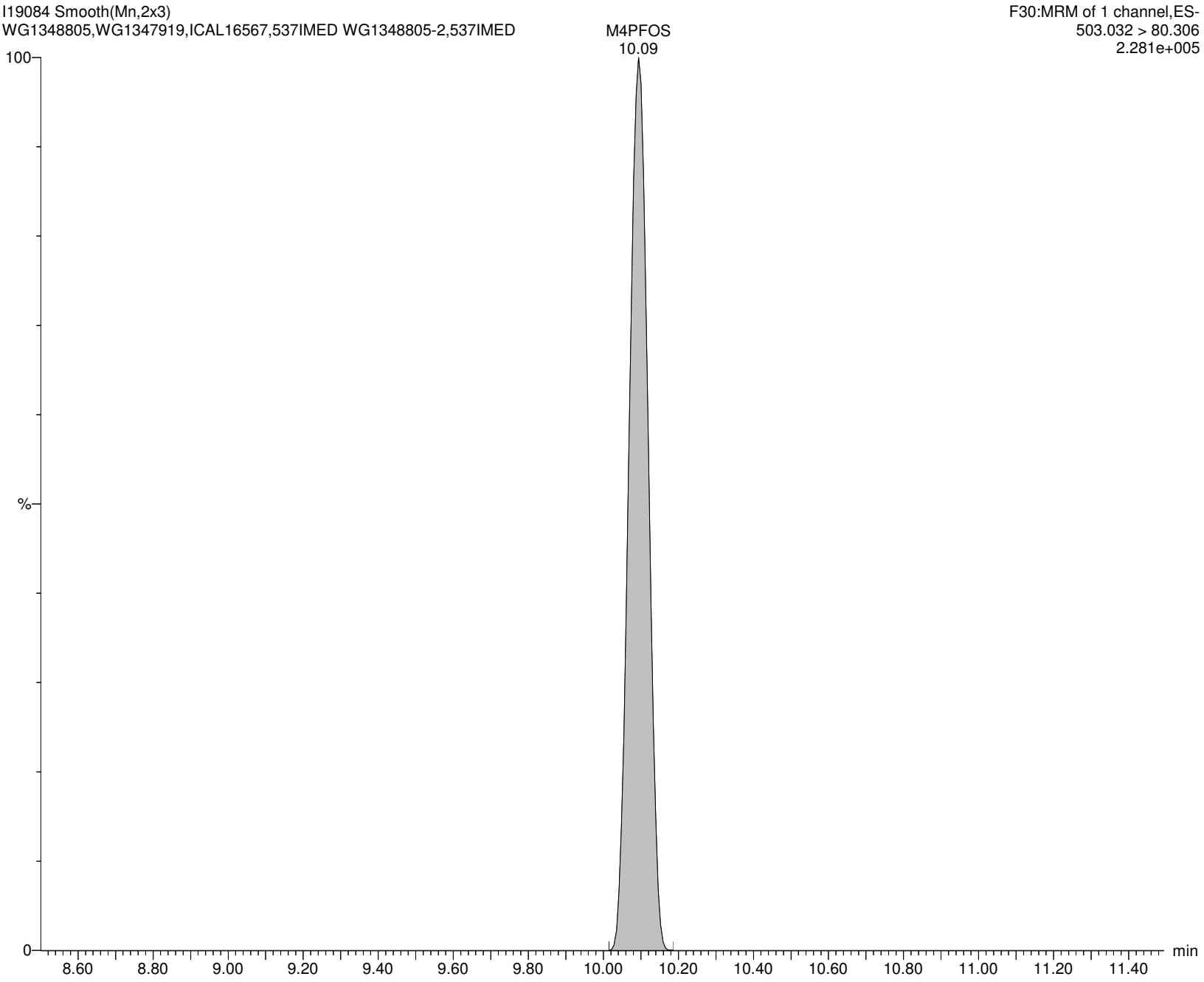
**M4PFOS**





all concentration units in (ng/mL)

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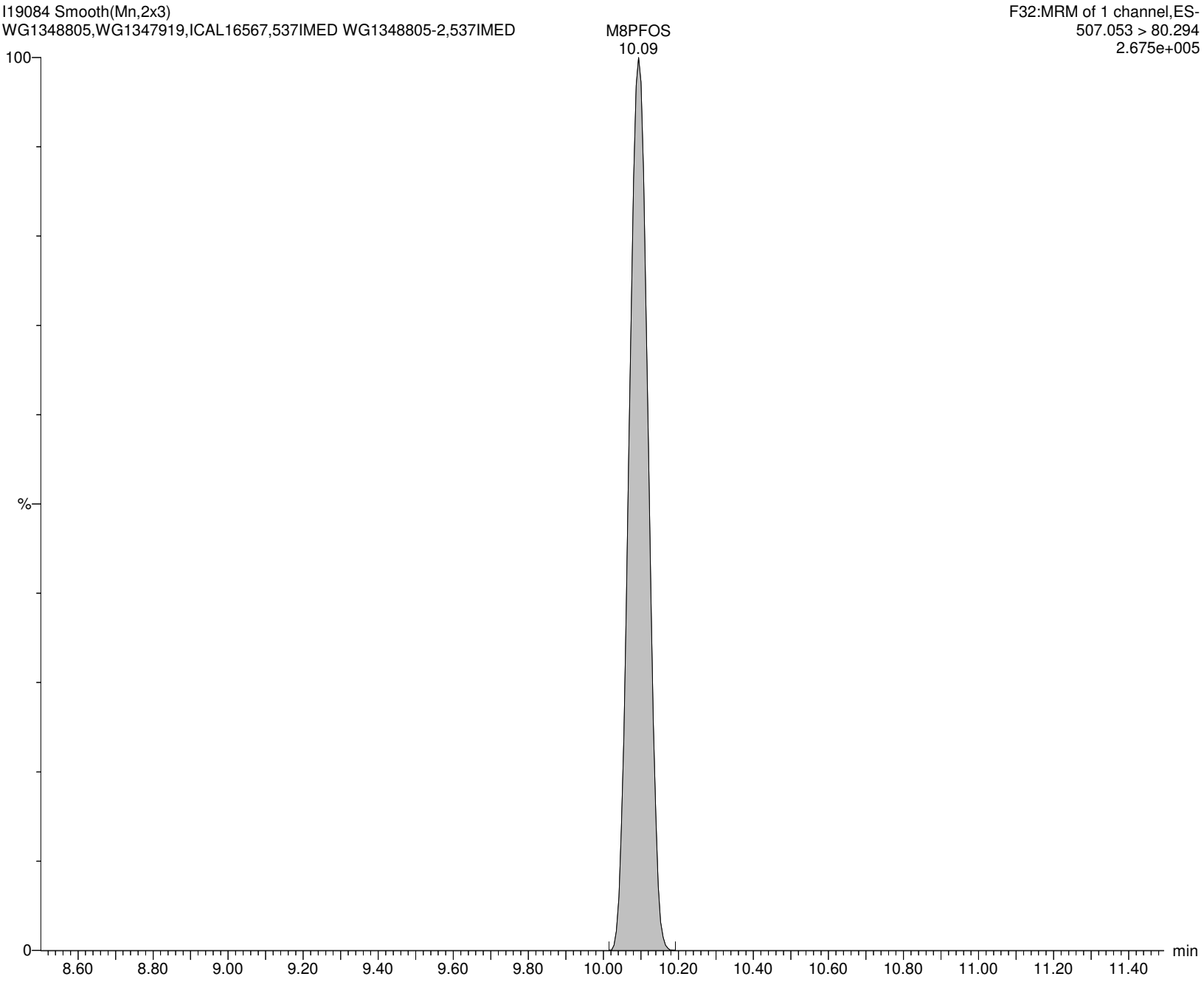
**M8PFOS**





all concentration units in (ng/mL)

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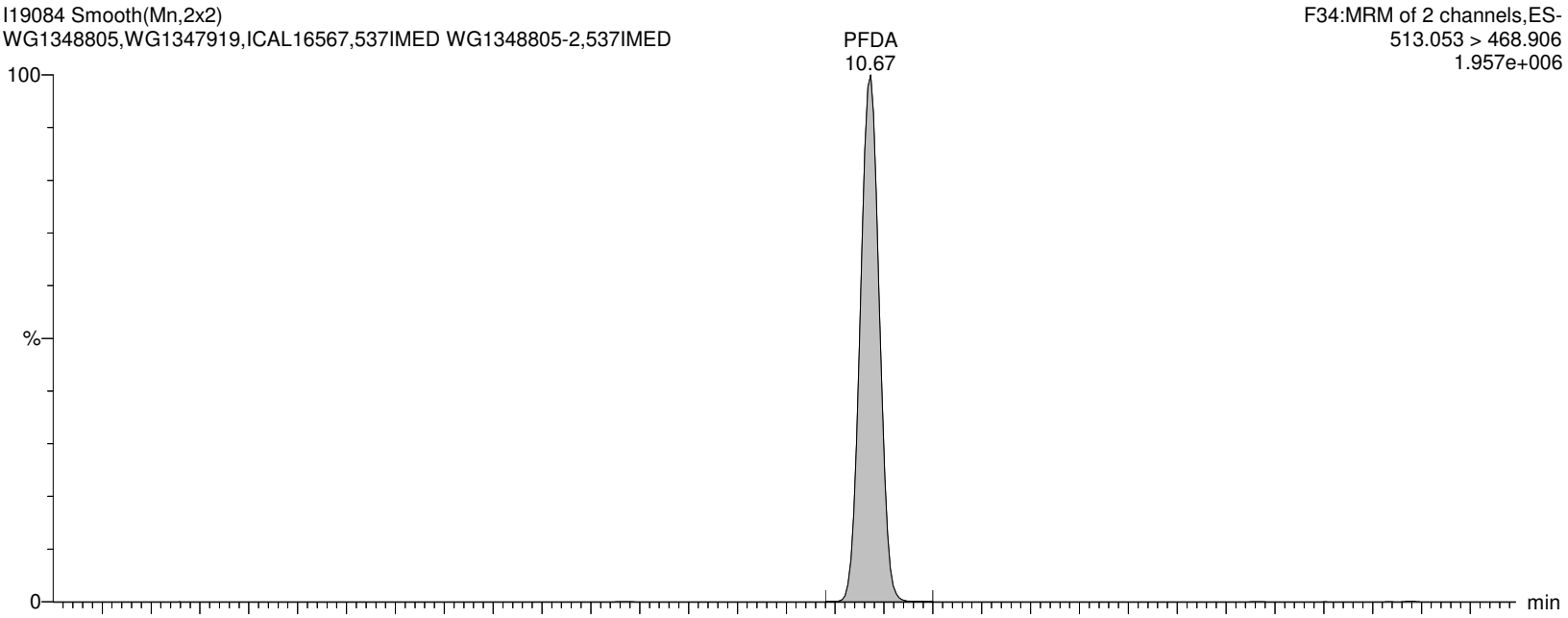


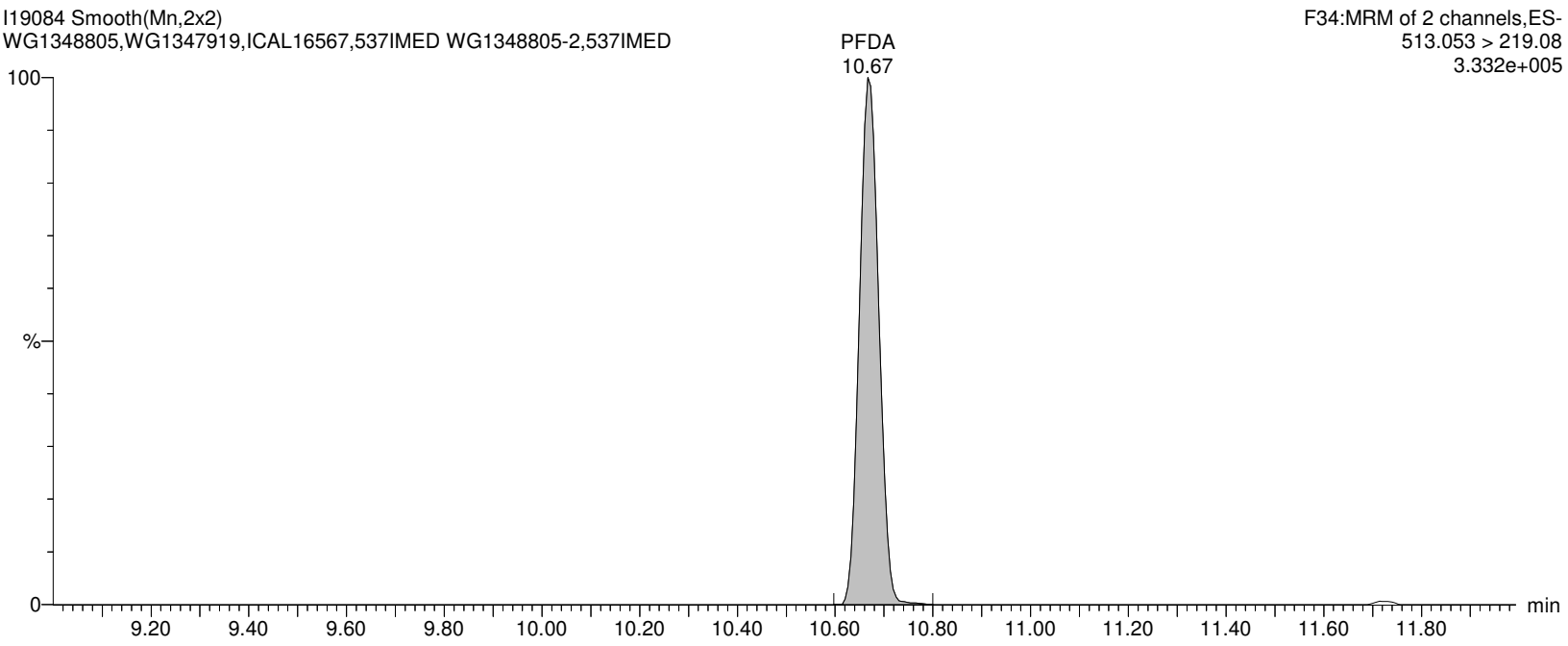



all concentration units in (ng/mL)

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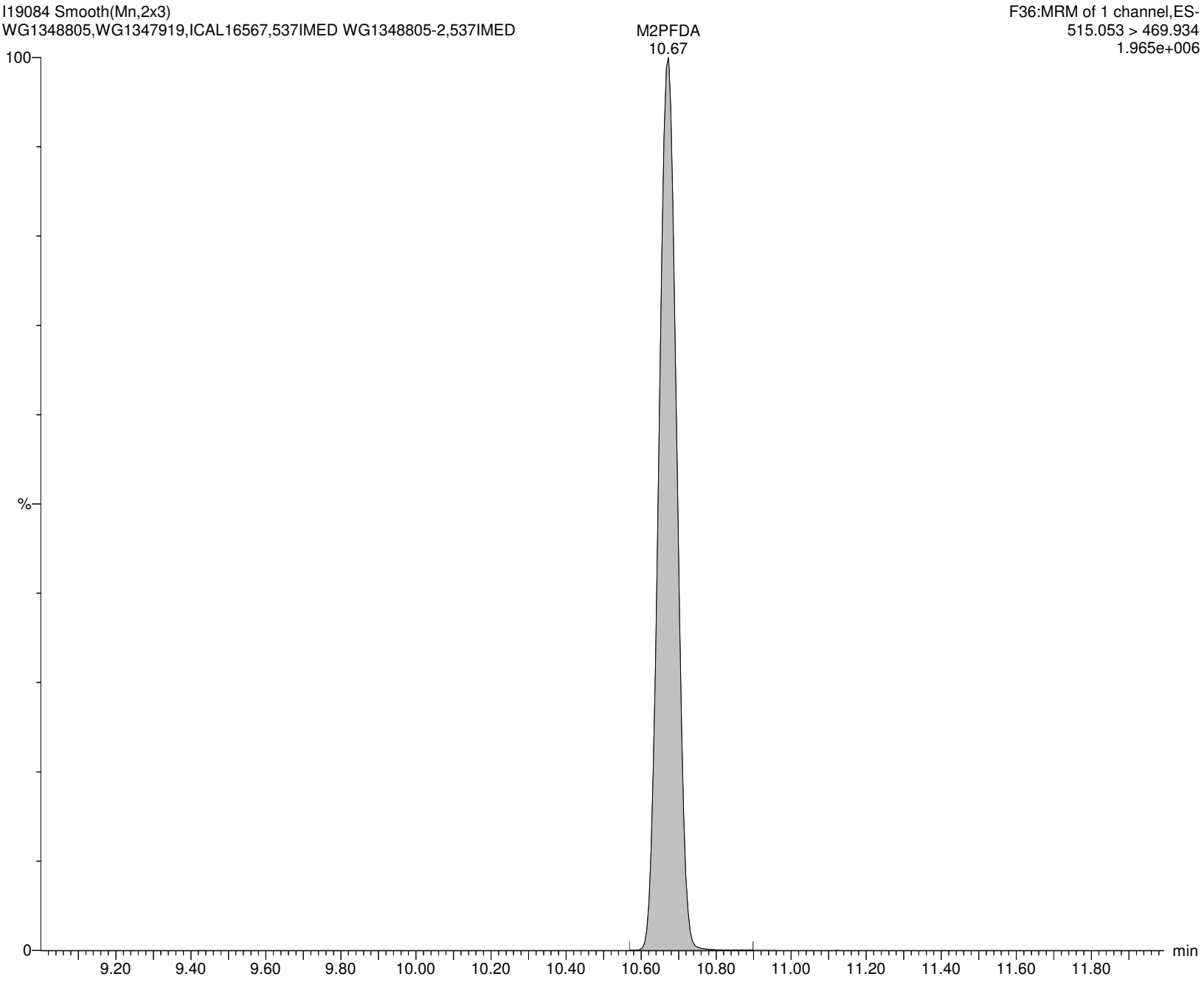



all concentration units in (ng/mL)

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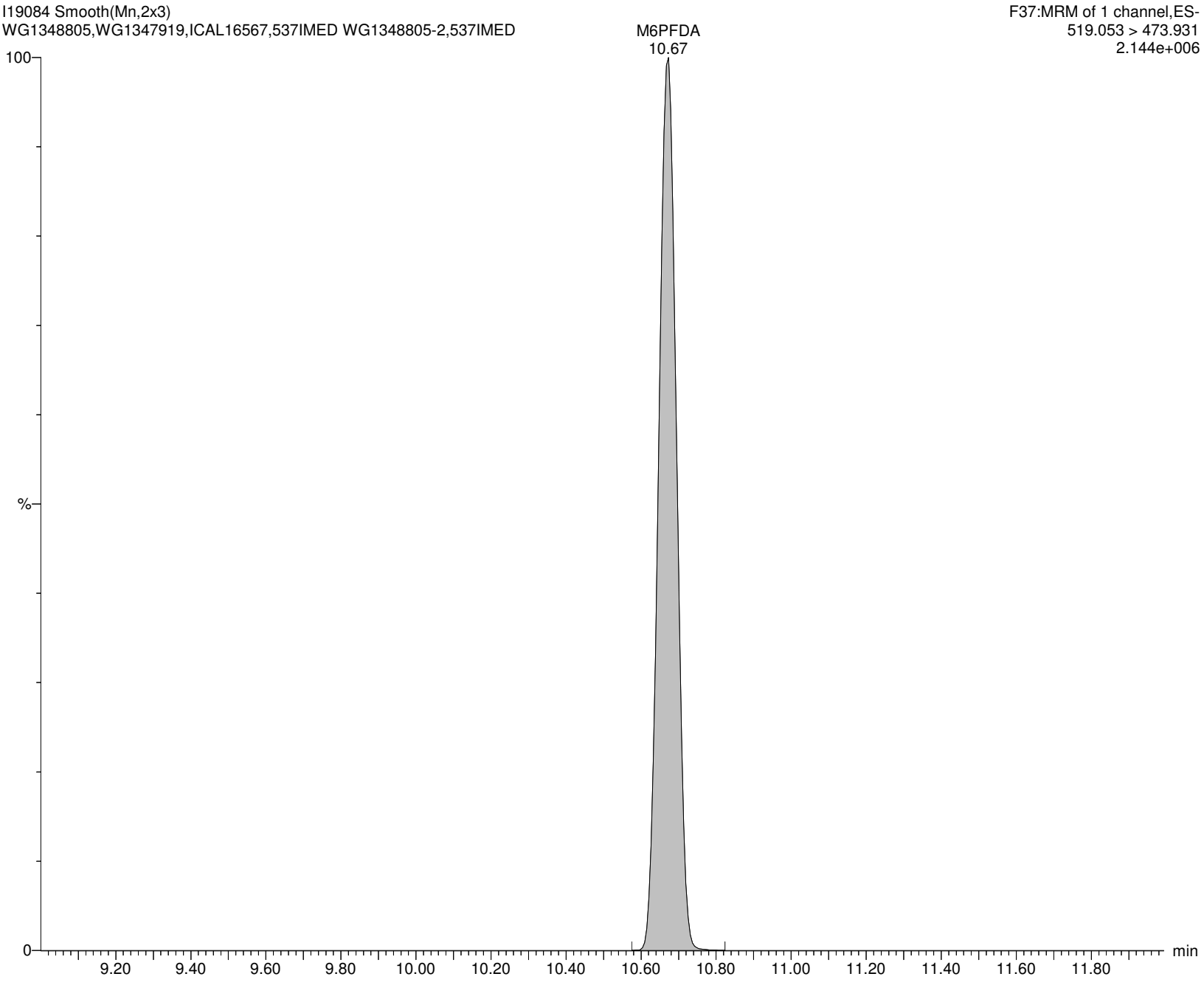



all concentration units in (ng/mL)

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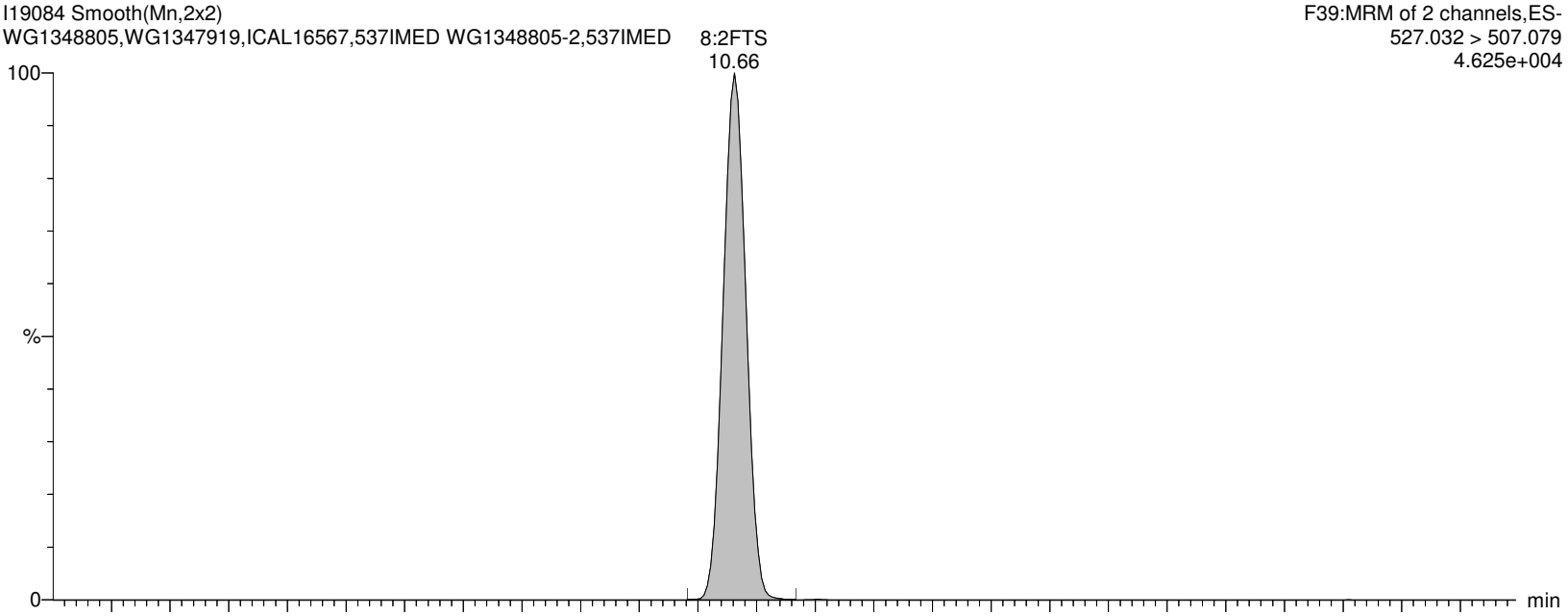
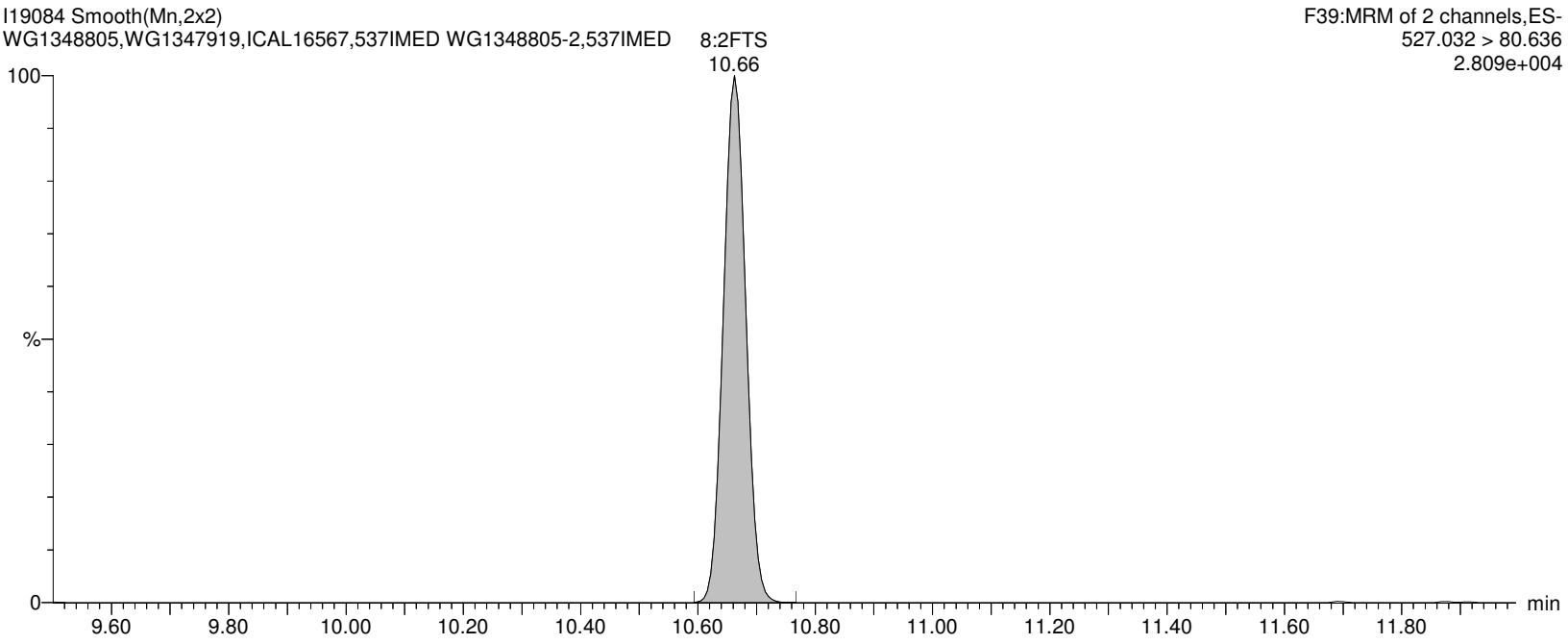
**8:2FTS**





all concentration units in (ng/mL)

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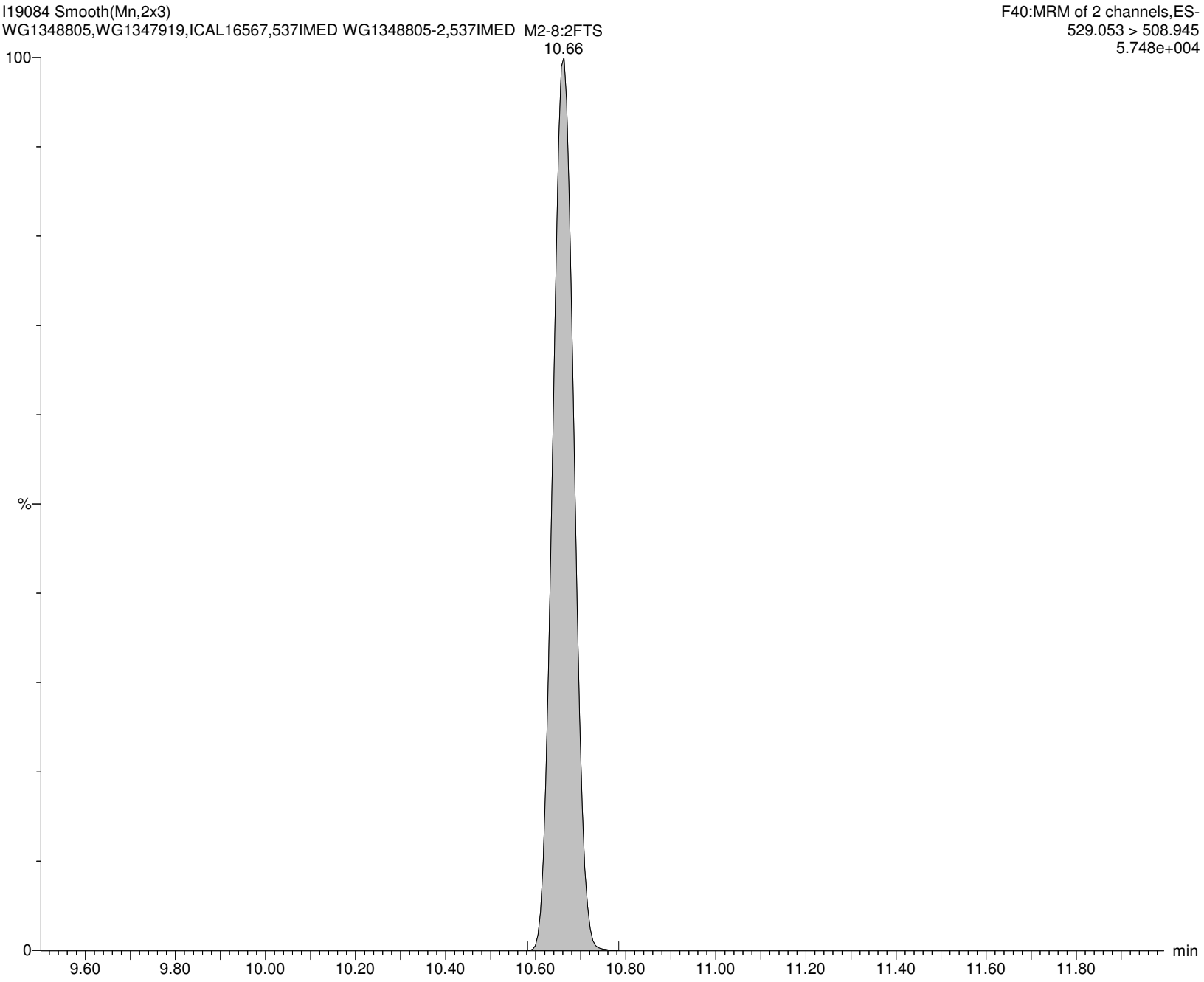



all concentration units in (ng/mL)

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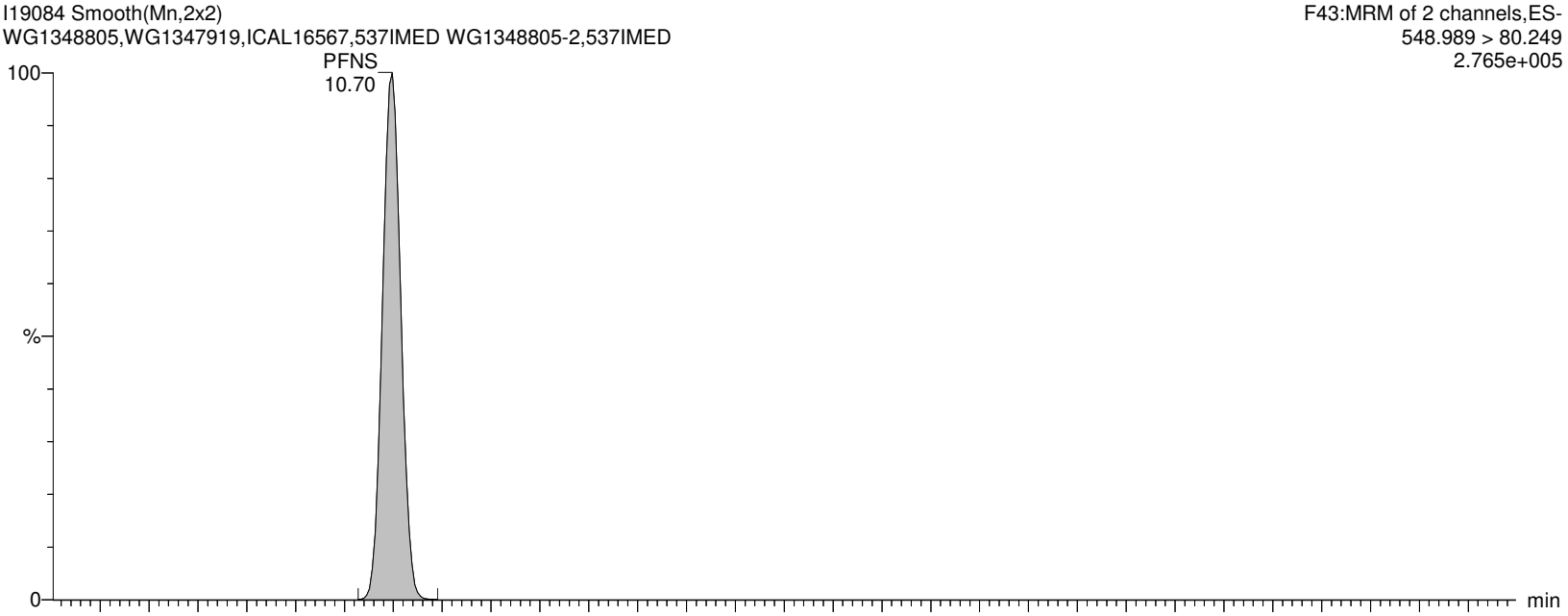
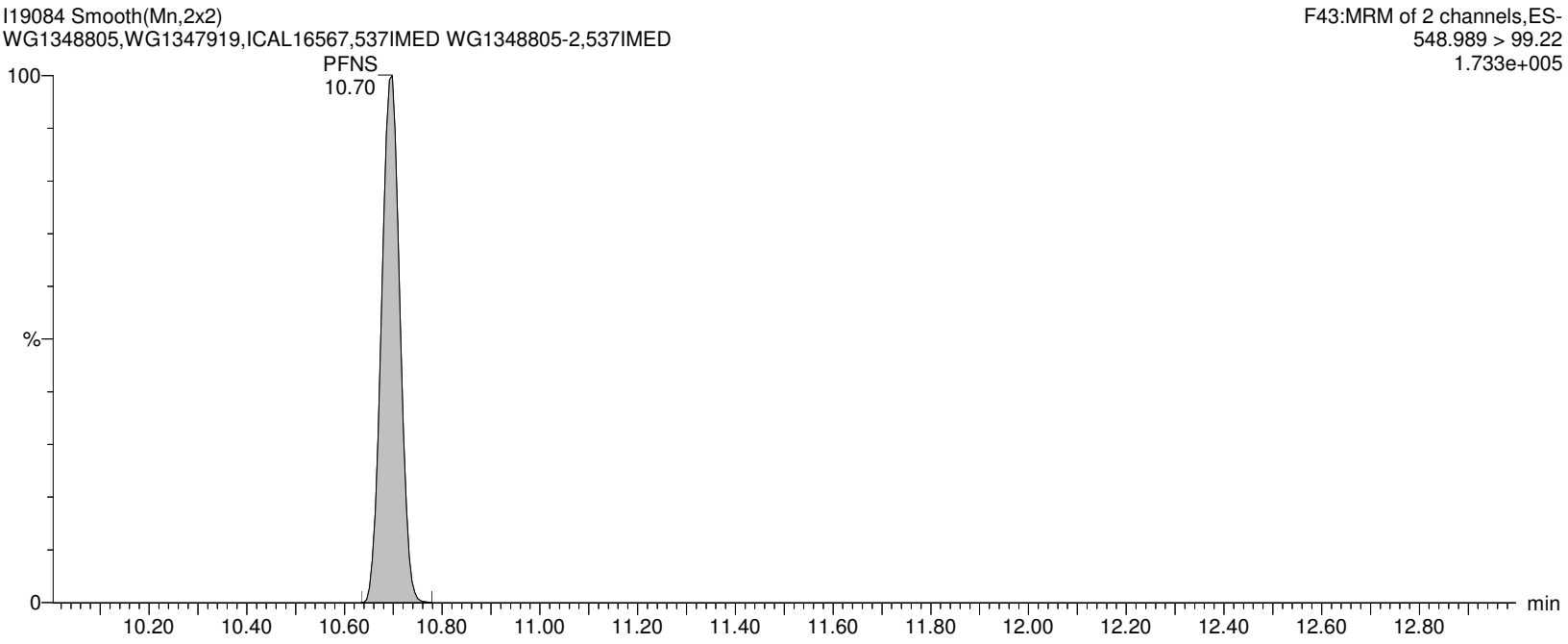
**PFNS**



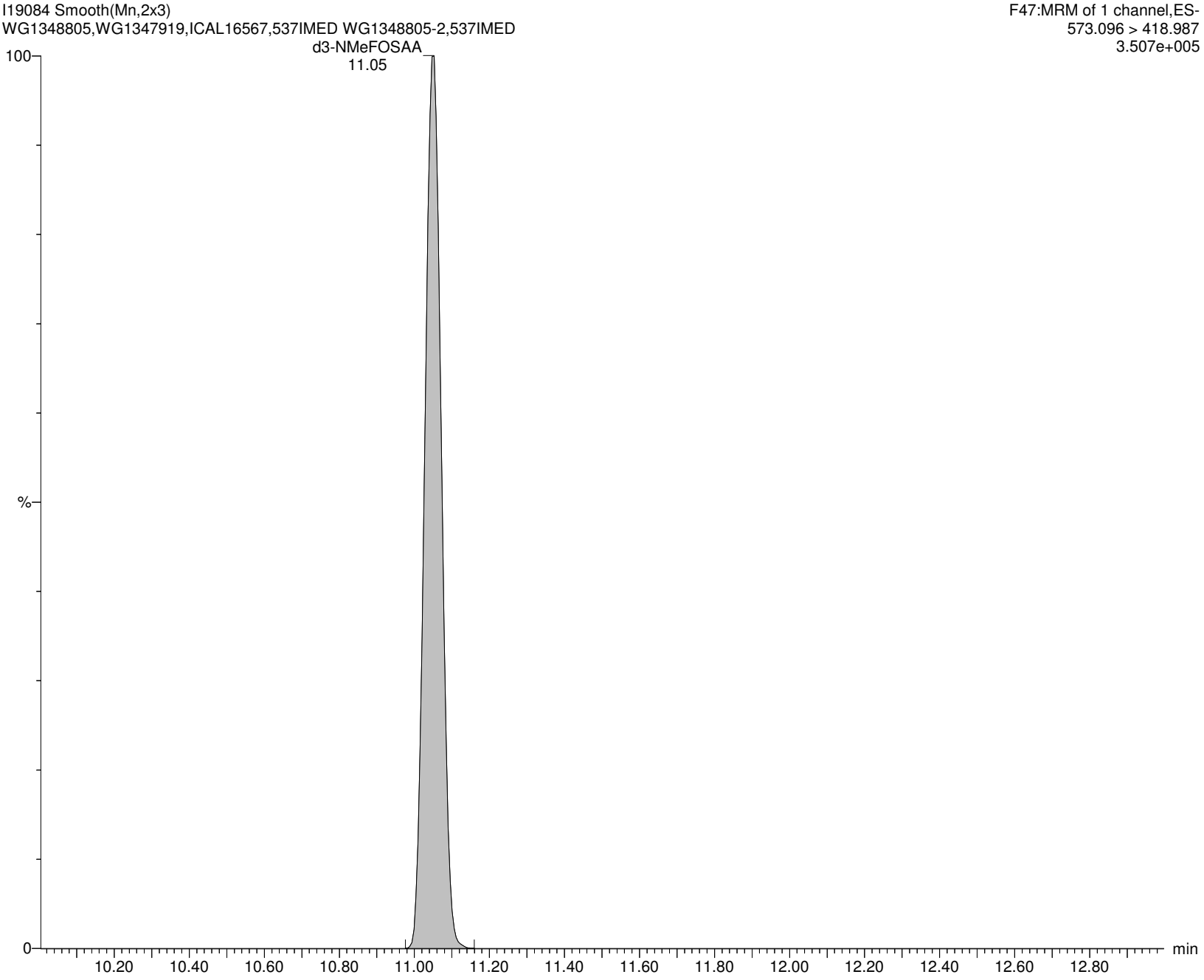


all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200309_537ISO.PRO\Data\WG1348805A.qld
Last Altered: Tuesday, March 10, 2020 20:06:08 Eastern Daylight Time
Printed: Tuesday, March 10, 2020 20:08:36 Eastern Daylight Time

**Name: I19084**
**ID: WG1348805-2,537IMED**
**Date: 09-Mar-2020**
**Time: 17:03:03**
**Description: WG1348805,WG1347919,ICAL16567,537IMED**
**User: LCMS01:JW**
**Vial: 1:A,3**
**Instrument: XEVO-TQSmicro#QEA0276**
**Inlet Method Name: C:\MassLynx\Data\200309_537ISO.PRO\ACQUDB\LCMS_537_ISO_MeOH**
**Tune Method Name: C:\MassLynx\Data\200309_537ISO.PRO\ACQUDB\190709_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\200309_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**d3-NMeFOSAA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200309_537ISO.PRO\Data\WG1348805A.qld
Last Altered: Tuesday, March 10, 2020 20:06:08 Eastern Daylight Time
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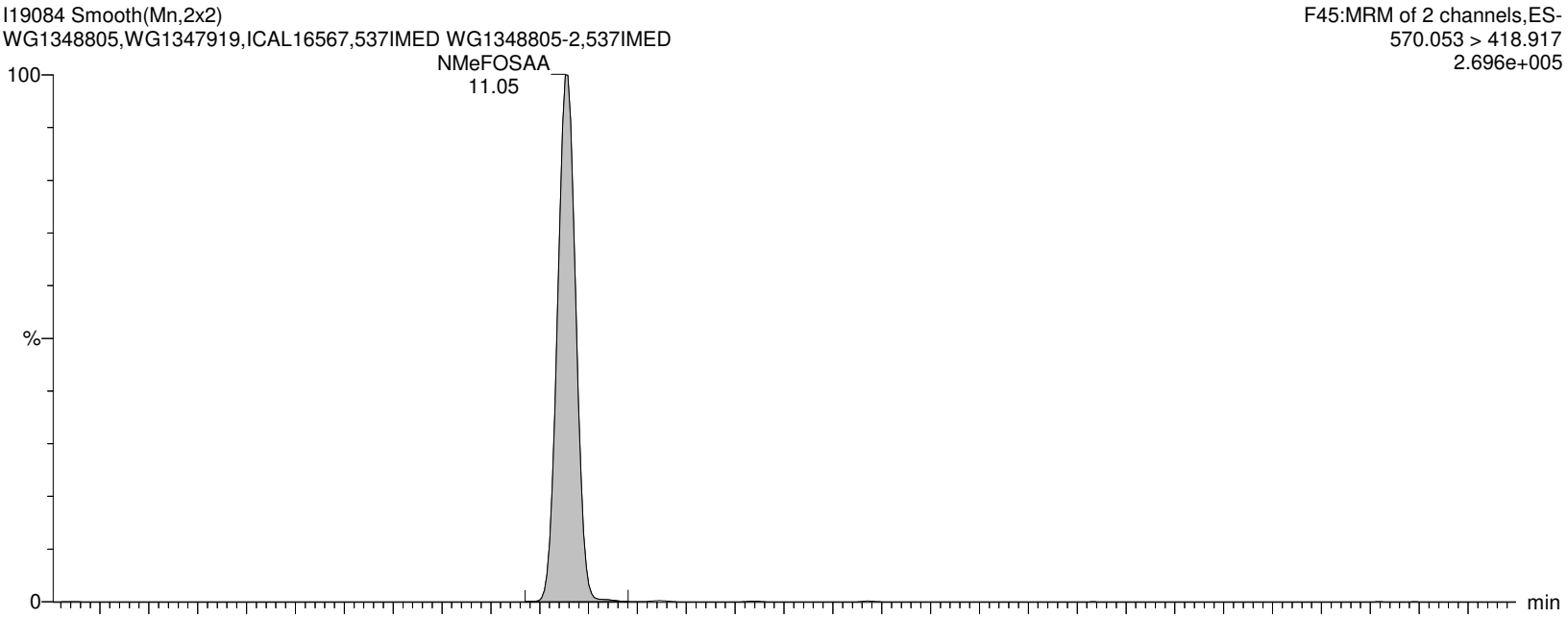
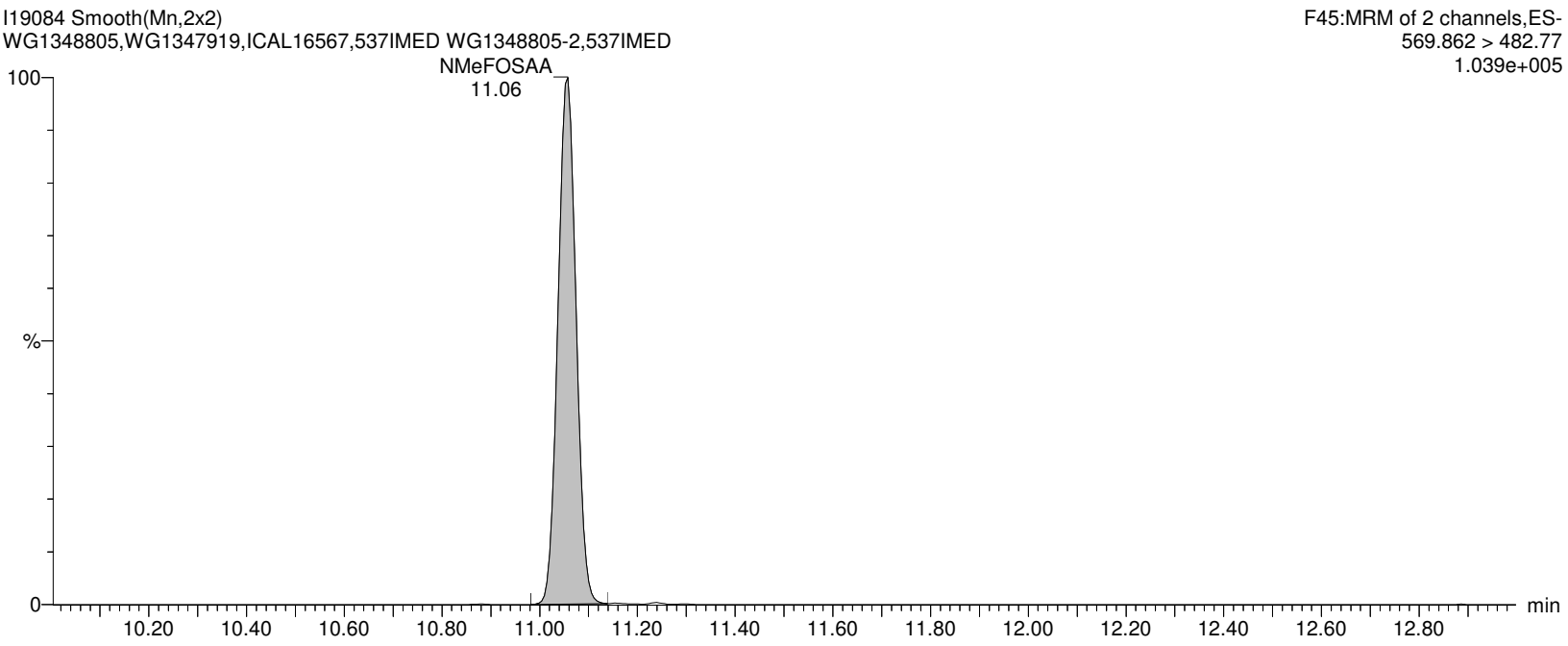
**User: LCMS01:JW**
**Vial: 1:A,3**
**Instrument: XEVO-TQSmicro#QEA0276**
**Inlet Method Name: C:\MassLynx\Data\200309_537ISO.PRO\ACQUDB\LCMS_537_ISO_MeOH**
**Tune Method Name: C:\MassLynx\Data\200309_537ISO.PRO\ACQUDB\190709_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\200309_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**NMeFOSAA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200309_537ISO.PRO\Data\WG1348805A.qld
Last Altered: Tuesday, March 10, 2020 20:06:08 Eastern Daylight Time
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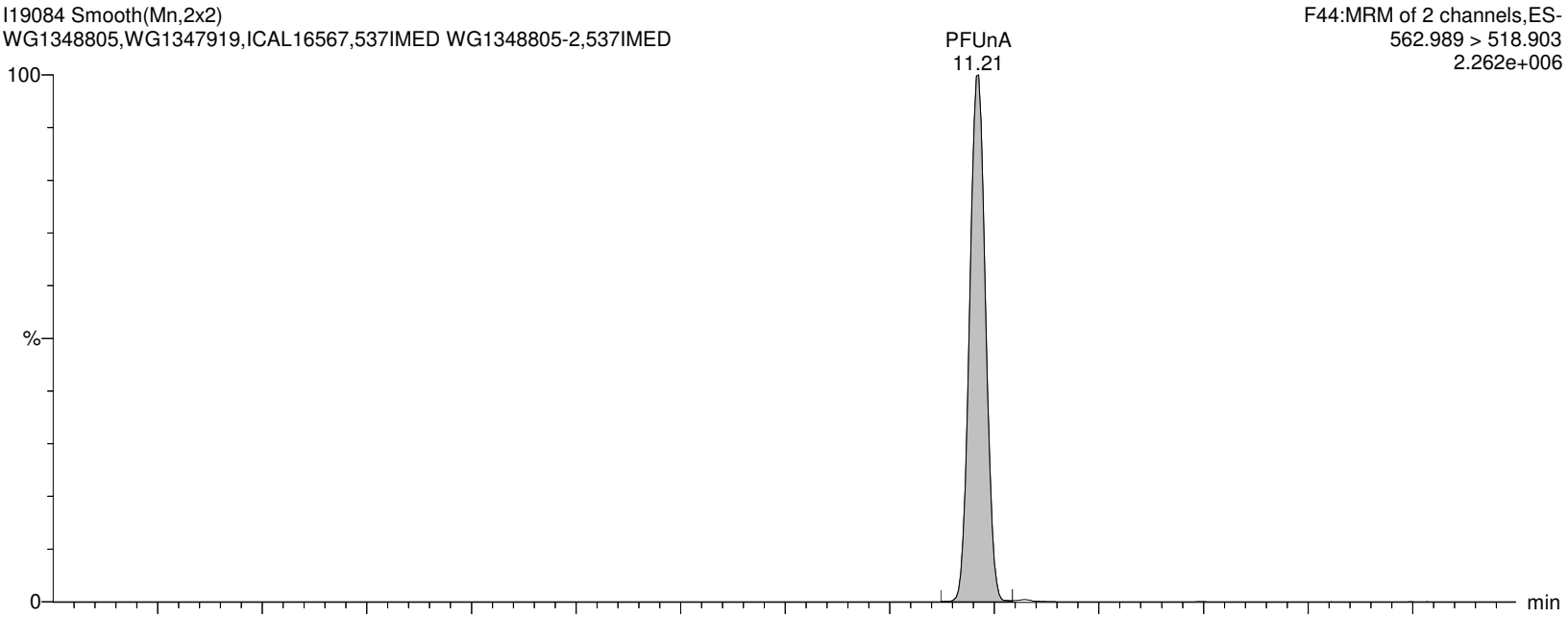
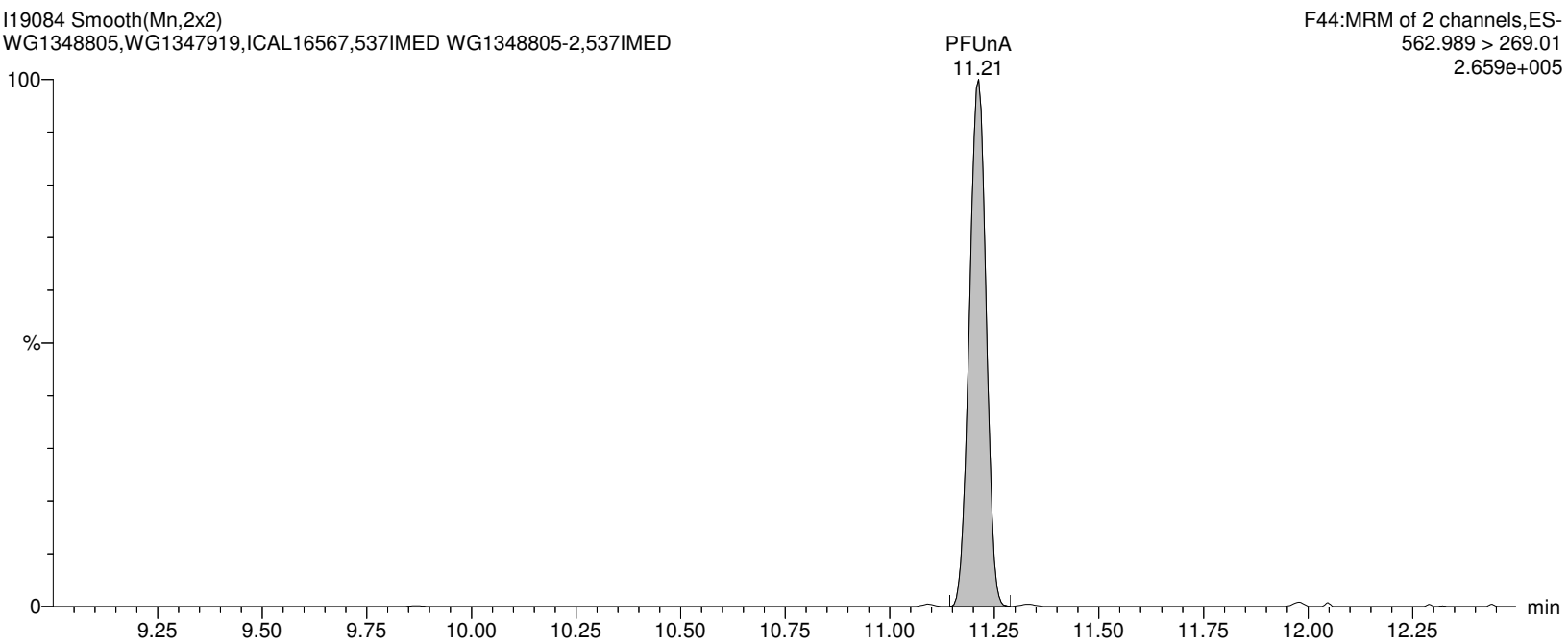
**User: LCMS01:JW**
**Vial: 1:A,3**
**Instrument: XEVO-TQSmicro#QEA0276**
**Inlet Method Name: C:\MassLynx\Data\200309_537ISO.PRO\ACQUDB\LCMS_537_ISO_MeOH**
**Tune Method Name: C:\MassLynx\Data\200309_537ISO.PRO\ACQUDB\190709_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\200309_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**PFUnA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200309_537ISO.PRO\Data\WG1348805A.qld
Last Altered: Tuesday, March 10, 2020 20:06:08 Eastern Daylight Time
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**Description: WG1348805,WG1347919,ICAL16567,537IMED**
**User: LCMS01:JW**
**Vial: 1:A,3**
**Instrument: XEVO-TQSmicro#QEA0276**
**Inlet Method Name: C:\MassLynx\Data\200309_537ISO.PRO\ACQUDB\LCMS_537_ISO_MeOH**
**Tune Method Name: C:\MassLynx\Data\200309_537ISO.PRO\ACQUDB\190709_TUNE.IPR**
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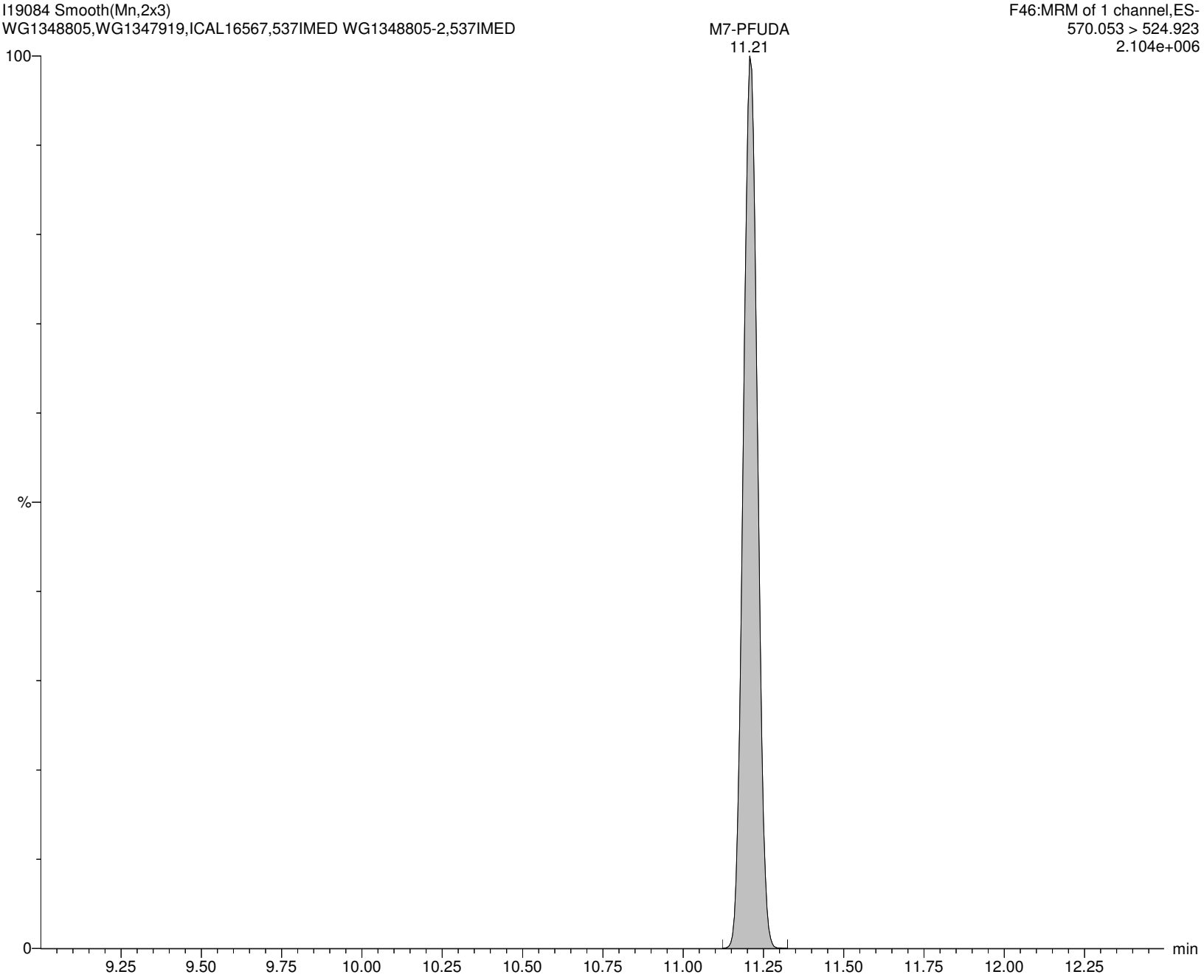
**M7-PFUDA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200309_537ISO.PRO\Data\WG1348805A.qld
Last Altered: Tuesday, March 10, 2020 20:06:08 Eastern Daylight Time
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**User: LCMS01:JW**
**Vial: 1:A,3**
**Instrument: XEVO-TQSmicro#QEA0276**
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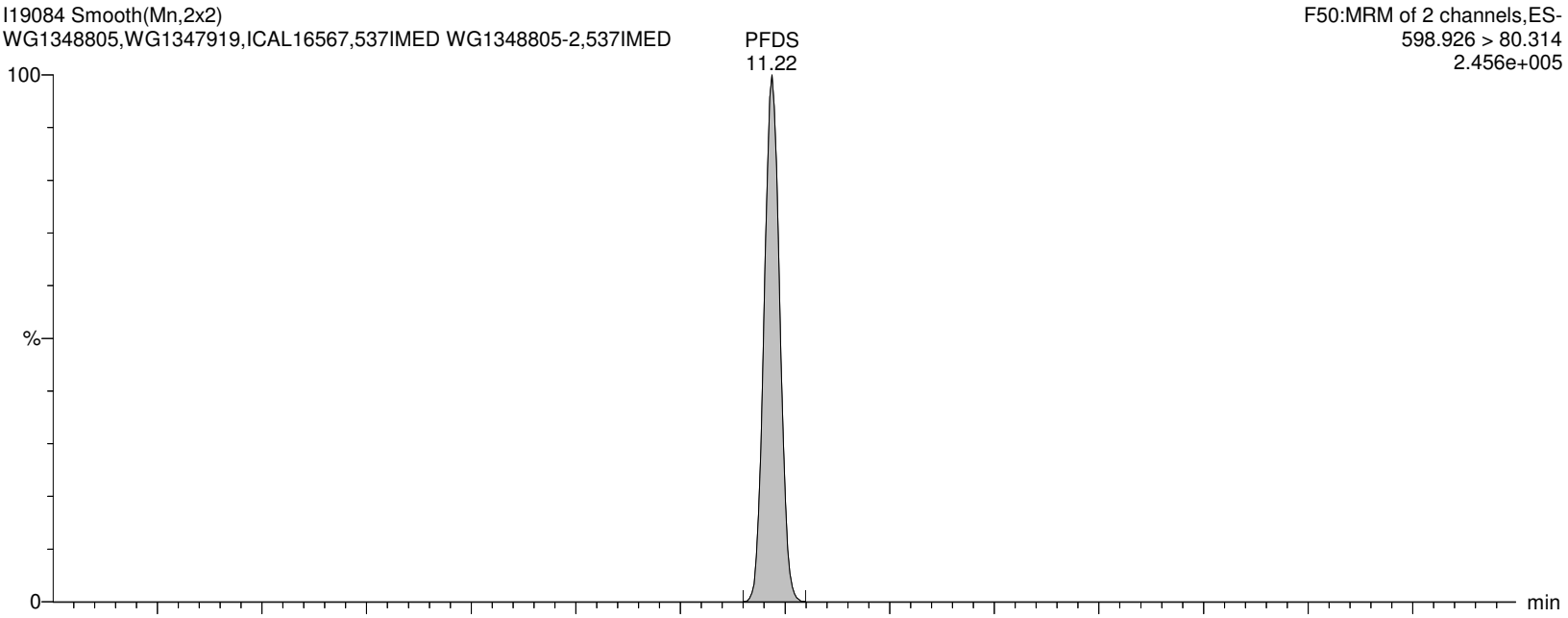
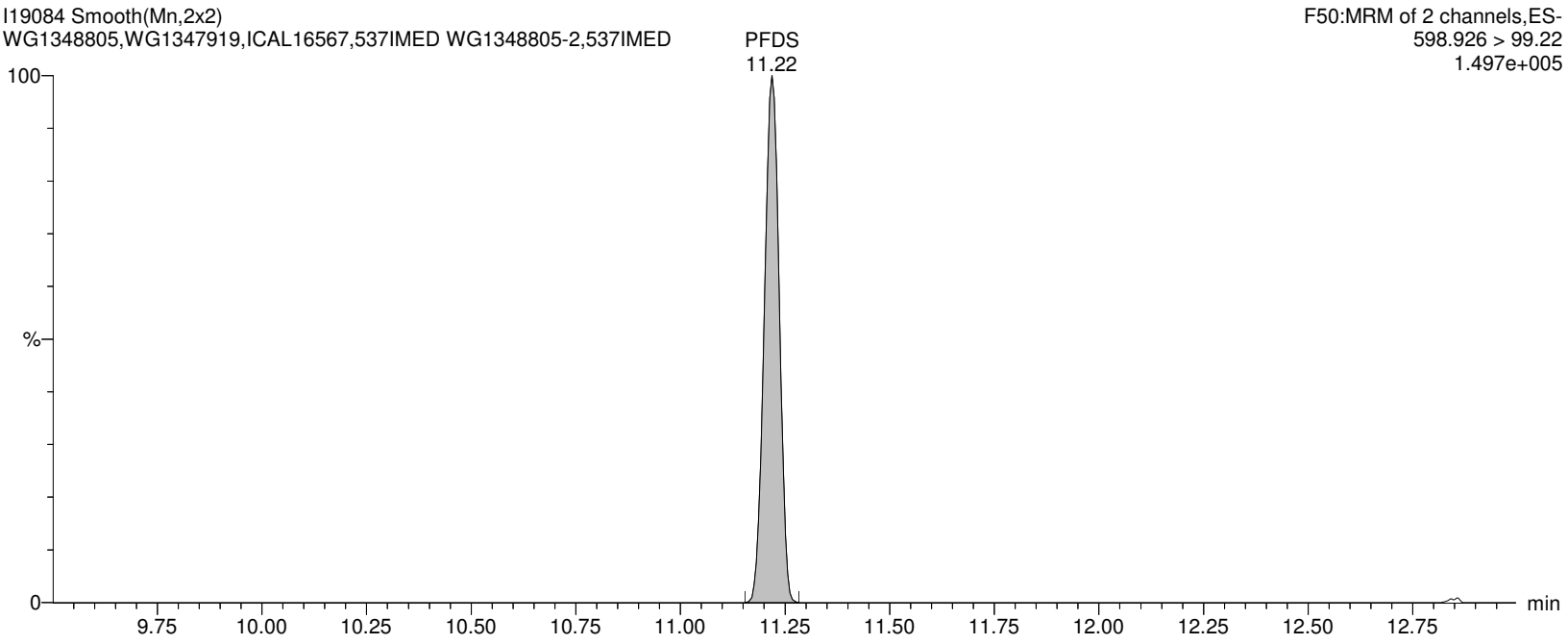
**MS Method Name: C:\MassLynx\Data\200309_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**PFDS**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200309_537ISO.PRO\Data\WG1348805A.qld
Last Altered: Tuesday, March 10, 2020 20:06:08 Eastern Daylight Time
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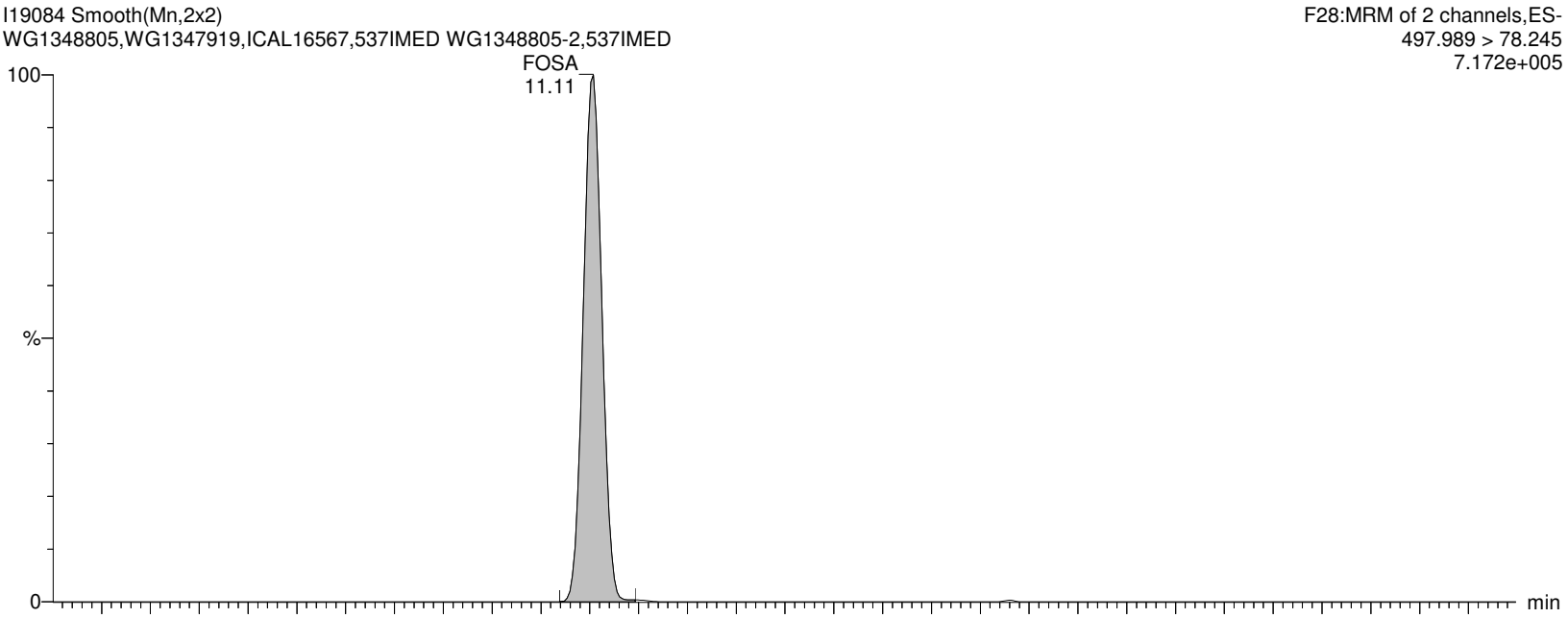
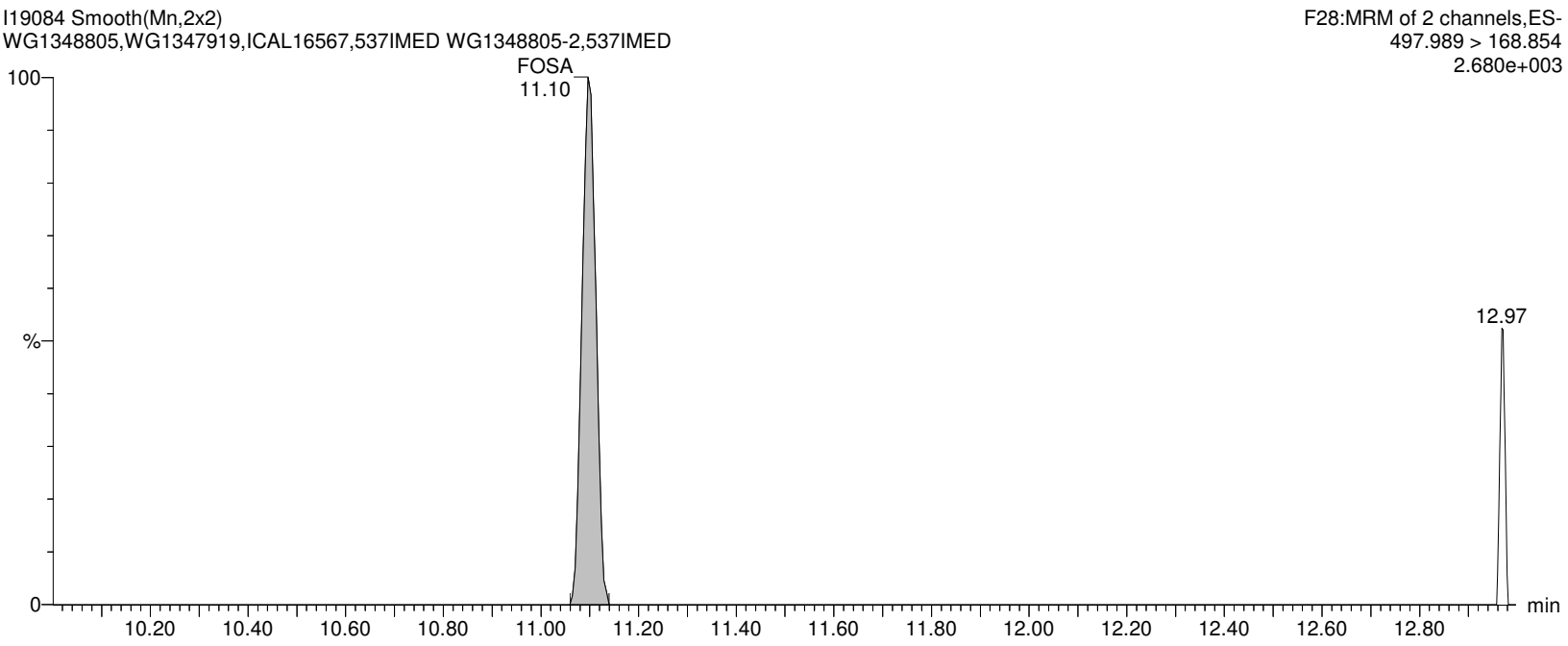
**User: LCMS01:JW**
**Vial: 1:A,3**
**Instrument: XEVO-TQSmicro#QEA0276**
**Inlet Method Name: C:\MassLynx\Data\200309_537ISO.PRO\ACQUDB\LCMS_537_ISO_MeOH**
**Tune Method Name: C:\MassLynx\Data\200309_537ISO.PRO\ACQUDB\190709_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\200309_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**FOSA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200309_537ISO.PRO\Data\WG1348805A.qld
Last Altered: Tuesday, March 10, 2020 20:06:08 Eastern Daylight Time
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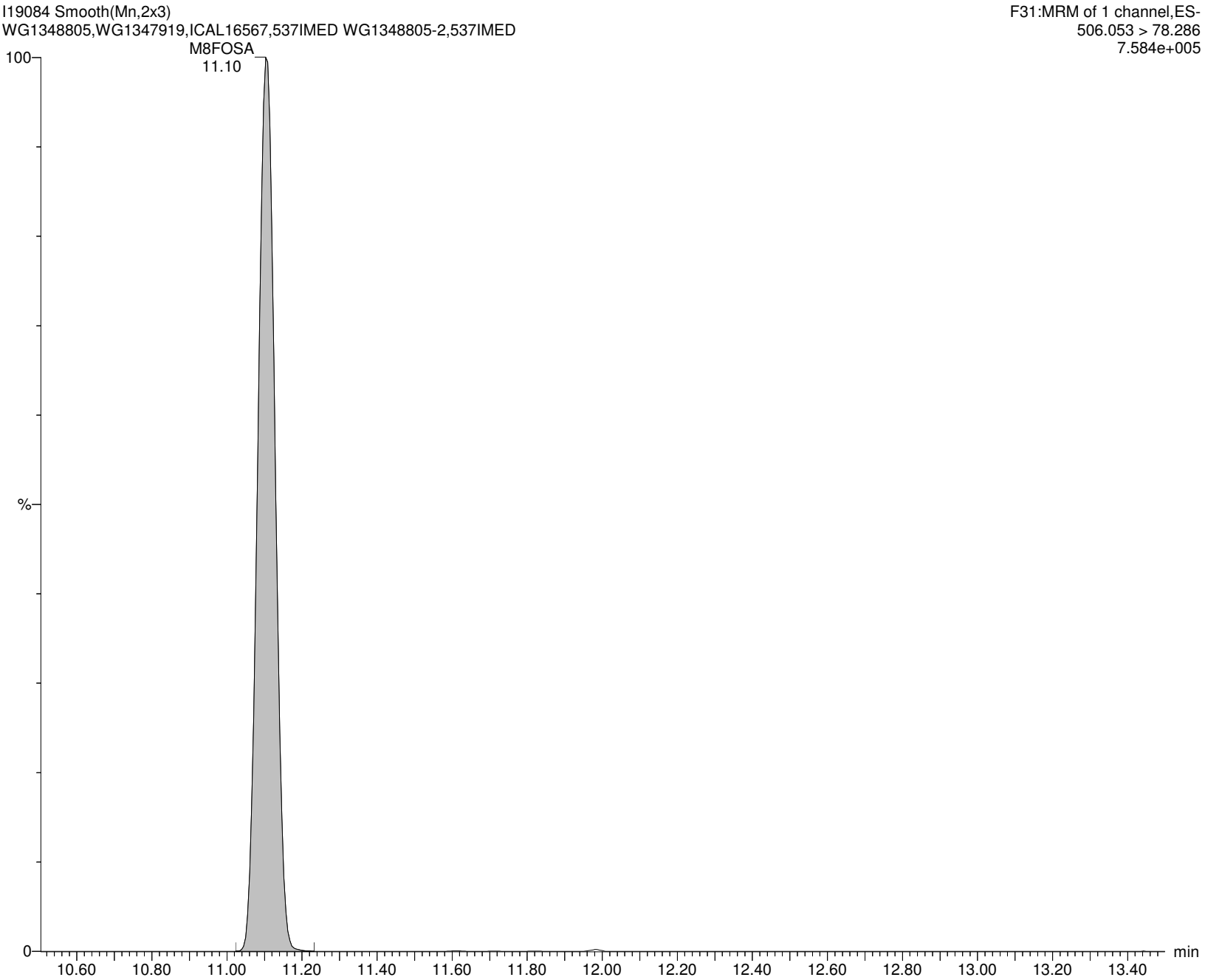
**MS Method Name: C:\MassLynx\Data\200309_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**M8FOSA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200309_537ISO.PRO\Data\WG1348805A.qld
Last Altered: Tuesday, March 10, 2020 20:06:08 Eastern Daylight Time
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**User: LCMS01:JW**
**Vial: 1:A,3**
**Instrument: XEVO-TQSmicro#QEA0276**
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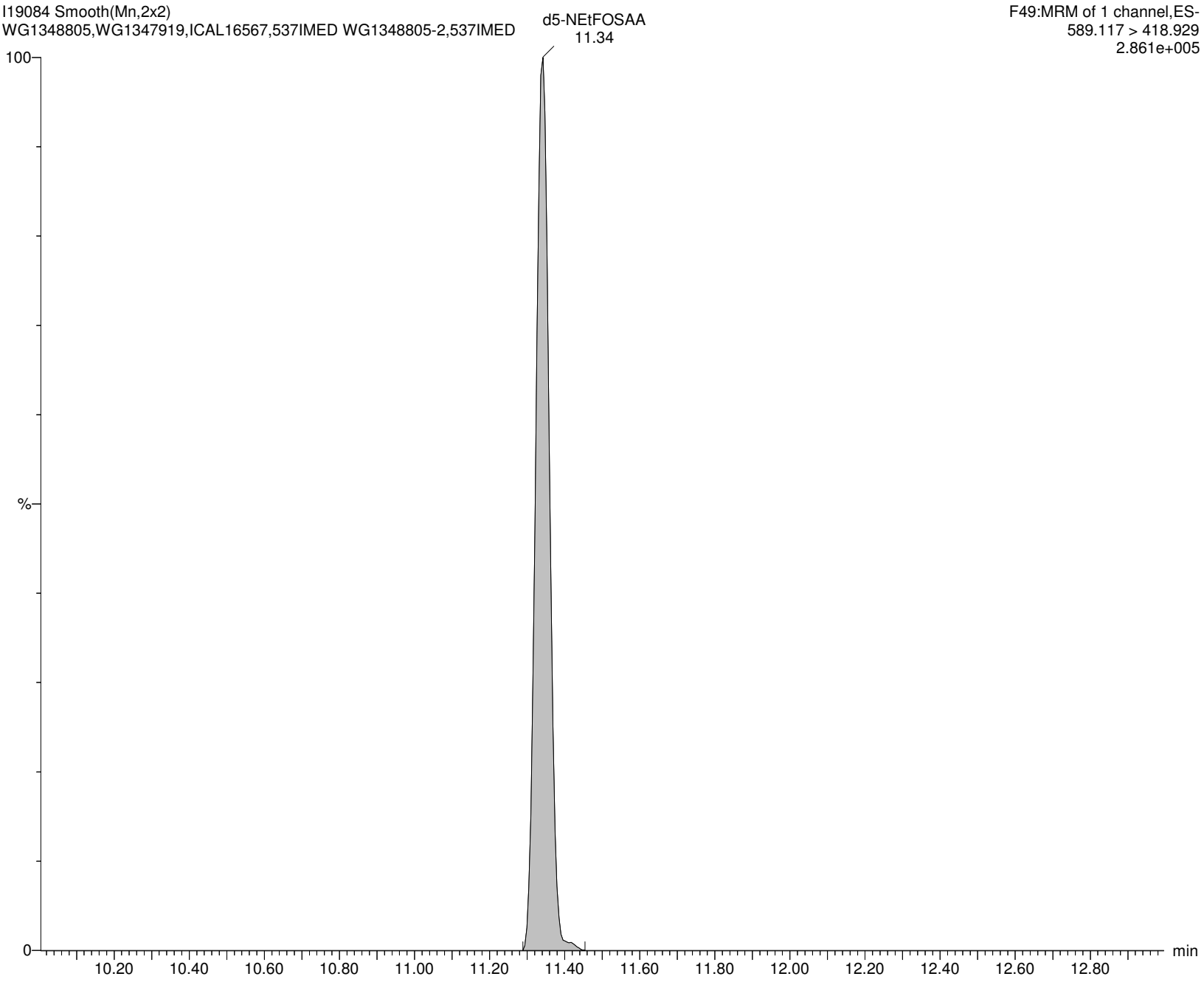
**d5-NEtFOSAA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200309_537ISO.PRO\Data\WG1348805A.qld
Last Altered: Tuesday, March 10, 2020 20:06:08 Eastern Daylight Time
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**Name: I19084**
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**Date: 09-Mar-2020**
**Time: 17:03:03**
**Description: WG1348805,WG1347919,ICAL16567,537IMED**
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**Vial: 1:A,3**
**Instrument: XEVO-TQSmicro#QEA0276**
**Inlet Method Name: C:\MassLynx\Data\200309_537ISO.PRO\ACQUDB\LCMS_537_ISO_MeOH**
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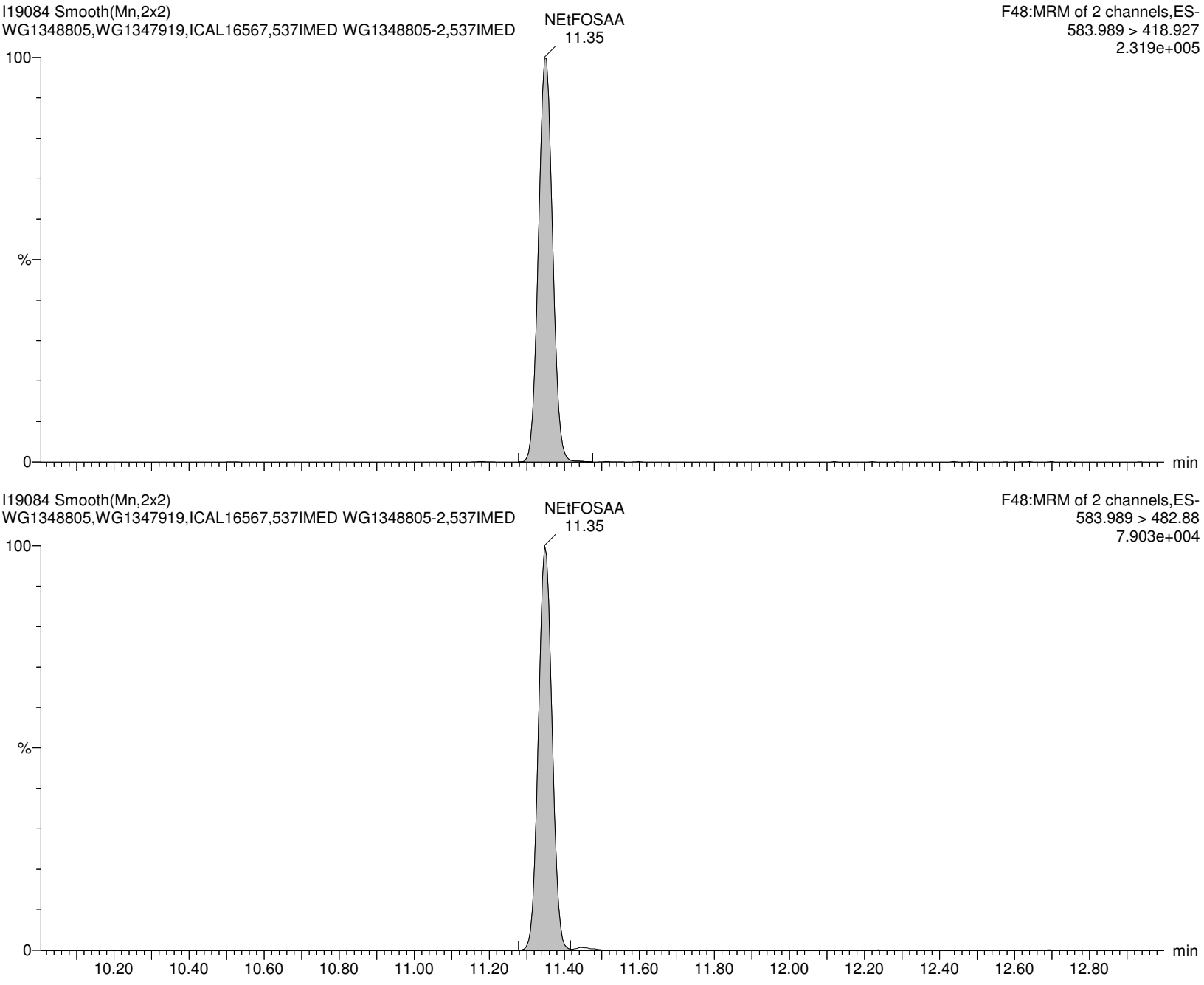
**NEtFOSAA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200309_537ISO.PRO\Data\WG1348805A.qld
Last Altered: Tuesday, March 10, 2020 20:06:08 Eastern Daylight Time
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**Vial: 1:A,3**
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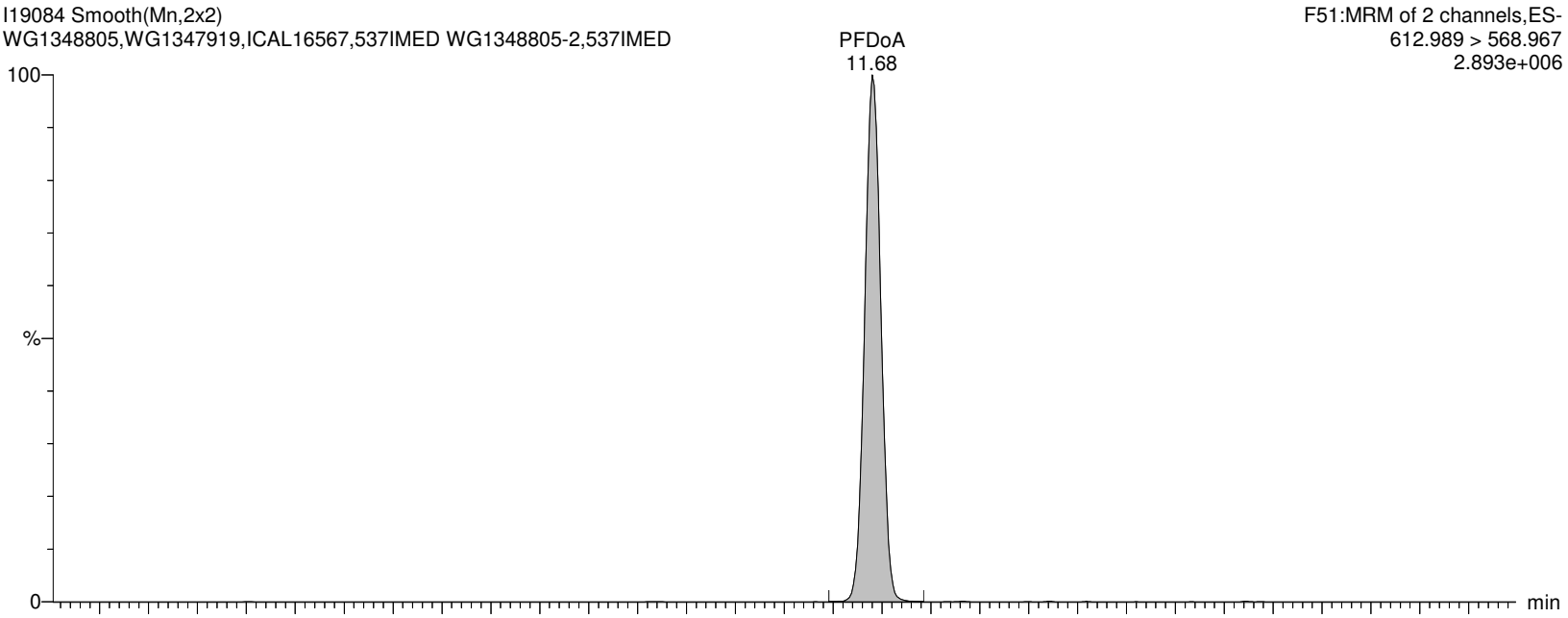


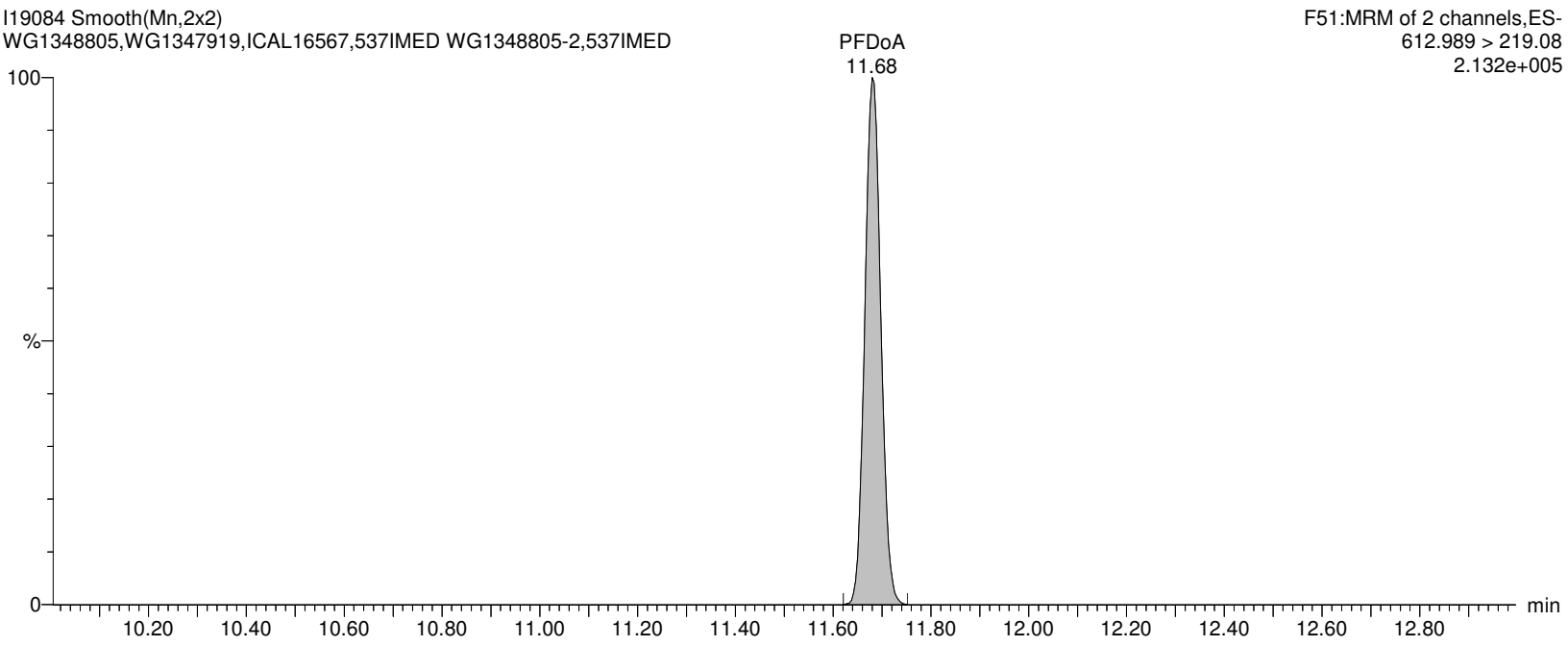



all concentration units in (ng/mL)

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Dataset: C:\MassLynx\Data\200309_537ISO.PRO\Data\WG1348805A.qld
Last Altered: Tuesday, March 10, 2020 20:06:08 Eastern Daylight Time
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**Date: 09-Mar-2020**
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**User: LCMS01:JW**
**Vial: 1:A,3**
**Instrument: XEVO-TQSmicro#QEA0276**
**Inlet Method Name: C:\MassLynx\Data\200309_537ISO.PRO\ACQUDB\LCMS_537_ISO_MeOH**
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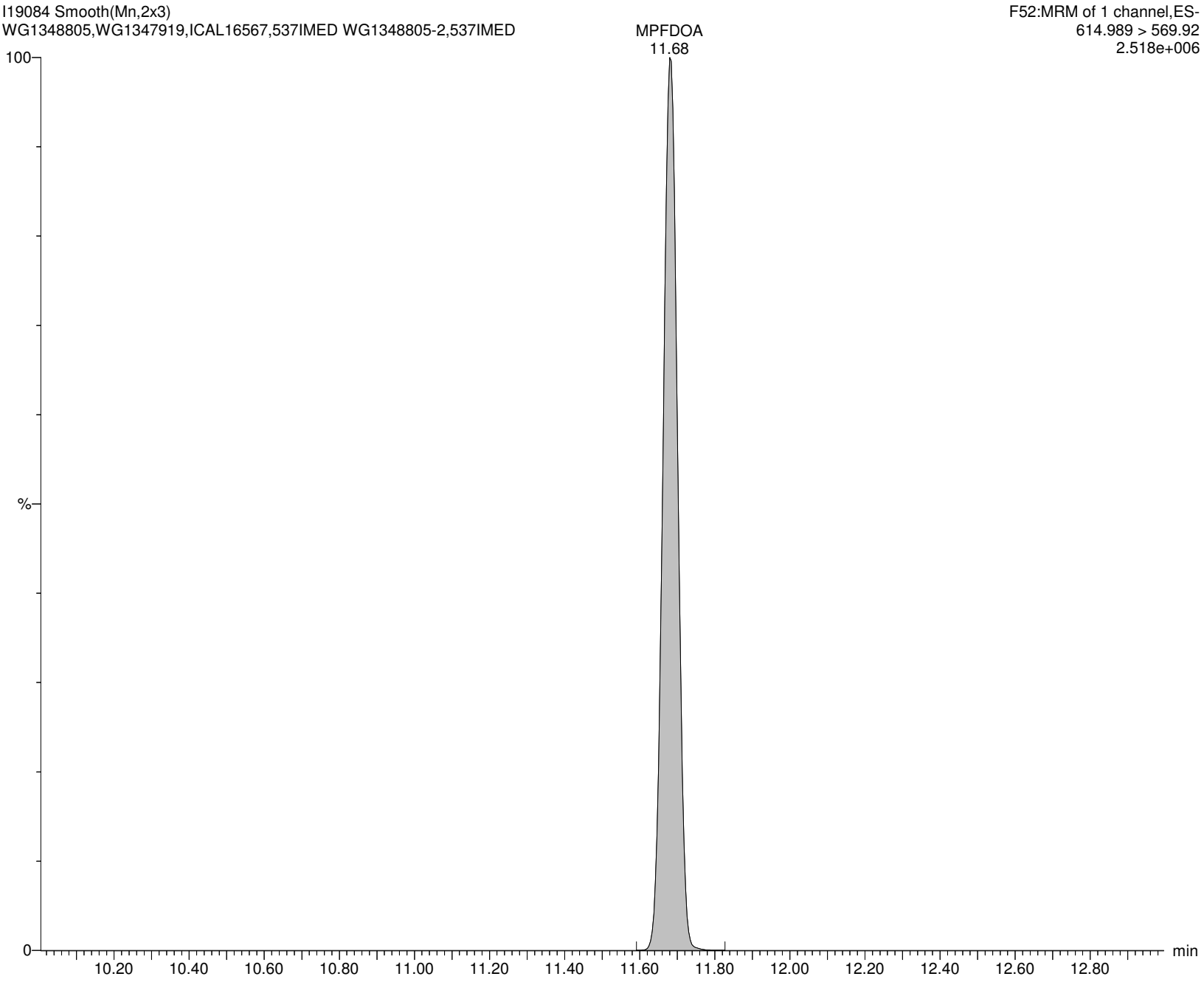



all concentration units in (ng/mL)

Alpha Analytical Inc.
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**Vial: 1:A,3**
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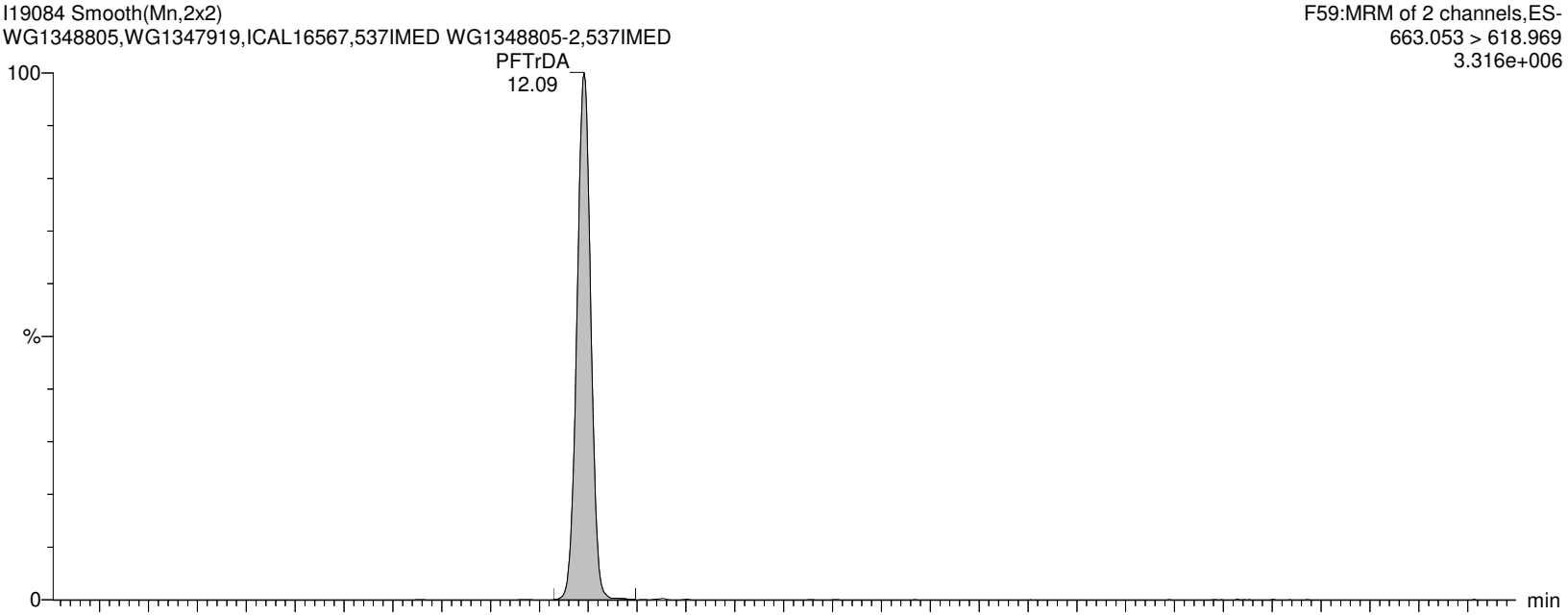


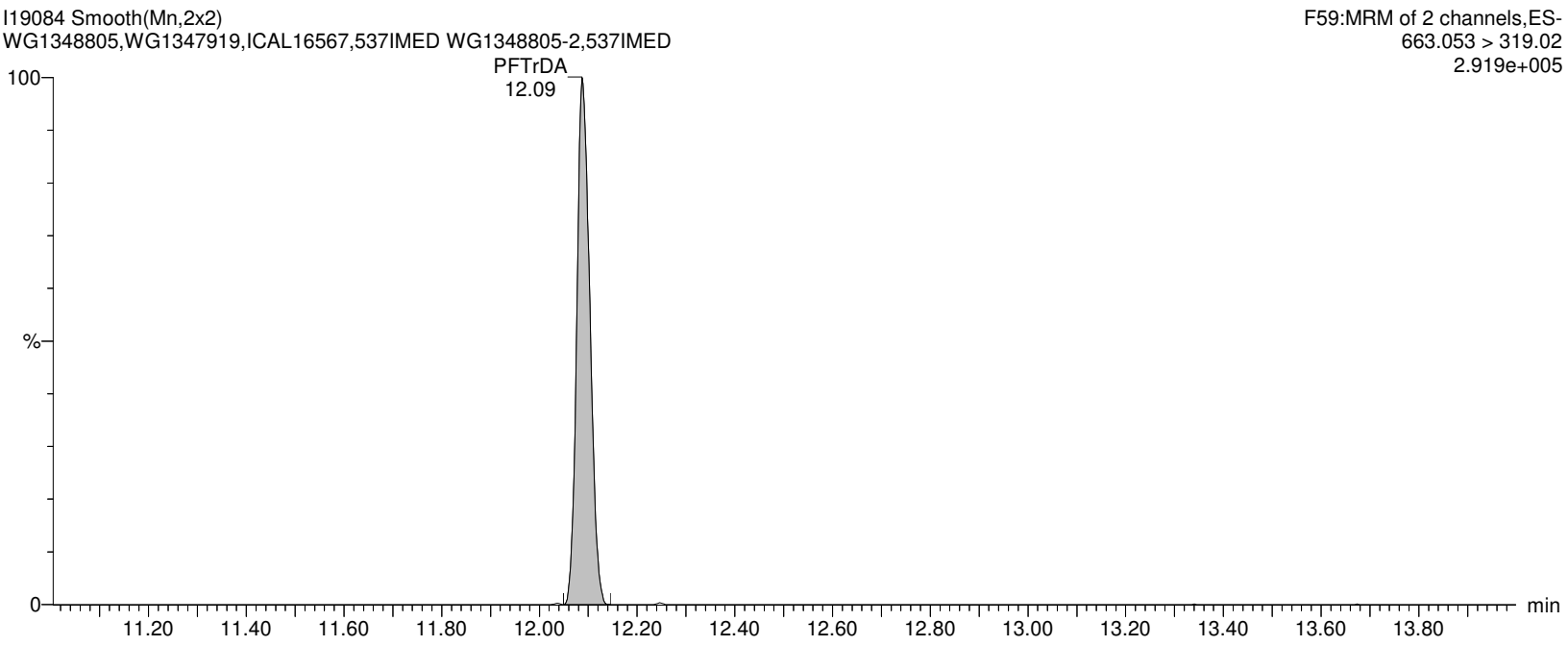



all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200309_537ISO.PRO\Data\WG1348805A.qld
Last Altered: Tuesday, March 10, 2020 20:06:08 Eastern Daylight Time
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**Vial: 1:A,3**
**Instrument: XEVO-TQSmicro#QEA0276**
**Inlet Method Name: C:\MassLynx\Data\200309_537ISO.PRO\ACQUDB\LCMS_537_ISO_MeOH**
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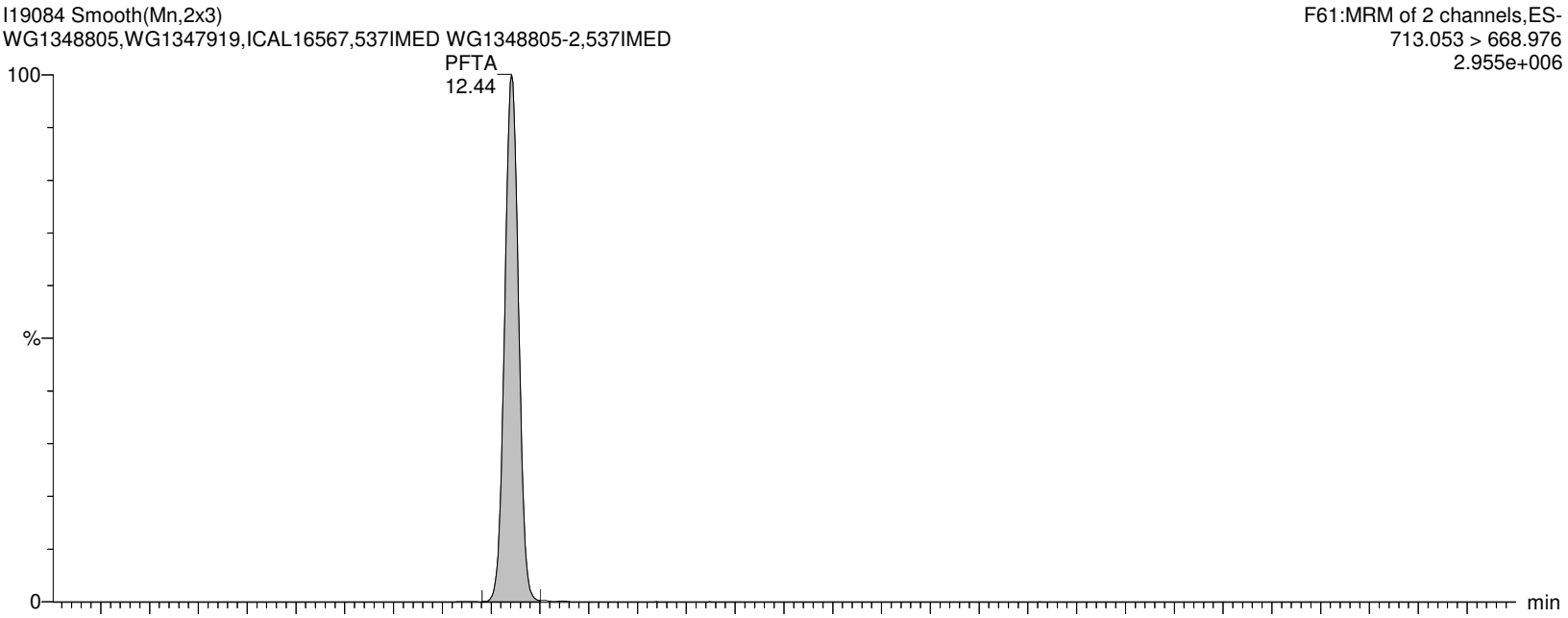


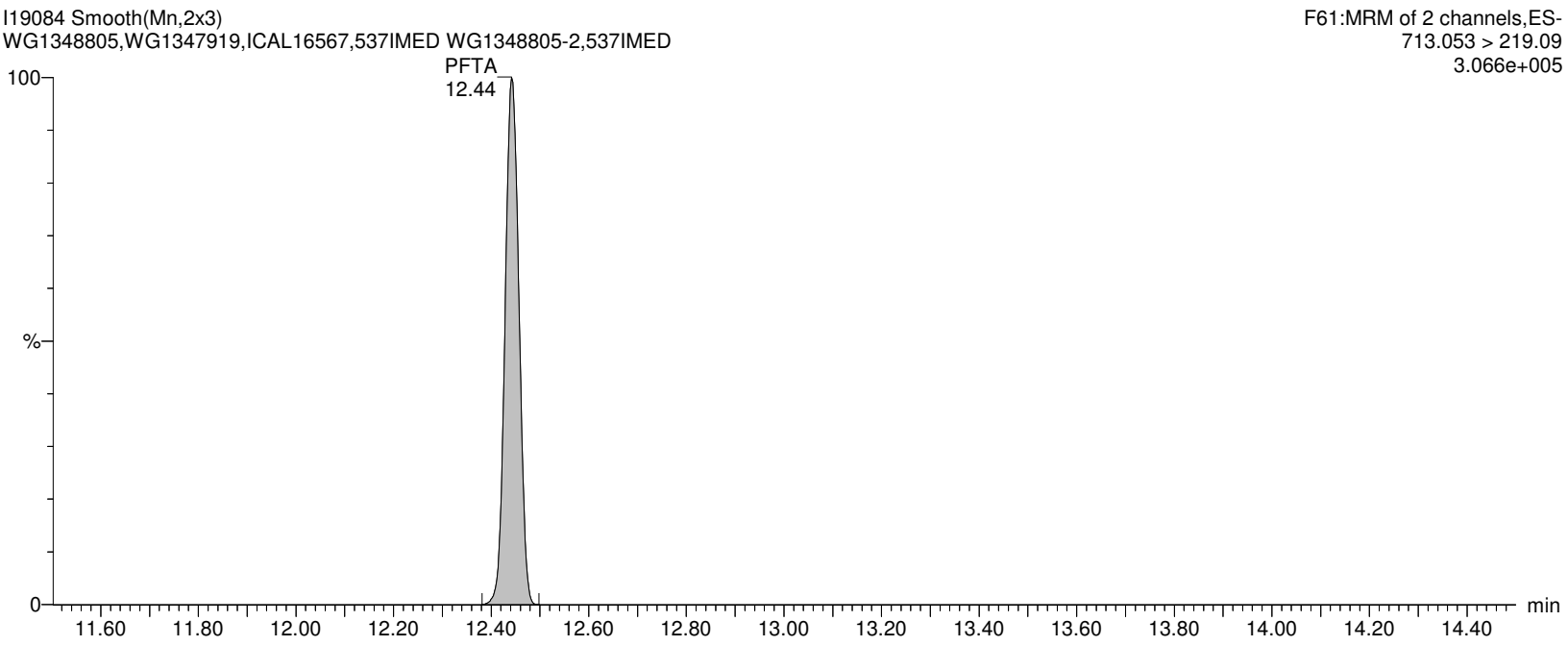



all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200309_537ISO.PRO\Data\WG1348805A.qld
Last Altered: Tuesday, March 10, 2020 20:06:08 Eastern Daylight Time
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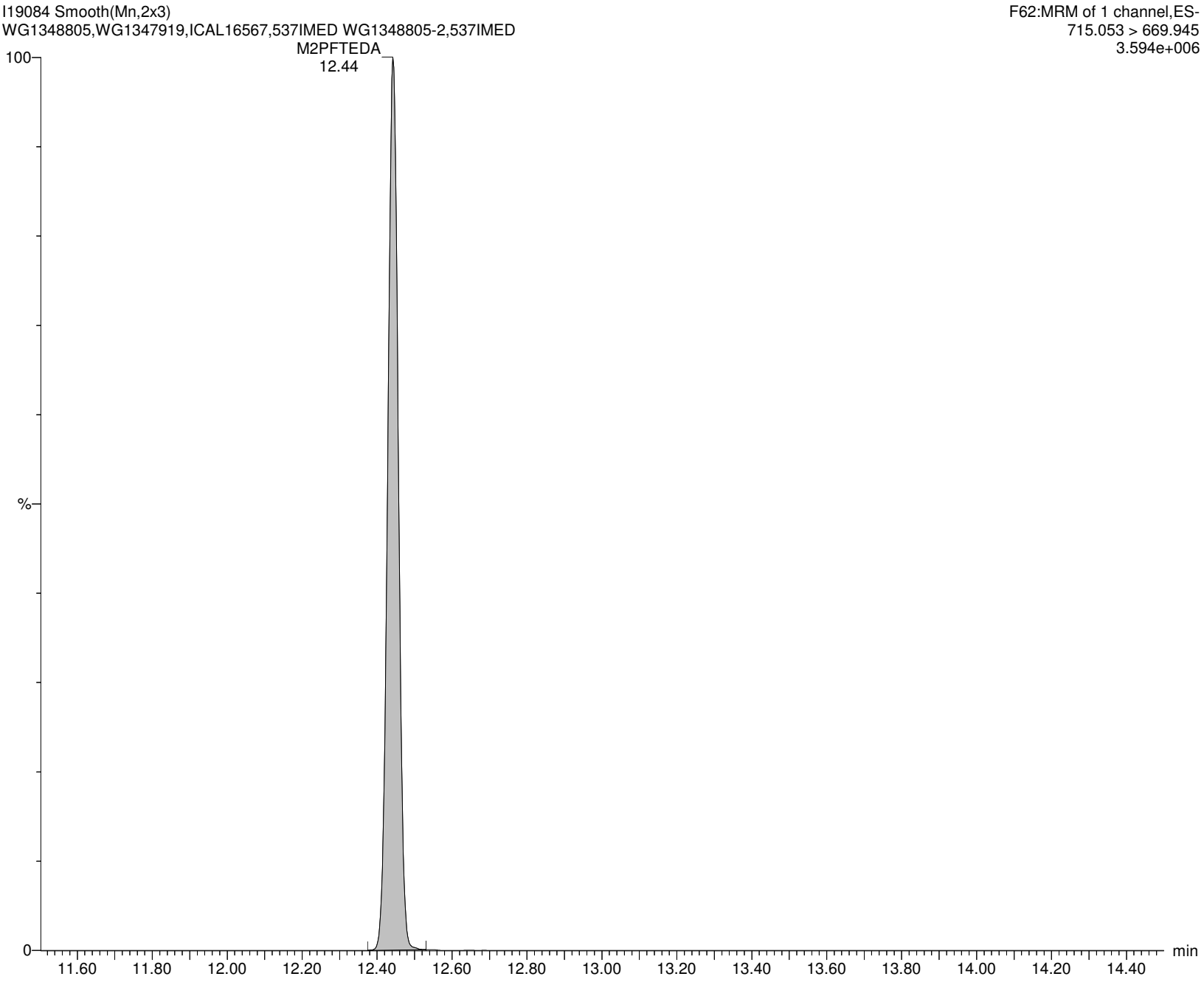
**M2PFTEDA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
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Last Altered: Tuesday, March 10, 2020 15:04:16 Eastern Daylight Time
Printed: Tuesday, March 10, 2020 20:10:14 Eastern Daylight Time

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**Date: 09-Mar-2020**
**Time: 20:21:47**
**Description: WG1348805,WG1347546,ICAL16567,537ILOW**
**Instrument: XEVO-TQSmicro#QEA0276**
**User: LCMS01:JW**
**Inlet Method Name: C:\MassLynx\Data\200309_537ISO.PRO\ACQUDB\LCMS_537_ISO_MeOH**
**Tune Method Name: C:\MassLynx\Data\200309_537ISO.PRO\ACQUDB\190709_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\200309_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

| | Name | CAS | RT | Trace | Area | M Flag | Conc (ng/mL) | Ion Ratio | Ratio Flag | %Rec |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | PFBA | 375-22-4 | 2.21 | 212.926 > 169.111 | 2065 | | 0.497 | | na | 99.3 |
| 2 | M3PFBA | INT STD | 2.22 | 215.926 > 172.122 | 49203 | | 12.513 | | na | 125.1 |
| 3 | MPFBA | INT STD | 2.21 | 216.926 > 172.137 | 57432 | | 10.187 | | na | 101.9 |
| 4 | PFPeA | 2706-90-3 | 5.17 | 262.926 > 219.002 | 3024 | M4 | 0.551 | | na | 110.1 |
| 5 | M5PFPEA | INT STD | 5.17 | 267.989 > 223.081 | 78943 | | 10.554 | | na | 105.5 |
| 6 | PFBS | 375-73-5 | 5.84 | 298.926 > 79.923 | 617 | | 0.457 | 1.93 | NO | 103.3 |
| 7 | M3PFBS | INT STD | 5.84 | 301.989 > 80.254 | 14970 | | 9.801 | | na | 98.0 |
| 8 | 4:2FTS | 757124-72-4 | 7.01 | 326.926 > 306.957 | 210 | | 0.434 | 1.49 | NO | 92.9 |
| 9 | M2-4:2FTS | INT STD | 7.01 | 329.117 > 309.079 | 5932 | | 7.455 | | na | 74.5 |
| 10 | PFHxA | 307-24-4 | 7.09 | 312.989 > 269.028 | 4447 | | 0.561 | 15.21 | NO | 112.1 |
| 11 | M5PFHxA | INT STD | 7.09 | 317.989 > 273.045 | 95679 | | 9.482 | | na | 94.8 |
| 12 | PFPeS | 2706-91-4 | 7.40 | 348.926 > 80.251 | 637 | | 0.485 | 2.49 | NO | 103.2 |
| 13 | PFHpA | 375-85-9 | 8.35 | 362.926 > 319.014 | 5189 | | 0.476 | 5.86 | NO | 95.2 |
| 14 | M4PFHpA | INT STD | 8.35 | 366.926 > 321.979 | 118834 | | 10.152 | | na | 101.5 |
| 15 | br-PFHxS | 355-46-4 | 8.27 | 398.904 > 79.915 | 83 | M2 | 0.082 | | YES | 96.7 |
| 16 | L-PFHxS | 355-46-4 | 8.51 | 398.904 > 79.915 | 469 | | 0.458 | | YES | 123.9 |
| 17 | PFHxS | 355-46-4 | | 398.904 > 79.915 | 552 | | 0.541 | | na | |
| 18 | M3PFHxS | INT STD | 8.50 | 401.926 > 80.317 | 13835 | | 10.110 | | na | 101.1 |
| 19 | br-PFOA | 335-67-1 | | 412.989 > 368.9 | | | ND | | YES | |
| 20 | L-PFOA | 335-67-1 | 9.29 | 412.989 > 368.9 | 5377 | | 0.548 | 7.78 | NO | 109.6 |
| 21 | M2PFOA | INT STD | 9.29 | 415.032 > 369.968 | 123244 | | 14.649 | | na | 146.5 |
| 22 | PFOA | 335-67-1 | | 412.989 > 368.9 | 5377 | | 0.548 | | na | |
| 23 | M8PFOA | INT STD | 9.29 | 420.989 > 375.979 | 114049 | | 9.704 | | na | 97.0 |
| 24 | 6:2FTS | 27619-97-2 | 9.24 | 426.989 > 406.921 | 73 | | 0.611 | 0.68 | NO | 128.7 |
| 25 | M2-6:2FTS | INT STD | 9.25 | 428.989 > 408.917 | 5030 | | 10.158 | | na | 101.6 |
| 26 | PFHpS | 375-92-8 | 9.38 | 448.926 > 80.257 | 222 | | 0.285 | 0.82 | NO | 60.0 |
| 27 | PFNA | 375-95-1 | 10.03 | 462.989 > 418.931 | 4835 | | 0.558 | 6.32 | YES | 111.6 |
| 28 | M9PFNA | INT STD | 10.03 | 472.053 > 426.947 | 116499 | | 10.139 | | na | 101.4 |
| 29 | br-PFOS | 1763-23-1 | 9.89 | 498.968 > 79.918 | 164 | | 0.143 | 5.12 | NO | 142.8 |
| 30 | L-PFOS | 1763-23-1 | 10.08 | 498.968 > 79.918 | 368 | | 0.438 | 1.35 | NO | 120.0 |
| 31 | PFOS | 1763-23-1 | | 498.968 > 79.918 | 532 | | 0.581 | | na | |
| 32 | M4PFOS | INT STD | 10.08 | 503.032 > 80.306 | 11906 | | 14.017 | | na | 140.2 |
| 33 | M8PFOS | INT STD | 10.08 | 507.053 > 80.294 | 15582 | | 11.270 | | na | 112.7 |
| 34 | PFDA | 335-76-2 | 10.66 | 513.053 > 468.906 | 5082 | M4 | 0.595 | 11.70 | YES | 119.0 |
| 35 | M2PFDA | INT STD | 10.66 | 515.053 > 469.934 | 104454 | | 15.791 | | na | 157.9 |
| 36 | M6PFDA | INT STD | 10.66 | 519.053 > 473.931 | 111479 | | 9.700 | | na | 97.0 |
| 37 | 8:2FTS | 39108-34-4 | 10.64 | 527.032 > 507.079 | 118 | | 0.627 | 1.90 | NO | 130.7 |
| 38 | M2-8:2FTS | INT STD | 10.65 | 529.053 > 508.945 | 2815 | | 9.400 | | na | 94.0 |
| 39 | PFNS | 68259-12-1 | 10.67 | 548.989 > 80.249 | 428 | | 0.407 | 5.33 | YES | 84.8 |


all concentration units in (ng/mL)

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Last Altered: Tuesday, March 10, 2020 15:04:16 Eastern Daylight Time
Printed: Tuesday, March 10, 2020 20:10:14 Eastern Daylight Time

**ID: WG1348805-3,537ILOW**
**Name: I19096**
**Date: 09-Mar-2020**
**Time: 20:21:47**
**Description: WG1348805,WG1347546,ICAL16567,537ILOW**
**Instrument: XEVO-TQSmicro#QEA0276**
**User: LCMS01:JW**
**Inlet Method Name: C:\MassLynx\Data\200309_537ISO.PRO\ACQUDB\LCMS_537_ISO_MeOH**
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**MS Method Name: C:\MassLynx\Data\200309_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

| | Name | CAS | RT | Trace | Area | M Flag | Conc (ng/mL) | Ion Ratio | Ratio Flag | %Rec |
|---|---|---|---|---|---|---|---|---|---|---|
| 40 | d3-NMeFOSAA | INT STD | 11.03 | 573.096 > 418.987 | 15113 | | 9.927 | | na | 99.3 |
| 41 | NMeFOSAA | 2355-31-9 | 11.04 | 570.053 > 418.917 | 581 | | 0.643 | 2.77 | NO | 128.6 |
| 42 | PFUnA | 2058-94-8 | 11.20 | 562.989 > 518.903 | 5287 | M4 | 0.496 | 9.08 | NO | 99.1 |
| 43 | M7-PFUDA | INT STD | 11.19 | 570.053 > 524.923 | 114566 | | 11.345 | | na | 113.4 |
| 44 | PFDS | 335-77-3 | 11.21 | 598.926 > 80.314 | 336 | | 0.328 | 4.73 | YES | 68.0 |
| 45 | FOSA | 754-91-6 | 11.09 | 497.989 > 78.245 | 1997 | | 0.619 | | YES | 123.7 |
| 46 | M8FOSA | INT STD | 11.09 | 506.053 > 78.286 | 39175 | | 8.506 | | na | 85.1 |
| 47 | d5-NEtFOSAA | INT STD | 11.33 | 589.117 > 418.929 | 11097 | | 9.996 | | na | 100.0 |
| 48 | NEtFOSAA | 2991-50-6 | 11.33 | 583.989 > 418.927 | 362 | | 0.382 | 2.55 | NO | 76.4 |
| 49 | PFDoA | 307-55-1 | 11.66 | 612.989 > 568.967 | 5287 | | 0.552 | 19.73 | YES | 110.5 |
| 50 | MPFDOA | INT STD | 11.66 | 614.989 > 569.92 | 105436 | | 9.711 | | na | 97.1 |
| 51 | PFTrDA | 72629-94-8 | 12.07 | 663.053 > 618.969 | 5267 | | 0.550 | 15.72 | NO | 109.9 |
| 52 | PFTA | 376-06-7 | 12.43 | 713.053 > 668.976 | 4146 | | 0.493 | 10.58 | NO | 98.6 |
| 53 | M2PFTEDA | INT STD | 12.43 | 715.053 > 669.945 | 113524 | | 9.277 | | na | 92.8 |


all concentration units in (ng/mL)

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**Method: C:\MassLynx\Data\200309_537ISO.PRO\MethDB\537ISO_Q_200227 .mdb 28 Feb 2020 10:16:06**
**Calibration: C:\MassLynx\Data\200309_537ISO.PRO\CurveDB\200227_537ISO_ICAL.cdb 28 Feb 2020 10:12:40**

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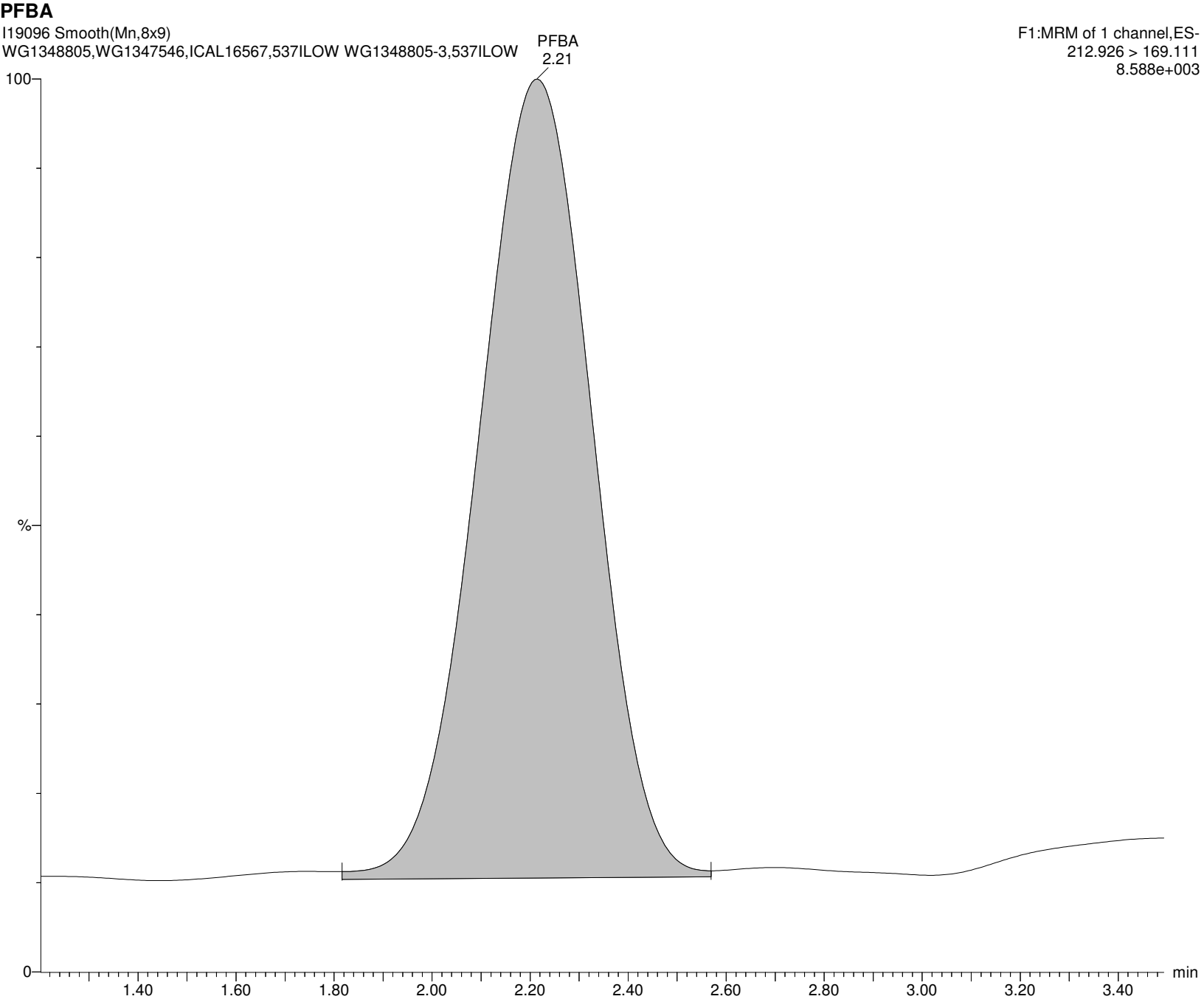
**PFBA**





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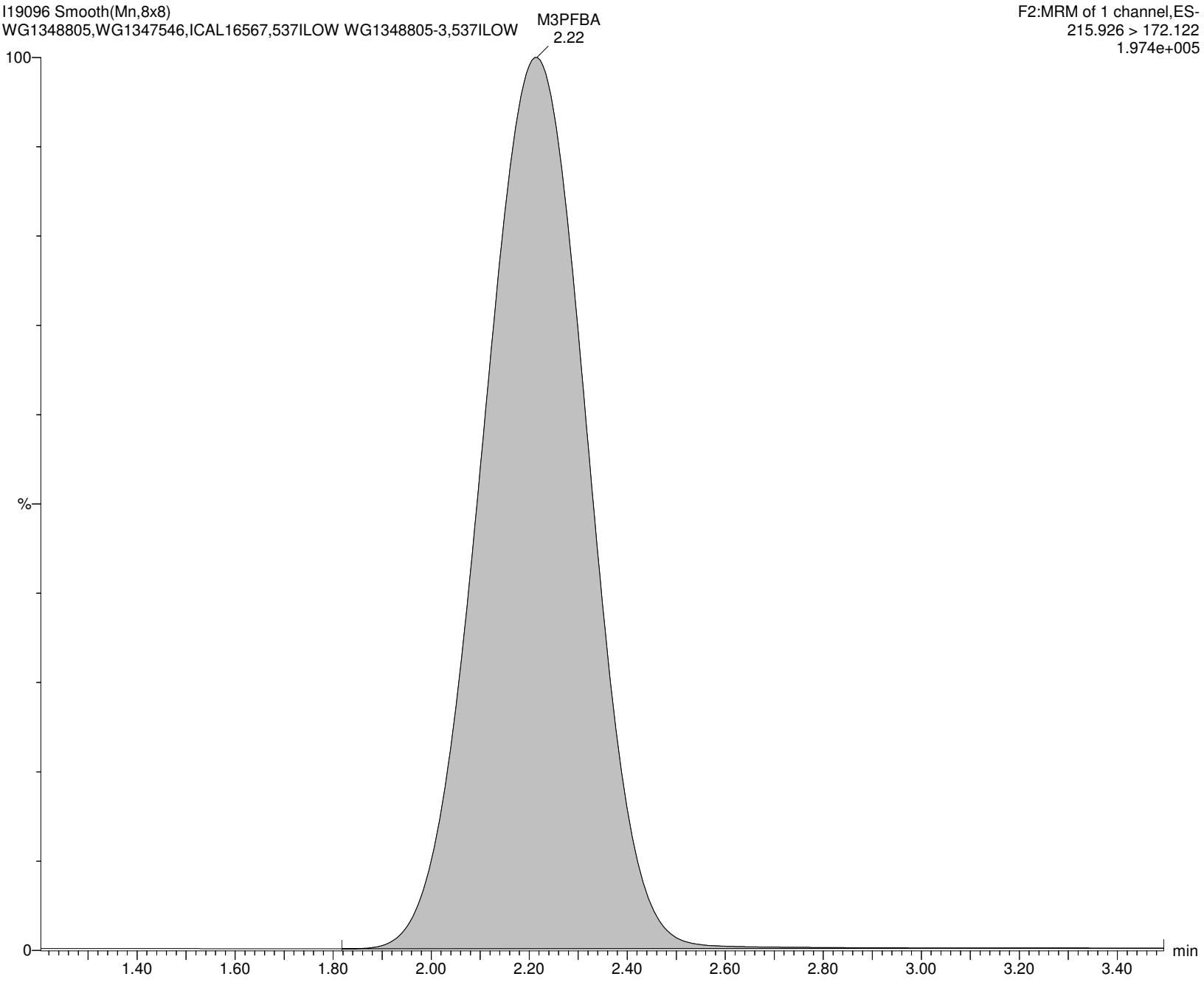
**M3PFBA**





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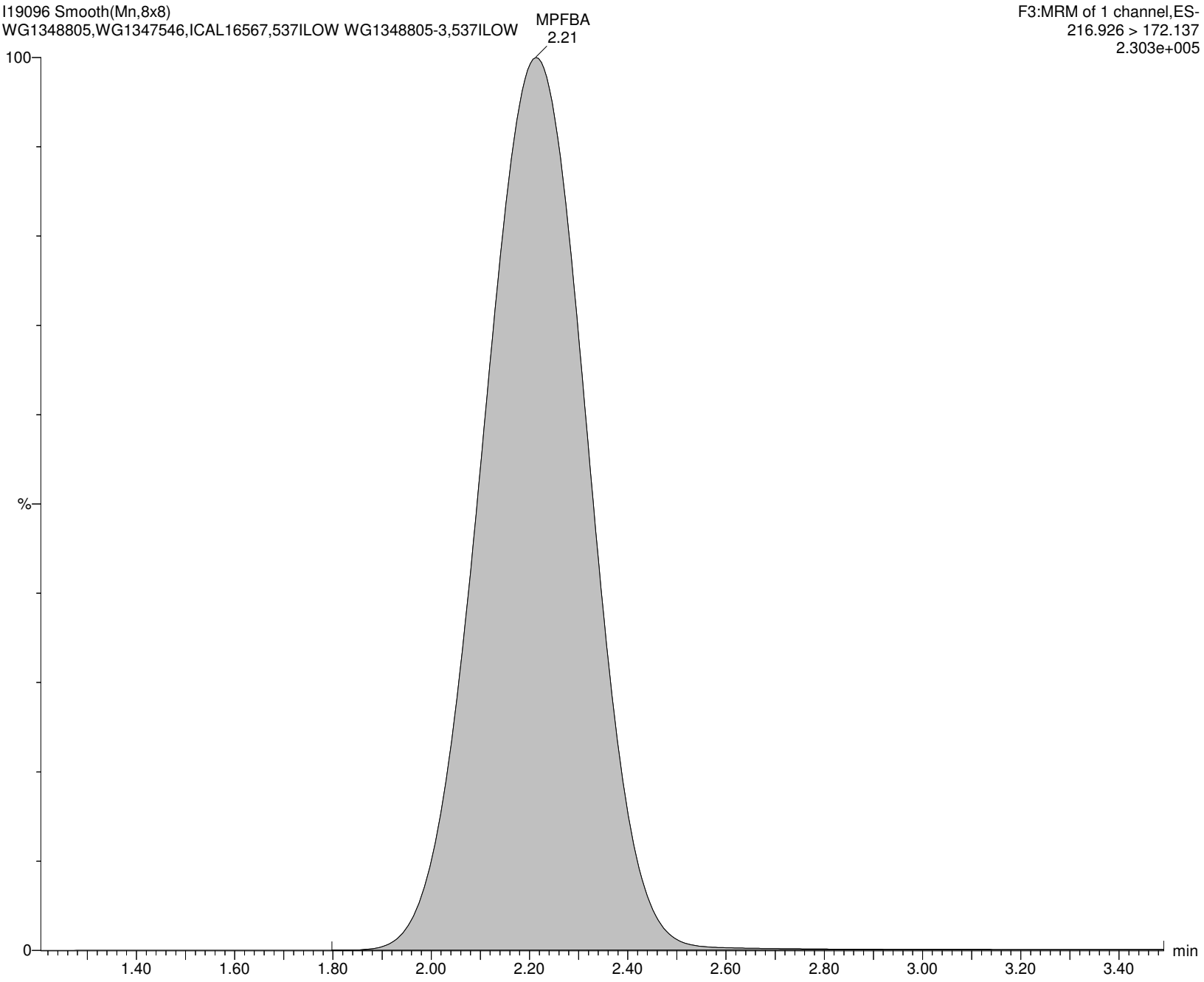
**MPFBA**





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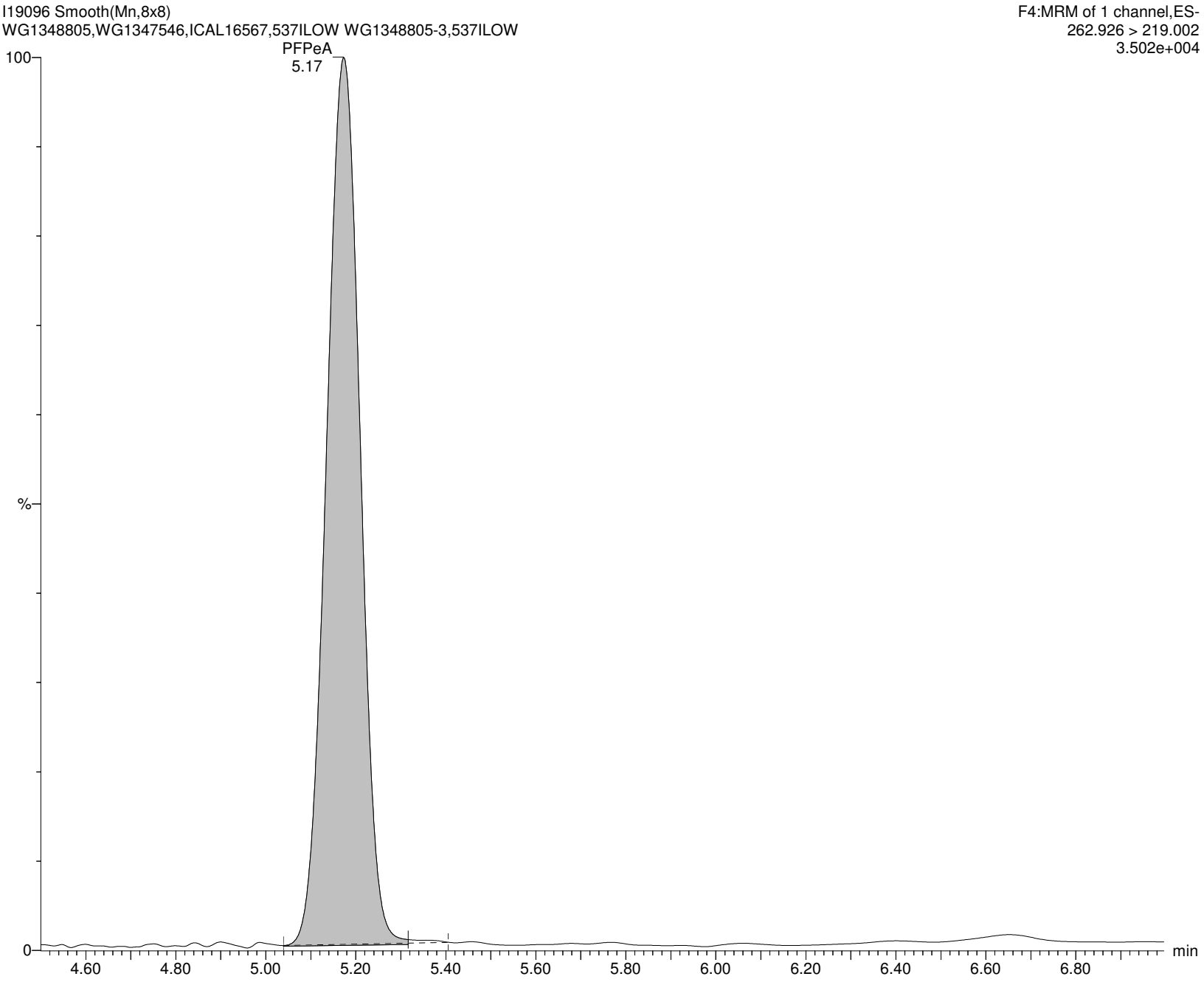
**PFPeA**





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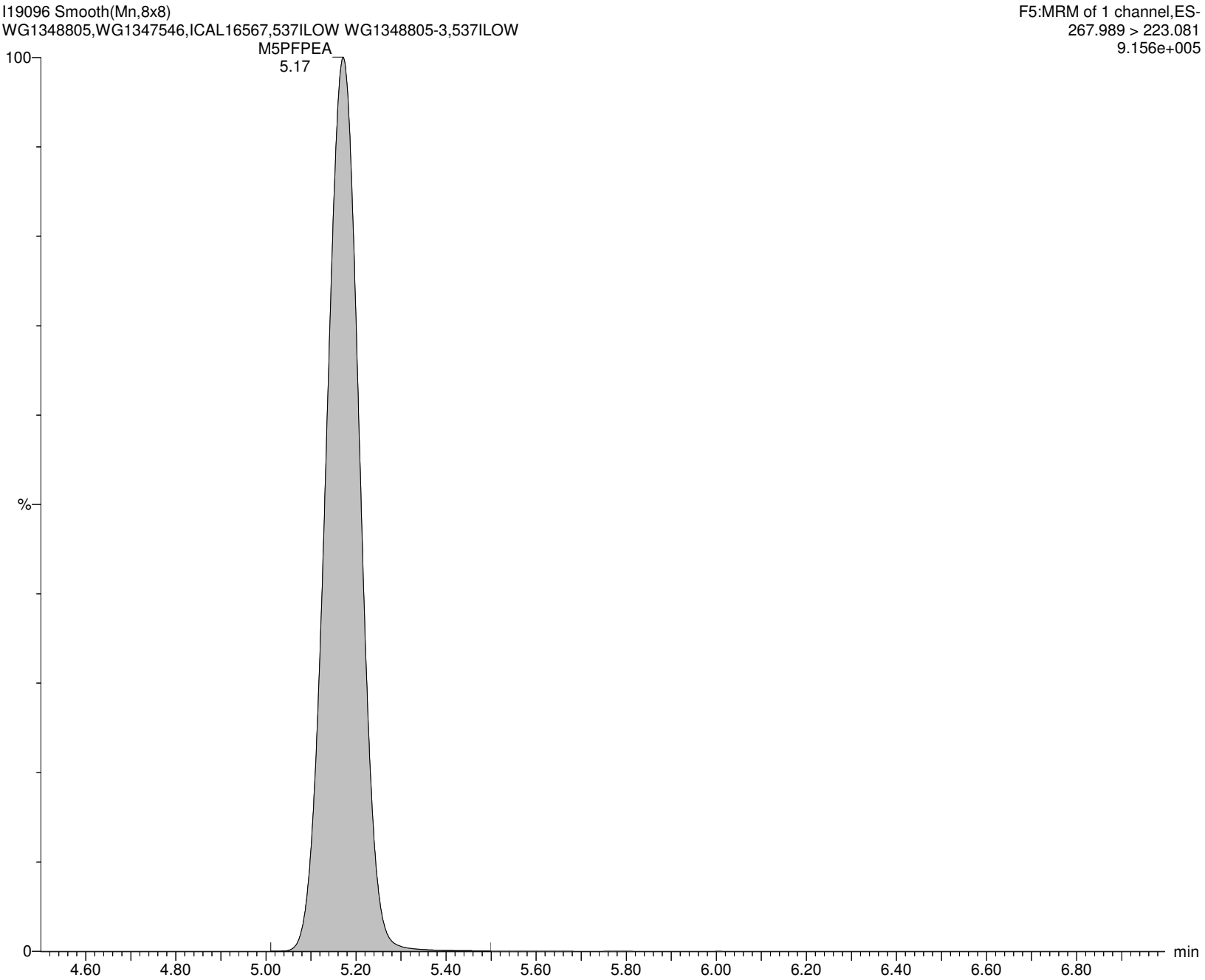
**M5PFPEA**





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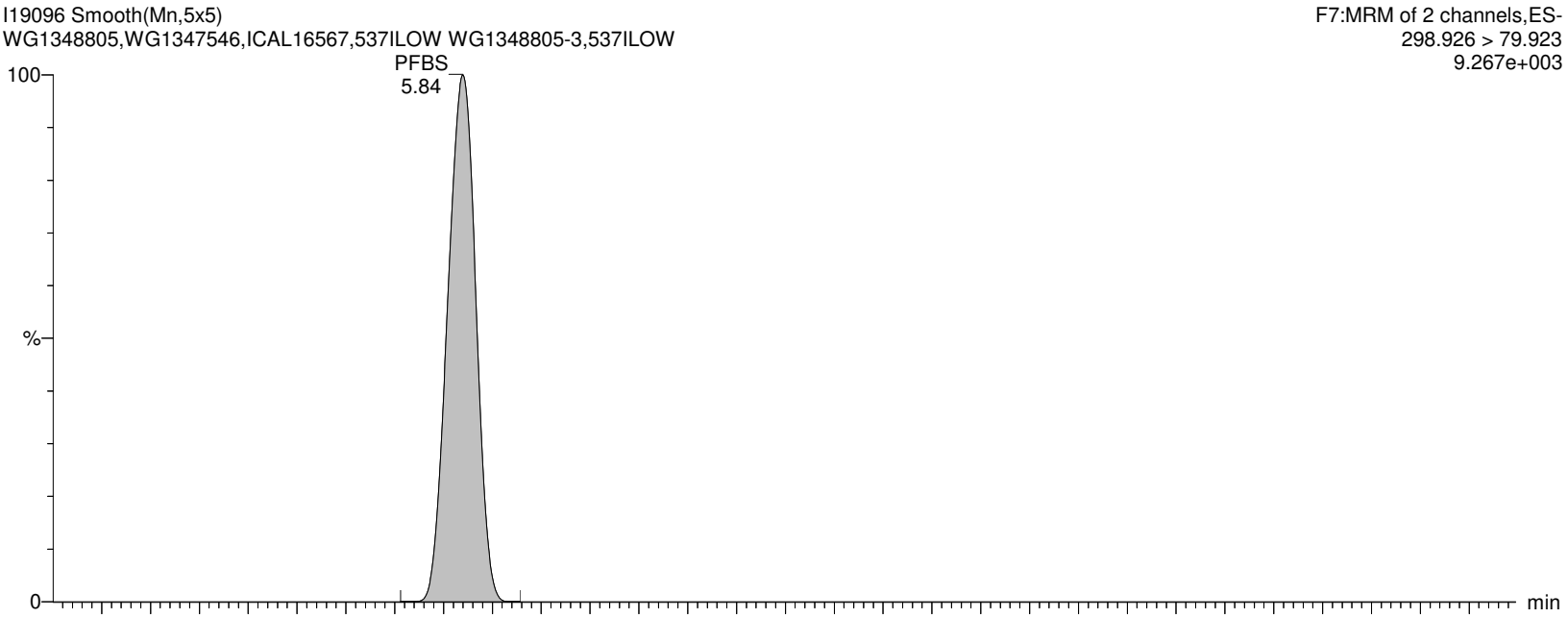
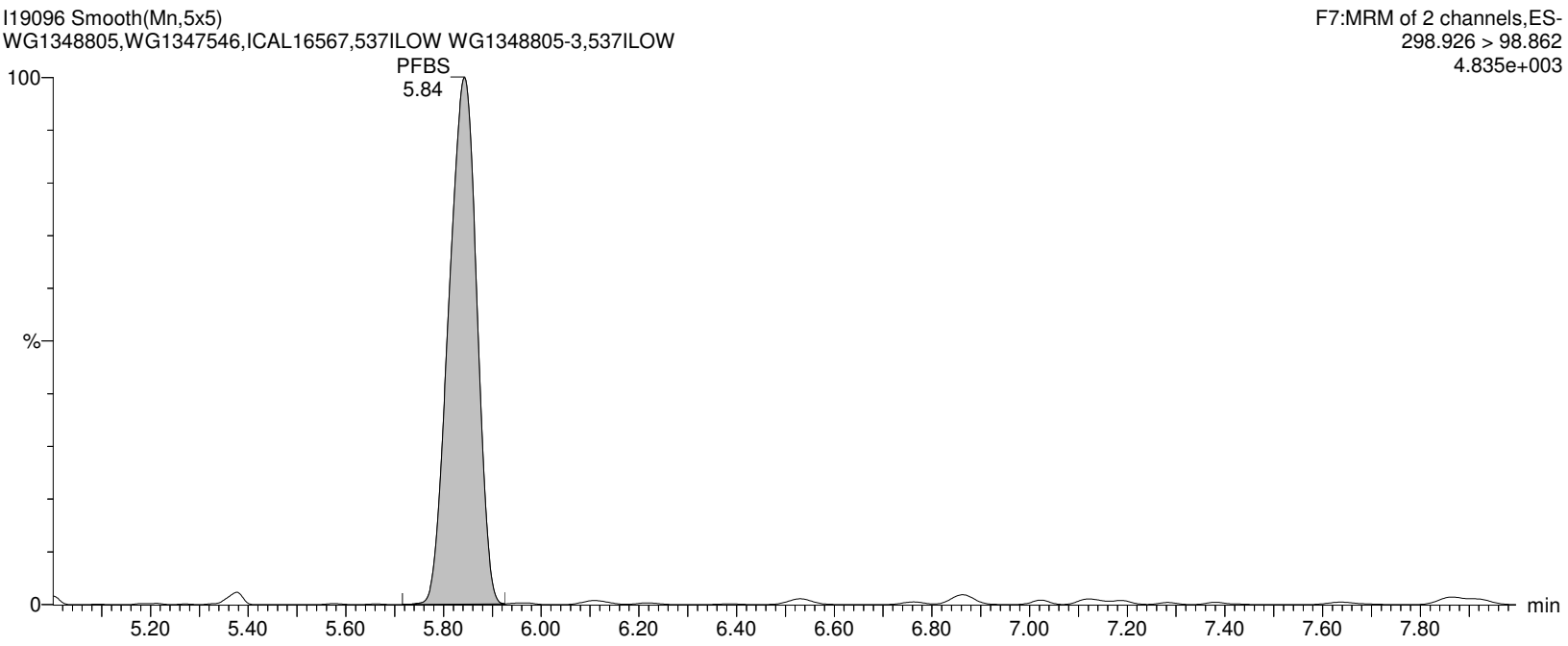
**PFBS**





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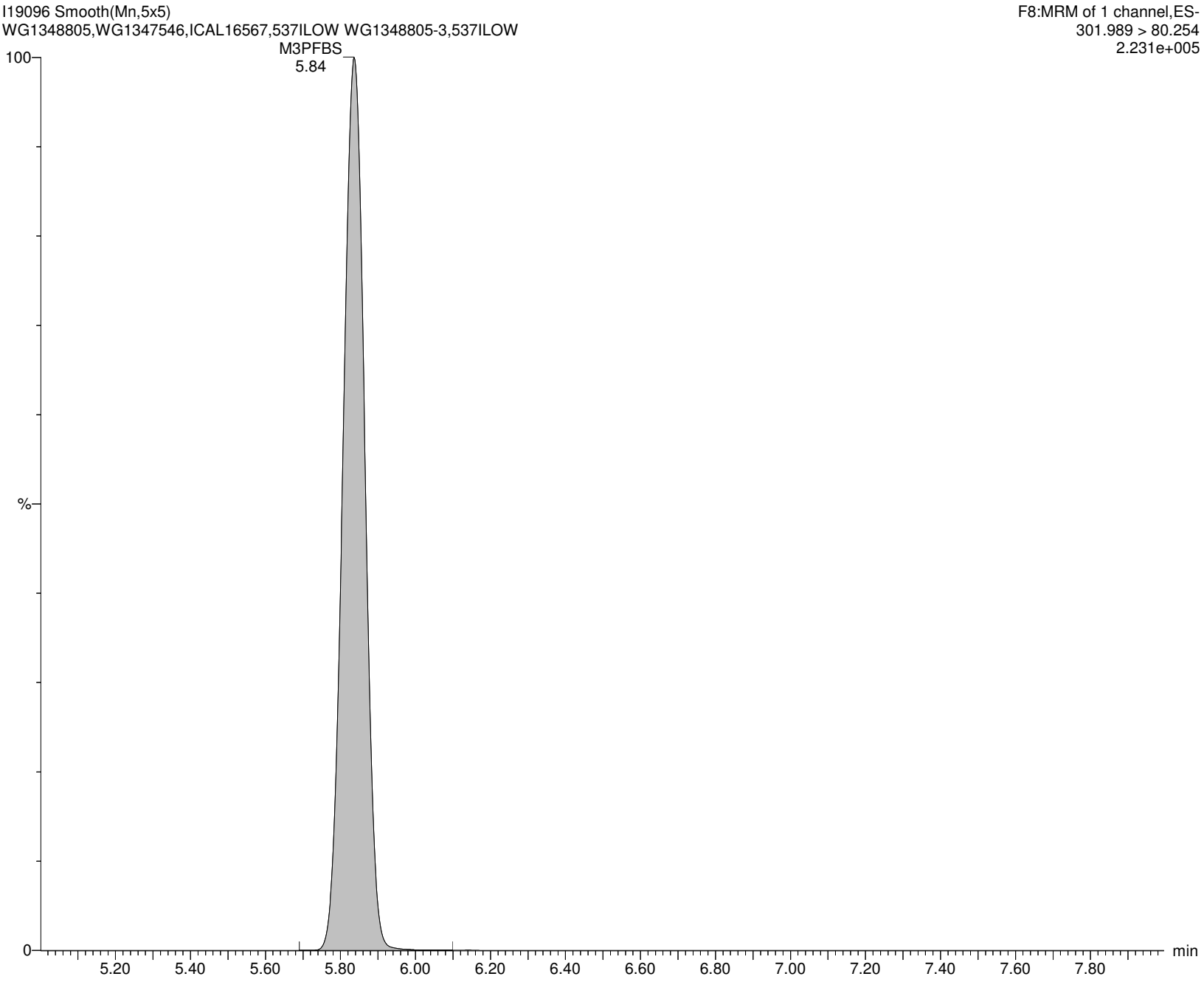
**M3PFBS**





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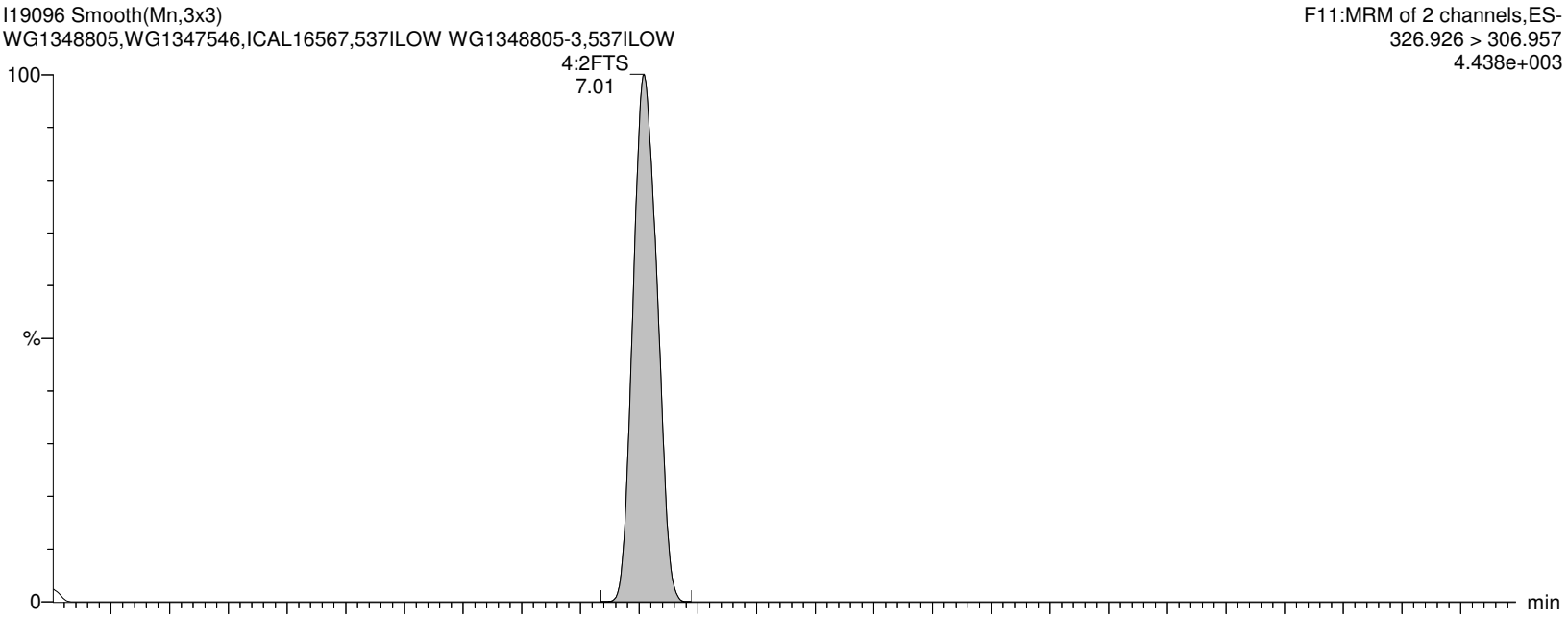
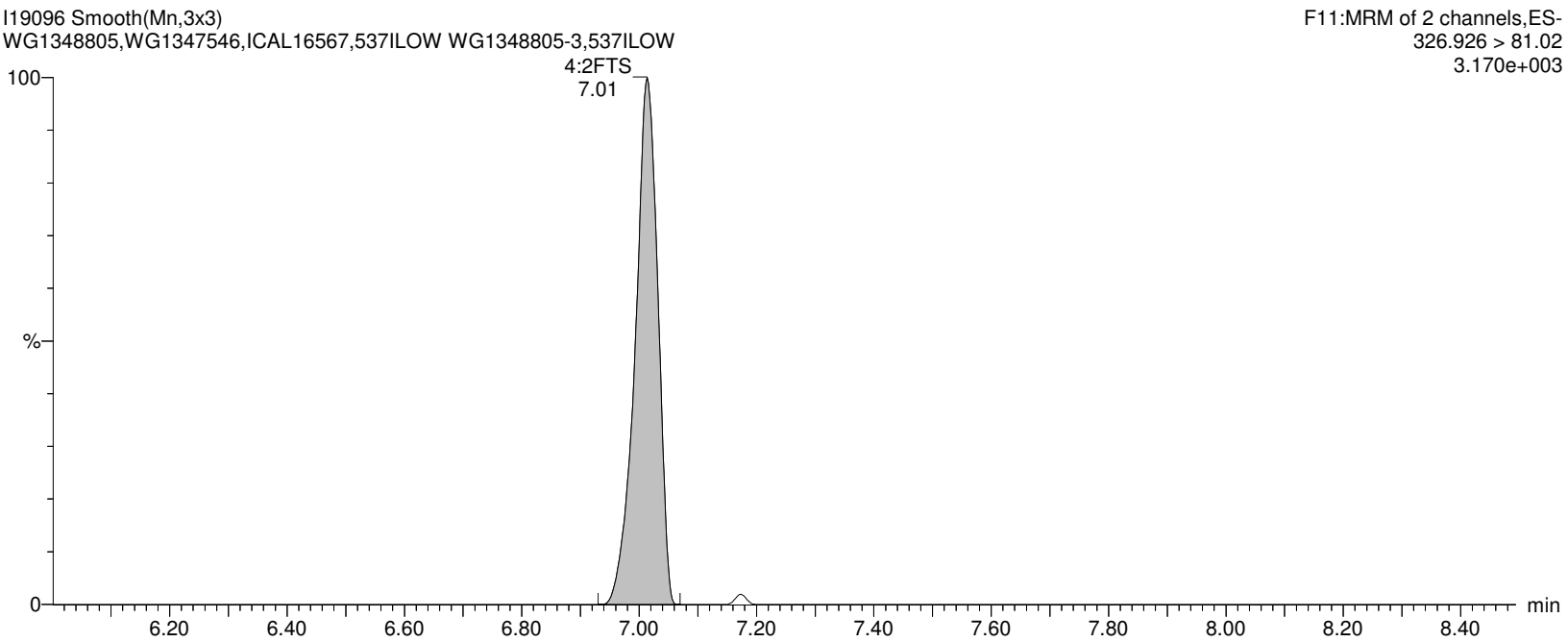
**4:2FTS**





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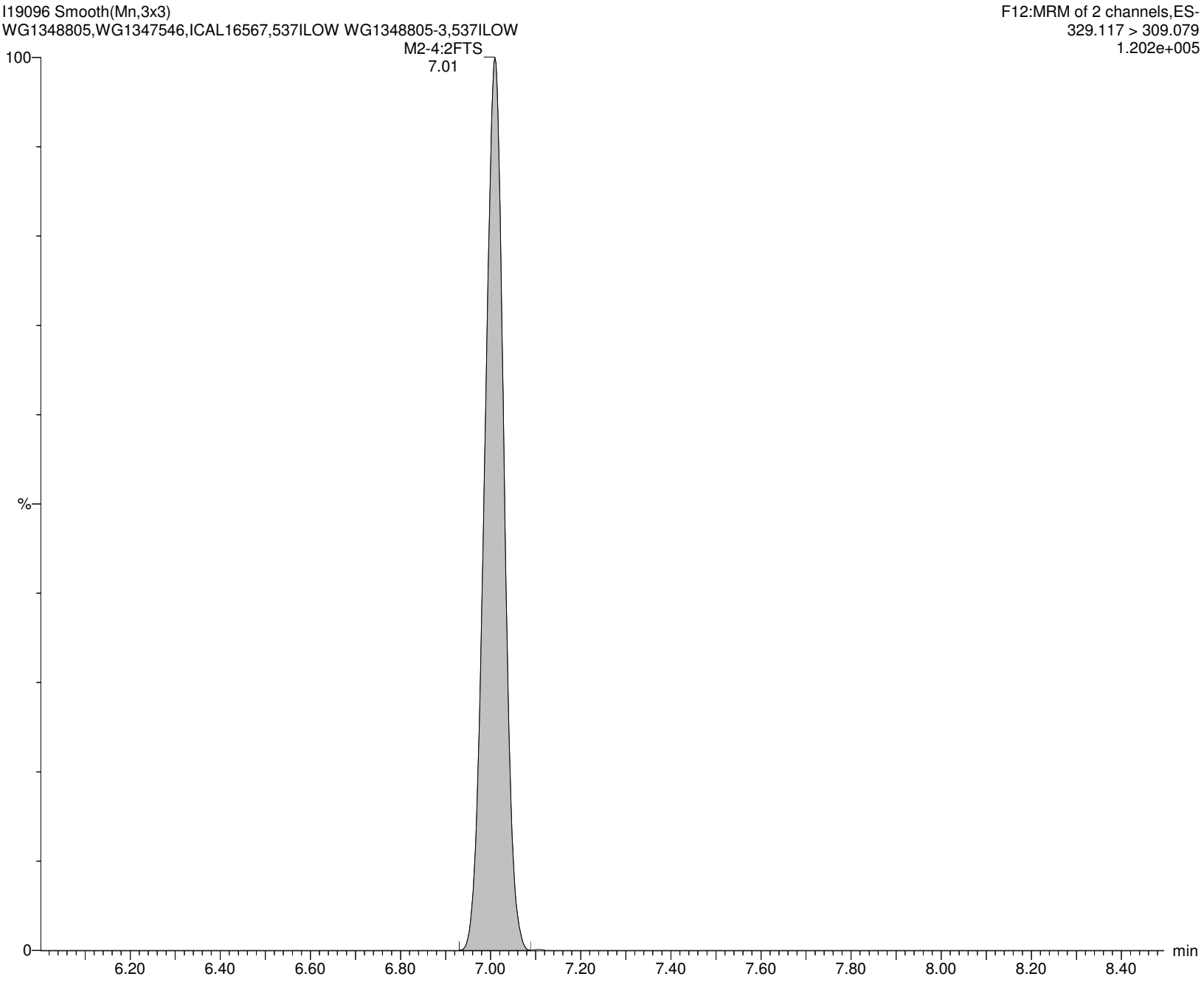
**M2-4:2FTS**





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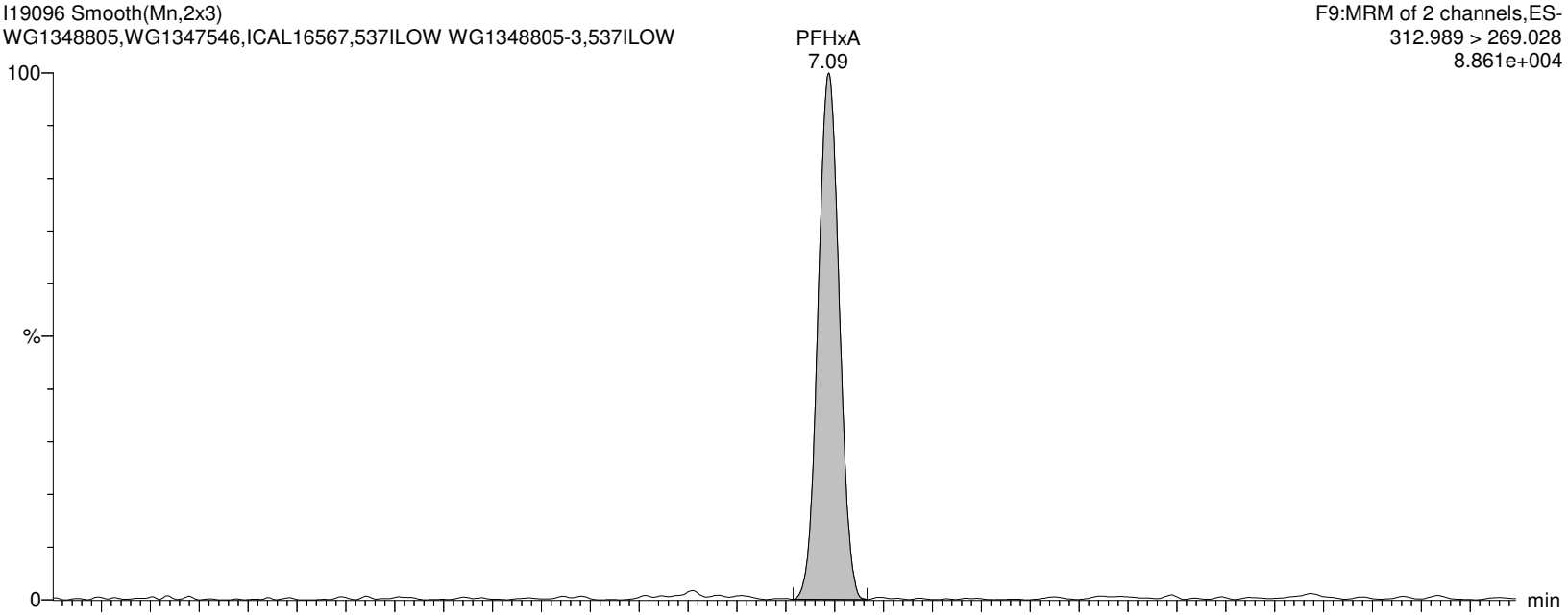
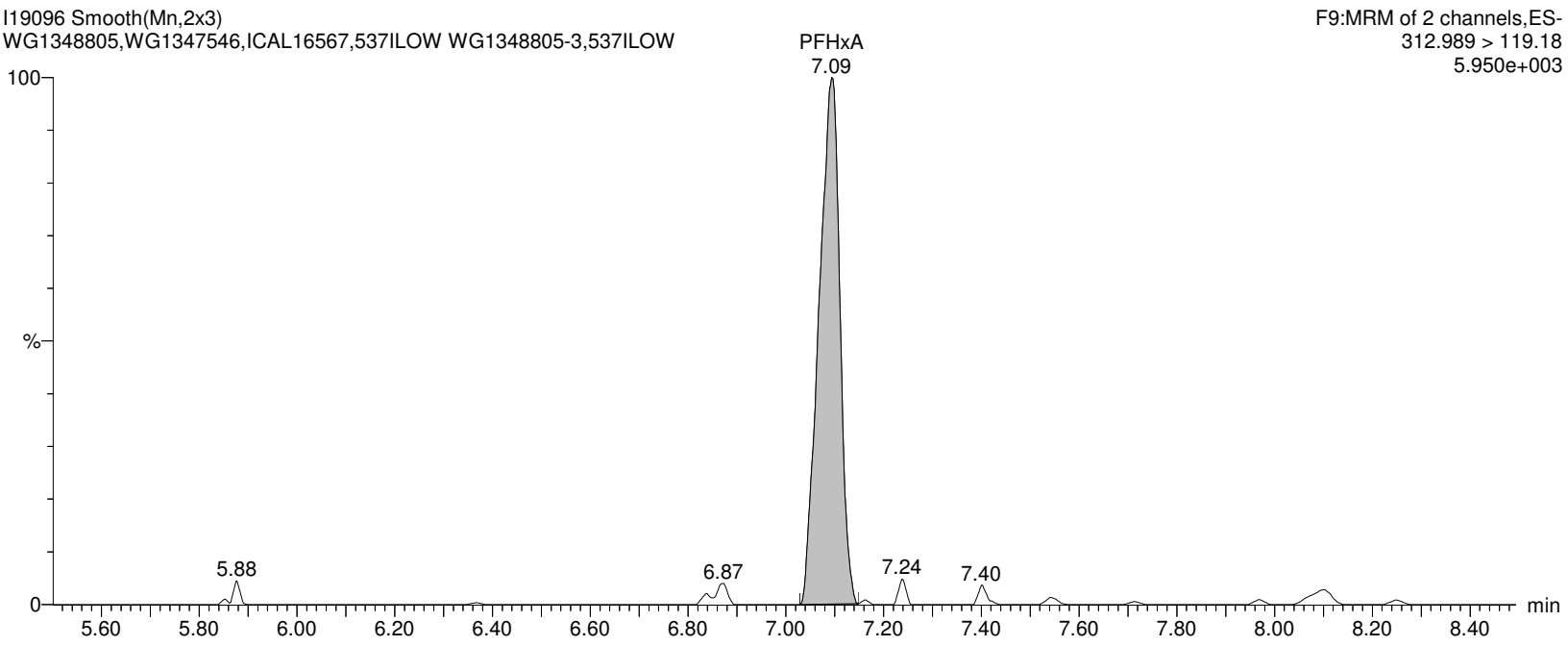
**PFHxA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200309_537ISO.PRO\Data\WG1348805B.qld
Last Altered: Tuesday, March 10, 2020 15:04:16 Eastern Daylight Time
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**Name: I19096**
**ID: WG1348805-3,537ILOW**
**Date: 09-Mar-2020**
**Time: 20:21:47**
**Description: WG1348805,WG1347546,ICAL16567,537ILOW**
**User: LCMS01:JW**
**Vial: 1:A,2**
**Instrument: XEVO-TQSmicro#QEA0276**
**Inlet Method Name: C:\MassLynx\Data\200309_537ISO.PRO\ACQUDB\LCMS_537_ISO_MeOH**
**Tune Method Name: C:\MassLynx\Data\200309_537ISO.PRO\ACQUDB\190709_TUNE.IPR**
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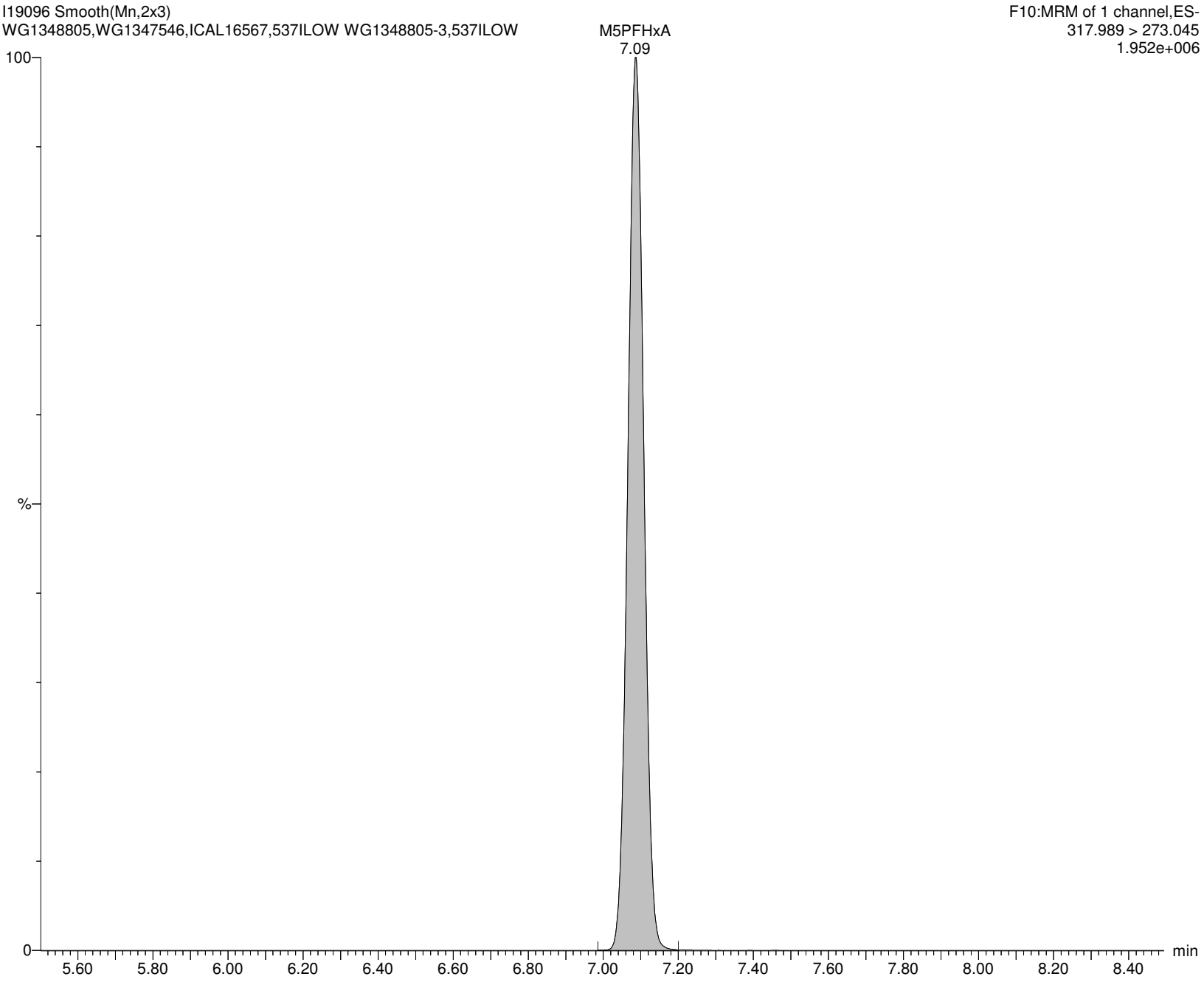
**M5PFHxA**





all concentration units in (ng/mL)

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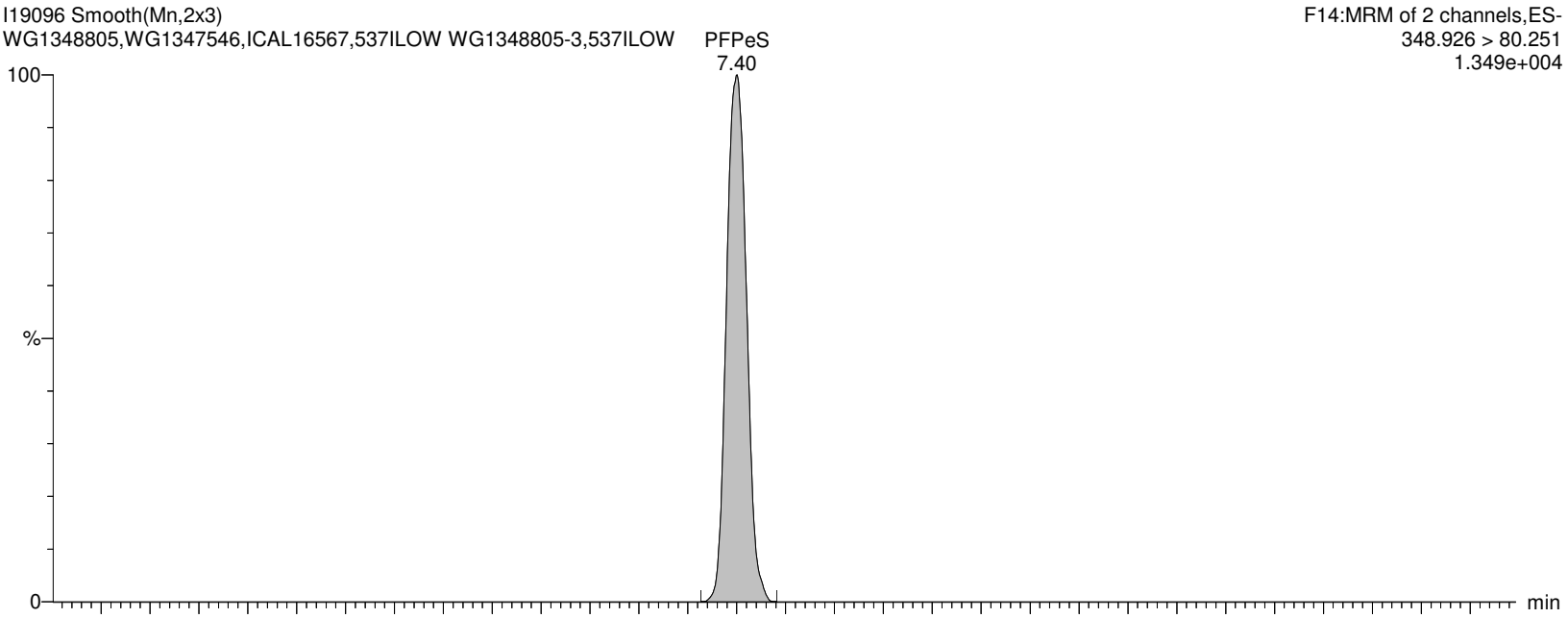


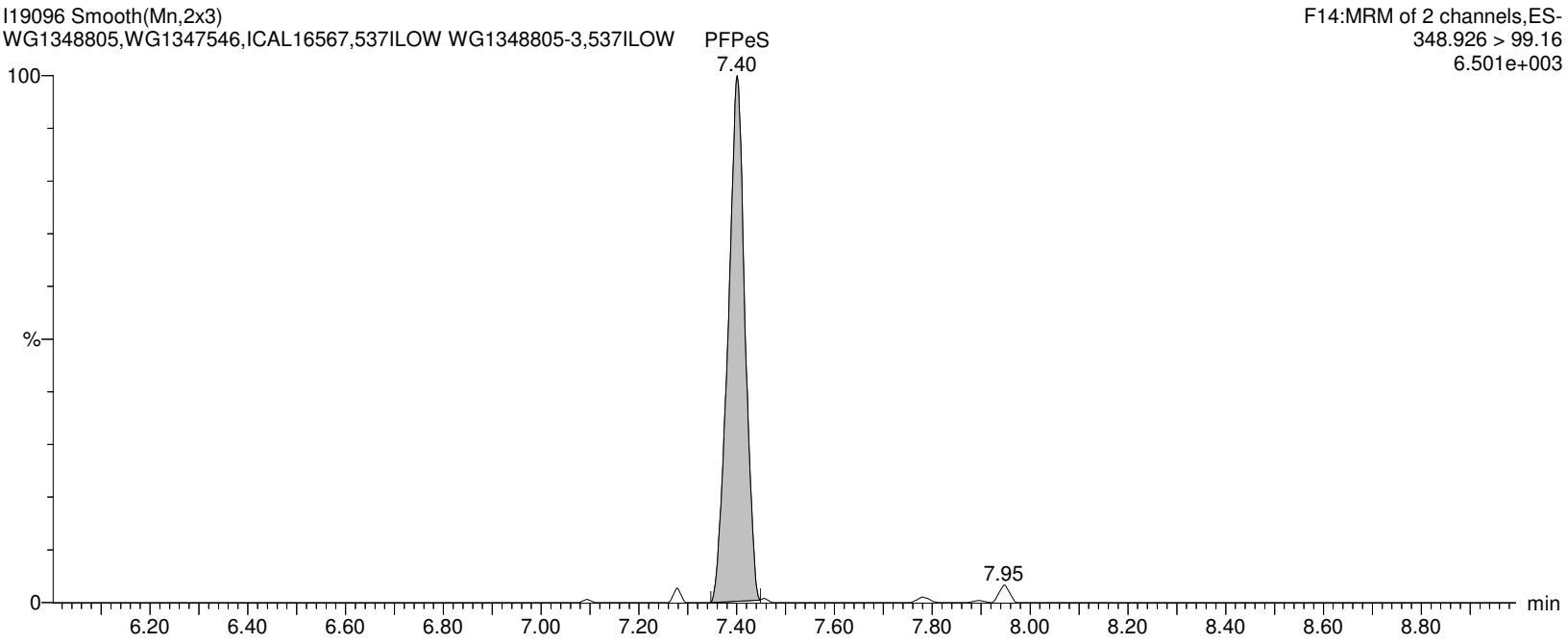



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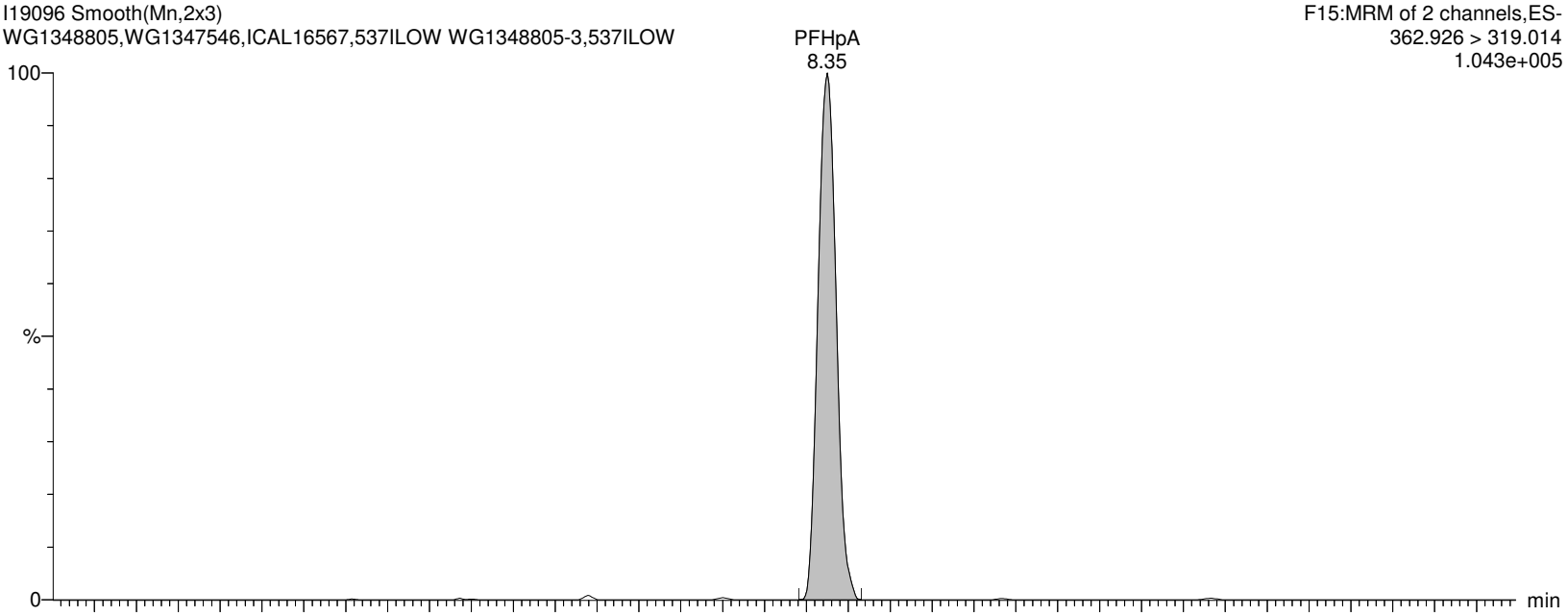
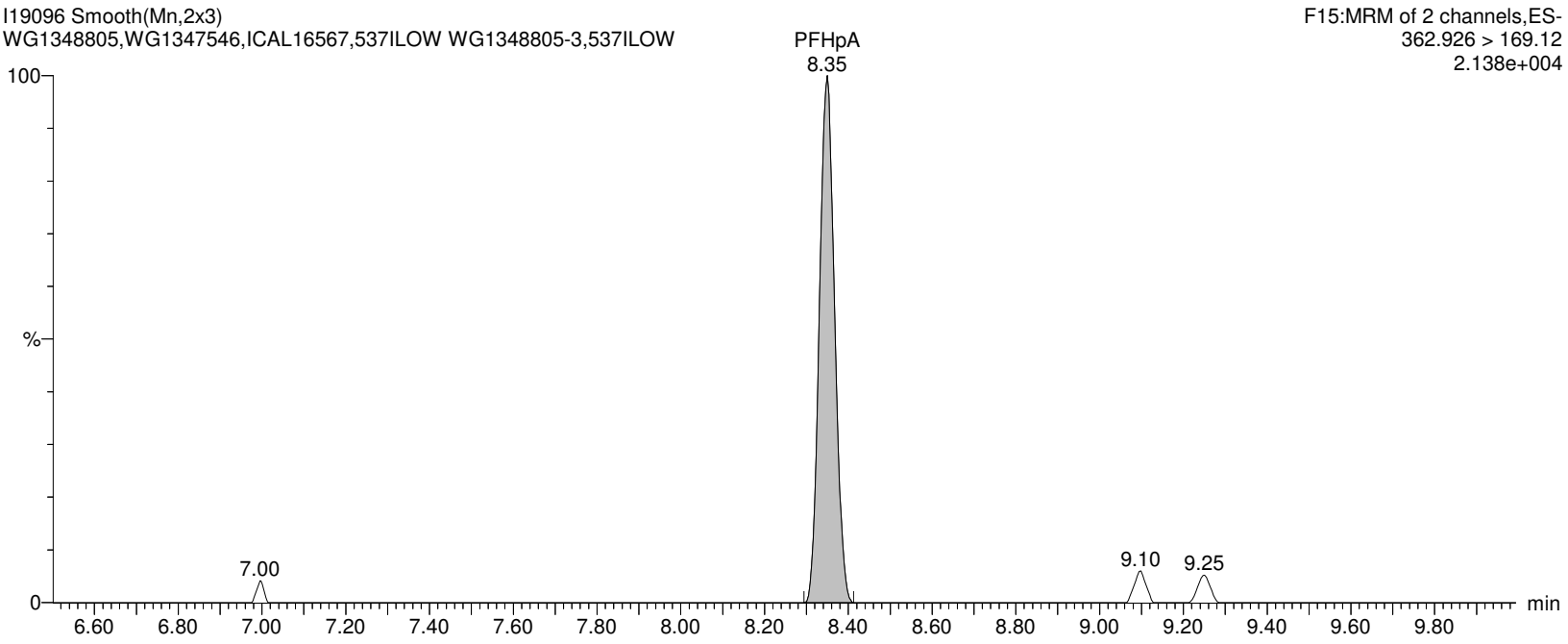
**PFHpA**





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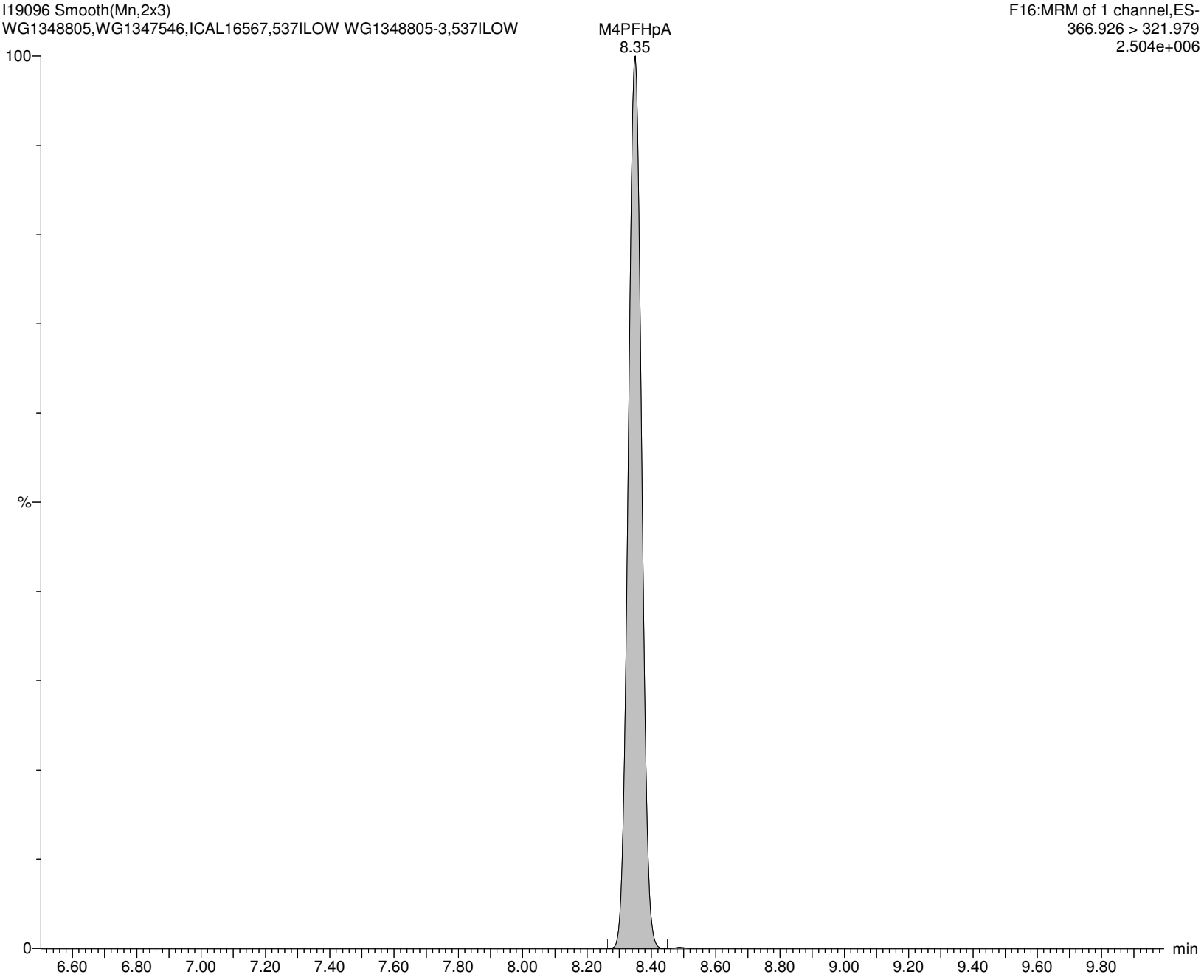
**M4PFHpA**





all concentration units in (ng/mL)

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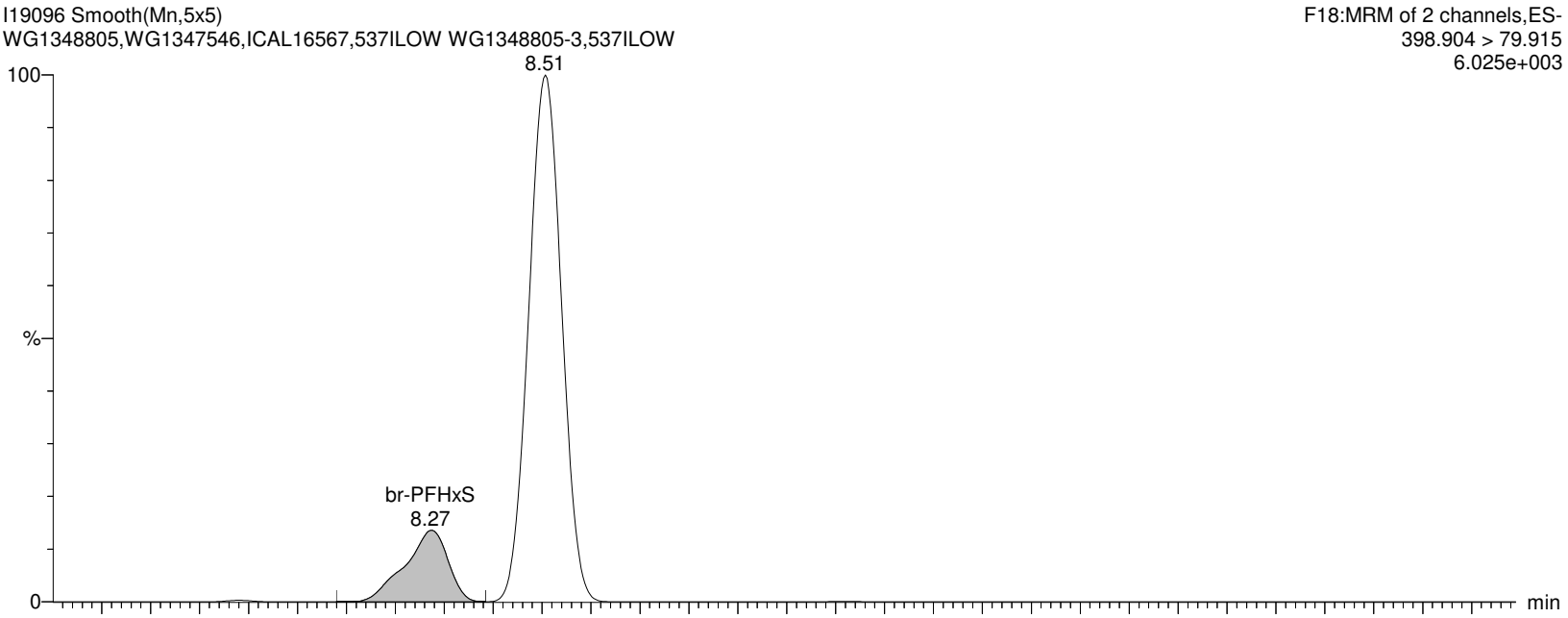
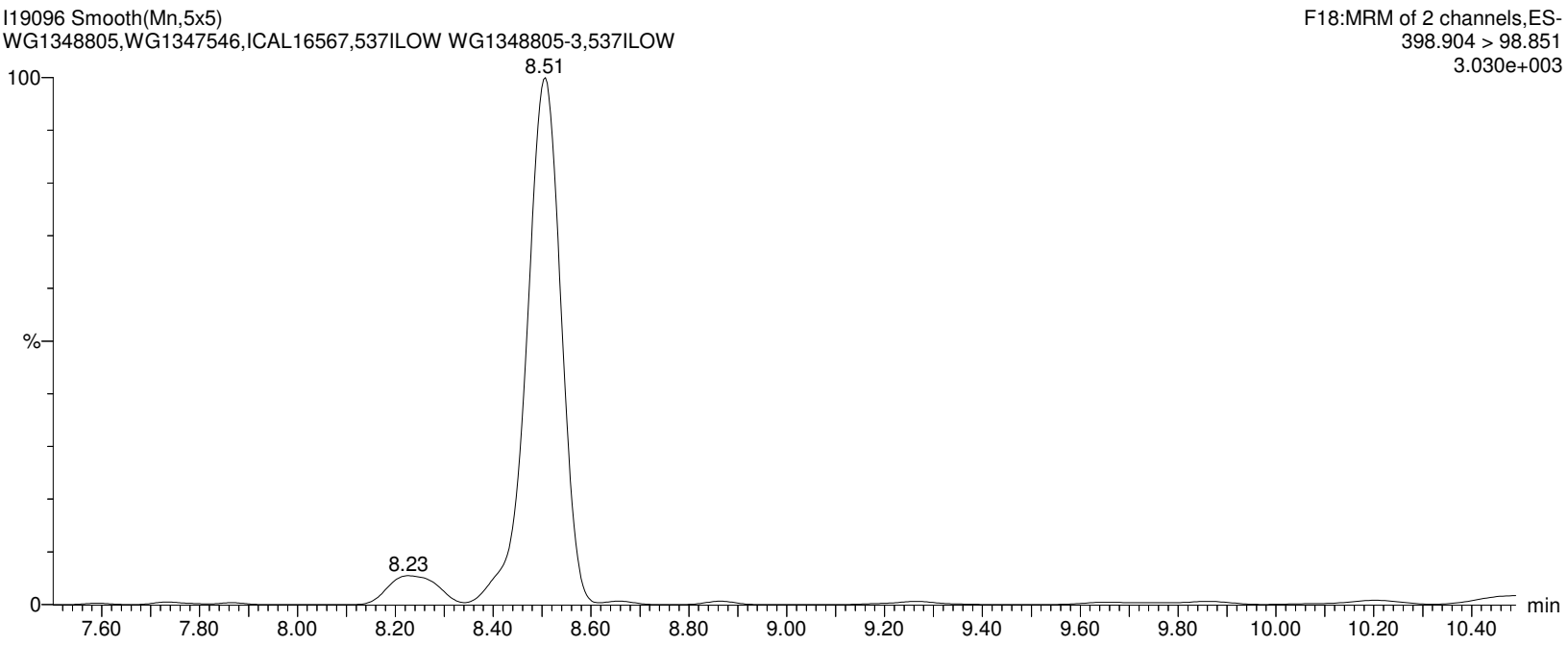
**br-PFHxS**





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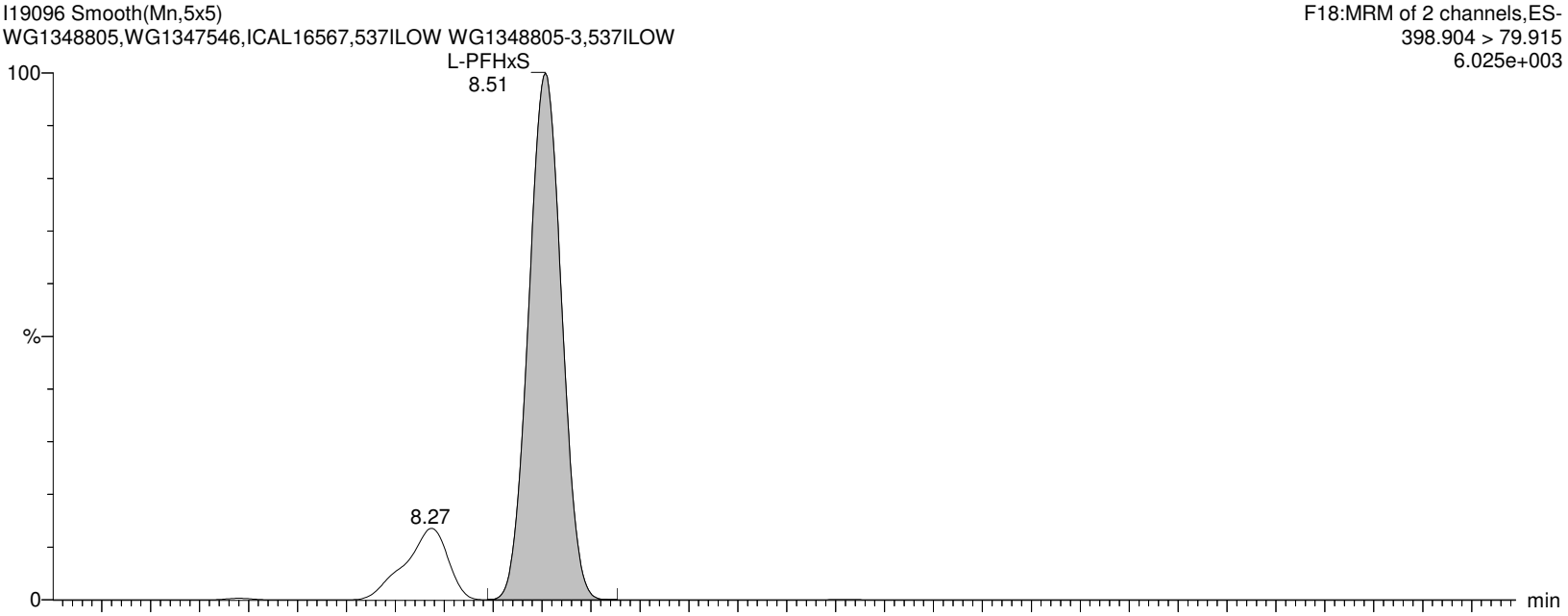
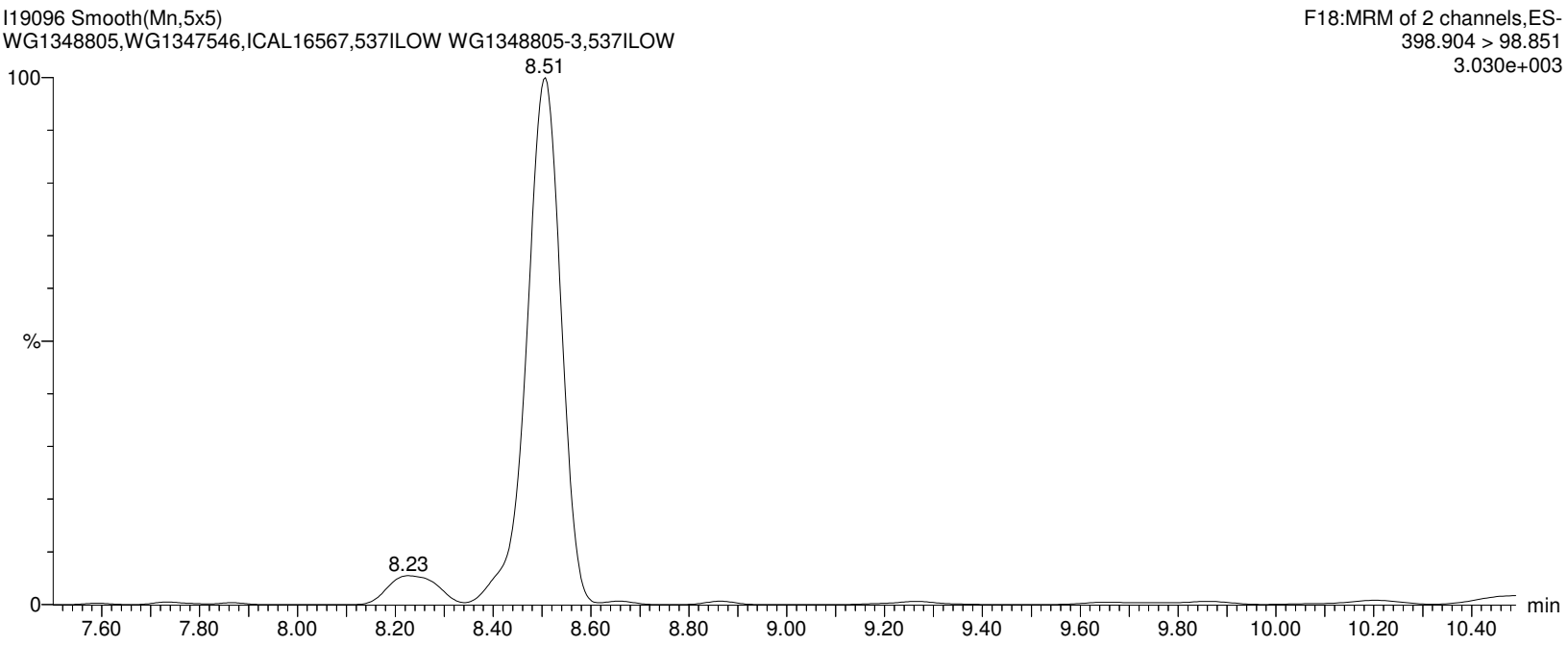
**L-PFHxS**





all concentration units in (ng/mL)

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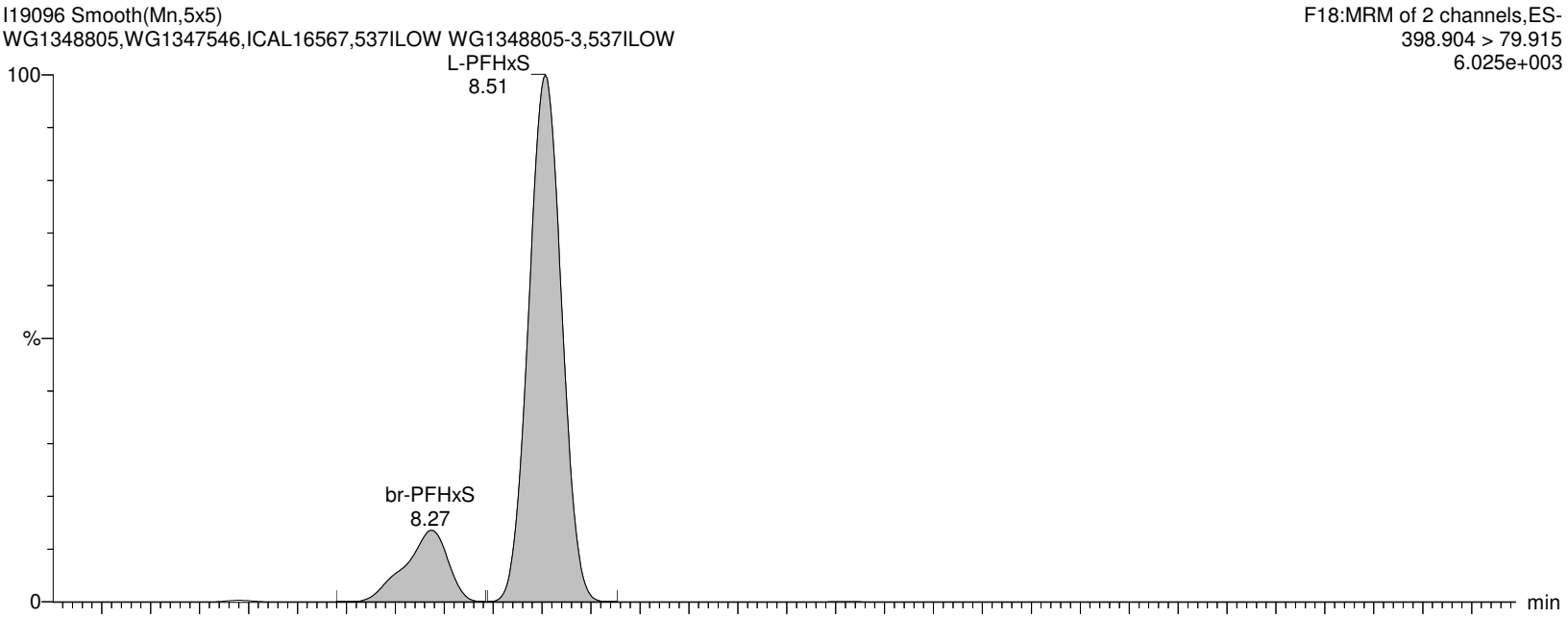
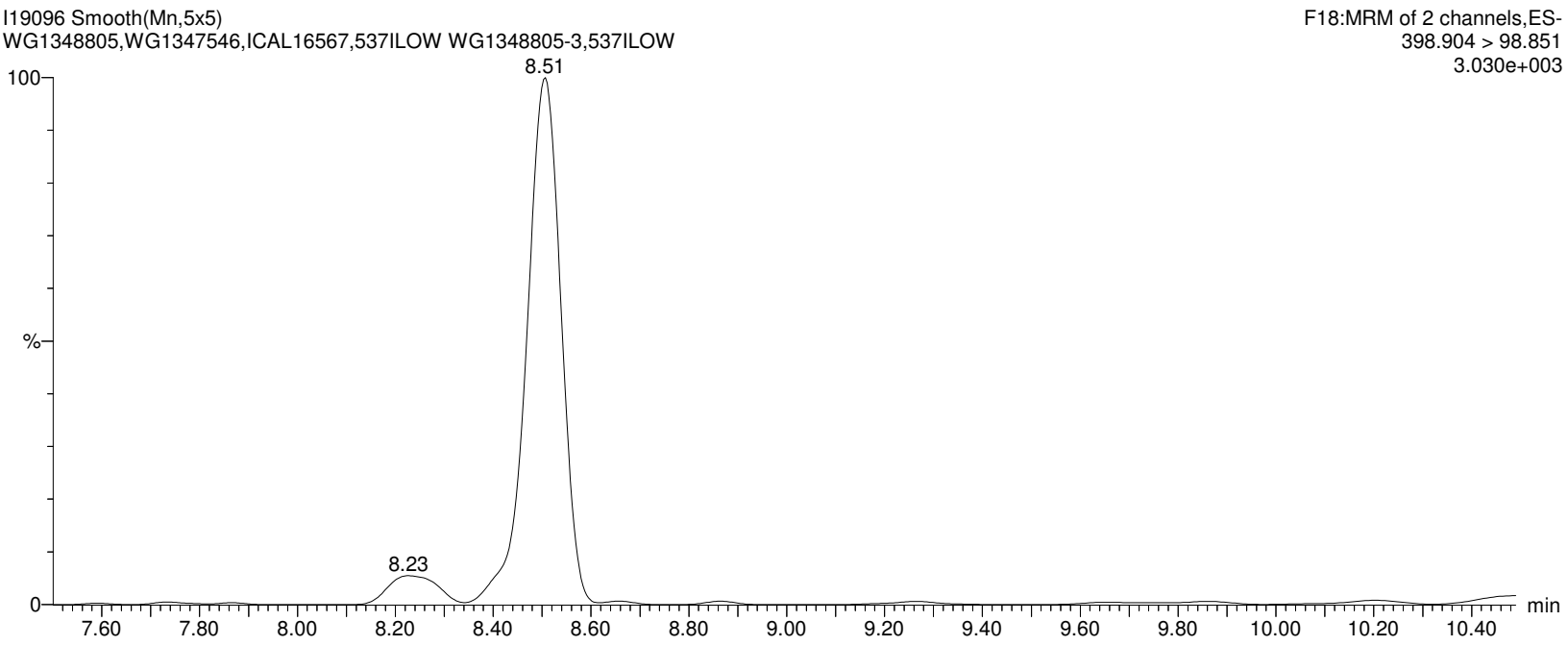
**PFHxS**





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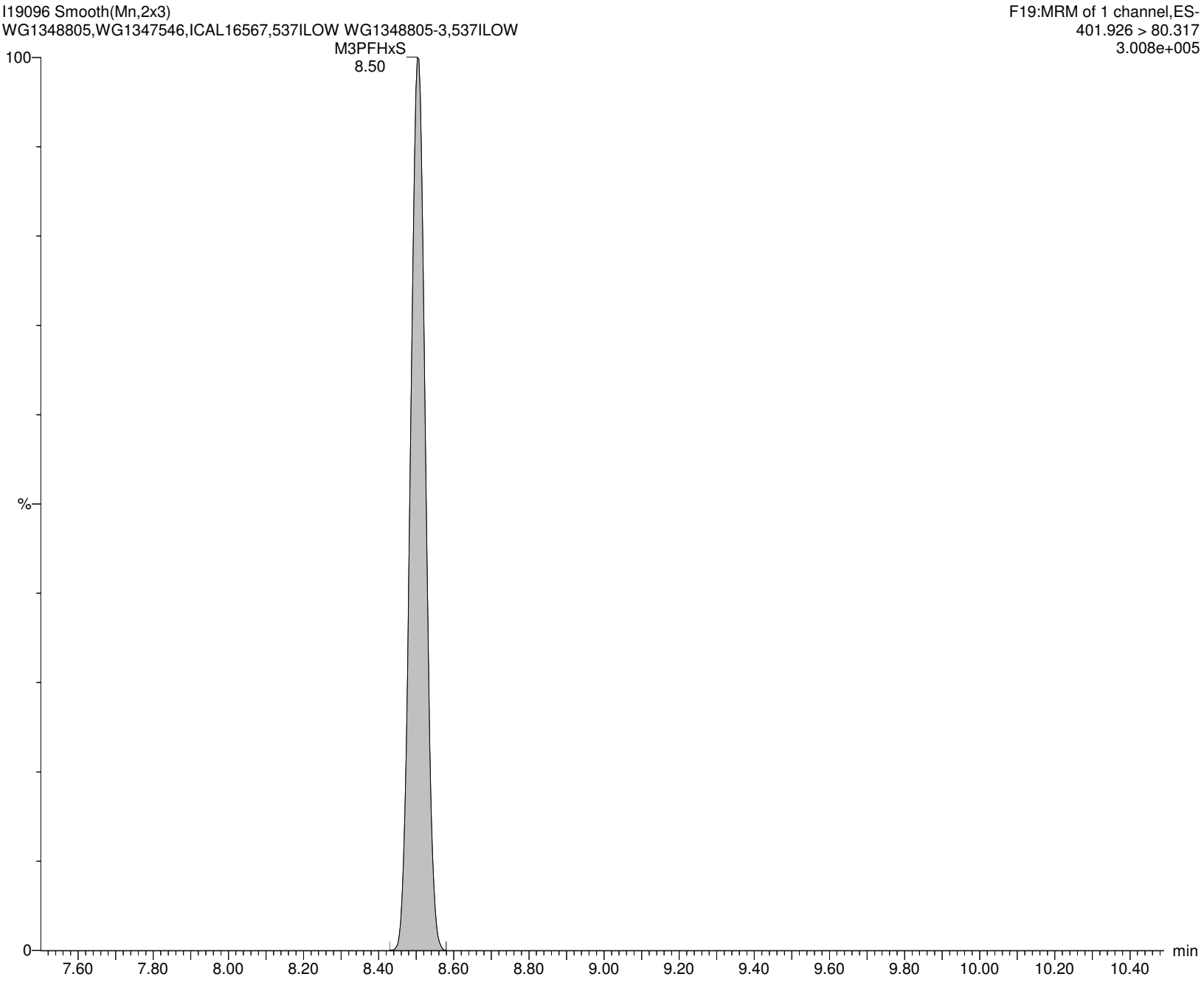
**M3PFHxS**





all concentration units in (ng/mL)

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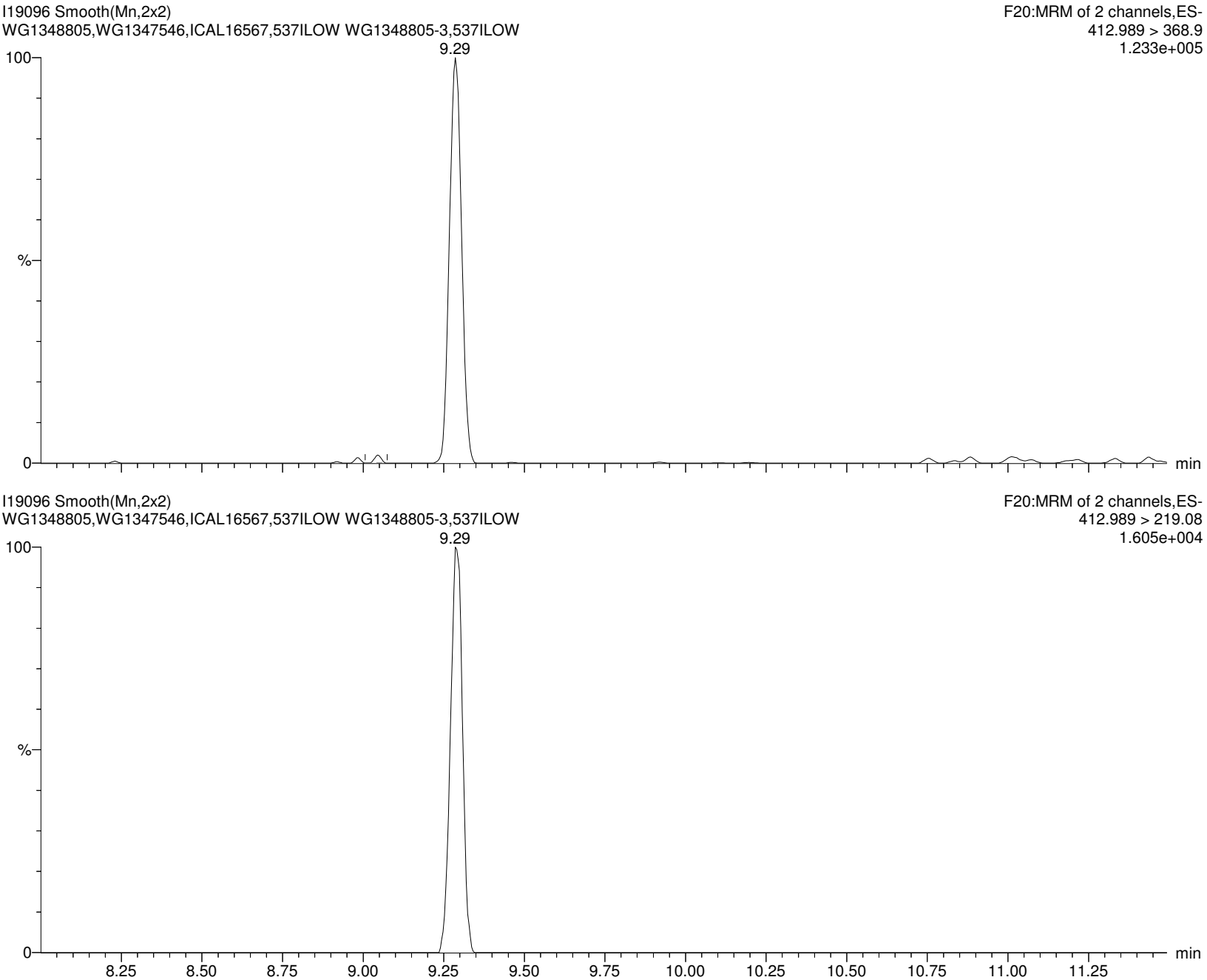
**br-PFOA**





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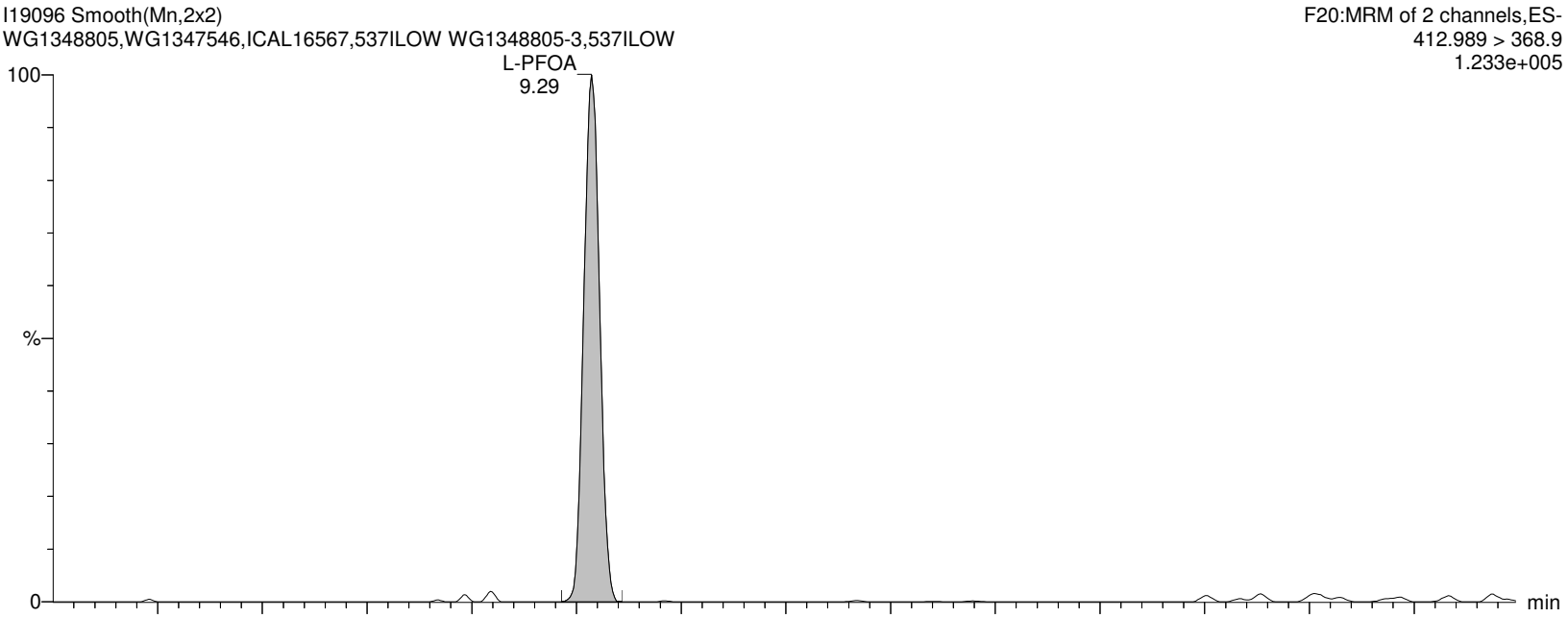
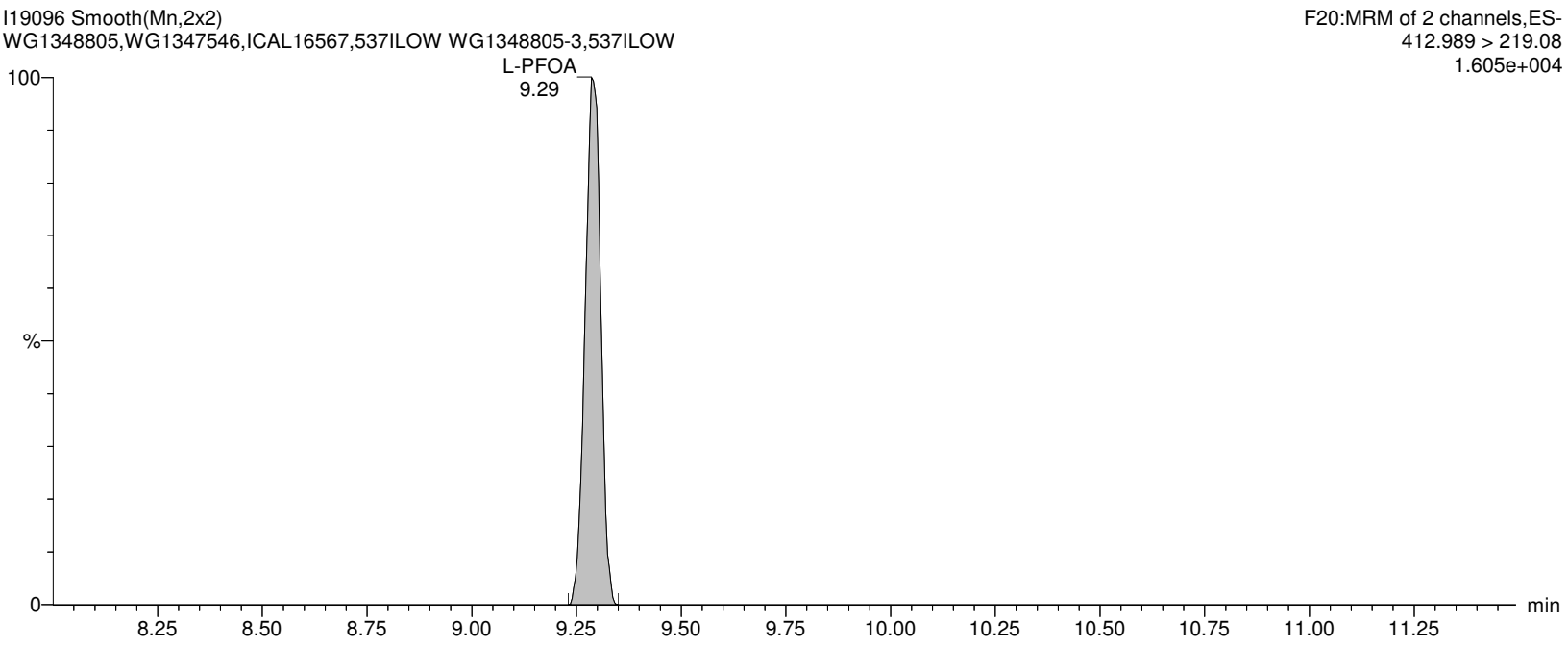
**L-PFOA**





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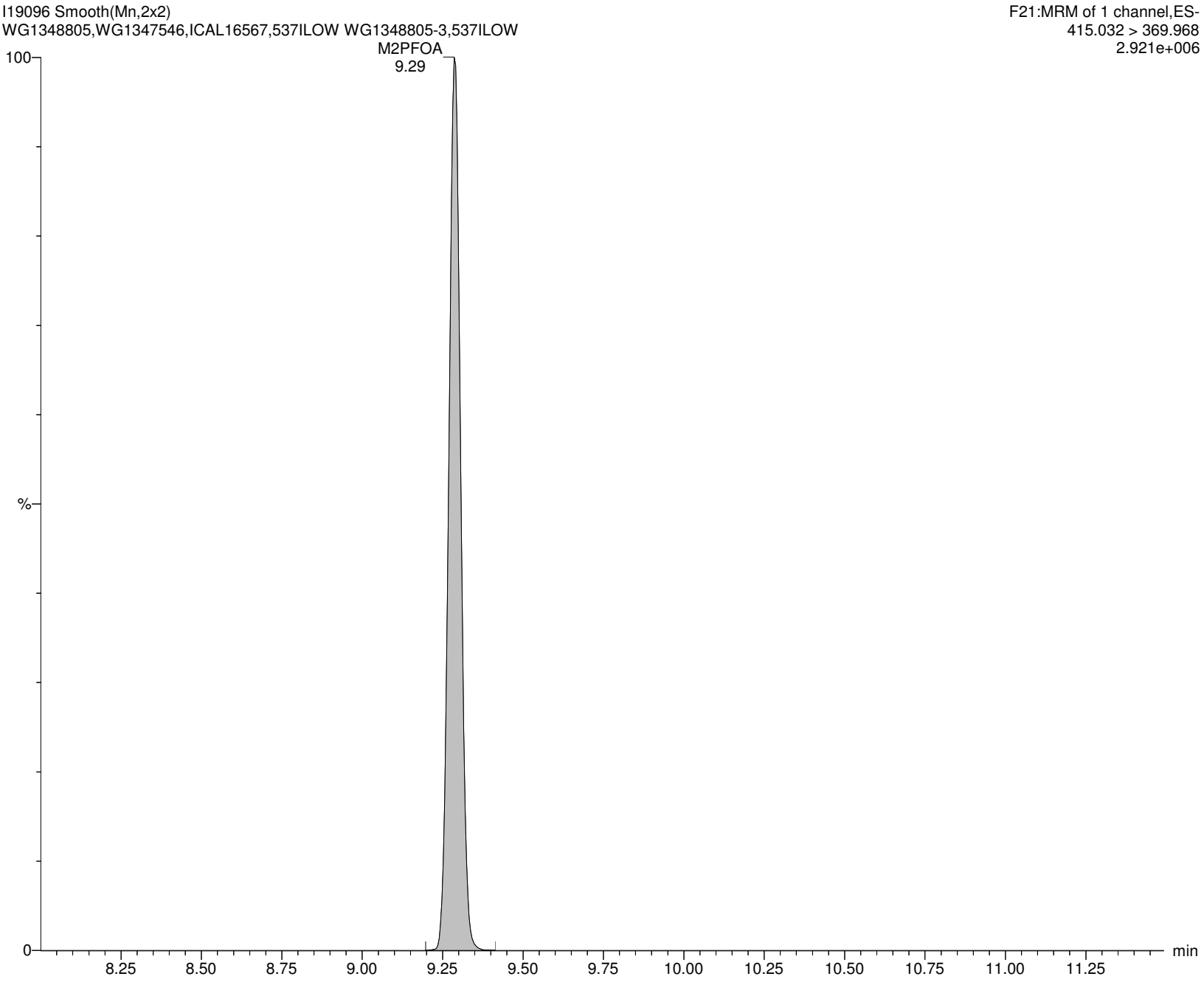
**M2PFOA**





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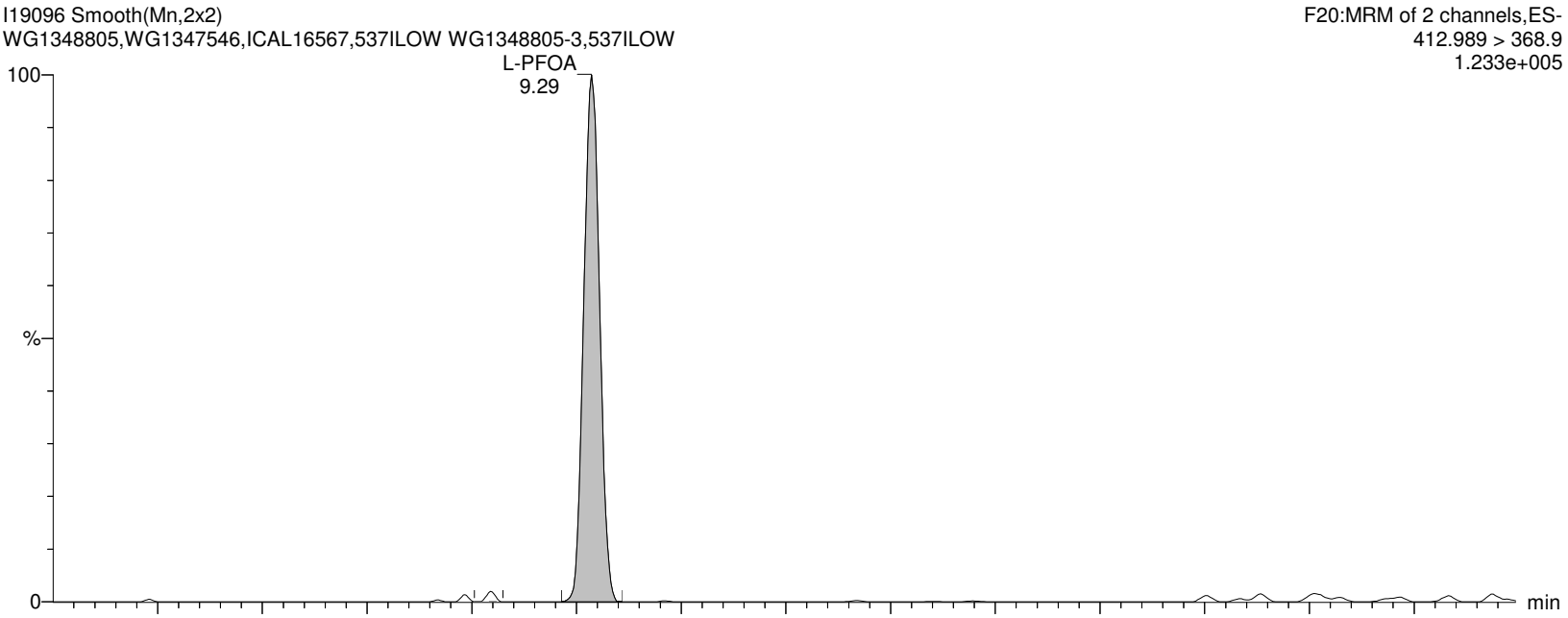
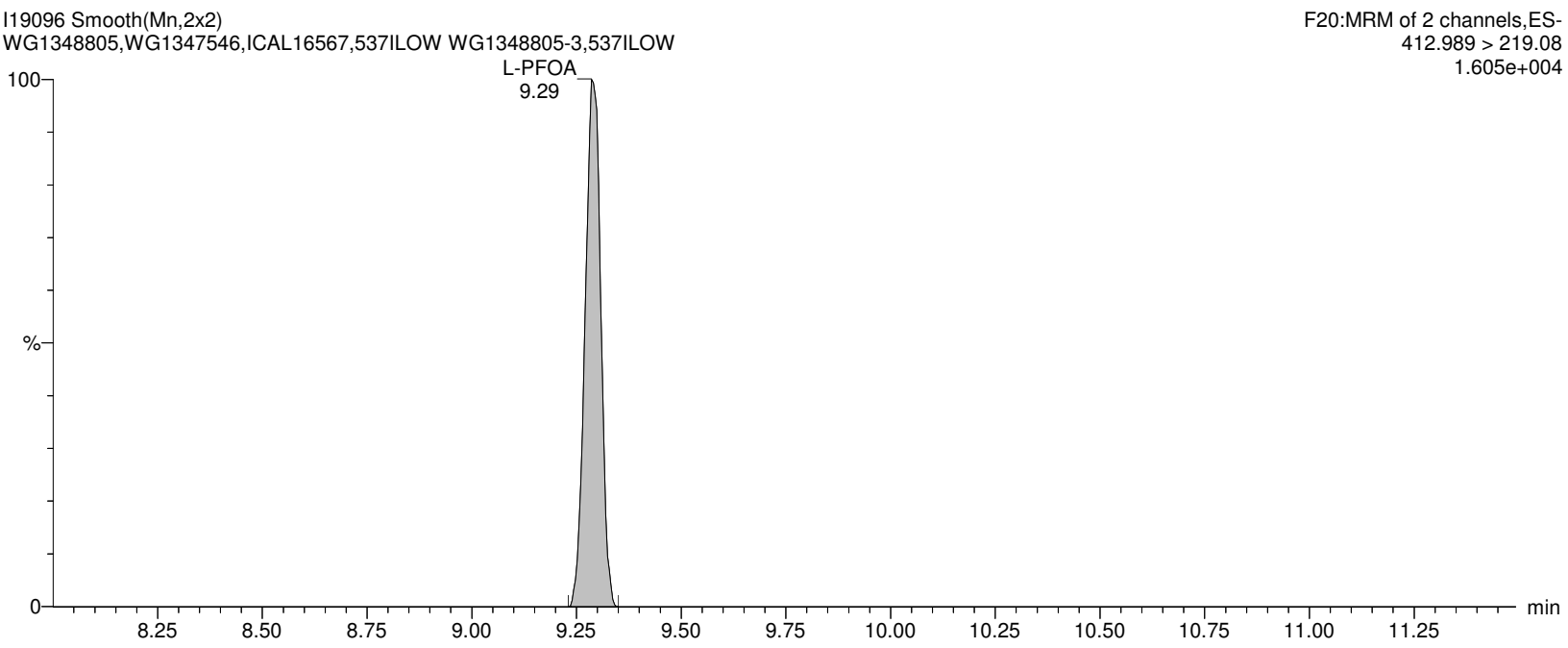
**PFOA**





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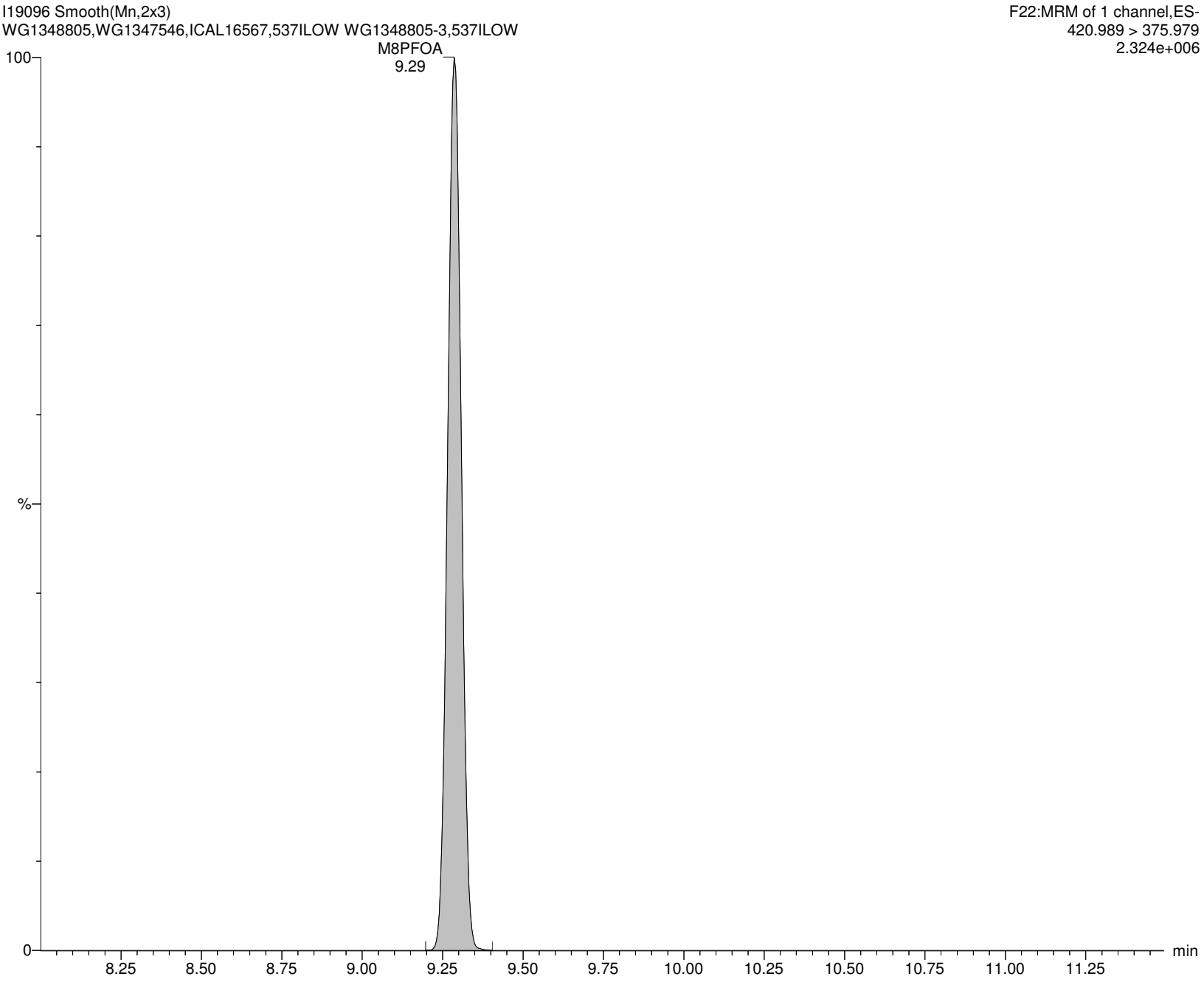
**M8PFOA**





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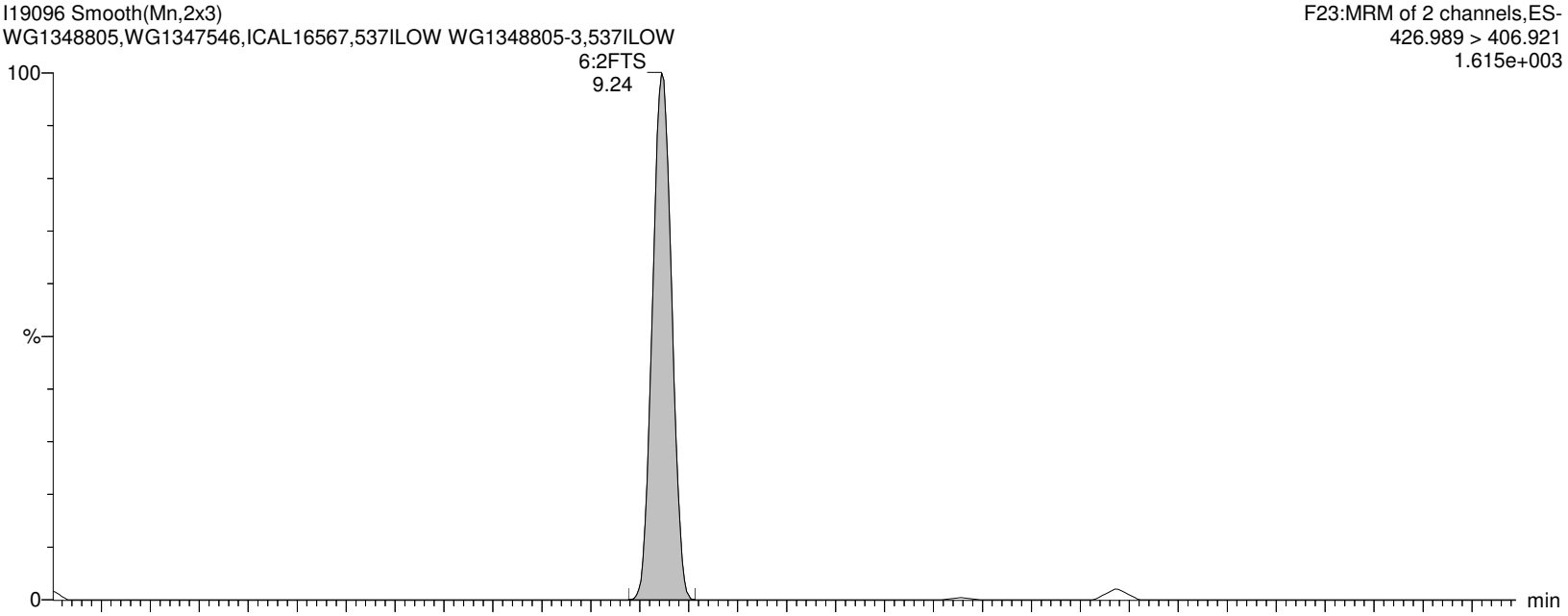


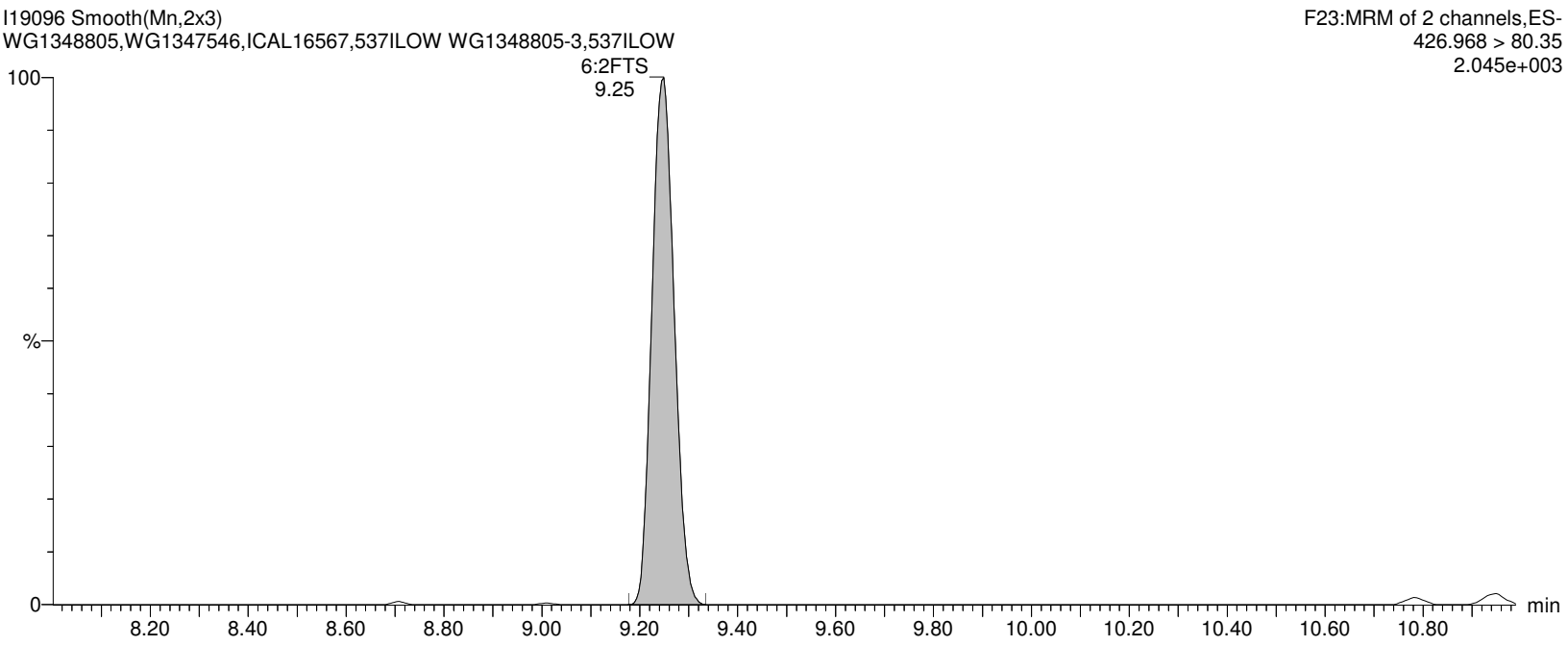



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**ID: WG1348805-3,537ILOW**
**Date: 09-Mar-2020**
**Time: 20:21:47**
**Description: WG1348805,WG1347546,ICAL16567,537ILOW**
**User: LCMS01:JW**
**Vial: 1:A,2**
**Instrument: XEVO-TQSmicro#QEA0276**
**Inlet Method Name: C:\MassLynx\Data\200309_537ISO.PRO\ACQUDB\LCMS_537_ISO_MeOH**
**Tune Method Name: C:\MassLynx\Data\200309_537ISO.PRO\ACQUDB\190709_TUNE.IPR**
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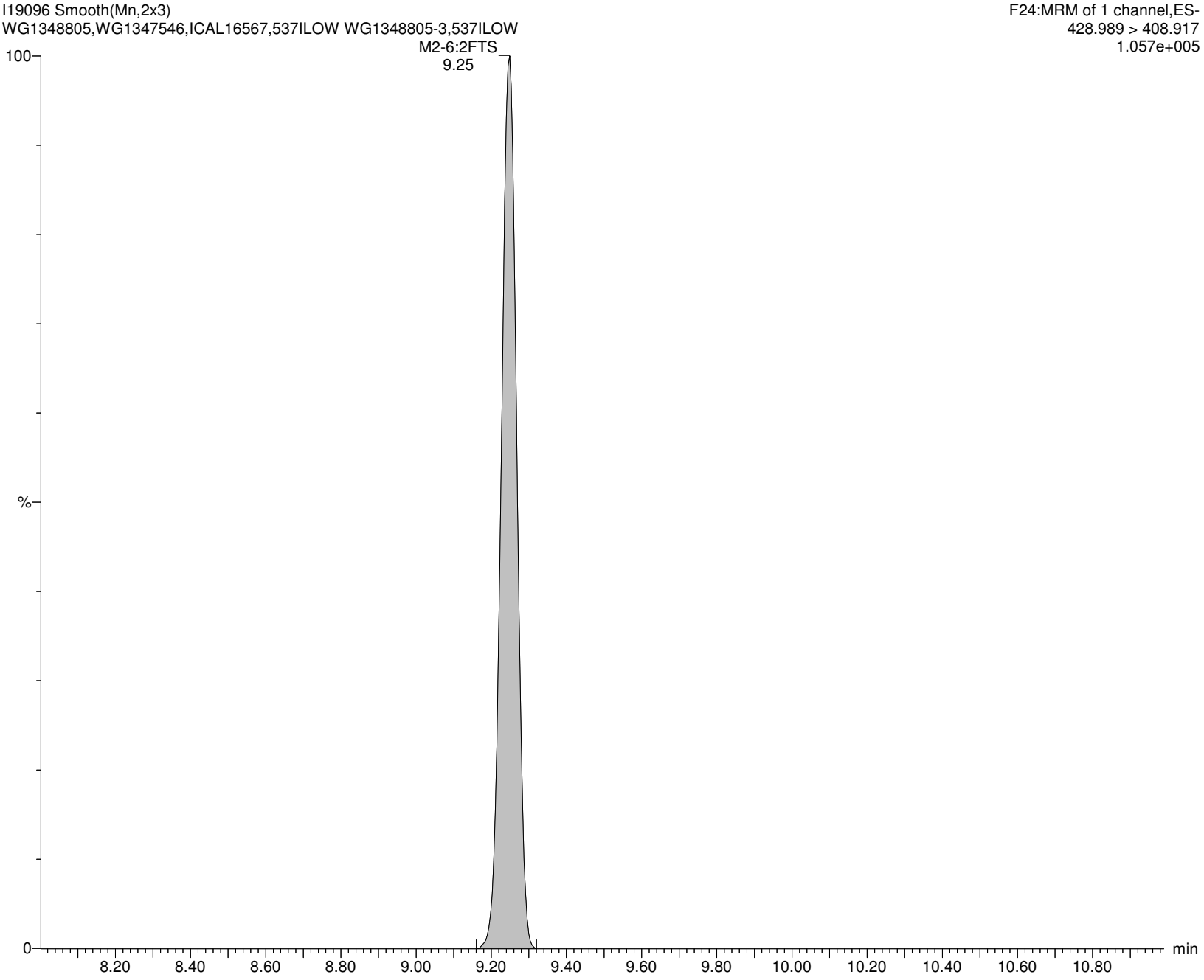
**M2-6:2FTS**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200309_537ISO.PRO\Data\WG1348805B.qld
Last Altered: Tuesday, March 10, 2020 15:04:16 Eastern Daylight Time
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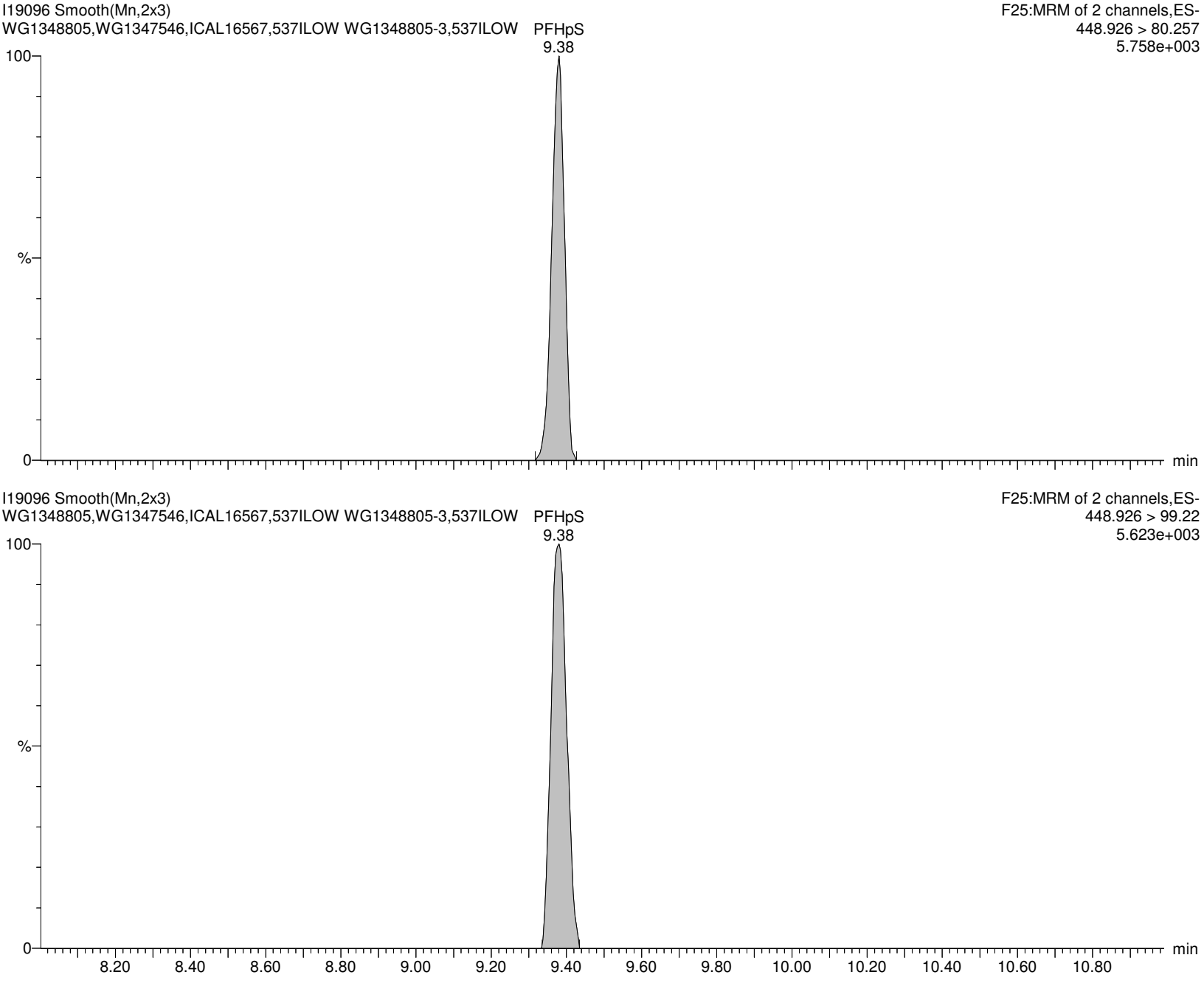



all concentration units in (ng/mL)

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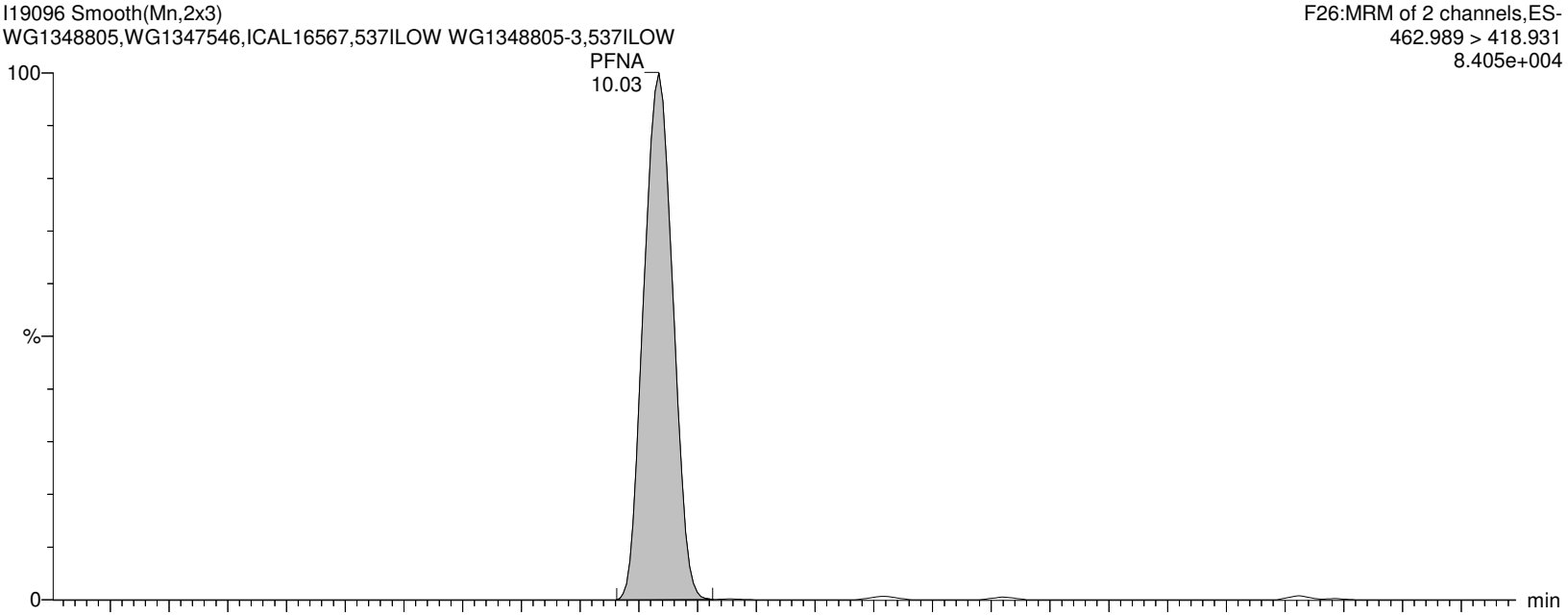


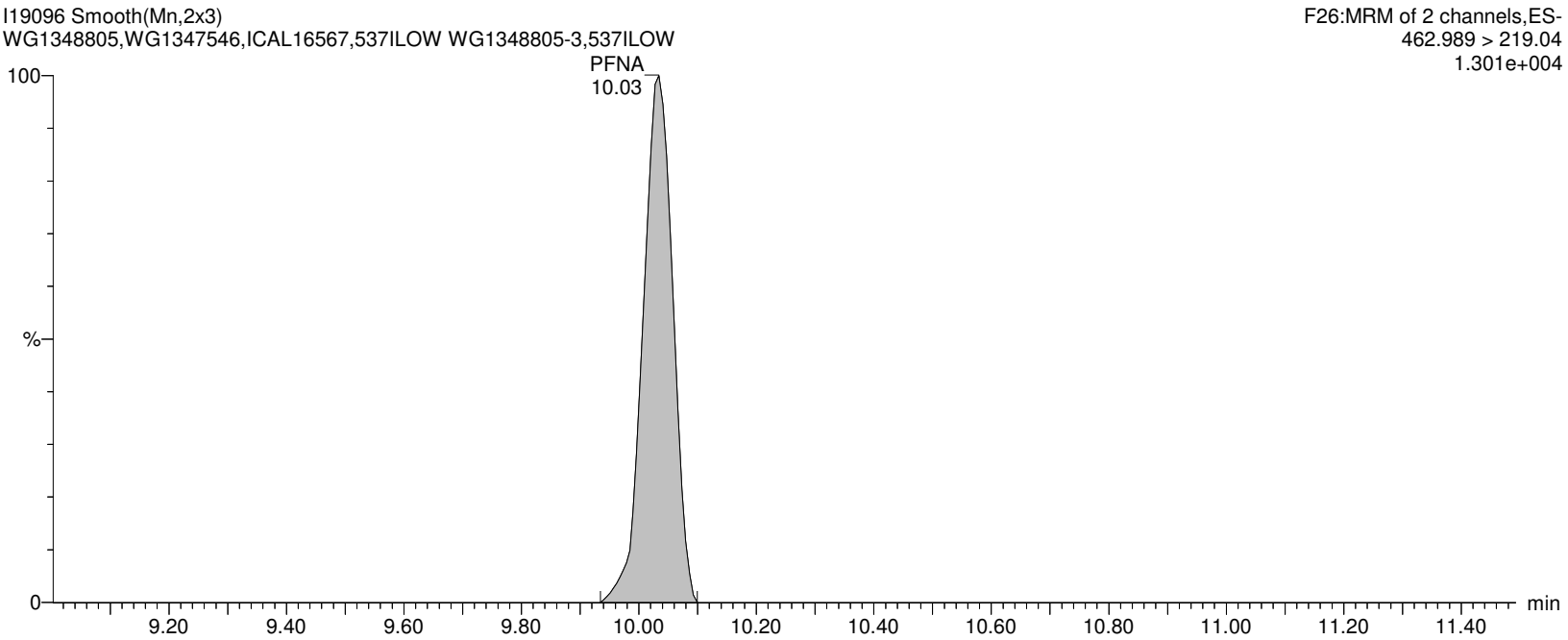



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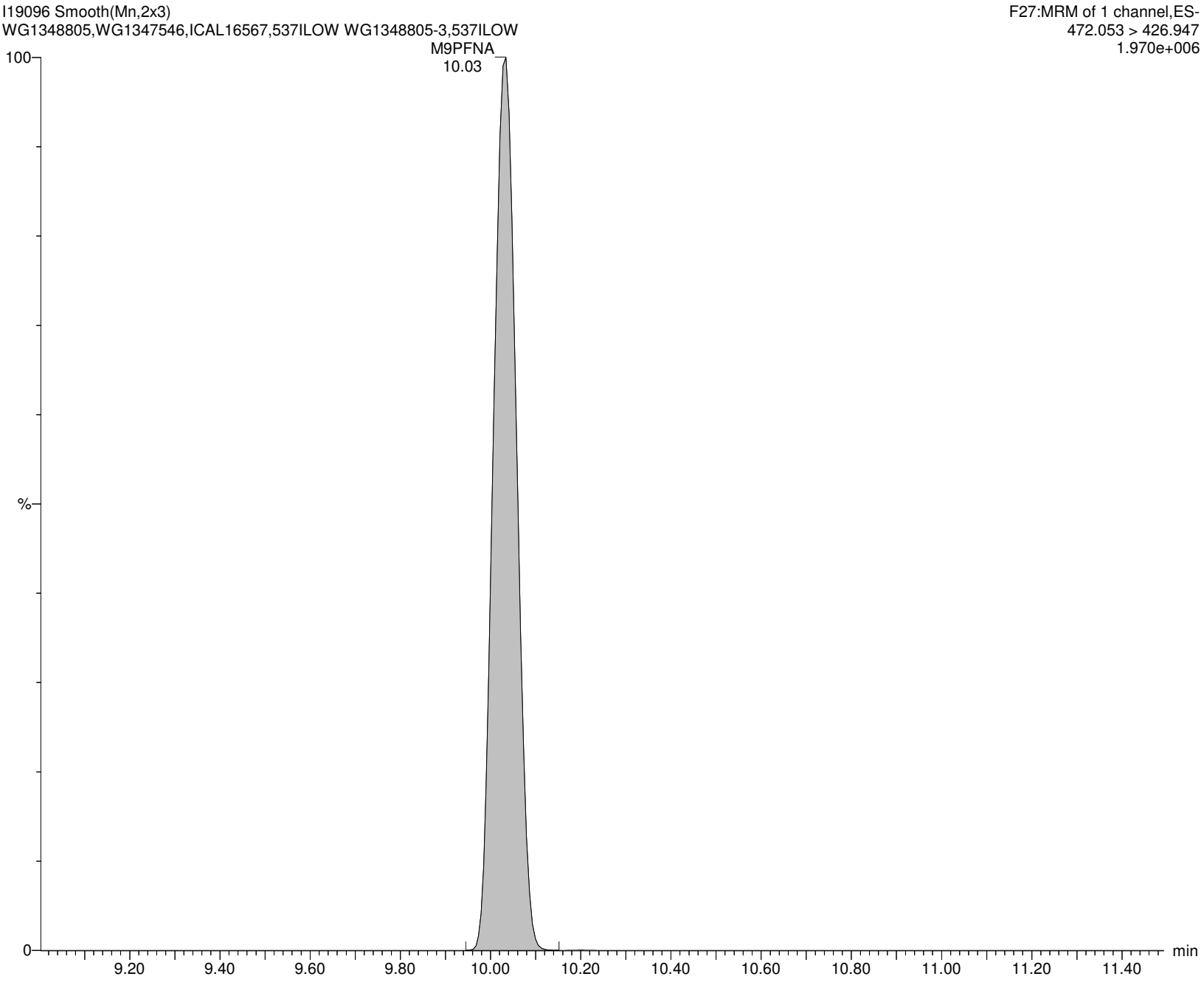
**M9PFNA**





all concentration units in (ng/mL)

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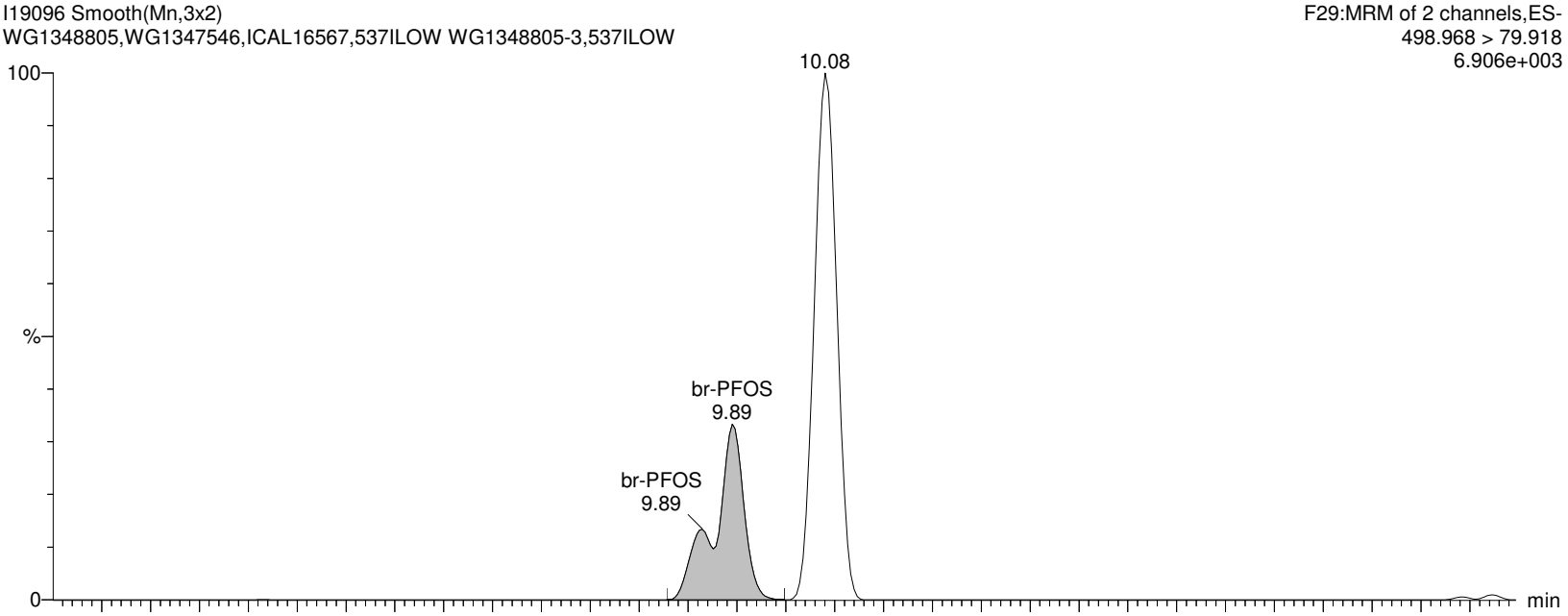
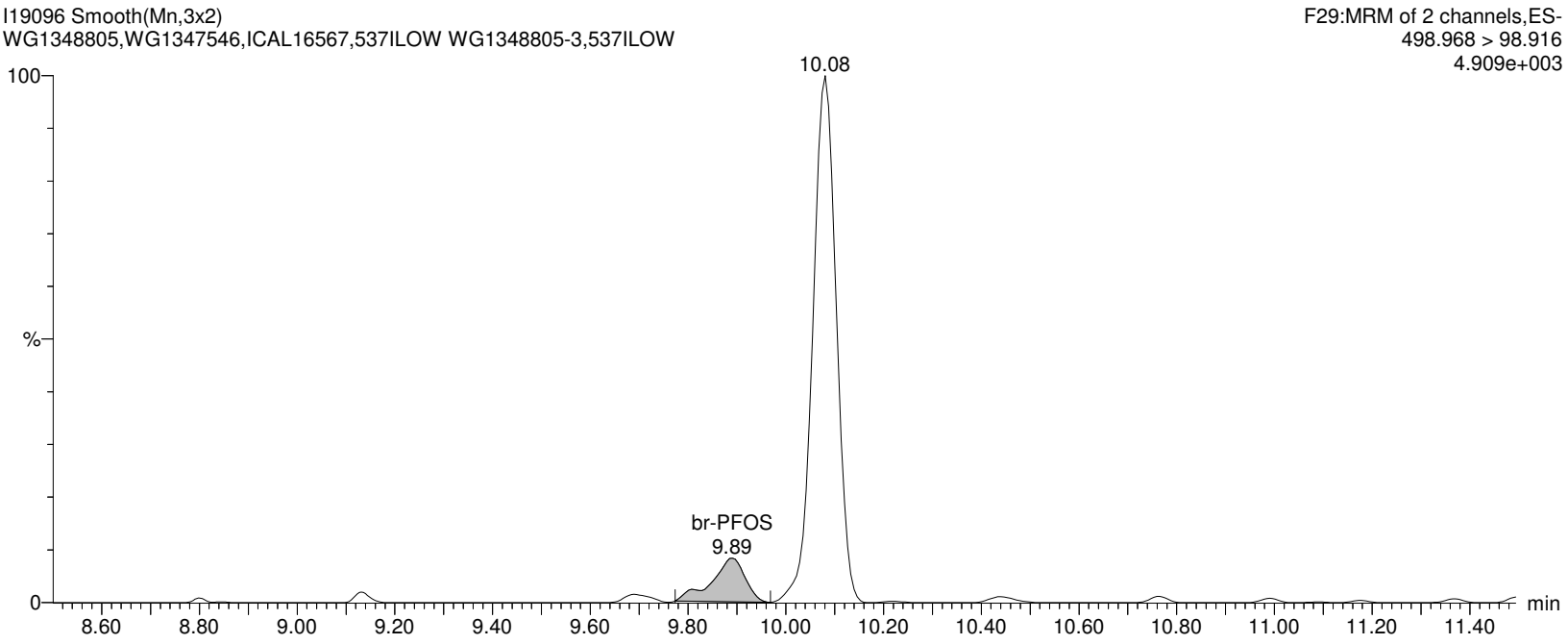
**br-PFOS**





all concentration units in (ng/mL)

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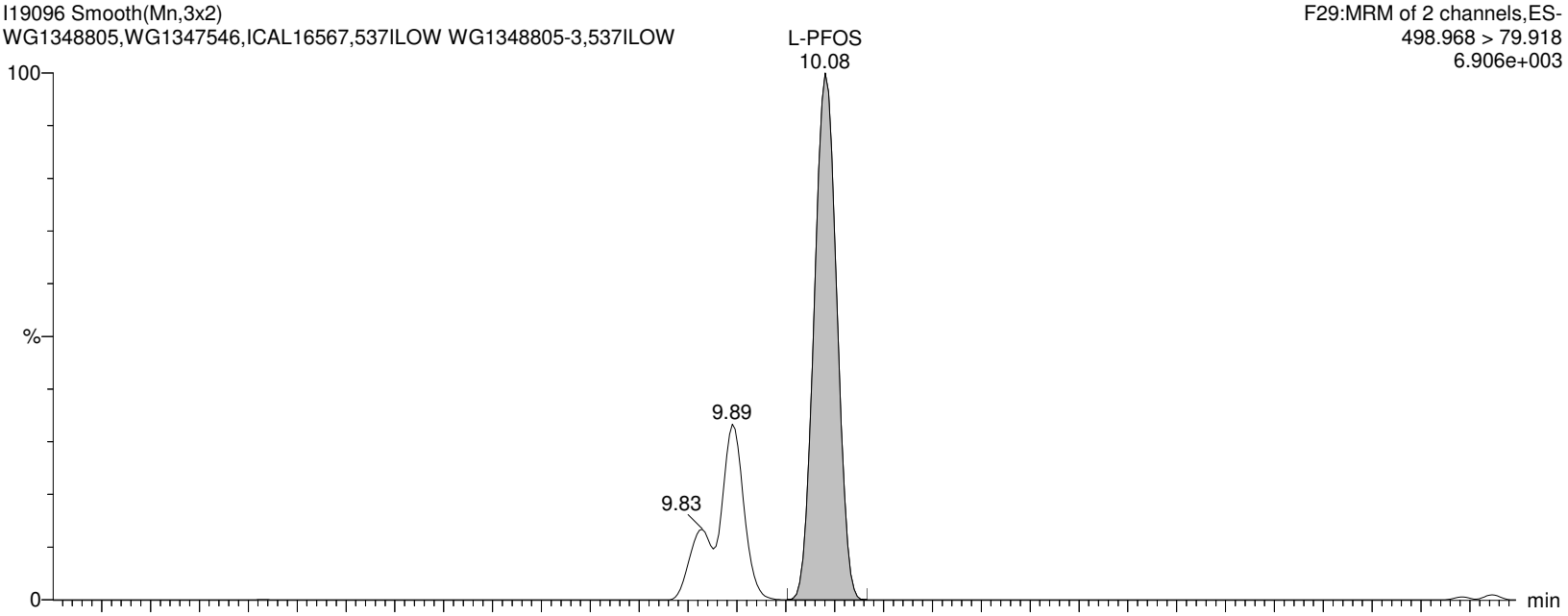
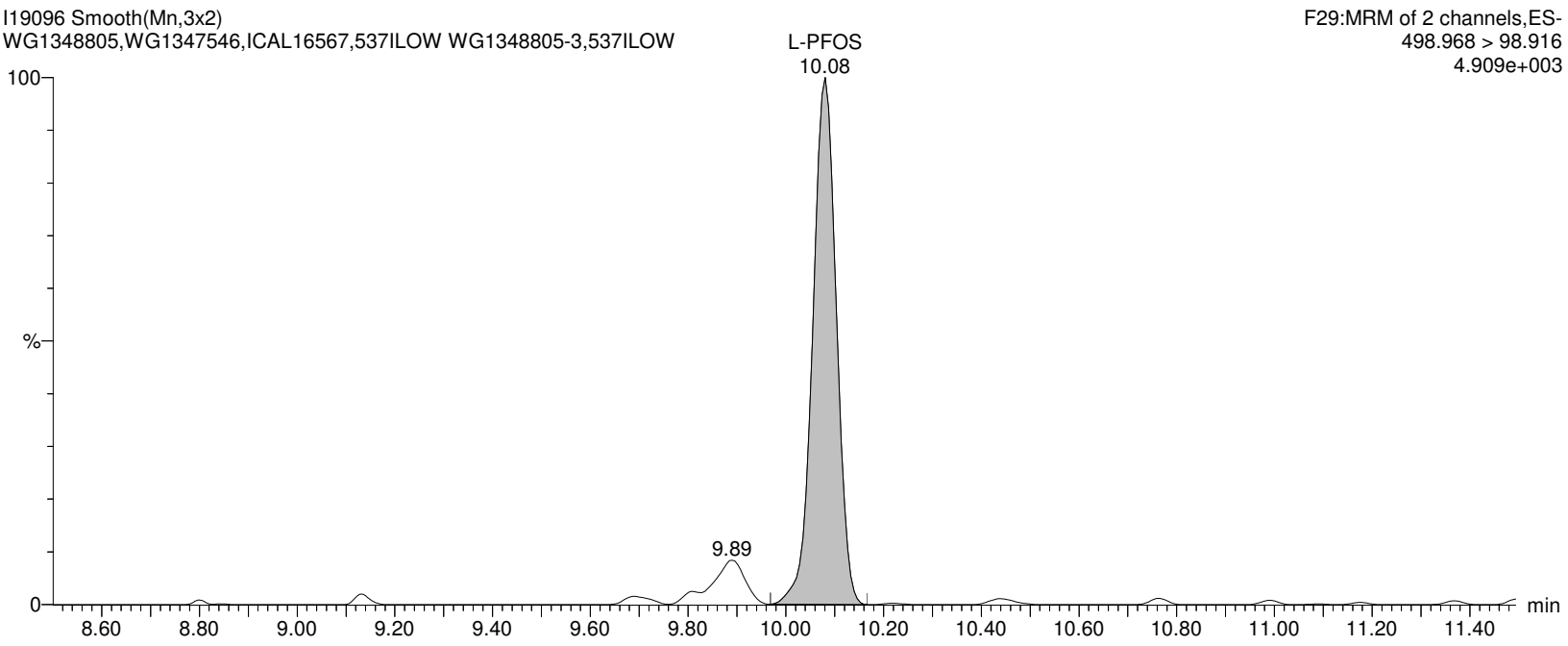
**L-PFOS**





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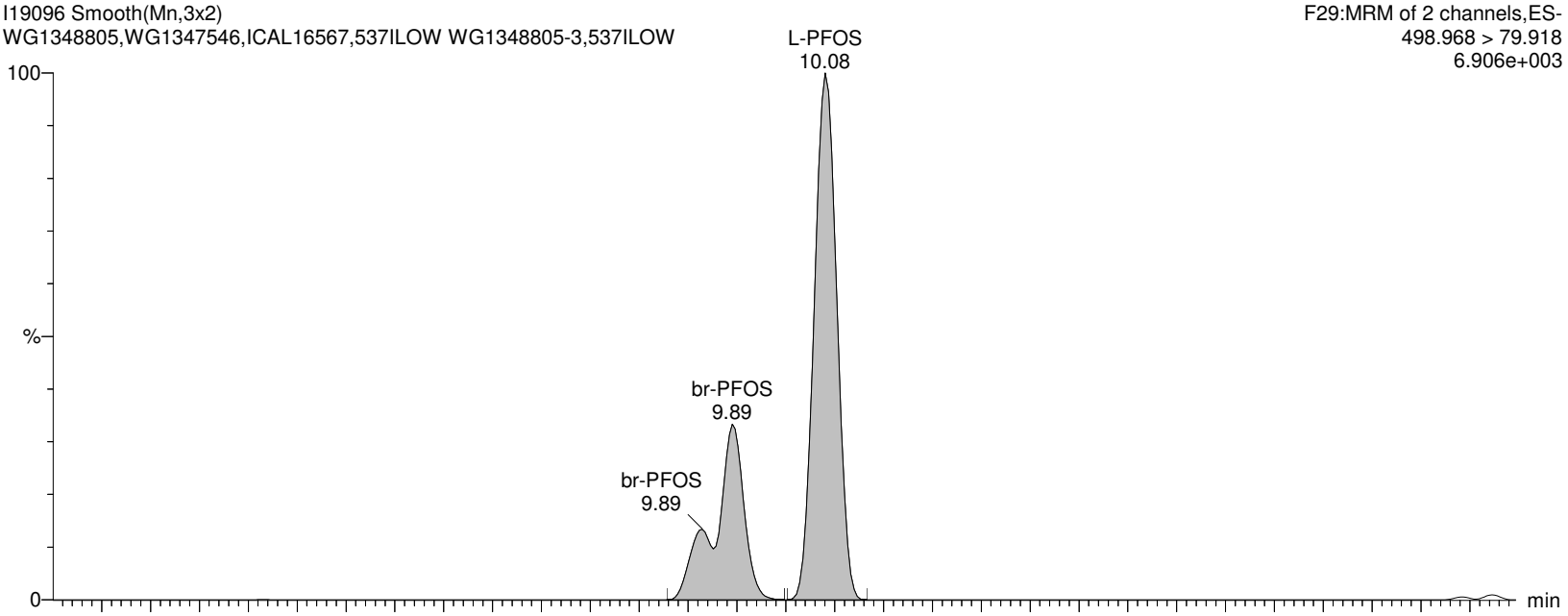
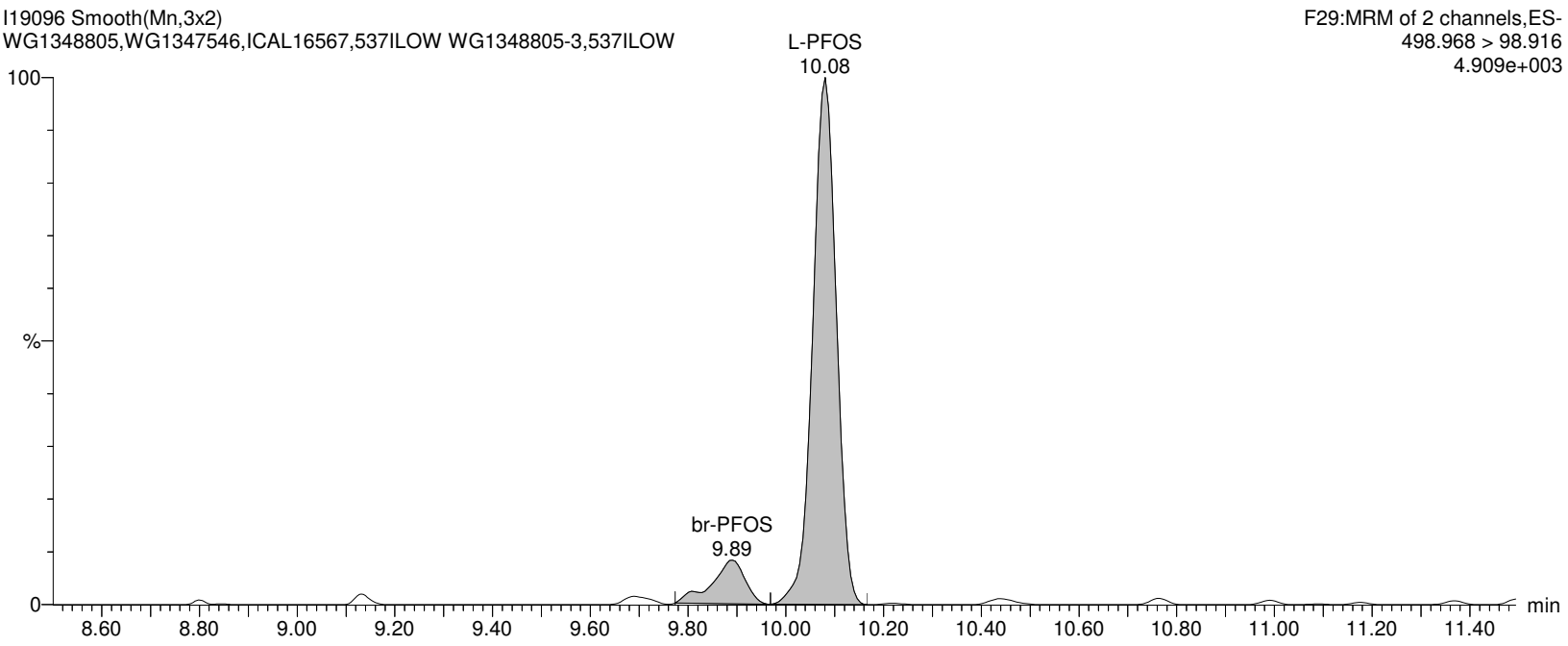
**PFOS**





all concentration units in (ng/mL)

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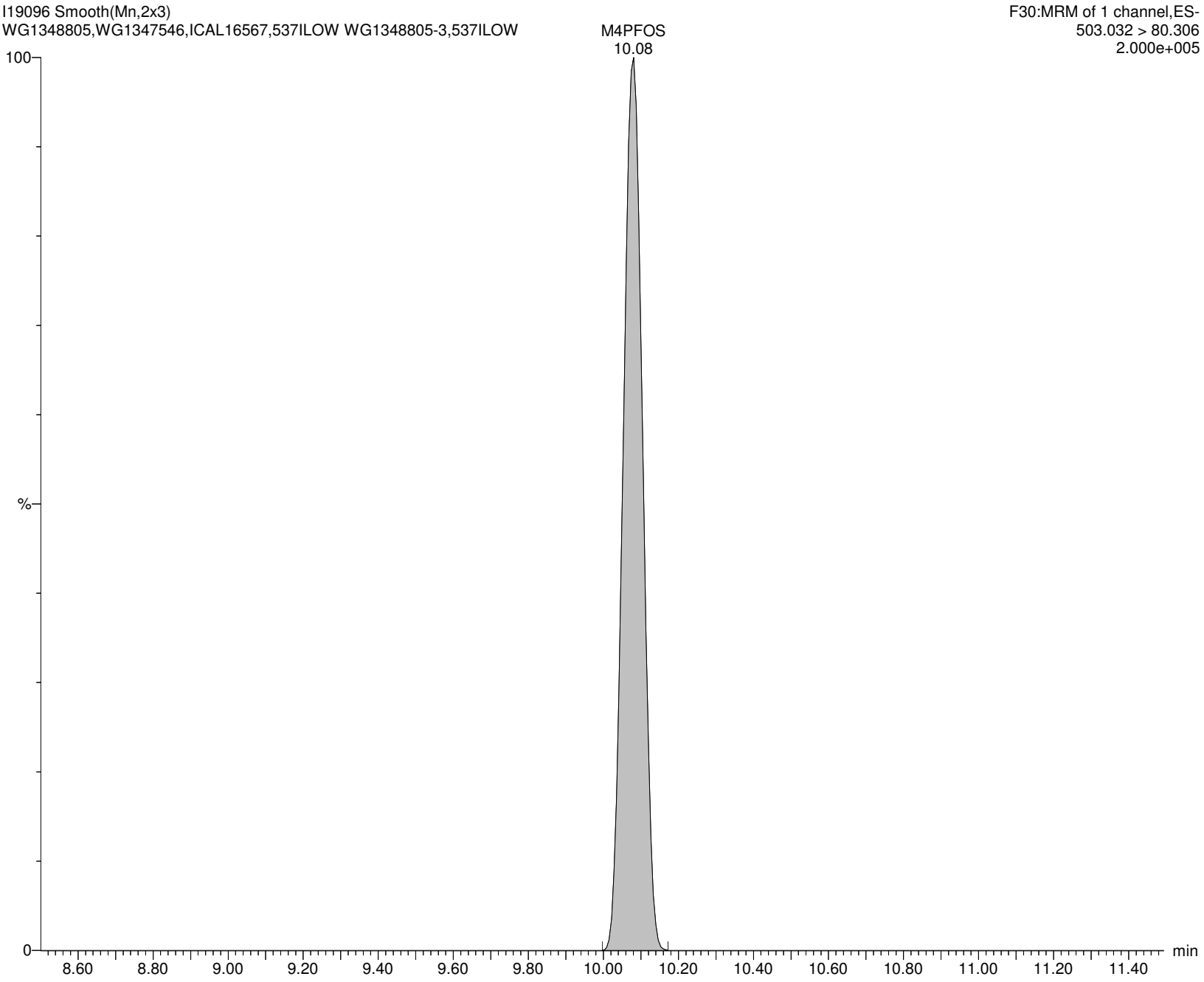
**M4PFOS**





all concentration units in (ng/mL)

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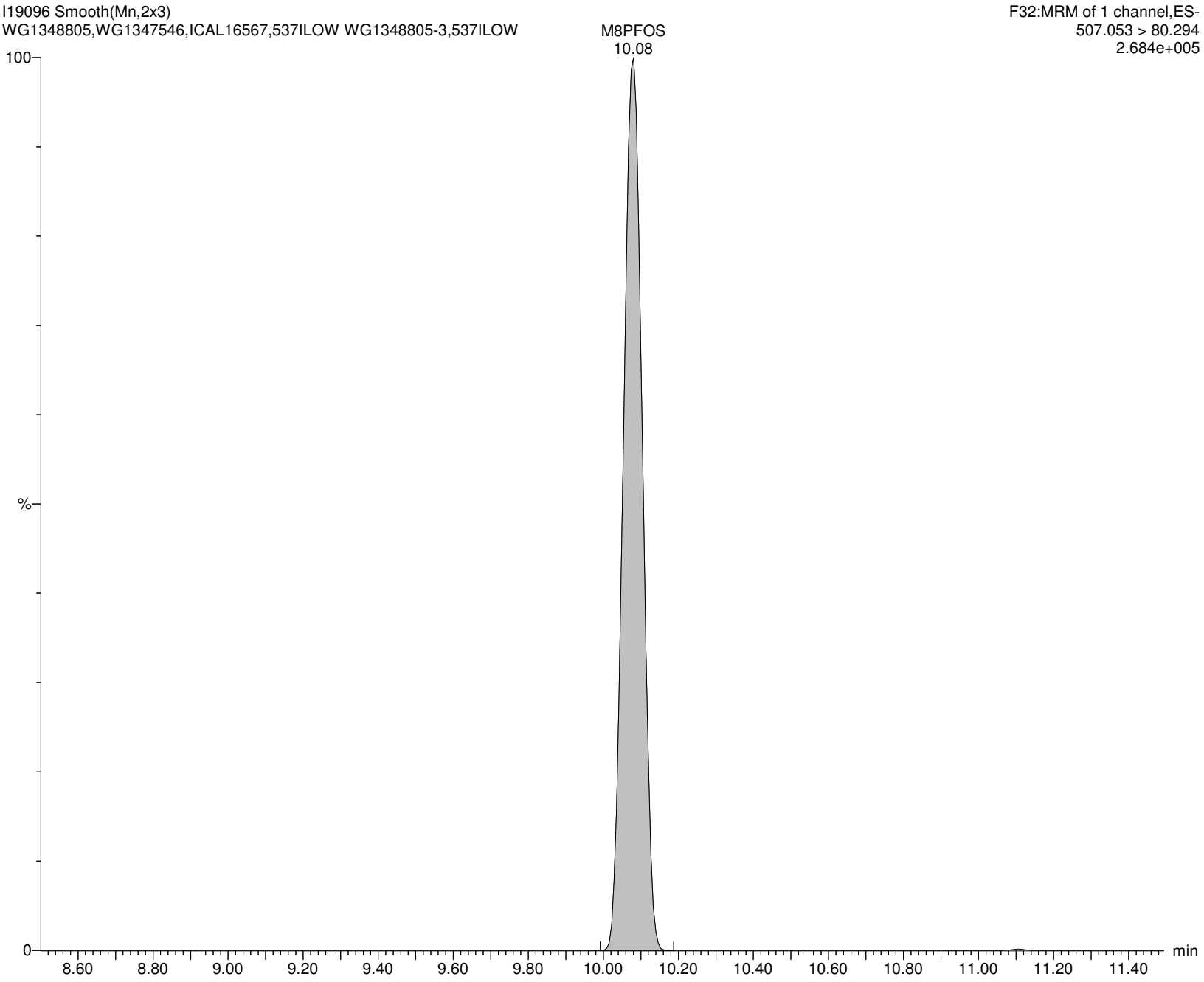
**M8PFOS**





all concentration units in (ng/mL)

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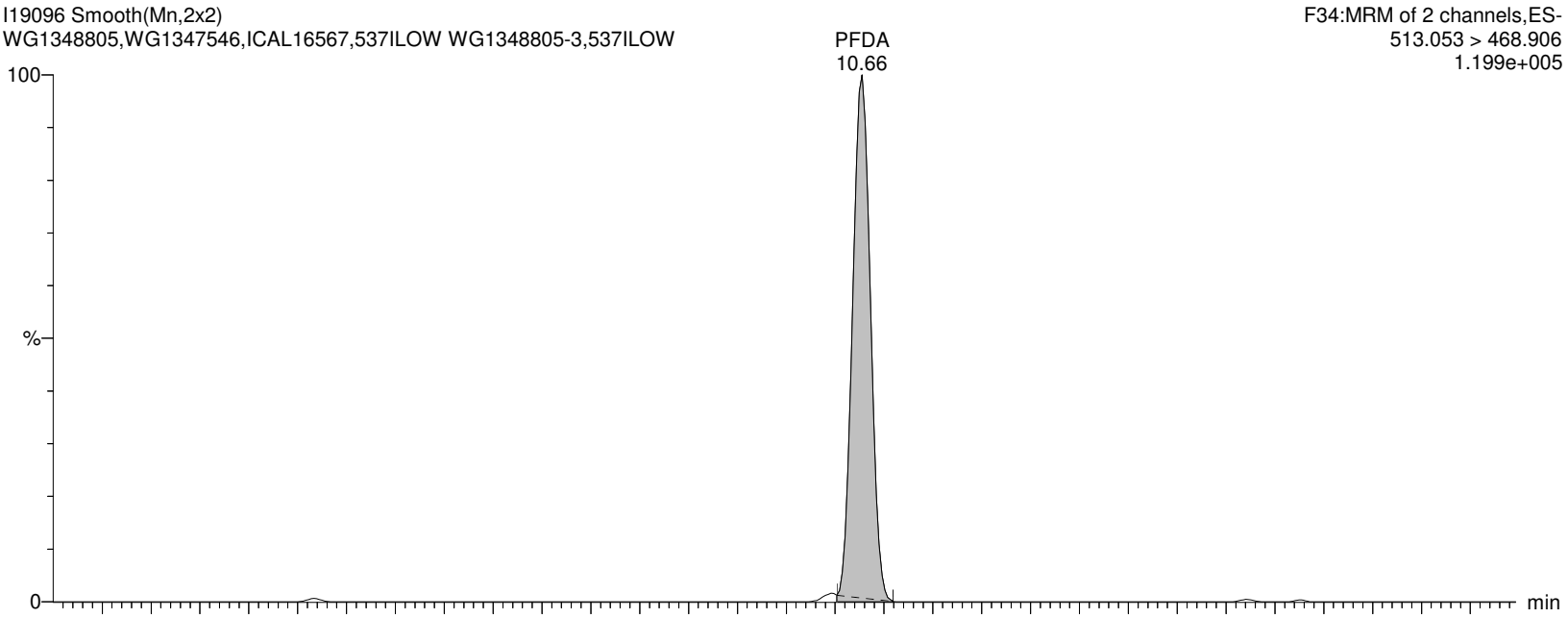


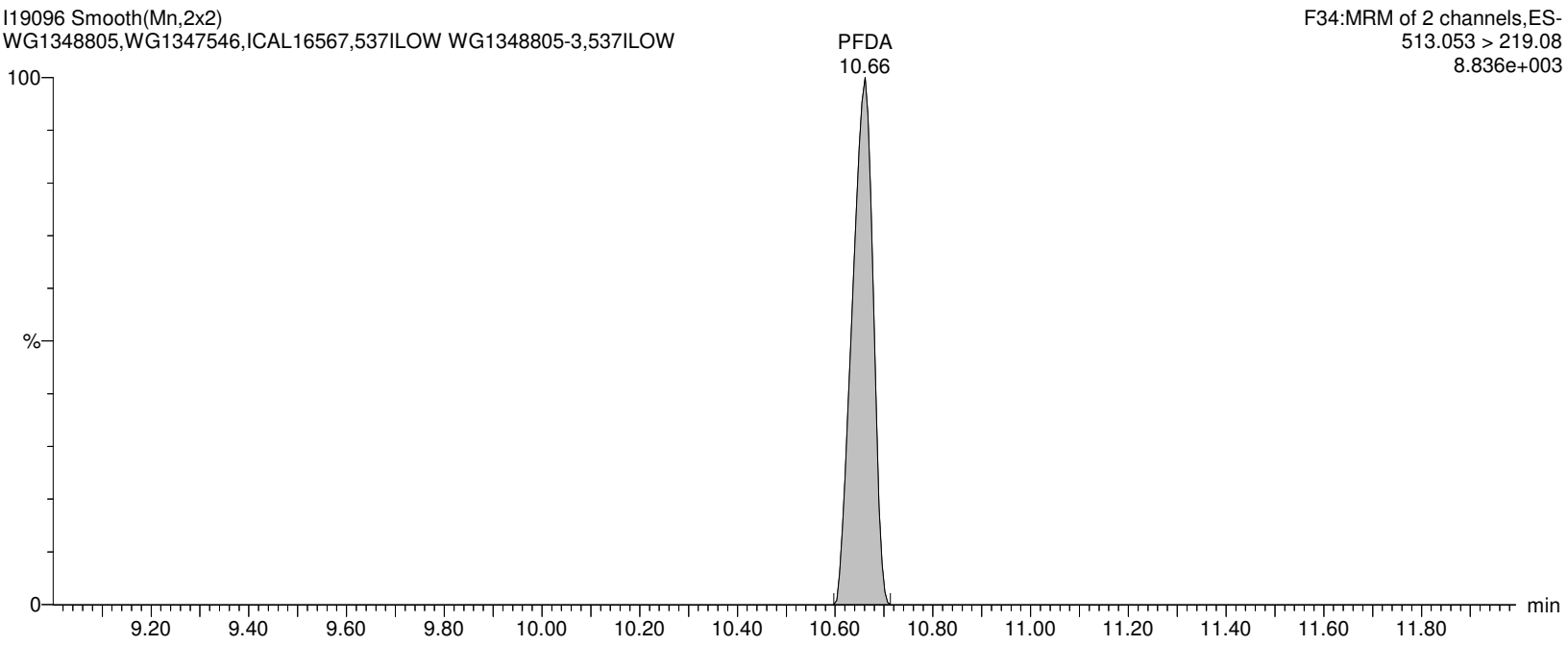



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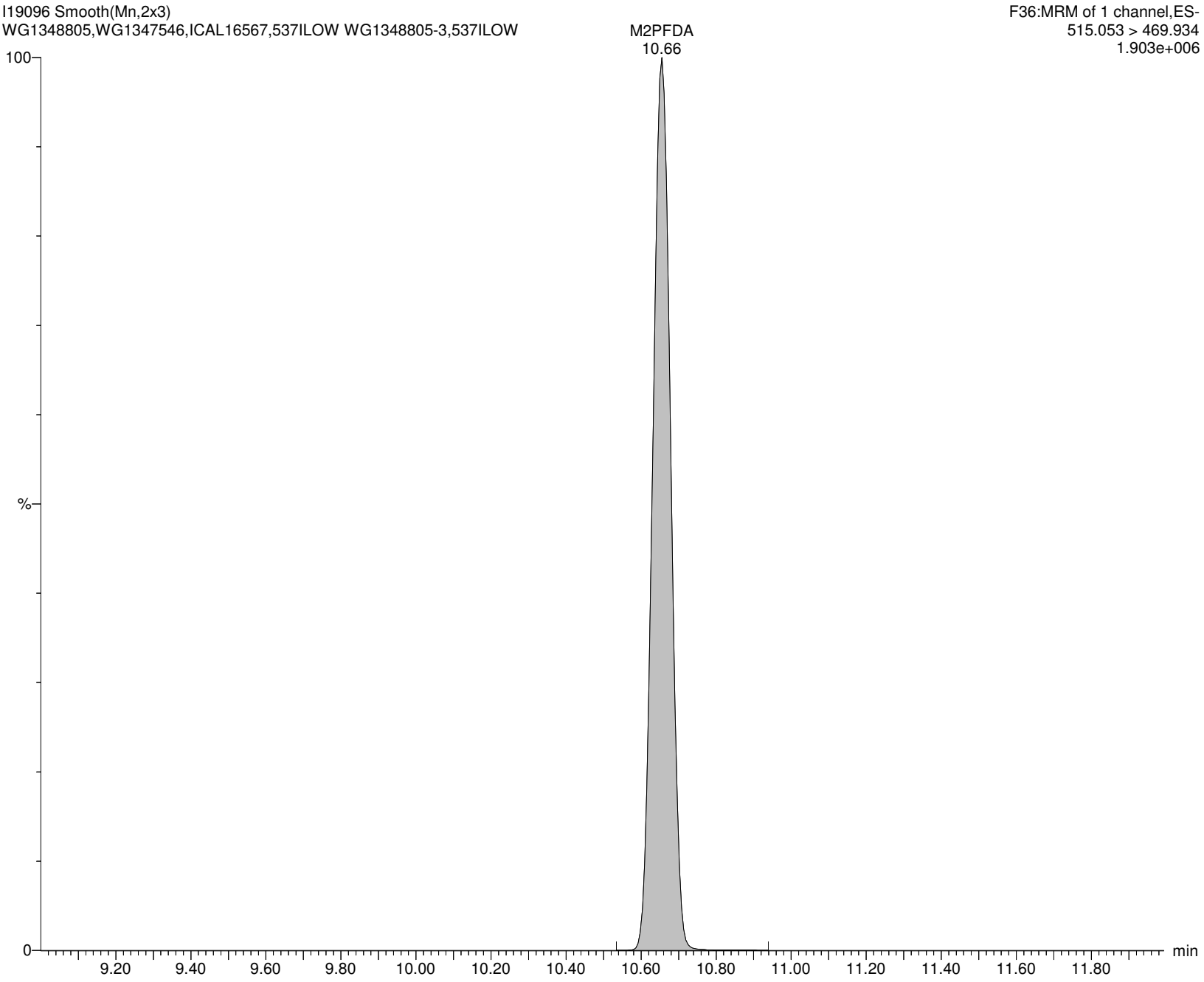



all concentration units in (ng/mL)

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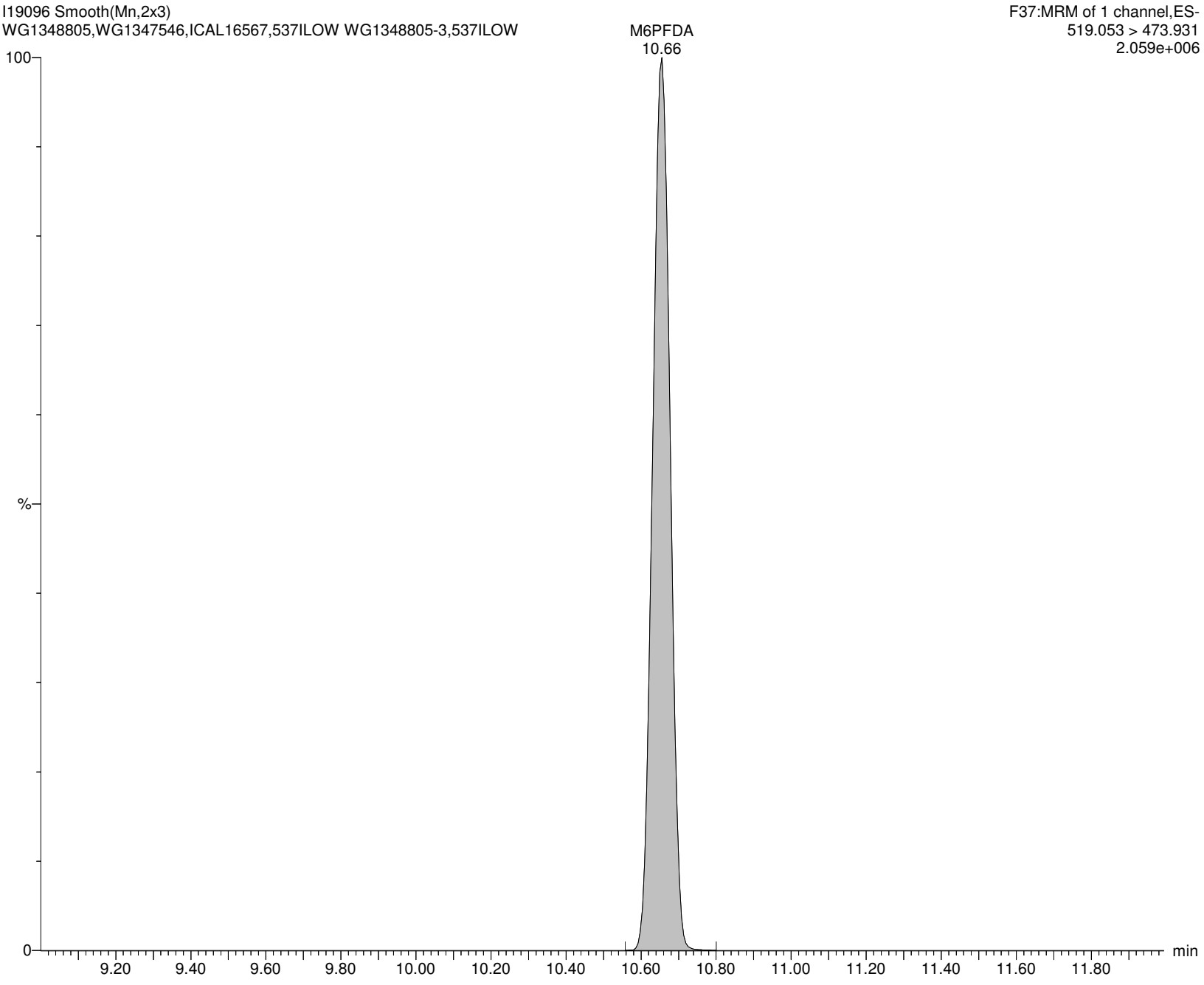



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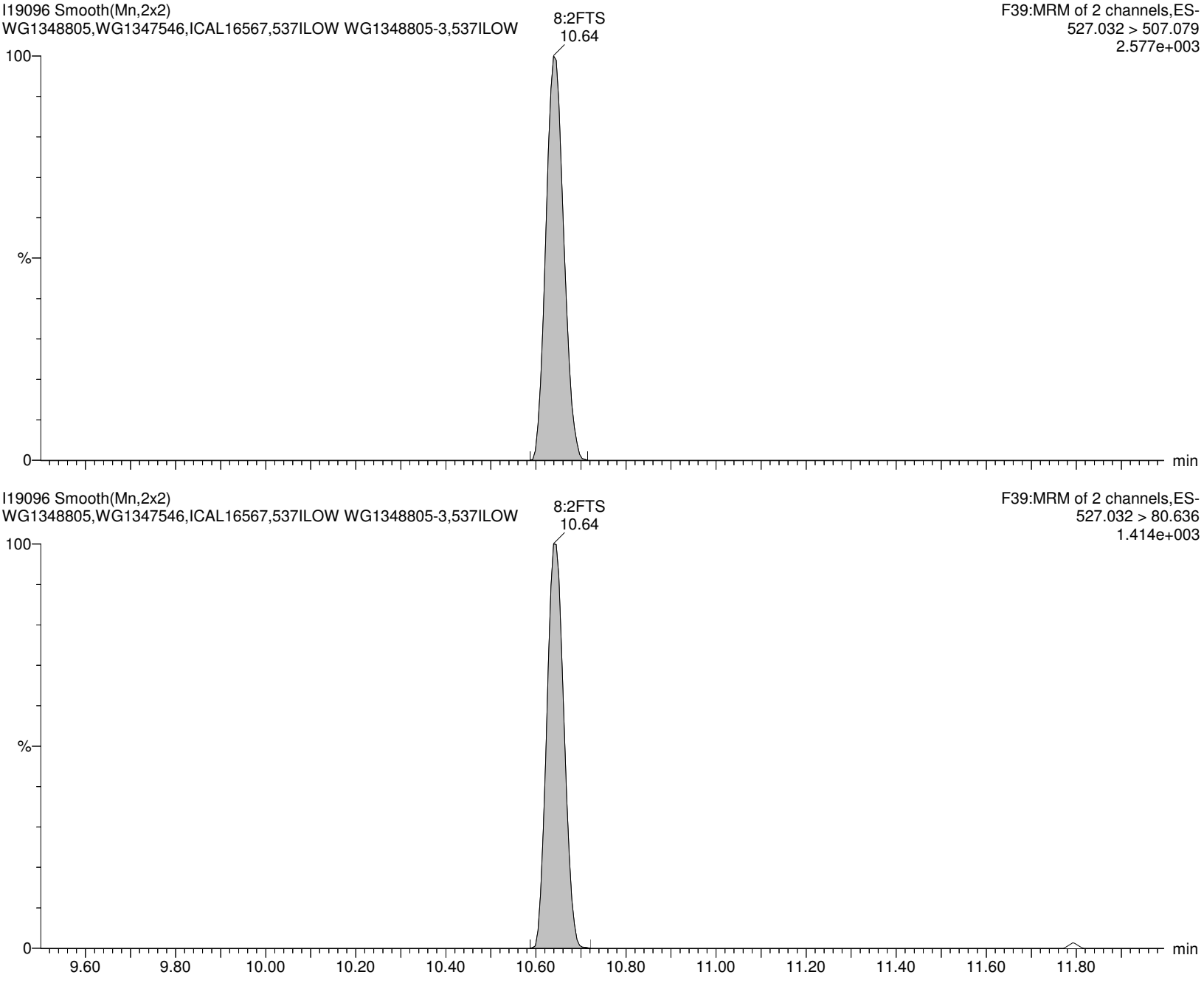



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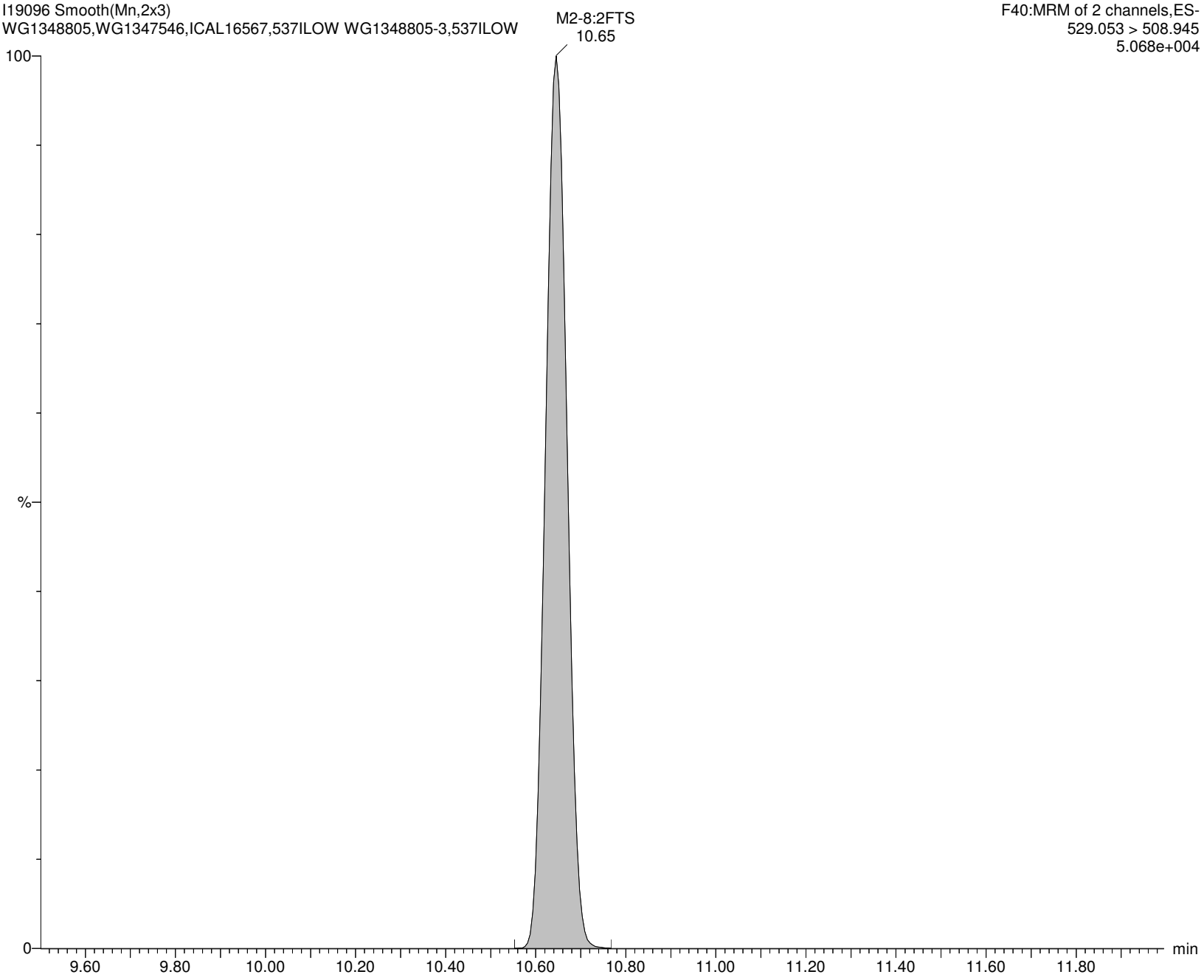
**M2-8:2FTS**





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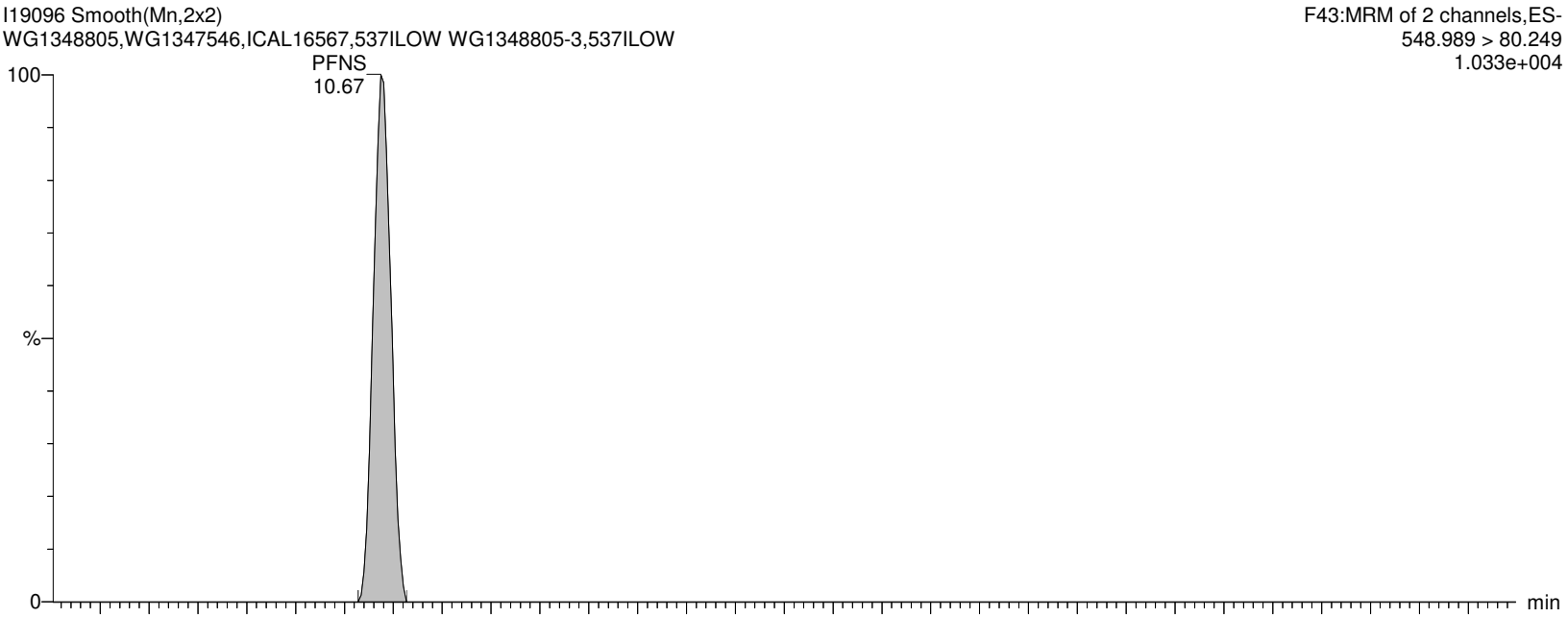
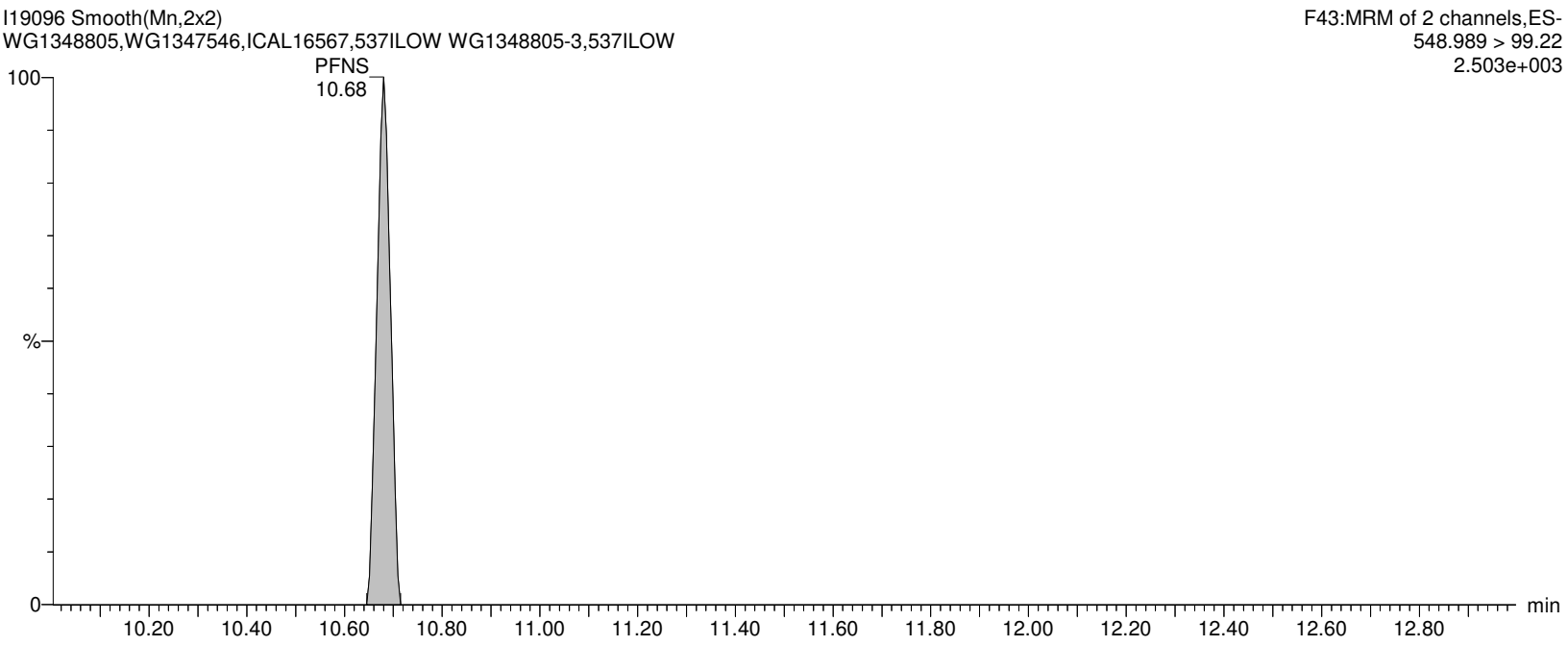
**PFNS**





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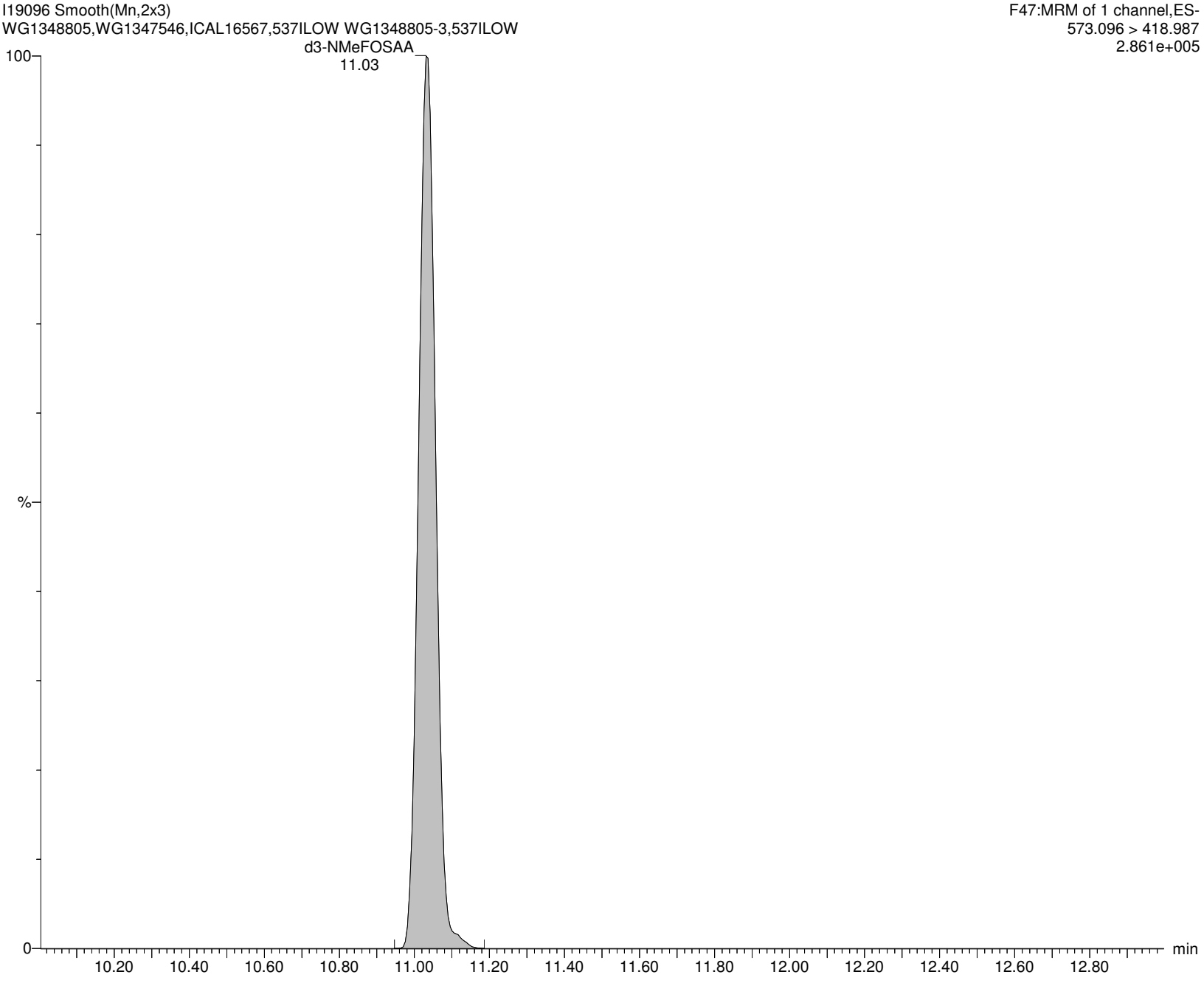
**Tune Method Name: C:\MassLynx\Data\200309_537ISO.PRO\ACQUDB\190709_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\200309_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**d3-NMeFOSAA**



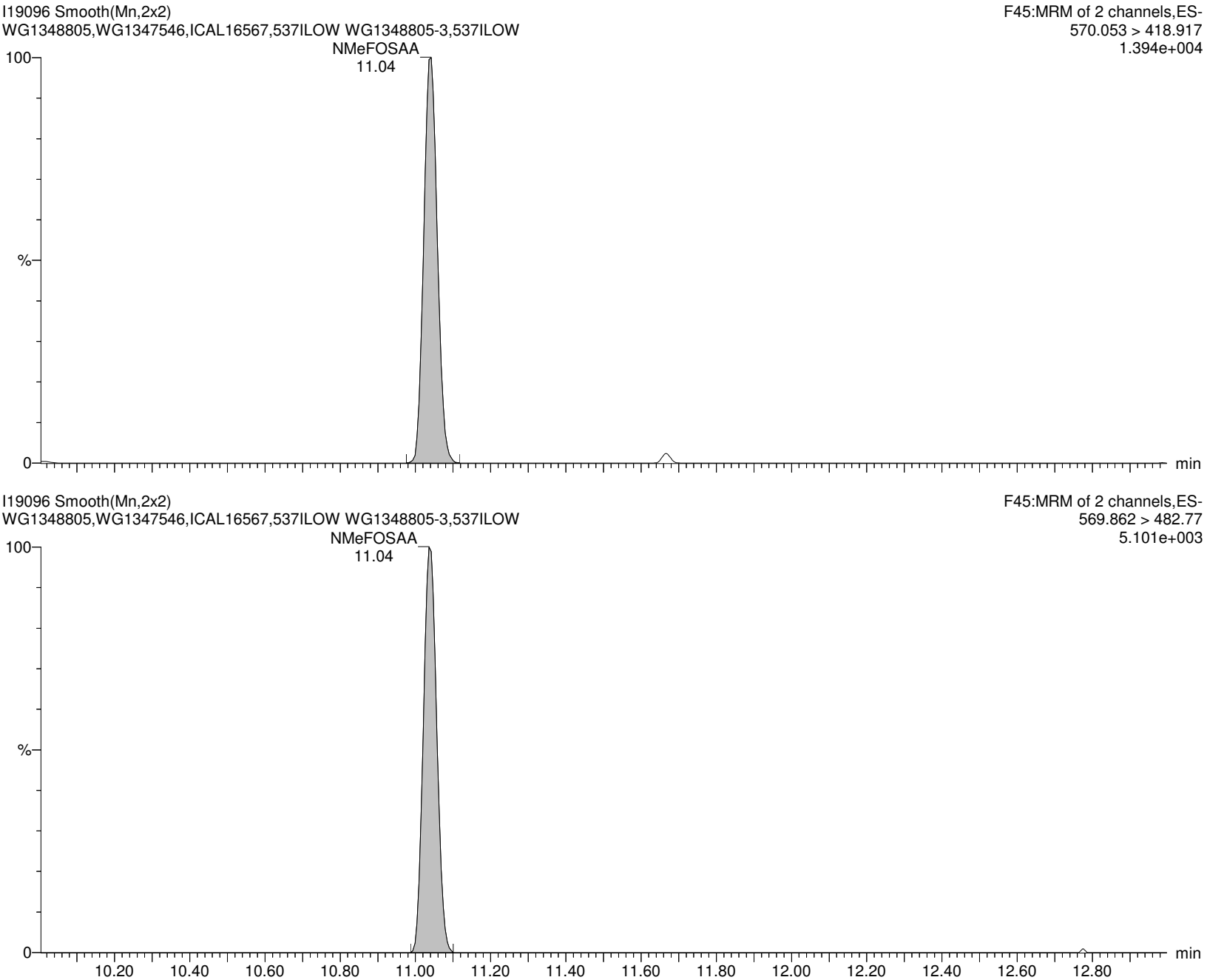


all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200309_537ISO.PRO\Data\WG1348805B.qld
Last Altered: Tuesday, March 10, 2020 15:04:16 Eastern Daylight Time
Printed: Tuesday, March 10, 2020 20:10:14 Eastern Daylight Time

**Name: I19096**
**ID: WG1348805-3,537ILOW**
**Date: 09-Mar-2020**
**Time: 20:21:47**
**Description: WG1348805,WG1347546,ICAL16567,537ILOW**
**User: LCMS01:JW**
**Vial: 1:A,2**
**Instrument: XEVO-TQSmicro#QEA0276**
**Inlet Method Name: C:\MassLynx\Data\200309_537ISO.PRO\ACQUDB\LCMS_537_ISO_MeOH**
**Tune Method Name: C:\MassLynx\Data\200309_537ISO.PRO\ACQUDB\190709_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\200309_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**NMeFOSAA**



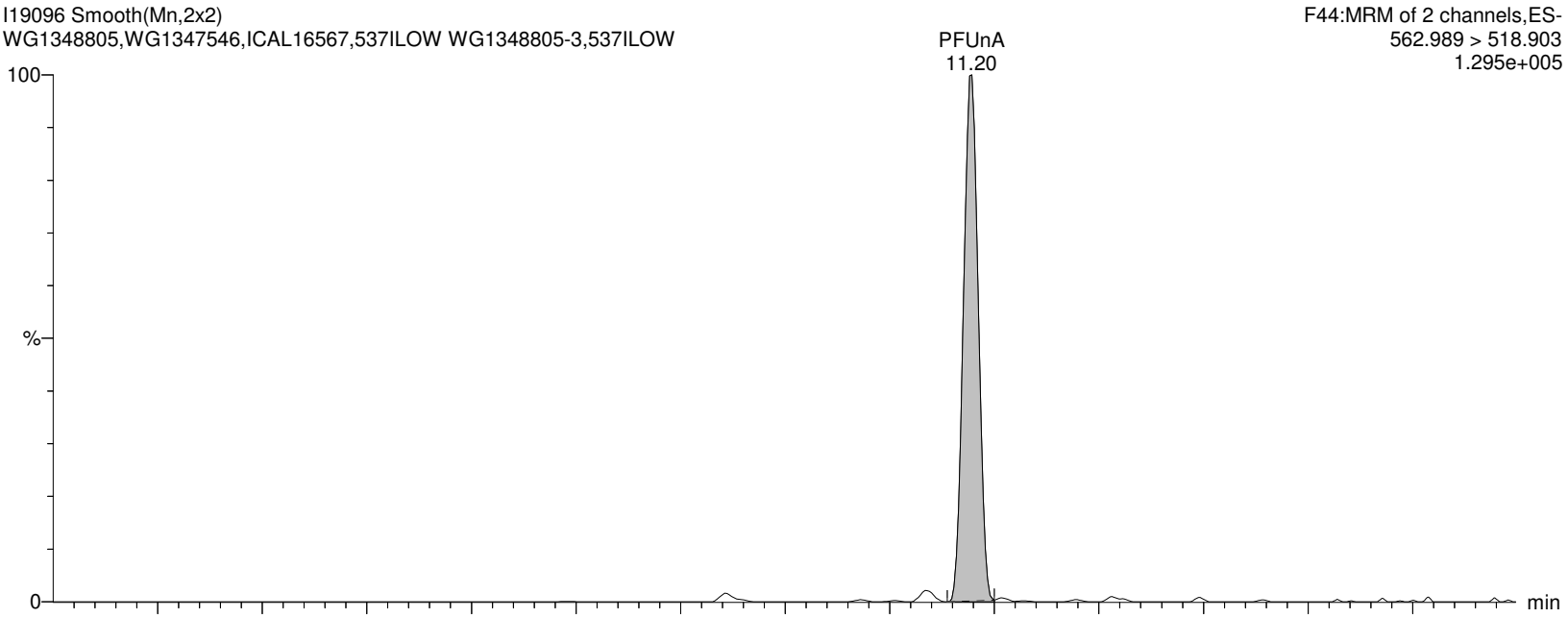


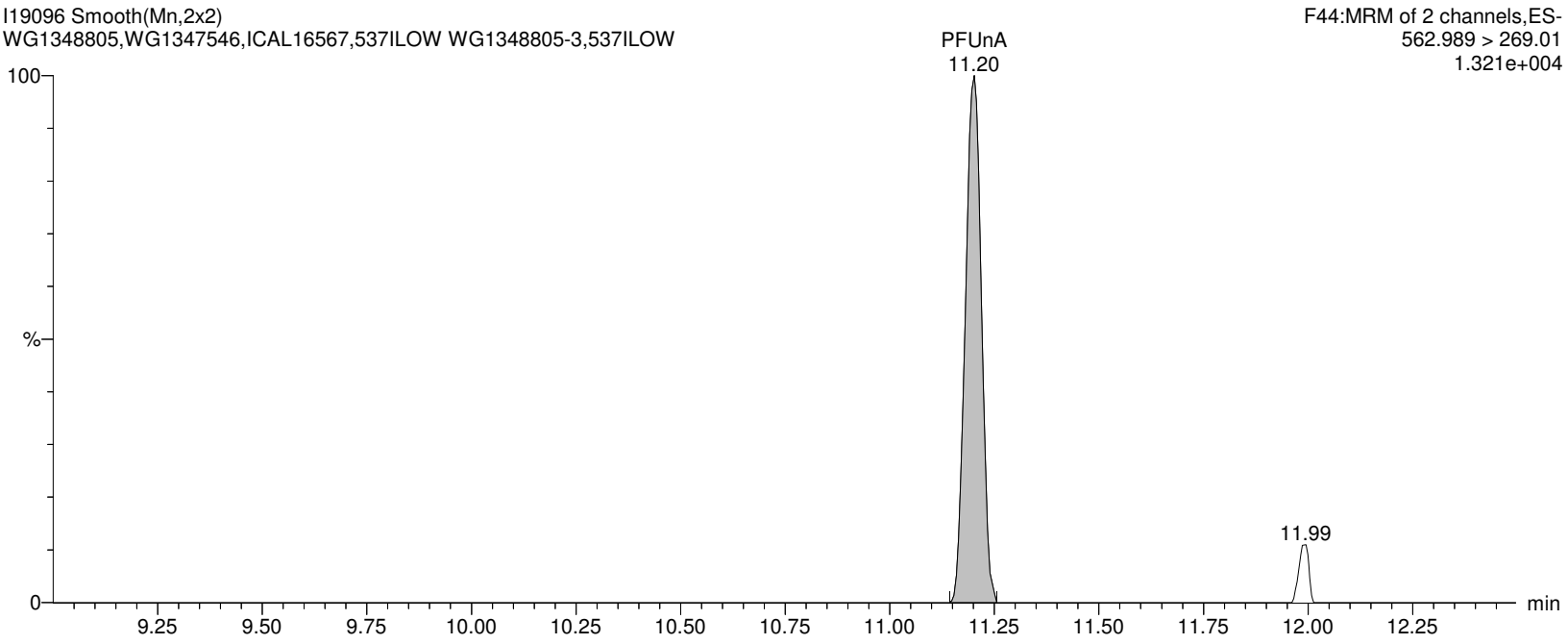
all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200309_537ISO.PRO\Data\WG1348805B.qld
Last Altered: Tuesday, March 10, 2020 15:04:16 Eastern Daylight Time
Printed: Tuesday, March 10, 2020 20:10:14 Eastern Daylight Time

**Name: I19096**
**ID: WG1348805-3,537ILOW**
**Date: 09-Mar-2020**
**Time: 20:21:47**
**Description: WG1348805,WG1347546,ICAL16567,537ILOW**
**User: LCMS01:JW**
**Vial: 1:A,2**
**Instrument: XEVO-TQSmicro#QEA0276**
**Inlet Method Name: C:\MassLynx\Data\200309_537ISO.PRO\ACQUDB\LCMS_537_ISO_MeOH**
**Tune Method Name: C:\MassLynx\Data\200309_537ISO.PRO\ACQUDB\190709_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\200309_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**PFUnA**



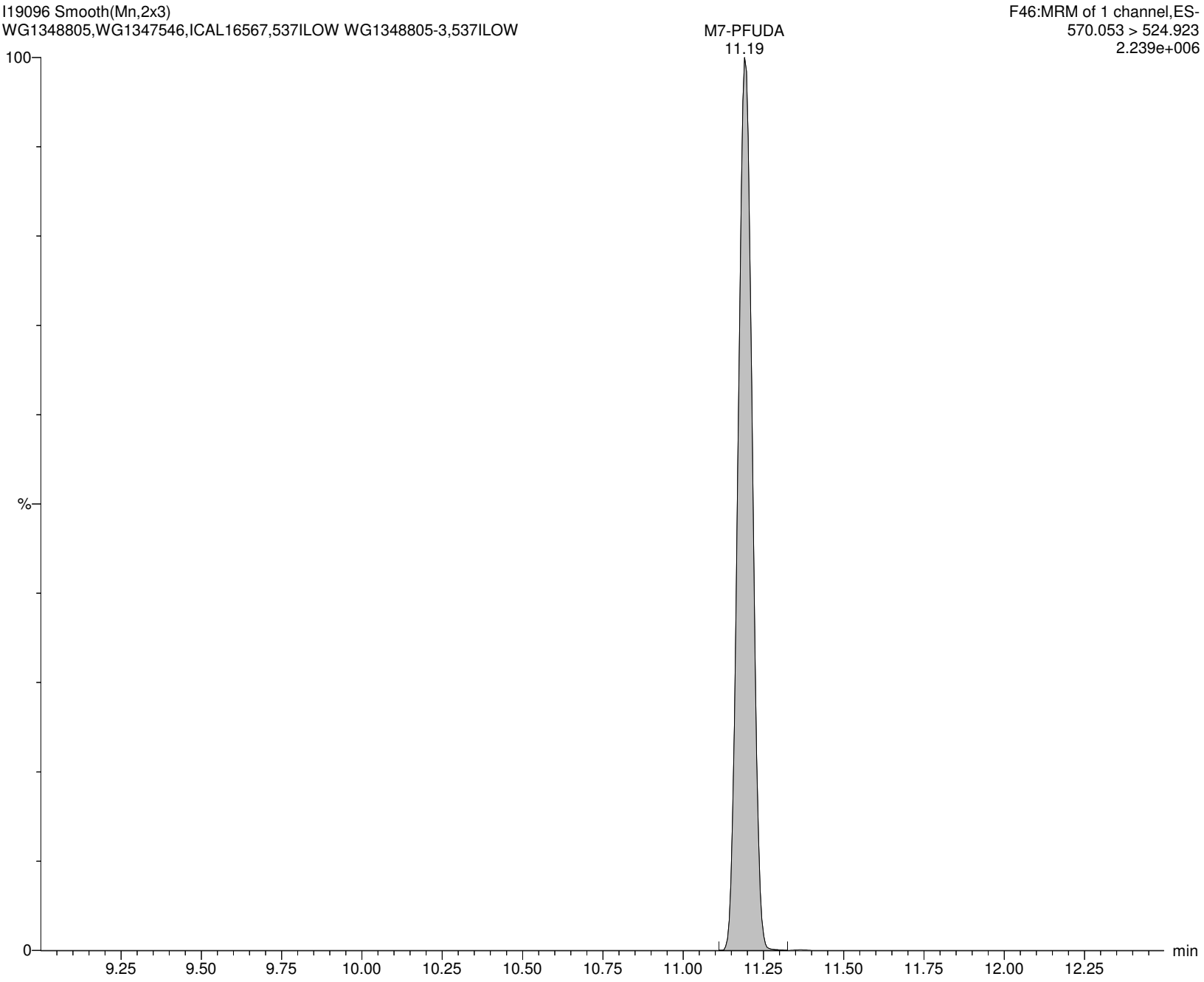


all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200309_537ISO.PRO\Data\WG1348805B.qld
Last Altered: Tuesday, March 10, 2020 15:04:16 Eastern Daylight Time
Printed: Tuesday, March 10, 2020 20:10:14 Eastern Daylight Time

**Name: I19096**
**ID: WG1348805-3,537ILOW**
**Date: 09-Mar-2020**
**Time: 20:21:47**
**Description: WG1348805,WG1347546,ICAL16567,537ILOW**
**User: LCMS01:JW**
**Vial: 1:A,2**
**Instrument: XEVO-TQSmicro#QEA0276**
**Inlet Method Name: C:\MassLynx\Data\200309_537ISO.PRO\ACQUDB\LCMS_537_ISO_MeOH**
**Tune Method Name: C:\MassLynx\Data\200309_537ISO.PRO\ACQUDB\190709_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\200309_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**M7-PFUDA**



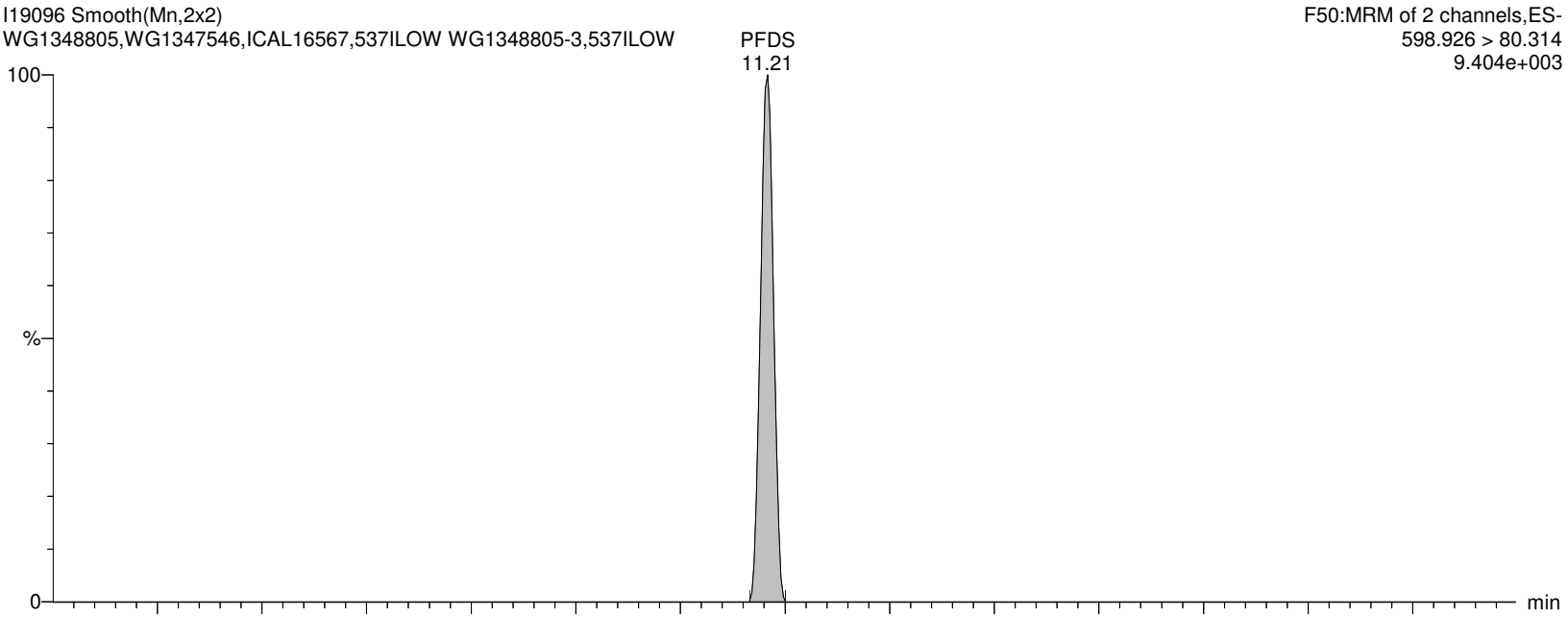


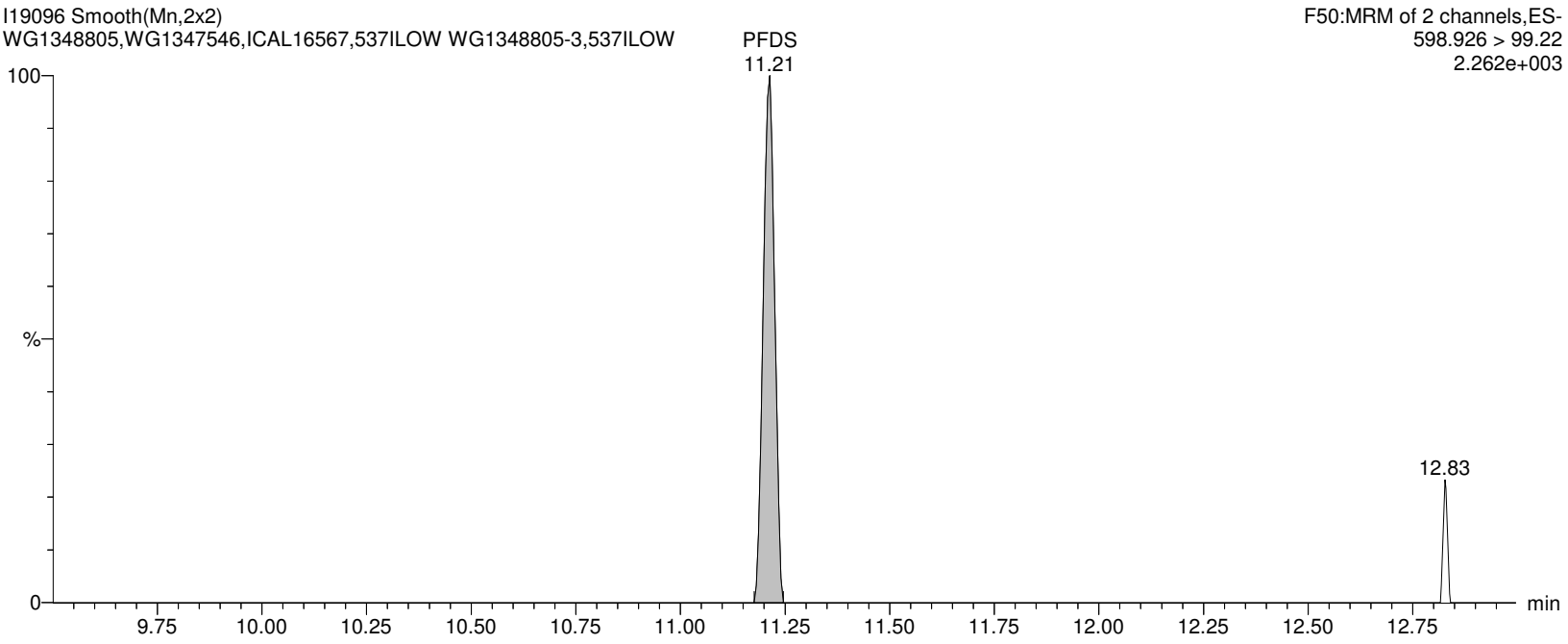
all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200309_537ISO.PRO\Data\WG1348805B.qld
Last Altered: Tuesday, March 10, 2020 15:04:16 Eastern Daylight Time
Printed: Tuesday, March 10, 2020 20:10:14 Eastern Daylight Time

**Name: I19096**
**ID: WG1348805-3,537ILOW**
**Date: 09-Mar-2020**
**Time: 20:21:47**
**Description: WG1348805,WG1347546,ICAL16567,537ILOW**
**User: LCMS01:JW**
**Vial: 1:A,2**
**Instrument: XEVO-TQSmicro#QEA0276**
**Inlet Method Name: C:\MassLynx\Data\200309_537ISO.PRO\ACQUDB\LCMS_537_ISO_MeOH**
**Tune Method Name: C:\MassLynx\Data\200309_537ISO.PRO\ACQUDB\190709_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\200309_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**PFDS**



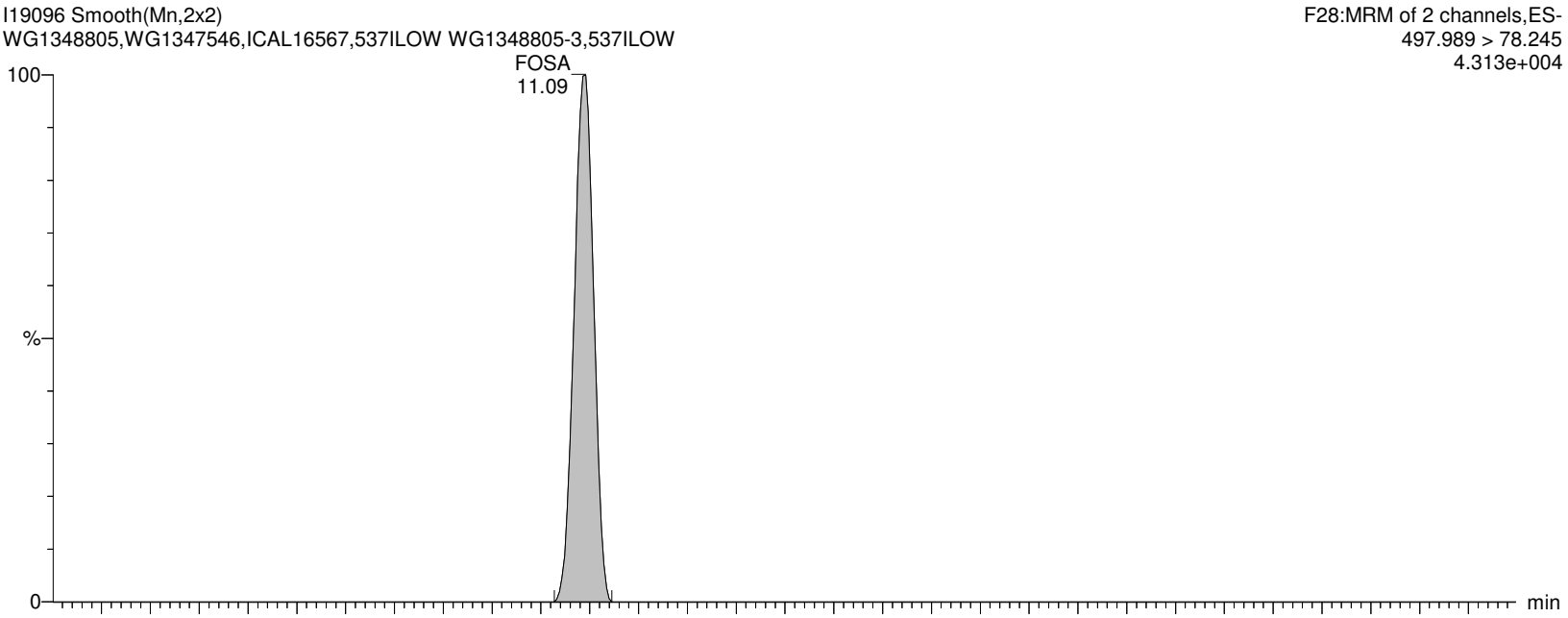


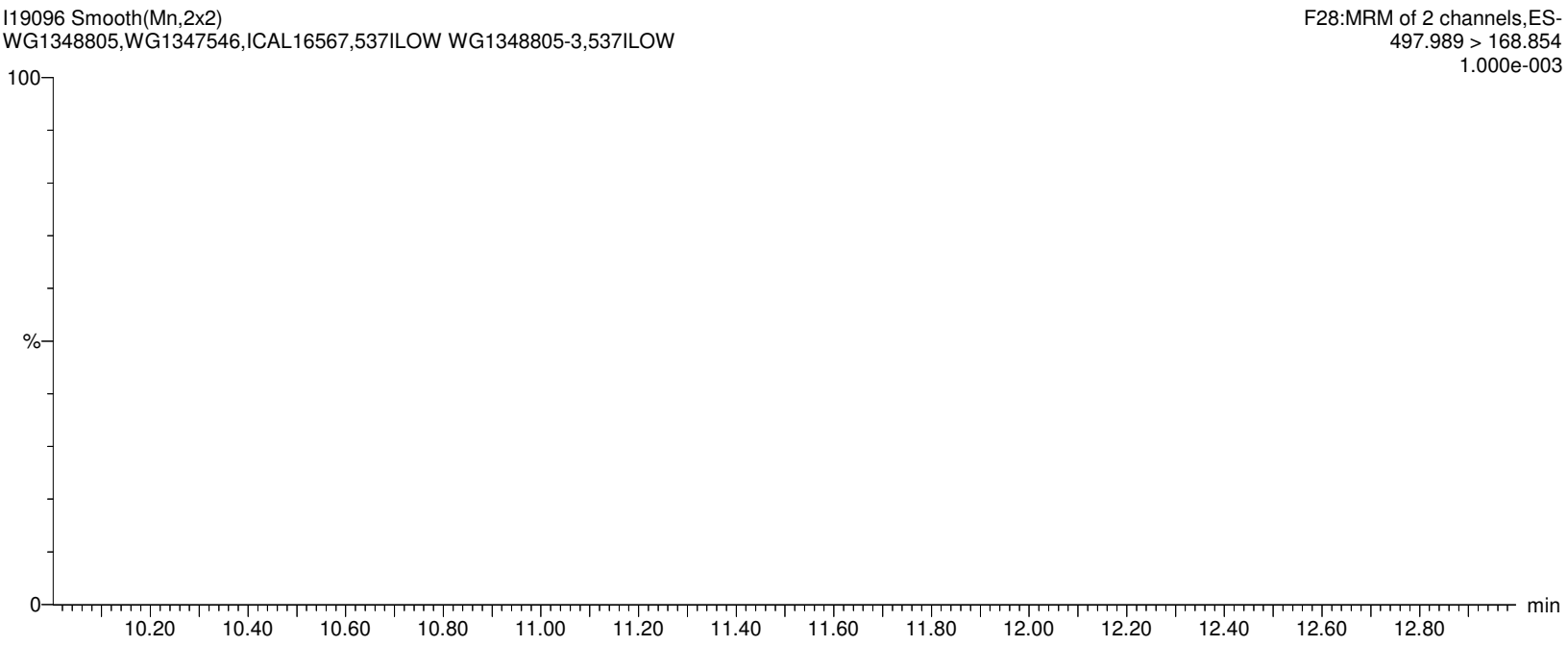
all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200309_537ISO.PRO\Data\WG1348805B.qld
Last Altered: Tuesday, March 10, 2020 15:04:16 Eastern Daylight Time
Printed: Tuesday, March 10, 2020 20:10:14 Eastern Daylight Time

**Name: I19096**
**ID: WG1348805-3,537ILOW**
**Date: 09-Mar-2020**
**Time: 20:21:47**
**Description: WG1348805,WG1347546,ICAL16567,537ILOW**
**User: LCMS01:JW**
**Vial: 1:A,2**
**Instrument: XEVO-TQSmicro#QEA0276**
**Inlet Method Name: C:\MassLynx\Data\200309_537ISO.PRO\ACQUDB\LCMS_537_ISO_MeOH**
**Tune Method Name: C:\MassLynx\Data\200309_537ISO.PRO\ACQUDB\190709_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\200309_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**FOSA**



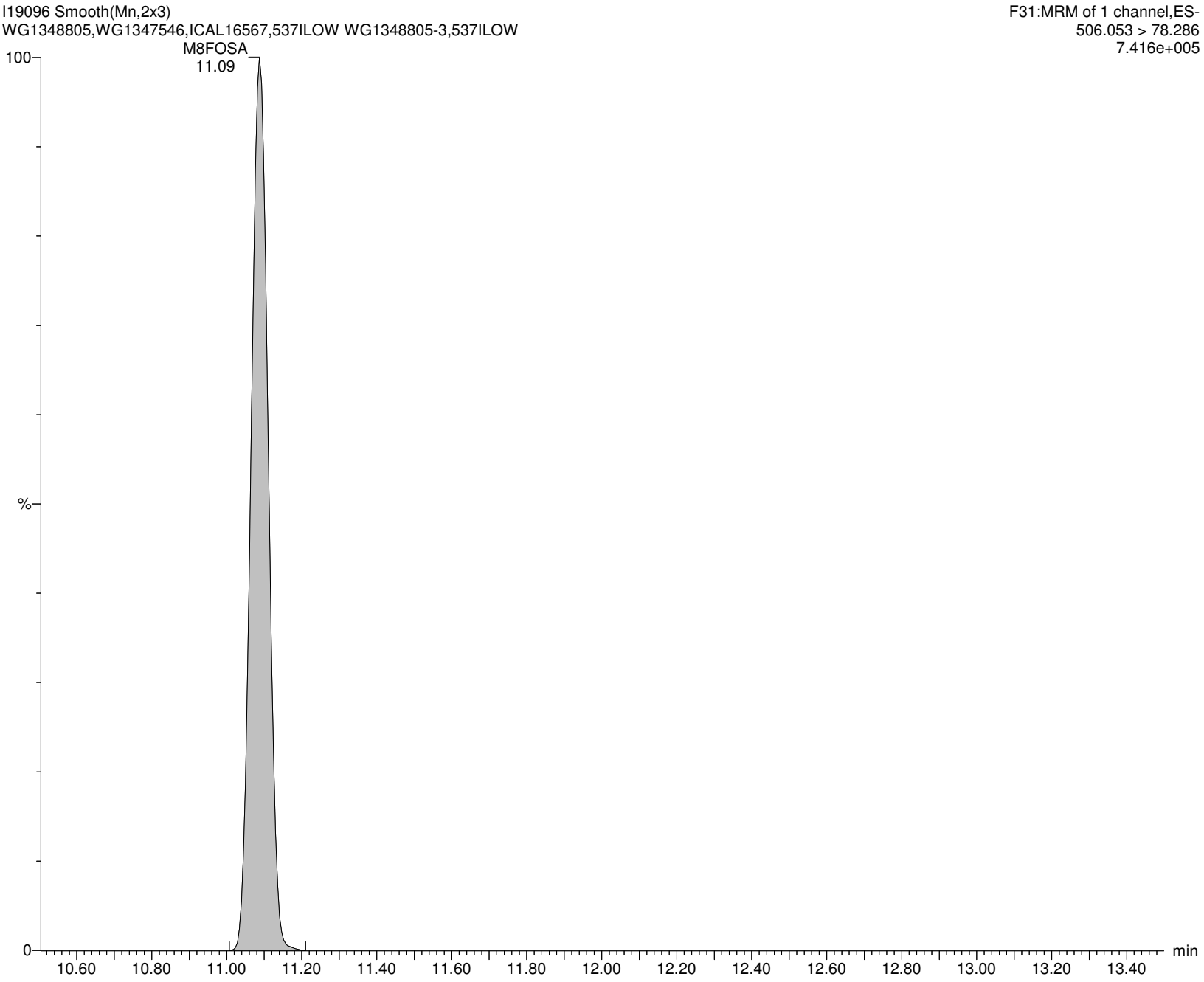


all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200309_537ISO.PRO\Data\WG1348805B.qld
Last Altered: Tuesday, March 10, 2020 15:04:16 Eastern Daylight Time
Printed: Tuesday, March 10, 2020 20:10:14 Eastern Daylight Time

**Name: I19096**
**ID: WG1348805-3,537ILOW**
**Date: 09-Mar-2020**
**Time: 20:21:47**
**Description: WG1348805,WG1347546,ICAL16567,537ILOW**
**User: LCMS01:JW**
**Vial: 1:A,2**
**Instrument: XEVO-TQSmicro#QEA0276**
**Inlet Method Name: C:\MassLynx\Data\200309_537ISO.PRO\ACQUDB\LCMS_537_ISO_MeOH**
**Tune Method Name: C:\MassLynx\Data\200309_537ISO.PRO\ACQUDB\190709_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\200309_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**M8FOSA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200309_537ISO.PRO\Data\WG1348805B.qld
Last Altered: Tuesday, March 10, 2020 15:04:16 Eastern Daylight Time
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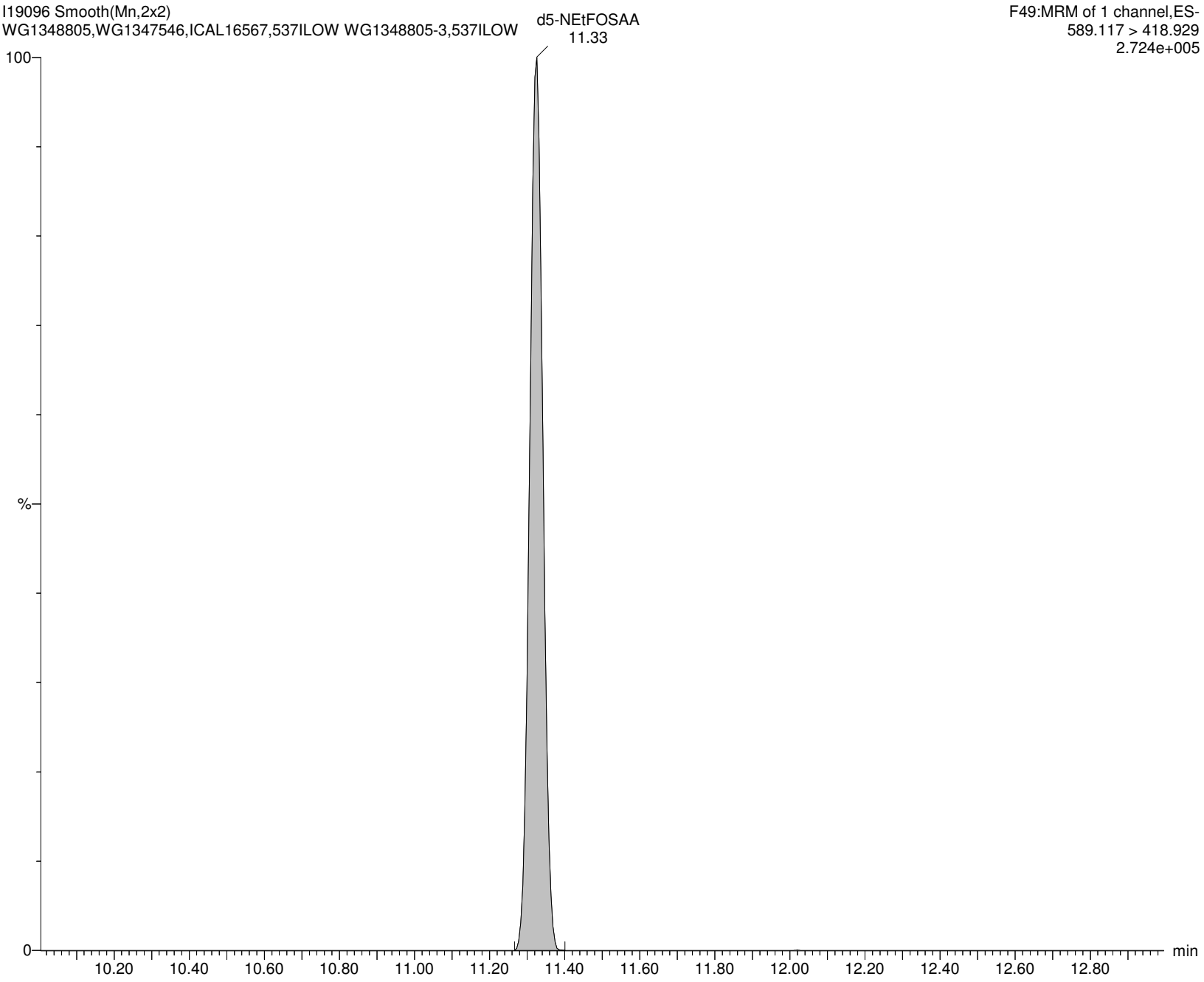
**Name: I19096**
**ID: WG1348805-3,537ILOW**
**Date: 09-Mar-2020**
**Time: 20:21:47**
**Description: WG1348805,WG1347546,ICAL16567,537ILOW**
**User: LCMS01:JW**
**Vial: 1:A,2**
**Instrument: XEVO-TQSmicro#QEA0276**
**Inlet Method Name: C:\MassLynx\Data\200309_537ISO.PRO\ACQUDB\LCMS_537_ISO_MeOH**
**Tune Method Name: C:\MassLynx\Data\200309_537ISO.PRO\ACQUDB\190709_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\200309_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**d5-NEtFOSAA**



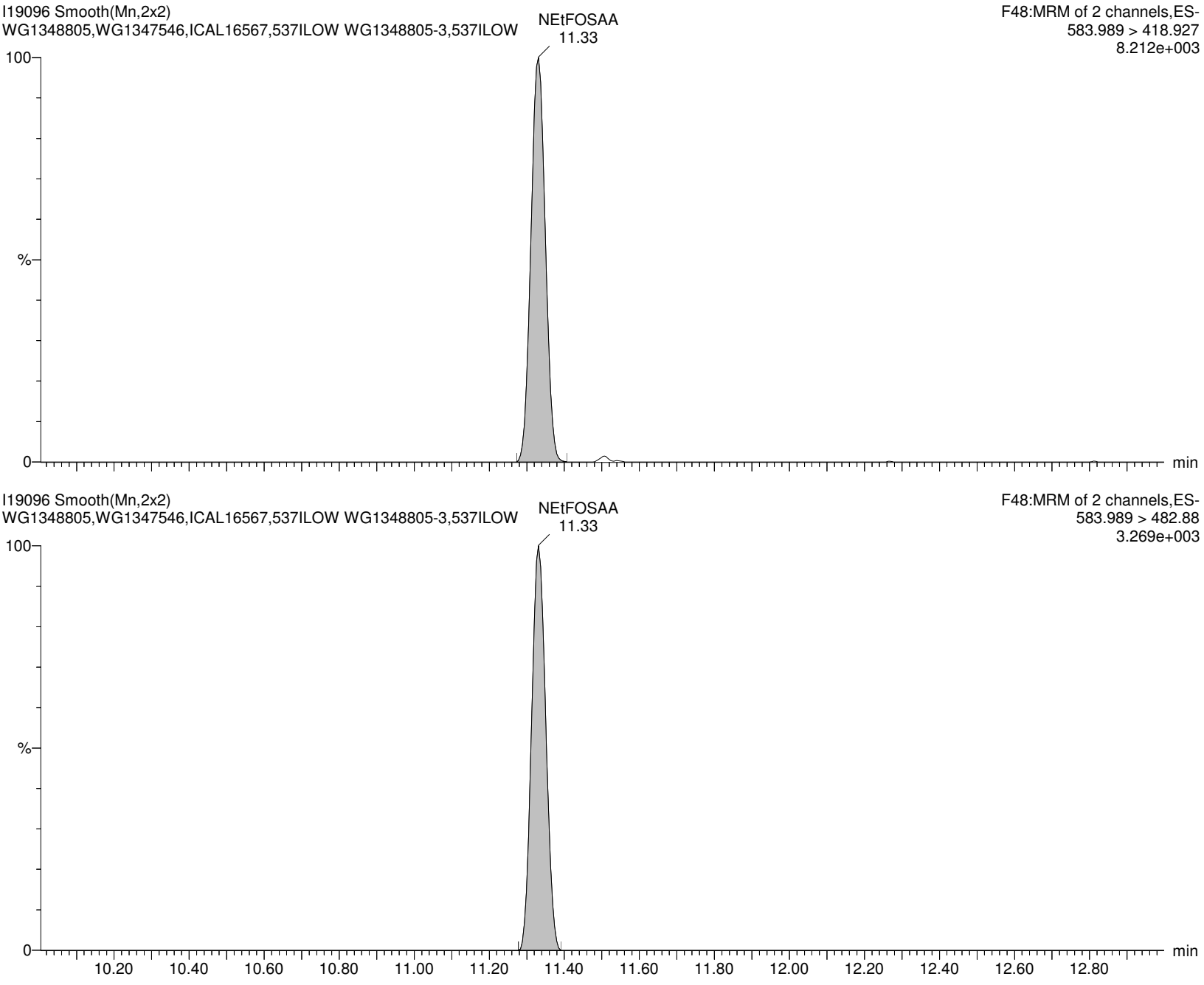


all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200309_537ISO.PRO\Data\WG1348805B.qld
Last Altered: Tuesday, March 10, 2020 15:04:16 Eastern Daylight Time
Printed: Tuesday, March 10, 2020 20:10:14 Eastern Daylight Time

**Name: I19096**
**ID: WG1348805-3,537ILOW**
**Date: 09-Mar-2020**
**Time: 20:21:47**
**Description: WG1348805,WG1347546,ICAL16567,537ILOW**
**User: LCMS01:JW**
**Vial: 1:A,2**
**Instrument: XEVO-TQSmicro#QEA0276**
**Inlet Method Name: C:\MassLynx\Data\200309_537ISO.PRO\ACQUDB\LCMS_537_ISO_MeOH**
**Tune Method Name: C:\MassLynx\Data\200309_537ISO.PRO\ACQUDB\190709_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\200309_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**NEtFOSAA**



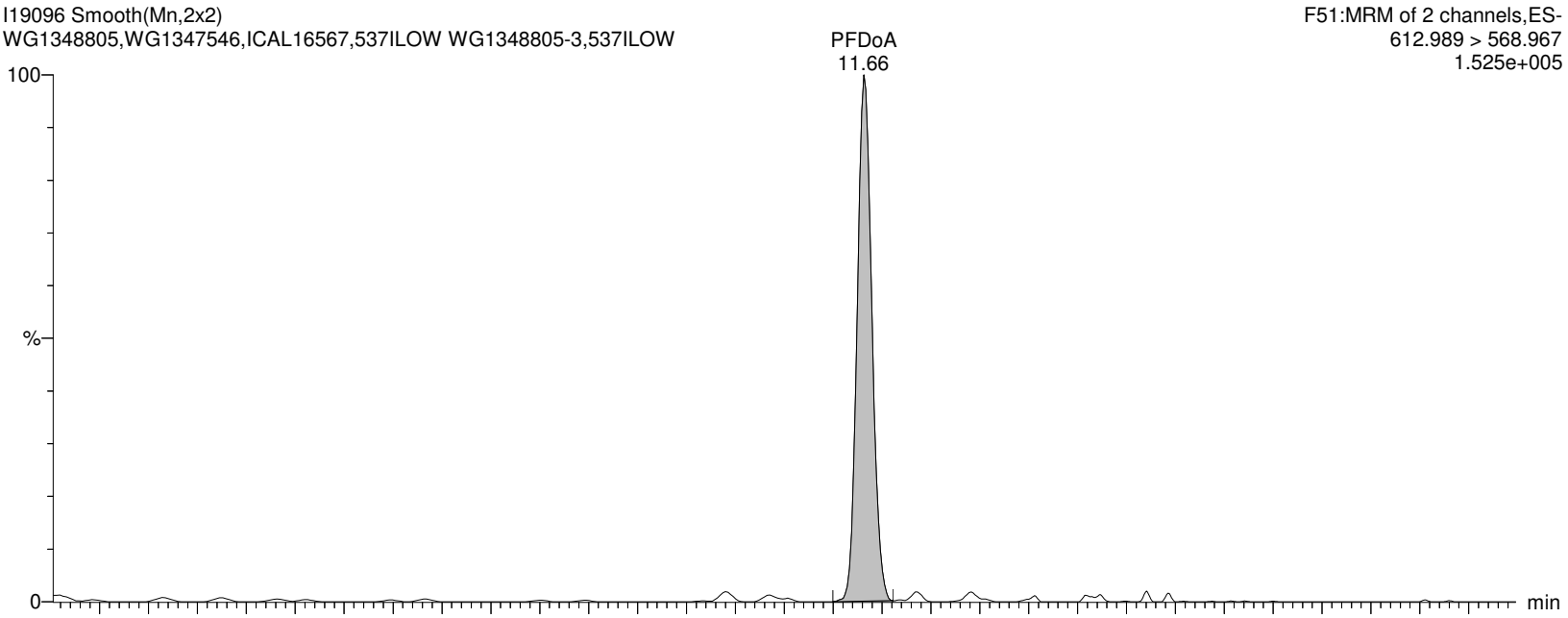


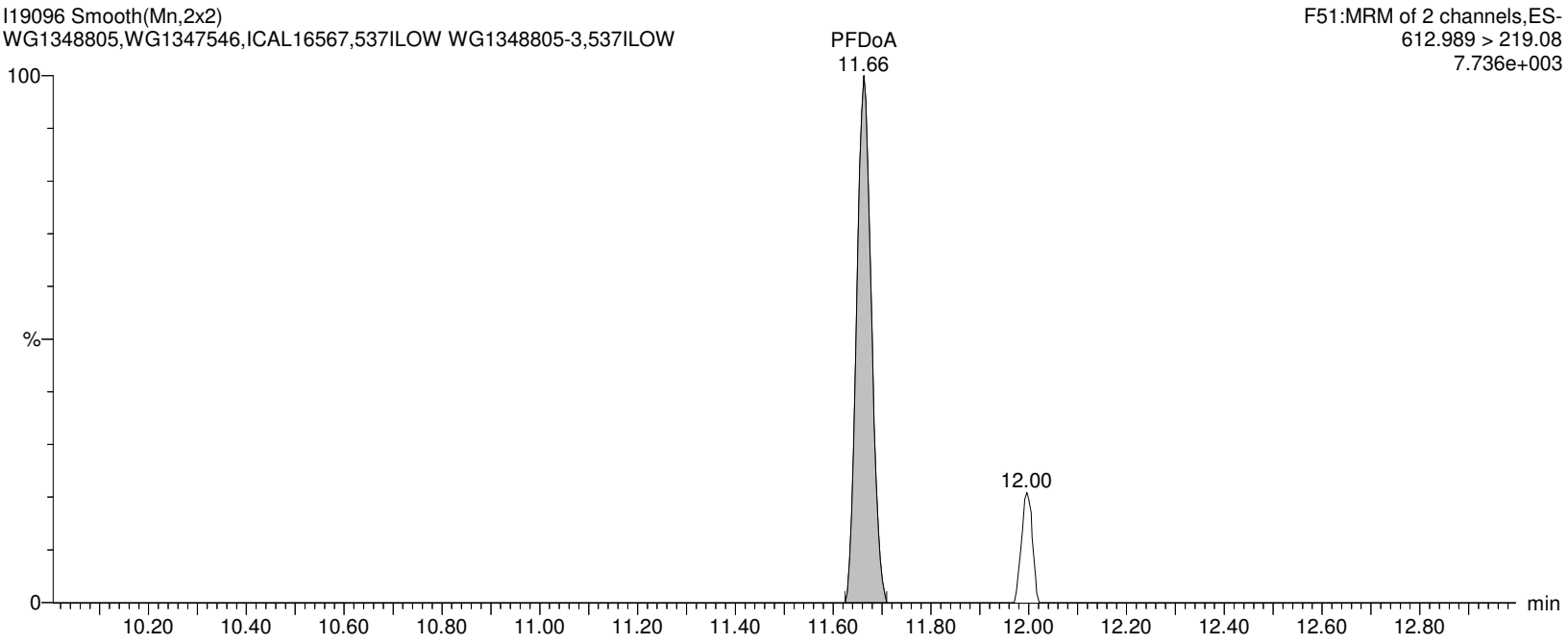
all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200309_537ISO.PRO\Data\WG1348805B.qld
Last Altered: Tuesday, March 10, 2020 15:04:16 Eastern Daylight Time
Printed: Tuesday, March 10, 2020 20:10:14 Eastern Daylight Time

**Name: I19096**
**ID: WG1348805-3,537ILOW**
**Date: 09-Mar-2020**
**Time: 20:21:47**
**Description: WG1348805,WG1347546,ICAL16567,537ILOW**
**User: LCMS01:JW**
**Vial: 1:A,2**
**Instrument: XEVO-TQSmicro#QEA0276**
**Inlet Method Name: C:\MassLynx\Data\200309_537ISO.PRO\ACQUDB\LCMS_537_ISO_MeOH**
**Tune Method Name: C:\MassLynx\Data\200309_537ISO.PRO\ACQUDB\190709_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\200309_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**PFDoA**



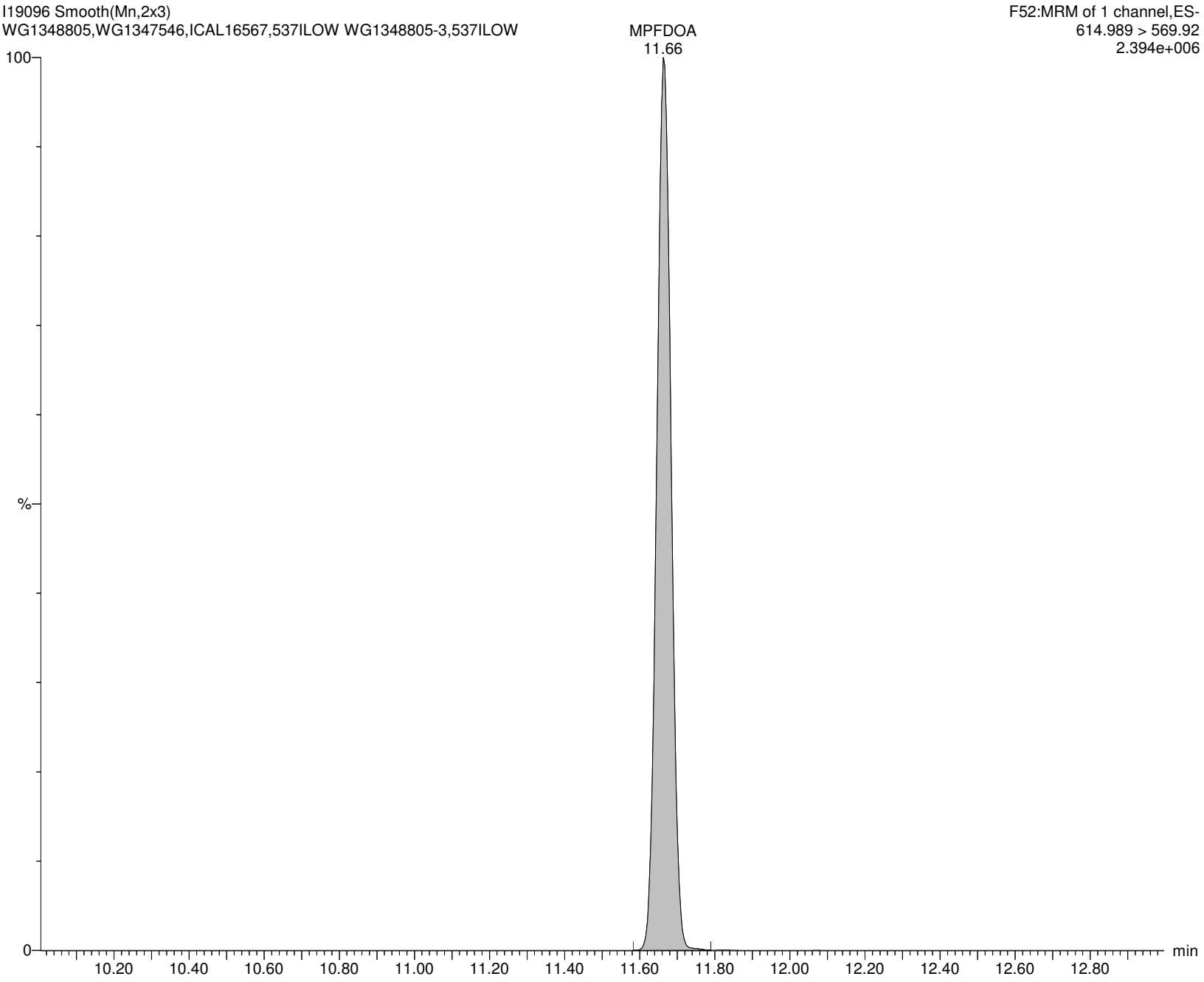


all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200309_537ISO.PRO\Data\WG1348805B.qld
Last Altered: Tuesday, March 10, 2020 15:04:16 Eastern Daylight Time
Printed: Tuesday, March 10, 2020 20:10:14 Eastern Daylight Time

**Name: I19096**
**ID: WG1348805-3,537ILOW**
**Date: 09-Mar-2020**
**Time: 20:21:47**
**Description: WG1348805,WG1347546,ICAL16567,537ILOW**
**User: LCMS01:JW**
**Vial: 1:A,2**
**Instrument: XEVO-TQSmicro#QEA0276**
**Inlet Method Name: C:\MassLynx\Data\200309_537ISO.PRO\ACQUDB\LCMS_537_ISO_MeOH**
**Tune Method Name: C:\MassLynx\Data\200309_537ISO.PRO\ACQUDB\190709_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\200309_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**MPFDOA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200309_537ISO.PRO\Data\WG1348805B.qld
Last Altered: Tuesday, March 10, 2020 15:04:16 Eastern Daylight Time
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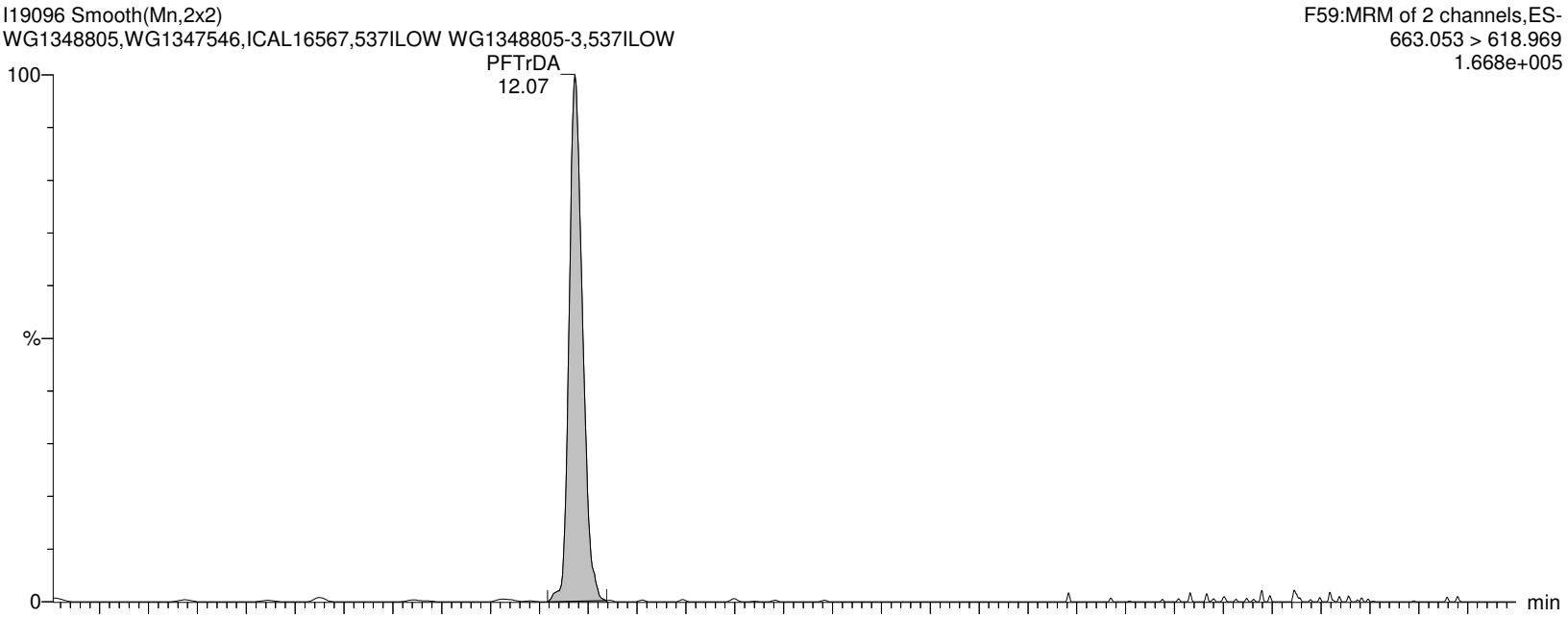
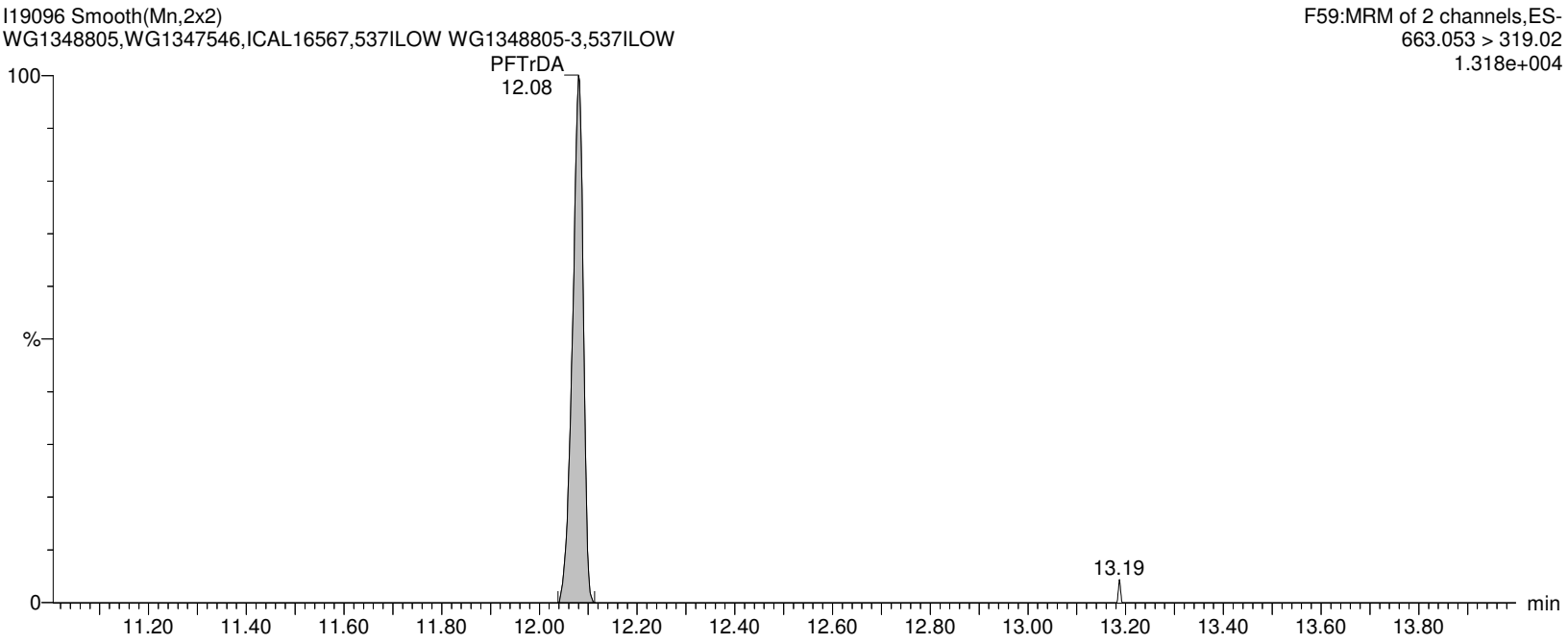
**Name: I19096**
**ID: WG1348805-3,537ILOW**
**Date: 09-Mar-2020**
**Time: 20:21:47**
**Description: WG1348805,WG1347546,ICAL16567,537ILOW**
**User: LCMS01:JW**
**Vial: 1:A,2**
**Instrument: XEVO-TQSmicro#QEA0276**
**Inlet Method Name: C:\MassLynx\Data\200309_537ISO.PRO\ACQUDB\LCMS_537_ISO_MeOH**
**Tune Method Name: C:\MassLynx\Data\200309_537ISO.PRO\ACQUDB\190709_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\200309_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**PFTrDA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200309_537ISO.PRO\Data\WG1348805B.qld
Last Altered: Tuesday, March 10, 2020 15:04:16 Eastern Daylight Time
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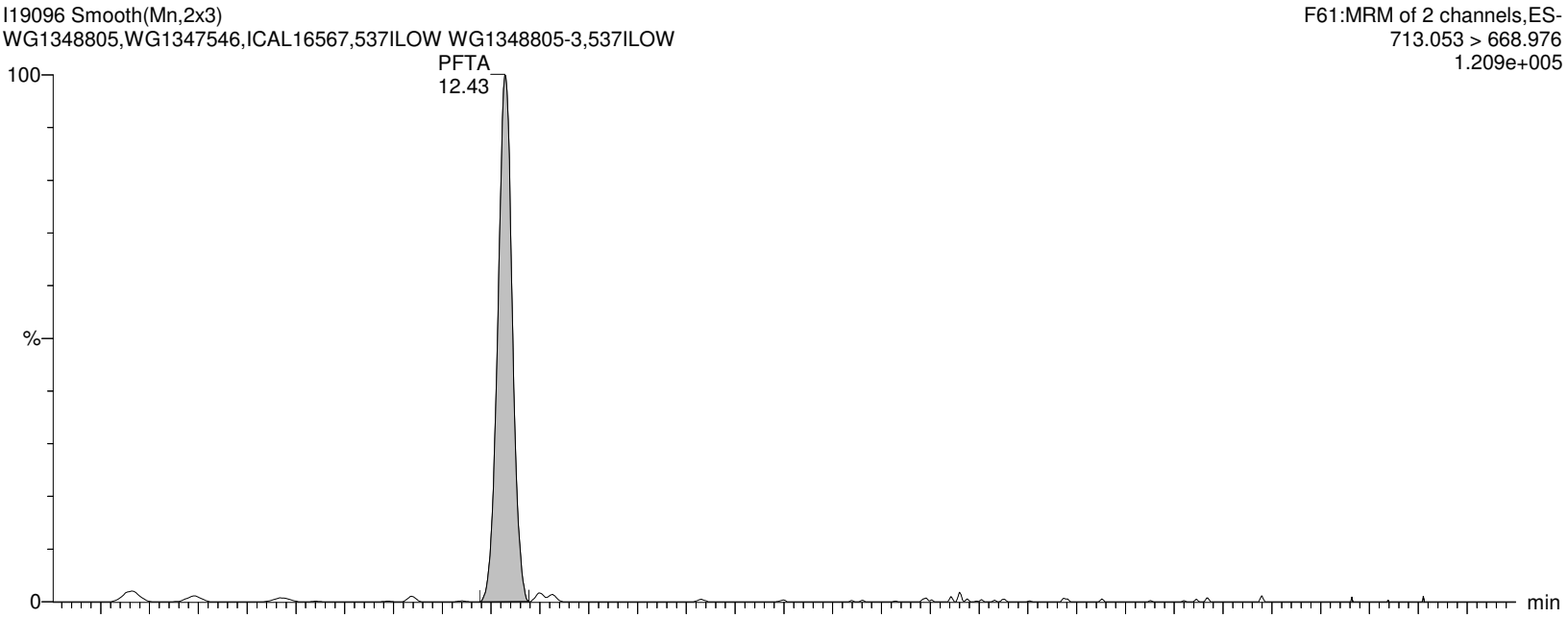
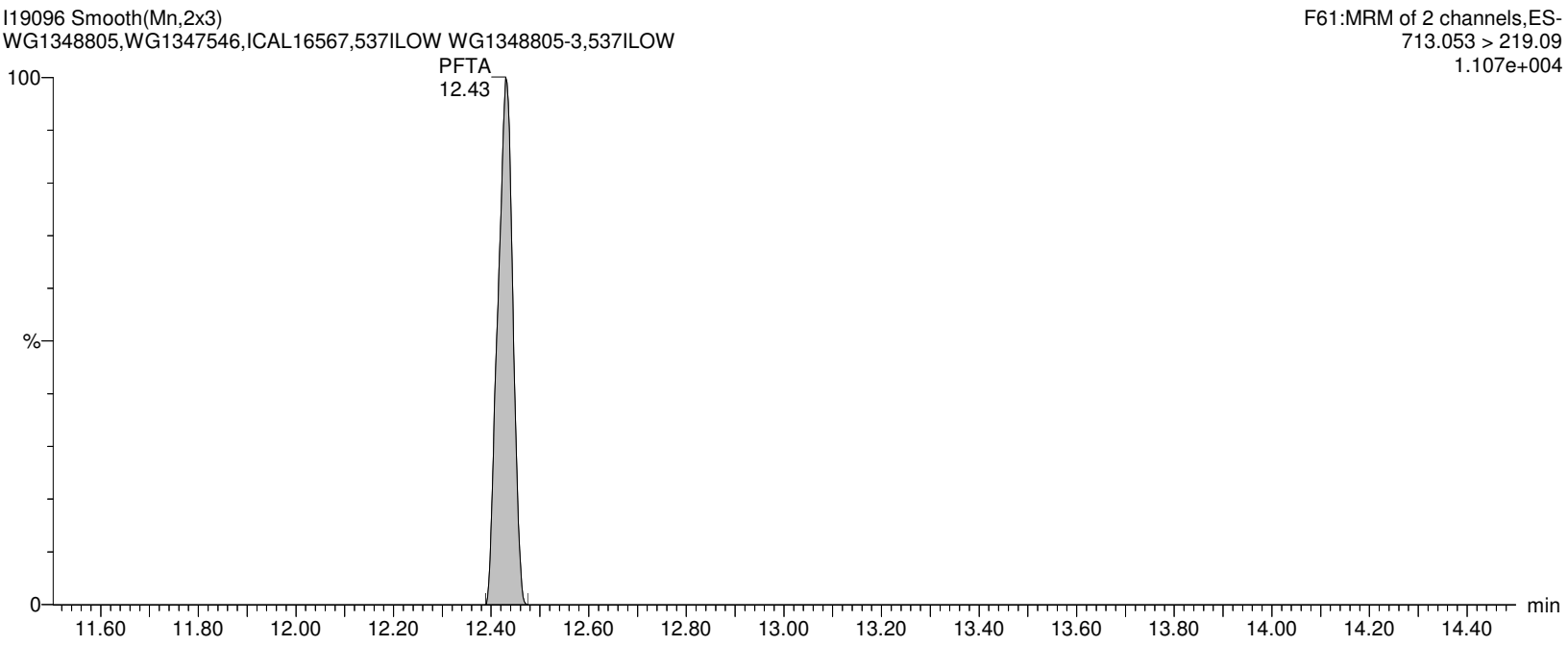
**Name: I19096**
**ID: WG1348805-3,537ILOW**
**Date: 09-Mar-2020**
**Time: 20:21:47**
**Description: WG1348805,WG1347546,ICAL16567,537ILOW**
**User: LCMS01:JW**
**Vial: 1:A,2**
**Instrument: XEVO-TQSmicro#QEA0276**
**Inlet Method Name: C:\MassLynx\Data\200309_537ISO.PRO\ACQUDB\LCMS_537_ISO_MeOH**
**Tune Method Name: C:\MassLynx\Data\200309_537ISO.PRO\ACQUDB\190709_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\200309_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**PFTA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200309_537ISO.PRO\Data\WG1348805B.qld
Last Altered: Tuesday, March 10, 2020 15:04:16 Eastern Daylight Time
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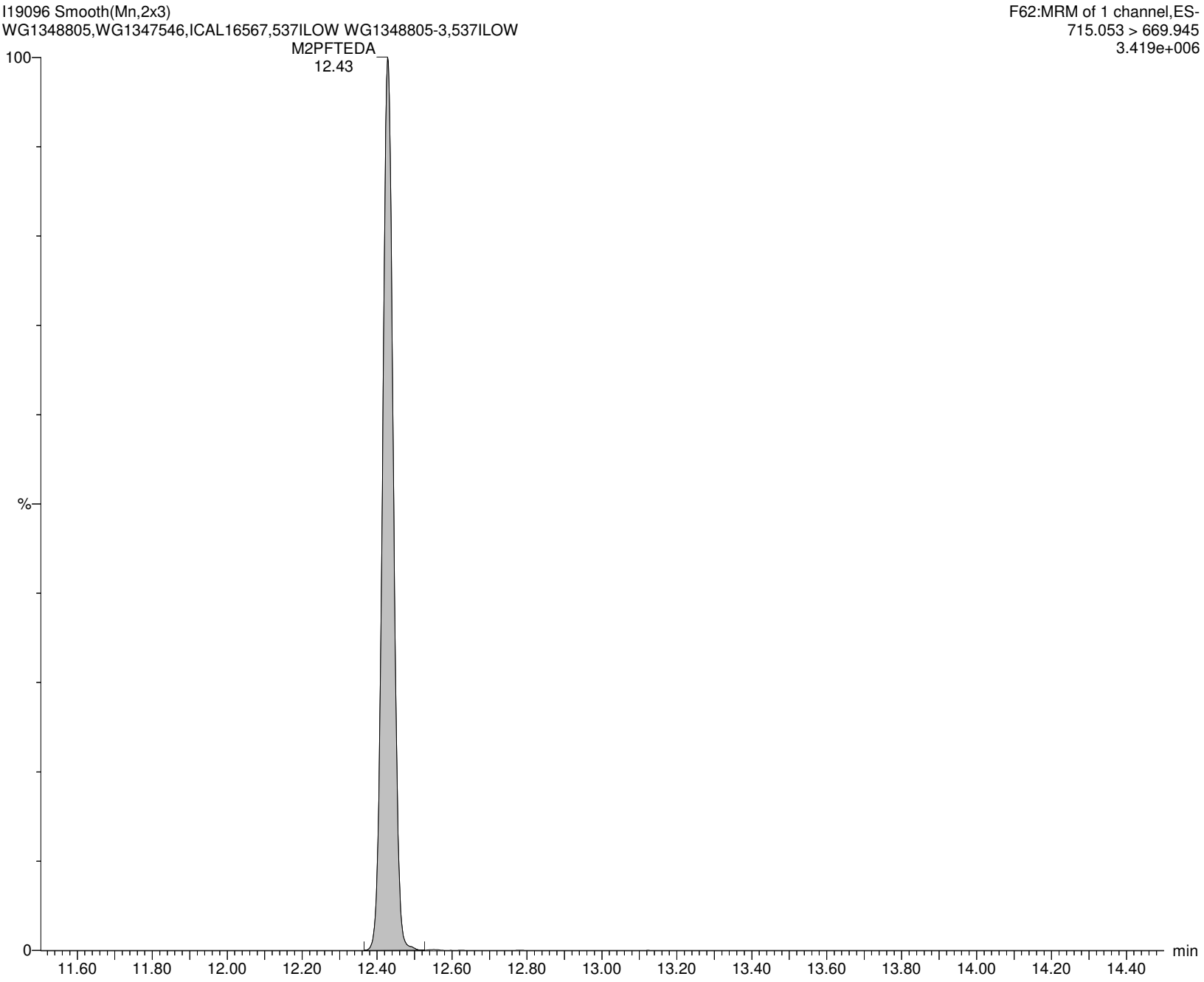
**ID: WG1348805-3,537ILOW**
**Date: 09-Mar-2020**
**Time: 20:21:47**
**Description: WG1348805,WG1347546,ICAL16567,537ILOW**
**User: LCMS01:JW**
**Vial: 1:A,2**
**Instrument: XEVO-TQSmicro#QEA0276**
**Inlet Method Name: C:\MassLynx\Data\200309_537ISO.PRO\ACQUDB\LCMS_537_ISO_MeOH**
**Tune Method Name: C:\MassLynx\Data\200309_537ISO.PRO\ACQUDB\190709_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\200309_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**M2PFTEDA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2020\200309_537ISO.PRO\Data\wg1348954-1.qld
Last Altered: Wednesday, March 11, 2020 13:51:31 Eastern Daylight Time
Printed: Thursday, March 12, 2020 02:48:34 Eastern Daylight Time

**Method: C:\MassLynx\Data\2020\200309_537ISO.PRO\MethDB\537ISO_Q_191118_DOD_RT.mdb 07 Feb 2020 15:55:12**
**Calibration: C:\MassLynx\Data\2020\200309_537ISO.PRO\CurveDB\191118_ISO_ICAL.cdb 18 Nov 2019 14:41:42**

**ID: WG1348954-1,537ILOW**
**Name: I20398**
**Date: 10-Mar-2020**
**Time: 10:15:45**
**Description: WG1348954,WG1347622,ICAL16305,537ILOW**
**Instrument: XEVO-TQSmicro#QEB0050**
**User: LCMS02:RS**
**Inlet Method Name: C:\MassLynx\Data\2020\200309_537ISO.PRO\ACQUDB\LCMS_537_ISO_B**
**Tune Method Name: C:\MassLynx\Data\2020\200309_537ISO.PRO\ACQUDB\181009_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\2020\200309_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

| | Name | CAS | RT | Trace | Area | M Flag | Conc (ng/mL) | Ion Ratio | Ratio Flag | %Rec |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | PFBA | 375-22-4 | 2.20 | 212.926 > 169.111 | 2352 | | 0.480 | | na | 96.1 |
| 2 | M3PFBA | INT STD | 2.20 | 215.926 > 172.122 | 50181 | | 10.830 | | na | 108.3 |
| 3 | MPFBA | INT STD | 2.20 | 216.926 > 172.137 | 58660 | | 10.742 | | na | 107.4 |
| 4 | PFPeA | 2706-90-3 | 5.02 | 262.926 > 219.002 | 4447 | | 0.530 | | na | 105.9 |
| 5 | M5PFPEA | INT STD | 5.01 | 267.989 > 223.081 | 86960 | | 11.227 | | na | 112.3 |
| 6 | PFBS | 375-73-5 | 5.64 | 298.926 > 79.923 | 640 | | 0.372 | 1.86 | NO | 84.1 |
| 7 | M3PFBS | INT STD | 5.64 | 301.989 > 80.254 | 11713 | | 9.505 | | na | 95.1 |
| 8 | 4:2FTS | 757124-72-4 | 6.78 | 326.926 > 306.957 | 337 | | 0.410 | 2.30 | NO | 87.7 |
| 9 | M2-4:2FTS | INT STD | 6.78 | 329.117 > 309.079 | 7415 | | 9.268 | | na | 92.7 |
| 10 | PFHxA | 307-24-4 | 6.86 | 312.989 > 269.028 | 5307 | | 0.559 | 19.38 | NO | 111.8 |
| 11 | M5PFHxA | INT STD | 6.85 | 317.989 > 273.045 | 103088 | | 11.006 | | na | 110.1 |
| 12 | PFPeS | 2706-91-4 | 7.16 | 348.926 > 80.251 | 464 | | 0.391 | 1.98 | NO | 83.2 |
| 13 | PFHpA | 375-85-9 | 8.09 | 362.926 > 319.014 | 6267 | | 0.485 | 6.13 | NO | 96.9 |
| 14 | M4PFHpA | INT STD | 8.09 | 366.926 > 321.979 | 143375 | | 11.491 | | na | 114.9 |
| 15 | br-PFHxS | 355-46-4 | 8.02 | 398.926 > 80.295 | 45 | m5 | 0.054 | | YES | 63.1 |
| 16 | L-PFHxS | 355-46-4 | 8.25 | 398.926 > 80.295 | 239 | | 0.268 | 1.05 | NO | 72.5 |
| 17 | PFHxS | 355-46-4 | | 398.926 > 80.295 | 283 | | 0.322 | | na | |
| 18 | M3PFHxS | INT STD | 8.25 | 401.926 > 80.317 | 7098 | | 9.979 | | na | 99.8 |
| 19 | br-PFOA | 335-67-1 | | 412.989 > 368.9 | | | ND | | YES | |
| 20 | L-PFOA | 335-67-1 | 9.02 | 412.989 > 368.9 | 6281 | | 0.503 | 10.42 | NO | 100.6 |
| 21 | PFOA | 335-67-1 | | 412.989 > 368.9 | 6281 | | 0.503 | | na | |
| 22 | M8PFOA | INT STD | 9.01 | 420.989 > 375.979 | 135946 | | 11.354 | | na | 113.5 |
| 23 | M2PFOA | INT STD | 9.01 | 415.032 > 369.968 | 122363 | | 11.575 | | na | 115.8 |
| 24 | 6:2FTS | 27619-97-2 | 8.97 | 426.989 > 406.921 | 302 | | 0.532 | | YES | 112.0 |
| 25 | M2-6:2FTS | INT STD | 8.97 | 428.989 > 408.917 | 7016 | | 8.973 | | na | 89.7 |
| 26 | PFHpS | 375-92-8 | 9.09 | 448.926 > 80.257 | 276 | | 0.457 | 1.07 | YES | 96.2 |
| 27 | PFNA | 375-95-1 | 9.77 | 462.989 > 418.931 | 5346 | | 0.464 | 4.53 | NO | 92.9 |
| 28 | M9PFNA | INT STD | 9.77 | 472.053 > 426.947 | 140540 | | 11.930 | | na | 119.3 |
| 29 | br-PFOS | 1763-23-1 | 9.64 | 498.989 > 80.294 | 78 | m5 | 0.066 | 2.05 | NO | 65.7 |
| 30 | L-PFOS | 1763-23-1 | 9.83 | 498.989 > 80.294 | 275 | | 0.306 | 1.77 | YES | 83.8 |
| 31 | PFOS | 1763-23-1 | | 498.989 > 80.294 | 353 | | 0.371 | | na | |
| 32 | M4PFOS | INT STD | 9.82 | 503.032 > 80.306 | 8804 | | 12.606 | | na | 126.1 |
| 33 | M8PFOS | INT STD | 9.81 | 507.053 > 80.294 | 9161 | | 10.141 | | na | 101.4 |
| 34 | PFDA | 335-76-2 | 10.41 | 513.053 > 468.906 | 5285 | | 0.463 | 8.61 | NO | 92.5 |
| 35 | M2PFDA | INT STD | 10.40 | 515.053 > 469.934 | 116641 | | 13.211 | | na | 132.1 |
| 36 | M6PFDA | INT STD | 10.40 | 519.053 > 473.931 | 133196 | | 11.049 | | na | 110.5 |
| 37 | 8:2FTS | 39108-34-4 | 10.39 | 526.926 > 506.818 | 294 | | 0.504 | | na | 105.1 |
| 38 | M2-8:2FTS | INT STD | 10.39 | 529.053 > 508.945 | 5365 | | 11.696 | | na | 117.0 |
| 39 | PFNS | 68259-12-1 | 10.44 | 548.989 > 80.249 | 324 | | 0.380 | 1.64 | YES | 79.2 |


all concentration units in (ng/mL)

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Last Altered: Wednesday, March 11, 2020 13:51:31 Eastern Daylight Time
Printed: Thursday, March 12, 2020 02:48:34 Eastern Daylight Time

**ID: WG1348954-1,537ILOW**
**Name: I20398**
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**Time: 10:15:45**
**Description: WG1348954,WG1347622,ICAL16305,537ILOW**
**Instrument: XEVO-TQSmicro#QEB0050**
**User: LCMS02:RS**
**Inlet Method Name: C:\MassLynx\Data\2020\200309_537ISO.PRO\ACQUDB\LCMS_537_ISO_B**
**Tune Method Name: C:\MassLynx\Data\2020\200309_537ISO.PRO\ACQUDB\181009_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\2020\200309_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

| | Name | CAS | RT | Trace | Area | M Flag | Conc (ng/mL) | Ion Ratio | Ratio Flag | %Rec |
|---|---|---|---|---|---|---|---|---|---|---|
| 40 | d3-NMeFOSAA | INT STD | 10.79 | 573.096 > 418.987 | 12899 | | 9.396 | | na | 94.0 |
| 41 | br-NMeFOSAA | 2355-31-9 | | 570.053 > 418.917 | | | ND | | YES | |
| 42 | L-NMeFOSAA | 2355-31-9 | 10.79 | 570.053 > 418.917 | 594 | | 0.494 | 3.87 | YES | 98.9 |
| 43 | NMeFOSAA | 2355-31-9 | | 570.053 > 418.917 | 594 | | 0.494 | | na | |
| 44 | PFUnA | 2058-94-8 | 10.95 | 562.989 > 518.903 | 5724 | | 0.459 | 10.04 | NO | 91.7 |
| 45 | M7-PFUDA | INT STD | 10.95 | 570.053 > 524.923 | 130518 | | 12.204 | | na | 122.0 |
| 46 | PFDS | 335-77-3 | 10.96 | 598.926 > 80.314 | 236 | | 0.388 | 1.44 | NO | 80.4 |
| 47 | FOSA | 754-91-6 | 10.85 | 497.989 > 78.245 | 1037 | | 0.409 | | YES | 81.7 |
| 48 | M8FOSA | INT STD | 10.85 | 506.053 > 78.286 | 23884 | | 8.380 | | na | 83.8 |
| 49 | d5-NEtFOSAA | INT STD | 11.08 | 589.117 > 418.929 | 12072 | | 9.954 | | na | 99.5 |
| 50 | br-NEtFOSAA | 2991-50-6 | | 583.989 > 418.927 | | | ND | | YES | |
| 51 | L-NEtFOSAA | 2991-50-6 | 11.09 | 583.989 > 418.927 | 388 | m2 | 0.340 | | YES | 68.0 |
| 52 | NEtFOSAA | 2991-50-6 | | 583.989 > 418.927 | 388 | | 0.340 | | na | |
| 53 | PFDoA | 307-55-1 | 11.42 | 612.989 > 568.967 | 5049 | | 0.467 | 22.02 | NO | 93.4 |
| 54 | MPFDOA | INT STD | 11.42 | 614.989 > 569.92 | 127690 | | 10.643 | | na | 106.4 |
| 55 | PFTrDA | 72629-94-8 | 11.83 | 663.053 > 618.969 | 4660 | | 0.536 | 17.42 | YES | 107.1 |
| 56 | PFTA | 376-06-7 | 12.19 | 713.053 > 668.976 | 3941 | | 0.481 | 8.45 | NO | 96.2 |
| 57 | M2PFTEDA | INT STD | 12.19 | 715.053 > 669.945 | 102334 | | 10.738 | | na | 107.4 |


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**Calibration: C:\MassLynx\Data\2020\200309_537ISO.PRO\CurveDB\191118_ISO_ICAL.cdb 18 Nov 2019 14:41:42**

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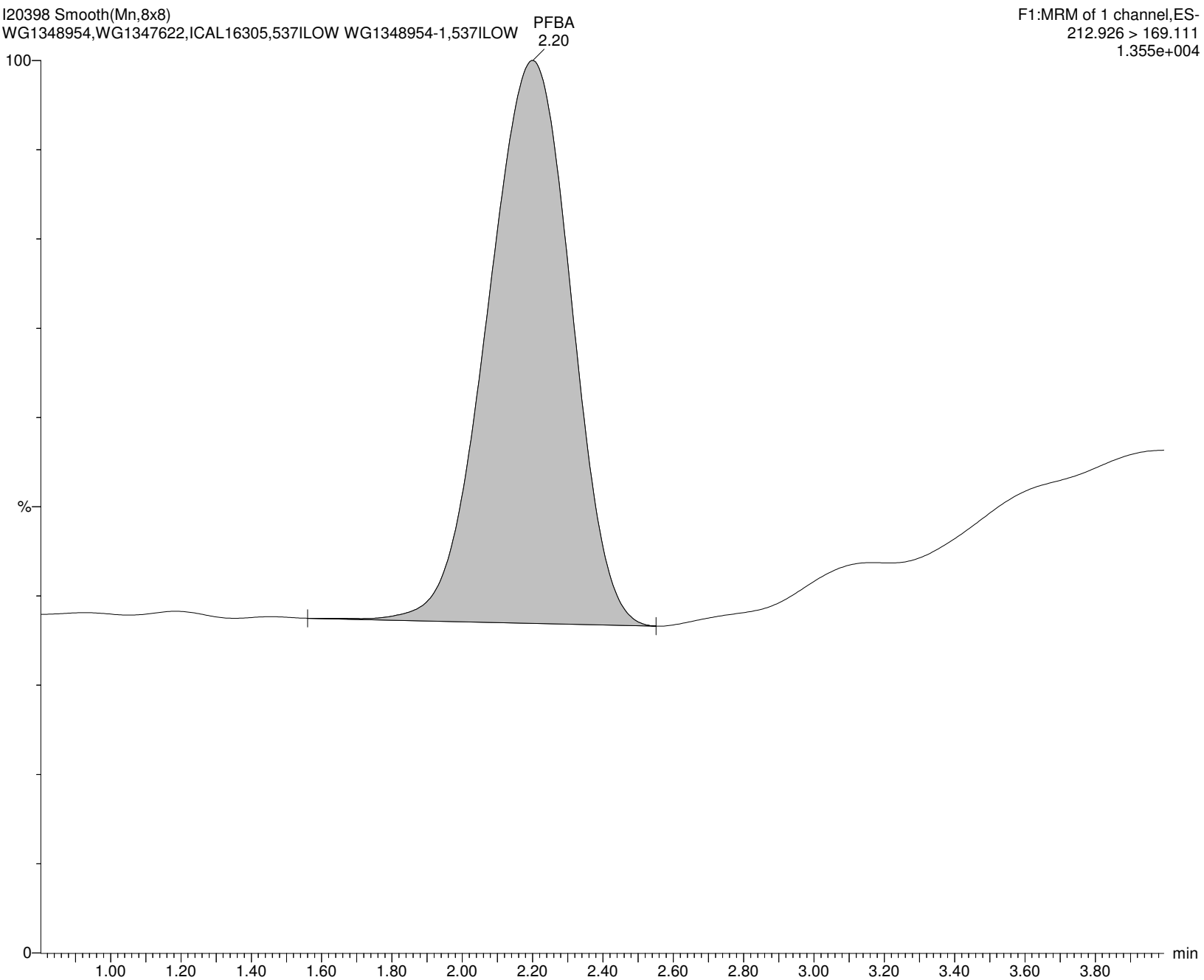
**PFBA**





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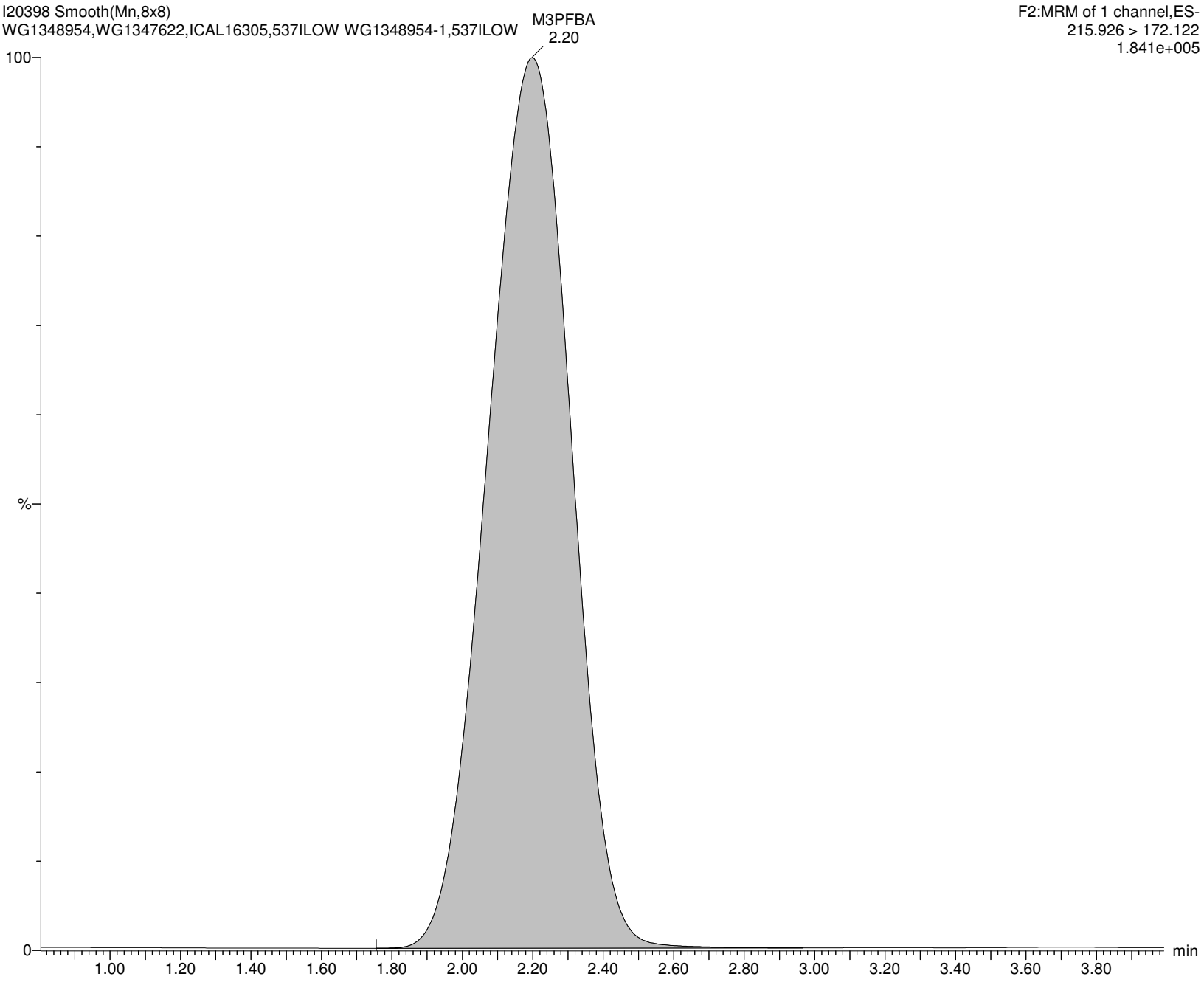



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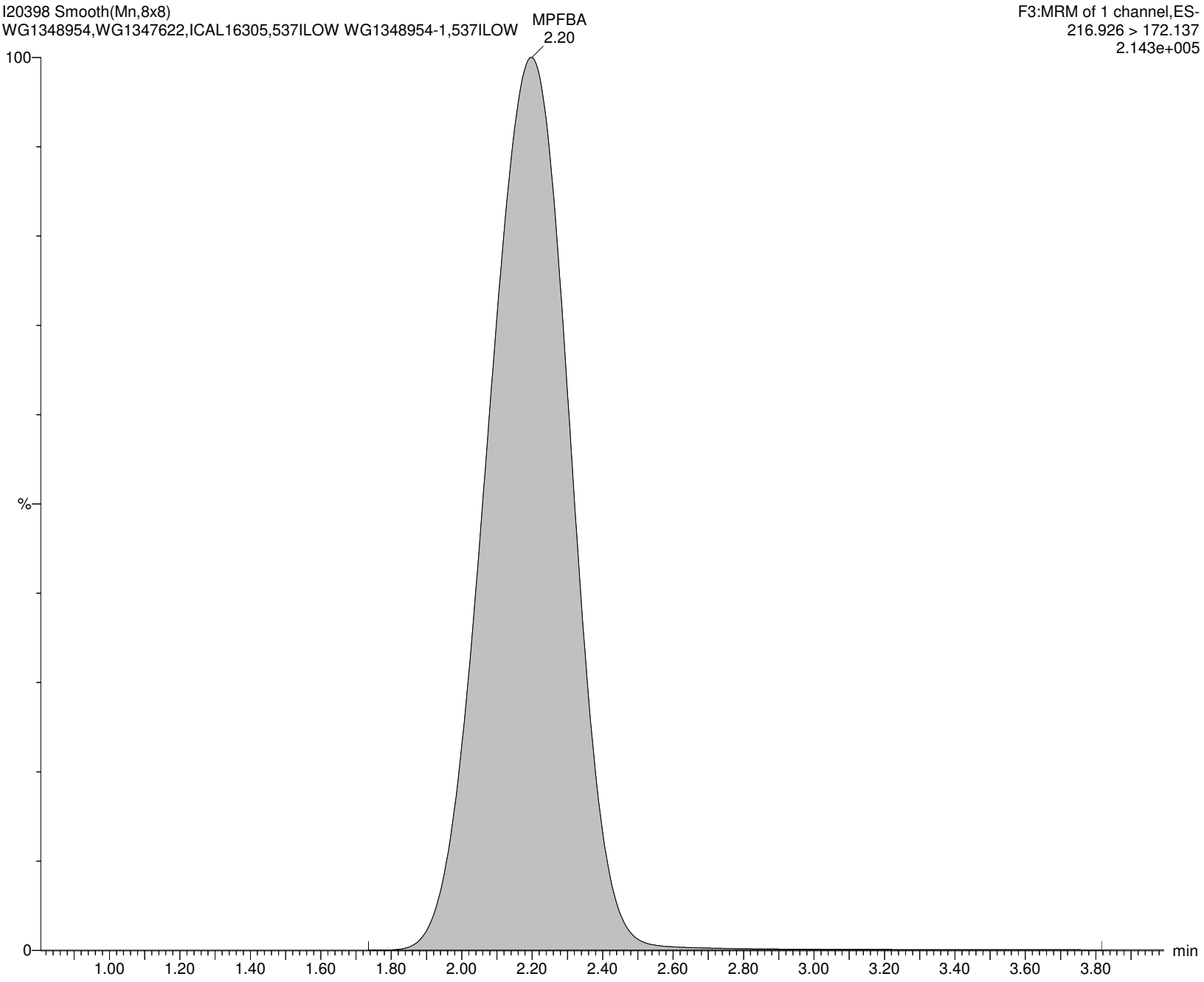
**MPFBA**





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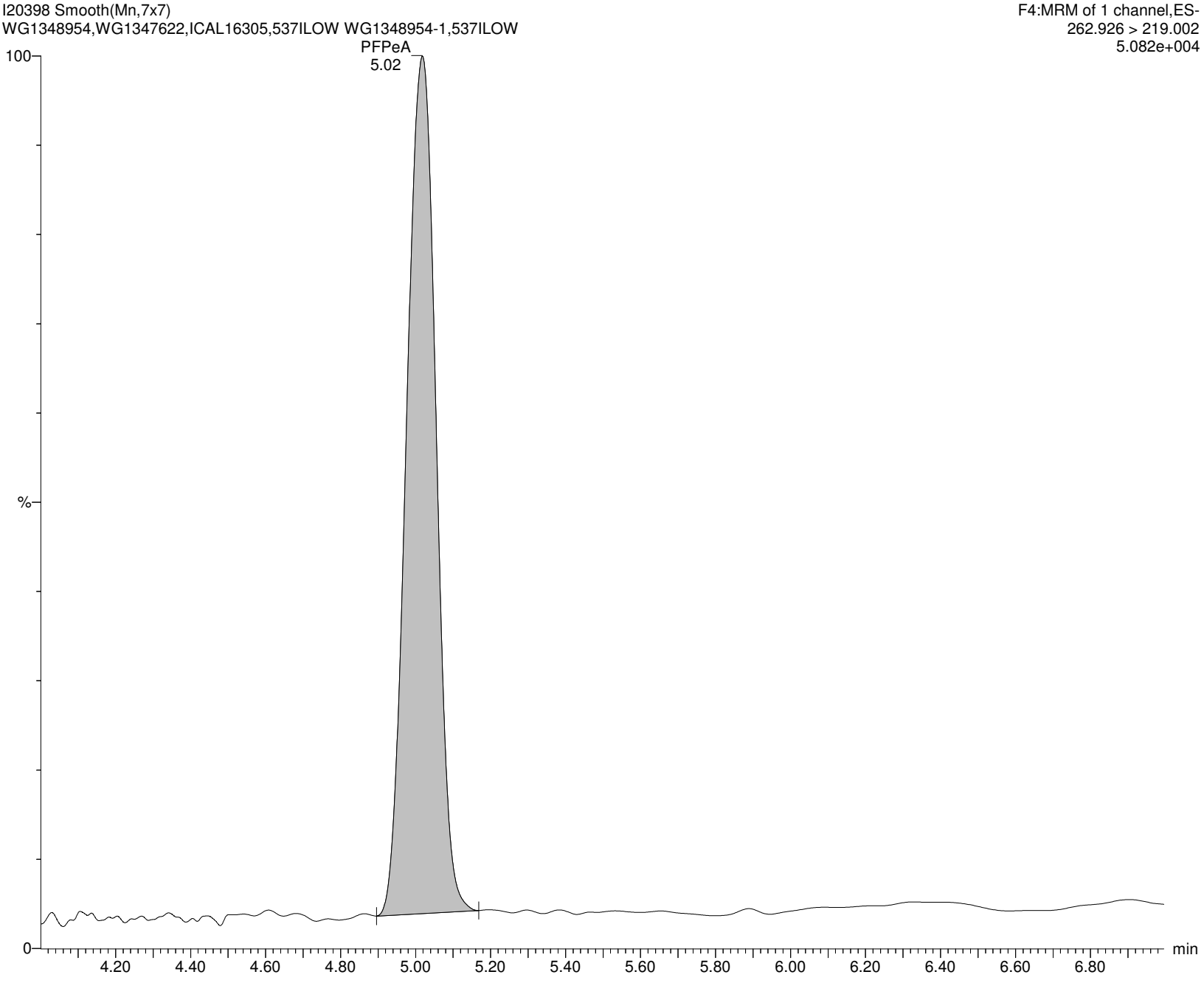
**PFPeA**





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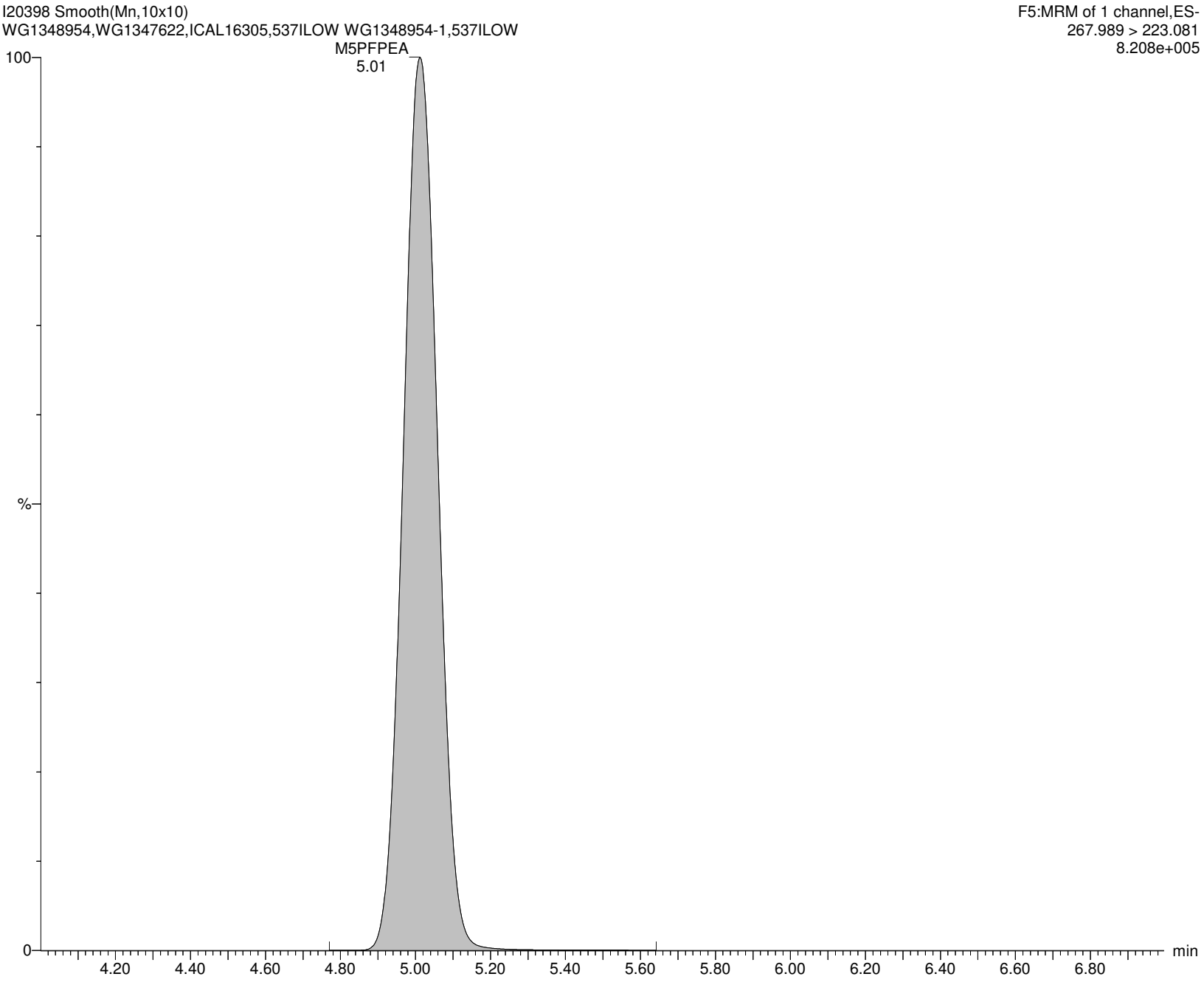
**M5PFPEA**





all concentration units in (ng/mL)

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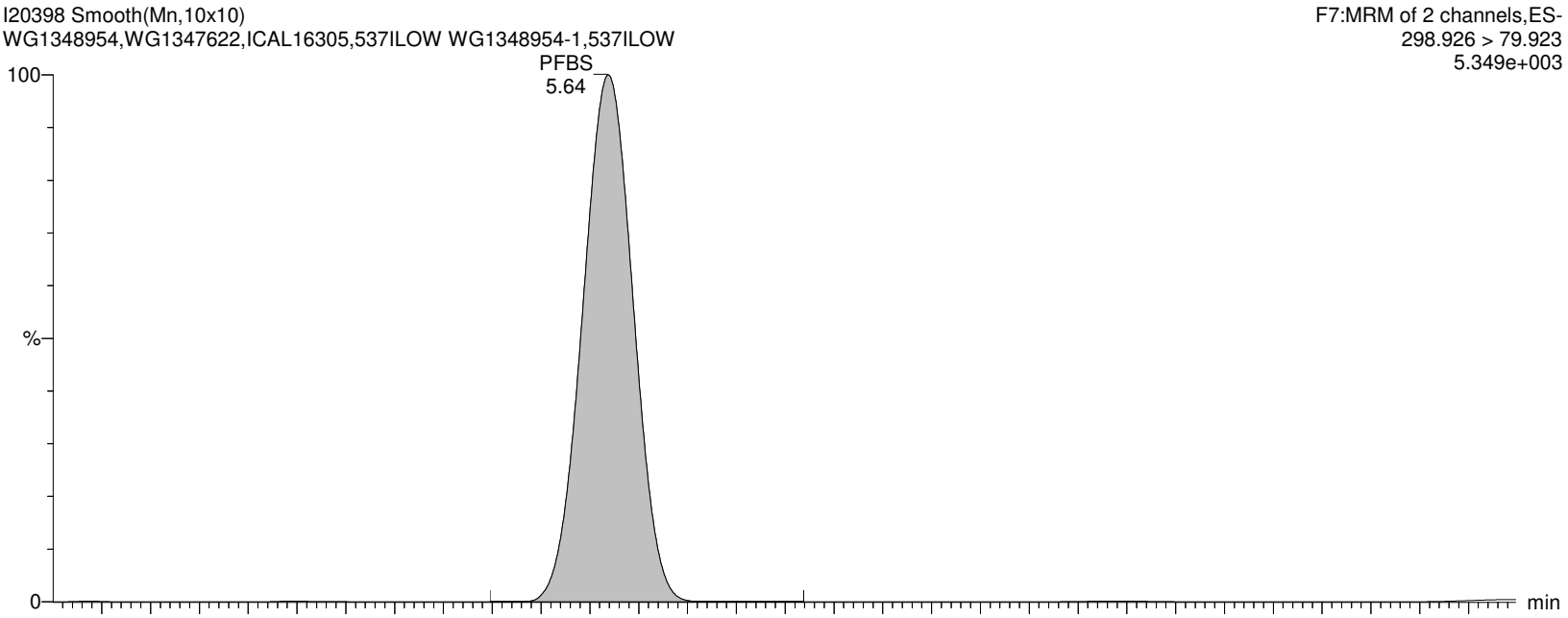
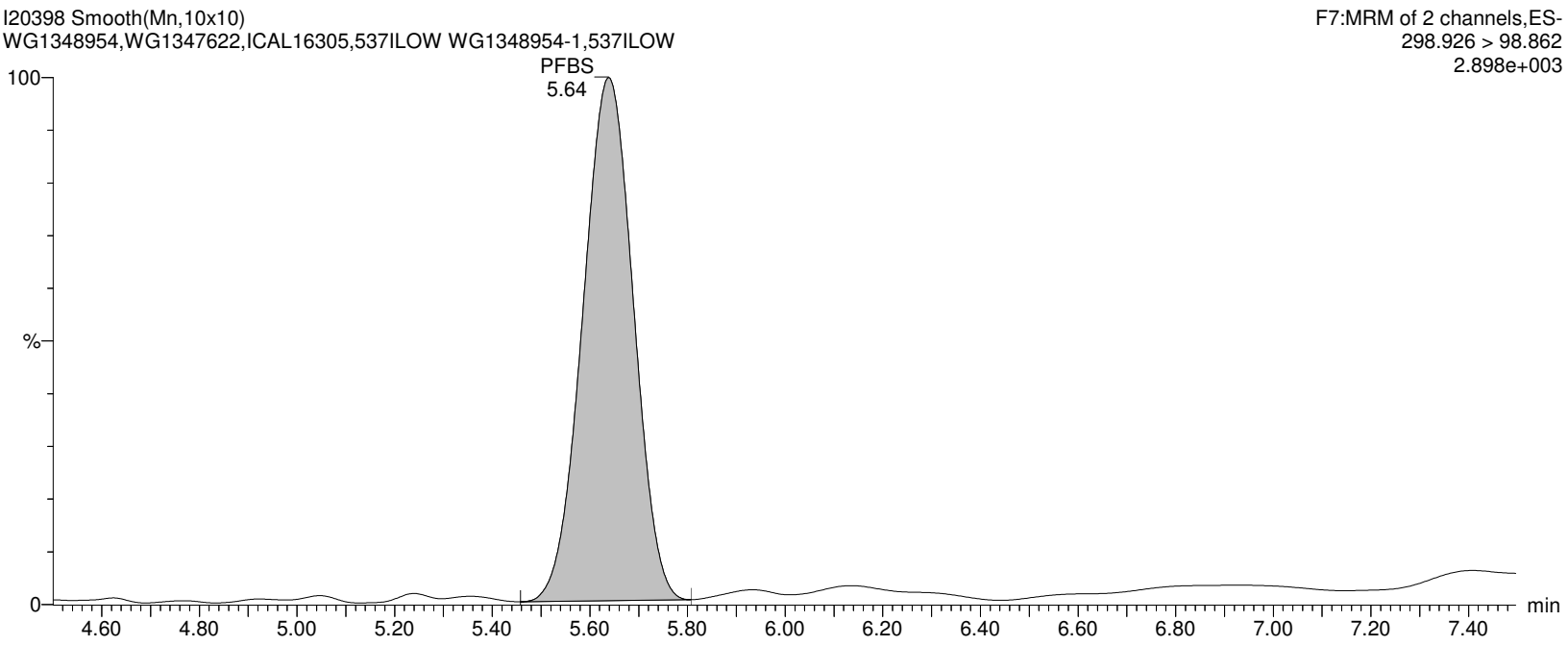
**PFBS**





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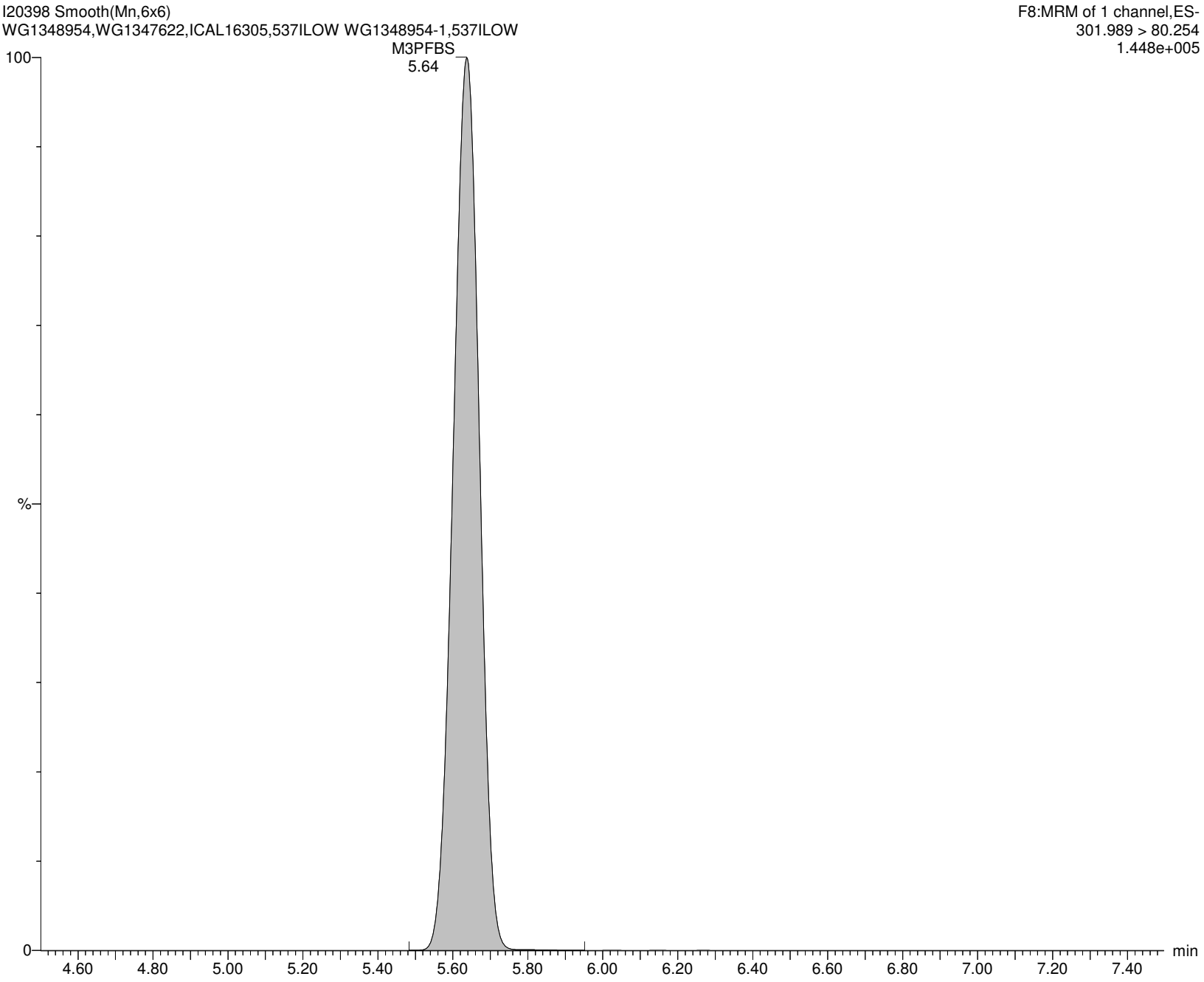
**M3PFBS**





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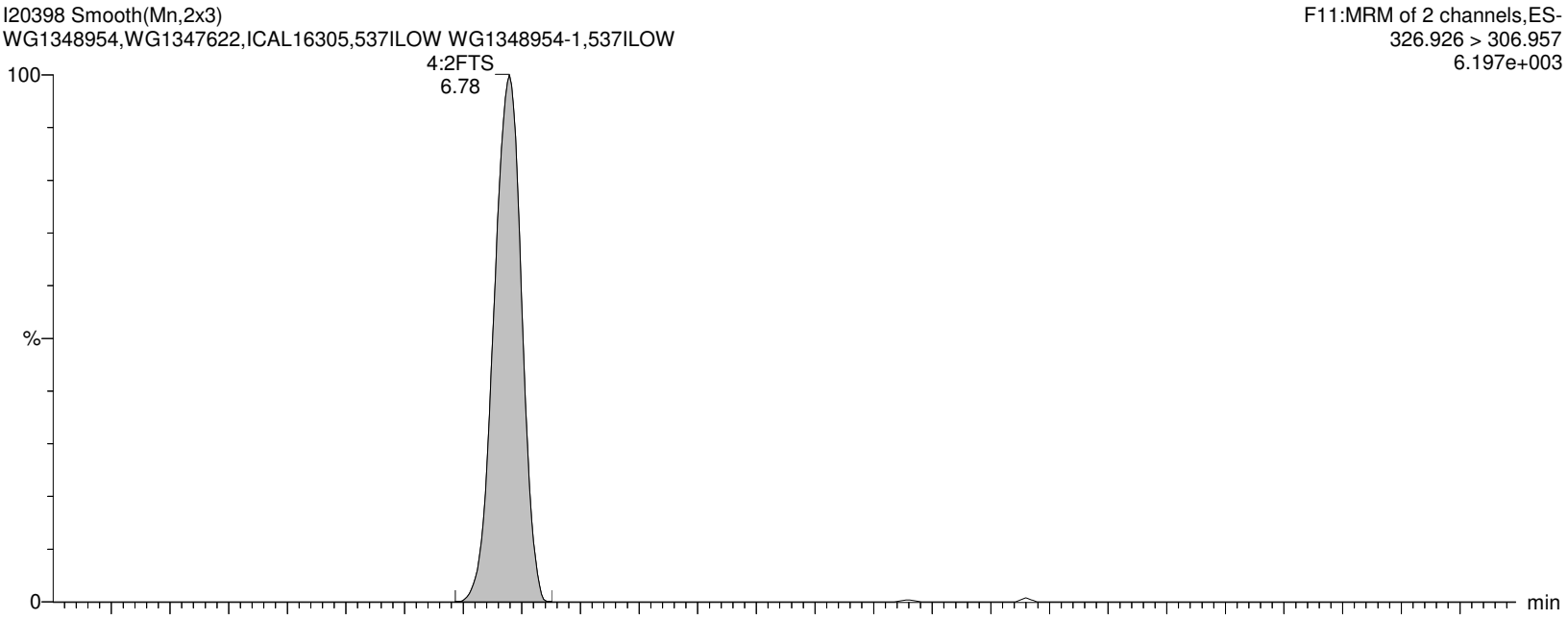
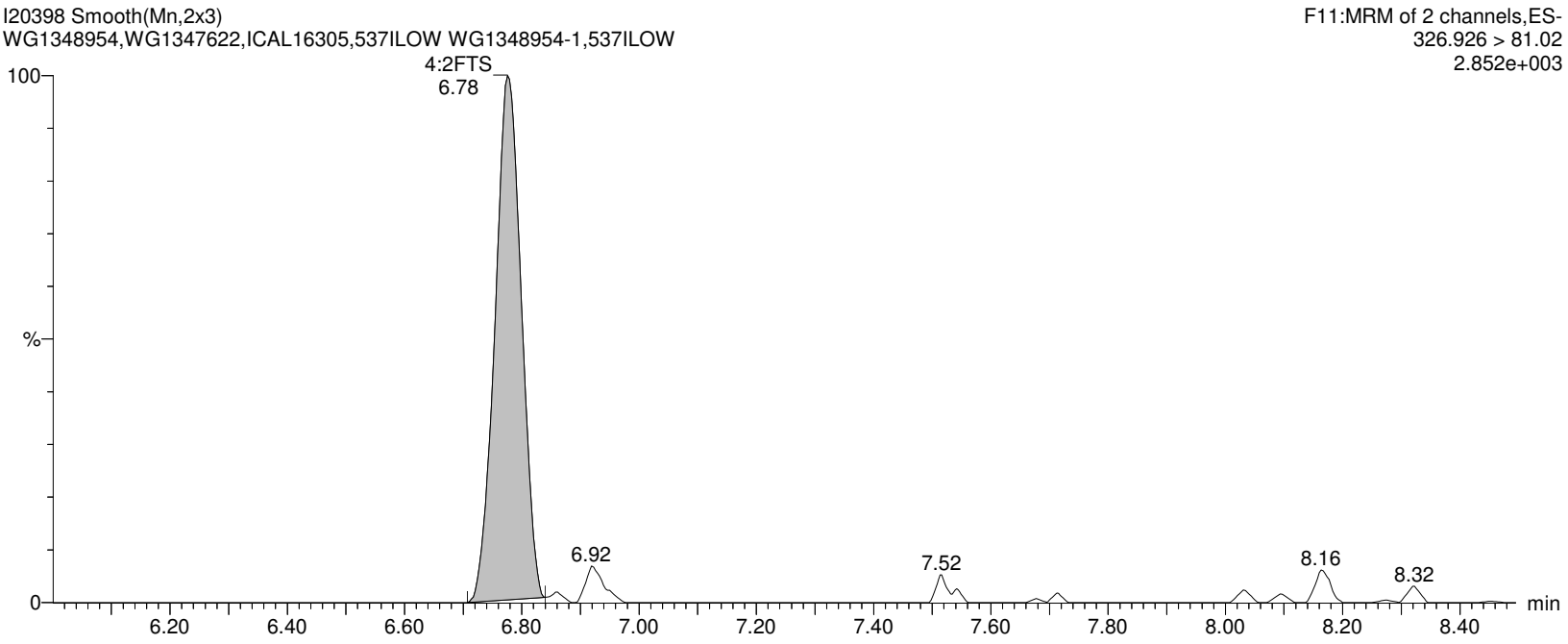
**4:2FTS**





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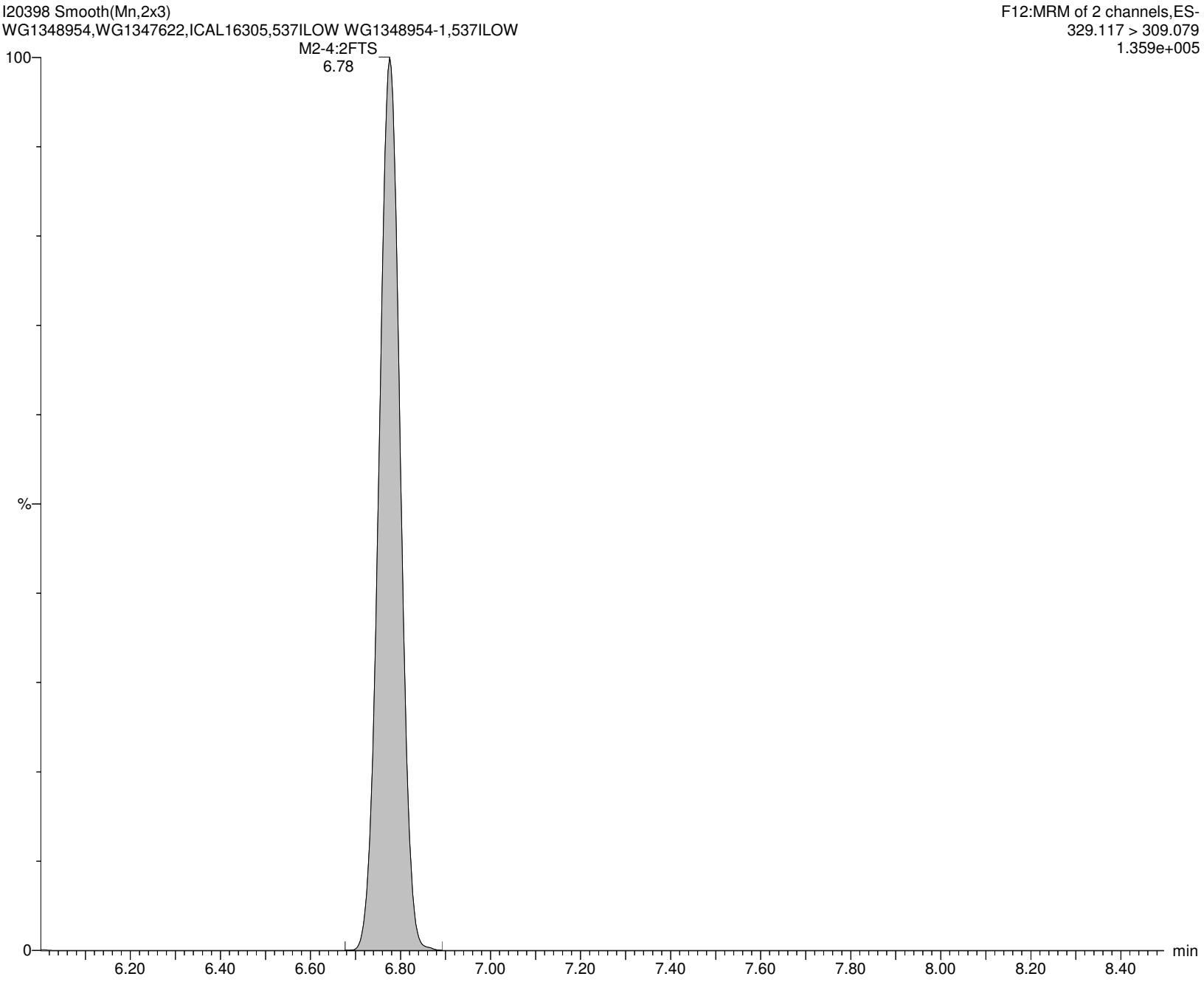
**M2-4:2FTS**





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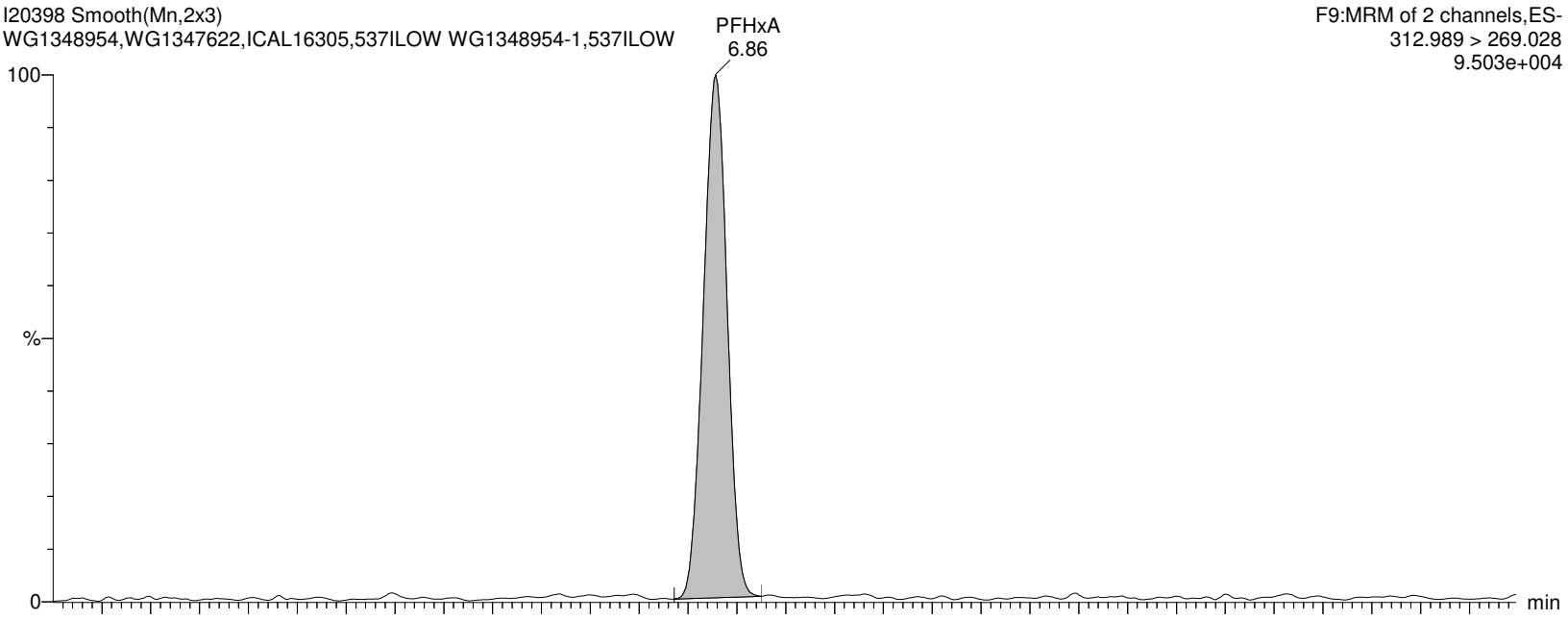
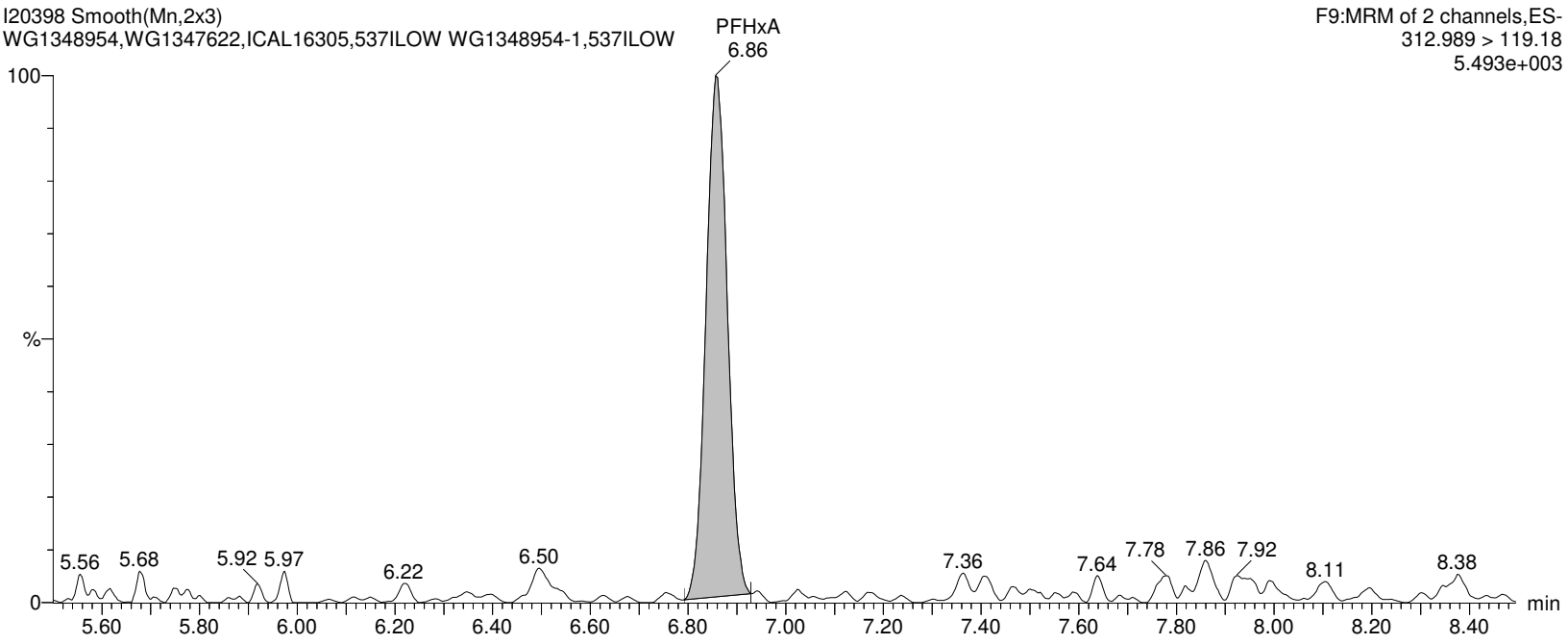
**PFHxA**





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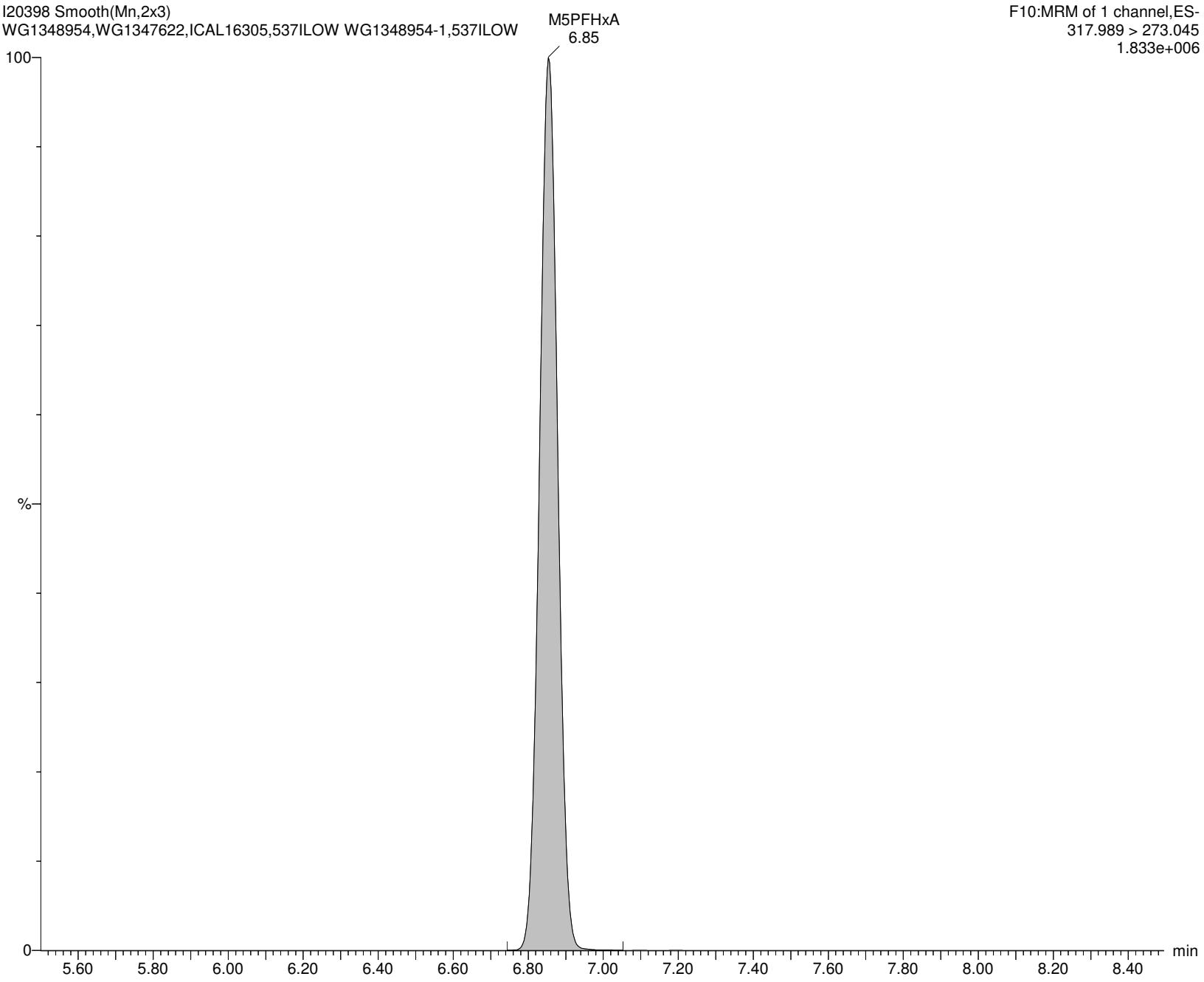


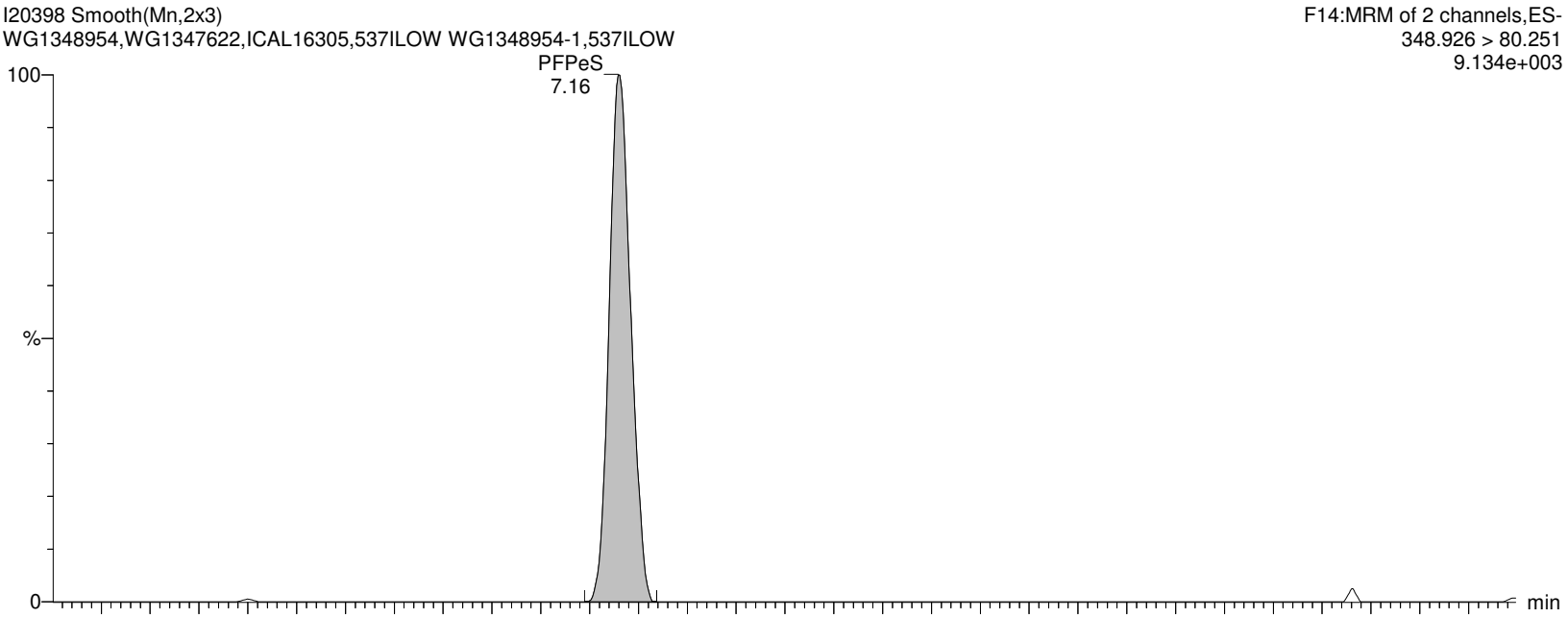


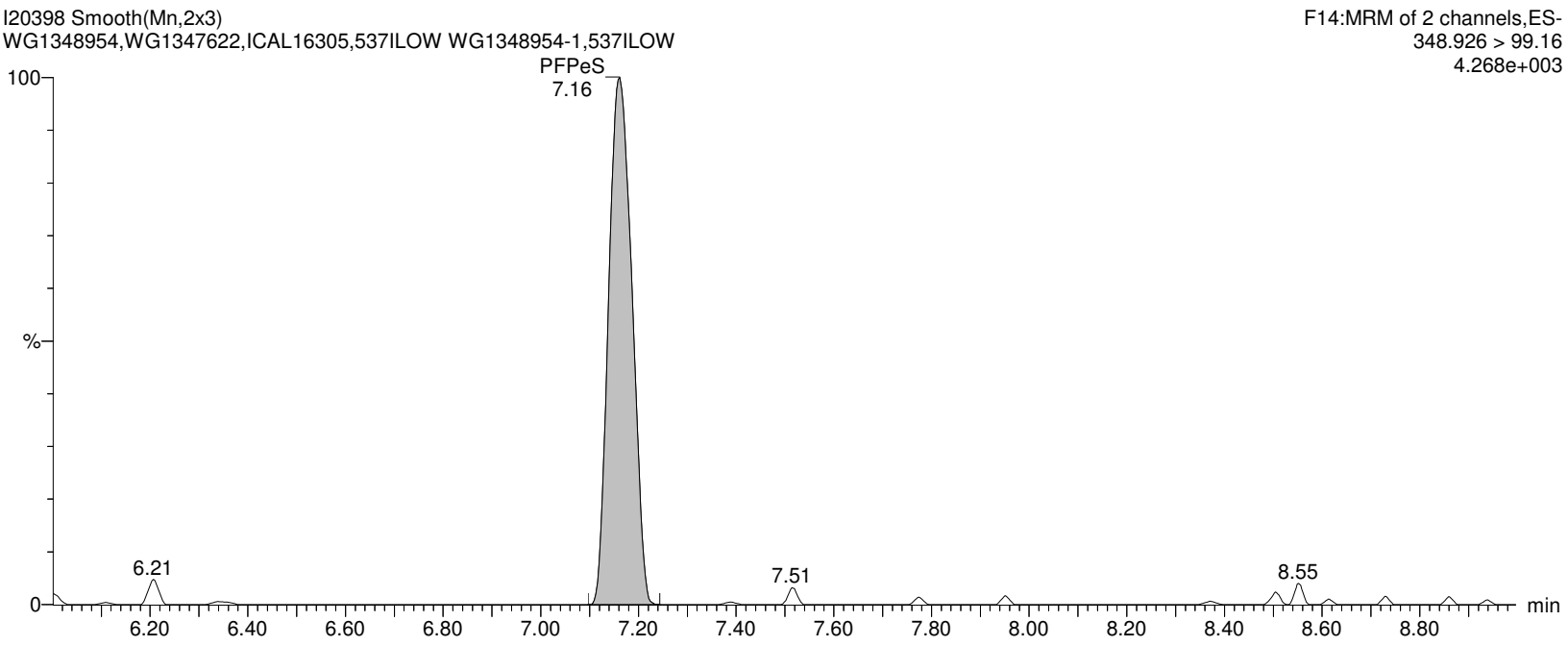
all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2020\200309_537ISO.PRO\Data\wg1348954-1.qld
Last Altered: Wednesday, March 11, 2020 13:51:31 Eastern Daylight Time
Printed: Thursday, March 12, 2020 02:48:34 Eastern Daylight Time

**Name: I20398**
**ID: WG1348954-1,537ILOW**
**Date: 10-Mar-2020**
**Time: 10:15:45**
**Description: WG1348954,WG1347622,ICAL16305,537ILOW**
**User: LCMS02:RS**
**Vial: 1:A,2**
**Instrument: XEVO-TQSmicro#QEB0050**
**Inlet Method Name: C:\MassLynx\Data\2020\200309_537ISO.PRO\ACQUDB\LCMS_537_ISO_B**
**Tune Method Name: C:\MassLynx\Data\2020\200309_537ISO.PRO\ACQUDB\181009_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\2020\200309_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**PFPeS**





all concentration units in (ng/mL)

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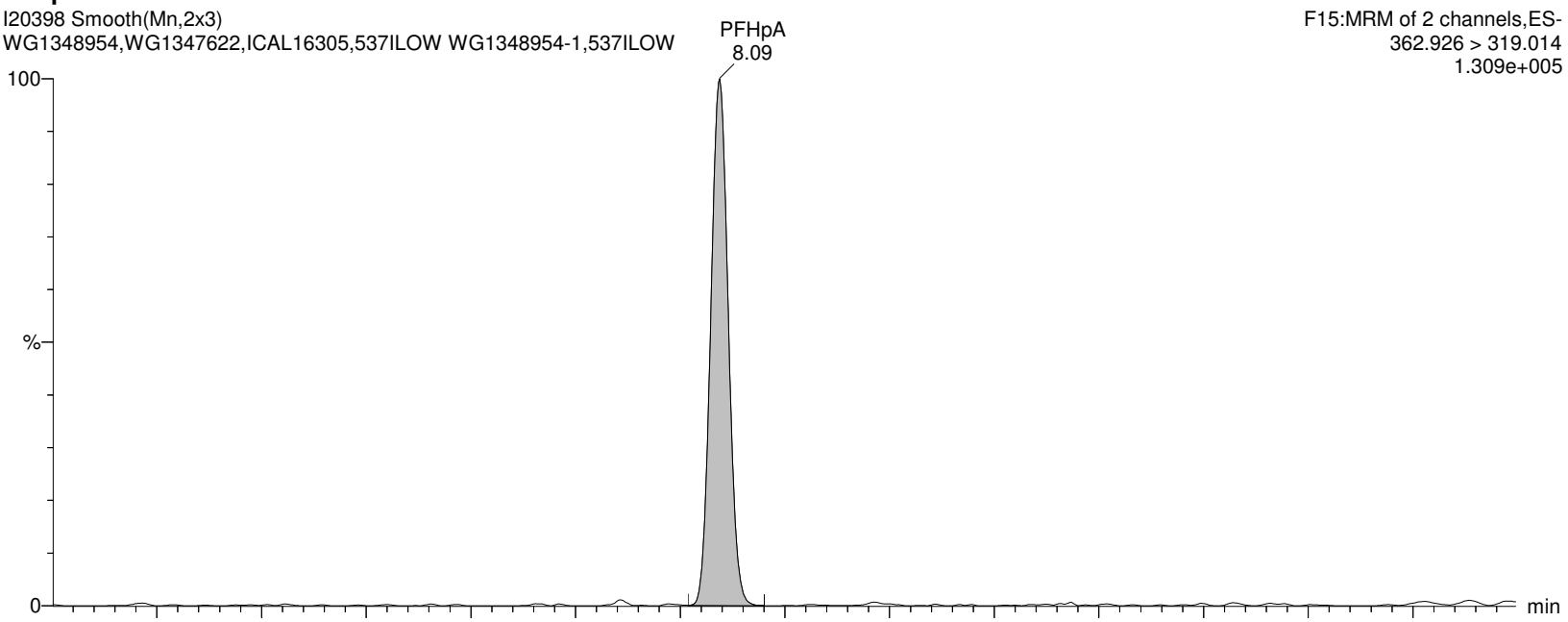
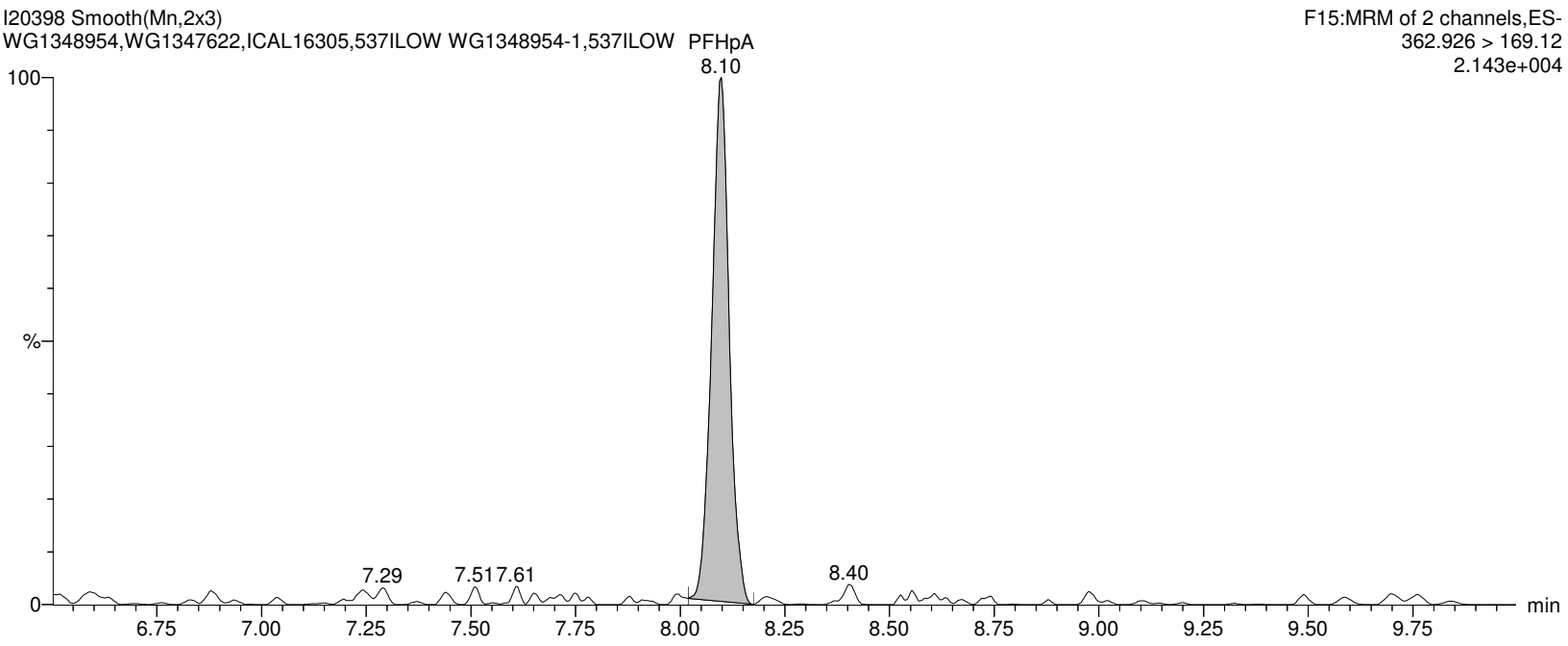
**PFHpA**





all concentration units in (ng/mL)

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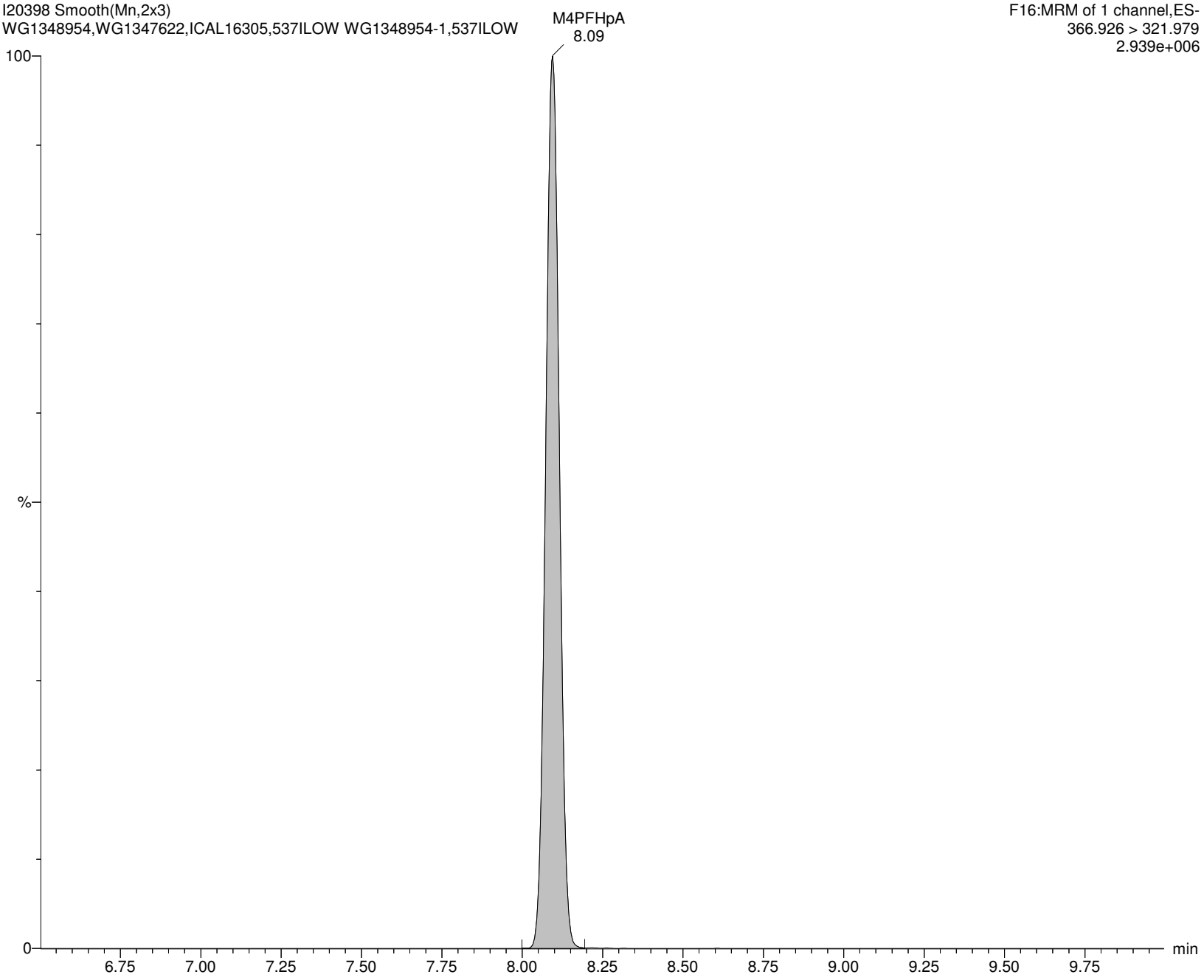
**M4PFHpA**





all concentration units in (ng/mL)

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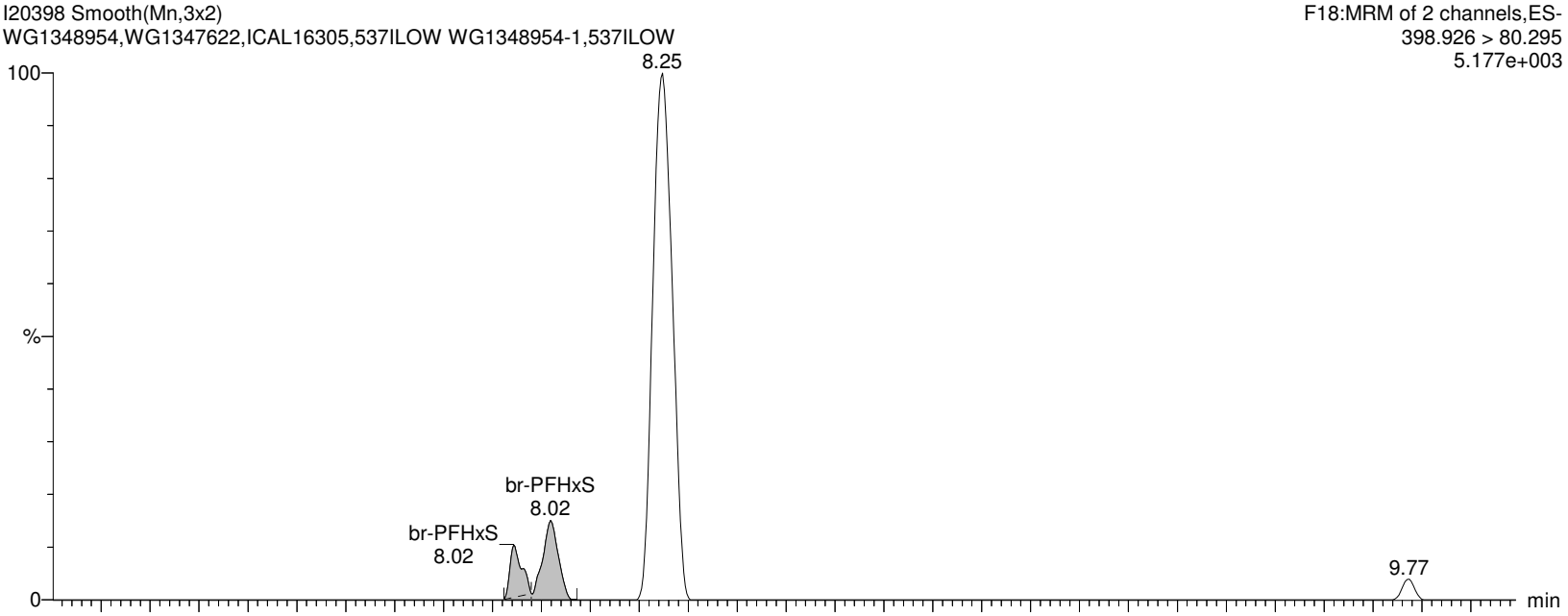
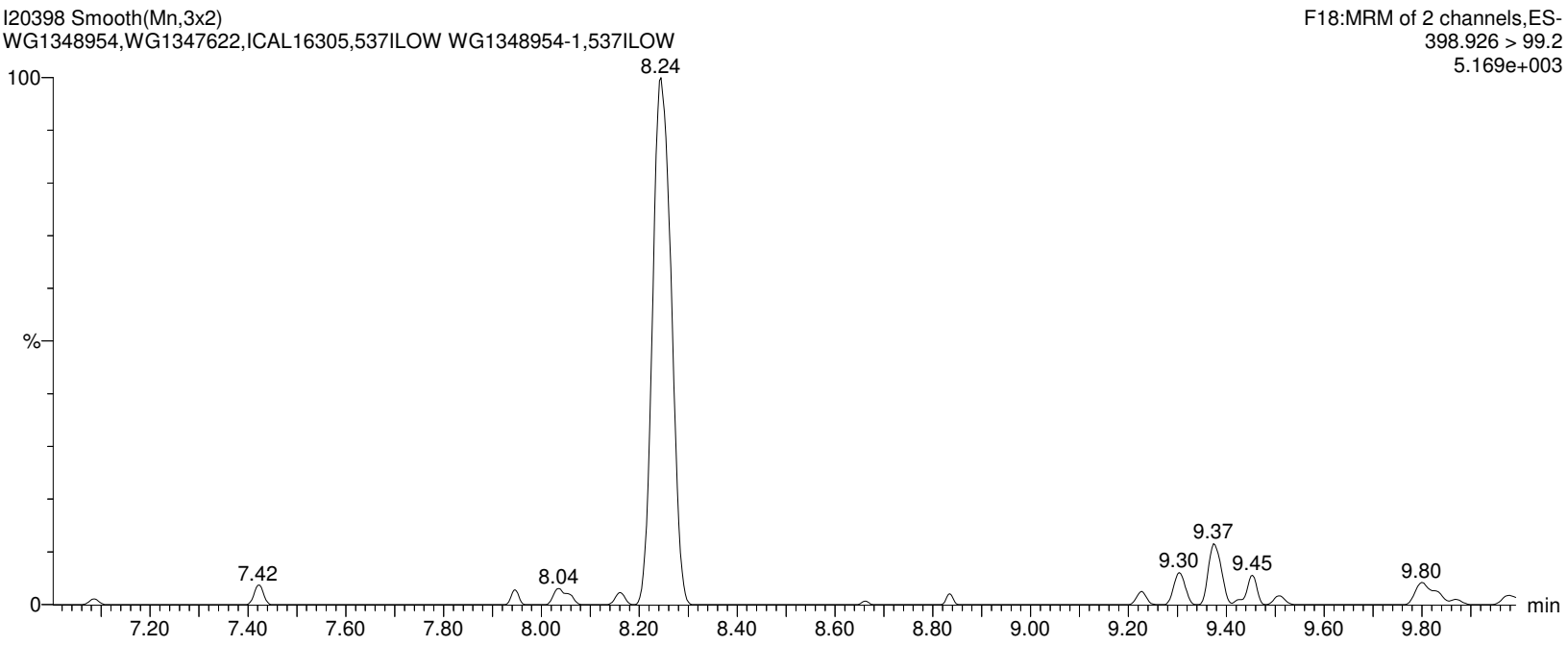
**br-PFHxS**





all concentration units in (ng/mL)

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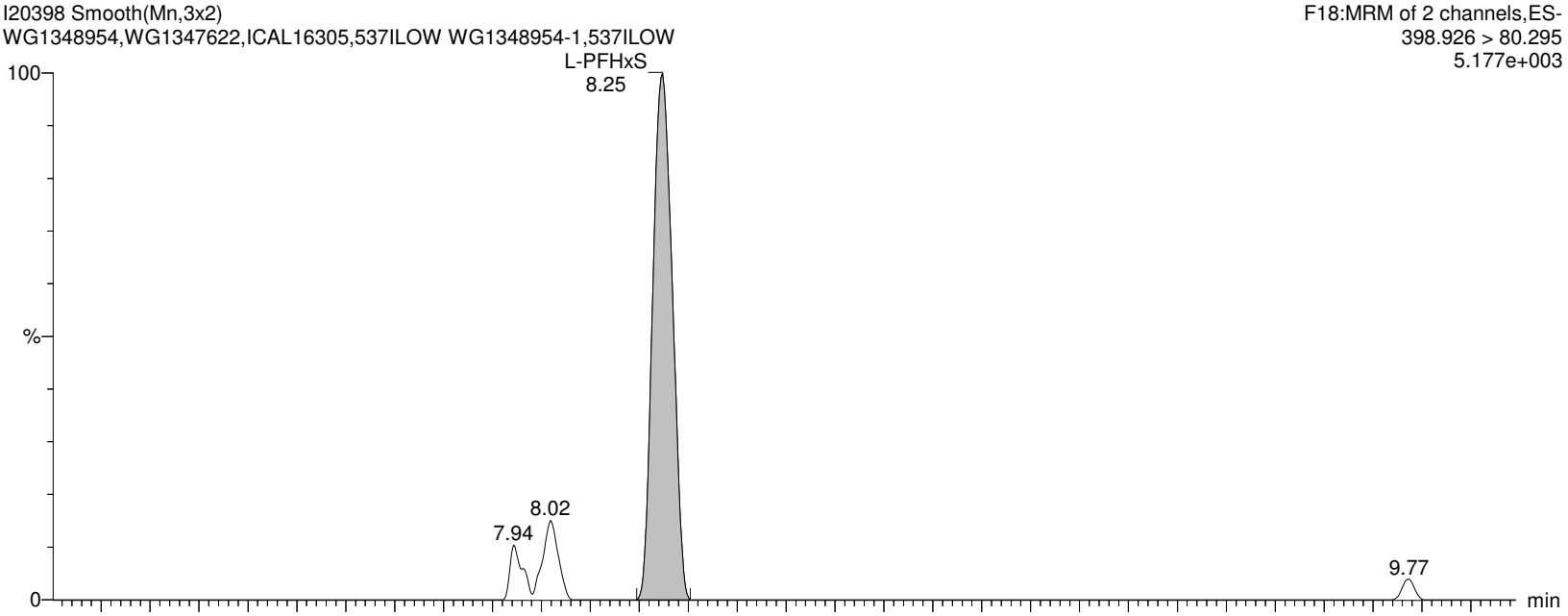
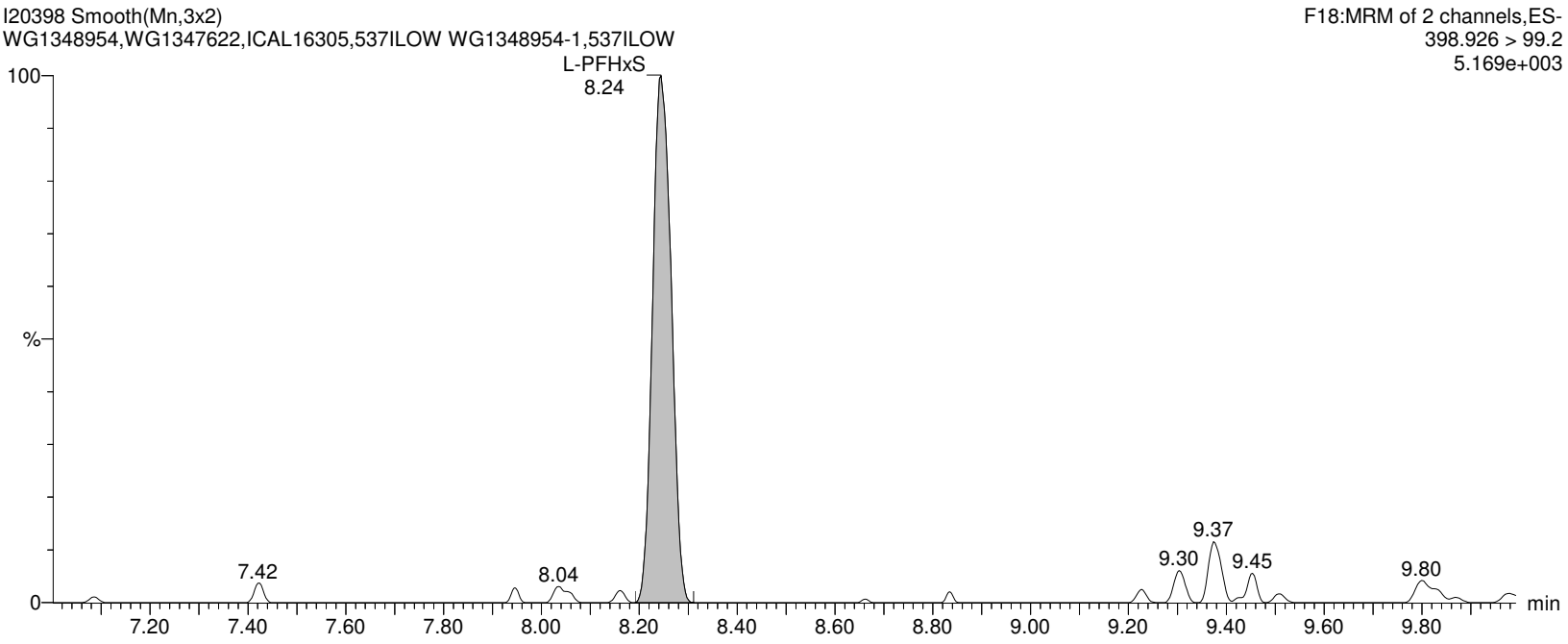
**L-PFHxS**





all concentration units in (ng/mL)

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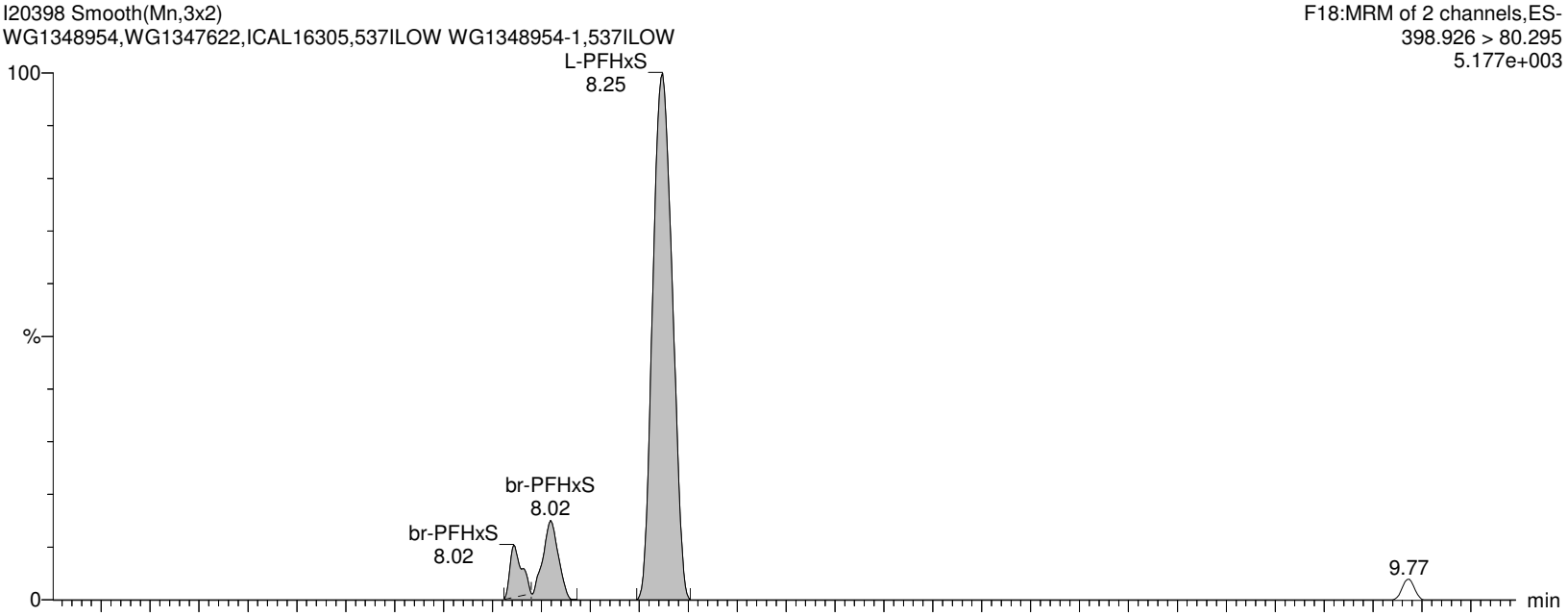
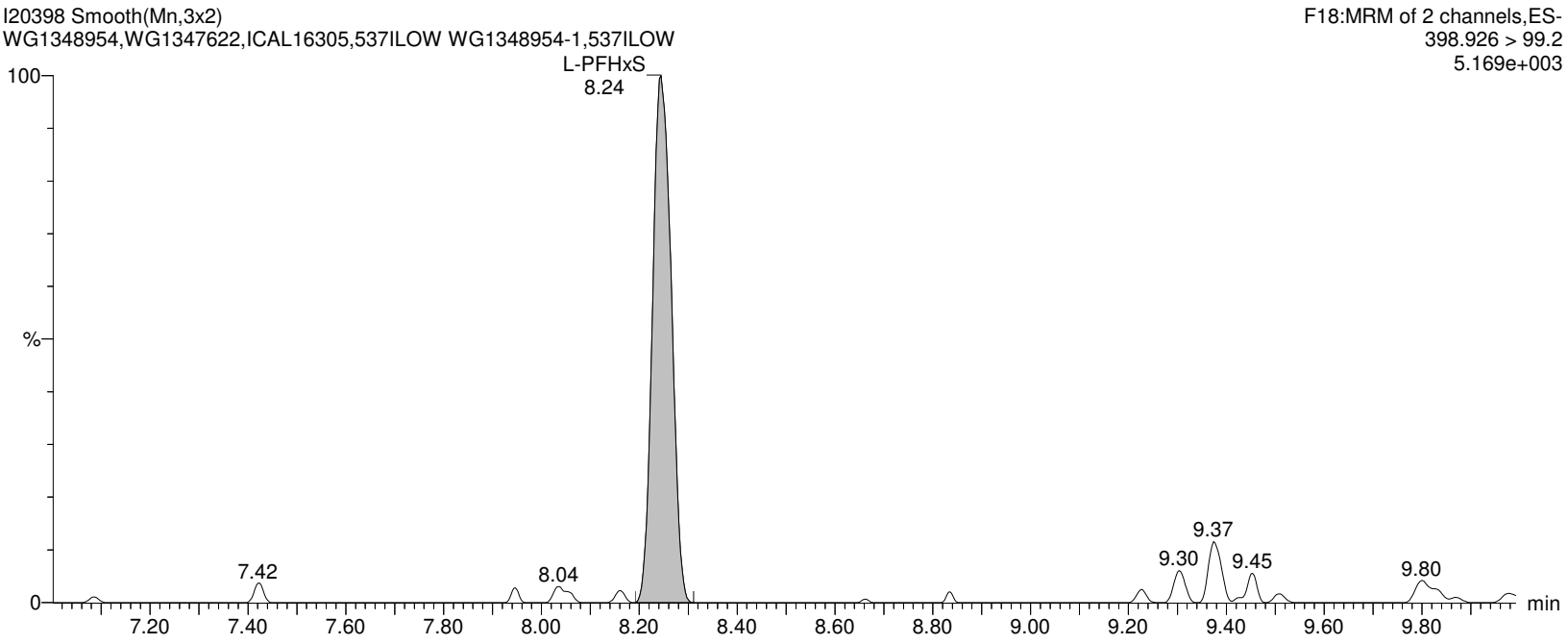
**PFHxS**





all concentration units in (ng/mL)

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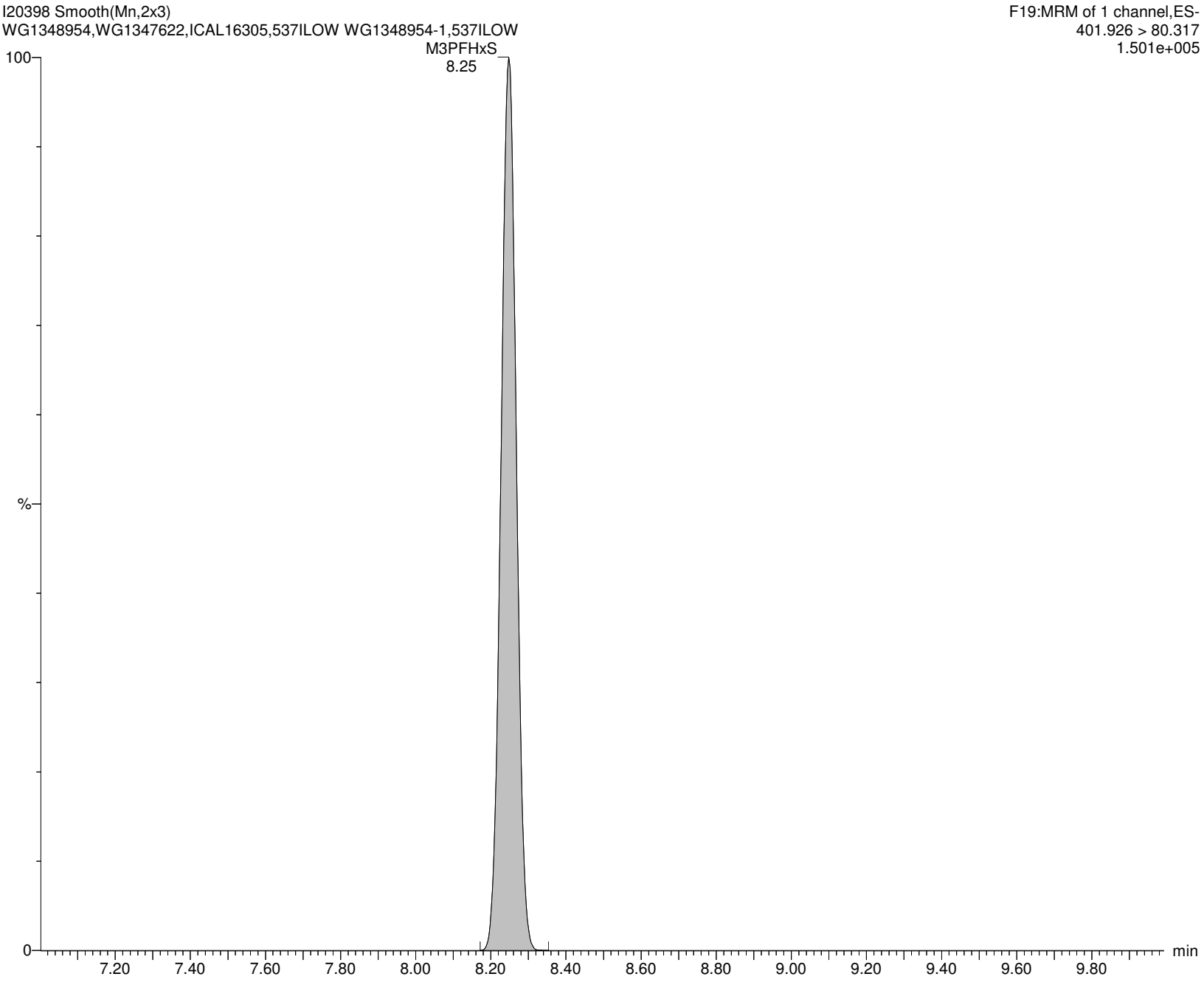
**M3PFHxS**





all concentration units in (ng/mL)

Alpha Analytical Inc.
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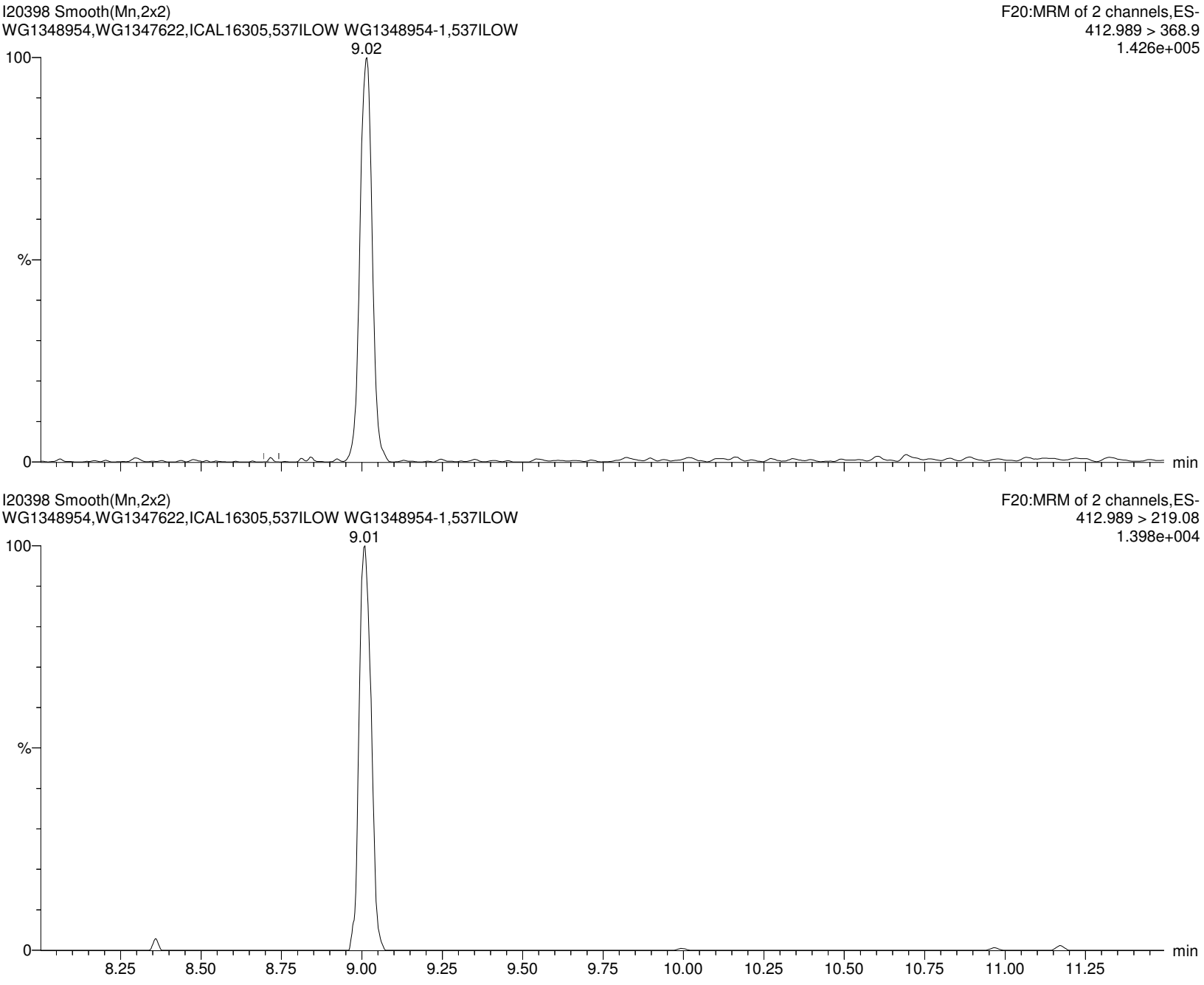
**MS Method Name: C:\MassLynx\Data\2020\200309_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**br-PFOA**





all concentration units in (ng/mL)

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Dataset: C:\MassLynx\Data\2020\200309_537ISO.PRO\Data\wg1348954-1.qld
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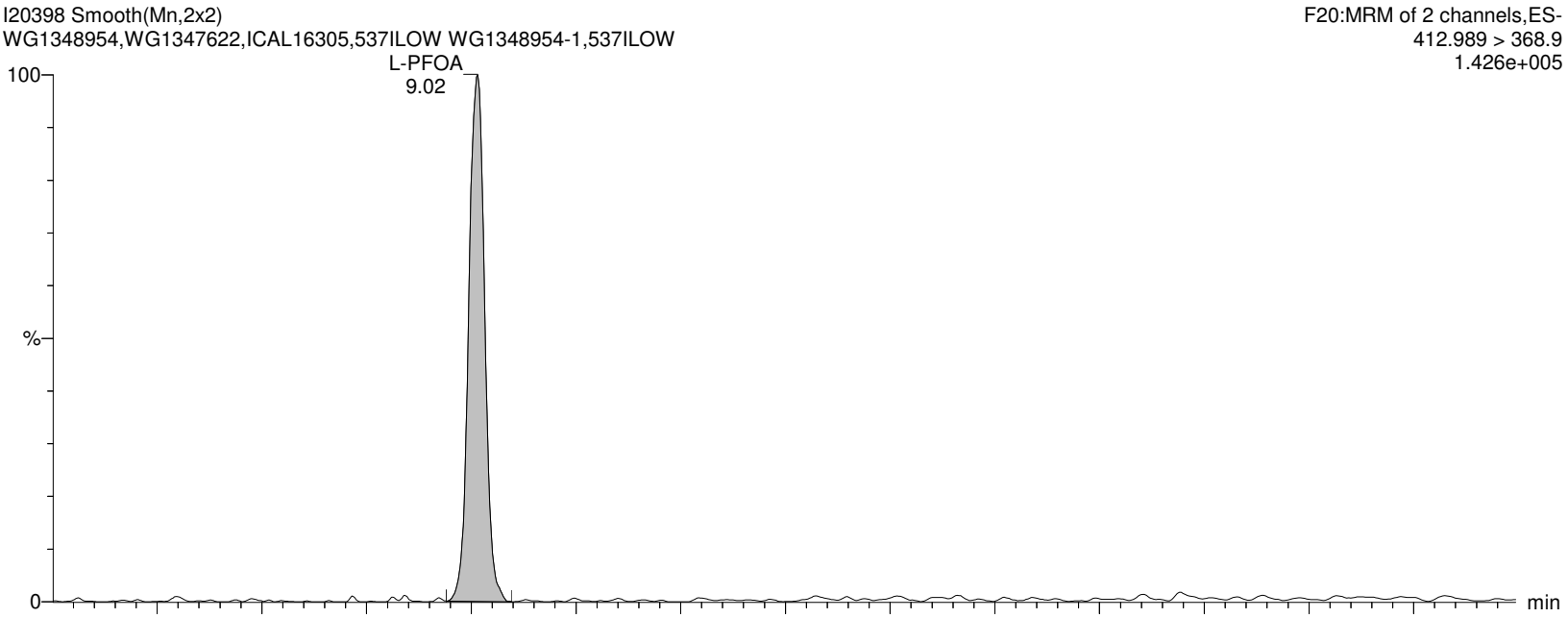
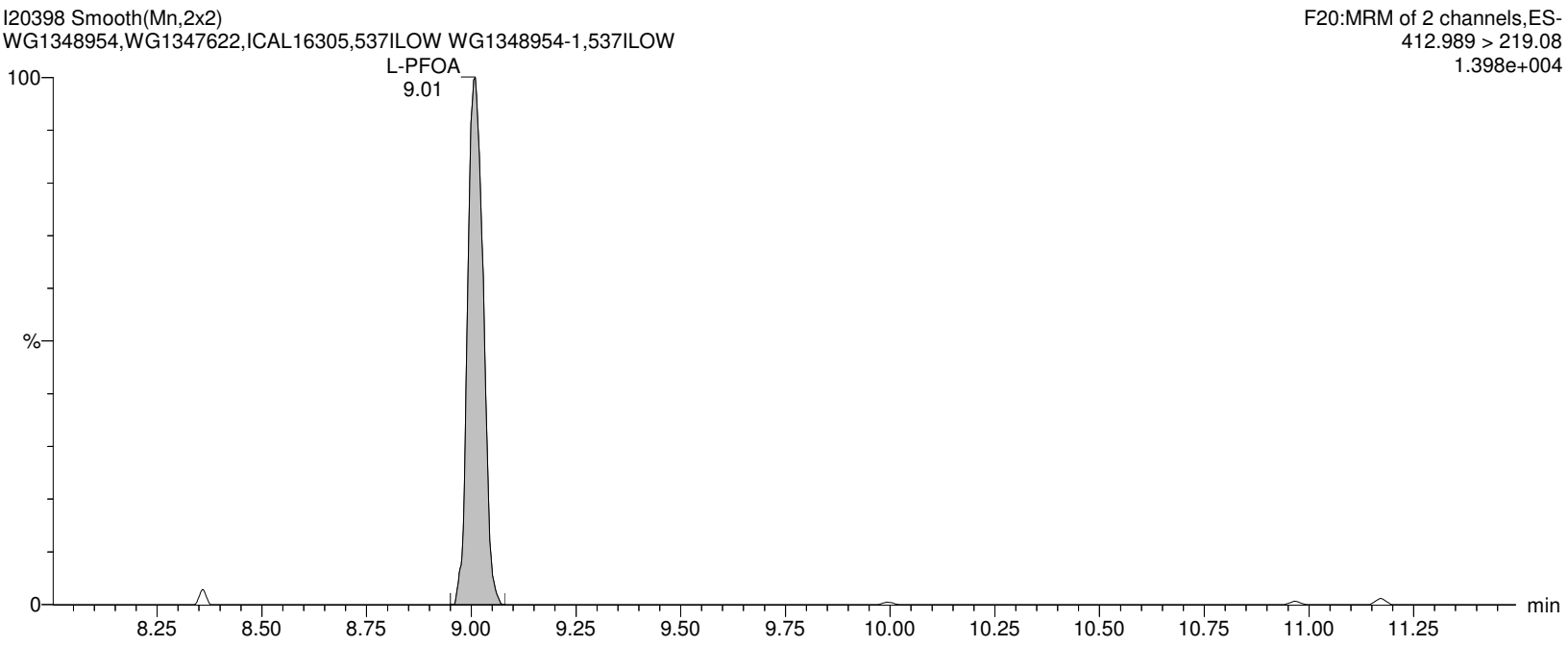
**L-PFOA**





all concentration units in (ng/mL)

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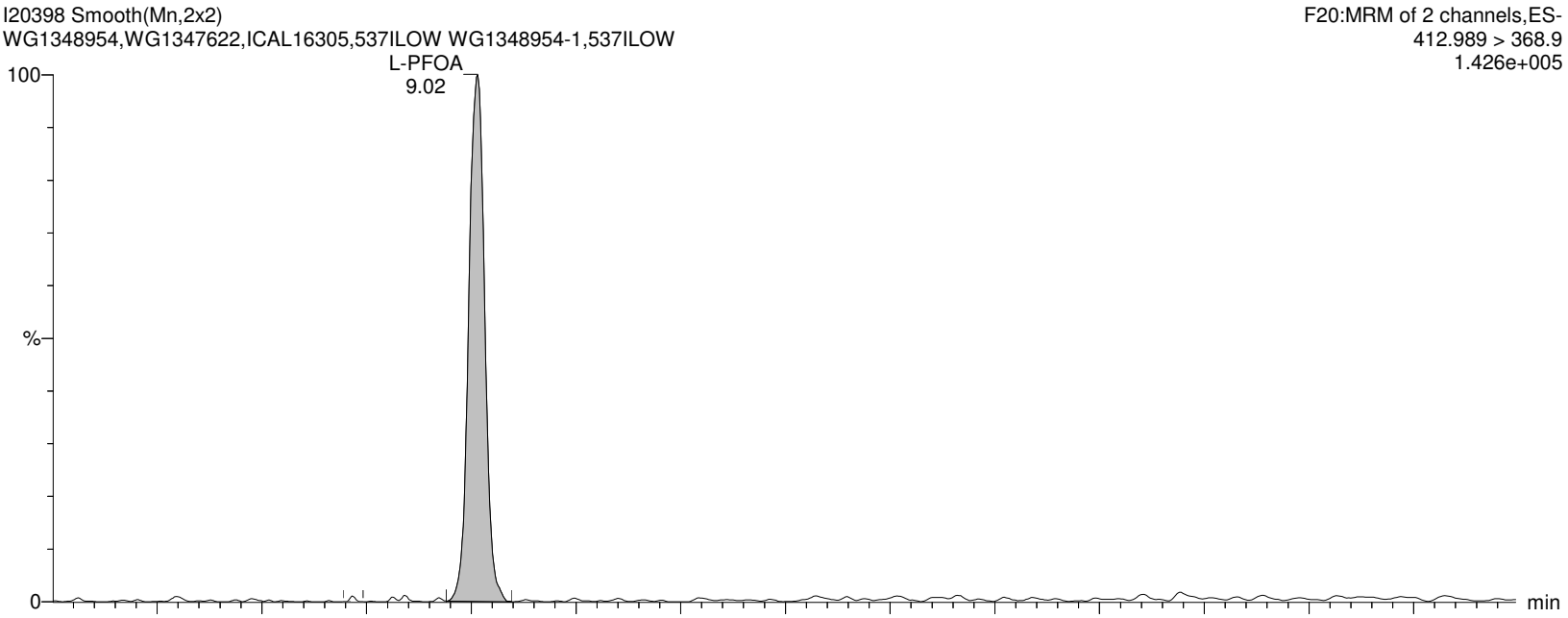
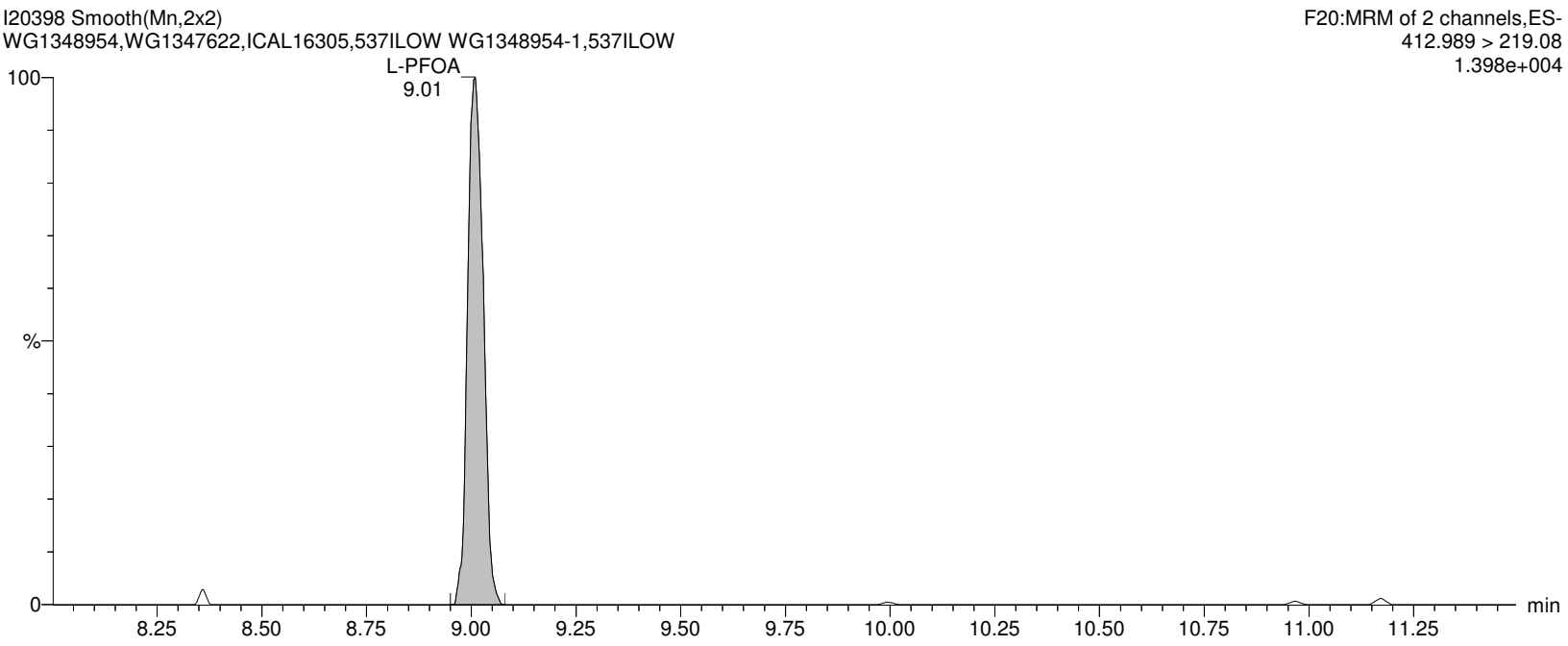
**PFOA**





all concentration units in (ng/mL)

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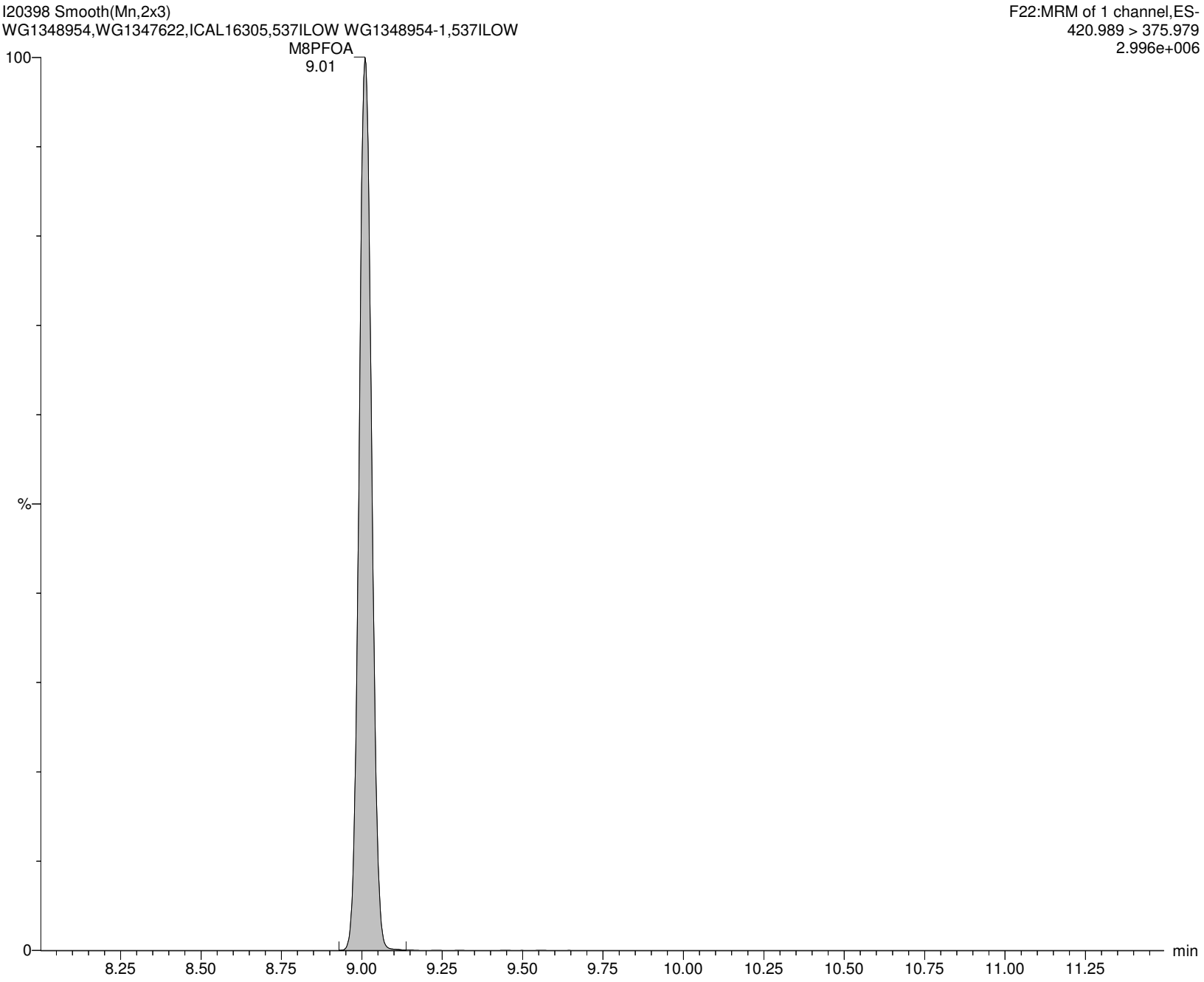
**M8PFOA**





all concentration units in (ng/mL)

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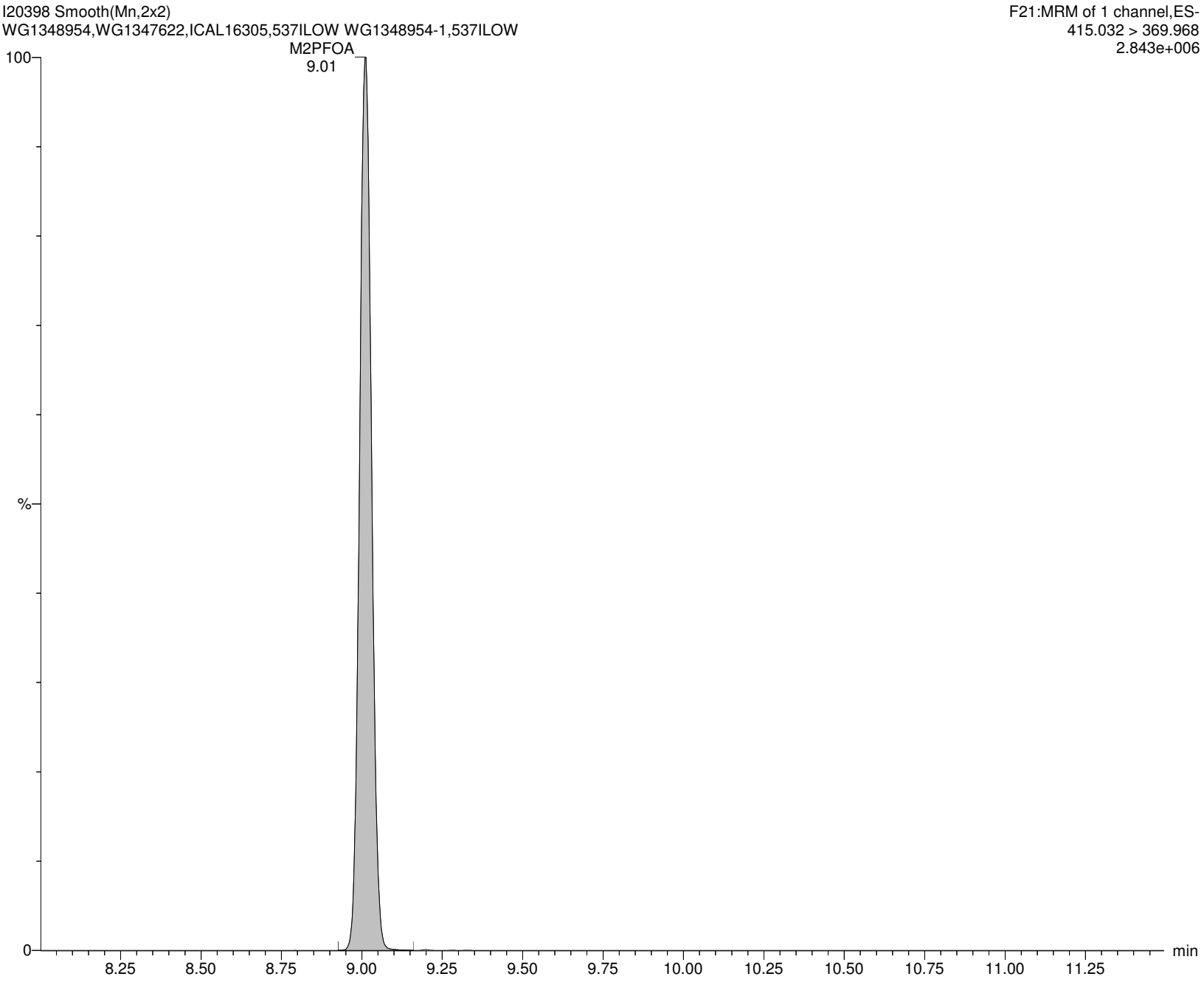



all concentration units in (ng/mL)

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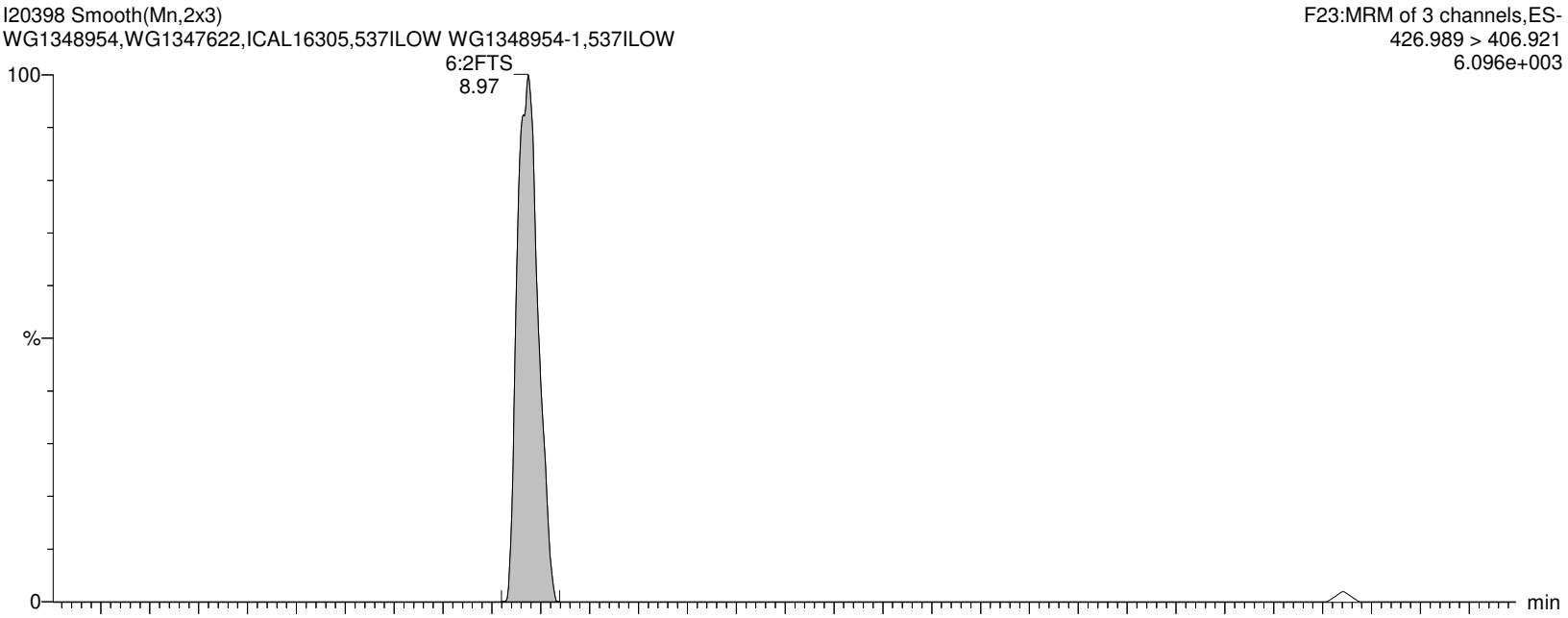
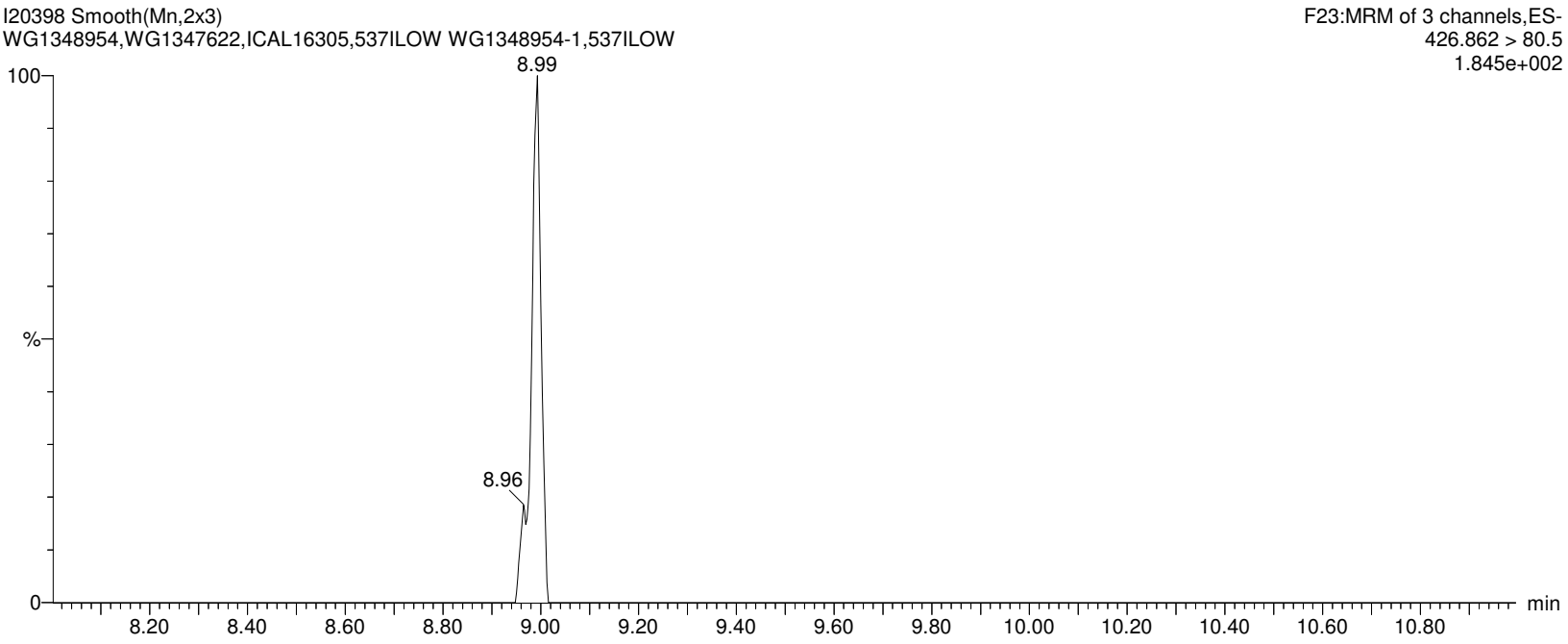
**6:2FTS**





all concentration units in (ng/mL)

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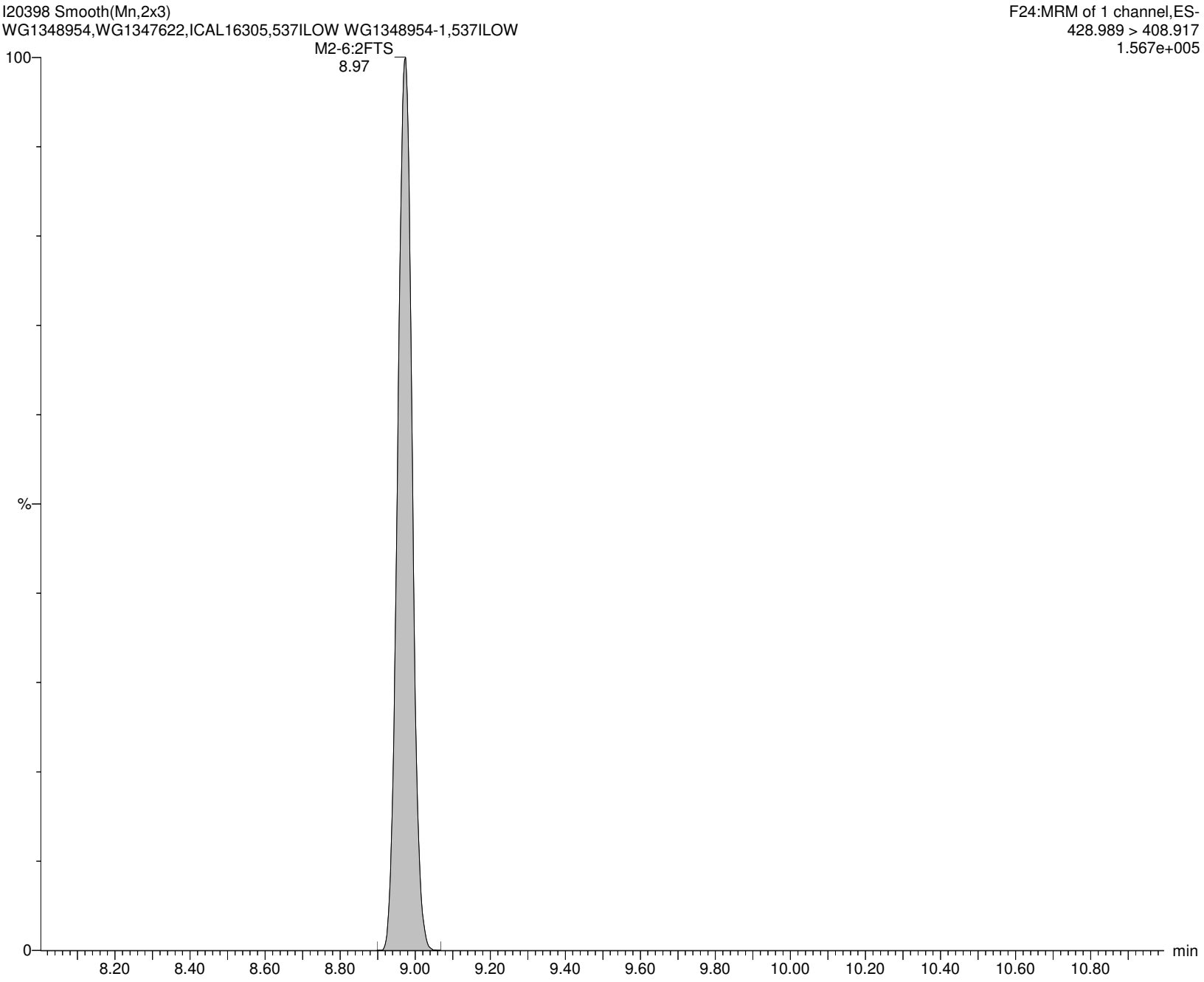



all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2020\200309_537ISO.PRO\Data\wg1348954-1.qld
Last Altered: Wednesday, March 11, 2020 13:51:31 Eastern Daylight Time
Printed: Thursday, March 12, 2020 02:48:34 Eastern Daylight Time

**Name: I20398**
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**Date: 10-Mar-2020**
**Time: 10:15:45**
**Description: WG1348954,WG1347622,ICAL16305,537ILOW**
**User: LCMS02:RS**
**Vial: 1:A,2**
**Instrument: XEVO-TQSmicro#QEB0050**
**Inlet Method Name: C:\MassLynx\Data\2020\200309_537ISO.PRO\ACQUDB\LCMS_537_ISO_B**
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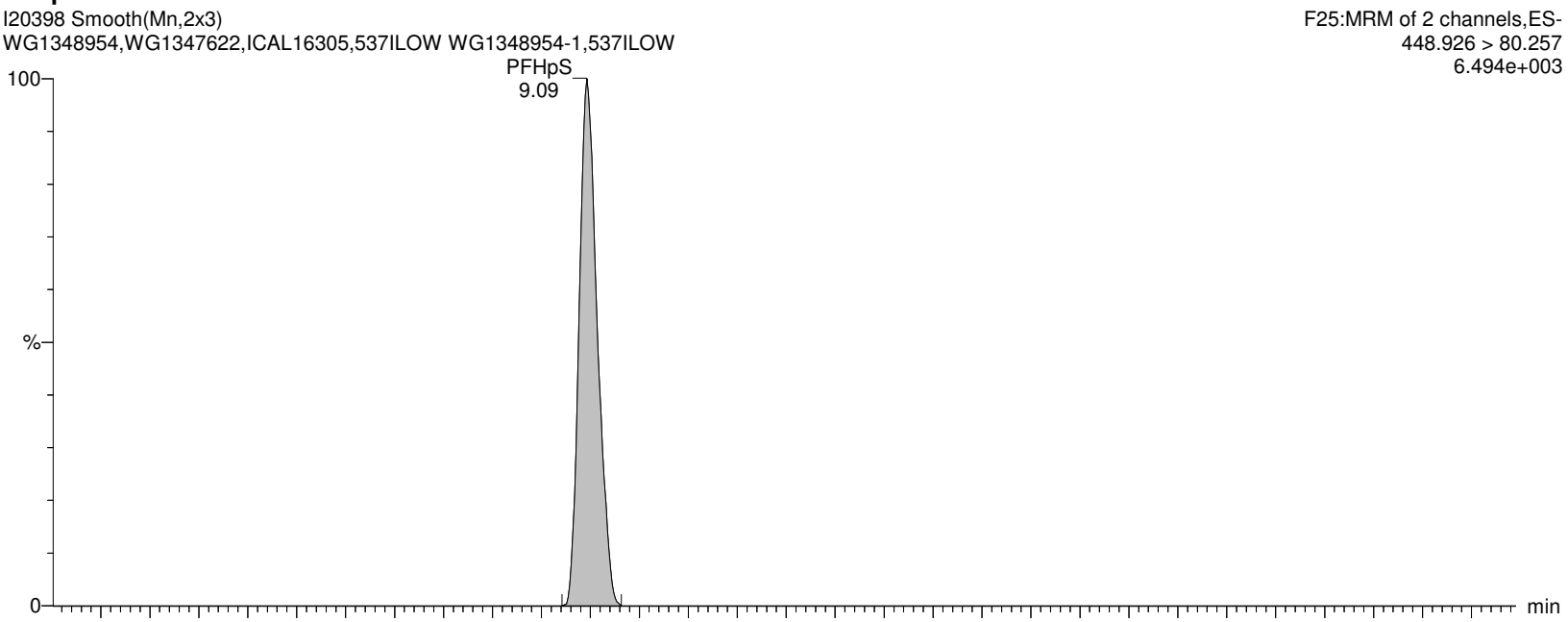


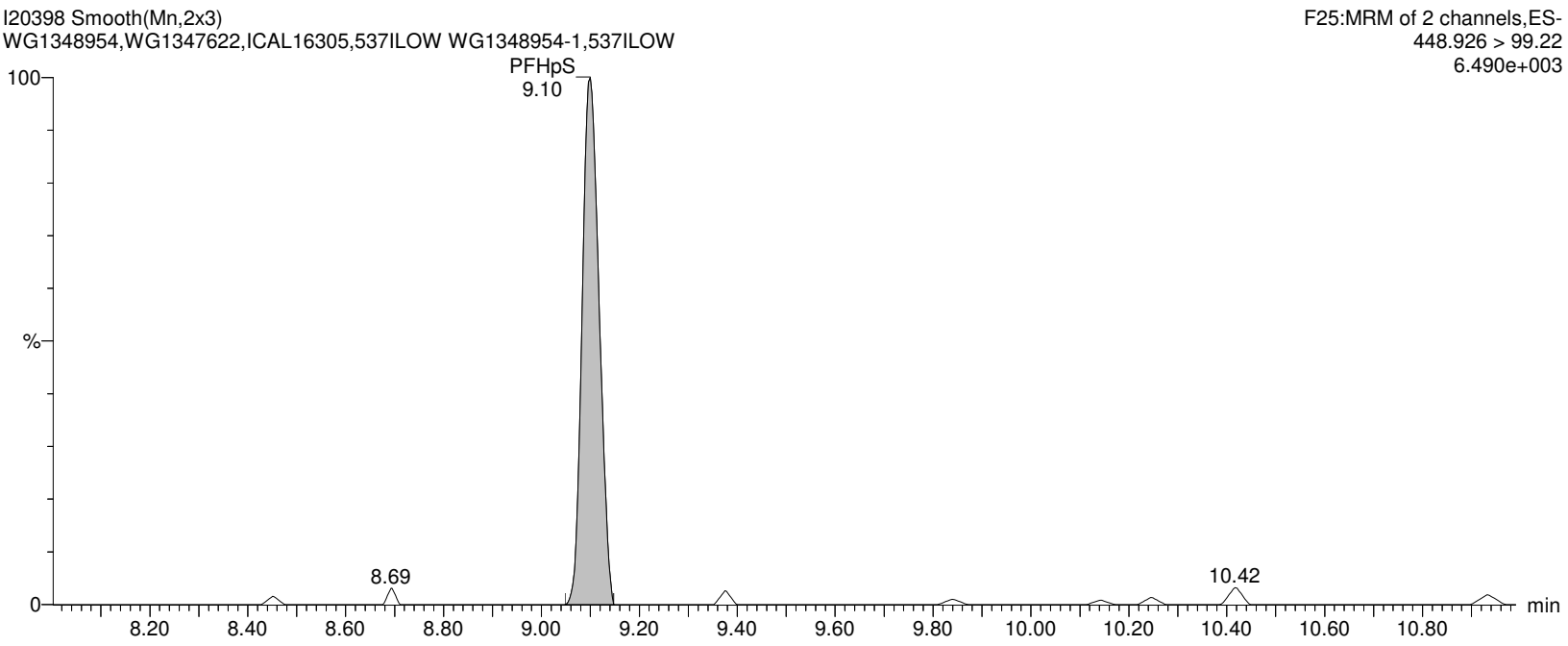



all concentration units in (ng/mL)

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**MS Method Name: C:\MassLynx\Data\2020\200309_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

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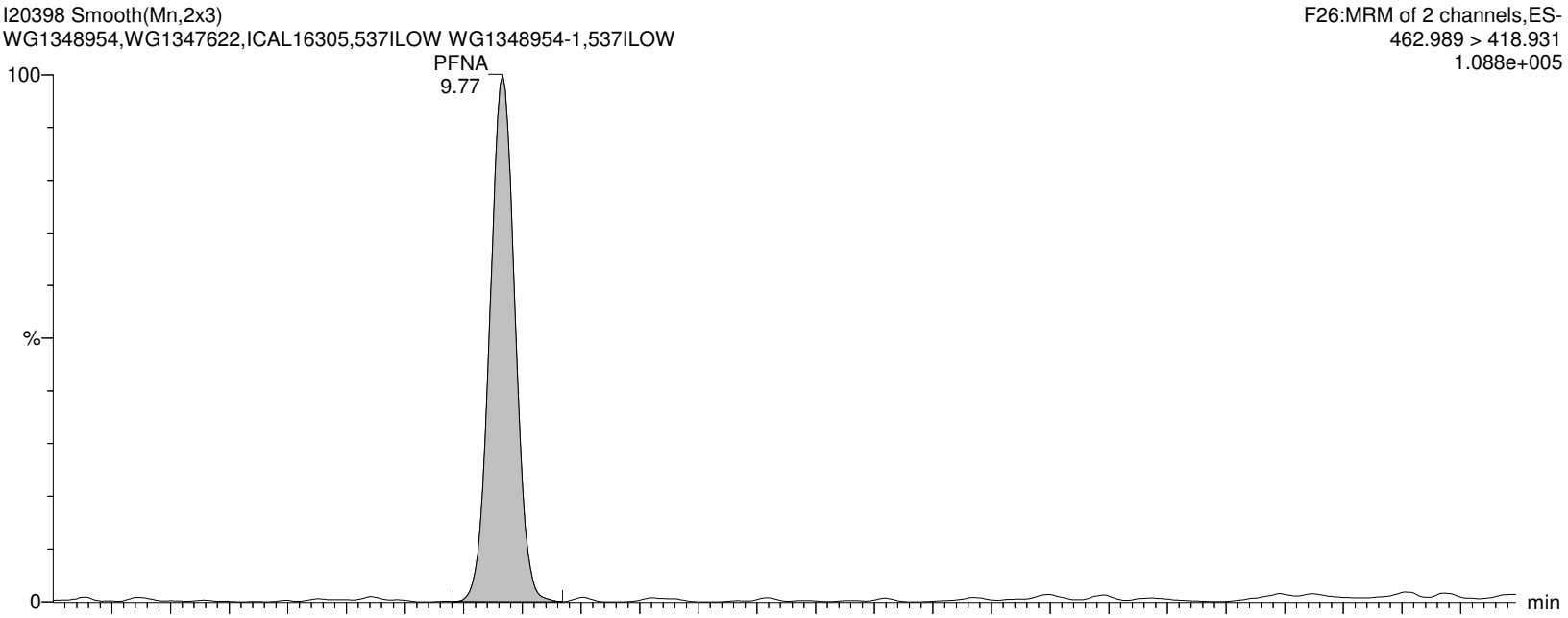


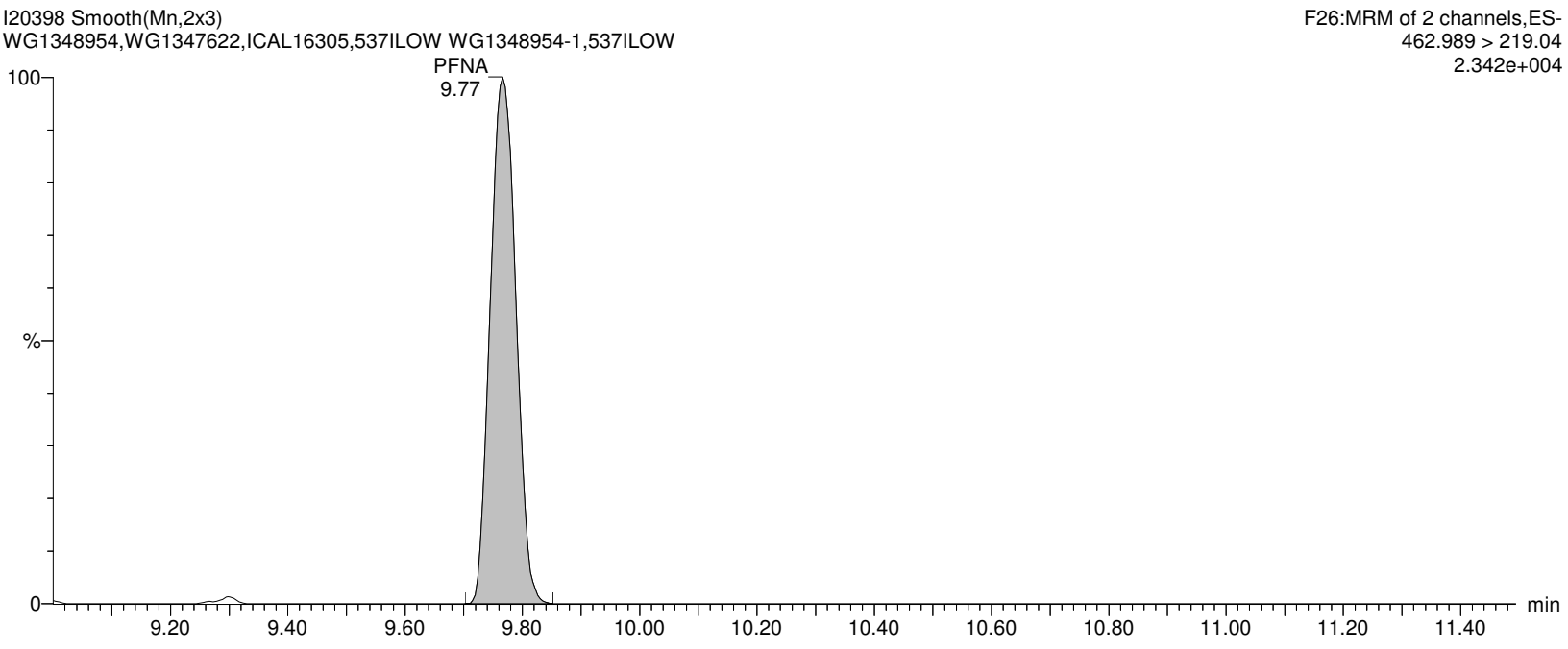



all concentration units in (ng/mL)

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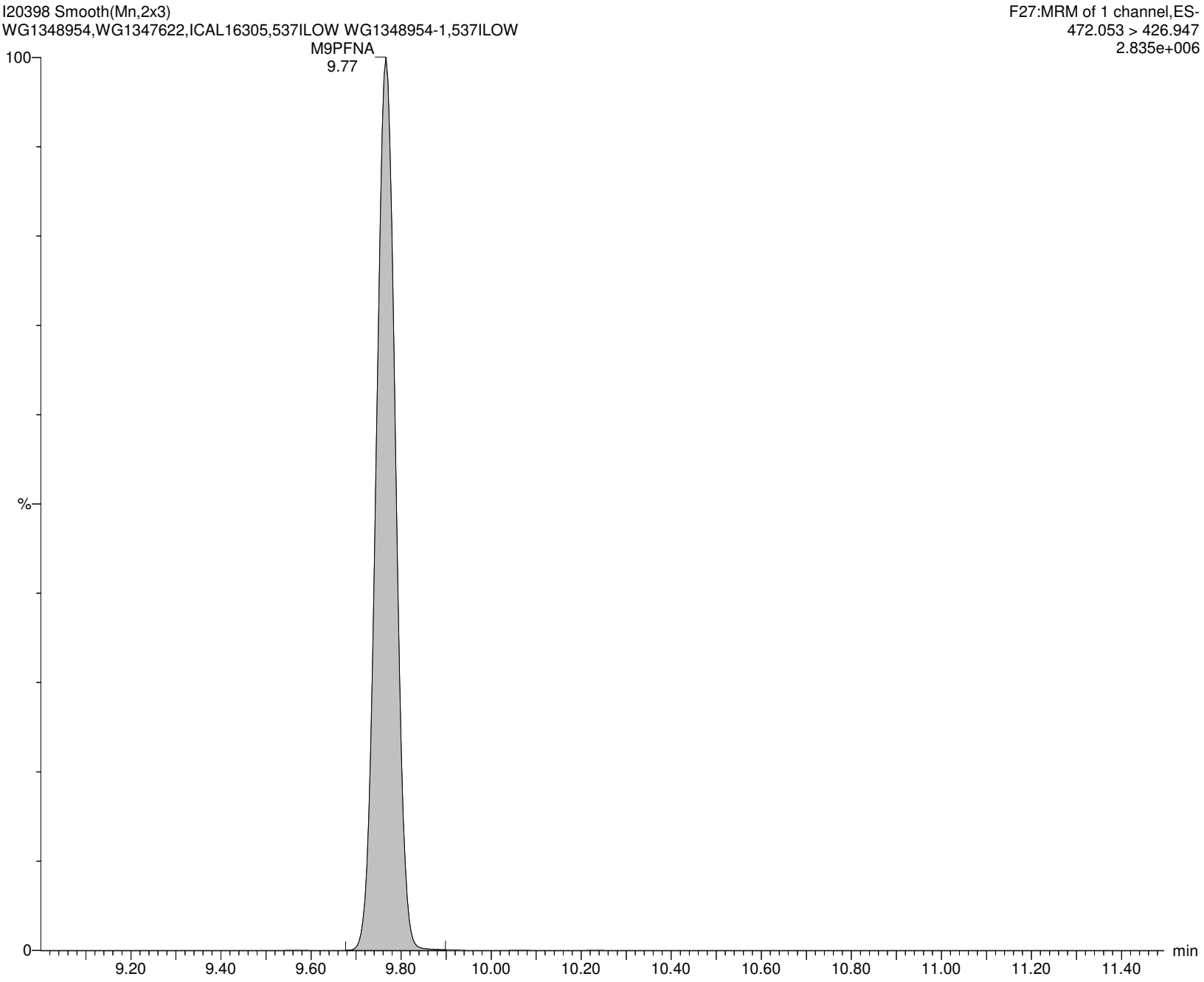



all concentration units in (ng/mL)

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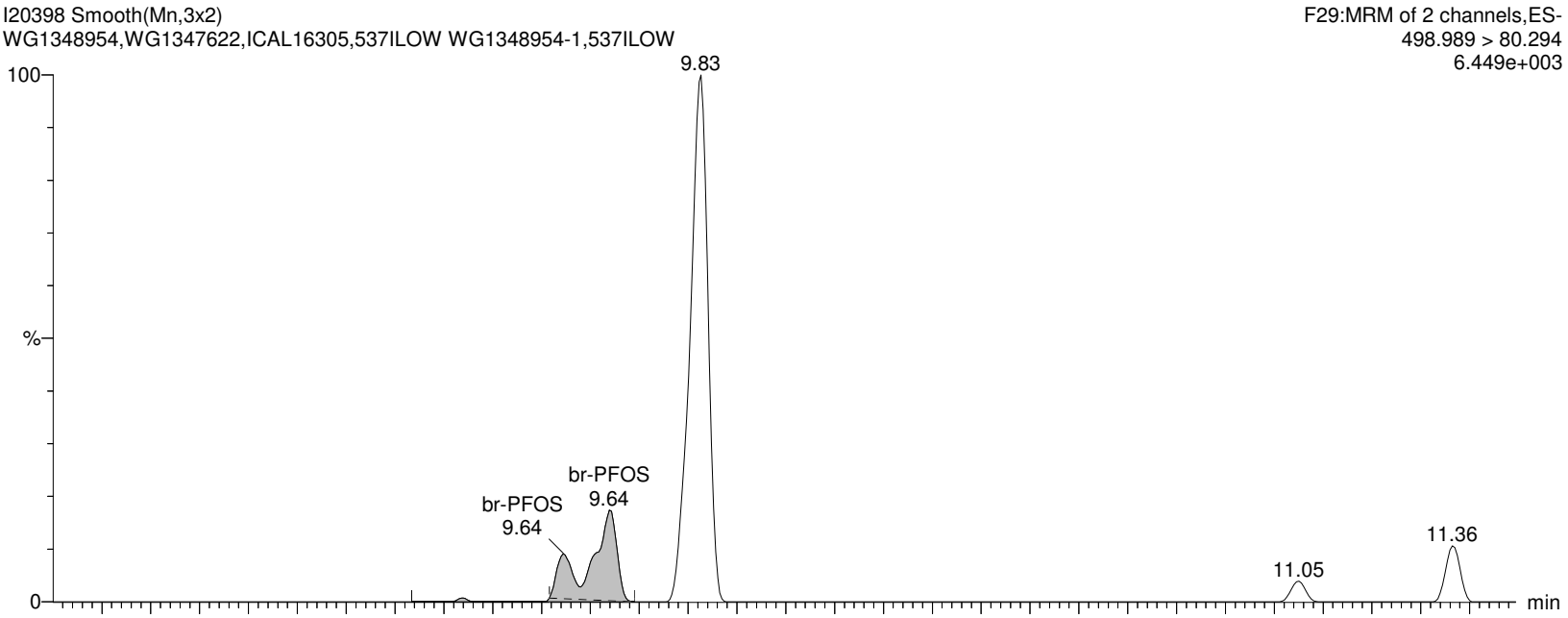
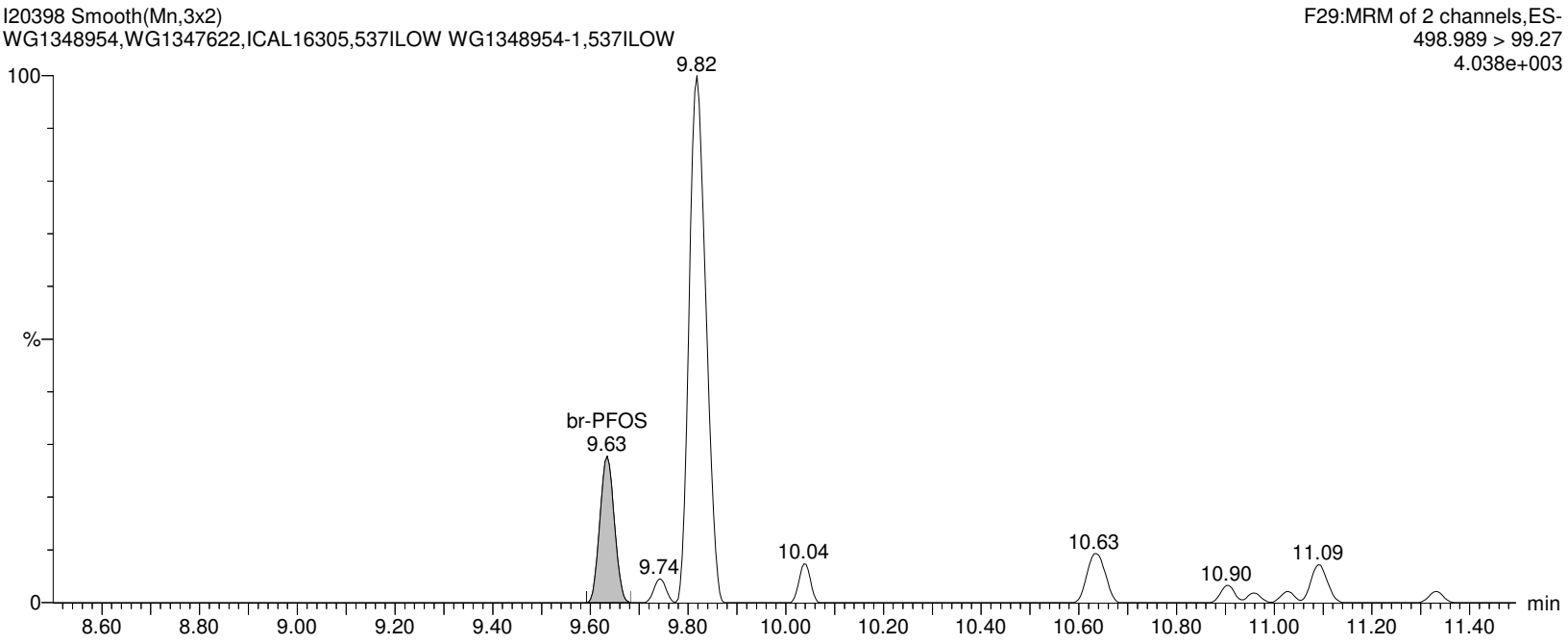
**br-PFOS**





all concentration units in (ng/mL)

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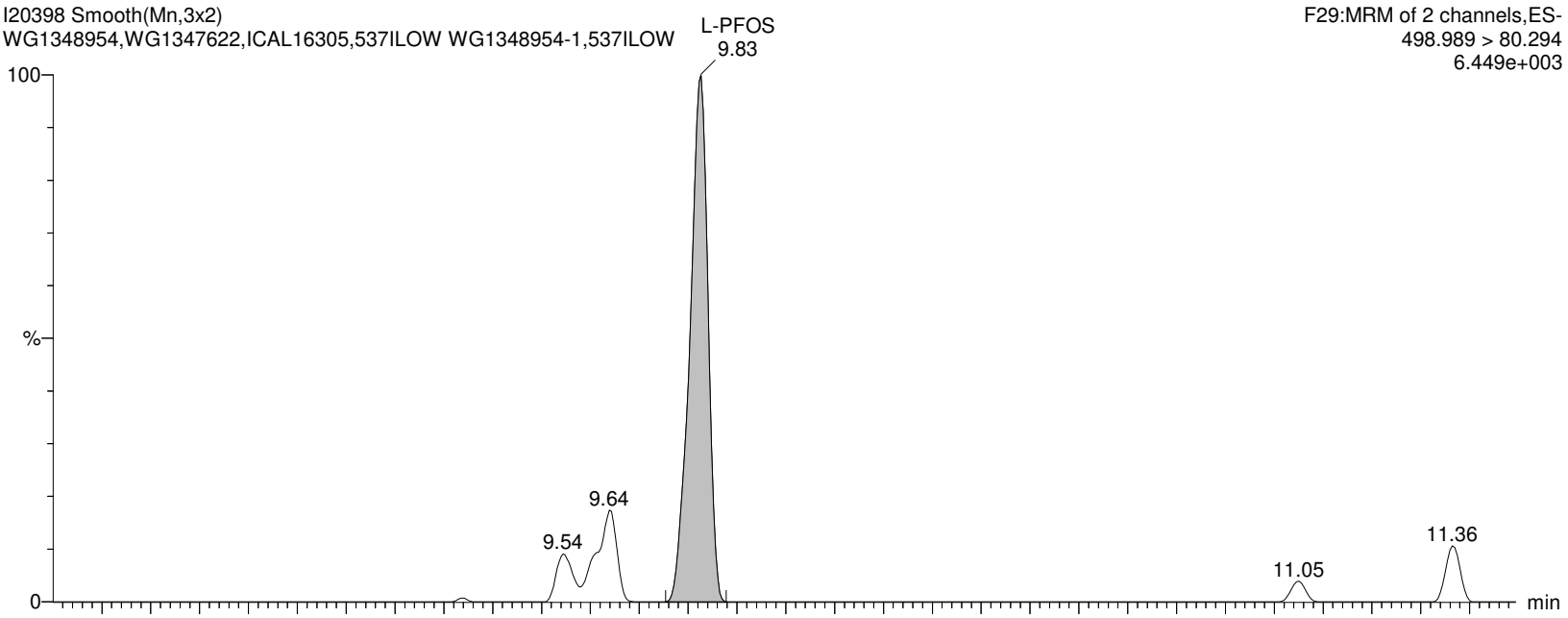


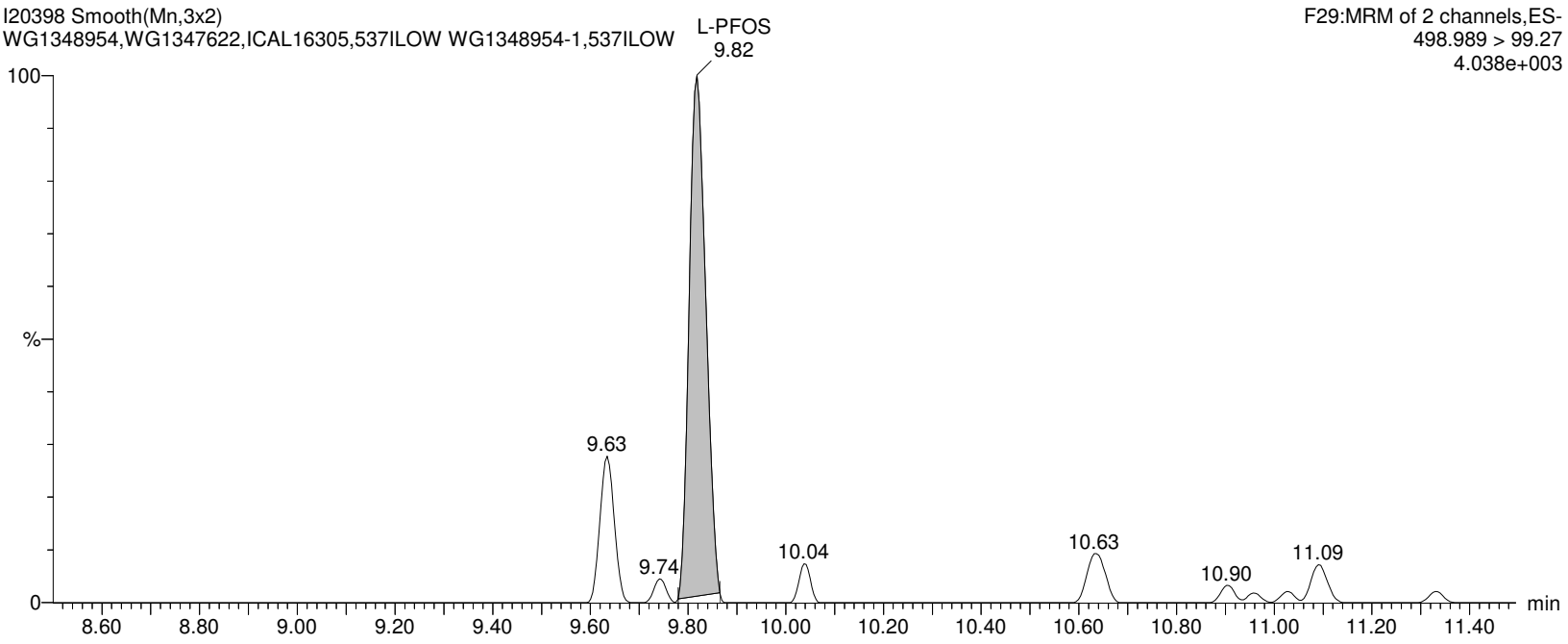



all concentration units in (ng/mL)

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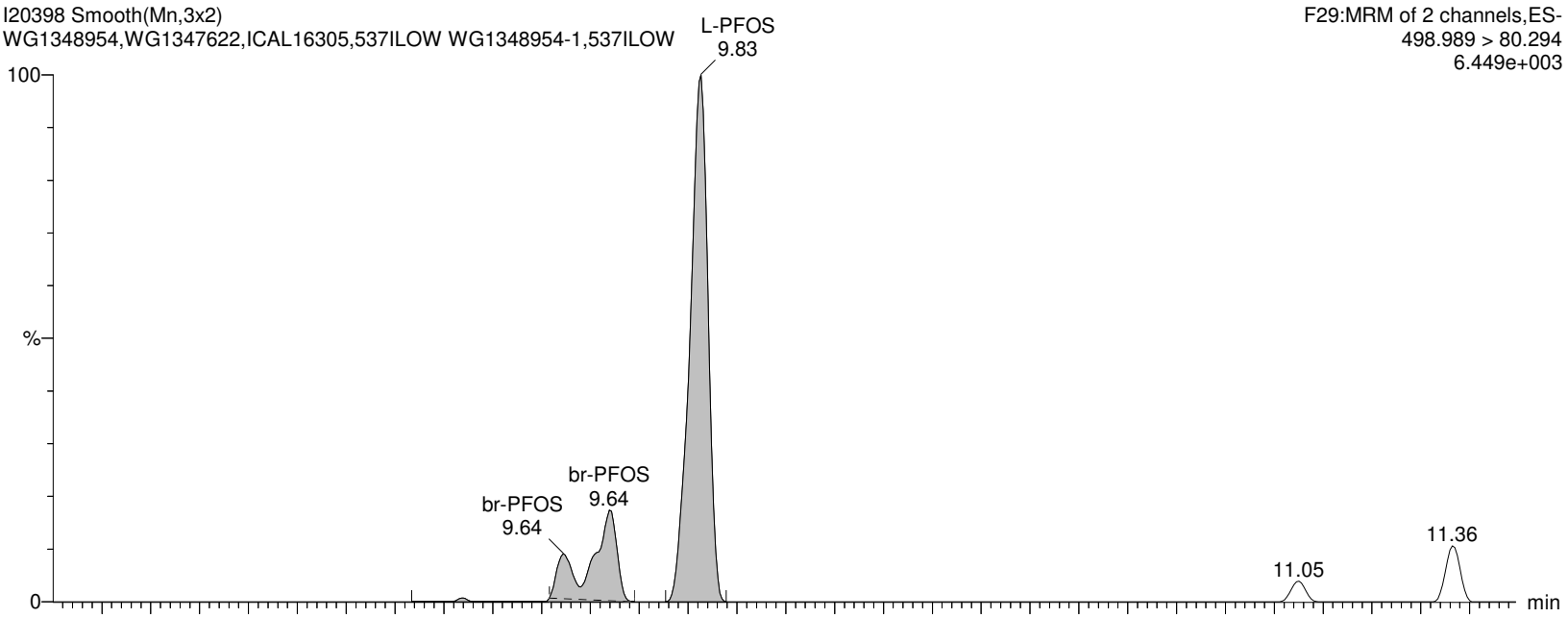
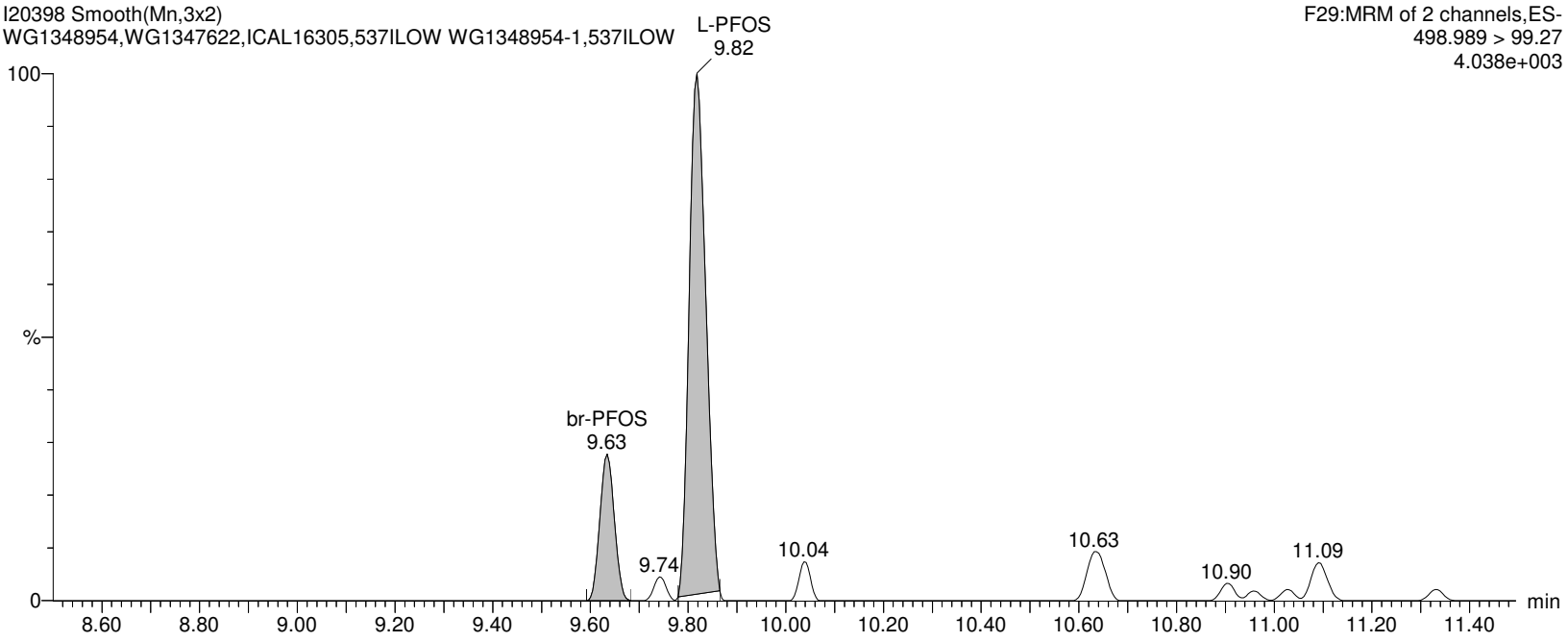
**PFOS**





all concentration units in (ng/mL)

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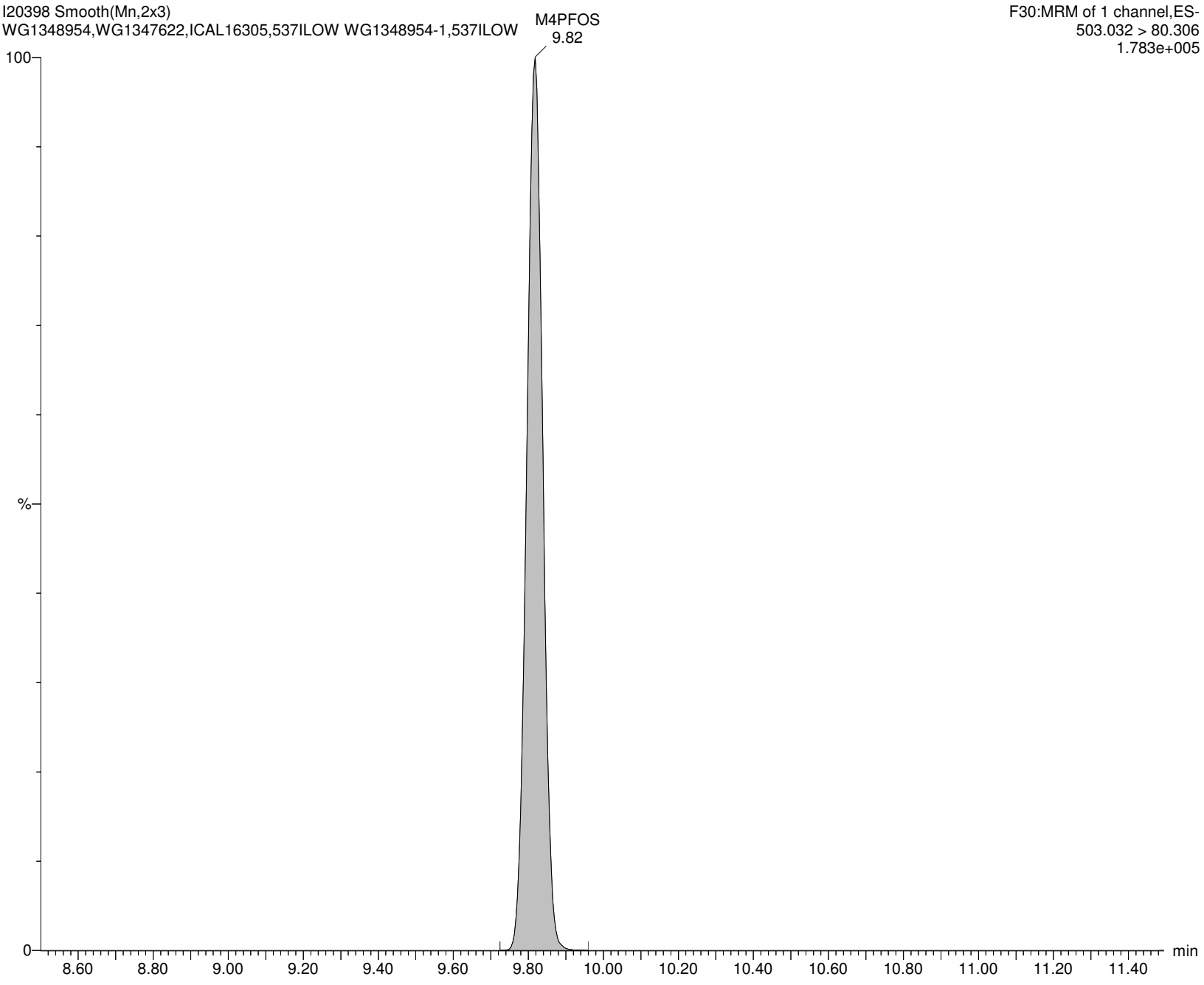
**M4PFOS**





all concentration units in (ng/mL)

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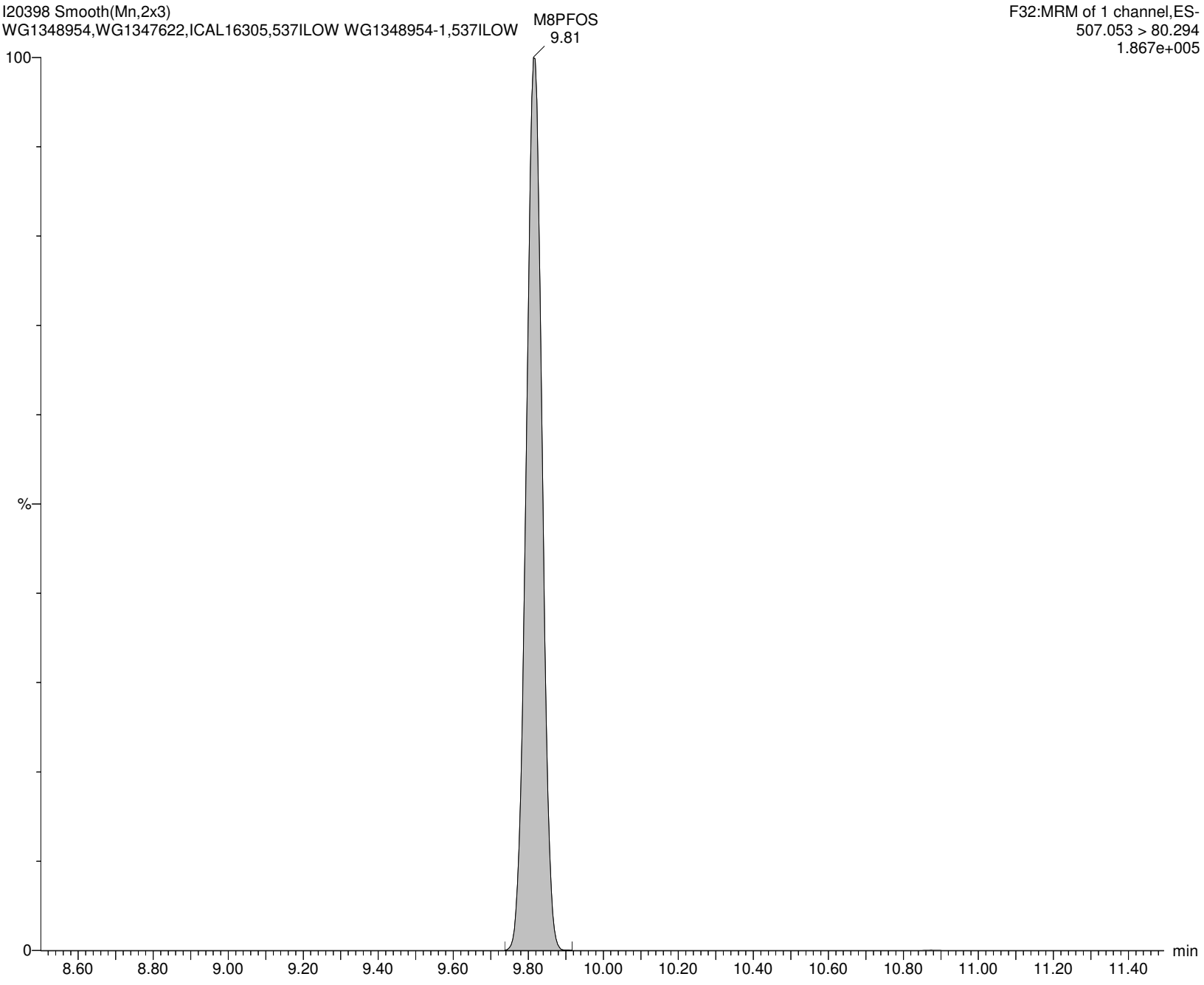
**M8PFOS**





all concentration units in (ng/mL)

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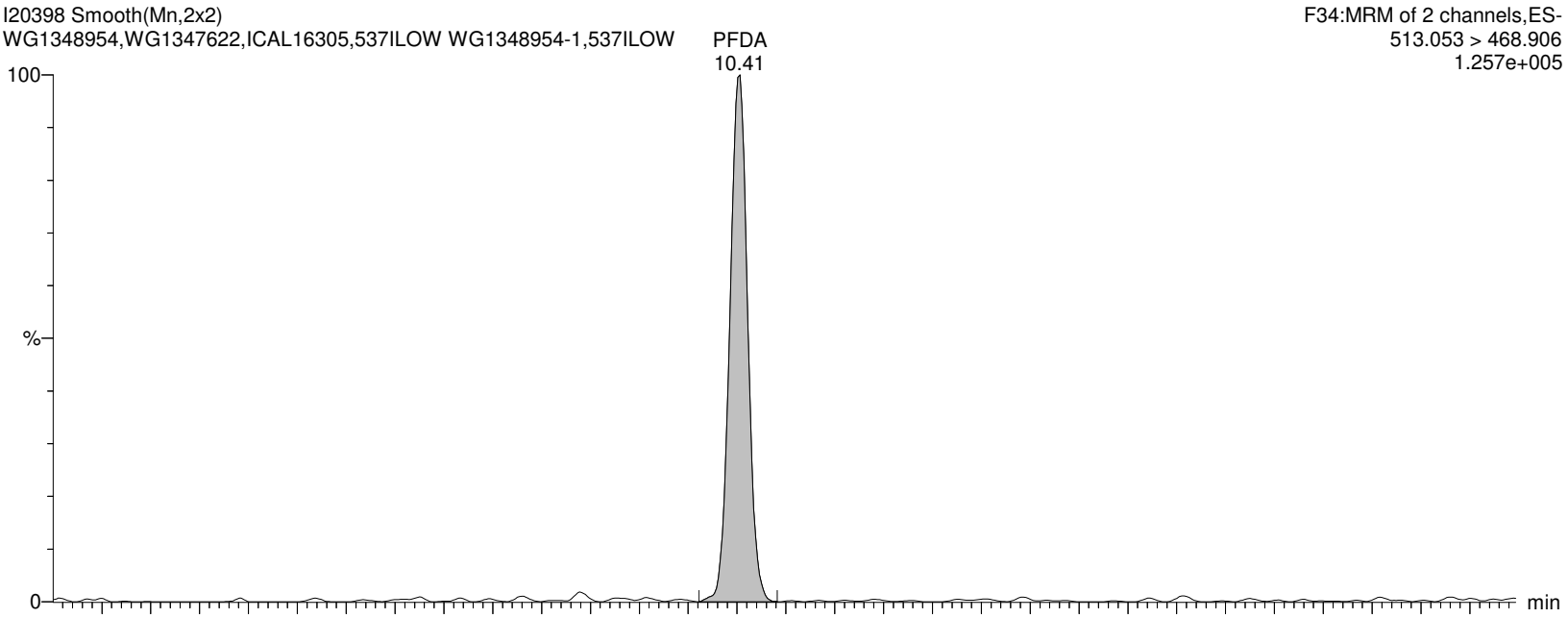


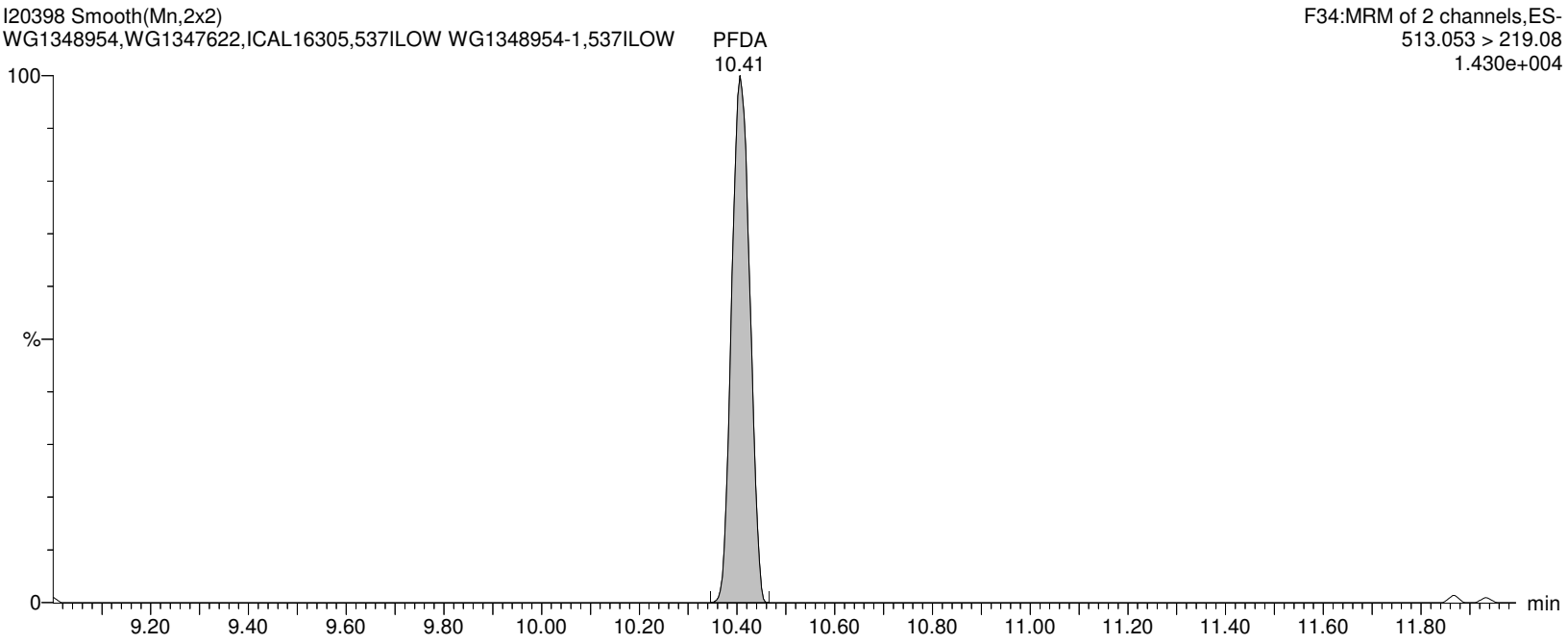



all concentration units in (ng/mL)

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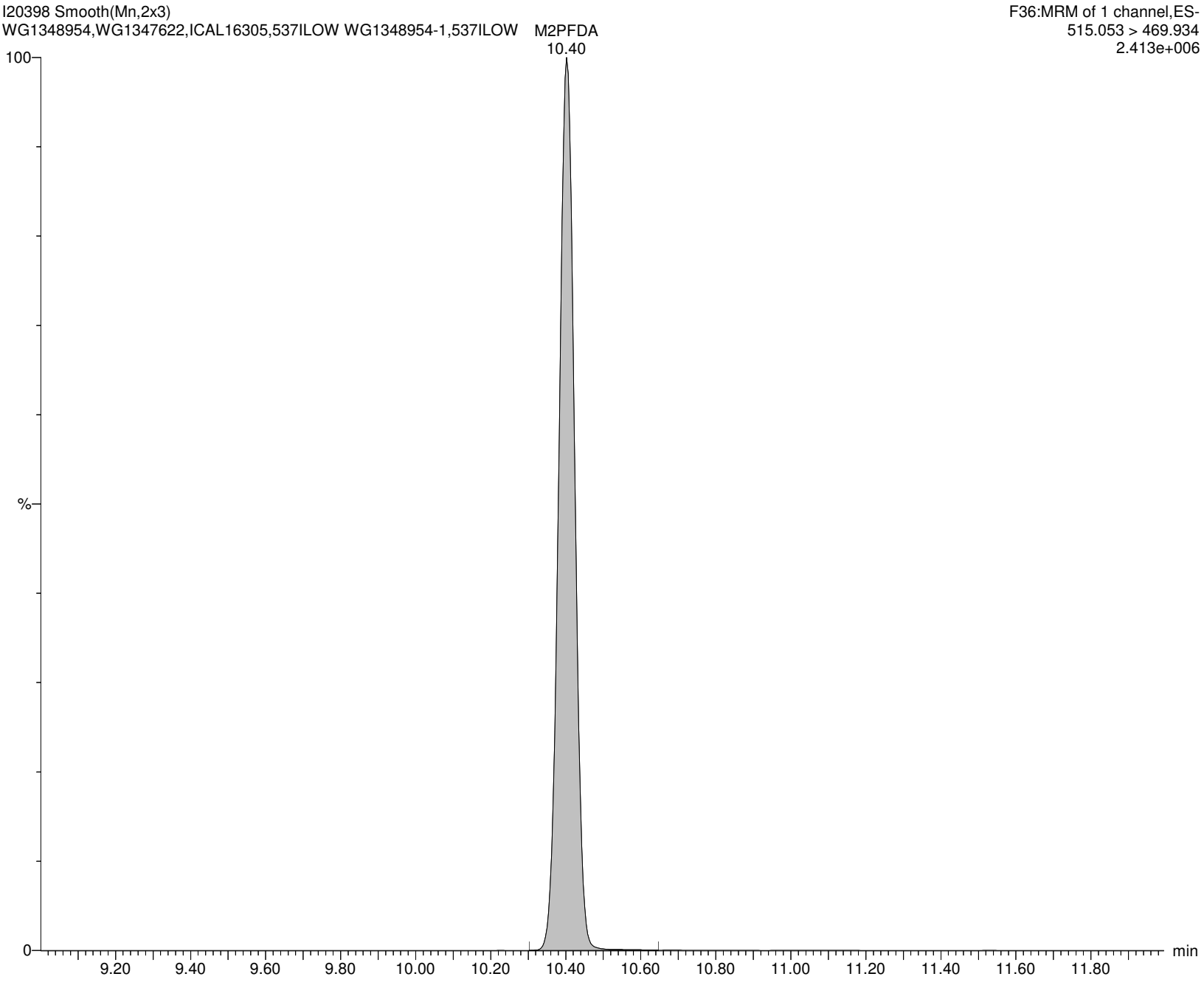



all concentration units in (ng/mL)

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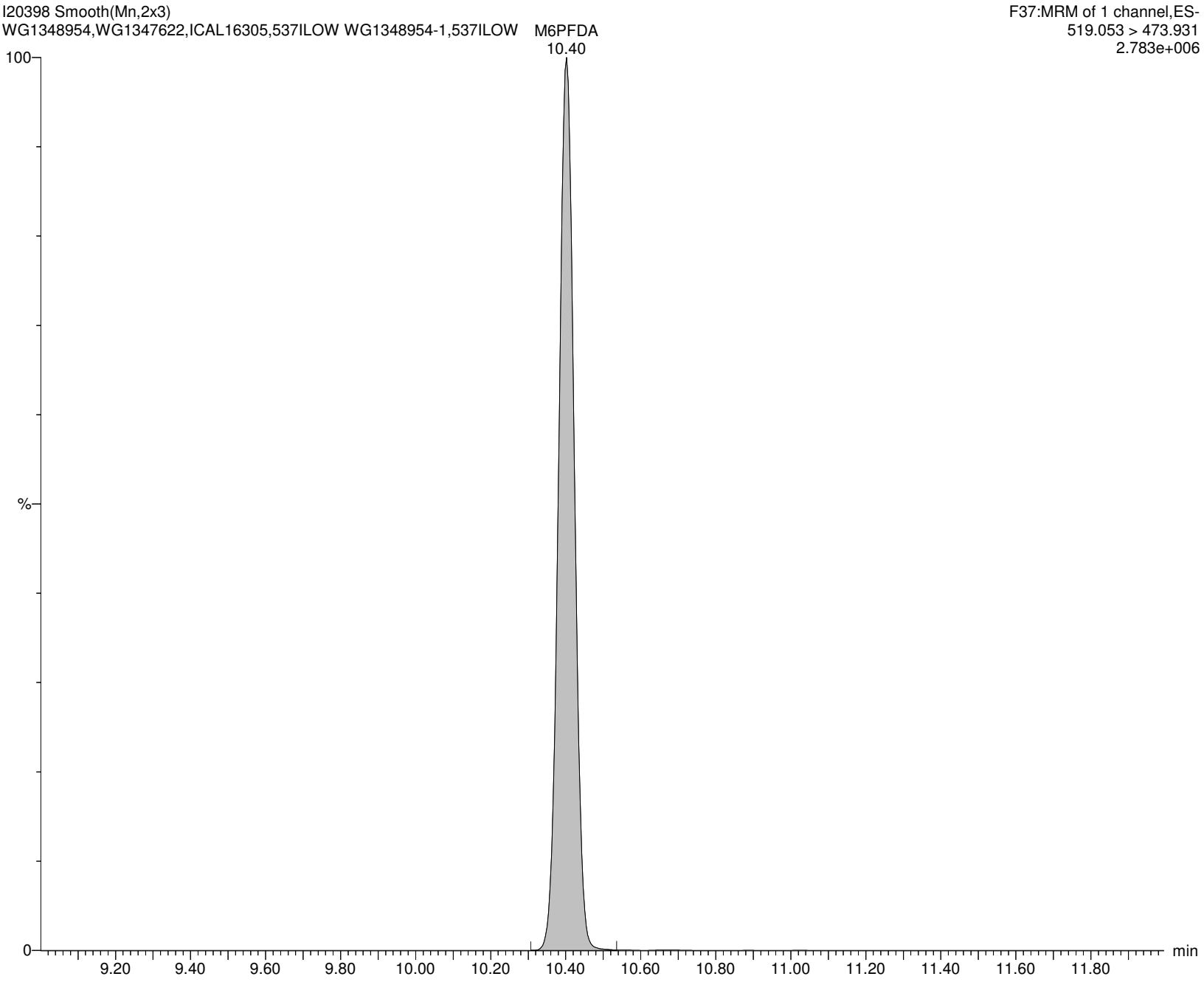



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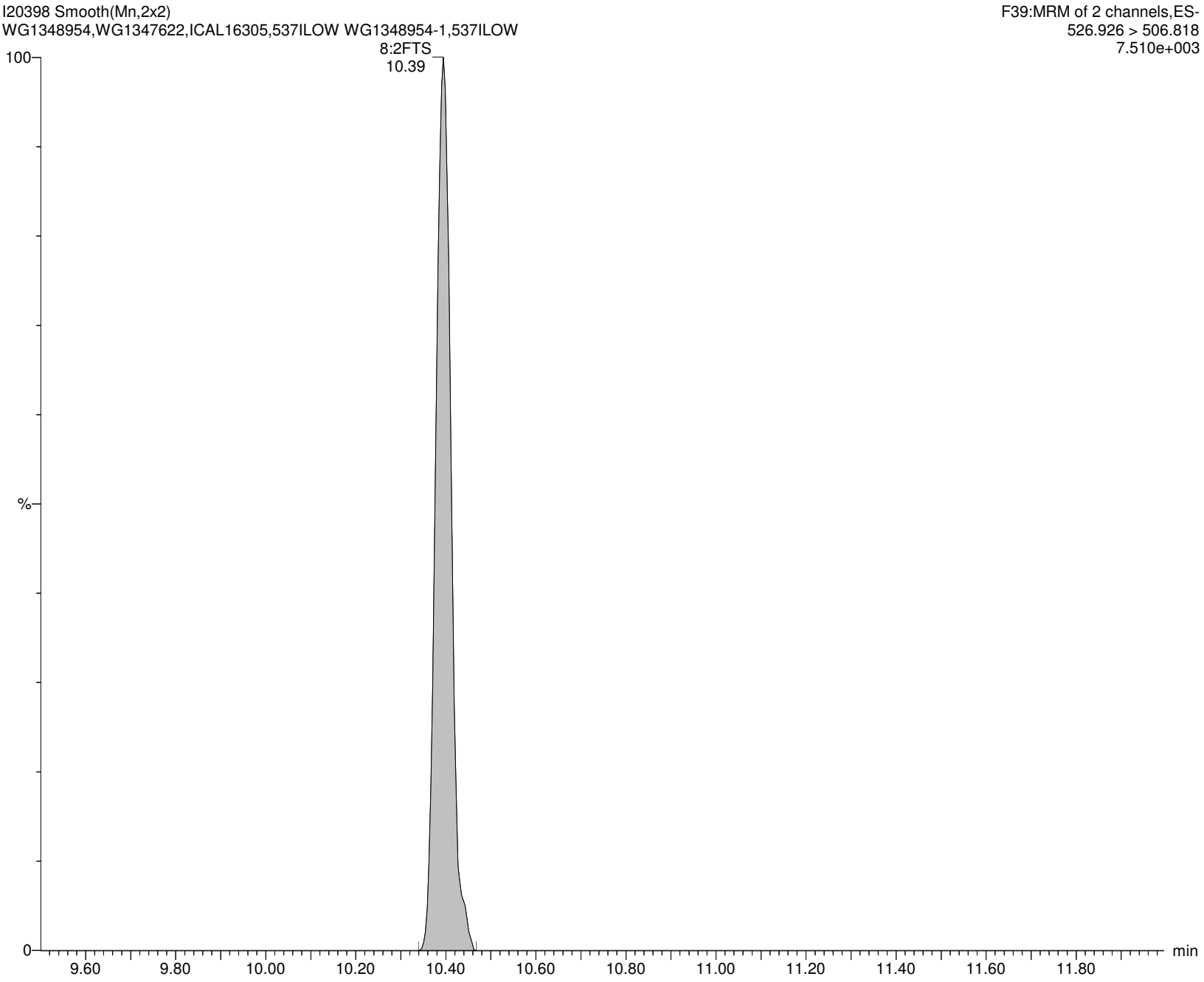



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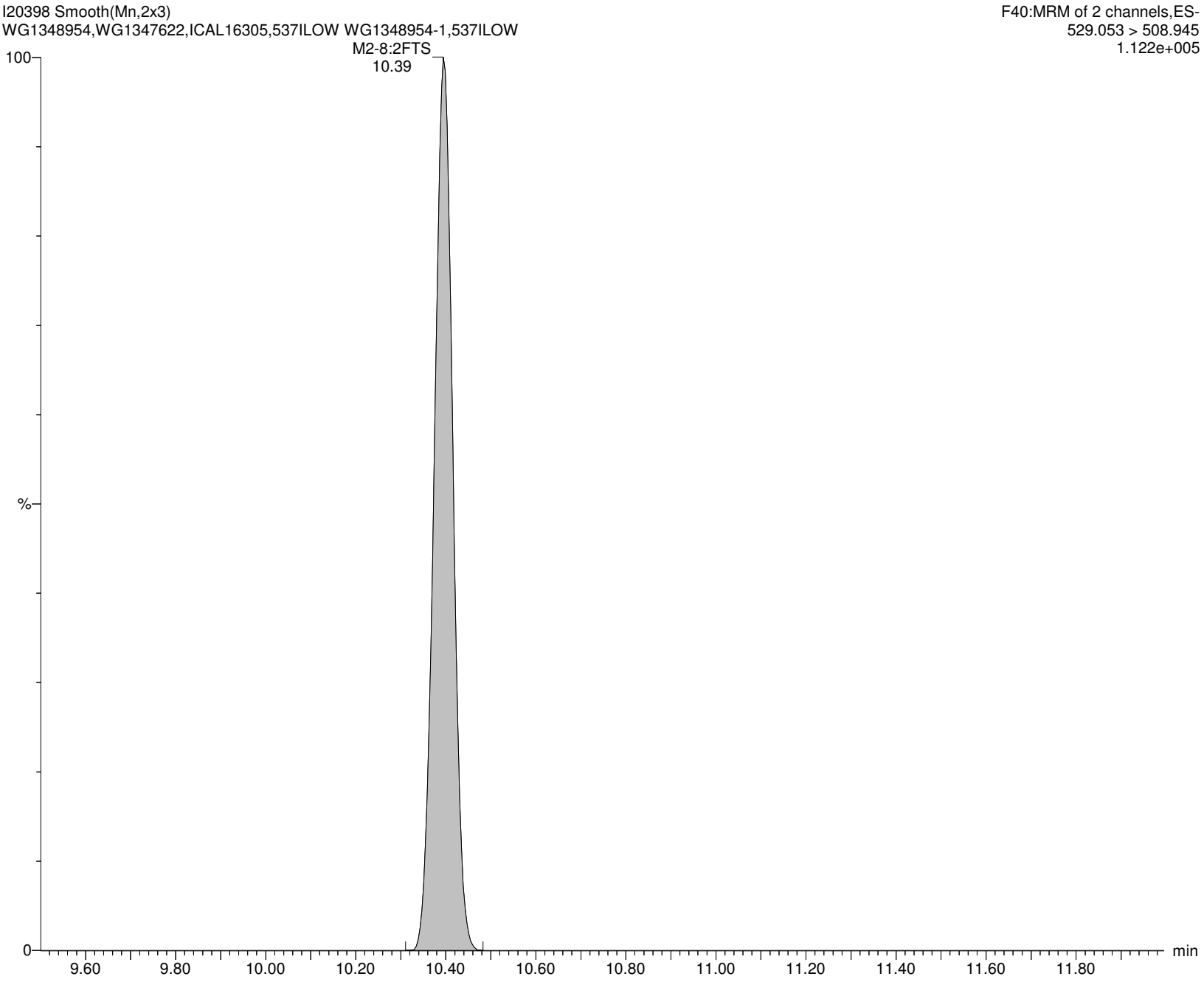



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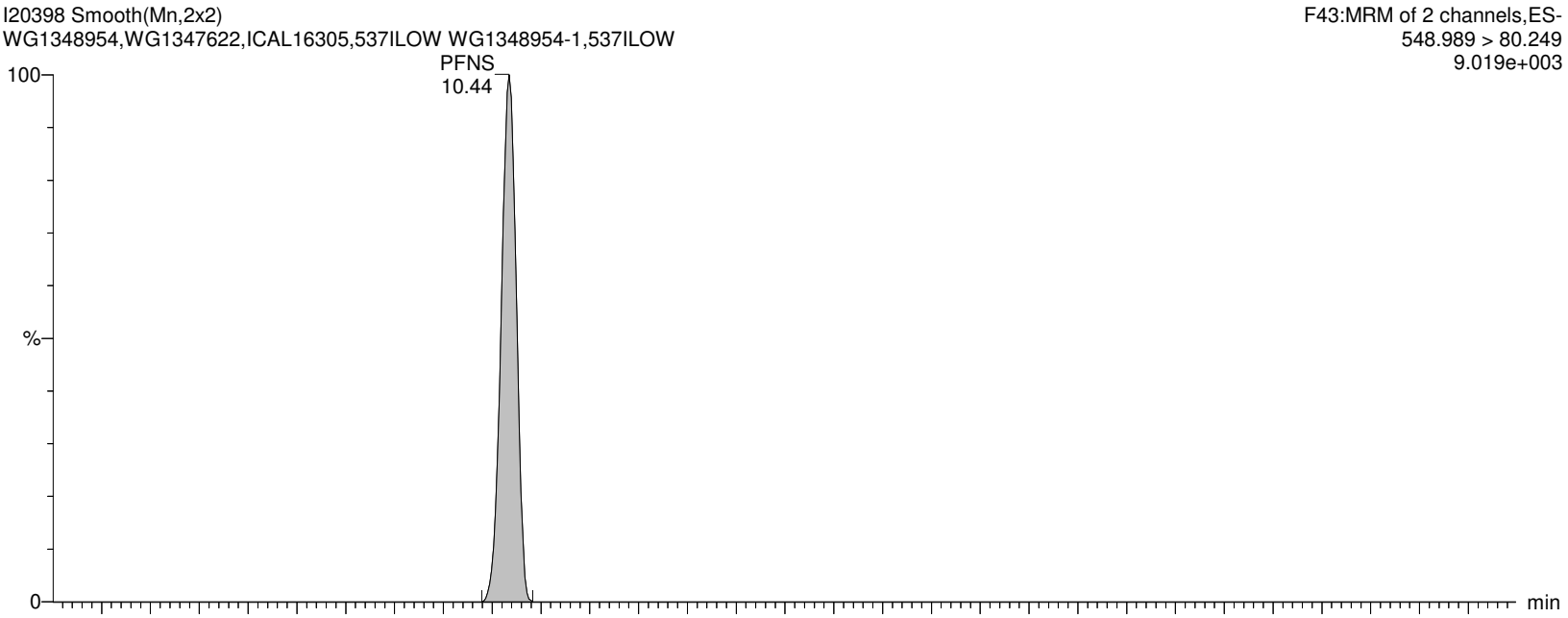


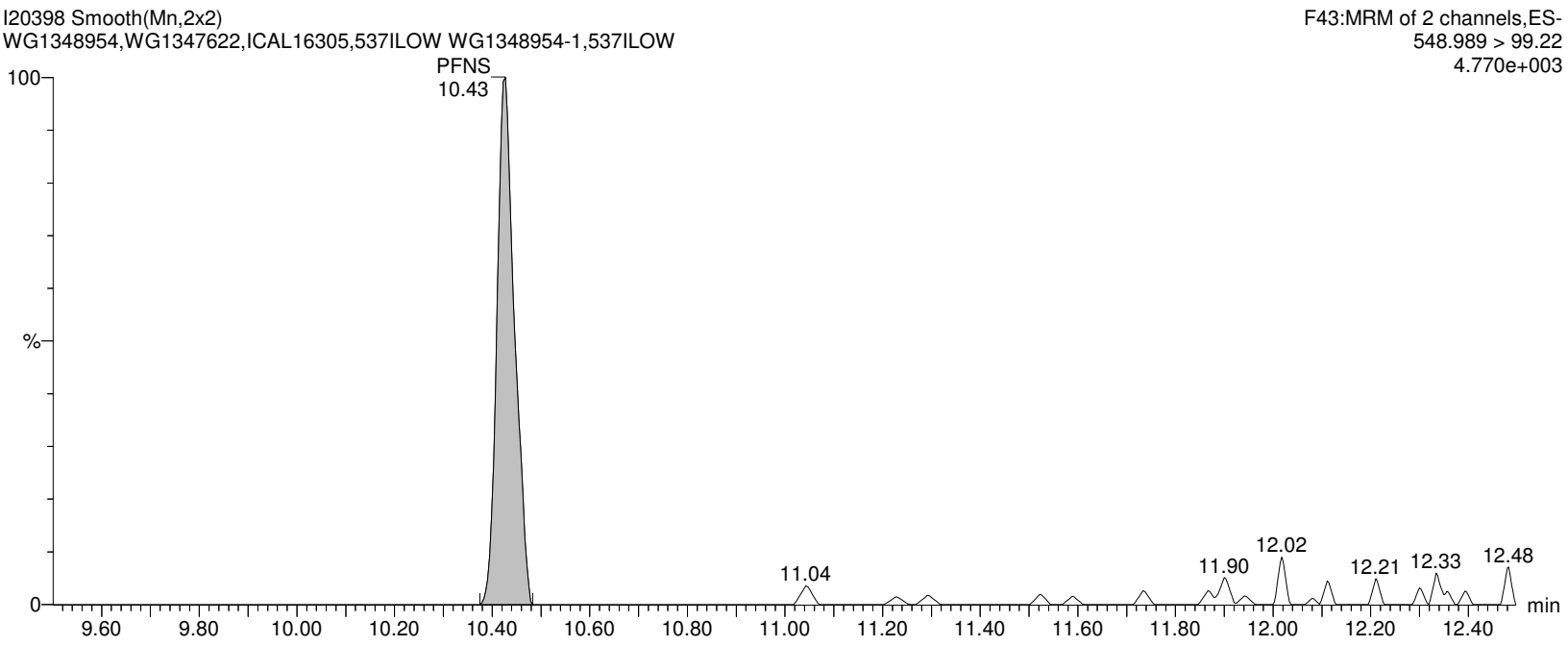



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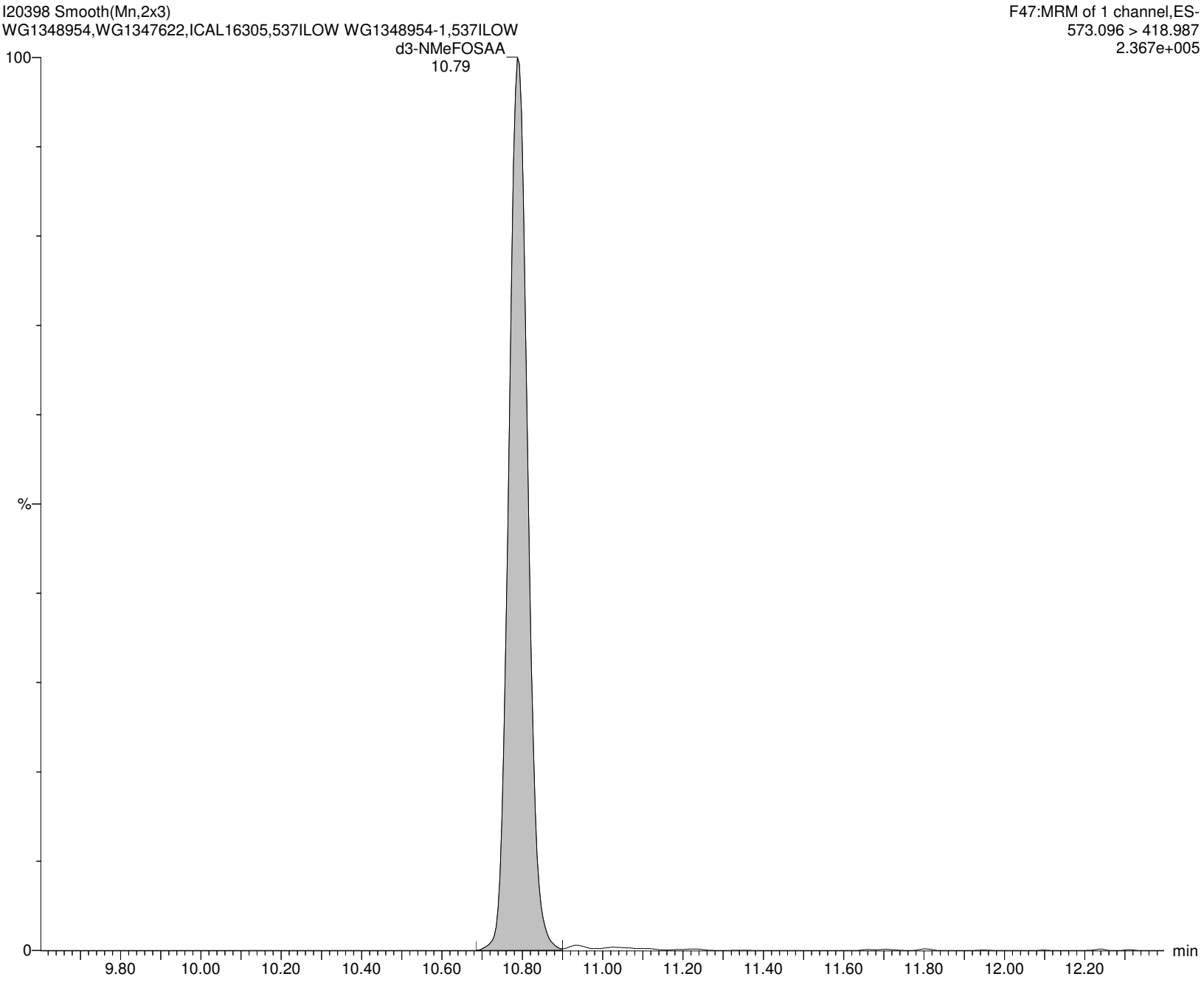
**MS Method Name: C:\MassLynx\Data\2020\200309_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**d3-NMeFOSAA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2020\200309_537ISO.PRO\Data\wg1348954-1.qld
Last Altered: Wednesday, March 11, 2020 13:51:31 Eastern Daylight Time
Printed: Thursday, March 12, 2020 02:48:34 Eastern Daylight Time

**Name: I20398**
**ID: WG1348954-1,537ILOW**
**Date: 10-Mar-2020**
**Time: 10:15:45**
**Description: WG1348954,WG1347622,ICAL16305,537ILOW**
**User: LCMS02:RS**
**Vial: 1:A,2**
**Instrument: XEVO-TQSmicro#QEB0050**
**Inlet Method Name: C:\MassLynx\Data\2020\200309_537ISO.PRO\ACQUDB\LCMS_537_ISO_B**
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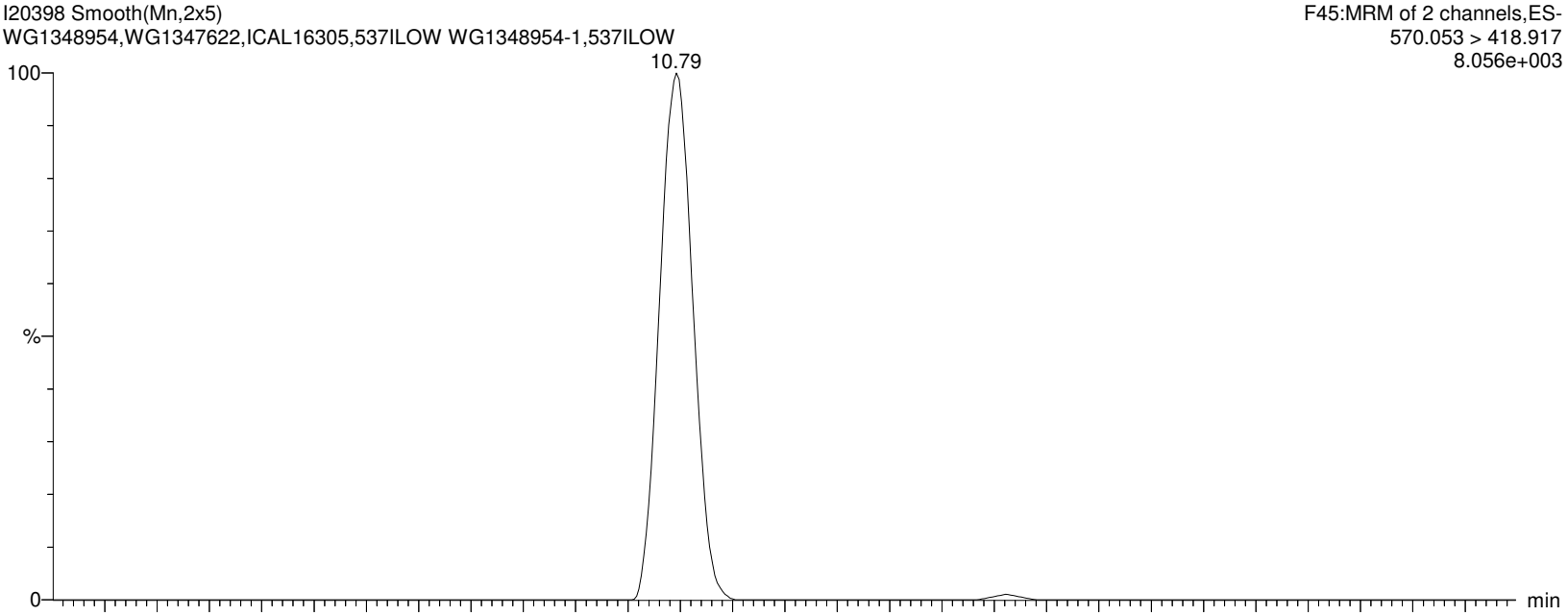
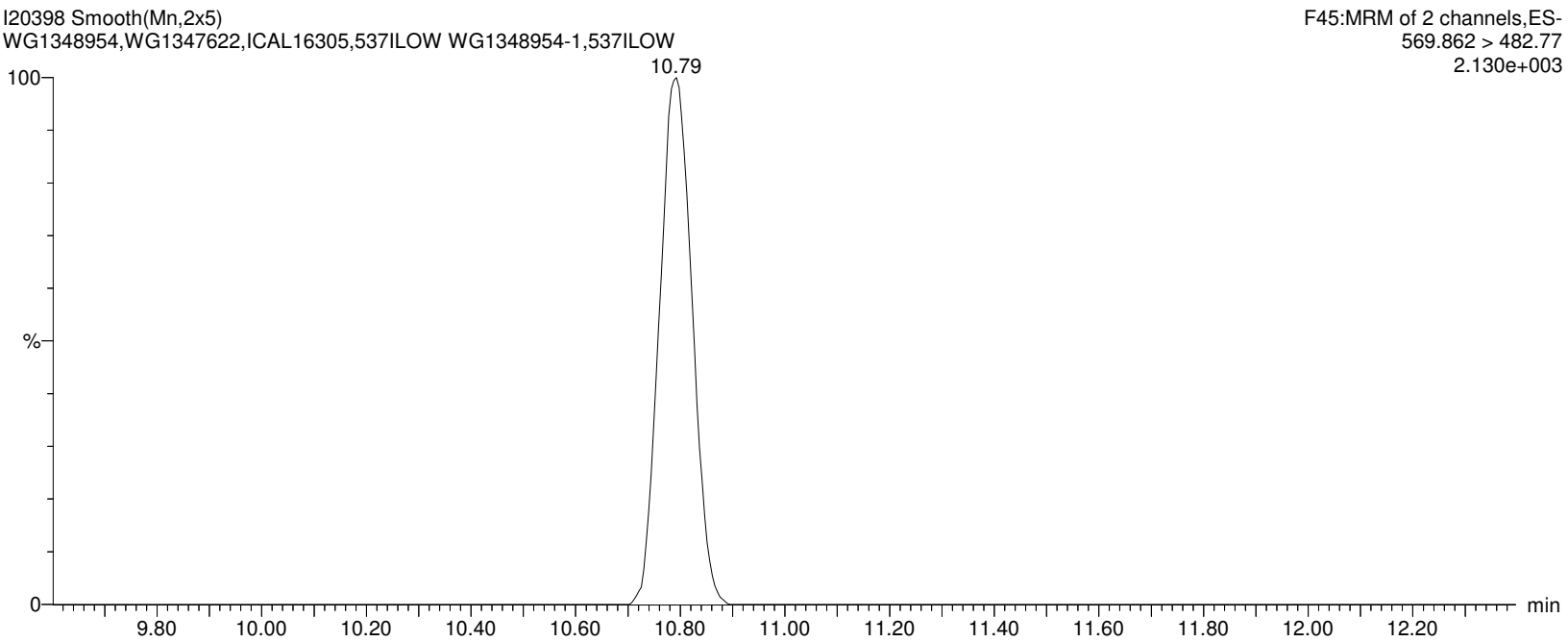
**br-NMeFOSAA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2020\200309_537ISO.PRO\Data\wg1348954-1.qld
Last Altered: Wednesday, March 11, 2020 13:51:31 Eastern Daylight Time
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**User: LCMS02:RS**
**Vial: 1:A,2**
**Instrument: XEVO-TQSmicro#QEB0050**
**Inlet Method Name: C:\MassLynx\Data\2020\200309_537ISO.PRO\ACQUDB\LCMS_537_ISO_B**
**Tune Method Name: C:\MassLynx\Data\2020\200309_537ISO.PRO\ACQUDB\181009_TUNE.IPR**
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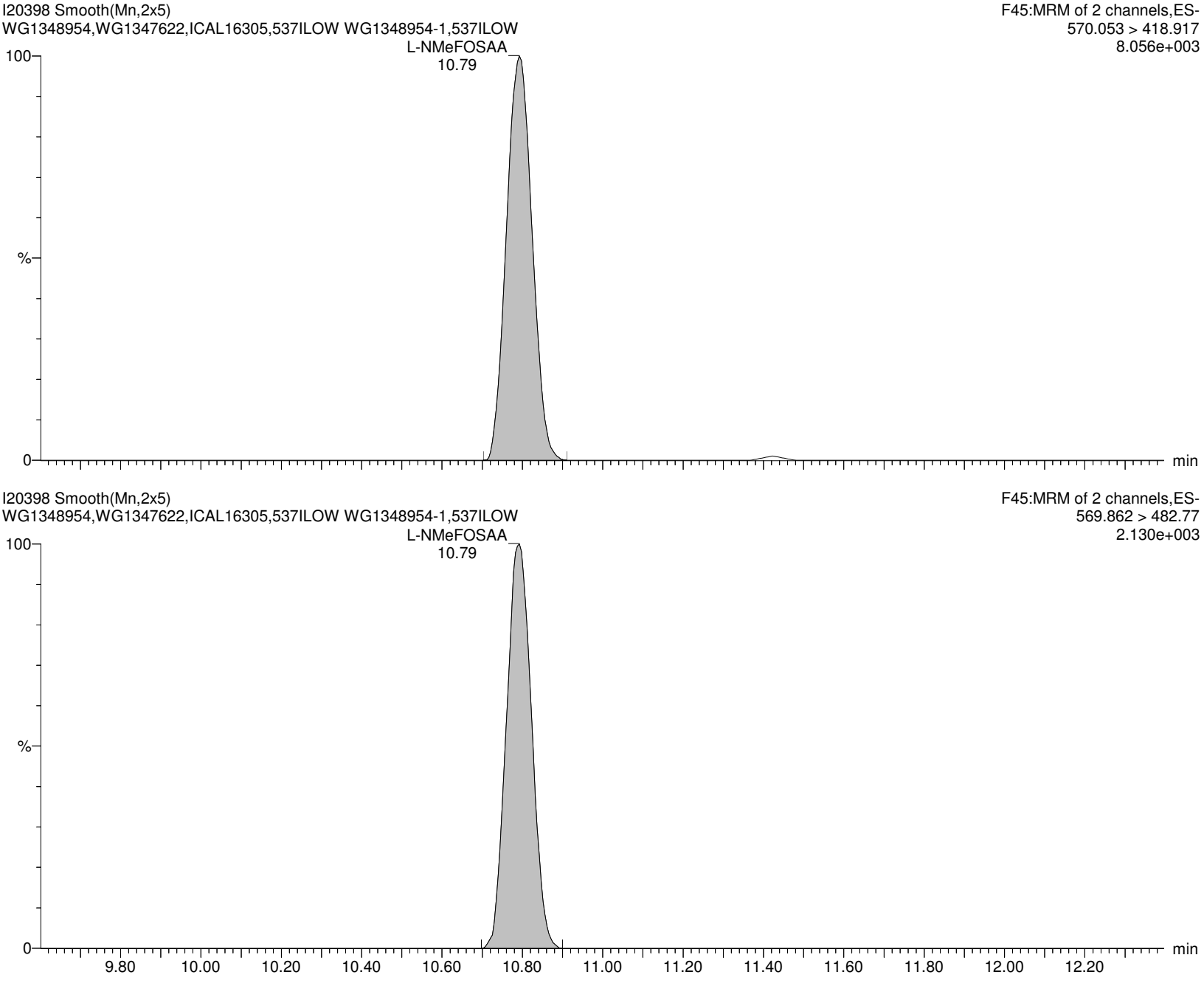
**L-NMeFOSAA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2020\200309_537ISO.PRO\Data\wg1348954-1.qld
Last Altered: Wednesday, March 11, 2020 13:51:31 Eastern Daylight Time
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**User: LCMS02:RS**
**Vial: 1:A,2**
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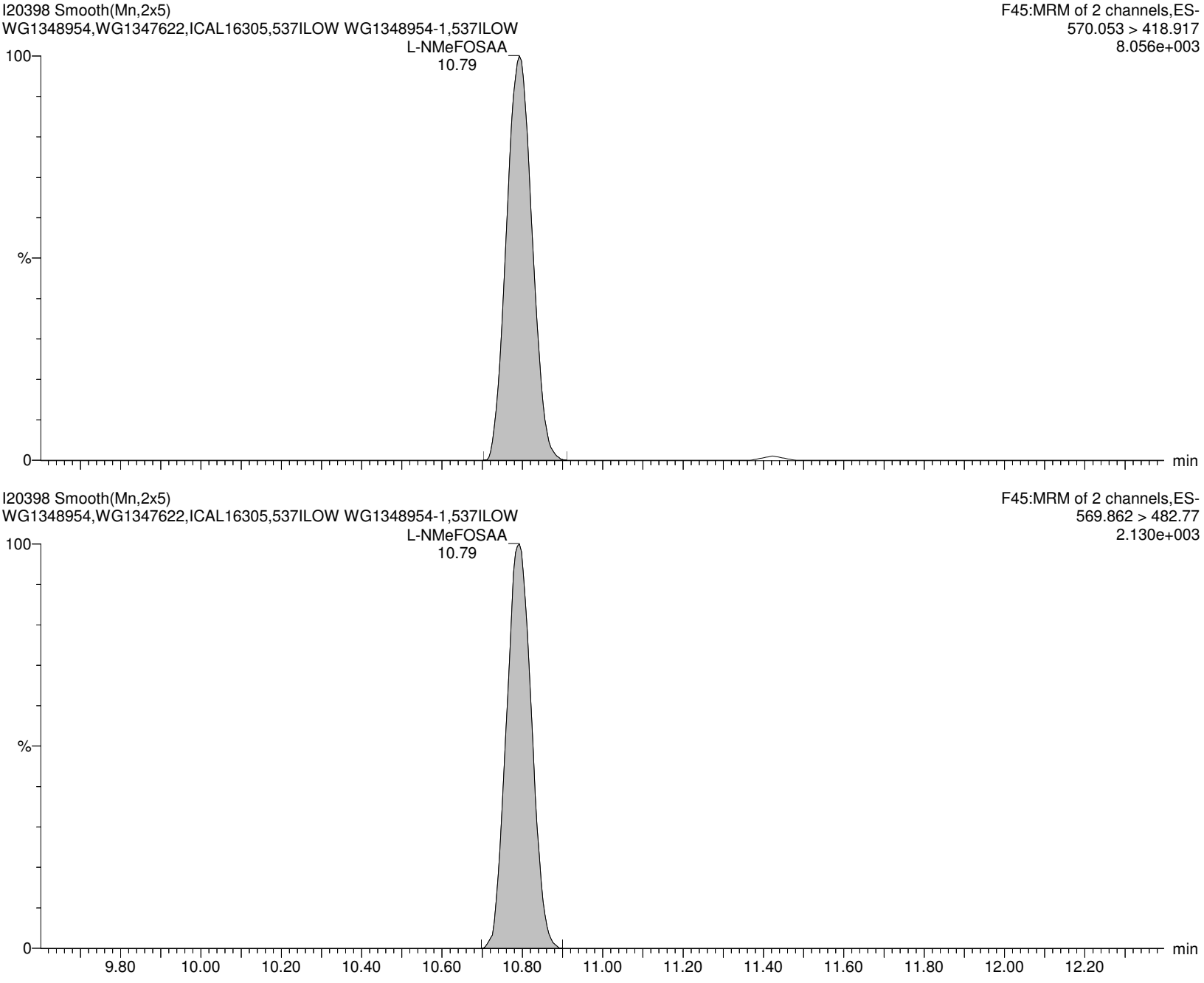
**NMeFOSAA**





all concentration units in (ng/mL)

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Dataset: C:\MassLynx\Data\2020\200309_537ISO.PRO\Data\wg1348954-1.qld
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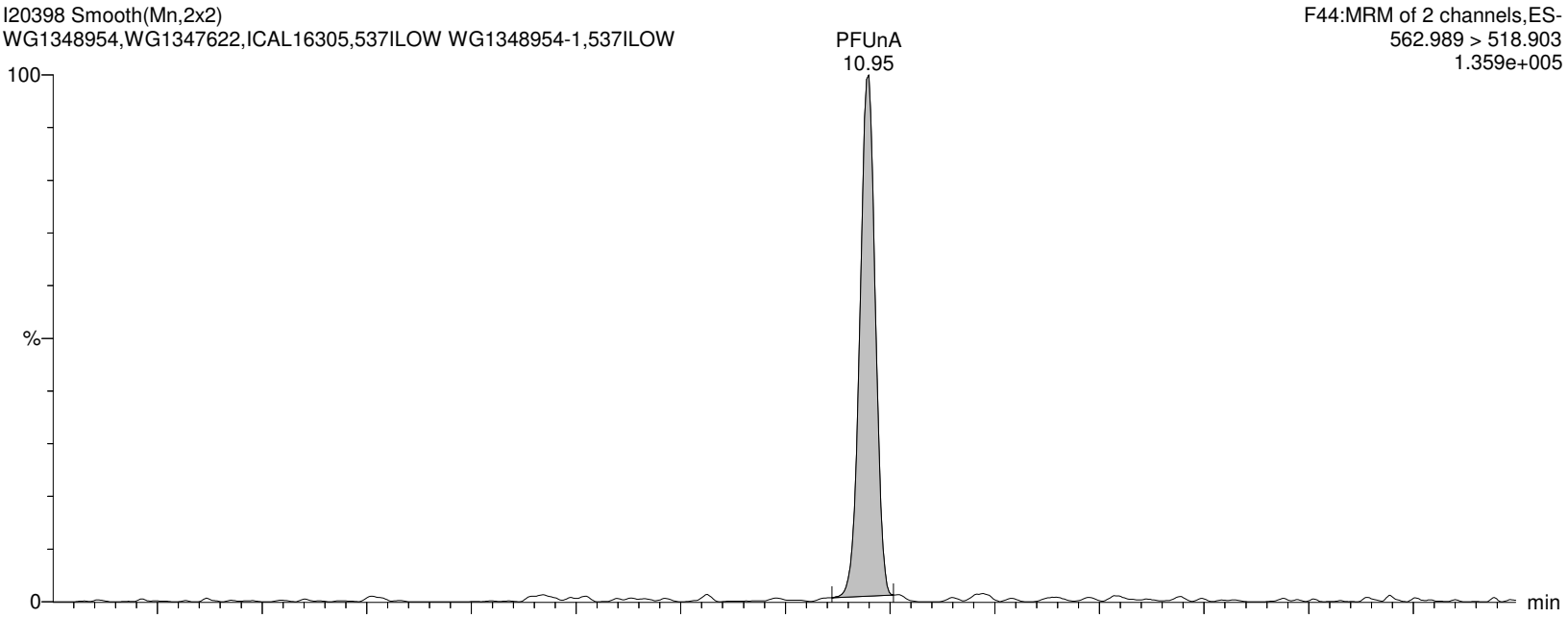


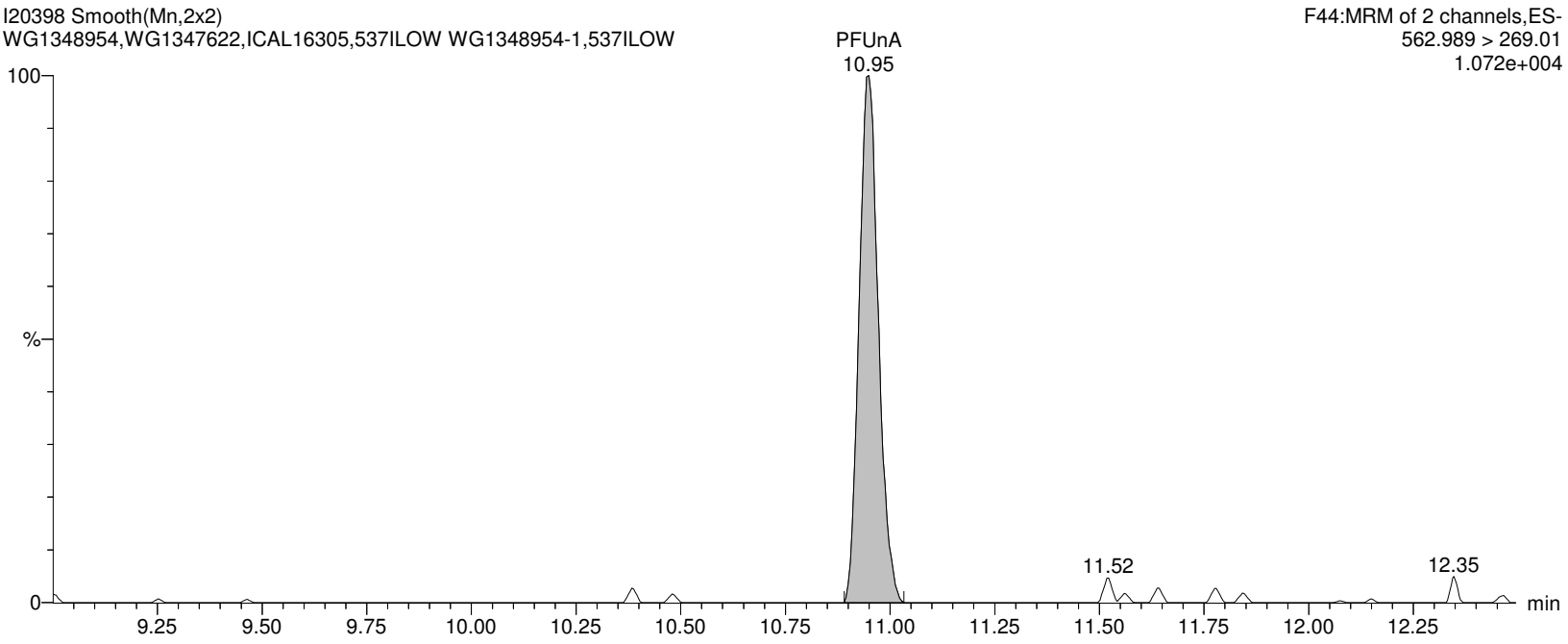



all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2020\200309_537ISO.PRO\Data\wg1348954-1.qld
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**Vial: 1:A,2**
**Instrument: XEVO-TQSmicro#QEB0050**
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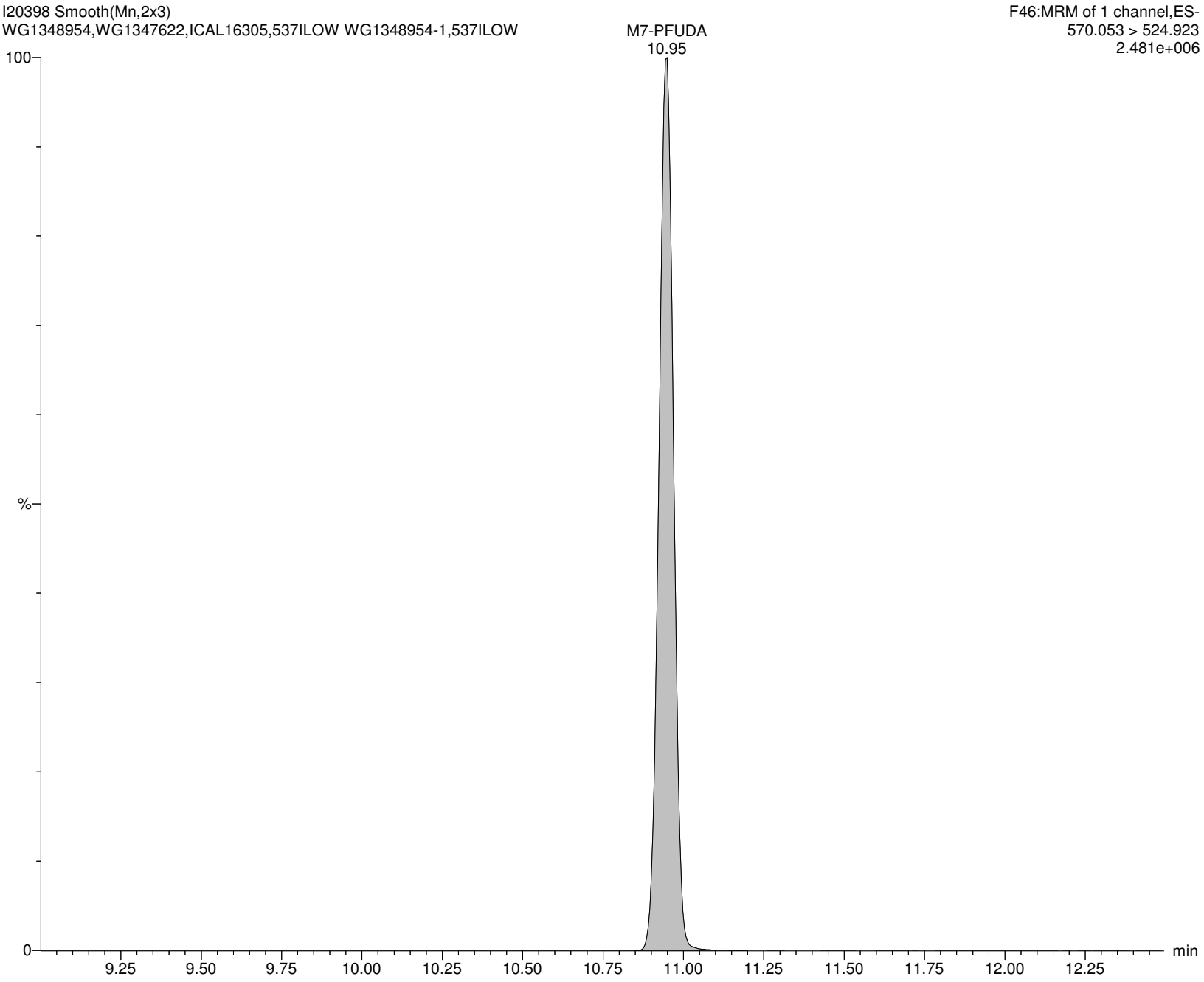
**M7-PFUDA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2020\200309_537ISO.PRO\Data\wg1348954-1.qld
Last Altered: Wednesday, March 11, 2020 13:51:31 Eastern Daylight Time
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**Vial: 1:A,2**
**Instrument: XEVO-TQSmicro#QEB0050**
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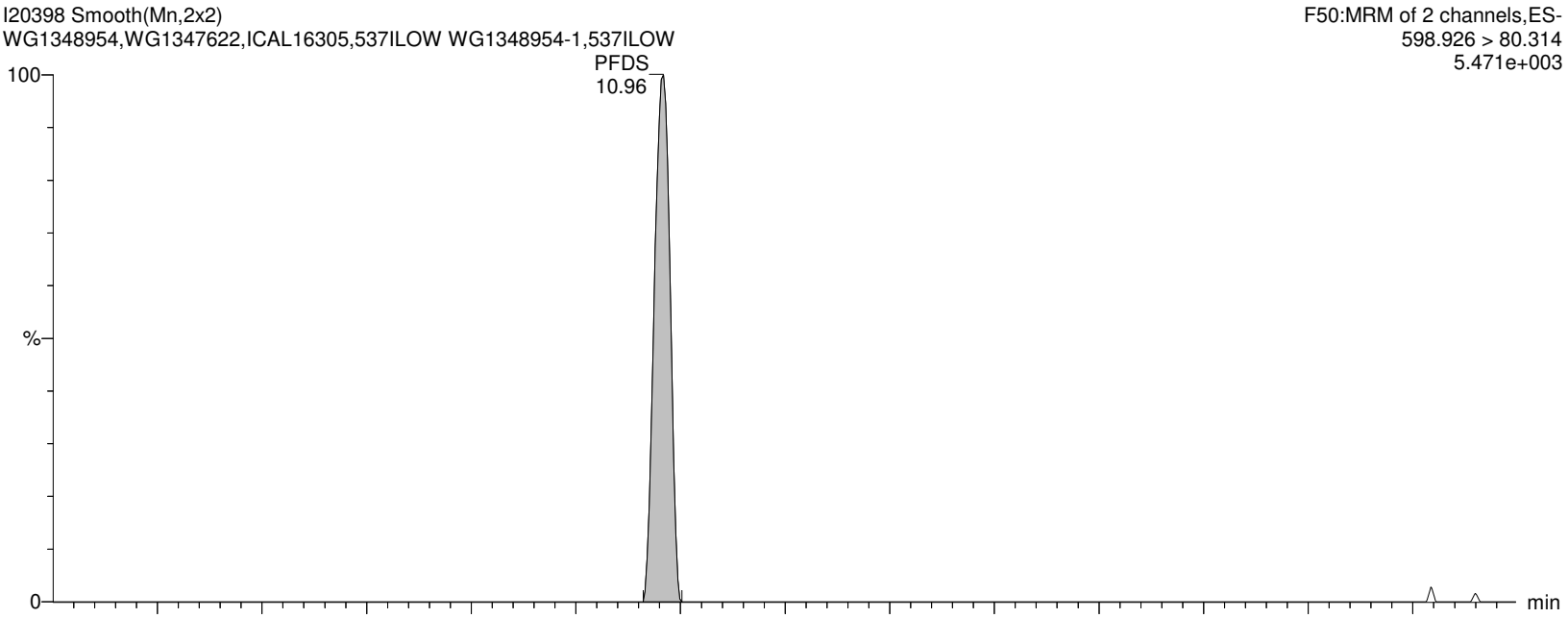
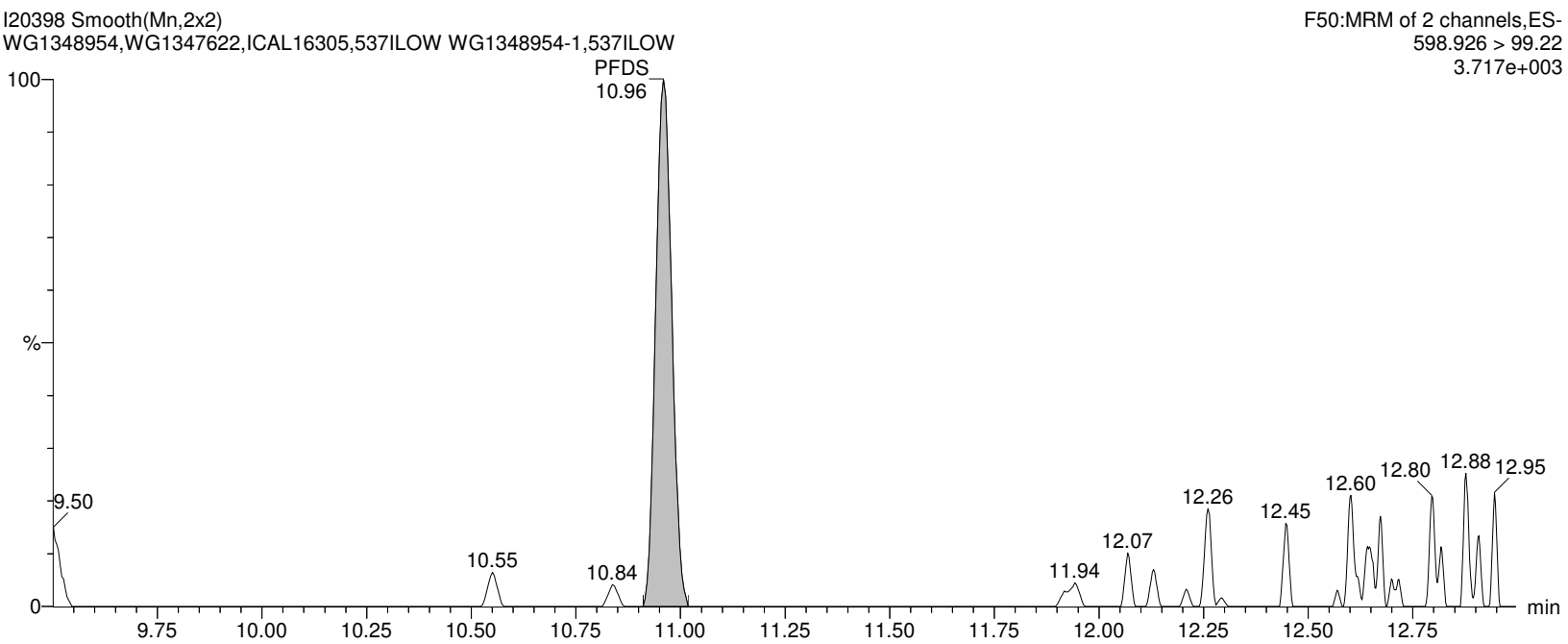
**PFDS**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2020\200309_537ISO.PRO\Data\wg1348954-1.qld
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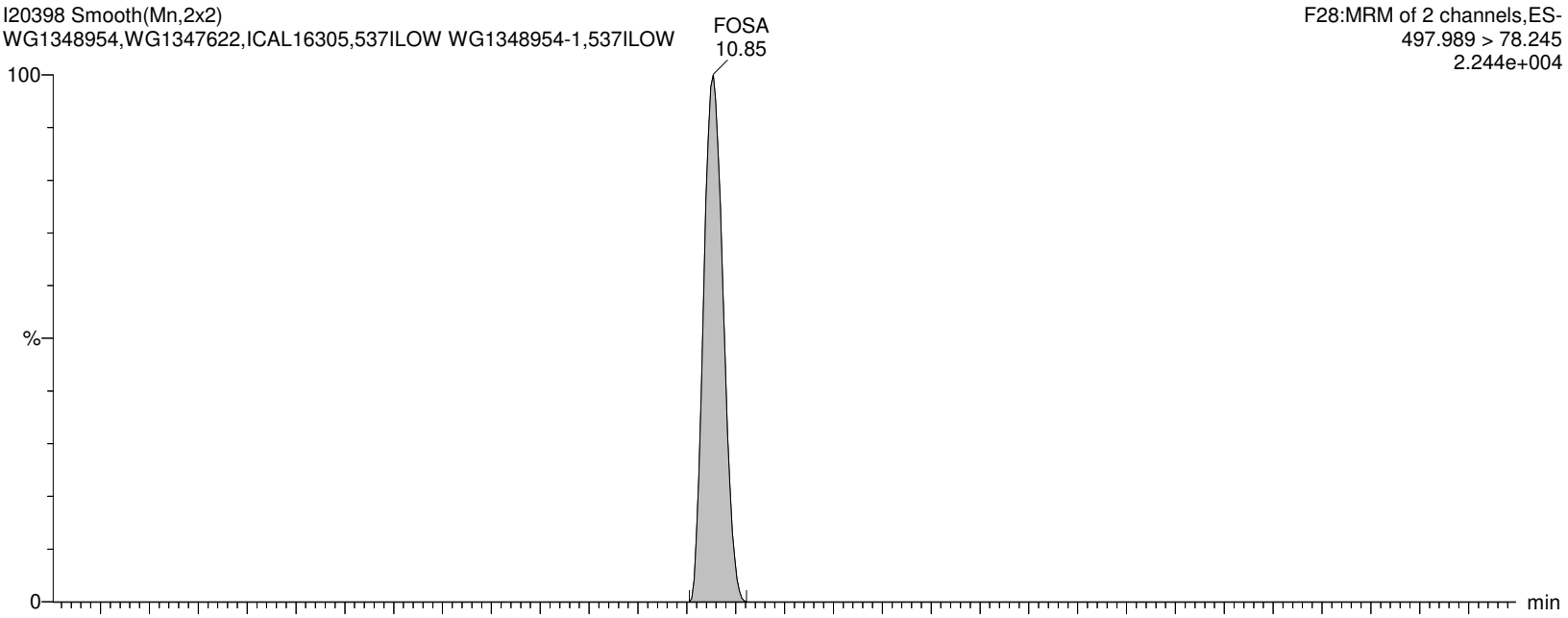
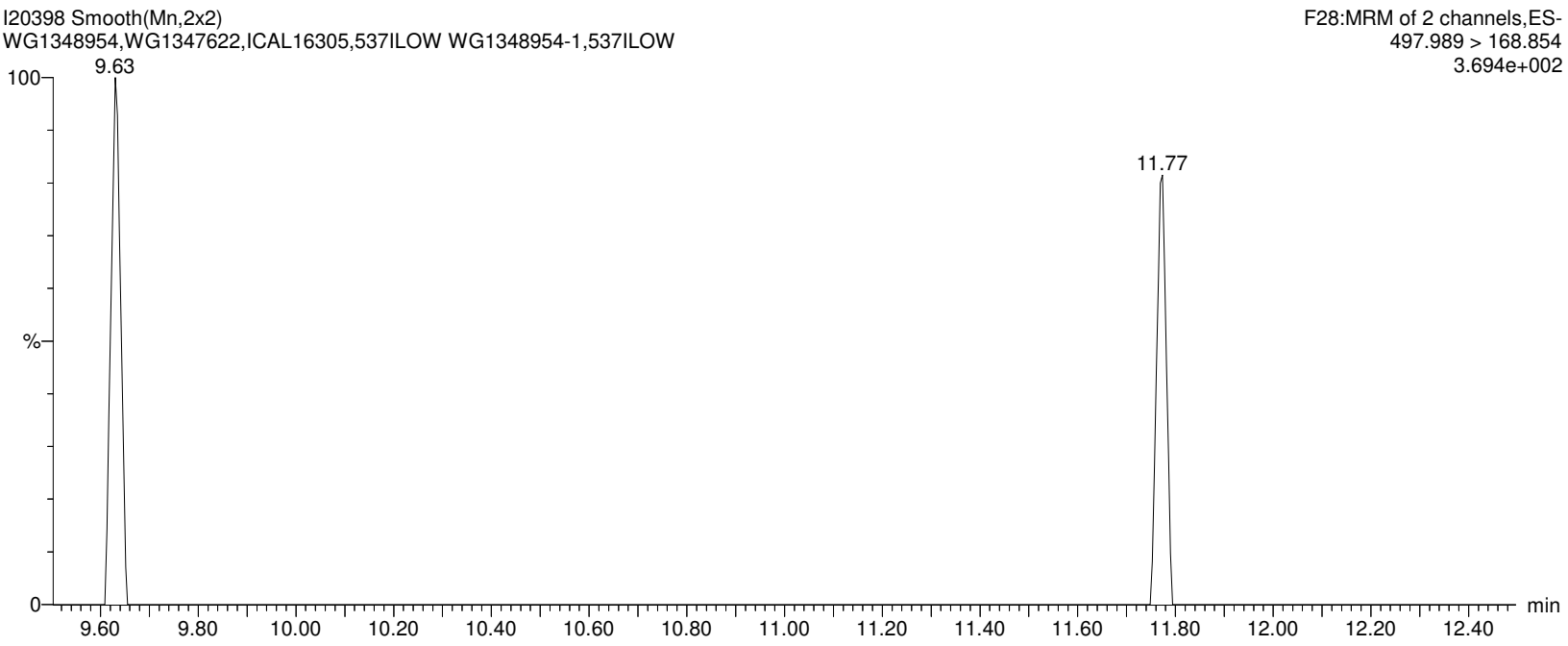
**FOSA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2020\200309_537ISO.PRO\Data\wg1348954-1.qld
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**Vial: 1:A,2**
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**Inlet Method Name: C:\MassLynx\Data\2020\200309_537ISO.PRO\ACQUDB\LCMS_537_ISO_B**
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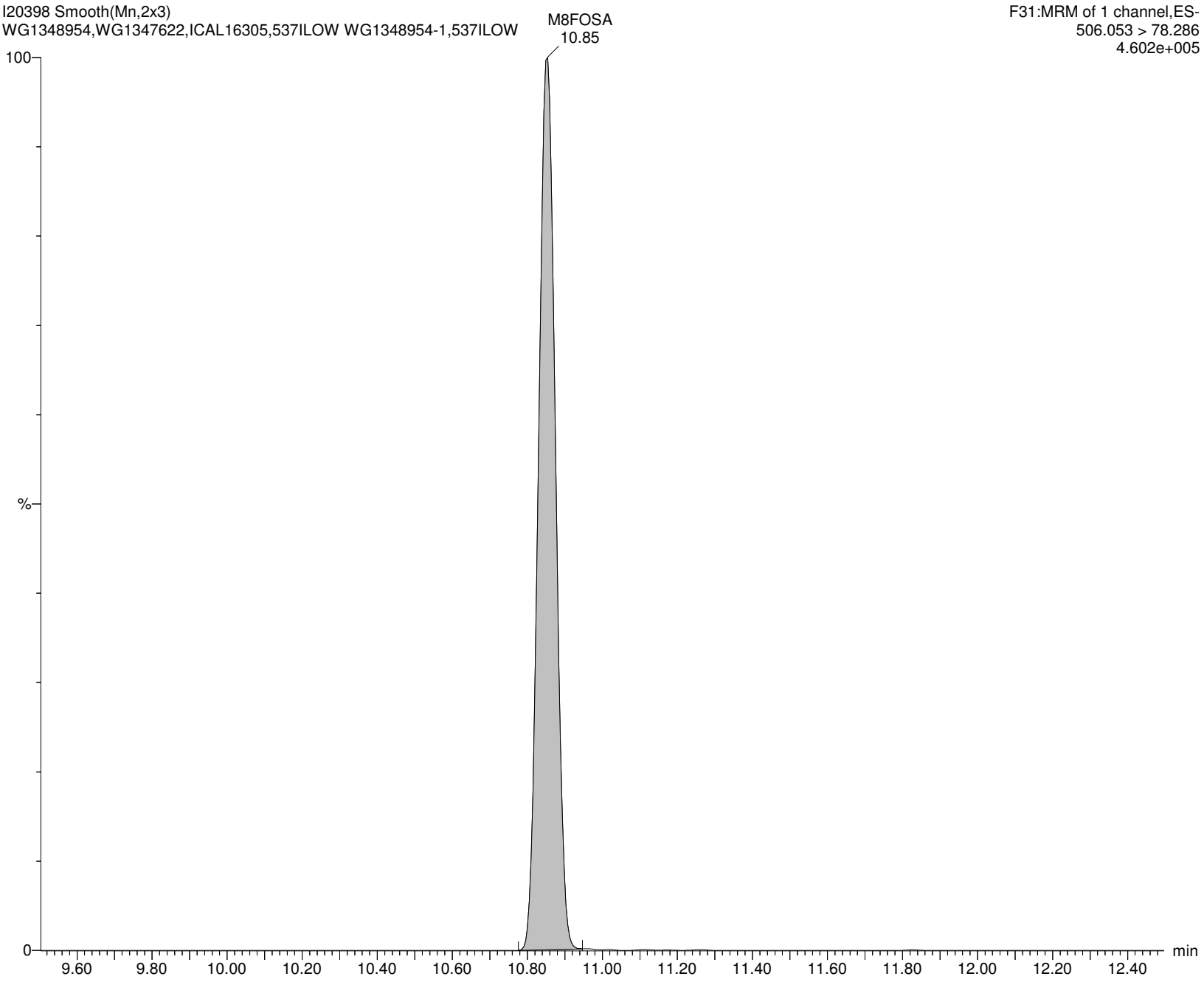
**M8FOSA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2020\200309_537ISO.PRO\Data\wg1348954-1.qld
Last Altered: Wednesday, March 11, 2020 13:51:31 Eastern Daylight Time
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**Vial: 1:A,2**
**Instrument: XEVO-TQSmicro#QEB0050**
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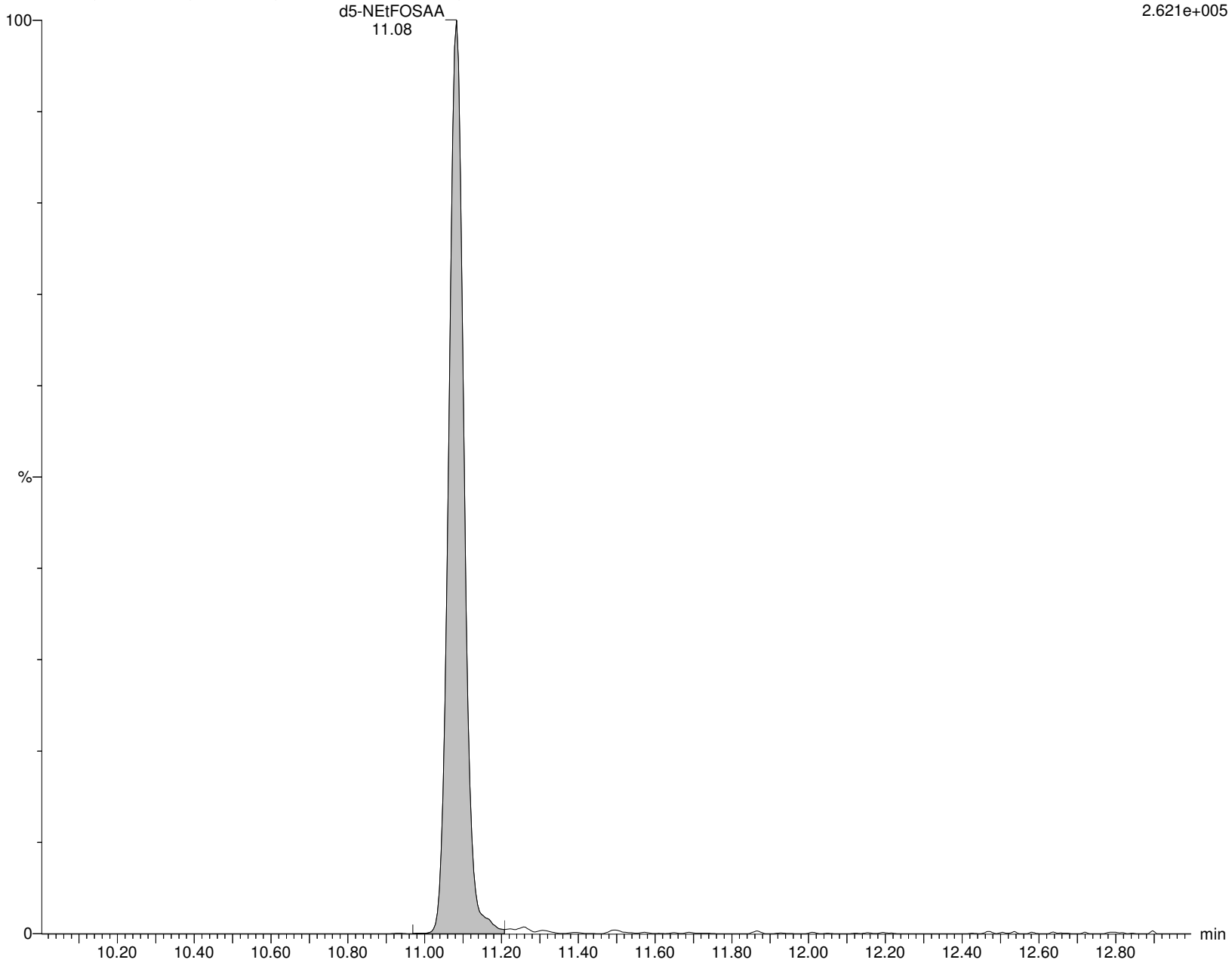
**d5-NEtFOSAA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2020\200309_537ISO.PRO\Data\wg1348954-1.qld
Last Altered: Wednesday, March 11, 2020 13:51:31 Eastern Daylight Time
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**Vial: 1:A,2**
**Instrument: XEVO-TQSmicro#QEB0050**
**Inlet Method Name: C:\MassLynx\Data\2020\200309_537ISO.PRO\ACQUDB\LCMS_537_ISO_B**
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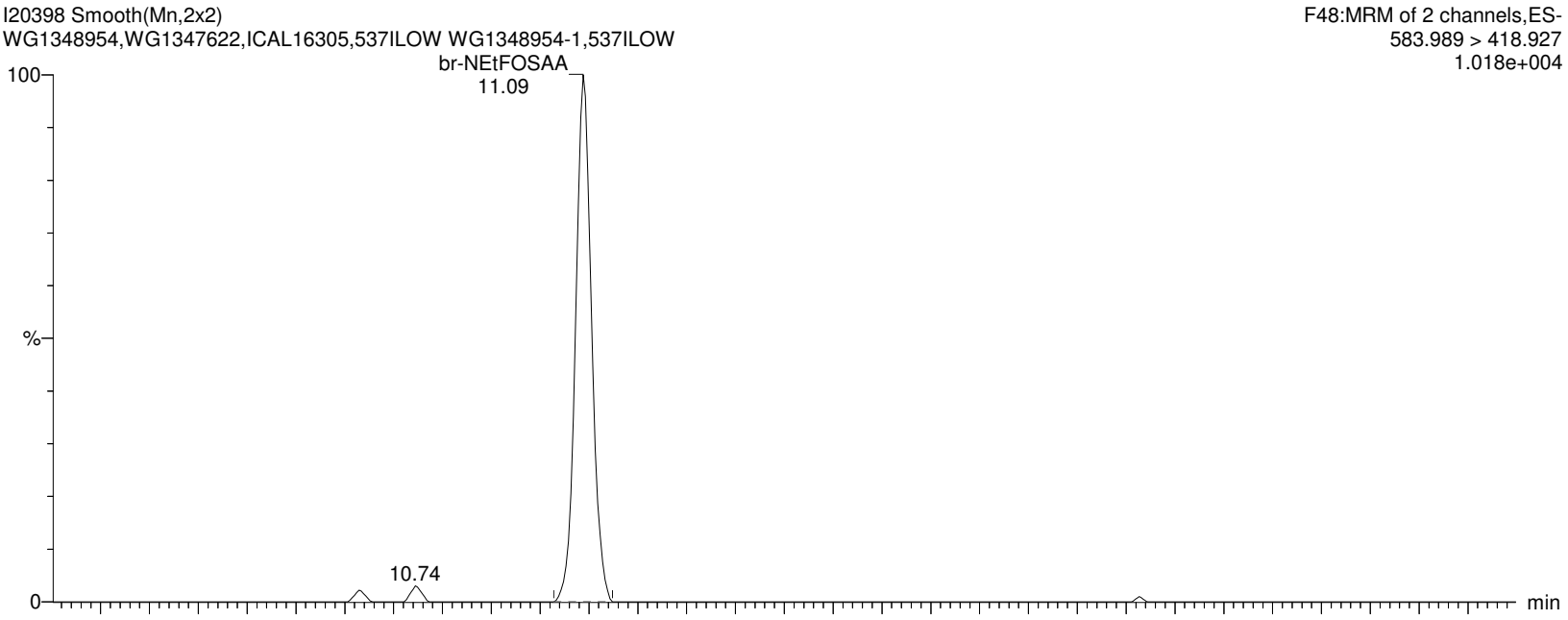
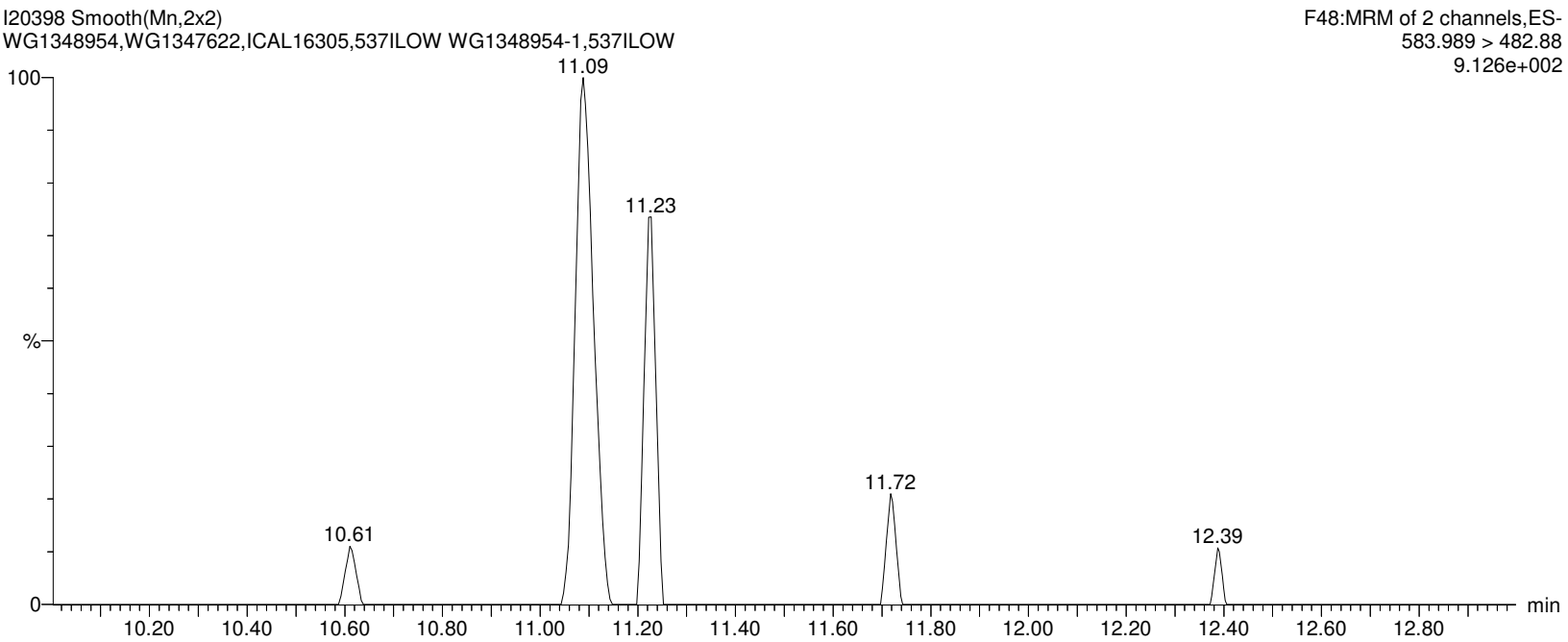
**MS Method Name: C:\MassLynx\Data\2020\200309_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**br-NEtFOSAA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2020\200309_537ISO.PRO\Data\wg1348954-1.qld
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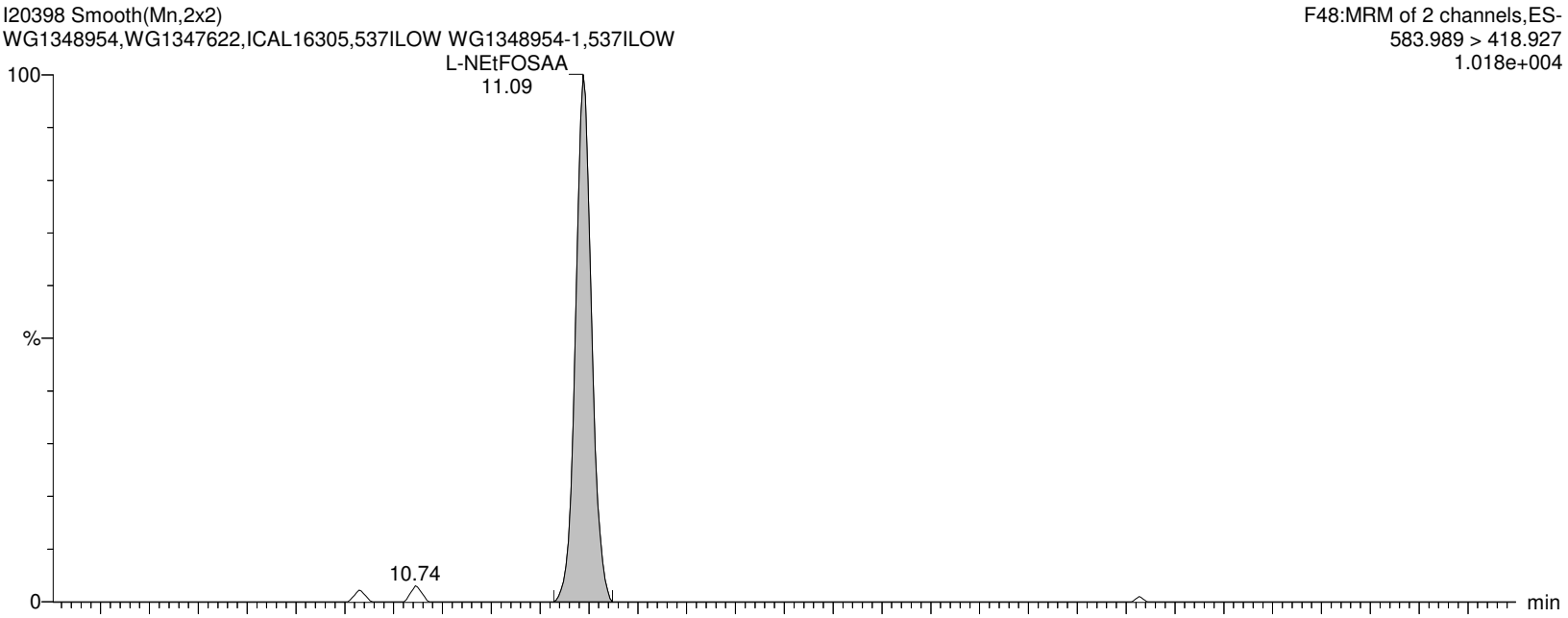
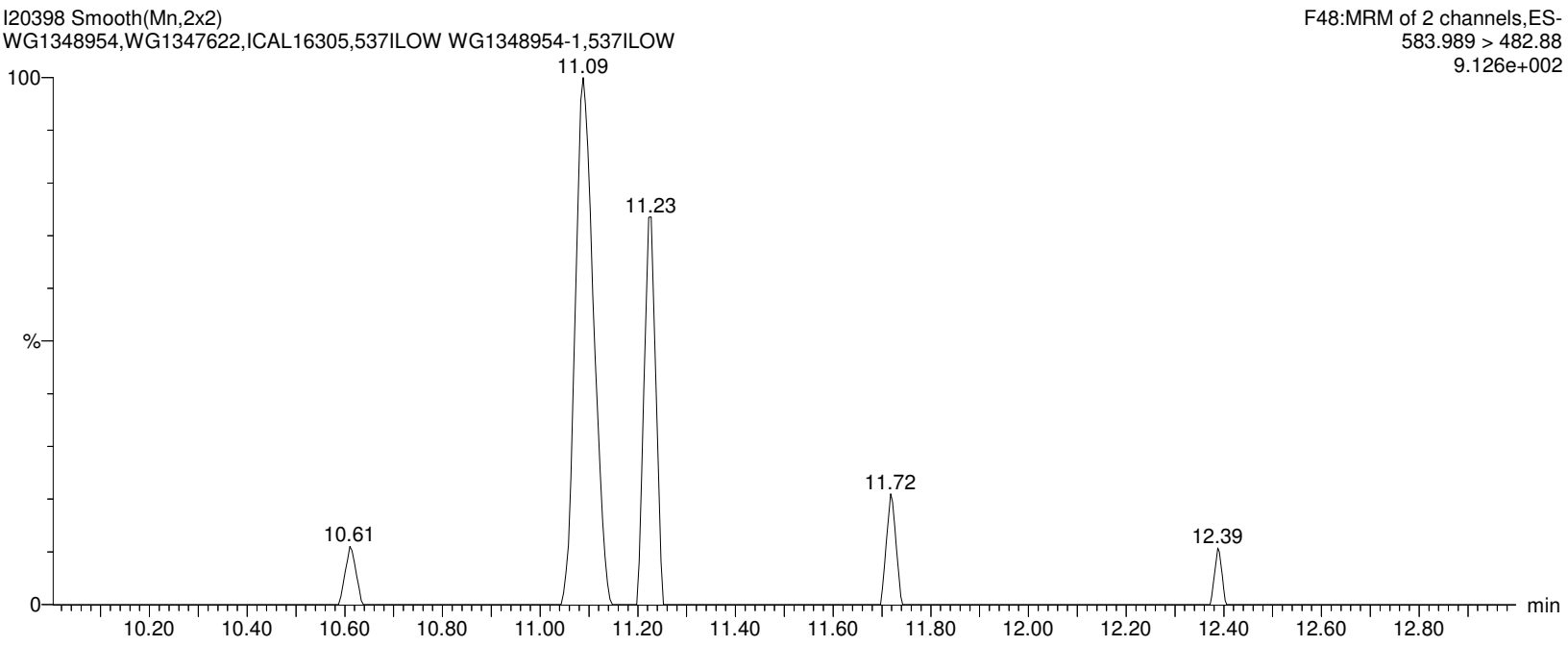
**L-NEtFOSAA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
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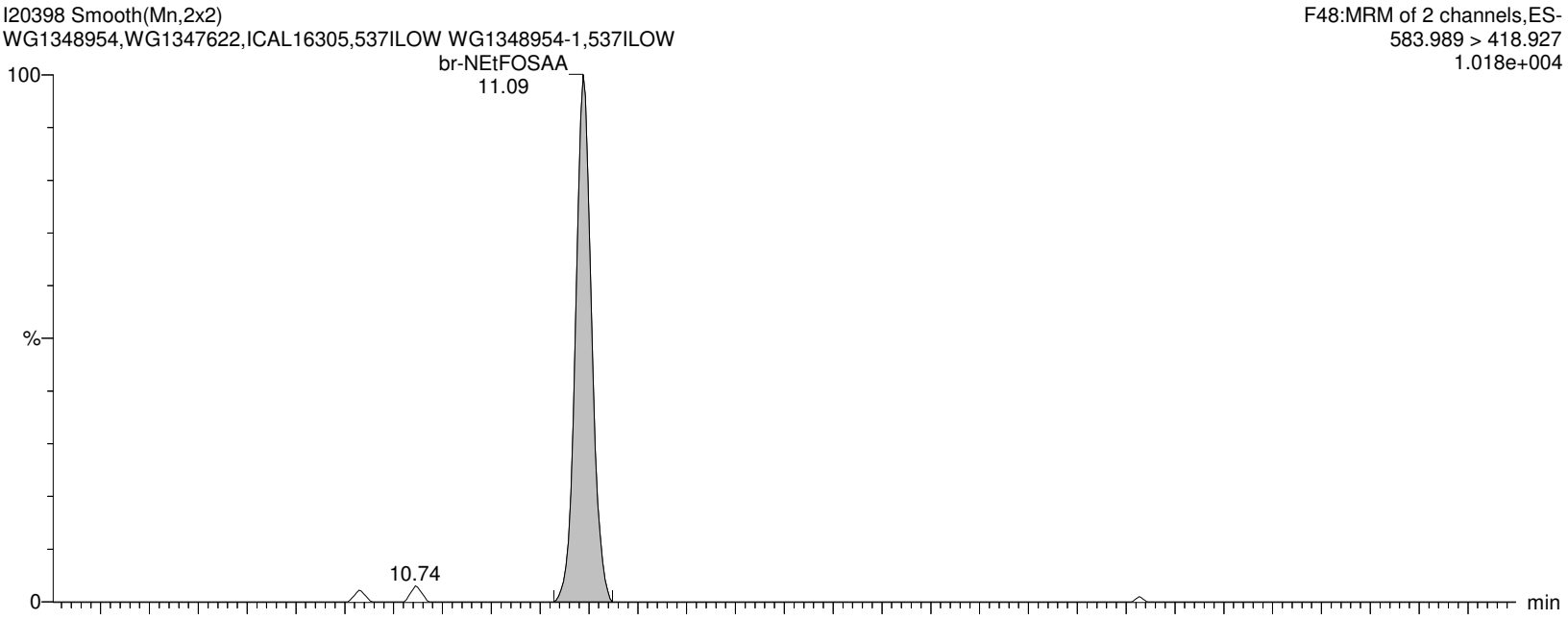
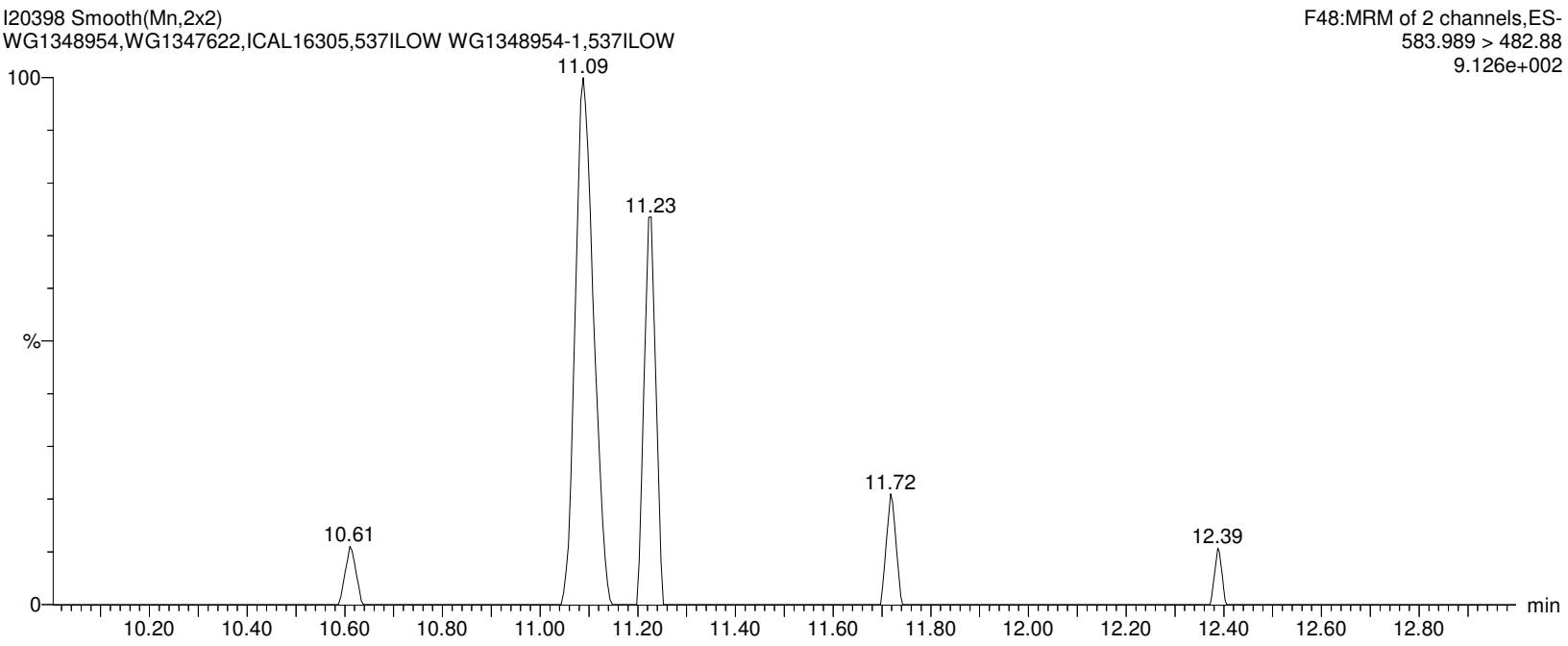
**NEtFOSAA**





all concentration units in (ng/mL)

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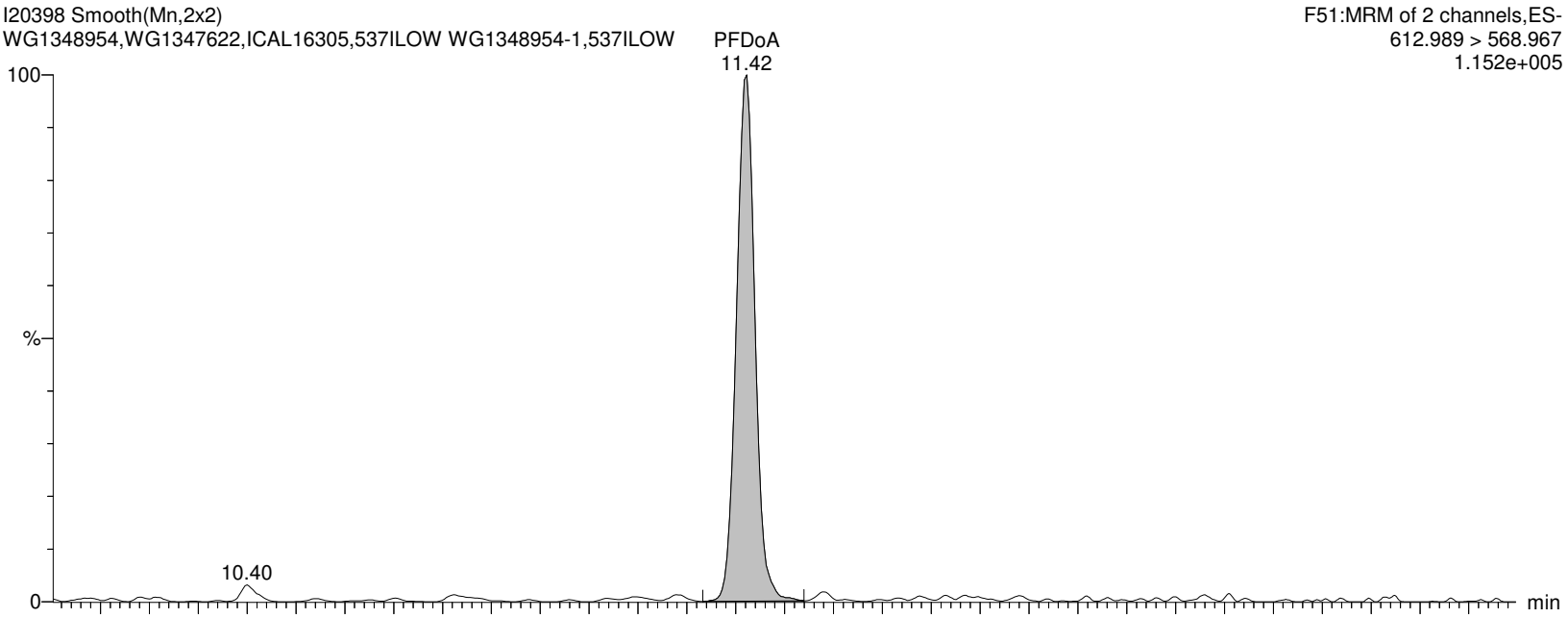
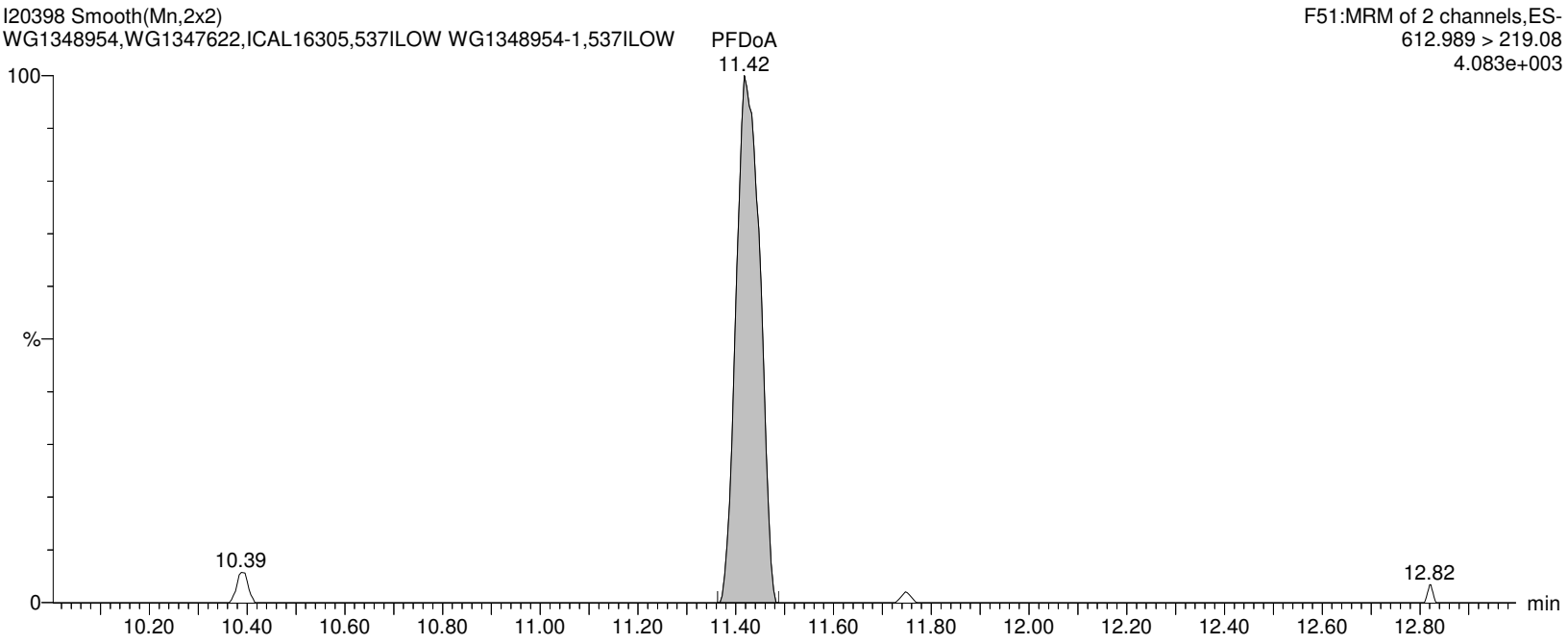
**PFDoA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
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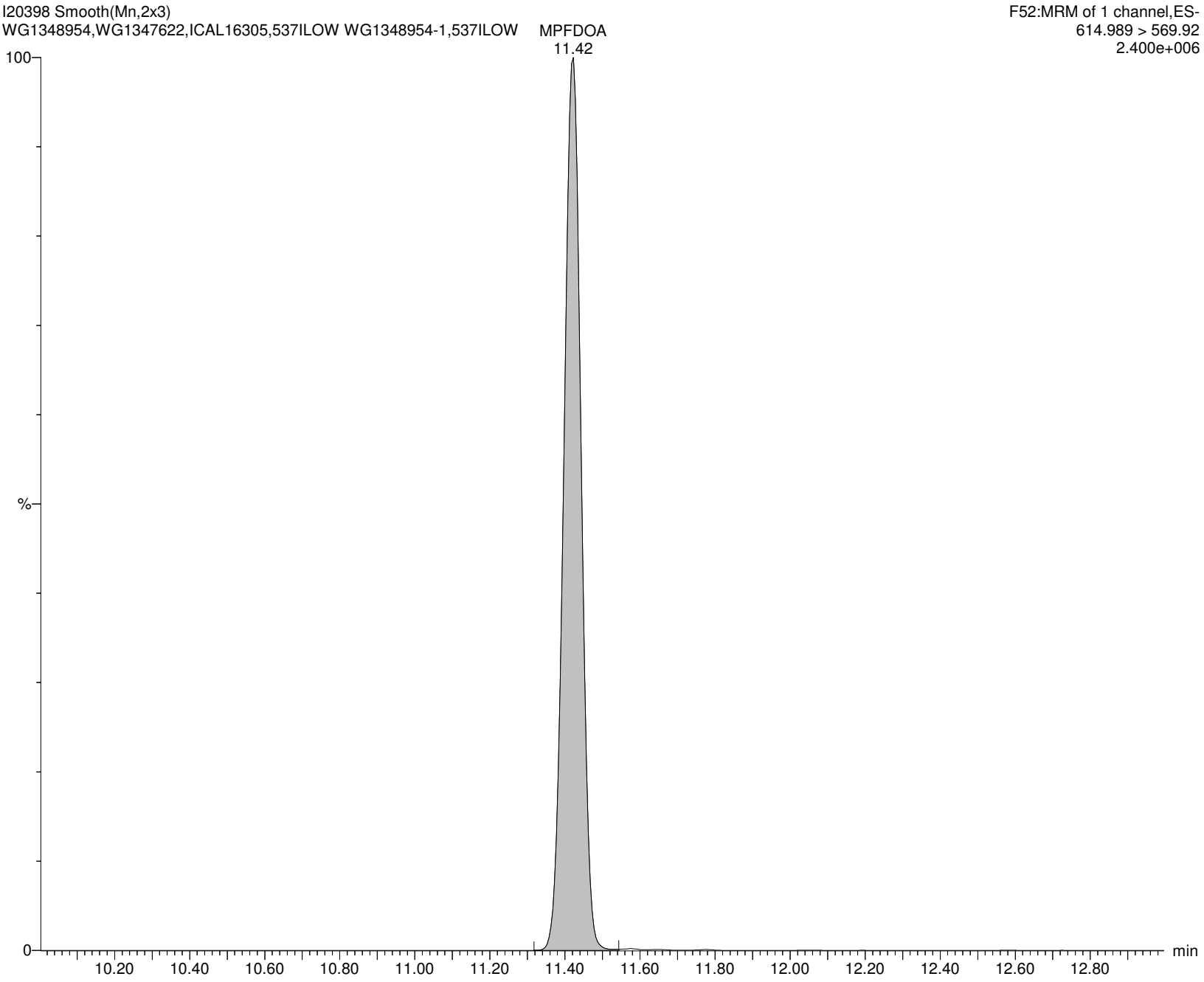



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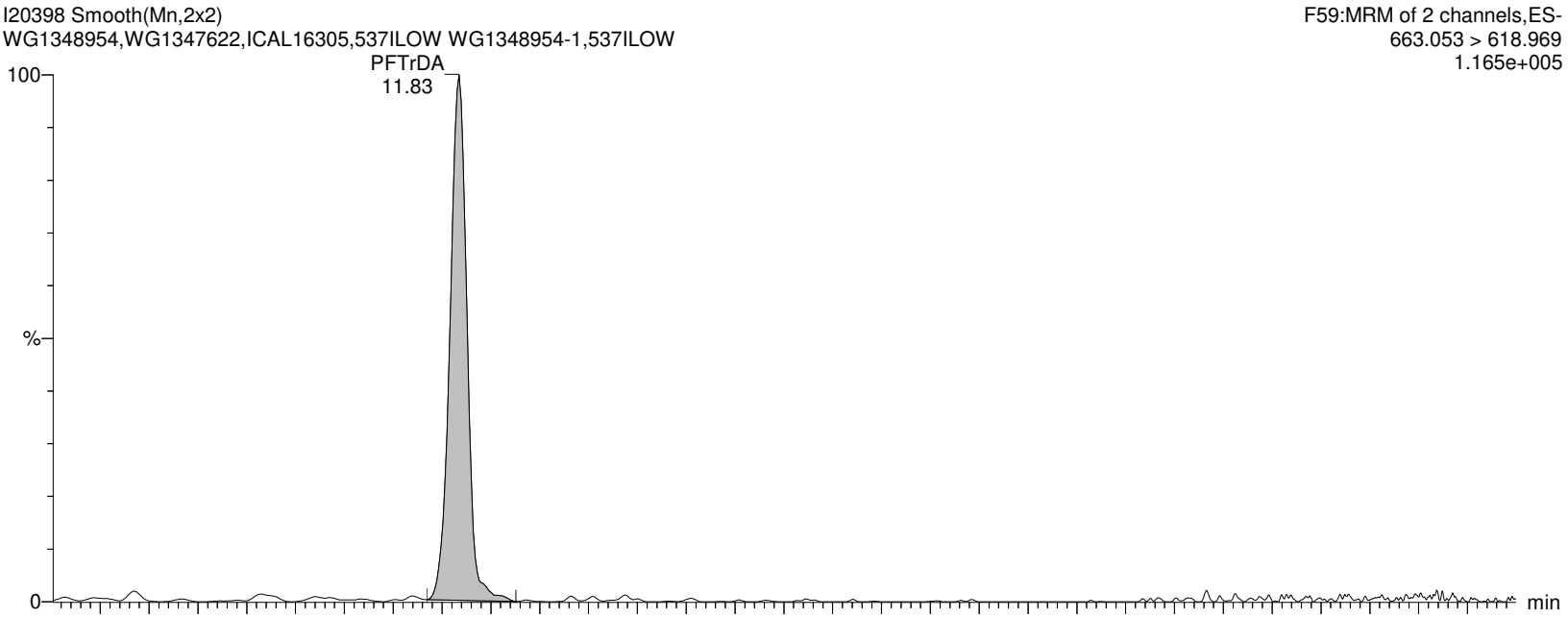
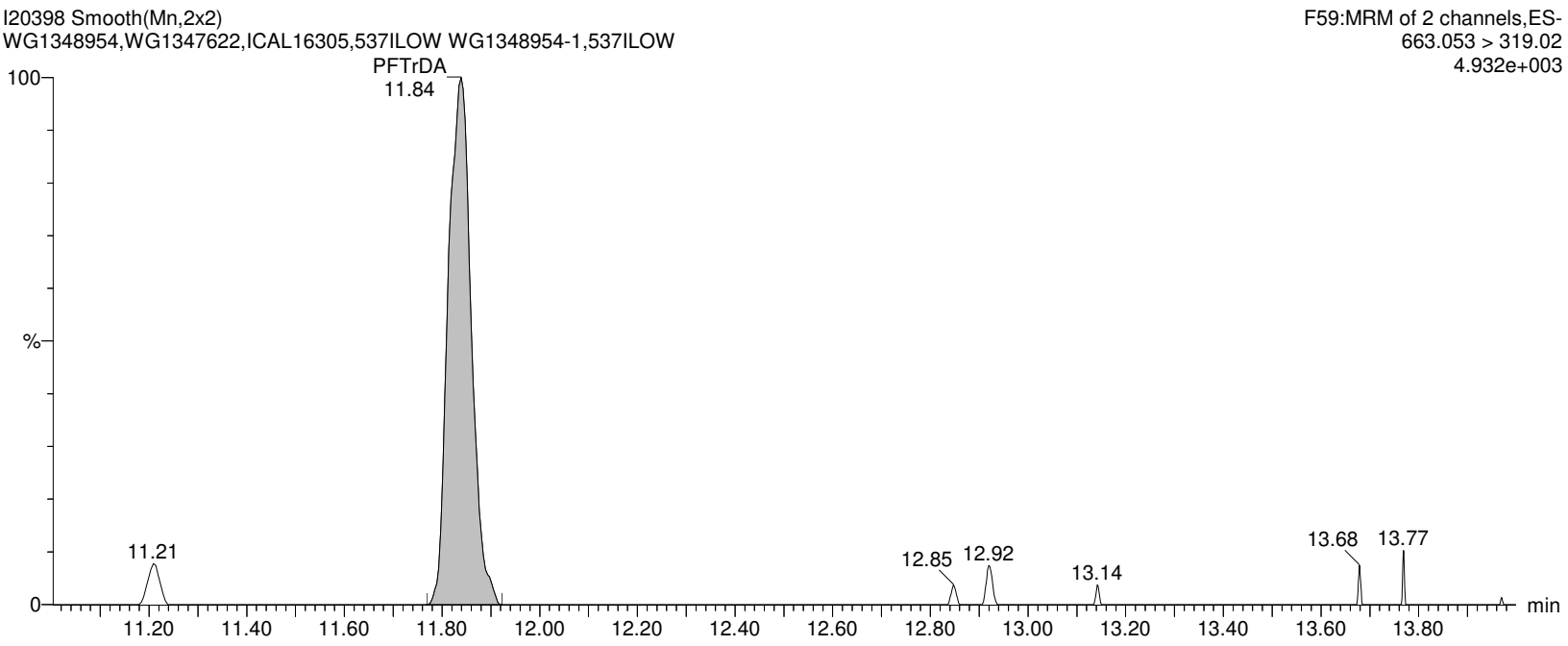
Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2020\200309_537ISO.PRO\Data\wg1348954-1.qld
Last Altered: Wednesday, March 11, 2020 13:51:31 Eastern Daylight Time
Printed: Thursday, March 12, 2020 02:48:34 Eastern Daylight Time

**Name: I20398**
**ID: WG1348954-1,537ILOW**
**Date: 10-Mar-2020**
**Time: 10:15:45**
**Description: WG1348954,WG1347622,ICAL16305,537ILOW**
**User: LCMS02:RS**
**Vial: 1:A,2**
**Instrument: XEVO-TQSmicro#QEB0050**
**Inlet Method Name: C:\MassLynx\Data\2020\200309_537ISO.PRO\ACQUDB\LCMS_537_ISO_B**
**Tune Method Name: C:\MassLynx\Data\2020\200309_537ISO.PRO\ACQUDB\181009_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\2020\200309_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**PFTrDA**





all concentration units in (ng/mL)

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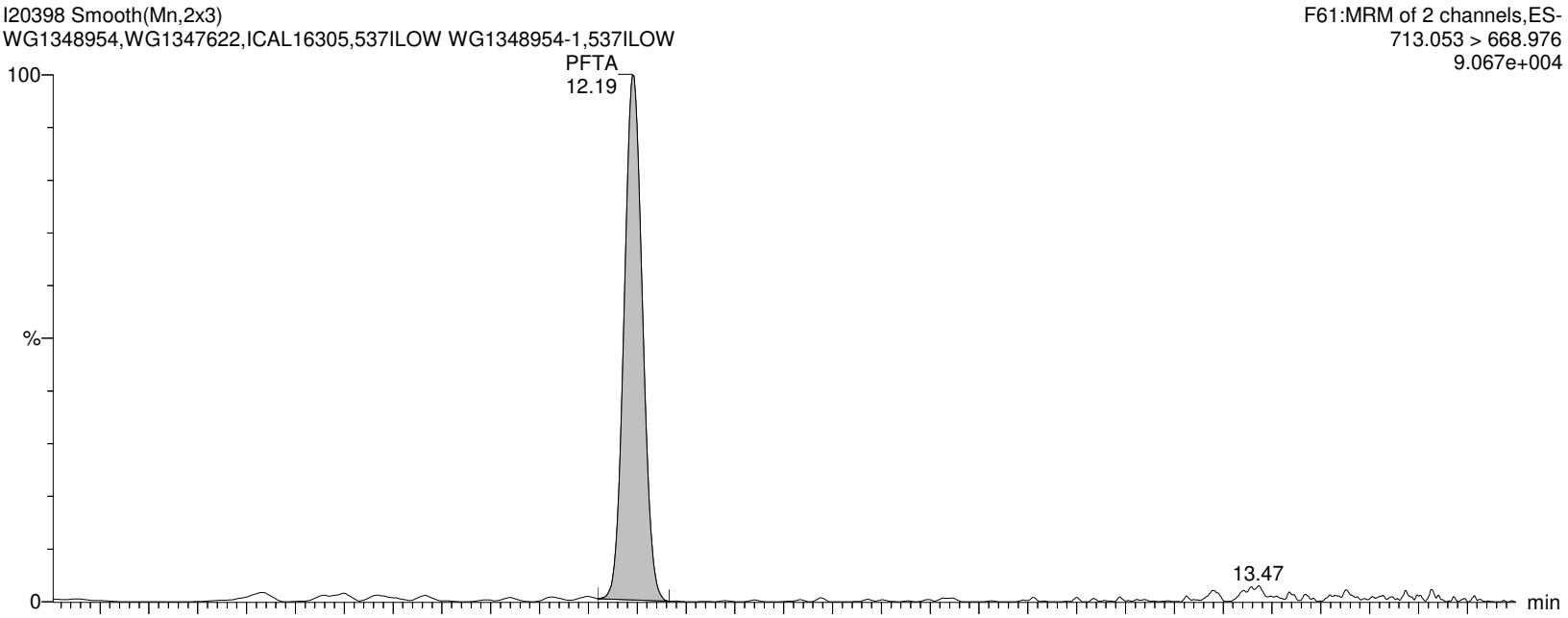
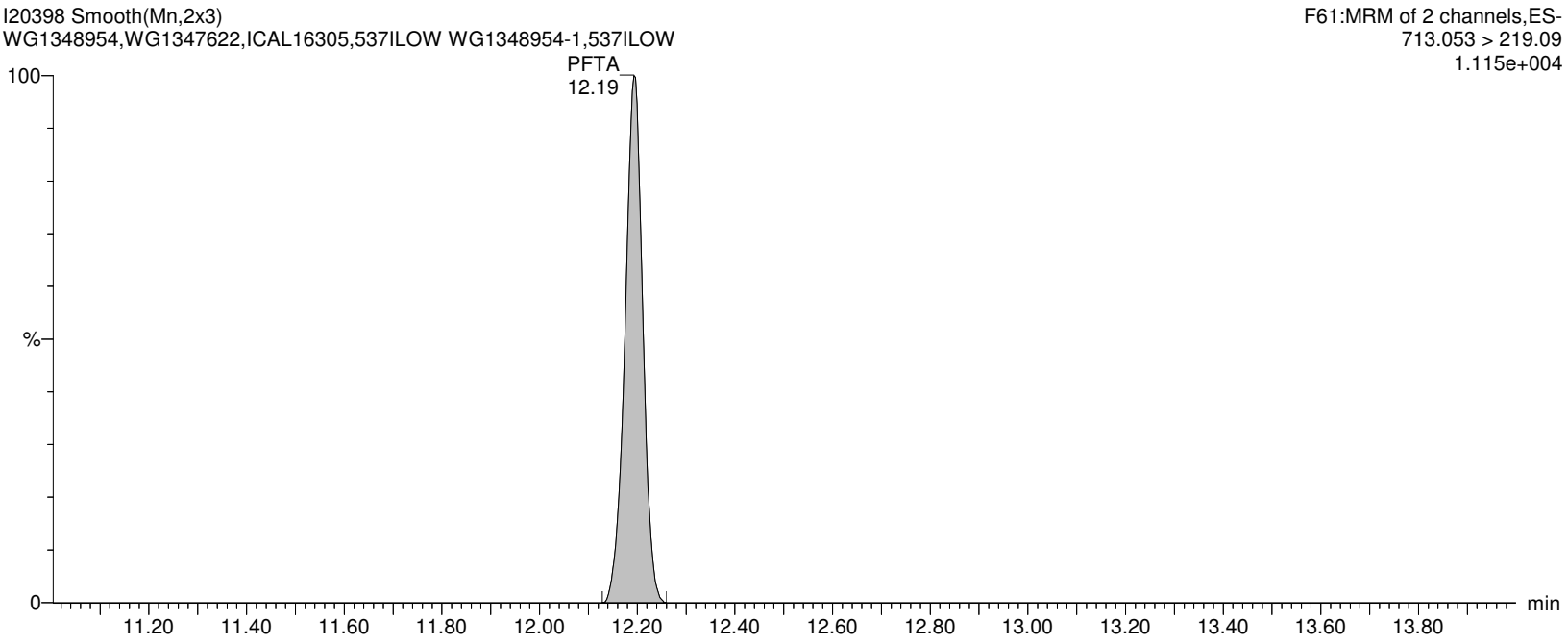
**PFTA**





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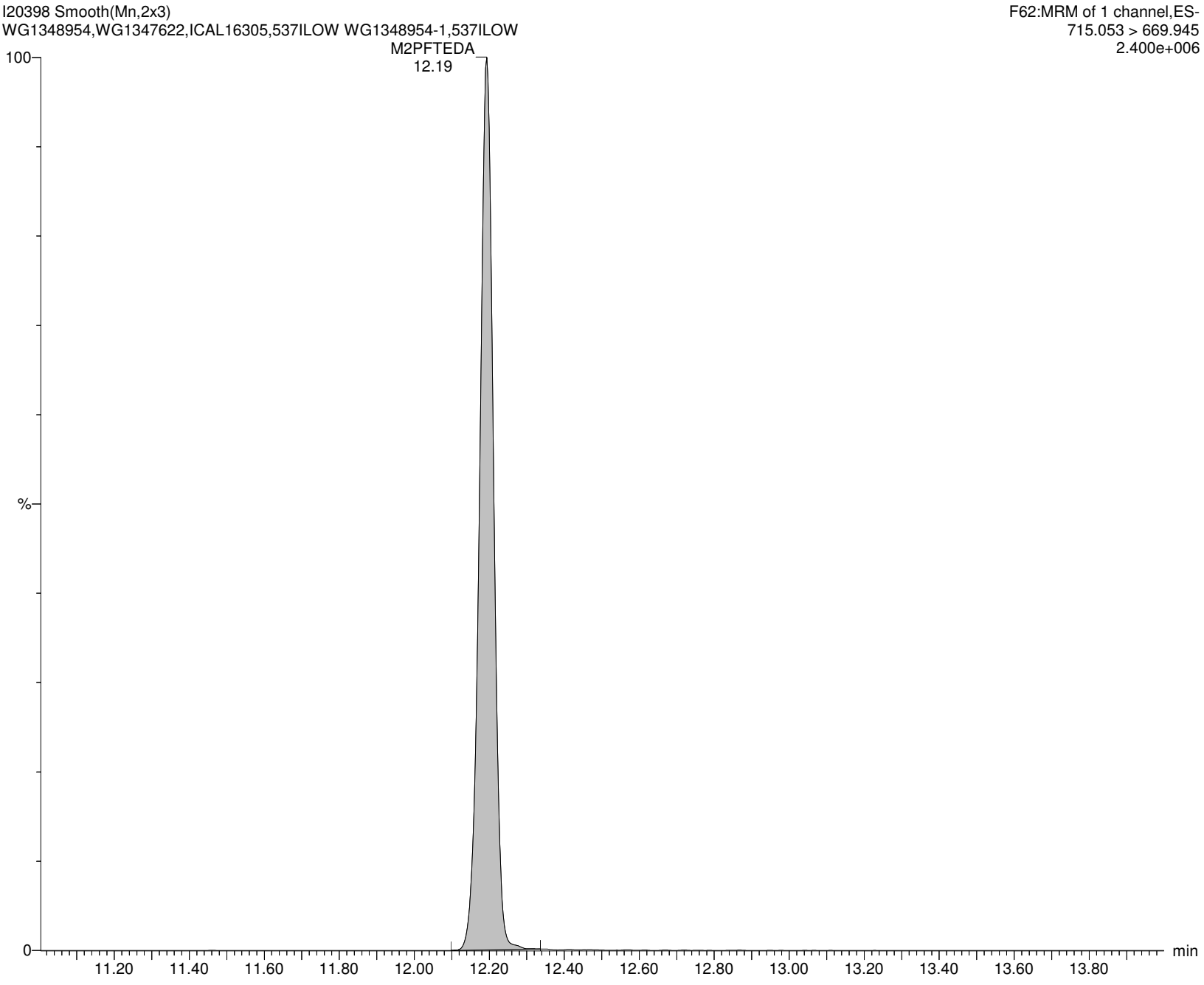
**MS Method Name: C:\MassLynx\Data\2020\200309_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**M2PFTEDA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2020\200309_537ISO.PRO\Data\WG1348954B.qld
Last Altered: Wednesday, March 11, 2020 19:42:58 Eastern Daylight Time
Printed: Thursday, March 12, 2020 03:41:27 Eastern Daylight Time

**Method: C:\MassLynx\Data\2020\200309_537ISO.PRO\MethDB\537ISO_Q_191118_DOD_RT.mdb 07 Feb 2020 15:55:12**
**Calibration: C:\MassLynx\Data\2020\200309_537ISO.PRO\CurveDB\191118_ISO_ICAL.cdb 18 Nov 2019 14:41:42**

**ID: WG1348954-3,537ILOW**
**Name: I20434**
**Date: 10-Mar-2020**
**Time: 21:04:42**
**Description: WG1348954,WG1347969,ICAL16305,537ILOW**
**Instrument: XEVO-TQSmicro#QEB0050**
**User: LCMS02:RS**
**Inlet Method Name: C:\MassLynx\Data\2020\200309_537ISO.PRO\ACQUDB\LCMS_537_ISO_B**
**Tune Method Name: C:\MassLynx\Data\2020\200309_537ISO.PRO\ACQUDB\181009_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\2020\200309_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

| | Name | CAS | RT | Trace | Area | M Flag | Conc (ng/mL) | Ion Ratio | Ratio Flag | %Rec |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | PFBA | 375-22-4 | 2.18 | 212.926 > 169.111 | 2309 | | 0.463 | | na | 92.6 |
| 2 | M3PFBA | INT STD | 2.18 | 215.926 > 172.122 | 50678 | | 10.937 | | na | 109.4 |
| 3 | MPFBA | INT STD | 2.18 | 216.926 > 172.137 | 59736 | | 10.831 | | na | 108.3 |
| 4 | PFPeA | 2706-90-3 | 5.08 | 262.926 > 219.002 | 4483 | M4 | 0.515 | | na | 102.9 |
| 5 | M5PFPEA | INT STD | 5.07 | 267.989 > 223.081 | 90177 | | 11.528 | | na | 115.3 |
| 6 | PFBS | 375-73-5 | 5.71 | 298.926 > 79.923 | 659 | | 0.370 | 1.78 | NO | 83.7 |
| 7 | M3PFBS | INT STD | 5.71 | 301.989 > 80.254 | 12120 | | 9.971 | | na | 99.7 |
| 8 | 4:2FTS | 757124-72-4 | 6.86 | 326.926 > 306.957 | 427 | | 0.491 | 2.73 | NO | 105.0 |
| 9 | M2-4:2FTS | INT STD | 6.87 | 329.117 > 309.079 | 7856 | | 9.955 | | na | 99.5 |
| 10 | PFHxA | 307-24-4 | 6.95 | 312.989 > 269.028 | 5439 | | 0.550 | 19.34 | NO | 109.9 |
| 11 | M5PFHxA | INT STD | 6.95 | 317.989 > 273.045 | 107497 | | 10.624 | | na | 106.2 |
| 12 | PFPeS | 2706-91-4 | 7.26 | 348.926 > 80.251 | 451 | | 0.359 | 1.55 | NO | 76.5 |
| 13 | PFHpA | 375-85-9 | 8.18 | 362.926 > 319.014 | 6338 | | 0.477 | 5.85 | NO | 95.3 |
| 14 | M4PFHpA | INT STD | 8.18 | 366.926 > 321.979 | 147390 | | 10.935 | | na | 109.4 |
| 15 | br-PFHxS | 355-46-4 | 8.05 | 398.926 > 80.295 | 55 | M5 | 0.062 | 1.85 | NO | 73.3 |
| 16 | L-PFHxS | 355-46-4 | 8.33 | 398.926 > 80.295 | 297 | | 0.316 | 1.15 | NO | 85.4 |
| 17 | PFHxS | 355-46-4 | | 398.926 > 80.295 | 352 | | 0.378 | | na | |
| 18 | M3PFHxS | INT STD | 8.33 | 401.926 > 80.317 | 7508 | | 10.702 | | na | 107.0 |
| 19 | br-PFOA | 335-67-1 | | 412.989 > 368.9 | | | ND | 0.00 | NO | |
| 20 | L-PFOA | 335-67-1 | 9.09 | 412.989 > 368.9 | 6888 | | 0.536 | 11.71 | NO | 107.2 |
| 21 | PFOA | 335-67-1 | | 412.989 > 368.9 | 6888 | | 0.536 | | na | |
| 22 | M8PFOA | INT STD | 9.09 | 420.989 > 375.979 | 139972 | | 10.822 | | na | 108.2 |
| 23 | M2PFOA | INT STD | 9.09 | 415.032 > 369.968 | 132183 | | 12.504 | | na | 125.0 |
| 24 | 6:2FTS | 27619-97-2 | 9.04 | 426.989 > 406.921 | 214 | | 0.311 | | YES | 65.4 |
| 25 | M2-6:2FTS | INT STD | 9.05 | 428.989 > 408.917 | 8482 | | 10.998 | | na | 110.0 |
| 26 | PFHpS | 375-92-8 | 9.17 | 448.926 > 80.257 | 321 | | 0.532 | 1.05 | YES | 112.0 |
| 27 | PFNA | 375-95-1 | 9.84 | 462.989 > 418.931 | 5791 | M4 | 0.479 | 5.62 | NO | 95.8 |
| 28 | M9PFNA | INT STD | 9.84 | 472.053 > 426.947 | 147584 | | 11.597 | | na | 116.0 |
| 29 | br-PFOS | 1763-23-1 | 9.71 | 498.989 > 80.294 | 99 | M5 | 0.083 | 8.26 | NO | 83.1 |
| 30 | L-PFOS | 1763-23-1 | 9.90 | 498.989 > 80.294 | 341 | | 0.380 | 2.75 | YES | 104.1 |
| 31 | PFOS | 1763-23-1 | | 498.989 > 80.294 | 440 | | 0.463 | | na | |
| 32 | M4PFOS | INT STD | 9.89 | 503.032 > 80.306 | 8684 | | 12.434 | | na | 124.3 |
| 33 | M8PFOS | INT STD | 9.90 | 507.053 > 80.294 | 9147 | | 10.266 | | na | 102.7 |
| 34 | PFDA | 335-76-2 | 10.49 | 513.053 > 468.906 | 5768 | M4 | 0.471 | 6.57 | NO | 94.2 |
| 35 | M2PFDA | INT STD | 10.49 | 515.053 > 469.934 | 123646 | | 14.004 | | na | 140.0 |
| 36 | M6PFDA | INT STD | 10.49 | 519.053 > 473.931 | 142740 | | 11.170 | | na | 111.7 |
| 37 | 8:2FTS | 39108-34-4 | 10.47 | 526.926 > 506.818 | 203 | | 0.342 | | na | 71.2 |
| 38 | M2-8:2FTS | INT STD | 10.48 | 529.053 > 508.945 | 5466 | | 12.082 | | na | 120.8 |
| 39 | PFNS | 68259-12-1 | 10.51 | 548.989 > 80.249 | 487 | | 0.573 | 1.55 | YES | 119.4 |


all concentration units in (ng/mL)

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Last Altered: Wednesday, March 11, 2020 19:42:58 Eastern Daylight Time
Printed: Thursday, March 12, 2020 03:41:27 Eastern Daylight Time

**ID: WG1348954-3,537ILOW**
**Name: I20434**
**Date: 10-Mar-2020**
**Time: 21:04:42**
**Description: WG1348954,WG1347969,ICAL16305,537ILOW**
**Instrument: XEVO-TQSmicro#QEB0050**
**User: LCMS02:RS**
**Inlet Method Name: C:\MassLynx\Data\2020\200309_537ISO.PRO\ACQUDB\LCMS_537_ISO_B**
**Tune Method Name: C:\MassLynx\Data\2020\200309_537ISO.PRO\ACQUDB\181009_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\2020\200309_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

| | Name | CAS | RT | Trace | Area | M Flag | Conc (ng/mL) | Ion Ratio | Ratio Flag | %Rec |
|---|---|---|---|---|---|---|---|---|---|---|
| 40 | d3-NMeFOSAA | INT STD | 10.88 | 573.096 > 418.987 | 14010 | | 9.626 | | na | 96.3 |
| 41 | br-NMeFOSAA | 2355-31-9 | | 570.053 > 418.917 | | | ND | | YES | |
| 42 | L-NMeFOSAA | 2355-31-9 | 10.89 | 570.053 > 418.917 | 774 | | 0.593 | 4.60 | YES | 118.6 |
| 43 | NMeFOSAA | 2355-31-9 | | 570.053 > 418.917 | 774 | | 0.593 | | na | |
| 44 | PFUnA | 2058-94-8 | 11.04 | 562.989 > 518.903 | 6582 | | 0.520 | 9.34 | NO | 104.1 |
| 45 | M7-PFUDA | INT STD | 11.04 | 570.053 > 524.923 | 132283 | | 11.668 | | na | 116.7 |
| 46 | PFDS | 335-77-3 | 11.05 | 598.926 > 80.314 | 242 | | 0.398 | 0.95 | NO | 82.4 |
| 47 | FOSA | 754-91-6 | 10.95 | 497.989 > 78.245 | 1300 | | 0.480 | | YES | 95.9 |
| 48 | M8FOSA | INT STD | 10.94 | 506.053 > 78.286 | 25498 | | 8.439 | | na | 84.4 |
| 49 | d5-NEtFOSAA | INT STD | 11.18 | 589.117 > 418.929 | 11744 | | 9.135 | | na | 91.3 |
| 50 | br-NEtFOSAA | 2991-50-6 | | 583.989 > 418.927 | | | ND | | YES | |
| 51 | L-NEtFOSAA | 2991-50-6 | 11.19 | 583.989 > 418.927 | 341 | | 0.308 | 1.96 | NO | 61.6 |
| 52 | NEtFOSAA | 2991-50-6 | | 583.989 > 418.927 | 341 | | 0.308 | | na | |
| 53 | PFDoA | 307-55-1 | 11.52 | 612.989 > 568.967 | 5359 | | 0.484 | 15.76 | NO | 96.8 |
| 54 | MPFDOA | INT STD | 11.52 | 614.989 > 569.92 | 130663 | | 10.273 | | na | 102.7 |
| 55 | PFTrDA | 72629-94-8 | 11.93 | 663.053 > 618.969 | 5237 | M4 | 0.588 | 13.91 | NO | 117.6 |
| 56 | PFTA | 376-06-7 | 12.30 | 713.053 > 668.976 | 4050 | | 0.501 | 9.17 | NO | 100.2 |
| 57 | M2PFTEDA | INT STD | 12.30 | 715.053 > 669.945 | 100949 | | 9.993 | | na | 99.9 |
| 58 | M3HFPO-DA | INT STD | 7.37 | 331.989 > 286.995 | 4250 | | 74.998 | | na | 37.5 |
| 59 | HFPO-DA | 13252-13-6 | 7.38 | 284.819 > 169.094 | 256 | | 7.251 | 2.08 | YES | 72.5 |
| 60 | ADONA | 958445-44-8 | 8.35 | 376.926 > 251.005 | 8245 | | 0.448 | | na | 94.7 |
| 61 | PFHxDA | | 12.75 | 813.053 > 769.005 | 3787 | | 0.669 | | na | 133.7 |
| 62 | PFODA | | 12.98 | 912.989 > 869.032 | 2646 | | 0.638 | | na | 127.5 |
| 63 | M2PFHxDA | | 12.76 | 815.372 > 770.158 | 15407 | | 7.165 | | na | 71.6 |
| 64 | PFDoS | | 11.93 | 698.649 > 79.853 | 305 | | 0.491 | 2.38 | YES | 98.3 |
| 65 | 10:2FTS | | 11.54 | 626.862 > 606.896 | 305 | | 0.534 | | na | 110.8 |
| 66 | 9CL-PF3ONS | | 10.25 | 530.862 > 350.843 | 2640 | | 0.439 | | na | 94.2 |
| 67 | 11CL-PFOUdS | | 11.32 | 630.862 > 450.854 | 2255 | | 0.445 | | na | 94.5 |


all concentration units in (ng/mL)

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**Method: C:\MassLynx\Data\2020\200309_537ISO.PRO\MethDB\537ISO_Q_191118_DOD_RT.mdb 07 Feb 2020 15:55:12**
**Calibration: C:\MassLynx\Data\2020\200309_537ISO.PRO\CurveDB\191118_ISO_ICAL.cdb 18 Nov 2019 14:41:42**

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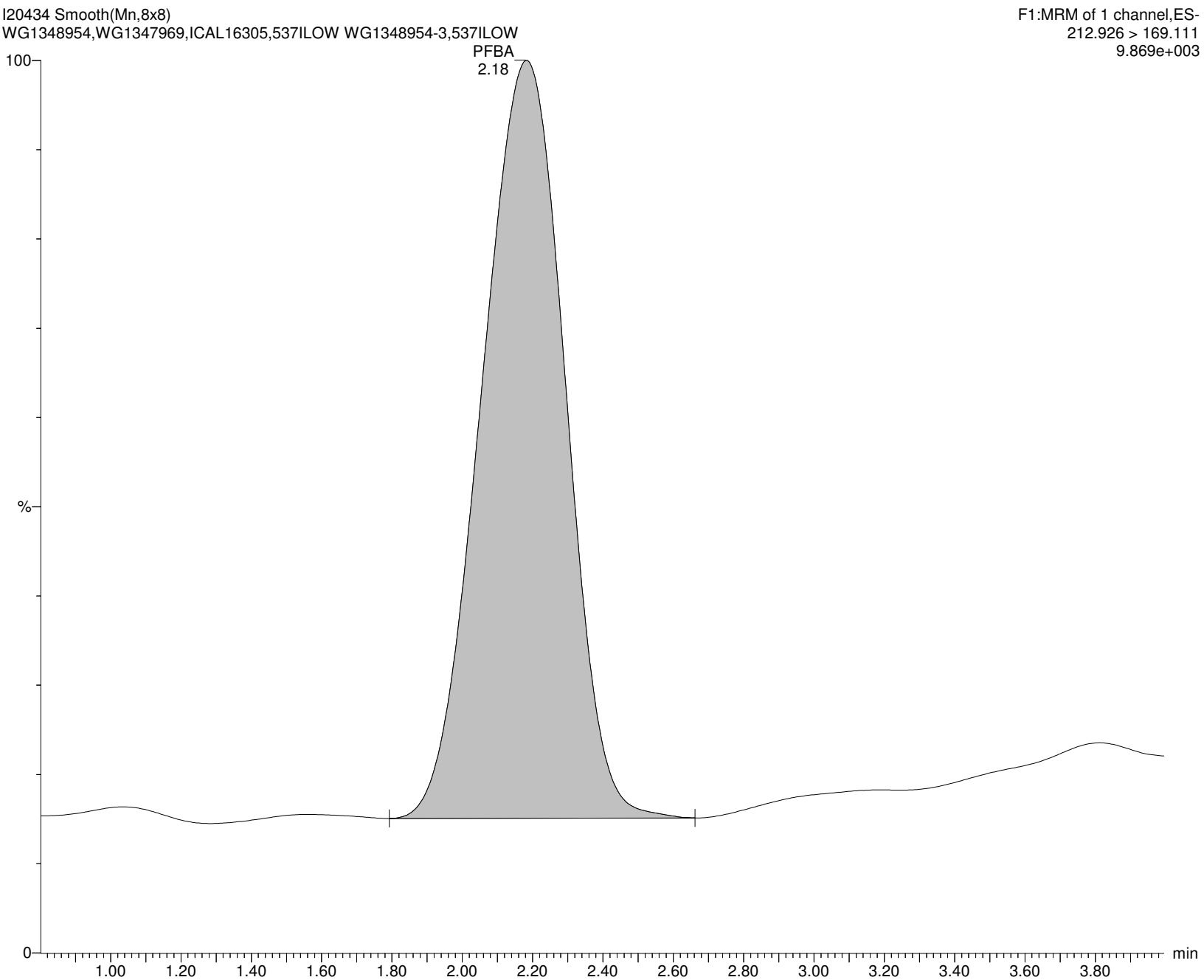
**MS Method Name: C:\MassLynx\Data\2020\200309_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**PFBA**





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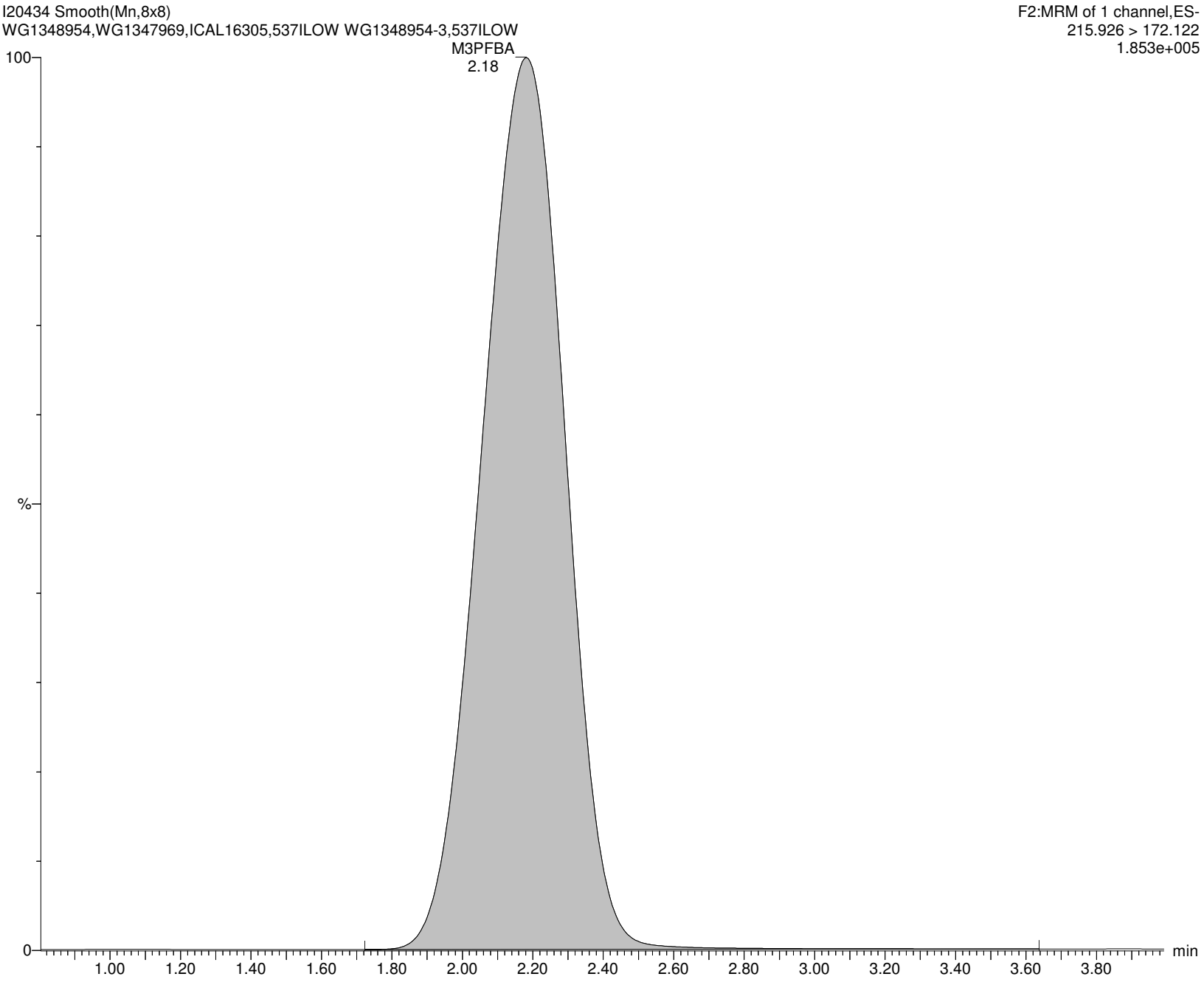
**M3PFBA**





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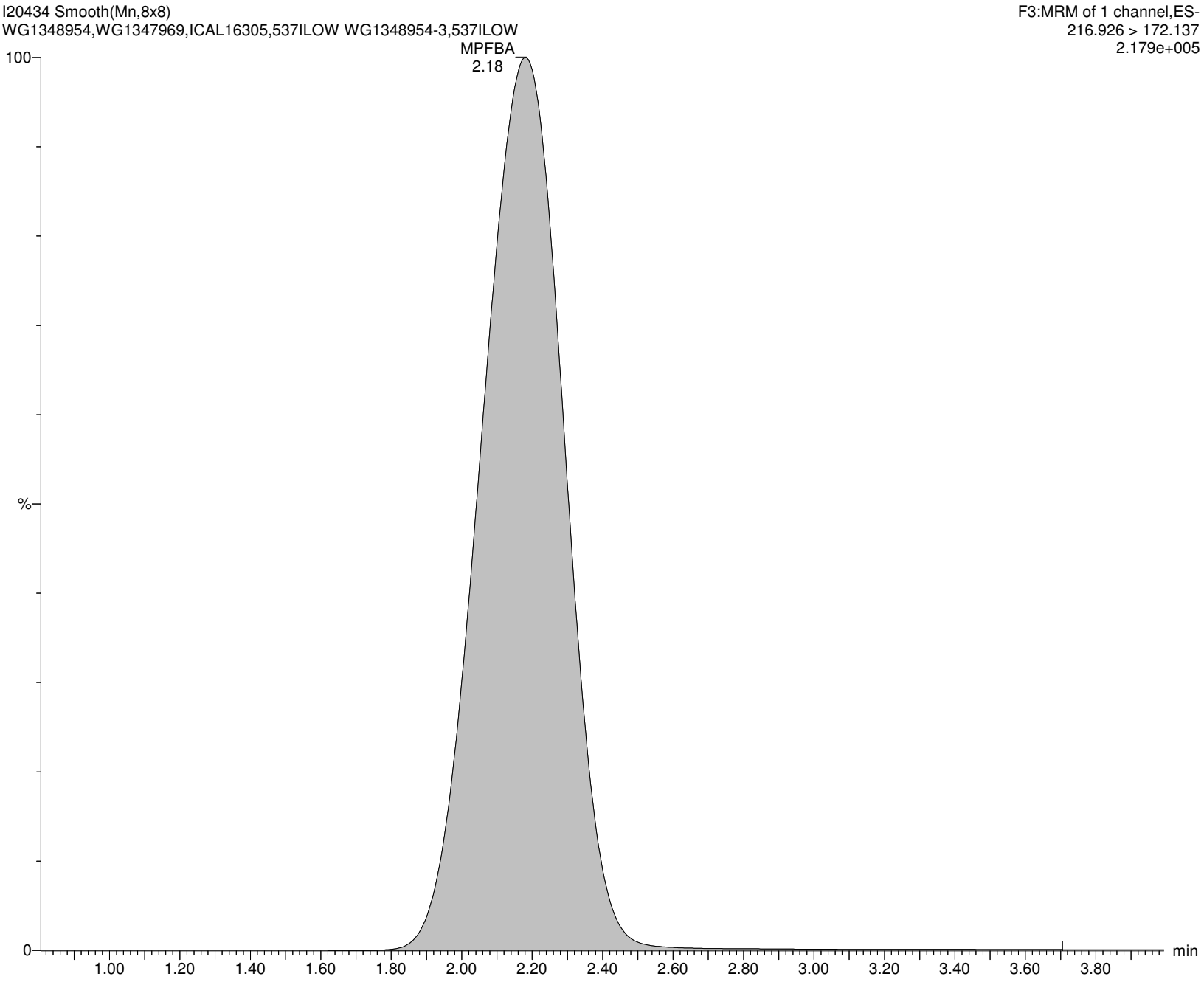
**MPFBA**





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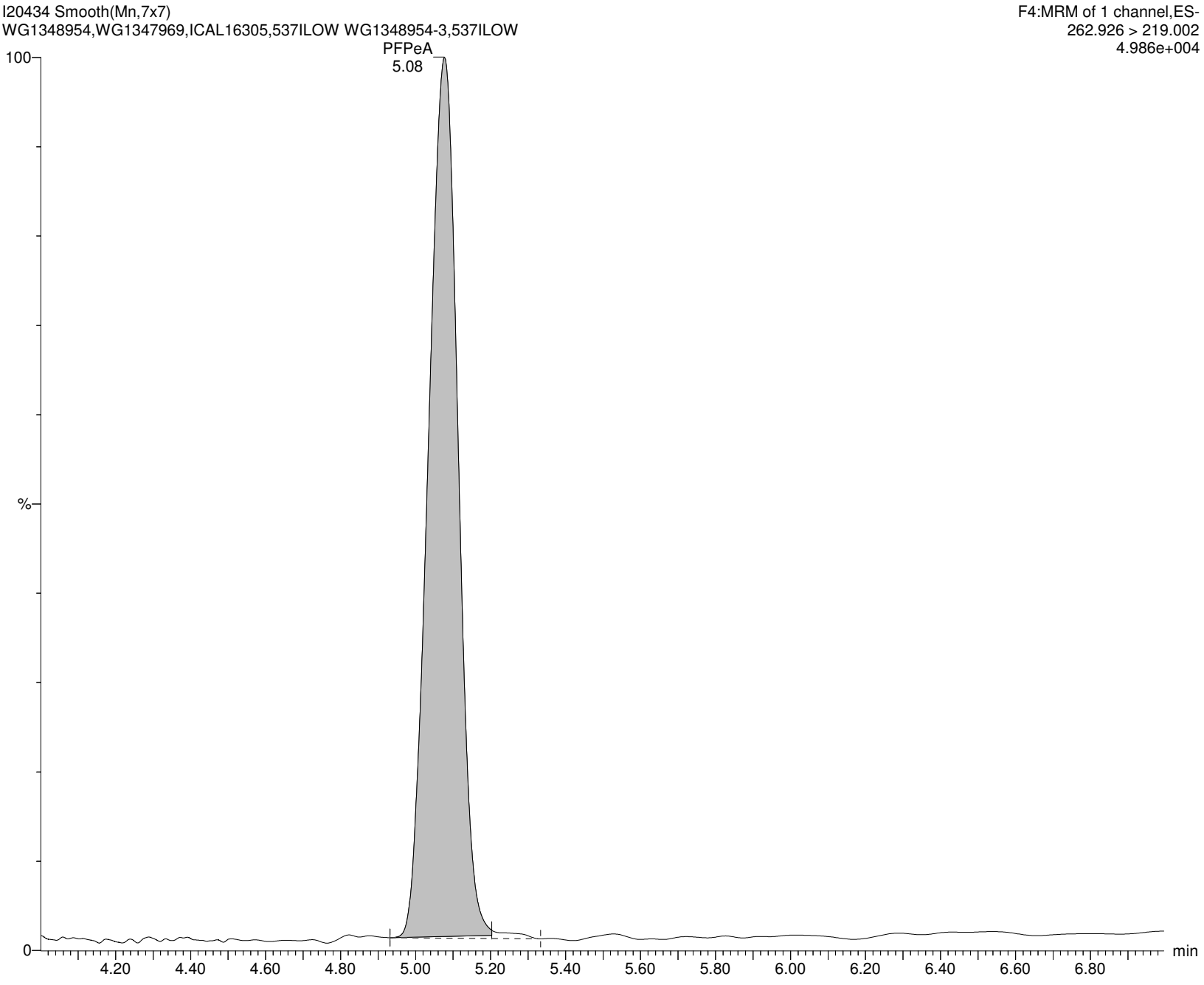
**PFPeA**





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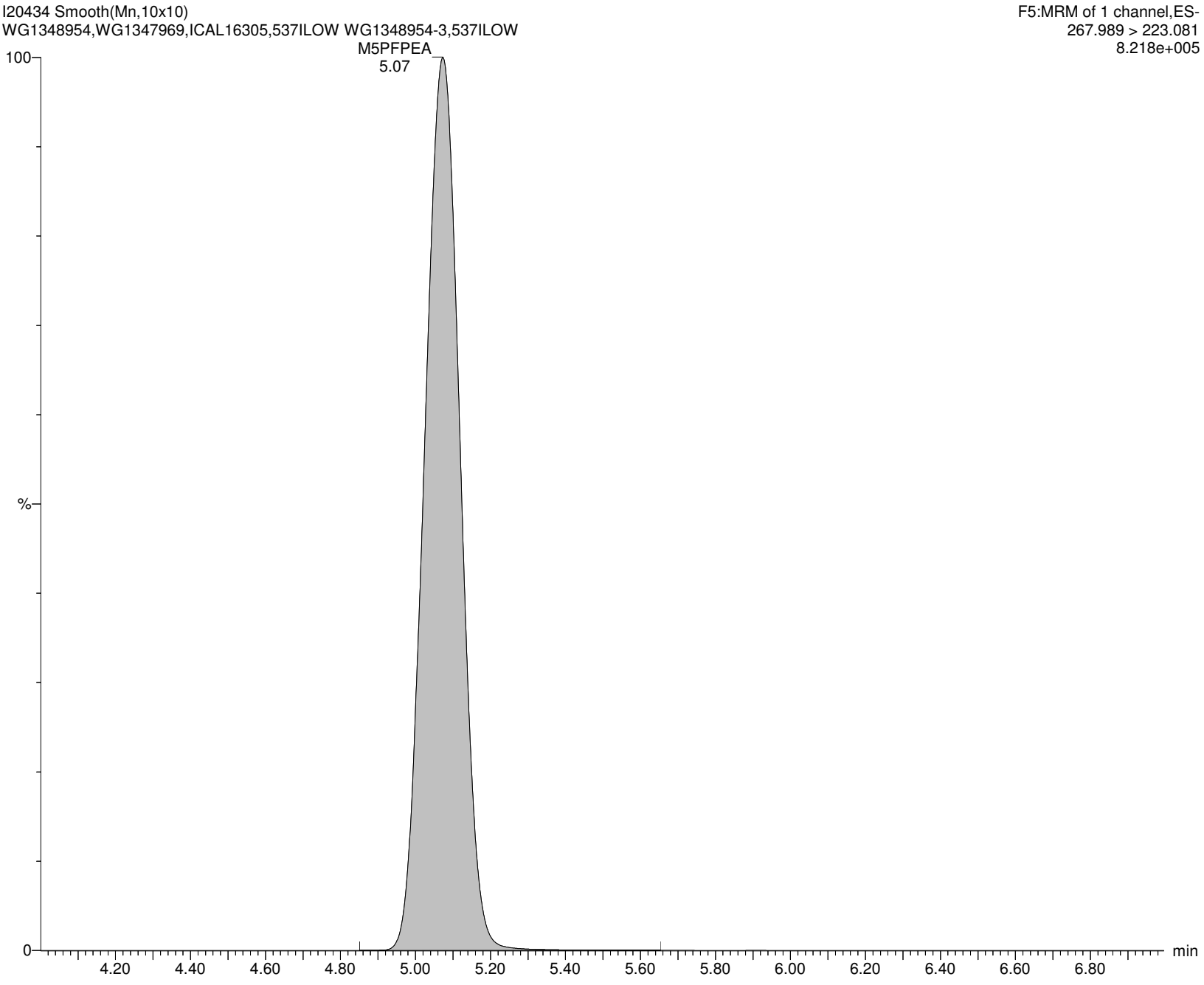
**MS Method Name: C:\MassLynx\Data\2020\200309_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**M5PFPEA**





all concentration units in (ng/mL)

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**Vial: 1:A,2**
**Instrument: XEVO-TQSmicro#QEB0050**
**Inlet Method Name: C:\MassLynx\Data\2020\200309_537ISO.PRO\ACQUDB\LCMS_537_ISO_B**
**Tune Method Name: C:\MassLynx\Data\2020\200309_537ISO.PRO\ACQUDB\181009_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\2020\200309_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

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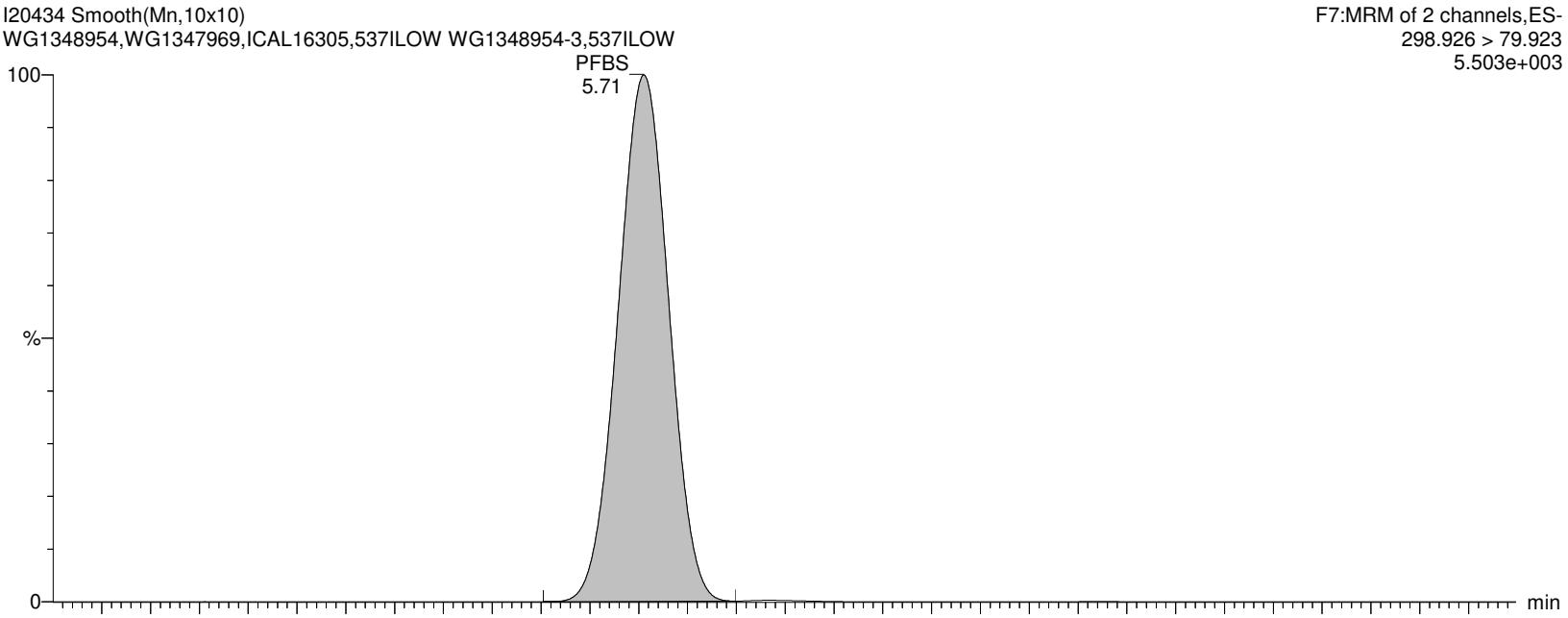


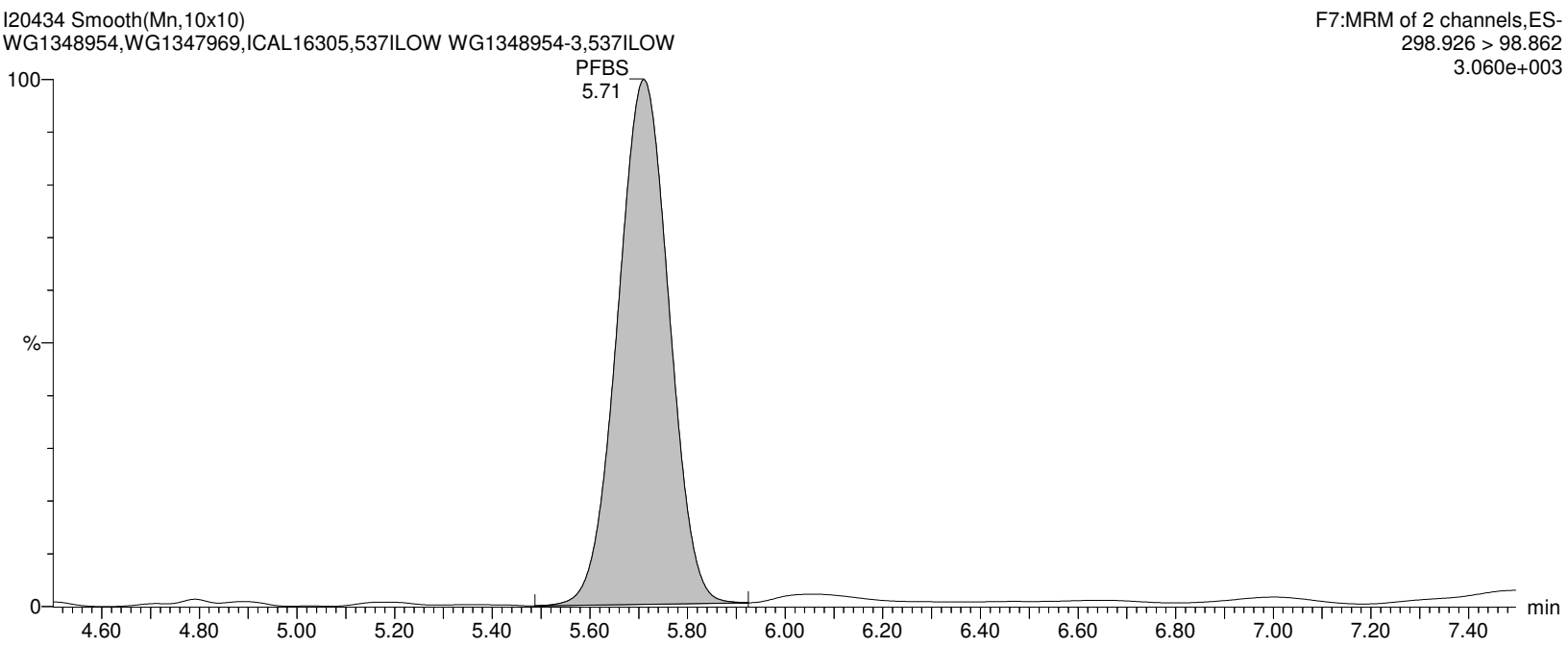



all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2020\200309_537ISO.PRO\Data\WG1348954B.qld
Last Altered: Wednesday, March 11, 2020 19:42:58 Eastern Daylight Time
Printed: Thursday, March 12, 2020 03:41:27 Eastern Daylight Time

**Name: I20434**
**ID: WG1348954-3,537ILOW**
**Date: 10-Mar-2020**
**Time: 21:04:42**
**Description: WG1348954,WG1347969,ICAL16305,537ILOW**
**User: LCMS02:RS**
**Vial: 1:A,2**
**Instrument: XEVO-TQSmicro#QEB0050**
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**Tune Method Name: C:\MassLynx\Data\2020\200309_537ISO.PRO\ACQUDB\181009_TUNE.IPR**
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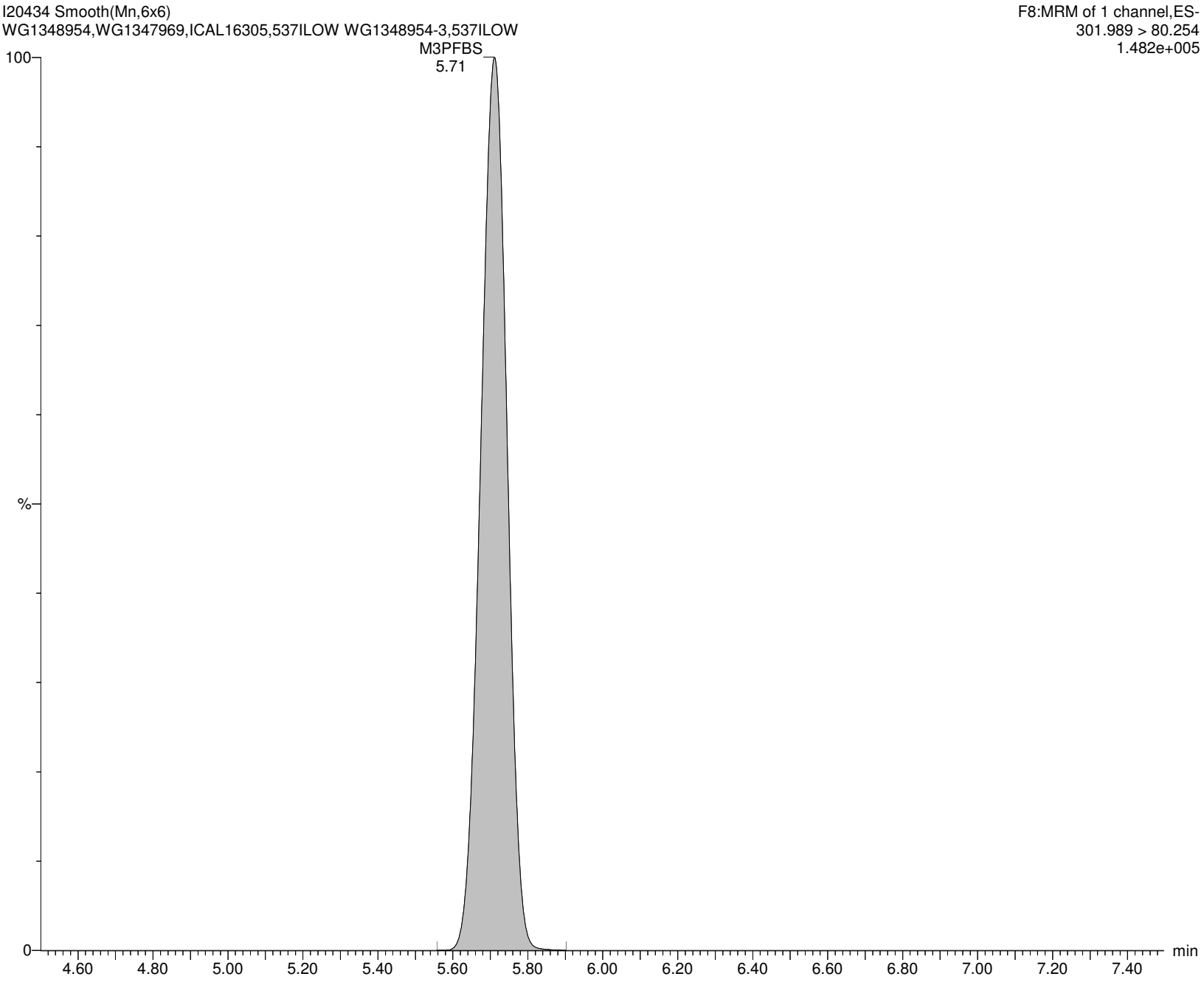



all concentration units in (ng/mL)

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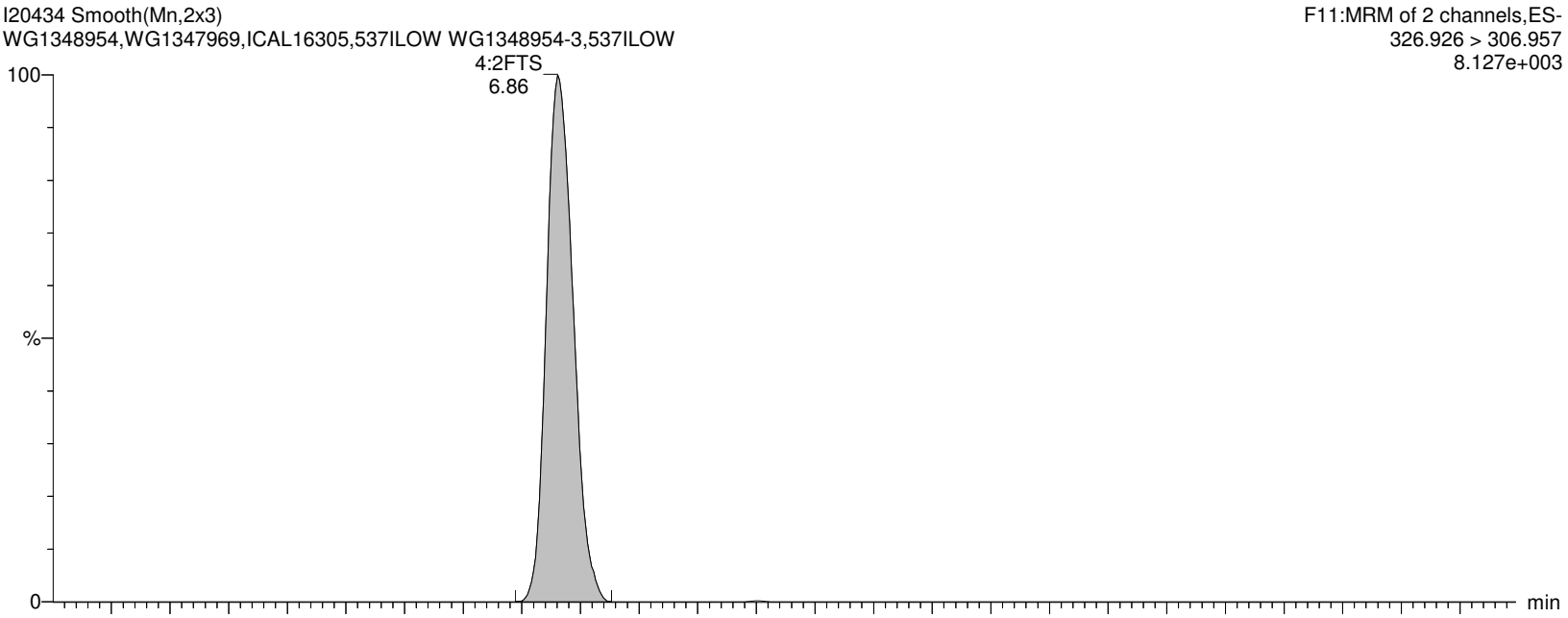


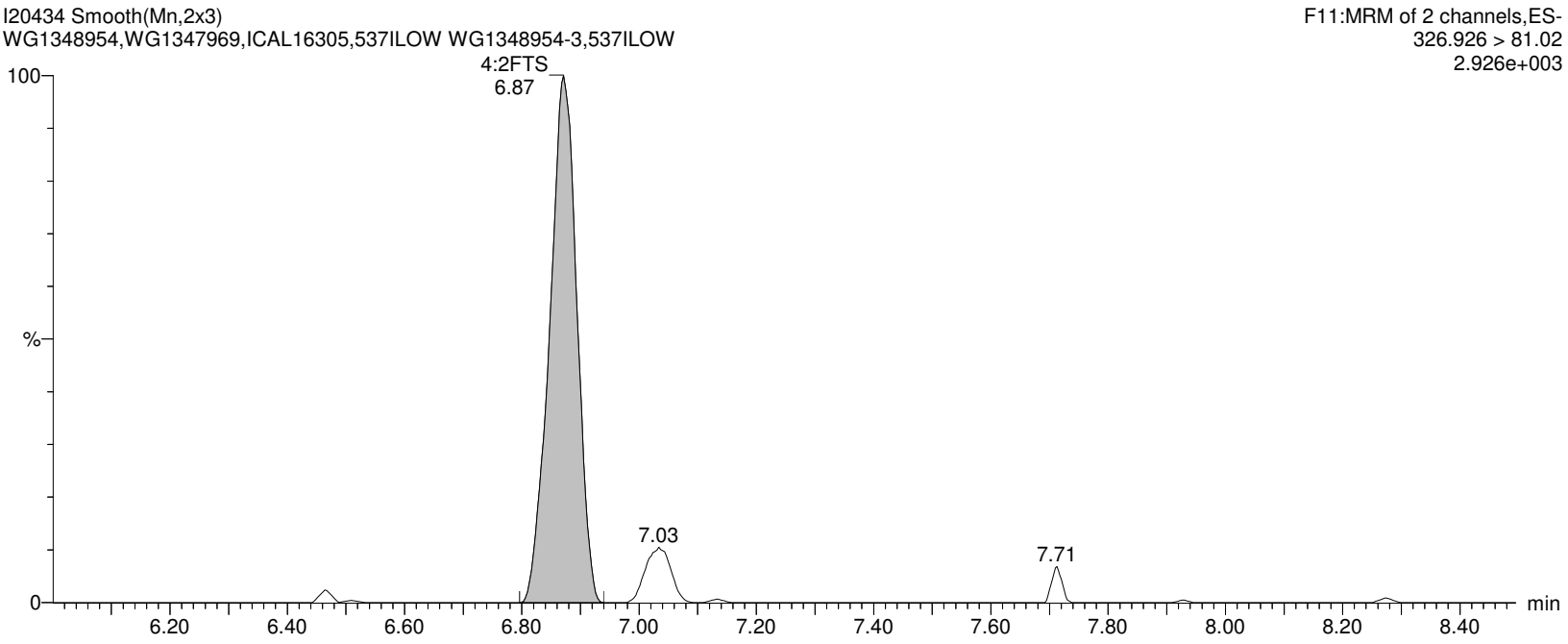



all concentration units in (ng/mL)

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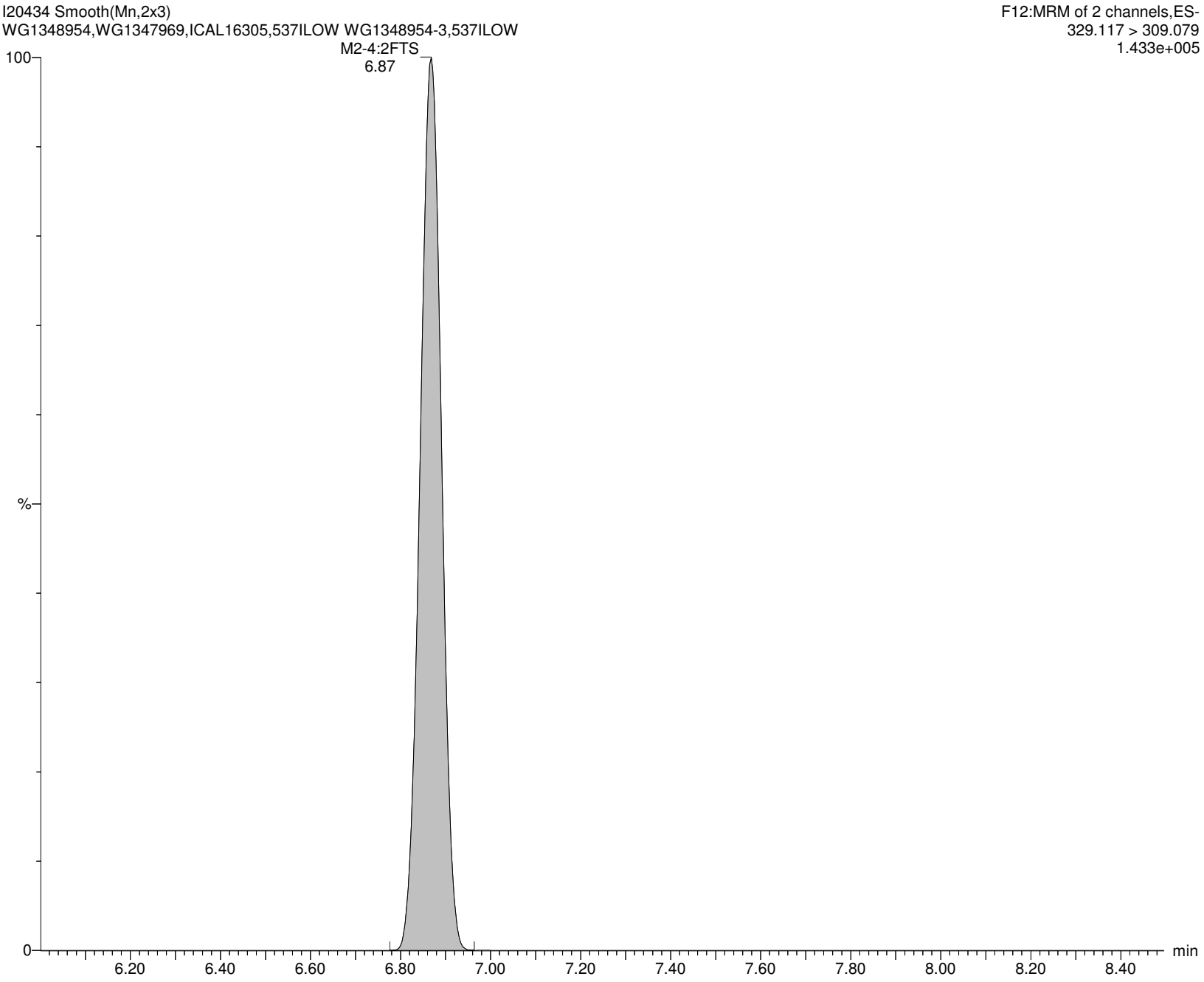
**M2-4:2FTS**





all concentration units in (ng/mL)

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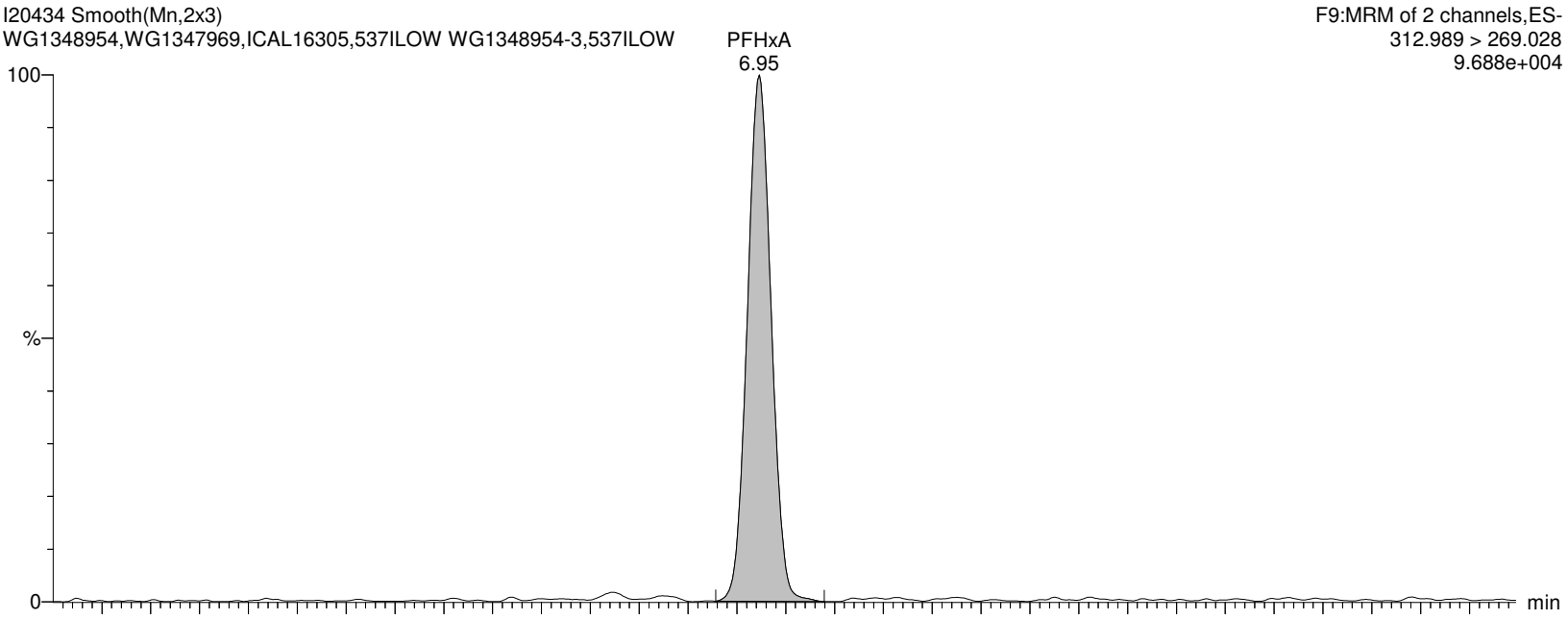
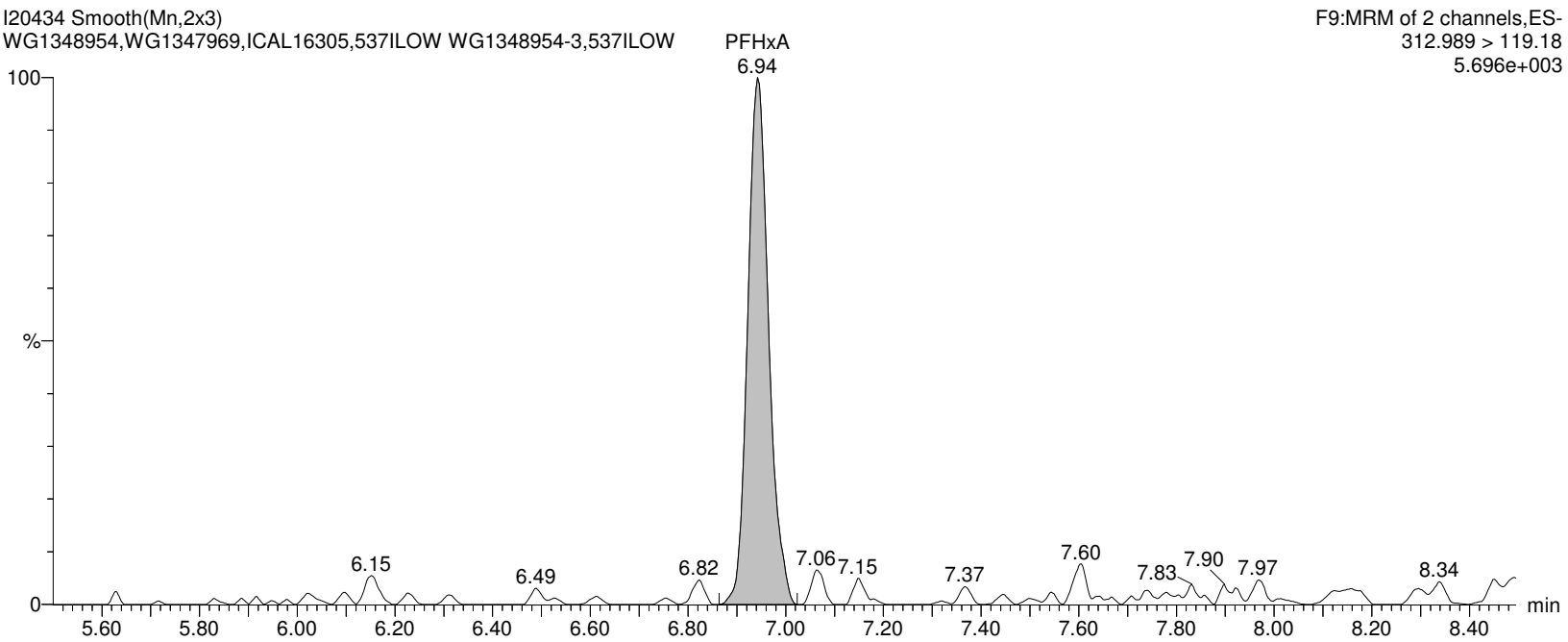
**PFHxA**





all concentration units in (ng/mL)

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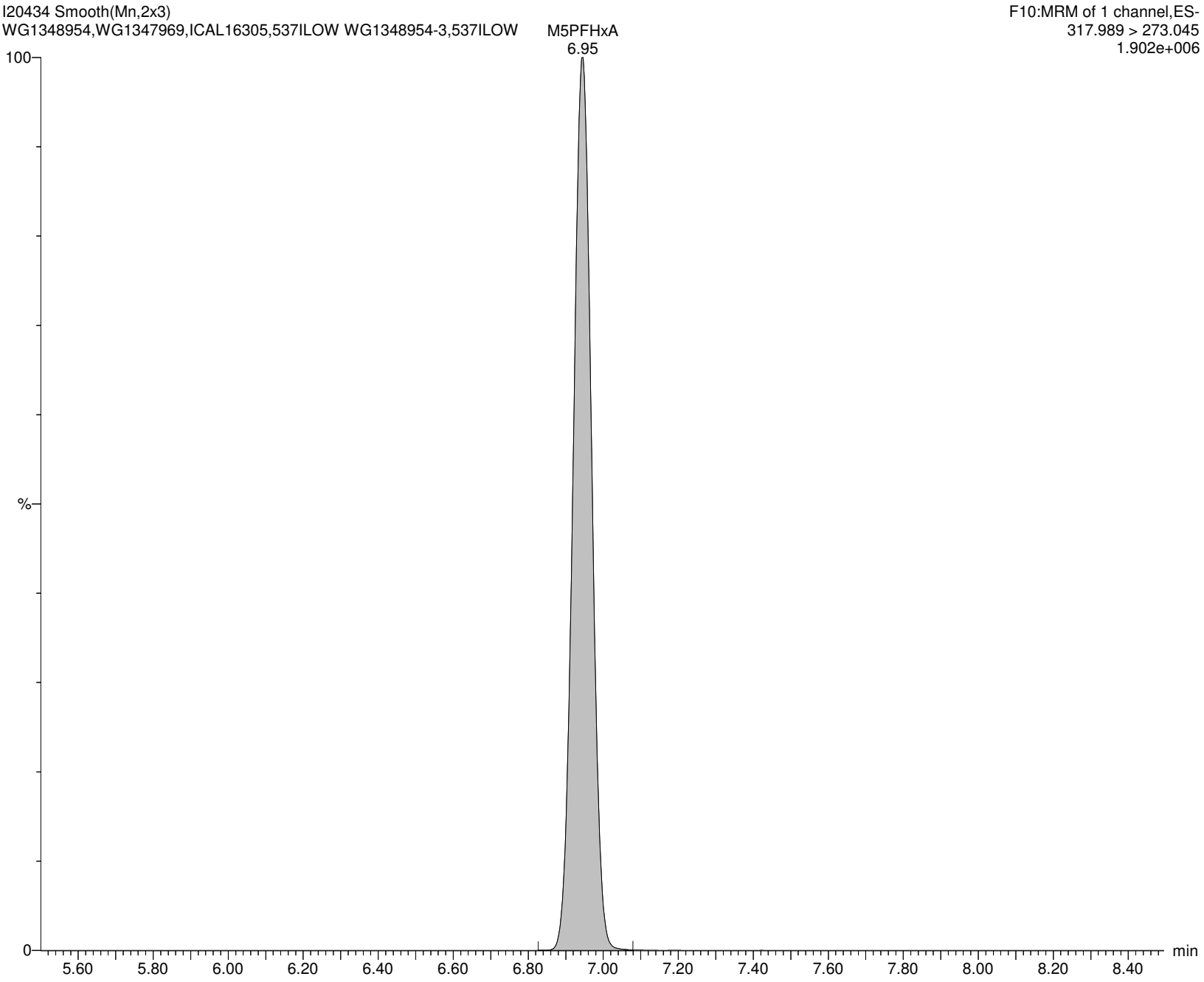
**M5PFHxA**





all concentration units in (ng/mL)

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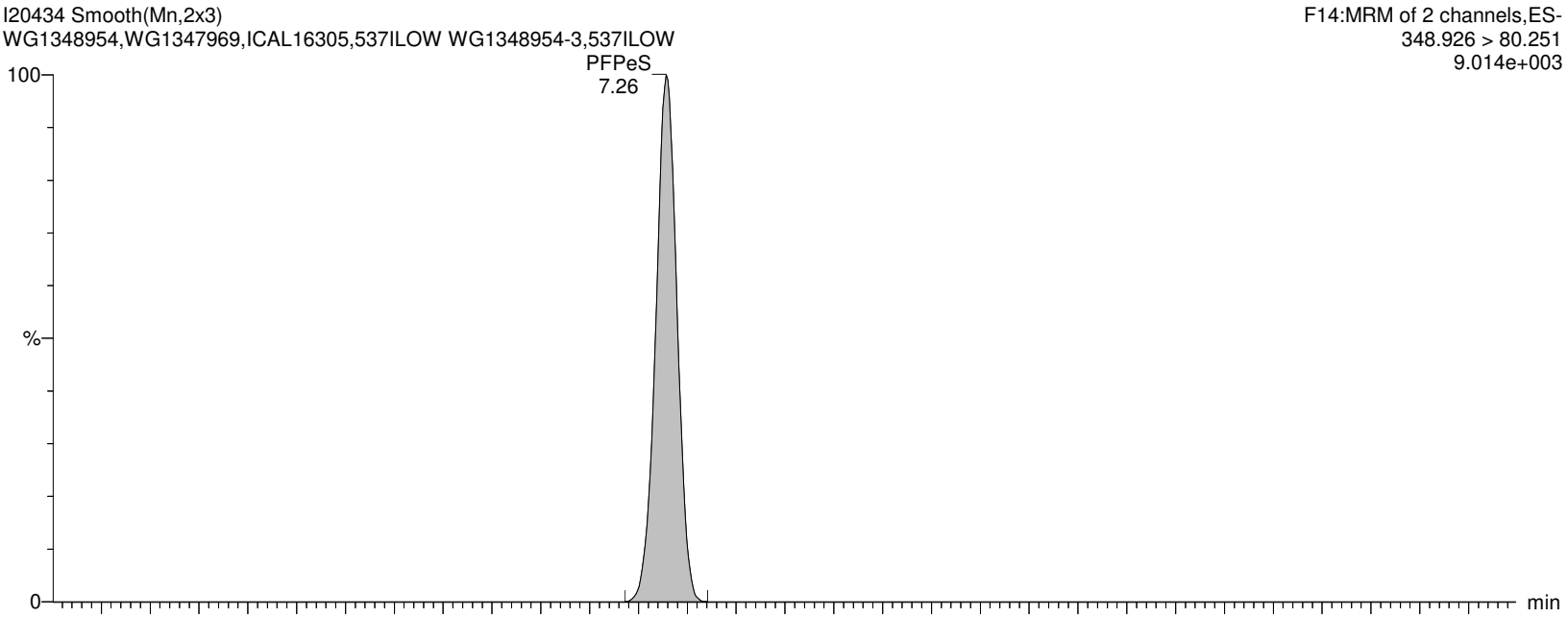
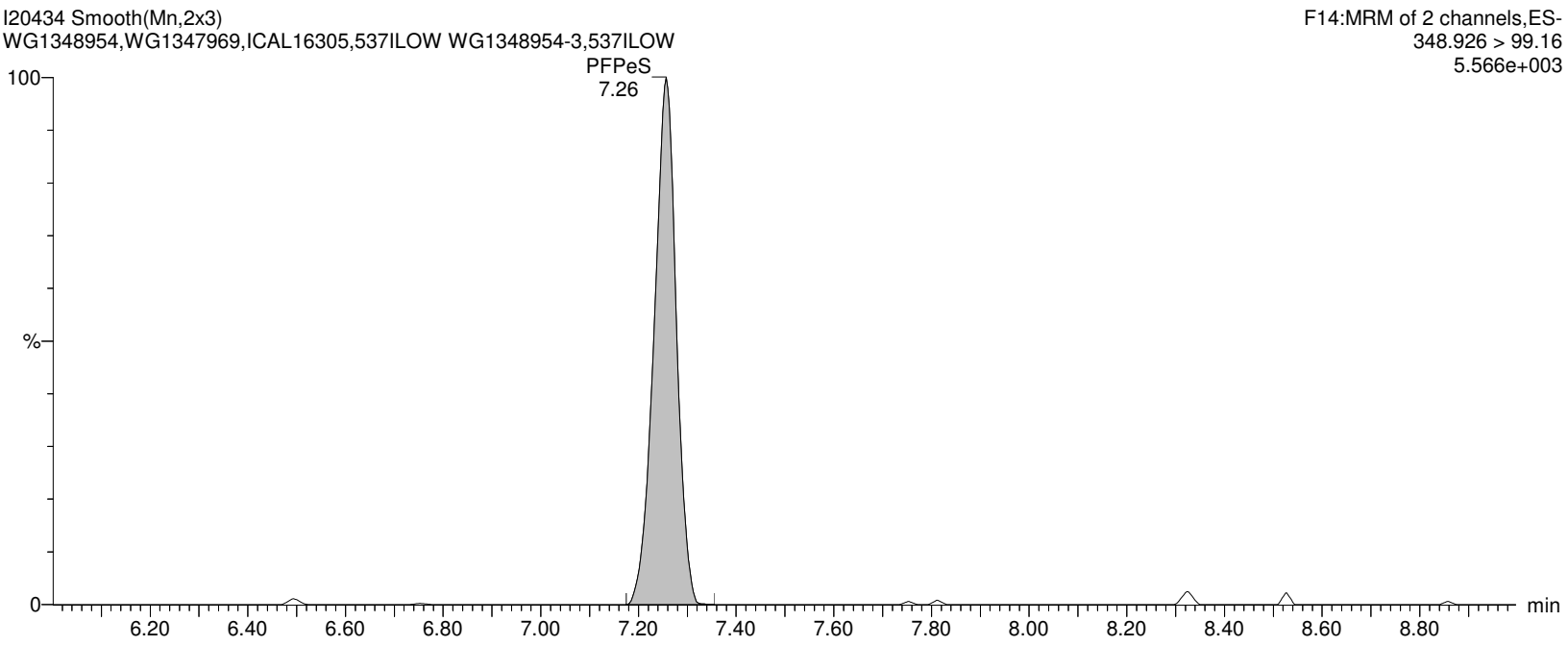
**PFPeS**





all concentration units in (ng/mL)

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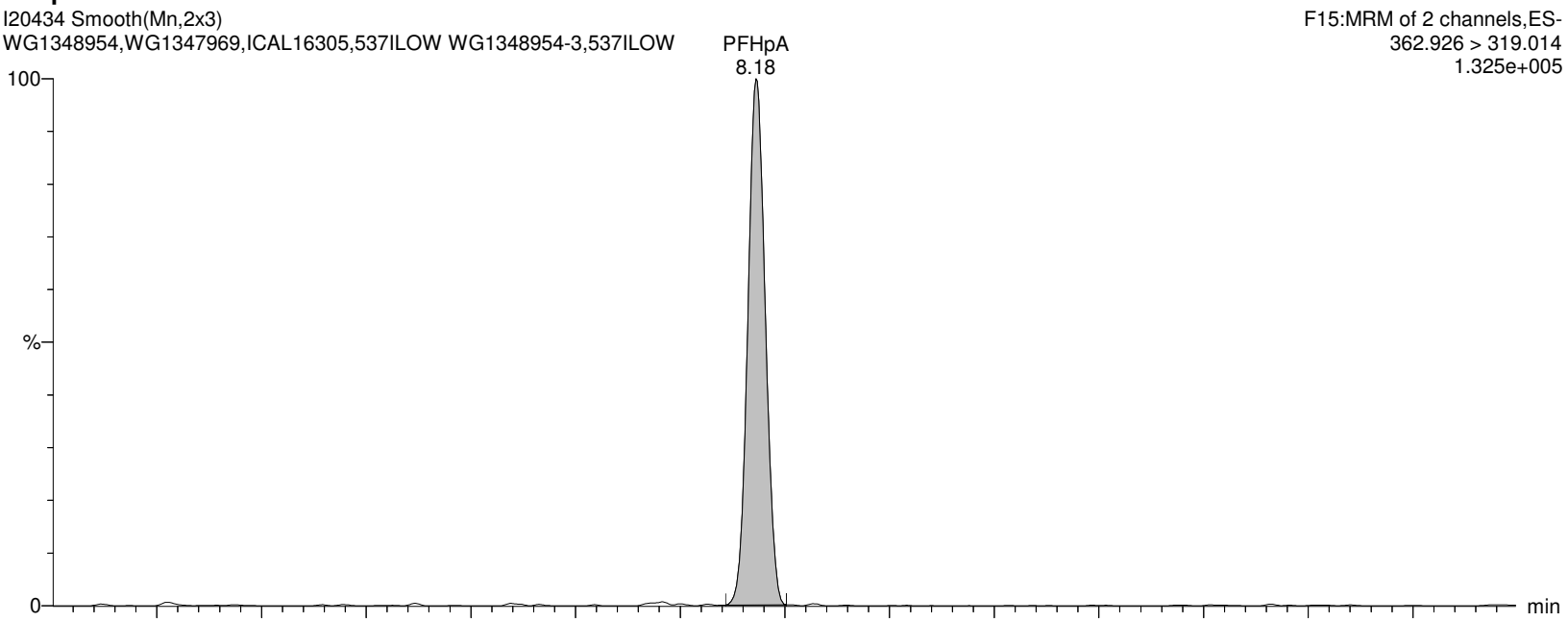
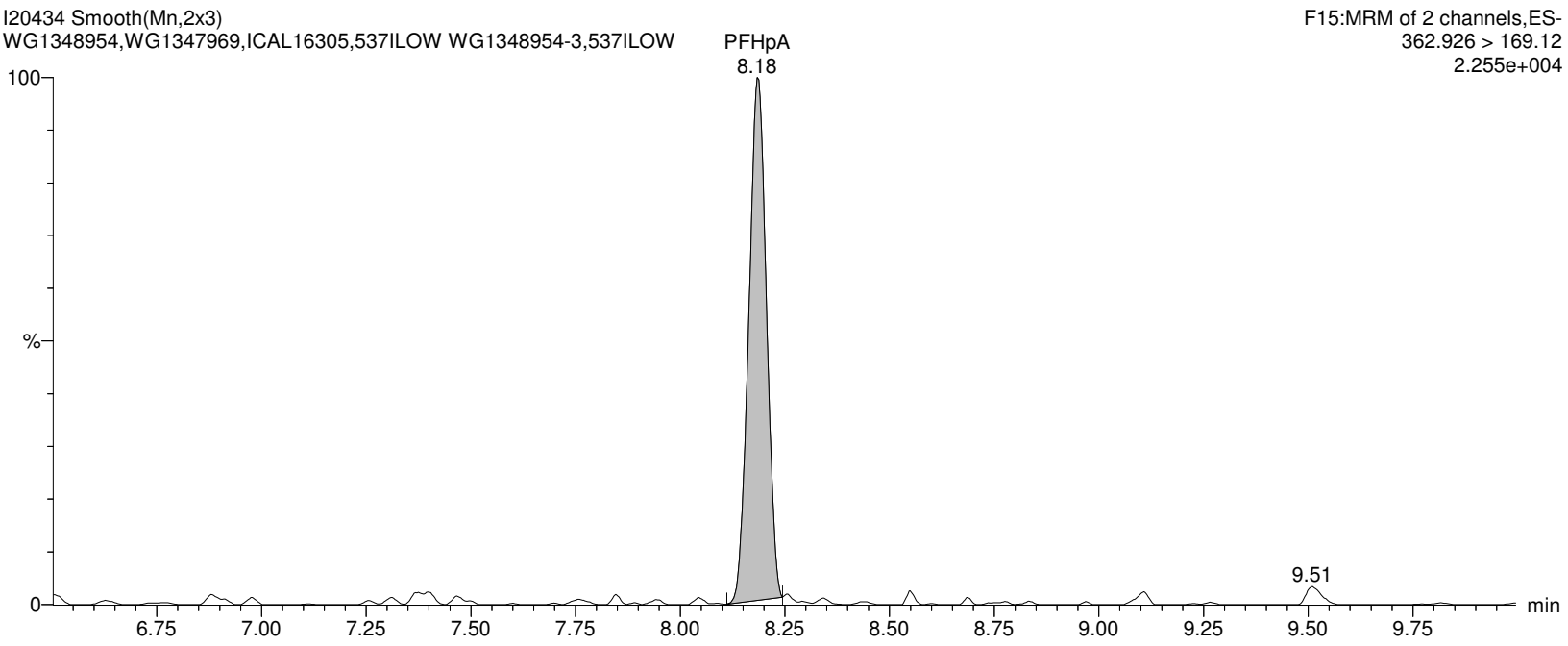
**PFHpA**





all concentration units in (ng/mL)

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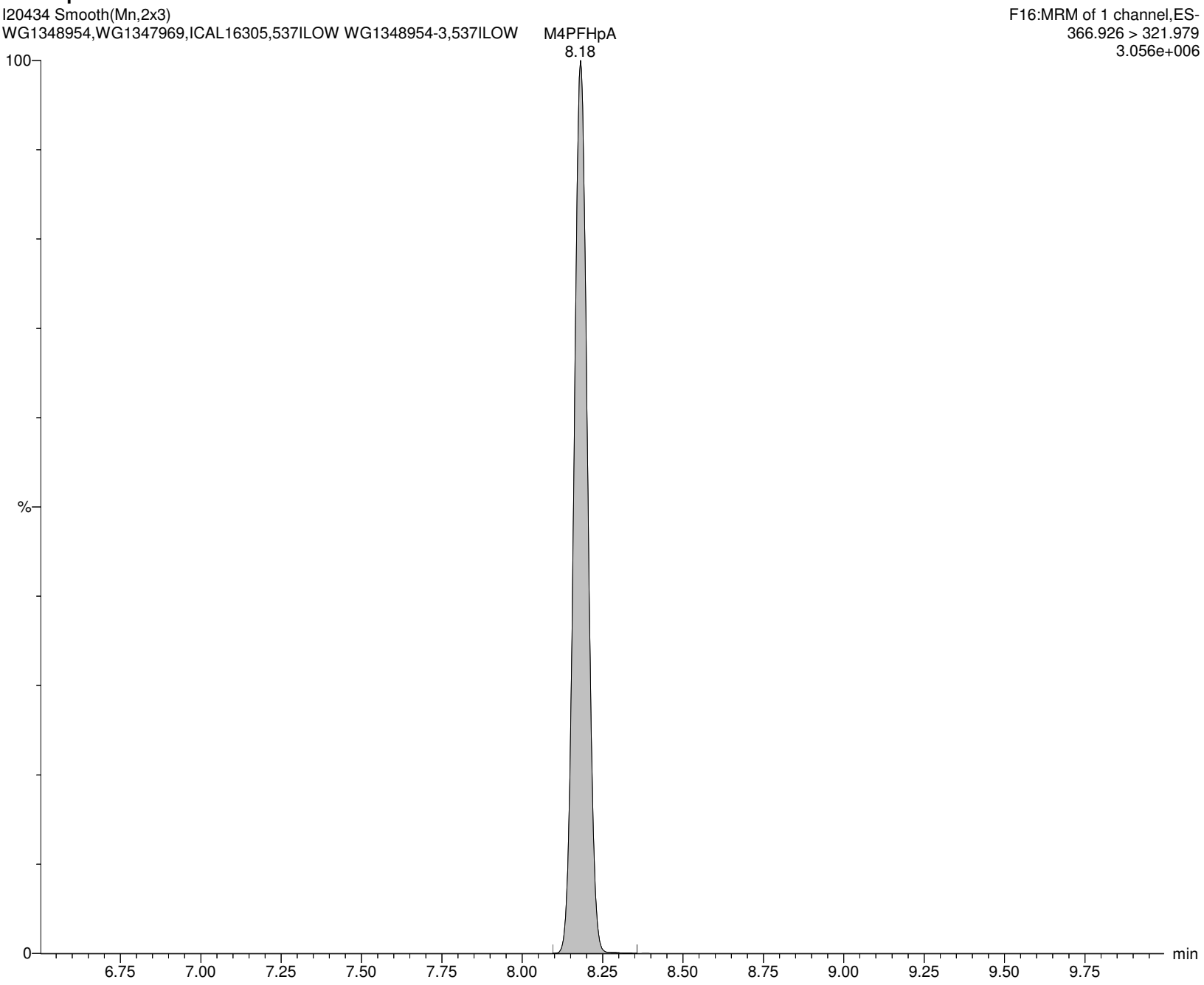
**M4PFHpA**





all concentration units in (ng/mL)

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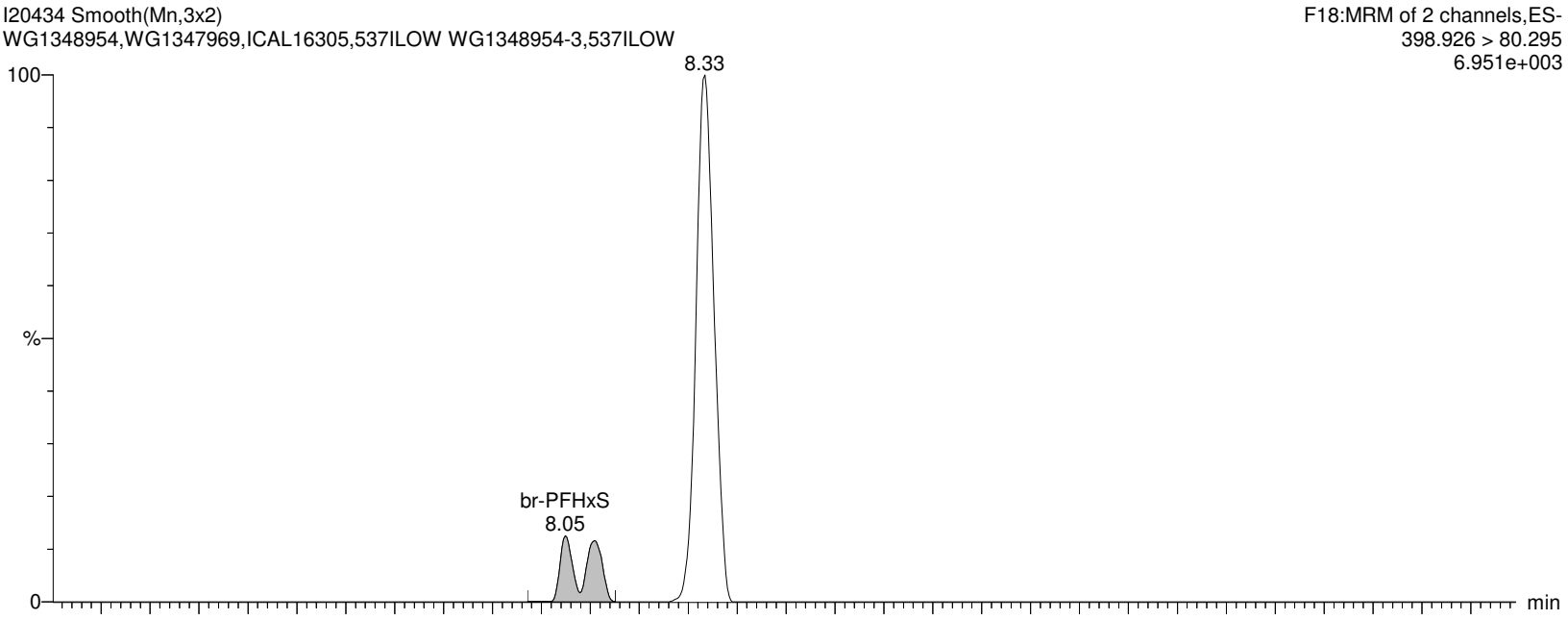
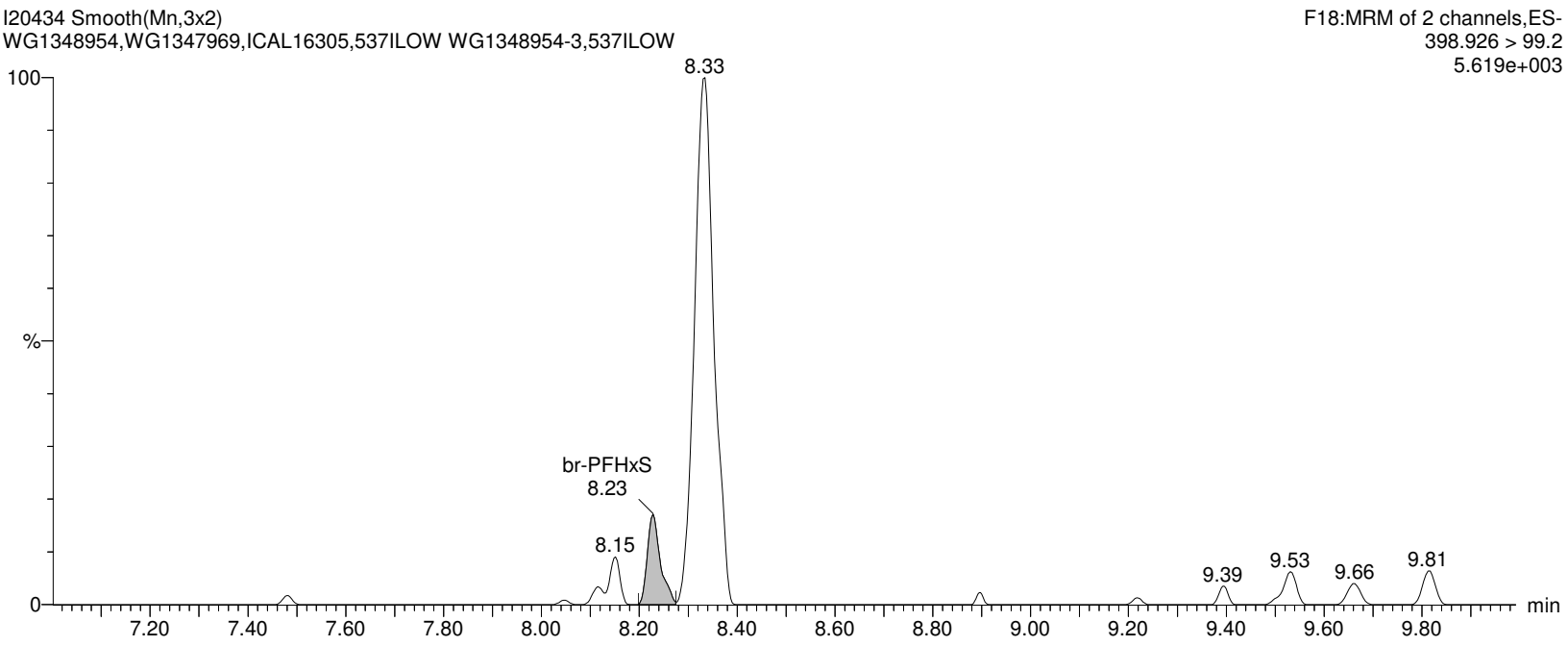
**br-PFHxS**





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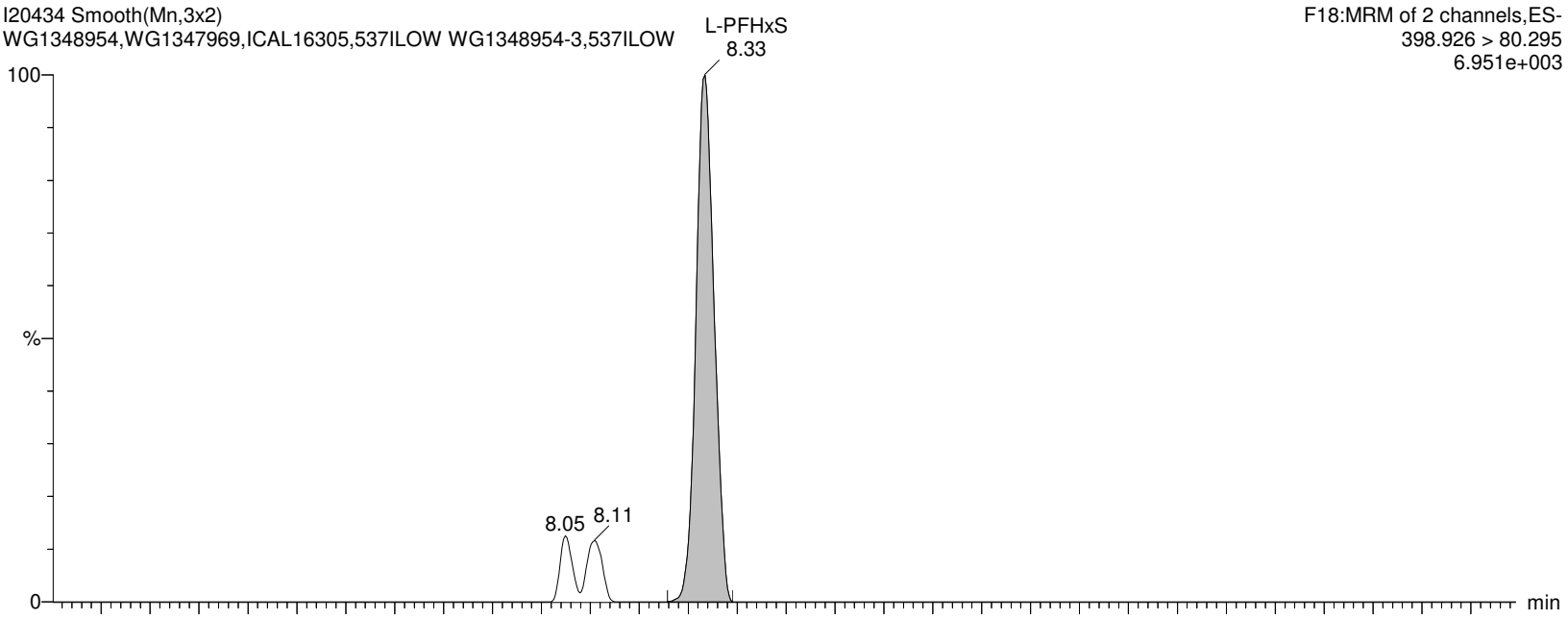
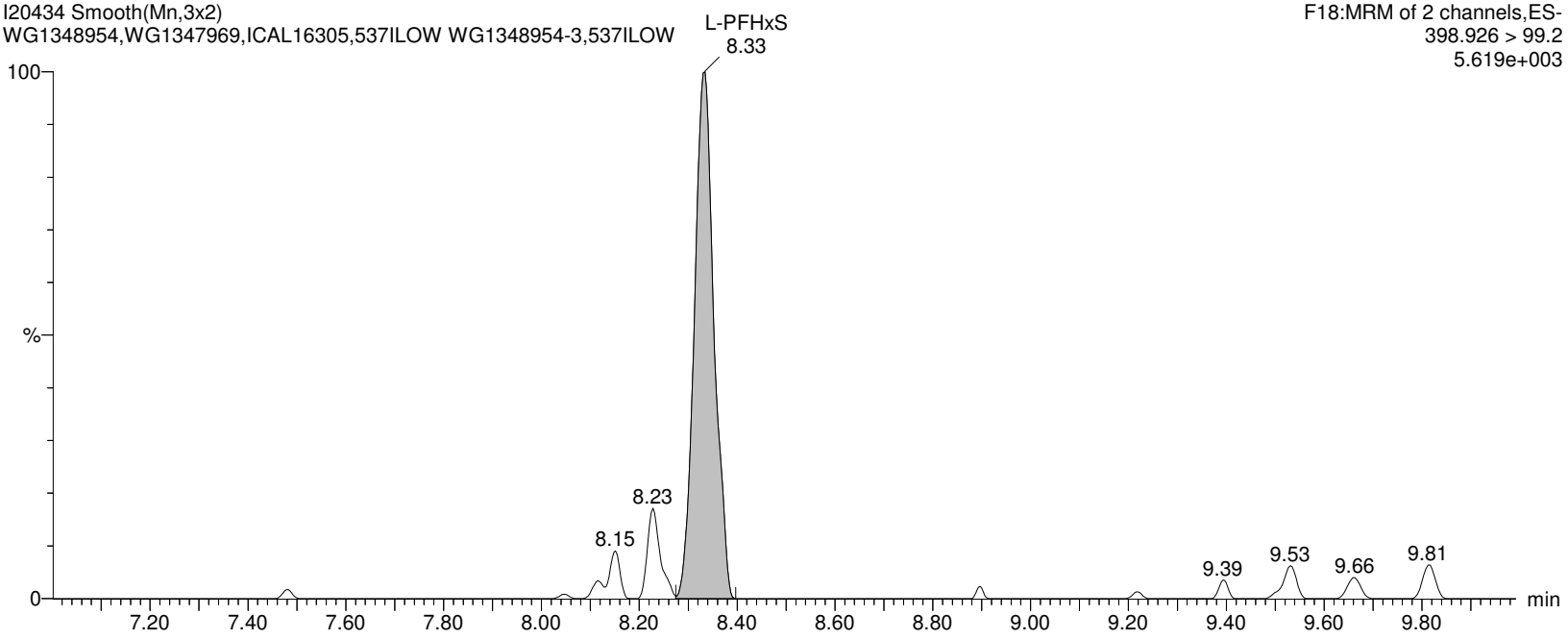
**L-PFHxS**





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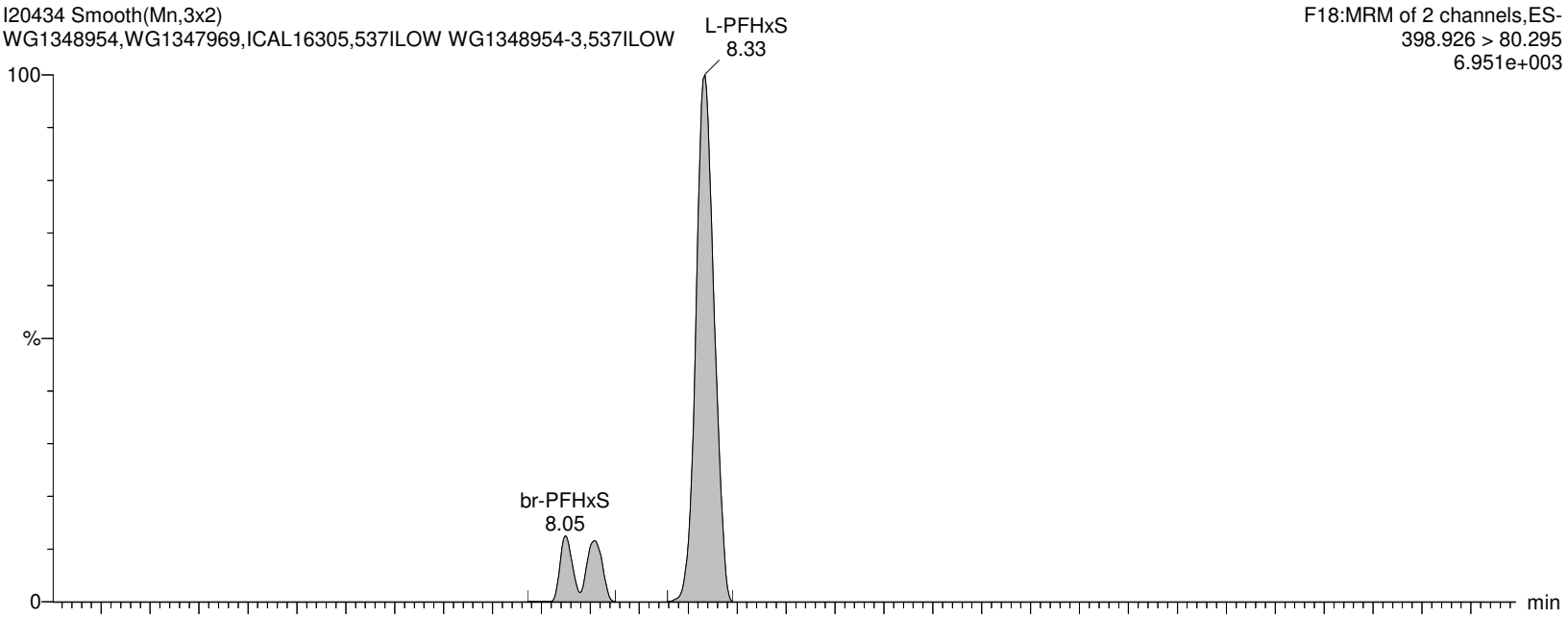


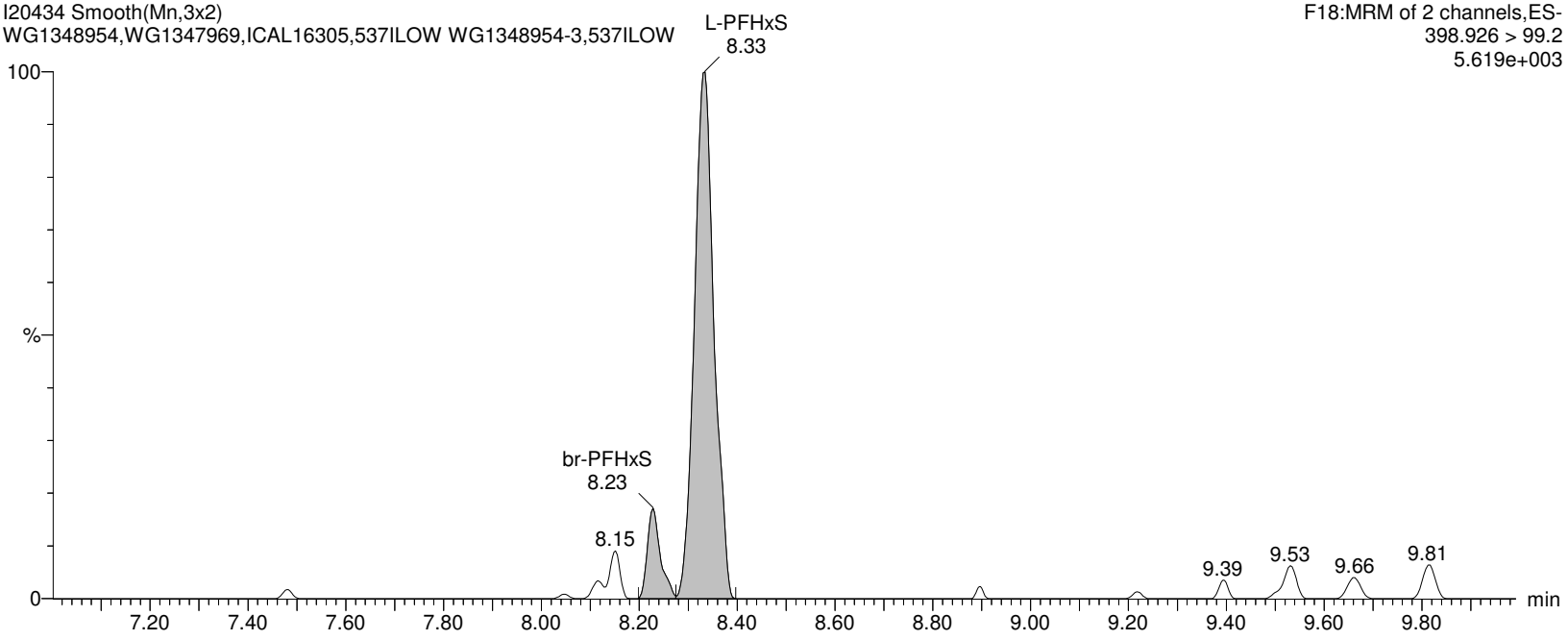



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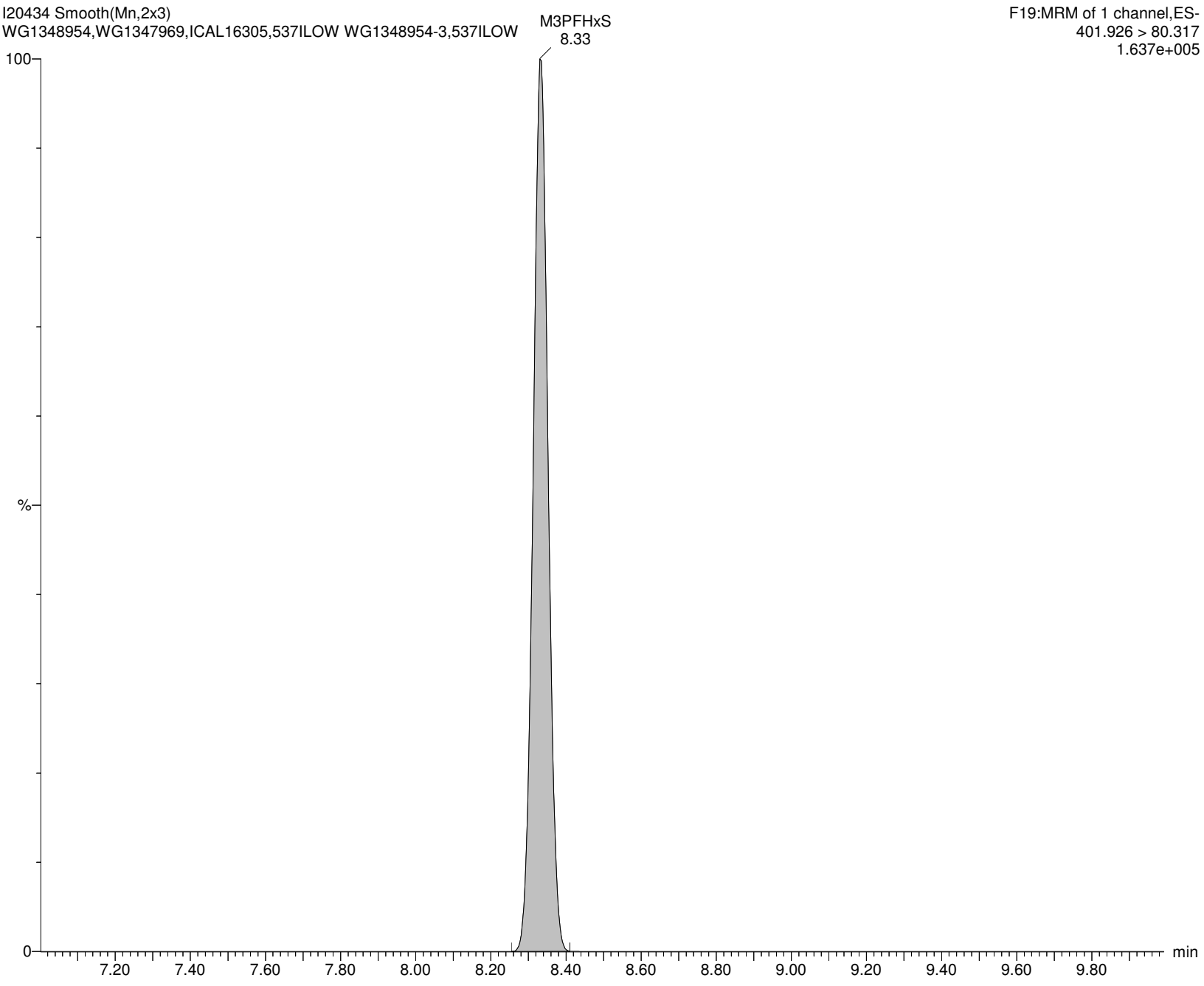



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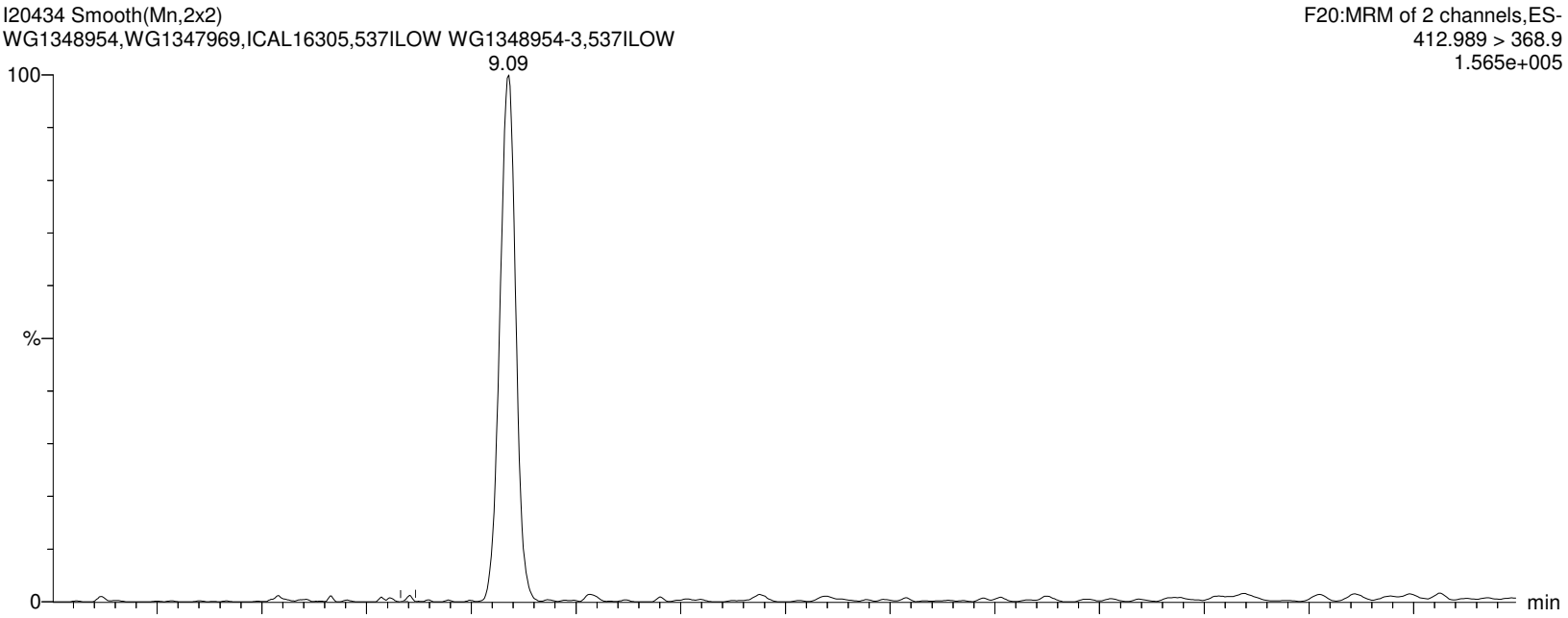


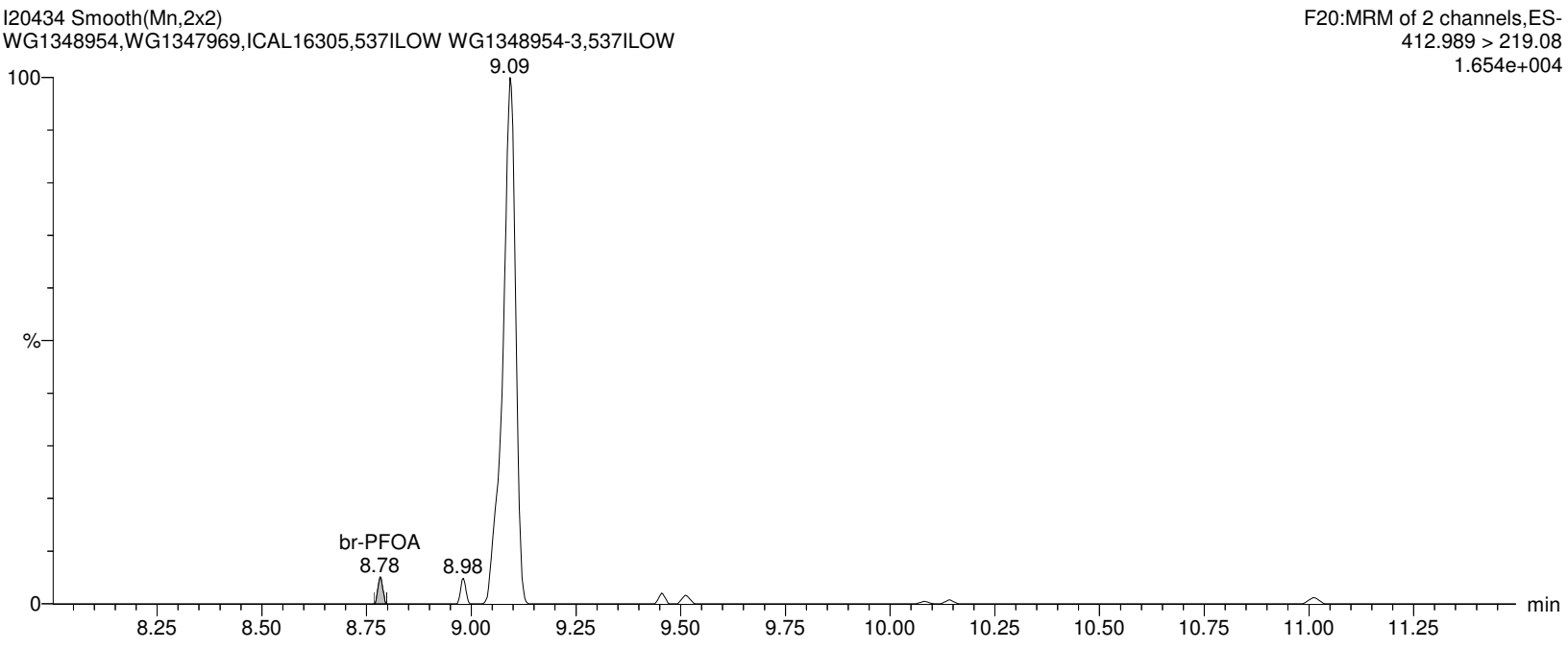



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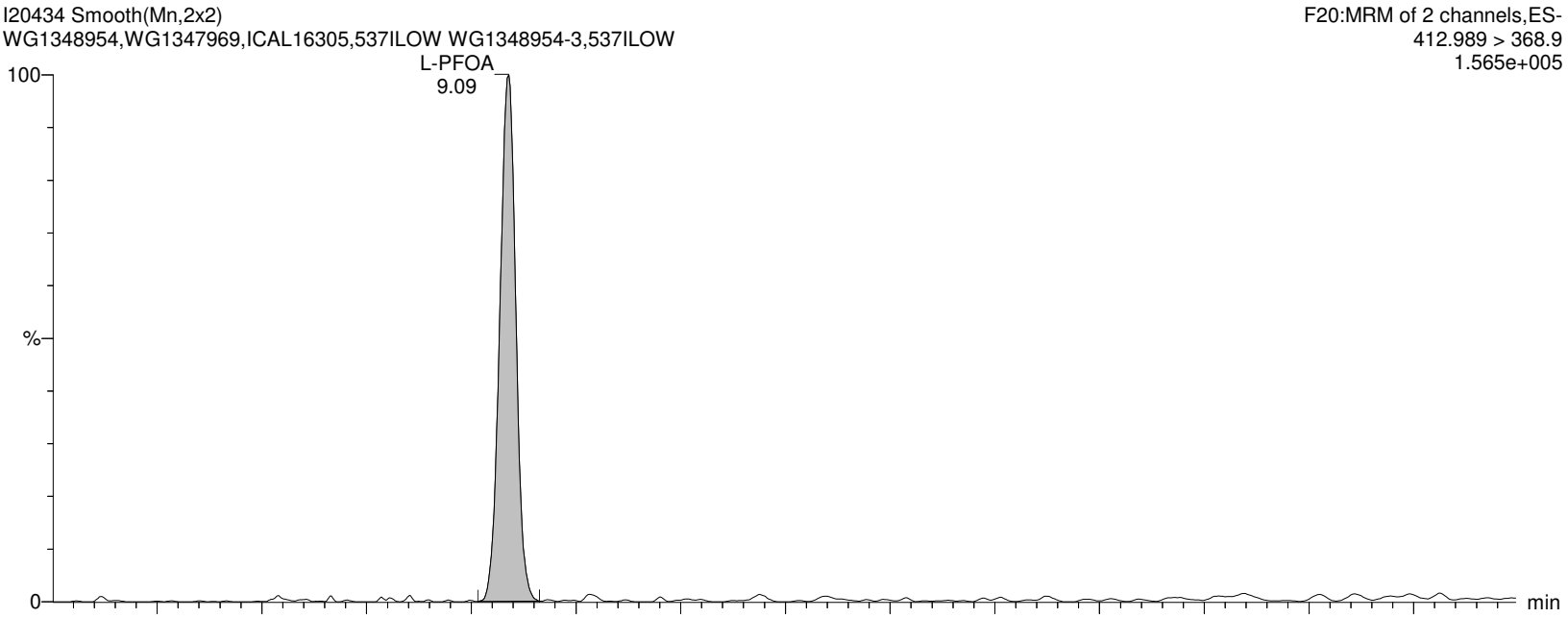
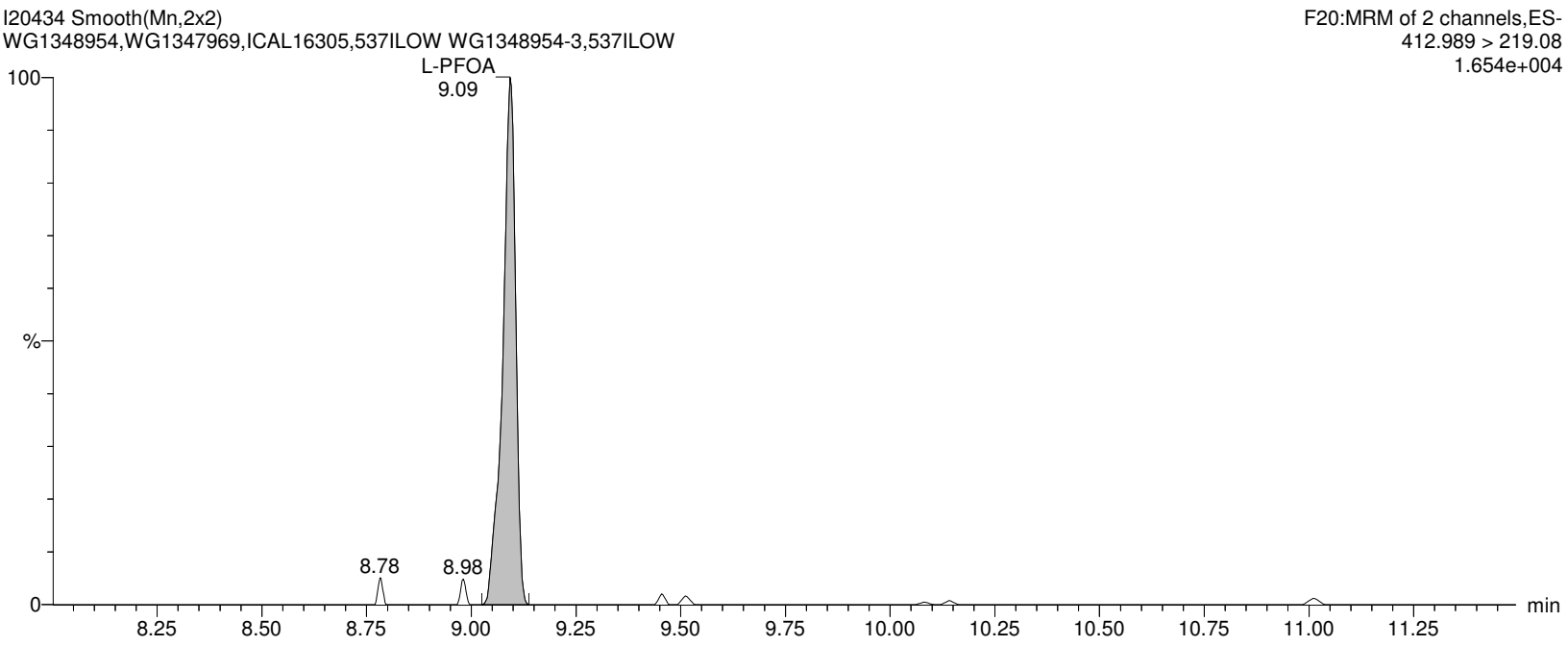
**L-PFOA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2020\200309_537ISO.PRO\Data\WG1348954B.qld
Last Altered: Wednesday, March 11, 2020 19:42:58 Eastern Daylight Time
Printed: Thursday, March 12, 2020 03:41:27 Eastern Daylight Time

**Name: I20434**
**ID: WG1348954-3,537ILOW**
**Date: 10-Mar-2020**
**Time: 21:04:42**
**Description: WG1348954,WG1347969,ICAL16305,537ILOW**
**User: LCMS02:RS**
**Vial: 1:A,2**
**Instrument: XEVO-TQSmicro#QEB0050**
**Inlet Method Name: C:\MassLynx\Data\2020\200309_537ISO.PRO\ACQUDB\LCMS_537_ISO_B**
**Tune Method Name: C:\MassLynx\Data\2020\200309_537ISO.PRO\ACQUDB\181009_TUNE.IPR**
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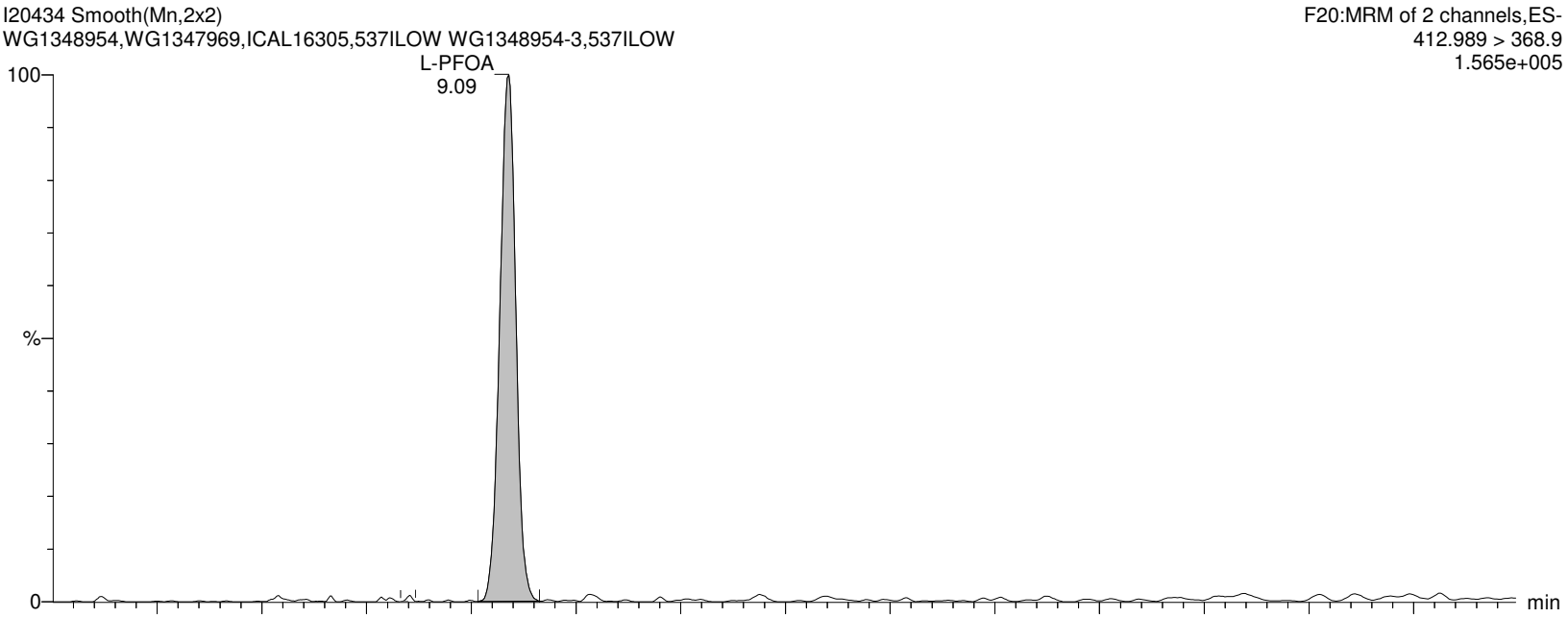


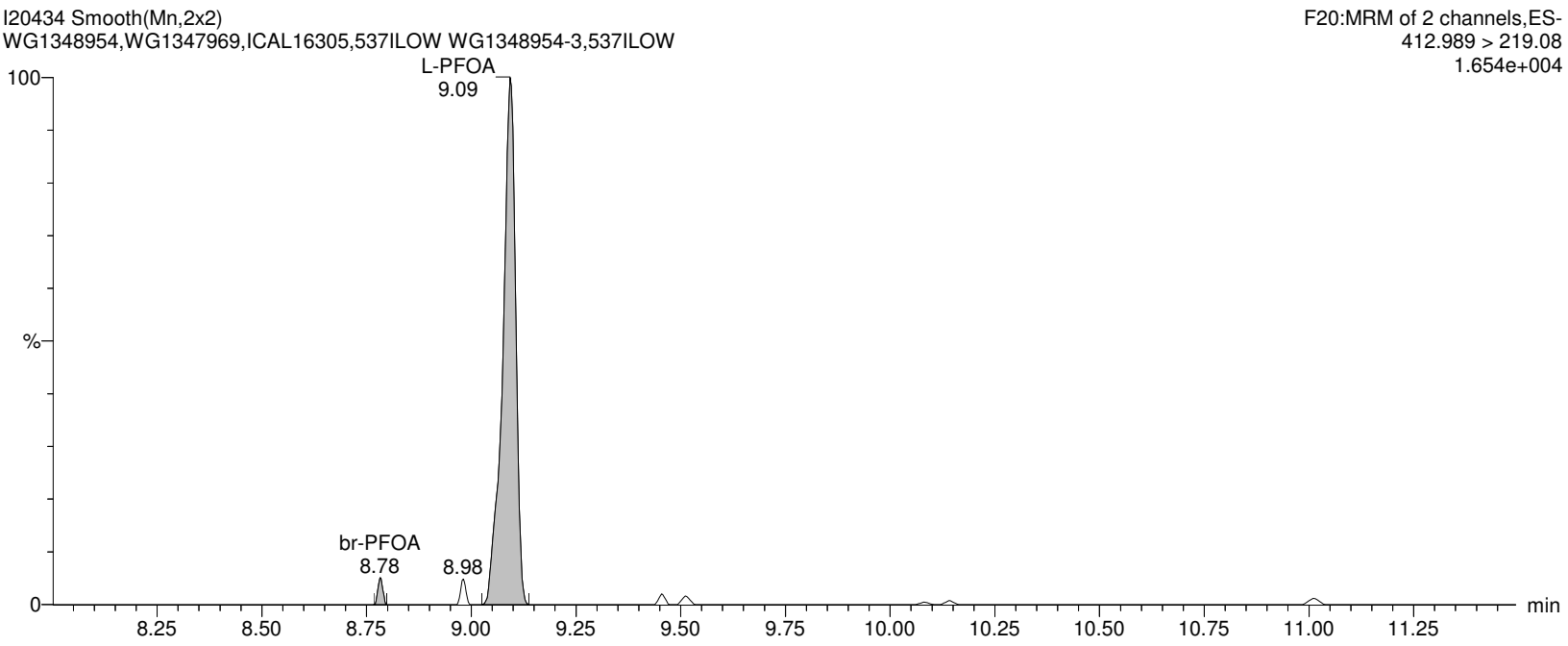



all concentration units in (ng/mL)

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**Vial: 1:A,2**
**Instrument: XEVO-TQSmicro#QEB0050**
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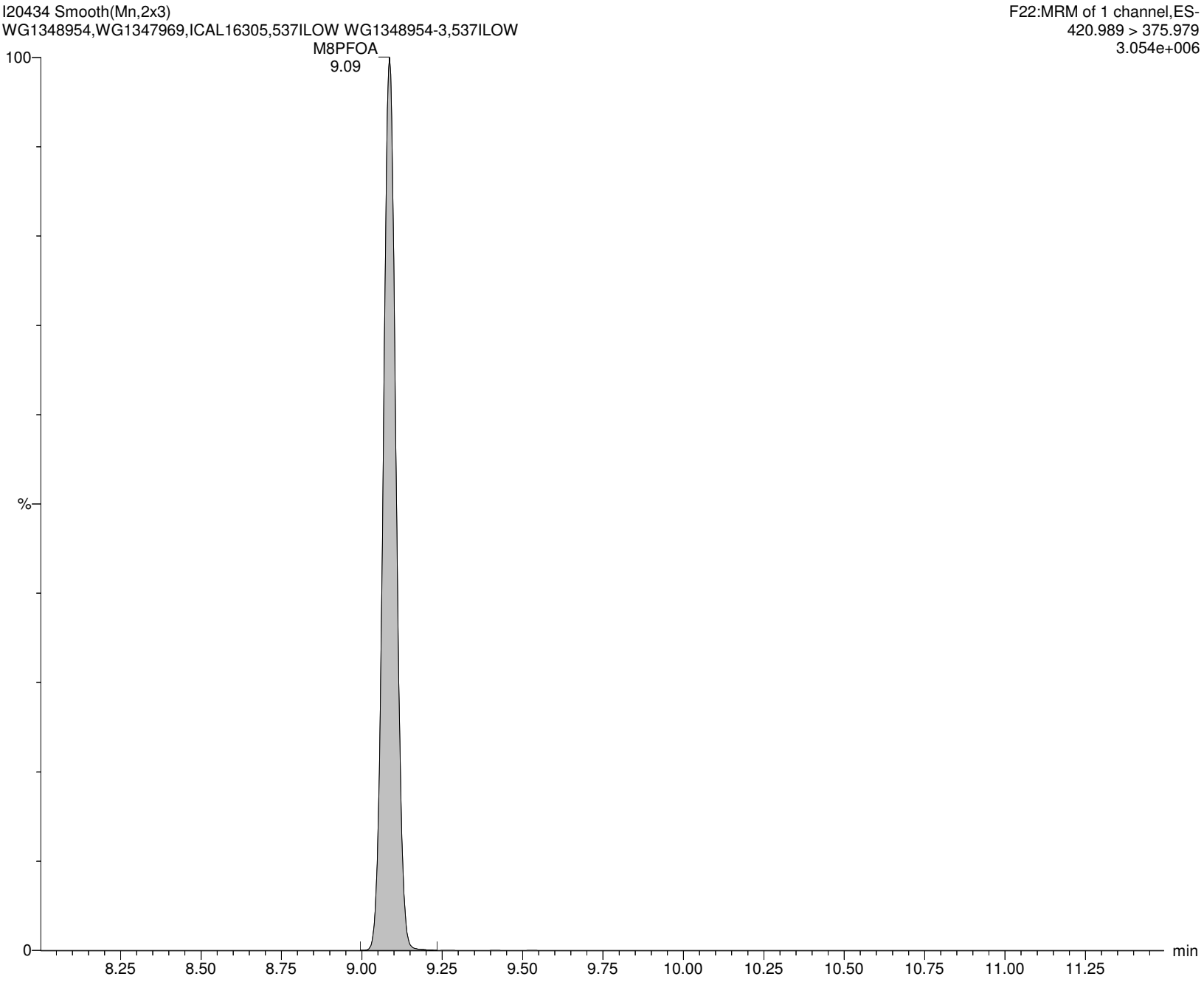
**M8PFOA**





all concentration units in (ng/mL)

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Dataset: C:\MassLynx\Data\2020\200309_537ISO.PRO\Data\WG1348954B.qld
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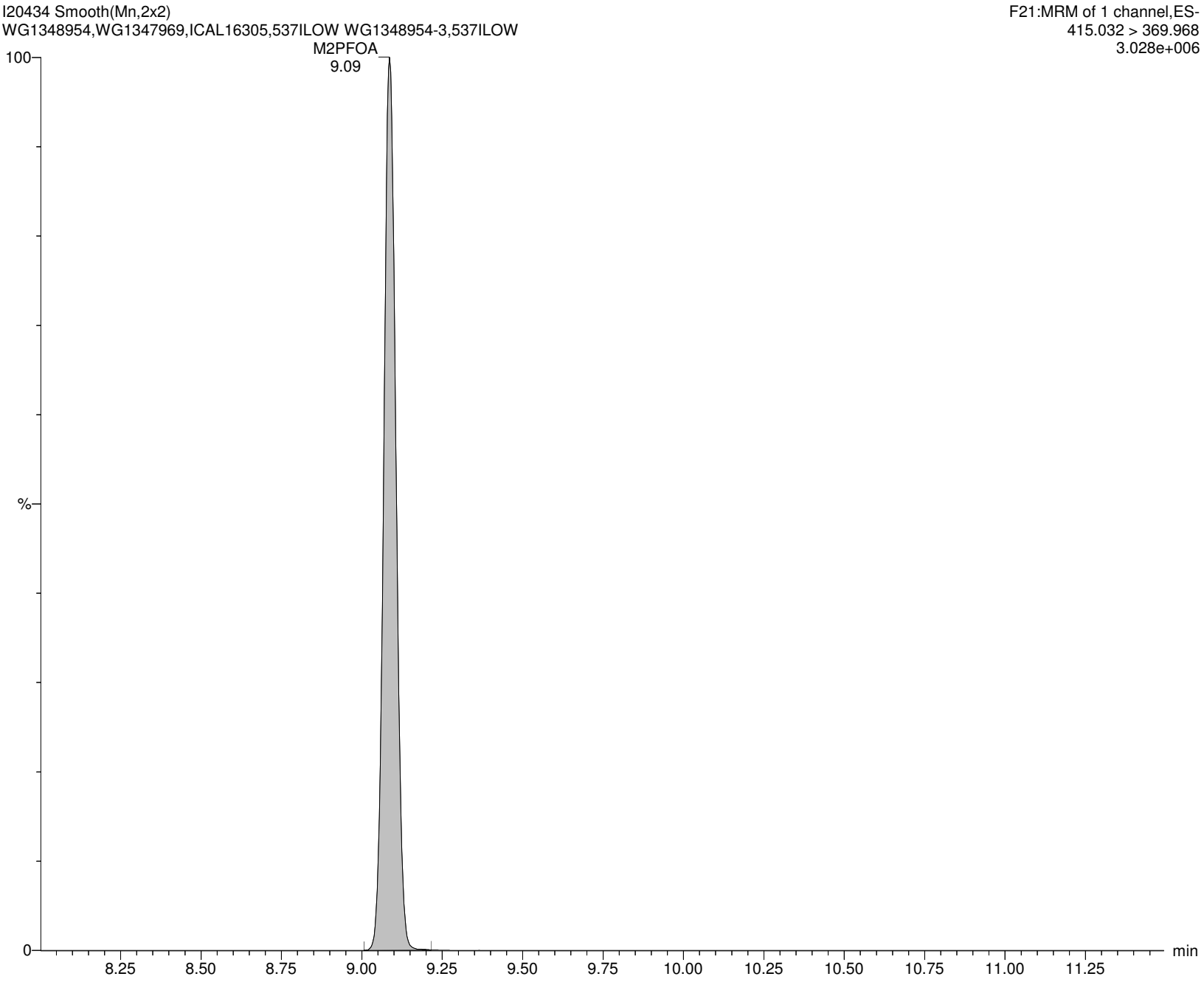



all concentration units in (ng/mL)

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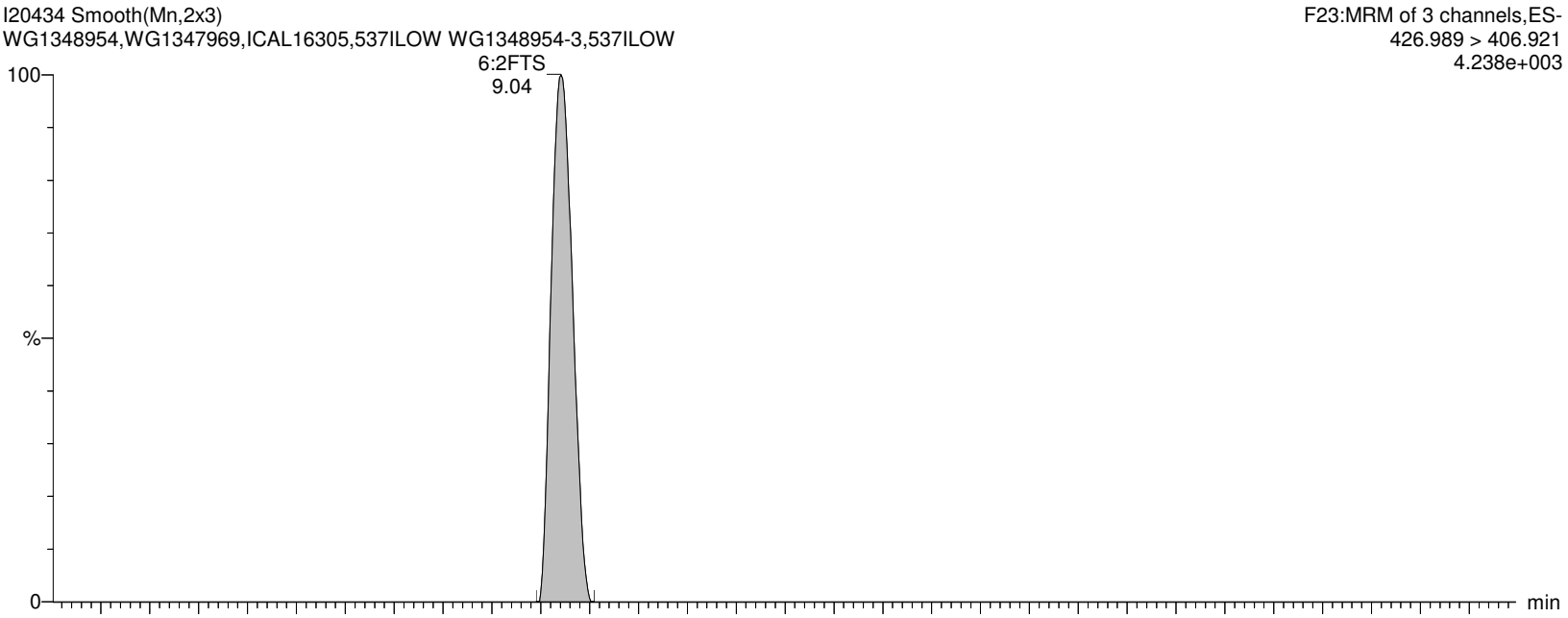
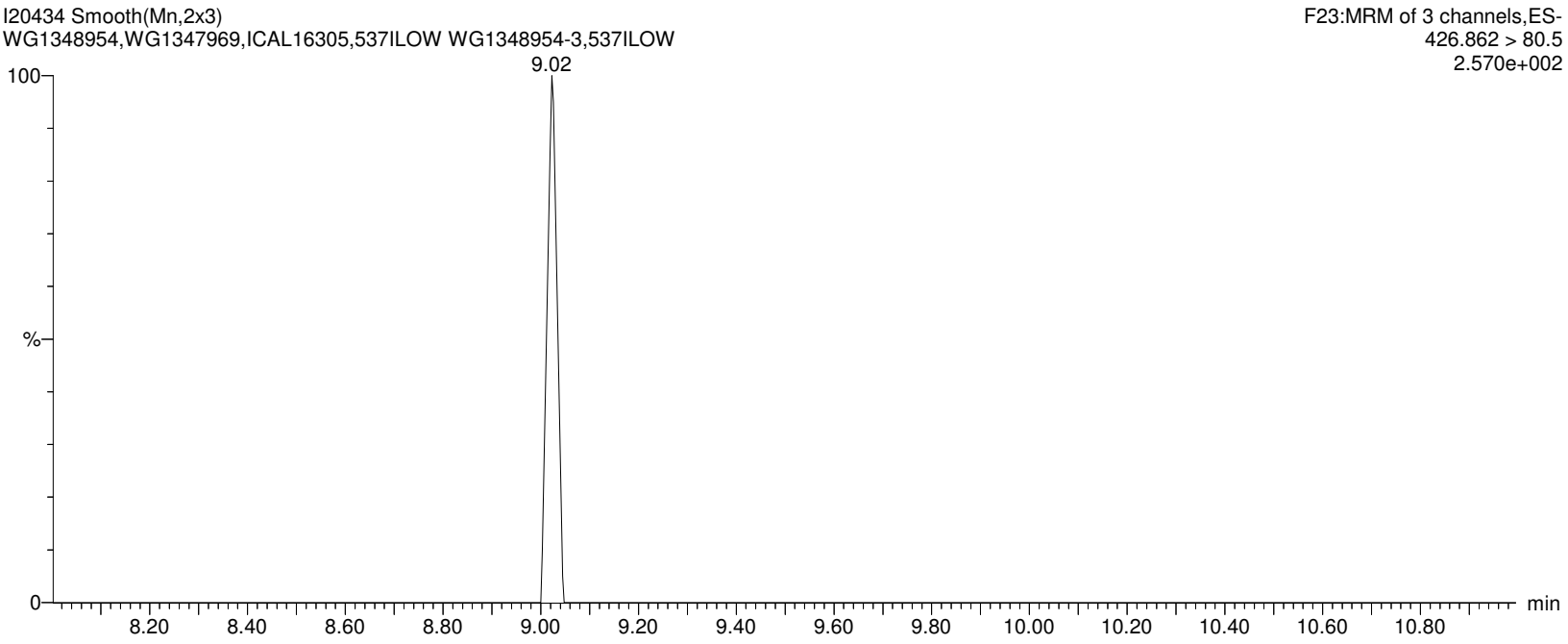
**6:2FTS**





all concentration units in (ng/mL)

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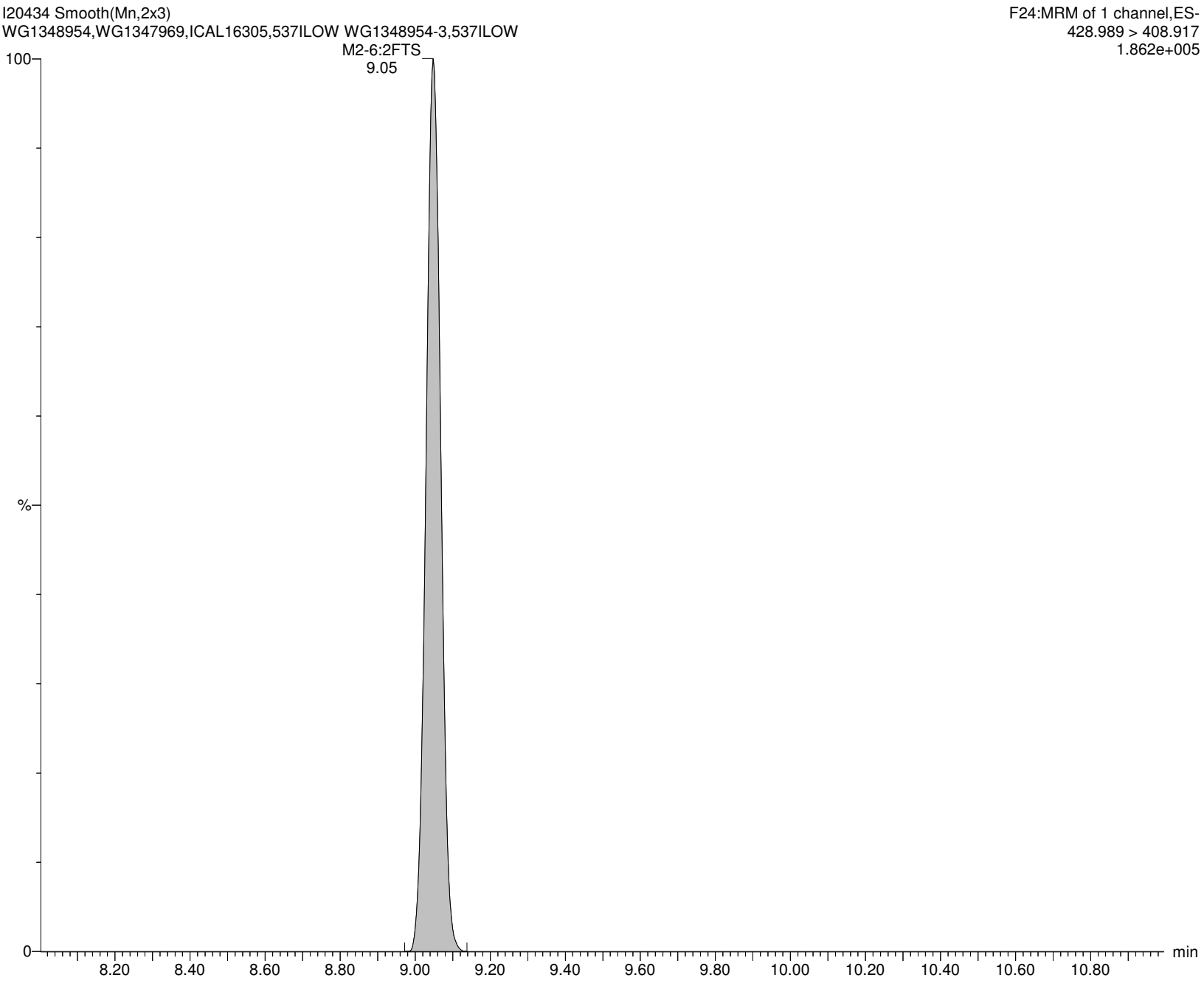
**MS Method Name: C:\MassLynx\Data\2020\200309_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**M2-6:2FTS**





all concentration units in (ng/mL)

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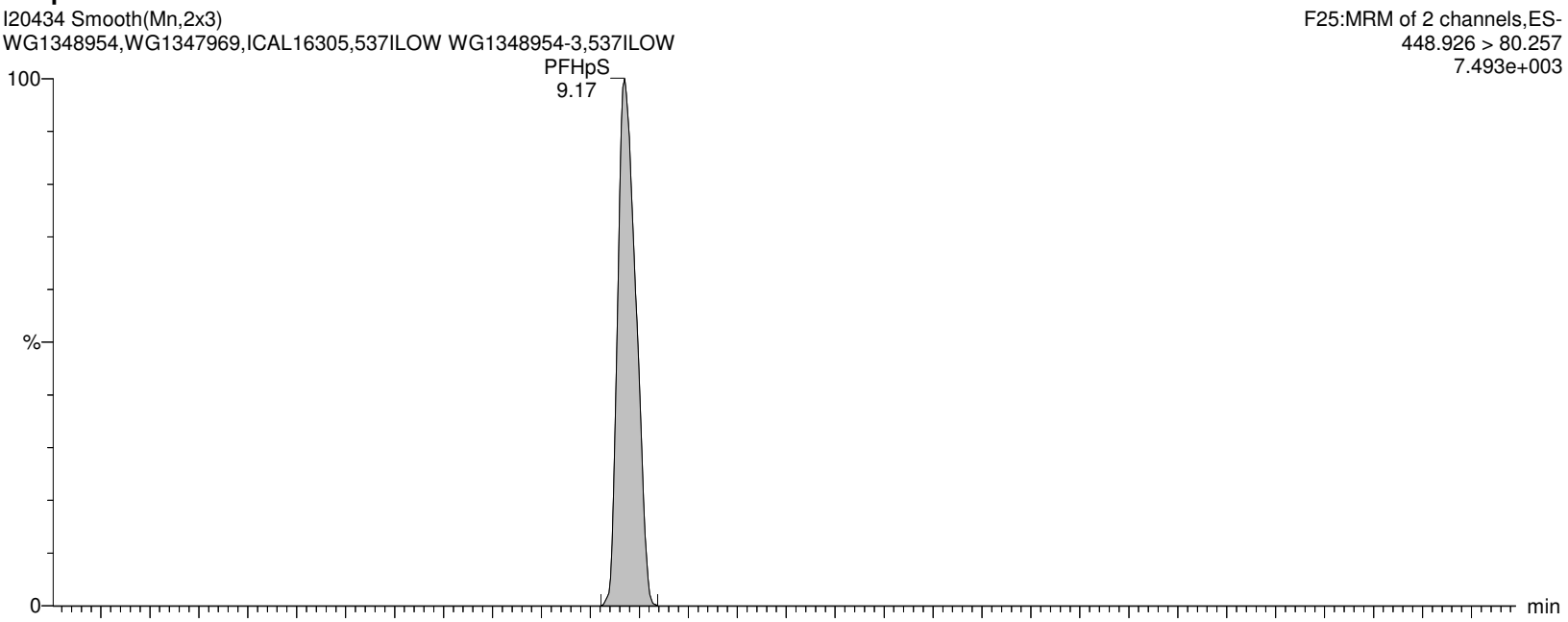
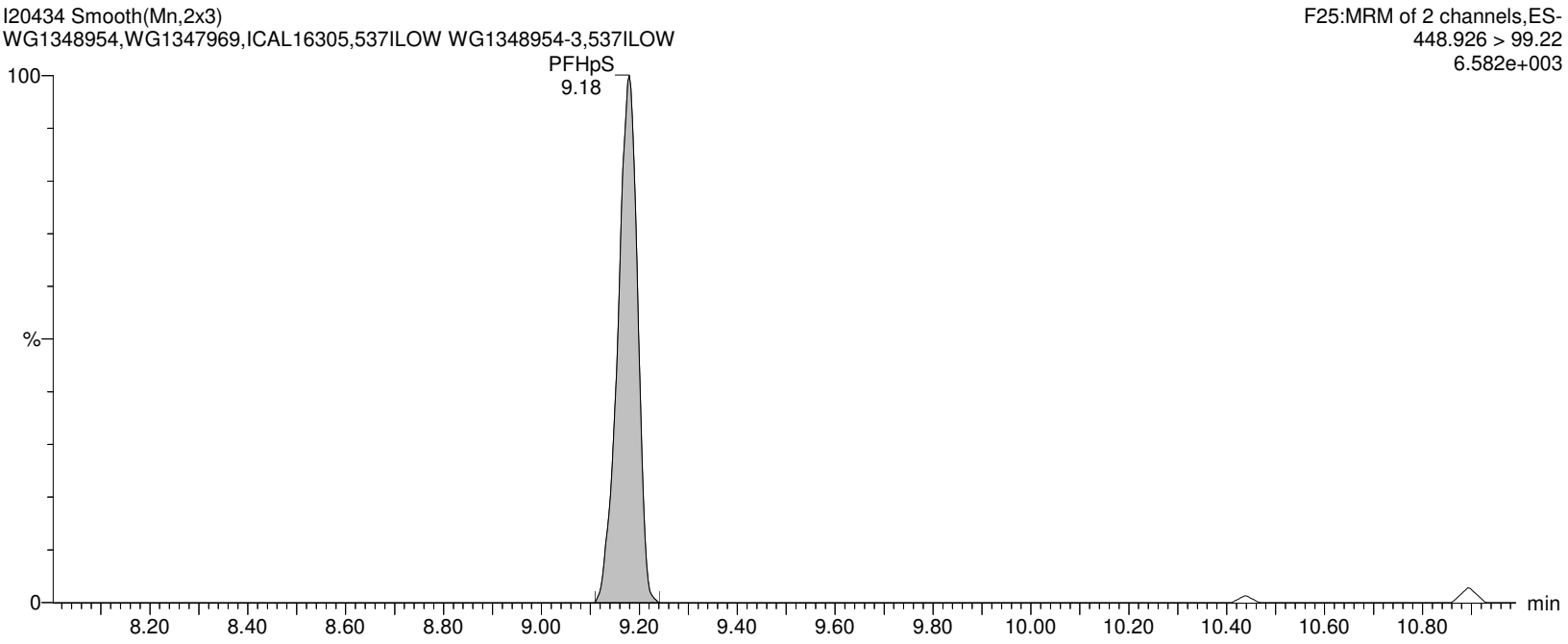
**PFHpS**





all concentration units in (ng/mL)

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**MS Method Name: C:\MassLynx\Data\2020\200309_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

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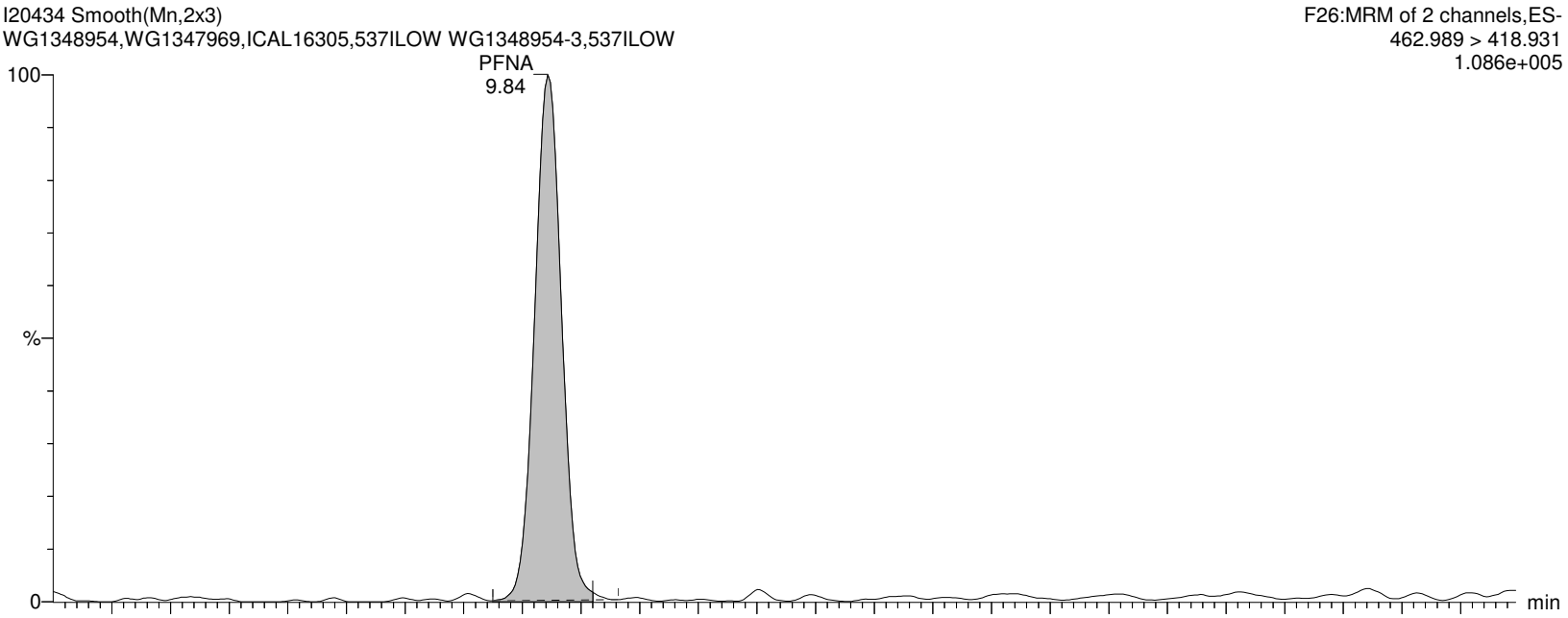


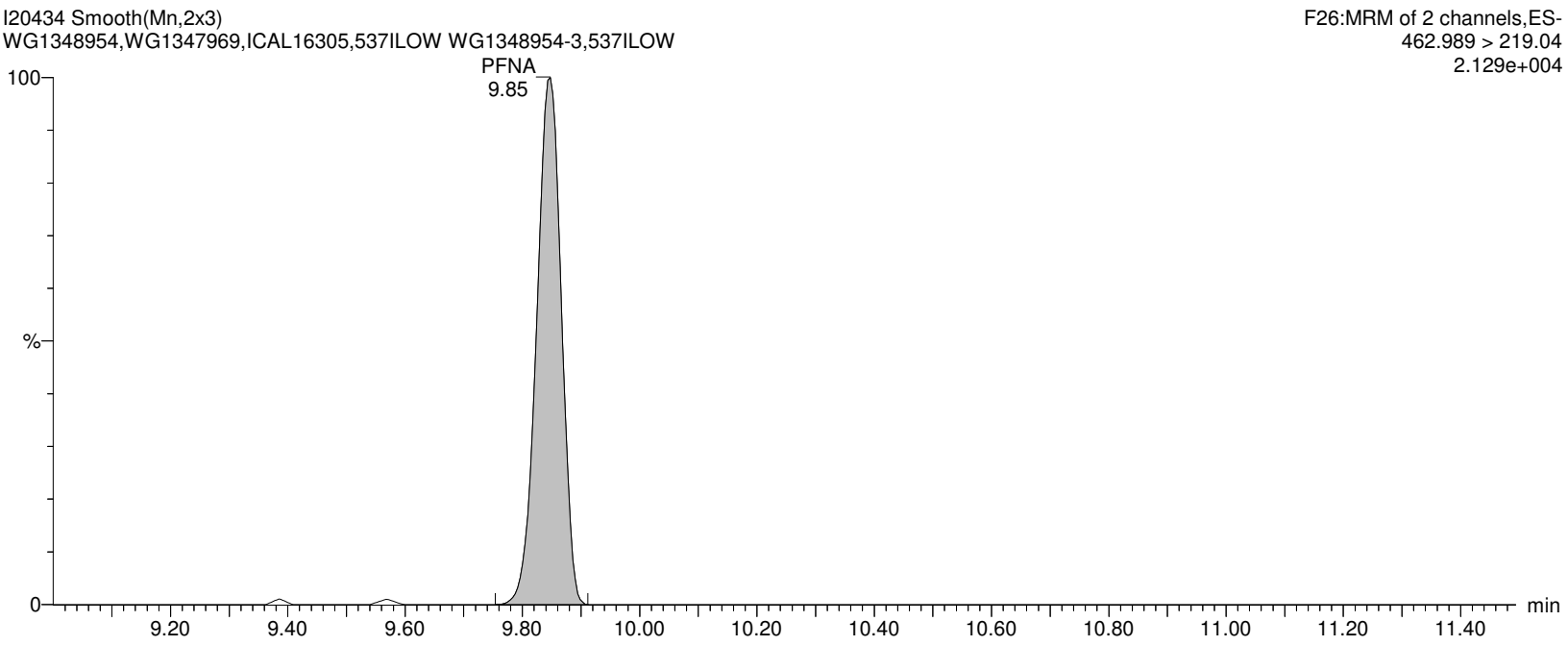



all concentration units in (ng/mL)

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**Tune Method Name: C:\MassLynx\Data\2020\200309_537ISO.PRO\ACQUDB\181009_TUNE.IPR**
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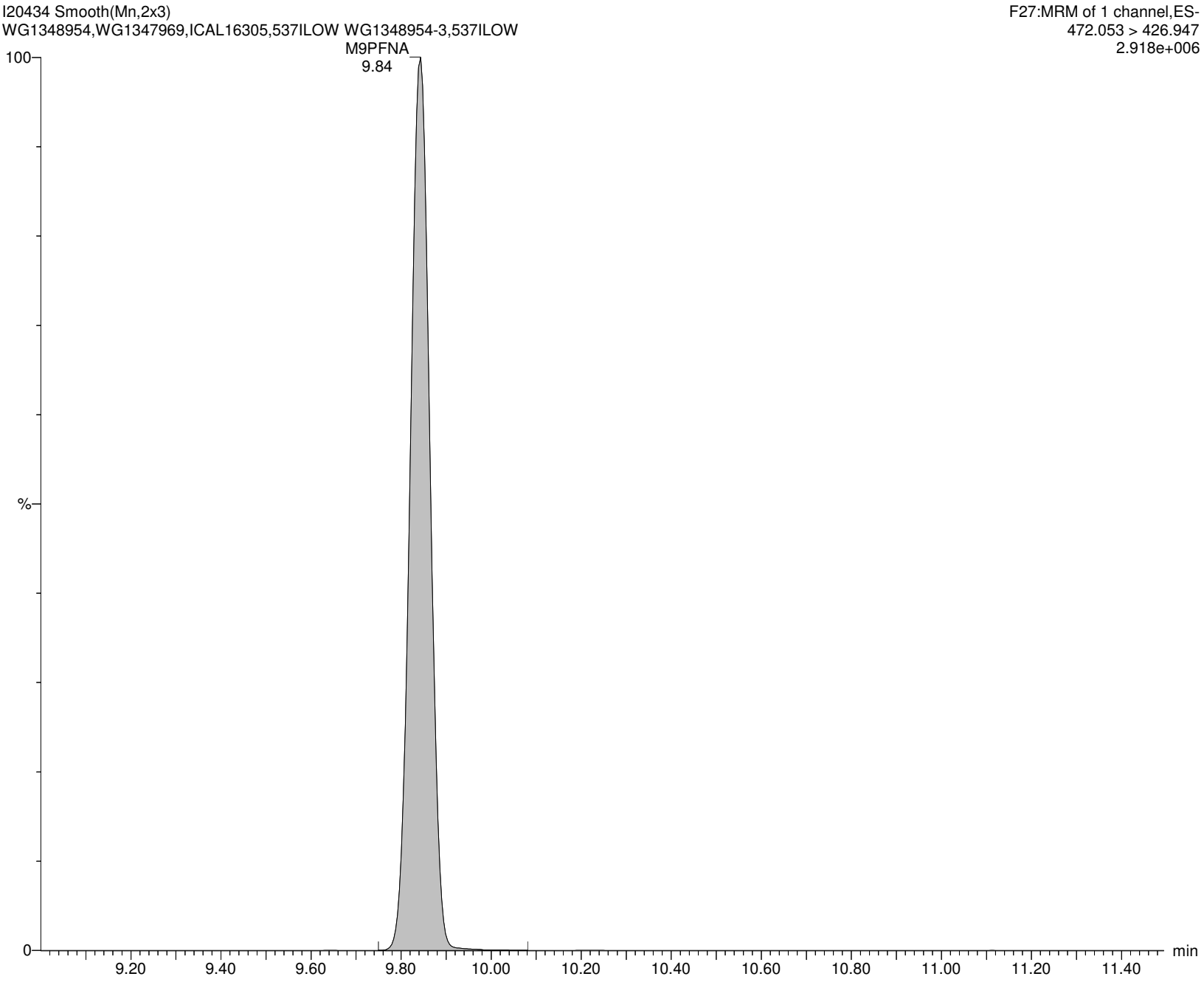



all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2020\200309_537ISO.PRO\Data\WG1348954B.qld
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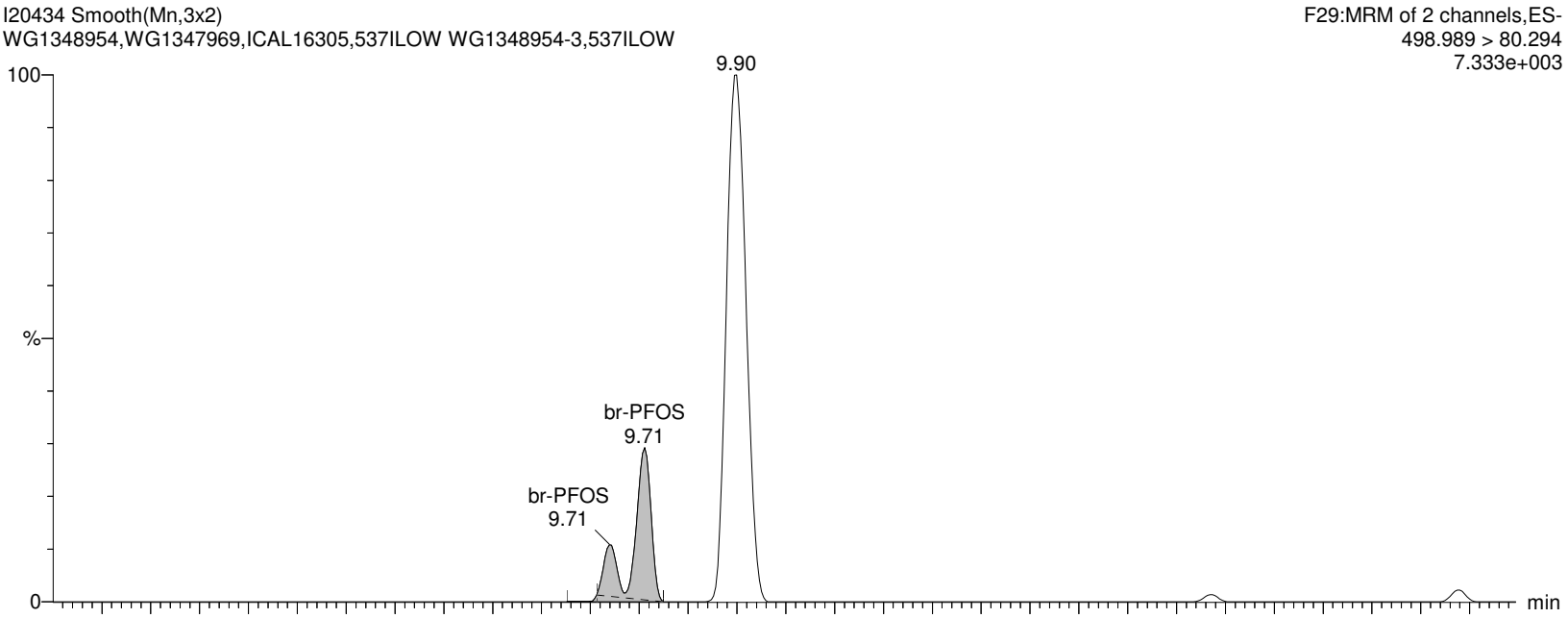
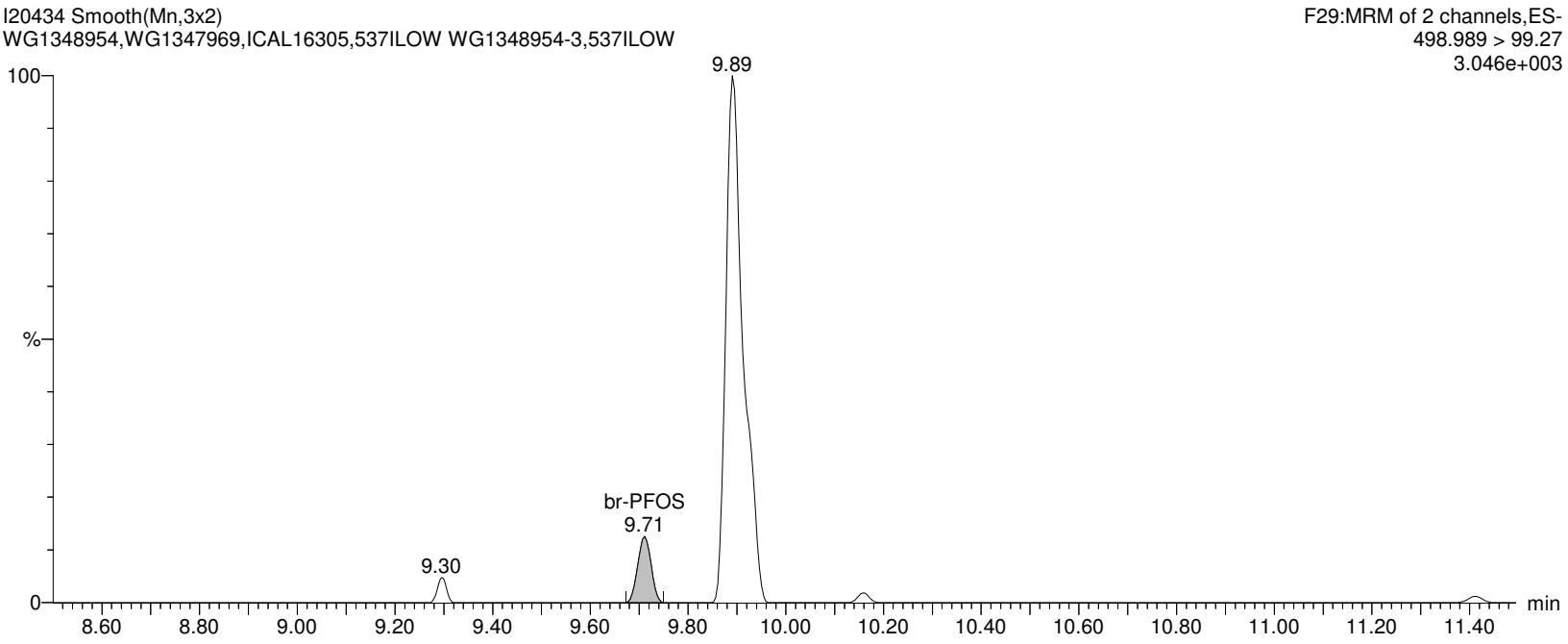
**br-PFOS**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2020\200309_537ISO.PRO\Data\WG1348954B.qld
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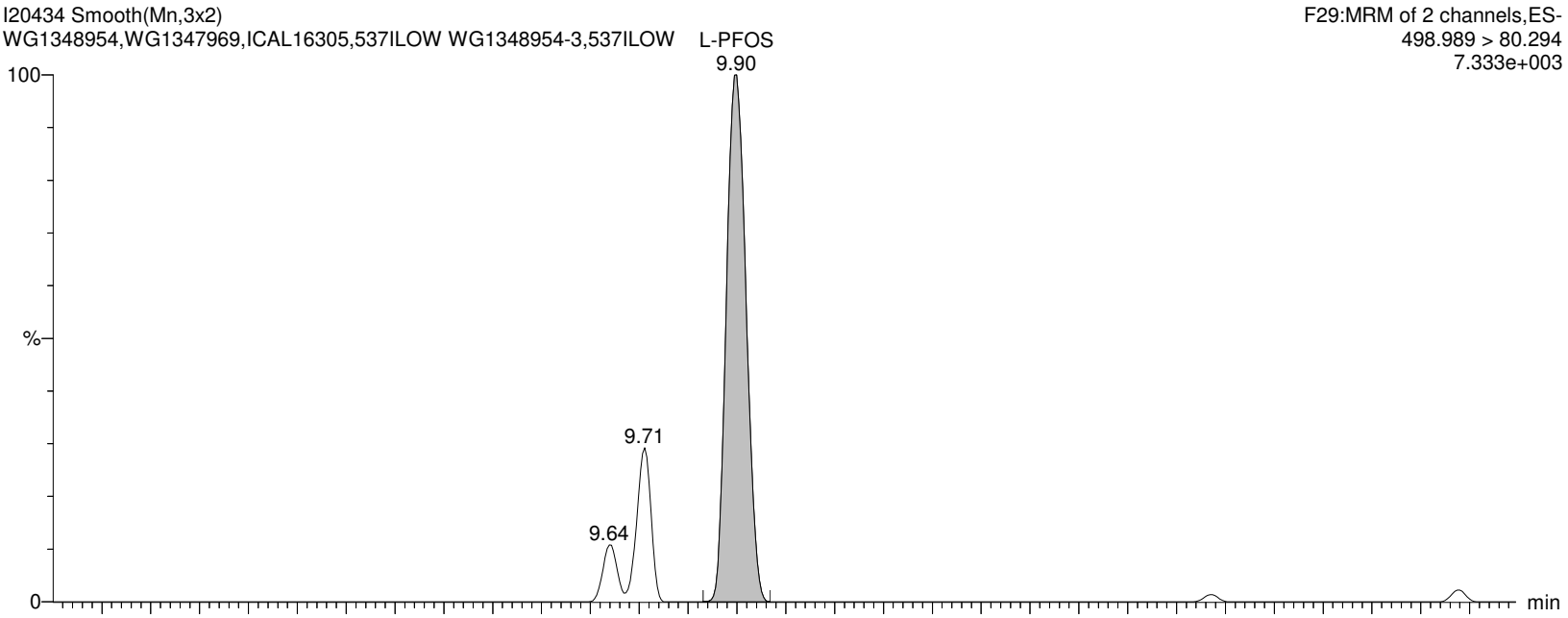
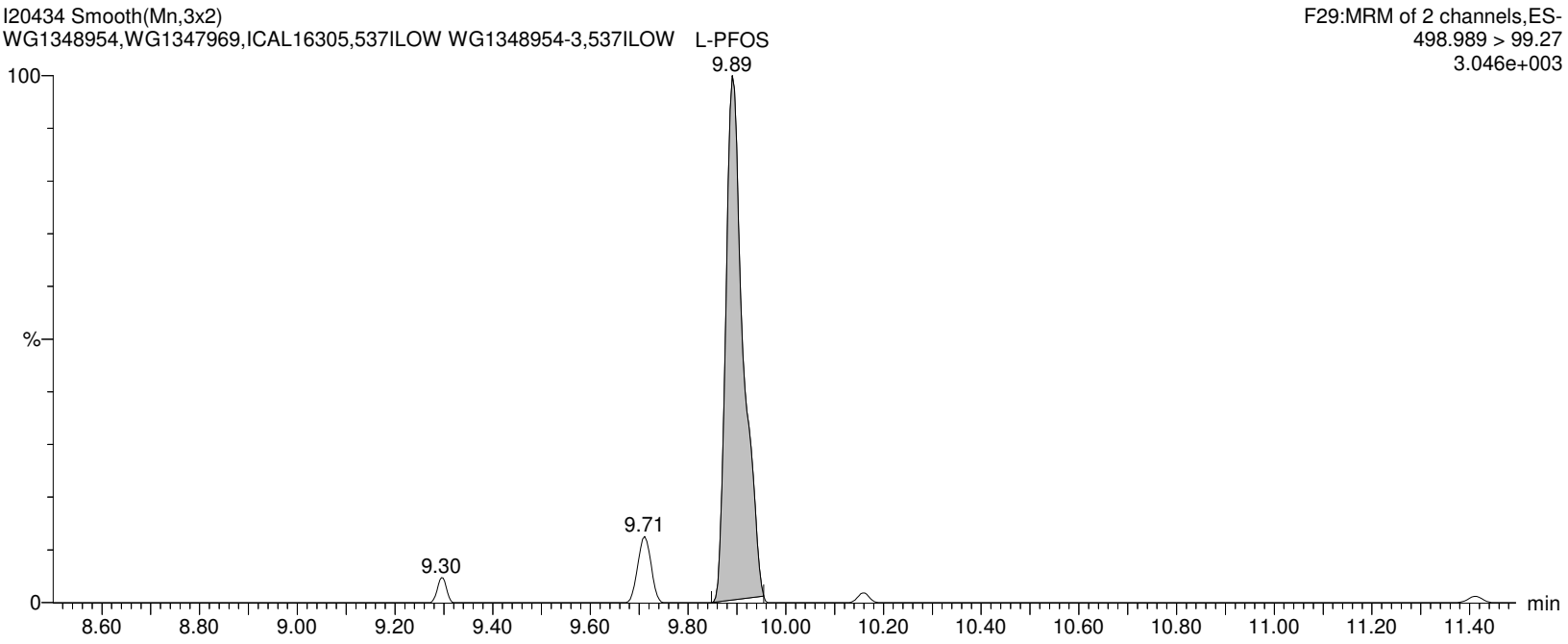
**L-PFOS**





all concentration units in (ng/mL)

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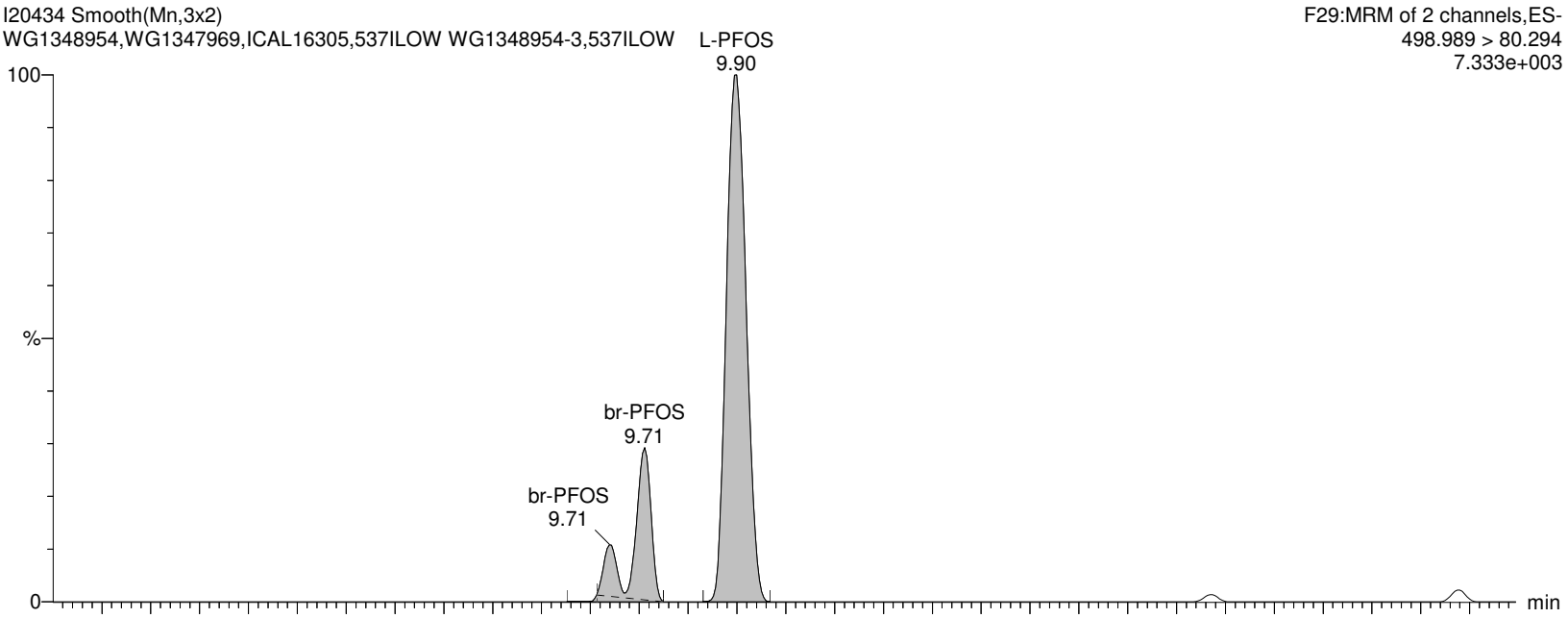


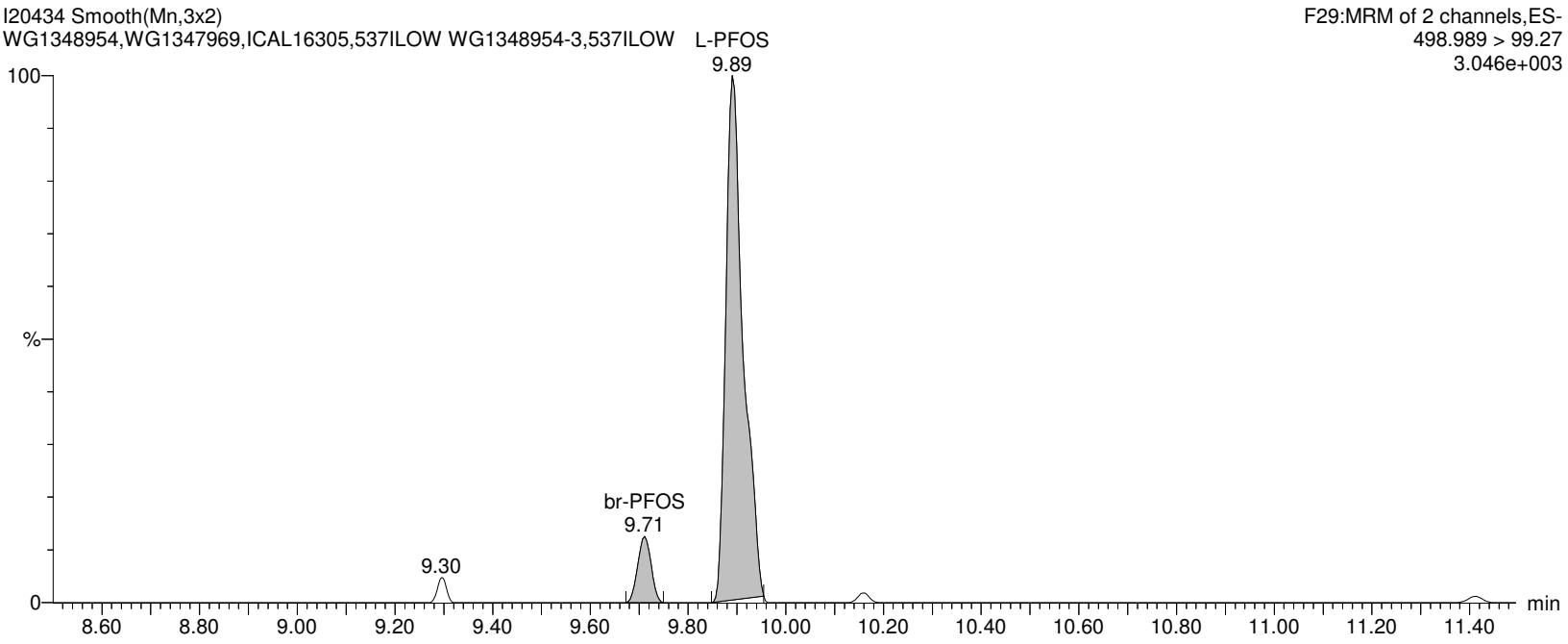



all concentration units in (ng/mL)

Alpha Analytical Inc.
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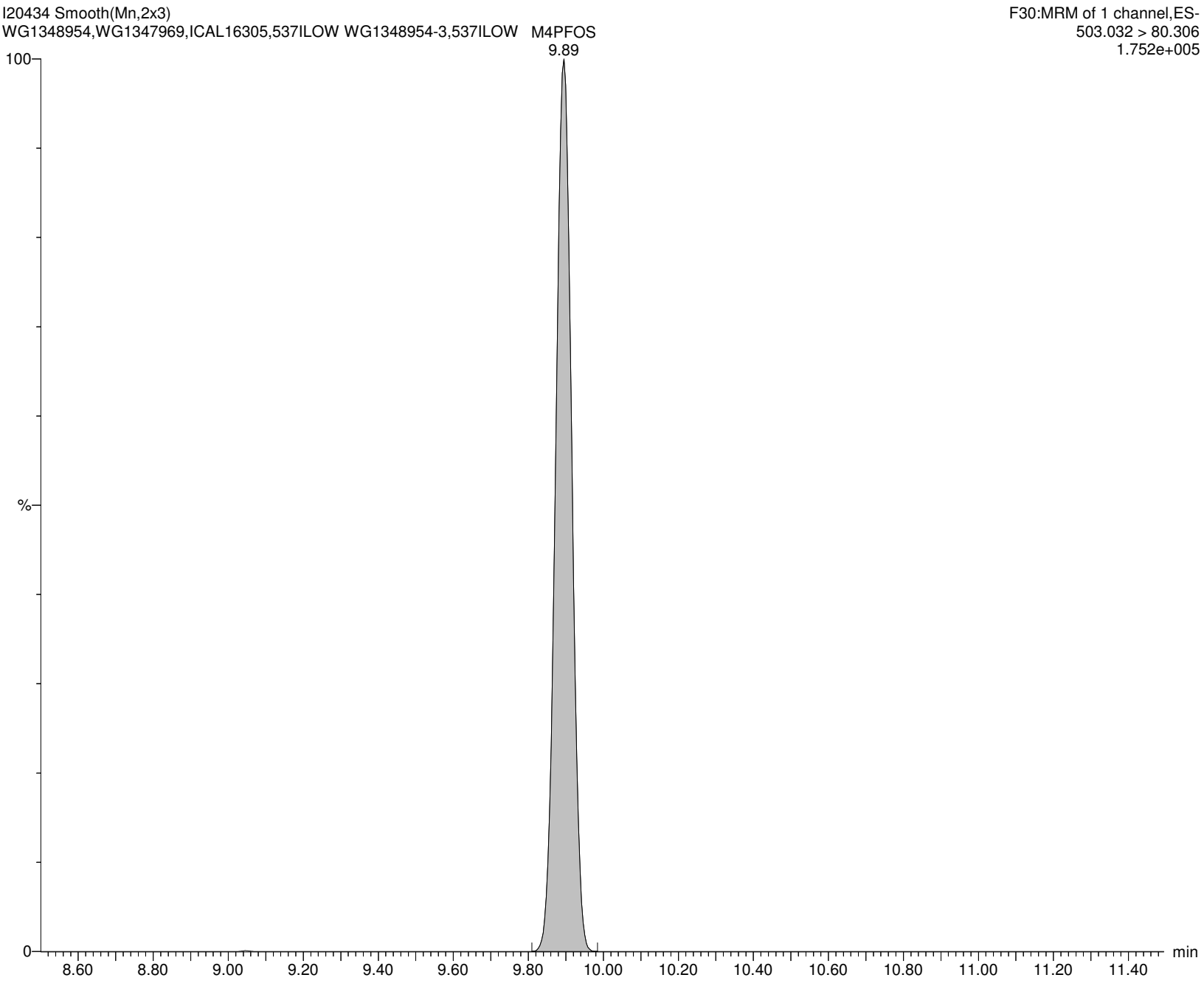



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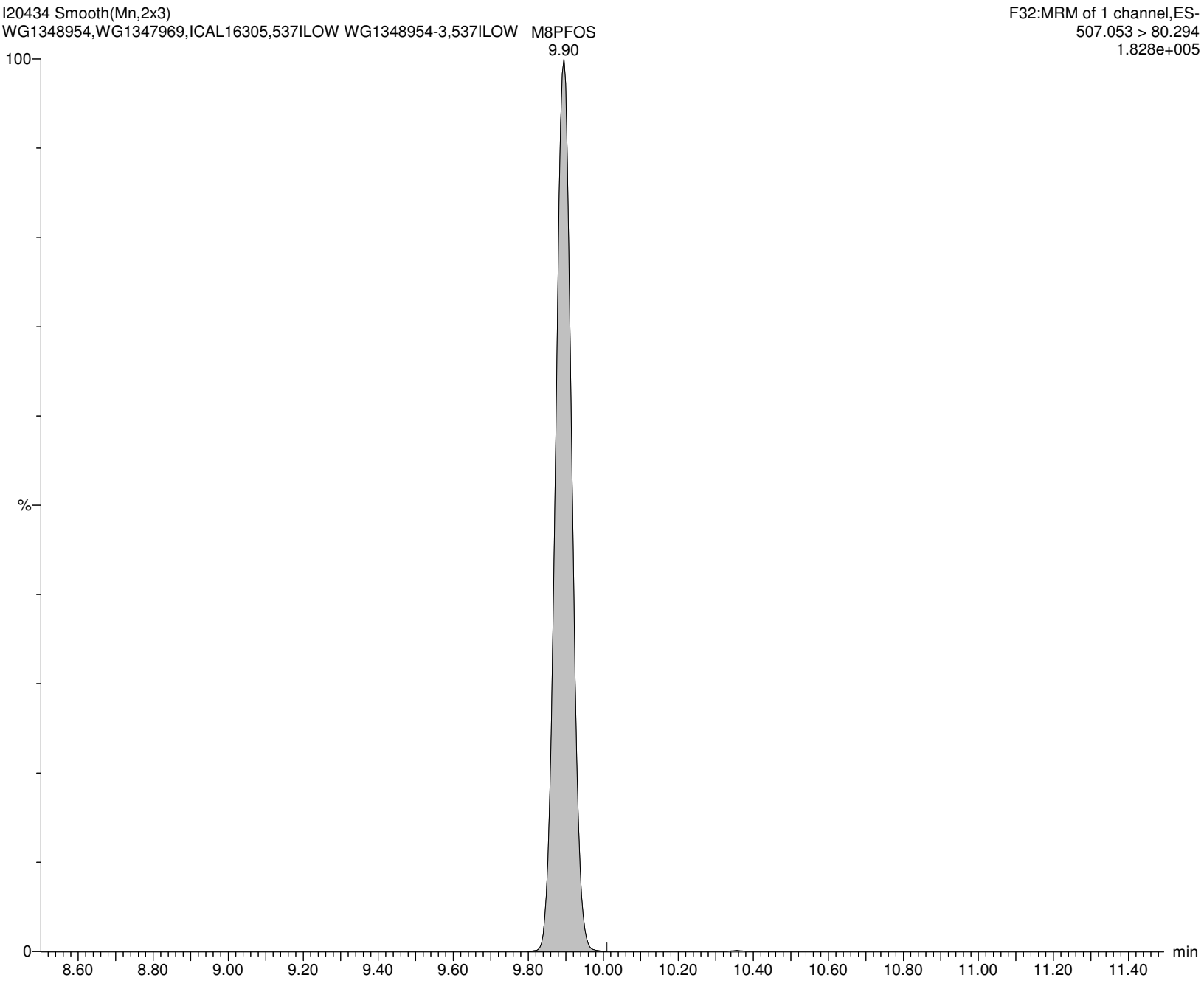



all concentration units in (ng/mL)

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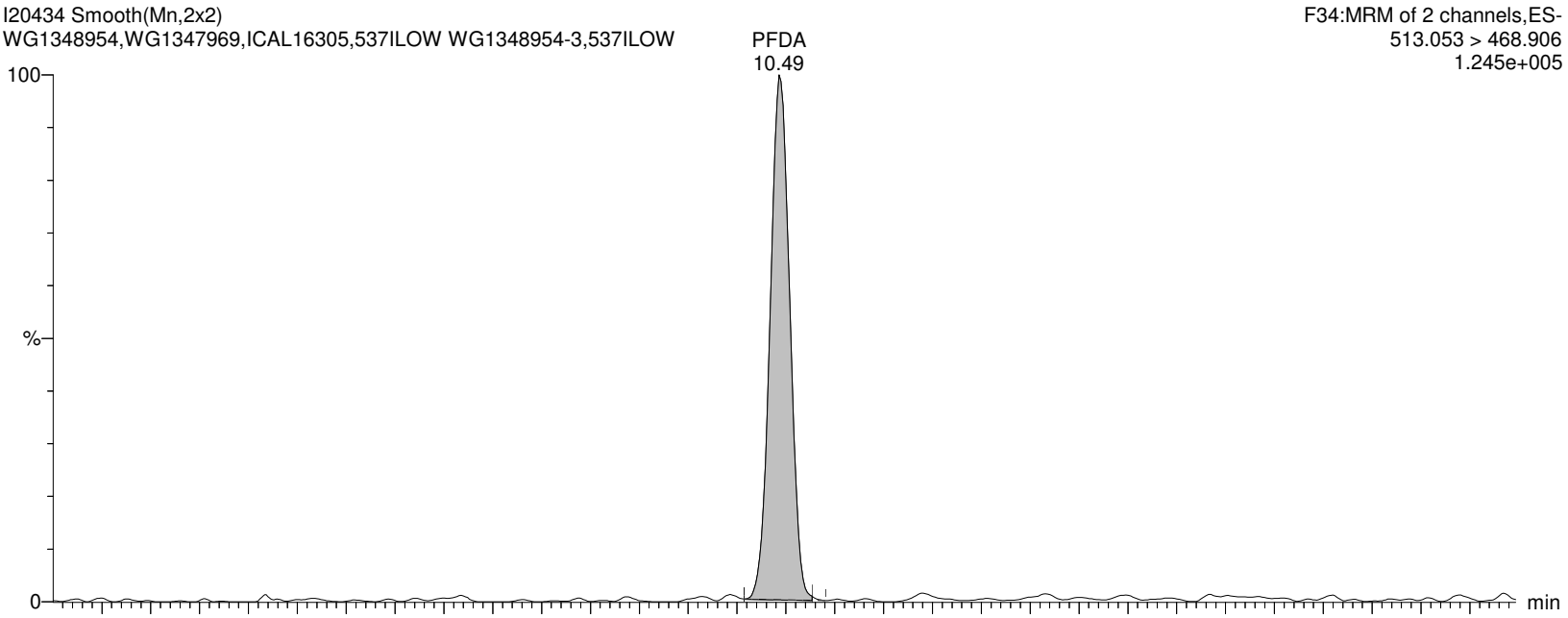


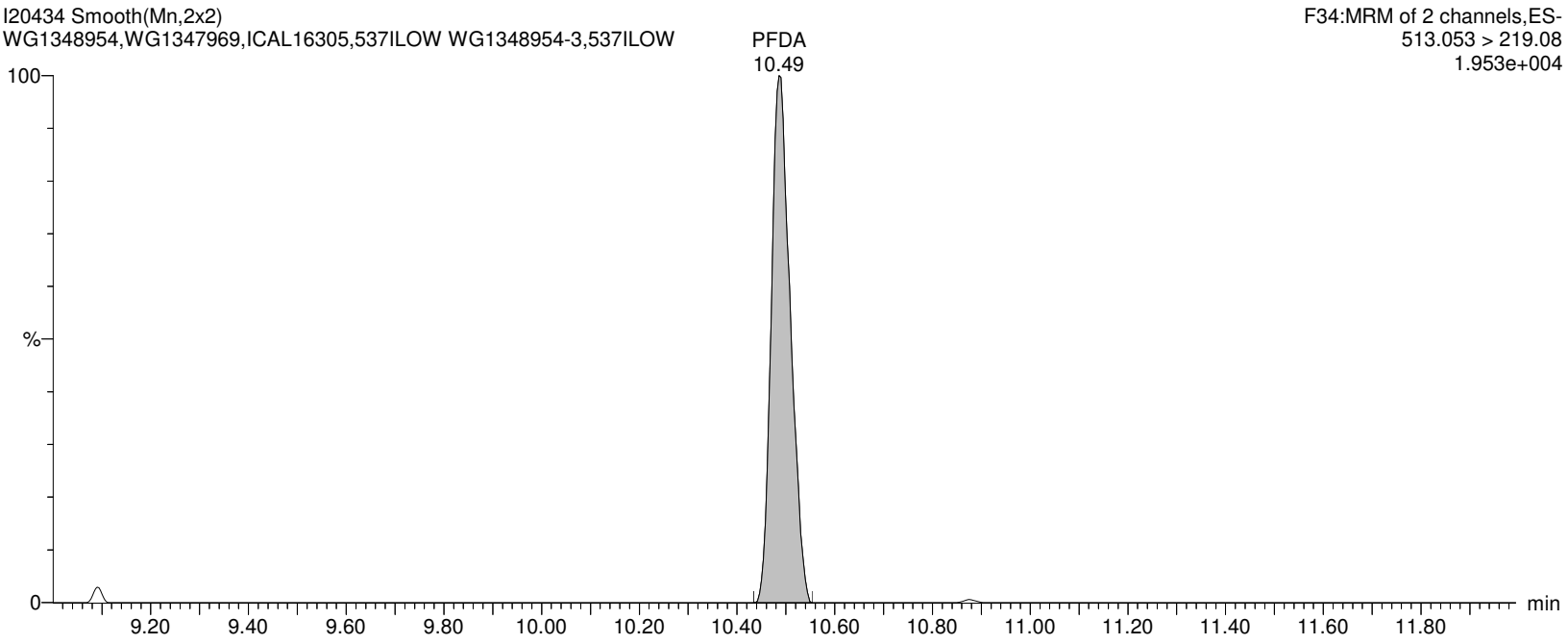



all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2020\200309_537ISO.PRO\Data\WG1348954B.qld
Last Altered: Wednesday, March 11, 2020 19:42:58 Eastern Daylight Time
Printed: Thursday, March 12, 2020 03:41:27 Eastern Daylight Time

**Name: I20434**
**ID: WG1348954-3,537ILOW**
**Date: 10-Mar-2020**
**Time: 21:04:42**
**Description: WG1348954,WG1347969,ICAL16305,537ILOW**
**User: LCMS02:RS**
**Vial: 1:A,2**
**Instrument: XEVO-TQSmicro#QEB0050**
**Inlet Method Name: C:\MassLynx\Data\2020\200309_537ISO.PRO\ACQUDB\LCMS_537_ISO_B**
**Tune Method Name: C:\MassLynx\Data\2020\200309_537ISO.PRO\ACQUDB\181009_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\2020\200309_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

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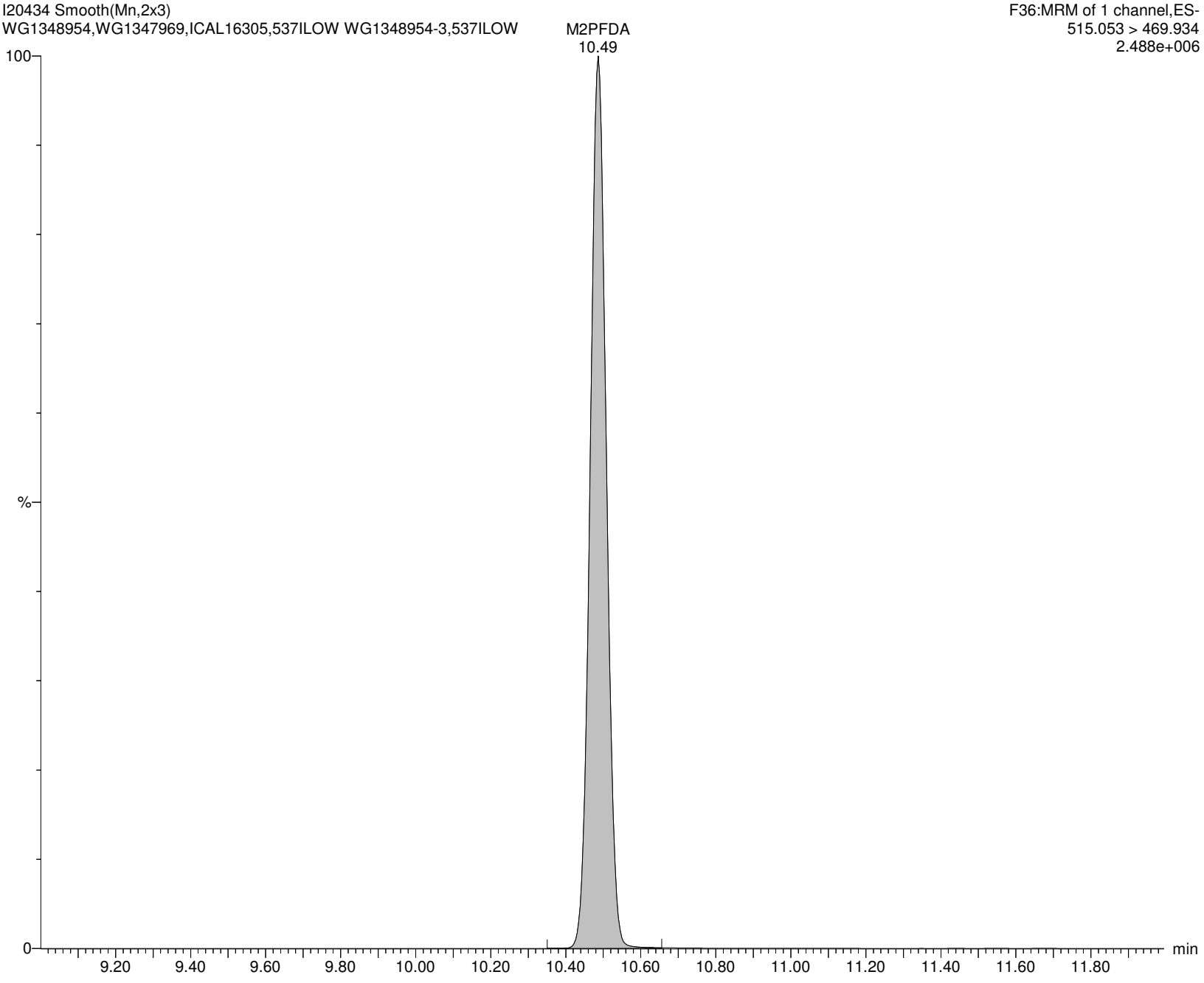



all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2020\200309_537ISO.PRO\Data\WG1348954B.qld
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**Vial: 1:A,2**
**Instrument: XEVO-TQSmicro#QEB0050**
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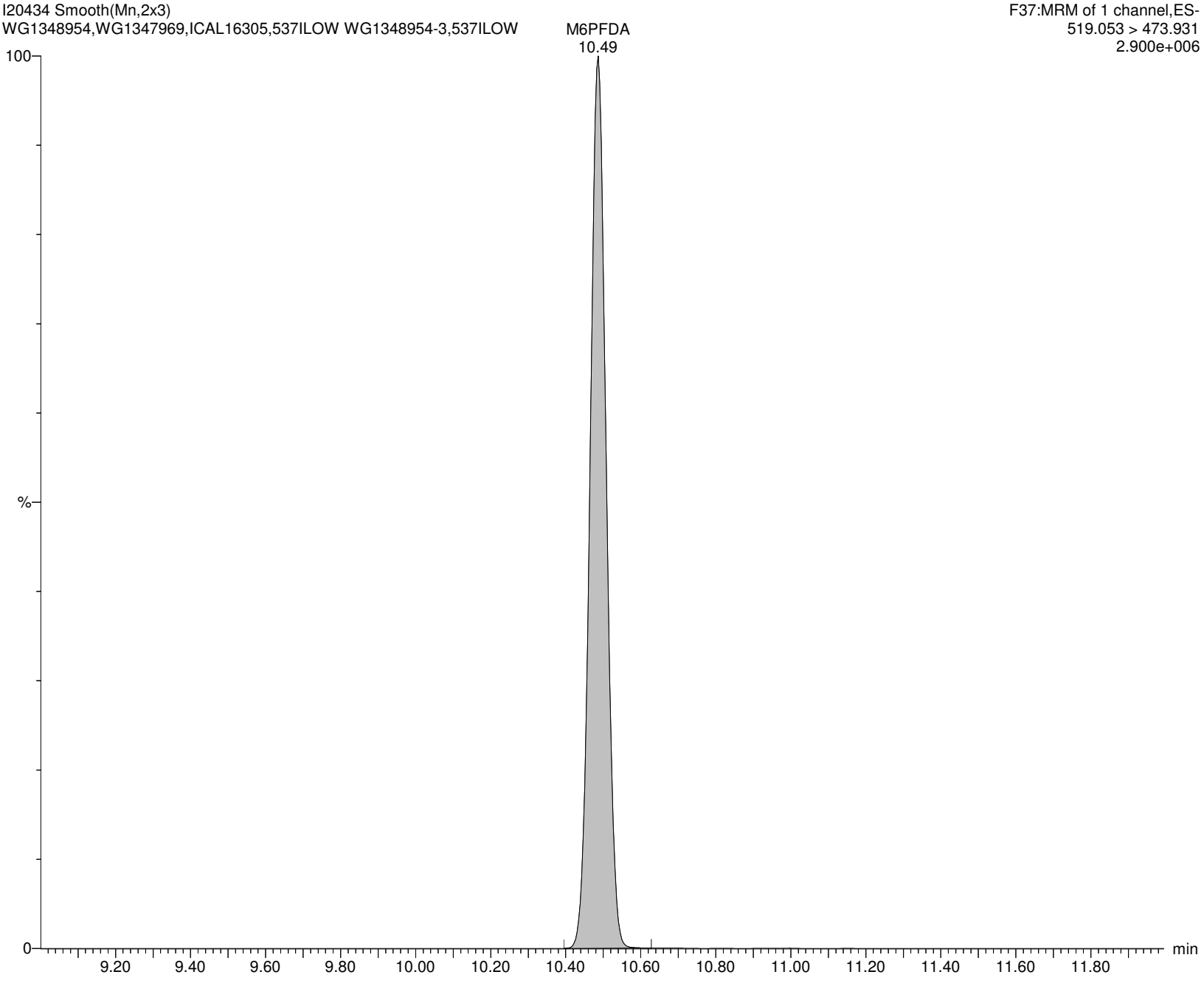
**M6PFDA**





all concentration units in (ng/mL)

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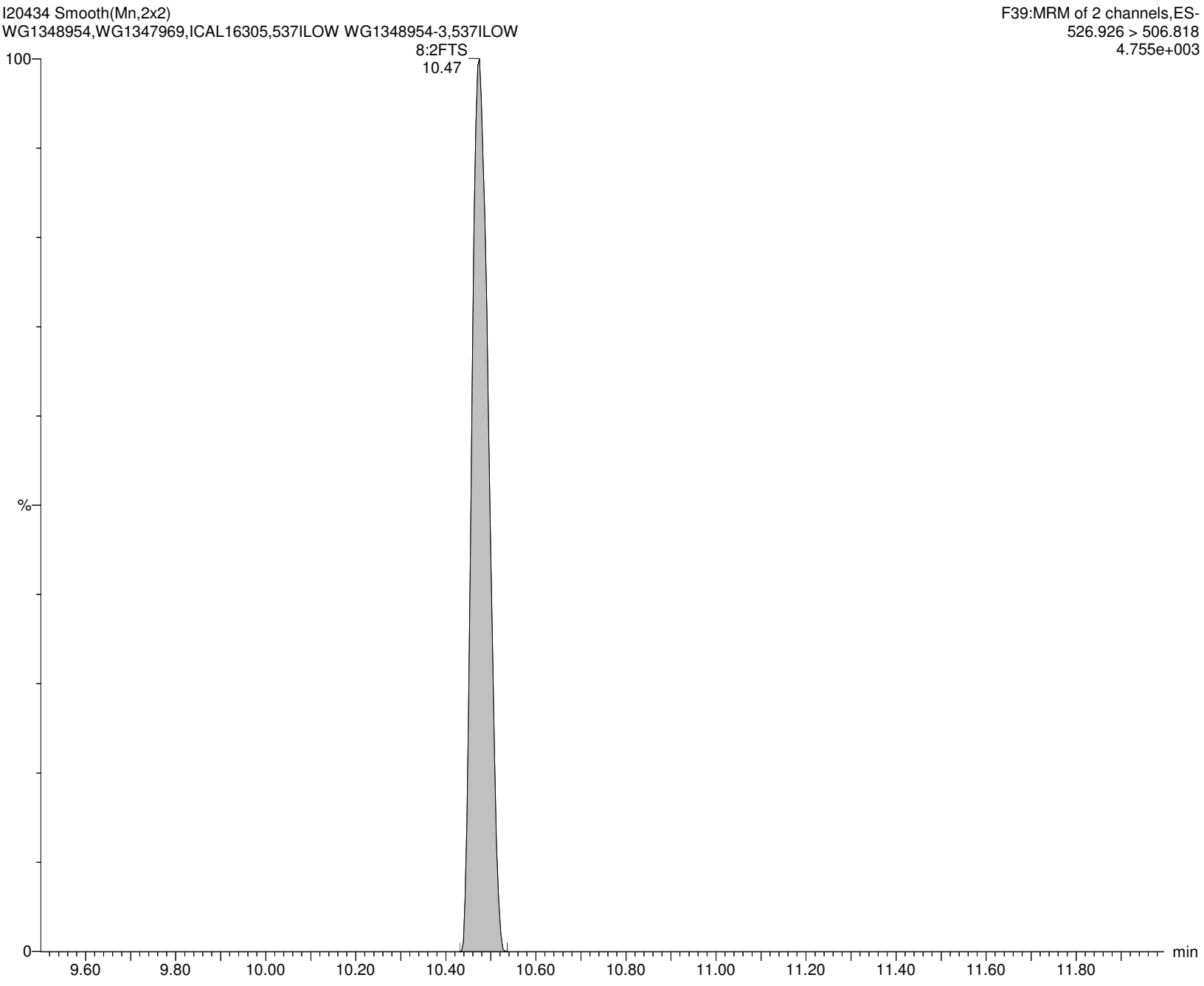
**8:2FTS**





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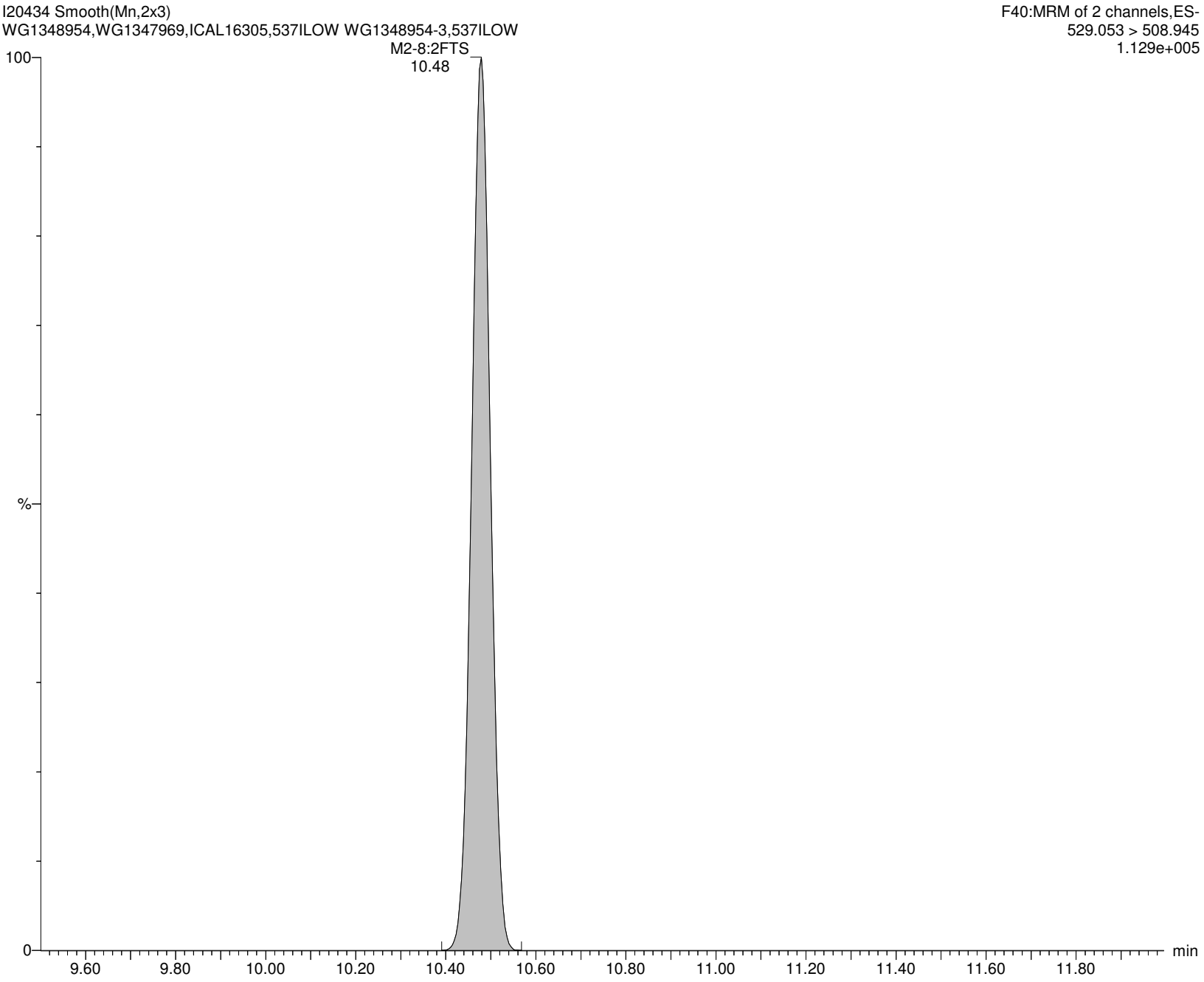
**M2-8:2FTS**





all concentration units in (ng/mL)

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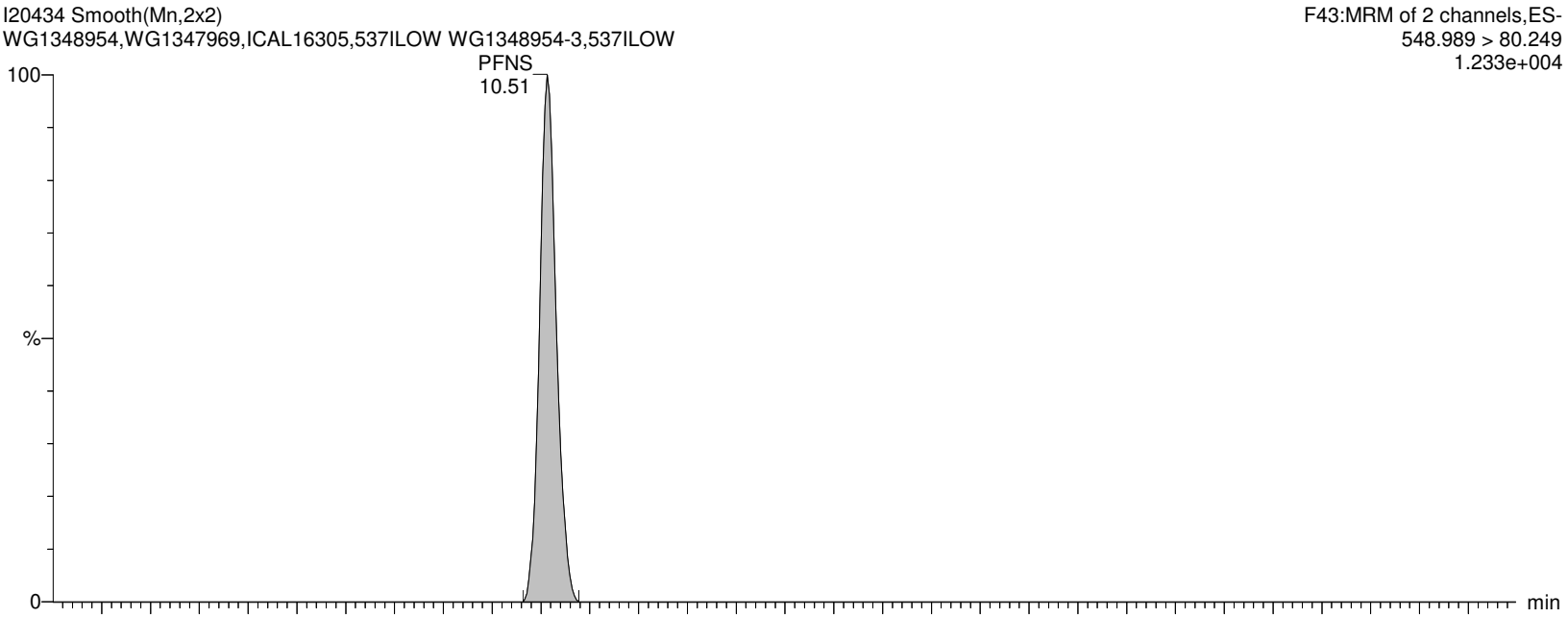
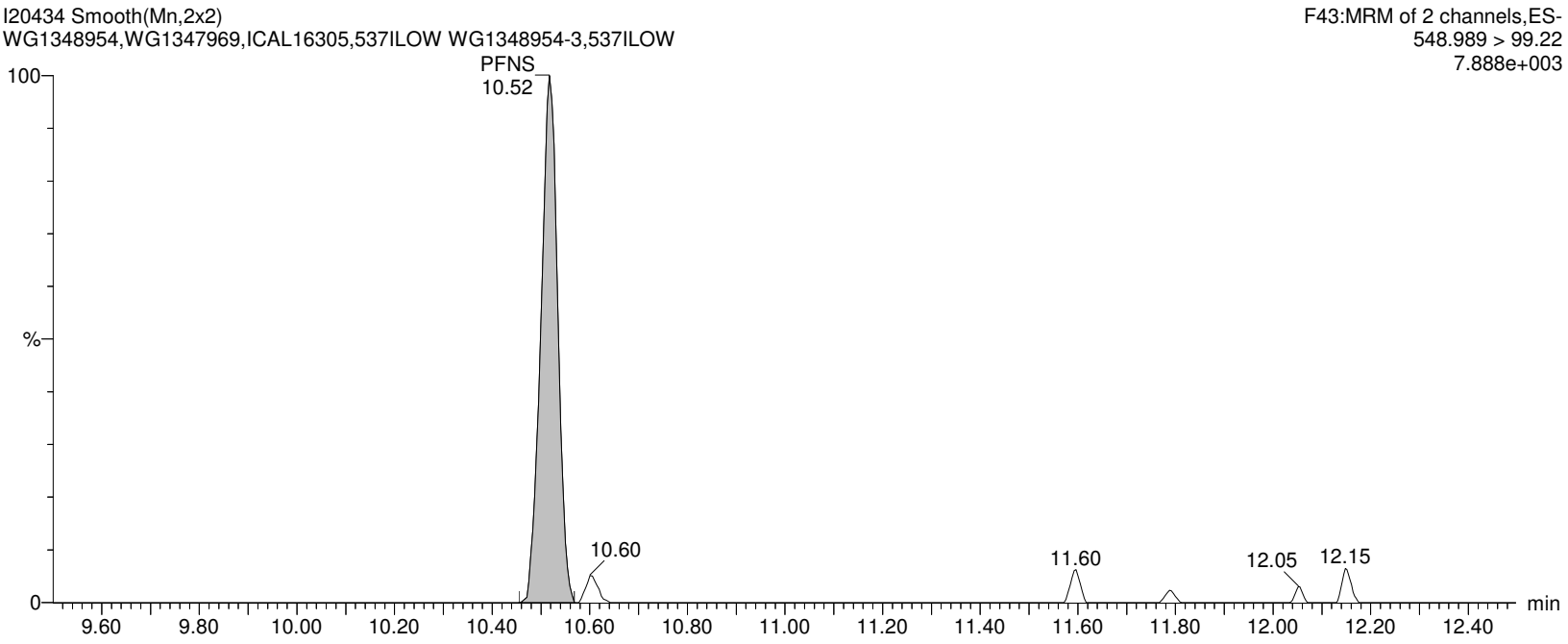
**PFNS**





all concentration units in (ng/mL)

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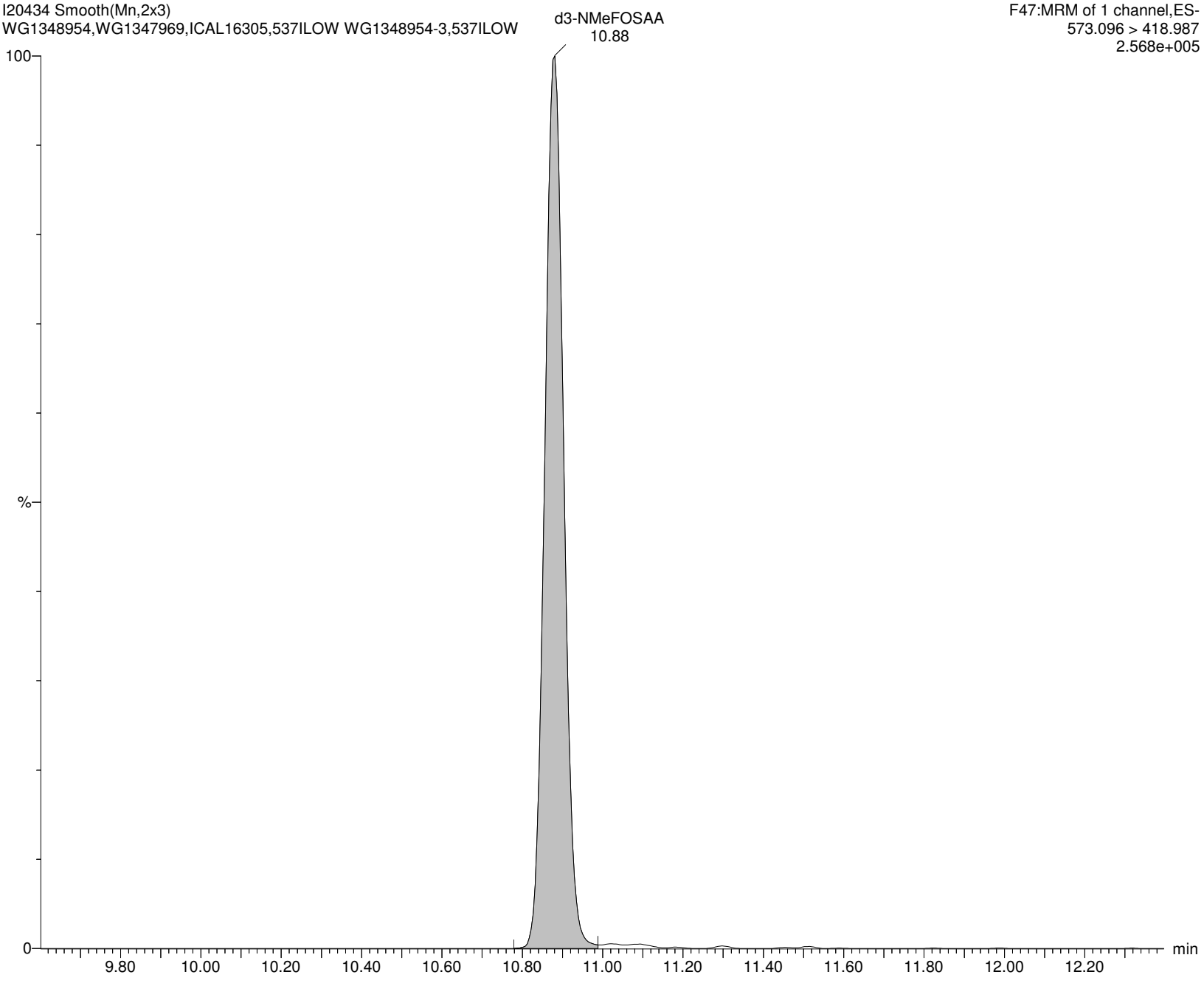
**d3-NMeFOSAA**





all concentration units in (ng/mL)

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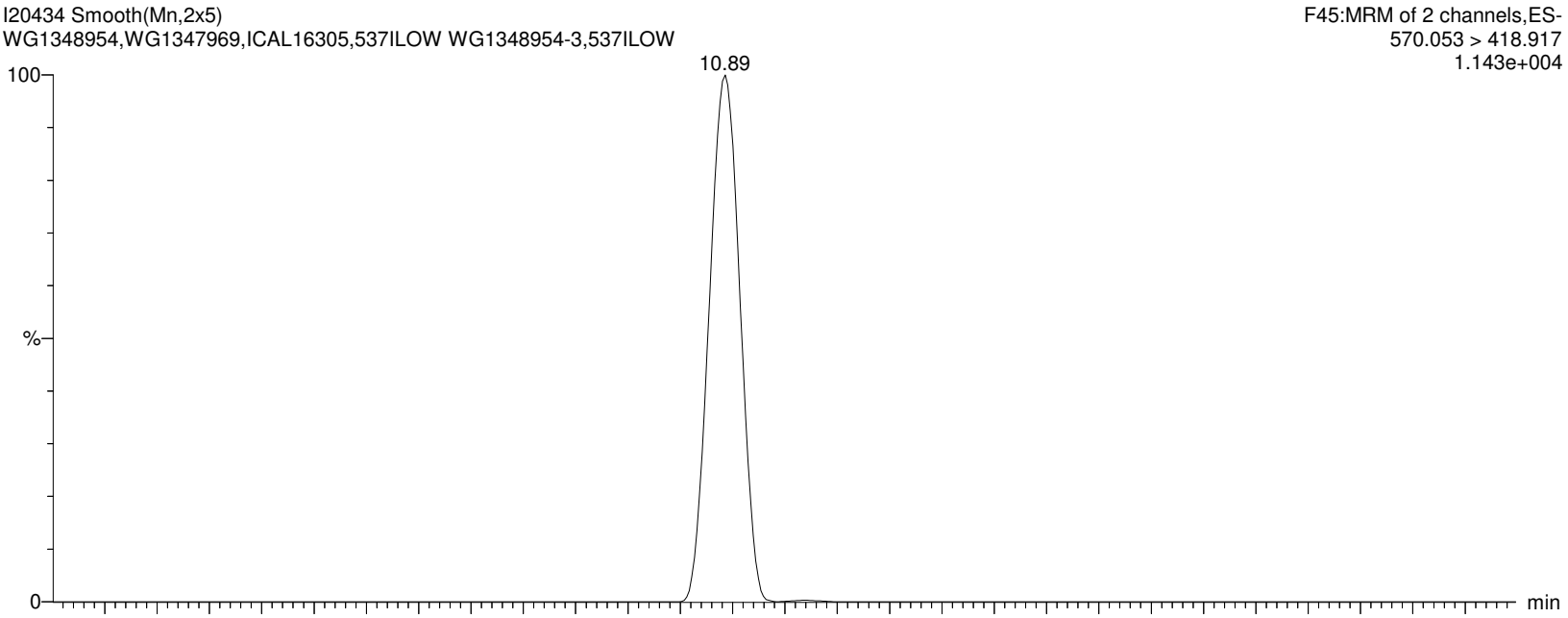
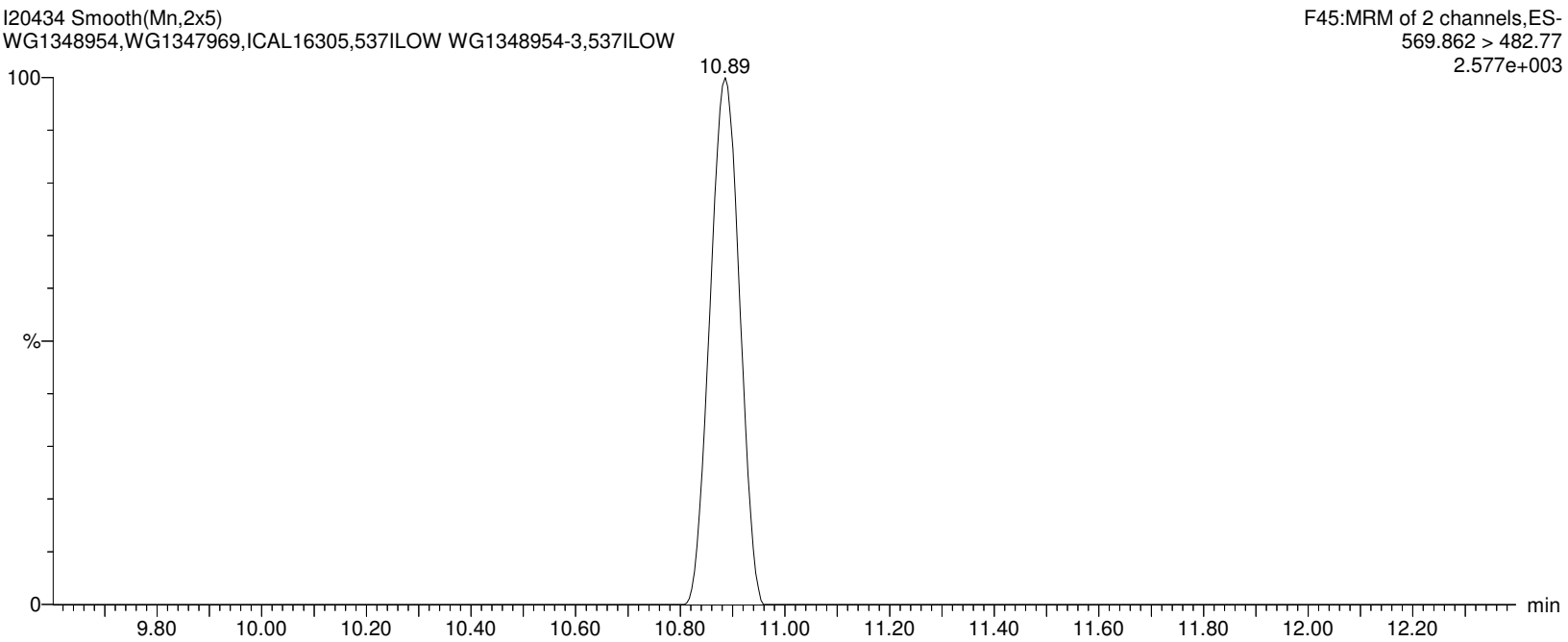
**br-NMeFOSAA**





all concentration units in (ng/mL)

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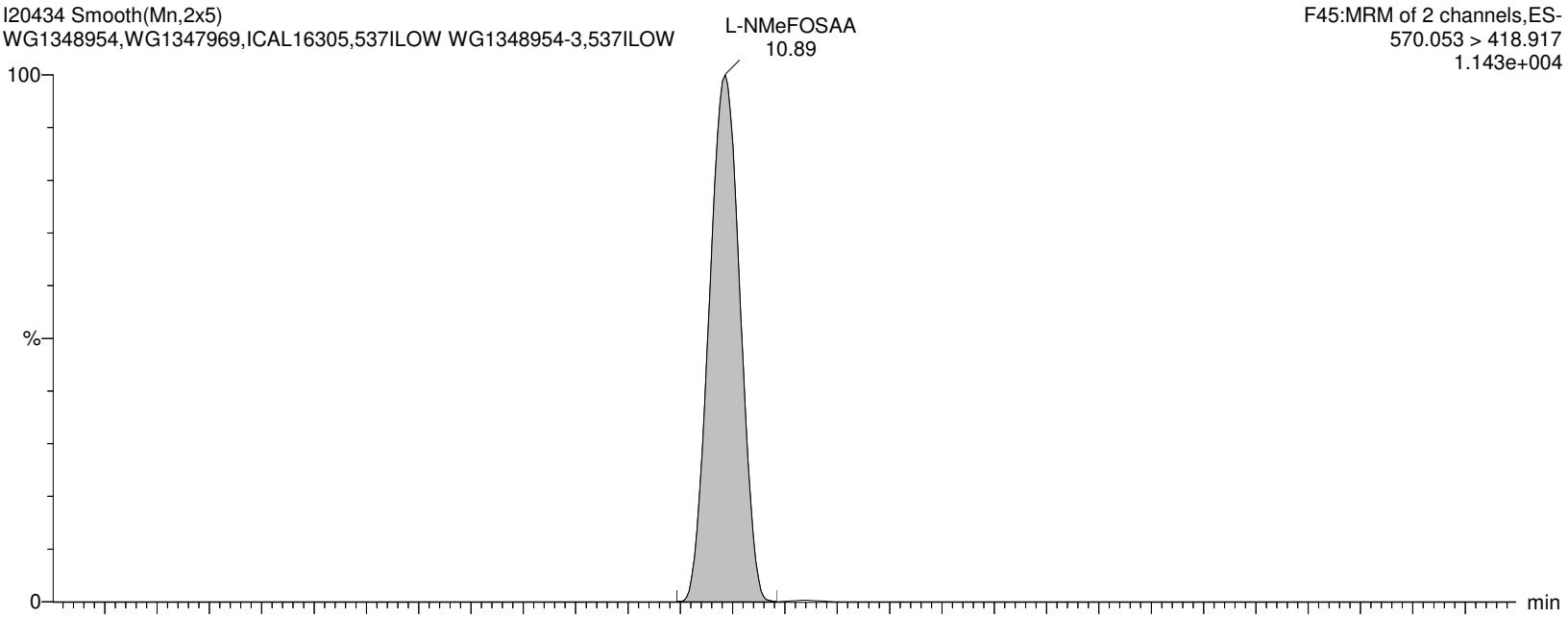
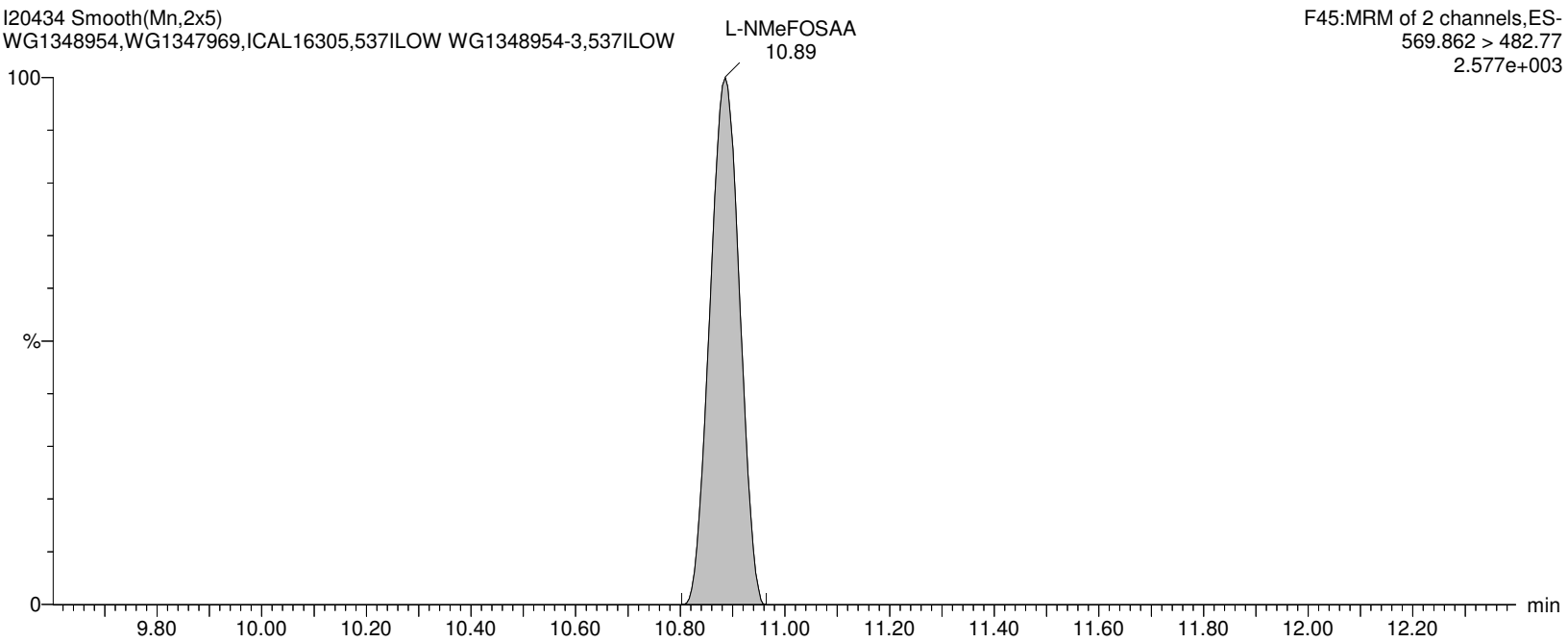
**L-NMeFOSAA**





all concentration units in (ng/mL)

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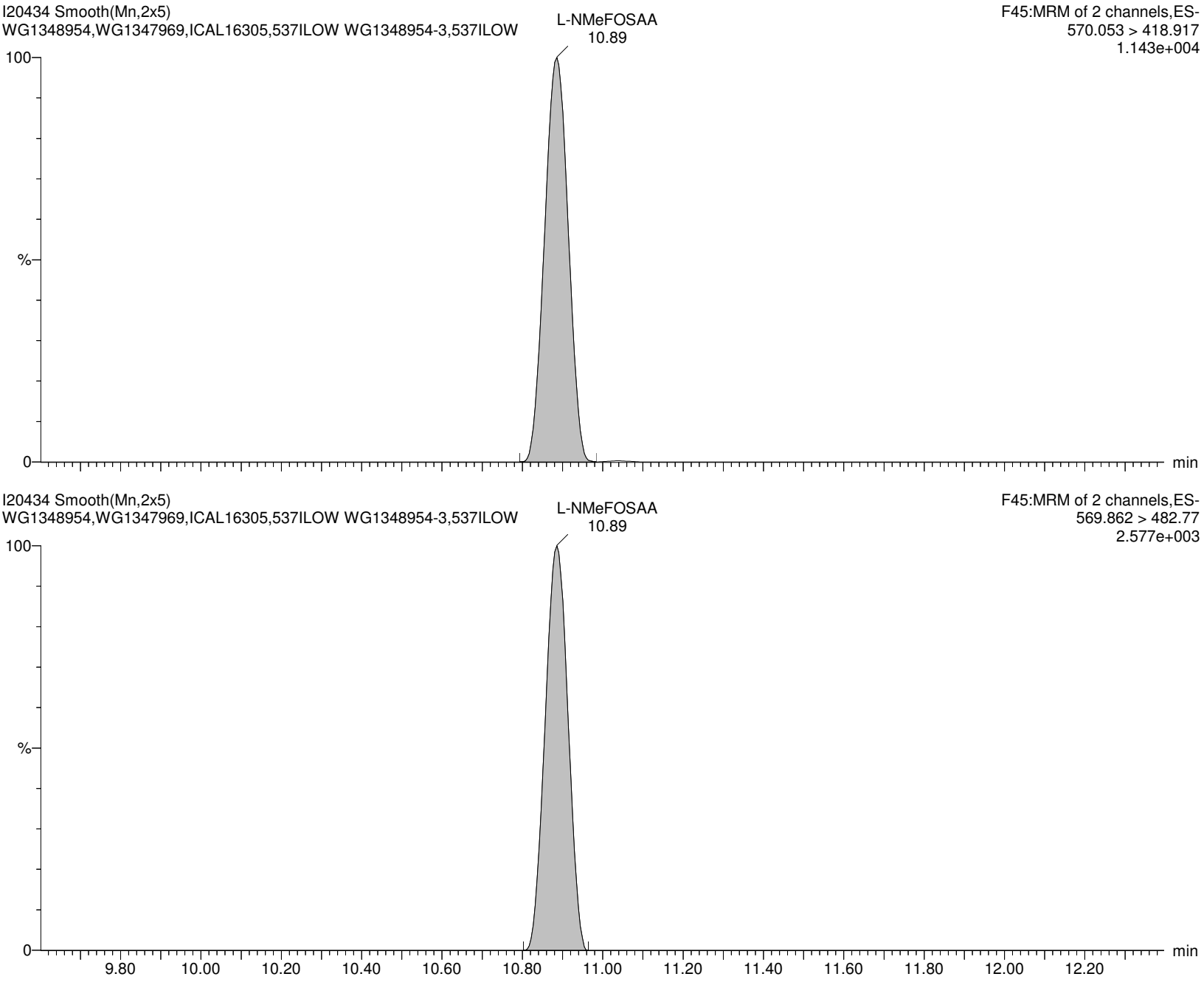
**NMeFOSAA**





all concentration units in (ng/mL)

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Dataset: C:\MassLynx\Data\2020\200309_537ISO.PRO\Data\WG1348954B.qld
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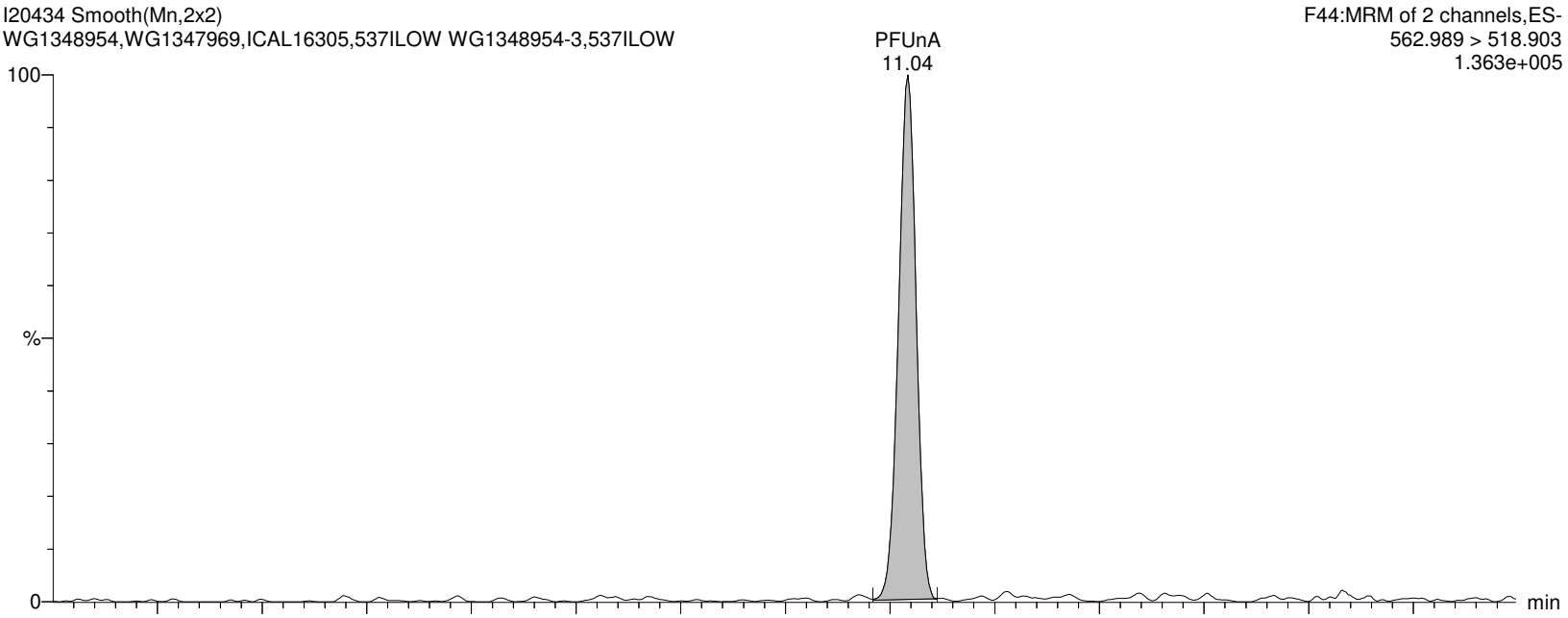


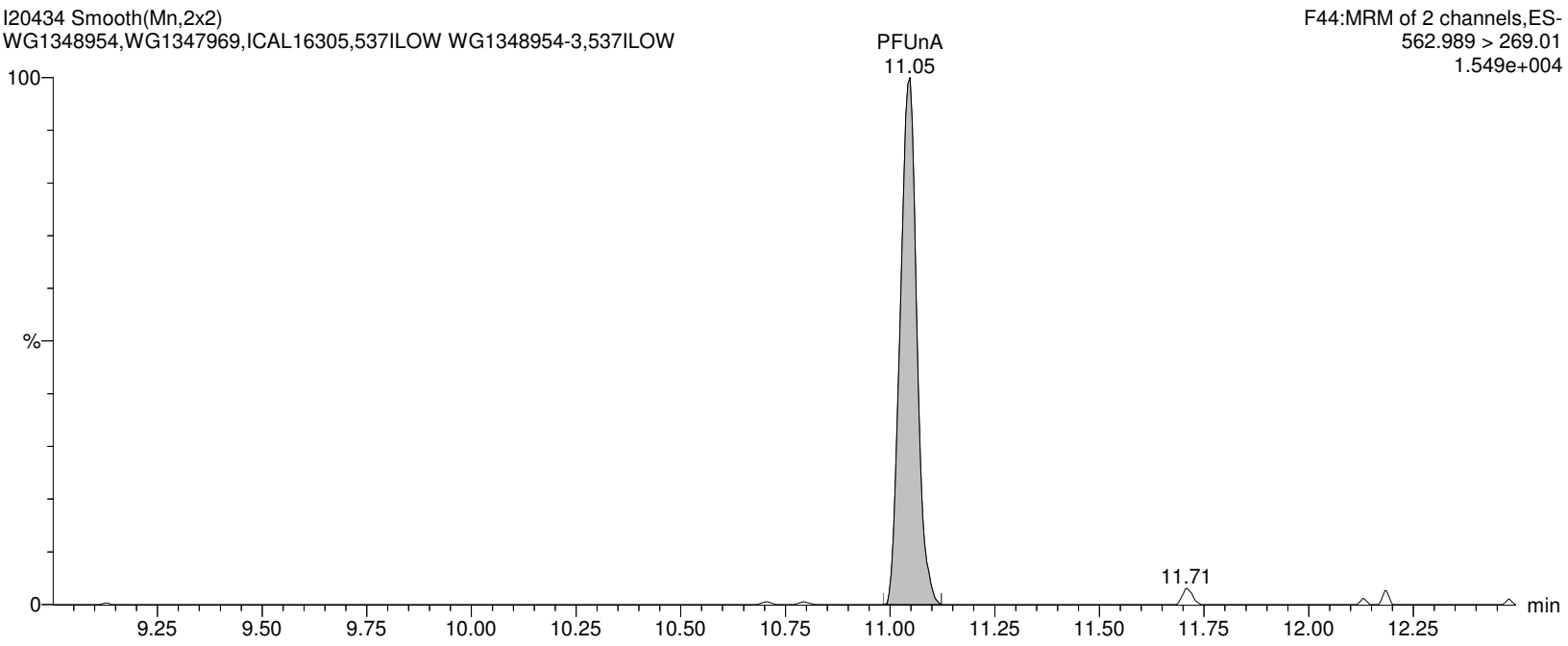



all concentration units in (ng/mL)

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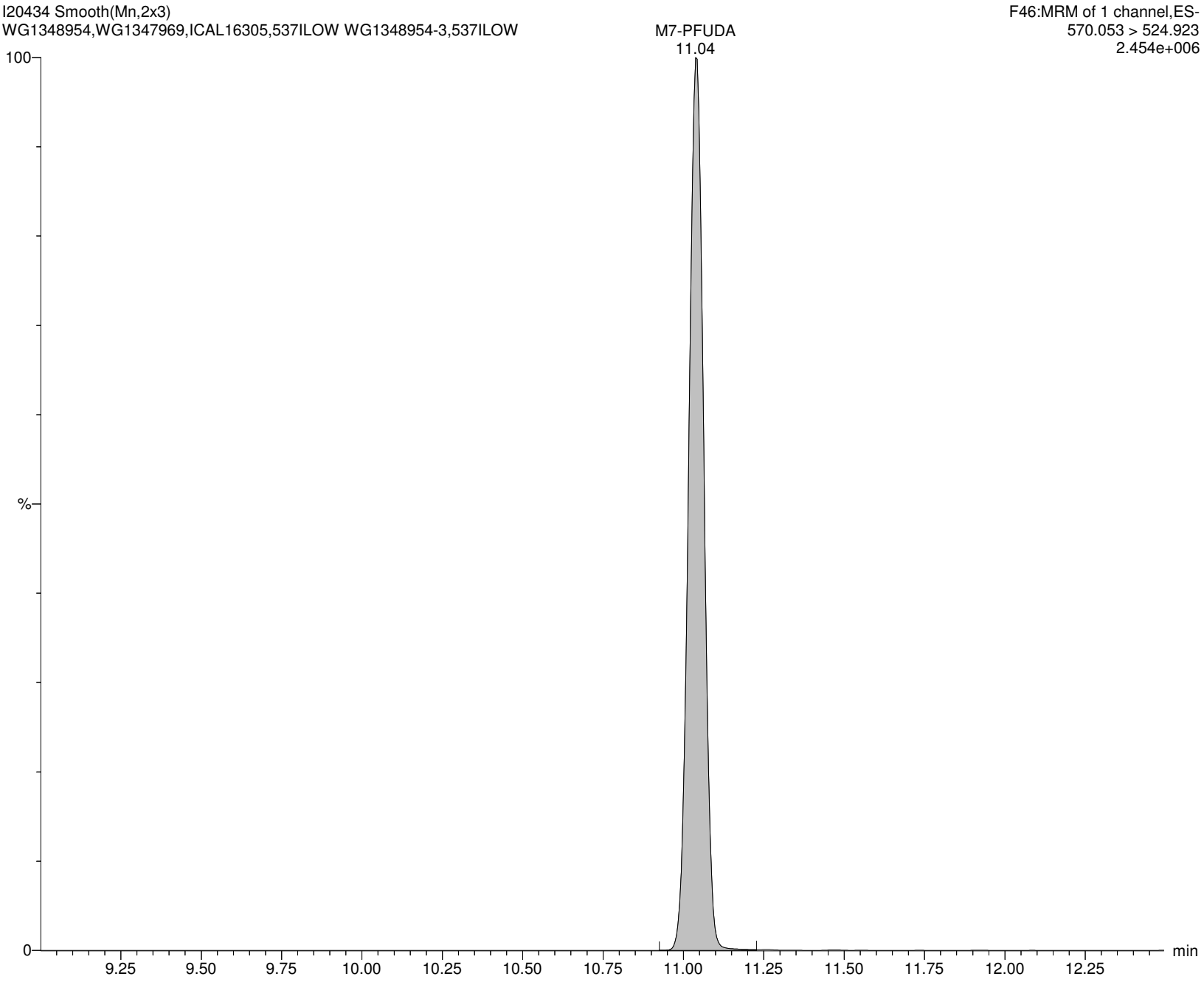



all concentration units in (ng/mL)

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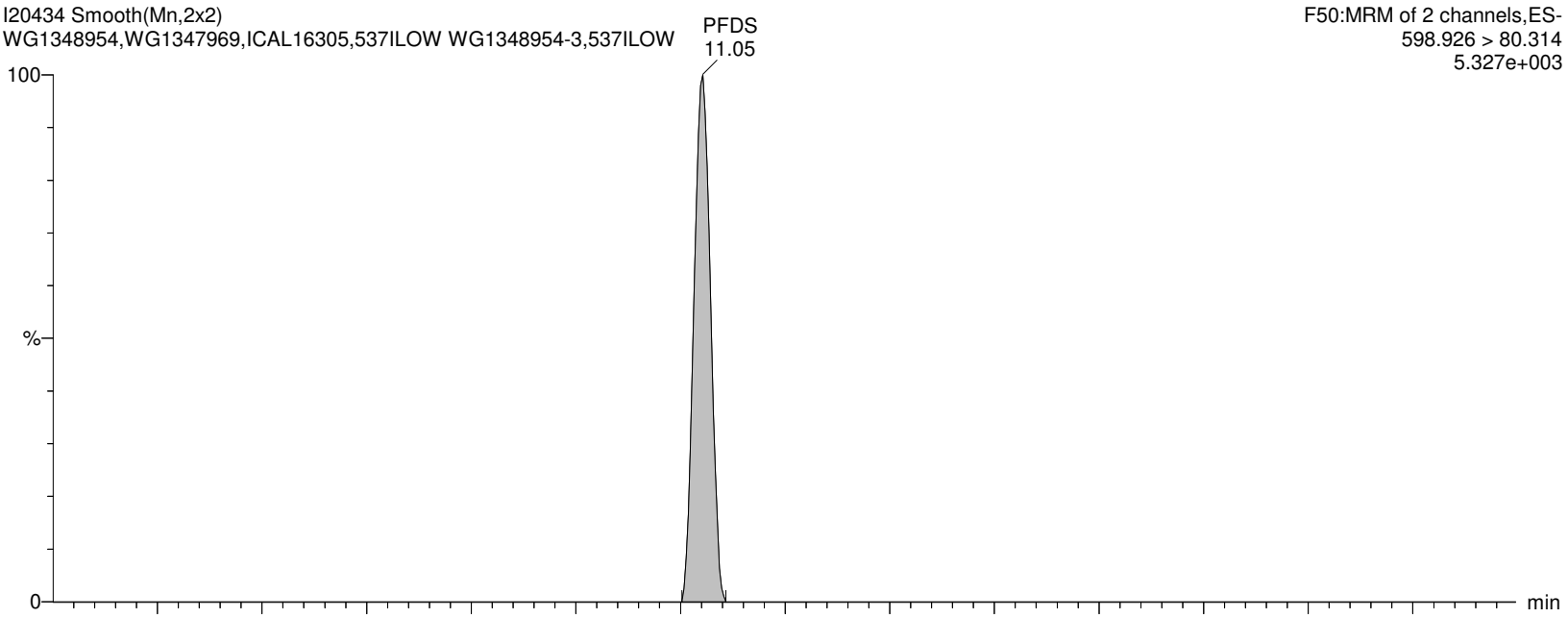


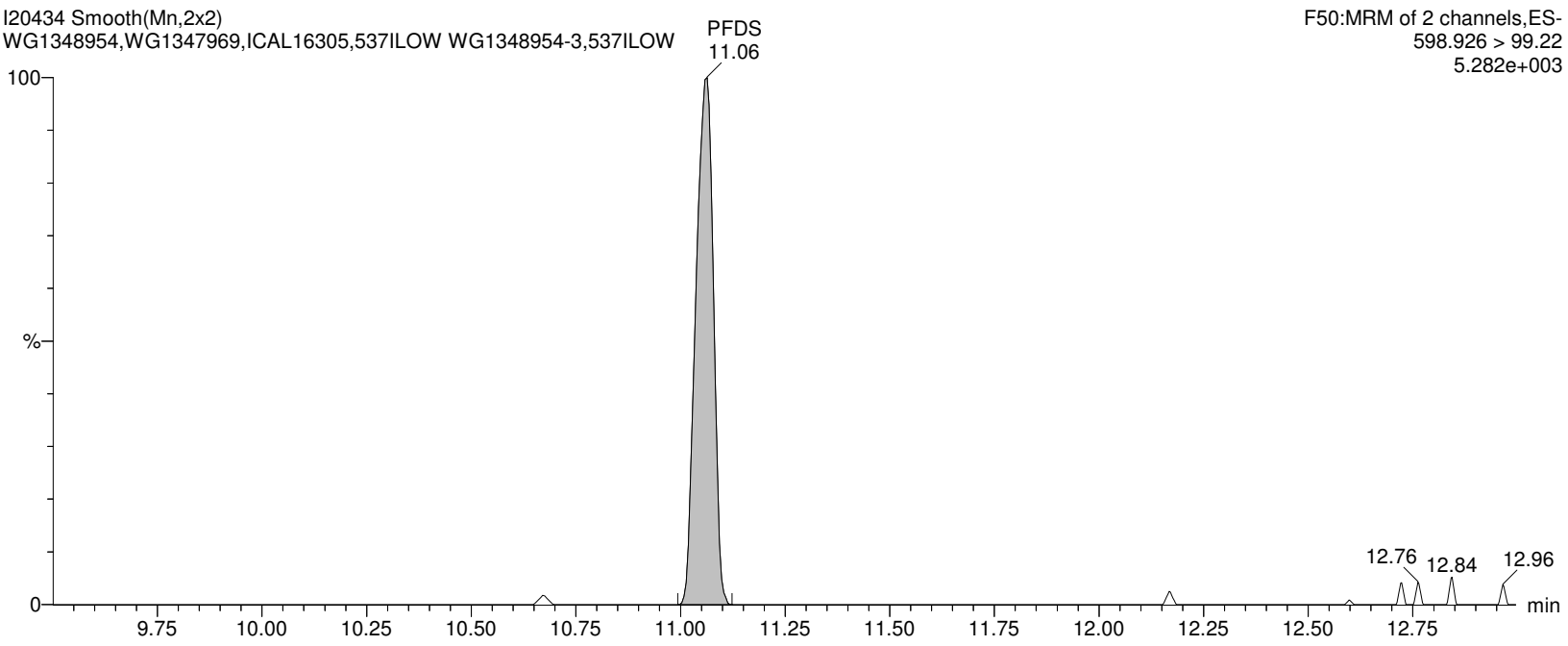



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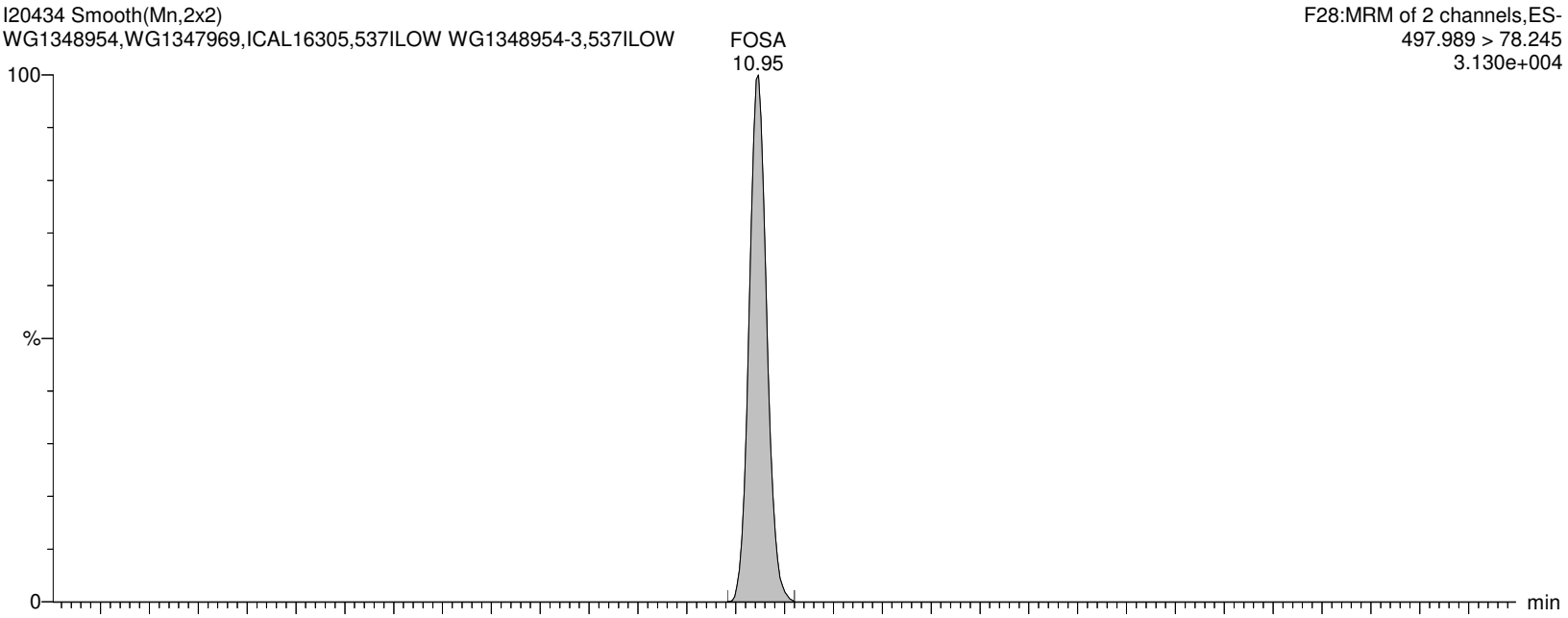


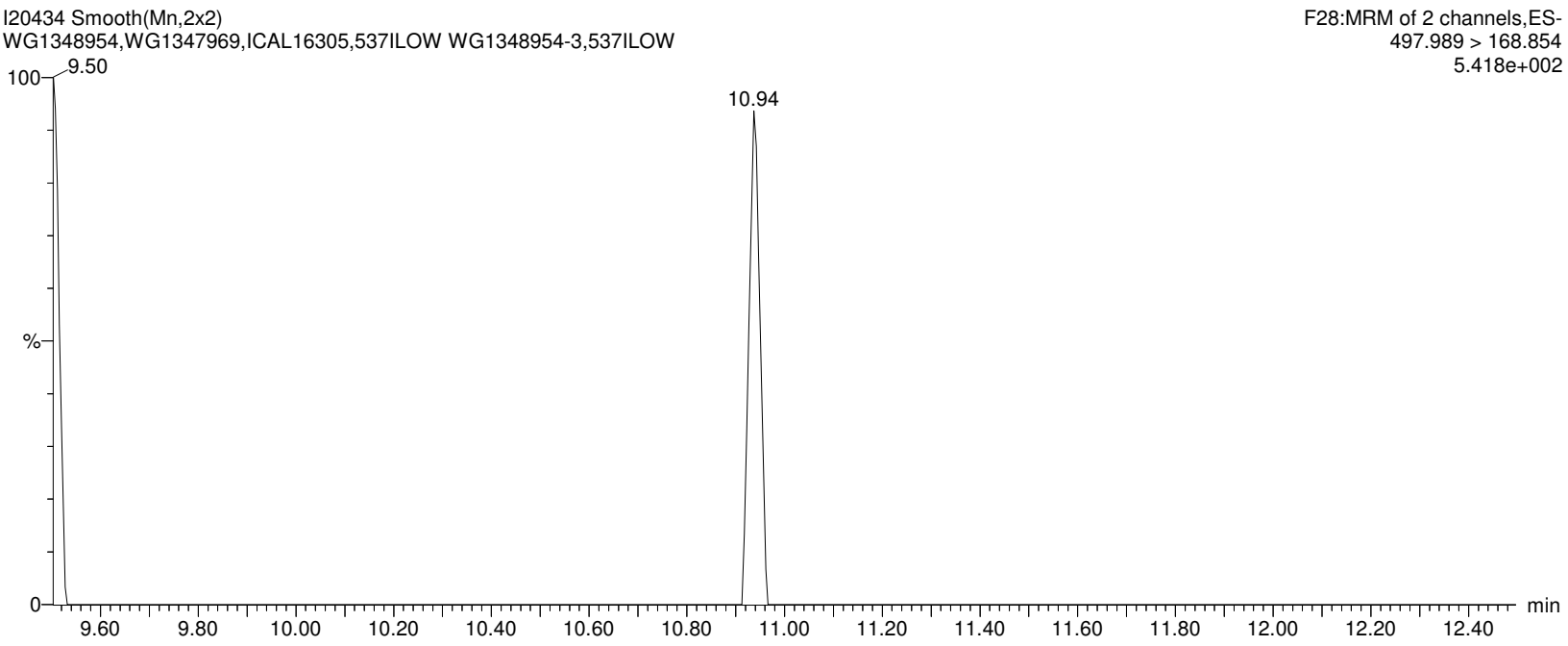



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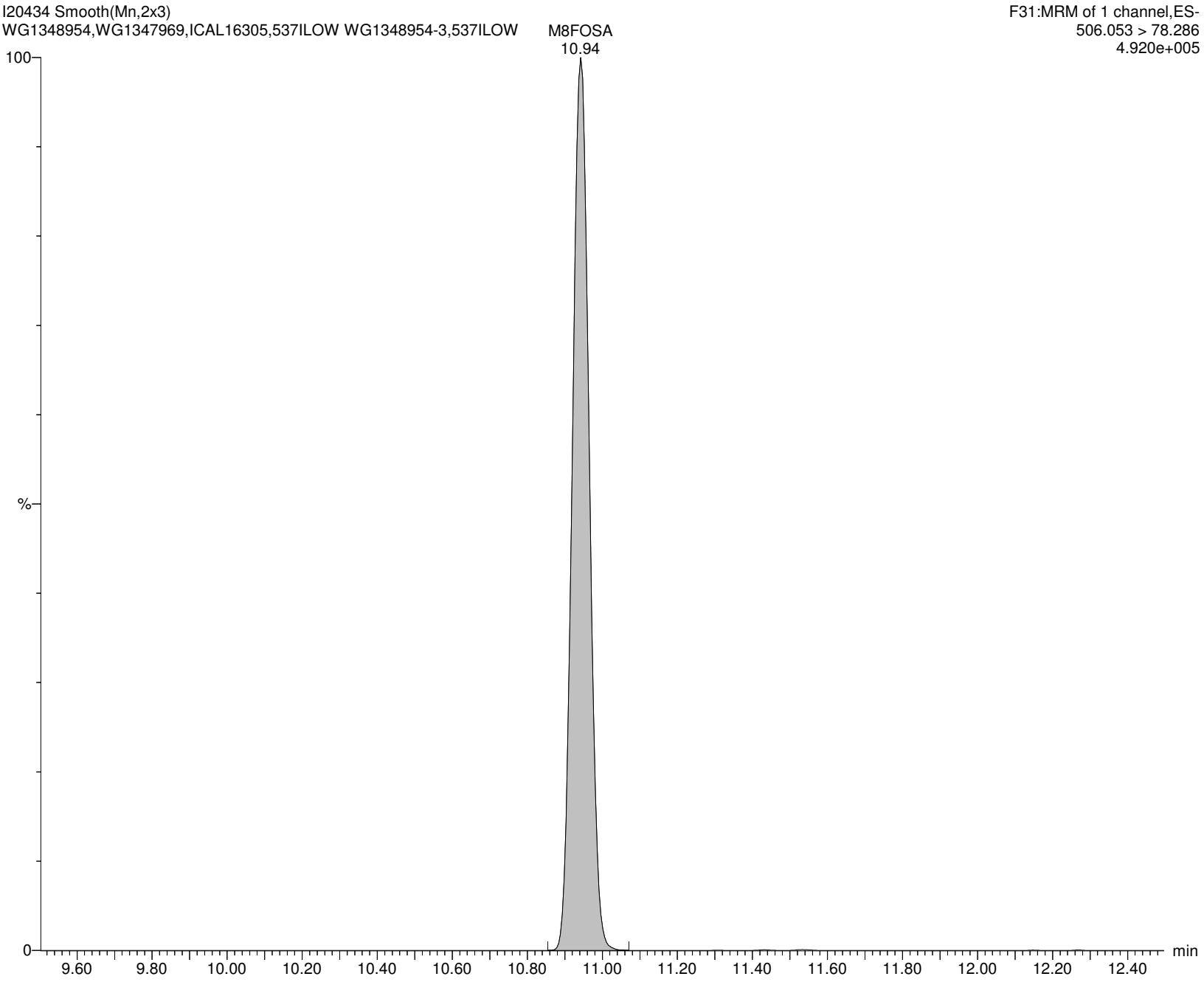
**M8FOSA**





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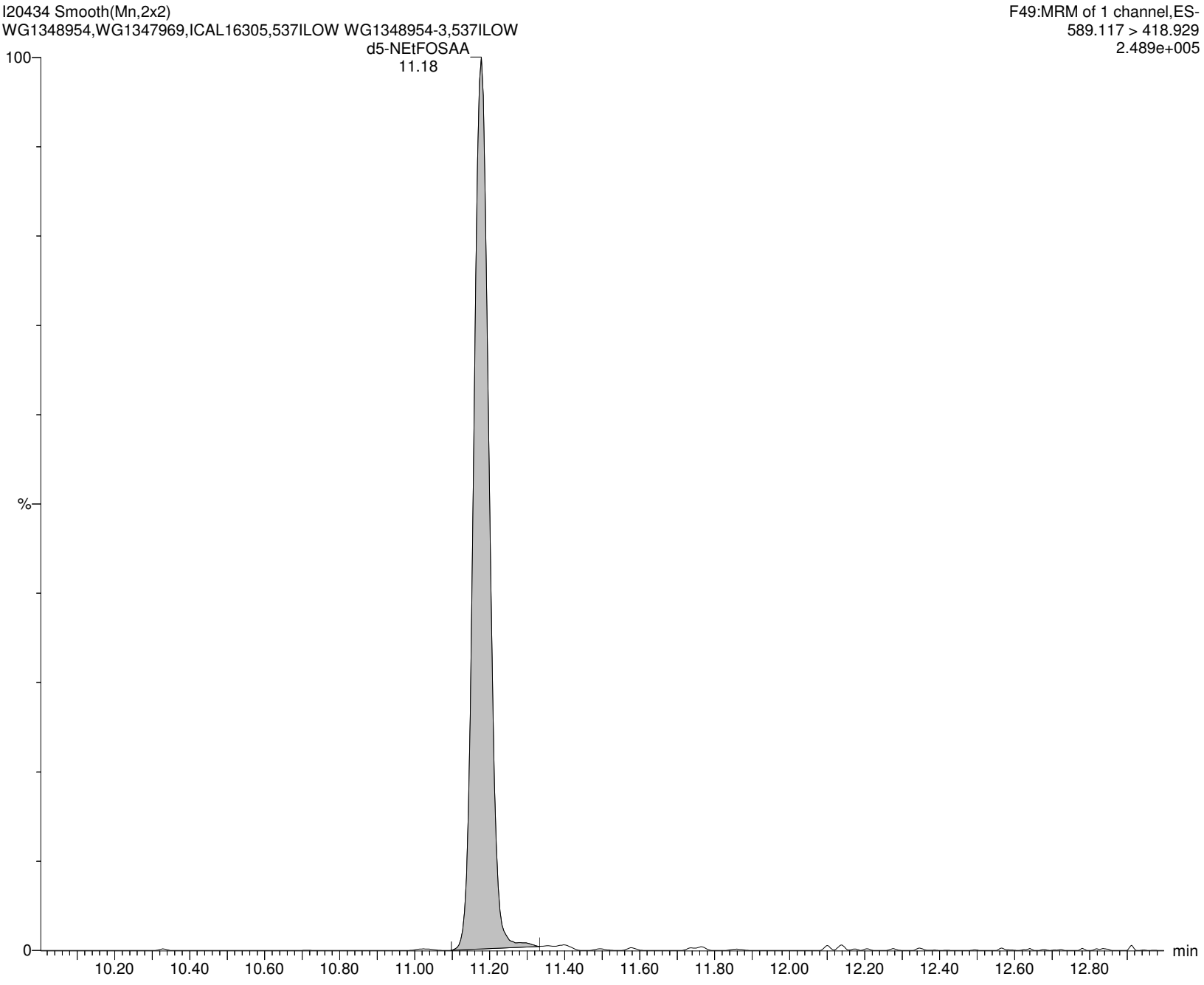



all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2020\200309_537ISO.PRO\Data\WG1348954B.qld
Last Altered: Wednesday, March 11, 2020 19:42:58 Eastern Daylight Time
Printed: Thursday, March 12, 2020 03:41:27 Eastern Daylight Time

**Name: I20434**
**ID: WG1348954-3,537ILOW**
**Date: 10-Mar-2020**
**Time: 21:04:42**
**Description: WG1348954,WG1347969,ICAL16305,537ILOW**
**User: LCMS02:RS**
**Vial: 1:A,2**
**Instrument: XEVO-TQSmicro#QEB0050**
**Inlet Method Name: C:\MassLynx\Data\2020\200309_537ISO.PRO\ACQUDB\LCMS_537_ISO_B**
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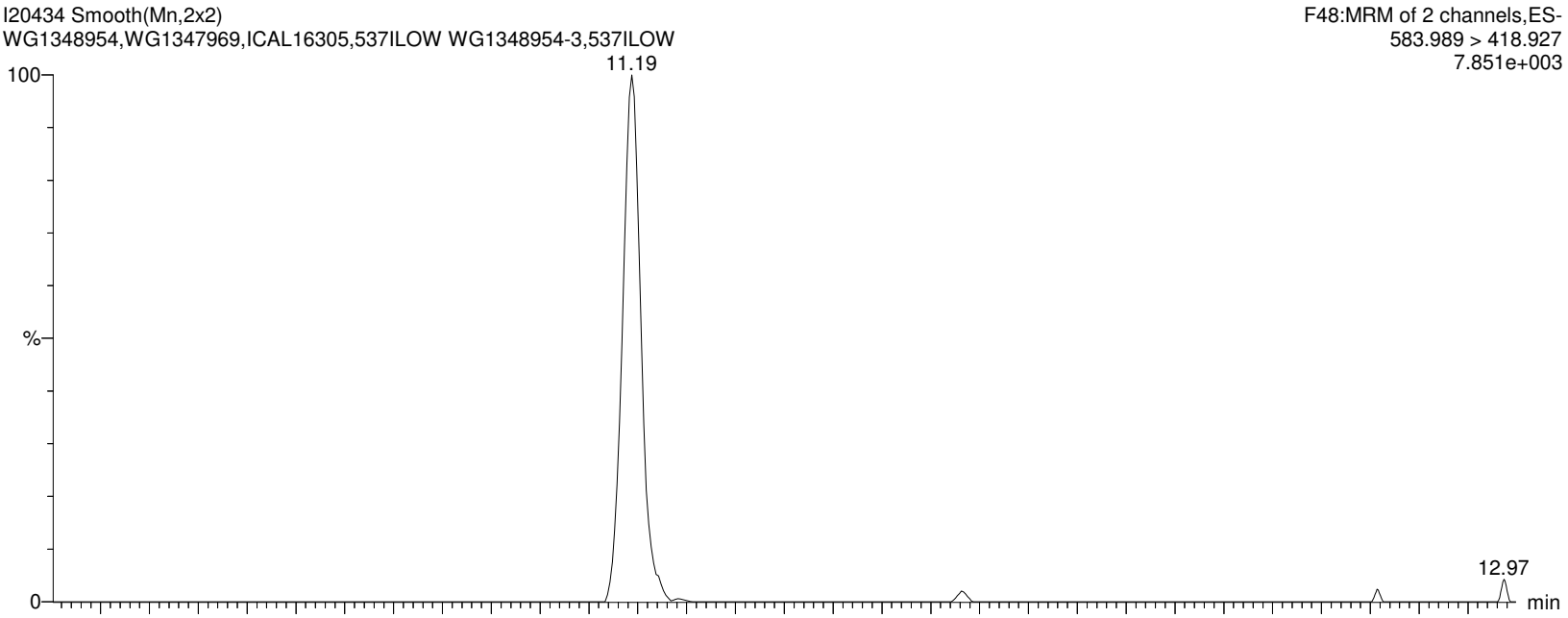


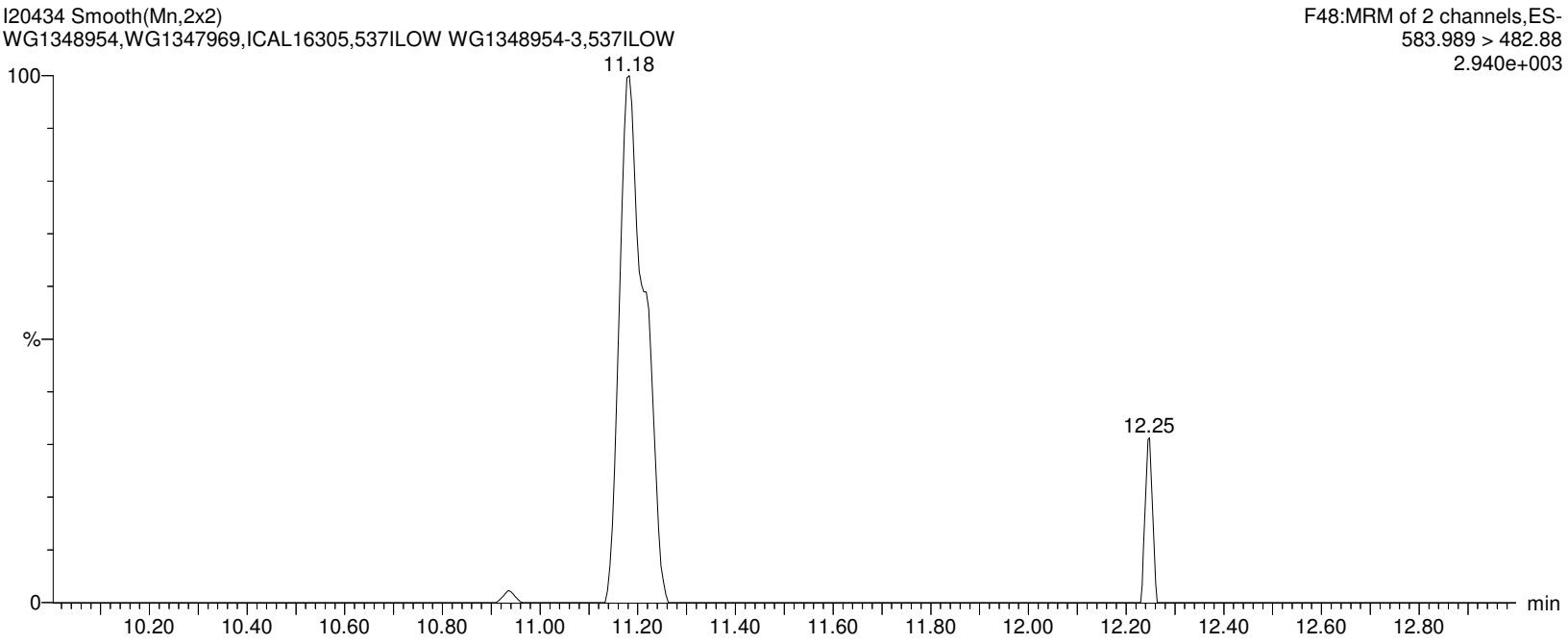



all concentration units in (ng/mL)

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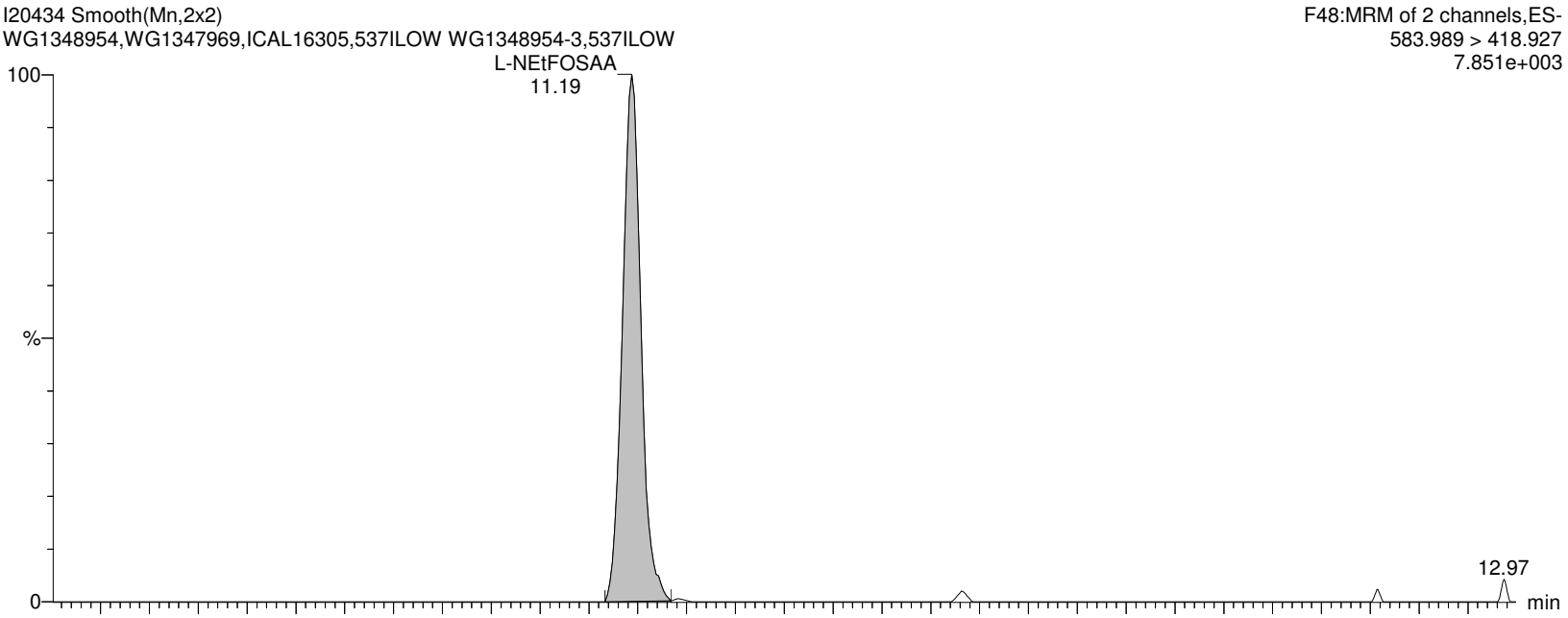


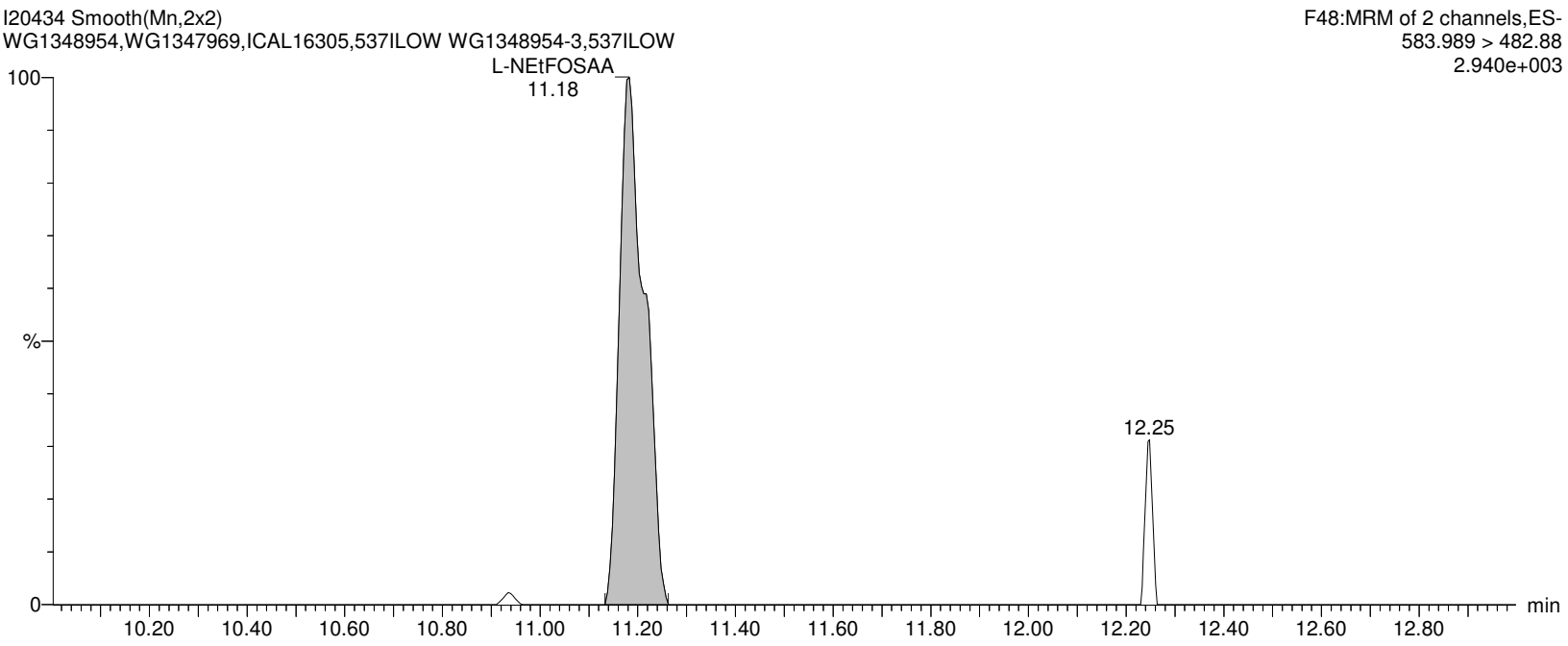



all concentration units in (ng/mL)

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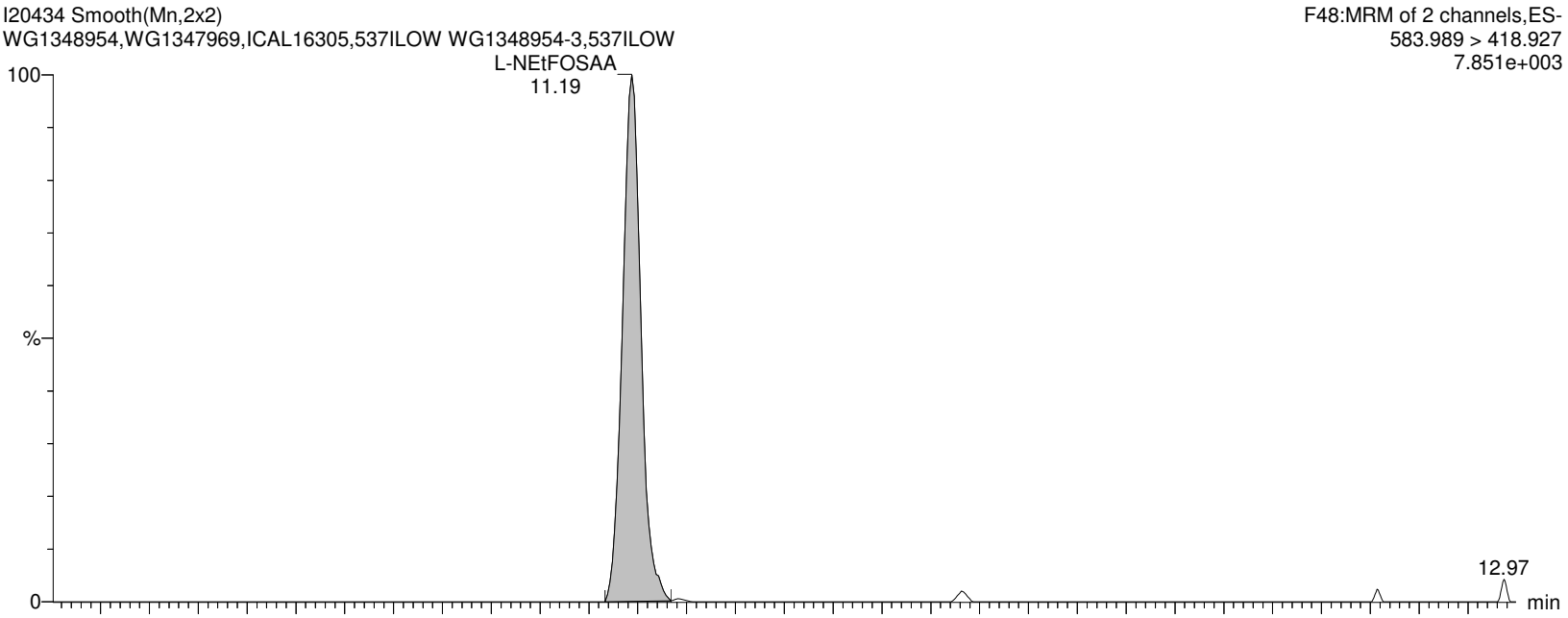


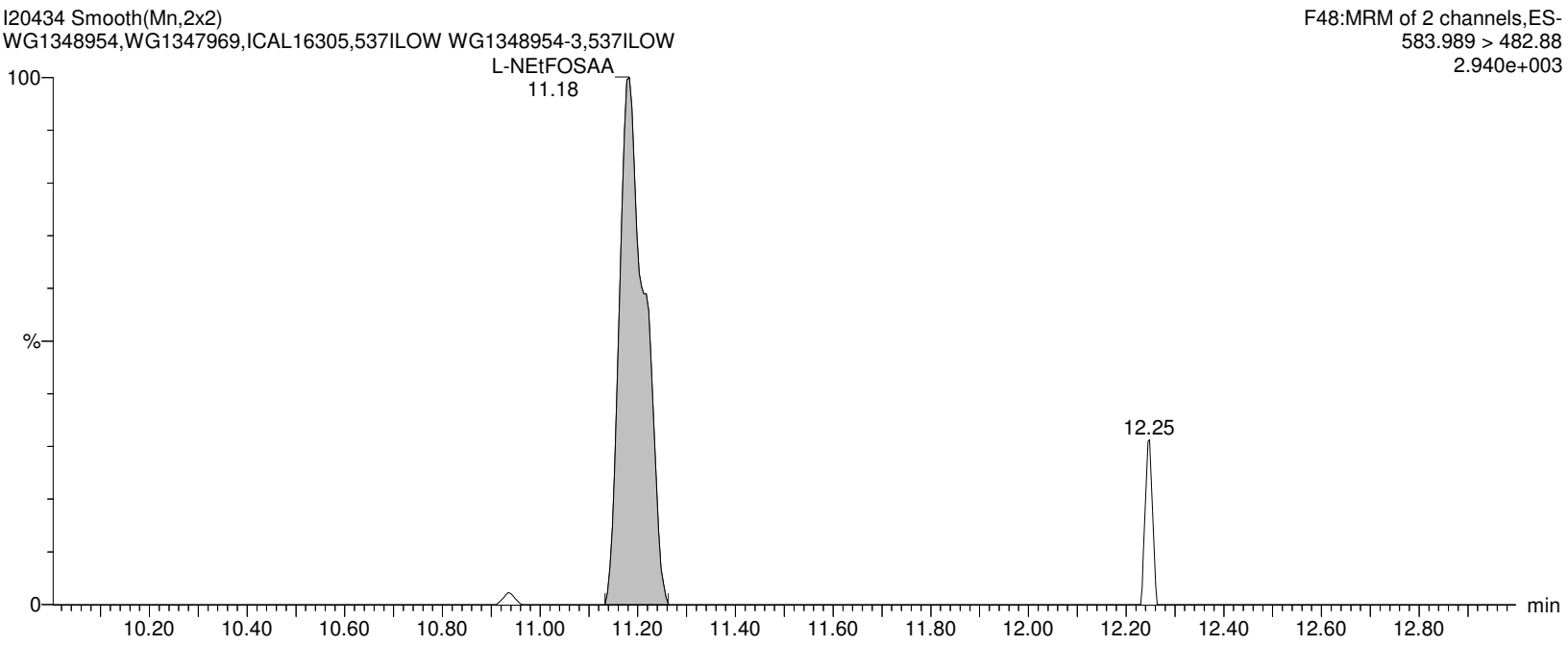



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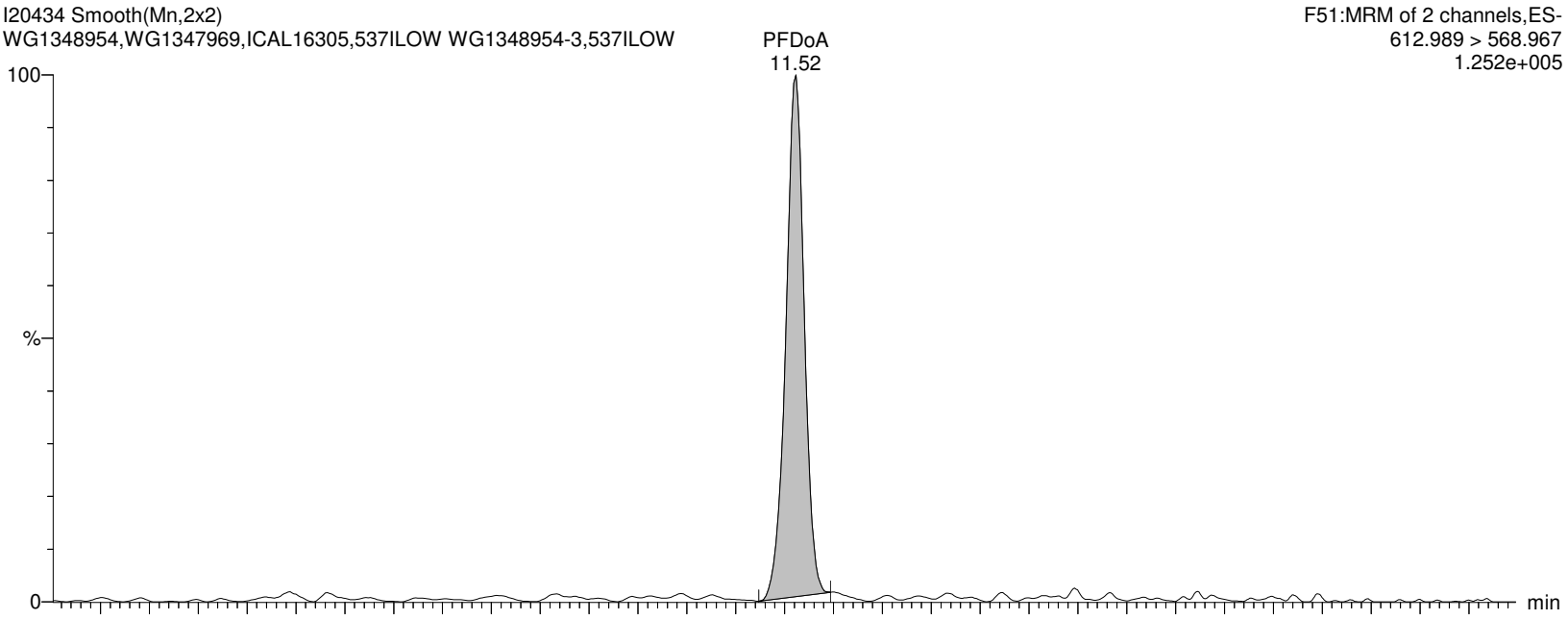


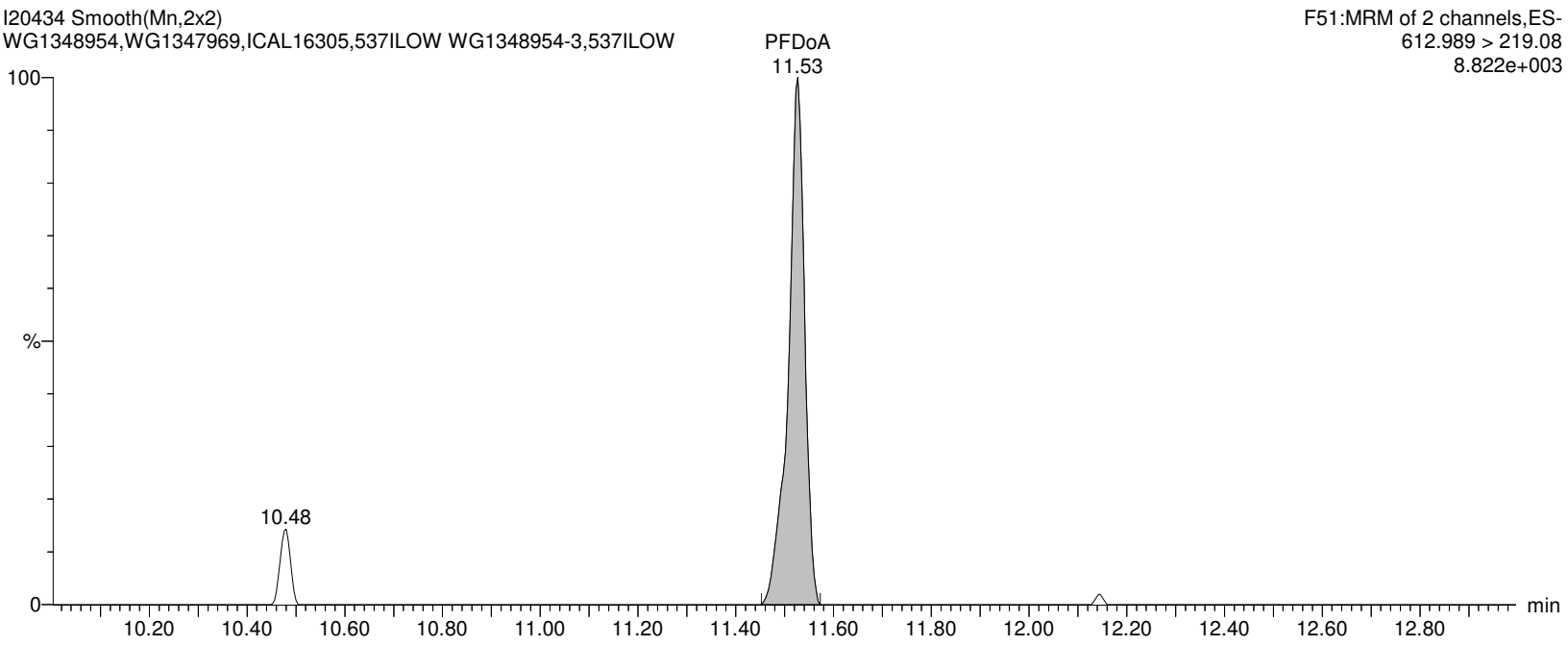



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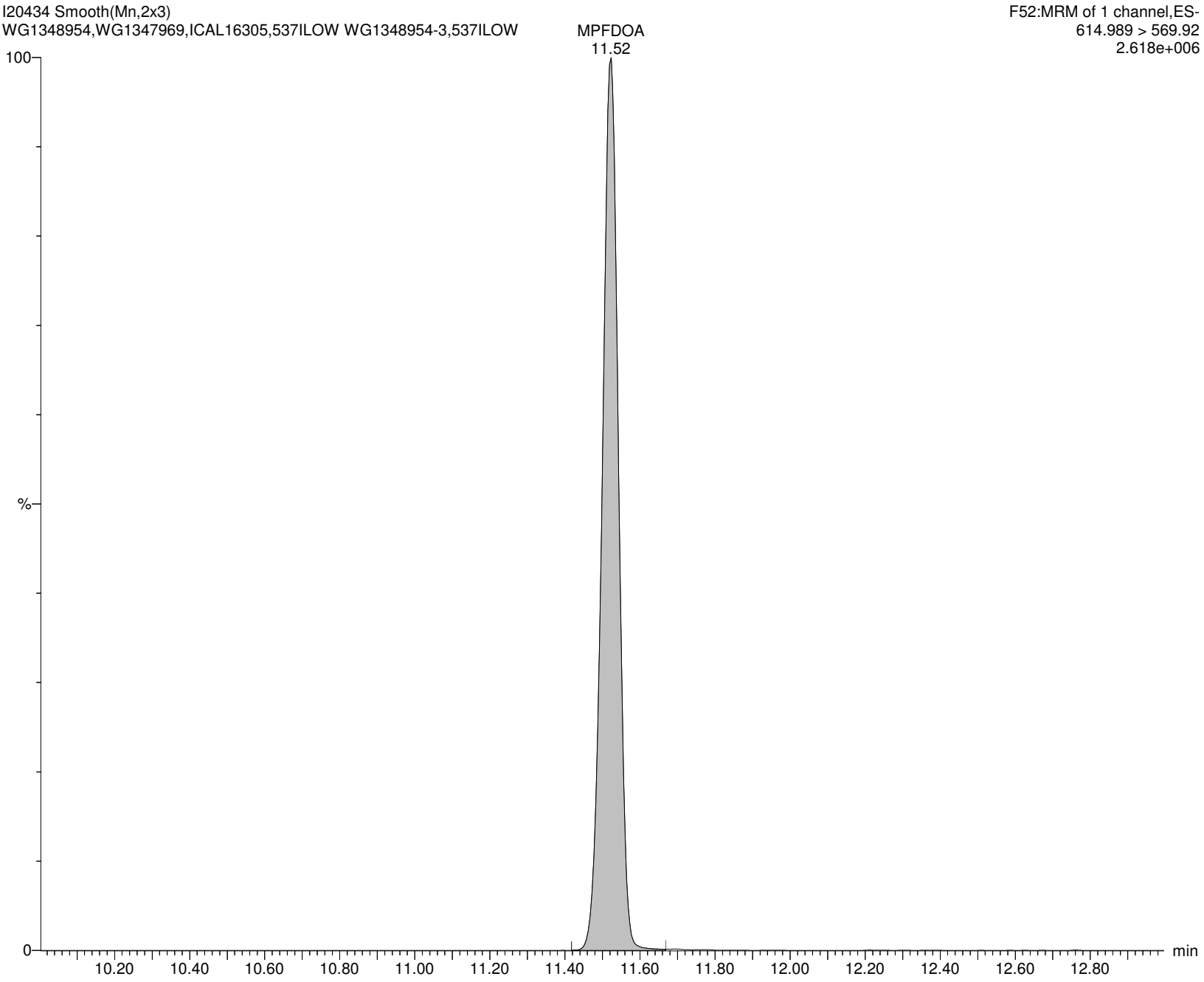



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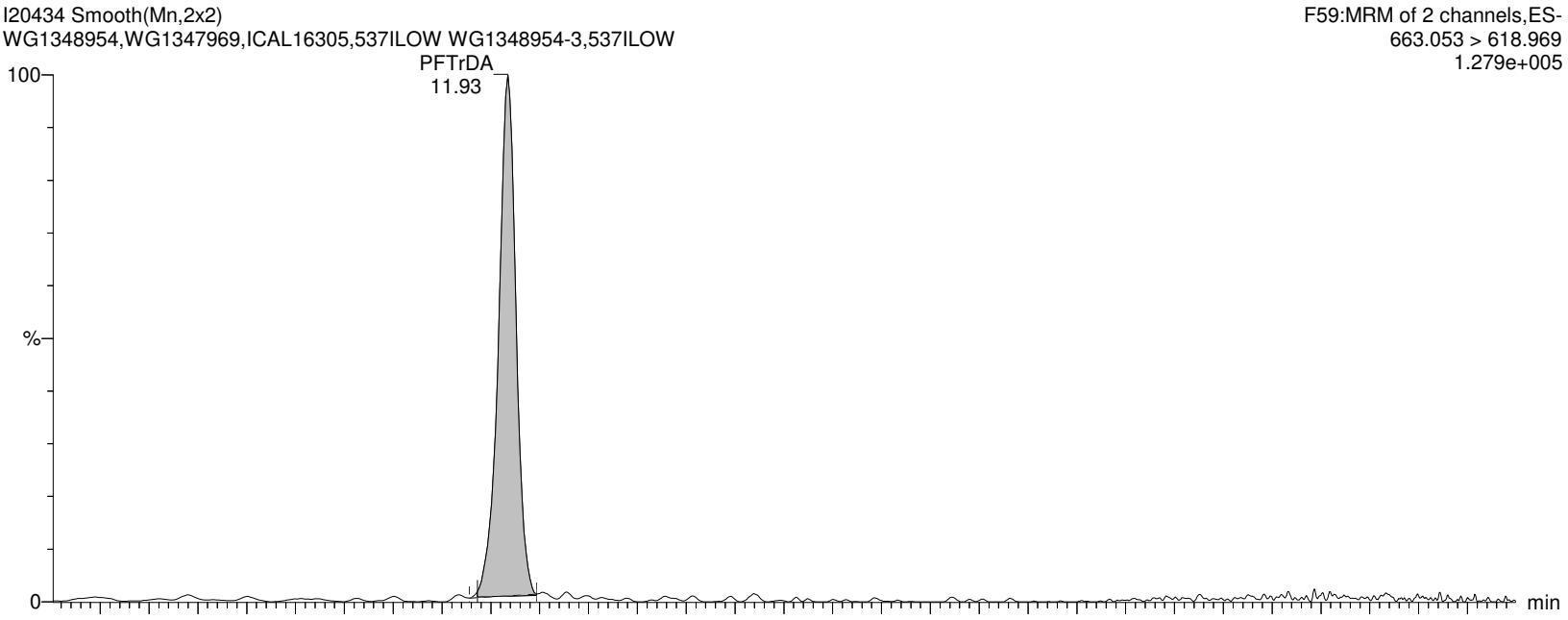


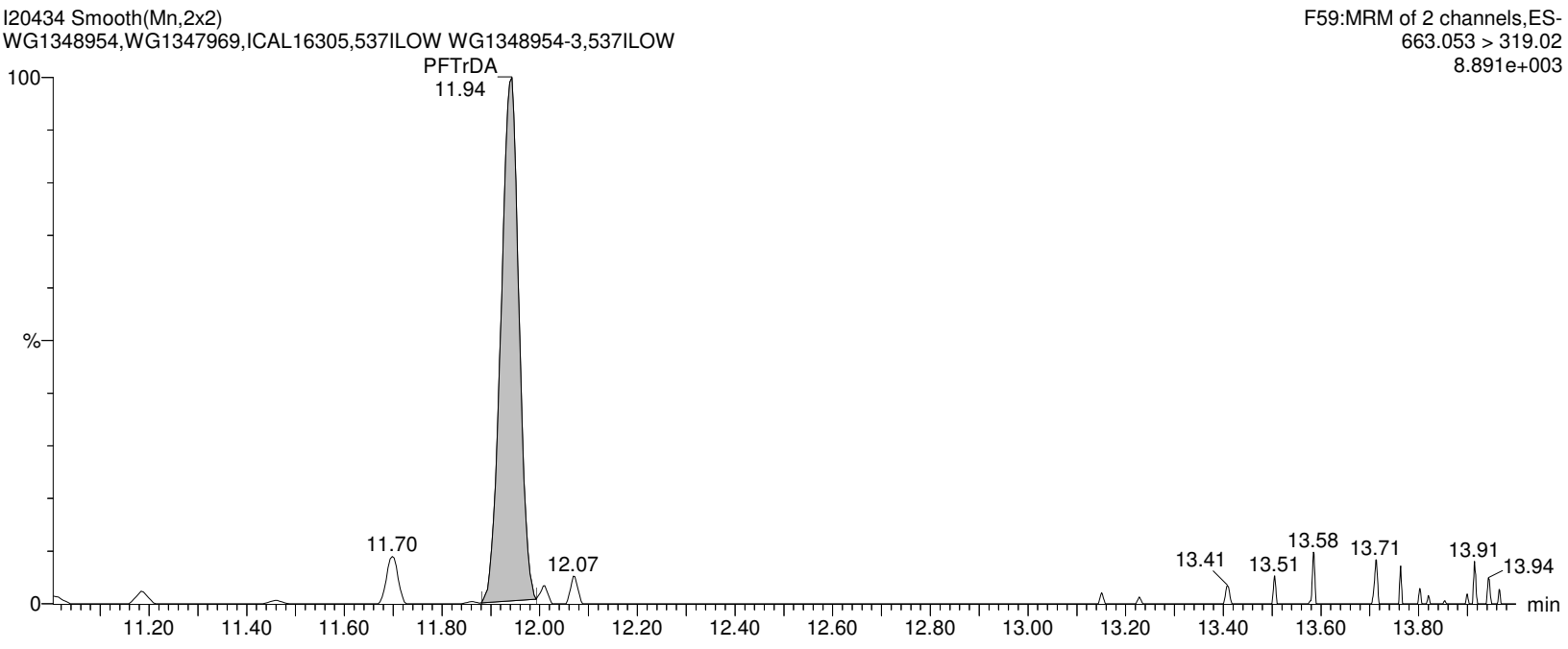



all concentration units in (ng/mL)

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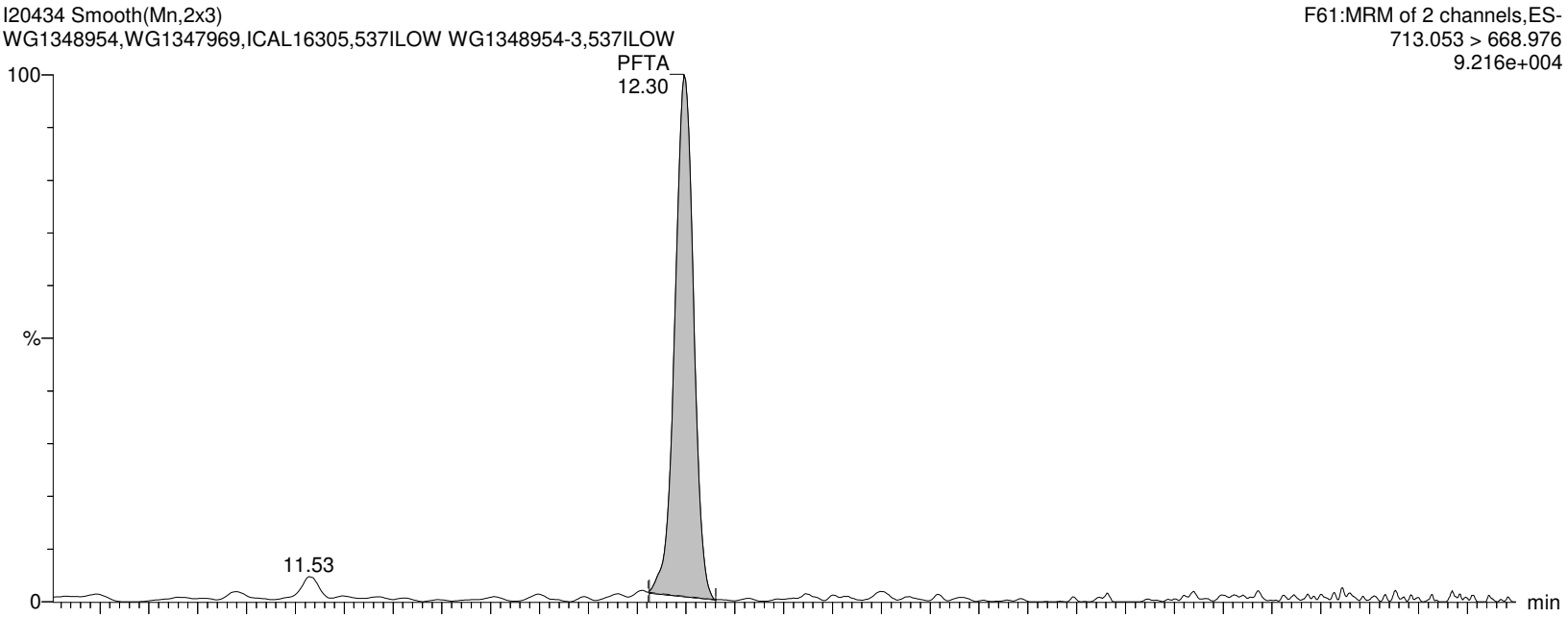


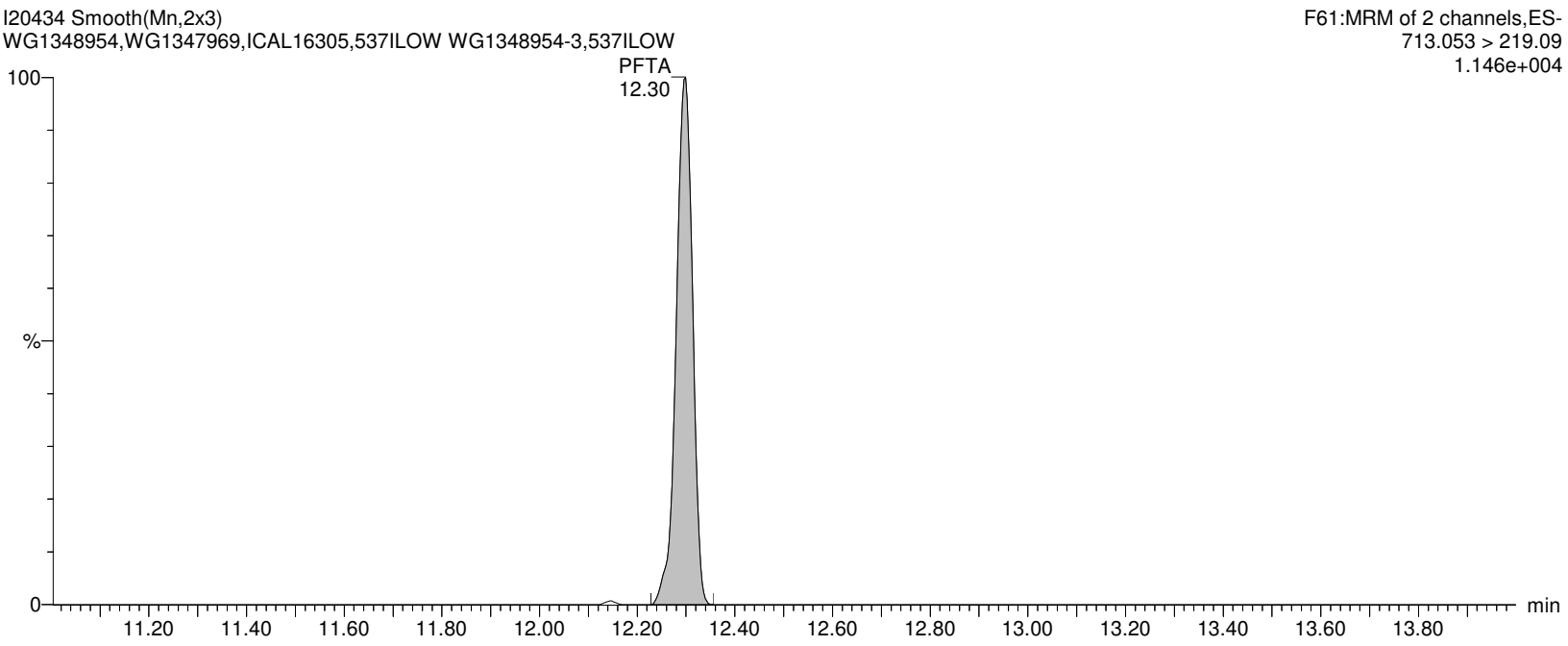



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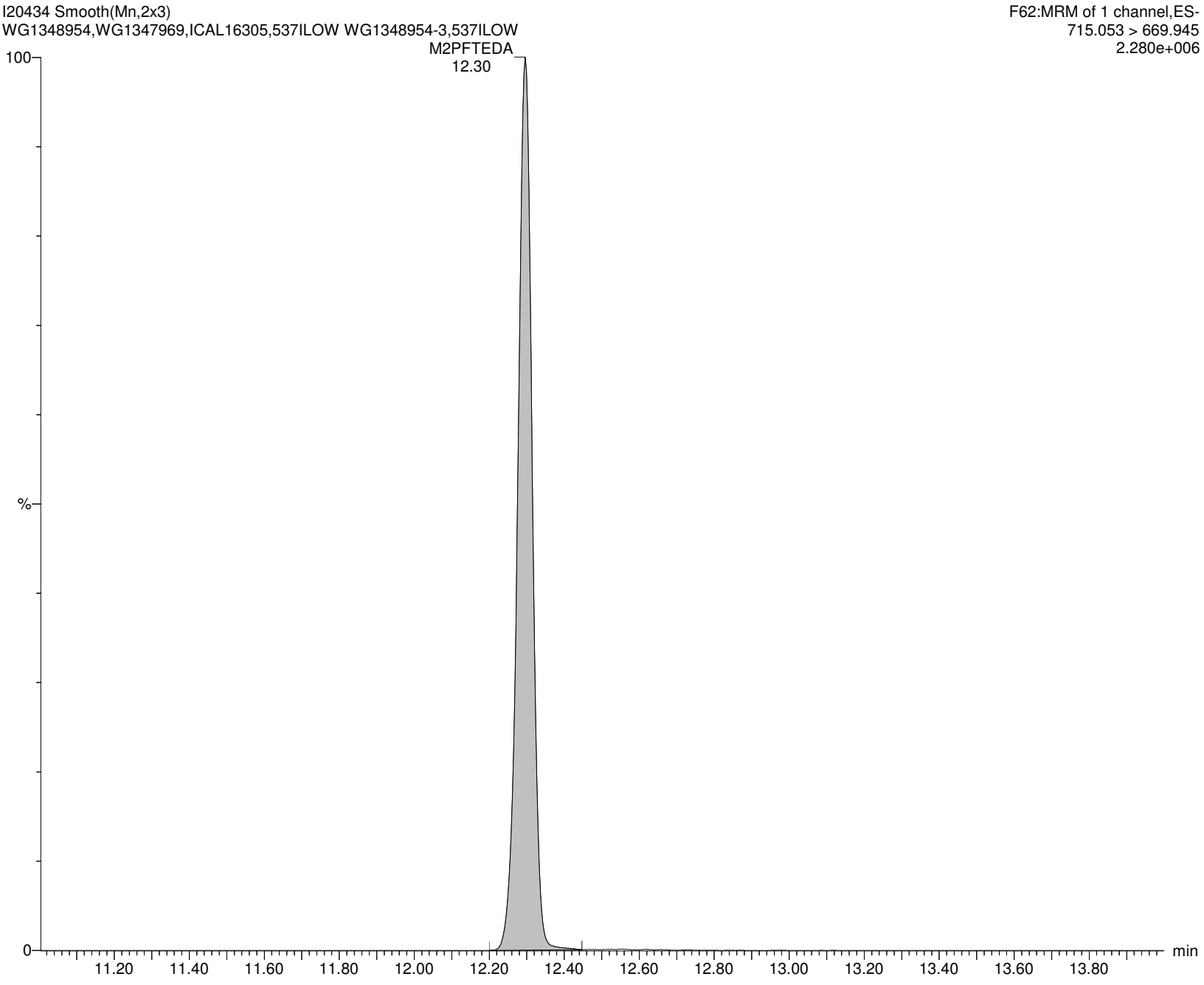



all concentration units in (ng/mL)

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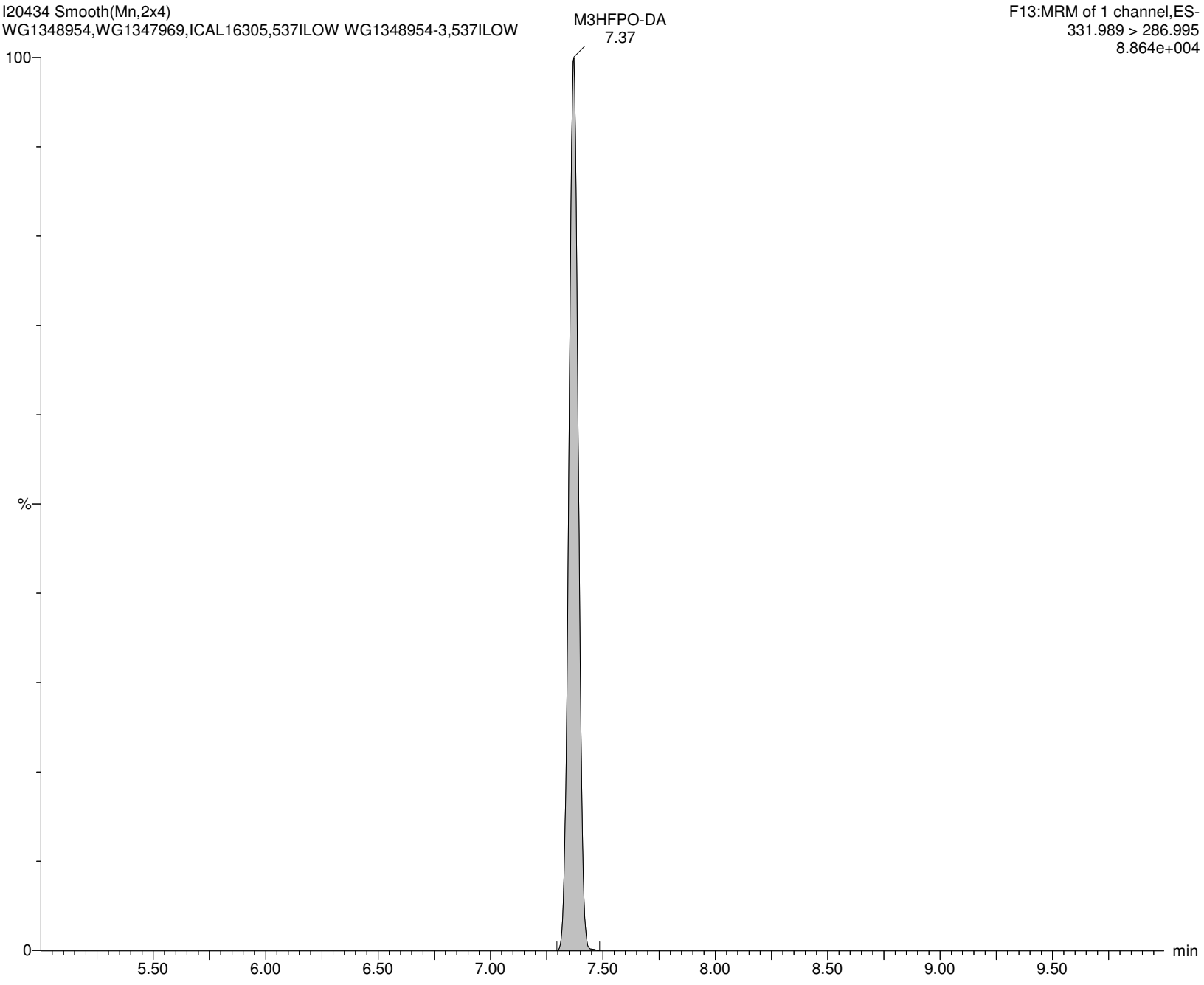



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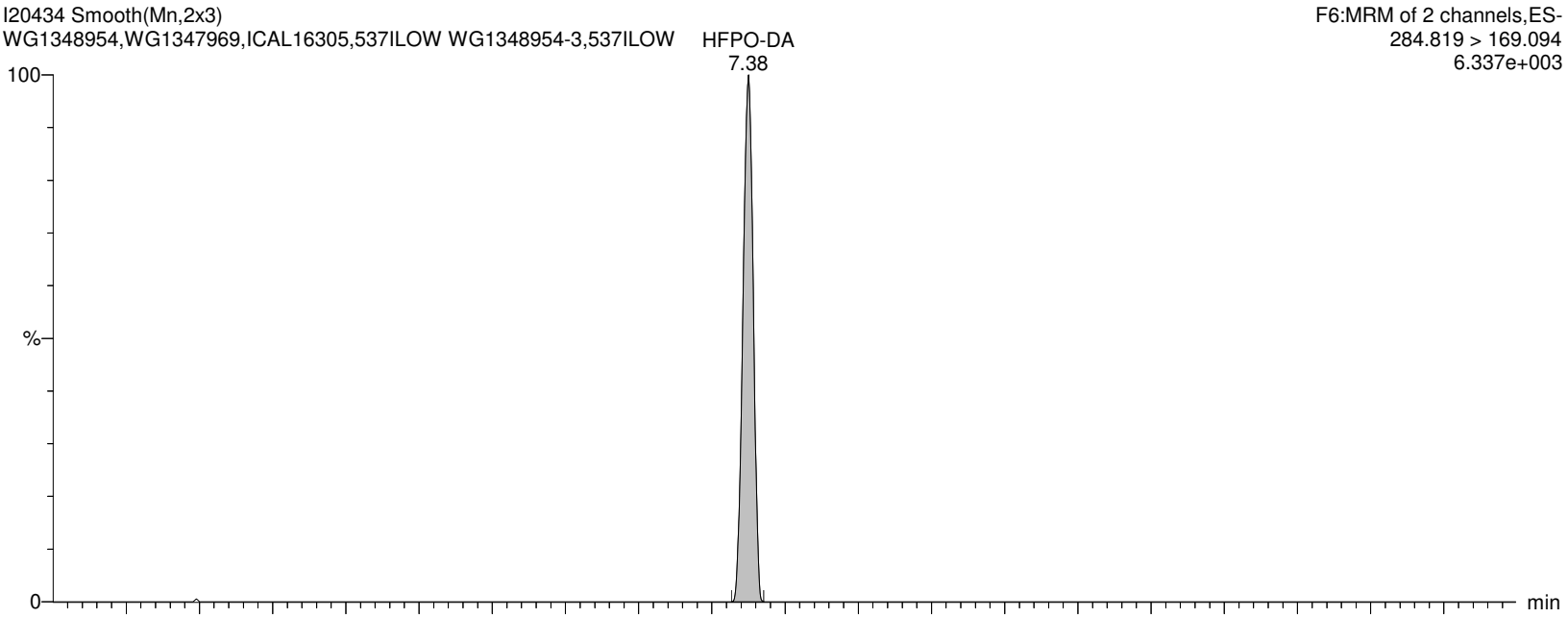


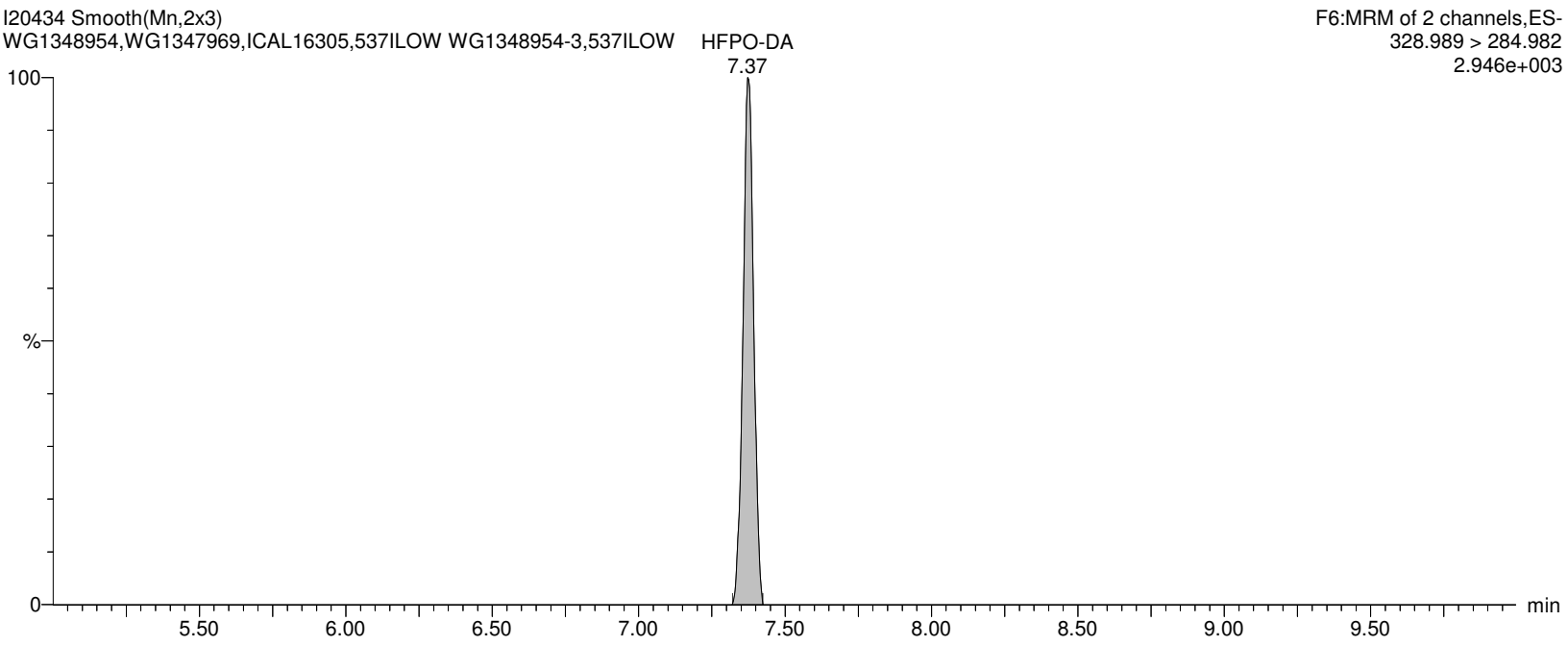



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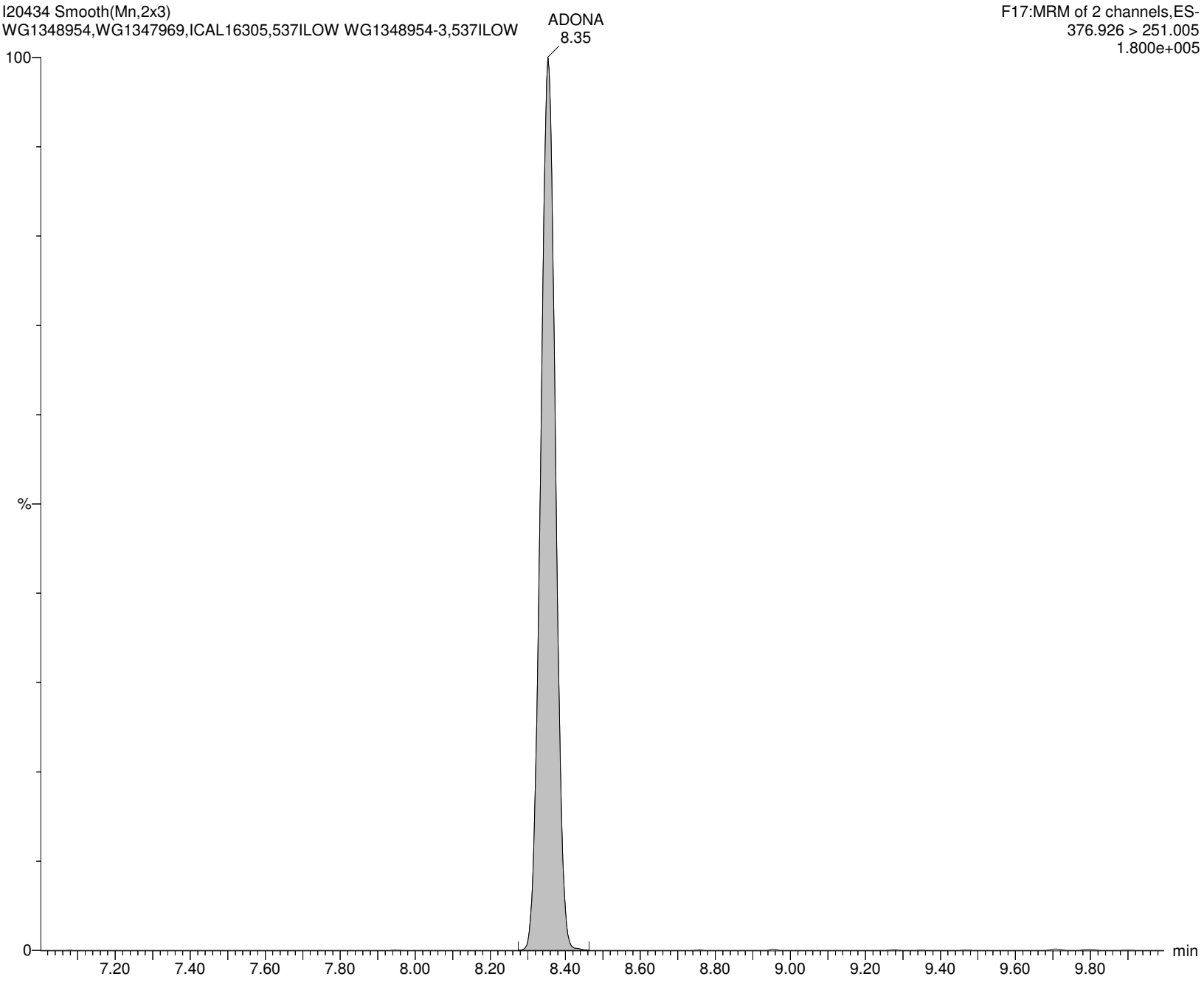



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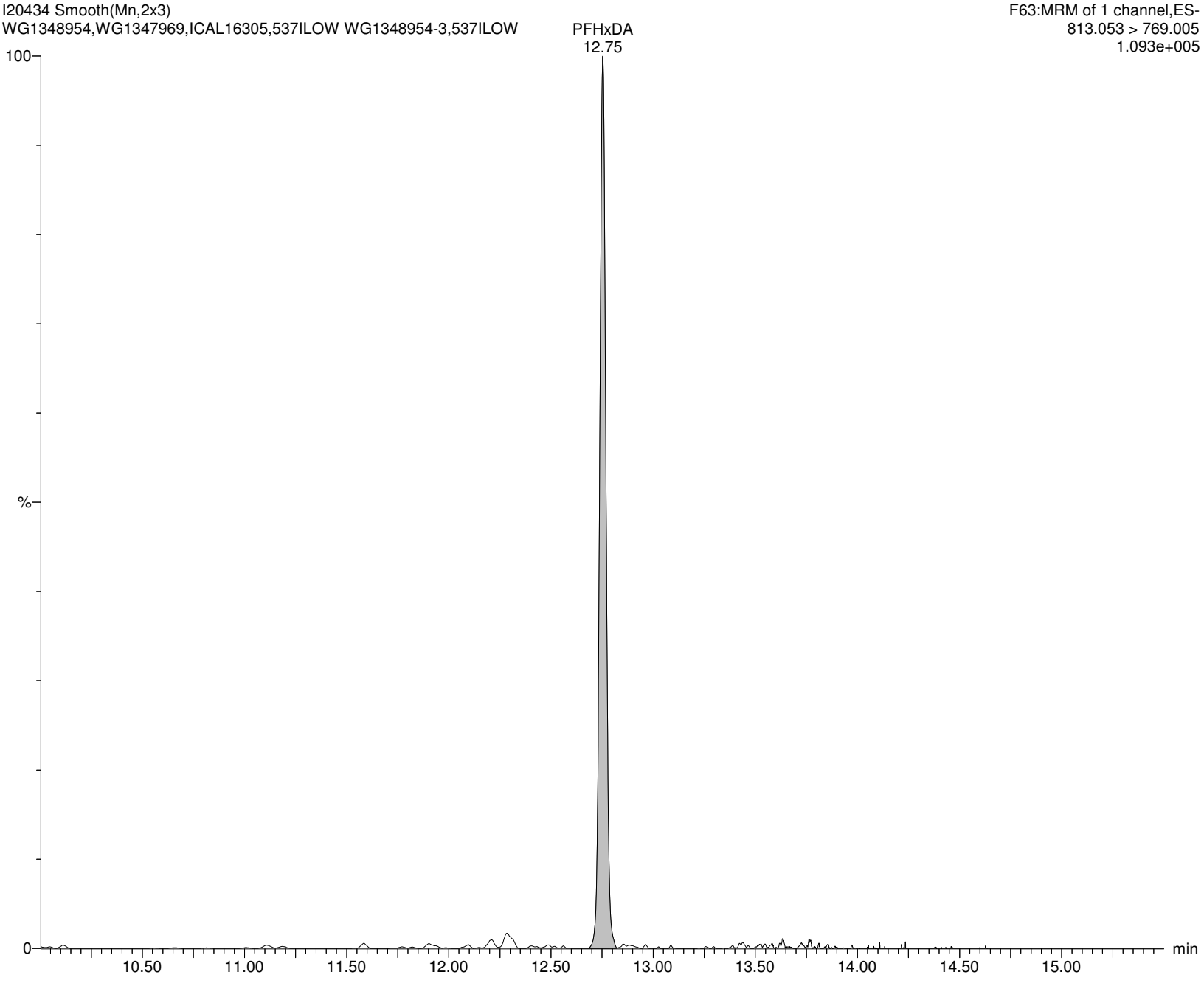



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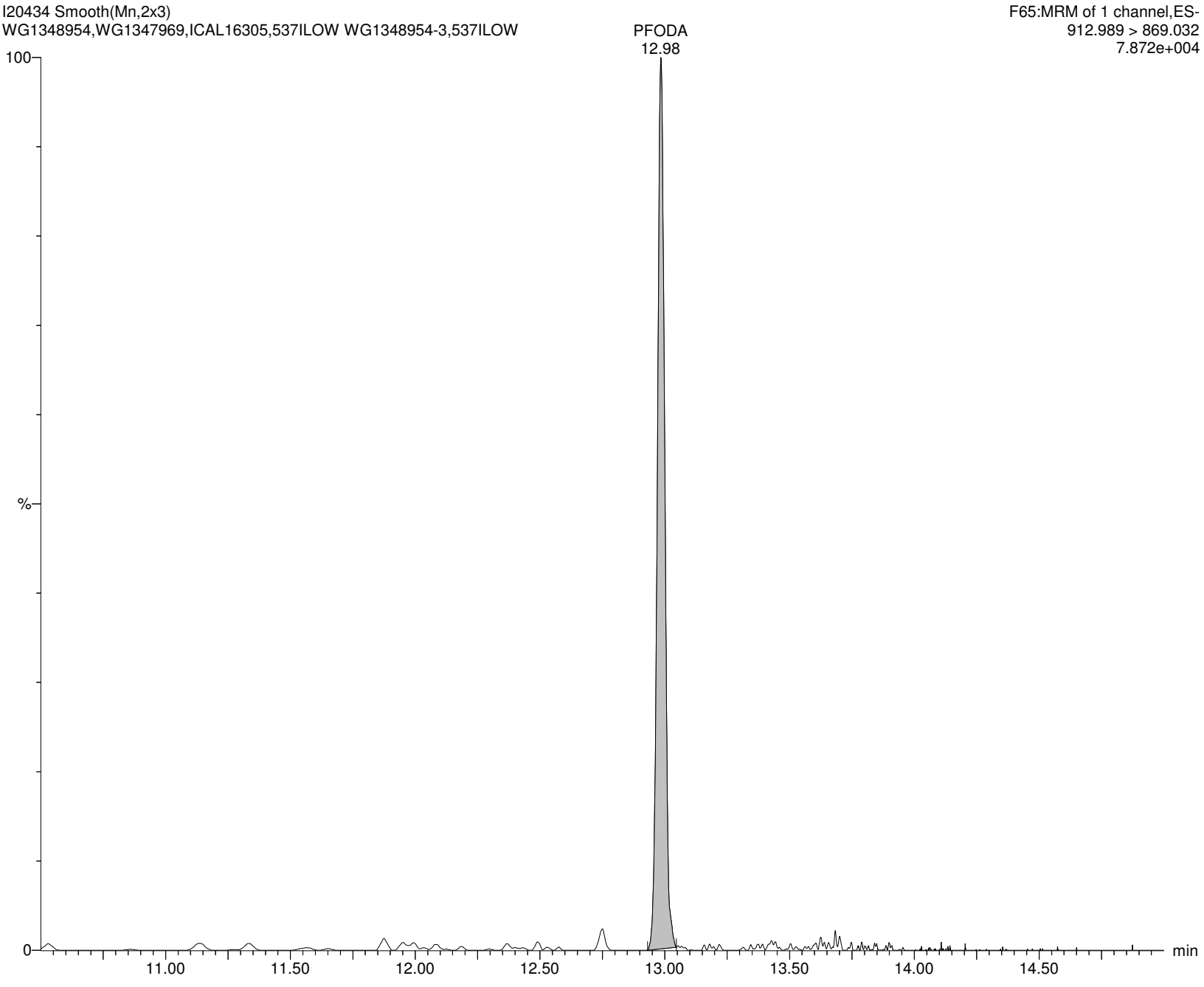



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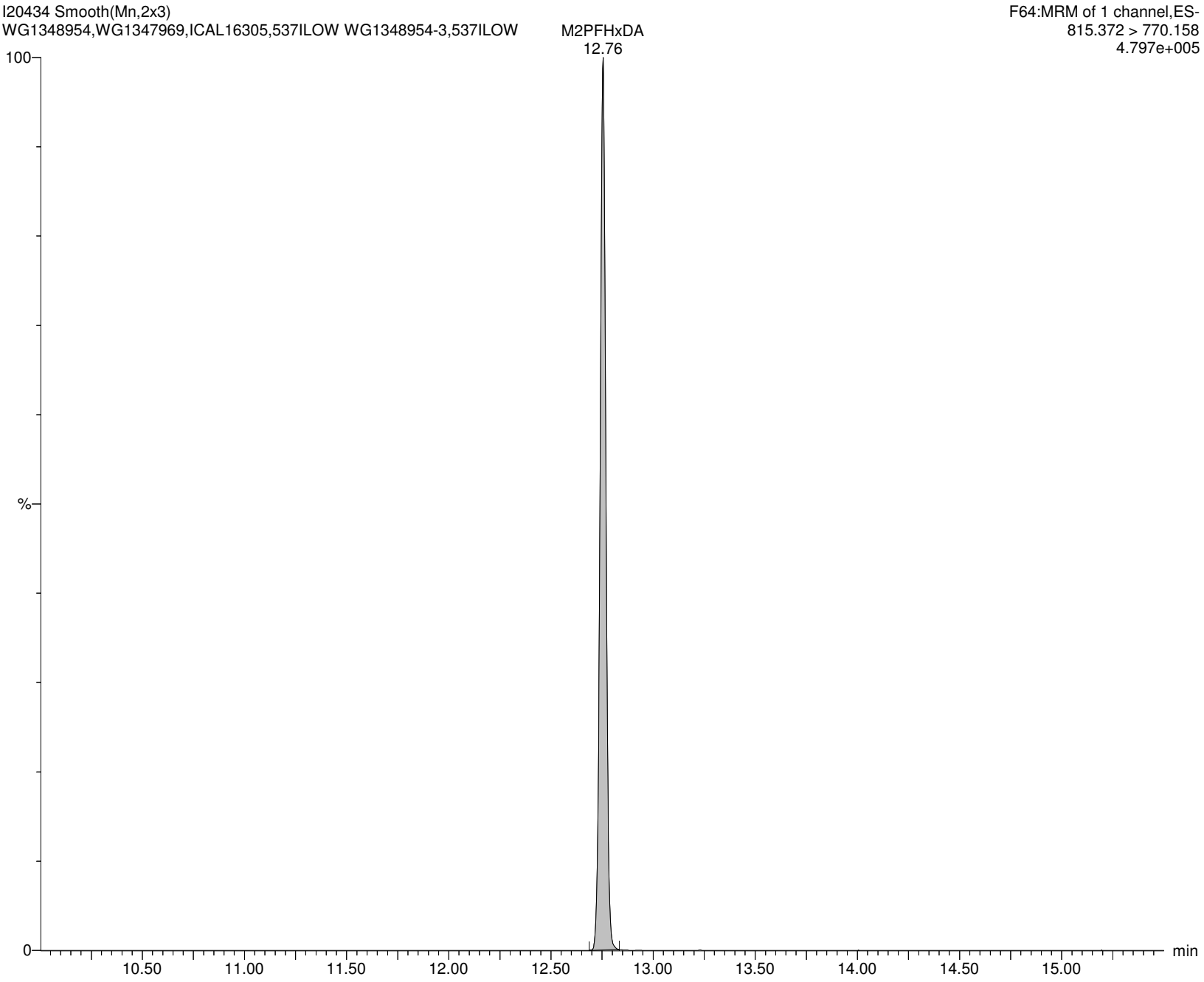



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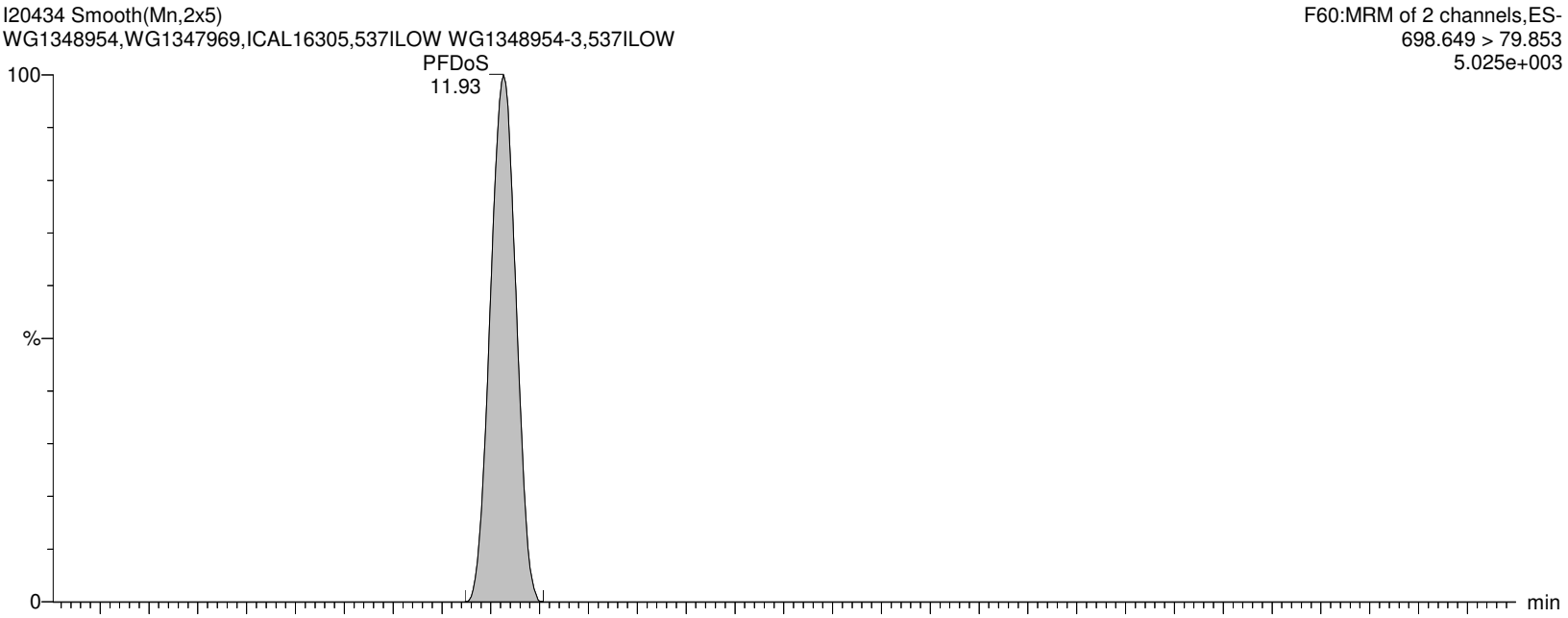
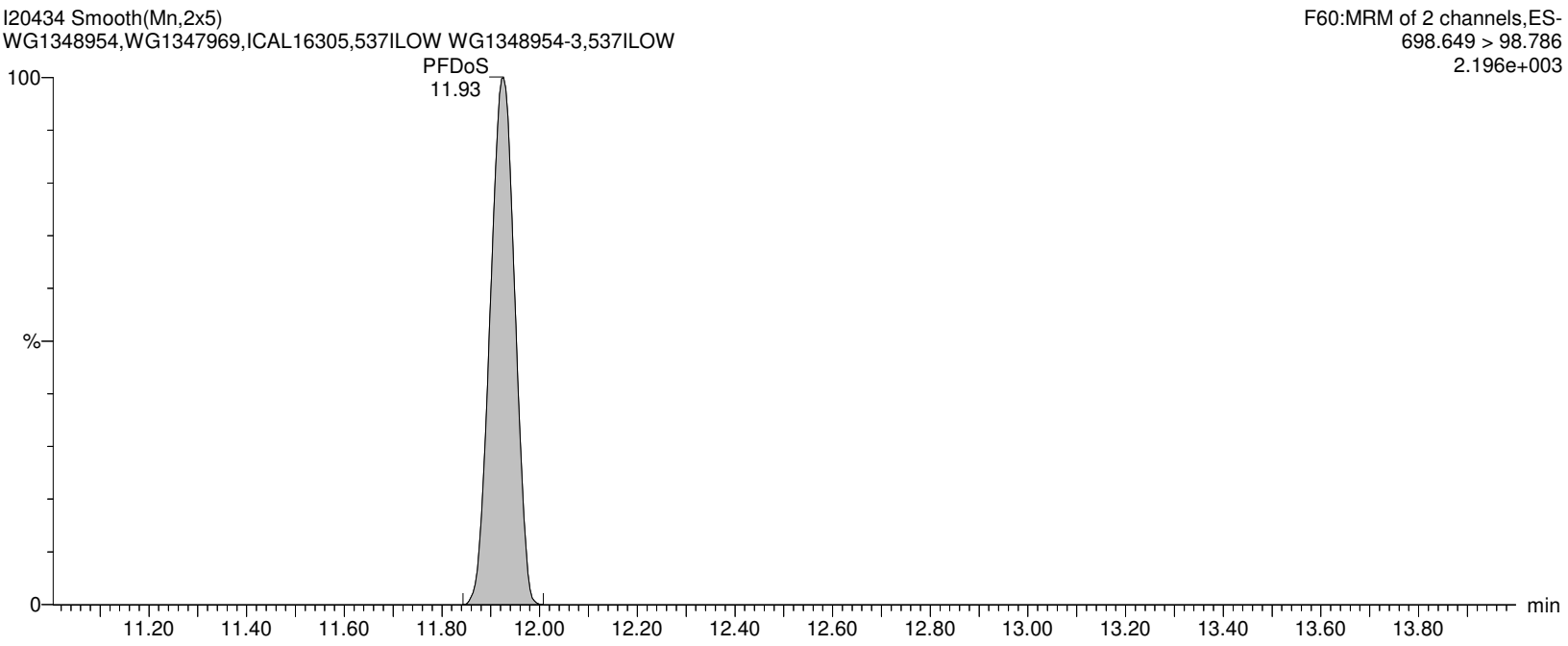
**User: LCMS02:RS**
**Vial: 1:A,2**
**Instrument: XEVO-TQSmicro#QEB0050**
**Inlet Method Name: C:\MassLynx\Data\2020\200309_537ISO.PRO\ACQUDB\LCMS_537_ISO_B**
**Tune Method Name: C:\MassLynx\Data\2020\200309_537ISO.PRO\ACQUDB\181009_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\2020\200309_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**PFDoS**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2020\200309_537ISO.PRO\Data\WG1348954B.qld
Last Altered: Wednesday, March 11, 2020 19:42:58 Eastern Daylight Time
Printed: Thursday, March 12, 2020 03:41:27 Eastern Daylight Time

**Name: I20434**
**ID: WG1348954-3,537ILOW**
**Date: 10-Mar-2020**
**Time: 21:04:42**
**Description: WG1348954,WG1347969,ICAL16305,537ILOW**
**User: LCMS02:RS**
**Vial: 1:A,2**
**Instrument: XEVO-TQSmicro#QEB0050**
**Inlet Method Name: C:\MassLynx\Data\2020\200309_537ISO.PRO\ACQUDB\LCMS_537_ISO_B**
**Tune Method Name: C:\MassLynx\Data\2020\200309_537ISO.PRO\ACQUDB\181009_TUNE.IPR**
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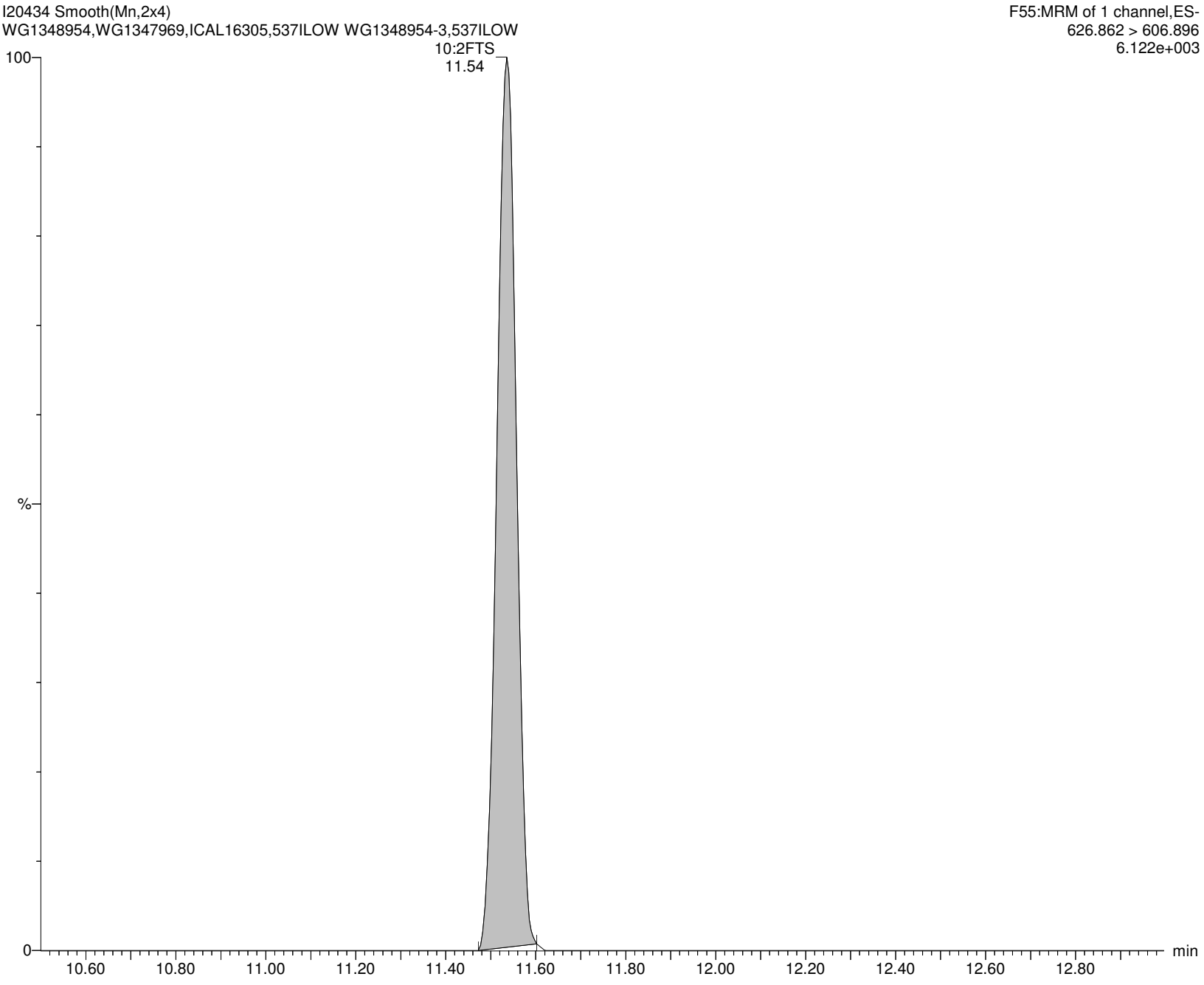
**10:2FTS**





all concentration units in (ng/mL)

Alpha Analytical Inc.
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Last Altered: Wednesday, March 11, 2020 19:42:58 Eastern Daylight Time
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**User: LCMS02:RS**
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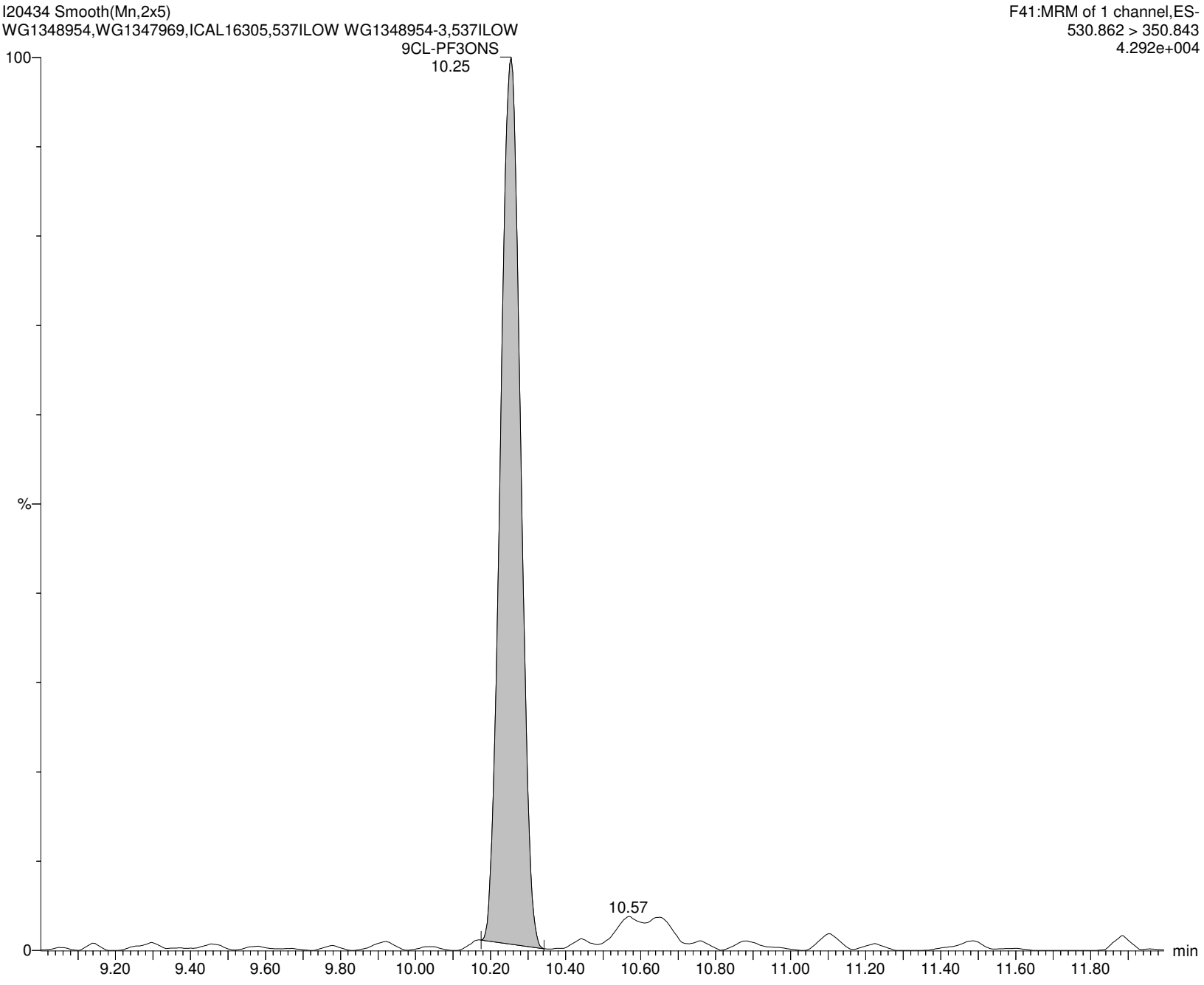
**9CL-PF3ONS**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2020\200309_537ISO.PRO\Data\WG1348954B.qld
Last Altered: Wednesday, March 11, 2020 19:42:58 Eastern Daylight Time
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**Vial: 1:A,2**
**Instrument: XEVO-TQSmicro#QEB0050**
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**Tune Method Name: C:\MassLynx\Data\2020\200309_537ISO.PRO\ACQUDB\181009_TUNE.IPR**
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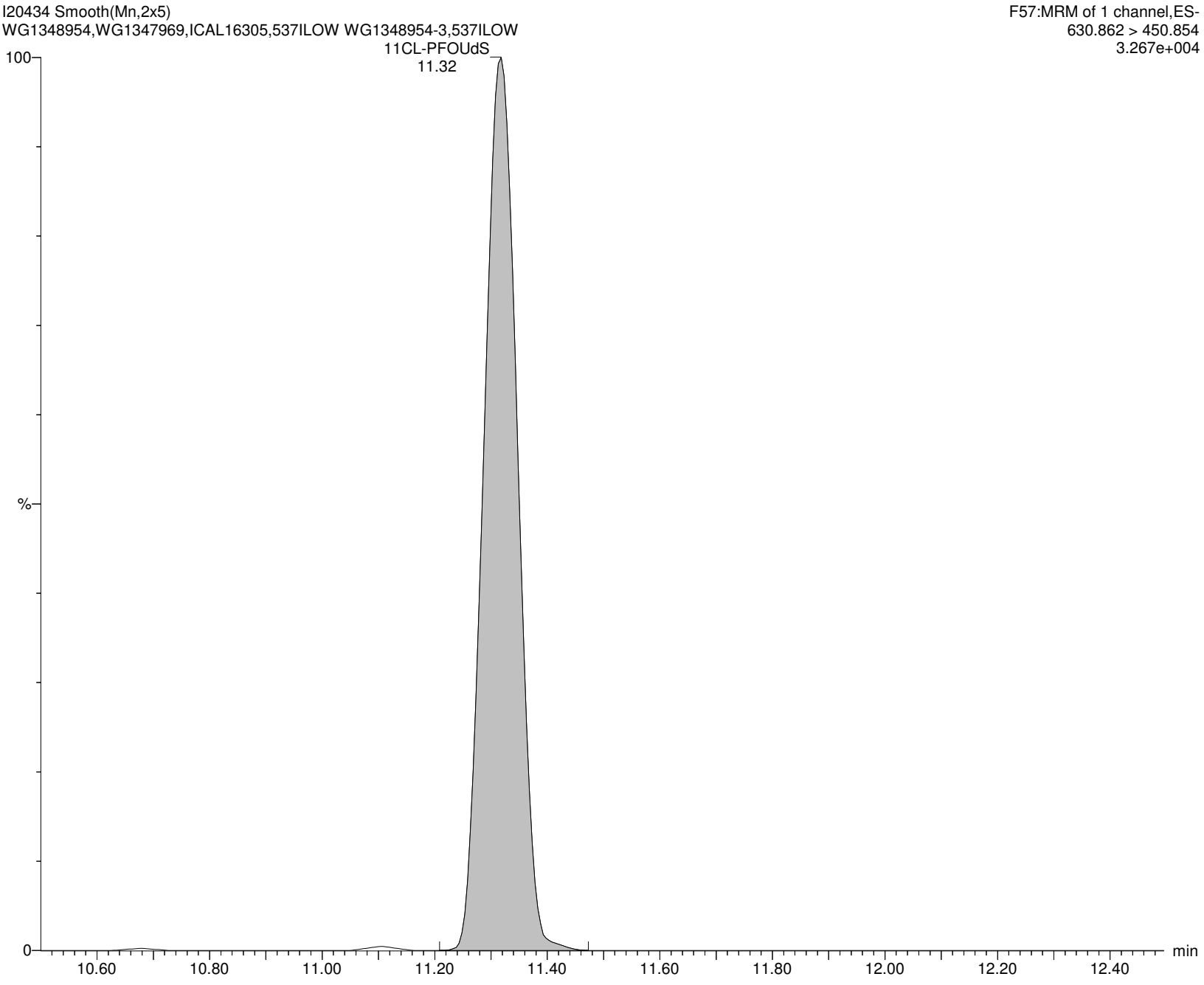
**11CL-PFOUdS**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2020\200309_537ISO.PRO\Data\WG1348954C.qld
Last Altered: Wednesday, March 11, 2020 21:10:58 Eastern Daylight Time
Printed: Thursday, March 12, 2020 03:36:37 Eastern Daylight Time

**Method: C:\MassLynx\Data\2020\200309_537ISO.PRO\MethDB\537ISO_Q_191118_DOD_RT.mdb 07 Feb 2020 15:55:12**
**Calibration: C:\MassLynx\Data\2020\200309_537ISO.PRO\CurveDB\191118_ISO_ICAL.cdb 18 Nov 2019 14:41:42**

**ID: WG1348954-4,537IMED**
**Name: I20444**
**Date: 10-Mar-2020**
**Time: 23:50:12**
**Description: WG1348954,WG1348193,ICAL16305,537IMED**
**Instrument: XEVO-TQSmicro#QEB0050**
**User: LCMS02:RS**
**Inlet Method Name: C:\MassLynx\Data\2020\200309_537ISO.PRO\ACQUDB\LCMS_537_ISO_B**
**Tune Method Name: C:\MassLynx\Data\2020\200309_537ISO.PRO\ACQUDB\181009_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\2020\200309_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

| | Name | CAS | RT | Trace | Area | M Flag | Conc (ng/mL) | Ion Ratio | Ratio Flag | %Rec |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | PFBA | 375-22-4 | 2.18 | 212.926 > 169.111 | 45137 | | 9.032 | | na | 90.3 |
| 2 | M3PFBA | INT STD | 2.18 | 215.926 > 172.122 | 50692 | | 10.940 | | na | 109.4 |
| 3 | MPFBA | INT STD | 2.18 | 216.926 > 172.137 | 59850 | | 10.849 | | na | 108.5 |
| 4 | PFPeA | 2706-90-3 | 5.07 | 262.926 > 219.002 | 81316 | | 9.376 | | na | 93.8 |
| 5 | M5PFPEA | INT STD | 5.07 | 267.989 > 223.081 | 89798 | | 11.477 | | na | 114.8 |
| 6 | PFBS | 375-73-5 | 5.70 | 298.926 > 79.923 | 13578 | | 7.758 | 1.88 | NO | 87.7 |
| 7 | M3PFBS | INT STD | 5.71 | 301.989 > 80.254 | 11913 | | 10.750 | | na | 107.5 |
| 8 | 4:2FTS | 757124-72-4 | 6.85 | 326.926 > 306.957 | 8494 | | 8.820 | 2.18 | NO | 94.3 |
| 9 | M2-4:2FTS | INT STD | 6.85 | 329.117 > 309.079 | 8909 | | 12.382 | | na | 123.8 |
| 10 | PFHxA | 307-24-4 | 6.94 | 312.989 > 269.028 | 87848 | | 8.886 | 18.95 | NO | 88.9 |
| 11 | M5PFHxA | INT STD | 6.93 | 317.989 > 273.045 | 107387 | | 10.900 | | na | 109.0 |
| 12 | PFPeS | 2706-91-4 | 7.24 | 348.926 > 80.251 | 9189 | | 7.450 | 1.69 | NO | 79.3 |
| 13 | PFHpA | 375-85-9 | 8.16 | 362.926 > 319.014 | 119154 | | 9.097 | 5.95 | NO | 91.0 |
| 14 | M4PFHpA | INT STD | 8.16 | 366.926 > 321.979 | 145206 | | 11.064 | | na | 110.6 |
| 15 | br-PFHxS | 355-46-4 | 8.09 | 398.926 > 80.295 | 1230 | M5 | 1.404 | 2.26 | NO | 82.6 |
| 16 | L-PFHxS | 355-46-4 | 8.31 | 398.926 > 80.295 | 6132 | | 6.638 | 1.14 | NO | 89.7 |
| 17 | PFHxS | 355-46-4 | | 398.926 > 80.295 | 7362 | | 8.042 | | na | |
| 18 | M3PFHxS | INT STD | 8.31 | 401.926 > 80.317 | 7375 | | 11.530 | | na | 115.3 |
| 19 | br-PFOA | 335-67-1 | | 412.989 > 368.9 | | | ND | | YES | |
| 20 | L-PFOA | 335-67-1 | 9.07 | 412.989 > 368.9 | 117321 | | 8.946 | 10.39 | NO | 89.5 |
| 21 | PFOA | 335-67-1 | | 412.989 > 368.9 | 117321 | | 8.946 | | na | |
| 22 | M8PFOA | INT STD | 9.07 | 420.989 > 375.979 | 142822 | | 11.341 | | na | 113.4 |
| 23 | M2PFOA | INT STD | 9.07 | 415.032 > 369.968 | 128707 | | 12.175 | | na | 121.8 |
| 24 | 6:2FTS | 27619-97-2 | 9.03 | 426.989 > 406.921 | 6810 | | 9.992 | 13.52 | NO | 105.2 |
| 25 | M2-6:2FTS | INT STD | 9.03 | 428.989 > 408.917 | 8602 | | 12.232 | | na | 122.3 |
| 26 | PFHpS | 375-92-8 | 9.15 | 448.926 > 80.257 | 5700 | | 9.326 | 0.89 | YES | 98.2 |
| 27 | PFNA | 375-95-1 | 9.82 | 462.989 > 418.931 | 109524 | | 9.236 | 4.41 | NO | 92.4 |
| 28 | M9PFNA | INT STD | 9.82 | 472.053 > 426.947 | 144746 | | 11.681 | | na | 116.8 |
| 29 | br-PFOS | 1763-23-1 | 9.68 | 498.989 > 80.294 | 2033 | M5 | 1.672 | 3.67 | NO | 83.6 |
| 30 | L-PFOS | 1763-23-1 | 9.86 | 498.989 > 80.294 | 5925 | | 6.504 | 1.58 | YES | 89.1 |
| 31 | PFOS | 1763-23-1 | | 498.989 > 80.294 | 7959 | | 8.176 | | na | |
| 32 | M4PFOS | INT STD | 9.87 | 503.032 > 80.306 | 7917 | | 11.337 | | na | 113.4 |
| 33 | M8PFOS | INT STD | 9.87 | 507.053 > 80.294 | 9283 | | 11.426 | | na | 114.3 |
| 34 | PFDA | 335-76-2 | 10.46 | 513.053 > 468.906 | 109003 | | 9.264 | 6.96 | NO | 92.6 |
| 35 | M2PFDA | INT STD | 10.46 | 515.053 > 469.934 | 120268 | | 13.622 | | na | 136.2 |
| 36 | M6PFDA | INT STD | 10.46 | 519.053 > 473.931 | 137156 | | 11.035 | | na | 110.3 |
| 37 | 8:2FTS | 39108-34-4 | 10.45 | 526.926 > 506.818 | 5756 | | 9.312 | | na | 97.0 |
| 38 | M2-8:2FTS | INT STD | 10.45 | 529.053 > 508.945 | 5854 | | 14.191 | | na | 141.9 |
| 39 | PFNS | 68259-12-1 | 10.49 | 548.989 > 80.249 | 8186 | | 9.480 | 1.27 | NO | 98.8 |


all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2020\200309_537ISO.PRO\Data\WG1348954C.qld
Last Altered: Wednesday, March 11, 2020 21:10:58 Eastern Daylight Time
Printed: Thursday, March 12, 2020 03:36:37 Eastern Daylight Time

**ID: WG1348954-4,537IMED**
**Name: I20444**
**Date: 10-Mar-2020**
**Time: 23:50:12**
**Description: WG1348954,WG1348193,ICAL16305,537IMED**
**Instrument: XEVO-TQSmicro#QEB0050**
**User: LCMS02:RS**
**Inlet Method Name: C:\MassLynx\Data\2020\200309_537ISO.PRO\ACQUDB\LCMS_537_ISO_B**
**Tune Method Name: C:\MassLynx\Data\2020\200309_537ISO.PRO\ACQUDB\181009_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\2020\200309_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

| | Name | CAS | RT | Trace | Area | M Flag | Conc (ng/mL) | Ion Ratio | Ratio Flag | %Rec |
|---|---|---|---|---|---|---|---|---|---|---|
| 40 | d3-NMeFOSAA | INT STD | 10.86 | 573.096 > 418.987 | 15469 | | 10.928 | | na | 109.3 |
| 41 | br-NMeFOSAA | 2355-31-9 | | 570.053 > 418.917 | | | ND | | YES | |
| 42 | L-NMeFOSAA | 2355-31-9 | 10.86 | 570.053 > 418.917 | 14268 | M4 | 9.896 | 2.41 | NO | 99.0 |
| 43 | NMeFOSAA | 2355-31-9 | | 570.053 > 418.917 | 14268 | | 9.896 | | na | |
| 44 | PFUnA | 2058-94-8 | 11.02 | 562.989 > 518.903 | 118663 | | 9.540 | 9.00 | NO | 95.4 |
| 45 | M7-PFUDA | INT STD | 11.02 | 570.053 > 524.923 | 130062 | | 11.795 | | na | 117.9 |
| 46 | PFDS | 335-77-3 | 11.03 | 598.926 > 80.314 | 5778 | | 9.362 | 1.02 | NO | 97.0 |
| 47 | FOSA | 754-91-6 | 10.92 | 497.989 > 78.245 | 22836 | | 8.780 | 149.46 | NO | 87.8 |
| 48 | M8FOSA | INT STD | 10.92 | 506.053 > 78.286 | 24476 | | 8.329 | | na | 83.3 |
| 49 | d5-NEtFOSAA | INT STD | 11.15 | 589.117 > 418.929 | 12247 | | 9.794 | | na | 97.9 |
| 50 | br-NEtFOSAA | 2991-50-6 | | 583.989 > 418.927 | | | ND | | YES | |
| 51 | L-NEtFOSAA | 2991-50-6 | 11.16 | 583.989 > 418.927 | 10161 | M4 | 8.789 | 2.77 | NO | 87.9 |
| 52 | NEtFOSAA | 2991-50-6 | | 583.989 > 418.927 | 10161 | | 8.789 | | na | |
| 53 | PFDoA | 307-55-1 | 11.51 | 612.989 > 568.967 | 107838 | | 9.545 | 14.02 | NO | 95.5 |
| 54 | MPFDOA | INT STD | 11.50 | 614.989 > 569.92 | 133383 | | 10.782 | | na | 107.8 |
| 55 | PFTrDA | 72629-94-8 | 11.92 | 663.053 > 618.969 | 97360 | | 10.778 | 10.90 | NO | 107.8 |
| 56 | PFTA | 376-06-7 | 12.29 | 713.053 > 668.976 | 80975 | | 9.671 | 8.78 | NO | 96.7 |
| 57 | M2PFTEDA | INT STD | 12.29 | 715.053 > 669.945 | 104555 | | 10.640 | | na | 106.4 |
| 58 | M3HFPO-DA | INT STD | 7.36 | 331.989 > 286.995 | 6046 | | 109.580 | | na | 54.8 |
| 59 | HFPO-DA | 13252-13-6 | 7.36 | 284.819 > 169.094 | 10608 | | 211.308 | 2.58 | YES | 105.7 |
| 60 | ADONA | 958445-44-8 | 8.33 | 376.926 > 251.005 | 155587 | | 8.287 | | na | 87.6 |
| 61 | PFHxDA | | 12.75 | 813.053 > 769.005 | 66648 | | 10.846 | | na | 108.5 |
| 62 | PFODA | | 12.98 | 912.989 > 869.032 | 54606 | | 12.136 | | na | 121.4 |
| 63 | M2PFHxDA | | 12.75 | 815.372 > 770.158 | 16807 | | 8.035 | | na | 80.4 |
| 64 | PFDoS | | 11.91 | 698.649 > 79.853 | 6878 | | 10.933 | 2.07 | YES | 109.3 |
| 65 | 10:2FTS | | 11.51 | 626.862 > 606.896 | 6313 | M4 | 10.632 | | na | 110.3 |
| 66 | 9CL-PF3ONS | | 10.23 | 530.862 > 350.843 | 53038 | | 8.694 | | na | 93.3 |
| 67 | 11CL-PFOUdS | | 11.30 | 630.862 > 450.854 | 44290 | | 8.612 | | na | 91.4 |


all concentration units in (ng/mL)

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Last Altered: Wednesday, March 11, 2020 21:10:58 Eastern Daylight Time
Printed: Thursday, March 12, 2020 03:36:37 Eastern Daylight Time

**Method: C:\MassLynx\Data\2020\200309_537ISO.PRO\MethDB\537ISO_Q_191118_DOD_RT.mdb 07 Feb 2020 15:55:12**
**Calibration: C:\MassLynx\Data\2020\200309_537ISO.PRO\CurveDB\191118_ISO_ICAL.cdb 18 Nov 2019 14:41:42**

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**Instrument: XEVO-TQSmicro#QEB0050**
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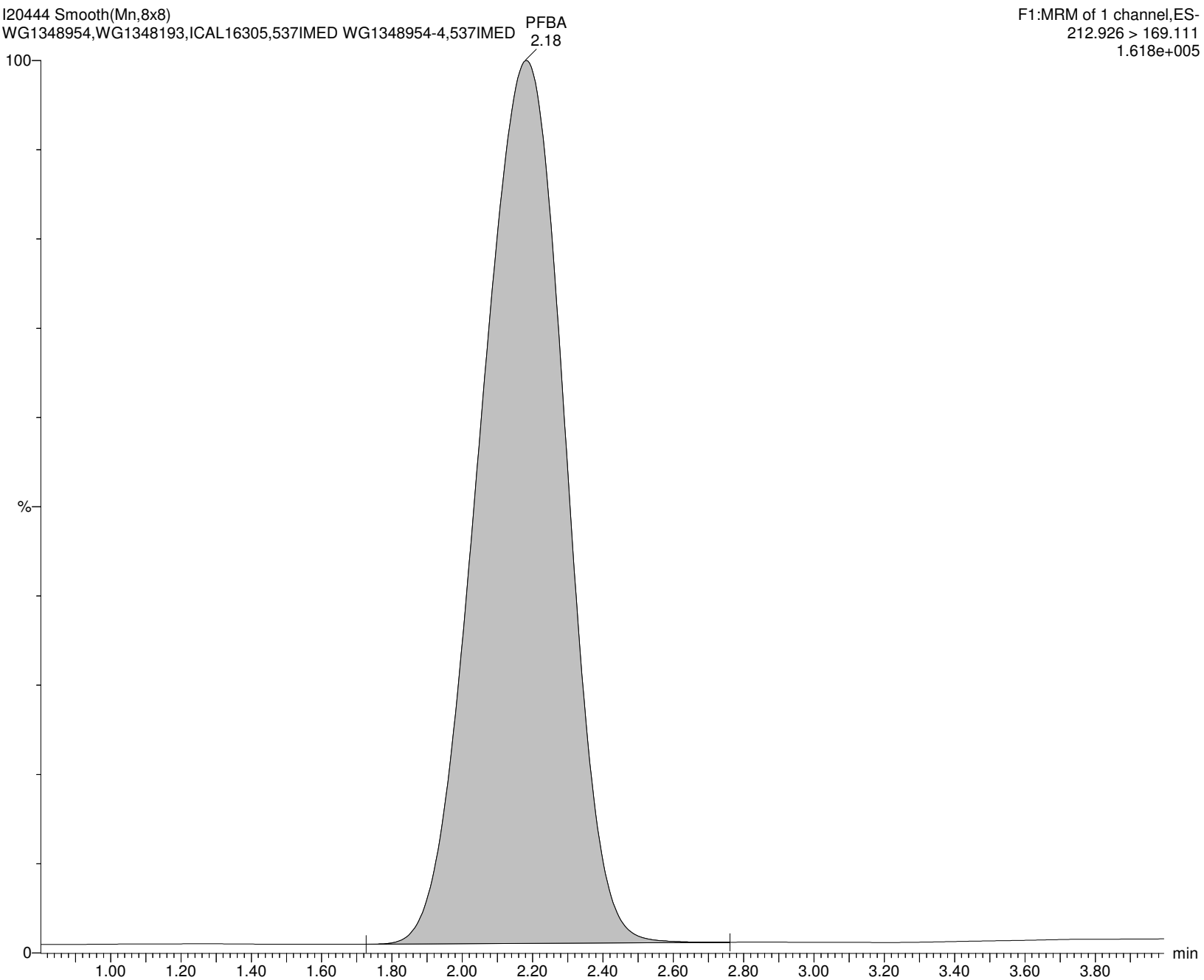



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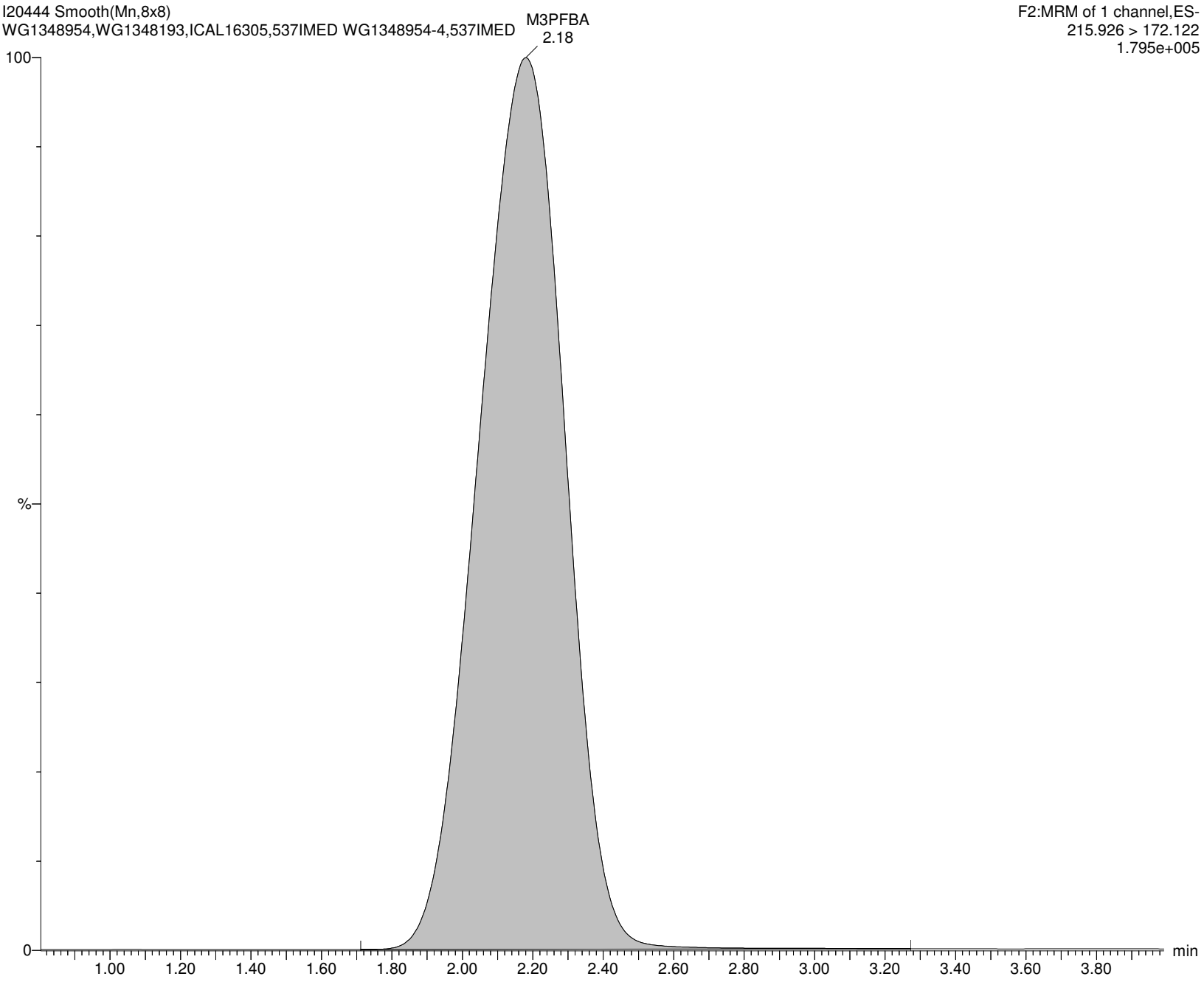
**M3PFBA**





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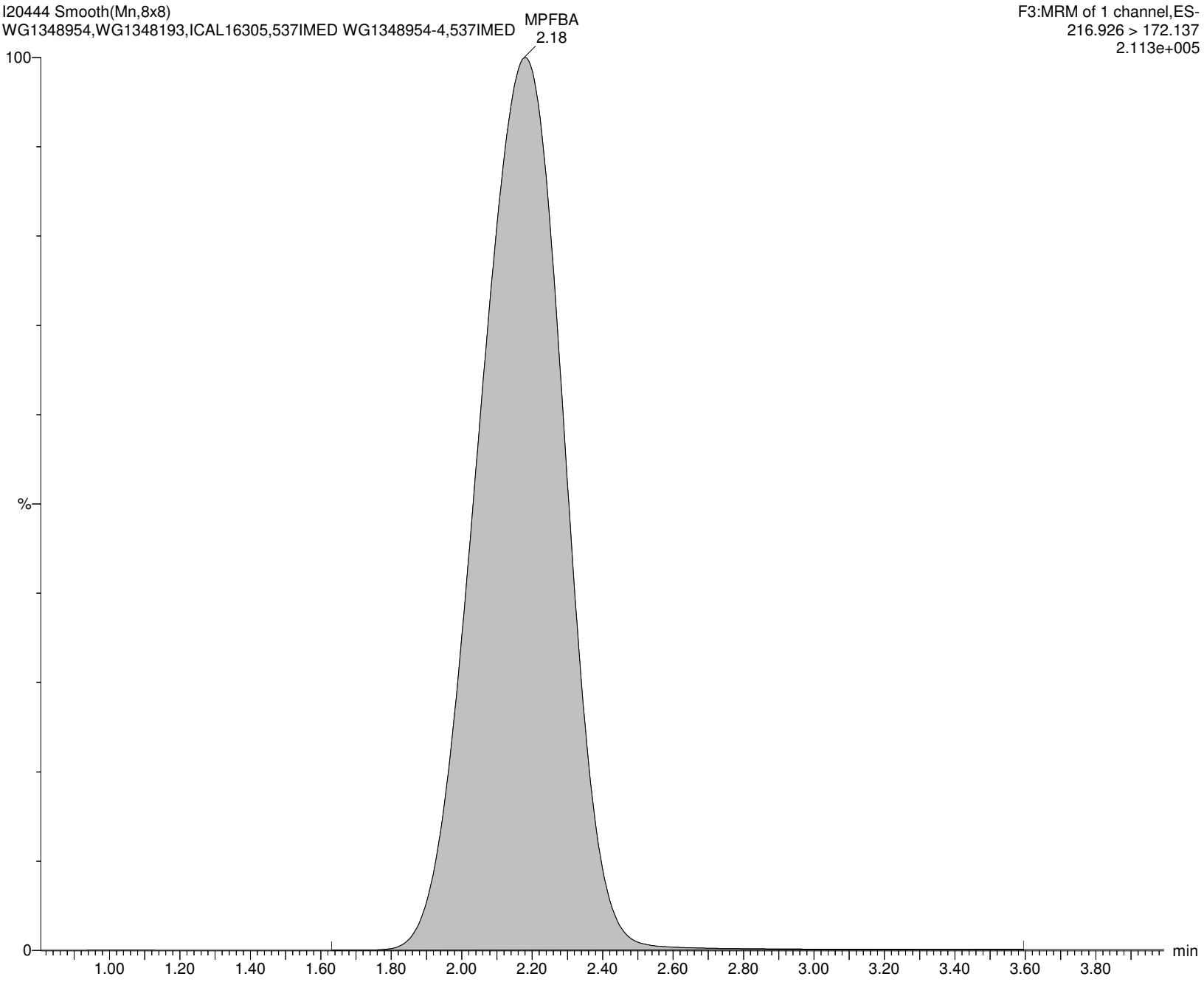
**MPFBA**





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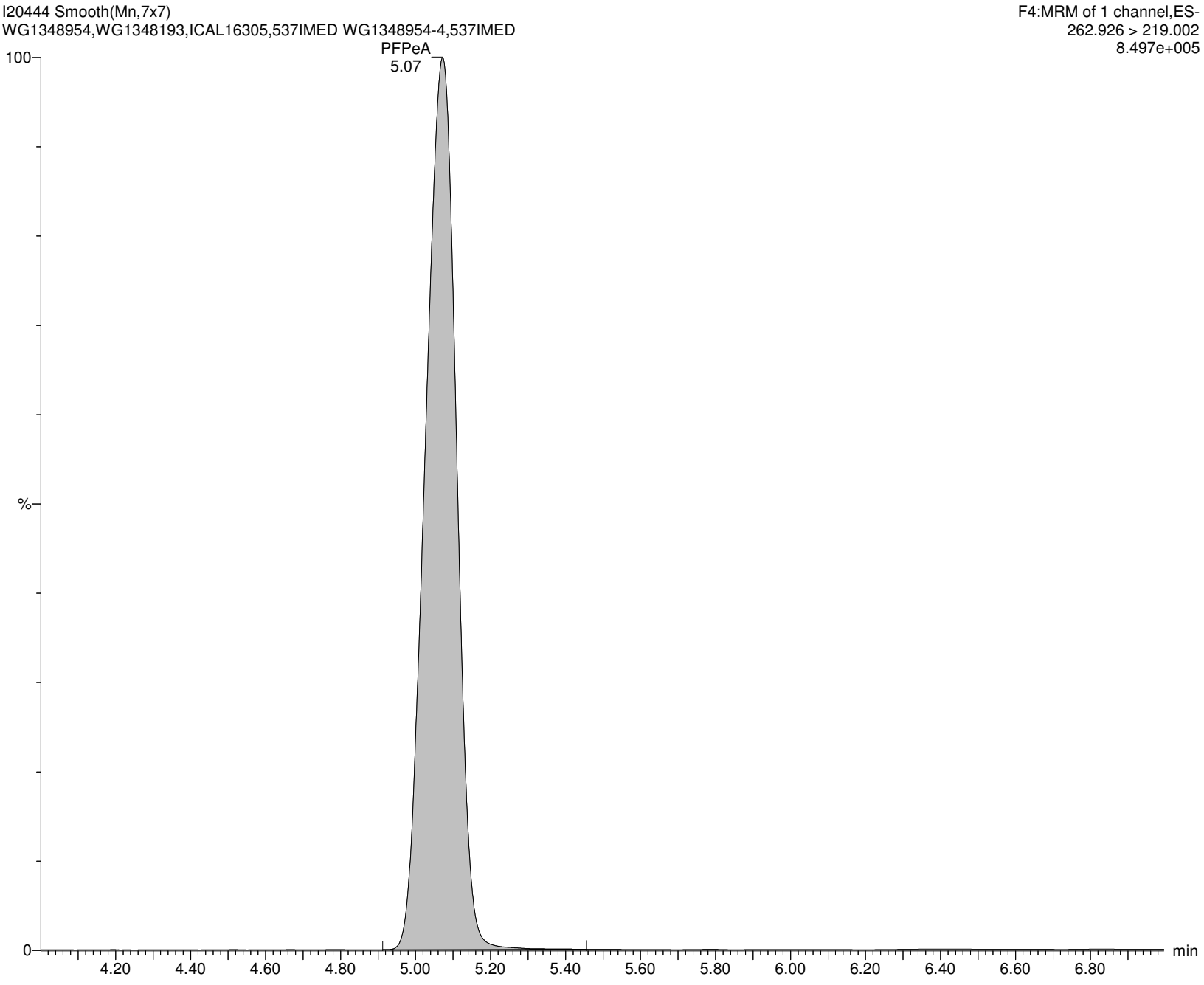
**MS Method Name: C:\MassLynx\Data\2020\200309_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**PFPeA**





all concentration units in (ng/mL)

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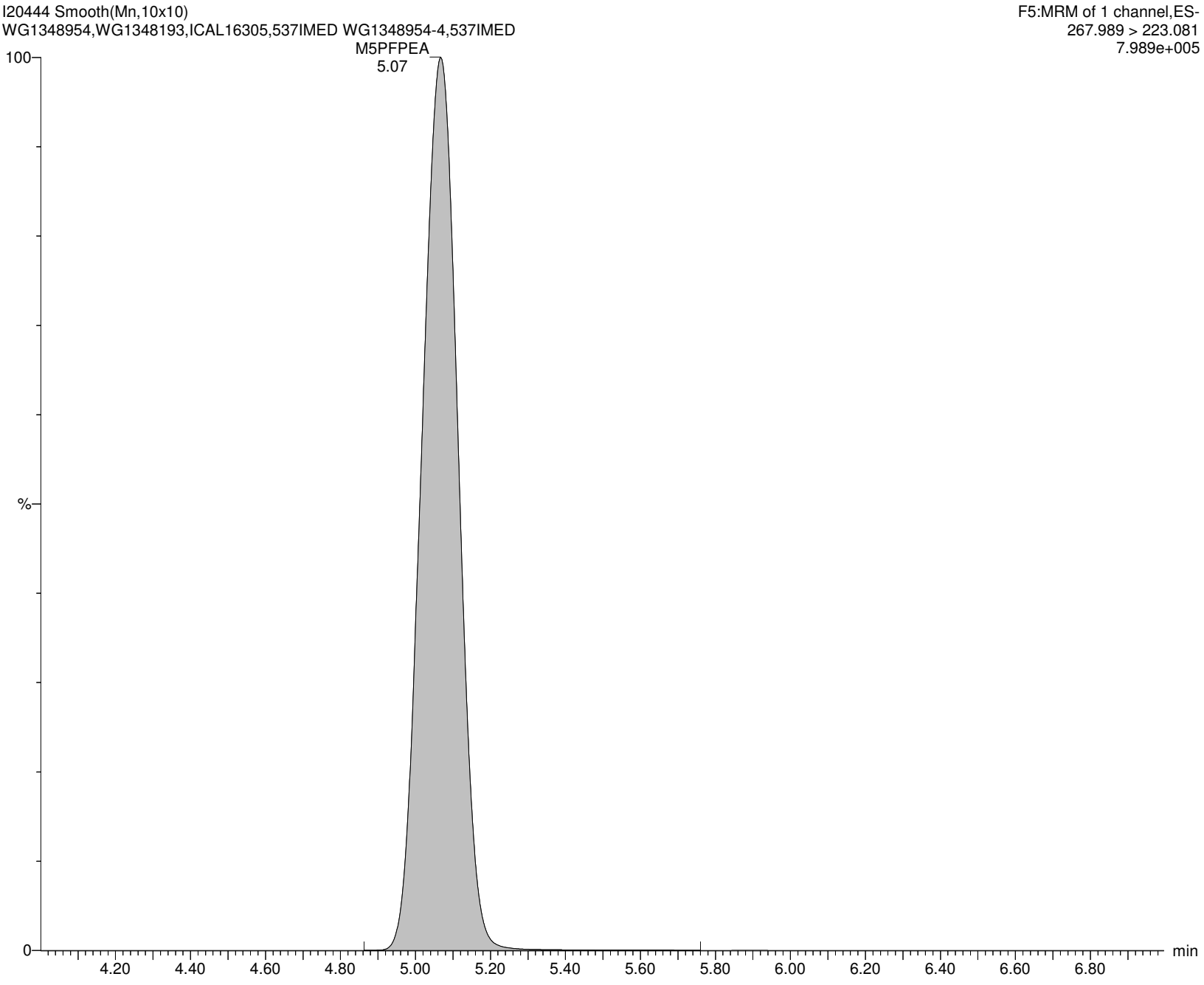
**MS Method Name: C:\MassLynx\Data\2020\200309_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**M5PFPEA**



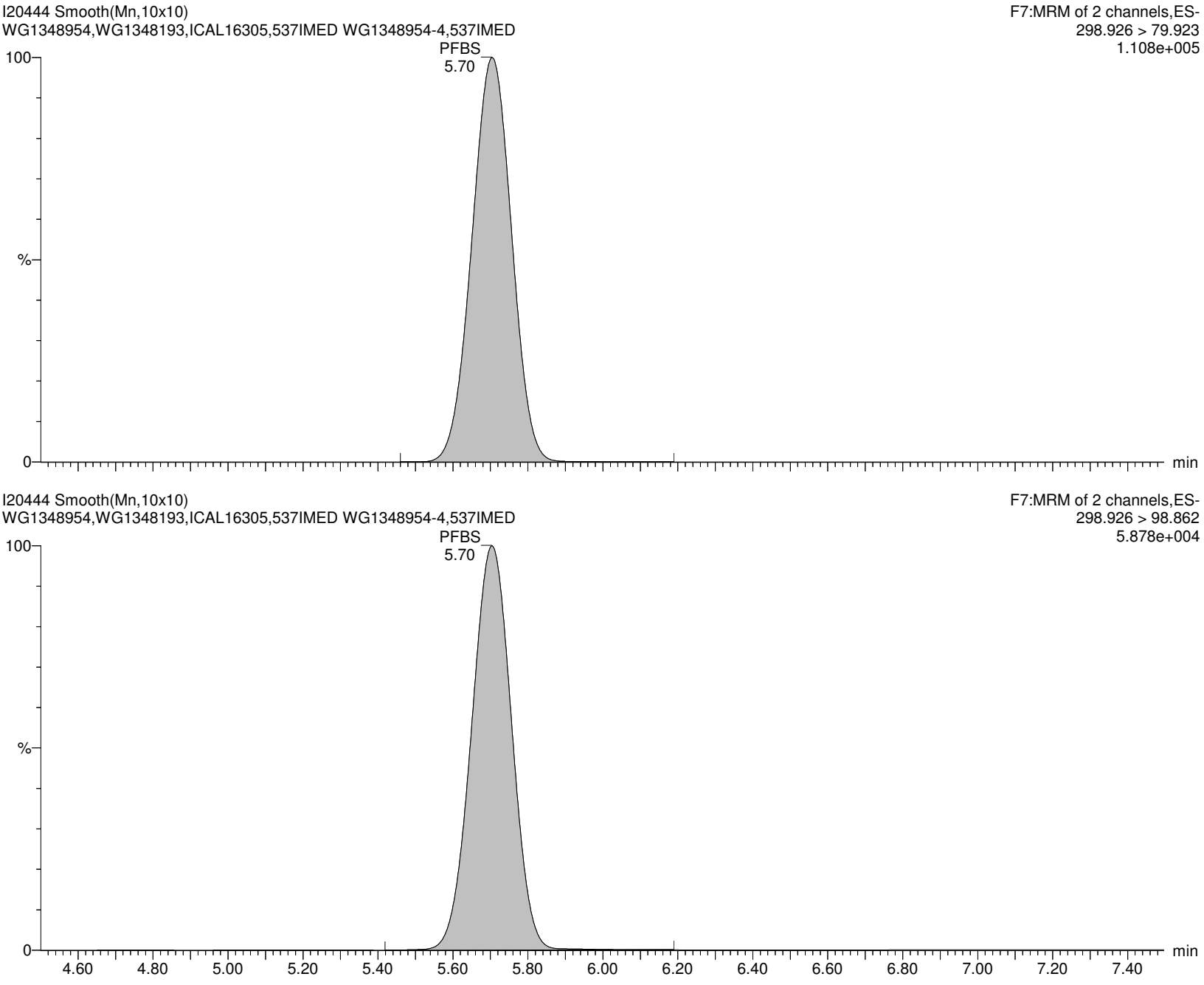


all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2020\200309_537ISO.PRO\Data\WG1348954C.qld
Last Altered: Wednesday, March 11, 2020 21:10:58 Eastern Daylight Time
Printed: Thursday, March 12, 2020 03:36:37 Eastern Daylight Time

**Name: I20444**
**ID: WG1348954-4,537IMED**
**Date: 10-Mar-2020**
**Time: 23:50:12**
**Description: WG1348954,WG1348193,ICAL16305,537IMED**
**User: LCMS02:RS**
**Vial: 1:A,3**
**Instrument: XEVO-TQSmicro#QEB0050**
**Inlet Method Name: C:\MassLynx\Data\2020\200309_537ISO.PRO\ACQUDB\LCMS_537_ISO_B**
**Tune Method Name: C:\MassLynx\Data\2020\200309_537ISO.PRO\ACQUDB\181009_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\2020\200309_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**PFBS**





all concentration units in (ng/mL)

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Last Altered: Wednesday, March 11, 2020 21:10:58 Eastern Daylight Time
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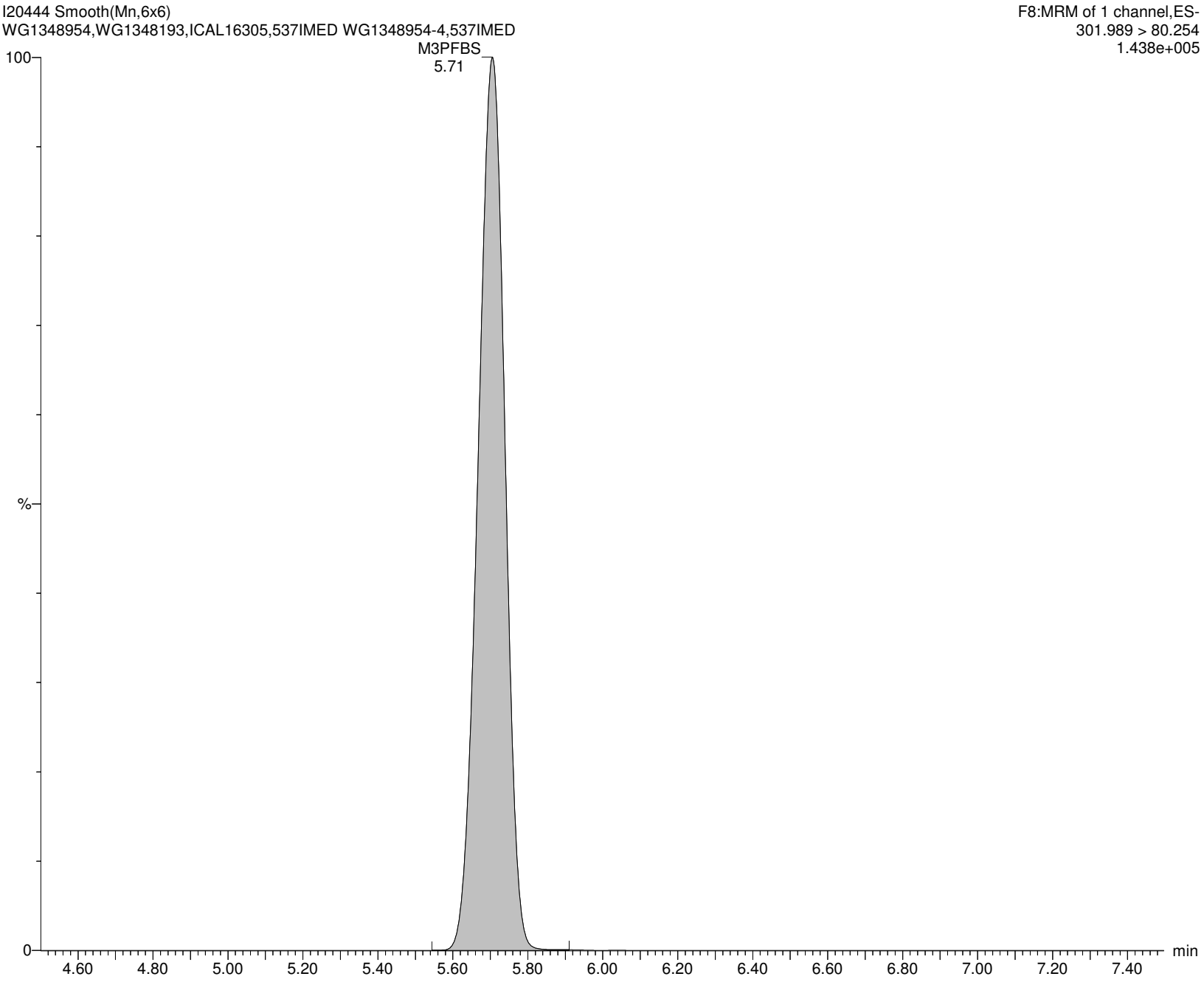
**M3PFBS**





all concentration units in (ng/mL)

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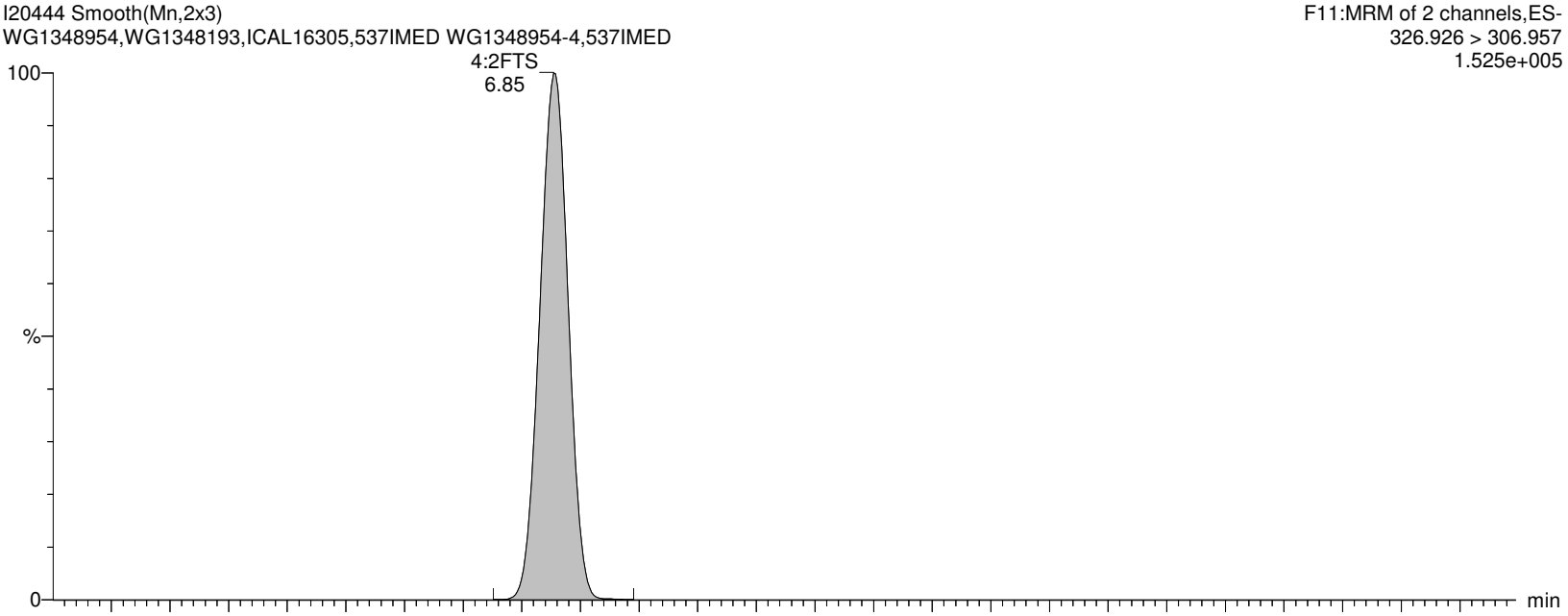
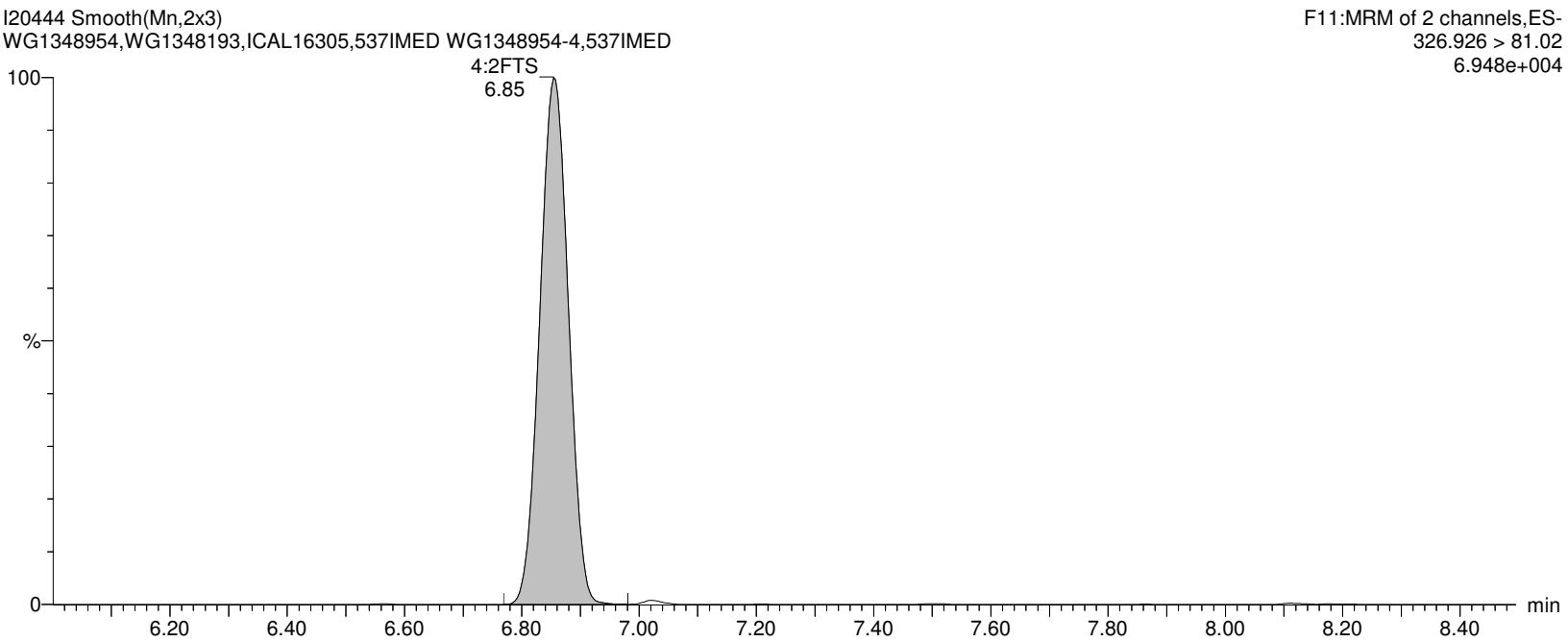
**4:2FTS**





all concentration units in (ng/mL)

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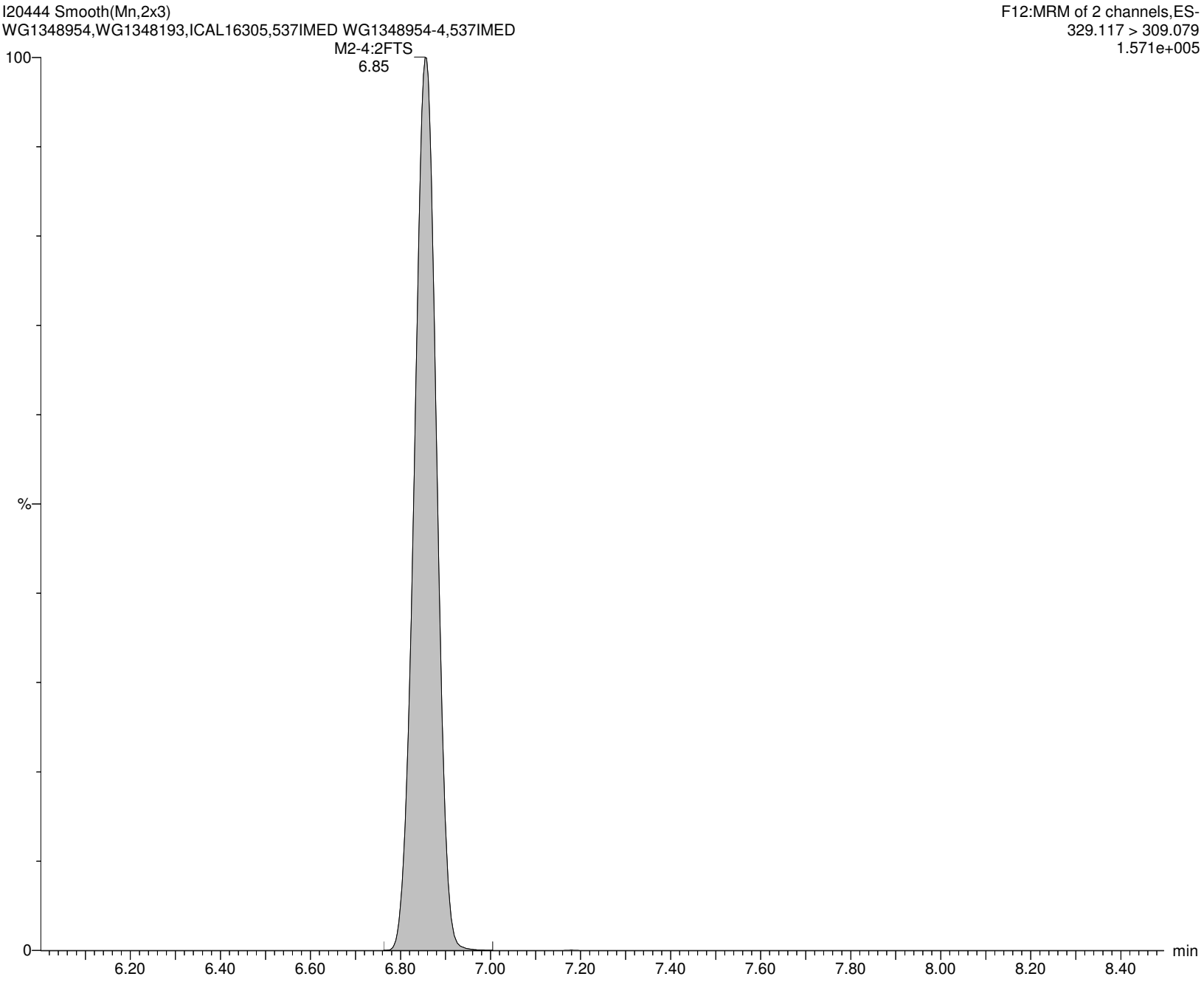
**MS Method Name: C:\MassLynx\Data\2020\200309_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**M2-4:2FTS**





all concentration units in (ng/mL)

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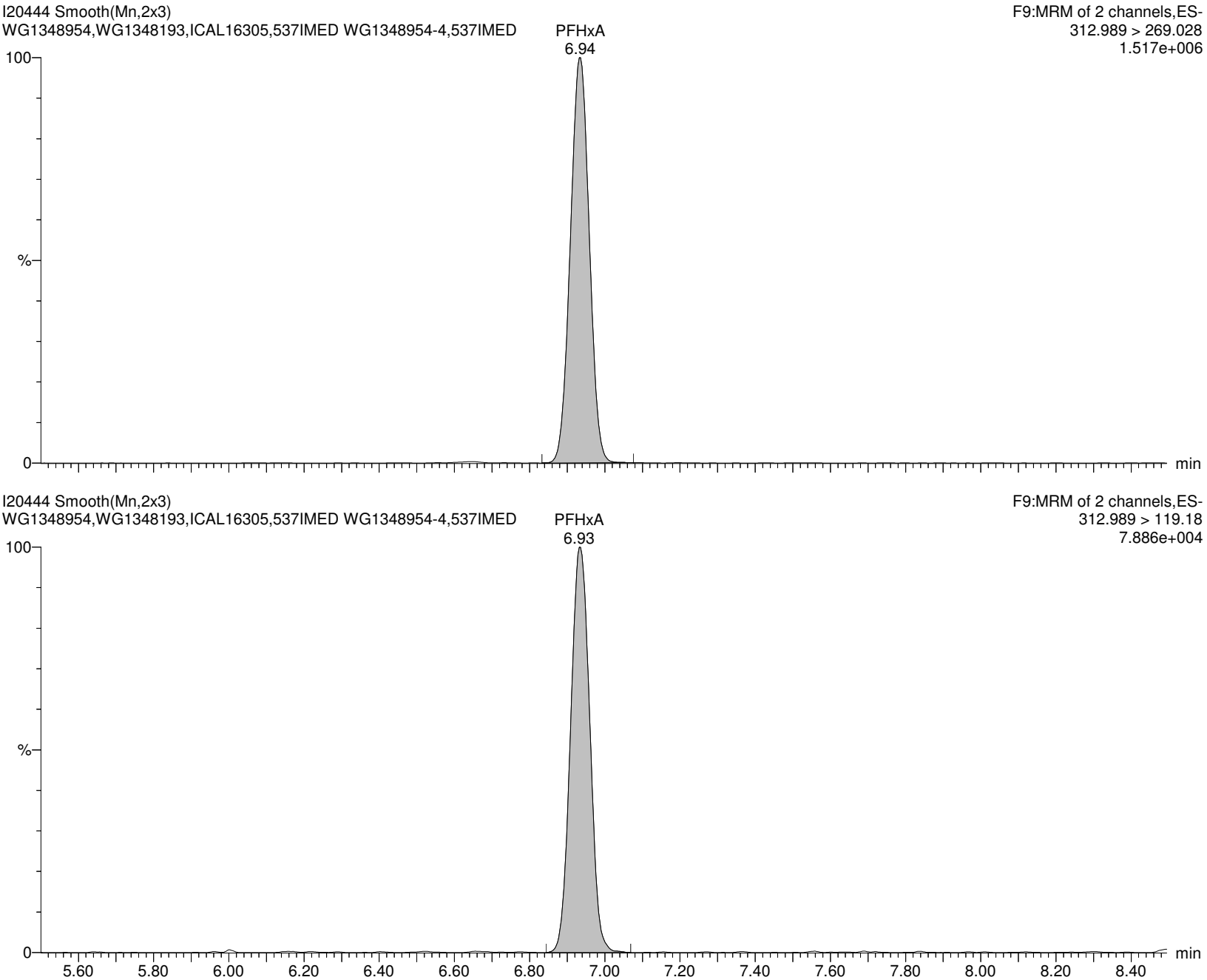
**PFHxA**





all concentration units in (ng/mL)

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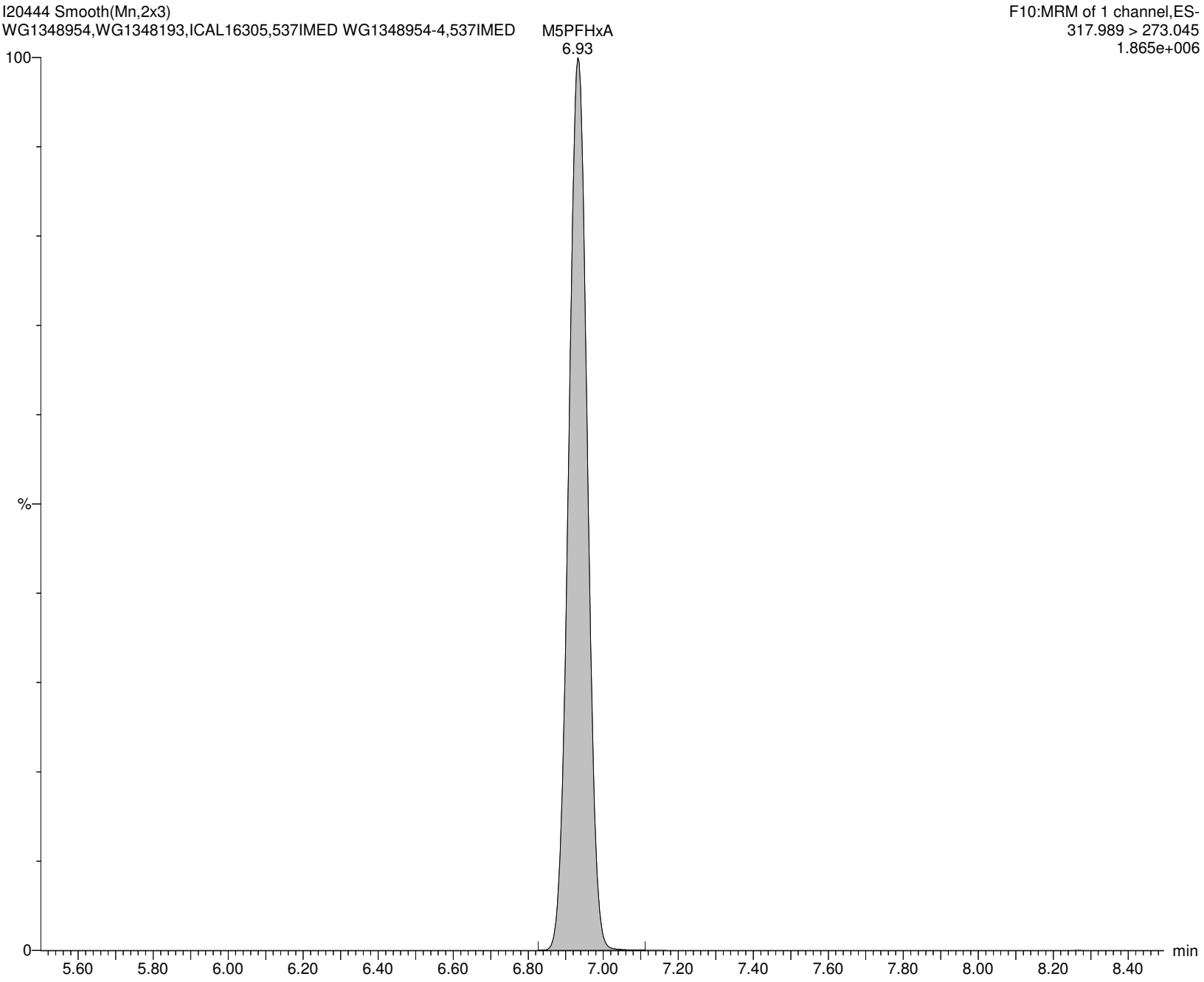
**M5PFHxA**





all concentration units in (ng/mL)

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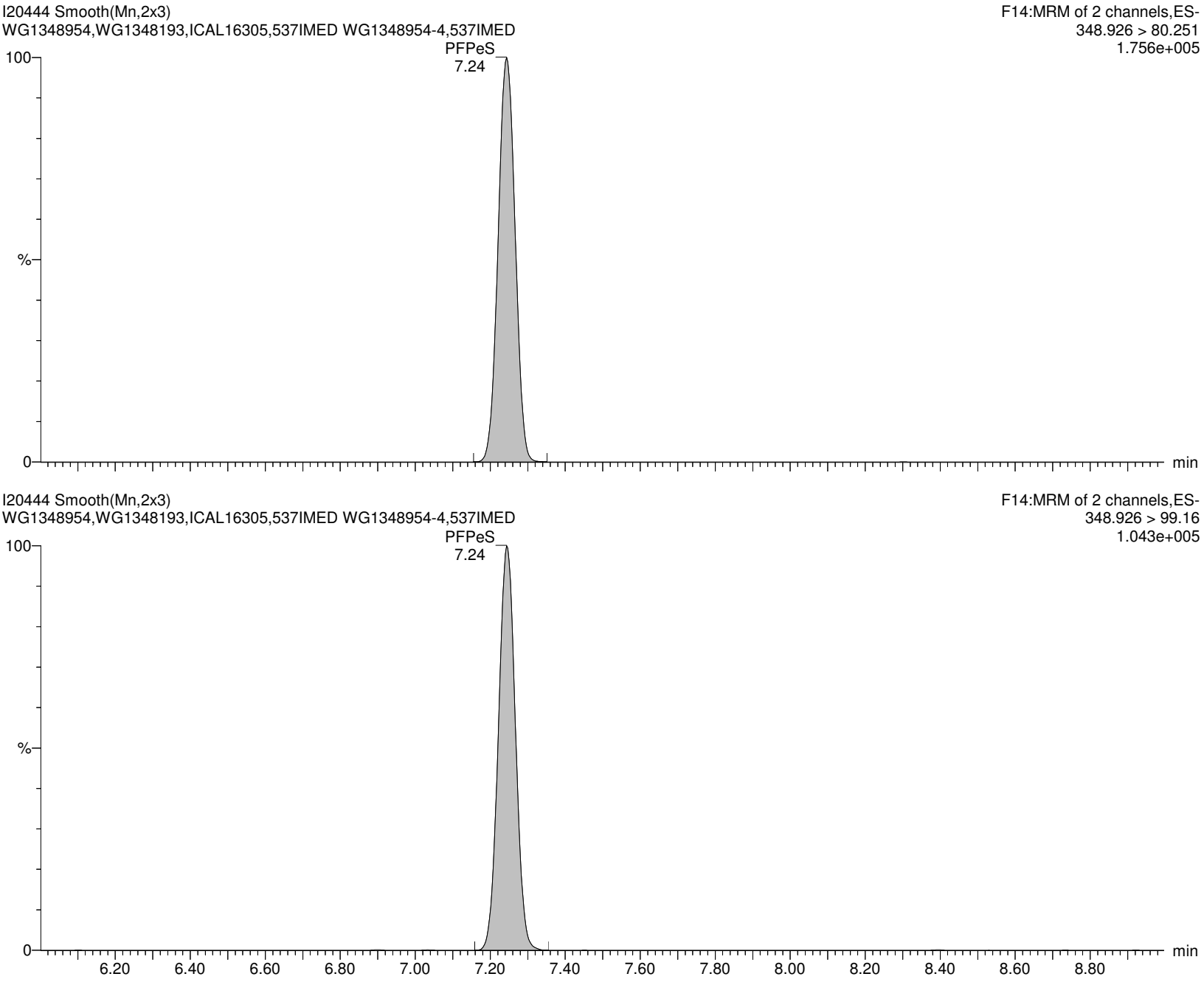
**PFPeS**





all concentration units in (ng/mL)

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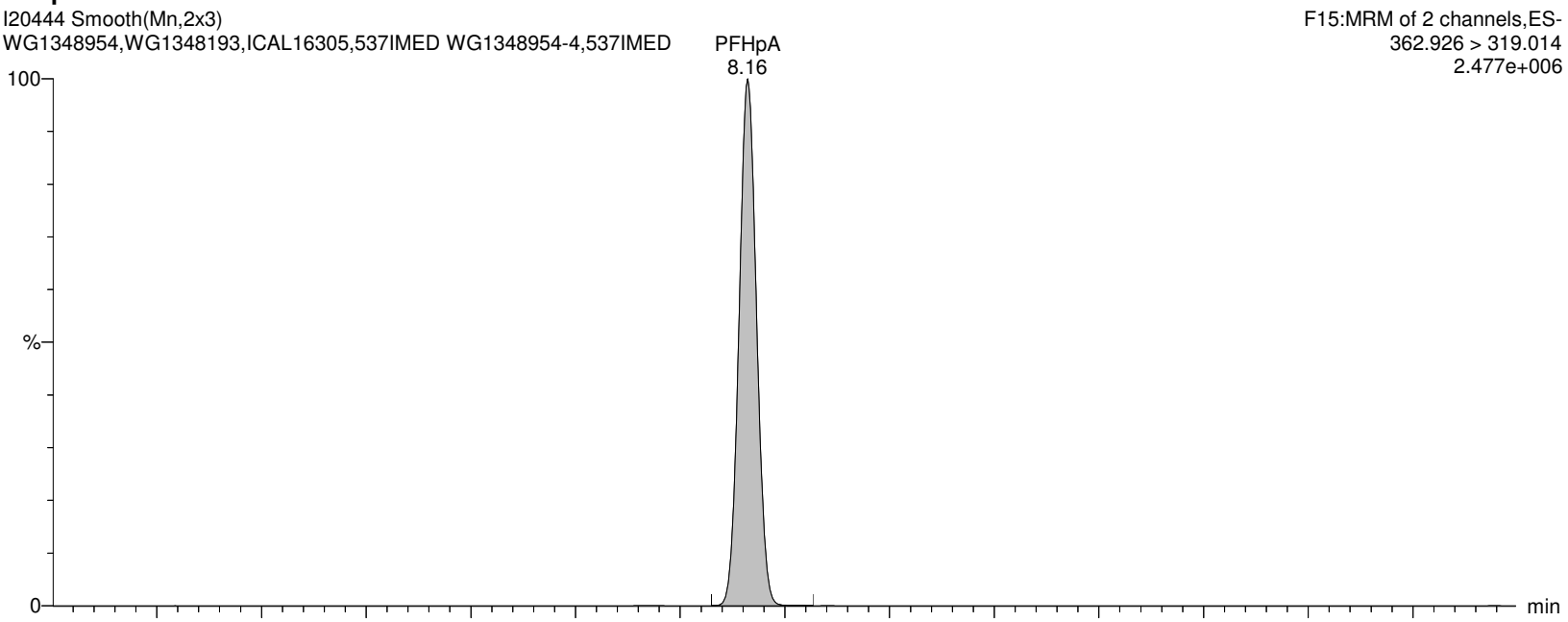
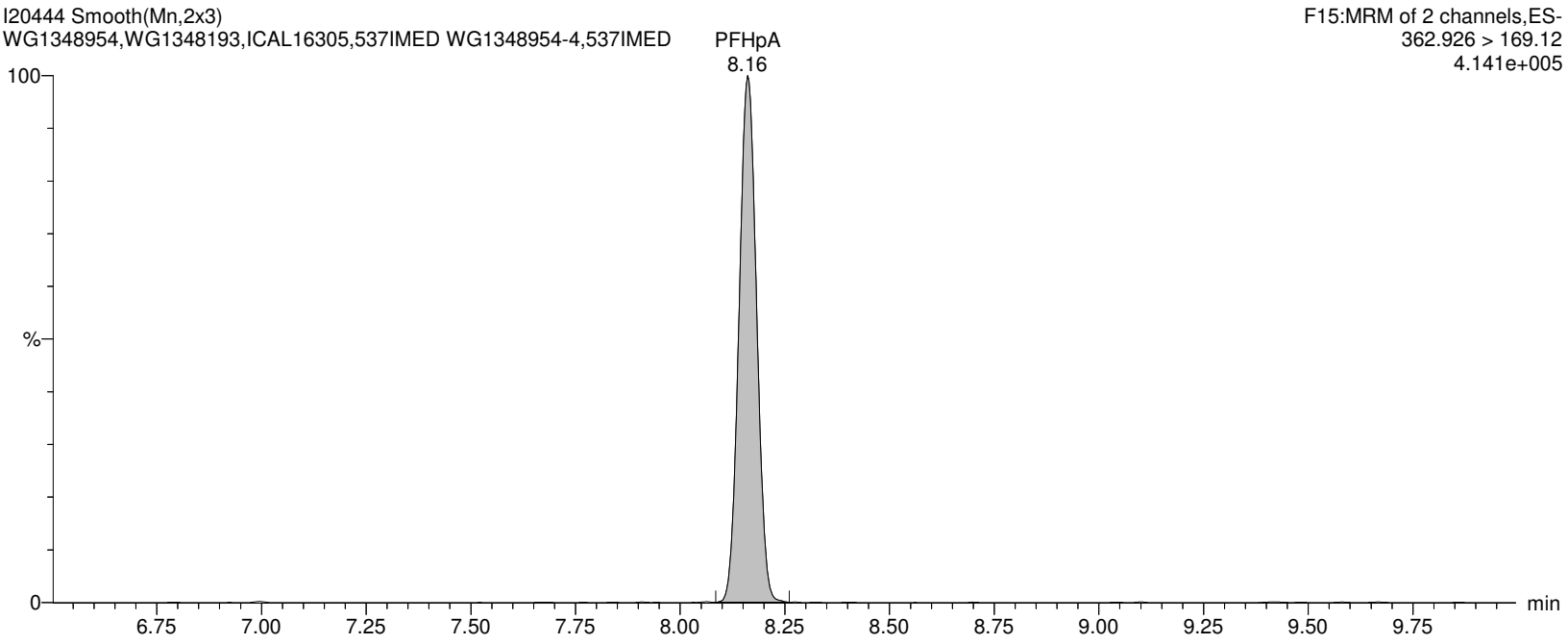
**PFHpA**





all concentration units in (ng/mL)

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**Instrument: XEVO-TQSmicro#QEB0050**
**Inlet Method Name: C:\MassLynx\Data\2020\200309_537ISO.PRO\ACQUDB\LCMS_537_ISO_B**
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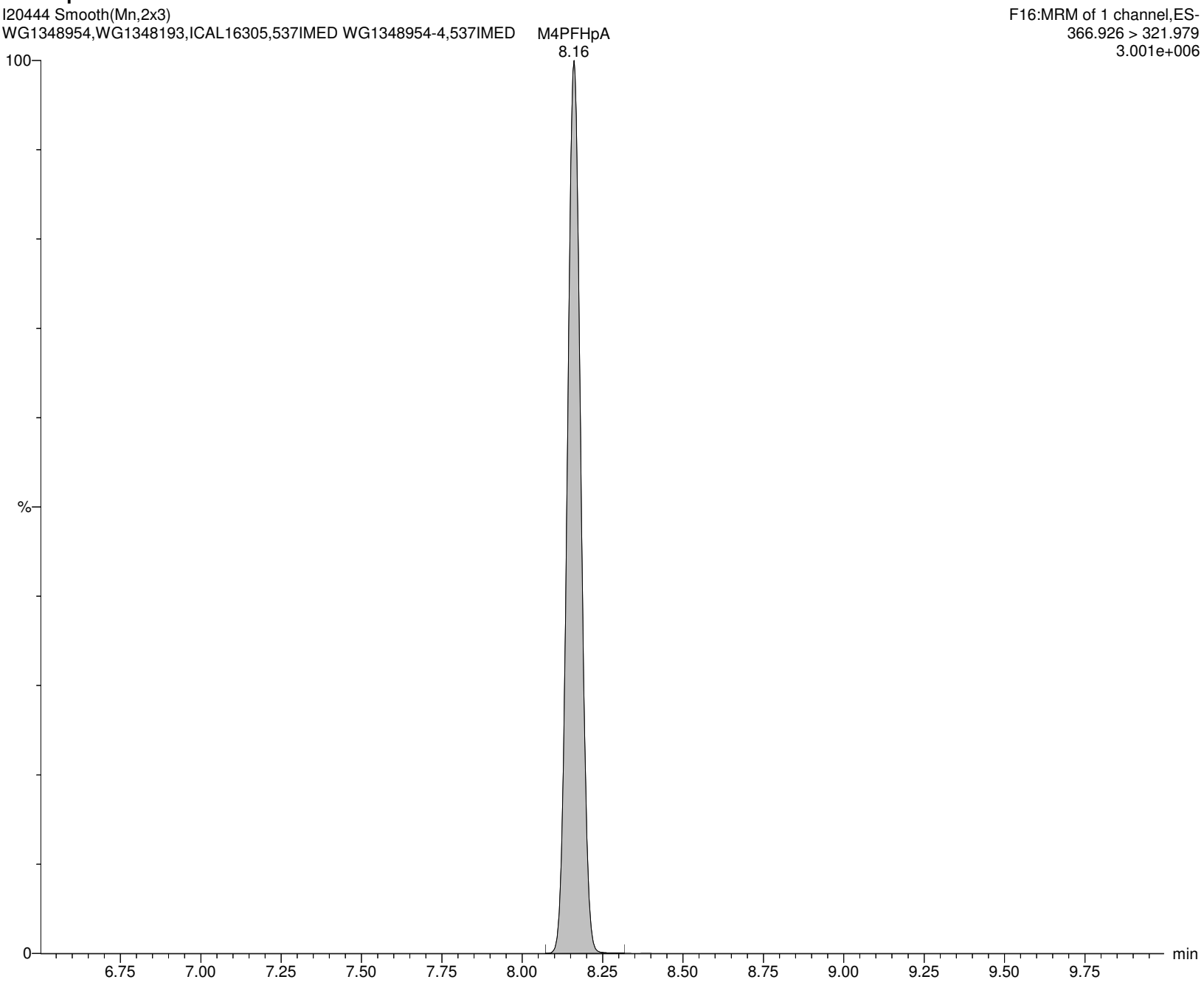
**MS Method Name: C:\MassLynx\Data\2020\200309_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**M4PFHpA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2020\200309_537ISO.PRO\Data\WG1348954C.qld
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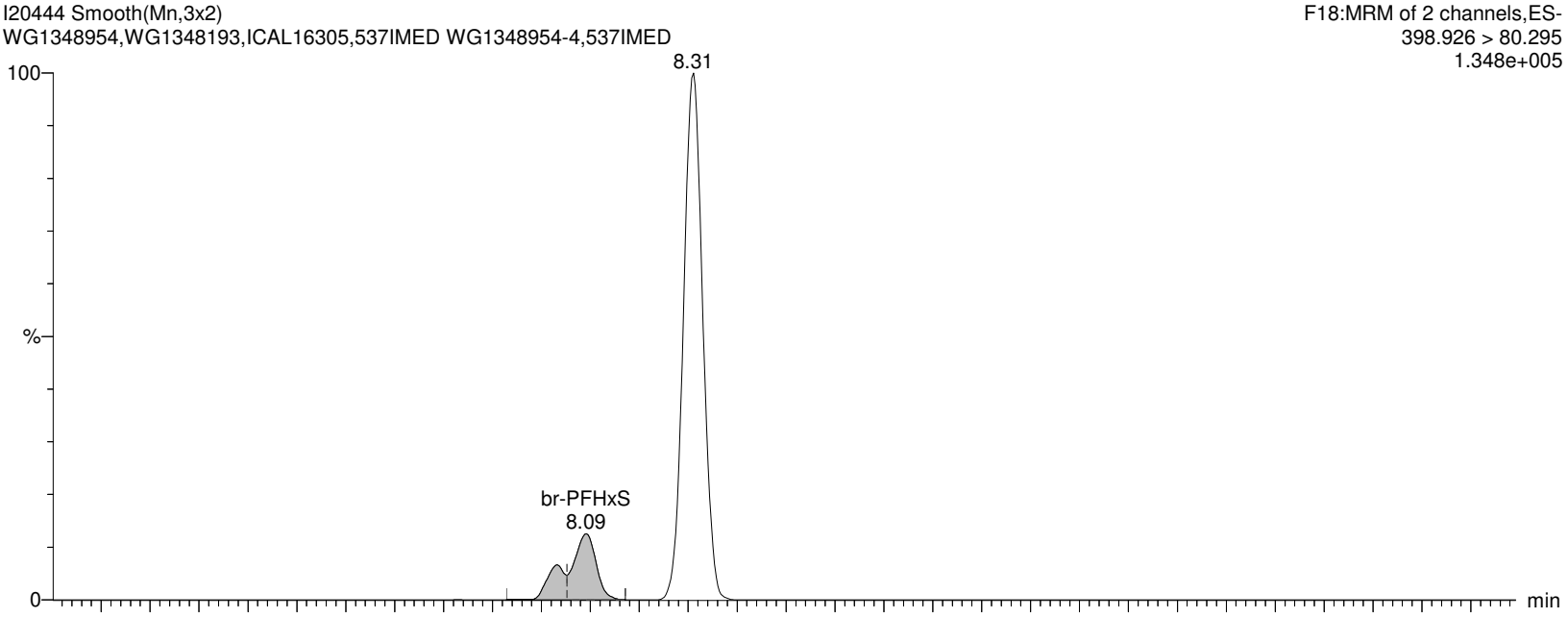
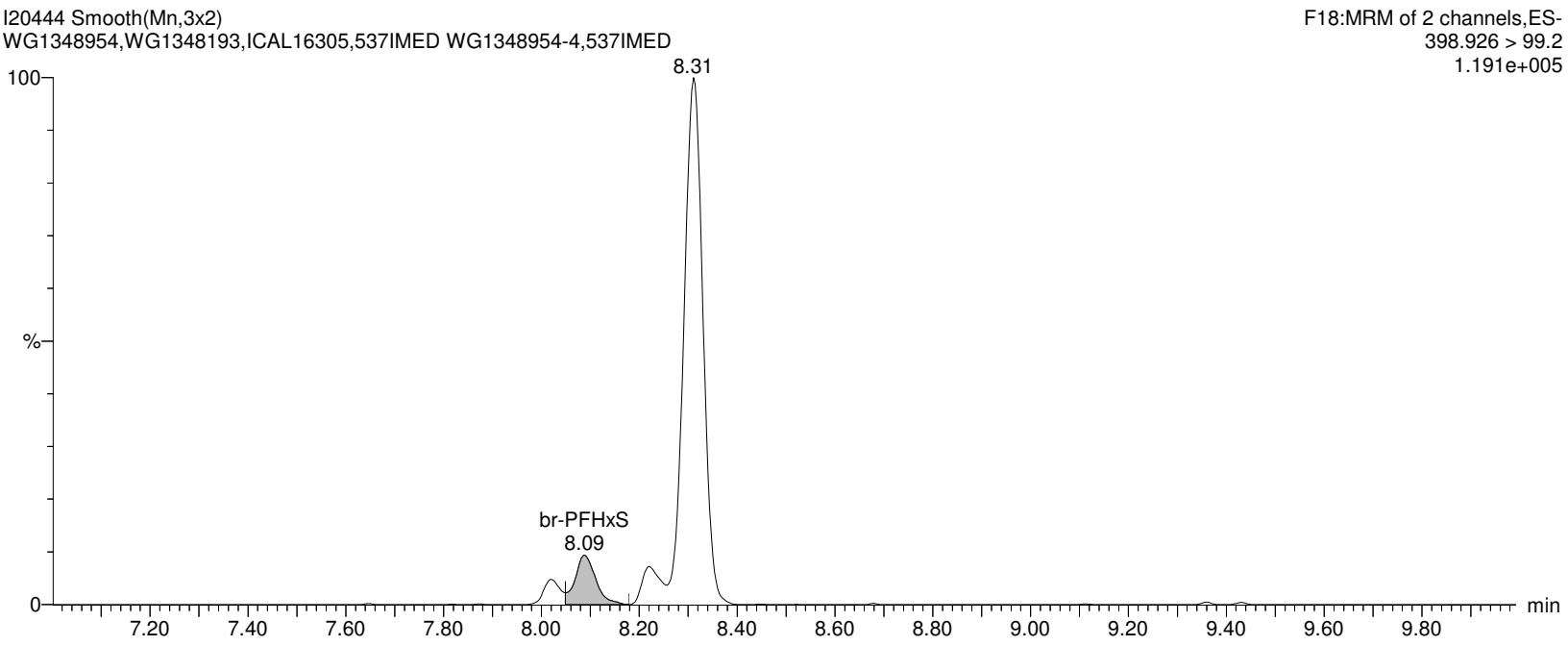
**br-PFHxS**





all concentration units in (ng/mL)

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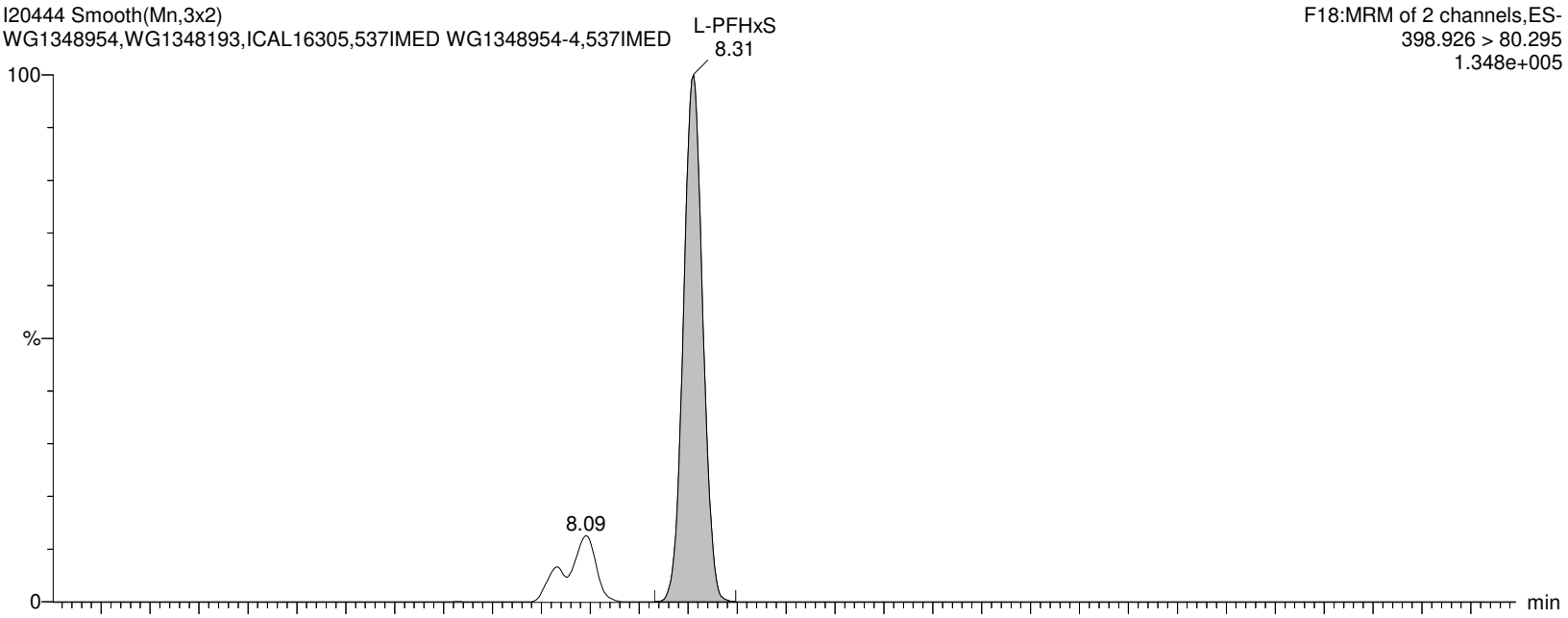
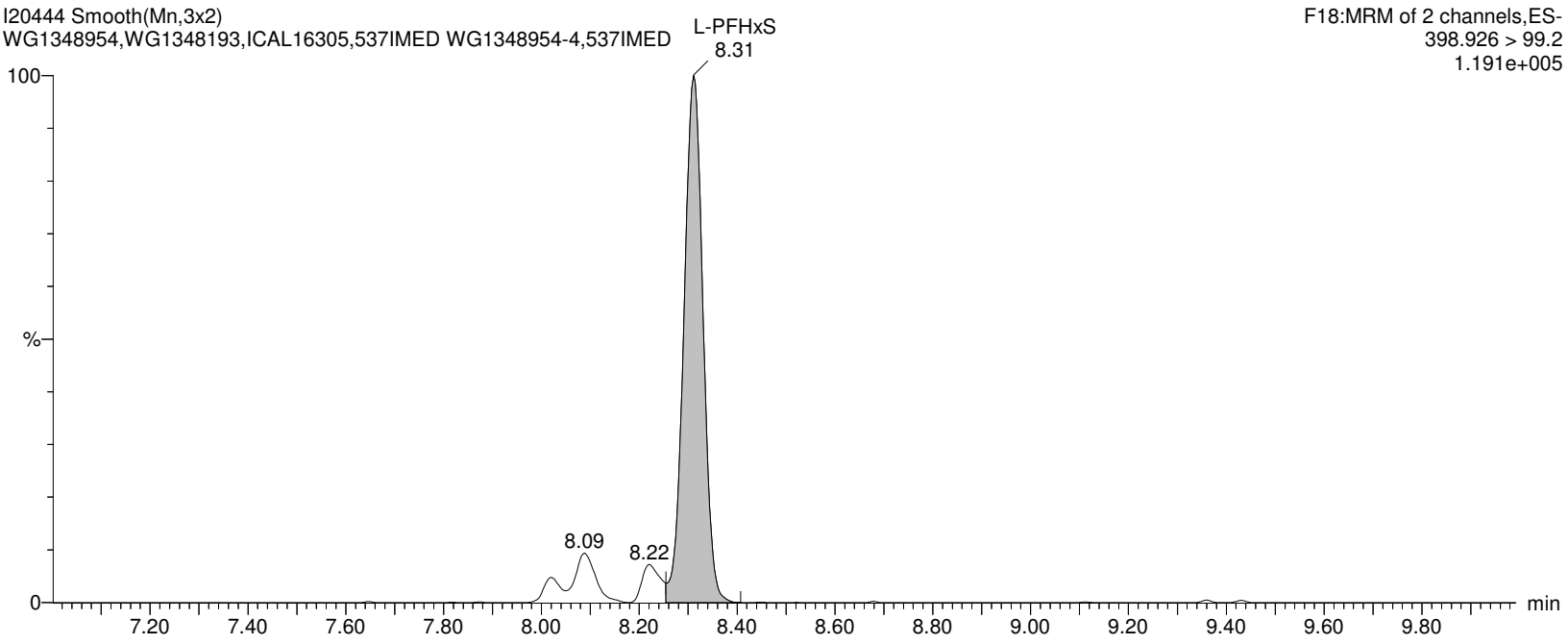
**MS Method Name: C:\MassLynx\Data\2020\200309_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**L-PFHxS**





all concentration units in (ng/mL)

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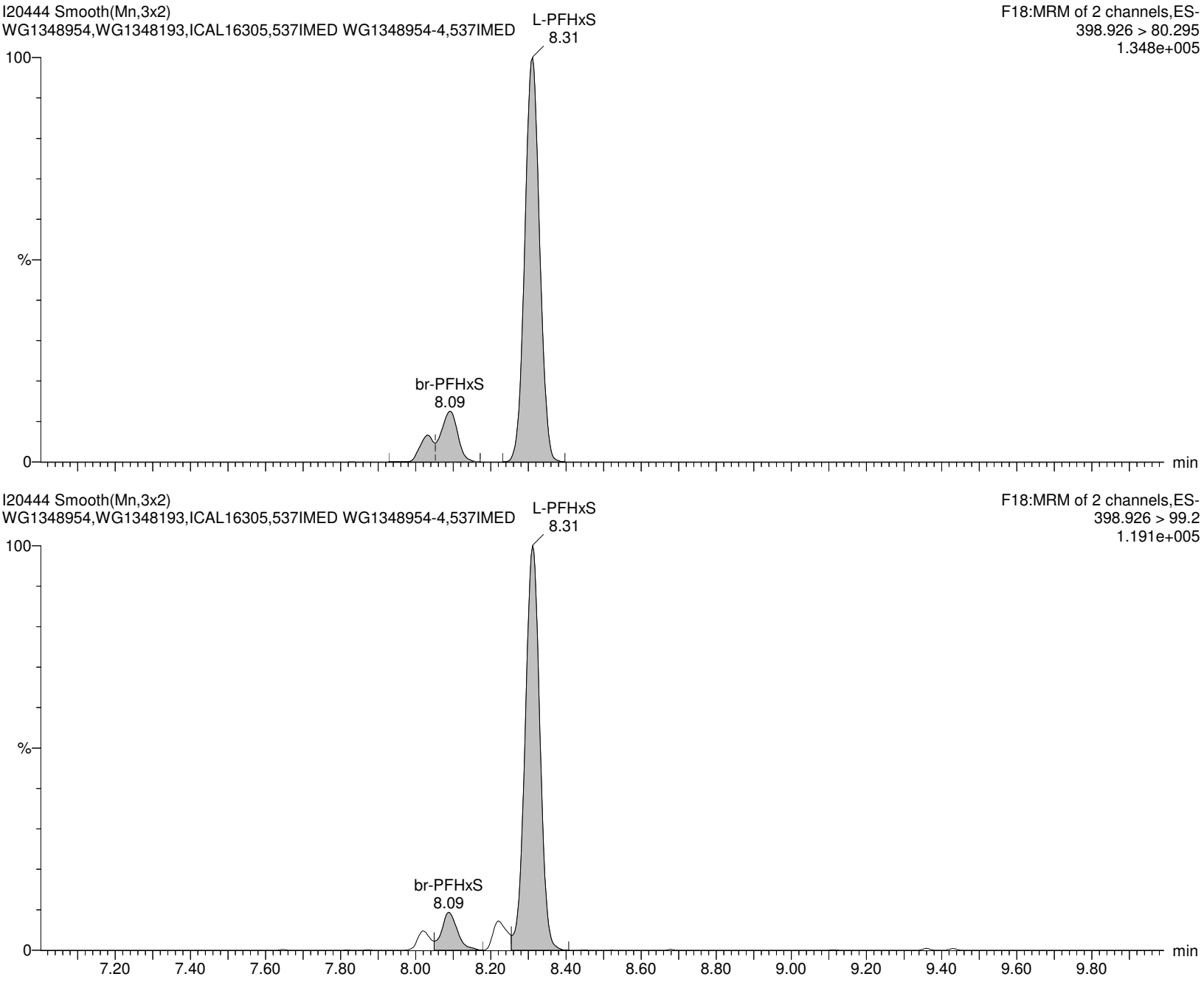
**PFHxS**





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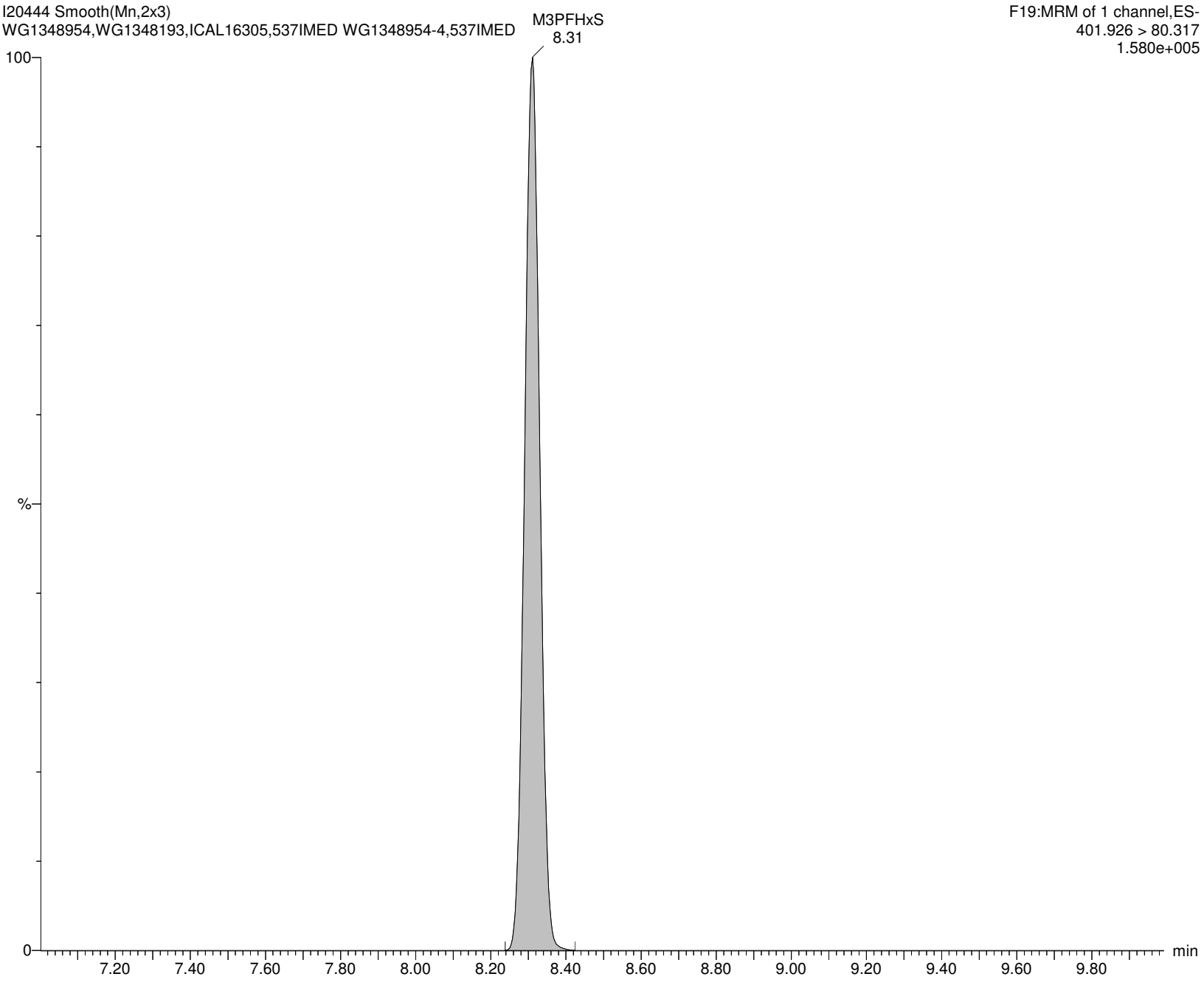
**M3PFHxS**





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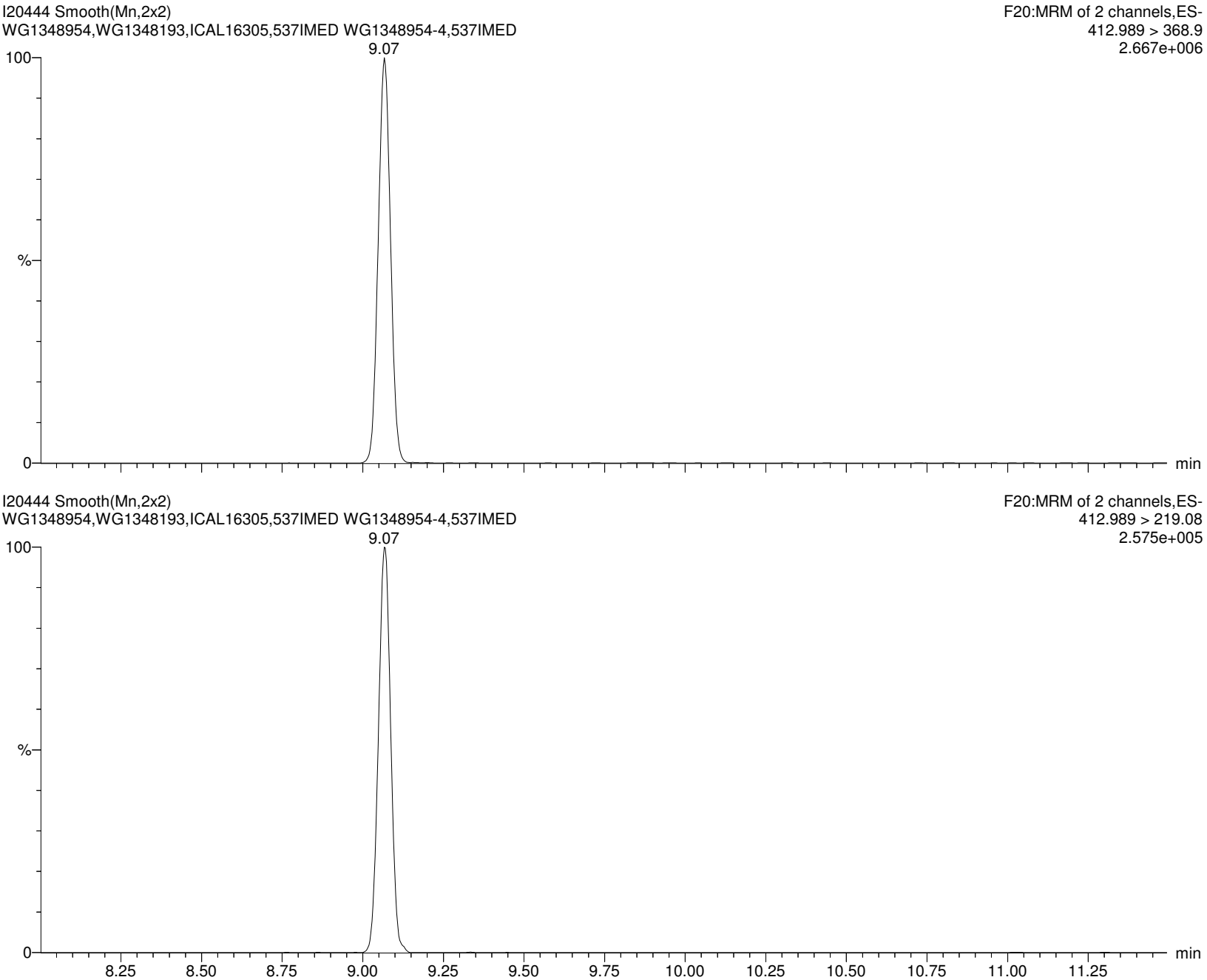
**br-PFOA**





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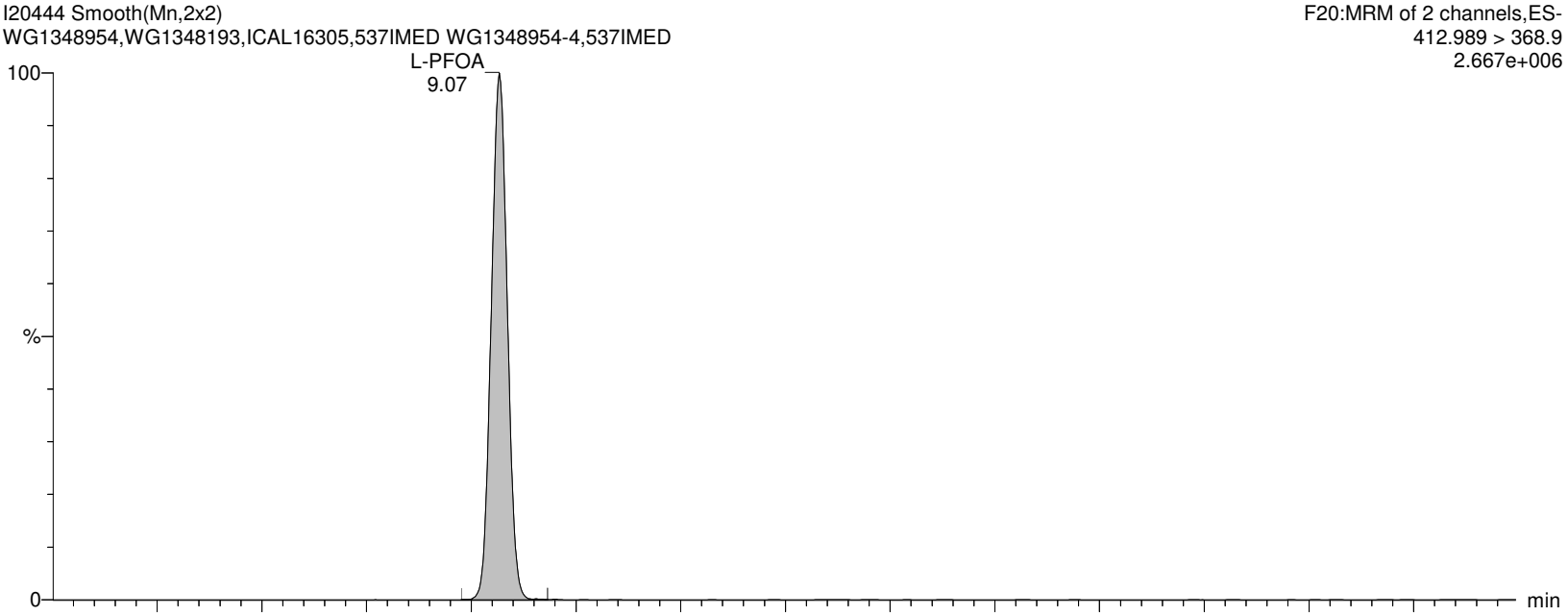
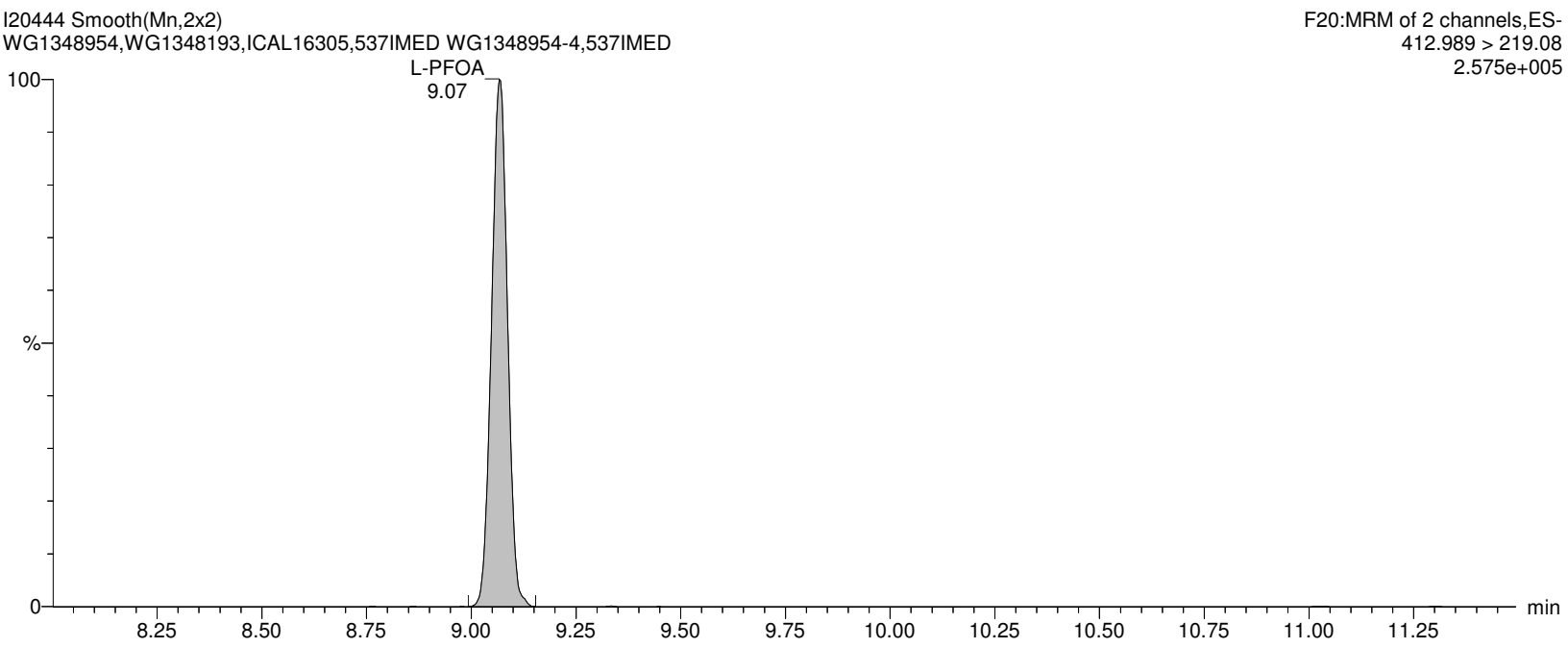
**L-PFOA**





all concentration units in (ng/mL)

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Last Altered: Wednesday, March 11, 2020 21:10:58 Eastern Daylight Time
Printed: Thursday, March 12, 2020 03:36:37 Eastern Daylight Time

**Name: I20444**
**ID: WG1348954-4,537IMED**
**Date: 10-Mar-2020**
**Time: 23:50:12**
**Description: WG1348954,WG1348193,ICAL16305,537IMED**
**User: LCMS02:RS**
**Vial: 1:A,3**
**Instrument: XEVO-TQSmicro#QEB0050**
**Inlet Method Name: C:\MassLynx\Data\2020\200309_537ISO.PRO\ACQUDB\LCMS_537_ISO_B**
**Tune Method Name: C:\MassLynx\Data\2020\200309_537ISO.PRO\ACQUDB\181009_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\2020\200309_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

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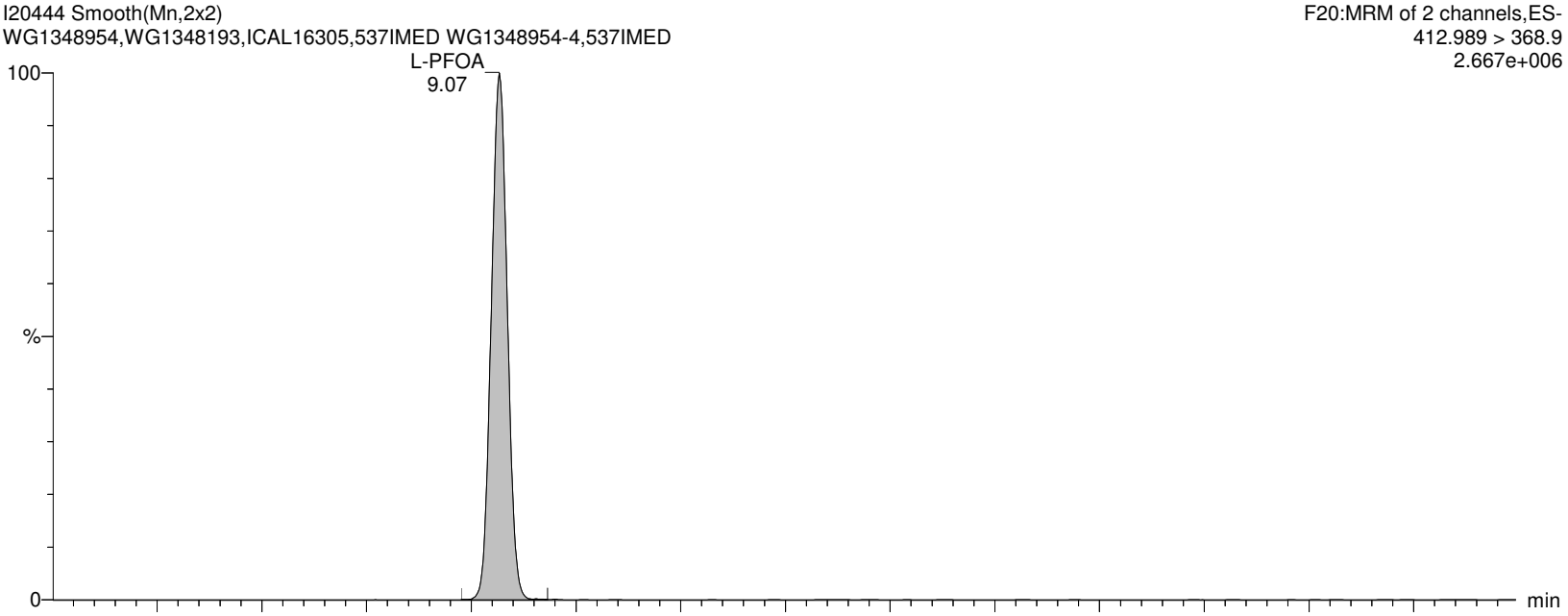


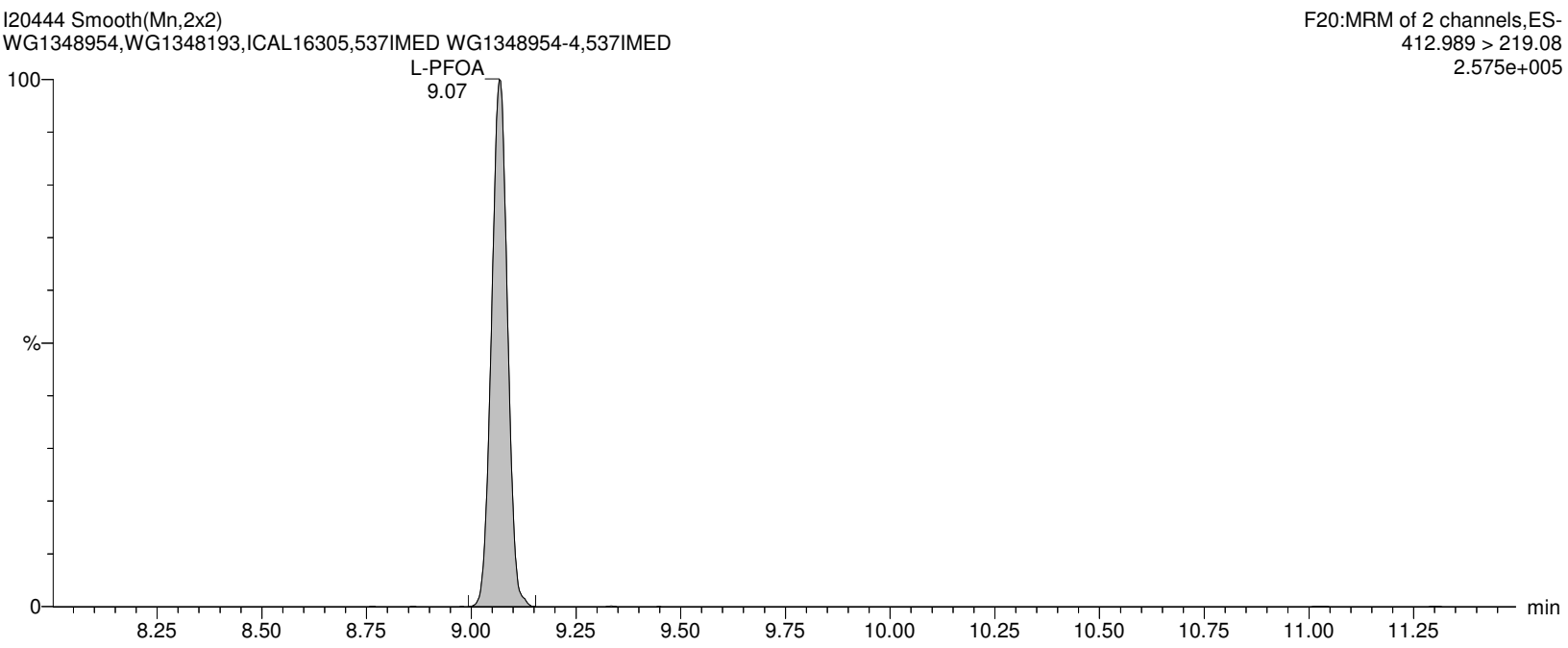



all concentration units in (ng/mL)

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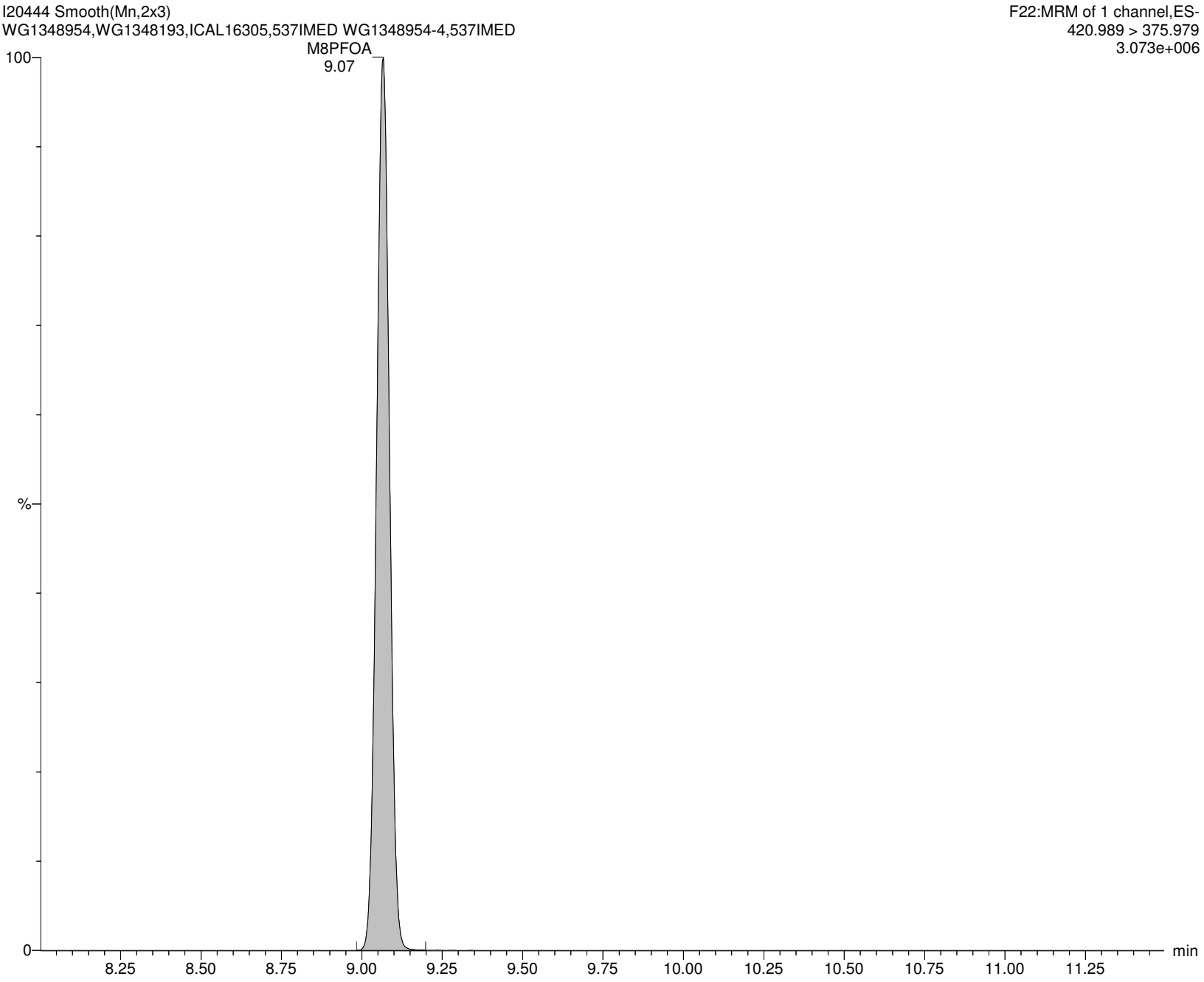



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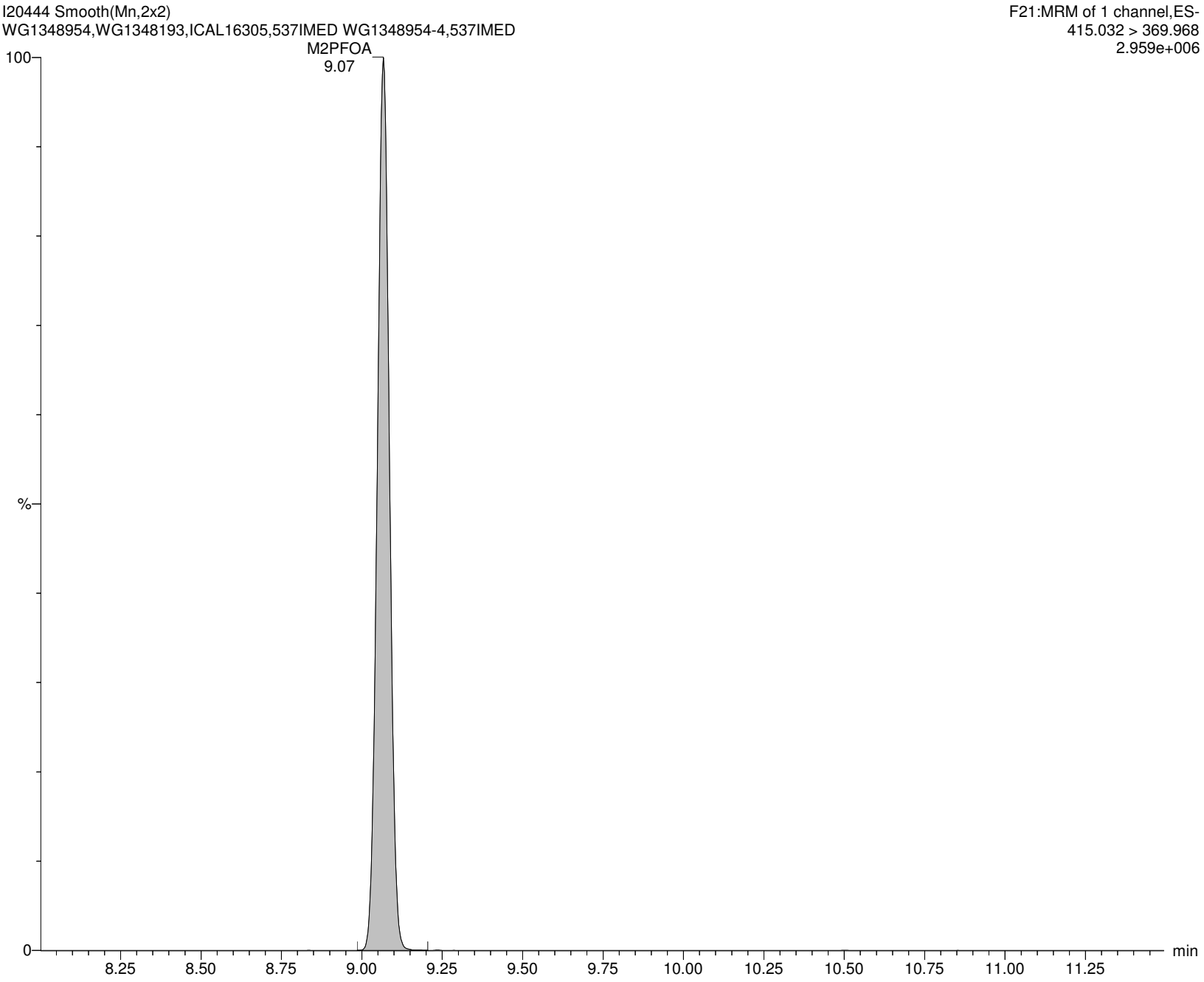



all concentration units in (ng/mL)

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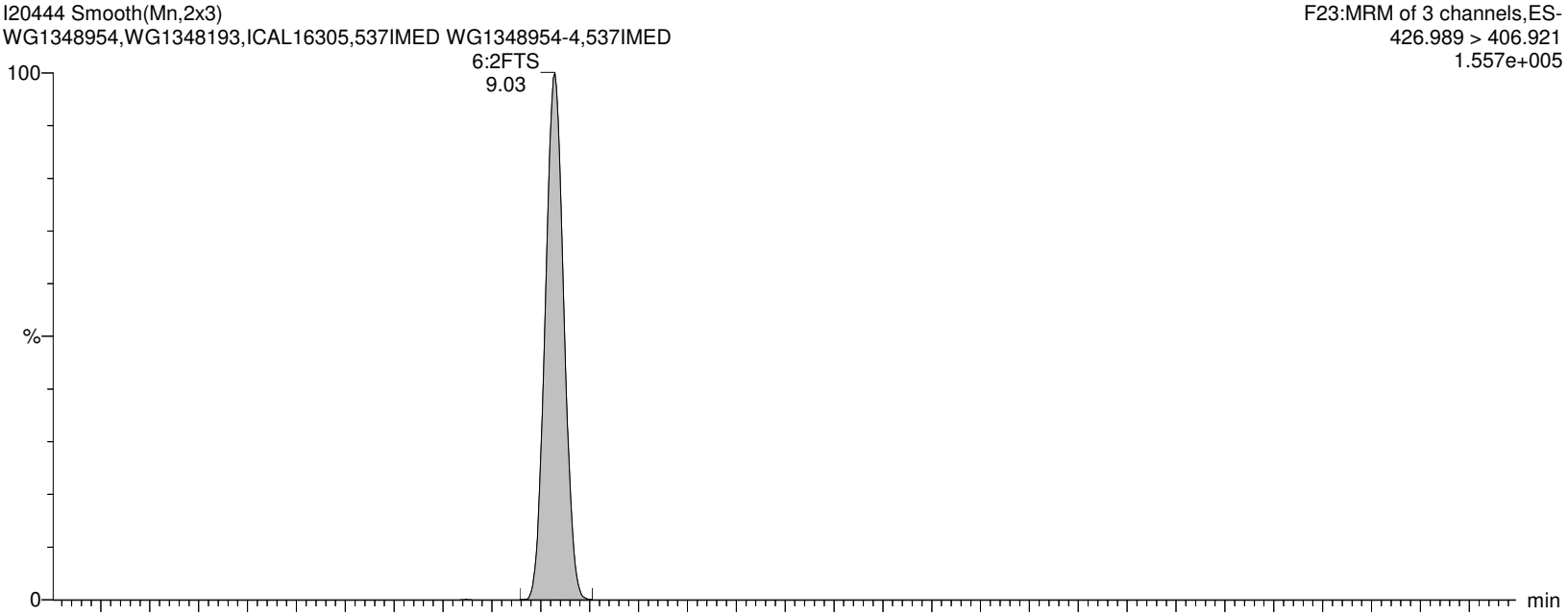
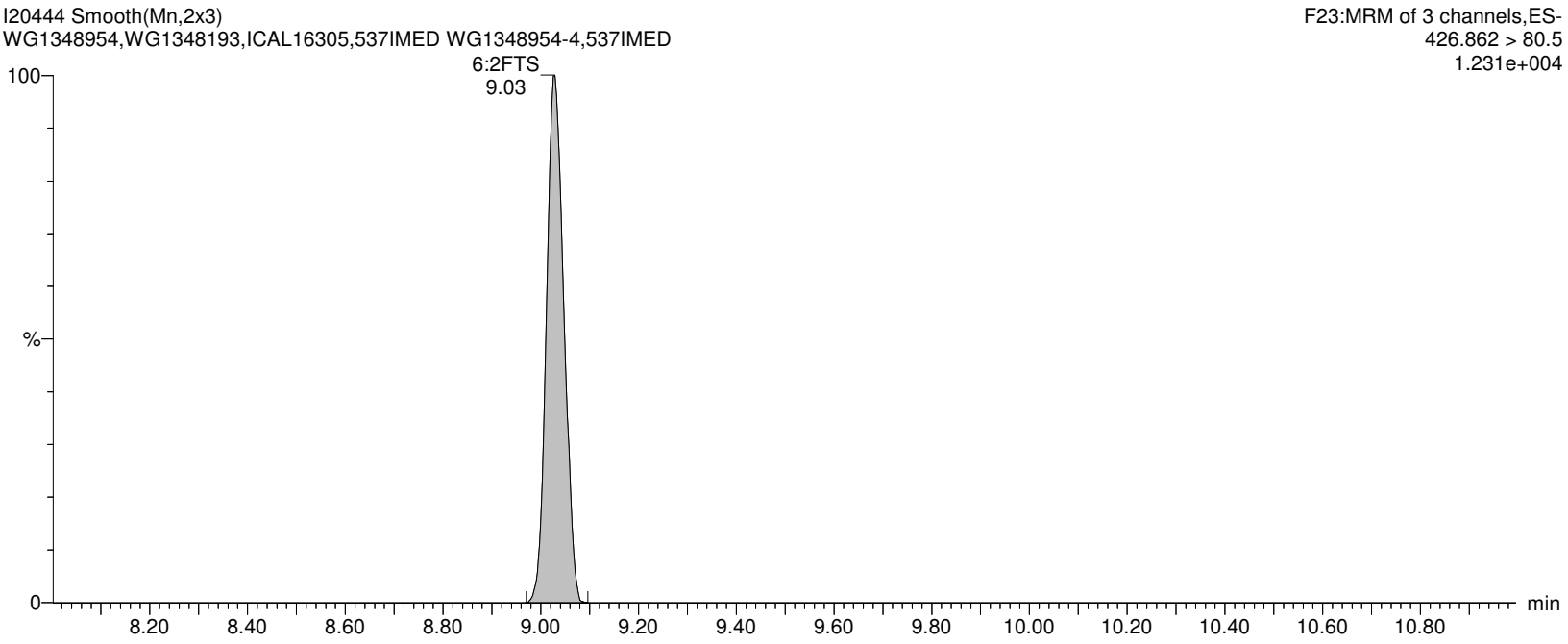
**6:2FTS**





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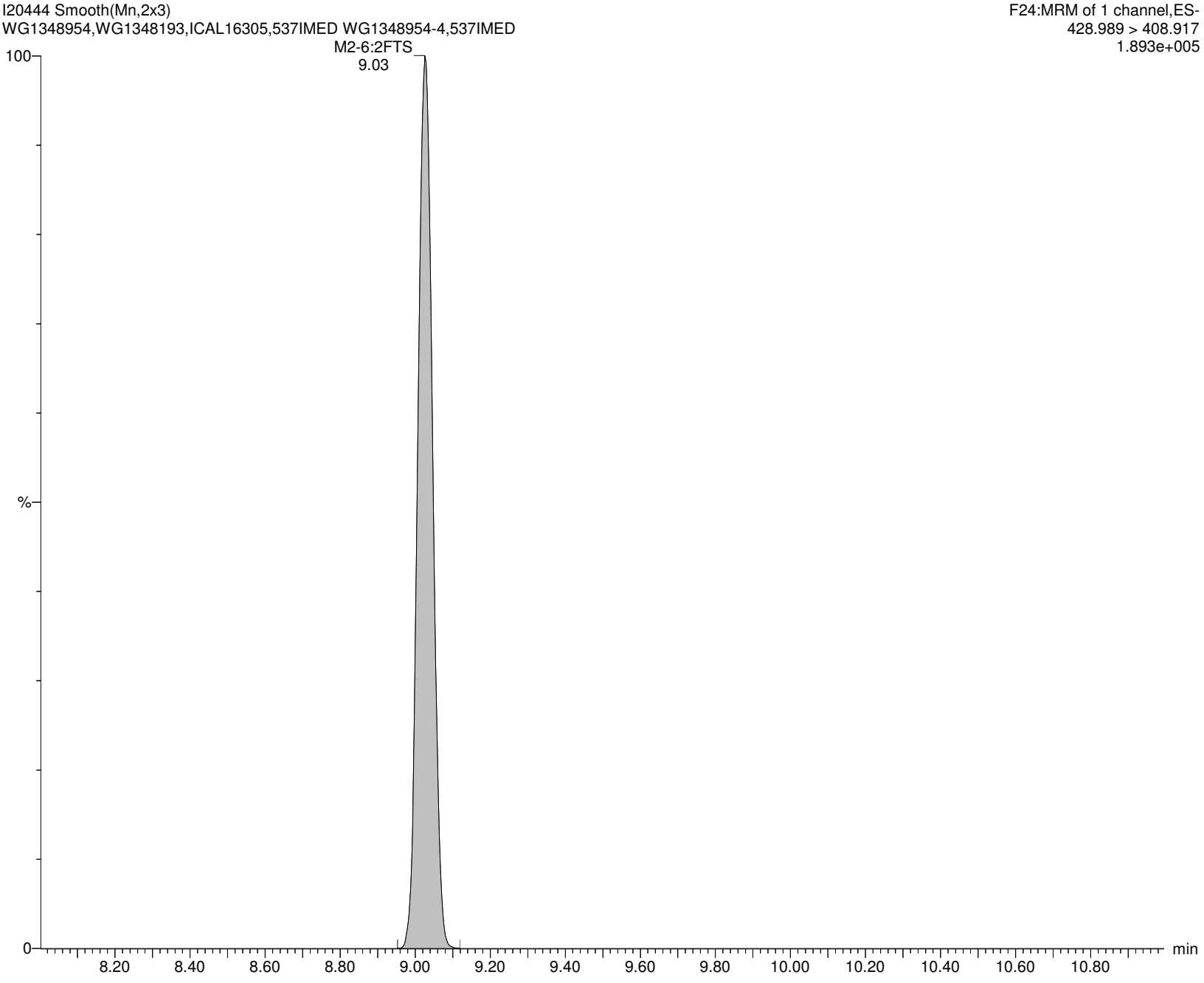
**M2-6:2FTS**





all concentration units in (ng/mL)

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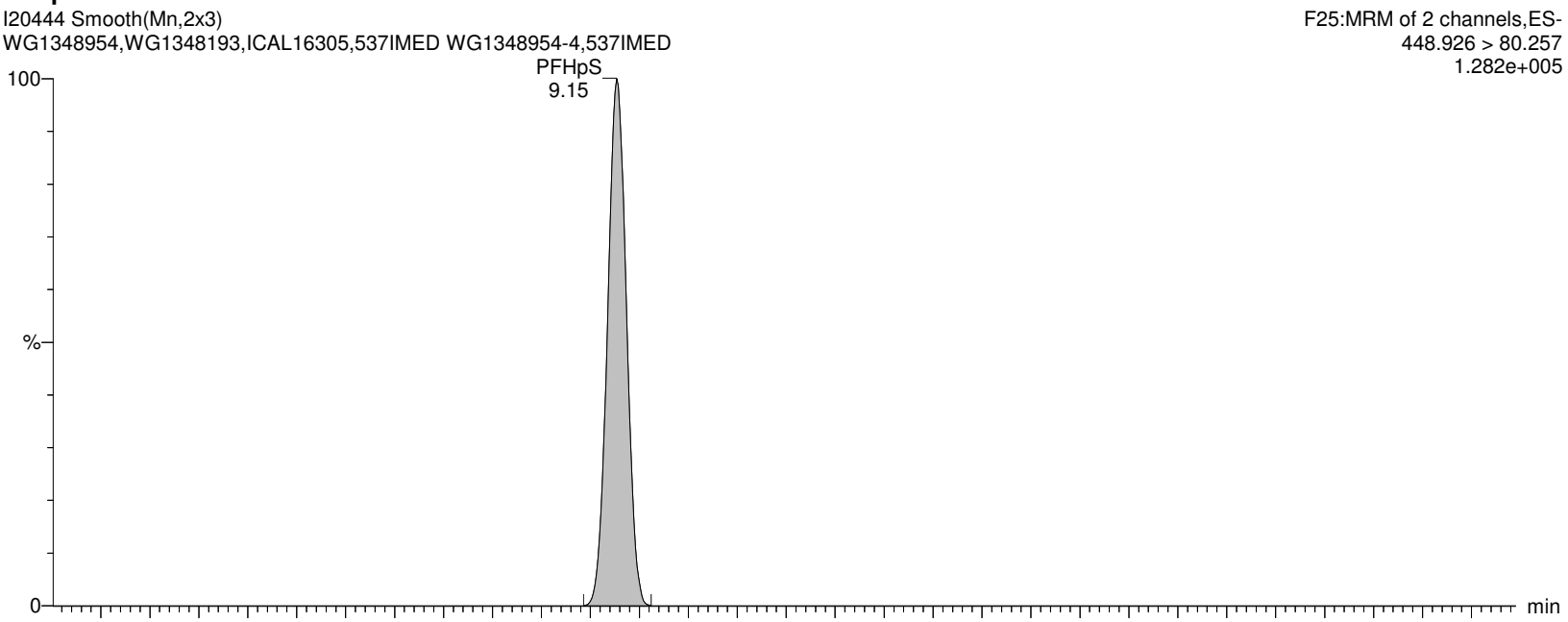


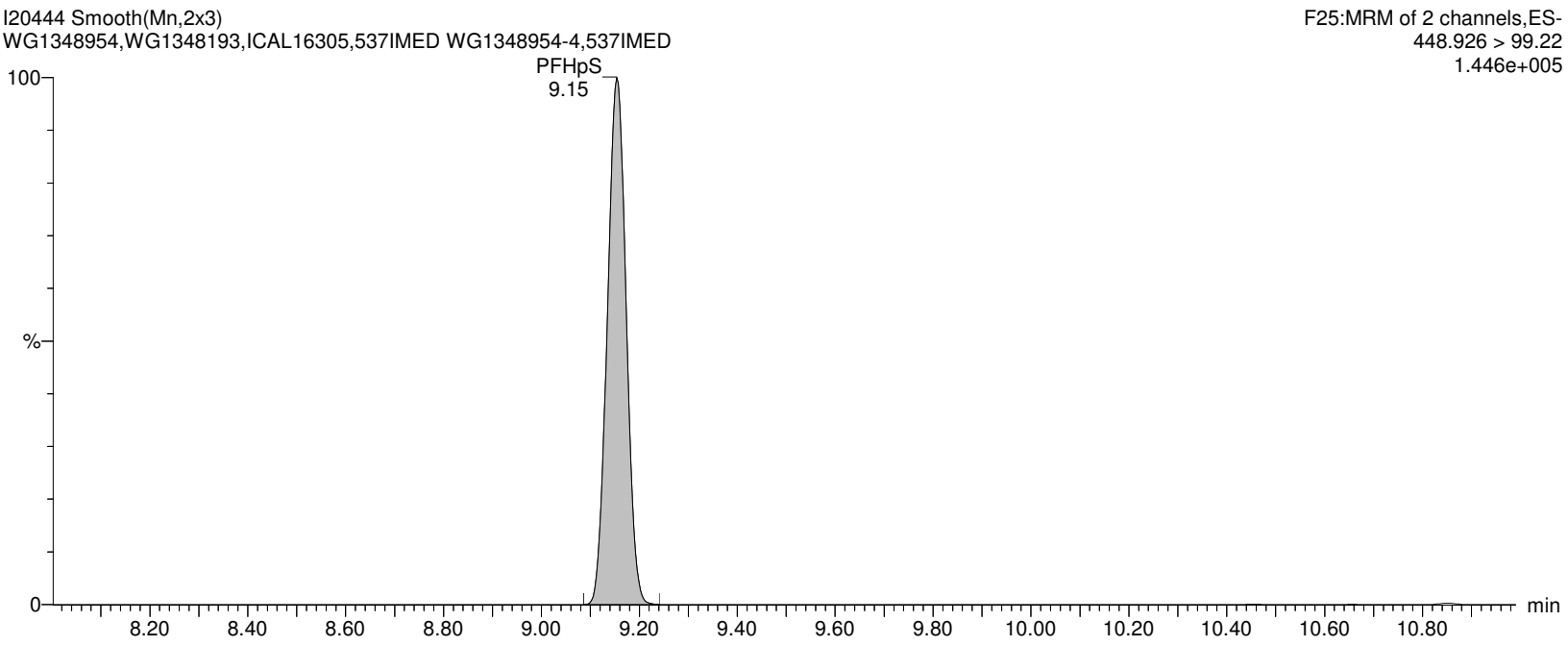



all concentration units in (ng/mL)

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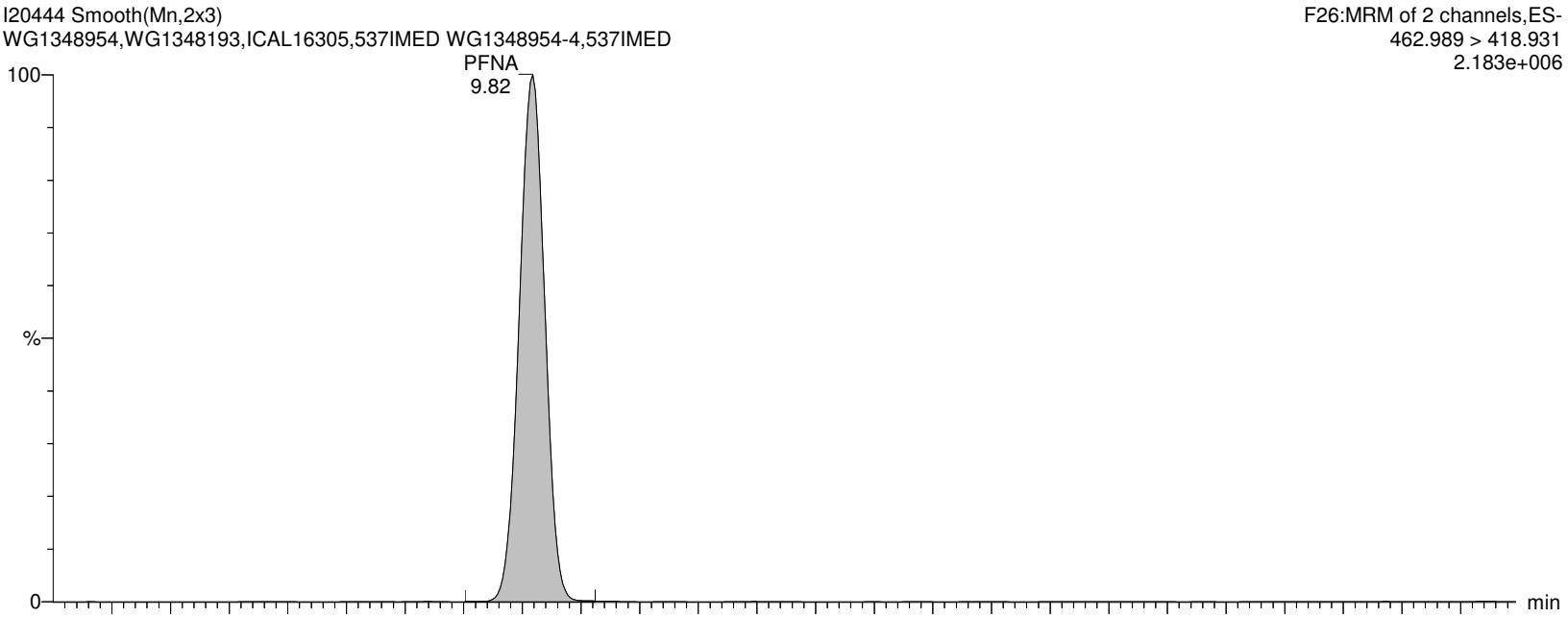


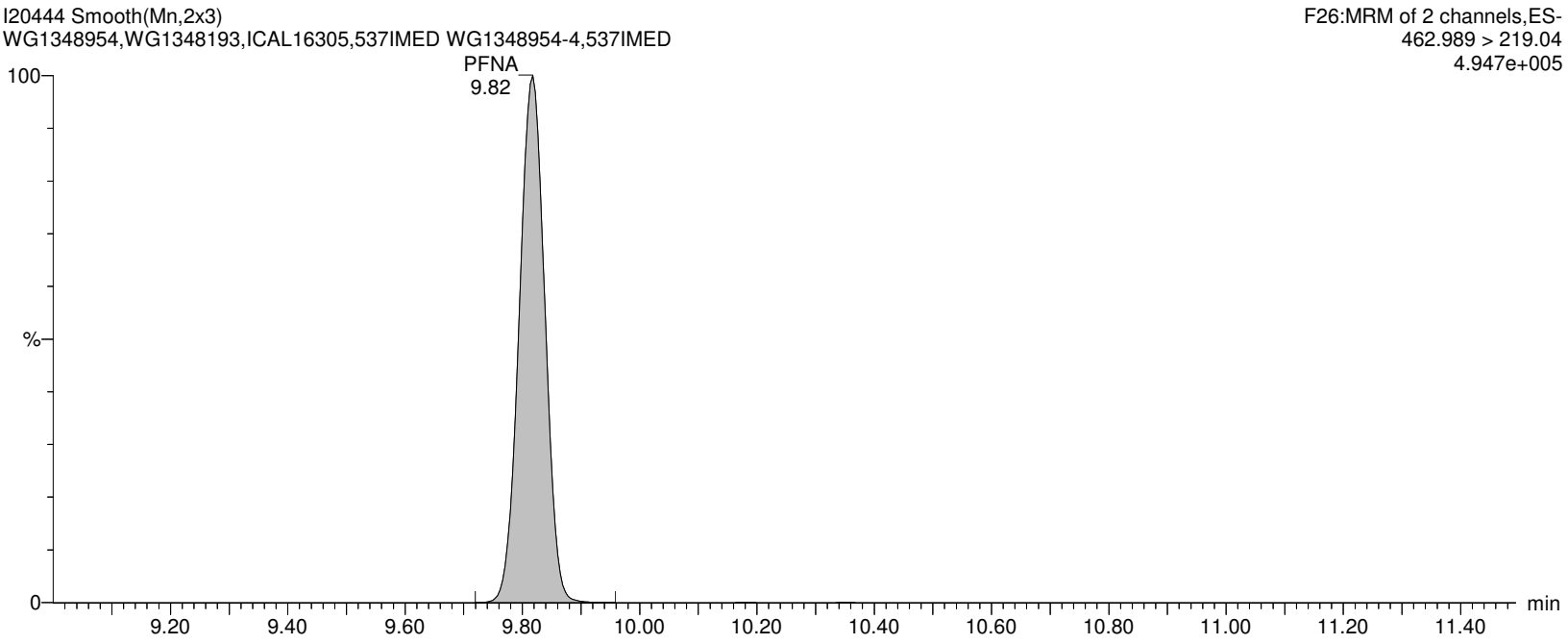



all concentration units in (ng/mL)

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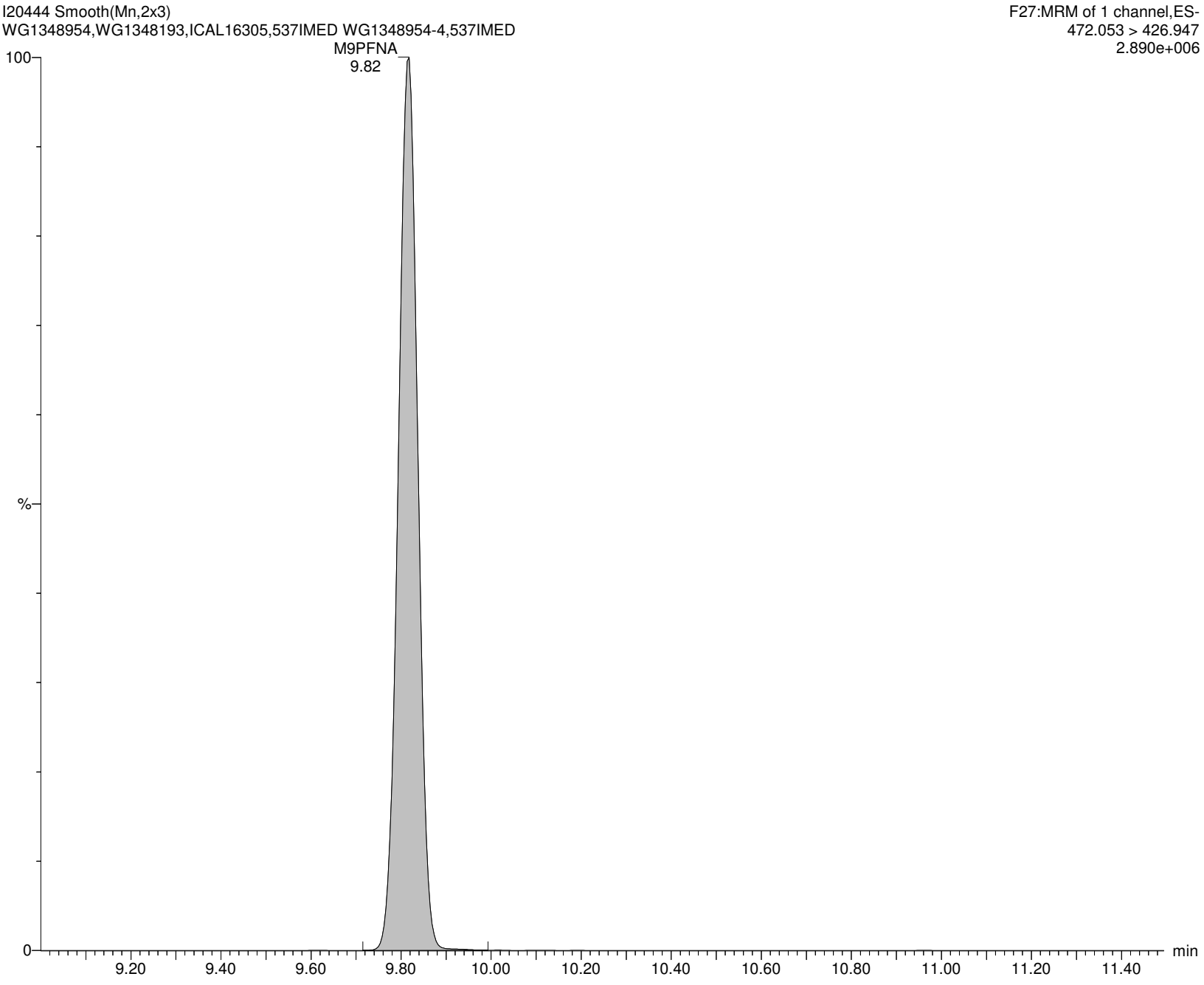



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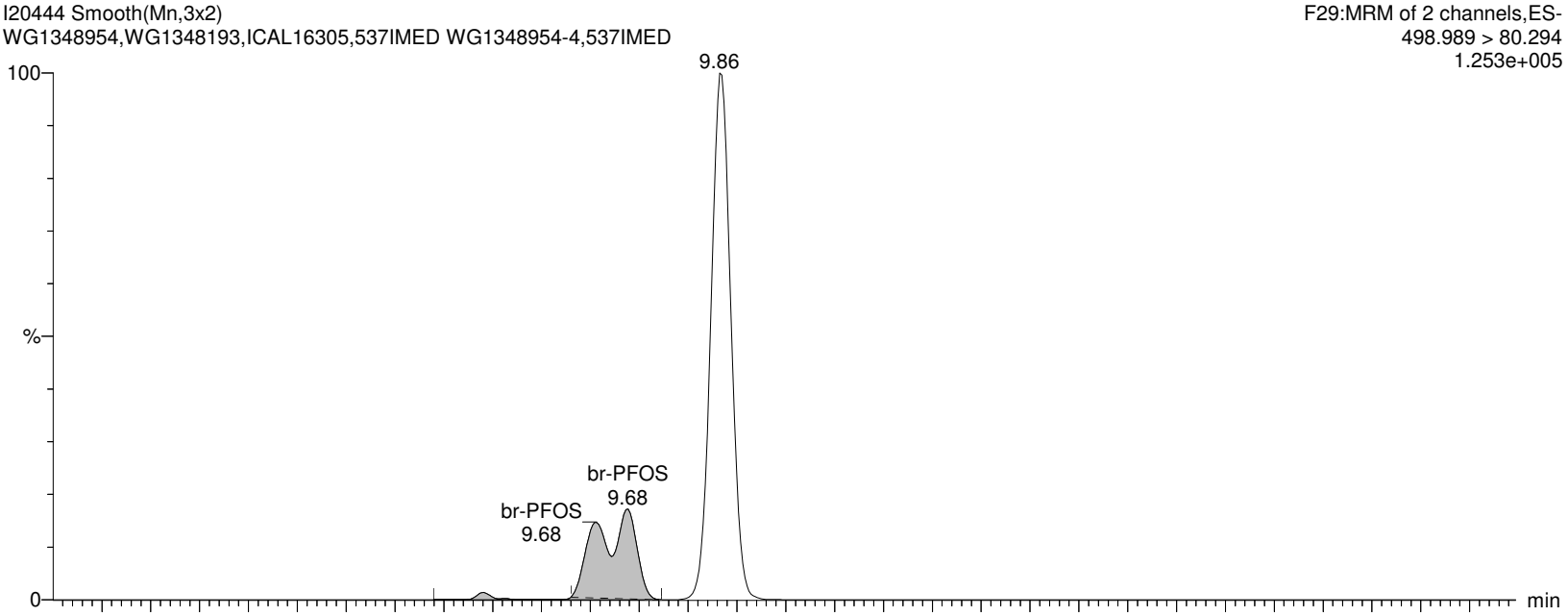


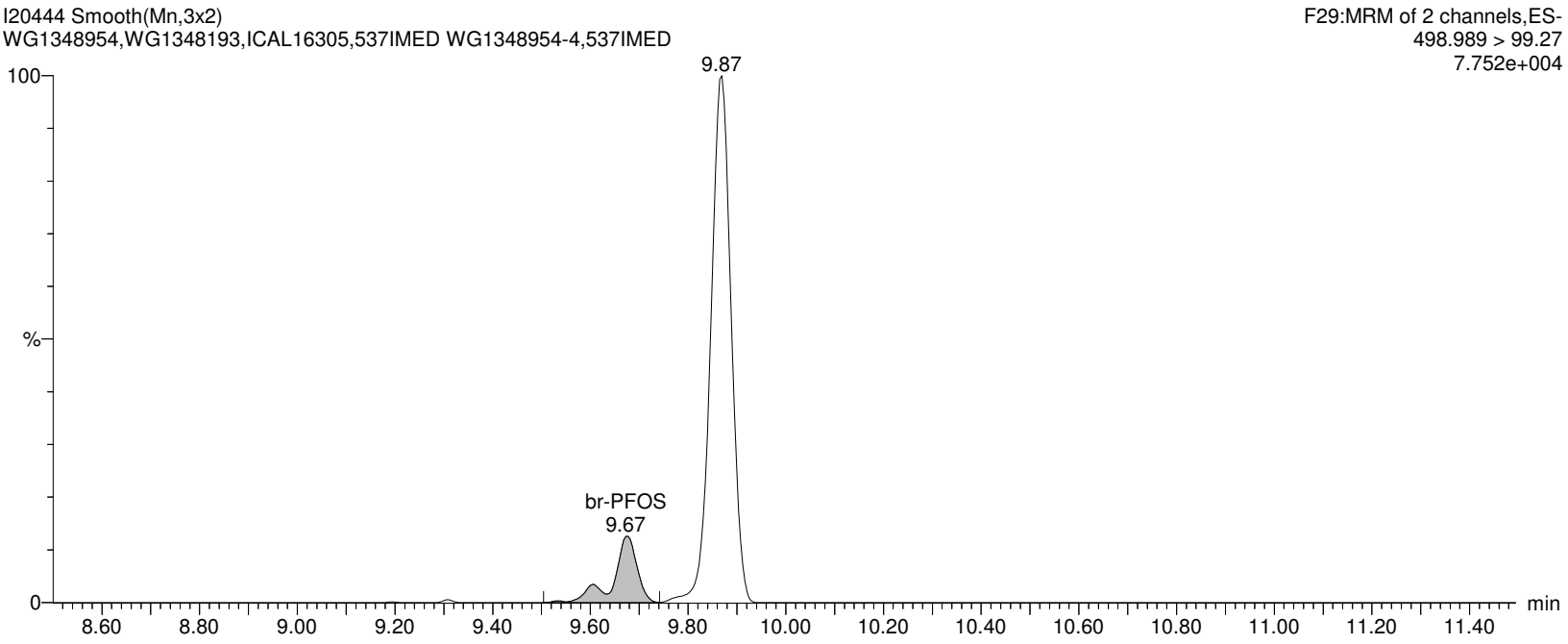



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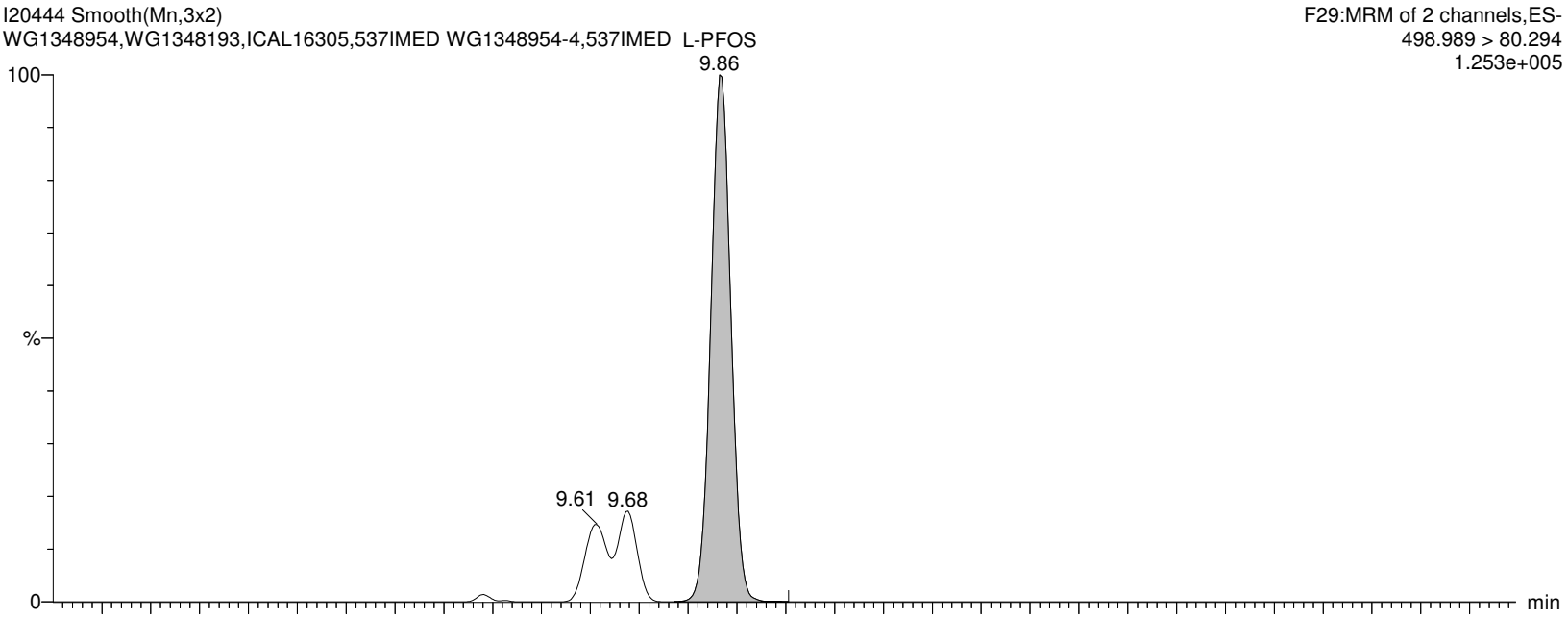


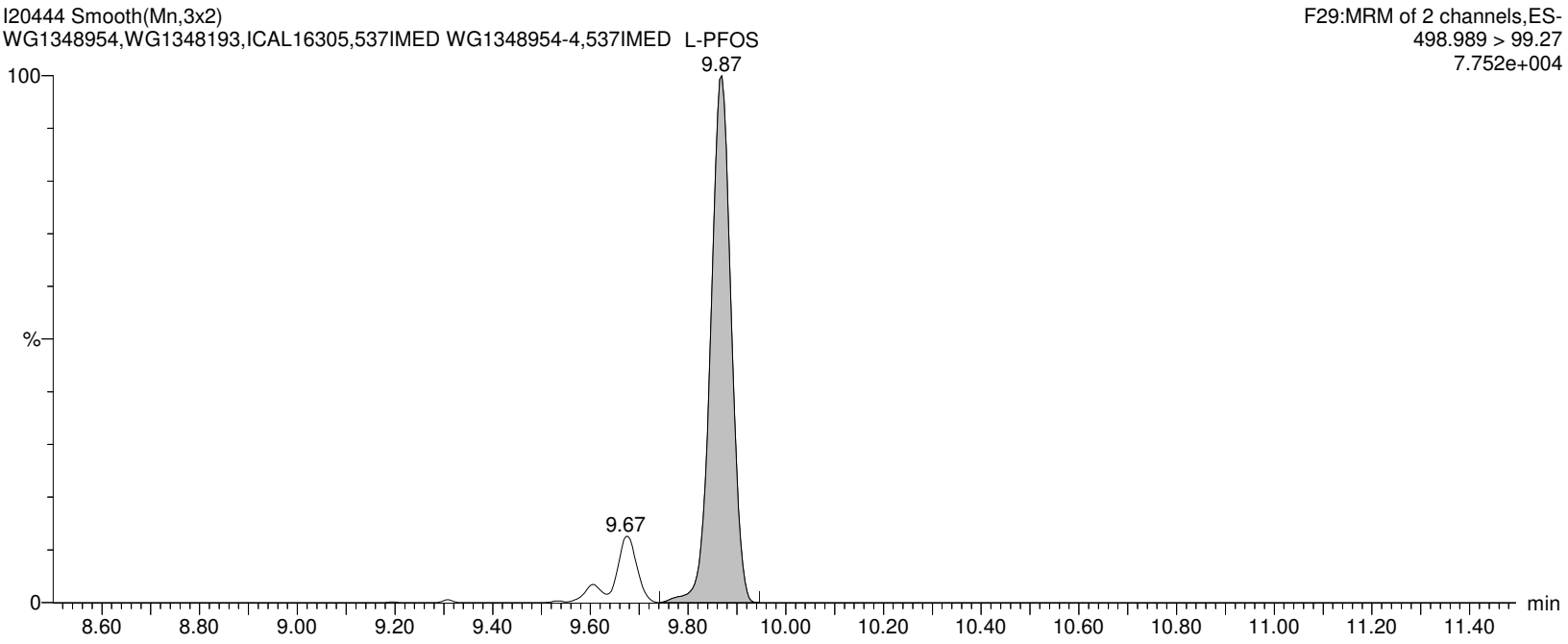



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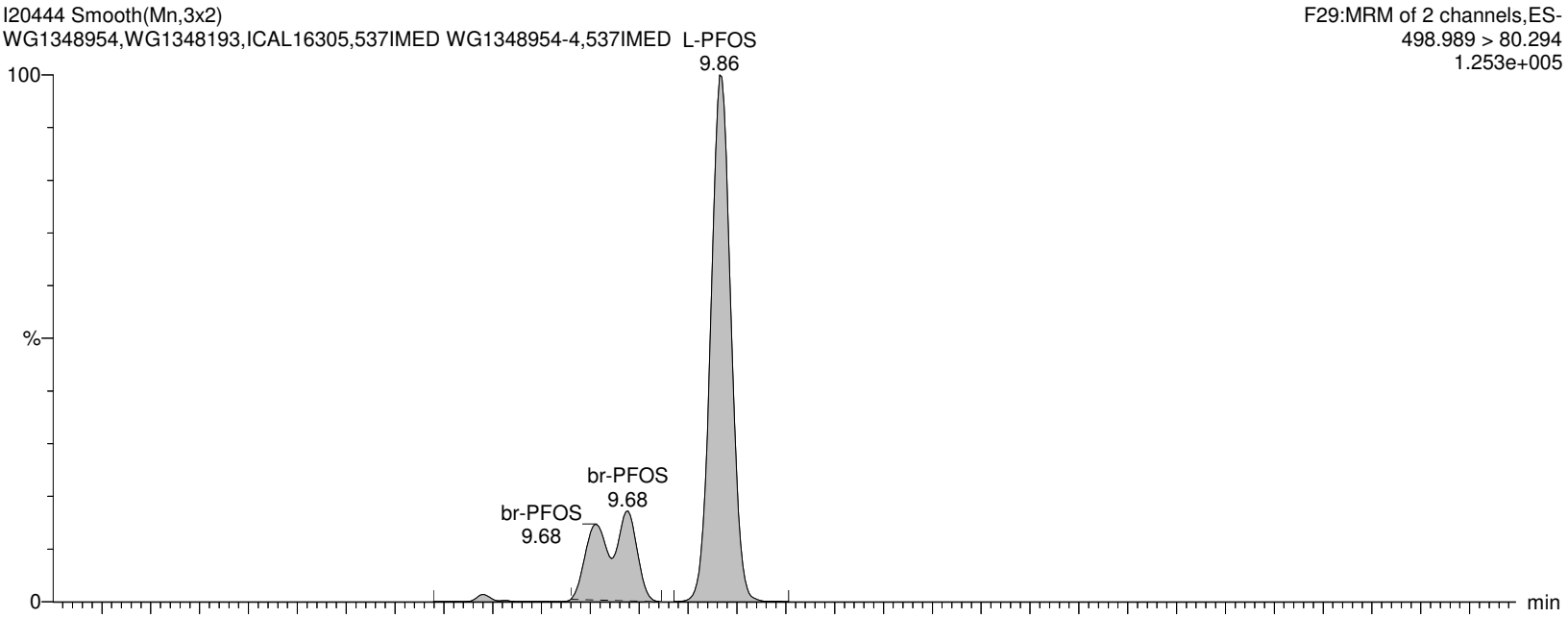


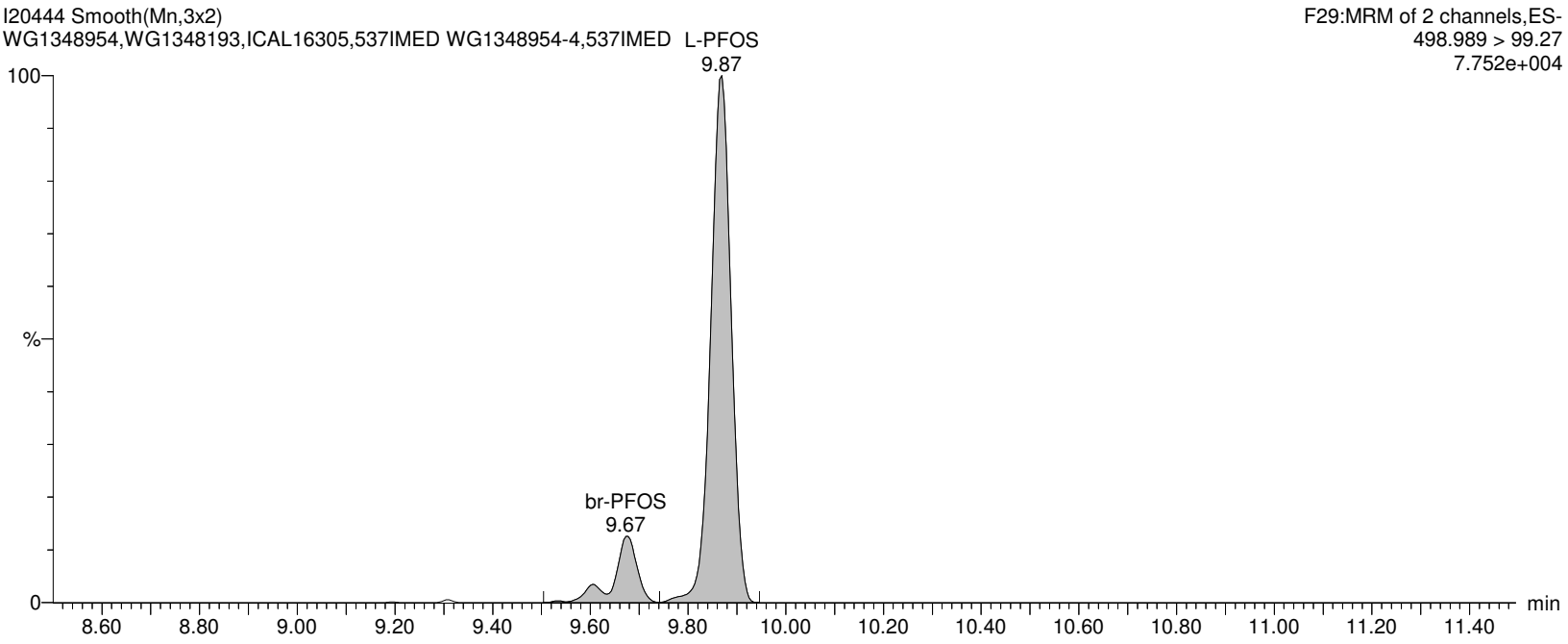



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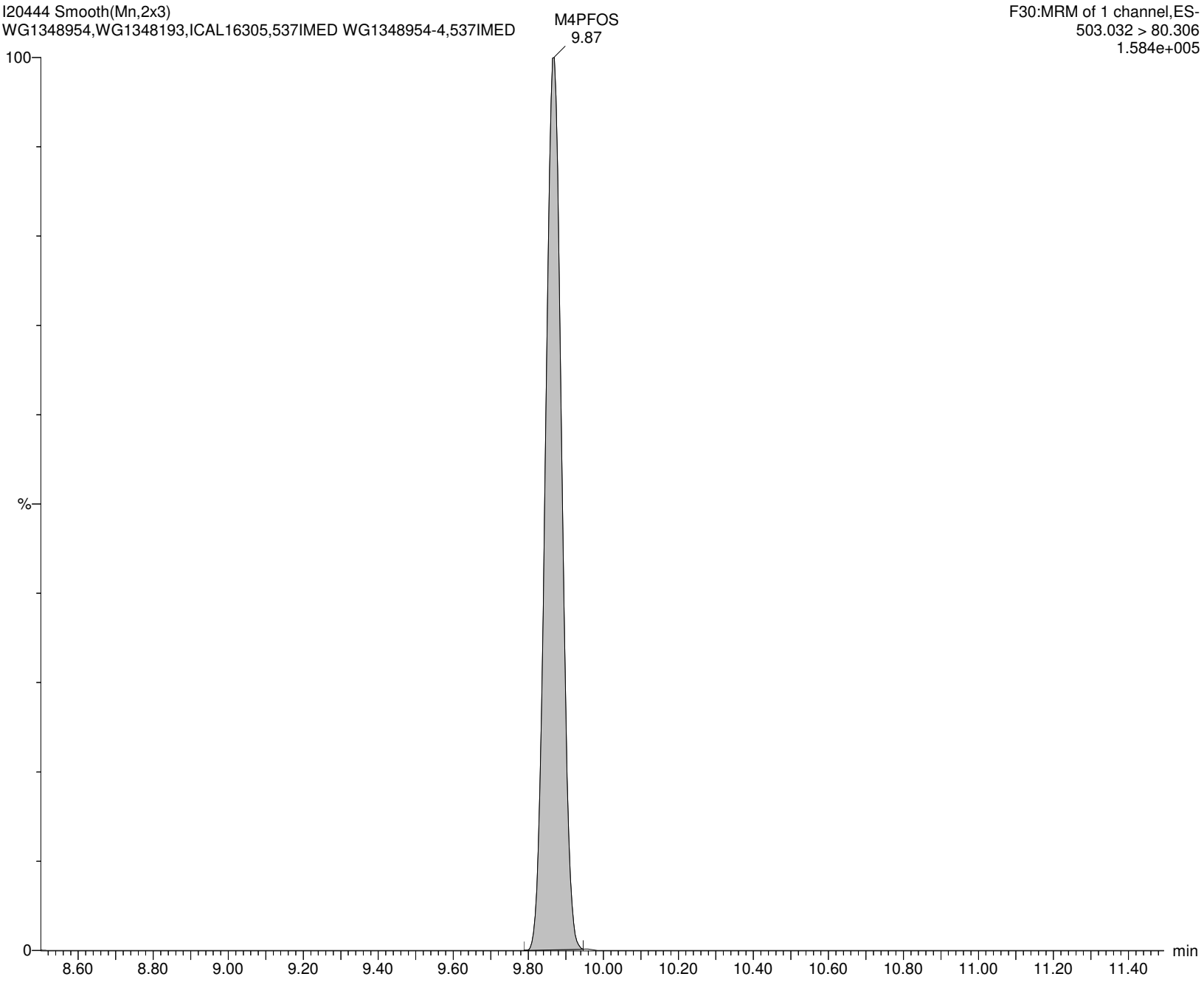



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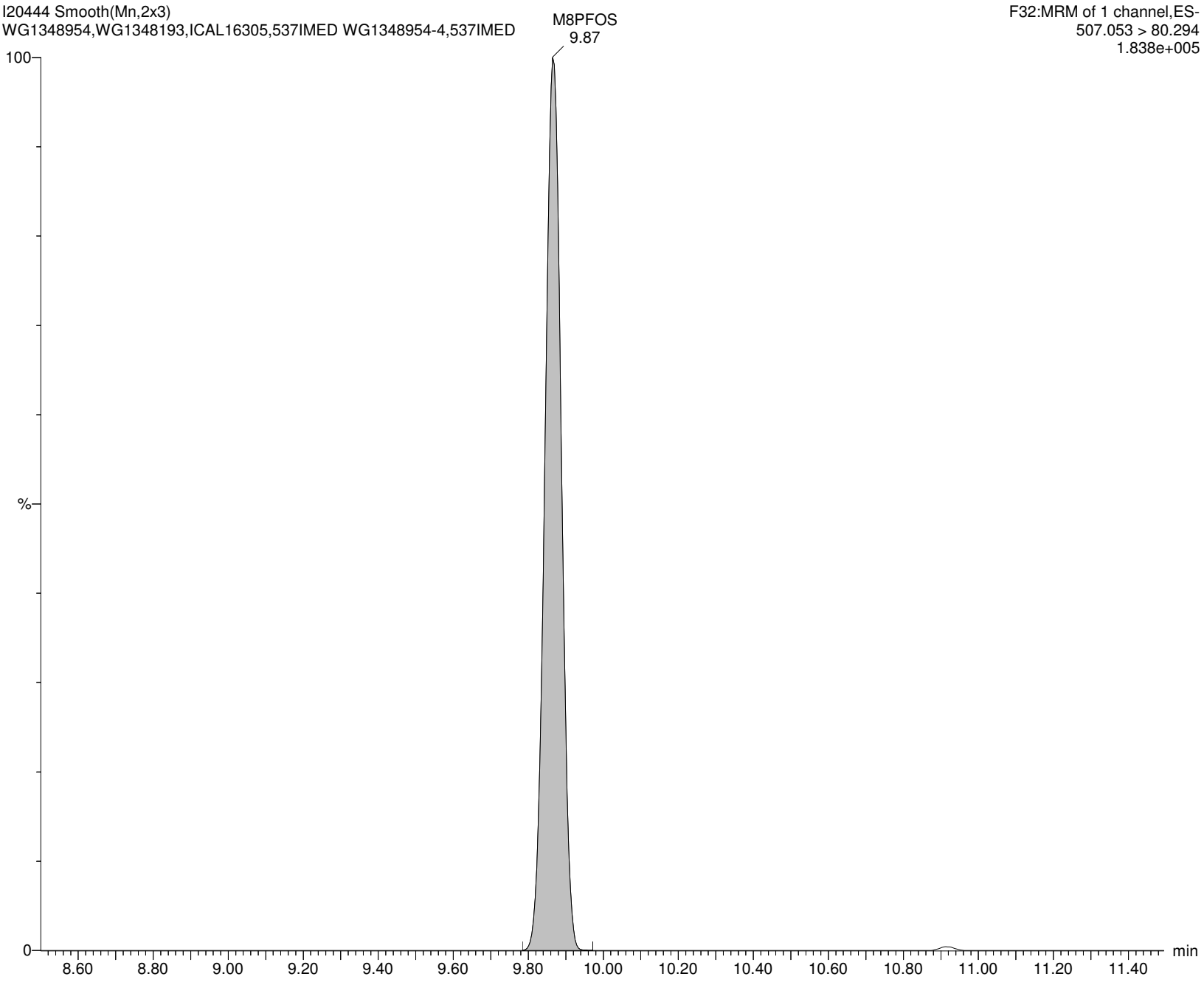



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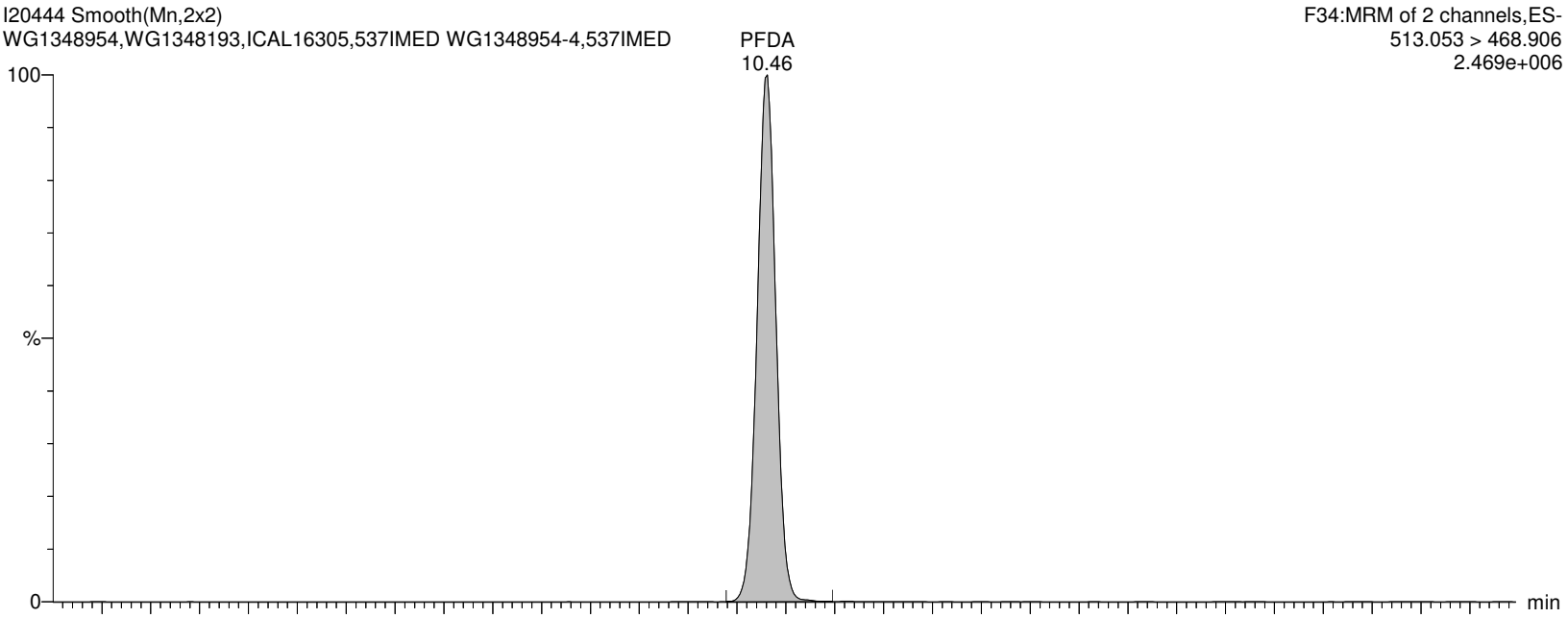


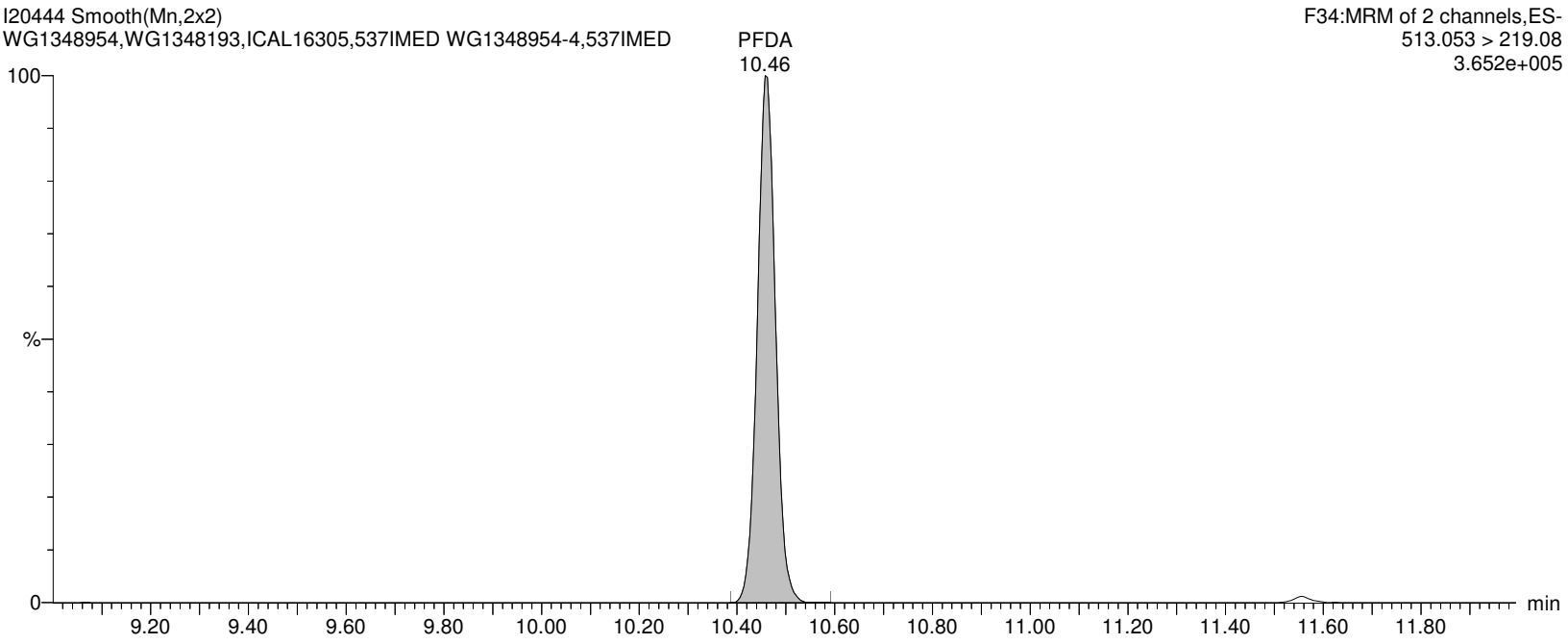



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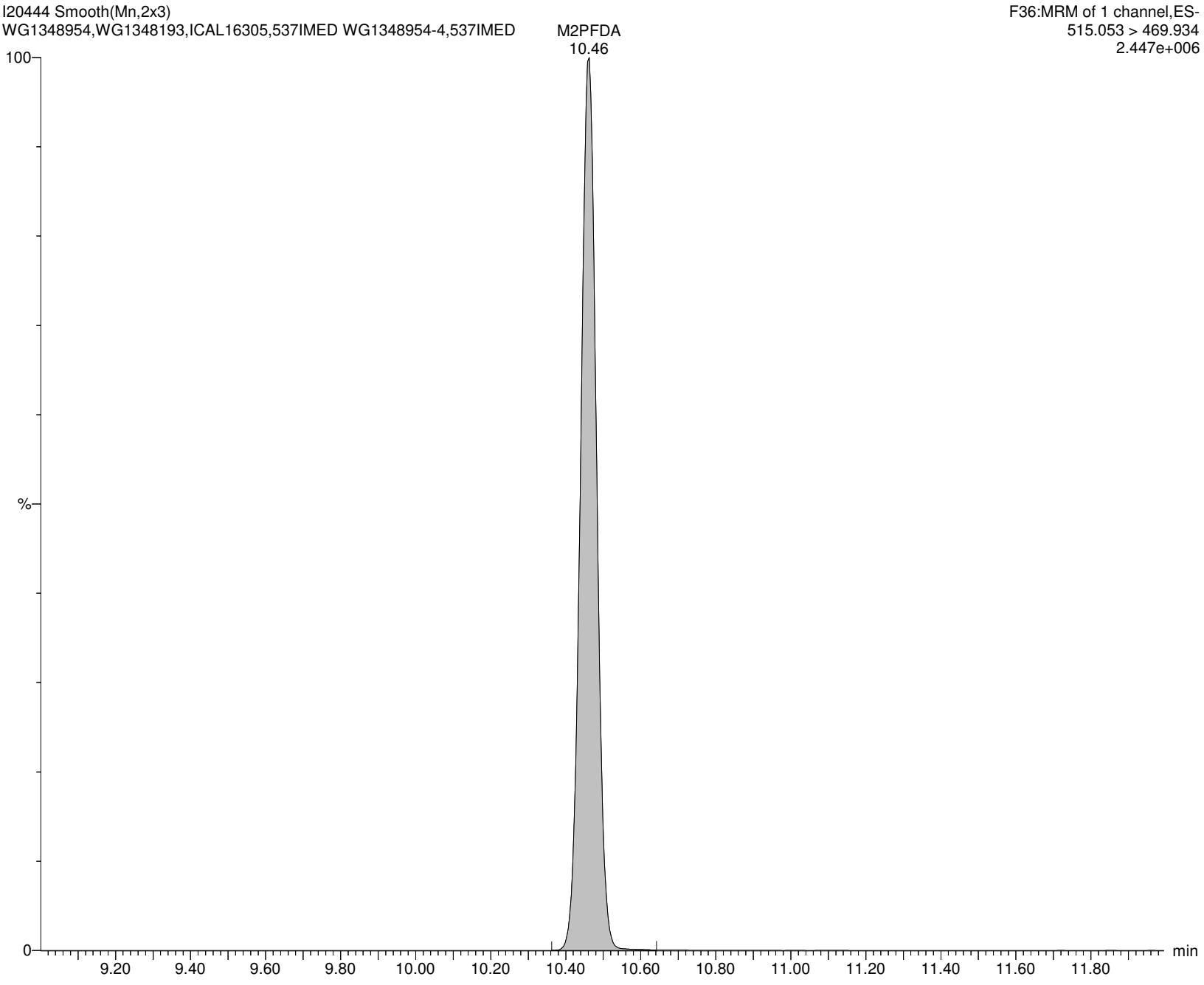
**M2PFDA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2020\200309_537ISO.PRO\Data\WG1348954C.qld
Last Altered: Wednesday, March 11, 2020 21:10:58 Eastern Daylight Time
Printed: Thursday, March 12, 2020 03:36:37 Eastern Daylight Time

**Name: I20444**
**ID: WG1348954-4,537IMED**
**Date: 10-Mar-2020**
**Time: 23:50:12**
**Description: WG1348954,WG1348193,ICAL16305,537IMED**
**User: LCMS02:RS**
**Vial: 1:A,3**
**Instrument: XEVO-TQSmicro#QEB0050**
**Inlet Method Name: C:\MassLynx\Data\2020\200309_537ISO.PRO\ACQUDB\LCMS_537_ISO_B**
**Tune Method Name: C:\MassLynx\Data\2020\200309_537ISO.PRO\ACQUDB\181009_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\2020\200309_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

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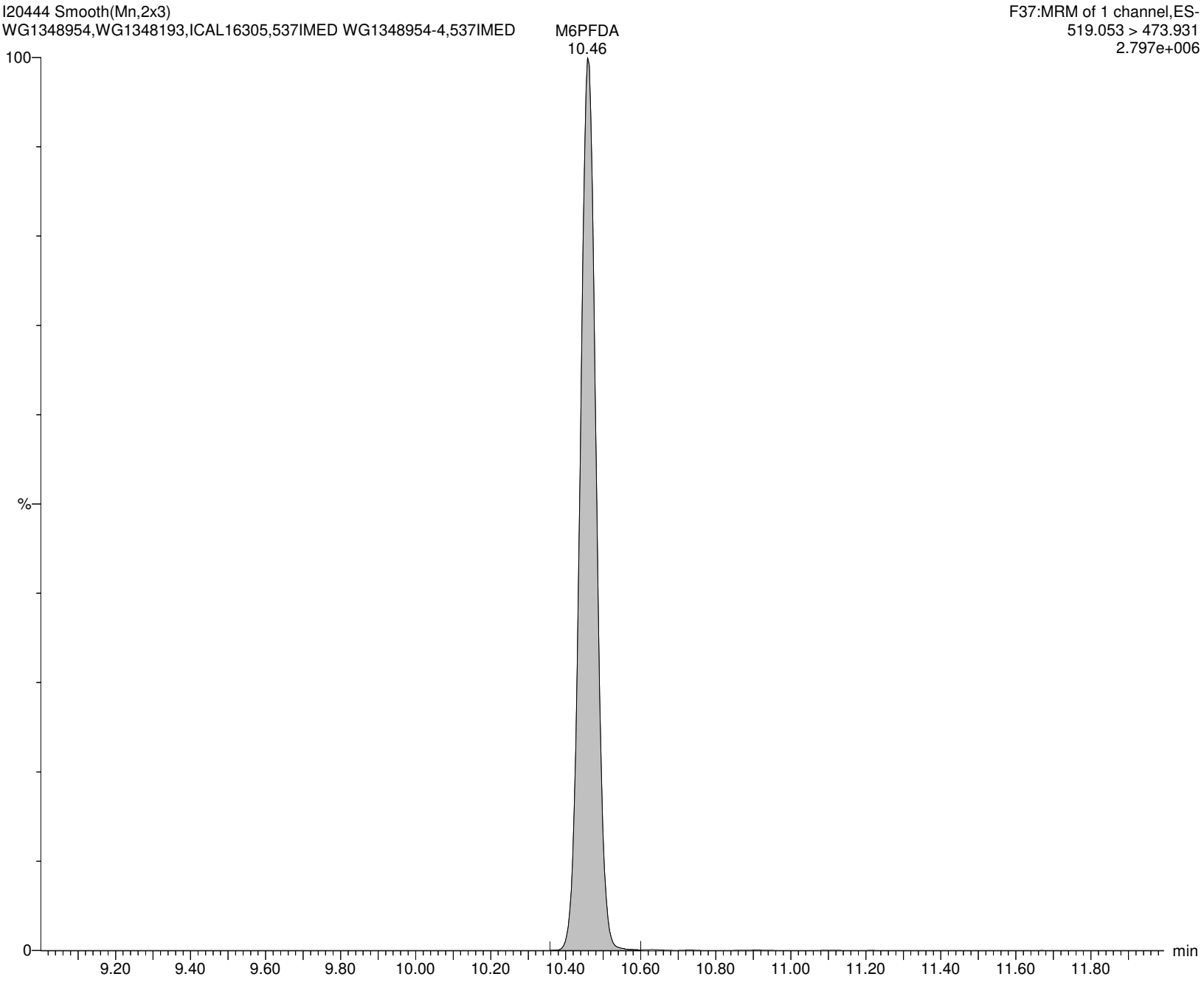



all concentration units in (ng/mL)

Alpha Analytical Inc.
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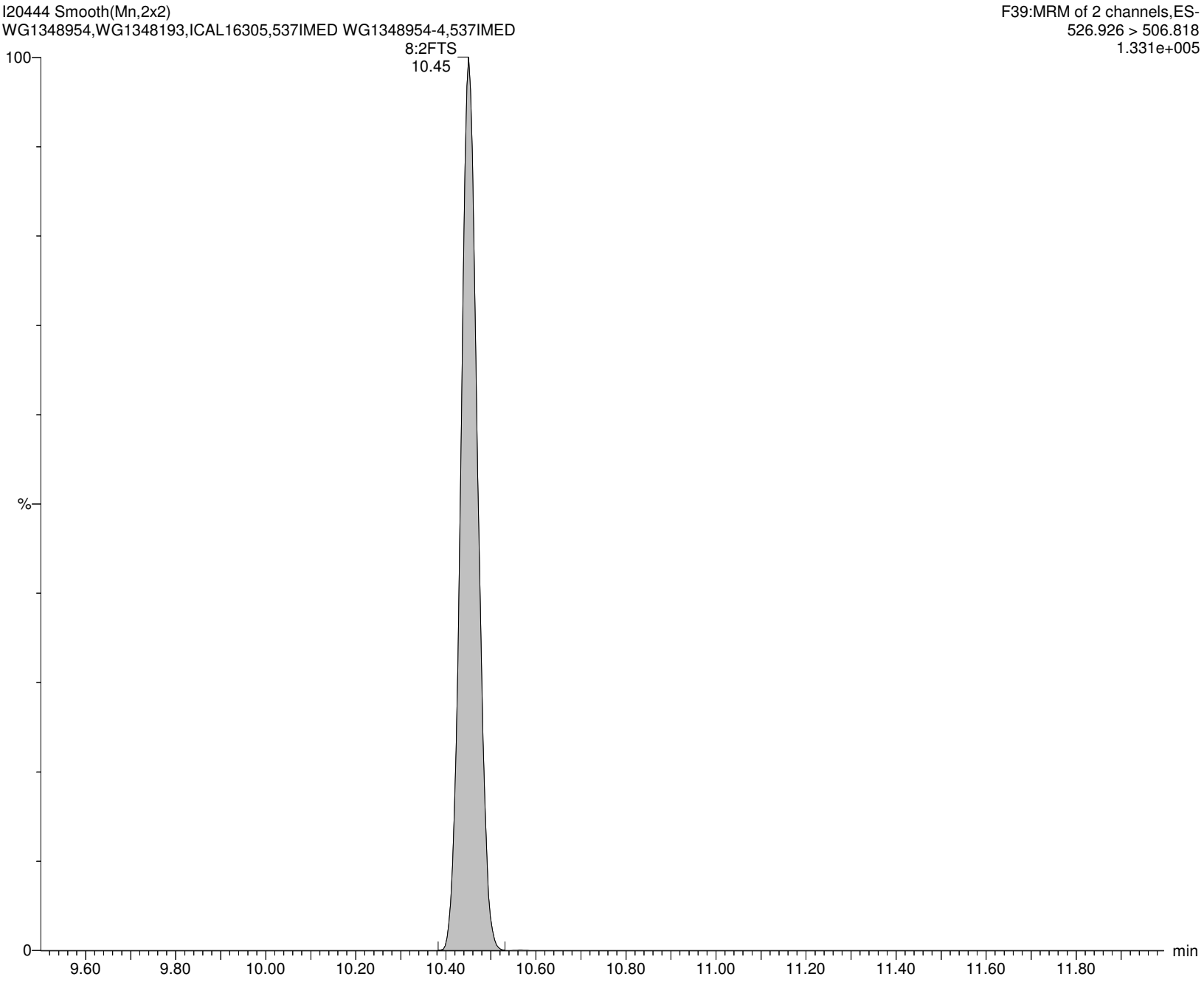
**MS Method Name: C:\MassLynx\Data\2020\200309_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**8:2FTS**





all concentration units in (ng/mL)

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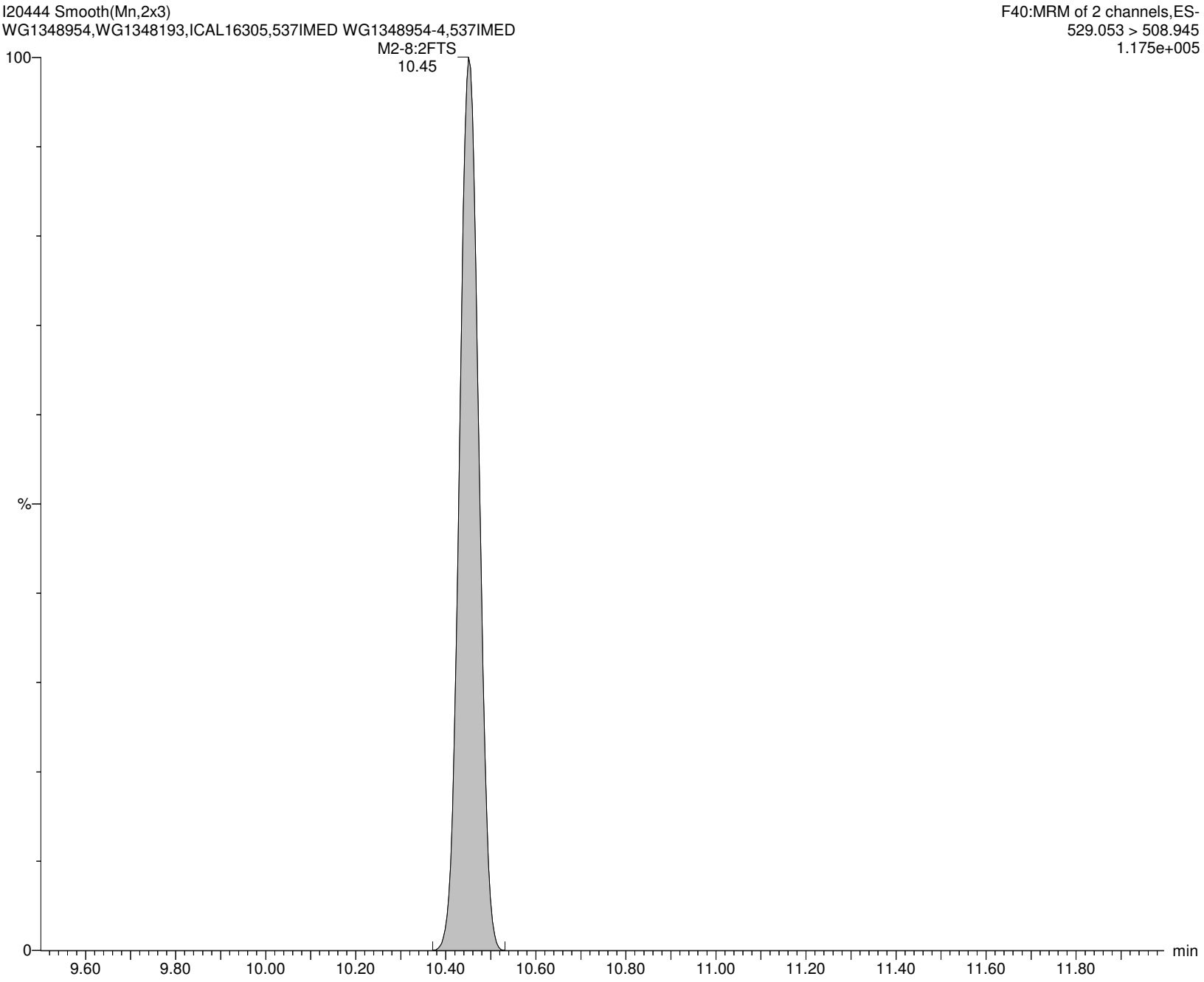
**M2-8:2FTS**





all concentration units in (ng/mL)

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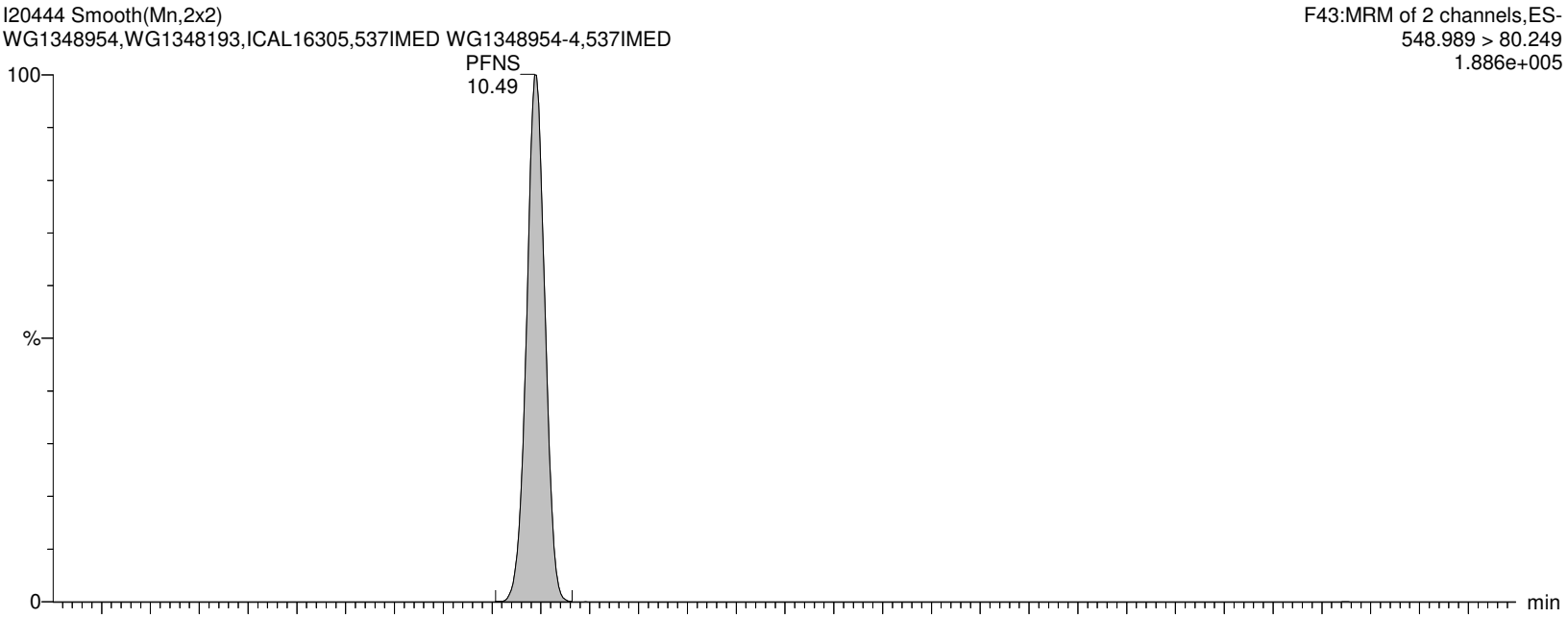
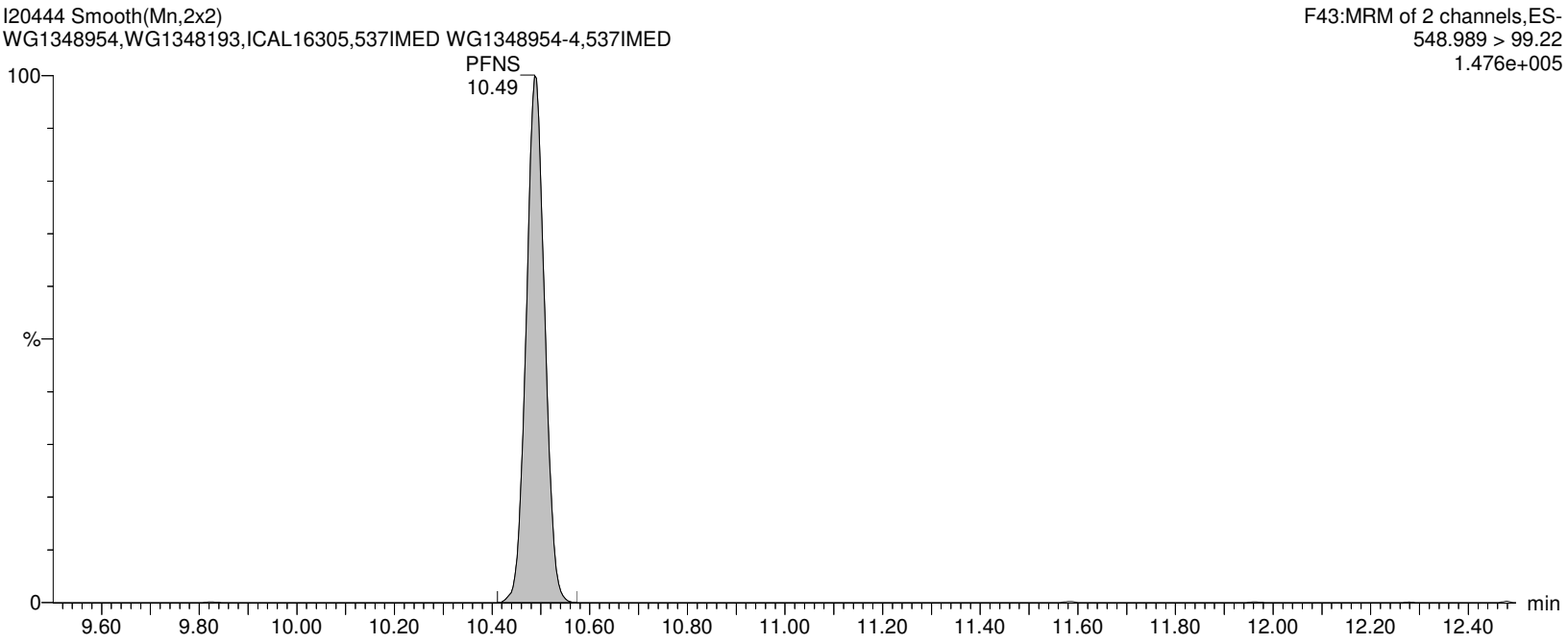
**PFNS**





all concentration units in (ng/mL)

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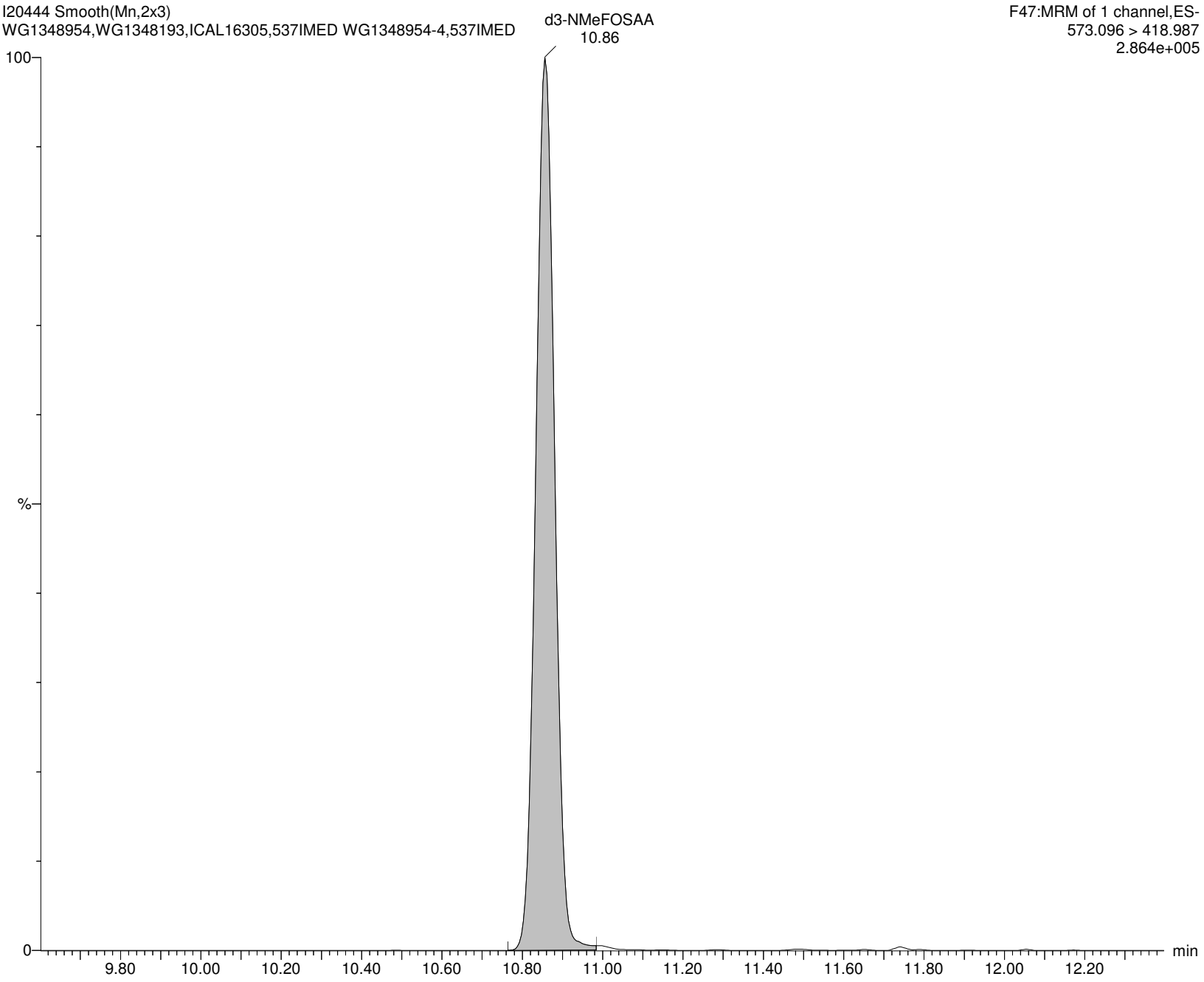
**d3-NMeFOSAA**





all concentration units in (ng/mL)

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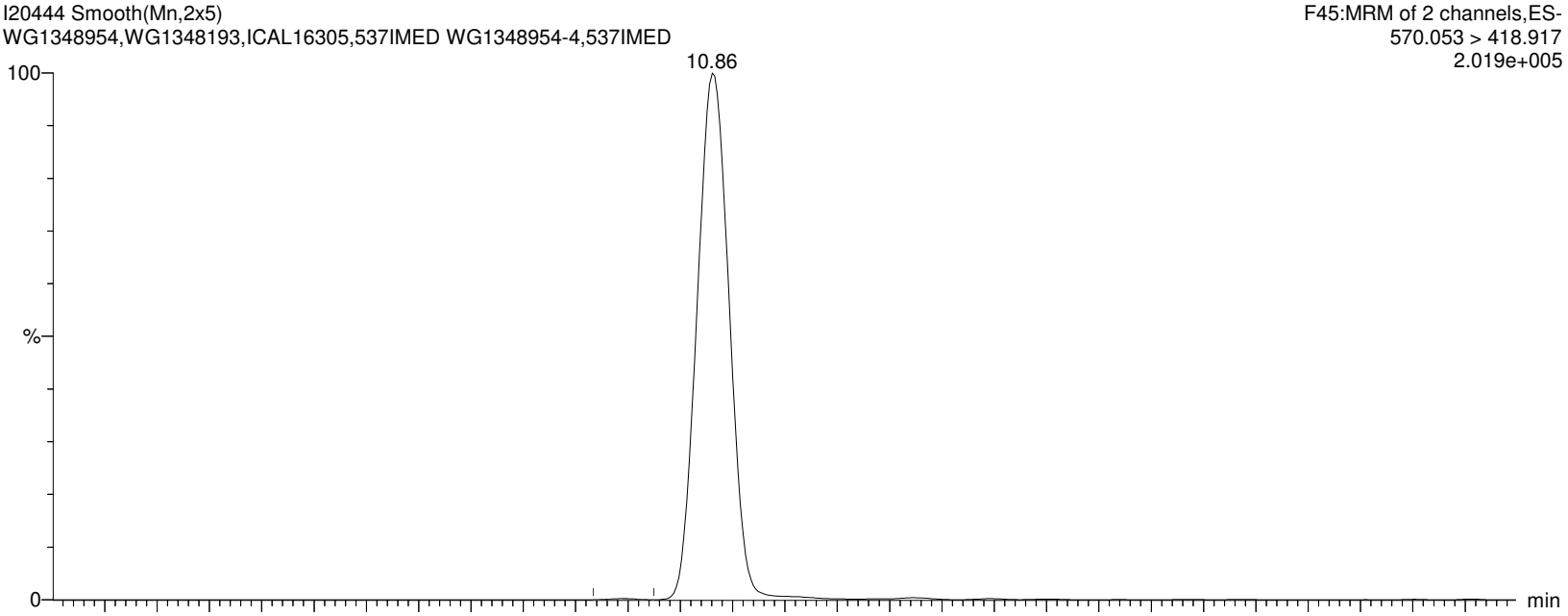
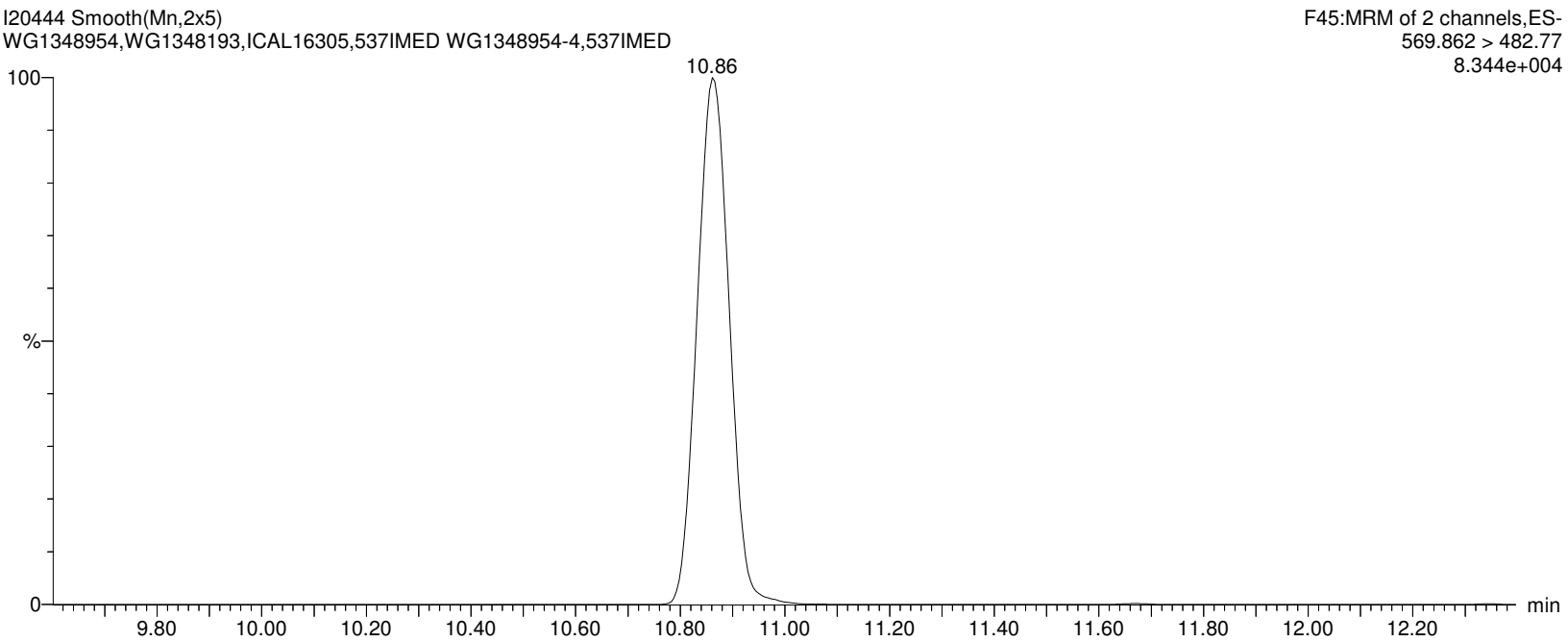
**br-NMeFOSAA**





all concentration units in (ng/mL)

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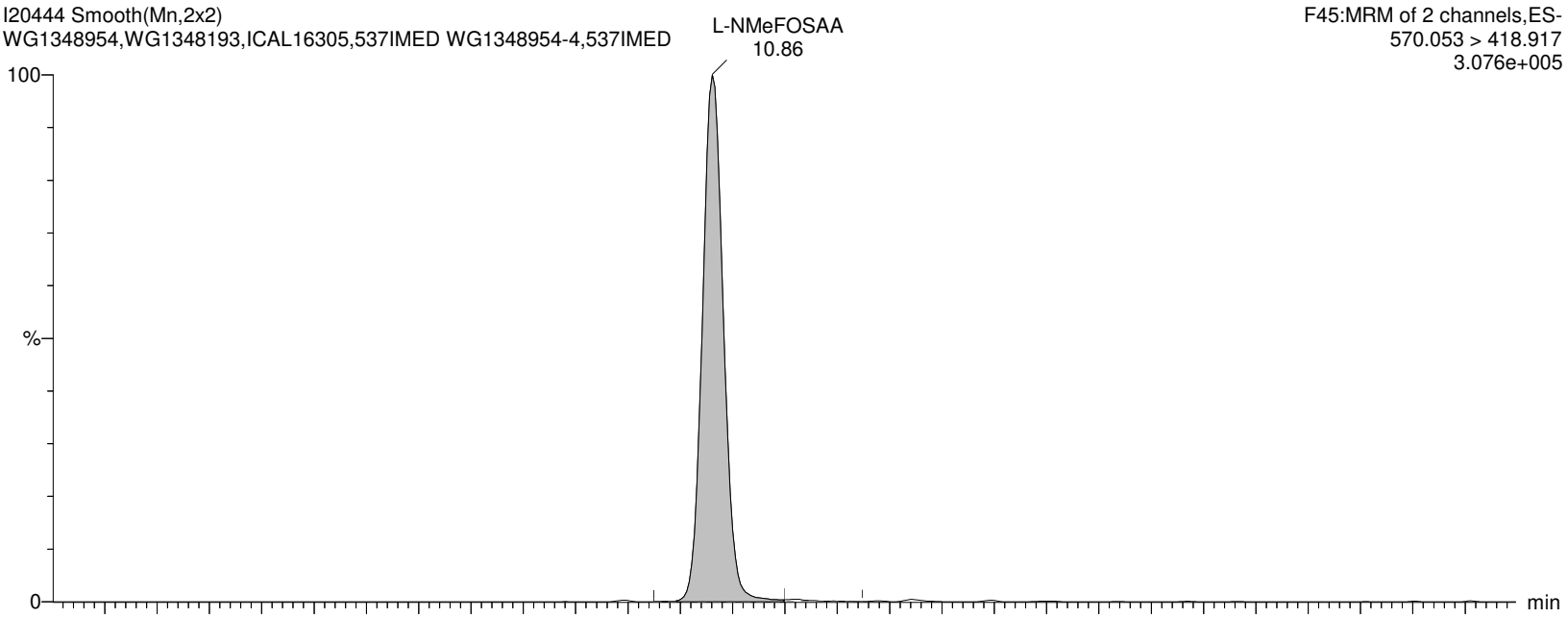
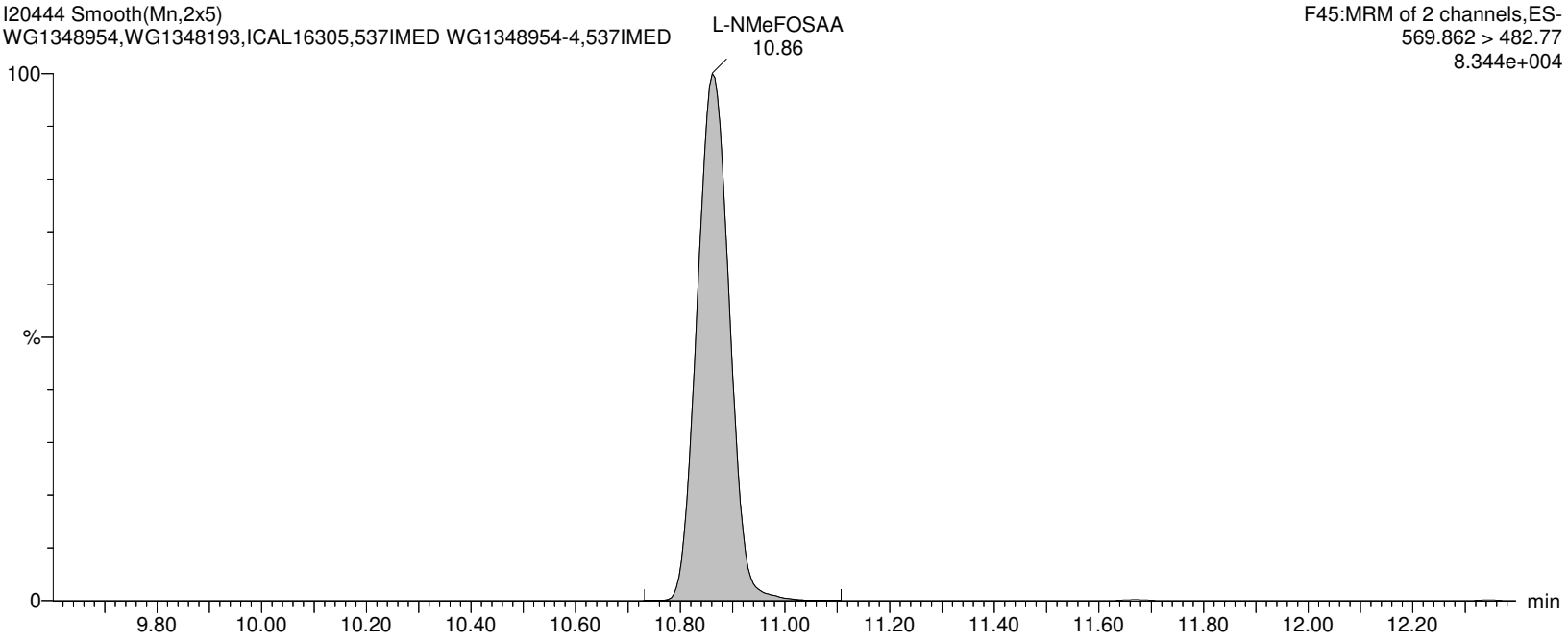
**MS Method Name: C:\MassLynx\Data\2020\200309_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**L-NMeFOSAA**





all concentration units in (ng/mL)

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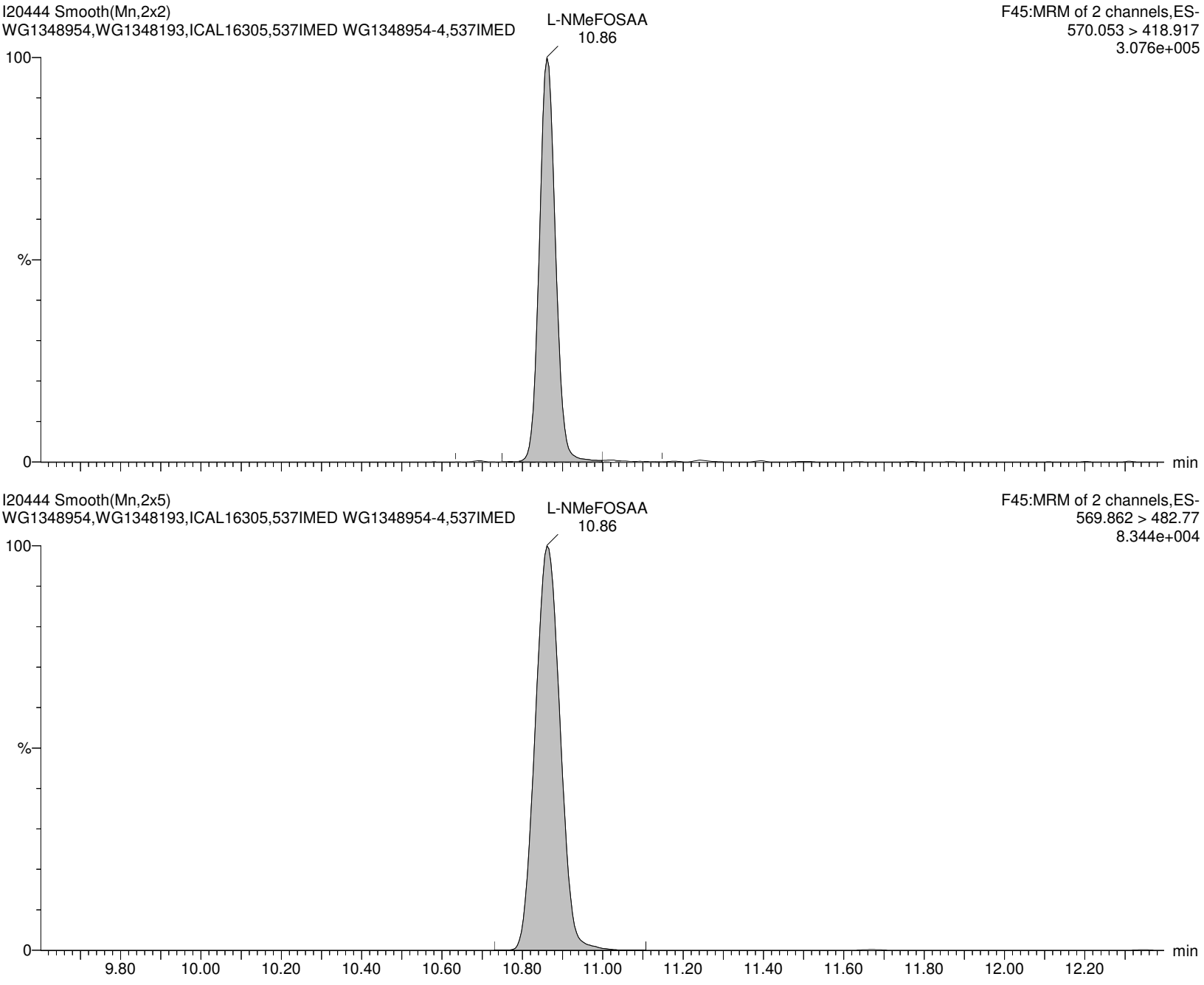
**NMeFOSAA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2020\200309_537ISO.PRO\Data\WG1348954C.qld
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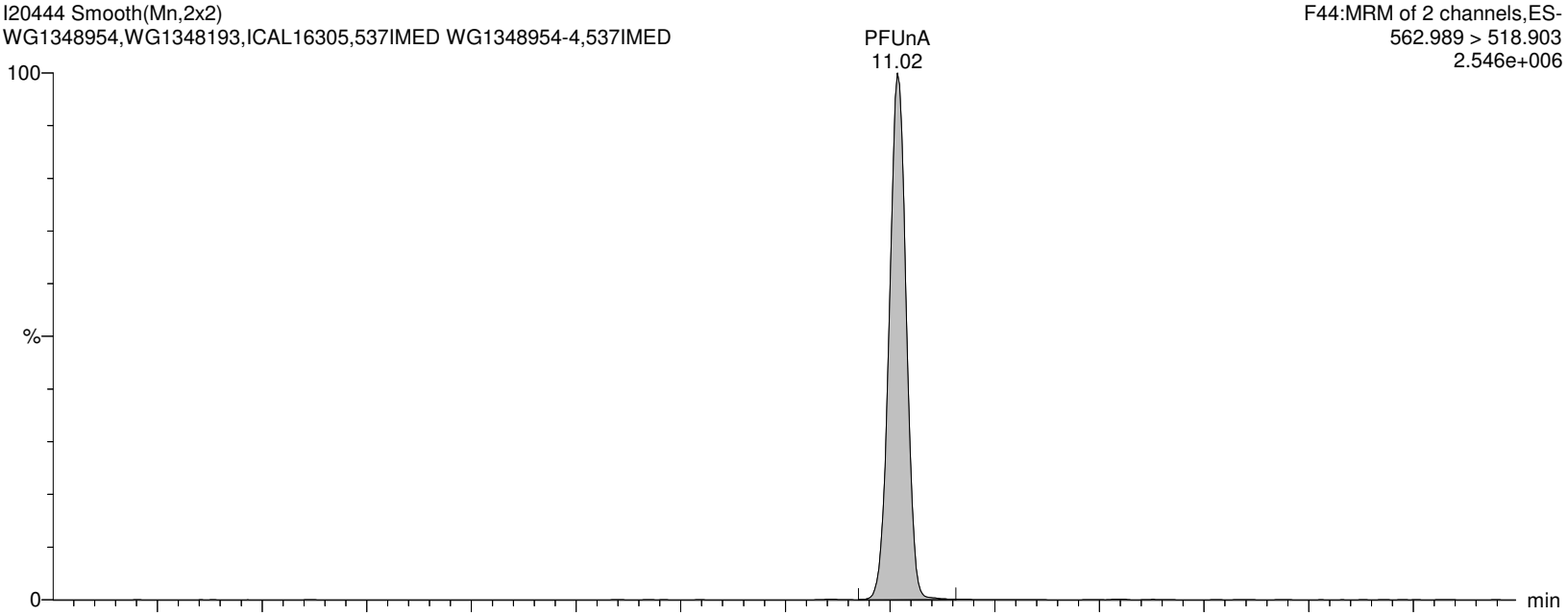
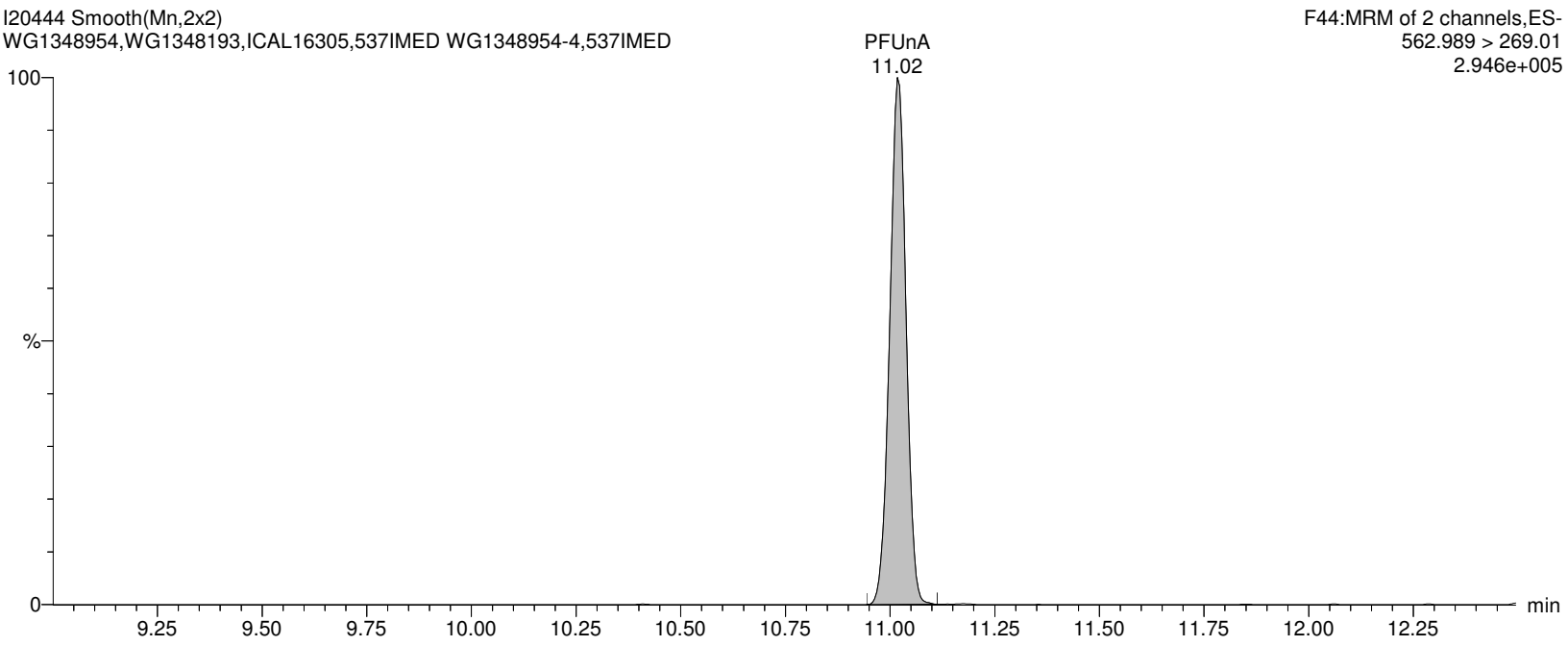
**PFUnA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2020\200309_537ISO.PRO\Data\WG1348954C.qld
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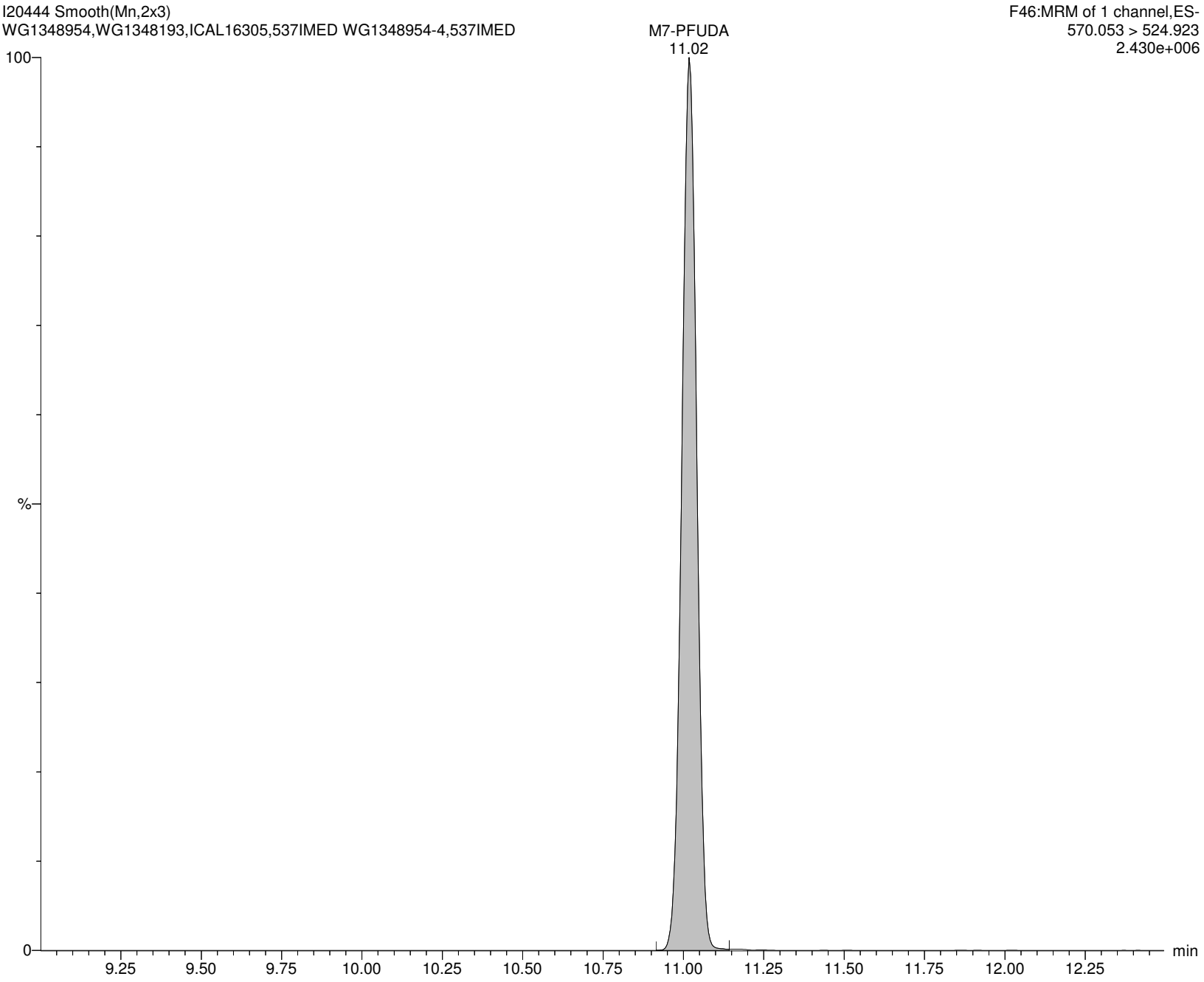
**M7-PFUDA**





all concentration units in (ng/mL)

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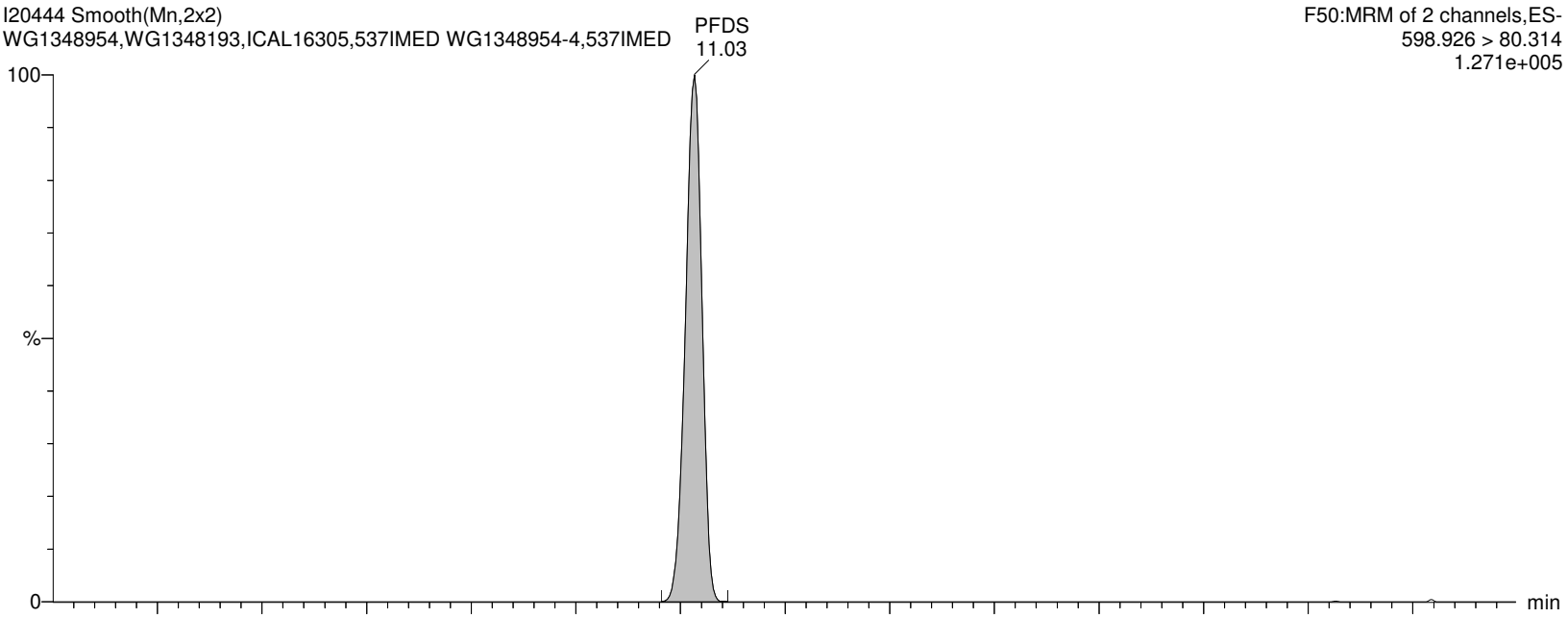
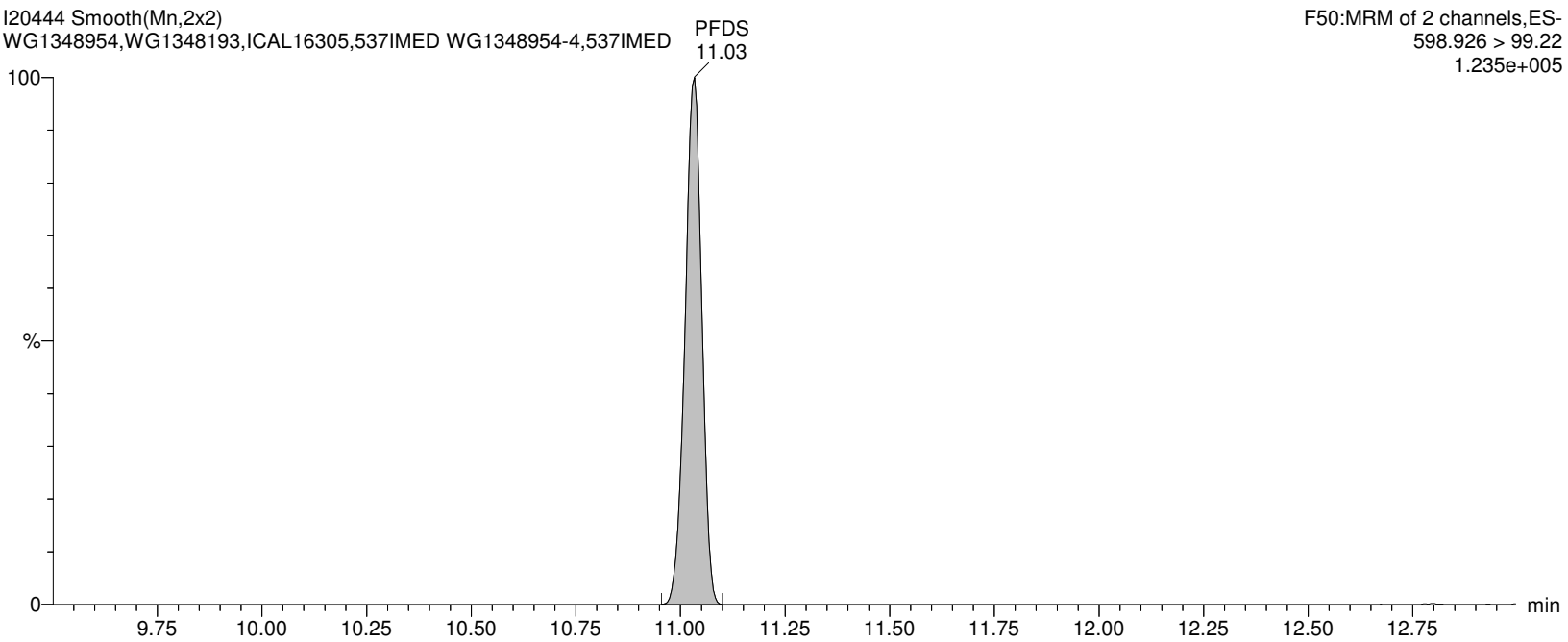
**PFDS**





all concentration units in (ng/mL)

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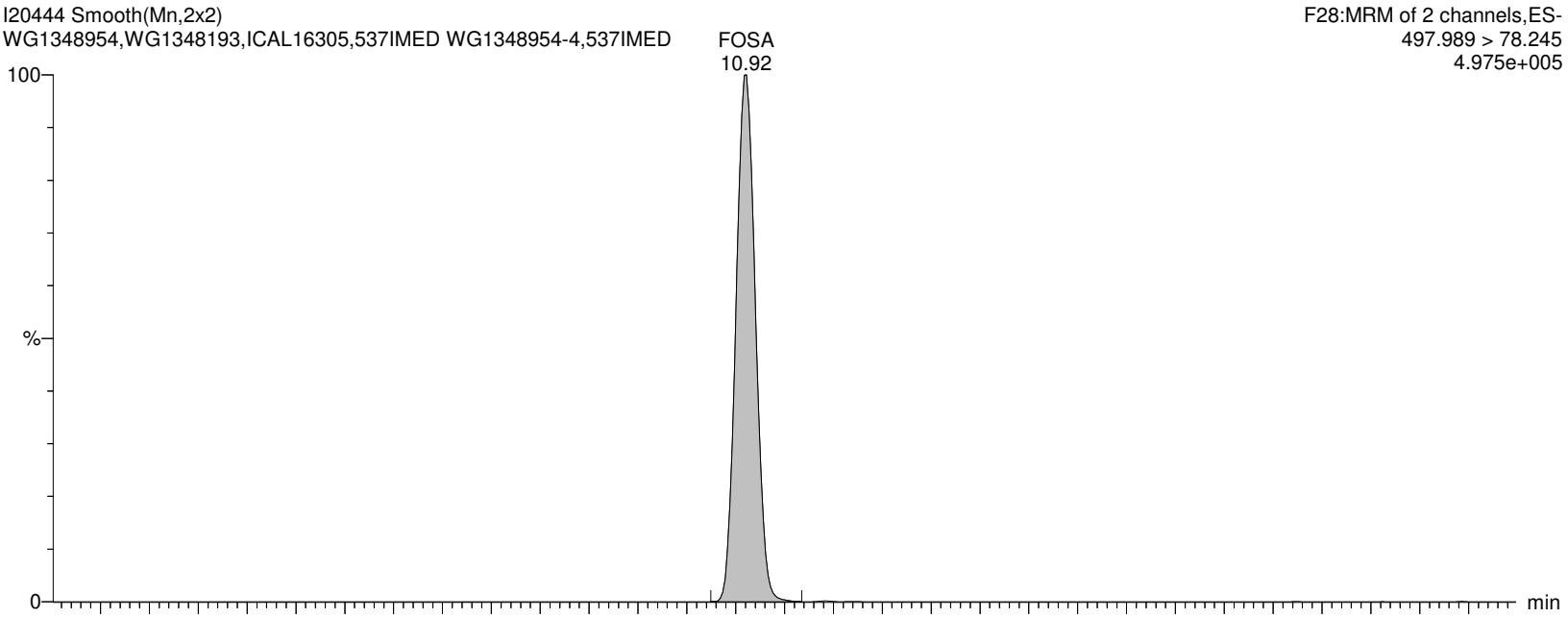
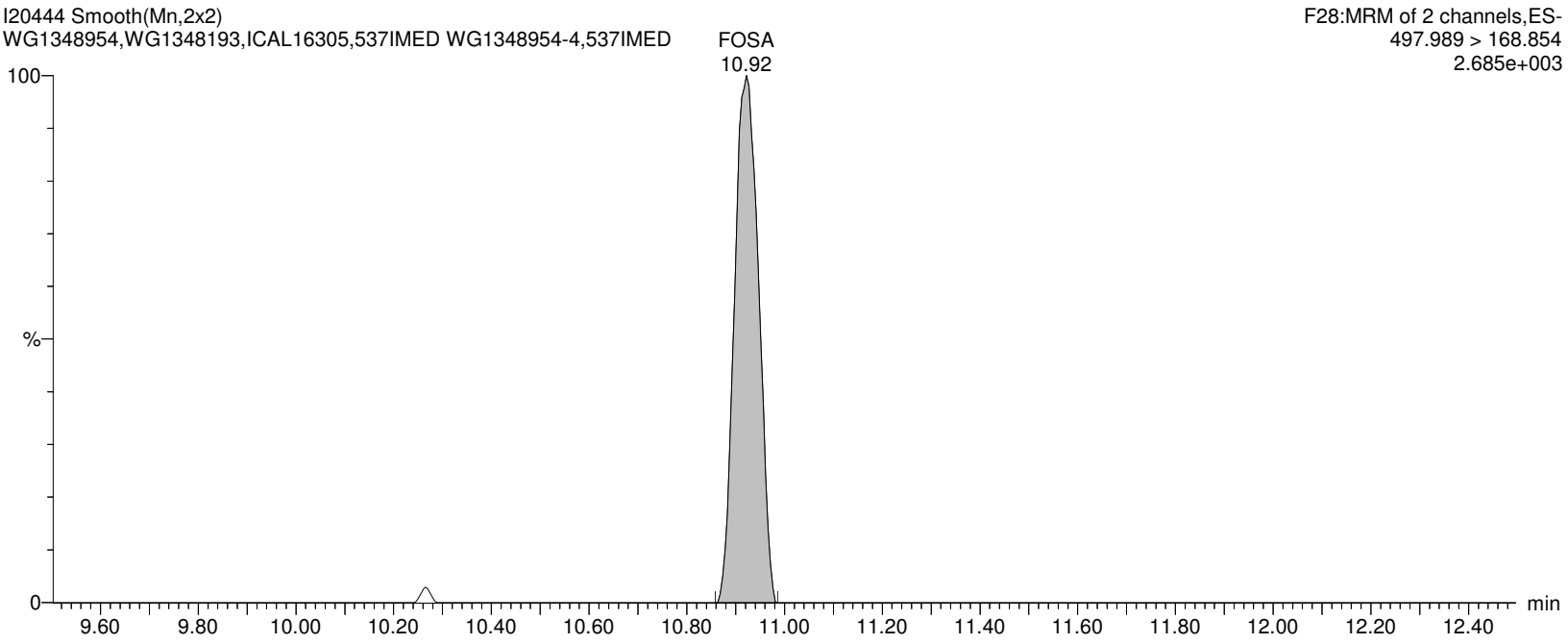
**FOSA**





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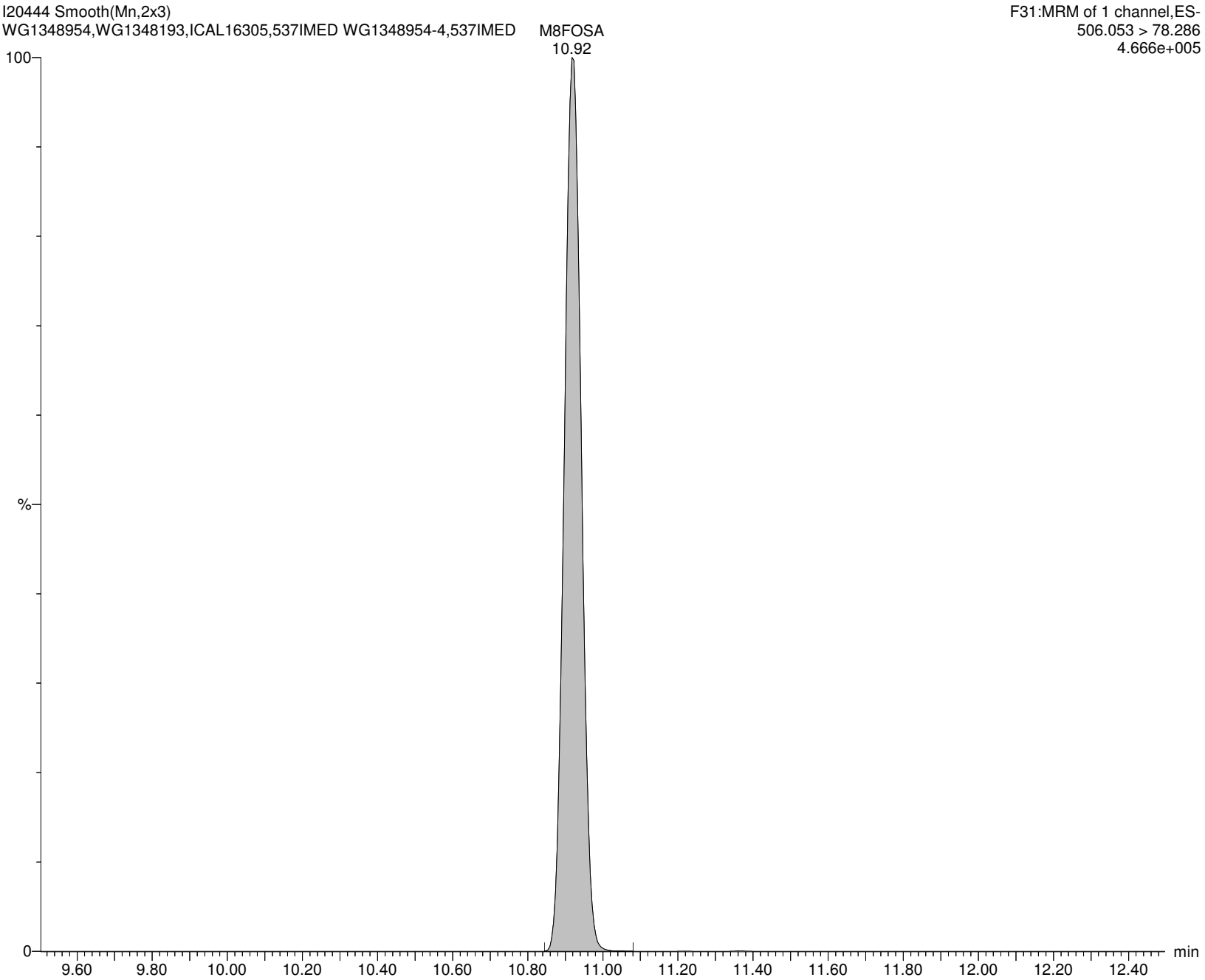
**M8FOSA**





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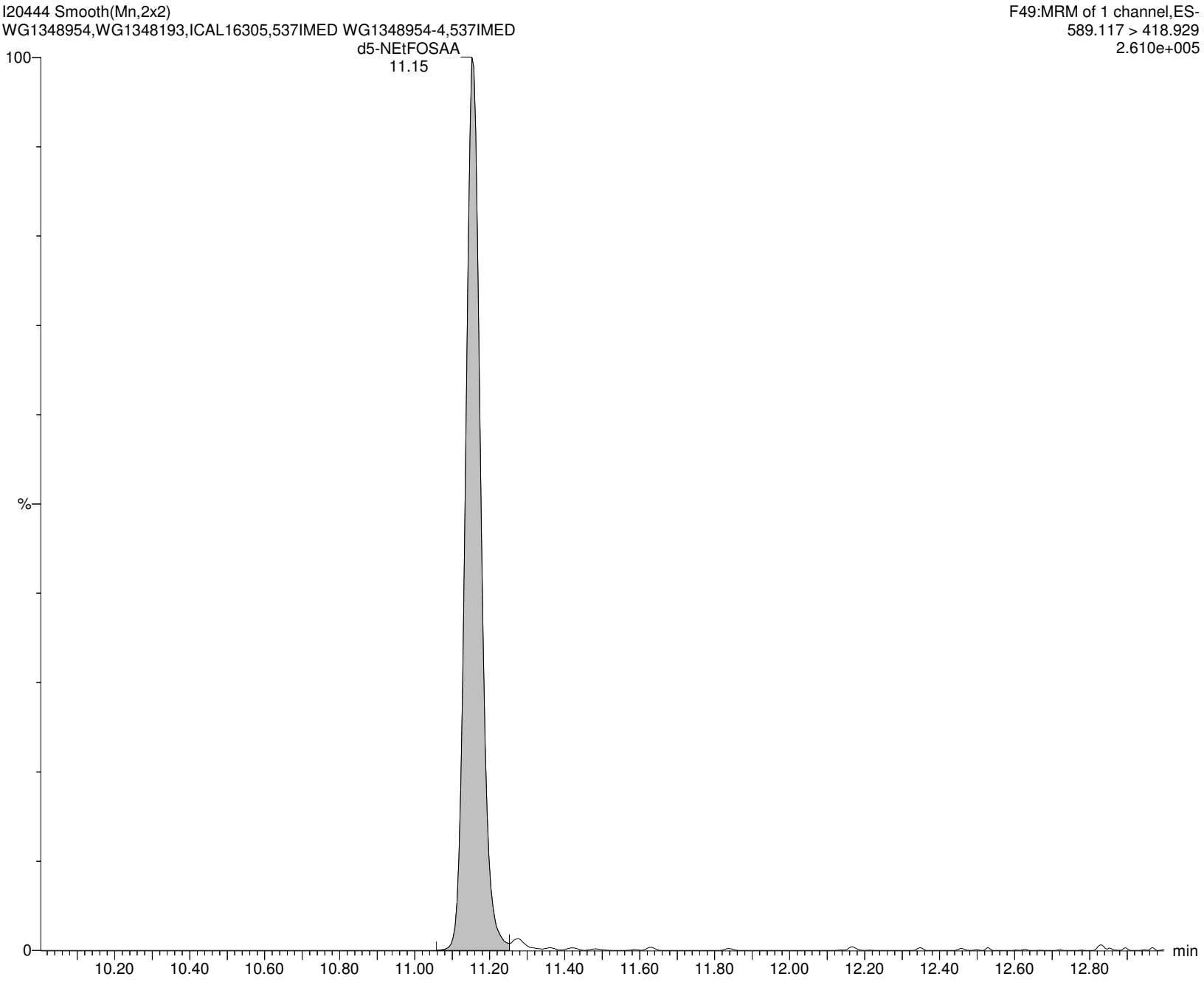
**d5-NEtFOSAA**





all concentration units in (ng/mL)

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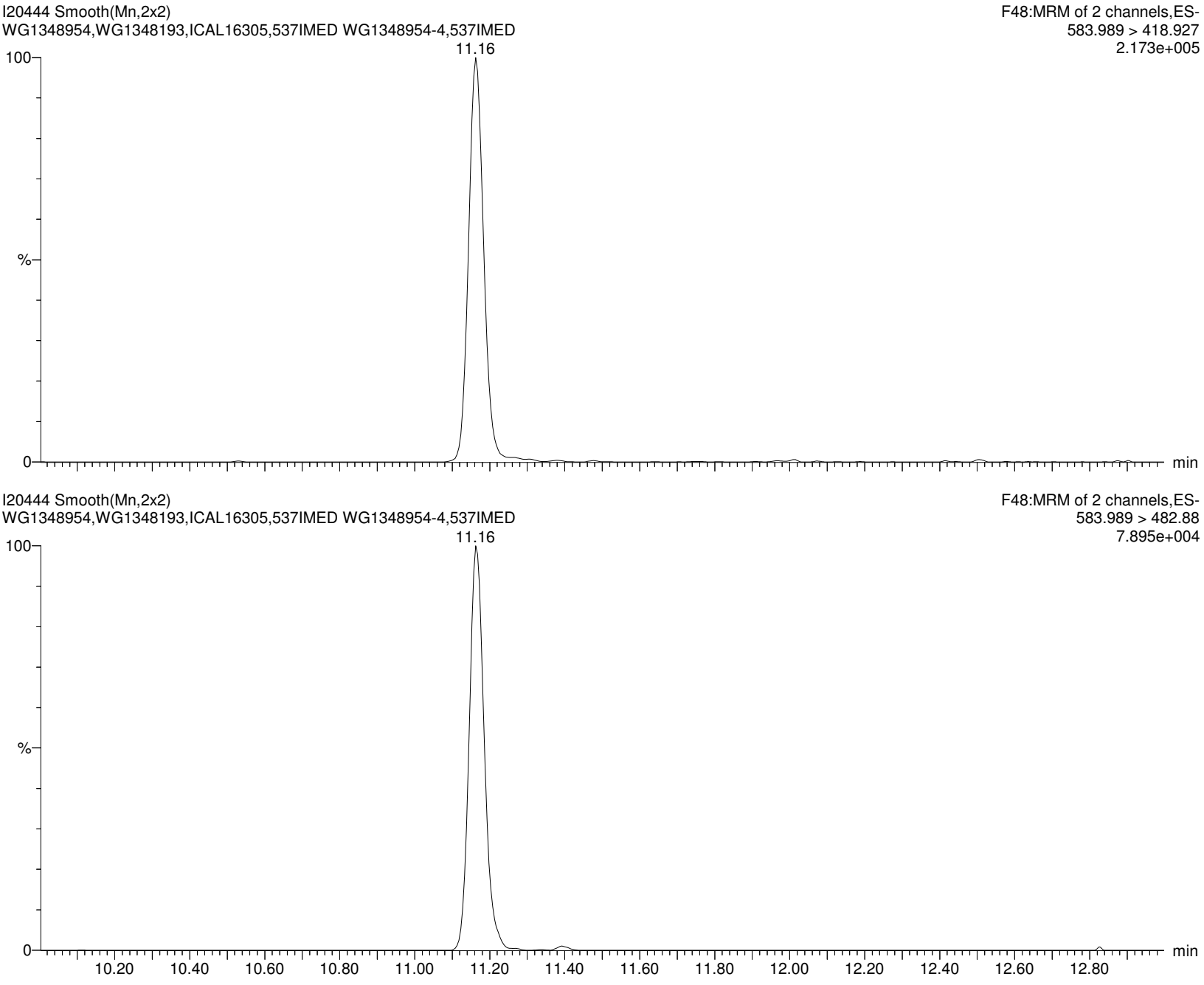
**MS Method Name: C:\MassLynx\Data\2020\200309_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**br-NEtFOSAA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2020\200309_537ISO.PRO\Data\WG1348954C.qld
Last Altered: Wednesday, March 11, 2020 21:10:58 Eastern Daylight Time
Printed: Thursday, March 12, 2020 03:36:37 Eastern Daylight Time

**Name: I20444**
**ID: WG1348954-4,537IMED**
**Date: 10-Mar-2020**
**Time: 23:50:12**
**Description: WG1348954,WG1348193,ICAL16305,537IMED**
**User: LCMS02:RS**
**Vial: 1:A,3**
**Instrument: XEVO-TQSmicro#QEB0050**
**Inlet Method Name: C:\MassLynx\Data\2020\200309_537ISO.PRO\ACQUDB\LCMS_537_ISO_B**
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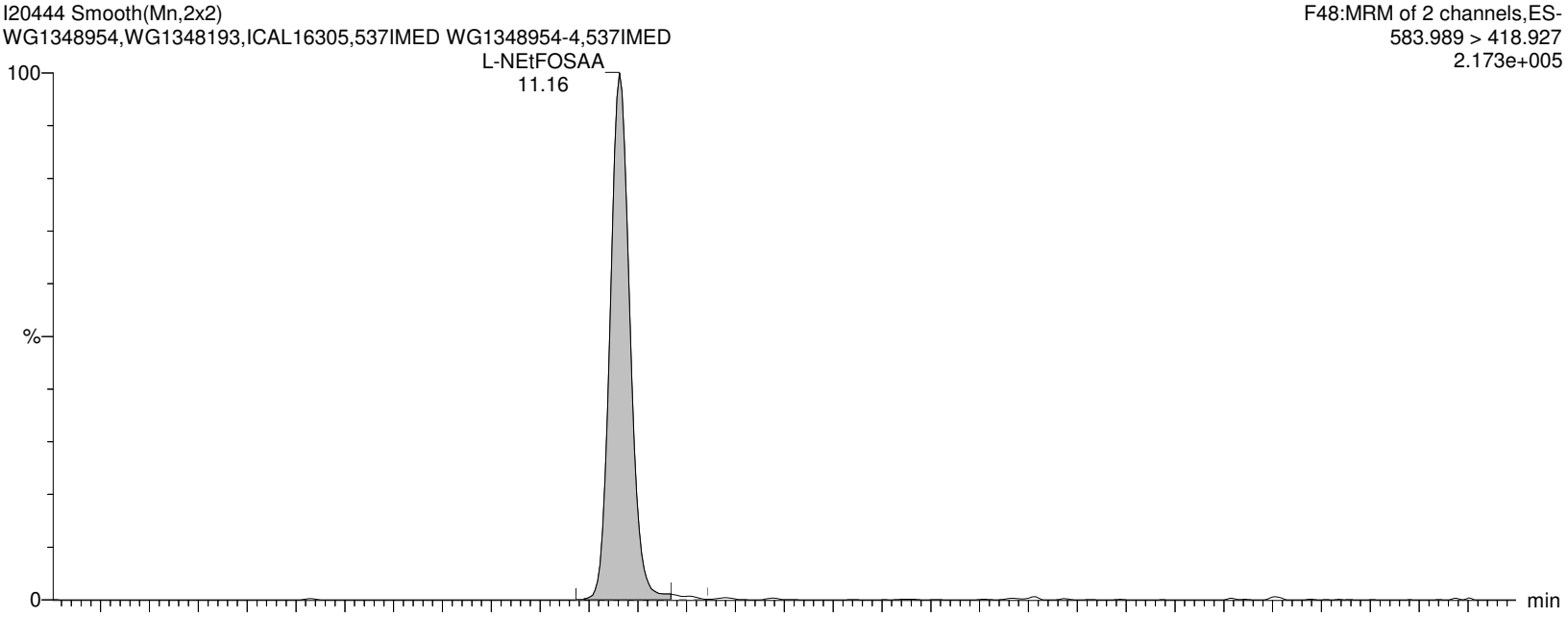


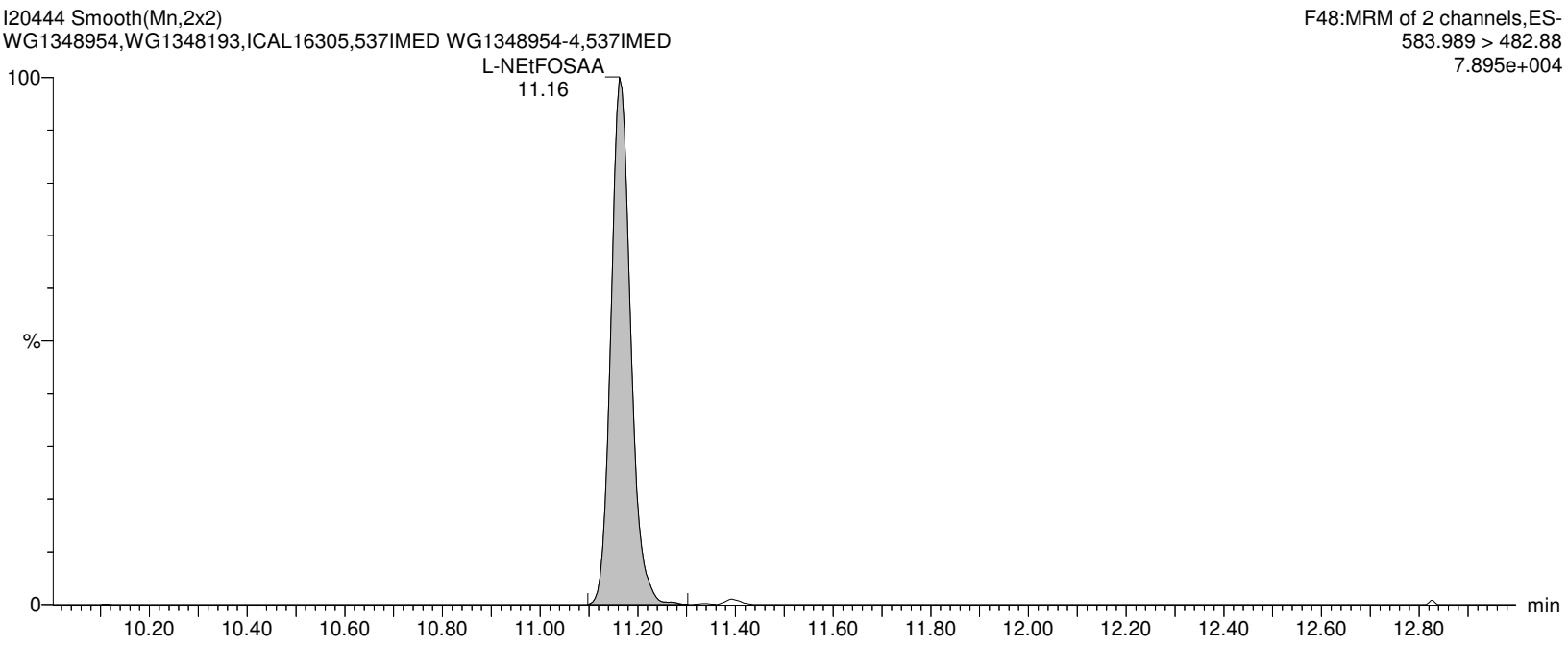



all concentration units in (ng/mL)

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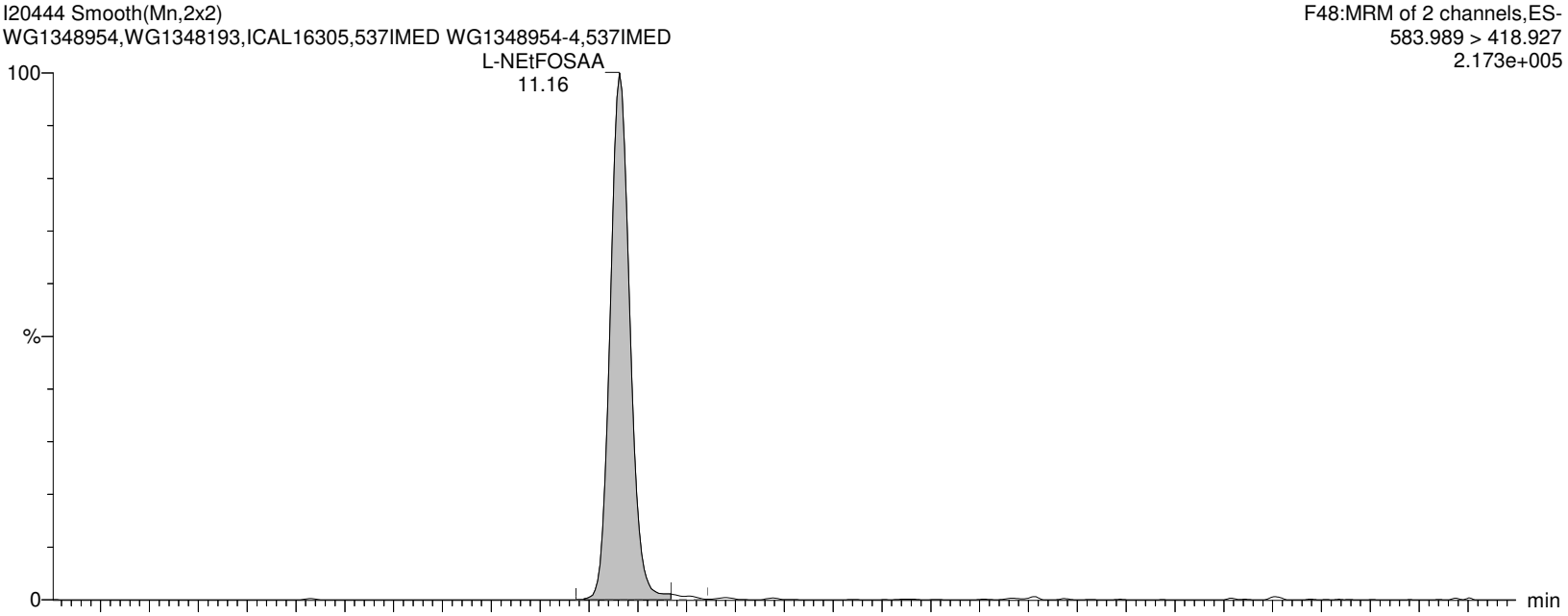


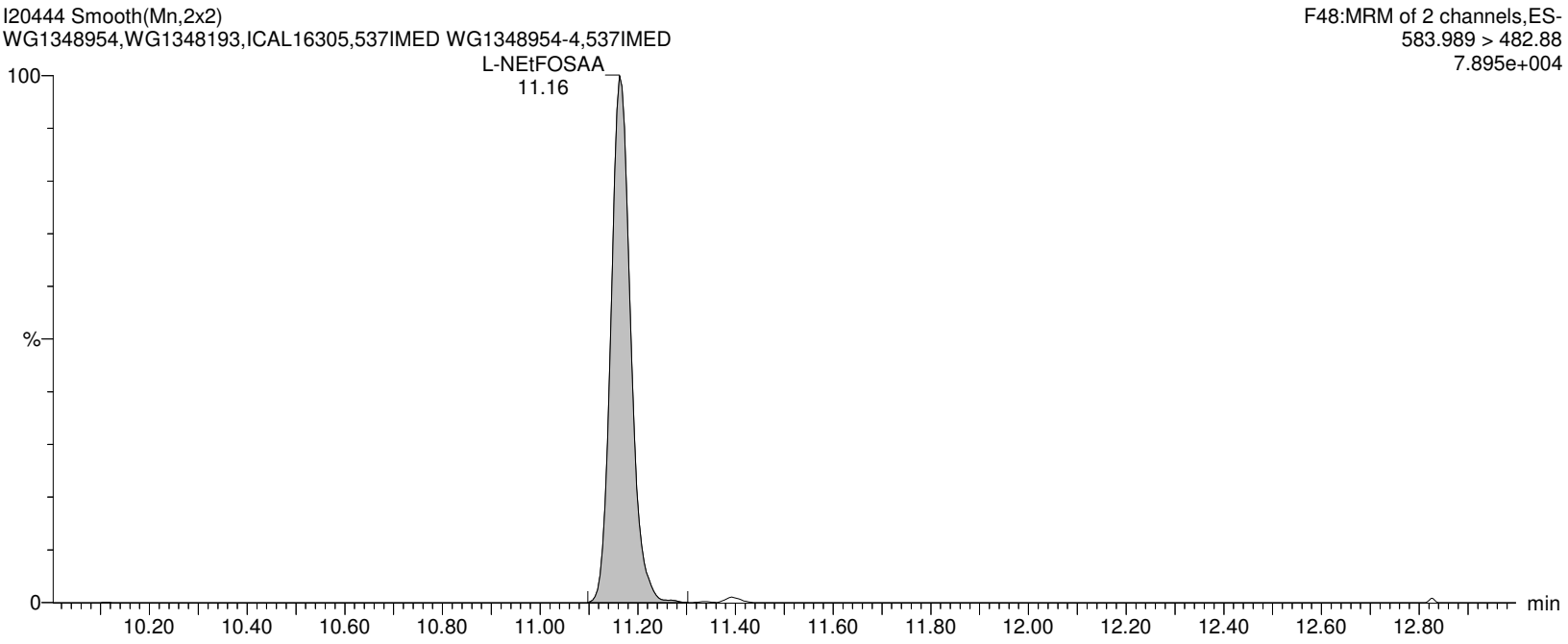



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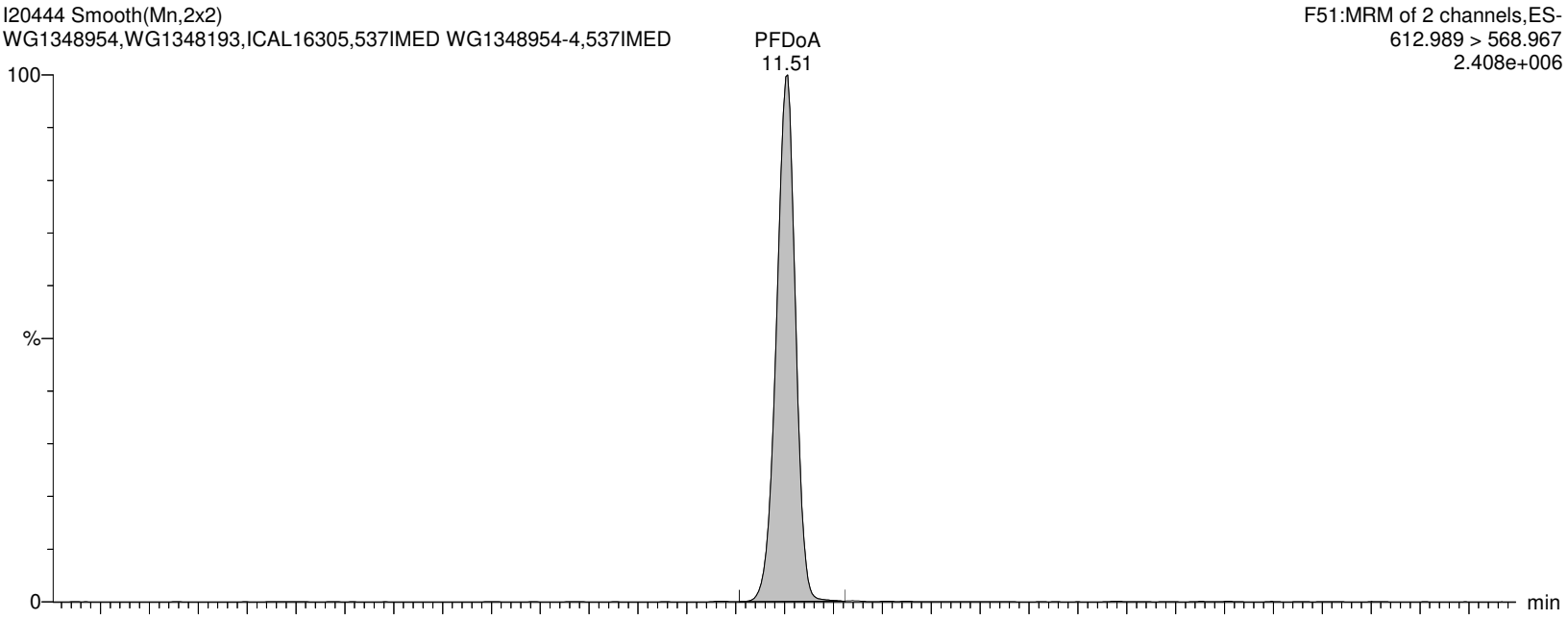


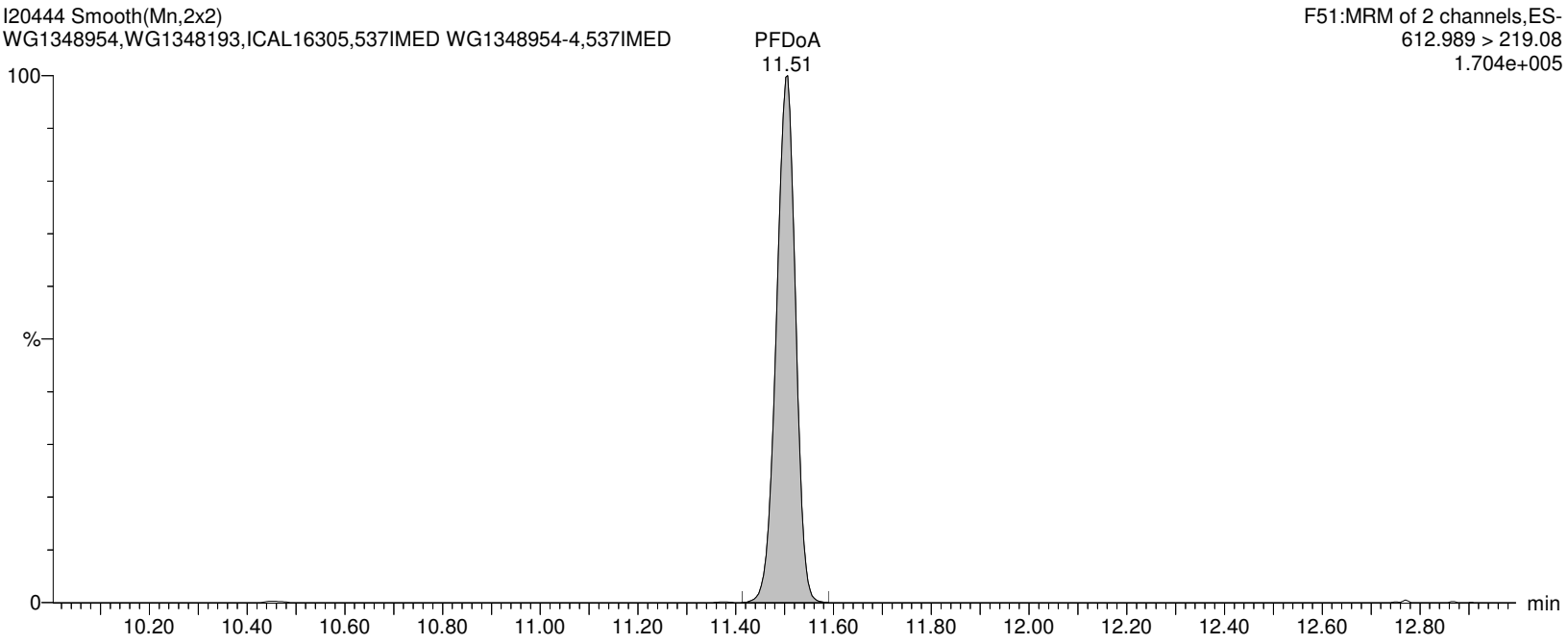



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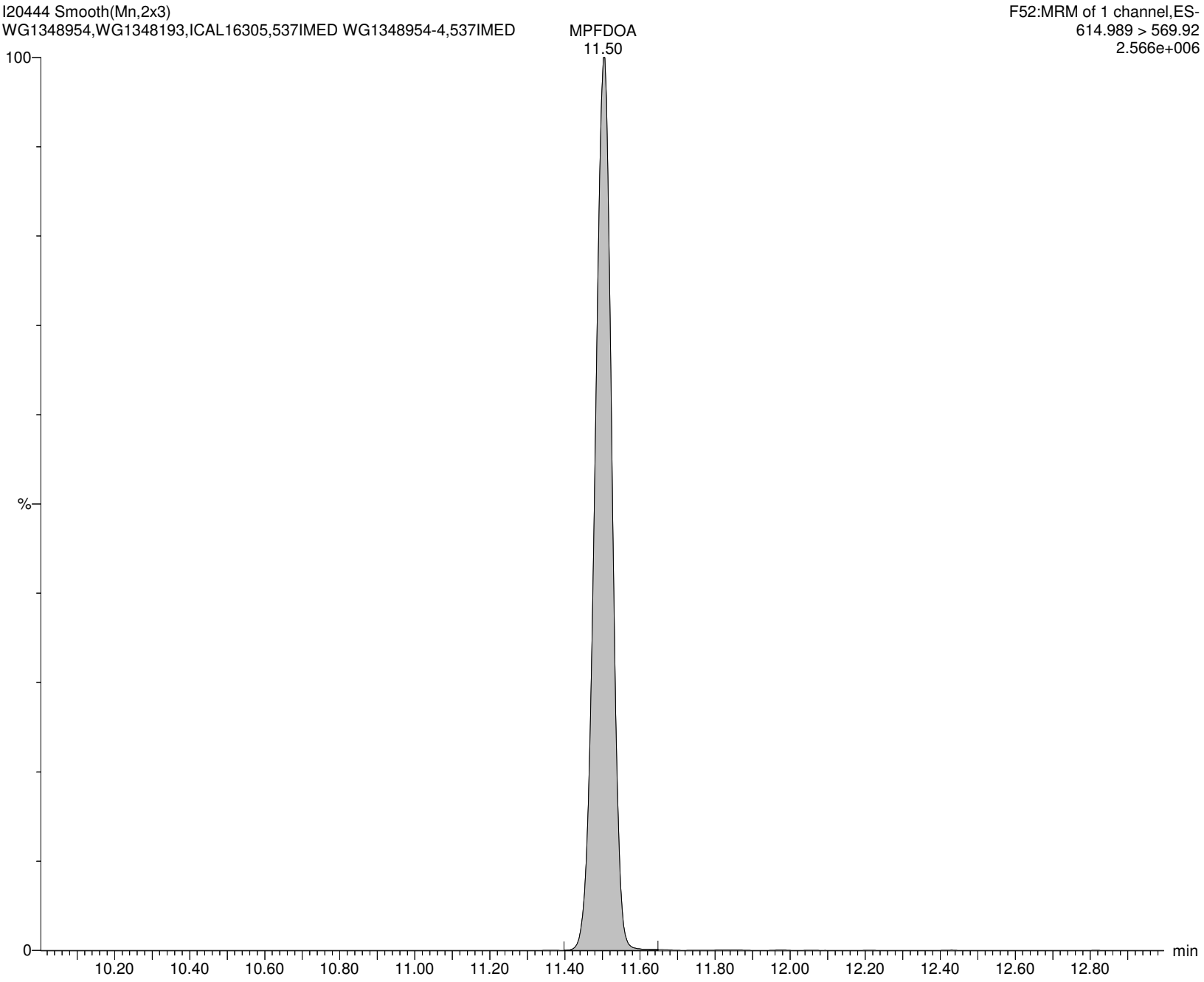



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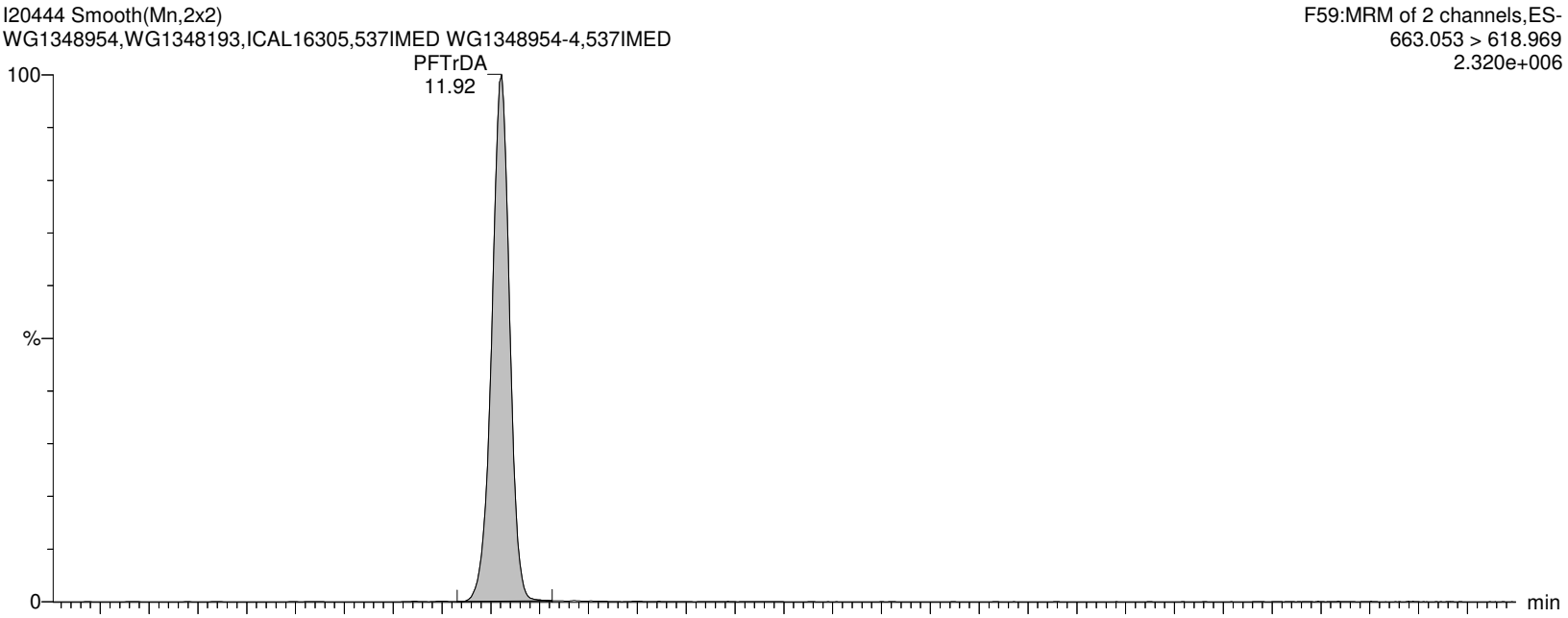


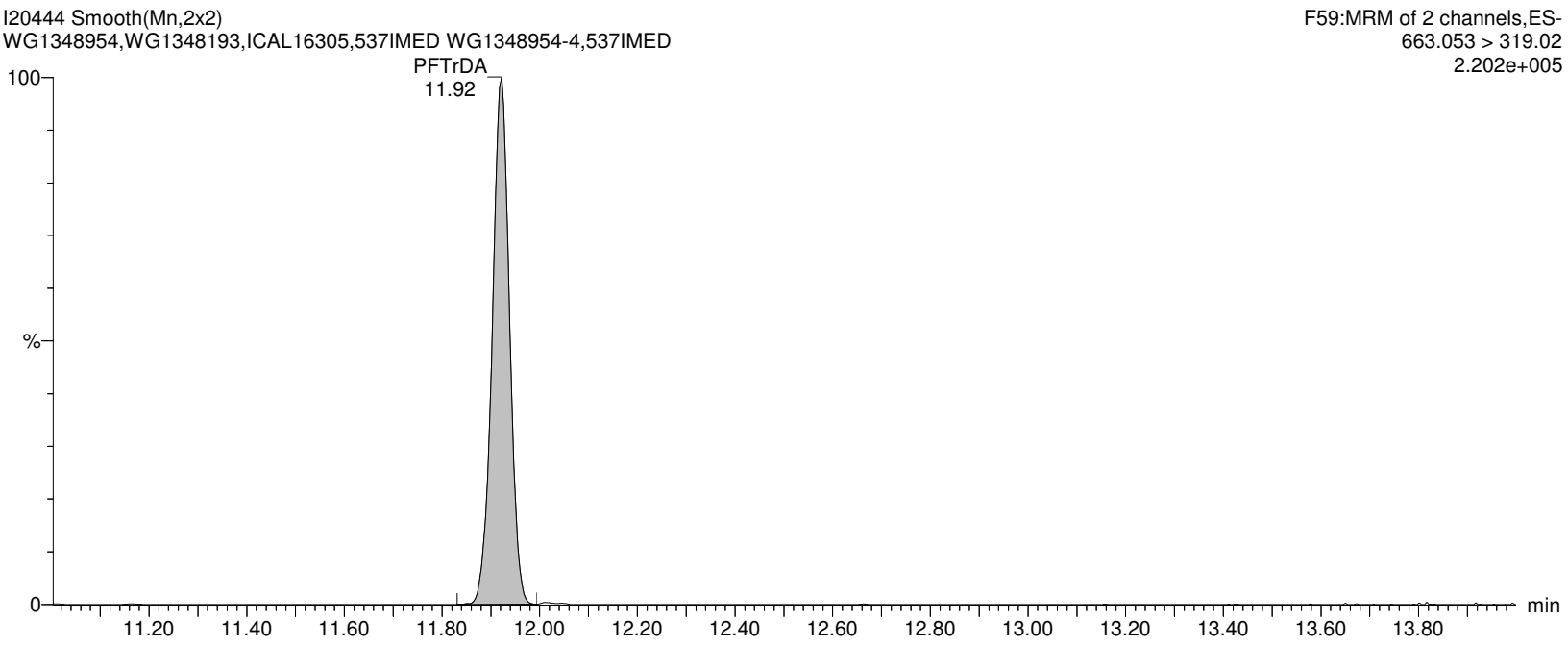



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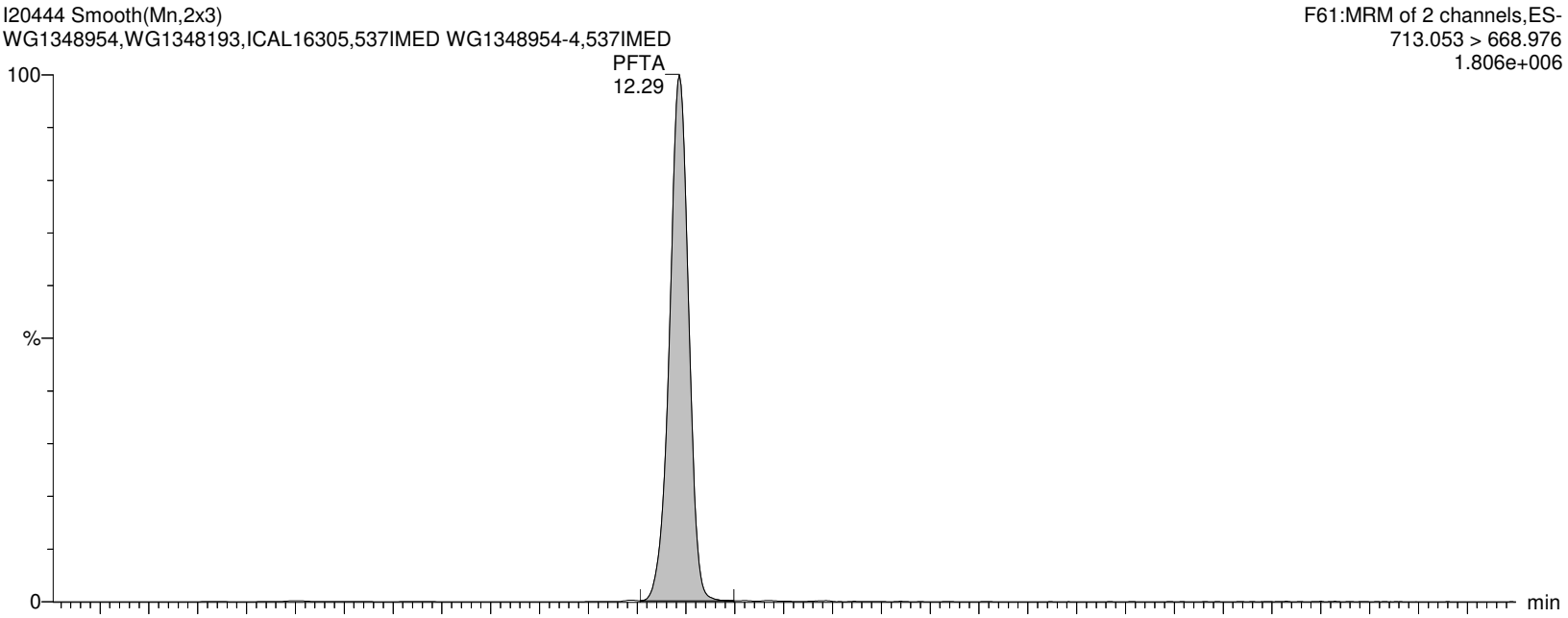


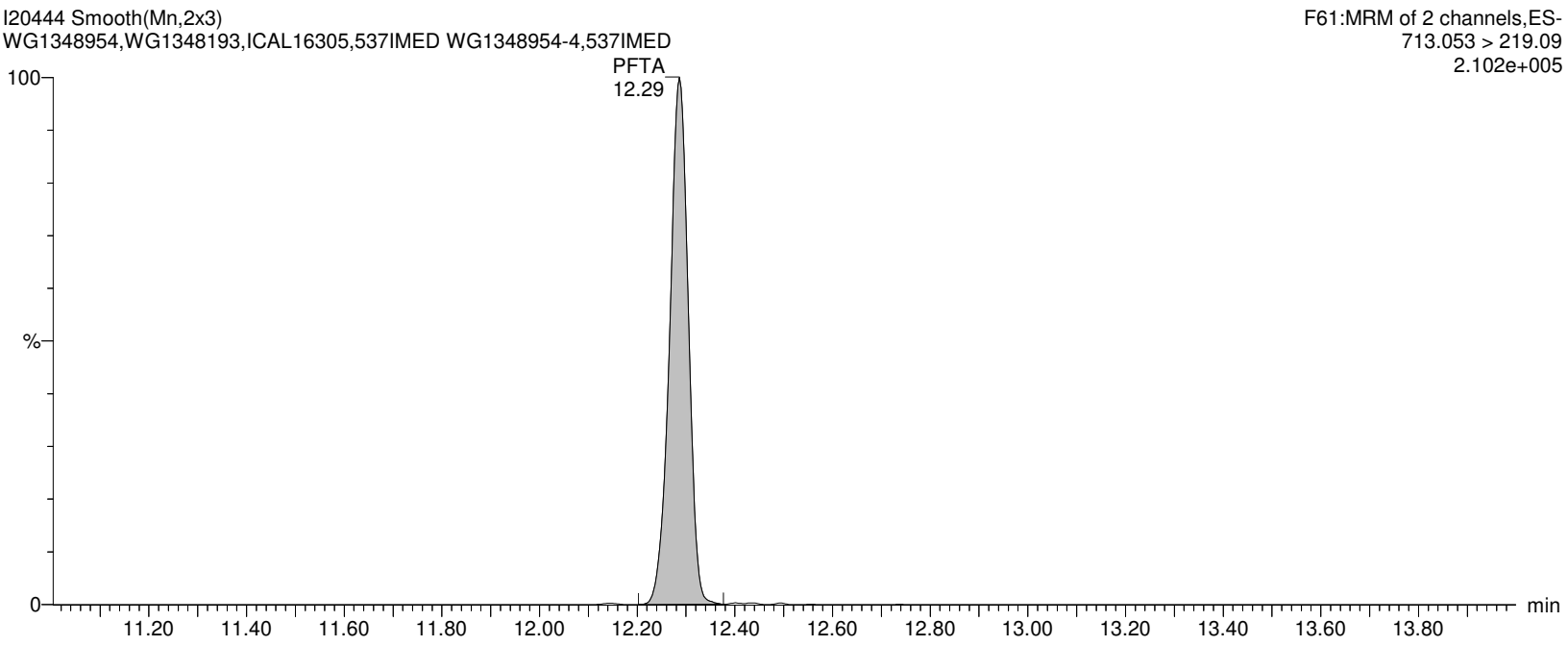



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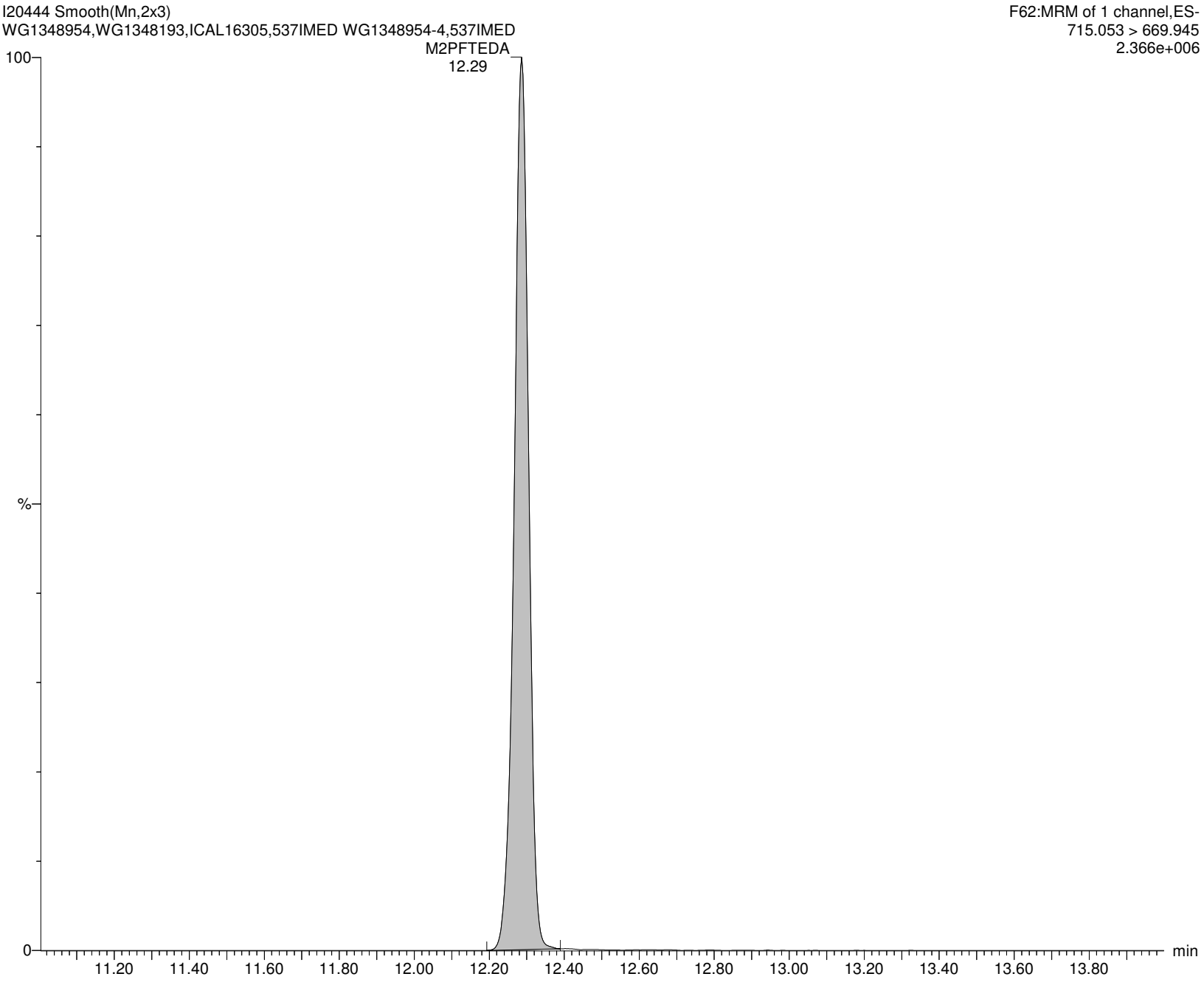



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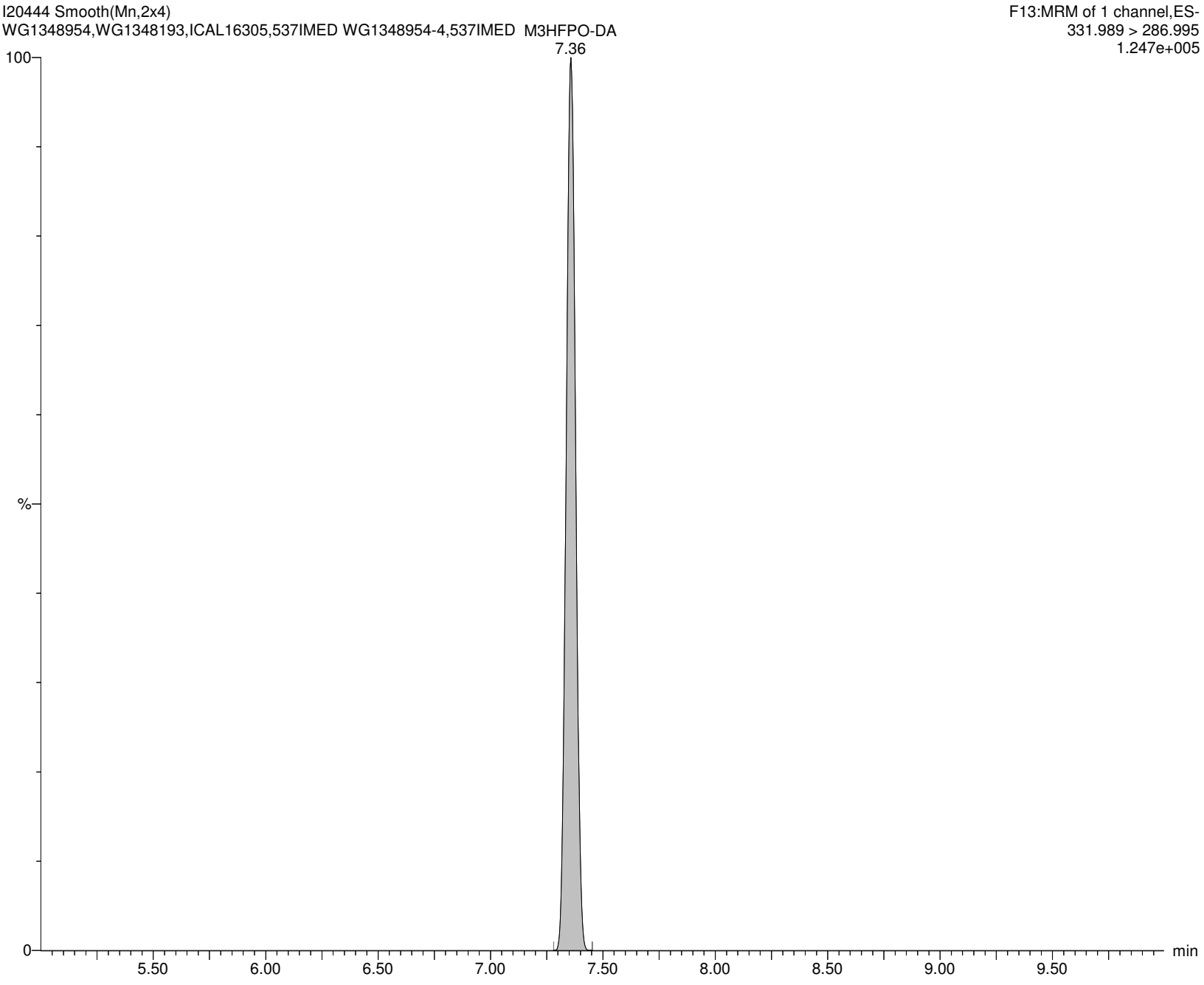
**M3HFPO-DA**





all concentration units in (ng/mL)

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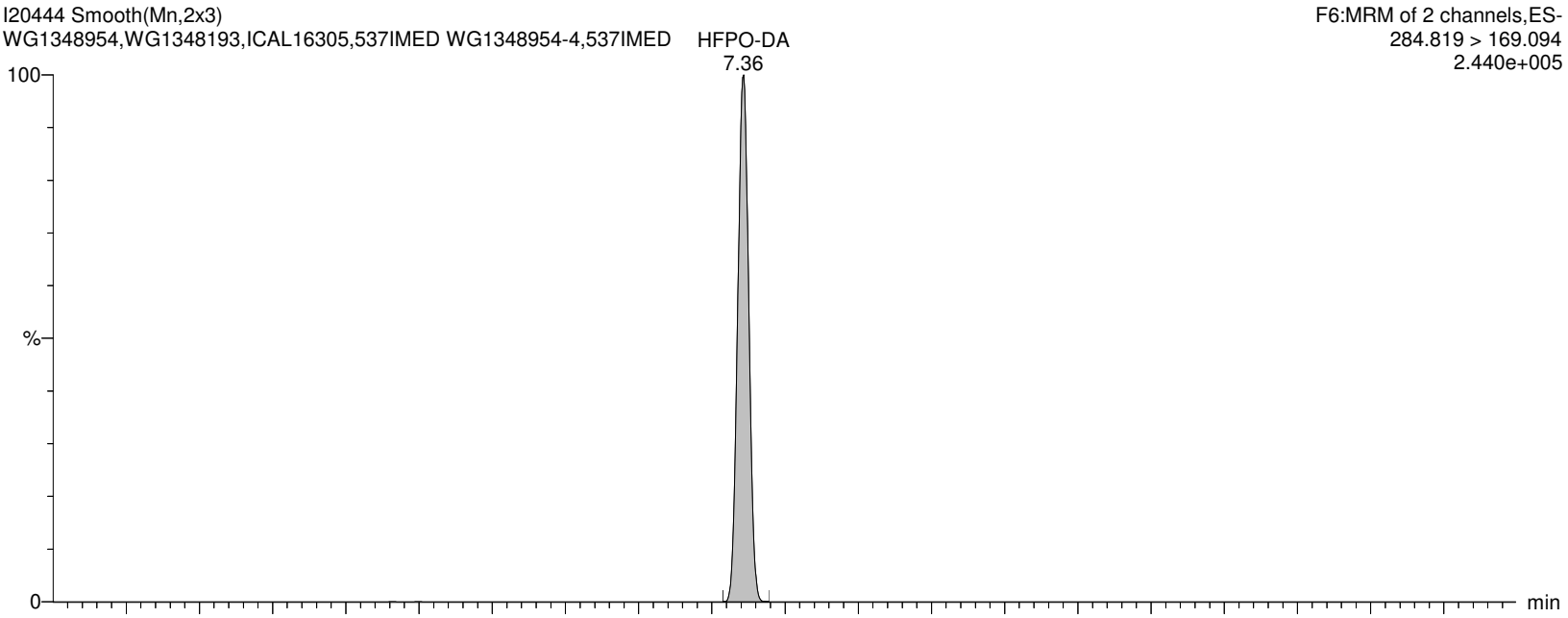


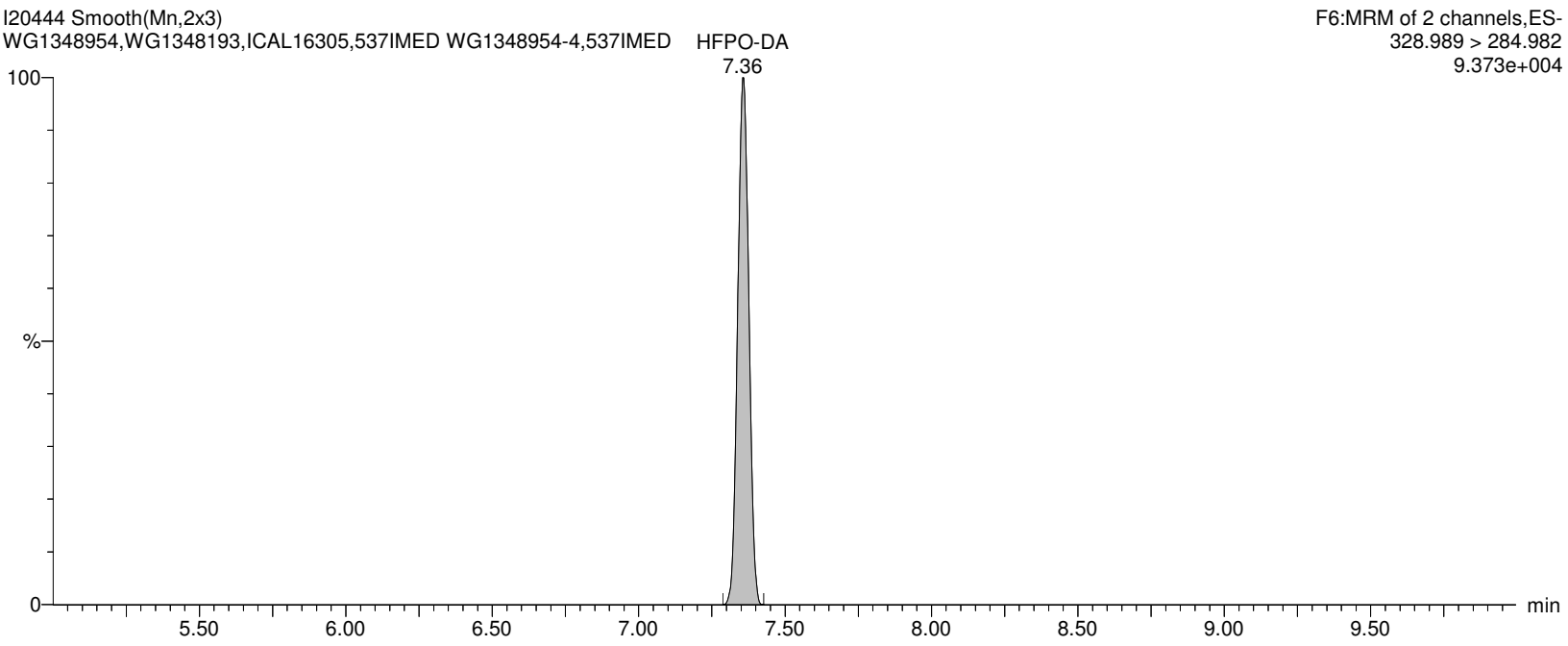



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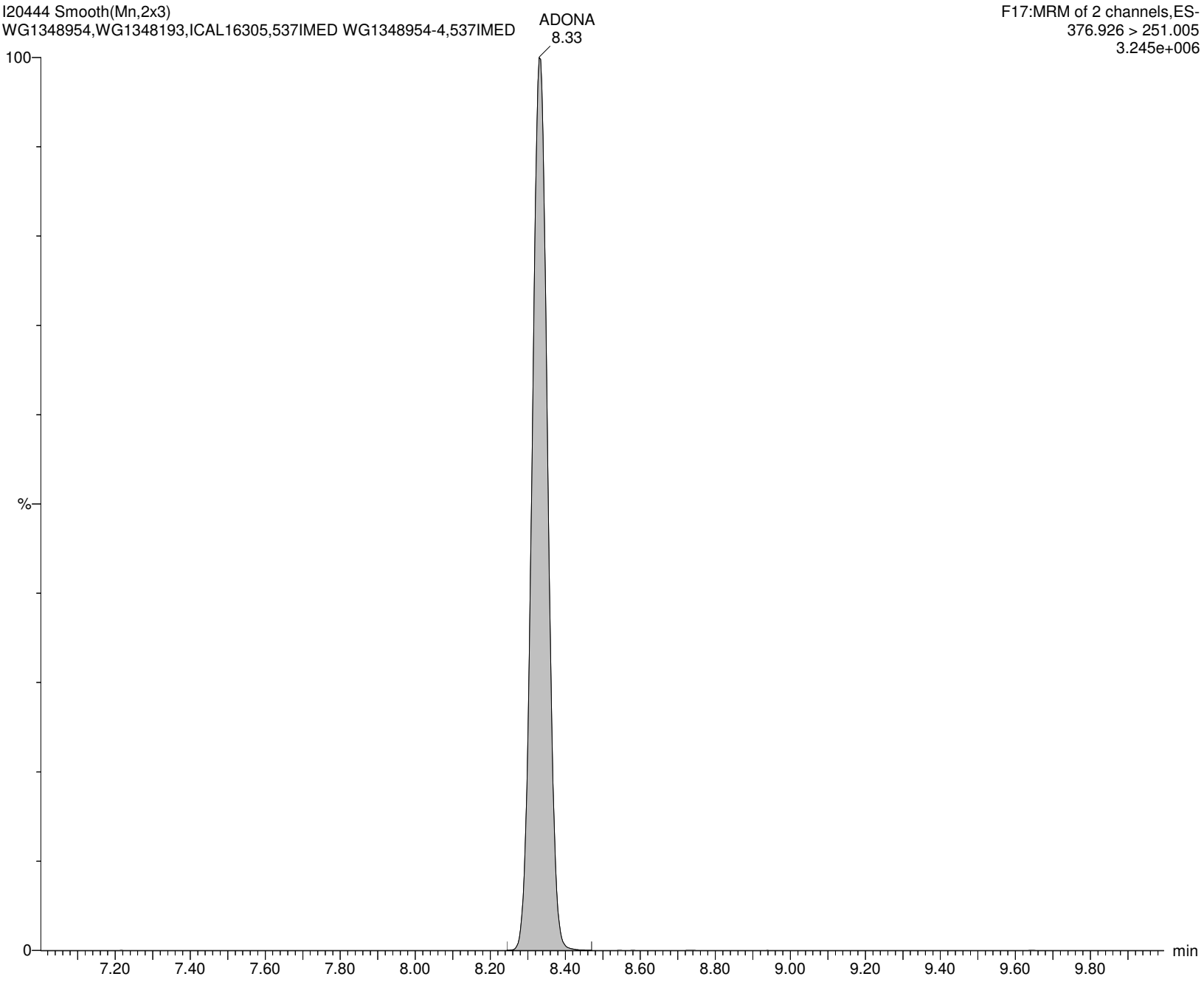



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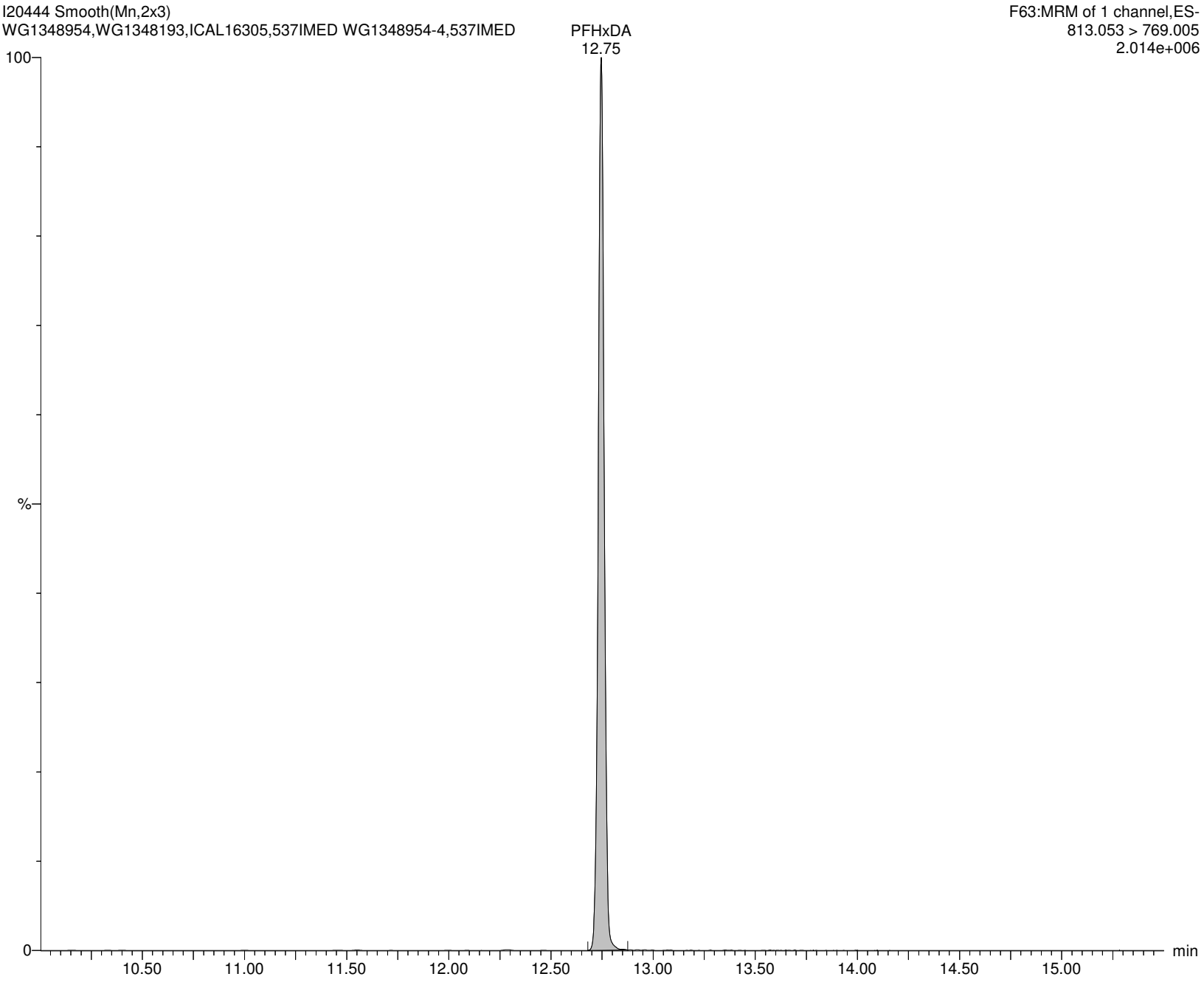



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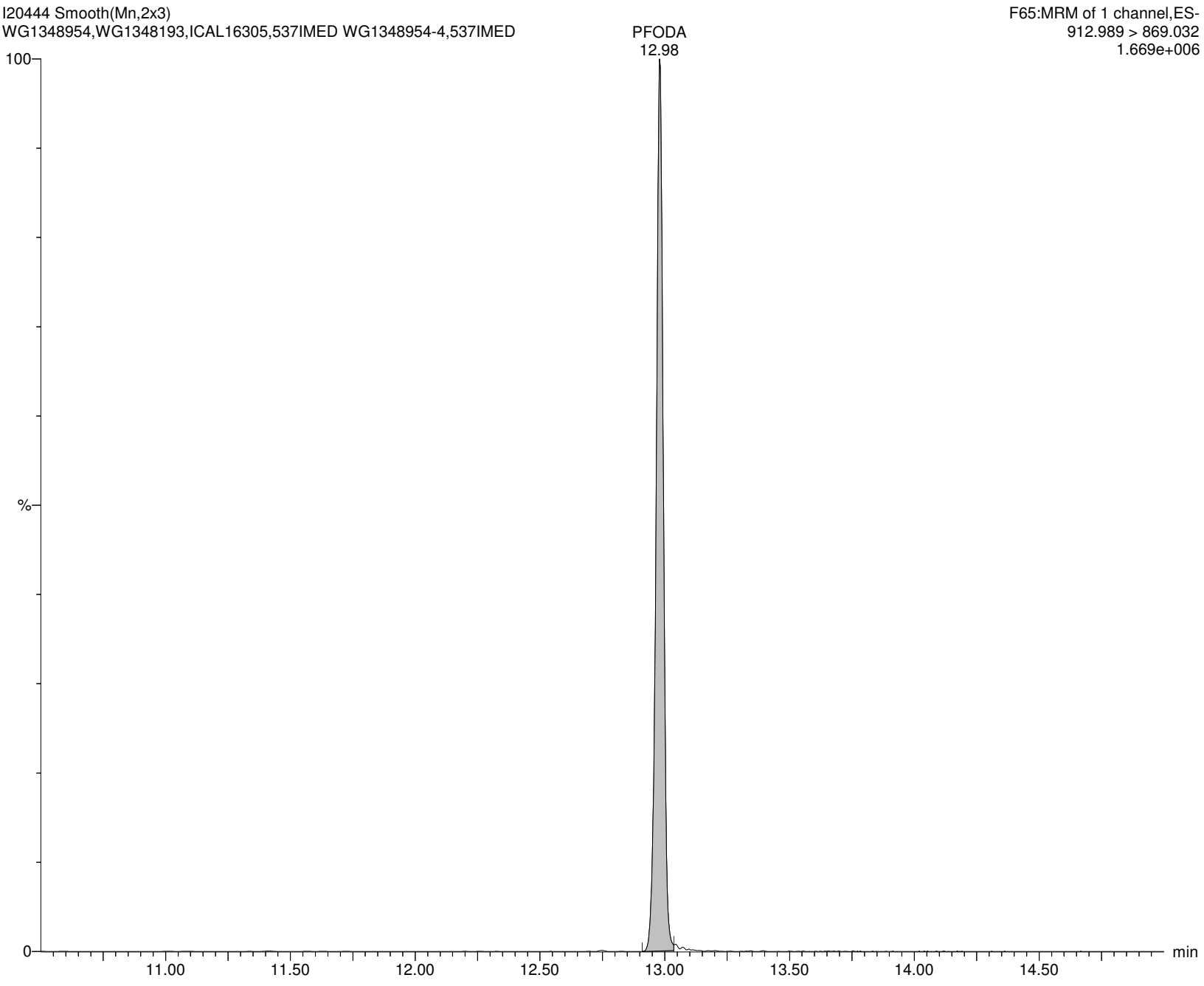



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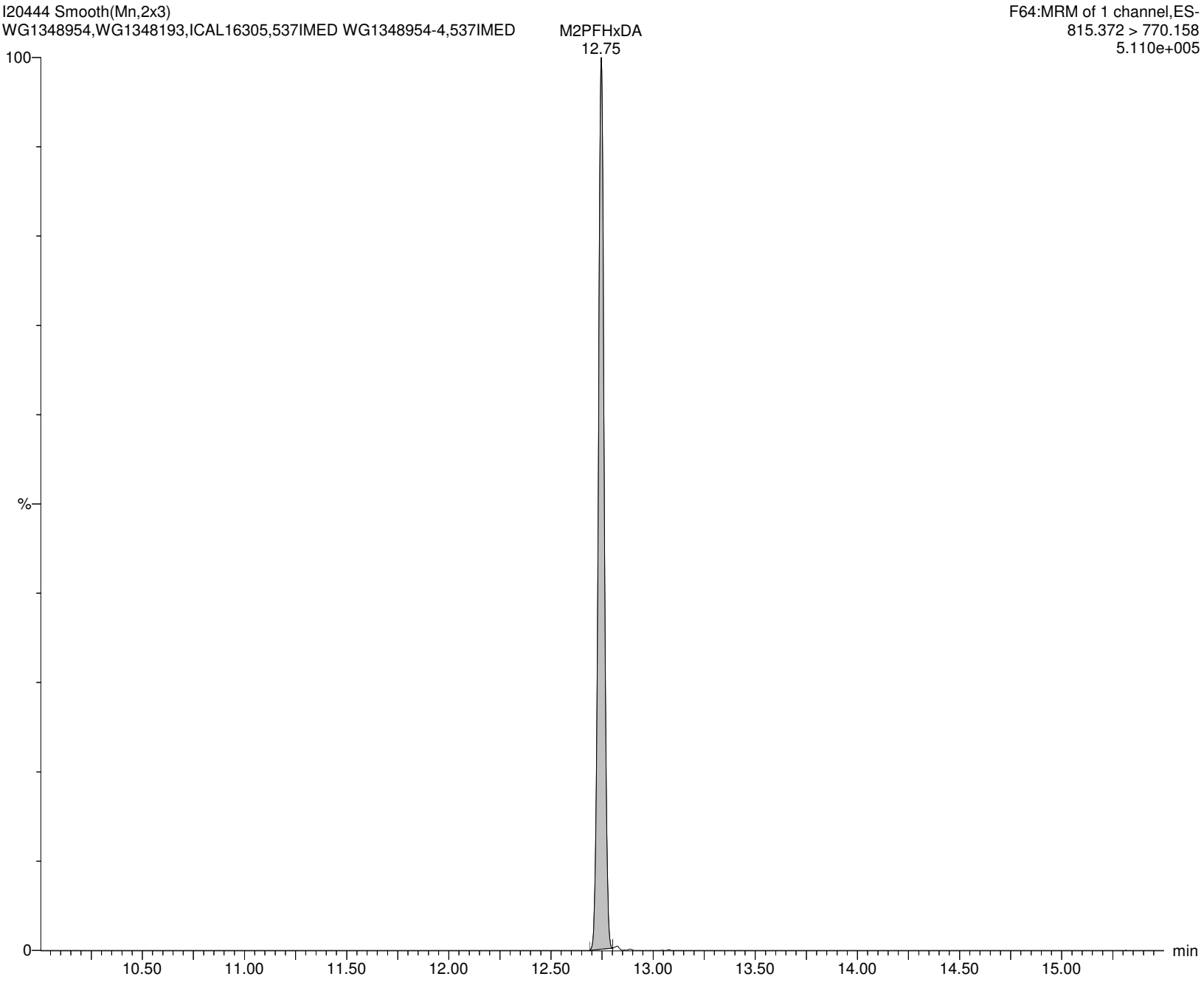



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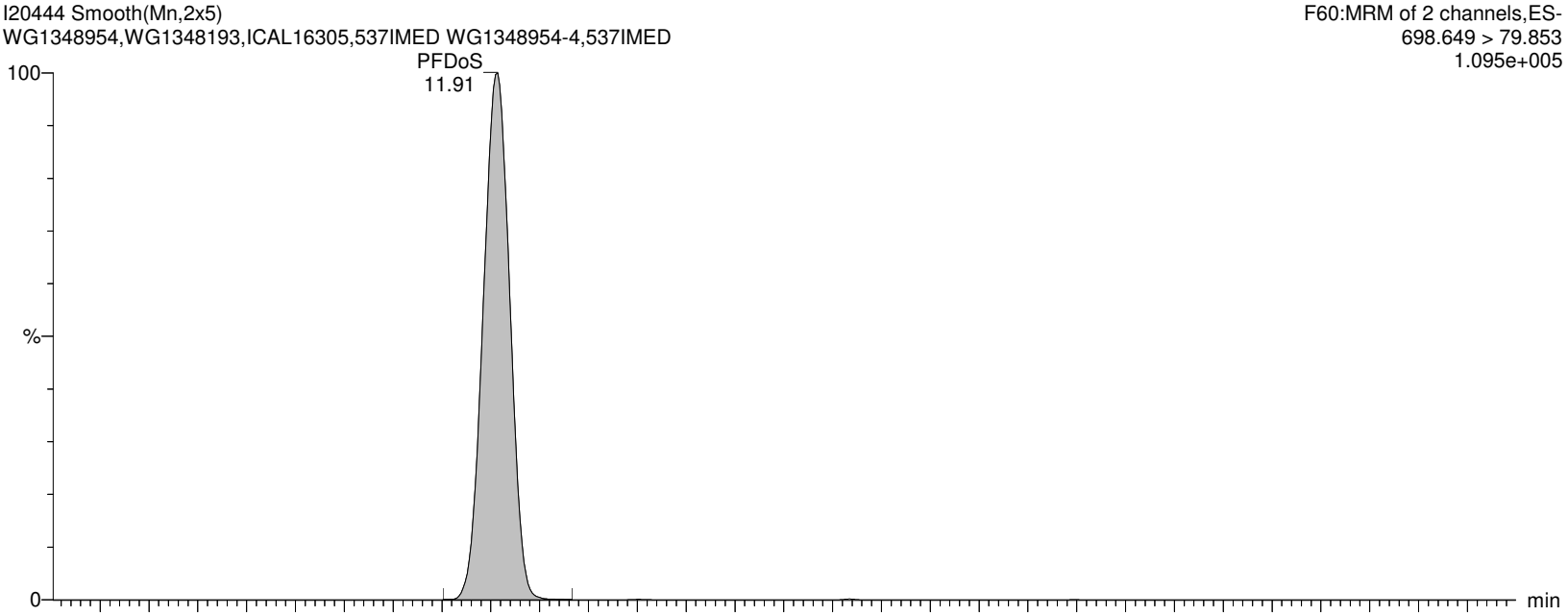


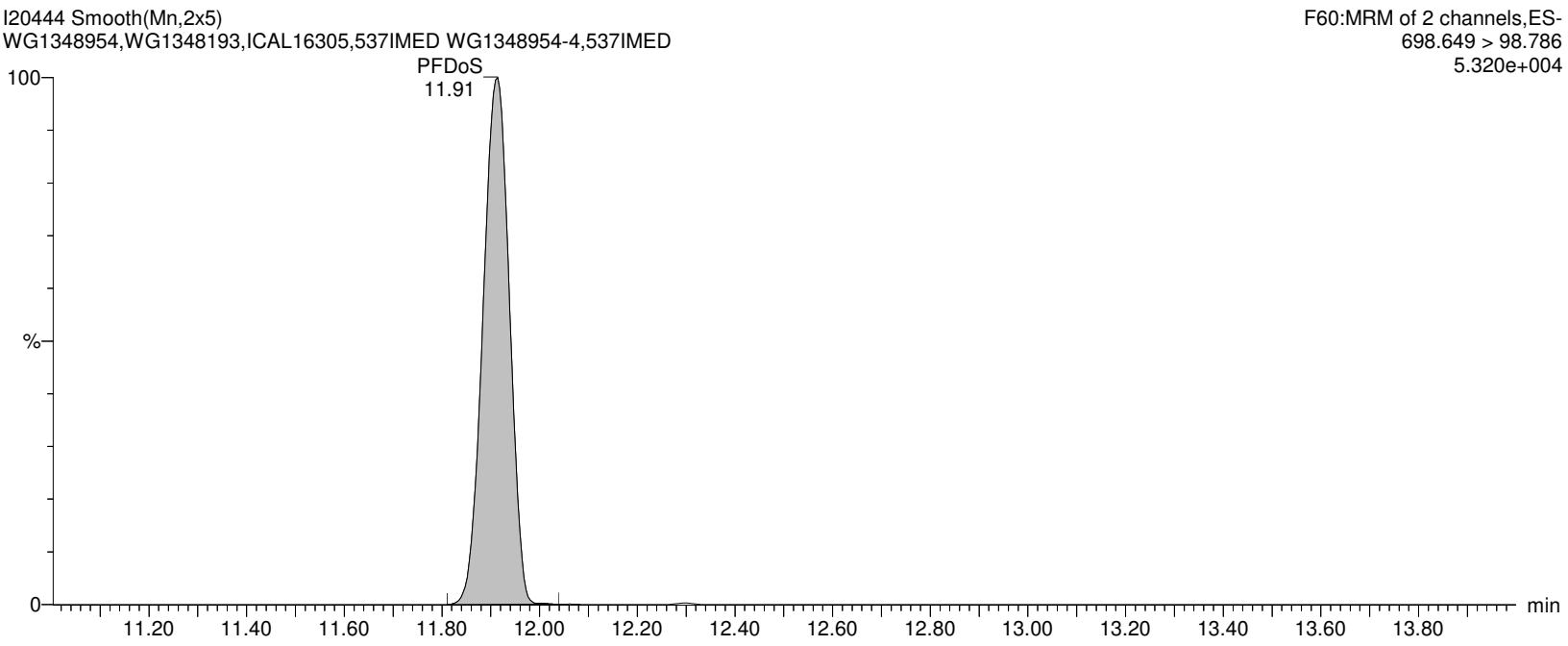



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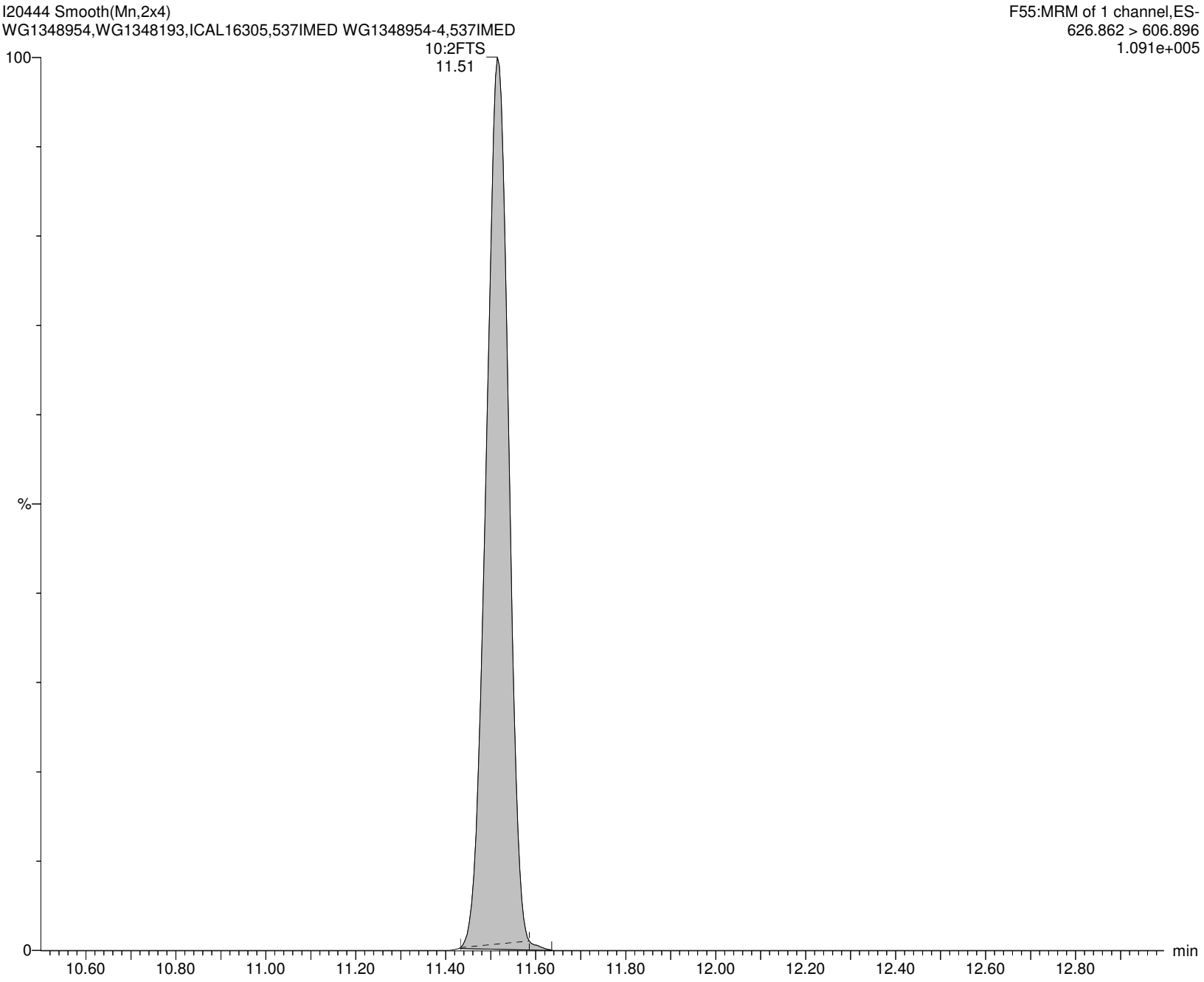
**Instrument: XEVO-TQSmicro#QEB0050**
**Inlet Method Name: C:\MassLynx\Data\2020\200309_537ISO.PRO\ACQUDB\LCMS_537_ISO_B**
**Tune Method Name: C:\MassLynx\Data\2020\200309_537ISO.PRO\ACQUDB\181009_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\2020\200309_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**10:2FTS**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2020\200309_537ISO.PRO\Data\WG1348954C.qld
Last Altered: Wednesday, March 11, 2020 21:10:58 Eastern Daylight Time
Printed: Thursday, March 12, 2020 03:36:37 Eastern Daylight Time

**Name: I20444**
**ID: WG1348954-4,537IMED**
**Date: 10-Mar-2020**
**Time: 23:50:12**
**Description: WG1348954,WG1348193,ICAL16305,537IMED**
**User: LCMS02:RS**
**Vial: 1:A,3**
**Instrument: XEVO-TQSmicro#QEB0050**
**Inlet Method Name: C:\MassLynx\Data\2020\200309_537ISO.PRO\ACQUDB\LCMS_537_ISO_B**
**Tune Method Name: C:\MassLynx\Data\2020\200309_537ISO.PRO\ACQUDB\181009_TUNE.IPR**
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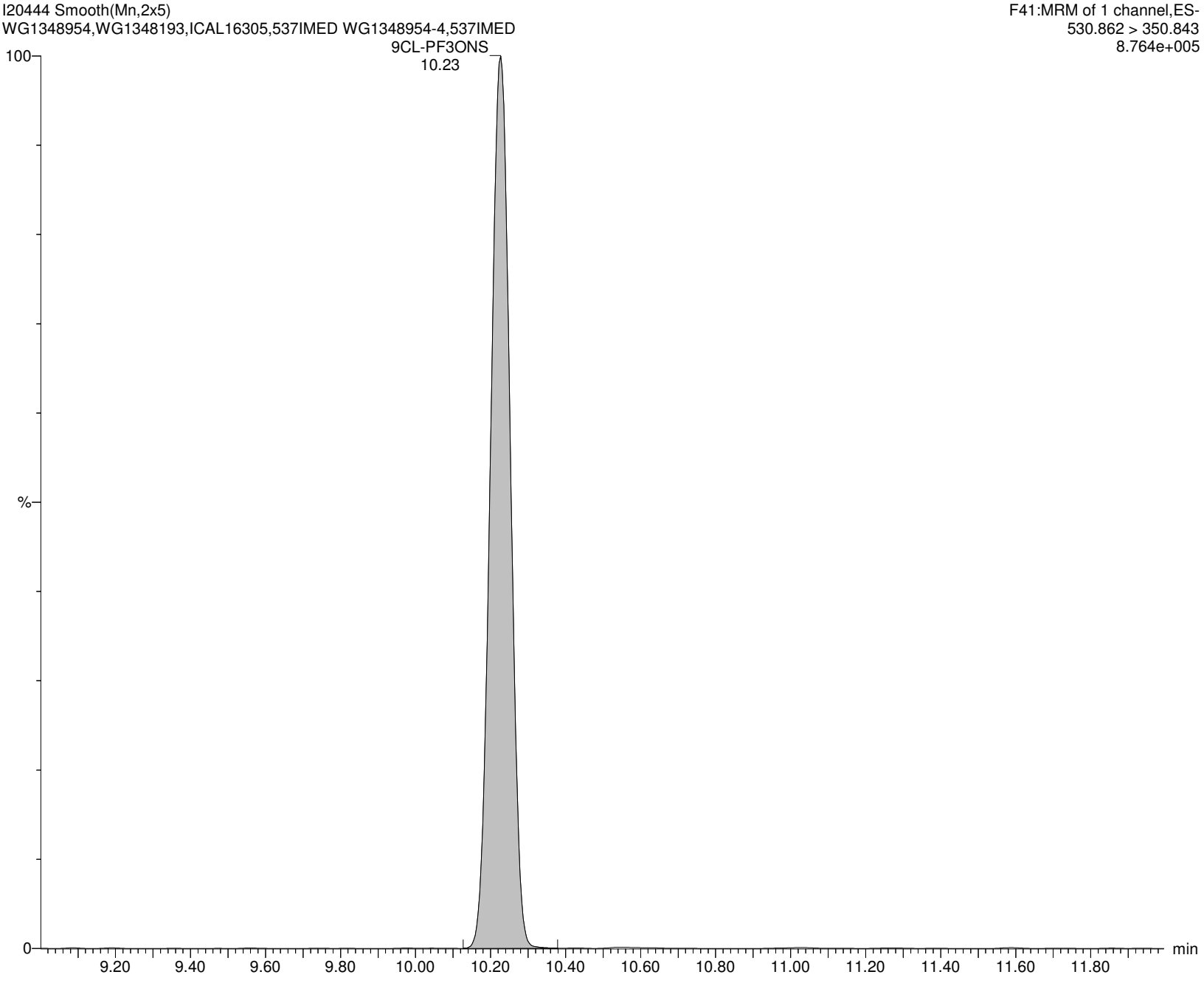
**9CL-PF3ONS**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2020\200309_537ISO.PRO\Data\WG1348954C.qld
Last Altered: Wednesday, March 11, 2020 21:10:58 Eastern Daylight Time
Printed: Thursday, March 12, 2020 03:36:37 Eastern Daylight Time

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**Date: 10-Mar-2020**
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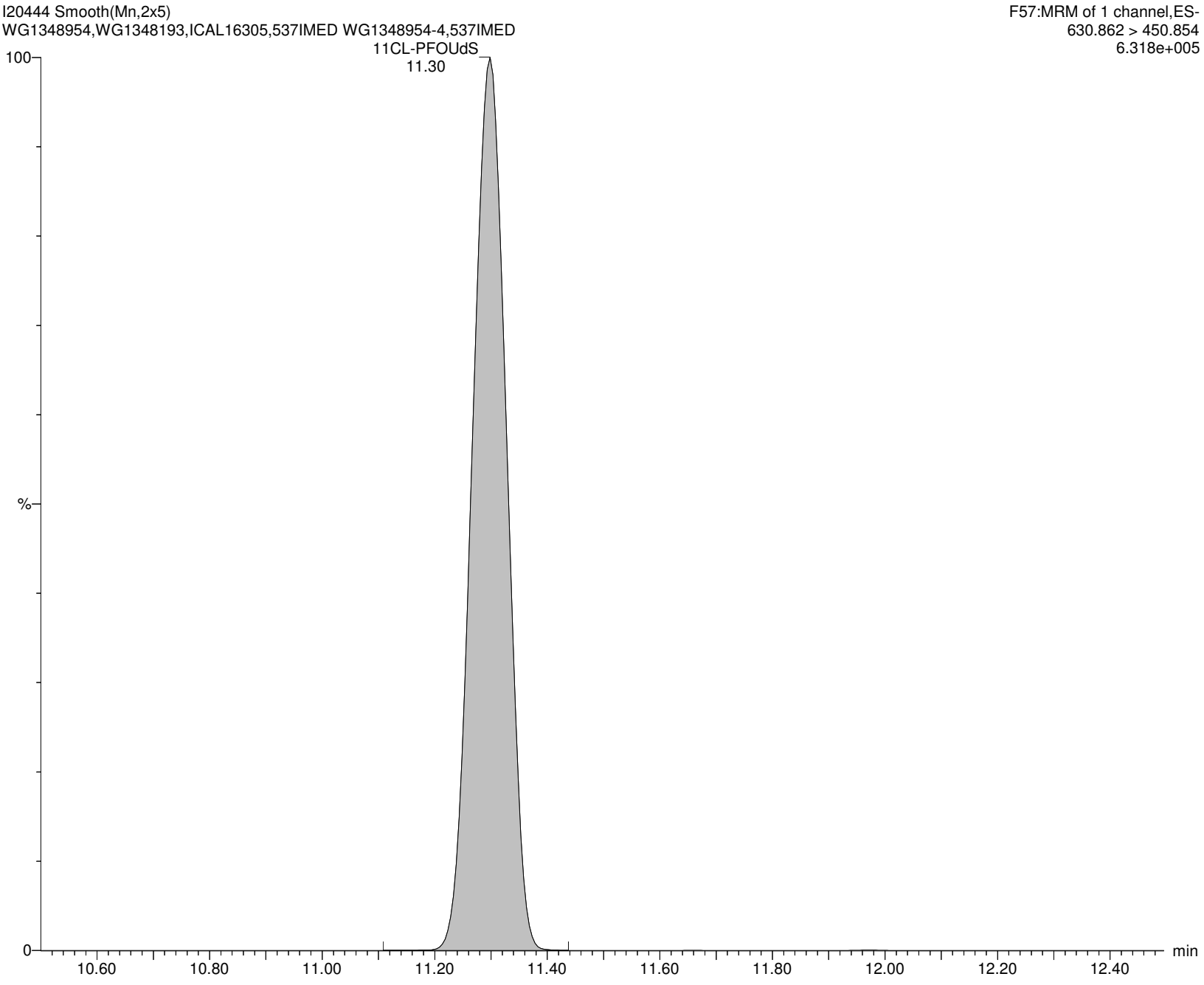
**Vial: 1:A,3**
**Instrument: XEVO-TQSmicro#QEB0050**
**Inlet Method Name: C:\MassLynx\Data\2020\200309_537ISO.PRO\ACQUDB\LCMS_537_ISO_B**
**Tune Method Name: C:\MassLynx\Data\2020\200309_537ISO.PRO\ACQUDB\181009_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\2020\200309_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**11CL-PFOUdS**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2020\200309_537ISO.PRO\Data\WG1348954D.qld
Last Altered: Wednesday, March 11, 2020 22:52:23 Eastern Daylight Time
Printed: Thursday, March 12, 2020 03:26:43 Eastern Daylight Time

**Method: C:\MassLynx\Data\2020\200309_537ISO.PRO\MethDB\537ISO_Q_191118_DOD_RT.mdb 07 Feb 2020 15:55:12**
**Calibration: C:\MassLynx\Data\2020\200309_537ISO.PRO\CurveDB\191118_ISO_ICAL.cdb 18 Nov 2019 14:41:42**

**ID: WG1348954-5,537ILOW**
**Name: I20457**
**Date: 11-Mar-2020**
**Time: 03:27:13**
**Description: WG1348954,WG1347969,ICAL16305,537ILOW**
**Instrument: XEVO-TQSmicro#QEB0050**
**User: LCMS02:RS**
**Inlet Method Name: C:\MassLynx\Data\2020\200309_537ISO.PRO\ACQUDB\LCMS_537_ISO_B**
**Tune Method Name: C:\MassLynx\Data\2020\200309_537ISO.PRO\ACQUDB\181009_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\2020\200309_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

| | Name | CAS | RT | Trace | Area | M Flag | Conc (ng/mL) | Ion Ratio | Ratio Flag | %Rec |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | PFBA | 375-22-4 | 2.19 | 212.926 > 169.111 | 2423 | | 0.466 | | na | 93.2 |
| 2 | M3PFBA | INT STD | 2.18 | 215.926 > 172.122 | 53277 | | 11.498 | | na | 115.0 |
| 3 | MPFBA | INT STD | 2.18 | 216.926 > 172.137 | 62281 | | 10.742 | | na | 107.4 |
| 4 | PFPeA | 2706-90-3 | 5.06 | 262.926 > 219.002 | 4679 | M4 | 0.521 | | na | 104.3 |
| 5 | M5PFPEA | INT STD | 5.06 | 267.989 > 223.081 | 92936 | | 11.301 | | na | 113.0 |
| 6 | PFBS | 375-73-5 | 5.70 | 298.926 > 79.923 | 737 | | 0.411 | 1.92 | NO | 92.8 |
| 7 | M3PFBS | INT STD | 5.70 | 301.989 > 80.254 | 12212 | | 9.728 | | na | 97.3 |
| 8 | 4:2FTS | 757124-72-4 | 6.85 | 326.926 > 306.957 | 379 | | 0.409 | 1.90 | NO | 87.5 |
| 9 | M2-4:2FTS | INT STD | 6.84 | 329.117 > 309.079 | 8361 | | 10.258 | | na | 102.6 |
| 10 | PFHxA | 307-24-4 | 6.93 | 312.989 > 269.028 | 5568 | M4 | 0.543 | 20.05 | NO | 108.7 |
| 11 | M5PFHxA | INT STD | 6.93 | 317.989 > 273.045 | 111334 | | 10.799 | | na | 108.0 |
| 12 | PFPeS | 2706-91-4 | 7.24 | 348.926 > 80.251 | 381 | | 0.298 | 1.59 | NO | 63.4 |
| 13 | PFHpA | 375-85-9 | 8.17 | 362.926 > 319.014 | 6583 | M4 | 0.484 | 5.89 | NO | 96.7 |
| 14 | M4PFHpA | INT STD | 8.17 | 366.926 > 321.979 | 150924 | | 10.990 | | na | 109.9 |
| 15 | br-PFHxS | 355-46-4 | 8.10 | 398.926 > 80.295 | 52 | M5 | 0.058 | 1.49 | NO | 68.4 |
| 16 | L-PFHxS | 355-46-4 | 8.32 | 398.926 > 80.295 | 228 | | 0.238 | 0.92 | NO | 64.3 |
| 17 | PFHxS | 355-46-4 | | 398.926 > 80.295 | 280 | | 0.296 | | na | |
| 18 | M3PFHxS | INT STD | 8.32 | 401.926 > 80.317 | 7655 | | 10.565 | | na | 105.7 |
| 19 | br-PFOA | 335-67-1 | | 412.989 > 368.9 | | | ND | | YES | |
| 20 | L-PFOA | 335-67-1 | 9.08 | 412.989 > 368.9 | 6653 | | 0.491 | 10.06 | NO | 98.3 |
| 21 | PFOA | 335-67-1 | | 412.989 > 368.9 | 6653 | | 0.491 | | na | |
| 22 | M8PFOA | INT STD | 9.08 | 420.989 > 375.979 | 147427 | | 11.187 | | na | 111.9 |
| 23 | M2PFOA | INT STD | 9.08 | 415.032 > 369.968 | 134679 | | 12.740 | | na | 127.4 |
| 24 | 6:2FTS | 27619-97-2 | 9.04 | 426.989 > 406.921 | 306 | | 0.454 | | YES | 95.7 |
| 25 | M2-6:2FTS | INT STD | 9.04 | 428.989 > 408.917 | 8297 | | 10.417 | | na | 104.2 |
| 26 | PFHpS | 375-92-8 | 9.18 | 448.926 > 80.257 | 277 | | 0.426 | 1.09 | YES | 89.6 |
| 27 | PFNA | 375-95-1 | 9.84 | 462.989 > 418.931 | 5819 | | 0.472 | 5.00 | NO | 94.4 |
| 28 | M9PFNA | INT STD | 9.84 | 472.053 > 426.947 | 150421 | | 11.601 | | na | 116.0 |
| 29 | br-PFOS | 1763-23-1 | 9.69 | 498.989 > 80.294 | 24 | | 0.019 | 0.74 | NO | 18.8 |
| 30 | L-PFOS | 1763-23-1 | 9.89 | 498.989 > 80.294 | 246 | | 0.253 | 1.57 | YES | 69.3 |
| 31 | PFOS | 1763-23-1 | | 498.989 > 80.294 | 270 | | 0.272 | | na | |
| 32 | M4PFOS | INT STD | 9.89 | 503.032 > 80.306 | 8968 | | 12.841 | | na | 128.4 |
| 33 | M8PFOS | INT STD | 9.89 | 507.053 > 80.294 | 9896 | | 10.754 | | na | 107.5 |
| 34 | PFDA | 335-76-2 | 10.48 | 513.053 > 468.906 | 6200 | M4 | 0.493 | 6.90 | NO | 98.6 |
| 35 | M2PFDA | INT STD | 10.48 | 515.053 > 469.934 | 128175 | | 14.517 | | na | 145.2 |
| 36 | M6PFDA | INT STD | 10.48 | 519.053 > 473.931 | 146615 | | 11.068 | | na | 110.7 |
| 37 | 8:2FTS | 39108-34-4 | 10.49 | 526.926 > 506.818 | 232 | M4 | 0.366 | | na | 76.3 |
| 38 | M2-8:2FTS | INT STD | 10.47 | 529.053 > 508.945 | 5826 | | 12.468 | | na | 124.7 |
| 39 | PFNS | 68259-12-1 | 10.51 | 548.989 > 80.249 | 326 | | 0.354 | 1.36 | YES | 73.8 |


all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2020\200309_537ISO.PRO\Data\WG1348954D.qld
Last Altered: Wednesday, March 11, 2020 22:52:23 Eastern Daylight Time
Printed: Thursday, March 12, 2020 03:26:43 Eastern Daylight Time

**ID: WG1348954-5,537ILOW**
**Name: I20457**
**Date: 11-Mar-2020**
**Time: 03:27:13**
**Description: WG1348954,WG1347969,ICAL16305,537ILOW**
**Instrument: XEVO-TQSmicro#QEB0050**
**User: LCMS02:RS**
**Inlet Method Name: C:\MassLynx\Data\2020\200309_537ISO.PRO\ACQUDB\LCMS_537_ISO_B**
**Tune Method Name: C:\MassLynx\Data\2020\200309_537ISO.PRO\ACQUDB\181009_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\2020\200309_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

| | Name | CAS | RT | Trace | Area | M Flag | Conc (ng/mL) | Ion Ratio | Ratio Flag | %Rec |
|---|---|---|---|---|---|---|---|---|---|---|
| 40 | d3-NMeFOSAA | INT STD | 10.87 | 573.096 > 418.987 | 15729 | | 10.426 | | na | 104.3 |
| 41 | br-NMeFOSAA | 2355-31-9 | | 570.053 > 418.917 | | | ND | | YES | |
| 42 | L-NMeFOSAA | 2355-31-9 | 10.88 | 570.053 > 418.917 | 1073 | | 0.732 | 3.15 | YES | 146.3 |
| 43 | NMeFOSAA | 2355-31-9 | | 570.053 > 418.917 | 1073 | | 0.732 | | na | |
| 44 | PFUnA | 2058-94-8 | 11.03 | 562.989 > 518.903 | 6898 | | 0.517 | 12.00 | NO | 103.5 |
| 45 | M7-PFUDA | INT STD | 11.03 | 570.053 > 524.923 | 139395 | | 11.861 | | na | 118.6 |
| 46 | PFDS | 335-77-3 | 11.04 | 598.926 > 80.314 | 320 | | 0.487 | 1.56 | NO | 100.9 |
| 47 | FOSA | 754-91-6 | 10.93 | 497.989 > 78.245 | 1213 | | 0.425 | | YES | 85.1 |
| 48 | M8FOSA | INT STD | 10.93 | 506.053 > 78.286 | 26823 | | 8.564 | | na | 85.6 |
| 49 | d5-NEtFOSAA | INT STD | 11.16 | 589.117 > 418.929 | 12034 | | 9.030 | | na | 90.3 |
| 50 | br-NEtFOSAA | 2991-50-6 | | 583.989 > 418.927 | | | ND | | YES | |
| 51 | L-NEtFOSAA | 2991-50-6 | 11.16 | 583.989 > 418.927 | 582 | M4 | 0.512 | 2.86 | NO | 102.5 |
| 52 | NEtFOSAA | 2991-50-6 | | 583.989 > 418.927 | 582 | | 0.512 | | na | |
| 53 | PFDoA | 307-55-1 | 11.51 | 612.989 > 568.967 | 5977 | | 0.528 | 18.74 | NO | 105.6 |
| 54 | MPFDOA | INT STD | 11.51 | 614.989 > 569.92 | 133591 | | 10.132 | | na | 101.3 |
| 55 | PFTrDA | 72629-94-8 | 11.92 | 663.053 > 618.969 | 5256 | M4 | 0.577 | 10.42 | NO | 115.5 |
| 56 | PFTA | 376-06-7 | 12.28 | 713.053 > 668.976 | 4577 | M4 | 0.527 | 12.20 | NO | 105.4 |
| 57 | M2PFTEDA | INT STD | 12.28 | 715.053 > 669.945 | 108450 | | 10.356 | | na | 103.6 |
| 58 | M3HFPO-DA | INT STD | 7.35 | 331.989 > 286.995 | 4252 | | 73.651 | | na | 36.8 |
| 59 | HFPO-DA | 13252-13-6 | 7.35 | 284.819 > 169.094 | 281 | | 7.973 | 2.55 | YES | 79.7 |
| 60 | ADONA | 958445-44-8 | 8.34 | 376.926 > 251.005 | 8531 | | 0.440 | | na | 93.0 |
| 61 | PFHxDA | | 12.74 | 813.053 > 769.005 | 4812 | | 0.960 | | na | 191.9 |
| 62 | PFODA | | 12.98 | 912.989 > 869.032 | 3022 | | 0.822 | | na | 164.5 |
| 63 | M2PFHxDA | | 12.74 | 815.372 > 770.158 | 13645 | | 6.121 | | na | 61.2 |
| 64 | PFDoS | | 11.91 | 698.649 > 79.853 | 359 | | 0.535 | 1.73 | YES | 107.1 |
| 65 | 10:2FTS | | 11.52 | 626.862 > 606.896 | 230 | M2 | 0.378 | | na | 78.4 |
| 66 | 9CL-PF3ONS | | 10.25 | 530.862 > 350.843 | 3111 | | 0.478 | | na | 102.6 |
| 67 | 11CL-PFOUdS | | 11.30 | 630.862 > 450.854 | 2635 | | 0.481 | | na | 102.0 |

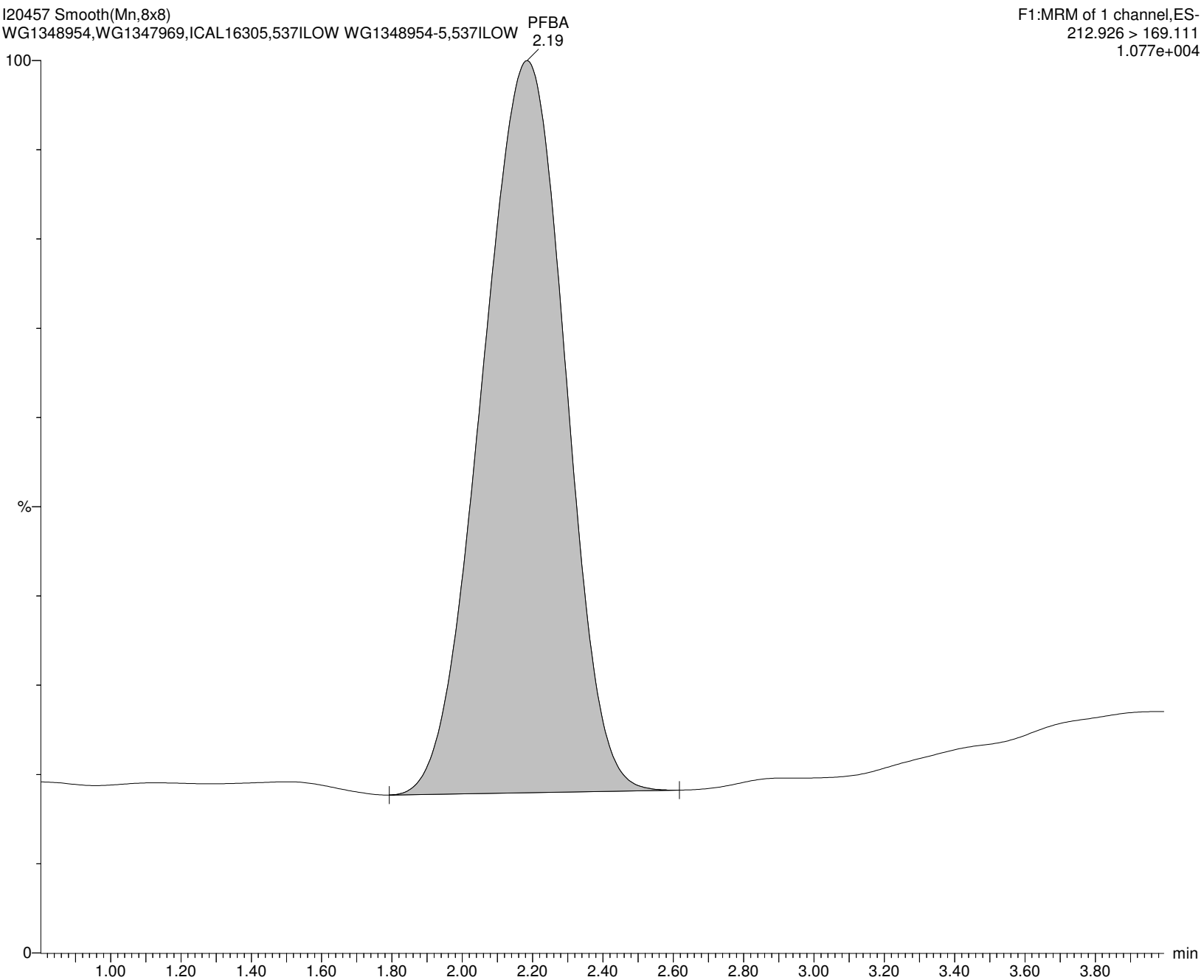

all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2020\200309_537ISO.PRO\Data\WG1348954D.qld
Last Altered: Wednesday, March 11, 2020 22:52:23 Eastern Daylight Time
Printed: Thursday, March 12, 2020 03:26:43 Eastern Daylight Time

**Method: C:\MassLynx\Data\2020\200309_537ISO.PRO\MethDB\537ISO_Q_191118_DOD_RT.mdb 07 Feb 2020 15:55:12**
**Calibration: C:\MassLynx\Data\2020\200309_537ISO.PRO\CurveDB\191118_ISO_ICAL.cdb 18 Nov 2019 14:41:42**

**Name: I20457**
**ID: WG1348954-5,537ILOW**
**Date: 11-Mar-2020**
**Time: 03:27:13**
**Description: WG1348954,WG1347969,ICAL16305,537ILOW**
**User: LCMS02:RS**
**Vial: 1:A,2**
**Instrument: XEVO-TQSmicro#QEB0050**
**Inlet Method Name: C:\MassLynx\Data\2020\200309_537ISO.PRO\ACQUDB\LCMS_537_ISO_B**
**Tune Method Name: C:\MassLynx\Data\2020\200309_537ISO.PRO\ACQUDB\181009_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\2020\200309_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**PFBA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
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**User: LCMS02:RS**
**Vial: 1:A,2**
**Instrument: XEVO-TQSmicro#QEB0050**
**Inlet Method Name: C:\MassLynx\Data\2020\200309_537ISO.PRO\ACQUDB\LCMS_537_ISO_B**
**Tune Method Name: C:\MassLynx\Data\2020\200309_537ISO.PRO\ACQUDB\181009_TUNE.IPR**
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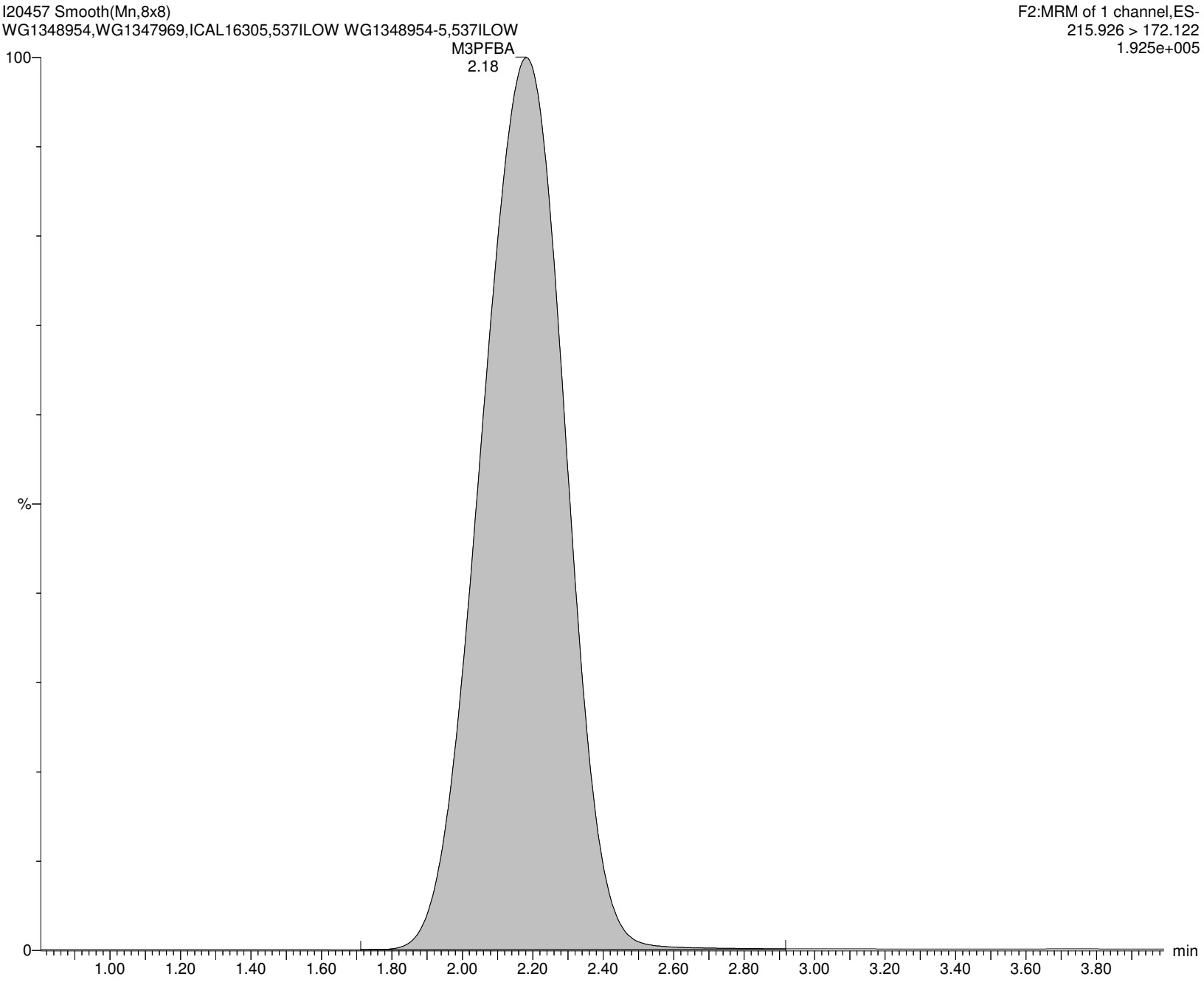
**M3PFBA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
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**User: LCMS02:RS**
**Vial: 1:A,2**
**Instrument: XEVO-TQSmicro#QEB0050**
**Inlet Method Name: C:\MassLynx\Data\2020\200309_537ISO.PRO\ACQUDB\LCMS_537_ISO_B**
**Tune Method Name: C:\MassLynx\Data\2020\200309_537ISO.PRO\ACQUDB\181009_TUNE.IPR**
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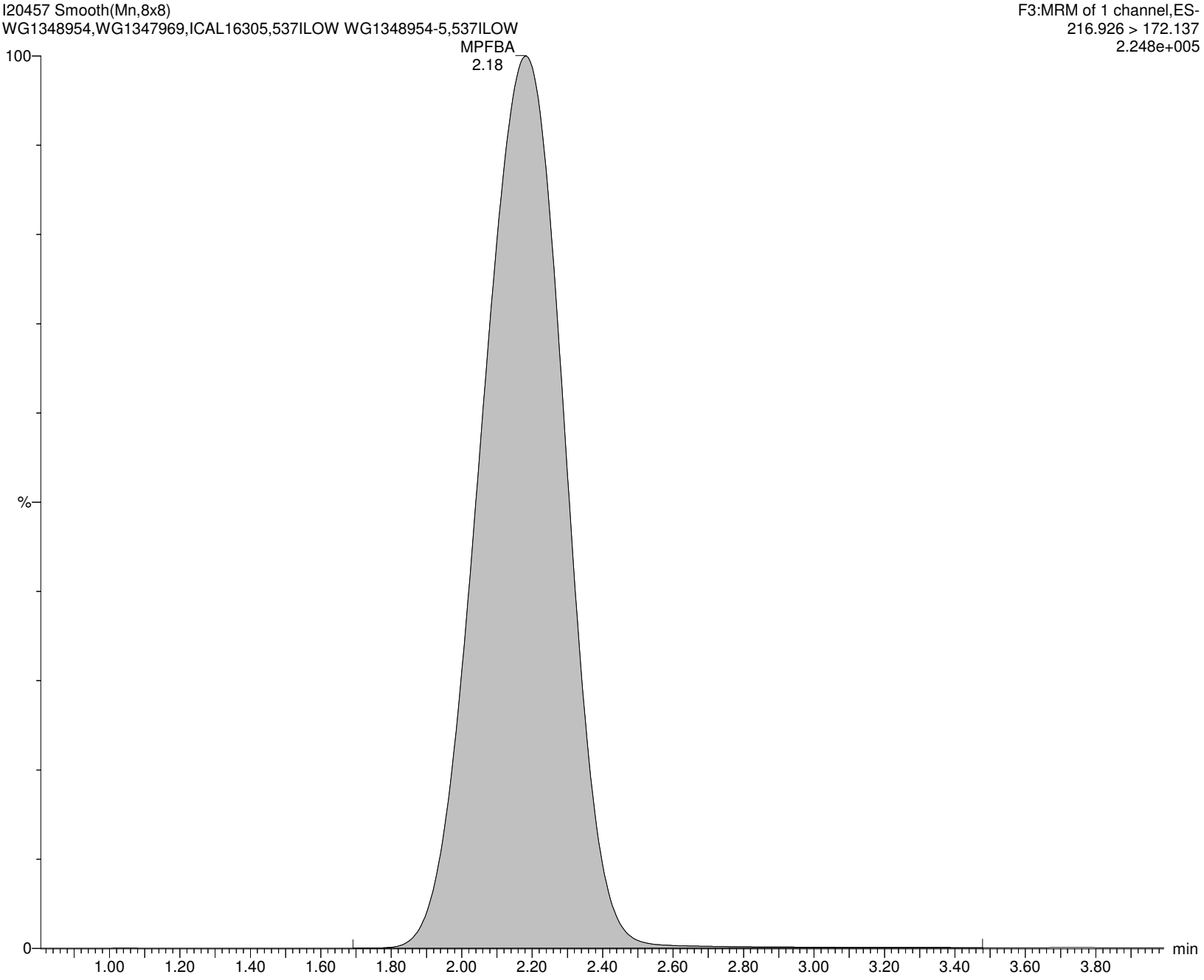
**MPFBA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2020\200309_537ISO.PRO\Data\WG1348954D.qld
Last Altered: Wednesday, March 11, 2020 22:52:23 Eastern Daylight Time
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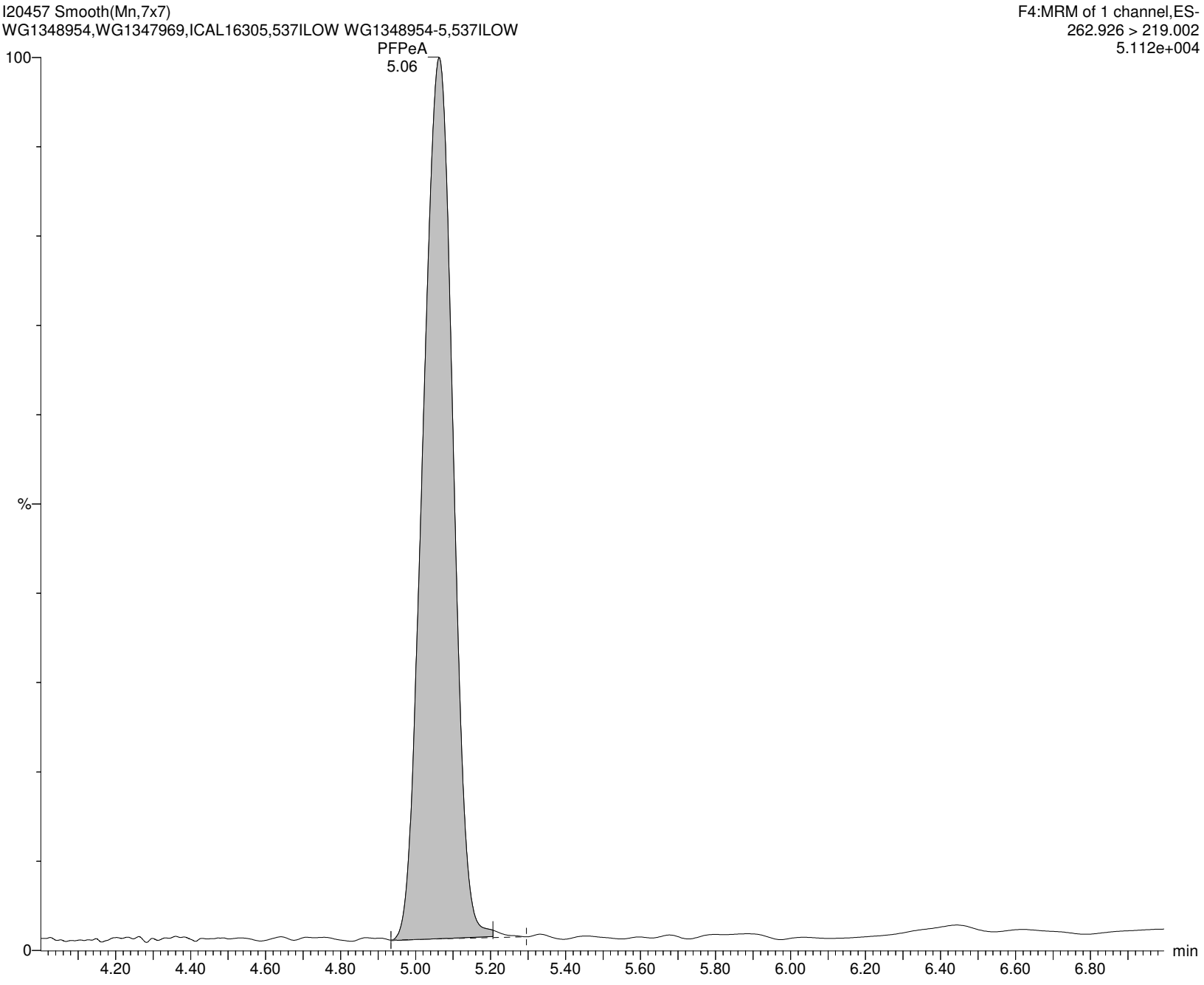
**MS Method Name: C:\MassLynx\Data\2020\200309_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**PFPeA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
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Last Altered: Wednesday, March 11, 2020 22:52:23 Eastern Daylight Time
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**Date: 11-Mar-2020**
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**User: LCMS02:RS**
**Vial: 1:A,2**
**Instrument: XEVO-TQSmicro#QEB0050**
**Inlet Method Name: C:\MassLynx\Data\2020\200309_537ISO.PRO\ACQUDB\LCMS_537_ISO_B**
**Tune Method Name: C:\MassLynx\Data\2020\200309_537ISO.PRO\ACQUDB\181009_TUNE.IPR**
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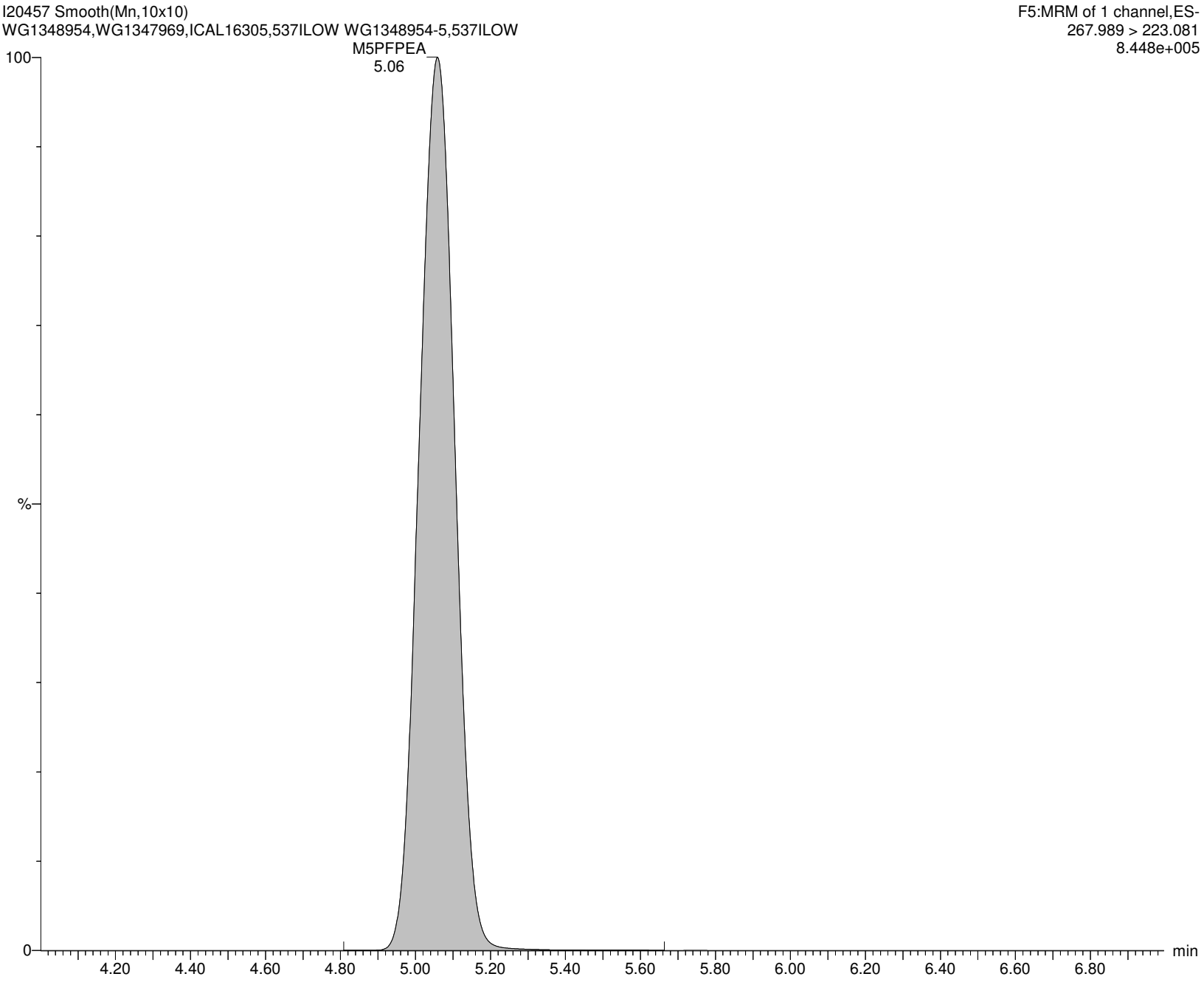
**M5PFPEA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2020\200309_537ISO.PRO\Data\WG1348954D.qld
Last Altered: Wednesday, March 11, 2020 22:52:23 Eastern Daylight Time
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**Name: I20457**
**ID: WG1348954-5,537ILOW**
**Date: 11-Mar-2020**
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**User: LCMS02:RS**
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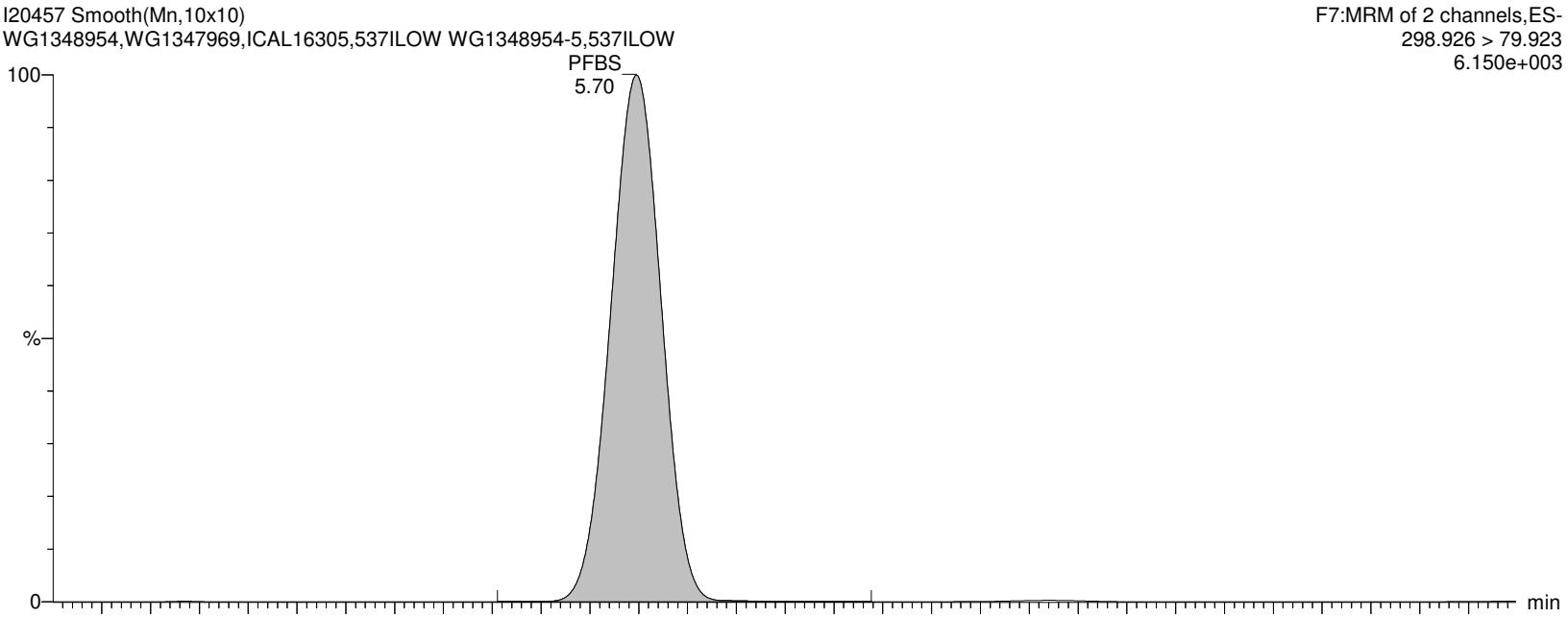
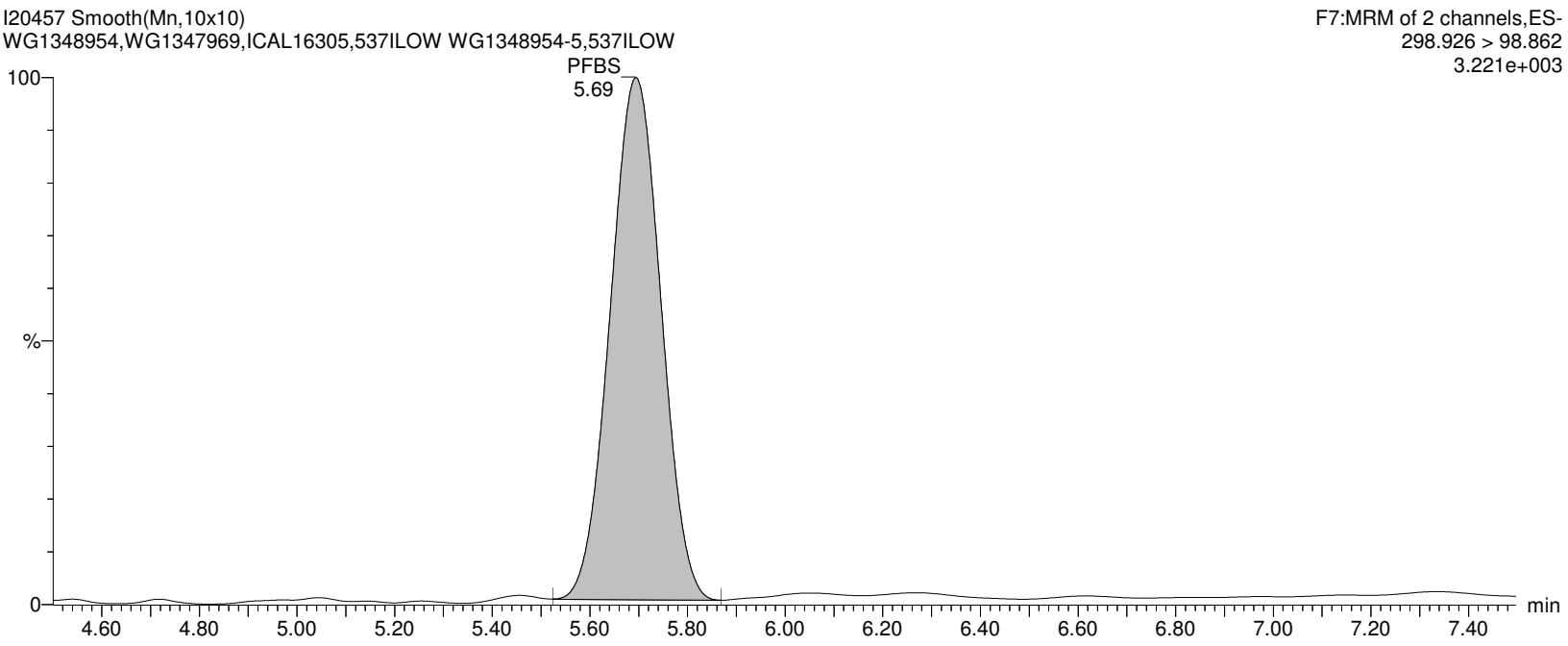
**Inlet Method Name: C:\MassLynx\Data\2020\200309_537ISO.PRO\ACQUDB\LCMS_537_ISO_B**
**Tune Method Name: C:\MassLynx\Data\2020\200309_537ISO.PRO\ACQUDB\181009_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\2020\200309_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**PFBS**





all concentration units in (ng/mL)

Alpha Analytical Inc.
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Printed: Thursday, March 12, 2020 03:26:43 Eastern Daylight Time

**Name: I20457**
**ID: WG1348954-5,537ILOW**
**Date: 11-Mar-2020**
**Time: 03:27:13**
**Description: WG1348954,WG1347969,ICAL16305,537ILOW**
**User: LCMS02:RS**
**Vial: 1:A,2**
**Instrument: XEVO-TQSmicro#QEB0050**
**Inlet Method Name: C:\MassLynx\Data\2020\200309_537ISO.PRO\ACQUDB\LCMS_537_ISO_B**
**Tune Method Name: C:\MassLynx\Data\2020\200309_537ISO.PRO\ACQUDB\181009_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\2020\200309_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

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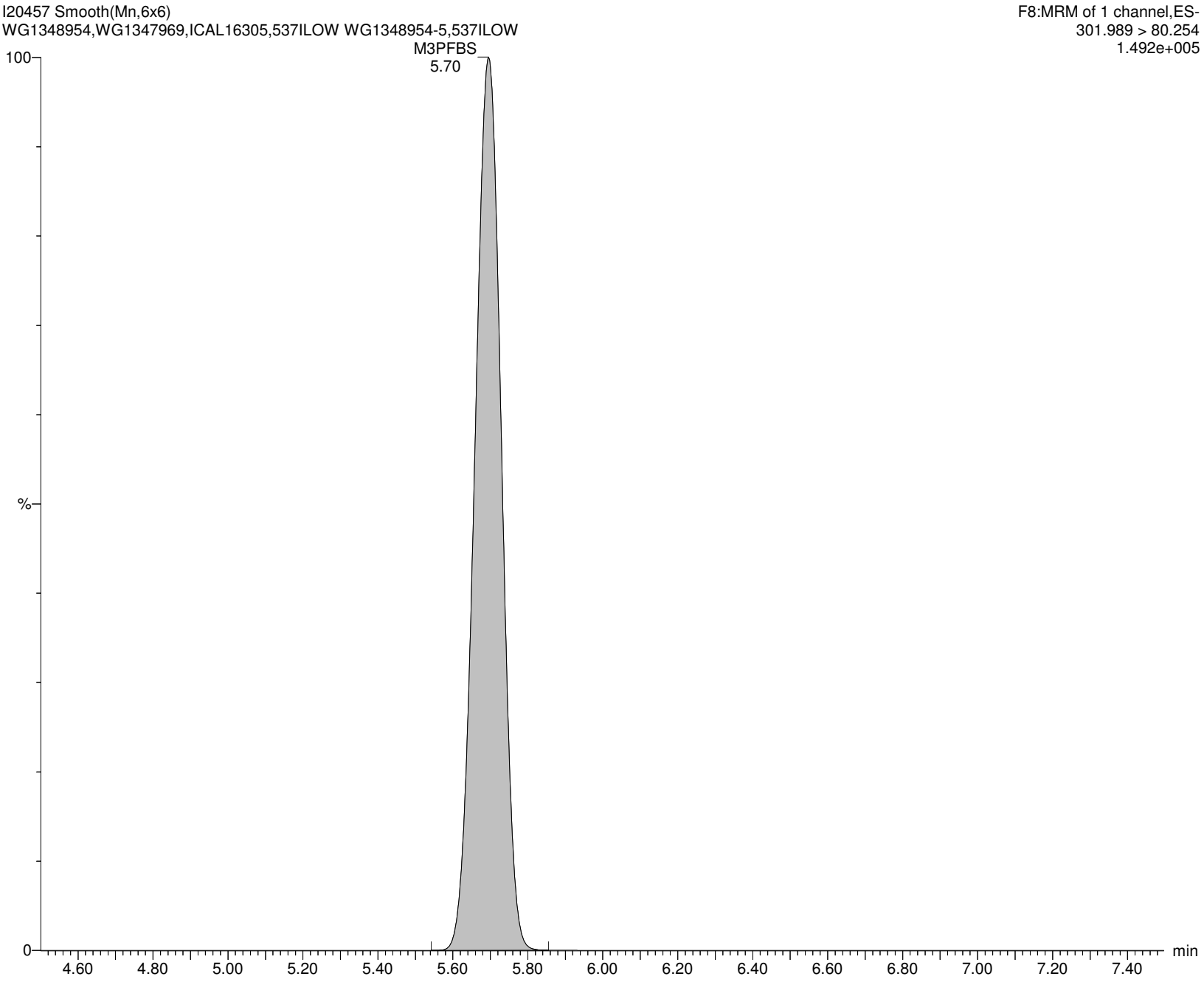



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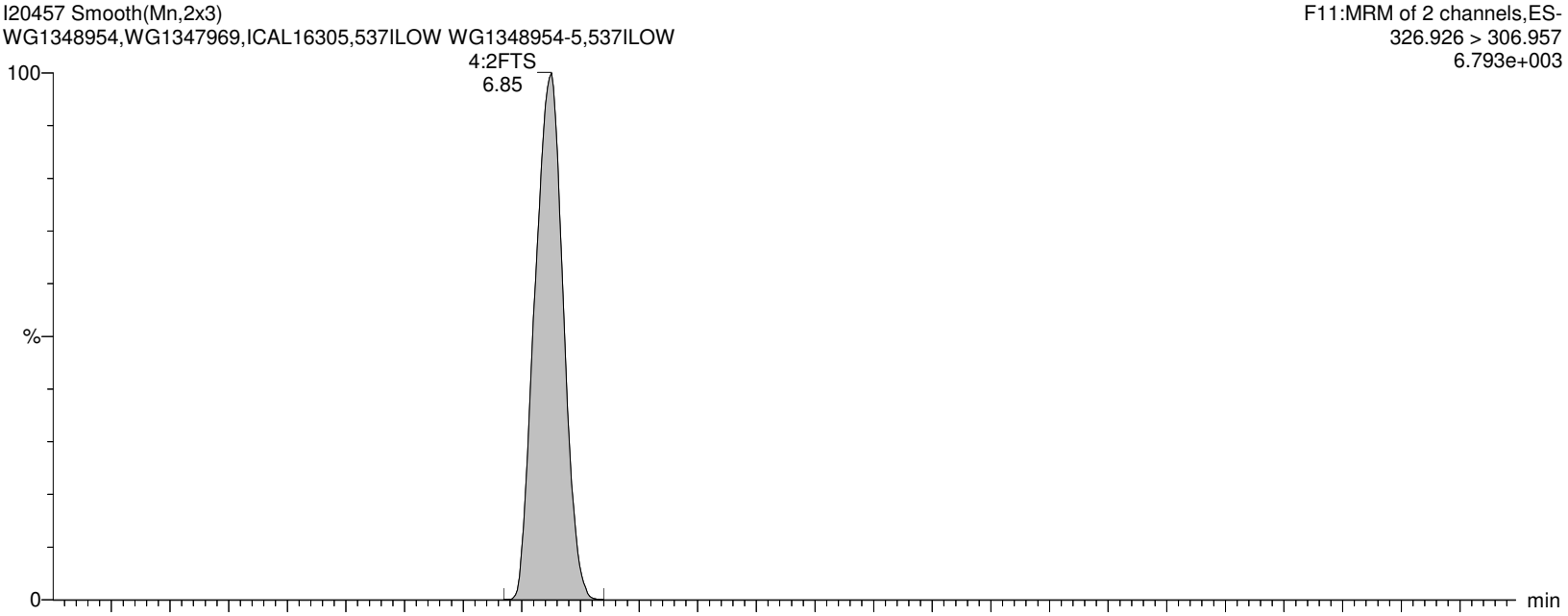
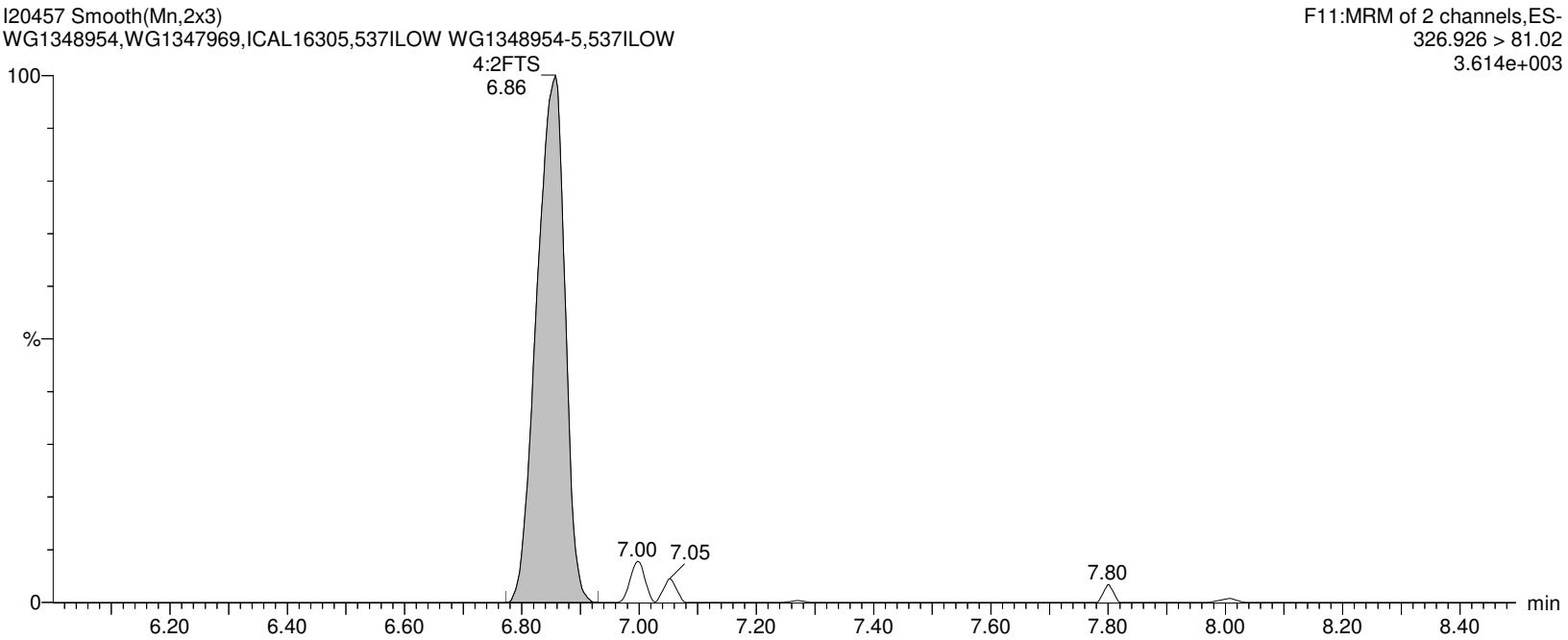
**4:2FTS**





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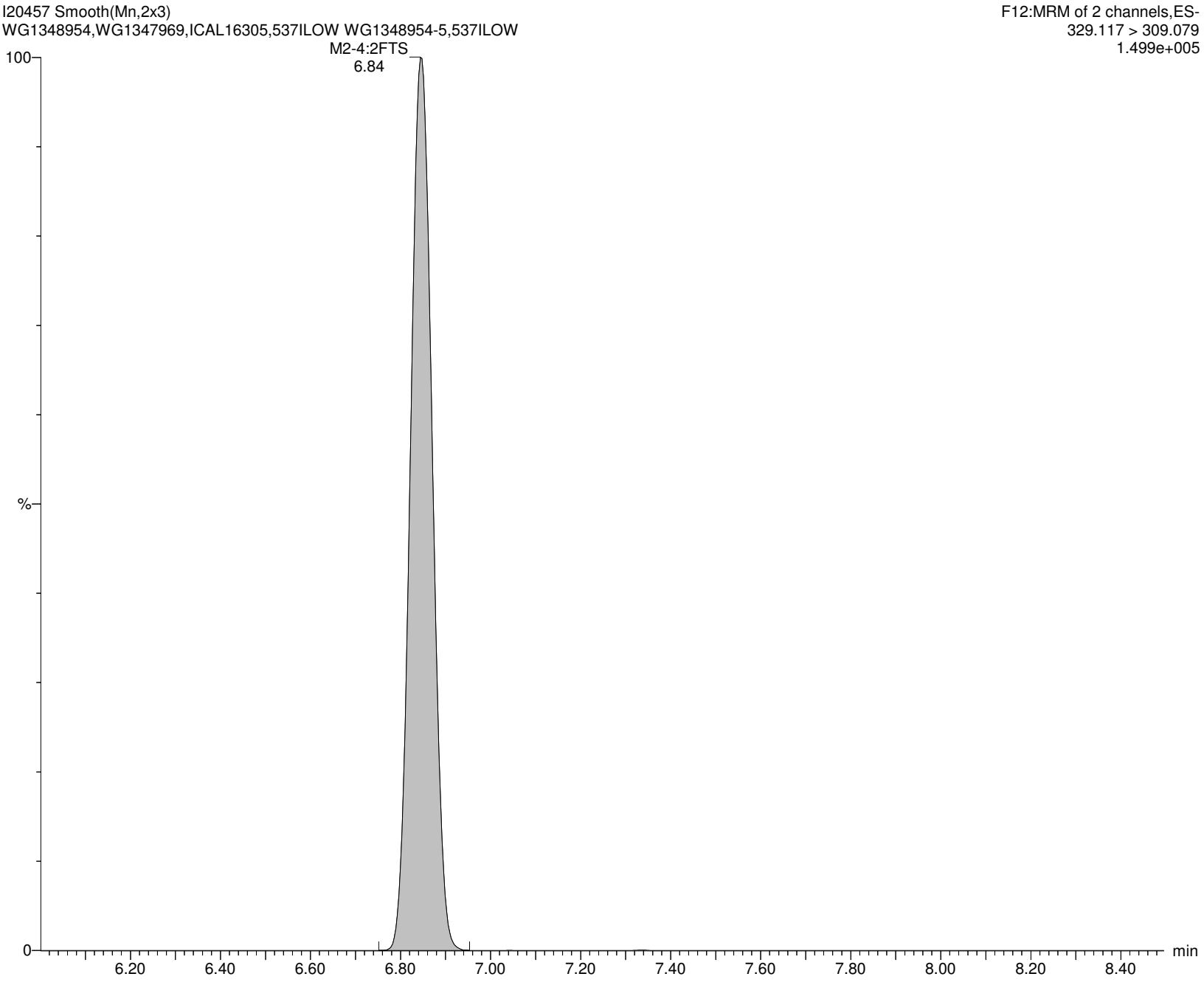
**M2-4:2FTS**





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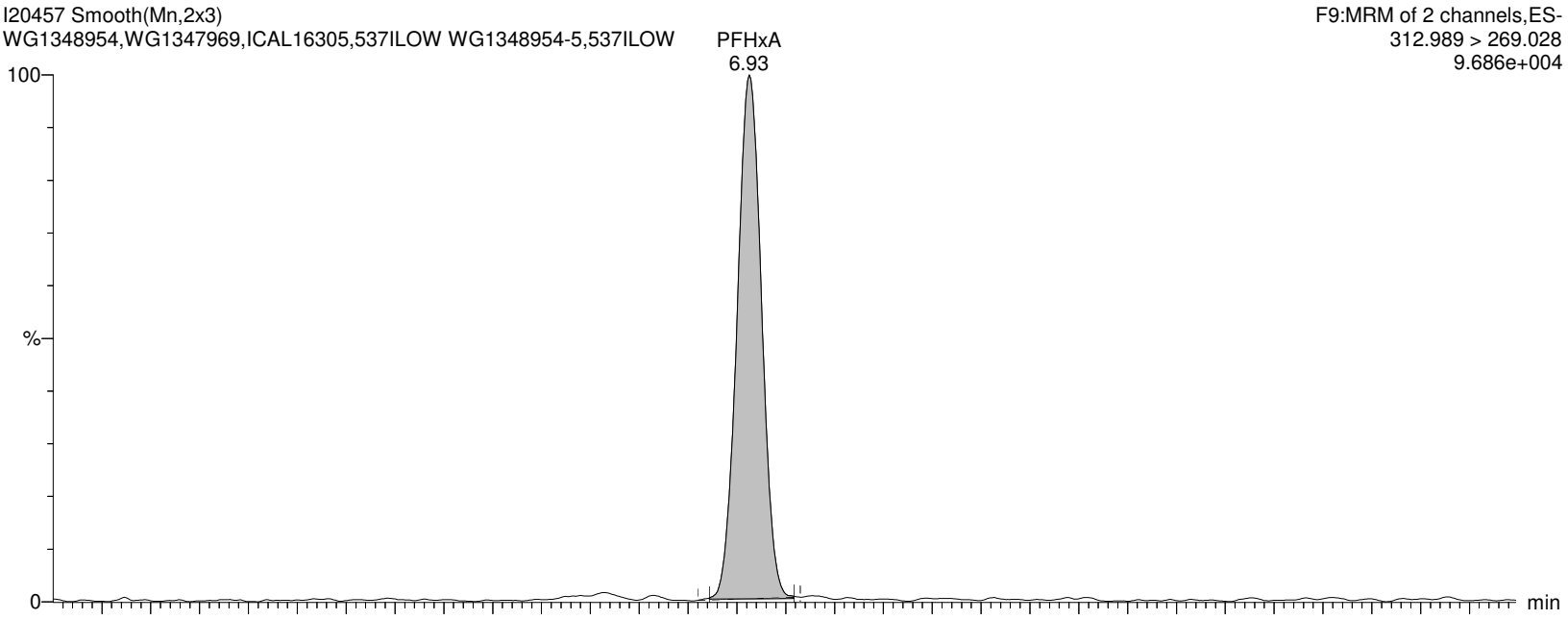
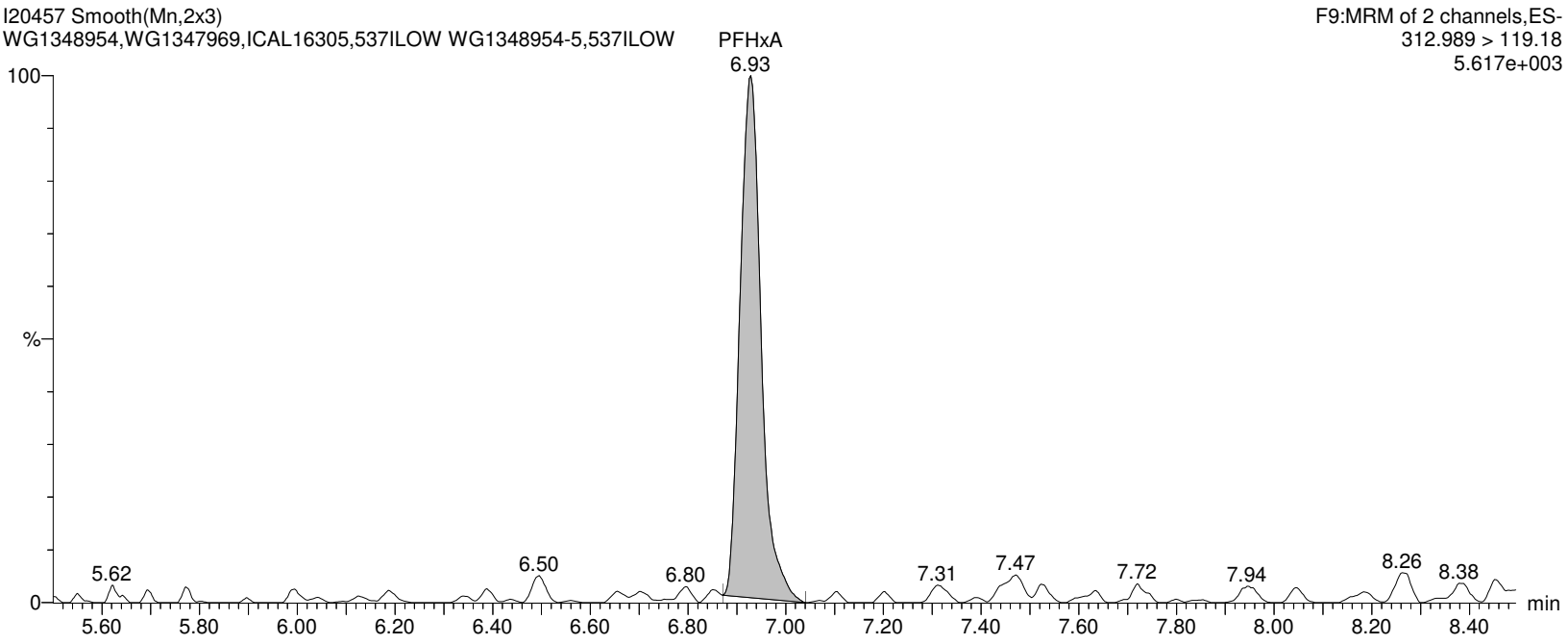
**PFHxA**





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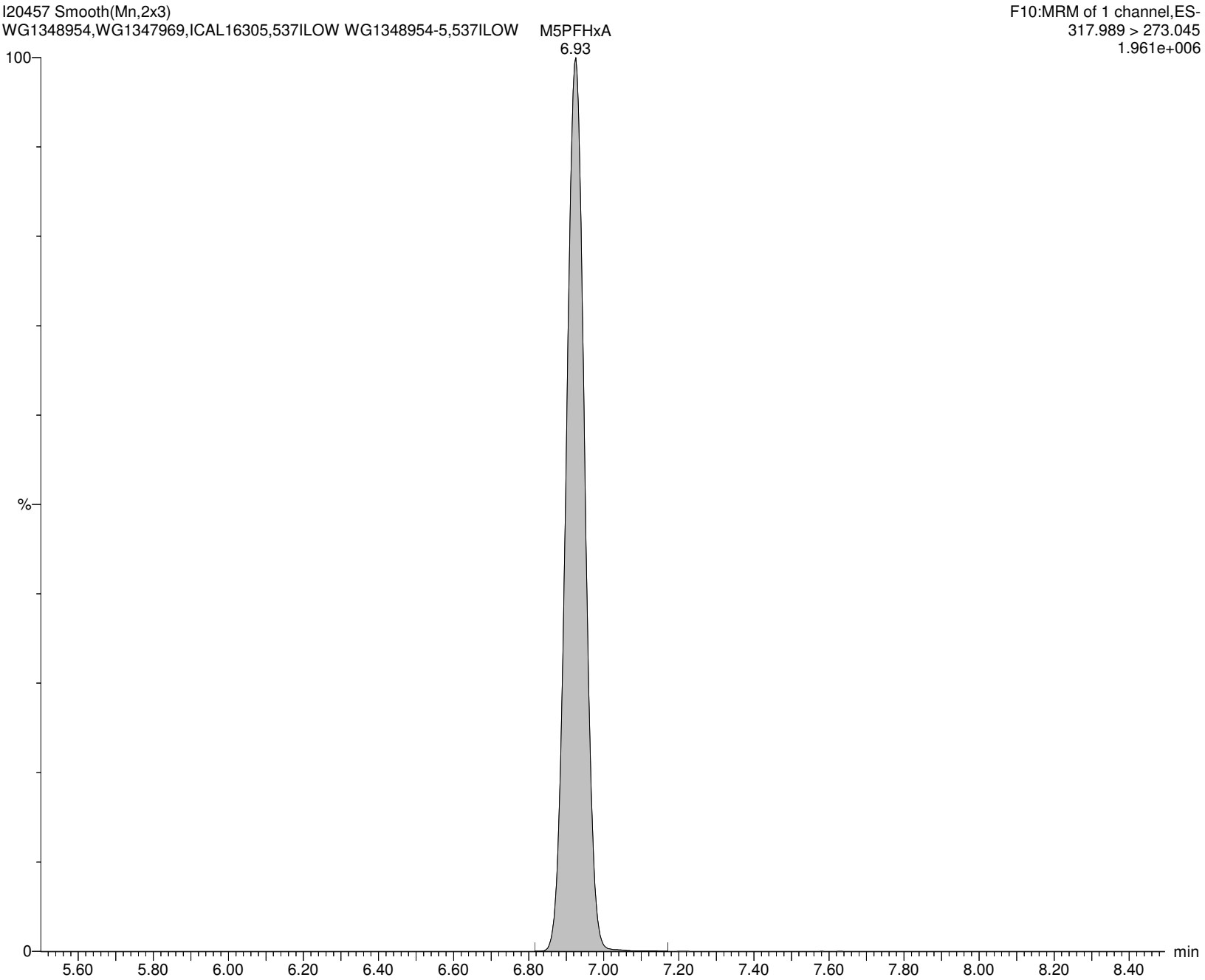



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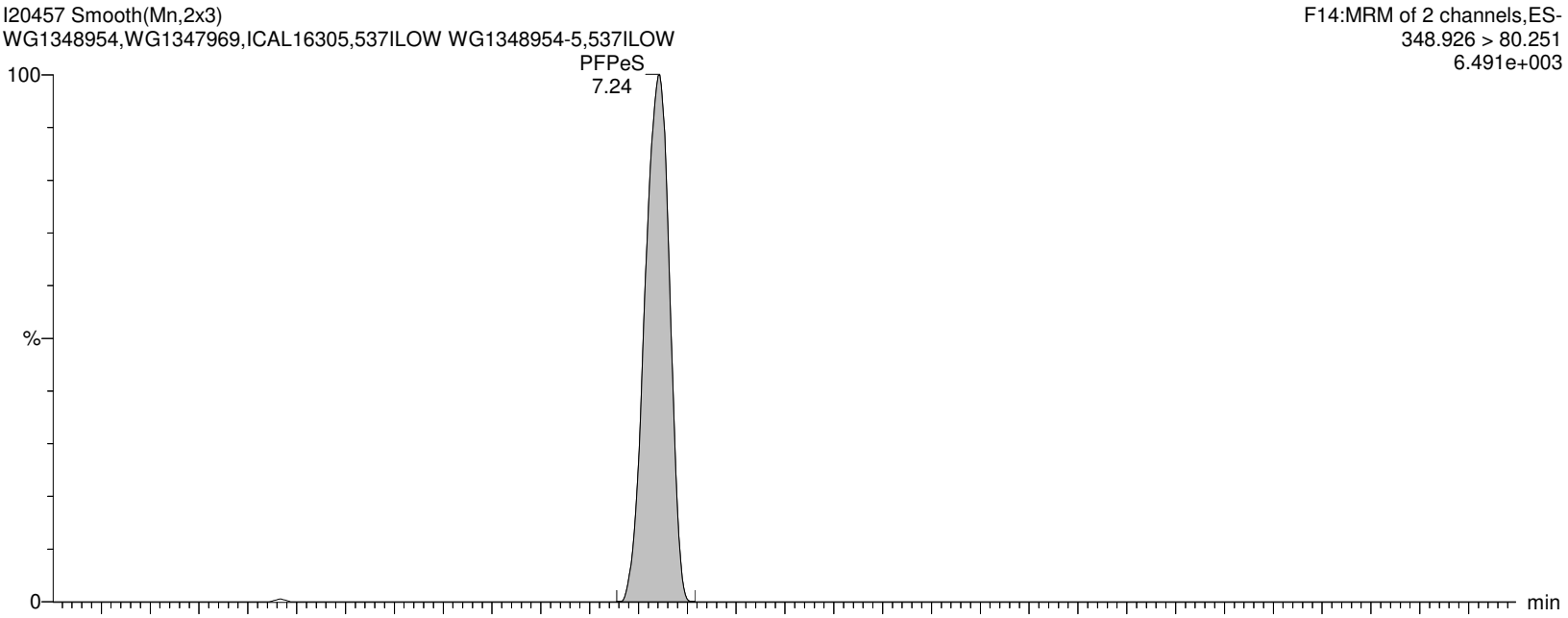
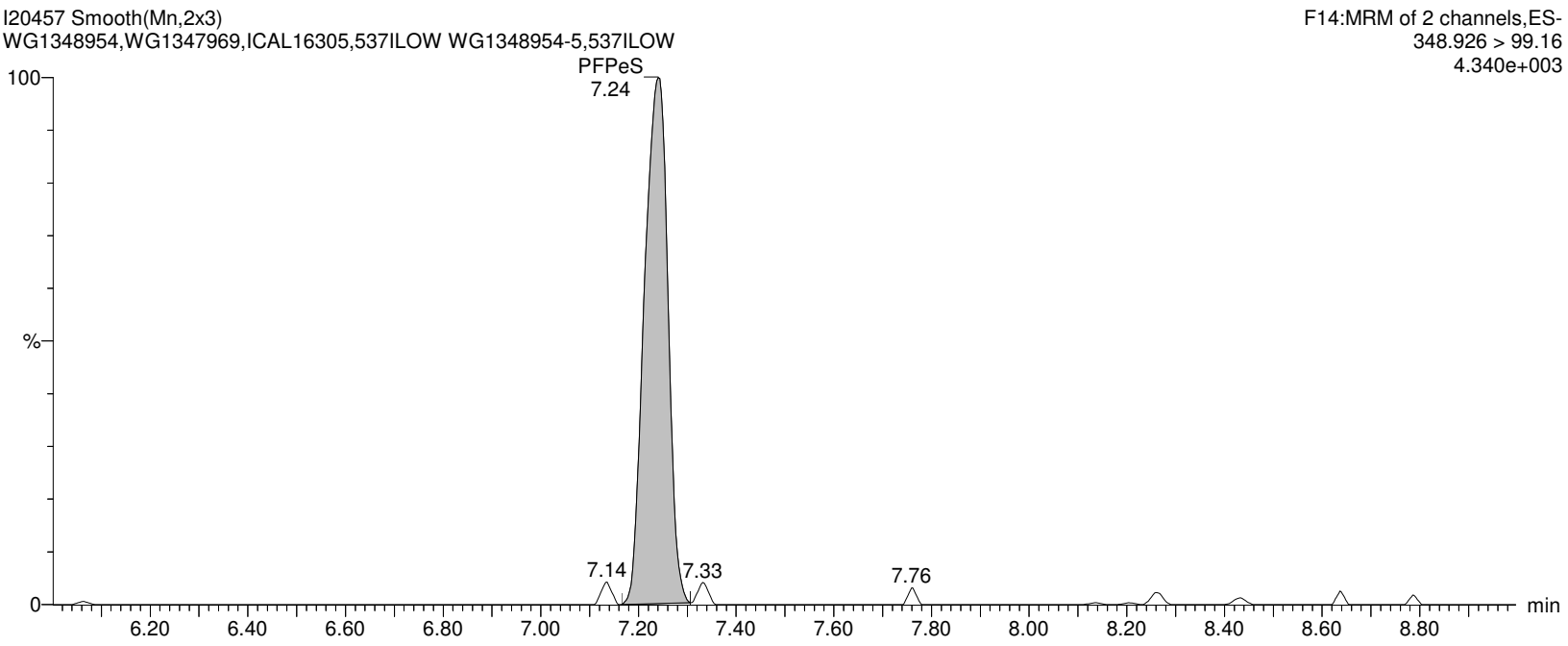
**PFPeS**





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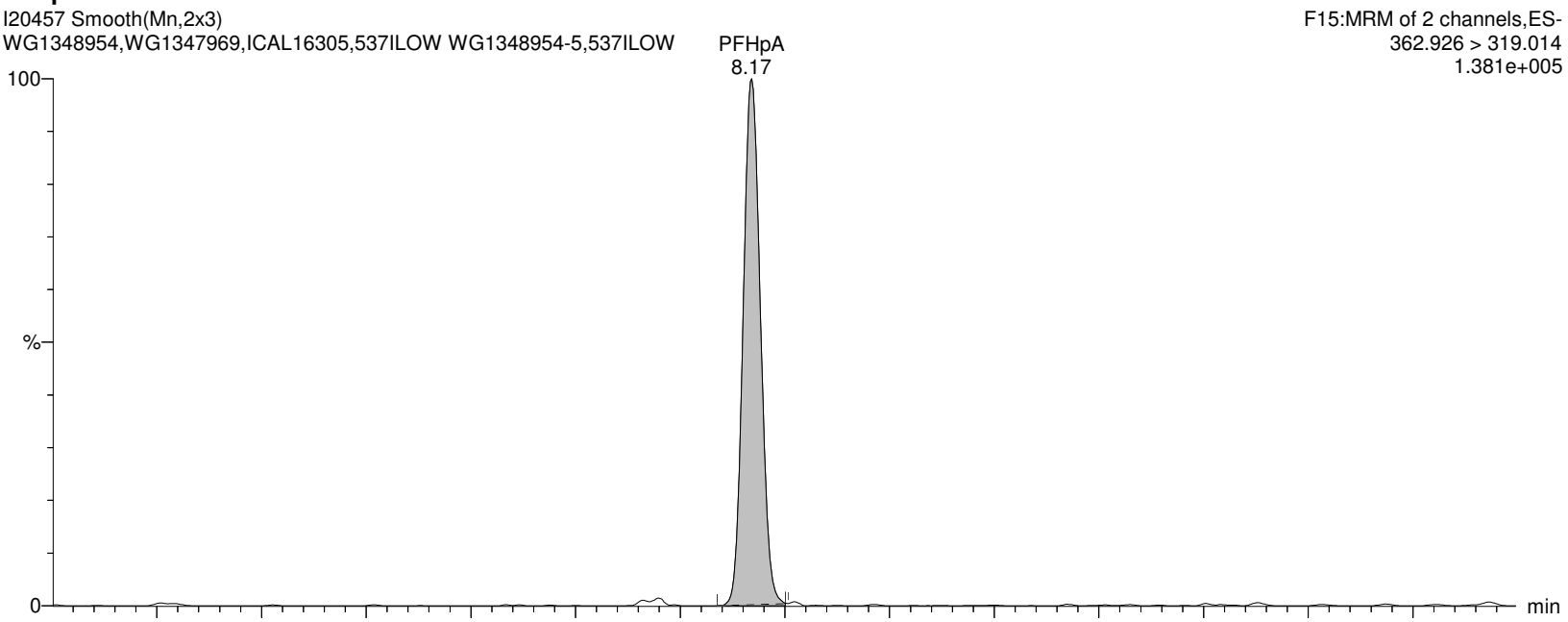
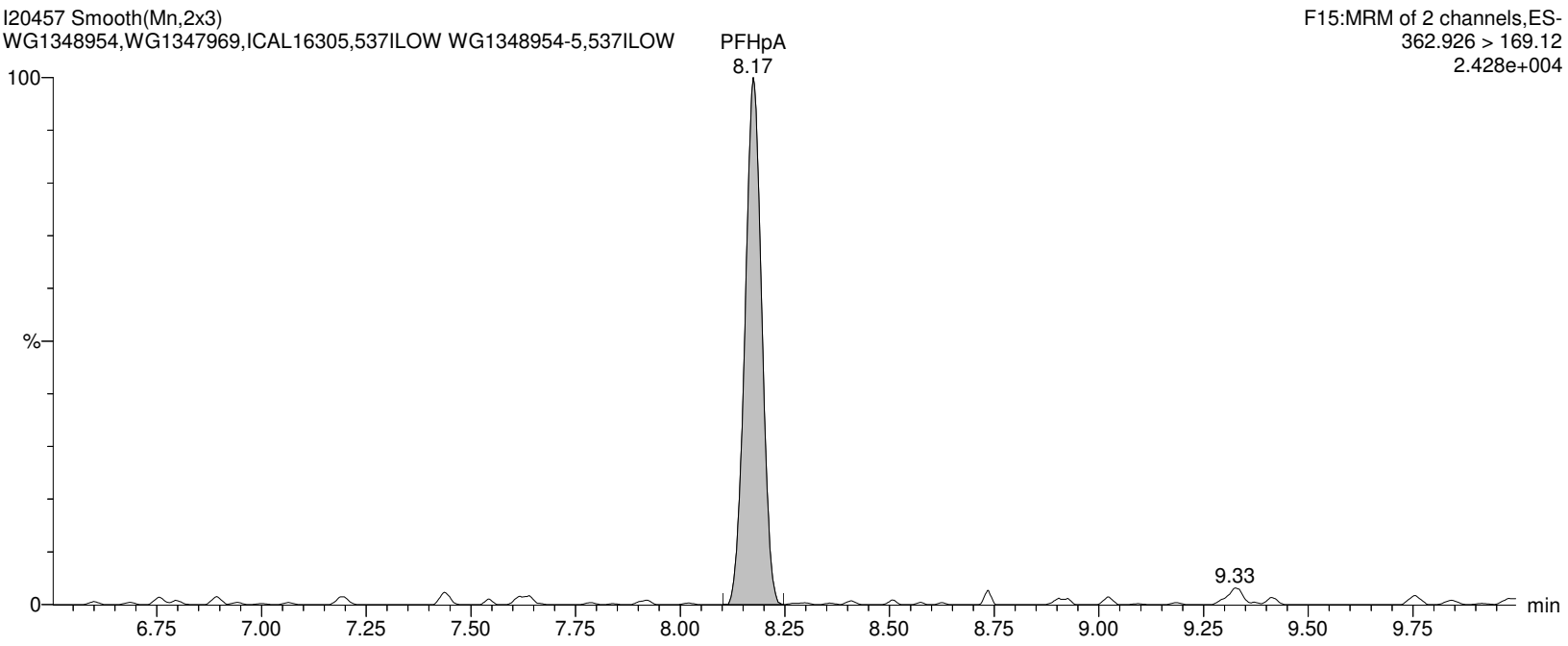
**PFHpA**





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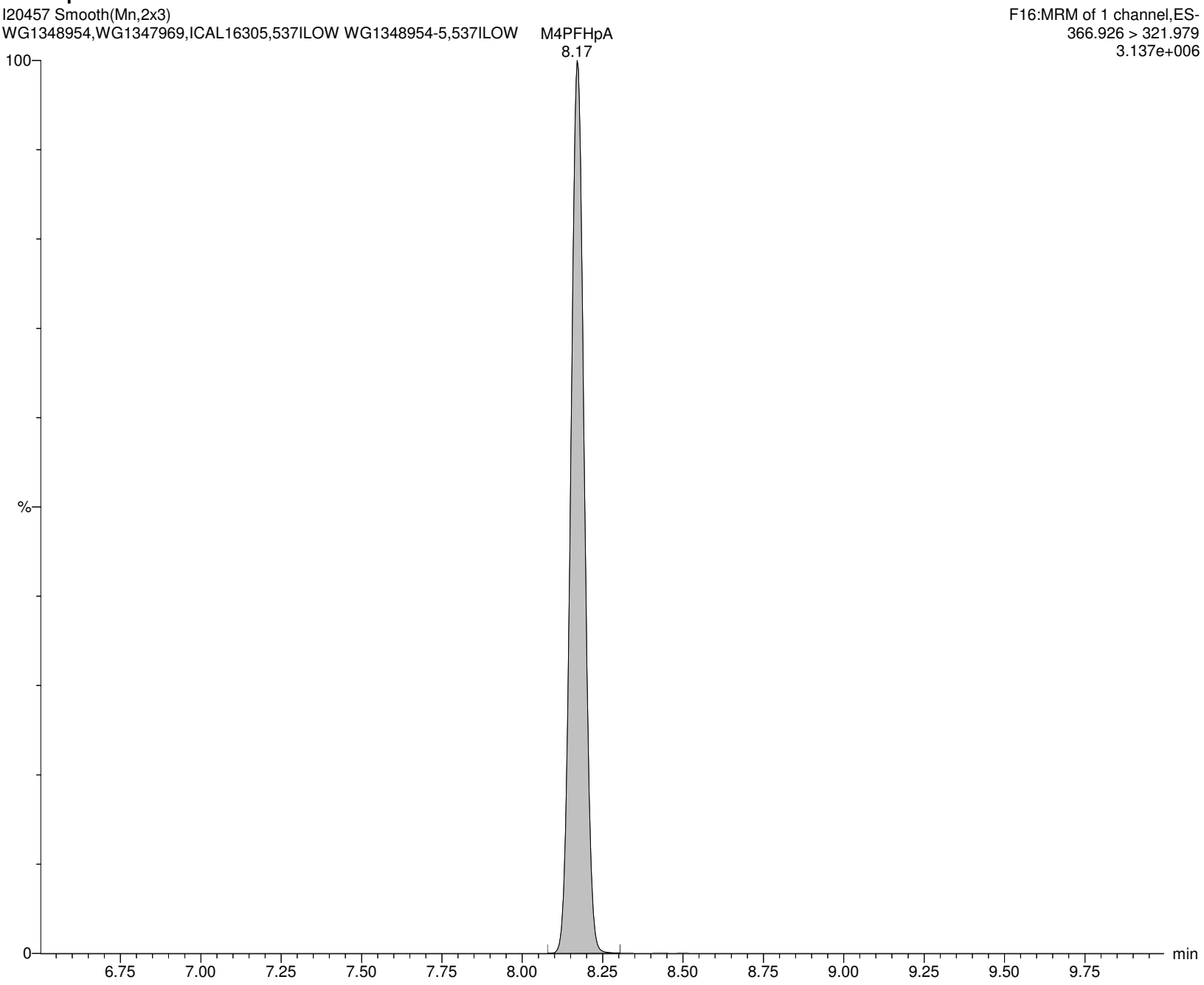
**M4PFHpA**





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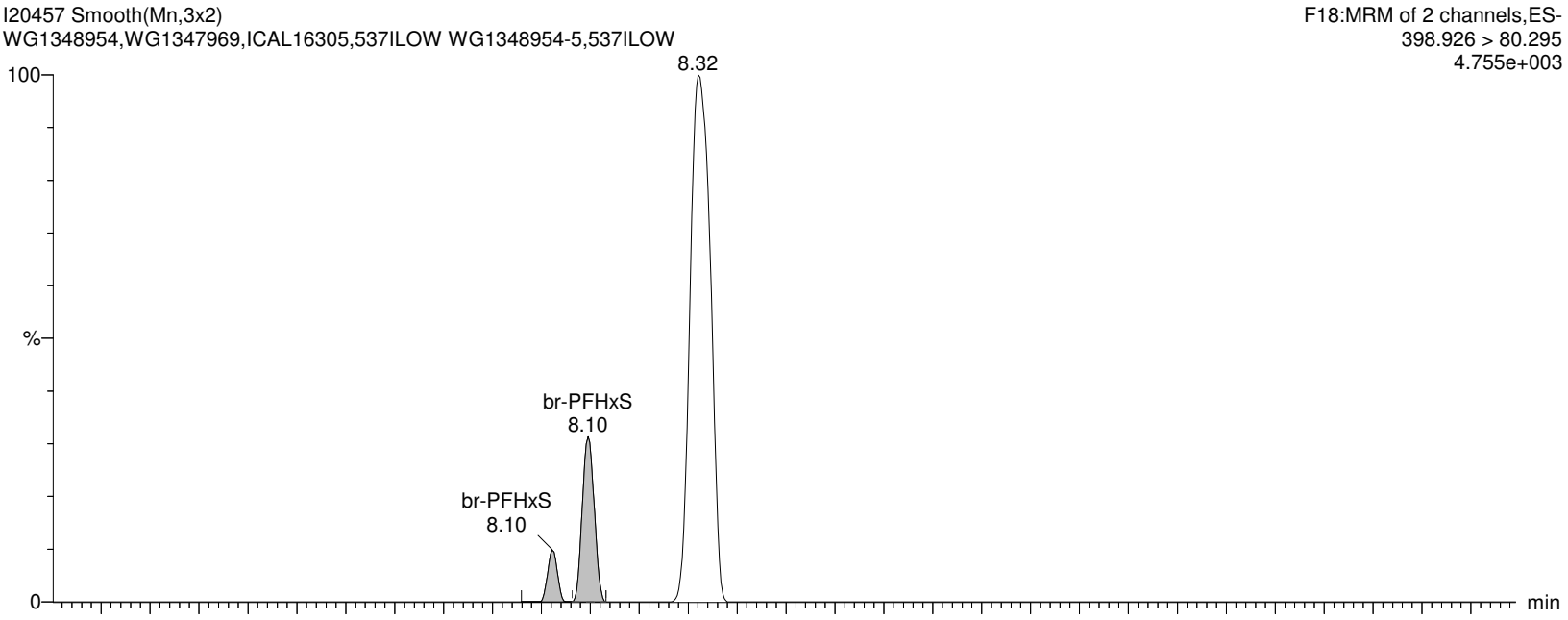
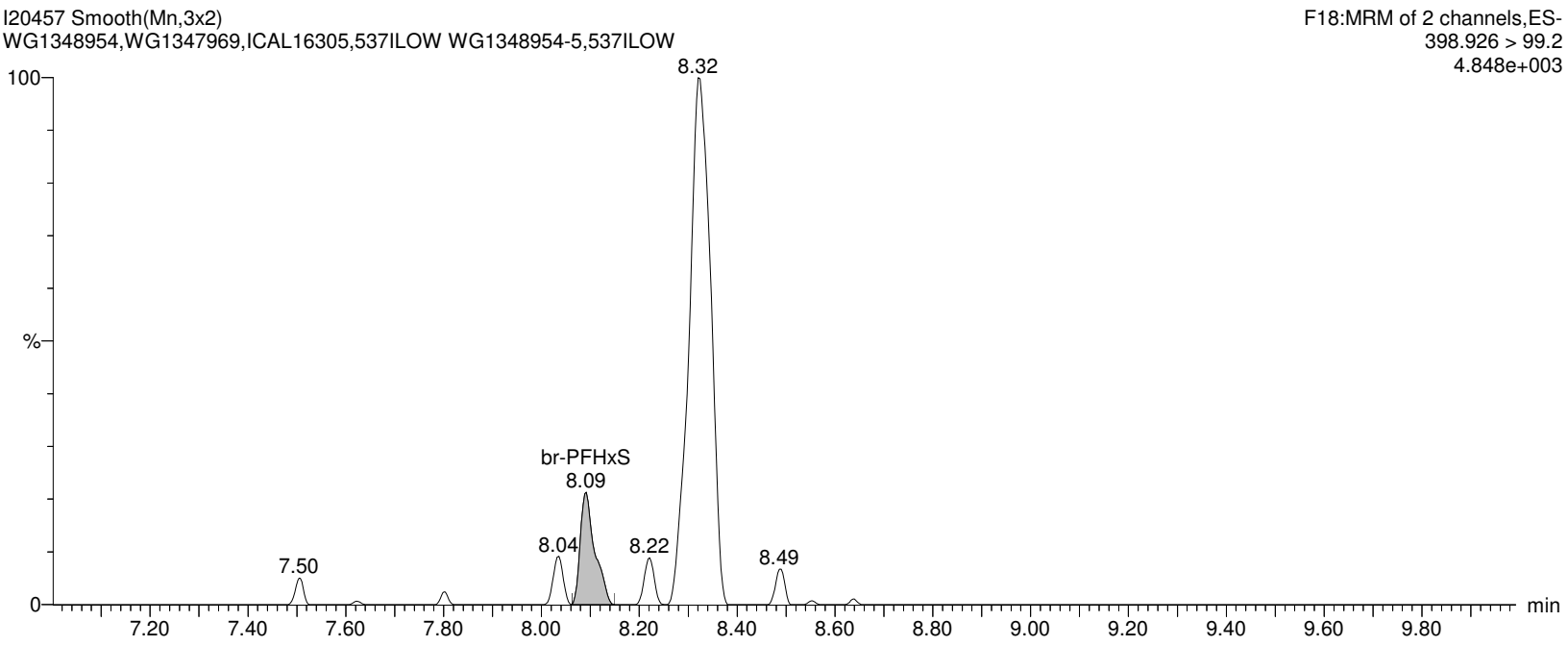
**br-PFHxS**





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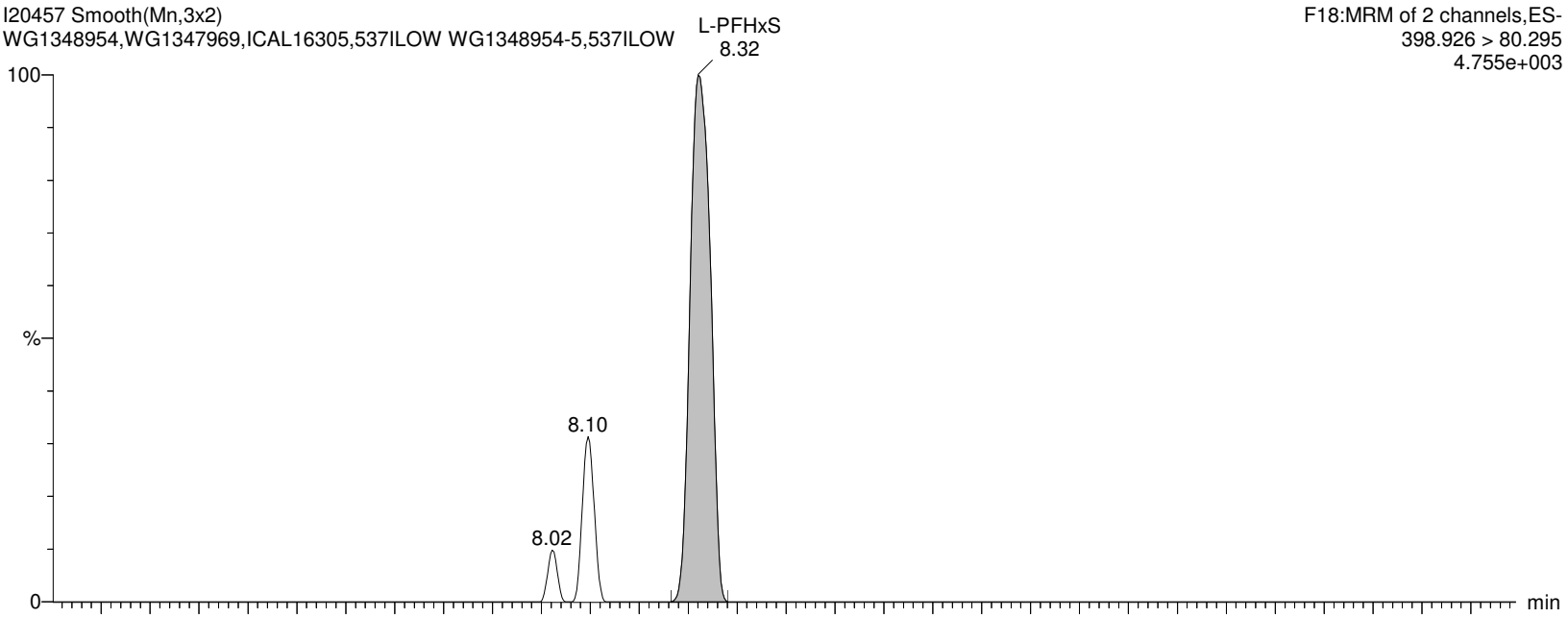
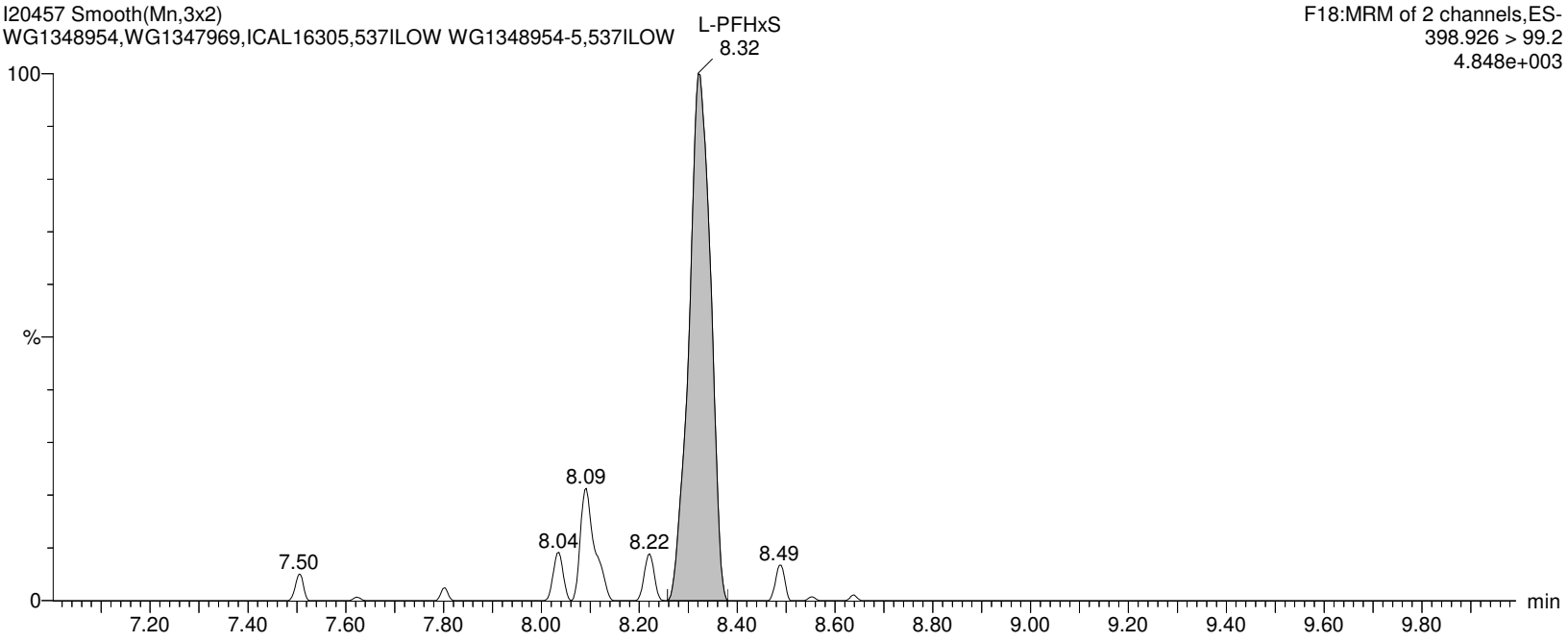
**L-PFHxS**





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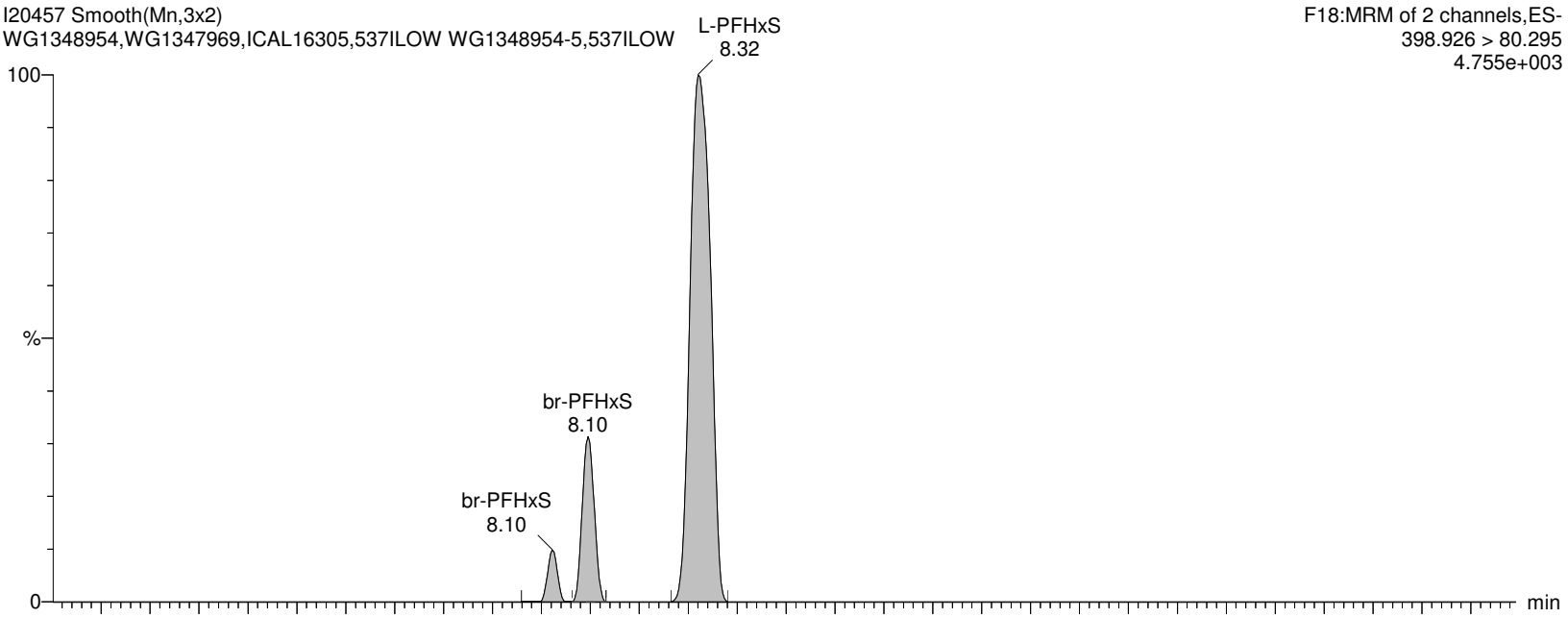
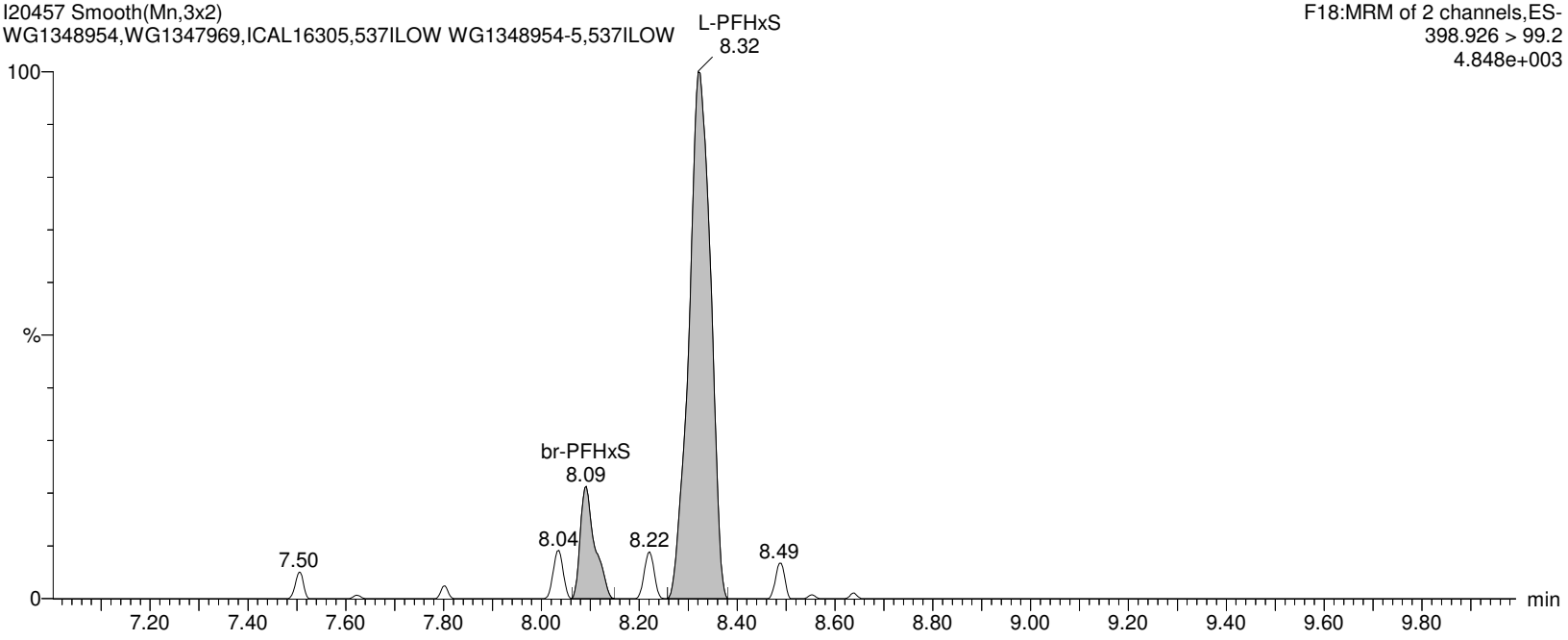
**PFHxS**





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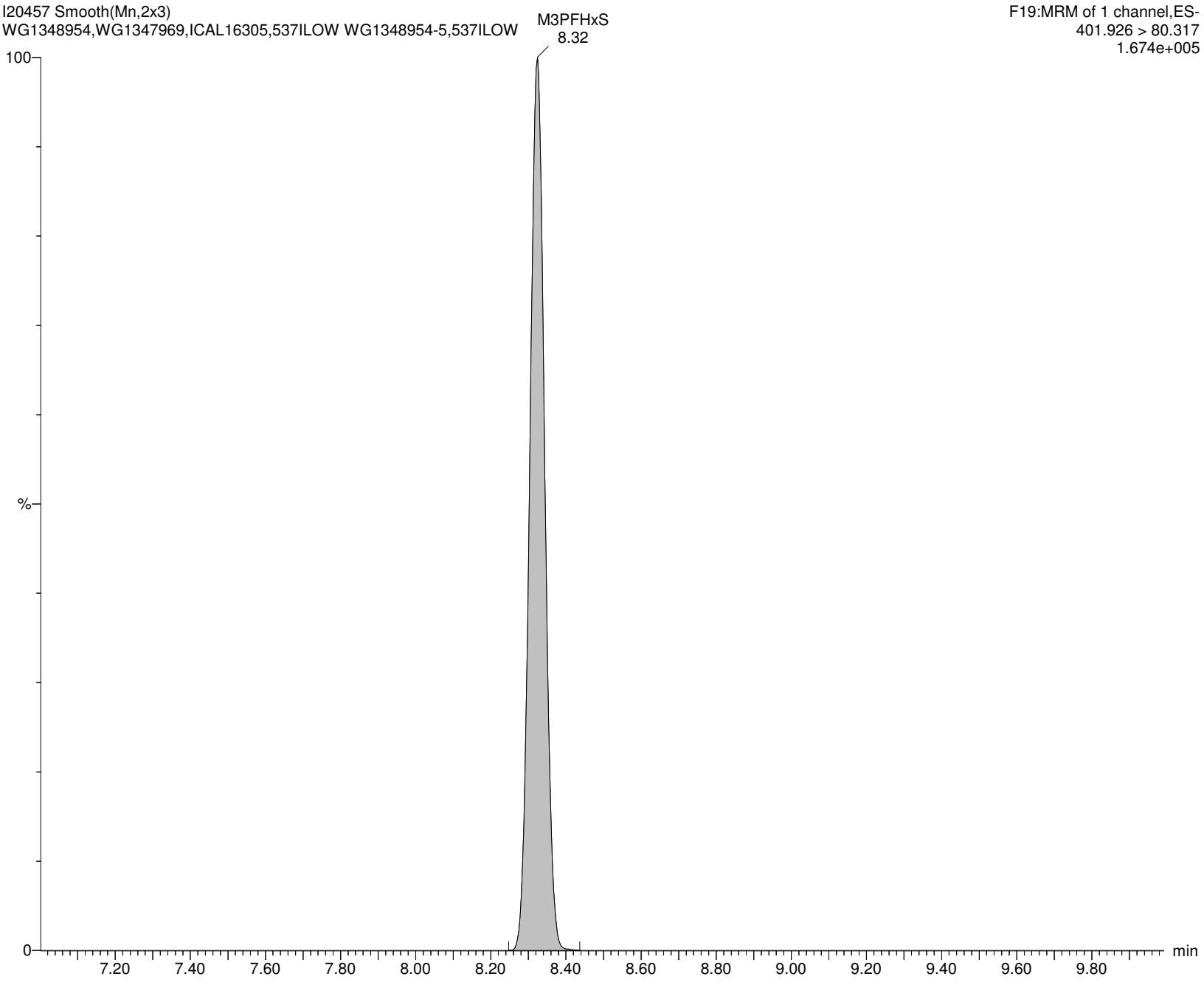



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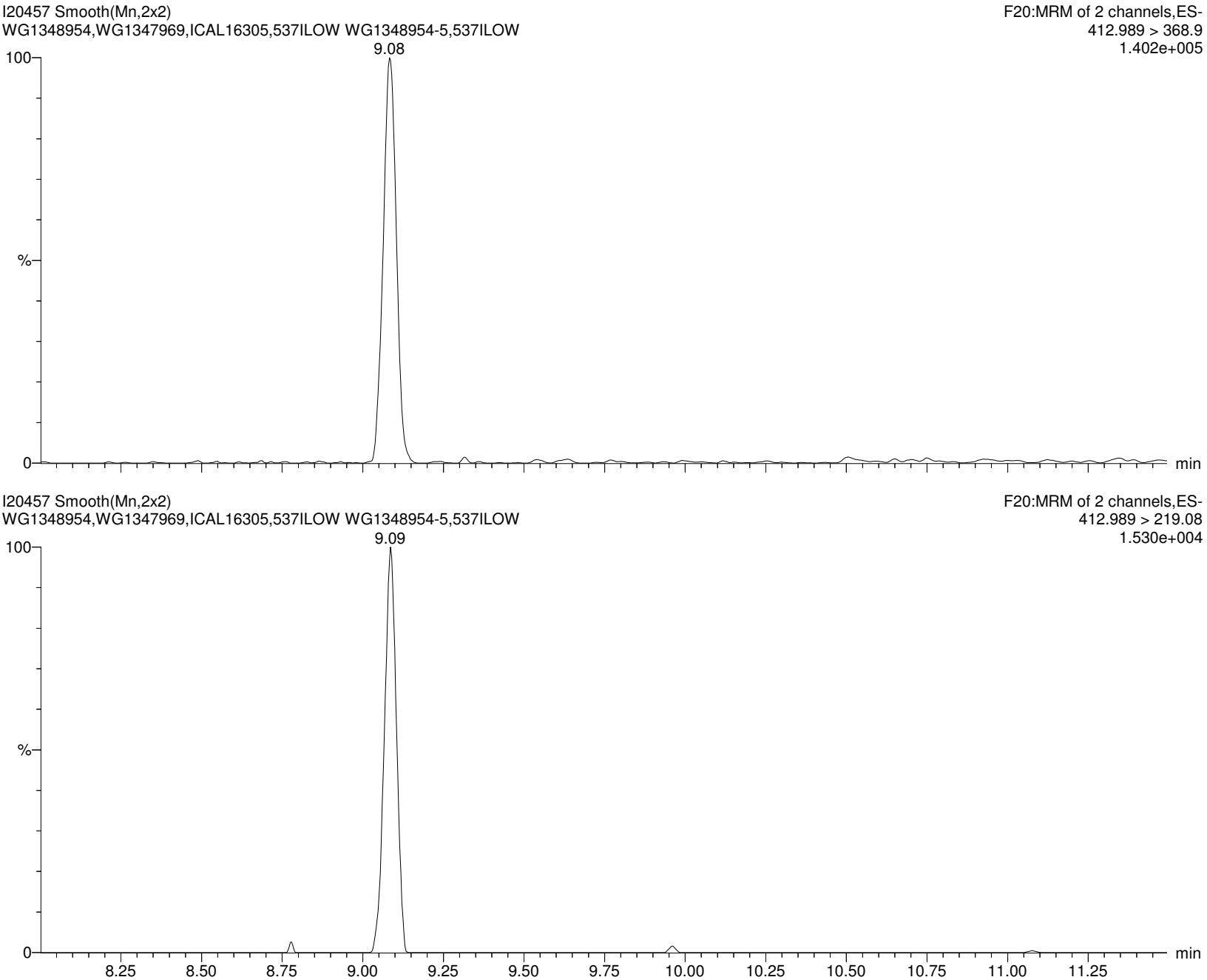
**br-PFOA**





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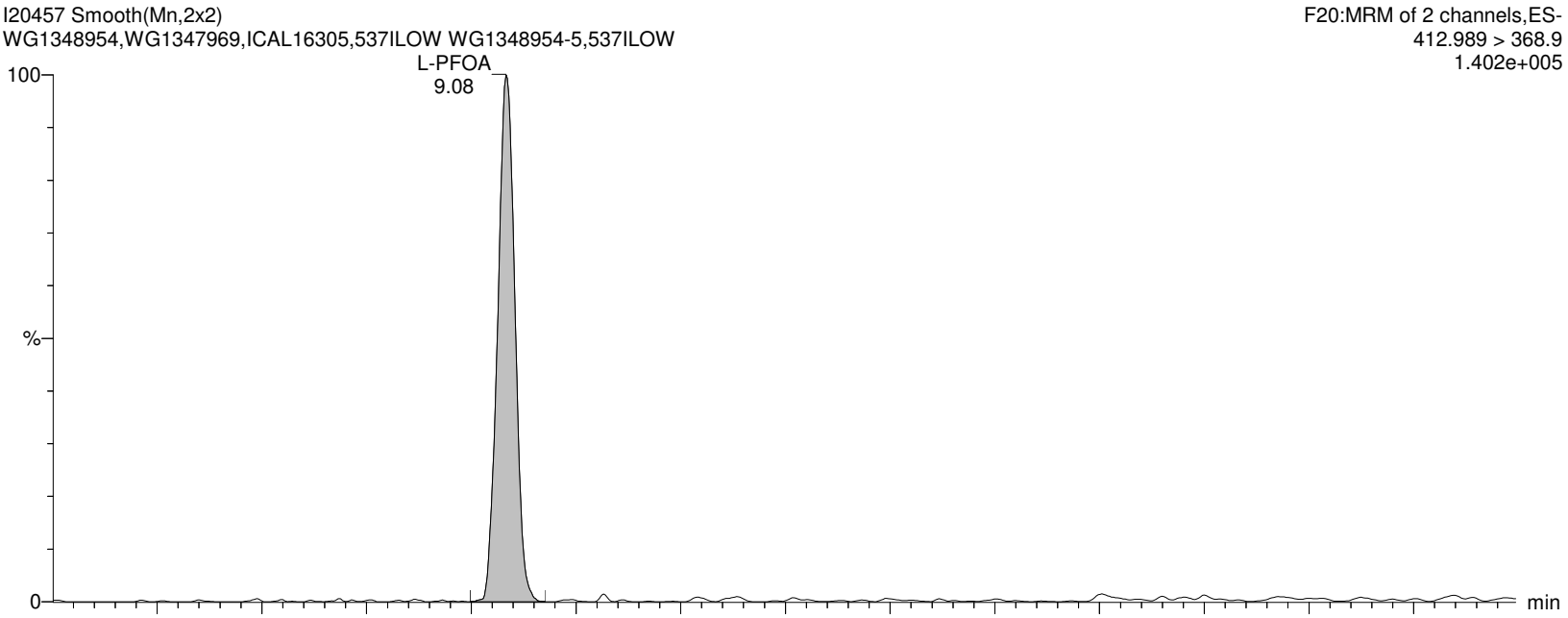
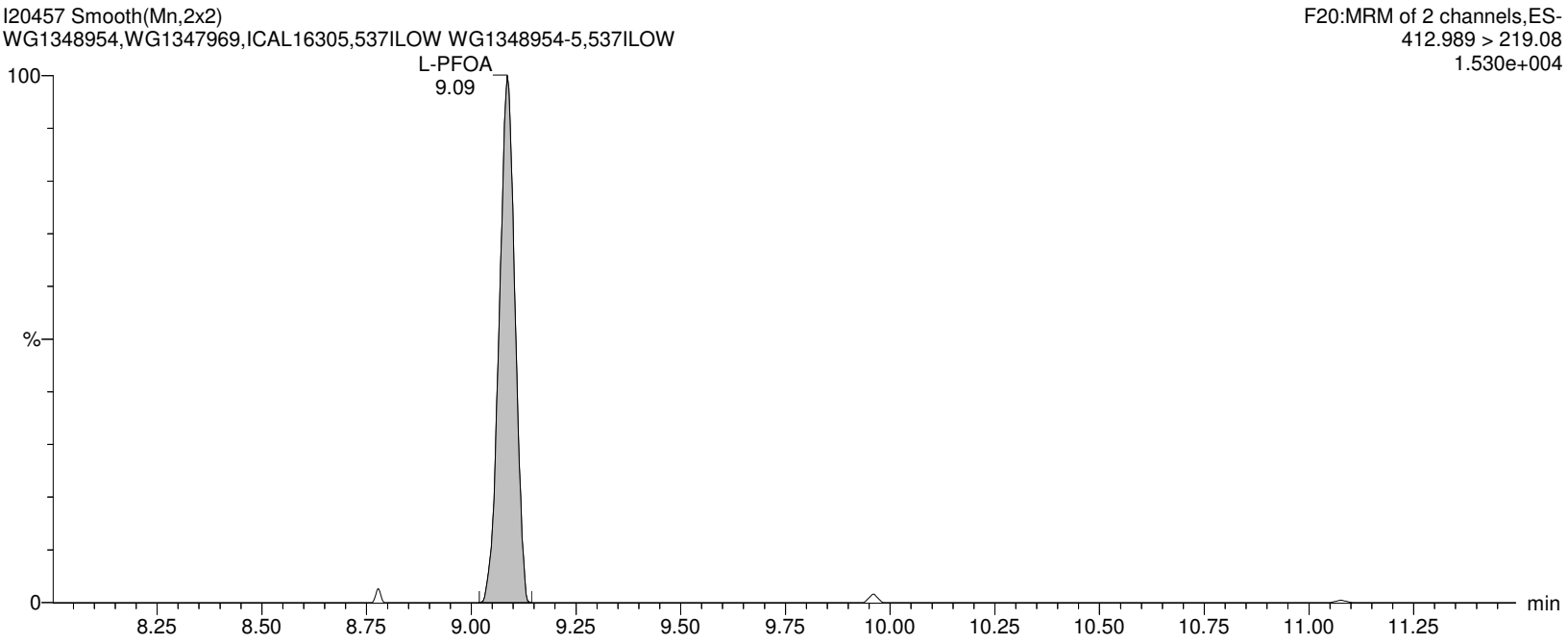
**L-PFOA**





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**MS Method Name: C:\MassLynx\Data\2020\200309_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

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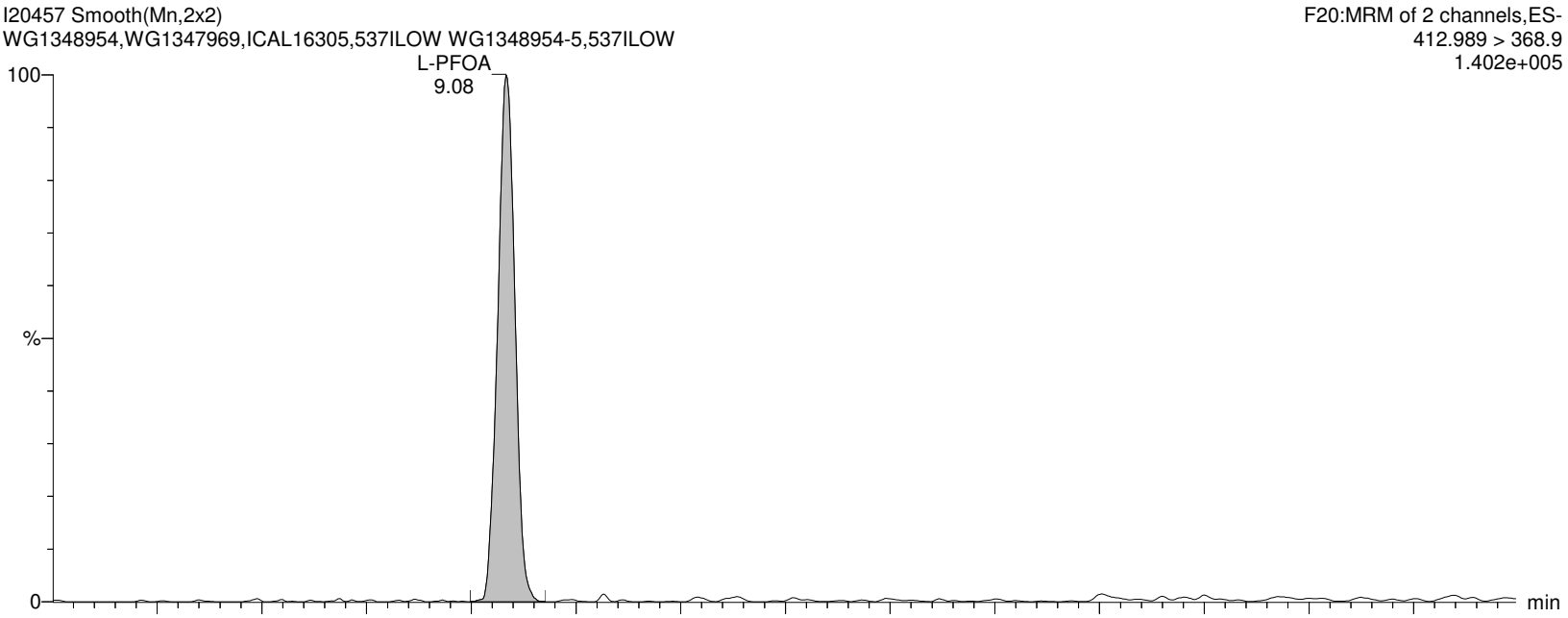


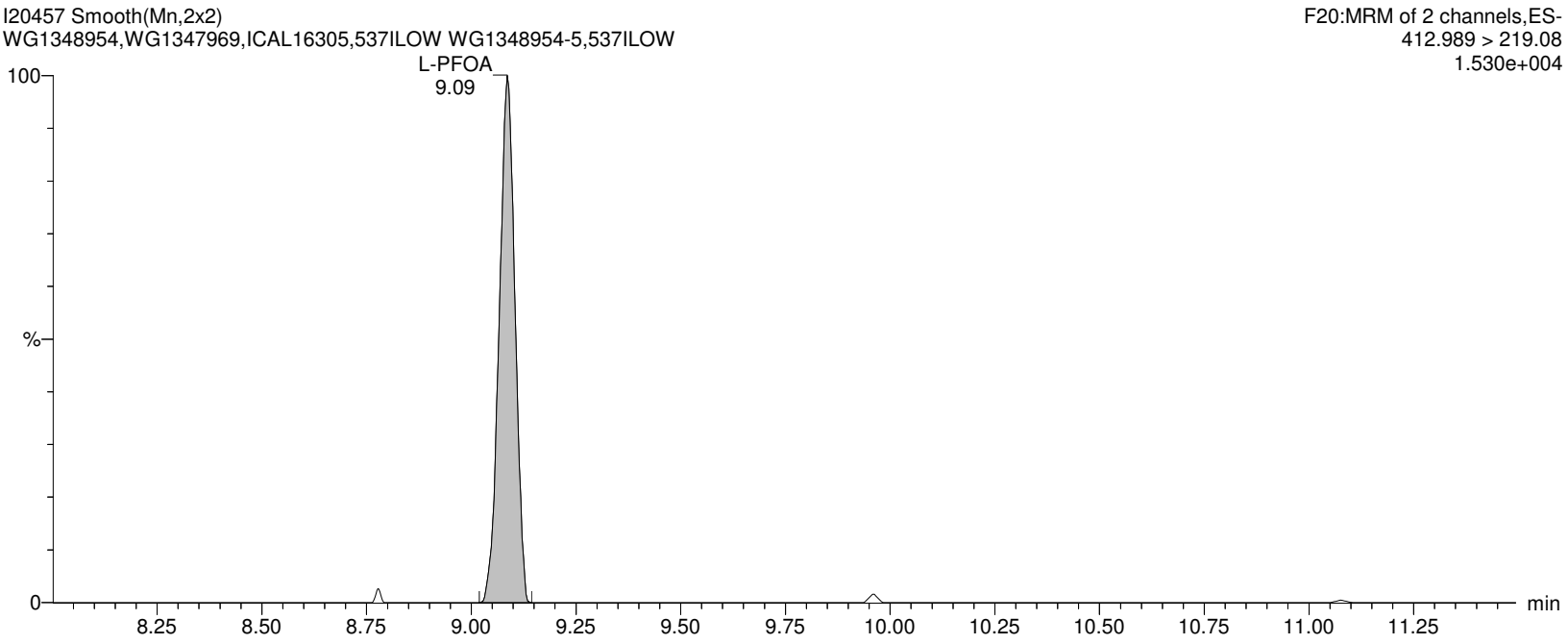



all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2020\200309_537ISO.PRO\Data\WG1348954D.qld
Last Altered: Wednesday, March 11, 2020 22:52:23 Eastern Daylight Time
Printed: Thursday, March 12, 2020 03:26:43 Eastern Daylight Time

**Name: I20457**
**ID: WG1348954-5,537ILOW**
**Date: 11-Mar-2020**
**Time: 03:27:13**
**Description: WG1348954,WG1347969,ICAL16305,537ILOW**
**User: LCMS02:RS**
**Vial: 1:A,2**
**Instrument: XEVO-TQSmicro#QEB0050**
**Inlet Method Name: C:\MassLynx\Data\2020\200309_537ISO.PRO\ACQUDB\LCMS_537_ISO_B**
**Tune Method Name: C:\MassLynx\Data\2020\200309_537ISO.PRO\ACQUDB\181009_TUNE.IPR**
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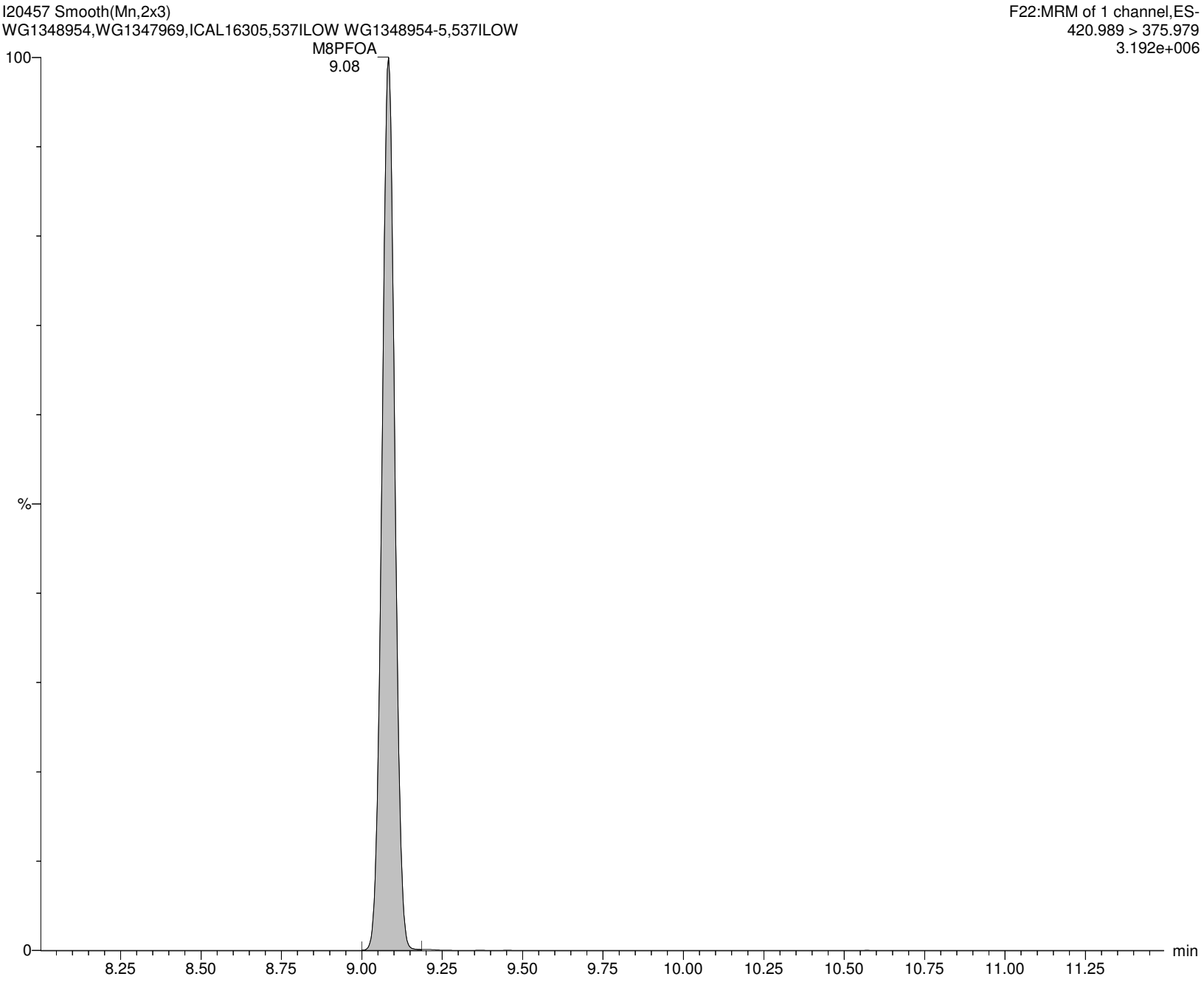



all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2020\200309_537ISO.PRO\Data\WG1348954D.qld
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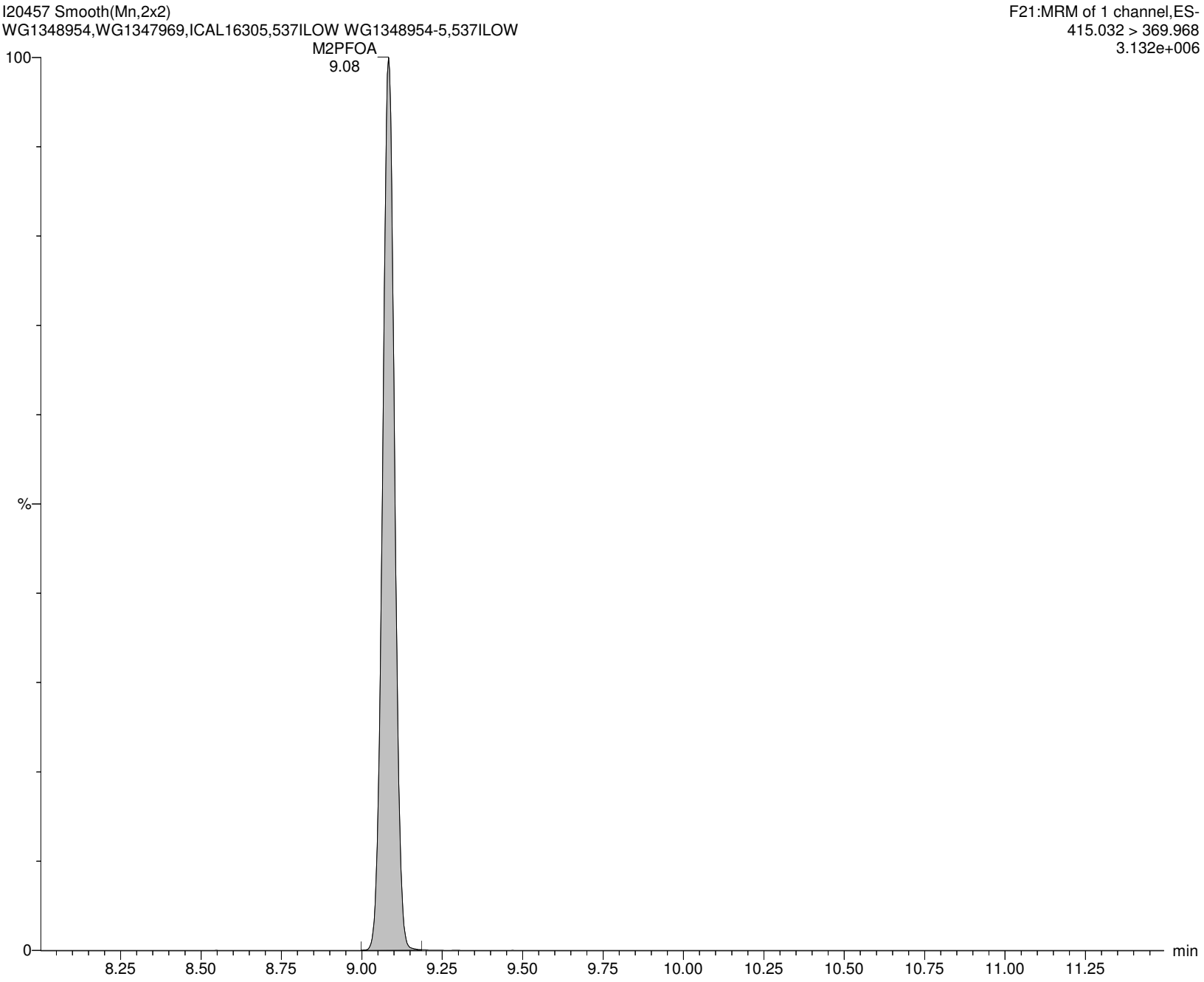



all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2020\200309_537ISO.PRO\Data\WG1348954D.qld
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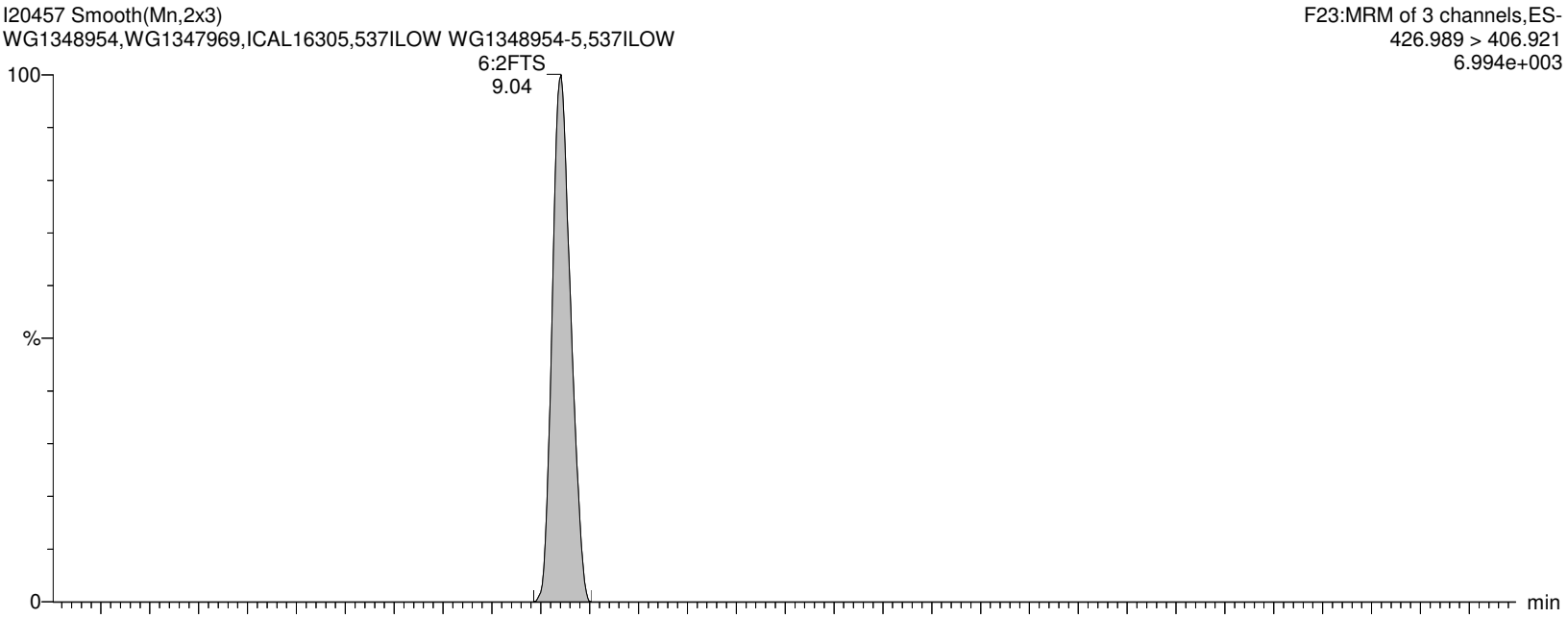
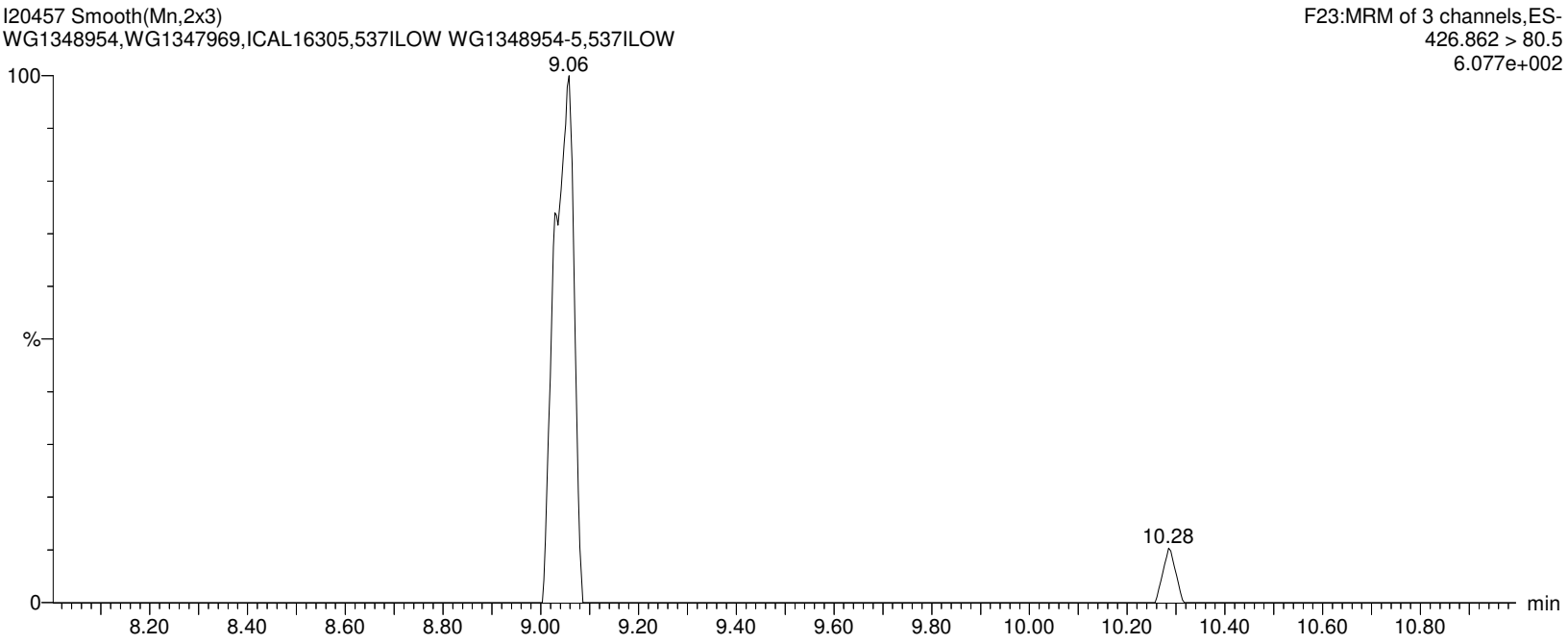
**6:2FTS**





all concentration units in (ng/mL)

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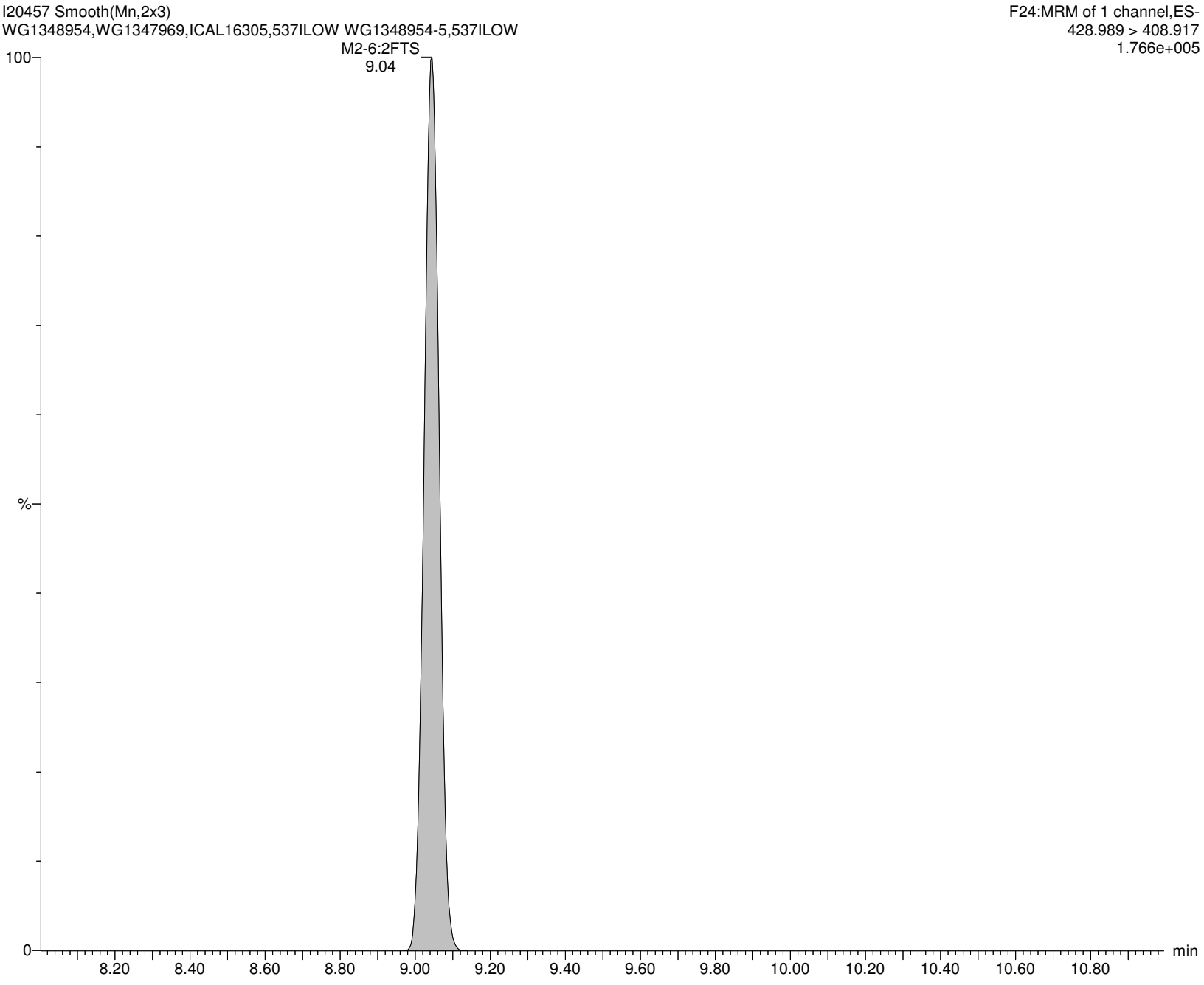
**M2-6:2FTS**





all concentration units in (ng/mL)

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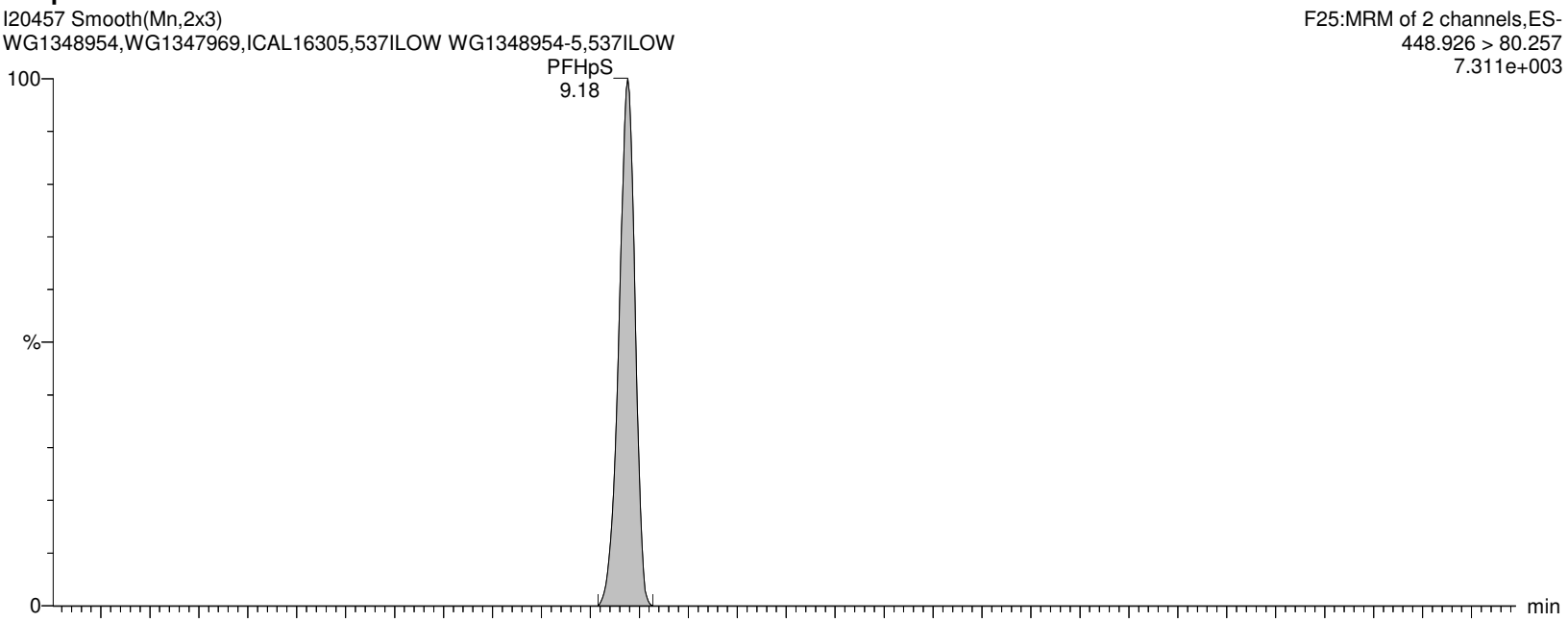
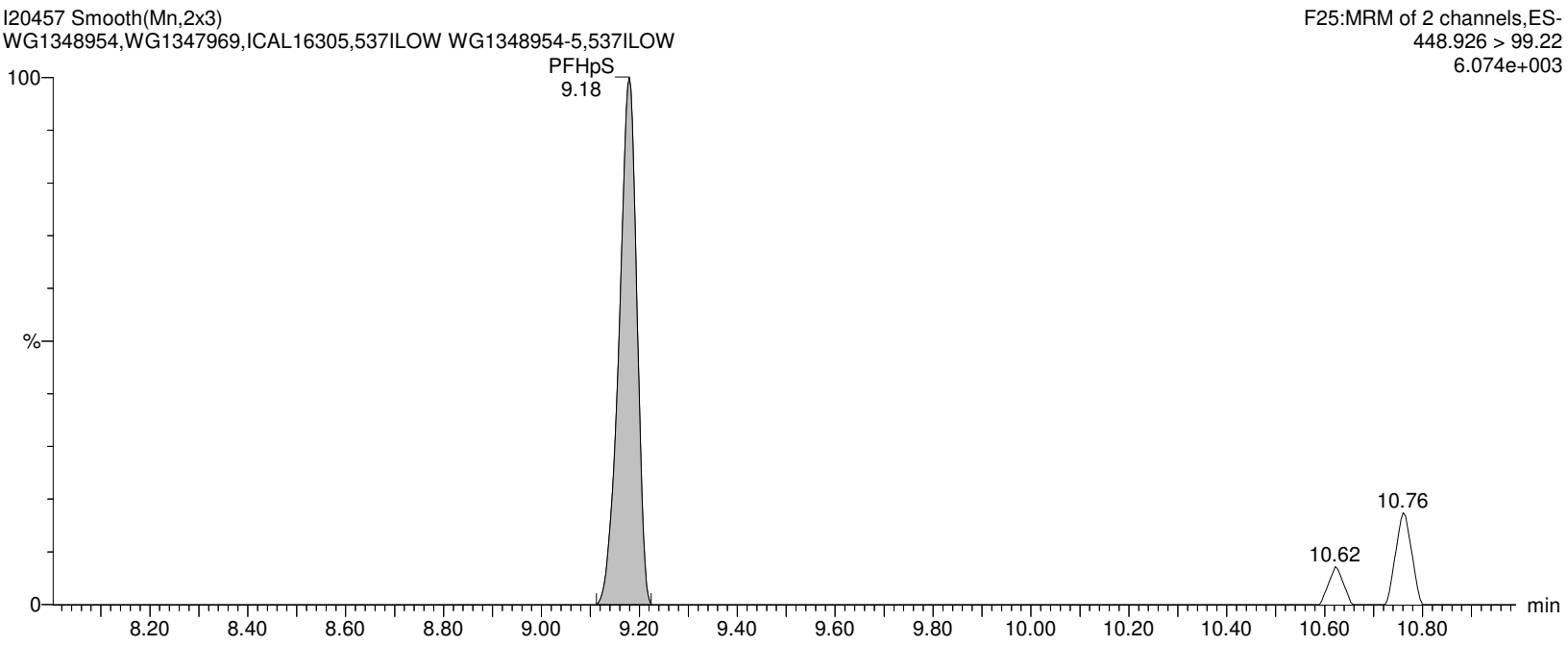
**PFHpS**





all concentration units in (ng/mL)

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**MS Method Name: C:\MassLynx\Data\2020\200309_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

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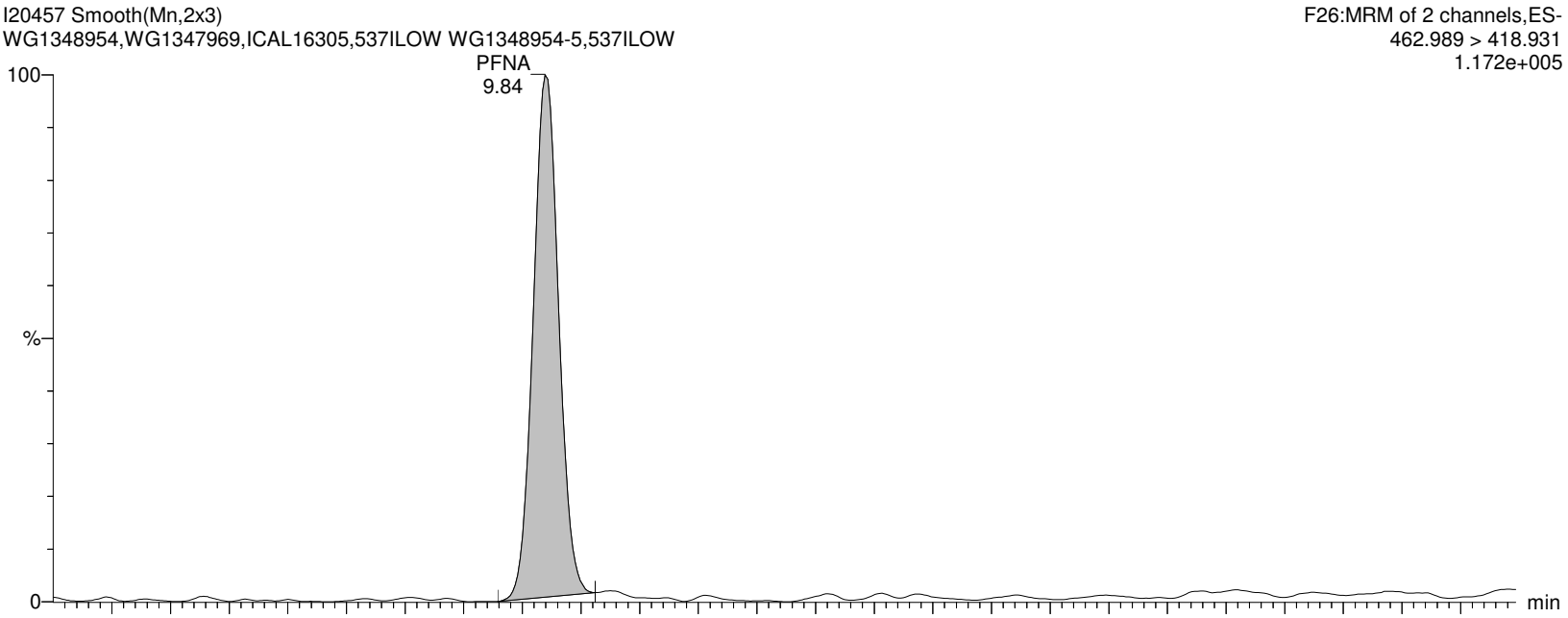


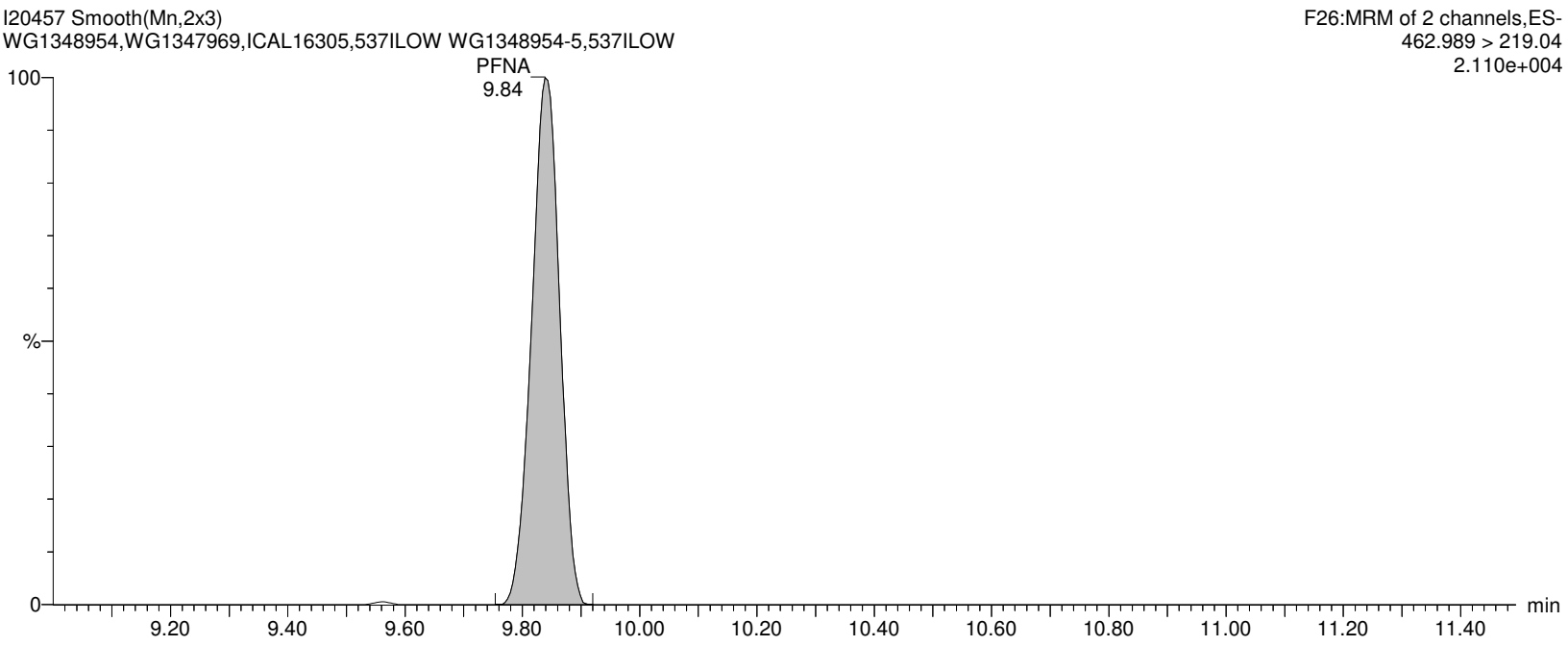



all concentration units in (ng/mL)

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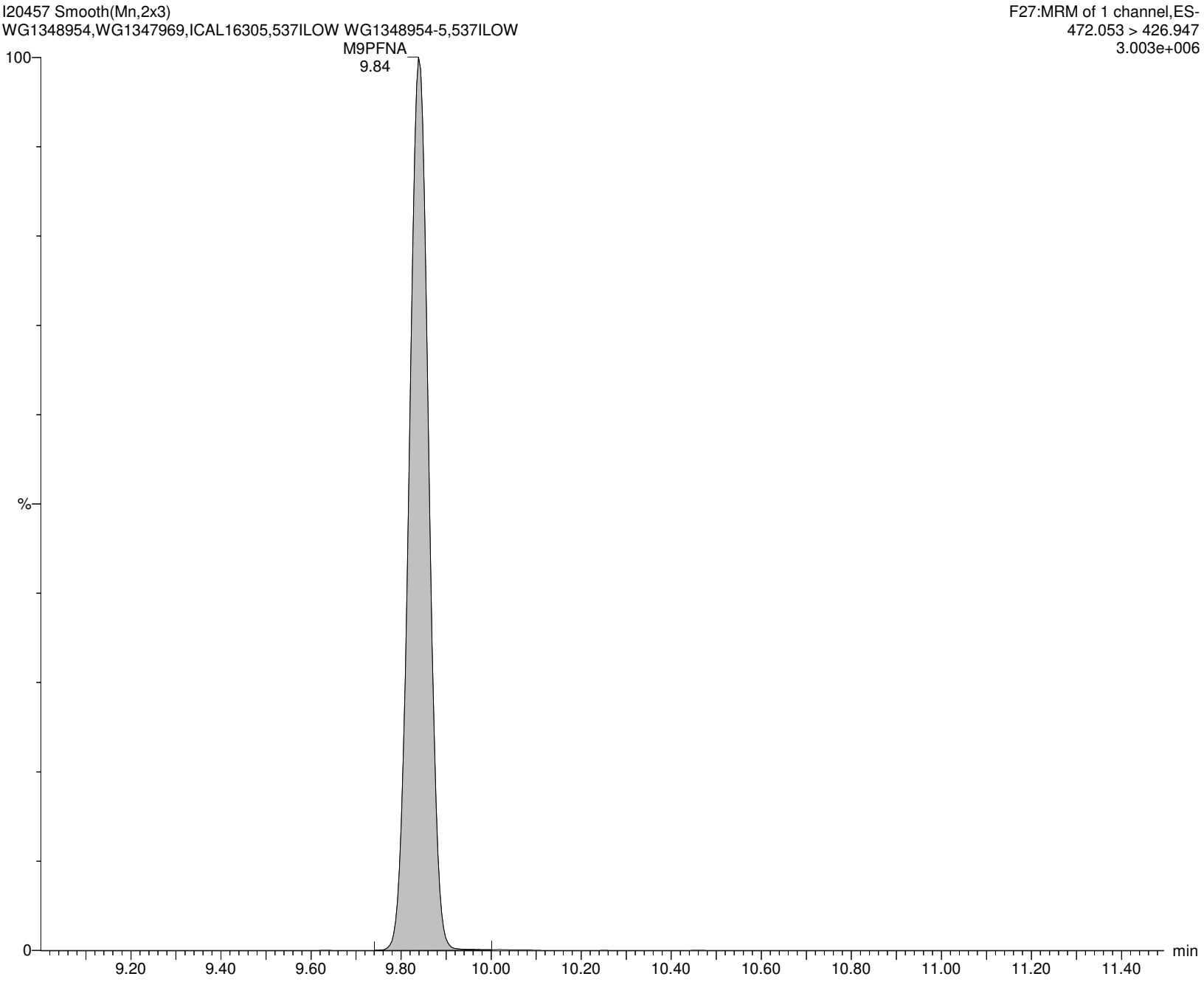
**M9PFNA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2020\200309_537ISO.PRO\Data\WG1348954D.qld
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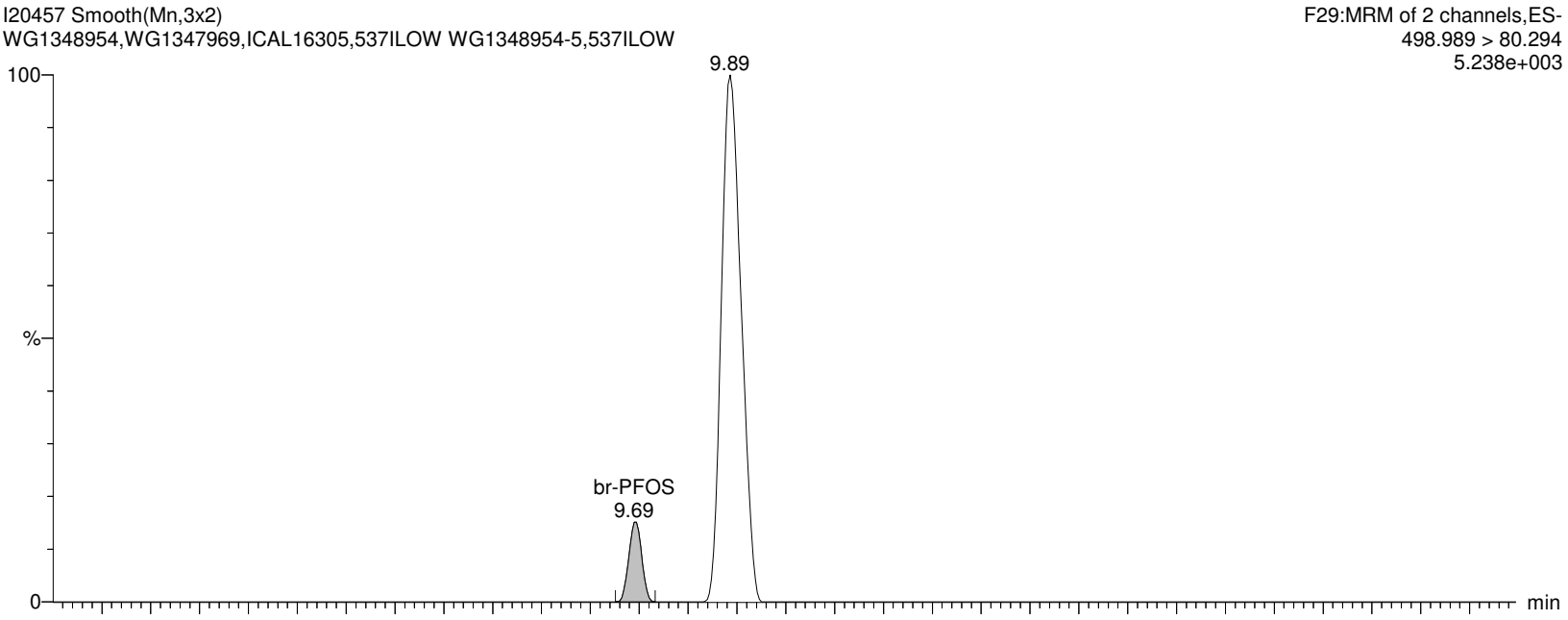
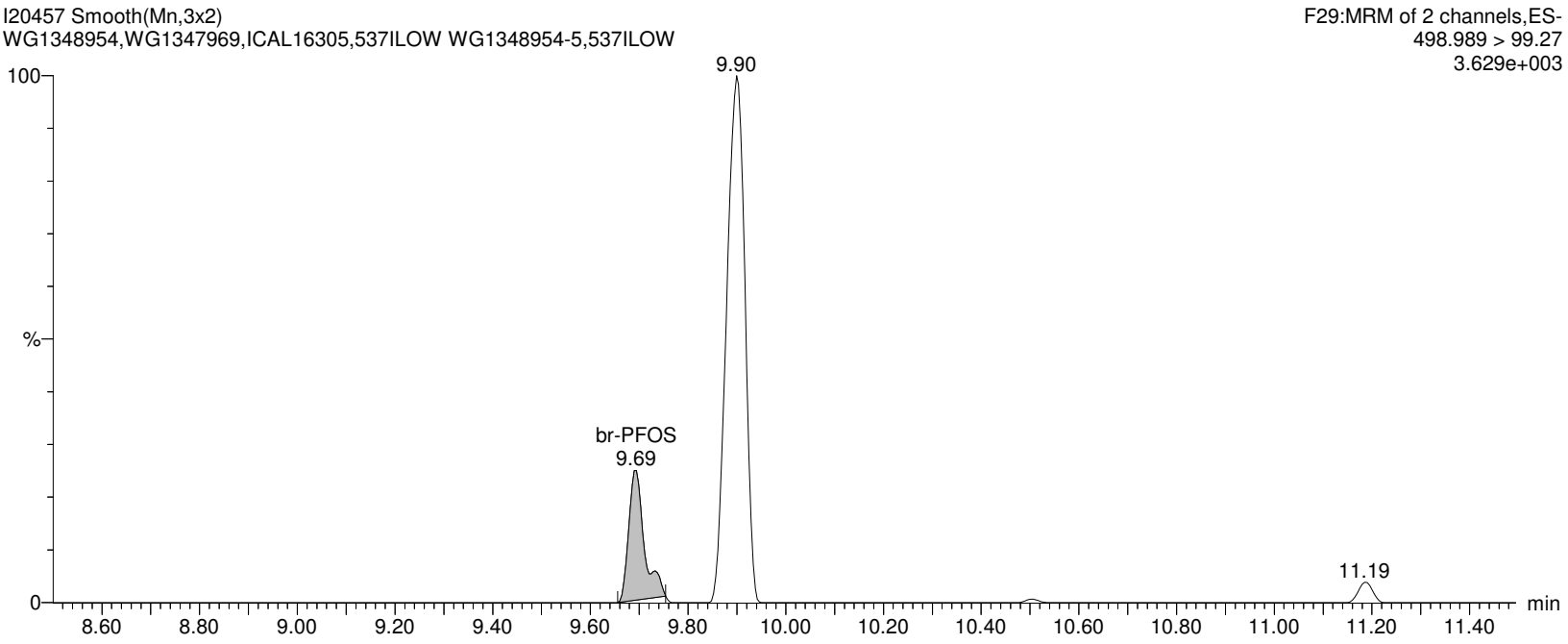
**br-PFOS**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2020\200309_537ISO.PRO\Data\WG1348954D.qld
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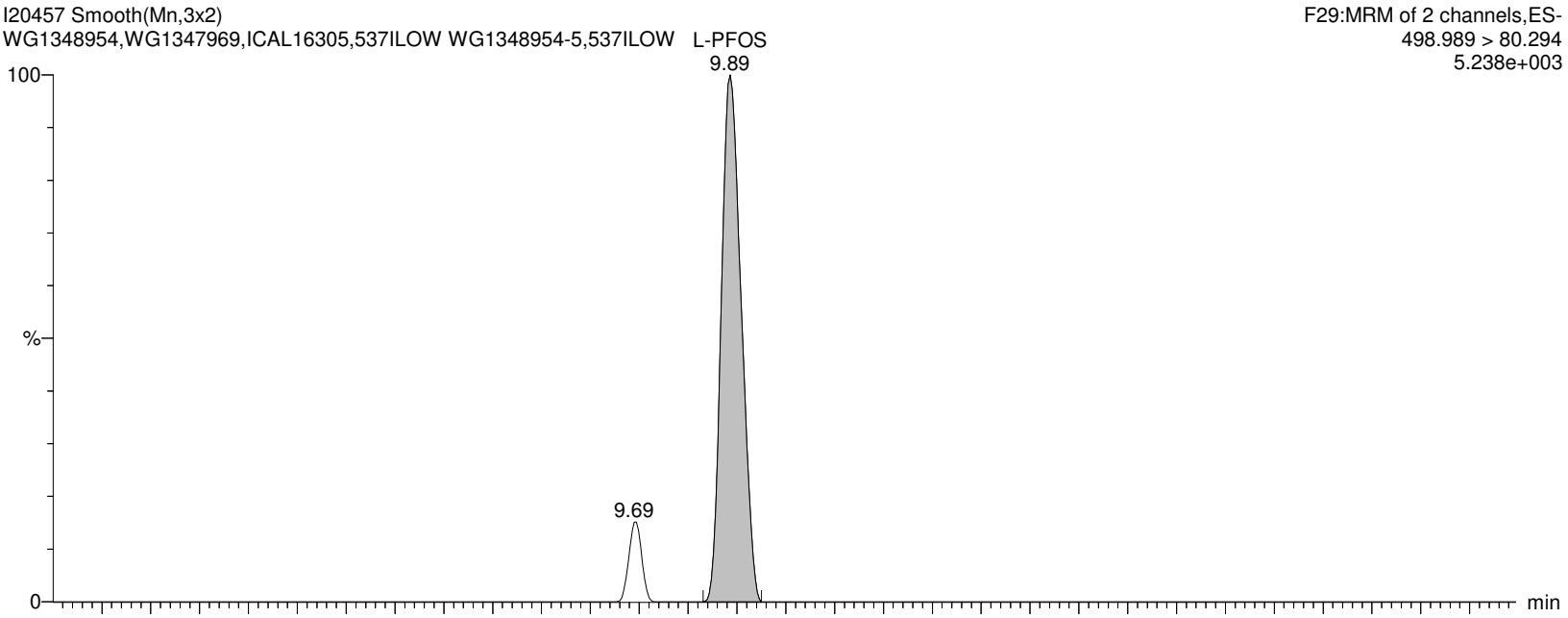


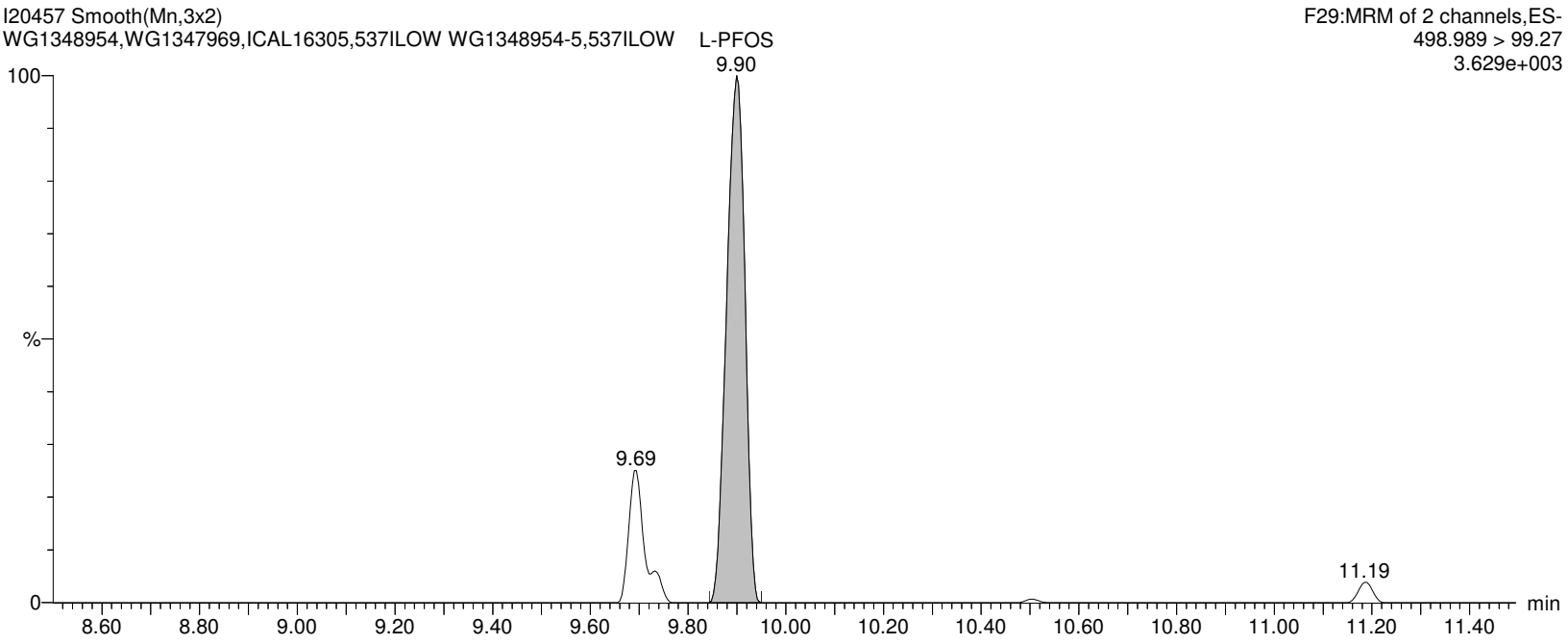



all concentration units in (ng/mL)

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**MS Method Name: C:\MassLynx\Data\2020\200309_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

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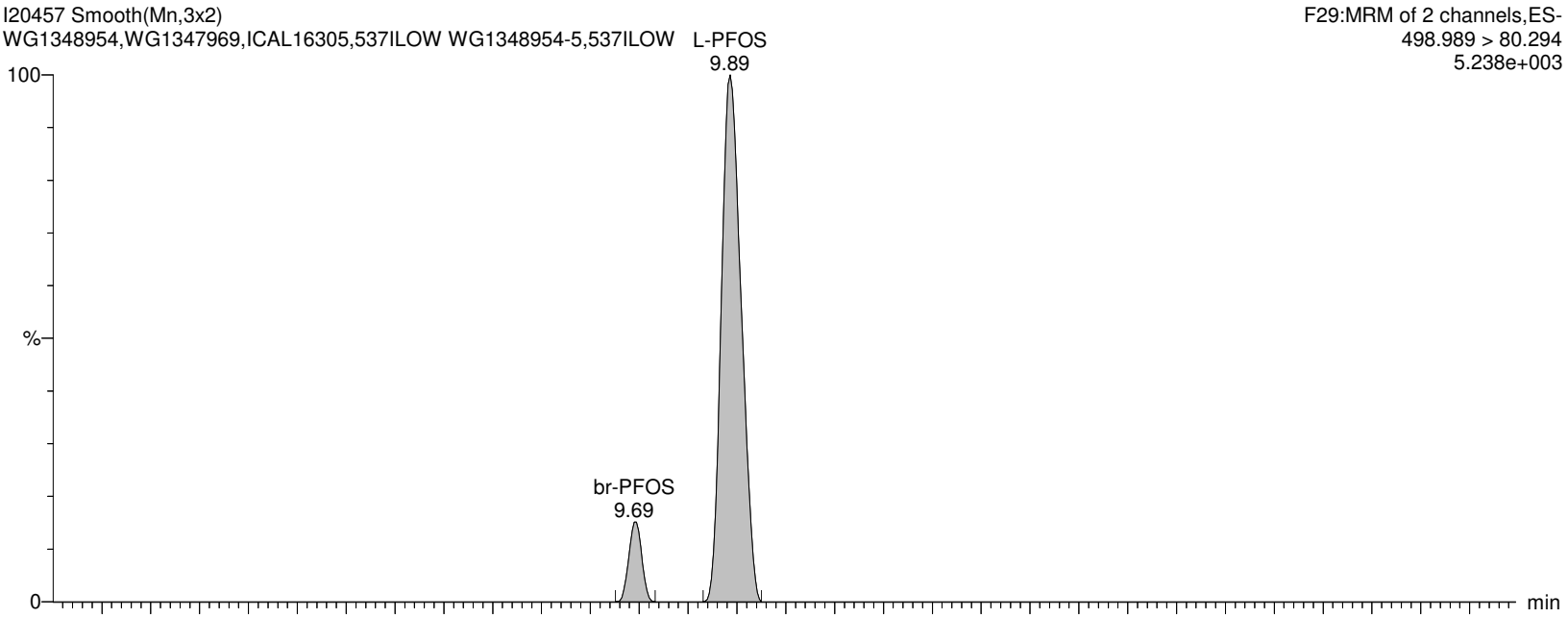


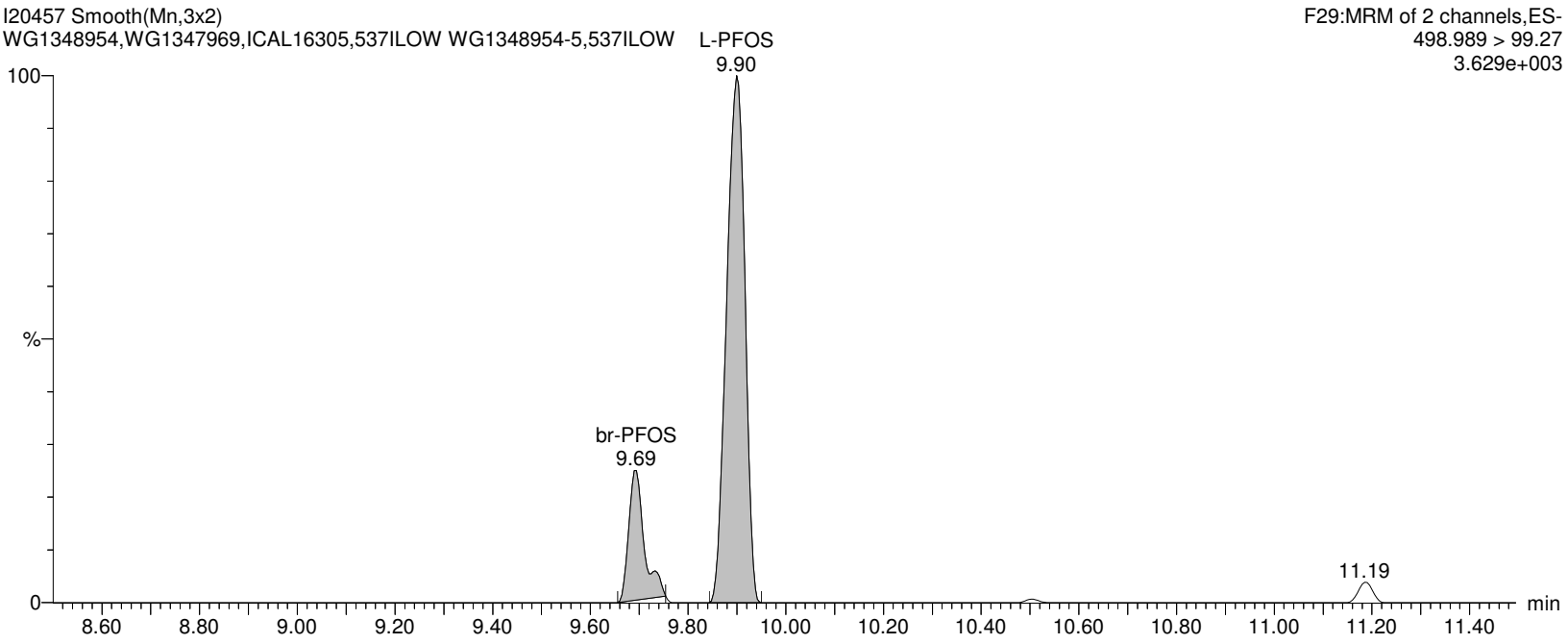



all concentration units in (ng/mL)

Alpha Analytical Inc.
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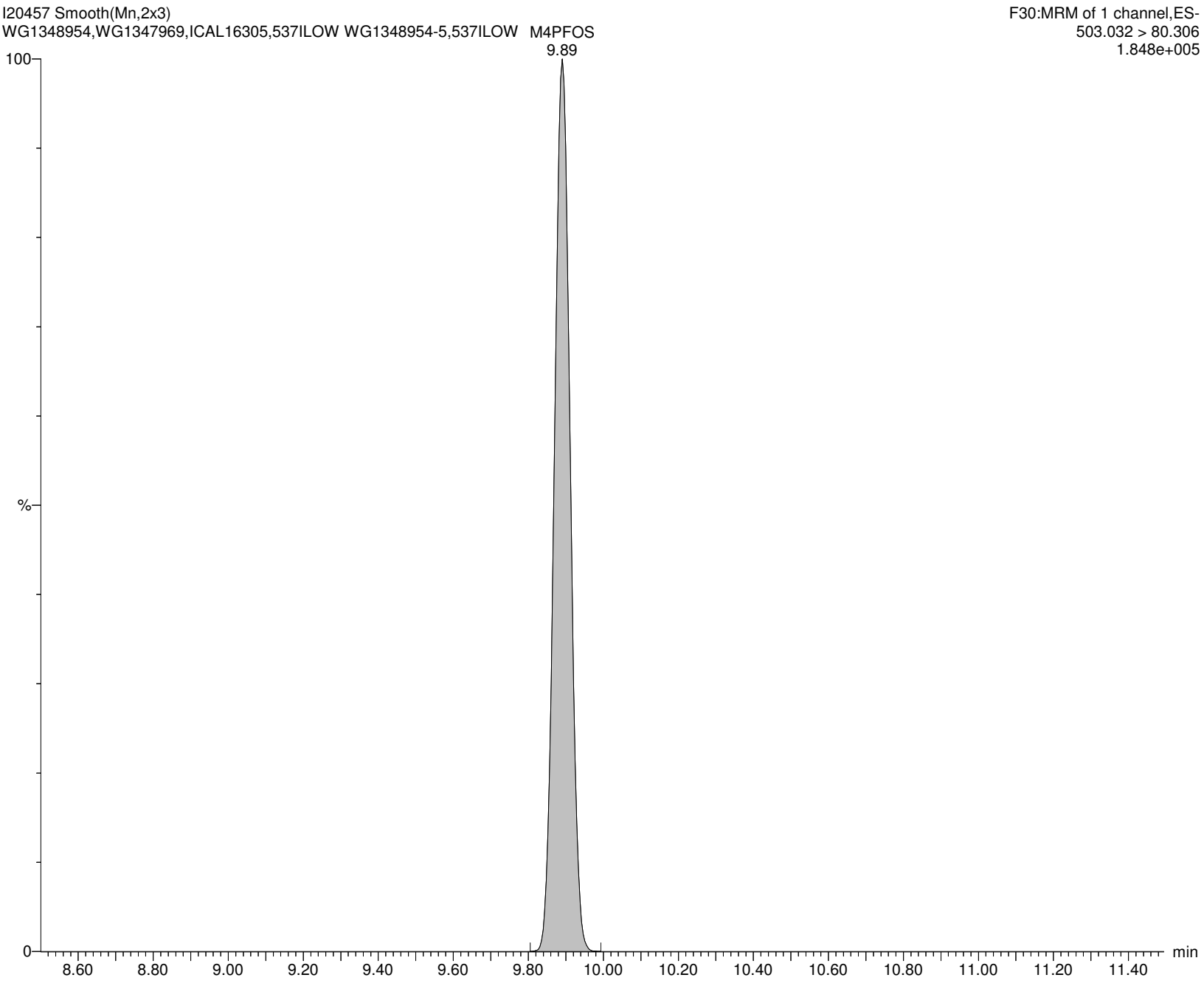



all concentration units in (ng/mL)

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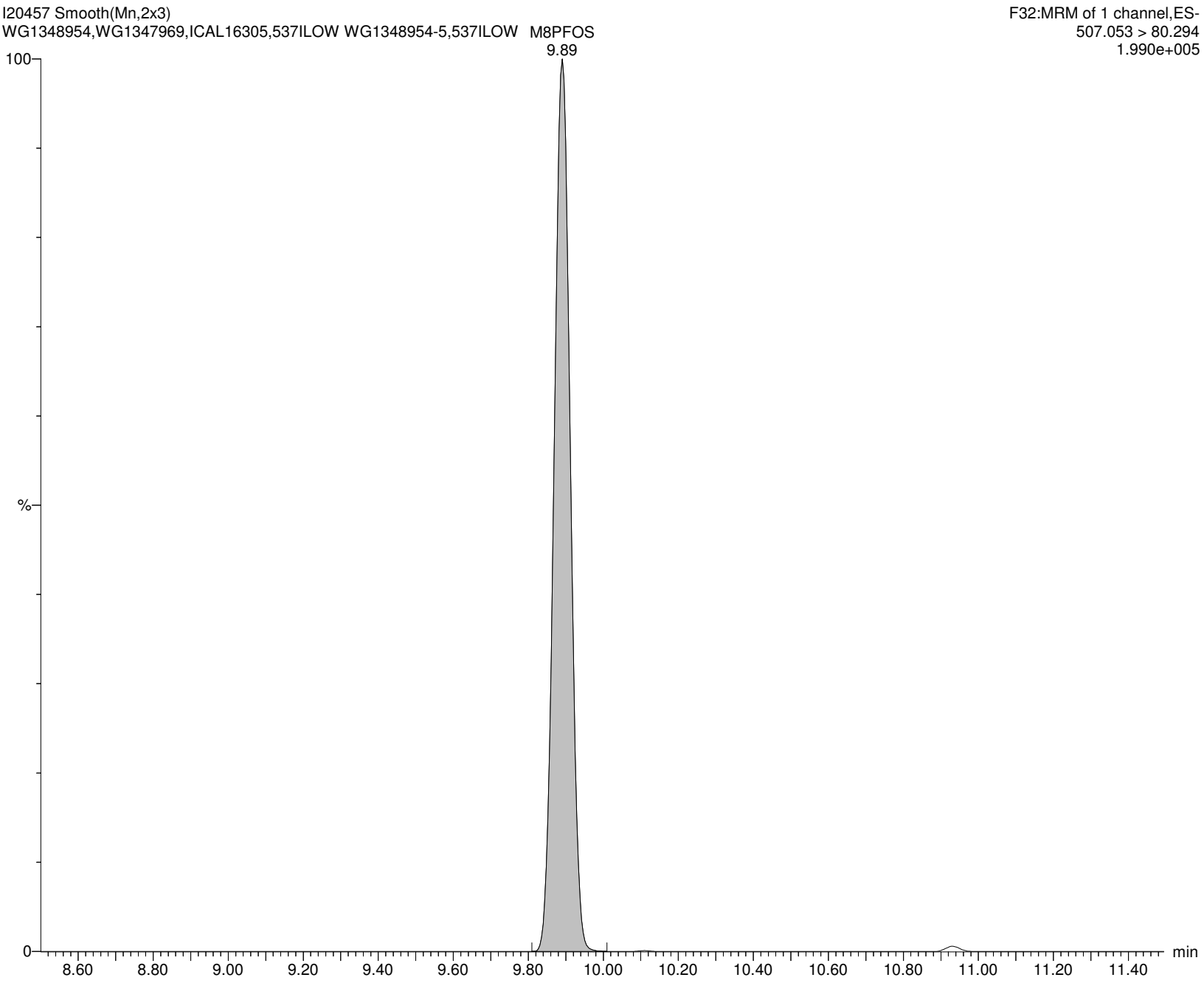
**M8PFOS**





all concentration units in (ng/mL)

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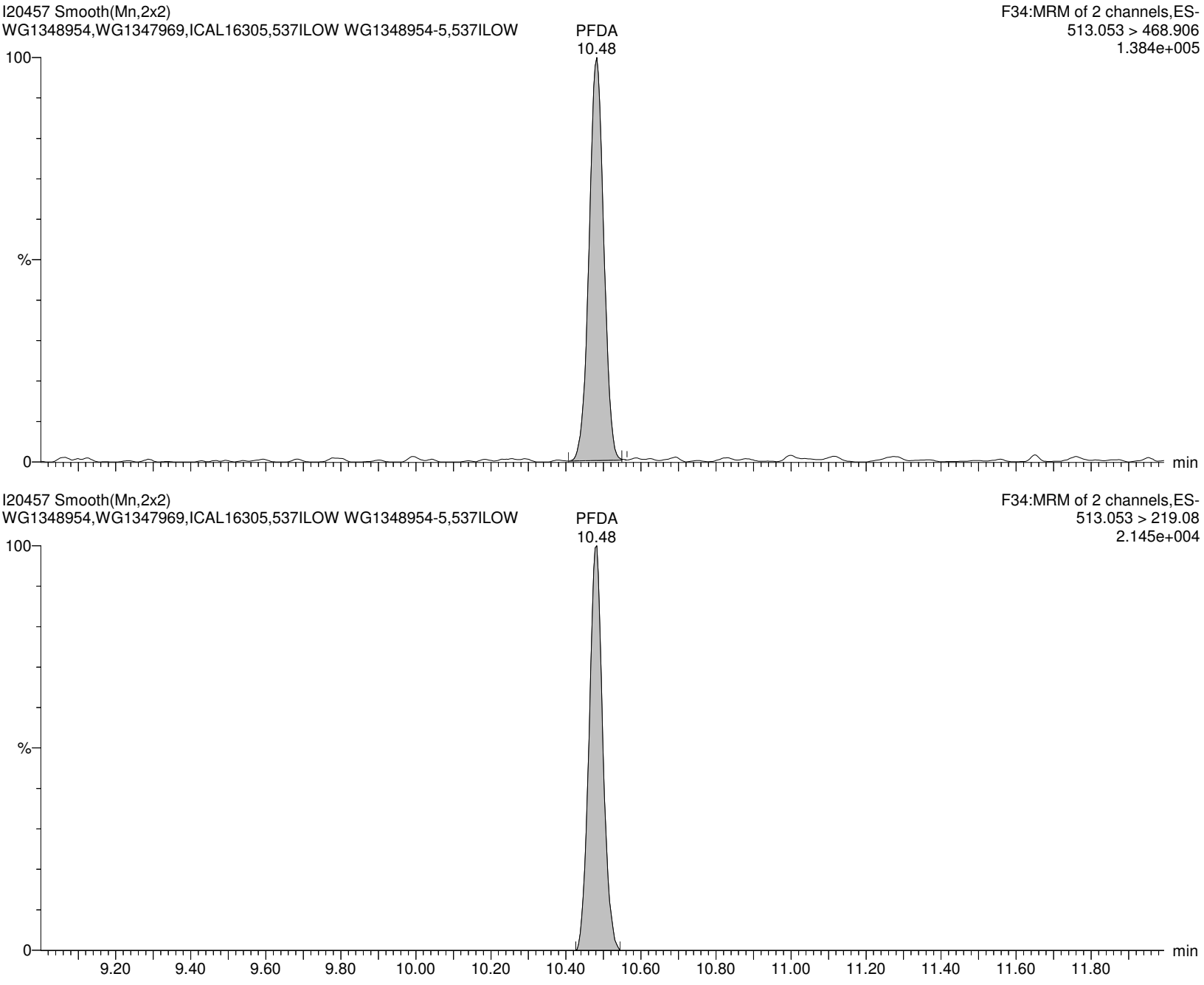



all concentration units in (ng/mL)

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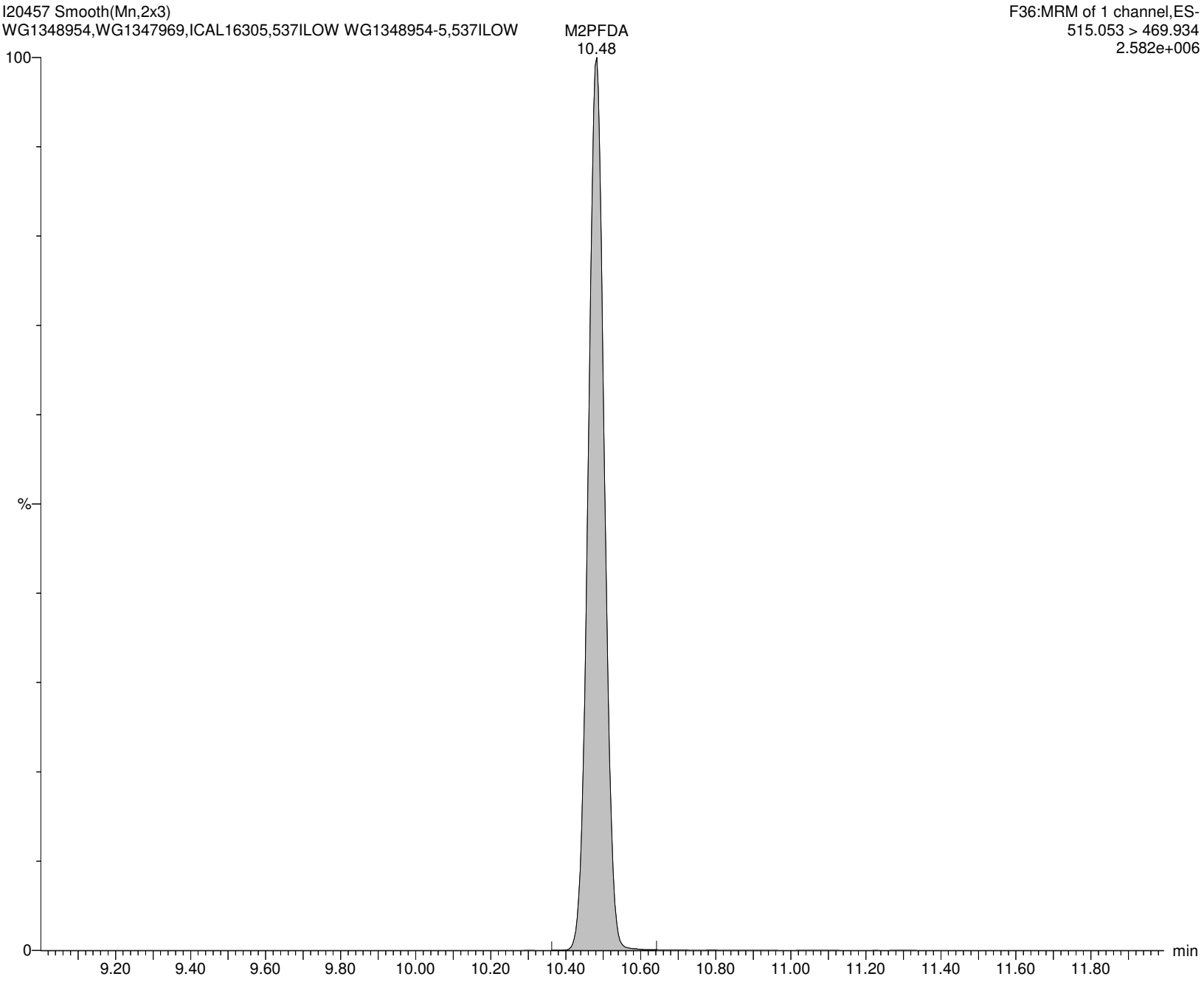



all concentration units in (ng/mL)

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**User: LCMS02:RS**
**Vial: 1:A,2**
**Instrument: XEVO-TQSmicro#QEB0050**
**Inlet Method Name: C:\MassLynx\Data\2020\200309_537ISO.PRO\ACQUDB\LCMS_537_ISO_B**
**Tune Method Name: C:\MassLynx\Data\2020\200309_537ISO.PRO\ACQUDB\181009_TUNE.IPR**
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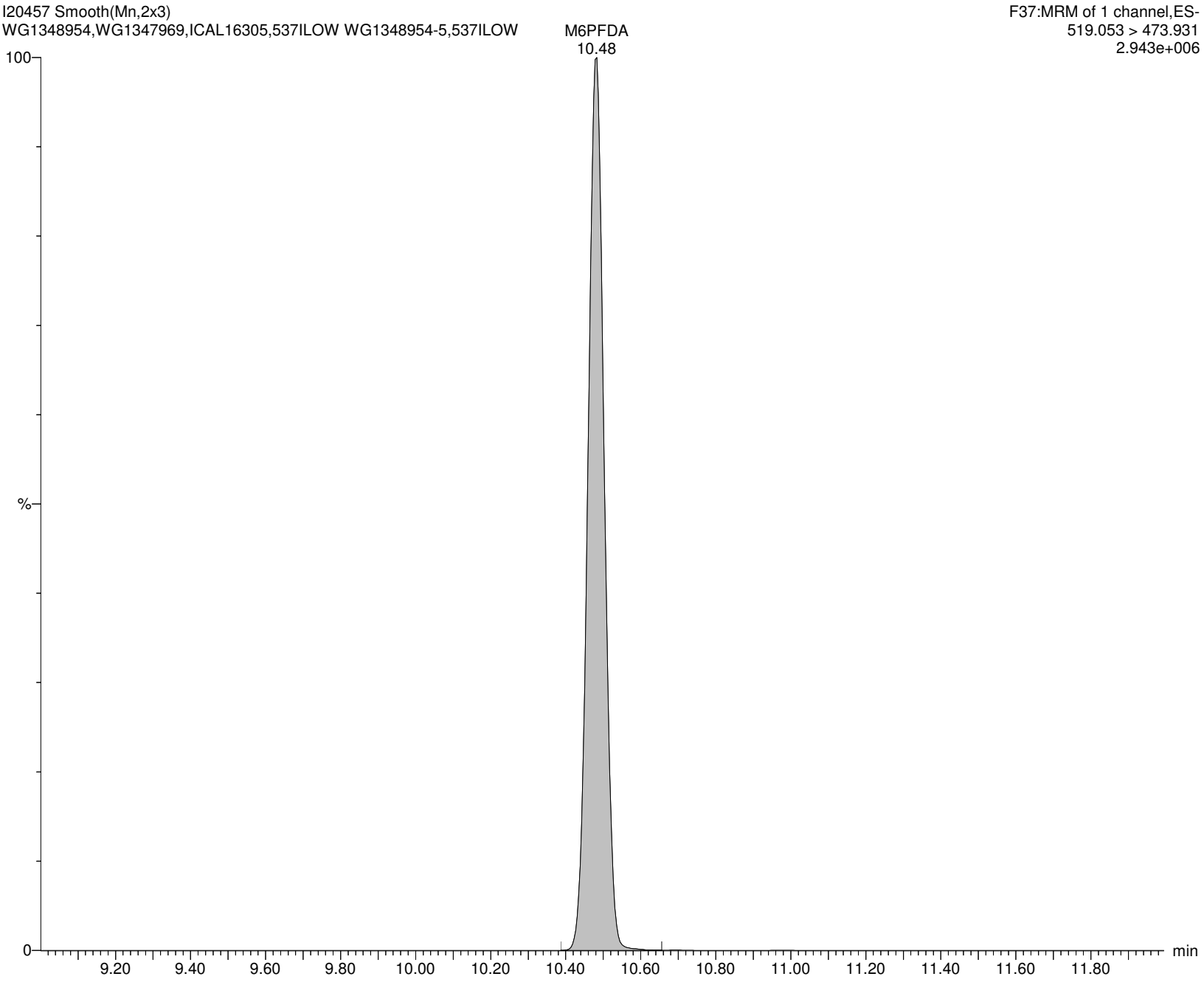



all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2020\200309_537ISO.PRO\Data\WG1348954D.qld
Last Altered: Wednesday, March 11, 2020 22:52:23 Eastern Daylight Time
Printed: Thursday, March 12, 2020 03:26:43 Eastern Daylight Time

**Name: I20457**
**ID: WG1348954-5,537ILOW**
**Date: 11-Mar-2020**
**Time: 03:27:13**
**Description: WG1348954,WG1347969,ICAL16305,537ILOW**
**User: LCMS02:RS**
**Vial: 1:A,2**
**Instrument: XEVO-TQSmicro#QEB0050**
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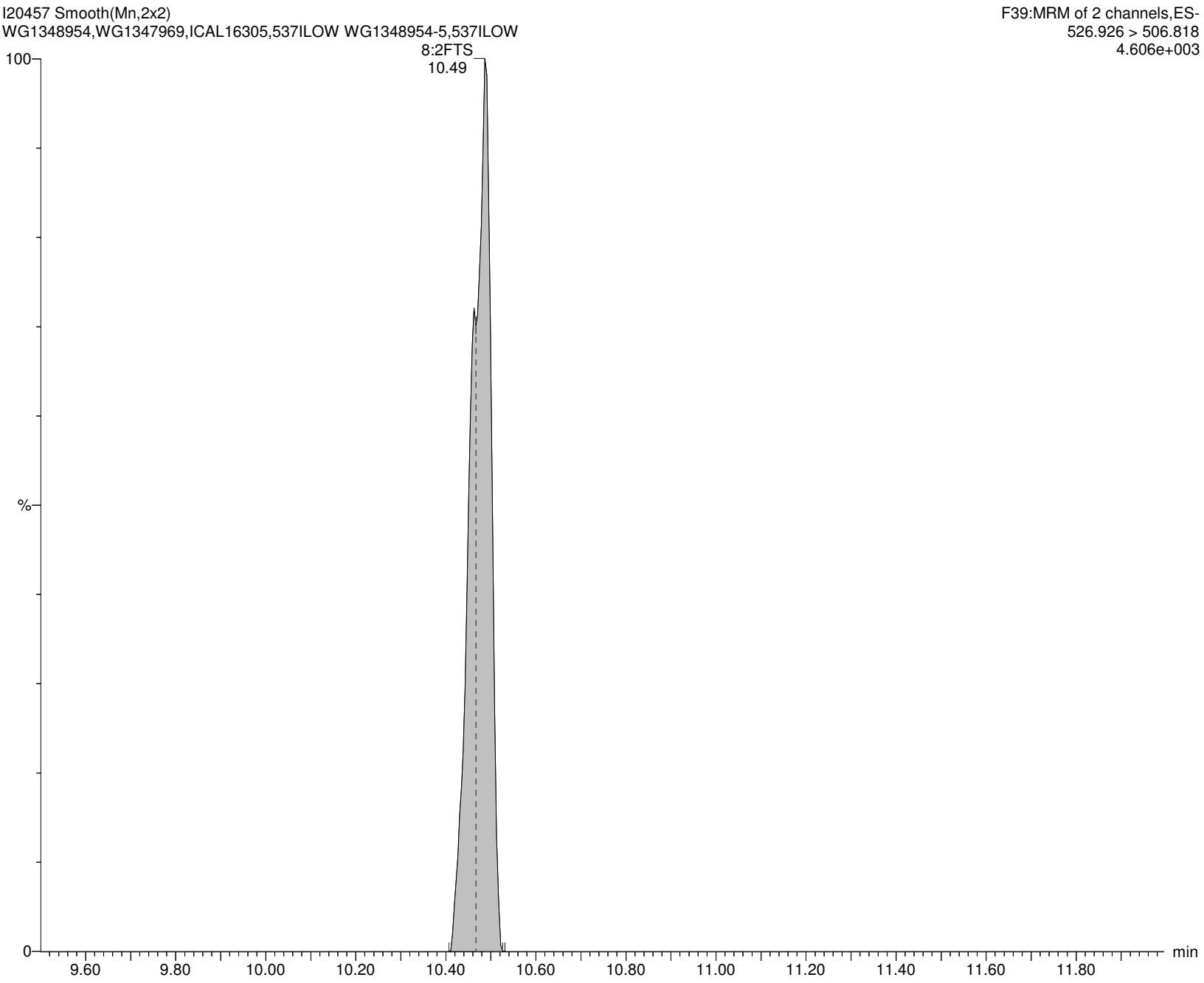
**8:2FTS**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2020\200309_537ISO.PRO\Data\WG1348954D.qld
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**User: LCMS02:RS**
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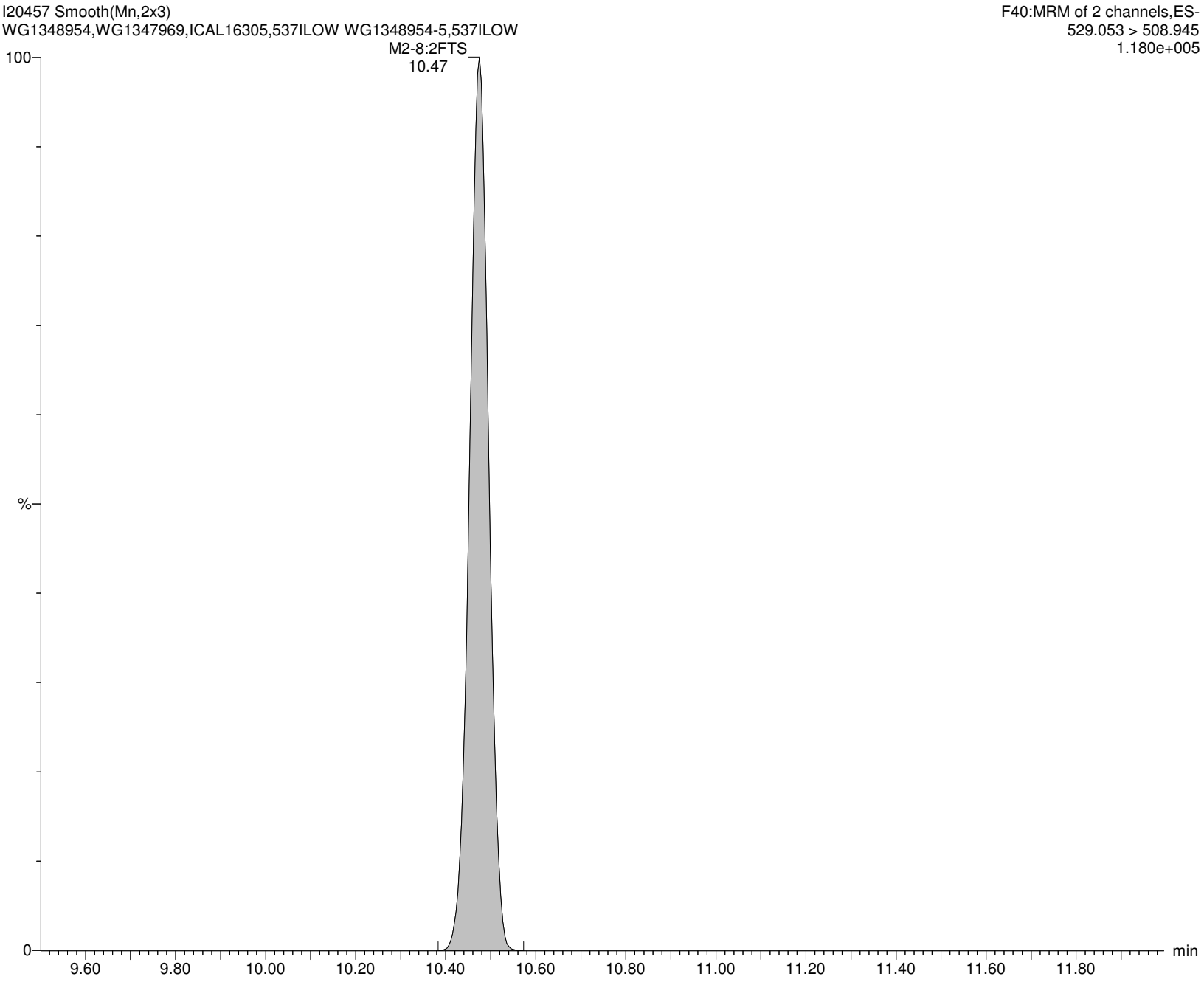
**M2-8:2FTS**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2020\200309_537ISO.PRO\Data\WG1348954D.qld
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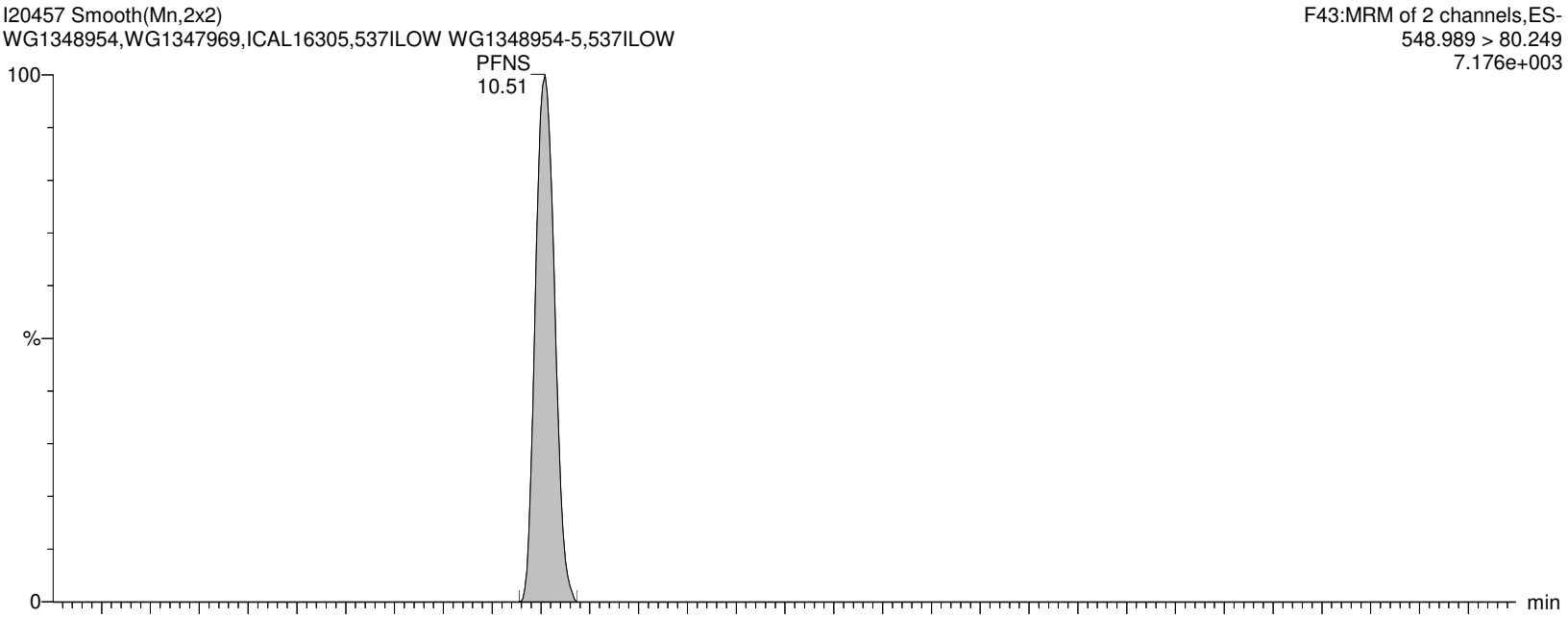


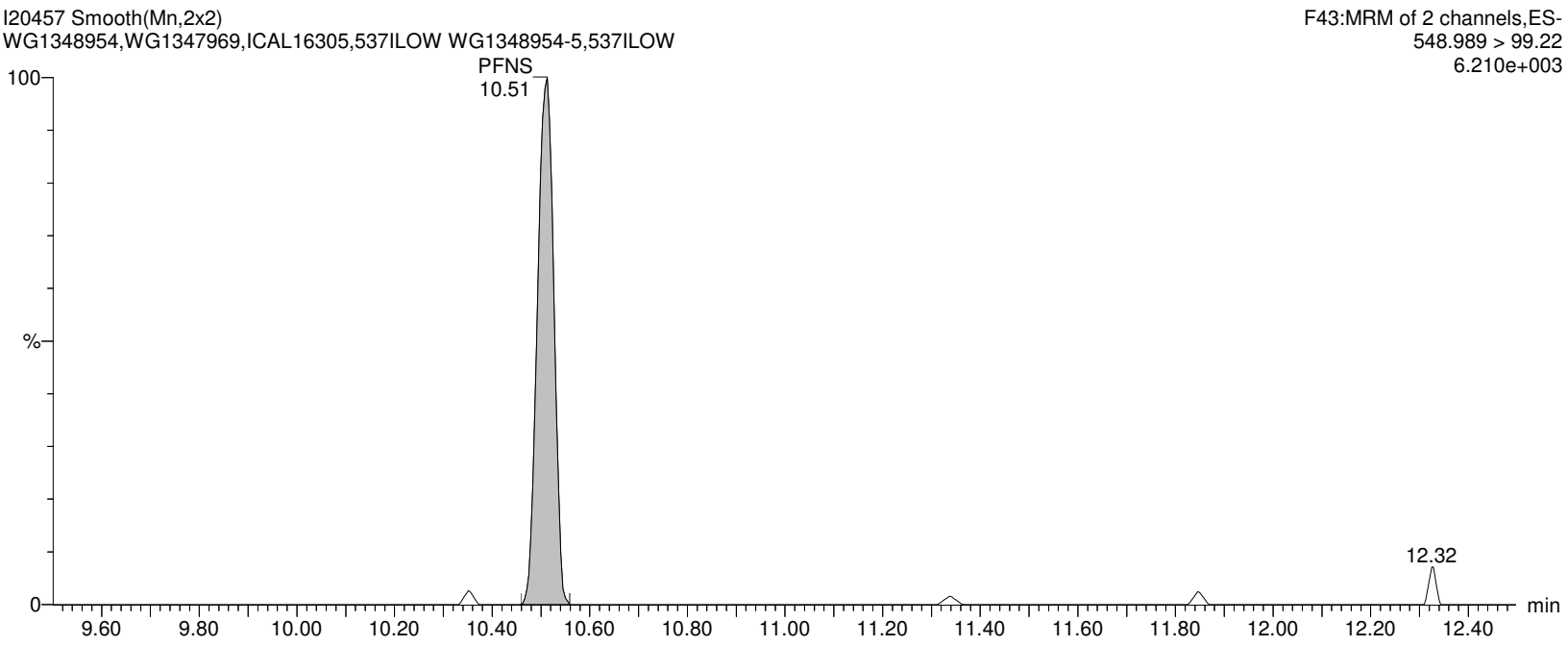



all concentration units in (ng/mL)

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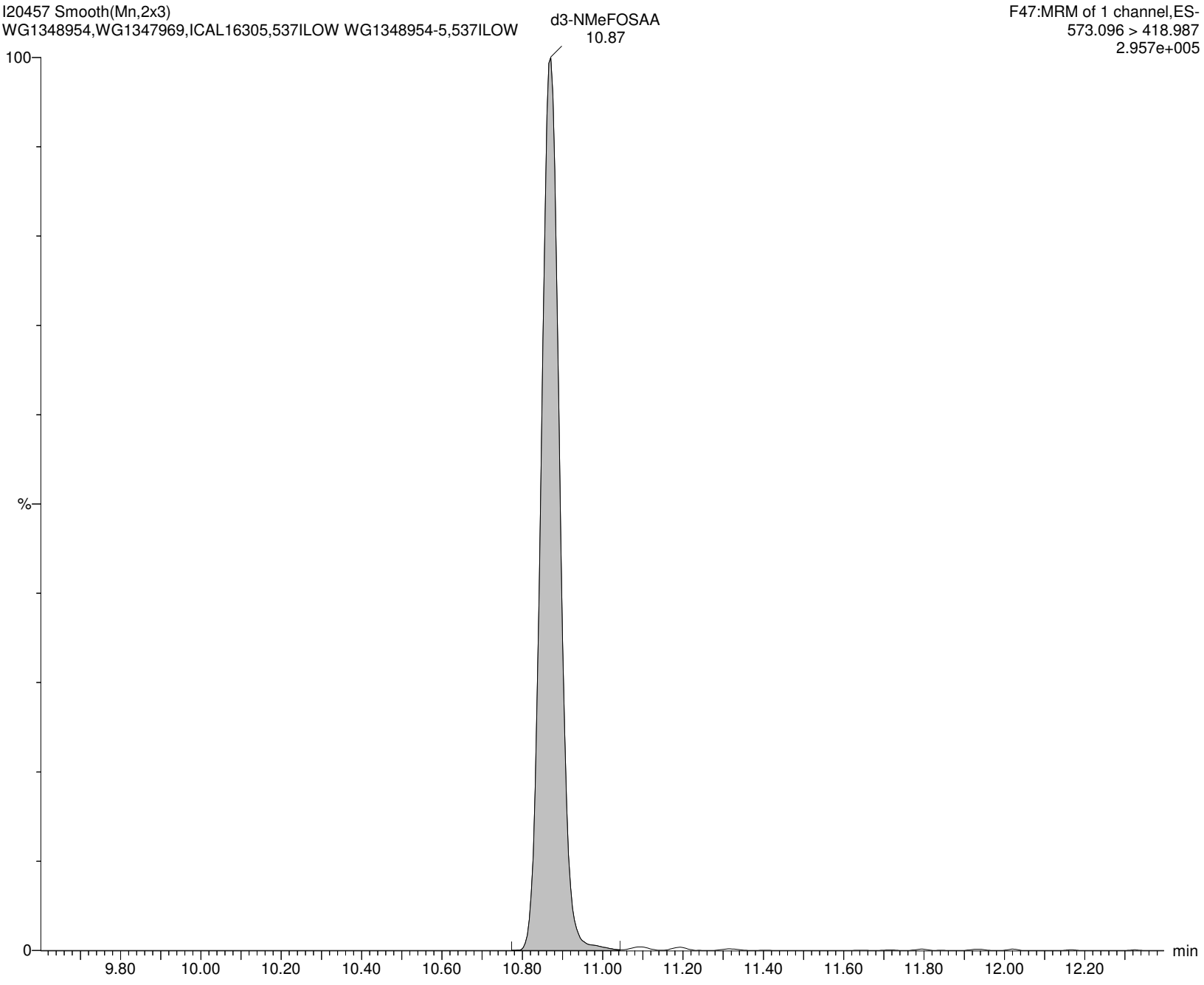
**d3-NMeFOSAA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2020\200309_537ISO.PRO\Data\WG1348954D.qld
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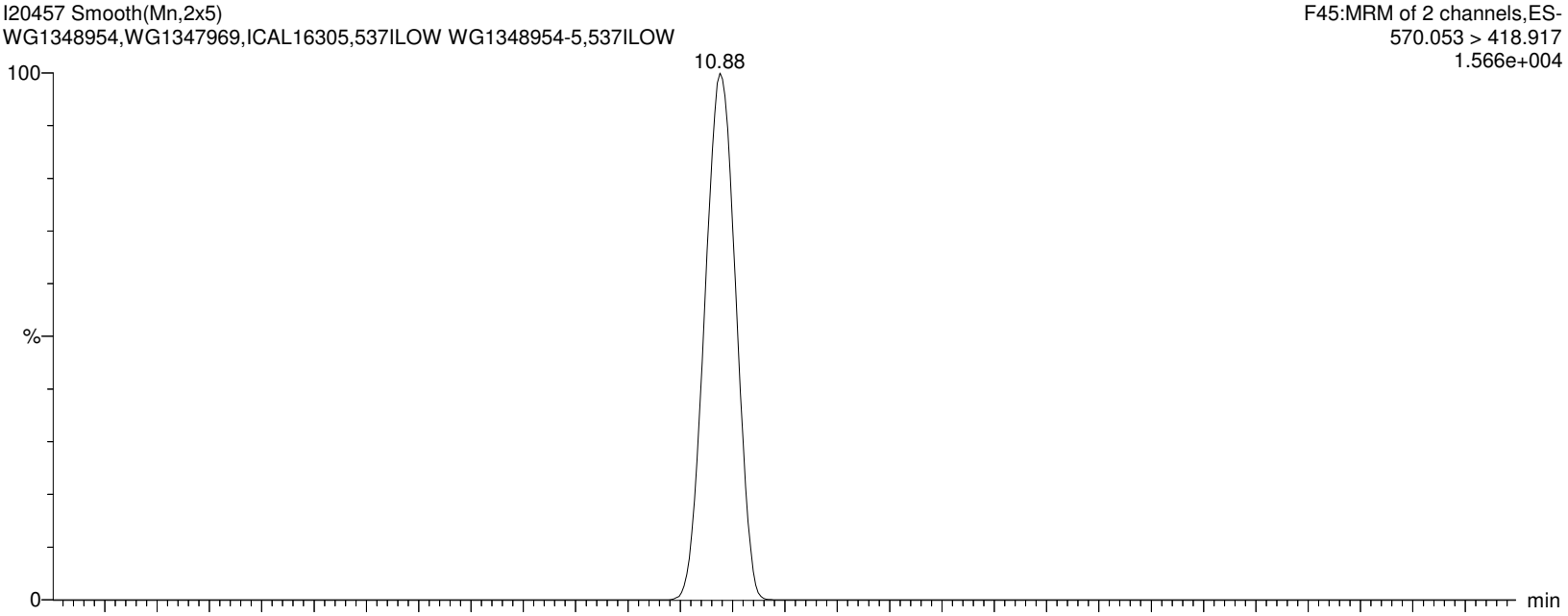
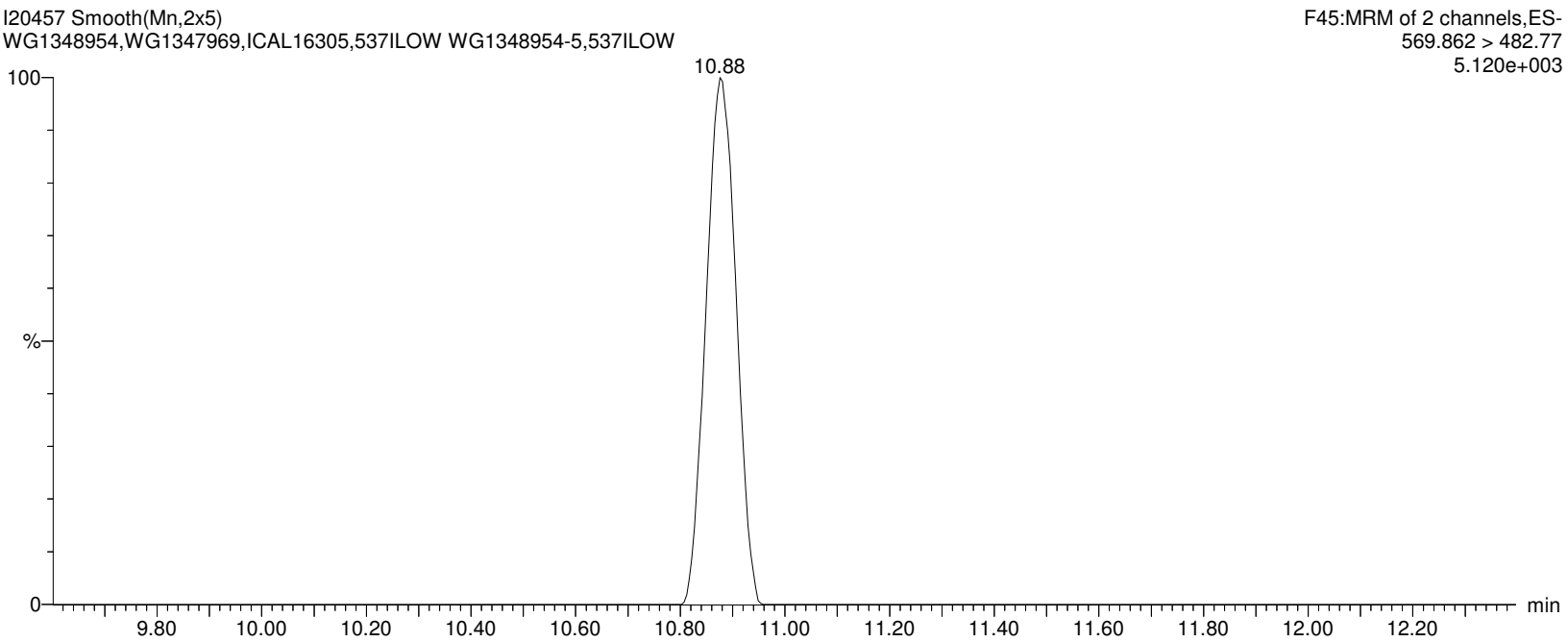
**br-NMeFOSAA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
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**Instrument: XEVO-TQSmicro#QEB0050**
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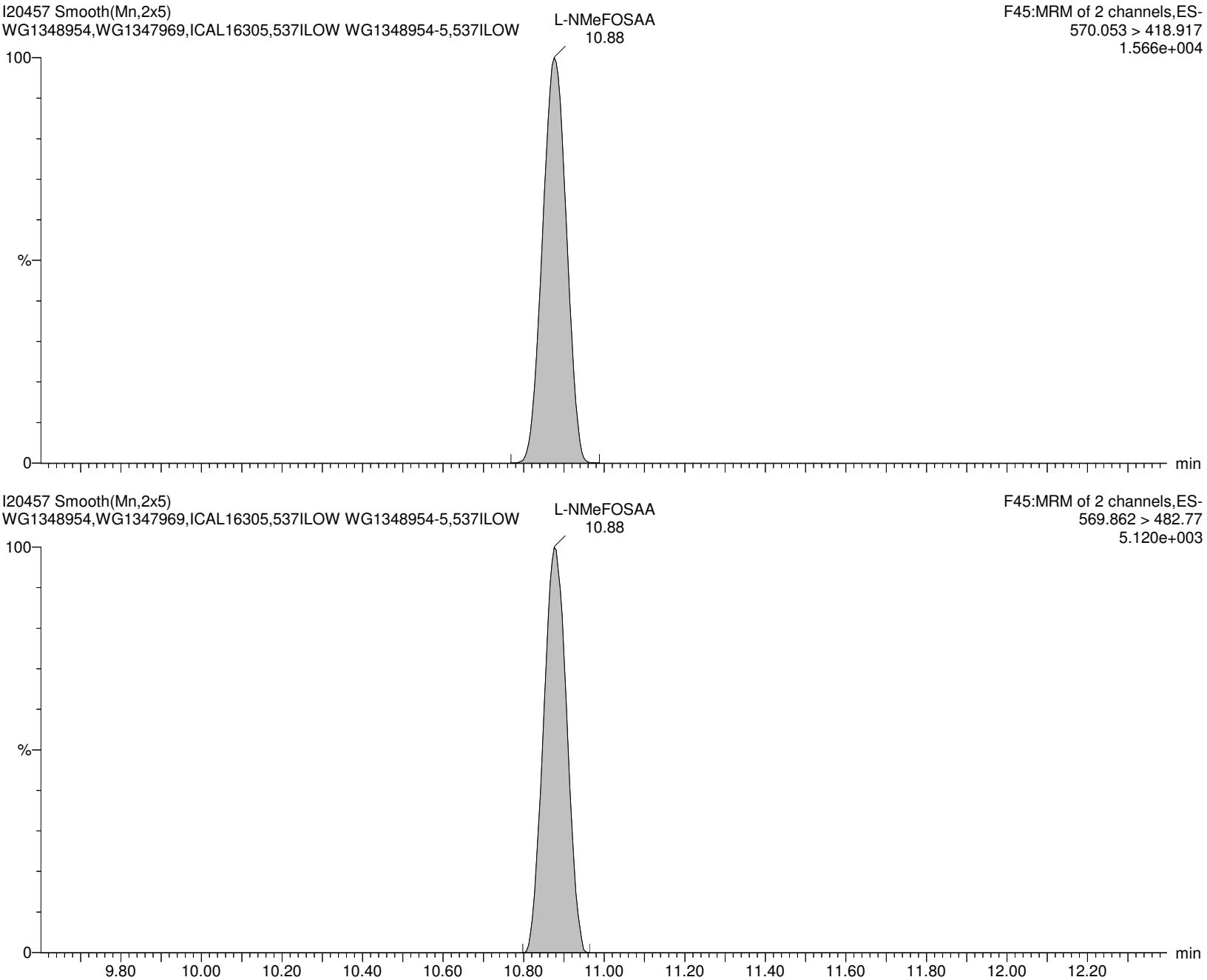
**L-NMeFOSAA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2020\200309_537ISO.PRO\Data\WG1348954D.qld
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**Vial: 1:A,2**
**Instrument: XEVO-TQSmicro#QEB0050**
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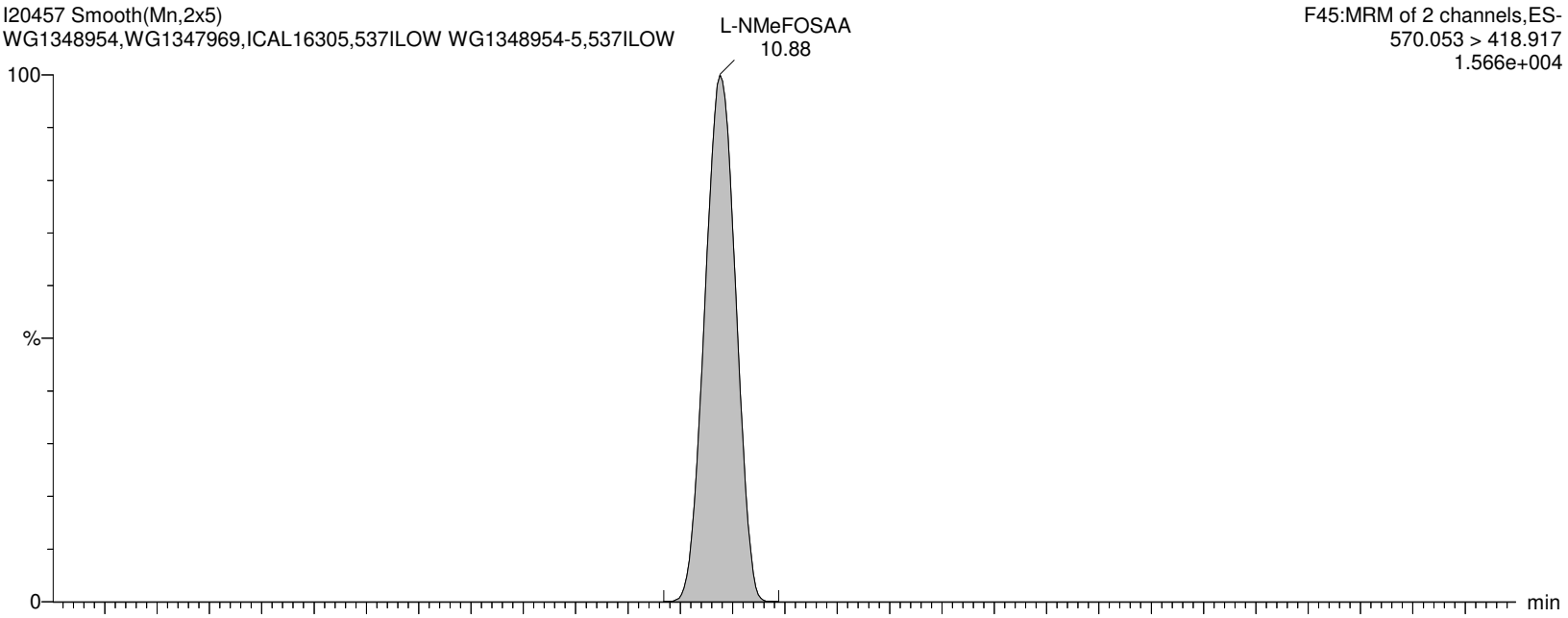
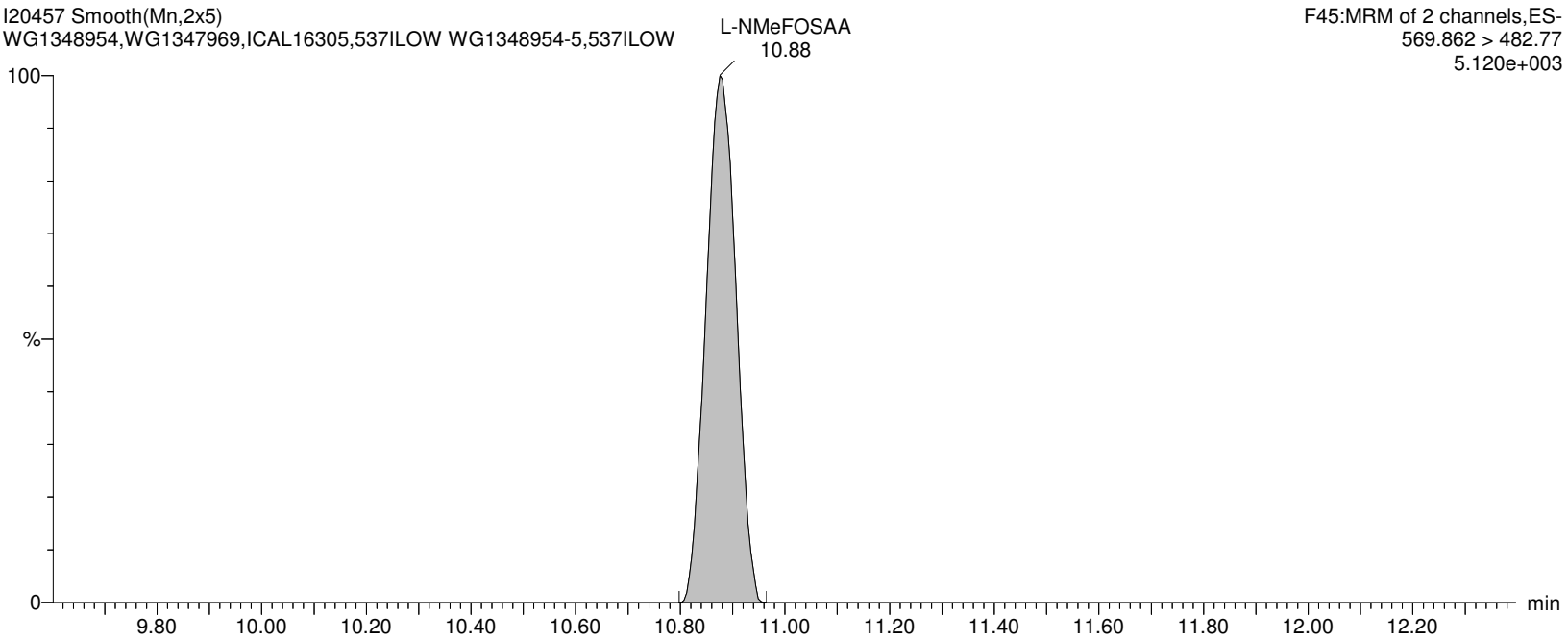
**NMeFOSAA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2020\200309_537ISO.PRO\Data\WG1348954D.qld
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**Vial: 1:A,2**
**Instrument: XEVO-TQSmicro#QEB0050**
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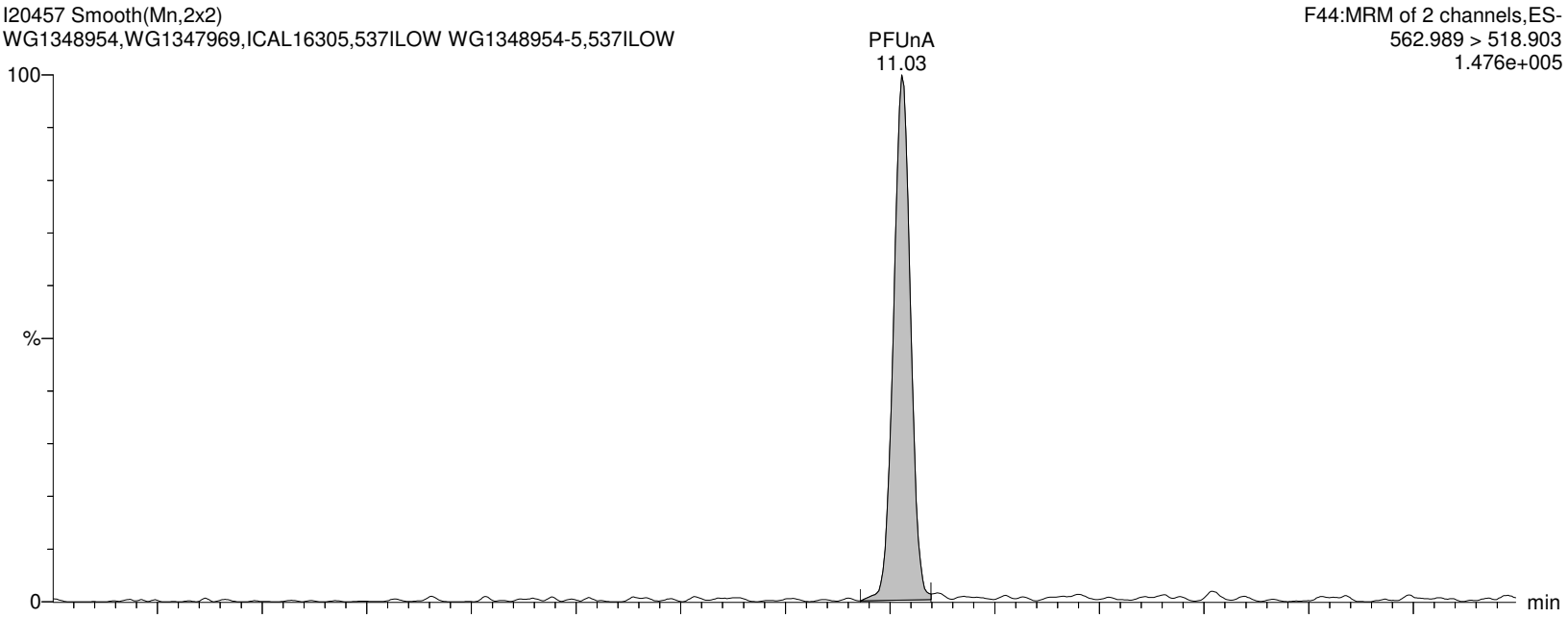


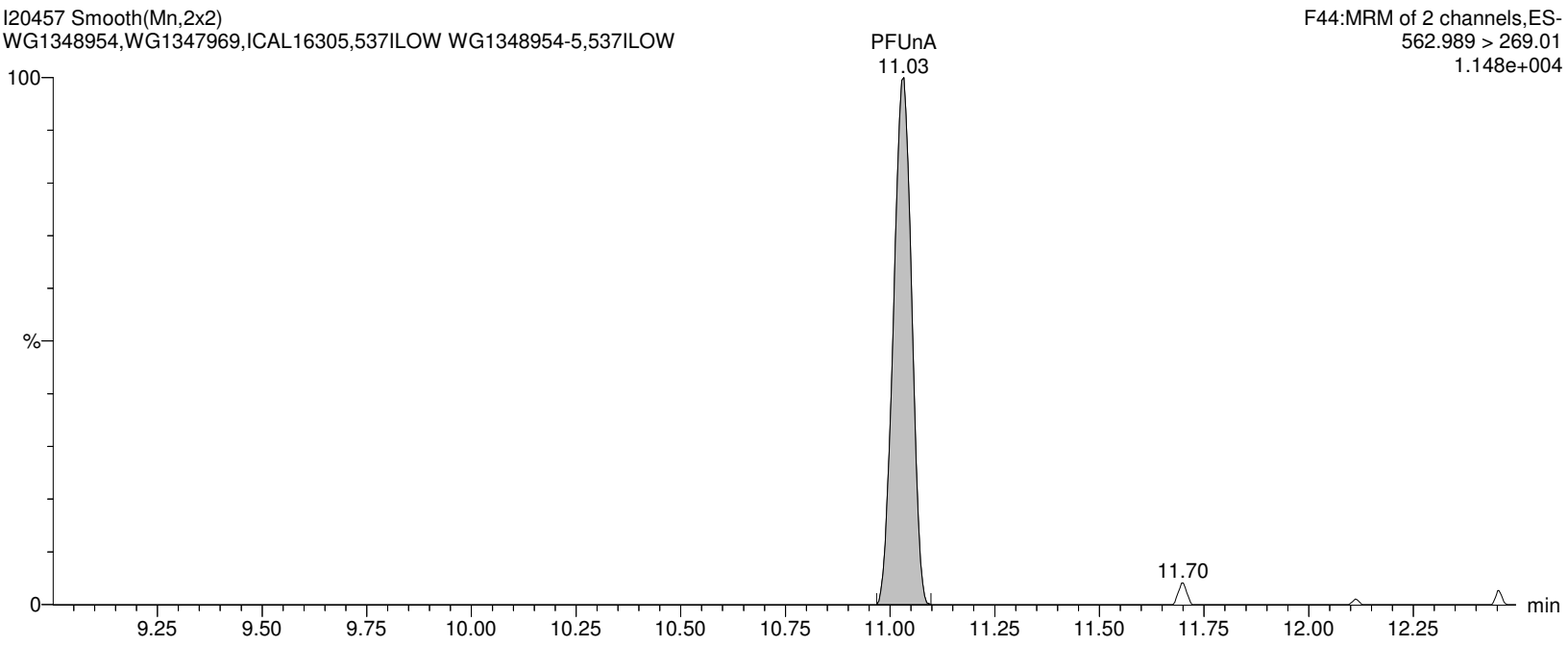



all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2020\200309_537ISO.PRO\Data\WG1348954D.qld
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**Vial: 1:A,2**
**Instrument: XEVO-TQSmicro#QEB0050**
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**Tune Method Name: C:\MassLynx\Data\2020\200309_537ISO.PRO\ACQUDB\181009_TUNE.IPR**
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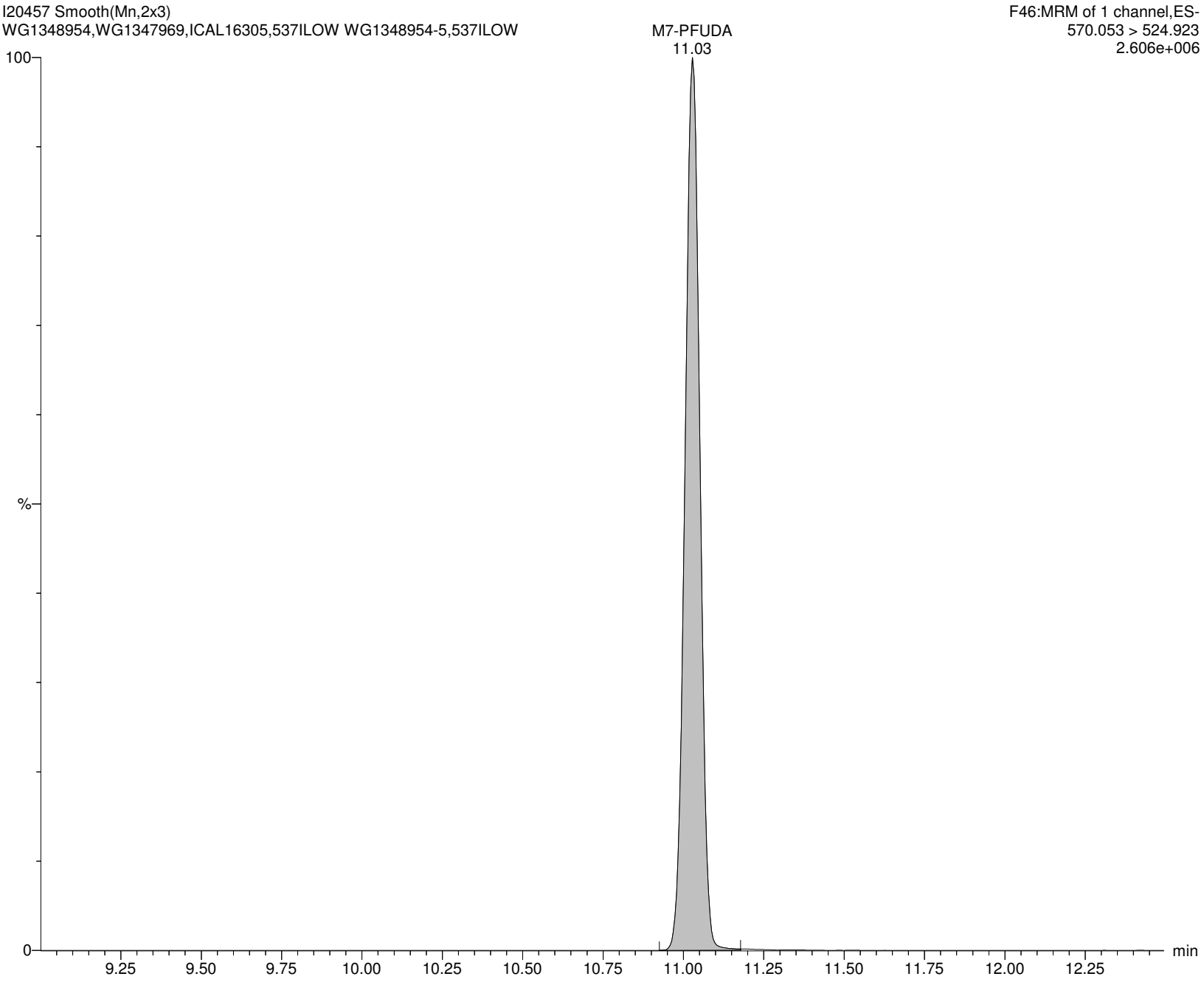
**M7-PFUDA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2020\200309_537ISO.PRO\Data\WG1348954D.qld
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**User: LCMS02:RS**
**Vial: 1:A,2**
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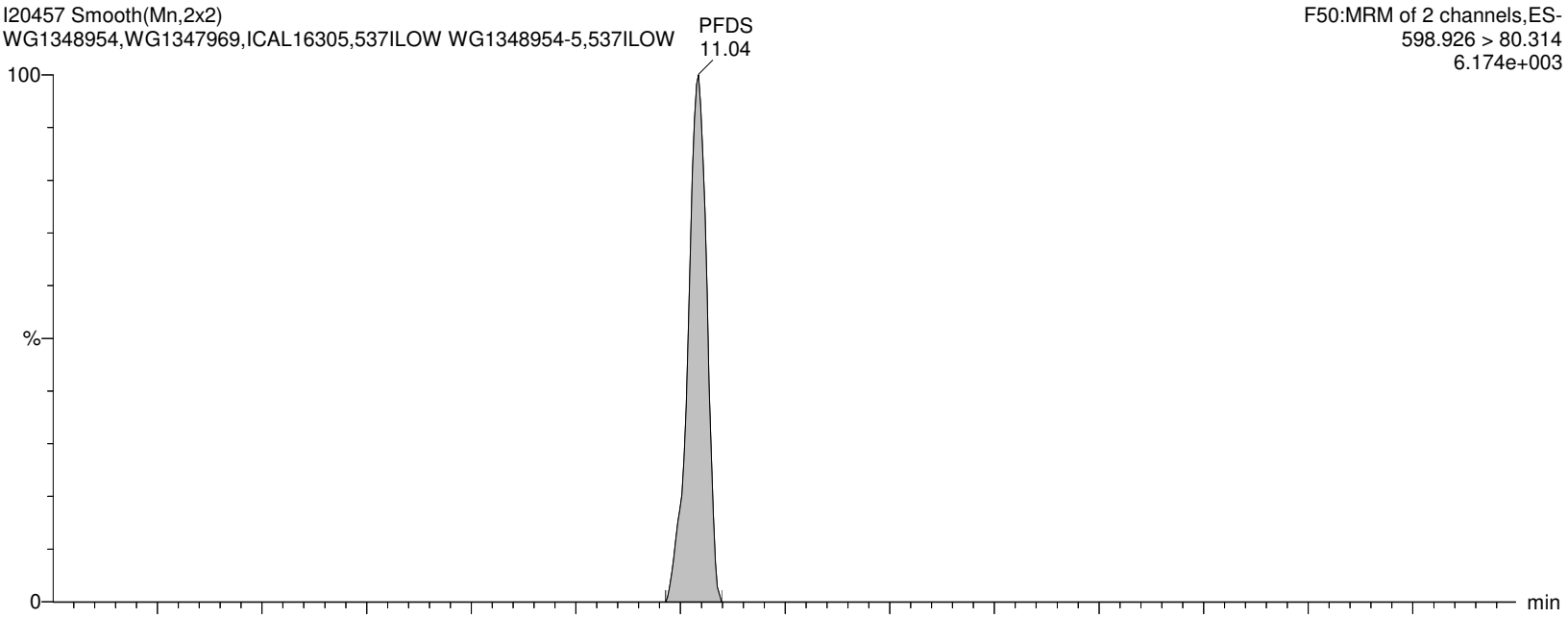


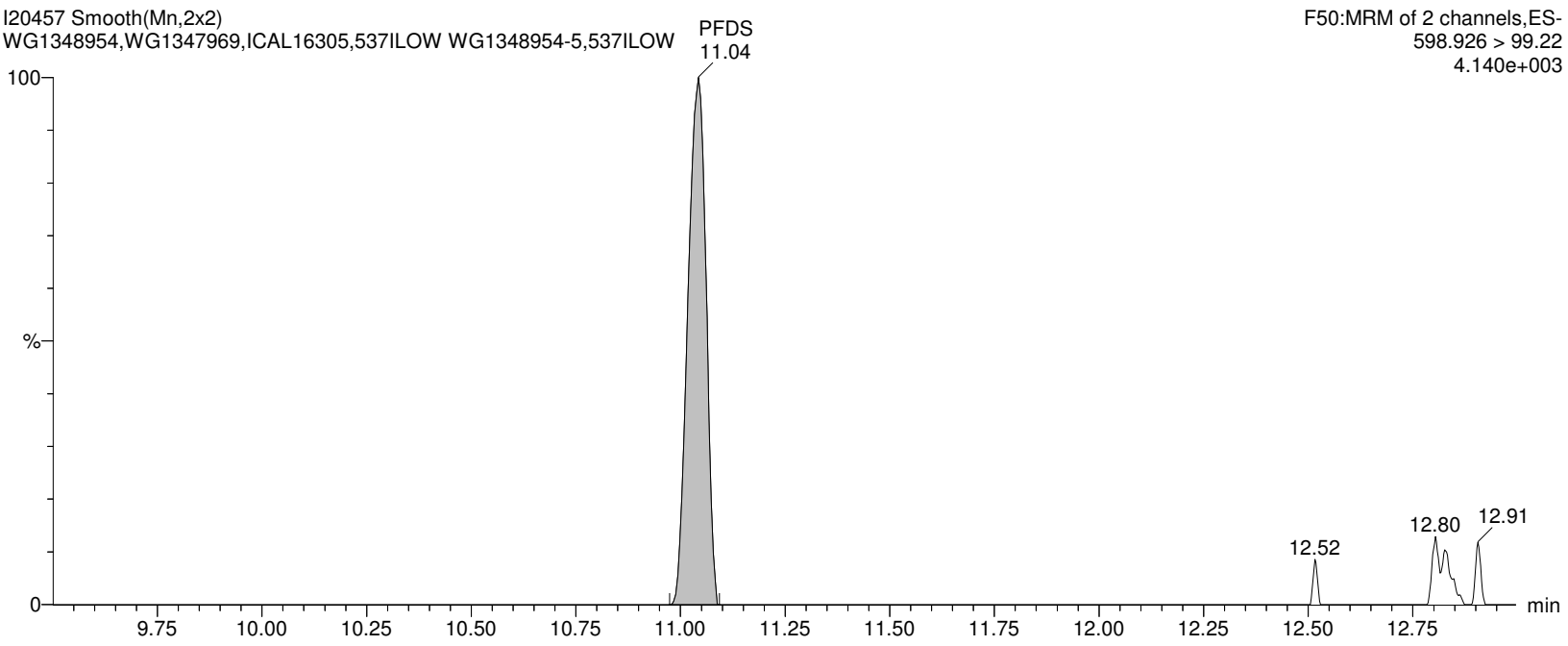



all concentration units in (ng/mL)

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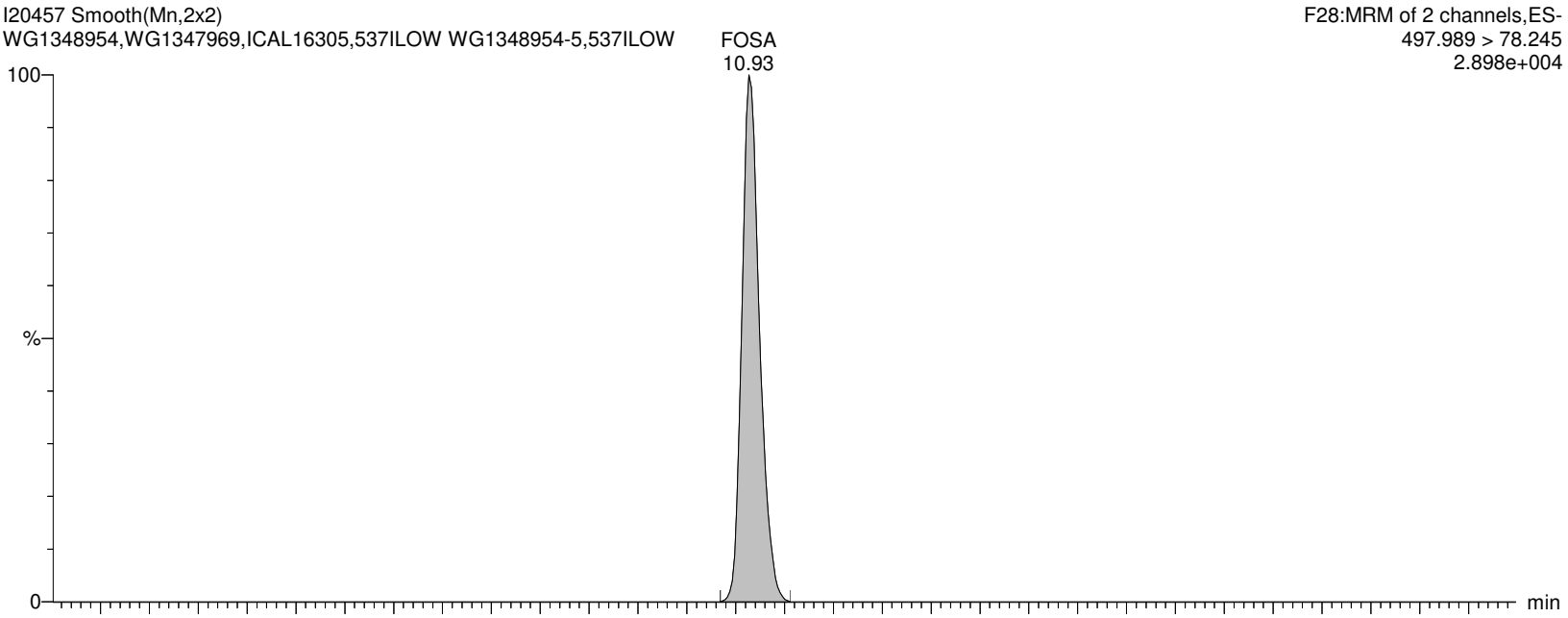


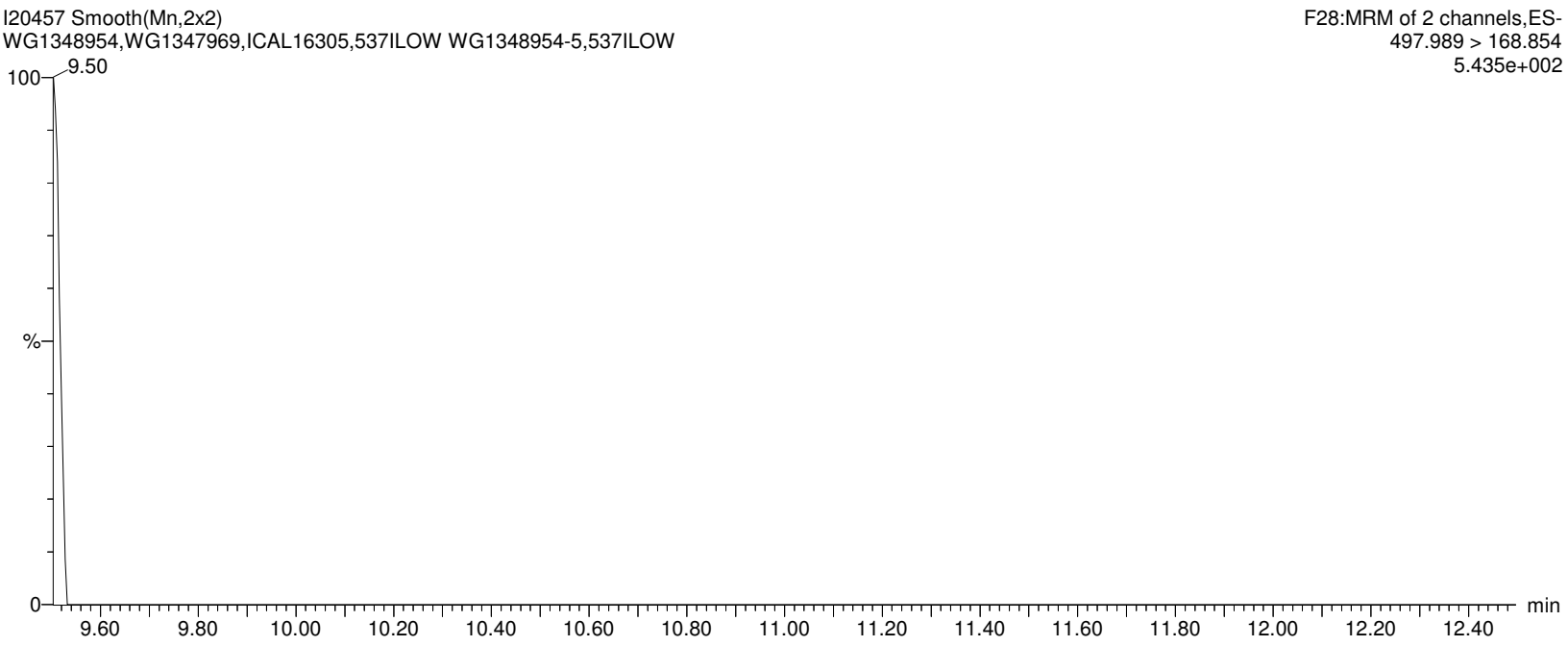



all concentration units in (ng/mL)

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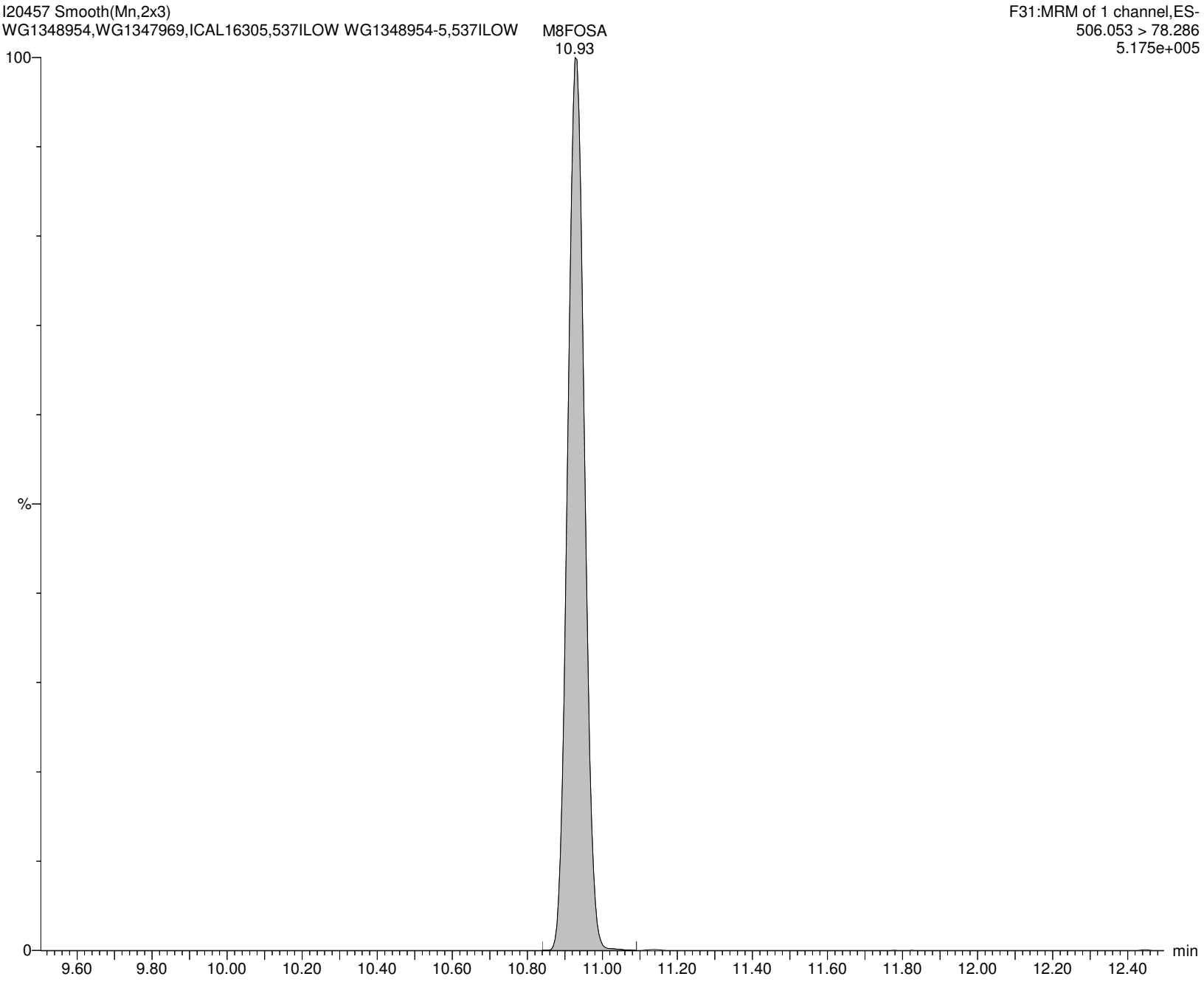



all concentration units in (ng/mL)

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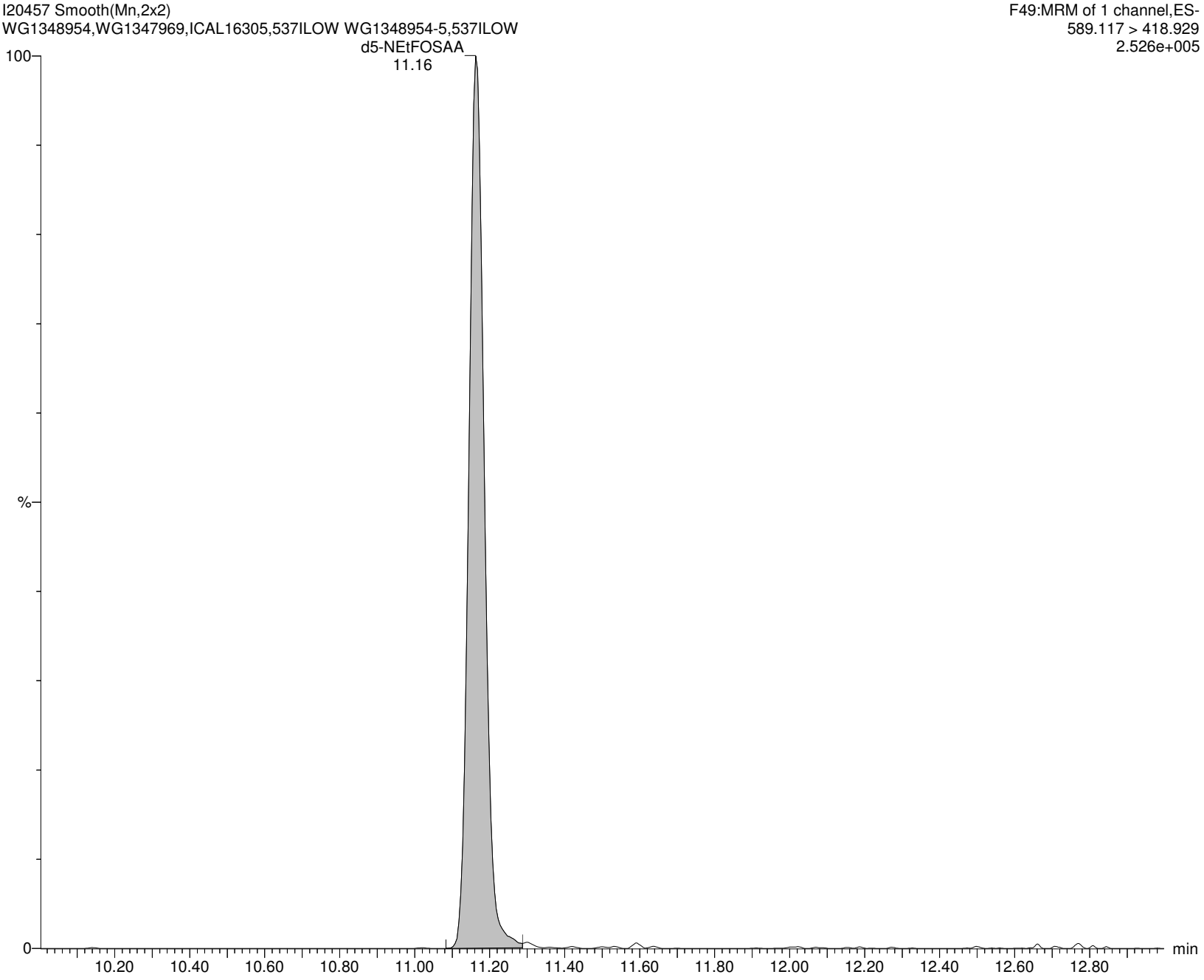
**d5-NEtFOSAA**





all concentration units in (ng/mL)

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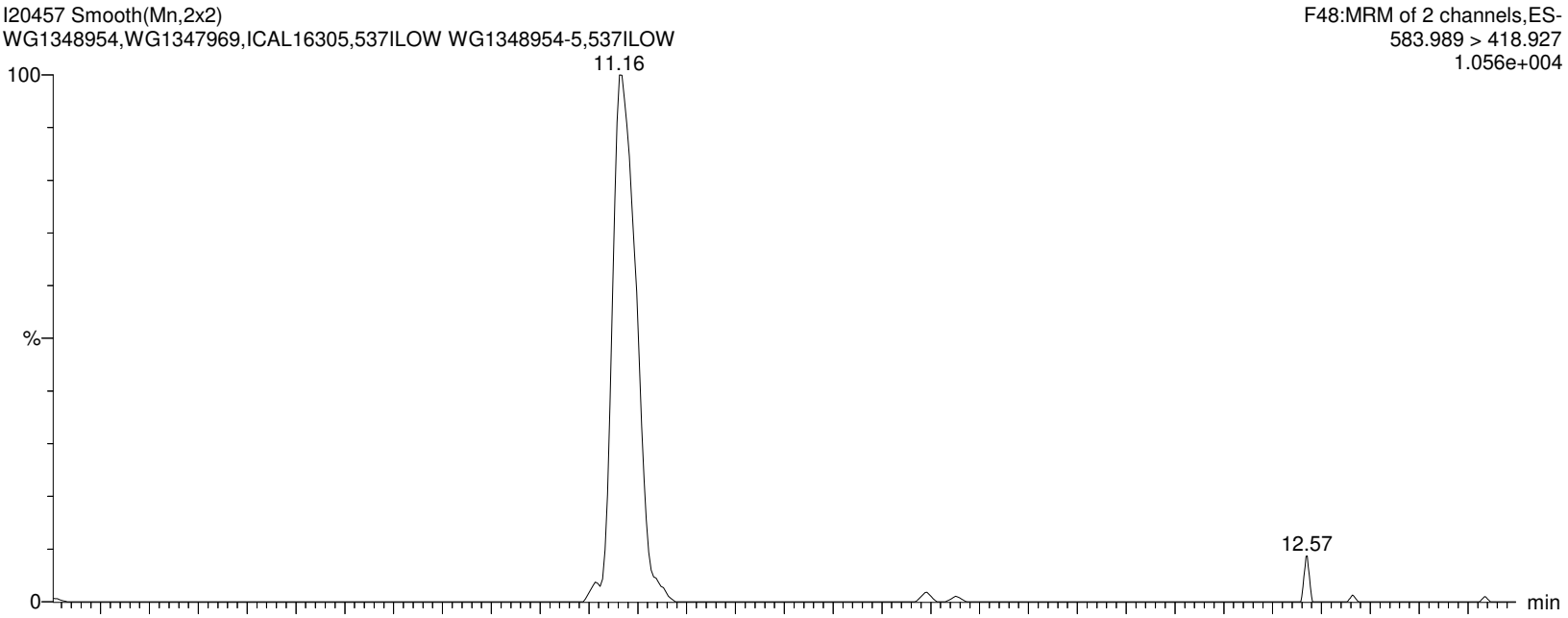
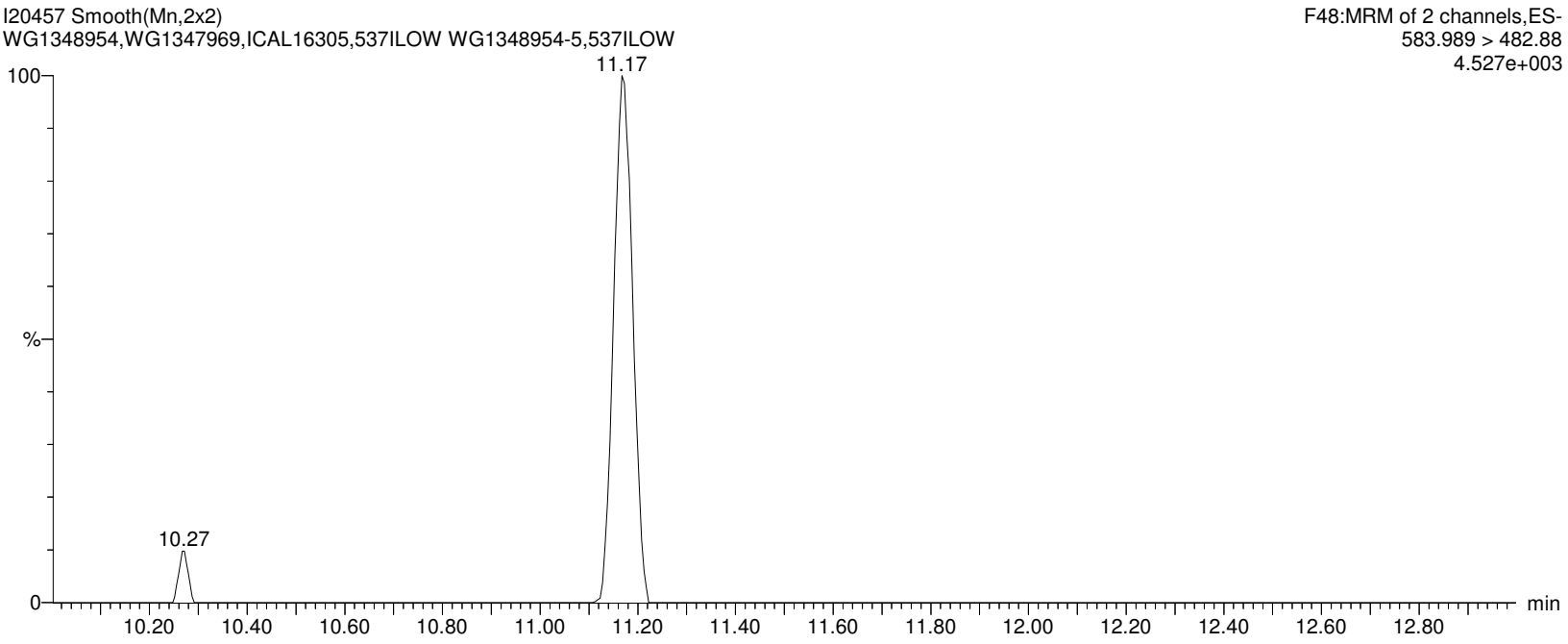
**br-NEtFOSAA**





all concentration units in (ng/mL)

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**Name: I20457**
**ID: WG1348954-5,537ILOW**
**Date: 11-Mar-2020**
**Time: 03:27:13**
**Description: WG1348954,WG1347969,ICAL16305,537ILOW**
**User: LCMS02:RS**
**Vial: 1:A,2**
**Instrument: XEVO-TQSmicro#QEB0050**
**Inlet Method Name: C:\MassLynx\Data\2020\200309_537ISO.PRO\ACQUDB\LCMS_537_ISO_B**
**Tune Method Name: C:\MassLynx\Data\2020\200309_537ISO.PRO\ACQUDB\181009_TUNE.IPR**
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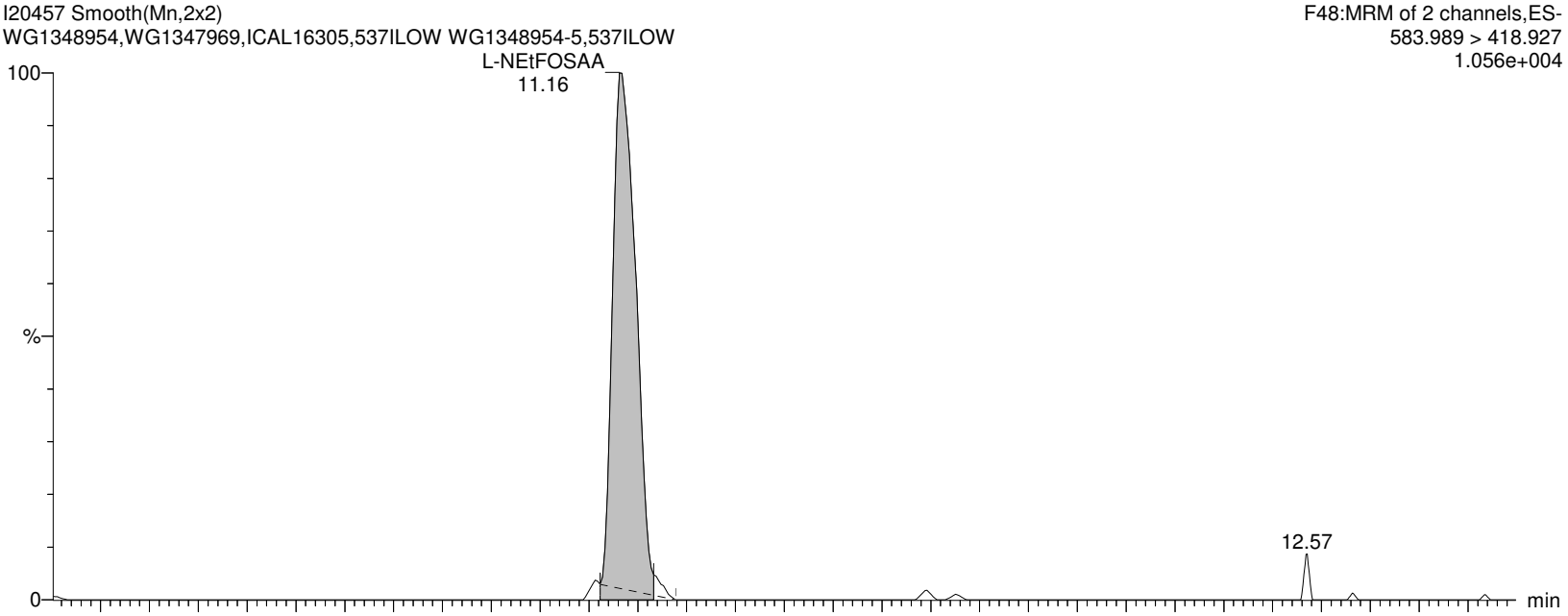


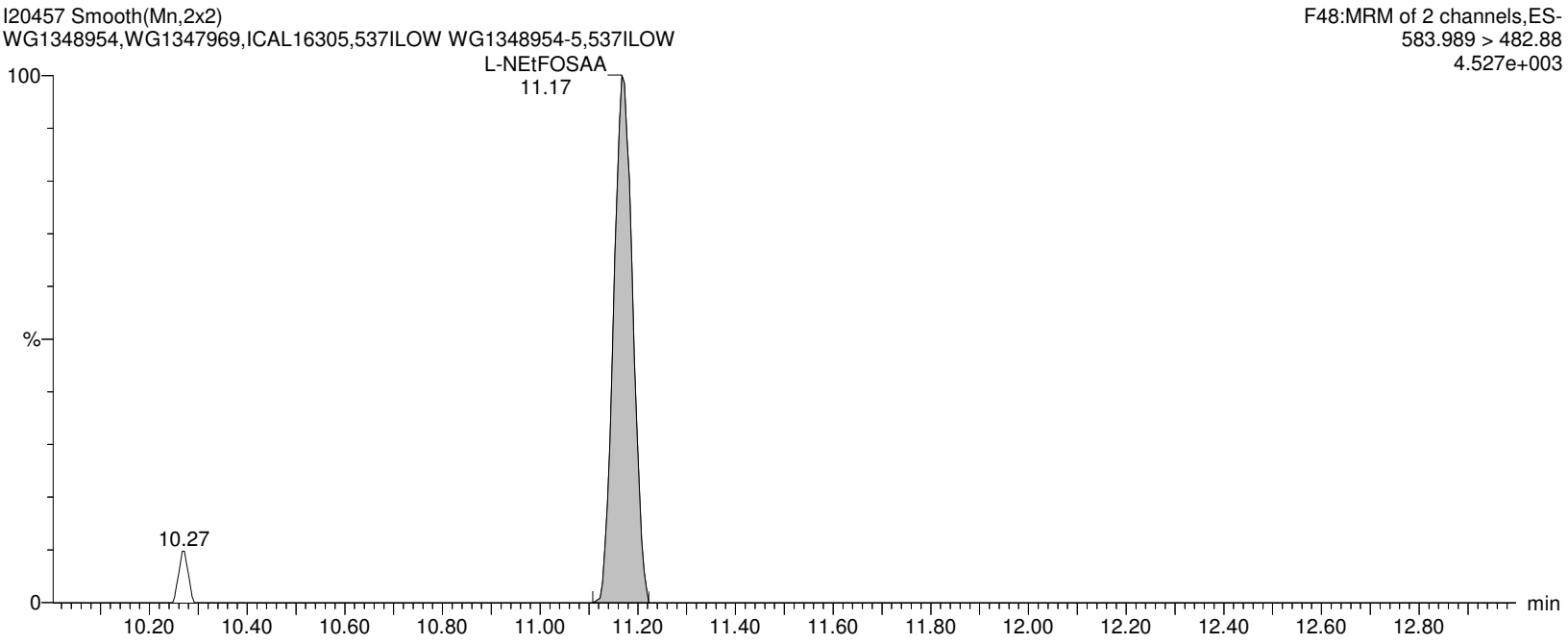



all concentration units in (ng/mL)

Alpha Analytical Inc.
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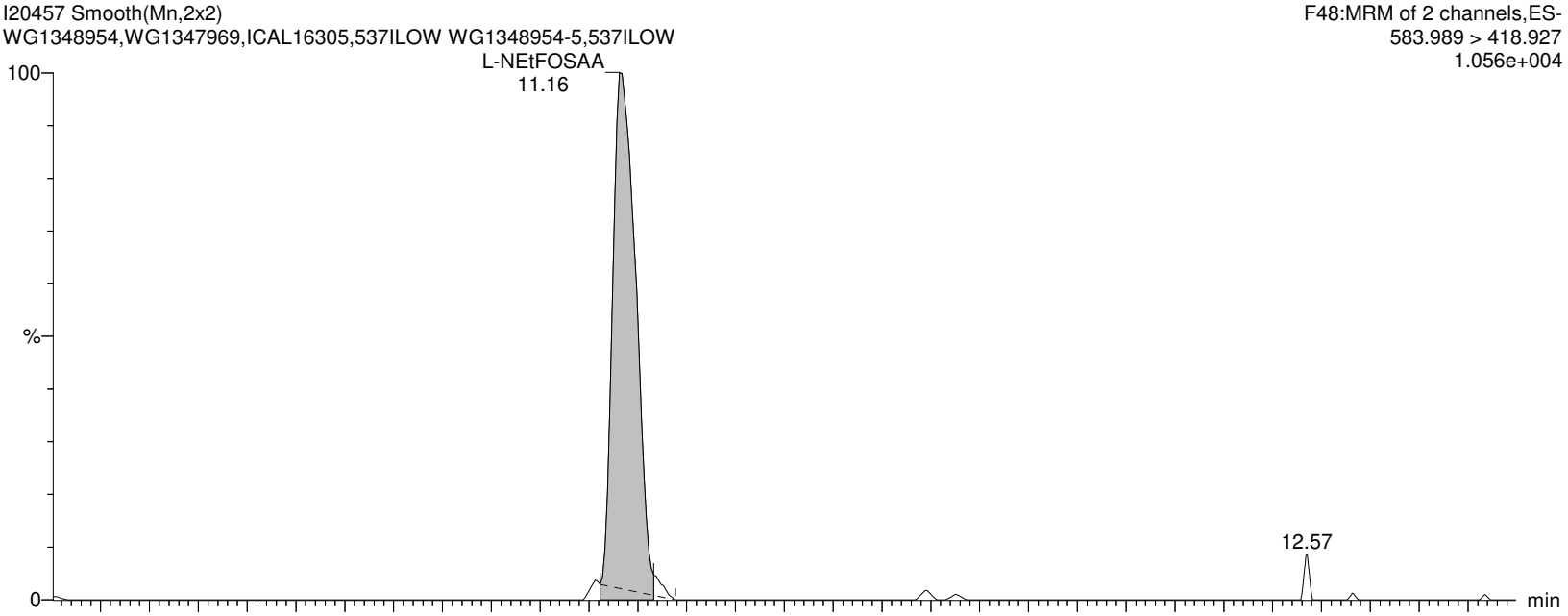


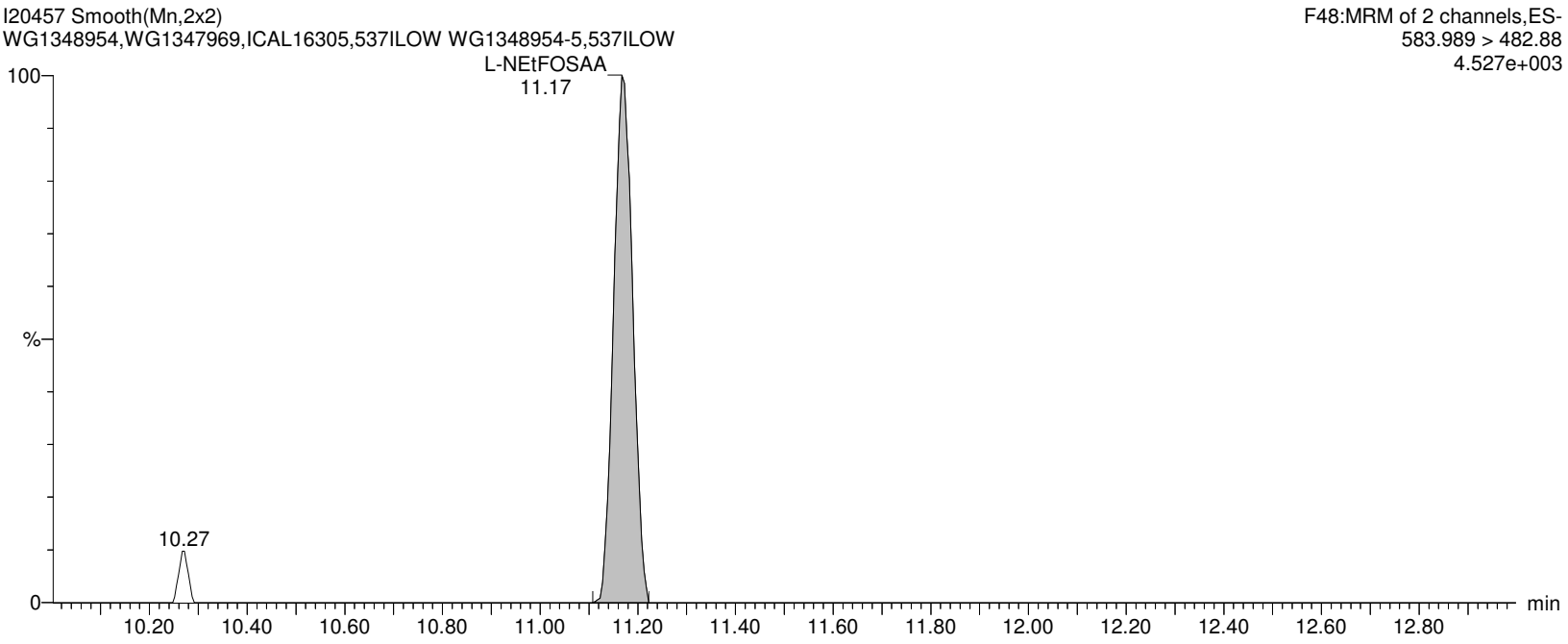



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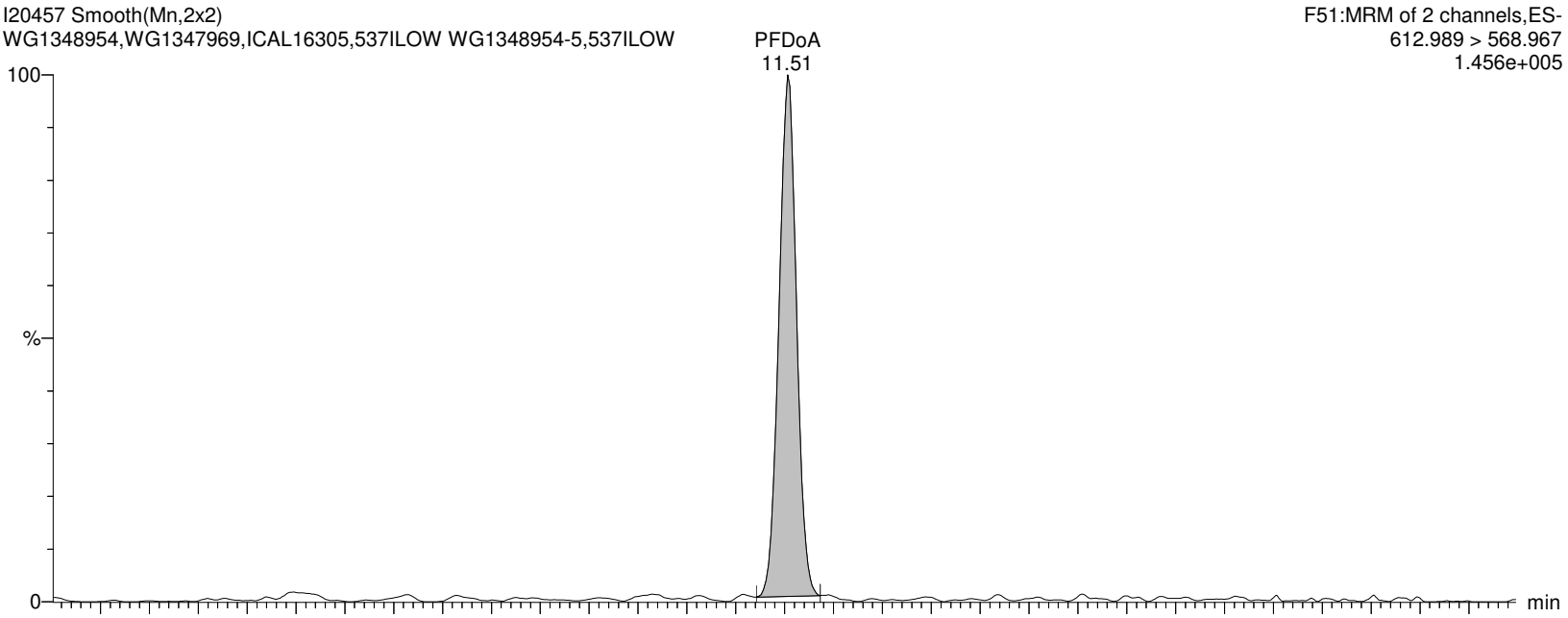


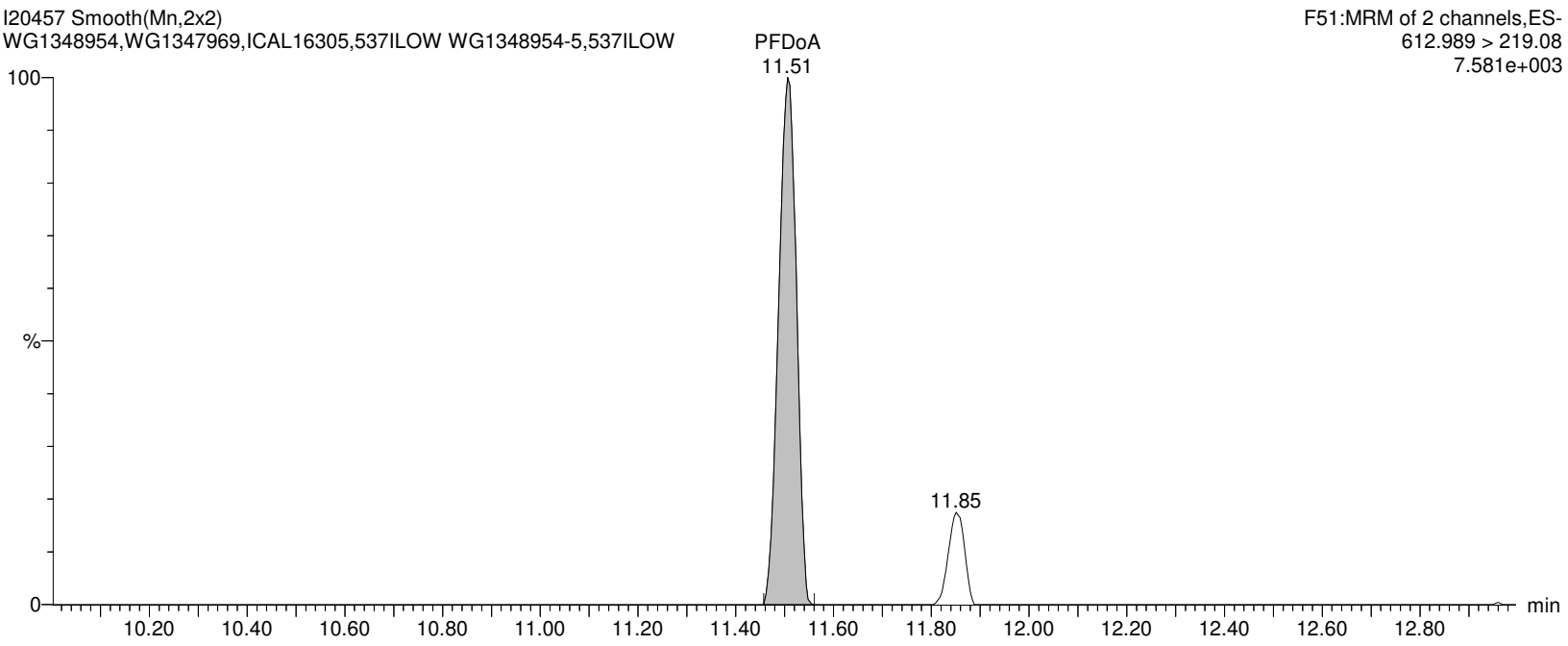



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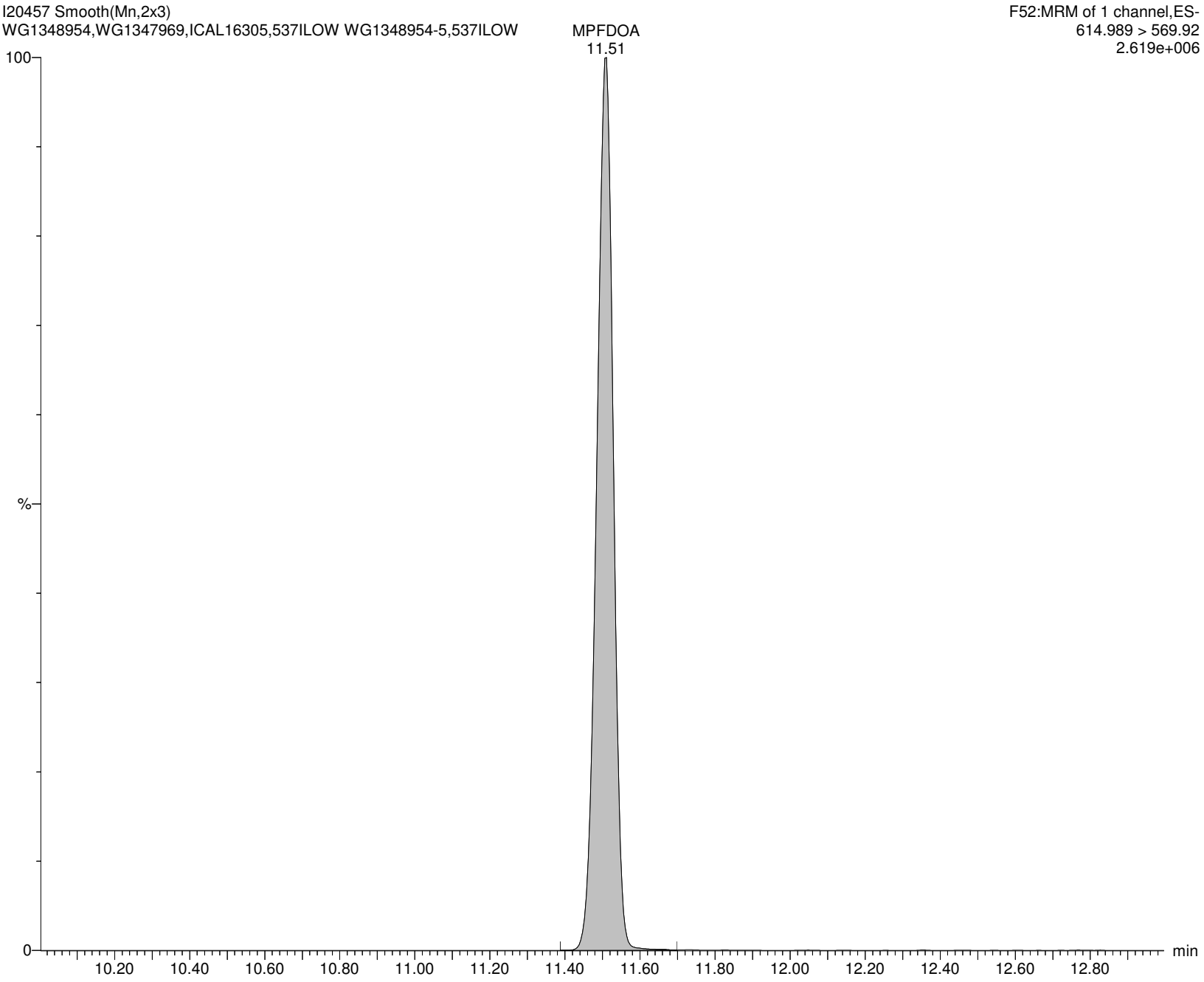



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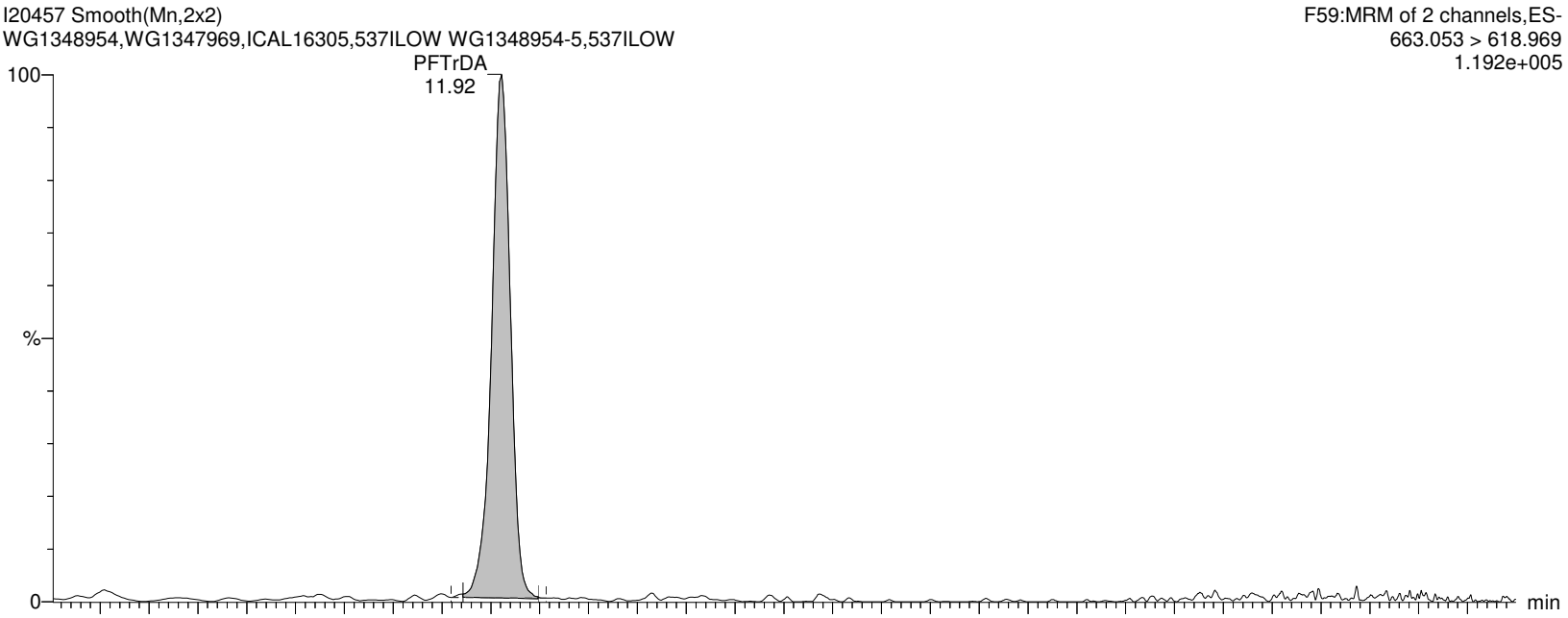


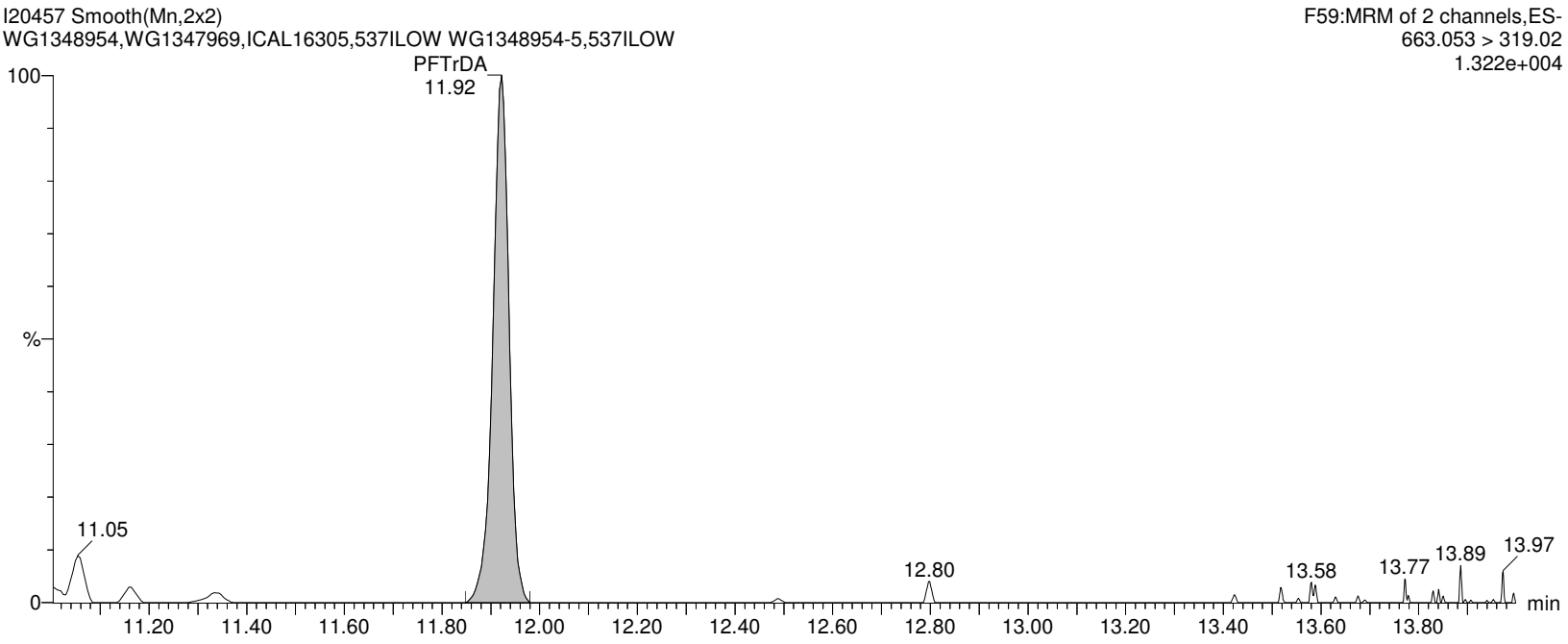



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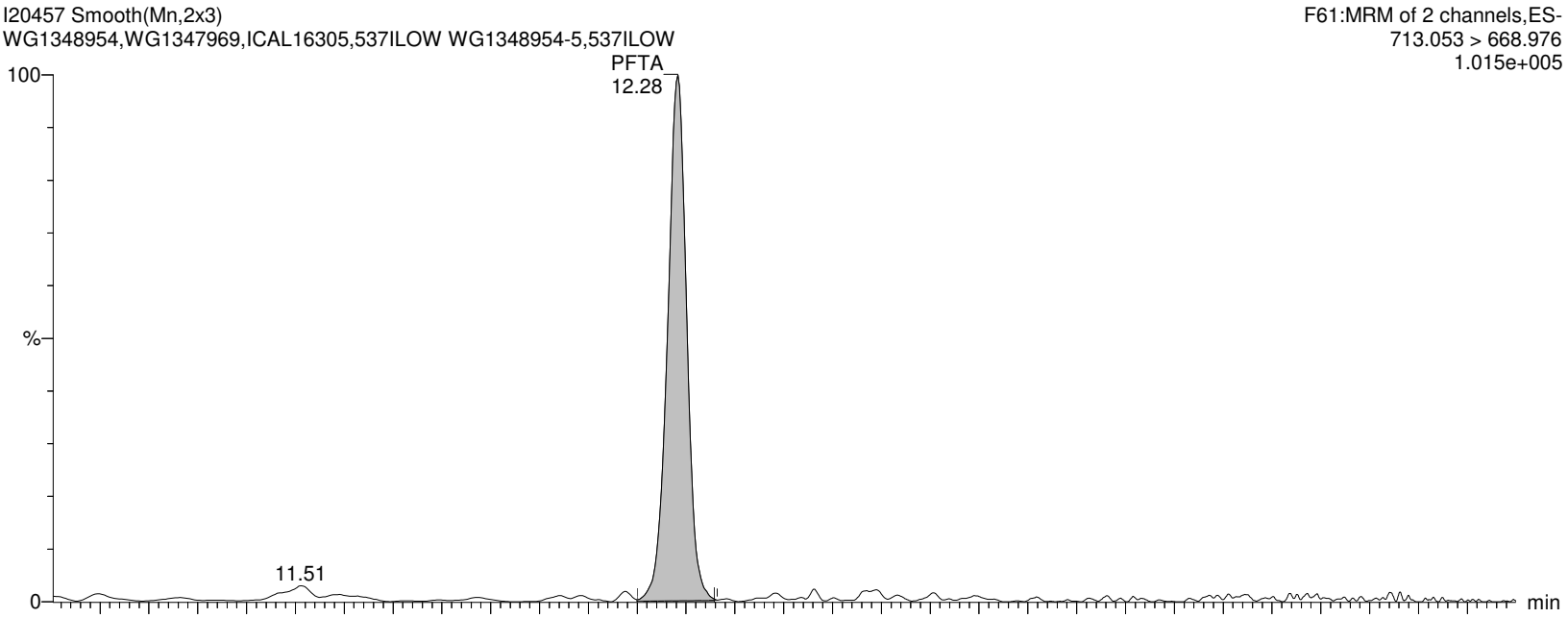


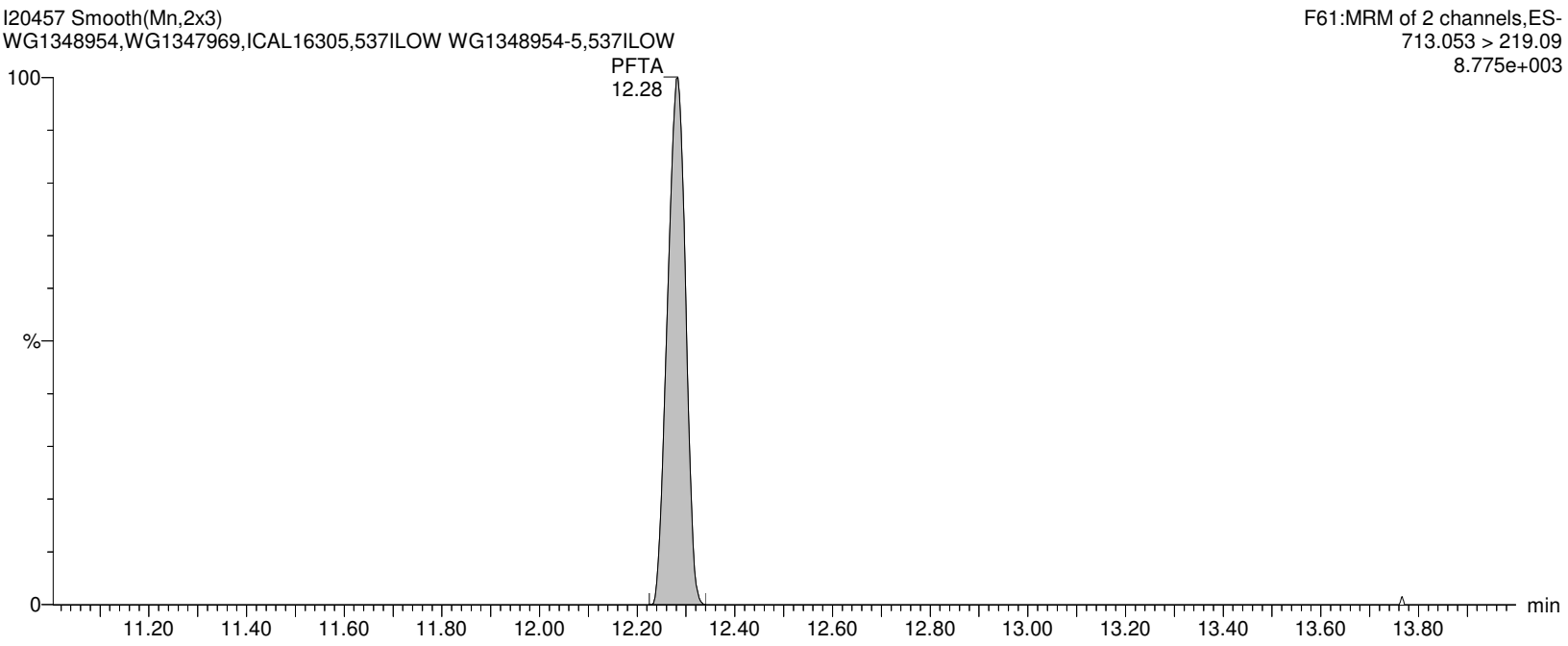



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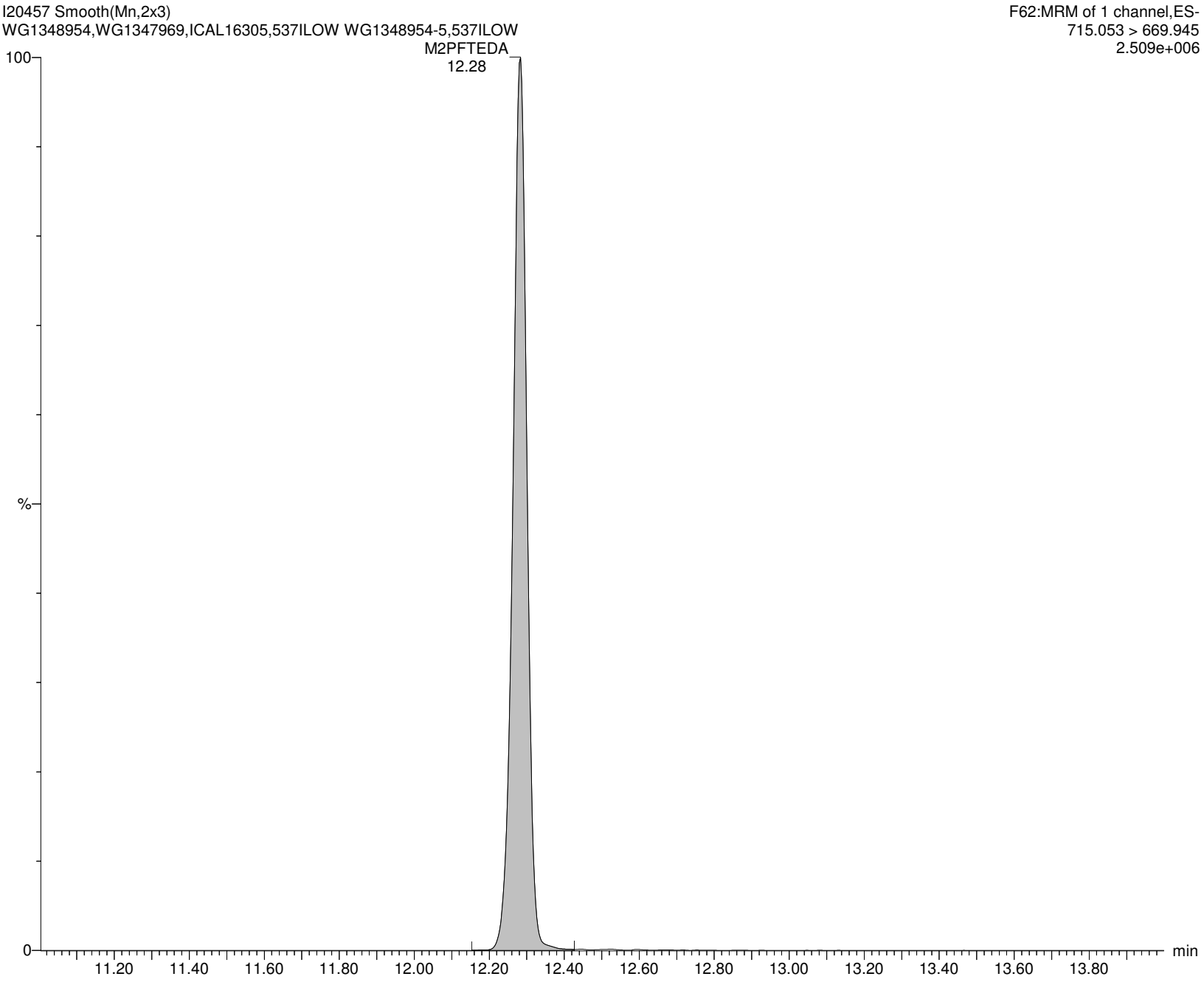



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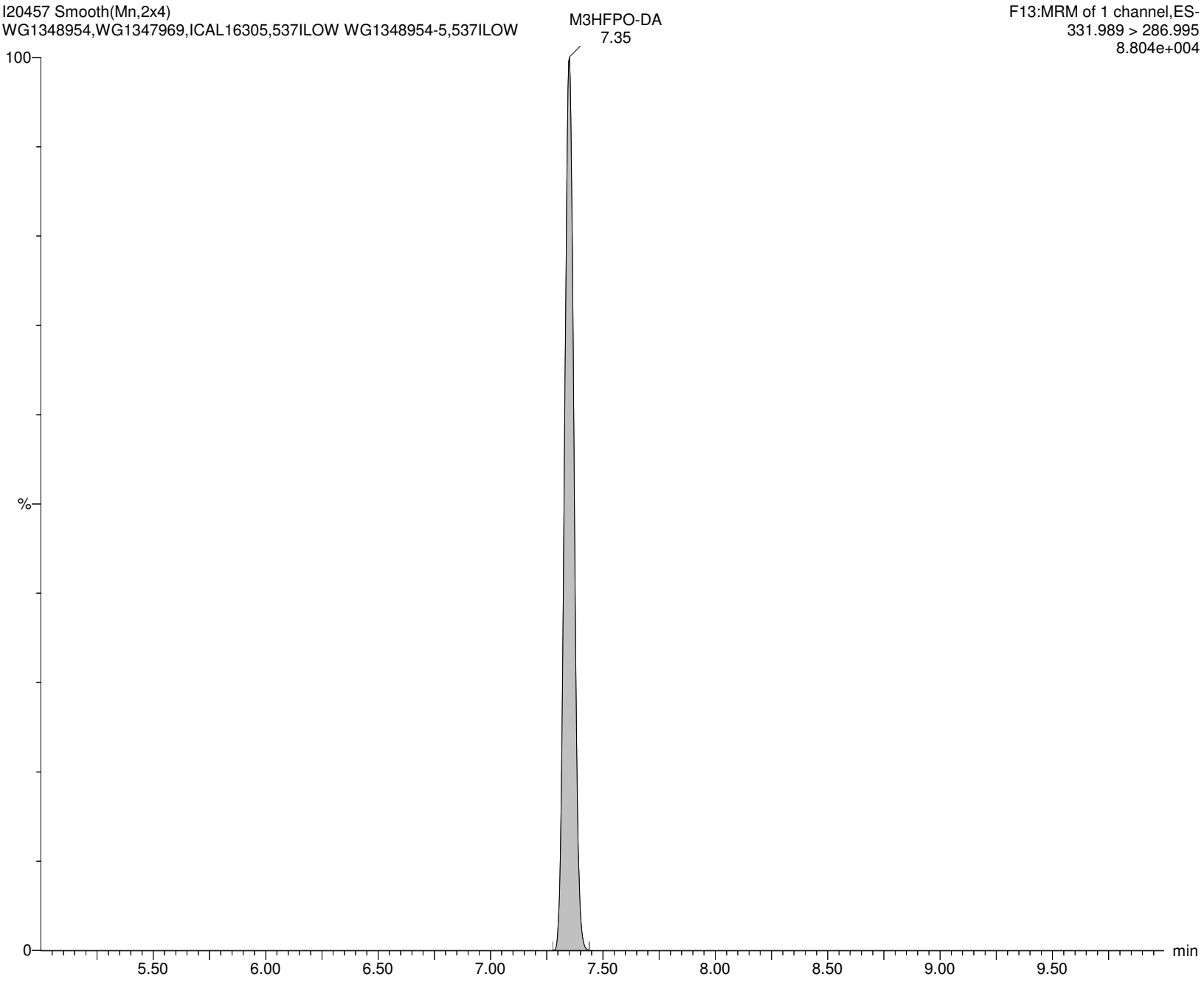



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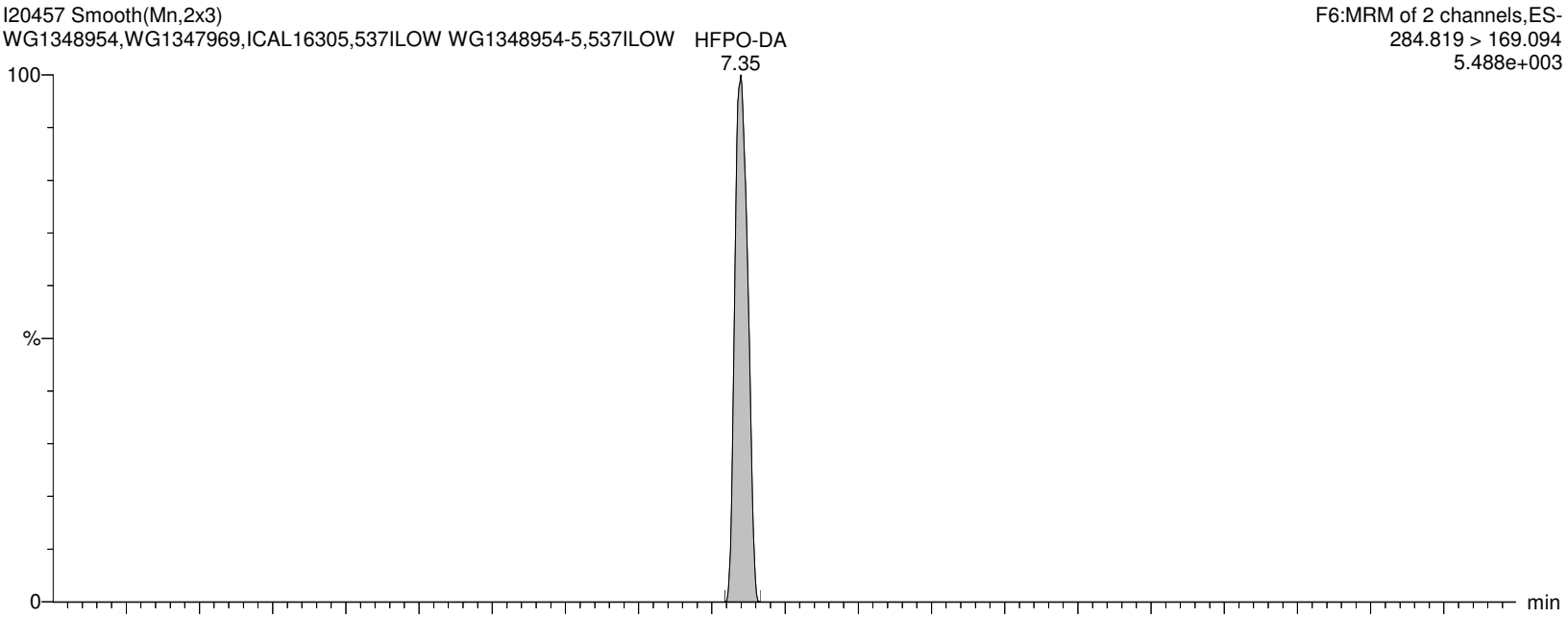


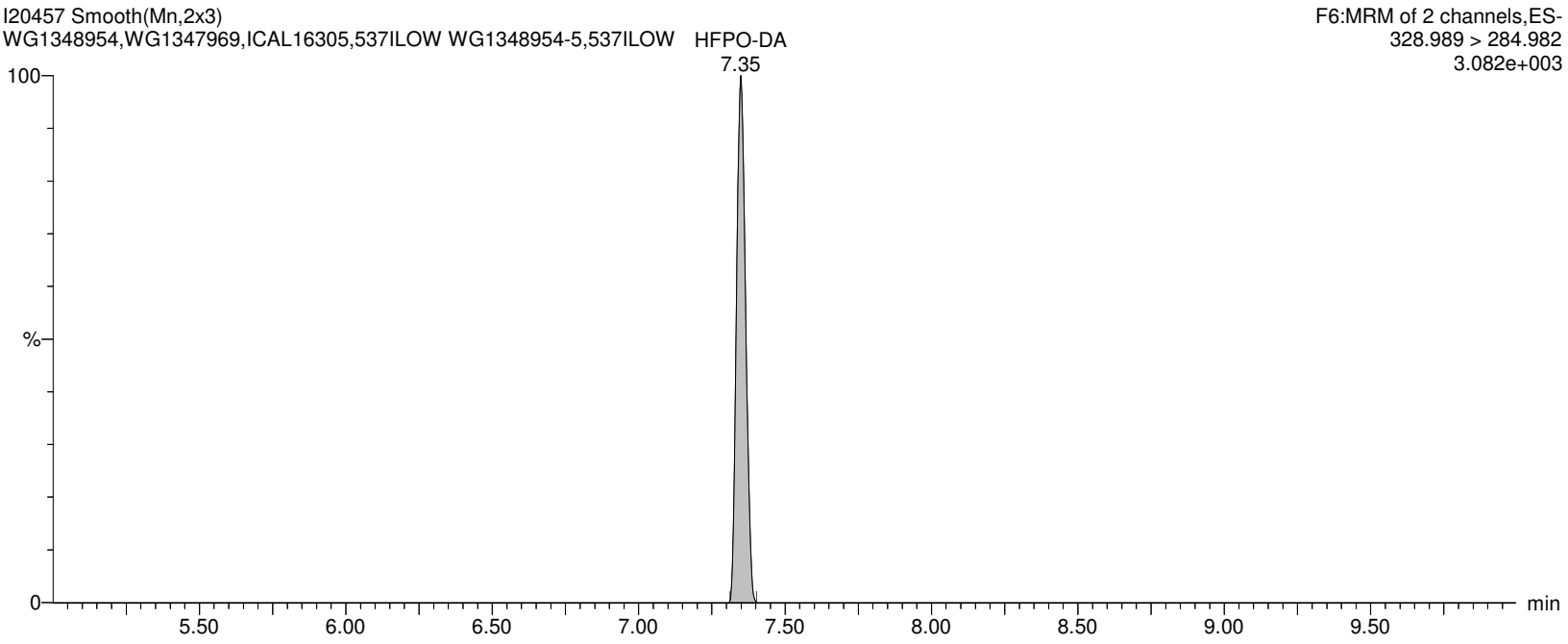



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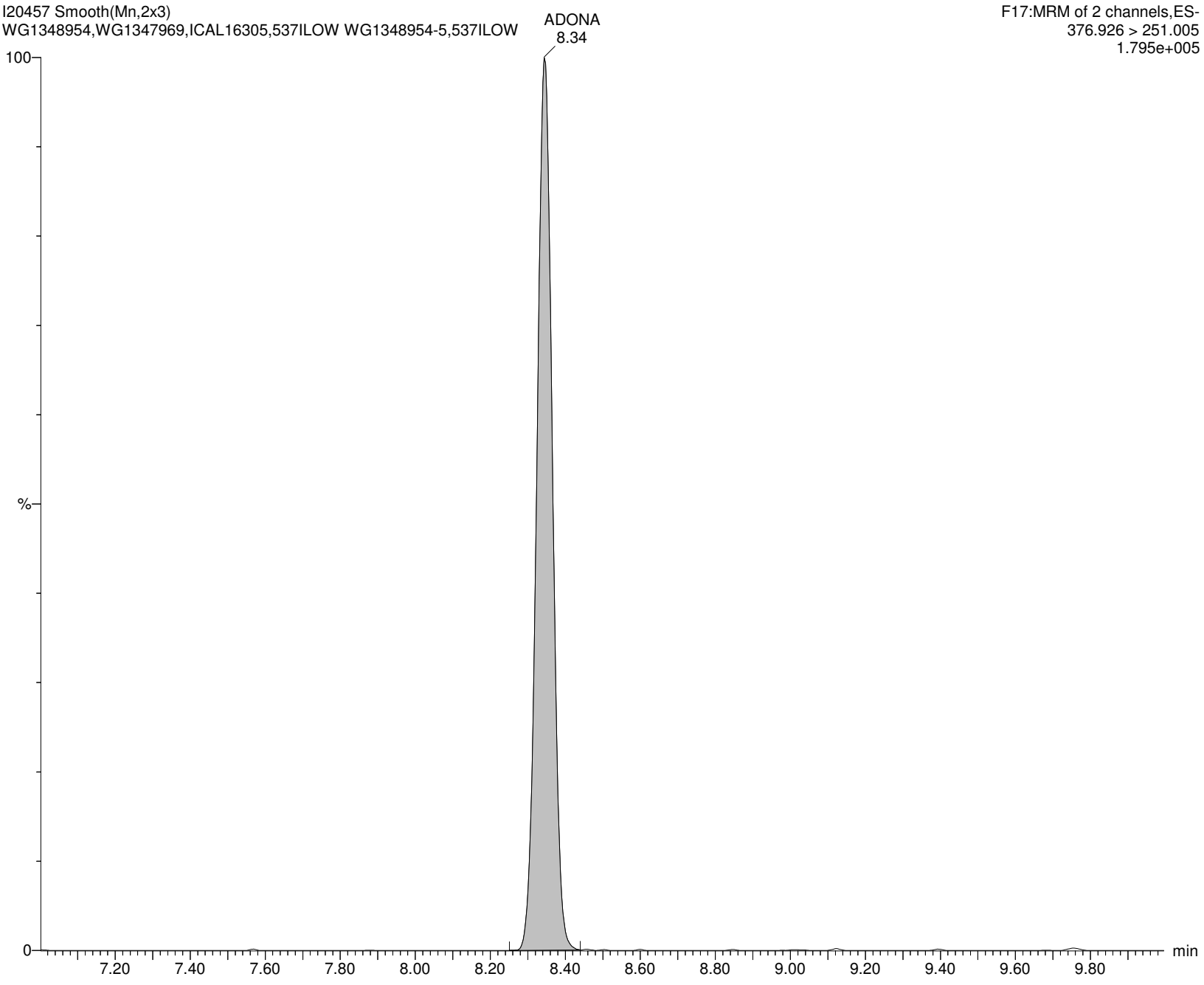



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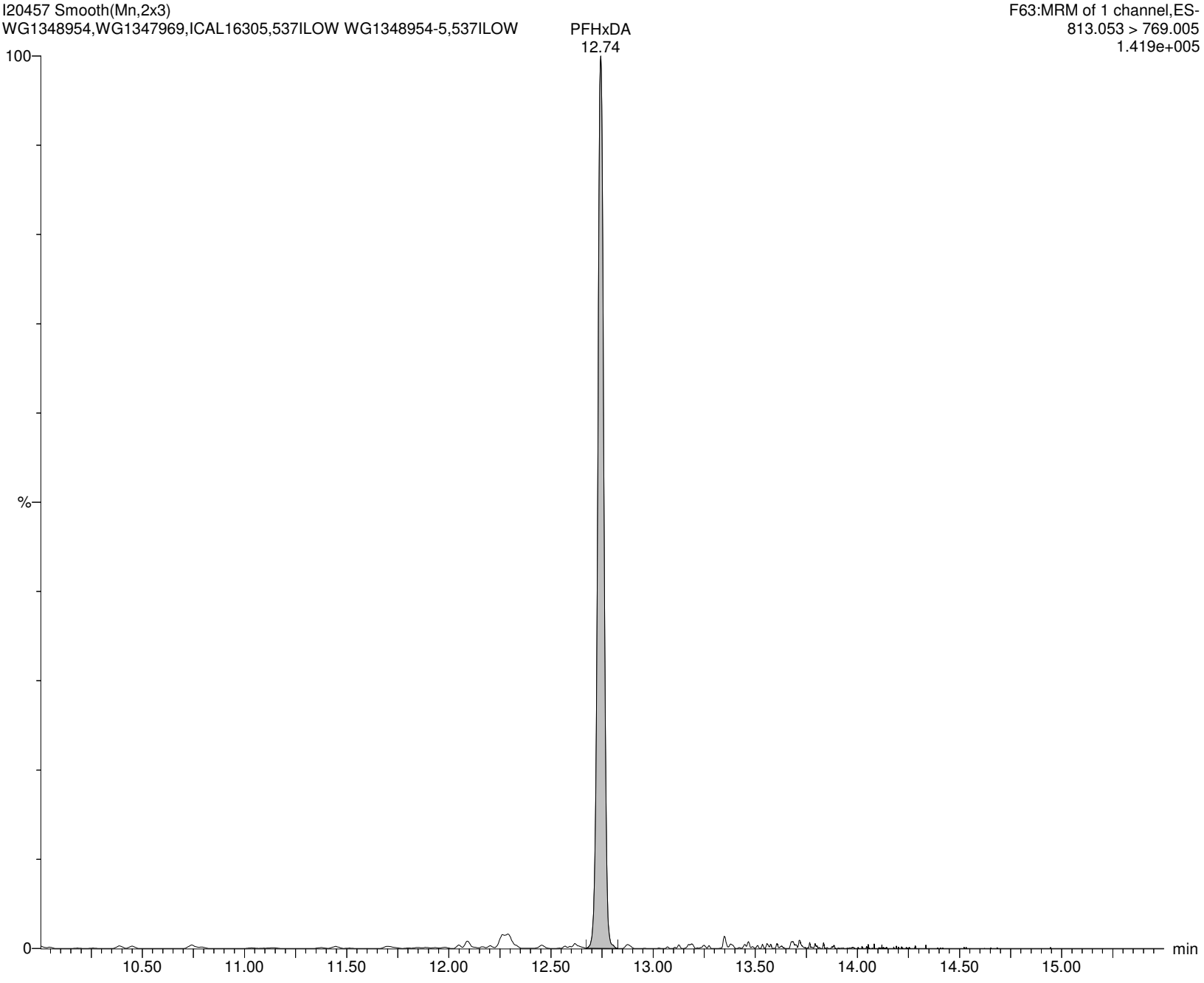



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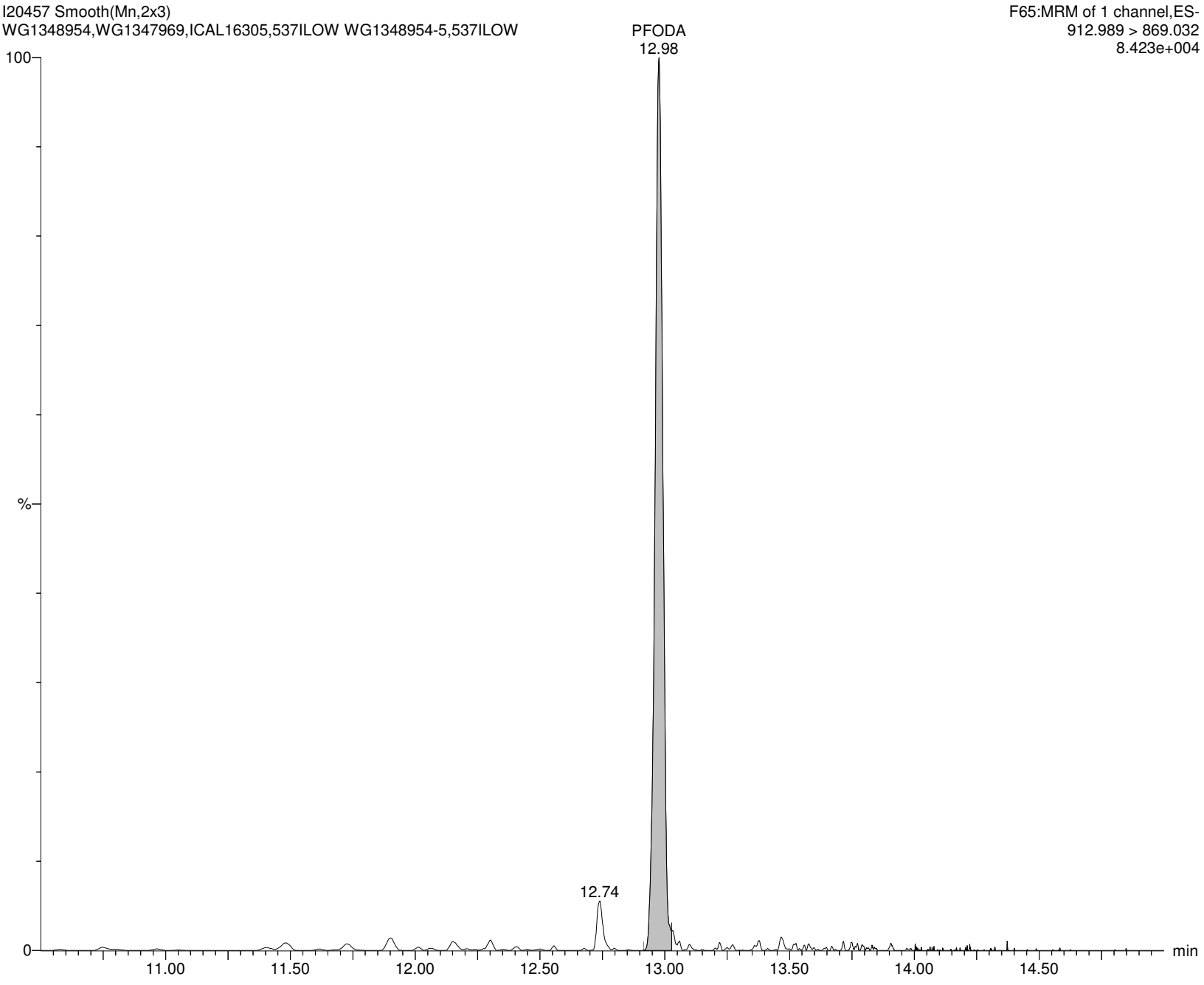



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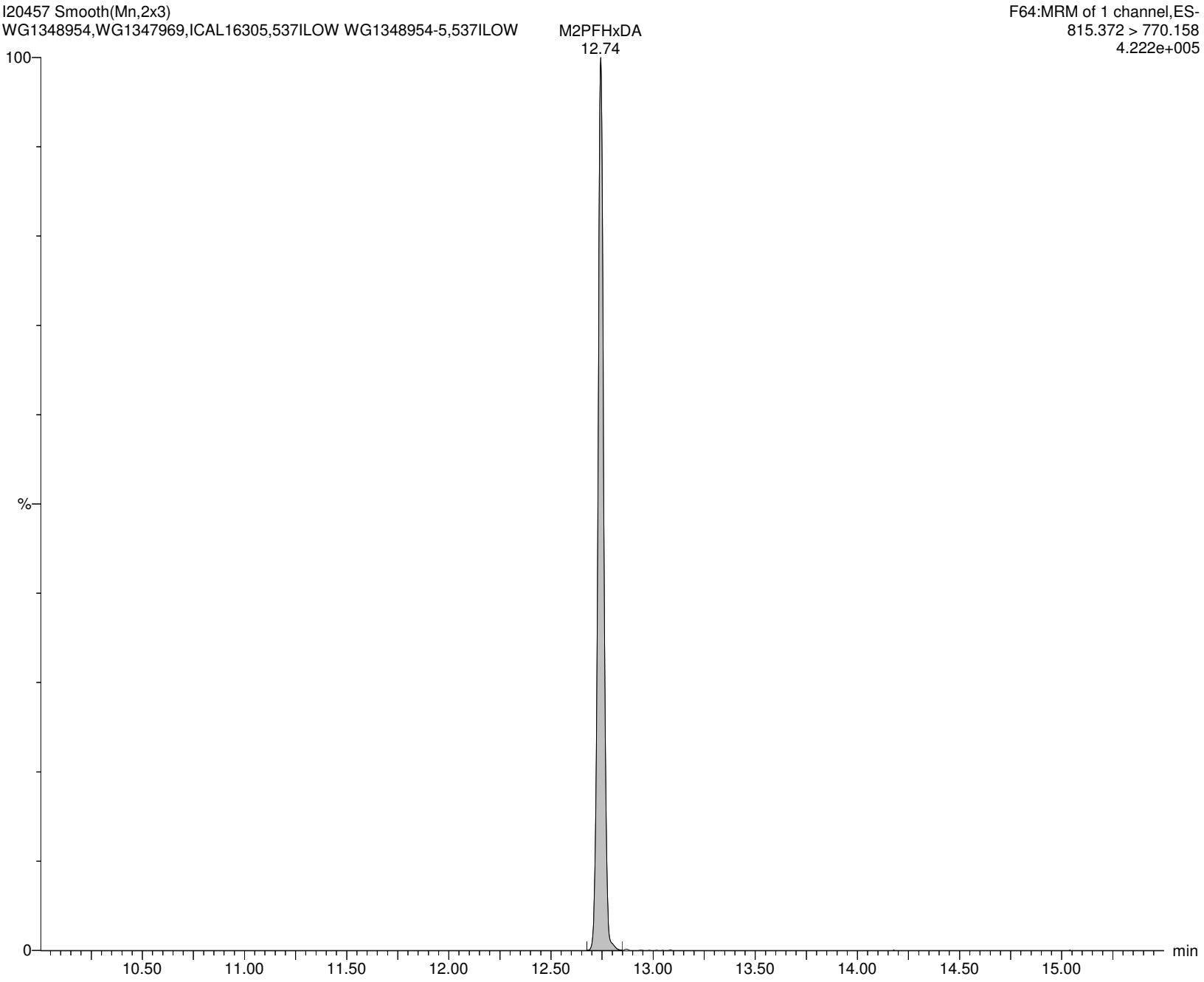



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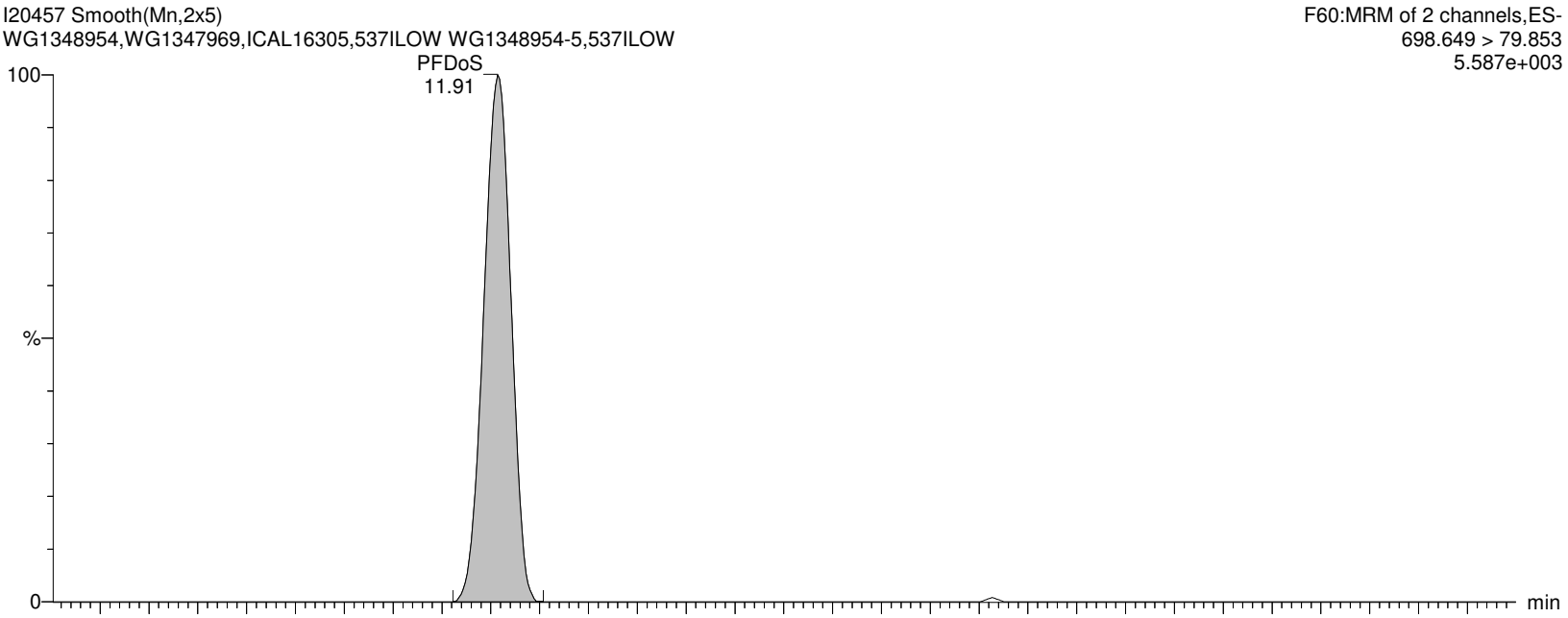


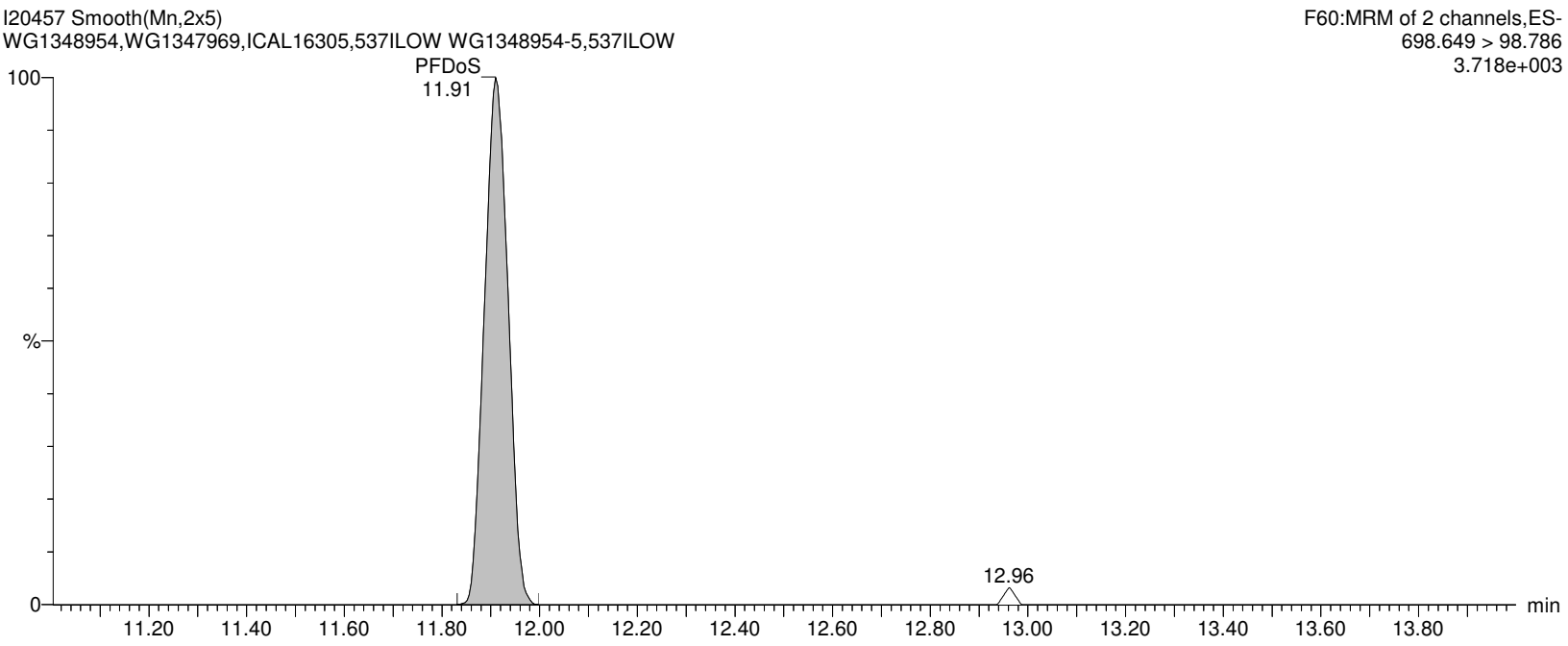



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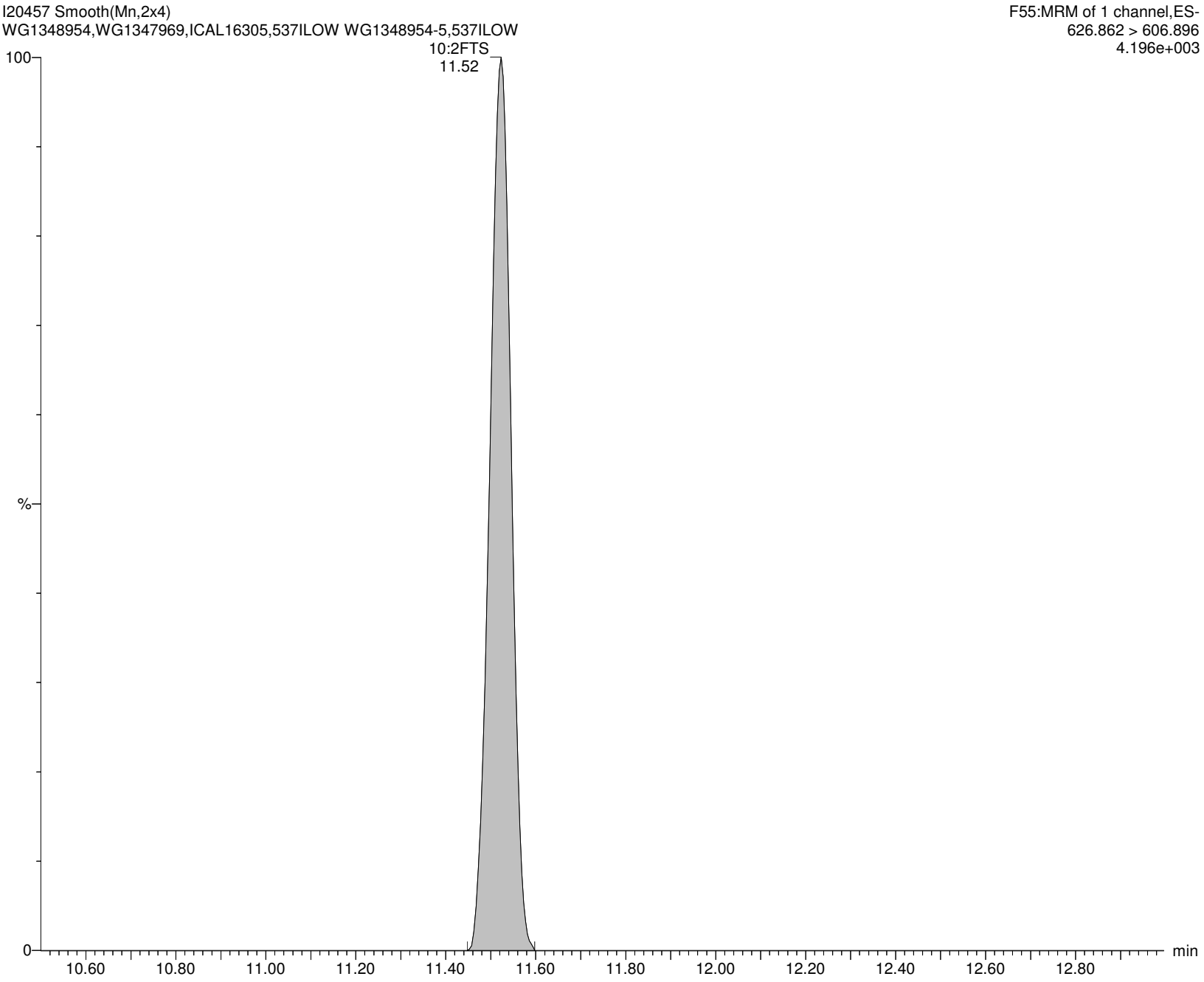


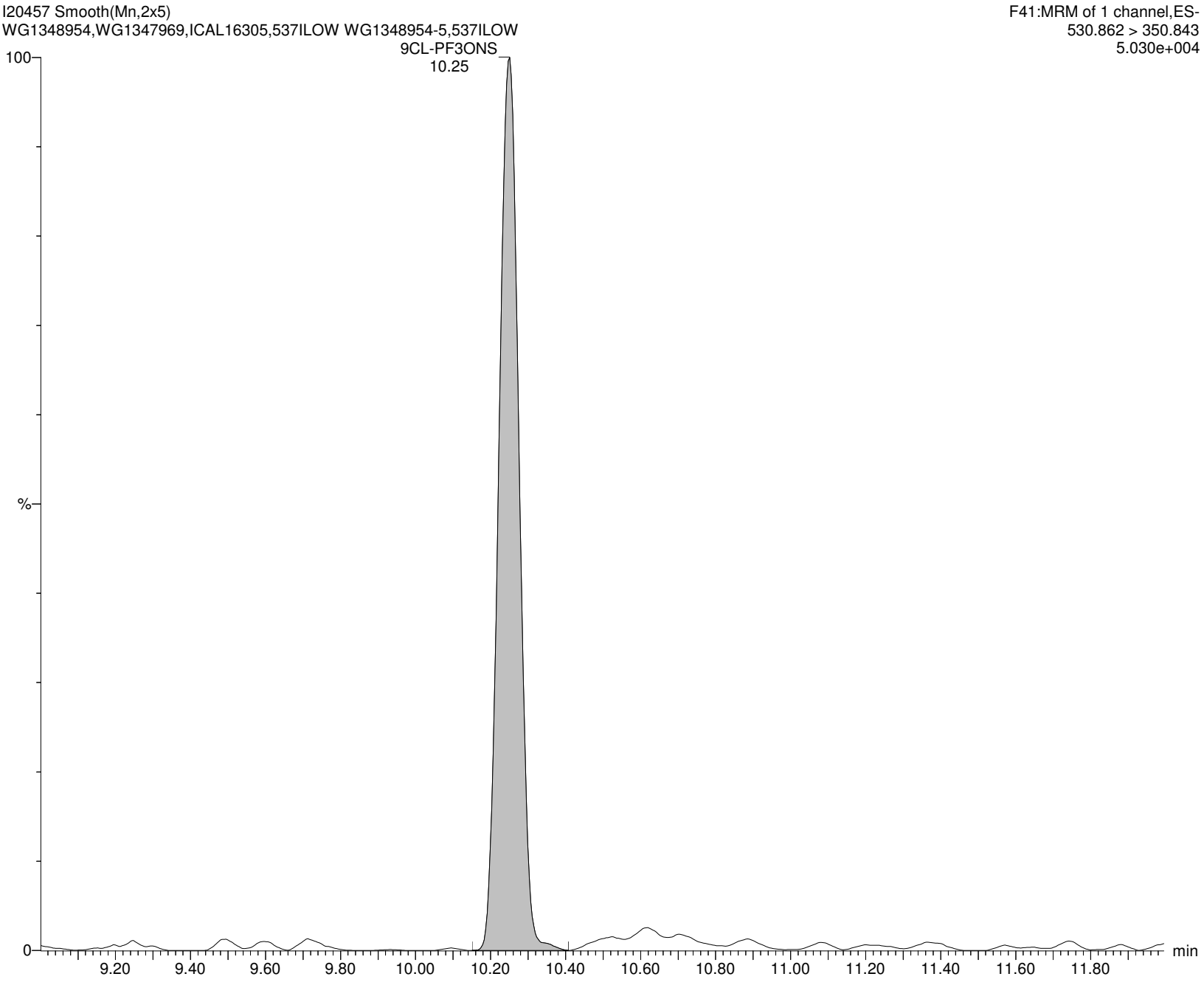


all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2020\200309_537ISO.PRO\Data\WG1348954D.qld
Last Altered: Wednesday, March 11, 2020 22:52:23 Eastern Daylight Time
Printed: Thursday, March 12, 2020 03:26:43 Eastern Daylight Time

**Name: I20457**
**ID: WG1348954-5,537ILOW**
**Date: 11-Mar-2020**
**Time: 03:27:13**
**Description: WG1348954,WG1347969,ICAL16305,537ILOW**
**User: LCMS02:RS**
**Vial: 1:A,2**
**Instrument: XEVO-TQSmicro#QEB0050**
**Inlet Method Name: C:\MassLynx\Data\2020\200309_537ISO.PRO\ACQUDB\LCMS_537_ISO_B**
**Tune Method Name: C:\MassLynx\Data\2020\200309_537ISO.PRO\ACQUDB\181009_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\2020\200309_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**9CL-PF3ONS**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2020\200309_537ISO.PRO\Data\WG1348954D.qld
Last Altered: Wednesday, March 11, 2020 22:52:23 Eastern Daylight Time
Printed: Thursday, March 12, 2020 03:26:43 Eastern Daylight Time

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**Date: 11-Mar-2020**
**Time: 03:27:13**
**Description: WG1348954,WG1347969,ICAL16305,537ILOW**
**User: LCMS02:RS**
**Vial: 1:A,2**
**Instrument: XEVO-TQSmicro#QEB0050**
**Inlet Method Name: C:\MassLynx\Data\2020\200309_537ISO.PRO\ACQUDB\LCMS_537_ISO_B**
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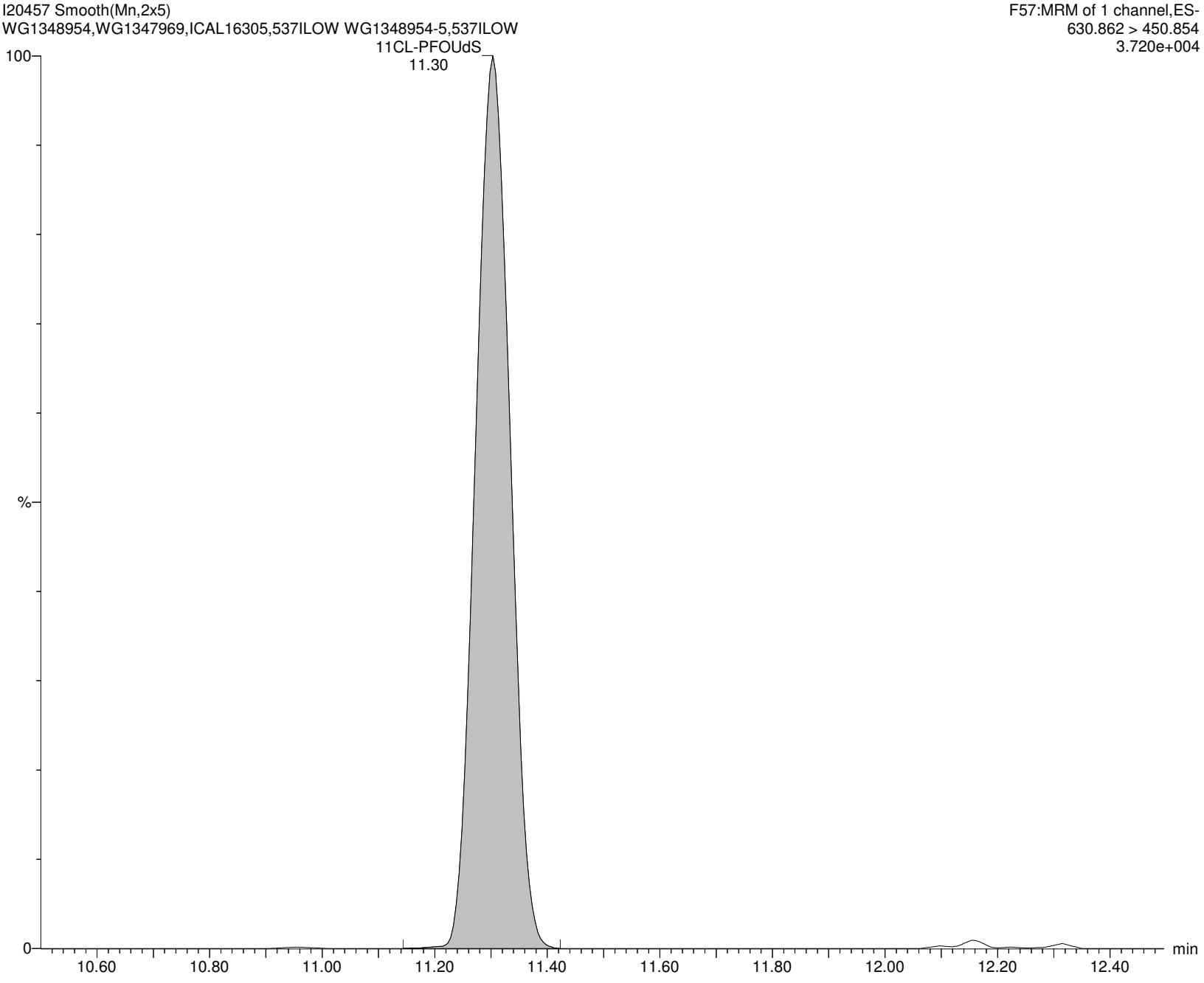
**MS Method Name: C:\MassLynx\Data\2020\200309_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**11CL-PFOUdS**





all concentration units in (ng/mL)

# Semivolatiles Raw QC Data

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2020\200309_537ISO.PRO\Data\WG1348954C.qld
Last Altered: Wednesday, March 11, 2020 21:10:58 Eastern Daylight Time
Printed: Thursday, March 12, 2020 09:03:00 Eastern Daylight Time

**Method: C:\MassLynx\Data\2020\200309_537ISO.PRO\MethDB\537ISO_Q_191118_DOD_RT.mdb 07 Feb 2020 15:55:12**
**Calibration: C:\MassLynx\Data\2020\200309_537ISO.PRO\CurveDB\191118_ISO_ICAL.cdb 18 Nov 2019 14:41:42**

**ID: WG1347919-1**
**Name: I20436**
**Date: 10-Mar-2020**
**Time: 21:37:46**
**Description: WG1348954,WG1347919,ICAL16305**
**Instrument: XEVO-TQSmicro#QEB0050**
**User: LCMS02:RS**
**Inlet Method Name: C:\MassLynx\Data\2020\200309_537ISO.PRO\ACQUDB\LCMS_537_ISO_B**
**Tune Method Name: C:\MassLynx\Data\2020\200309_537ISO.PRO\ACQUDB\181009_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\2020\200309_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

| | Name | CAS | RT | Trace | Area | M Flag | Conc (ng/mL) | Ion Ratio | Ratio Flag | %Rec |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | PFBA | 375-22-4 | | 212.926 > 169.111 | | | ND | | na | |
| 2 | M3PFBA | INT STD | 2.18 | 215.926 > 172.122 | 50586 | | 10.917 | | na | 109.2 |
| 3 | MPFBA | INT STD | 2.18 | 216.926 > 172.137 | 59727 | | 10.849 | | na | 108.5 |
| 4 | PFPeA | 2706-90-3 | 5.05 | 262.926 > 219.002 | 539 | | 0.058 | | na | |
| 5 | M5PFPEA | INT STD | 5.06 | 267.989 > 223.081 | 96487 | | 12.357 | | na | 123.6 |
| 6 | PFBS | 375-73-5 | 5.69 | 298.926 > 79.923 | 6 | M2 | 0.003 | | YES | |
| 7 | M3PFBS | INT STD | 5.70 | 301.989 > 80.254 | 11996 | | 9.838 | | na | 98.4 |
| 8 | 4:2FTS | 757124-72-4 | | 326.926 > 306.957 | | | ND | | YES | |
| 9 | M2-4:2FTS | INT STD | 6.85 | 329.117 > 309.079 | 8400 | | 10.610 | | na | 106.1 |
| 10 | PFHxA | 307-24-4 | 6.93 | 312.989 > 269.028 | 797 | M4 | 0.078 | | YES | |
| 11 | M5PFHxA | INT STD | 6.93 | 317.989 > 273.045 | 110543 | | 10.652 | | na | 106.5 |
| 12 | PFPeS | 2706-91-4 | | 348.926 > 80.251 | | | ND | | YES | |
| 13 | PFHpA | 375-85-9 | 8.16 | 362.926 > 319.014 | 124 | M4 | 0.009 | | YES | |
| 14 | M4PFHpA | INT STD | 8.16 | 366.926 > 321.979 | 147472 | | 10.668 | | na | 106.7 |
| 15 | br-PFHxS | 355-46-4 | | 398.926 > 80.295 | | | ND | | YES | |
| 16 | L-PFHxS | 355-46-4 | | 398.926 > 80.295 | | | ND | | YES | |
| 17 | PFHxS | 355-46-4 | | 398.926 > 80.295 | 0 | | ND | | na | |
| 18 | M3PFHxS | INT STD | 8.31 | 401.926 > 80.317 | 7482 | | 10.631 | | na | 106.3 |
| 19 | br-PFOA | 335-67-1 | | 412.989 > 368.9 | | | ND | | YES | |
| 20 | L-PFOA | 335-67-1 | 9.07 | 412.989 > 368.9 | 408 | | 0.030 | 24.28 | YES | |
| 21 | PFOA | 335-67-1 | | 412.989 > 368.9 | 408 | | 0.030 | | na | |
| 22 | M8PFOA | INT STD | 9.07 | 420.989 > 375.979 | 148539 | | 11.198 | | na | 112.0 |
| 23 | M2PFOA | INT STD | 9.07 | 415.032 > 369.968 | 135568 | | 12.824 | | na | 128.2 |
| 24 | 6:2FTS | 27619-97-2 | | 426.989 > 406.921 | | | ND | | YES | |
| 25 | M2-6:2FTS | INT STD | 9.03 | 428.989 > 408.917 | 8461 | | 10.935 | | na | 109.4 |
| 26 | PFHpS | 375-92-8 | | 448.926 > 80.257 | | | ND | | YES | |
| 27 | PFNA | 375-95-1 | 9.83 | 462.989 > 418.931 | 171 | | 0.014 | | YES | |
| 28 | M9PFNA | INT STD | 9.82 | 472.053 > 426.947 | 149582 | | 11.460 | | na | 114.6 |
| 29 | br-PFOS | 1763-23-1 | 9.68 | 498.989 > 80.294 | 17 | | 0.014 | 0.51 | NO | |
| 30 | L-PFOS | 1763-23-1 | 9.85 | 498.989 > 80.294 | 22 | | 0.024 | | YES | |
| 31 | PFOS | 1763-23-1 | | 498.989 > 80.294 | 39 | | 0.037 | | na | |
| 32 | M4PFOS | INT STD | 9.87 | 503.032 > 80.306 | 8712 | | 12.474 | | na | 124.7 |
| 33 | M8PFOS | INT STD | 9.87 | 507.053 > 80.294 | 9579 | | 10.715 | | na | 107.2 |
| 34 | PFDA | 335-76-2 | 10.47 | 513.053 > 468.906 | 185 | M4 | 0.016 | | YES | |
| 35 | M2PFDA | INT STD | 10.46 | 515.053 > 469.934 | 124385 | | 14.088 | | na | 140.9 |
| 36 | M6PFDA | INT STD | 10.46 | 519.053 > 473.931 | 137053 | | 10.661 | | na | 106.6 |
| 37 | 8:2FTS | 39108-34-4 | | 526.926 > 506.818 | | | ND | | na | |
| 38 | M2-8:2FTS | INT STD | 10.45 | 529.053 > 508.945 | 5347 | | 11.780 | | na | 117.8 |
| 39 | PFNS | 68259-12-1 | | 548.989 > 80.249 | | | ND | | YES | |


all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2020\200309_537ISO.PRO\Data\WG1348954C.qld
Last Altered: Wednesday, March 11, 2020 21:10:58 Eastern Daylight Time
Printed: Thursday, March 12, 2020 09:03:00 Eastern Daylight Time

**ID: WG1347919-1**
**Name: I20436**
**Date: 10-Mar-2020**
**Time: 21:37:46**
**Description: WG1348954,WG1347919,ICAL16305**
**Instrument: XEVO-TQSmicro#QEB0050**
**User: LCMS02:RS**
**Inlet Method Name: C:\MassLynx\Data\2020\200309_537ISO.PRO\ACQUDB\LCMS_537_ISO_B**
**Tune Method Name: C:\MassLynx\Data\2020\200309_537ISO.PRO\ACQUDB\181009_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\2020\200309_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

| | Name | CAS | RT | Trace | Area | M Flag | Conc (ng/mL) | Ion Ratio | Ratio Flag | %Rec |
|---|---|---|---|---|---|---|---|---|---|---|
| 40 | d3-NMeFOSAA | INT STD | 10.86 | 573.096 > 418.987 | 15465 | | 10.564 | | na | 105.6 |
| 41 | br-NMeFOSAA | 2355-31-9 | | 570.053 > 418.917 | | | ND | | YES | |
| 42 | L-NMeFOSAA | 2355-31-9 | 10.86 | 570.053 > 418.917 | 28 | | 0.020 | 5.40 | YES | |
| 43 | NMeFOSAA | 2355-31-9 | | 570.053 > 418.917 | 28 | | 0.020 | | na | |
| 44 | PFUnA | 2058-94-8 | 11.02 | 562.989 > 518.903 | 139 | | 0.011 | | YES | |
| 45 | M7-PFUDA | INT STD | 11.02 | 570.053 > 524.923 | 133374 | | 11.695 | | na | 116.9 |
| 46 | PFDS | 335-77-3 | | 598.926 > 80.314 | | | ND | | YES | |
| 47 | FOSA | 754-91-6 | | 497.989 > 78.245 | | | ND | | YES | |
| 48 | M8FOSA | INT STD | 10.92 | 506.053 > 78.286 | 18535 | | 6.098 | | na | 61.0 |
| 49 | d5-NEtFOSAA | INT STD | 11.16 | 589.117 > 418.929 | 11844 | | 9.158 | | na | 91.6 |
| 50 | br-NEtFOSAA | 2991-50-6 | | 583.989 > 418.927 | | | ND | | YES | |
| 51 | L-NEtFOSAA | 2991-50-6 | 11.16 | 583.989 > 418.927 | 48 | | 0.043 | | YES | |
| 52 | NEtFOSAA | 2991-50-6 | | 583.989 > 418.927 | 48 | | 0.043 | | na | |
| 53 | PFDoA | 307-55-1 | 11.52 | 612.989 > 568.967 | 178 | | 0.016 | | YES | |
| 54 | MPFDOA | INT STD | 11.51 | 614.989 > 569.92 | 133844 | | 10.461 | | na | 104.6 |
| 55 | PFTrDA | 72629-94-8 | | 663.053 > 618.969 | | | ND | | YES | |
| 56 | PFTA | 376-06-7 | 12.29 | 713.053 > 668.976 | 123 | M4 | 0.015 | | YES | |
| 57 | M2PFTEDA | INT STD | 12.29 | 715.053 > 669.945 | 100507 | | 9.890 | | na | 98.9 |
| 58 | M3HFPO-DA | INT STD | 7.35 | 331.989 > 286.995 | 3770 | | 64.875 | | na | 32.4 |
| 59 | HFPO-DA | 13252-13-6 | | 284.819 > 169.094 | | | ND | | YES | |
| 60 | ADONA | 958445-44-8 | 8.33 | 376.926 > 251.005 | 35 | | 0.002 | | na | |
| 61 | PFHxDA | | 12.75 | 813.053 > 769.005 | 758 | | 0.128 | | na | |
| 62 | PFODA | | | 912.989 > 869.032 | | | ND | | na | |
| 63 | M2PFHxDA | | 12.75 | 815.372 > 770.158 | 16150 | | 7.466 | | na | 74.7 |
| 64 | PFDoS | | | 698.649 > 79.853 | | | ND | | YES | |
| 65 | 10:2FTS | | | 626.862 > 606.896 | | | ND | | na | |
| 66 | 9CL-PF3ONS | | 10.17 | 530.862 > 350.843 | 51 | | 0.008 | | na | |
| 67 | 11CL-PFOUdS | | | 630.862 > 450.854 | | | ND | | na | |

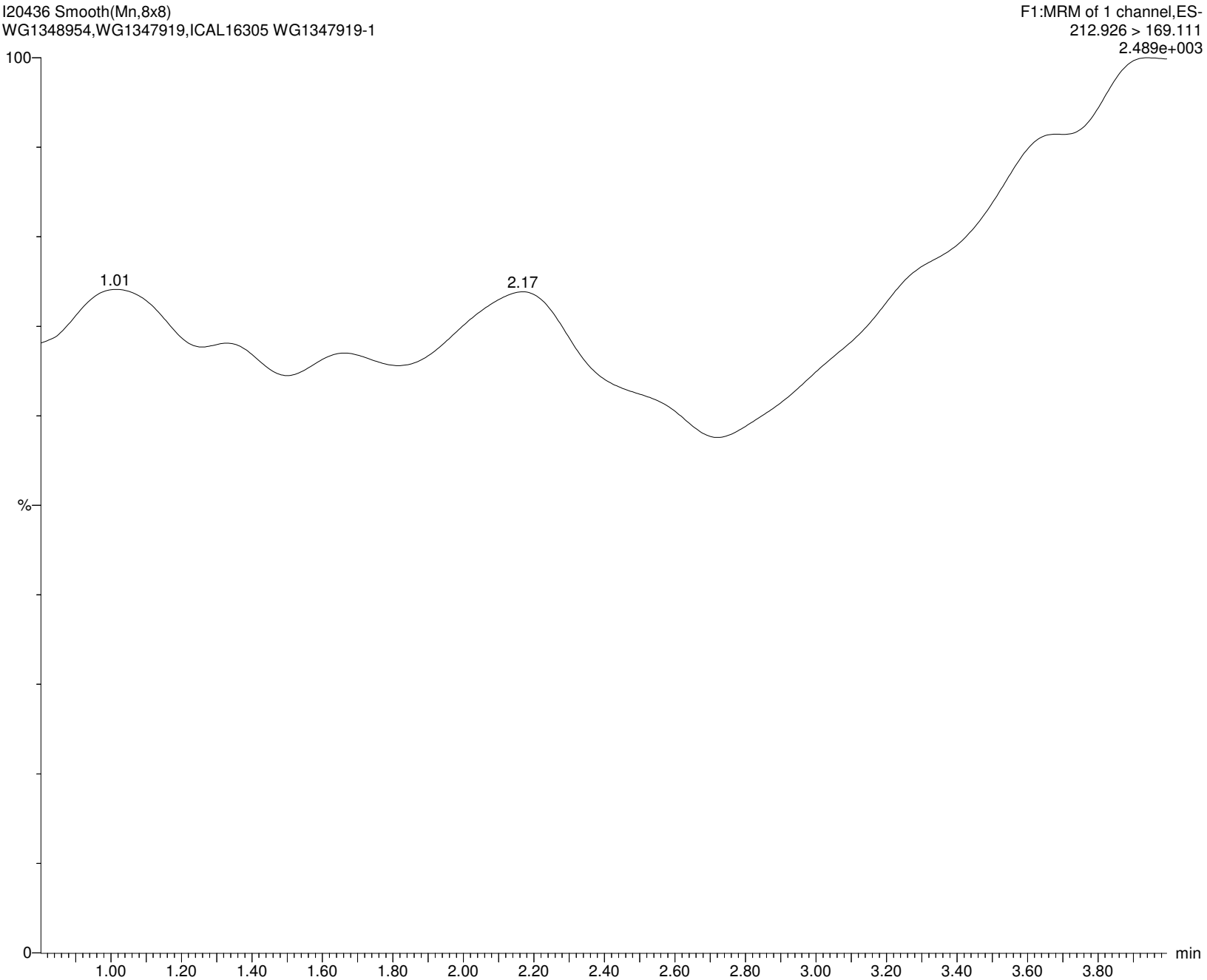

all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2020\200309_537ISO.PRO\Data\WG1348954C.qld
Last Altered: Wednesday, March 11, 2020 21:10:58 Eastern Daylight Time
Printed: Thursday, March 12, 2020 09:03:00 Eastern Daylight Time

**Method: C:\MassLynx\Data\2020\200309_537ISO.PRO\MethDB\537ISO_Q_191118_DOD_RT.mdb 07 Feb 2020 15:55:12**
**Calibration: C:\MassLynx\Data\2020\200309_537ISO.PRO\CurveDB\191118_ISO_ICAL.cdb 18 Nov 2019 14:41:42**

**Name: I20436**
**ID: WG1347919-1**
**Date: 10-Mar-2020**
**Time: 21:37:46**
**Description: WG1348954,WG1347919,ICAL16305**
**User: LCMS02:RS**
**Vial: 1:E,7**
**Instrument: XEVO-TQSmicro#QEB0050**
**Inlet Method Name: C:\MassLynx\Data\2020\200309_537ISO.PRO\ACQUDB\LCMS_537_ISO_B**
**Tune Method Name: C:\MassLynx\Data\2020\200309_537ISO.PRO\ACQUDB\181009_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\2020\200309_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**PFBA**





all concentration units in (ng/mL)

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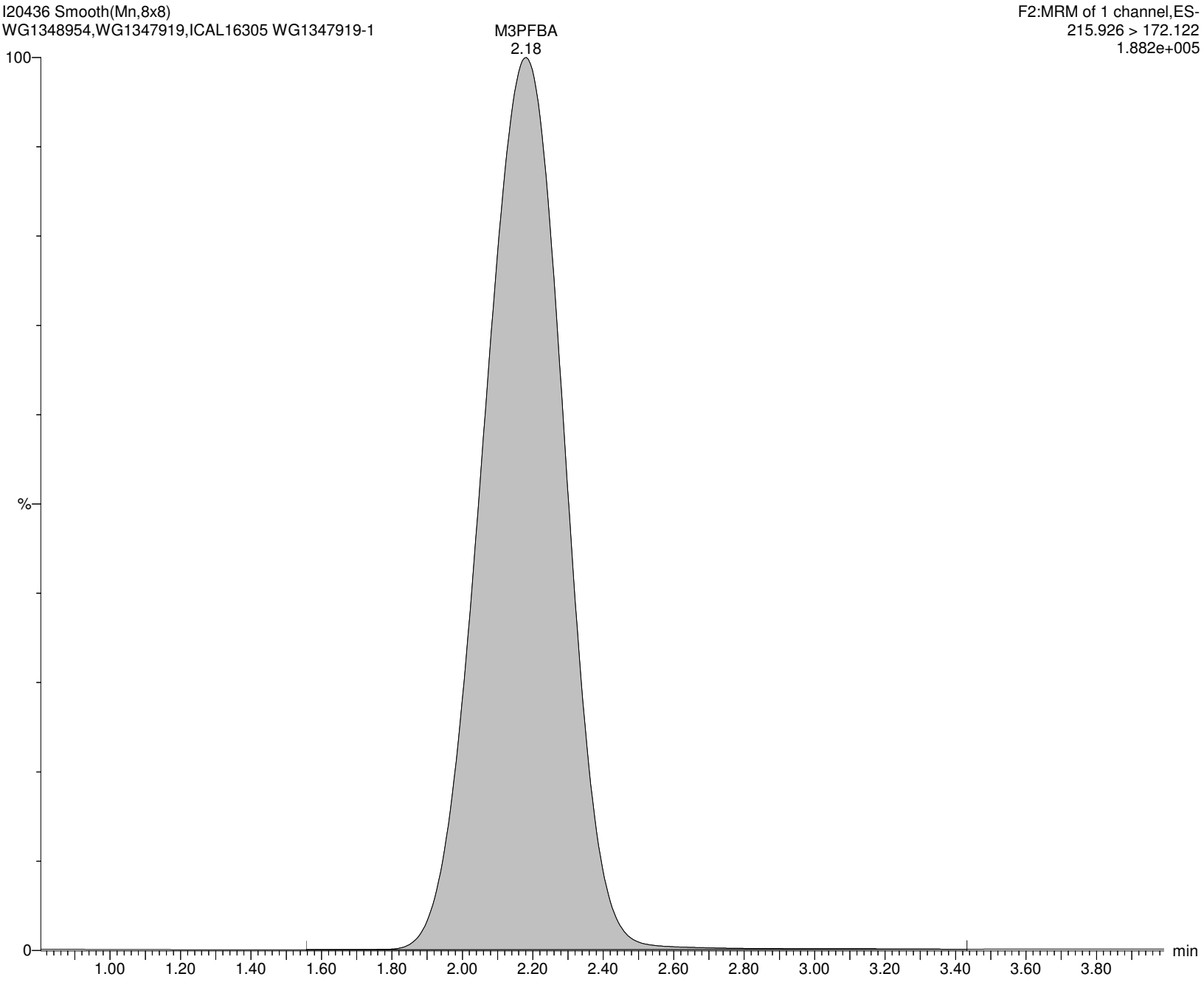
**MS Method Name: C:\MassLynx\Data\2020\200309_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**M3PFBA**





all concentration units in (ng/mL)

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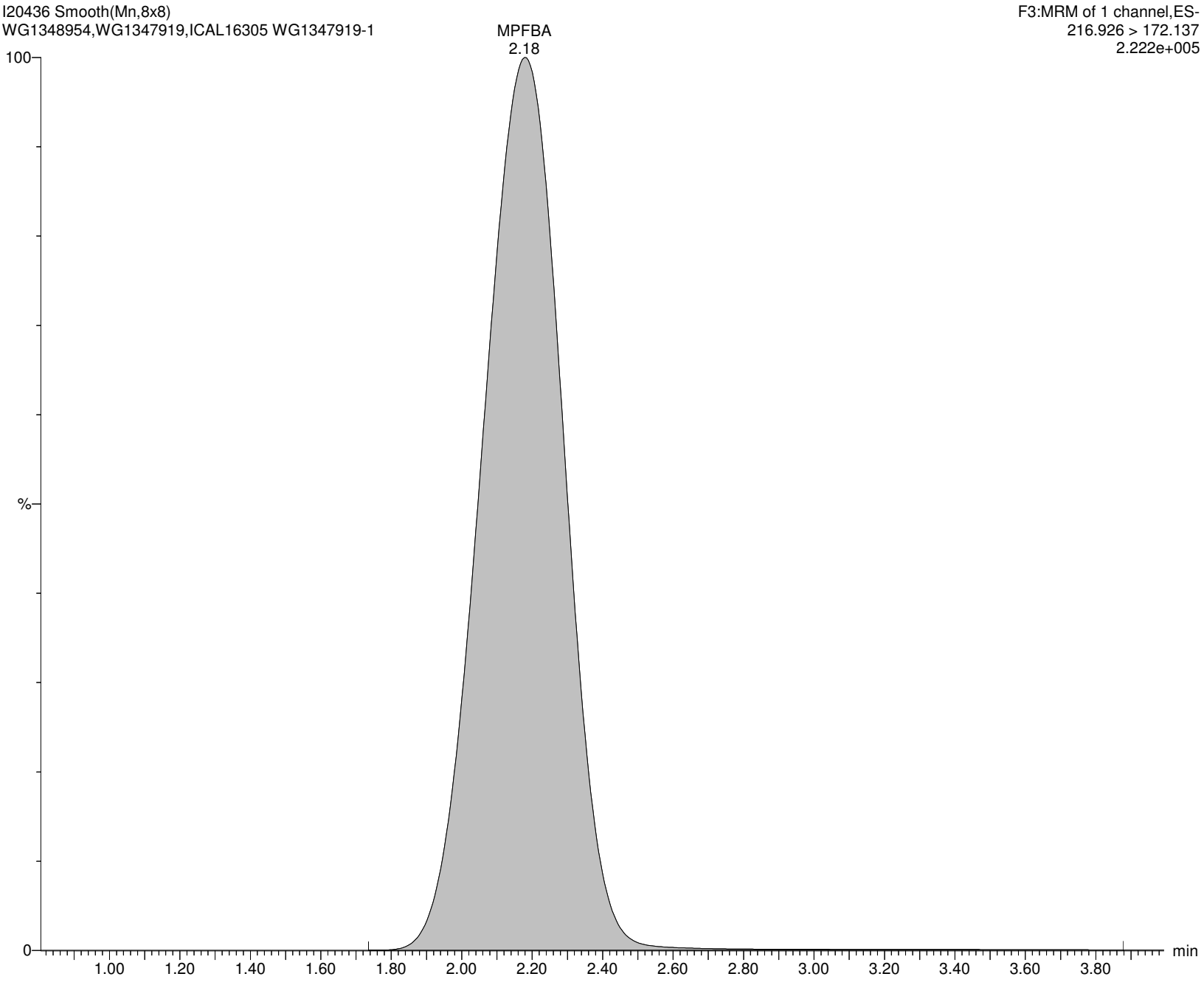
**MPFBA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2020\200309_537ISO.PRO\Data\WG1348954C.qld
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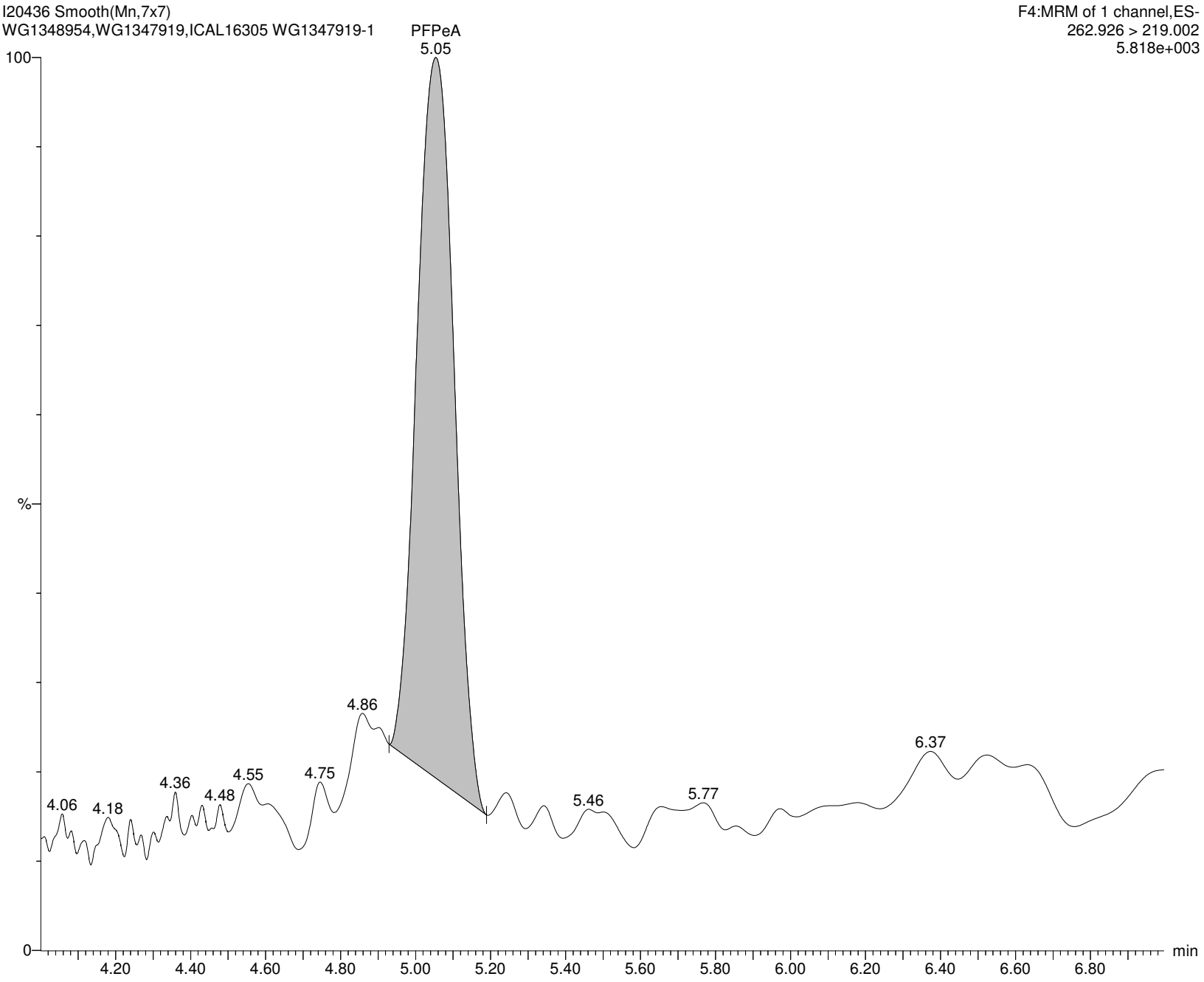
**Tune Method Name: C:\MassLynx\Data\2020\200309_537ISO.PRO\ACQUDB\181009_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\2020\200309_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**PFPeA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2020\200309_537ISO.PRO\Data\WG1348954C.qld
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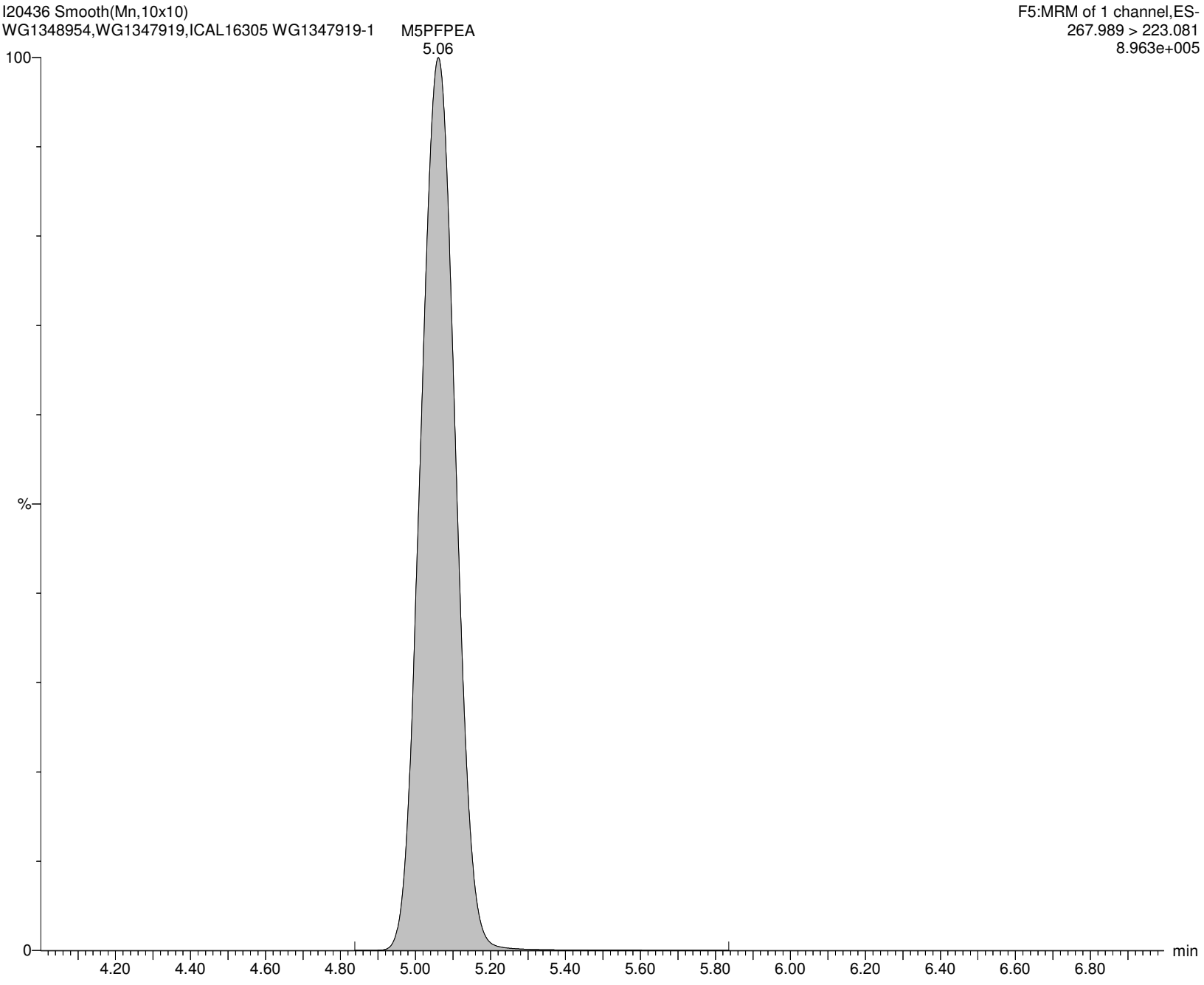
**M5PFPEA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
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Last Altered: Wednesday, March 11, 2020 21:10:58 Eastern Daylight Time
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**Date: 10-Mar-2020**
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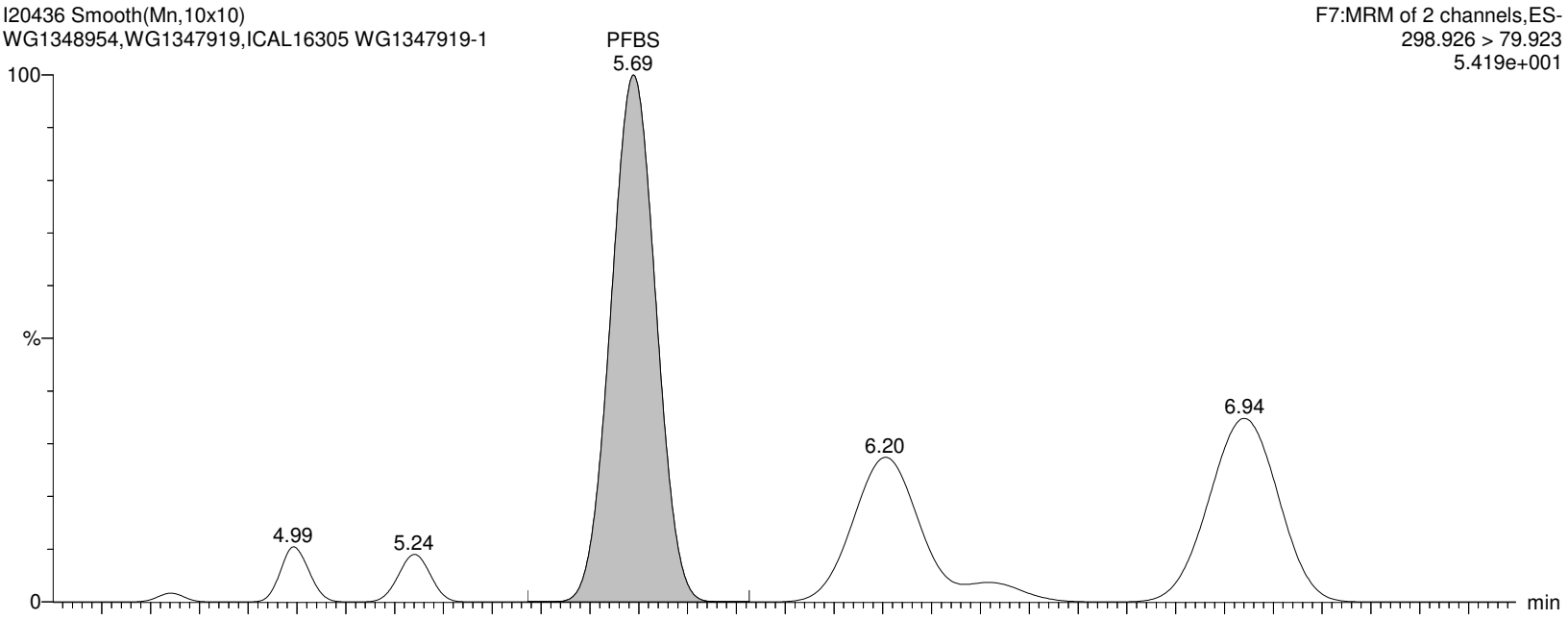
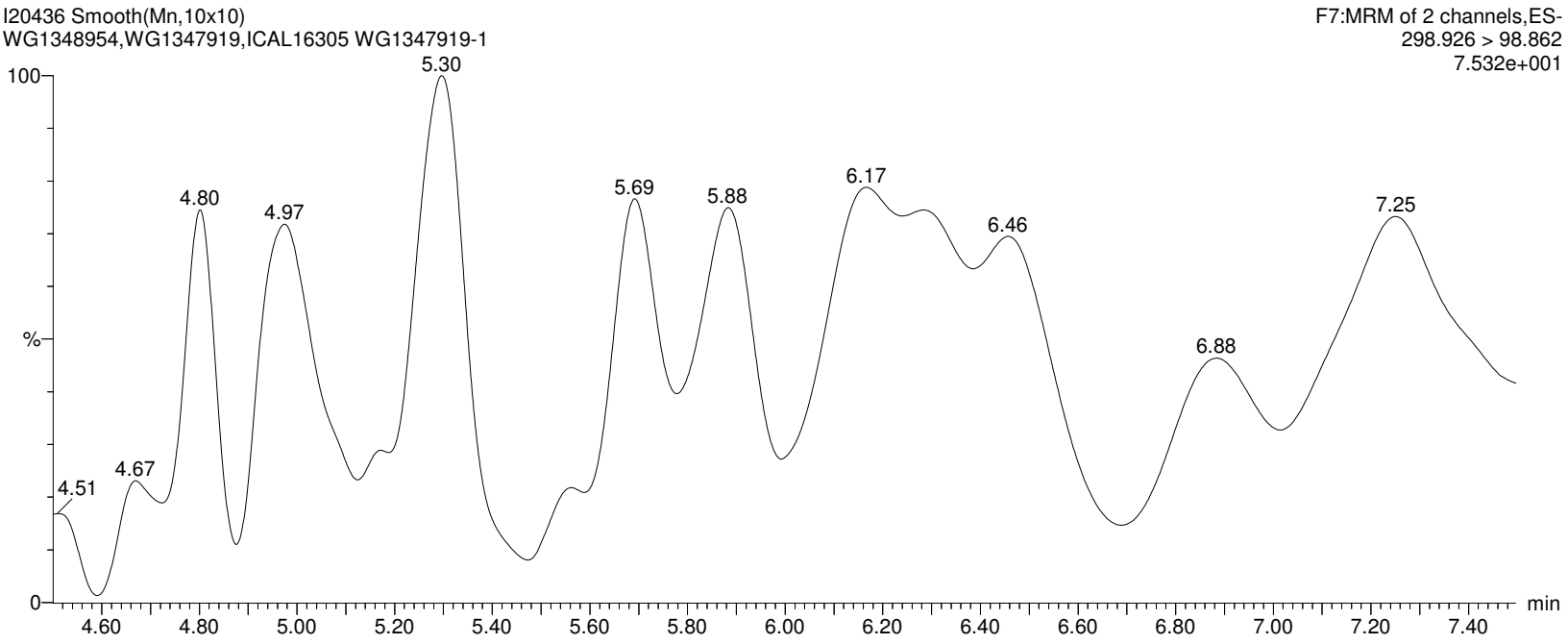
**Inlet Method Name: C:\MassLynx\Data\2020\200309_537ISO.PRO\ACQUDB\LCMS_537_ISO_B**
**Tune Method Name: C:\MassLynx\Data\2020\200309_537ISO.PRO\ACQUDB\181009_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\2020\200309_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**PFBS**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2020\200309_537ISO.PRO\Data\WG1348954C.qld
Last Altered: Wednesday, March 11, 2020 21:10:58 Eastern Daylight Time
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**Date: 10-Mar-2020**
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**User: LCMS02:RS**
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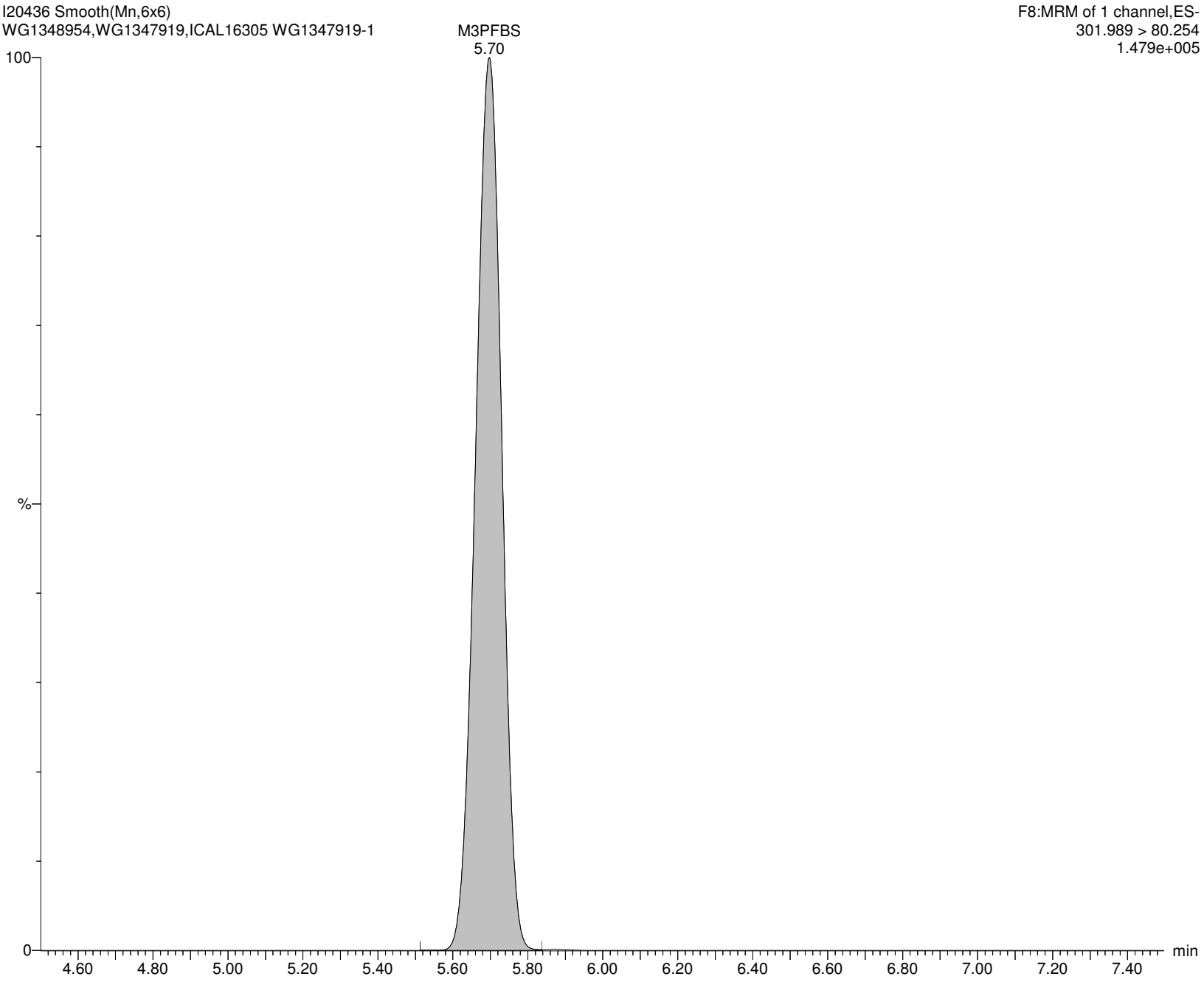
**Inlet Method Name: C:\MassLynx\Data\2020\200309_537ISO.PRO\ACQUDB\LCMS_537_ISO_B**
**Tune Method Name: C:\MassLynx\Data\2020\200309_537ISO.PRO\ACQUDB\181009_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\2020\200309_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**M3PFBS**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2020\200309_537ISO.PRO\Data\WG1348954C.qld
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**Name: I20436**
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**Date: 10-Mar-2020**
**Time: 21:37:46**
**Description: WG1348954,WG1347919,ICAL16305**
**User: LCMS02:RS**
**Vial: 1:E,7**
**Instrument: XEVO-TQSmicro#QEB0050**
**Inlet Method Name: C:\MassLynx\Data\2020\200309_537ISO.PRO\ACQUDB\LCMS_537_ISO_B**
**Tune Method Name: C:\MassLynx\Data\2020\200309_537ISO.PRO\ACQUDB\181009_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\2020\200309_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

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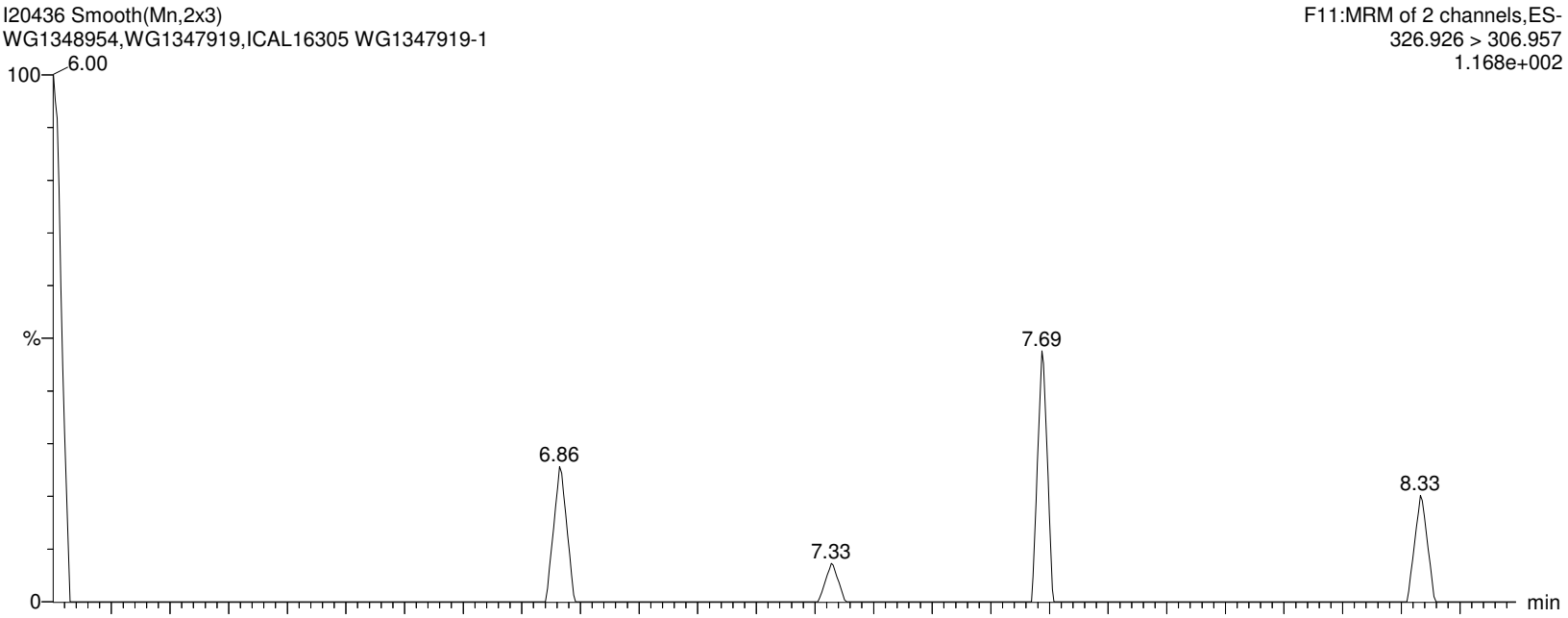


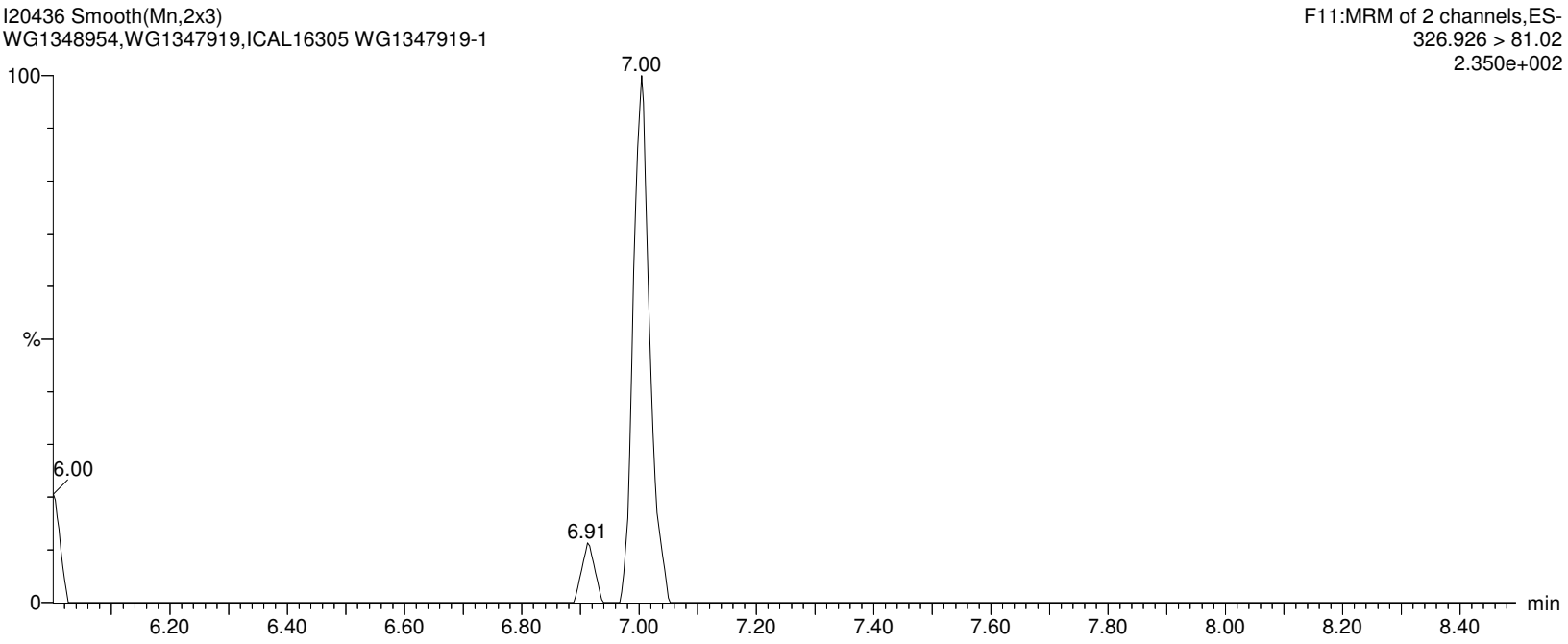



all concentration units in (ng/mL)

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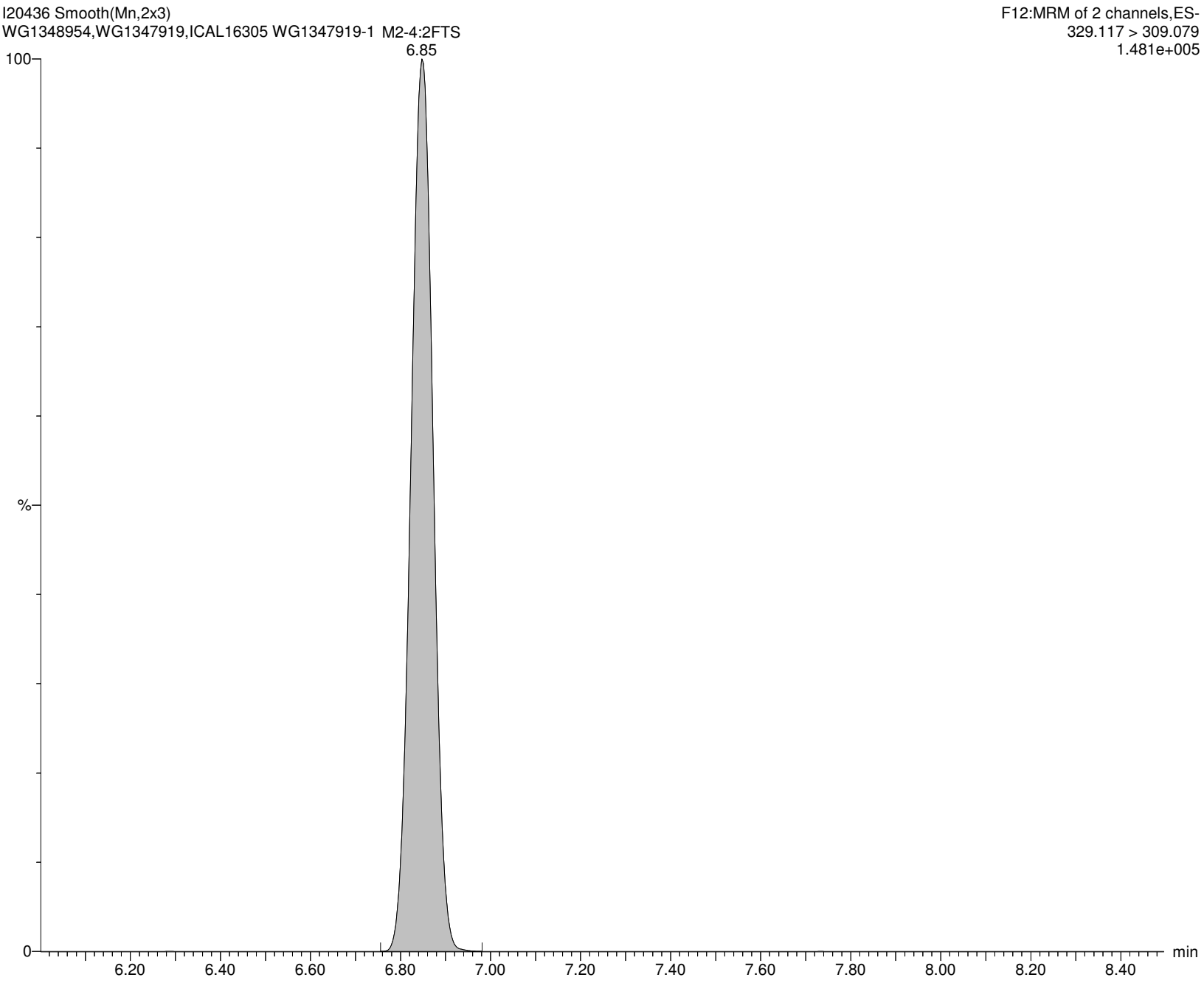



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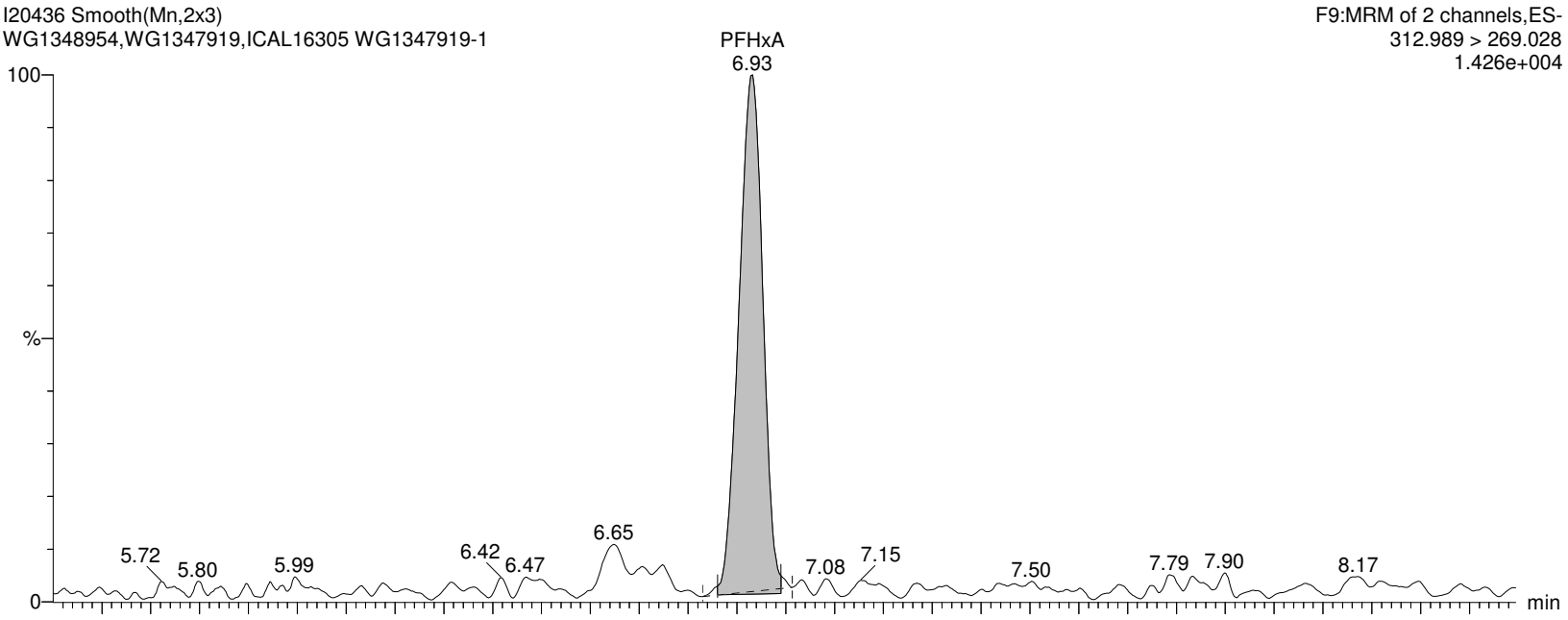


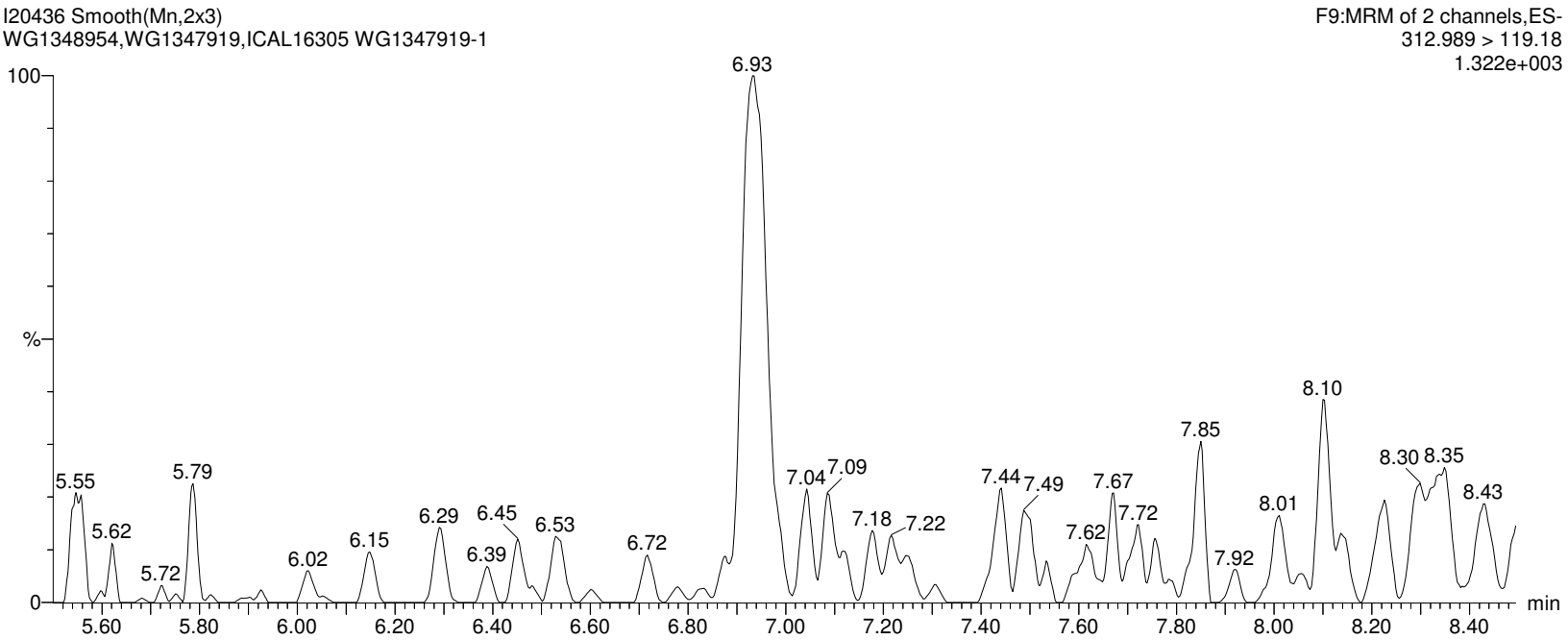



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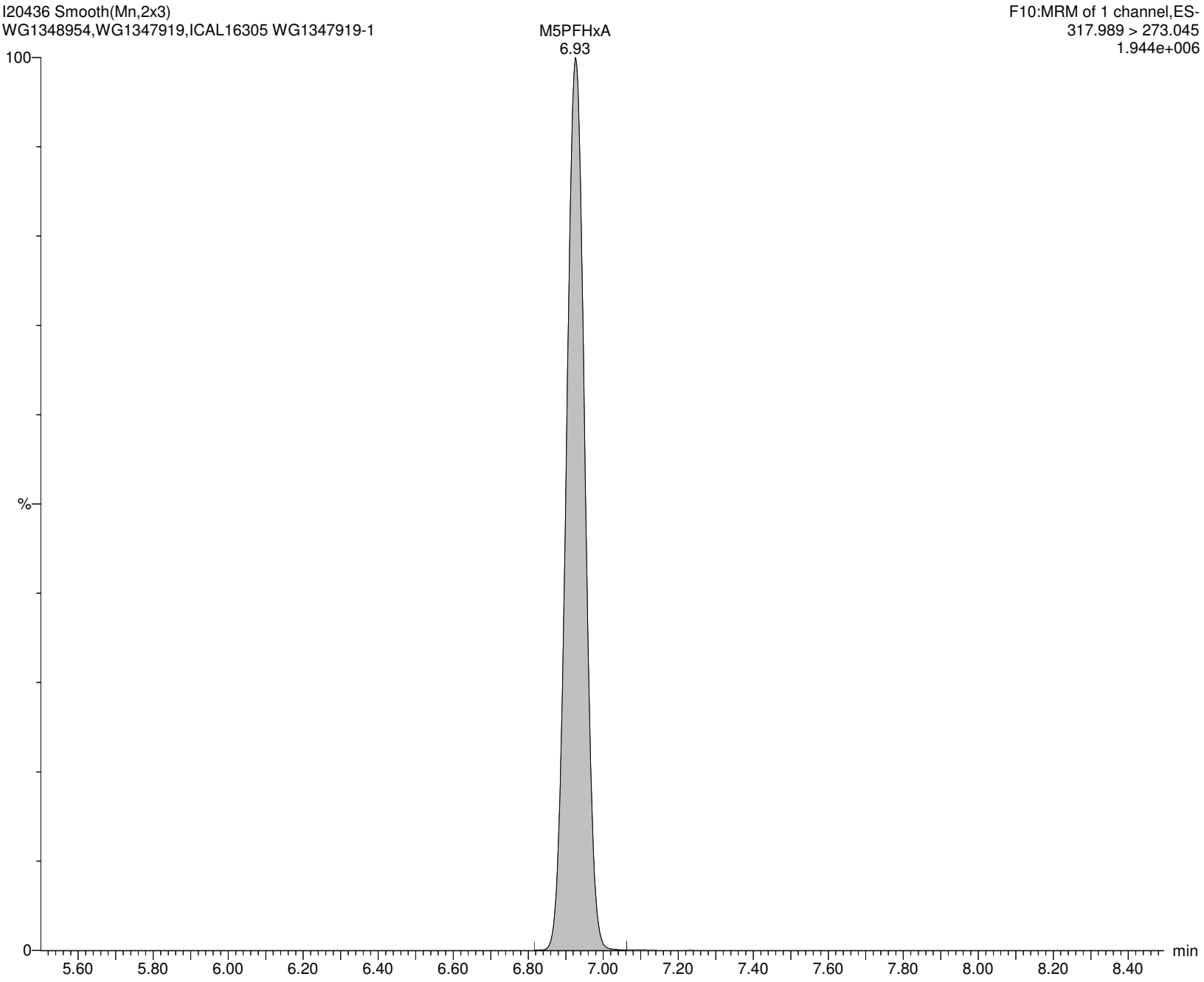



all concentration units in (ng/mL)

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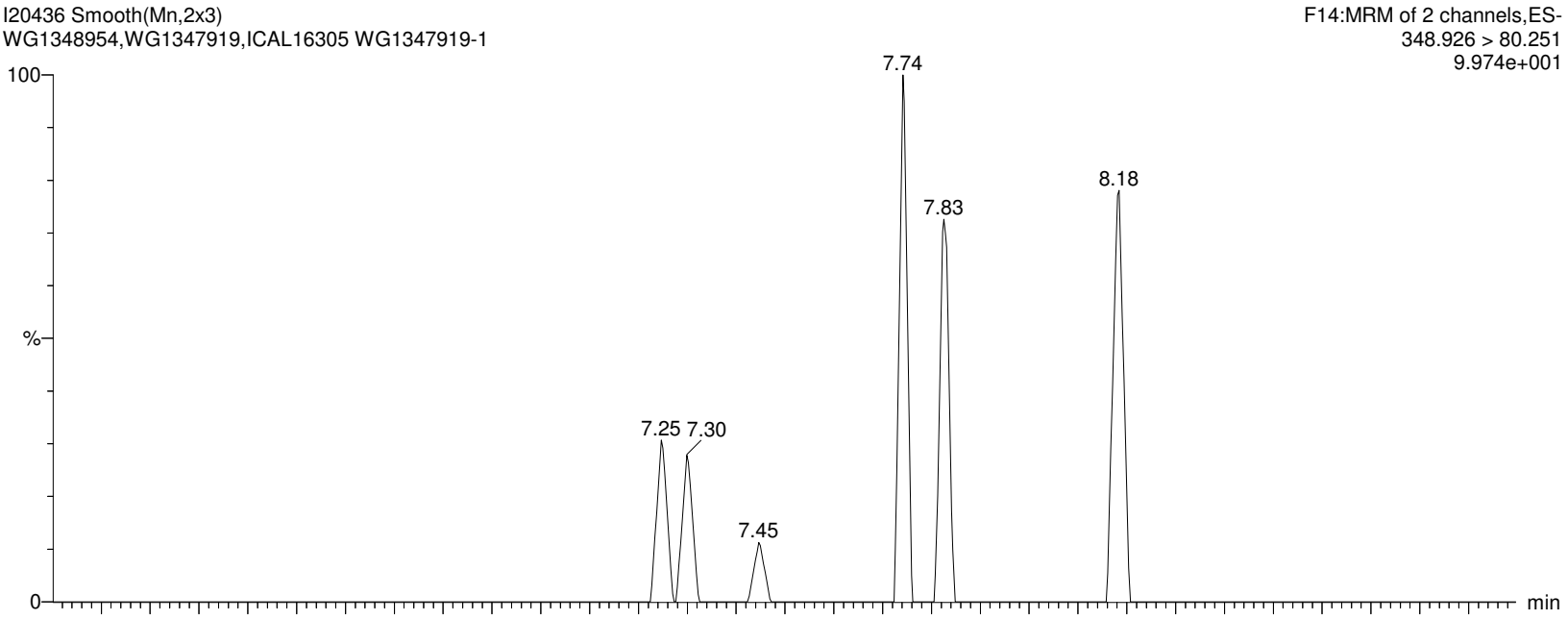


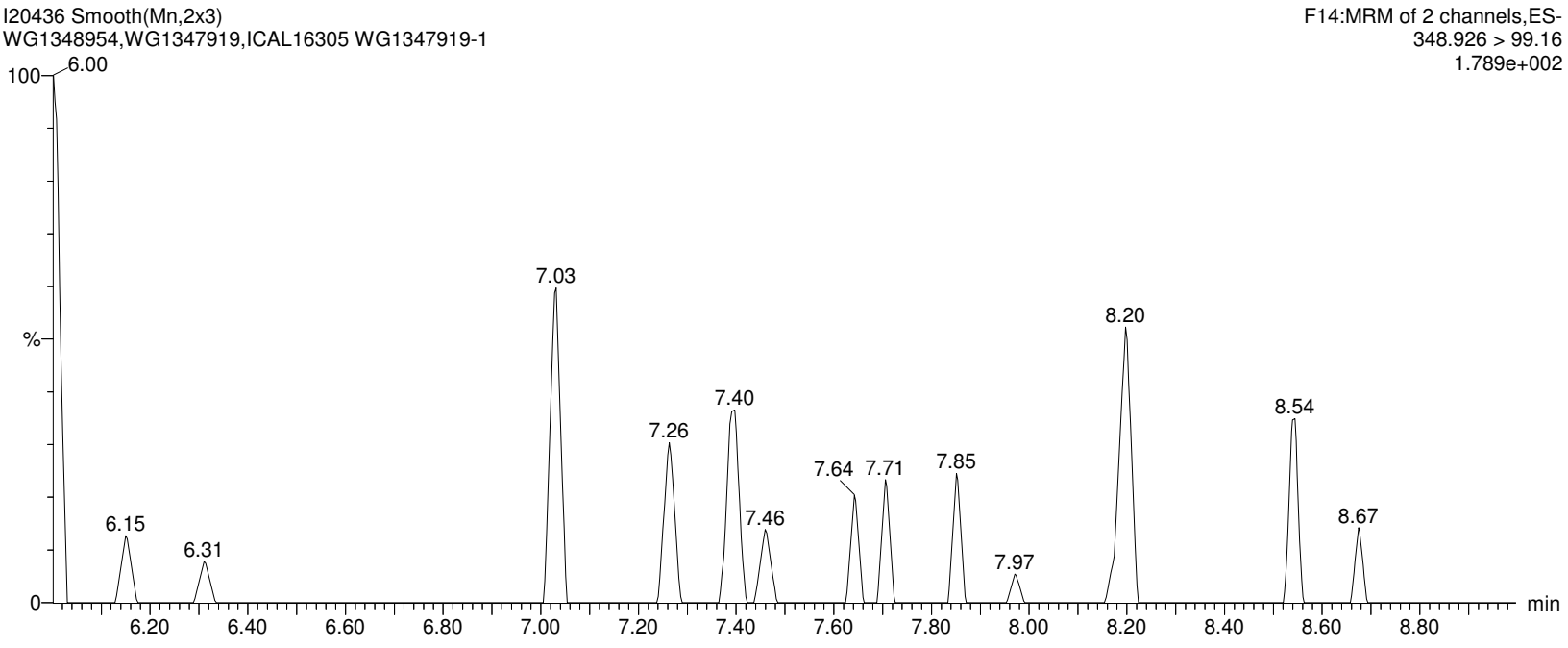



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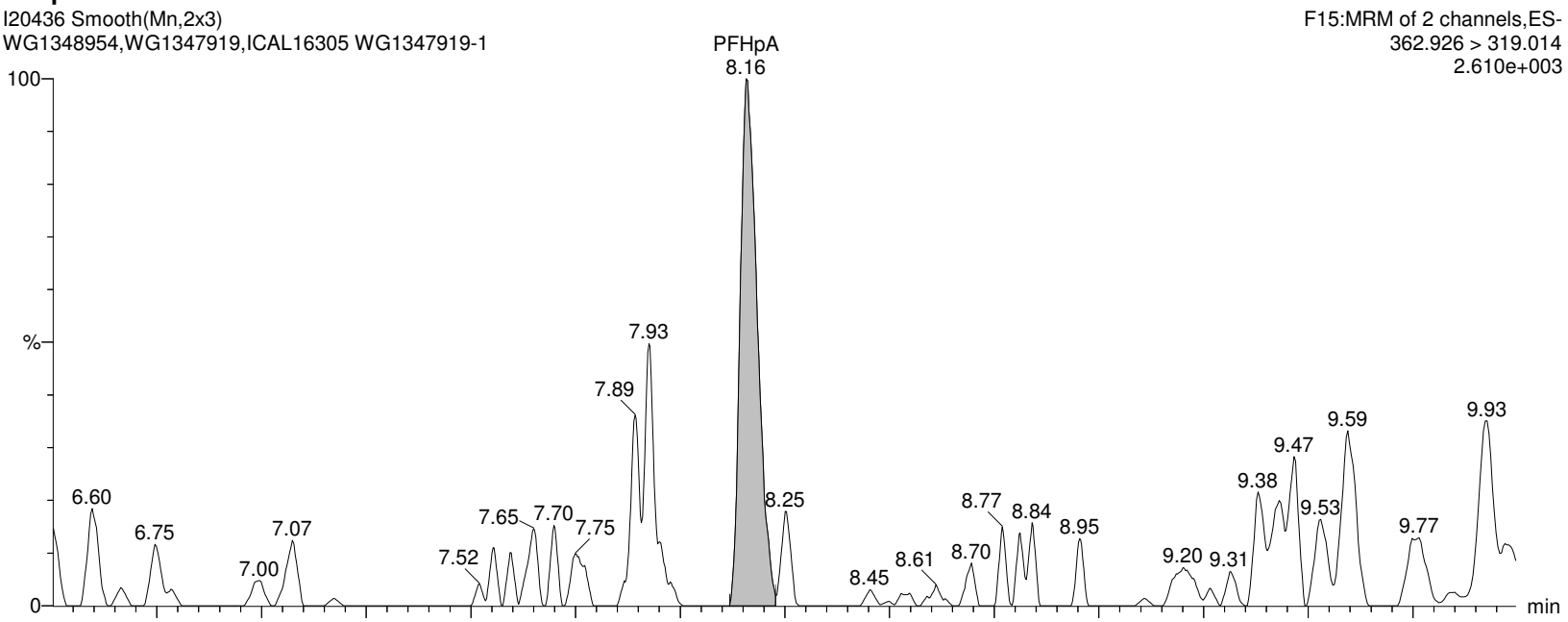
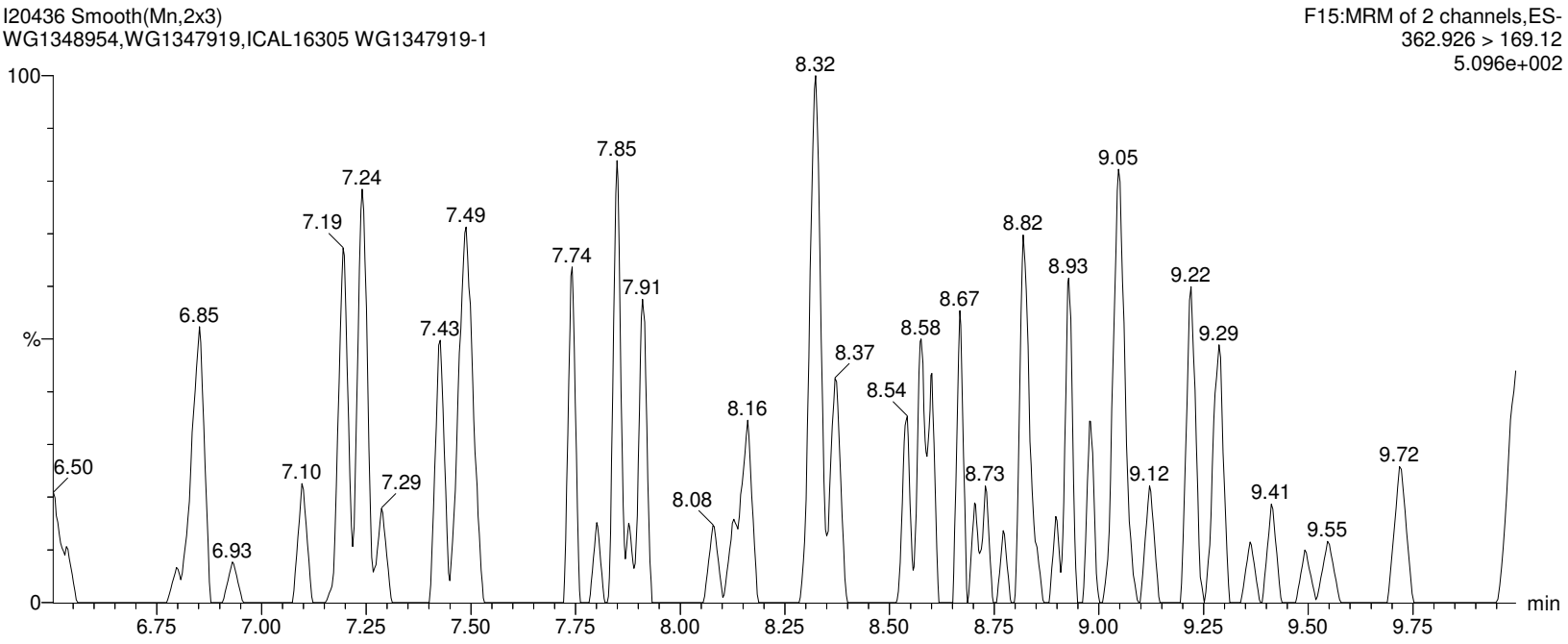
**PFHpA**





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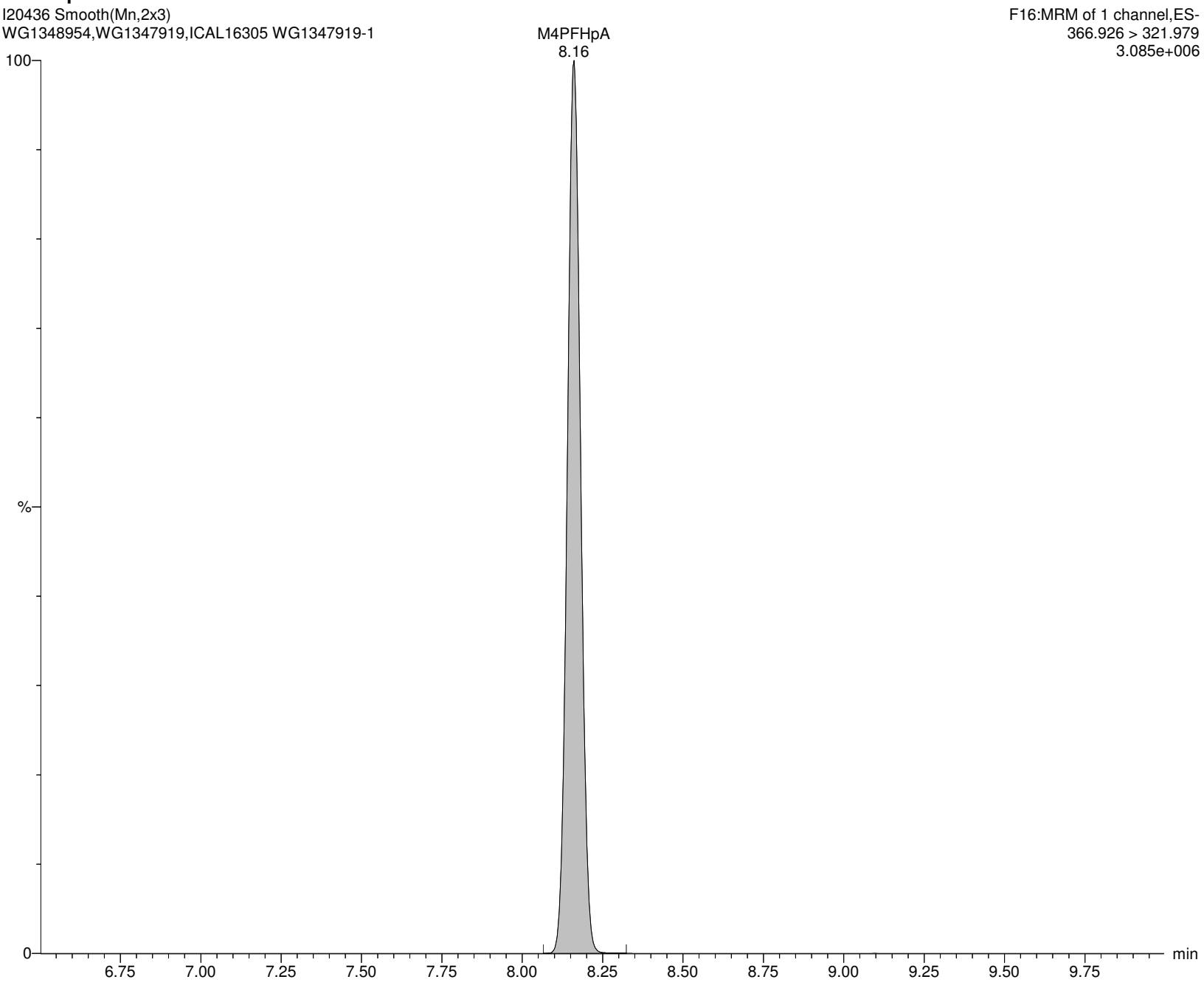
**M4PFHpA**





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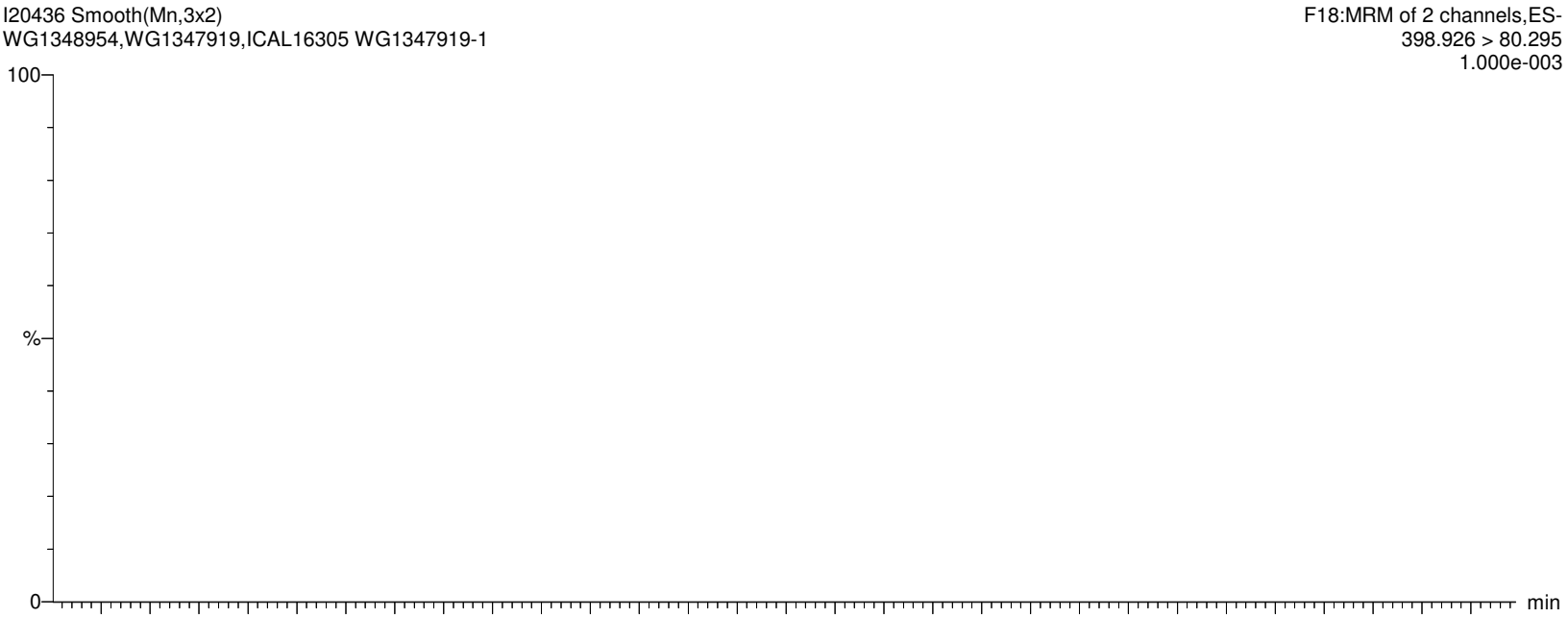


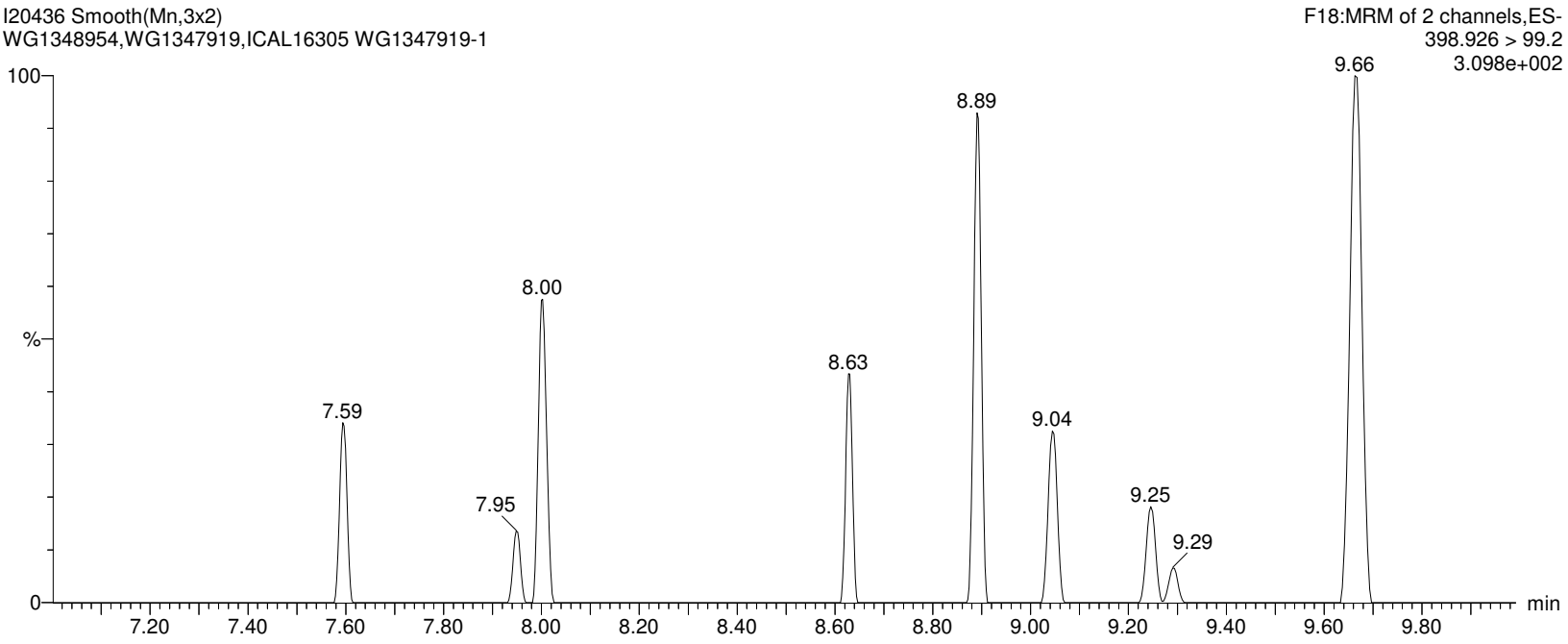



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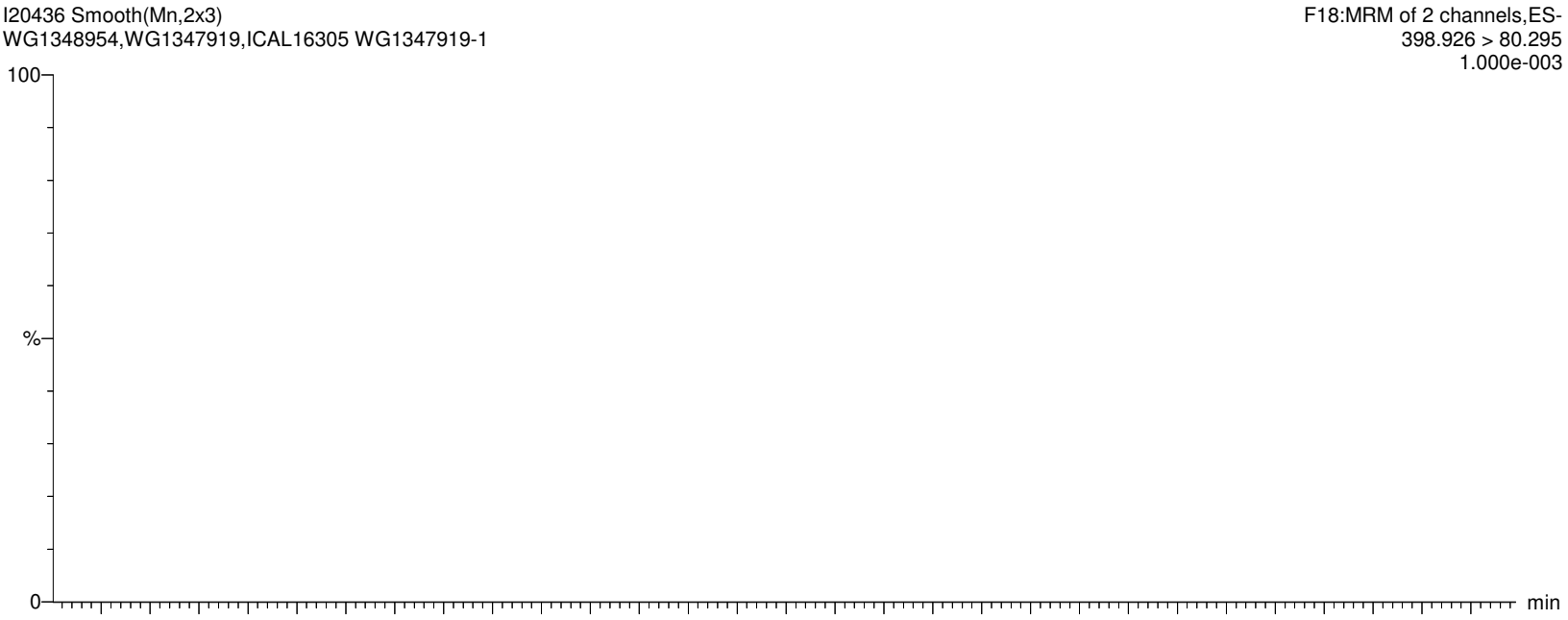


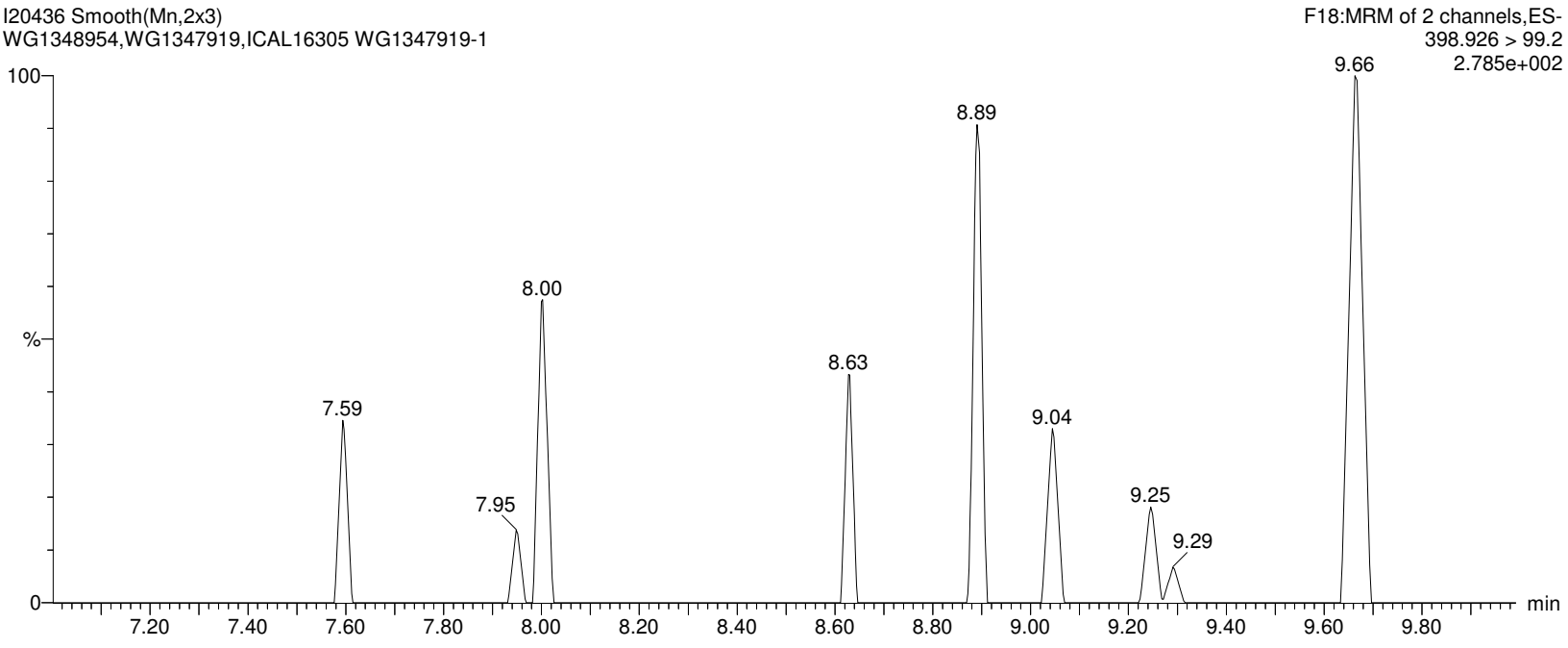



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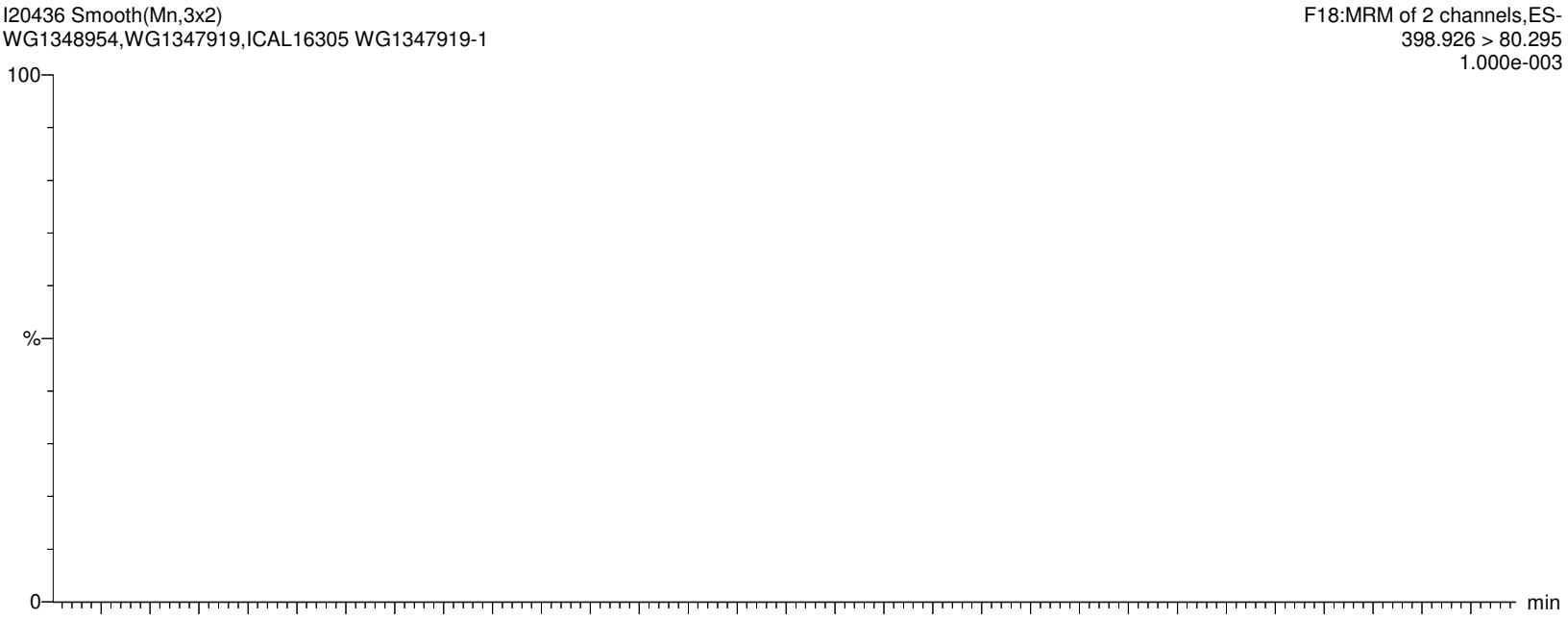


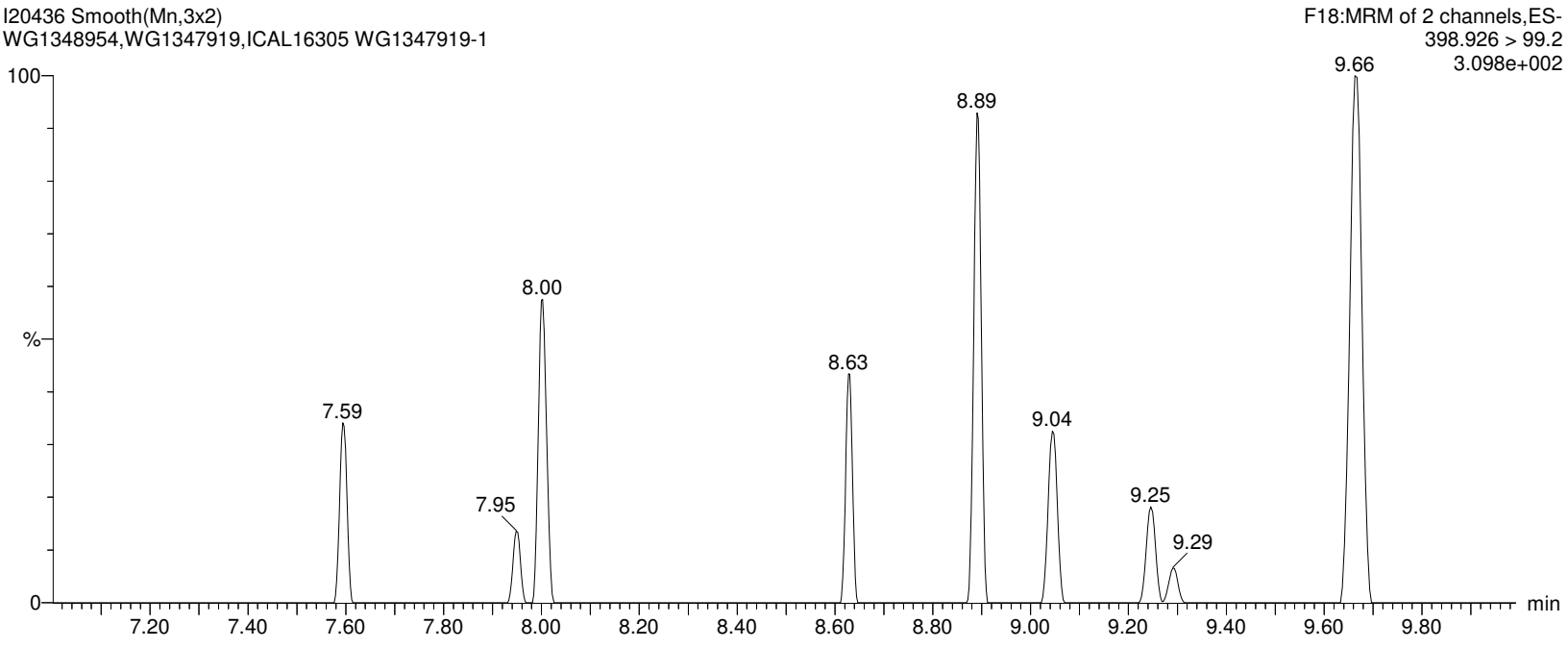



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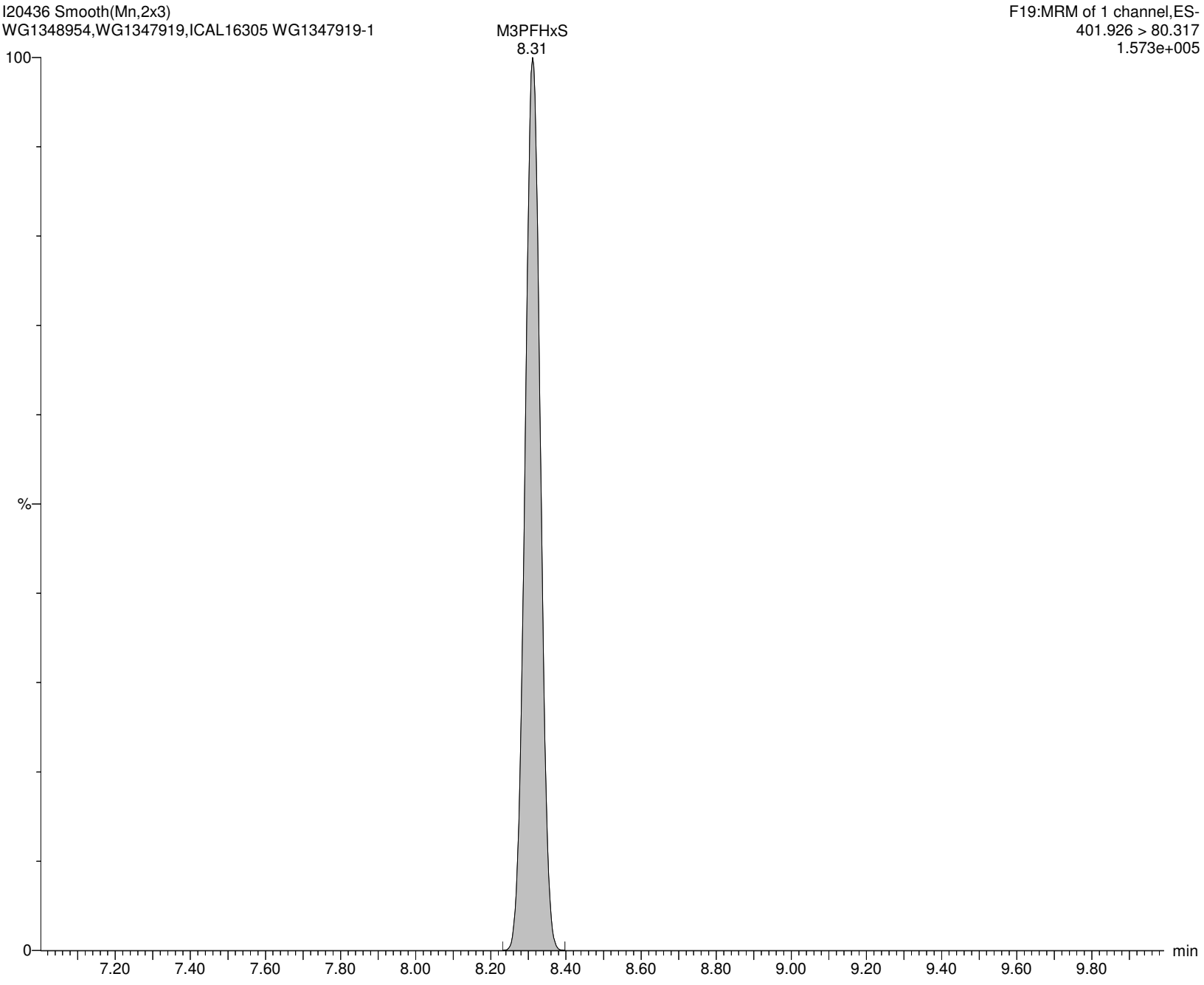



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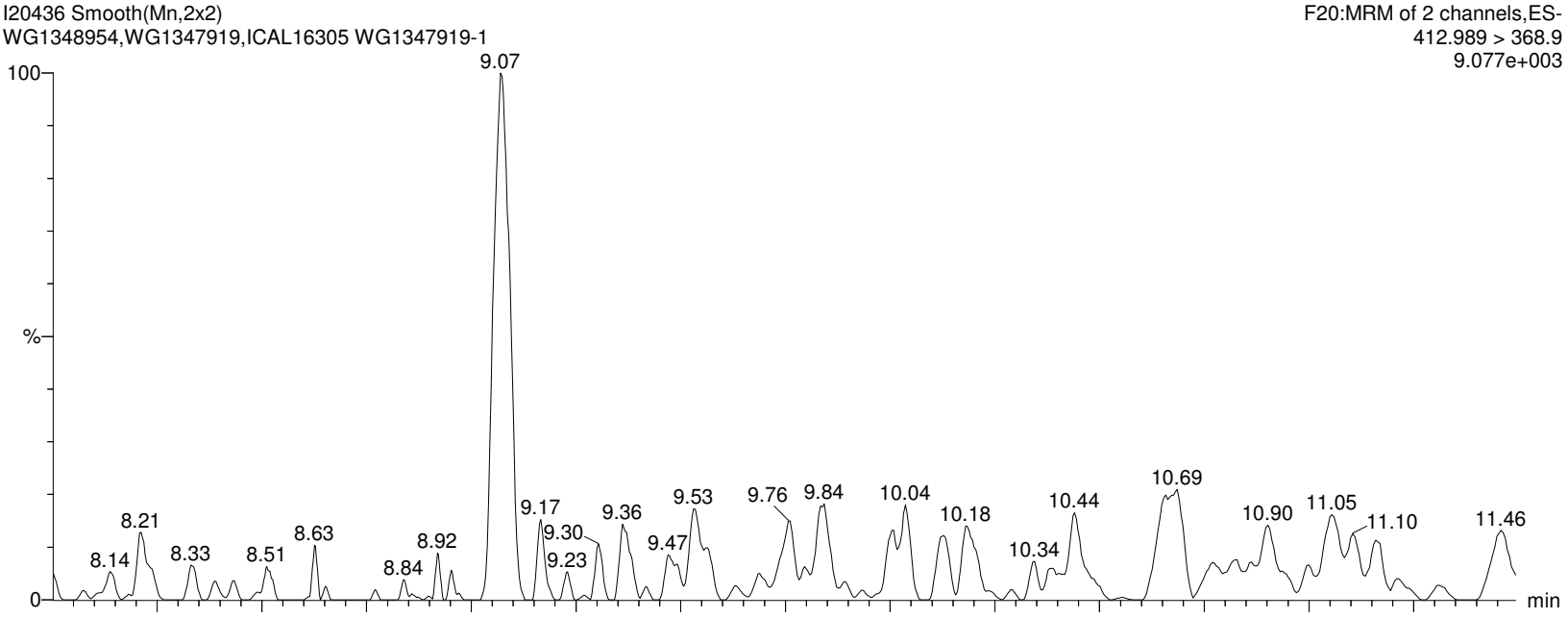


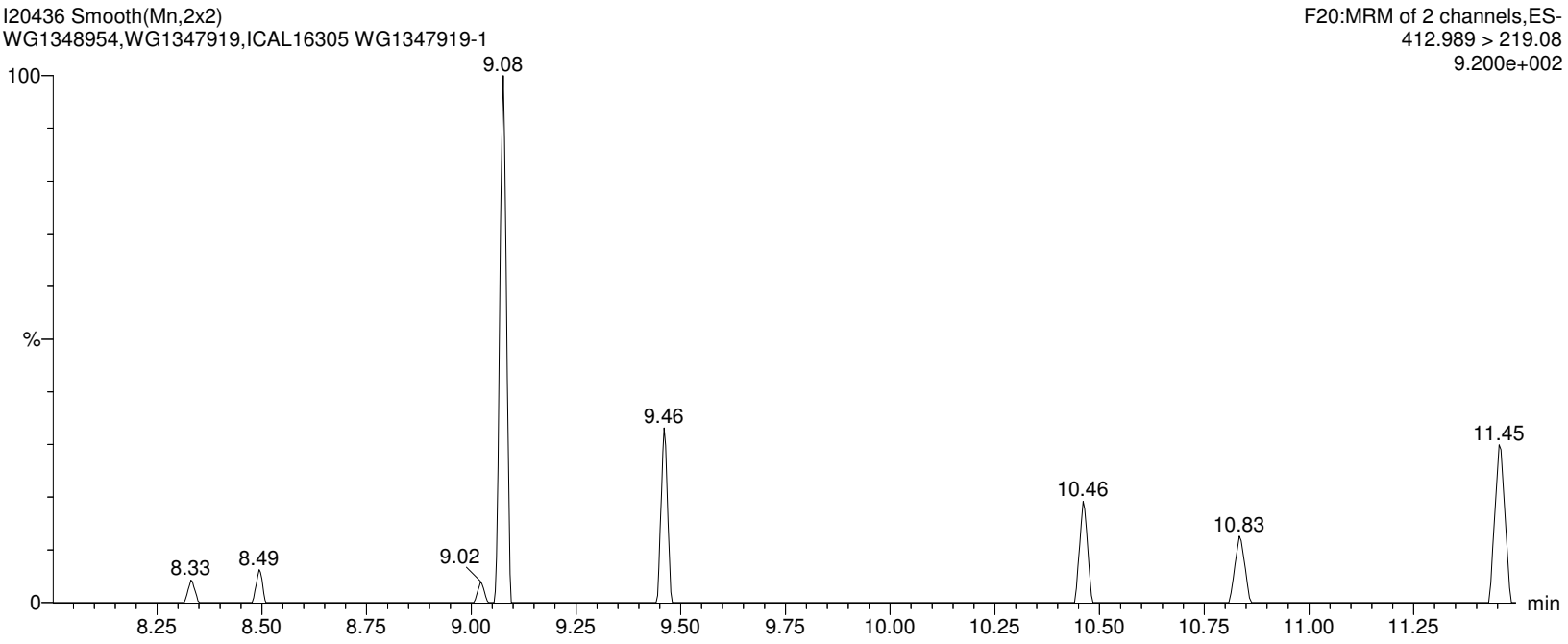



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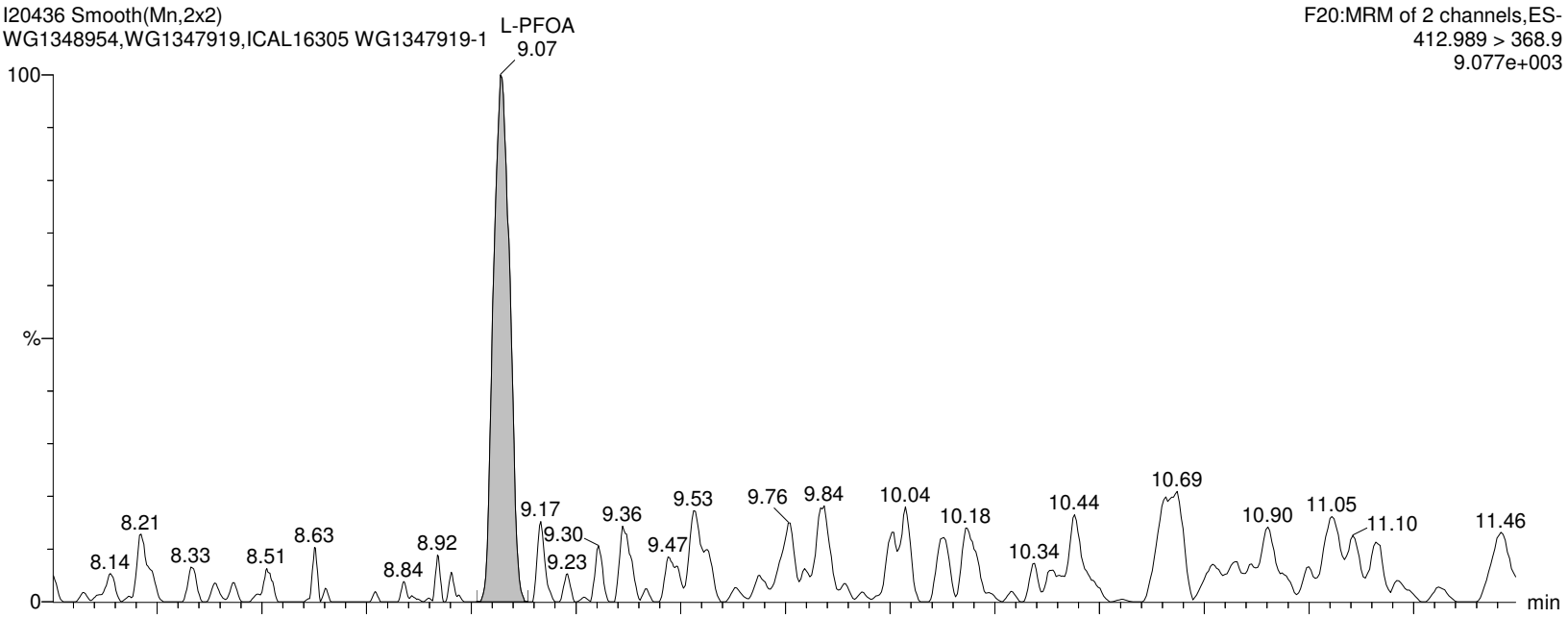


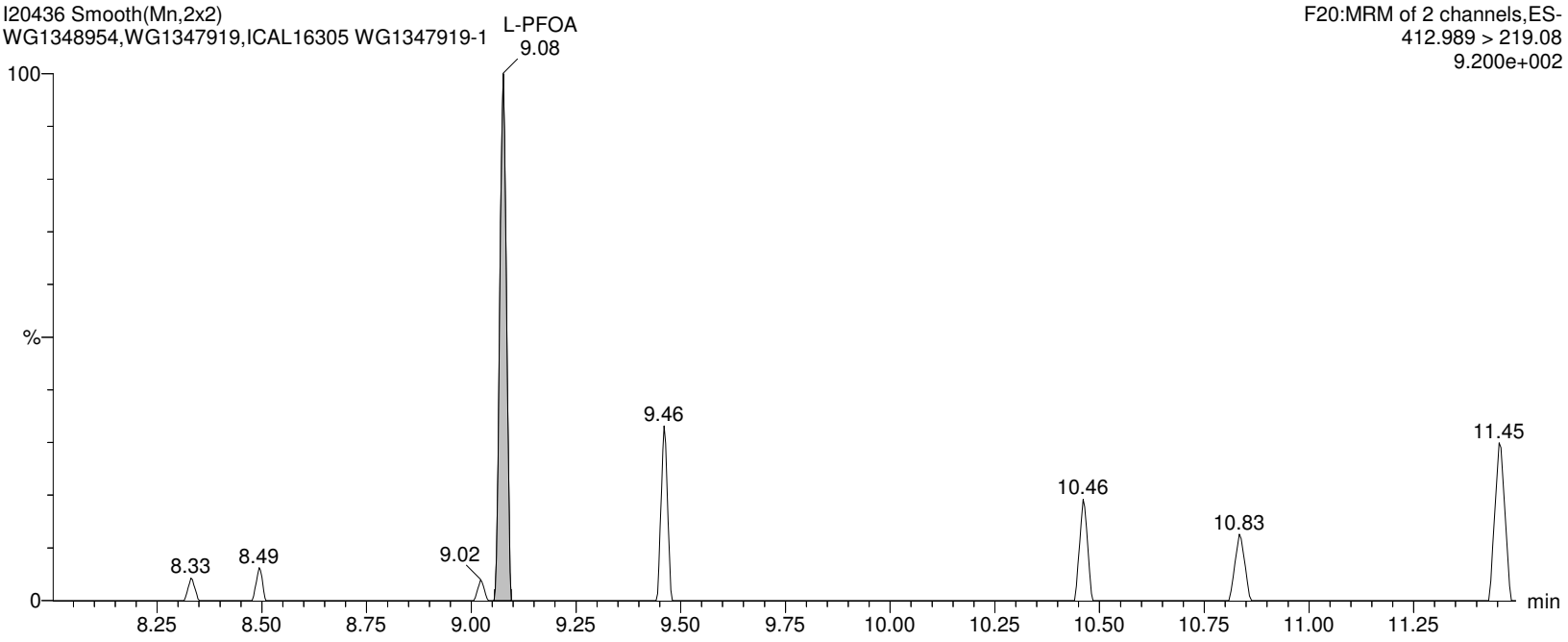



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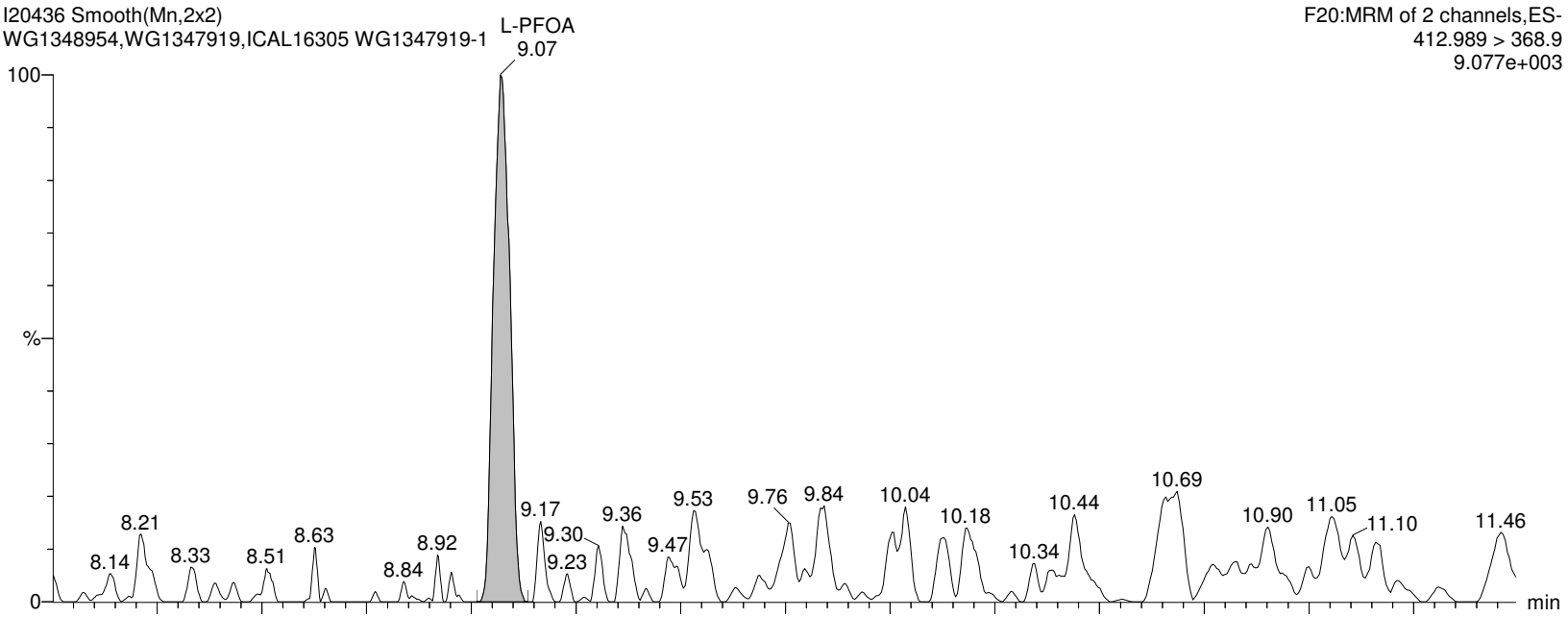


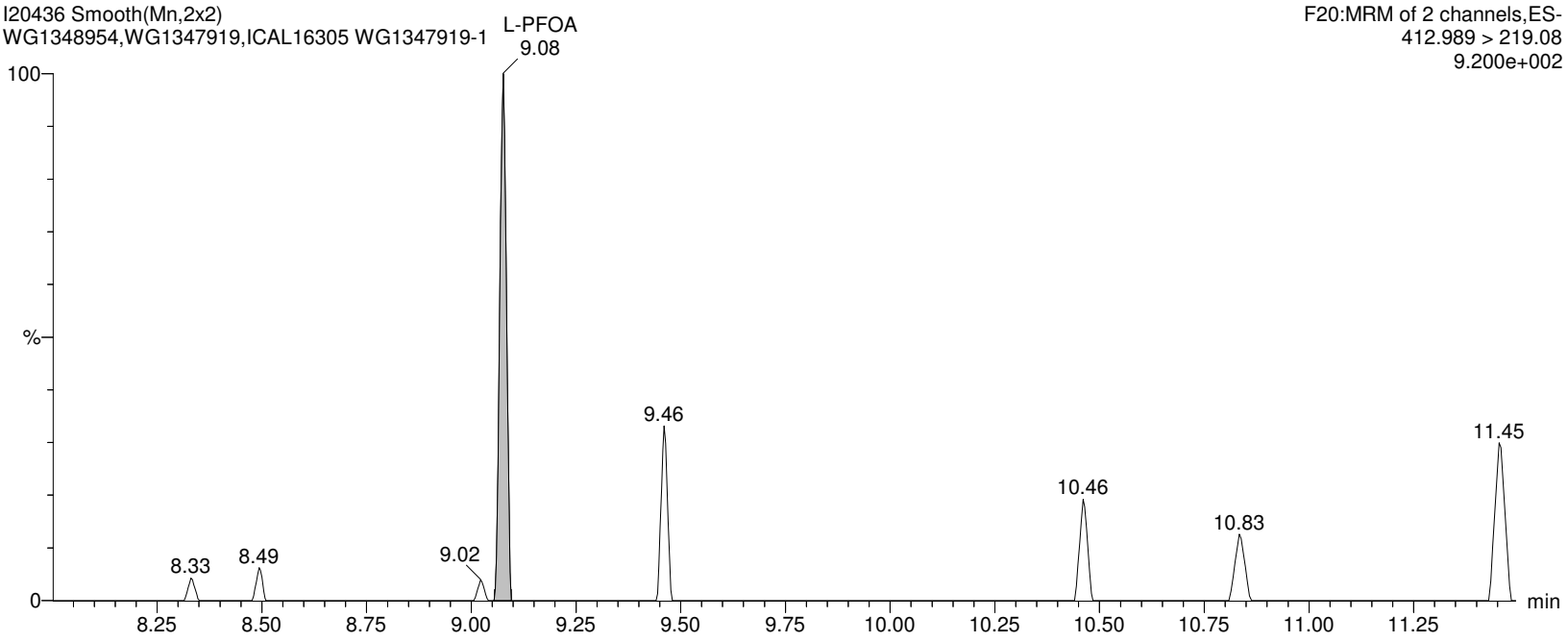



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**User: LCMS02:RS**
**Vial: 1:E,7**
**Instrument: XEVO-TQSmicro#QEB0050**
**Inlet Method Name: C:\MassLynx\Data\2020\200309_537ISO.PRO\ACQUDB\LCMS_537_ISO_B**
**Tune Method Name: C:\MassLynx\Data\2020\200309_537ISO.PRO\ACQUDB\181009_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\2020\200309_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

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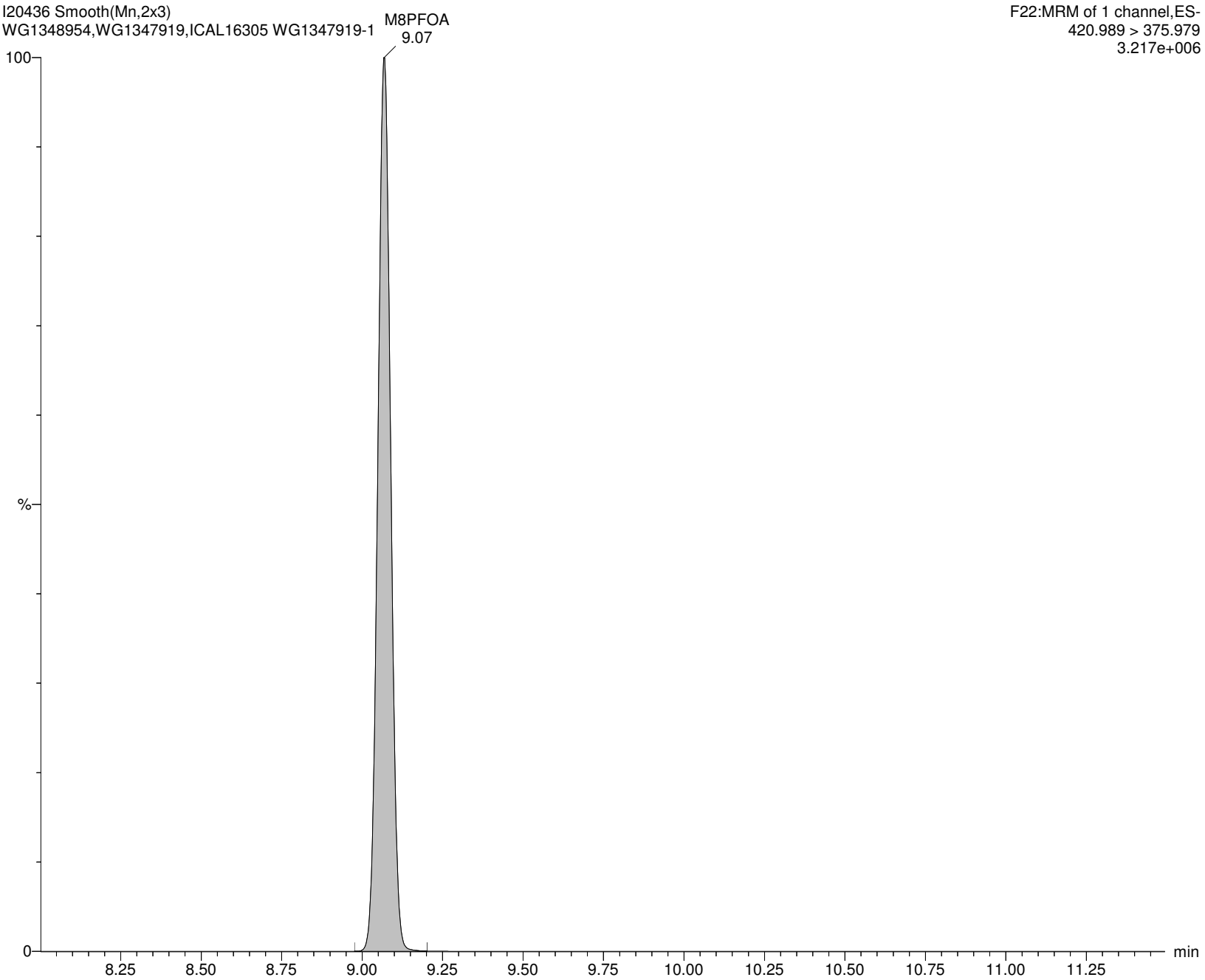



all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2020\200309_537ISO.PRO\Data\WG1348954C.qld
Last Altered: Wednesday, March 11, 2020 21:10:58 Eastern Daylight Time
Printed: Thursday, March 12, 2020 09:03:00 Eastern Daylight Time

**Name: I20436**
**ID: WG1347919-1**
**Date: 10-Mar-2020**
**Time: 21:37:46**
**Description: WG1348954,WG1347919,ICAL16305**
**User: LCMS02:RS**
**Vial: 1:E,7**
**Instrument: XEVO-TQSmicro#QEB0050**
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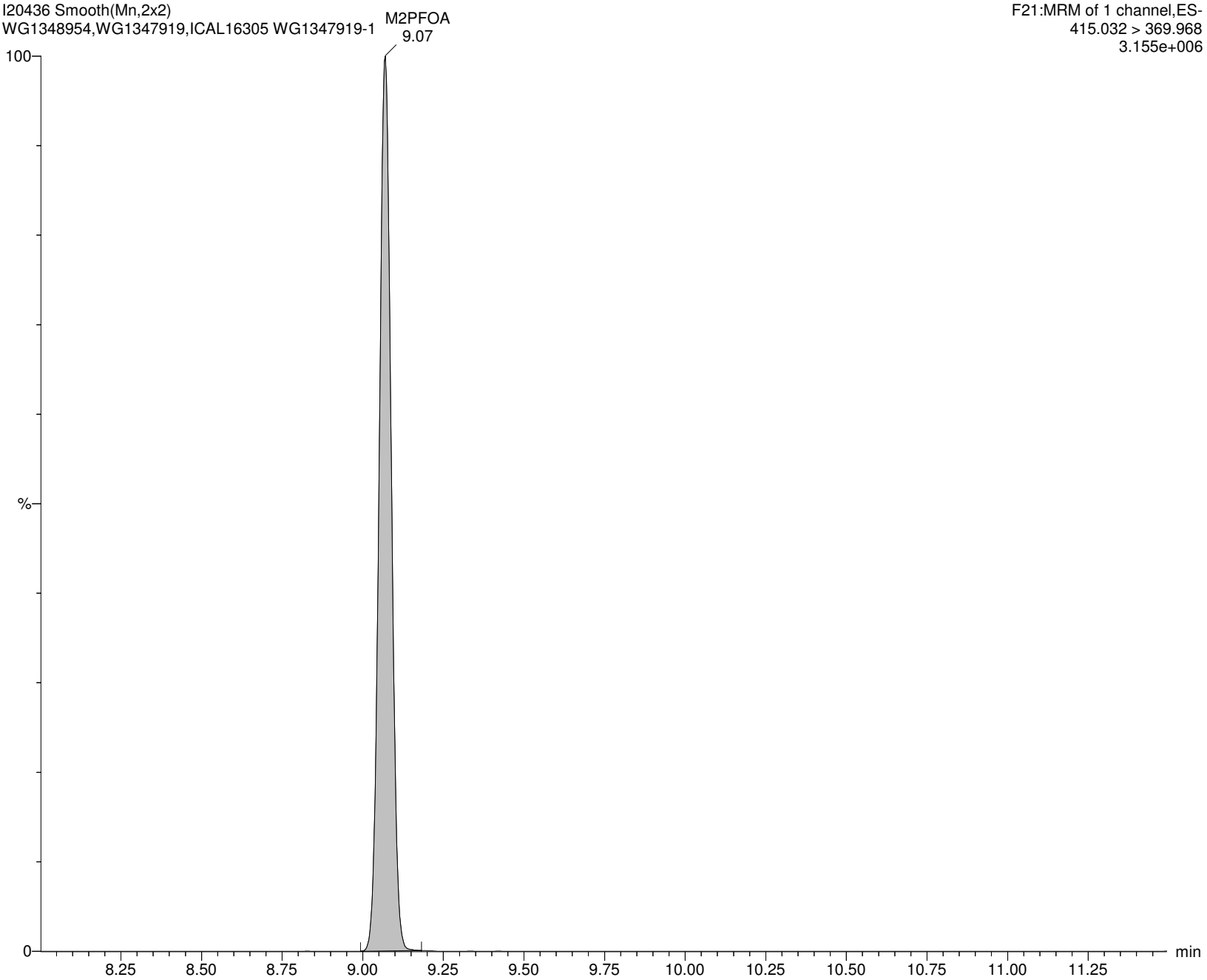



all concentration units in (ng/mL)

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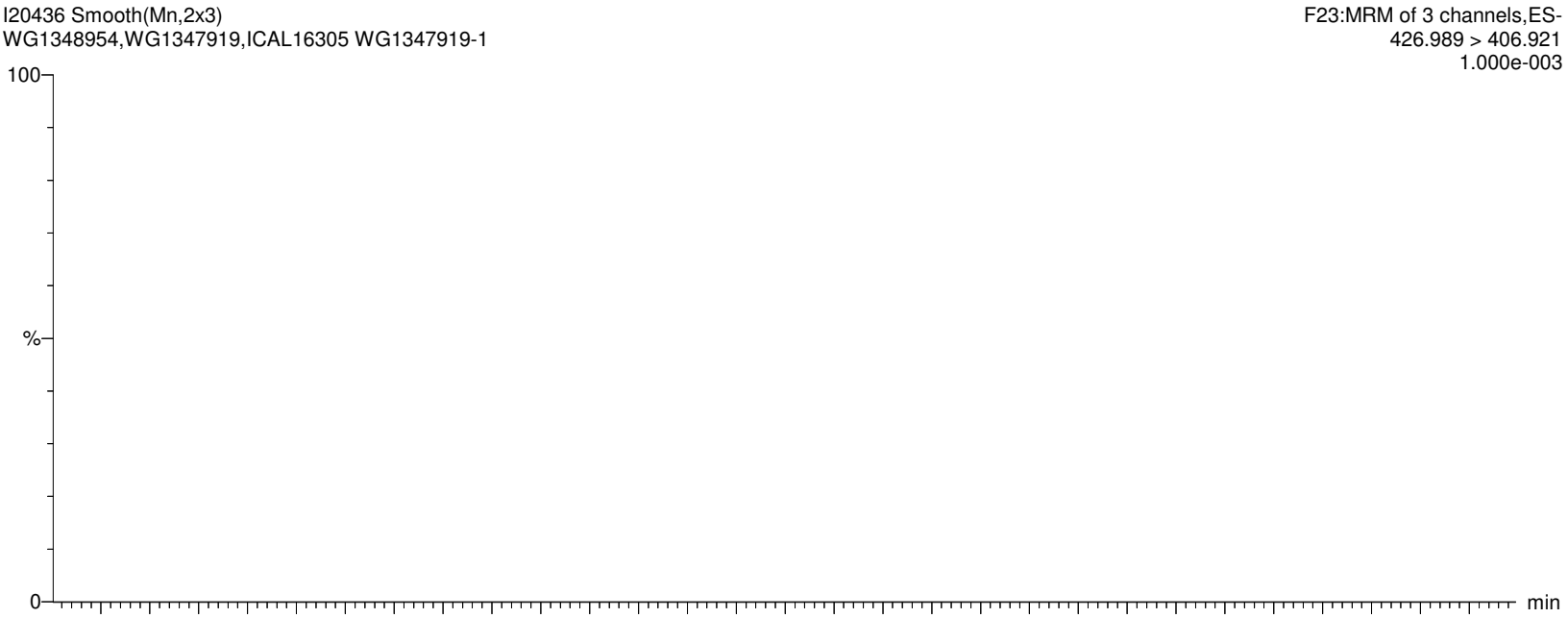
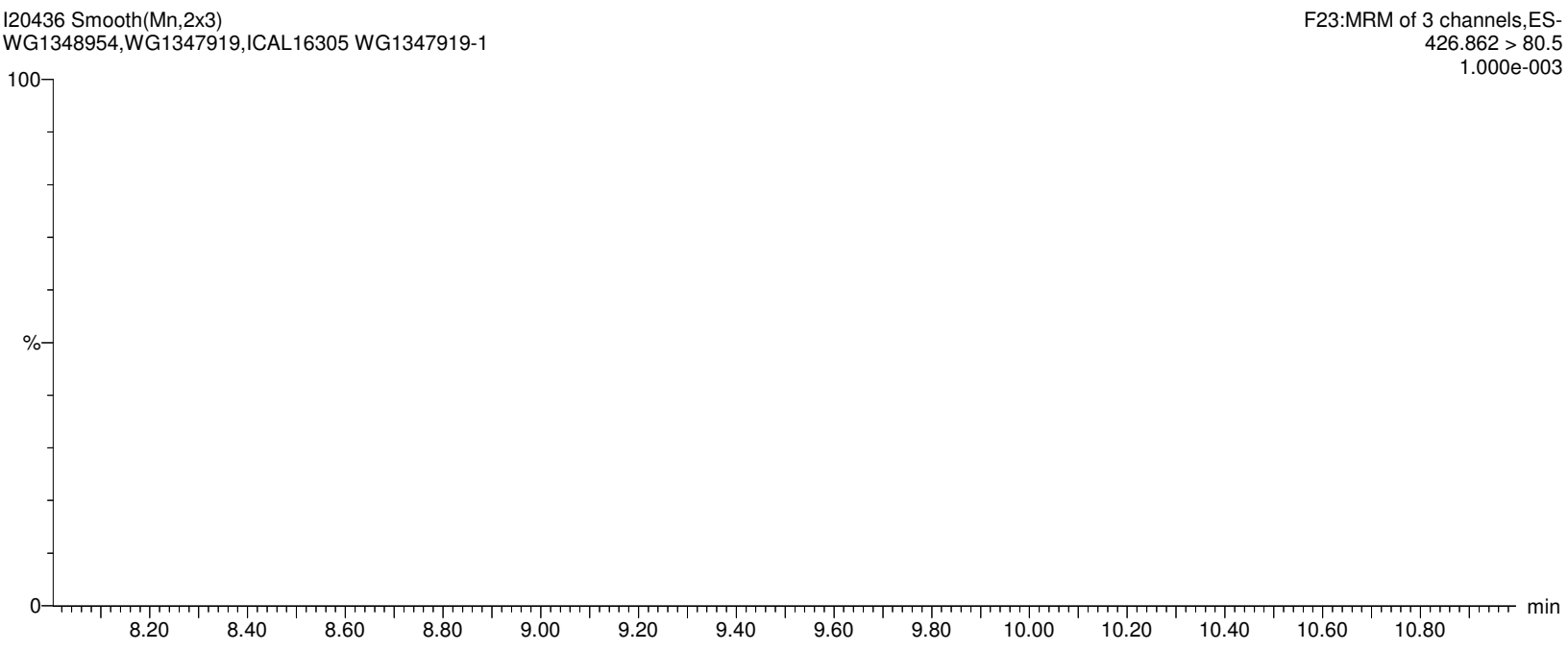
**6:2FTS**





all concentration units in (ng/mL)

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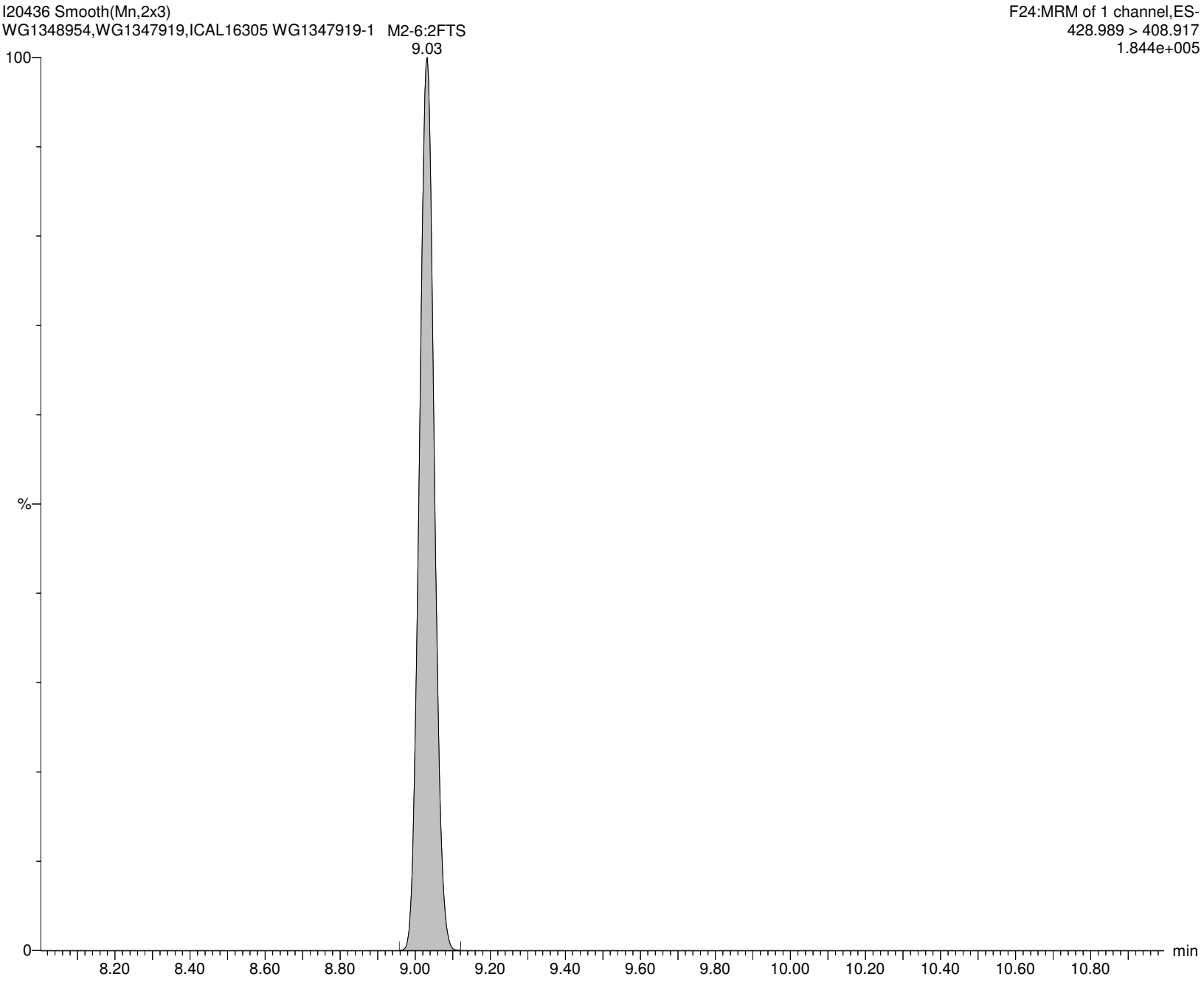
**MS Method Name: C:\MassLynx\Data\2020\200309_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**M2-6:2FTS**





all concentration units in (ng/mL)

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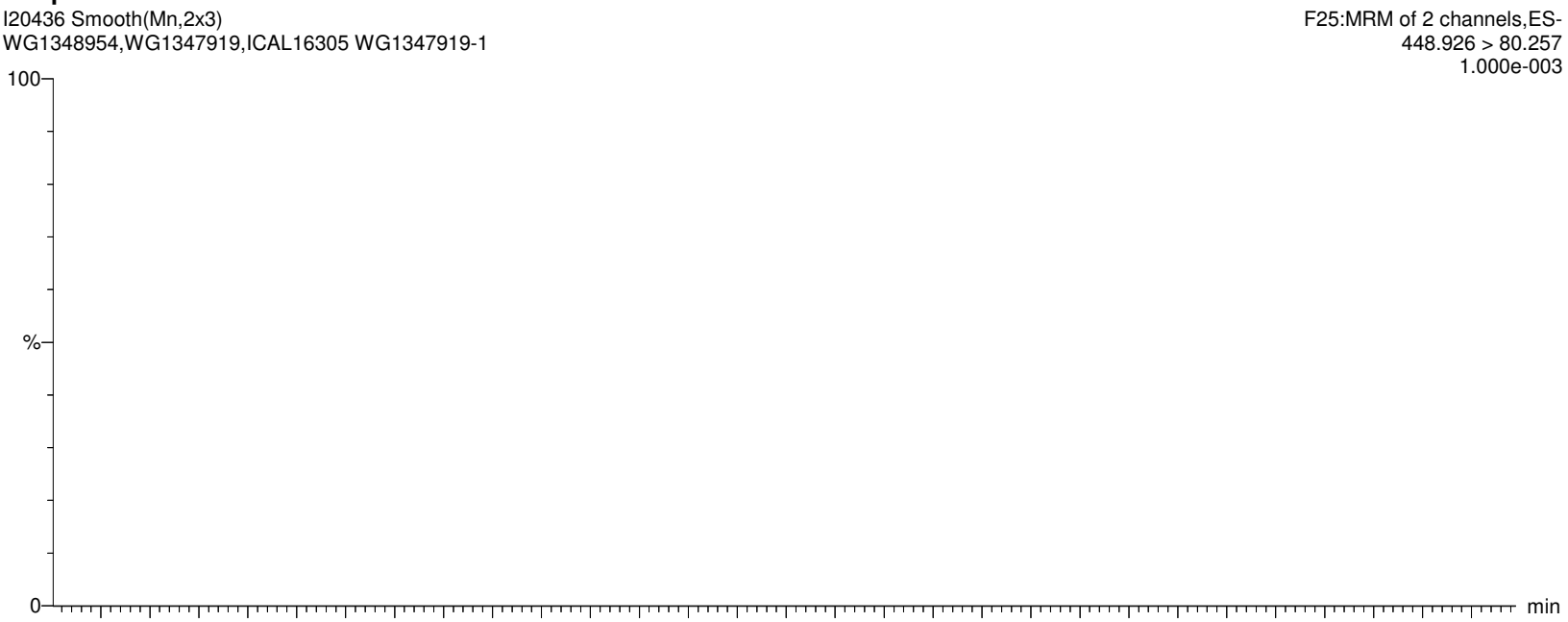


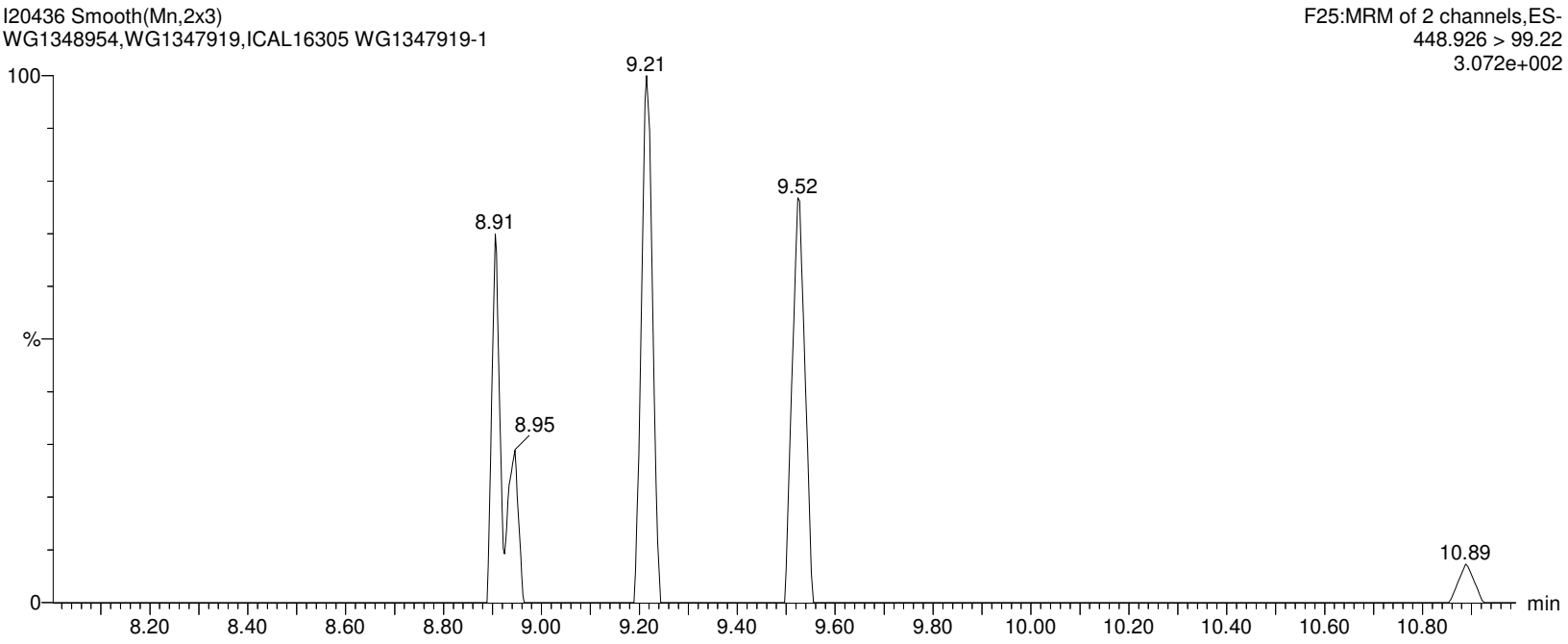



all concentration units in (ng/mL)

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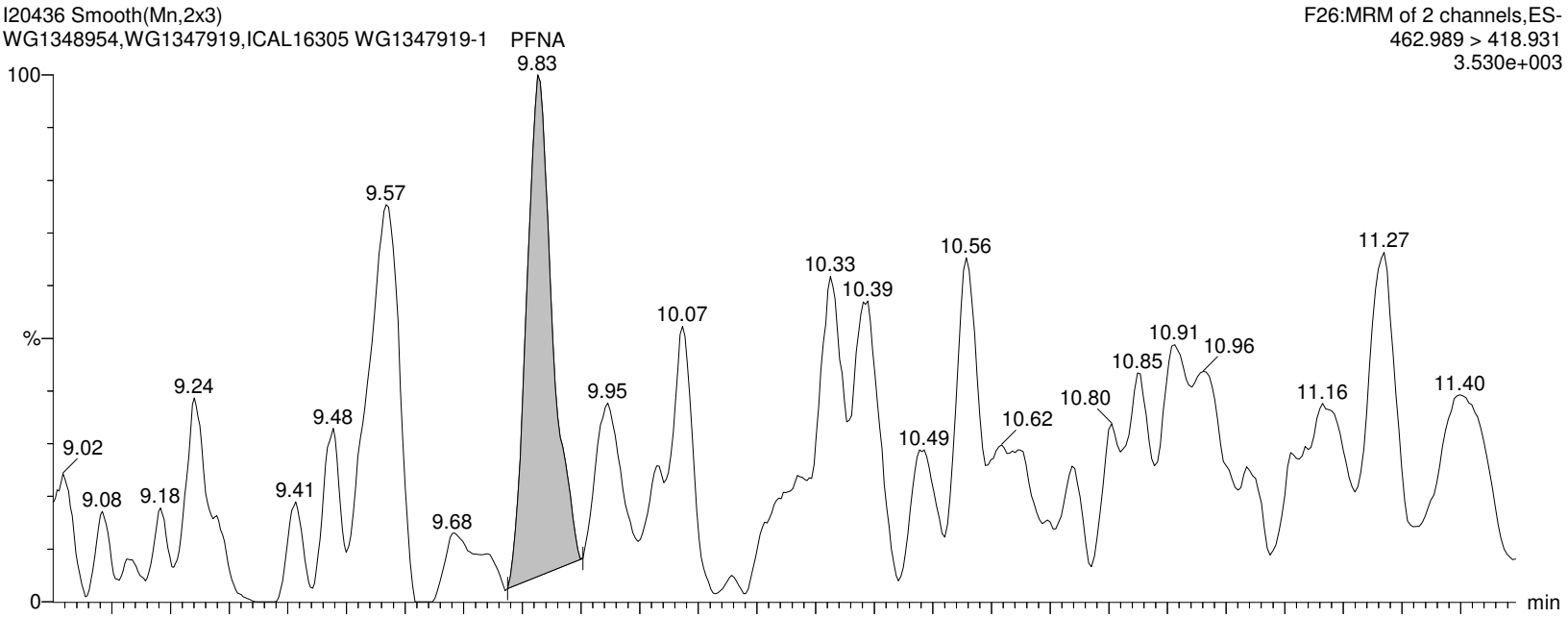
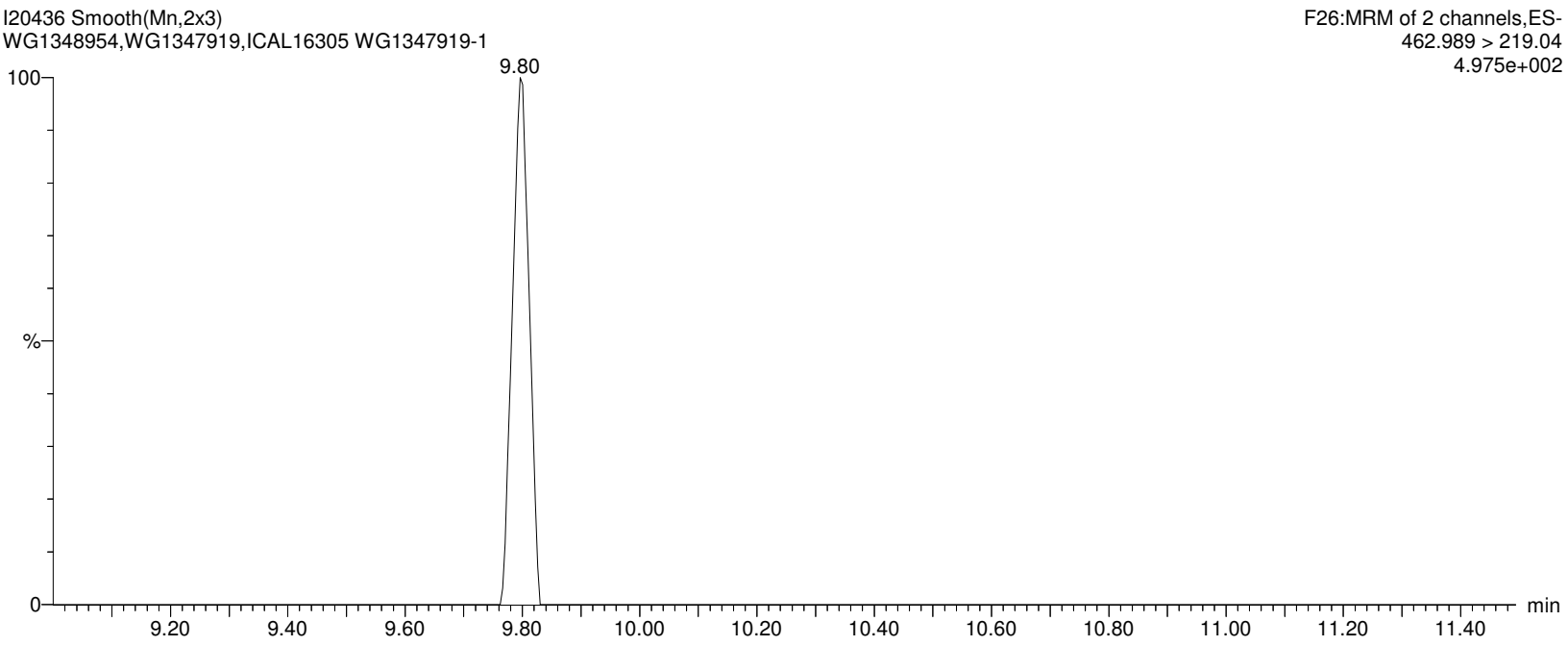
**PFNA**





all concentration units in (ng/mL)

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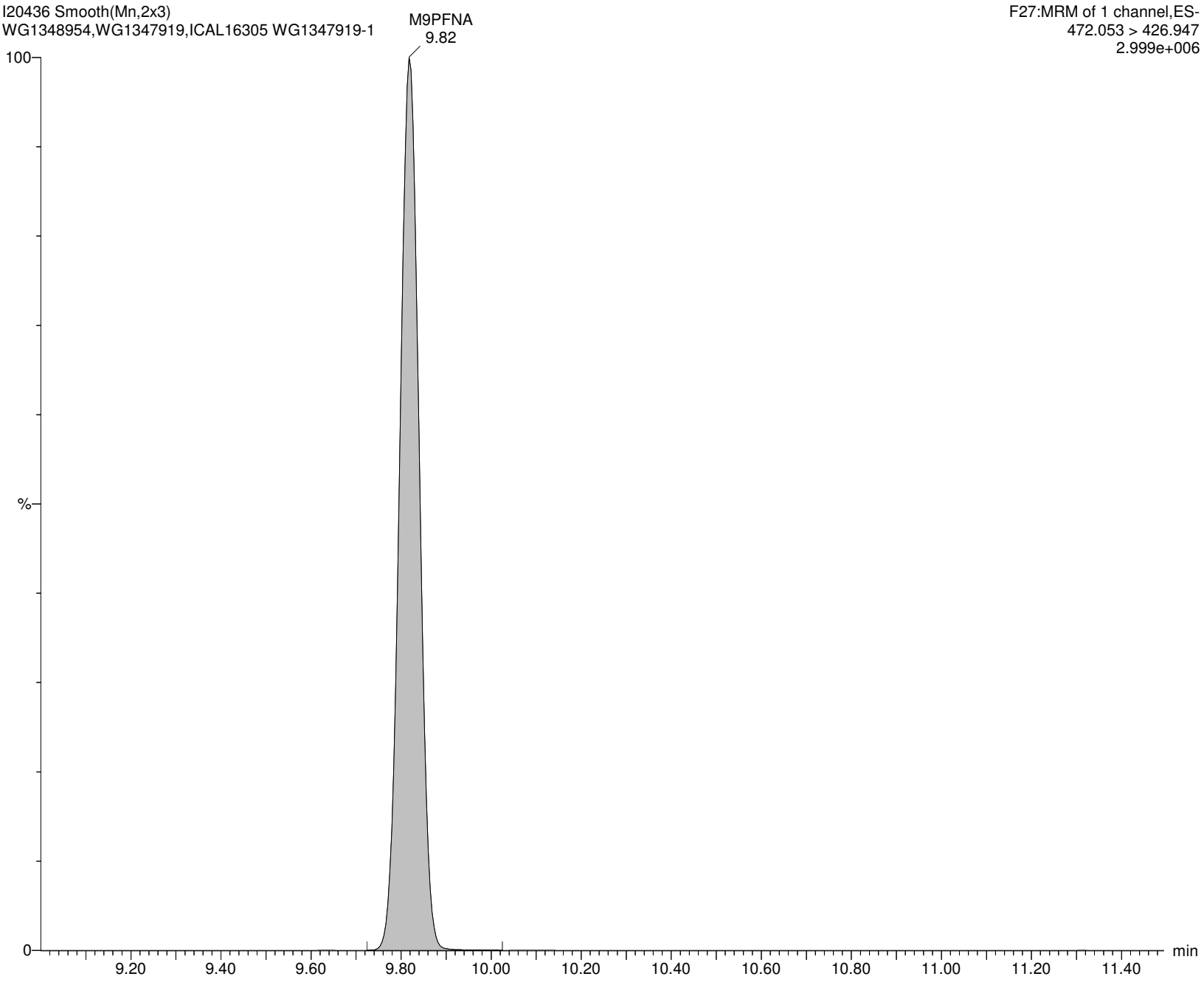
**M9PFNA**





all concentration units in (ng/mL)

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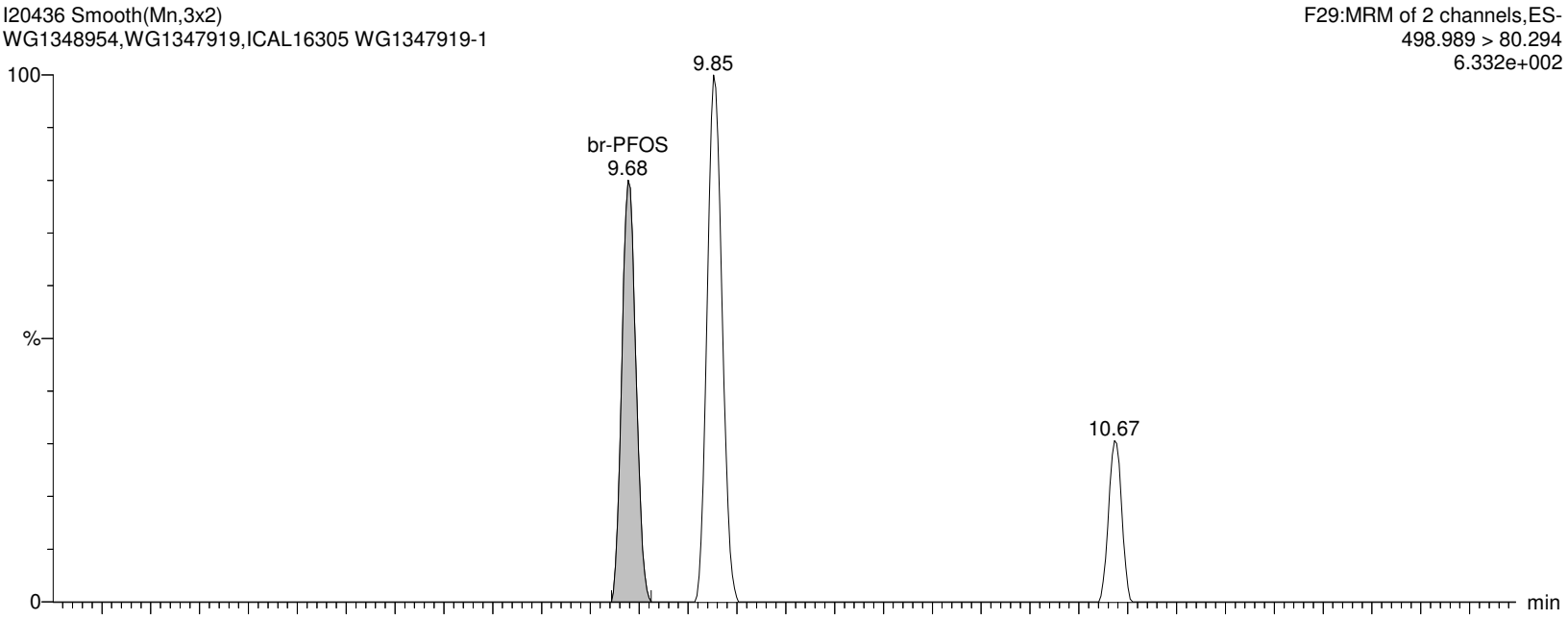
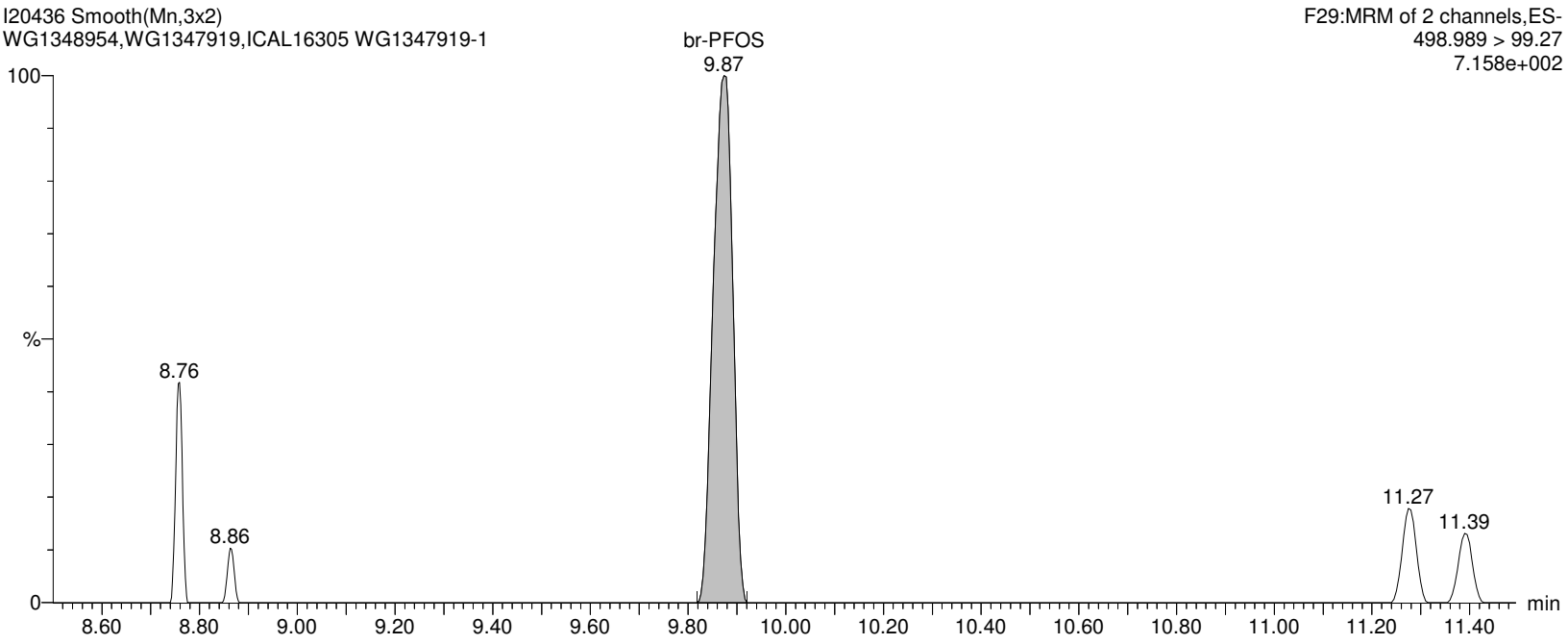
**br-PFOS**





all concentration units in (ng/mL)

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**MS Method Name: C:\MassLynx\Data\2020\200309_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

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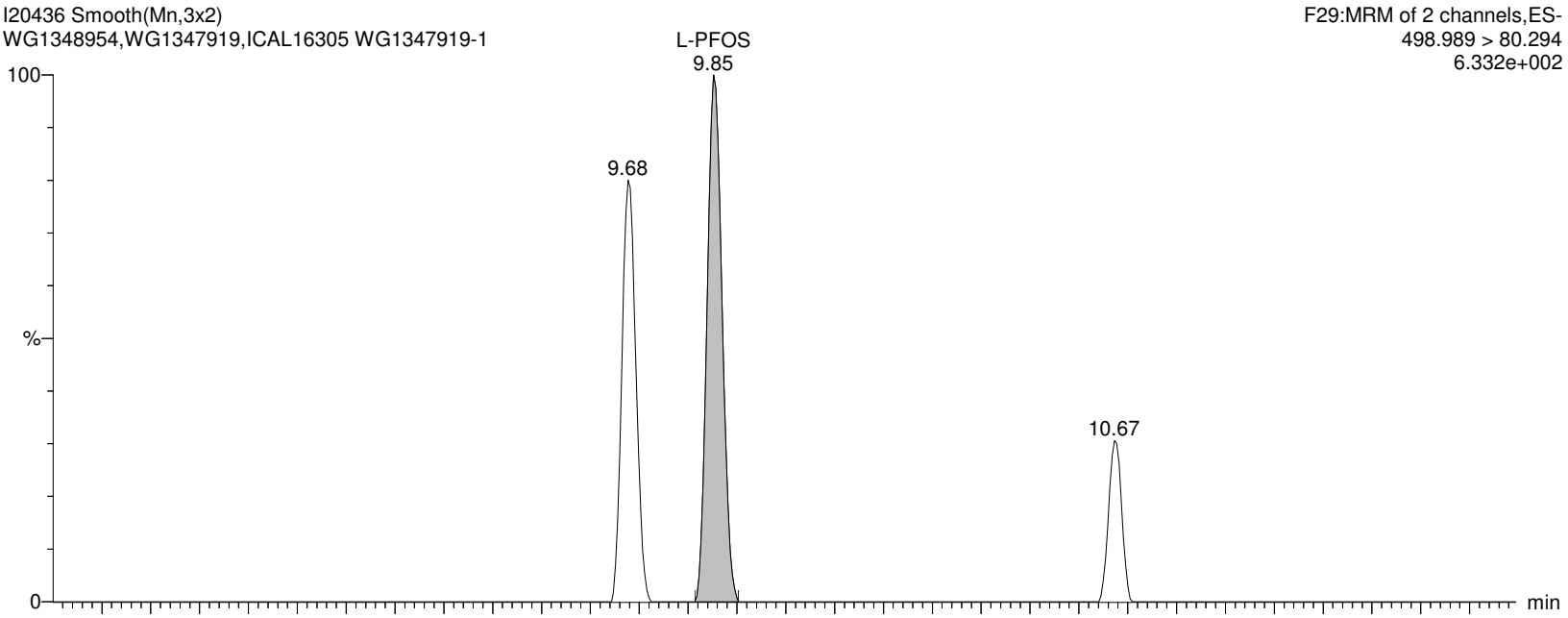


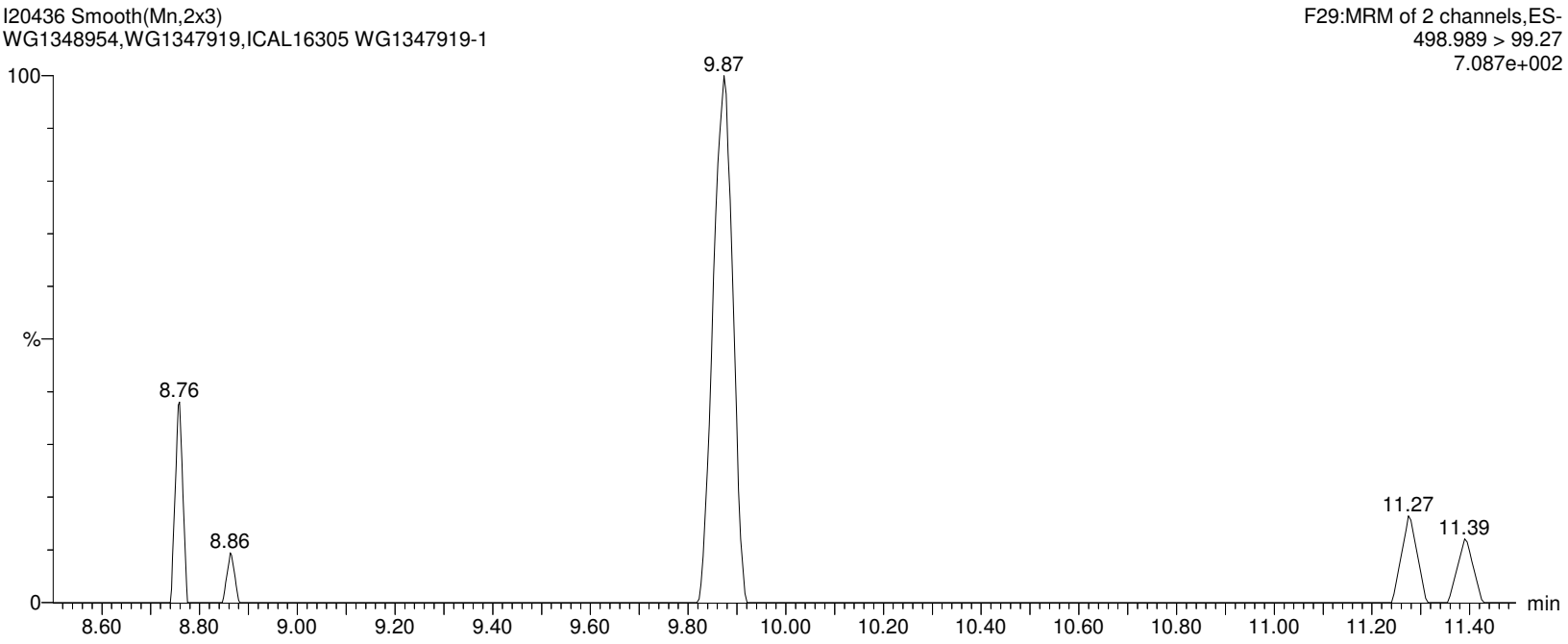



all concentration units in (ng/mL)

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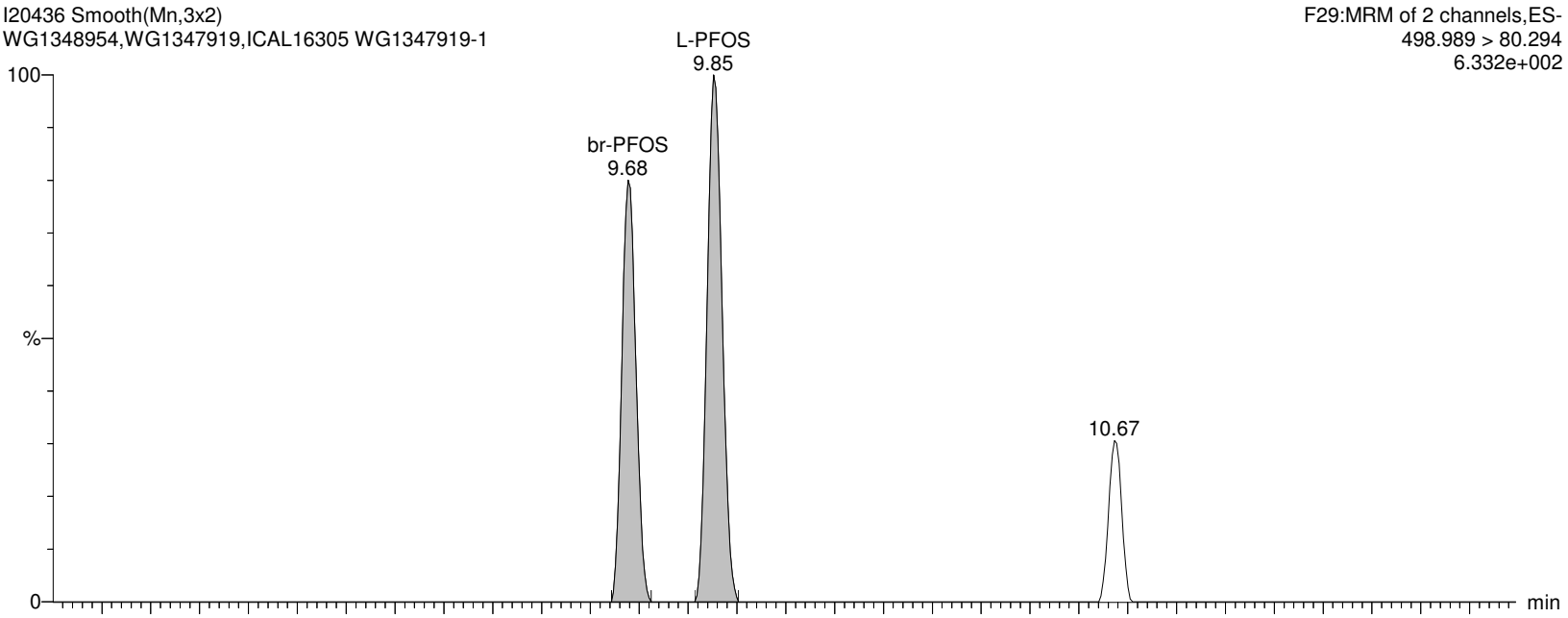
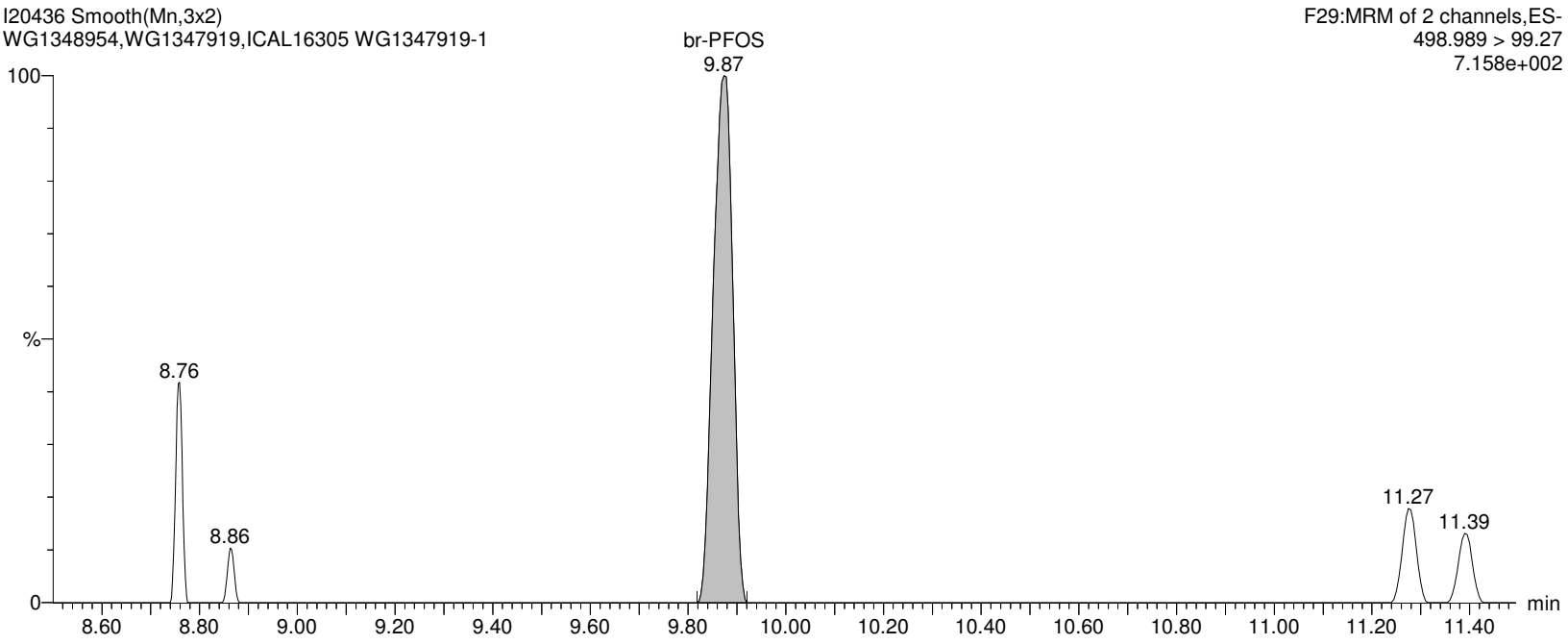
**MS Method Name: C:\MassLynx\Data\2020\200309_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**PFOS**





all concentration units in (ng/mL)

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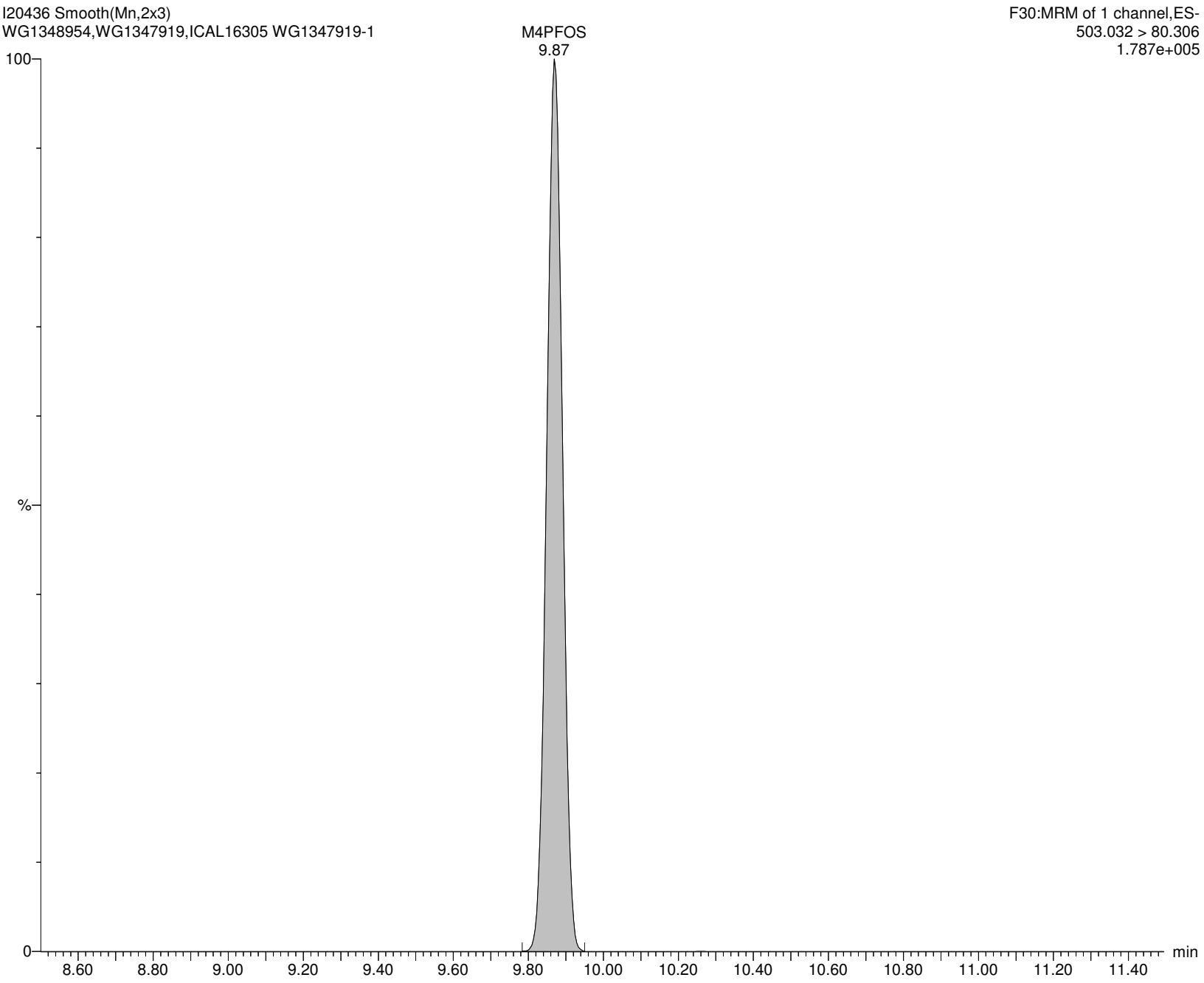



all concentration units in (ng/mL)

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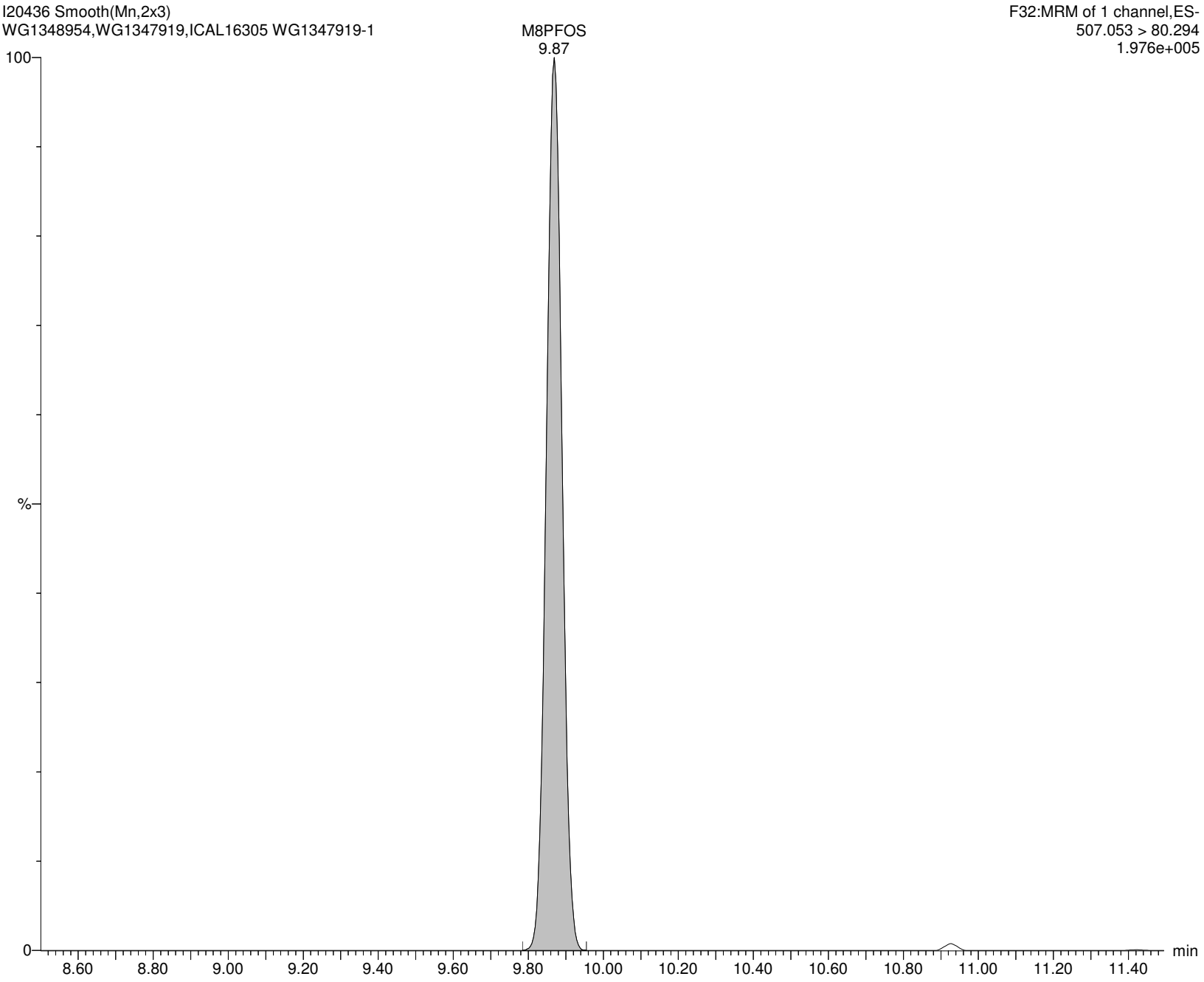



all concentration units in (ng/mL)

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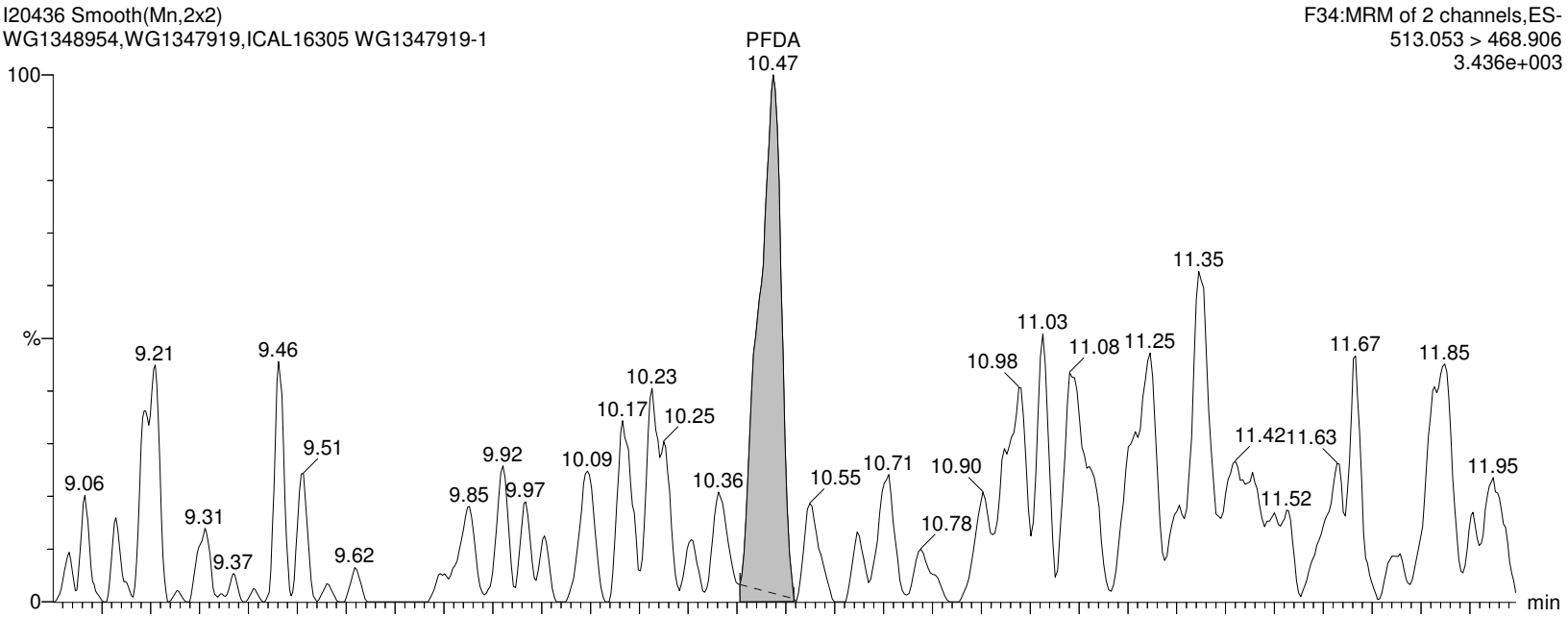


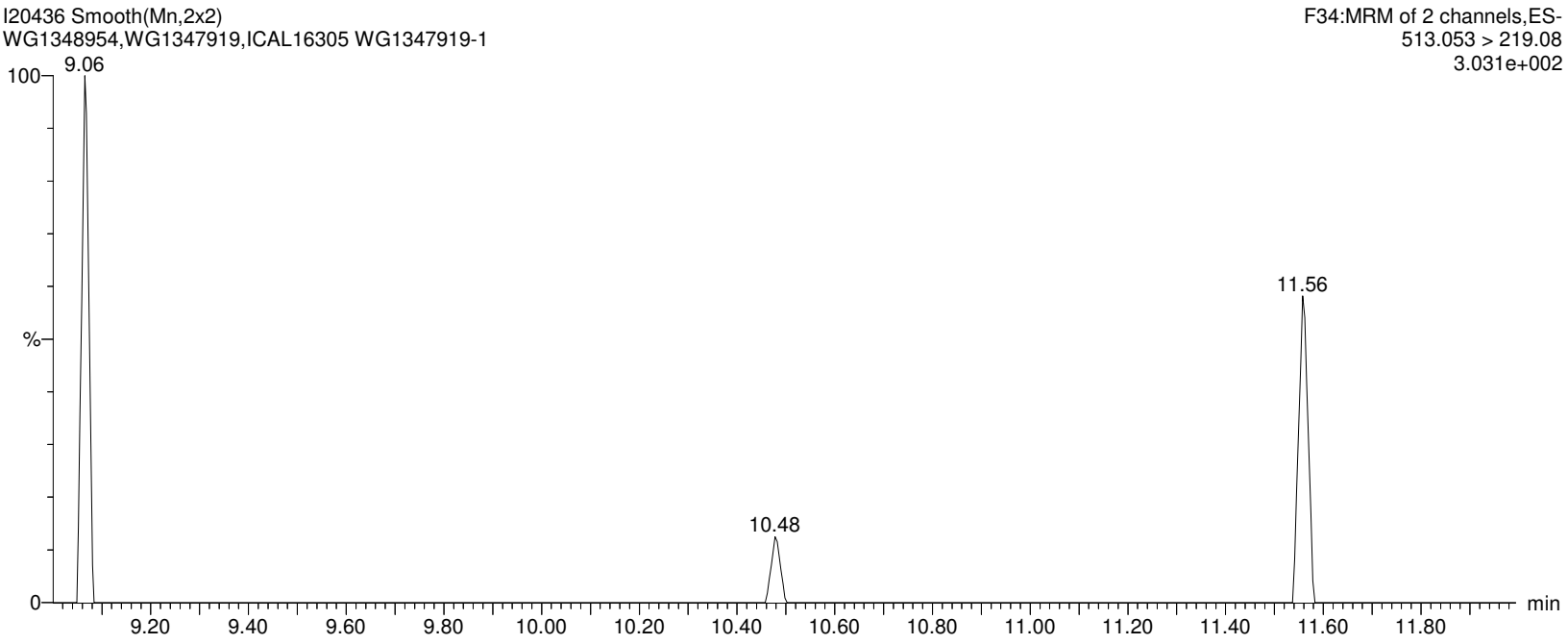



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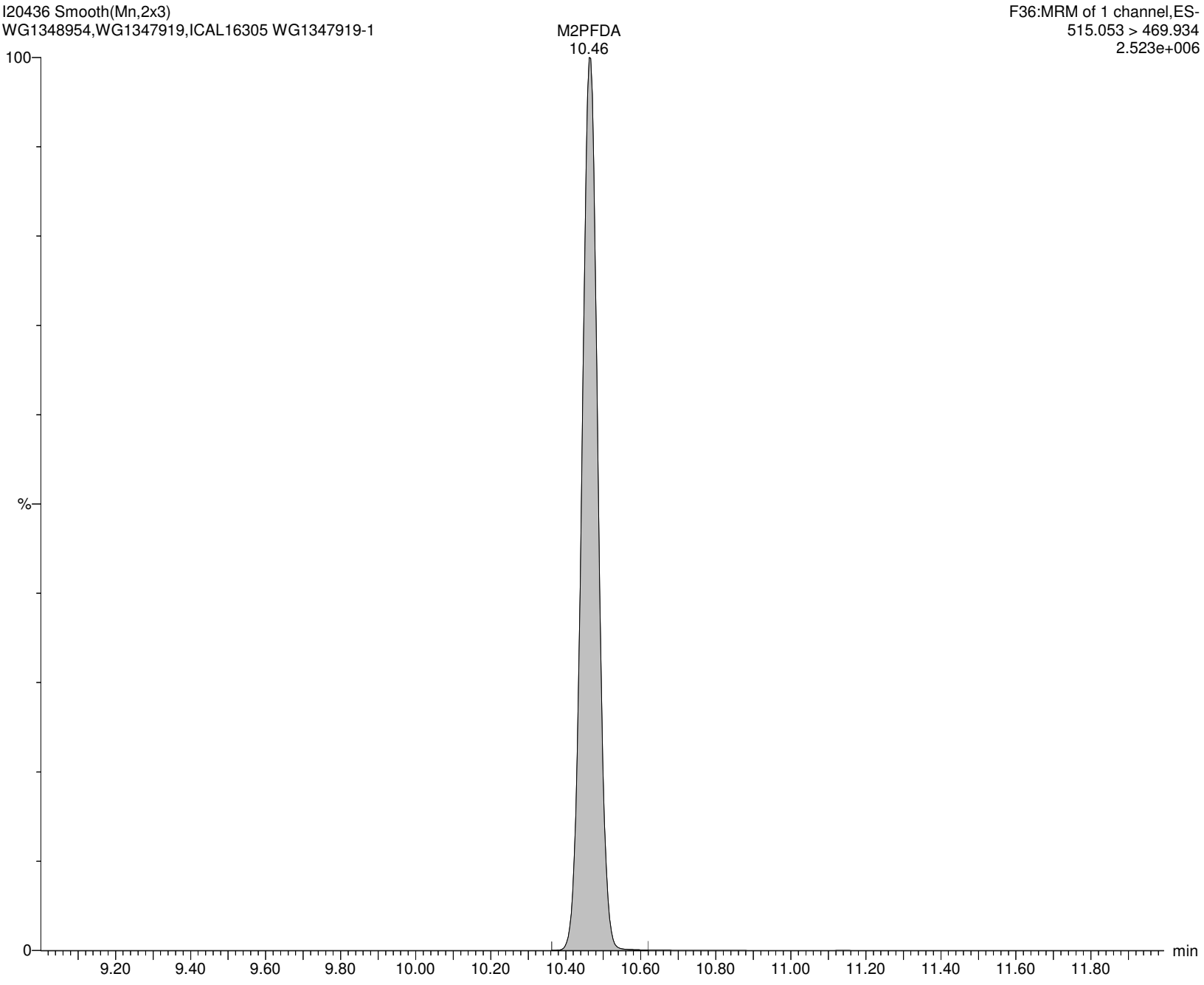



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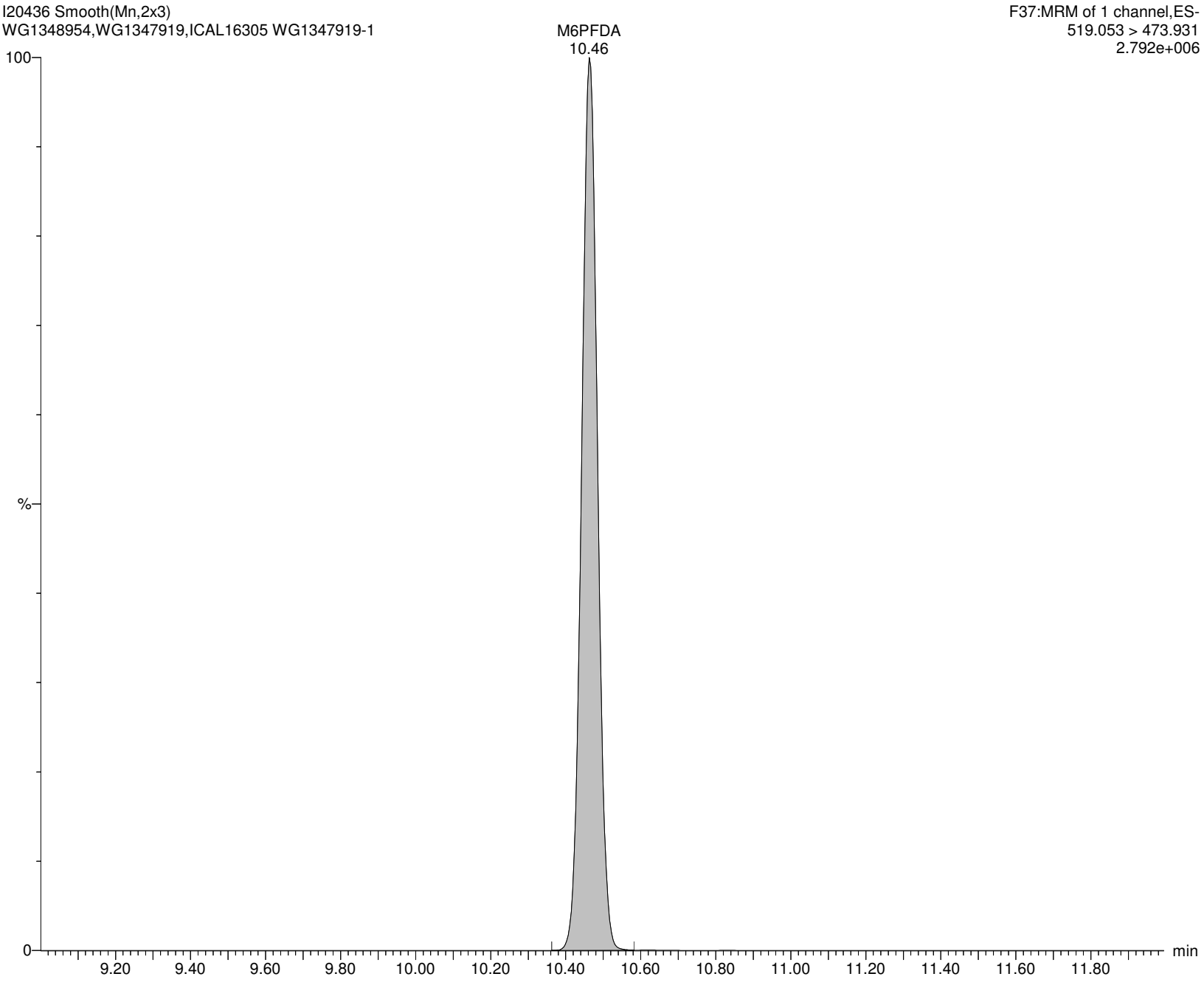



all concentration units in (ng/mL)

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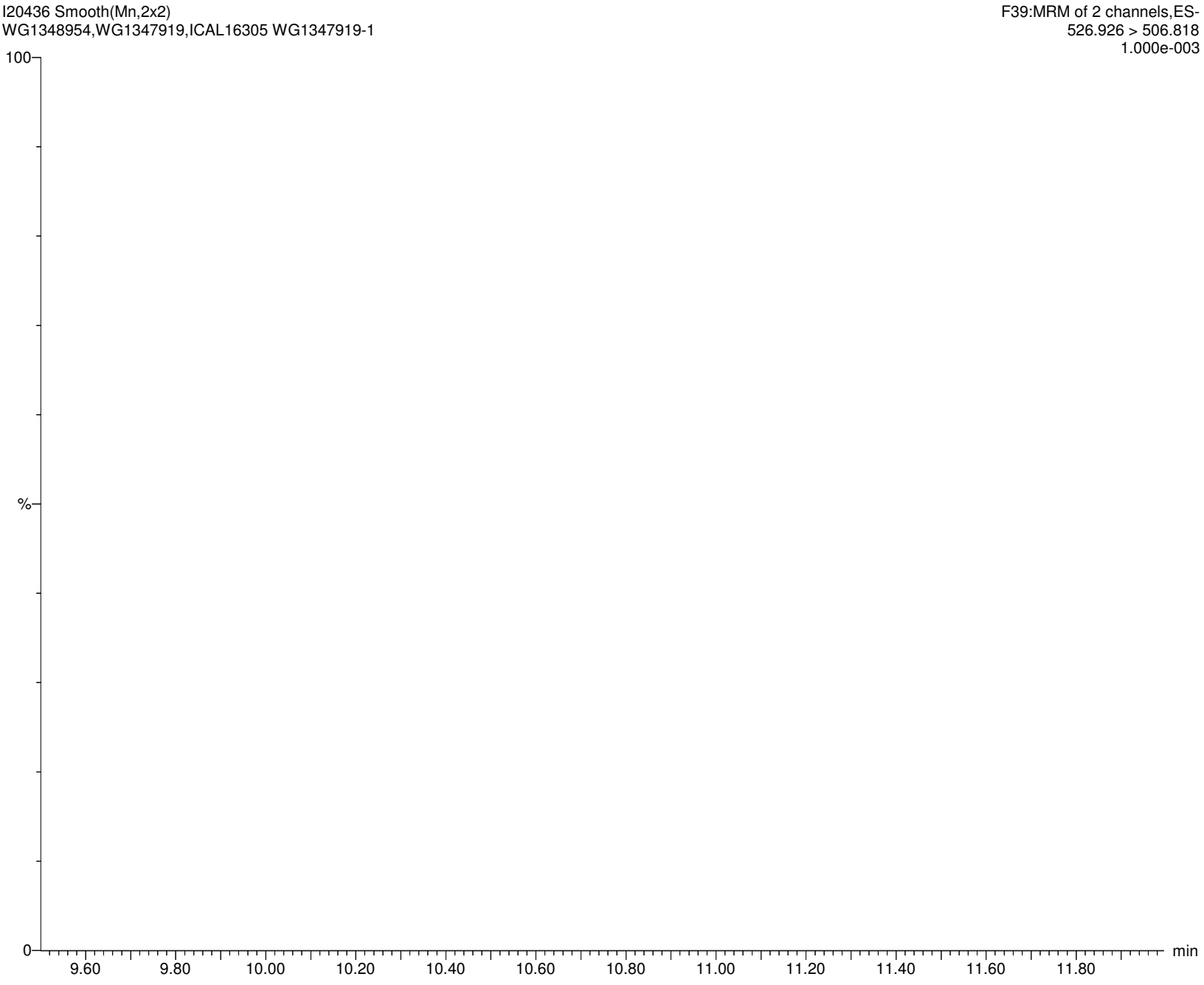
**Vial: 1:E,7**
**Instrument: XEVO-TQSmicro#QEB0050**
**Inlet Method Name: C:\MassLynx\Data\2020\200309_537ISO.PRO\ACQUDB\LCMS_537_ISO_B**
**Tune Method Name: C:\MassLynx\Data\2020\200309_537ISO.PRO\ACQUDB\181009_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\2020\200309_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

-

**8:2FTS**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2020\200309_537ISO.PRO\Data\WG1348954C.qld
Last Altered: Wednesday, March 11, 2020 21:10:58 Eastern Daylight Time
Printed: Thursday, March 12, 2020 09:03:00 Eastern Daylight Time

**Name: I20436**
**ID: WG1347919-1**
**Date: 10-Mar-2020**
**Time: 21:37:46**
**Description: WG1348954,WG1347919,ICAL16305**
**User: LCMS02:RS**
**Vial: 1:E,7**
**Instrument: XEVO-TQSmicro#QEB0050**
**Inlet Method Name: C:\MassLynx\Data\2020\200309_537ISO.PRO\ACQUDB\LCMS_537_ISO_B**
**Tune Method Name: C:\MassLynx\Data\2020\200309_537ISO.PRO\ACQUDB\181009_TUNE.IPR**
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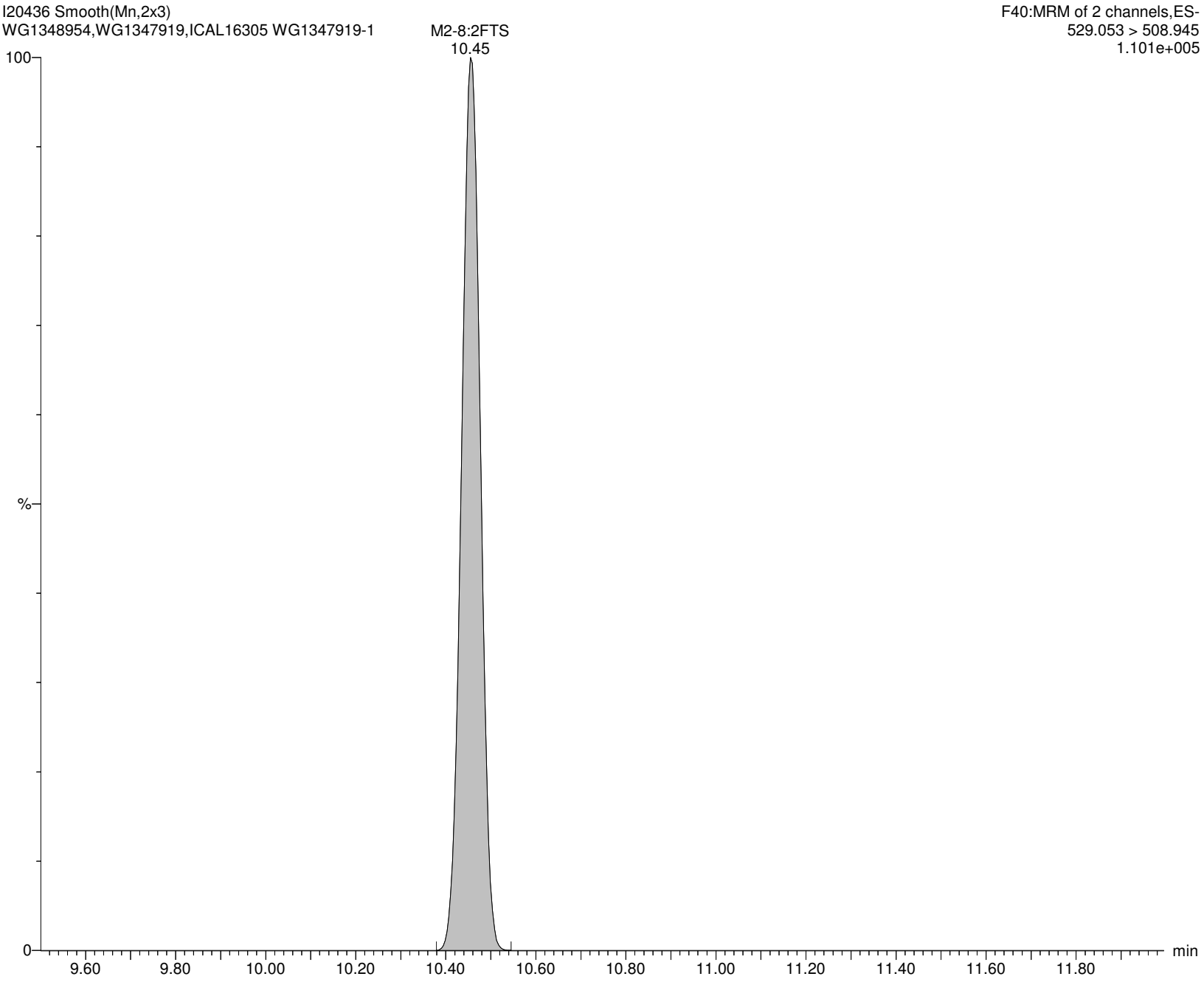
**M2-8:2FTS**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2020\200309_537ISO.PRO\Data\WG1348954C.qld
Last Altered: Wednesday, March 11, 2020 21:10:58 Eastern Daylight Time
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**User: LCMS02:RS**
**Vial: 1:E,7**
**Instrument: XEVO-TQSmicro#QEB0050**
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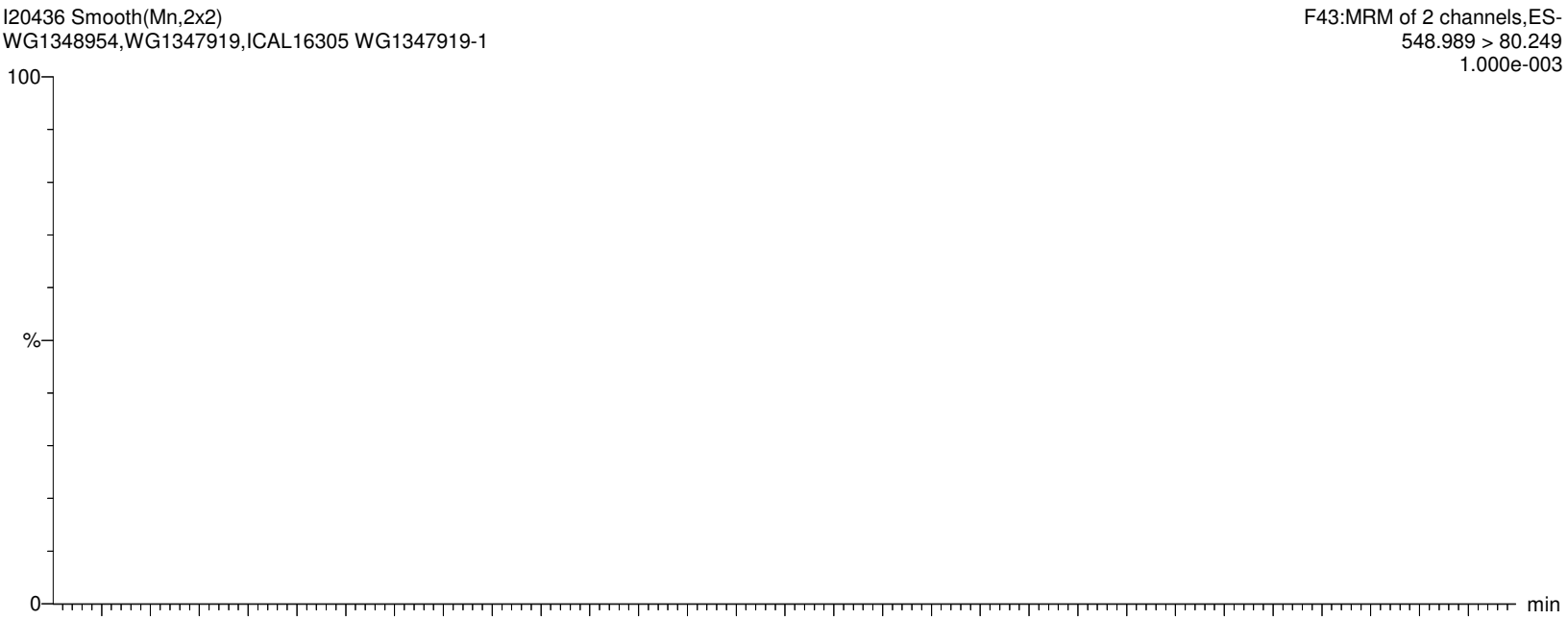


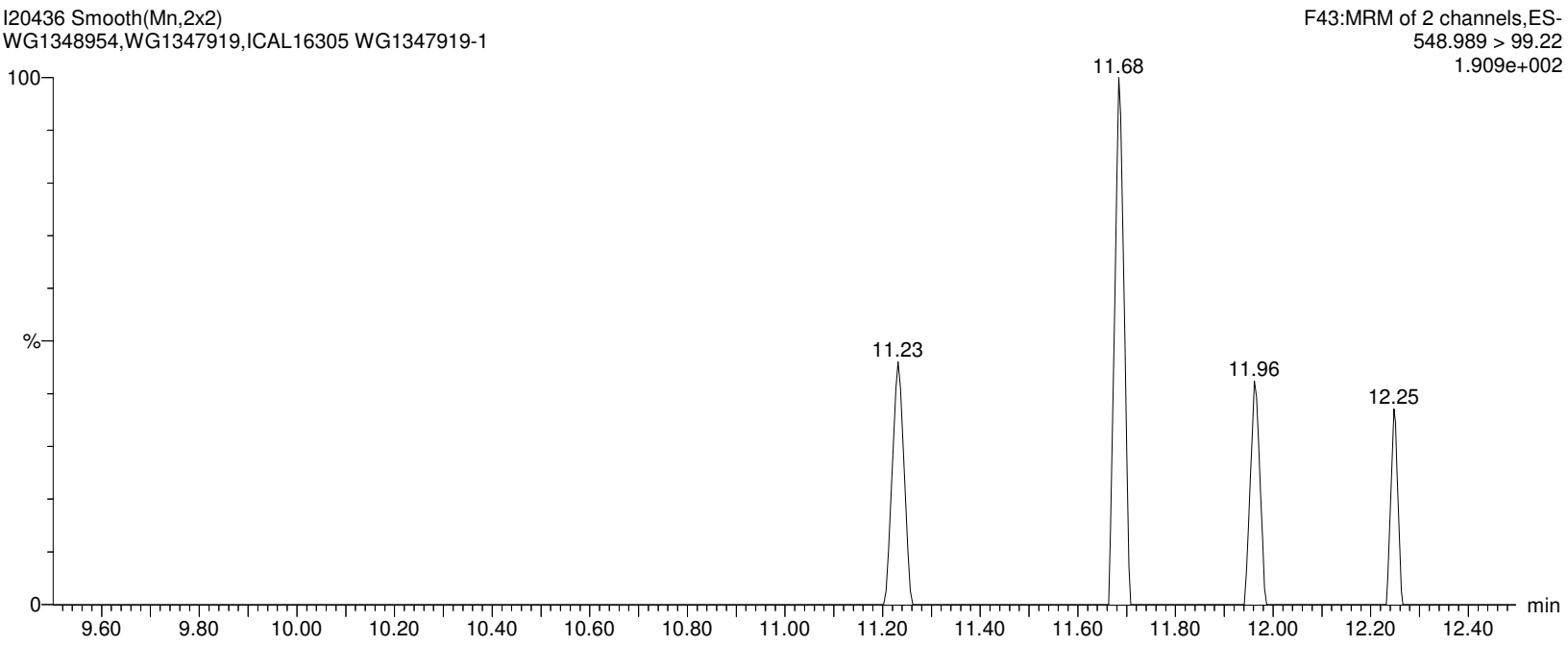



all concentration units in (ng/mL)

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Dataset: C:\MassLynx\Data\2020\200309_537ISO.PRO\Data\WG1348954C.qld
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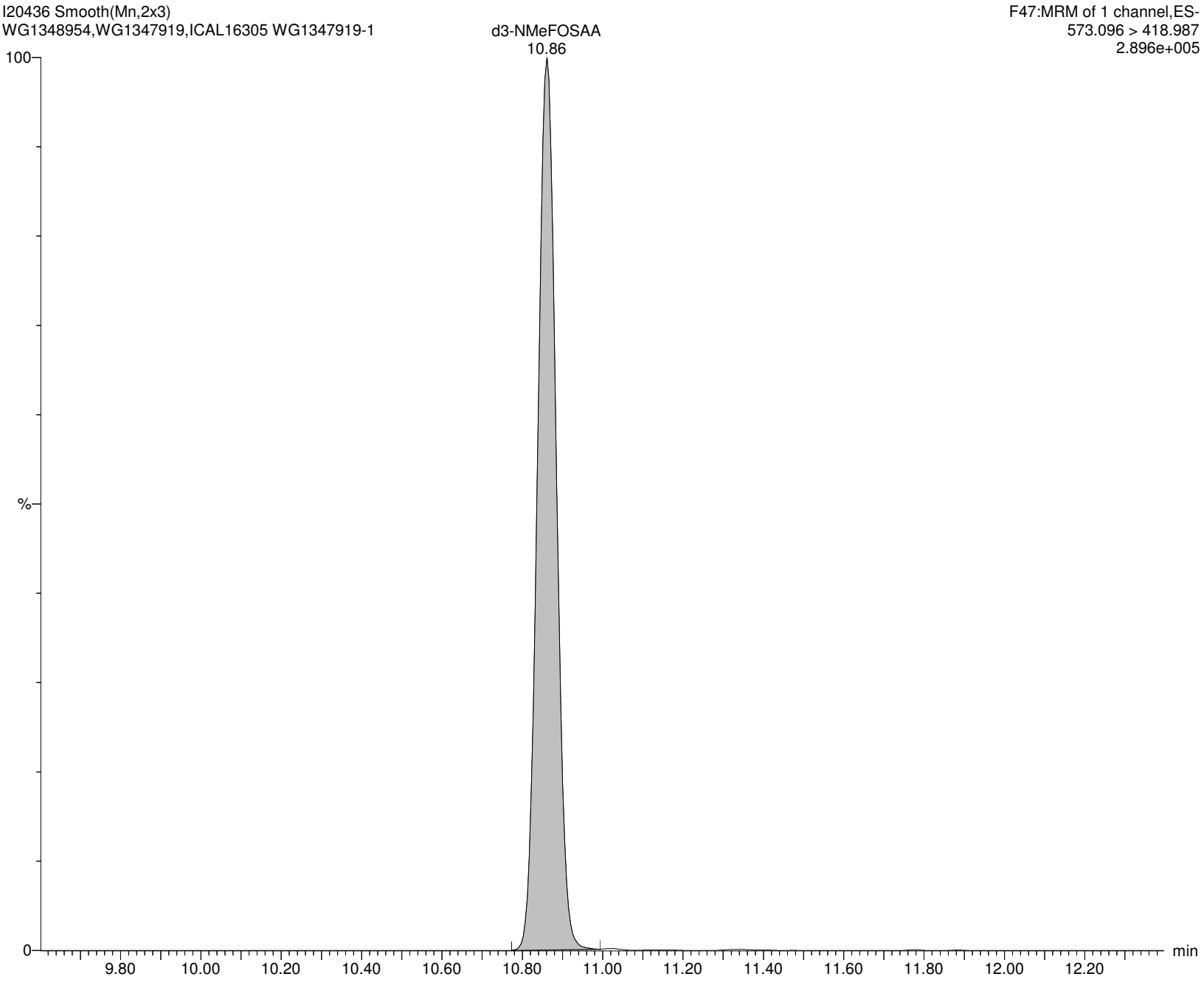
**d3-NMeFOSAA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2020\200309_537ISO.PRO\Data\WG1348954C.qld
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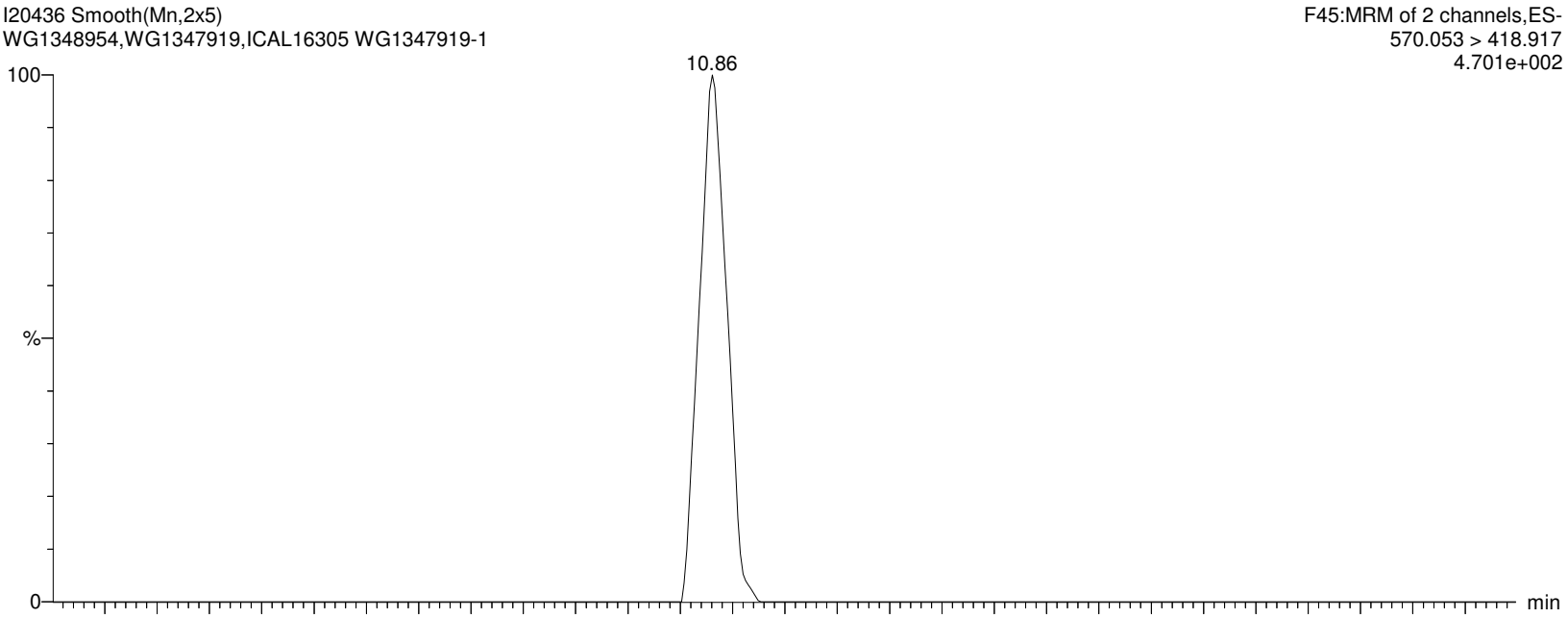
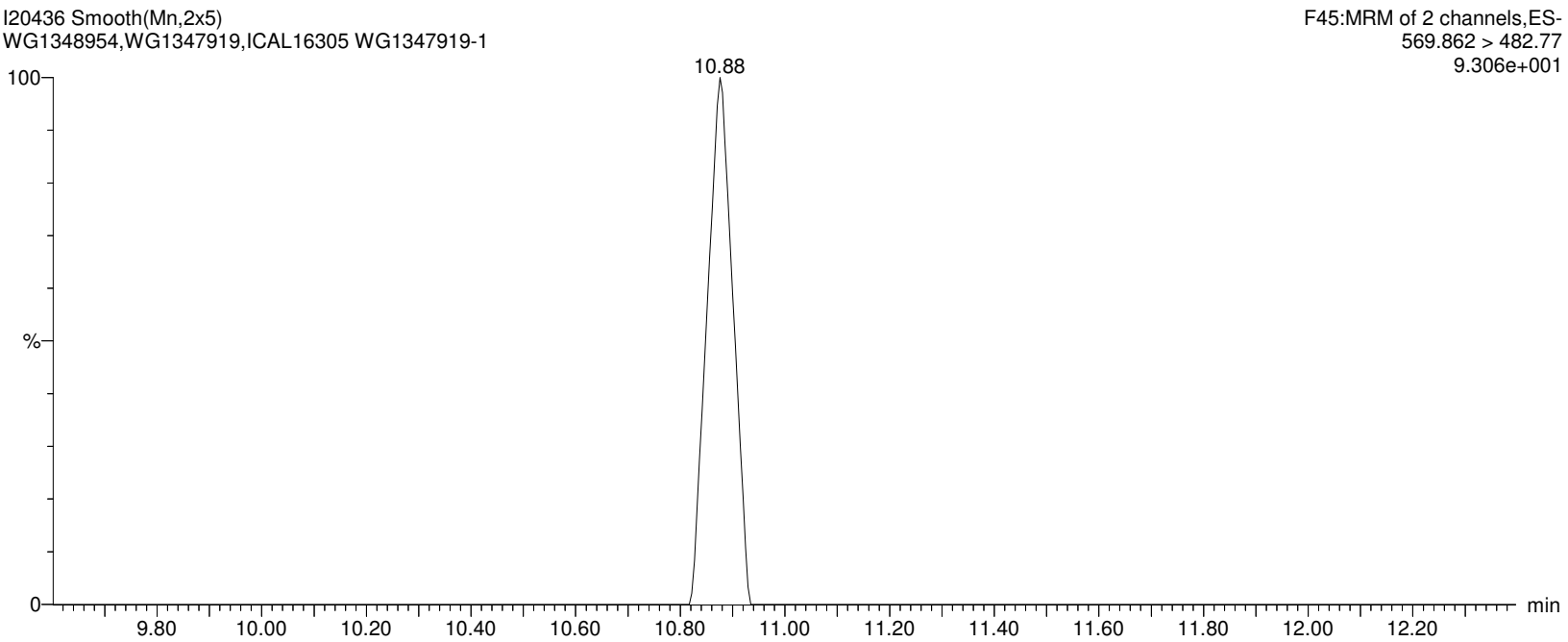
**br-NMeFOSAA**





all concentration units in (ng/mL)

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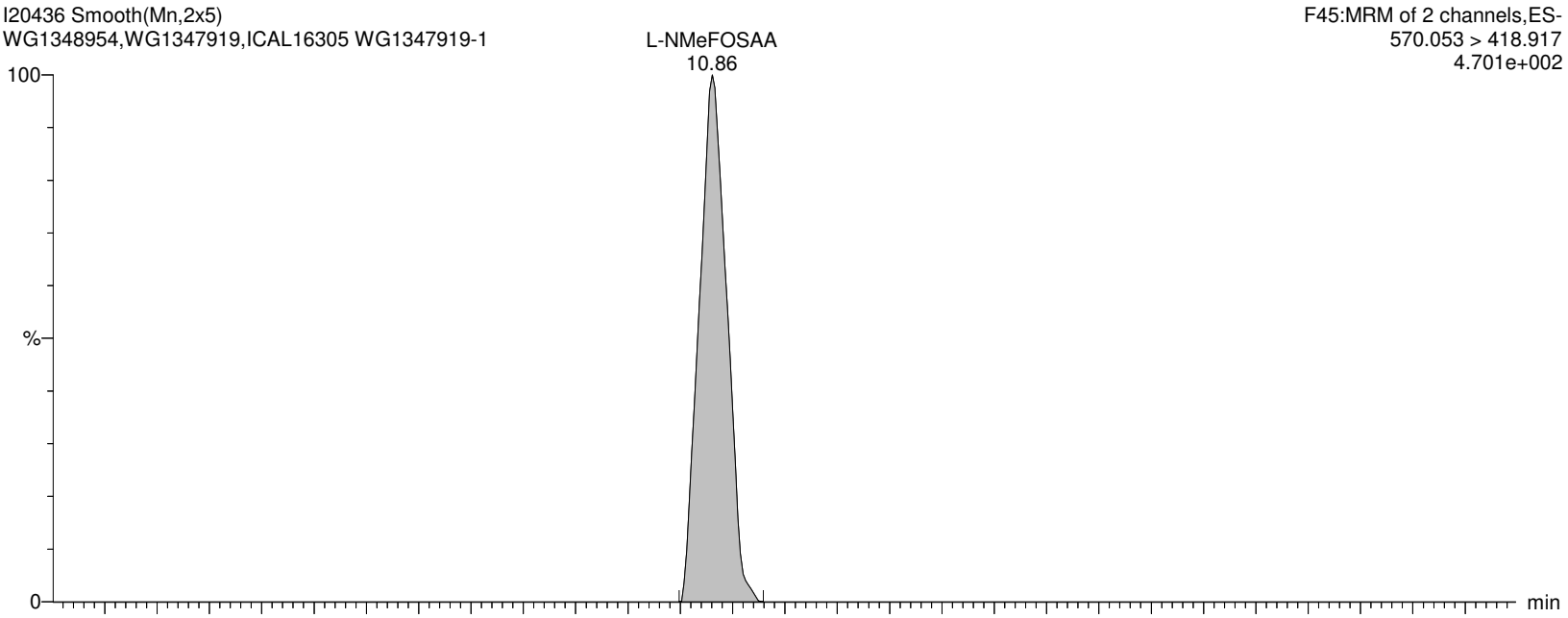
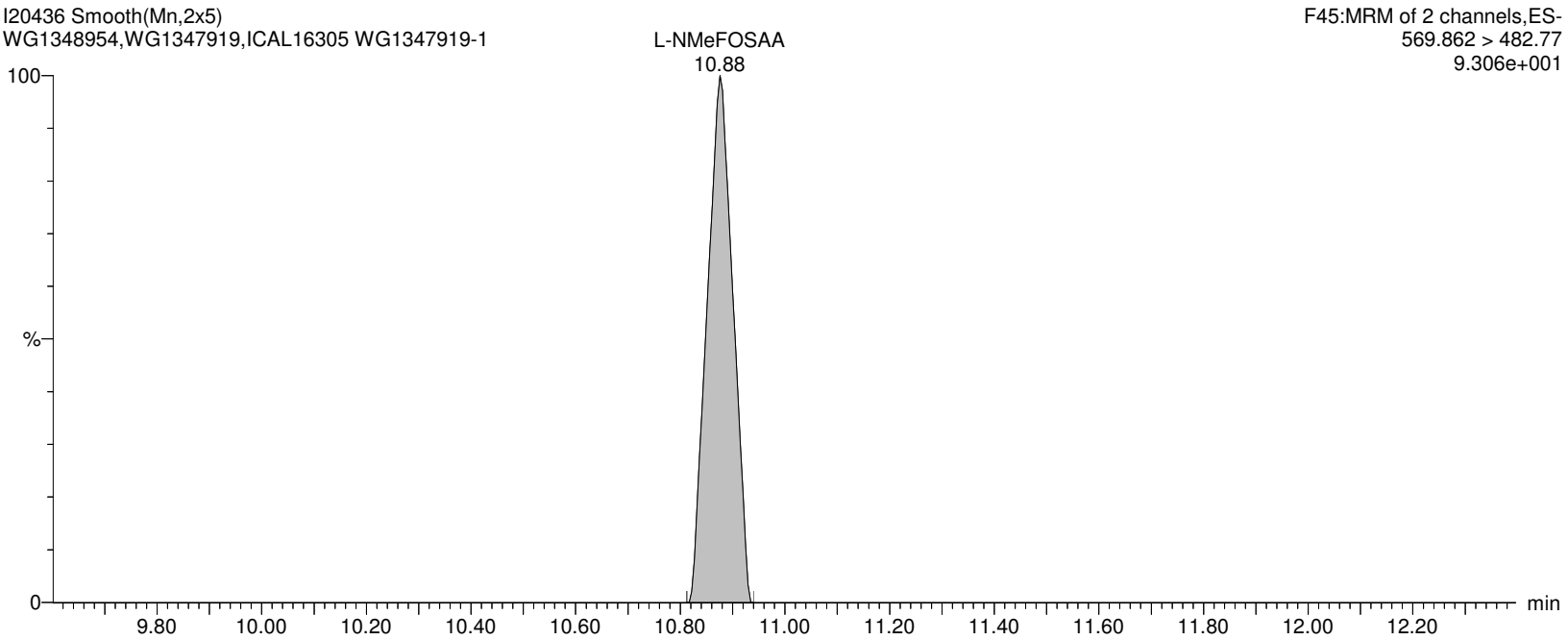
**L-NMeFOSAA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
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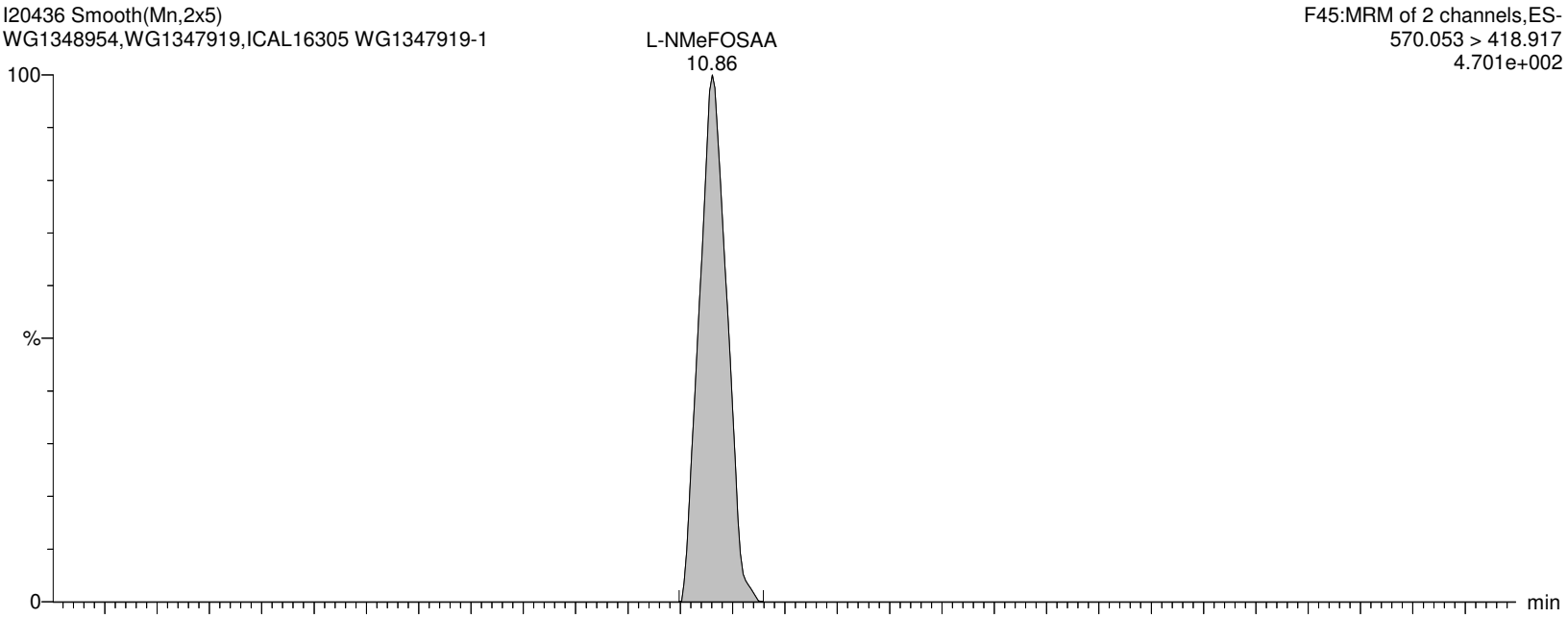
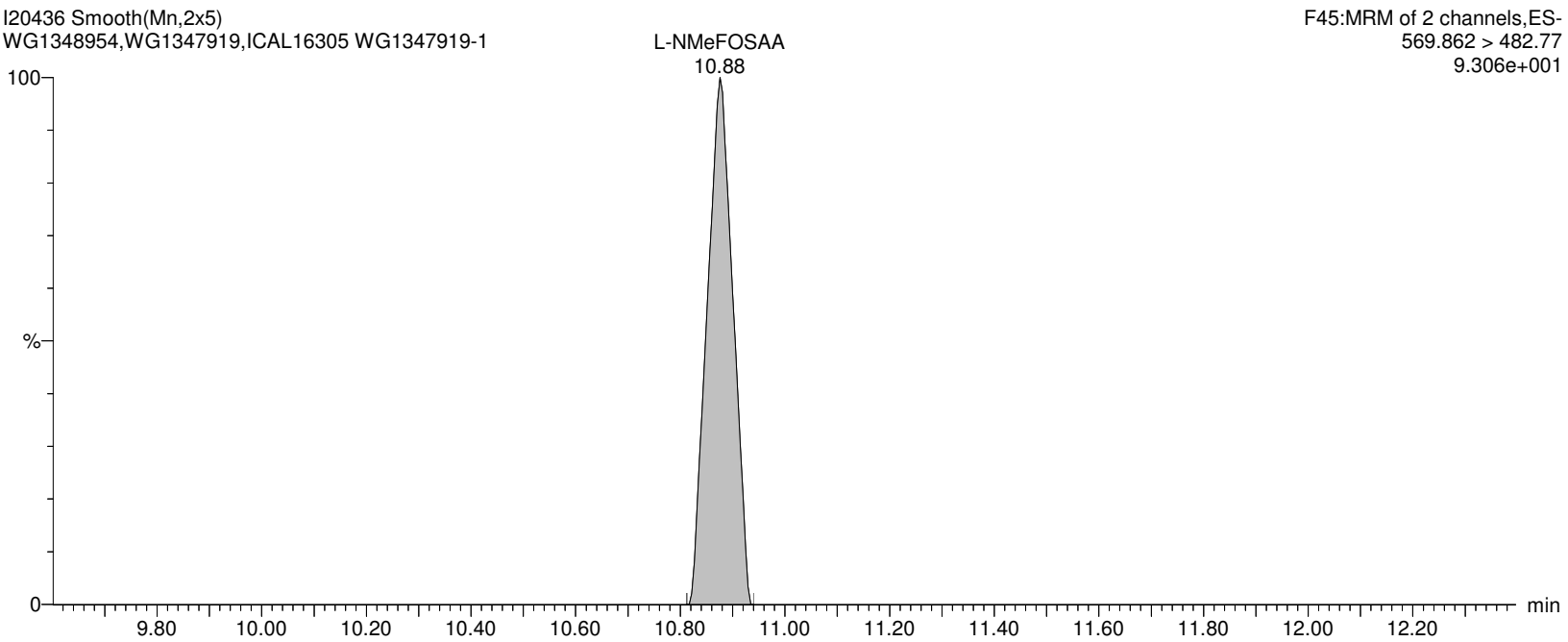
**NMeFOSAA**





all concentration units in (ng/mL)

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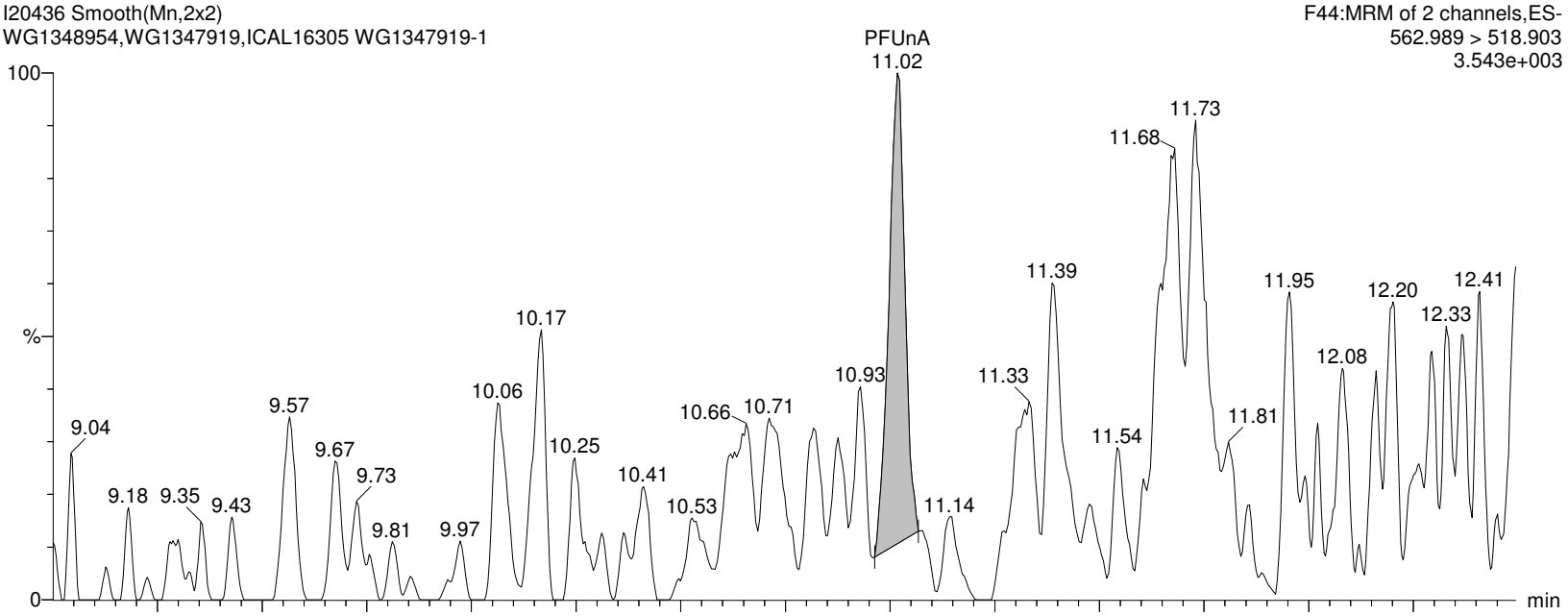
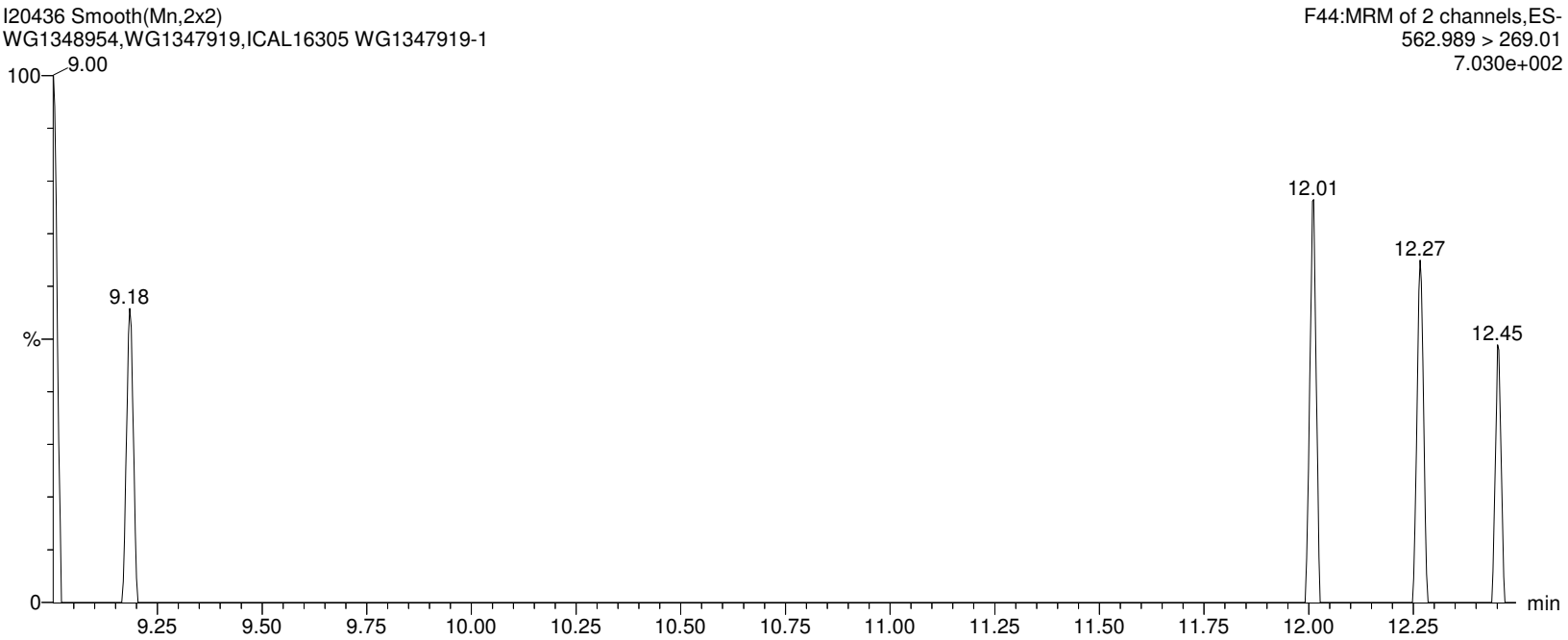
**PFUnA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2020\200309_537ISO.PRO\Data\WG1348954C.qld
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**Vial: 1:E,7**
**Instrument: XEVO-TQSmicro#QEB0050**
**Inlet Method Name: C:\MassLynx\Data\2020\200309_537ISO.PRO\ACQUDB\LCMS_537_ISO_B**
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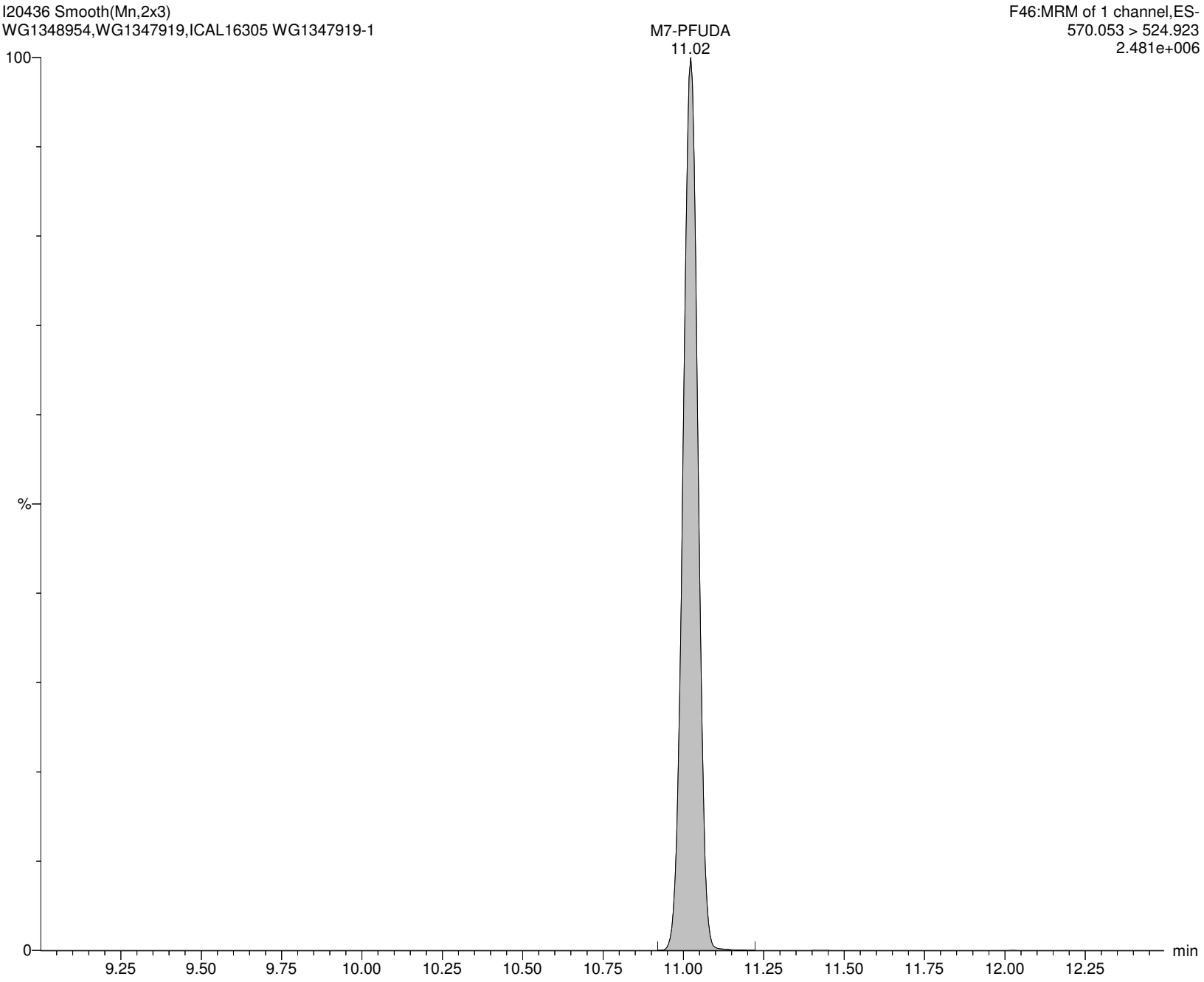
**MS Method Name: C:\MassLynx\Data\2020\200309_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**M7-PFUDA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2020\200309_537ISO.PRO\Data\WG1348954C.qld
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**User: LCMS02:RS**
**Vial: 1:E,7**
**Instrument: XEVO-TQSmicro#QEB0050**
**Inlet Method Name: C:\MassLynx\Data\2020\200309_537ISO.PRO\ACQUDB\LCMS_537_ISO_B**
**Tune Method Name: C:\MassLynx\Data\2020\200309_537ISO.PRO\ACQUDB\181009_TUNE.IPR**
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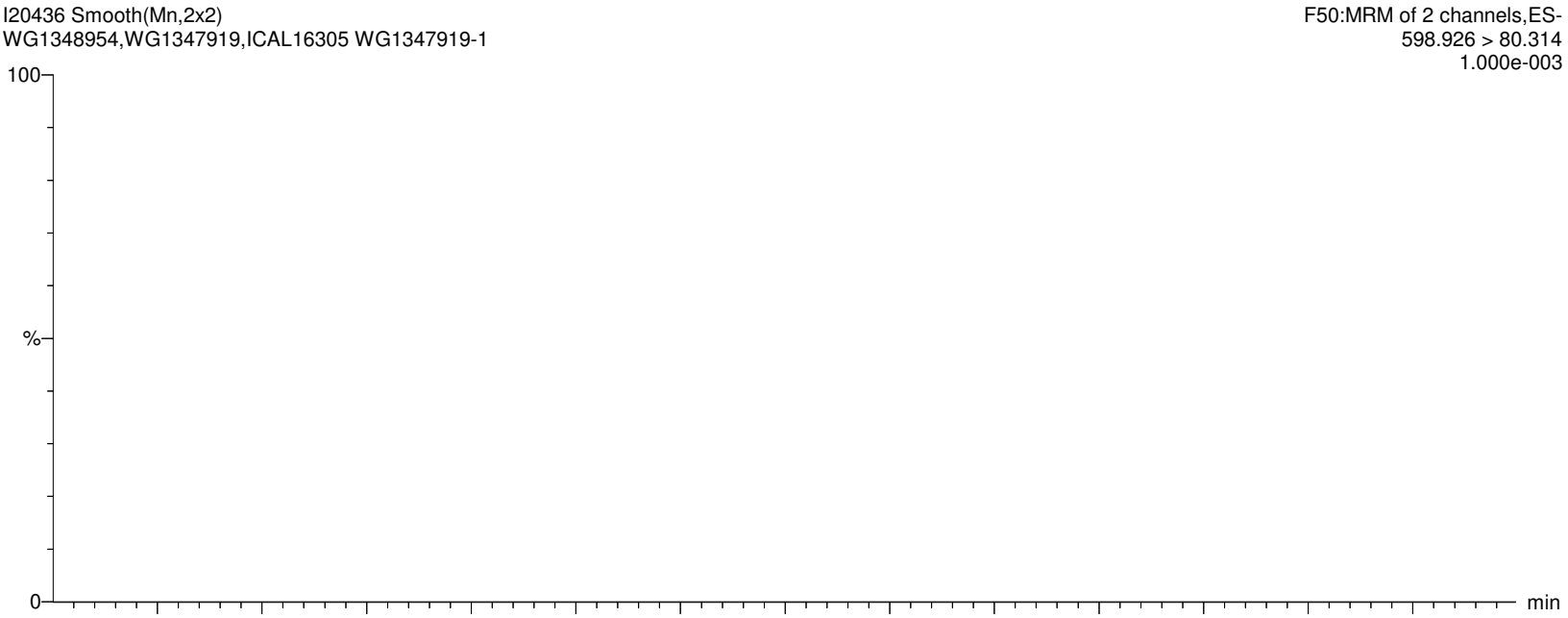
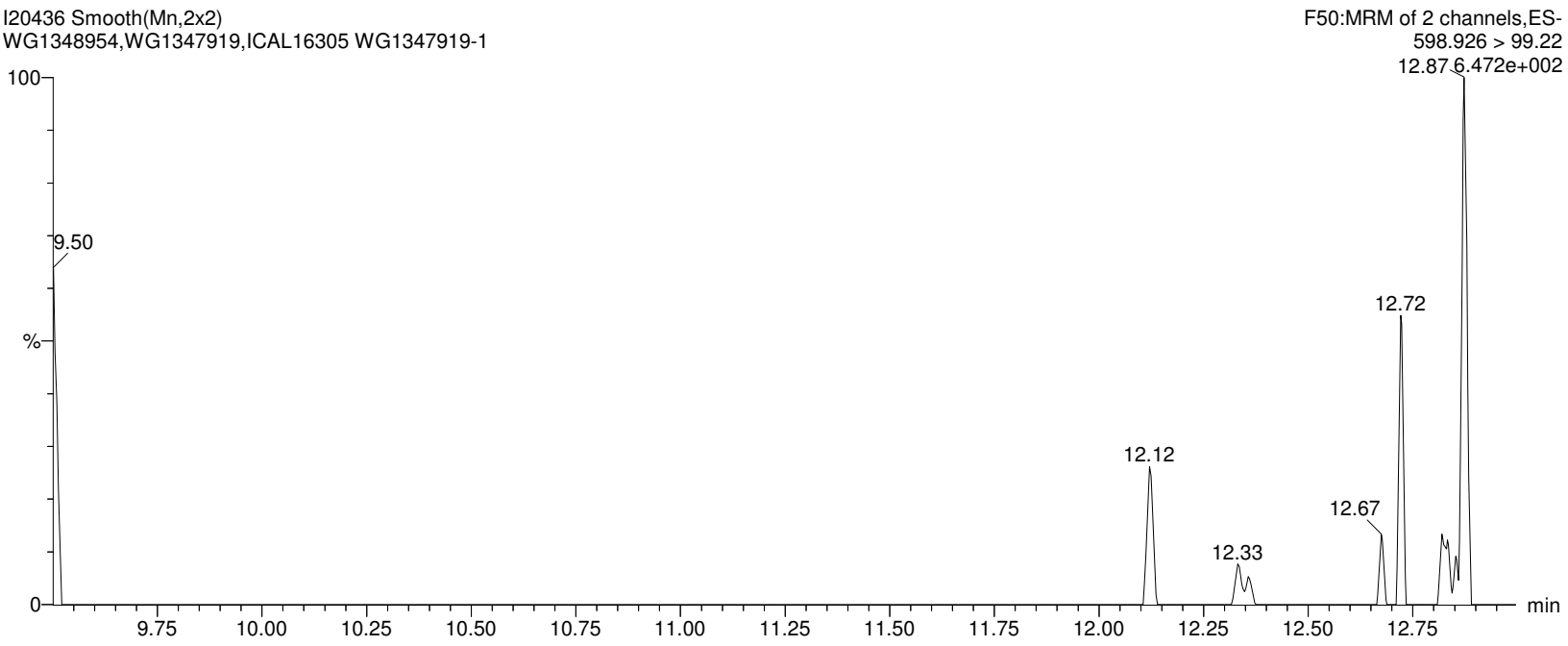
**PFDS**





all concentration units in (ng/mL)

Alpha Analytical Inc.
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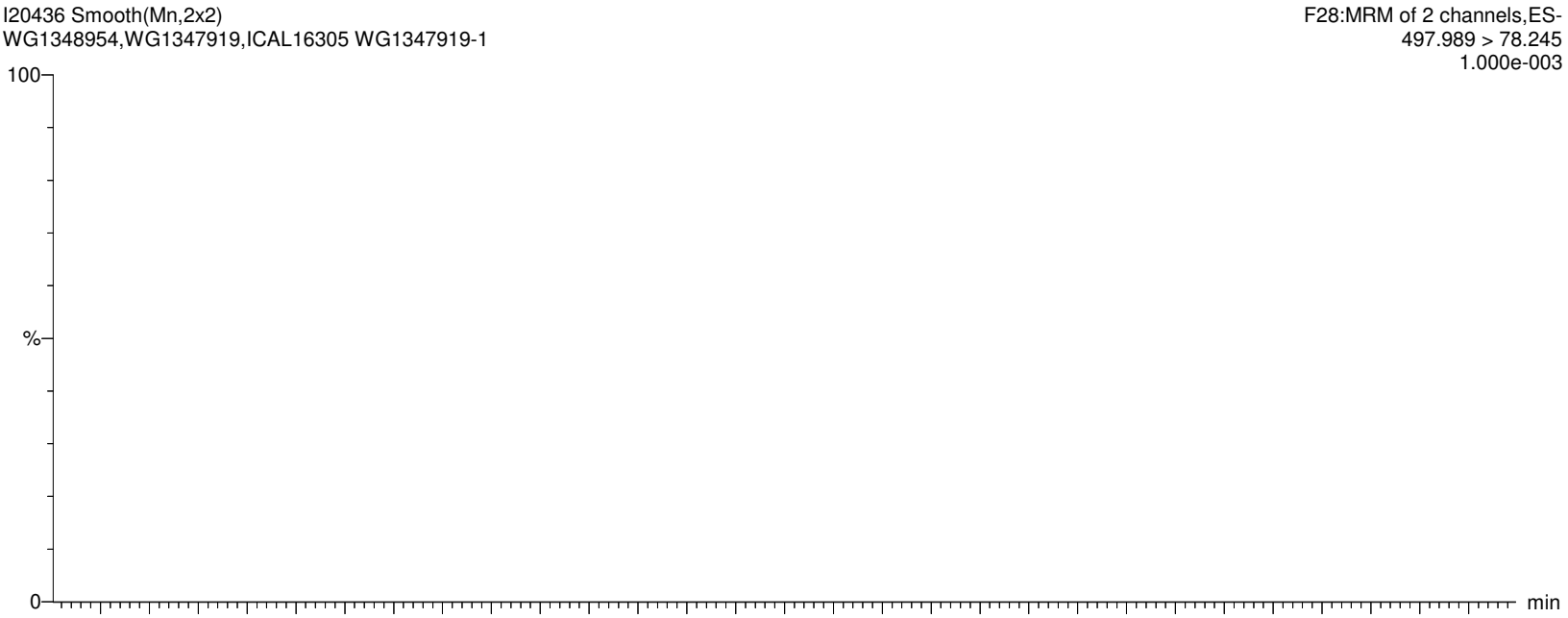


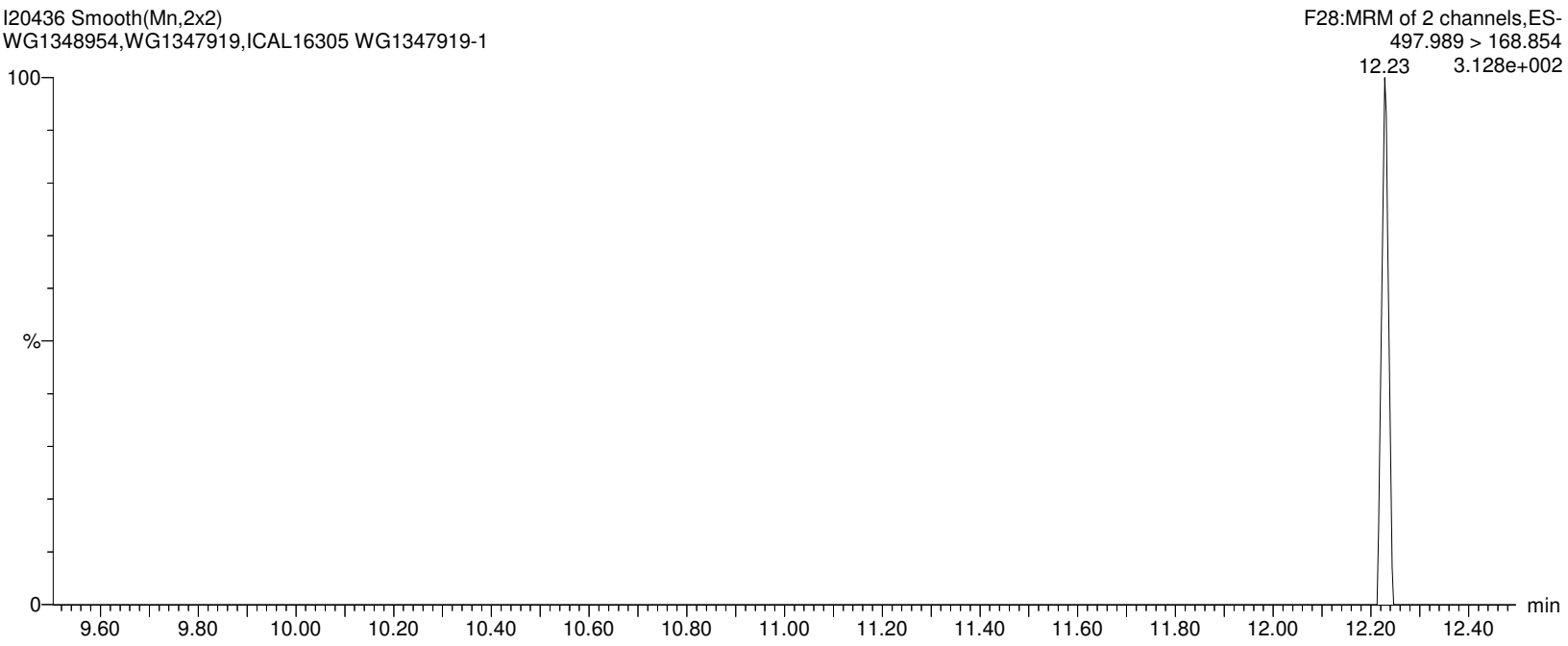



all concentration units in (ng/mL)

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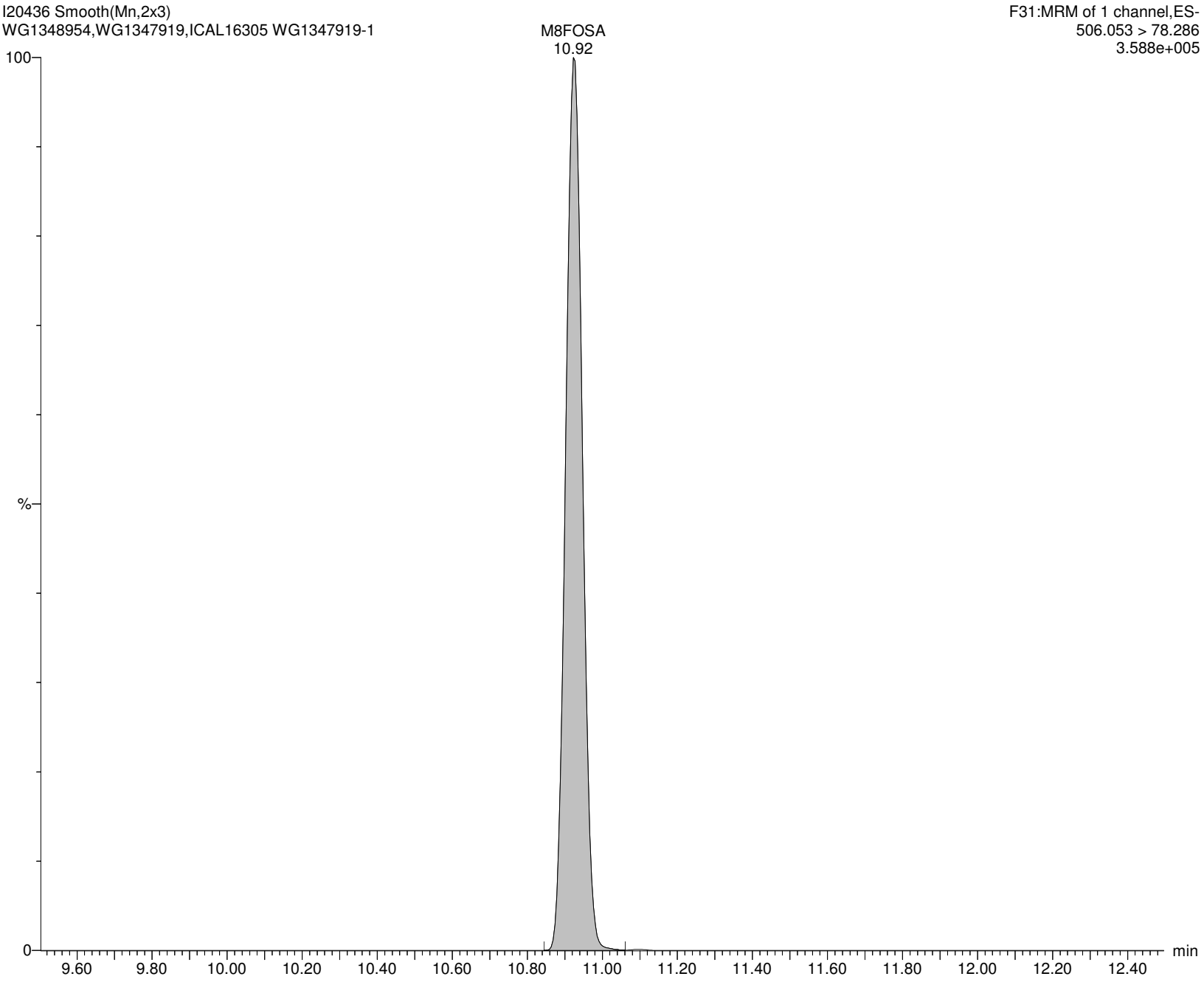
**M8FOSA**





all concentration units in (ng/mL)

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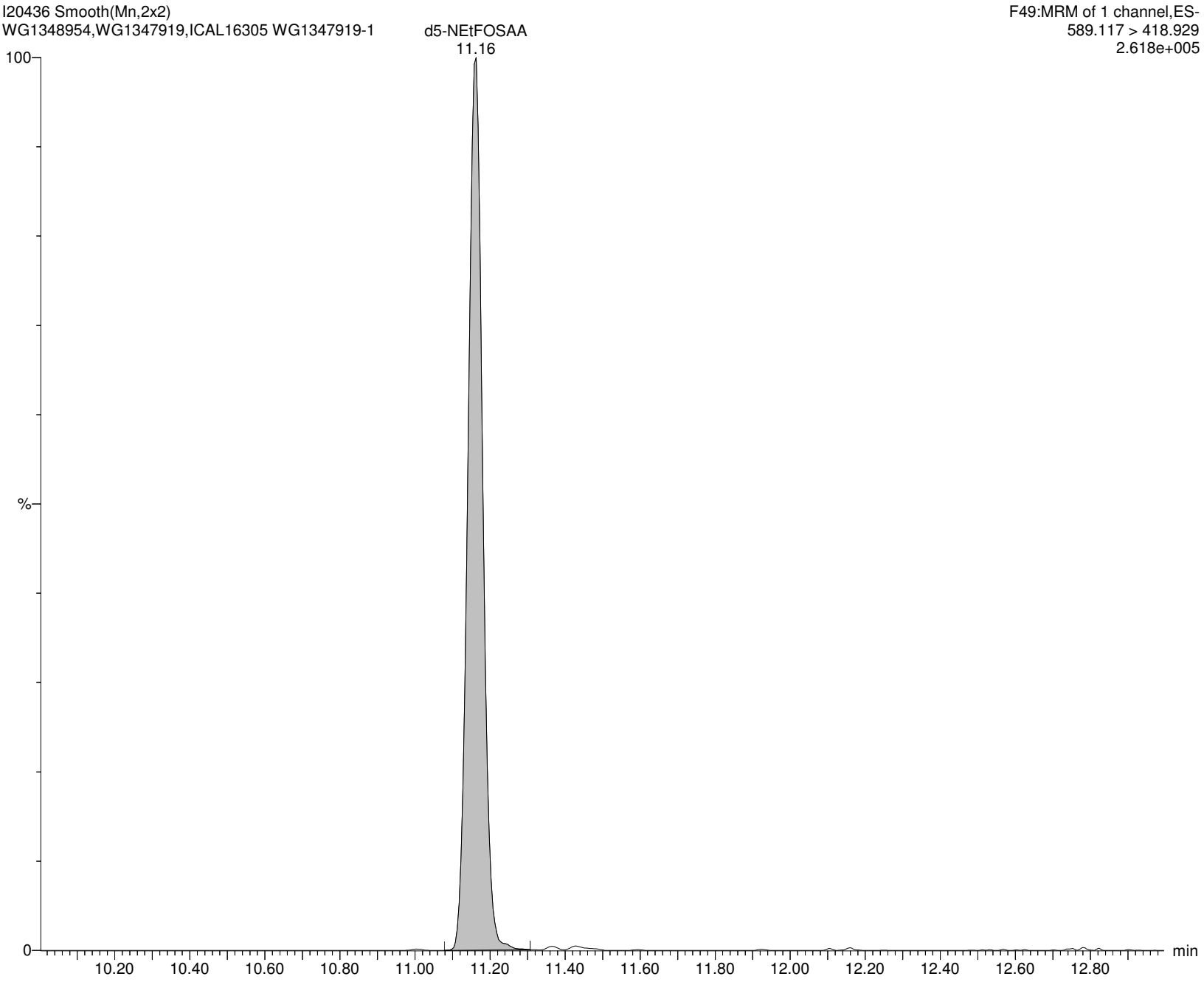
**d5-NEtFOSAA**





all concentration units in (ng/mL)

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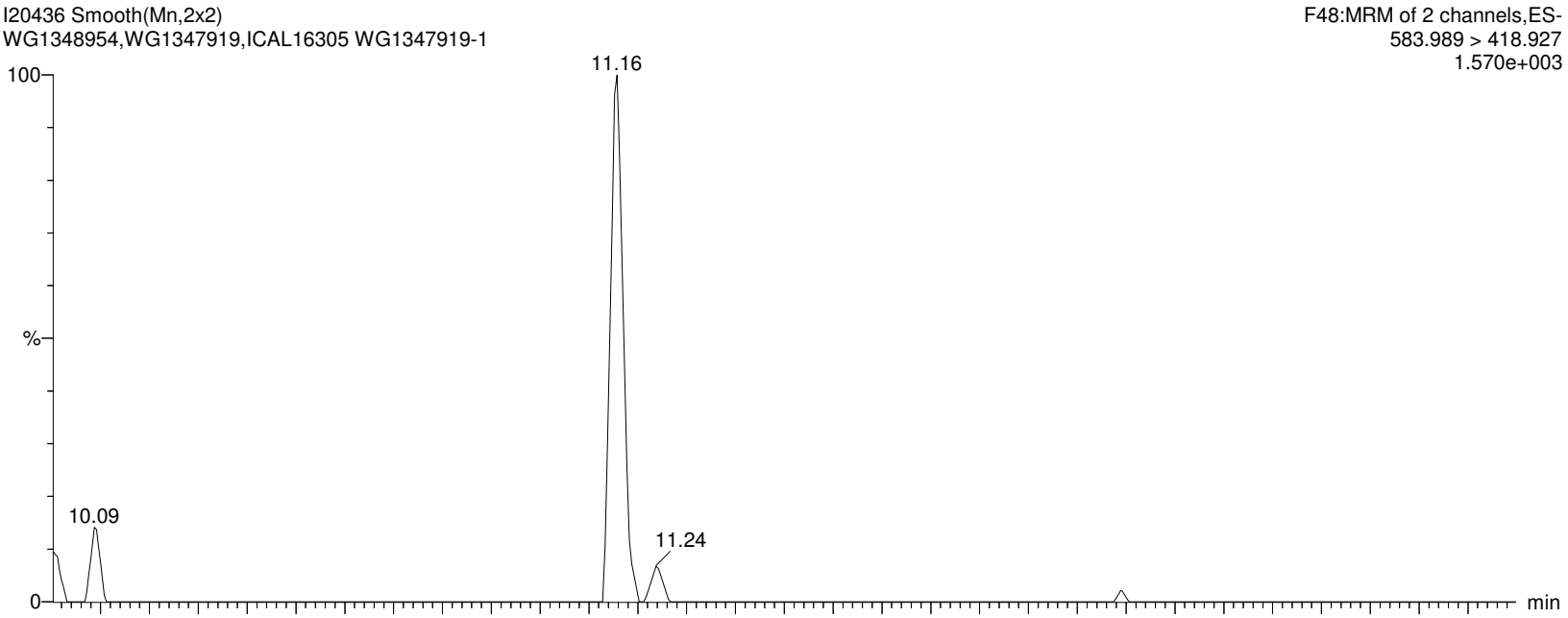
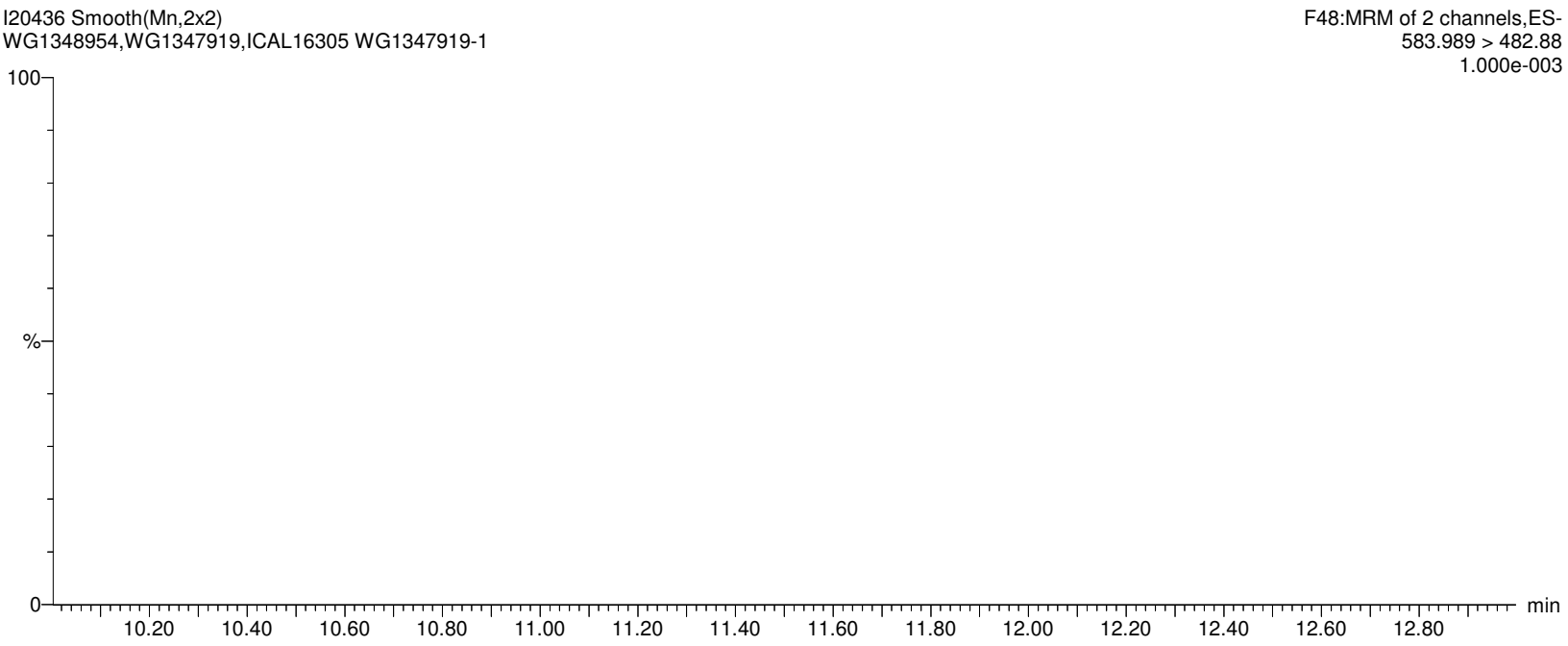
**br-NEtFOSAA**





all concentration units in (ng/mL)

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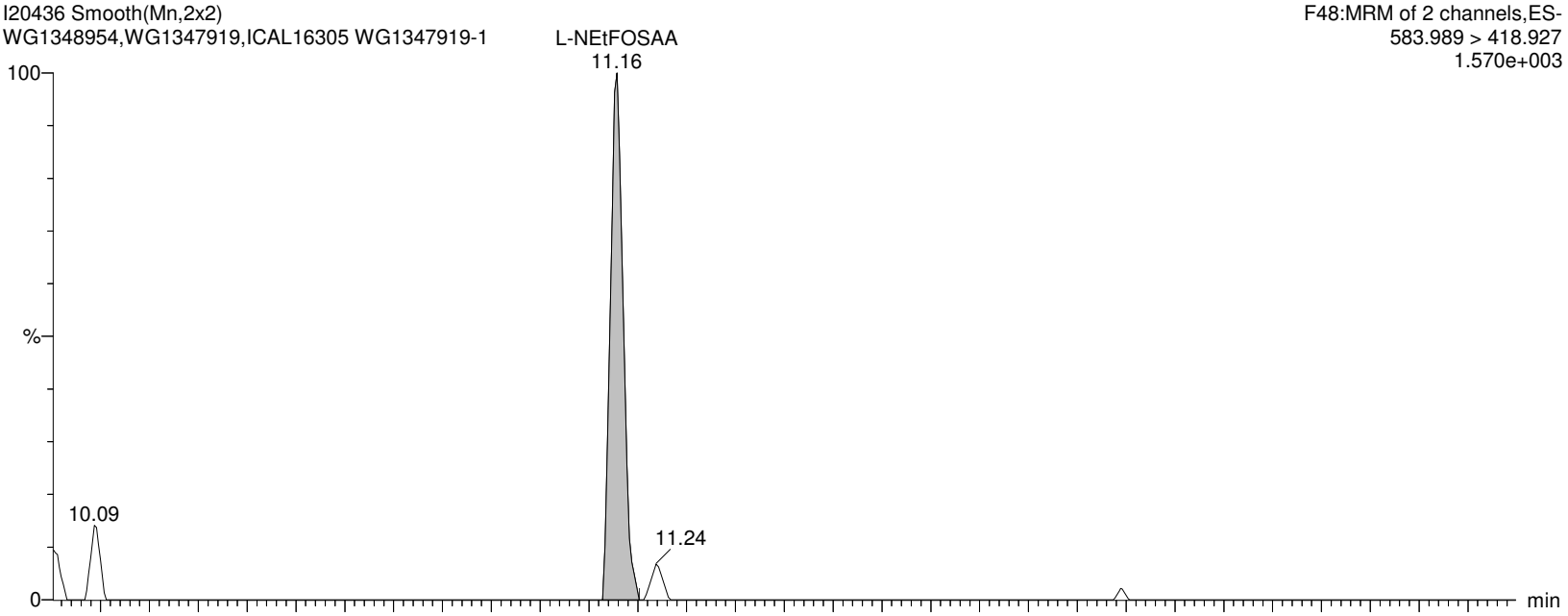
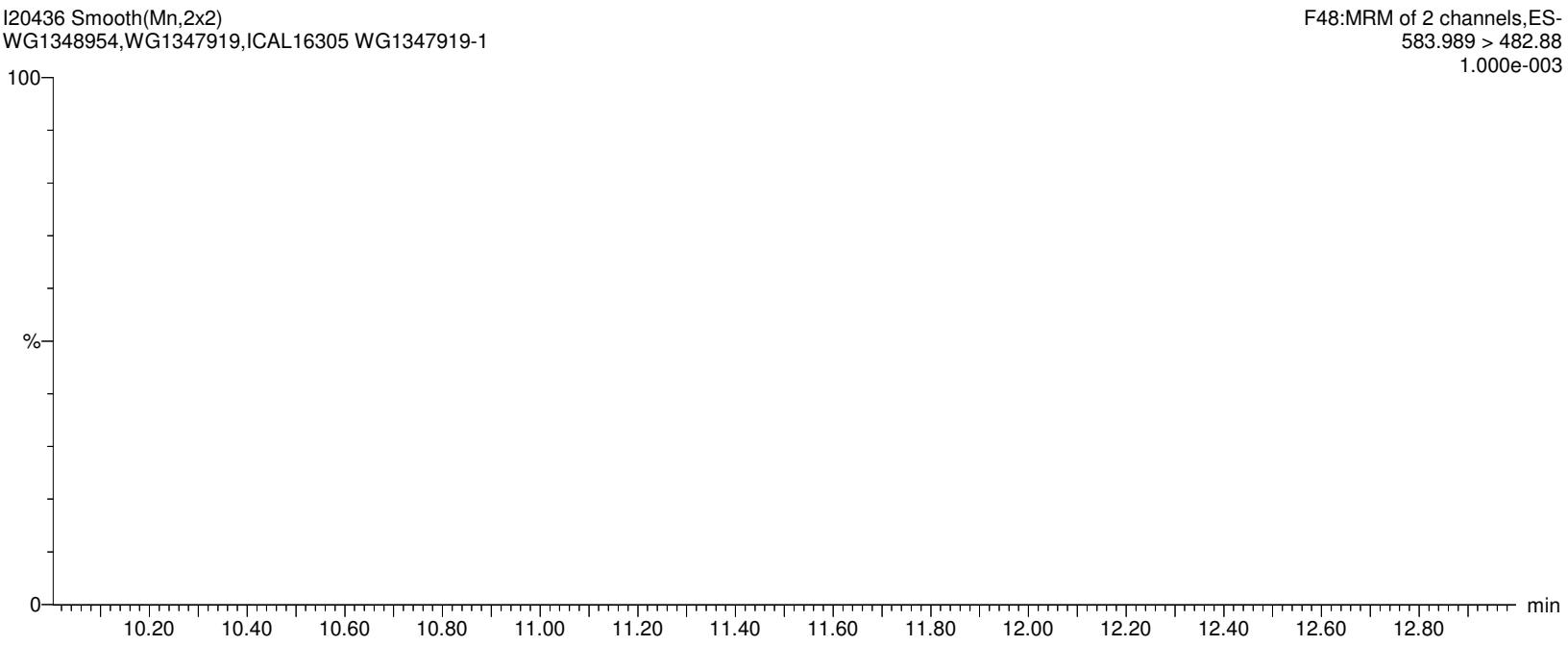
**L-NEtFOSAA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2020\200309_537ISO.PRO\Data\WG1348954C.qld
Last Altered: Wednesday, March 11, 2020 21:10:58 Eastern Daylight Time
Printed: Thursday, March 12, 2020 09:03:00 Eastern Daylight Time

**Name: I20436**
**ID: WG1347919-1**
**Date: 10-Mar-2020**
**Time: 21:37:46**
**Description: WG1348954,WG1347919,ICAL16305**
**User: LCMS02:RS**
**Vial: 1:E,7**
**Instrument: XEVO-TQSmicro#QEB0050**
**Inlet Method Name: C:\MassLynx\Data\2020\200309_537ISO.PRO\ACQUDB\LCMS_537_ISO_B**
**Tune Method Name: C:\MassLynx\Data\2020\200309_537ISO.PRO\ACQUDB\181009_TUNE.IPR**
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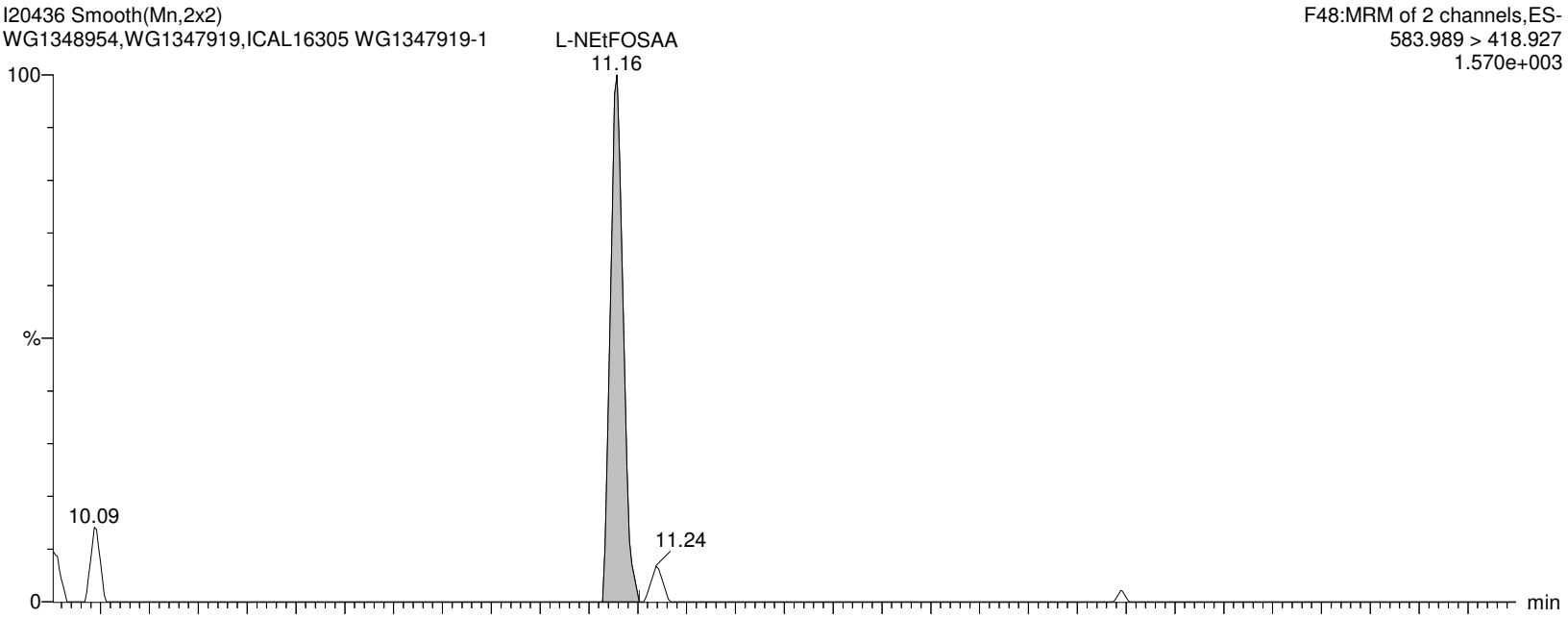


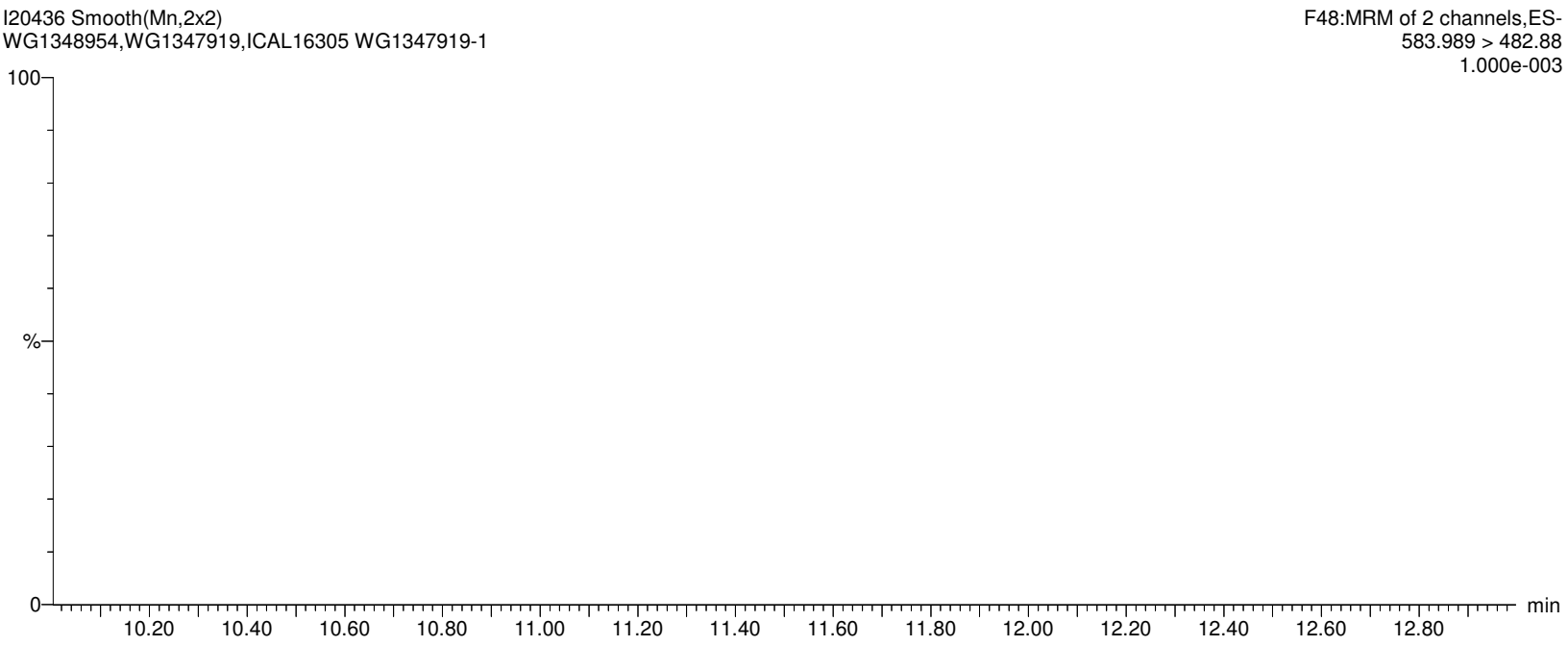



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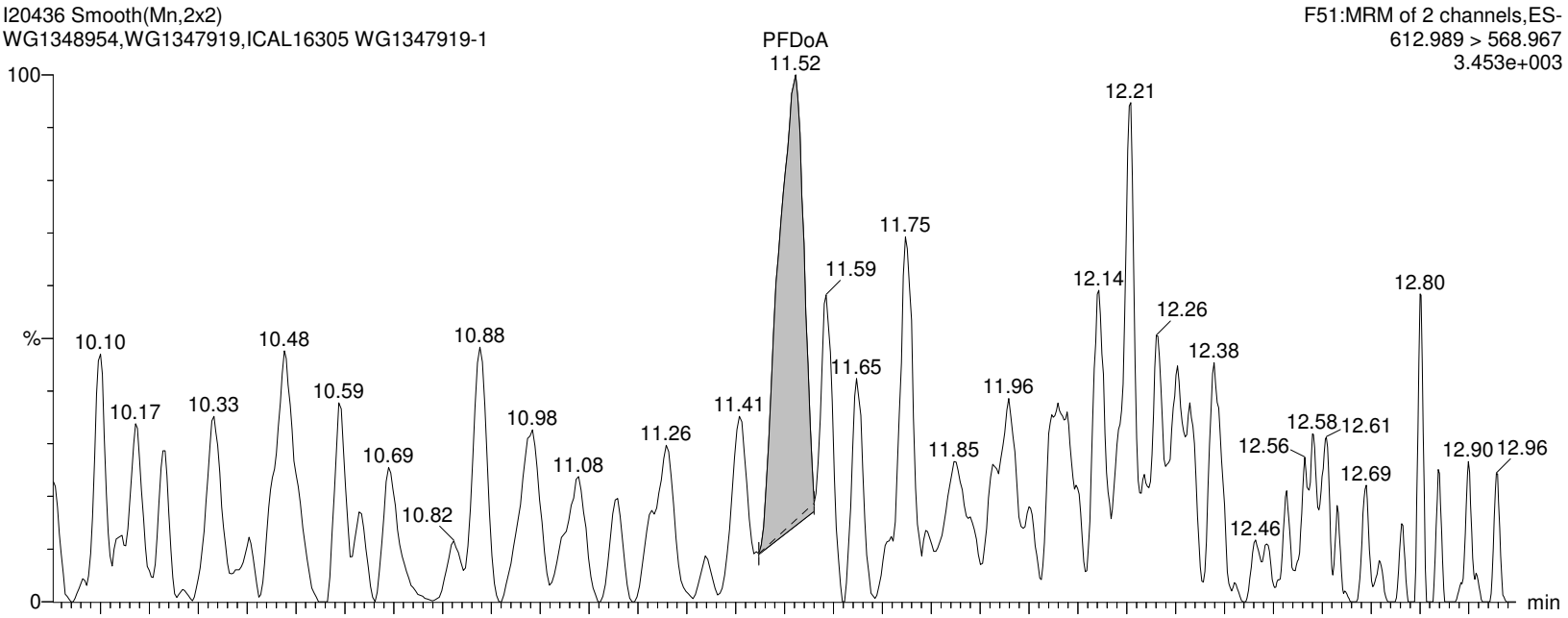


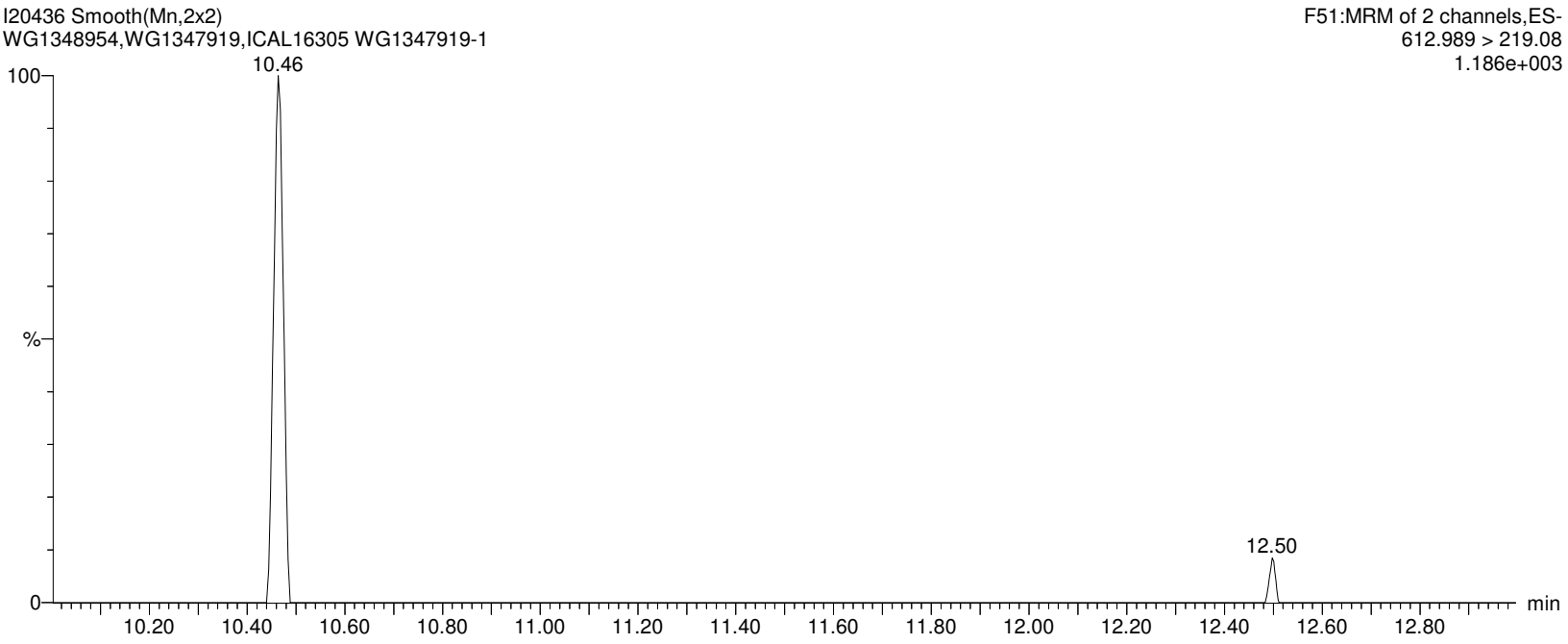



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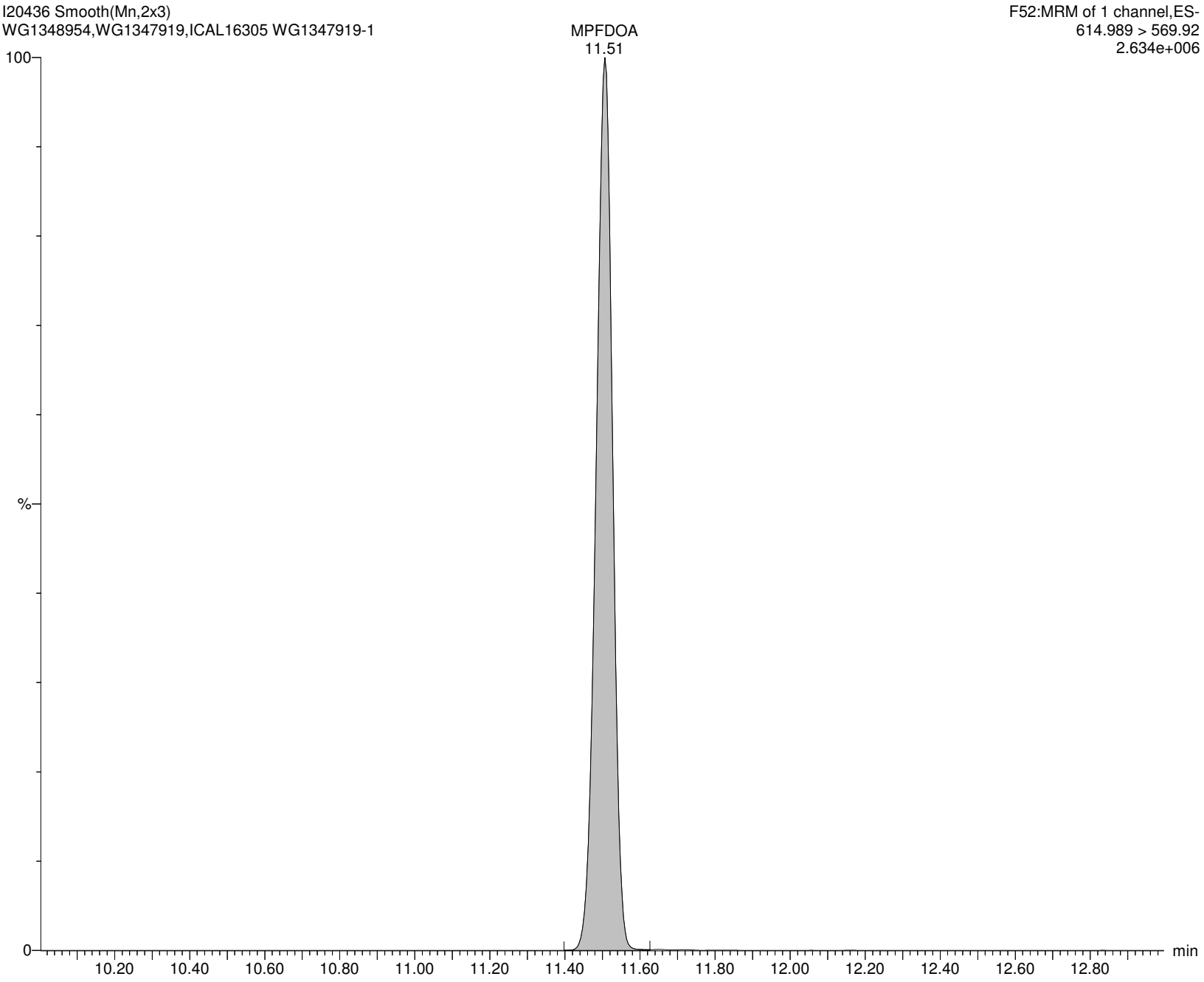



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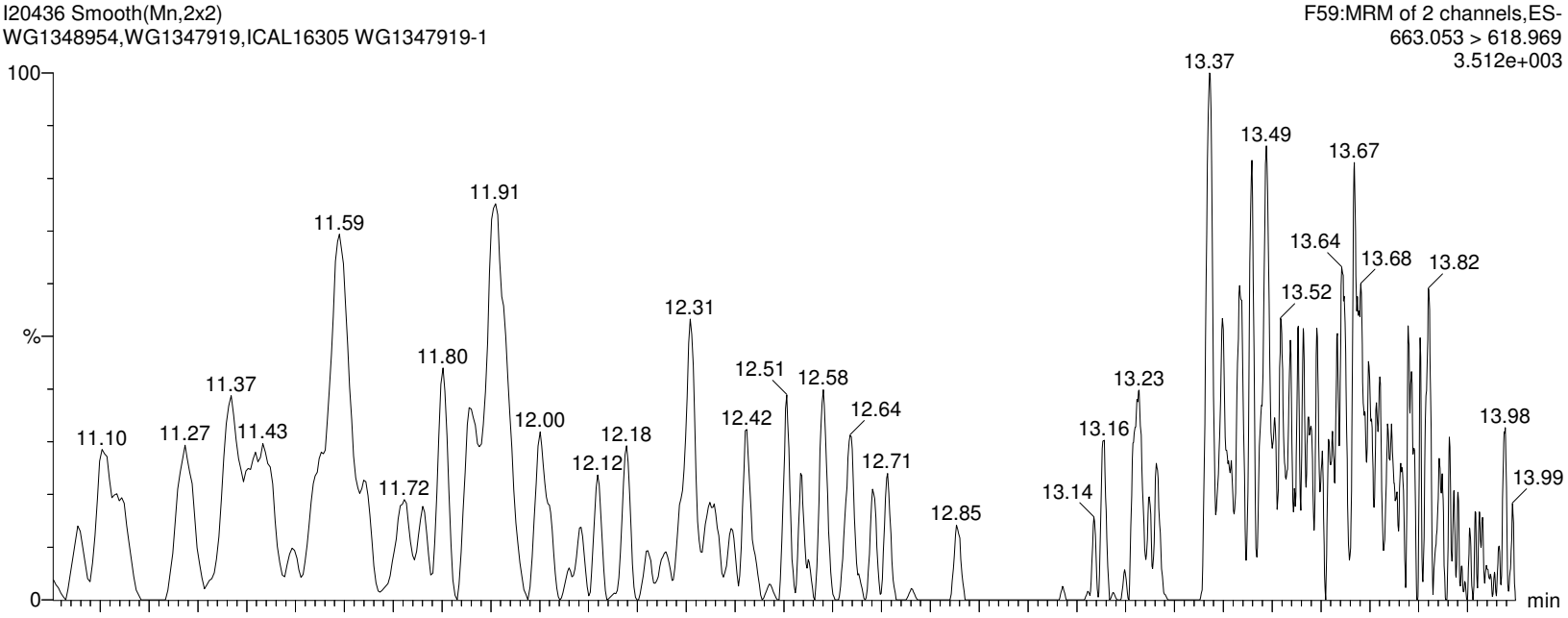


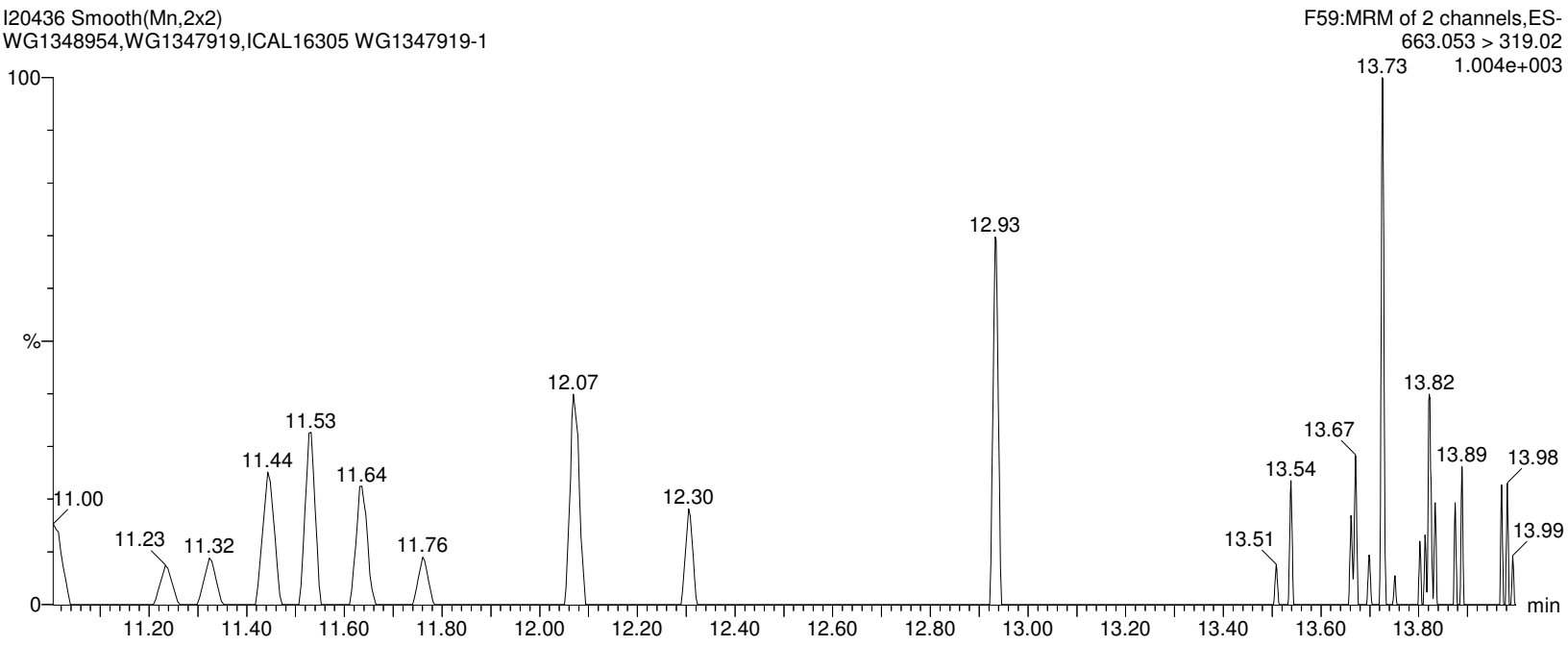



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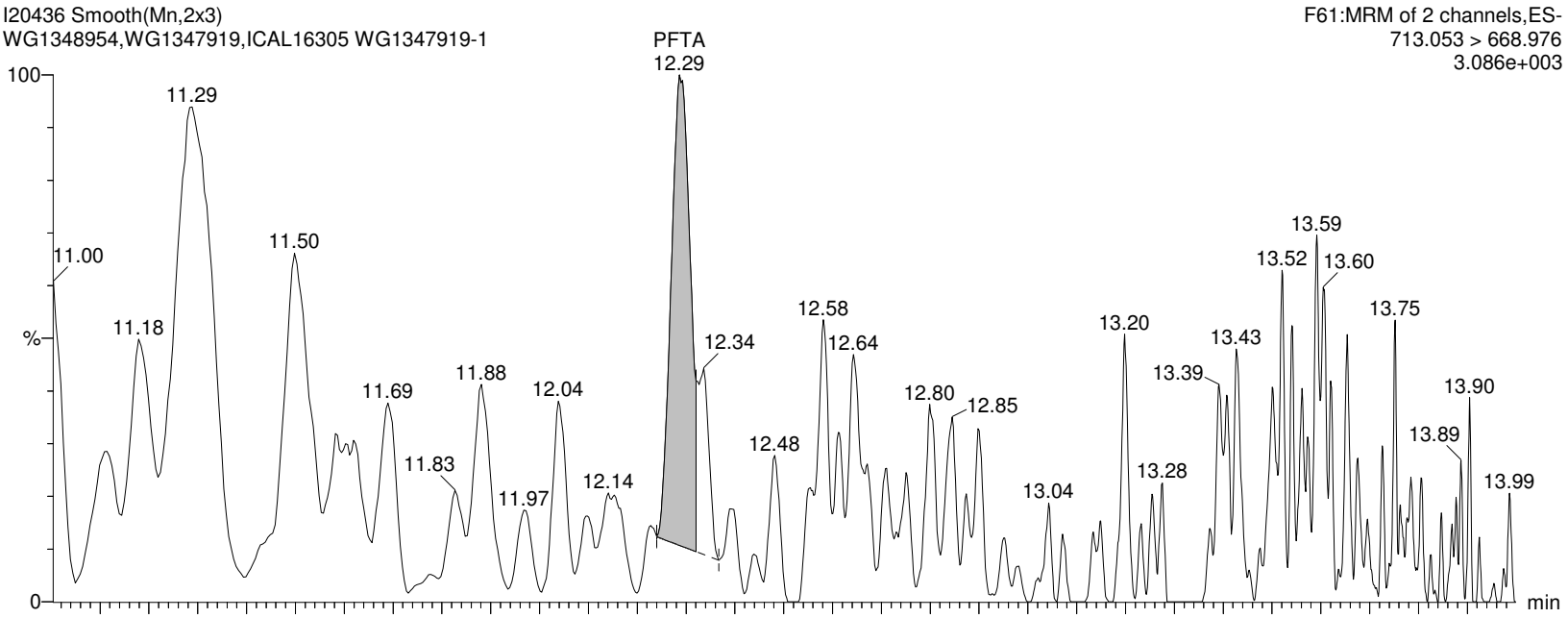


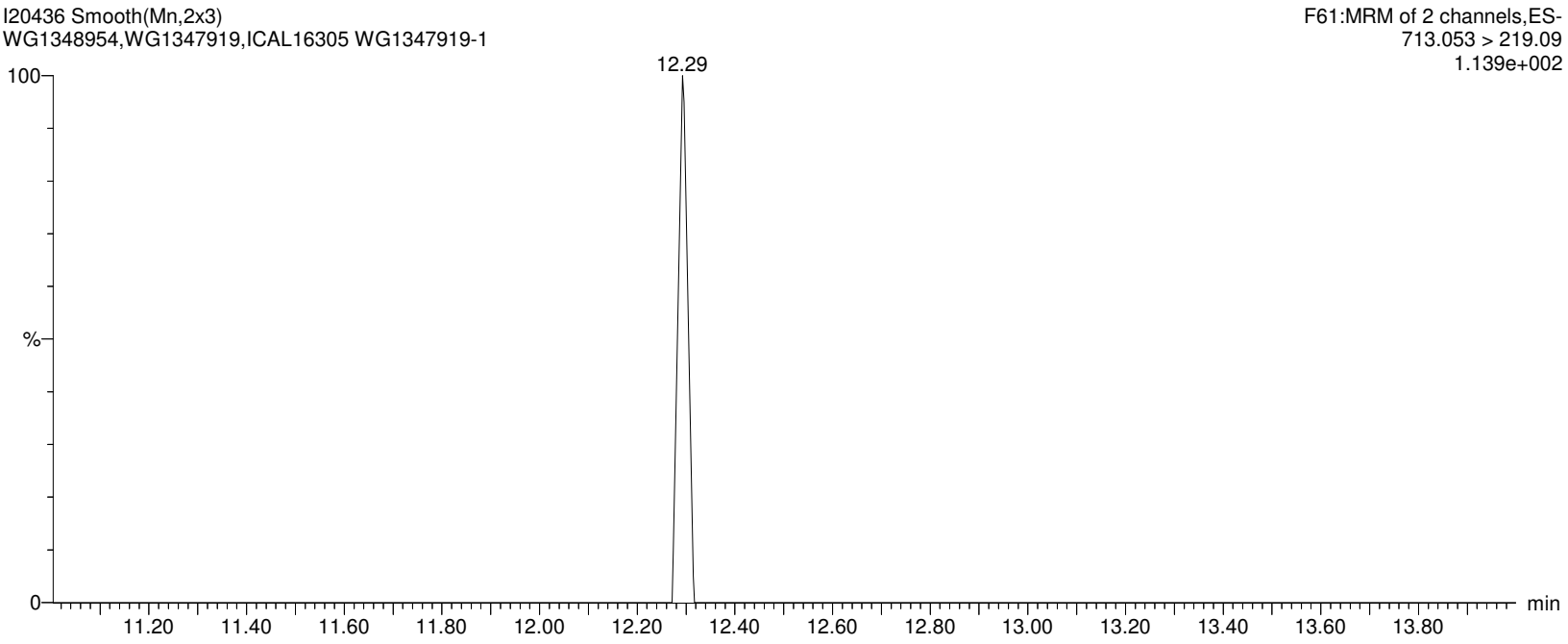



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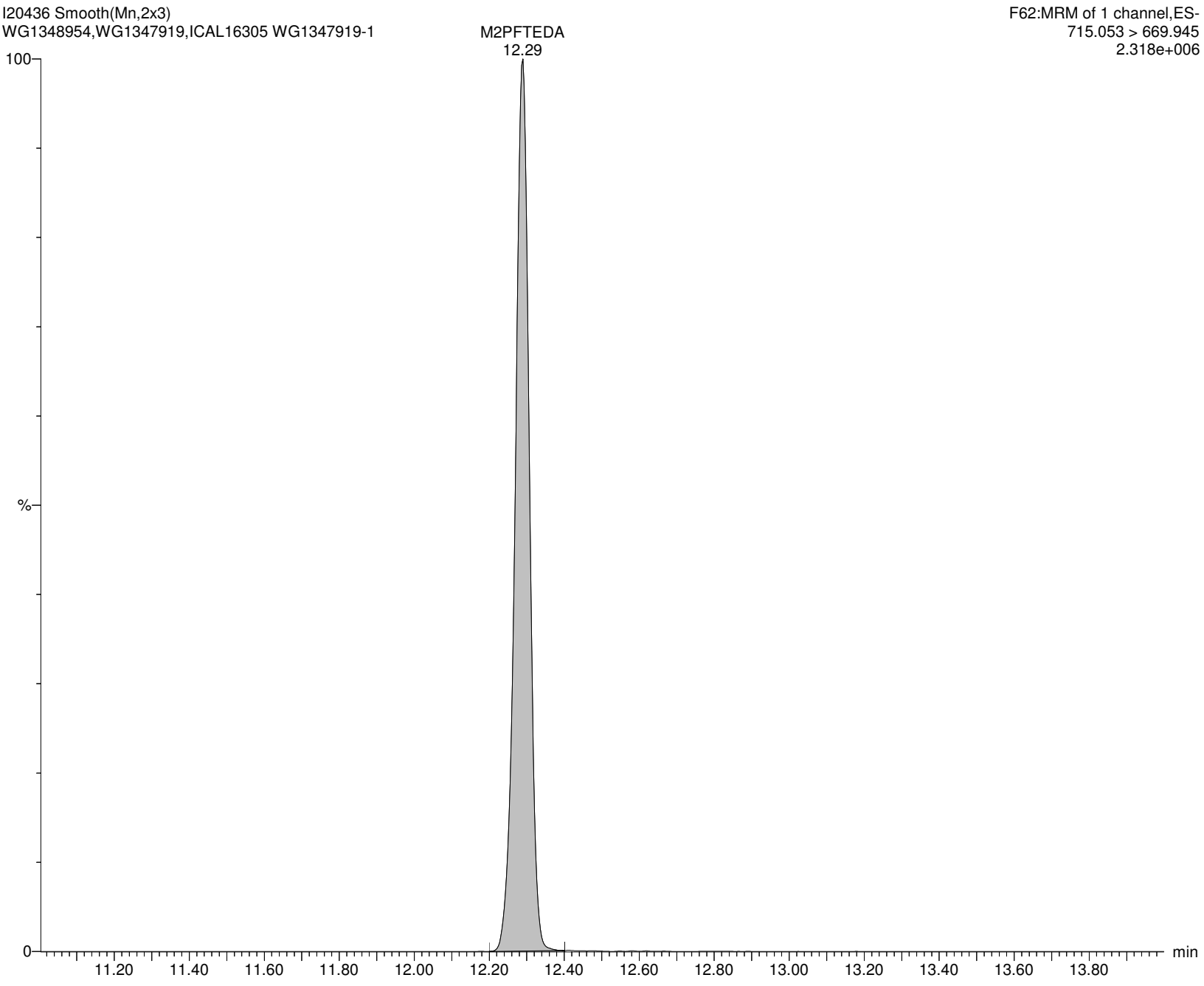



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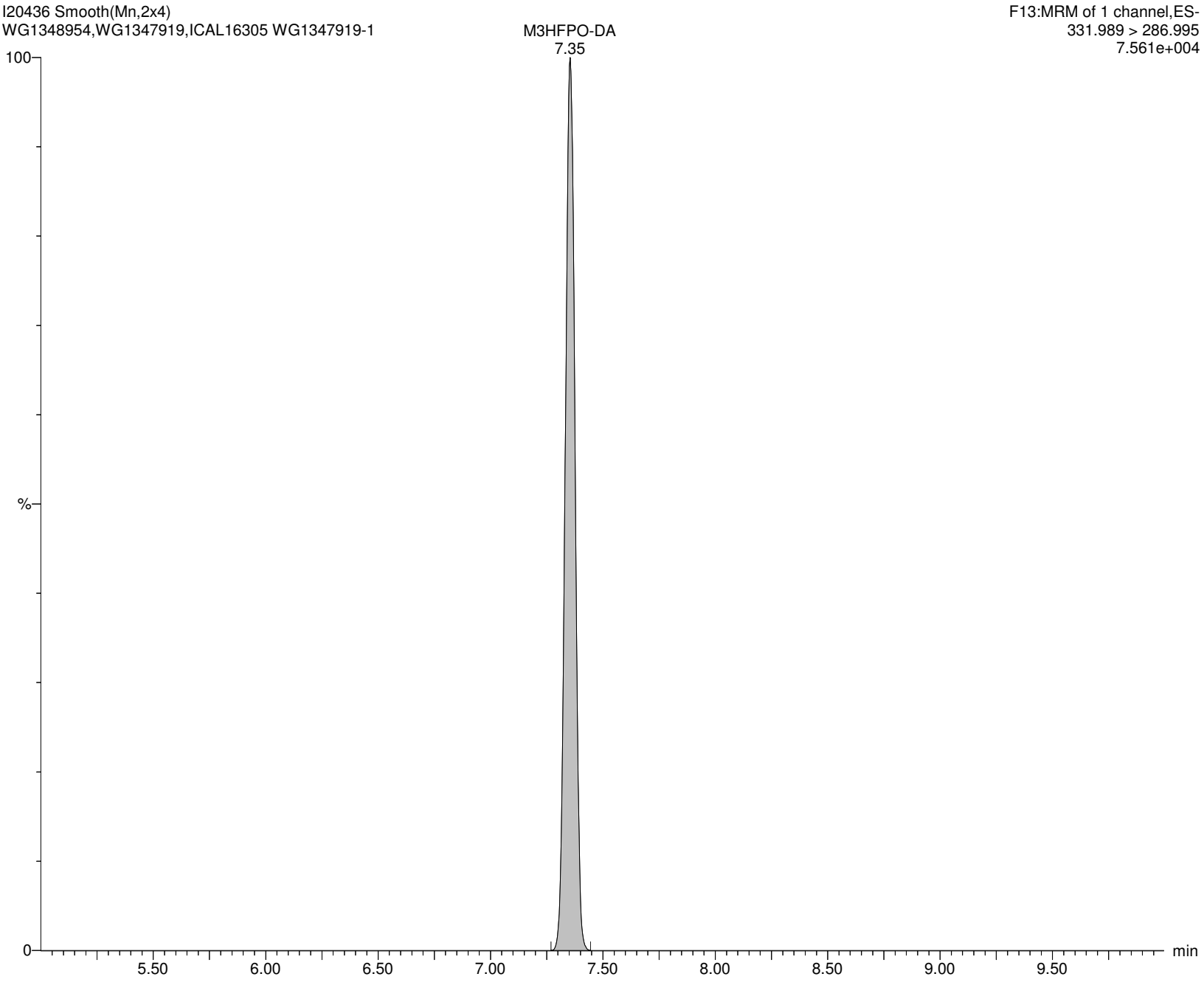



all concentration units in (ng/mL)

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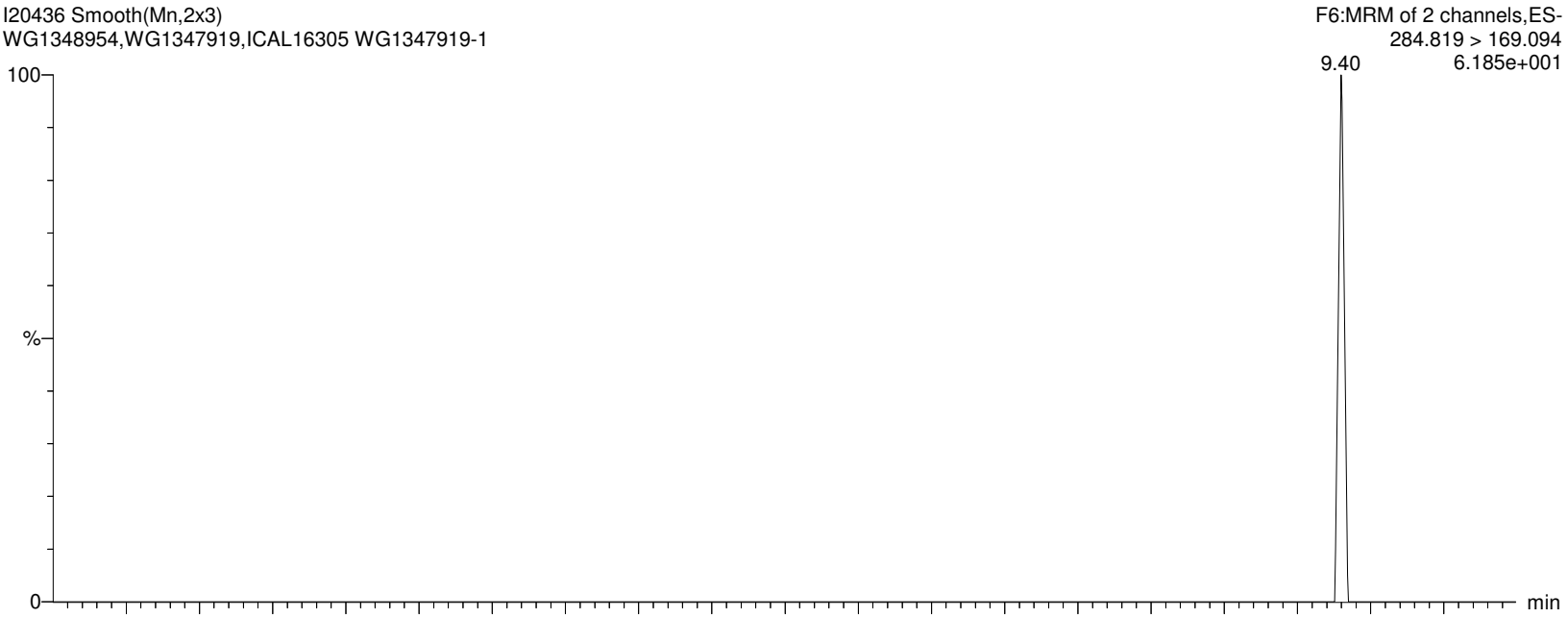


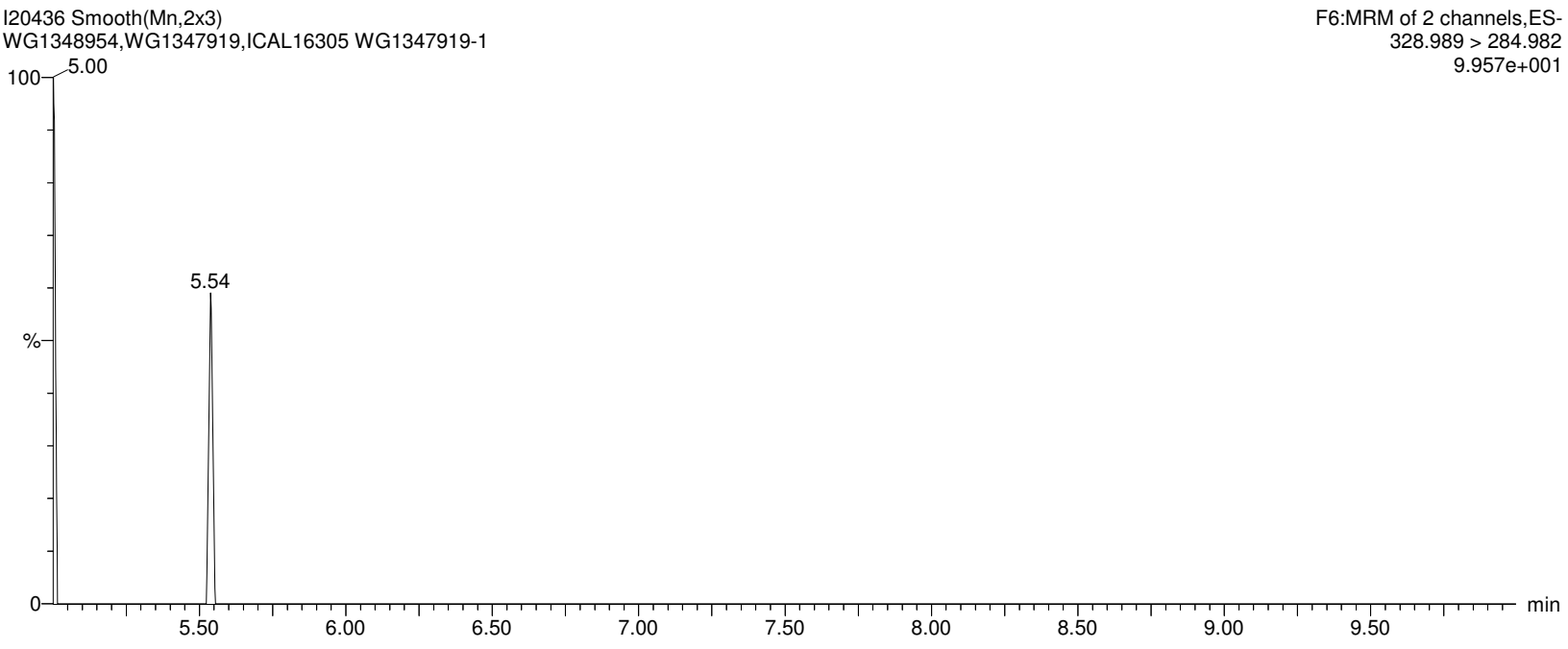



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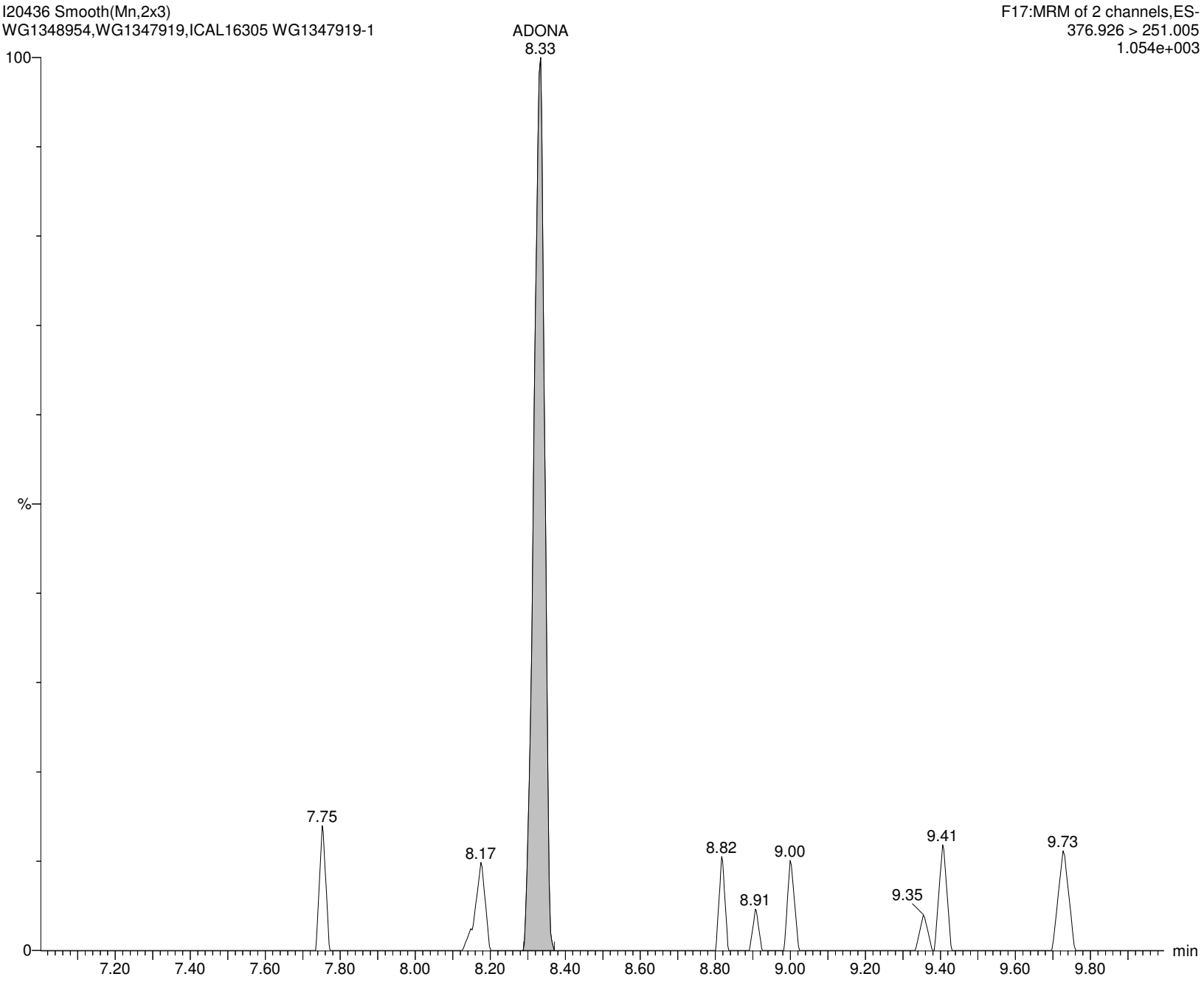



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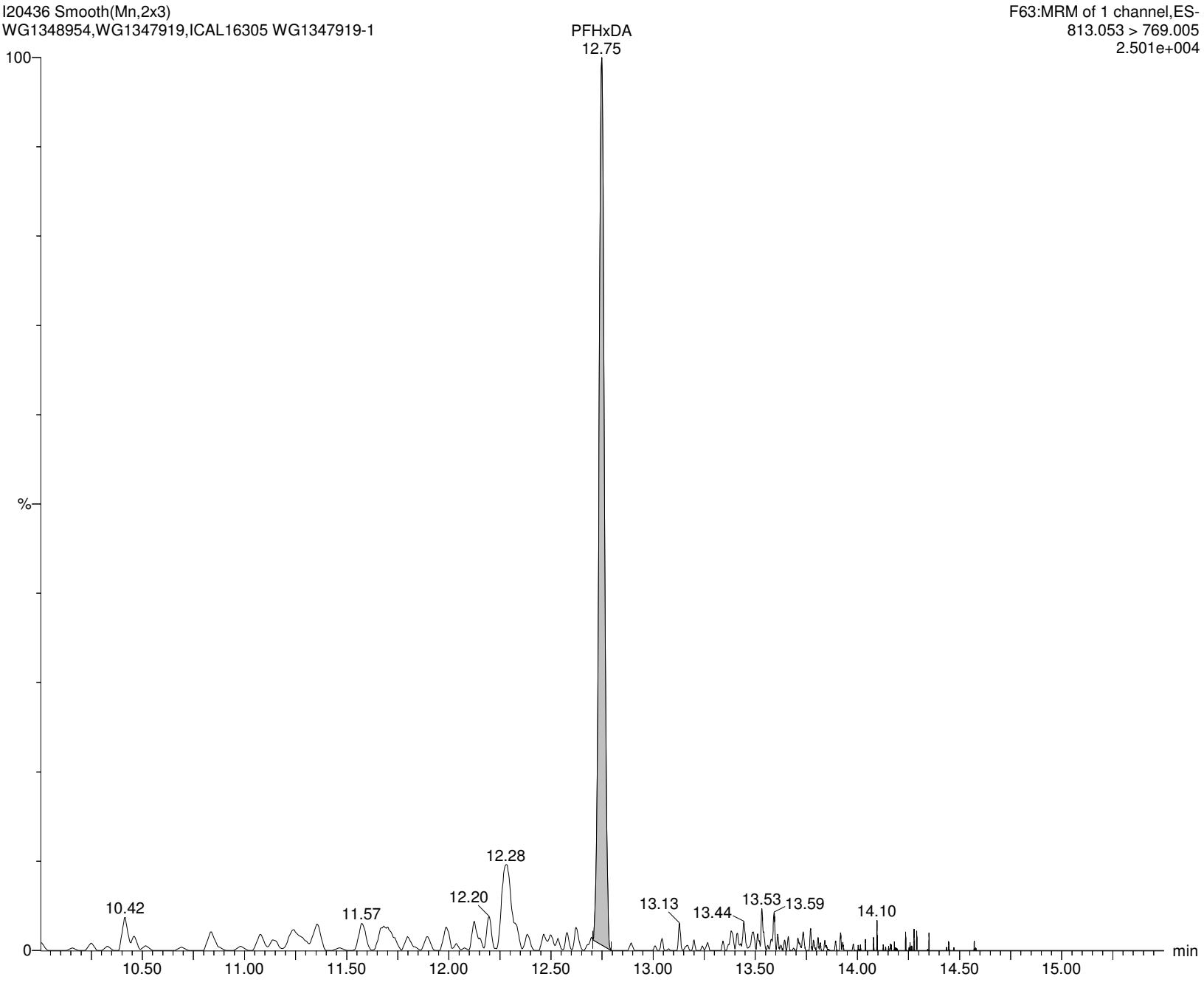



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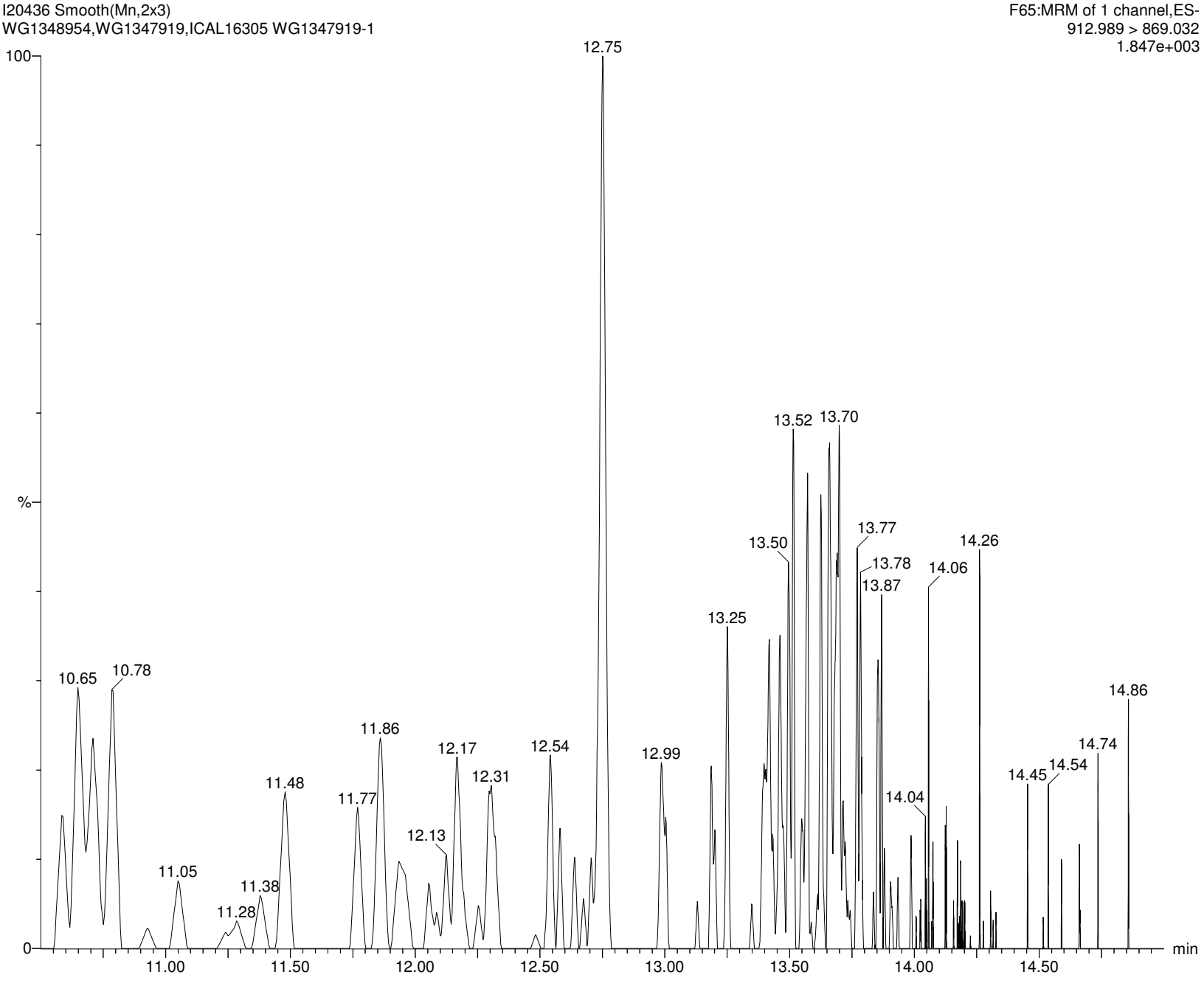



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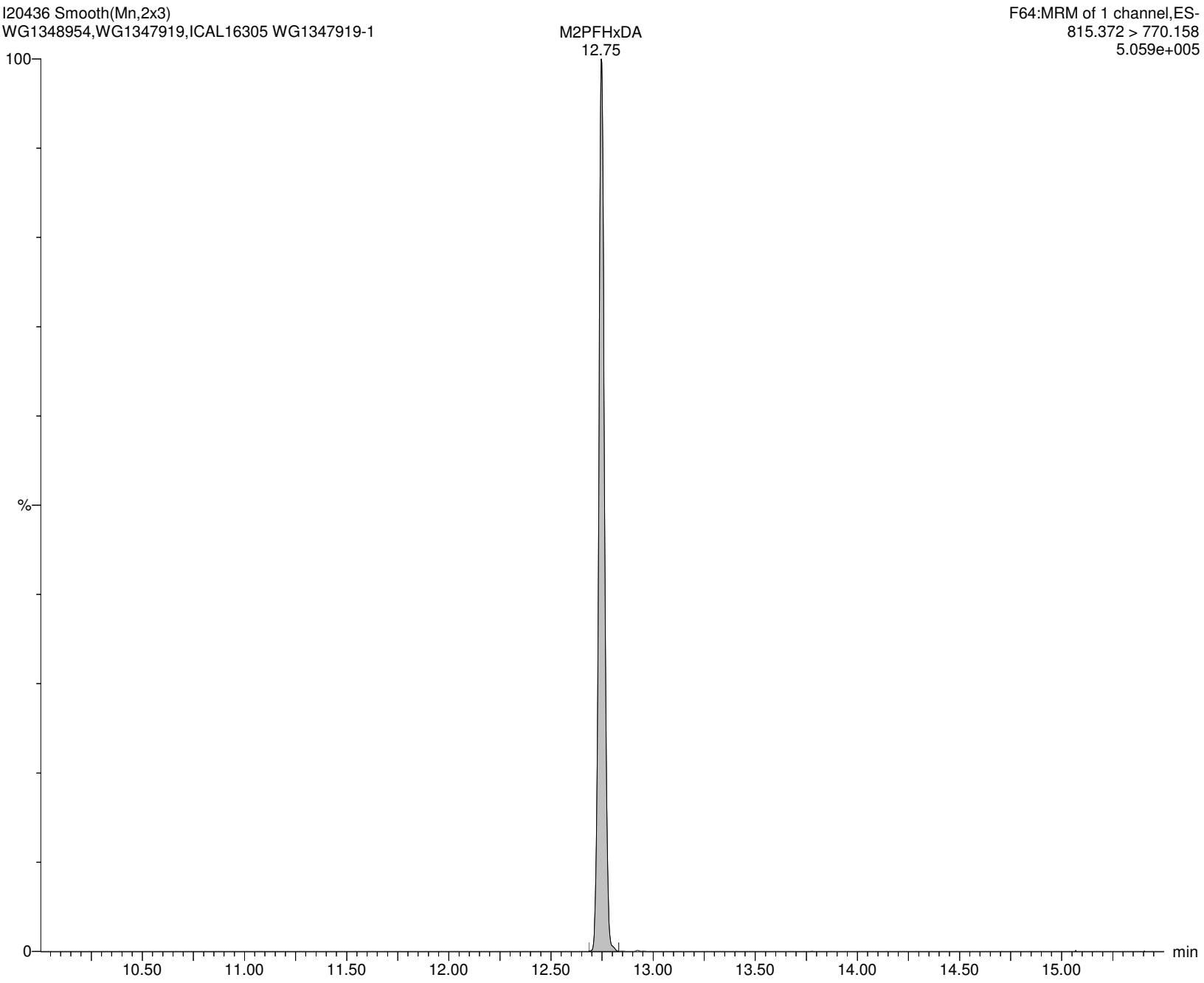



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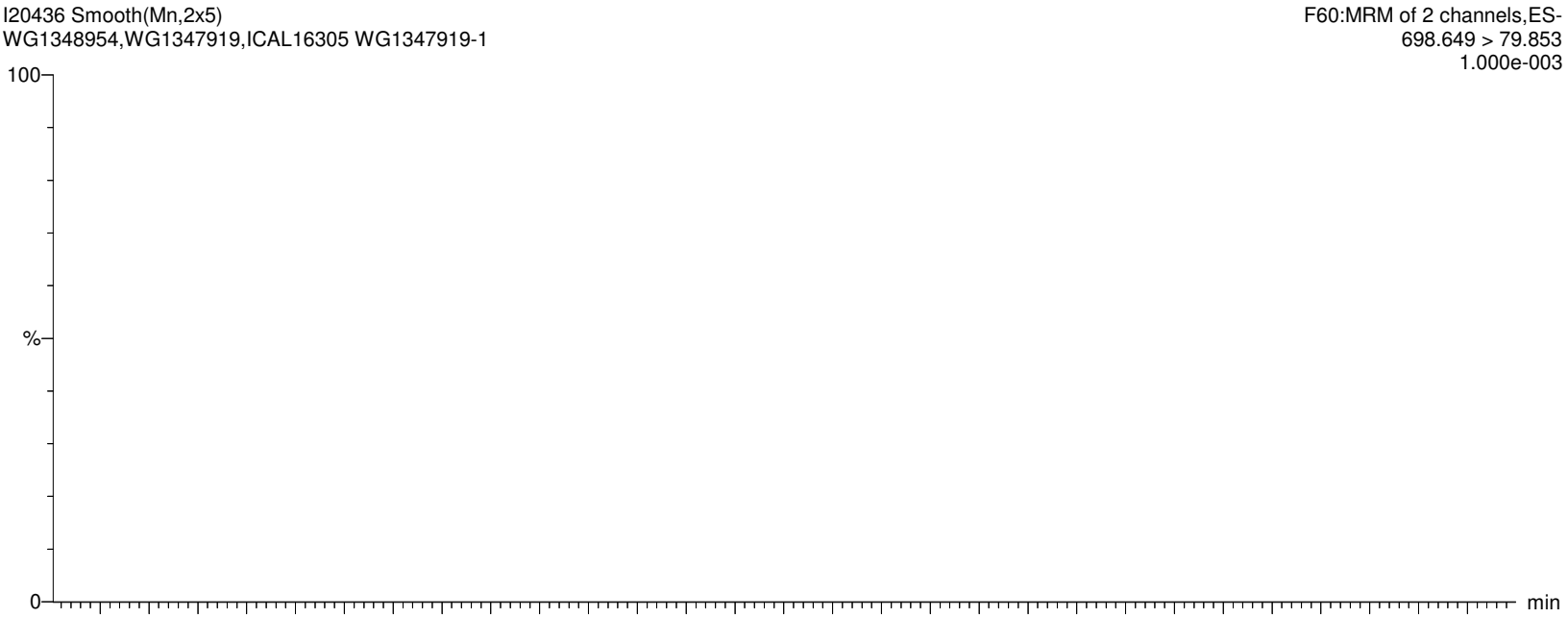


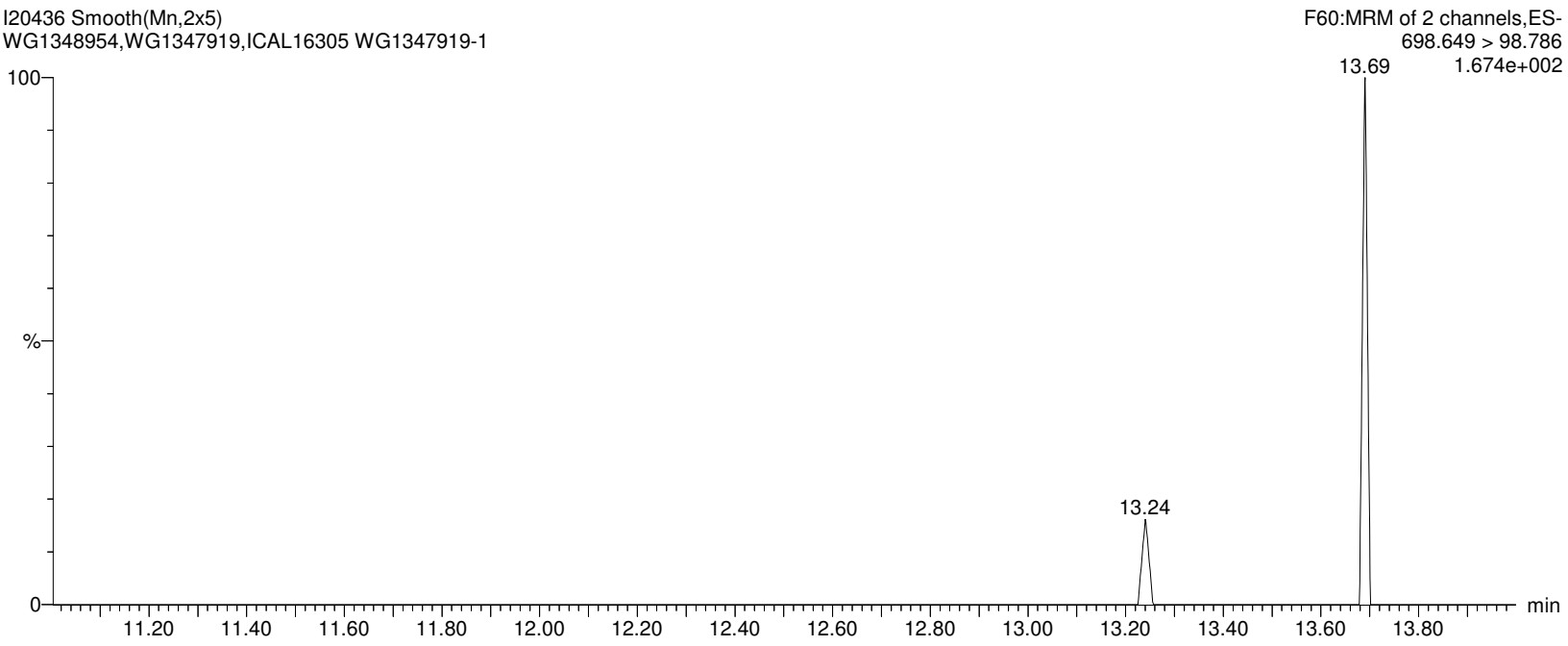



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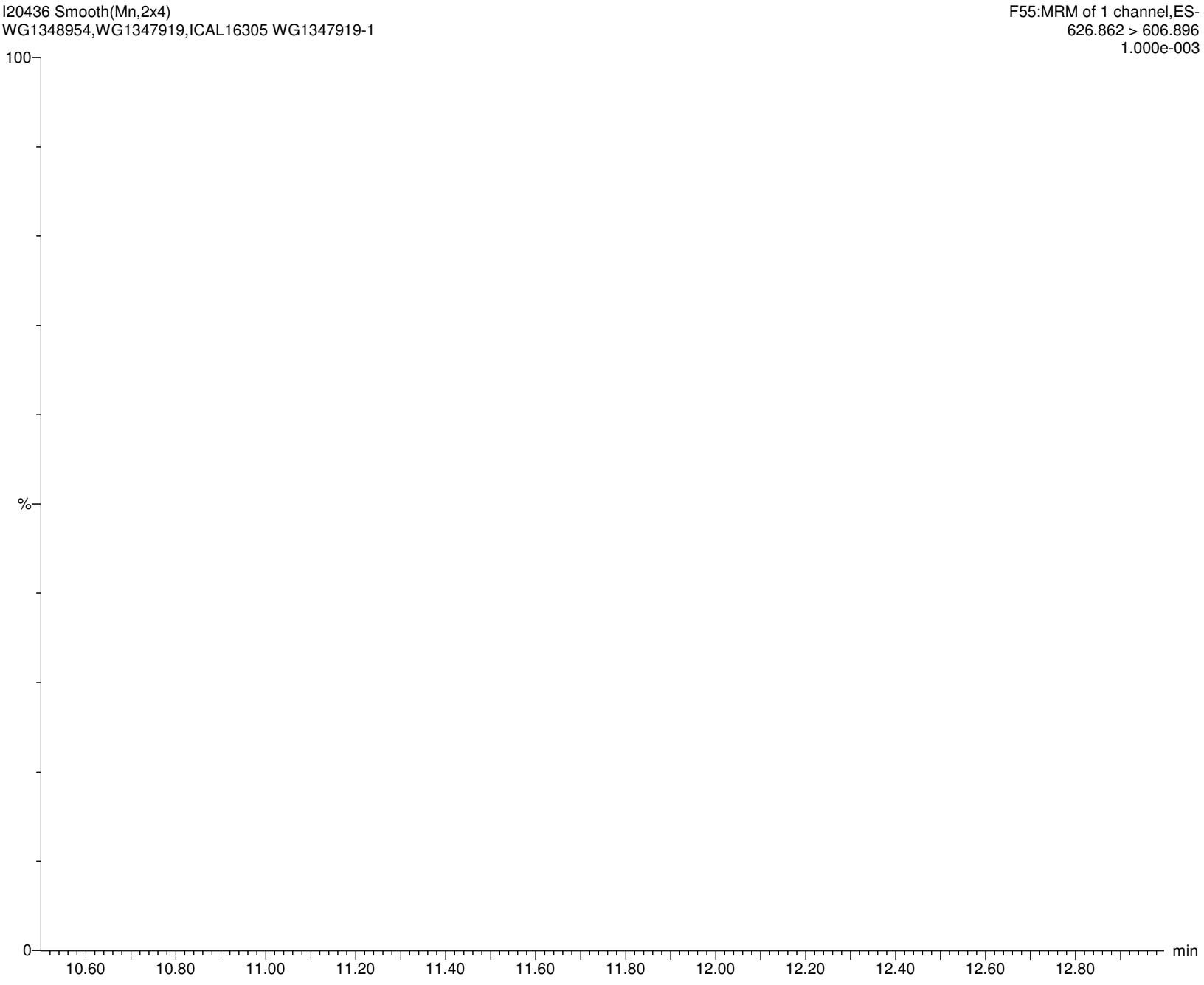



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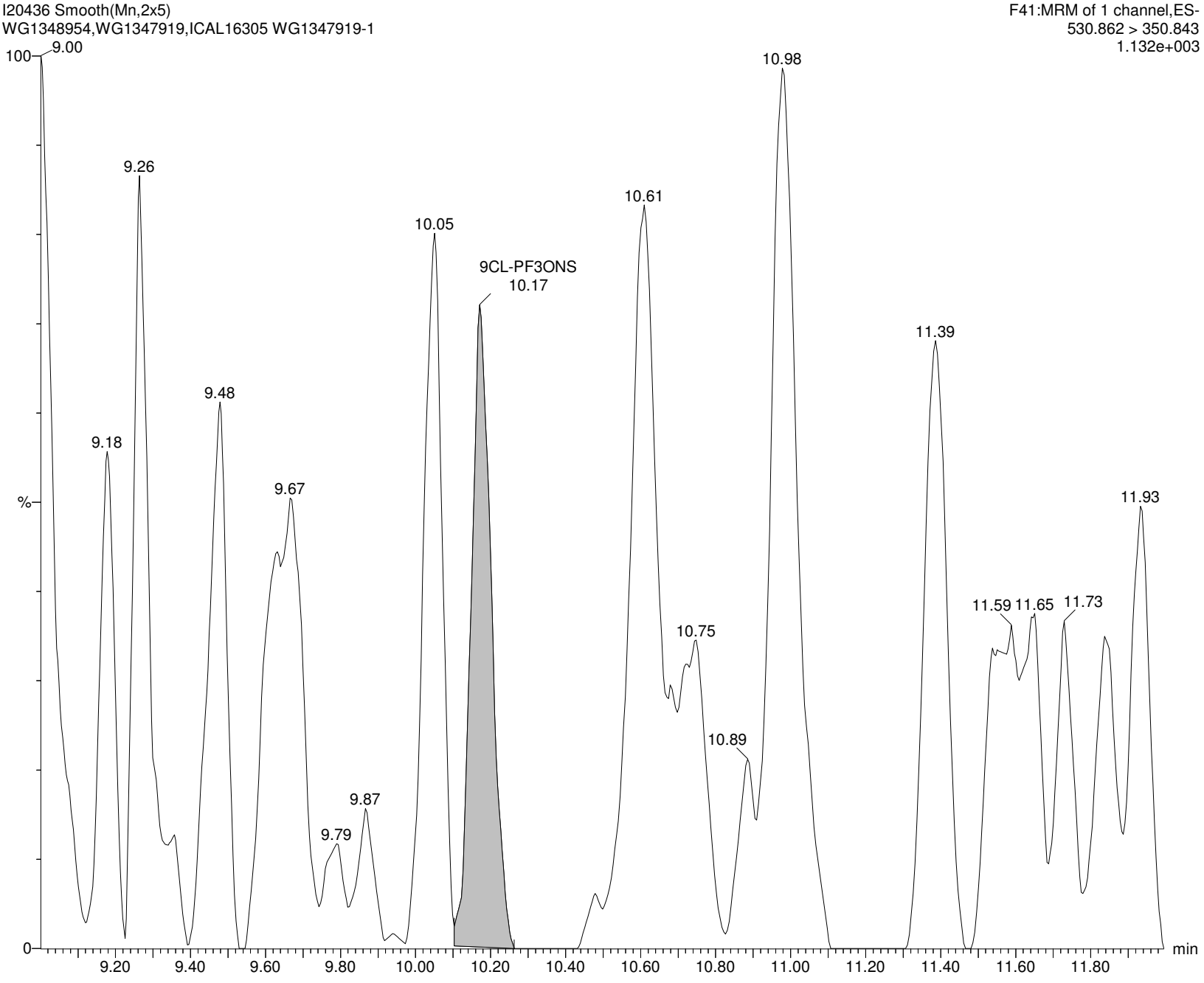
**MS Method Name: C:\MassLynx\Data\2020\200309_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**9CL-PF3ONS**



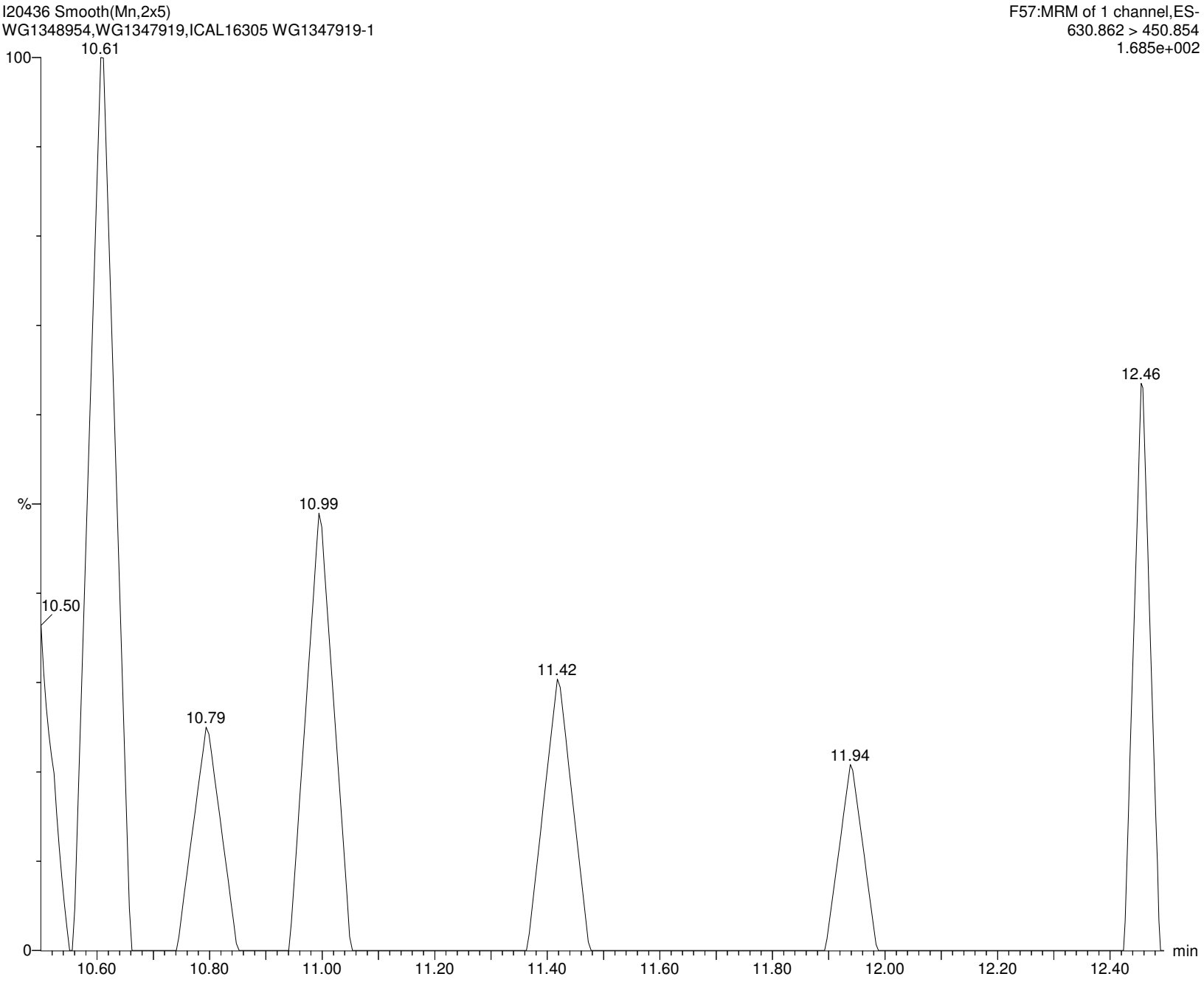


all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2020\200309_537ISO.PRO\Data\WG1348954C.qld
Last Altered: Wednesday, March 11, 2020 21:10:58 Eastern Daylight Time
Printed: Thursday, March 12, 2020 09:03:00 Eastern Daylight Time

**Name: I20436**
**ID: WG1347919-1**
**Date: 10-Mar-2020**
**Time: 21:37:46**
**Description: WG1348954,WG1347919,ICAL16305**
**User: LCMS02:RS**
**Vial: 1:E,7**
**Instrument: XEVO-TQSmicro#QEB0050**
**Inlet Method Name: C:\MassLynx\Data\2020\200309_537ISO.PRO\ACQUDB\LCMS_537_ISO_B**
**Tune Method Name: C:\MassLynx\Data\2020\200309_537ISO.PRO\ACQUDB\181009_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\2020\200309_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**11CL-PFOUdS**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2020\200309_537ISO.PRO\Data\WG1348954D.qld
Last Altered: Wednesday, March 11, 2020 22:52:23 Eastern Daylight Time
Printed: Thursday, March 12, 2020 03:26:40 Eastern Daylight Time

**Method: C:\MassLynx\Data\2020\200309_537ISO.PRO\MethDB\537ISO_Q_191118_DOD_RT.mdb 07 Feb 2020 15:55:12**
**Calibration: C:\MassLynx\Data\2020\200309_537ISO.PRO\CurveDB\191118_ISO_ICAL.cdb 18 Nov 2019 14:41:42**

**ID: WG1347919-2**
**Name: I20455**
**Date: 11-Mar-2020**
**Time: 02:54:13**
**Description: WG1348954,WG1347919,ICAL16305**
**Instrument: XEVO-TQSmicro#QEB0050**
**User: LCMS02:RS**
**Inlet Method Name: C:\MassLynx\Data\2020\200309_537ISO.PRO\ACQUDB\LCMS_537_ISO_B**
**Tune Method Name: C:\MassLynx\Data\2020\200309_537ISO.PRO\ACQUDB\181009_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\2020\200309_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

| | Name | CAS | RT | Trace | Area | M Flag | Conc (ng/mL) | Ion Ratio | Ratio Flag | %Rec |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | PFBA | 375-22-4 | 2.19 | 212.926 > 169.111 | 44668 | M2 | 8.835 | | na | 88.3 |
| 2 | M3PFBA | INT STD | 2.18 | 215.926 > 172.122 | 55060 | | 11.883 | | na | 118.8 |
| 3 | MPFBA | INT STD | 2.18 | 216.926 > 172.137 | 60550 | | 10.105 | | na | 101.1 |
| 4 | PFPeA | 2706-90-3 | 5.06 | 262.926 > 219.002 | 86632 | M2 | 9.160 | | na | 91.6 |
| 5 | M5PFPEA | INT STD | 5.06 | 267.989 > 223.081 | 97923 | | 11.522 | | na | 115.2 |
| 6 | PFBS | 375-73-5 | 5.69 | 298.926 > 79.923 | 13504 | | 7.916 | 1.88 | NO | 89.5 |
| 7 | M3PFBS | INT STD | 5.69 | 301.989 > 80.254 | 11611 | | 9.534 | | na | 95.3 |
| 8 | 4:2FTS | 757124-72-4 | 6.84 | 326.926 > 306.957 | 8794 | | 8.963 | 2.30 | NO | 95.9 |
| 9 | M2-4:2FTS | INT STD | 6.84 | 329.117 > 309.079 | 9081 | | 11.485 | | na | 114.8 |
| 10 | PFHxA | 307-24-4 | 6.92 | 312.989 > 269.028 | 87826 | | 8.793 | 18.54 | NO | 87.9 |
| 11 | M5PFHxA | INT STD | 6.92 | 317.989 > 273.045 | 108507 | | 9.661 | | na | 96.6 |
| 12 | PFPeS | 2706-91-4 | 7.22 | 348.926 > 80.251 | 9031 | | 7.345 | 1.78 | NO | 78.1 |
| 13 | PFHpA | 375-85-9 | 8.13 | 362.926 > 319.014 | 120514 | | 9.103 | 5.97 | NO | 91.0 |
| 14 | M4PFHpA | INT STD | 8.13 | 366.926 > 321.979 | 146773 | | 9.810 | | na | 98.1 |
| 15 | br-PFHxS | 355-46-4 | 8.06 | 398.926 > 80.295 | 1102 | M5 | 1.263 | 1.91 | NO | 74.3 |
| 16 | L-PFHxS | 355-46-4 | 8.28 | 398.926 > 80.295 | 6235 | | 6.770 | 1.15 | NO | 91.5 |
| 17 | PFHxS | 355-46-4 | | 398.926 > 80.295 | 7337 | | 8.033 | | na | |
| 18 | M3PFHxS | INT STD | 8.28 | 401.926 > 80.317 | 7352 | | 10.460 | | na | 104.6 |
| 19 | br-PFOA | 335-67-1 | | 412.989 > 368.9 | | | ND | 0.00 | NO | |
| 20 | L-PFOA | 335-67-1 | 9.04 | 412.989 > 368.9 | 122209 | | 9.066 | | YES | 90.7 |
| 21 | PFOA | 335-67-1 | | 412.989 > 368.9 | 122209 | | 9.066 | | na | |
| 22 | M8PFOA | INT STD | 9.04 | 420.989 > 375.979 | 146802 | | 10.226 | | na | 102.3 |
| 23 | M2PFOA | INT STD | 9.04 | 415.032 > 369.968 | 146720 | | 13.879 | | na | 138.8 |
| 24 | 6:2FTS | 27619-97-2 | 9.00 | 426.989 > 406.921 | 7069 | | 9.591 | 11.62 | NO | 101.0 |
| 25 | M2-6:2FTS | INT STD | 9.00 | 428.989 > 408.917 | 9292 | | 12.024 | | na | 120.2 |
| 26 | PFHpS | 375-92-8 | 9.13 | 448.926 > 80.257 | 5274 | | 8.916 | 0.78 | NO | 93.9 |
| 27 | PFNA | 375-95-1 | 9.79 | 462.989 > 418.931 | 109647 | | 8.962 | 4.57 | NO | 89.6 |
| 28 | M9PFNA | INT STD | 9.79 | 472.053 > 426.947 | 149345 | | 10.572 | | na | 105.7 |
| 29 | br-PFOS | 1763-23-1 | 9.66 | 498.989 > 80.294 | 1790 | M5 | 1.522 | 3.96 | NO | 76.1 |
| 30 | L-PFOS | 1763-23-1 | 9.84 | 498.989 > 80.294 | 5992 | | 6.796 | 1.47 | NO | 93.1 |
| 31 | PFOS | 1763-23-1 | | 498.989 > 80.294 | 7782 | | 8.318 | | na | |
| 32 | M4PFOS | INT STD | 9.84 | 503.032 > 80.306 | 8701 | | 12.458 | | na | 124.6 |
| 33 | M8PFOS | INT STD | 9.84 | 507.053 > 80.294 | 8983 | | 10.062 | | na | 100.6 |
| 34 | PFDA | 335-76-2 | 10.43 | 513.053 > 468.906 | 107382 | | 8.983 | 7.20 | NO | 89.8 |
| 35 | M2PFDA | INT STD | 10.43 | 515.053 > 469.934 | 133103 | | 15.075 | | na | 150.8 |
| 36 | M6PFDA | INT STD | 10.43 | 519.053 > 473.931 | 139344 | | 10.129 | | na | 101.3 |
| 37 | 8:2FTS | 39108-34-4 | 10.42 | 526.926 > 506.818 | 6077 | | 9.293 | | na | 96.8 |
| 38 | M2-8:2FTS | INT STD | 10.42 | 529.053 > 508.945 | 6193 | | 13.661 | | na | 136.6 |
| 39 | PFNS | 68259-12-1 | 10.46 | 548.989 > 80.249 | 6955 | | 8.324 | 1.18 | NO | 86.7 |


all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2020\200309_537ISO.PRO\Data\WG1348954D.qld
Last Altered: Wednesday, March 11, 2020 22:52:23 Eastern Daylight Time
Printed: Thursday, March 12, 2020 03:26:40 Eastern Daylight Time

**ID: WG1347919-2**
**Name: I20455**
**Date: 11-Mar-2020**
**Time: 02:54:13**
**Description: WG1348954,WG1347919,ICAL16305**
**Instrument: XEVO-TQSmicro#QEB0050**
**User: LCMS02:RS**
**Inlet Method Name: C:\MassLynx\Data\2020\200309_537ISO.PRO\ACQUDB\LCMS_537_ISO_B**
**Tune Method Name: C:\MassLynx\Data\2020\200309_537ISO.PRO\ACQUDB\181009_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\2020\200309_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

| | Name | CAS | RT | Trace | Area | M Flag | Conc (ng/mL) | Ion Ratio | Ratio Flag | %Rec |
|---|---|---|---|---|---|---|---|---|---|---|
| 40 | d3-NMeFOSAA | INT STD | 10.83 | 573.096 > 418.987 | 15539 | | 9.919 | | na | 99.2 |
| 41 | br-NMeFOSAA | 2355-31-9 | | 570.053 > 418.917 | | | ND | | YES | |
| 42 | L-NMeFOSAA | 2355-31-9 | 10.84 | 570.053 > 418.917 | 14515 | M4 | 10.023 | 2.75 | NO | 100.2 |
| 43 | NMeFOSAA | 2355-31-9 | | 570.053 > 418.917 | 14515 | | 10.023 | | na | |
| 44 | PFUnA | 2058-94-8 | 10.99 | 562.989 > 518.903 | 112386 | | 8.932 | 8.10 | NO | 89.3 |
| 45 | M7-PFUDA | INT STD | 10.99 | 570.053 > 524.923 | 131571 | | 10.781 | | na | 107.8 |
| 46 | PFDS | 335-77-3 | 11.00 | 598.926 > 80.314 | 5534 | | 9.266 | 1.01 | NO | 96.0 |
| 47 | FOSA | 754-91-6 | 10.89 | 497.989 > 78.245 | 16218 | | 9.460 | 125.24 | NO | 94.6 |
| 48 | M8FOSA | INT STD | 10.89 | 506.053 > 78.286 | 16134 | | 4.960 | | na | 49.6 |
| 49 | d5-NEtFOSAA | INT STD | 11.13 | 589.117 > 418.929 | 12261 | | 8.860 | | na | 88.6 |
| 50 | br-NEtFOSAA | 2991-50-6 | | 583.989 > 418.927 | | | ND | | YES | |
| 51 | L-NEtFOSAA | 2991-50-6 | 11.14 | 583.989 > 418.927 | 9878 | | 8.534 | 2.73 | NO | 85.3 |
| 52 | NEtFOSAA | 2991-50-6 | | 583.989 > 418.927 | 9878 | | 8.534 | | na | |
| 53 | PFDoA | 307-55-1 | 11.48 | 612.989 > 568.967 | 106051 | | 9.116 | 14.56 | NO | 91.2 |
| 54 | MPFDOA | INT STD | 11.48 | 614.989 > 569.92 | 137354 | | 10.032 | | na | 100.3 |
| 55 | PFTrDA | 72629-94-8 | 11.90 | 663.053 > 618.969 | 93607 | | 10.058 | 11.57 | NO | 100.6 |
| 56 | PFTA | 376-06-7 | 12.26 | 713.053 > 668.976 | 73862 | M4 | 9.217 | 9.72 | NO | 92.2 |
| 57 | M2PFTEDA | INT STD | 12.26 | 715.053 > 669.945 | 100065 | | 9.202 | | na | 92.0 |
| 58 | M3HFPO-DA | INT STD | 7.33 | 331.989 > 286.995 | 6215 | | 98.805 | | na | 49.4 |
| 59 | HFPO-DA | 13252-13-6 | 7.33 | 284.819 > 169.094 | 9101 | | 176.367 | 2.65 | YES | 88.2 |
| 60 | ADONA | 958445-44-8 | 8.30 | 376.926 > 251.005 | 208832 | | 10.821 | | na | 114.4 |
| 61 | PFHxDA | | 12.73 | 813.053 > 769.005 | 78386 | | 13.090 | | na | 130.9 |
| 62 | PFODA | | 12.97 | 912.989 > 869.032 | 31139 | | 7.075 | | na | 70.7 |
| 63 | M2PFHxDA | | 12.73 | 815.372 > 770.158 | 16398 | | 7.084 | | na | 70.8 |
| 64 | PFDoS | | 11.89 | 698.649 > 79.853 | 7874 | | 12.932 | 1.93 | YES | 129.3 |
| 65 | 10:2FTS | | 11.49 | 626.862 > 606.896 | 8684 | M4 | 13.959 | | na | 144.8 |
| 66 | 9CL-PF3ONS | | 10.19 | 530.862 > 350.843 | 67785 | | 11.482 | | na | 123.2 |
| 67 | 11CL-PFOUdS | | 11.27 | 630.862 > 450.854 | 56194 | | 11.291 | | na | 119.9 |

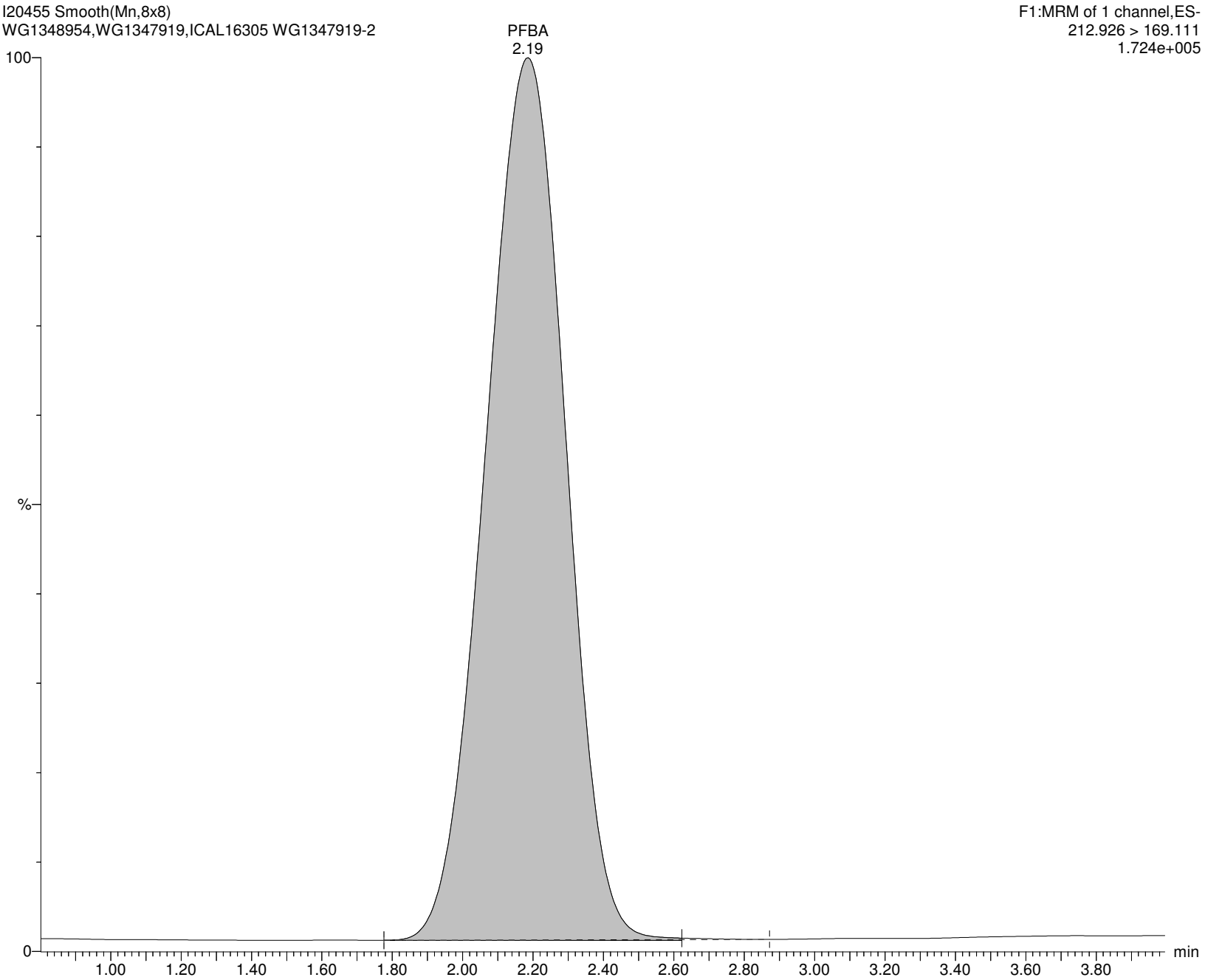

all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2020\200309_537ISO.PRO\Data\WG1348954D.qld
Last Altered: Wednesday, March 11, 2020 22:52:23 Eastern Daylight Time
Printed: Thursday, March 12, 2020 03:26:40 Eastern Daylight Time

**Method: C:\MassLynx\Data\2020\200309_537ISO.PRO\MethDB\537ISO_Q_191118_DOD_RT.mdb 07 Feb 2020 15:55:12**
**Calibration: C:\MassLynx\Data\2020\200309_537ISO.PRO\CurveDB\191118_ISO_ICAL.cdb 18 Nov 2019 14:41:42**

**Name: I20455**
**ID: WG1347919-2**
**Date: 11-Mar-2020**
**Time: 02:54:13**
**Description: WG1348954,WG1347919,ICAL16305**
**User: LCMS02:RS**
**Vial: 2:A,8**
**Instrument: XEVO-TQSmicro#QEB0050**
**Inlet Method Name: C:\MassLynx\Data\2020\200309_537ISO.PRO\ACQUDB\LCMS_537_ISO_B**
**Tune Method Name: C:\MassLynx\Data\2020\200309_537ISO.PRO\ACQUDB\181009_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\2020\200309_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**PFBA**



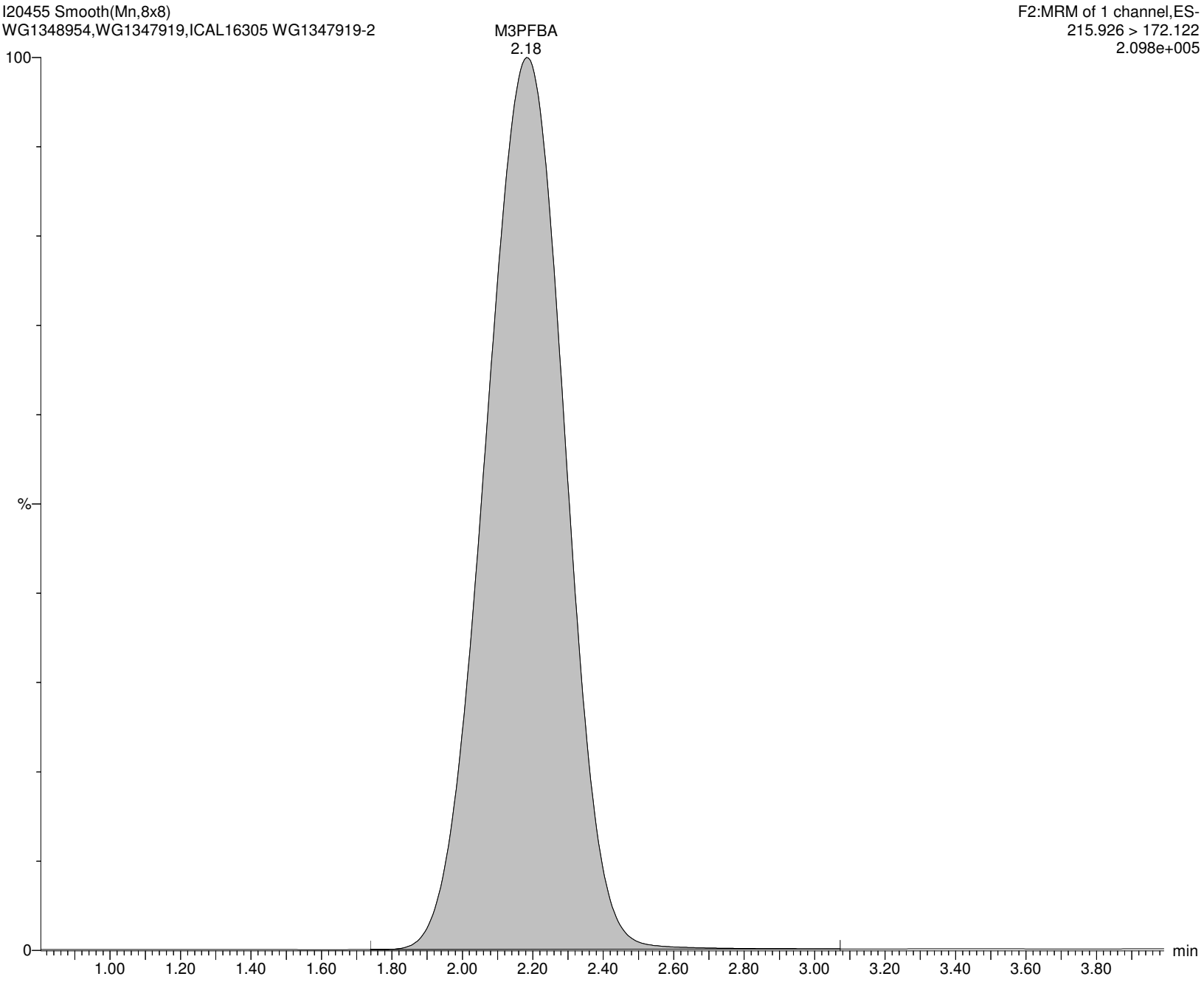


all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2020\200309_537ISO.PRO\Data\WG1348954D.qld
Last Altered: Wednesday, March 11, 2020 22:52:23 Eastern Daylight Time
Printed: Thursday, March 12, 2020 03:26:40 Eastern Daylight Time

**Name: I20455**
**ID: WG1347919-2**
**Date: 11-Mar-2020**
**Time: 02:54:13**
**Description: WG1348954,WG1347919,ICAL16305**
**User: LCMS02:RS**
**Vial: 2:A,8**
**Instrument: XEVO-TQSmicro#QEB0050**
**Inlet Method Name: C:\MassLynx\Data\2020\200309_537ISO.PRO\ACQUDB\LCMS_537_ISO_B**
**Tune Method Name: C:\MassLynx\Data\2020\200309_537ISO.PRO\ACQUDB\181009_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\2020\200309_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**M3PFBA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2020\200309_537ISO.PRO\Data\WG1348954D.qld
Last Altered: Wednesday, March 11, 2020 22:52:23 Eastern Daylight Time
Printed: Thursday, March 12, 2020 03:26:40 Eastern Daylight Time

**Name: I20455**
**ID: WG1347919-2**
**Date: 11-Mar-2020**
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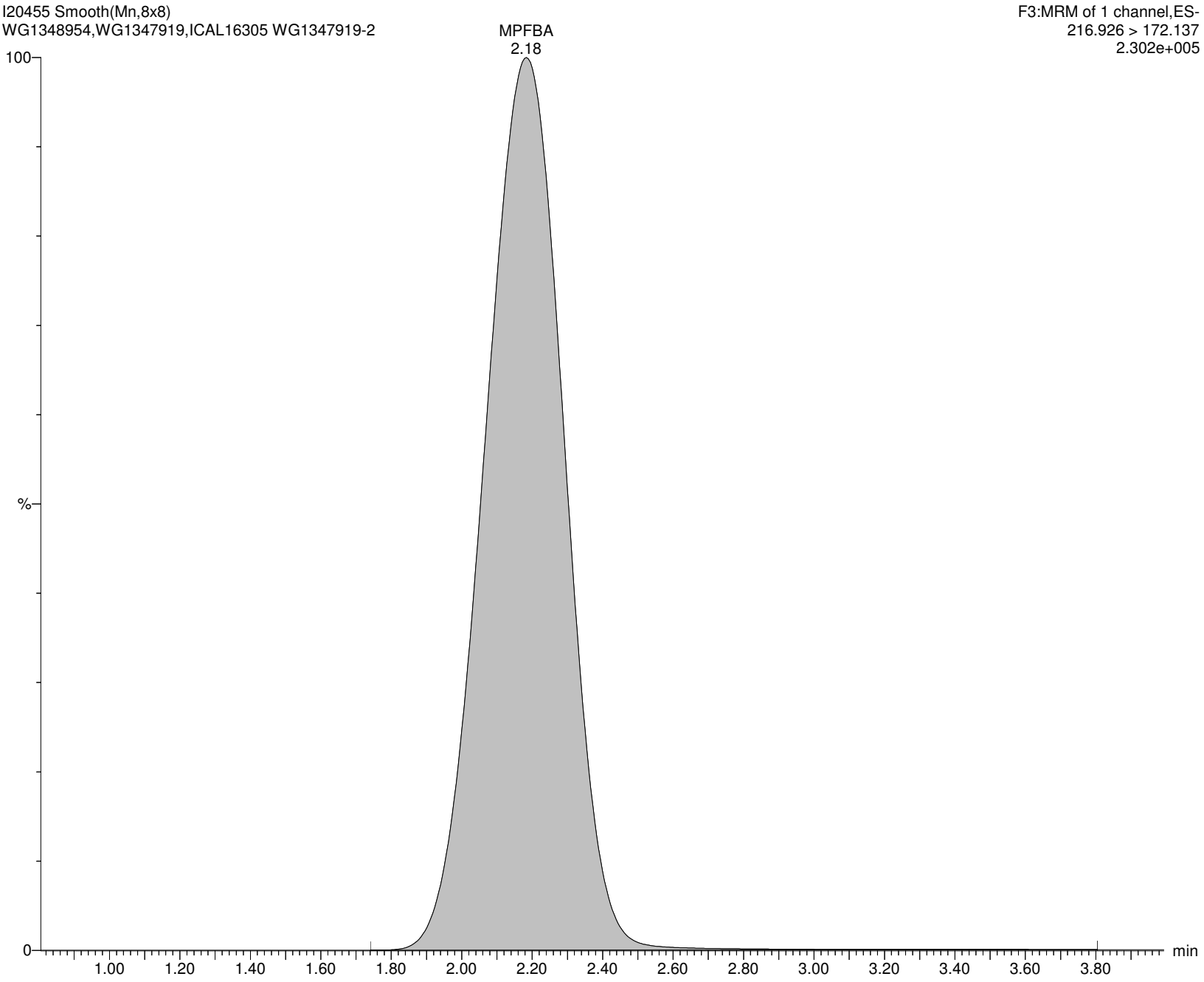
**Description: WG1348954,WG1347919,ICAL16305**
**User: LCMS02:RS**
**Vial: 2:A,8**
**Instrument: XEVO-TQSmicro#QEB0050**
**Inlet Method Name: C:\MassLynx\Data\2020\200309_537ISO.PRO\ACQUDB\LCMS_537_ISO_B**
**Tune Method Name: C:\MassLynx\Data\2020\200309_537ISO.PRO\ACQUDB\181009_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\2020\200309_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**MPFBA**



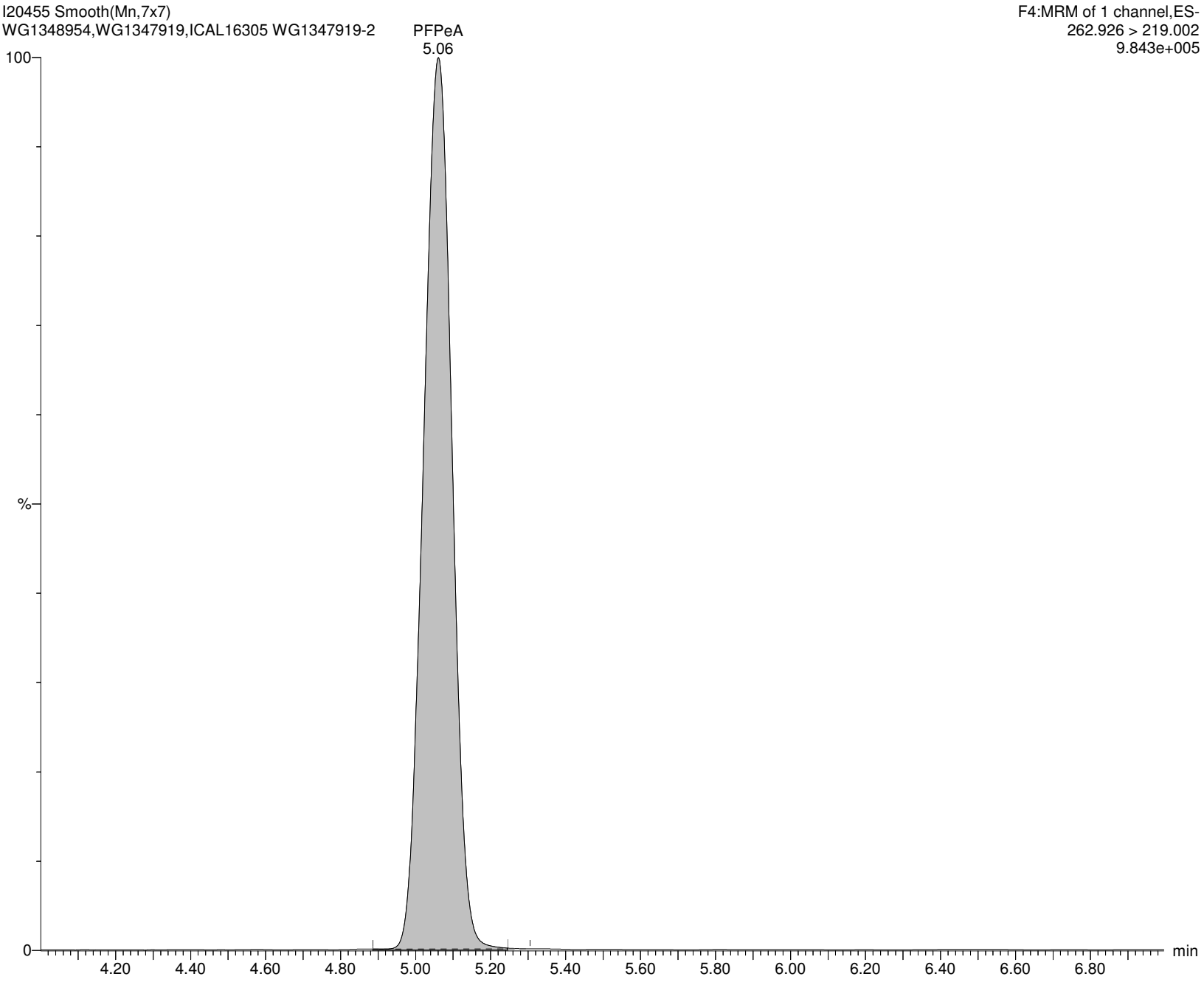


all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2020\200309_537ISO.PRO\Data\WG1348954D.qld
Last Altered: Wednesday, March 11, 2020 22:52:23 Eastern Daylight Time
Printed: Thursday, March 12, 2020 03:26:40 Eastern Daylight Time

**Name: I20455**
**ID: WG1347919-2**
**Date: 11-Mar-2020**
**Time: 02:54:13**
**Description: WG1348954,WG1347919,ICAL16305**
**User: LCMS02:RS**
**Vial: 2:A,8**
**Instrument: XEVO-TQSmicro#QEB0050**
**Inlet Method Name: C:\MassLynx\Data\2020\200309_537ISO.PRO\ACQUDB\LCMS_537_ISO_B**
**Tune Method Name: C:\MassLynx\Data\2020\200309_537ISO.PRO\ACQUDB\181009_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\2020\200309_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**PFPeA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2020\200309_537ISO.PRO\Data\WG1348954D.qld
Last Altered: Wednesday, March 11, 2020 22:52:23 Eastern Daylight Time
Printed: Thursday, March 12, 2020 03:26:40 Eastern Daylight Time

**Name: I20455**
**ID: WG1347919-2**
**Date: 11-Mar-2020**
**Time: 02:54:13**
**Description: WG1348954,WG1347919,ICAL16305**
**User: LCMS02:RS**
**Vial: 2:A,8**
**Instrument: XEVO-TQSmicro#QEB0050**
**Inlet Method Name: C:\MassLynx\Data\2020\200309_537ISO.PRO\ACQUDB\LCMS_537_ISO_B**
**Tune Method Name: C:\MassLynx\Data\2020\200309_537ISO.PRO\ACQUDB\181009_TUNE.IPR**
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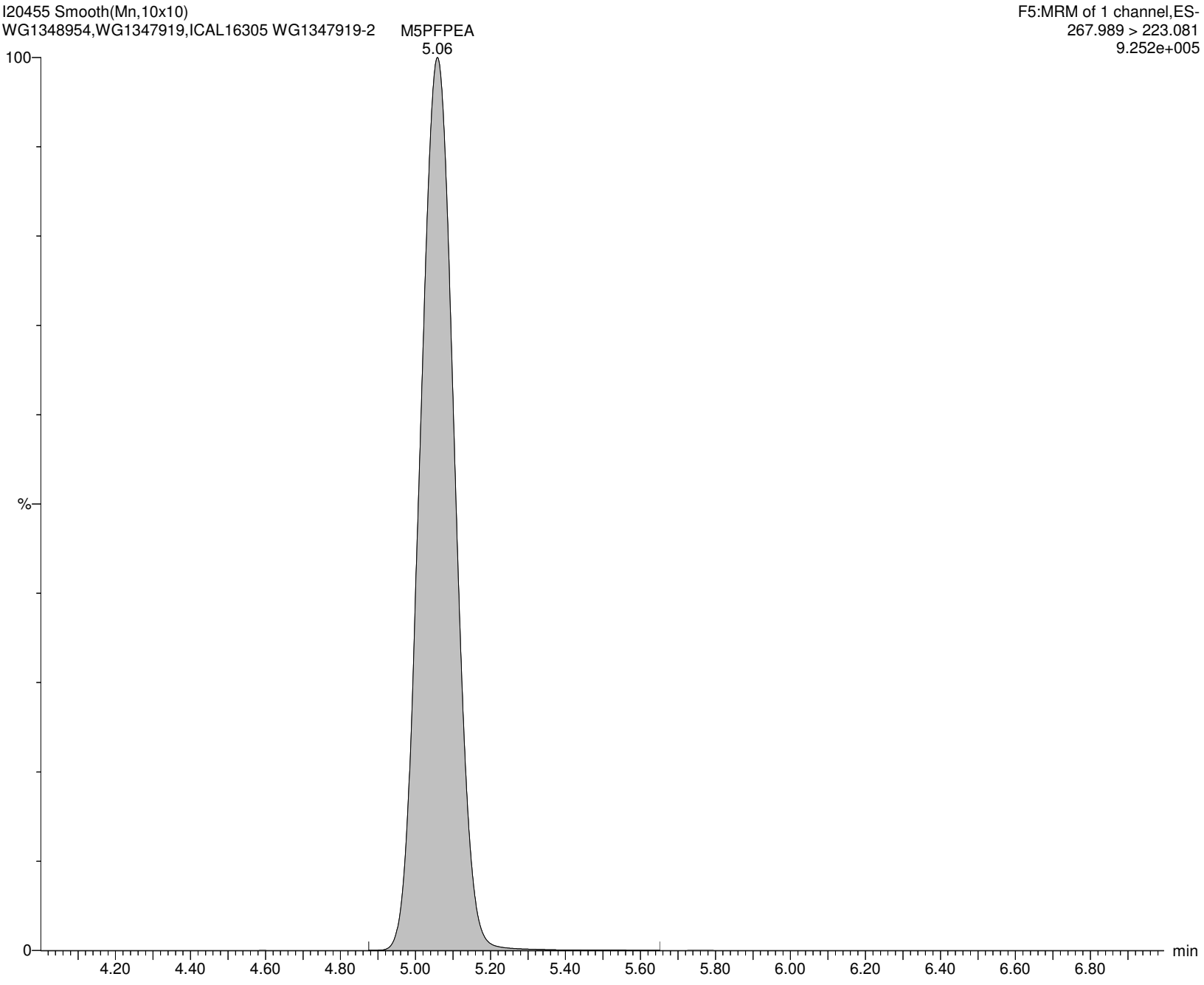
**M5PFPEA**



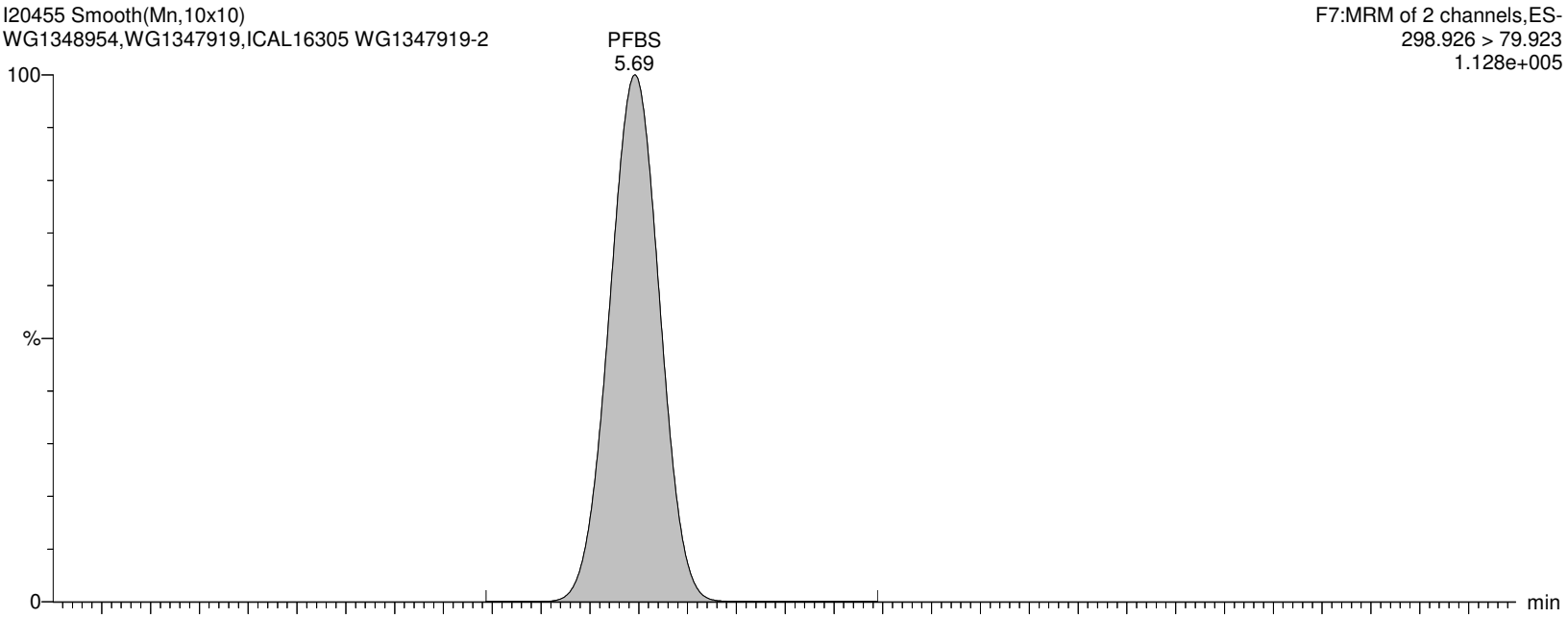


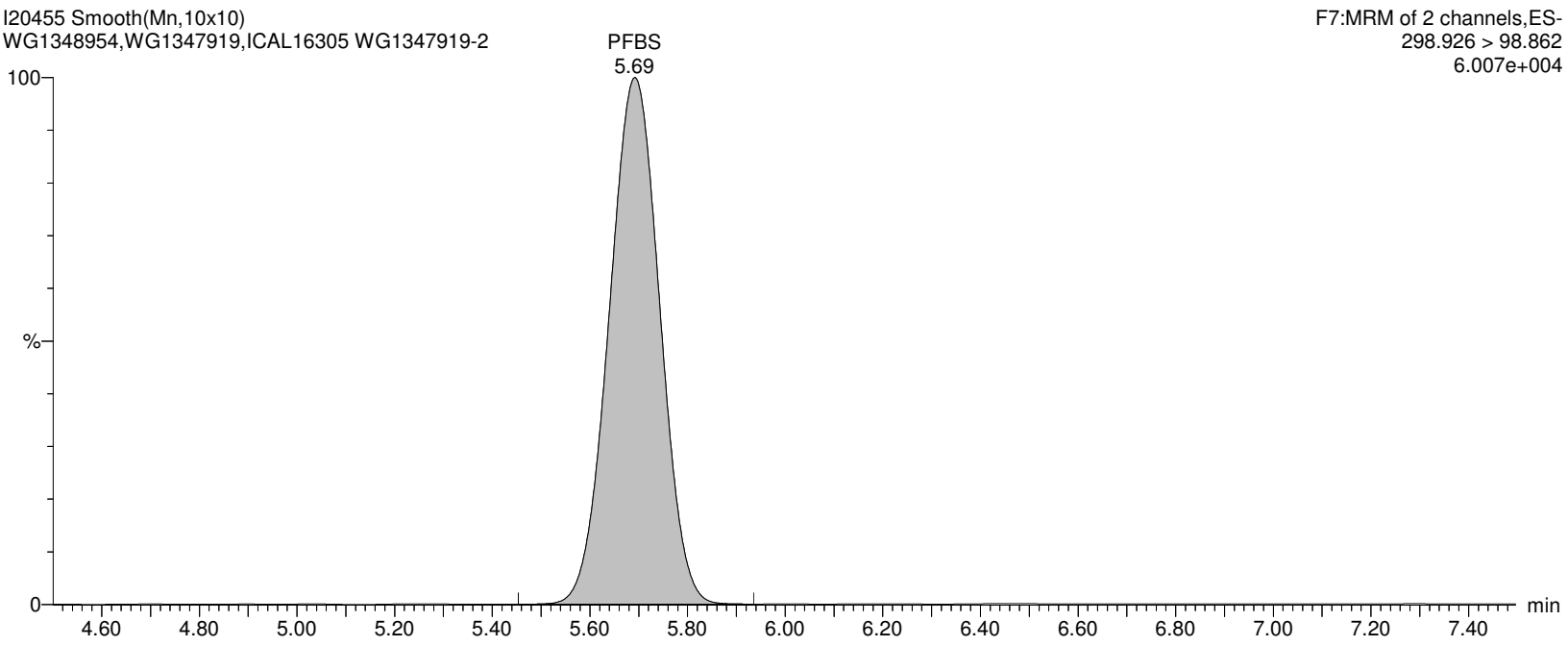
all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2020\200309_537ISO.PRO\Data\WG1348954D.qld
Last Altered: Wednesday, March 11, 2020 22:52:23 Eastern Daylight Time
Printed: Thursday, March 12, 2020 03:26:40 Eastern Daylight Time

**Name: I20455**
**ID: WG1347919-2**
**Date: 11-Mar-2020**
**Time: 02:54:13**
**Description: WG1348954,WG1347919,ICAL16305**
**User: LCMS02:RS**
**Vial: 2:A,8**
**Instrument: XEVO-TQSmicro#QEB0050**
**Inlet Method Name: C:\MassLynx\Data\2020\200309_537ISO.PRO\ACQUDB\LCMS_537_ISO_B**
**Tune Method Name: C:\MassLynx\Data\2020\200309_537ISO.PRO\ACQUDB\181009_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\2020\200309_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**PFBS**



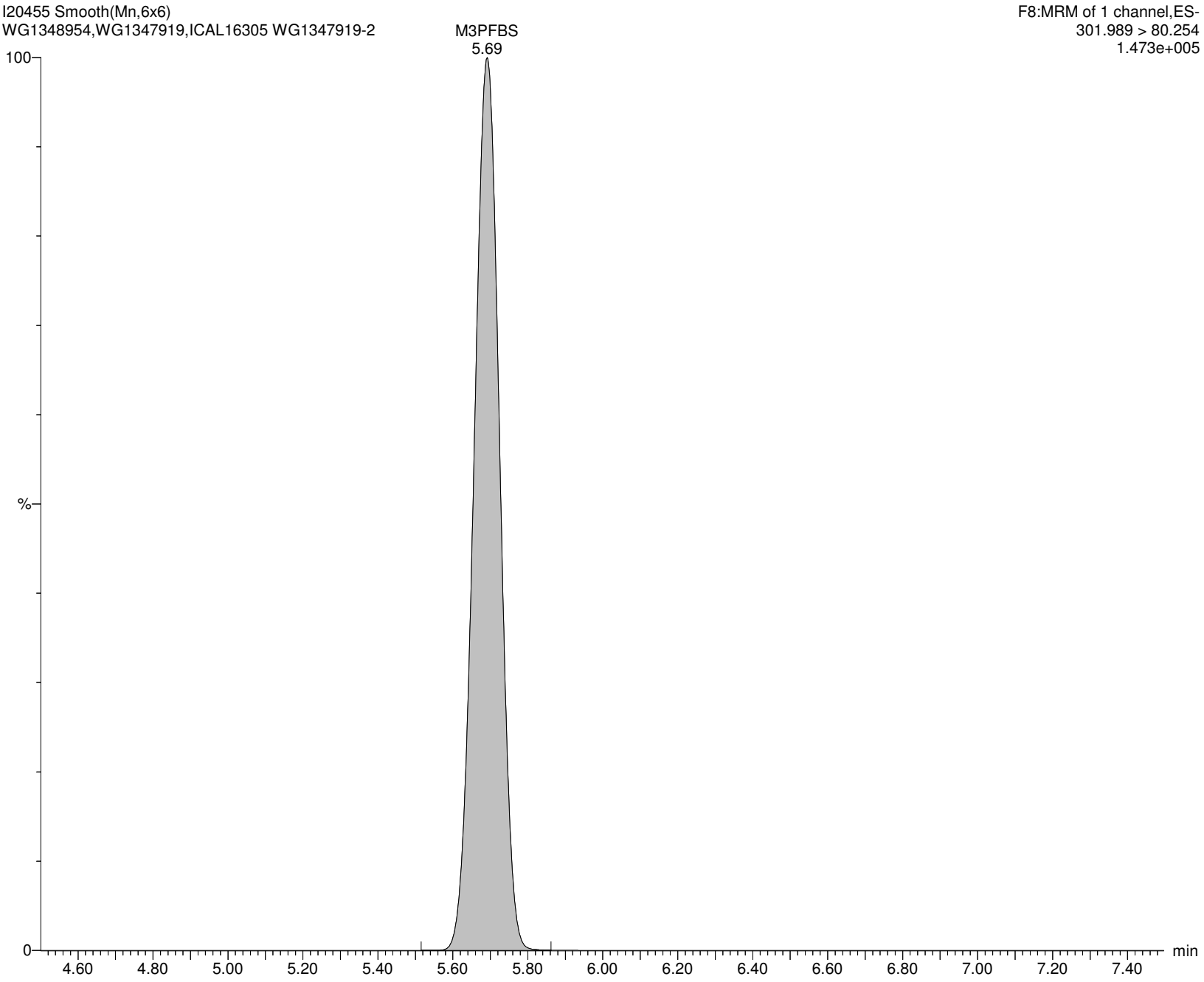


all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2020\200309_537ISO.PRO\Data\WG1348954D.qld
Last Altered: Wednesday, March 11, 2020 22:52:23 Eastern Daylight Time
Printed: Thursday, March 12, 2020 03:26:40 Eastern Daylight Time

**Name: I20455**
**ID: WG1347919-2**
**Date: 11-Mar-2020**
**Time: 02:54:13**
**Description: WG1348954,WG1347919,ICAL16305**
**User: LCMS02:RS**
**Vial: 2:A,8**
**Instrument: XEVO-TQSmicro#QEB0050**
**Inlet Method Name: C:\MassLynx\Data\2020\200309_537ISO.PRO\ACQUDB\LCMS_537_ISO_B**
**Tune Method Name: C:\MassLynx\Data\2020\200309_537ISO.PRO\ACQUDB\181009_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\2020\200309_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**M3PFBS**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2020\200309_537ISO.PRO\Data\WG1348954D.qld
Last Altered: Wednesday, March 11, 2020 22:52:23 Eastern Daylight Time
Printed: Thursday, March 12, 2020 03:26:40 Eastern Daylight Time

**Name: I20455**
**ID: WG1347919-2**
**Date: 11-Mar-2020**
**Time: 02:54:13**
**Description: WG1348954,WG1347919,ICAL16305**
**User: LCMS02:RS**
**Vial: 2:A,8**
**Instrument: XEVO-TQSmicro#QEB0050**
**Inlet Method Name: C:\MassLynx\Data\2020\200309_537ISO.PRO\ACQUDB\LCMS_537_ISO_B**
**Tune Method Name: C:\MassLynx\Data\2020\200309_537ISO.PRO\ACQUDB\181009_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\2020\200309_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

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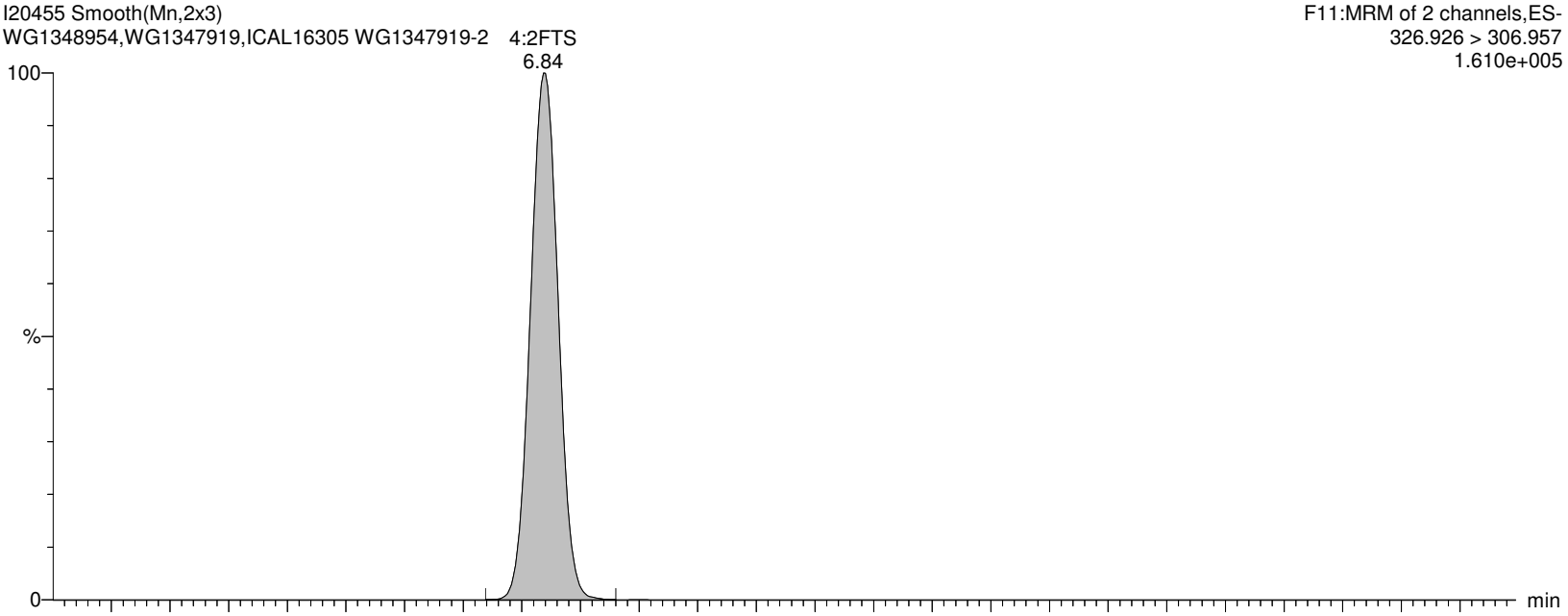


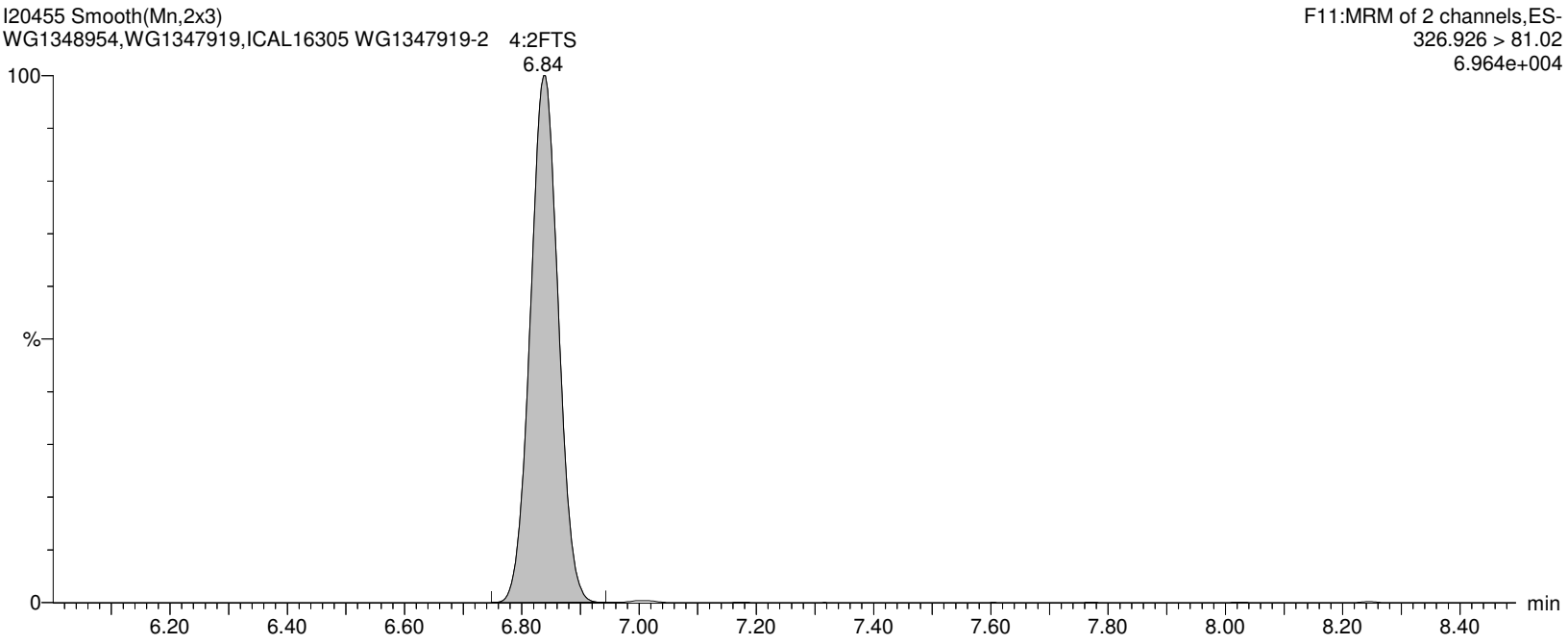



all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2020\200309_537ISO.PRO\Data\WG1348954D.qld
Last Altered: Wednesday, March 11, 2020 22:52:23 Eastern Daylight Time
Printed: Thursday, March 12, 2020 03:26:40 Eastern Daylight Time

**Name: I20455**
**ID: WG1347919-2**
**Date: 11-Mar-2020**
**Time: 02:54:13**
**Description: WG1348954,WG1347919,ICAL16305**
**User: LCMS02:RS**
**Vial: 2:A,8**
**Instrument: XEVO-TQSmicro#QEB0050**
**Inlet Method Name: C:\MassLynx\Data\2020\200309_537ISO.PRO\ACQUDB\LCMS_537_ISO_B**
**Tune Method Name: C:\MassLynx\Data\2020\200309_537ISO.PRO\ACQUDB\181009_TUNE.IPR**
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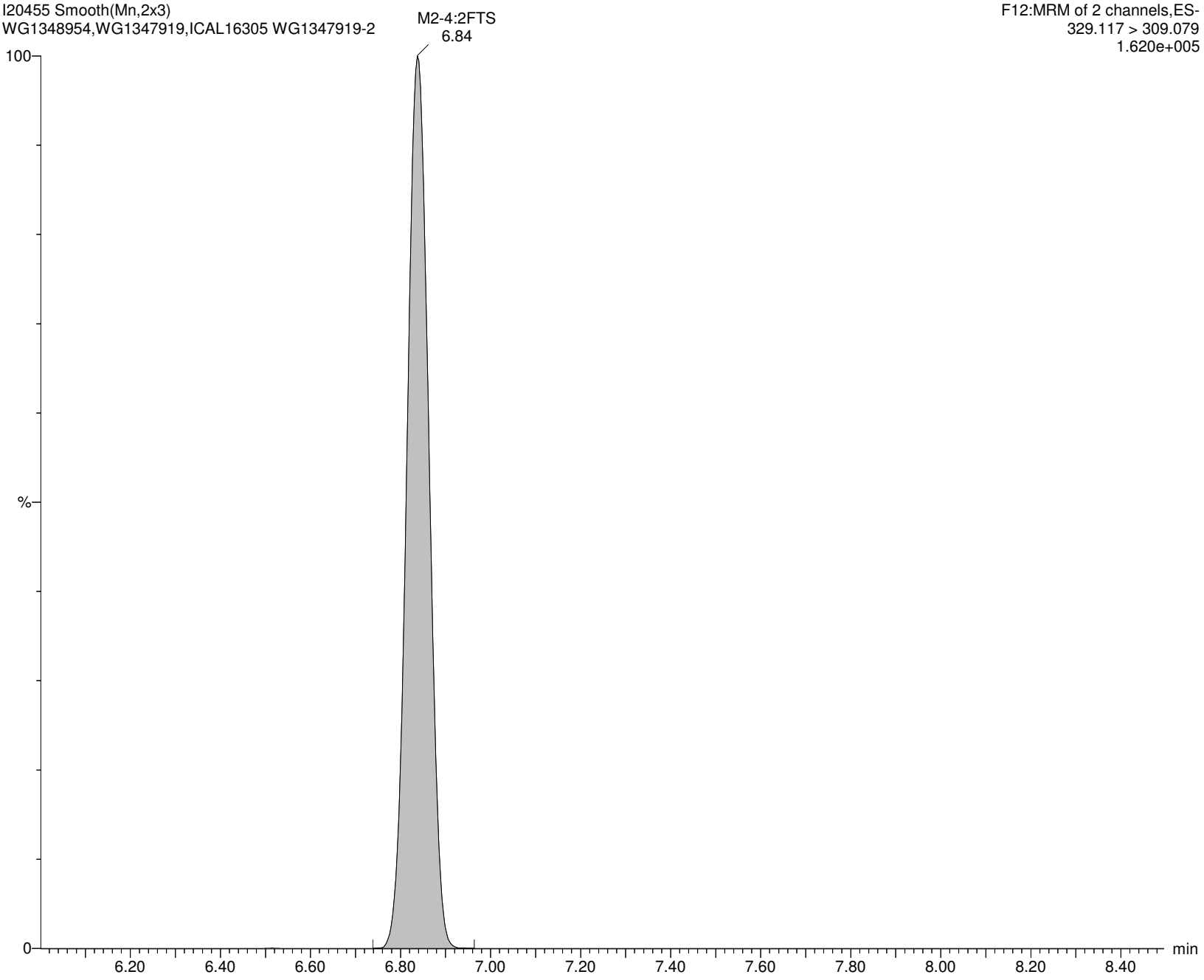



all concentration units in (ng/mL)

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Dataset: C:\MassLynx\Data\2020\200309_537ISO.PRO\Data\WG1348954D.qld
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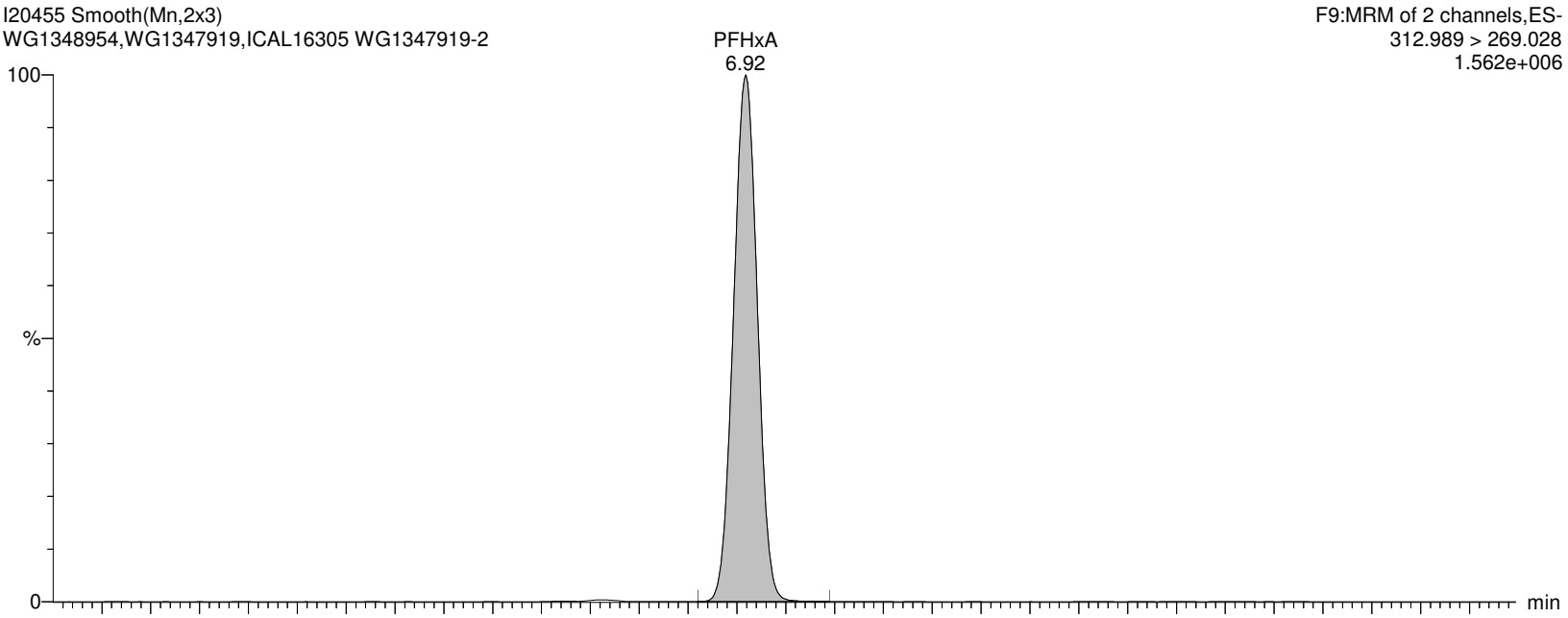


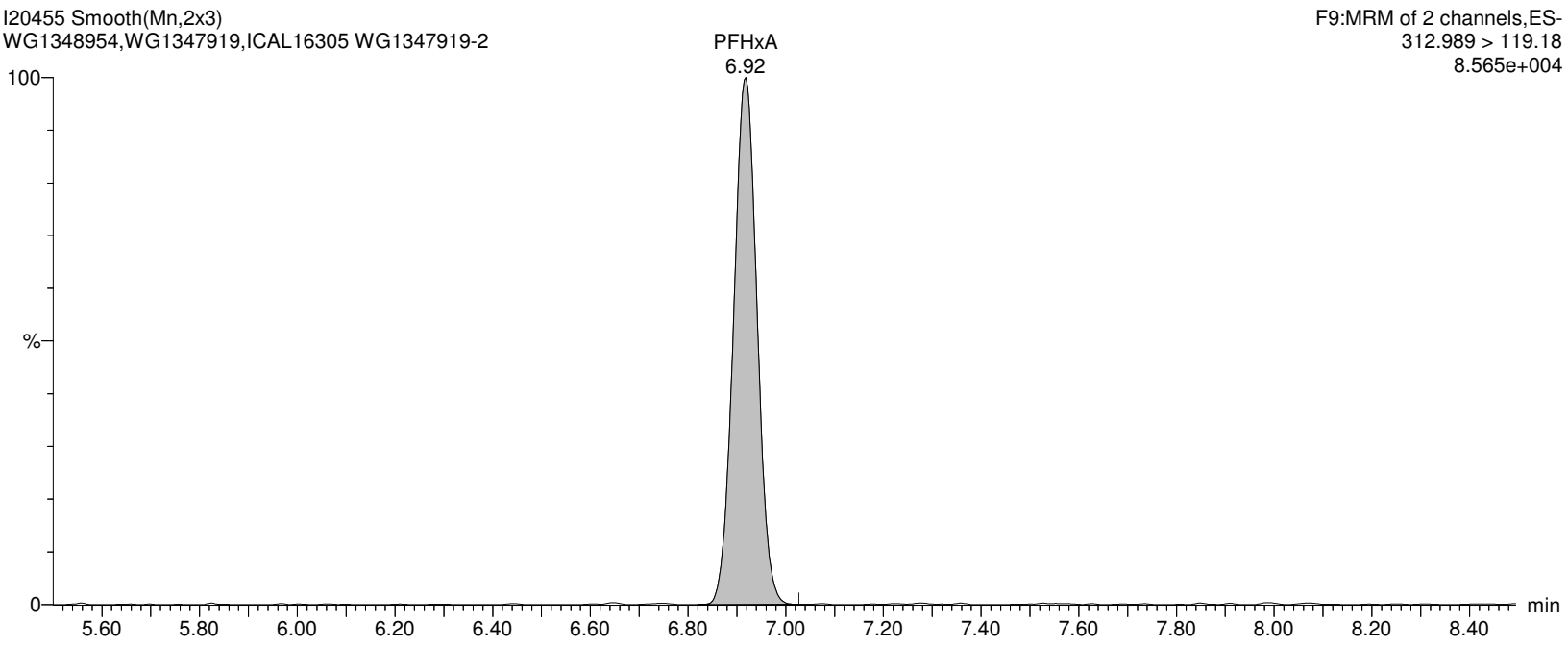



all concentration units in (ng/mL)

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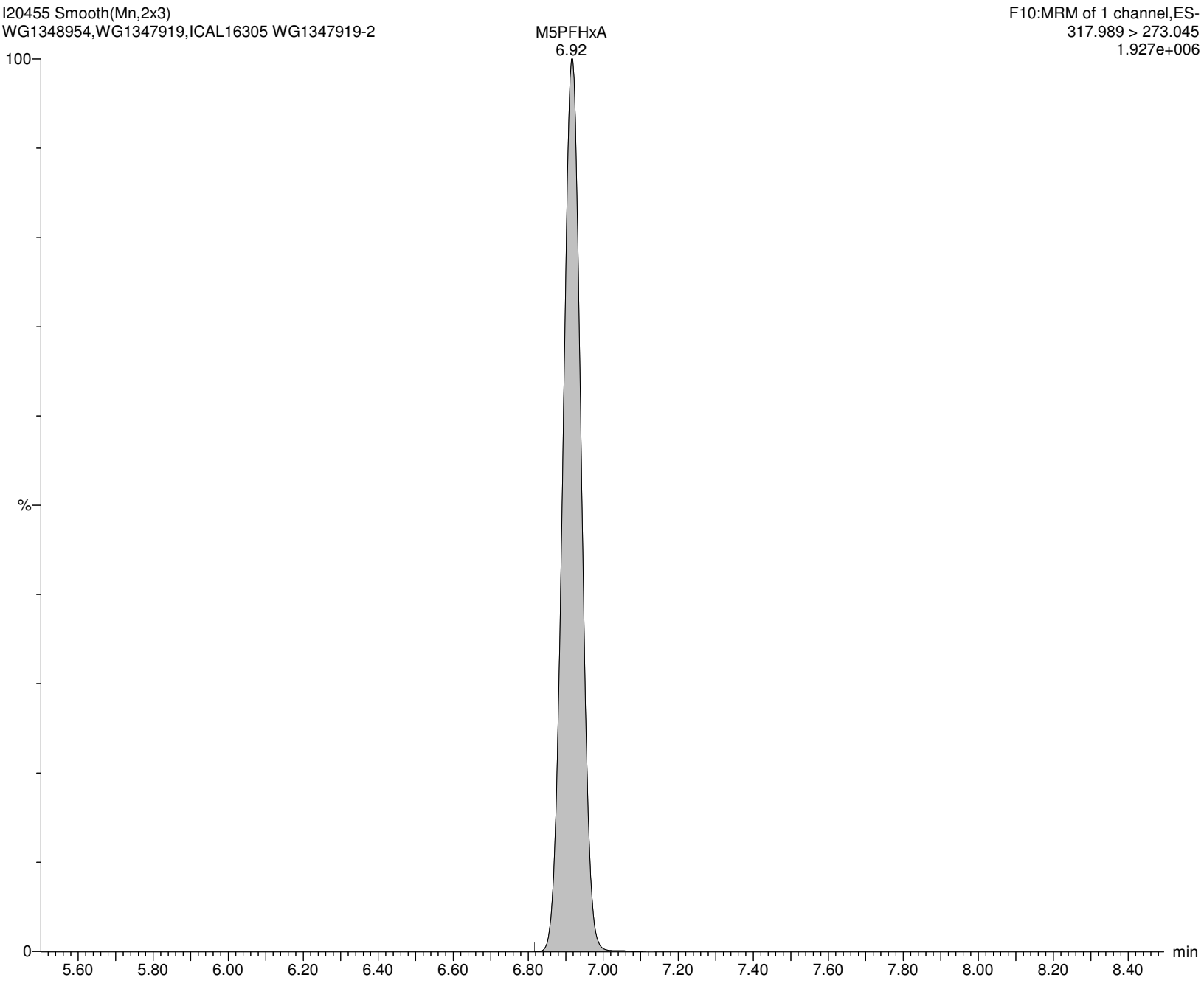
**M5PFHxA**





all concentration units in (ng/mL)

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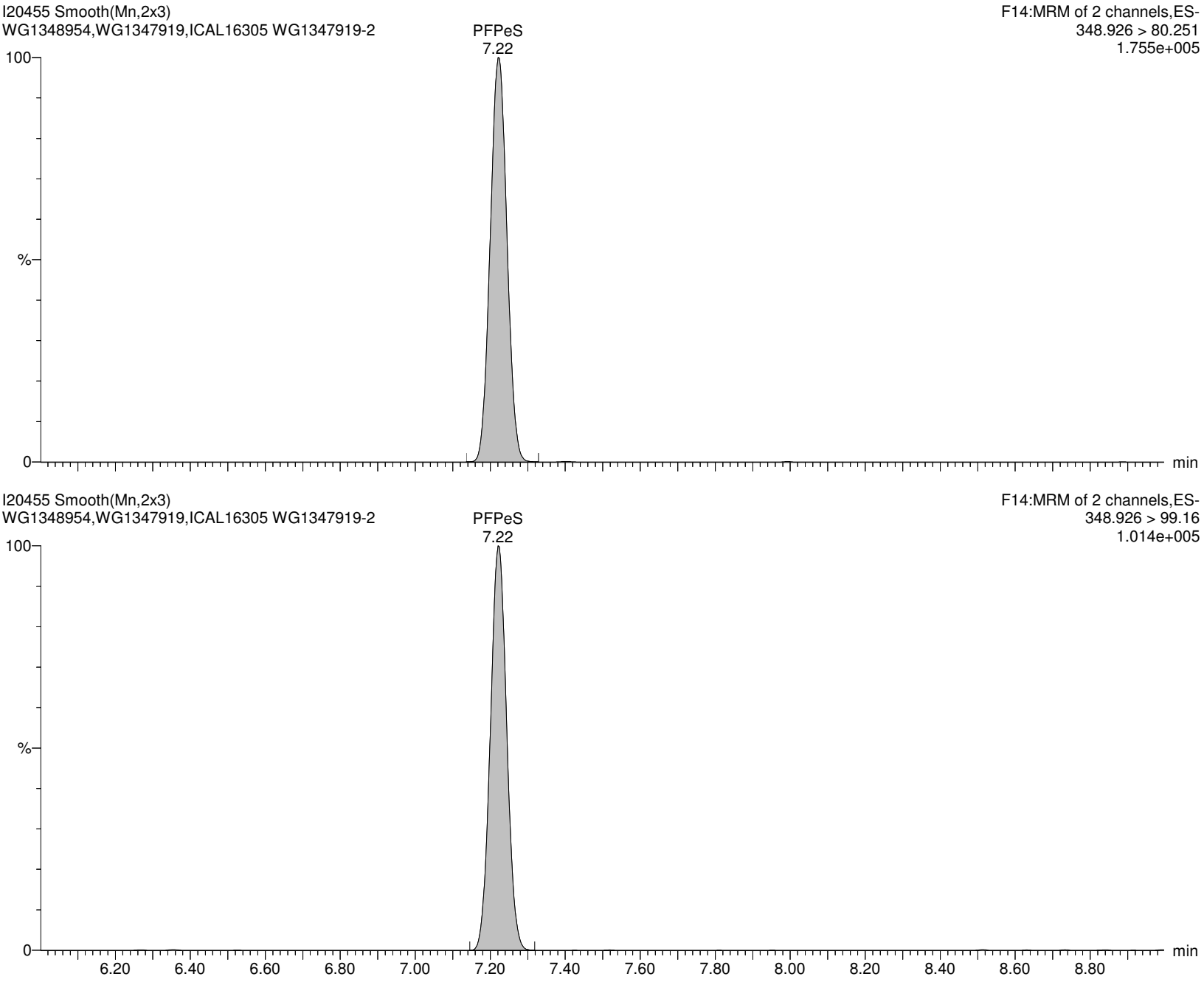
**PFPeS**





all concentration units in (ng/mL)

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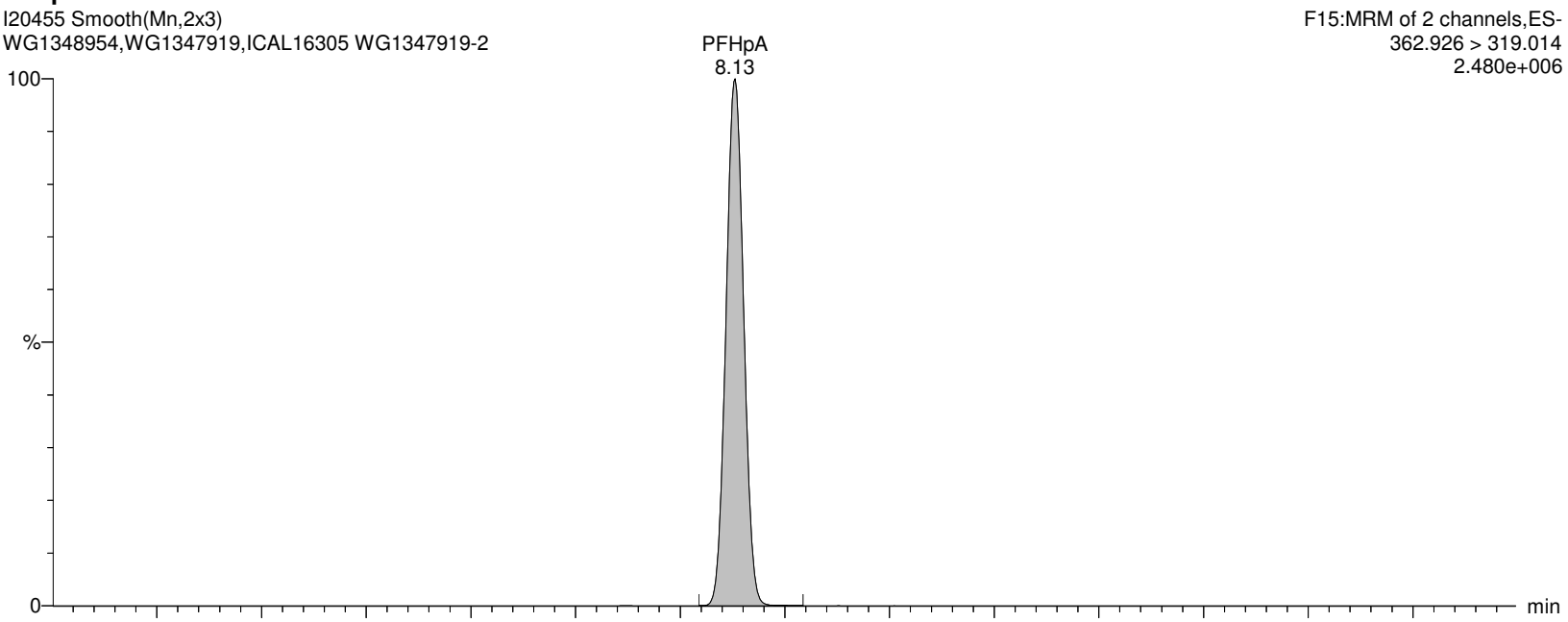
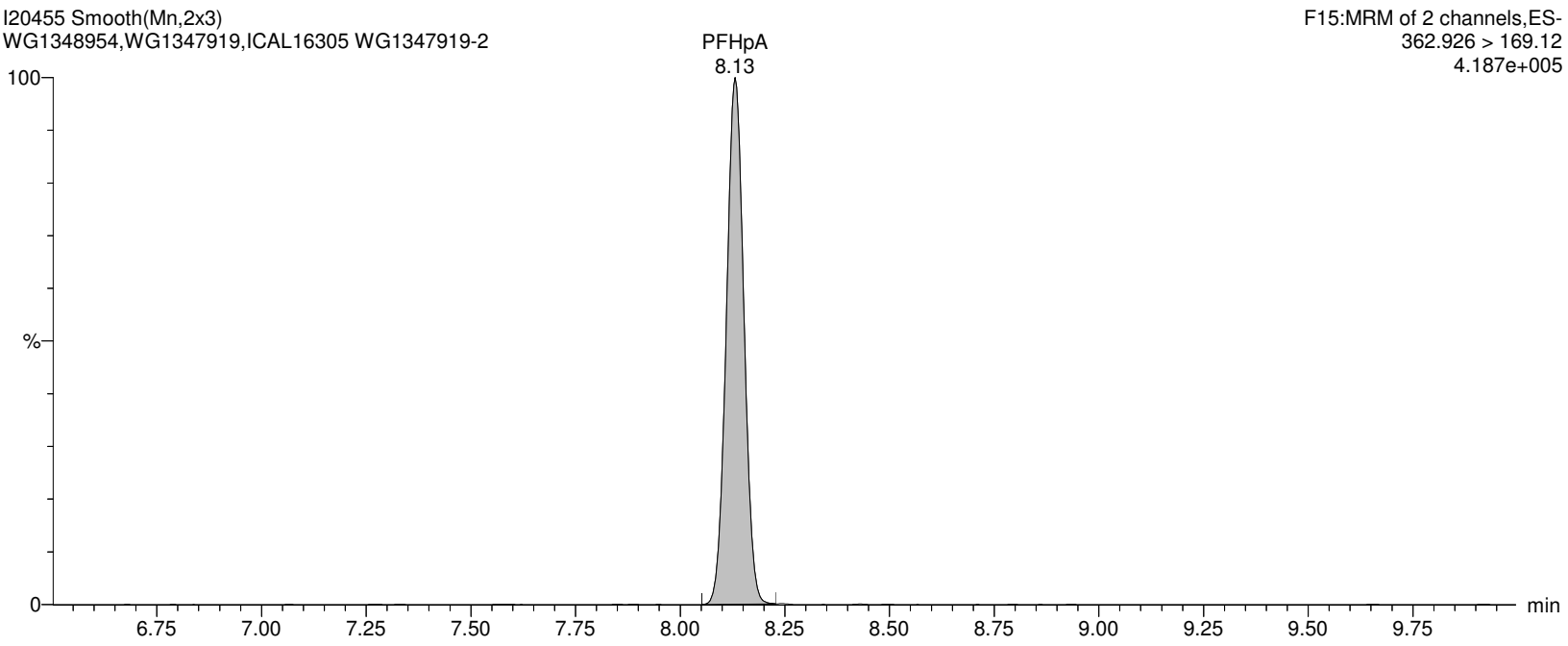
**PFHpA**





all concentration units in (ng/mL)

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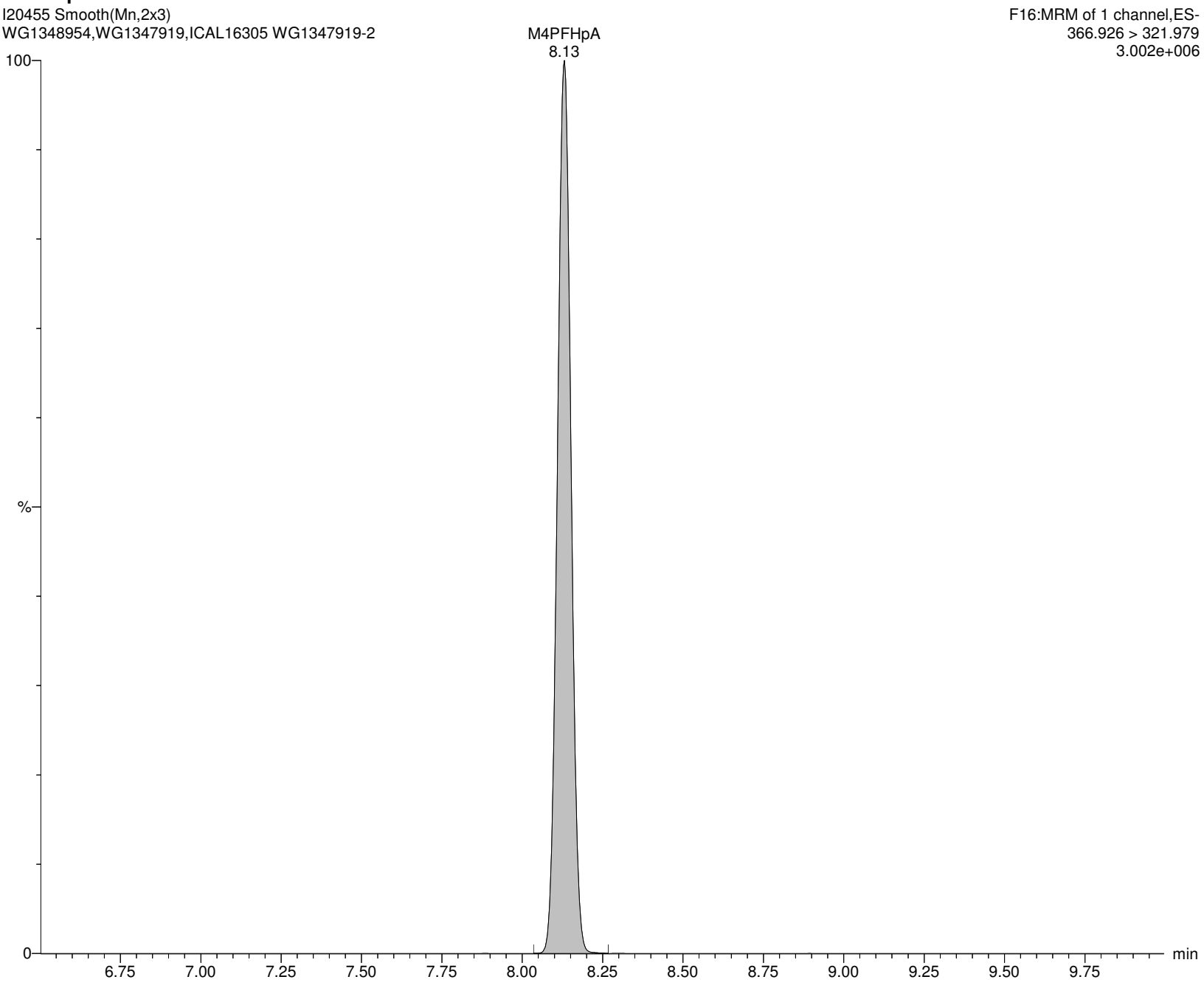
**M4PFHpA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2020\200309_537ISO.PRO\Data\WG1348954D.qld
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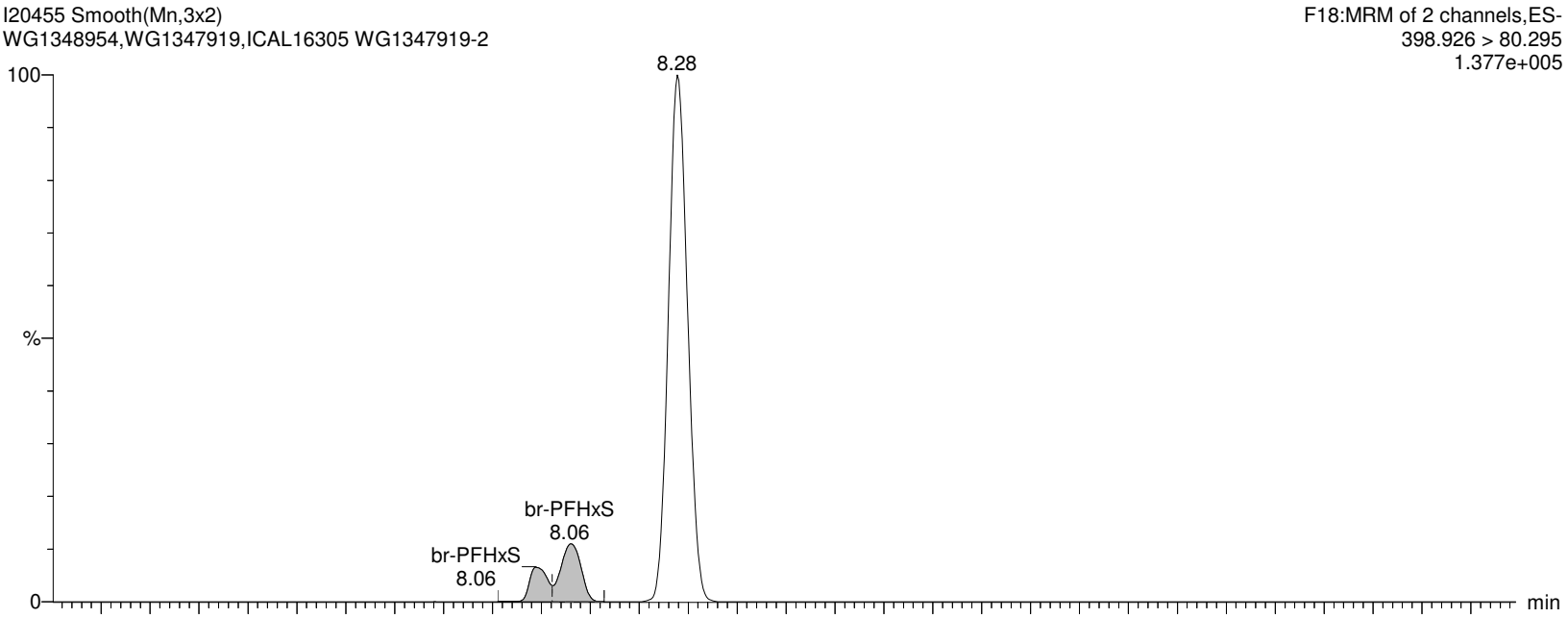
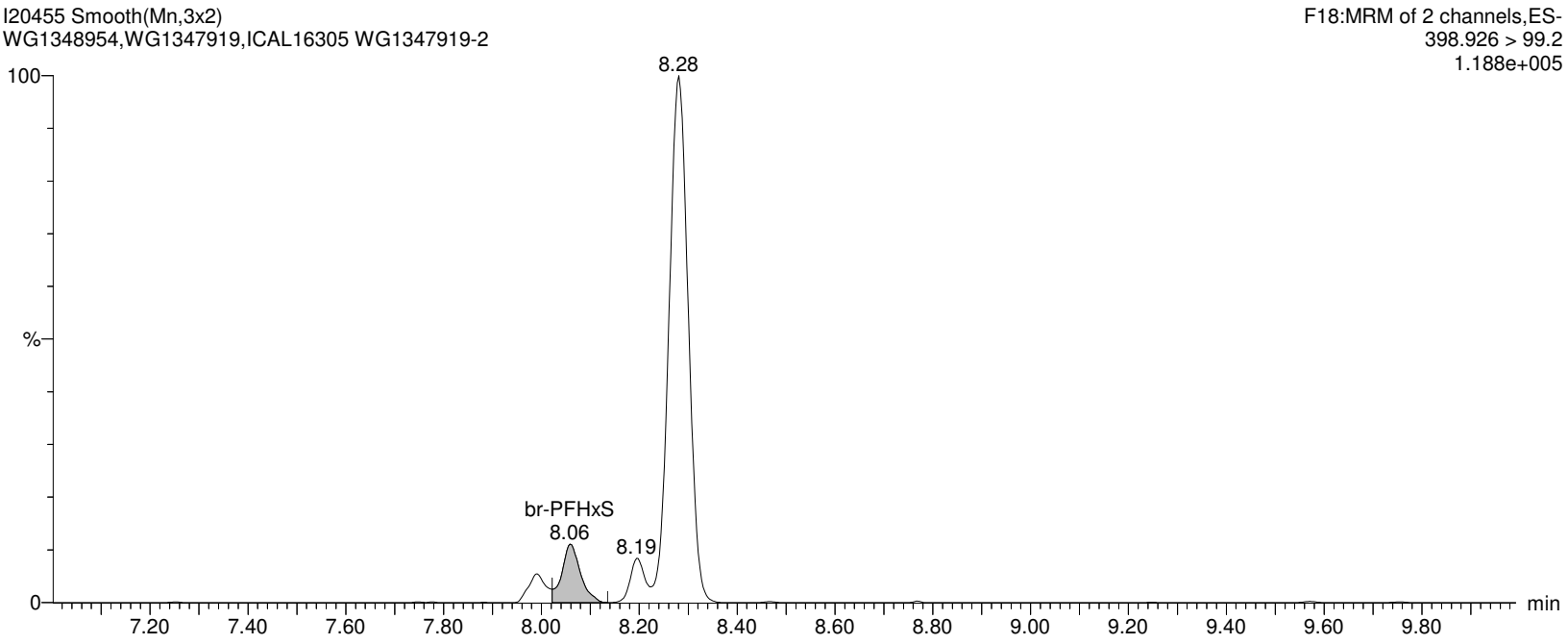
**br-PFHxS**





all concentration units in (ng/mL)

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**Inlet Method Name: C:\MassLynx\Data\2020\200309_537ISO.PRO\ACQUDB\LCMS_537_ISO_B**
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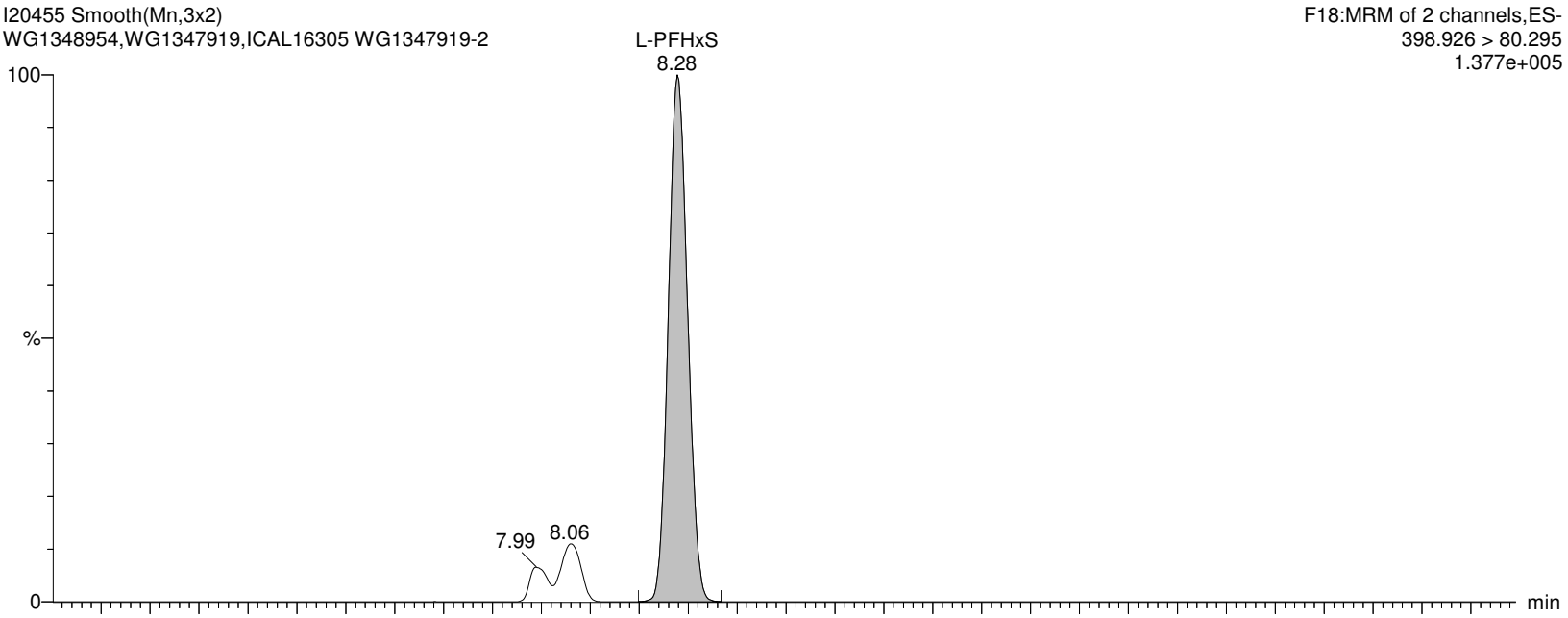
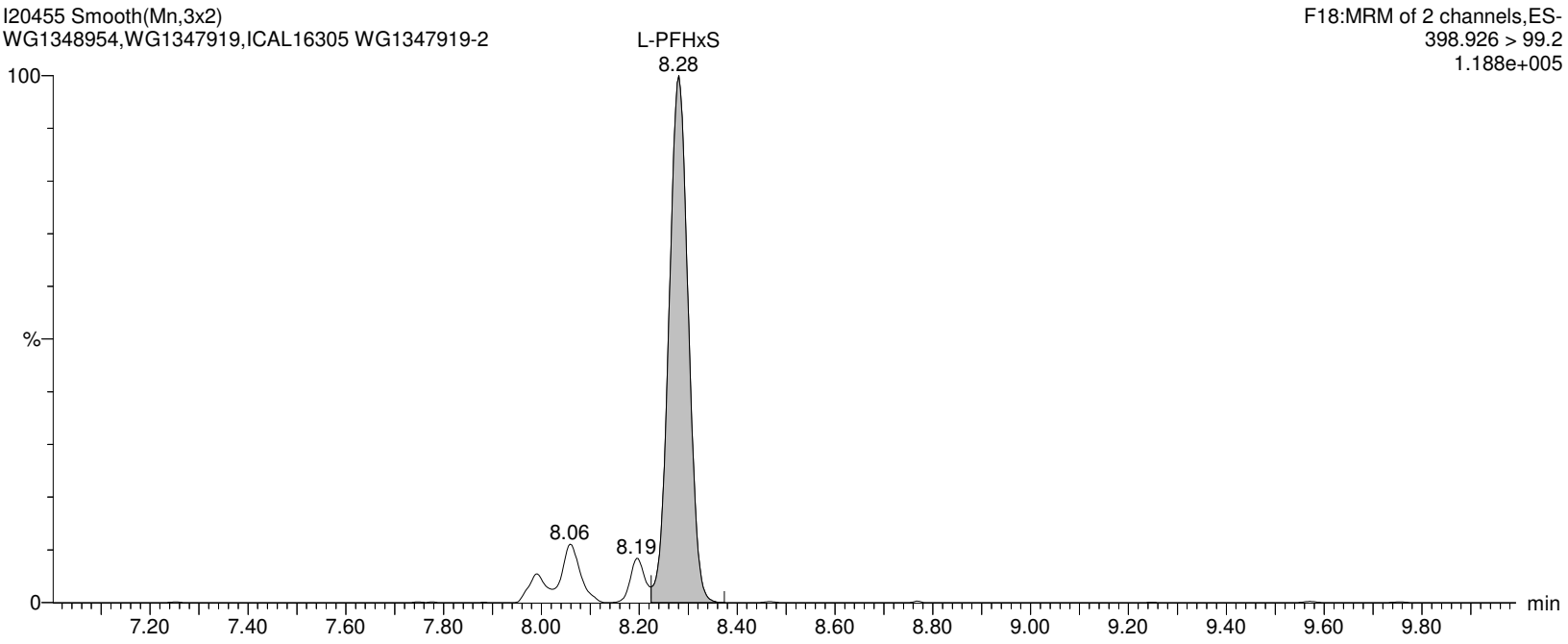
**L-PFHxS**





all concentration units in (ng/mL)

Alpha Analytical Inc.
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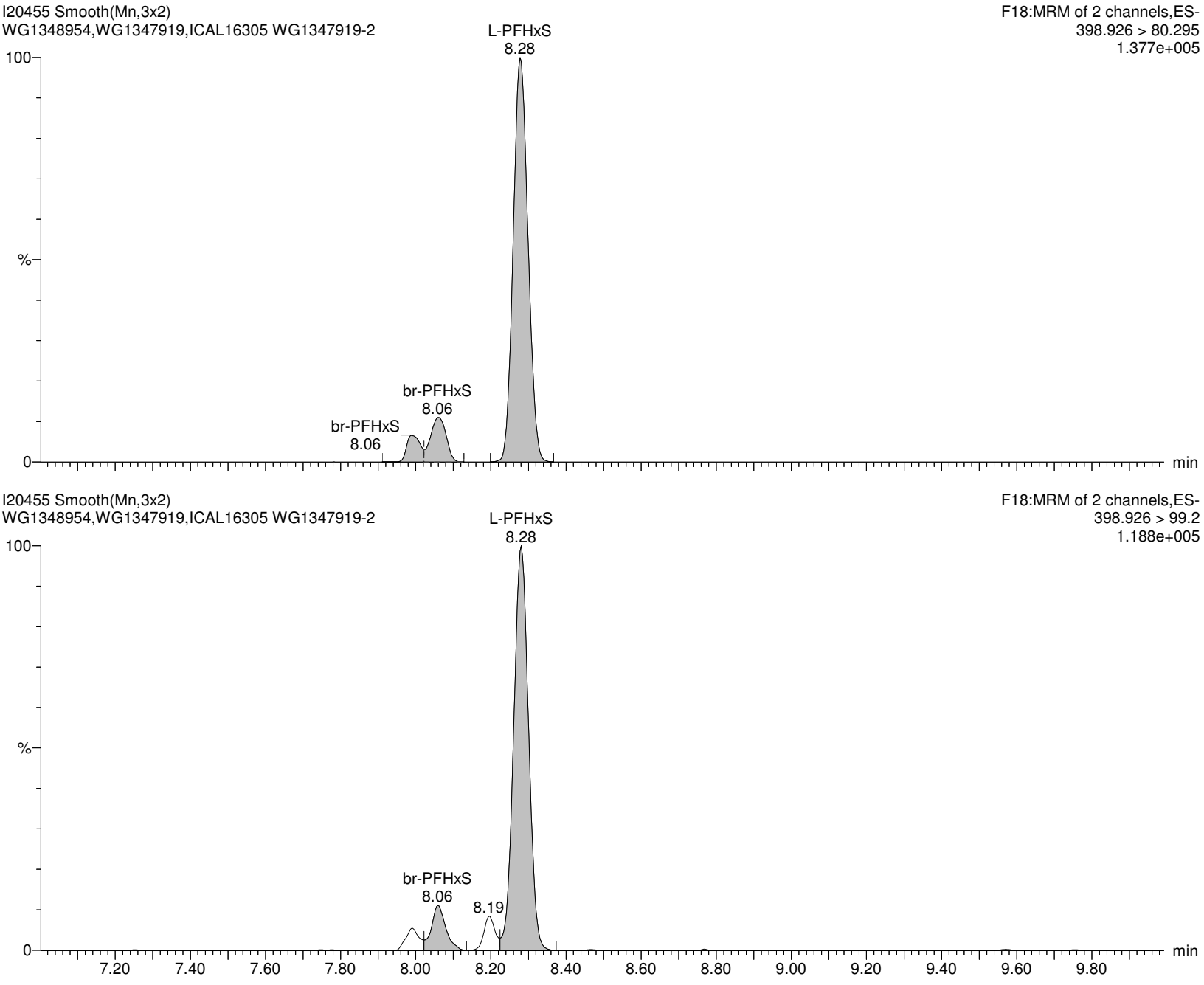
**PFHxS**





all concentration units in (ng/mL)

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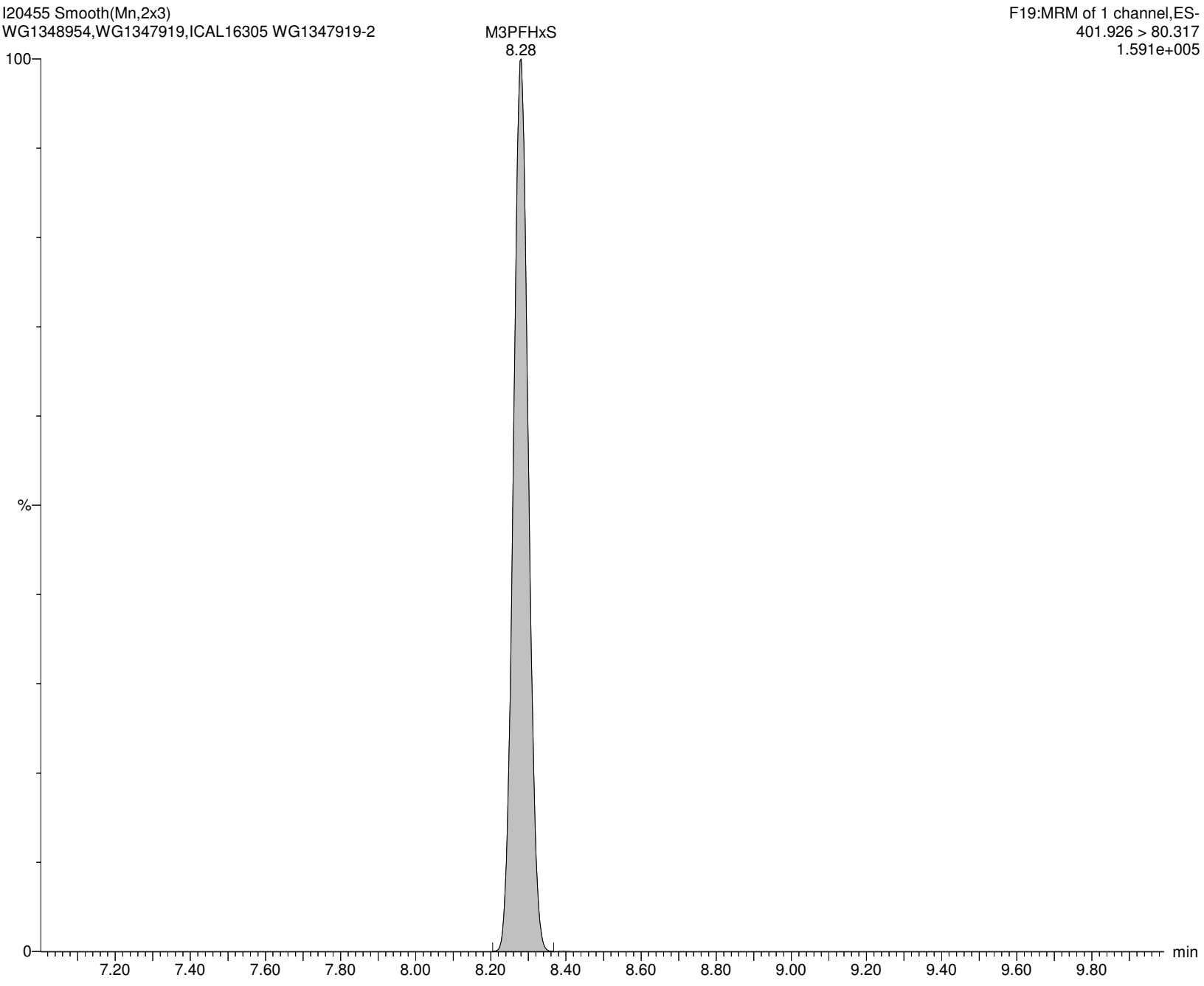
**M3PFHxS**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2020\200309_537ISO.PRO\Data\WG1348954D.qld
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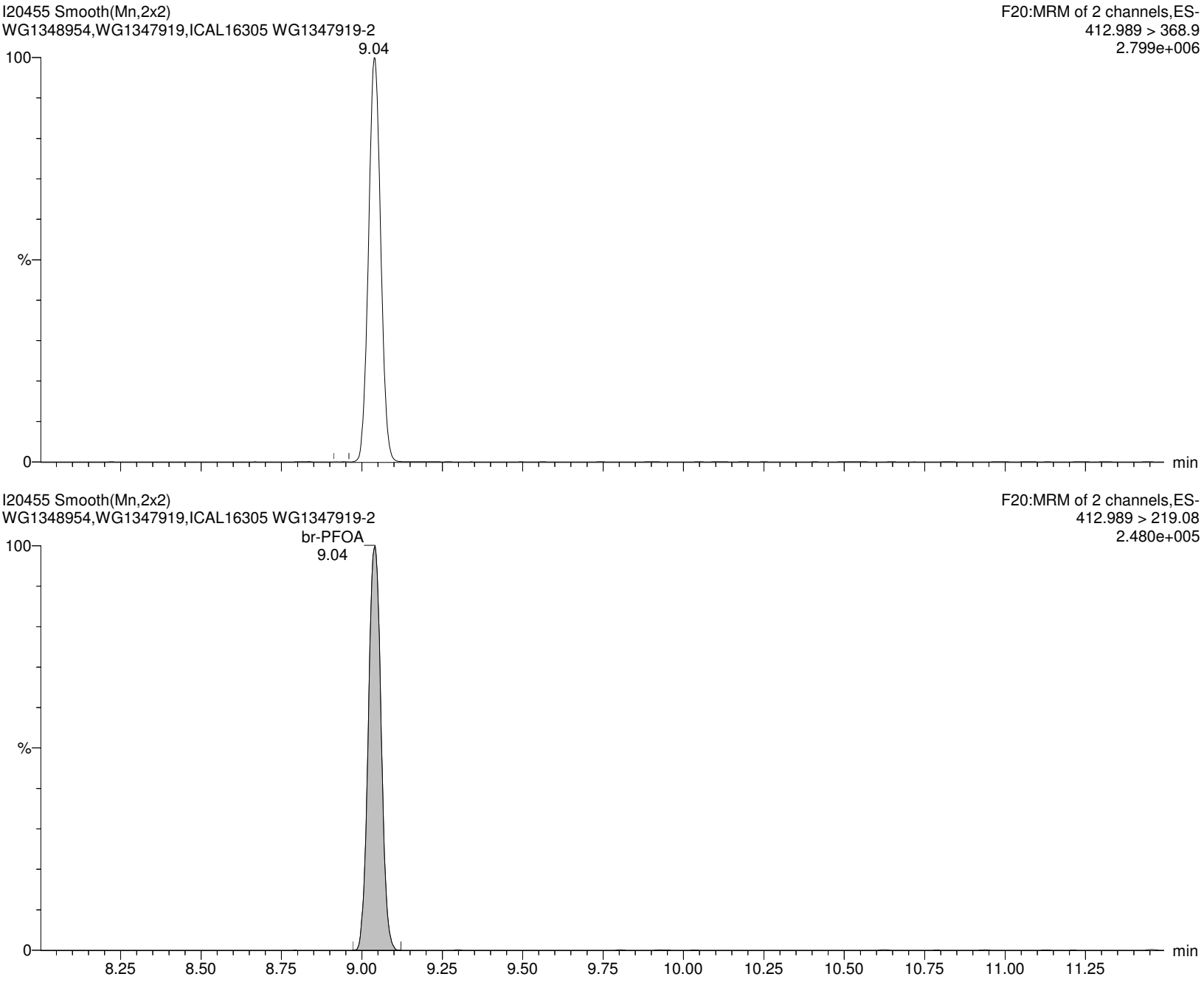



all concentration units in (ng/mL)

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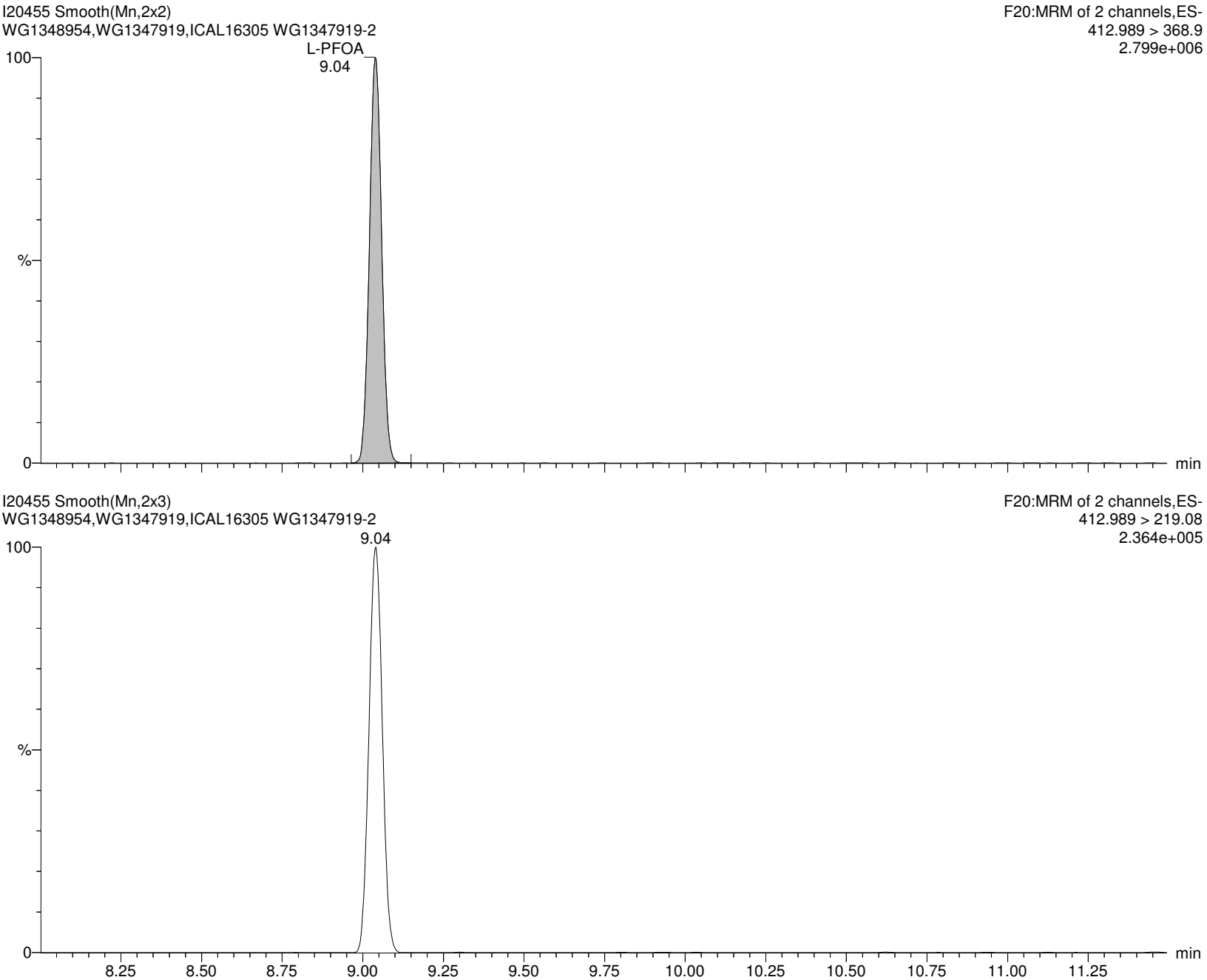



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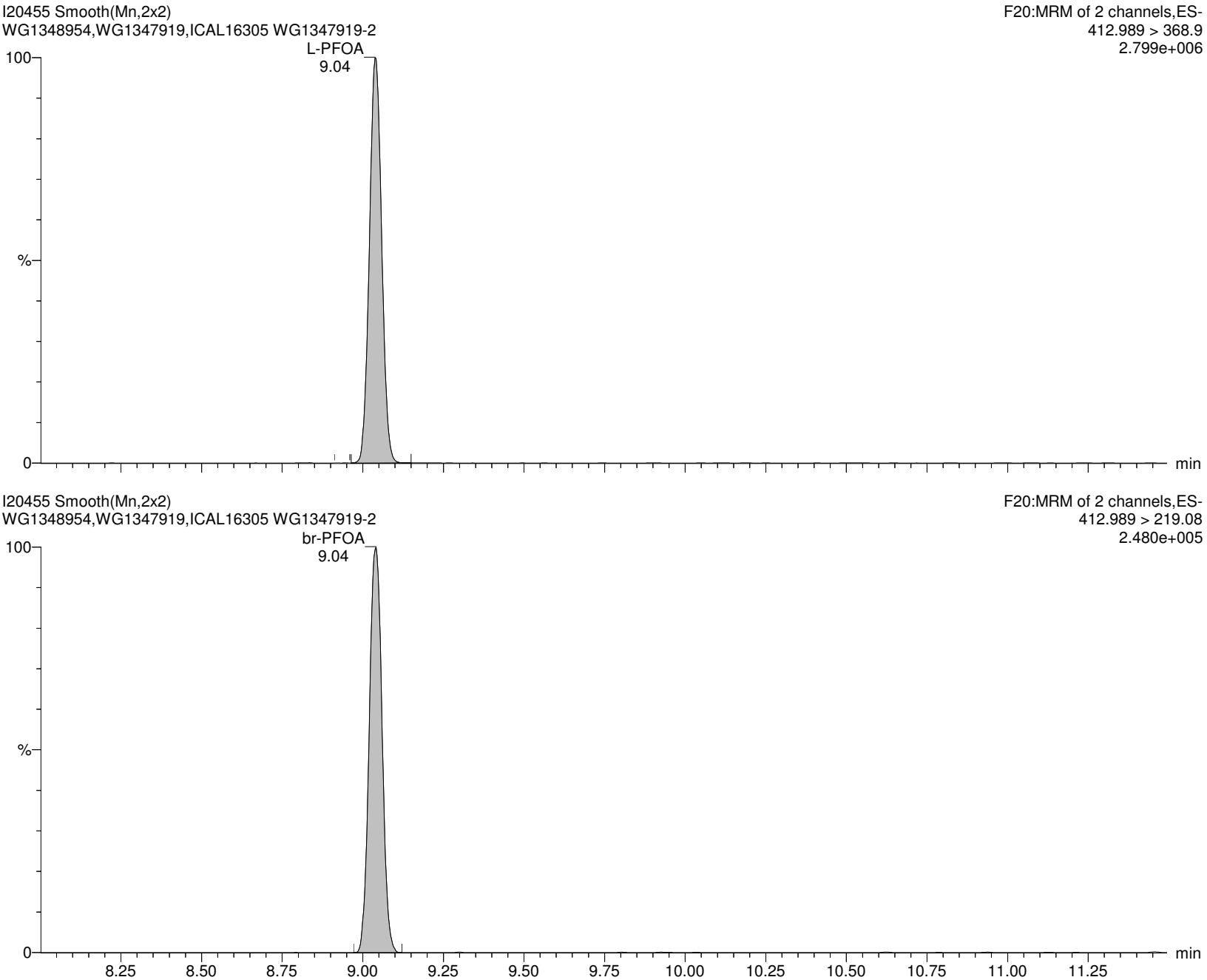



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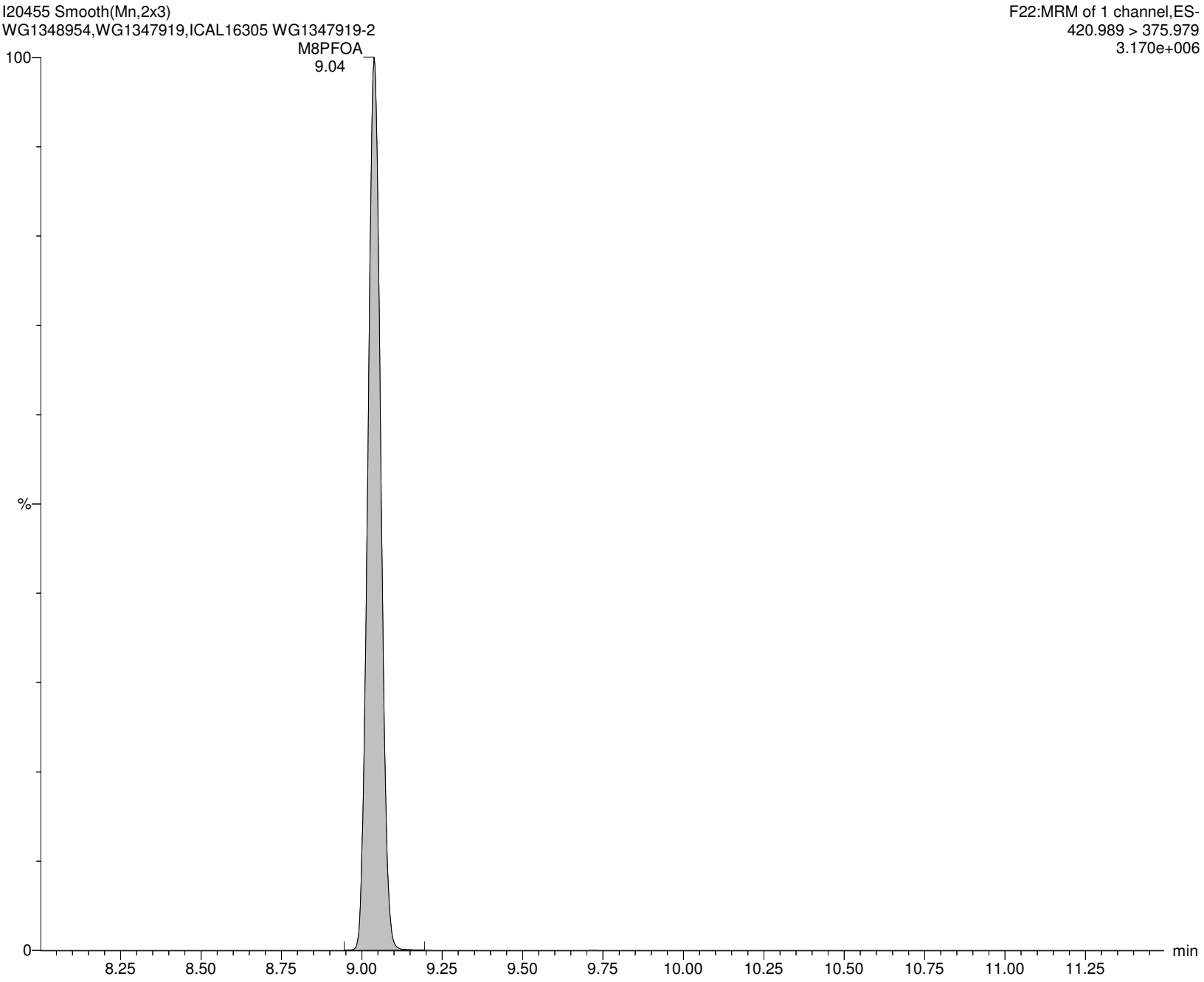
**M8PFOA**





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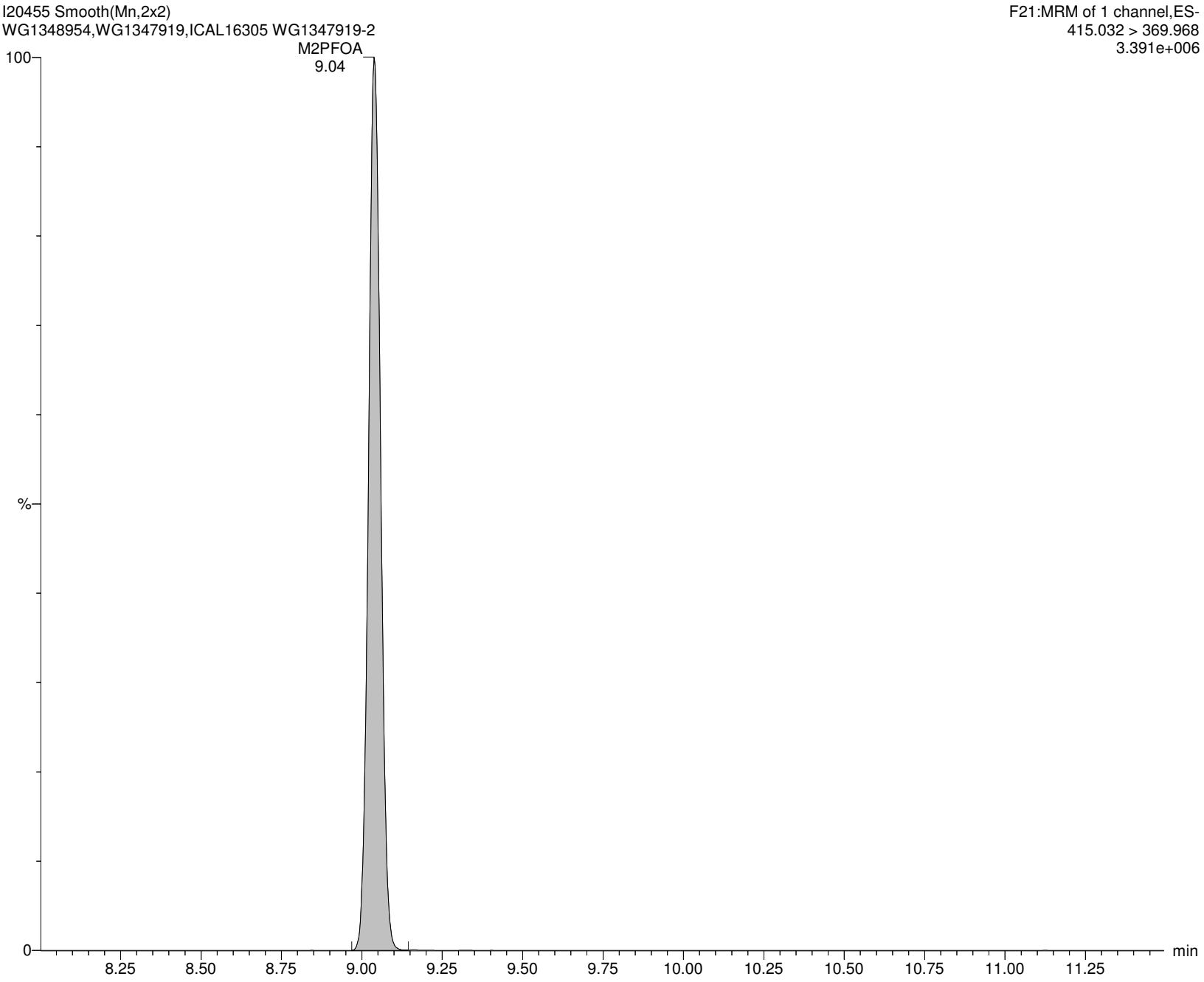



all concentration units in (ng/mL)

Alpha Analytical Inc.
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Last Altered: Wednesday, March 11, 2020 22:52:23 Eastern Daylight Time
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**Name: I20455**
**ID: WG1347919-2**
**Date: 11-Mar-2020**
**Time: 02:54:13**
**Description: WG1348954,WG1347919,ICAL16305**
**User: LCMS02:RS**
**Vial: 2:A,8**
**Instrument: XEVO-TQSmicro#QEB0050**
**Inlet Method Name: C:\MassLynx\Data\2020\200309_537ISO.PRO\ACQUDB\LCMS_537_ISO_B**
**Tune Method Name: C:\MassLynx\Data\2020\200309_537ISO.PRO\ACQUDB\181009_TUNE.IPR**
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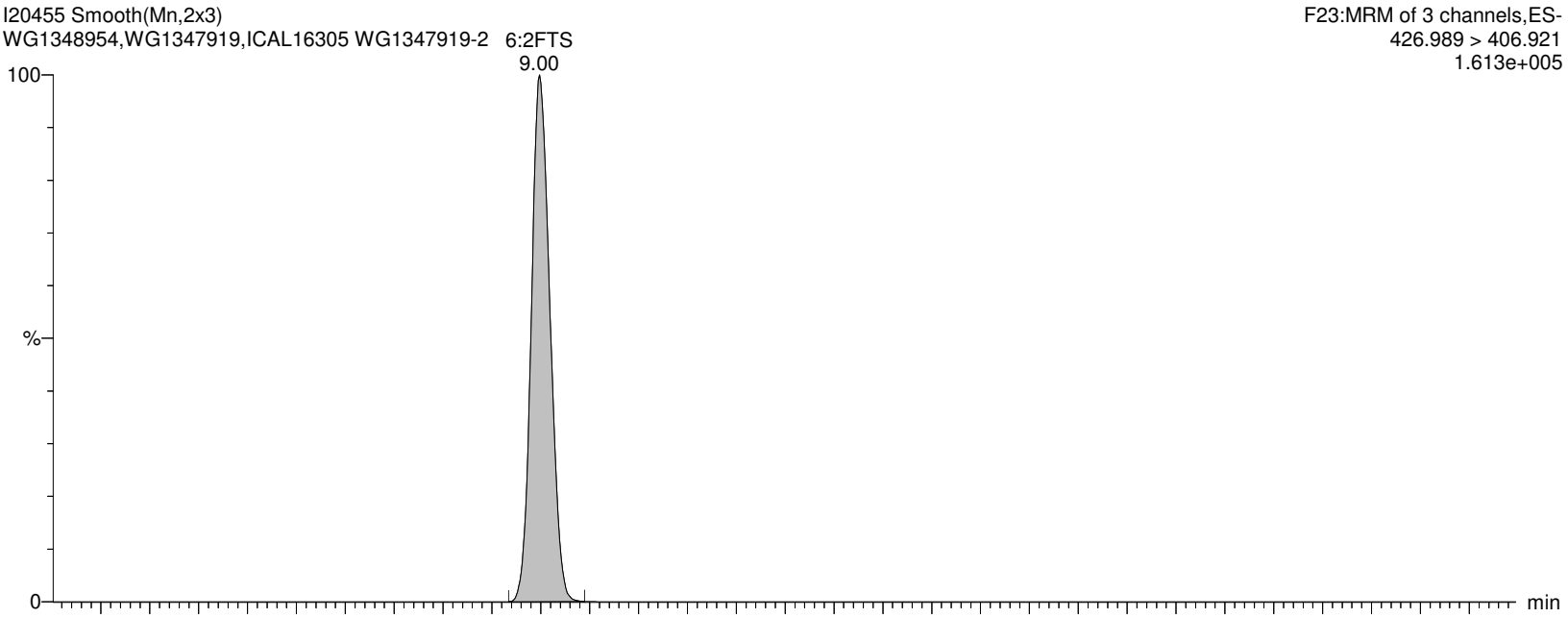
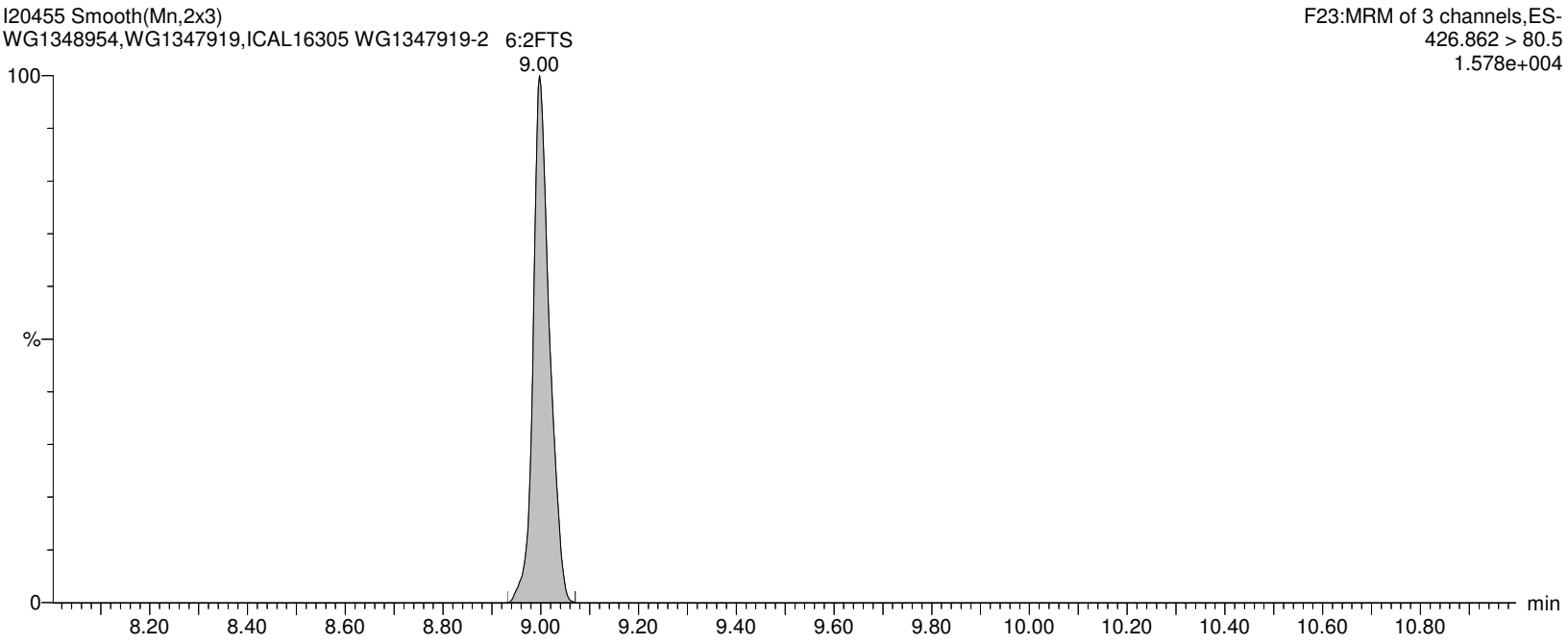
**6:2FTS**





all concentration units in (ng/mL)

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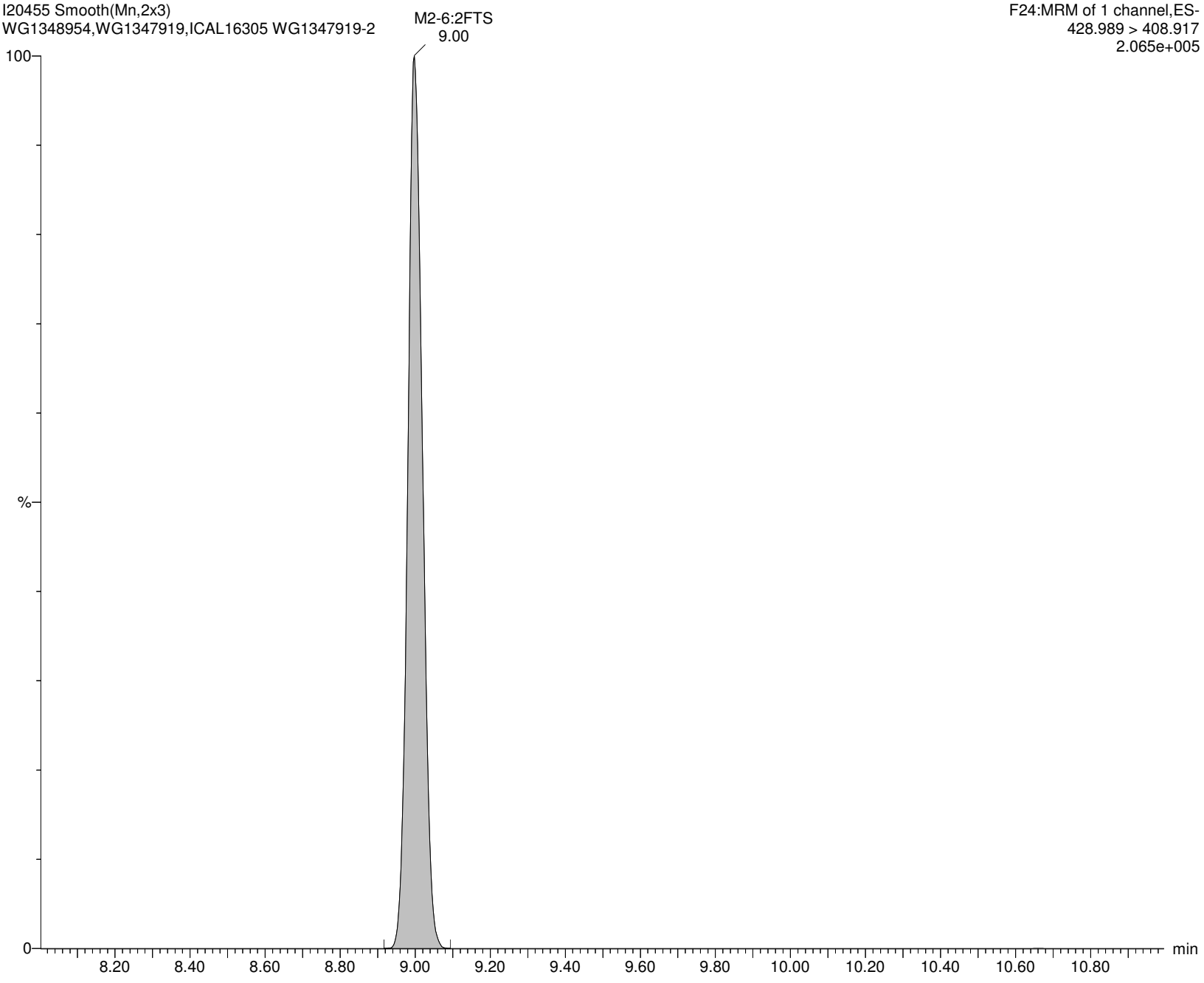
**M2-6:2FTS**





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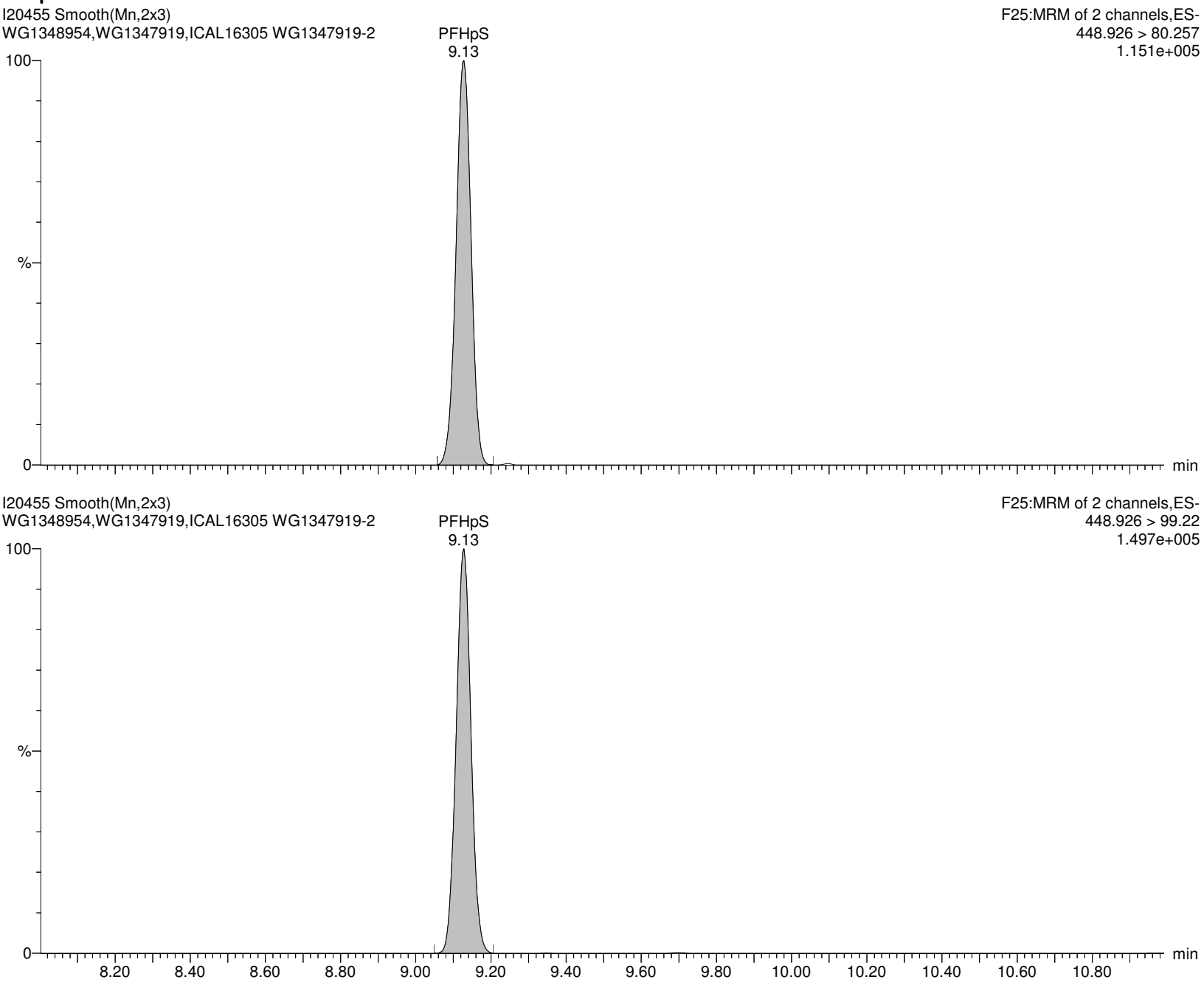



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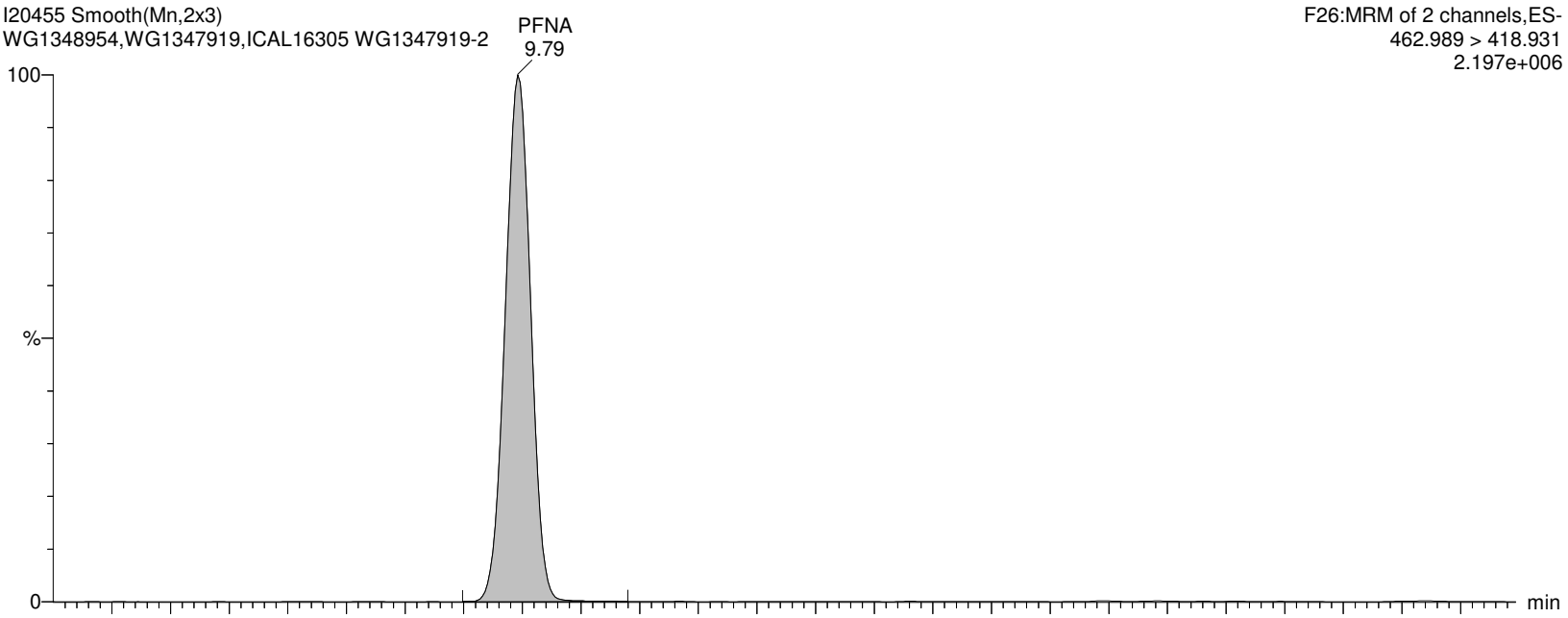
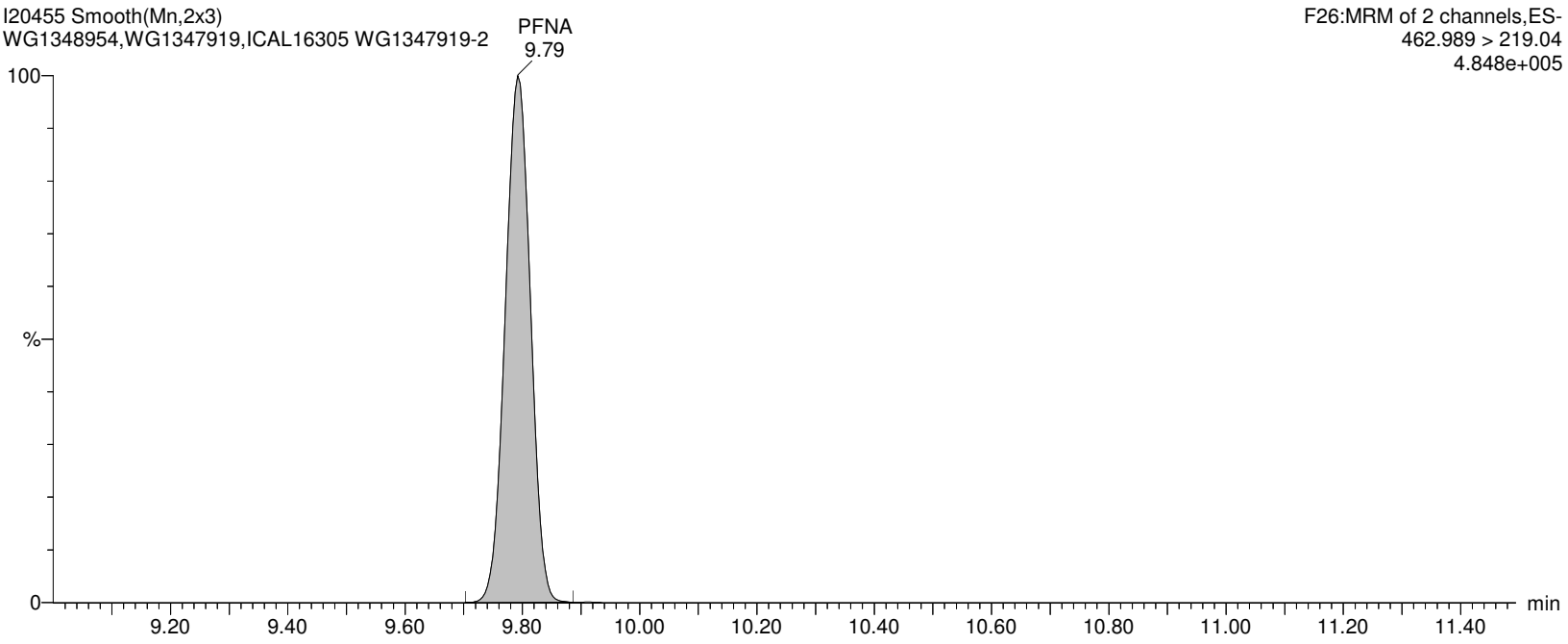
**PFNA**





all concentration units in (ng/mL)

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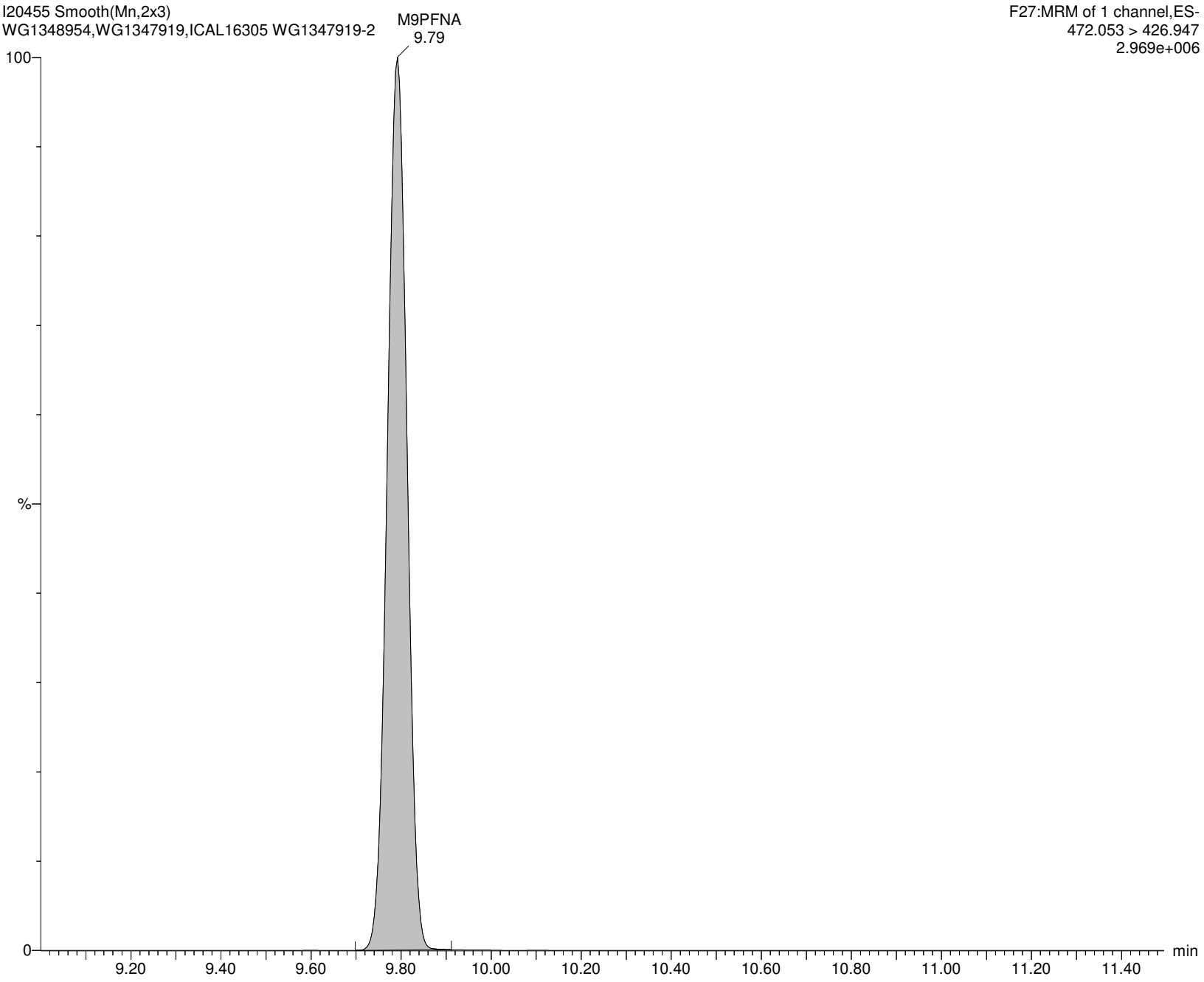



all concentration units in (ng/mL)

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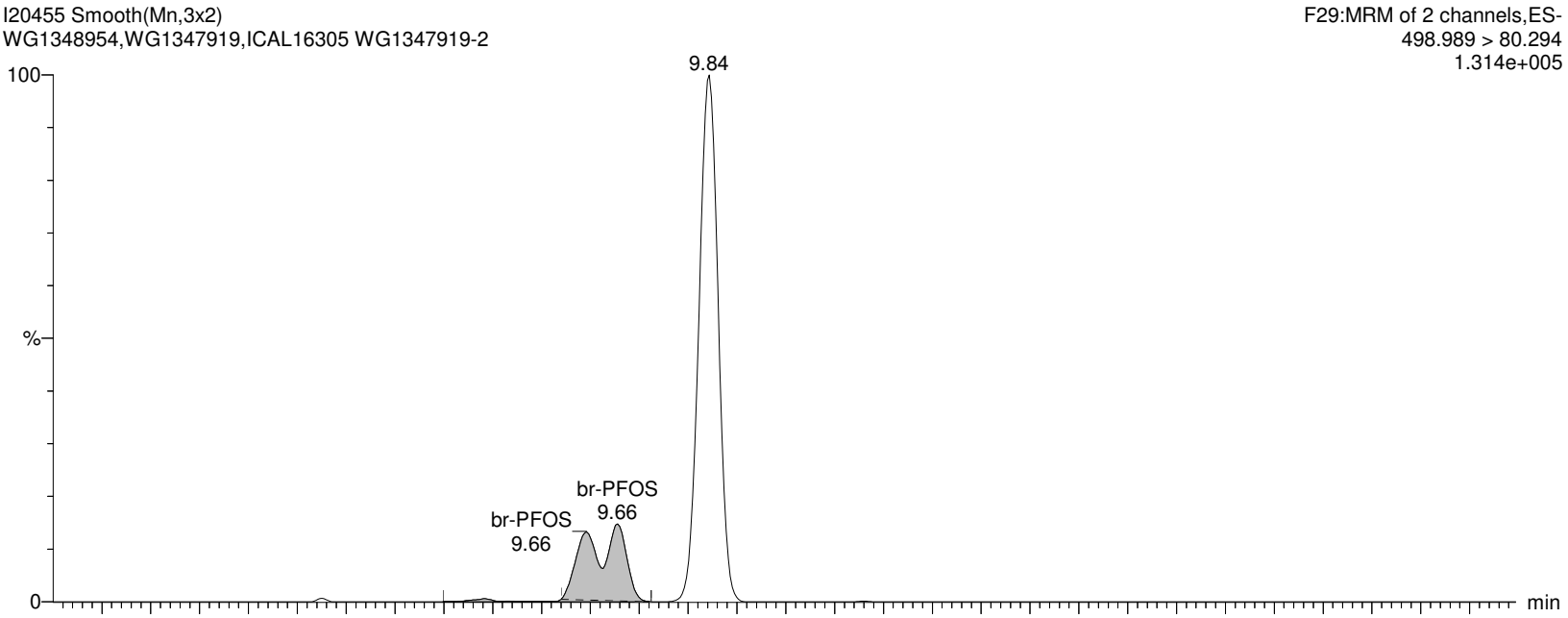


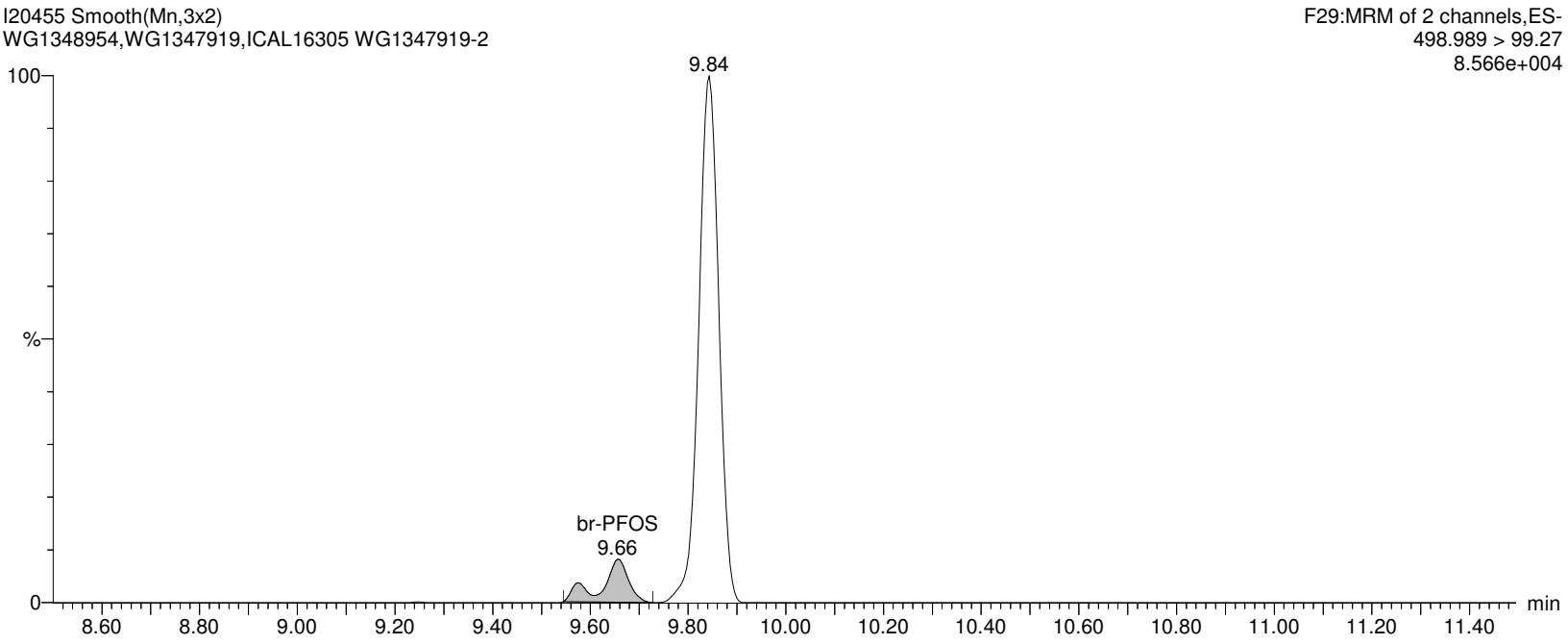



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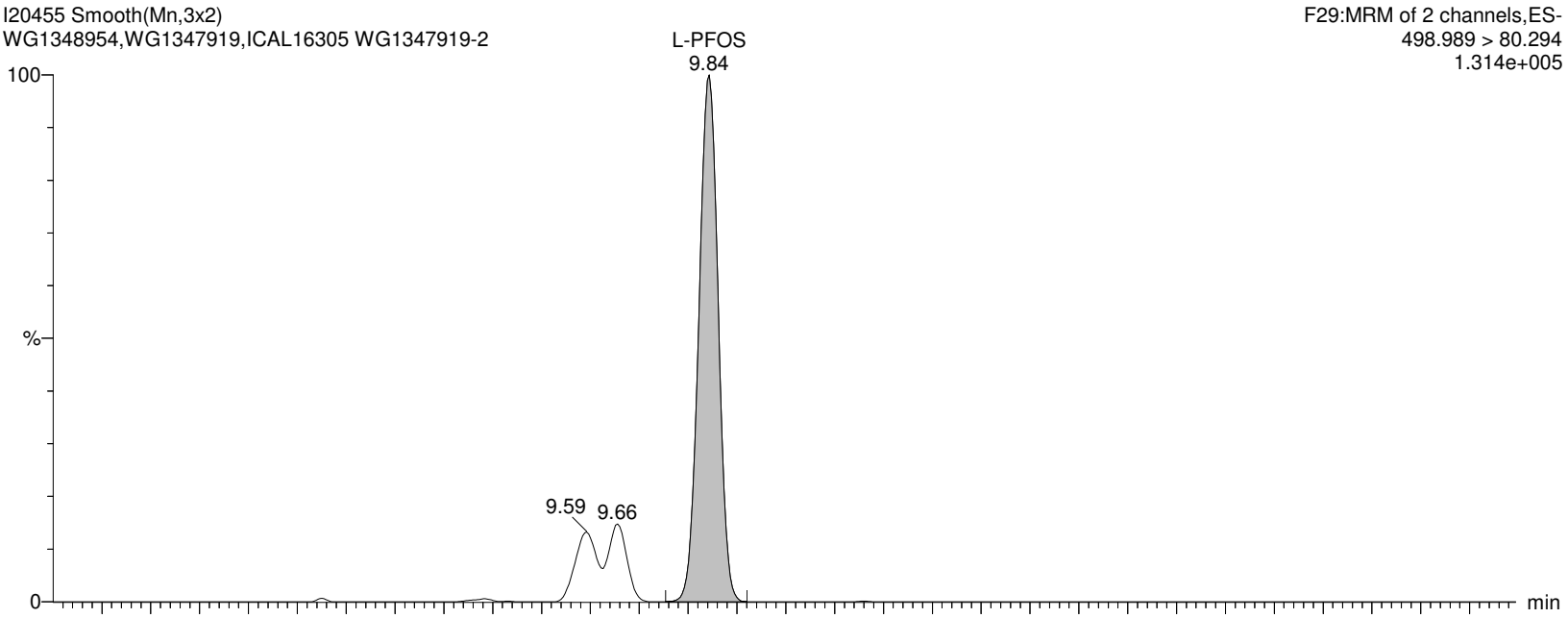
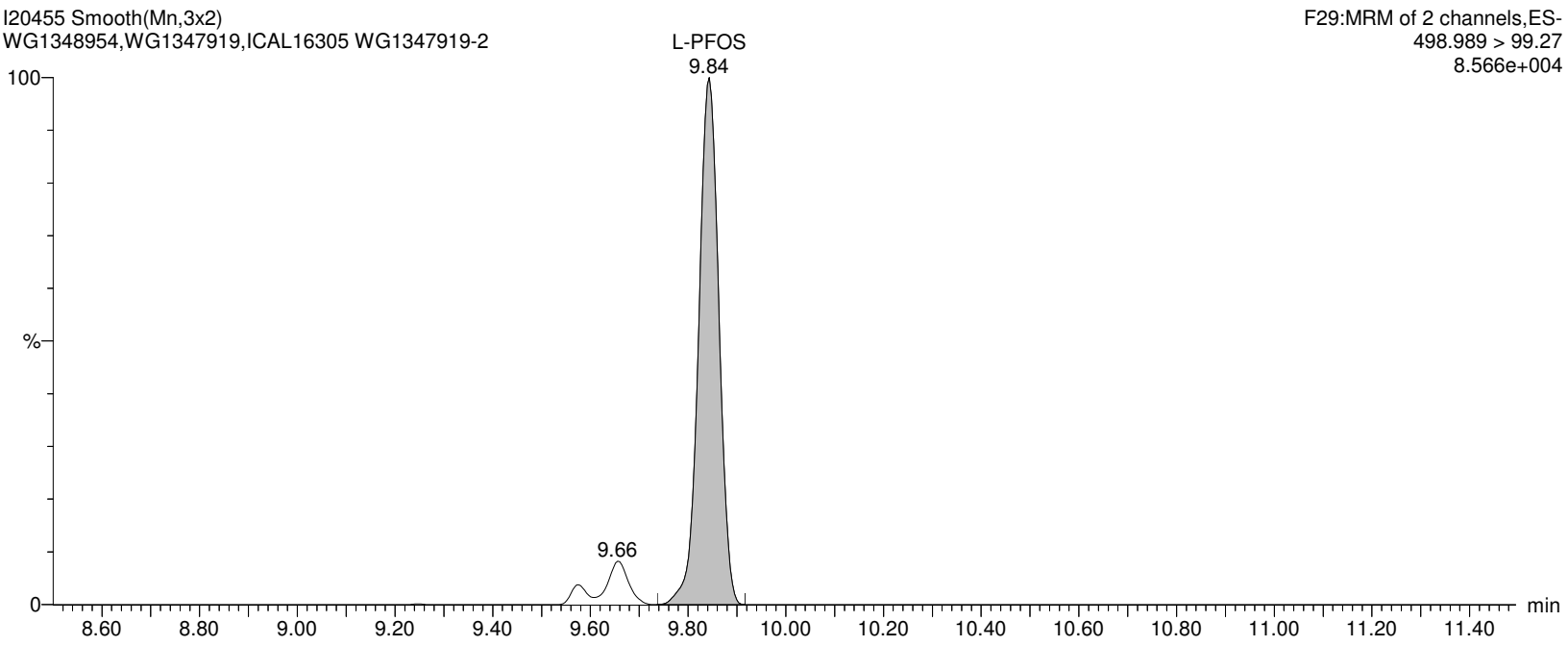
**L-PFOS**





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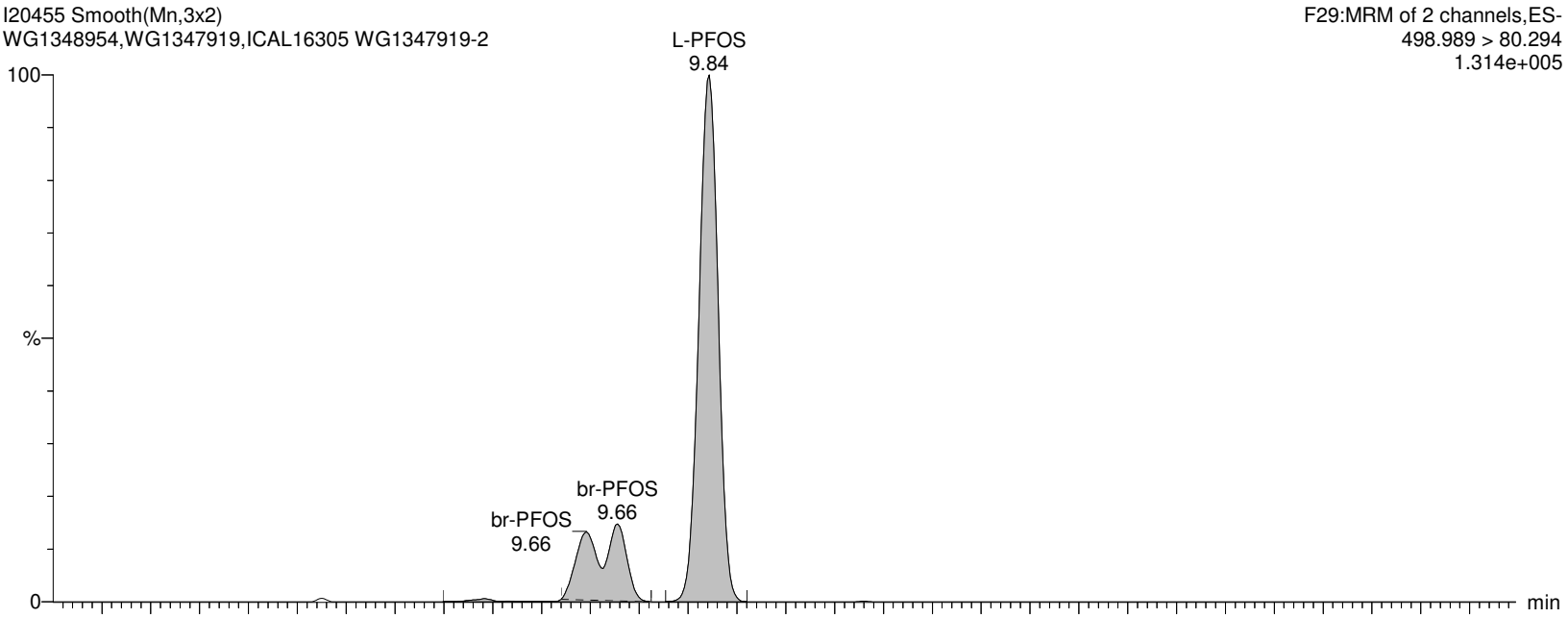
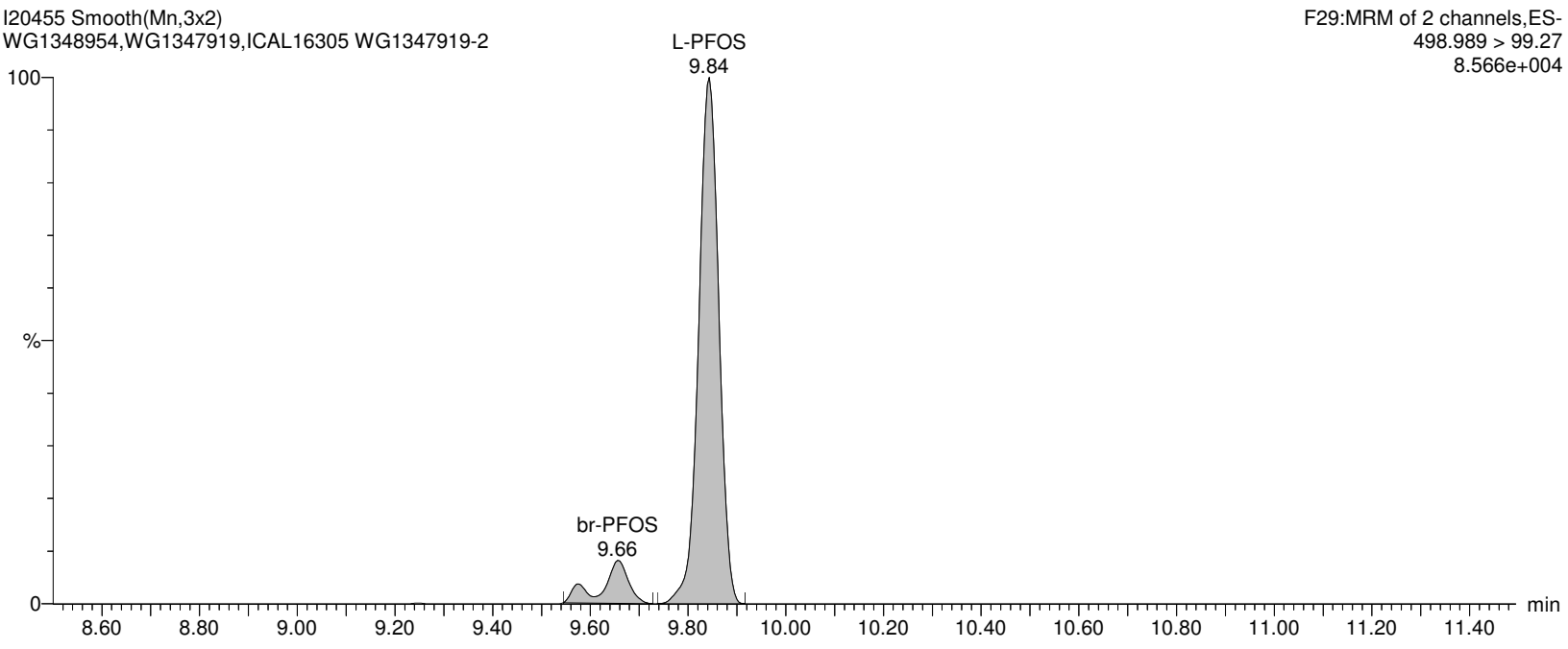
**PFOS**





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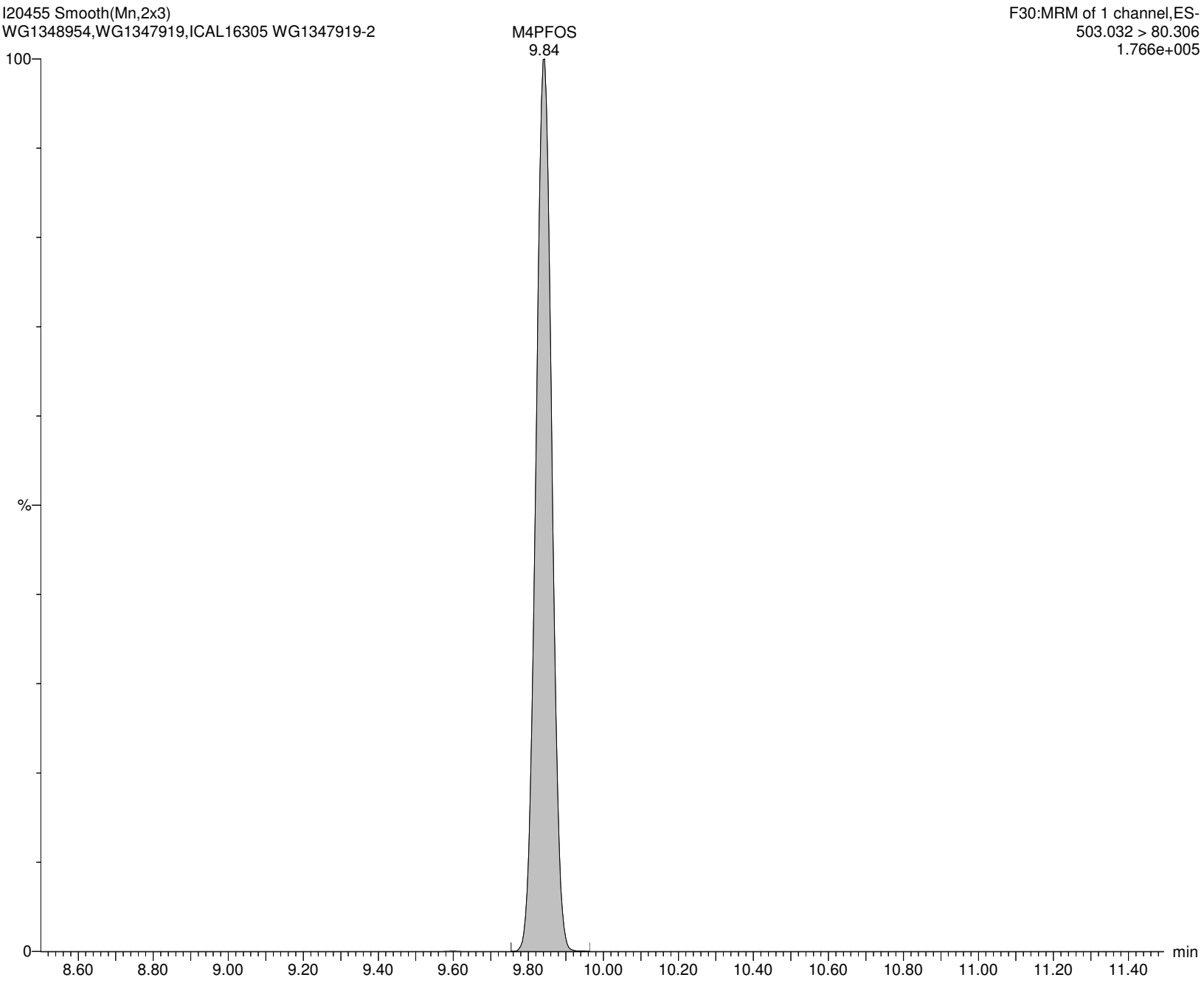



all concentration units in (ng/mL)

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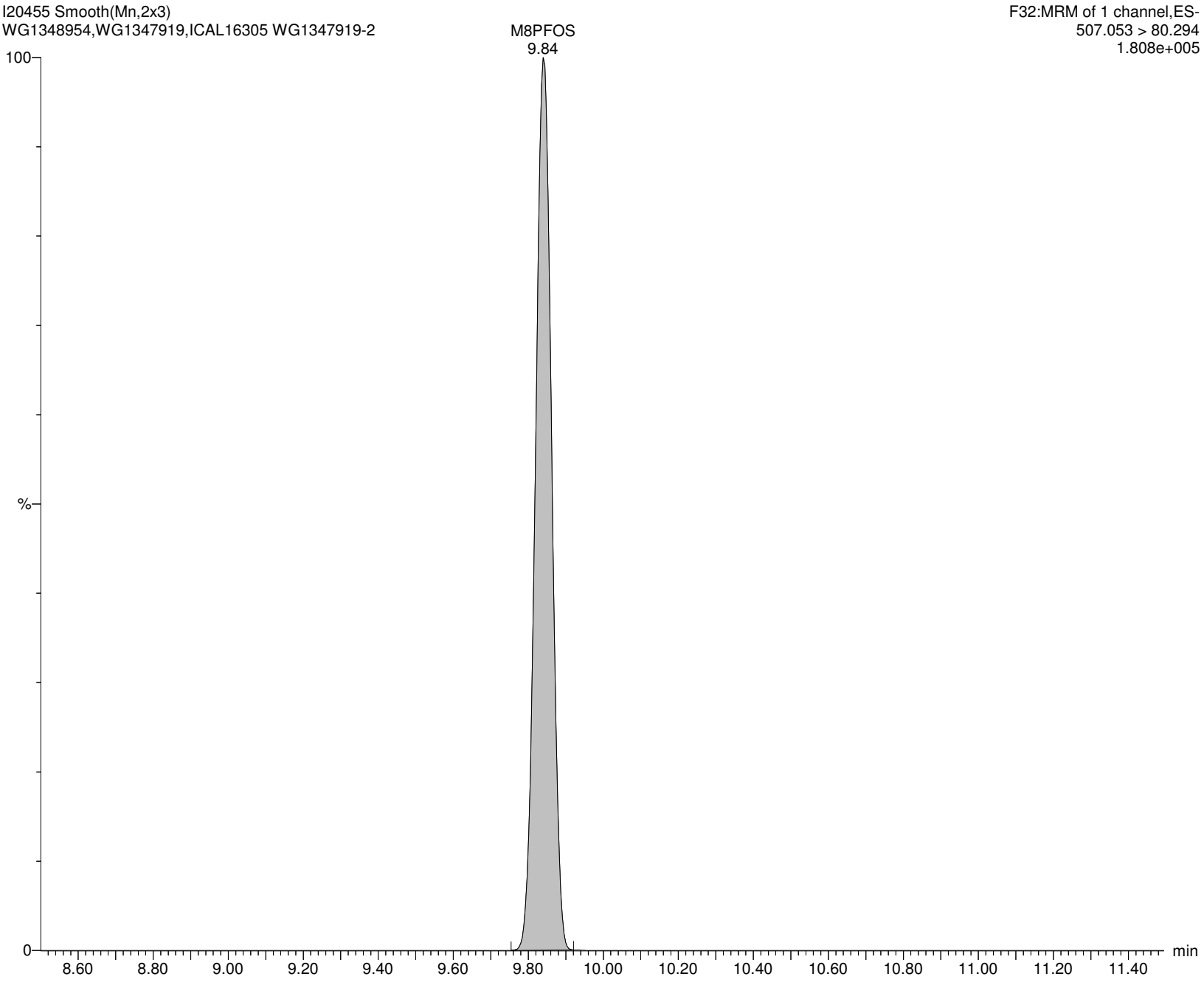
**M8PFOS**





all concentration units in (ng/mL)

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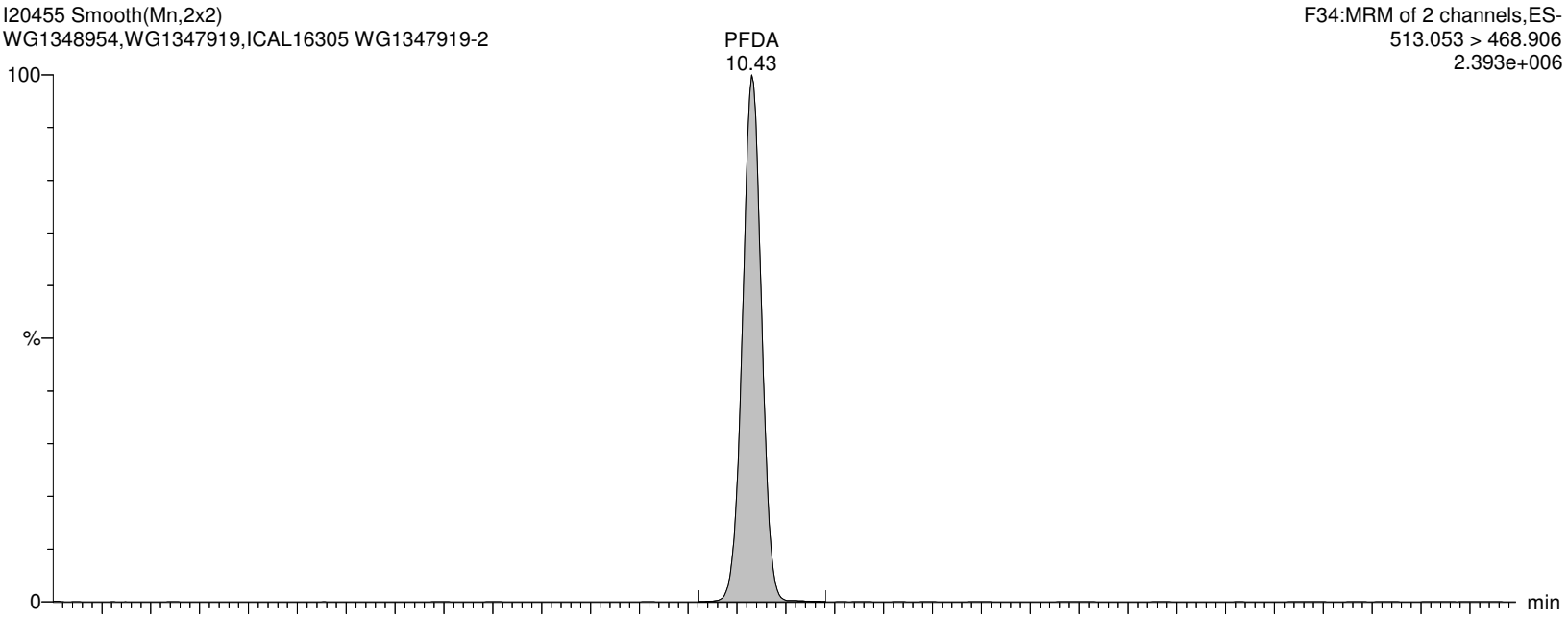


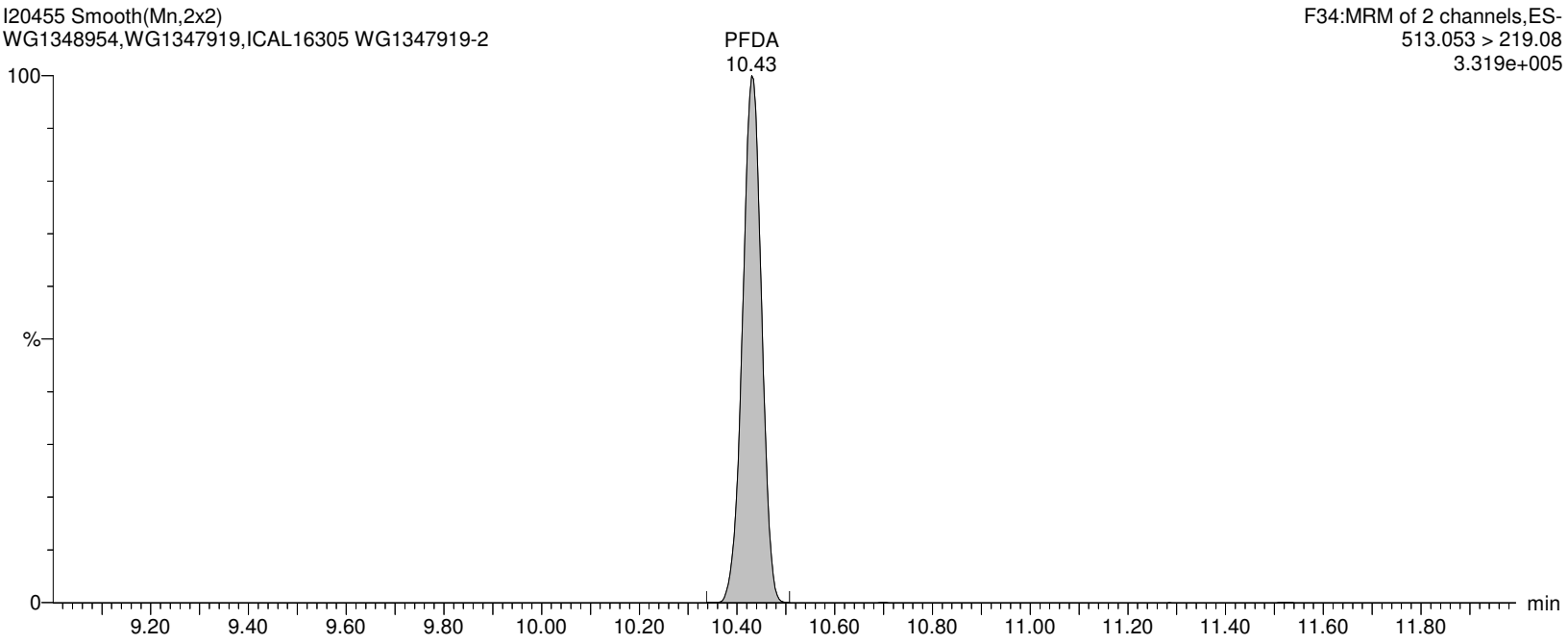



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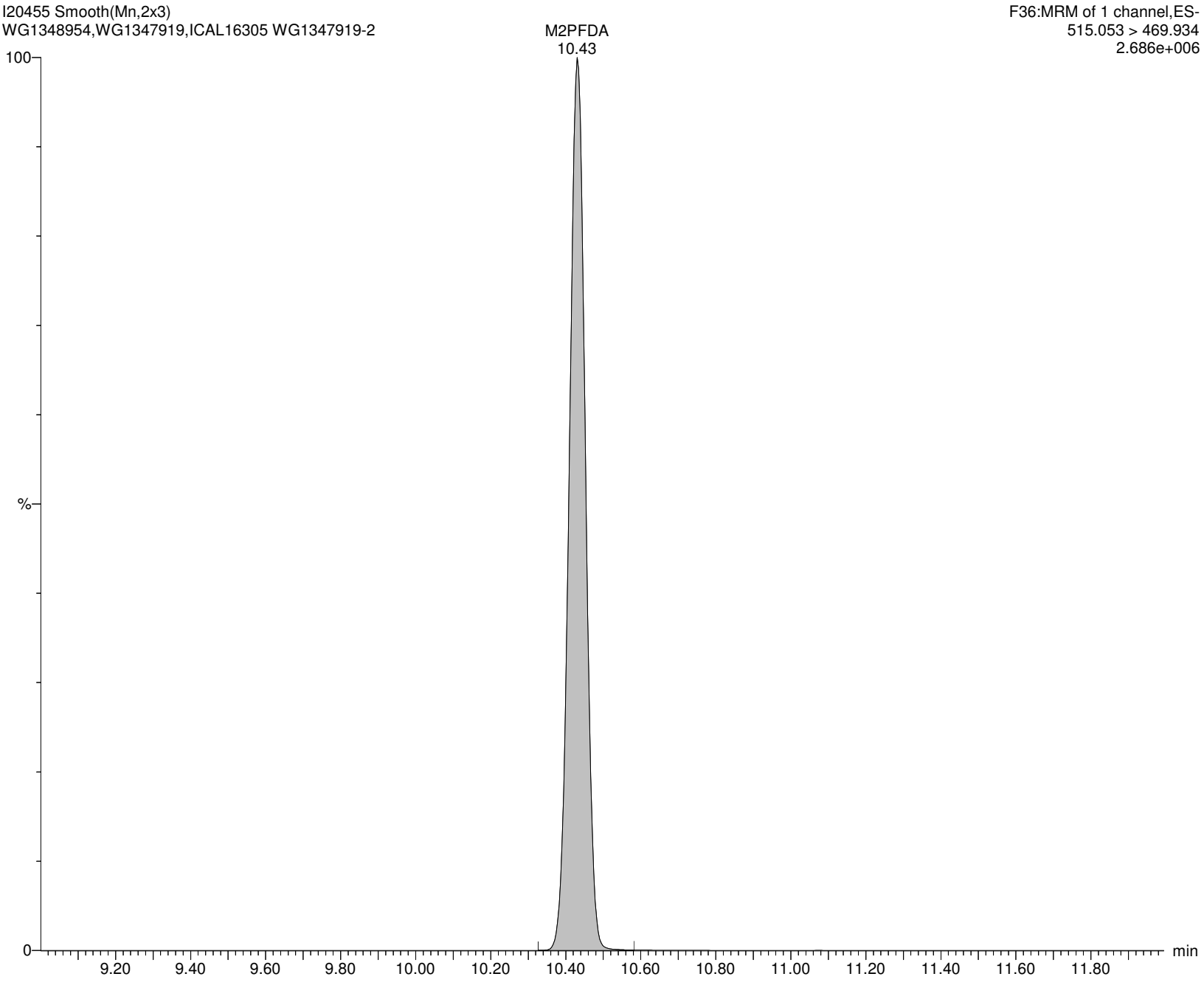



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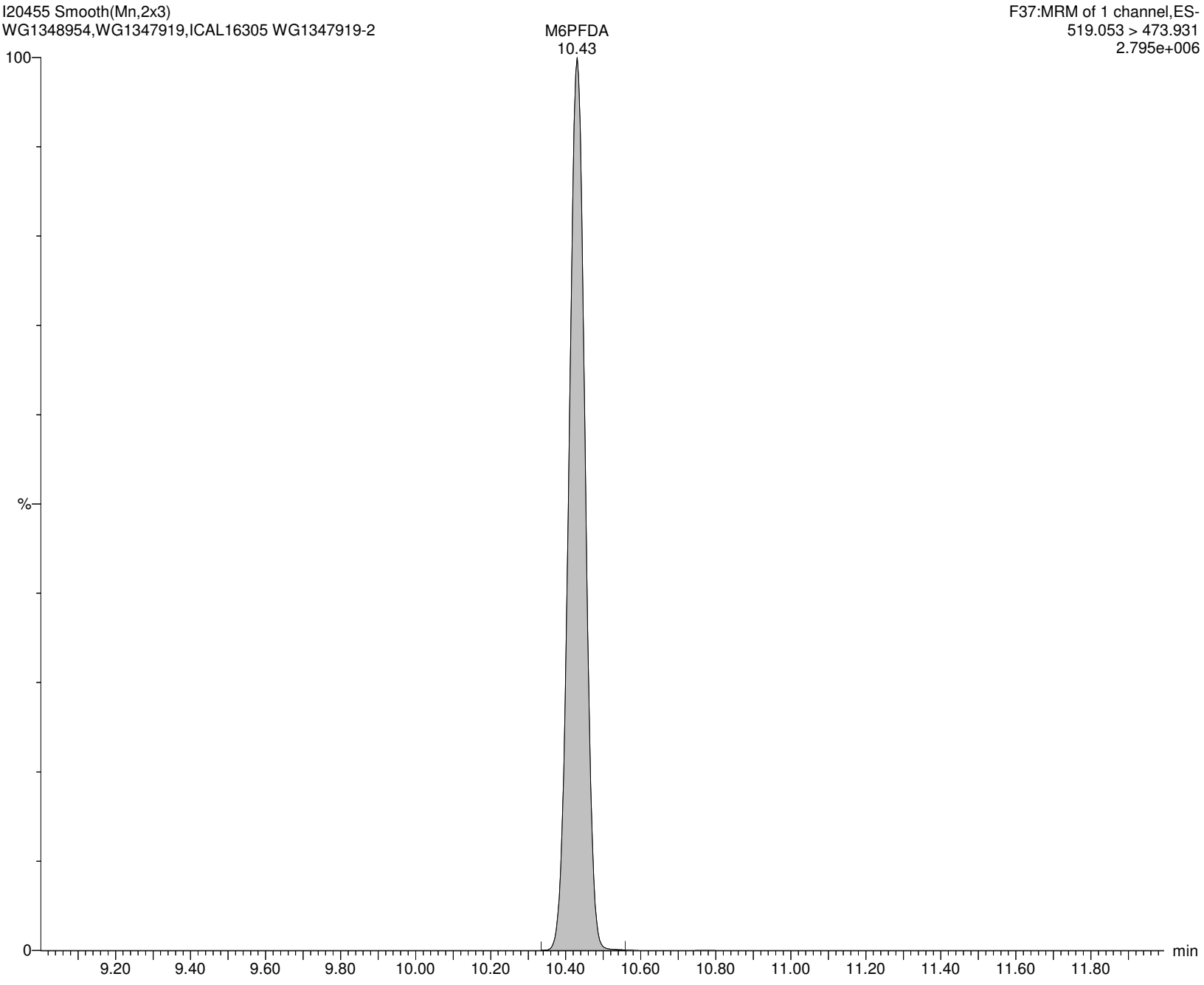



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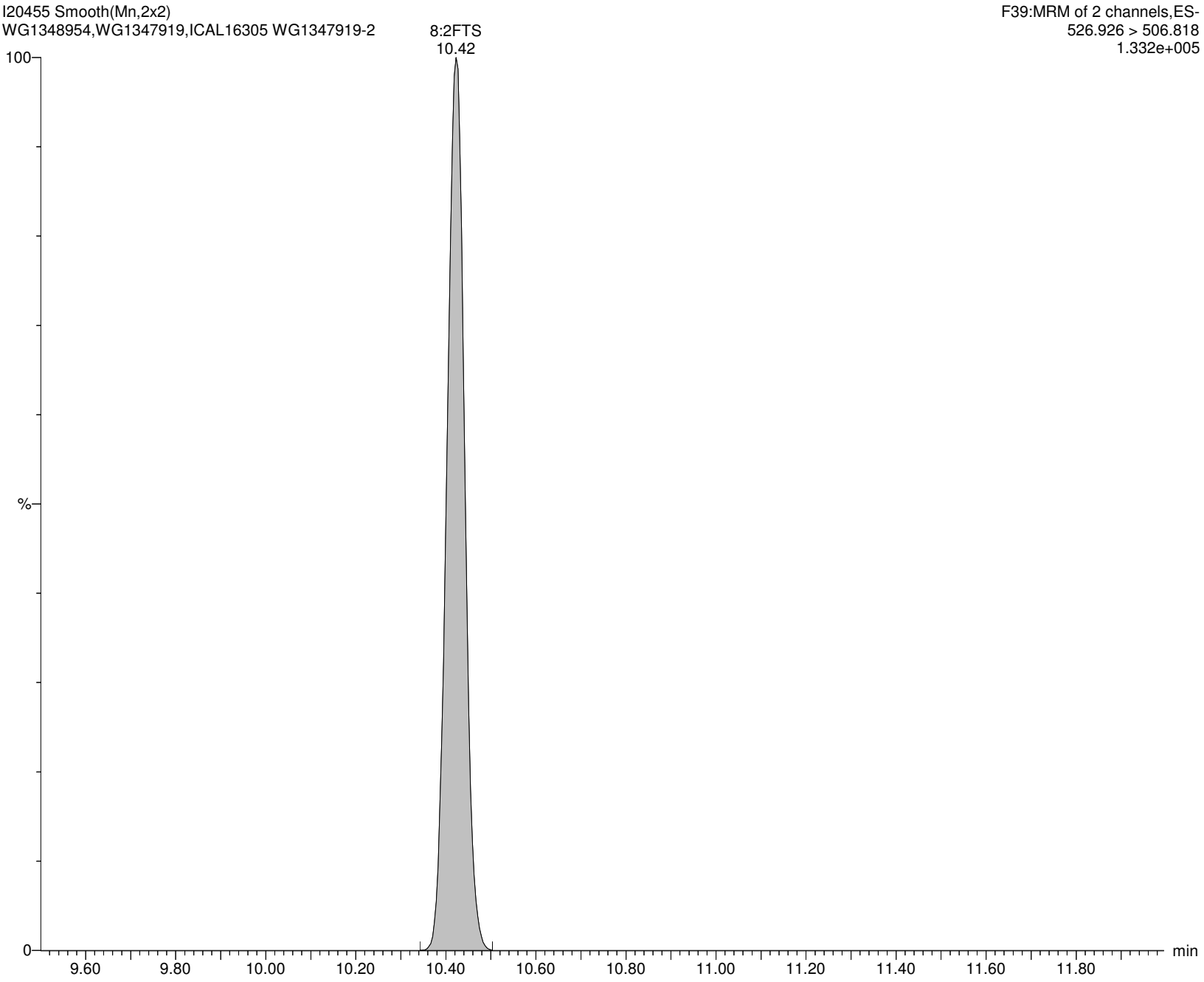
**8:2FTS**





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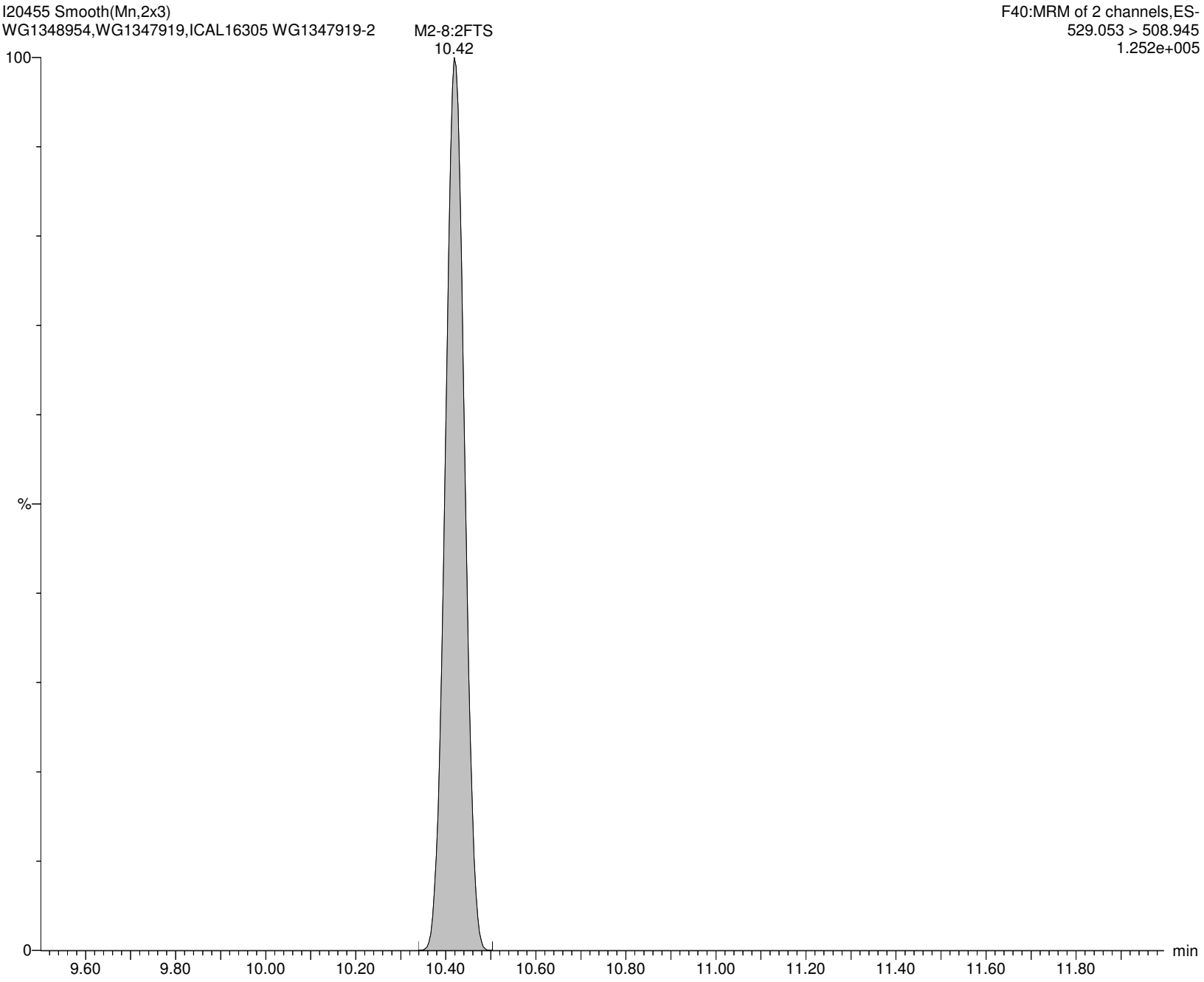
**M2-8:2FTS**





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**Instrument: XEVO-TQSmicro#QEB0050**
**Inlet Method Name: C:\MassLynx\Data\2020\200309_537ISO.PRO\ACQUDB\LCMS_537_ISO_B**
**Tune Method Name: C:\MassLynx\Data\2020\200309_537ISO.PRO\ACQUDB\181009_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\2020\200309_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

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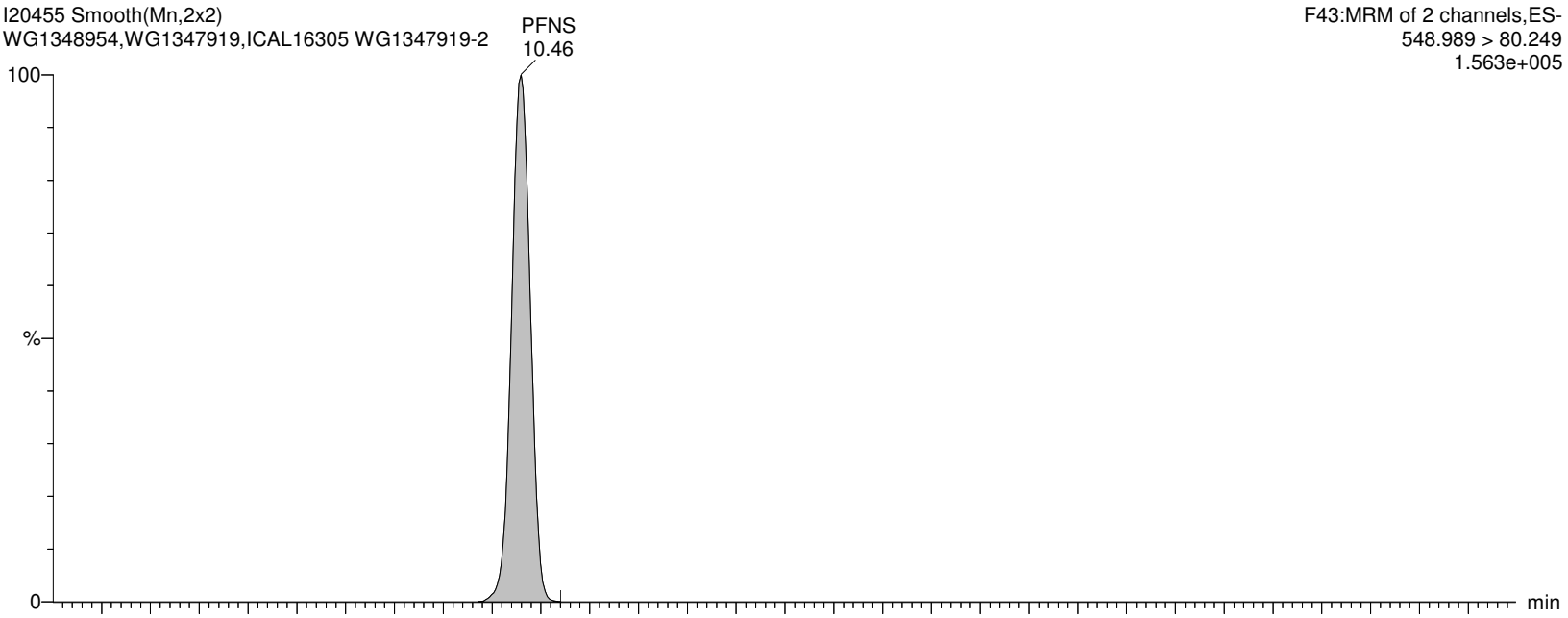


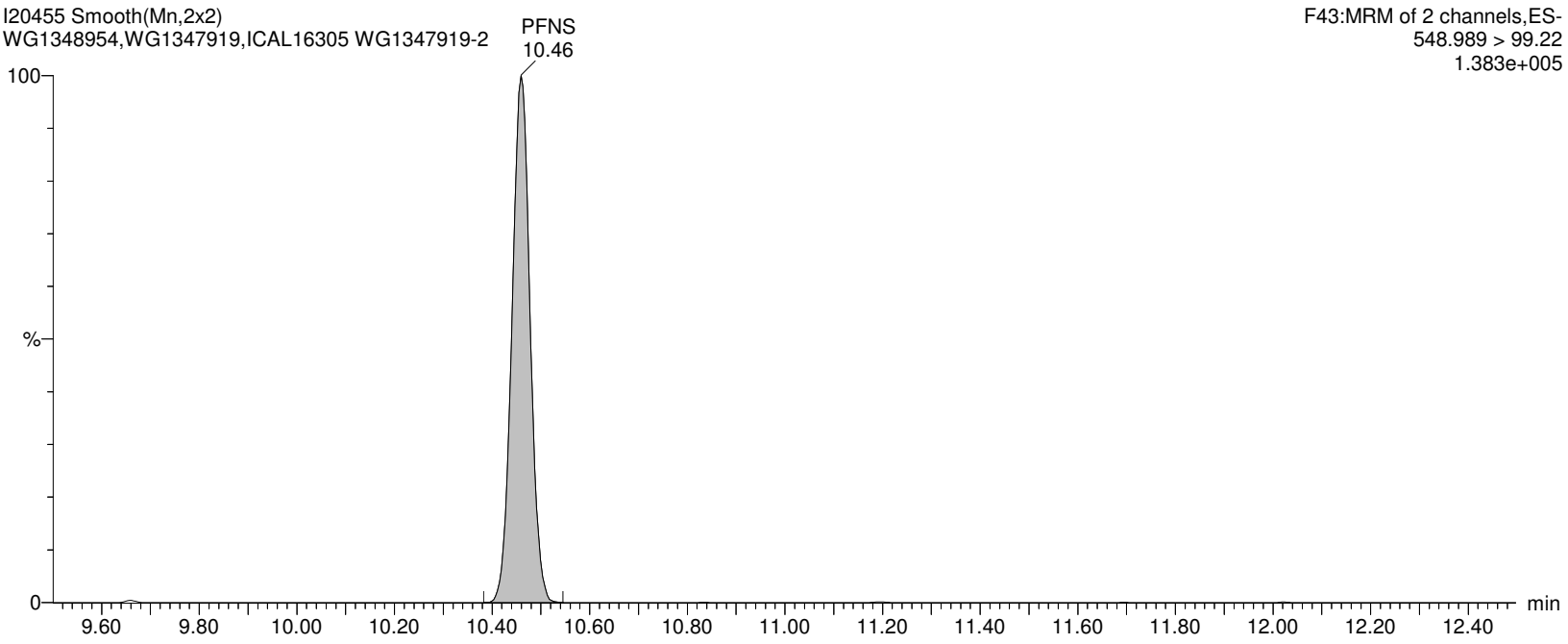



all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2020\200309_537ISO.PRO\Data\WG1348954D.qld
Last Altered: Wednesday, March 11, 2020 22:52:23 Eastern Daylight Time
Printed: Thursday, March 12, 2020 03:26:40 Eastern Daylight Time

**Name: I20455**
**ID: WG1347919-2**
**Date: 11-Mar-2020**
**Time: 02:54:13**
**Description: WG1348954,WG1347919,ICAL16305**
**User: LCMS02:RS**
**Vial: 2:A,8**
**Instrument: XEVO-TQSmicro#QEB0050**
**Inlet Method Name: C:\MassLynx\Data\2020\200309_537ISO.PRO\ACQUDB\LCMS_537_ISO_B**
**Tune Method Name: C:\MassLynx\Data\2020\200309_537ISO.PRO\ACQUDB\181009_TUNE.IPR**
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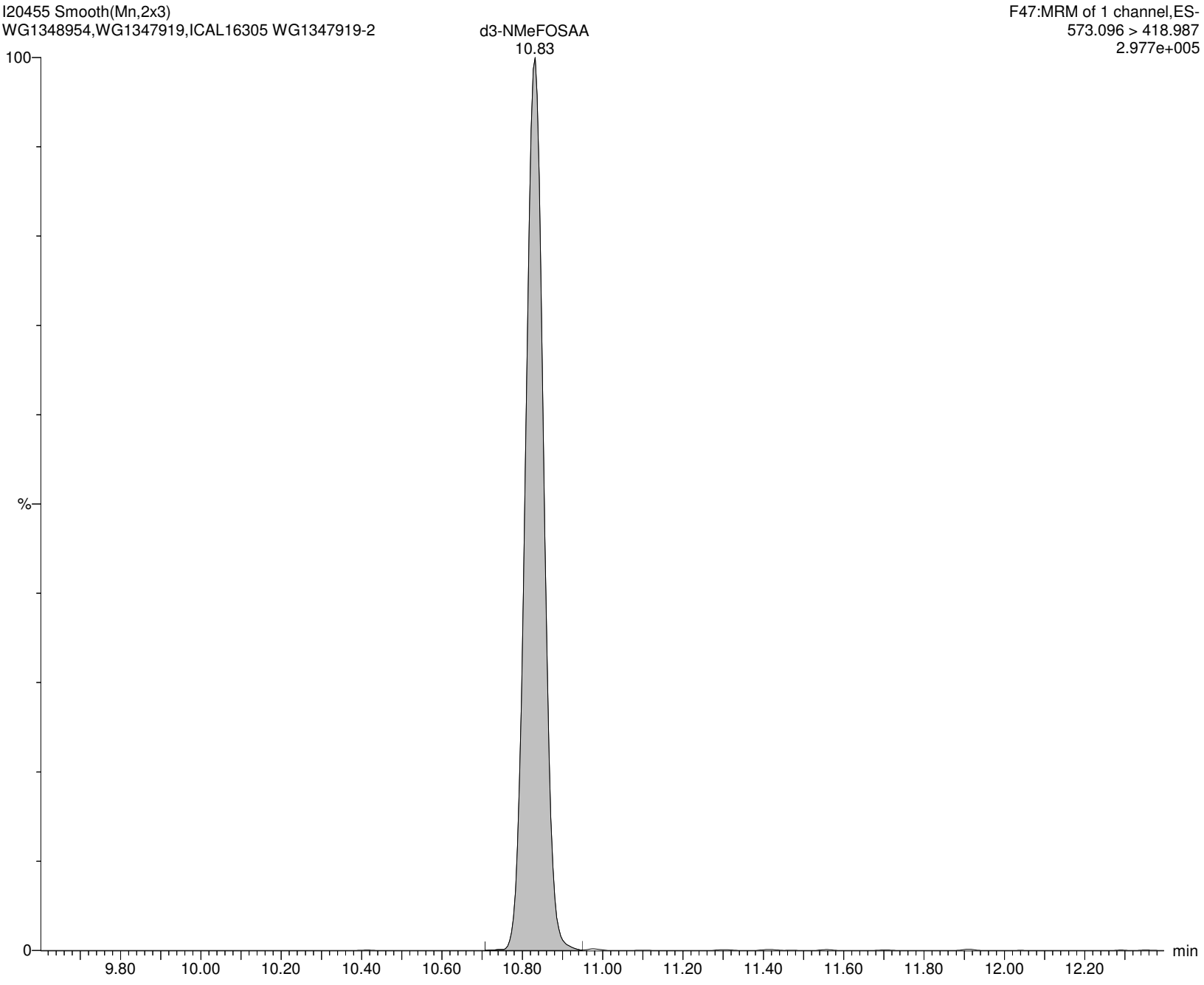
**d3-NMeFOSAA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2020\200309_537ISO.PRO\Data\WG1348954D.qld
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**Vial: 2:A,8**
**Instrument: XEVO-TQSmicro#QEB0050**
**Inlet Method Name: C:\MassLynx\Data\2020\200309_537ISO.PRO\ACQUDB\LCMS_537_ISO_B**
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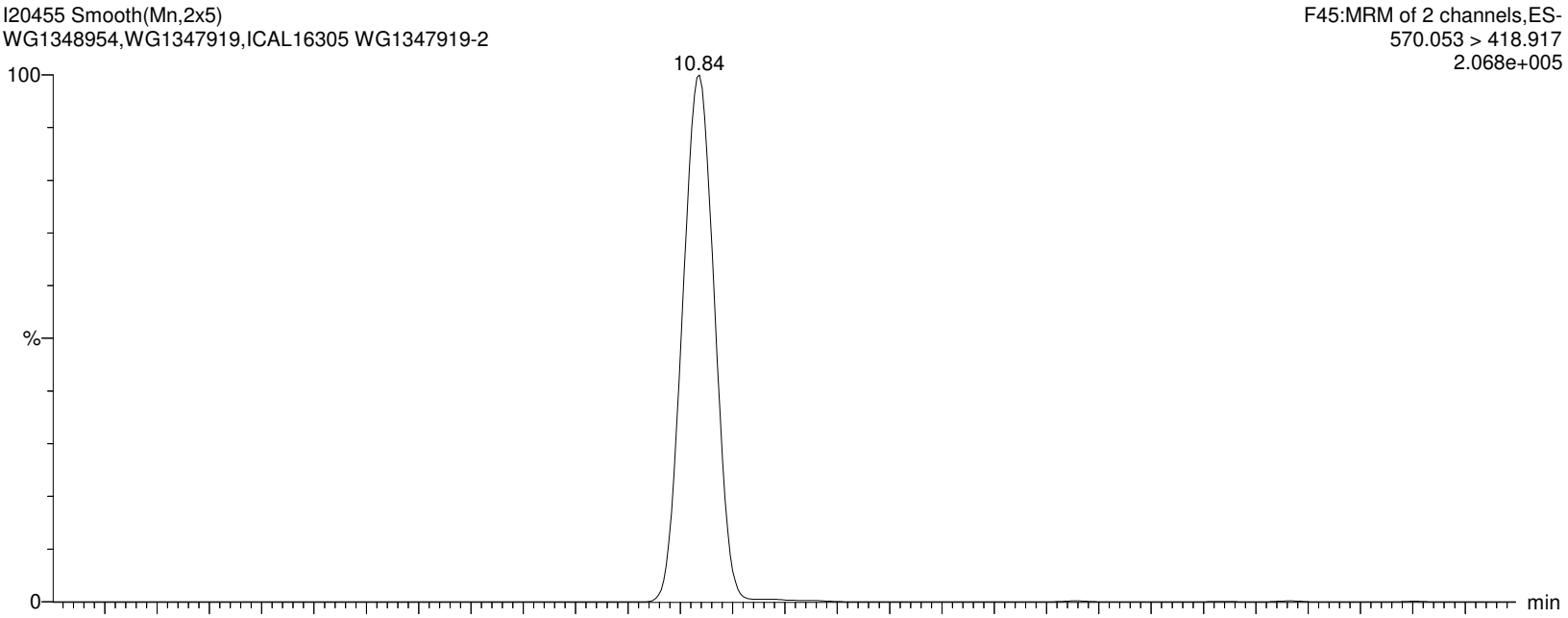
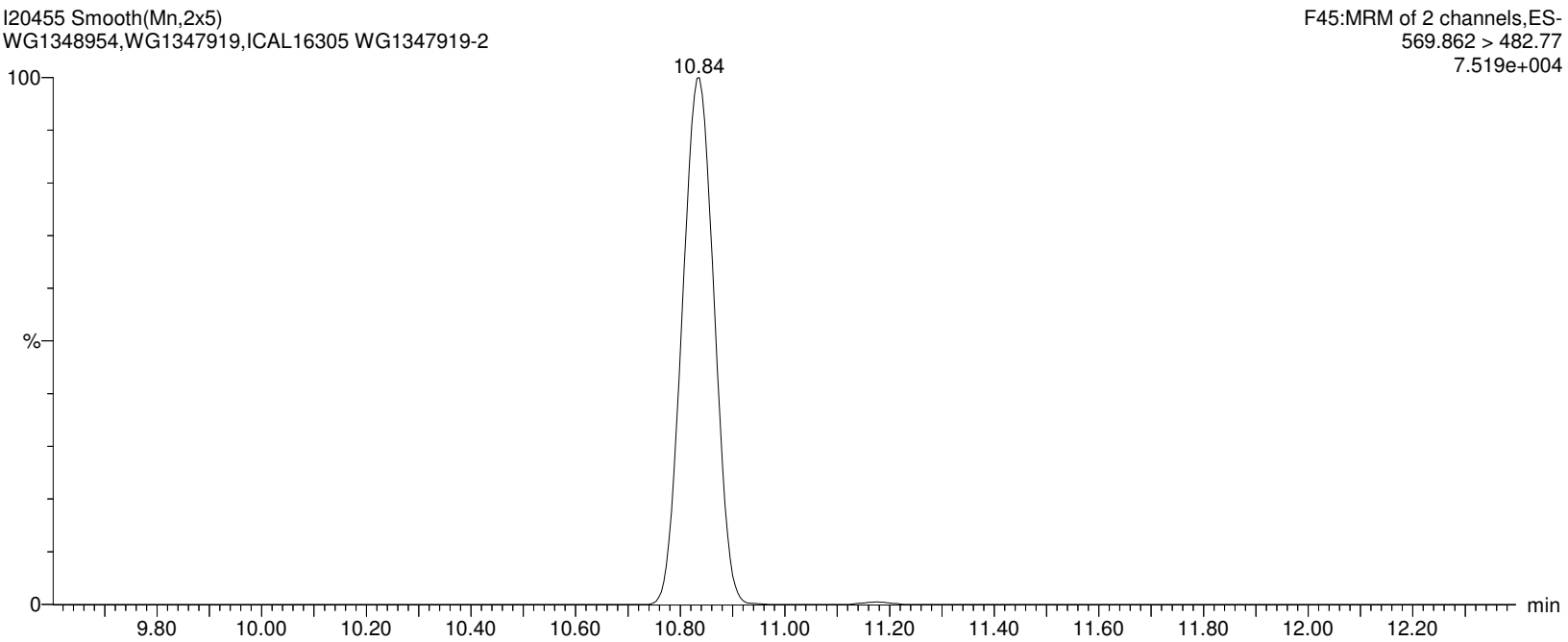
**br-NMeFOSAA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2020\200309_537ISO.PRO\Data\WG1348954D.qld
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**Instrument: XEVO-TQSmicro#QEB0050**
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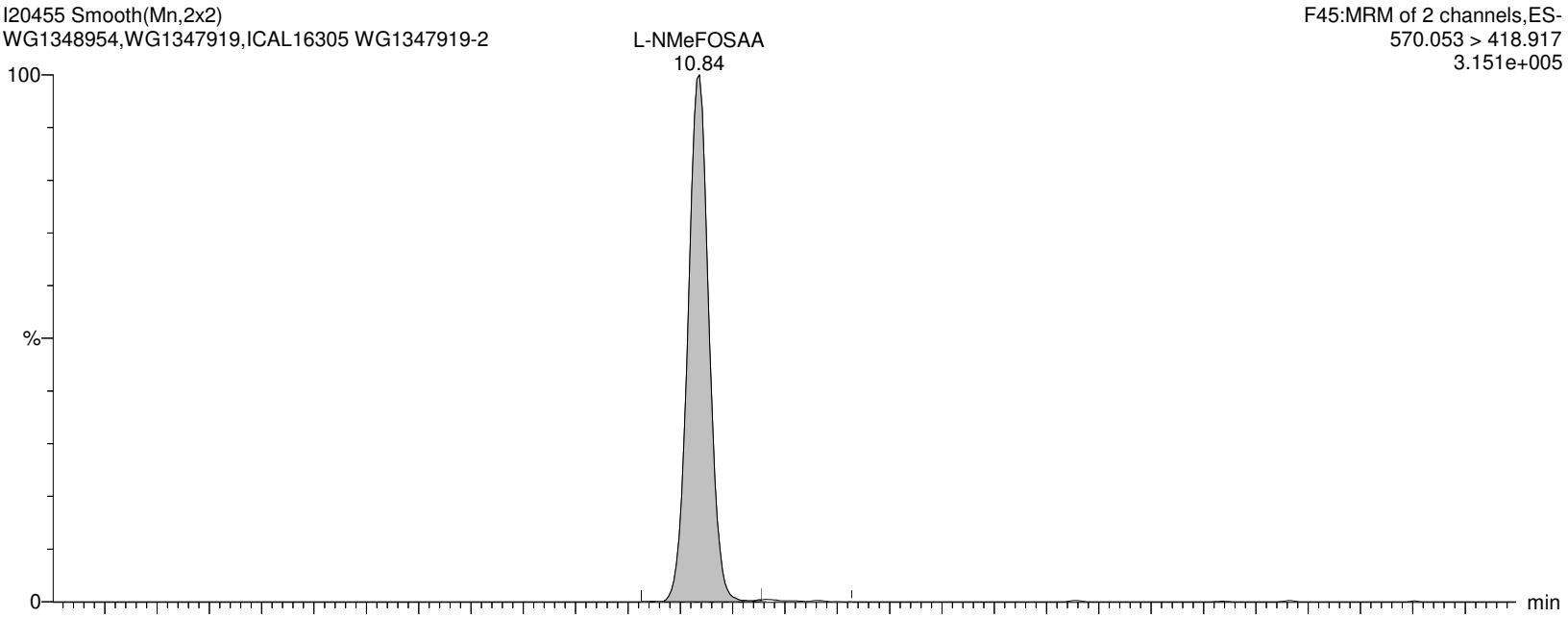
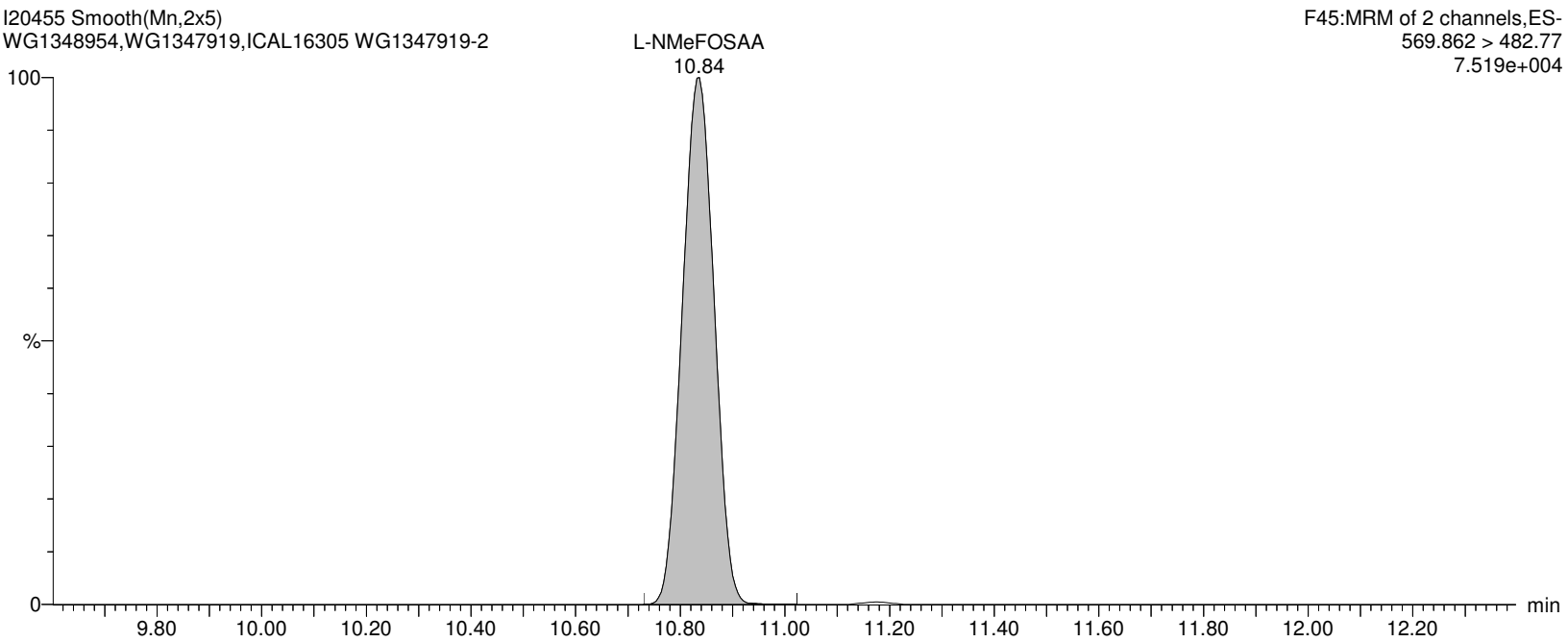
**L-NMeFOSAA**





all concentration units in (ng/mL)

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**Vial: 2:A,8**
**Instrument: XEVO-TQSmicro#QEB0050**
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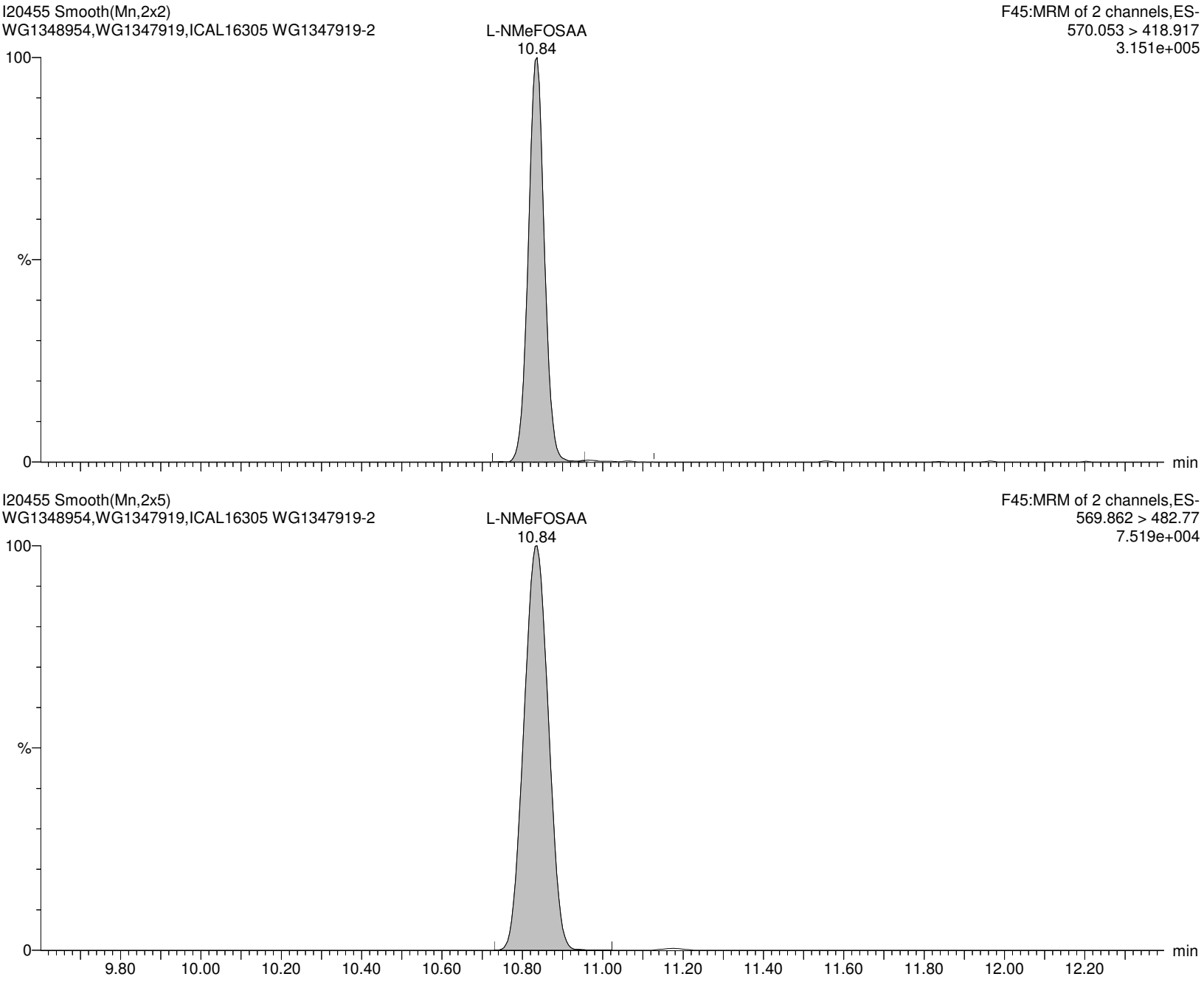
**NMeFOSAA**





all concentration units in (ng/mL)

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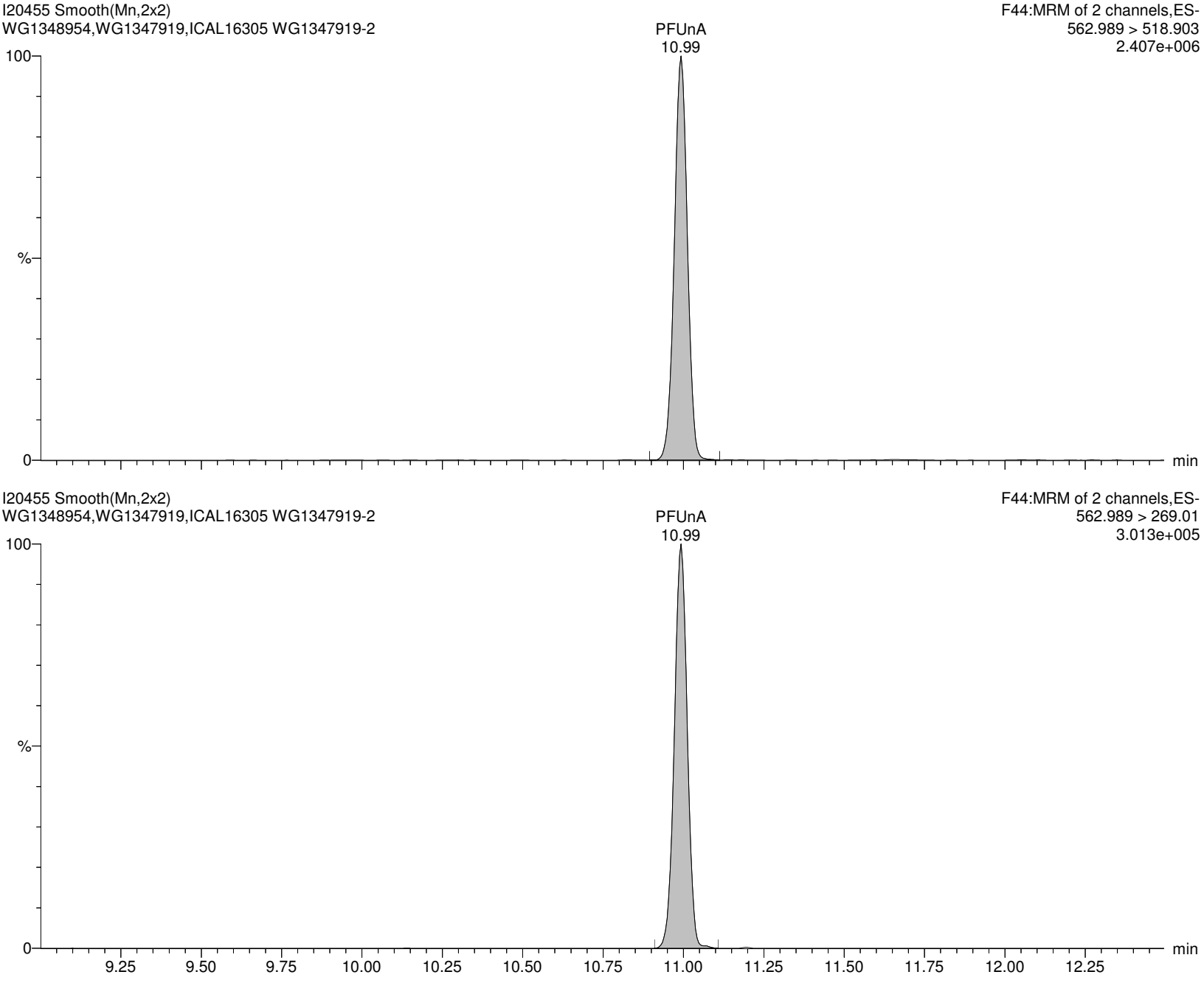
**PFUnA**





all concentration units in (ng/mL)

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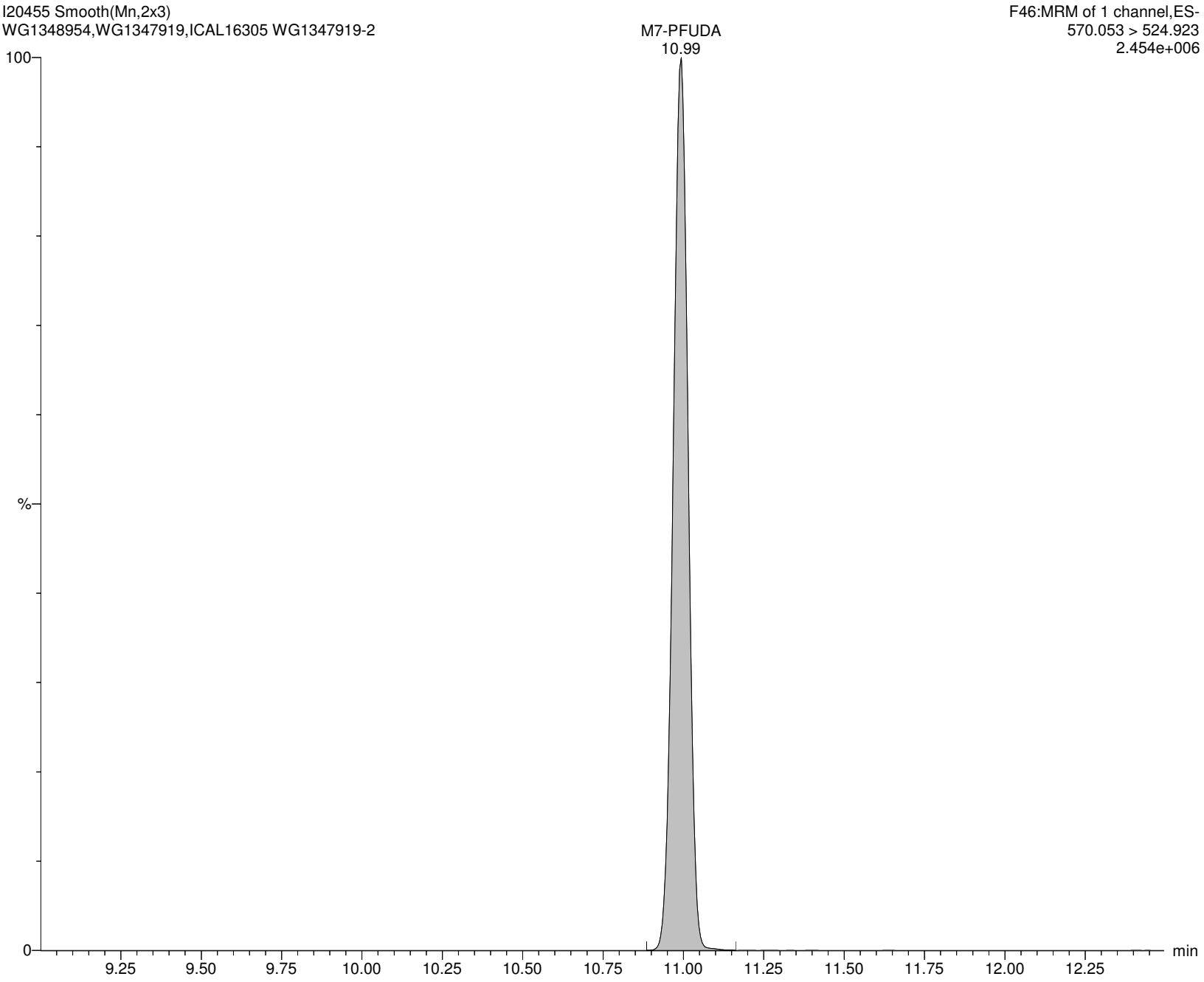
**M7-PFUDA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2020\200309_537ISO.PRO\Data\WG1348954D.qld
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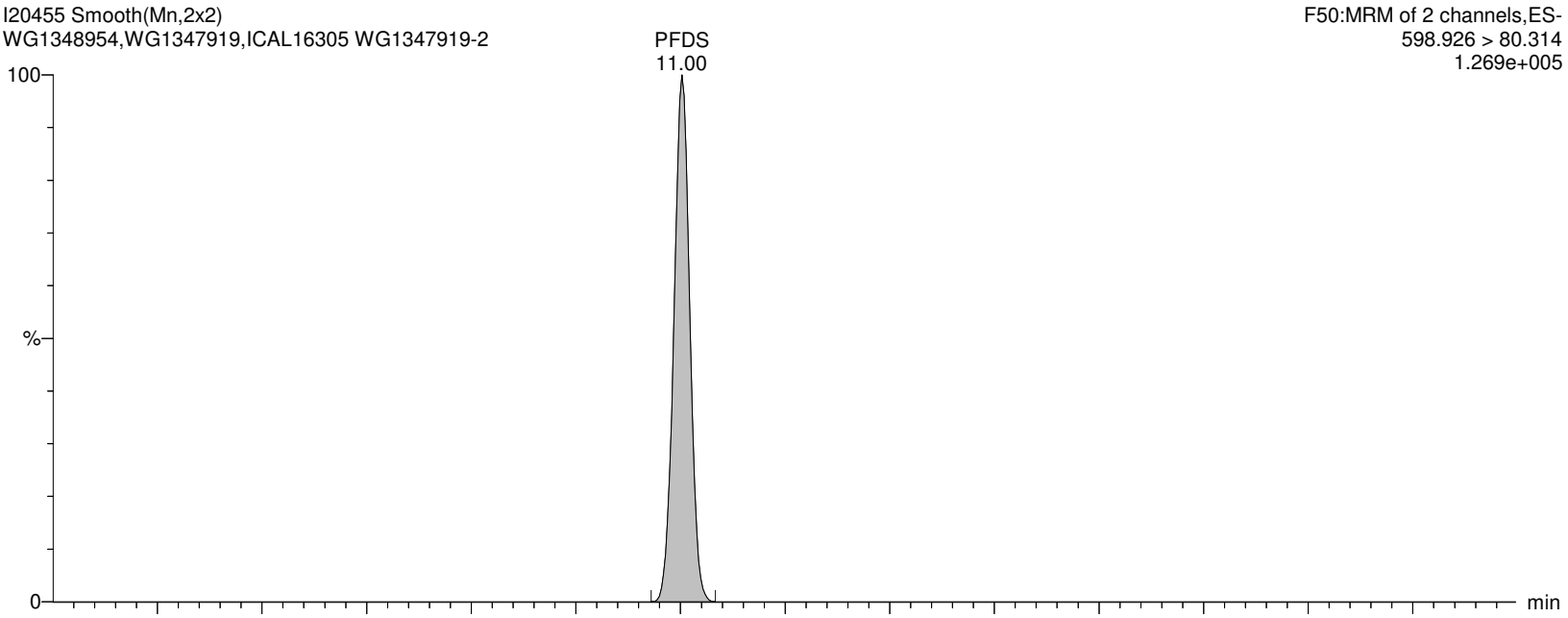
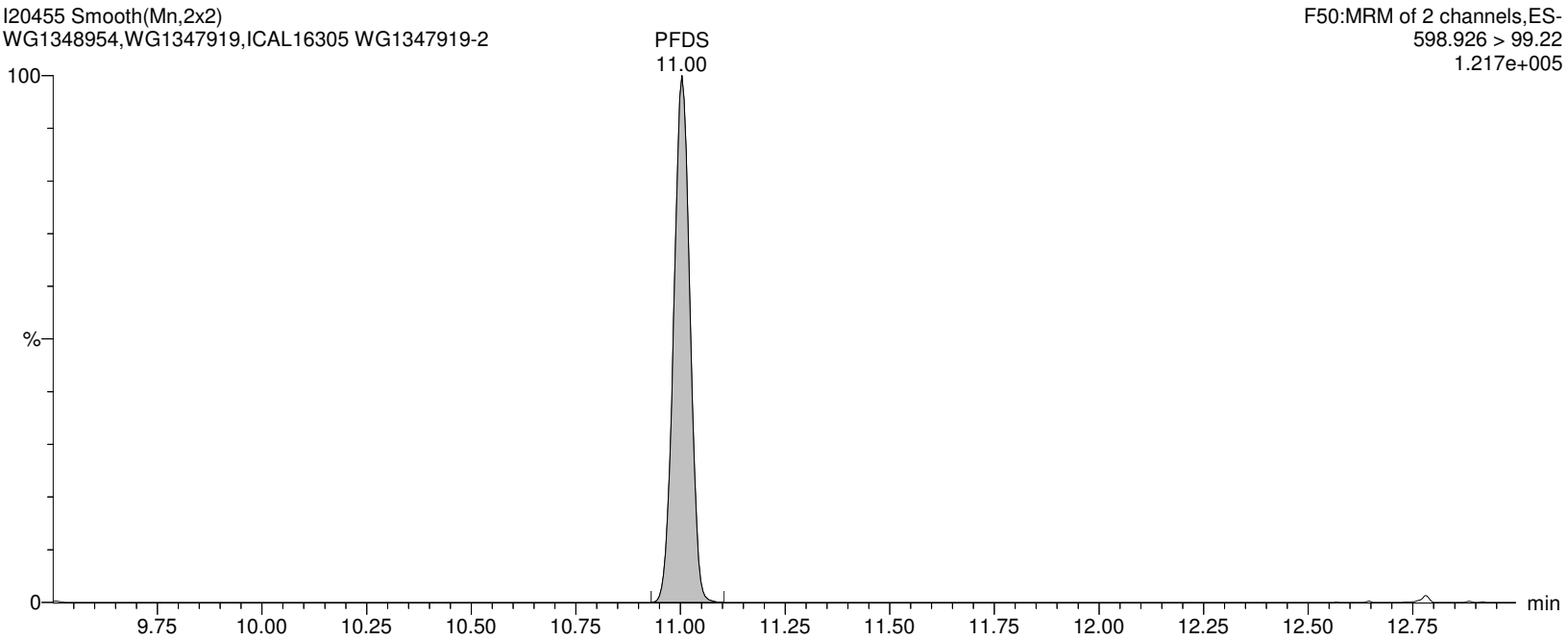
**PFDS**





all concentration units in (ng/mL)

Alpha Analytical Inc.
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**Vial: 2:A,8**
**Instrument: XEVO-TQSmicro#QEB0050**
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**Tune Method Name: C:\MassLynx\Data\2020\200309_537ISO.PRO\ACQUDB\181009_TUNE.IPR**
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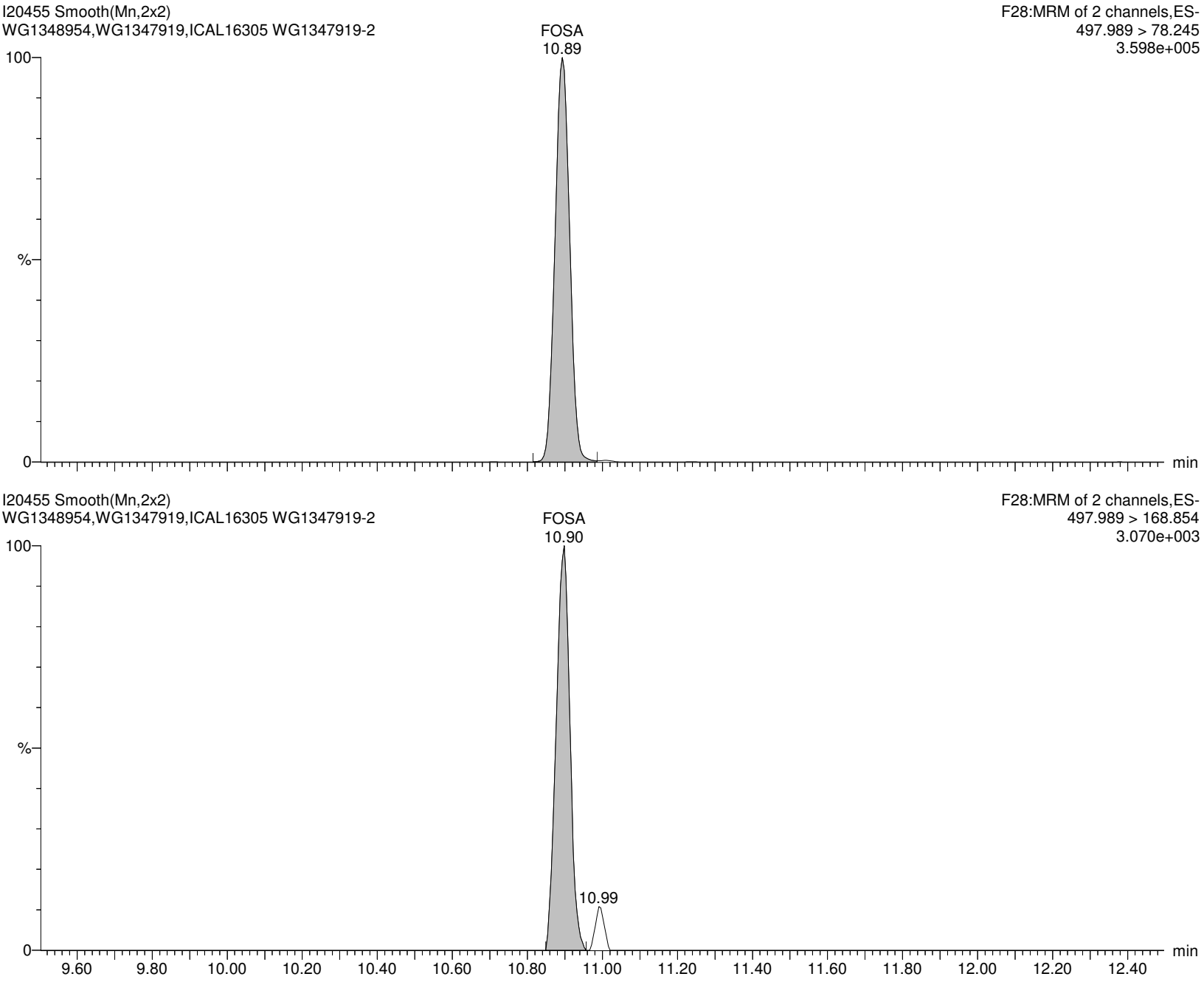



all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2020\200309_537ISO.PRO\Data\WG1348954D.qld
Last Altered: Wednesday, March 11, 2020 22:52:23 Eastern Daylight Time
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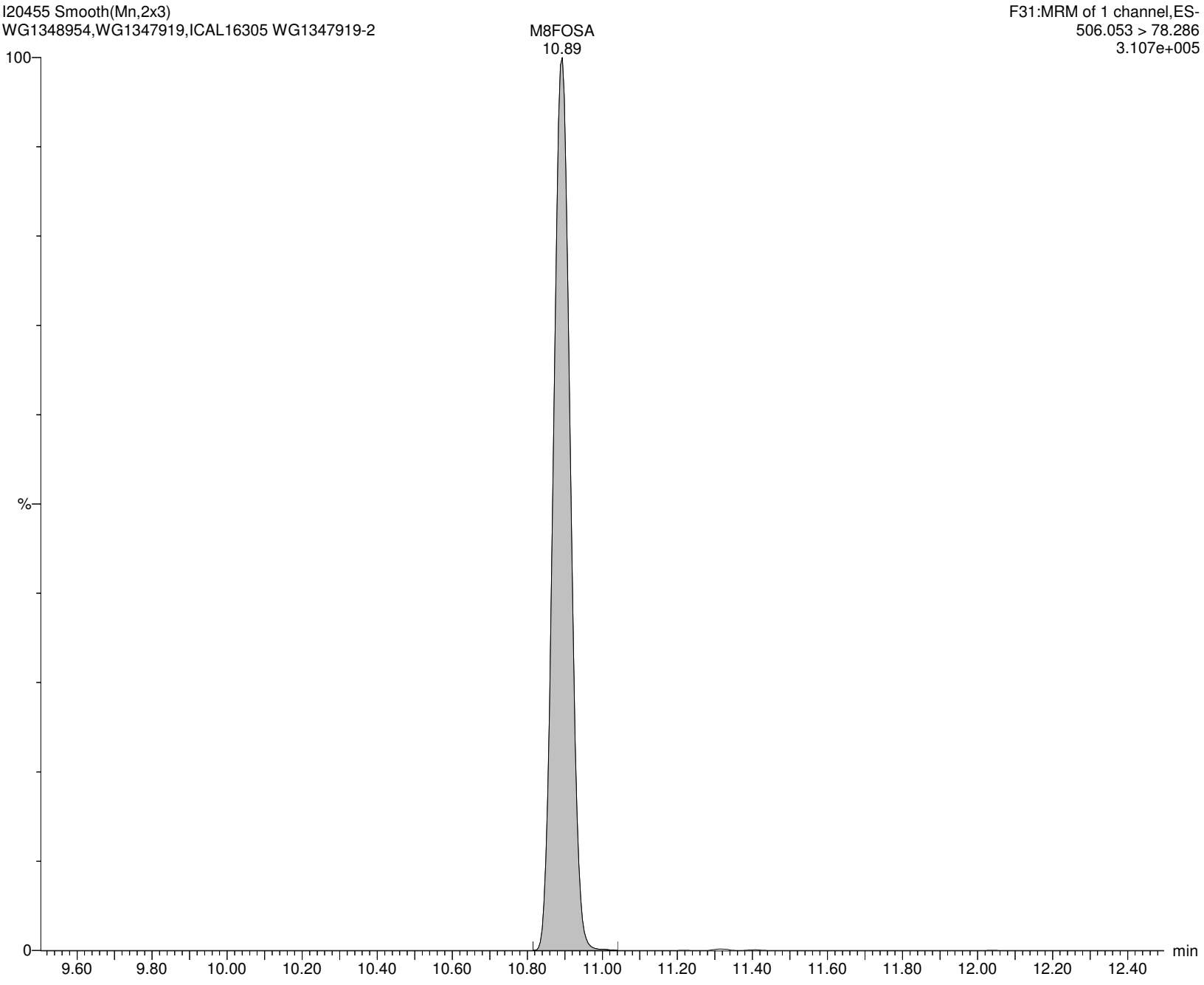
**M8FOSA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2020\200309_537ISO.PRO\Data\WG1348954D.qld
Last Altered: Wednesday, March 11, 2020 22:52:23 Eastern Daylight Time
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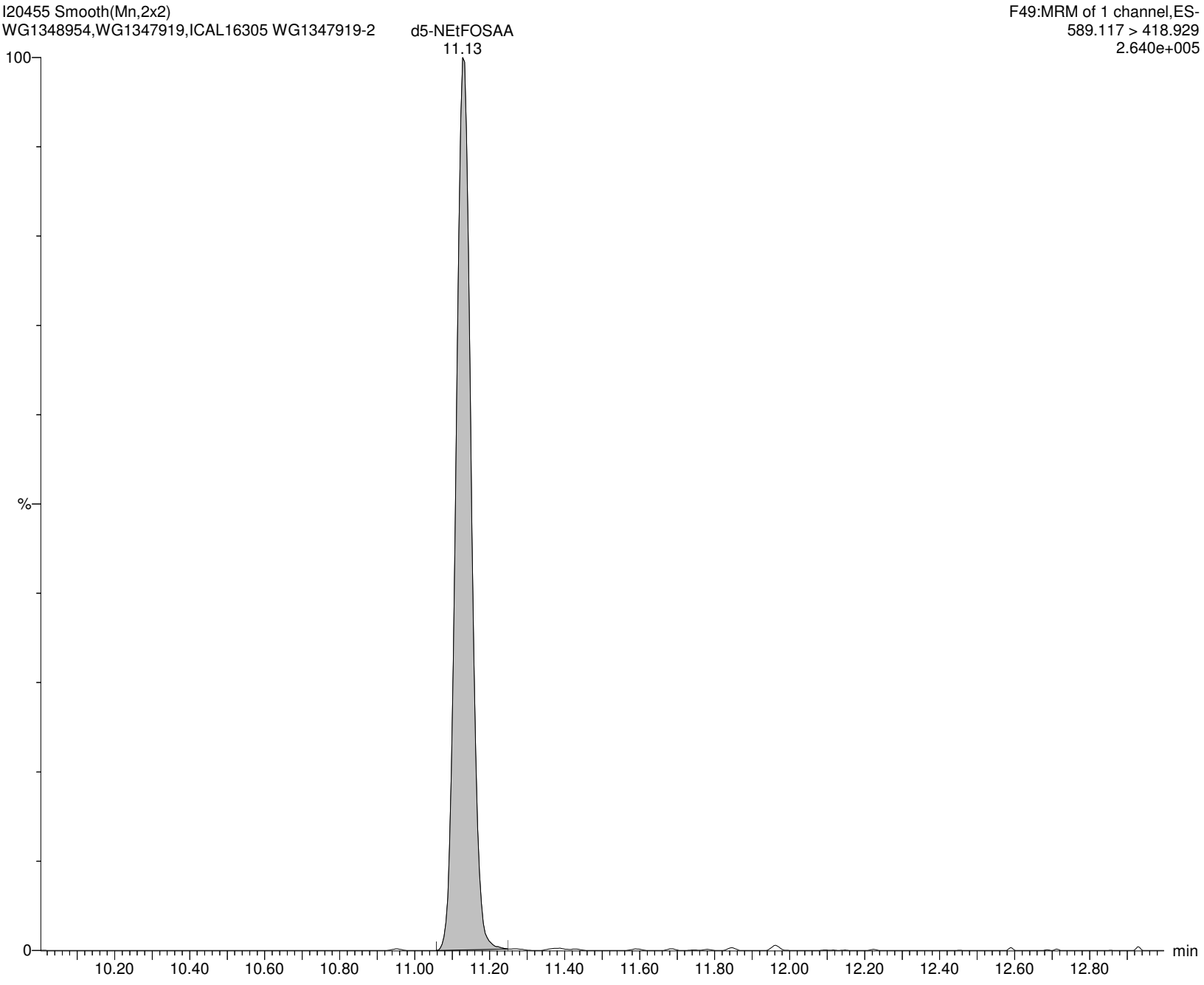
**d5-NEtFOSAA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
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**Inlet Method Name: C:\MassLynx\Data\2020\200309_537ISO.PRO\ACQUDB\LCMS_537_ISO_B**
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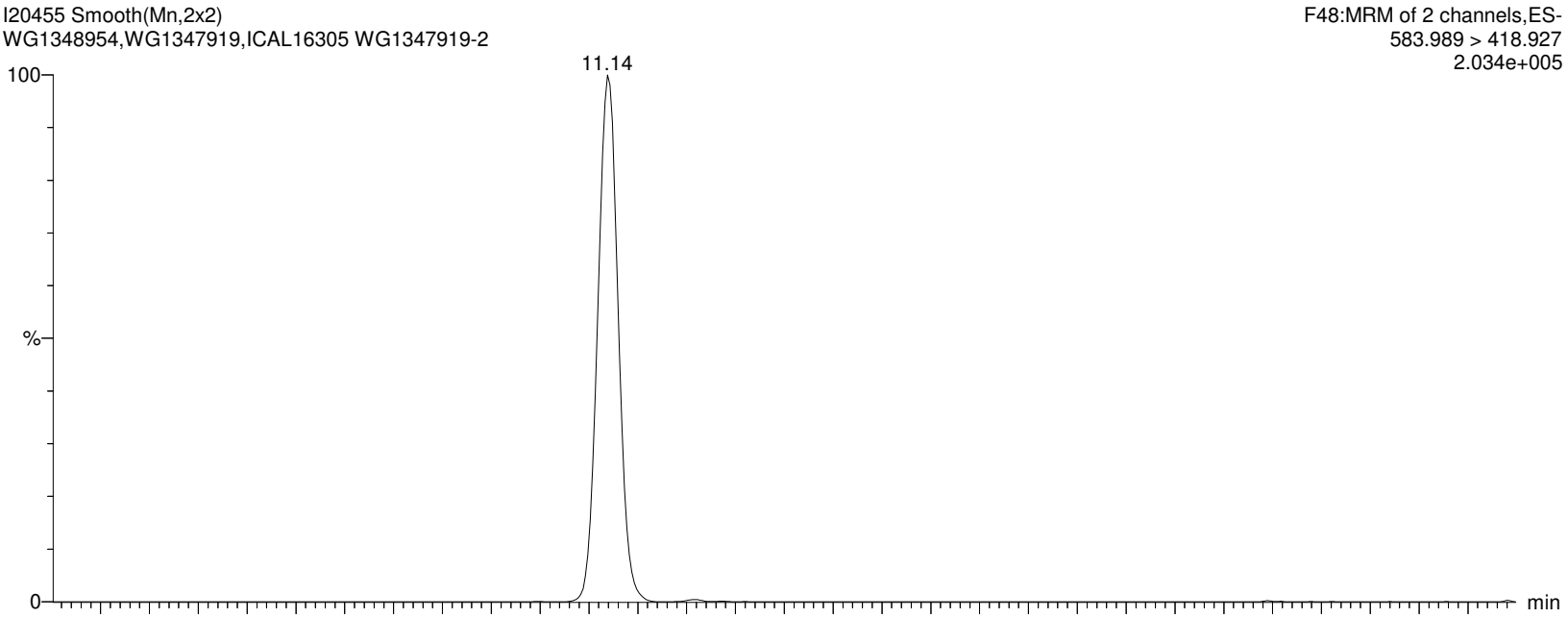
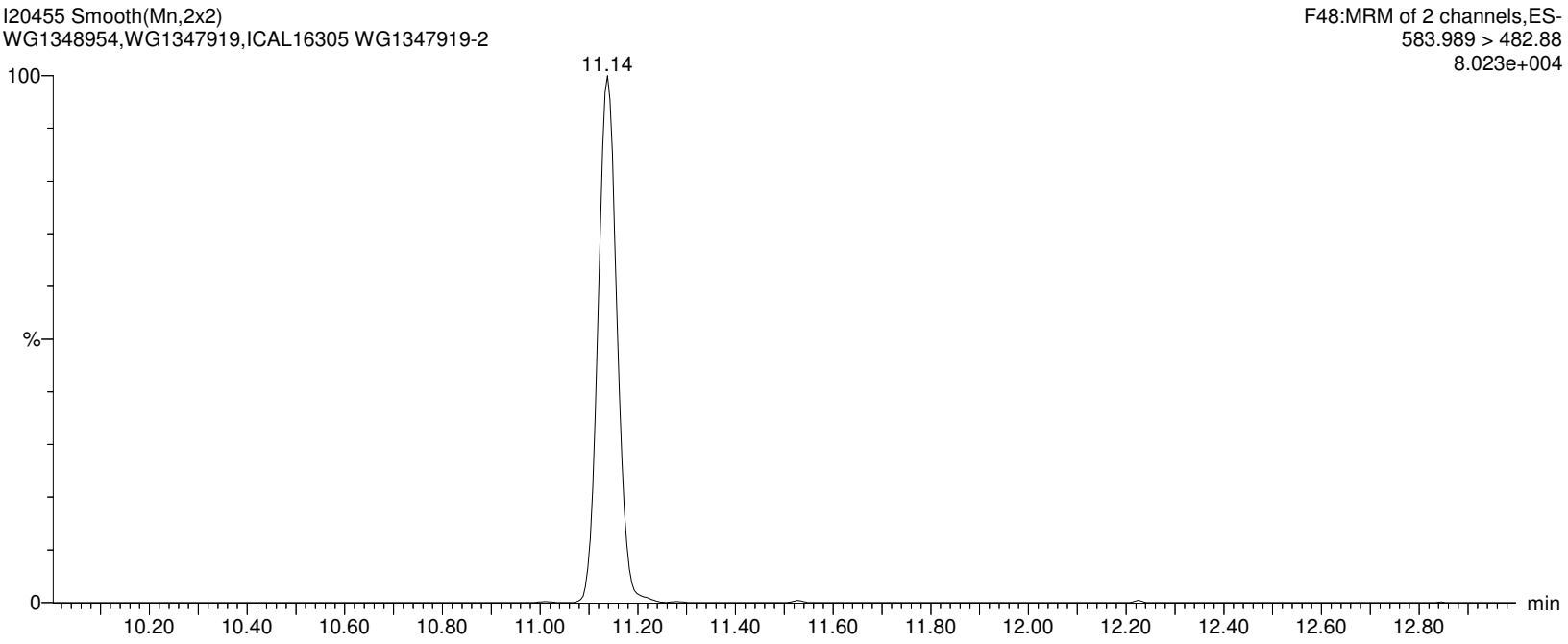
**br-NEtFOSAA**





all concentration units in (ng/mL)

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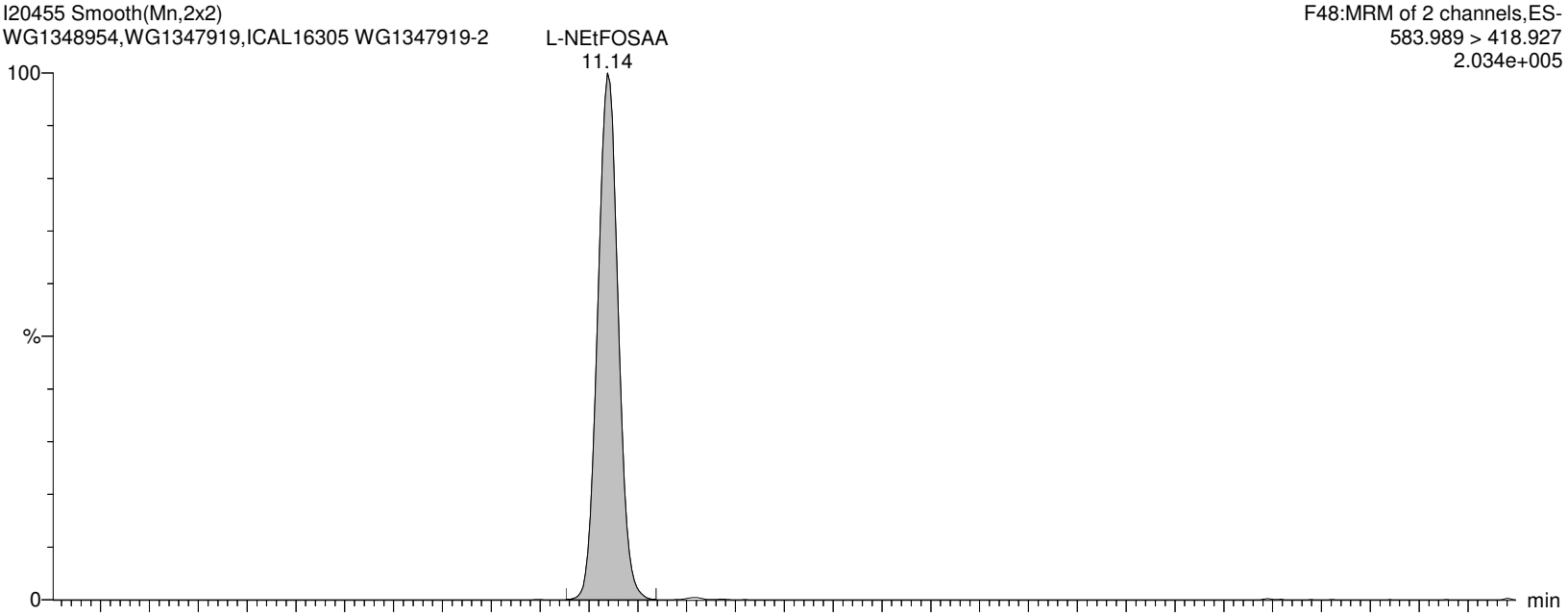
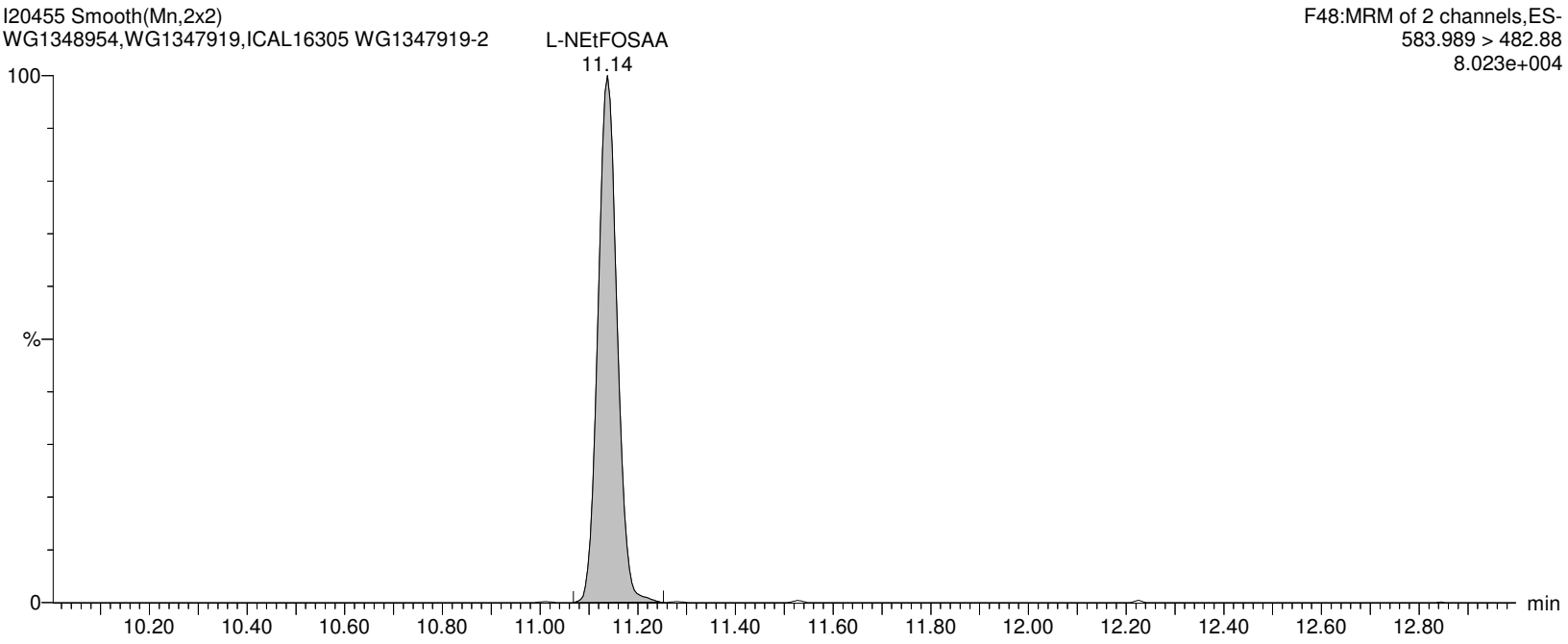
**L-NEtFOSAA**





all concentration units in (ng/mL)

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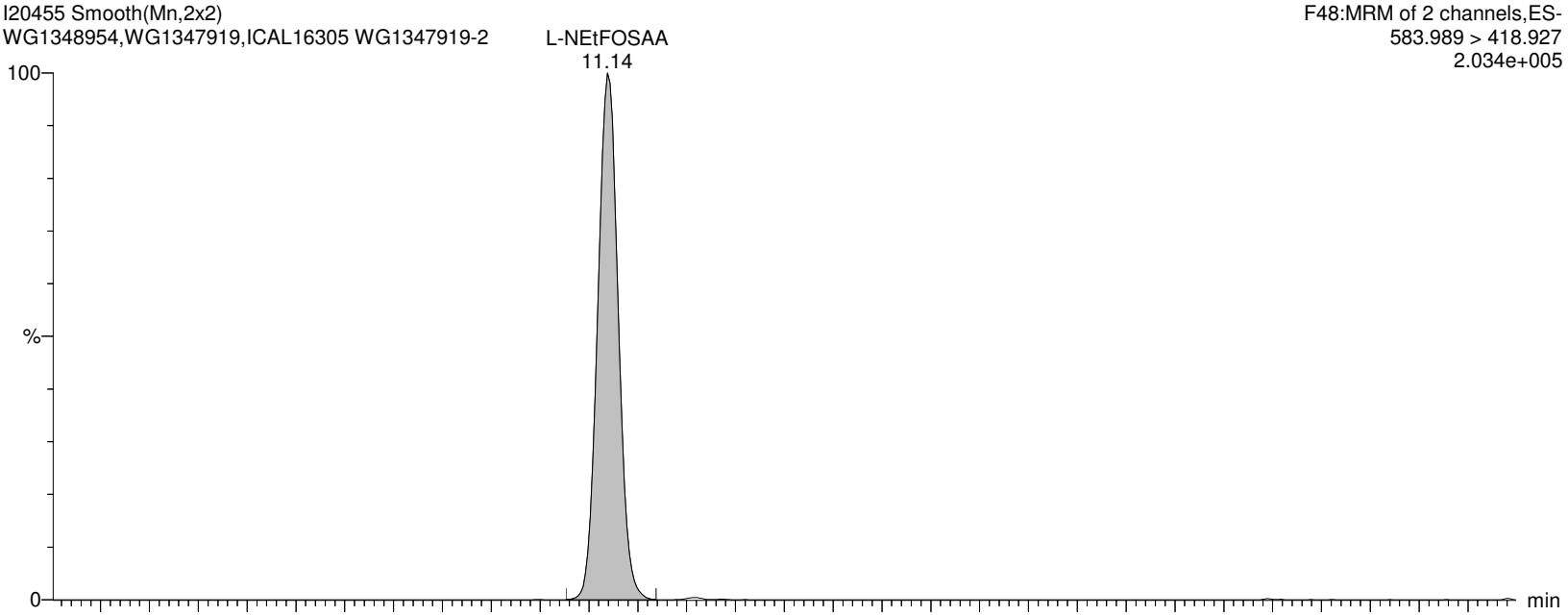


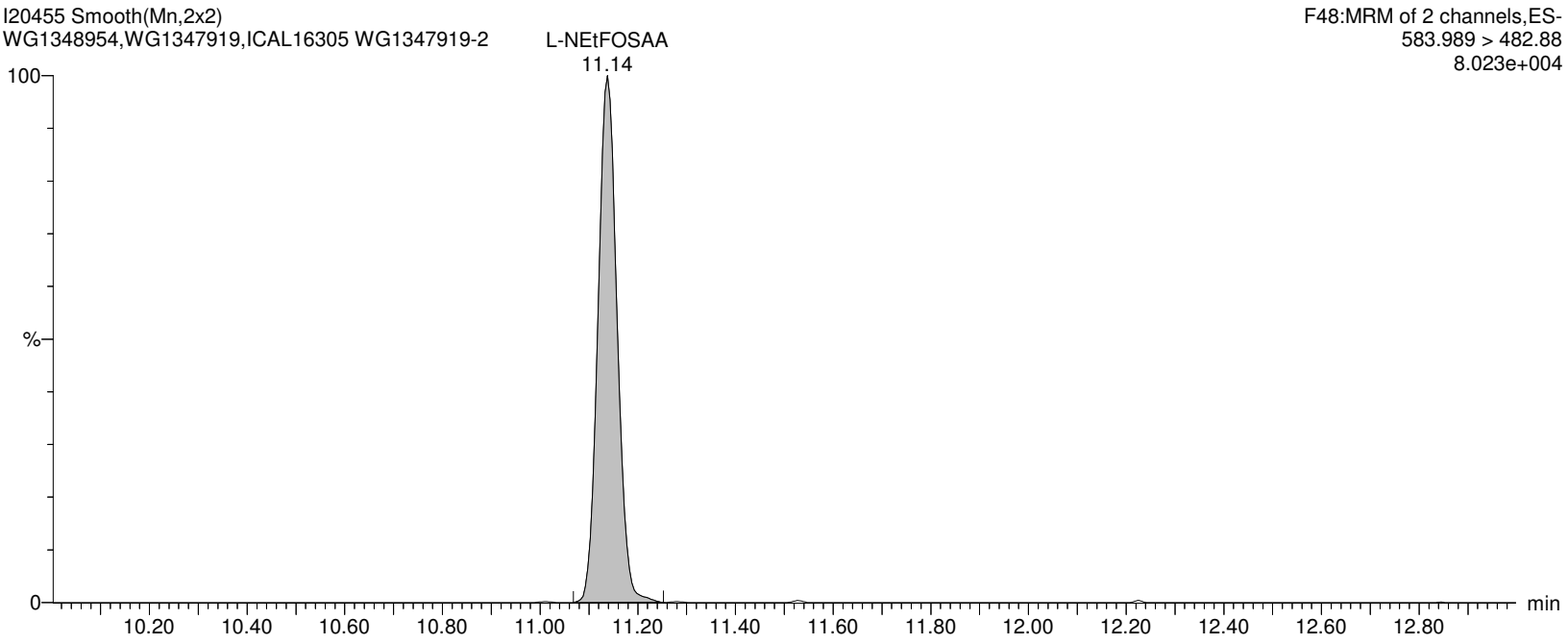



all concentration units in (ng/mL)

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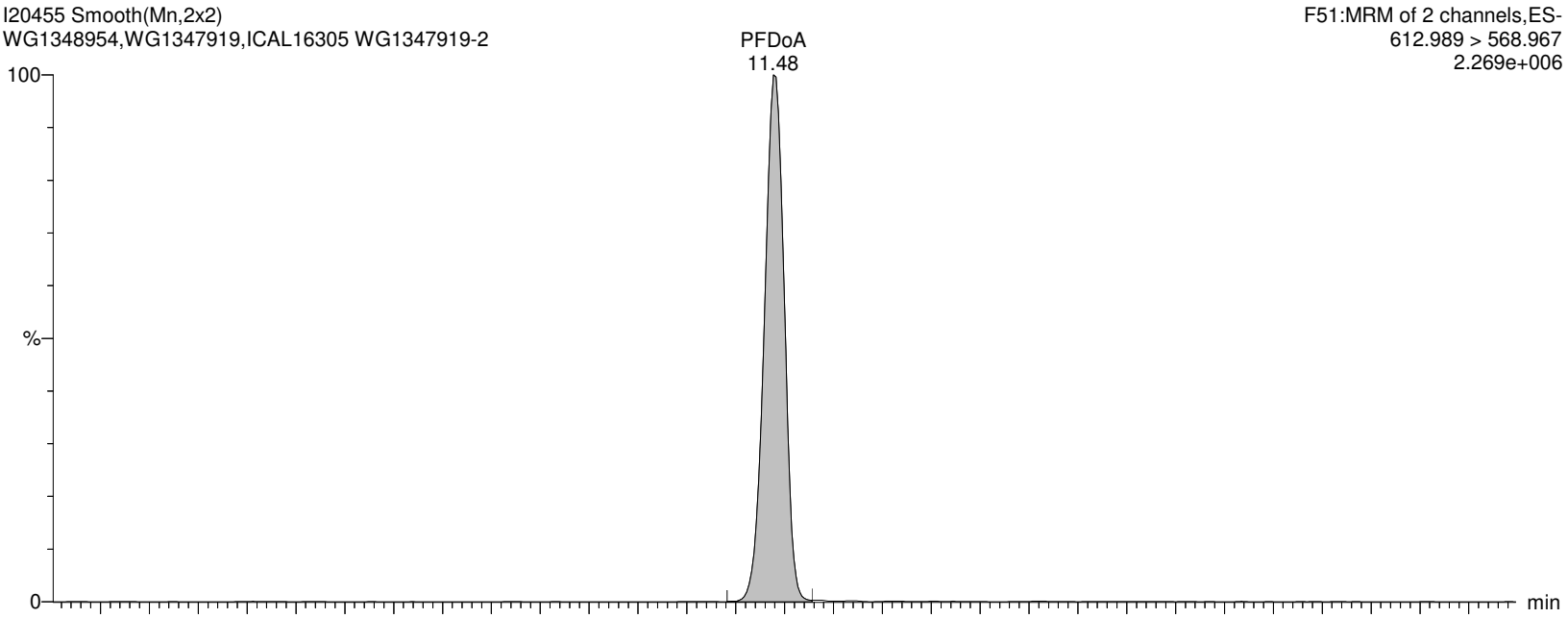


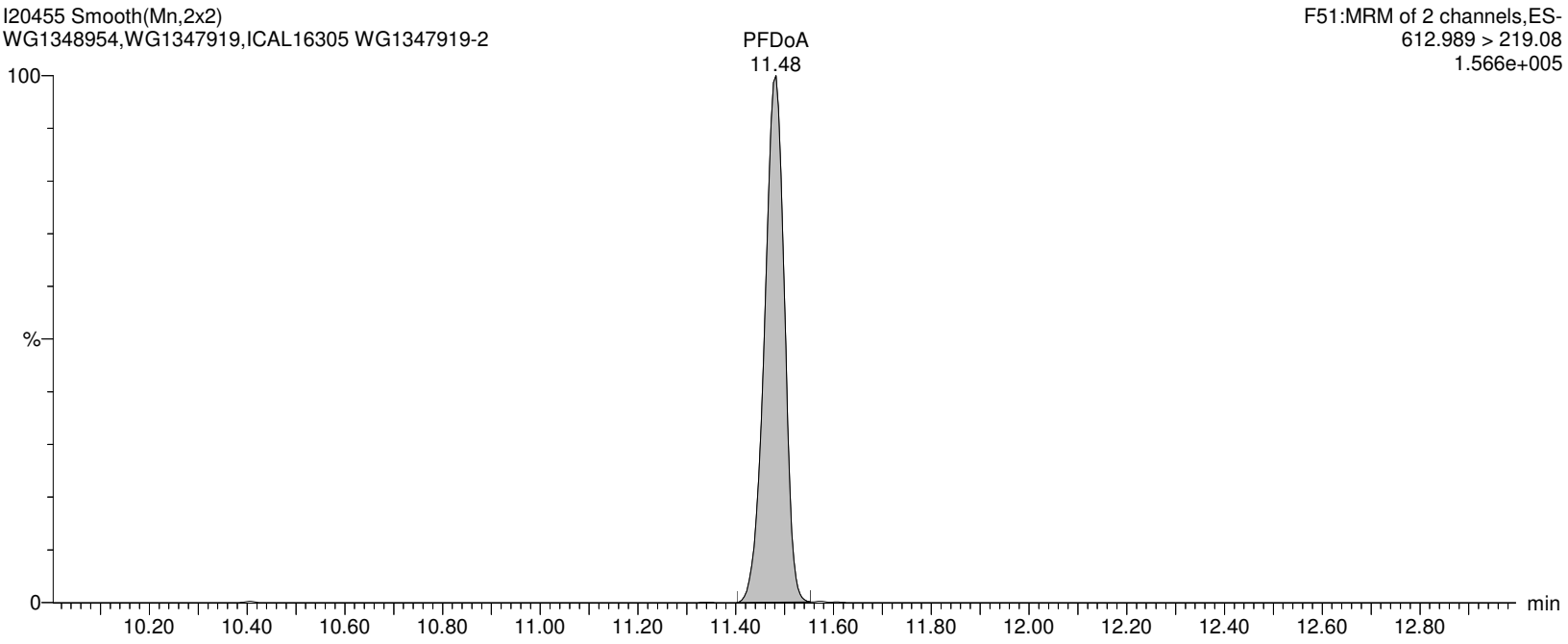



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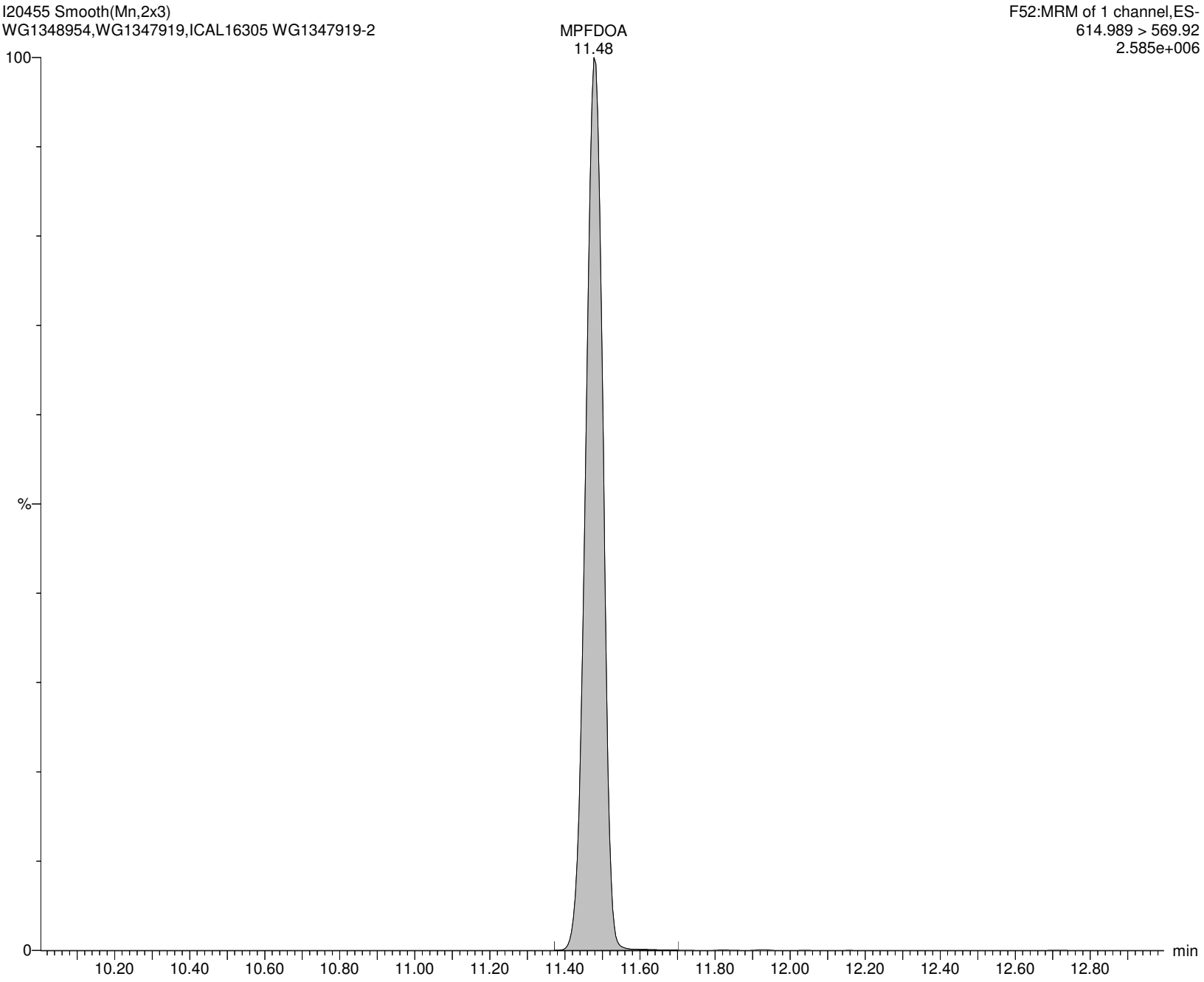
**Date: 11-Mar-2020**
**Time: 02:54:13**
**Description: WG1348954,WG1347919,ICAL16305**
**User: LCMS02:RS**
**Vial: 2:A,8**
**Instrument: XEVO-TQSmicro#QEB0050**
**Inlet Method Name: C:\MassLynx\Data\2020\200309_537ISO.PRO\ACQUDB\LCMS_537_ISO_B**
**Tune Method Name: C:\MassLynx\Data\2020\200309_537ISO.PRO\ACQUDB\181009_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\2020\200309_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**MPFDOA**



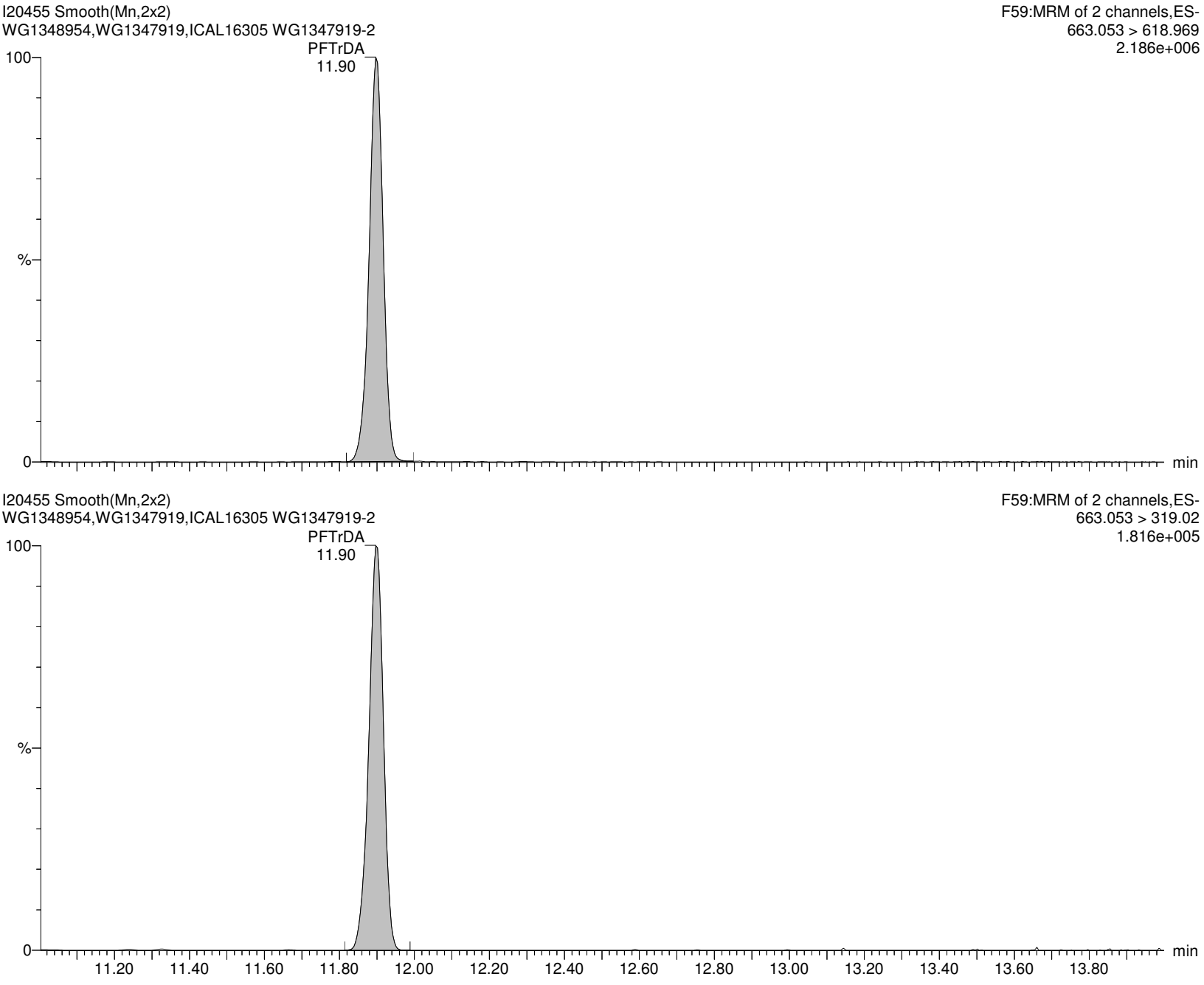


all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2020\200309_537ISO.PRO\Data\WG1348954D.qld
Last Altered: Wednesday, March 11, 2020 22:52:23 Eastern Daylight Time
Printed: Thursday, March 12, 2020 03:26:40 Eastern Daylight Time

**Name: I20455**
**ID: WG1347919-2**
**Date: 11-Mar-2020**
**Time: 02:54:13**
**Description: WG1348954,WG1347919,ICAL16305**
**User: LCMS02:RS**
**Vial: 2:A,8**
**Instrument: XEVO-TQSmicro#QEB0050**
**Inlet Method Name: C:\MassLynx\Data\2020\200309_537ISO.PRO\ACQUDB\LCMS_537_ISO_B**
**Tune Method Name: C:\MassLynx\Data\2020\200309_537ISO.PRO\ACQUDB\181009_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\2020\200309_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**PFTrDA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2020\200309_537ISO.PRO\Data\WG1348954D.qld
Last Altered: Wednesday, March 11, 2020 22:52:23 Eastern Daylight Time
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**User: LCMS02:RS**
**Vial: 2:A,8**
**Instrument: XEVO-TQSmicro#QEB0050**
**Inlet Method Name: C:\MassLynx\Data\2020\200309_537ISO.PRO\ACQUDB\LCMS_537_ISO_B**
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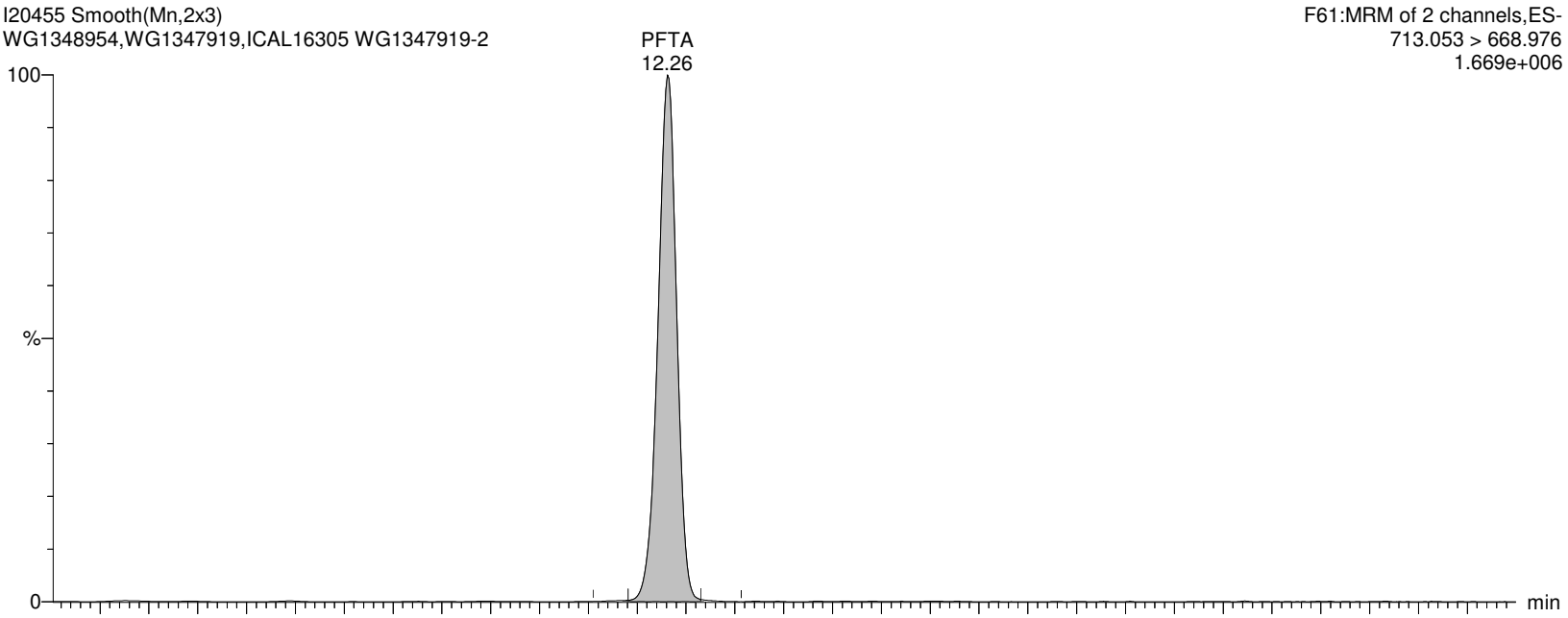
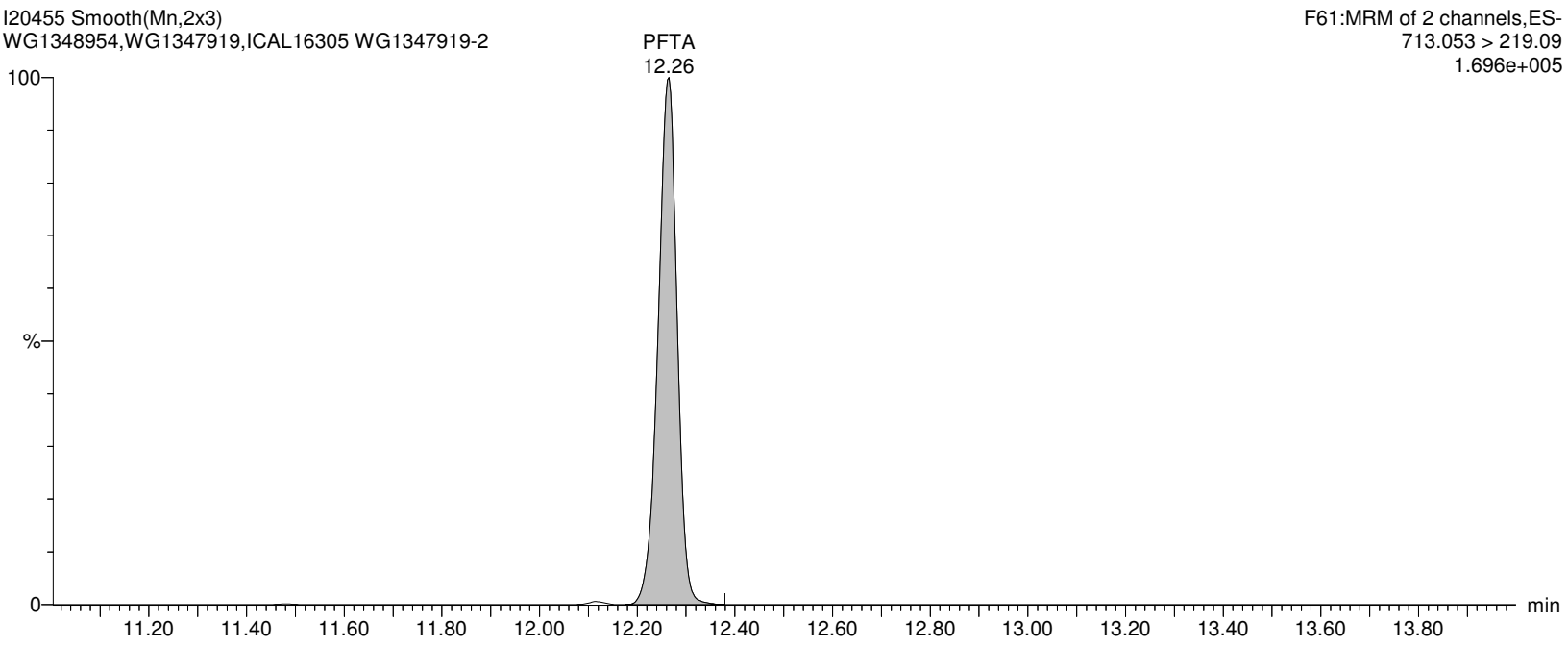
**MS Method Name: C:\MassLynx\Data\2020\200309_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**PFTA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2020\200309_537ISO.PRO\Data\WG1348954D.qld
Last Altered: Wednesday, March 11, 2020 22:52:23 Eastern Daylight Time
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**Name: I20455**
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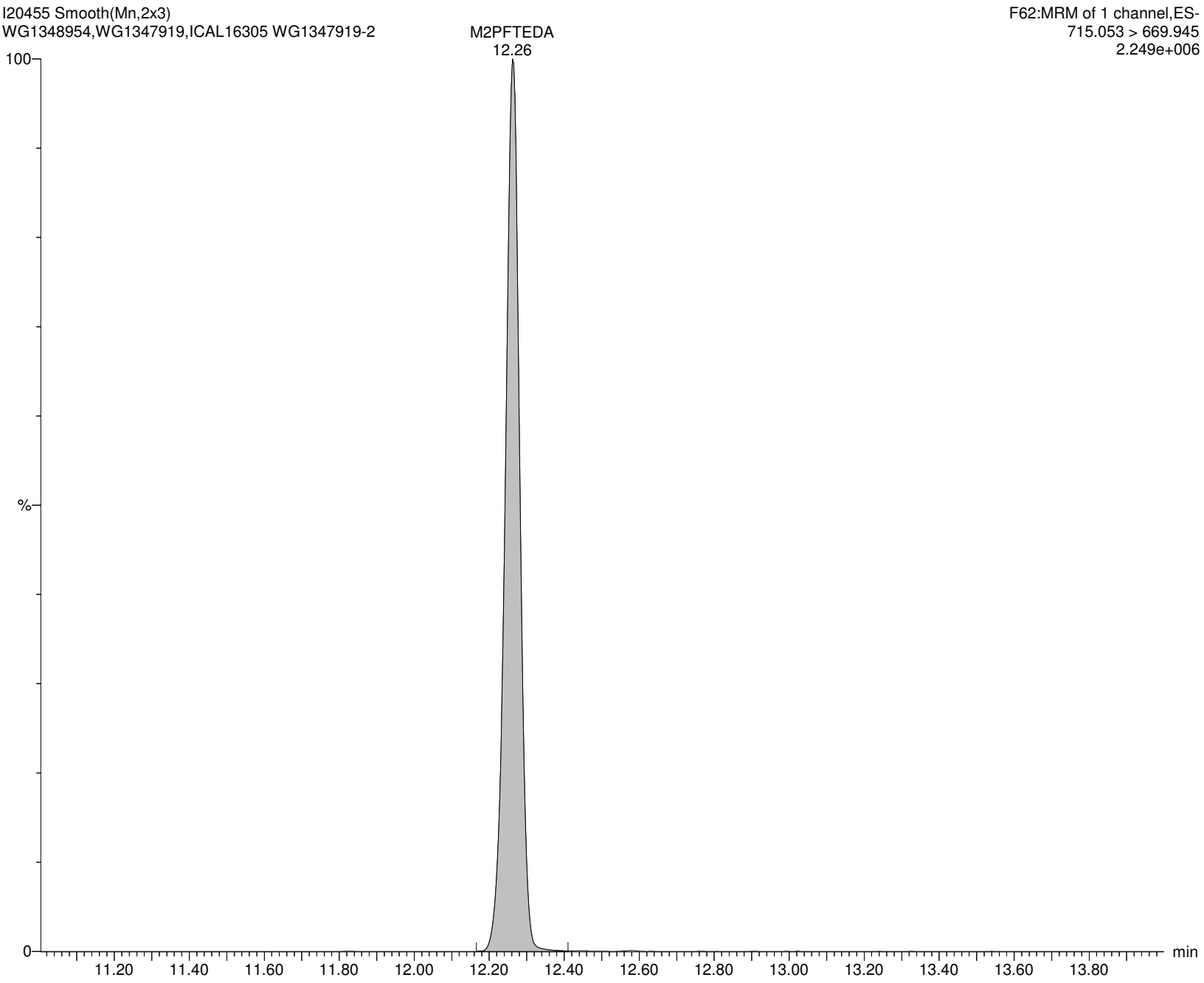
**Instrument: XEVO-TQSmicro#QEB0050**
**Inlet Method Name: C:\MassLynx\Data\2020\200309_537ISO.PRO\ACQUDB\LCMS_537_ISO_B**
**Tune Method Name: C:\MassLynx\Data\2020\200309_537ISO.PRO\ACQUDB\181009_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\2020\200309_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**M2PFTEDA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2020\200309_537ISO.PRO\Data\WG1348954D.qld
Last Altered: Wednesday, March 11, 2020 22:52:23 Eastern Daylight Time
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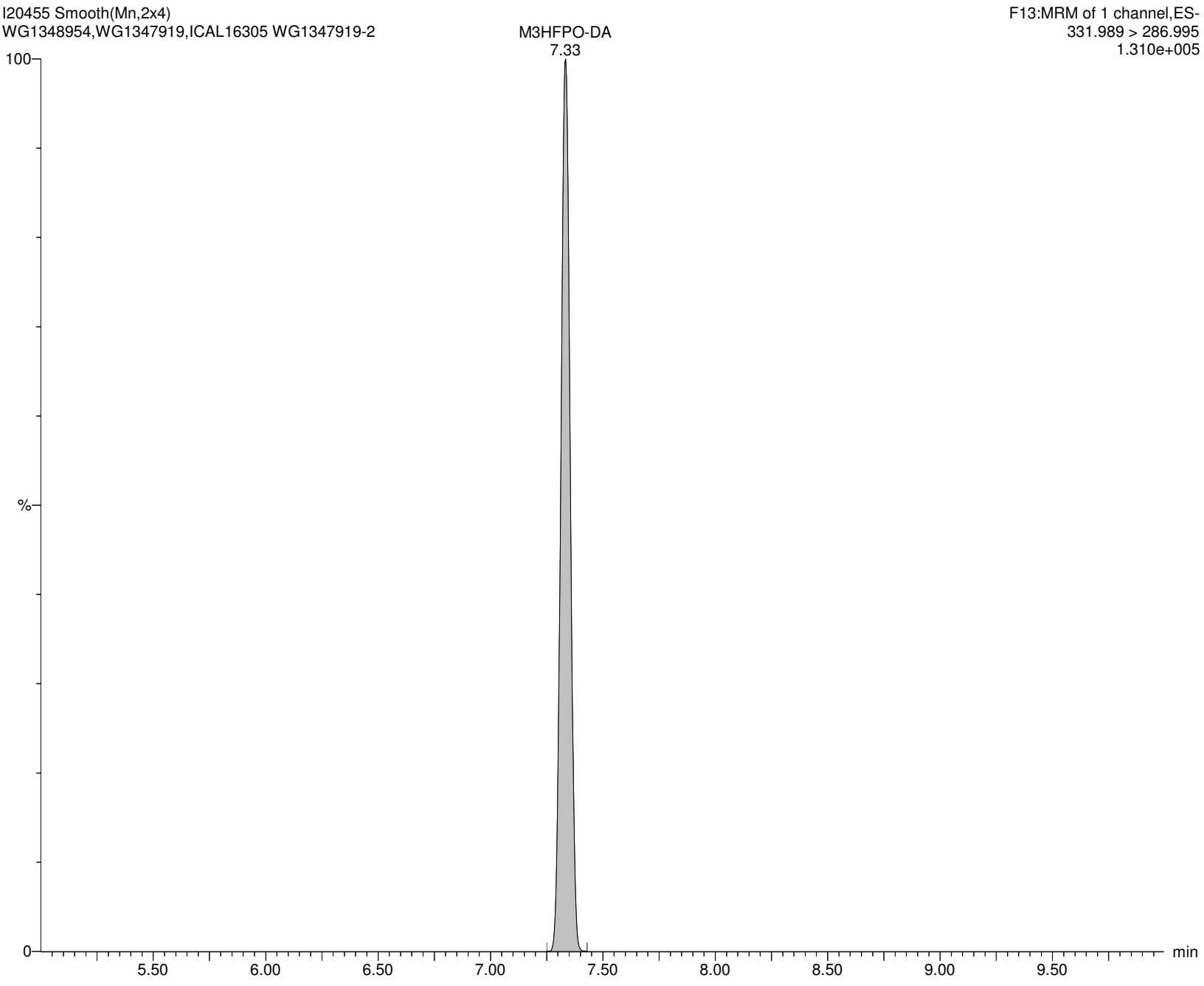
**User: LCMS02:RS**
**Vial: 2:A,8**
**Instrument: XEVO-TQSmicro#QEB0050**
**Inlet Method Name: C:\MassLynx\Data\2020\200309_537ISO.PRO\ACQUDB\LCMS_537_ISO_B**
**Tune Method Name: C:\MassLynx\Data\2020\200309_537ISO.PRO\ACQUDB\181009_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\2020\200309_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**M3HFPO-DA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2020\200309_537ISO.PRO\Data\WG1348954D.qld
Last Altered: Wednesday, March 11, 2020 22:52:23 Eastern Daylight Time
Printed: Thursday, March 12, 2020 03:26:40 Eastern Daylight Time

**Name: I20455**
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**User: LCMS02:RS**
**Vial: 2:A,8**
**Instrument: XEVO-TQSmicro#QEB0050**
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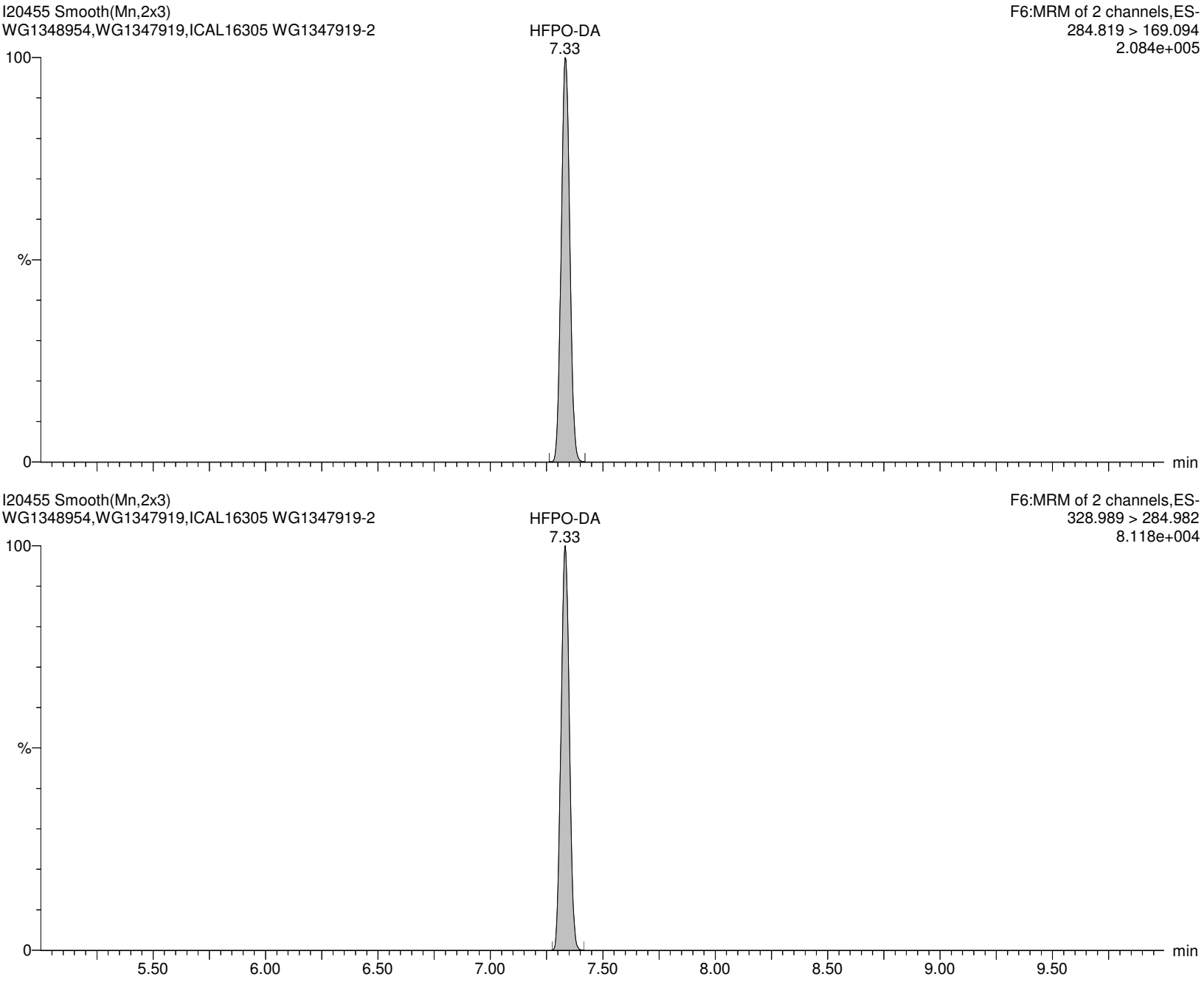
**Tune Method Name: C:\MassLynx\Data\2020\200309_537ISO.PRO\ACQUDB\181009_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\2020\200309_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**HFPO-DA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2020\200309_537ISO.PRO\Data\WG1348954D.qld
Last Altered: Wednesday, March 11, 2020 22:52:23 Eastern Daylight Time
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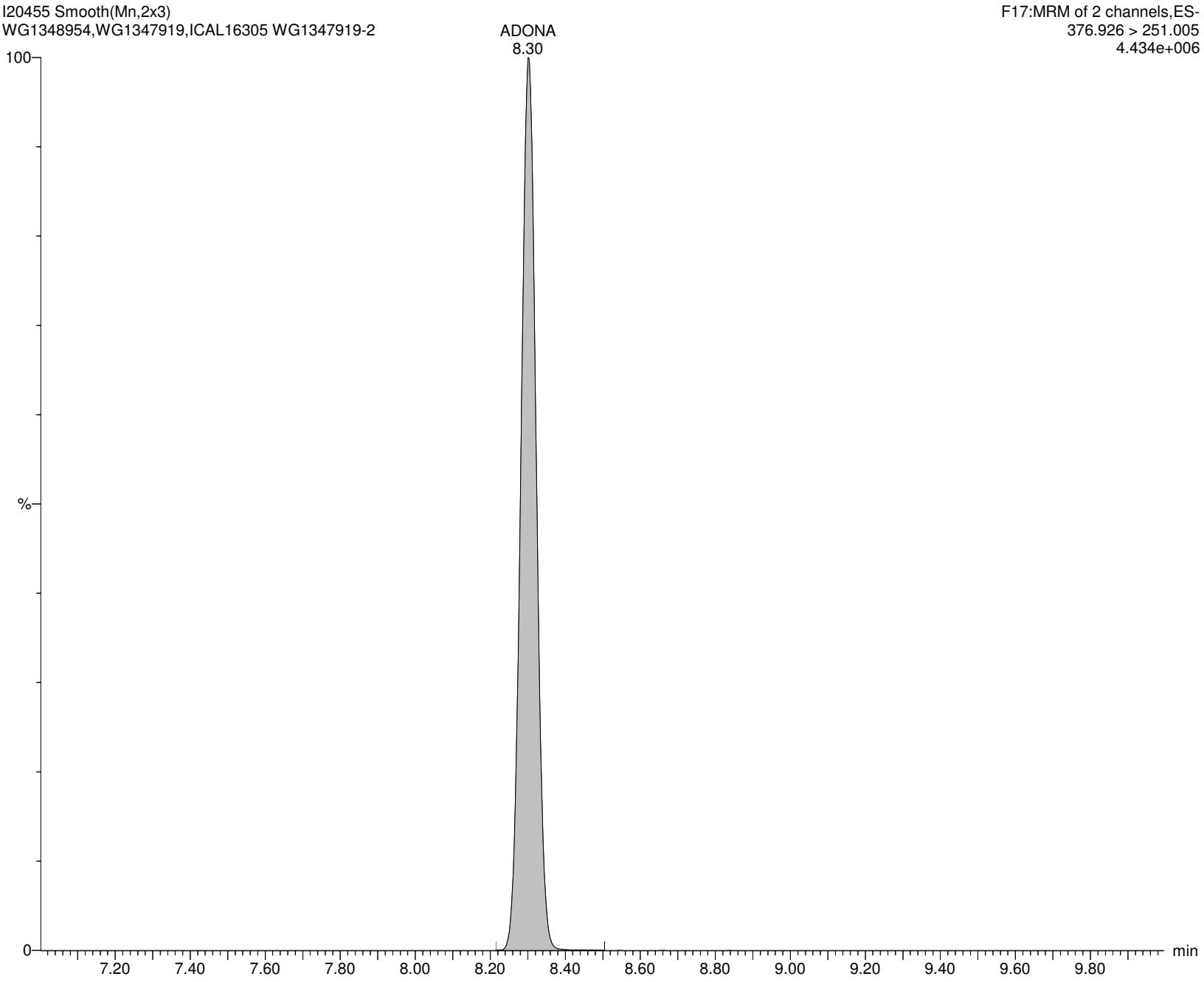
**User: LCMS02:RS**
**Vial: 2:A,8**
**Instrument: XEVO-TQSmicro#QEB0050**
**Inlet Method Name: C:\MassLynx\Data\2020\200309_537ISO.PRO\ACQUDB\LCMS_537_ISO_B**
**Tune Method Name: C:\MassLynx\Data\2020\200309_537ISO.PRO\ACQUDB\181009_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\2020\200309_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**ADONA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2020\200309_537ISO.PRO\Data\WG1348954D.qld
Last Altered: Wednesday, March 11, 2020 22:52:23 Eastern Daylight Time
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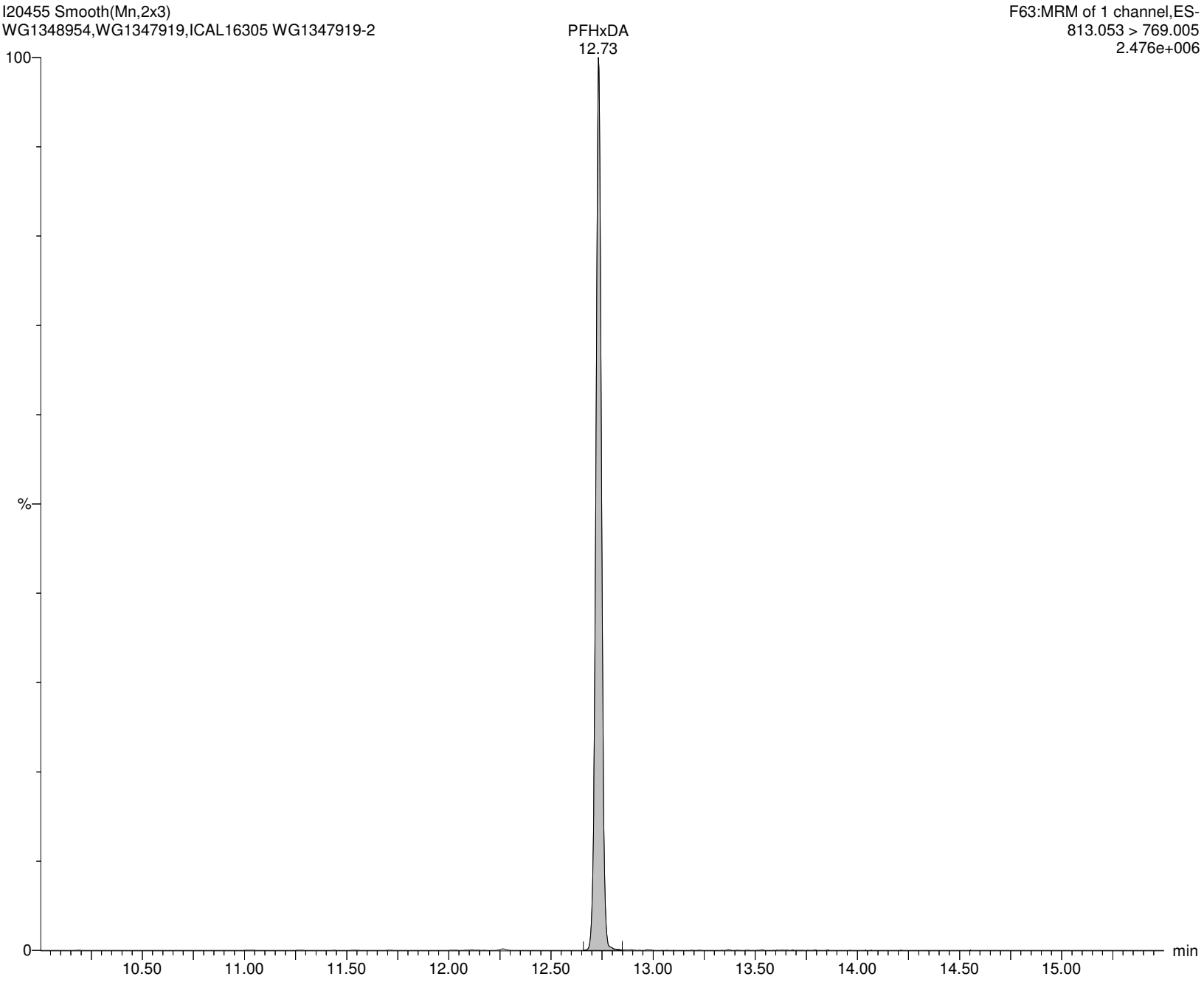
**User: LCMS02:RS**
**Vial: 2:A,8**
**Instrument: XEVO-TQSmicro#QEB0050**
**Inlet Method Name: C:\MassLynx\Data\2020\200309_537ISO.PRO\ACQUDB\LCMS_537_ISO_B**
**Tune Method Name: C:\MassLynx\Data\2020\200309_537ISO.PRO\ACQUDB\181009_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\2020\200309_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**PFHxDA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2020\200309_537ISO.PRO\Data\WG1348954D.qld
Last Altered: Wednesday, March 11, 2020 22:52:23 Eastern Daylight Time
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**Name: I20455**
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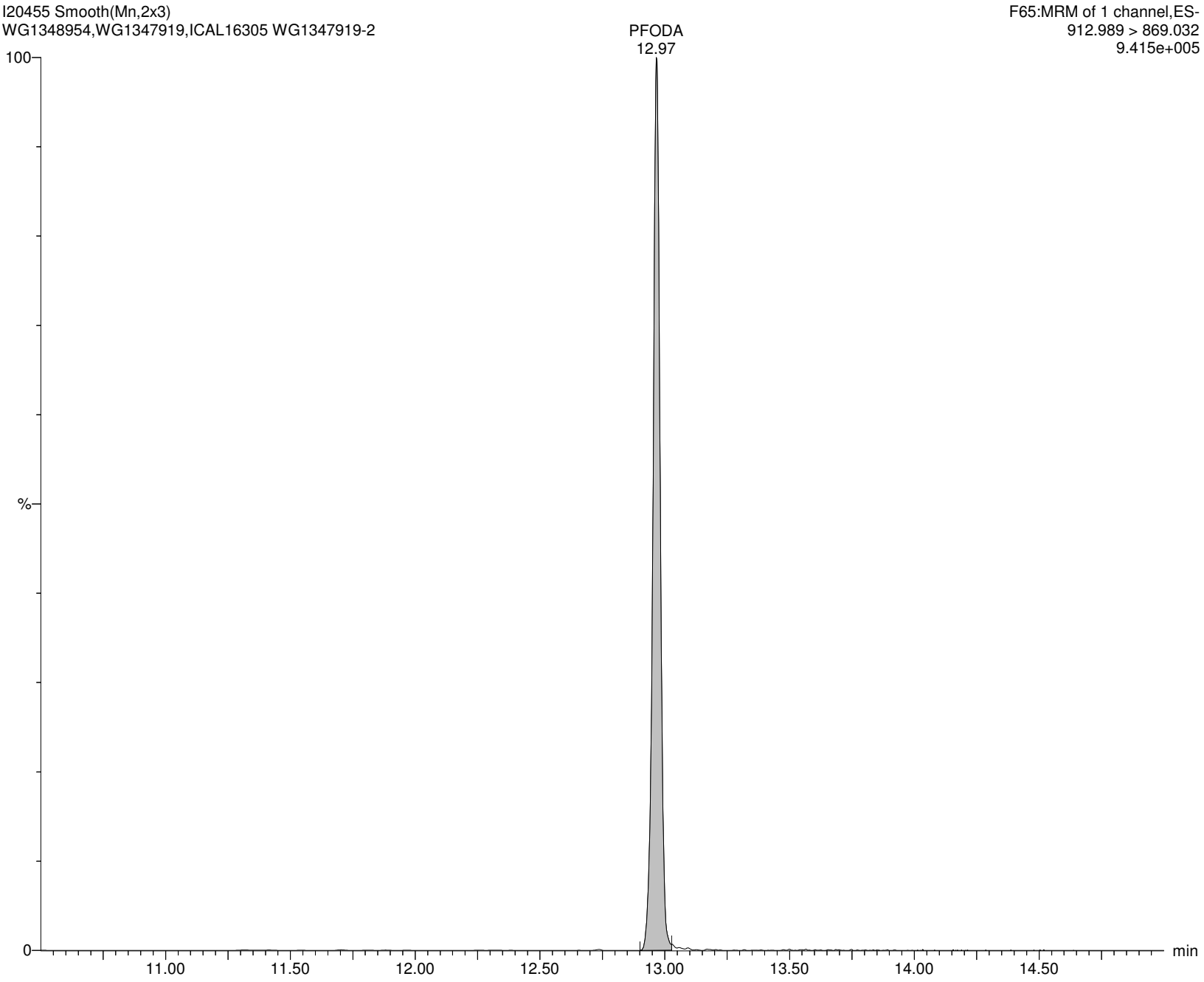
**User: LCMS02:RS**
**Vial: 2:A,8**
**Instrument: XEVO-TQSmicro#QEB0050**
**Inlet Method Name: C:\MassLynx\Data\2020\200309_537ISO.PRO\ACQUDB\LCMS_537_ISO_B**
**Tune Method Name: C:\MassLynx\Data\2020\200309_537ISO.PRO\ACQUDB\181009_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\2020\200309_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**PFODA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2020\200309_537ISO.PRO\Data\WG1348954D.qld
Last Altered: Wednesday, March 11, 2020 22:52:23 Eastern Daylight Time
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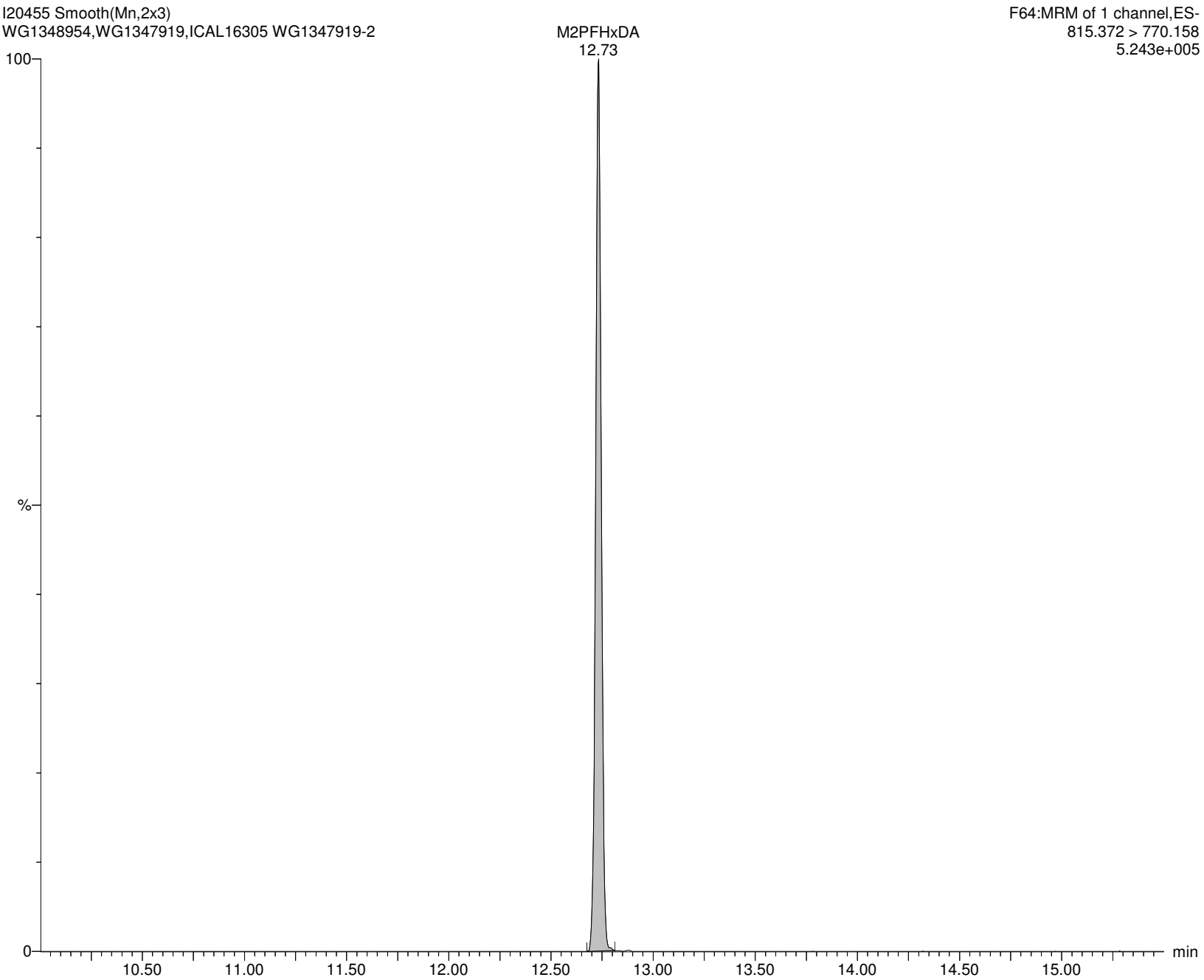
**Name: I20455**
**ID: WG1347919-2**
**Date: 11-Mar-2020**
**Time: 02:54:13**
**Description: WG1348954,WG1347919,ICAL16305**
**User: LCMS02:RS**
**Vial: 2:A,8**
**Instrument: XEVO-TQSmicro#QEB0050**
**Inlet Method Name: C:\MassLynx\Data\2020\200309_537ISO.PRO\ACQUDB\LCMS_537_ISO_B**
**Tune Method Name: C:\MassLynx\Data\2020\200309_537ISO.PRO\ACQUDB\181009_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\2020\200309_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**M2PFHxDA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2020\200309_537ISO.PRO\Data\WG1348954D.qld
Last Altered: Wednesday, March 11, 2020 22:52:23 Eastern Daylight Time
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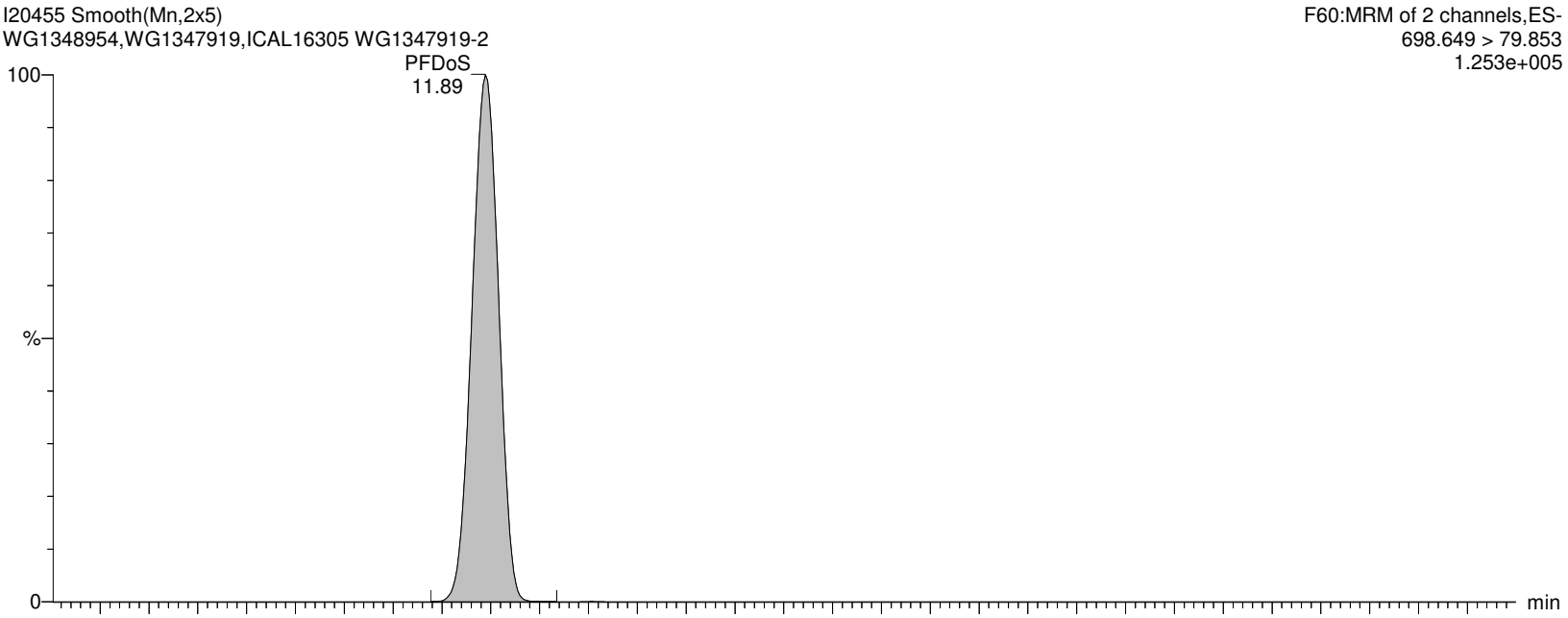
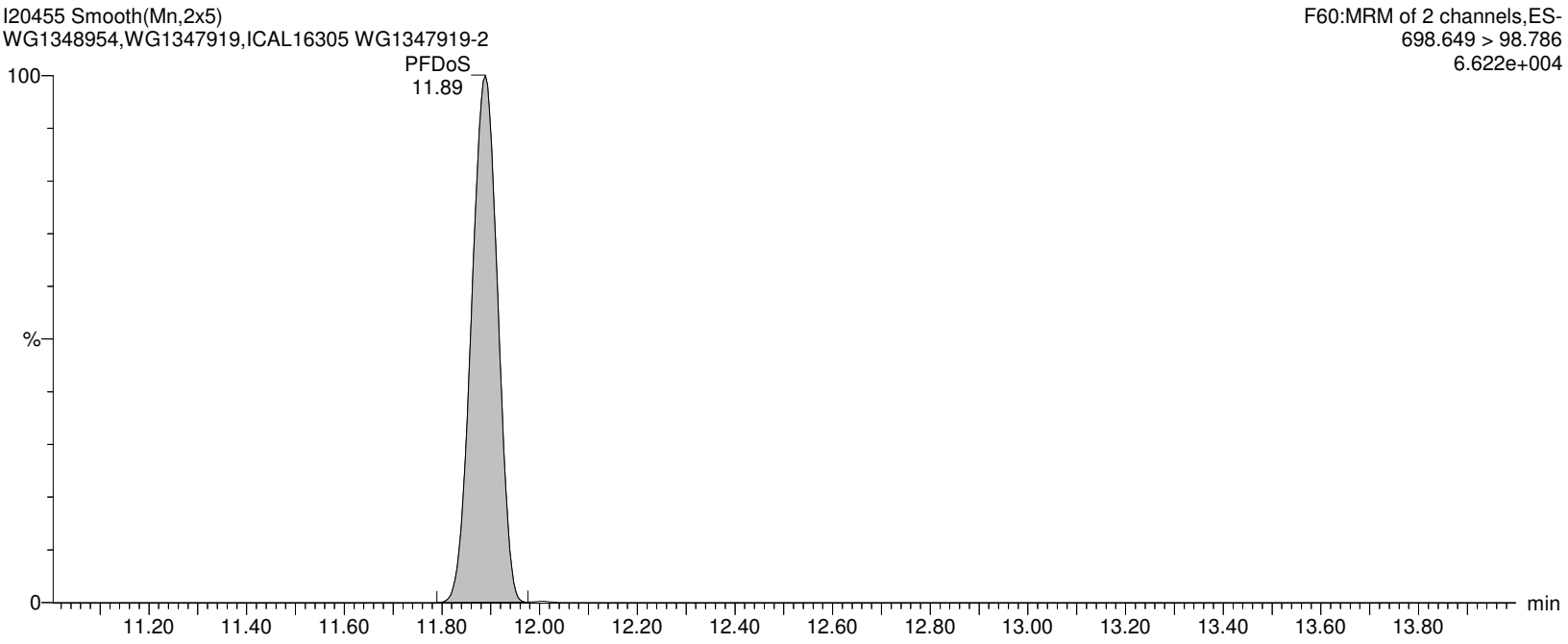
**Name: I20455**
**ID: WG1347919-2**
**Date: 11-Mar-2020**
**Time: 02:54:13**
**Description: WG1348954,WG1347919,ICAL16305**
**User: LCMS02:RS**
**Vial: 2:A,8**
**Instrument: XEVO-TQSmicro#QEB0050**
**Inlet Method Name: C:\MassLynx\Data\2020\200309_537ISO.PRO\ACQUDB\LCMS_537_ISO_B**
**Tune Method Name: C:\MassLynx\Data\2020\200309_537ISO.PRO\ACQUDB\181009_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\2020\200309_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**PFDoS**



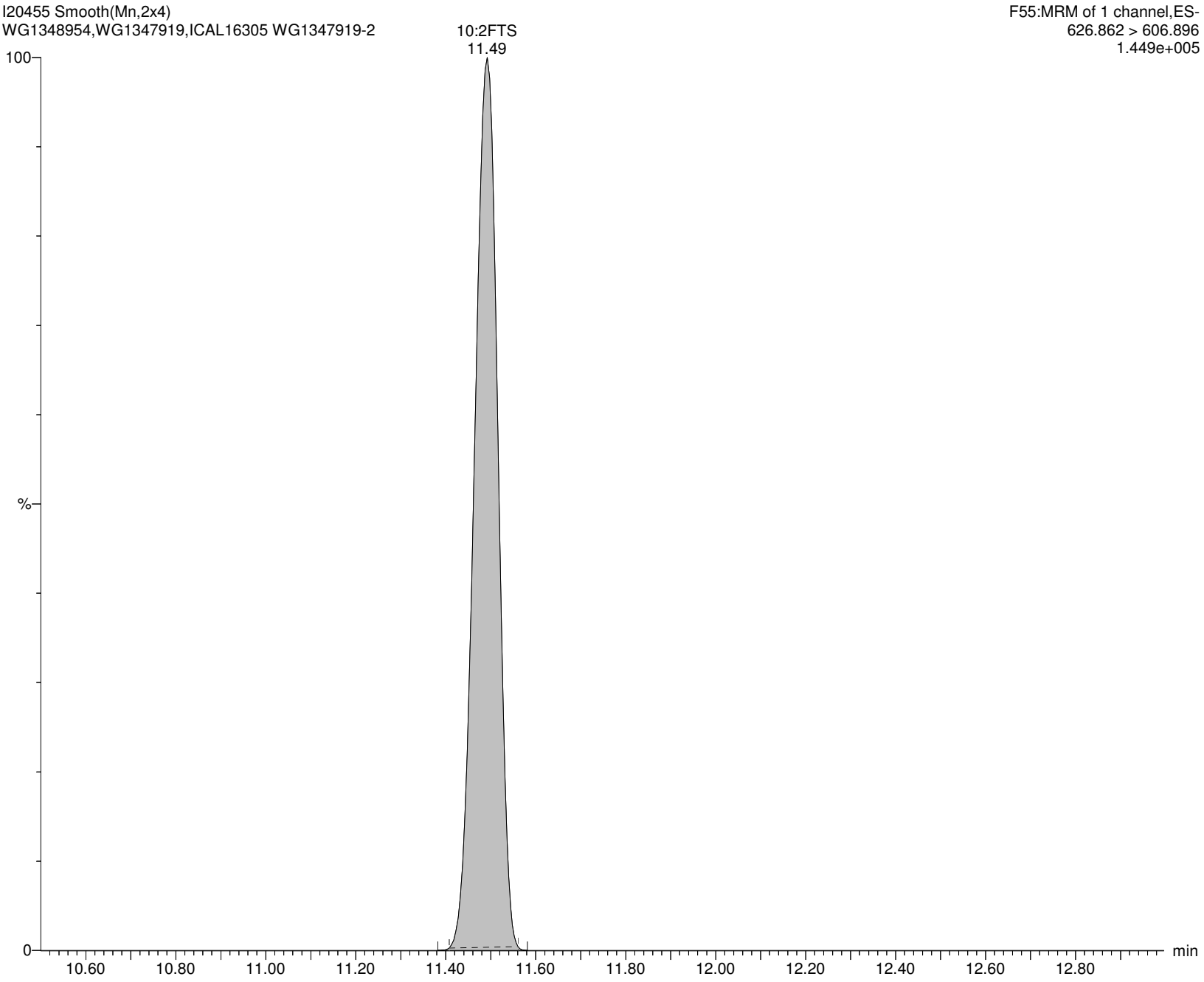


all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2020\200309_537ISO.PRO\Data\WG1348954D.qld
Last Altered: Wednesday, March 11, 2020 22:52:23 Eastern Daylight Time
Printed: Thursday, March 12, 2020 03:26:40 Eastern Daylight Time

**Name: I20455**
**ID: WG1347919-2**
**Date: 11-Mar-2020**
**Time: 02:54:13**
**Description: WG1348954,WG1347919,ICAL16305**
**User: LCMS02:RS**
**Vial: 2:A,8**
**Instrument: XEVO-TQSmicro#QEB0050**
**Inlet Method Name: C:\MassLynx\Data\2020\200309_537ISO.PRO\ACQUDB\LCMS_537_ISO_B**
**Tune Method Name: C:\MassLynx\Data\2020\200309_537ISO.PRO\ACQUDB\181009_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\2020\200309_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**10:2FTS**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2020\200309_537ISO.PRO\Data\WG1348954D.qld
Last Altered: Wednesday, March 11, 2020 22:52:23 Eastern Daylight Time
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**Date: 11-Mar-2020**
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**Description: WG1348954,WG1347919,ICAL16305**
**User: LCMS02:RS**
**Vial: 2:A,8**
**Instrument: XEVO-TQSmicro#QEB0050**
**Inlet Method Name: C:\MassLynx\Data\2020\200309_537ISO.PRO\ACQUDB\LCMS_537_ISO_B**
**Tune Method Name: C:\MassLynx\Data\2020\200309_537ISO.PRO\ACQUDB\181009_TUNE.IPR**
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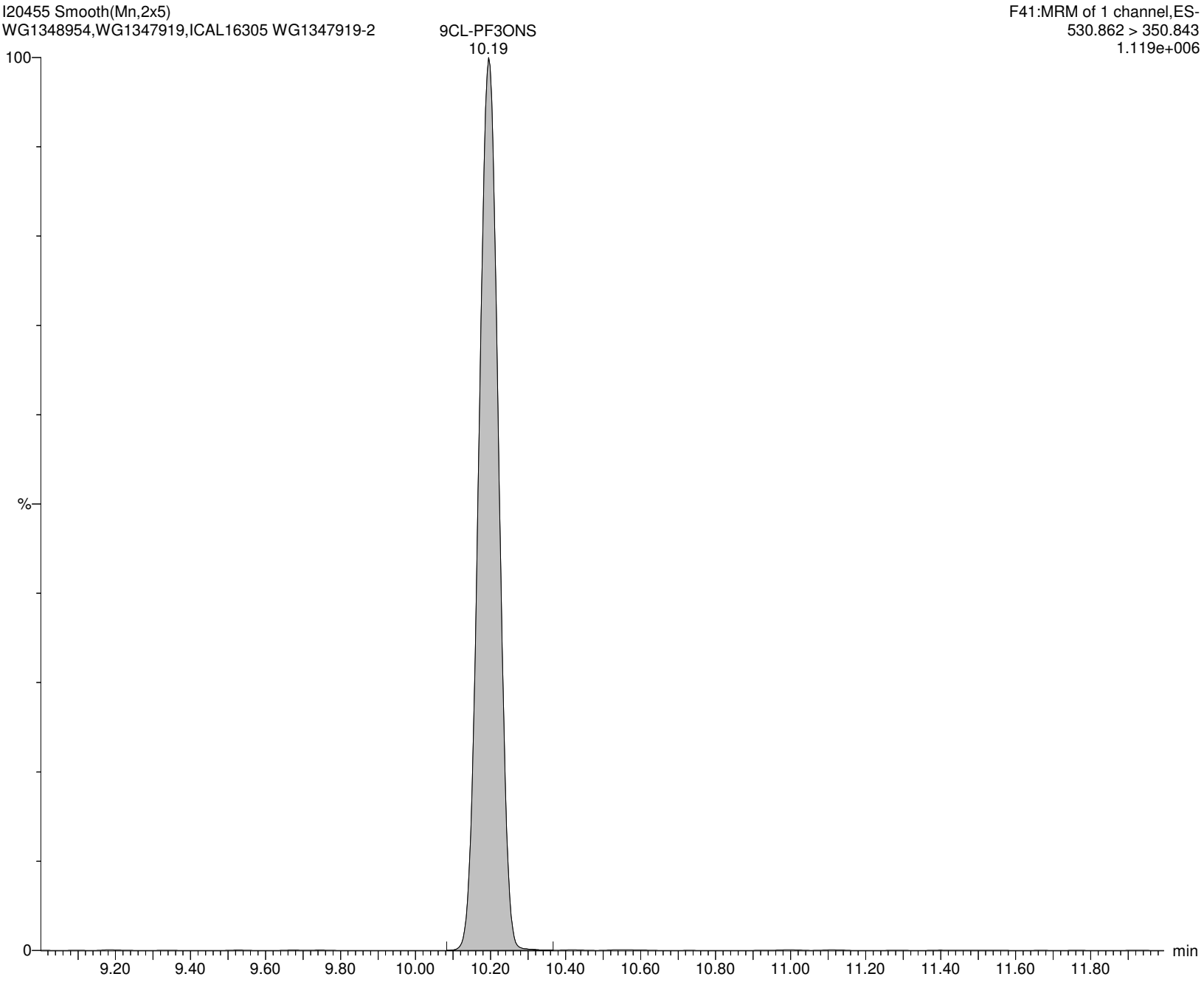
**9CL-PF3ONS**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2020\200309_537ISO.PRO\Data\WG1348954D.qld
Last Altered: Wednesday, March 11, 2020 22:52:23 Eastern Daylight Time
Printed: Thursday, March 12, 2020 03:26:40 Eastern Daylight Time

**Name: I20455**
**ID: WG1347919-2**
**Date: 11-Mar-2020**
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**Description: WG1348954,WG1347919,ICAL16305**
**User: LCMS02:RS**
**Vial: 2:A,8**
**Instrument: XEVO-TQSmicro#QEB0050**
**Inlet Method Name: C:\MassLynx\Data\2020\200309_537ISO.PRO\ACQUDB\LCMS_537_ISO_B**
**Tune Method Name: C:\MassLynx\Data\2020\200309_537ISO.PRO\ACQUDB\181009_TUNE.IPR**
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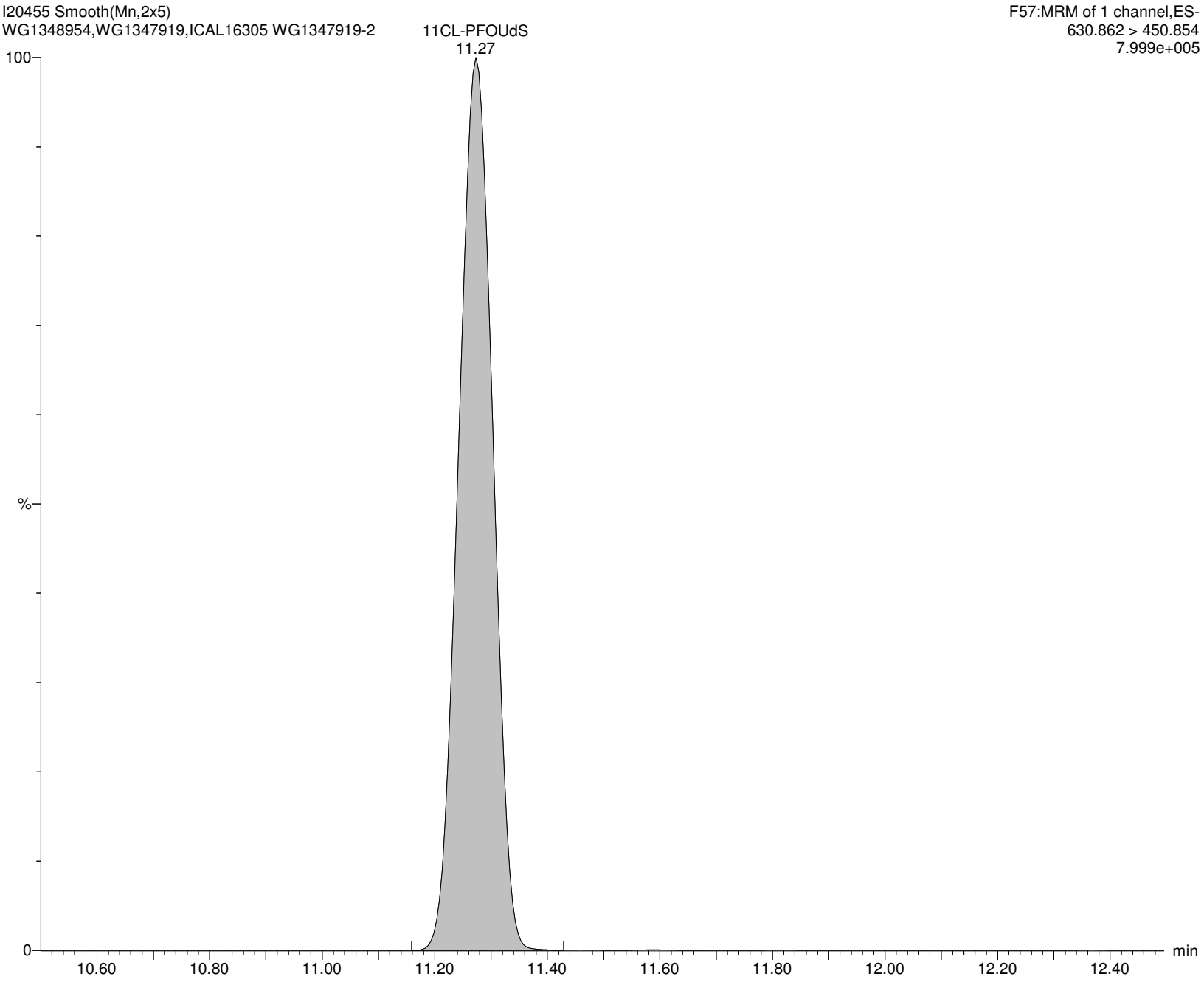
**11CL-PFOUdS**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2020\200309_537ISO.PRO\Data\WG1348954D.qld
Last Altered: Wednesday, March 11, 2020 22:52:23 Eastern Daylight Time
Printed: Thursday, March 12, 2020 03:26:42 Eastern Daylight Time

**Method: C:\MassLynx\Data\2020\200309_537ISO.PRO\MethDB\537ISO_Q_191118_DOD_RT.mdb 07 Feb 2020 15:55:12**
**Calibration: C:\MassLynx\Data\2020\200309_537ISO.PRO\CurveDB\191118_ISO_ICAL.cdb 18 Nov 2019 14:41:42**

**ID: WG1347919-3**
**Name: I20456**
**Date: 11-Mar-2020**
**Time: 03:10:43**
**Description: WG1348954,WG1347919,ICAL16305**
**Instrument: XEVO-TQSmicro#QEB0050**
**User: LCMS02:RS**
**Inlet Method Name: C:\MassLynx\Data\2020\200309_537ISO.PRO\ACQUDB\LCMS_537_ISO_B**
**Tune Method Name: C:\MassLynx\Data\2020\200309_537ISO.PRO\ACQUDB\181009_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\2020\200309_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

| | Name | CAS | RT | Trace | Area | M Flag | Conc (ng/mL) | Ion Ratio | Ratio Flag | %Rec |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | PFBA | 375-22-4 | 2.18 | 212.926 > 169.111 | 44177 | M4 | 8.613 | | na | 86.1 |
| 2 | M3PFBA | INT STD | 2.18 | 215.926 > 172.122 | 56014 | | 12.089 | | na | 120.9 |
| 3 | MPFBA | INT STD | 2.18 | 216.926 > 172.137 | 61427 | | 10.077 | | na | 100.8 |
| 4 | PFPeA | 2706-90-3 | 5.06 | 262.926 > 219.002 | 86175 | M4 | 9.064 | | na | 90.6 |
| 5 | M5PFPEA | INT STD | 5.05 | 267.989 > 223.081 | 98441 | | 11.386 | | na | 113.9 |
| 6 | PFBS | 375-73-5 | 5.69 | 298.926 > 79.923 | 13410 | | 7.587 | 1.88 | NO | 85.7 |
| 7 | M3PFBS | INT STD | 5.69 | 301.989 > 80.254 | 12031 | | 9.607 | | na | 96.1 |
| 8 | 4:2FTS | 757124-72-4 | 6.84 | 326.926 > 306.957 | 8639 | | 8.662 | 2.24 | NO | 92.6 |
| 9 | M2-4:2FTS | INT STD | 6.84 | 329.117 > 309.079 | 9222 | | 11.343 | | na | 113.4 |
| 10 | PFHxA | 307-24-4 | 6.92 | 312.989 > 269.028 | 86904 | | 8.512 | 17.97 | NO | 85.1 |
| 11 | M5PFHxA | INT STD | 6.92 | 317.989 > 273.045 | 110912 | | 9.875 | | na | 98.7 |
| 12 | PFPeS | 2706-91-4 | 7.23 | 348.926 > 80.251 | 9089 | | 7.107 | 1.76 | NO | 75.6 |
| 13 | PFHpA | 375-85-9 | 8.15 | 362.926 > 319.014 | 115739 | | 8.585 | 5.76 | NO | 85.8 |
| 14 | M4PFHpA | INT STD | 8.15 | 366.926 > 321.979 | 149462 | | 9.990 | | na | 99.9 |
| 15 | br-PFHxS | 355-46-4 | 8.09 | 398.926 > 80.295 | 1154 | M5 | 1.271 | 2.54 | NO | 74.8 |
| 16 | L-PFHxS | 355-46-4 | 8.30 | 398.926 > 80.295 | 5739 | | 5.991 | 1.10 | NO | 81.0 |
| 17 | PFHxS | 355-46-4 | | 398.926 > 80.295 | 6894 | | 7.263 | | na | |
| 18 | M3PFHxS | INT STD | 8.30 | 401.926 > 80.317 | 7647 | | 10.580 | | na | 105.8 |
| 19 | br-PFOA | 335-67-1 | | 412.989 > 368.9 | | | ND | | YES | |
| 20 | L-PFOA | 335-67-1 | 9.06 | 412.989 > 368.9 | 119076 | | 8.712 | 10.10 | NO | 87.1 |
| 21 | PFOA | 335-67-1 | | 412.989 > 368.9 | 119076 | | 8.712 | | na | |
| 22 | M8PFOA | INT STD | 9.06 | 420.989 > 375.979 | 148850 | | 10.368 | | na | 103.7 |
| 23 | M2PFOA | INT STD | 9.06 | 415.032 > 369.968 | 146724 | | 13.879 | | na | 138.8 |
| 24 | 6:2FTS | 27619-97-2 | 9.02 | 426.989 > 406.921 | 6899 | | 9.024 | 10.23 | NO | 95.0 |
| 25 | M2-6:2FTS | INT STD | 9.02 | 428.989 > 408.917 | 9626 | | 12.114 | | na | 121.1 |
| 26 | PFHpS | 375-92-8 | 9.14 | 448.926 > 80.257 | 5353 | | 8.288 | 0.91 | YES | 87.2 |
| 27 | PFNA | 375-95-1 | 9.81 | 462.989 > 418.931 | 109590 | | 8.660 | 4.52 | NO | 86.6 |
| 28 | M9PFNA | INT STD | 9.81 | 472.053 > 426.947 | 154475 | | 10.935 | | na | 109.4 |
| 29 | br-PFOS | 1763-23-1 | 9.67 | 498.989 > 80.294 | 1808 | M5 | 1.409 | 5.94 | NO | 70.4 |
| 30 | L-PFOS | 1763-23-1 | 9.86 | 498.989 > 80.294 | 5947 | | 6.178 | 1.55 | YES | 84.6 |
| 31 | PFOS | 1763-23-1 | | 498.989 > 80.294 | 7755 | | 7.587 | | na | |
| 32 | M4PFOS | INT STD | 9.86 | 503.032 > 80.306 | 8947 | | 12.810 | | na | 128.1 |
| 33 | M8PFOS | INT STD | 9.86 | 507.053 > 80.294 | 9808 | | 10.684 | | na | 106.8 |
| 34 | PFDA | 335-76-2 | 10.45 | 513.053 > 468.906 | 105377 | | 8.620 | 6.72 | NO | 86.2 |
| 35 | M2PFDA | INT STD | 10.45 | 515.053 > 469.934 | 136498 | | 15.460 | | na | 154.6 |
| 36 | M6PFDA | INT STD | 10.45 | 519.053 > 473.931 | 142504 | | 10.102 | | na | 101.0 |
| 37 | 8:2FTS | 39108-34-4 | 10.45 | 526.926 > 506.818 | 5804 | | 9.272 | | na | 96.6 |
| 38 | M2-8:2FTS | INT STD | 10.45 | 529.053 > 508.945 | 5927 | | 12.715 | | na | 127.1 |
| 39 | PFNS | 68259-12-1 | 10.48 | 548.989 > 80.249 | 7623 | | 8.356 | 1.28 | NO | 87.0 |


all concentration units in (ng/mL)

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Printed: Thursday, March 12, 2020 03:26:42 Eastern Daylight Time

**ID: WG1347919-3**
**Name: I20456**
**Date: 11-Mar-2020**
**Time: 03:10:43**
**Description: WG1348954,WG1347919,ICAL16305**
**Instrument: XEVO-TQSmicro#QEB0050**
**User: LCMS02:RS**
**Inlet Method Name: C:\MassLynx\Data\2020\200309_537ISO.PRO\ACQUDB\LCMS_537_ISO_B**
**Tune Method Name: C:\MassLynx\Data\2020\200309_537ISO.PRO\ACQUDB\181009_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\2020\200309_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

| | Name | CAS | RT | Trace | Area | M Flag | Conc (ng/mL) | Ion Ratio | Ratio Flag | %Rec |
|---|---|---|---|---|---|---|---|---|---|---|
| 40 | d3-NMeFOSAA | INT STD | 10.85 | 573.096 > 418.987 | 15130 | | 9.417 | | na | 94.2 |
| 41 | br-NMeFOSAA | 2355-31-9 | | 570.053 > 418.917 | | | ND | | YES | |
| 42 | L-NMeFOSAA | 2355-31-9 | 10.85 | 570.053 > 418.917 | 14292 | | 10.136 | 2.60 | NO | 101.4 |
| 43 | NMeFOSAA | 2355-31-9 | | 570.053 > 418.917 | 14292 | | 10.136 | | na | |
| 44 | PFUnA | 2058-94-8 | 11.01 | 562.989 > 518.903 | 112419 | | 8.434 | 8.24 | NO | 84.3 |
| 45 | M7-PFUDA | INT STD | 11.01 | 570.053 > 524.923 | 139383 | | 11.137 | | na | 111.4 |
| 46 | PFDS | 335-77-3 | 11.02 | 598.926 > 80.314 | 5522 | | 8.468 | 1.03 | NO | 87.8 |
| 47 | FOSA | 754-91-6 | 10.91 | 497.989 > 78.245 | 16324 | | 8.672 | 158.69 | NO | 86.7 |
| 48 | M8FOSA | INT STD | 10.91 | 506.053 > 78.286 | 17715 | | 5.311 | | na | 53.1 |
| 49 | d5-NEtFOSAA | INT STD | 11.14 | 589.117 > 418.929 | 12206 | | 8.601 | | na | 86.0 |
| 50 | br-NEtFOSAA | 2991-50-6 | | 583.989 > 418.927 | | | ND | | YES | |
| 51 | L-NEtFOSAA | 2991-50-6 | 11.15 | 583.989 > 418.927 | 10556 | M4 | 9.161 | 2.56 | NO | 91.6 |
| 52 | NEtFOSAA | 2991-50-6 | | 583.989 > 418.927 | 10556 | | 9.161 | | na | |
| 53 | PFDoA | 307-55-1 | 11.49 | 612.989 > 568.967 | 103108 | | 9.024 | 13.63 | NO | 90.2 |
| 54 | MPFDOA | INT STD | 11.49 | 614.989 > 569.92 | 134897 | | 9.608 | | na | 96.1 |
| 55 | PFTrDA | 72629-94-8 | 11.91 | 663.053 > 618.969 | 93490 | | 10.230 | 10.73 | NO | 102.3 |
| 56 | PFTA | 376-06-7 | 12.27 | 713.053 > 668.976 | 74366 | | 9.085 | 9.52 | NO | 90.9 |
| 57 | M2PFTEDA | INT STD | 12.27 | 715.053 > 669.945 | 102211 | | 9.165 | | na | 91.7 |
| 58 | M3HFPO-DA | INT STD | 7.34 | 331.989 > 286.995 | 5973 | | 94.950 | | na | 47.5 |
| 59 | HFPO-DA | 13252-13-6 | 7.34 | 284.819 > 169.094 | 9434 | | 190.237 | 2.65 | YES | 95.1 |
| 60 | ADONA | 958445-44-8 | 8.32 | 376.926 > 251.005 | 208567 | | 10.658 | | na | 112.6 |
| 61 | PFHxDA | | 12.74 | 813.053 > 769.005 | 81675 | | 15.201 | | na | 152.0 |
| 62 | PFODA | | 12.98 | 912.989 > 869.032 | 33542 | | 8.490 | | na | 84.9 |
| 63 | M2PFHxDA | | 12.74 | 815.372 > 770.158 | 14730 | | 6.205 | | na | 62.0 |
| 64 | PFDoS | | 11.90 | 698.649 > 79.853 | 8249 | | 12.409 | 1.95 | YES | 124.1 |
| 65 | 10:2FTS | | 11.51 | 626.862 > 606.896 | 7955 | | 13.337 | | na | 138.3 |
| 66 | 9CL-PF3ONS | | 10.22 | 530.862 > 350.843 | 67177 | | 10.422 | | na | 111.8 |
| 67 | 11CL-PFOUdS | | 11.28 | 630.862 > 450.854 | 55843 | | 10.277 | | na | 109.1 |


all concentration units in (ng/mL)

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**Calibration: C:\MassLynx\Data\2020\200309_537ISO.PRO\CurveDB\191118_ISO_ICAL.cdb 18 Nov 2019 14:41:42**

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**User: LCMS02:RS**
**Vial: 2:B,1**
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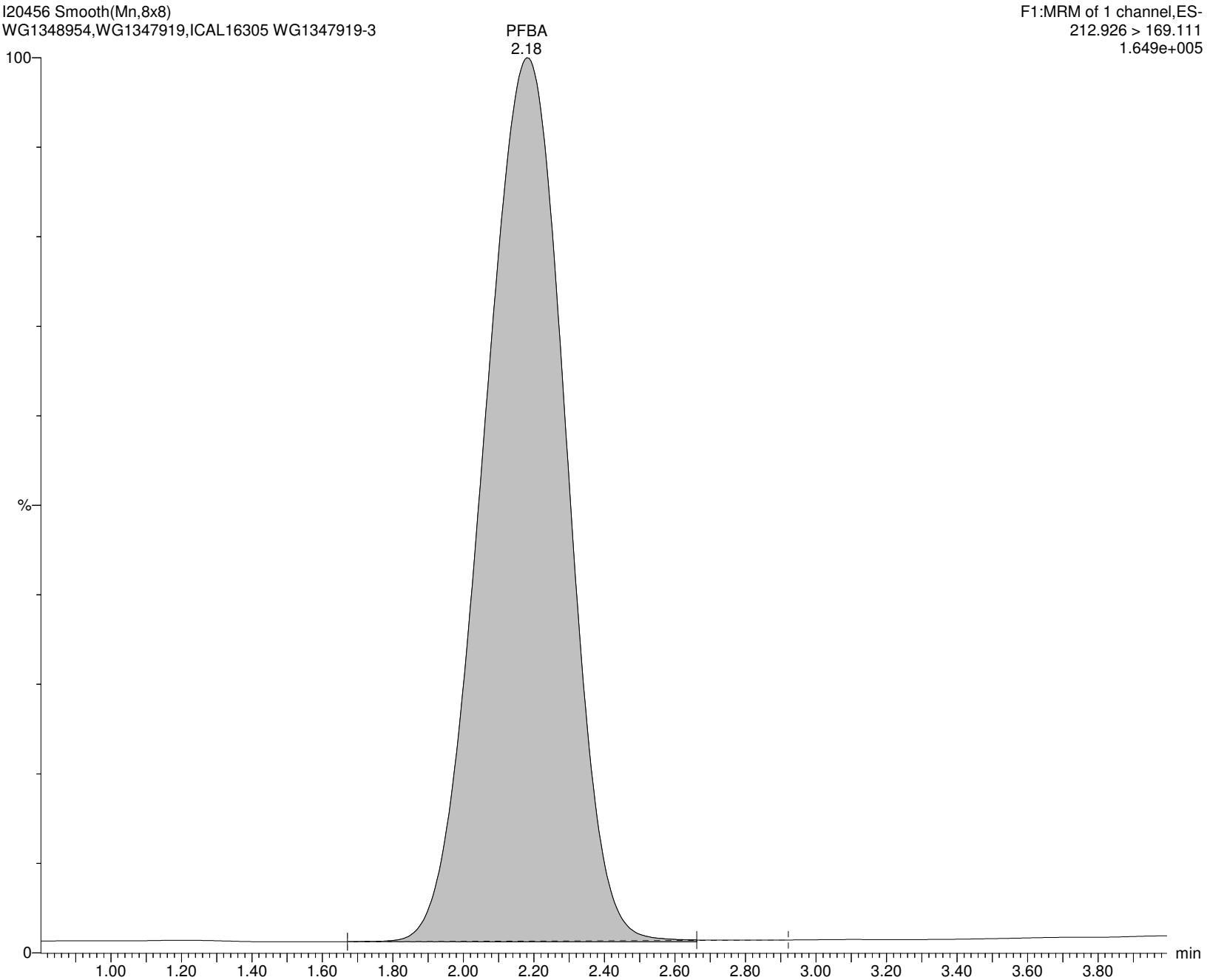
**PFBA**





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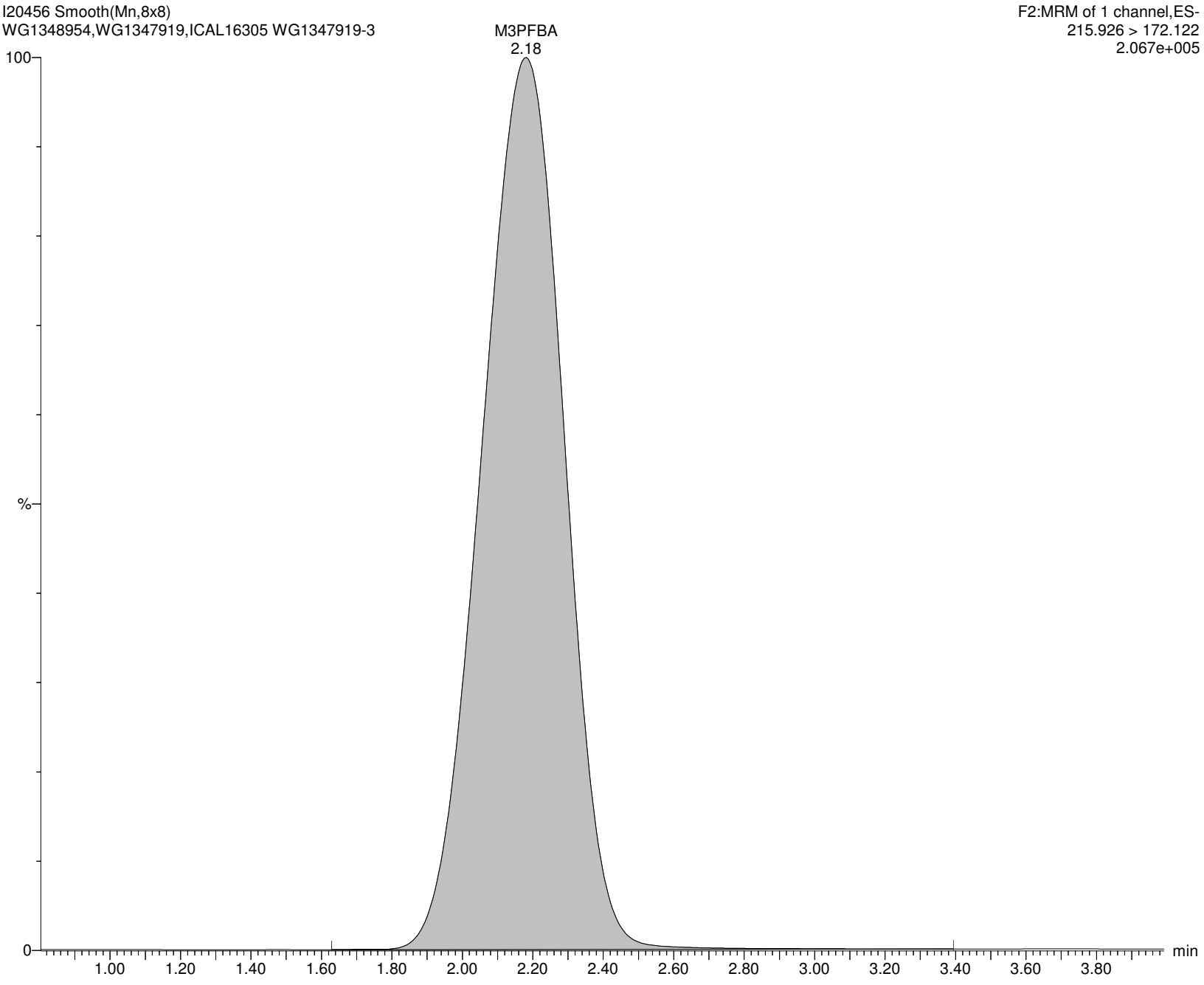
**M3PFBA**





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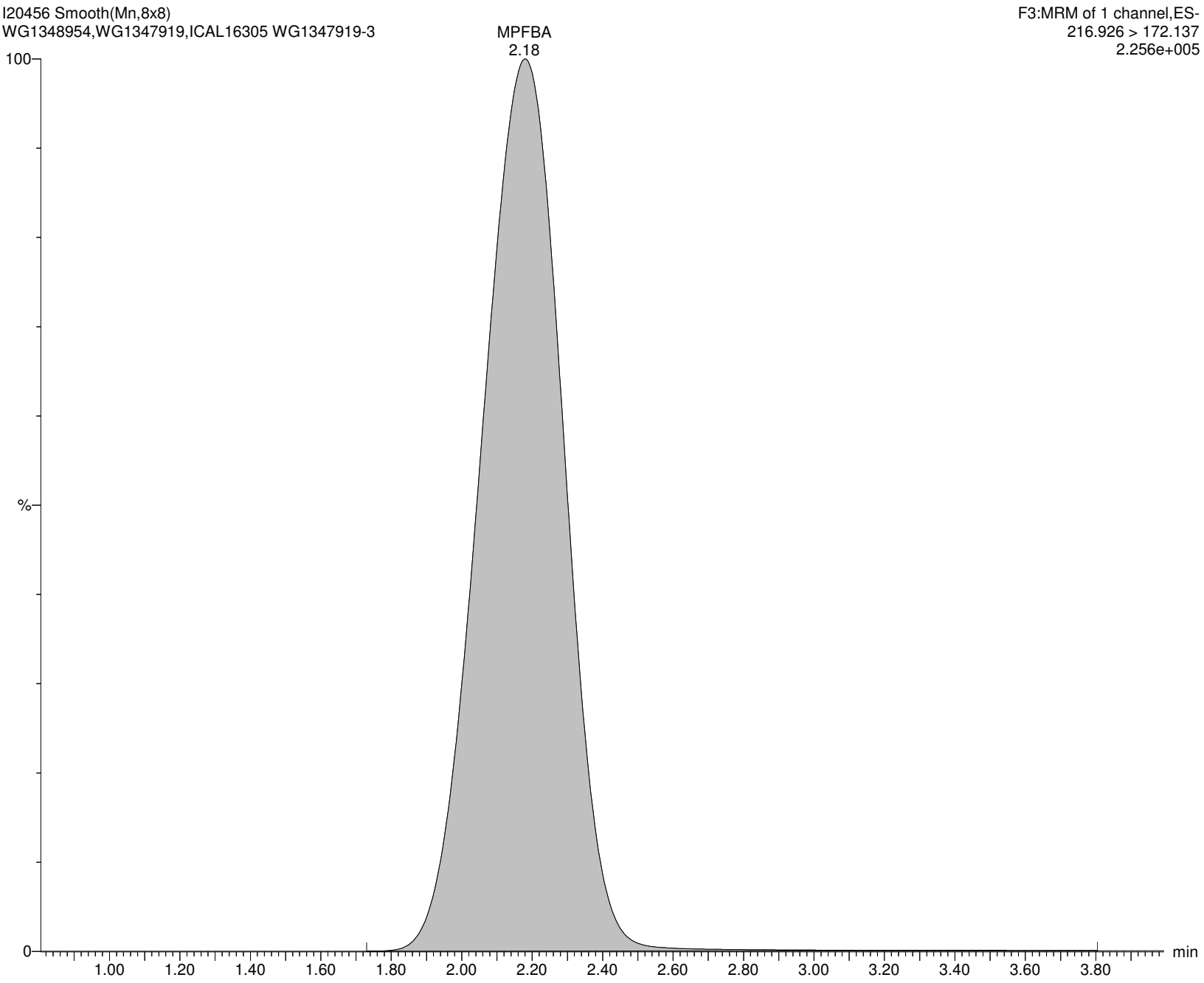
**MPFBA**





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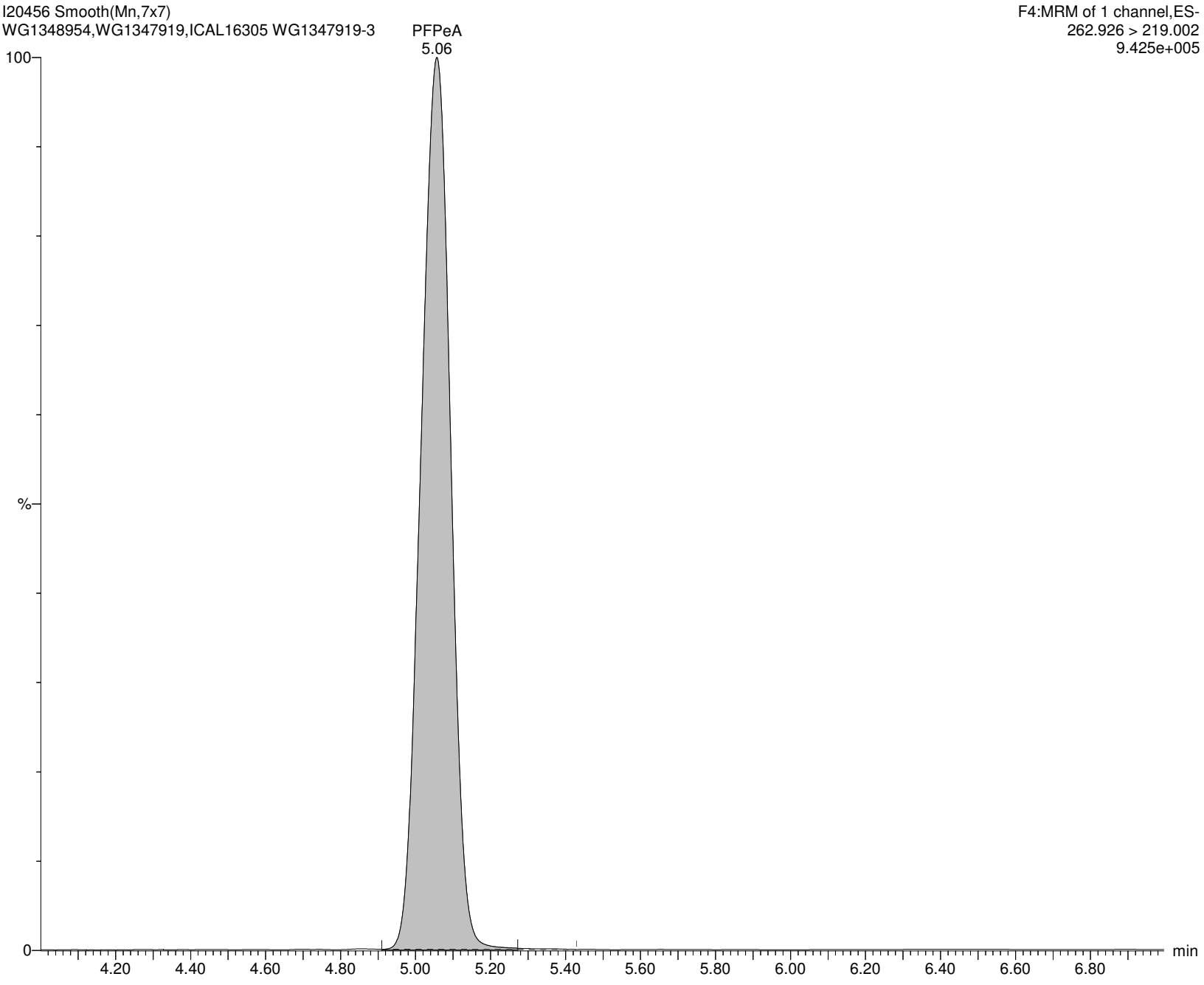
**PFPeA**





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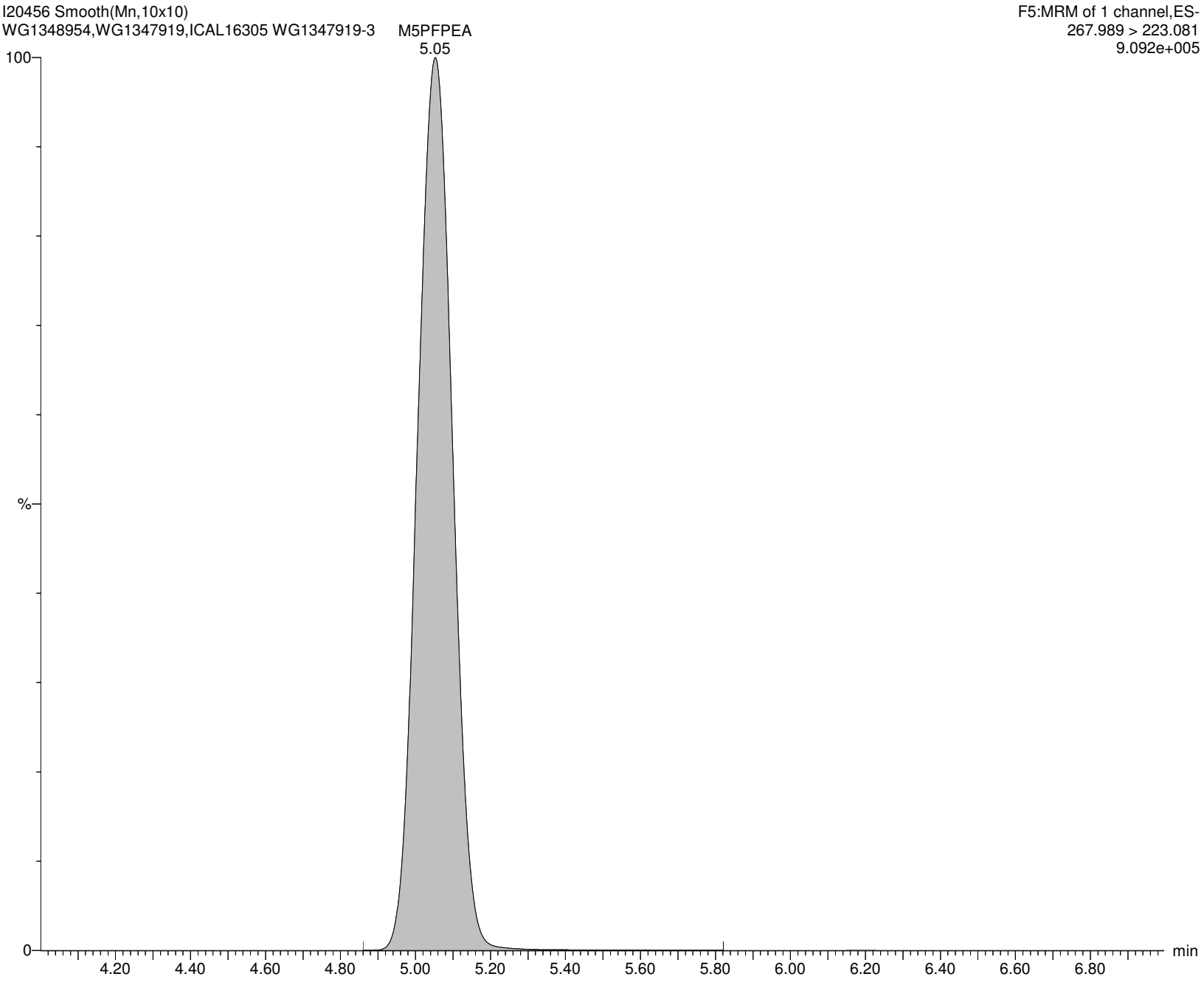
**M5PFPEA**





all concentration units in (ng/mL)

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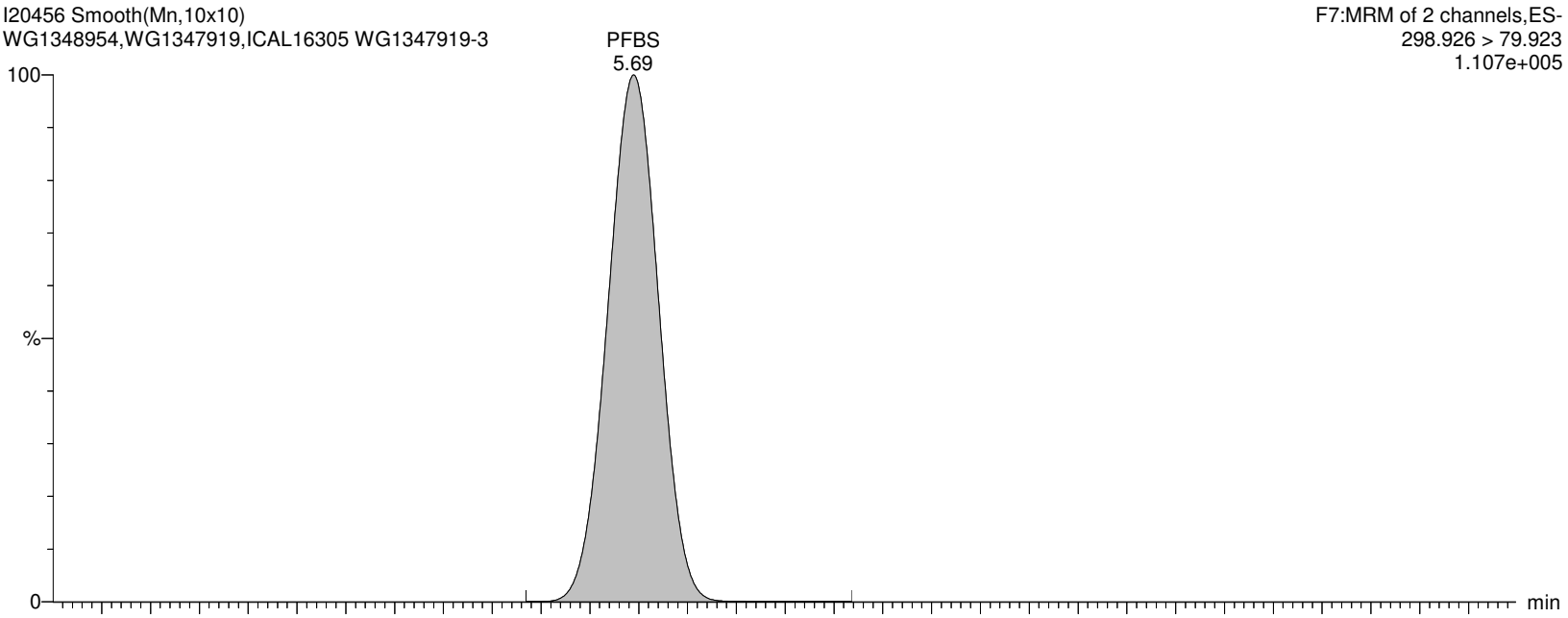
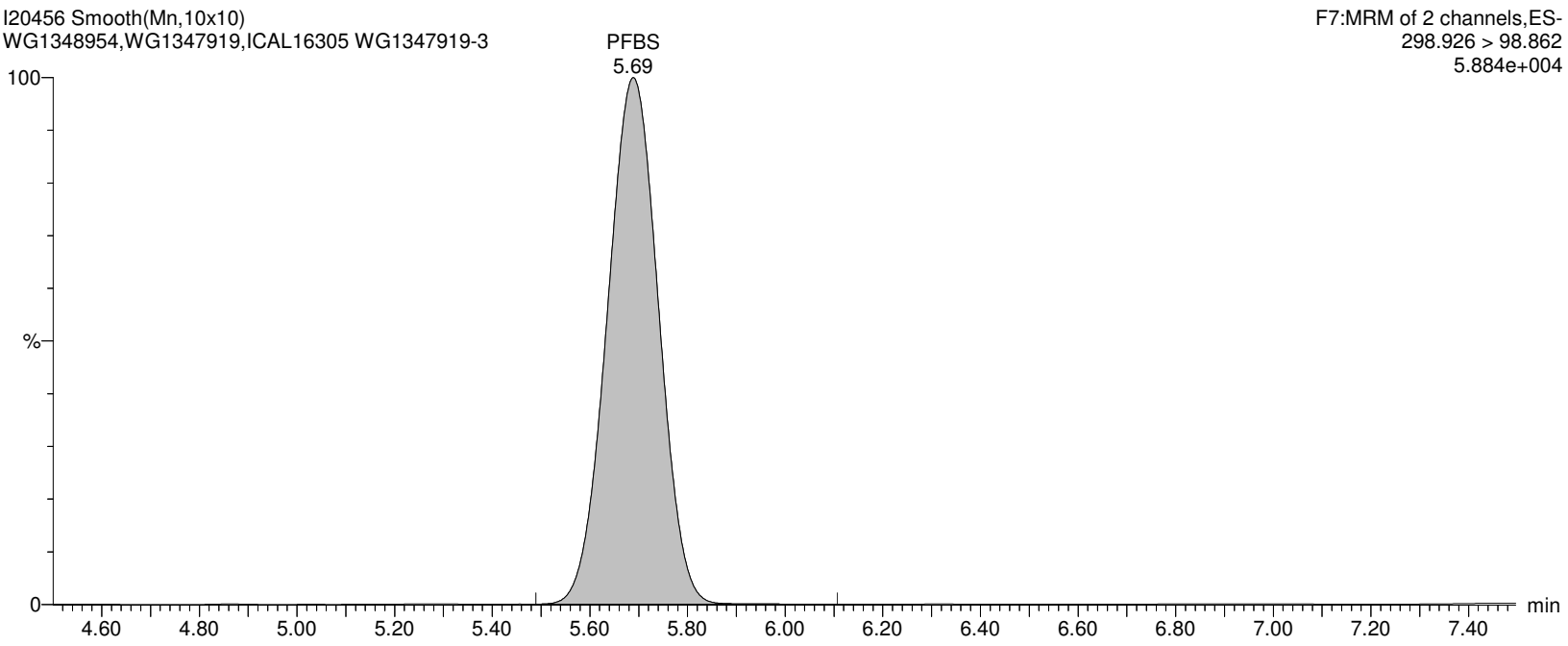
**PFBS**





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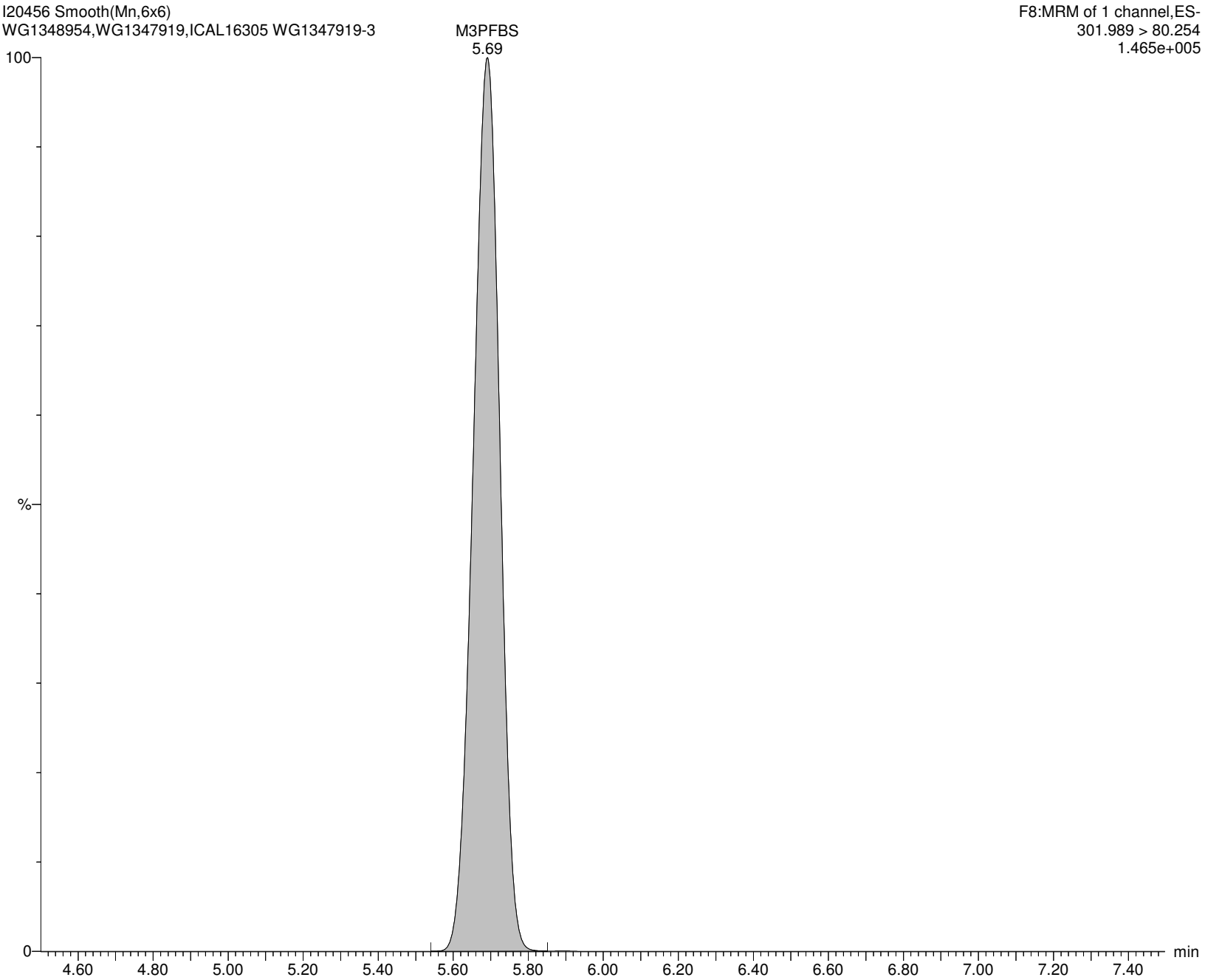
**M3PFBS**





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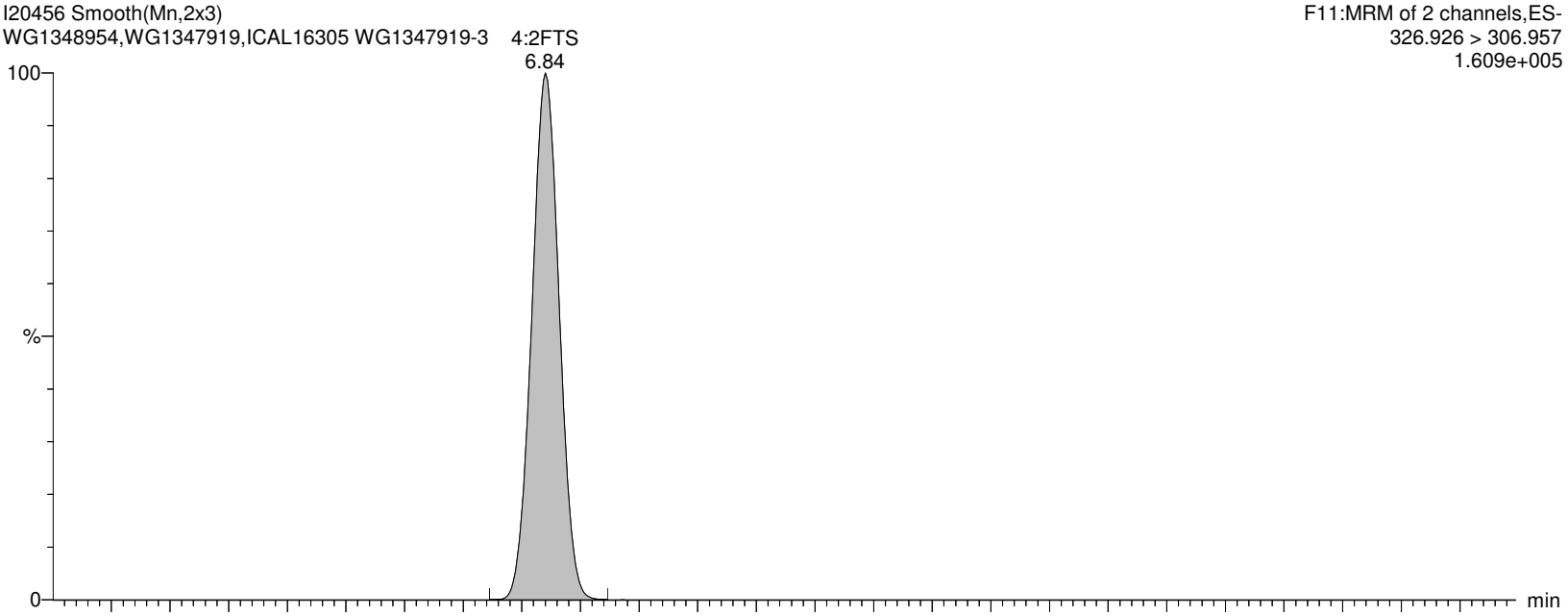
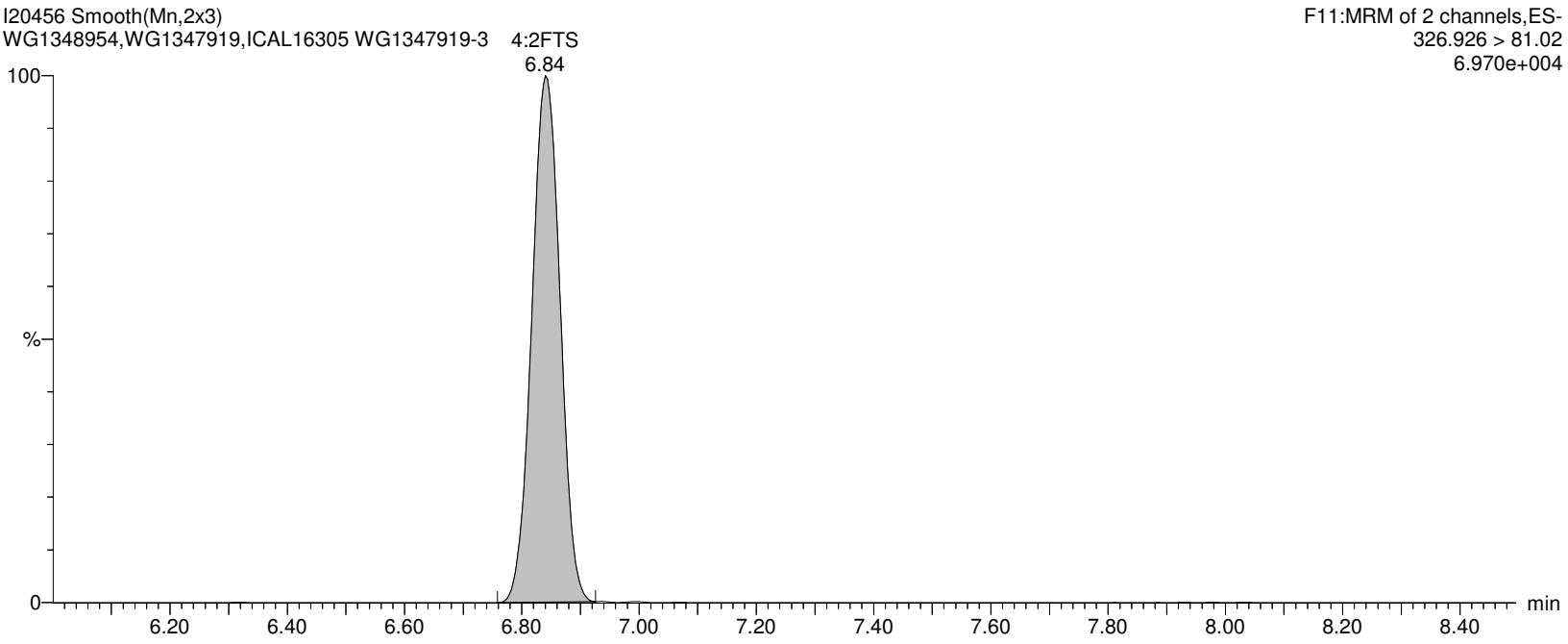
**4:2FTS**





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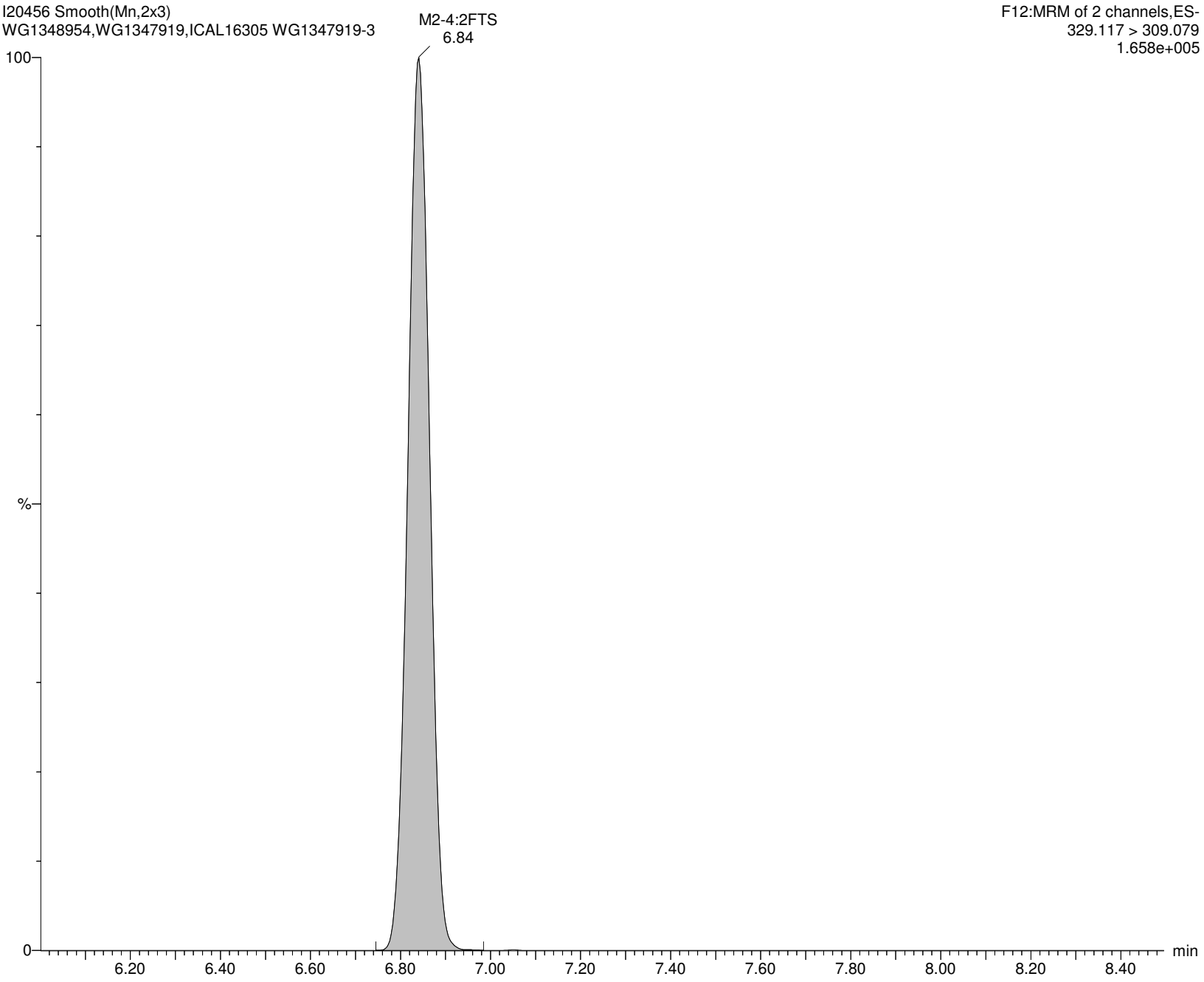
**M2-4:2FTS**





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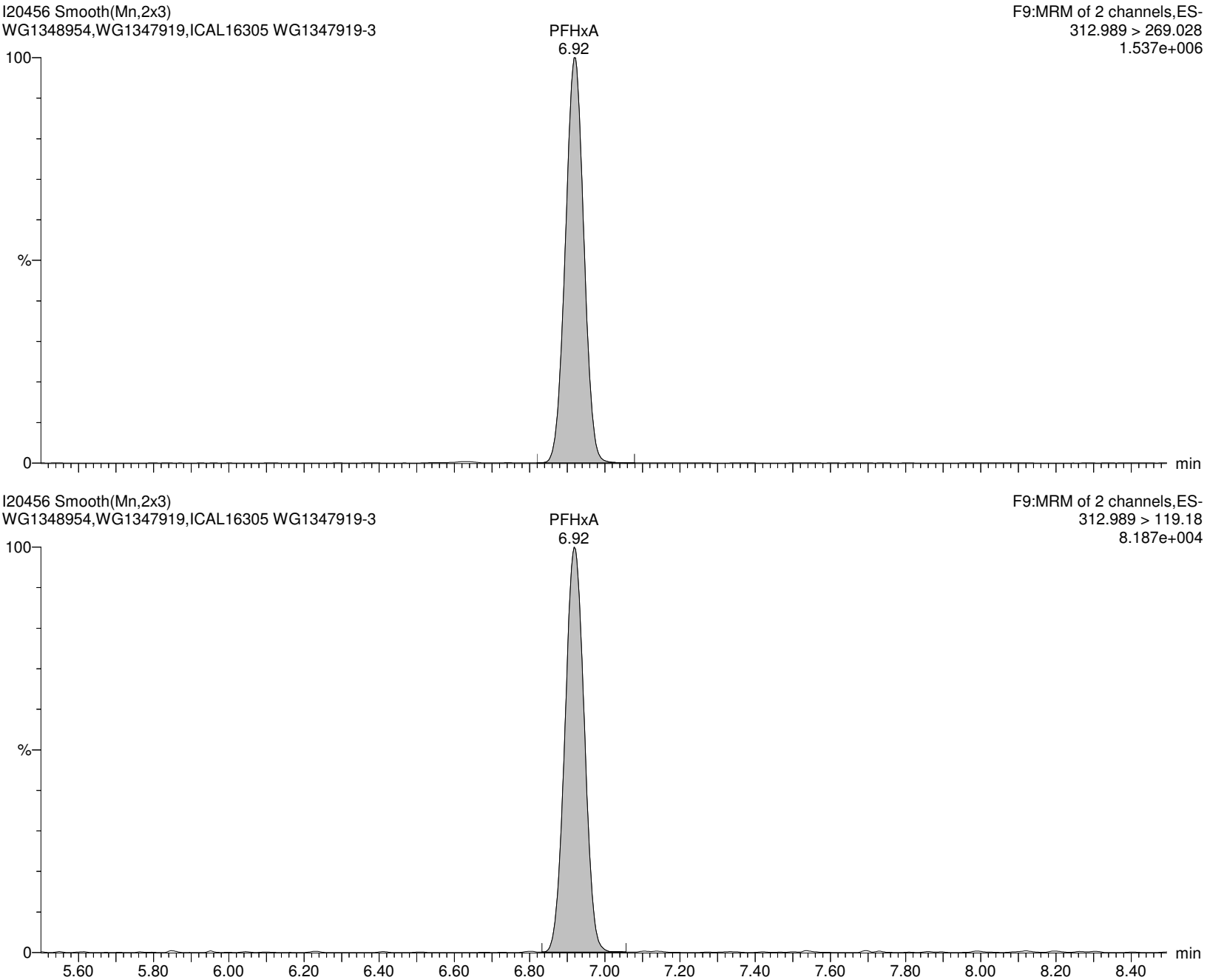
**PFHxA**





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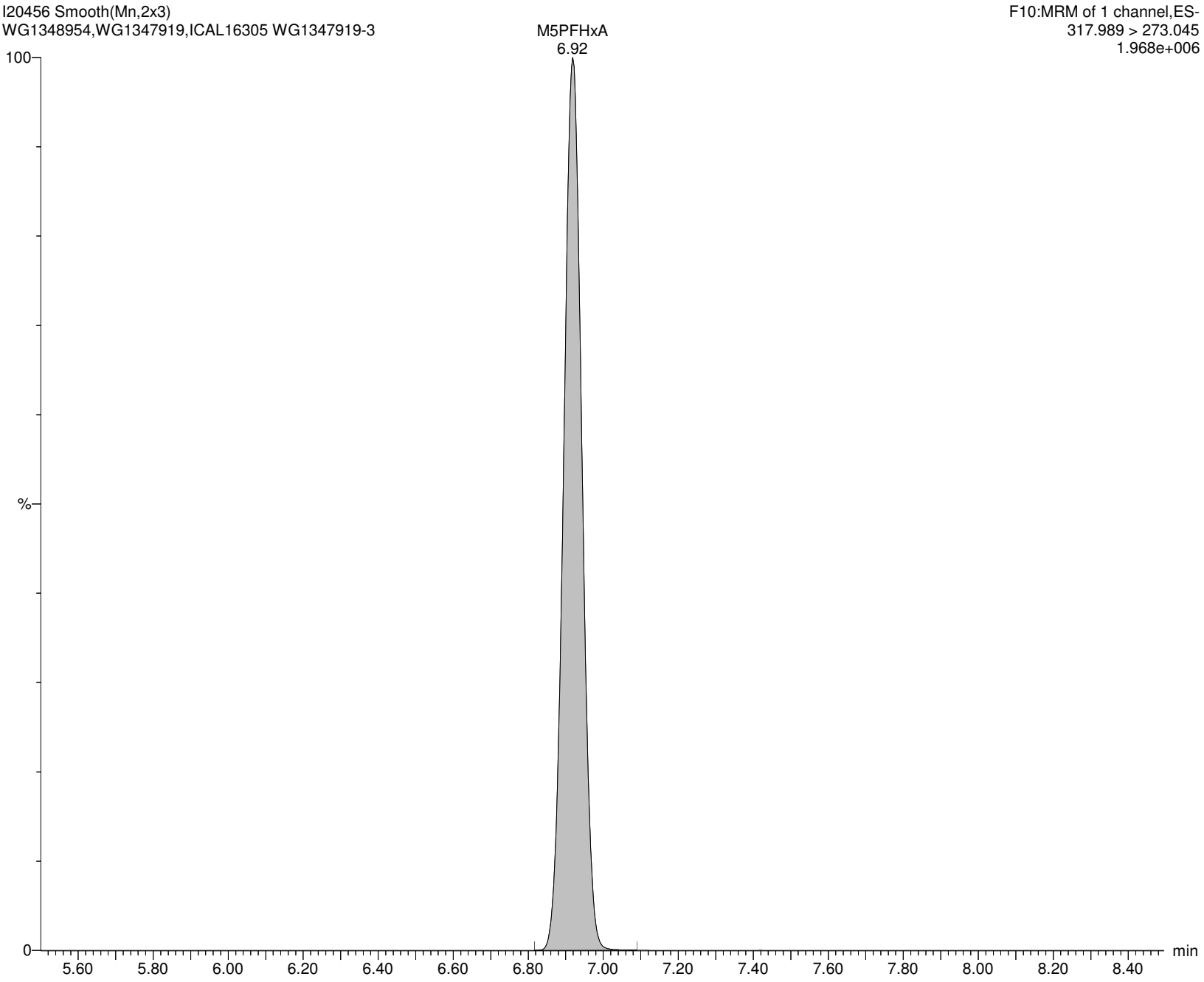
**M5PFHxA**





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**Name: I20456**
**ID: WG1347919-3**
**Date: 11-Mar-2020**
**Time: 03:10:43**
**Description: WG1348954,WG1347919,ICAL16305**
**User: LCMS02:RS**
**Vial: 2:B,1**
**Instrument: XEVO-TQSmicro#QEB0050**
**Inlet Method Name: C:\MassLynx\Data\2020\200309_537ISO.PRO\ACQUDB\LCMS_537_ISO_B**
**Tune Method Name: C:\MassLynx\Data\2020\200309_537ISO.PRO\ACQUDB\181009_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\2020\200309_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

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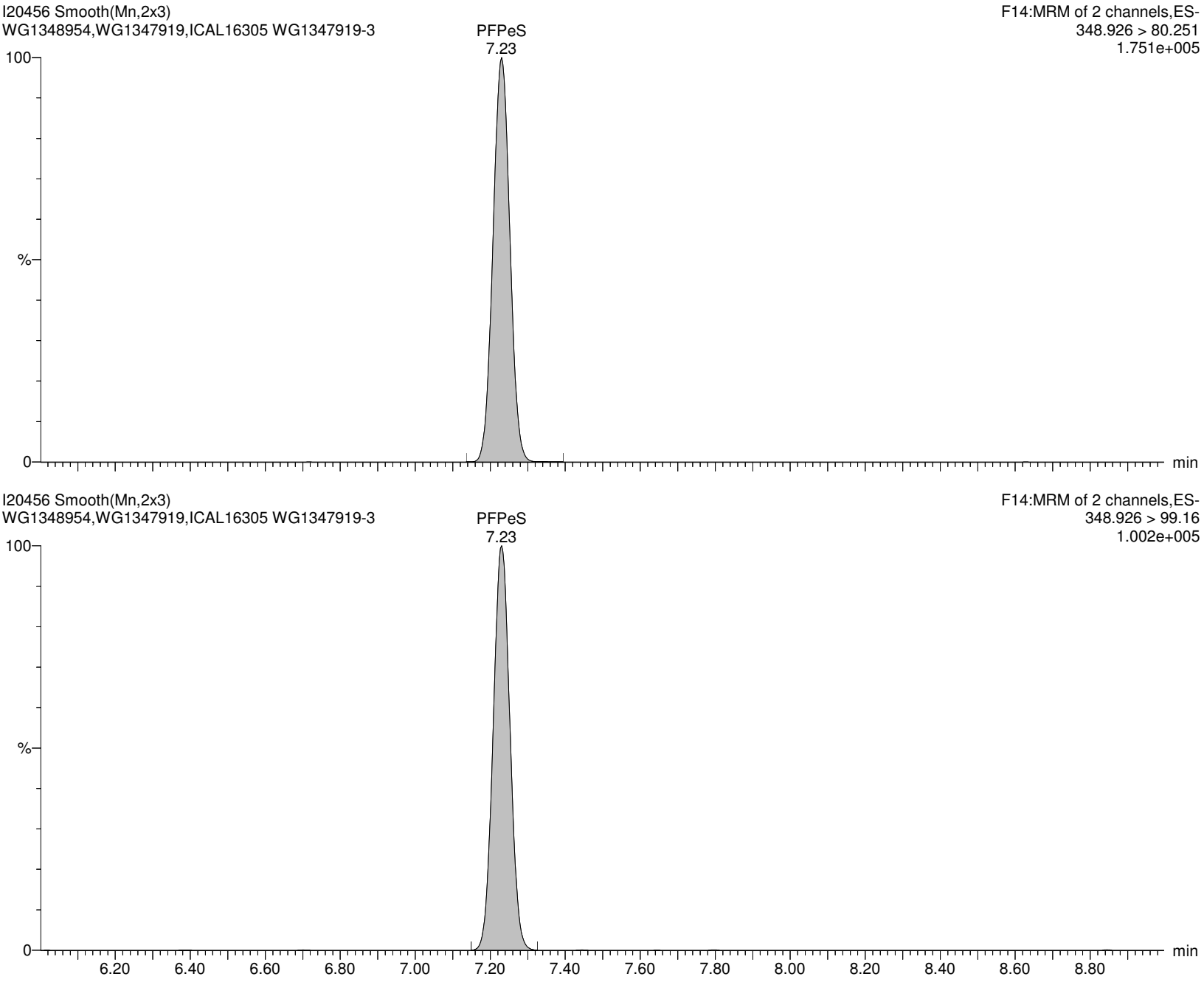



all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2020\200309_537ISO.PRO\Data\WG1348954D.qld
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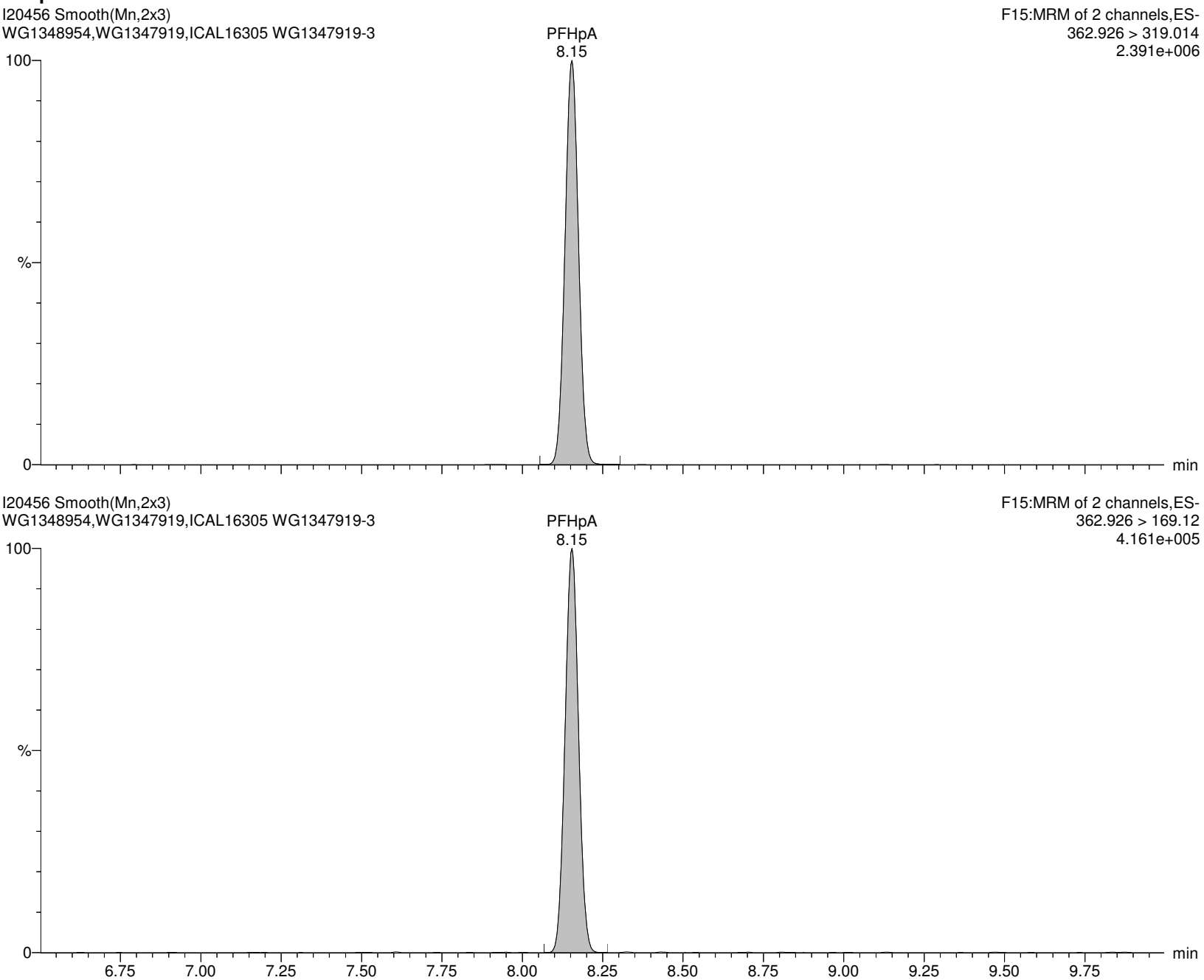



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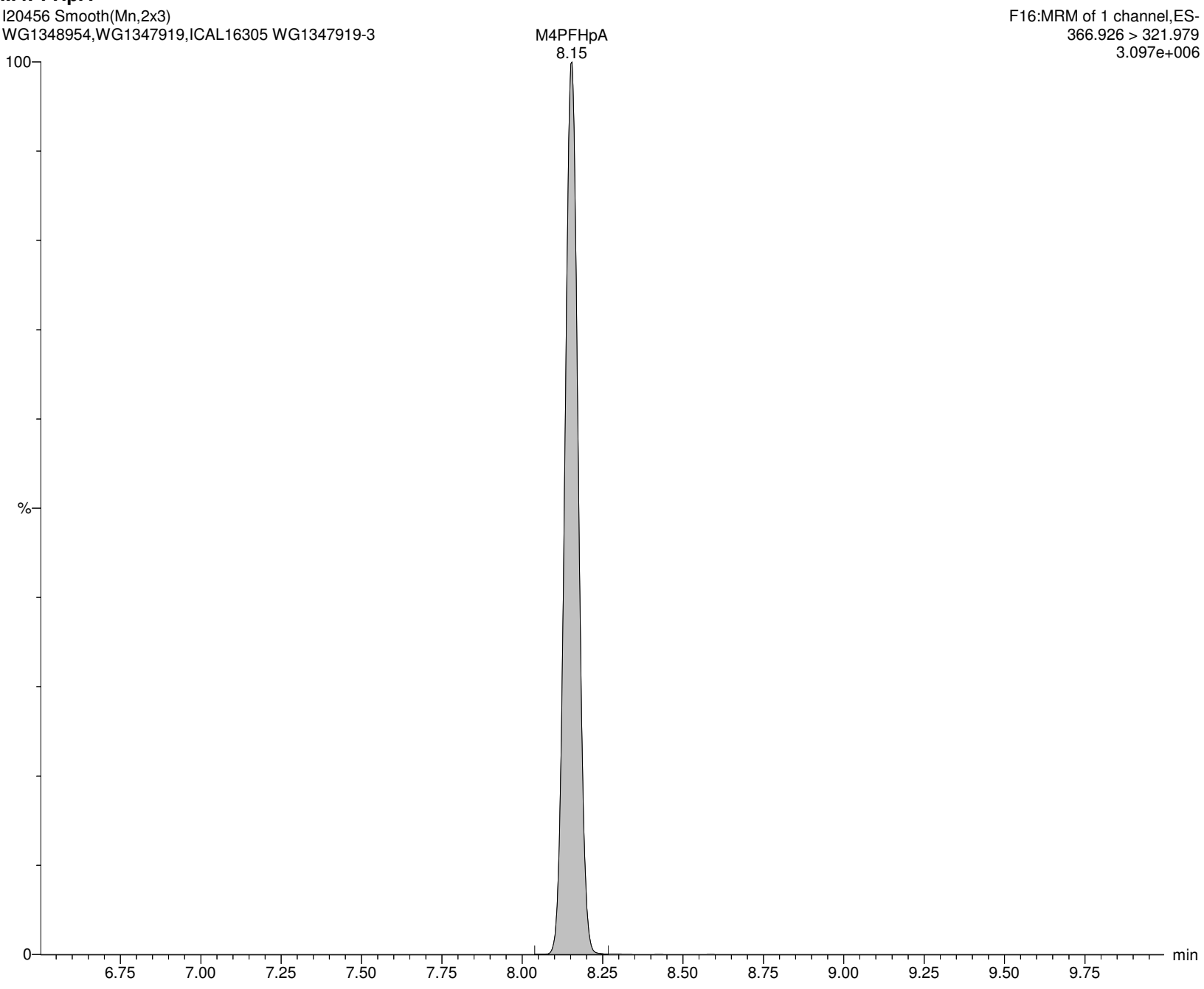



all concentration units in (ng/mL)

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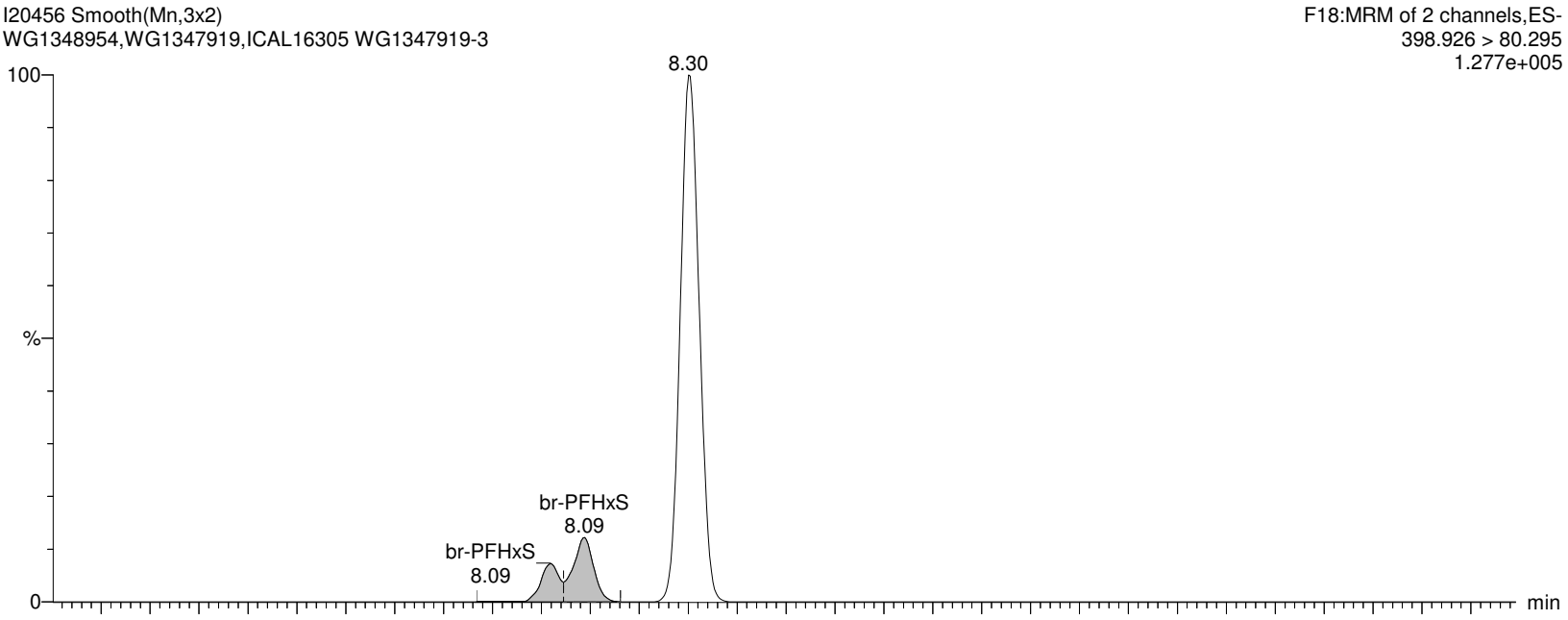
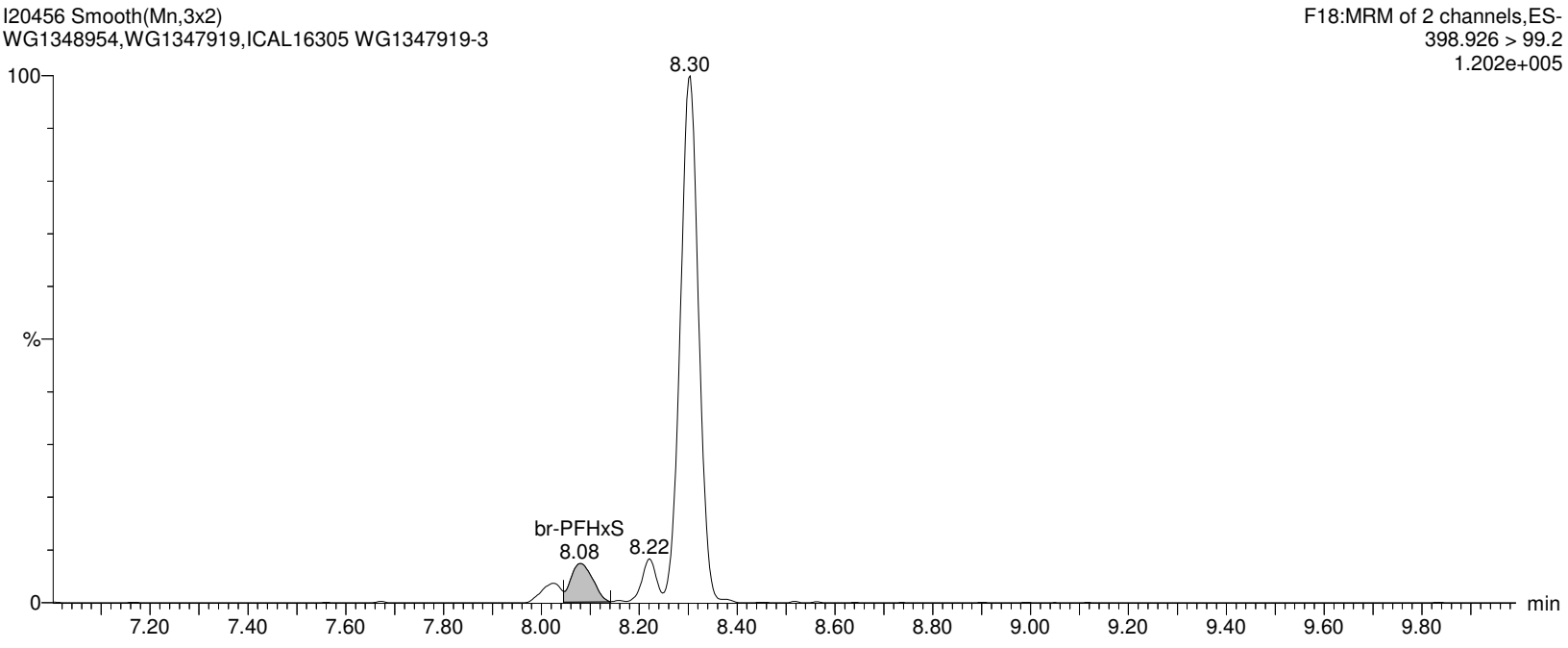
**br-PFHxS**





all concentration units in (ng/mL)

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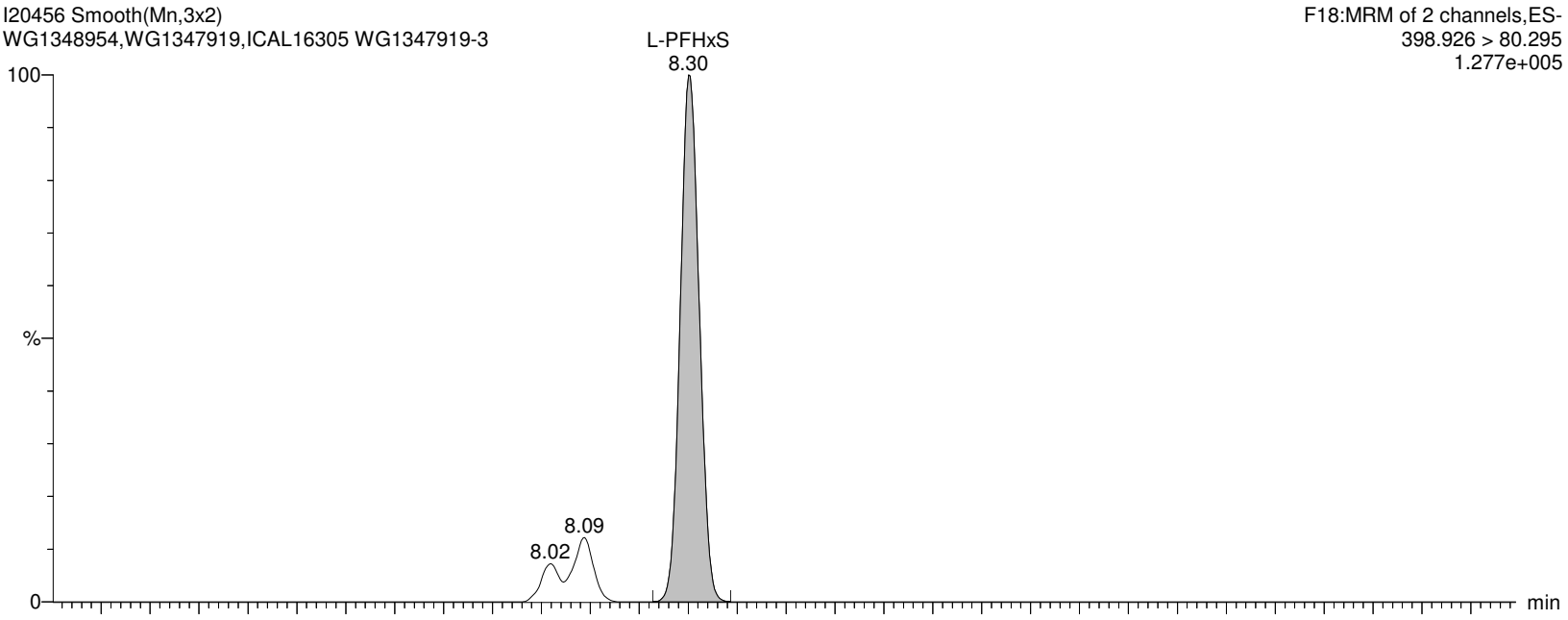
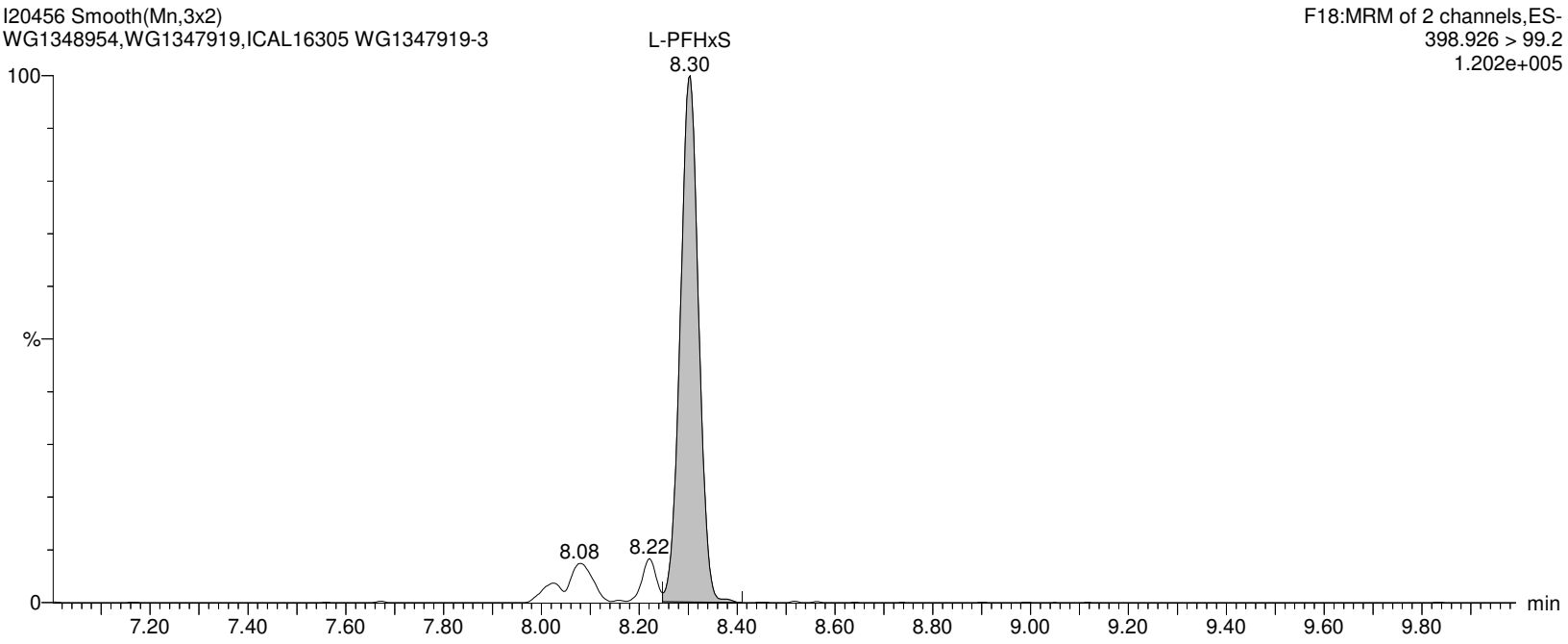
**L-PFHxS**





all concentration units in (ng/mL)

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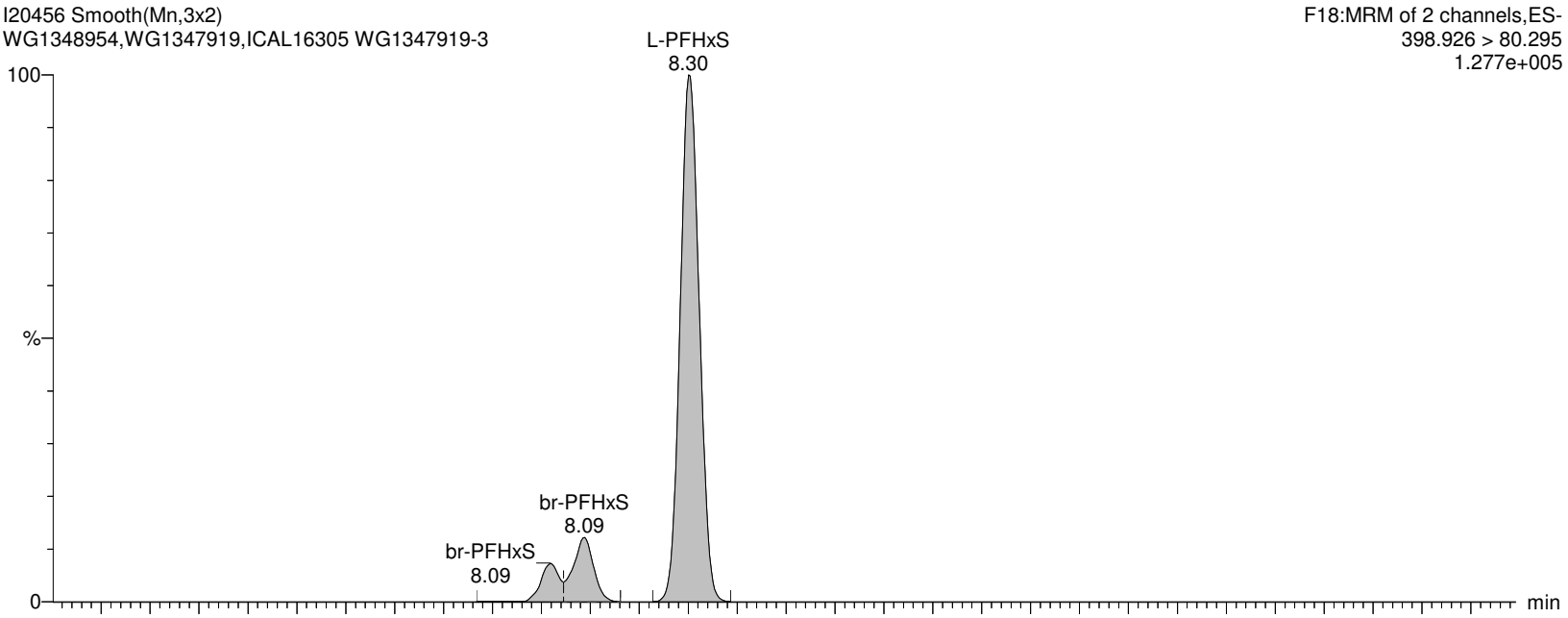
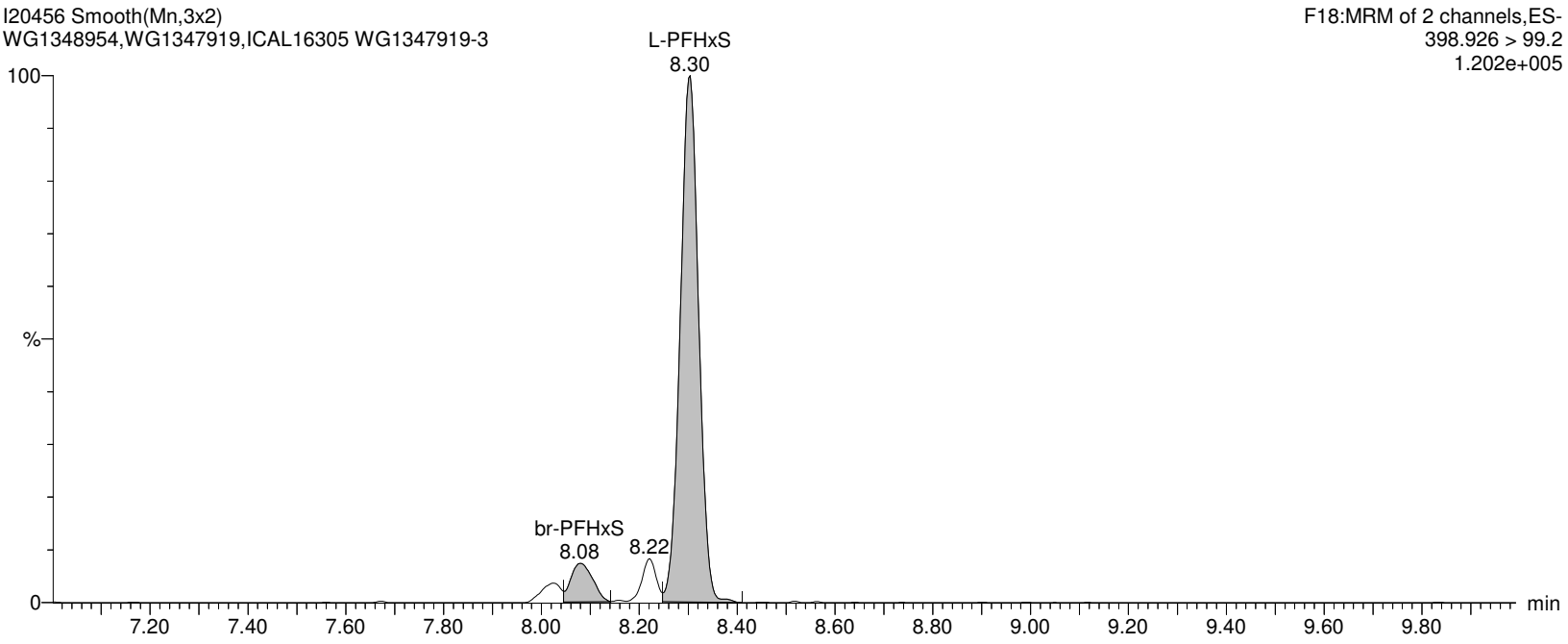
**PFHxS**





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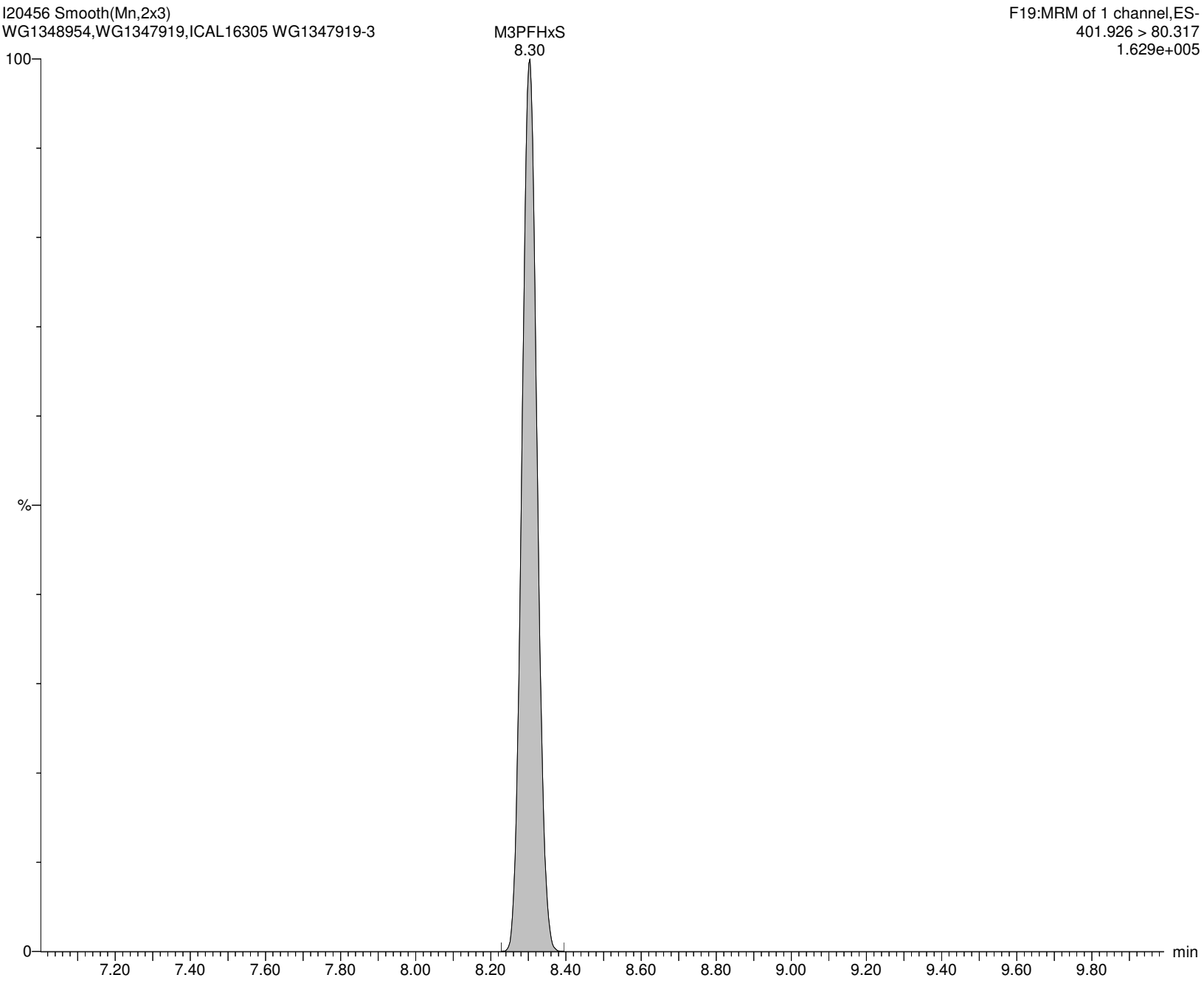
**M3PFHxS**





all concentration units in (ng/mL)

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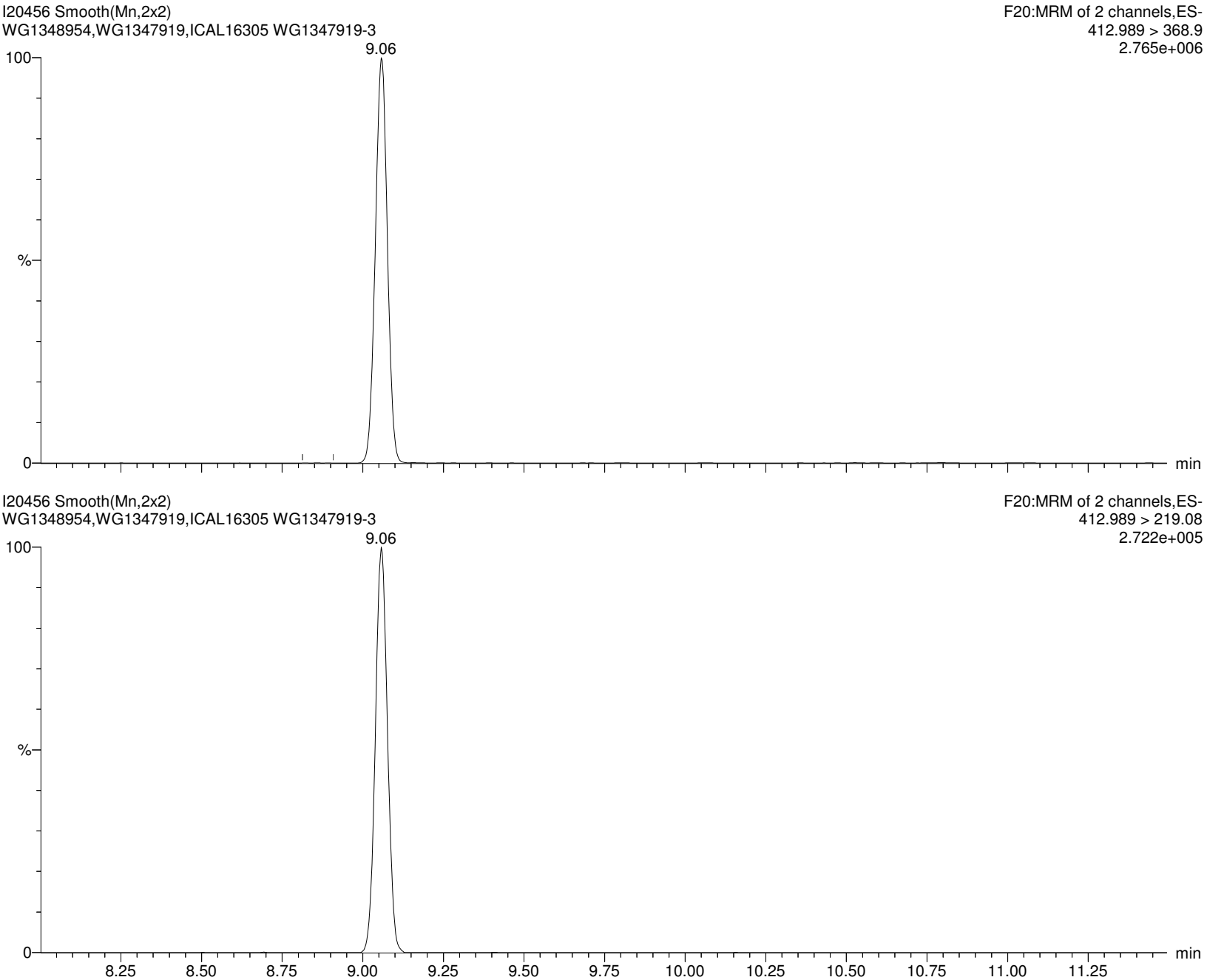
**br-PFOA**





all concentration units in (ng/mL)

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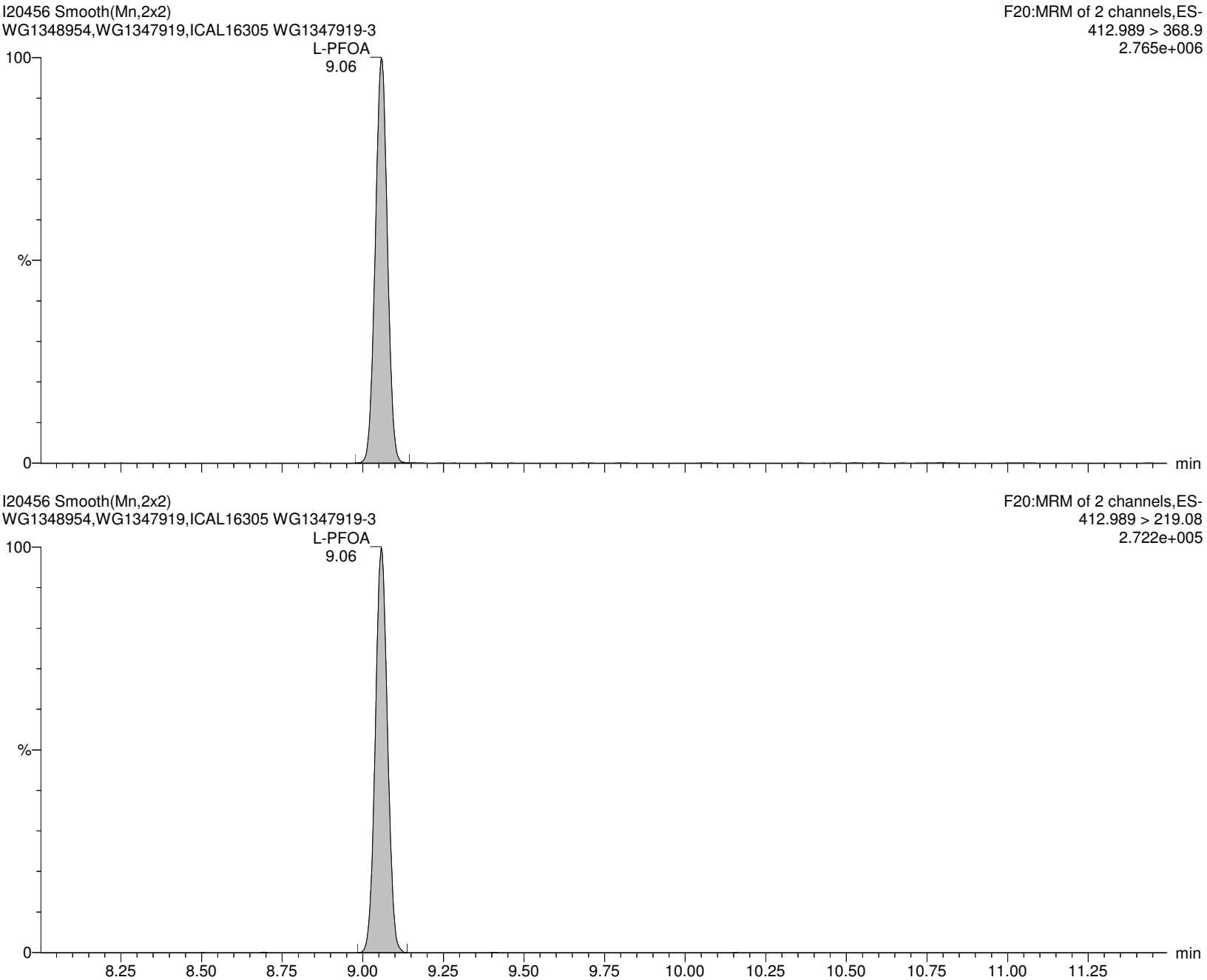



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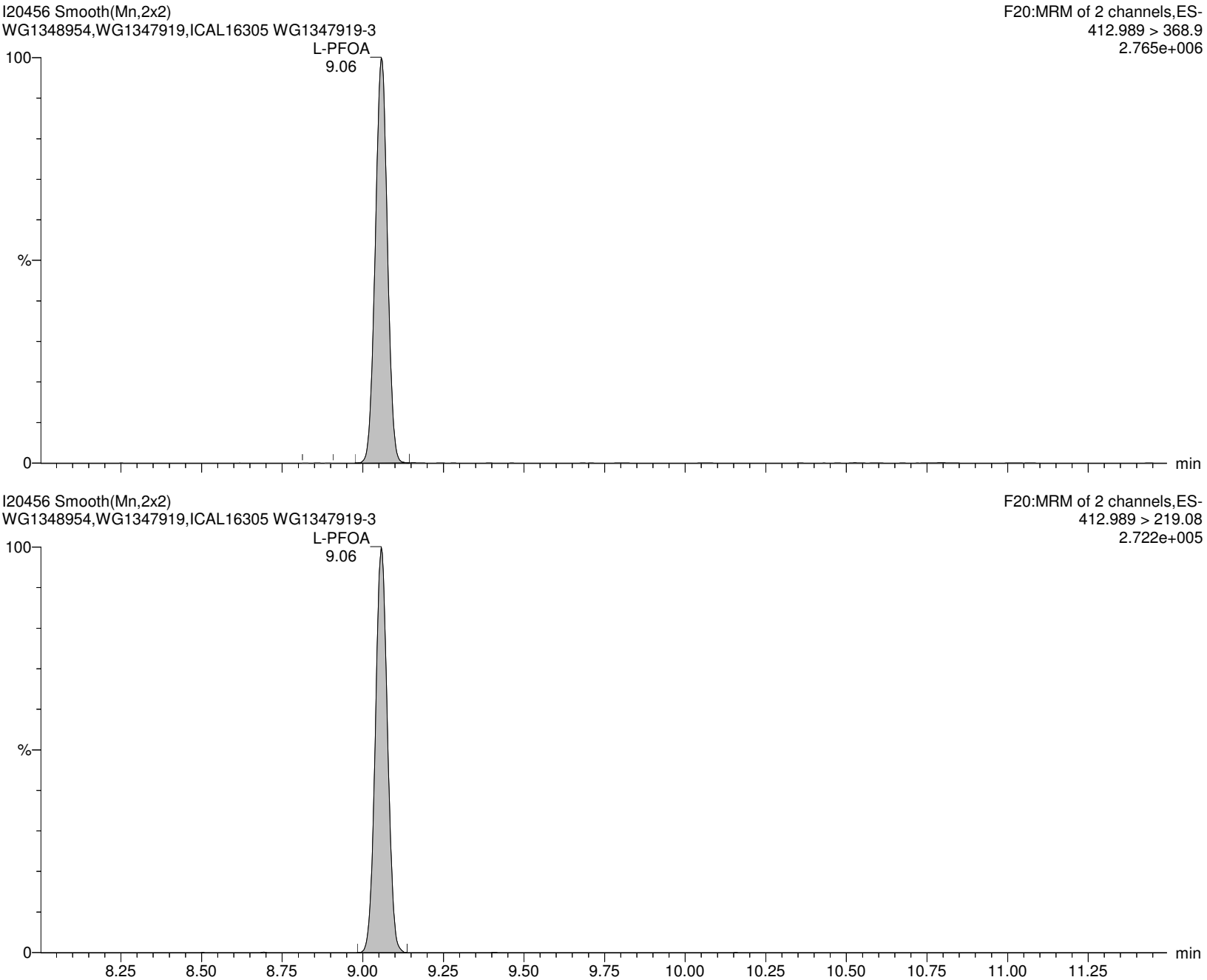



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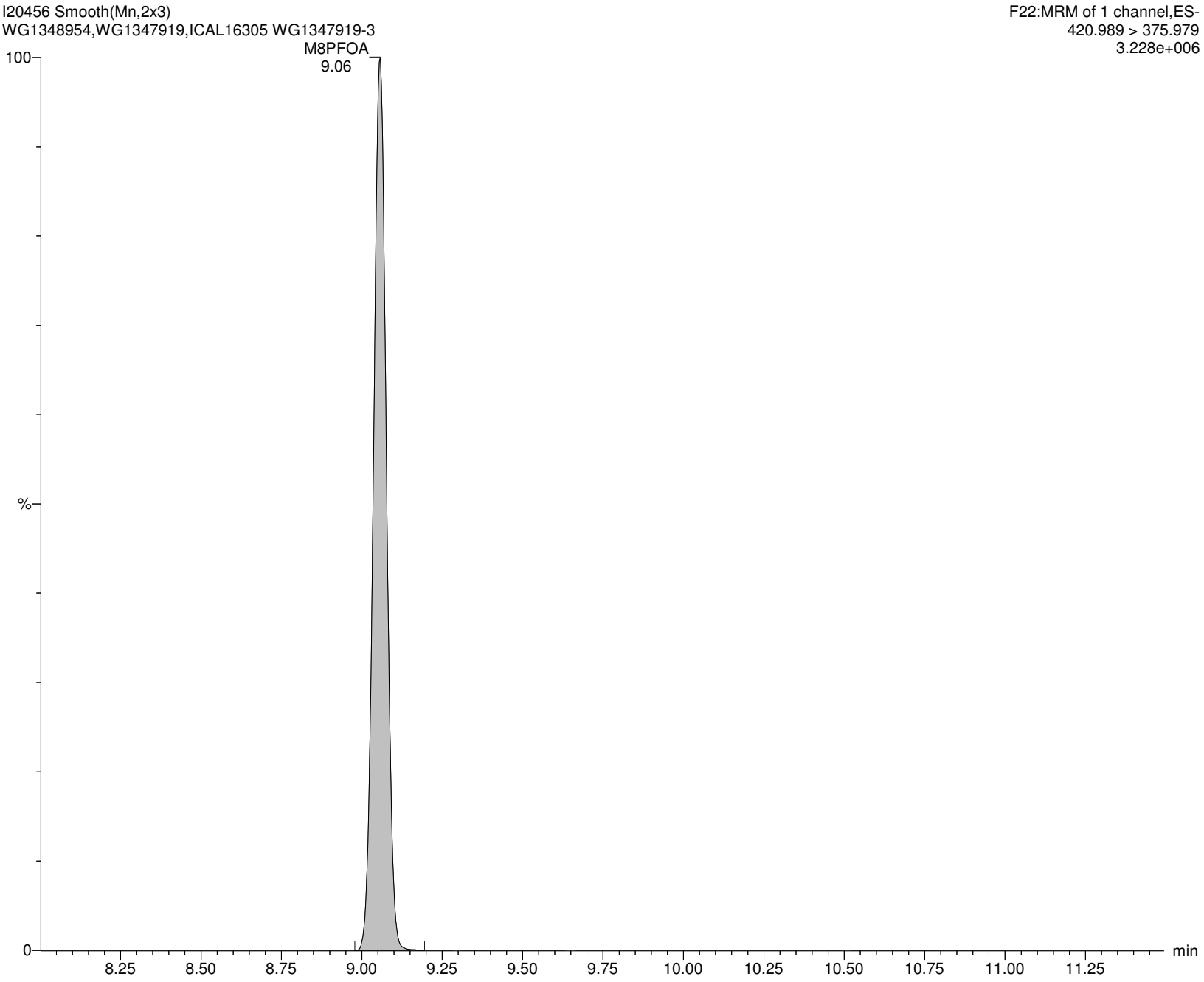



all concentration units in (ng/mL)

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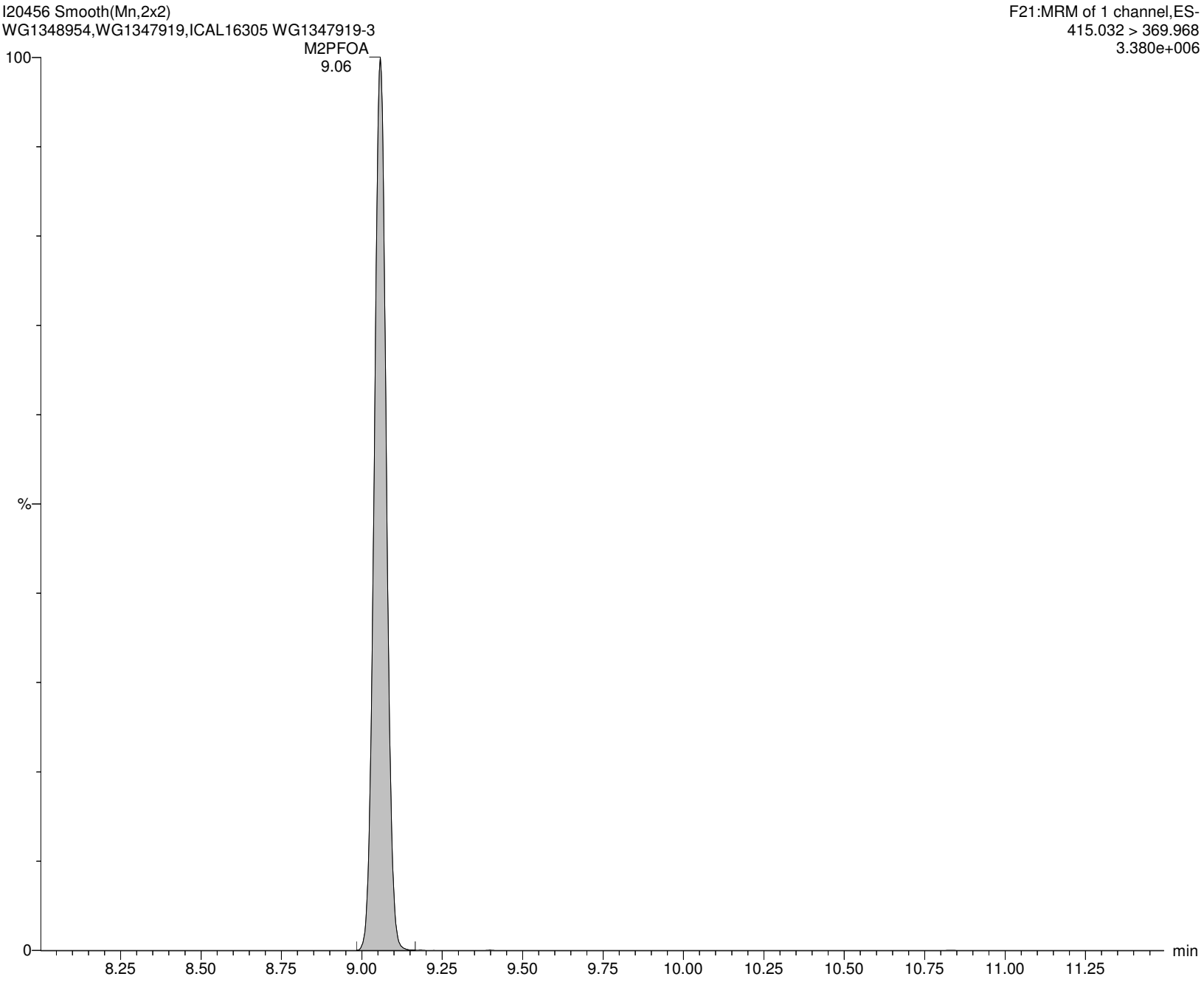



all concentration units in (ng/mL)

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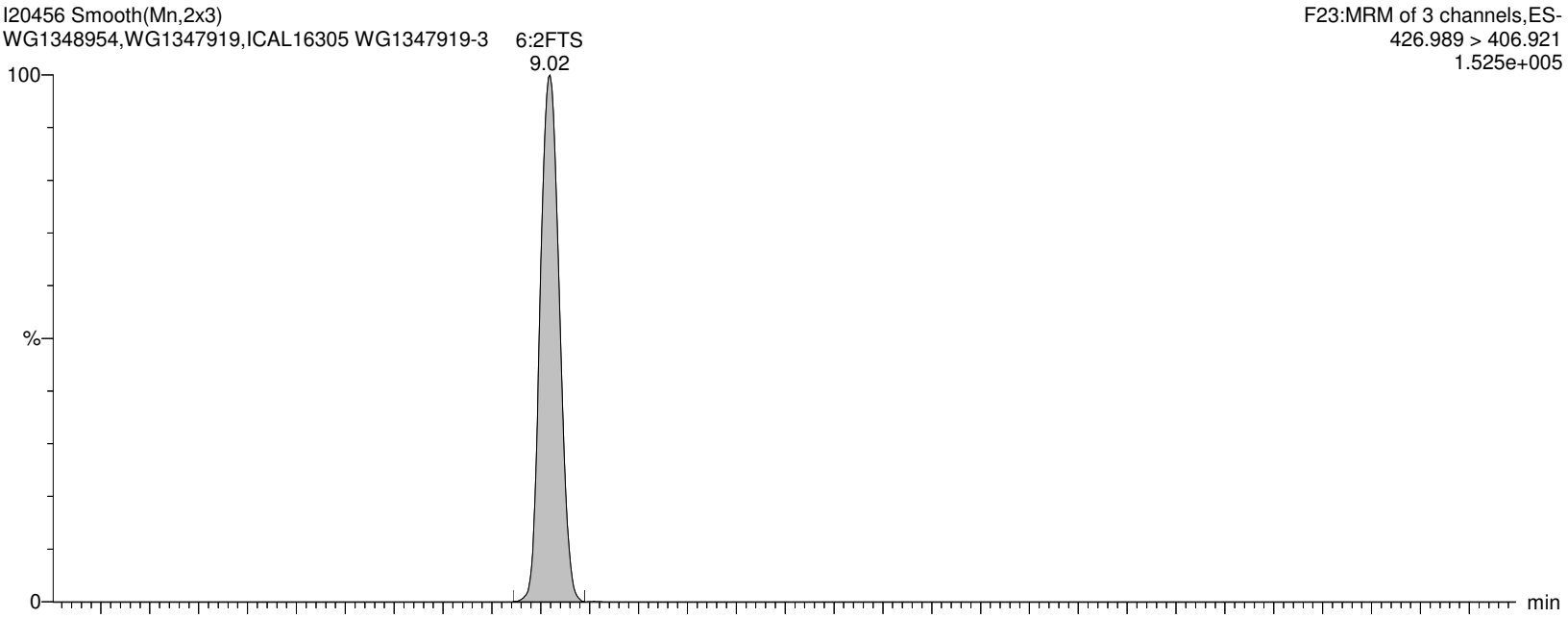
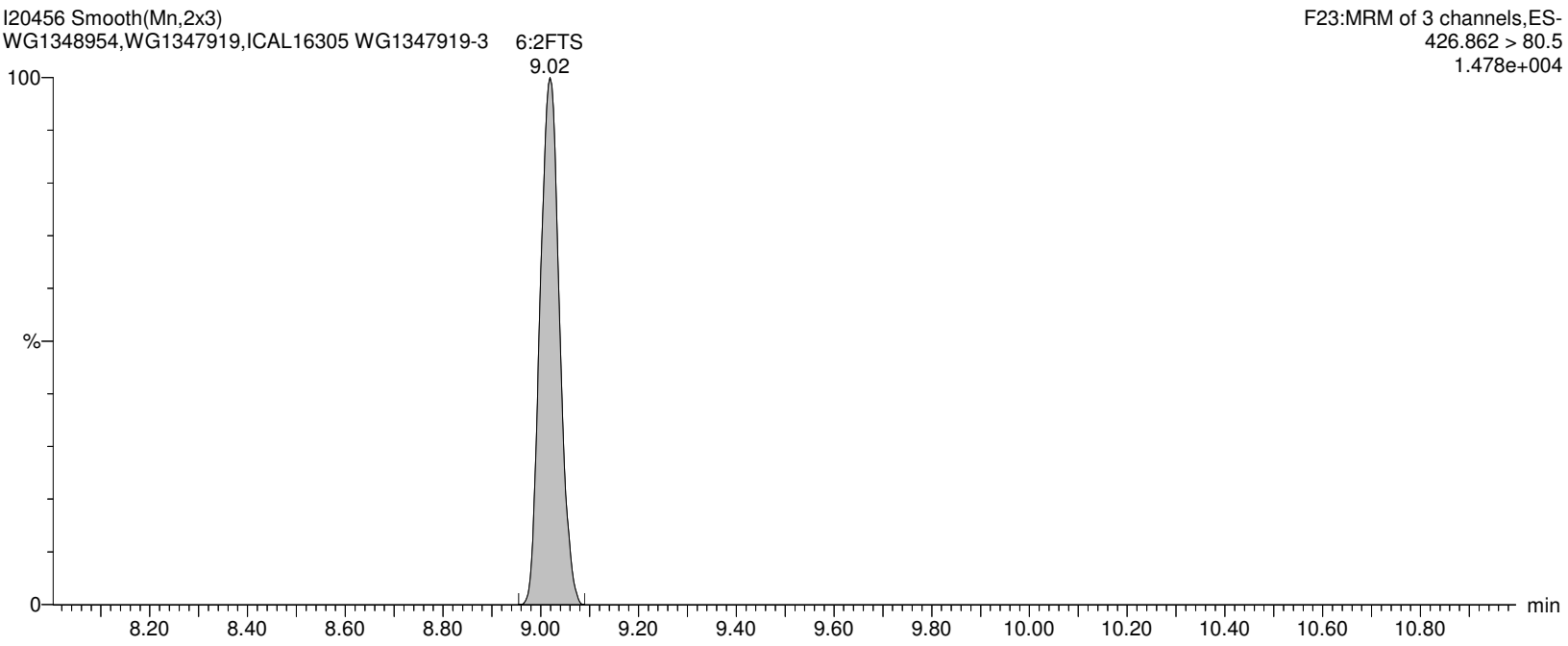
**6:2FTS**





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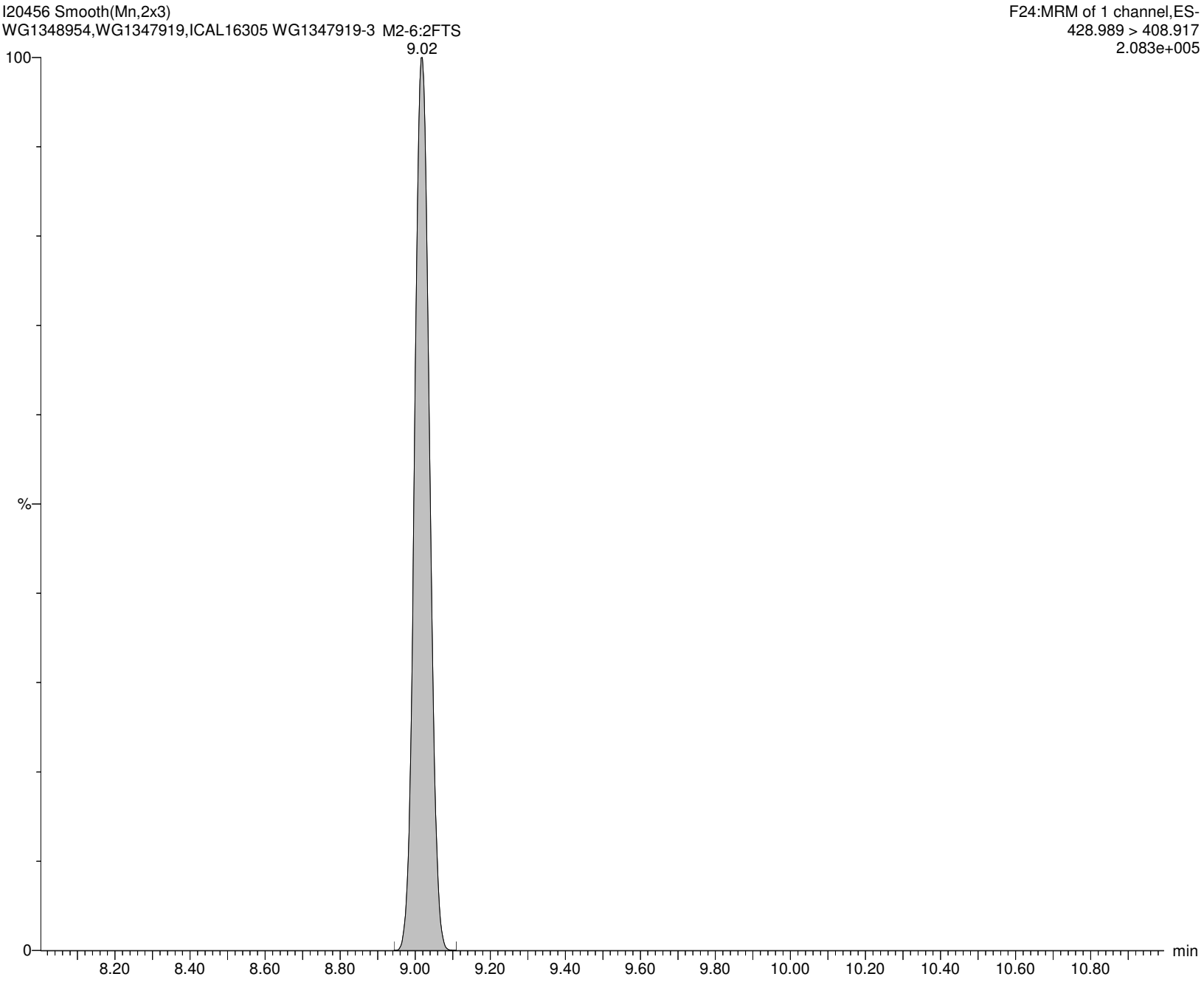



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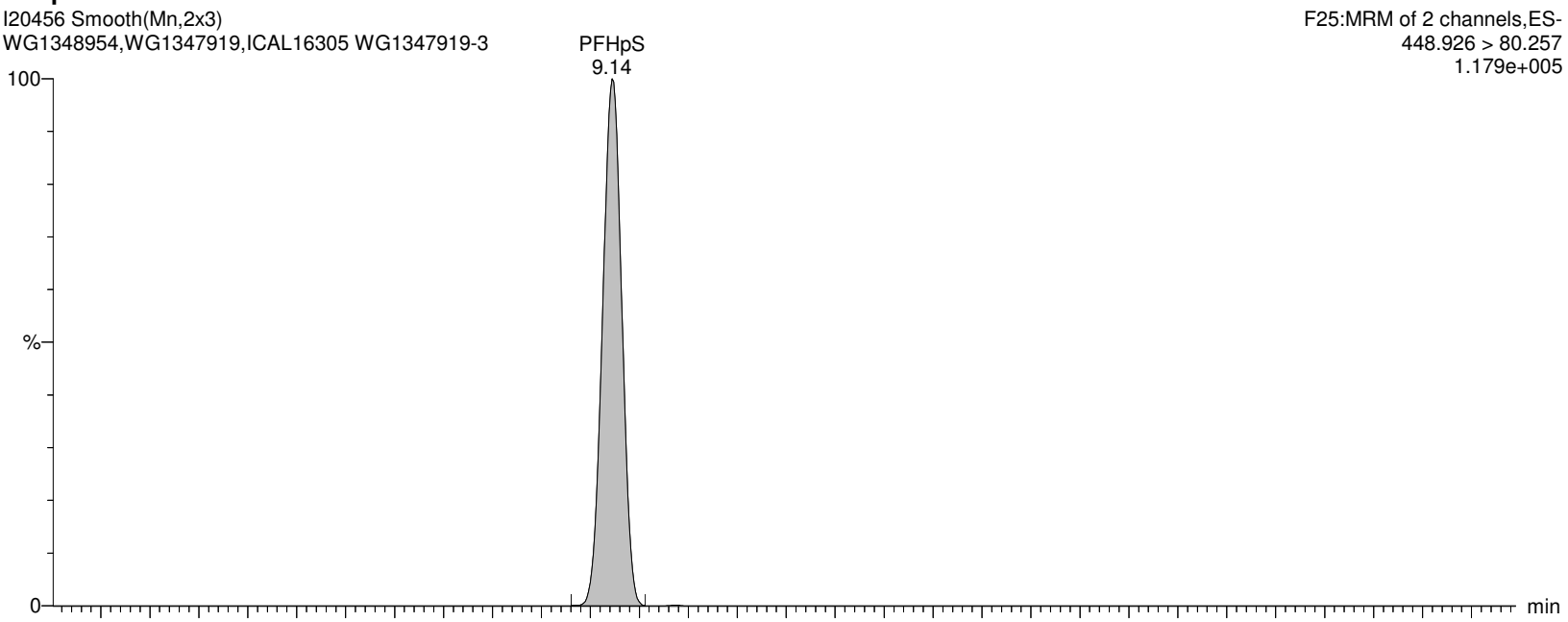
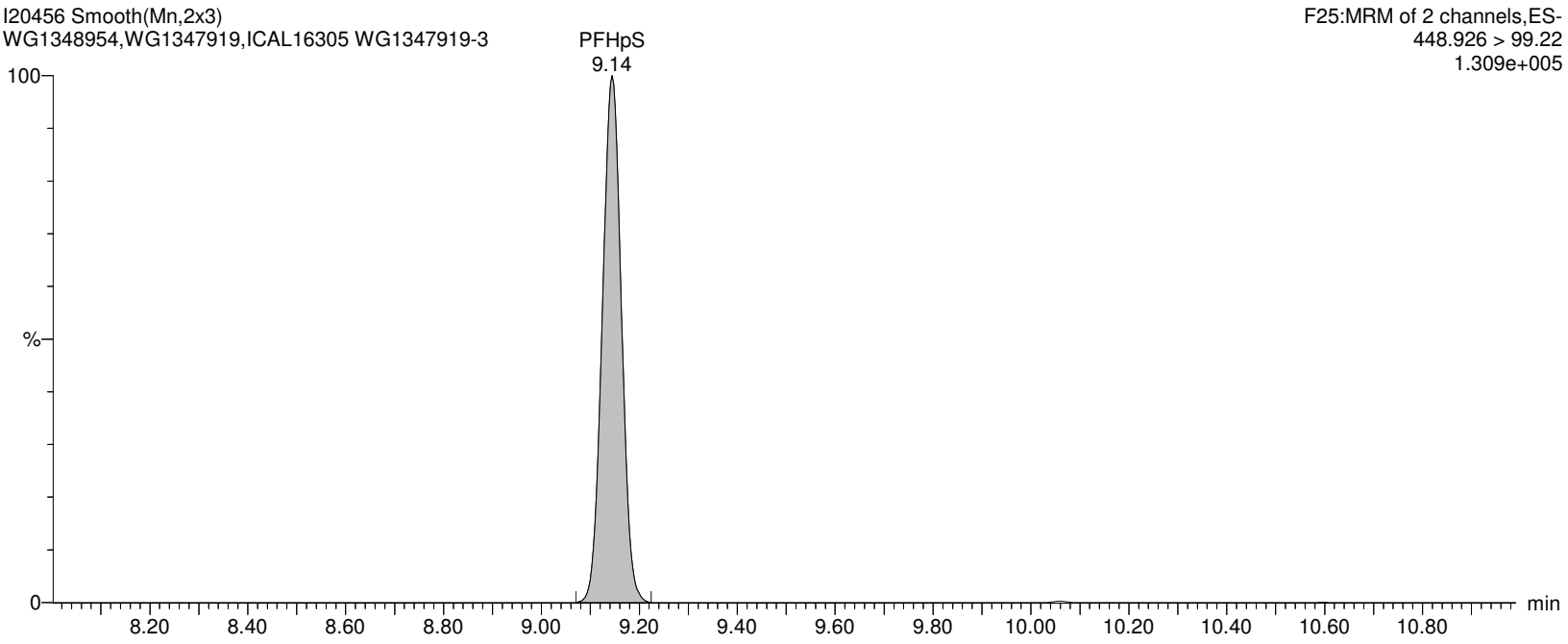
**PFHpS**





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**MS Method Name: C:\MassLynx\Data\2020\200309_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

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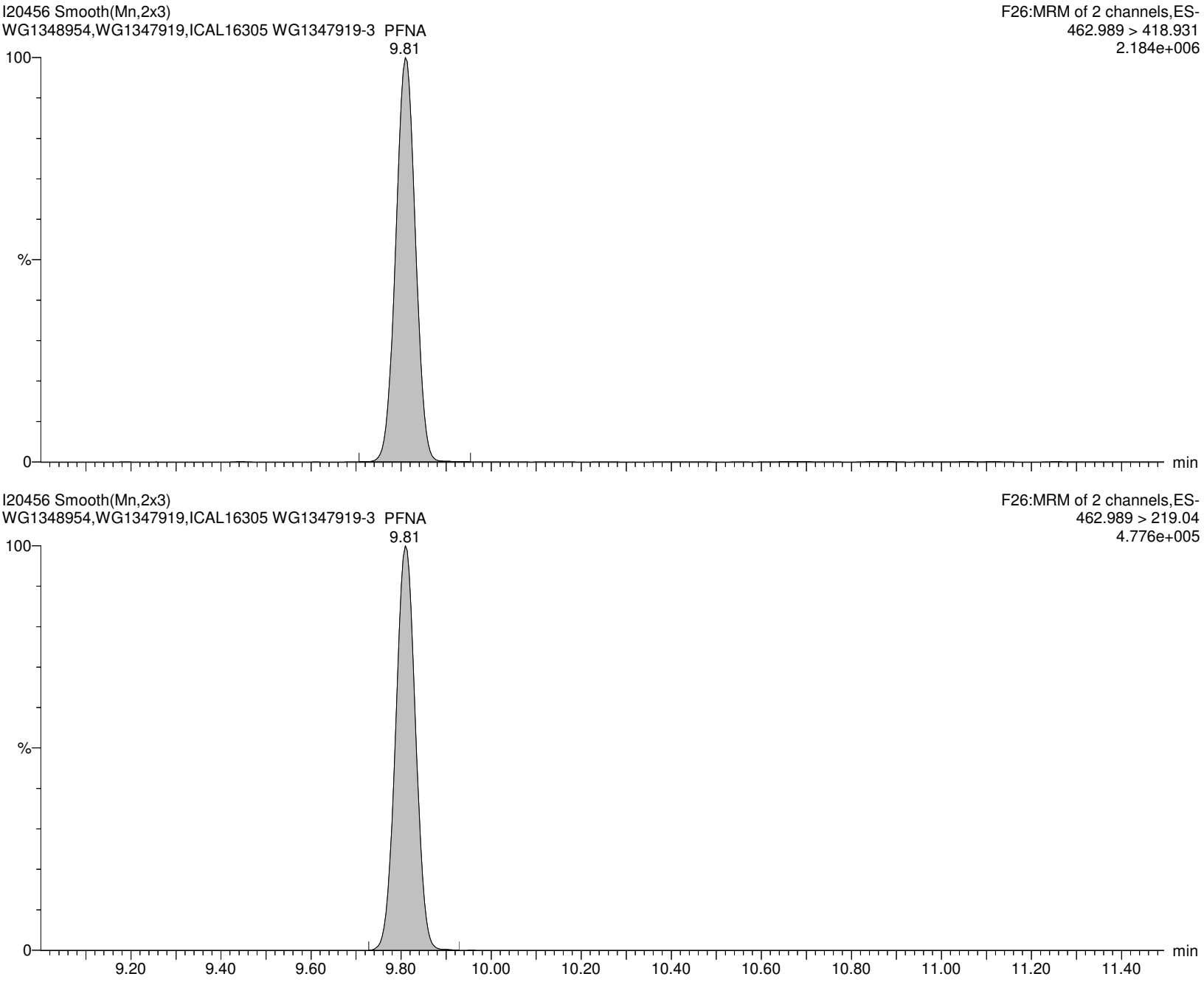



all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2020\200309_537ISO.PRO\Data\WG1348954D.qld
Last Altered: Wednesday, March 11, 2020 22:52:23 Eastern Daylight Time
Printed: Thursday, March 12, 2020 03:26:42 Eastern Daylight Time

**Name: I20456**
**ID: WG1347919-3**
**Date: 11-Mar-2020**
**Time: 03:10:43**
**Description: WG1348954,WG1347919,ICAL16305**
**User: LCMS02:RS**
**Vial: 2:B,1**
**Instrument: XEVO-TQSmicro#QEB0050**
**Inlet Method Name: C:\MassLynx\Data\2020\200309_537ISO.PRO\ACQUDB\LCMS_537_ISO_B**
**Tune Method Name: C:\MassLynx\Data\2020\200309_537ISO.PRO\ACQUDB\181009_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\2020\200309_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

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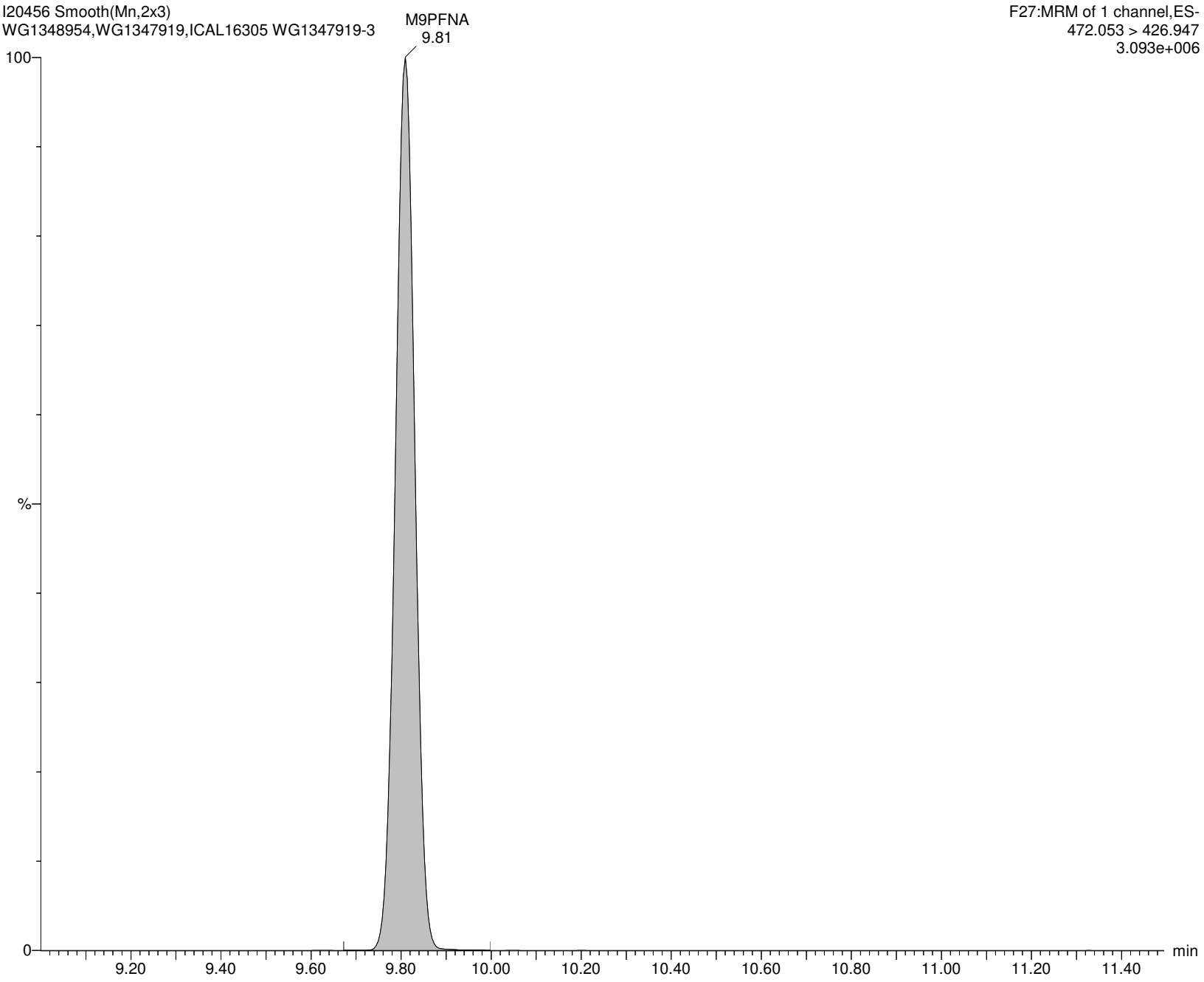



all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2020\200309_537ISO.PRO\Data\WG1348954D.qld
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**Vial: 2:B,1**
**Instrument: XEVO-TQSmicro#QEB0050**
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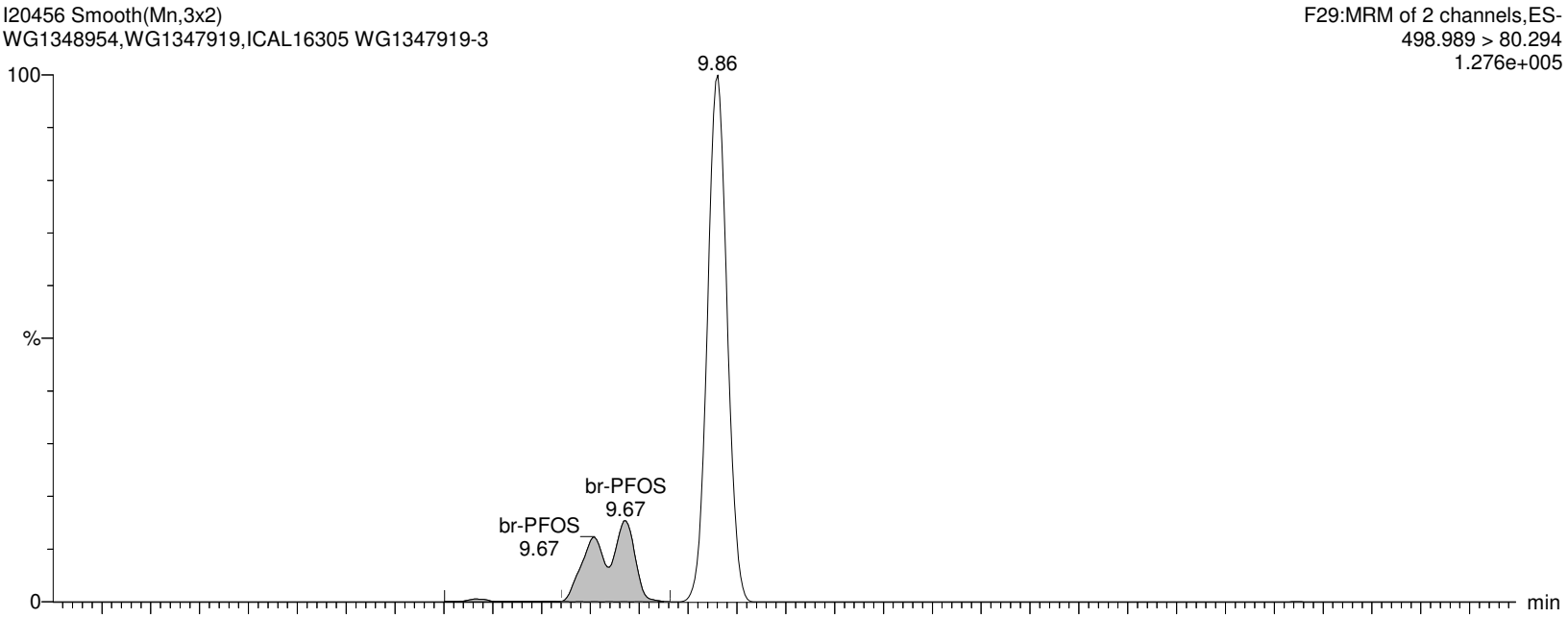
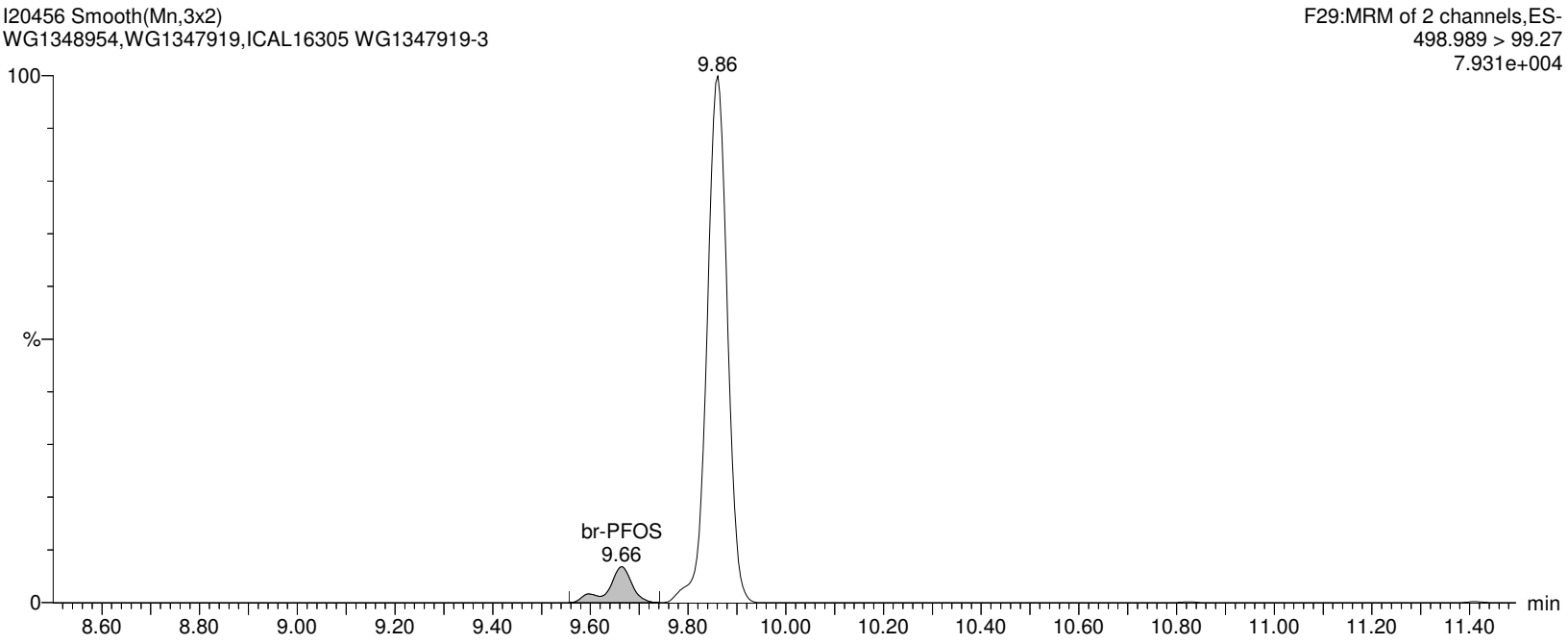
**br-PFOS**





all concentration units in (ng/mL)

Alpha Analytical Inc.
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**User: LCMS02:RS**
**Vial: 2:B,1**
**Instrument: XEVO-TQSmicro#QEB0050**
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**Tune Method Name: C:\MassLynx\Data\2020\200309_537ISO.PRO\ACQUDB\181009_TUNE.IPR**
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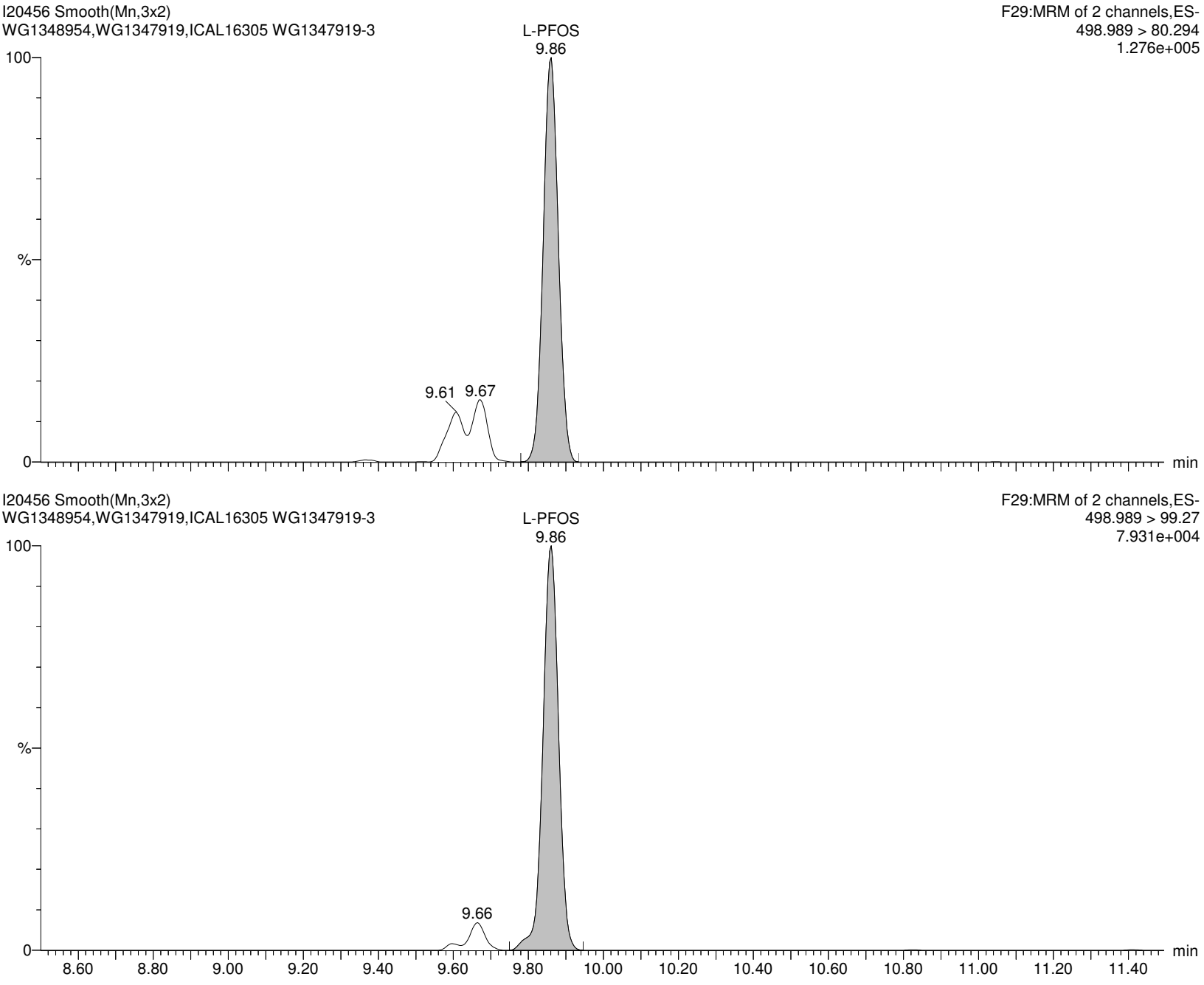
**L-PFOS**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2020\200309_537ISO.PRO\Data\WG1348954D.qld
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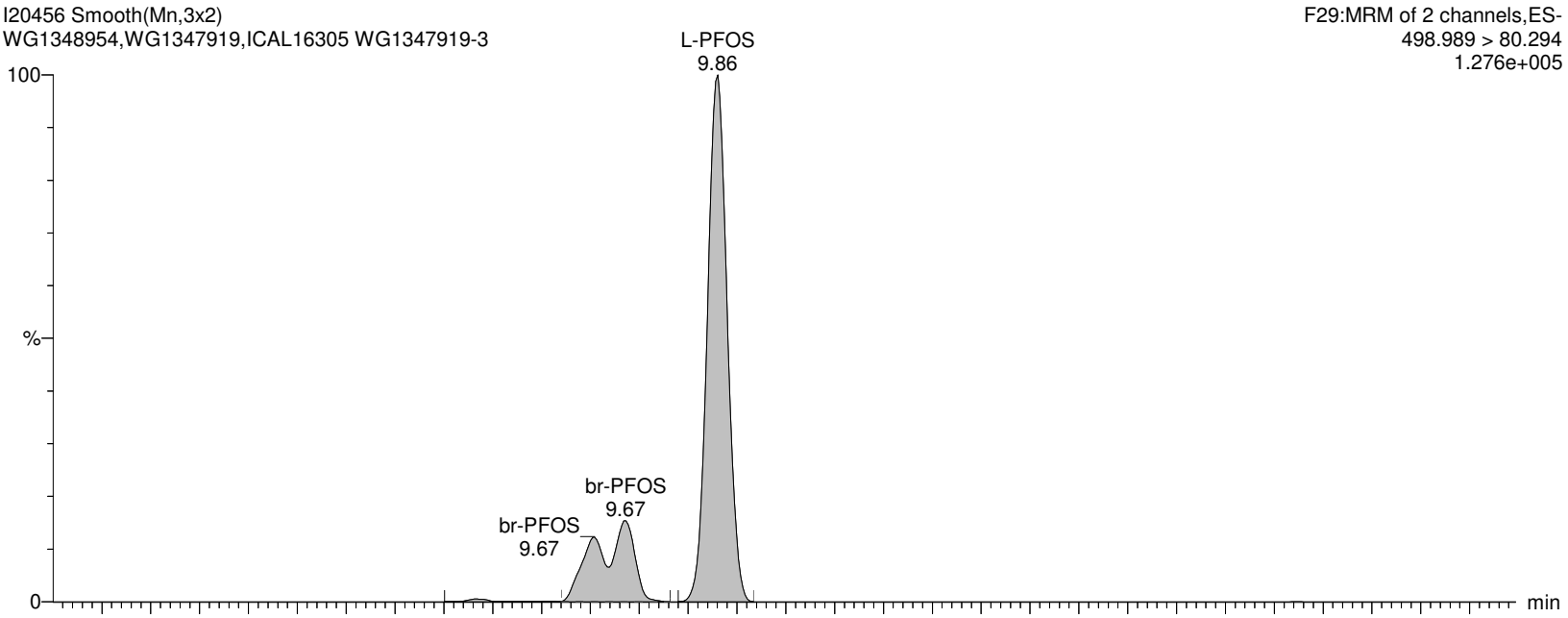
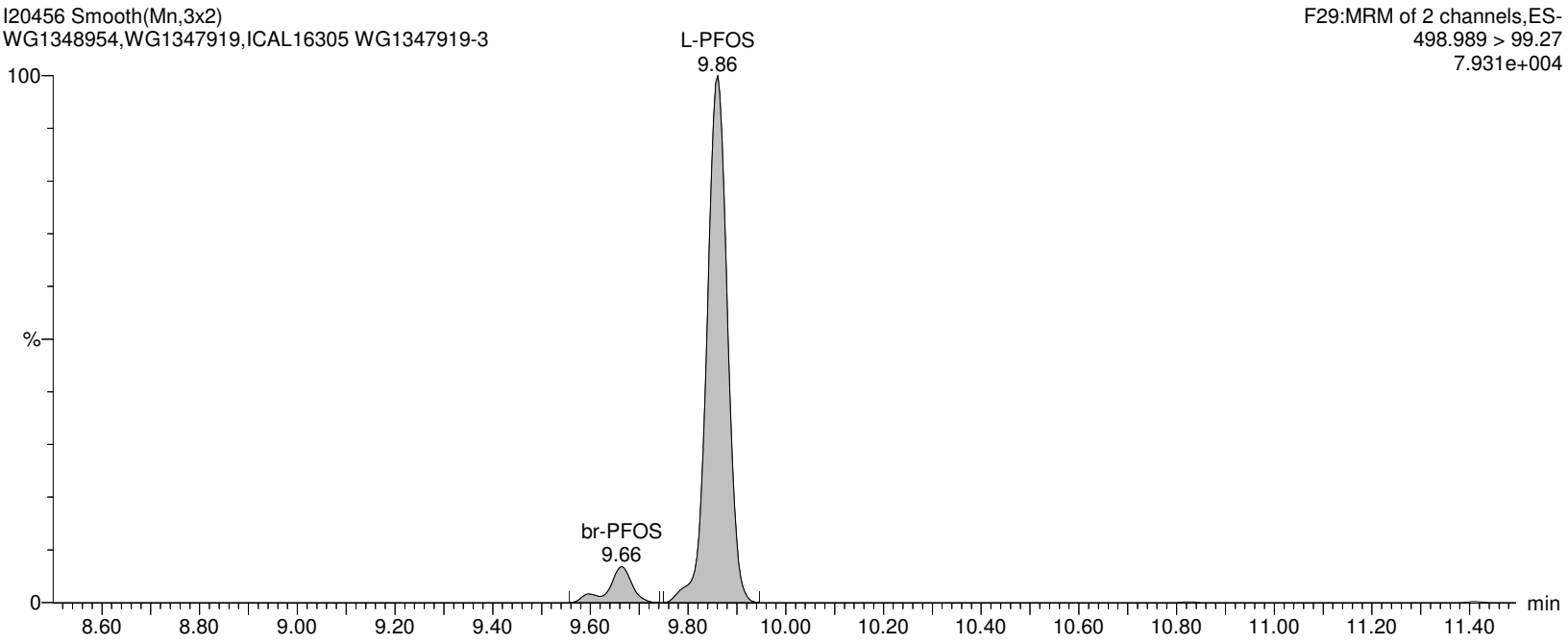
**MS Method Name: C:\MassLynx\Data\2020\200309_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**PFOS**





all concentration units in (ng/mL)

Alpha Analytical Inc.
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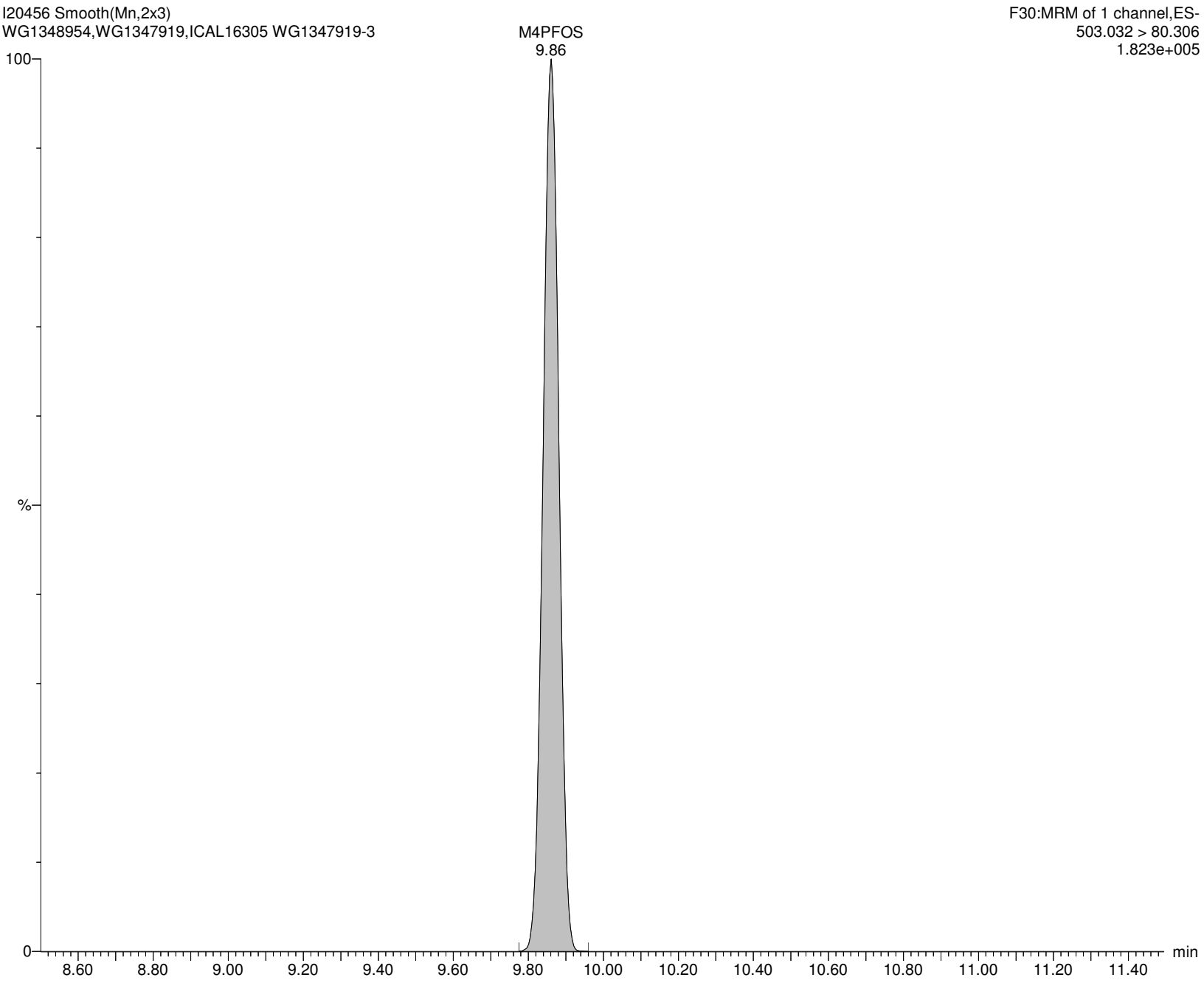
**MS Method Name: C:\MassLynx\Data\2020\200309_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**M4PFOS**





all concentration units in (ng/mL)

Alpha Analytical Inc.
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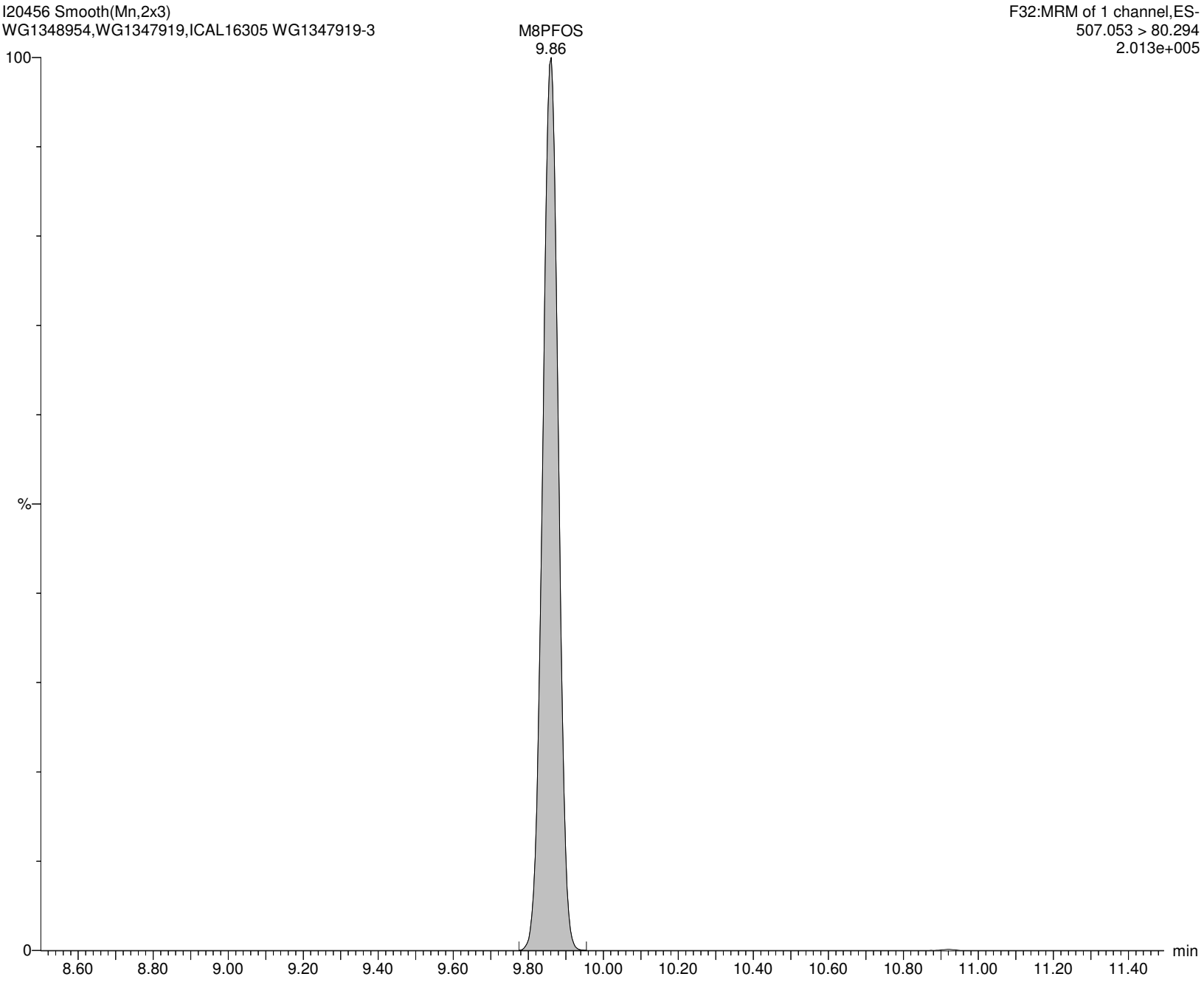



all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2020\200309_537ISO.PRO\Data\WG1348954D.qld
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**User: LCMS02:RS**
**Vial: 2:B,1**
**Instrument: XEVO-TQSmicro#QEB0050**
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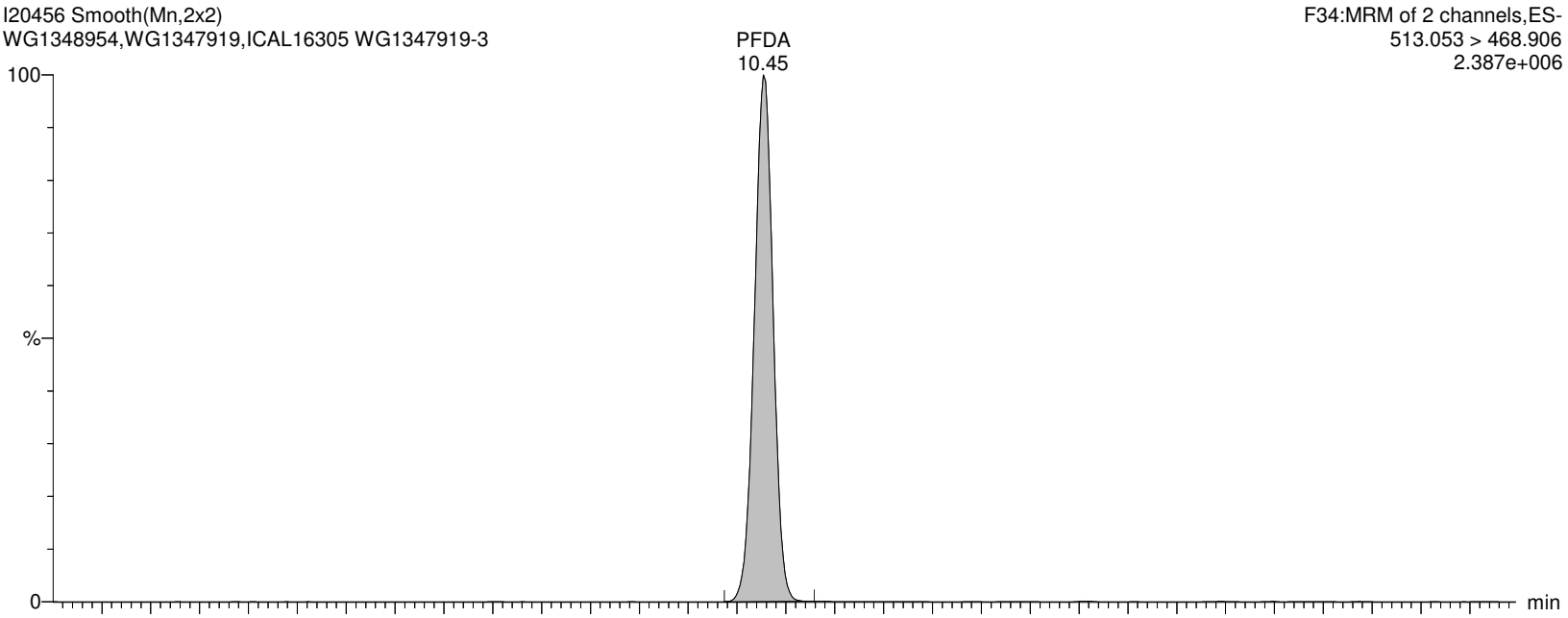


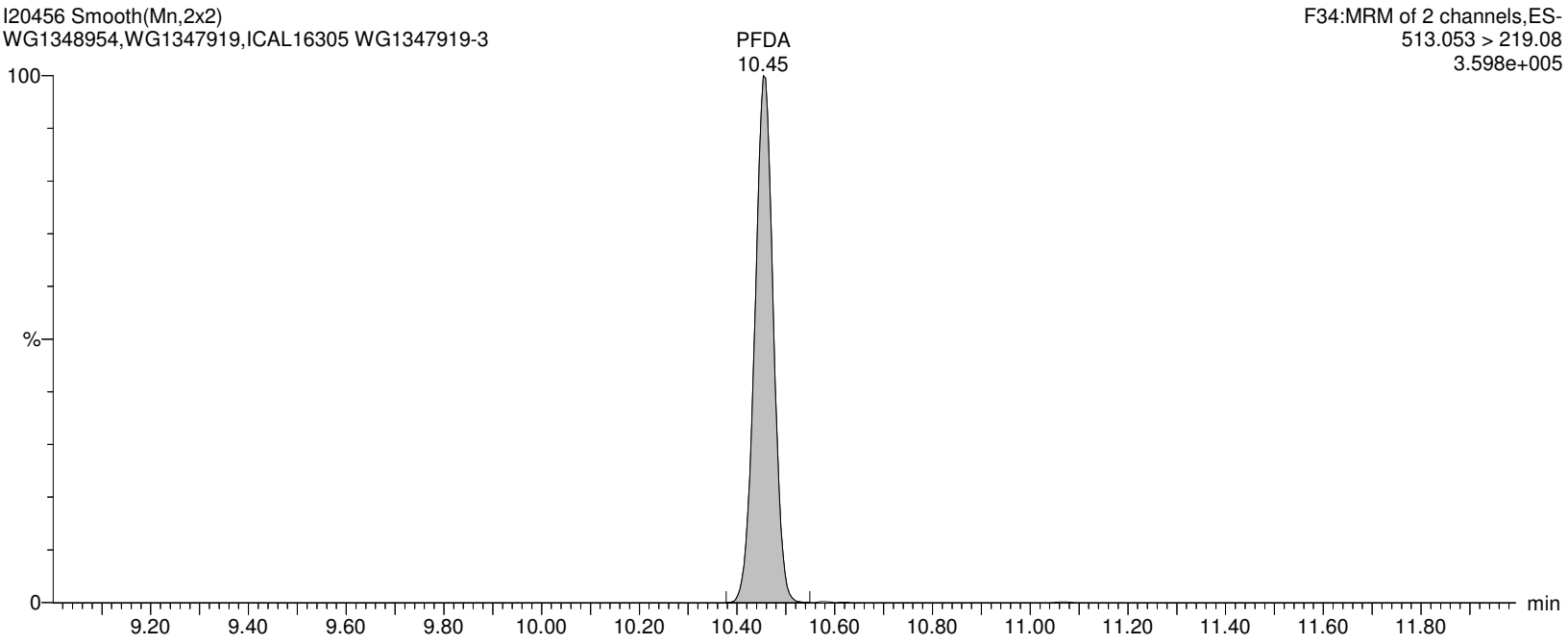



all concentration units in (ng/mL)

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Dataset: C:\MassLynx\Data\2020\200309_537ISO.PRO\Data\WG1348954D.qld
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**Vial: 2:B,1**
**Instrument: XEVO-TQSmicro#QEB0050**
**Inlet Method Name: C:\MassLynx\Data\2020\200309_537ISO.PRO\ACQUDB\LCMS_537_ISO_B**
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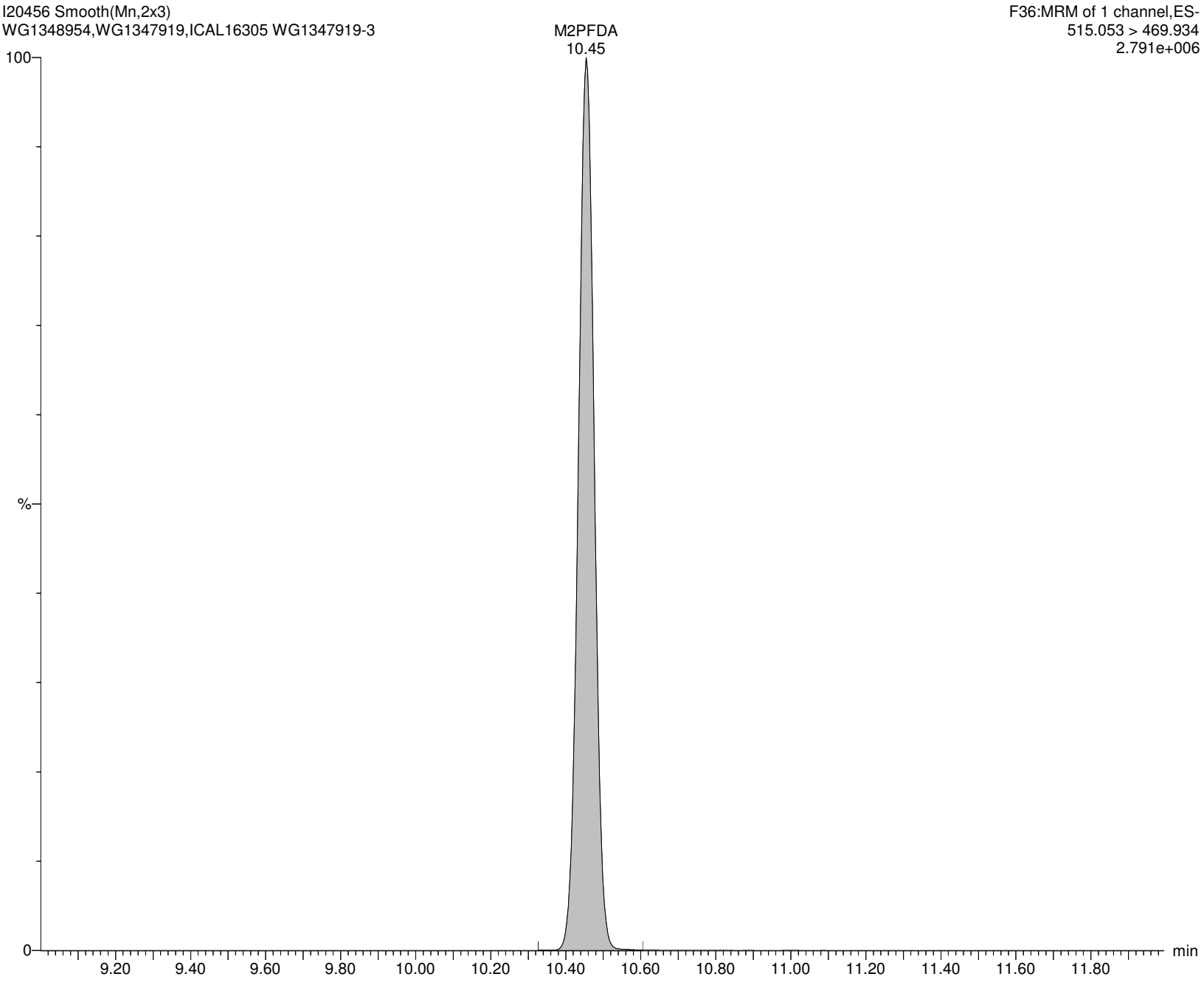
**M2PFDA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2020\200309_537ISO.PRO\Data\WG1348954D.qld
Last Altered: Wednesday, March 11, 2020 22:52:23 Eastern Daylight Time
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**User: LCMS02:RS**
**Vial: 2:B,1**
**Instrument: XEVO-TQSmicro#QEB0050**
**Inlet Method Name: C:\MassLynx\Data\2020\200309_537ISO.PRO\ACQUDB\LCMS_537_ISO_B**
**Tune Method Name: C:\MassLynx\Data\2020\200309_537ISO.PRO\ACQUDB\181009_TUNE.IPR**
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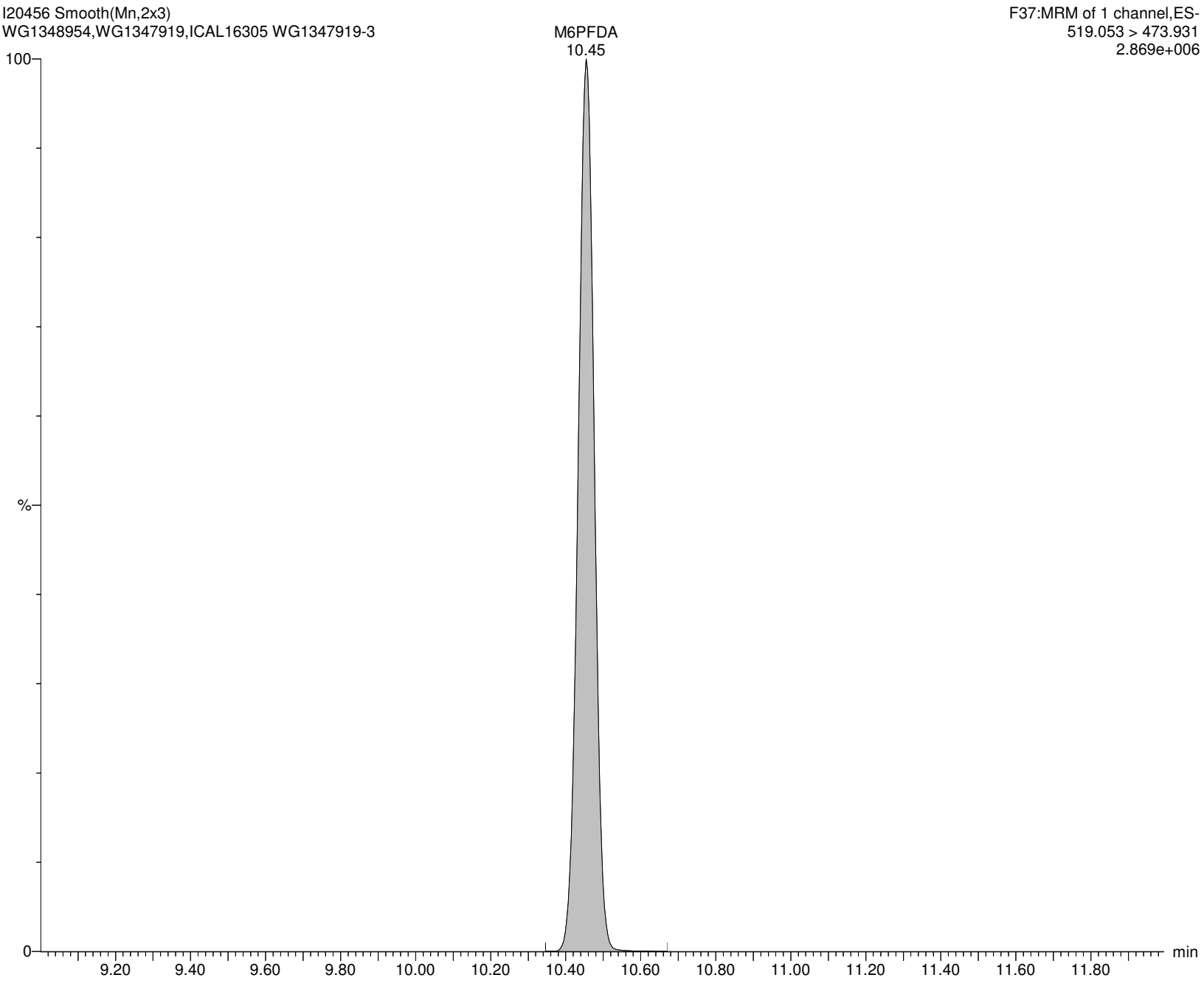



all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2020\200309_537ISO.PRO\Data\WG1348954D.qld
Last Altered: Wednesday, March 11, 2020 22:52:23 Eastern Daylight Time
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**Vial: 2:B,1**
**Instrument: XEVO-TQSmicro#QEB0050**
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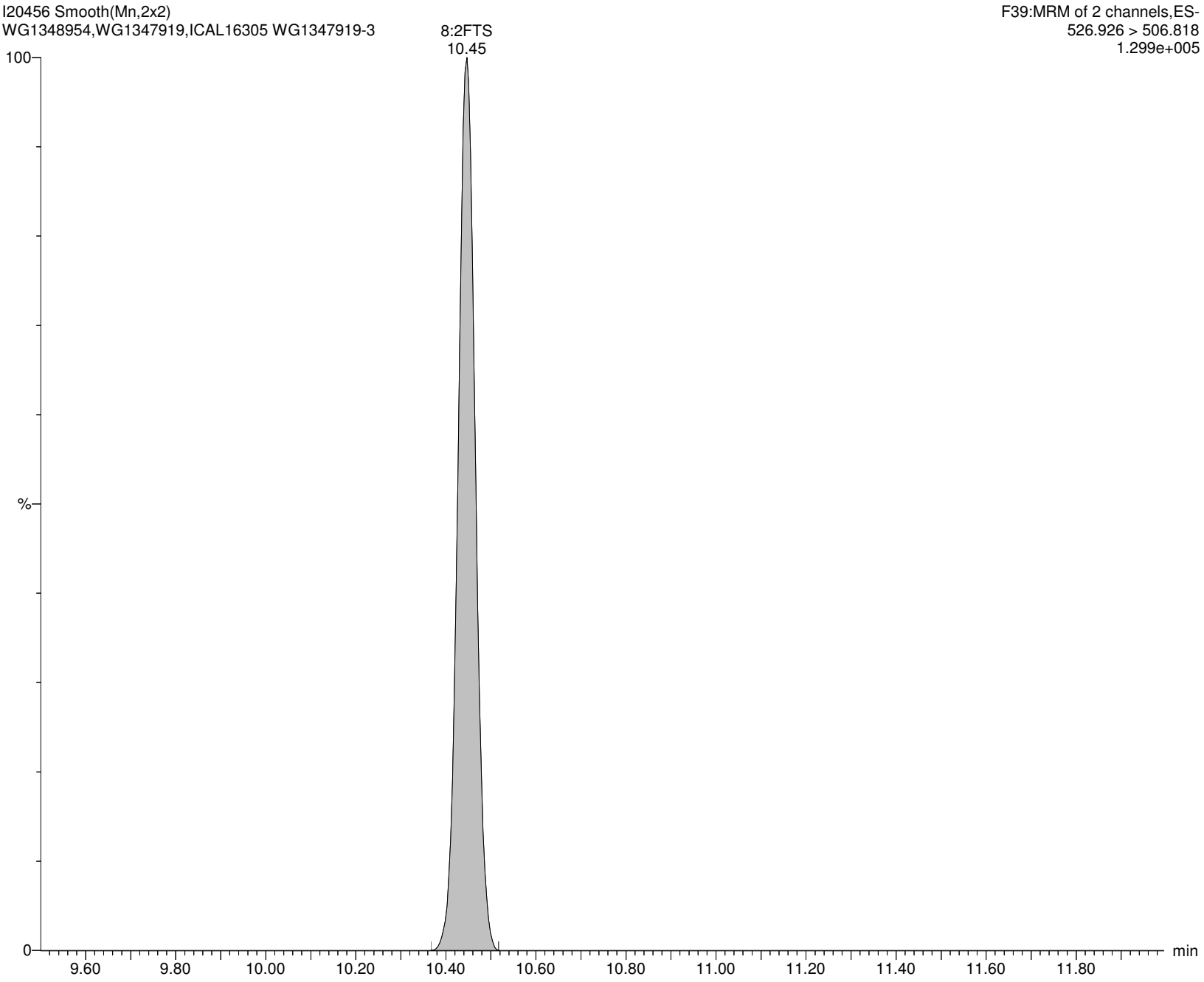
**MS Method Name: C:\MassLynx\Data\2020\200309_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**8:2FTS**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2020\200309_537ISO.PRO\Data\WG1348954D.qld
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**Vial: 2:B,1**
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**Inlet Method Name: C:\MassLynx\Data\2020\200309_537ISO.PRO\ACQUDB\LCMS_537_ISO_B**
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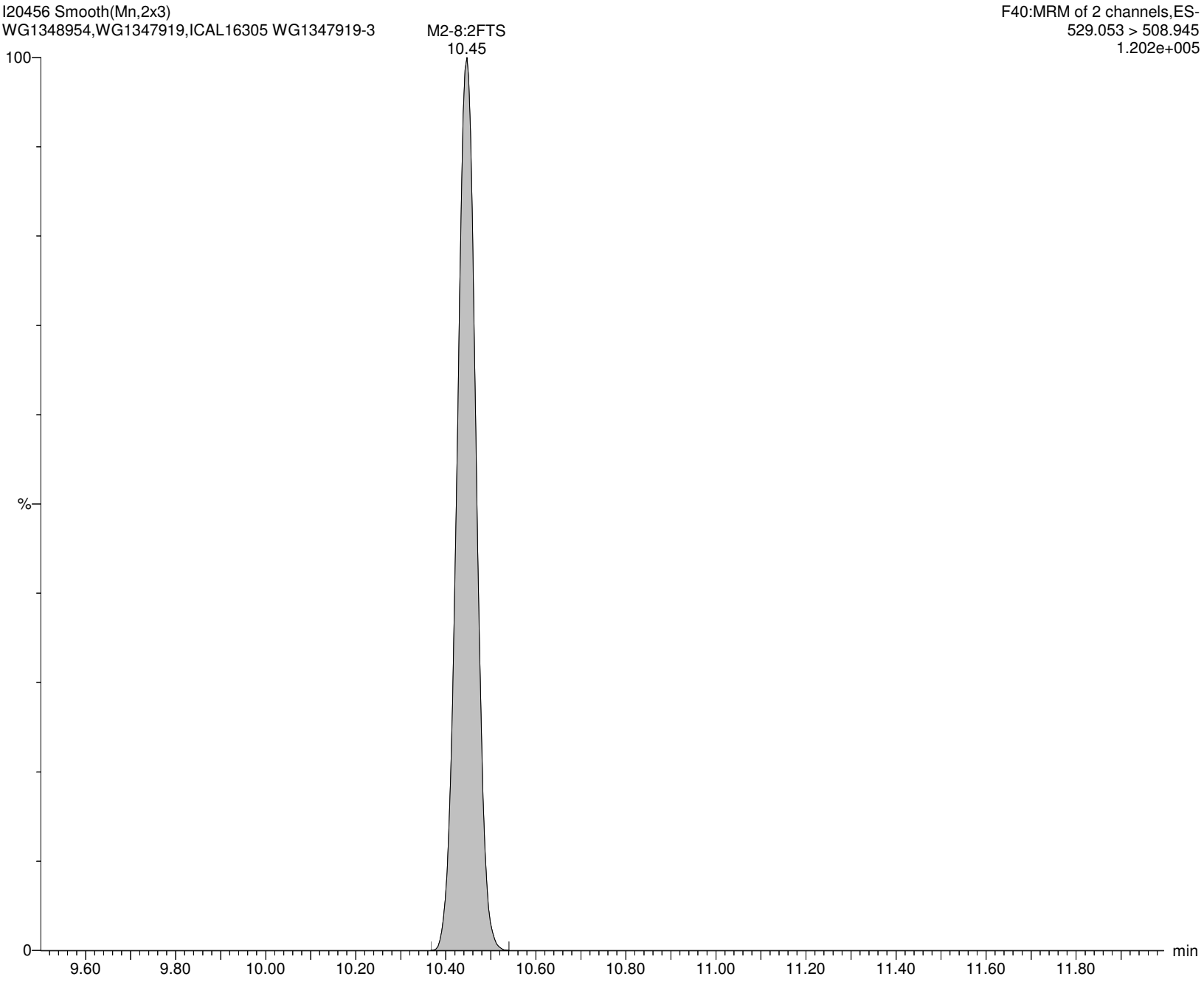
**M2-8:2FTS**





all concentration units in (ng/mL)

Alpha Analytical Inc.
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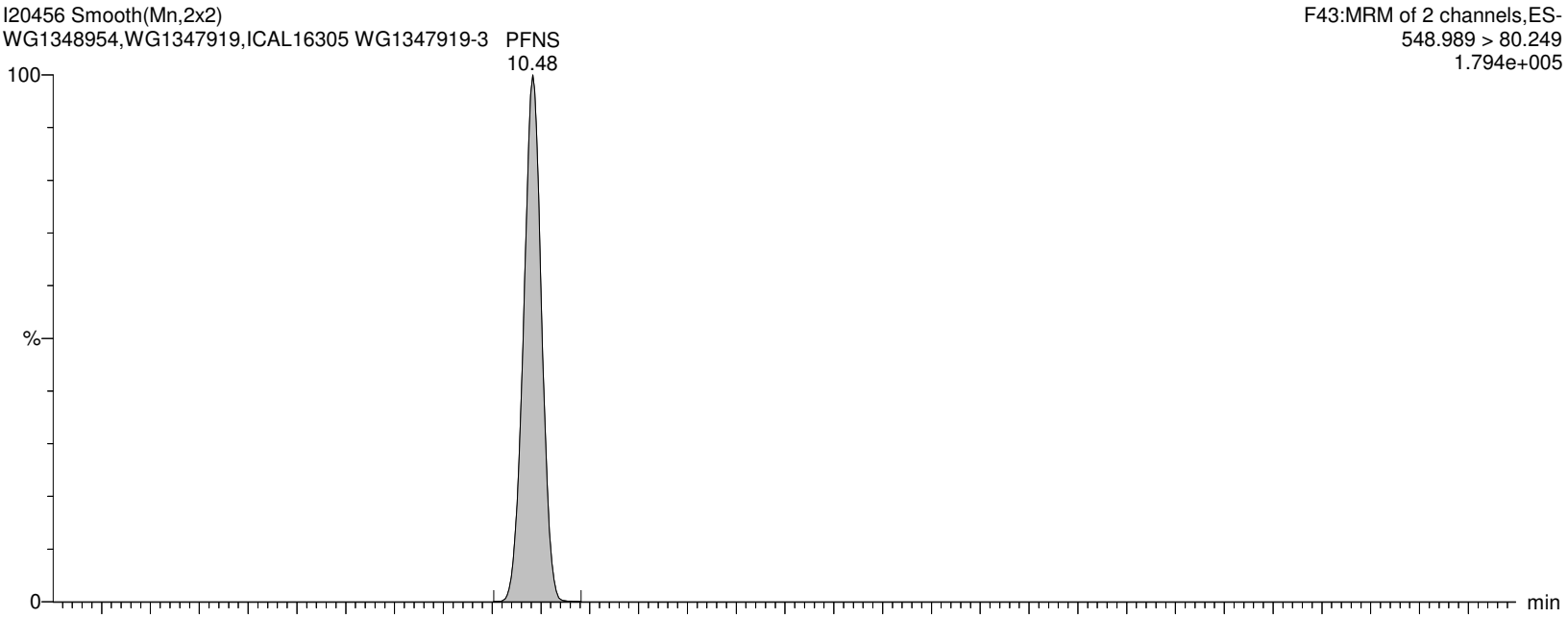


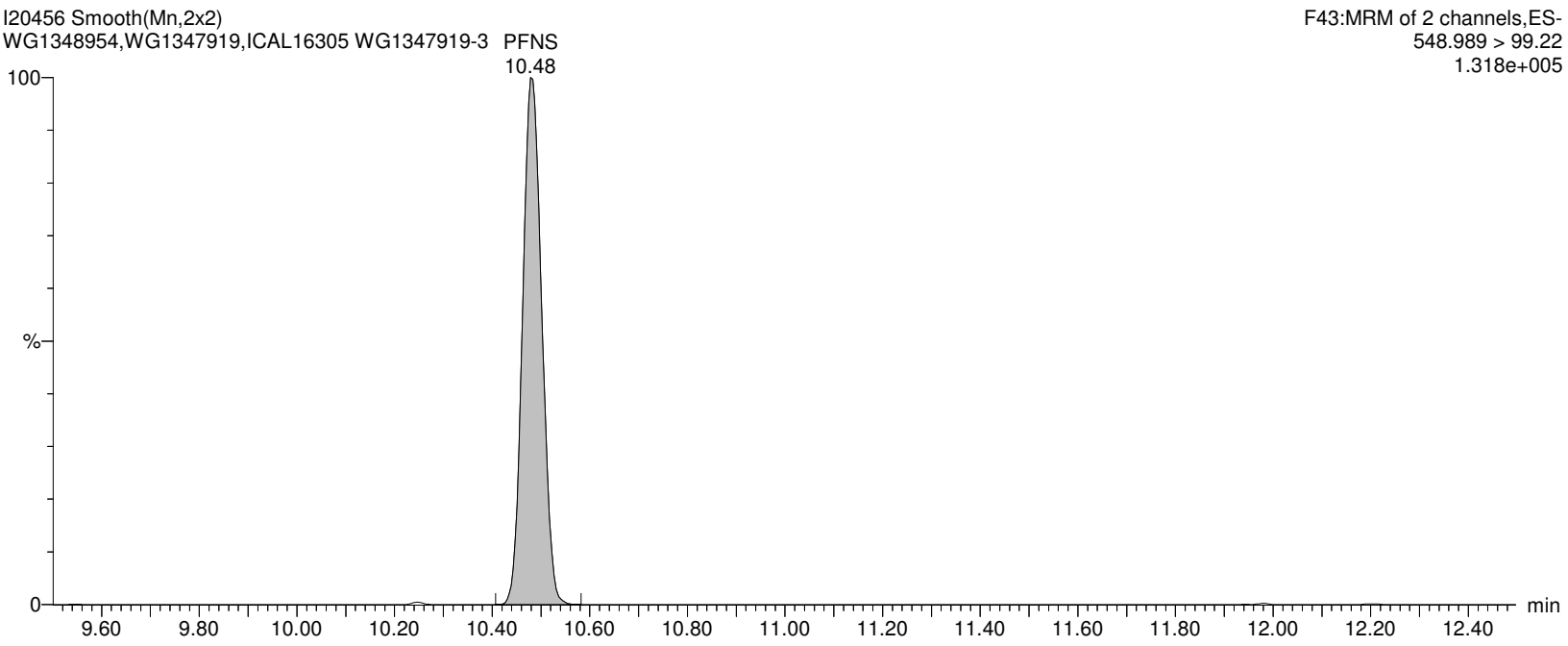



all concentration units in (ng/mL)

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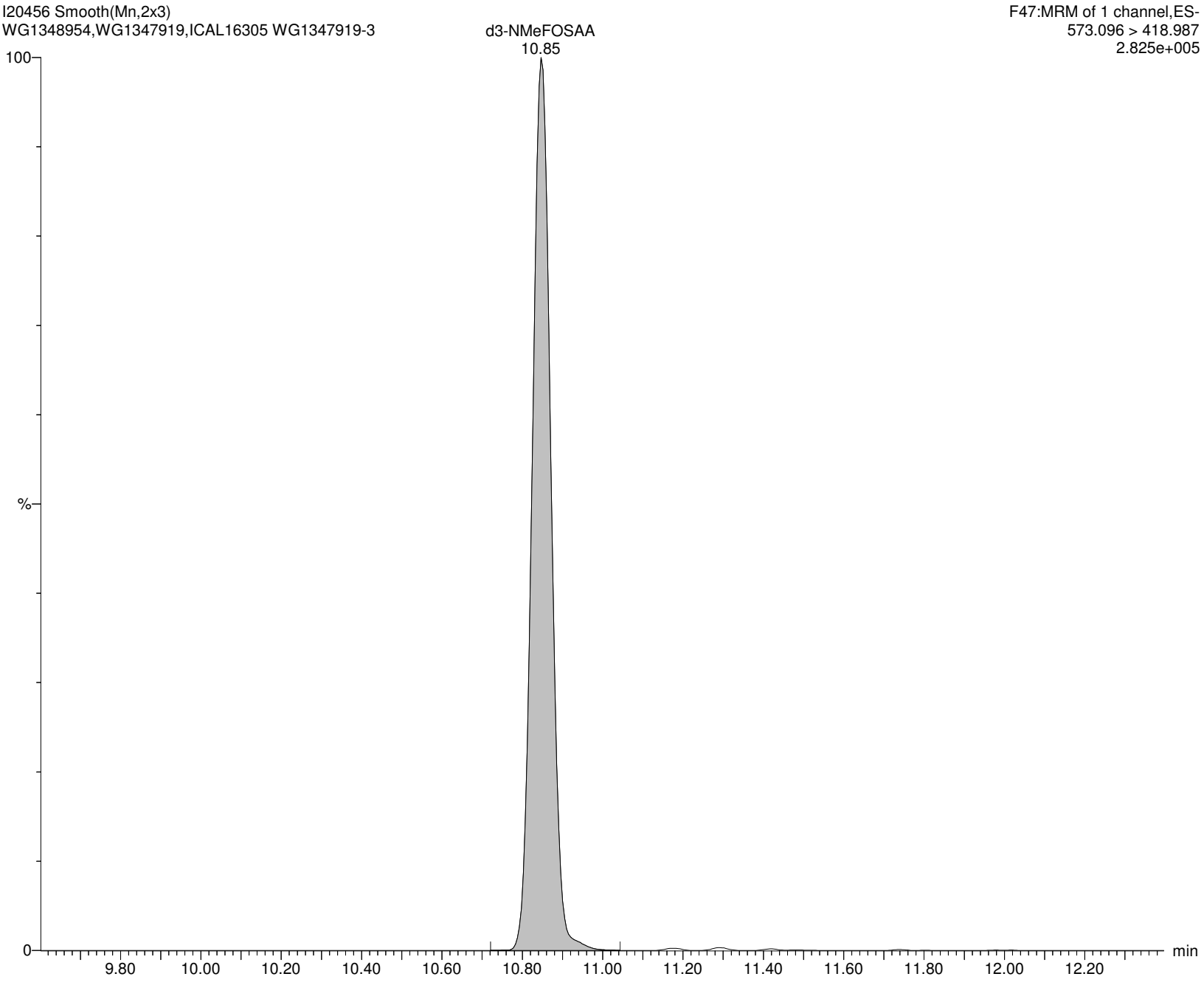
**d3-NMeFOSAA**





all concentration units in (ng/mL)

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**Instrument: XEVO-TQSmicro#QEB0050**
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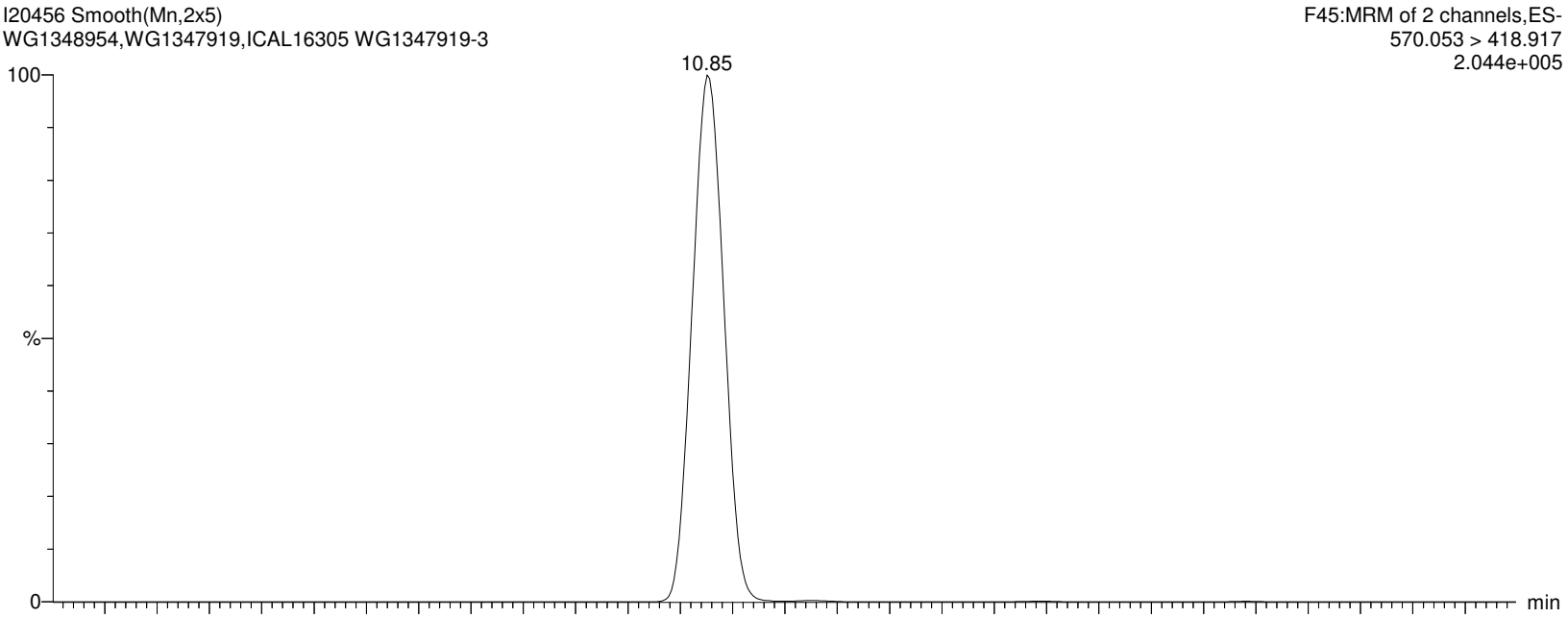
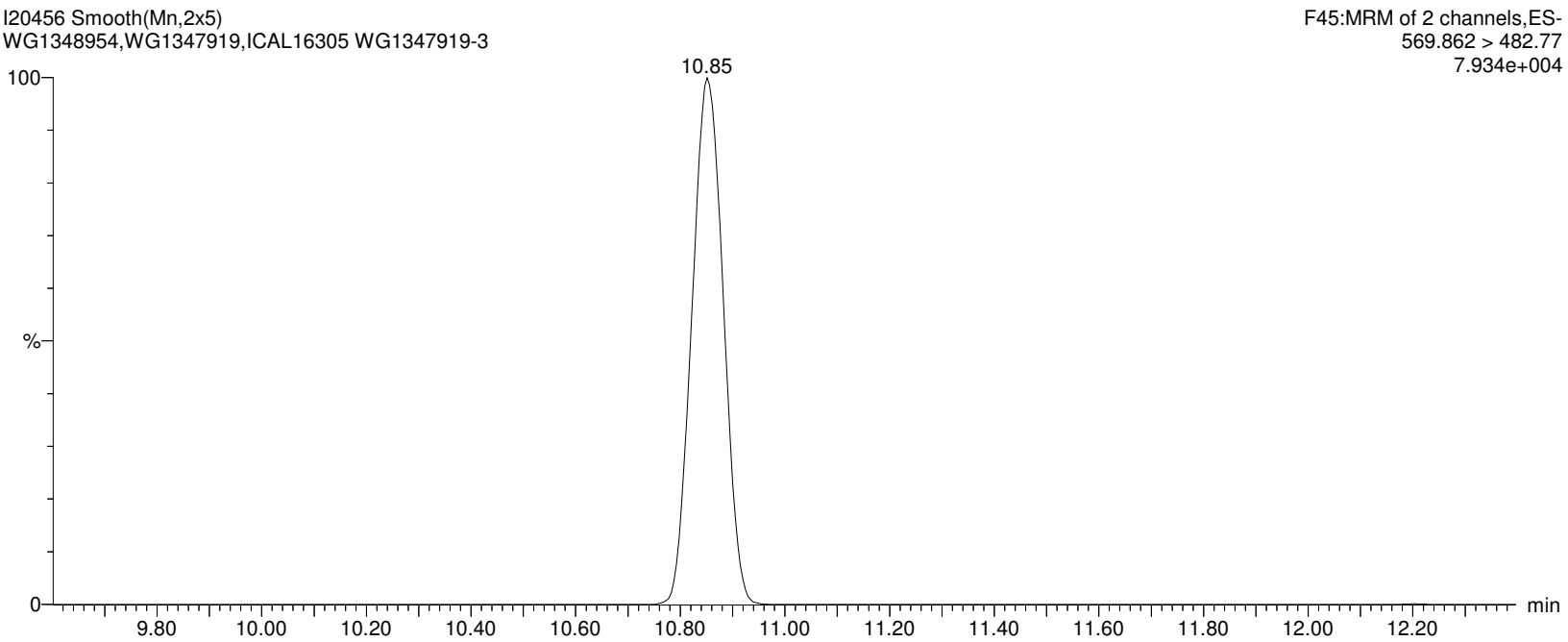
**br-NMeFOSAA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
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**Inlet Method Name: C:\MassLynx\Data\2020\200309_537ISO.PRO\ACQUDB\LCMS_537_ISO_B**
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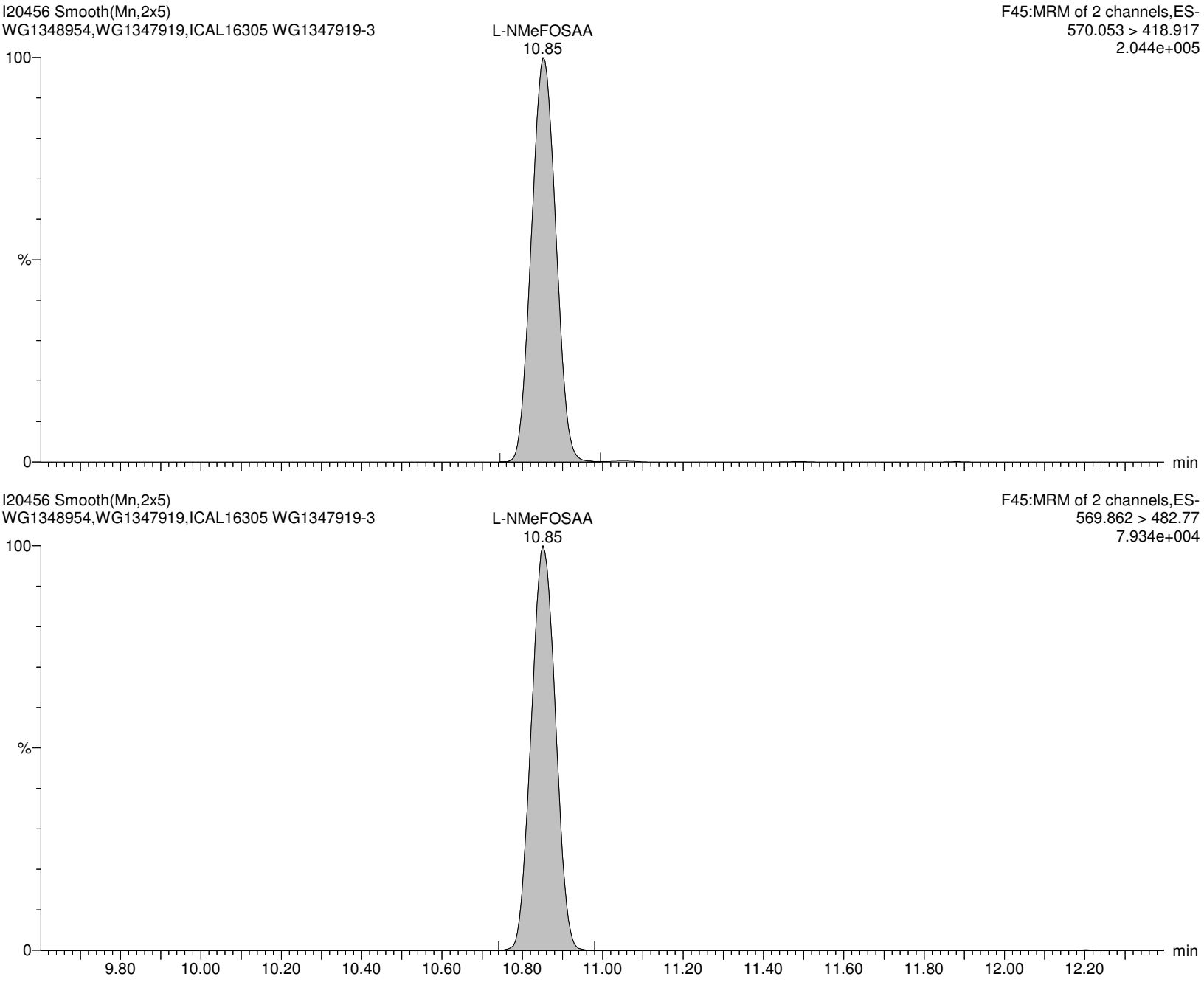
**L-NMeFOSAA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
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**Vial: 2:B,1**
**Instrument: XEVO-TQSmicro#QEB0050**
**Inlet Method Name: C:\MassLynx\Data\2020\200309_537ISO.PRO\ACQUDB\LCMS_537_ISO_B**
**Tune Method Name: C:\MassLynx\Data\2020\200309_537ISO.PRO\ACQUDB\181009_TUNE.IPR**
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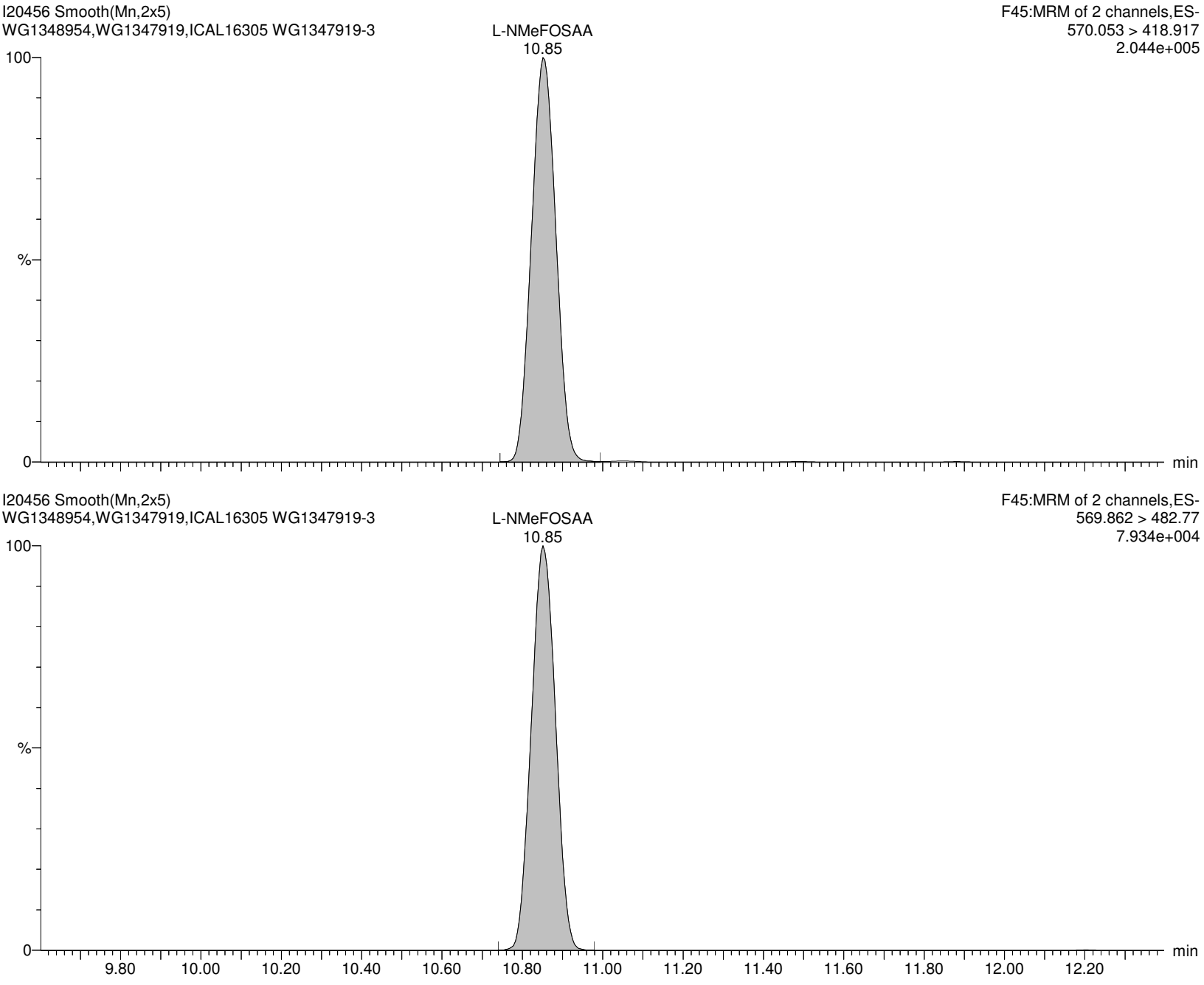



all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2020\200309_537ISO.PRO\Data\WG1348954D.qld
Last Altered: Wednesday, March 11, 2020 22:52:23 Eastern Daylight Time
Printed: Thursday, March 12, 2020 03:26:42 Eastern Daylight Time

**Name: I20456**
**ID: WG1347919-3**
**Date: 11-Mar-2020**
**Time: 03:10:43**
**Description: WG1348954,WG1347919,ICAL16305**
**User: LCMS02:RS**
**Vial: 2:B,1**
**Instrument: XEVO-TQSmicro#QEB0050**
**Inlet Method Name: C:\MassLynx\Data\2020\200309_537ISO.PRO\ACQUDB\LCMS_537_ISO_B**
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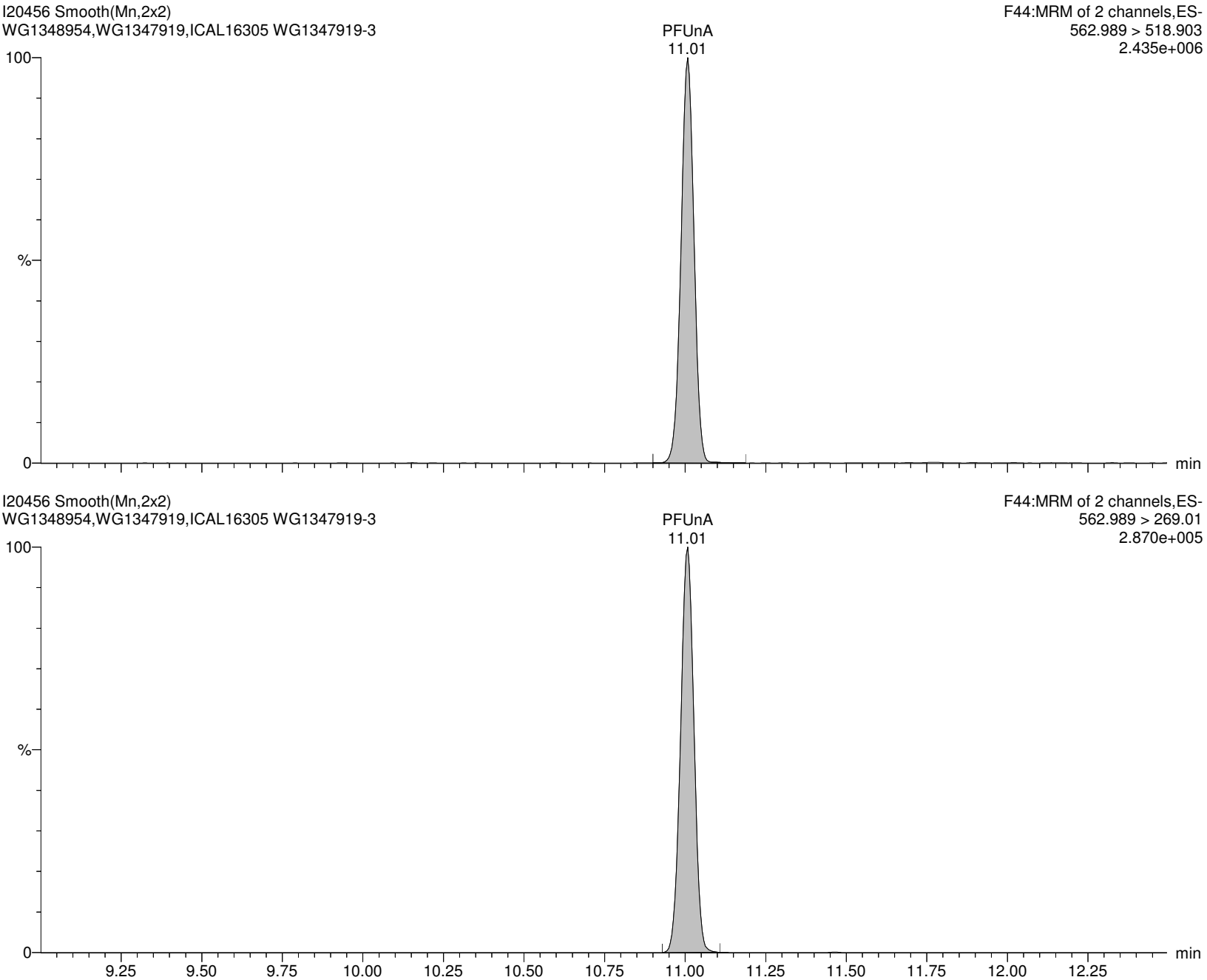



all concentration units in (ng/mL)

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**User: LCMS02:RS**
**Vial: 2:B,1**
**Instrument: XEVO-TQSmicro#QEB0050**
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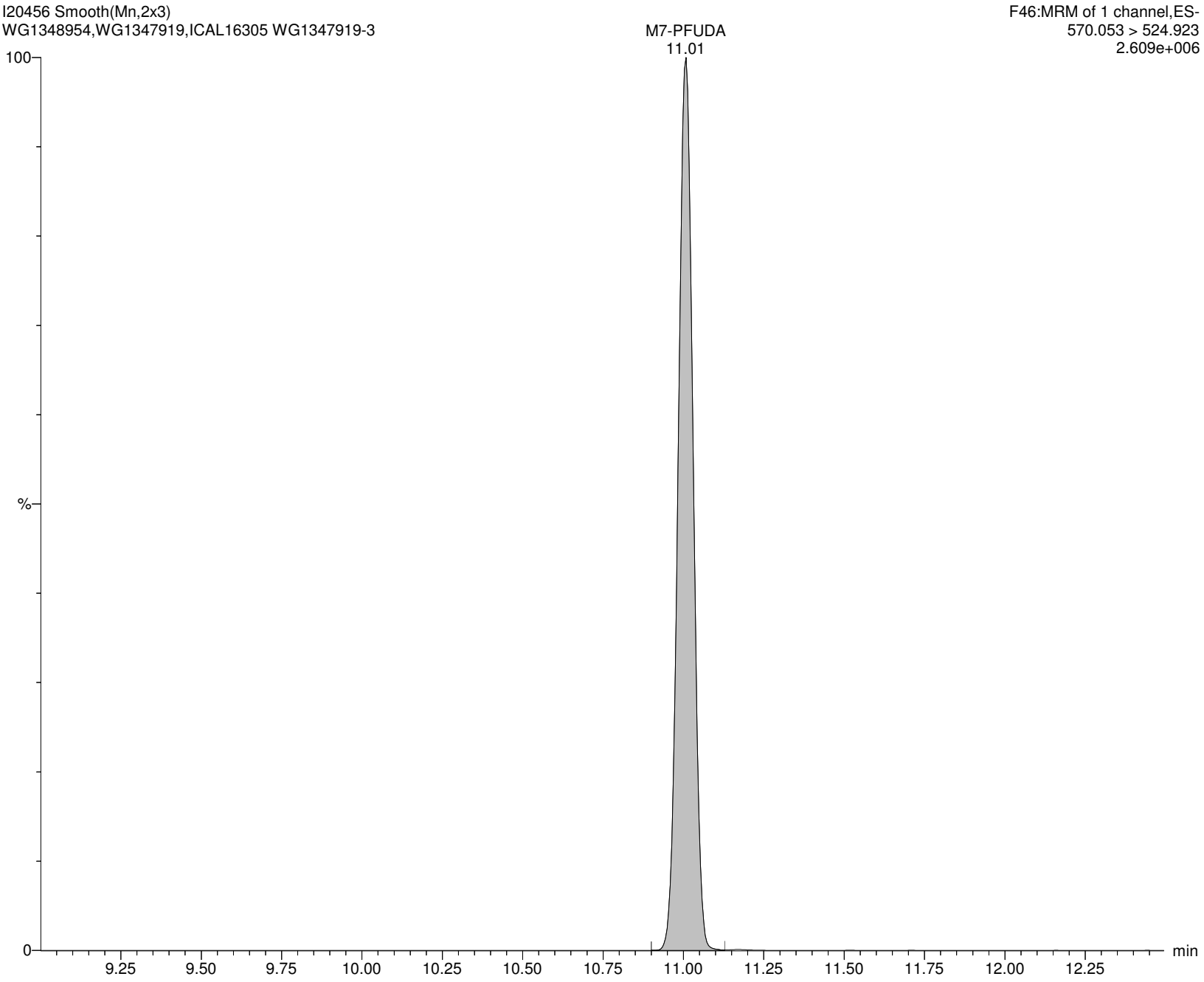



all concentration units in (ng/mL)

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**Instrument: XEVO-TQSmicro#QEB0050**
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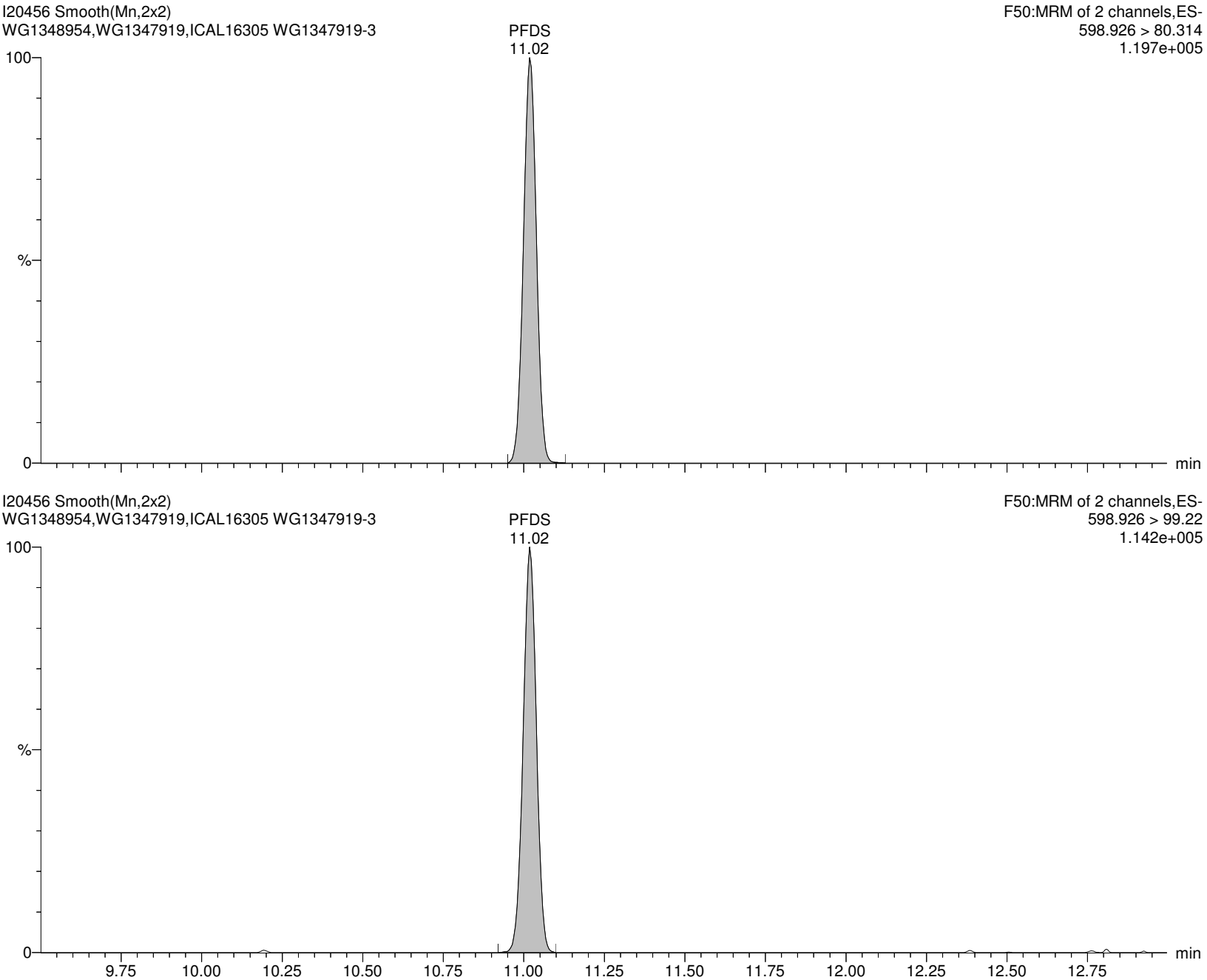



all concentration units in (ng/mL)

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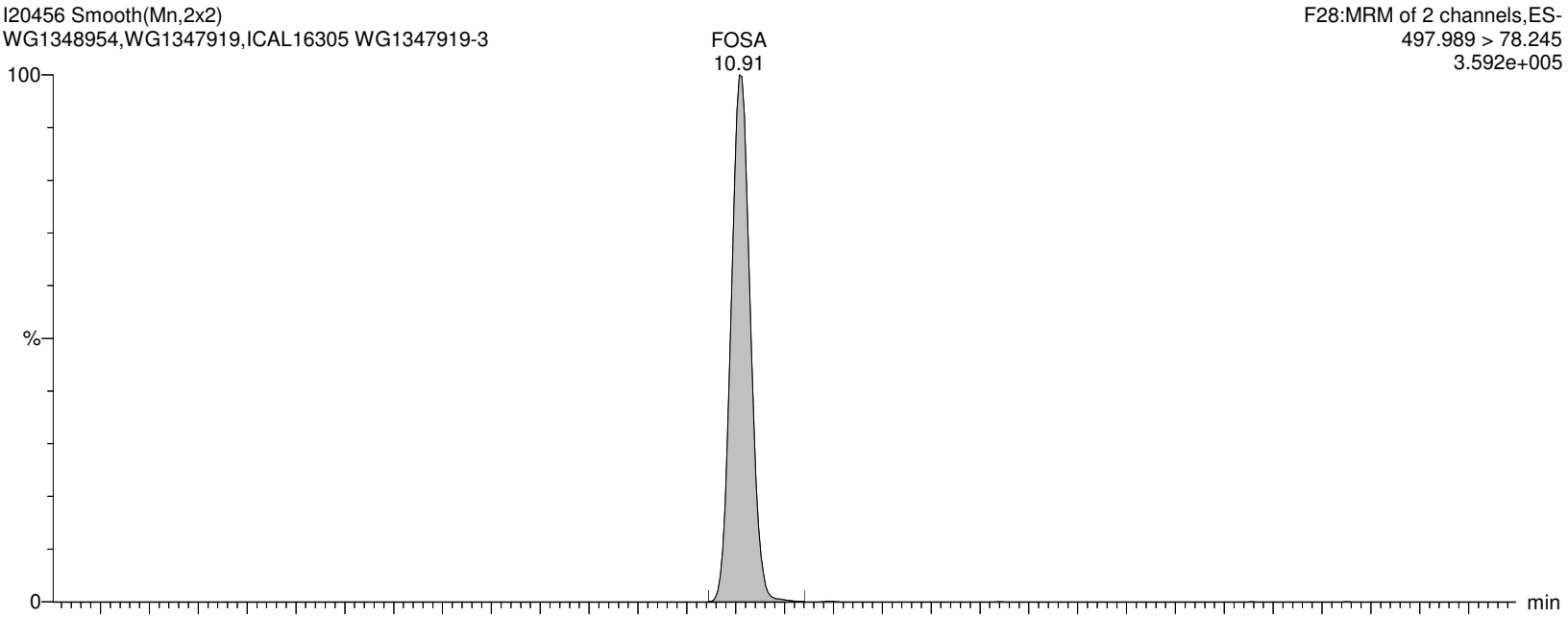
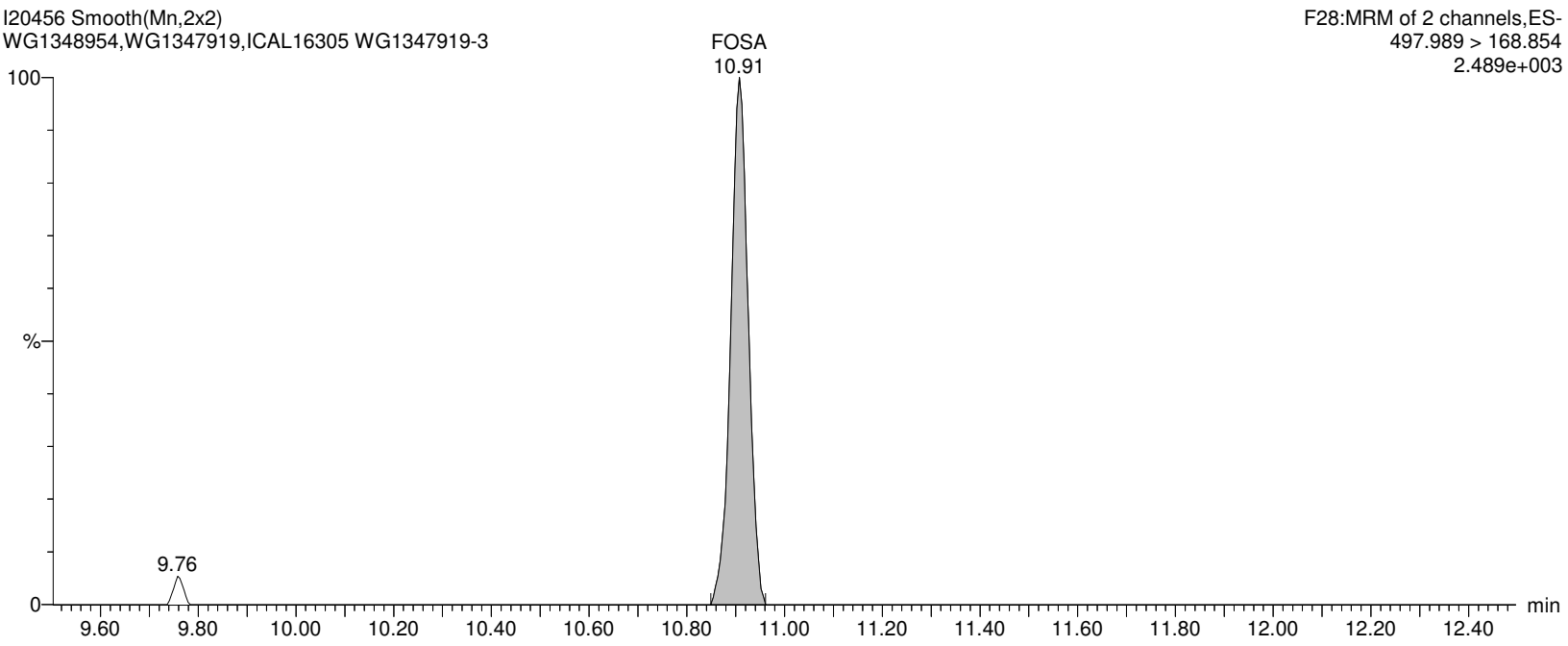
**FOSA**





all concentration units in (ng/mL)

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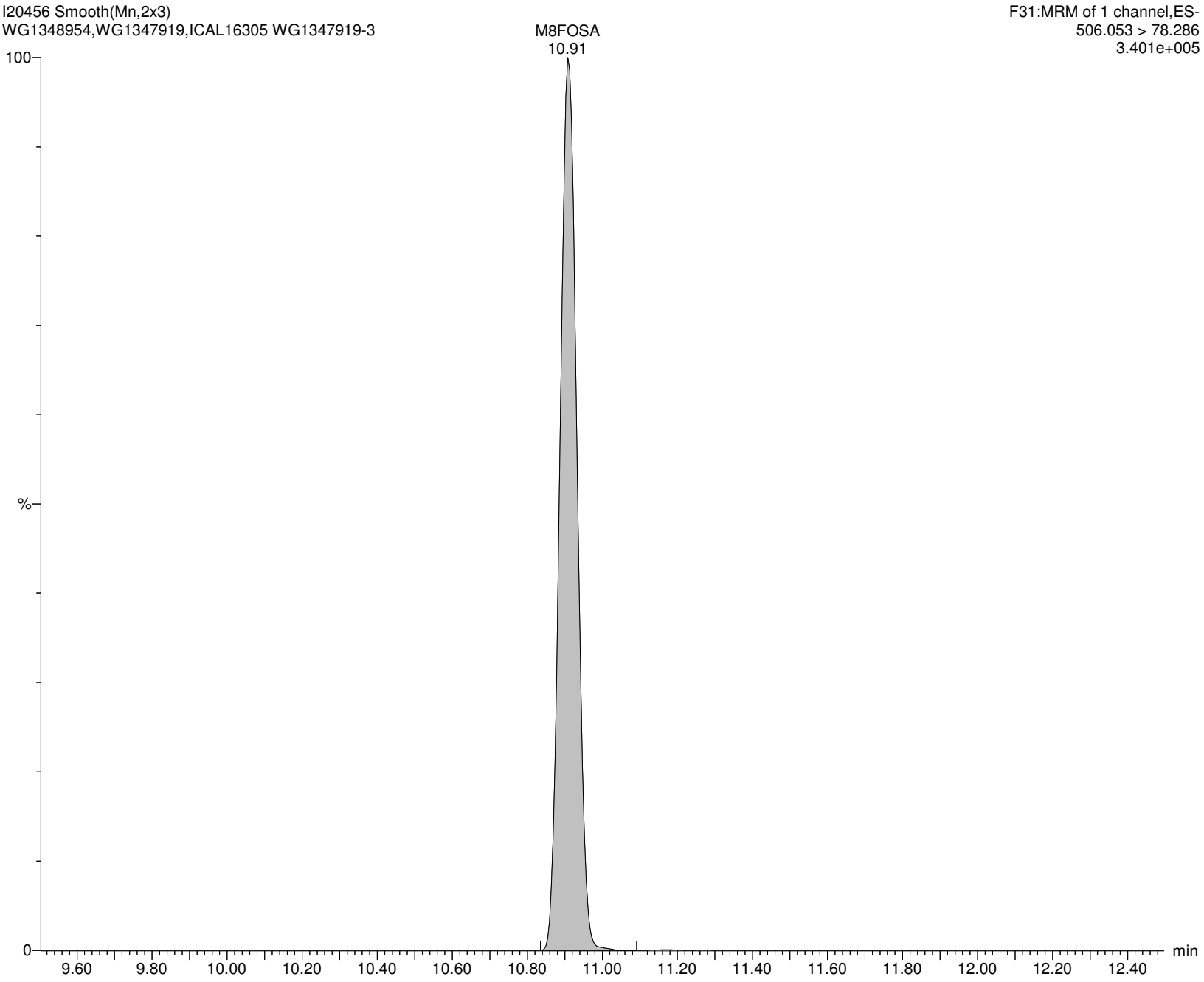
**M8FOSA**





all concentration units in (ng/mL)

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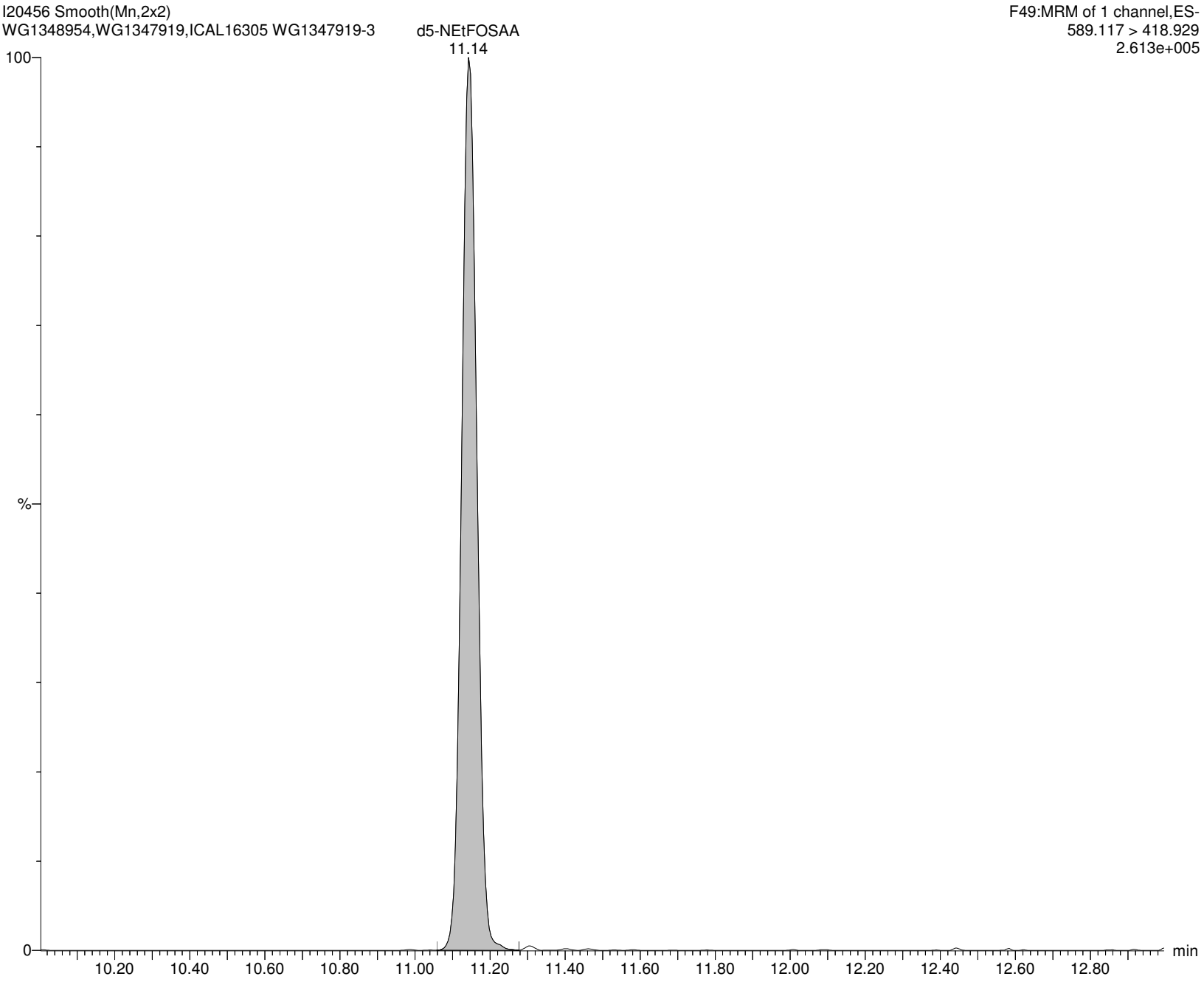
**d5-NEtFOSAA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2020\200309_537ISO.PRO\Data\WG1348954D.qld
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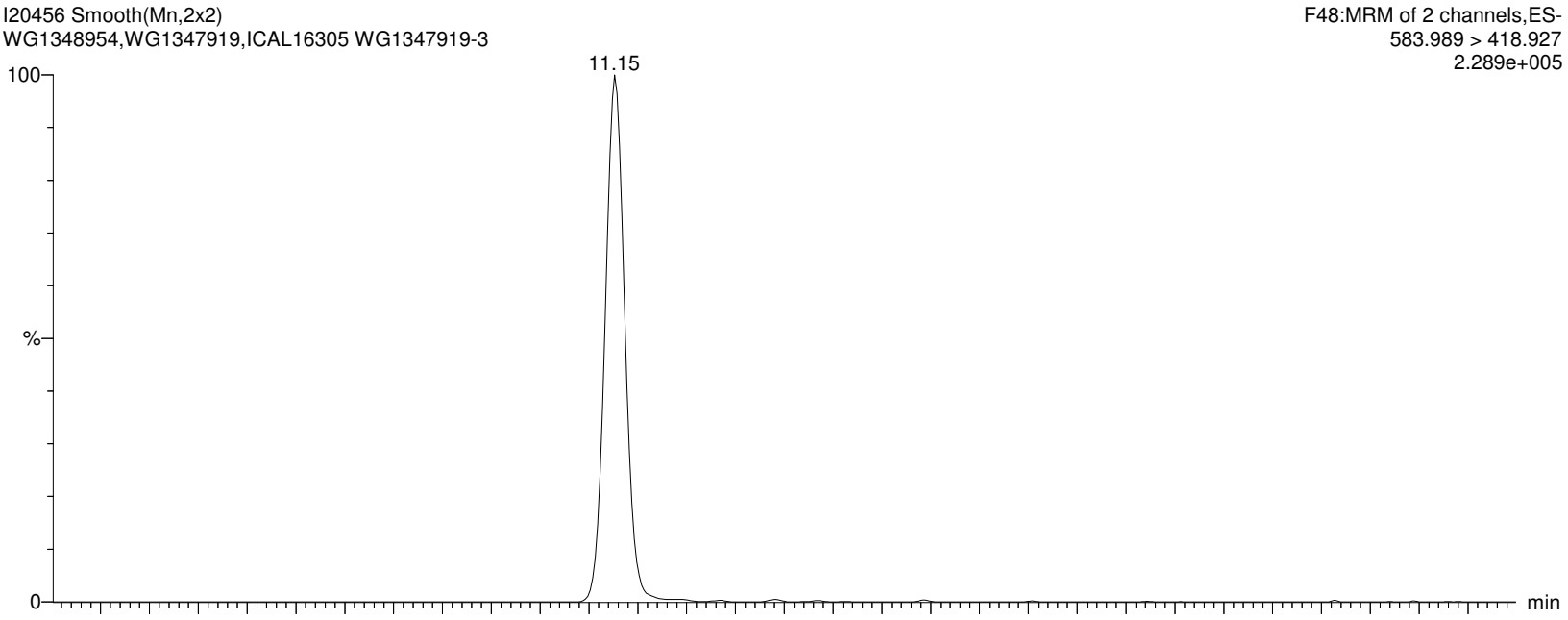
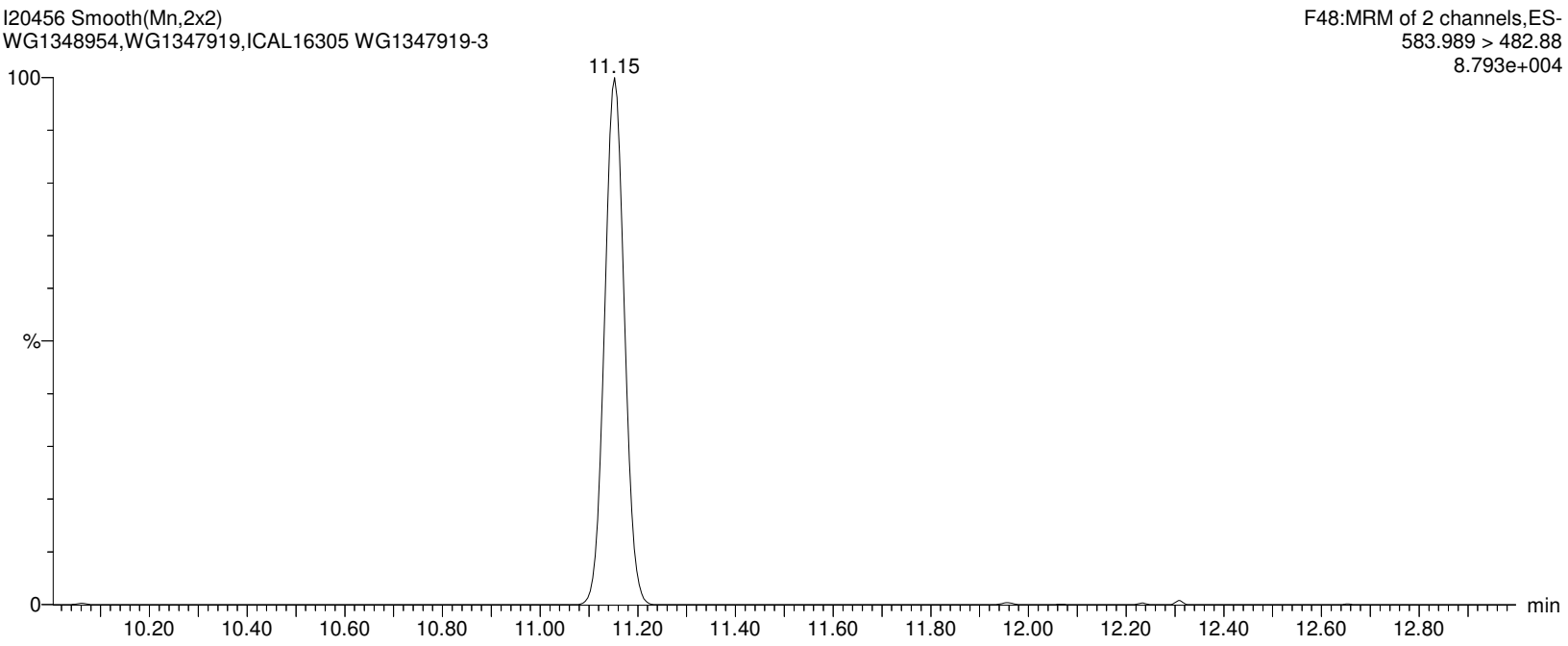
**br-NEtFOSAA**





all concentration units in (ng/mL)

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**Instrument: XEVO-TQSmicro#QEB0050**
**Inlet Method Name: C:\MassLynx\Data\2020\200309_537ISO.PRO\ACQUDB\LCMS_537_ISO_B**
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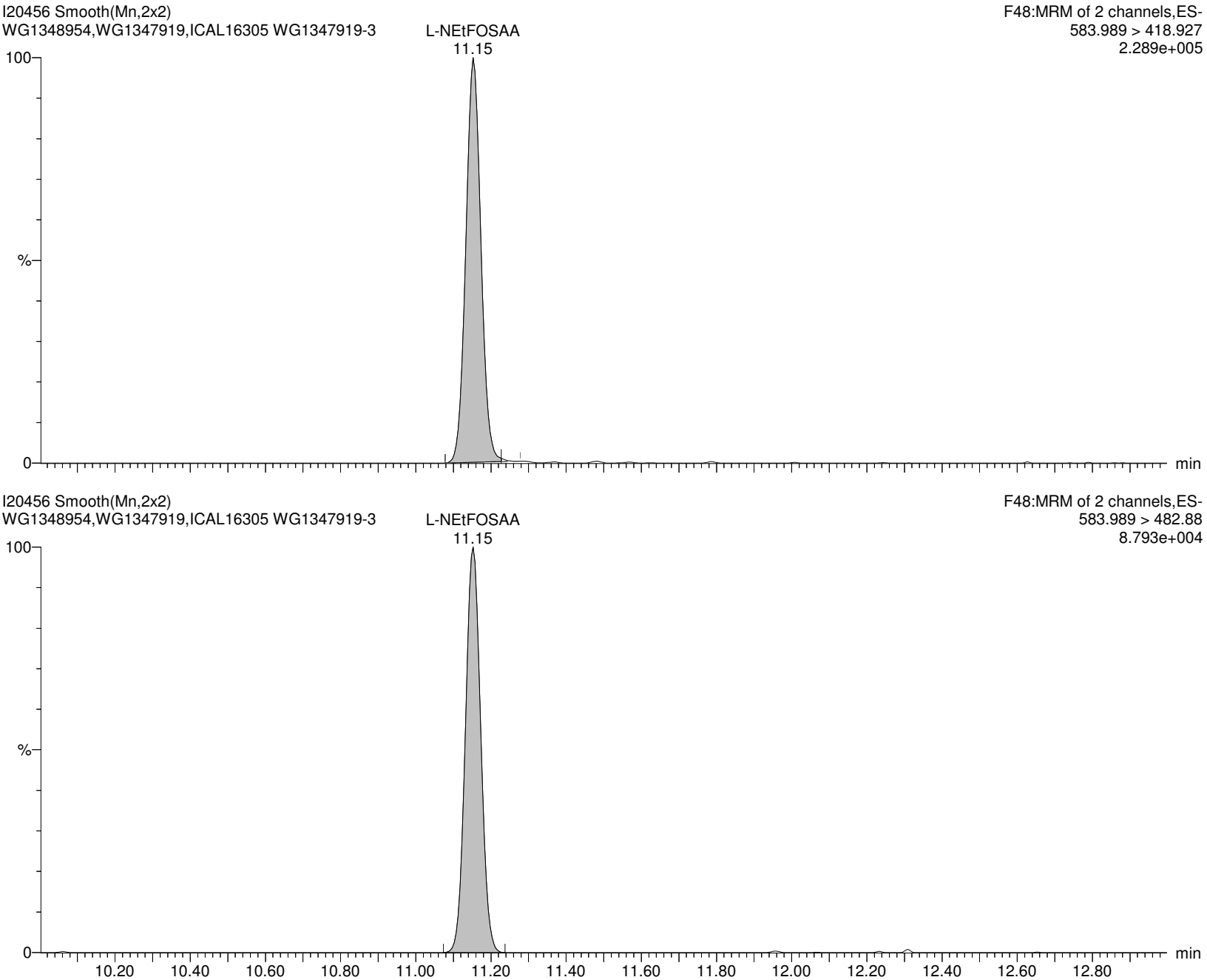
**L-NEtFOSAA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2020\200309_537ISO.PRO\Data\WG1348954D.qld
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**Instrument: XEVO-TQSmicro#QEB0050**
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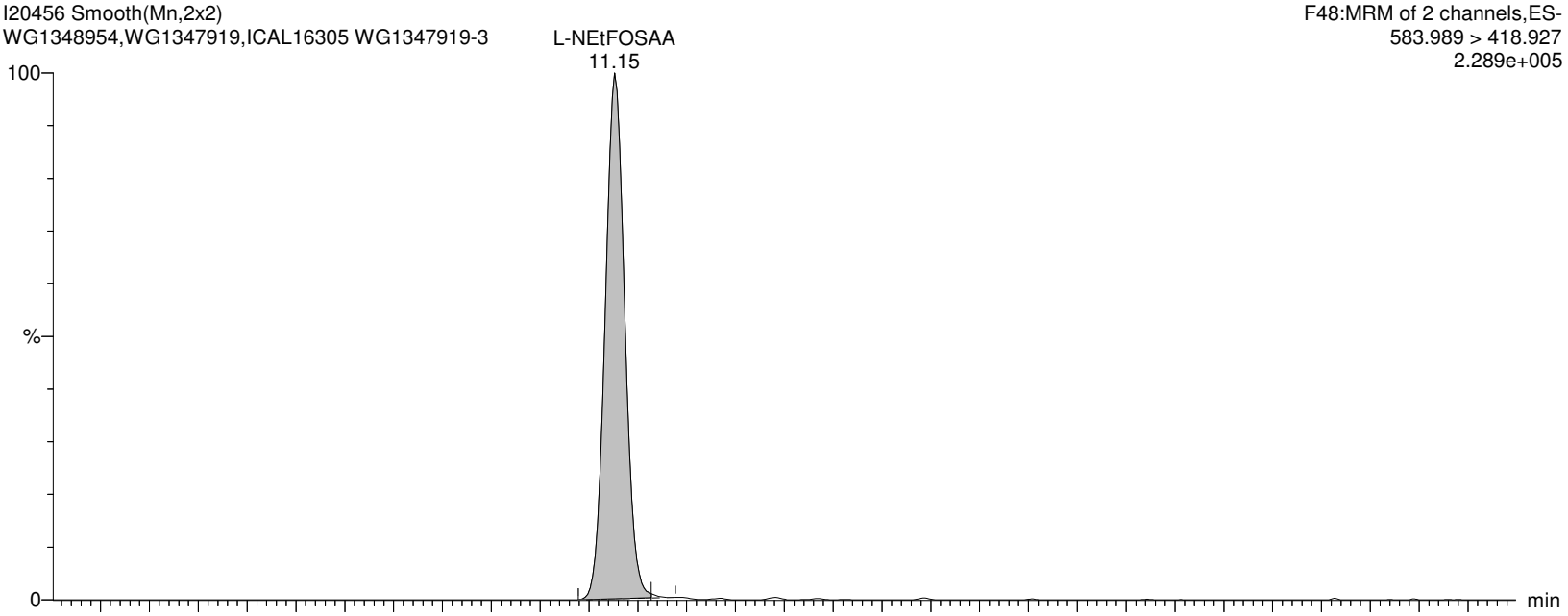


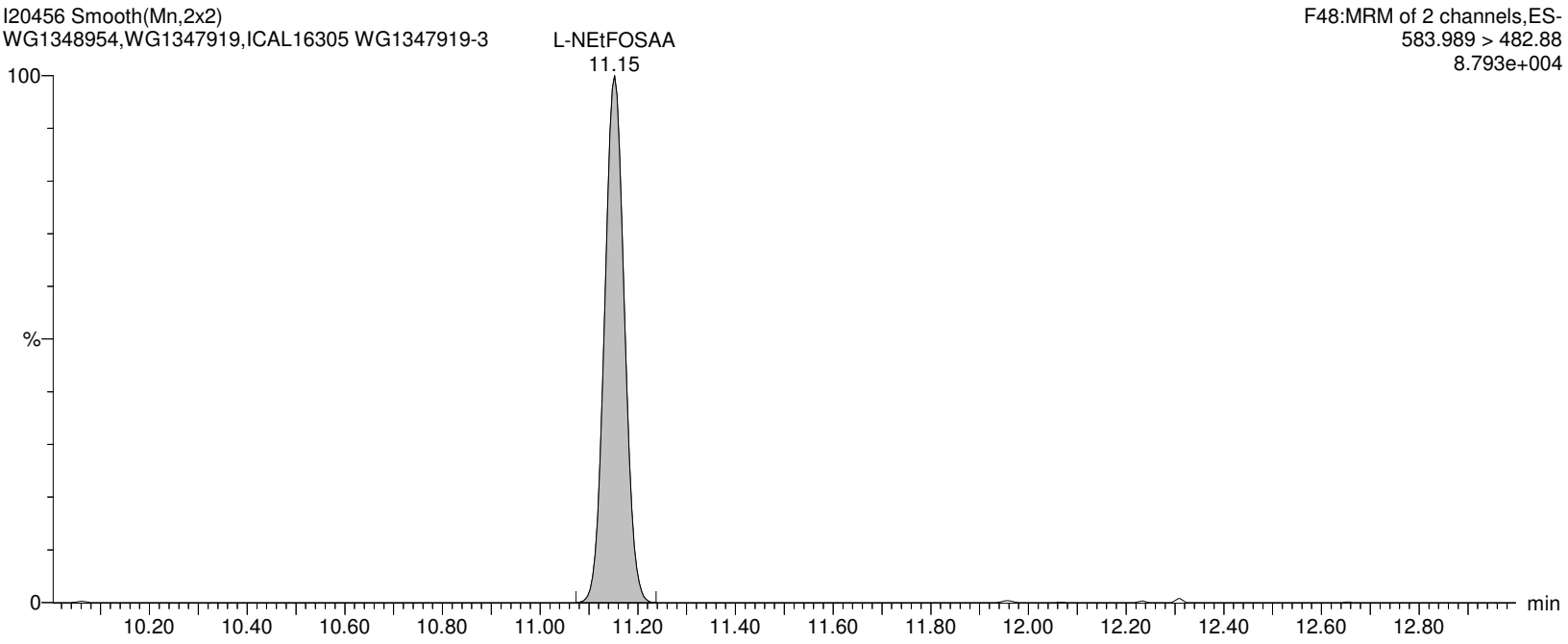



all concentration units in (ng/mL)

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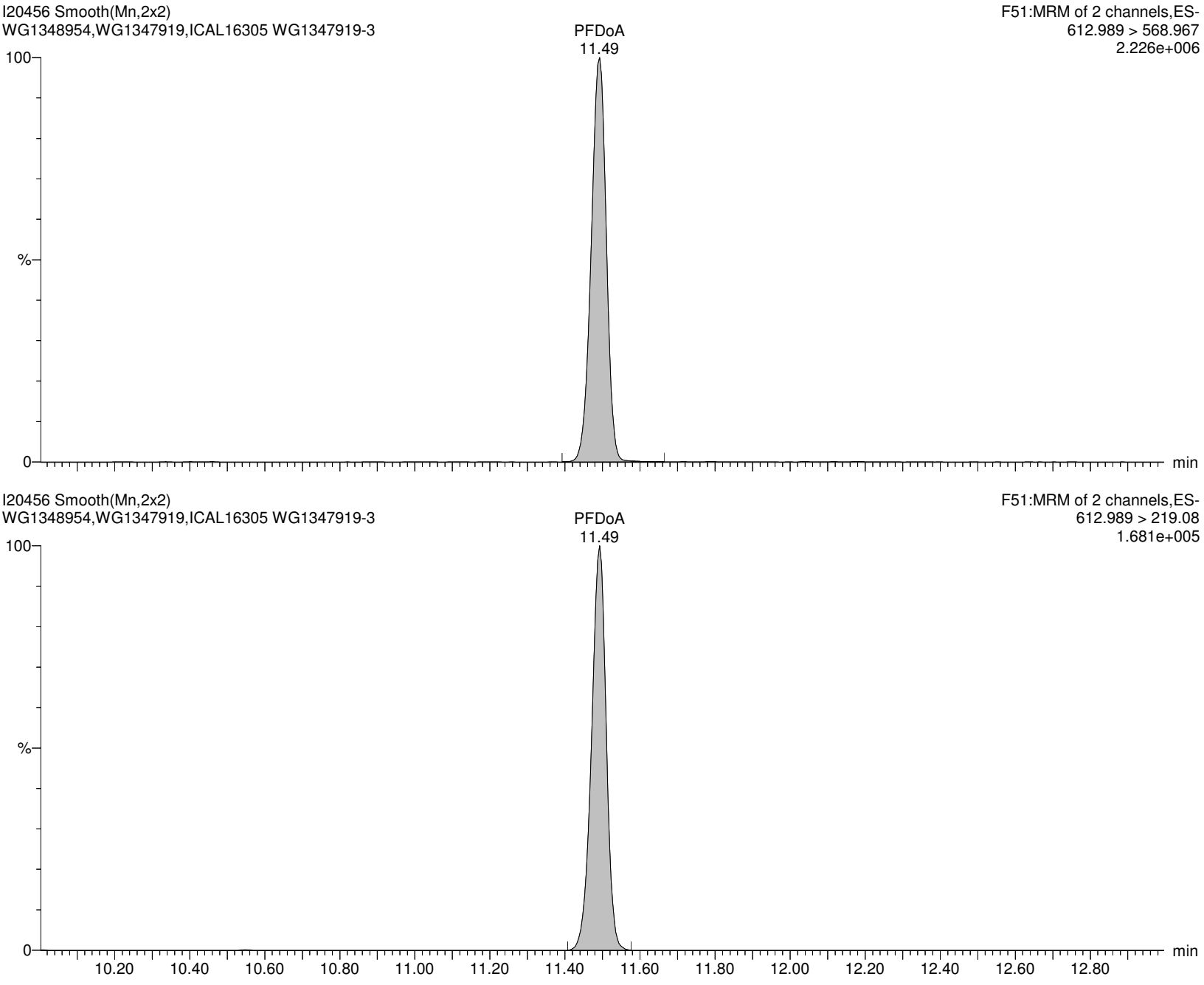



all concentration units in (ng/mL)

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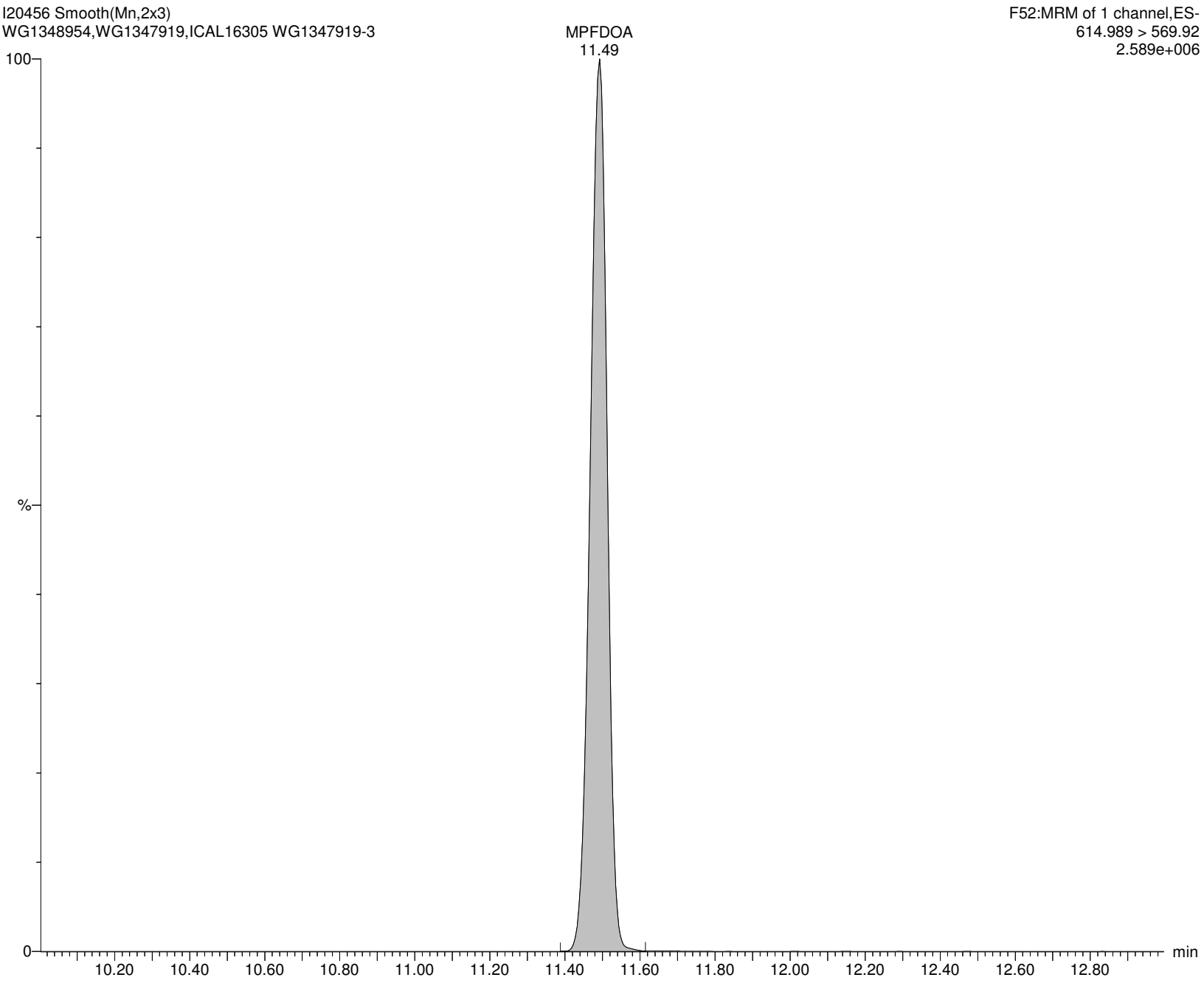



all concentration units in (ng/mL)

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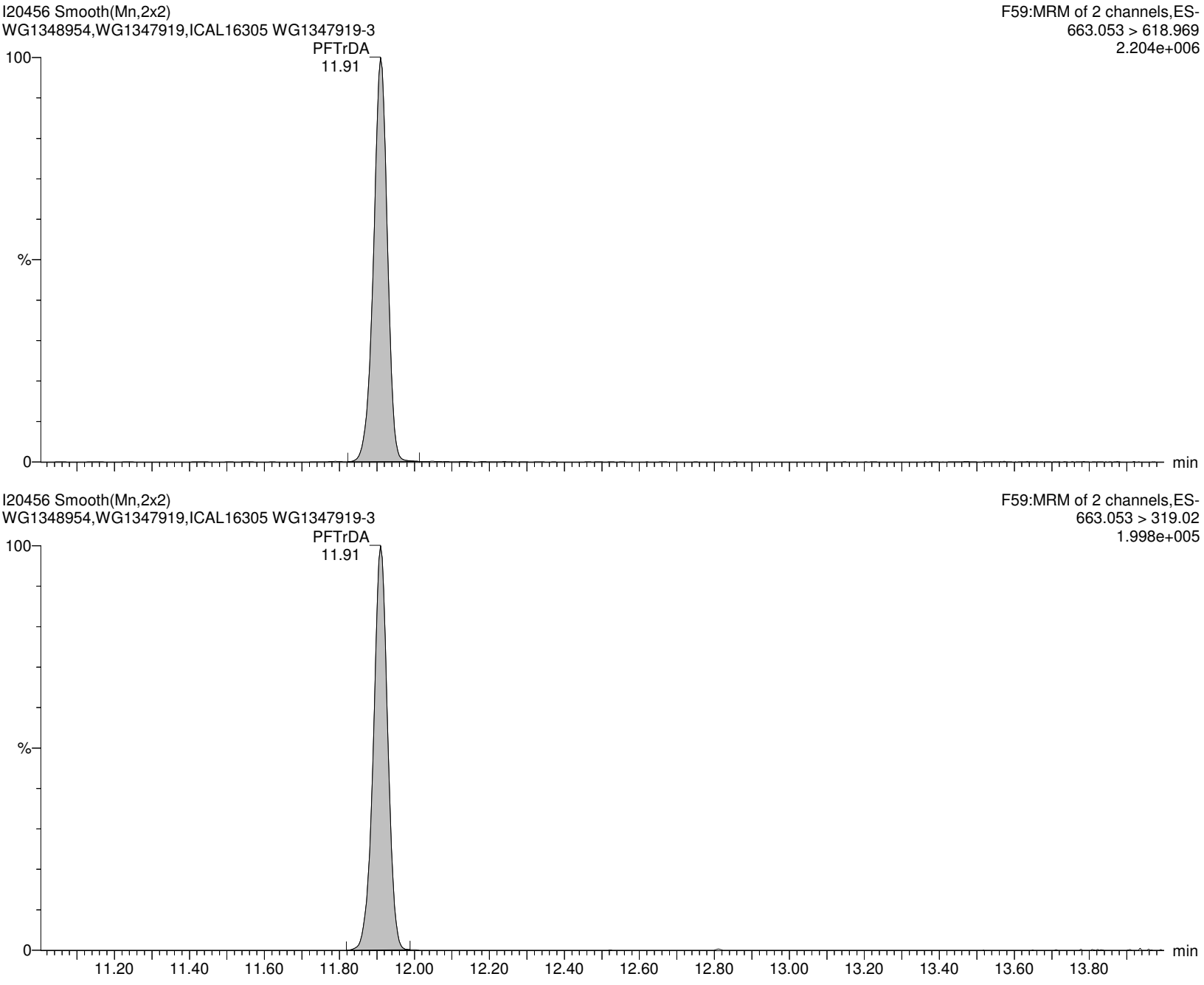
**PFTrDA**





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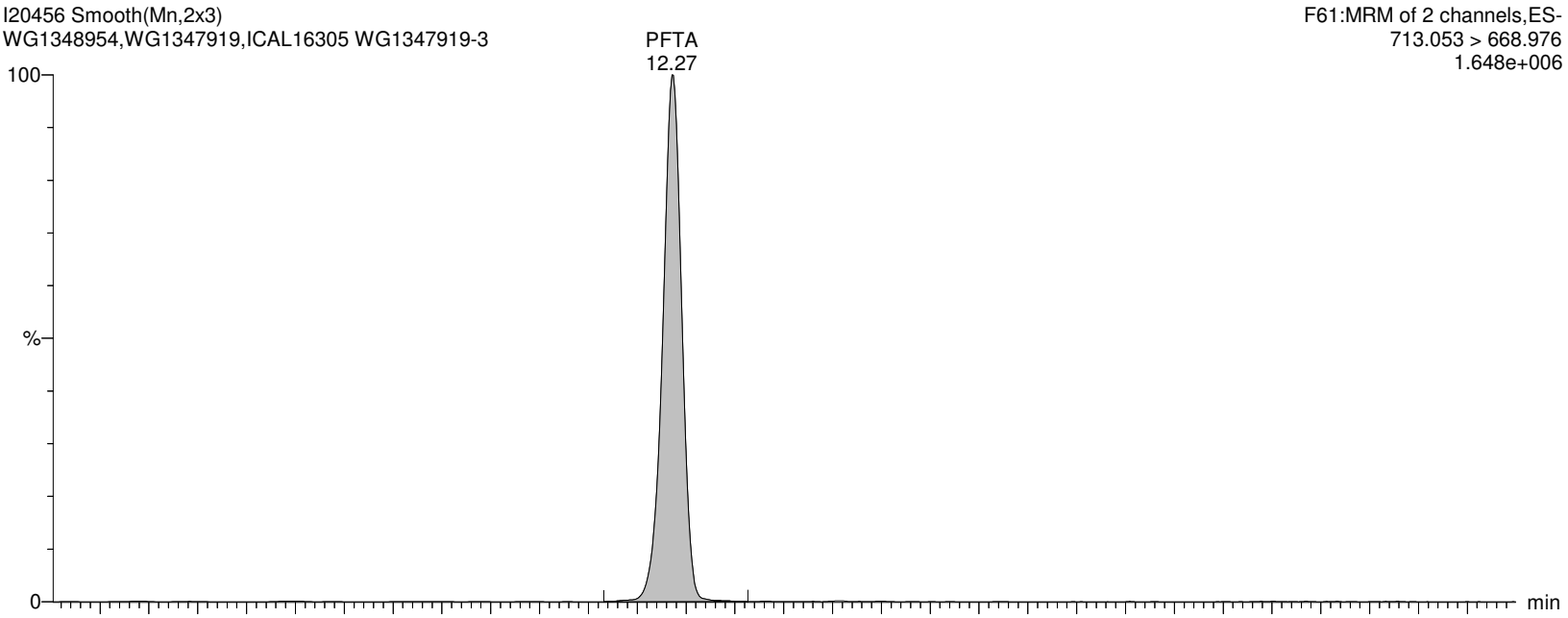


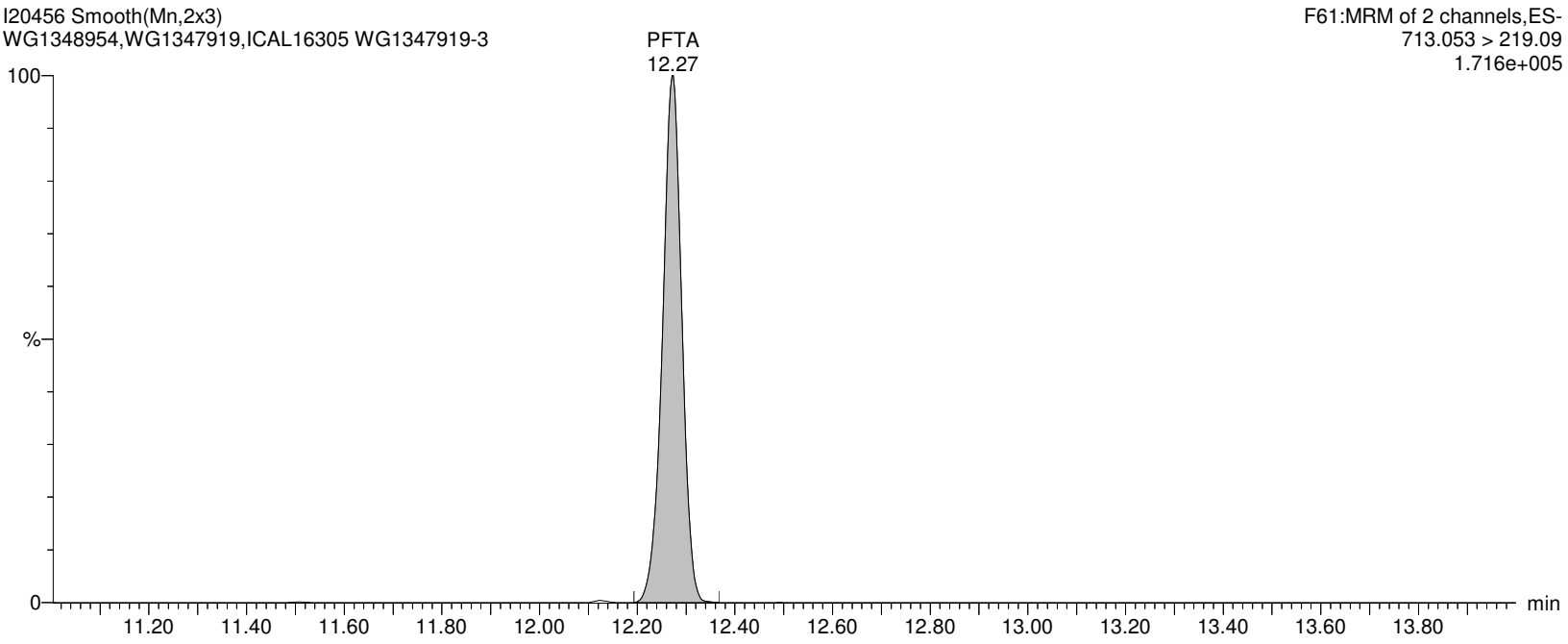



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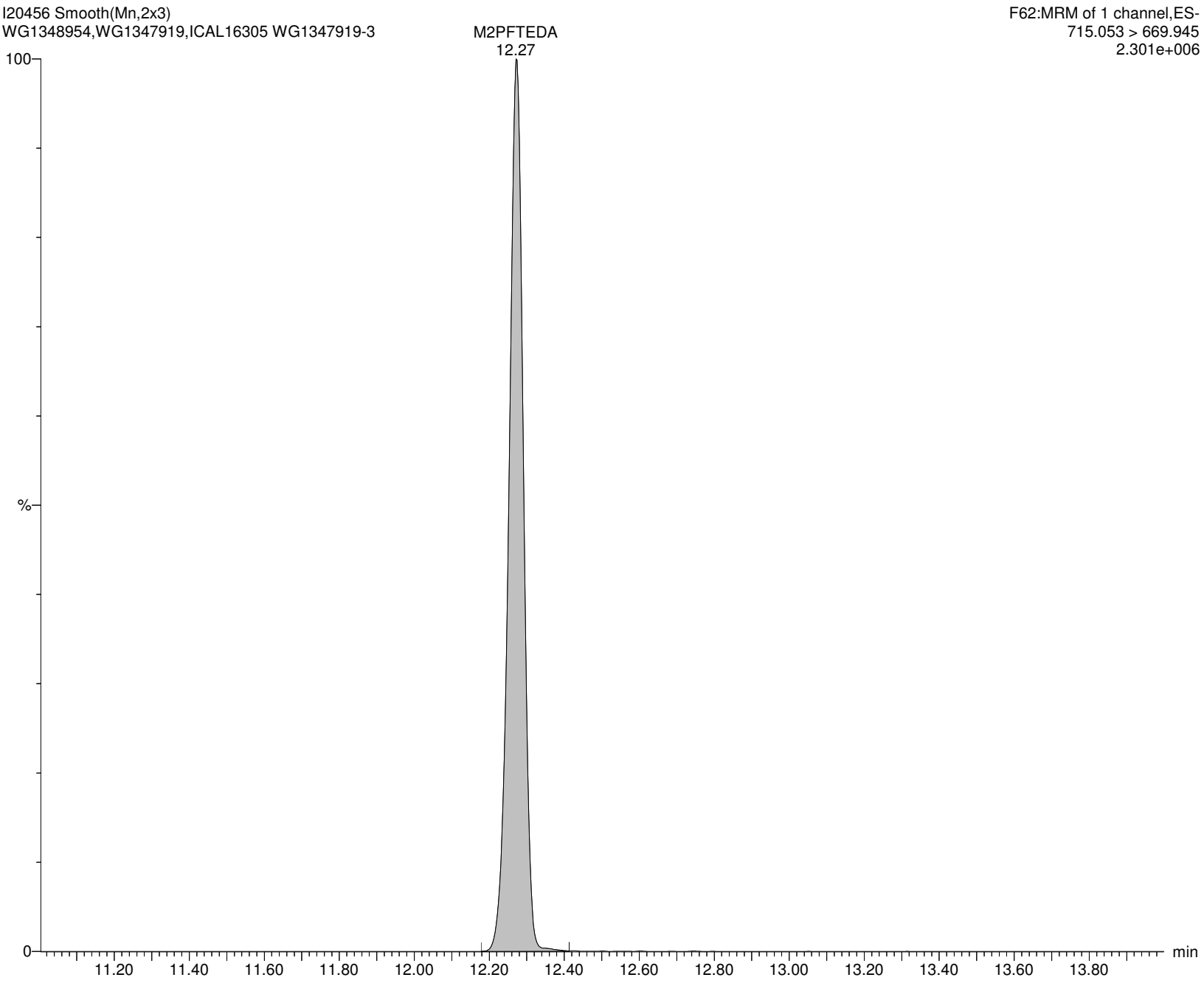



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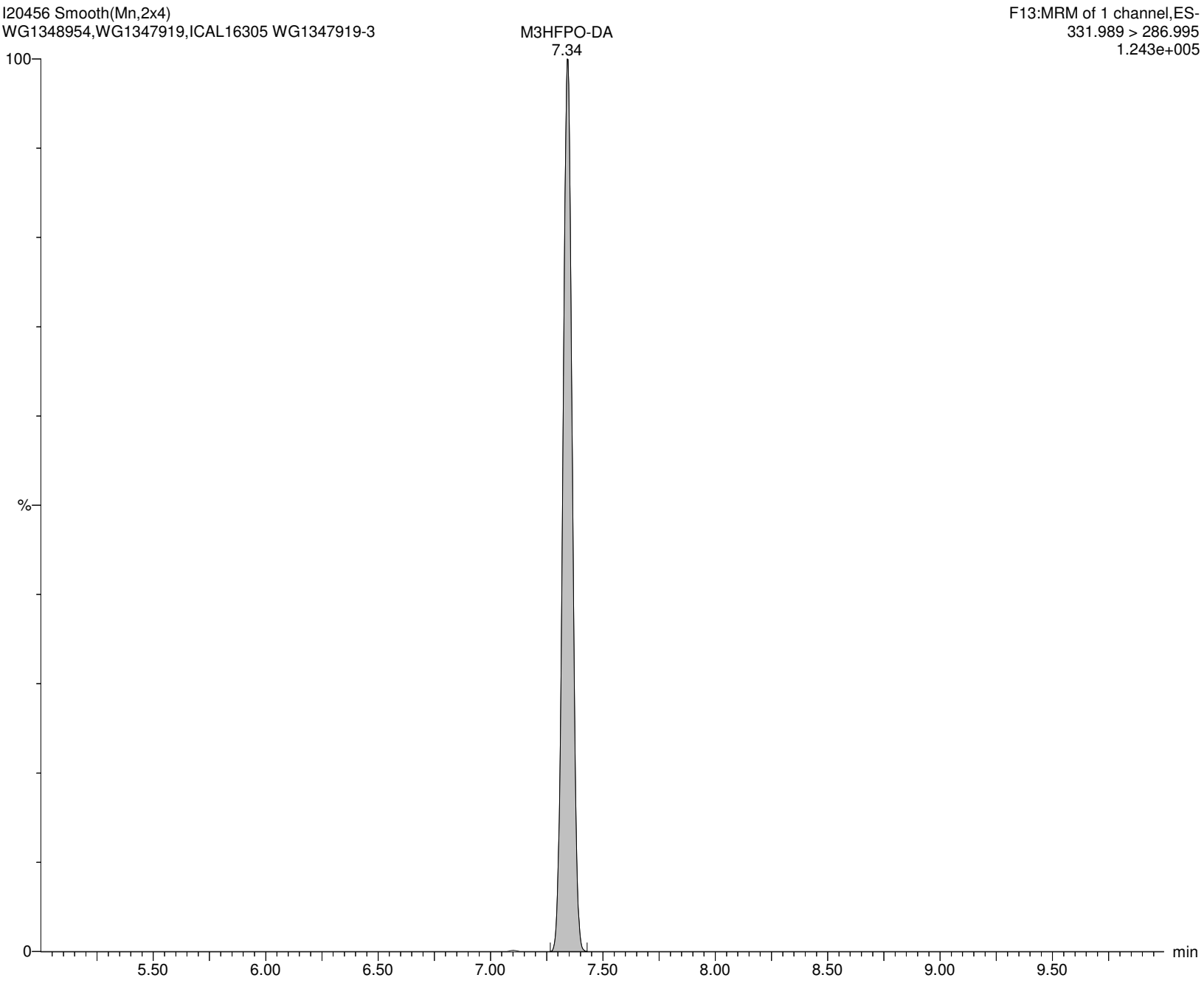



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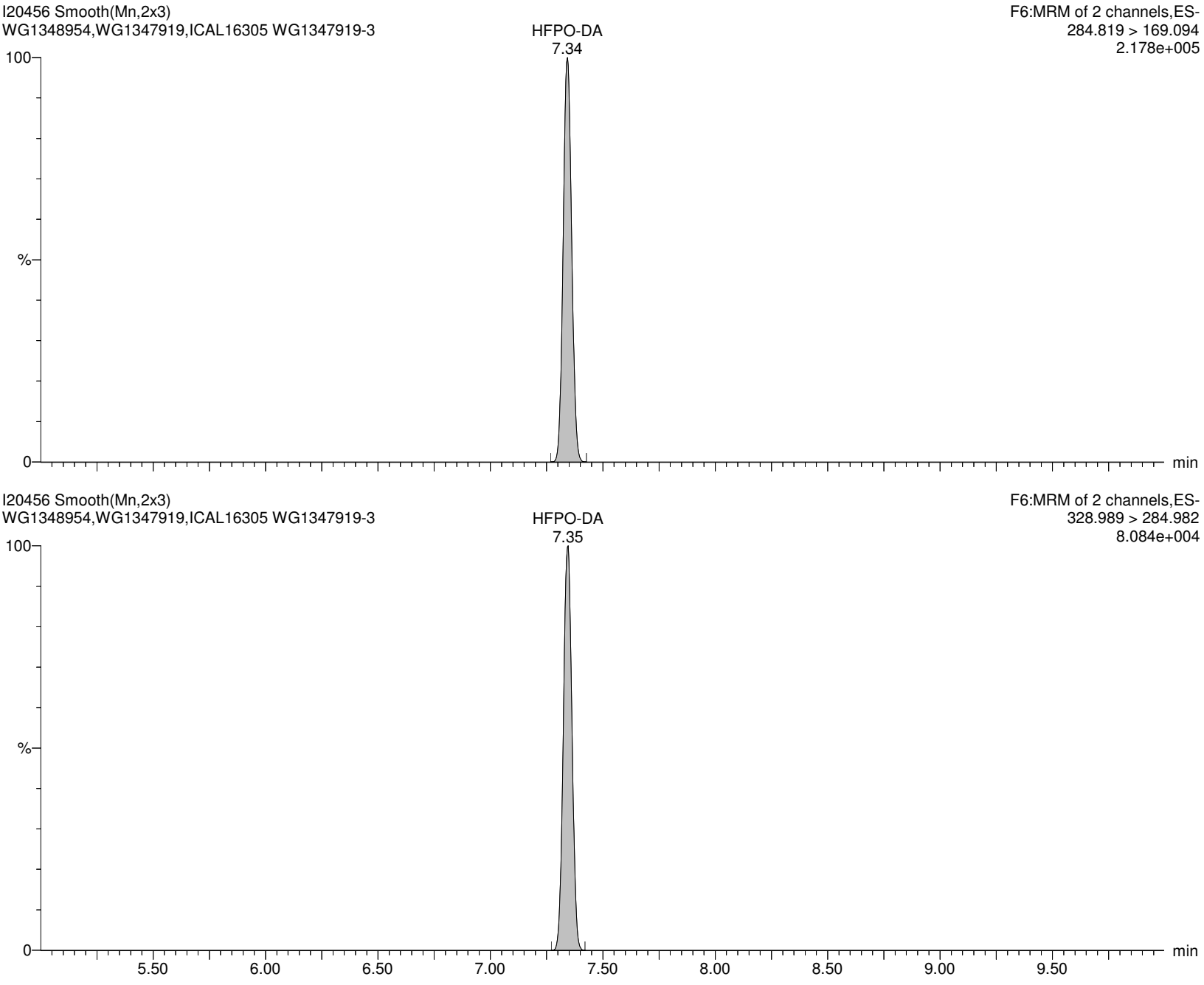
**Vial: 2:B,1**
**Instrument: XEVO-TQSmicro#QEB0050**
**Inlet Method Name: C:\MassLynx\Data\2020\200309_537ISO.PRO\ACQUDB\LCMS_537_ISO_B**
**Tune Method Name: C:\MassLynx\Data\2020\200309_537ISO.PRO\ACQUDB\181009_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\2020\200309_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**HFPO-DA**



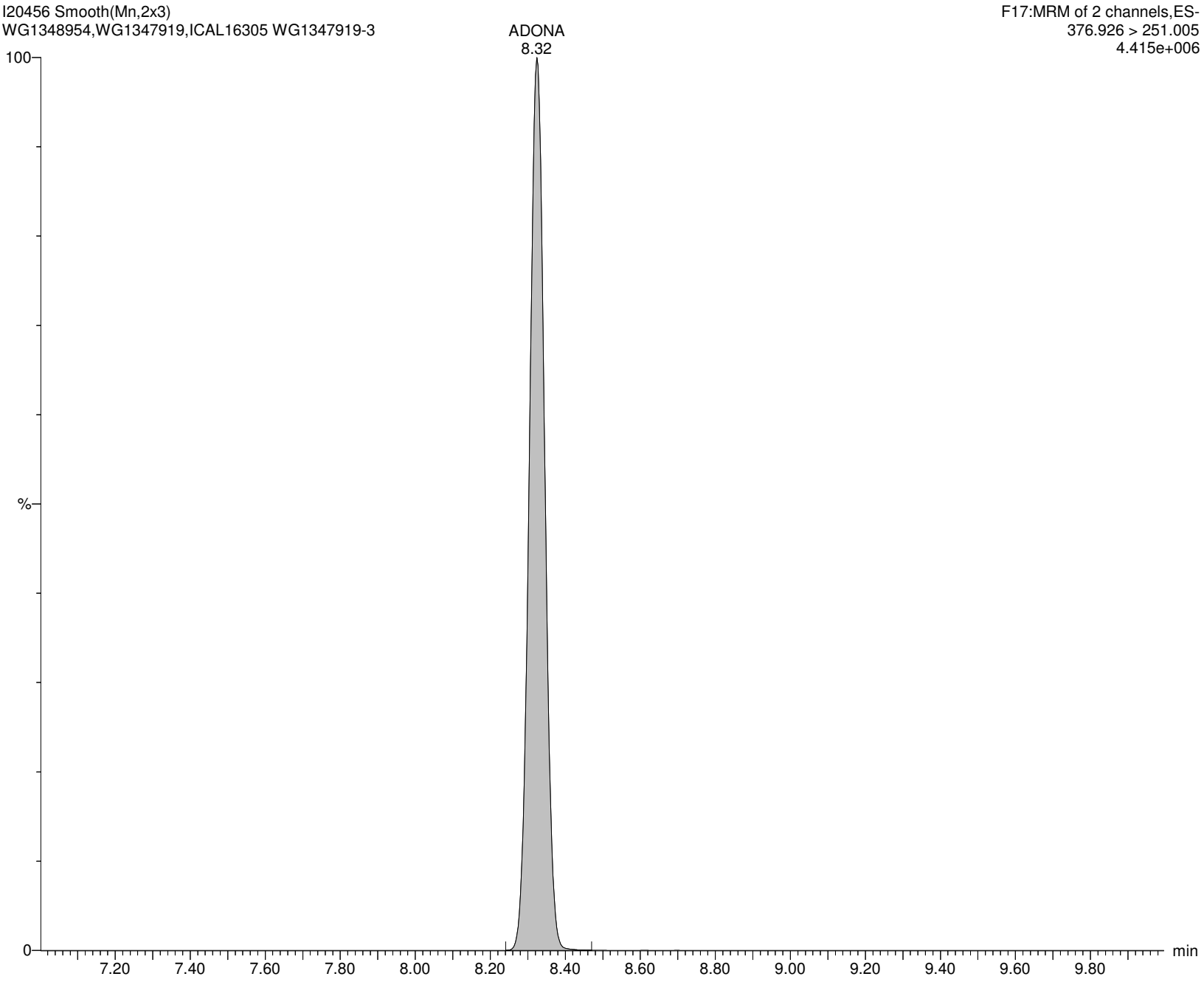


all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2020\200309_537ISO.PRO\Data\WG1348954D.qld
Last Altered: Wednesday, March 11, 2020 22:52:23 Eastern Daylight Time
Printed: Thursday, March 12, 2020 03:26:42 Eastern Daylight Time

**Name: I20456**
**ID: WG1347919-3**
**Date: 11-Mar-2020**
**Time: 03:10:43**
**Description: WG1348954,WG1347919,ICAL16305**
**User: LCMS02:RS**
**Vial: 2:B,1**
**Instrument: XEVO-TQSmicro#QEB0050**
**Inlet Method Name: C:\MassLynx\Data\2020\200309_537ISO.PRO\ACQUDB\LCMS_537_ISO_B**
**Tune Method Name: C:\MassLynx\Data\2020\200309_537ISO.PRO\ACQUDB\181009_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\2020\200309_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**ADONA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2020\200309_537ISO.PRO\Data\WG1348954D.qld
Last Altered: Wednesday, March 11, 2020 22:52:23 Eastern Daylight Time
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**Description: WG1348954,WG1347919,ICAL16305**
**User: LCMS02:RS**
**Vial: 2:B,1**
**Instrument: XEVO-TQSmicro#QEB0050**
**Inlet Method Name: C:\MassLynx\Data\2020\200309_537ISO.PRO\ACQUDB\LCMS_537_ISO_B**
**Tune Method Name: C:\MassLynx\Data\2020\200309_537ISO.PRO\ACQUDB\181009_TUNE.IPR**
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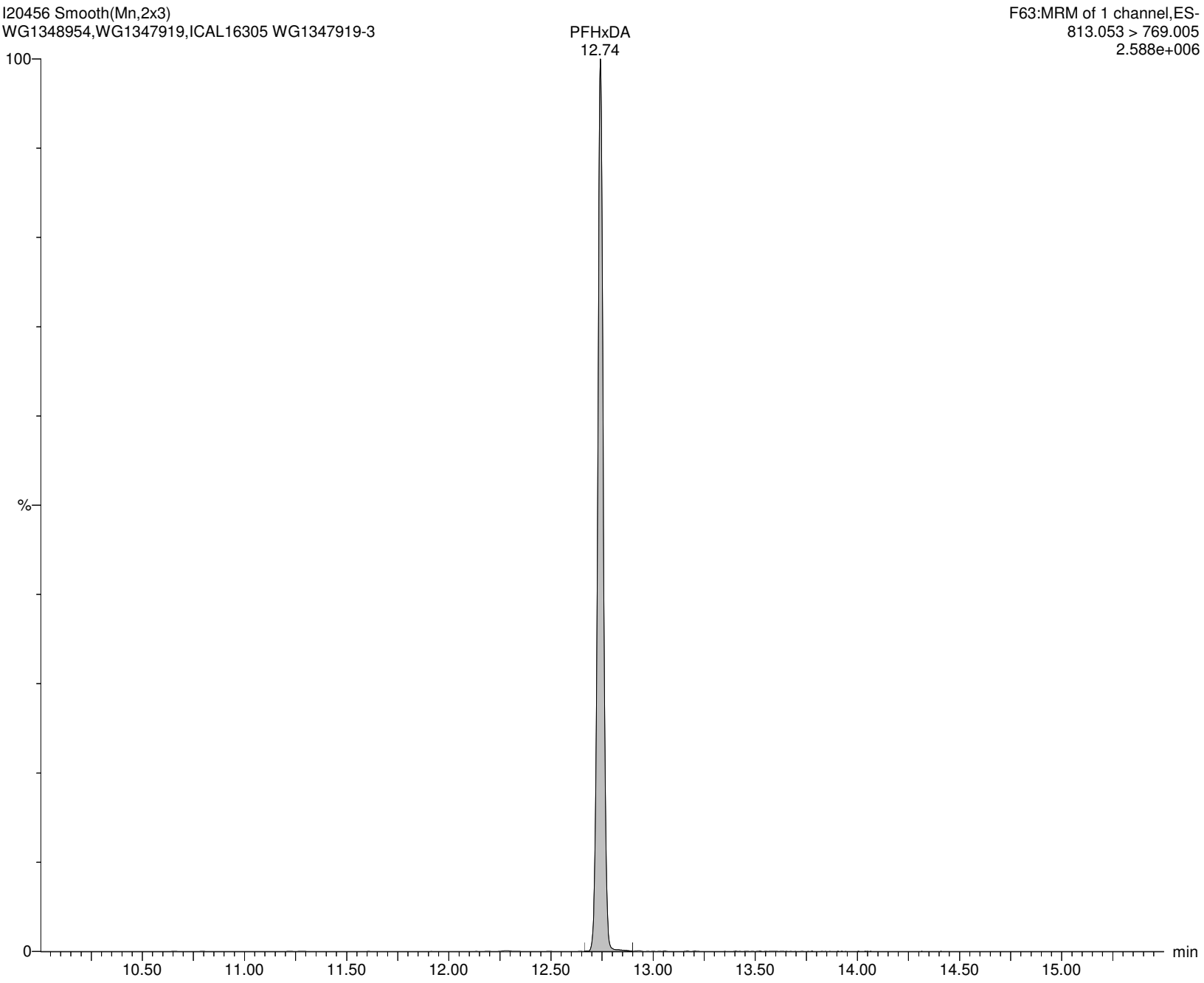
**PFHxDA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2020\200309_537ISO.PRO\Data\WG1348954D.qld
Last Altered: Wednesday, March 11, 2020 22:52:23 Eastern Daylight Time
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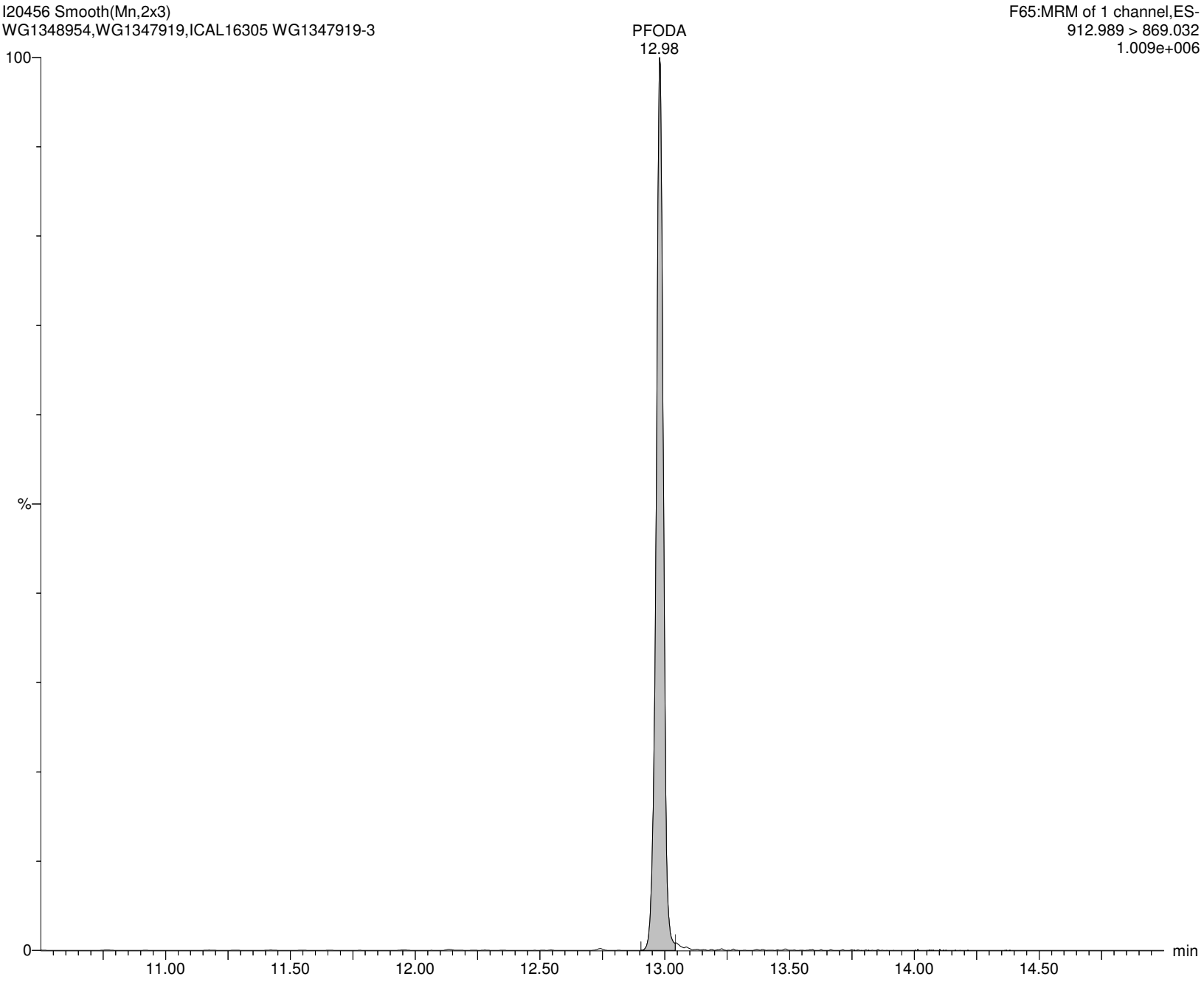
**Time: 03:10:43**
**Description: WG1348954,WG1347919,ICAL16305**
**User: LCMS02:RS**
**Vial: 2:B,1**
**Instrument: XEVO-TQSmicro#QEB0050**
**Inlet Method Name: C:\MassLynx\Data\2020\200309_537ISO.PRO\ACQUDB\LCMS_537_ISO_B**
**Tune Method Name: C:\MassLynx\Data\2020\200309_537ISO.PRO\ACQUDB\181009_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\2020\200309_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**PFODA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2020\200309_537ISO.PRO\Data\WG1348954D.qld
Last Altered: Wednesday, March 11, 2020 22:52:23 Eastern Daylight Time
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**Inlet Method Name: C:\MassLynx\Data\2020\200309_537ISO.PRO\ACQUDB\LCMS_537_ISO_B**
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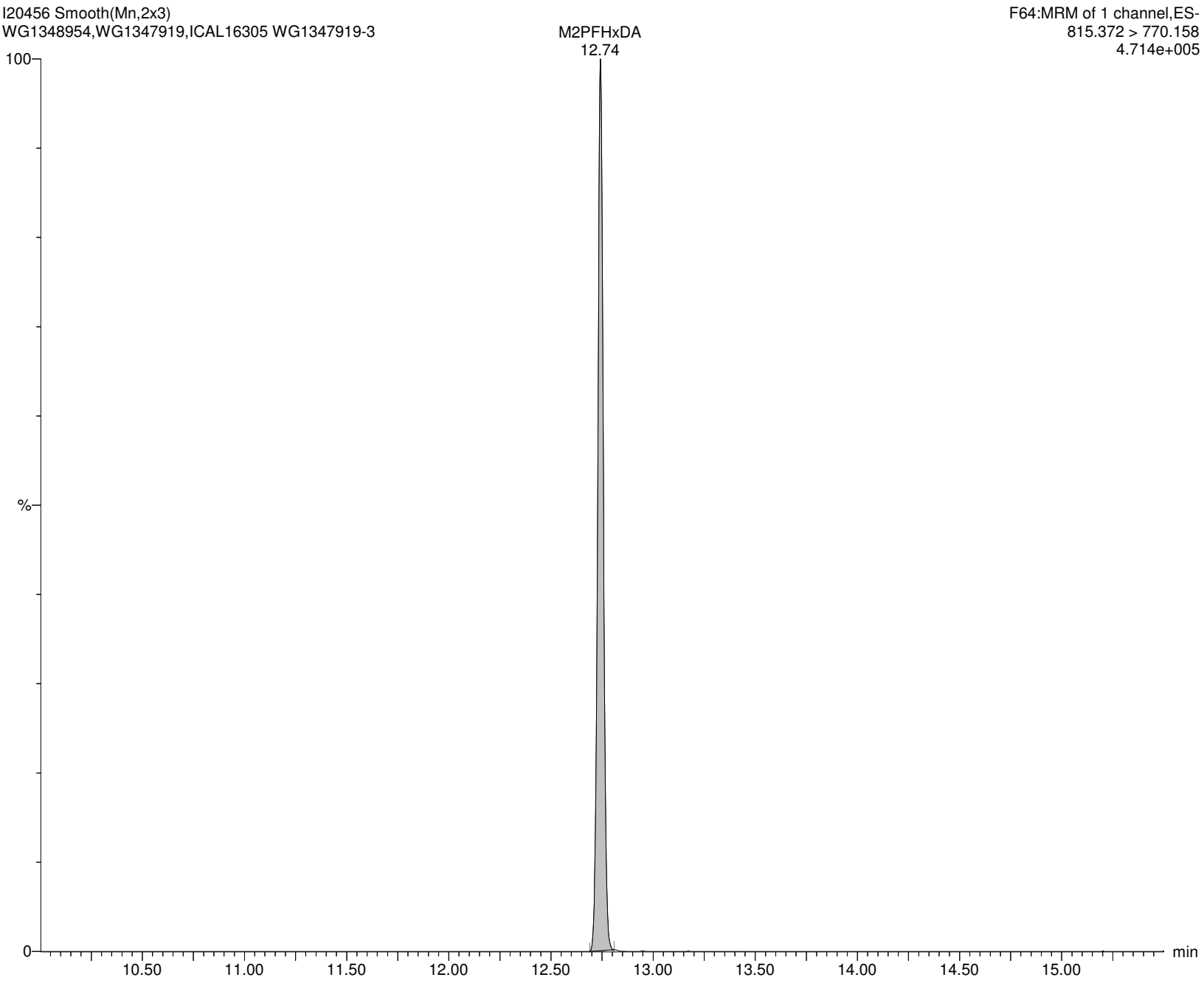
**M2PFHxDA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2020\200309_537ISO.PRO\Data\WG1348954D.qld
Last Altered: Wednesday, March 11, 2020 22:52:23 Eastern Daylight Time
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**Description: WG1348954,WG1347919,ICAL16305**
**User: LCMS02:RS**
**Vial: 2:B,1**
**Instrument: XEVO-TQSmicro#QEB0050**
**Inlet Method Name: C:\MassLynx\Data\2020\200309_537ISO.PRO\ACQUDB\LCMS_537_ISO_B**
**Tune Method Name: C:\MassLynx\Data\2020\200309_537ISO.PRO\ACQUDB\181009_TUNE.IPR**
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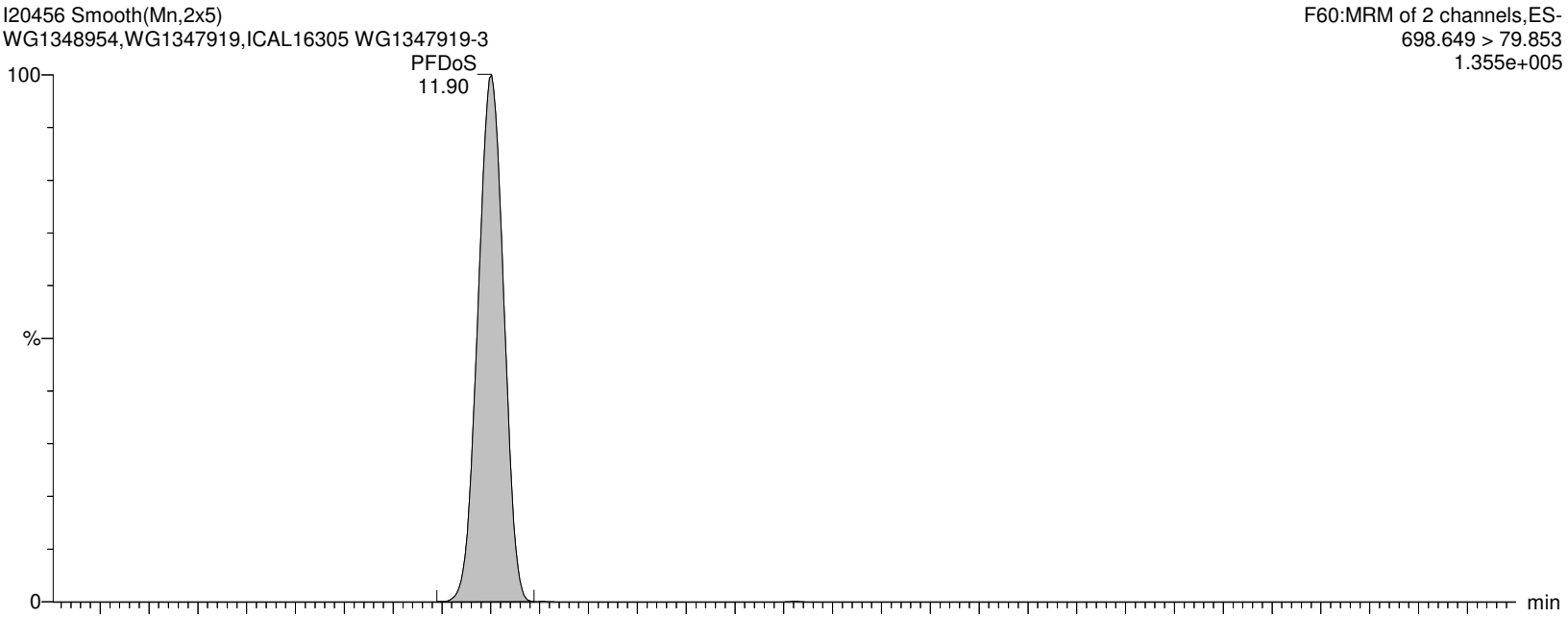
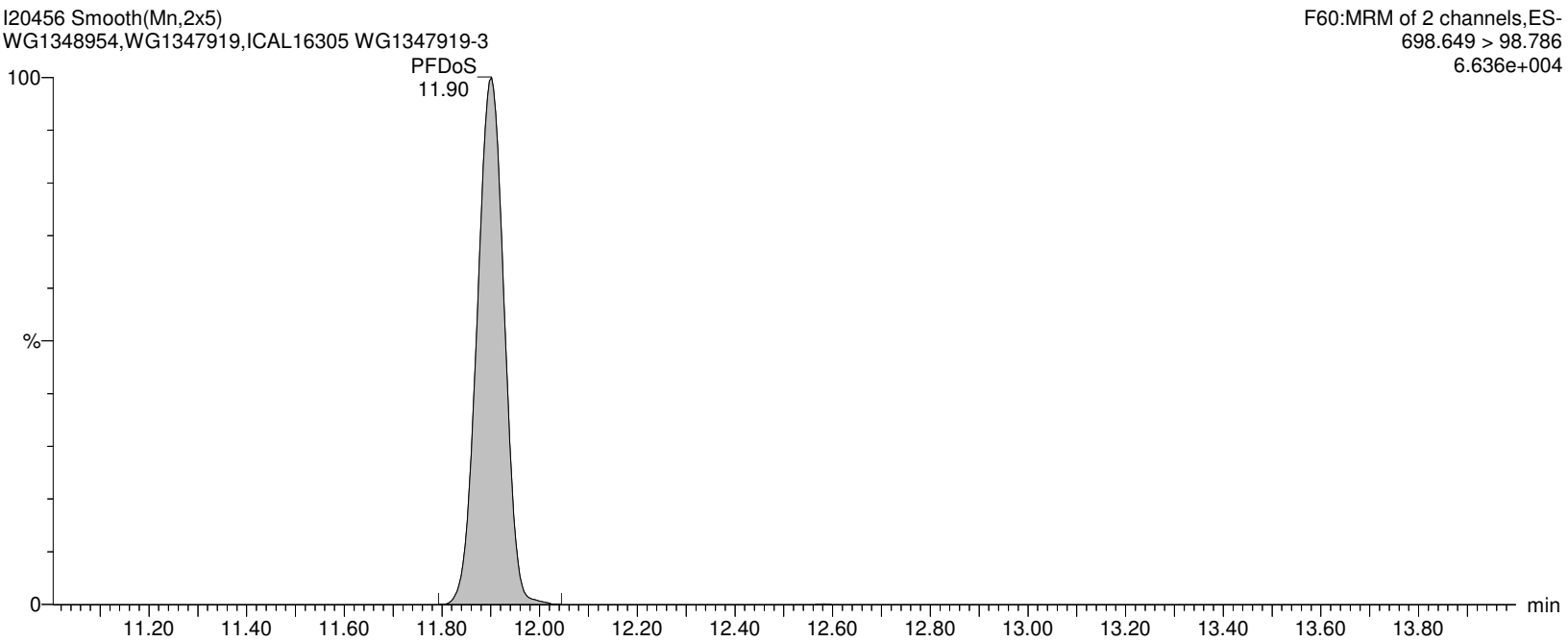
**PFDoS**





all concentration units in (ng/mL)

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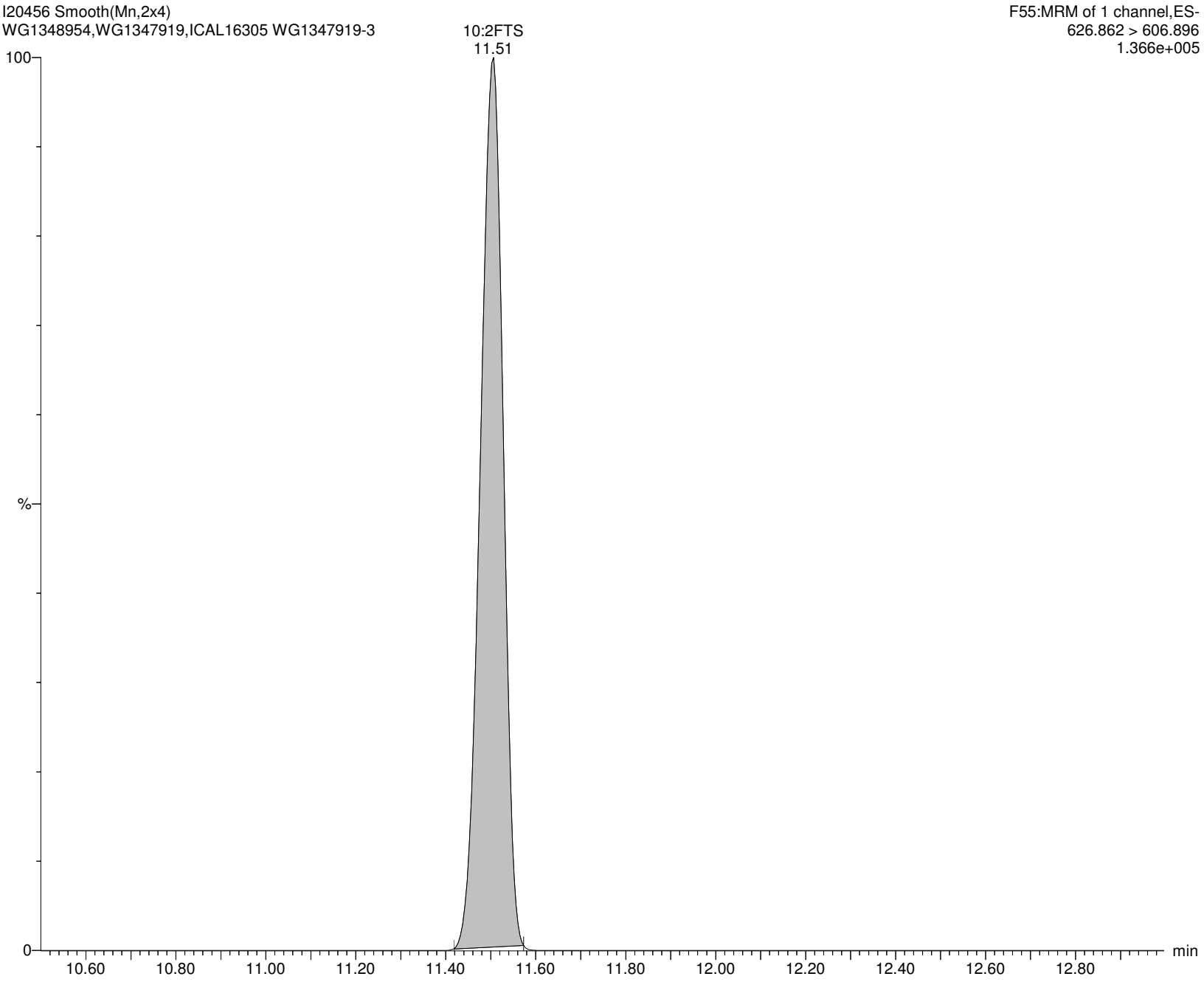
**User: LCMS02:RS**
**Vial: 2:B,1**
**Instrument: XEVO-TQSmicro#QEB0050**
**Inlet Method Name: C:\MassLynx\Data\2020\200309_537ISO.PRO\ACQUDB\LCMS_537_ISO_B**
**Tune Method Name: C:\MassLynx\Data\2020\200309_537ISO.PRO\ACQUDB\181009_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\2020\200309_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**10:2FTS**





all concentration units in (ng/mL)

Alpha Analytical Inc.
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Last Altered: Wednesday, March 11, 2020 22:52:23 Eastern Daylight Time
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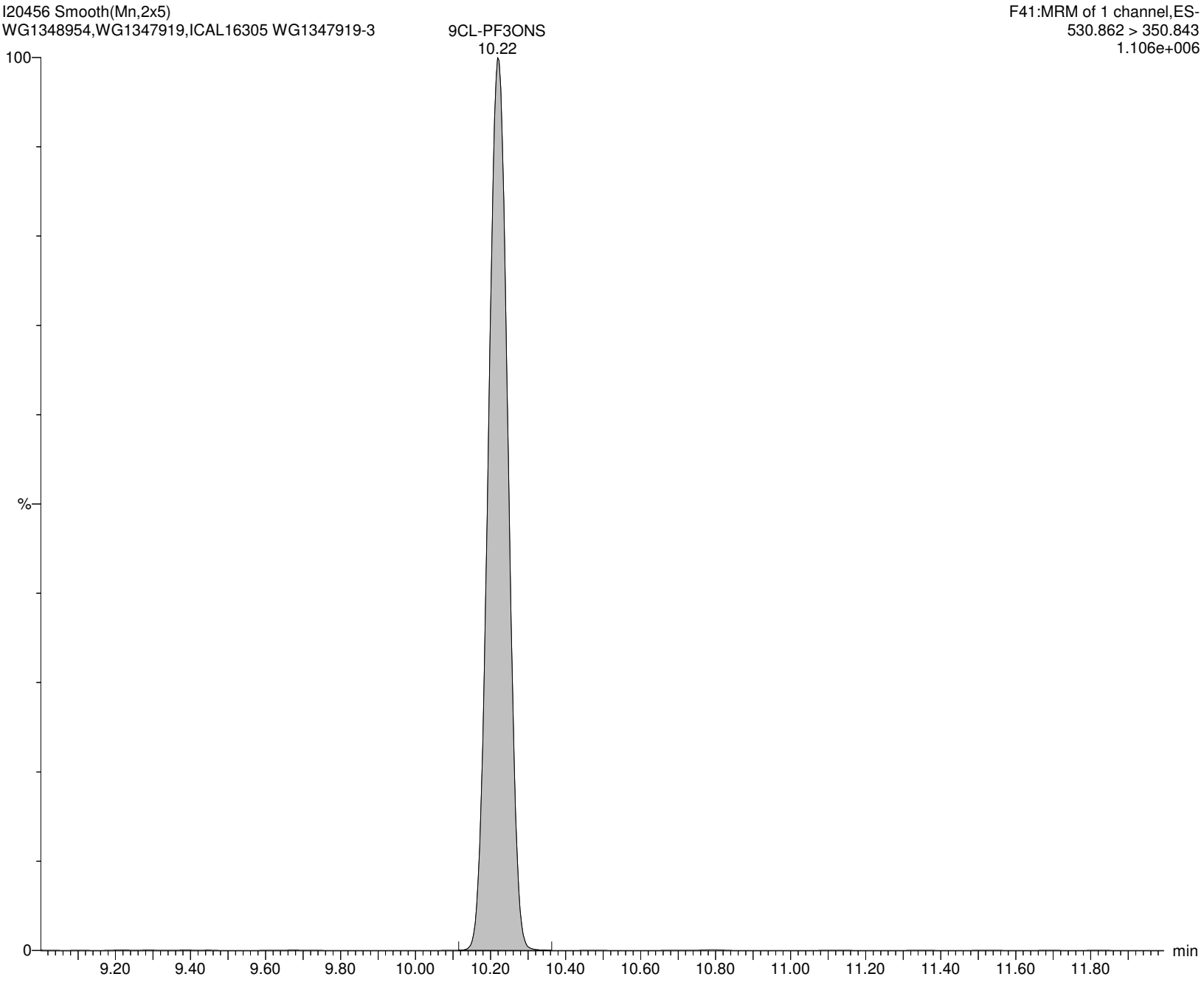
**Date: 11-Mar-2020**
**Time: 03:10:43**
**Description: WG1348954,WG1347919,ICAL16305**
**User: LCMS02:RS**
**Vial: 2:B,1**
**Instrument: XEVO-TQSmicro#QEB0050**
**Inlet Method Name: C:\MassLynx\Data\2020\200309_537ISO.PRO\ACQUDB\LCMS_537_ISO_B**
**Tune Method Name: C:\MassLynx\Data\2020\200309_537ISO.PRO\ACQUDB\181009_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\2020\200309_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**9CL-PF3ONS**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\2020\200309_537ISO.PRO\Data\WG1348954D.qld
Last Altered: Wednesday, March 11, 2020 22:52:23 Eastern Daylight Time
Printed: Thursday, March 12, 2020 03:26:42 Eastern Daylight Time

**Name: I20456**
**ID: WG1347919-3**
**Date: 11-Mar-2020**
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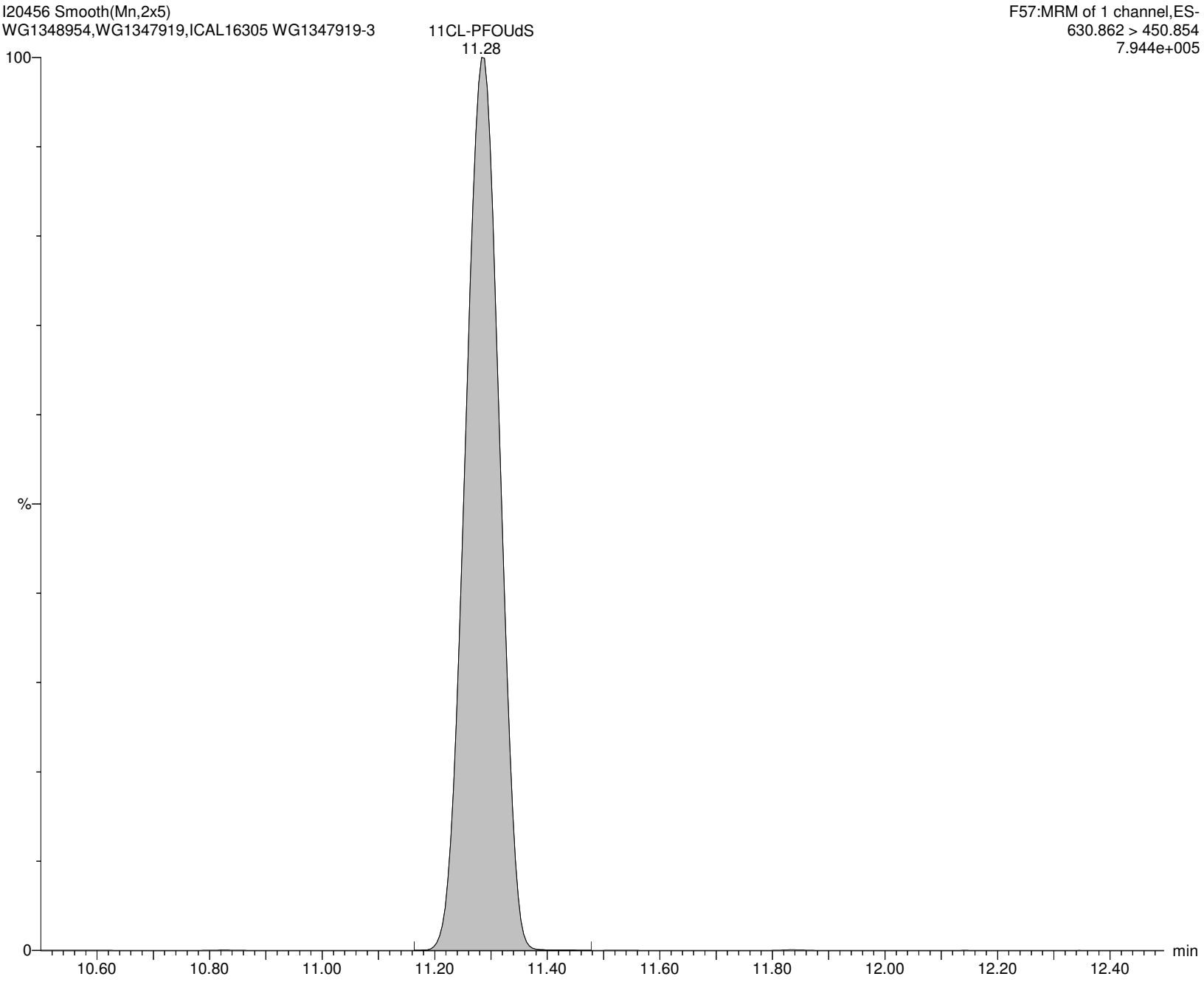
**Description: WG1348954,WG1347919,ICAL16305**
**User: LCMS02:RS**
**Vial: 2:B,1**
**Instrument: XEVO-TQSmicro#QEB0050**
**Inlet Method Name: C:\MassLynx\Data\2020\200309_537ISO.PRO\ACQUDB\LCMS_537_ISO_B**
**Tune Method Name: C:\MassLynx\Data\2020\200309_537ISO.PRO\ACQUDB\181009_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\2020\200309_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**11CL-PFOUdS**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200309_537ISO.PRO\Data\WG1348805A.qld
Last Altered: Tuesday, March 17, 2020 11:10:13 Eastern Daylight Time
Printed: Tuesday, March 17, 2020 11:22:13 Eastern Daylight Time

**Method: C:\MassLynx\Data\200309_537ISO.PRO\MethDB\537ISO_Q_200227 .mdb 28 Feb 2020 10:16:06**
**Calibration: C:\MassLynx\Data\200309_537ISO.PRO\CurveDB\200227_537ISO_ICAL.cdb 28 Feb 2020 10:12:40**

**ID: WG1347919-5**
**Name: I19080**
**Date: 09-Mar-2020**
**Time: 15:56:46**
**Description: WG1348805,WG1347919,ICAL16567**
**Instrument: XEVO-TQSmicro#QEA0276**
**User: LCMS01:JW**
**Inlet Method Name: C:\MassLynx\Data\200309_537ISO.PRO\ACQUDB\LCMS_537_ISO_MeOH**
**Tune Method Name: C:\MassLynx\Data\200309_537ISO.PRO\ACQUDB\190709_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\200309_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

| | Name | CAS | RT | Trace | Area | M Flag | Conc (ng/mL) | Ion Ratio | Ratio Flag | %Rec |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | PFBA | 375-22-4 | 2.19 | 212.926 > 169.111 | 8021 | M4 | 2.853 | | na | |
| 2 | M3PFBA | INT STD | 2.19 | 215.926 > 172.122 | 39483 | | 10.041 | | na | 100.4 |
| 3 | MPFBA | INT STD | 2.20 | 216.926 > 172.137 | 38847 | | 8.586 | | na | 85.9 |
| 4 | PFPeA | 2706-90-3 | 5.16 | 262.926 > 219.002 | 4700 | m4 | 1.462 | | na | |
| 5 | M5PFPEA | INT STD | 5.16 | 267.989 > 223.081 | 46211 | | 7.698 | | na | 77.0 |
| 6 | PFBS | 375-73-5 | 5.83 | 298.926 > 79.923 | 893 | m4 | 1.073 | 2.17 | NO | |
| 7 | M3PFBS | INT STD | 5.82 | 301.989 > 80.254 | 9228 | | 6.634 | | na | 66.3 |
| 8 | 4:2FTS | 757124-72-4 | | 326.926 > 306.957 | | | ND | | YES | |
| 9 | M2-4:2FTS | INT STD | 7.00 | 329.117 > 309.079 | 9807 | | 13.532 | | na | 135.3 |
| 10 | PFHxA | 307-24-4 | 7.09 | 312.989 > 269.028 | 10031 | | 2.252 | 17.47 | NO | |
| 11 | M5PFHxA | INT STD | 7.08 | 317.989 > 273.045 | 53739 | | 6.114 | | na | 61.1 |
| 12 | PFPeS | 2706-91-4 | 7.40 | 348.926 > 80.251 | 449 | | 0.485 | 2.19 | NO | |
| 13 | PFHpA | 375-85-9 | 8.36 | 362.926 > 319.014 | 10116 | m4 | 1.472 | 6.14 | NO | |
| 14 | M4PFHpA | INT STD | 8.36 | 366.926 > 321.979 | 74946 | | 7.349 | | na | 73.5 |
| 15 | br-PFHxS | 355-46-4 | 8.28 | 398.904 > 79.915 | 264 | M2 | 0.368 | | YES | |
| 16 | L-PFHxS | 355-46-4 | 8.52 | 398.904 > 79.915 | 1117 | M4 | 1.549 | 2.33 | NO | |
| 17 | PFHxS | 355-46-4 | | 398.904 > 79.915 | 1381 | | 1.917 | | na | |
| 18 | M3PFHxS | INT STD | 8.52 | 401.926 > 80.317 | 9755 | | 7.828 | | na | 78.3 |
| 19 | br-PFOA | 335-67-1 | 9.08 | 412.989 > 368.9 | 11092 | M5 | 1.505 | 55.37 | NO | |
| 20 | L-PFOA | 335-67-1 | 9.30 | 412.989 > 368.9 | 46643 | | 6.335 | 9.43 | NO | |
| 21 | M2PFOA | INT STD | 9.30 | 415.032 > 369.968 | 107366 | | 12.762 | | na | 127.6 |
| 22 | PFOA | 335-67-1 | | 412.989 > 368.9 | 57736 | | 7.840 | | na | |
| 23 | M8PFOA | INT STD | 9.30 | 420.989 > 375.979 | 85651 | | 8.366 | | na | 83.7 |
| 24 | 6:2FTS | 27619-97-2 | | 426.989 > 406.921 | | | ND | | YES | |
| 25 | M2-6:2FTS | INT STD | 9.26 | 428.989 > 408.917 | 9775 | | 21.677 | | na | 216.8 |
| 26 | PFHpS | 375-92-8 | 9.38 | 448.926 > 80.257 | 75 | M2 | 0.158 | 0.41 | YES | |
| 27 | PFNA | 375-95-1 | 10.05 | 462.989 > 418.931 | 1872 | | 0.266 | 11.87 | YES | |
| 28 | M9PFNA | INT STD | 10.05 | 472.053 > 426.947 | 94727 | | 9.464 | | na | 94.6 |
| 29 | br-PFOS | 1763-23-1 | 9.85 | 498.968 > 79.918 | 3661 | M5 | 4.961 | 4.77 | NO | |
| 30 | L-PFOS | 1763-23-1 | 10.10 | 498.968 > 79.918 | 2994 | | 5.808 | 1.21 | NO | |
| 31 | PFOS | 1763-23-1 | | 498.968 > 79.918 | 6654 | | 10.769 | | na | |
| 32 | M4PFOS | INT STD | 10.10 | 503.032 > 80.306 | 10843 | | 12.765 | | na | 127.7 |
| 33 | M8PFOS | INT STD | 10.10 | 507.053 > 80.294 | 9539 | | 7.575 | | na | 75.8 |
| 34 | PFDA | 335-76-2 | 10.68 | 513.053 > 468.906 | 878 | | 0.135 | 5.18 | NO | |
| 35 | M2PFDA | INT STD | 10.67 | 515.053 > 469.934 | 101287 | | 15.312 | | na | 153.1 |
| 36 | M6PFDA | INT STD | 10.67 | 519.053 > 473.931 | 84920 | | 7.620 | | na | 76.2 |
| 37 | 8:2FTS | 39108-34-4 | 10.67 | 527.032 > 507.079 | 5 | M2 | 0.020 | | YES | |
| 38 | M2-8:2FTS | INT STD | 10.66 | 529.053 > 508.945 | 3553 | | 13.029 | | na | 130.3 |
| 39 | PFNS | 68259-12-1 | | 548.989 > 80.249 | | | ND | | YES | |


all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200309_537ISO.PRO\Data\WG1348805A.qld
Last Altered: Tuesday, March 17, 2020 11:10:13 Eastern Daylight Time
Printed: Tuesday, March 17, 2020 11:22:13 Eastern Daylight Time

**ID: WG1347919-5**
**Name: I19080**
**Date: 09-Mar-2020**
**Time: 15:56:46**
**Description: WG1348805,WG1347919,ICAL16567**
**Instrument: XEVO-TQSmicro#QEA0276**
**User: LCMS01:JW**
**Inlet Method Name: C:\MassLynx\Data\200309_537ISO.PRO\ACQUDB\LCMS_537_ISO_MeOH**
**Tune Method Name: C:\MassLynx\Data\200309_537ISO.PRO\ACQUDB\190709_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\200309_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

| | Name | CAS | RT | Trace | Area | M Flag | Conc (ng/mL) | Ion Ratio | Ratio Flag | %Rec |
|---|---|---|---|---|---|---|---|---|---|---|
| 40 | d3-NMeFOSAA | INT STD | 11.05 | 573.096 > 418.987 | 14201 | | 9.619 | | na | 96.2 |
| 41 | NMeFOSAA | 2355-31-9 | 10.81 | 570.053 > 418.917 | 87 | m5 | 0.103 | 2.82 | NO | |
| 42 | PFUnA | 2058-94-8 | 11.21 | 562.989 > 518.903 | 330 | | 0.043 | | YES | |
| 43 | M7-PFUDA | INT STD | 11.21 | 570.053 > 524.923 | 82385 | | 8.413 | | na | 84.1 |
| 44 | PFDS | 335-77-3 | | 598.926 > 80.314 | | | ND | | YES | |
| 45 | FOSA | 754-91-6 | 11.12 | 497.989 > 78.245 | 171 | | 0.197 | | YES | |
| 46 | M8FOSA | INT STD | 11.11 | 506.053 > 78.286 | 10534 | | 2.359 | | na | 23.6 |
| 47 | d5-NEtFOSAA | INT STD | 11.34 | 589.117 > 418.929 | 9702 | | 9.012 | | na | 90.1 |
| 48 | NEtFOSAA | 2991-50-6 | 11.35 | 583.989 > 418.927 | 119 | m5 | 0.143 | | YES | |
| 49 | PFDoA | 307-55-1 | 11.67 | 612.989 > 568.967 | 41 | M2 | 0.006 | | YES | |
| 50 | MPFDOA | INT STD | 11.68 | 614.989 > 569.92 | 76766 | | 7.292 | | na | 72.9 |
| 51 | PFTrDA | 72629-94-8 | | 663.053 > 618.969 | | | ND | | YES | |
| 52 | PFTA | 376-06-7 | | 713.053 > 668.976 | | | ND | | YES | |
| 53 | M2PFTEDA | INT STD | 12.44 | 715.053 > 669.945 | 80637 | | 6.796 | | na | 68.0 |


all concentration units in (ng/mL)

Alpha Analytical Inc.
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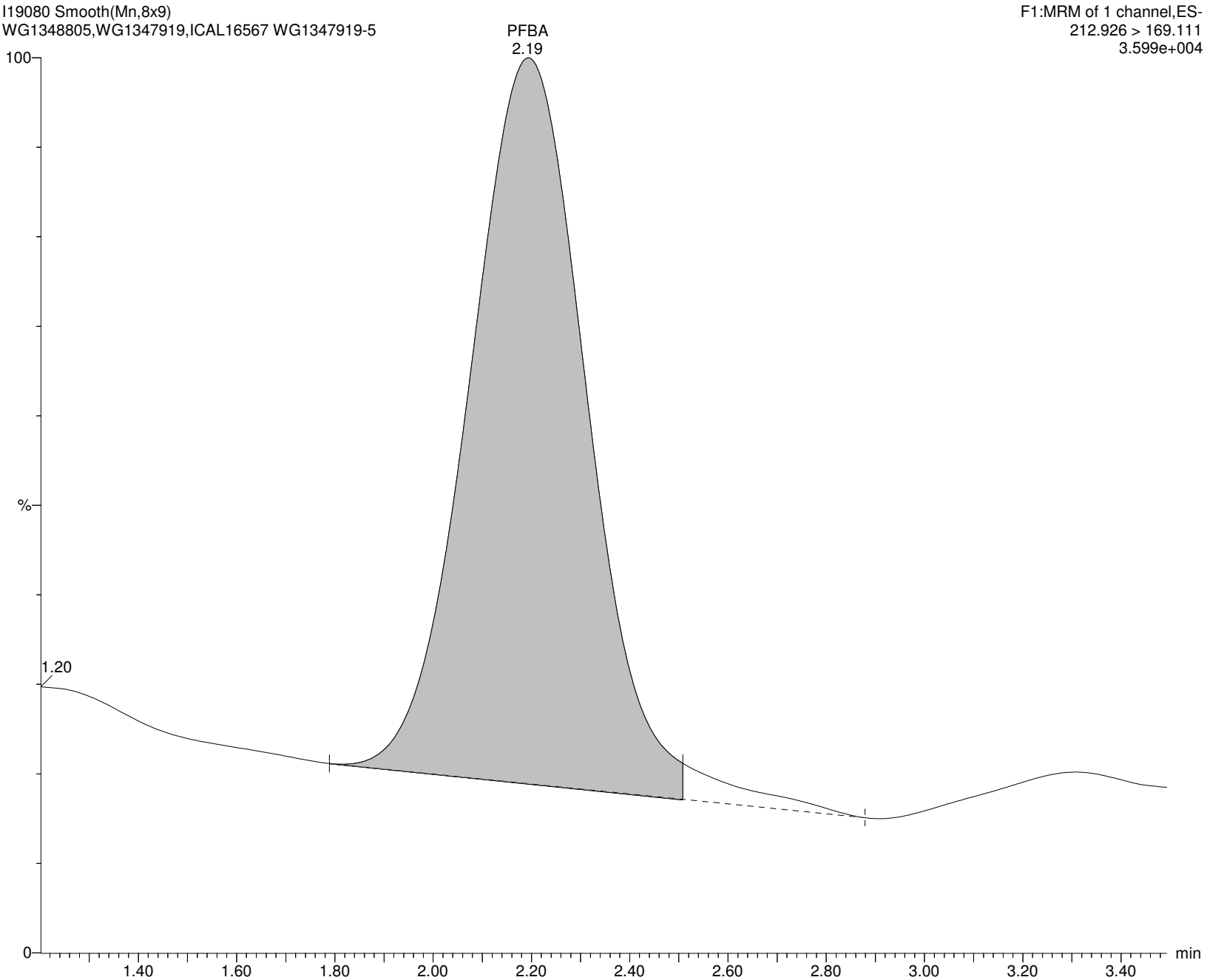
Last Altered: Tuesday, March 17, 2020 11:10:13 Eastern Daylight Time
Printed: Tuesday, March 17, 2020 11:22:13 Eastern Daylight Time

**Method: C:\MassLynx\Data\200309_537ISO.PRO\MethDB\537ISO_Q_200227 .mdb 28 Feb 2020 10:16:06**
**Calibration: C:\MassLynx\Data\200309_537ISO.PRO\CurveDB\200227_537ISO_ICAL.cdb 28 Feb 2020 10:12:40**

**Name: I19080**
**ID: WG1347919-5**
**Date: 09-Mar-2020**
**Time: 15:56:46**
**Description: WG1348805,WG1347919,ICAL16567**
**User: LCMS01:JW**
**Vial: 1:C,3**
**Instrument: XEVO-TQSmicro#QEA0276**
**Inlet Method Name: C:\MassLynx\Data\200309_537ISO.PRO\ACQUDB\LCMS_537_ISO_MeOH**
**Tune Method Name: C:\MassLynx\Data\200309_537ISO.PRO\ACQUDB\190709_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\200309_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**PFBA**





all concentration units in (ng/mL)

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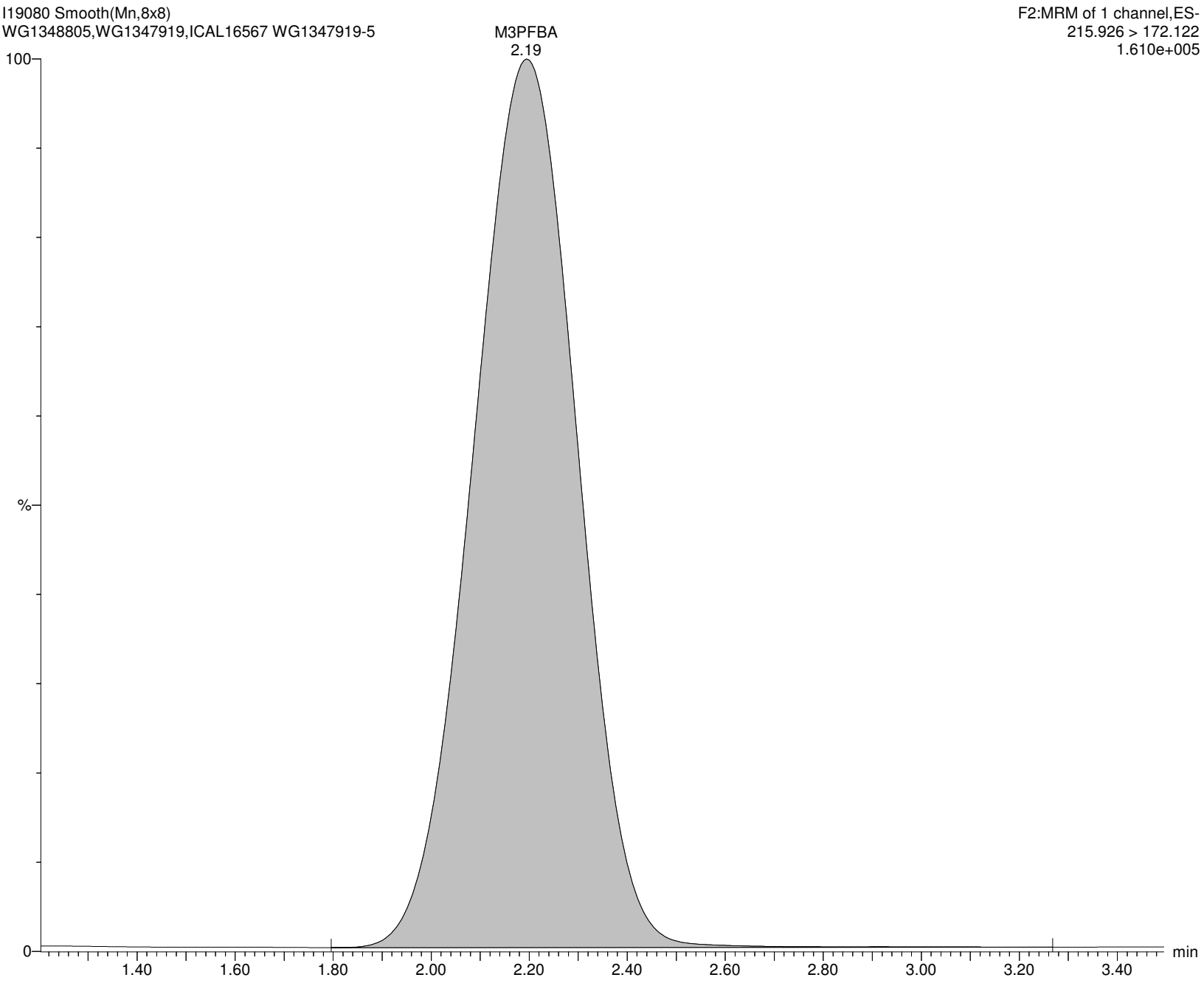
**MS Method Name: C:\MassLynx\Data\200309_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**M3PFBA**



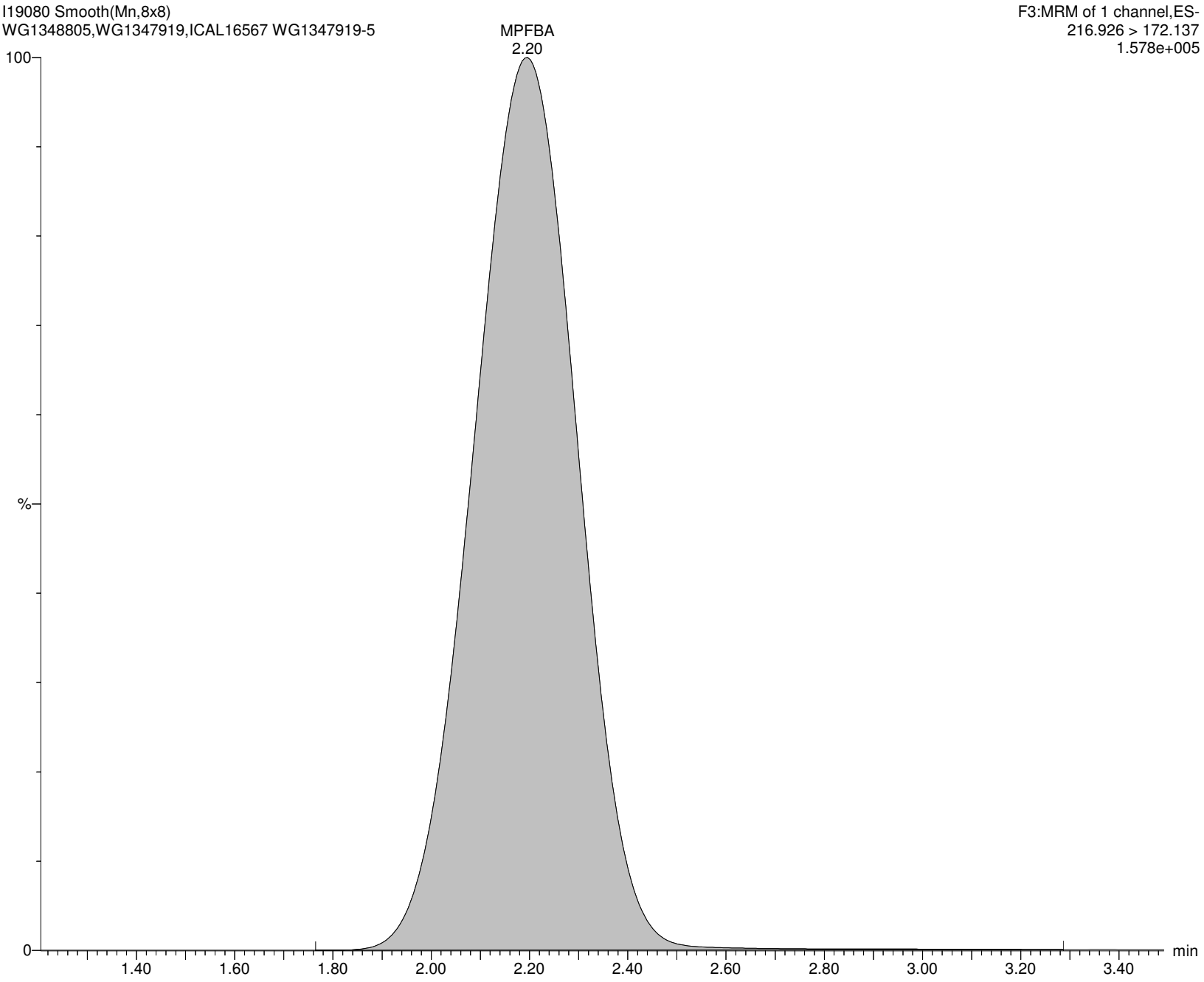


all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200309_537ISO.PRO\Data\WG1348805A.qld
Last Altered: Tuesday, March 17, 2020 11:10:13 Eastern Daylight Time
Printed: Tuesday, March 17, 2020 11:22:13 Eastern Daylight Time

**Name: I19080**
**ID: WG1347919-5**
**Date: 09-Mar-2020**
**Time: 15:56:46**
**Description: WG1348805,WG1347919,ICAL16567**
**User: LCMS01:JW**
**Vial: 1:C,3**
**Instrument: XEVO-TQSmicro#QEA0276**
**Inlet Method Name: C:\MassLynx\Data\200309_537ISO.PRO\ACQUDB\LCMS_537_ISO_MeOH**
**Tune Method Name: C:\MassLynx\Data\200309_537ISO.PRO\ACQUDB\190709_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\200309_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**MPFBA**





all concentration units in (ng/mL)

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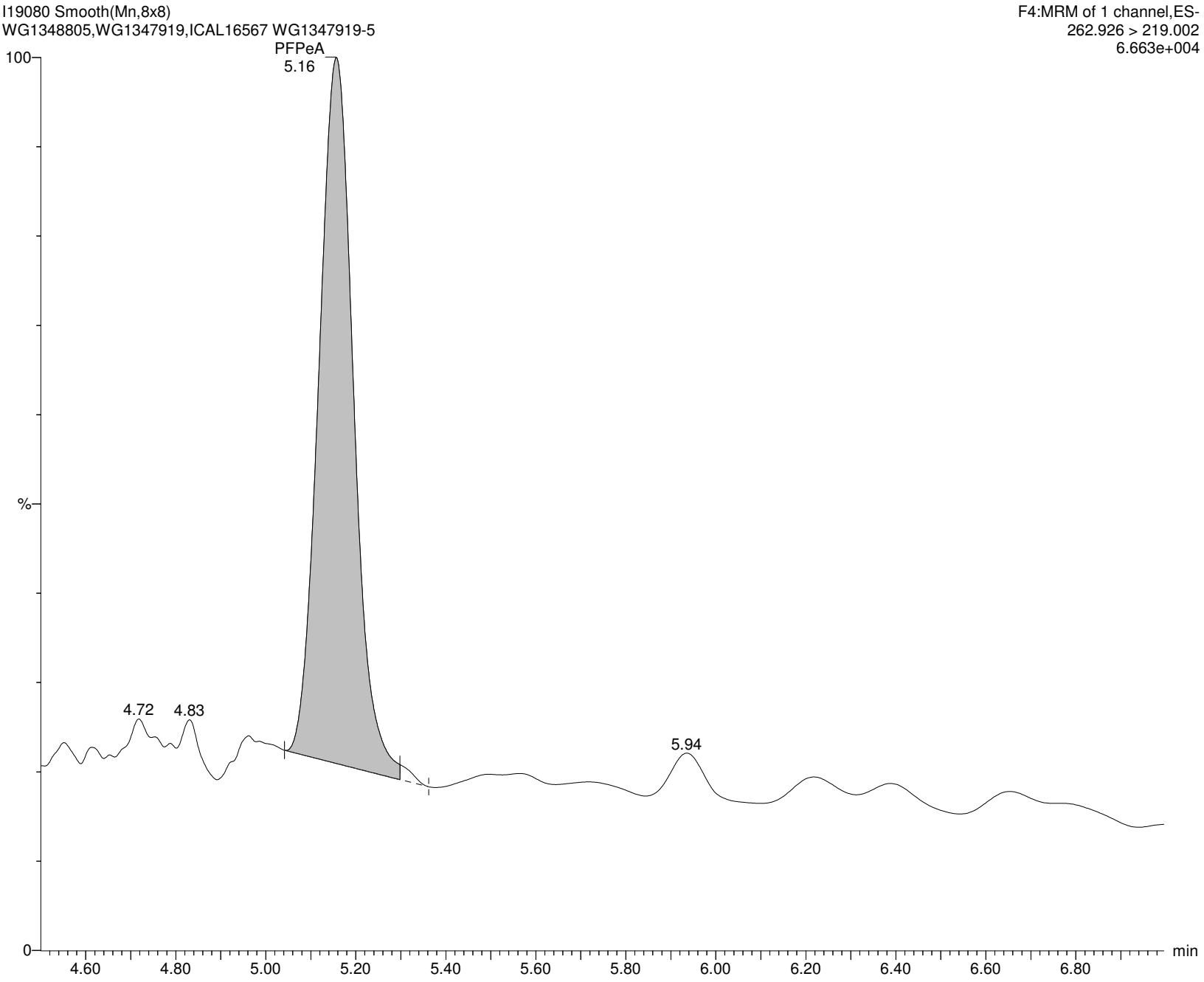



all concentration units in (ng/mL)

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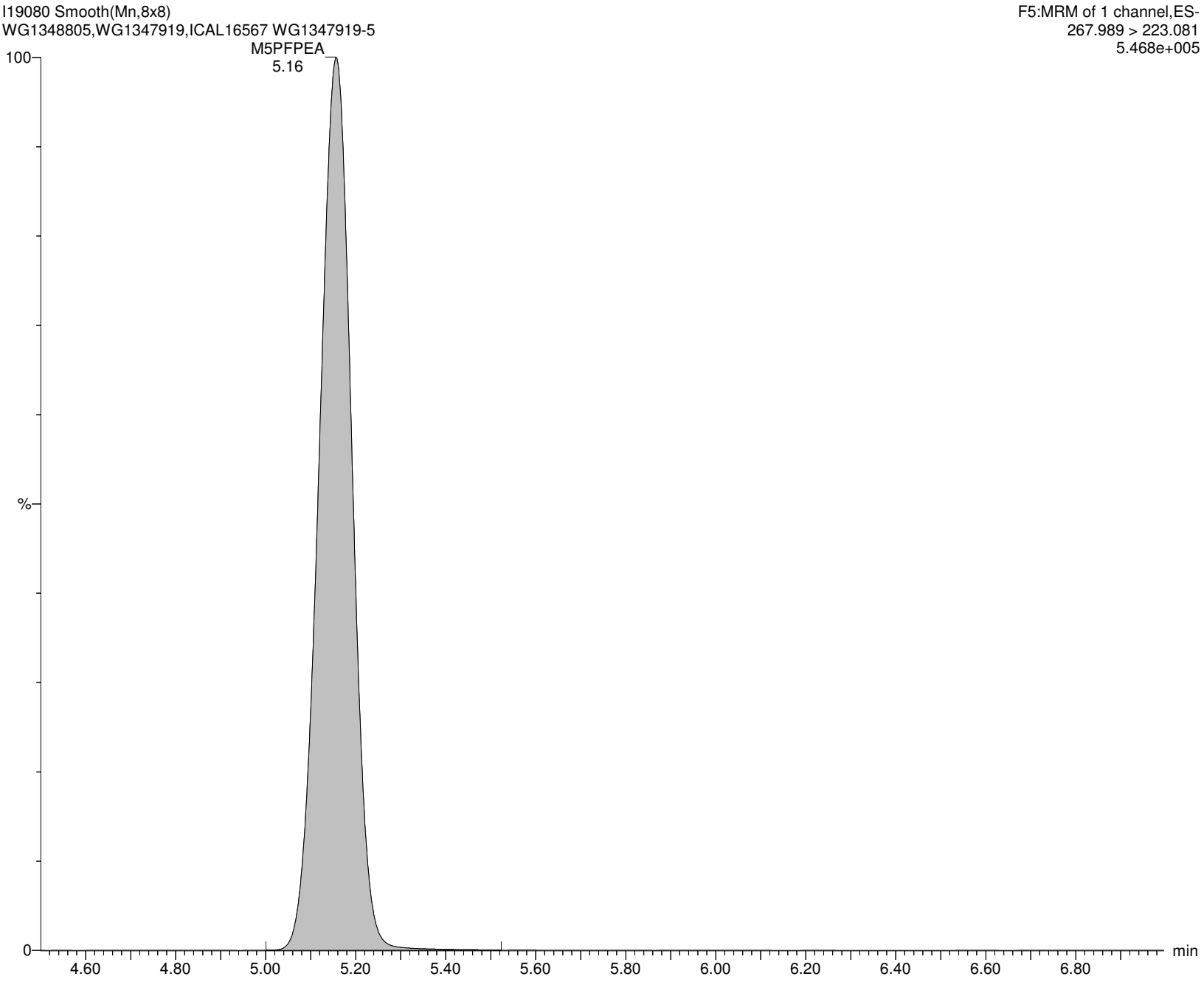
**M5PFPEA**





all concentration units in (ng/mL)

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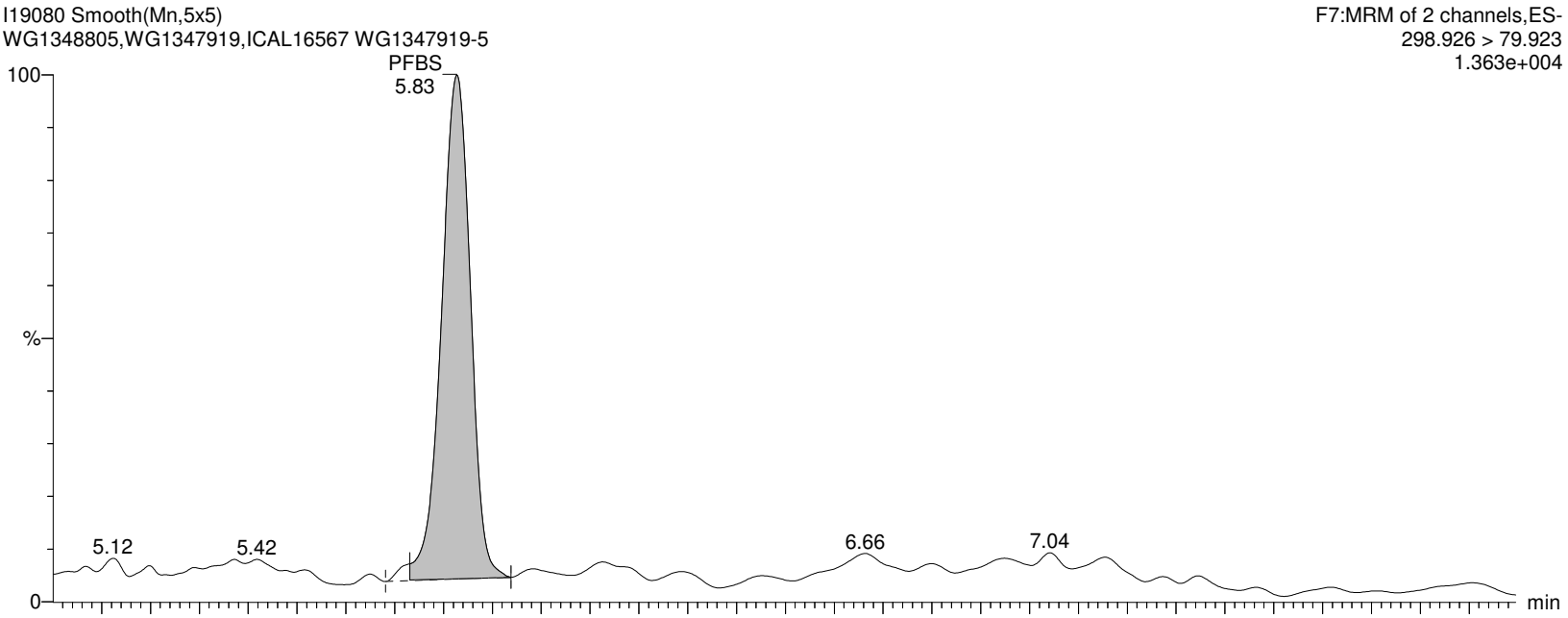
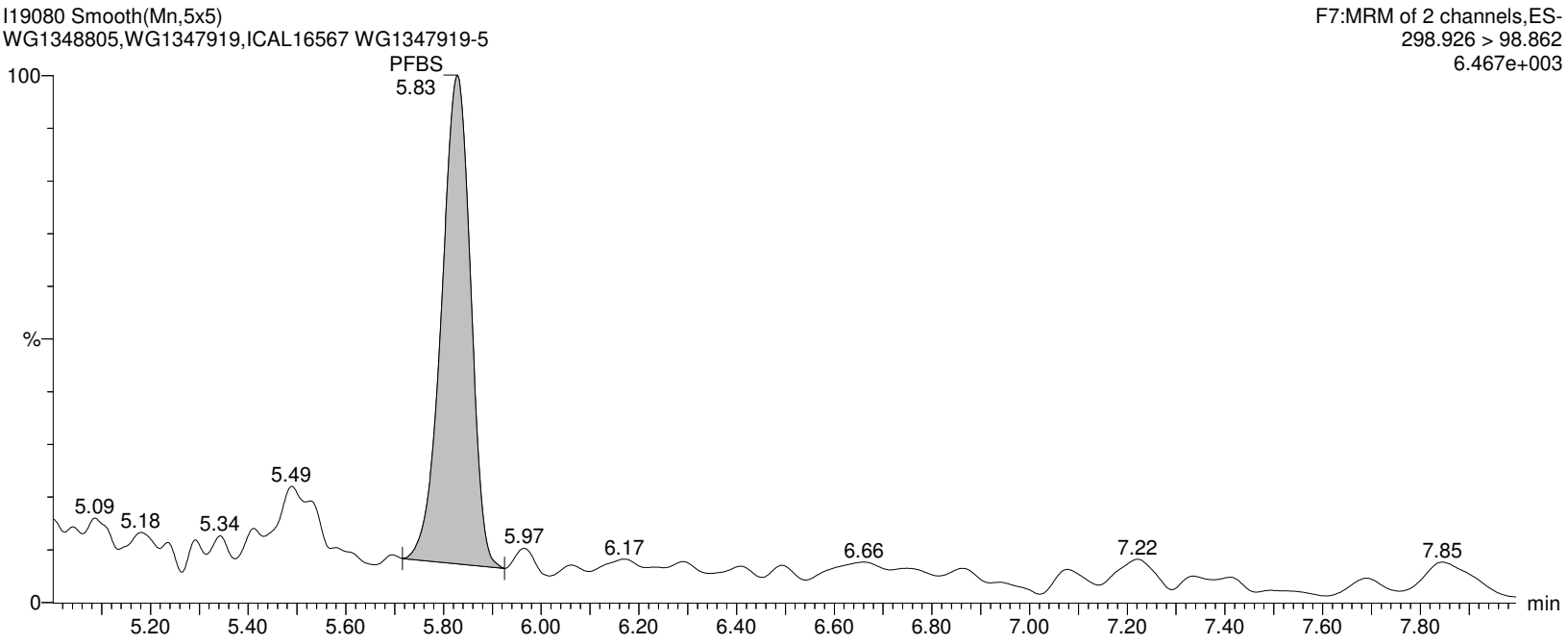
**PFBS**





all concentration units in (ng/mL)

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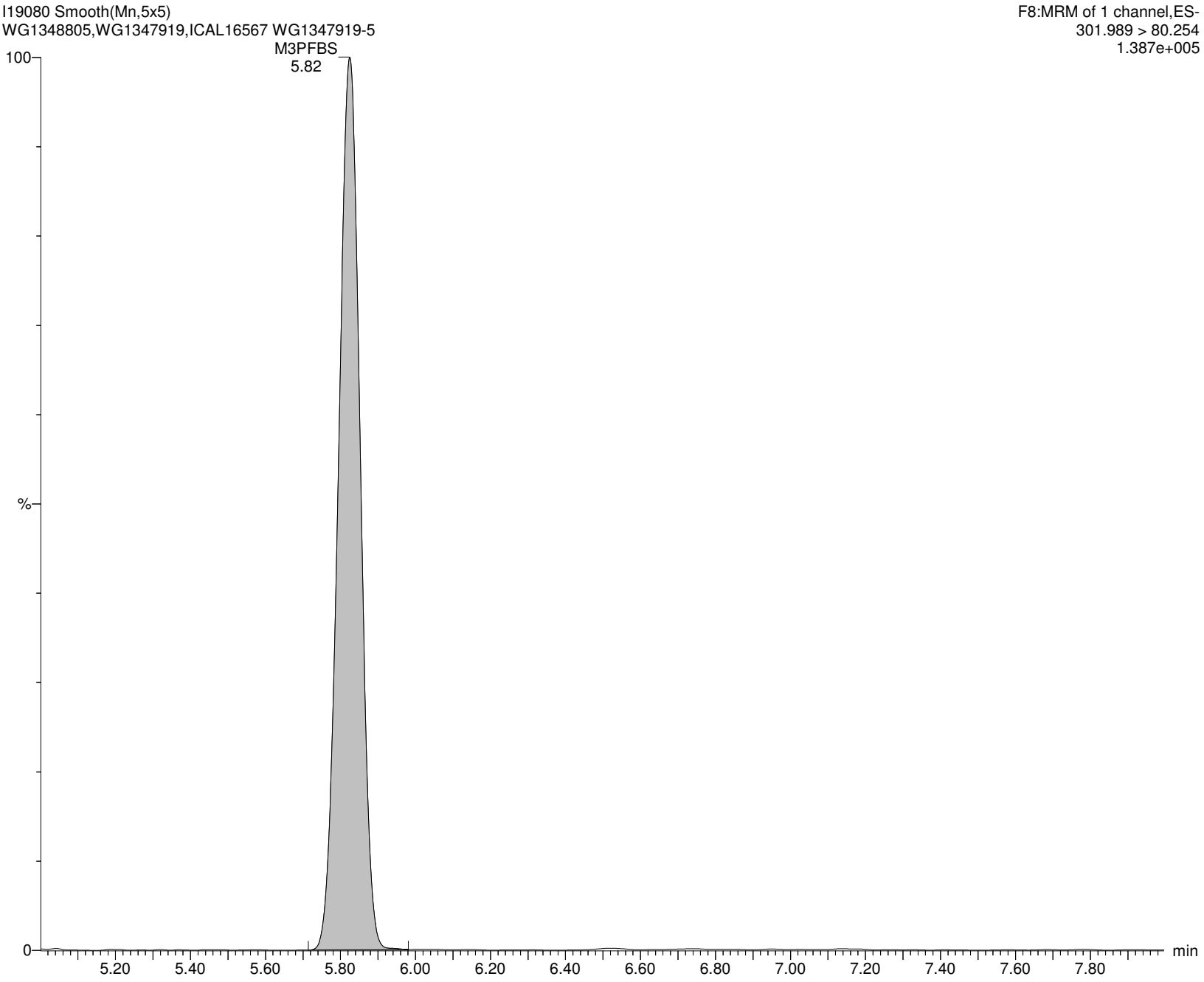
**M3PFBS**





all concentration units in (ng/mL)

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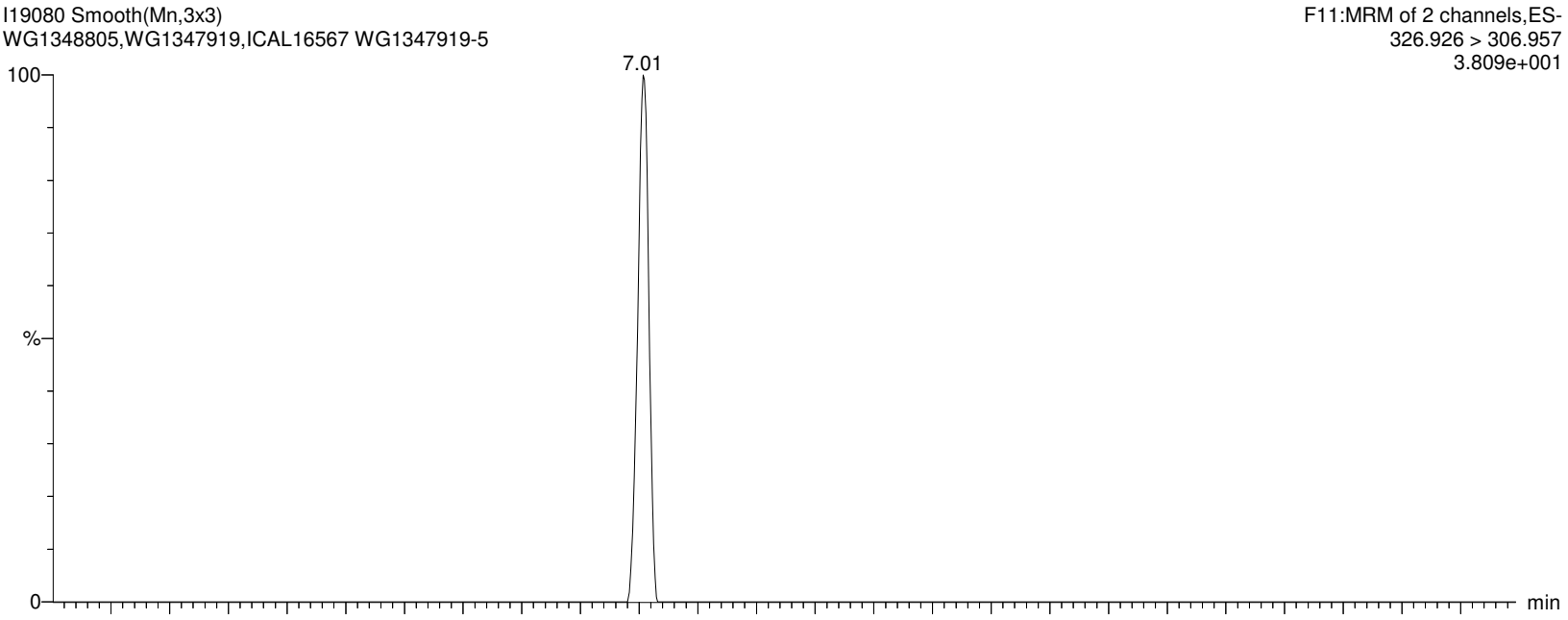
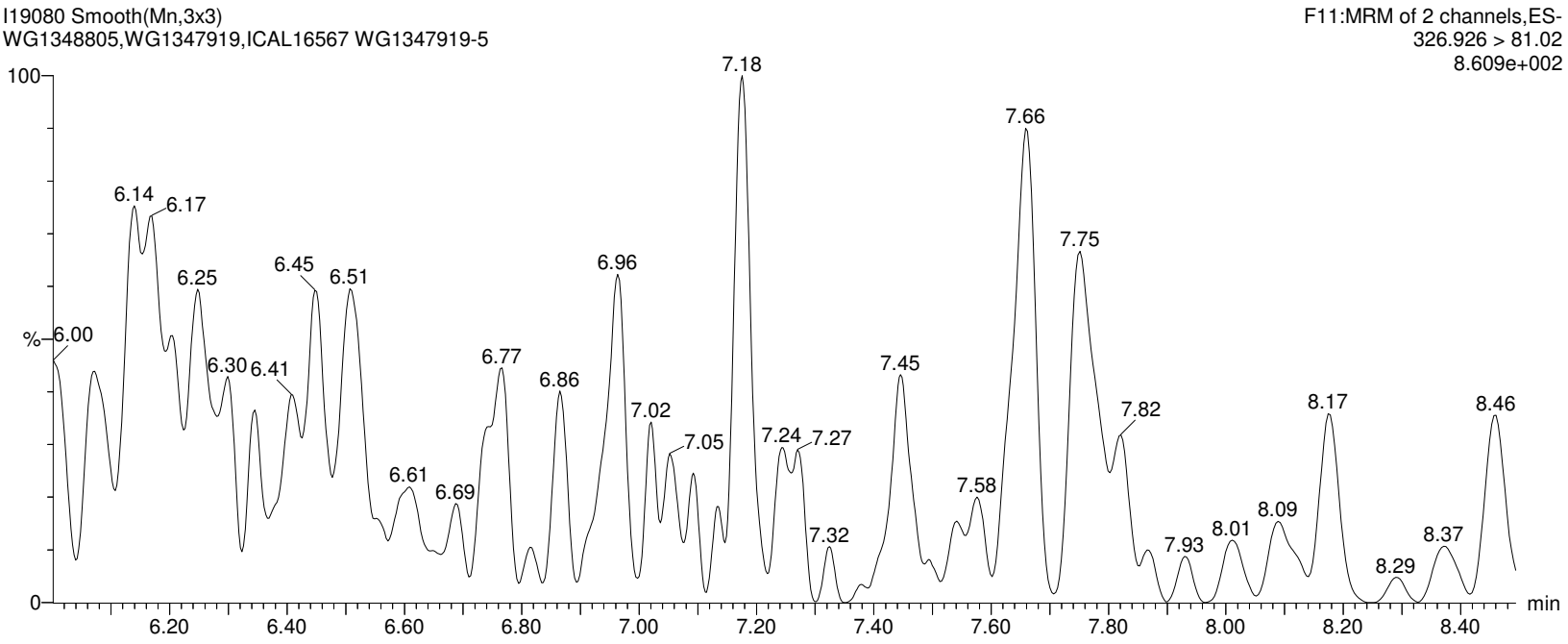
**4:2FTS**





all concentration units in (ng/mL)

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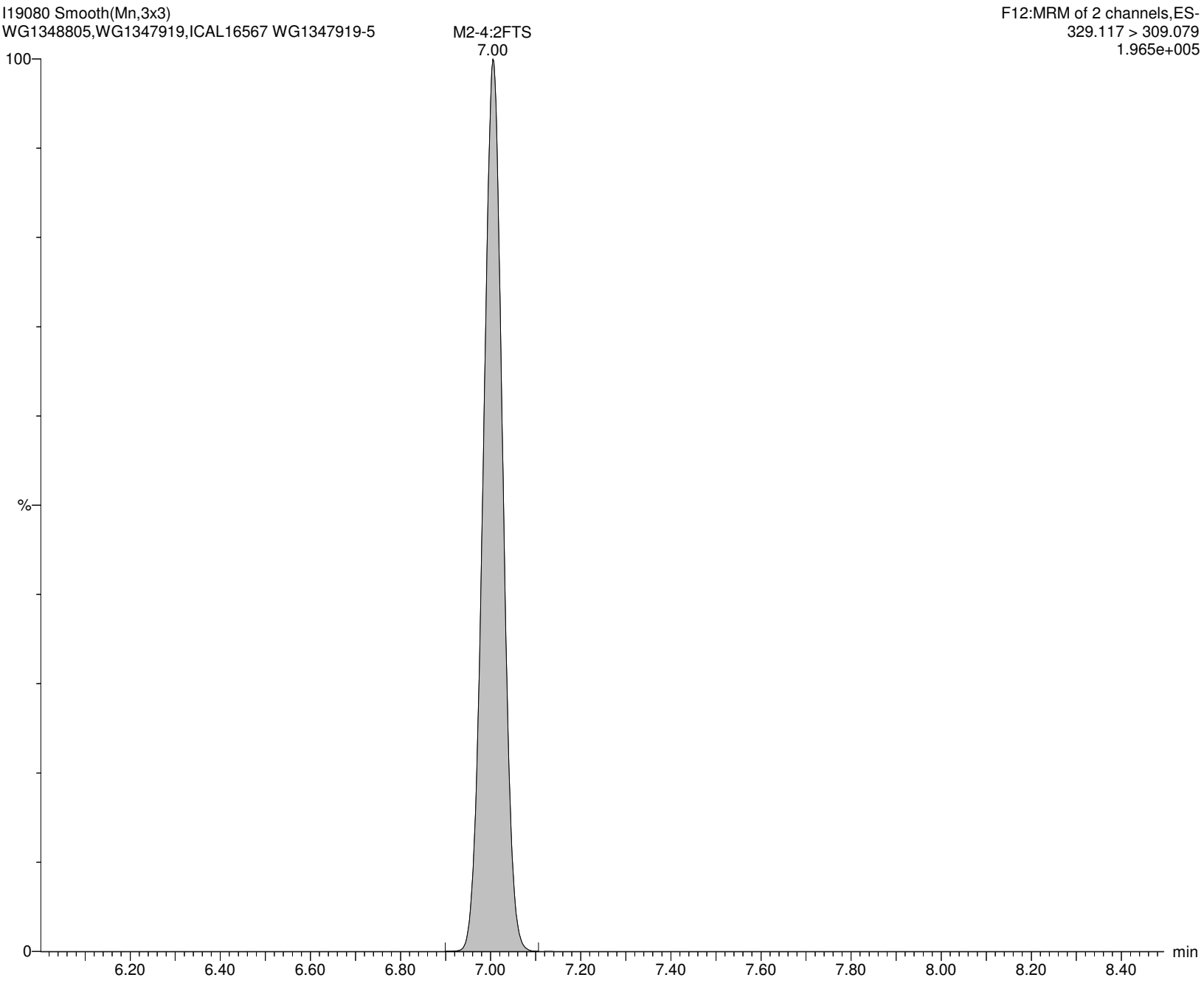
**M2-4:2FTS**





all concentration units in (ng/mL)

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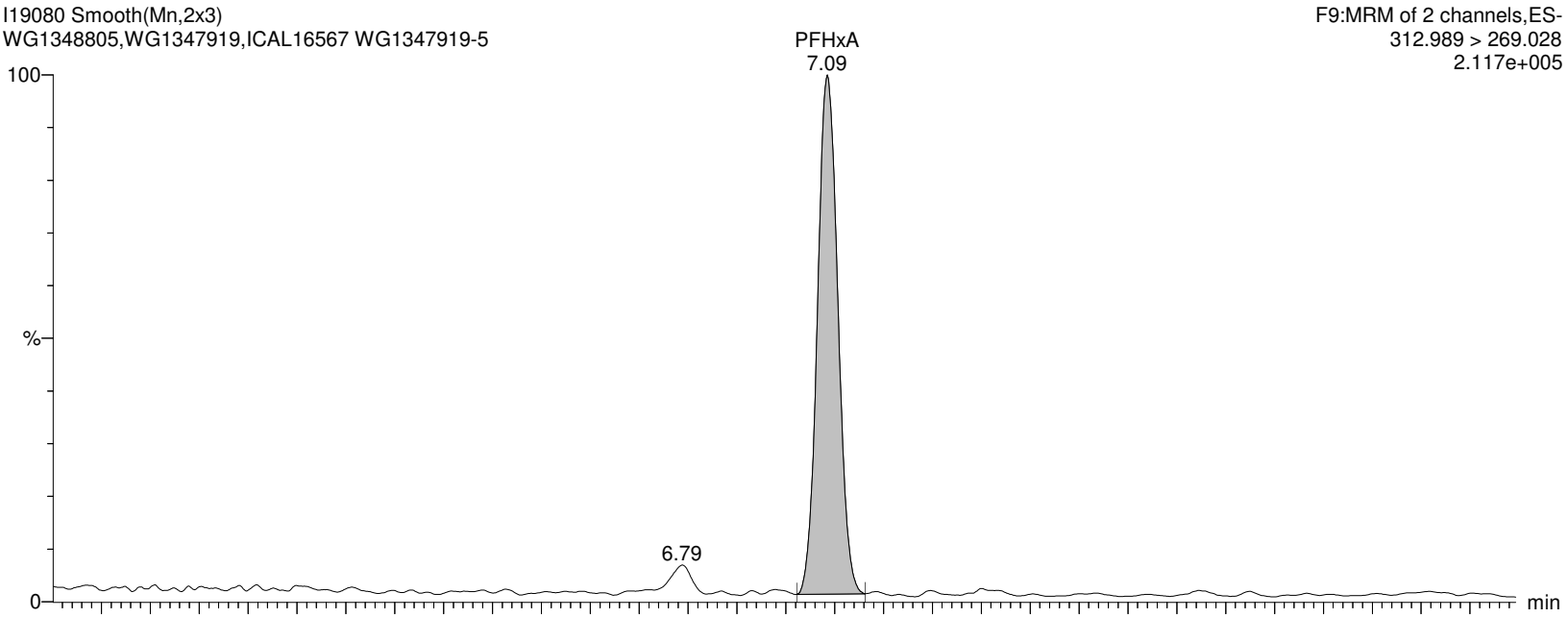
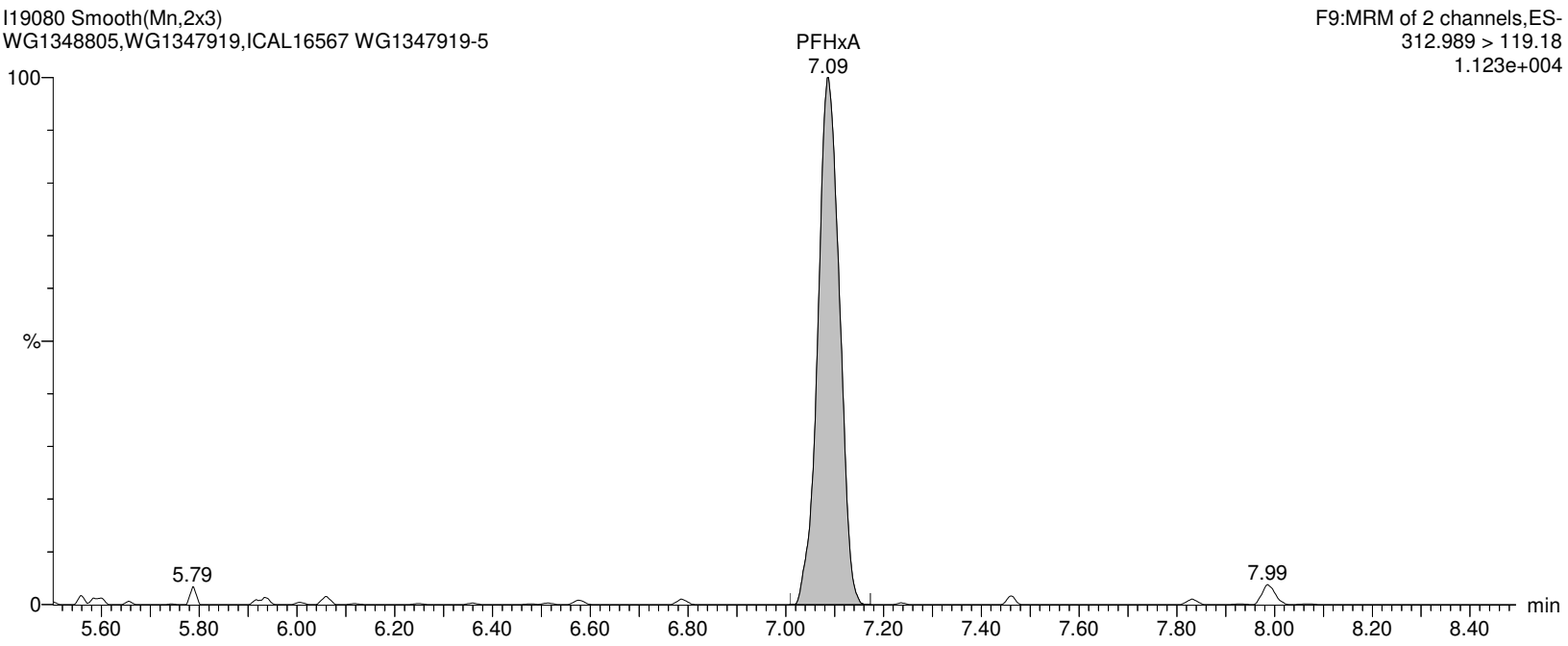
**PFHxA**





all concentration units in (ng/mL)

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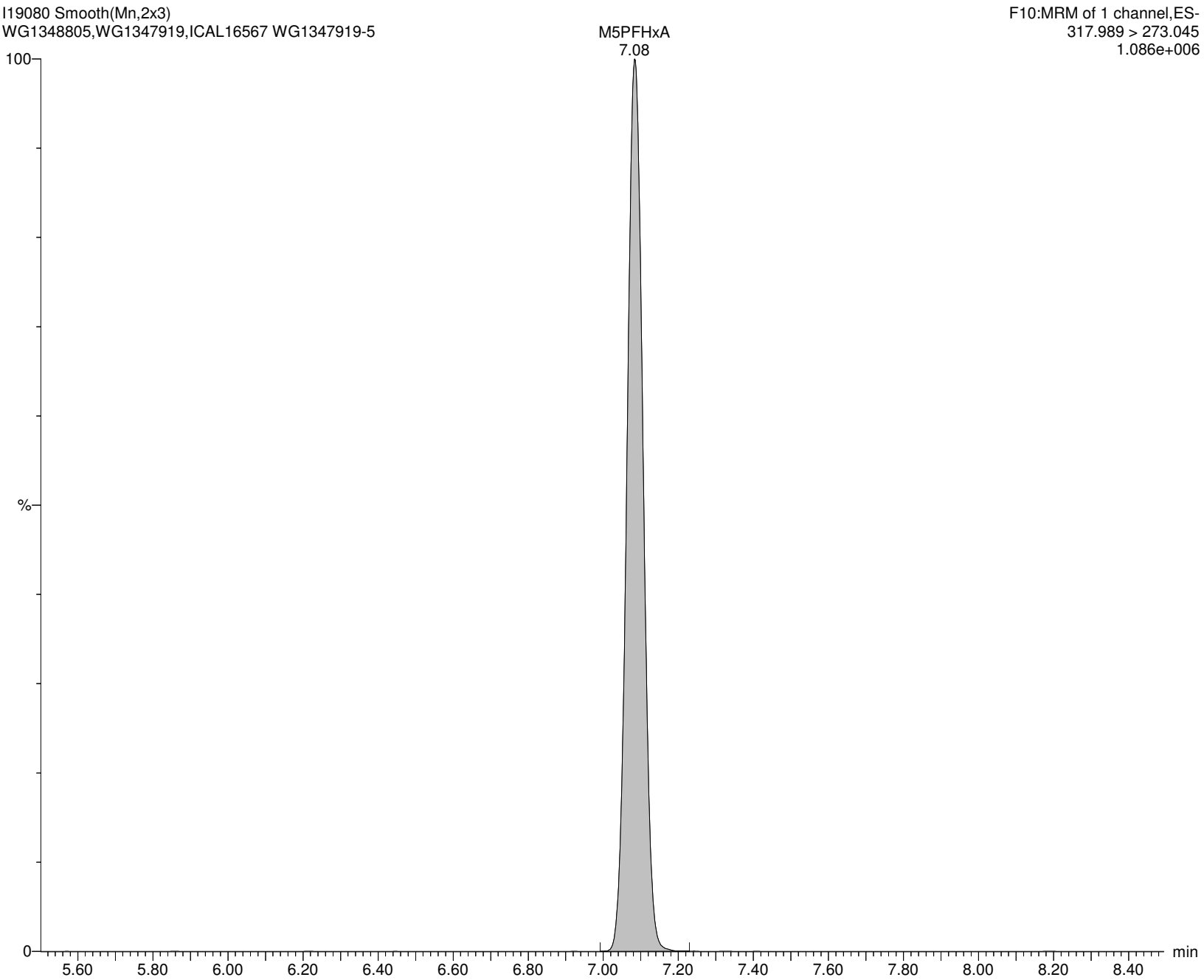
**M5PFHxA**





all concentration units in (ng/mL)

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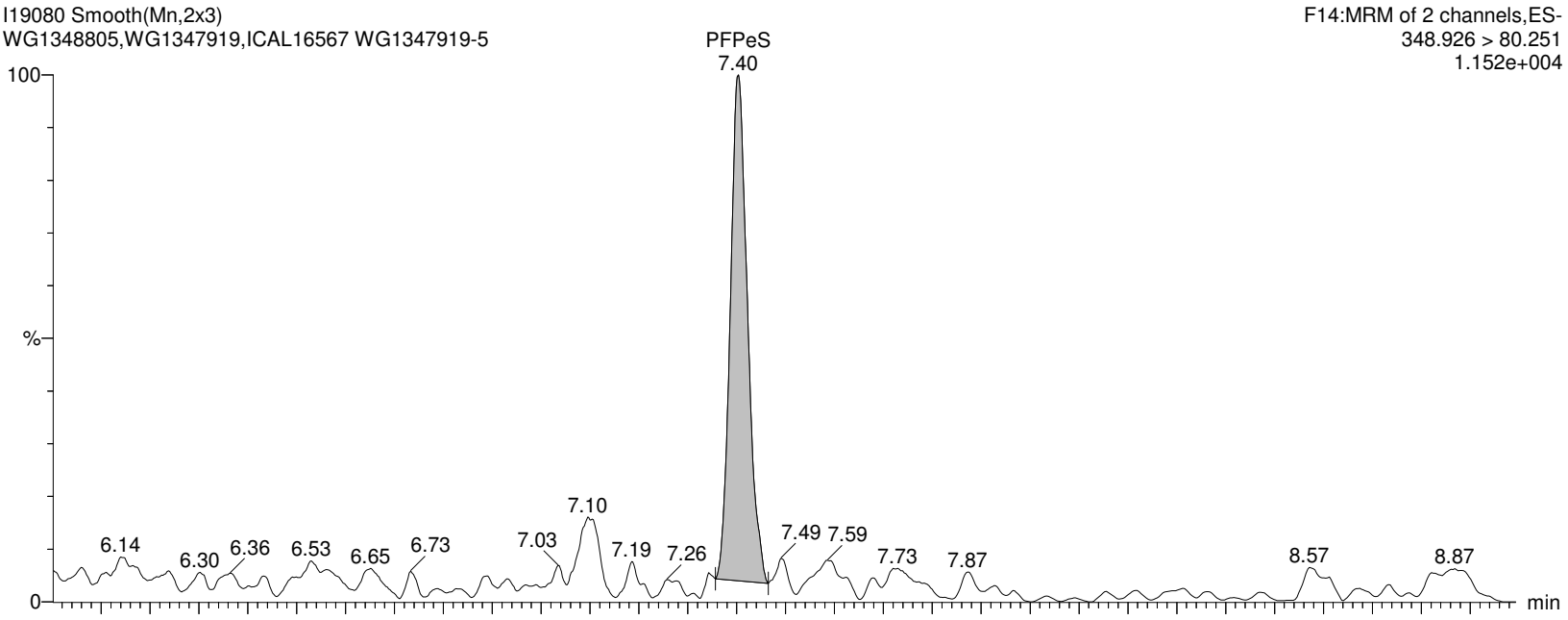
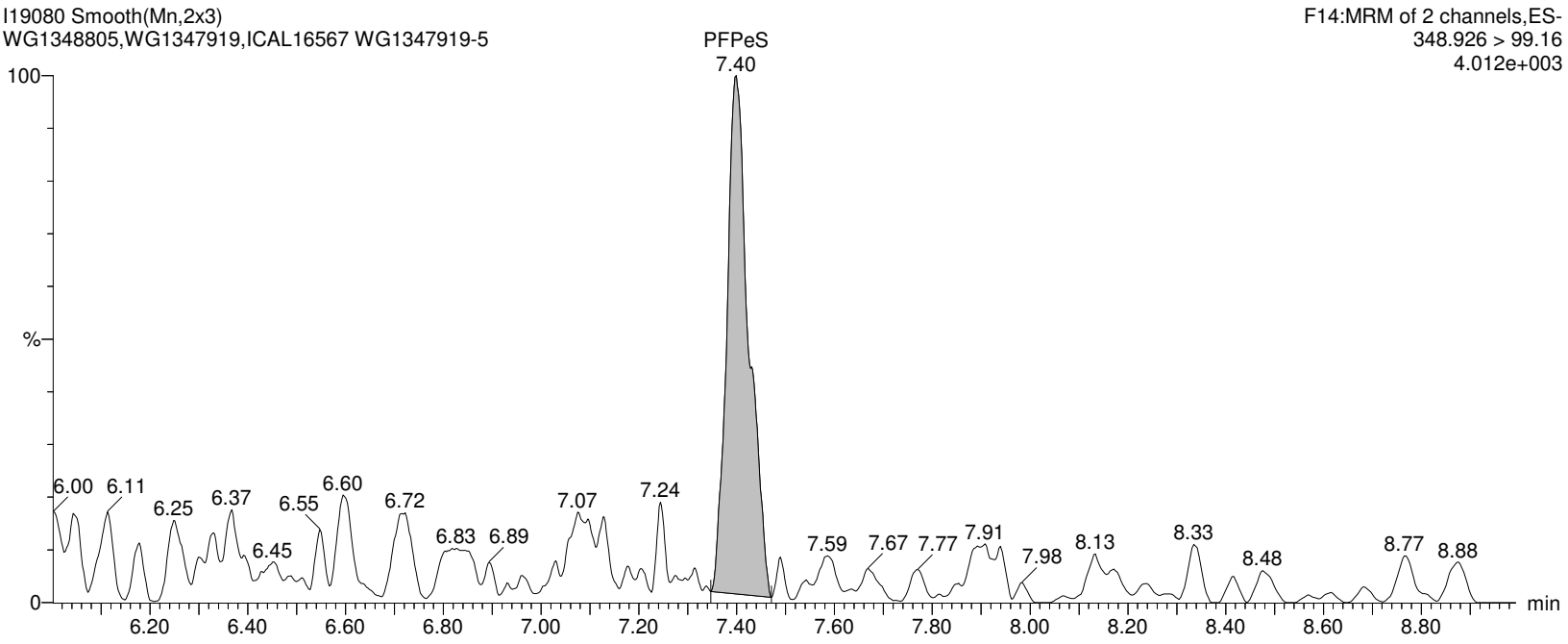
**PFPeS**





all concentration units in (ng/mL)

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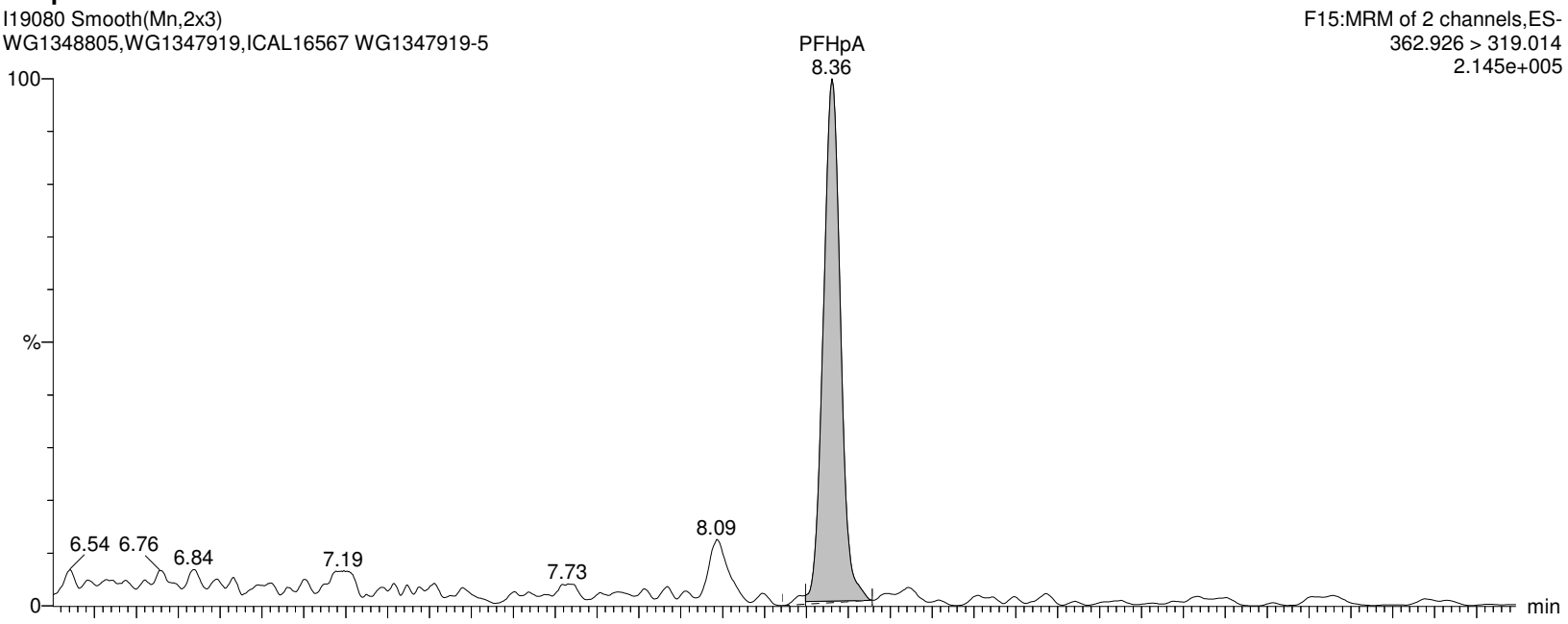
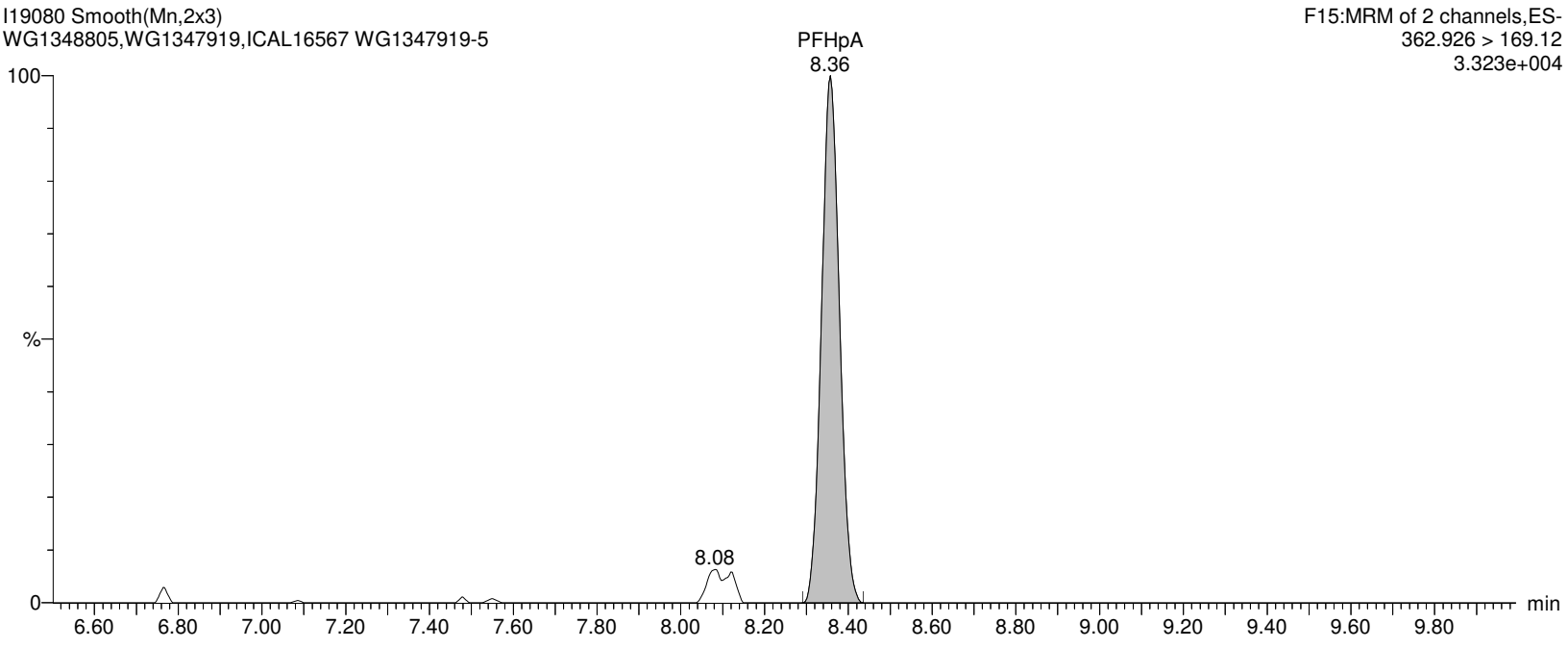
**PFHpA**





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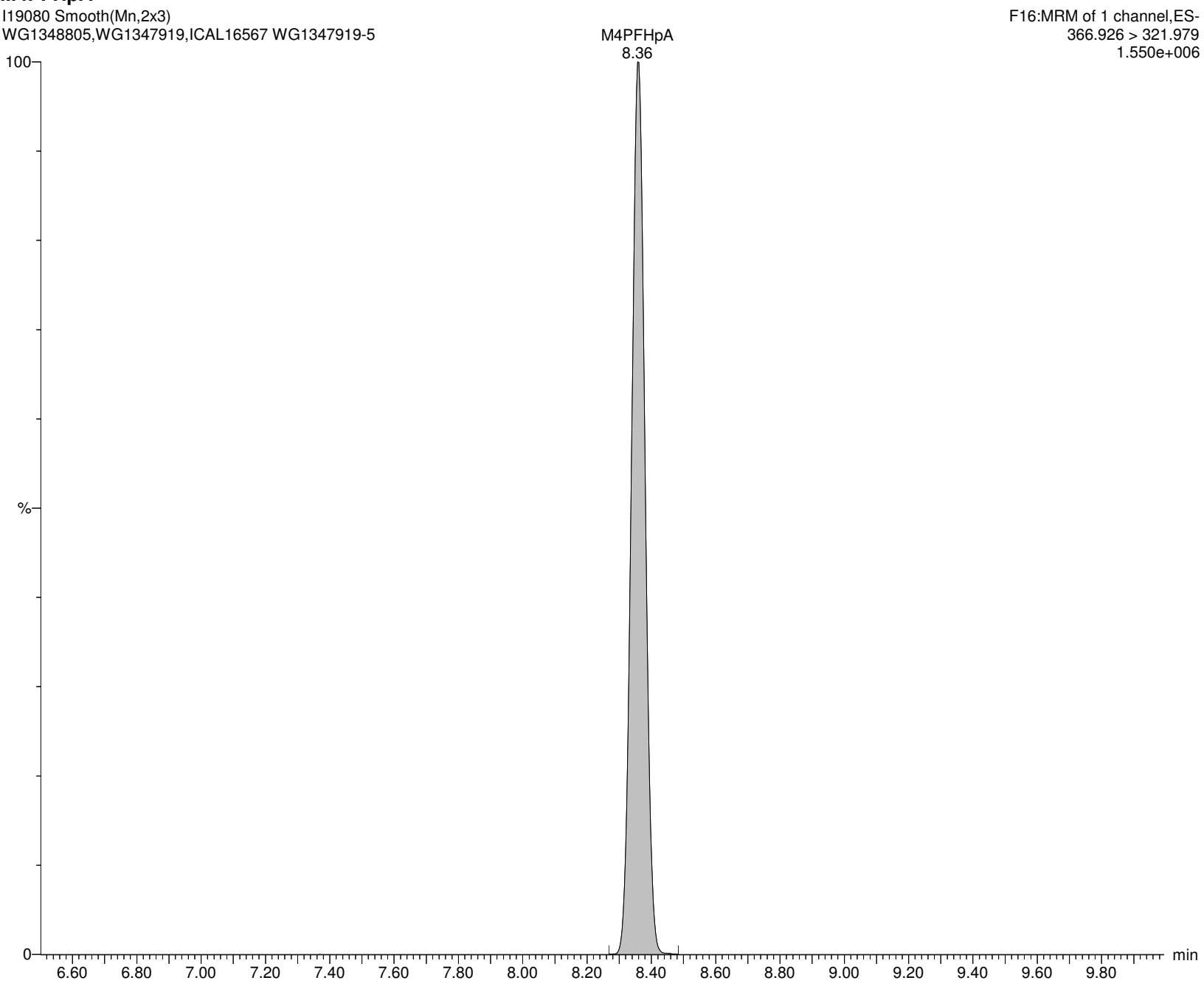
**M4PFHpA**





all concentration units in (ng/mL)

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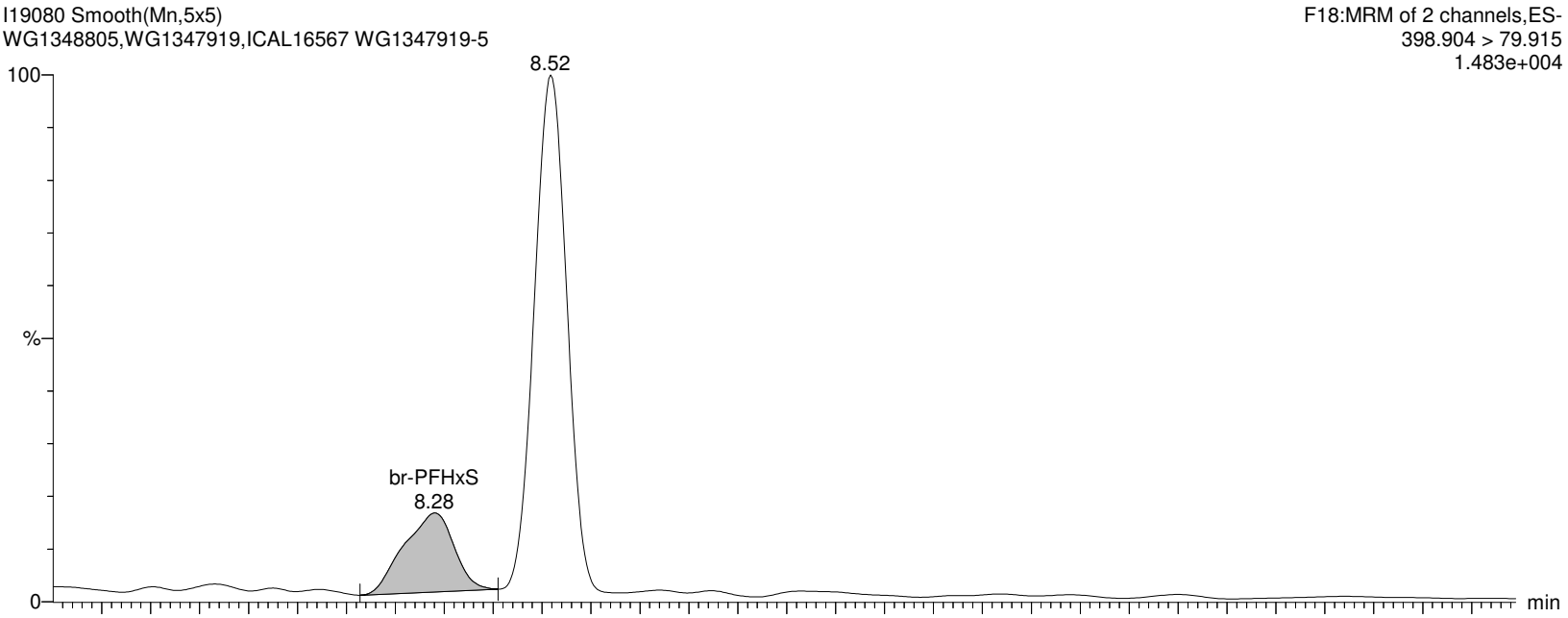
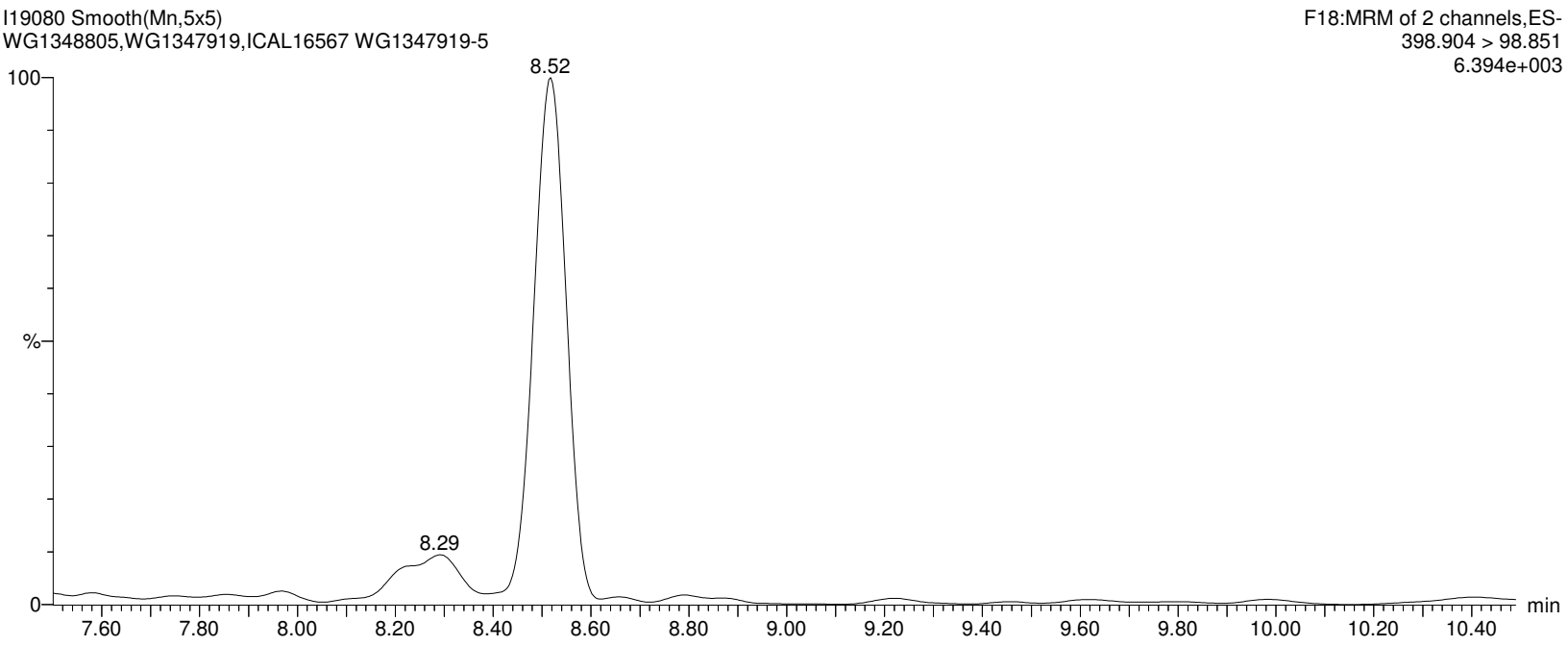
**br-PFHxS**





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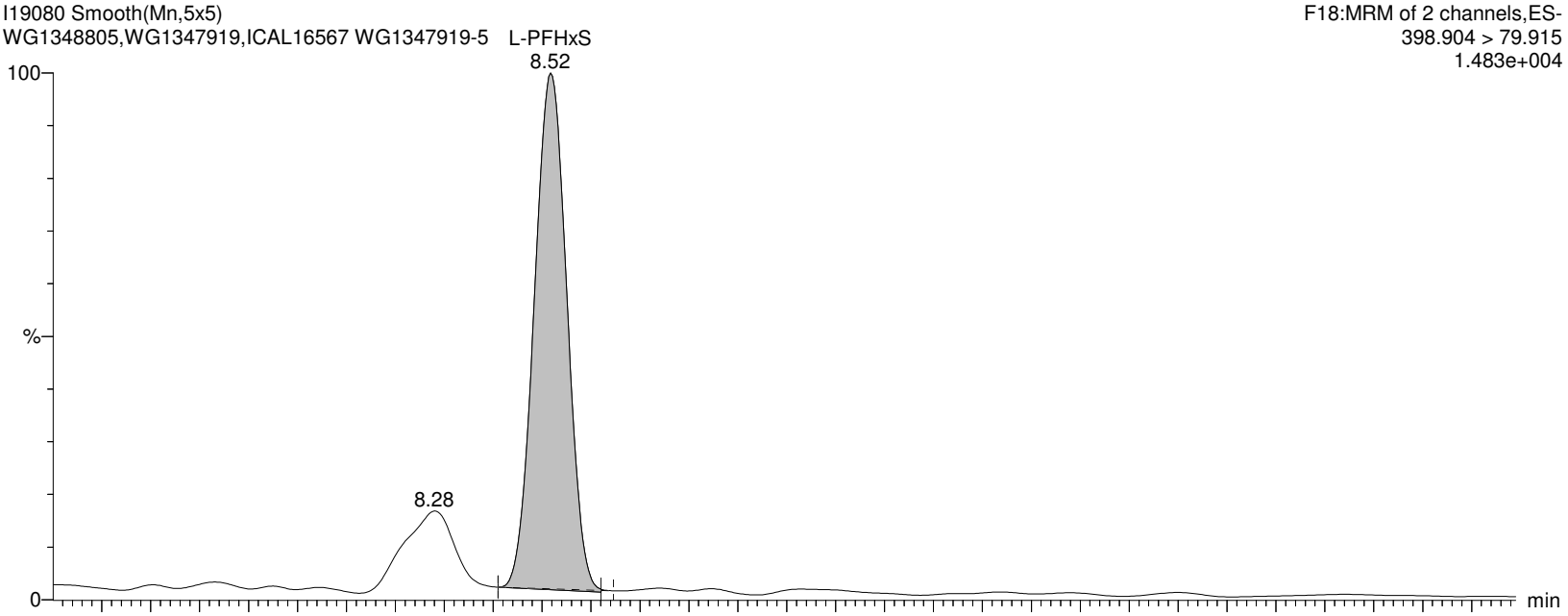
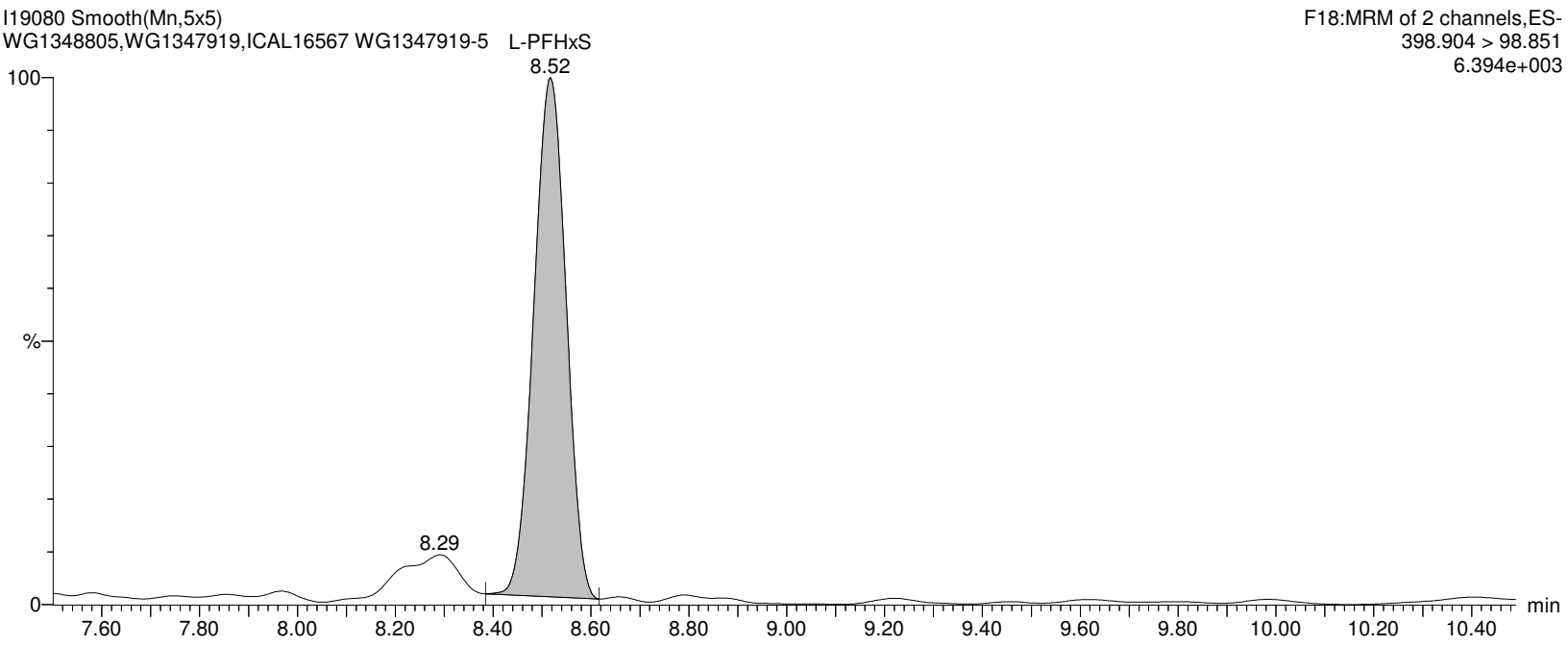
**L-PFHxS**





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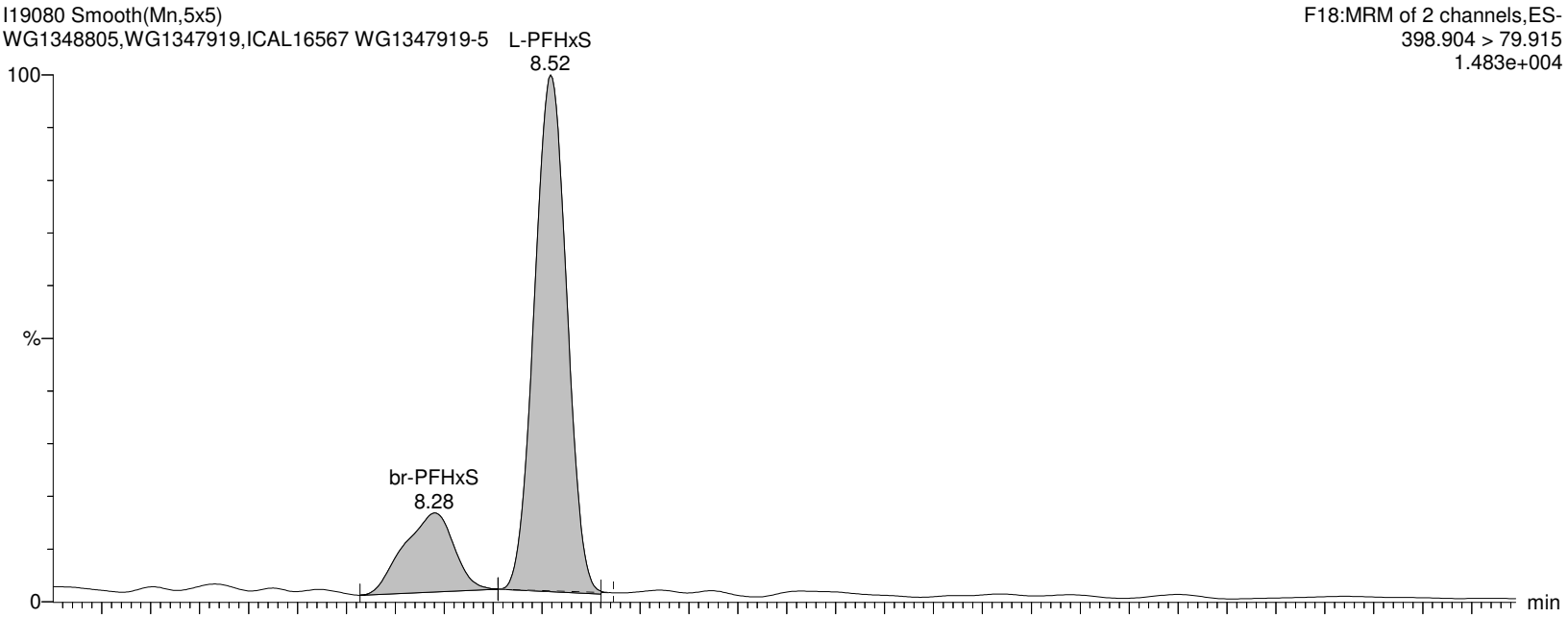
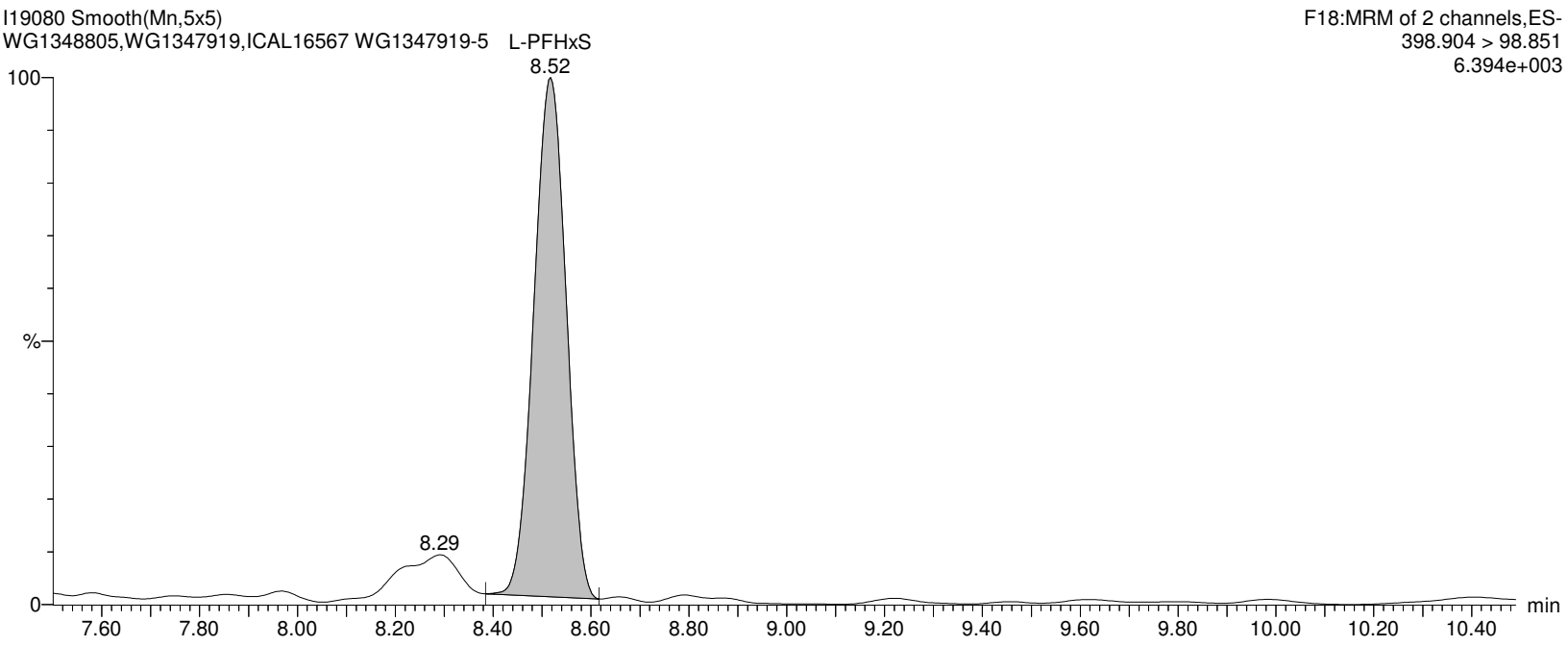
**MS Method Name: C:\MassLynx\Data\200309_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**PFHxS**



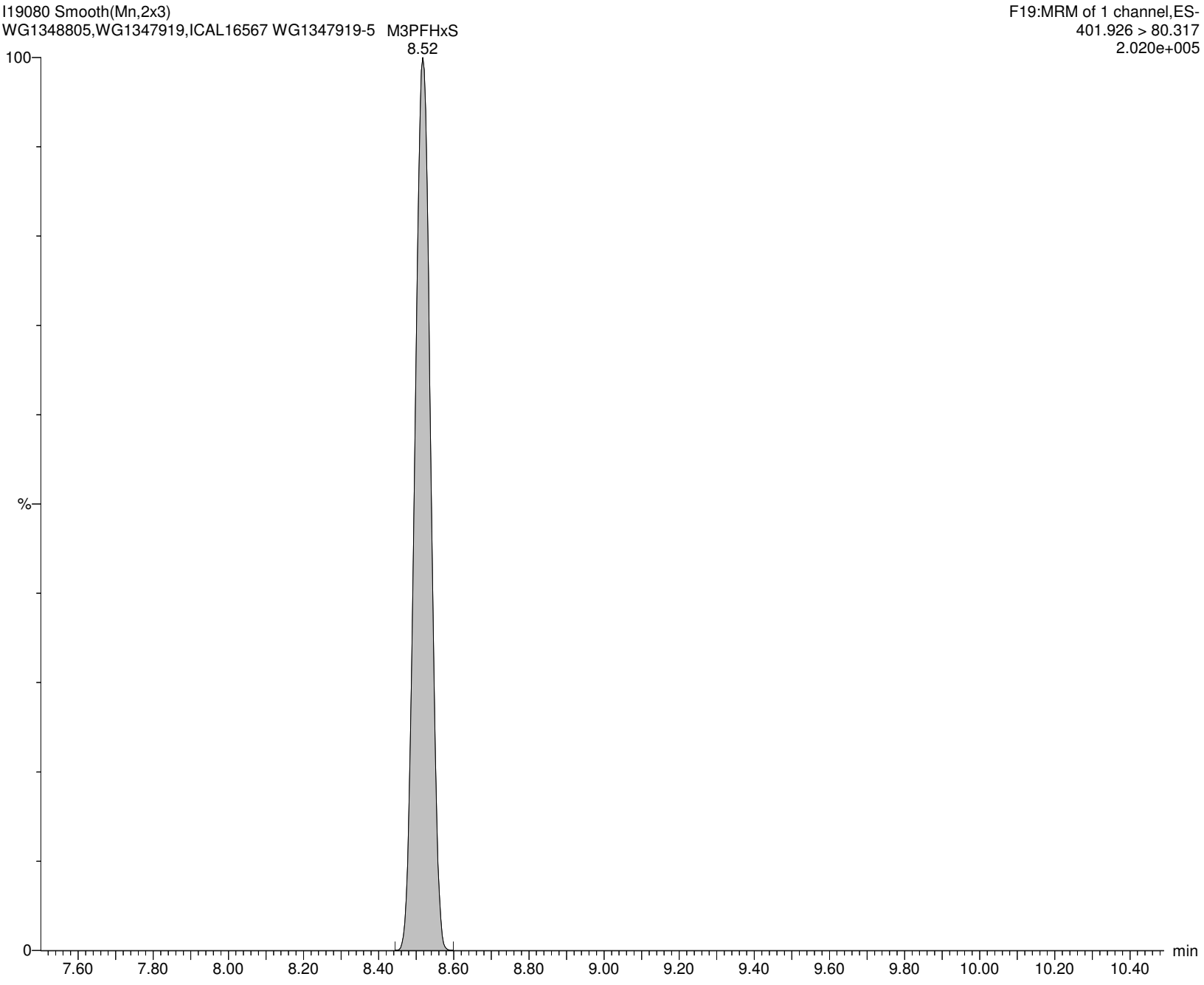


all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200309_537ISO.PRO\Data\WG1348805A.qld
Last Altered: Tuesday, March 17, 2020 11:10:13 Eastern Daylight Time
Printed: Tuesday, March 17, 2020 11:22:13 Eastern Daylight Time

**Name: I19080**
**ID: WG1347919-5**
**Date: 09-Mar-2020**
**Time: 15:56:46**
**Description: WG1348805,WG1347919,ICAL16567**
**User: LCMS01:JW**
**Vial: 1:C,3**
**Instrument: XEVO-TQSmicro#QEA0276**
**Inlet Method Name: C:\MassLynx\Data\200309_537ISO.PRO\ACQUDB\LCMS_537_ISO_MeOH**
**Tune Method Name: C:\MassLynx\Data\200309_537ISO.PRO\ACQUDB\190709_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\200309_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**M3PFHxS**





all concentration units in (ng/mL)

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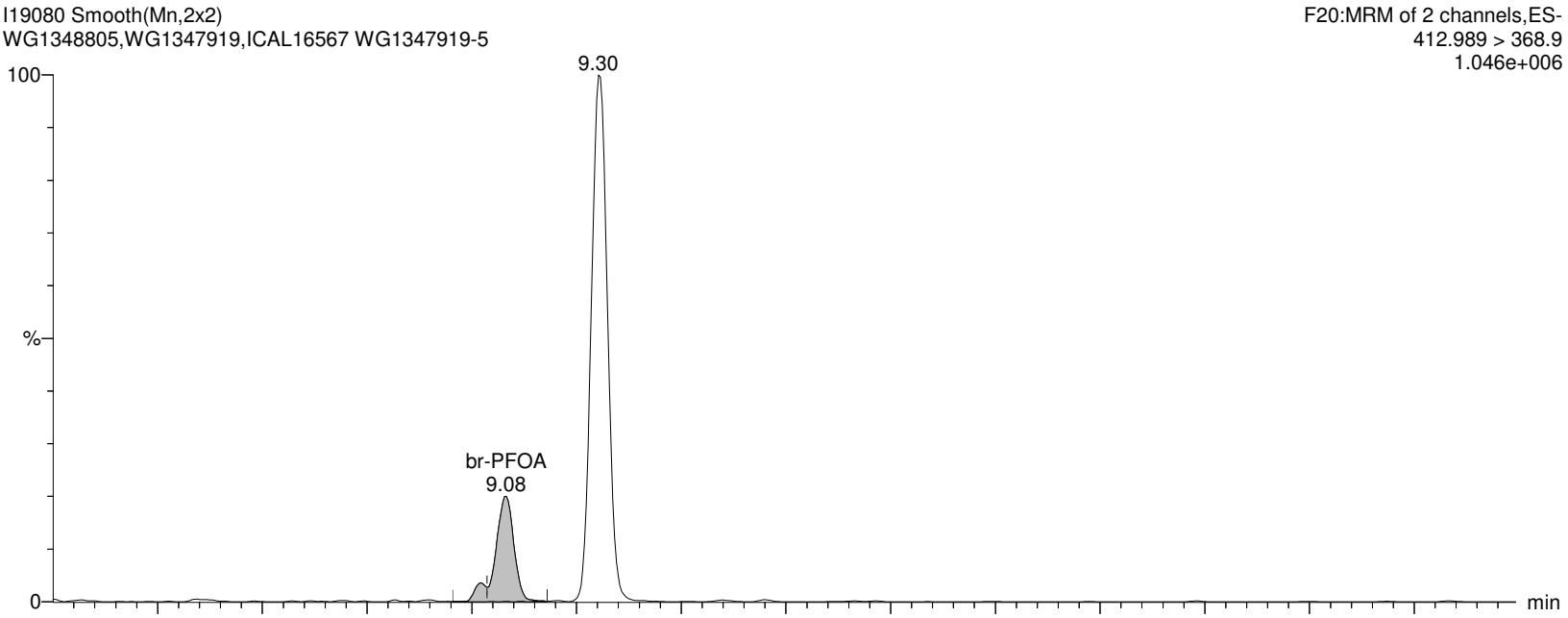
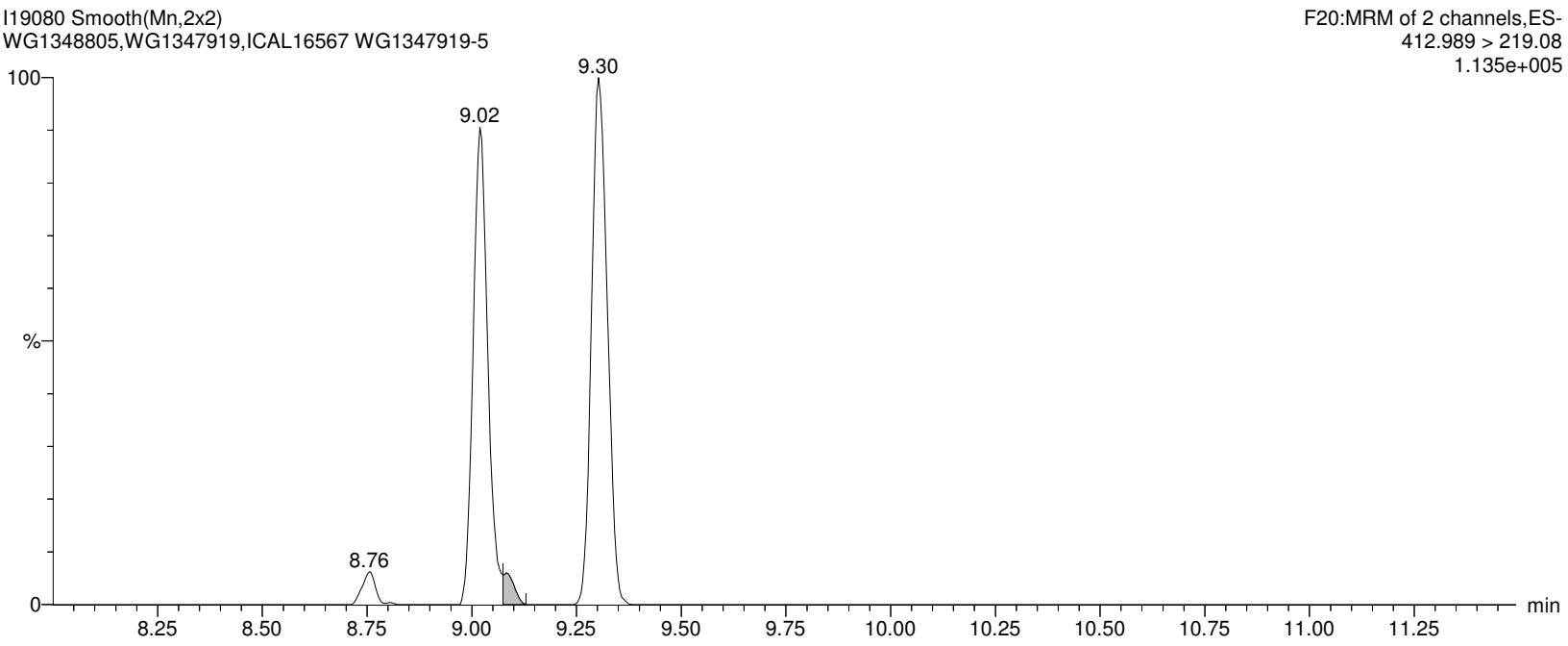
**br-PFOA**





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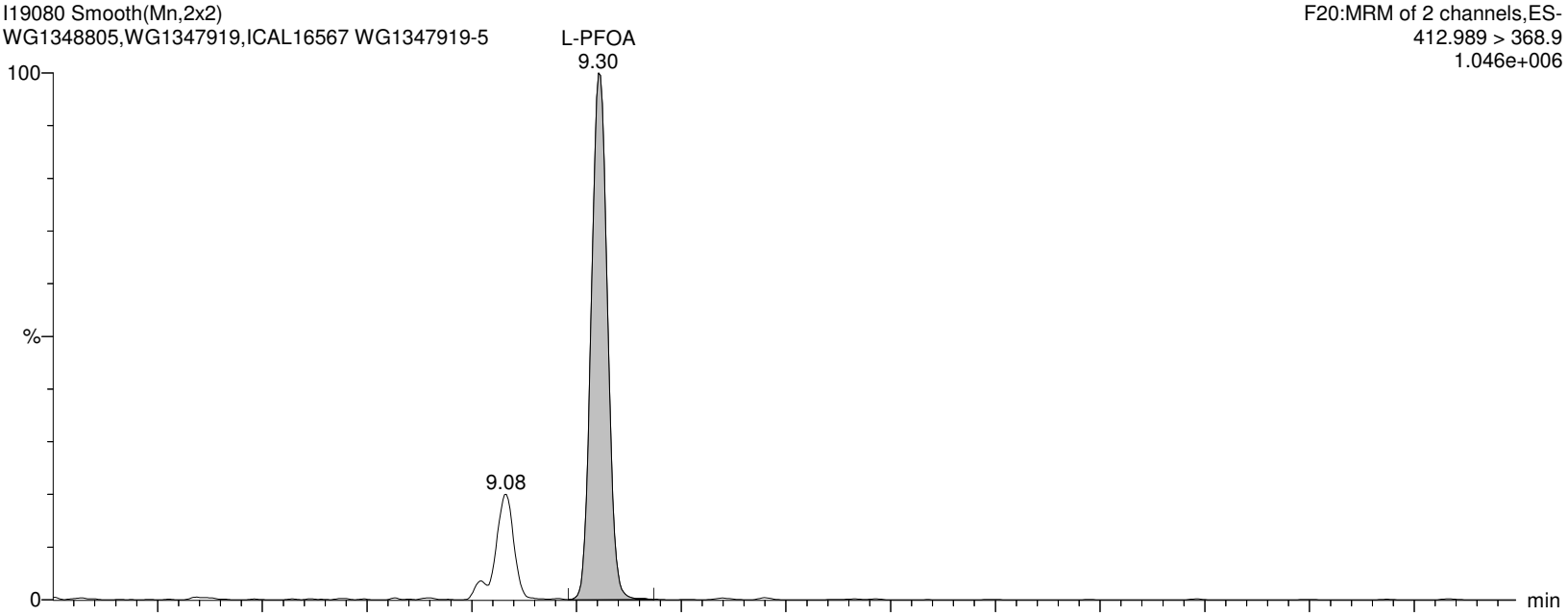
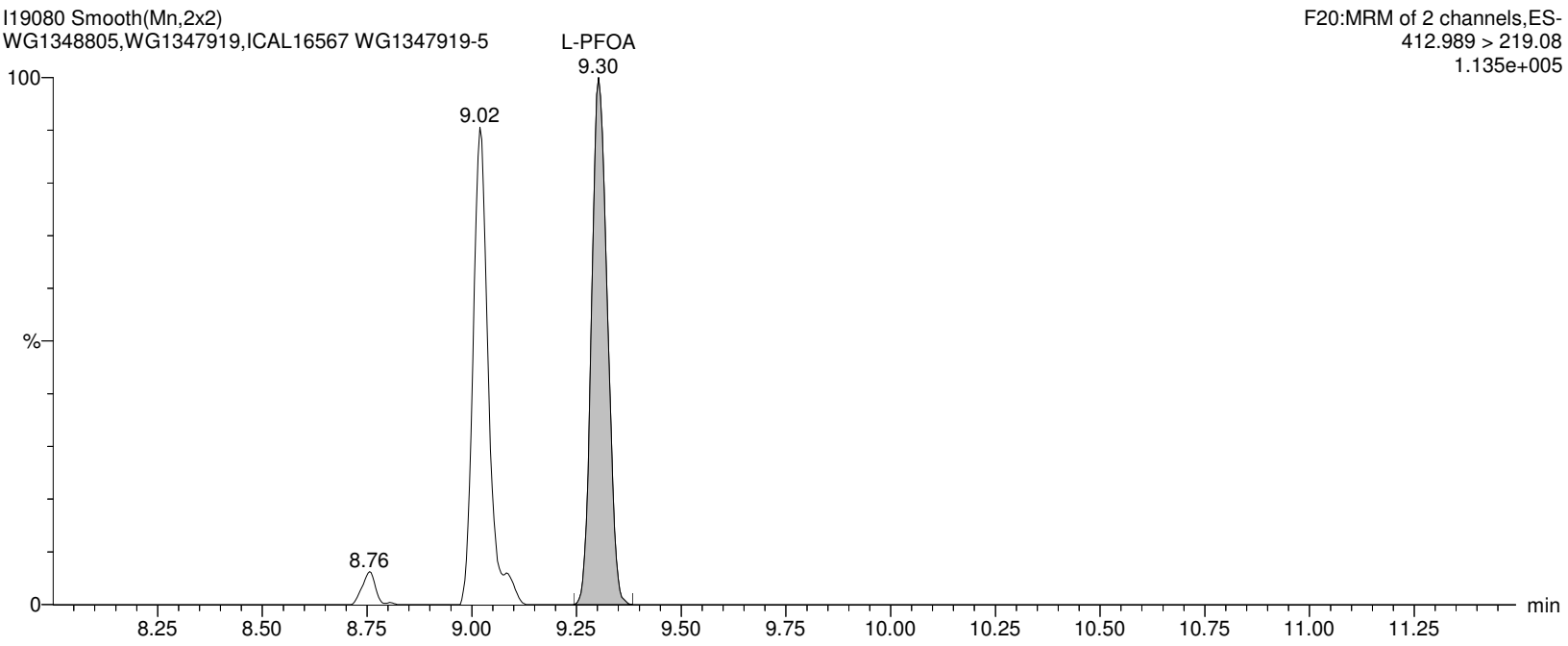
**L-PFOA**





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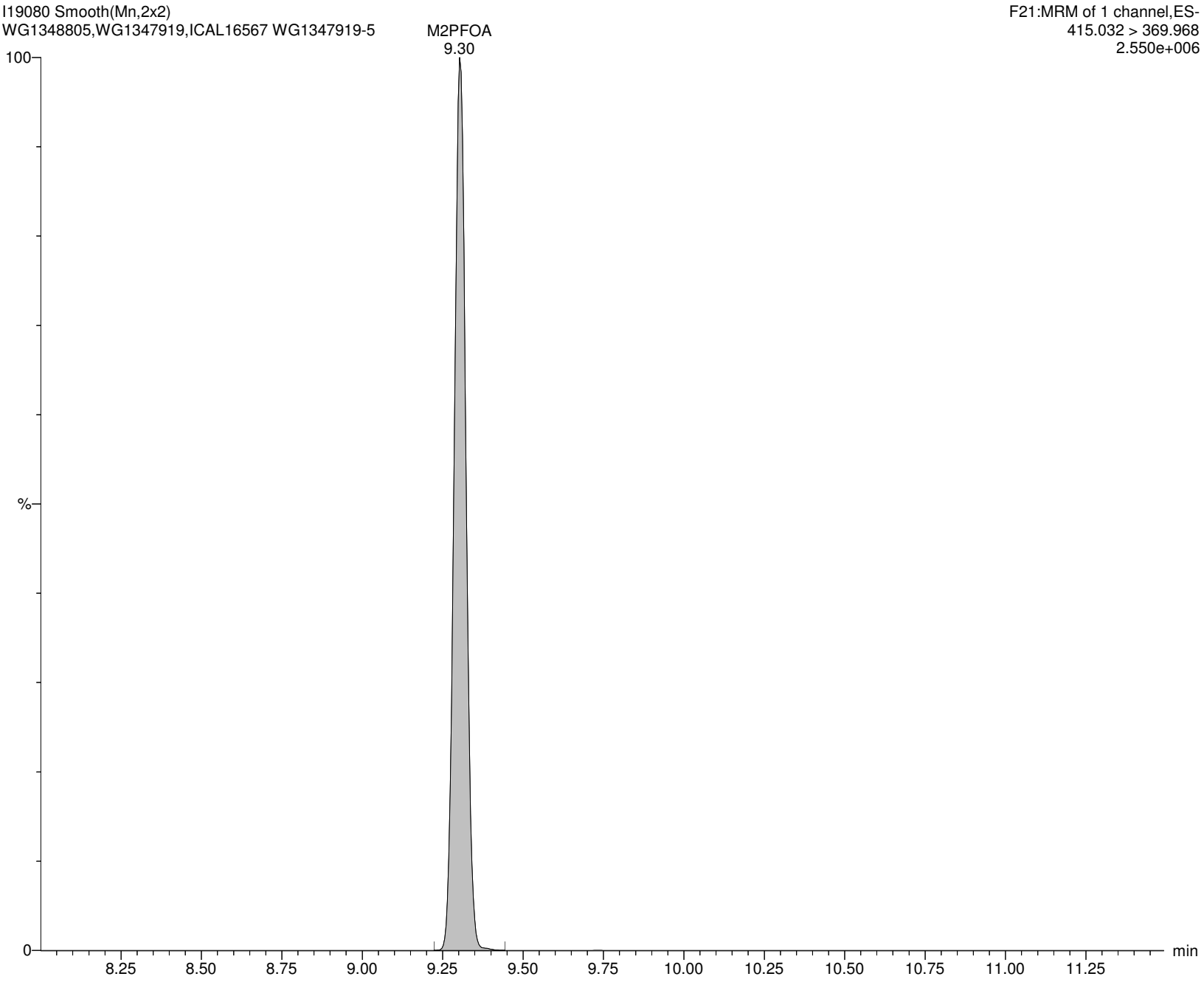
**M2PFOA**





all concentration units in (ng/mL)

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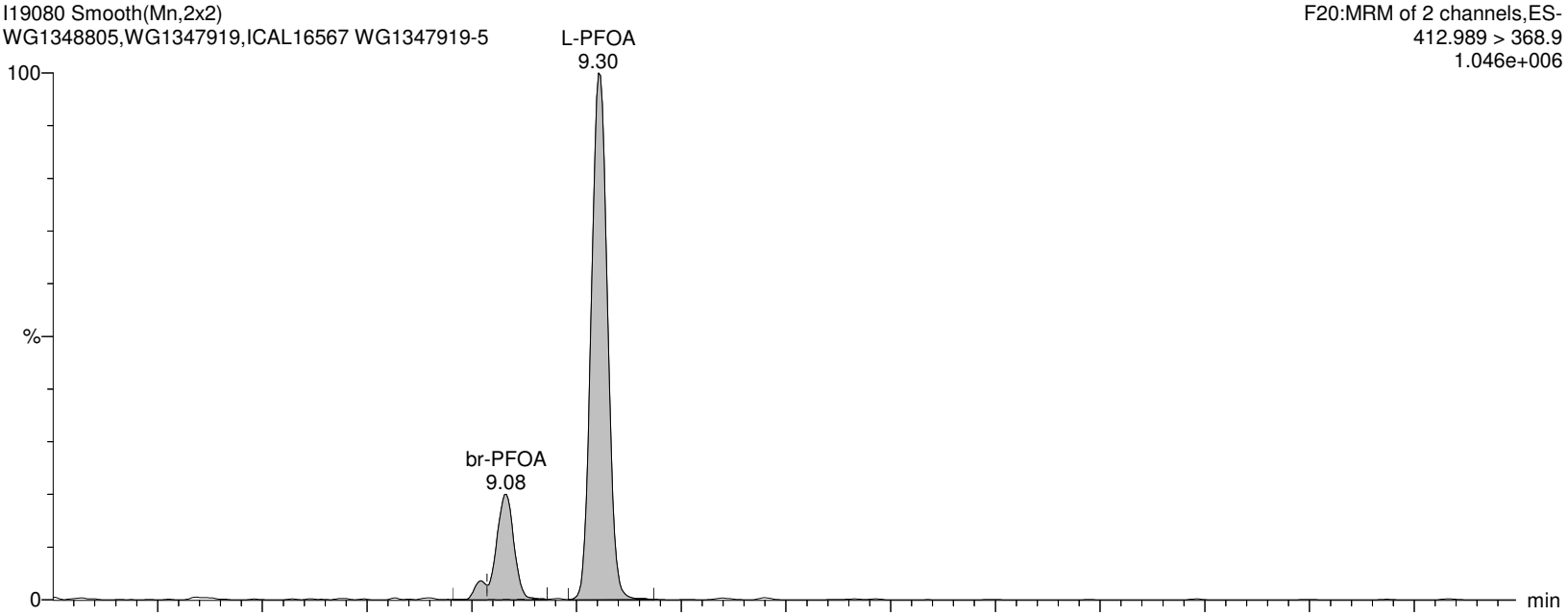
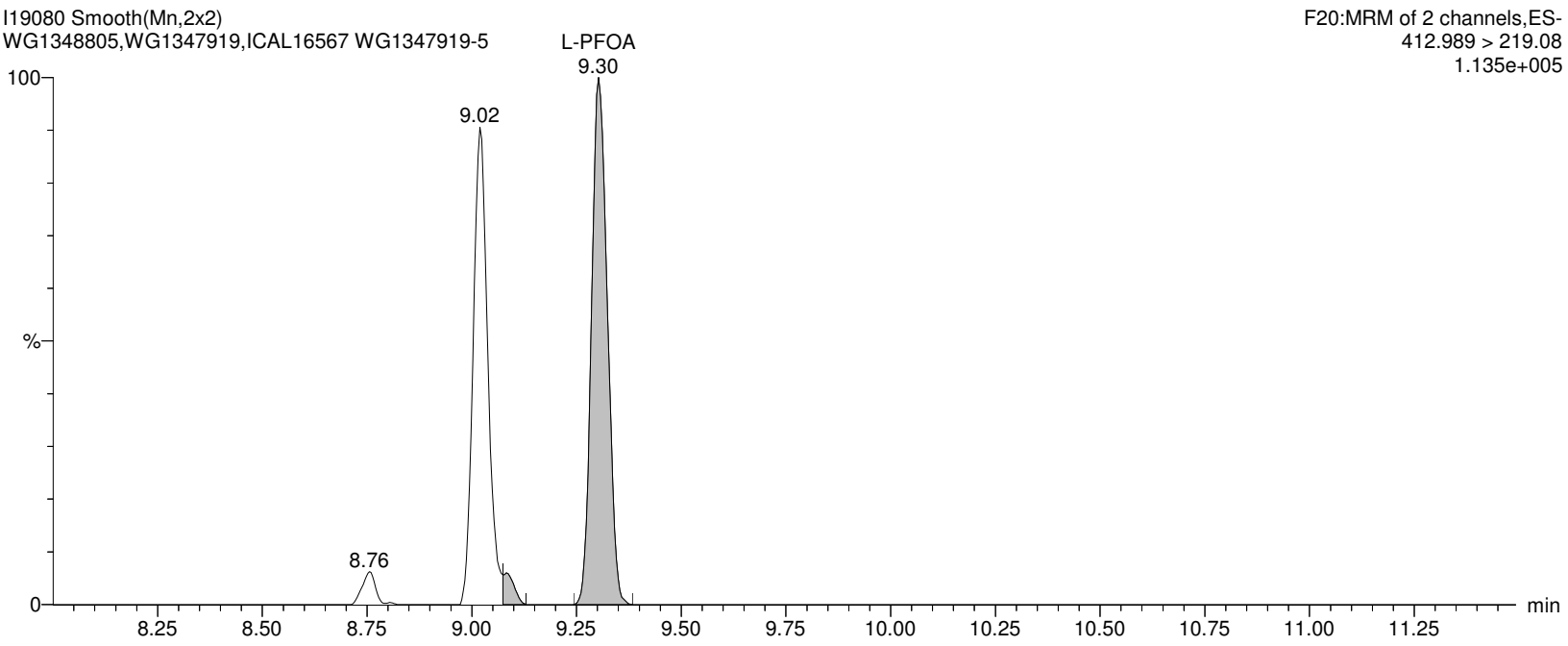
**PFOA**





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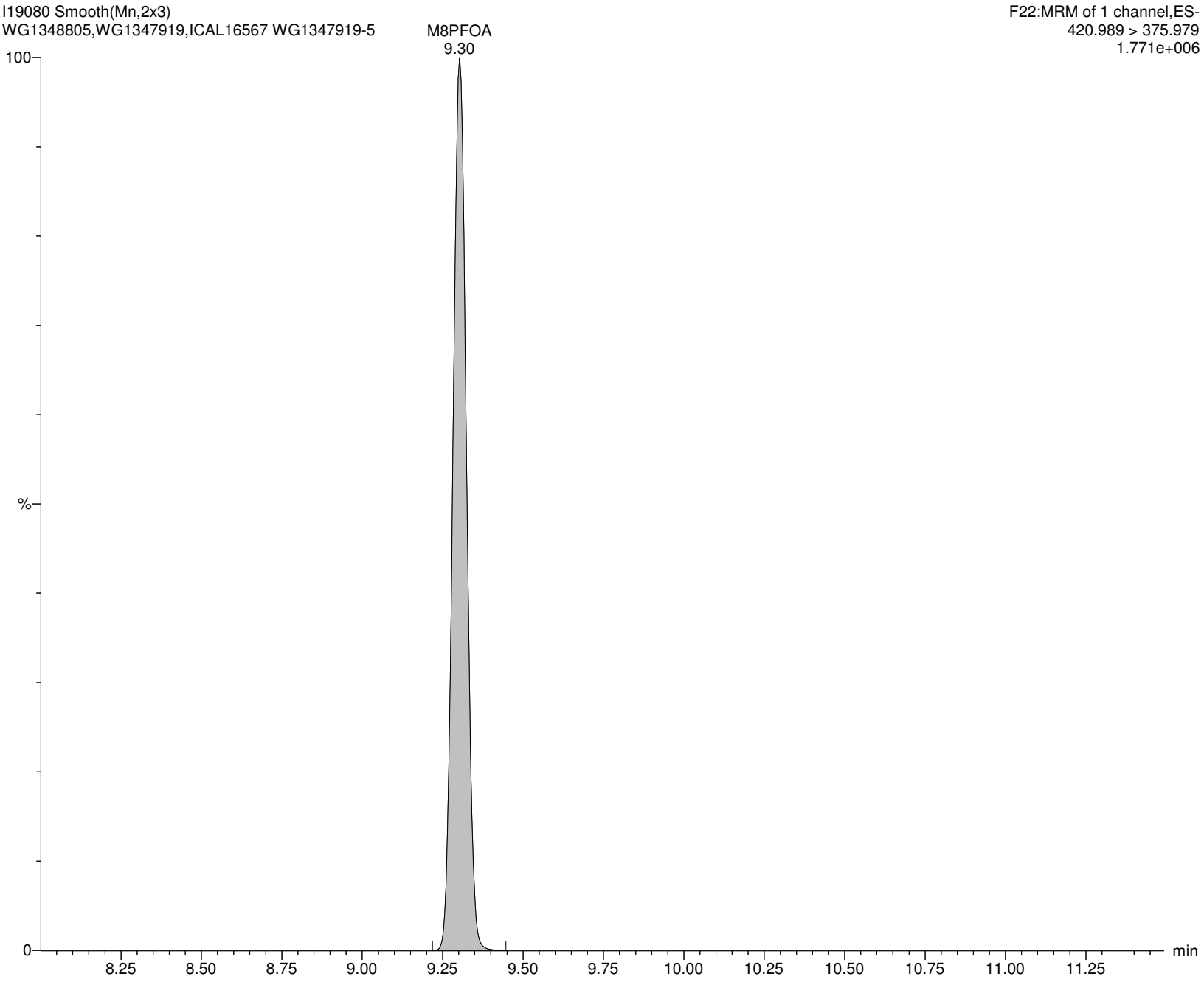
**M8PFOA**





all concentration units in (ng/mL)

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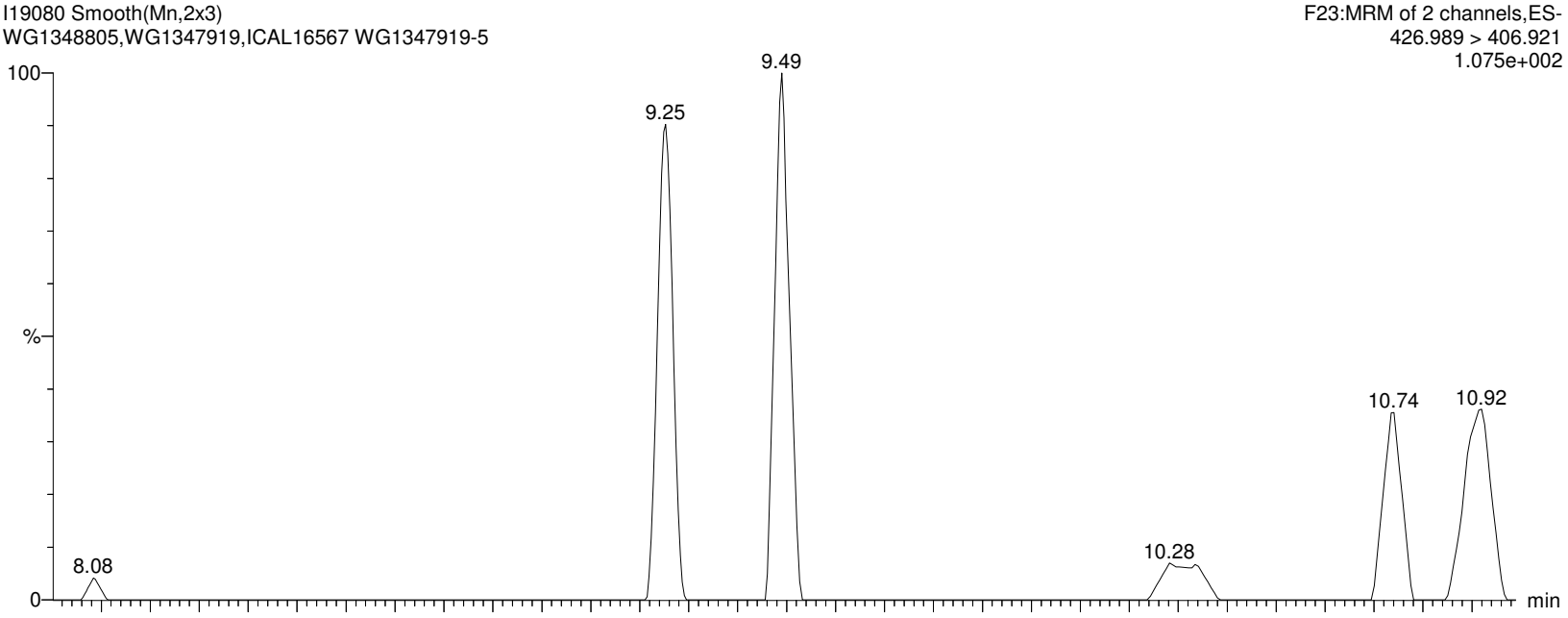
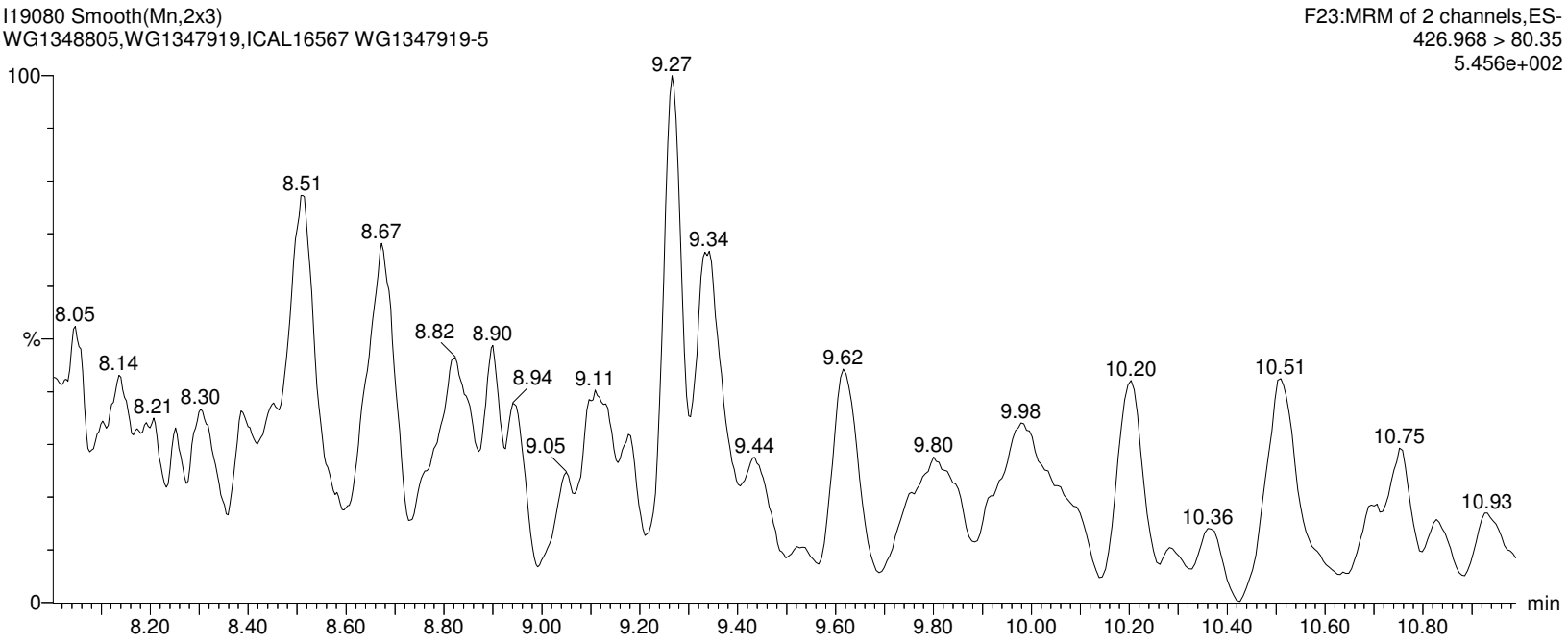
**6:2FTS**





all concentration units in (ng/mL)

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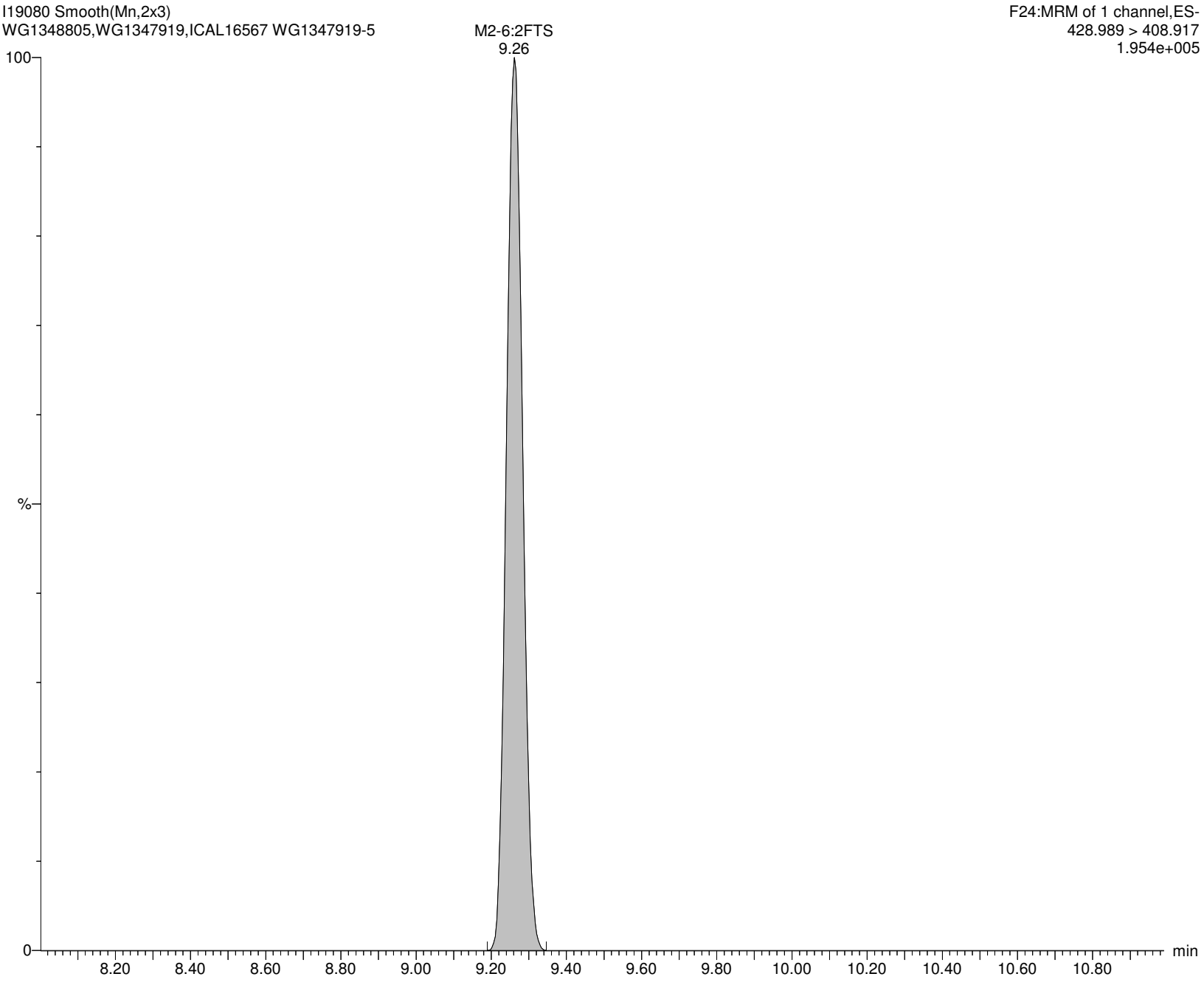
**M2-6:2FTS**





all concentration units in (ng/mL)

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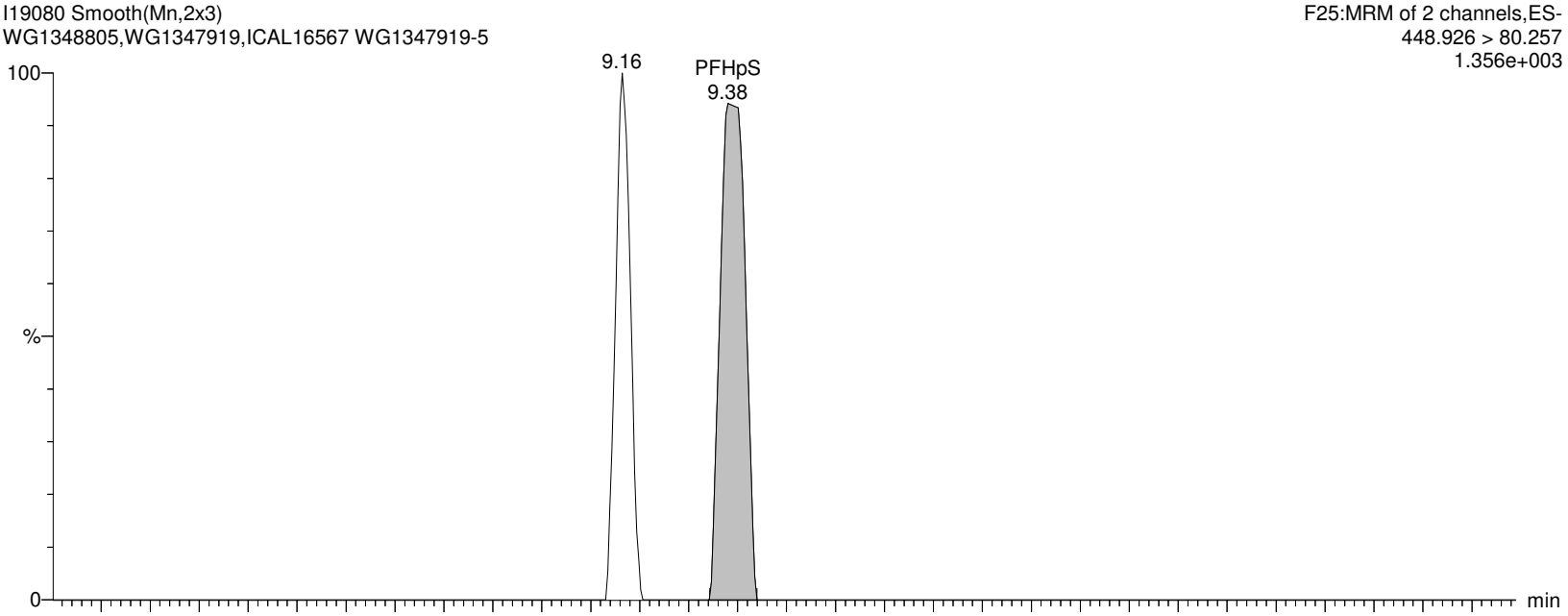
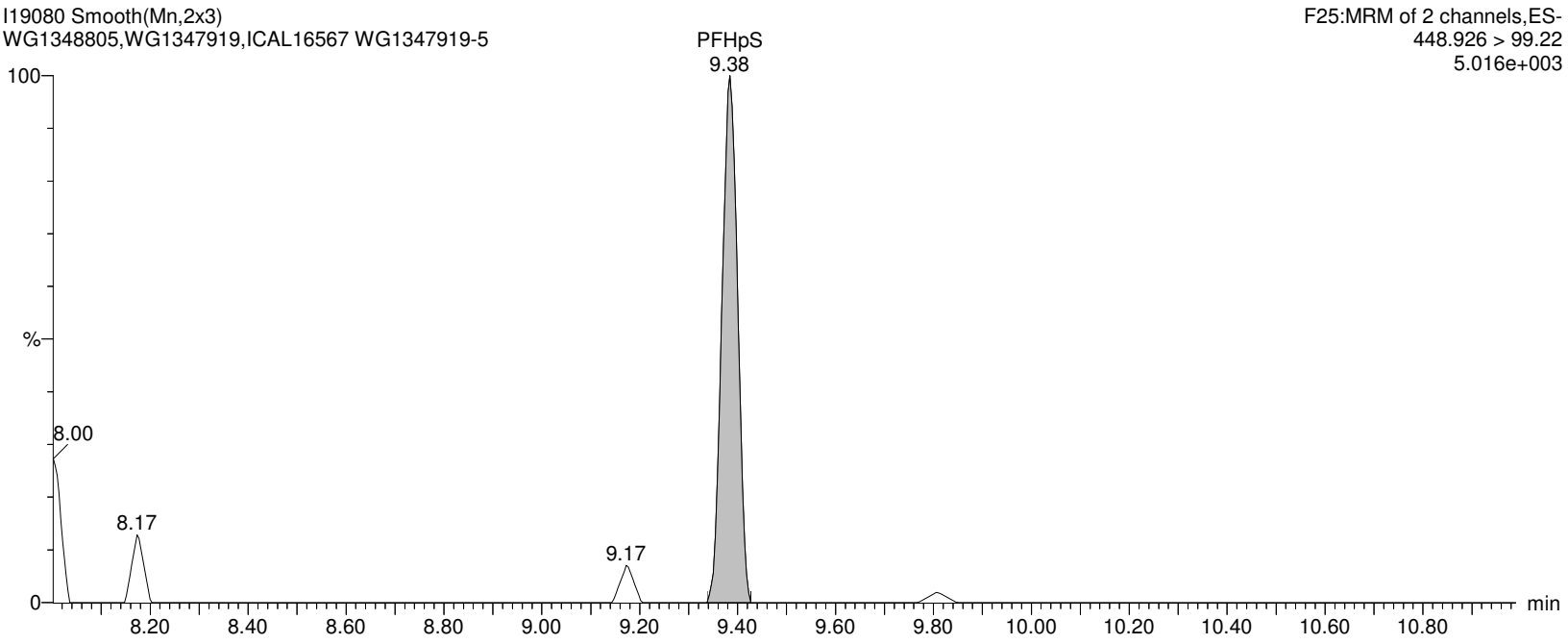
**PFHpS**





all concentration units in (ng/mL)

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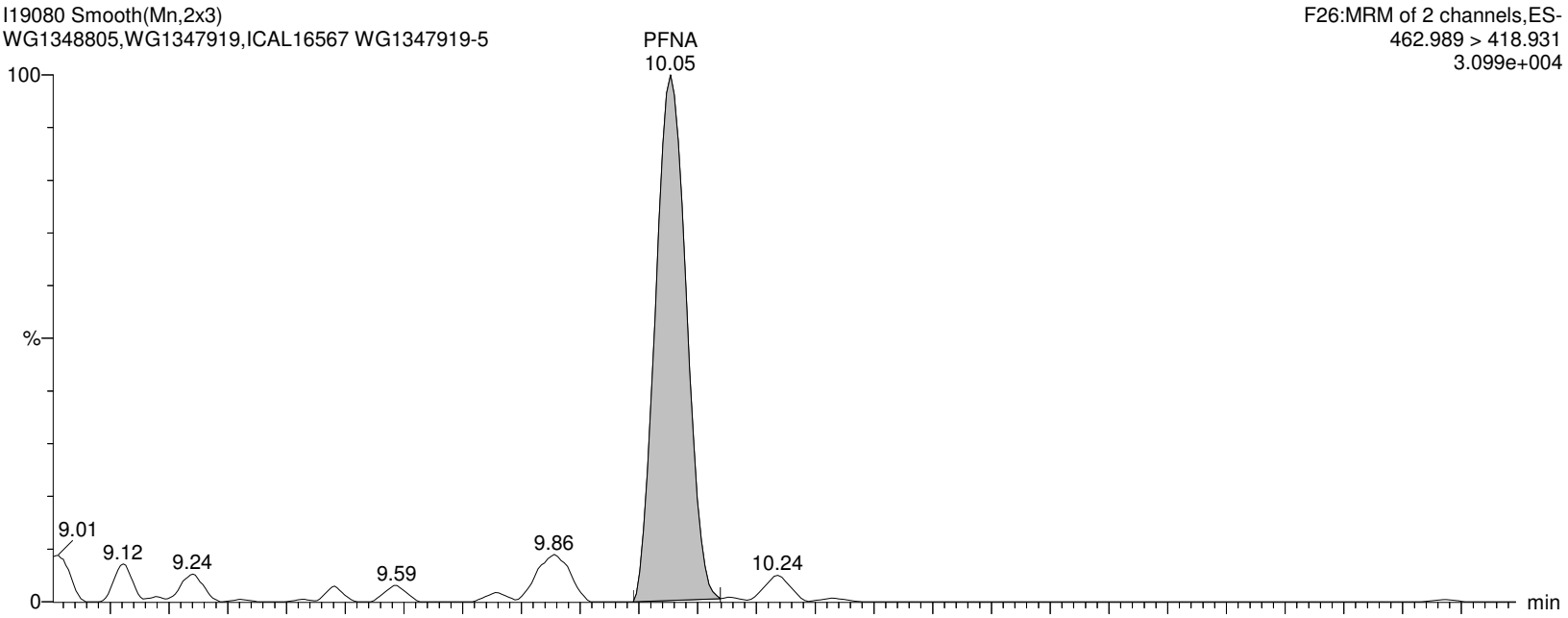


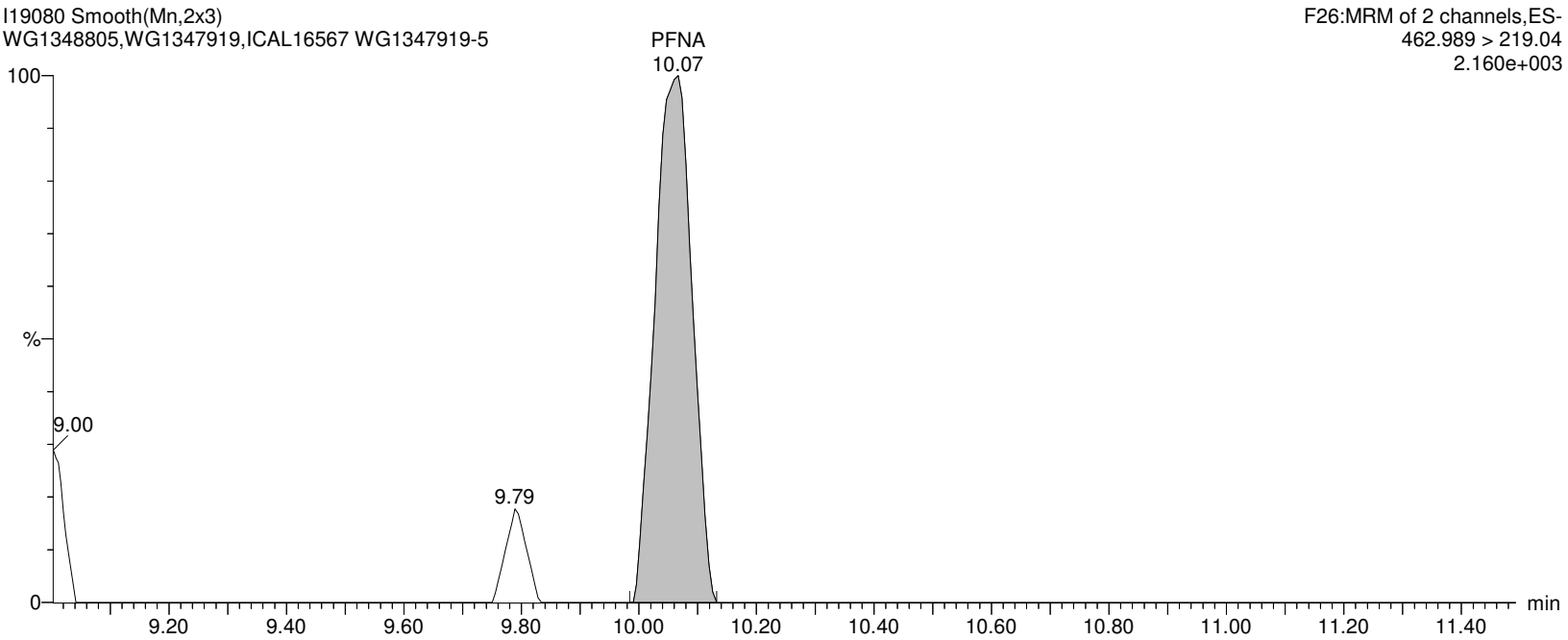



all concentration units in (ng/mL)

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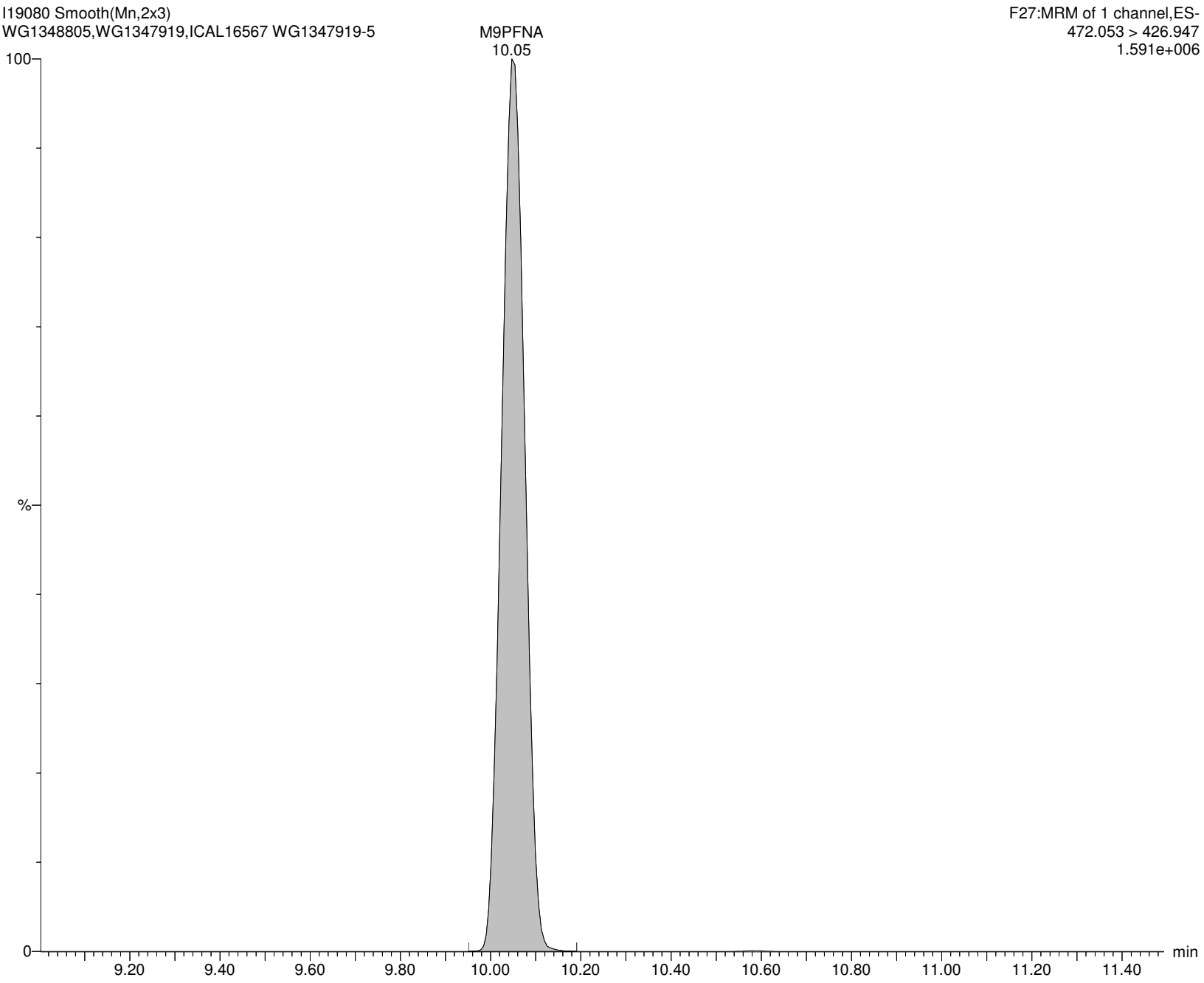
**M9PFNA**





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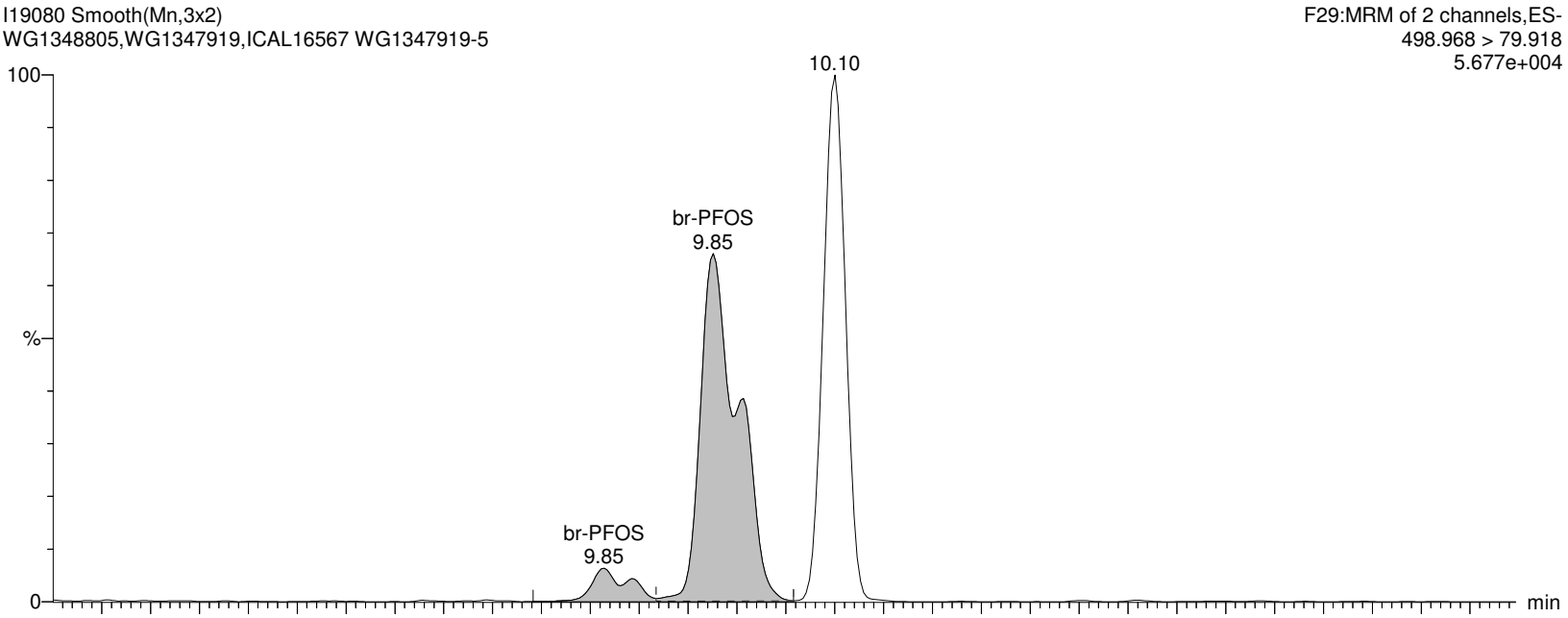
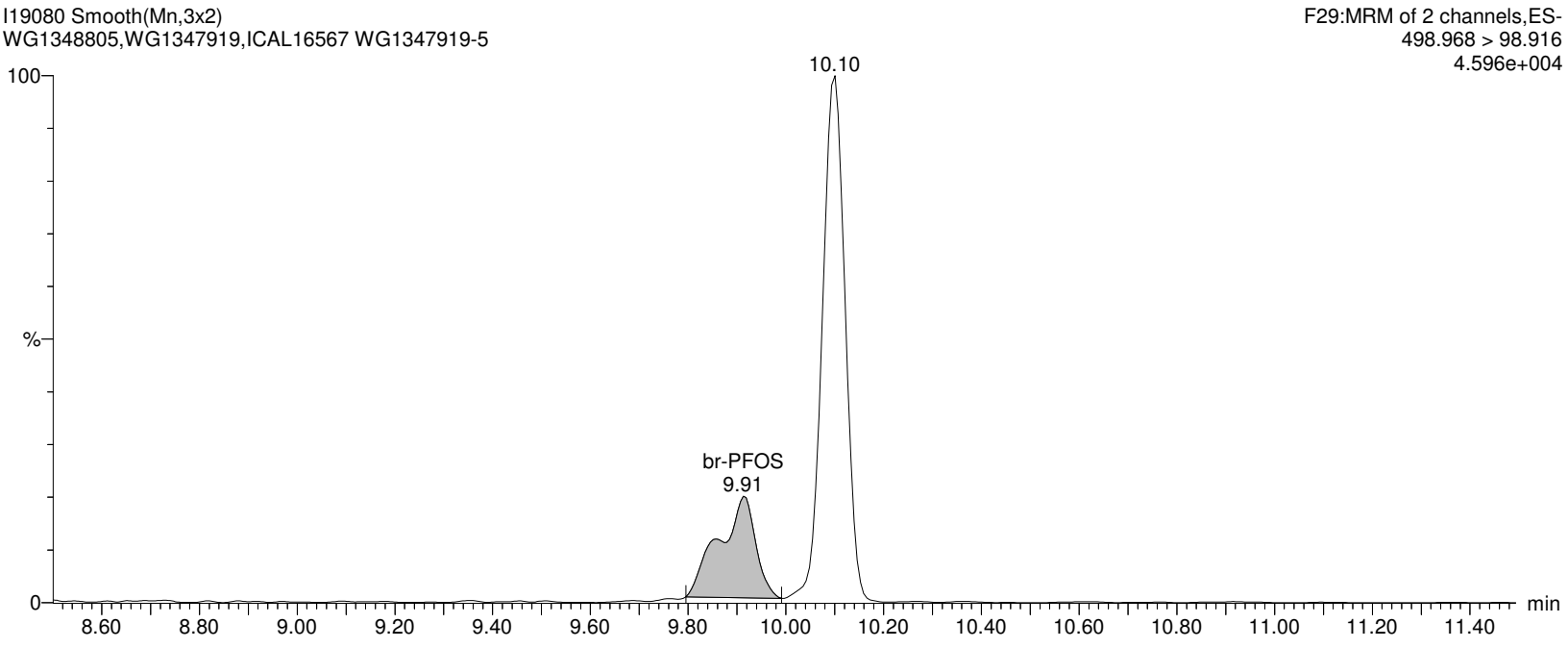
**br-PFOS**





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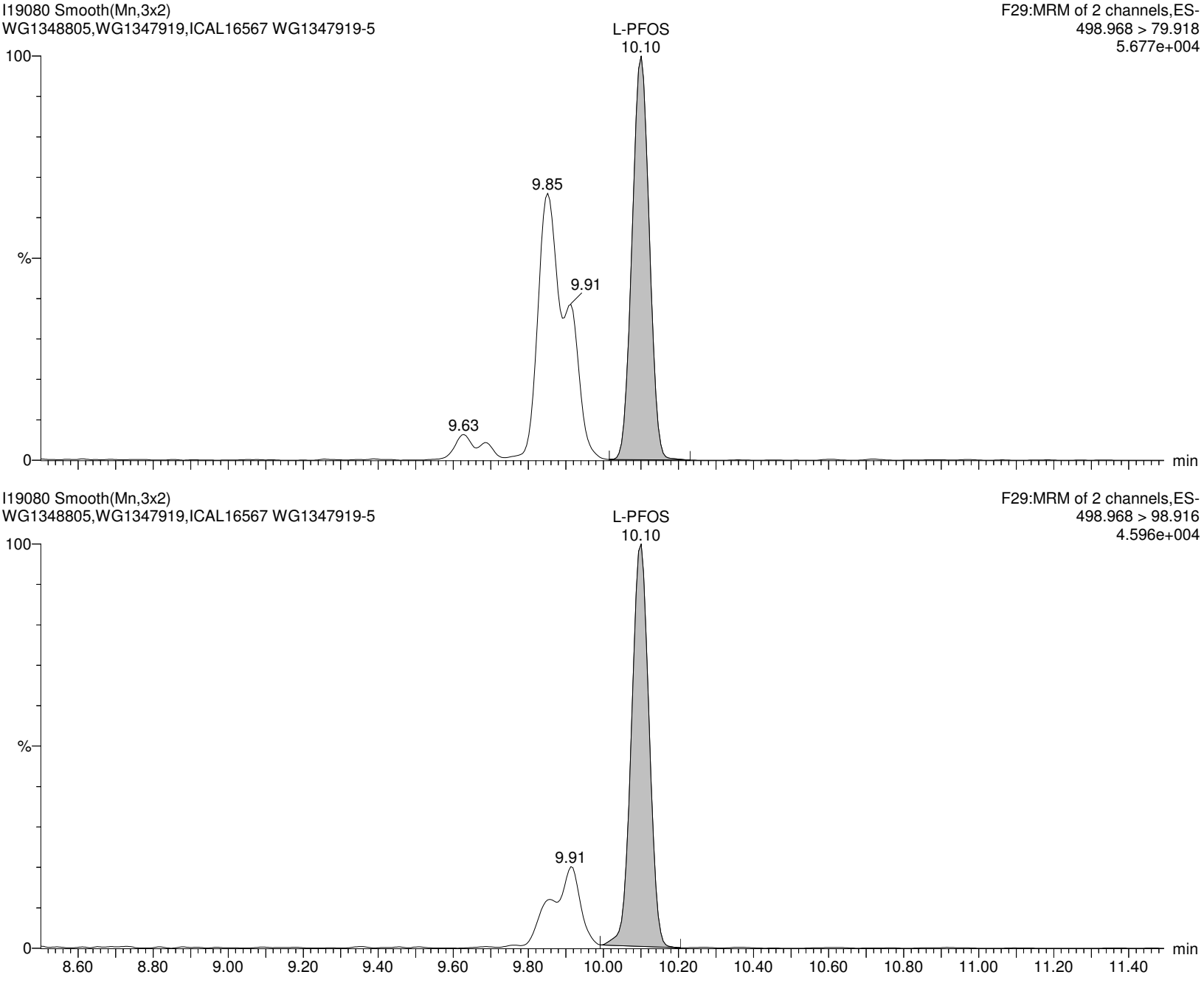
**L-PFOS**





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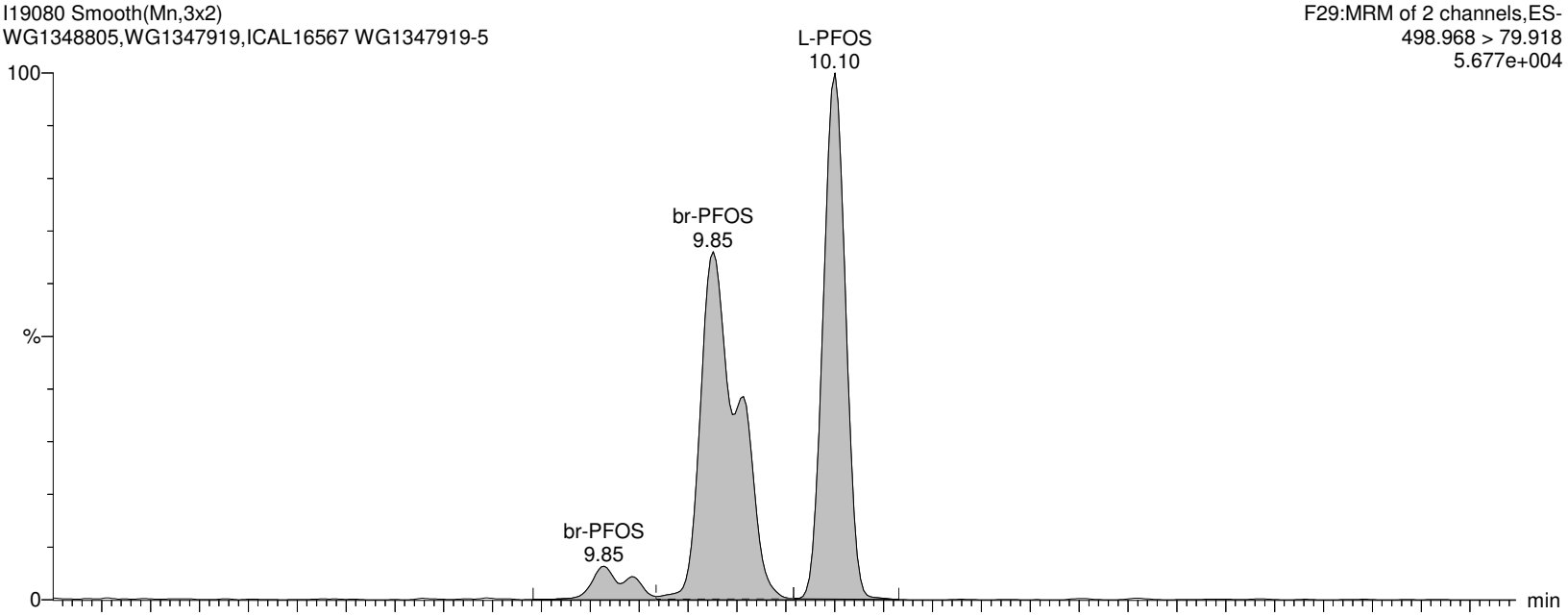
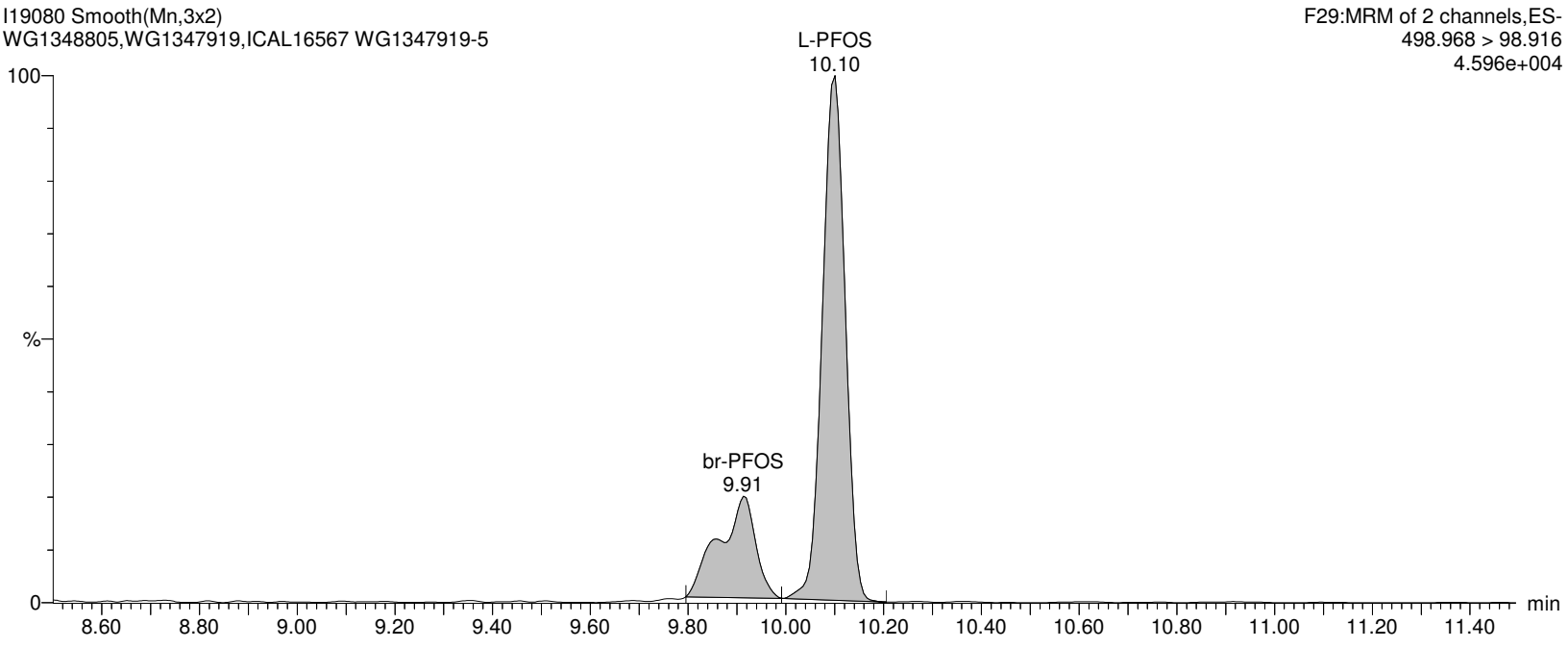
**PFOS**





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**Vial: 1:C,3**
**Instrument: XEVO-TQSmicro#QEA0276**
**Inlet Method Name: C:\MassLynx\Data\200309_537ISO.PRO\ACQUDB\LCMS_537_ISO_MeOH**
**Tune Method Name: C:\MassLynx\Data\200309_537ISO.PRO\ACQUDB\190709_TUNE.IPR**
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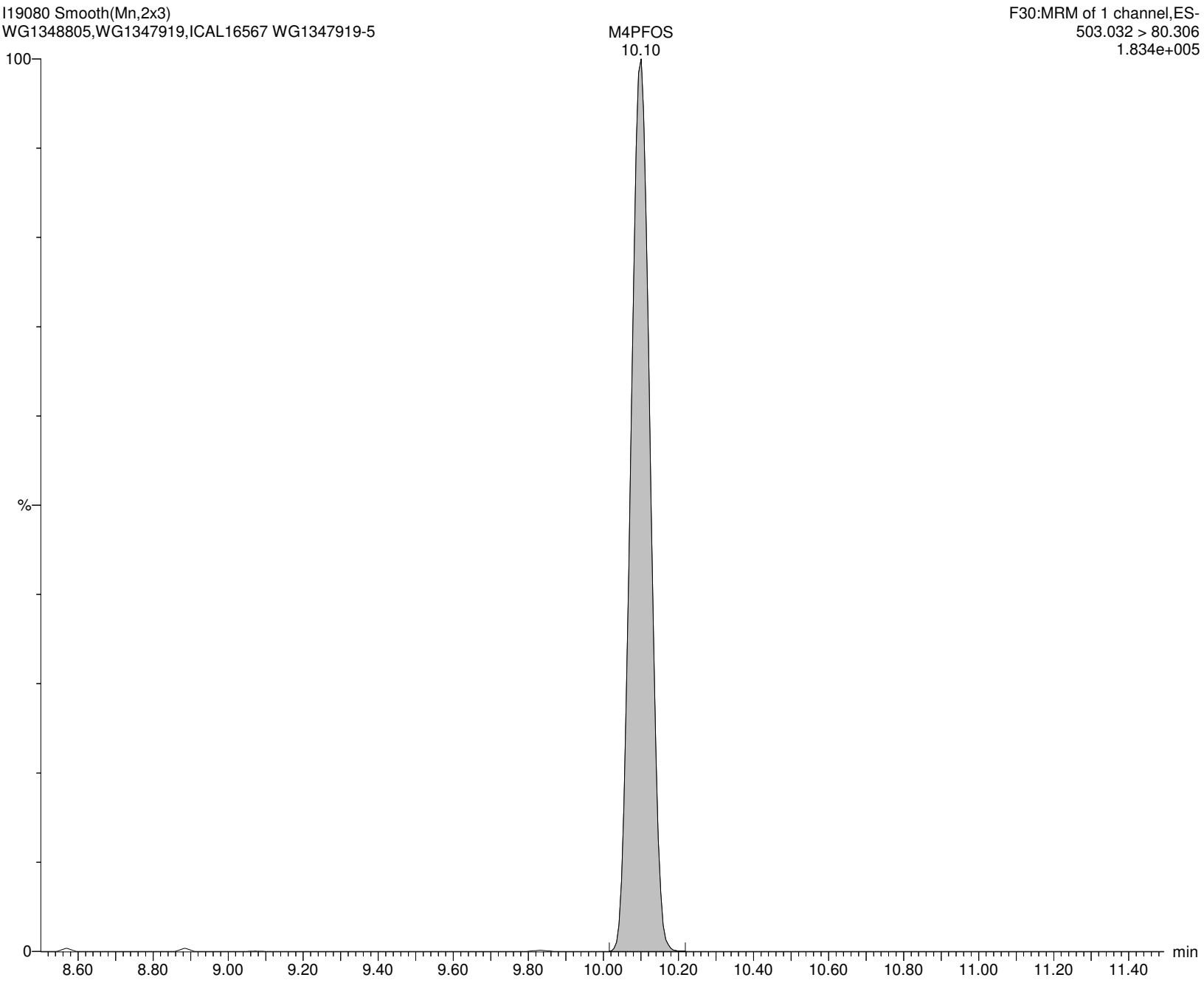



all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200309_537ISO.PRO\Data\WG1348805A.qld
Last Altered: Tuesday, March 17, 2020 11:10:13 Eastern Daylight Time
Printed: Tuesday, March 17, 2020 11:22:13 Eastern Daylight Time

**Name: I19080**
**ID: WG1347919-5**
**Date: 09-Mar-2020**
**Time: 15:56:46**
**Description: WG1348805,WG1347919,ICAL16567**
**User: LCMS01:JW**
**Vial: 1:C,3**
**Instrument: XEVO-TQSmicro#QEA0276**
**Inlet Method Name: C:\MassLynx\Data\200309_537ISO.PRO\ACQUDB\LCMS_537_ISO_MeOH**
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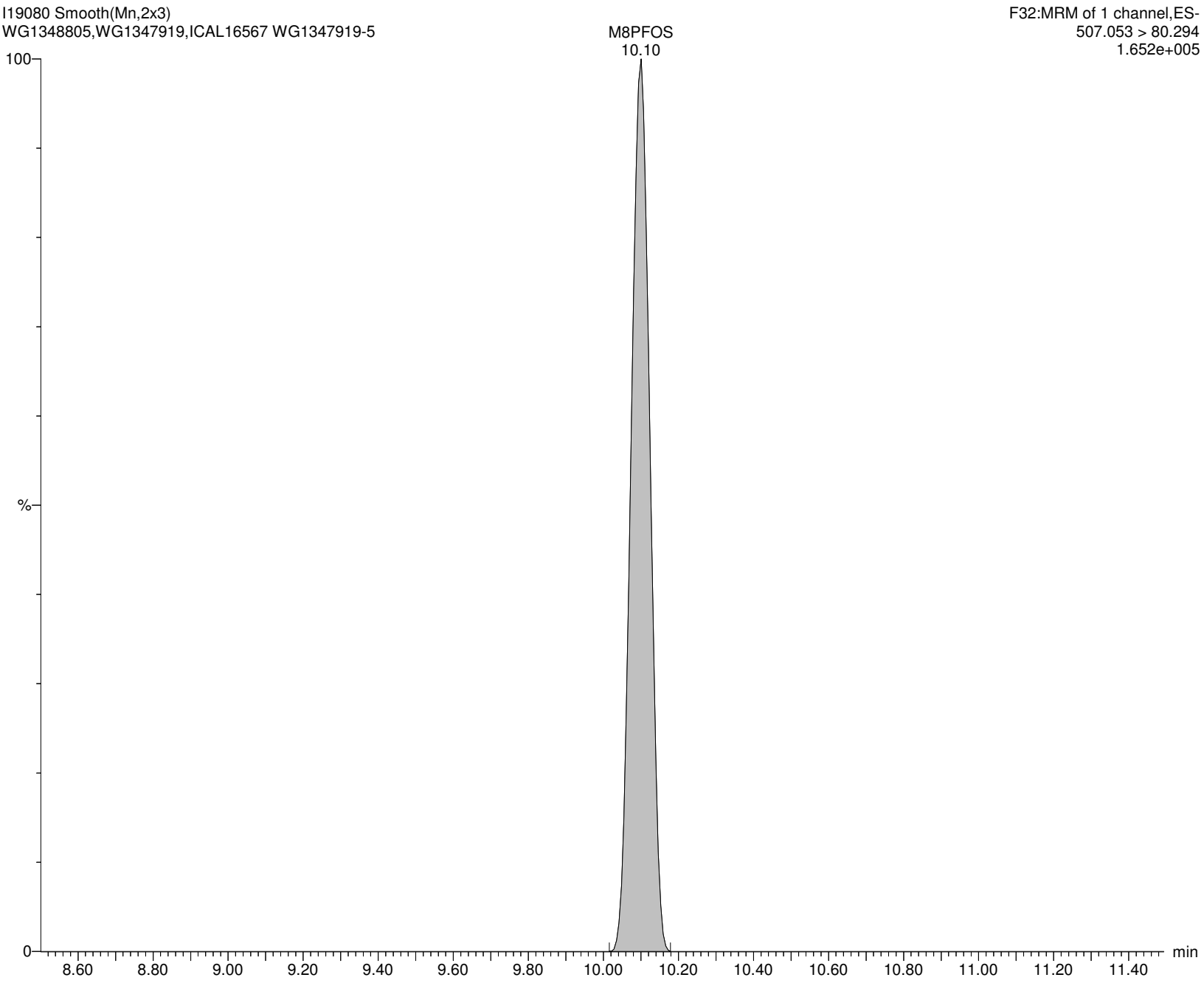
**M8PFOS**





all concentration units in (ng/mL)

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Dataset: C:\MassLynx\Data\200309_537ISO.PRO\Data\WG1348805A.qld
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**Vial: 1:C,3**
**Instrument: XEVO-TQSmicro#QEA0276**
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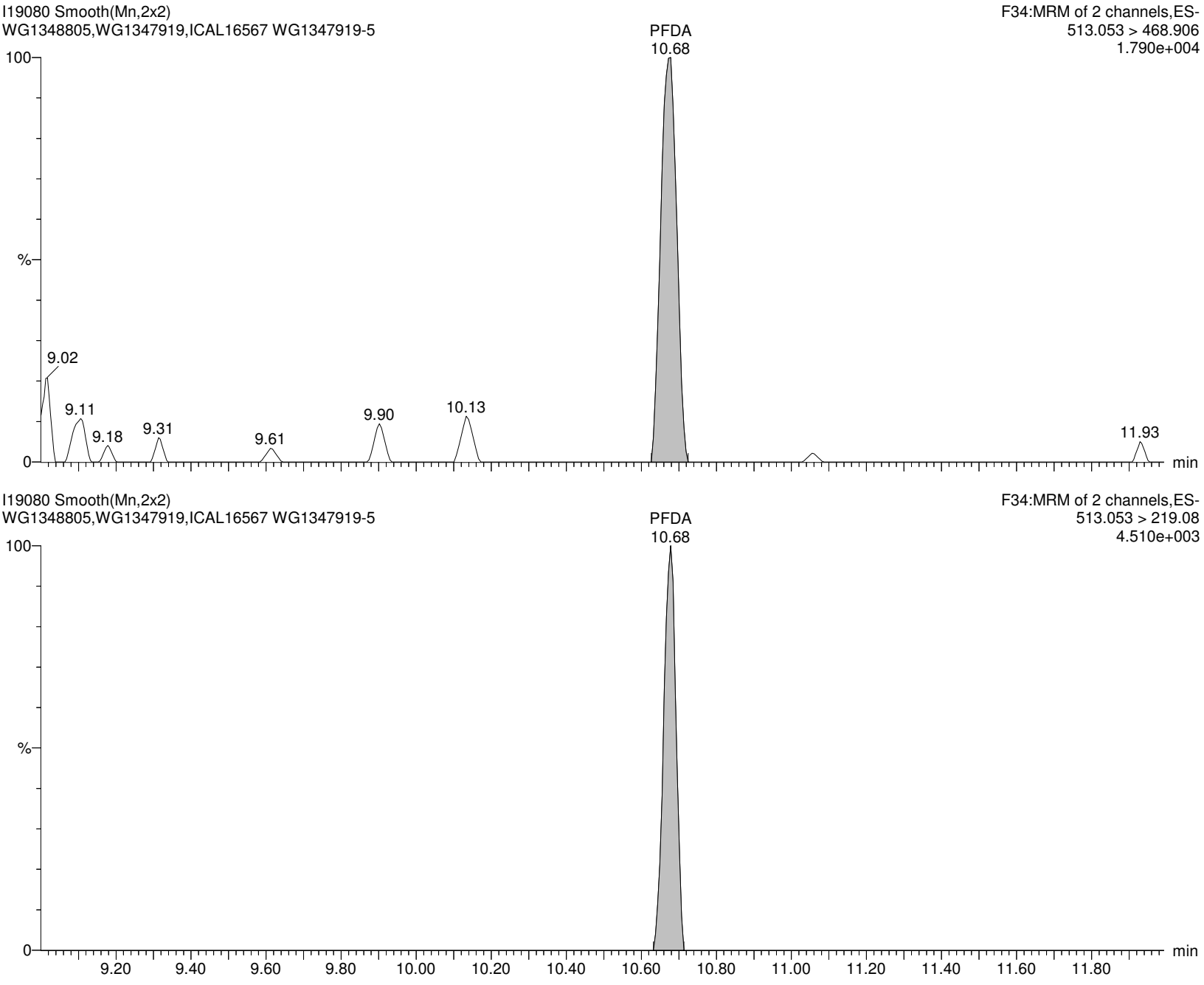
**PFDA**





all concentration units in (ng/mL)

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**Vial: 1:C,3**
**Instrument: XEVO-TQSmicro#QEA0276**
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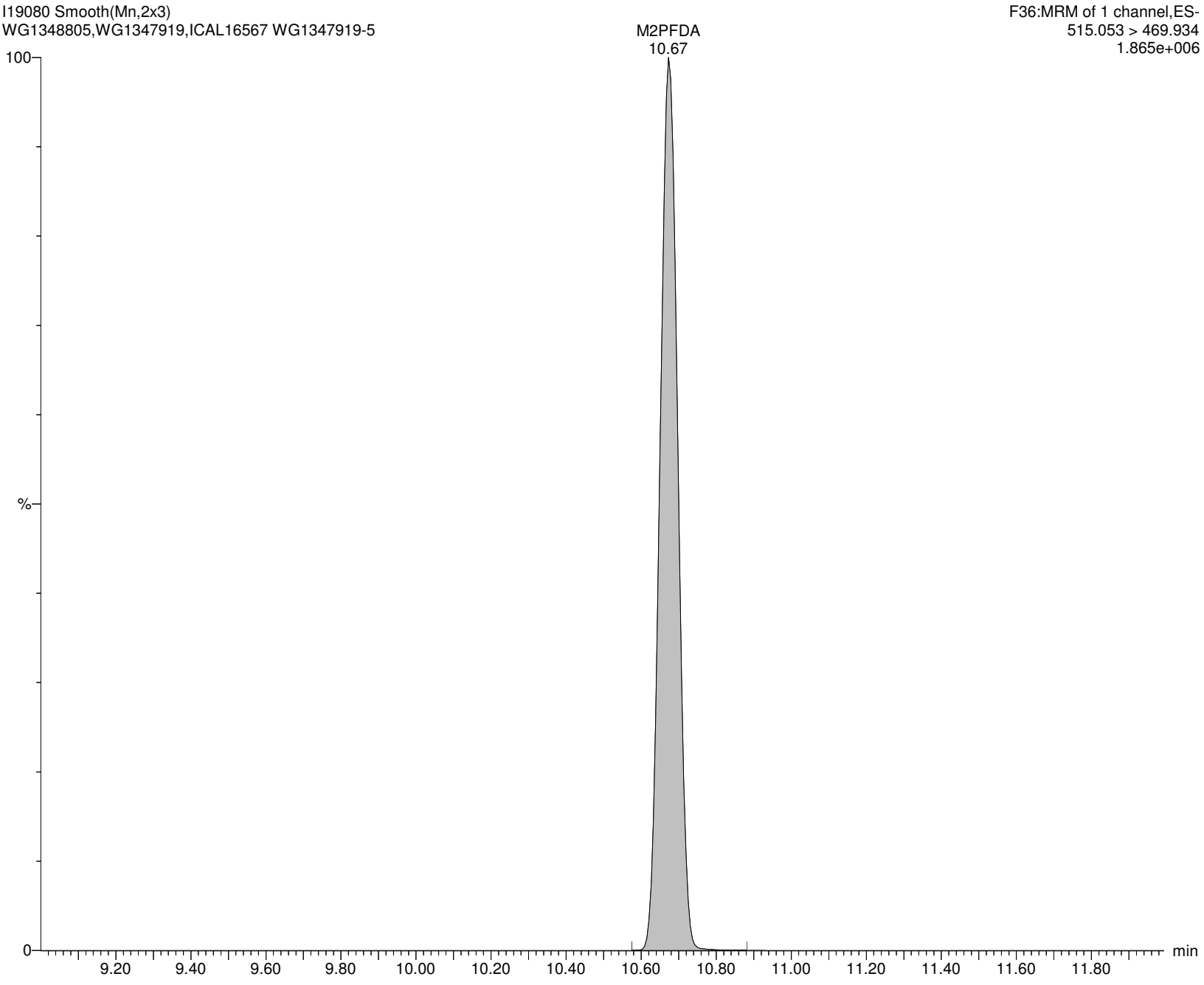
**MS Method Name: C:\MassLynx\Data\200309_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**M2PFDA**





all concentration units in (ng/mL)

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**Instrument: XEVO-TQSmicro#QEA0276**
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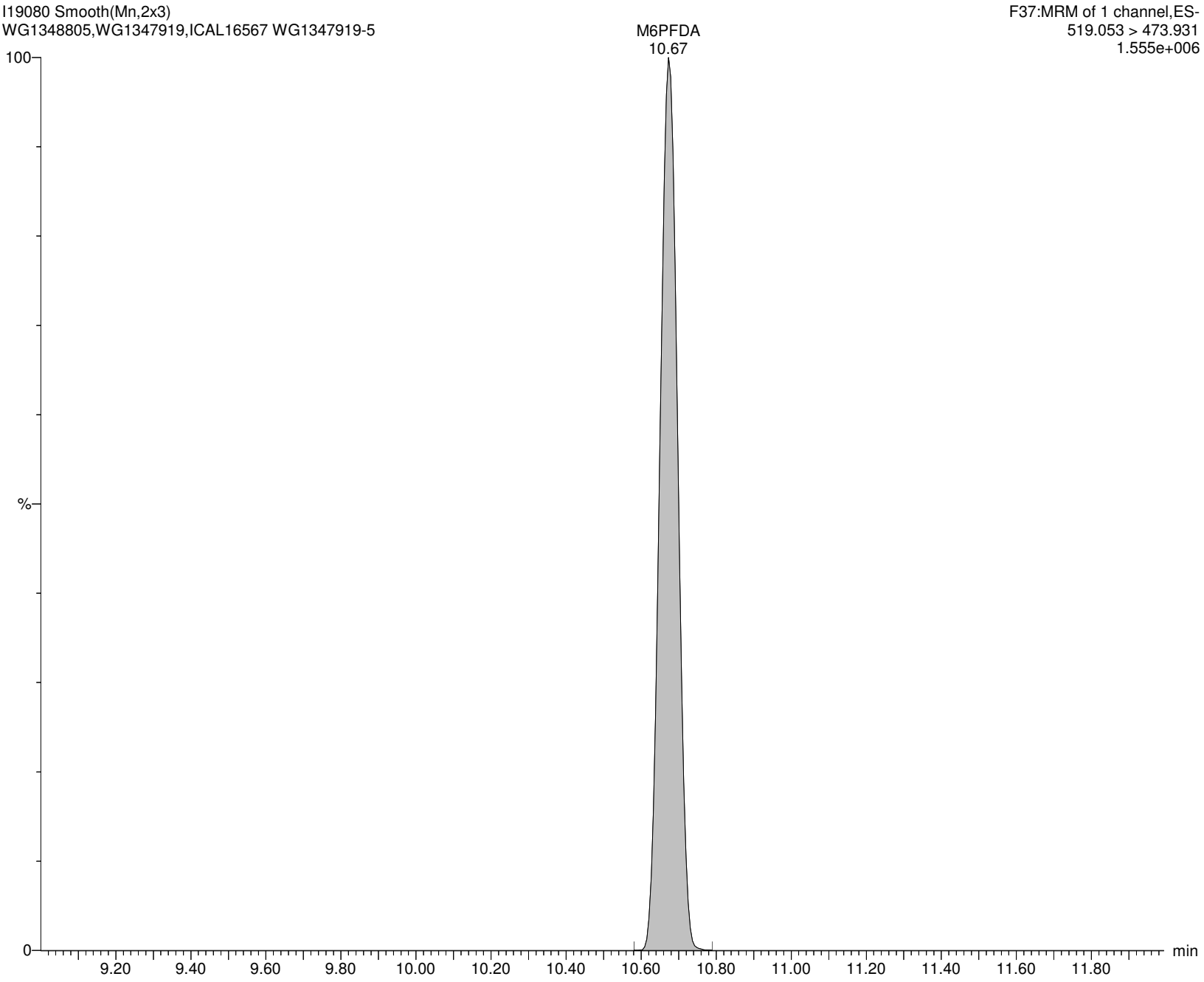
**MS Method Name: C:\MassLynx\Data\200309_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**M6PFDA**





all concentration units in (ng/mL)

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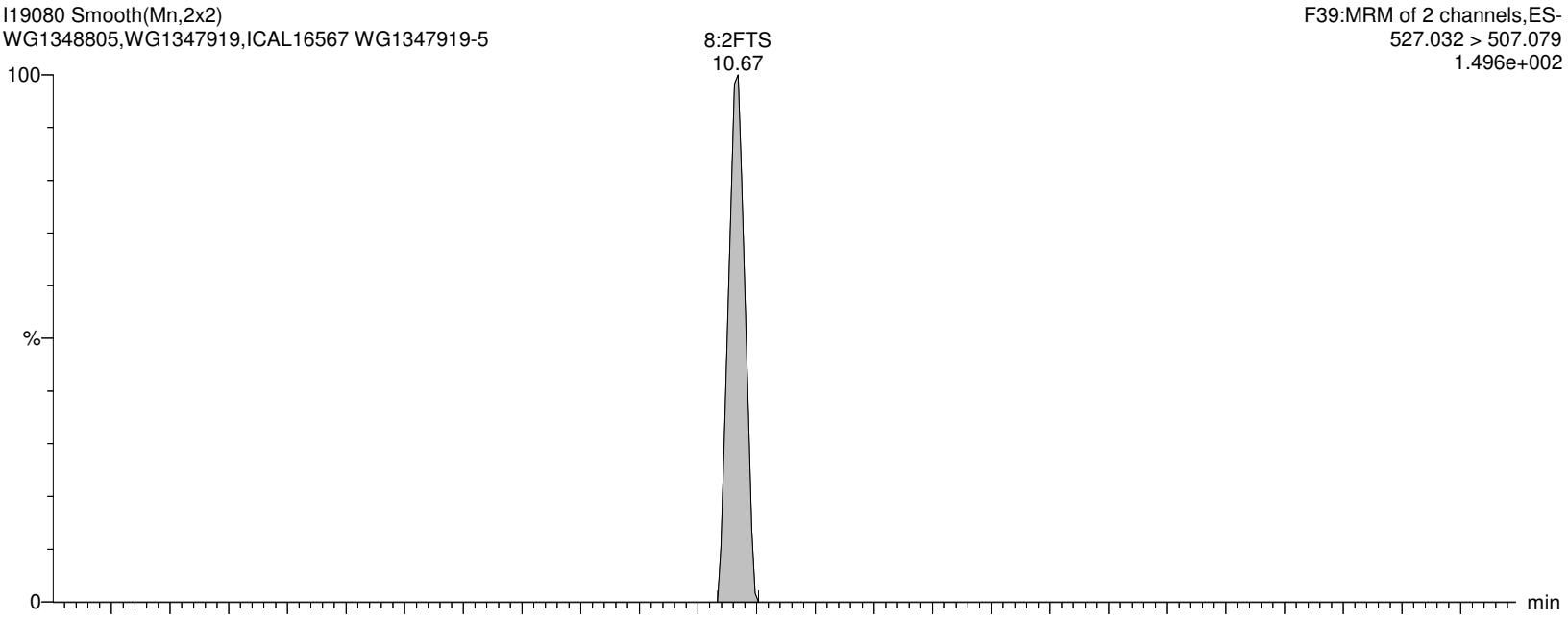
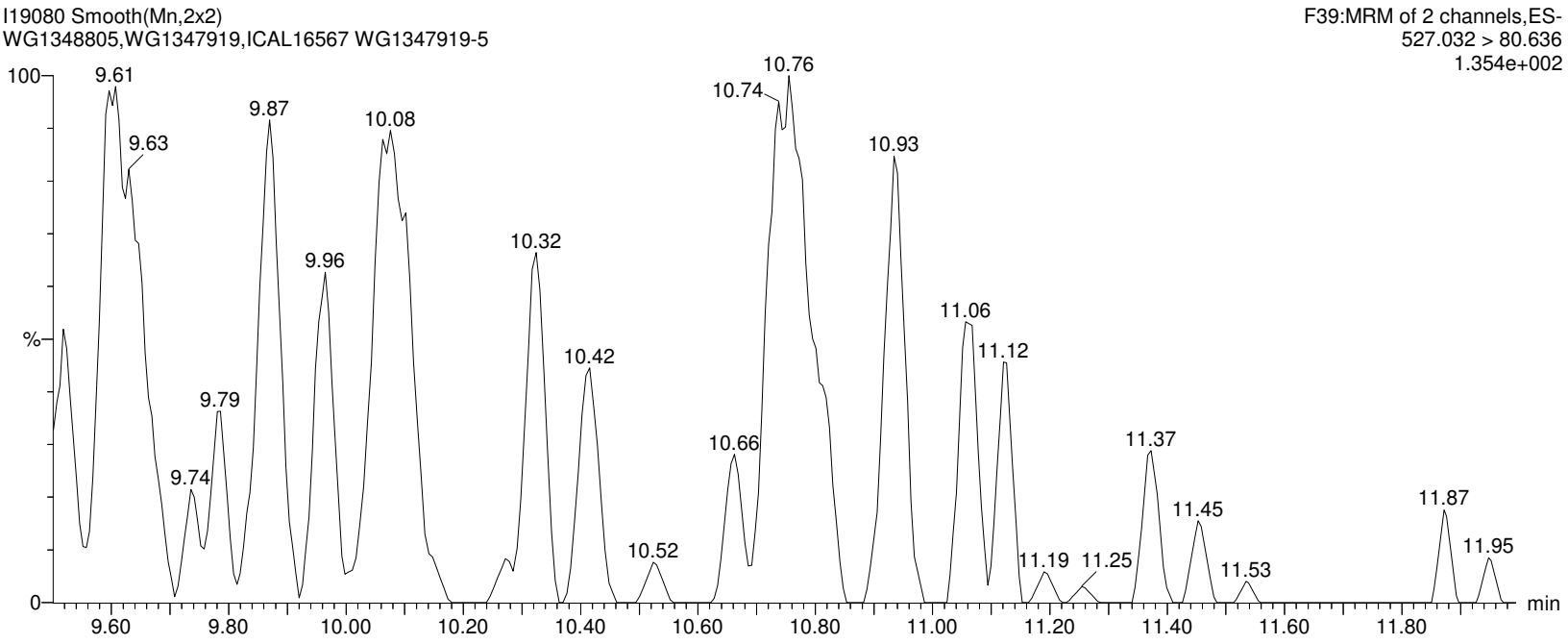
**8:2FTS**





all concentration units in (ng/mL)

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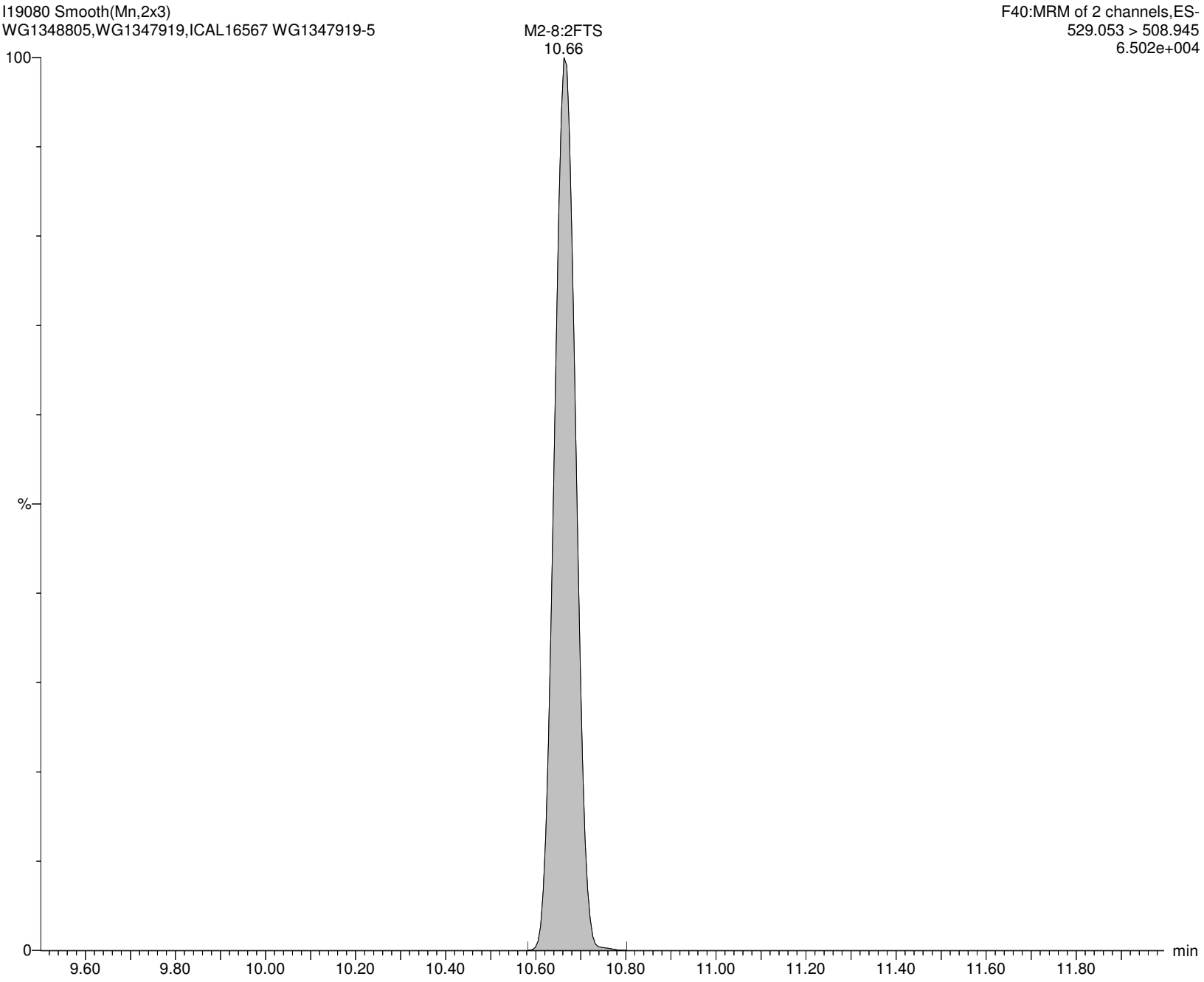
**M2-8:2FTS**





all concentration units in (ng/mL)

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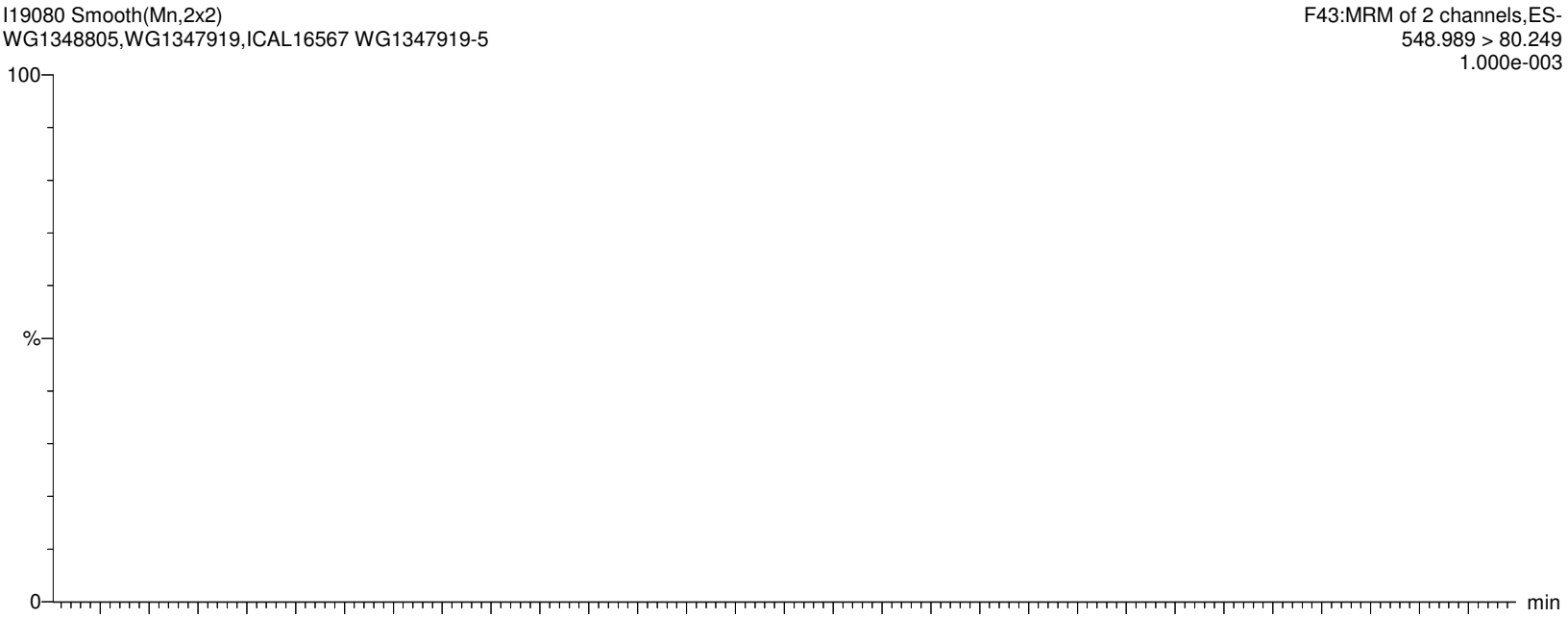
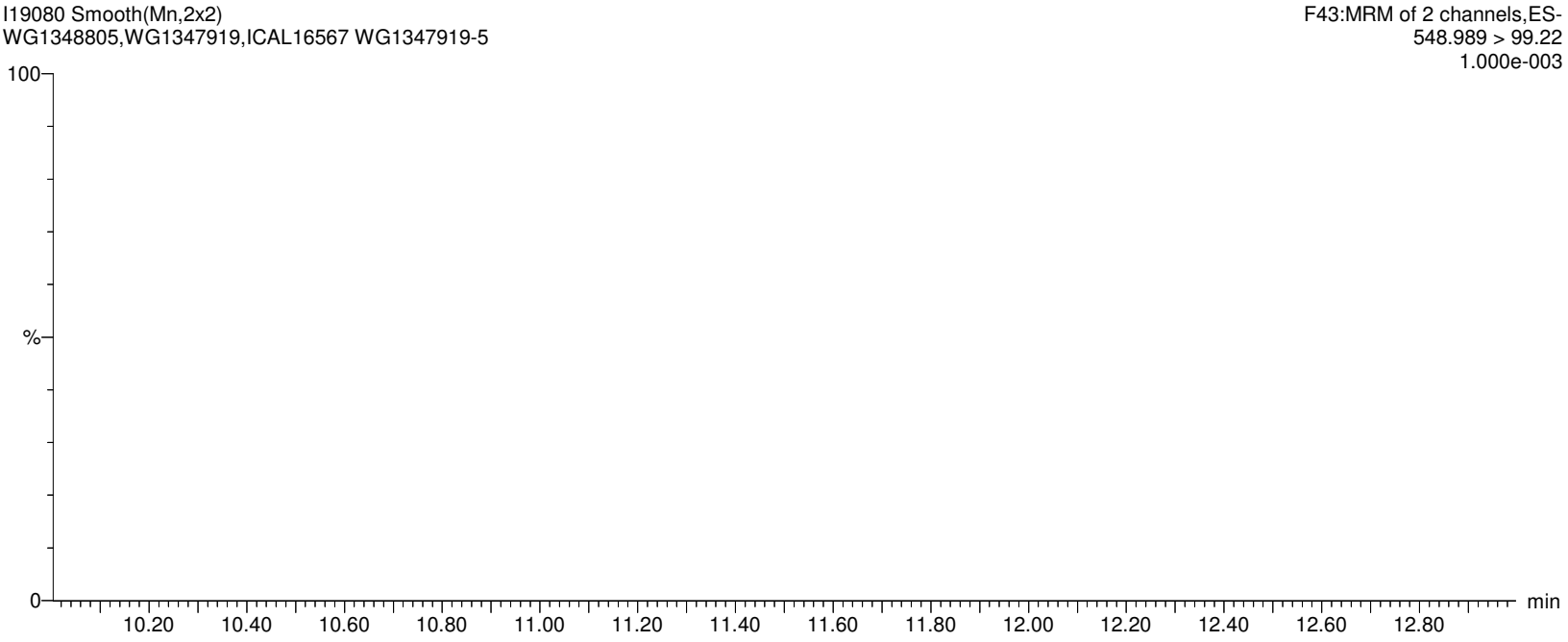
**MS Method Name: C:\MassLynx\Data\200309_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**PFNS**





all concentration units in (ng/mL)

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**Inlet Method Name: C:\MassLynx\Data\200309_537ISO.PRO\ACQUDB\LCMS_537_ISO_MeOH**
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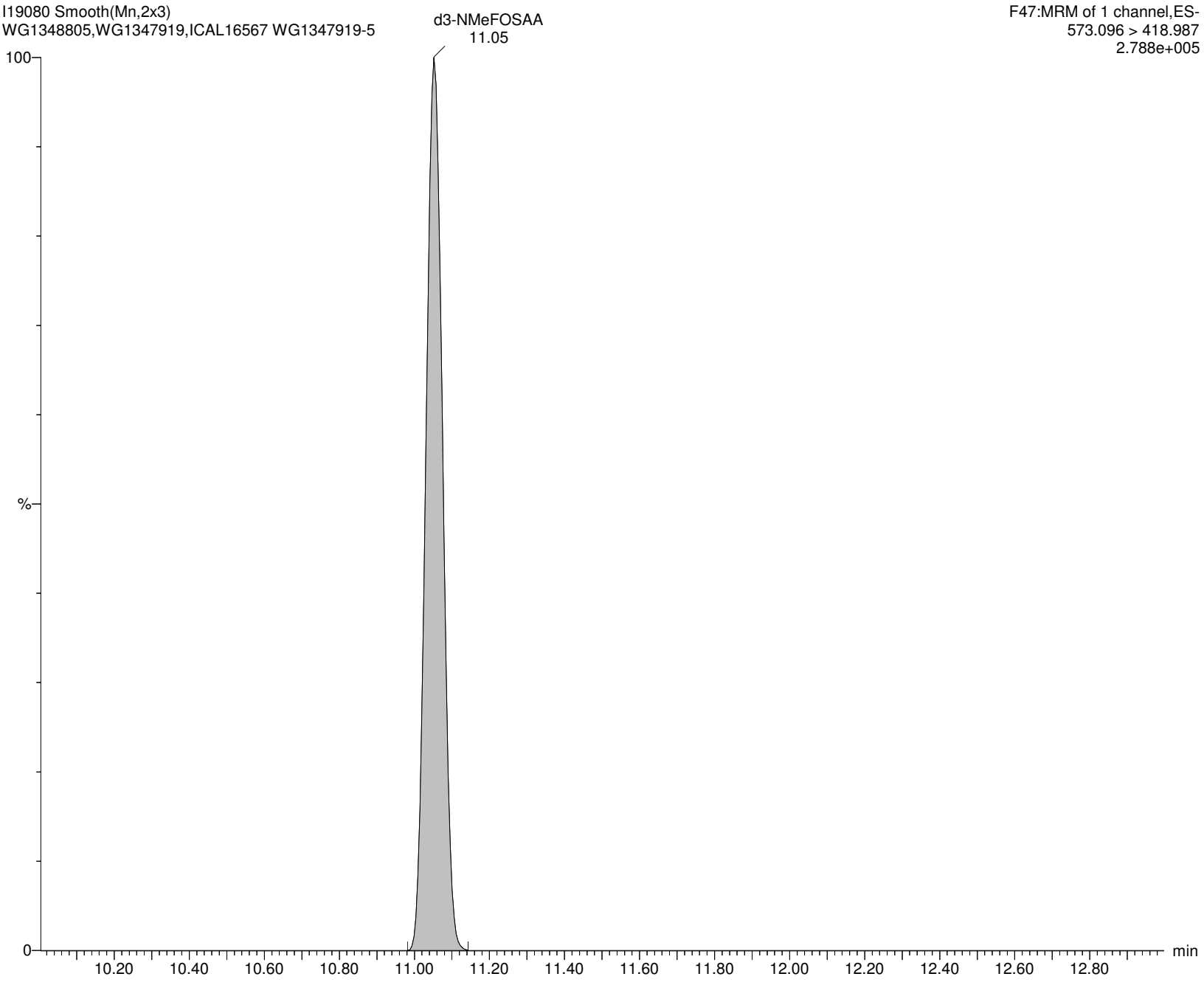
**d3-NMeFOSAA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200309_537ISO.PRO\Data\WG1348805A.qld
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**Instrument: XEVO-TQSmicro#QEA0276**
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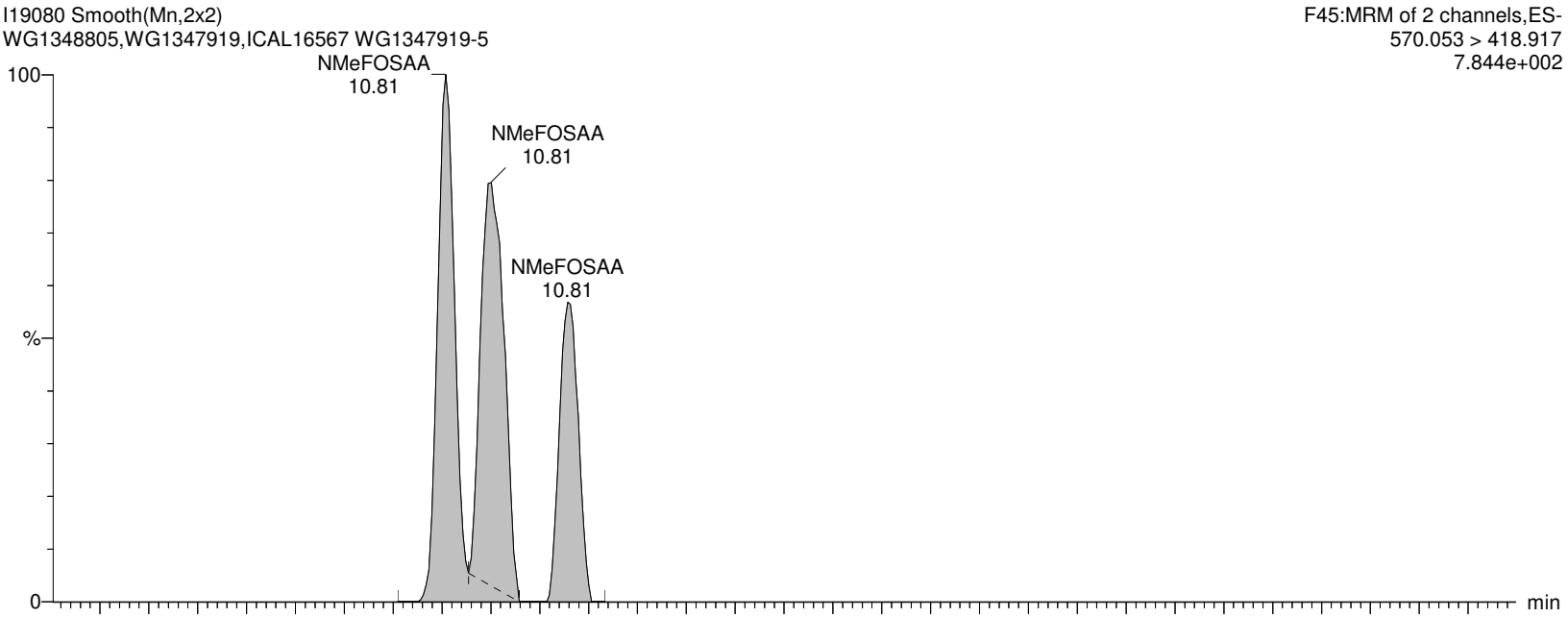
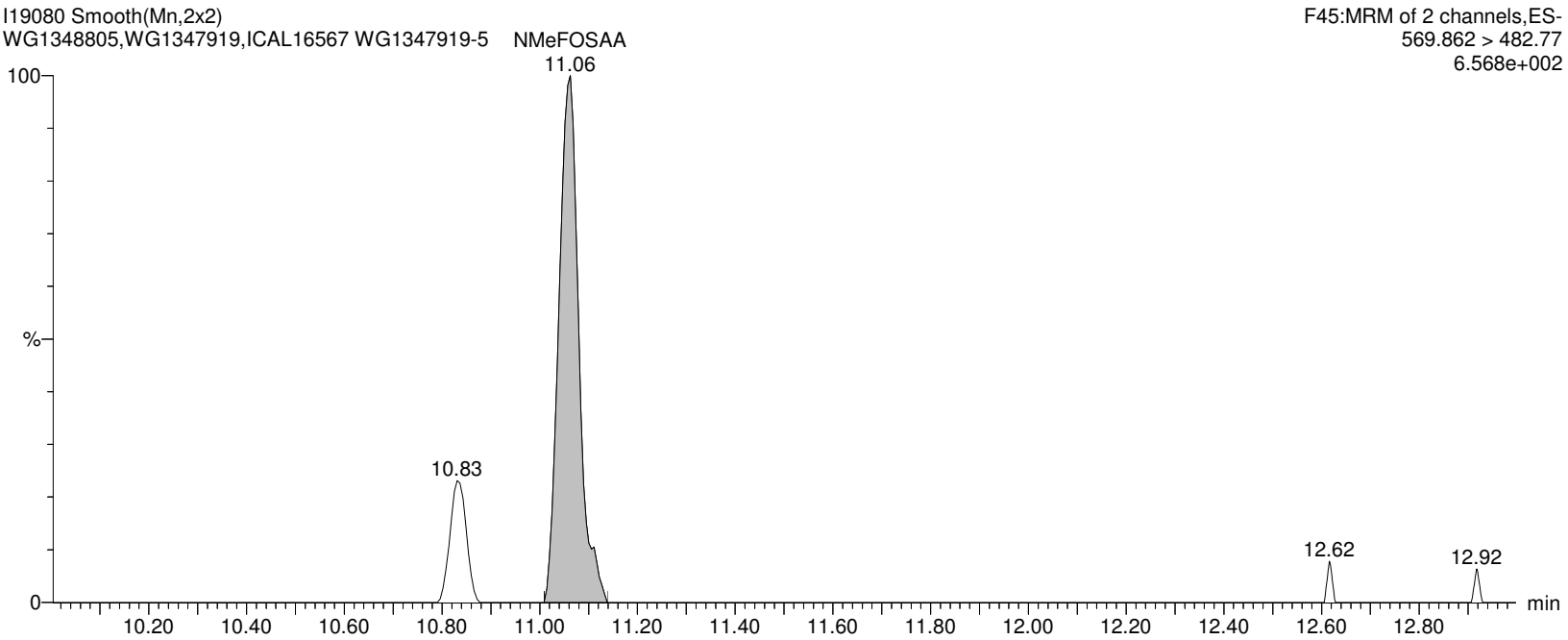
**NMeFOSAA**





all concentration units in (ng/mL)

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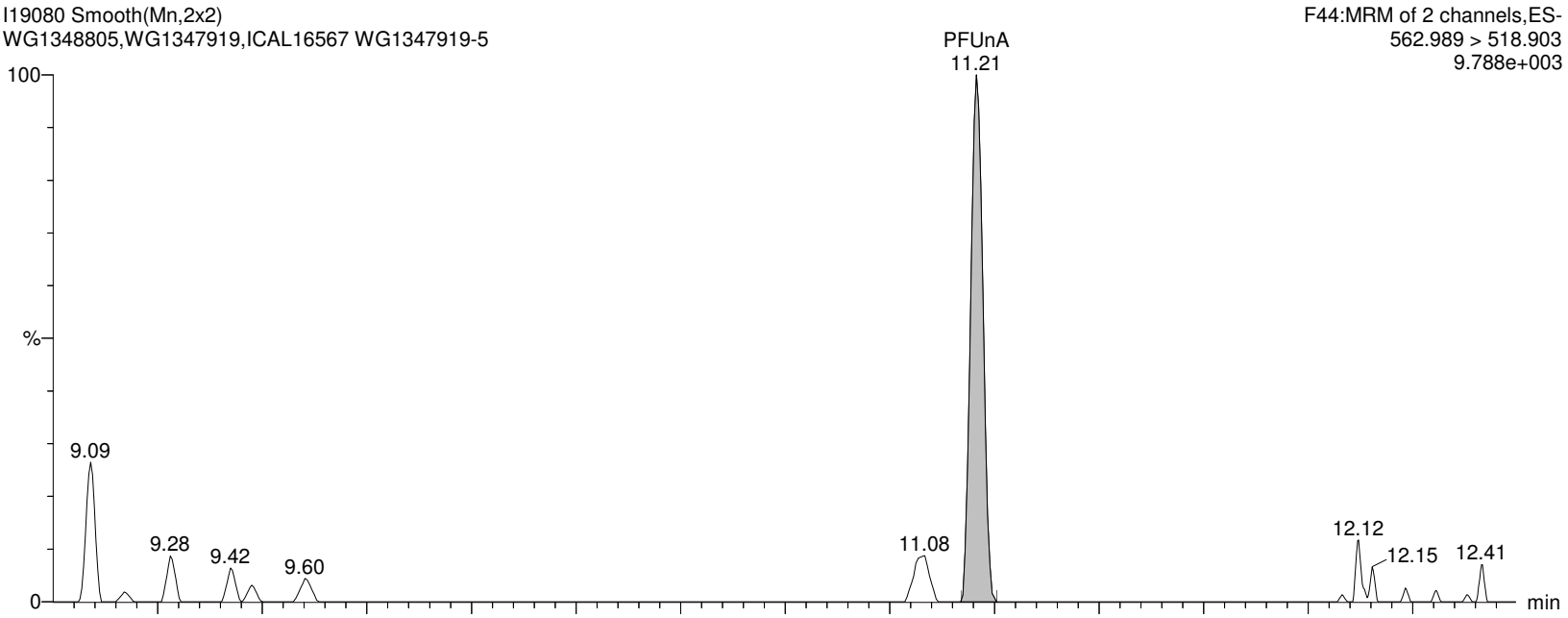
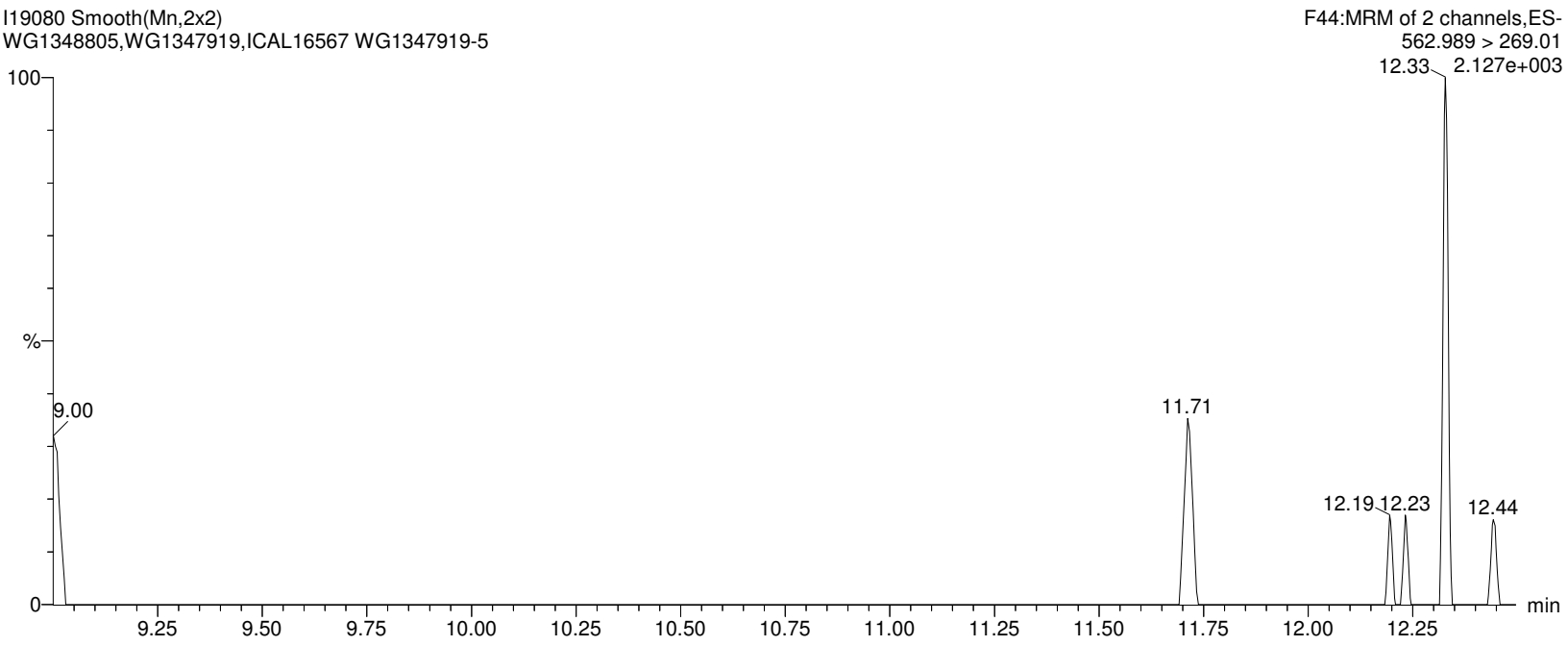
**PFUnA**





all concentration units in (ng/mL)

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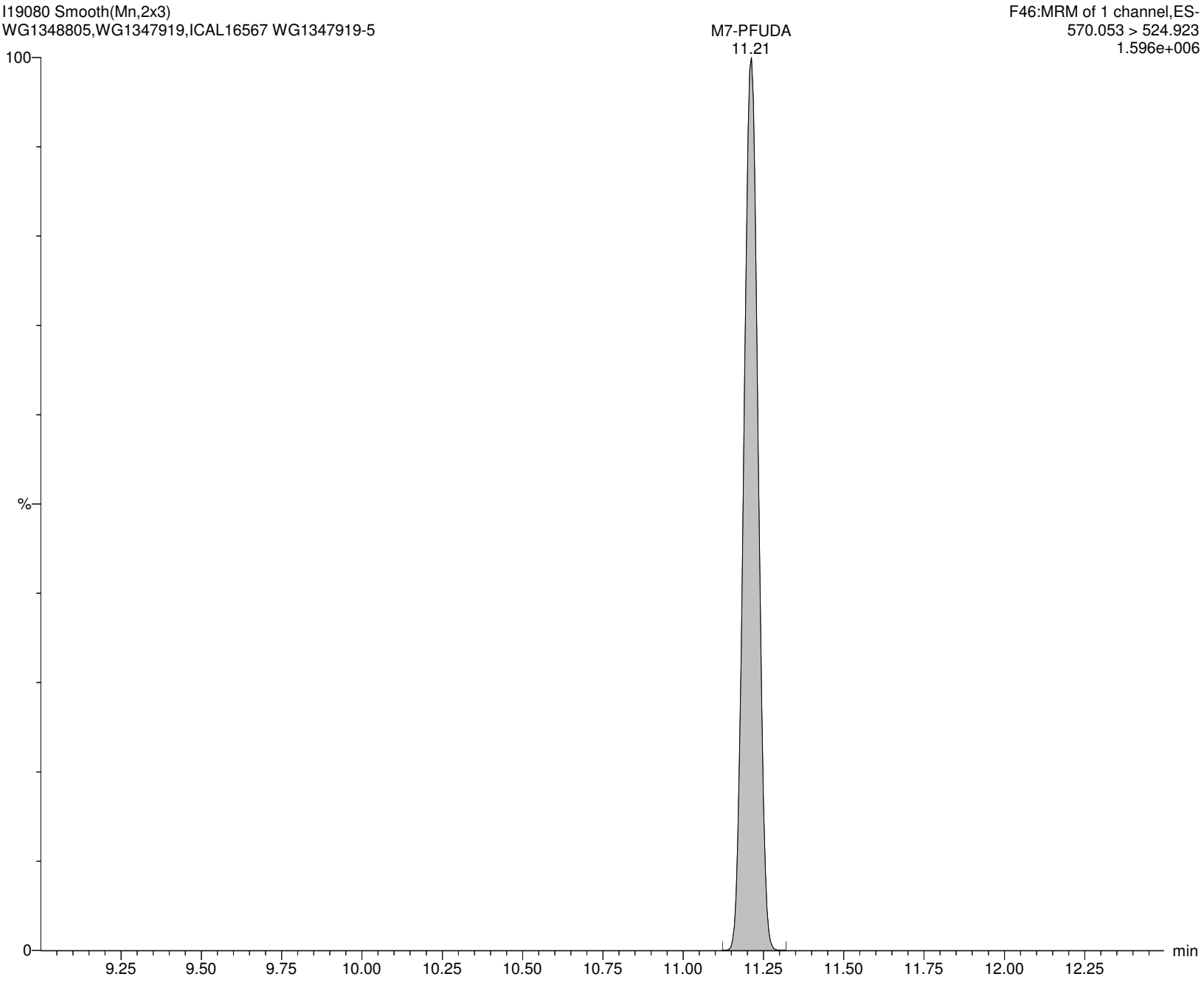
**M7-PFUDA**





all concentration units in (ng/mL)

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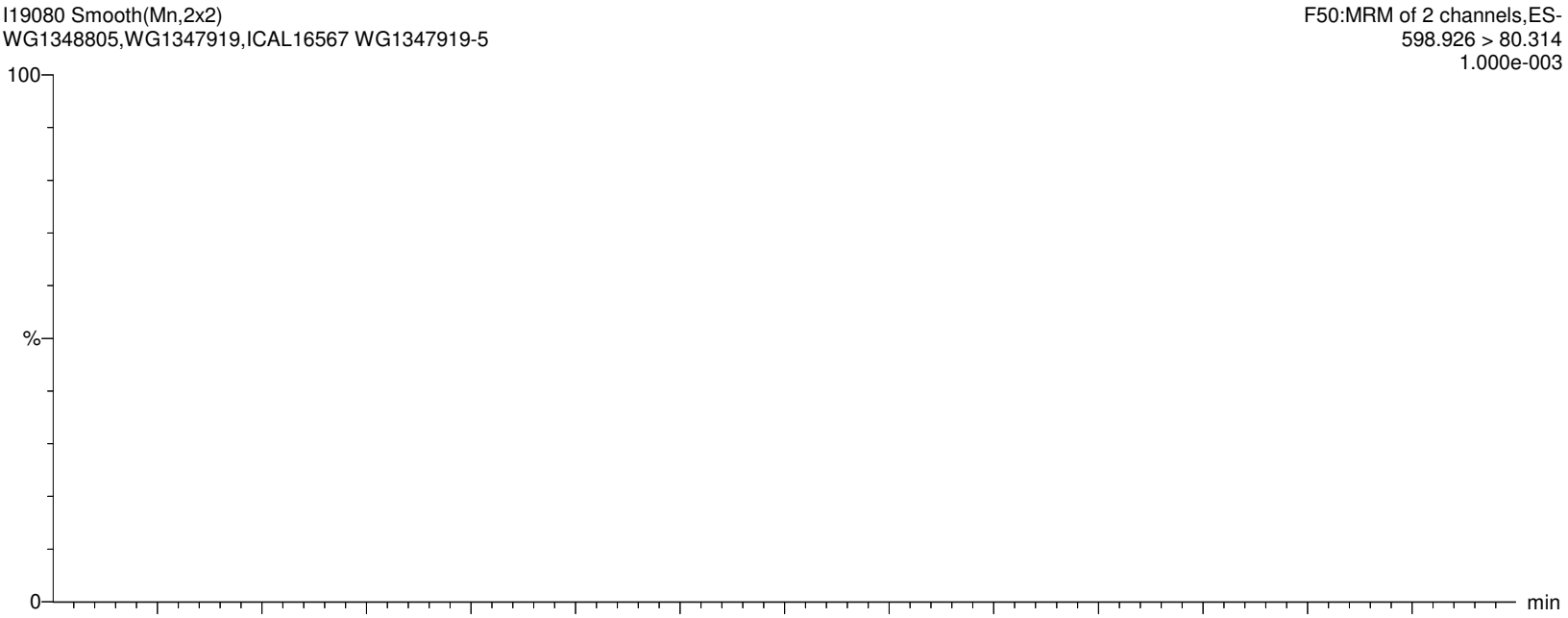
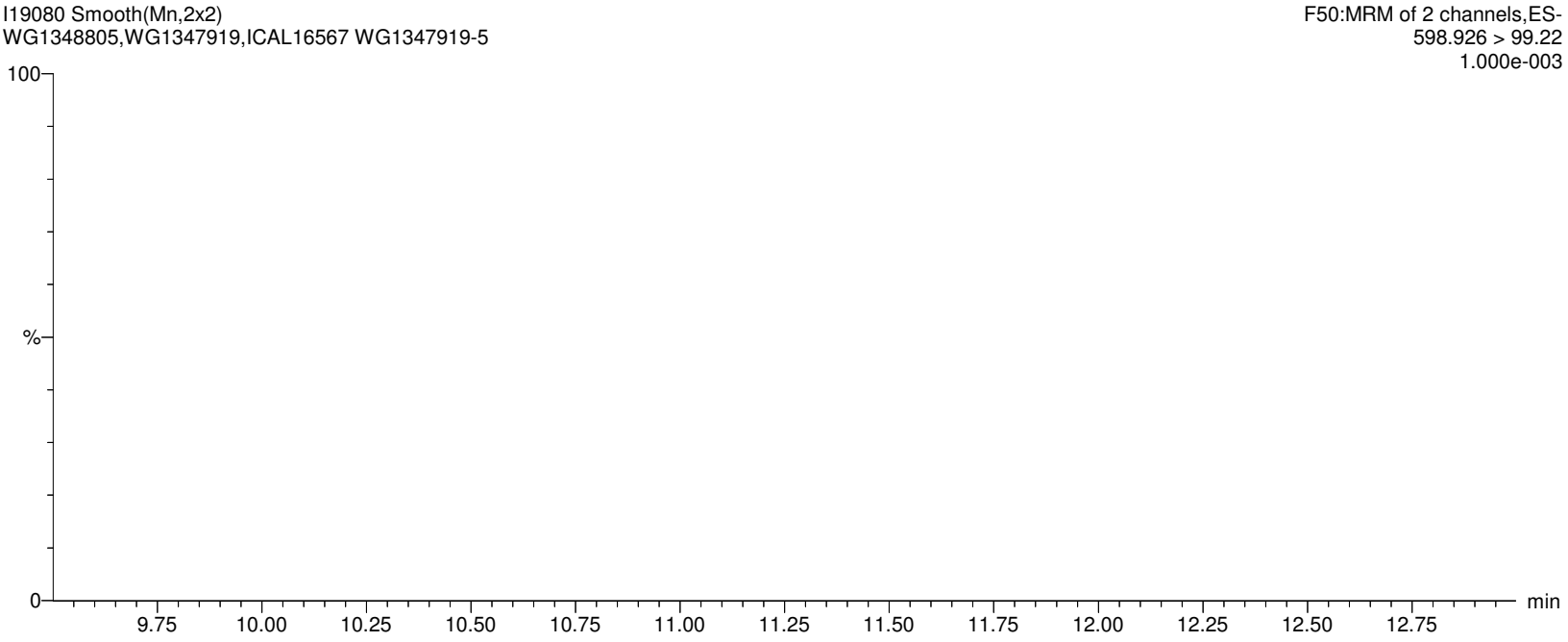
**PFDS**





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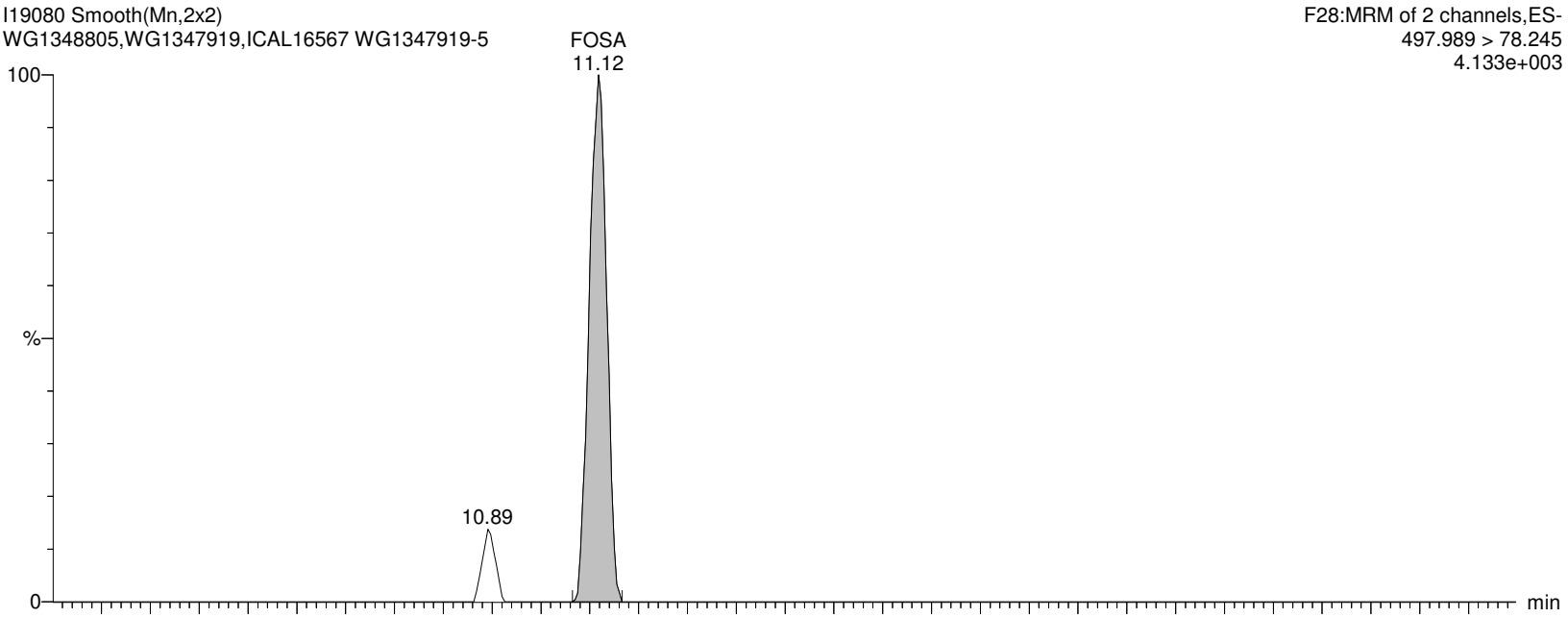
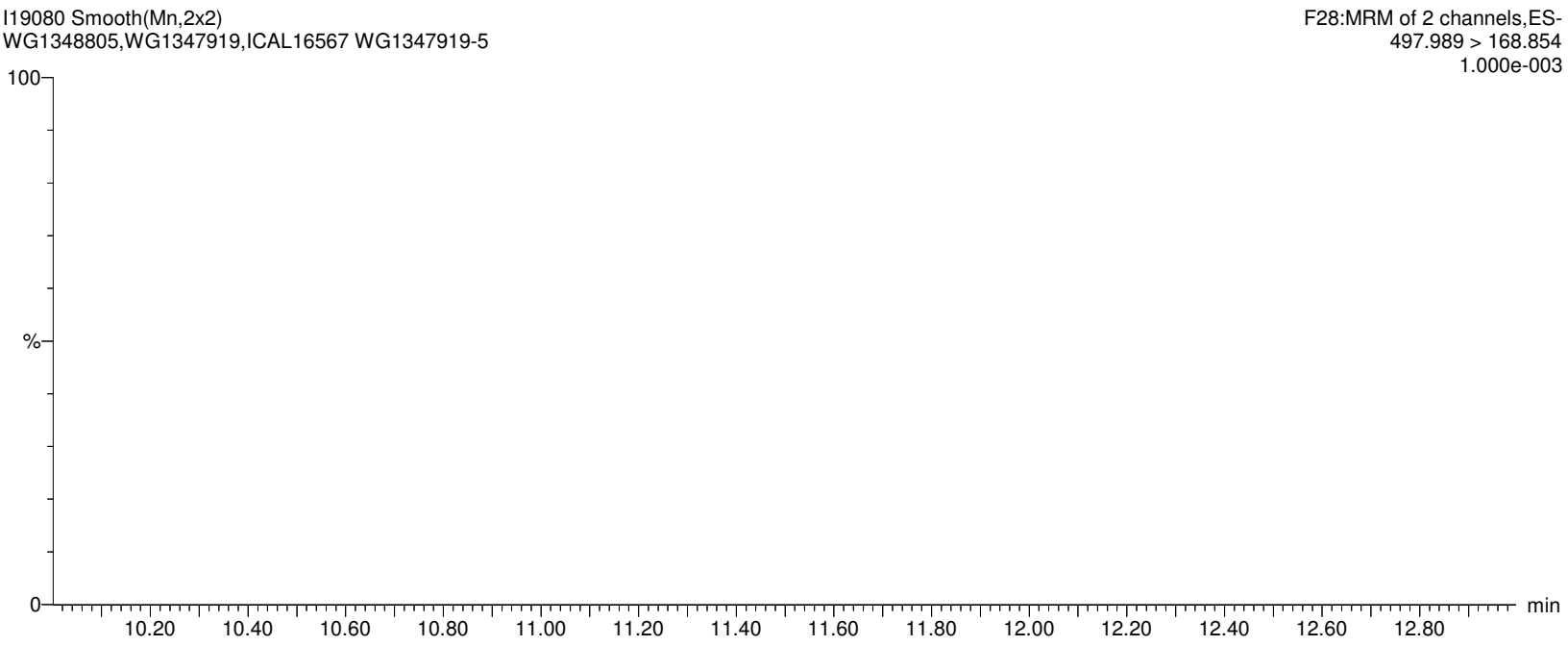
**FOSA**





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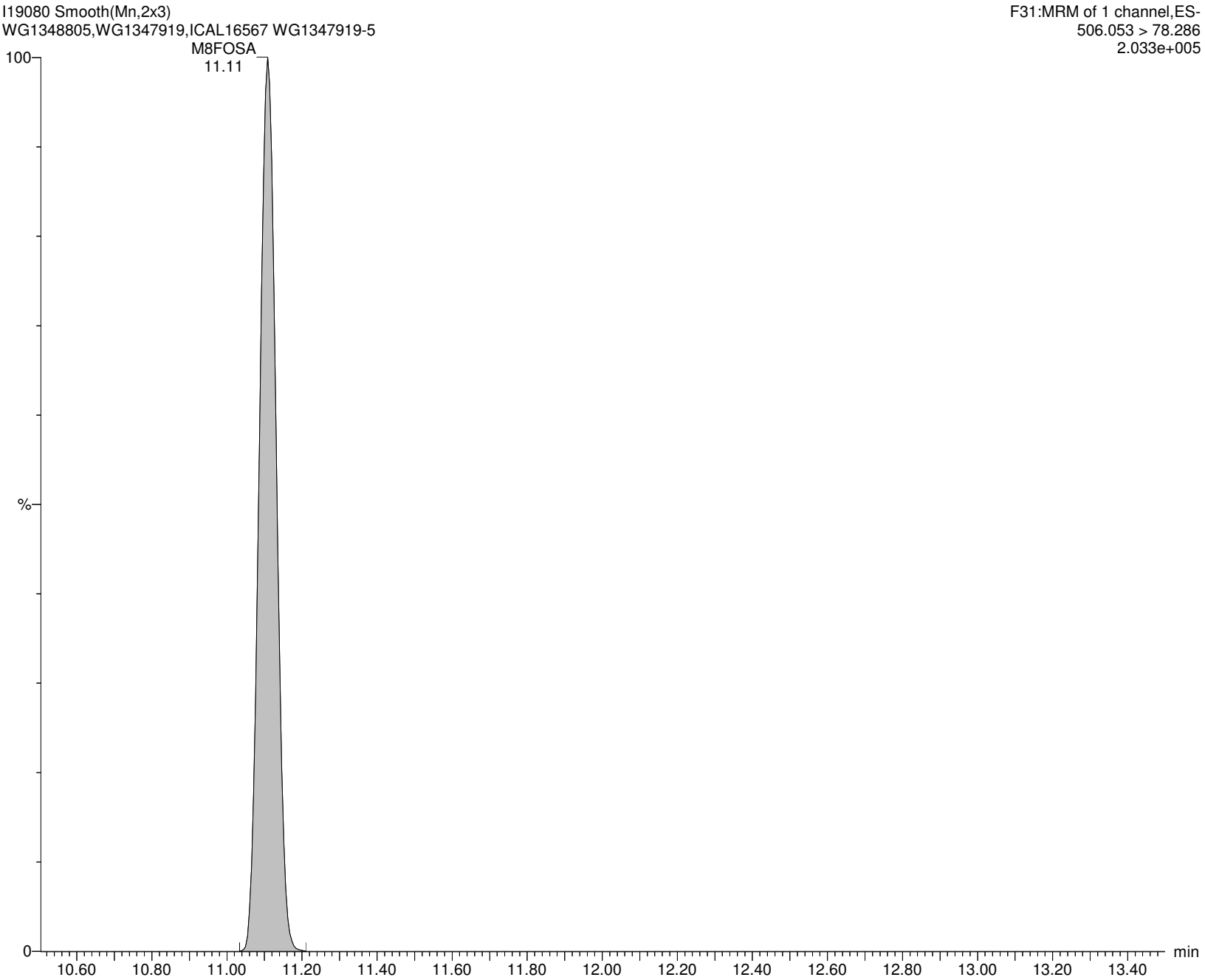
**M8FOSA**





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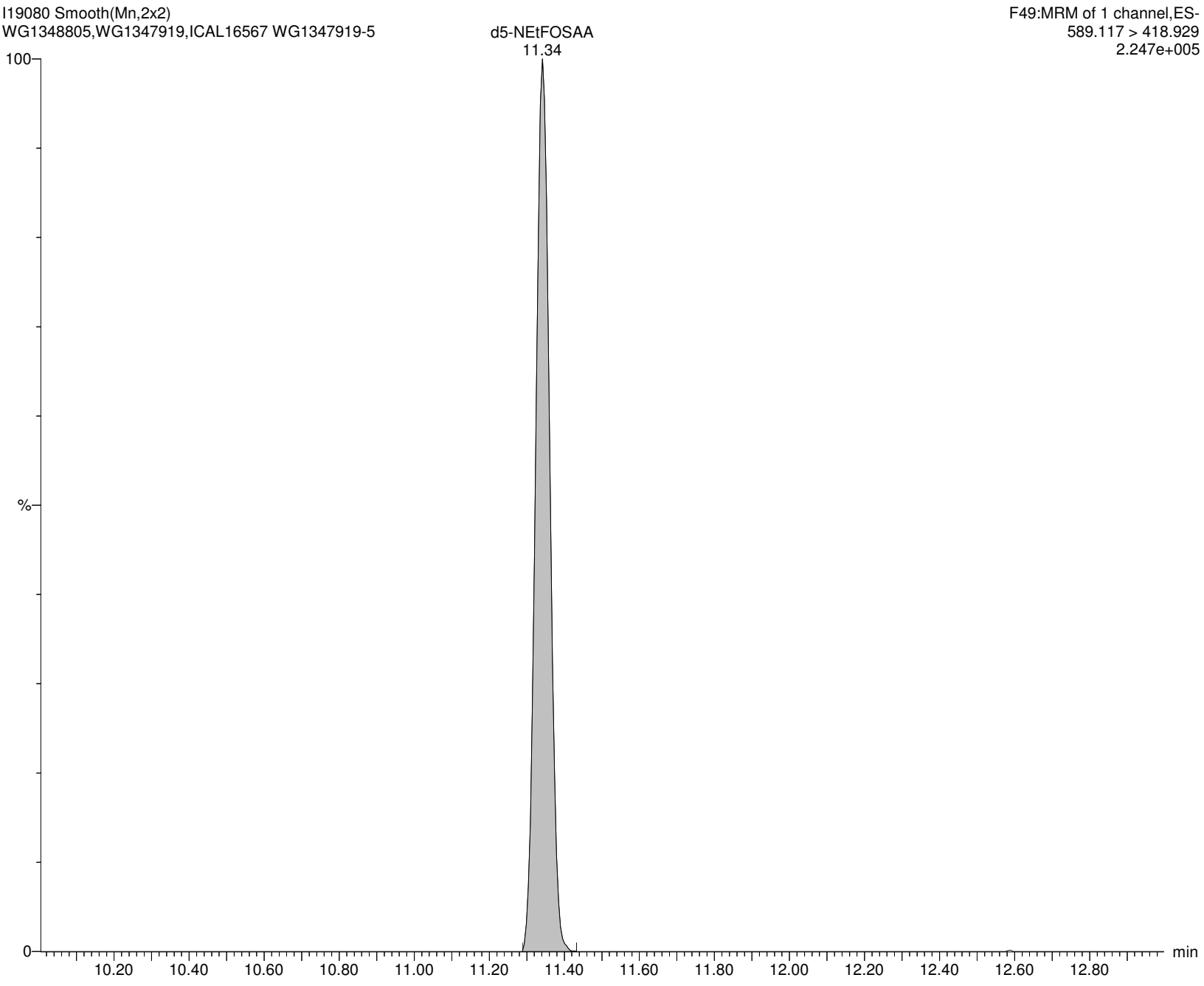


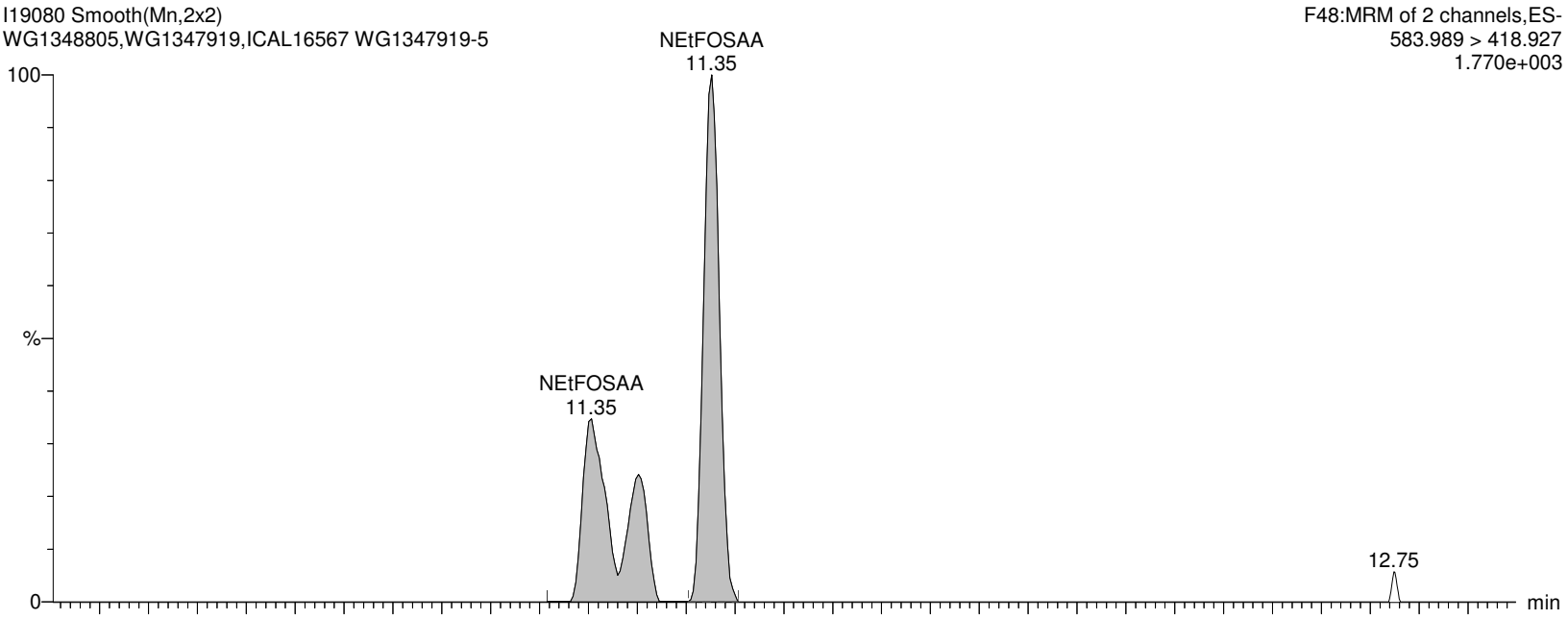


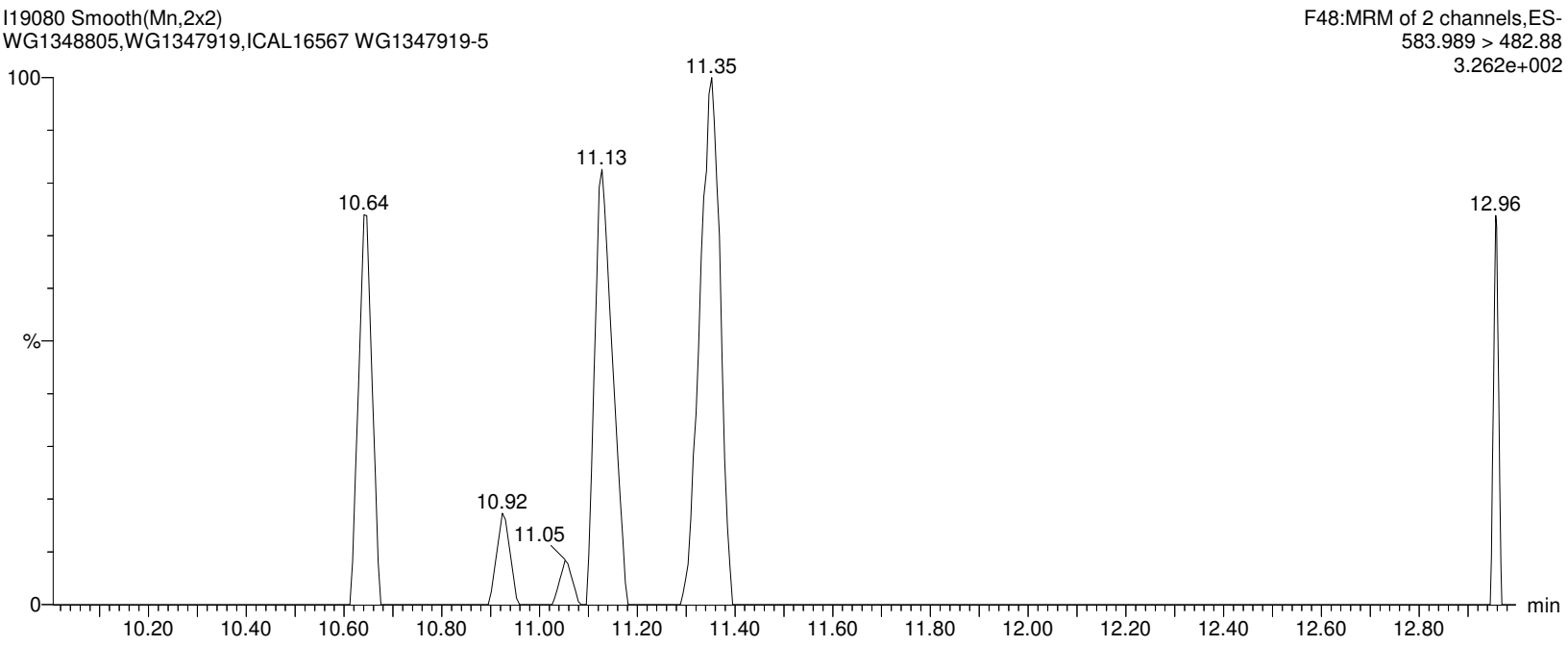
all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200309_537ISO.PRO\Data\WG1348805A.qld
Last Altered: Tuesday, March 17, 2020 11:10:13 Eastern Daylight Time
Printed: Tuesday, March 17, 2020 11:22:13 Eastern Daylight Time

**Name: I19080**
**ID: WG1347919-5**
**Date: 09-Mar-2020**
**Time: 15:56:46**
**Description: WG1348805,WG1347919,ICAL16567**
**User: LCMS01:JW**
**Vial: 1:C,3**
**Instrument: XEVO-TQSmicro#QEA0276**
**Inlet Method Name: C:\MassLynx\Data\200309_537ISO.PRO\ACQUDB\LCMS_537_ISO_MeOH**
**Tune Method Name: C:\MassLynx\Data\200309_537ISO.PRO\ACQUDB\190709_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\200309_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**NEtFOSAA**





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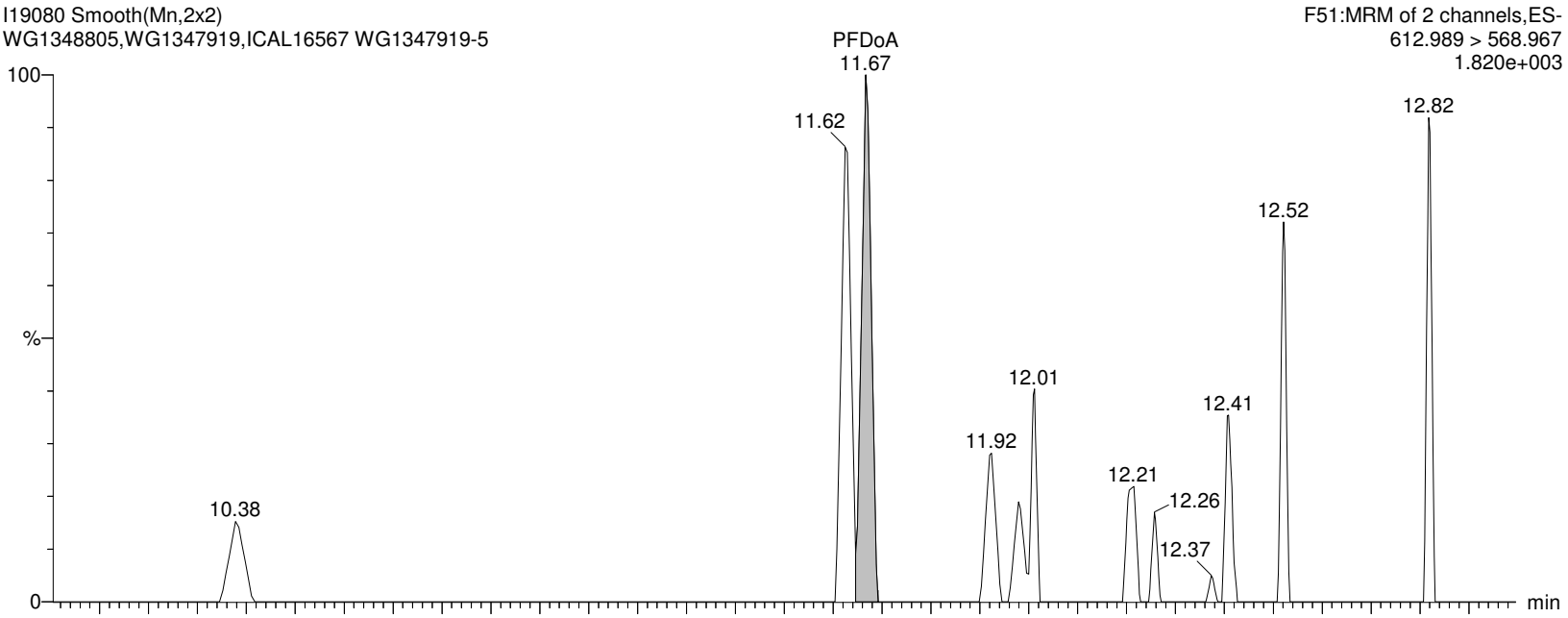
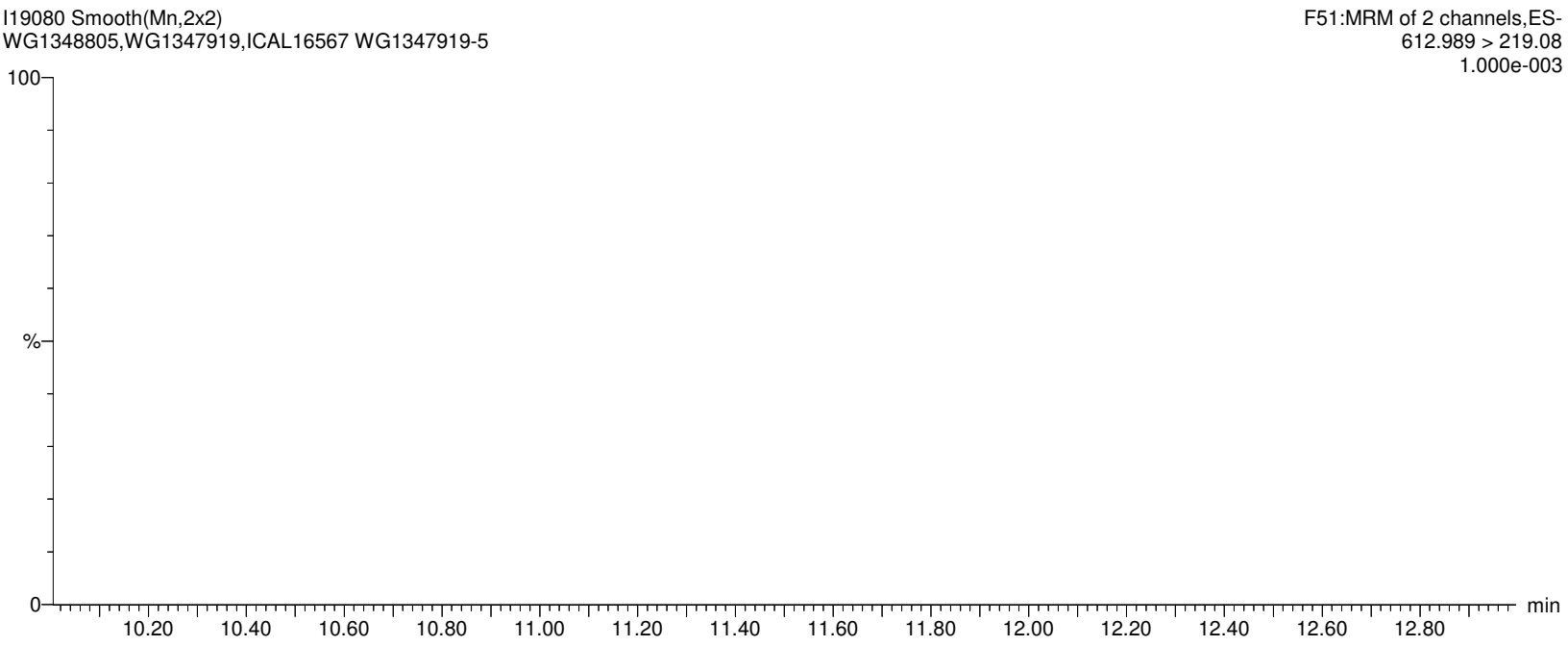
**PFDoA**





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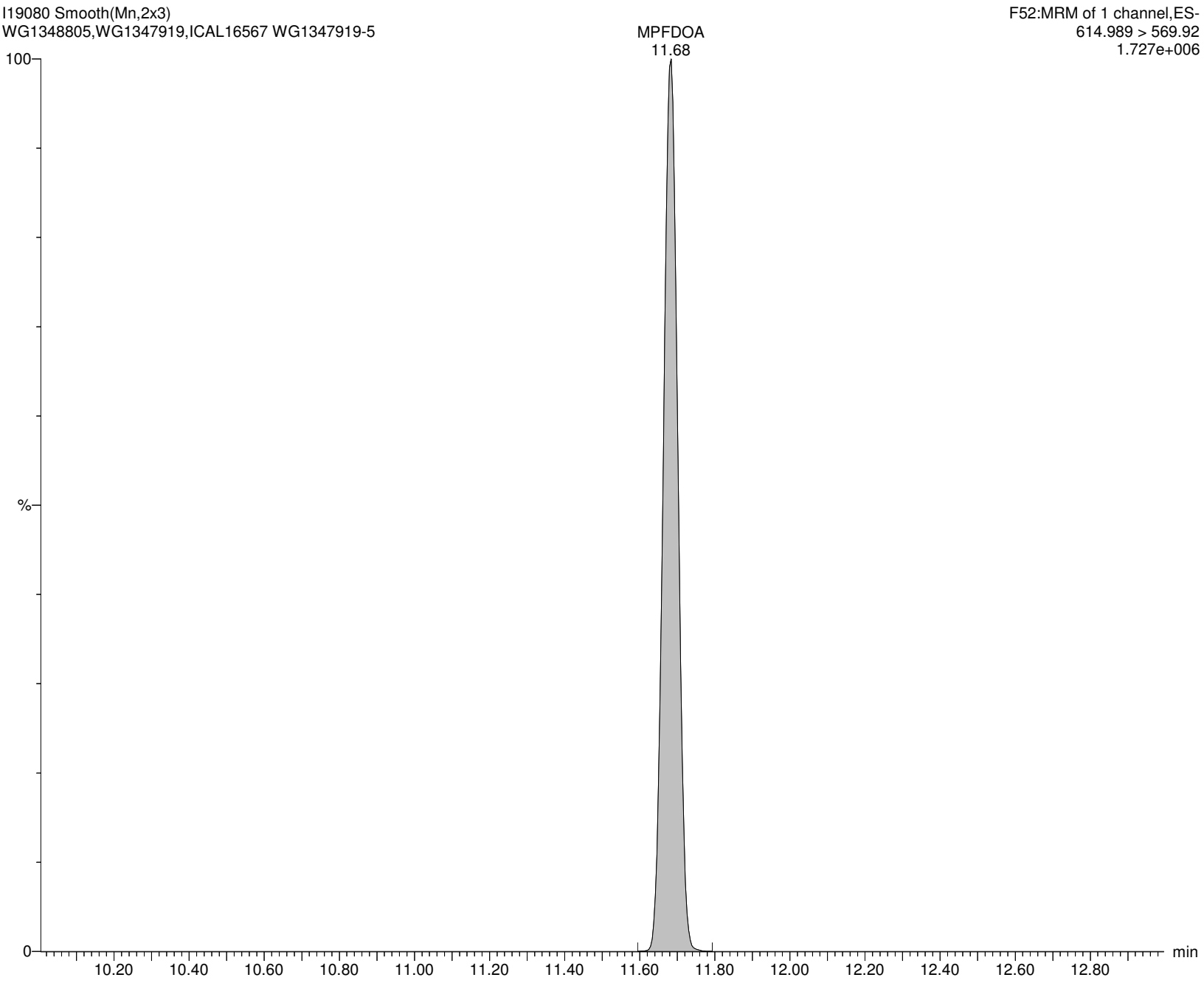



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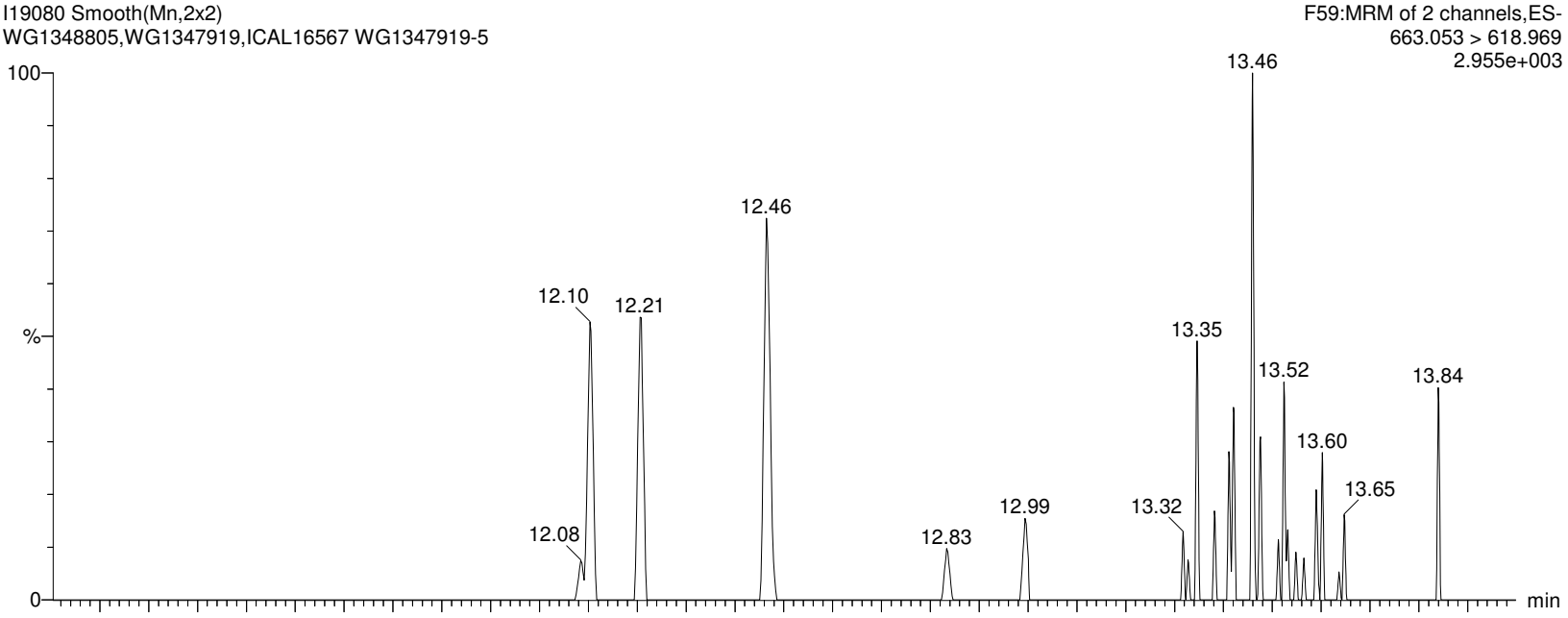


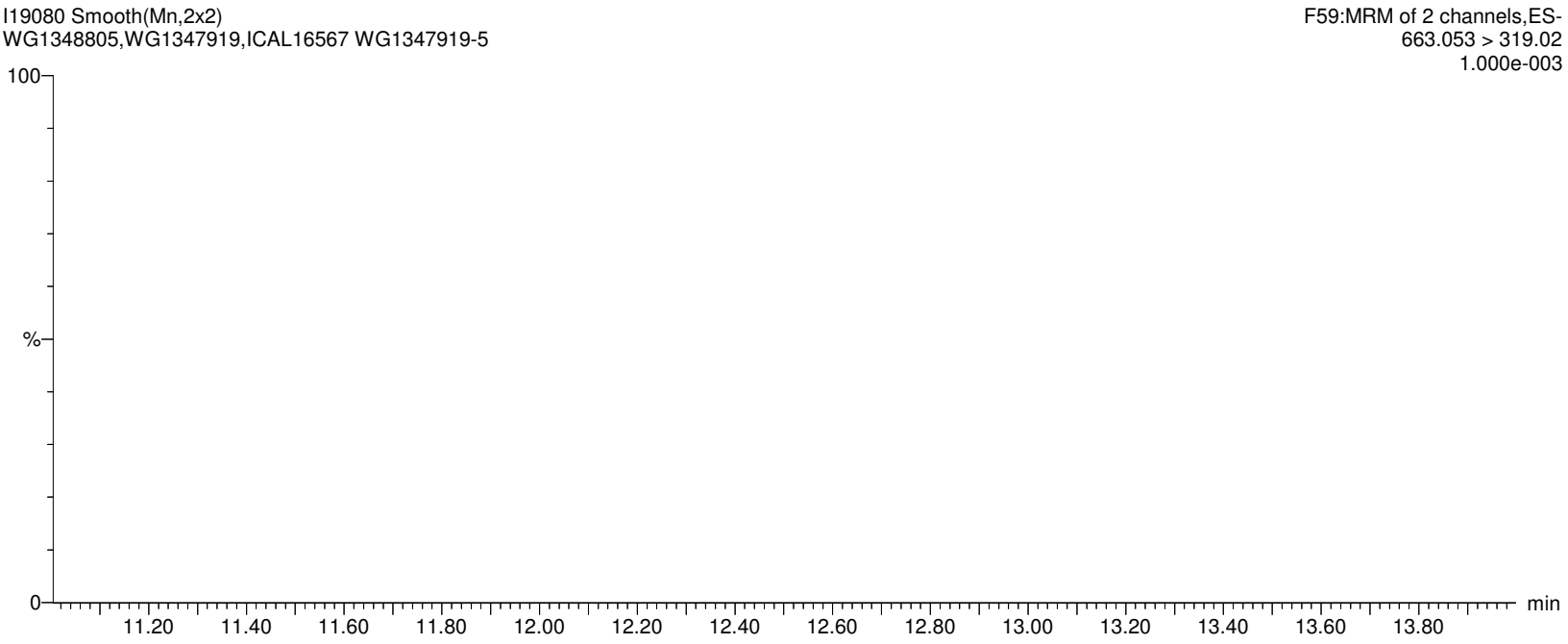



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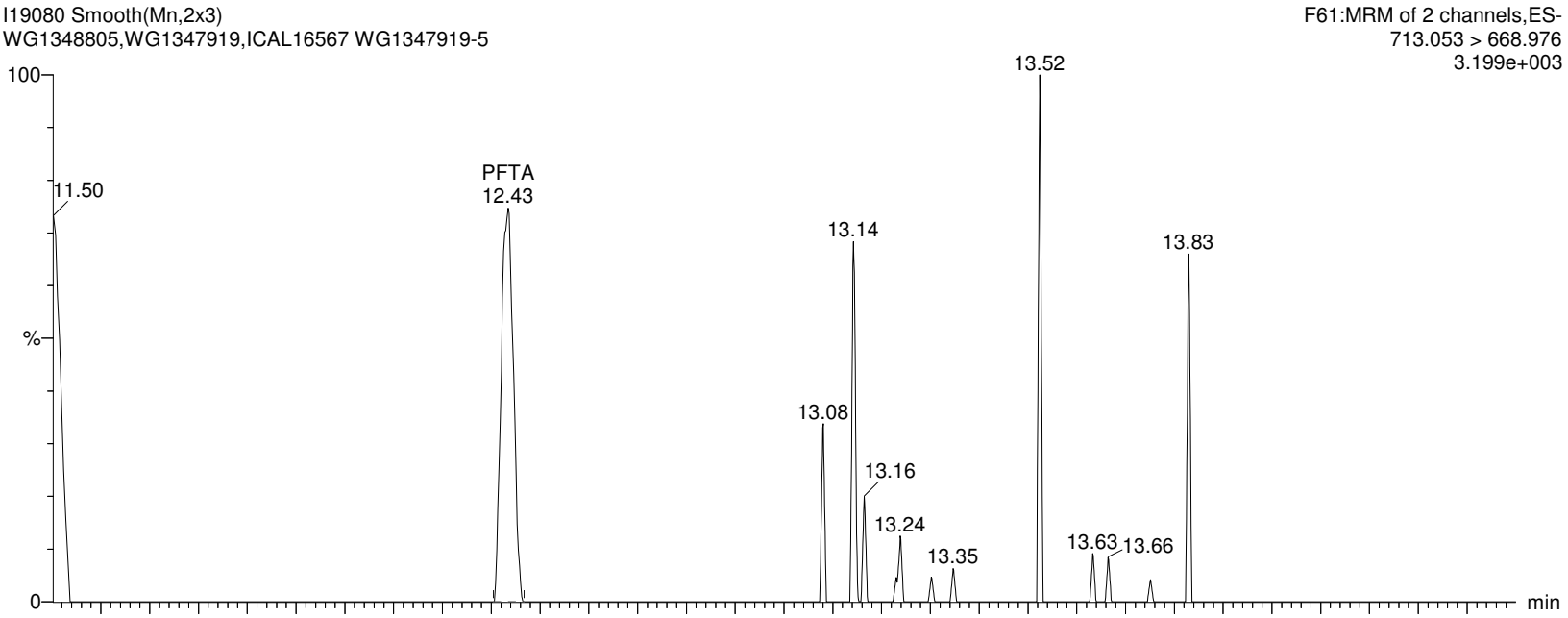
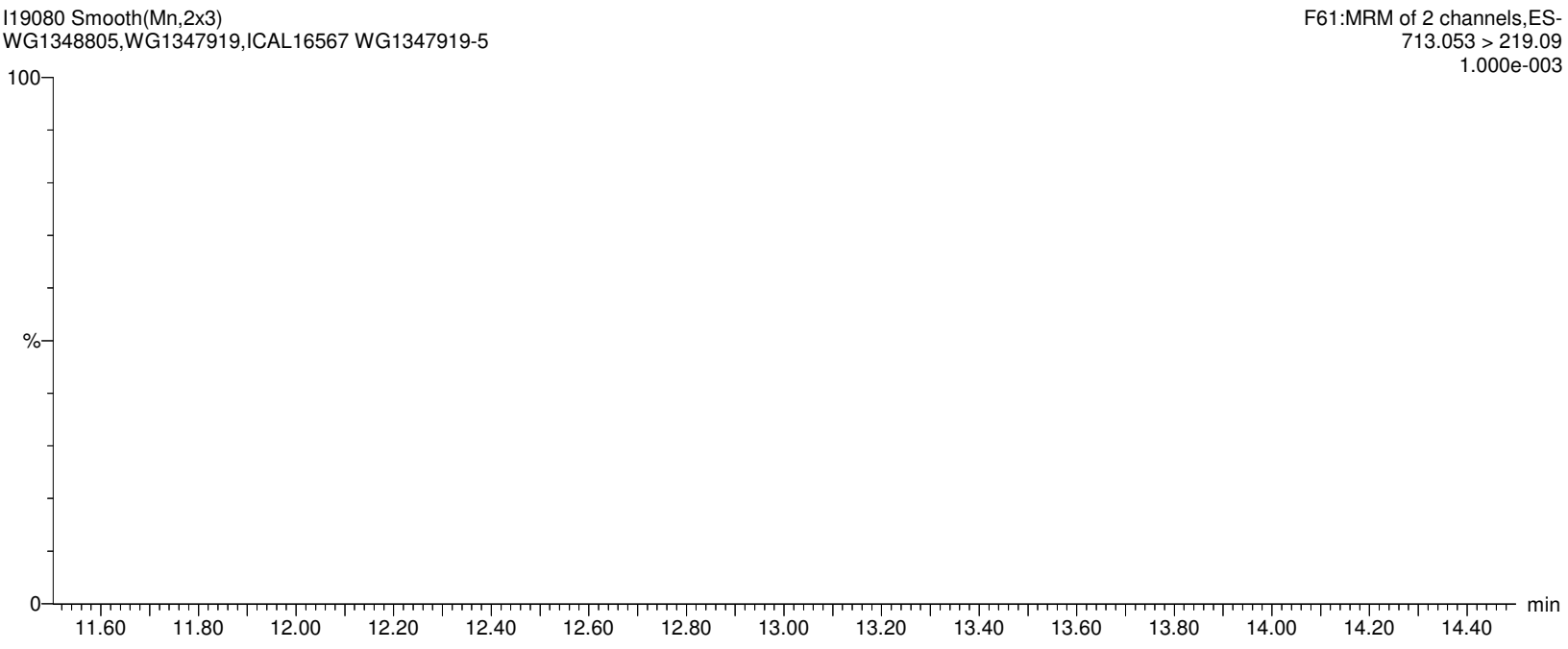
**MS Method Name: C:\MassLynx\Data\200309_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**PFTA**





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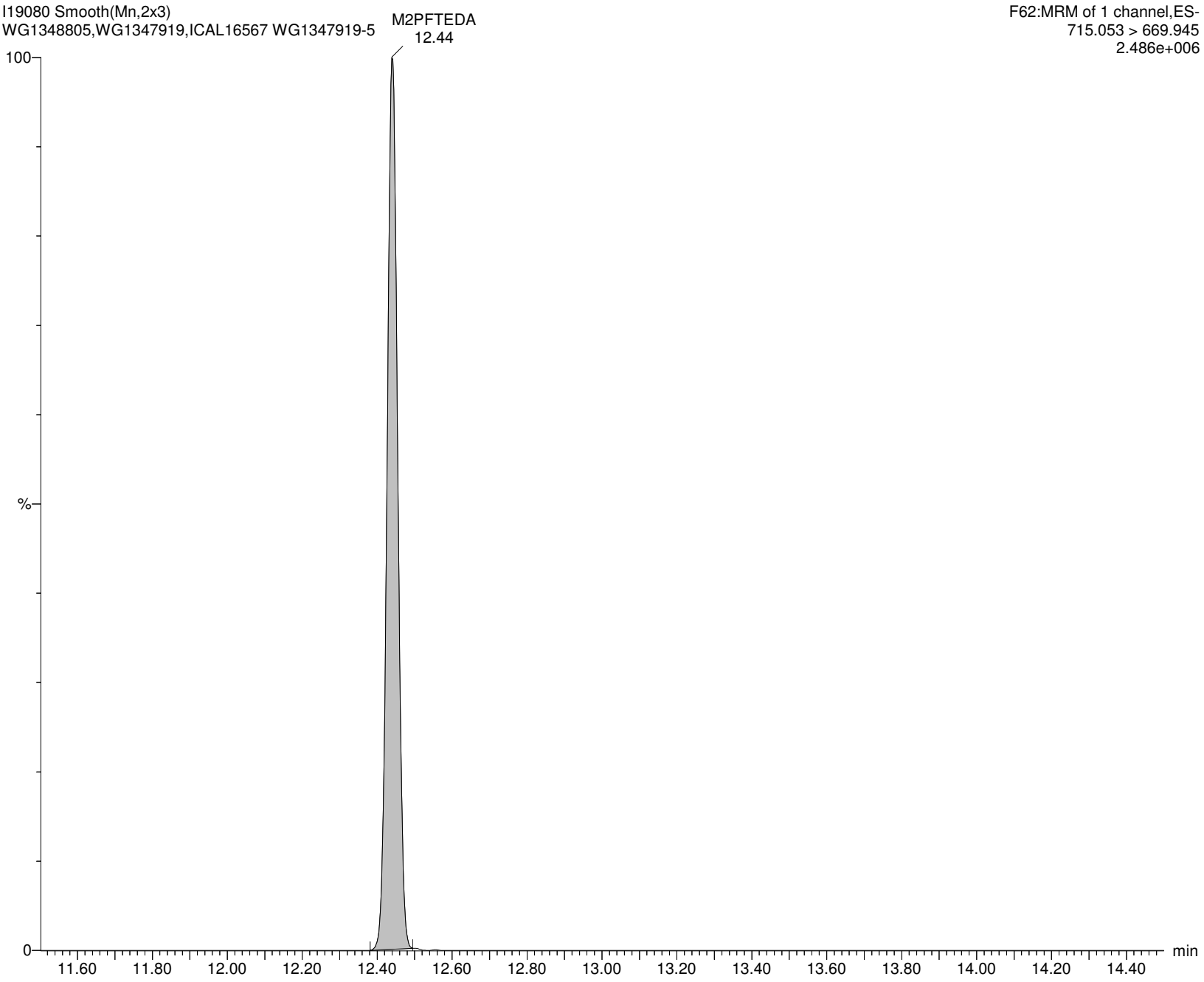
**MS Method Name: C:\MassLynx\Data\200309_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**M2PFTEDA**





all concentration units in (ng/mL)

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Last Altered: Tuesday, March 17, 2020 11:10:13 Eastern Daylight Time
Printed: Tuesday, March 17, 2020 11:22:15 Eastern Daylight Time

**Method: C:\MassLynx\Data\200309_537ISO.PRO\MethDB\537ISO_Q_200227 .mdb 28 Feb 2020 10:16:06**
**Calibration: C:\MassLynx\Data\200309_537ISO.PRO\CurveDB\200227_537ISO_ICAL.cdb 28 Feb 2020 10:12:40**

**ID: WG1347919-4**
**Name: I19083**
**Date: 09-Mar-2020**
**Time: 16:46:25**
**Description: WG1348805,WG1347919,ICAL16567**
**Instrument: XEVO-TQSmicro#QEA0276**
**User: LCMS01:JW**
**Inlet Method Name: C:\MassLynx\Data\200309_537ISO.PRO\ACQUDB\LCMS_537_ISO_MeOH**
**Tune Method Name: C:\MassLynx\Data\200309_537ISO.PRO\ACQUDB\190709_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\200309_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

| | Name | CAS | RT | Trace | Area | M Flag | Conc (ng/mL) | Ion Ratio | Ratio Flag | %Rec |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | PFBA | 375-22-4 | 2.20 | 212.926 > 169.111 | 42317 | | 13.929 | | na | |
| 2 | M3PFBA | INT STD | 2.19 | 215.926 > 172.122 | 41359 | | 10.518 | | na | 105.2 |
| 3 | MPFBA | INT STD | 2.20 | 216.926 > 172.137 | 42012 | | 8.865 | | na | 88.6 |
| 4 | PFPeA | 2706-90-3 | 5.16 | 262.926 > 219.002 | 45599 | M4 | 13.062 | | na | |
| 5 | M5PFPEA | INT STD | 5.16 | 267.989 > 223.081 | 50226 | | 7.988 | | na | 79.9 |
| 6 | PFBS | 375-73-5 | 5.82 | 298.926 > 79.923 | 9313 | | 10.075 | 1.99 | NO | |
| 7 | M3PFBS | INT STD | 5.82 | 301.989 > 80.254 | 10248 | | 7.641 | | na | 76.4 |
| 8 | 4:2FTS | 757124-72-4 | 7.00 | 326.926 > 306.957 | 9756 | | 10.564 | 1.88 | NO | |
| 9 | M2-4:2FTS | INT STD | 7.00 | 329.117 > 309.079 | 11600 | | 16.601 | | na | 166.0 |
| 10 | PFHxA | 307-24-4 | 7.08 | 312.989 > 269.028 | 65258 | | 13.426 | 18.14 | NO | |
| 11 | M5PFHxA | INT STD | 7.08 | 317.989 > 273.045 | 58692 | | 6.579 | | na | 65.8 |
| 12 | PFPeS | 2706-91-4 | 7.39 | 348.926 > 80.251 | 9483 | | 10.150 | 2.29 | NO | |
| 13 | PFHpA | 375-85-9 | 8.35 | 362.926 > 319.014 | 87942 | | 11.955 | 5.51 | NO | |
| 14 | M4PFHpA | INT STD | 8.35 | 366.926 > 321.979 | 80384 | | 7.767 | | na | 77.7 |
| 15 | br-PFHxS | 355-46-4 | 8.27 | 398.904 > 79.915 | 1410 | | 1.929 | | YES | |
| 16 | L-PFHxS | 355-46-4 | 8.51 | 398.904 > 79.915 | 6990 | | 9.619 | 2.07 | NO | |
| 17 | PFHxS | 355-46-4 | | 398.904 > 79.915 | 8401 | | 11.548 | | na | |
| 18 | M3PFHxS | INT STD | 8.51 | 401.926 > 80.317 | 9823 | | 8.175 | | na | 81.7 |
| 19 | br-PFOA | 335-67-1 | 9.07 | 412.989 > 368.9 | 9387 | M5 | 1.243 | 2.64 | NO | |
| 20 | L-PFOA | 335-67-1 | 9.29 | 412.989 > 368.9 | 132616 | | 17.597 | 8.11 | NO | |
| 21 | M2PFOA | INT STD | 9.29 | 415.032 > 369.968 | 108960 | | 12.951 | | na | 129.5 |
| 22 | PFOA | 335-67-1 | | 412.989 > 368.9 | 142002 | | 18.840 | | na | |
| 23 | M8PFOA | INT STD | 9.29 | 420.989 > 375.979 | 87811 | | 8.451 | | na | 84.5 |
| 24 | 6:2FTS | 27619-97-2 | 9.25 | 426.989 > 406.921 | 2382 | | 10.170 | 0.68 | NO | |
| 25 | M2-6:2FTS | INT STD | 9.25 | 428.989 > 408.917 | 9818 | | 22.580 | | na | 225.8 |
| 26 | PFHpS | 375-92-8 | 9.38 | 448.926 > 80.257 | 6442 | | 12.215 | 1.02 | NO | |
| 27 | PFNA | 375-95-1 | 10.04 | 462.989 > 418.931 | 77713 | | 10.959 | 4.04 | NO | |
| 28 | M9PFNA | INT STD | 10.04 | 472.053 > 426.947 | 95303 | | 9.382 | | na | 93.8 |
| 29 | br-PFOS | 1763-23-1 | 9.84 | 498.968 > 79.918 | 6155 | M5 | 7.419 | 4.17 | NO | |
| 30 | L-PFOS | 1763-23-1 | 10.09 | 498.968 > 79.918 | 12111 | | 21.175 | 1.35 | NO | |
| 31 | PFOS | 1763-23-1 | | 498.968 > 79.918 | 18266 | | 28.594 | | na | |
| 32 | M4PFOS | INT STD | 10.09 | 503.032 > 80.306 | 10455 | | 12.308 | | na | 123.1 |
| 33 | M8PFOS | INT STD | 10.09 | 507.053 > 80.294 | 10476 | | 8.628 | | na | 86.3 |
| 34 | PFDA | 335-76-2 | 10.67 | 513.053 > 468.906 | 69919 | | 10.401 | 5.51 | NO | |
| 35 | M2PFDA | INT STD | 10.67 | 515.053 > 469.934 | 100653 | | 15.216 | | na | 152.2 |
| 36 | M6PFDA | INT STD | 10.66 | 519.053 > 473.931 | 87766 | | 7.925 | | na | 79.3 |
| 37 | 8:2FTS | 39108-34-4 | 10.66 | 527.032 > 507.079 | 2832 | | 12.218 | 1.83 | NO | |
| 38 | M2-8:2FTS | INT STD | 10.66 | 529.053 > 508.945 | 3560 | | 13.541 | | na | 135.4 |
| 39 | PFNS | 68259-12-1 | 10.69 | 548.989 > 80.249 | 7632 | | 10.769 | 1.65 | NO | |


all concentration units in (ng/mL)

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**Name: I19083**
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**Description: WG1348805,WG1347919,ICAL16567**
**Instrument: XEVO-TQSmicro#QEA0276**
**User: LCMS01:JW**
**Inlet Method Name: C:\MassLynx\Data\200309_537ISO.PRO\ACQUDB\LCMS_537_ISO_MeOH**
**Tune Method Name: C:\MassLynx\Data\200309_537ISO.PRO\ACQUDB\190709_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\200309_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

| | Name | CAS | RT | Trace | Area | M Flag | Conc (ng/mL) | Ion Ratio | Ratio Flag | %Rec |
|---|---|---|---|---|---|---|---|---|---|---|
| 40 | d3-NMeFOSAA | INT STD | 11.04 | 573.096 > 418.987 | 13268 | | 9.044 | | na | 90.4 |
| 41 | NMeFOSAA | 2355-31-9 | 11.05 | 570.053 > 418.917 | 8407 | m5 | 10.603 | 2.59 | NO | |
| 42 | PFUnA | 2058-94-8 | 11.20 | 562.989 > 518.903 | 70622 | | 9.381 | 7.62 | NO | |
| 43 | M7-PFUDA | INT STD | 11.20 | 570.053 > 524.923 | 81088 | | 8.333 | | na | 83.3 |
| 44 | PFDS | 335-77-3 | 11.21 | 598.926 > 80.314 | 7816 | | 11.326 | 2.17 | NO | |
| 45 | FOSA | 754-91-6 | 11.10 | 497.989 > 78.245 | 13618 | | 10.781 | | YES | |
| 46 | M8FOSA | INT STD | 11.10 | 506.053 > 78.286 | 15330 | | 3.454 | | na | 34.5 |
| 47 | d5-NEtFOSAA | INT STD | 11.34 | 589.117 > 418.929 | 8789 | | 8.216 | | na | 82.2 |
| 48 | NEtFOSAA | 2991-50-6 | 11.34 | 583.989 > 418.927 | 8026 | m5 | 10.705 | 3.24 | NO | |
| 49 | PFDoA | 307-55-1 | 11.68 | 612.989 > 568.967 | 73489 | | 10.656 | 13.24 | NO | |
| 50 | MPFDOA | INT STD | 11.68 | 614.989 > 569.92 | 75962 | | 7.261 | | na | 72.6 |
| 51 | PFTrDA | 72629-94-8 | 12.09 | 663.053 > 618.969 | 77089 | | 11.214 | 10.61 | NO | |
| 52 | PFTA | 376-06-7 | 12.44 | 713.053 > 668.976 | 63479 | | 11.168 | 9.44 | NO | |
| 53 | M2PFTEDA | INT STD | 12.44 | 715.053 > 669.945 | 76715 | | 6.506 | | na | 65.1 |


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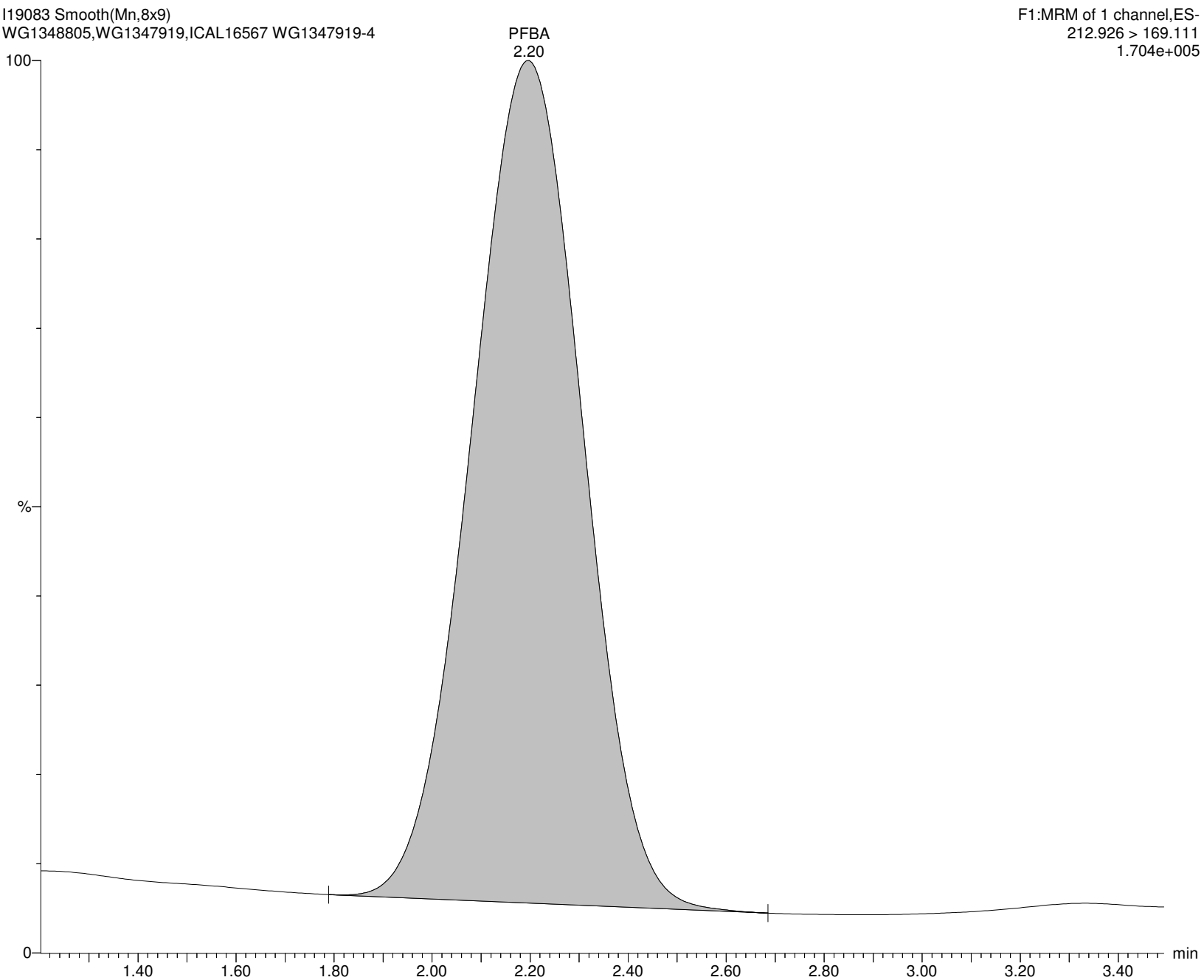



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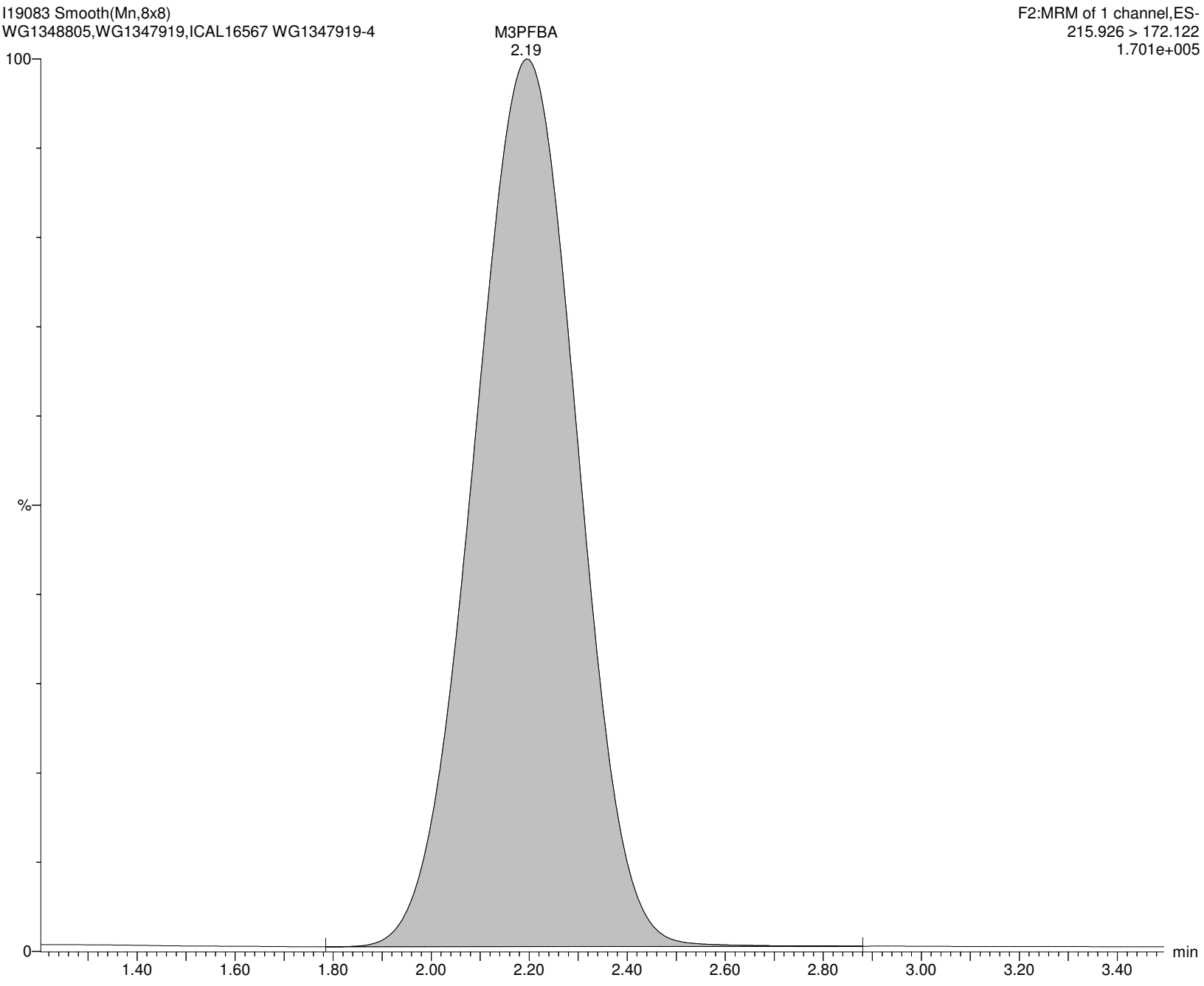
**M3PFBA**





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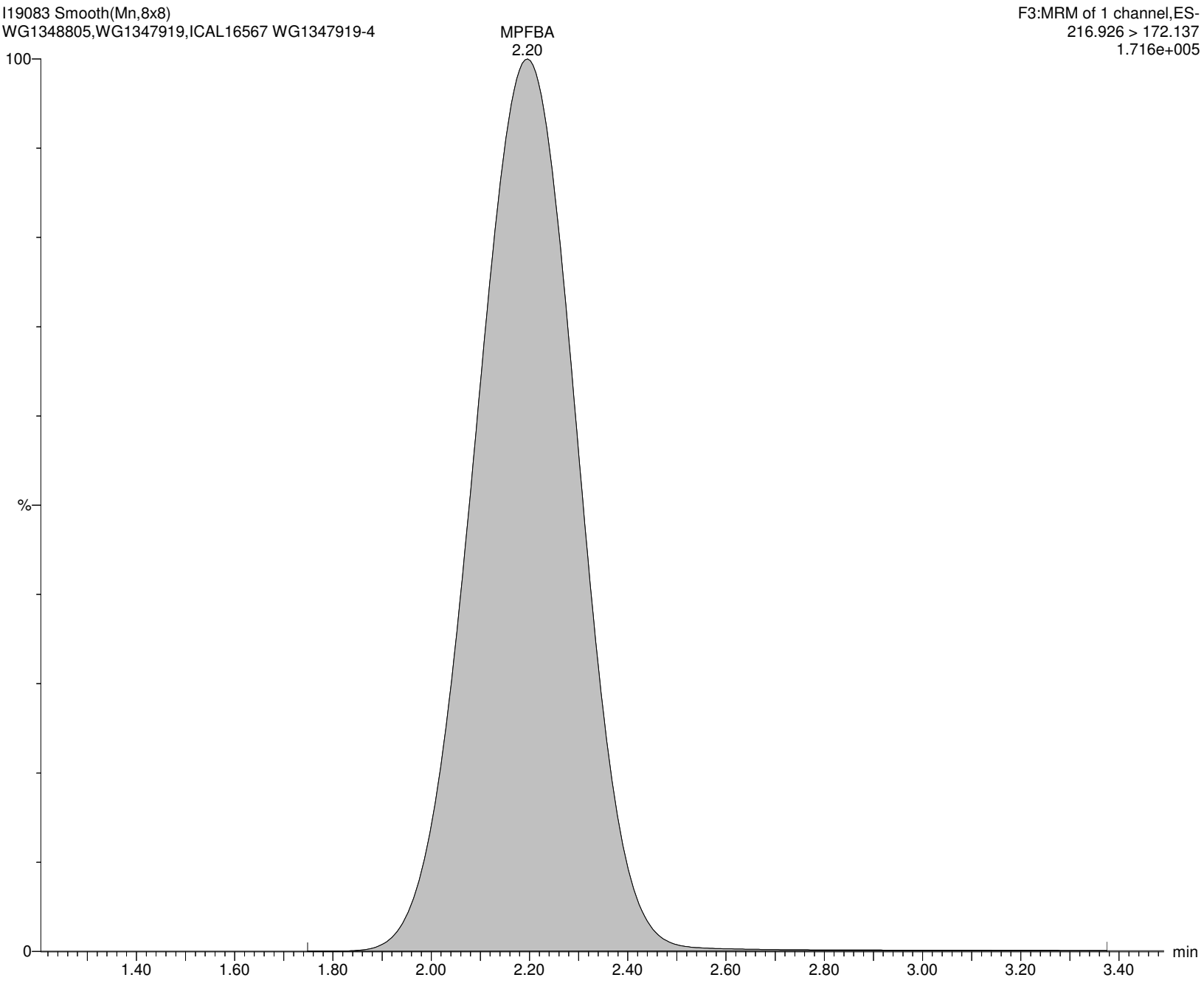
**MPFBA**





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**Name: I19083**
**ID: WG1347919-4**
**Date: 09-Mar-2020**
**Time: 16:46:25**
**Description: WG1348805,WG1347919,ICAL16567**
**User: LCMS01:JW**
**Vial: 1:C,6**
**Instrument: XEVO-TQSmicro#QEA0276**
**Inlet Method Name: C:\MassLynx\Data\200309_537ISO.PRO\ACQUDB\LCMS_537_ISO_MeOH**
**Tune Method Name: C:\MassLynx\Data\200309_537ISO.PRO\ACQUDB\190709_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\200309_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

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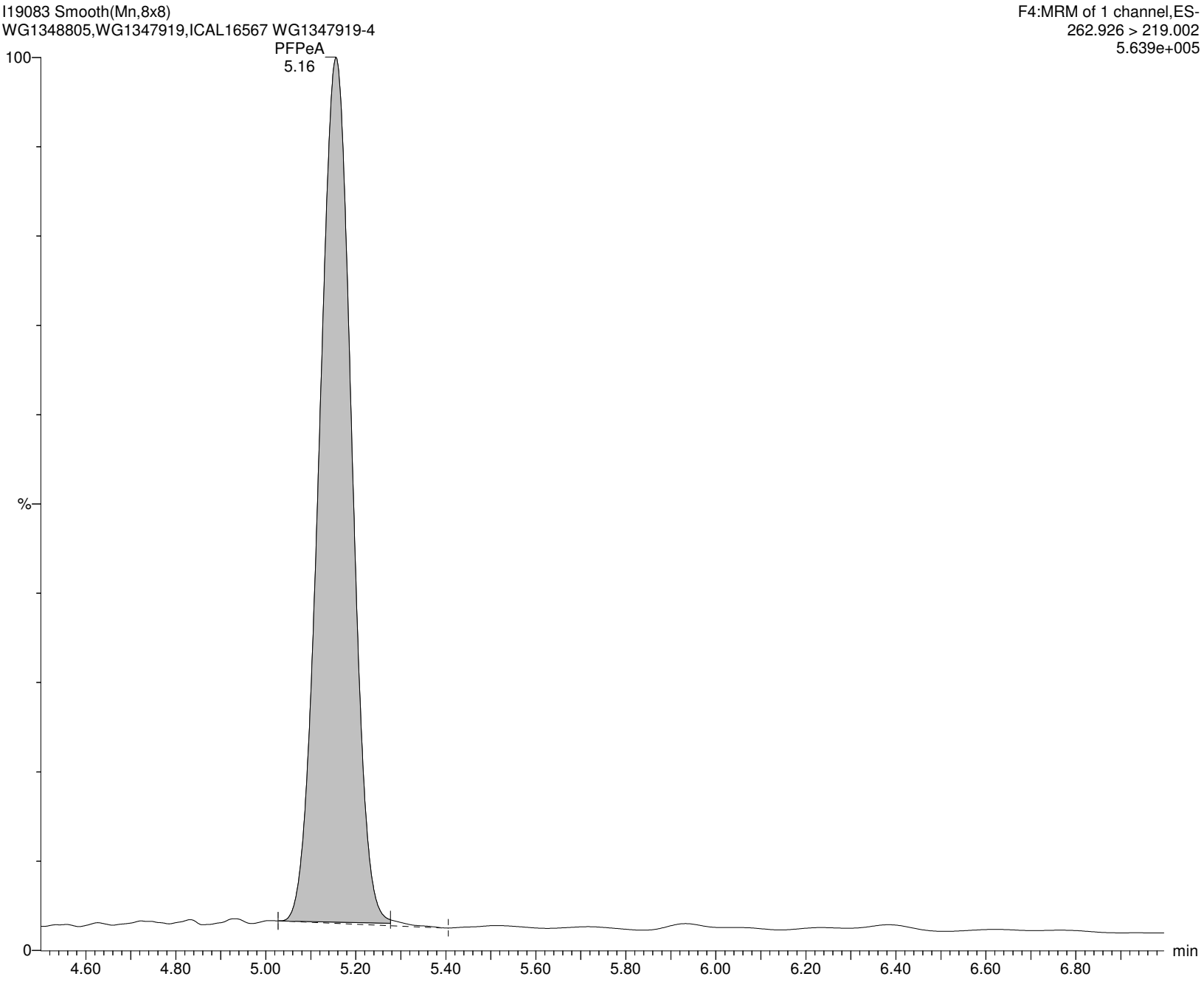



all concentration units in (ng/mL)

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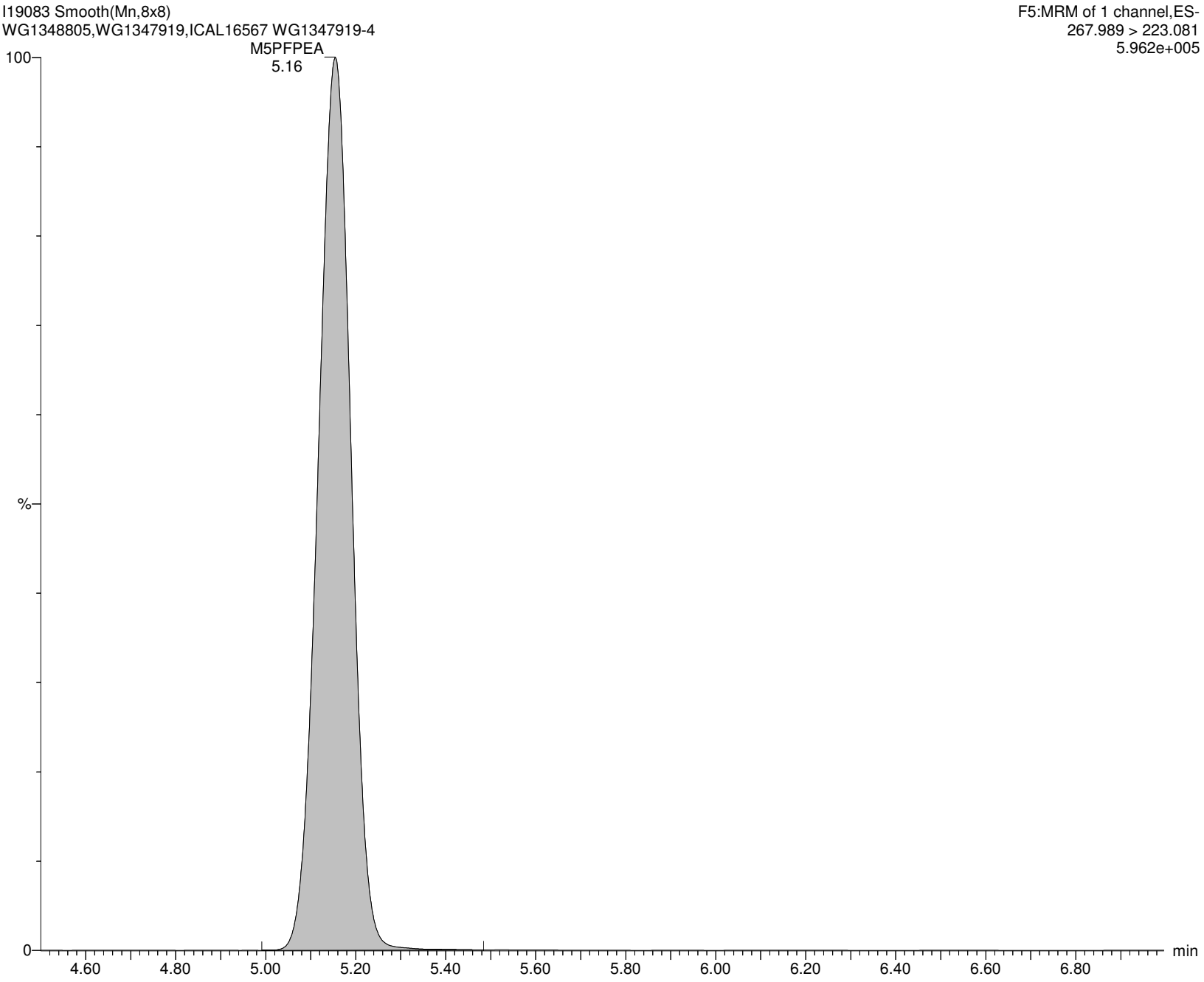
**M5PFPEA**





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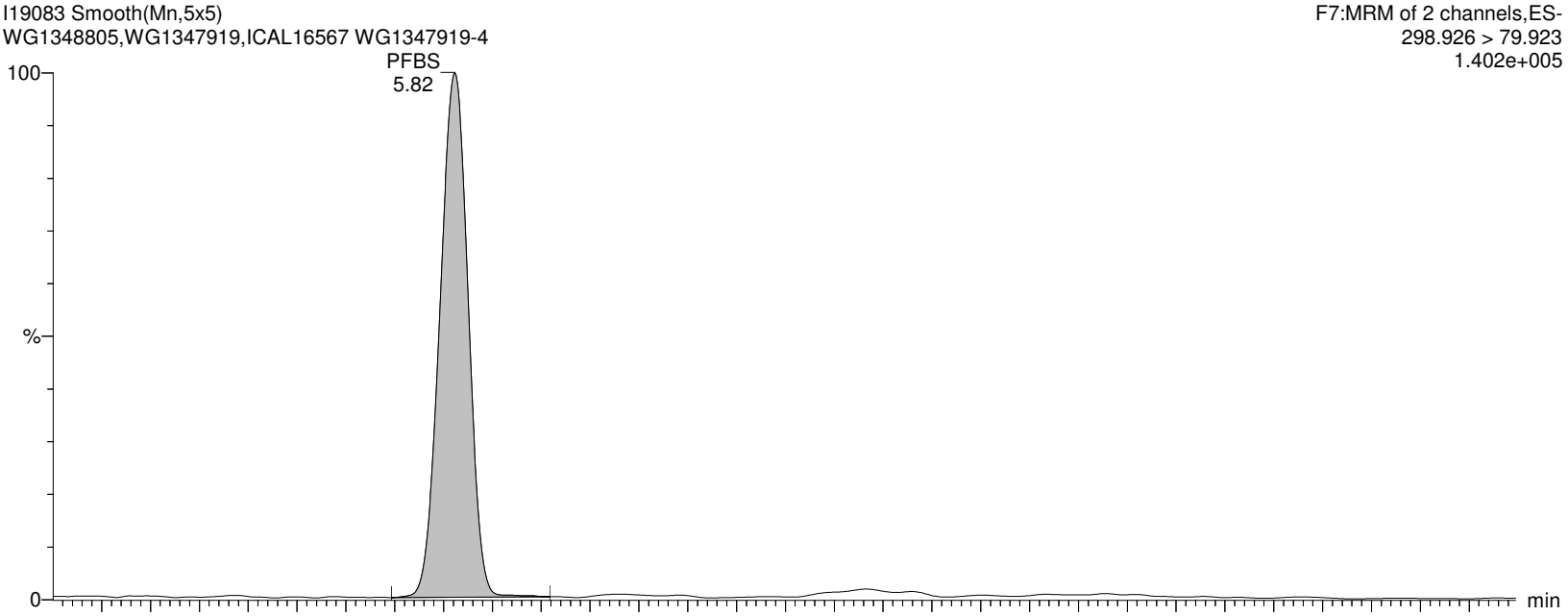


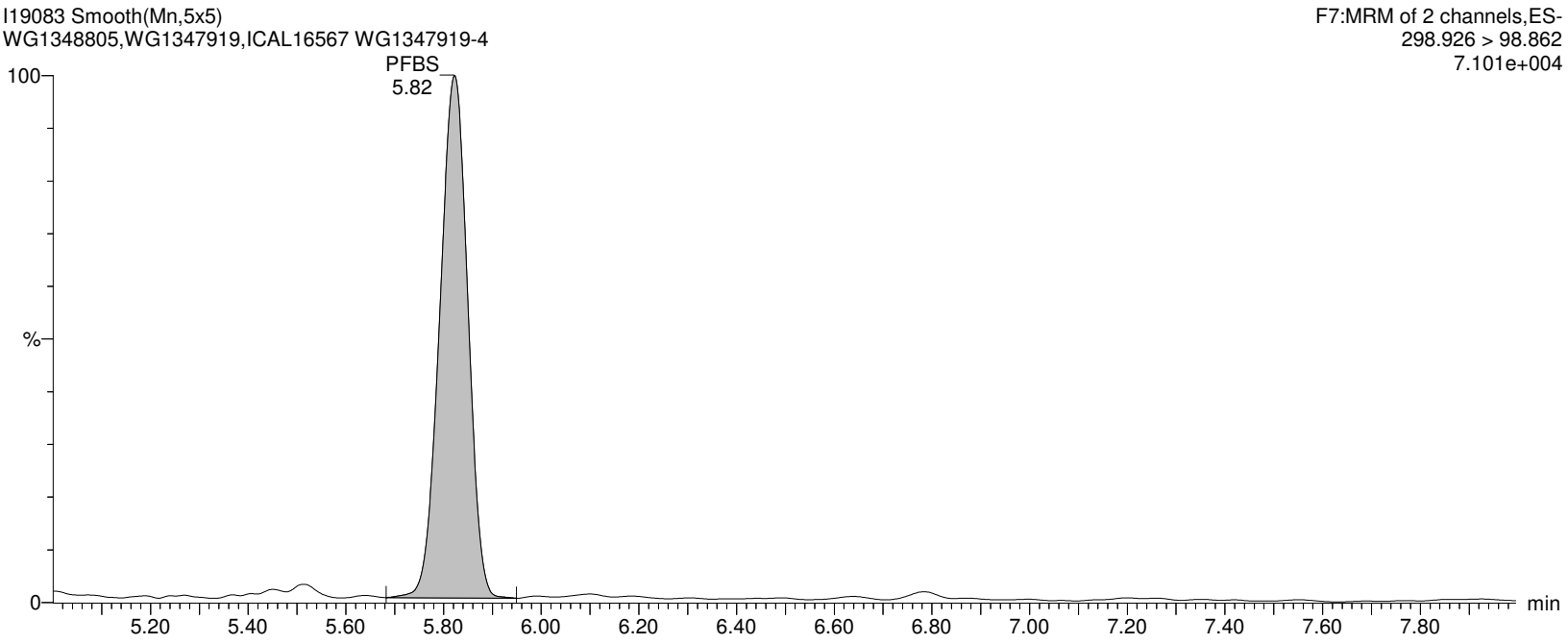



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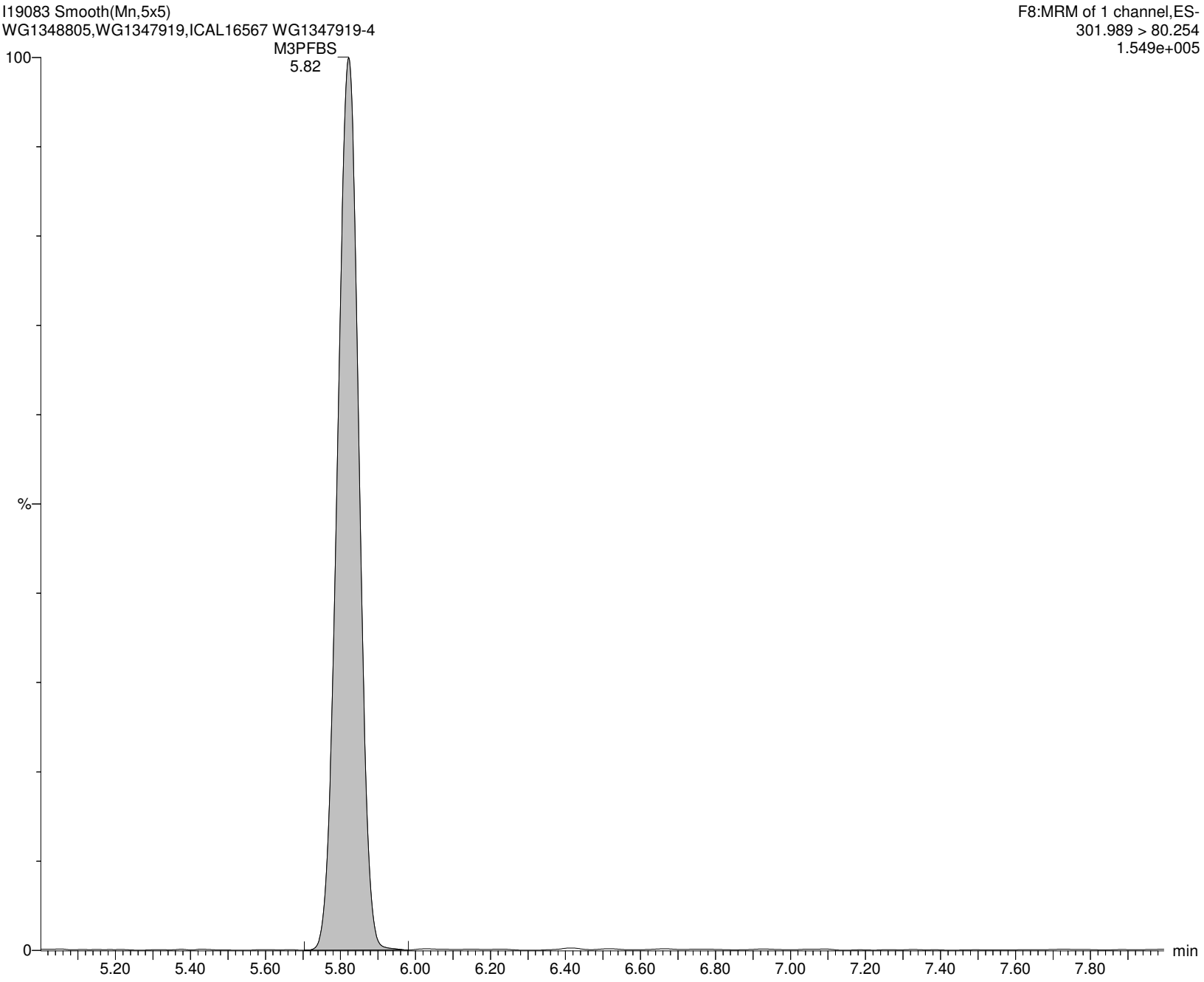
**M3PFBS**





all concentration units in (ng/mL)

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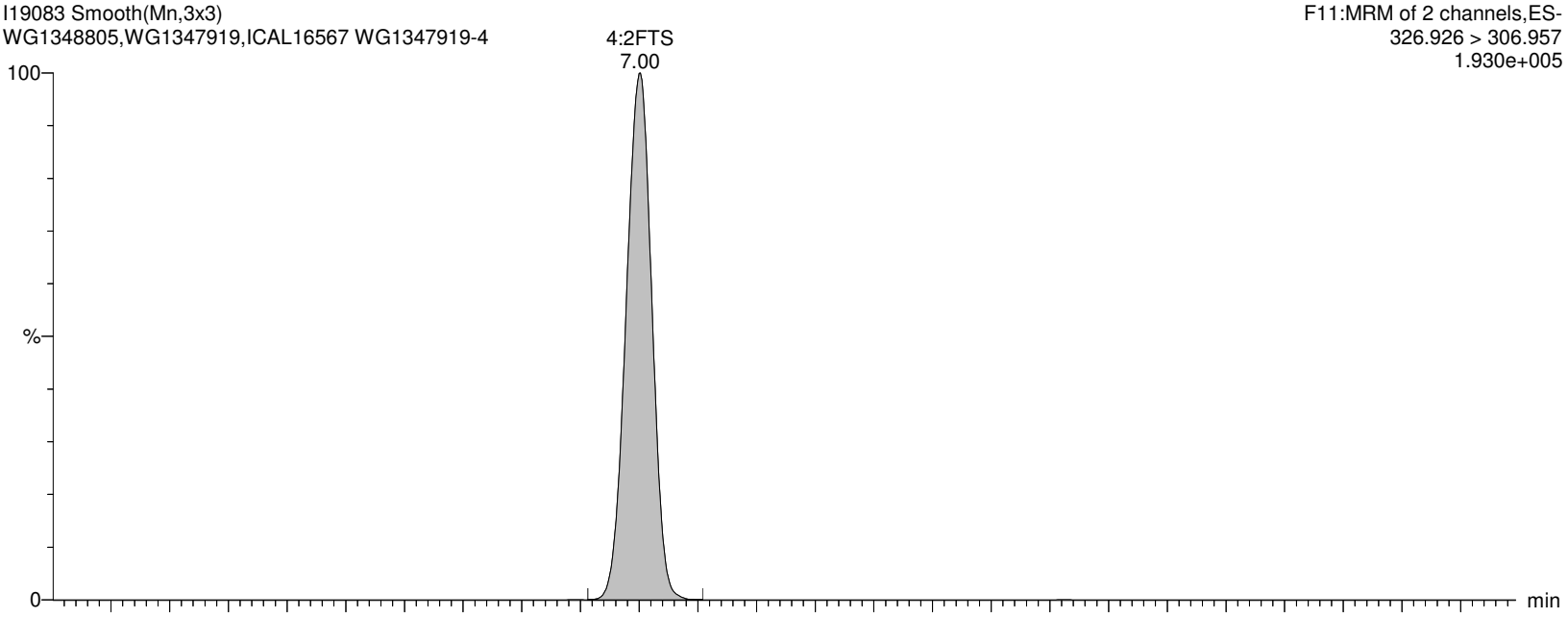
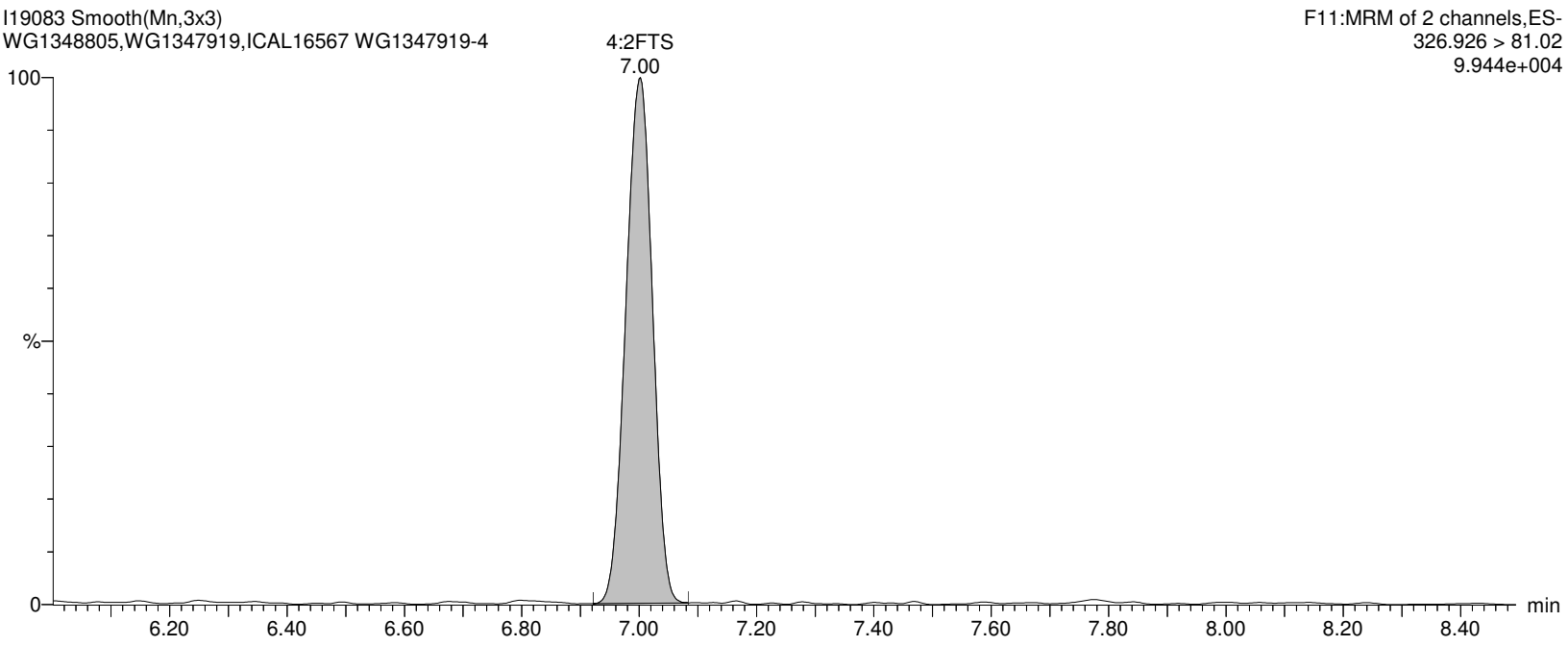
**4:2FTS**





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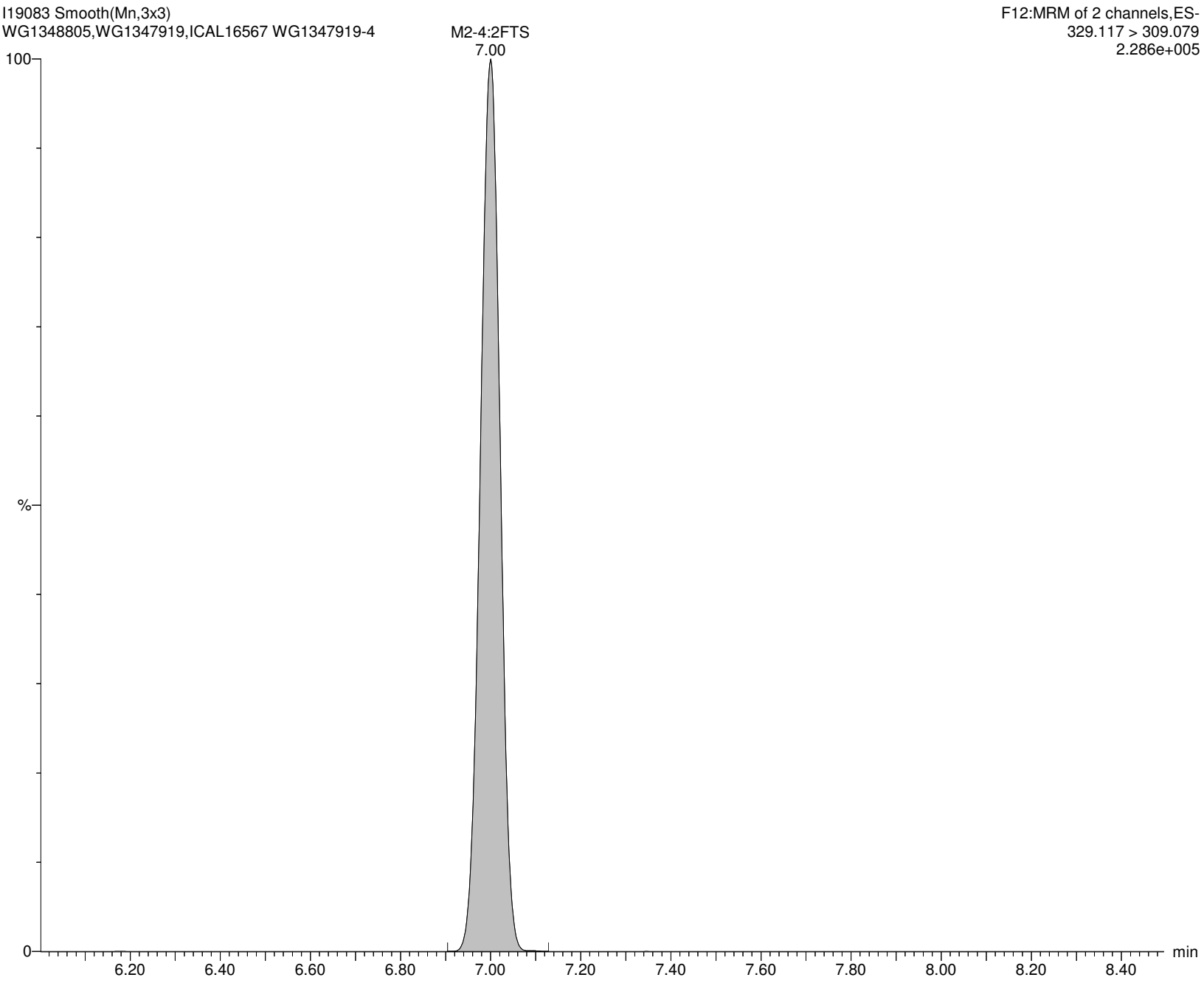
**M2-4:2FTS**





all concentration units in (ng/mL)

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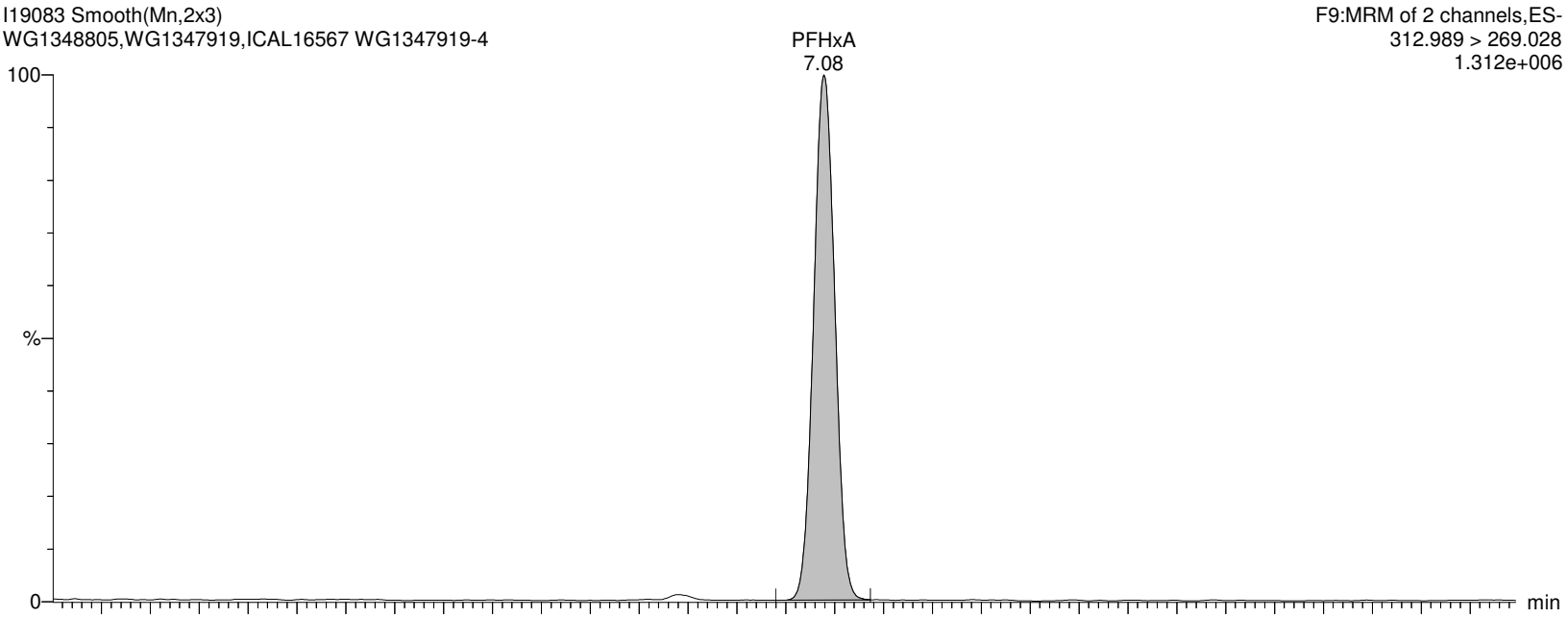
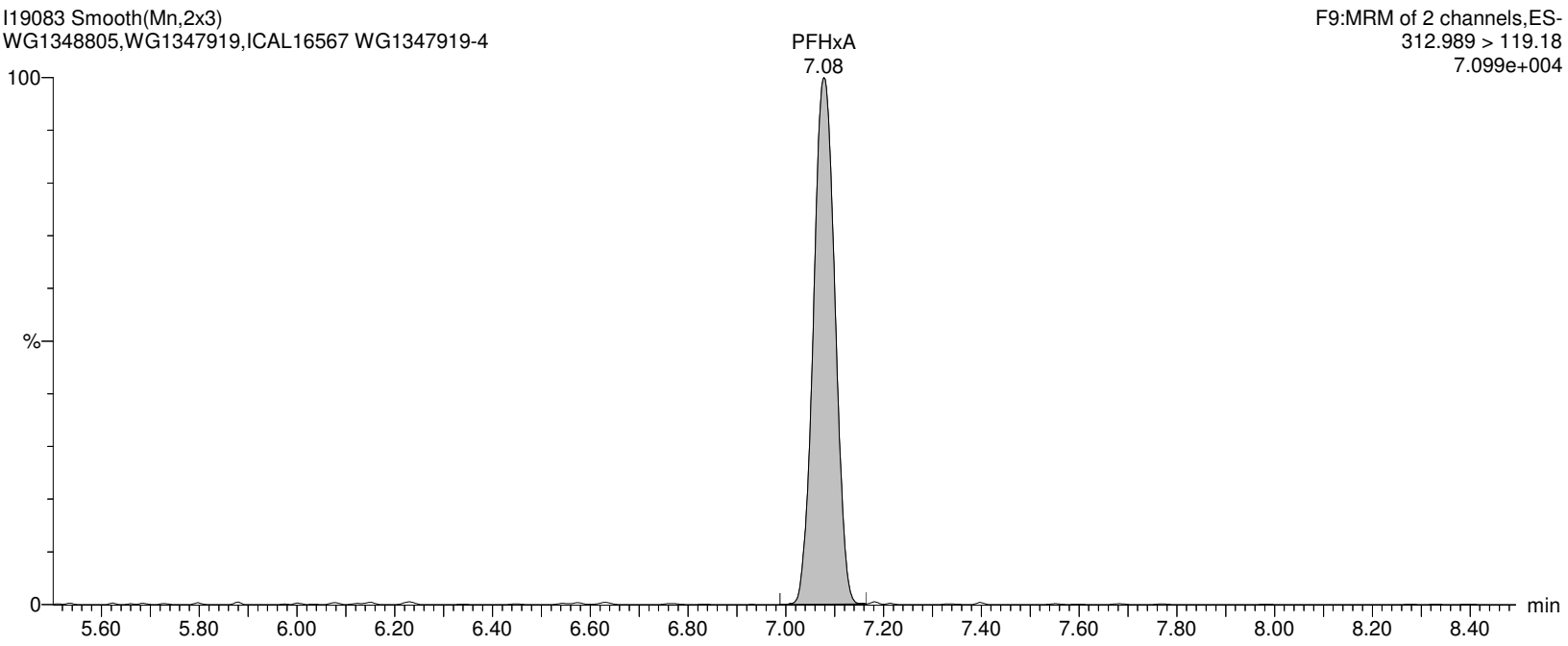
**PFHxA**





all concentration units in (ng/mL)

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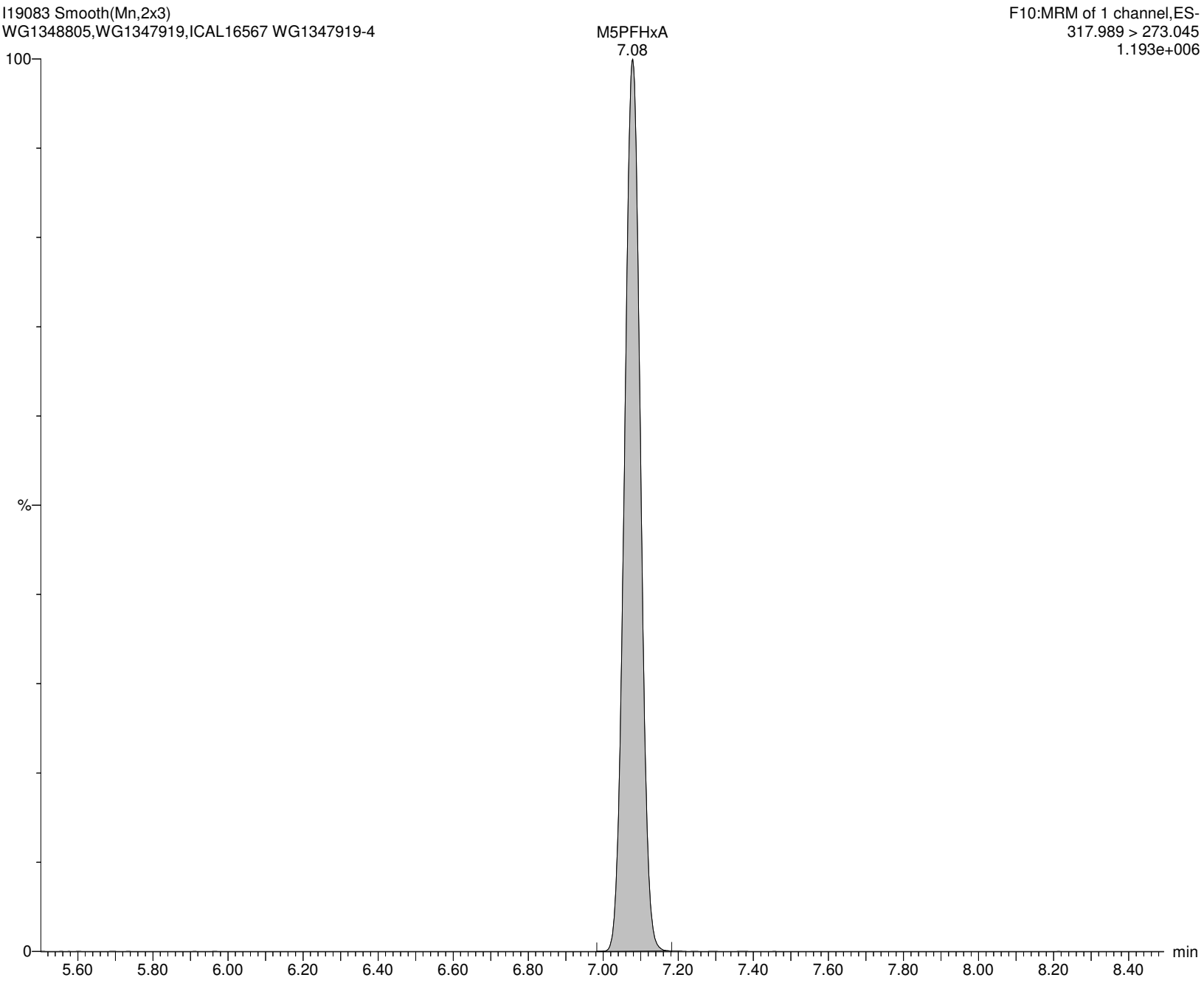
**M5PFHxA**





all concentration units in (ng/mL)

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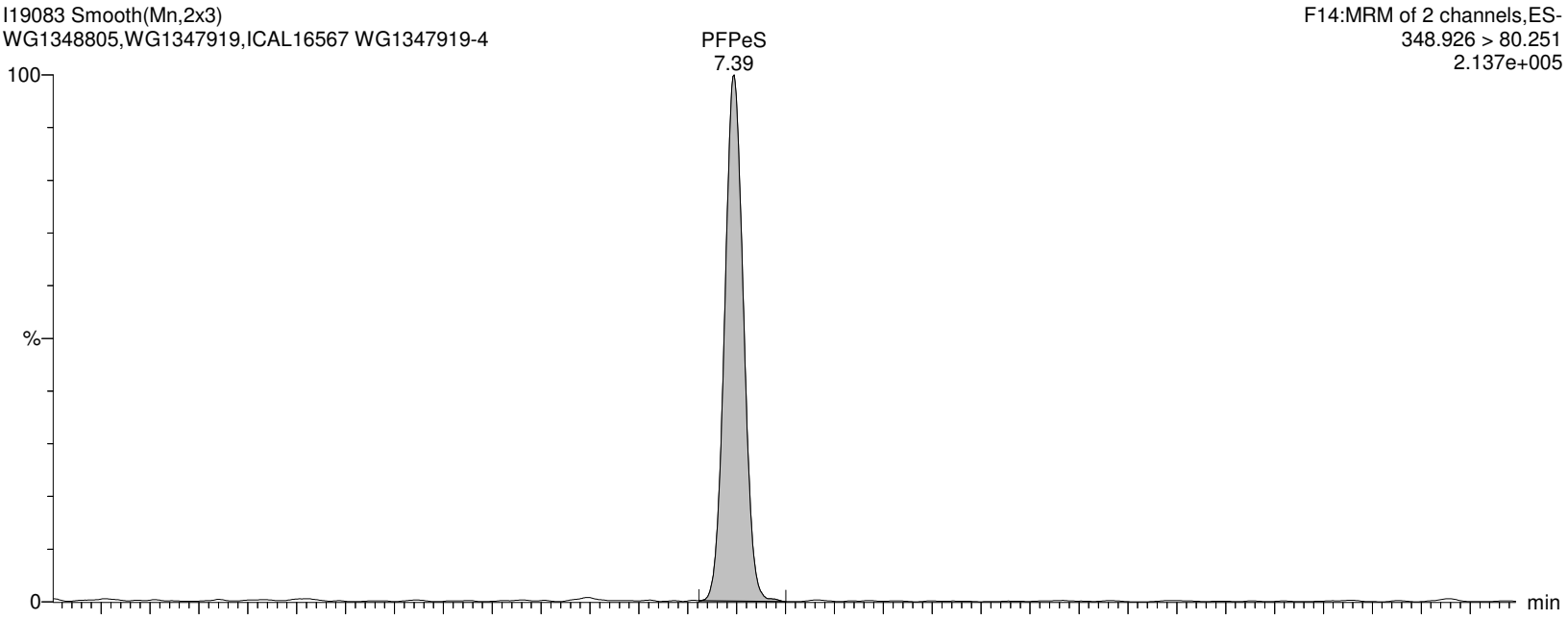


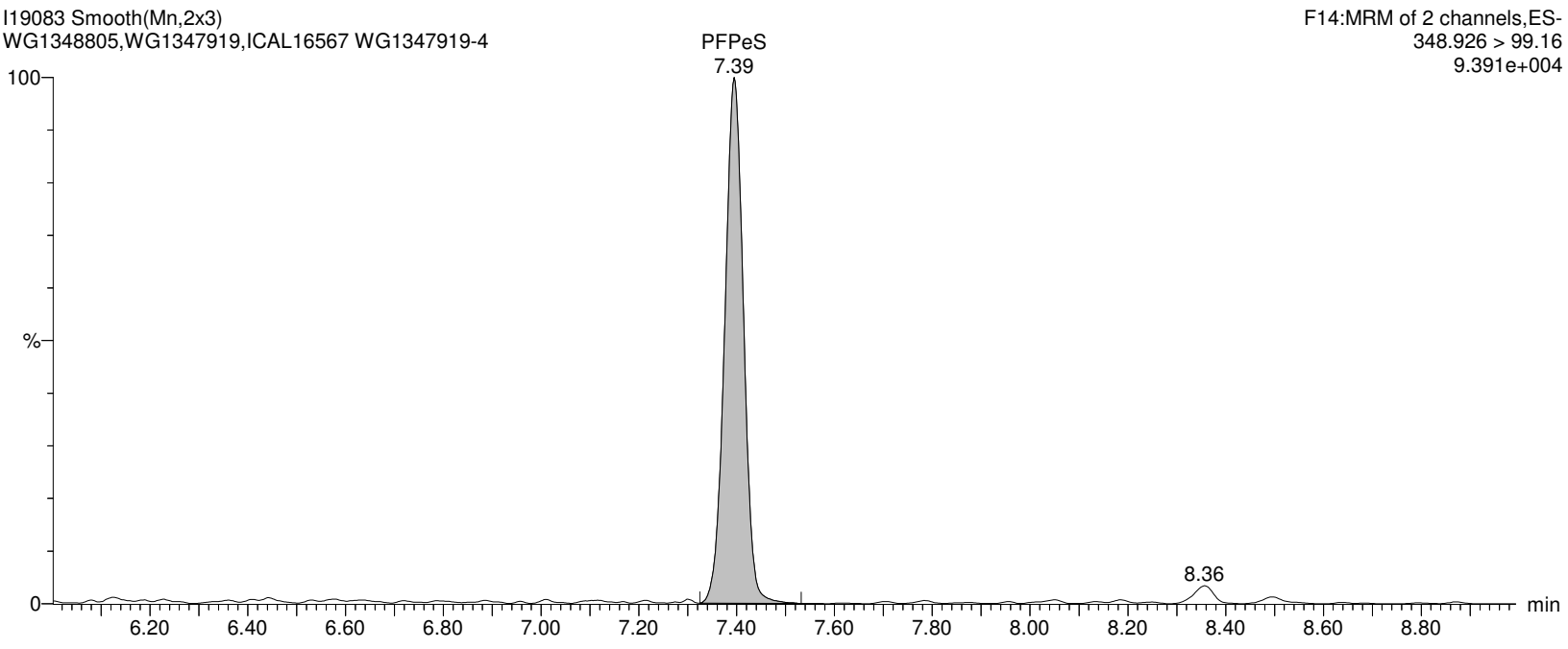



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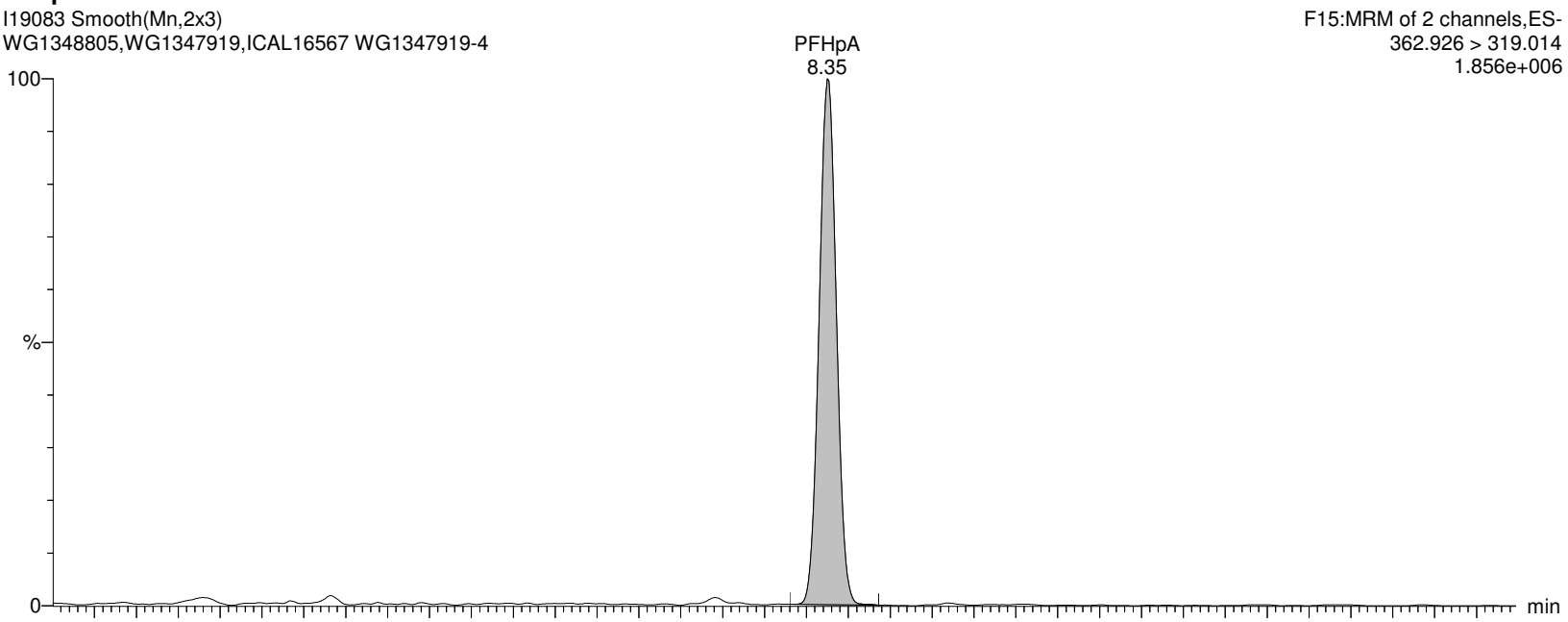
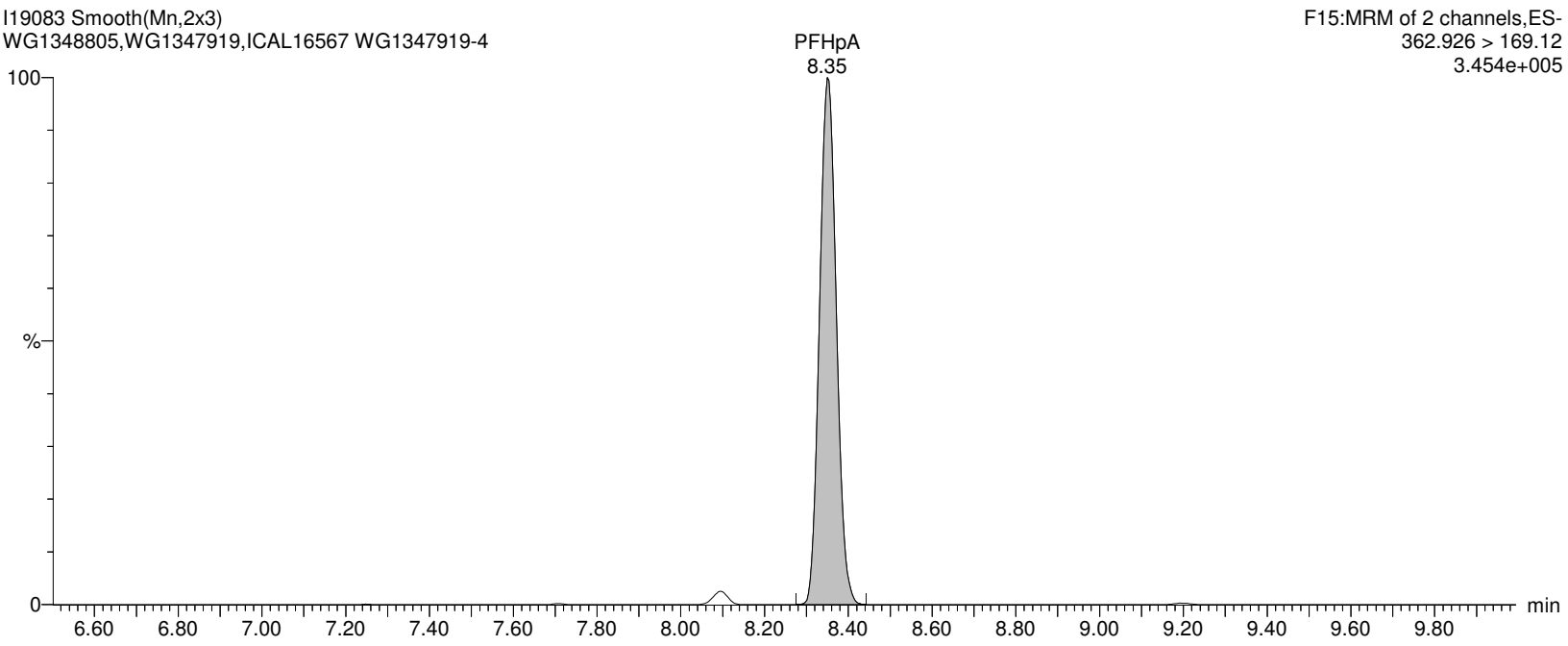
**PFHpA**





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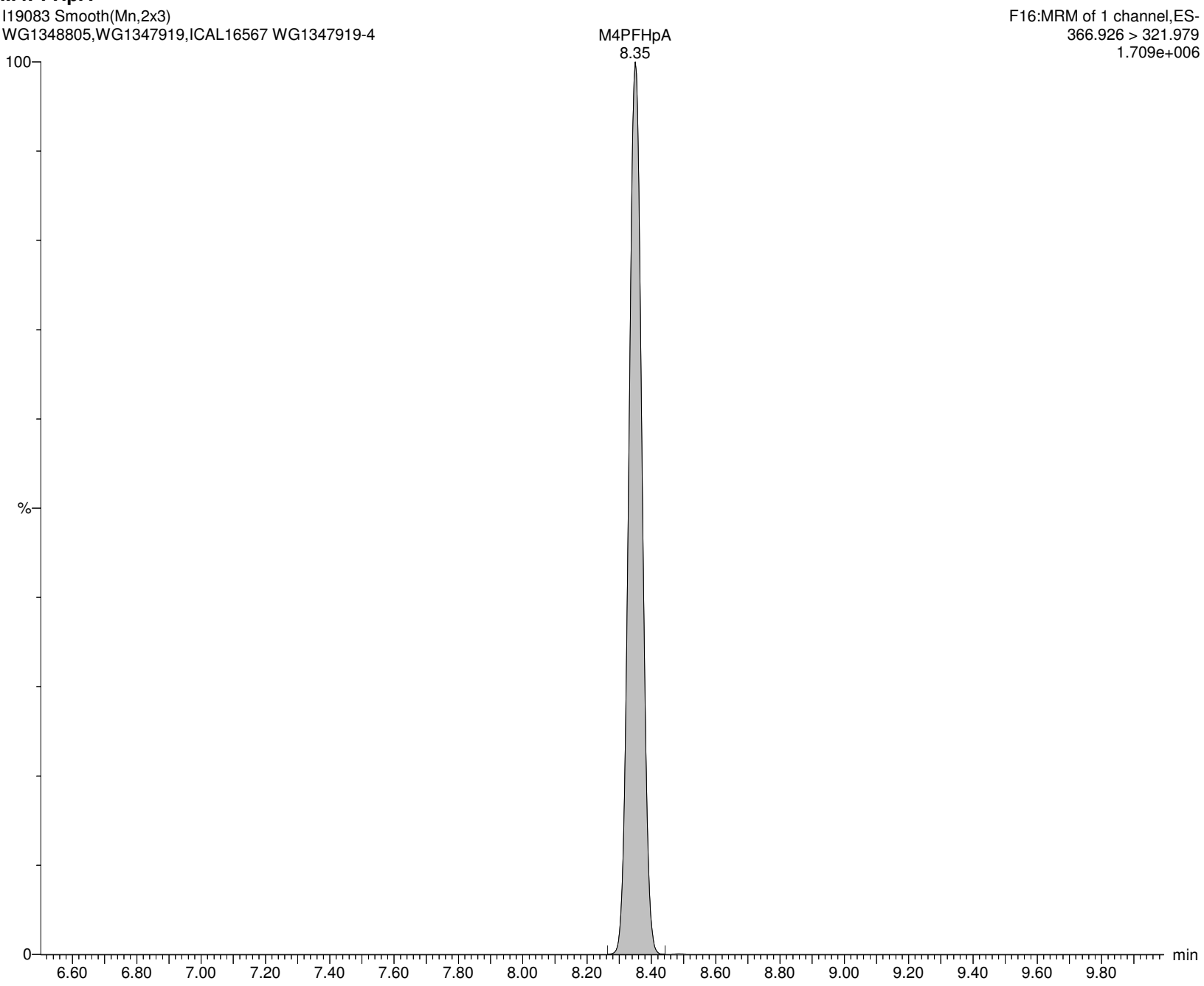
**M4PFHpA**





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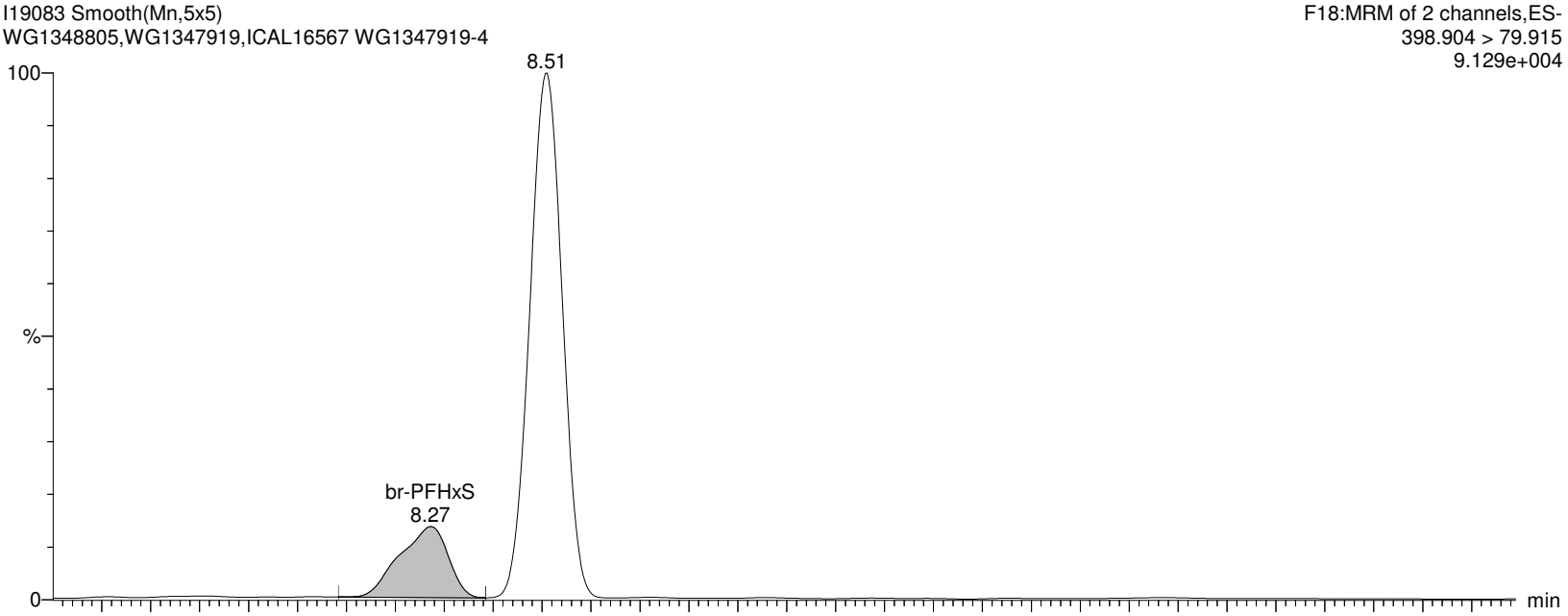
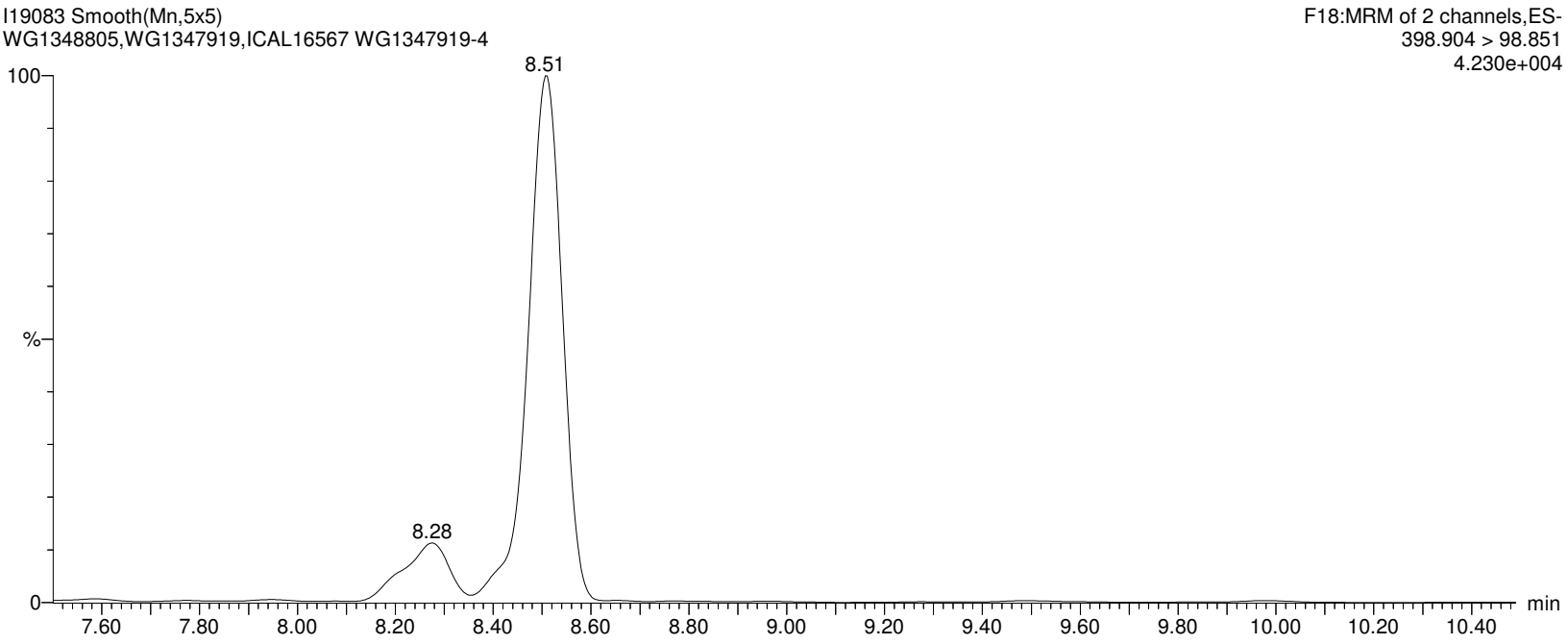
**br-PFHxS**





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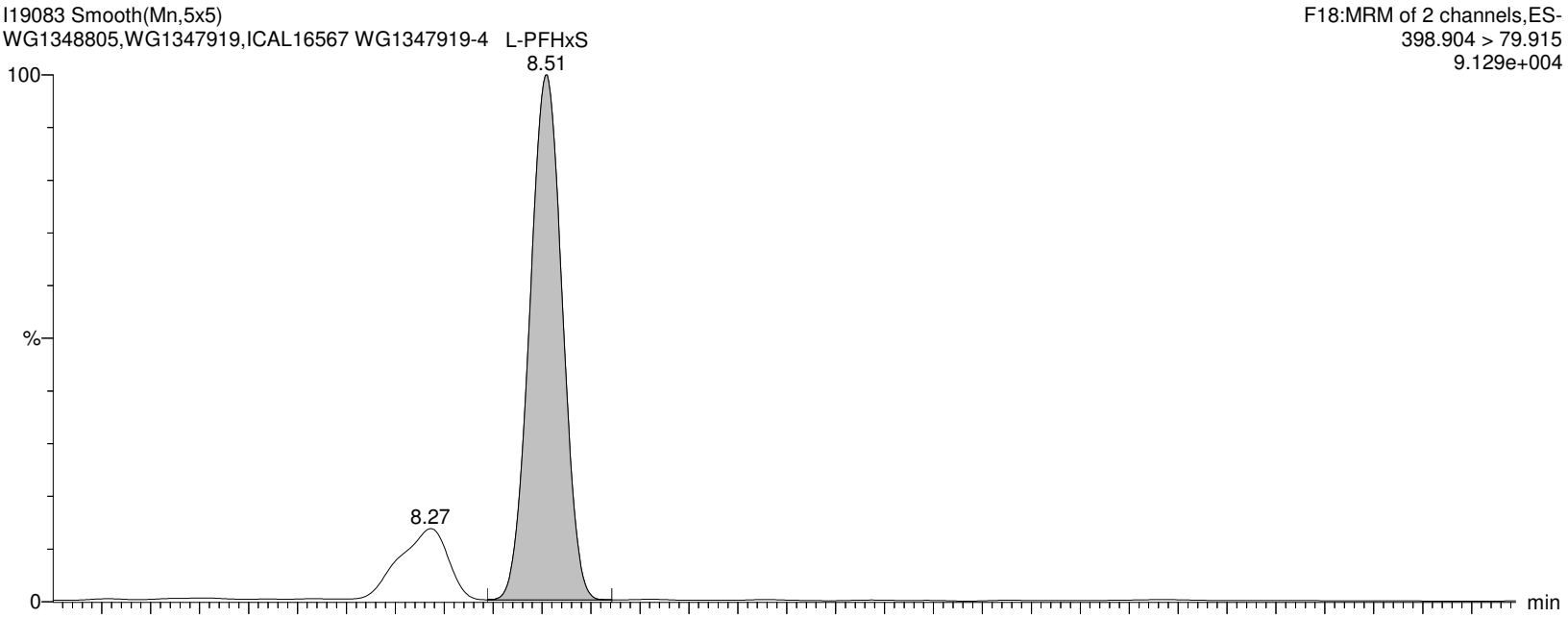


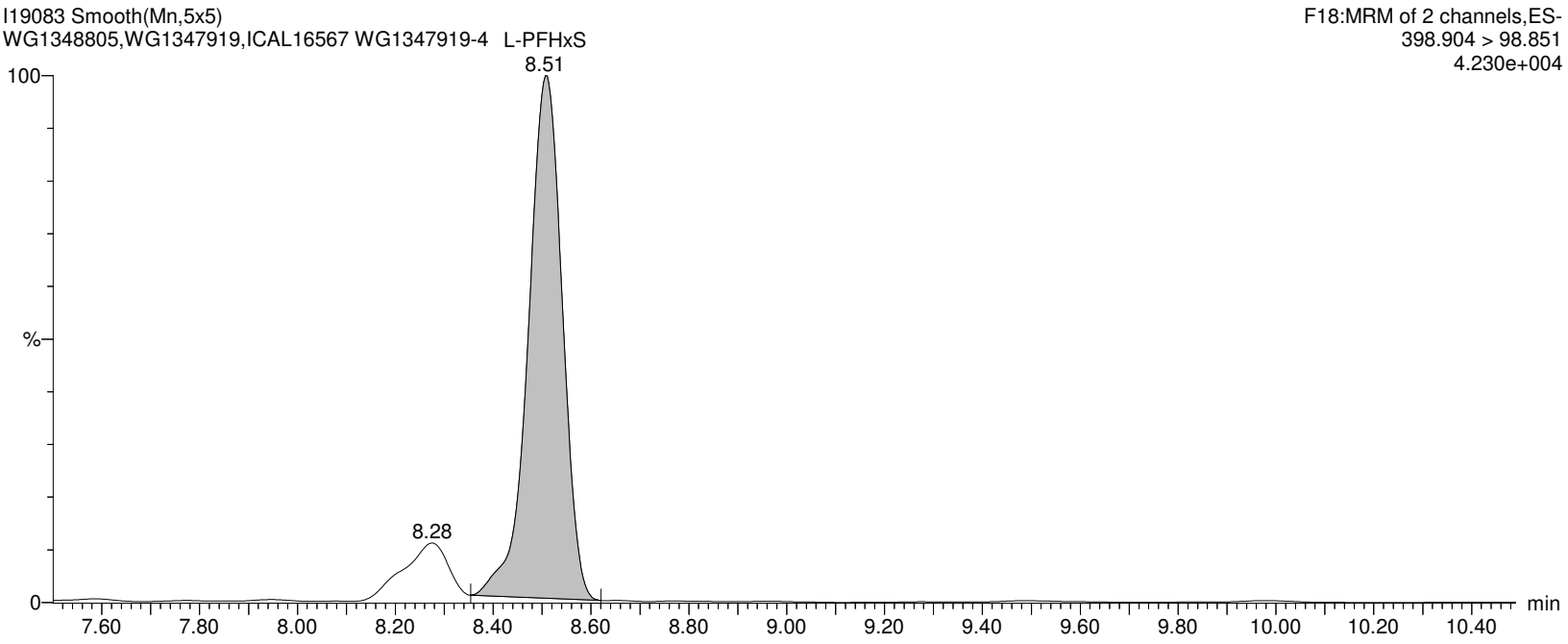



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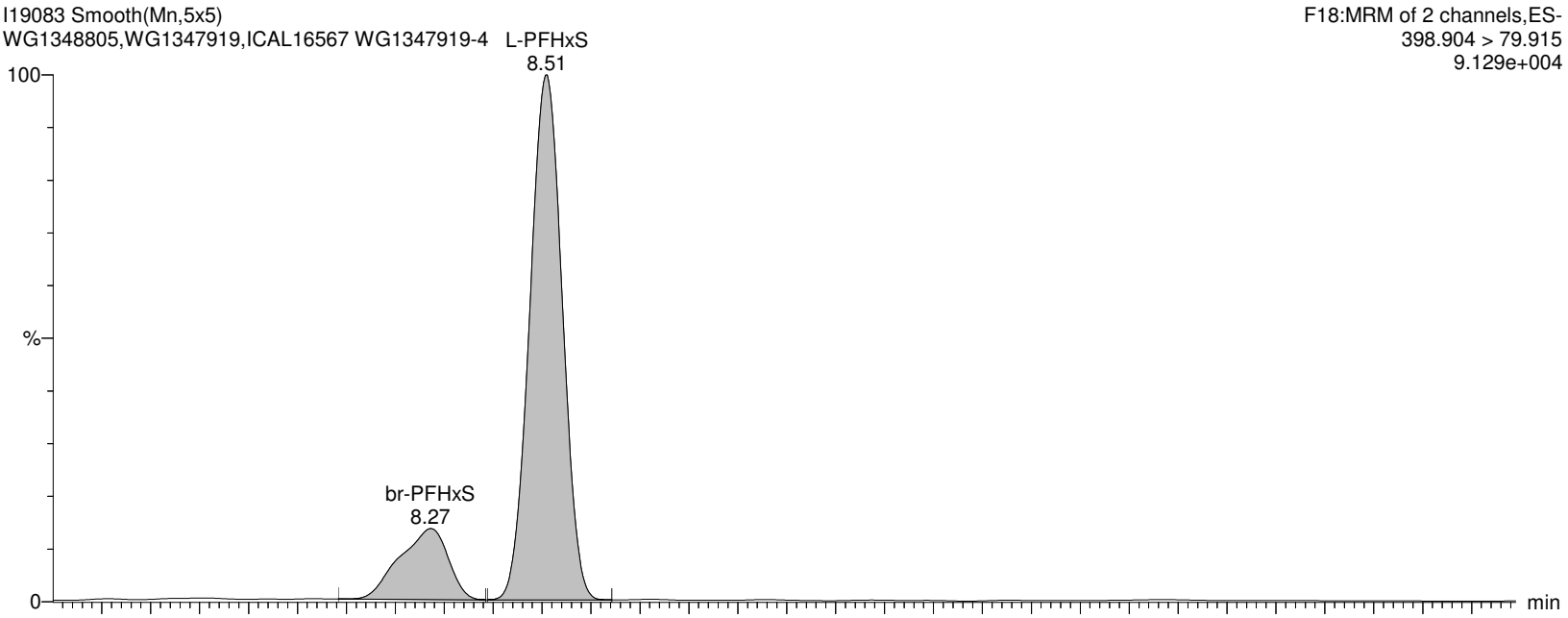
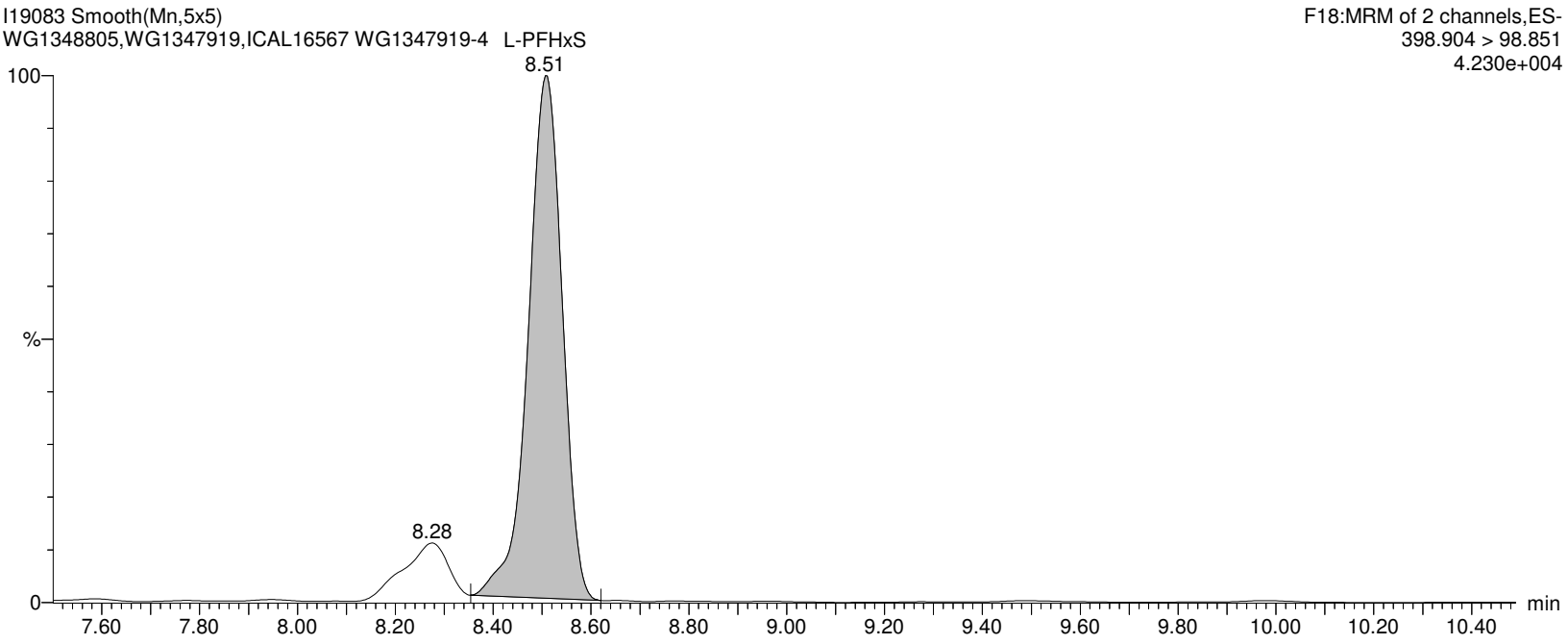
**PFHxS**





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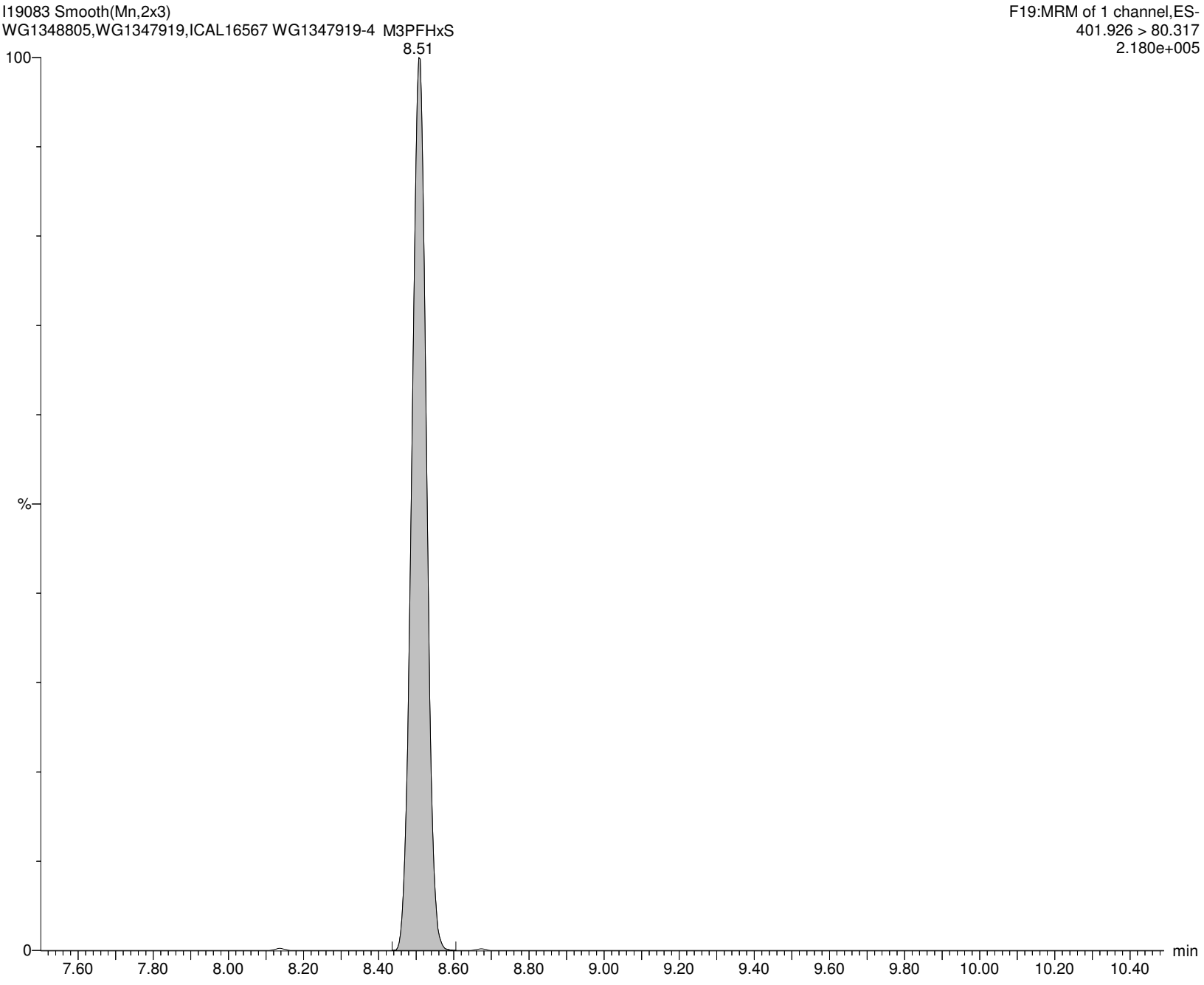
**M3PFHxS**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200309_537ISO.PRO\Data\WG1348805A.qld
Last Altered: Tuesday, March 17, 2020 11:10:13 Eastern Daylight Time
Printed: Tuesday, March 17, 2020 11:22:15 Eastern Daylight Time

**Name: I19083**
**ID: WG1347919-4**
**Date: 09-Mar-2020**
**Time: 16:46:25**
**Description: WG1348805,WG1347919,ICAL16567**
**User: LCMS01:JW**
**Vial: 1:C,6**
**Instrument: XEVO-TQSmicro#QEA0276**
**Inlet Method Name: C:\MassLynx\Data\200309_537ISO.PRO\ACQUDB\LCMS_537_ISO_MeOH**
**Tune Method Name: C:\MassLynx\Data\200309_537ISO.PRO\ACQUDB\190709_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\200309_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

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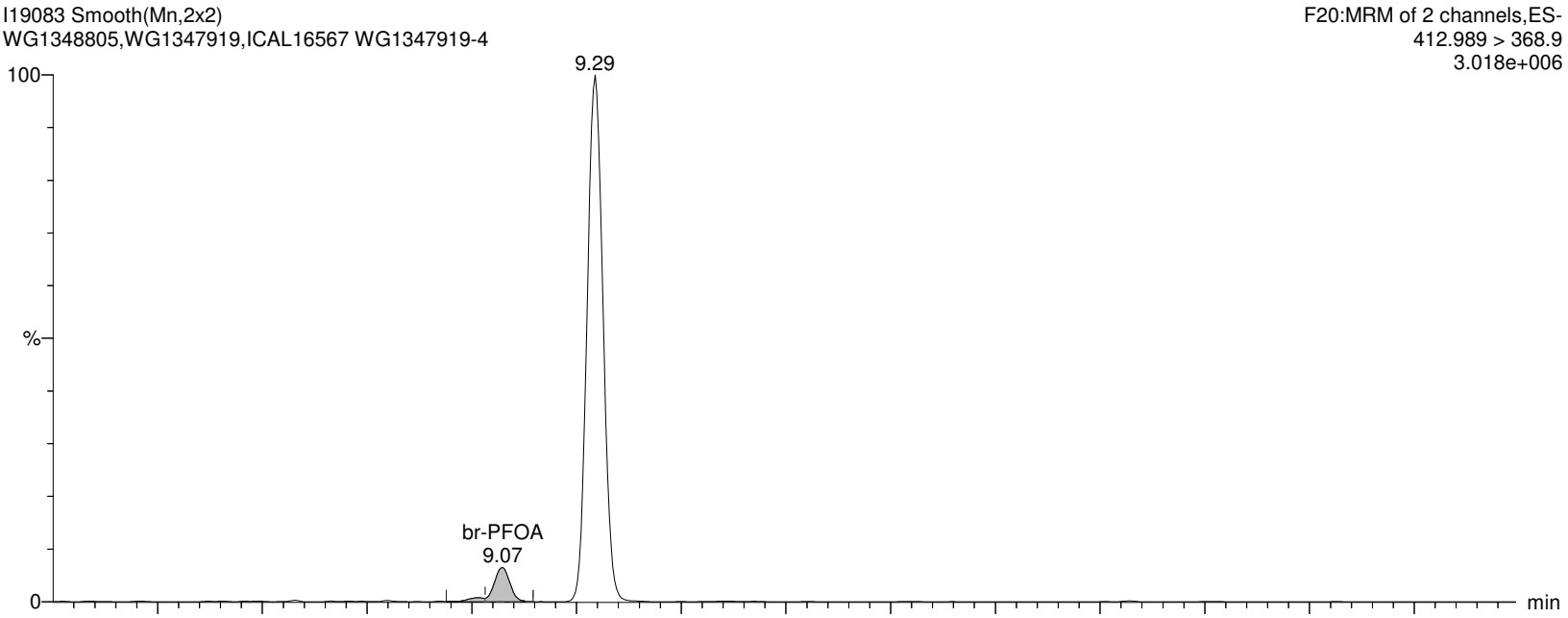


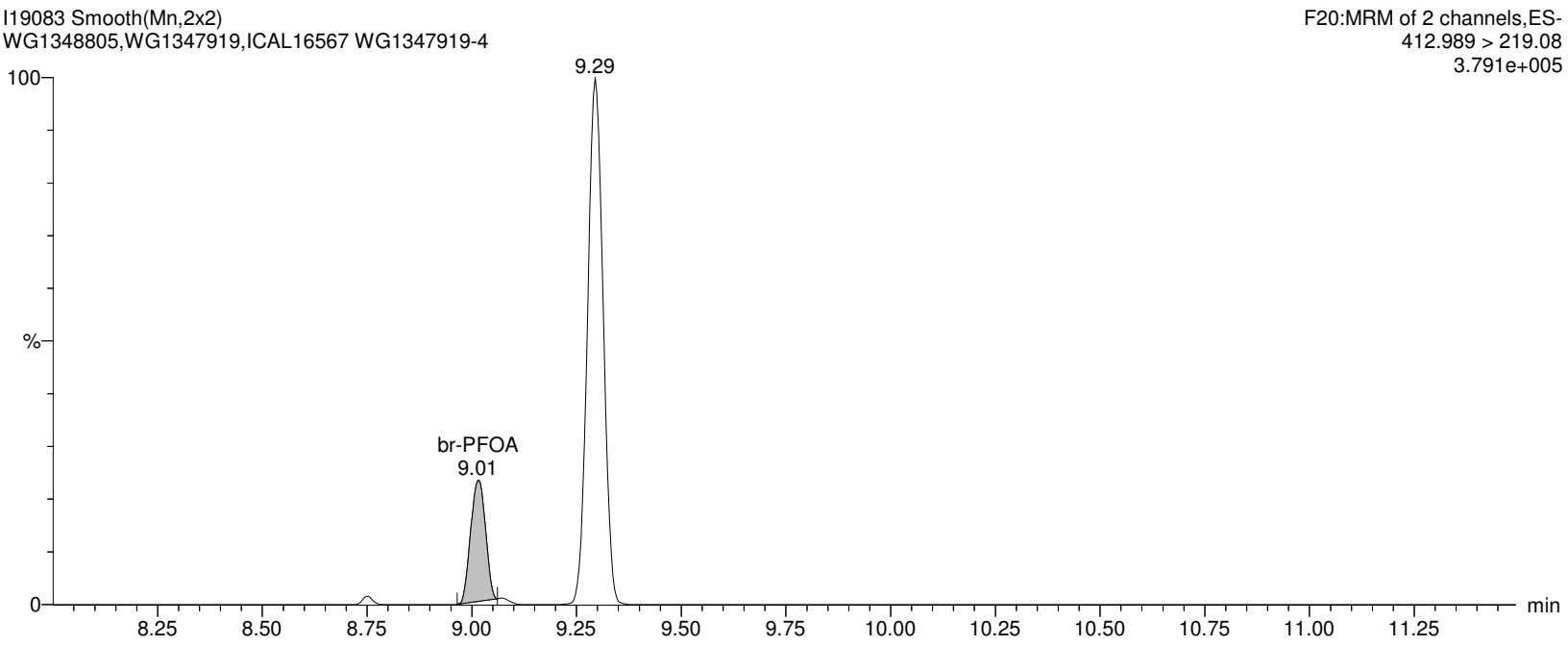



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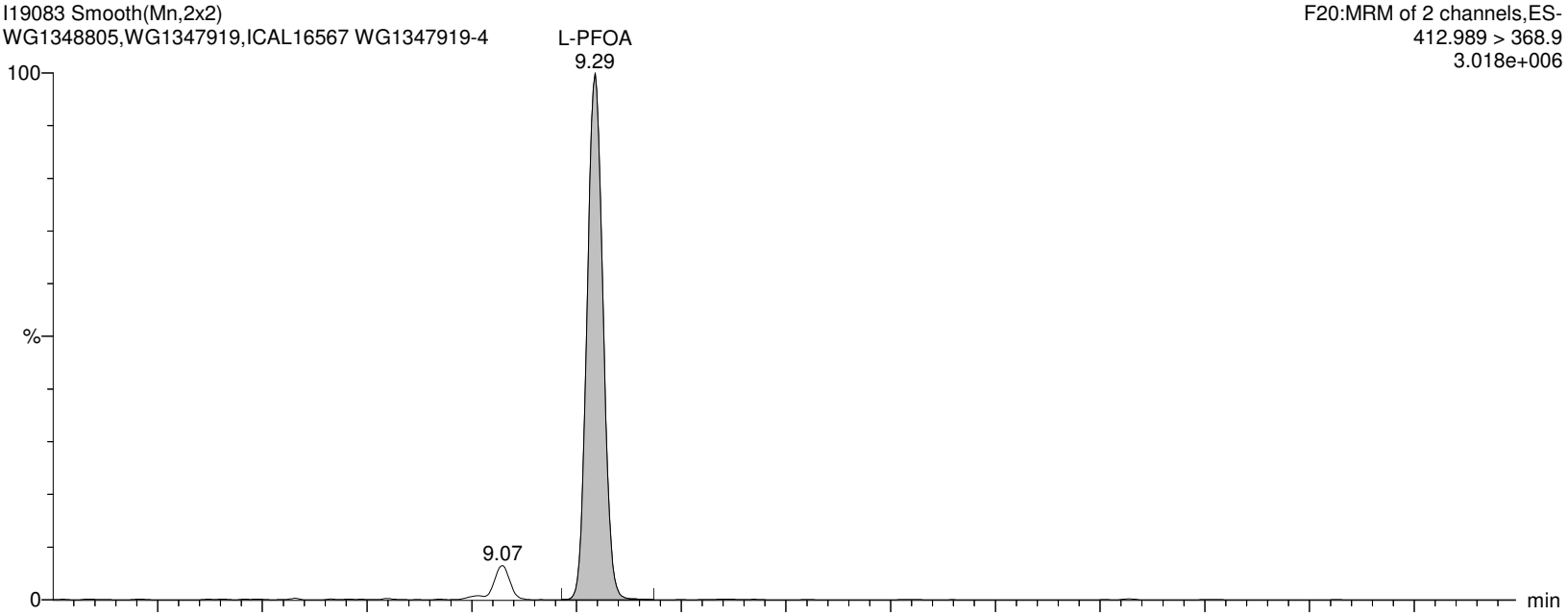


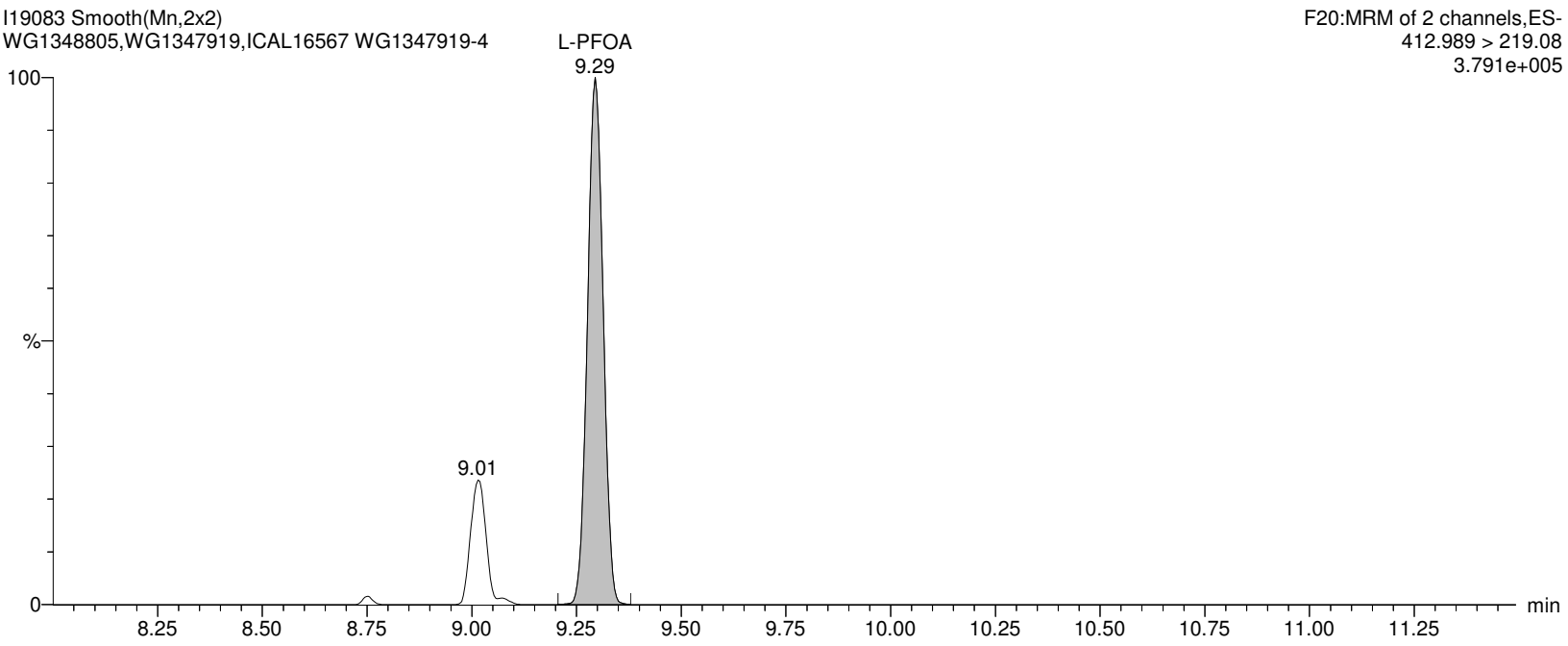



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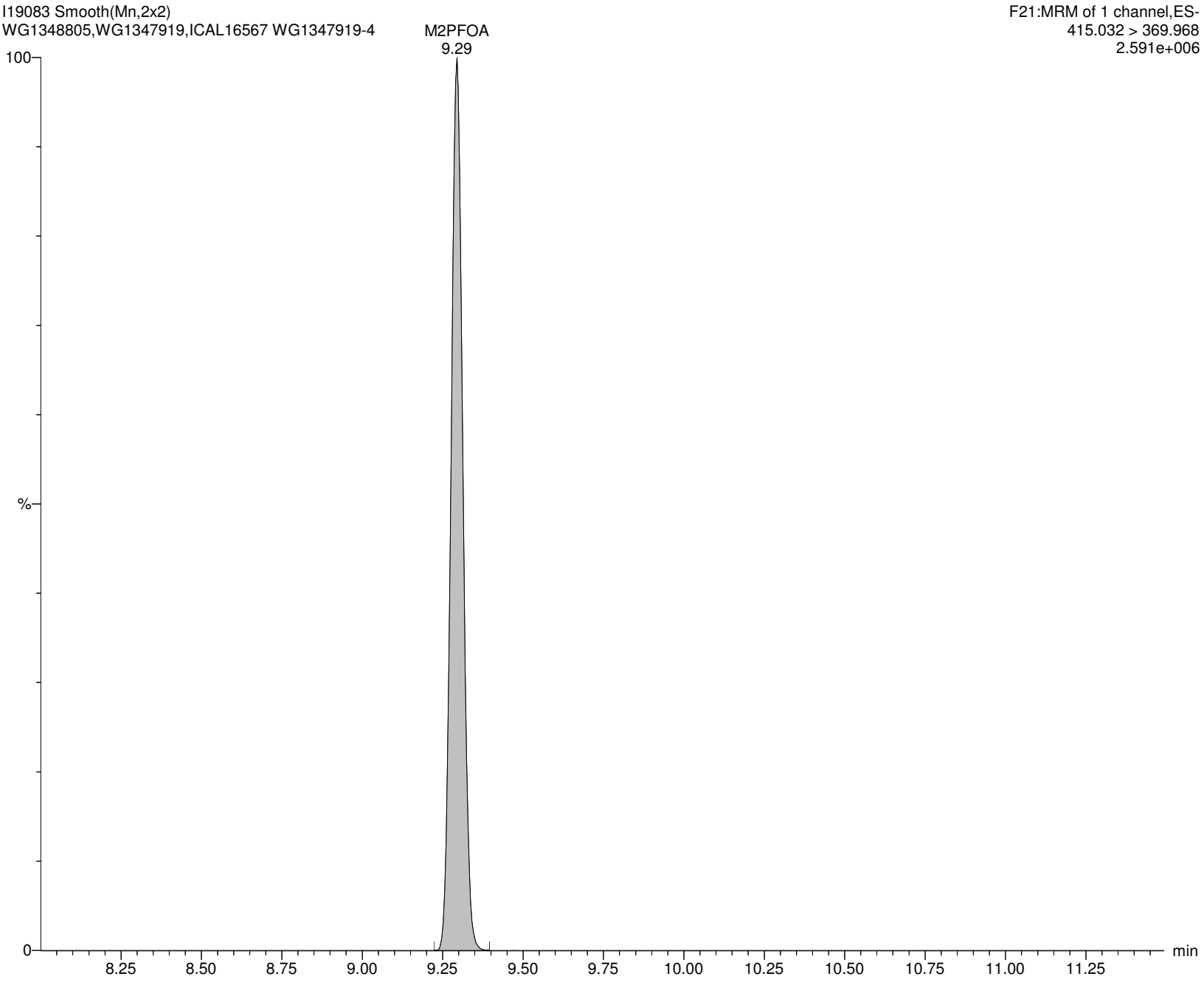



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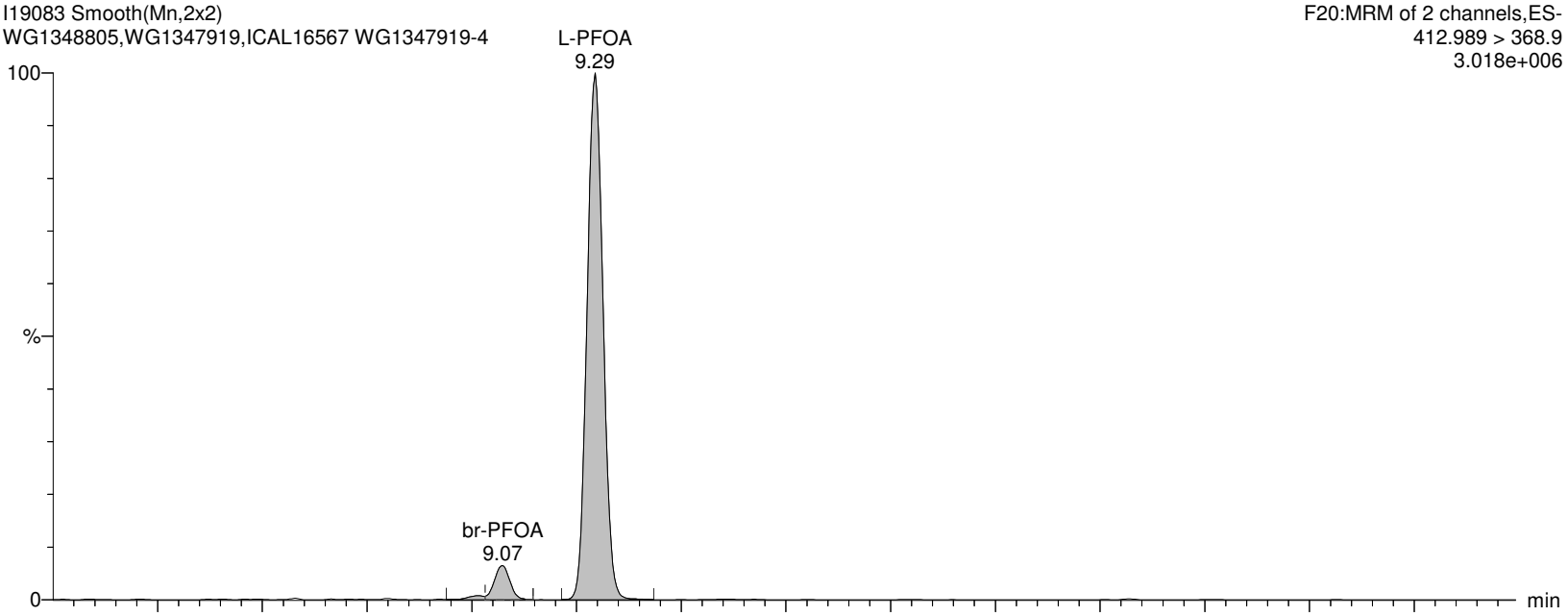
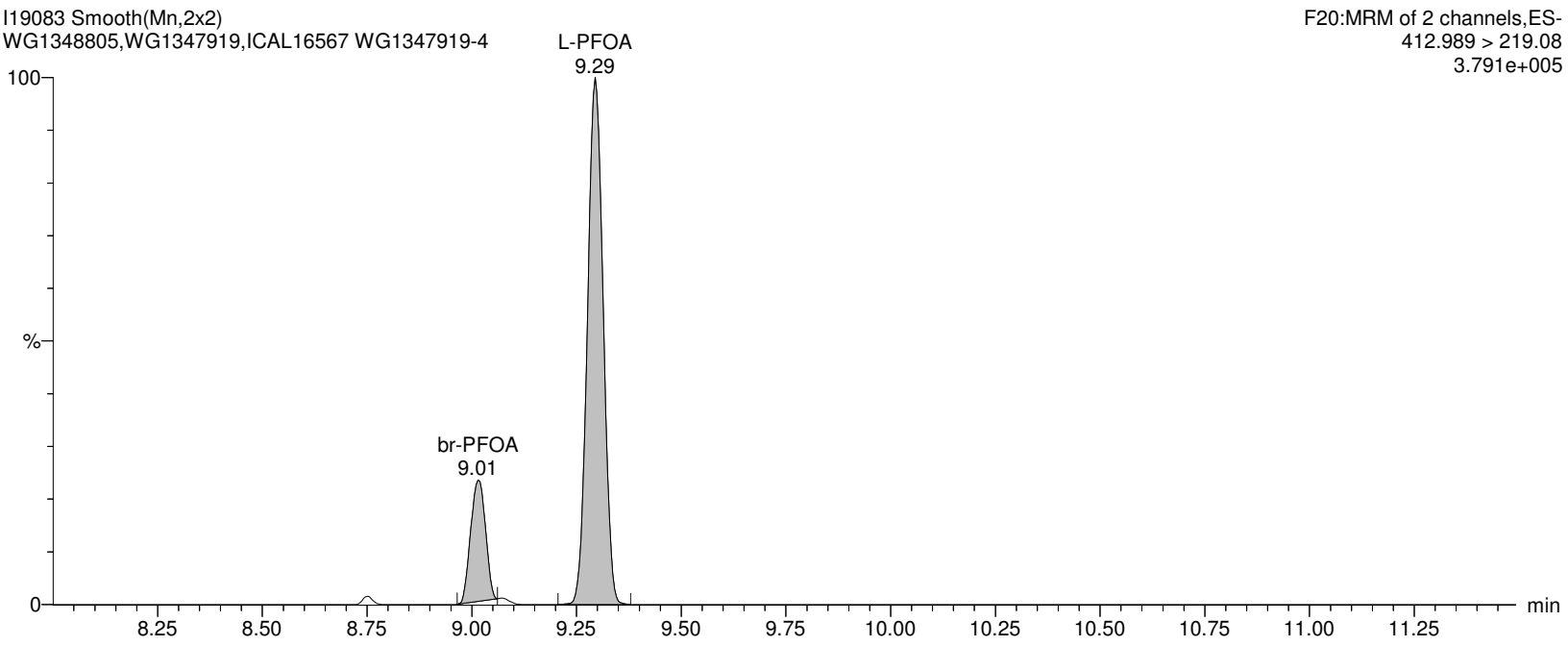
**PFOA**





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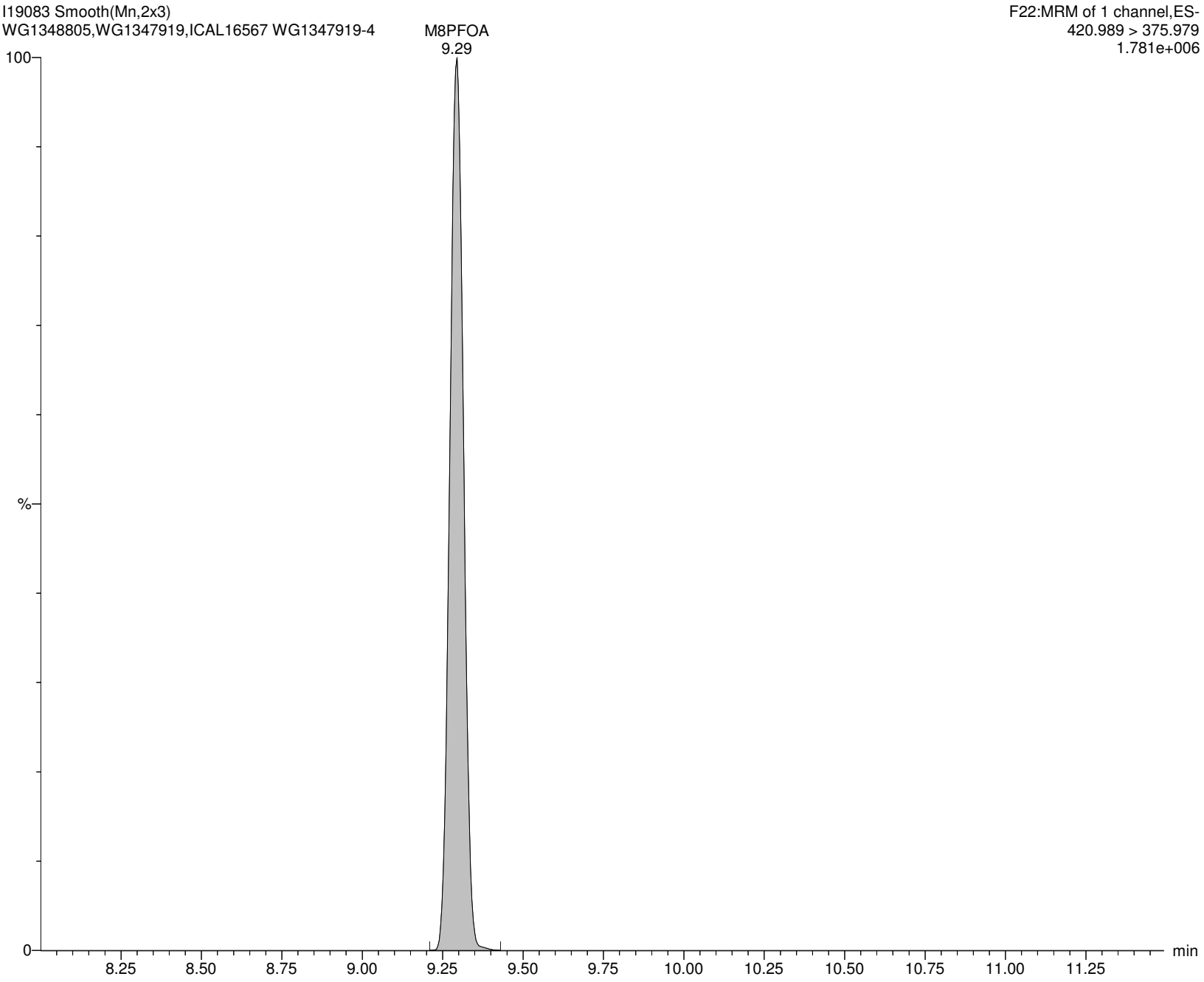
**M8PFOA**





all concentration units in (ng/mL)

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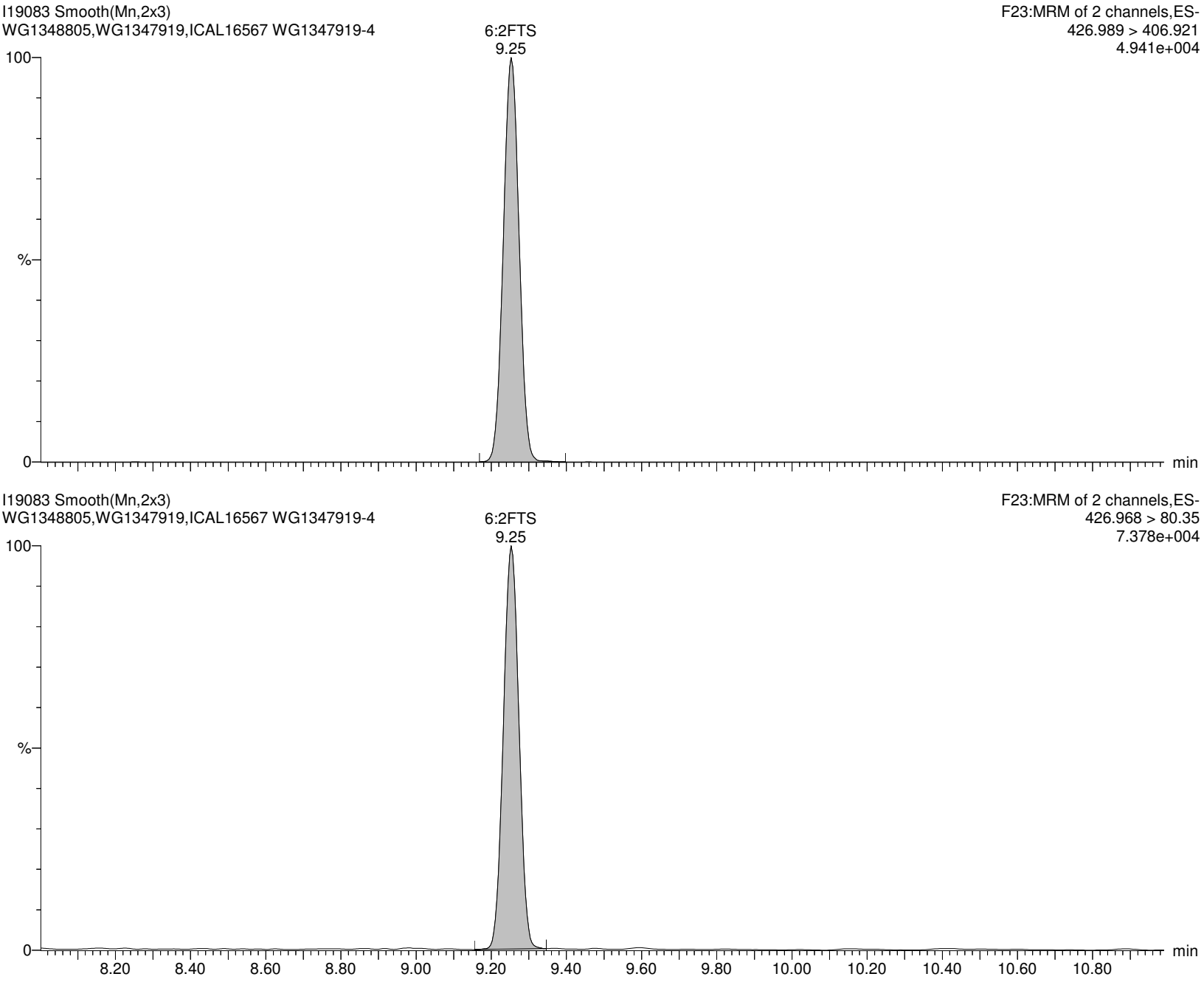
**6:2FTS**





all concentration units in (ng/mL)

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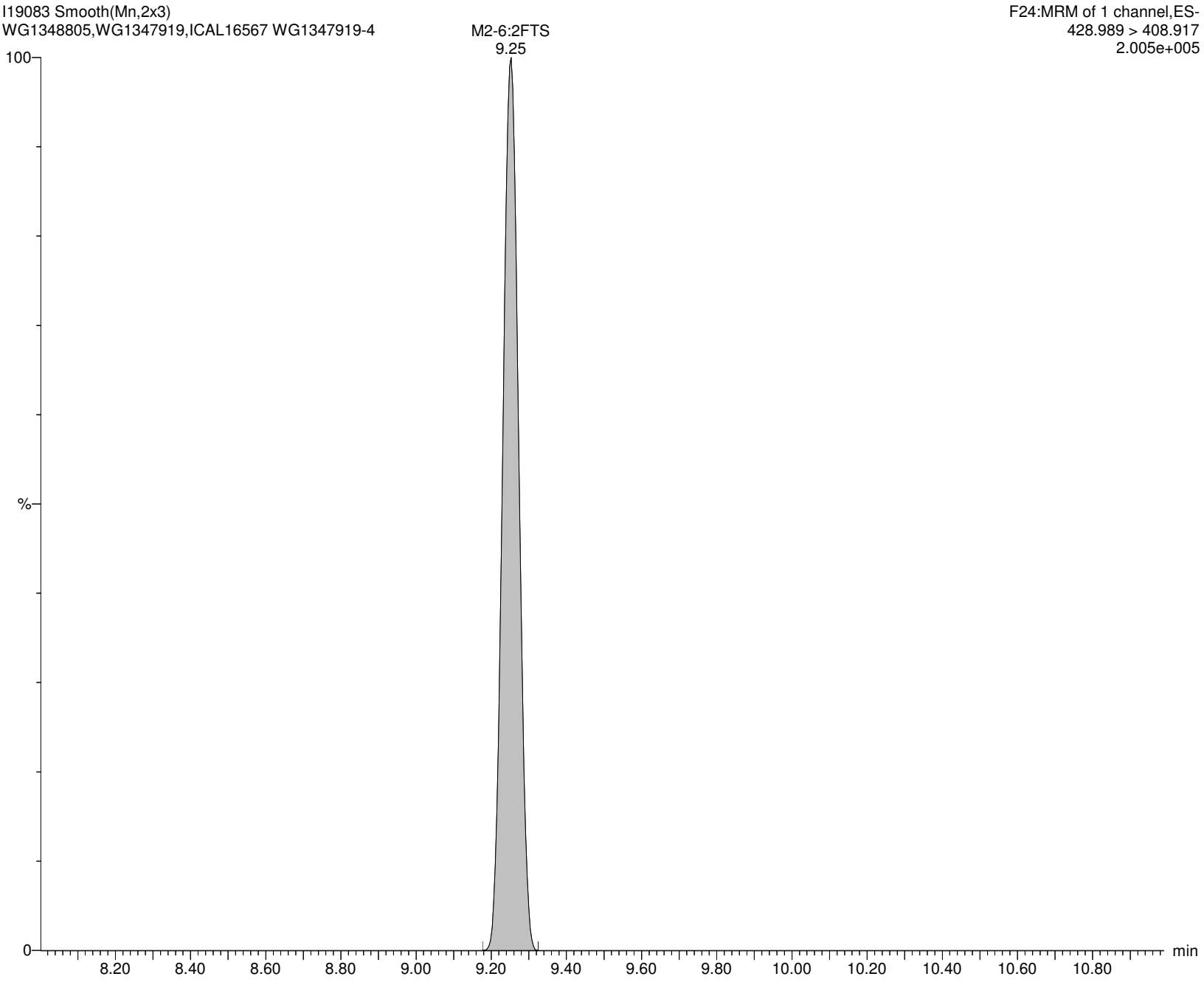
**M2-6:2FTS**





all concentration units in (ng/mL)

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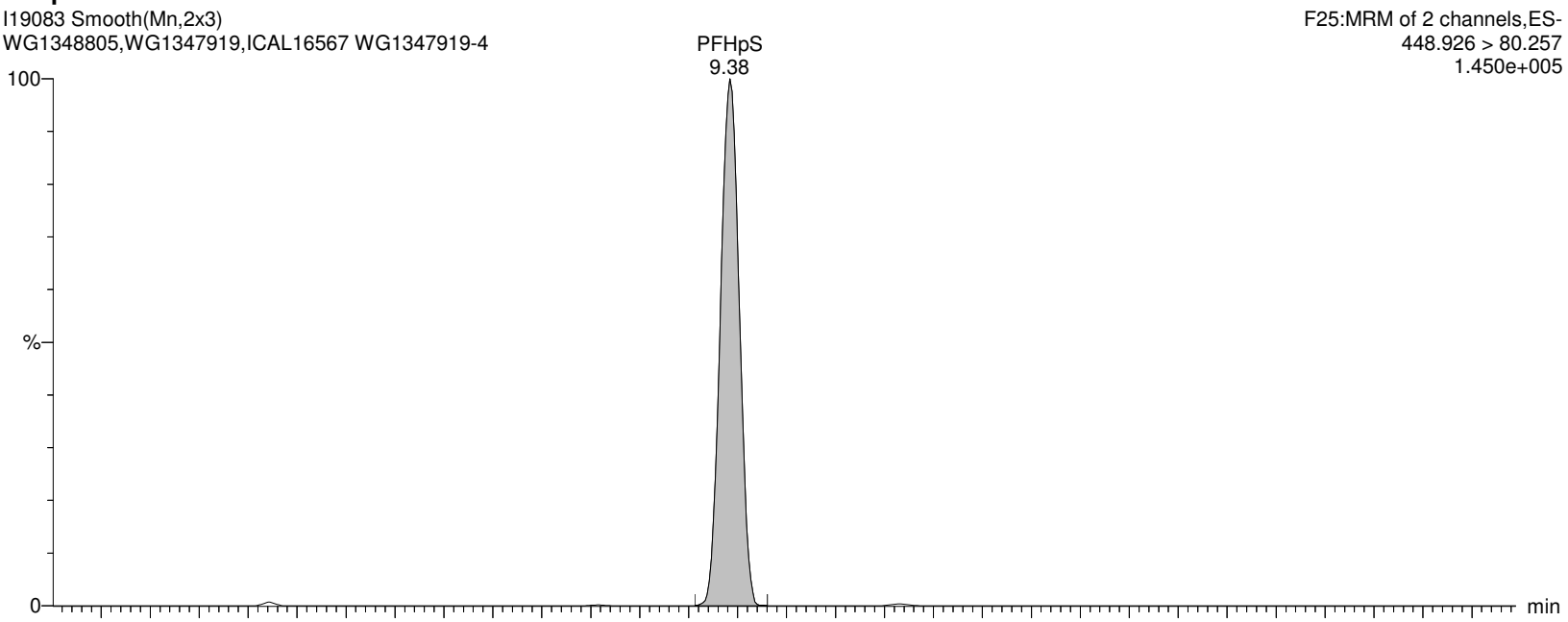
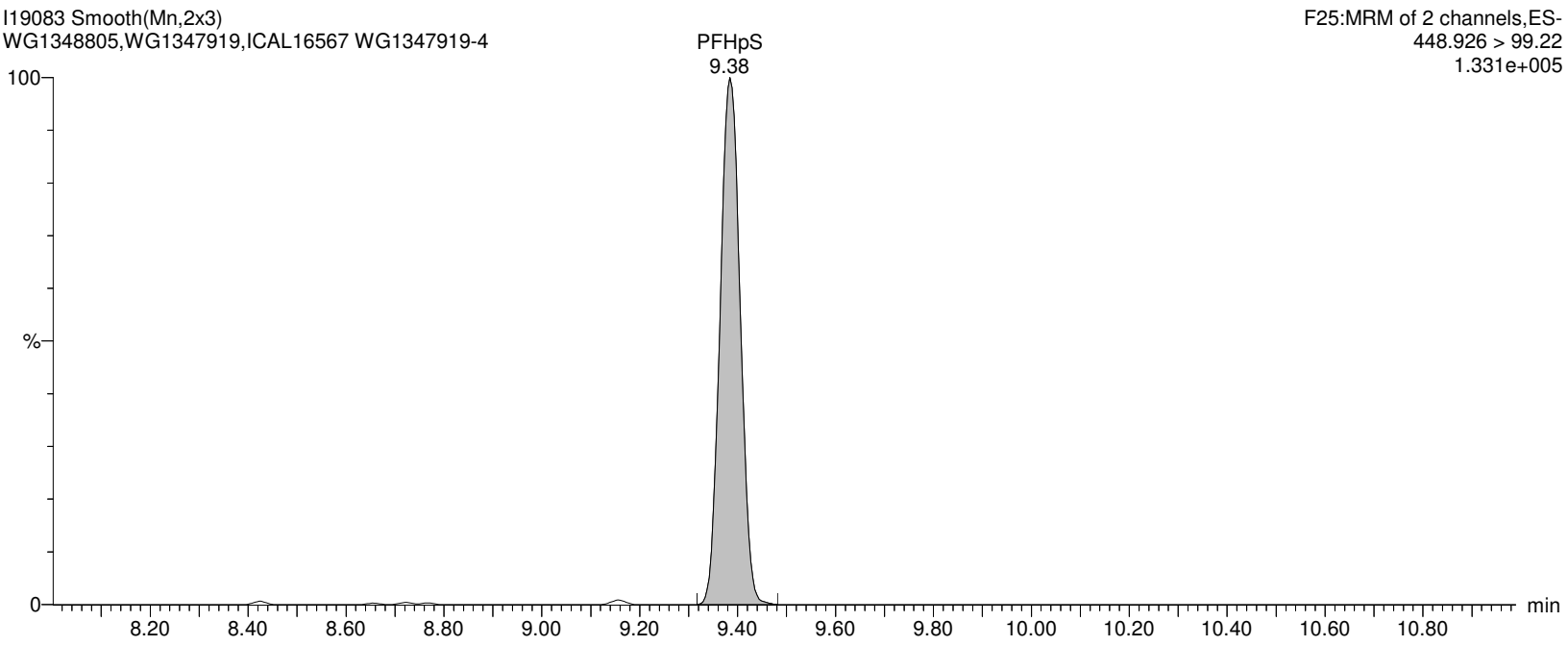
**PFHpS**





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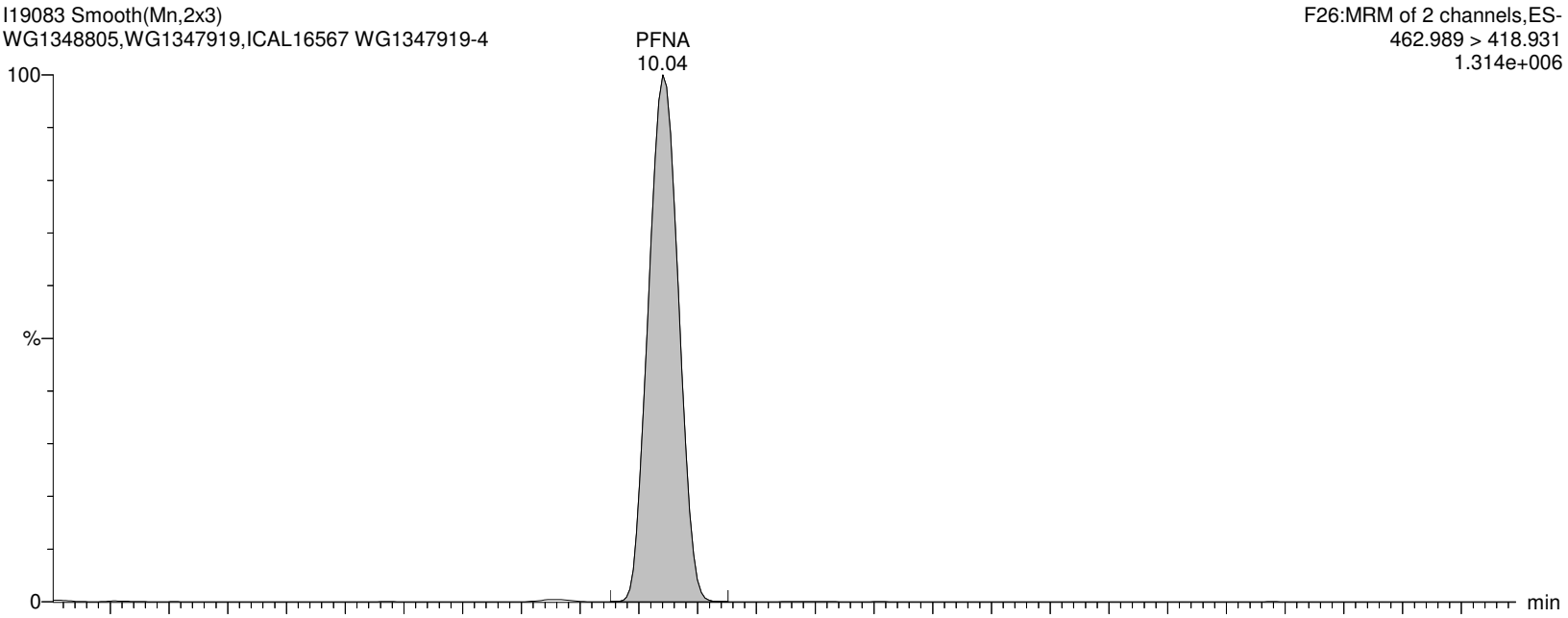


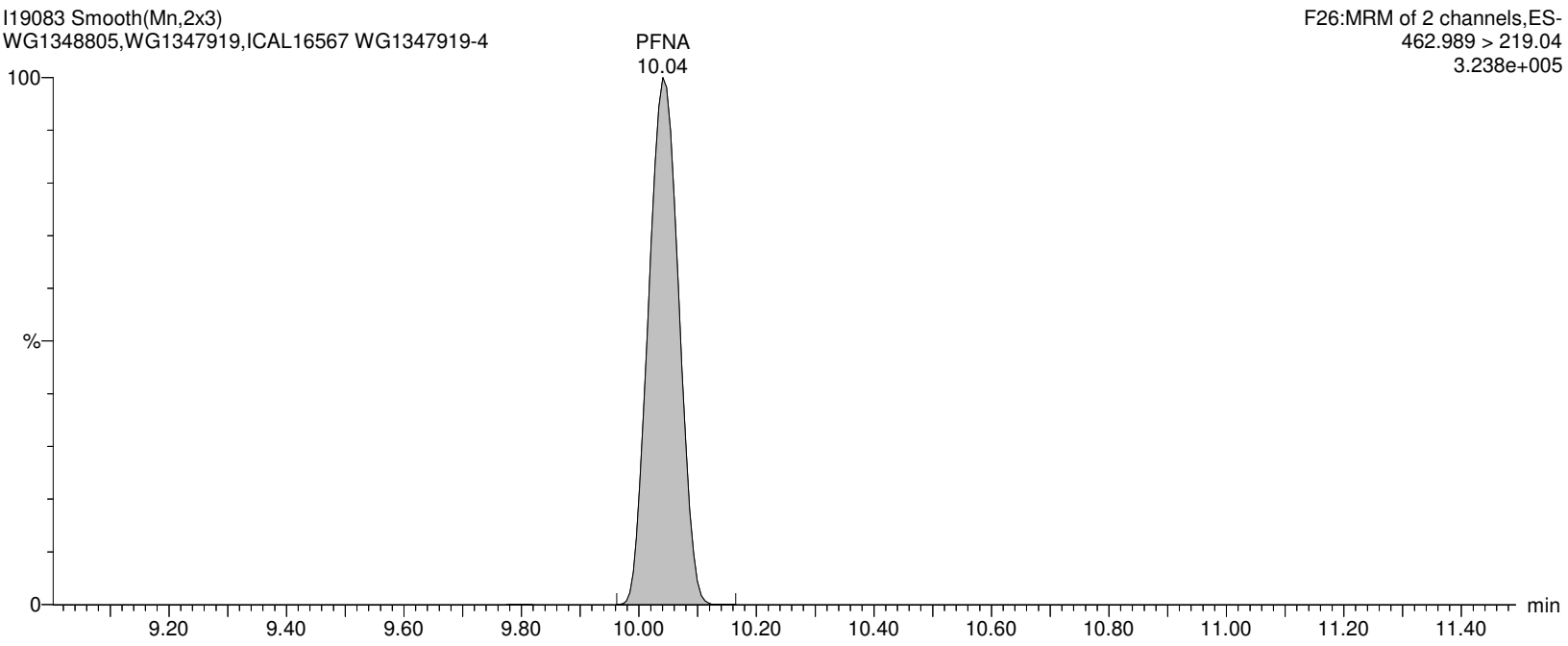



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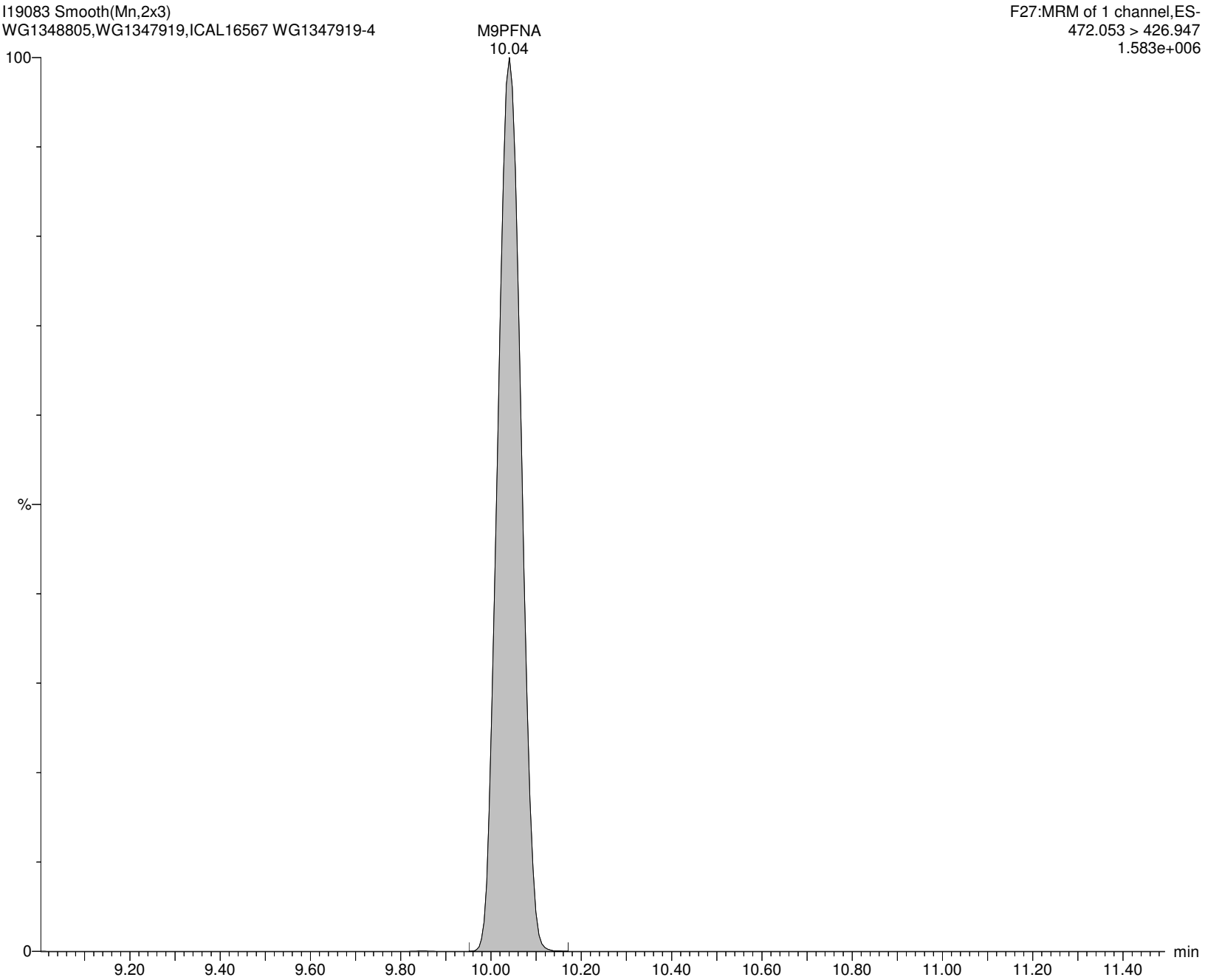
**M9PFNA**





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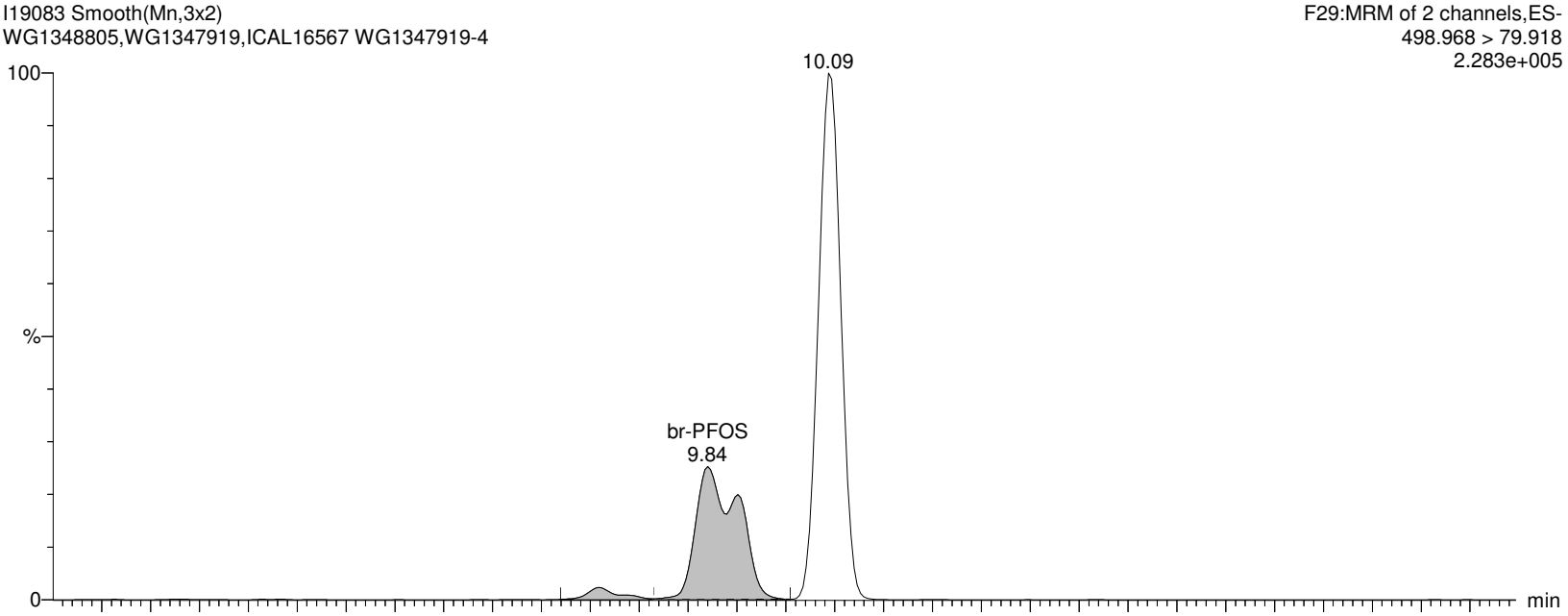
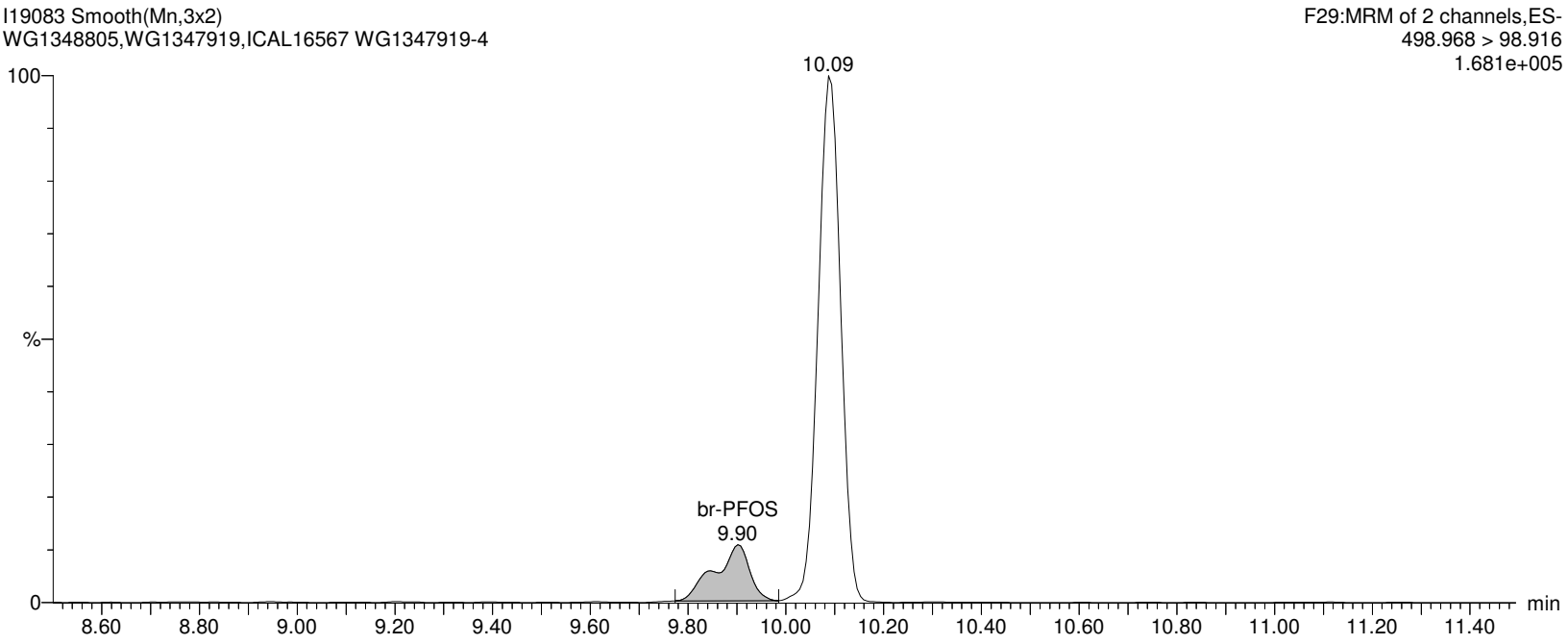
**br-PFOS**





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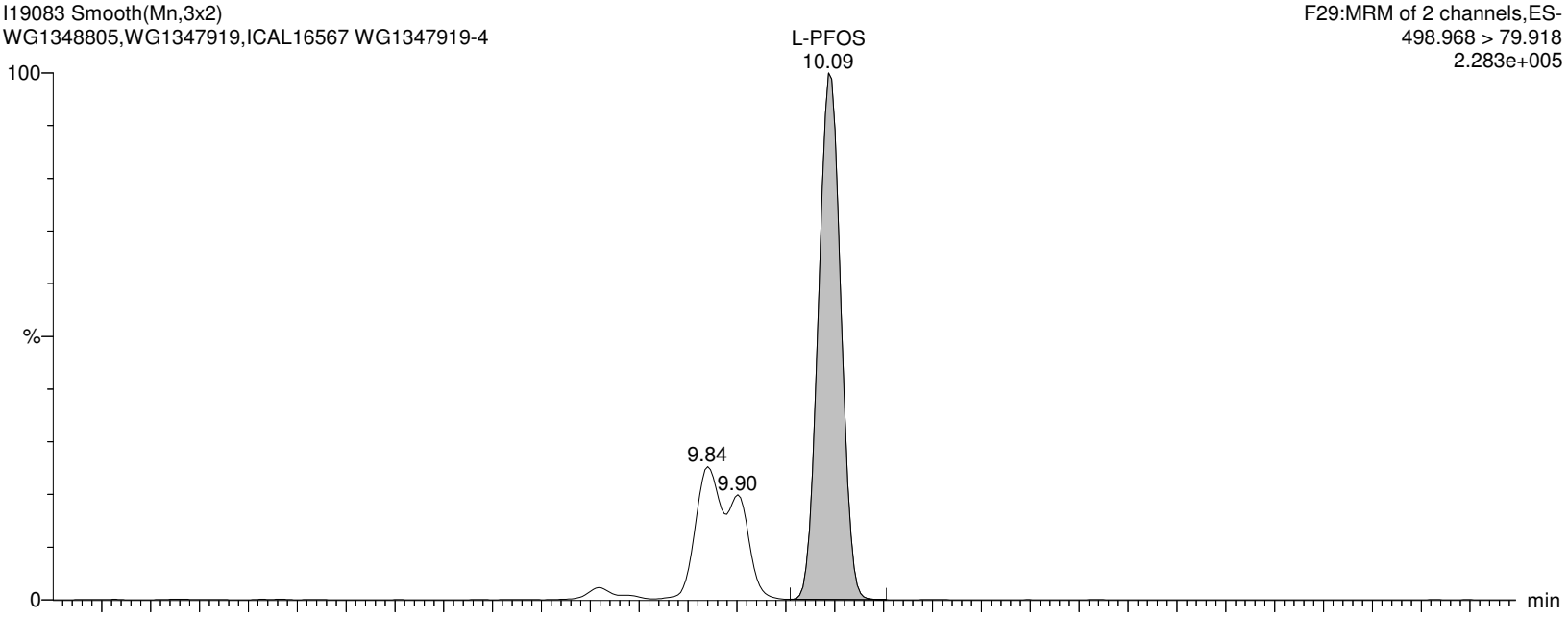
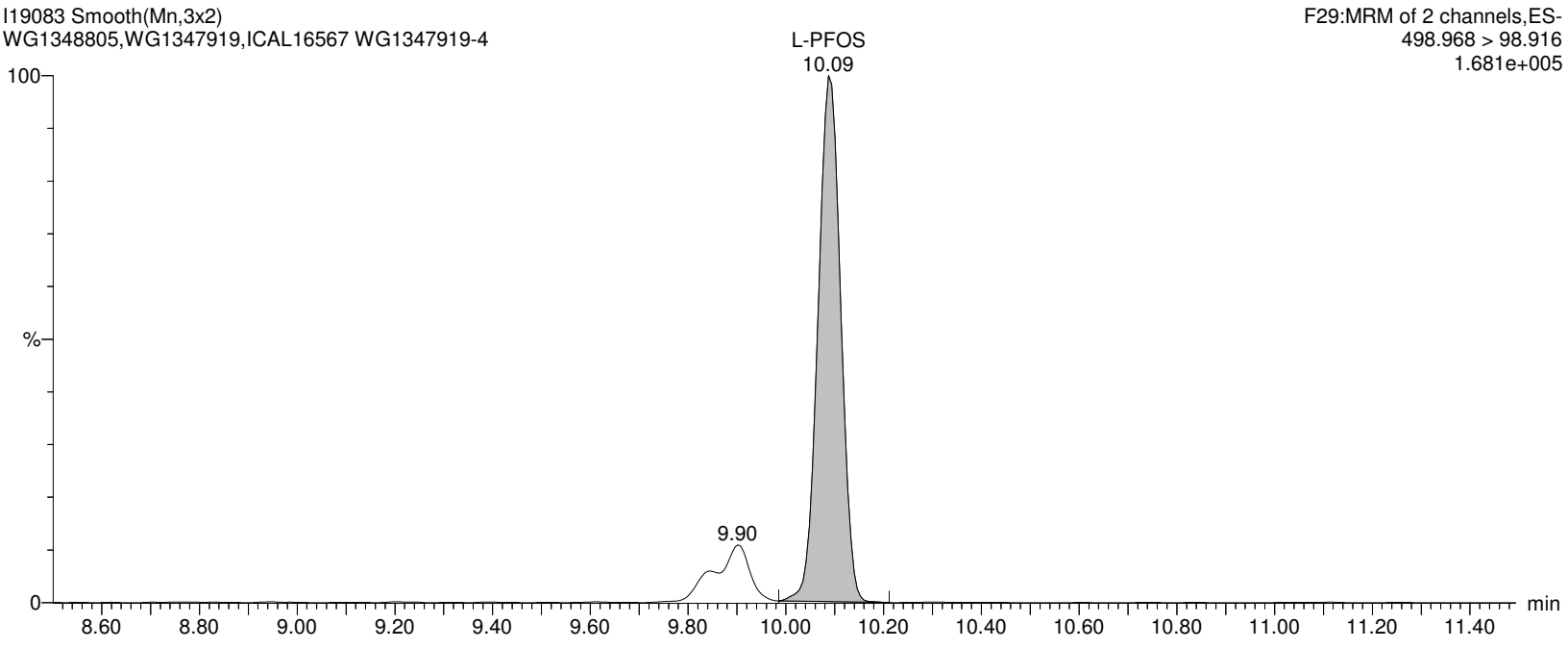
**L-PFOS**





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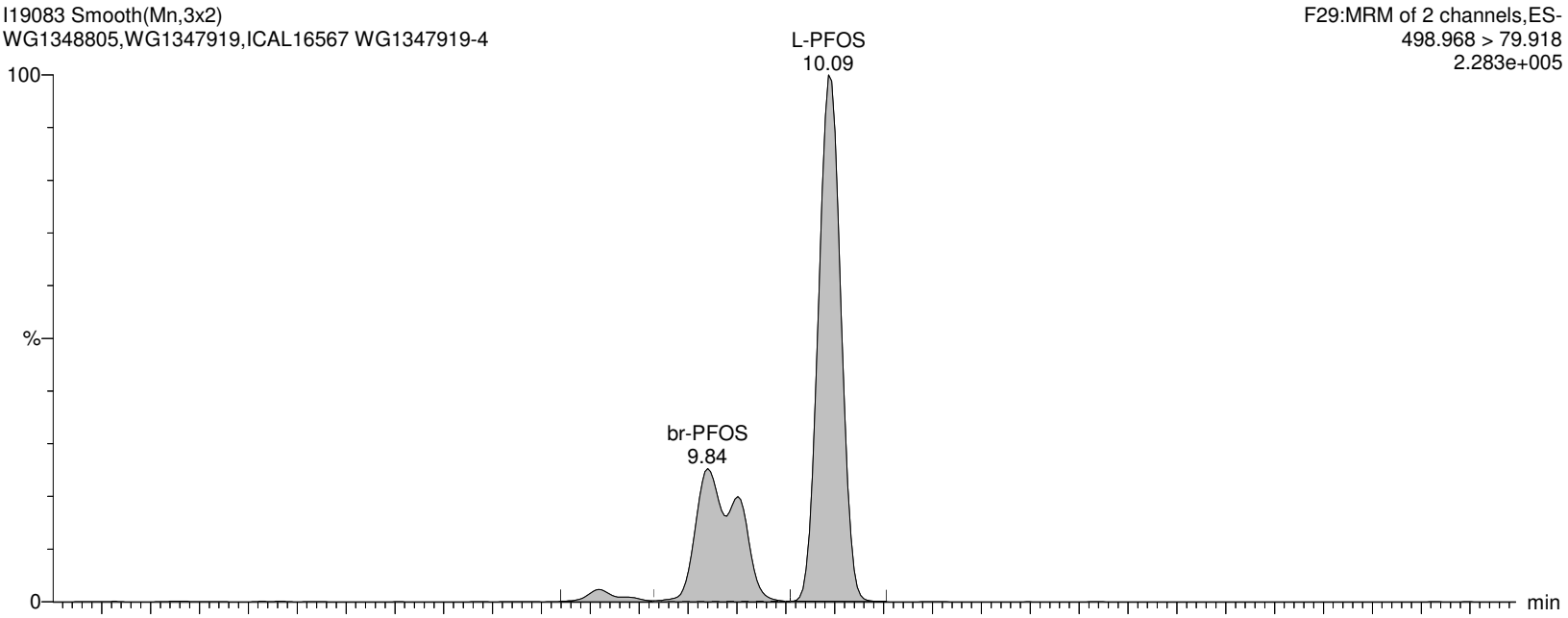
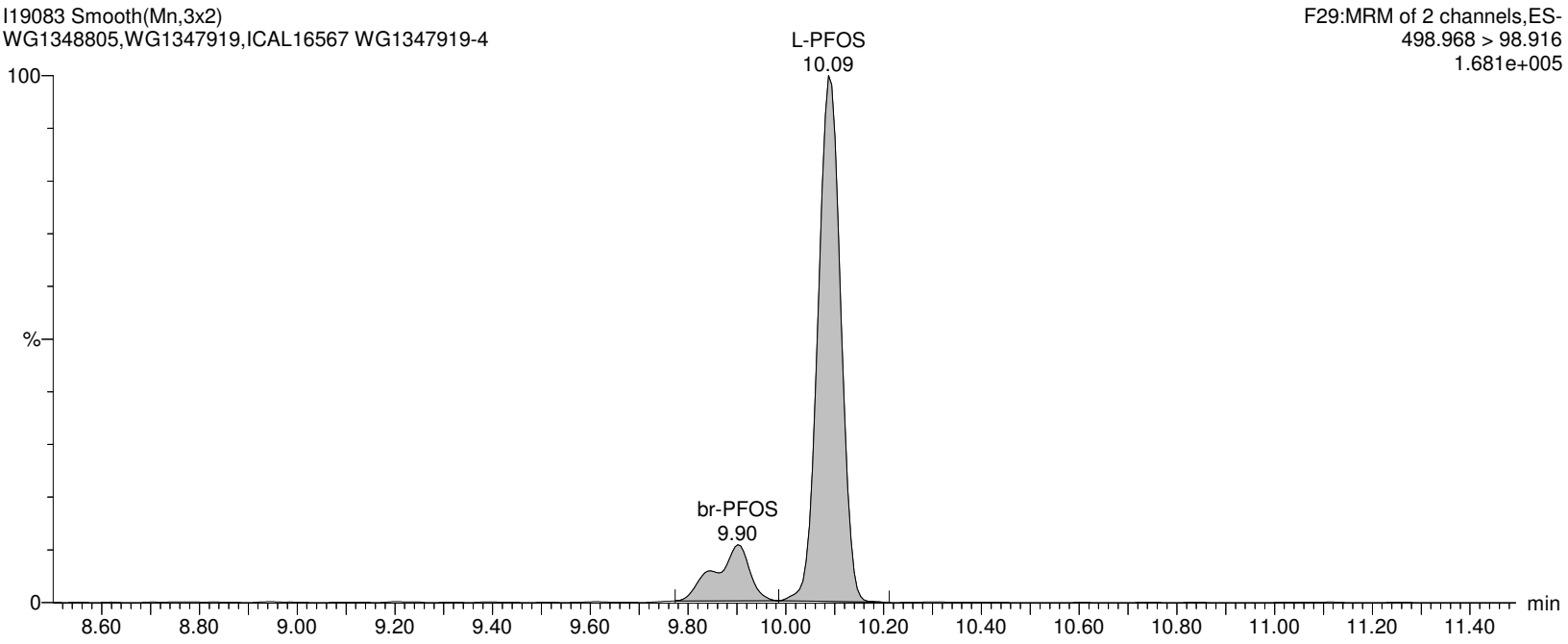
**PFOS**





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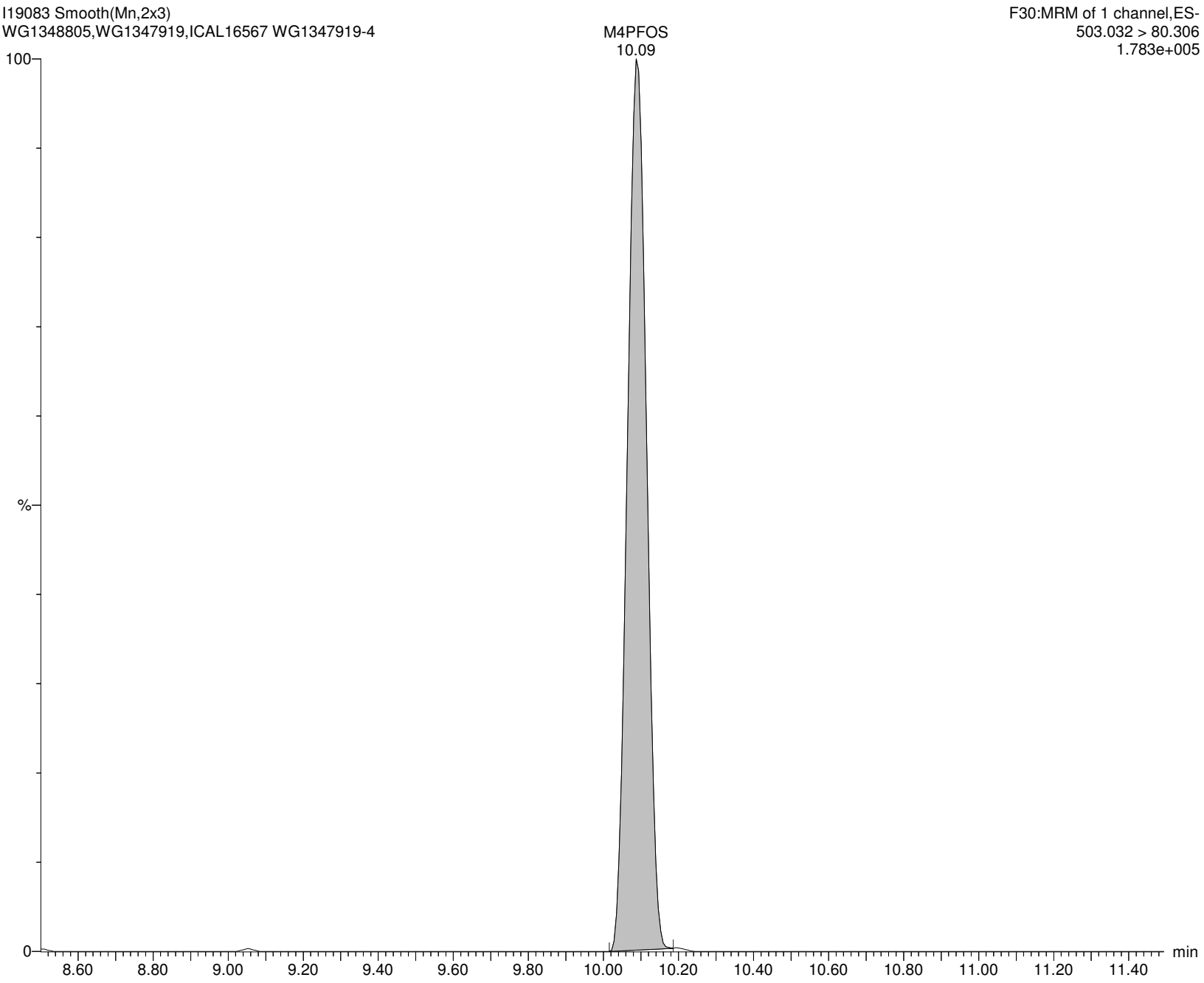
**M4PFOS**





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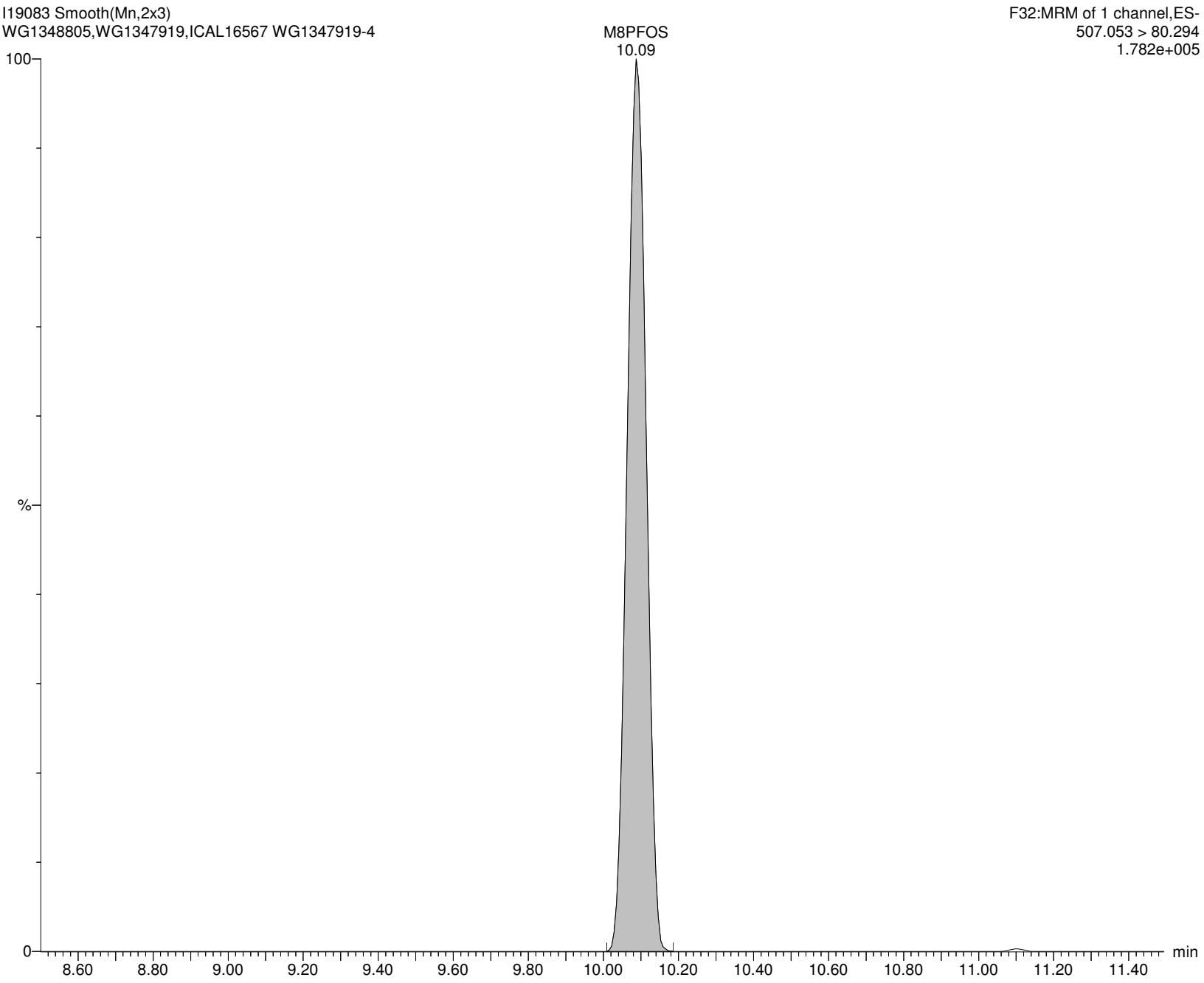



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**Name: I19083**
**ID: WG1347919-4**
**Date: 09-Mar-2020**
**Time: 16:46:25**
**Description: WG1348805,WG1347919,ICAL16567**
**User: LCMS01:JW**
**Vial: 1:C,6**
**Instrument: XEVO-TQSmicro#QEA0276**
**Inlet Method Name: C:\MassLynx\Data\200309_537ISO.PRO\ACQUDB\LCMS_537_ISO_MeOH**
**Tune Method Name: C:\MassLynx\Data\200309_537ISO.PRO\ACQUDB\190709_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\200309_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

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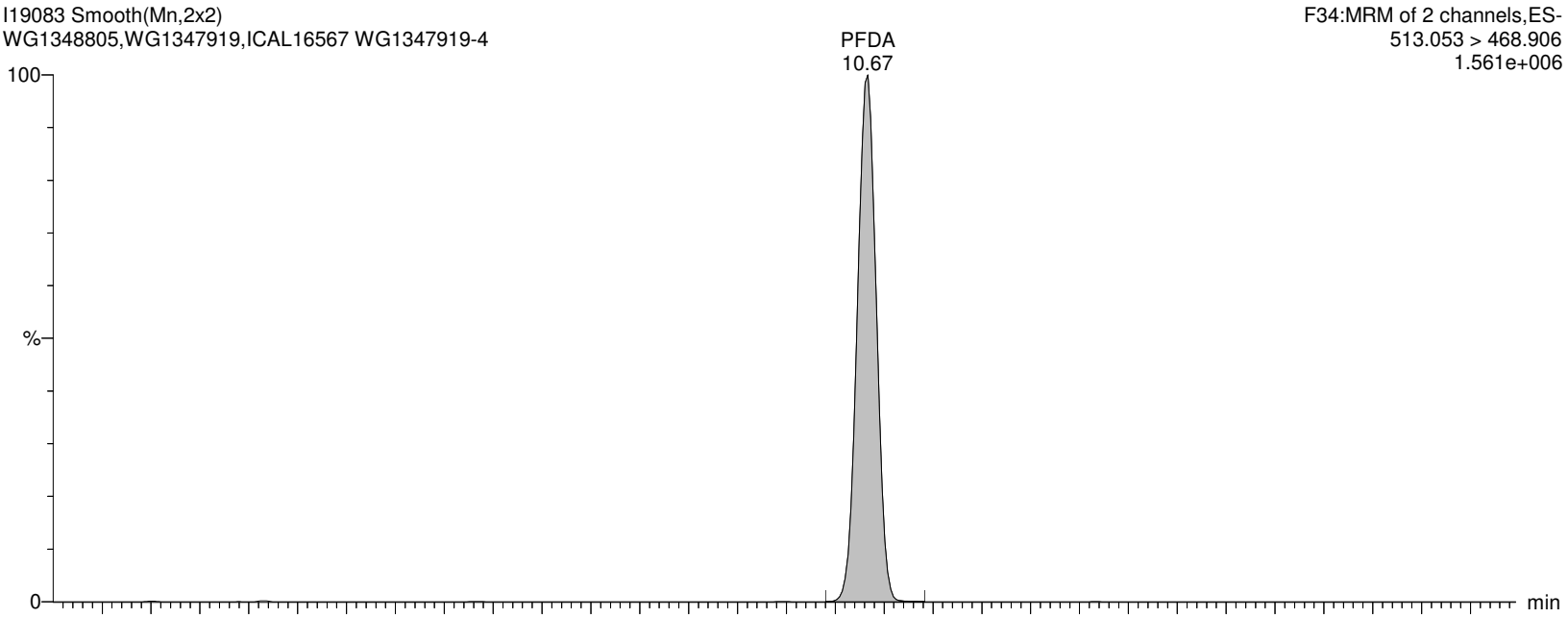


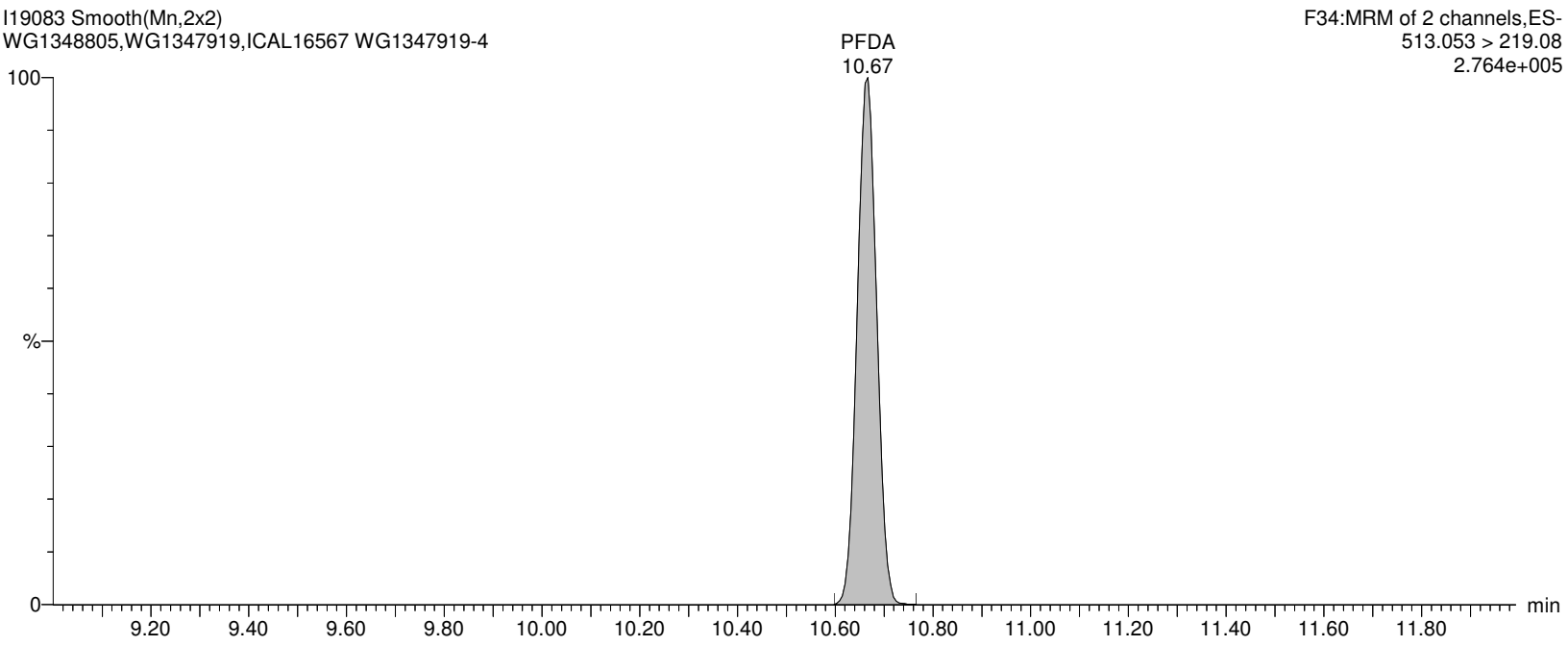



all concentration units in (ng/mL)

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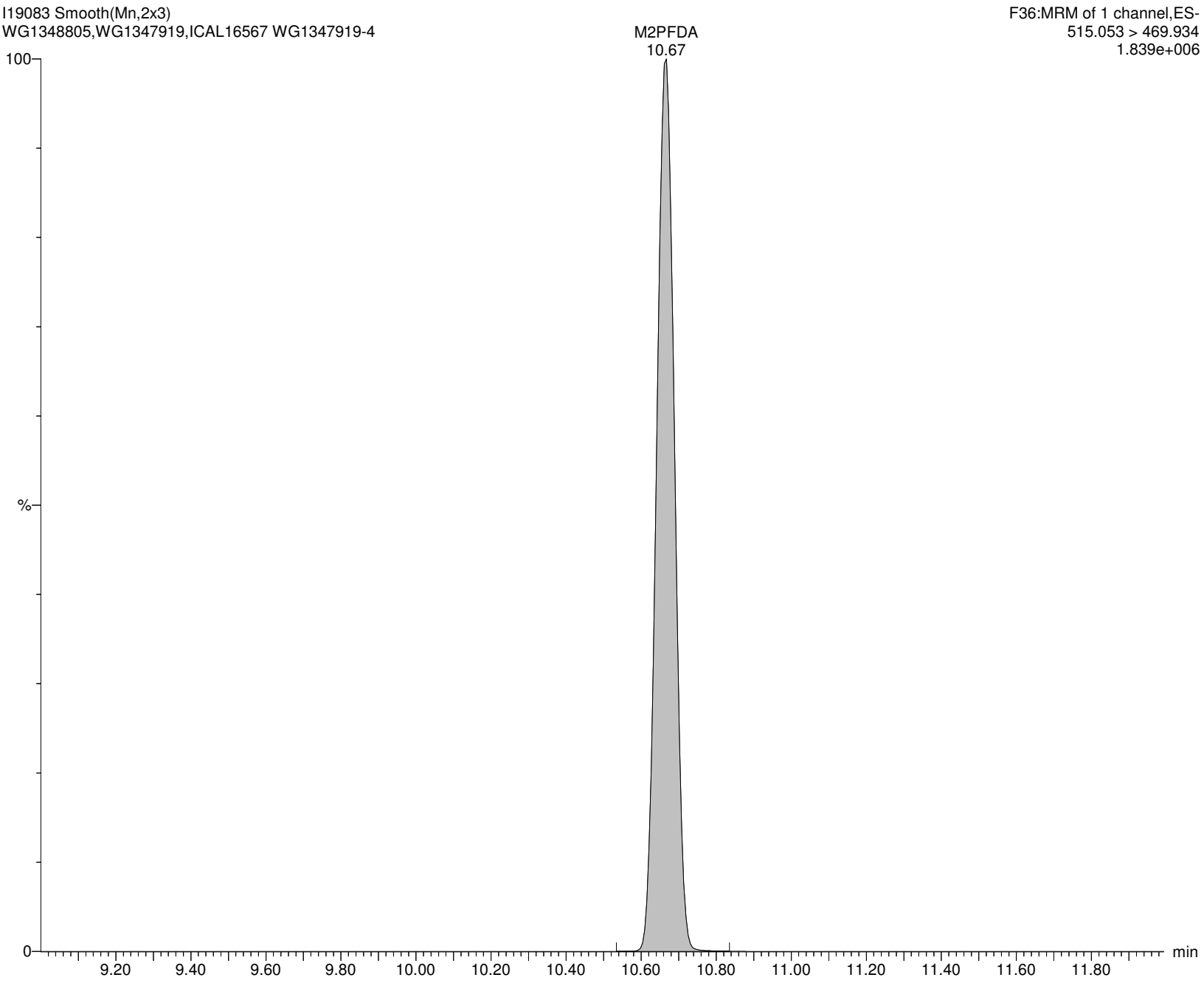



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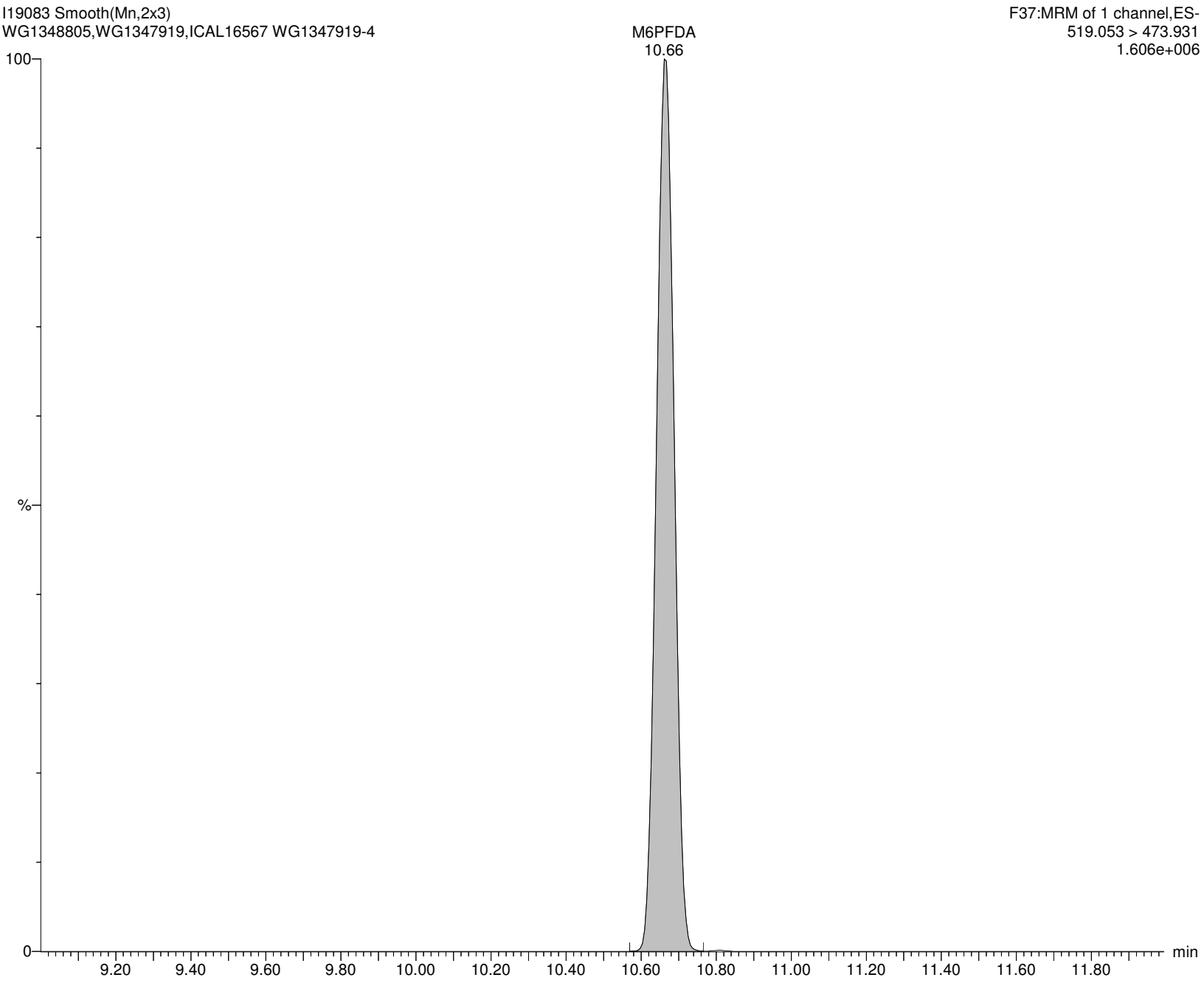



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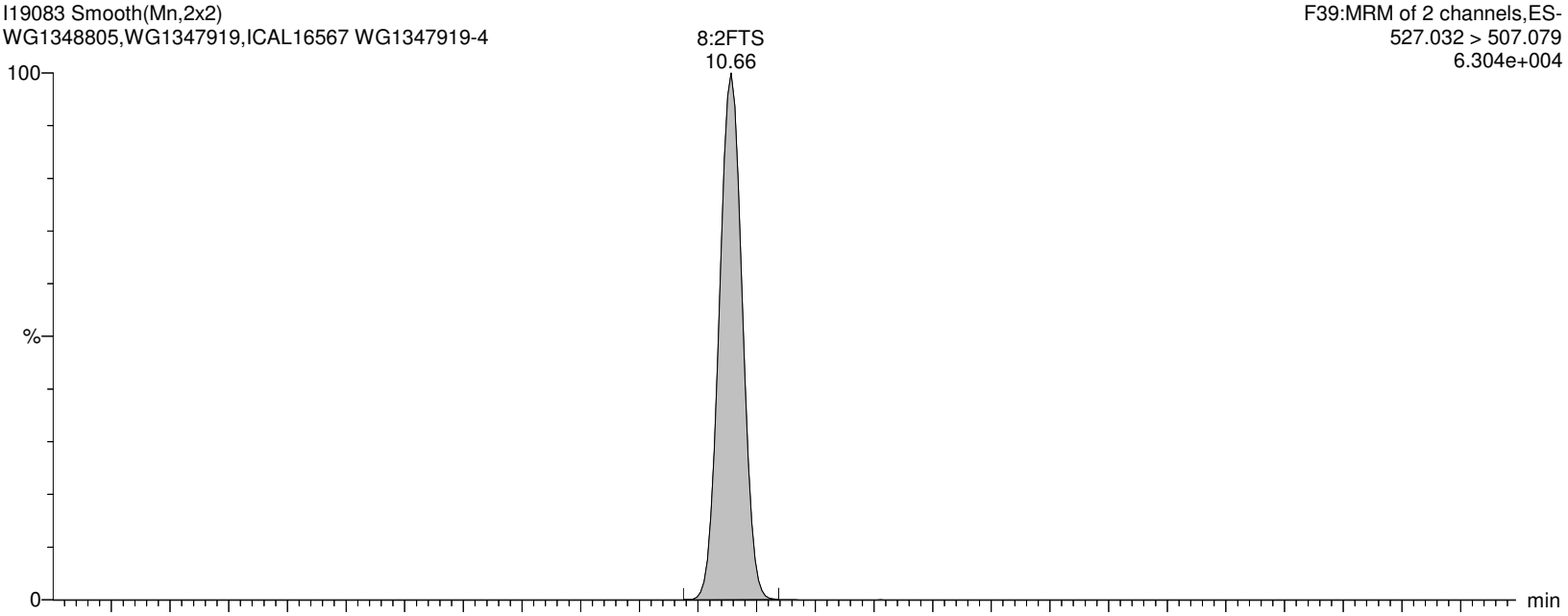
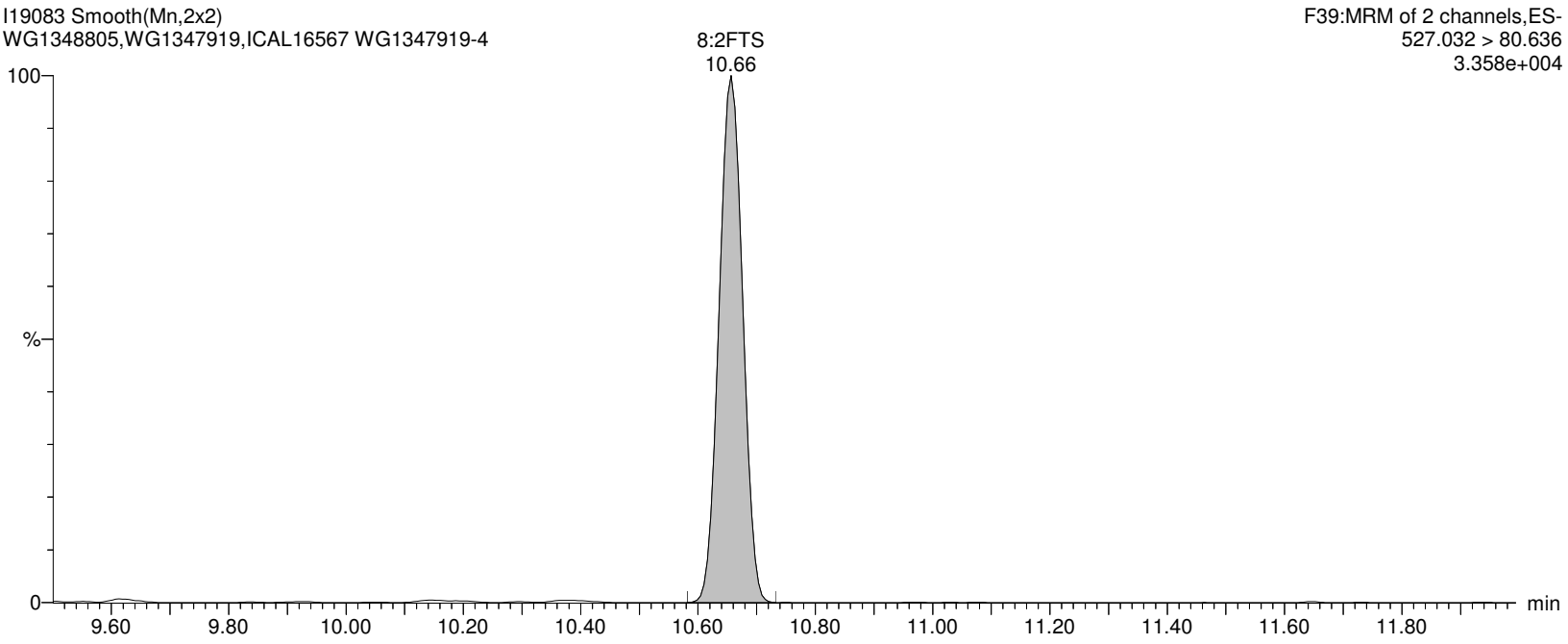
**8:2FTS**





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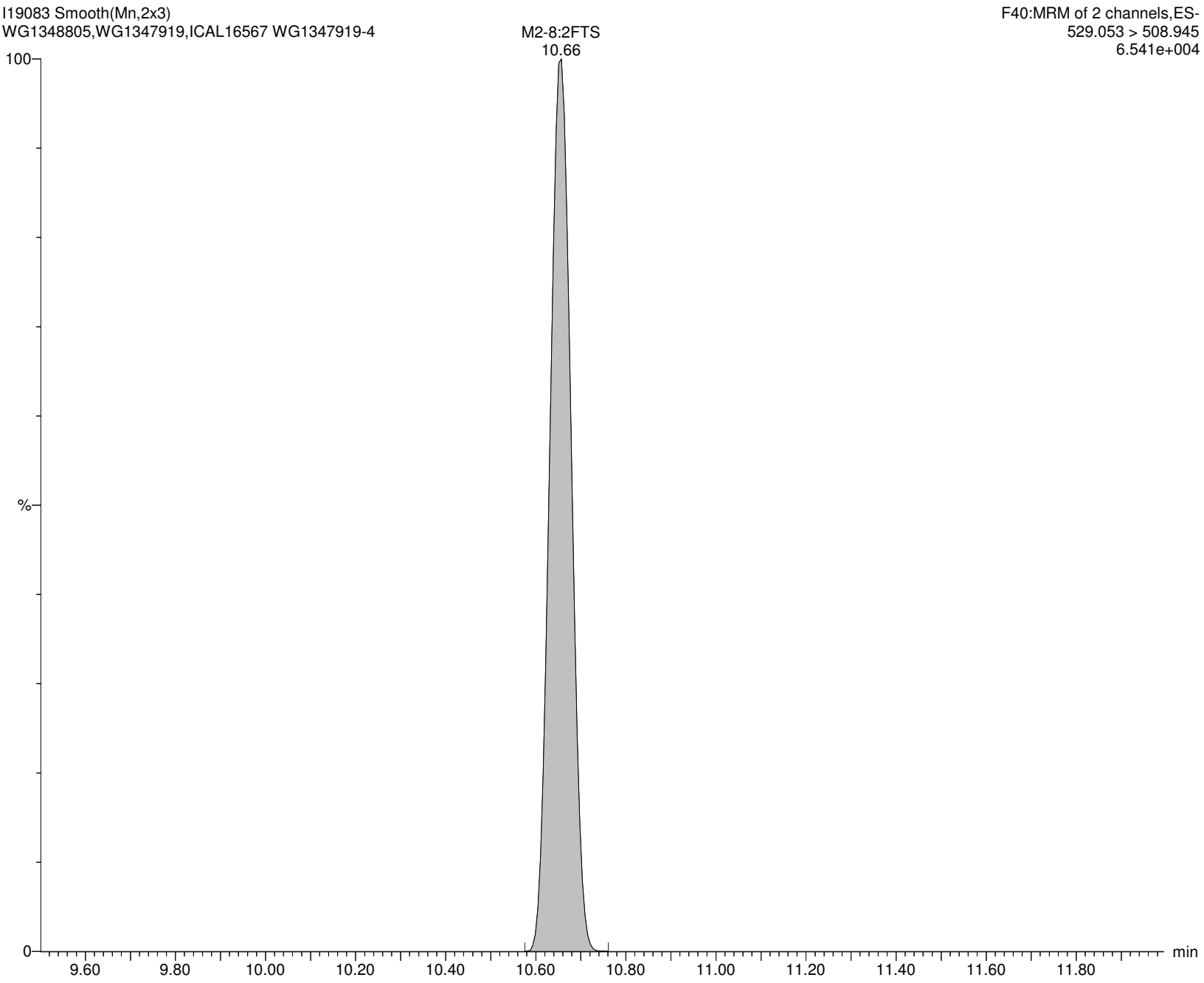



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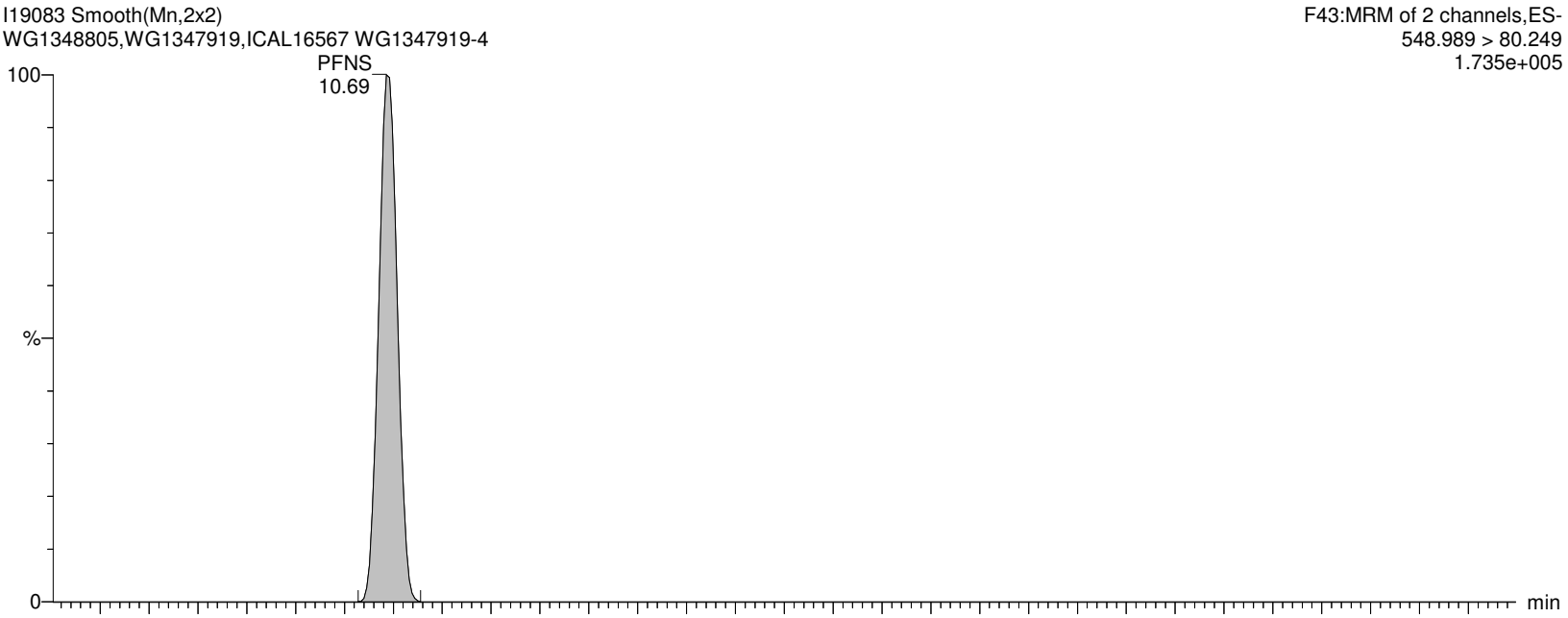
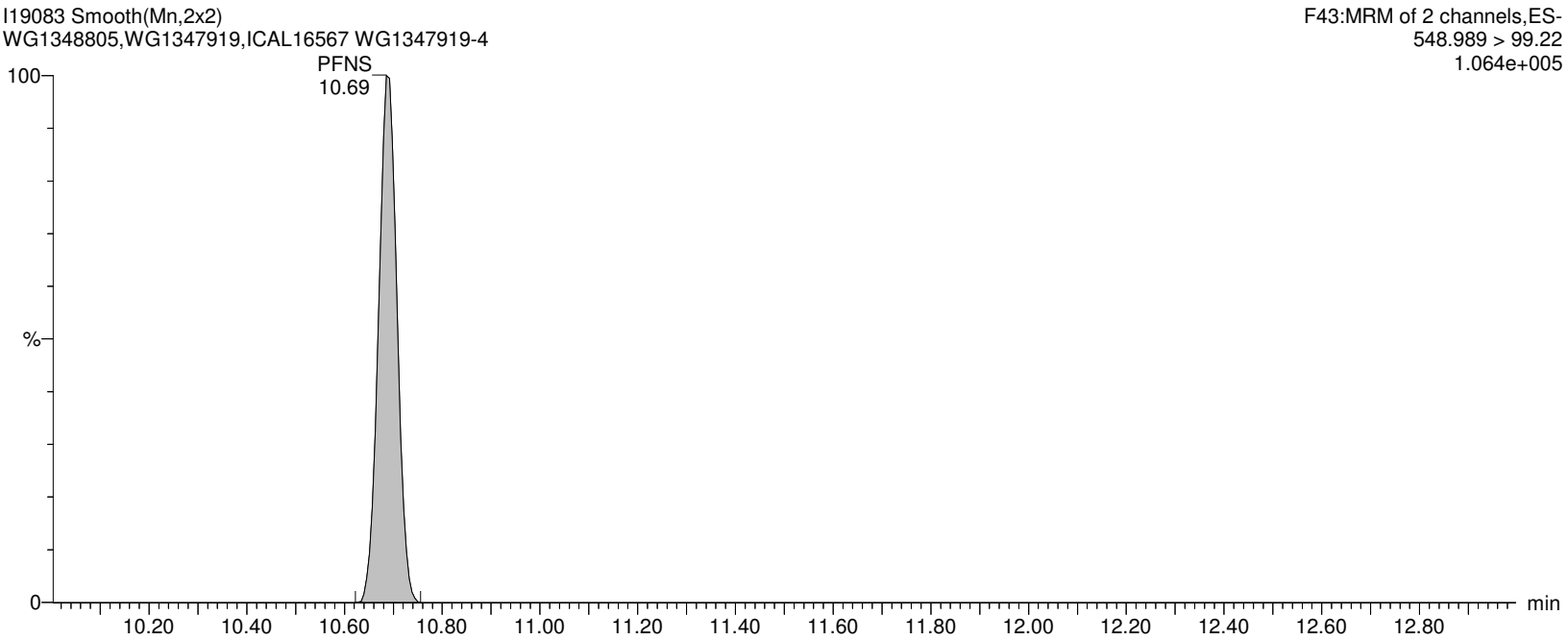
**PFNS**





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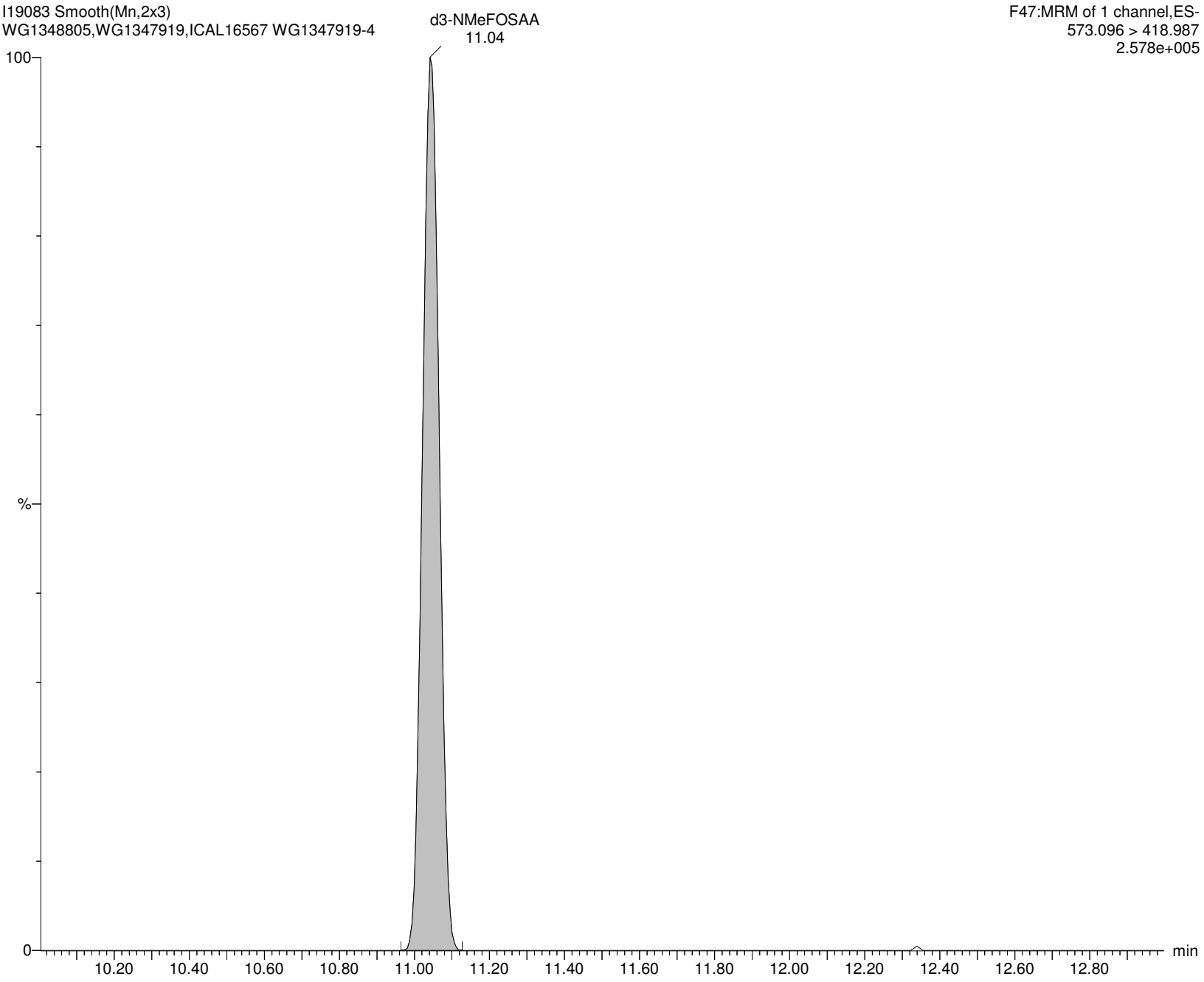
**d3-NMeFOSAA**





all concentration units in (ng/mL)

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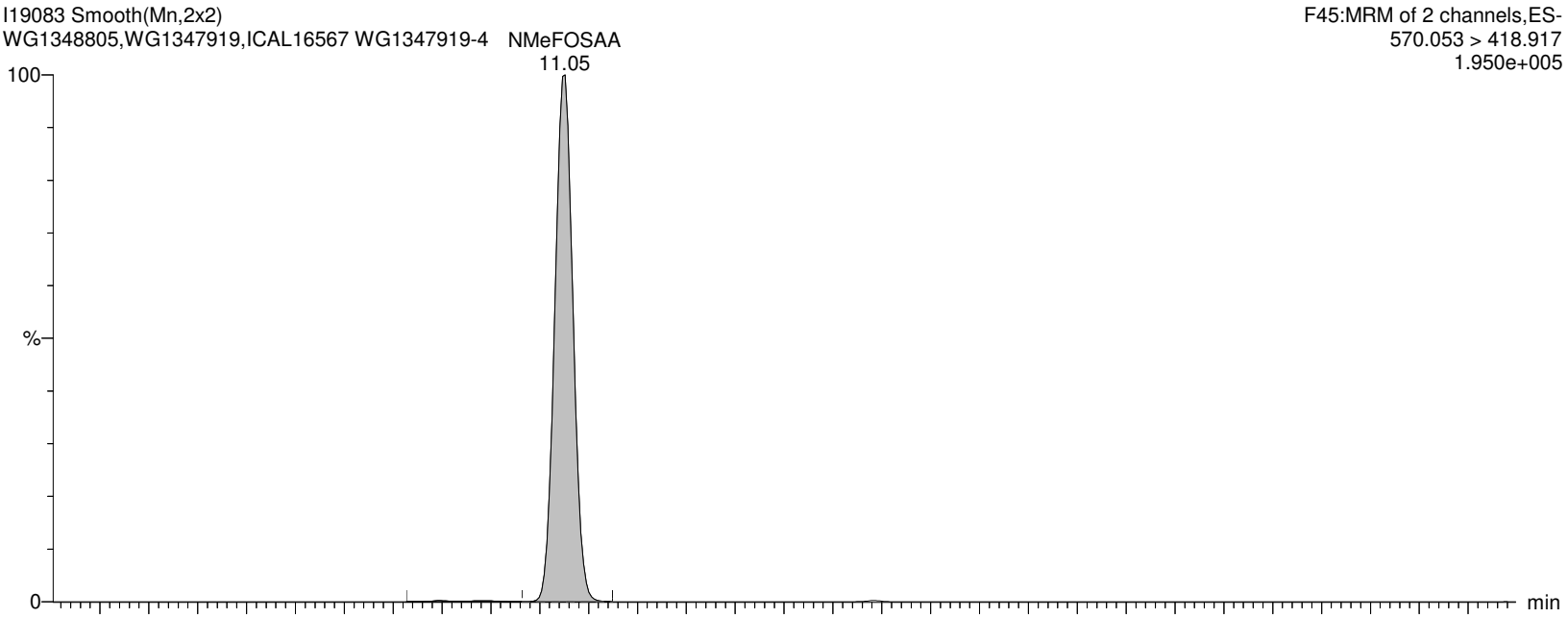
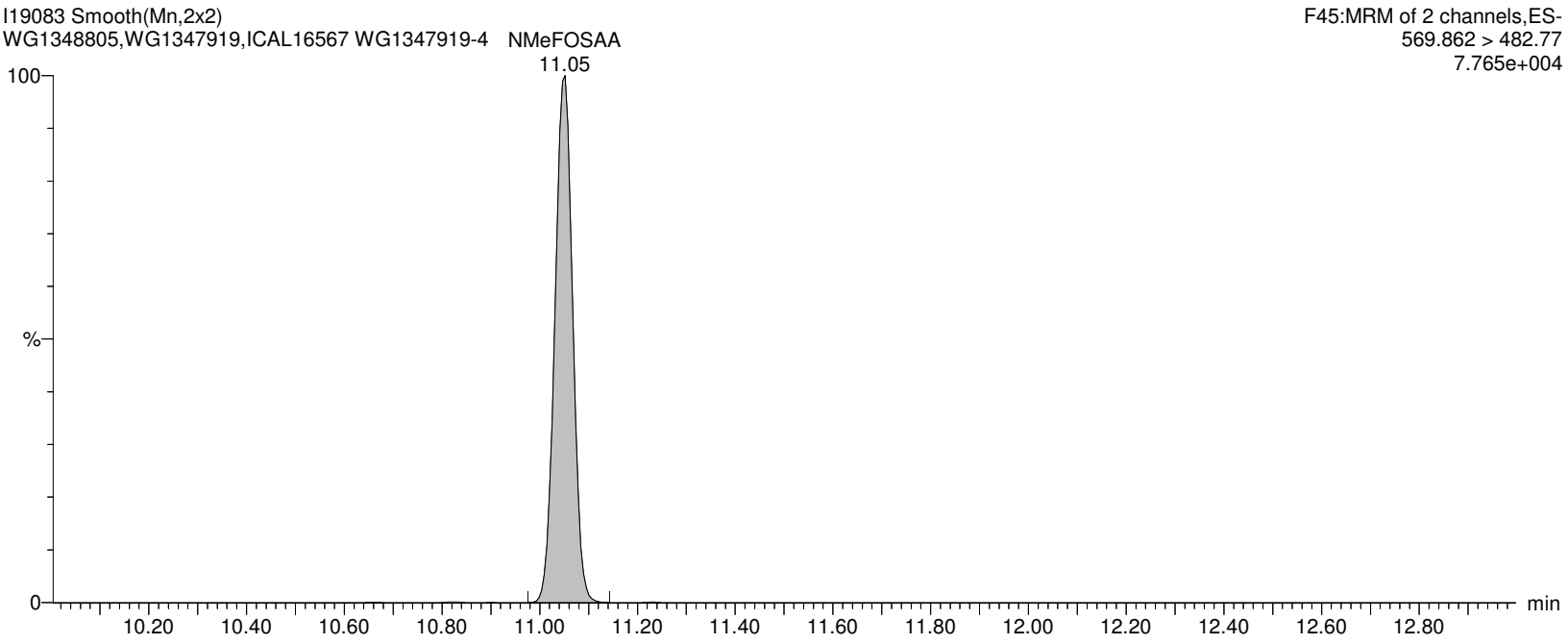
**NMeFOSAA**





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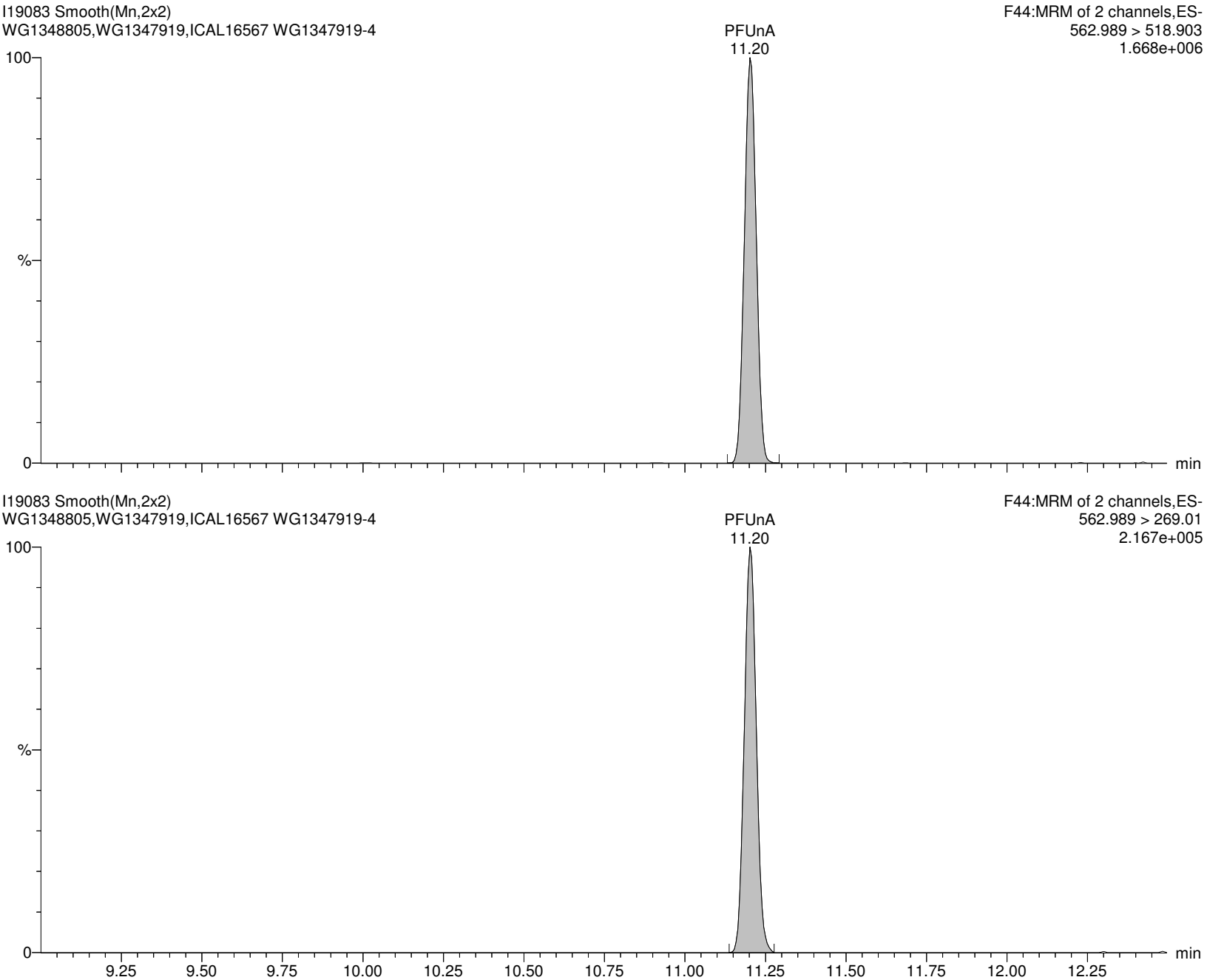



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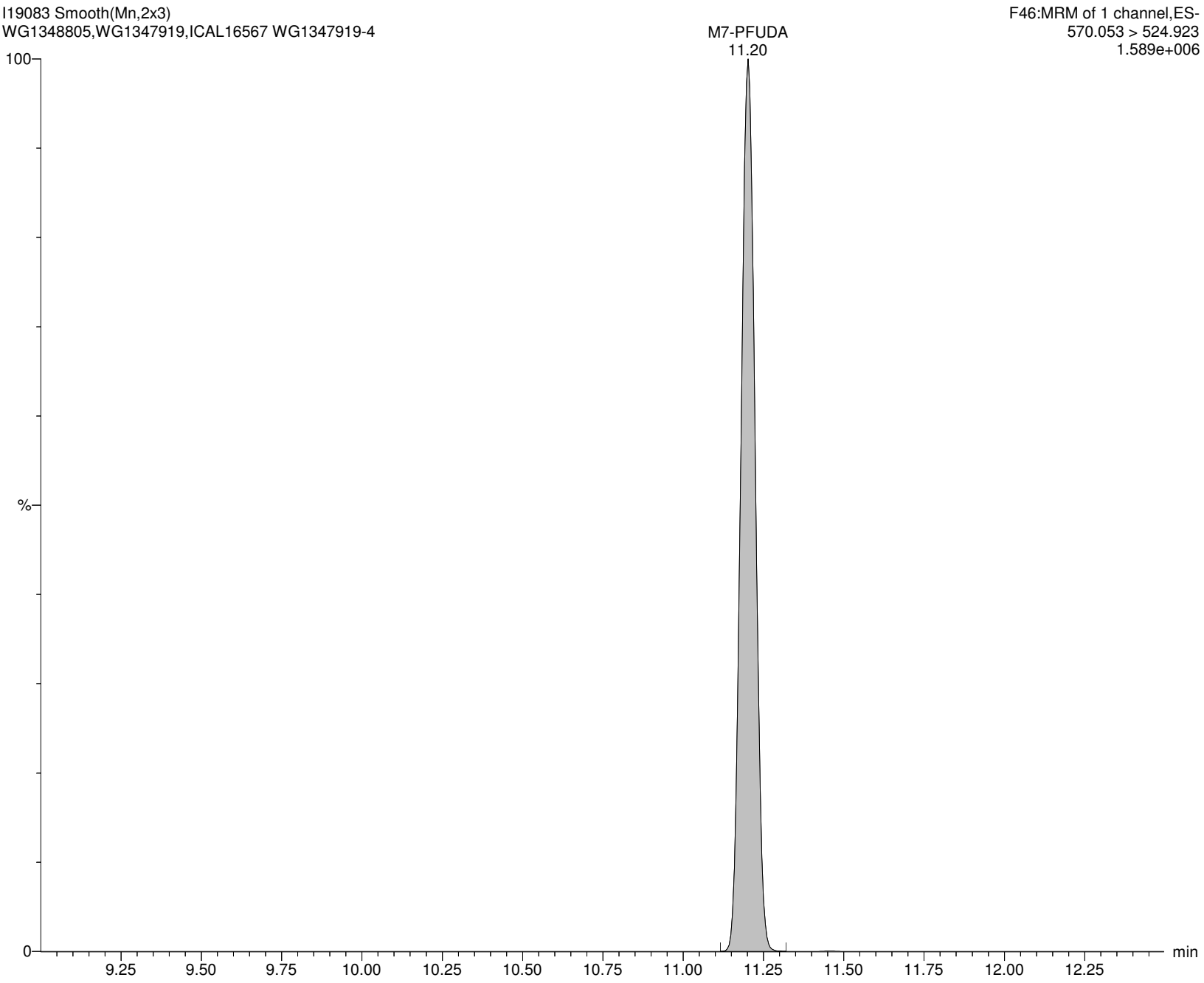
**M7-PFUDA**





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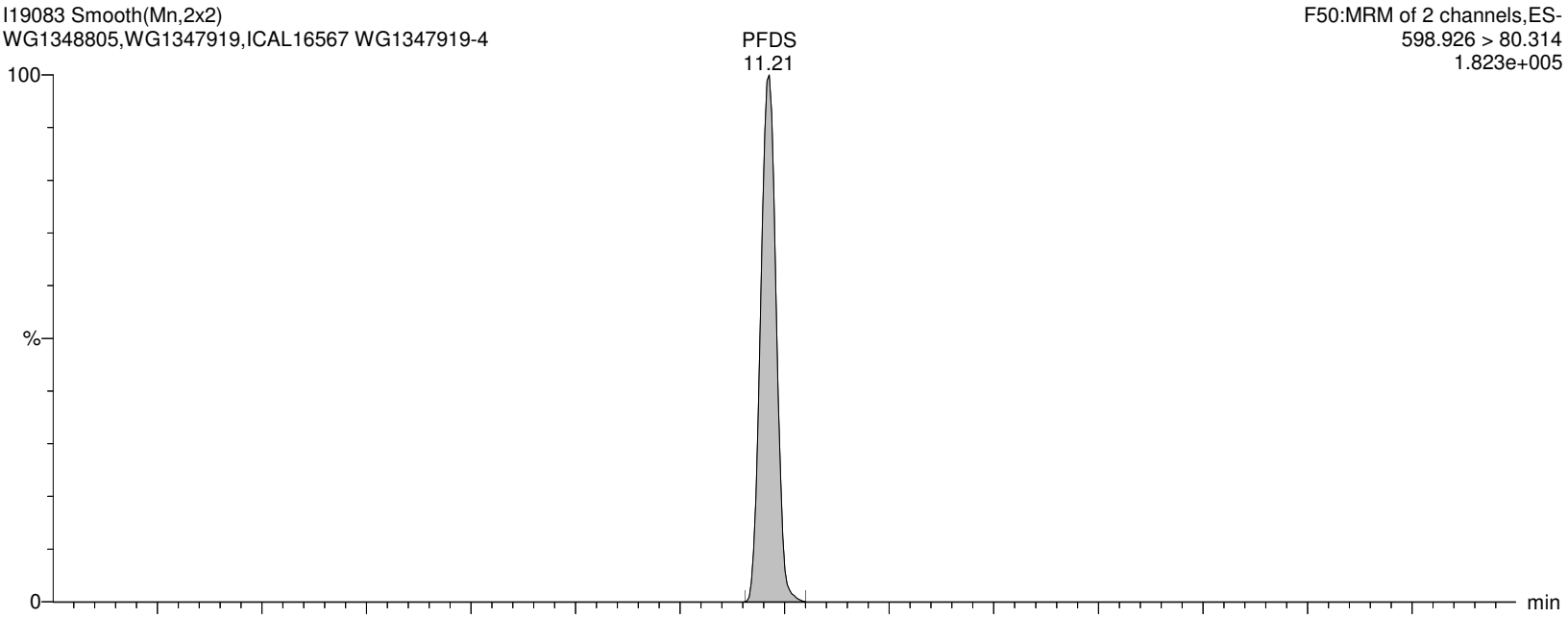


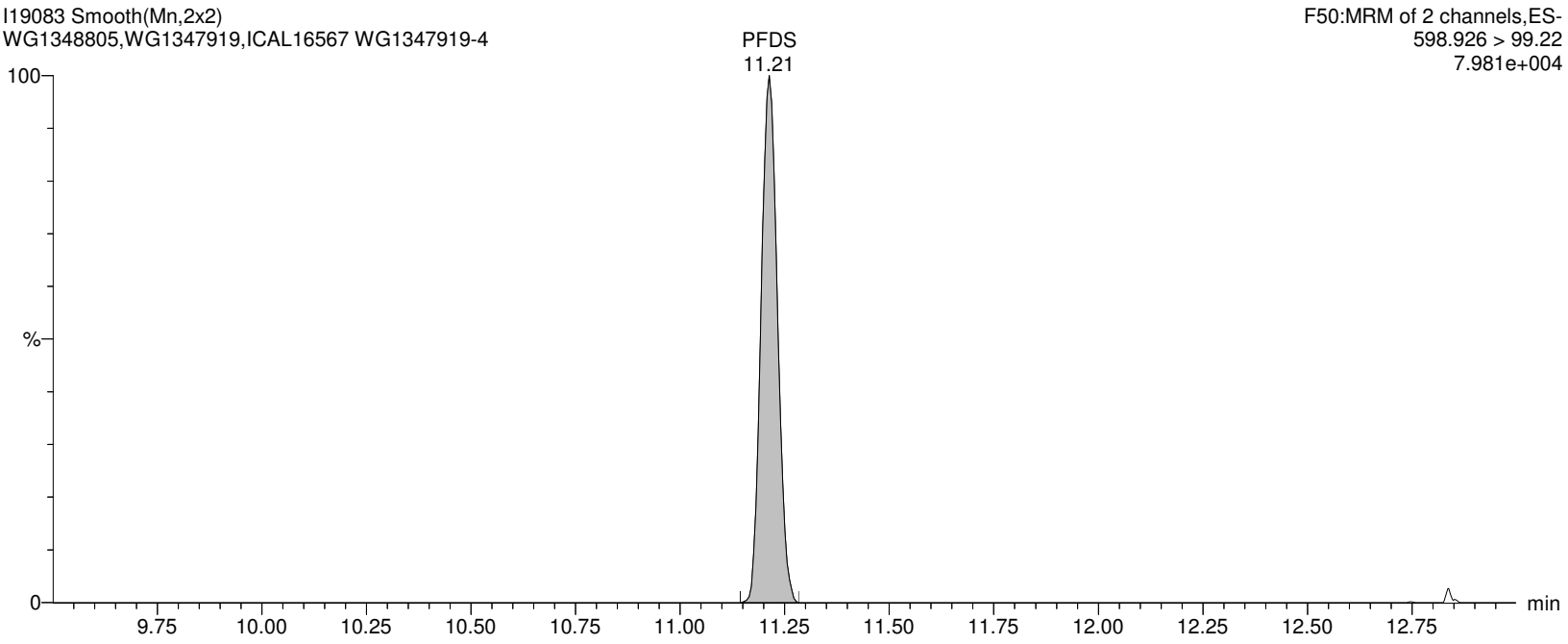



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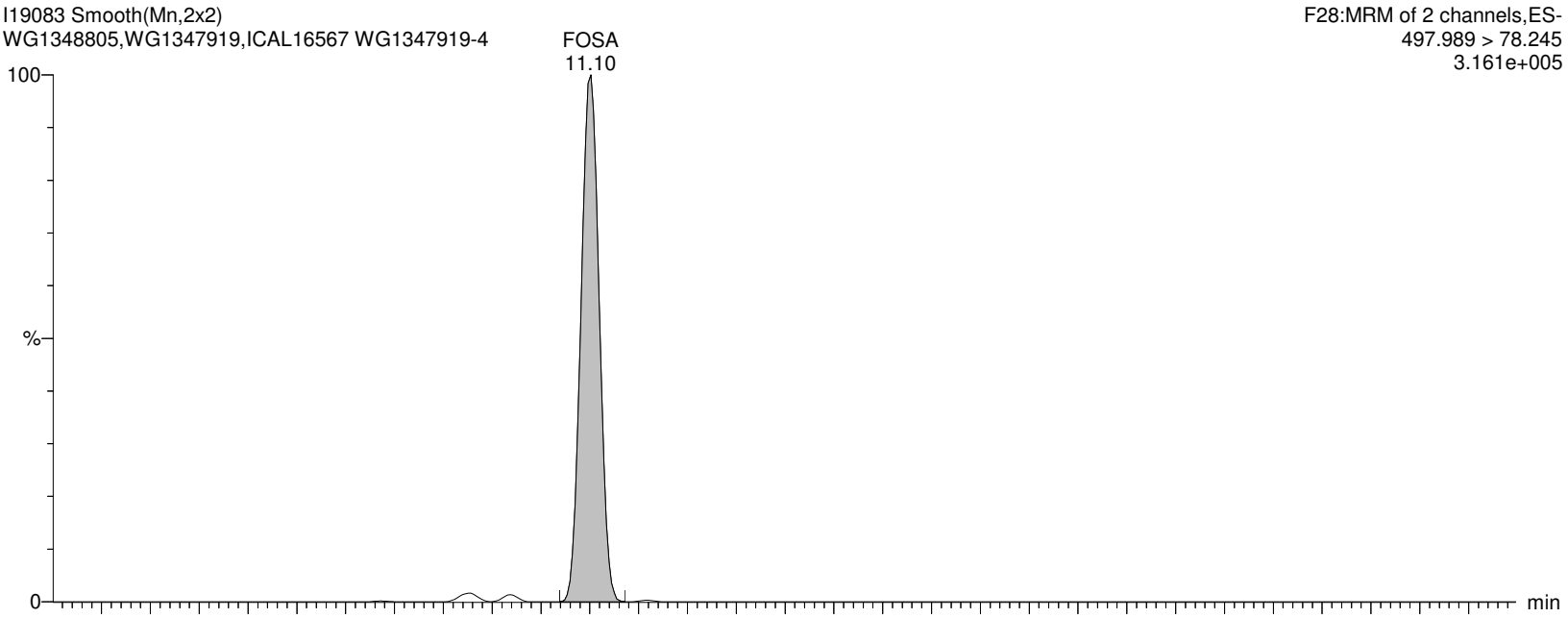


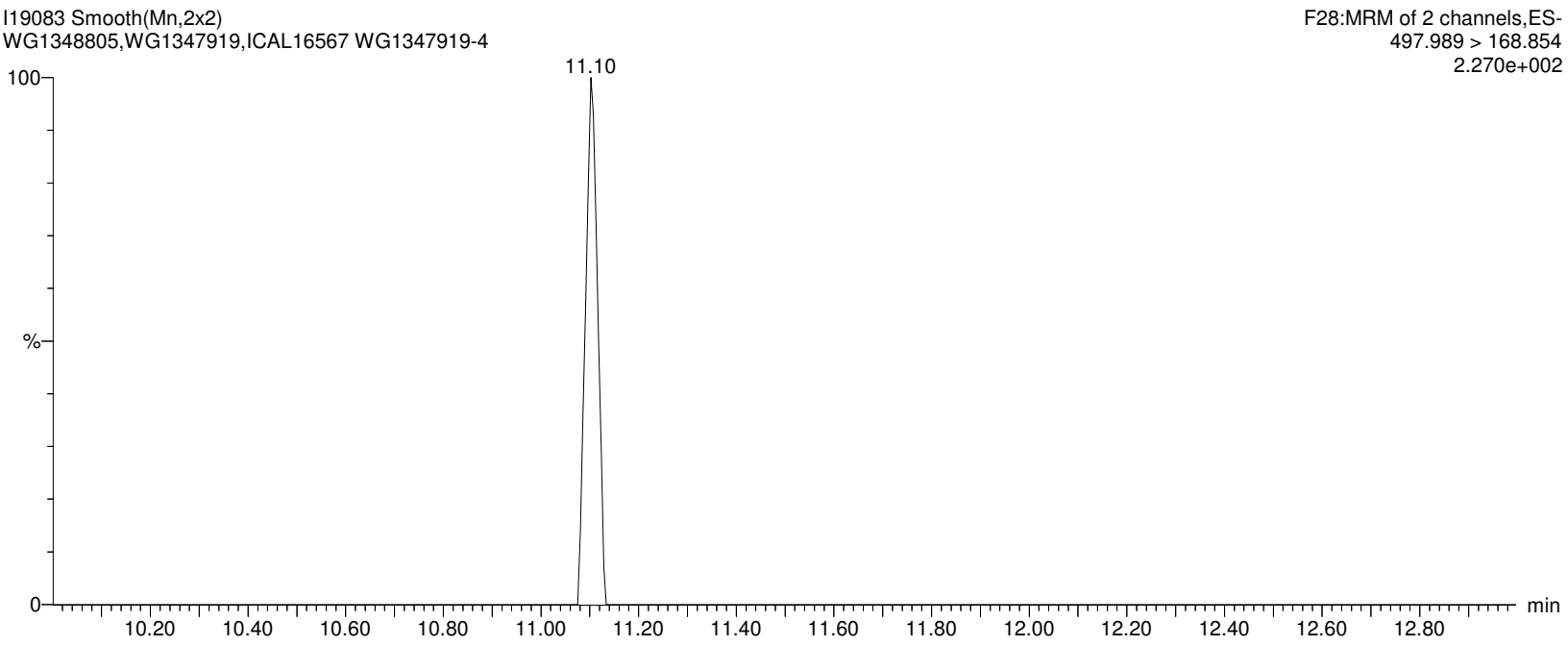



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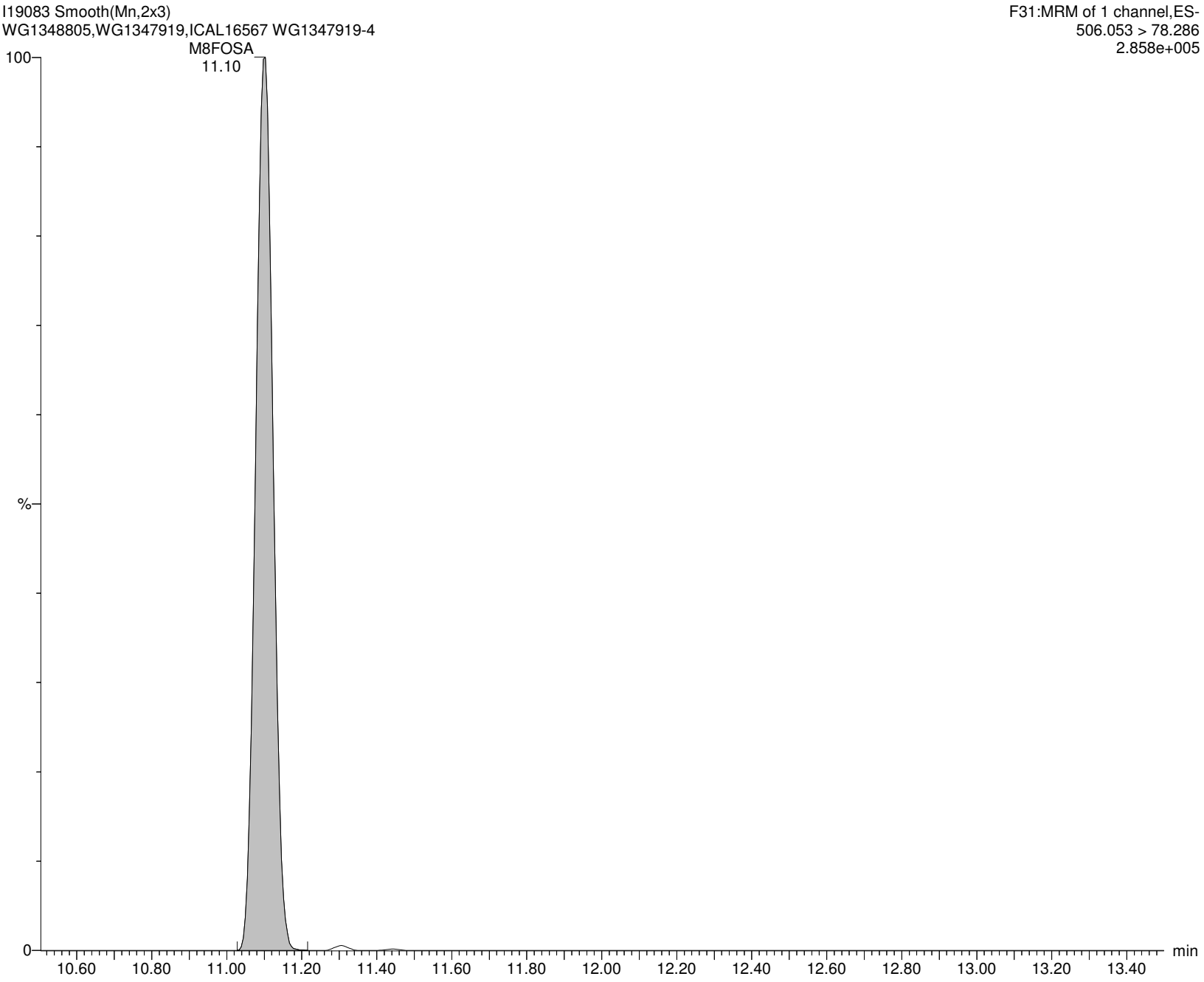



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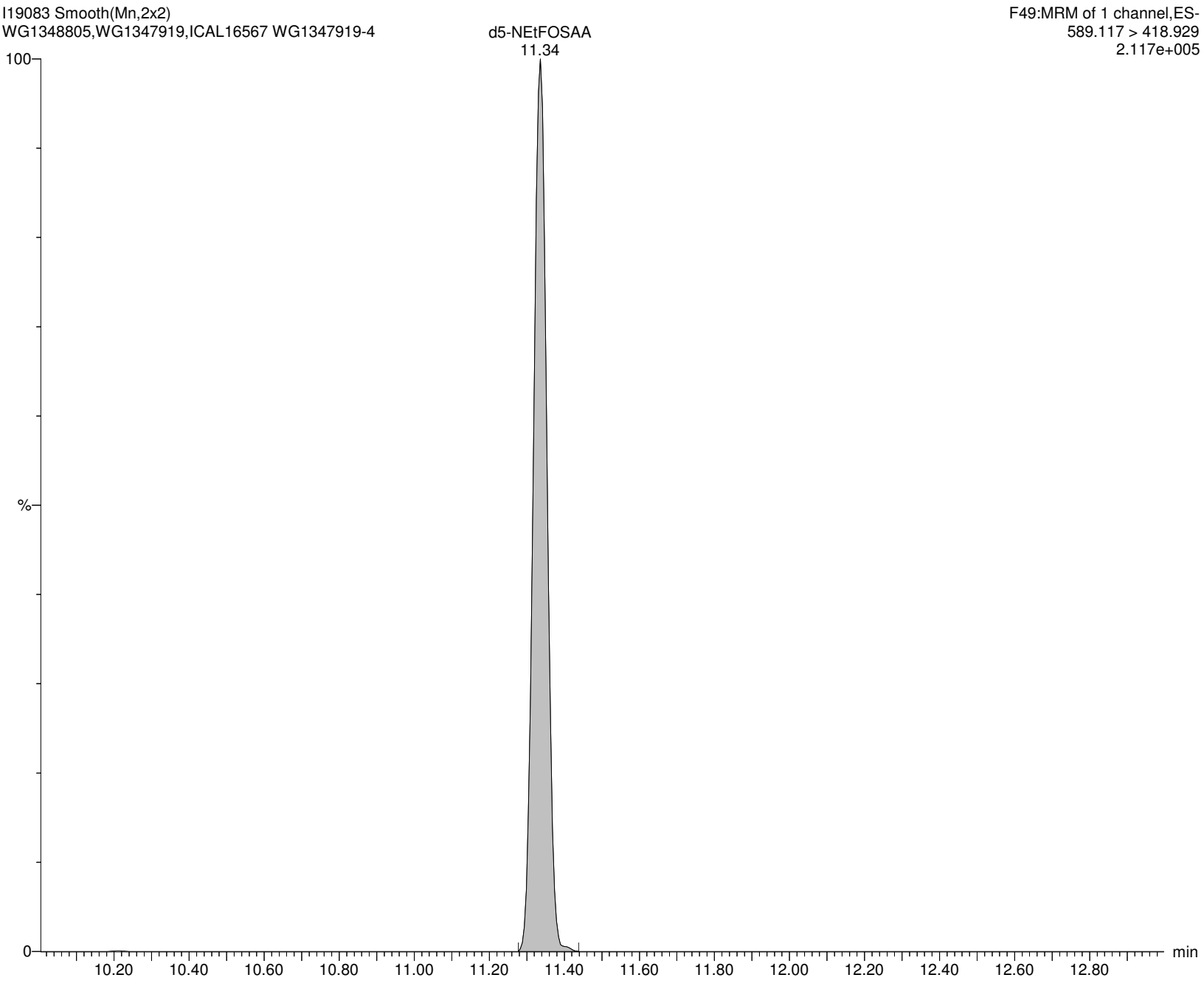



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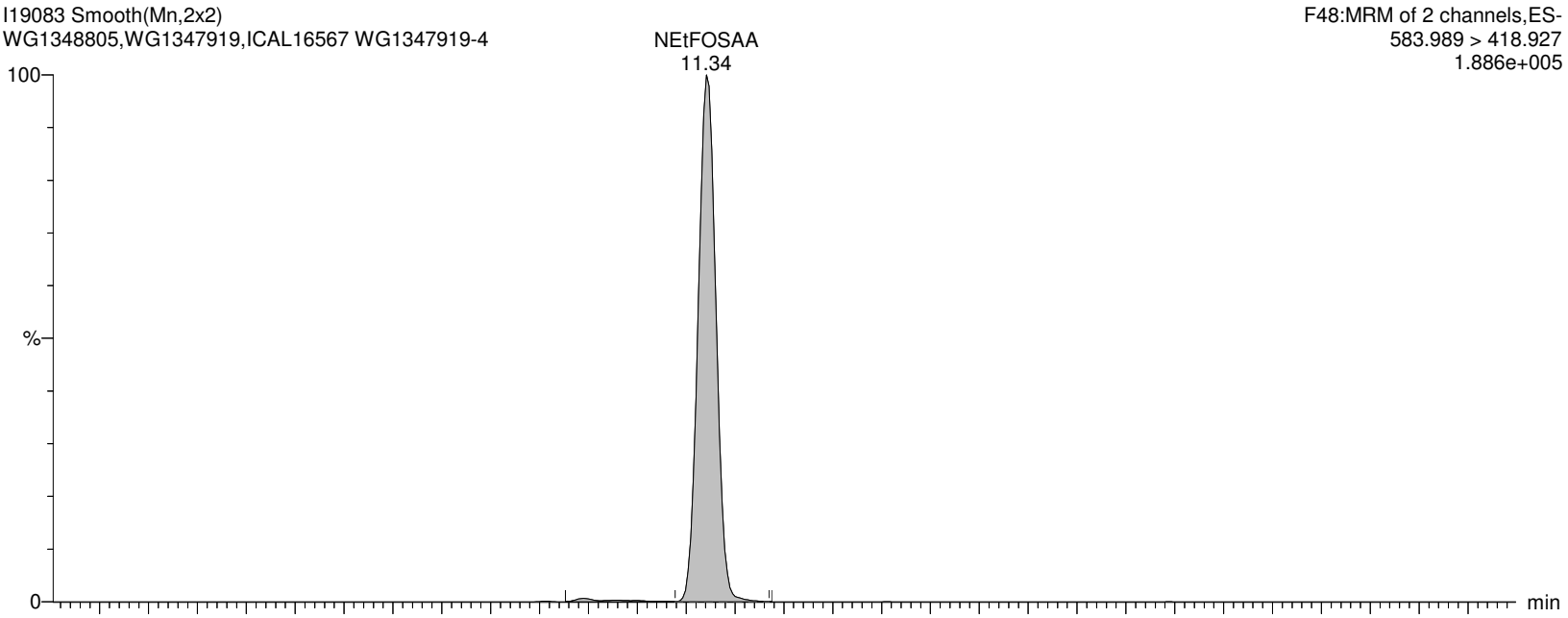


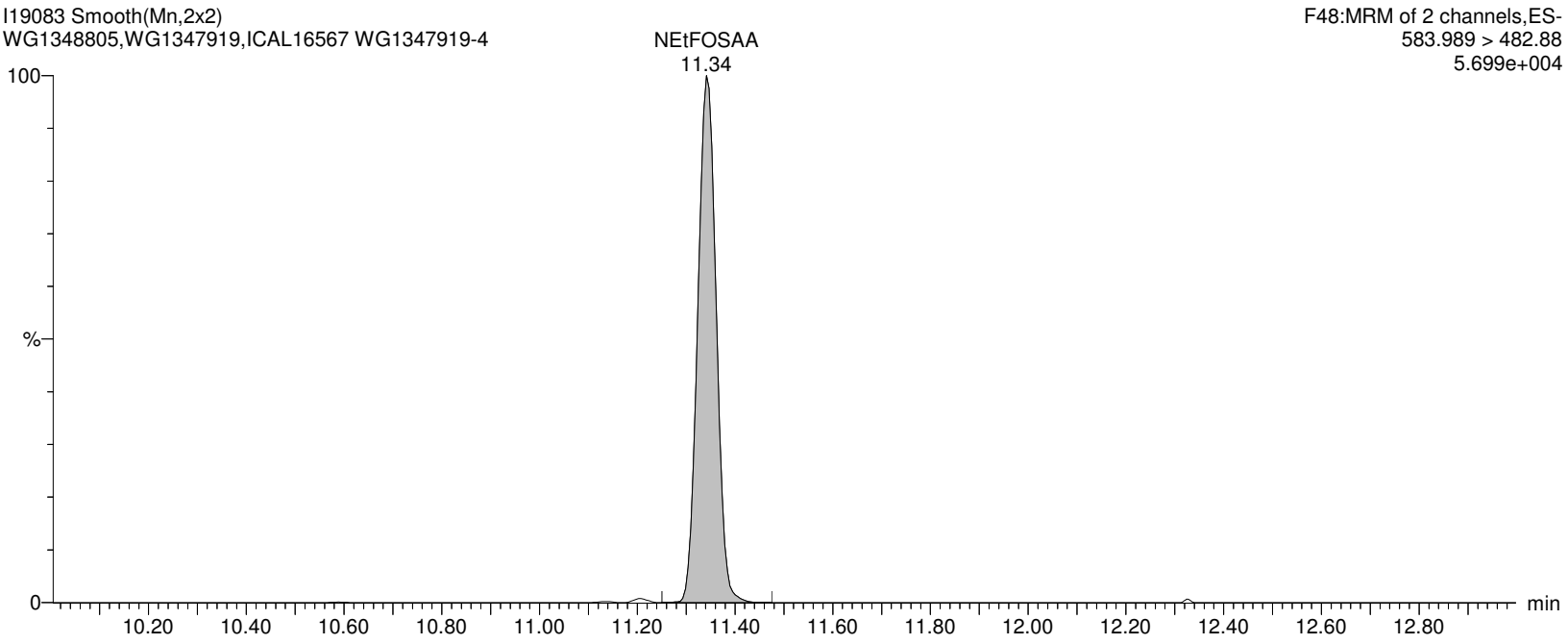



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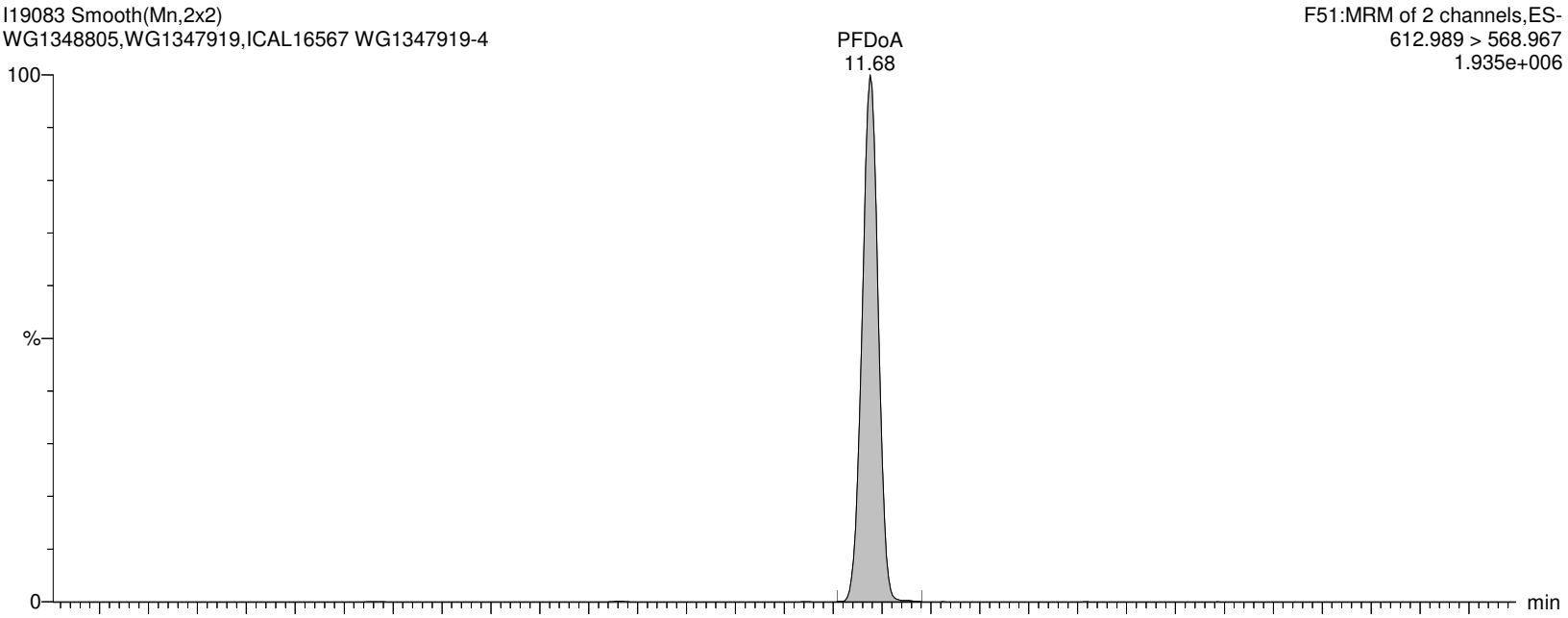
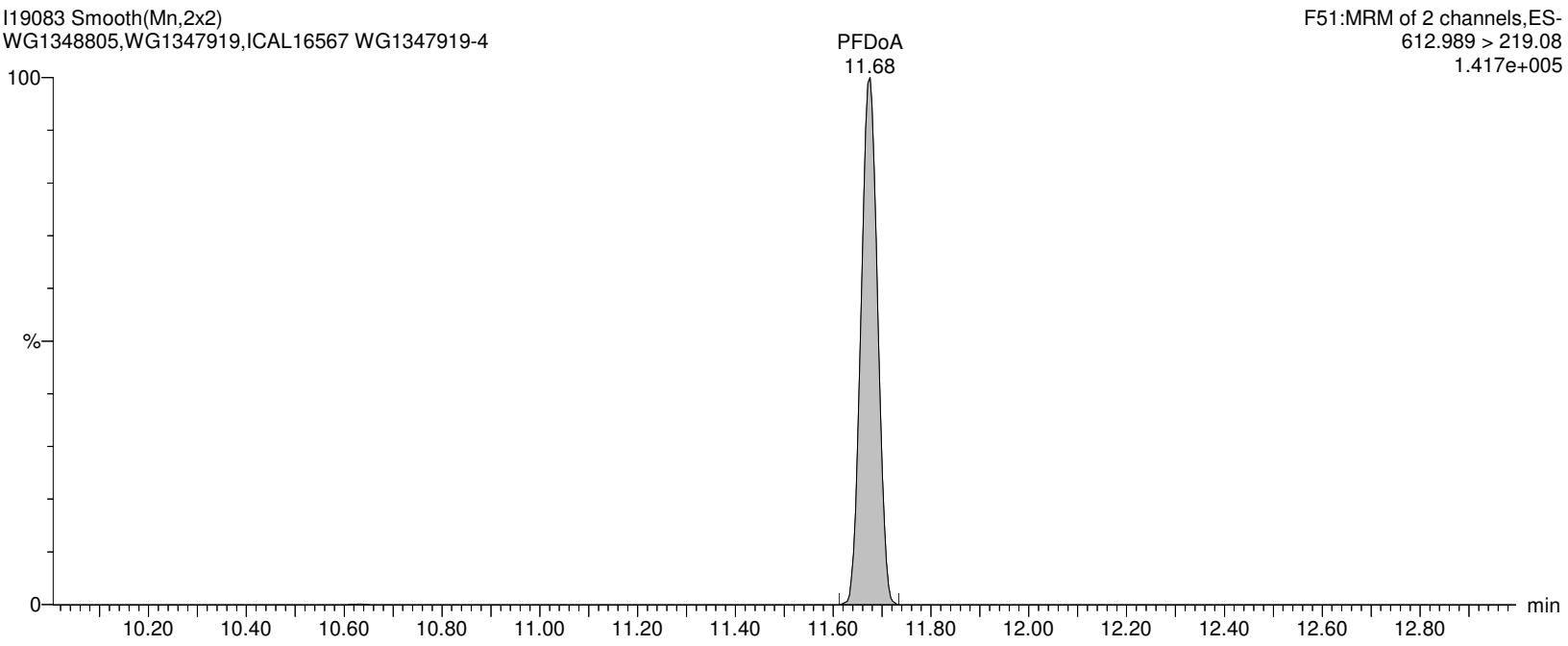
**User: LCMS01:JW**
**Vial: 1:C,6**
**Instrument: XEVO-TQSmicro#QEA0276**
**Inlet Method Name: C:\MassLynx\Data\200309_537ISO.PRO\ACQUDB\LCMS_537_ISO_MeOH**
**Tune Method Name: C:\MassLynx\Data\200309_537ISO.PRO\ACQUDB\190709_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\200309_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**PFDoA**



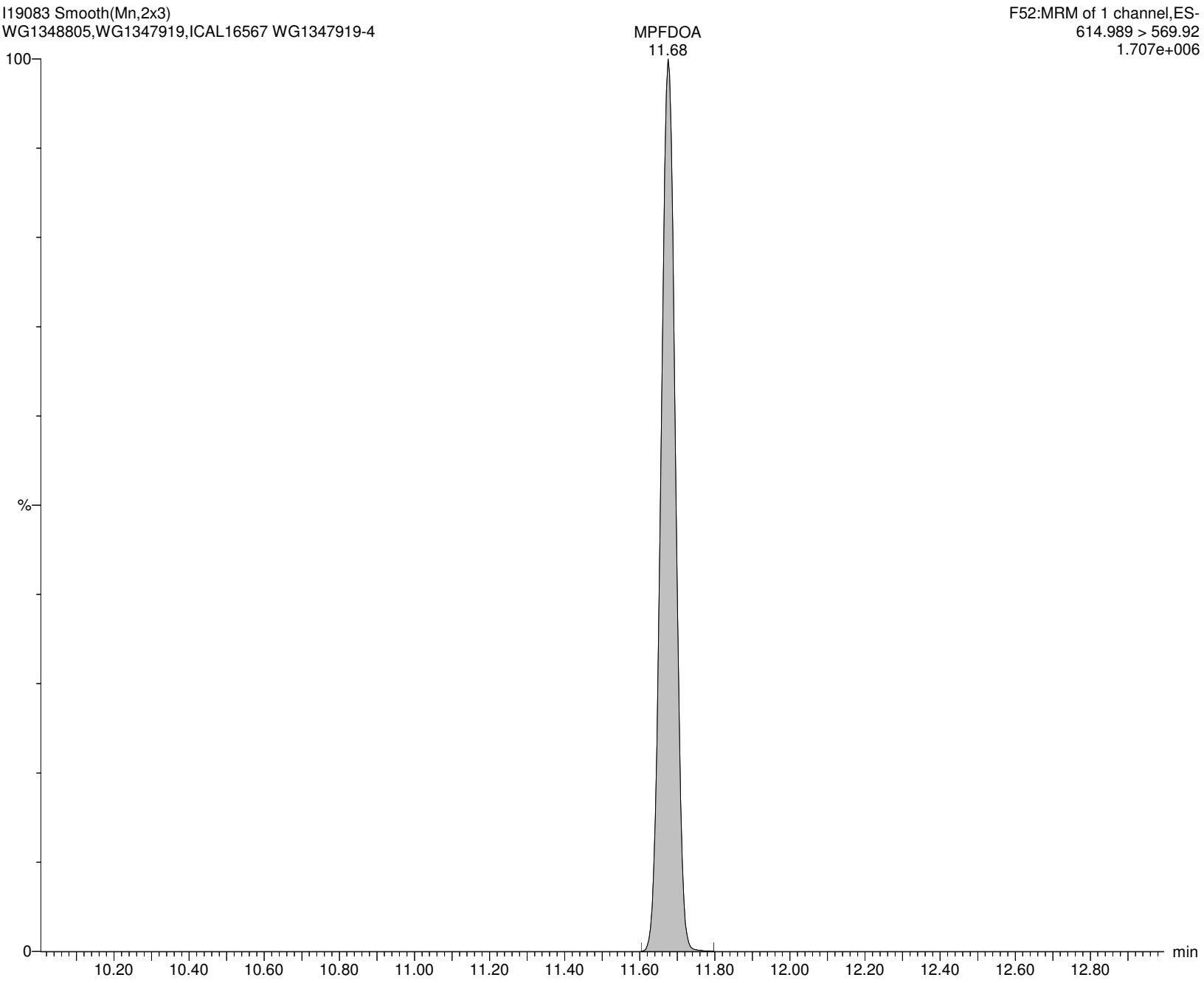


all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200309_537ISO.PRO\Data\WG1348805A.qld
Last Altered: Tuesday, March 17, 2020 11:10:13 Eastern Daylight Time
Printed: Tuesday, March 17, 2020 11:22:15 Eastern Daylight Time

**Name: I19083**
**ID: WG1347919-4**
**Date: 09-Mar-2020**
**Time: 16:46:25**
**Description: WG1348805,WG1347919,ICAL16567**
**User: LCMS01:JW**
**Vial: 1:C,6**
**Instrument: XEVO-TQSmicro#QEA0276**
**Inlet Method Name: C:\MassLynx\Data\200309_537ISO.PRO\ACQUDB\LCMS_537_ISO_MeOH**
**Tune Method Name: C:\MassLynx\Data\200309_537ISO.PRO\ACQUDB\190709_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\200309_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**MPFDOA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200309_537ISO.PRO\Data\WG1348805A.qld
Last Altered: Tuesday, March 17, 2020 11:10:13 Eastern Daylight Time
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**Name: I19083**
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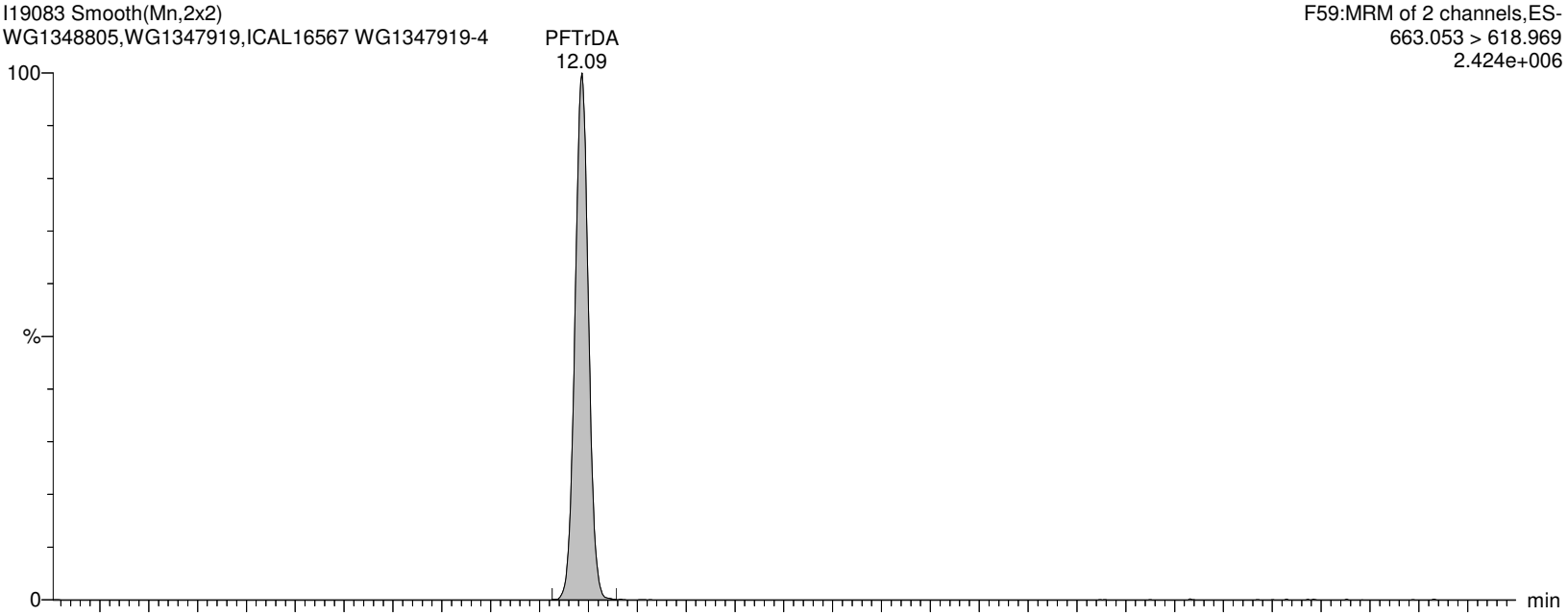
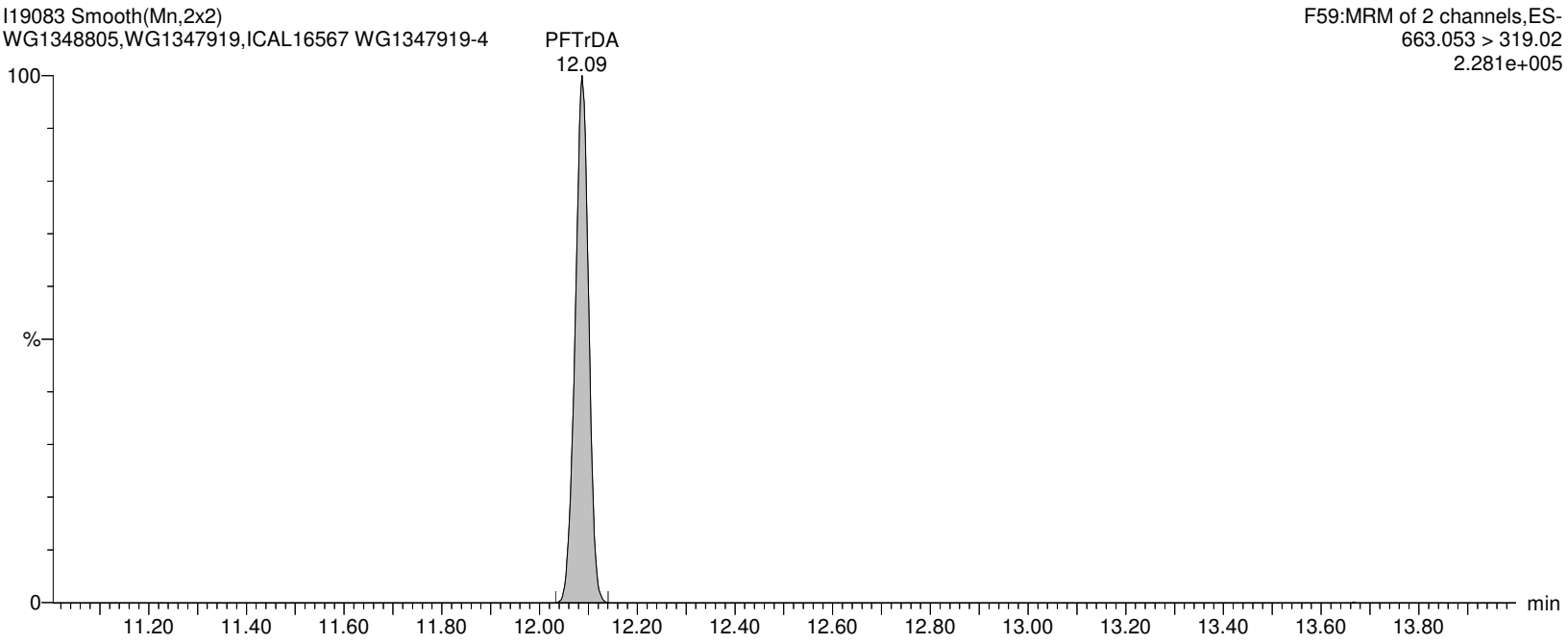
**User: LCMS01:JW**
**Vial: 1:C,6**
**Instrument: XEVO-TQSmicro#QEA0276**
**Inlet Method Name: C:\MassLynx\Data\200309_537ISO.PRO\ACQUDB\LCMS_537_ISO_MeOH**
**Tune Method Name: C:\MassLynx\Data\200309_537ISO.PRO\ACQUDB\190709_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\200309_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**PFTrDA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200309_537ISO.PRO\Data\WG1348805A.qld
Last Altered: Tuesday, March 17, 2020 11:10:13 Eastern Daylight Time
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**Name: I19083**
**ID: WG1347919-4**
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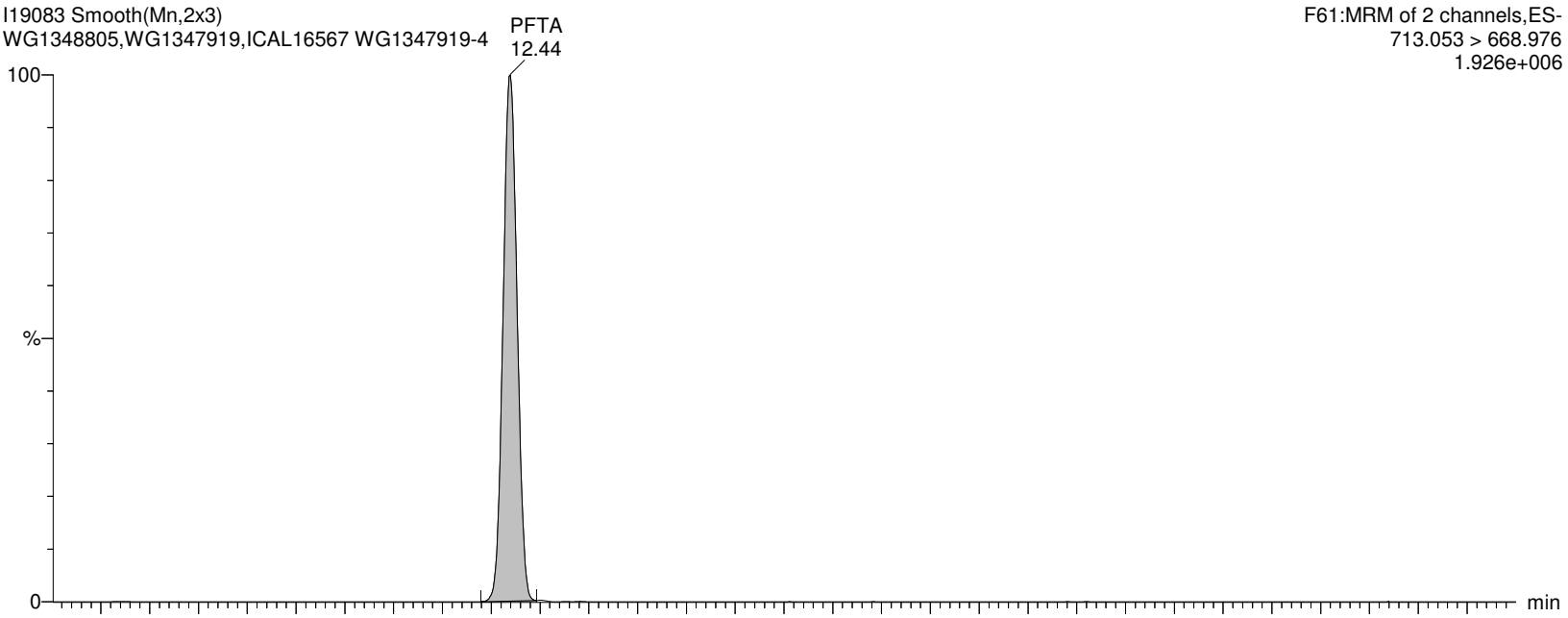
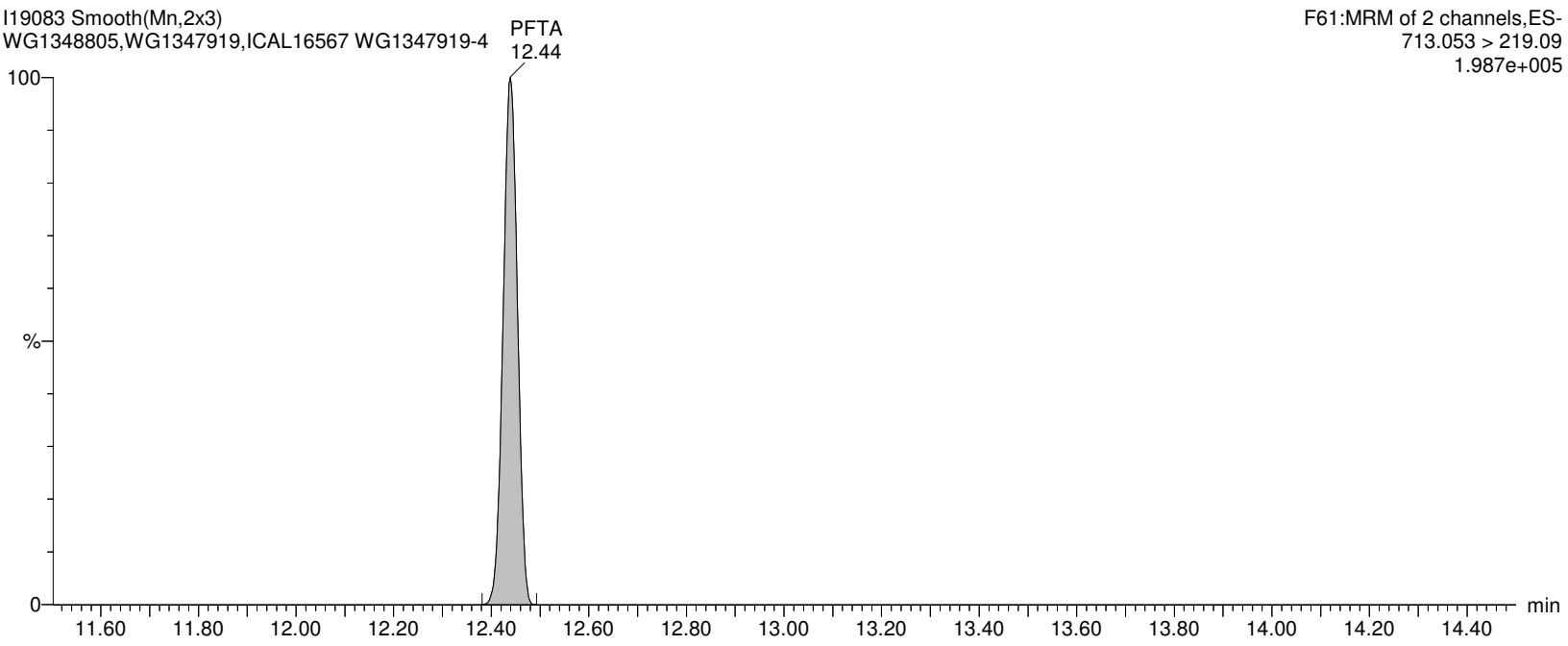
**Description: WG1348805,WG1347919,ICAL16567**
**User: LCMS01:JW**
**Vial: 1:C,6**
**Instrument: XEVO-TQSmicro#QEA0276**
**Inlet Method Name: C:\MassLynx\Data\200309_537ISO.PRO\ACQUDB\LCMS_537_ISO_MeOH**
**Tune Method Name: C:\MassLynx\Data\200309_537ISO.PRO\ACQUDB\190709_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\200309_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**PFTA**





all concentration units in (ng/mL)

Alpha Analytical Inc.
Dataset: C:\MassLynx\Data\200309_537ISO.PRO\Data\WG1348805A.qld
Last Altered: Tuesday, March 17, 2020 11:10:13 Eastern Daylight Time
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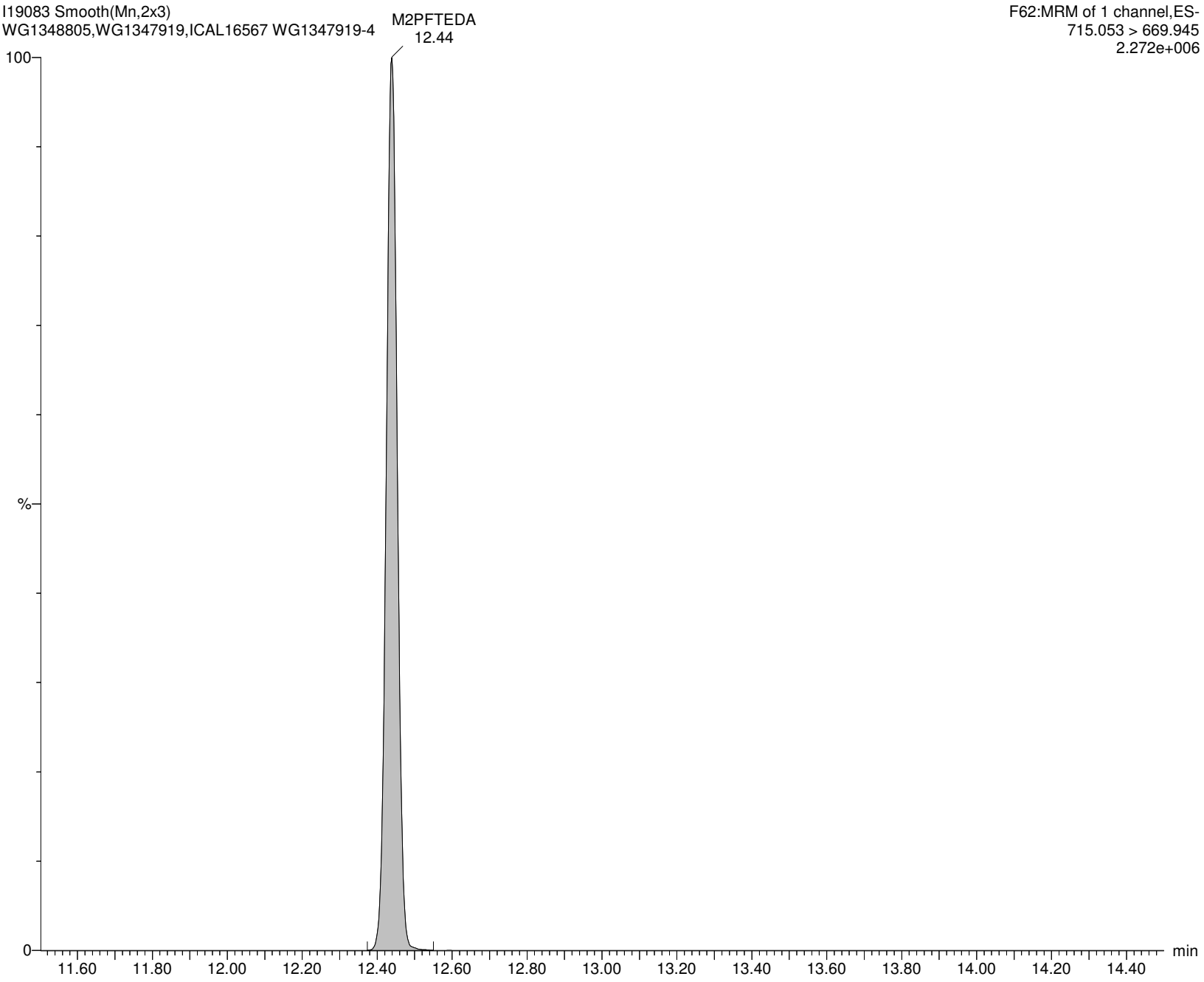
**Name: I19083**
**ID: WG1347919-4**
**Date: 09-Mar-2020**
**Time: 16:46:25**
**Description: WG1348805,WG1347919,ICAL16567**
**User: LCMS01:JW**
**Vial: 1:C,6**
**Instrument: XEVO-TQSmicro#QEA0276**
**Inlet Method Name: C:\MassLynx\Data\200309_537ISO.PRO\ACQUDB\LCMS_537_ISO_MeOH**
**Tune Method Name: C:\MassLynx\Data\200309_537ISO.PRO\ACQUDB\190709_TUNE.IPR**
**MS Method Name: C:\MassLynx\Data\200309_537ISO.PRO\ACQUDB\537ISO28_M_SPAN_DOD.EXP**

**M2PFTEDA**





all concentration units in (ng/mL)

## Calculation of Semi Volatile Organic Compounds

Results of Water Analysis- calculation as performed in report form:

$$\text{Concentration (ug/L)} = \frac{(\text{Conc})\ (\text{Vf})\ (\text{DF})}{(\text{Vi})} \times 1000$$

where:
Conc =Raw on-column concentration obtained from the quantitation report using Initial Calibration results.
Vf = Final volume of extract (mL)
Vi= Volume of sample extracted (mL)
DF= Dilution factor

Results of Sediment/Soil Analysis- calculation as performed in report form:

$$\text{Concentration (ug/Kg)} = \frac{(\text{Conc})\ (\text{Vf})\ (\text{DF})}{(\text{W})\ (\%\text{S})}$$

where:
Conc =Raw on-column concentration obtained from the quantitation report using Initial Calibration results.
Vf = Final volume of extract (mL)
W= Aliquot of sample (wet), g
DF= Dilution factor
%S= Sample %solid (in decimal form)

ALPHA ANALYTICAL LABORATORIES, INC.

Alpha WORK GROUP REPORT (wk02)

Mar 17 2020, 02:23 pm

Work Group: WG1348805  for Department: 32 GC/MS - Semivolatiles

Created: 09-MAR-20  Due:  Operator: SG

| Sample | Client ID | C | Product | Matrix | Stat | UA | HOLD | DUE | PR | Location |
|---|---|---|---|---|---|---|---|---|---|---|
| L2009600-04 | RINSEATE BLANK 2/25/2020 | S | A2-NY-537-ISOTOPE | WATER | DONE | U | 0316 | 0318 | S0 | 537ISET |
| L2009693-01 | FIELD BLANK 1 | S | A2-537-ISOTOPE | WATER | DONE | U | 0318 | 0320 | S0 | Plastic-T.25 |
| L2009693-03 | PUMP-2 | S | A2-537-ISOTOPE | WATER | DONE | U | 0318 | 0320 | S0 | Plastic-T.25 |
| L2009693-04 | PUMP-3 | S | A2-537-ISOTOPE | WATER | DONE | U | 0318 | 0320 | S0 | Plastic-T.25 |
| L2009738-01 | S03040K2 | S | A2-NH-537-ISOTOPE | DW | SENT | U | 0317 | 0318 | S0 | 537ISET |
| L2009793-01 | MW-213 | S | A2-NY-537-ISOTOPE | WATER | DONE | U | 0318 | 0318 | S0 | 537ISET |
| L2009793-02 | MW-214 | S | A2-NY-537-ISOTOPE | WATER | DONE | U | 0318 | 0318 | S0 | 537ISET |
| L2009793-03 | FB | S | A2-NY-537-ISOTOPE | WATER | DONE | U | 0318 | 0318 | S0 | 537ISET |
| L2010072-01 | SYS-EFF_030520 | S | A2-537-ISOTOPE | WATER | DONE | U | 0319 | 0319 | S0 | 537ISET |
| WG1347919-4 | Matrix Spike | S | A2-537-ISOTOPE | WATER | DONE | U | | | | |
| WG1347919-4 | Matrix Spike | S | A2-NY-537-ISOTOPE | WATER | DACQ | U | | | | |
| WG1347919-5 | Duplicate Sample | S | A2-537-ISOTOPE | WATER | DONE | U | | | | |
| WG1347919-5 | Duplicate Sample | S | A2-NY-537-ISOTOPE | WATER | DACQ | U | | | | |
| WG1347920-1 | Laboratory Method Bl | S | A2-NH-537-ISOTOPE | DW | SEC | U | | | | |
| WG1347920-2 | Laboratory Control S | S | A2-NH-537-ISOTOPE | DW | SEC | U | | | | |
| WG1347920-3 | LCS Duplicate | S | A2-NH-537-ISOTOPE | DW | SEC | U | | | | |
| WG1348805-1 | Continuing Calibrati | S | A2-NH-537-ISOTOPE | DW | DONE | U | | | | |
| WG1348805-1 | Continuing Calibrati | S | A2-537-ISOTOPE | WATER | DONE | U | | | | |
| WG1348805-1 | Continuing Calibrati | S | A2-NY-537-ISOTOPE | WATER | DONE | U | | | | |
| WG1348805-2 | Continuing Calibrati | S | A2-NH-537-ISOTOPE | DW | DONE | U | | | | |
| WG1348805-2 | Continuing Calibrati | S | A2-537-ISOTOPE | WATER | DONE | U | | | | |
| WG1348805-2 | Continuing Calibrati | S | A2-NY-537-ISOTOPE | WATER | DONE | U | | | | |
| WG1348805-3 | Continuing Calibrati | S | A2-NY-537-ISOTOPE | WATER | DONE | U | | | | |
| WG1348805-3 | Continuing Calibrati | S | A2-NH-537-ISOTOPE | DW | DONE | U | | | | |
| WG1348805-3 | Continuing Calibrati | S | A2-537-ISOTOPE | WATER | DONE | U | | | | |
| WG1348805-4 | Continuing Calibrati | S | A2-NY-537-ISOTOPE | WATER | DONE | U | | | | |
| WG1348805-4 | Continuing Calibrati | S | A2-NH-537-ISOTOPE | DW | DONE | U | | | | |
| WG1348805-4 | Continuing Calibrati | S | A2-537-ISOTOPE | WATER | DONE | U | | | | |
| WG1348805-5 | Continuing Calibrati | S | A2-NY-537-ISOTOPE | WATER | DACQ | U | | | | |
| WG1348805-5 | Continuing Calibrati | S | A2-537-ISOTOPE | WATER | DACQ | U | | | | |
| WG1348805-5 | Continuing Calibrati | S | A2-NH-537-ISOTOPE | DW | DACQ | U | | | | |
| WG1348805-6 | Continuing Calibrati | S | A2-537-ISOTOPE | WATER | DACQ | U | | | | |
| WG1348805-6 | Continuing Calibrati | S | A2-NH-537-ISOTOPE | DW | DACQ | U | | | | |
| WG1348805-6 | Continuing Calibrati | S | A2-NY-537-ISOTOPE | WATER | DACQ | U | | | | |

Comments:

| | |
|---|---|
| WG1347919-4 | L2009793-01 |
| WG1347919-5 | L2009793-02 |
| WG1347920-3 | WG1347920-2 |

| | Vial | File Name | File Text | Sample ID |
|---|---|---|---|---|
| 1 | --- | --- | IS LOT#LC_537_ISO_ISTD_191117 | SURROGATE LOT# LC_537_ISO_SURR_191116 |
| 2 | 1:A,1 | I13432 | MeOH BLANK | MeOH BLANK |
| 3 | 1:A,1 | I13433 | MeOH BLANK | MeOH BLANK |
| 4 | 1:A,2 | I13434 | WG1310082,,537_190904_1 | IA2-537STD0.5 |
| 5 | 1:A,3 | I13435 | WG1310082,,537_190904_2 | IA2-537STD1.0 |
| 6 | 1:A,4 | I13436 | WG1310082,,537_190904_3 | IA2-537STD5.0 |
| 7 | 1:A,5 | I13437 | WG1310082,,537_190904_4 | IA2-537STD10.0 |
| 8 | 1:A,6 | I13438 | WG1310082,,537_190904_5 | IA2-537STD50.0 |
| 9 | 1:A,7 | I13439 | WG1310082,,537_190904_6 | IA2-537STD125 |
| 10 | 1:A,8 | I13440 | WG1310082,,537_190904_7 | IA2-537STD150 |
| 11 | 1:B,1 | I13441 | WG1310082,,537_190904_8 | IA2-537STD250 |
| 12 | 1:B,2 | I13442 | WG1310082,,537_190904_9 | IA2-537STD500 |
| 13 | 1:A,1 | I13443 | MeOH BLANK | MeOH BLANK |
| 14 | 1:A,1 | I13444 | MeOH BLANK | MeOH BLANK |
| 15 | 1:A,1 | I13445 | MeOH BLANK | MeOH BLANK |
| 16 | 1:B,3 | I13446 | WG1310082,,537ISO_190904 | CA2-537STD010 |
| 17 | 1:B,4 | I13447 | WG1310082,,537ISO_TECHSTD_190520A | TECHSTD_190520A |

| MS File | MS Tune File | Inlet File | Inject Volume | Sample Type | Conc A | User |
|---|---|---|---|---|---|---|
| --- | --- | --- | 0.0 | --- | --- | --- |
| 537ISO28_M_SPAN_DOD | 181009_TUNE | LCMS_537_ISO_B | 3.0 | Analyte | --- | LCMS02:JW |
| 537ISO28_M_SPAN_DOD | 181009_TUNE | LCMS_537_ISO_B | 3.0 | Analyte | --- | LCMS02:JW |
| 537ISO28_M_SPAN_DOD | 181009_TUNE | LCMS_537_ISO_B | 3.0 | Standard | 0.5 | LCMS02:JW |
| 537ISO28_M_SPAN_DOD | 181009_TUNE | LCMS_537_ISO_B | 3.0 | Standard | 1.0 | LCMS02:JW |
| 537ISO28_M_SPAN_DOD | 181009_TUNE | LCMS_537_ISO_B | 3.0 | Standard | 5.0 | LCMS02:JW |
| 537ISO28_M_SPAN_DOD | 181009_TUNE | LCMS_537_ISO_B | 3.0 | Standard | 10.0 | LCMS02:JW |
| 537ISO28_M_SPAN_DOD | 181009_TUNE | LCMS_537_ISO_B | 3.0 | Standard | 50.0 | LCMS02:JW |
| 537ISO28_M_SPAN_DOD | 181009_TUNE | LCMS_537_ISO_B | 3.0 | Standard | 125 | LCMS02:JW |
| 537ISO28_M_SPAN_DOD | 181009_TUNE | LCMS_537_ISO_B | 3.0 | Standard | 150 | LCMS02:JW |
| 537ISO28_M_SPAN_DOD | 181009_TUNE | LCMS_537_ISO_B | 3.0 | Standard | 250 | LCMS02:JW |
| 537ISO28_M_SPAN_DOD | 181009_TUNE | LCMS_537_ISO_B | 3.0 | Standard | 500 | LCMS02:JW |
| 537ISO28_M_SPAN_DOD | 181009_TUNE | LCMS_537_ISO_B | 3.0 | Analyte | --- | LCMS02:JW |
| 537ISO28_M_SPAN_DOD | 181009_TUNE | LCMS_537_ISO_B | 3.0 | Analyte | --- | LCMS02:JW |
| 537ISO28_M_SPAN_DOD | 181009_TUNE | LCMS_537_ISO_B | 3.0 | Analyte | --- | LCMS02:JW |
| 537ISO28_M_SPAN_DOD | 181009_TUNE | LCMS_537_ISO_B | 3.0 | QC | 10 | LCMS02:JW |
| 537ISO28_M_SPAN_DOD | 181009_TUNE | LCMS_537_ISO_B | 3.0 | Analyte | --- | LCMS02:JW |

| | Vial | File Name | File Text | Sample ID |
|---|---|---|---|---|
| 1 | --- | ---- | IS LOT#_537_ISO_ISTD_200216 | SURROGATE LOT#LC_537_ISO_SURR_200213 |
| 2 | 1:A,1 | I18525 | MeOH Blank | MeOH Blank |
| 3 | 1:A,1 | I18526 | MeOH Blank | MeOH Blank |
| 4 | 1:A,4 | I18529 | WG1345050,,537_200120_3 | IA2-537STD5.0 |
| 5 | 1:A,5 | I18530 | WG1345050,,537_200120_4 | IA2-537STD10.0 |
| 6 | 1:A,6 | I18531 | WG1345050,,537_200120_5 | IA2-537STD50.0 |
| 7 | 1:A,7 | I18532 | WG1345050,,537_200120_6 | IA2-537STD125 |
| 8 | 1:A,8 | I18533 | WG1345050,,537_200120_7 | IA2-537STD150 |
| 9 | 1:B,1 | I18534 | WG1345050,,537_200120_8 | IA2-537STD250 |
| 10 | 1:B,2 | I18535 | WG1345050,,537_200120_9 | IA2-537STD500 |
| 11 | 1:B,5 | I18539 | WG1345050,,537_200120_1 | IA2-537STD0.5 |
| 12 | 1:B,6 | I18540 | WG1345050,,537_200120_2 | IA2-537STD1.0 |
| 13 | 1:B,4 | I18542 | WG1345050,,537ISO_TECHSTD_190520A | TECHSTD_190520A |
| 14 | 1:B,7 | I18543 | WG1345050,,537ISO_ICV_200120 | CA2-537STD010 |

| MS File | MS Tune File | Inlet File | Inject Volume | Sample Type | Conc A | User |
|---|---|---|---|---|---|---|
| --- | --- | --- | 0.0 | --- | --- | --- |
| 537ISO28_M_SPAN_DOD | 190709_TUNE | LCMS_537_ISO_MeOH | 3.0 | Analyte | --- | LCMS01:JW |
| 537ISO28_M_SPAN_DOD | 190709_TUNE | LCMS_537_ISO_MeOH | 3.0 | Analyte | --- | LCMS01:JW |
| 537ISO28_M_SPAN_DOD | 190709_TUNE | LCMS_537_ISO_MeOH | 3.0 | Standard | 5 | LCMS01:JW |
| 537ISO28_M_SPAN_DOD | 190709_TUNE | LCMS_537_ISO_MeOH | 3.0 | Standard | 10 | LCMS01:JW |
| 537ISO28_M_SPAN_DOD | 190709_TUNE | LCMS_537_ISO_MeOH | 3.0 | Standard | 50 | LCMS01:JW |
| 537ISO28_M_SPAN_DOD | 190709_TUNE | LCMS_537_ISO_MeOH | 3.0 | Standard | 125 | LCMS01:JW |
| 537ISO28_M_SPAN_DOD | 190709_TUNE | LCMS_537_ISO_MeOH | 3.0 | Standard | 150 | LCMS01:JW |
| 537ISO28_M_SPAN_DOD | 190709_TUNE | LCMS_537_ISO_MeOH | 3.0 | Standard | 250 | LCMS01:JW |
| 537ISO28_M_SPAN_DOD | 190709_TUNE | LCMS_537_ISO_MeOH | 3.0 | Standard | 500 | LCMS01:JW |
| 537ISO28_M_SPAN_DOD | 190709_TUNE | LCMS_537_ISO_MeOH | 3.0 | Standard | 0.5 | LCMS01:JW |
| 537ISO28_M_SPAN_DOD | 190709_TUNE | LCMS_537_ISO_MeOH | 3.0 | Standard | 1 | LCMS01:JW |
| 537ISO28_M_SPAN_DOD | 190709_TUNE | LCMS_537_ISO_MeOH | 3.0 | Analyte | --- | LCMS01:JW |
| 537ISO28_M_SPAN_DOD | 190709_TUNE | LCMS_537_ISO_MeOH | 3.0 | QC | 10 | LCMS01:JW |

| | Vial | File Name | File Text | Sample ID |
|---|---|---|---|---|
| 1 | --- | ---- | IS LOT#_537_ISO_ISTD_2000304 | SURROGATE LOT#LC_537_ISO_SURR_200303 |
| 2 | 1:A,1 | I19066 | MeOH Blank | MeOH Blank |
| 3 | 1:A,1 | I19067 | MeOH Blank | MeOH Blank |
| 4 | 1:A,1 | I19068 | MeOH Blank | MeOH Blank |
| 5 | 1:A,2 | I19069 | WG1348805,WG1346657,ICAL16567,537ILOW | WG1348805-1,537ILOW |
| 6 | 1:B,1 | I19070 | WG1348805,WG1347919,ICAL16567 | WG1347919-1 |
| 7 | 1:B,2 | I19071 | WG1348805,WG1346657,ICAL16567 | WG1346657-2R |
| 8 | 1:B,3 | I19072 | WG1348805,WG1346657,ICAL16567 | WG1346657-3R |
| 9 | 1:B,4 | I19073 | WG1348805,WG1347919,ICAL16567 | L2009693-01 |
| 10 | 1:B,5 | I19074 | WG1348805,WG1347919,ICAL16567 | L2009693-02 |
| 11 | 1:B,6 | I19075 | WG1348805,WG1347919,ICAL16567 | L2009693-03 |
| 12 | 1:B,7 | I19076 | WG1348805,WG1347919,ICAL16567 | L2009693-04 |
| 13 | 1:B,8 | I19077 | WG1348805,WG1347919,ICAL16567 | L2009600-04 |
| 14 | 1:C,1 | I19078 | WG1348805,WG1347919,ICAL16567 | L2009793-01 |
| 15 | 1:C,2 | I19079 | WG1348805,WG1347919,ICAL16567 | L2009793-02 |
| 16 | 1:C,3 | I19080 | WG1348805,WG1347919,ICAL16567 | WG1347919-5 |
| 17 | 1:C,4 | I19081 | WG1348805,WG1347919,ICAL16567 | WG1347919-2 |
| 18 | 1:C,5 | I19082 | WG1348805,WG1347919,ICAL16567 | WG1347919-3 |
| 19 | 1:C,6 | I19083 | WG1348805,WG1347919,ICAL16567 | WG1347919-4 |
| 20 | 1:A,3 | I19084 | WG1348805,WG1347919,ICAL16567,537IMED | WG1348805-2,537IMED |
| 21 | 1:A,1 | I19085 | MeOH Blank | MeOH Blank |
| 22 | 1:C,7 | I19086 | WG1348805,WG1347919,ICAL16567 | L2009793-03 |
| 23 | 1:C,8 | I19087 | WG1348805,WG1347919,ICAL16567 | L2009823-01 |
| 24 | 1:D,1 | I19088 | WG1348805,WG1347919,ICAL16567 | L2009823-02 |
| 25 | 1:D,2 | I19089 | WG1348805,WG1347919,ICAL16567 | L2009823-03 |
| 26 | 1:D,3 | I19090 | WG1348805,WG1347919,ICAL16567 | L2009823-04 |
| 27 | 1:D,4 | I19091 | WG1348805,WG1347919,ICAL16567 | L2009823-05 |
| 28 | 1:D,5 | I19092 | WG1348805,WG1347919,ICAL16567 | L2009823-06 |
| 29 | 1:D,6 | I19093 | WG1348805,WG1347919,ICAL16567 | L2009823-07 |
| 30 | 1:D,7 | I19094 | WG1348805,WG1347919,ICAL16567 | L2009823-08 |
| 31 | 1:D,8 | I19095 | WG1348805,WG1347919,ICAL16567 | L2009823-09 |
| 32 | 1:A,2 | I19096 | WG1348805,WG1347546,ICAL16567,537ILOW | WG1348805-3,537ILOW |
| 33 | 1:E,1 | I19097 | WG1348805,WG1347919,ICAL16567 | L2009824-01 |
| 34 | 1:E,2 | I19098 | WG1348805,WG1347919,ICAL16567 | L2010072-01 |
| 35 | 1:E,3 | I19099 | WG1348805,WG1347920,ICAL16567 | L2009738-01 |
| 36 | 1:A,3 | I19100 | WG1348805,WG13474920,ICAL16567,537IMED | WG1348805-4,537IMED |
| 37 | 1:A,4 | I19101 | ACN FLUSH | ACN FLUSH |
| 38 | 1:A,1 | I19102 | MeOH FLUSH | MeOH FLUSH |

| MS File | MS Tune File | Inlet File | Inject Volume | Sample Type | Conc A | User |
|---|---|---|---|---|---|---|
| --- | --- | --- | 0.0 | --- | --- | --- |
| 537ISO28_M_SPAN_DOD | 190709_TUNE | LCMS_537_ISO_MeOH | 3.0 | Analyte | --- | LCMS01:SG |
| 537ISO28_M_SPAN_DOD | 190709_TUNE | LCMS_537_ISO_MeOH | 3.0 | Analyte | --- | LCMS01:SG |
| 537ISO28_M_SPAN_DOD | 190709_TUNE | LCMS_537_ISO_MeOH | 3.0 | Analyte | --- | LCMS01:SG |
| 537ISO28_M_SPAN_DOD | 190709_TUNE | LCMS_537_ISO_MeOH | 3.0 | QC | 0.5 | LCMS01:SG |
| 537ISO28_M_SPAN_DOD | 190709_TUNE | LCMS_537_ISO_MeOH | 3.0 | Analyte | --- | LCMS01:SG |
| 537ISO28_M_SPAN_DOD | 190709_TUNE | LCMS_537_ISO_MeOH | 3.0 | QC | 10 | LCMS01:SG |
| 537ISO28_M_SPAN_DOD | 190709_TUNE | LCMS_537_ISO_MeOH | 3.0 | QC | 10 | LCMS01:SG |
| 537ISO28_M_SPAN_DOD | 190709_TUNE | LCMS_537_ISO_MeOH | 3.0 | Analyte | --- | LCMS01:SG |
| 537ISO28_M_SPAN_DOD | 190709_TUNE | LCMS_537_ISO_MeOH | 3.0 | Analyte | --- | LCMS01:SG |
| 537ISO28_M_SPAN_DOD | 190709_TUNE | LCMS_537_ISO_MeOH | 3.0 | Analyte | --- | LCMS01:SG |
| 537ISO28_M_SPAN_DOD | 190709_TUNE | LCMS_537_ISO_MeOH | 3.0 | Analyte | --- | LCMS01:SG |
| 537ISO28_M_SPAN_DOD | 190709_TUNE | LCMS_537_ISO_MeOH | 3.0 | Analyte | --- | LCMS01:SG |
| 537ISO28_M_SPAN_DOD | 190709_TUNE | LCMS_537_ISO_MeOH | 3.0 | Analyte | --- | LCMS01:SG |
| 537ISO28_M_SPAN_DOD | 190709_TUNE | LCMS_537_ISO_MeOH | 3.0 | Analyte | --- | LCMS01:SG |
| 537ISO28_M_SPAN_DOD | 190709_TUNE | LCMS_537_ISO_MeOH | 3.0 | Analyte | --- | LCMS01:SG |
| 537ISO28_M_SPAN_DOD | 190709_TUNE | LCMS_537_ISO_MeOH | 3.0 | QC | 10 | LCMS01:SG |
| 537ISO28_M_SPAN_DOD | 190709_TUNE | LCMS_537_ISO_MeOH | 3.0 | QC | 10 | LCMS01:SG |
| 537ISO28_M_SPAN_DOD | 190709_TUNE | LCMS_537_ISO_MeOH | 3.0 | Analyte | --- | LCMS01:SG |
| 537ISO28_M_SPAN_DOD | 190709_TUNE | LCMS_537_ISO_MeOH | 3.0 | QC | 10 | LCMS01:SG |
| 537ISO28_M_SPAN_DOD | 190709_TUNE | LCMS_537_ISO_MeOH | 3.0 | Analyte | --- | LCMS01:SG |
| 537ISO28_M_SPAN_DOD | 190709_TUNE | LCMS_537_ISO_MeOH | 3.0 | Analyte | --- | LCMS01:SG |
| 537ISO28_M_SPAN_DOD | 190709_TUNE | LCMS_537_ISO_MeOH | 3.0 | Analyte | --- | LCMS01:SG |
| 537ISO28_M_SPAN_DOD | 190709_TUNE | LCMS_537_ISO_MeOH | 3.0 | Analyte | --- | LCMS01:SG |
| 537ISO28_M_SPAN_DOD | 190709_TUNE | LCMS_537_ISO_MeOH | 3.0 | Analyte | --- | LCMS01:SG |
| 537ISO28_M_SPAN_DOD | 190709_TUNE | LCMS_537_ISO_MeOH | 3.0 | Analyte | --- | LCMS01:SG |
| 537ISO28_M_SPAN_DOD | 190709_TUNE | LCMS_537_ISO_MeOH | 3.0 | Analyte | --- | LCMS01:SG |
| 537ISO28_M_SPAN_DOD | 190709_TUNE | LCMS_537_ISO_MeOH | 3.0 | Analyte | --- | LCMS01:SG |
| 537ISO28_M_SPAN_DOD | 190709_TUNE | LCMS_537_ISO_MeOH | 3.0 | Analyte | --- | LCMS01:SG |
| 537ISO28_M_SPAN_DOD | 190709_TUNE | LCMS_537_ISO_MeOH | 3.0 | Analyte | --- | LCMS01:SG |
| 537ISO28_M_SPAN_DOD | 190709_TUNE | LCMS_537_ISO_MeOH | 3.0 | QC | 0.5 | LCMS01:SG |
| 537ISO28_M_SPAN_DOD | 190709_TUNE | LCMS_537_ISO_MeOH | 3.0 | Analyte | --- | LCMS01:SG |
| 537ISO28_M_SPAN_DOD | 190709_TUNE | LCMS_537_ISO_MeOH | 3.0 | Analyte | --- | LCMS01:SG |
| 537ISO28_M_SPAN_DOD | 190709_TUNE | LCMS_537_ISO_MeOH | 3.0 | Analyte | --- | LCMS01:SG |
| 537ISO28_M_SPAN_DOD | 190709_TUNE | LCMS_537_ISO_MeOH | 3.0 | QC | 10 | LCMS01:SG |
| 537ISO28_M_SPAN_DOD | 190709_TUNE | ACN_MeOH_Flush_30 | 3.0 | Analyte | --- | LCMS01:SG |
| 537ISO28_M_SPAN_DOD | 190709_TUNE | MeOH_Flush_30 | 3.0 | Analyte | --- | LCMS01:SG |

| | Vial | File Name | File Text | Sample ID |
|---|---|---|---|---|
| 1 | --- | --- | IS LOT#LC_537_ISO_ISTD_200226 | SURROGATE LOT# LC_537_ISO_SURR_200227 |
| 2 | 1:A,1 | I20392 | MeOH BLANK | MeOH BLANK |
| 3 | 1:A,1 | I20393 | MeOH BLANK | MeOH BLANK |
| 4 | 1:A,1 | I20394 | MeOH BLANK | MeOH BLANK |
| 5 | 1:A,1 | I20395 | MeOH BLANK | MeOH BLANK |
| 6 | 1:A,2 | I20396 | WG1348954,WG1347622,ICAL16305,537ILOW | WG1348954-1,537ILOW |
| 7 | 1:A,1 | I20397 | MeOH BLANK | MeOH BLANK |
| 8 | 1:A,2 | I20398 | WG1348954,WG1347622,ICAL16305,537ILOW | WG1348954-1,537ILOW |
| 9 | 1:B,1 | I20399 | WG1348954,WG1347622,ICAL16305 | WG1347622-1 |
| 10 | 1:F,5 | I20400 | WG1348954,WG1347630,ICAL16305 | WG1347630-1R |
| 11 | 1:B,2 | I20401 | WG1348954,WG1347622,ICAL16305 | L2009575-01 |
| 12 | 1:B,3 | I20402 | WG1348954,WG1347622,ICAL16305 | L2009575-02 |
| 13 | 1:B,4 | I20403 | WG1348954,WG1347622,ICAL16305 | WG1347622-5 |
| 14 | 1:B,5 | I20404 | WG1348954,WG1347622,ICAL16305 | L2009575-03 |
| 15 | 1:B,6 | I20405 | WG1348954,WG1347622,ICAL16305 | L2009575-04 |
| 16 | 1:B,7 | I20406 | WG1348954,WG1347622,ICAL16305 | L2009586-01 |
| 17 | 1:B,8 | I20407 | WG1348954,WG1347622,ICAL16305 | L2009586-04 |
| 18 | 1:C,1 | I20408 | WG1348954,WG1347622,ICAL16305 | L2009586-07 |
| 19 | 1:C,2 | I20409 | WG1348954,WG1347622,ICAL16305 | L2009586-10 |
| 20 | 1:C,3 | I20410 | WG1348954,WG1347622,ICAL16305 | L2009586-13 |
| 21 | 1:C,4 | I20411 | WG1348954,WG1347622,ICAL16305 | L2009586-16 |
| 22 | 1:C,5 | I20412 | WG1348954,WG1347622,ICAL16305 | WG1347622-2 |
| 23 | 1:C,6 | I20413 | WG1348954,WG1347622,ICAL16305 | WG1347622-3 |
| 24 | 1:C,7 | I20414 | WG1348954,WG1347622,ICAL16305 | WG1347622-4 |
| 25 | 1:A,3 | I20415 | WG1348954,WG1347622,ICAL16305,537IMED | WG1348954-2,537IMED |
| 26 | 1:A,4 | I20416 | ACN BLANK | ACN BLANK |
| 27 | 1:A,1 | I20417 | MeOH BLANK | MeOH BLANK |
| 28 | 1:C,8 | I20418 | WG1348954,WG1347969,ICAL16305 | WG1347969-1 |
| 29 | 1:D,1 | I20419 | WG1348954,WG1347622,ICAL16305 | L2009586-19 |
| 30 | 1:D,2 | I20420 | WG1348954,WG1347622,ICAL16305 | L2009586-22 |
| 31 | 1:D,3 | I20421 | WG1348954,WG1347622,ICAL16305 | L2009586-25 |
| 32 | 1:D,4 | I20422 | WG1348954,WG1347622,ICAL16305 | L2009586-28 |
| 33 | 1:D,5 | I20423 | WG1348954,WG1347622,ICAL16305 | L2009586-31 |
| 34 | 1:D,6 | I20424 | WG1348954,WG1347622,ICAL16305 | L2009586-34 |
| 35 | 1:D,7 | I20425 | WG1348954,WG1347969,ICAL16305 | L2009600-01 |
| 36 | 1:D,8 | I20426 | WG1348954,WG1347969,ICAL16305 | L2009600-02 |
| 37 | 1:E,1 | I20427 | WG1348954,WG1347969,ICAL16305 | WG1347969-5 |
| 38 | 1:E,2 | I20428 | WG1348954,WG1347969,ICAL16305 | L2009600-03 |
| 39 | 1:E,3 | I20429 | WG1348954,WG1347969,ICAL16305 | WG1347969-2 |
| 40 | 1:E,4 | I20430 | WG1348954,WG1347969,ICAL16305 | WG1347969-3 |
| 41 | 1:E,5 | I20431 | WG1348954,WG1347969,ICAL16305 | WG1347969-4 |
| 42 | 1:A,1 | I20432 | MeOH BLANK | MeOH BLANK |
| 43 | 1:A,1 | I20433 | MeOH BLANK | MeOH BLANK |
| 44 | 1:A,2 | I20434 | WG1348954,WG1347969,ICAL16305,537ILOW | WG1348954-3,537ILOW |
| 45 | 1:E,6 | I20435 | WG1348954,WG1348193,ICAL16305 | WG1348193-1 |
| 46 | 1:E,7 | I20436 | WG1348954,WG1347919,ICAL16305 | WG1347919-1 |
| 47 | 1:E,8 | I20437 | WG1348954,WG1349088,ICAL16305 | L2009824-01RE |
| 48 | 1:F,1 | I20438 | WG1348954,WG1348193,ICAL16305 | L2010015-01 |
| 49 | 1:F,2 | I20439 | WG1348954,WG1348193,ICAL16305 | L2010015-02 |
| 50 | 1:F,3 | I20440 | WG1348954,WG1348193,ICAL16305 | WG1348193-5 |
| 51 | 1:F,4 | I20441 | WG1348954,WG1348193,ICAL16305 | WG1348193-2 |
| 52 | 1:F,5 | I20442 | WG1348954,WG1348193,ICAL16305 | WG1348193-3 |
| 53 | 1:F,6 | I20443 | WG1348954,WG1348193,ICAL16305 | WG1348193-4 |
| 54 | 1:A,3 | I20444 | WG1348954,WG1348193,ICAL16305,537IMED | WG1348954-4,537IMED |
| 55 | 1:A,4 | I20445 | ACN BLANK | ACN BLANK |
| 56 | 1:A,1 | I20446 | MeOH BLANK | MeOH BLANK |
| 57 | 1:F,7 | I20447 | WG1348954,WG1349088,ICAL16305 | WG1349088-1 |
| 58 | 2:A,1 | I20448 | WG1348954,WG1347919,ICAL16305 | L2009823-01 |
| 59 | 2:A,2 | I20449 | WG1348954,WG1347919,ICAL16305 | L2009823-02 |
| 60 | 2:A,3 | I20450 | WG1348954,WG1347919,ICAL16305 | L2009823-03 |

| MS File | MS Tune File | Inlet File | Inject Volume | Sample Type | Conc A | User |
|---|---|---|---|---|---|---|
| --- | --- | --- | 0.0 | --- | --- | --- |
| 537ISO28_M_SPAN_DOD | 181009_TUNE | LCMS_537_ISO_B | 3.0 | Analyte | --- | LCMS02:RS |
| 537ISO28_M_SPAN_DOD | 181009_TUNE | LCMS_537_ISO_B | 3.0 | Analyte | --- | LCMS02:RS |
| 537ISO28_M_SPAN_DOD | 181009_TUNE | LCMS_537_ISO_B | 3.0 | Analyte | --- | LCMS02:RS |
| 537ISO28_M_SPAN_DOD | 181009_TUNE | LCMS_537_ISO_B | 3.0 | Analyte | --- | LCMS02:RS |
| 537ISO28_M_SPAN_DOD | 181009_TUNE | LCMS_537_ISO_B | 3.0 | QC | 0.5 | LCMS02:RS |
| 537ISO28_M_SPAN_DOD | 181009_TUNE | LCMS_537_ISO_B | 3.0 | Analyte | --- | LCMS02:RS |
| 537ISO28_M_SPAN_DOD | 181009_TUNE | LCMS_537_ISO_B | 3.0 | QC | 0.5 | LCMS02:RS |
| 537ISO28_M_SPAN_DOD | 181009_TUNE | LCMS_537_ISO_B | 3.0 | Analyte | --- | LCMS02:RS |
| 537ISO28_M_SPAN_DOD | 181009_TUNE | LCMS_537_ISO_B | 3.0 | Analyte | --- | LCMS02:RS |
| 537ISO28_M_SPAN_DOD | 181009_TUNE | LCMS_537_ISO_B | 3.0 | Analyte | --- | LCMS02:RS |
| 537ISO28_M_SPAN_DOD | 181009_TUNE | LCMS_537_ISO_B | 3.0 | Analyte | --- | LCMS02:RS |
| 537ISO28_M_SPAN_DOD | 181009_TUNE | LCMS_537_ISO_B | 3.0 | Analyte | --- | LCMS02:RS |
| 537ISO28_M_SPAN_DOD | 181009_TUNE | LCMS_537_ISO_B | 3.0 | Analyte | --- | LCMS02:RS |
| 537ISO28_M_SPAN_DOD | 181009_TUNE | LCMS_537_ISO_B | 3.0 | Analyte | --- | LCMS02:RS |
| 537ISO28_M_SPAN_DOD | 181009_TUNE | LCMS_537_ISO_B | 3.0 | Analyte | --- | LCMS02:RS |
| 537ISO28_M_SPAN_DOD | 181009_TUNE | LCMS_537_ISO_B | 3.0 | Analyte | --- | LCMS02:RS |
| 537ISO28_M_SPAN_DOD | 181009_TUNE | LCMS_537_ISO_B | 3.0 | Analyte | --- | LCMS02:RS |
| 537ISO28_M_SPAN_DOD | 181009_TUNE | LCMS_537_ISO_B | 3.0 | Analyte | --- | LCMS02:RS |
| 537ISO28_M_SPAN_DOD | 181009_TUNE | LCMS_537_ISO_B | 3.0 | Analyte | --- | LCMS02:RS |
| 537ISO28_M_SPAN_DOD | 181009_TUNE | LCMS_537_ISO_B | 3.0 | Analyte | --- | LCMS02:RS |
| 537ISO28_M_SPAN_DOD | 181009_TUNE | LCMS_537_ISO_B | 3.0 | QC | 10 | LCMS02:RS |
| 537ISO28_M_SPAN_DOD | 181009_TUNE | LCMS_537_ISO_B | 3.0 | QC | 10 | LCMS02:RS |
| 537ISO28_M_SPAN_DOD | 181009_TUNE | LCMS_537_ISO_B | 3.0 | Analyte | --- | LCMS02:RS |
| 537ISO28_M_SPAN_DOD | 181009_TUNE | LCMS_537_ISO_B | 3.0 | QC | 10 | LCMS02:RS |
| 537ISO28_M_SPAN_DOD | 181009_TUNE | LCMS_537_ISO_B | 3.0 | Analyte | --- | LCMS02:RS |
| 537ISO28_M_SPAN_DOD | 181009_TUNE | LCMS_537_ISO_B | 3.0 | Analyte | --- | LCMS02:RS |
| 537ISO28_M_SPAN_DOD | 181009_TUNE | LCMS_537_ISO_B | 3.0 | Analyte | --- | LCMS02:RS |
| 537ISO28_M_SPAN_DOD | 181009_TUNE | LCMS_537_ISO_B | 3.0 | Analyte | --- | LCMS02:RS |
| 537ISO28_M_SPAN_DOD | 181009_TUNE | LCMS_537_ISO_B | 3.0 | Analyte | --- | LCMS02:RS |
| 537ISO28_M_SPAN_DOD | 181009_TUNE | LCMS_537_ISO_B | 3.0 | Analyte | --- | LCMS02:RS |
| 537ISO28_M_SPAN_DOD | 181009_TUNE | LCMS_537_ISO_B | 3.0 | Analyte | --- | LCMS02:RS |
| 537ISO28_M_SPAN_DOD | 181009_TUNE | LCMS_537_ISO_B | 3.0 | Analyte | --- | LCMS02:RS |
| 537ISO28_M_SPAN_DOD | 181009_TUNE | LCMS_537_ISO_B | 3.0 | Analyte | --- | LCMS02:RS |
| 537ISO28_M_SPAN_DOD | 181009_TUNE | LCMS_537_ISO_B | 3.0 | Analyte | --- | LCMS02:RS |
| 537ISO28_M_SPAN_DOD | 181009_TUNE | LCMS_537_ISO_B | 3.0 | Analyte | --- | LCMS02:RS |
| 537ISO28_M_SPAN_DOD | 181009_TUNE | LCMS_537_ISO_B | 3.0 | Analyte | --- | LCMS02:RS |
| 537ISO28_M_SPAN_DOD | 181009_TUNE | LCMS_537_ISO_B | 3.0 | Analyte | --- | LCMS02:RS |
| 537ISO28_M_SPAN_DOD | 181009_TUNE | LCMS_537_ISO_B | 3.0 | Analyte | --- | LCMS02:RS |
| 537ISO28_M_SPAN_DOD | 181009_TUNE | LCMS_537_ISO_B | 3.0 | Analyte | --- | LCMS02:RS |
| 537ISO28_M_SPAN_DOD | 181009_TUNE | LCMS_537_ISO_B | 3.0 | Analyte | --- | LCMS02:RS |
| 537ISO28_M_SPAN_DOD | 181009_TUNE | LCMS_537_ISO_B | 3.0 | Analyte | --- | LCMS02:RS |
| 537ISO28_M_SPAN_DOD | 181009_TUNE | LCMS_537_ISO_B | 3.0 | Analyte | --- | LCMS02:RS |
| 537ISO28_M_SPAN_DOD | 181009_TUNE | LCMS_537_ISO_B | 3.0 | Analyte | --- | LCMS02:RS |
| 537ISO28_M_SPAN_DOD | 181009_TUNE | LCMS_537_ISO_B | 3.0 | Analyte | --- | LCMS02:RS |
| 537ISO28_M_SPAN_DOD | 181009_TUNE | LCMS_537_ISO_B | 3.0 | Analyte | --- | LCMS02:RS |
| 537ISO28_M_SPAN_DOD | 181009_TUNE | LCMS_537_ISO_B | 3.0 | Analyte | --- | LCMS02:RS |
| 537ISO28_M_SPAN_DOD | 181009_TUNE | LCMS_537_ISO_B | 3.0 | Analyte | --- | LCMS02:RS |
| 537ISO28_M_SPAN_DOD | 181009_TUNE | LCMS_537_ISO_B | 3.0 | Analyte | --- | LCMS02:RS |
| 537ISO28_M_SPAN_DOD | 181009_TUNE | LCMS_537_ISO_B | 3.0 | Analyte | --- | LCMS02:RS |
| 537ISO28_M_SPAN_DOD | 181009_TUNE | LCMS_537_ISO_B | 3.0 | Analyte | --- | LCMS02:RS |
| 537ISO28_M_SPAN_DOD | 181009_TUNE | LCMS_537_ISO_B | 3.0 | Analyte | --- | LCMS02:RS |
| 537ISO28_M_SPAN_DOD | 181009_TUNE | LCMS_537_ISO_B | 3.0 | Analyte | --- | LCMS02:RS |
| 537ISO28_M_SPAN_DOD | 181009_TUNE | LCMS_537_ISO_B | 3.0 | Analyte | --- | LCMS02:RS |
| 537ISO28_M_SPAN_DOD | 181009_TUNE | LCMS_537_ISO_B | 3.0 | Analyte | --- | LCMS02:RS |
| 537ISO28_M_SPAN_DOD | 181009_TUNE | LCMS_537_ISO_B | 3.0 | Analyte | --- | LCMS02:RS |
| 537ISO28_M_SPAN_DOD | 181009_TUNE | LCMS_537_ISO_B | 3.0 | Analyte | --- | LCMS02:RS |
| 537ISO28_M_SPAN_DOD | 181009_TUNE | LCMS_537_ISO_B | 3.0 | Analyte | --- | LCMS02:RS |
| 537ISO28_M_SPAN_DOD | 181009_TUNE | LCMS_537_ISO_B | 3.0 | Analyte | --- | LCMS02:RS |
| 537ISO28_M_SPAN_DOD | 181009_TUNE | LCMS_537_ISO_B | 3.0 | Analyte | --- | LCMS02:RS |
| 537ISO28_M_SPAN_DOD | 181009_TUNE | LCMS_537_ISO_B | 3.0 | Analyte | --- | LCMS02:RS |
| 537ISO28_M_SPAN_DOD | 181009_TUNE | LCMS_537_ISO_B | 3.0 | Analyte | --- | LCMS02:RS |
| 537ISO28_M_SPAN_DOD | 181009_TUNE | LCMS_537_ISO_B | 3.0 | Analyte | --- | LCMS02:RS |

| | Vial | File Name | File Text | Sample ID |
|---|---|---|---|---|
| 61 | 2:A,4 | I20451 | WG1348954,WG1347919,ICAL16305 | L2009823-05 |
| 62 | 2:A,5 | I20452 | WG1348954,WG1347919,ICAL16305 | L2009823-06 |
| 63 | 2:A,6 | I20453 | WG1348954,WG1347919,ICAL16305 | L2009823-08 |
| 64 | 2:A,7 | I20454 | WG1348954,WG1347919,ICAL16305 | L2009823-09 |
| 65 | 2:A,8 | I20455 | WG1348954,WG1347919,ICAL16305 | WG1347919-2 |
| 66 | 2:B,1 | I20456 | WG1348954,WG1347919,ICAL16305 | WG1347919-3 |
| 67 | 1:A,2 | I20457 | WG1348954,WG1347969,ICAL16305,537ILOW | WG1348954-5,537ILOW |
| 68 | 2:B,2 | I20458 | WG1348954,WG1349088,ICAL16305 | WG1349088-2 |
| 69 | 2:B,3 | I20459 | WG1348954,WG1349088,ICAL16305 | WG1349088-3 |
| 70 | 2:B,4 | I20460 | WG1348954,WG1347919,ICAL16305 | L2009824-01 |
| 71 | 2:B,5 | I20461 | WG1348954,WG1347919,ICAL16305 | L2009823-04 |
| 72 | 2:B,6 | I20462 | WG1348954,WG1347919,ICAL16305 | L2009823-07 |
| 73 | 1:A,3 | I20463 | WG1348954,WG1348193,ICAL16305,537IMED | WG1348954-6,537IMED |
| 74 | 1:A,4 | I20464 | ACN BLANK | ACN BLANK |
| 75 | 1:A,1 | I20465 | MeOH BLANK | MeOH BLANK |
| 76 | 2:B,7 | I20466 | WG1348954,WG1347546,ICAL16305 | WG1347546-1 |
| 77 | 2:B,8 | I20467 | WG1348954,WG1347546,ICAL16305 | L2009548-01 |
| 78 | 2:C,1 | I20468 | WG1348954,WG1347546,ICAL16305 | L2009548-02 |
| 79 | 2:C,2 | I20469 | WG1348954,WG1347546,ICAL16305 | L2009548-03 |
| 80 | 2:C,3 | I20470 | WG1348954,WG1347546,ICAL16305 | L2009548-04 |
| 81 | 2:C,4 | I20471 | WG1348954,WG1347546,ICAL16305 | L2009548-05 |
| 82 | 2:C,5 | I20472 | WG1348954,WG1347546,ICAL16305 | L2009548-06 |
| 83 | 2:C,6 | I20473 | WG1348954,WG1347546,ICAL16305 | L2009548-07 |
| 84 | 2:C,7 | I20474 | WG1348954,WG1347546,ICAL16305 | WG1347546-2 |
| 85 | 2:C,8 | I20475 | WG1348954,WG1347546,ICAL16305 | WG1347546-3 |
| 86 | 1:A,2 | I20476 | WG1348954,WG1347969,ICAL16305,537ILOW | WG1348954-7,537ILOW |
| 87 | 1:A,2 | I20477 | ACN/MeOH FLUSH | ACN/MeOH FLUSH |
| 88 | 1:A,3 | I20478 | MEOH FLUSH | MeOH FLUSH |

| MS File | MS Tune File | Inlet File | Inject Volume | Sample Type | Conc A | User |
|---|---|---|---|---|---|---|
| 537ISO28_M_SPAN_DOD | 181009_TUNE | LCMS_537_ISO_B | 3.0 | Analyte | --- | LCMS02:RS |
| 537ISO28_M_SPAN_DOD | 181009_TUNE | LCMS_537_ISO_B | 3.0 | Analyte | --- | LCMS02:RS |
| 537ISO28_M_SPAN_DOD | 181009_TUNE | LCMS_537_ISO_B | 3.0 | Analyte | --- | LCMS02:RS |
| 537ISO28_M_SPAN_DOD | 181009_TUNE | LCMS_537_ISO_B | 3.0 | Analyte | --- | LCMS02:RS |
| 537ISO28_M_SPAN_DOD | 181009_TUNE | LCMS_537_ISO_B | 3.0 | QC | 10 | LCMS02:RS |
| 537ISO28_M_SPAN_DOD | 181009_TUNE | LCMS_537_ISO_B | 3.0 | QC | 10 | LCMS02:RS |
| 537ISO28_M_SPAN_DOD | 181009_TUNE | LCMS_537_ISO_B | 3.0 | QC | 0.5 | LCMS02:RS |
| 537ISO28_M_SPAN_DOD | 181009_TUNE | LCMS_537_ISO_B | 3.0 | QC | 10 | LCMS02:RS |
| 537ISO28_M_SPAN_DOD | 181009_TUNE | LCMS_537_ISO_B | 3.0 | QC | 10 | LCMS02:RS |
| 537ISO28_M_SPAN_DOD | 181009_TUNE | LCMS_537_ISO_B | 3.0 | Analyte | --- | LCMS02:RS |
| 537ISO28_M_SPAN_DOD | 181009_TUNE | LCMS_537_ISO_B | 3.0 | Analyte | --- | LCMS02:RS |
| 537ISO28_M_SPAN_DOD | 181009_TUNE | LCMS_537_ISO_B | 3.0 | Analyte | --- | LCMS02:RS |
| 537ISO28_M_SPAN_DOD | 181009_TUNE | LCMS_537_ISO_B | 3.0 | QC | 10 | LCMS02:RS |
| 537ISO28_M_SPAN_DOD | 181009_TUNE | LCMS_537_ISO_B | 3.0 | Analyte | --- | LCMS02:RS |
| 537ISO28_M_SPAN_DOD | 181009_TUNE | LCMS_537_ISO_B | 3.0 | Analyte | --- | LCMS02:RS |
| 537ISO28_M_SPAN_DOD | 181009_TUNE | LCMS_537_ISO_B | 3.0 | Analyte | --- | LCMS02:RS |
| 537ISO28_M_SPAN_DOD | 181009_TUNE | LCMS_537_ISO_B | 3.0 | Analyte | --- | LCMS02:RS |
| 537ISO28_M_SPAN_DOD | 181009_TUNE | LCMS_537_ISO_B | 3.0 | Analyte | --- | LCMS02:RS |
| 537ISO28_M_SPAN_DOD | 181009_TUNE | LCMS_537_ISO_B | 3.0 | Analyte | --- | LCMS02:RS |
| 537ISO28_M_SPAN_DOD | 181009_TUNE | LCMS_537_ISO_B | 3.0 | Analyte | --- | LCMS02:RS |
| 537ISO28_M_SPAN_DOD | 181009_TUNE | LCMS_537_ISO_B | 3.0 | Analyte | --- | LCMS02:RS |
| 537ISO28_M_SPAN_DOD | 181009_TUNE | LCMS_537_ISO_B | 3.0 | Analyte | --- | LCMS02:RS |
| 537ISO28_M_SPAN_DOD | 181009_TUNE | LCMS_537_ISO_B | 3.0 | Analyte | --- | LCMS02:RS |
| 537ISO28_M_SPAN_DOD | 181009_TUNE | LCMS_537_ISO_B | 3.0 | Analyte | --- | LCMS02:RS |
| 537ISO28_M_SPAN_DOD | 181009_TUNE | LCMS_537_ISO_B | 3.0 | QC | 10 | LCMS02:RS |
| 537ISO28_M_SPAN_DOD | 181009_TUNE | LCMS_537_ISO_B | 3.0 | QC | 10 | LCMS02:RS |
| 537ISO28_M_SPAN_DOD | 181009_TUNE | LCMS_537_ISO_B | 3.0 | QC | 0.5 | LCMS02:RS |
| 537ISO28_M_SPAN_DOD | 181009_TUNE | ACN_MeOH_Flush_30 | 3.0 | Analyte | --- | LCMS02:RS |
| 537ISO28_M_SPAN_DOD | 181009_TUNE | MeOH_Flush_30 | 3.0 | Analyte | --- | LCMS02:RS |

# ORGANIC ELN REPORT

**Workgroup: WG1347919**

**Prep Method:** ALPHA 23528
**Solvent Type:** Methanol **Lot #:** DX985-US
**Surrogate Type:** NA **Lot #:** LC_537_ISO_SURR_200303/2(
**Spike Type:** 537 **Lot #:** LC_537_ISO_LCS_200305
**Spike Verify by:** N/A
**Lims Spikelot:** 537I

**Additional Reagents/Stds**

| | |
|---|---|
| 2% NH4OH | EC030520A |
| 25 mM NaOAc | EC022820A |
| Acetic Acid | 2019072400 |
| | |

**Conc.Method:** N-EVAP
**Solvent Type:** 80:20 Methanol/Wat
**Lot #:** EC0221220A

**Additional Reagents/Stds**

| | |
|---|---|
| IS | 537_ISO_ISTD_200304 |

***Cleanup 1***

**Cleanup Method 1:**
**Cleanup Method 2:**
**Solvent Type:** **Lot #:**

**Additional Reagents/Stds**

**Extraction** | **Concentration**

| Sample/ Type | Extract Date | Analyst | Initial Sample Weight | Final Weight g | Sample Vol g | Balance Id | Surr Amt ml | Spike Amt ml | Pipette Id | Lot: Spe Cartrid | Flow Rate ml/min | Lot: Clnup Cartridg | Flow Rate 2 ml/min | Conc Date | Analyst | Final Vol ml | Conc Unit | Pipette Id |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| L2009600-04 WATER | 03/06/20 07:50 | Tyler Russell | 7.5 | 0 | 7.5 | BAL-7 | .02 | | WHG-31 | S19-007054 ; S308-010 | 4 | BO2483; 1/1242/G | 4 | 03/06/20 11:29 | Mark Ranalli | 1 | NEVAP 657 | 247_249 |
| **1-1 HOSE 52. Sample seemed to have soap and bubbles. This was diluted to 250 mL with DI water.** | | | | | | | | | | | | | | | | | | |
| L2009693-01 WATER | 03/06/20 07:50 | Tyler Russell | 294 | 24 | 270 | BAL-7 | .02 | | WHG-31 | S19-007054 ; S308-010 | 4 | BO2483; 1/1242/G | 4 | 03/06/20 11:29 | Mark Ranalli | 1 | NEVAP 657 | 247_249 |
| **5-1 HOSE 32** | | | | | | | | | | | | | | | | | | |
| L2009693-02 | 03/06/20 07:50 | Tyler Russell | 301 | 24 | 277 | BAL-7 | .02 | | WHG-31 | S19-007054 ; S308-010 | 4 | BO2483; 1/1242/G | 4 | 03/06/20 11:29 | Mark Ranalli | 1 | NEVAP 657 | 247_249 |
| **5-2 HOSE 53** | | | | | | | | | | | | | | | | | | |
| L2009693-03 WATER | 03/06/20 07:50 | Tyler Russell | 295 | 24 | 271 | BAL-7 | .02 | | WHG-31 | S19-007054 ; S308-010 | 4 | BO2483; 1/1242/G | 4 | 03/06/20 11:29 | Mark Ranalli | 1 | NEVAP 657 | 247_249 |
| **5-3 HOSE 51** | | | | | | | | | | | | | | | | | | |
| L2009693-04 WATER | 03/06/20 07:50 | Tyler Russell | 305 | 24 | 281 | BAL-7 | .02 | | WHG-31 | S19-007054 ; S308-010 | 4 | BO2483; 1/1242/G | 4 | 03/06/20 11:29 | Mark Ranalli | 1 | NEVAP 657 | 247_249 |
| **1-2 HOSE 27** | | | | | | | | | | | | | | | | | | |
| L2009793-01 WATER | 03/06/20 07:50 | Tyler Russell | 287 | 26 | 261 | BAL-7 | .02 | | WHG-31 | S19-007054 ; S308-010 | 4 | BO2483; 1/1242/G | 4 | 03/06/20 11:29 | Mark Ranalli | 1 | NEVAP 657 | 247_249 |
| **1-3 HOSE 60** | | | | | | | | | | | | | | | | | | |



Reported: 17-MAR-20 02:53 PM

# ORGANIC ELN REPORT

**Workgroup: WG1347919**

| Sample/ Type | Extraction | | | | | | | | | | | | | Concentration | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Extract Date | Analyst | Initial Sample Weight | Final Weight **g** | Sample Vol **g** | Balance Id | Surr Amt **ml** | Spike Amt **ml** | Pipette Id | Lot: Spe Cartrid | Flow Rate **ml/min** | Lot: Clnup Cartridg | Flow Rate 2 **ml/min** | Conc Date | Analyst | Final Vol **ml** | Conc Unit | Pipette Id |
| L2009793-02 WATER | 03/06/20 07:50 | Tyler Russell | 284 | 26 | 258 | BAL-7 | .02 | | WHG-31 | S19-007054 ; S308-010 | 4 | BO2483; 1/1242/G | 4 | 03/06/20 11:29 | Mark Ranalli | 1 | NEVAP 657 | 247_249 |
| | **1-5 HOSE 20** | | | | | | | | | | | | | | | | | |
| L2009793-03 WATER | 03/06/20 07:50 | Tyler Russell | 295 | 27 | 268 | BAL-7 | .02 | | WHG-31 | S19-007054 ; S308-010 | 4 | BO2483; 1/1242/G | 4 | 03/06/20 11:29 | Mark Ranalli | 1 | NEVAP 657 | 247_249 |
| | **2-1 HOSE 28** | | | | | | | | | | | | | | | | | |
| L2009823-01 WATER | 03/06/20 07:50 | Tyler Russell | 289 | 26 | 263 | BAL-7 | .02 | | WHG-31 | S19-007054 ; S308-010 | 4 | BO2483; 1/1242/G | 4 | 03/06/20 11:29 | Mark Ranalli | 1 | NEVAP 657 | 247_249 |
| | **2-2 HOSE 58. Centrifuged and decanted.** | | | | | | | | | | | | | | | | | |
| L2009823-02 WATER | 03/06/20 07:50 | Tyler Russell | 283 | 26 | 257 | BAL-7 | .02 | | WHG-31 | S19-007054 ; S308-010 | 4 | BO2483; 1/1242/G | 4 | 03/06/20 11:29 | Mark Ranalli | 1 | NEVAP 657 | 247_249 |
| | **2-3 HOSE 56. Centrifuged and decanted.** | | | | | | | | | | | | | | | | | |
| L2009823-03 WATER | 03/06/20 07:50 | Tyler Russell | 278 | 27 | 251 | BAL-7 | .02 | | WHG-31 | S19-007054 ; S308-010 | 4 | BO2483; 1/1242/G | 4 | 03/06/20 11:29 | Mark Ranalli | 1 | NEVAP 657 | 247_249 |
| | **2-4 HOSE 16. Centrifuged and decanted.** | | | | | | | | | | | | | | | | | |
| L2009823-04 WATER | 03/06/20 07:50 | Tyler Russell | 289 | 26 | 263 | BAL-7 | .02 | | WHG-31 | S19-007054 ; S308-010 | 4 | BO2483; 1/1242/G | 4 | 03/06/20 11:29 | Mark Ranalli | 1 | NEVAP 657 | 247_249 |
| | **2-5 HOSE 59. Centrifuged and decanted.** | | | | | | | | | | | | | | | | | |
| L2009823-05 WATER | 03/06/20 07:50 | Tyler Russell | 287 | 25 | 262 | BAL-7 | .02 | | WHG-31 | S19-007054 ; S308-010 | 4 | BO2483; 1/1242/G | 4 | 03/06/20 11:29 | Mark Ranalli | 1 | NEVAP 657 | 247_249 |
| | **2-6 HOSE 39. Centrifuged and decanted.** | | | | | | | | | | | | | | | | | |
| L2009823-06 WATER | 03/06/20 07:50 | Tyler Russell | 291 | 25 | 266 | BAL-7 | .02 | | WHG-31 | S19-007054 ; S308-010 | 4 | BO2483; 1/1242/G | 4 | 03/06/20 11:29 | Mark Ranalli | 1 | NEVAP 657 | 247_249 |
| | **3-1 HOSE 12. Centrifuged and decanted.** | | | | | | | | | | | | | | | | | |

# ORGANIC ELN REPORT

**Workgroup: WG1347919**

| Sample/ Type | Extraction | | | | | | | | | | | | | Concentration | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Extract Date | Analyst | Initial Sample Weight | Final Weight **g** | Sample Vol **g** | Balance Id | Surr Amt **ml** | Spike Amt **ml** | Pipette Id | Lot: Spe Cartrid | Flow Rate **ml/min** | Lot: Clnup Cartridg | Flow Rate 2 **ml/min** | Conc Date | Analyst | Final Vol **ml** | Conc Unit | Pipette Id |
| L2009823-07 WATER | 03/06/20 07:50 | Tyler Russell | 286 | 25 | 261 | BAL-7 | .02 | | WHG-31 | S19-007054; S308-010 | 4 | BO2483; 1/1242/G | 4 | 03/06/20 11:29 | Mark Ranalli | 1 | NEVAP 657 | 247_249 |
| | **3-2 HOSE 57. Centrifuged and decanted.** | | | | | | | | | | | | | | | | | |
| L2009823-08 WATER | 03/06/20 07:50 | Tyler Russell | 285 | 27 | 258 | BAL-7 | .02 | | WHG-31 | S19-007054; S308-010 | 4 | BO2483; 1/1242/G | 4 | 03/06/20 11:29 | Mark Ranalli | 1 | NEVAP 657 | 247_249 |
| | **3-3 HOSE 19., Centrifuged and decanted.** | | | | | | | | | | | | | | | | | |
| L2009823-09 WATER | 03/06/20 07:50 | Tyler Russell | 303 | 23 | 280 | BAL-7 | .02 | | WHG-31 | S19-007054; S308-010 | 4 | BO2483; 1/1242/G | 4 | 03/06/20 11:29 | Mark Ranalli | 1 | NEVAP 657 | 247_249 |
| | **3-4 HOSE 14** | | | | | | | | | | | | | | | | | |
| L2009824-01 | 03/06/20 07:50 | Tyler Russell | 310 | 27 | 283 | BAL-7 | .02 | | WHG-31 | S19-007054; S308-010 | 4 | BO2483; 1/1242/G | 4 | 03/06/20 11:29 | Mark Ranalli | 1 | NEVAP 657 | 247_249 |
| | **3-5 HOSE 17** | | | | | | | | | | | | | | | | | |
| L2010072-01 SAMP | 03/06/20 07:50 | Tyler Russell | 296 | 27 | 269 | BAL-7 | .02 | | WHG-31 | S19-007054; S308-010 | 4 | BO2483; 1/1242/G | 4 | 03/06/20 11:29 | Mark Ranalli | 1 | NEVAP 657 | 247_249 |
| | **3-6 HOSE 7** | | | | | | | | | | | | | | | | | |
| WG1347919-1 BLANK | 03/06/20 07:50 | Tyler Russell | 275 | 25 | 250 | BAL-7 | .02 | | WHG-31 | S19-007054; S308-010 | 4 | BO2483; 1/1242/G | 4 | 03/06/20 11:29 | Mark Ranalli | 1 | NEVAP 657 | 247_249 |
| | **5-4 HOSE 32., Shared QCs with WG1347920** | | | | | | | | | | | | | | | | | |
| WG1347919-2 LCS | 03/06/20 07:50 | Tyler Russell | 275 | 25 | 250 | BAL-7 | .02 | .02 | WHG-31 | S19-007054; S308-010 | 4 | BO2483; 1/1242/G | 4 | 03/06/20 11:29 | Mark Ranalli | 1 | NEVAP 657 | 247_249 |
| | **5-5 HOSE 53** | | | | | | | | | | | | | | | | | |
| WG1347919-3 LCSD | 03/06/20 07:50 | Tyler Russell | 275 | 25 | 250 | BAL-7 | .02 | .02 | WHG-31 | S19-007054; S308-010 | 4 | BO2483; 1/1242/G | 4 | 03/06/20 11:29 | Mark Ranalli | 1 | NEVAP 657 | 247_249 |
| | **5-6 HOSE 27** | | | | | | | | | | | | | | | | | |



Reported: 17-MAR-20 02:53 PM

# ORGANIC ELN REPORT

**Workgroup: WG1347919**

| Sample/ Type | Extraction | | | | | | | | | | | | | Concentration | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Extract Date | Analyst | Initial Sample Weight | Final Weight **g** | Sample Vol **g** | Balance Id | Surr Amt **ml** | Spike Amt **ml** | Pipette Id | Lot: Spe Cartrid | Flow Rate **ml/min** | Lot: Clnup Cartridg | Flow Rate 2 **ml/min** | Conc Date | Analyst | Final Vol **ml** | Conc Unit | Pipette Id |
| WG1347919-4 MS | 03/06/20 07:50 **1-4 HOSE 23** | Tyler Russell | 279 | 27 | 252 | BAL-7 | .02 | .02 | WHG-31 | S19-007054 ; S308-010 | 4 | BO2483; 1/1242/G | 4 | 03/06/20 11:29 | Mark Ranalli | 1 | NEVAP 65 7 | 247_249 |
| WG1347919-5 DUP | 03/06/20 07:50 **1-6 HOSE 55** | Tyler Russell | 278 | 27 | 251 | BAL-7 | .02 | | WHG-31 | S19-007054 ; S308-010 | 4 | BO2483; 1/1242/G | 4 | 03/06/20 11:29 | Mark Ranalli | 1 | NEVAP 65 7 | 247_249 |



Reported: 17-MAR-20 02:53 PM

# ANALYTICAL REPORT

| | |
|---|---|
| Lab Number: | L2010093 |
| Client: | Soils Engineering Services, Inc.<br>12A Maple Avenue<br>Pine Brook, NJ 07058 |
| ATTN: | Fuad Duhan |
| Phone: | (973) 808-9050 |
| Project Name: | GROSSINGERS |
| Project Number: | 9313 |
| Report Date: | 03/18/20 |

The original project report/data package is held by Alpha Analytical. This report/data package is paginated and should be reproduced only in its entirety. Alpha Analytical holds no responsibility for results and/or data that are not consistent with the original.

Certifications & Approvals: MA (M-MA086), NH NELAP (2064), CT (PH-0574), IL (200077), ME (MA00086), MD (348), NJ (MA935), NY (11148), NC (25700/666), PA (68-03671), RI (LAO00065), TX (T104704476), VT (VT-0935), VA (460195), USDA (Permit #P330-17-00196).

Eight Walkup Drive, Westborough, MA 01581-1019
508-898-9220 (Fax) 508-898-9193 800-624-9220 - www.alphalab.com

**Project Name:** GROSSINGERS
**Project Number:** 9313

**Lab Number:** L2010093
**Report Date:** 03/18/20

| Alpha Sample ID | Client ID | Matrix | Sample Location | Collection Date/Time | Receive Date |
|---|---|---|---|---|---|
| L2010093-01 | MW-203 | WATER | LIBERTY, NY | 03/05/20 09:00 | 03/05/20 |
| L2010093-02 | MW-204 | WATER | LIBERTY, NY | 03/05/20 11:30 | 03/05/20 |
| L2010093-03 | MW-205 | WATER | LIBERTY, NY | 03/05/20 10:35 | 03/05/20 |
| L2010093-04 | MW-206 | WATER | LIBERTY, NY | 03/05/20 12:20 | 03/05/20 |
| L2010093-05 | MW-208 | WATER | LIBERTY, NY | 03/05/20 13:20 | 03/05/20 |
| L2010093-06 | MW-207 | WATER | LIBERTY, NY | 03/05/20 15:30 | 03/05/20 |
| L2010093-07 | FB | WATER | LIBERTY, NY | 03/05/20 14:50 | 03/05/20 |
| L2010093-08 | TB | WATER | LIBERTY, NY | 03/03/20 00:00 | 03/05/20 |
| L2010093-09 | DUP | WATER | LIBERTY, NY | 03/05/20 00:00 | 03/05/20 |

| | | | |
|---|---|---|---|
| **Project Name:** | GROSSINGERS | **Lab Number:** | L2010093 |
| **Project Number:** | 9313 | **Report Date:** | 03/18/20 |

## Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet NELAP requirements for all NELAP accredited parameters unless otherwise noted in the following narrative. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. Tentatively Identified Compounds (TICs), if requested, are reported for compounds identified to be present and are not part of the method/program Target Compound List, even if only a subset of the TCL are being reported. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively.

When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances, the specific failure is not narrated but noted in the associated QC Outlier Summary Report, located directly after the Case Narrative. QC information is also incorporated in the Data Usability Assessment table (Format 11) of our Data Merger tool, where it can be reviewed in conjunction with the sample result, associated regulatory criteria and any associated data usability implications.

Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

HOLD POLICY - For samples submitted on hold, Alpha's policy is to hold samples (with the exception of Air canisters) free of charge for 21 calendar days from the date the project is completed. After 21 calendar days, we will dispose of all samples submitted including those put on hold unless you have contacted your Alpha Project Manager and made arrangements for Alpha to continue to hold the samples. Air canisters will be disposed after 3 business days from the date the project is completed.

Please contact Project Management at 800-624-9220 with any questions.

**Project Name:** GROSSINGERS **Lab Number:** L2010093
**Project Number:** 9313 **Report Date:** 03/18/20

**Case Narrative (continued)**

Report Submission
March 18, 2020: This final report includes the results of all requested analyses.

All non-detect (ND) or estimated concentrations (J-qualified) have been quantitated to the limit noted in the MDL column.

Perfluorinated Alkyl Acids by Isotope Dilution
L2010093-01, -04, -04, and -09: Extracted Internal Standard recoveries were outside the acceptance criteria for individual analytes. Please refer to the surrogate section of the report for details.
WG1349833-1: The continuing calibration standard had the response for Perfluorohexanesulfonic Acid-Branched (br-PFHxS) outside of acceptance criteria. The response for Perfluorohexanesulfonic Acid (PFHxS) was within acceptance criteria; therefore, no further action was taken.
WG1349833-2: The continuing calibration standard had the response for Perfluoroctanesulfonic Acid-Branched (br-PFOS) outside of acceptance criteria. The response for Perfluorooctanesulfonic Acid (PFOS) was within acceptance criteria; therefore, no further action was taken.
WG1349833-3: The continuing calibration standard had the response for Perfluorohexanesulfonic Acid-Branched (br-PFHxS) outside of acceptance criteria. The response for Perfluorohexanesulfonic Acid (PFHxS) was within acceptance criteria; therefore, no further action was taken.
The WG1348148-5 Laboratory Duplicate RPD for perfluorotetradecanoic acid (pfta) (53%), performed on L2010093-01, is outside the acceptance criteria.
WG1348148-5: Extracted Internal Standard recoveries were outside the acceptance criteria for individual analytes. Please refer to the surrogate section of the report for details.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature: Cristin Walker

Title: Technical Director/Representative Date: 03/18/20

# ORGANICS

# VOLATILES

**Project Name:** GROSSINGERS
**Project Number:** 9313
**Lab Number:** L2010093
**Report Date:** 03/18/20

## SAMPLE RESULTS

Lab ID: L2010093-01
Client ID: MW-203
Sample Location: LIBERTY, NY

Date Collected: 03/05/20 09:00
Date Received: 03/05/20
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8260C
Analytical Date: 03/10/20 12:26
Analyst: PD

| Parameter | Result | Qualifier | Units | RL | MDL | Dilution Factor |
|---|---|---|---|---|---|---|
| **Volatile Organics by GC/MS - Westborough Lab** | | | | | | |
| Methylene chloride | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,1-Dichloroethane | ND | | ug/l | 2.5 | 0.70 | 1 |
| Chloroform | ND | | ug/l | 2.5 | 0.70 | 1 |
| Carbon tetrachloride | ND | | ug/l | 0.50 | 0.13 | 1 |
| 1,2-Dichloropropane | ND | | ug/l | 1.0 | 0.14 | 1 |
| Dibromochloromethane | ND | | ug/l | 0.50 | 0.15 | 1 |
| 1,1,2-Trichloroethane | ND | | ug/l | 1.5 | 0.50 | 1 |
| Tetrachloroethene | ND | | ug/l | 0.50 | 0.18 | 1 |
| Chlorobenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Trichlorofluoromethane | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,2-Dichloroethane | ND | | ug/l | 0.50 | 0.13 | 1 |
| 1,1,1-Trichloroethane | ND | | ug/l | 2.5 | 0.70 | 1 |
| Bromodichloromethane | ND | | ug/l | 0.50 | 0.19 | 1 |
| trans-1,3-Dichloropropene | ND | | ug/l | 0.50 | 0.16 | 1 |
| cis-1,3-Dichloropropene | ND | | ug/l | 0.50 | 0.14 | 1 |
| 1,3-Dichloropropene, Total | ND | | ug/l | 0.50 | 0.14 | 1 |
| 1,1-Dichloropropene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Bromoform | ND | | ug/l | 2.0 | 0.65 | 1 |
| 1,1,2,2-Tetrachloroethane | ND | | ug/l | 0.50 | 0.17 | 1 |
| Benzene | ND | | ug/l | 0.50 | 0.16 | 1 |
| Toluene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Ethylbenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Chloromethane | ND | | ug/l | 2.5 | 0.70 | 1 |
| Bromomethane | ND | | ug/l | 2.5 | 0.70 | 1 |
| Vinyl chloride | ND | | ug/l | 1.0 | 0.07 | 1 |
| Chloroethane | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,1-Dichloroethene | ND | | ug/l | 0.50 | 0.17 | 1 |
| trans-1,2-Dichloroethene | ND | | ug/l | 2.5 | 0.70 | 1 |

**Project Name:** GROSSINGERS **Lab Number:** L2010093

**Project Number:** 9313 **Report Date:** 03/18/20

## SAMPLE RESULTS

Lab ID: L2010093-01 Date Collected: 03/05/20 09:00

Client ID: MW-203 Date Received: 03/05/20

Sample Location: LIBERTY, NY Field Prep: Not Specified

Sample Depth:

| Parameter | Result | Qualifier | Units | RL | MDL | Dilution Factor |
|---|---|---|---|---|---|---|
| **Volatile Organics by GC/MS - Westborough Lab** | | | | | | |
| Trichloroethene | ND | | ug/l | 0.50 | 0.18 | 1 |
| 1,2-Dichlorobenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,3-Dichlorobenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,4-Dichlorobenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Methyl tert butyl ether | ND | | ug/l | 2.5 | 0.70 | 1 |
| p/m-Xylene | ND | | ug/l | 2.5 | 0.70 | 1 |
| o-Xylene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Xylenes, Total | ND | | ug/l | 2.5 | 0.70 | 1 |
| cis-1,2-Dichloroethene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,2-Dichloroethene, Total | ND | | ug/l | 2.5 | 0.70 | 1 |
| Dibromomethane | ND | | ug/l | 5.0 | 1.0 | 1 |
| 1,2,3-Trichloropropane | ND | | ug/l | 2.5 | 0.70 | 1 |
| Acrylonitrile | ND | | ug/l | 5.0 | 1.5 | 1 |
| Styrene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Dichlorodifluoromethane | ND | | ug/l | 5.0 | 1.0 | 1 |
| Acetone | ND | | ug/l | 5.0 | 1.5 | 1 |
| Carbon disulfide | ND | | ug/l | 5.0 | 1.0 | 1 |
| 2-Butanone | ND | | ug/l | 5.0 | 1.9 | 1 |
| Vinyl acetate | ND | | ug/l | 5.0 | 1.0 | 1 |
| 4-Methyl-2-pentanone | ND | | ug/l | 5.0 | 1.0 | 1 |
| 2-Hexanone | ND | | ug/l | 5.0 | 1.0 | 1 |
| Bromochloromethane | ND | | ug/l | 2.5 | 0.70 | 1 |
| 2,2-Dichloropropane | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,2-Dibromoethane | ND | | ug/l | 2.0 | 0.65 | 1 |
| 1,3-Dichloropropane | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,1,1,2-Tetrachloroethane | ND | | ug/l | 2.5 | 0.70 | 1 |
| Bromobenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| n-Butylbenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| sec-Butylbenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| tert-Butylbenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| o-Chlorotoluene | ND | | ug/l | 2.5 | 0.70 | 1 |
| p-Chlorotoluene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,2-Dibromo-3-chloropropane | ND | | ug/l | 2.5 | 0.70 | 1 |
| Hexachlorobutadiene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Isopropylbenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| p-Isopropyltoluene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Naphthalene | ND | | ug/l | 2.5 | 0.70 | 1 |

**Project Name:** GROSSINGERS **Lab Number:** L2010093

**Project Number:** 9313 **Report Date:** 03/18/20

## SAMPLE RESULTS

Lab ID: L2010093-01 Date Collected: 03/05/20 09:00

Client ID: MW-203 Date Received: 03/05/20

Sample Location: LIBERTY, NY Field Prep: Not Specified

Sample Depth:

| Parameter | Result | Qualifier | Units | RL | MDL | Dilution Factor |
|---|---|---|---|---|---|---|
| **Volatile Organics by GC/MS - Westborough Lab** | | | | | | |
| n-Propylbenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,2,3-Trichlorobenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,2,4-Trichlorobenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,3,5-Trimethylbenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,2,4-Trimethylbenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,4-Dioxane | ND | | ug/l | 250 | 61. | 1 |
| p-Diethylbenzene | ND | | ug/l | 2.0 | 0.70 | 1 |
| p-Ethyltoluene | ND | | ug/l | 2.0 | 0.70 | 1 |
| 1,2,4,5-Tetramethylbenzene | ND | | ug/l | 2.0 | 0.54 | 1 |
| Ethyl ether | ND | | ug/l | 2.5 | 0.70 | 1 |
| trans-1,4-Dichloro-2-butene | ND | | ug/l | 2.5 | 0.70 | 1 |
| **Tentatively Identified Compounds** | | | | | | |
| No Tentatively Identified Compounds | ND | | ug/l | | | 1 |

| Surrogate | % Recovery | Qualifier | Acceptance Criteria |
|---|---|---|---|
| 1,2-Dichloroethane-d4 | 111 | | 70-130 |
| Toluene-d8 | 98 | | 70-130 |
| 4-Bromofluorobenzene | 97 | | 70-130 |
| Dibromofluoromethane | 108 | | 70-130 |

**Project Name:** GROSSINGERS
**Project Number:** 9313
**Lab Number:** L2010093
**Report Date:** 03/18/20

## SAMPLE RESULTS

Lab ID: L2010093-02
Client ID: MW-204
Sample Location: LIBERTY, NY

Date Collected: 03/05/20 11:30
Date Received: 03/05/20
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8260C
Analytical Date: 03/10/20 12:48
Analyst: NLK

| Parameter | Result | Qualifier | Units | RL | MDL | Dilution Factor |
|---|---|---|---|---|---|---|
| **Volatile Organics by GC/MS - Westborough Lab** | | | | | | |
| Methylene chloride | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,1-Dichloroethane | ND | | ug/l | 2.5 | 0.70 | 1 |
| Chloroform | ND | | ug/l | 2.5 | 0.70 | 1 |
| Carbon tetrachloride | ND | | ug/l | 0.50 | 0.13 | 1 |
| 1,2-Dichloropropane | ND | | ug/l | 1.0 | 0.14 | 1 |
| Dibromochloromethane | ND | | ug/l | 0.50 | 0.15 | 1 |
| 1,1,2-Trichloroethane | ND | | ug/l | 1.5 | 0.50 | 1 |
| Tetrachloroethene | ND | | ug/l | 0.50 | 0.18 | 1 |
| Chlorobenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Trichlorofluoromethane | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,2-Dichloroethane | ND | | ug/l | 0.50 | 0.13 | 1 |
| 1,1,1-Trichloroethane | ND | | ug/l | 2.5 | 0.70 | 1 |
| Bromodichloromethane | ND | | ug/l | 0.50 | 0.19 | 1 |
| trans-1,3-Dichloropropene | ND | | ug/l | 0.50 | 0.16 | 1 |
| cis-1,3-Dichloropropene | ND | | ug/l | 0.50 | 0.14 | 1 |
| 1,3-Dichloropropene, Total | ND | | ug/l | 0.50 | 0.14 | 1 |
| 1,1-Dichloropropene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Bromoform | ND | | ug/l | 2.0 | 0.65 | 1 |
| 1,1,2,2-Tetrachloroethane | ND | | ug/l | 0.50 | 0.17 | 1 |
| Benzene | ND | | ug/l | 0.50 | 0.16 | 1 |
| Toluene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Ethylbenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Chloromethane | ND | | ug/l | 2.5 | 0.70 | 1 |
| Bromomethane | ND | | ug/l | 2.5 | 0.70 | 1 |
| Vinyl chloride | ND | | ug/l | 1.0 | 0.07 | 1 |
| Chloroethane | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,1-Dichloroethene | ND | | ug/l | 0.50 | 0.17 | 1 |
| trans-1,2-Dichloroethene | ND | | ug/l | 2.5 | 0.70 | 1 |

**Project Name:** GROSSINGERS **Lab Number:** L2010093

**Project Number:** 9313 **Report Date:** 03/18/20

## SAMPLE RESULTS

Lab ID: L2010093-02 Date Collected: 03/05/20 11:30

Client ID: MW-204 Date Received: 03/05/20

Sample Location: LIBERTY, NY Field Prep: Not Specified

Sample Depth:

| Parameter | Result | Qualifier | Units | RL | MDL | Dilution Factor |
|---|---|---|---|---|---|---|
| **Volatile Organics by GC/MS - Westborough Lab** | | | | | | |
| Trichloroethene | ND | | ug/l | 0.50 | 0.18 | 1 |
| 1,2-Dichlorobenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,3-Dichlorobenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,4-Dichlorobenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Methyl tert butyl ether | ND | | ug/l | 2.5 | 0.70 | 1 |
| p/m-Xylene | ND | | ug/l | 2.5 | 0.70 | 1 |
| o-Xylene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Xylenes, Total | ND | | ug/l | 2.5 | 0.70 | 1 |
| cis-1,2-Dichloroethene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,2-Dichloroethene, Total | ND | | ug/l | 2.5 | 0.70 | 1 |
| Dibromomethane | ND | | ug/l | 5.0 | 1.0 | 1 |
| 1,2,3-Trichloropropane | ND | | ug/l | 2.5 | 0.70 | 1 |
| Acrylonitrile | ND | | ug/l | 5.0 | 1.5 | 1 |
| Styrene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Dichlorodifluoromethane | ND | | ug/l | 5.0 | 1.0 | 1 |
| Acetone | ND | | ug/l | 5.0 | 1.5 | 1 |
| Carbon disulfide | ND | | ug/l | 5.0 | 1.0 | 1 |
| 2-Butanone | ND | | ug/l | 5.0 | 1.9 | 1 |
| Vinyl acetate | ND | | ug/l | 5.0 | 1.0 | 1 |
| 4-Methyl-2-pentanone | ND | | ug/l | 5.0 | 1.0 | 1 |
| 2-Hexanone | ND | | ug/l | 5.0 | 1.0 | 1 |
| Bromochloromethane | ND | | ug/l | 2.5 | 0.70 | 1 |
| 2,2-Dichloropropane | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,2-Dibromoethane | ND | | ug/l | 2.0 | 0.65 | 1 |
| 1,3-Dichloropropane | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,1,1,2-Tetrachloroethane | ND | | ug/l | 2.5 | 0.70 | 1 |
| Bromobenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| n-Butylbenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| sec-Butylbenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| tert-Butylbenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| o-Chlorotoluene | ND | | ug/l | 2.5 | 0.70 | 1 |
| p-Chlorotoluene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,2-Dibromo-3-chloropropane | ND | | ug/l | 2.5 | 0.70 | 1 |
| Hexachlorobutadiene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Isopropylbenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| p-Isopropyltoluene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Naphthalene | ND | | ug/l | 2.5 | 0.70 | 1 |

**Project Name:** GROSSINGERS **Lab Number:** L2010093

**Project Number:** 9313 **Report Date:** 03/18/20

## SAMPLE RESULTS

Lab ID: L2010093-02 Date Collected: 03/05/20 11:30

Client ID: MW-204 Date Received: 03/05/20

Sample Location: LIBERTY, NY Field Prep: Not Specified

Sample Depth:

| Parameter | Result | Qualifier | Units | RL | MDL | Dilution Factor |
|---|---|---|---|---|---|---|
| **Volatile Organics by GC/MS - Westborough Lab** | | | | | | |
| n-Propylbenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,2,3-Trichlorobenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,2,4-Trichlorobenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,3,5-Trimethylbenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,2,4-Trimethylbenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,4-Dioxane | ND | | ug/l | 250 | 61. | 1 |
| p-Diethylbenzene | ND | | ug/l | 2.0 | 0.70 | 1 |
| p-Ethyltoluene | ND | | ug/l | 2.0 | 0.70 | 1 |
| 1,2,4,5-Tetramethylbenzene | ND | | ug/l | 2.0 | 0.54 | 1 |
| Ethyl ether | ND | | ug/l | 2.5 | 0.70 | 1 |
| trans-1,4-Dichloro-2-butene | ND | | ug/l | 2.5 | 0.70 | 1 |
| **Tentatively Identified Compounds** | | | | | | |
| No Tentatively Identified Compounds | ND | | ug/l | | | 1 |

| Surrogate | % Recovery | Qualifier | Acceptance Criteria |
|---|---|---|---|
| 1,2-Dichloroethane-d4 | 112 | | 70-130 |
| Toluene-d8 | 94 | | 70-130 |
| 4-Bromofluorobenzene | 98 | | 70-130 |
| Dibromofluoromethane | 110 | | 70-130 |

**Project Name:** GROSSINGERS
**Project Number:** 9313
**Lab Number:** L2010093
**Report Date:** 03/18/20

## SAMPLE RESULTS

Lab ID: L2010093-03
Client ID: MW-205
Sample Location: LIBERTY, NY

Date Collected: 03/05/20 10:35
Date Received: 03/05/20
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8260C
Analytical Date: 03/10/20 13:10
Analyst: NLK

| Parameter | Result | Qualifier | Units | RL | MDL | Dilution Factor |
|---|---|---|---|---|---|---|
| **Volatile Organics by GC/MS - Westborough Lab** | | | | | | |
| Methylene chloride | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,1-Dichloroethane | ND | | ug/l | 2.5 | 0.70 | 1 |
| Chloroform | ND | | ug/l | 2.5 | 0.70 | 1 |
| Carbon tetrachloride | ND | | ug/l | 0.50 | 0.13 | 1 |
| 1,2-Dichloropropane | ND | | ug/l | 1.0 | 0.14 | 1 |
| Dibromochloromethane | ND | | ug/l | 0.50 | 0.15 | 1 |
| 1,1,2-Trichloroethane | ND | | ug/l | 1.5 | 0.50 | 1 |
| Tetrachloroethene | ND | | ug/l | 0.50 | 0.18 | 1 |
| Chlorobenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Trichlorofluoromethane | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,2-Dichloroethane | ND | | ug/l | 0.50 | 0.13 | 1 |
| 1,1,1-Trichloroethane | ND | | ug/l | 2.5 | 0.70 | 1 |
| Bromodichloromethane | ND | | ug/l | 0.50 | 0.19 | 1 |
| trans-1,3-Dichloropropene | ND | | ug/l | 0.50 | 0.16 | 1 |
| cis-1,3-Dichloropropene | ND | | ug/l | 0.50 | 0.14 | 1 |
| 1,3-Dichloropropene, Total | ND | | ug/l | 0.50 | 0.14 | 1 |
| 1,1-Dichloropropene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Bromoform | ND | | ug/l | 2.0 | 0.65 | 1 |
| 1,1,2,2-Tetrachloroethane | ND | | ug/l | 0.50 | 0.17 | 1 |
| Benzene | ND | | ug/l | 0.50 | 0.16 | 1 |
| Toluene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Ethylbenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Chloromethane | ND | | ug/l | 2.5 | 0.70 | 1 |
| Bromomethane | ND | | ug/l | 2.5 | 0.70 | 1 |
| Vinyl chloride | ND | | ug/l | 1.0 | 0.07 | 1 |
| Chloroethane | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,1-Dichloroethene | ND | | ug/l | 0.50 | 0.17 | 1 |
| trans-1,2-Dichloroethene | ND | | ug/l | 2.5 | 0.70 | 1 |

**Project Name:** GROSSINGERS **Lab Number:** L2010093

**Project Number:** 9313 **Report Date:** 03/18/20

## SAMPLE RESULTS

Lab ID: L2010093-03 Date Collected: 03/05/20 10:35

Client ID: MW-205 Date Received: 03/05/20

Sample Location: LIBERTY, NY Field Prep: Not Specified

Sample Depth:

| Parameter | Result | Qualifier | Units | RL | MDL | Dilution Factor |
|---|---|---|---|---|---|---|
| **Volatile Organics by GC/MS - Westborough Lab** | | | | | | |
| Trichloroethene | ND | | ug/l | 0.50 | 0.18 | 1 |
| 1,2-Dichlorobenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,3-Dichlorobenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,4-Dichlorobenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Methyl tert butyl ether | ND | | ug/l | 2.5 | 0.70 | 1 |
| p/m-Xylene | ND | | ug/l | 2.5 | 0.70 | 1 |
| o-Xylene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Xylenes, Total | ND | | ug/l | 2.5 | 0.70 | 1 |
| cis-1,2-Dichloroethene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,2-Dichloroethene, Total | ND | | ug/l | 2.5 | 0.70 | 1 |
| Dibromomethane | ND | | ug/l | 5.0 | 1.0 | 1 |
| 1,2,3-Trichloropropane | ND | | ug/l | 2.5 | 0.70 | 1 |
| Acrylonitrile | ND | | ug/l | 5.0 | 1.5 | 1 |
| Styrene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Dichlorodifluoromethane | ND | | ug/l | 5.0 | 1.0 | 1 |
| Acetone | ND | | ug/l | 5.0 | 1.5 | 1 |
| Carbon disulfide | ND | | ug/l | 5.0 | 1.0 | 1 |
| 2-Butanone | ND | | ug/l | 5.0 | 1.9 | 1 |
| Vinyl acetate | ND | | ug/l | 5.0 | 1.0 | 1 |
| 4-Methyl-2-pentanone | ND | | ug/l | 5.0 | 1.0 | 1 |
| 2-Hexanone | ND | | ug/l | 5.0 | 1.0 | 1 |
| Bromochloromethane | ND | | ug/l | 2.5 | 0.70 | 1 |
| 2,2-Dichloropropane | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,2-Dibromoethane | ND | | ug/l | 2.0 | 0.65 | 1 |
| 1,3-Dichloropropane | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,1,1,2-Tetrachloroethane | ND | | ug/l | 2.5 | 0.70 | 1 |
| Bromobenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| n-Butylbenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| sec-Butylbenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| tert-Butylbenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| o-Chlorotoluene | ND | | ug/l | 2.5 | 0.70 | 1 |
| p-Chlorotoluene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,2-Dibromo-3-chloropropane | ND | | ug/l | 2.5 | 0.70 | 1 |
| Hexachlorobutadiene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Isopropylbenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| p-Isopropyltoluene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Naphthalene | ND | | ug/l | 2.5 | 0.70 | 1 |

**Project Name:** GROSSINGERS **Lab Number:** L2010093

**Project Number:** 9313 **Report Date:** 03/18/20

## SAMPLE RESULTS

Lab ID: L2010093-03 Date Collected: 03/05/20 10:35

Client ID: MW-205 Date Received: 03/05/20

Sample Location: LIBERTY, NY Field Prep: Not Specified

Sample Depth:

| Parameter | Result | Qualifier | Units | RL | MDL | Dilution Factor |
|---|---|---|---|---|---|---|
| **Volatile Organics by GC/MS - Westborough Lab** | | | | | | |
| n-Propylbenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,2,3-Trichlorobenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,2,4-Trichlorobenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,3,5-Trimethylbenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,2,4-Trimethylbenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,4-Dioxane | ND | | ug/l | 250 | 61. | 1 |
| p-Diethylbenzene | ND | | ug/l | 2.0 | 0.70 | 1 |
| p-Ethyltoluene | ND | | ug/l | 2.0 | 0.70 | 1 |
| 1,2,4,5-Tetramethylbenzene | ND | | ug/l | 2.0 | 0.54 | 1 |
| Ethyl ether | ND | | ug/l | 2.5 | 0.70 | 1 |
| trans-1,4-Dichloro-2-butene | ND | | ug/l | 2.5 | 0.70 | 1 |
| **Tentatively Identified Compounds** | | | | | | |
| No Tentatively Identified Compounds | ND | | ug/l | | | 1 |

| Surrogate | % Recovery | Qualifier | Acceptance Criteria |
|---|---|---|---|
| 1,2-Dichloroethane-d4 | 114 | | 70-130 |
| Toluene-d8 | 93 | | 70-130 |
| 4-Bromofluorobenzene | 97 | | 70-130 |
| Dibromofluoromethane | 109 | | 70-130 |

**Project Name:** GROSSINGERS
**Project Number:** 9313
**Lab Number:** L2010093
**Report Date:** 03/18/20

## SAMPLE RESULTS

Lab ID: L2010093-04
Client ID: MW-206
Sample Location: LIBERTY, NY

Date Collected: 03/05/20 12:20
Date Received: 03/05/20
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8260C
Analytical Date: 03/10/20 13:32
Analyst: NLK

| Parameter | Result | Qualifier | Units | RL | MDL | Dilution Factor |
|---|---|---|---|---|---|---|
| **Volatile Organics by GC/MS - Westborough Lab** | | | | | | |
| Methylene chloride | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,1-Dichloroethane | ND | | ug/l | 2.5 | 0.70 | 1 |
| Chloroform | ND | | ug/l | 2.5 | 0.70 | 1 |
| Carbon tetrachloride | ND | | ug/l | 0.50 | 0.13 | 1 |
| 1,2-Dichloropropane | ND | | ug/l | 1.0 | 0.14 | 1 |
| Dibromochloromethane | ND | | ug/l | 0.50 | 0.15 | 1 |
| 1,1,2-Trichloroethane | ND | | ug/l | 1.5 | 0.50 | 1 |
| Tetrachloroethene | ND | | ug/l | 0.50 | 0.18 | 1 |
| Chlorobenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Trichlorofluoromethane | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,2-Dichloroethane | ND | | ug/l | 0.50 | 0.13 | 1 |
| 1,1,1-Trichloroethane | ND | | ug/l | 2.5 | 0.70 | 1 |
| Bromodichloromethane | ND | | ug/l | 0.50 | 0.19 | 1 |
| trans-1,3-Dichloropropene | ND | | ug/l | 0.50 | 0.16 | 1 |
| cis-1,3-Dichloropropene | ND | | ug/l | 0.50 | 0.14 | 1 |
| 1,3-Dichloropropene, Total | ND | | ug/l | 0.50 | 0.14 | 1 |
| 1,1-Dichloropropene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Bromoform | ND | | ug/l | 2.0 | 0.65 | 1 |
| 1,1,2,2-Tetrachloroethane | ND | | ug/l | 0.50 | 0.17 | 1 |
| Benzene | ND | | ug/l | 0.50 | 0.16 | 1 |
| Toluene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Ethylbenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Chloromethane | ND | | ug/l | 2.5 | 0.70 | 1 |
| Bromomethane | ND | | ug/l | 2.5 | 0.70 | 1 |
| Vinyl chloride | ND | | ug/l | 1.0 | 0.07 | 1 |
| Chloroethane | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,1-Dichloroethene | ND | | ug/l | 0.50 | 0.17 | 1 |
| trans-1,2-Dichloroethene | ND | | ug/l | 2.5 | 0.70 | 1 |

**Project Name:** GROSSINGERS **Lab Number:** L2010093

**Project Number:** 9313 **Report Date:** 03/18/20

## SAMPLE RESULTS

Lab ID: L2010093-04 Date Collected: 03/05/20 12:20

Client ID: MW-206 Date Received: 03/05/20

Sample Location: LIBERTY, NY Field Prep: Not Specified

Sample Depth:

| Parameter | Result | Qualifier | Units | RL | MDL | Dilution Factor |
|---|---|---|---|---|---|---|
| **Volatile Organics by GC/MS - Westborough Lab** | | | | | | |
| Trichloroethene | ND | | ug/l | 0.50 | 0.18 | 1 |
| 1,2-Dichlorobenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,3-Dichlorobenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,4-Dichlorobenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Methyl tert butyl ether | ND | | ug/l | 2.5 | 0.70 | 1 |
| p/m-Xylene | ND | | ug/l | 2.5 | 0.70 | 1 |
| o-Xylene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Xylenes, Total | ND | | ug/l | 2.5 | 0.70 | 1 |
| cis-1,2-Dichloroethene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,2-Dichloroethene, Total | ND | | ug/l | 2.5 | 0.70 | 1 |
| Dibromomethane | ND | | ug/l | 5.0 | 1.0 | 1 |
| 1,2,3-Trichloropropane | ND | | ug/l | 2.5 | 0.70 | 1 |
| Acrylonitrile | ND | | ug/l | 5.0 | 1.5 | 1 |
| Styrene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Dichlorodifluoromethane | ND | | ug/l | 5.0 | 1.0 | 1 |
| Acetone | ND | | ug/l | 5.0 | 1.5 | 1 |
| Carbon disulfide | ND | | ug/l | 5.0 | 1.0 | 1 |
| 2-Butanone | ND | | ug/l | 5.0 | 1.9 | 1 |
| Vinyl acetate | ND | | ug/l | 5.0 | 1.0 | 1 |
| 4-Methyl-2-pentanone | ND | | ug/l | 5.0 | 1.0 | 1 |
| 2-Hexanone | ND | | ug/l | 5.0 | 1.0 | 1 |
| Bromochloromethane | ND | | ug/l | 2.5 | 0.70 | 1 |
| 2,2-Dichloropropane | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,2-Dibromoethane | ND | | ug/l | 2.0 | 0.65 | 1 |
| 1,3-Dichloropropane | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,1,1,2-Tetrachloroethane | ND | | ug/l | 2.5 | 0.70 | 1 |
| Bromobenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| n-Butylbenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| sec-Butylbenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| tert-Butylbenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| o-Chlorotoluene | ND | | ug/l | 2.5 | 0.70 | 1 |
| p-Chlorotoluene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,2-Dibromo-3-chloropropane | ND | | ug/l | 2.5 | 0.70 | 1 |
| Hexachlorobutadiene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Isopropylbenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| p-Isopropyltoluene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Naphthalene | ND | | ug/l | 2.5 | 0.70 | 1 |

**Project Name:** GROSSINGERS **Lab Number:** L2010093

**Project Number:** 9313 **Report Date:** 03/18/20

## SAMPLE RESULTS

Lab ID: L2010093-04 Date Collected: 03/05/20 12:20

Client ID: MW-206 Date Received: 03/05/20

Sample Location: LIBERTY, NY Field Prep: Not Specified

Sample Depth:

| Parameter | Result | Qualifier | Units | RL | MDL | Dilution Factor |
|---|---|---|---|---|---|---|
| **Volatile Organics by GC/MS - Westborough Lab** | | | | | | |
| n-Propylbenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,2,3-Trichlorobenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,2,4-Trichlorobenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,3,5-Trimethylbenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,2,4-Trimethylbenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,4-Dioxane | ND | | ug/l | 250 | 61. | 1 |
| p-Diethylbenzene | ND | | ug/l | 2.0 | 0.70 | 1 |
| p-Ethyltoluene | ND | | ug/l | 2.0 | 0.70 | 1 |
| 1,2,4,5-Tetramethylbenzene | ND | | ug/l | 2.0 | 0.54 | 1 |
| Ethyl ether | ND | | ug/l | 2.5 | 0.70 | 1 |
| trans-1,4-Dichloro-2-butene | ND | | ug/l | 2.5 | 0.70 | 1 |
| **Tentatively Identified Compounds** | | | | | | |
| No Tentatively Identified Compounds | ND | | ug/l | | | 1 |

| Surrogate | % Recovery | Qualifier | Acceptance Criteria |
|---|---|---|---|
| 1,2-Dichloroethane-d4 | 112 | | 70-130 |
| Toluene-d8 | 95 | | 70-130 |
| 4-Bromofluorobenzene | 97 | | 70-130 |
| Dibromofluoromethane | 107 | | 70-130 |

**Project Name:** GROSSINGERS
**Project Number:** 9313
**Lab Number:** L2010093
**Report Date:** 03/18/20

**SAMPLE RESULTS**

Lab ID: L2010093-05
Client ID: MW-208
Sample Location: LIBERTY, NY

Date Collected: 03/05/20 13:20
Date Received: 03/05/20
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8260C
Analytical Date: 03/10/20 13:54
Analyst: NLK

| Parameter | Result | Qualifier | Units | RL | MDL | Dilution Factor |
|---|---|---|---|---|---|---|
| **Volatile Organics by GC/MS - Westborough Lab** | | | | | | |
| Methylene chloride | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,1-Dichloroethane | ND | | ug/l | 2.5 | 0.70 | 1 |
| Chloroform | ND | | ug/l | 2.5 | 0.70 | 1 |
| Carbon tetrachloride | ND | | ug/l | 0.50 | 0.13 | 1 |
| 1,2-Dichloropropane | ND | | ug/l | 1.0 | 0.14 | 1 |
| Dibromochloromethane | ND | | ug/l | 0.50 | 0.15 | 1 |
| 1,1,2-Trichloroethane | ND | | ug/l | 1.5 | 0.50 | 1 |
| Tetrachloroethene | ND | | ug/l | 0.50 | 0.18 | 1 |
| Chlorobenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Trichlorofluoromethane | 1.8 | J | ug/l | 2.5 | 0.70 | 1 |
| 1,2-Dichloroethane | ND | | ug/l | 0.50 | 0.13 | 1 |
| 1,1,1-Trichloroethane | ND | | ug/l | 2.5 | 0.70 | 1 |
| Bromodichloromethane | ND | | ug/l | 0.50 | 0.19 | 1 |
| trans-1,3-Dichloropropene | ND | | ug/l | 0.50 | 0.16 | 1 |
| cis-1,3-Dichloropropene | ND | | ug/l | 0.50 | 0.14 | 1 |
| 1,3-Dichloropropene, Total | ND | | ug/l | 0.50 | 0.14 | 1 |
| 1,1-Dichloropropene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Bromoform | ND | | ug/l | 2.0 | 0.65 | 1 |
| 1,1,2,2-Tetrachloroethane | ND | | ug/l | 0.50 | 0.17 | 1 |
| Benzene | ND | | ug/l | 0.50 | 0.16 | 1 |
| Toluene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Ethylbenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Chloromethane | ND | | ug/l | 2.5 | 0.70 | 1 |
| Bromomethane | ND | | ug/l | 2.5 | 0.70 | 1 |
| Vinyl chloride | ND | | ug/l | 1.0 | 0.07 | 1 |
| Chloroethane | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,1-Dichloroethene | ND | | ug/l | 0.50 | 0.17 | 1 |
| trans-1,2-Dichloroethene | ND | | ug/l | 2.5 | 0.70 | 1 |

**Project Name:** GROSSINGERS **Lab Number:** L2010093

**Project Number:** 9313 **Report Date:** 03/18/20

## SAMPLE RESULTS

Lab ID: L2010093-05 Date Collected: 03/05/20 13:20

Client ID: MW-208 Date Received: 03/05/20

Sample Location: LIBERTY, NY Field Prep: Not Specified

Sample Depth:

| Parameter | Result | Qualifier | Units | RL | MDL | Dilution Factor |
|---|---|---|---|---|---|---|
| **Volatile Organics by GC/MS - Westborough Lab** | | | | | | |
| Trichloroethene | ND | | ug/l | 0.50 | 0.18 | 1 |
| 1,2-Dichlorobenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,3-Dichlorobenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,4-Dichlorobenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Methyl tert butyl ether | ND | | ug/l | 2.5 | 0.70 | 1 |
| p/m-Xylene | ND | | ug/l | 2.5 | 0.70 | 1 |
| o-Xylene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Xylenes, Total | ND | | ug/l | 2.5 | 0.70 | 1 |
| cis-1,2-Dichloroethene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,2-Dichloroethene, Total | ND | | ug/l | 2.5 | 0.70 | 1 |
| Dibromomethane | ND | | ug/l | 5.0 | 1.0 | 1 |
| 1,2,3-Trichloropropane | ND | | ug/l | 2.5 | 0.70 | 1 |
| Acrylonitrile | ND | | ug/l | 5.0 | 1.5 | 1 |
| Styrene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Dichlorodifluoromethane | ND | | ug/l | 5.0 | 1.0 | 1 |
| Acetone | 3.2 | J | ug/l | 5.0 | 1.5 | 1 |
| Carbon disulfide | ND | | ug/l | 5.0 | 1.0 | 1 |
| 2-Butanone | ND | | ug/l | 5.0 | 1.9 | 1 |
| Vinyl acetate | ND | | ug/l | 5.0 | 1.0 | 1 |
| 4-Methyl-2-pentanone | ND | | ug/l | 5.0 | 1.0 | 1 |
| 2-Hexanone | ND | | ug/l | 5.0 | 1.0 | 1 |
| Bromochloromethane | ND | | ug/l | 2.5 | 0.70 | 1 |
| 2,2-Dichloropropane | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,2-Dibromoethane | ND | | ug/l | 2.0 | 0.65 | 1 |
| 1,3-Dichloropropane | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,1,1,2-Tetrachloroethane | ND | | ug/l | 2.5 | 0.70 | 1 |
| Bromobenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| n-Butylbenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| sec-Butylbenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| tert-Butylbenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| o-Chlorotoluene | ND | | ug/l | 2.5 | 0.70 | 1 |
| p-Chlorotoluene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,2-Dibromo-3-chloropropane | ND | | ug/l | 2.5 | 0.70 | 1 |
| Hexachlorobutadiene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Isopropylbenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| p-Isopropyltoluene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Naphthalene | ND | | ug/l | 2.5 | 0.70 | 1 |

**Project Name:** GROSSINGERS **Lab Number:** L2010093

**Project Number:** 9313 **Report Date:** 03/18/20

## SAMPLE RESULTS

Lab ID: L2010093-05 Date Collected: 03/05/20 13:20

Client ID: MW-208 Date Received: 03/05/20

Sample Location: LIBERTY, NY Field Prep: Not Specified

Sample Depth:

| Parameter | Result | Qualifier | Units | RL | MDL | Dilution Factor |
|---|---|---|---|---|---|---|
| **Volatile Organics by GC/MS - Westborough Lab** | | | | | | |
| n-Propylbenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,2,3-Trichlorobenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,2,4-Trichlorobenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,3,5-Trimethylbenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,2,4-Trimethylbenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,4-Dioxane | ND | | ug/l | 250 | 61. | 1 |
| p-Diethylbenzene | ND | | ug/l | 2.0 | 0.70 | 1 |
| p-Ethyltoluene | ND | | ug/l | 2.0 | 0.70 | 1 |
| 1,2,4,5-Tetramethylbenzene | ND | | ug/l | 2.0 | 0.54 | 1 |
| Ethyl ether | ND | | ug/l | 2.5 | 0.70 | 1 |
| trans-1,4-Dichloro-2-butene | ND | | ug/l | 2.5 | 0.70 | 1 |
| **Tentatively Identified Compounds** | | | | | | |
| No Tentatively Identified Compounds | ND | | ug/l | | | 1 |

| Surrogate | % Recovery | Qualifier | Acceptance Criteria |
|---|---|---|---|
| 1,2-Dichloroethane-d4 | 110 | | 70-130 |
| Toluene-d8 | 96 | | 70-130 |
| 4-Bromofluorobenzene | 95 | | 70-130 |
| Dibromofluoromethane | 111 | | 70-130 |

**Project Name:** GROSSINGERS
**Project Number:** 9313
**Lab Number:** L2010093
**Report Date:** 03/18/20

## SAMPLE RESULTS

Lab ID: L2010093-06
Client ID: MW-207
Sample Location: LIBERTY, NY

Date Collected: 03/05/20 15:30
Date Received: 03/05/20
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8260C
Analytical Date: 03/10/20 14:16
Analyst: AJK

| Parameter | Result | Qualifier | Units | RL | MDL | Dilution Factor |
|---|---|---|---|---|---|---|
| **Volatile Organics by GC/MS - Westborough Lab** | | | | | | |
| Methylene chloride | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,1-Dichloroethane | ND | | ug/l | 2.5 | 0.70 | 1 |
| Chloroform | ND | | ug/l | 2.5 | 0.70 | 1 |
| Carbon tetrachloride | ND | | ug/l | 0.50 | 0.13 | 1 |
| 1,2-Dichloropropane | ND | | ug/l | 1.0 | 0.14 | 1 |
| Dibromochloromethane | ND | | ug/l | 0.50 | 0.15 | 1 |
| 1,1,2-Trichloroethane | ND | | ug/l | 1.5 | 0.50 | 1 |
| Tetrachloroethene | ND | | ug/l | 0.50 | 0.18 | 1 |
| Chlorobenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Trichlorofluoromethane | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,2-Dichloroethane | ND | | ug/l | 0.50 | 0.13 | 1 |
| 1,1,1-Trichloroethane | ND | | ug/l | 2.5 | 0.70 | 1 |
| Bromodichloromethane | ND | | ug/l | 0.50 | 0.19 | 1 |
| trans-1,3-Dichloropropene | ND | | ug/l | 0.50 | 0.16 | 1 |
| cis-1,3-Dichloropropene | ND | | ug/l | 0.50 | 0.14 | 1 |
| 1,3-Dichloropropene, Total | ND | | ug/l | 0.50 | 0.14 | 1 |
| 1,1-Dichloropropene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Bromoform | ND | | ug/l | 2.0 | 0.65 | 1 |
| 1,1,2,2-Tetrachloroethane | ND | | ug/l | 0.50 | 0.17 | 1 |
| Benzene | ND | | ug/l | 0.50 | 0.16 | 1 |
| Toluene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Ethylbenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Chloromethane | ND | | ug/l | 2.5 | 0.70 | 1 |
| Bromomethane | ND | | ug/l | 2.5 | 0.70 | 1 |
| Vinyl chloride | ND | | ug/l | 1.0 | 0.07 | 1 |
| Chloroethane | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,1-Dichloroethene | ND | | ug/l | 0.50 | 0.17 | 1 |
| trans-1,2-Dichloroethene | ND | | ug/l | 2.5 | 0.70 | 1 |

**Project Name:** GROSSINGERS **Lab Number:** L2010093

**Project Number:** 9313 **Report Date:** 03/18/20

## SAMPLE RESULTS

Lab ID: L2010093-06 Date Collected: 03/05/20 15:30

Client ID: MW-207 Date Received: 03/05/20

Sample Location: LIBERTY, NY Field Prep: Not Specified

Sample Depth:

| Parameter | Result | Qualifier | Units | RL | MDL | Dilution Factor |
|---|---|---|---|---|---|---|
| **Volatile Organics by GC/MS - Westborough Lab** | | | | | | |
| Trichloroethene | ND | | ug/l | 0.50 | 0.18 | 1 |
| 1,2-Dichlorobenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,3-Dichlorobenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,4-Dichlorobenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Methyl tert butyl ether | ND | | ug/l | 2.5 | 0.70 | 1 |
| p/m-Xylene | ND | | ug/l | 2.5 | 0.70 | 1 |
| o-Xylene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Xylenes, Total | ND | | ug/l | 2.5 | 0.70 | 1 |
| cis-1,2-Dichloroethene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,2-Dichloroethene, Total | ND | | ug/l | 2.5 | 0.70 | 1 |
| Dibromomethane | ND | | ug/l | 5.0 | 1.0 | 1 |
| 1,2,3-Trichloropropane | ND | | ug/l | 2.5 | 0.70 | 1 |
| Acrylonitrile | ND | | ug/l | 5.0 | 1.5 | 1 |
| Styrene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Dichlorodifluoromethane | ND | | ug/l | 5.0 | 1.0 | 1 |
| Acetone | ND | | ug/l | 5.0 | 1.5 | 1 |
| Carbon disulfide | ND | | ug/l | 5.0 | 1.0 | 1 |
| 2-Butanone | ND | | ug/l | 5.0 | 1.9 | 1 |
| Vinyl acetate | ND | | ug/l | 5.0 | 1.0 | 1 |
| 4-Methyl-2-pentanone | ND | | ug/l | 5.0 | 1.0 | 1 |
| 2-Hexanone | ND | | ug/l | 5.0 | 1.0 | 1 |
| Bromochloromethane | ND | | ug/l | 2.5 | 0.70 | 1 |
| 2,2-Dichloropropane | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,2-Dibromoethane | ND | | ug/l | 2.0 | 0.65 | 1 |
| 1,3-Dichloropropane | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,1,1,2-Tetrachloroethane | ND | | ug/l | 2.5 | 0.70 | 1 |
| Bromobenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| n-Butylbenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| sec-Butylbenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| tert-Butylbenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| o-Chlorotoluene | ND | | ug/l | 2.5 | 0.70 | 1 |
| p-Chlorotoluene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,2-Dibromo-3-chloropropane | ND | | ug/l | 2.5 | 0.70 | 1 |
| Hexachlorobutadiene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Isopropylbenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| p-Isopropyltoluene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Naphthalene | ND | | ug/l | 2.5 | 0.70 | 1 |

**Project Name:** GROSSINGERS **Lab Number:** L2010093

**Project Number:** 9313 **Report Date:** 03/18/20

## SAMPLE RESULTS

Lab ID: L2010093-06 Date Collected: 03/05/20 15:30

Client ID: MW-207 Date Received: 03/05/20

Sample Location: LIBERTY, NY Field Prep: Not Specified

Sample Depth:

| Parameter | Result | Qualifier | Units | RL | MDL | Dilution Factor |
|---|---|---|---|---|---|---|
| **Volatile Organics by GC/MS - Westborough Lab** | | | | | | |
| n-Propylbenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,2,3-Trichlorobenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,2,4-Trichlorobenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,3,5-Trimethylbenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,2,4-Trimethylbenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,4-Dioxane | ND | | ug/l | 250 | 61. | 1 |
| p-Diethylbenzene | ND | | ug/l | 2.0 | 0.70 | 1 |
| p-Ethyltoluene | ND | | ug/l | 2.0 | 0.70 | 1 |
| 1,2,4,5-Tetramethylbenzene | ND | | ug/l | 2.0 | 0.54 | 1 |
| Ethyl ether | ND | | ug/l | 2.5 | 0.70 | 1 |
| trans-1,4-Dichloro-2-butene | ND | | ug/l | 2.5 | 0.70 | 1 |
| **Tentatively Identified Compounds** | | | | | | |
| No Tentatively Identified Compounds | ND | | ug/l | | | 1 |

| Surrogate | % Recovery | Qualifier | Acceptance Criteria |
|---|---|---|---|
| 1,2-Dichloroethane-d4 | 117 | | 70-130 |
| Toluene-d8 | 96 | | 70-130 |
| 4-Bromofluorobenzene | 97 | | 70-130 |
| Dibromofluoromethane | 114 | | 70-130 |

**Project Name:** GROSSINGERS
**Project Number:** 9313
**Lab Number:** L2010093
**Report Date:** 03/18/20

**SAMPLE RESULTS**

Lab ID: L2010093-08
Client ID: TB
Sample Location: LIBERTY, NY

Date Collected: 03/03/20 00:00
Date Received: 03/05/20
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8260C
Analytical Date: 03/09/20 15:55
Analyst: AD

| Parameter | Result | Qualifier | Units | RL | MDL | Dilution Factor |
|---|---|---|---|---|---|---|
| **Volatile Organics by GC/MS - Westborough Lab** | | | | | | |
| Methylene chloride | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,1-Dichloroethane | ND | | ug/l | 2.5 | 0.70 | 1 |
| Chloroform | ND | | ug/l | 2.5 | 0.70 | 1 |
| Carbon tetrachloride | ND | | ug/l | 0.50 | 0.13 | 1 |
| 1,2-Dichloropropane | ND | | ug/l | 1.0 | 0.14 | 1 |
| Dibromochloromethane | ND | | ug/l | 0.50 | 0.15 | 1 |
| 1,1,2-Trichloroethane | ND | | ug/l | 1.5 | 0.50 | 1 |
| Tetrachloroethene | ND | | ug/l | 0.50 | 0.18 | 1 |
| Chlorobenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Trichlorofluoromethane | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,2-Dichloroethane | ND | | ug/l | 0.50 | 0.13 | 1 |
| 1,1,1-Trichloroethane | ND | | ug/l | 2.5 | 0.70 | 1 |
| Bromodichloromethane | ND | | ug/l | 0.50 | 0.19 | 1 |
| trans-1,3-Dichloropropene | ND | | ug/l | 0.50 | 0.16 | 1 |
| cis-1,3-Dichloropropene | ND | | ug/l | 0.50 | 0.14 | 1 |
| 1,3-Dichloropropene, Total | ND | | ug/l | 0.50 | 0.14 | 1 |
| 1,1-Dichloropropene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Bromoform | ND | | ug/l | 2.0 | 0.65 | 1 |
| 1,1,2,2-Tetrachloroethane | ND | | ug/l | 0.50 | 0.17 | 1 |
| Benzene | ND | | ug/l | 0.50 | 0.16 | 1 |
| Toluene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Ethylbenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Chloromethane | ND | | ug/l | 2.5 | 0.70 | 1 |
| Bromomethane | ND | | ug/l | 2.5 | 0.70 | 1 |
| Vinyl chloride | ND | | ug/l | 1.0 | 0.07 | 1 |
| Chloroethane | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,1-Dichloroethene | ND | | ug/l | 0.50 | 0.17 | 1 |
| trans-1,2-Dichloroethene | ND | | ug/l | 2.5 | 0.70 | 1 |

**Project Name:** GROSSINGERS **Lab Number:** L2010093

**Project Number:** 9313 **Report Date:** 03/18/20

**SAMPLE RESULTS**

Lab ID: L2010093-08 Date Collected: 03/03/20 00:00

Client ID: TB Date Received: 03/05/20

Sample Location: LIBERTY, NY Field Prep: Not Specified

Sample Depth:

| Parameter | Result | Qualifier | Units | RL | MDL | Dilution Factor |
|---|---|---|---|---|---|---|
| **Volatile Organics by GC/MS - Westborough Lab** | | | | | | |
| Trichloroethene | ND | | ug/l | 0.50 | 0.18 | 1 |
| 1,2-Dichlorobenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,3-Dichlorobenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,4-Dichlorobenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Methyl tert butyl ether | ND | | ug/l | 2.5 | 0.70 | 1 |
| p/m-Xylene | ND | | ug/l | 2.5 | 0.70 | 1 |
| o-Xylene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Xylenes, Total | ND | | ug/l | 2.5 | 0.70 | 1 |
| cis-1,2-Dichloroethene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,2-Dichloroethene, Total | ND | | ug/l | 2.5 | 0.70 | 1 |
| Dibromomethane | ND | | ug/l | 5.0 | 1.0 | 1 |
| 1,2,3-Trichloropropane | ND | | ug/l | 2.5 | 0.70 | 1 |
| Acrylonitrile | ND | | ug/l | 5.0 | 1.5 | 1 |
| Styrene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Dichlorodifluoromethane | ND | | ug/l | 5.0 | 1.0 | 1 |
| Acetone | ND | | ug/l | 5.0 | 1.5 | 1 |
| Carbon disulfide | ND | | ug/l | 5.0 | 1.0 | 1 |
| 2-Butanone | ND | | ug/l | 5.0 | 1.9 | 1 |
| Vinyl acetate | ND | | ug/l | 5.0 | 1.0 | 1 |
| 4-Methyl-2-pentanone | ND | | ug/l | 5.0 | 1.0 | 1 |
| 2-Hexanone | ND | | ug/l | 5.0 | 1.0 | 1 |
| Bromochloromethane | ND | | ug/l | 2.5 | 0.70 | 1 |
| 2,2-Dichloropropane | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,2-Dibromoethane | ND | | ug/l | 2.0 | 0.65 | 1 |
| 1,3-Dichloropropane | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,1,1,2-Tetrachloroethane | ND | | ug/l | 2.5 | 0.70 | 1 |
| Bromobenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| n-Butylbenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| sec-Butylbenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| tert-Butylbenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| o-Chlorotoluene | ND | | ug/l | 2.5 | 0.70 | 1 |
| p-Chlorotoluene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,2-Dibromo-3-chloropropane | ND | | ug/l | 2.5 | 0.70 | 1 |
| Hexachlorobutadiene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Isopropylbenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| p-Isopropyltoluene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Naphthalene | ND | | ug/l | 2.5 | 0.70 | 1 |

**Project Name:** GROSSINGERS **Lab Number:** L2010093

**Project Number:** 9313 **Report Date:** 03/18/20

## SAMPLE RESULTS

Lab ID: L2010093-08 Date Collected: 03/03/20 00:00

Client ID: TB Date Received: 03/05/20

Sample Location: LIBERTY, NY Field Prep: Not Specified

Sample Depth:

| Parameter | Result | Qualifier | Units | RL | MDL | Dilution Factor |
|---|---|---|---|---|---|---|
| **Volatile Organics by GC/MS - Westborough Lab** | | | | | | |
| n-Propylbenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,2,3-Trichlorobenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,2,4-Trichlorobenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,3,5-Trimethylbenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,2,4-Trimethylbenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,4-Dioxane | ND | | ug/l | 250 | 61. | 1 |
| p-Diethylbenzene | ND | | ug/l | 2.0 | 0.70 | 1 |
| p-Ethyltoluene | ND | | ug/l | 2.0 | 0.70 | 1 |
| 1,2,4,5-Tetramethylbenzene | ND | | ug/l | 2.0 | 0.54 | 1 |
| Ethyl ether | ND | | ug/l | 2.5 | 0.70 | 1 |
| trans-1,4-Dichloro-2-butene | ND | | ug/l | 2.5 | 0.70 | 1 |
| **Tentatively Identified Compounds** | | | | | | |
| No Tentatively Identified Compounds | ND | | ug/l | | | 1 |

| Surrogate | % Recovery | Qualifier | Acceptance Criteria |
|---|---|---|---|
| 1,2-Dichloroethane-d4 | 130 | | 70-130 |
| Toluene-d8 | 92 | | 70-130 |
| 4-Bromofluorobenzene | 92 | | 70-130 |
| Dibromofluoromethane | 115 | | 70-130 |

**Project Name:** GROSSINGERS
**Project Number:** 9313
**Lab Number:** L2010093
**Report Date:** 03/18/20

## SAMPLE RESULTS

Lab ID: L2010093-09
Client ID: DUP
Sample Location: LIBERTY, NY

Date Collected: 03/05/20 00:00
Date Received: 03/05/20
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8260C
Analytical Date: 03/10/20 14:38
Analyst: AJK

| Parameter | Result | Qualifier | Units | RL | MDL | Dilution Factor |
|---|---|---|---|---|---|---|
| **Volatile Organics by GC/MS - Westborough Lab** | | | | | | |
| Methylene chloride | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,1-Dichloroethane | ND | | ug/l | 2.5 | 0.70 | 1 |
| Chloroform | ND | | ug/l | 2.5 | 0.70 | 1 |
| Carbon tetrachloride | ND | | ug/l | 0.50 | 0.13 | 1 |
| 1,2-Dichloropropane | ND | | ug/l | 1.0 | 0.14 | 1 |
| Dibromochloromethane | ND | | ug/l | 0.50 | 0.15 | 1 |
| 1,1,2-Trichloroethane | ND | | ug/l | 1.5 | 0.50 | 1 |
| Tetrachloroethene | ND | | ug/l | 0.50 | 0.18 | 1 |
| Chlorobenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Trichlorofluoromethane | 2.0 | J | ug/l | 2.5 | 0.70 | 1 |
| 1,2-Dichloroethane | ND | | ug/l | 0.50 | 0.13 | 1 |
| 1,1,1-Trichloroethane | ND | | ug/l | 2.5 | 0.70 | 1 |
| Bromodichloromethane | ND | | ug/l | 0.50 | 0.19 | 1 |
| trans-1,3-Dichloropropene | ND | | ug/l | 0.50 | 0.16 | 1 |
| cis-1,3-Dichloropropene | ND | | ug/l | 0.50 | 0.14 | 1 |
| 1,3-Dichloropropene, Total | ND | | ug/l | 0.50 | 0.14 | 1 |
| 1,1-Dichloropropene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Bromoform | ND | | ug/l | 2.0 | 0.65 | 1 |
| 1,1,2,2-Tetrachloroethane | ND | | ug/l | 0.50 | 0.17 | 1 |
| Benzene | ND | | ug/l | 0.50 | 0.16 | 1 |
| Toluene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Ethylbenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Chloromethane | ND | | ug/l | 2.5 | 0.70 | 1 |
| Bromomethane | ND | | ug/l | 2.5 | 0.70 | 1 |
| Vinyl chloride | ND | | ug/l | 1.0 | 0.07 | 1 |
| Chloroethane | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,1-Dichloroethene | ND | | ug/l | 0.50 | 0.17 | 1 |
| trans-1,2-Dichloroethene | ND | | ug/l | 2.5 | 0.70 | 1 |

**Project Name:** GROSSINGERS **Lab Number:** L2010093

**Project Number:** 9313 **Report Date:** 03/18/20

**SAMPLE RESULTS**

Lab ID: L2010093-09 Date Collected: 03/05/20 00:00

Client ID: DUP Date Received: 03/05/20

Sample Location: LIBERTY, NY Field Prep: Not Specified

Sample Depth:

| Parameter | Result | Qualifier | Units | RL | MDL | Dilution Factor |
|---|---|---|---|---|---|---|
| **Volatile Organics by GC/MS - Westborough Lab** | | | | | | |
| Trichloroethene | ND | | ug/l | 0.50 | 0.18 | 1 |
| 1,2-Dichlorobenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,3-Dichlorobenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,4-Dichlorobenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Methyl tert butyl ether | ND | | ug/l | 2.5 | 0.70 | 1 |
| p/m-Xylene | ND | | ug/l | 2.5 | 0.70 | 1 |
| o-Xylene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Xylenes, Total | ND | | ug/l | 2.5 | 0.70 | 1 |
| cis-1,2-Dichloroethene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,2-Dichloroethene, Total | ND | | ug/l | 2.5 | 0.70 | 1 |
| Dibromomethane | ND | | ug/l | 5.0 | 1.0 | 1 |
| 1,2,3-Trichloropropane | ND | | ug/l | 2.5 | 0.70 | 1 |
| Acrylonitrile | ND | | ug/l | 5.0 | 1.5 | 1 |
| Styrene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Dichlorodifluoromethane | ND | | ug/l | 5.0 | 1.0 | 1 |
| Acetone | 3.2 | J | ug/l | 5.0 | 1.5 | 1 |
| Carbon disulfide | ND | | ug/l | 5.0 | 1.0 | 1 |
| 2-Butanone | ND | | ug/l | 5.0 | 1.9 | 1 |
| Vinyl acetate | ND | | ug/l | 5.0 | 1.0 | 1 |
| 4-Methyl-2-pentanone | ND | | ug/l | 5.0 | 1.0 | 1 |
| 2-Hexanone | ND | | ug/l | 5.0 | 1.0 | 1 |
| Bromochloromethane | ND | | ug/l | 2.5 | 0.70 | 1 |
| 2,2-Dichloropropane | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,2-Dibromoethane | ND | | ug/l | 2.0 | 0.65 | 1 |
| 1,3-Dichloropropane | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,1,1,2-Tetrachloroethane | ND | | ug/l | 2.5 | 0.70 | 1 |
| Bromobenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| n-Butylbenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| sec-Butylbenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| tert-Butylbenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| o-Chlorotoluene | ND | | ug/l | 2.5 | 0.70 | 1 |
| p-Chlorotoluene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,2-Dibromo-3-chloropropane | ND | | ug/l | 2.5 | 0.70 | 1 |
| Hexachlorobutadiene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Isopropylbenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| p-Isopropyltoluene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Naphthalene | ND | | ug/l | 2.5 | 0.70 | 1 |

**Project Name:** GROSSINGERS **Lab Number:** L2010093

**Project Number:** 9313 **Report Date:** 03/18/20

## SAMPLE RESULTS

Lab ID: L2010093-09 Date Collected: 03/05/20 00:00

Client ID: DUP Date Received: 03/05/20

Sample Location: LIBERTY, NY Field Prep: Not Specified

Sample Depth:

| Parameter | Result | Qualifier | Units | RL | MDL | Dilution Factor |
|---|---|---|---|---|---|---|
| **Volatile Organics by GC/MS - Westborough Lab** | | | | | | |
| n-Propylbenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,2,3-Trichlorobenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,2,4-Trichlorobenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,3,5-Trimethylbenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,2,4-Trimethylbenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,4-Dioxane | ND | | ug/l | 250 | 61. | 1 |
| p-Diethylbenzene | ND | | ug/l | 2.0 | 0.70 | 1 |
| p-Ethyltoluene | ND | | ug/l | 2.0 | 0.70 | 1 |
| 1,2,4,5-Tetramethylbenzene | ND | | ug/l | 2.0 | 0.54 | 1 |
| Ethyl ether | ND | | ug/l | 2.5 | 0.70 | 1 |
| trans-1,4-Dichloro-2-butene | ND | | ug/l | 2.5 | 0.70 | 1 |
| **Tentatively Identified Compounds** | | | | | | |
| No Tentatively Identified Compounds | ND | | ug/l | | | 1 |

| Surrogate | % Recovery | Qualifier | Acceptance Criteria |
|---|---|---|---|
| 1,2-Dichloroethane-d4 | 113 | | 70-130 |
| Toluene-d8 | 95 | | 70-130 |
| 4-Bromofluorobenzene | 100 | | 70-130 |
| Dibromofluoromethane | 110 | | 70-130 |

**Project Name:** GROSSINGERS **Lab Number:** L2010093

**Project Number:** 9313 **Report Date:** 03/18/20

# Method Blank Analysis
## Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 03/09/20 08:14
Analyst: PD

| Parameter | Result | Qualifier | Units | RL | MDL |
|---|---|---|---|---|---|
| Volatile Organics by GC/MS - Westborough Lab for sample(s): 08 Batch: WG1348908-5 | | | | | |
| Methylene chloride | ND | | ug/l | 2.5 | 0.70 |
| 1,1-Dichloroethane | ND | | ug/l | 2.5 | 0.70 |
| Chloroform | ND | | ug/l | 2.5 | 0.70 |
| Carbon tetrachloride | ND | | ug/l | 0.50 | 0.13 |
| 1,2-Dichloropropane | ND | | ug/l | 1.0 | 0.14 |
| Dibromochloromethane | ND | | ug/l | 0.50 | 0.15 |
| 1,1,2-Trichloroethane | ND | | ug/l | 1.5 | 0.50 |
| Tetrachloroethene | ND | | ug/l | 0.50 | 0.18 |
| Chlorobenzene | ND | | ug/l | 2.5 | 0.70 |
| Trichlorofluoromethane | ND | | ug/l | 2.5 | 0.70 |
| 1,2-Dichloroethane | ND | | ug/l | 0.50 | 0.13 |
| 1,1,1-Trichloroethane | ND | | ug/l | 2.5 | 0.70 |
| Bromodichloromethane | ND | | ug/l | 0.50 | 0.19 |
| trans-1,3-Dichloropropene | ND | | ug/l | 0.50 | 0.16 |
| cis-1,3-Dichloropropene | ND | | ug/l | 0.50 | 0.14 |
| 1,3-Dichloropropene, Total | ND | | ug/l | 0.50 | 0.14 |
| 1,1-Dichloropropene | ND | | ug/l | 2.5 | 0.70 |
| Bromoform | ND | | ug/l | 2.0 | 0.65 |
| 1,1,2,2-Tetrachloroethane | ND | | ug/l | 0.50 | 0.17 |
| Benzene | ND | | ug/l | 0.50 | 0.16 |
| Toluene | ND | | ug/l | 2.5 | 0.70 |
| Ethylbenzene | ND | | ug/l | 2.5 | 0.70 |
| Chloromethane | ND | | ug/l | 2.5 | 0.70 |
| Bromomethane | ND | | ug/l | 2.5 | 0.70 |
| Vinyl chloride | ND | | ug/l | 1.0 | 0.07 |
| Chloroethane | ND | | ug/l | 2.5 | 0.70 |
| 1,1-Dichloroethene | ND | | ug/l | 0.50 | 0.17 |
| trans-1,2-Dichloroethene | ND | | ug/l | 2.5 | 0.70 |
| Trichloroethene | ND | | ug/l | 0.50 | 0.18 |

**Project Name:** GROSSINGERS **Lab Number:** L2010093

**Project Number:** 9313 **Report Date:** 03/18/20

# Method Blank Analysis
## Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 03/09/20 08:14
Analyst: PD

| Parameter | Result | Qualifier | Units | RL | MDL |
|---|---|---|---|---|---|
| Volatile Organics by GC/MS - Westborough Lab for sample(s): 08 Batch: WG1348908-5 | | | | | |
| 1,2-Dichlorobenzene | ND | | ug/l | 2.5 | 0.70 |
| 1,3-Dichlorobenzene | ND | | ug/l | 2.5 | 0.70 |
| 1,4-Dichlorobenzene | ND | | ug/l | 2.5 | 0.70 |
| Methyl tert butyl ether | ND | | ug/l | 2.5 | 0.70 |
| p/m-Xylene | ND | | ug/l | 2.5 | 0.70 |
| o-Xylene | ND | | ug/l | 2.5 | 0.70 |
| Xylenes, Total | ND | | ug/l | 2.5 | 0.70 |
| cis-1,2-Dichloroethene | ND | | ug/l | 2.5 | 0.70 |
| 1,2-Dichloroethene, Total | ND | | ug/l | 2.5 | 0.70 |
| Dibromomethane | ND | | ug/l | 5.0 | 1.0 |
| 1,2,3-Trichloropropane | ND | | ug/l | 2.5 | 0.70 |
| Acrylonitrile | ND | | ug/l | 5.0 | 1.5 |
| Styrene | ND | | ug/l | 2.5 | 0.70 |
| Dichlorodifluoromethane | ND | | ug/l | 5.0 | 1.0 |
| Acetone | ND | | ug/l | 5.0 | 1.5 |
| Carbon disulfide | ND | | ug/l | 5.0 | 1.0 |
| 2-Butanone | ND | | ug/l | 5.0 | 1.9 |
| Vinyl acetate | ND | | ug/l | 5.0 | 1.0 |
| 4-Methyl-2-pentanone | ND | | ug/l | 5.0 | 1.0 |
| 2-Hexanone | ND | | ug/l | 5.0 | 1.0 |
| Bromochloromethane | ND | | ug/l | 2.5 | 0.70 |
| 2,2-Dichloropropane | ND | | ug/l | 2.5 | 0.70 |
| 1,2-Dibromoethane | ND | | ug/l | 2.0 | 0.65 |
| 1,3-Dichloropropane | ND | | ug/l | 2.5 | 0.70 |
| 1,1,1,2-Tetrachloroethane | ND | | ug/l | 2.5 | 0.70 |
| Bromobenzene | ND | | ug/l | 2.5 | 0.70 |
| n-Butylbenzene | ND | | ug/l | 2.5 | 0.70 |
| sec-Butylbenzene | ND | | ug/l | 2.5 | 0.70 |
| tert-Butylbenzene | ND | | ug/l | 2.5 | 0.70 |

**Project Name:** GROSSINGERS
**Project Number:** 9313
**Lab Number:** L2010093
**Report Date:** 03/18/20

# Method Blank Analysis
## Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 03/09/20 08:14
Analyst: PD

| Parameter | Result | Qualifier | Units | RL | MDL |
|---|---|---|---|---|---|
| Volatile Organics by GC/MS - Westborough Lab for sample(s): 08 Batch: WG1348908-5 | | | | | |
| o-Chlorotoluene | ND | | ug/l | 2.5 | 0.70 |
| p-Chlorotoluene | ND | | ug/l | 2.5 | 0.70 |
| 1,2-Dibromo-3-chloropropane | ND | | ug/l | 2.5 | 0.70 |
| Hexachlorobutadiene | ND | | ug/l | 2.5 | 0.70 |
| Isopropylbenzene | ND | | ug/l | 2.5 | 0.70 |
| p-Isopropyltoluene | ND | | ug/l | 2.5 | 0.70 |
| Naphthalene | ND | | ug/l | 2.5 | 0.70 |
| n-Propylbenzene | ND | | ug/l | 2.5 | 0.70 |
| 1,2,3-Trichlorobenzene | ND | | ug/l | 2.5 | 0.70 |
| 1,2,4-Trichlorobenzene | ND | | ug/l | 2.5 | 0.70 |
| 1,3,5-Trimethylbenzene | ND | | ug/l | 2.5 | 0.70 |
| 1,2,4-Trimethylbenzene | ND | | ug/l | 2.5 | 0.70 |
| 1,4-Dioxane | ND | | ug/l | 250 | 61. |
| p-Diethylbenzene | ND | | ug/l | 2.0 | 0.70 |
| p-Ethyltoluene | ND | | ug/l | 2.0 | 0.70 |
| 1,2,4,5-Tetramethylbenzene | ND | | ug/l | 2.0 | 0.54 |
| Ethyl ether | ND | | ug/l | 2.5 | 0.70 |
| trans-1,4-Dichloro-2-butene | ND | | ug/l | 2.5 | 0.70 |

Tentatively Identified Compounds

No Tentatively Identified Compounds ND ug/l

**Project Name:** GROSSINGERS
**Project Number:** 9313
**Lab Number:** L2010093
**Report Date:** 03/18/20

# Method Blank Analysis
## Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 03/09/20 08:14
Analyst: PD

| Parameter | Result | Qualifier | Units | RL | MDL |
|---|---|---|---|---|---|
| Volatile Organics by GC/MS - Westborough Lab for sample(s): 08 Batch: WG1348908-5 | | | | | |

| Surrogate | %Recovery | Qualifier | Acceptance Criteria |
|---|---|---|---|
| 1,2-Dichloroethane-d4 | 114 | | 70-130 |
| Toluene-d8 | 93 | | 70-130 |
| 4-Bromofluorobenzene | 96 | | 70-130 |
| Dibromofluoromethane | 105 | | 70-130 |

**Project Name:** GROSSINGERS **Lab Number:** L2010093

**Project Number:** 9313 **Report Date:** 03/18/20

# Method Blank Analysis
## Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 03/10/20 08:03
Analyst: PD

| Parameter | Result | Qualifier | Units | RL | MDL |
|---|---|---|---|---|---|
| Volatile Organics by GC/MS - Westborough Lab for sample(s): 01-06,09 Batch: WG1349240-5 | | | | | |
| Methylene chloride | ND | | ug/l | 2.5 | 0.70 |
| 1,1-Dichloroethane | ND | | ug/l | 2.5 | 0.70 |
| Chloroform | ND | | ug/l | 2.5 | 0.70 |
| Carbon tetrachloride | ND | | ug/l | 0.50 | 0.13 |
| 1,2-Dichloropropane | ND | | ug/l | 1.0 | 0.14 |
| Dibromochloromethane | ND | | ug/l | 0.50 | 0.15 |
| 1,1,2-Trichloroethane | ND | | ug/l | 1.5 | 0.50 |
| Tetrachloroethene | ND | | ug/l | 0.50 | 0.18 |
| Chlorobenzene | ND | | ug/l | 2.5 | 0.70 |
| Trichlorofluoromethane | ND | | ug/l | 2.5 | 0.70 |
| 1,2-Dichloroethane | ND | | ug/l | 0.50 | 0.13 |
| 1,1,1-Trichloroethane | ND | | ug/l | 2.5 | 0.70 |
| Bromodichloromethane | ND | | ug/l | 0.50 | 0.19 |
| trans-1,3-Dichloropropene | ND | | ug/l | 0.50 | 0.16 |
| cis-1,3-Dichloropropene | ND | | ug/l | 0.50 | 0.14 |
| 1,3-Dichloropropene, Total | ND | | ug/l | 0.50 | 0.14 |
| 1,1-Dichloropropene | ND | | ug/l | 2.5 | 0.70 |
| Bromoform | ND | | ug/l | 2.0 | 0.65 |
| 1,1,2,2-Tetrachloroethane | ND | | ug/l | 0.50 | 0.17 |
| Benzene | ND | | ug/l | 0.50 | 0.16 |
| Toluene | ND | | ug/l | 2.5 | 0.70 |
| Ethylbenzene | ND | | ug/l | 2.5 | 0.70 |
| Chloromethane | ND | | ug/l | 2.5 | 0.70 |
| Bromomethane | ND | | ug/l | 2.5 | 0.70 |
| Vinyl chloride | ND | | ug/l | 1.0 | 0.07 |
| Chloroethane | ND | | ug/l | 2.5 | 0.70 |
| 1,1-Dichloroethene | ND | | ug/l | 0.50 | 0.17 |
| trans-1,2-Dichloroethene | ND | | ug/l | 2.5 | 0.70 |
| Trichloroethene | ND | | ug/l | 0.50 | 0.18 |

**Project Name:** GROSSINGERS **Lab Number:** L2010093

**Project Number:** 9313 **Report Date:** 03/18/20

# Method Blank Analysis
## Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 03/10/20 08:03
Analyst: PD

| Parameter | Result | Qualifier | Units | RL | MDL |
|---|---|---|---|---|---|
| Volatile Organics by GC/MS - Westborough Lab for sample(s): 01-06,09 Batch: WG1349240-5 | | | | | |
| 1,2-Dichlorobenzene | ND | | ug/l | 2.5 | 0.70 |
| 1,3-Dichlorobenzene | ND | | ug/l | 2.5 | 0.70 |
| 1,4-Dichlorobenzene | ND | | ug/l | 2.5 | 0.70 |
| Methyl tert butyl ether | ND | | ug/l | 2.5 | 0.70 |
| p/m-Xylene | ND | | ug/l | 2.5 | 0.70 |
| o-Xylene | ND | | ug/l | 2.5 | 0.70 |
| Xylenes, Total | ND | | ug/l | 2.5 | 0.70 |
| cis-1,2-Dichloroethene | ND | | ug/l | 2.5 | 0.70 |
| 1,2-Dichloroethene, Total | ND | | ug/l | 2.5 | 0.70 |
| Dibromomethane | ND | | ug/l | 5.0 | 1.0 |
| 1,2,3-Trichloropropane | ND | | ug/l | 2.5 | 0.70 |
| Acrylonitrile | ND | | ug/l | 5.0 | 1.5 |
| Styrene | ND | | ug/l | 2.5 | 0.70 |
| Dichlorodifluoromethane | ND | | ug/l | 5.0 | 1.0 |
| Acetone | ND | | ug/l | 5.0 | 1.5 |
| Carbon disulfide | ND | | ug/l | 5.0 | 1.0 |
| 2-Butanone | ND | | ug/l | 5.0 | 1.9 |
| Vinyl acetate | ND | | ug/l | 5.0 | 1.0 |
| 4-Methyl-2-pentanone | ND | | ug/l | 5.0 | 1.0 |
| 2-Hexanone | ND | | ug/l | 5.0 | 1.0 |
| Bromochloromethane | ND | | ug/l | 2.5 | 0.70 |
| 2,2-Dichloropropane | ND | | ug/l | 2.5 | 0.70 |
| 1,2-Dibromoethane | ND | | ug/l | 2.0 | 0.65 |
| 1,3-Dichloropropane | ND | | ug/l | 2.5 | 0.70 |
| 1,1,1,2-Tetrachloroethane | ND | | ug/l | 2.5 | 0.70 |
| Bromobenzene | ND | | ug/l | 2.5 | 0.70 |
| n-Butylbenzene | ND | | ug/l | 2.5 | 0.70 |
| sec-Butylbenzene | ND | | ug/l | 2.5 | 0.70 |
| tert-Butylbenzene | ND | | ug/l | 2.5 | 0.70 |

**Project Name:** GROSSINGERS
**Project Number:** 9313
**Lab Number:** L2010093
**Report Date:** 03/18/20

# Method Blank Analysis
## Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 03/10/20 08:03
Analyst: PD

| Parameter | Result | Qualifier | Units | RL | MDL |
|---|---|---|---|---|---|
| Volatile Organics by GC/MS - Westborough Lab for sample(s): 01-06,09 Batch: WG1349240-5 | | | | | |
| o-Chlorotoluene | ND | | ug/l | 2.5 | 0.70 |
| p-Chlorotoluene | ND | | ug/l | 2.5 | 0.70 |
| 1,2-Dibromo-3-chloropropane | ND | | ug/l | 2.5 | 0.70 |
| Hexachlorobutadiene | ND | | ug/l | 2.5 | 0.70 |
| Isopropylbenzene | ND | | ug/l | 2.5 | 0.70 |
| p-Isopropyltoluene | ND | | ug/l | 2.5 | 0.70 |
| Naphthalene | ND | | ug/l | 2.5 | 0.70 |
| n-Propylbenzene | ND | | ug/l | 2.5 | 0.70 |
| 1,2,3-Trichlorobenzene | ND | | ug/l | 2.5 | 0.70 |
| 1,2,4-Trichlorobenzene | ND | | ug/l | 2.5 | 0.70 |
| 1,3,5-Trimethylbenzene | ND | | ug/l | 2.5 | 0.70 |
| 1,2,4-Trimethylbenzene | ND | | ug/l | 2.5 | 0.70 |
| 1,4-Dioxane | ND | | ug/l | 250 | 61. |
| p-Diethylbenzene | ND | | ug/l | 2.0 | 0.70 |
| p-Ethyltoluene | ND | | ug/l | 2.0 | 0.70 |
| 1,2,4,5-Tetramethylbenzene | ND | | ug/l | 2.0 | 0.54 |
| Ethyl ether | ND | | ug/l | 2.5 | 0.70 |
| trans-1,4-Dichloro-2-butene | ND | | ug/l | 2.5 | 0.70 |
| Tentatively Identified Compounds | | | | | |
| No Tentatively Identified Compounds | ND | | ug/l | | |

**Project Name:** GROSSINGERS
**Project Number:** 9313
**Lab Number:** L2010093
**Report Date:** 03/18/20

# Method Blank Analysis
## Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 03/10/20 08:03
Analyst: PD

| Parameter | Result | Qualifier | Units | RL | MDL |
|---|---|---|---|---|---|
| Volatile Organics by GC/MS - Westborough Lab for sample(s): 01-06,09 Batch: WG1349240-5 | | | | | |

| Surrogate | %Recovery | Qualifier | Acceptance Criteria |
|---|---|---|---|
| 1,2-Dichloroethane-d4 | 109 | | 70-130 |
| Toluene-d8 | 95 | | 70-130 |
| 4-Bromofluorobenzene | 96 | | 70-130 |
| Dibromofluoromethane | 107 | | 70-130 |

# Lab Control Sample Analysis
## Batch Quality Control

**Project Name:** GROSSINGERS
**Project Number:** 9313
**Lab Number:** L2010093
**Report Date:** 03/18/20

| Parameter | LCS %Recovery | Qual | LCSD %Recovery | Qual | %Recovery Limits | RPD | Qual | RPD Limits |
|---|---|---|---|---|---|---|---|---|
| Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 08 Batch: WG1348908-3 WG1348908-4 | | | | | | | | |
| Methylene chloride | 100 | | 100 | | 70-130 | 0 | | 20 |
| 1,1-Dichloroethane | 110 | | 110 | | 70-130 | 0 | | 20 |
| Chloroform | 120 | | 120 | | 70-130 | 0 | | 20 |
| Carbon tetrachloride | 130 | | **140** | Q | 63-132 | 7 | | 20 |
| 1,2-Dichloropropane | 100 | | 100 | | 70-130 | 0 | | 20 |
| Dibromochloromethane | 95 | | 93 | | 63-130 | 2 | | 20 |
| 1,1,2-Trichloroethane | 98 | | 94 | | 70-130 | 4 | | 20 |
| Tetrachloroethene | 110 | | 110 | | 70-130 | 0 | | 20 |
| Chlorobenzene | 100 | | 100 | | 75-130 | 0 | | 20 |
| Trichlorofluoromethane | 140 | | 150 | | 62-150 | 7 | | 20 |
| 1,2-Dichloroethane | 120 | | 120 | | 70-130 | 0 | | 20 |
| 1,1,1-Trichloroethane | 130 | | 130 | | 67-130 | 0 | | 20 |
| Bromodichloromethane | 120 | | 120 | | 67-130 | 0 | | 20 |
| trans-1,3-Dichloropropene | 98 | | 93 | | 70-130 | 5 | | 20 |
| cis-1,3-Dichloropropene | 120 | | 110 | | 70-130 | 9 | | 20 |
| 1,1-Dichloropropene | 120 | | 130 | | 70-130 | 8 | | 20 |
| Bromoform | 92 | | 89 | | 54-136 | 3 | | 20 |
| 1,1,2,2-Tetrachloroethane | 92 | | 89 | | 67-130 | 3 | | 20 |
| Benzene | 110 | | 120 | | 70-130 | 9 | | 20 |
| Toluene | 100 | | 100 | | 70-130 | 0 | | 20 |
| Ethylbenzene | 110 | | 110 | | 70-130 | 0 | | 20 |
| Chloromethane | 84 | | 91 | | 64-130 | 8 | | 20 |
| Bromomethane | 120 | | 120 | | 39-139 | 0 | | 20 |

# Lab Control Sample Analysis
## Batch Quality Control

**Project Name:** GROSSINGERS
**Project Number:** 9313
**Lab Number:** L2010093
**Report Date:** 03/18/20

| Parameter | LCS %Recovery | Qual | LCSD %Recovery | Qual | %Recovery Limits | RPD | Qual | RPD Limits |
|---|---|---|---|---|---|---|---|---|
| Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 08 Batch: WG1348908-3 WG1348908-4 | | | | | | | | |
| Vinyl chloride | 100 | | 110 | | 55-140 | 10 | | 20 |
| Chloroethane | 130 | | **140** | Q | 55-138 | 7 | | 20 |
| 1,1-Dichloroethene | 110 | | 110 | | 61-145 | 0 | | 20 |
| trans-1,2-Dichloroethene | 110 | | 110 | | 70-130 | 0 | | 20 |
| Trichloroethene | 110 | | 120 | | 70-130 | 9 | | 20 |
| 1,2-Dichlorobenzene | 97 | | 100 | | 70-130 | 3 | | 20 |
| 1,3-Dichlorobenzene | 99 | | 100 | | 70-130 | 1 | | 20 |
| 1,4-Dichlorobenzene | 97 | | 100 | | 70-130 | 3 | | 20 |
| Methyl tert butyl ether | 110 | | 110 | | 63-130 | 0 | | 20 |
| p/m-Xylene | 110 | | 110 | | 70-130 | 0 | | 20 |
| o-Xylene | 105 | | 105 | | 70-130 | 0 | | 20 |
| cis-1,2-Dichloroethene | 110 | | 110 | | 70-130 | 0 | | 20 |
| Dibromomethane | 110 | | 110 | | 70-130 | 0 | | 20 |
| 1,2,3-Trichloropropane | 100 | | 98 | | 64-130 | 2 | | 20 |
| Acrylonitrile | 100 | | 98 | | 70-130 | 2 | | 20 |
| Styrene | 110 | | 110 | | 70-130 | 0 | | 20 |
| Dichlorodifluoromethane | 90 | | 94 | | 36-147 | 4 | | 20 |
| Acetone | 120 | | 110 | | 58-148 | 9 | | 20 |
| Carbon disulfide | 100 | | 110 | | 51-130 | 10 | | 20 |
| 2-Butanone | 99 | | 96 | | 63-138 | 3 | | 20 |
| Vinyl acetate | 99 | | 96 | | 70-130 | 3 | | 20 |
| 4-Methyl-2-pentanone | 95 | | 87 | | 59-130 | 9 | | 20 |
| 2-Hexanone | 85 | | 81 | | 57-130 | 5 | | 20 |

# Lab Control Sample Analysis
## Batch Quality Control

**Project Name:** GROSSINGERS
**Project Number:** 9313
**Lab Number:** L2010093
**Report Date:** 03/18/20

| Parameter | LCS %Recovery | Qual | LCSD %Recovery | Qual | %Recovery Limits | RPD | Qual | RPD Limits |
|---|---|---|---|---|---|---|---|---|
| Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 08 Batch: WG1348908-3 WG1348908-4 | | | | | | | | |
| Bromochloromethane | 110 | | 110 | | 70-130 | 0 | | 20 |
| 2,2-Dichloropropane | 130 | | 110 | | 63-133 | 17 | | 20 |
| 1,2-Dibromoethane | 98 | | 95 | | 70-130 | 3 | | 20 |
| 1,3-Dichloropropane | 96 | | 95 | | 70-130 | 1 | | 20 |
| 1,1,1,2-Tetrachloroethane | 110 | | 110 | | 64-130 | 0 | | 20 |
| Bromobenzene | 92 | | 96 | | 70-130 | 4 | | 20 |
| n-Butylbenzene | 110 | | 110 | | 53-136 | 0 | | 20 |
| sec-Butylbenzene | 110 | | 110 | | 70-130 | 0 | | 20 |
| tert-Butylbenzene | 100 | | 110 | | 70-130 | 10 | | 20 |
| o-Chlorotoluene | 100 | | 110 | | 70-130 | 10 | | 20 |
| p-Chlorotoluene | 100 | | 110 | | 70-130 | 10 | | 20 |
| 1,2-Dibromo-3-chloropropane | 85 | | 88 | | 41-144 | 3 | | 20 |
| Hexachlorobutadiene | 100 | | 110 | | 63-130 | 10 | | 20 |
| Isopropylbenzene | 100 | | 110 | | 70-130 | 10 | | 20 |
| p-Isopropyltoluene | 110 | | 110 | | 70-130 | 0 | | 20 |
| Naphthalene | 84 | | 86 | | 70-130 | 2 | | 20 |
| n-Propylbenzene | 110 | | 110 | | 69-130 | 0 | | 20 |
| 1,2,3-Trichlorobenzene | 89 | | 92 | | 70-130 | 3 | | 20 |
| 1,2,4-Trichlorobenzene | 91 | | 97 | | 70-130 | 6 | | 20 |
| 1,3,5-Trimethylbenzene | 100 | | 110 | | 64-130 | 10 | | 20 |
| 1,2,4-Trimethylbenzene | 100 | | 110 | | 70-130 | 10 | | 20 |
| 1,4-Dioxane | 104 | | 98 | | 56-162 | 6 | | 20 |
| p-Diethylbenzene | 100 | | 100 | | 70-130 | 0 | | 20 |

# Lab Control Sample Analysis
## Batch Quality Control

**Project Name:** GROSSINGERS
**Project Number:** 9313
**Lab Number:** L2010093
**Report Date:** 03/18/20

| Parameter | LCS %Recovery | Qual | LCSD %Recovery | Qual | %Recovery Limits | RPD | Qual | RPD Limits |
|---|---|---|---|---|---|---|---|---|
| Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 08 Batch: WG1348908-3 WG1348908-4 | | | | | | | | |
| p-Ethyltoluene | 100 | | 110 | | 70-130 | 10 | | 20 |
| 1,2,4,5-Tetramethylbenzene | 96 | | 100 | | 70-130 | 4 | | 20 |
| Ethyl ether | 130 | | 130 | | 59-134 | 0 | | 20 |
| trans-1,4-Dichloro-2-butene | 99 | | 88 | | 70-130 | 12 | | 20 |

| Surrogate | LCS %Recovery | Qual | LCSD %Recovery | Qual | Acceptance Criteria |
|---|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 118 | | 119 | | 70-130 |
| Toluene-d8 | 93 | | 94 | | 70-130 |
| 4-Bromofluorobenzene | 95 | | 96 | | 70-130 |
| Dibromofluoromethane | 107 | | 111 | | 70-130 |

# Lab Control Sample Analysis

## Batch Quality Control

**Project Name:** GROSSINGERS

**Project Number:** 9313

**Lab Number:** L2010093

**Report Date:** 03/18/20

| Parameter | LCS %Recovery | Qual | LCSD %Recovery | Qual | %Recovery Limits | RPD | Qual | RPD Limits |
|---|---|---|---|---|---|---|---|---|
| Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-06,09 Batch: WG1349240-3 WG1349240-4 | | | | | | | | |
| Methylene chloride | 94 | | 95 | | 70-130 | 1 | | 20 |
| 1,1-Dichloroethane | 97 | | 97 | | 70-130 | 0 | | 20 |
| Chloroform | 100 | | 100 | | 70-130 | 0 | | 20 |
| Carbon tetrachloride | 100 | | 100 | | 63-132 | 0 | | 20 |
| 1,2-Dichloropropane | 91 | | 90 | | 70-130 | 1 | | 20 |
| Dibromochloromethane | 90 | | 94 | | 63-130 | 4 | | 20 |
| 1,1,2-Trichloroethane | 84 | | 86 | | 70-130 | 2 | | 20 |
| Tetrachloroethene | 87 | | 88 | | 70-130 | 1 | | 20 |
| Chlorobenzene | 90 | | 92 | | 75-130 | 2 | | 20 |
| Trichlorofluoromethane | 120 | | 120 | | 62-150 | 0 | | 20 |
| 1,2-Dichloroethane | 94 | | 97 | | 70-130 | 3 | | 20 |
| 1,1,1-Trichloroethane | 110 | | 110 | | 67-130 | 0 | | 20 |
| Bromodichloromethane | 96 | | 96 | | 67-130 | 0 | | 20 |
| trans-1,3-Dichloropropene | 86 | | 90 | | 70-130 | 5 | | 20 |
| cis-1,3-Dichloropropene | 90 | | 94 | | 70-130 | 4 | | 20 |
| 1,1-Dichloropropene | 100 | | 100 | | 70-130 | 0 | | 20 |
| Bromoform | 86 | | 93 | | 54-136 | 8 | | 20 |
| 1,1,2,2-Tetrachloroethane | 78 | | 89 | | 67-130 | 13 | | 20 |
| Benzene | 96 | | 97 | | 70-130 | 1 | | 20 |
| Toluene | 92 | | 92 | | 70-130 | 0 | | 20 |
| Ethylbenzene | 93 | | 94 | | 70-130 | 1 | | 20 |
| Chloromethane | 87 | | 87 | | 64-130 | 0 | | 20 |
| Bromomethane | 96 | | 96 | | 39-139 | 0 | | 20 |

# Lab Control Sample Analysis
## Batch Quality Control

**Project Name:** GROSSINGERS
**Project Number:** 9313
**Lab Number:** L2010093
**Report Date:** 03/18/20

| Parameter | LCS %Recovery | Qual | LCSD %Recovery | Qual | %Recovery Limits | RPD | Qual | RPD Limits |
|---|---|---|---|---|---|---|---|---|
| Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-06,09 Batch: WG1349240-3 WG1349240-4 | | | | | | | | |
| Vinyl chloride | 96 | | 96 | | 55-140 | 0 | | 20 |
| Chloroethane | 110 | | 110 | | 55-138 | 0 | | 20 |
| 1,1-Dichloroethene | 100 | | 100 | | 61-145 | 0 | | 20 |
| trans-1,2-Dichloroethene | 98 | | 100 | | 70-130 | 2 | | 20 |
| Trichloroethene | 100 | | 110 | | 70-130 | 10 | | 20 |
| 1,2-Dichlorobenzene | 90 | | 94 | | 70-130 | 4 | | 20 |
| 1,3-Dichlorobenzene | 93 | | 96 | | 70-130 | 3 | | 20 |
| 1,4-Dichlorobenzene | 90 | | 93 | | 70-130 | 3 | | 20 |
| Methyl tert butyl ether | 90 | | 95 | | 63-130 | 5 | | 20 |
| p/m-Xylene | 95 | | 95 | | 70-130 | 0 | | 20 |
| o-Xylene | 95 | | 95 | | 70-130 | 0 | | 20 |
| cis-1,2-Dichloroethene | 97 | | 99 | | 70-130 | 2 | | 20 |
| Dibromomethane | 90 | | 93 | | 70-130 | 3 | | 20 |
| 1,2,3-Trichloropropane | 81 | | 88 | | 64-130 | 8 | | 20 |
| Acrylonitrile | 83 | | 89 | | 70-130 | 7 | | 20 |
| Styrene | 95 | | 95 | | 70-130 | 0 | | 20 |
| Dichlorodifluoromethane | 88 | | 89 | | 36-147 | 1 | | 20 |
| Acetone | 83 | | 90 | | 58-148 | 8 | | 20 |
| Carbon disulfide | 95 | | 97 | | 51-130 | 2 | | 20 |
| 2-Butanone | 85 | | 92 | | 63-138 | 8 | | 20 |
| Vinyl acetate | 84 | | 87 | | 70-130 | 4 | | 20 |
| 4-Methyl-2-pentanone | 74 | | 85 | | 59-130 | 14 | | 20 |
| 2-Hexanone | 72 | | 81 | | 57-130 | 12 | | 20 |

# Lab Control Sample Analysis
## Batch Quality Control

**Project Name:** GROSSINGERS
**Project Number:** 9313
**Lab Number:** L2010093
**Report Date:** 03/18/20

| Parameter | LCS %Recovery | Qual | LCSD %Recovery | Qual | %Recovery Limits | RPD | Qual | RPD Limits |
|---|---|---|---|---|---|---|---|---|
| Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-06,09 Batch: WG1349240-3 WG1349240-4 | | | | | | | | |
| Bromochloromethane | 100 | | 100 | | 70-130 | 0 | | 20 |
| 2,2-Dichloropropane | 120 | | 120 | | 63-133 | 0 | | 20 |
| 1,2-Dibromoethane | 87 | | 92 | | 70-130 | 6 | | 20 |
| 1,3-Dichloropropane | 85 | | 89 | | 70-130 | 5 | | 20 |
| 1,1,1,2-Tetrachloroethane | 94 | | 94 | | 64-130 | 0 | | 20 |
| Bromobenzene | 91 | | 95 | | 70-130 | 4 | | 20 |
| n-Butylbenzene | 95 | | 98 | | 53-136 | 3 | | 20 |
| sec-Butylbenzene | 94 | | 97 | | 70-130 | 3 | | 20 |
| tert-Butylbenzene | 82 | | 84 | | 70-130 | 2 | | 20 |
| o-Chlorotoluene | 92 | | 95 | | 70-130 | 3 | | 20 |
| p-Chlorotoluene | 92 | | 94 | | 70-130 | 2 | | 20 |
| 1,2-Dibromo-3-chloropropane | 82 | | 93 | | 41-144 | 13 | | 20 |
| Hexachlorobutadiene | 97 | | 100 | | 63-130 | 3 | | 20 |
| Isopropylbenzene | 95 | | 97 | | 70-130 | 2 | | 20 |
| p-Isopropyltoluene | 97 | | 99 | | 70-130 | 2 | | 20 |
| Naphthalene | 76 | | 85 | | 70-130 | 11 | | 20 |
| n-Propylbenzene | 94 | | 97 | | 69-130 | 3 | | 20 |
| 1,2,3-Trichlorobenzene | 87 | | 92 | | 70-130 | 6 | | 20 |
| 1,2,4-Trichlorobenzene | 87 | | 92 | | 70-130 | 6 | | 20 |
| 1,3,5-Trimethylbenzene | 94 | | 97 | | 64-130 | 3 | | 20 |
| 1,2,4-Trimethylbenzene | 94 | | 97 | | 70-130 | 3 | | 20 |
| 1,4-Dioxane | 86 | | 96 | | 56-162 | 11 | | 20 |
| p-Diethylbenzene | 94 | | 95 | | 70-130 | 1 | | 20 |

# Lab Control Sample Analysis

## Batch Quality Control

**Project Name:** GROSSINGERS

**Project Number:** 9313

**Lab Number:** L2010093

**Report Date:** 03/18/20

| Parameter | LCS %Recovery | Qual | LCSD %Recovery | Qual | %Recovery Limits | RPD | Qual | RPD Limits |
|---|---|---|---|---|---|---|---|---|
| Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-06,09 Batch: WG1349240-3 WG1349240-4 | | | | | | | | |
| p-Ethyltoluene | 95 | | 98 | | 70-130 | 3 | | 20 |
| 1,2,4,5-Tetramethylbenzene | 87 | | 90 | | 70-130 | 3 | | 20 |
| Ethyl ether | 86 | | 94 | | 59-134 | 9 | | 20 |
| trans-1,4-Dichloro-2-butene | 81 | | 89 | | 70-130 | 9 | | 20 |

| Surrogate | LCS %Recovery | Qual | LCSD %Recovery | Qual | Acceptance Criteria |
|---|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 98 | | 101 | | 70-130 |
| Toluene-d8 | 95 | | 97 | | 70-130 |
| 4-Bromofluorobenzene | 100 | | 100 | | 70-130 |
| Dibromofluoromethane | 102 | | 101 | | 70-130 |

# SEMIVOLATILES

**Project Name:** GROSSINGERS
**Project Number:** 9313
**Lab Number:** L2010093
**Report Date:** 03/18/20

## SAMPLE RESULTS

Lab ID: L2010093-01
Client ID: MW-203
Sample Location: LIBERTY, NY

Date Collected: 03/05/20 09:00
Date Received: 03/05/20
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 134,LCMSMS-ID
Analytical Date: 03/11/20 15:48
Analyst: SG

Extraction Method: ALPHA 23528
Extraction Date: 03/06/20 15:00

| Parameter | Result | Qualifier | Units | RL | MDL | Dilution Factor |
|---|---|---|---|---|---|---|
| **Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab** | | | | | | |
| Perfluorobutanoic Acid (PFBA) | 2.79 | | ng/l | 2.14 | 0.438 | 1 |
| Perfluoropentanoic Acid (PFPeA) | 1.62 | J | ng/l | 2.14 | 0.425 | 1 |
| Perfluorobutanesulfonic Acid (PFBS) | 1.23 | J | ng/l | 2.14 | 0.255 | 1 |
| Perfluorohexanoic Acid (PFHxA) | 2.13 | J | ng/l | 2.14 | 0.352 | 1 |
| Perfluoroheptanoic Acid (PFHpA) | 1.77 | J | ng/l | 2.14 | 0.242 | 1 |
| Perfluorohexanesulfonic Acid (PFHxS) | 0.914 | J | ng/l | 2.14 | 0.403 | 1 |
| Perfluorooctanoic Acid (PFOA) | 6.00 | | ng/l | 2.14 | 0.253 | 1 |
| 1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS) | ND | | ng/l | 2.14 | 1.43 | 1 |
| Perfluoroheptanesulfonic Acid (PFHpS) | ND | | ng/l | 2.14 | 0.738 | 1 |
| Perfluorononanoic Acid (PFNA) | 0.802 | J | ng/l | 2.14 | 0.335 | 1 |
| Perfluorooctanesulfonic Acid (PFOS) | 27.9 | | ng/l | 2.14 | 0.541 | 1 |
| Perfluorodecanoic Acid (PFDA) | 0.464 | J | ng/l | 2.14 | 0.326 | 1 |
| 1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS) | ND | | ng/l | 2.14 | 1.30 | 1 |
| N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA) | ND | | ng/l | 2.14 | 0.695 | 1 |
| Perfluoroundecanoic Acid (PFUnA) | 0.288 | J | ng/l | 2.14 | 0.279 | 1 |
| Perfluorodecanesulfonic Acid (PFDS) | ND | | ng/l | 2.14 | 1.05 | 1 |
| Perfluorooctanesulfonamide (FOSA) | 0.978 | J | ng/l | 2.14 | 0.622 | 1 |
| N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA) | 2.34 | | ng/l | 2.14 | 0.863 | 1 |
| Perfluorododecanoic Acid (PFDoA) | 1.32 | J | ng/l | 2.14 | 0.399 | 1 |
| Perfluorotridecanoic Acid (PFTrDA) | 0.768 | J | ng/l | 2.14 | 0.351 | 1 |
| Perfluorotetradecanoic Acid (PFTA) | 3.92 | | ng/l | 2.14 | 0.266 | 1 |
| PFOA/PFOS, Total | 33.9 | | ng/l | 2.14 | 0.253 | 1 |

**Project Name:** GROSSINGERS **Lab Number:** L2010093

**Project Number:** 9313 **Report Date:** 03/18/20

## SAMPLE RESULTS

Lab ID: L2010093-01 Date Collected: 03/05/20 09:00

Client ID: MW-203 Date Received: 03/05/20

Sample Location: LIBERTY, NY Field Prep: Not Specified

Sample Depth:

| Parameter | Result | Qualifier | Units | RL | MDL | Dilution Factor |
|---|---|---|---|---|---|---|
| Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab | | | | | | |

| Surrogate (Extracted Internal Standard) | % Recovery | Qualifier | Acceptance Criteria |
|---|---|---|---|
| Perfluoro[13C4]Butanoic Acid (MPFBA) | 100 | | 2-156 |
| Perfluoro[13C5]Pentanoic Acid (M5PFPEA) | 100 | | 16-173 |
| Perfluoro[2,3,4-13C3]Butanesulfonic Acid (M3PFBS) | 96 | | 31-159 |
| Perfluoro[1,2,3,4,6-13C5]Hexanoic Acid (M5PFHxA) | 85 | | 21-145 |
| Perfluoro[1,2,3,4-13C4]Heptanoic Acid (M4PFHpA) | 95 | | 30-139 |
| Perfluoro[1,2,3-13C3]Hexanesulfonic Acid (M3PFHxS) | 102 | | 47-153 |
| Perfluoro[13C8]Octanoic Acid (M8PFOA) | 102 | | 36-149 |
| 1H,1H,2H,2H-Perfluoro[1,2-13C2]Octanesulfonic Acid (M2-6:2FTS) | **300** | Q | 1-244 |
| Perfluoro[13C9]Nonanoic Acid (M9PFNA) | 106 | | 34-146 |
| Perfluoro[13C8]Octanesulfonic Acid (M8PFOS) | 101 | | 42-146 |
| Perfluoro[1,2,3,4,5,6-13C6]Decanoic Acid (M6PFDA) | 93 | | 38-144 |
| 1H,1H,2H,2H-Perfluoro[1,2-13C2]Decanesulfonic Acid (M2-8:2FTS) | **231** | Q | 7-170 |
| N-Deuteriomethylperfluoro-1-octanesulfonamidoacetic Acid (d3-NMeFOSAA) | 93 | | 1-181 |
| Perfluoro[1,2,3,4,5,6,7-13C7]Undecanoic Acid (M7-PFUDA) | 95 | | 40-144 |
| Perfluoro[13C8]Octanesulfonamide (M8FOSA) | 38 | | 1-87 |
| N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA) | 98 | | 23-146 |
| Perfluoro[1,2-13C2]Dodecanoic Acid (MPFDOA) | 80 | | 24-161 |
| Perfluoro[1,2-13C2]Tetradecanoic Acid (M2PFTEDA) | 77 | | 33-143 |

**Project Name:** GROSSINGERS
**Project Number:** 9313
**Lab Number:** L2010093
**Report Date:** 03/18/20

## SAMPLE RESULTS

Lab ID: L2010093-02
Client ID: MW-204
Sample Location: LIBERTY, NY

Date Collected: 03/05/20 11:30
Date Received: 03/05/20
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 134,LCMSMS-ID
Analytical Date: 03/11/20 16:21
Analyst: SG

Extraction Method: ALPHA 23528
Extraction Date: 03/06/20 15:00

| Parameter | Result | Qualifier | Units | RL | MDL | Dilution Factor |
|---|---|---|---|---|---|---|
| **Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab** | | | | | | |
| Perfluorobutanoic Acid (PFBA) | 0.971 | J | ng/l | 2.04 | 0.416 | 1 |
| Perfluoropentanoic Acid (PFPeA) | 0.812 | J | ng/l | 2.04 | 0.404 | 1 |
| Perfluorobutanesulfonic Acid (PFBS) | 0.249 | J | ng/l | 2.04 | 0.243 | 1 |
| Perfluorohexanoic Acid (PFHxA) | 0.837 | J | ng/l | 2.04 | 0.335 | 1 |
| Perfluoroheptanoic Acid (PFHpA) | 0.563 | J | ng/l | 2.04 | 0.230 | 1 |
| Perfluorohexanesulfonic Acid (PFHxS) | ND | | ng/l | 2.04 | 0.384 | 1 |
| Perfluorooctanoic Acid (PFOA) | 2.22 | | ng/l | 2.04 | 0.241 | 1 |
| 1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS) | ND | | ng/l | 2.04 | 1.36 | 1 |
| Perfluoroheptanesulfonic Acid (PFHpS) | ND | | ng/l | 2.04 | 0.702 | 1 |
| Perfluorononanoic Acid (PFNA) | ND | | ng/l | 2.04 | 0.318 | 1 |
| Perfluorooctanesulfonic Acid (PFOS) | 5.05 | | ng/l | 2.04 | 0.514 | 1 |
| Perfluorodecanoic Acid (PFDA) | ND | | ng/l | 2.04 | 0.310 | 1 |
| 1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS) | ND | | ng/l | 2.04 | 1.24 | 1 |
| N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA) | ND | | ng/l | 2.04 | 0.661 | 1 |
| Perfluoroundecanoic Acid (PFUnA) | ND | | ng/l | 2.04 | 0.265 | 1 |
| Perfluorodecanesulfonic Acid (PFDS) | ND | | ng/l | 2.04 | 1.00 | 1 |
| Perfluorooctanesulfonamide (FOSA) | ND | | ng/l | 2.04 | 0.592 | 1 |
| N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA) | ND | | ng/l | 2.04 | 0.820 | 1 |
| Perfluorododecanoic Acid (PFDoA) | 0.588 | J | ng/l | 2.04 | 0.380 | 1 |
| Perfluorotridecanoic Acid (PFTrDA) | 0.384 | J | ng/l | 2.04 | 0.334 | 1 |
| Perfluorotetradecanoic Acid (PFTA) | 1.66 | J | ng/l | 2.04 | 0.253 | 1 |
| PFOA/PFOS, Total | 7.27 | | ng/l | 2.04 | 0.241 | 1 |

**Project Name:** GROSSINGERS **Lab Number:** L2010093

**Project Number:** 9313 **Report Date:** 03/18/20

## SAMPLE RESULTS

Lab ID: L2010093-02 Date Collected: 03/05/20 11:30

Client ID: MW-204 Date Received: 03/05/20

Sample Location: LIBERTY, NY Field Prep: Not Specified

Sample Depth:

| Parameter | Result | Qualifier | Units | RL | MDL | Dilution Factor |
|---|---|---|---|---|---|---|
| Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab | | | | | | |

| Surrogate (Extracted Internal Standard) | % Recovery | Qualifier | Acceptance Criteria |
|---|---|---|---|
| Perfluoro[13C4]Butanoic Acid (MPFBA) | 88 | | 2-156 |
| Perfluoro[13C5]Pentanoic Acid (M5PFPEA) | 90 | | 16-173 |
| Perfluoro[2,3,4-13C3]Butanesulfonic Acid (M3PFBS) | 95 | | 31-159 |
| Perfluoro[1,2,3,4,6-13C5]Hexanoic Acid (M5PFHxA) | 78 | | 21-145 |
| Perfluoro[1,2,3,4-13C4]Heptanoic Acid (M4PFHpA) | 85 | | 30-139 |
| Perfluoro[1,2,3-13C3]Hexanesulfonic Acid (M3PFHxS) | 105 | | 47-153 |
| Perfluoro[13C8]Octanoic Acid (M8PFOA) | 86 | | 36-149 |
| 1H,1H,2H,2H-Perfluoro[1,2-13C2]Octanesulfonic Acid (M2-6:2FTS) | 179 | | 1-244 |
| Perfluoro[13C9]Nonanoic Acid (M9PFNA) | 91 | | 34-146 |
| Perfluoro[13C8]Octanesulfonic Acid (M8PFOS) | 100 | | 42-146 |
| Perfluoro[1,2,3,4,5,6-13C6]Decanoic Acid (M6PFDA) | 89 | | 38-144 |
| 1H,1H,2H,2H-Perfluoro[1,2-13C2]Decanesulfonic Acid (M2-8:2FTS) | 141 | | 7-170 |
| N-Deuteriomethylperfluoro-1-octanesulfonamidoacetic Acid (d3-NMeFOSAA) | 72 | | 1-181 |
| Perfluoro[1,2,3,4,5,6,7-13C7]Undecanoic Acid (M7-PFUDA) | 92 | | 40-144 |
| Perfluoro[13C8]Octanesulfonamide (M8FOSA) | 34 | | 1-87 |
| N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA) | 70 | | 23-146 |
| Perfluoro[1,2-13C2]Dodecanoic Acid (MPFDOA) | 81 | | 24-161 |
| Perfluoro[1,2-13C2]Tetradecanoic Acid (M2PFTEDA) | 73 | | 33-143 |

**Project Name:** GROSSINGERS
**Project Number:** 9313
**Lab Number:** L2010093
**Report Date:** 03/18/20

## SAMPLE RESULTS

Lab ID: L2010093-03
Client ID: MW-205
Sample Location: LIBERTY, NY

Date Collected: 03/05/20 10:35
Date Received: 03/05/20
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 134,LCMSMS-ID
Analytical Date: 03/11/20 16:38
Analyst: SG

Extraction Method: ALPHA 23528
Extraction Date: 03/06/20 15:00

| Parameter | Result | Qualifier | Units | RL | MDL | Dilution Factor |
|---|---|---|---|---|---|---|
| **Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab** | | | | | | |
| Perfluorobutanoic Acid (PFBA) | 0.597 | J | ng/l | 1.90 | 0.388 | 1 |
| Perfluoropentanoic Acid (PFPeA) | 0.646 | J | ng/l | 1.90 | 0.376 | 1 |
| Perfluorobutanesulfonic Acid (PFBS) | ND | | ng/l | 1.90 | 0.226 | 1 |
| Perfluorohexanoic Acid (PFHxA) | 0.597 | J | ng/l | 1.90 | 0.312 | 1 |
| Perfluoroheptanoic Acid (PFHpA) | 0.414 | J | ng/l | 1.90 | 0.214 | 1 |
| Perfluorohexanesulfonic Acid (PFHxS) | ND | | ng/l | 1.90 | 0.357 | 1 |
| Perfluorooctanoic Acid (PFOA) | 2.19 | | ng/l | 1.90 | 0.224 | 1 |
| 1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS) | ND | | ng/l | 1.90 | 1.27 | 1 |
| Perfluoroheptanesulfonic Acid (PFHpS) | ND | | ng/l | 1.90 | 0.654 | 1 |
| Perfluorononanoic Acid (PFNA) | 0.300 | J | ng/l | 1.90 | 0.296 | 1 |
| Perfluorooctanesulfonic Acid (PFOS) | 2.13 | | ng/l | 1.90 | 0.479 | 1 |
| Perfluorodecanoic Acid (PFDA) | ND | | ng/l | 1.90 | 0.289 | 1 |
| 1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS) | ND | | ng/l | 1.90 | 1.15 | 1 |
| N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA) | ND | | ng/l | 1.90 | 0.616 | 1 |
| Perfluoroundecanoic Acid (PFUnA) | ND | | ng/l | 1.90 | 0.247 | 1 |
| Perfluorodecanesulfonic Acid (PFDS) | ND | | ng/l | 1.90 | 0.932 | 1 |
| Perfluorooctanesulfonamide (FOSA) | ND | | ng/l | 1.90 | 0.551 | 1 |
| N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA) | ND | | ng/l | 1.90 | 0.764 | 1 |
| Perfluorododecanoic Acid (PFDoA) | ND | | ng/l | 1.90 | 0.354 | 1 |
| Perfluorotridecanoic Acid (PFTrDA) | ND | | ng/l | 1.90 | 0.311 | 1 |
| Perfluorotetradecanoic Acid (PFTA) | 1.13 | J | ng/l | 1.90 | 0.236 | 1 |
| PFOA/PFOS, Total | 4.32 | | ng/l | 1.90 | 0.224 | 1 |

**Project Name:** GROSSINGERS **Lab Number:** L2010093

**Project Number:** 9313 **Report Date:** 03/18/20

## SAMPLE RESULTS

Lab ID: L2010093-03 Date Collected: 03/05/20 10:35

Client ID: MW-205 Date Received: 03/05/20

Sample Location: LIBERTY, NY Field Prep: Not Specified

Sample Depth:

| Parameter | Result | Qualifier | Units | RL | MDL | Dilution Factor |
|---|---|---|---|---|---|---|
| Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab | | | | | | |

| Surrogate (Extracted Internal Standard) | % Recovery | Qualifier | Acceptance Criteria |
|---|---|---|---|
| Perfluoro[13C4]Butanoic Acid (MPFBA) | 87 | | 2-156 |
| Perfluoro[13C5]Pentanoic Acid (M5PFPEA) | 88 | | 16-173 |
| Perfluoro[2,3,4-13C3]Butanesulfonic Acid (M3PFBS) | 100 | | 31-159 |
| Perfluoro[1,2,3,4,6-13C5]Hexanoic Acid (M5PFHxA) | 76 | | 21-145 |
| Perfluoro[1,2,3,4-13C4]Heptanoic Acid (M4PFHpA) | 86 | | 30-139 |
| Perfluoro[1,2,3-13C3]Hexanesulfonic Acid (M3PFHxS) | 112 | | 47-153 |
| Perfluoro[13C8]Octanoic Acid (M8PFOA) | 88 | | 36-149 |
| 1H,1H,2H,2H-Perfluoro[1,2-13C2]Octanesulfonic Acid (M2-6:2FTS) | 174 | | 1-244 |
| Perfluoro[13C9]Nonanoic Acid (M9PFNA) | 90 | | 34-146 |
| Perfluoro[13C8]Octanesulfonic Acid (M8PFOS) | 103 | | 42-146 |
| Perfluoro[1,2,3,4,5,6-13C6]Decanoic Acid (M6PFDA) | 88 | | 38-144 |
| 1H,1H,2H,2H-Perfluoro[1,2-13C2]Decanesulfonic Acid (M2-8:2FTS) | 135 | | 7-170 |
| N-Deuteriomethylperfluoro-1-octanesulfonamidoacetic Acid (d3-NMeFOSAA) | 69 | | 1-181 |
| Perfluoro[1,2,3,4,5,6,7-13C7]Undecanoic Acid (M7-PFUDA) | 90 | | 40-144 |
| Perfluoro[13C8]Octanesulfonamide (M8FOSA) | 41 | | 1-87 |
| N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA) | 67 | | 23-146 |
| Perfluoro[1,2-13C2]Dodecanoic Acid (MPFDOA) | 77 | | 24-161 |
| Perfluoro[1,2-13C2]Tetradecanoic Acid (M2PFTEDA) | 76 | | 33-143 |

**Project Name:** GROSSINGERS
**Project Number:** 9313
**Lab Number:** L2010093
**Report Date:** 03/18/20

## SAMPLE RESULTS

Lab ID: L2010093-04
Client ID: MW-206
Sample Location: LIBERTY, NY

Date Collected: 03/05/20 12:20
Date Received: 03/05/20
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 134,LCMSMS-ID
Analytical Date: 03/11/20 16:54
Analyst: SG

Extraction Method: ALPHA 23528
Extraction Date: 03/06/20 15:00

| Parameter | Result | Qualifier | Units | RL | MDL | Dilution Factor |
|---|---|---|---|---|---|---|
| **Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab** | | | | | | |
| Perfluorobutanoic Acid (PFBA) | 9.62 | | ng/l | 1.91 | 0.389 | 1 |
| Perfluoropentanoic Acid (PFPeA) | 4.08 | | ng/l | 1.91 | 0.378 | 1 |
| Perfluorobutanesulfonic Acid (PFBS) | 2.22 | | ng/l | 1.91 | 0.227 | 1 |
| Perfluorohexanoic Acid (PFHxA) | 5.43 | | ng/l | 1.91 | 0.313 | 1 |
| Perfluoroheptanoic Acid (PFHpA) | 5.37 | | ng/l | 1.91 | 0.215 | 1 |
| Perfluorohexanesulfonic Acid (PFHxS) | 2.91 | | ng/l | 1.91 | 0.359 | 1 |
| Perfluorooctanoic Acid (PFOA) | 25.5 | | ng/l | 1.91 | 0.225 | 1 |
| 1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS) | ND | | ng/l | 1.91 | 1.27 | 1 |
| Perfluoroheptanesulfonic Acid (PFHpS) | 0.809 | J | ng/l | 1.91 | 0.656 | 1 |
| Perfluorononanoic Acid (PFNA) | 1.29 | J | ng/l | 1.91 | 0.298 | 1 |
| Perfluorooctanesulfonic Acid (PFOS) | 47.9 | | ng/l | 1.91 | 0.481 | 1 |
| Perfluorodecanoic Acid (PFDA) | 0.561 | J | ng/l | 1.91 | 0.290 | 1 |
| 1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS) | ND | | ng/l | 1.91 | 1.16 | 1 |
| N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA) | ND | | ng/l | 1.91 | 0.618 | 1 |
| Perfluoroundecanoic Acid (PFUnA) | ND | | ng/l | 1.91 | 0.248 | 1 |
| Perfluorodecanesulfonic Acid (PFDS) | ND | | ng/l | 1.91 | 0.935 | 1 |
| Perfluorooctanesulfonamide (FOSA) | ND | | ng/l | 1.91 | 0.553 | 1 |
| N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA) | ND | | ng/l | 1.91 | 0.767 | 1 |
| Perfluorododecanoic Acid (PFDoA) | ND | | ng/l | 1.91 | 0.355 | 1 |
| Perfluorotridecanoic Acid (PFTrDA) | ND | | ng/l | 1.91 | 0.312 | 1 |
| Perfluorotetradecanoic Acid (PFTA) | 0.802 | J | ng/l | 1.91 | 0.237 | 1 |
| PFOA/PFOS, Total | 73.4 | | ng/l | 1.91 | 0.225 | 1 |

**Project Name:** GROSSINGERS **Lab Number:** L2010093

**Project Number:** 9313 **Report Date:** 03/18/20

## SAMPLE RESULTS

Lab ID: L2010093-04 Date Collected: 03/05/20 12:20

Client ID: MW-206 Date Received: 03/05/20

Sample Location: LIBERTY, NY Field Prep: Not Specified

Sample Depth:

| Parameter | Result | Qualifier | Units | RL | MDL | Dilution Factor |
|---|---|---|---|---|---|---|

Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab

| Surrogate (Extracted Internal Standard) | % Recovery | Qualifier | Acceptance Criteria |
|---|---|---|---|
| Perfluoro[13C4]Butanoic Acid (MPFBA) | 101 | | 2-156 |
| Perfluoro[13C5]Pentanoic Acid (M5PFPEA) | 100 | | 16-173 |
| Perfluoro[2,3,4-13C3]Butanesulfonic Acid (M3PFBS) | 95 | | 31-159 |
| Perfluoro[1,2,3,4,6-13C5]Hexanoic Acid (M5PFHxA) | 84 | | 21-145 |
| Perfluoro[1,2,3,4-13C4]Heptanoic Acid (M4PFHpA) | 93 | | 30-139 |
| Perfluoro[1,2,3-13C3]Hexanesulfonic Acid (M3PFHxS) | 116 | | 47-153 |
| Perfluoro[13C8]Octanoic Acid (M8PFOA) | 101 | | 36-149 |
| 1H,1H,2H,2H-Perfluoro[1,2-13C2]Octanesulfonic Acid (M2-6:2FTS) | 240 | | 1-244 |
| Perfluoro[13C9]Nonanoic Acid (M9PFNA) | 104 | | 34-146 |
| Perfluoro[13C8]Octanesulfonic Acid (M8PFOS) | 109 | | 42-146 |
| Perfluoro[1,2,3,4,5,6-13C6]Decanoic Acid (M6PFDA) | 100 | | 38-144 |
| 1H,1H,2H,2H-Perfluoro[1,2-13C2]Decanesulfonic Acid (M2-8:2FTS) | **180** | Q | 7-170 |
| N-Deuteriomethylperfluoro-1-octanesulfonamidoacetic Acid (d3-NMeFOSAA) | 84 | | 1-181 |
| Perfluoro[1,2,3,4,5,6,7-13C7]Undecanoic Acid (M7-PFUDA) | 98 | | 40-144 |
| Perfluoro[13C8]Octanesulfonamide (M8FOSA) | 46 | | 1-87 |
| N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA) | 84 | | 23-146 |
| Perfluoro[1,2-13C2]Dodecanoic Acid (MPFDOA) | 84 | | 24-161 |
| Perfluoro[1,2-13C2]Tetradecanoic Acid (M2PFTEDA) | 82 | | 33-143 |

**Project Name:** GROSSINGERS
**Project Number:** 9313
**Lab Number:** L2010093
**Report Date:** 03/18/20

## SAMPLE RESULTS

Lab ID: L2010093-05
Client ID: MW-208
Sample Location: LIBERTY, NY

Date Collected: 03/05/20 13:20
Date Received: 03/05/20
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 134,LCMSMS-ID
Analytical Date: 03/11/20 17:11
Analyst: SG

Extraction Method: ALPHA 23528
Extraction Date: 03/06/20 15:00

| Parameter | Result | Qualifier | Units | RL | MDL | Dilution Factor |
|---|---|---|---|---|---|---|
| **Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab** | | | | | | |
| Perfluorobutanoic Acid (PFBA) | 10.3 | | ng/l | 1.96 | 0.400 | 1 |
| Perfluoropentanoic Acid (PFPeA) | 6.12 | | ng/l | 1.96 | 0.388 | 1 |
| Perfluorobutanesulfonic Acid (PFBS) | 2.40 | | ng/l | 1.96 | 0.233 | 1 |
| Perfluorohexanoic Acid (PFHxA) | 8.38 | | ng/l | 1.96 | 0.322 | 1 |
| Perfluoroheptanoic Acid (PFHpA) | 6.38 | | ng/l | 1.96 | 0.221 | 1 |
| Perfluorohexanesulfonic Acid (PFHxS) | 6.24 | | ng/l | 1.96 | 0.369 | 1 |
| Perfluorooctanoic Acid (PFOA) | 38.2 | | ng/l | 1.96 | 0.231 | 1 |
| 1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS) | 1.87 | J | ng/l | 1.96 | 1.30 | 1 |
| Perfluoroheptanesulfonic Acid (PFHpS) | 1.01 | J | ng/l | 1.96 | 0.674 | 1 |
| Perfluorononanoic Acid (PFNA) | 2.58 | | ng/l | 1.96 | 0.306 | 1 |
| Perfluorooctanesulfonic Acid (PFOS) | 68.2 | | ng/l | 1.96 | 0.494 | 1 |
| Perfluorodecanoic Acid (PFDA) | 3.69 | | ng/l | 1.96 | 0.298 | 1 |
| 1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS) | ND | | ng/l | 1.96 | 1.19 | 1 |
| N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA) | 8.18 | | ng/l | 1.96 | 0.635 | 1 |
| Perfluoroundecanoic Acid (PFUnA) | 0.792 | J | ng/l | 1.96 | 0.255 | 1 |
| Perfluorodecanesulfonic Acid (PFDS) | ND | | ng/l | 1.96 | 0.961 | 1 |
| Perfluorooctanesulfonamide (FOSA) | 16.2 | | ng/l | 1.96 | 0.569 | 1 |
| N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA) | 9.71 | | ng/l | 1.96 | 0.788 | 1 |
| Perfluorododecanoic Acid (PFDoA) | 0.518 | J | ng/l | 1.96 | 0.365 | 1 |
| Perfluorotridecanoic Acid (PFTrDA) | ND | | ng/l | 1.96 | 0.321 | 1 |
| Perfluorotetradecanoic Acid (PFTA) | 0.690 | J | ng/l | 1.96 | 0.243 | 1 |
| PFOA/PFOS, Total | 106 | | ng/l | 1.96 | 0.231 | 1 |

**Project Name:** GROSSINGERS **Lab Number:** L2010093

**Project Number:** 9313 **Report Date:** 03/18/20

## SAMPLE RESULTS

Lab ID: L2010093-05 Date Collected: 03/05/20 13:20

Client ID: MW-208 Date Received: 03/05/20

Sample Location: LIBERTY, NY Field Prep: Not Specified

Sample Depth:

| Parameter | Result | Qualifier | Units | RL | MDL | Dilution Factor |
|---|---|---|---|---|---|---|
| Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab | | | | | | |

| Surrogate (Extracted Internal Standard) | % Recovery | Qualifier | Acceptance Criteria |
|---|---|---|---|
| Perfluoro[13C4]Butanoic Acid (MPFBA) | 103 | | 2-156 |
| Perfluoro[13C5]Pentanoic Acid (M5PFPEA) | 94 | | 16-173 |
| Perfluoro[2,3,4-13C3]Butanesulfonic Acid (M3PFBS) | 100 | | 31-159 |
| Perfluoro[1,2,3,4,6-13C5]Hexanoic Acid (M5PFHxA) | 82 | | 21-145 |
| Perfluoro[1,2,3,4-13C4]Heptanoic Acid (M4PFHpA) | 95 | | 30-139 |
| Perfluoro[1,2,3-13C3]Hexanesulfonic Acid (M3PFHxS) | 109 | | 47-153 |
| Perfluoro[13C8]Octanoic Acid (M8PFOA) | 105 | | 36-149 |
| 1H,1H,2H,2H-Perfluoro[1,2-13C2]Octanesulfonic Acid (M2-6:2FTS) | **306** | Q | 1-244 |
| Perfluoro[13C9]Nonanoic Acid (M9PFNA) | 113 | | 34-146 |
| Perfluoro[13C8]Octanesulfonic Acid (M8PFOS) | 100 | | 42-146 |
| Perfluoro[1,2,3,4,5,6-13C6]Decanoic Acid (M6PFDA) | 100 | | 38-144 |
| 1H,1H,2H,2H-Perfluoro[1,2-13C2]Decanesulfonic Acid (M2-8:2FTS) | **311** | Q | 7-170 |
| N-Deuteriomethylperfluoro-1-octanesulfonamidoacetic Acid (d3-NMeFOSAA) | 112 | | 1-181 |
| Perfluoro[1,2,3,4,5,6,7-13C7]Undecanoic Acid (M7-PFUDA) | 102 | | 40-144 |
| Perfluoro[13C8]Octanesulfonamide (M8FOSA) | 45 | | 1-87 |
| N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA) | 109 | | 23-146 |
| Perfluoro[1,2-13C2]Dodecanoic Acid (MPFDOA) | 88 | | 24-161 |
| Perfluoro[1,2-13C2]Tetradecanoic Acid (M2PFTEDA) | 80 | | 33-143 |

**Project Name:** GROSSINGERS
**Project Number:** 9313
**Lab Number:** L2010093
**Report Date:** 03/18/20

## SAMPLE RESULTS

Lab ID: L2010093-06
Client ID: MW-207
Sample Location: LIBERTY, NY

Date Collected: 03/05/20 15:30
Date Received: 03/05/20
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 134,LCMSMS-ID
Analytical Date: 03/11/20 17:27
Analyst: SG

Extraction Method: ALPHA 23528
Extraction Date: 03/06/20 15:00

| Parameter | Result | Qualifier | Units | RL | MDL | Dilution Factor |
|---|---|---|---|---|---|---|
| **Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab** | | | | | | |
| Perfluorobutanoic Acid (PFBA) | 1.94 | J | ng/l | 2.09 | 0.427 | 1 |
| Perfluoropentanoic Acid (PFPeA) | 1.62 | J | ng/l | 2.09 | 0.414 | 1 |
| Perfluorobutanesulfonic Acid (PFBS) | 0.749 | J | ng/l | 2.09 | 0.249 | 1 |
| Perfluorohexanoic Acid (PFHxA) | 1.61 | J | ng/l | 2.09 | 0.343 | 1 |
| Perfluoroheptanoic Acid (PFHpA) | 1.35 | J | ng/l | 2.09 | 0.236 | 1 |
| Perfluorohexanesulfonic Acid (PFHxS) | 1.15 | J | ng/l | 2.09 | 0.393 | 1 |
| Perfluorooctanoic Acid (PFOA) | 6.59 | | ng/l | 2.09 | 0.247 | 1 |
| 1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS) | ND | | ng/l | 2.09 | 1.39 | 1 |
| Perfluoroheptanesulfonic Acid (PFHpS) | ND | | ng/l | 2.09 | 0.720 | 1 |
| Perfluorononanoic Acid (PFNA) | 0.644 | J | ng/l | 2.09 | 0.326 | 1 |
| Perfluorooctanesulfonic Acid (PFOS) | 11.3 | | ng/l | 2.09 | 0.527 | 1 |
| Perfluorodecanoic Acid (PFDA) | ND | | ng/l | 2.09 | 0.318 | 1 |
| 1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS) | ND | | ng/l | 2.09 | 1.27 | 1 |
| N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA) | ND | | ng/l | 2.09 | 0.678 | 1 |
| Perfluoroundecanoic Acid (PFUnA) | ND | | ng/l | 2.09 | 0.272 | 1 |
| Perfluorodecanesulfonic Acid (PFDS) | ND | | ng/l | 2.09 | 1.02 | 1 |
| Perfluorooctanesulfonamide (FOSA) | ND | | ng/l | 2.09 | 0.607 | 1 |
| N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA) | ND | | ng/l | 2.09 | 0.841 | 1 |
| Perfluorododecanoic Acid (PFDoA) | ND | | ng/l | 2.09 | 0.389 | 1 |
| Perfluorotridecanoic Acid (PFTrDA) | ND | | ng/l | 2.09 | 0.342 | 1 |
| Perfluorotetradecanoic Acid (PFTA) | 0.561 | J | ng/l | 2.09 | 0.259 | 1 |
| PFOA/PFOS, Total | 17.9 | | ng/l | 2.09 | 0.247 | 1 |

**Project Name:** GROSSINGERS **Lab Number:** L2010093

**Project Number:** 9313 **Report Date:** 03/18/20

## SAMPLE RESULTS

Lab ID: L2010093-06 Date Collected: 03/05/20 15:30

Client ID: MW-207 Date Received: 03/05/20

Sample Location: LIBERTY, NY Field Prep: Not Specified

Sample Depth:

| Parameter | Result | Qualifier | Units | RL | MDL | Dilution Factor |
|---|---|---|---|---|---|---|
| Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab | | | | | | |

| Surrogate (Extracted Internal Standard) | % Recovery | Qualifier | Acceptance Criteria |
|---|---|---|---|
| Perfluoro[13C4]Butanoic Acid (MPFBA) | 92 | | 2-156 |
| Perfluoro[13C5]Pentanoic Acid (M5PFPEA) | 96 | | 16-173 |
| Perfluoro[2,3,4-13C3]Butanesulfonic Acid (M3PFBS) | 99 | | 31-159 |
| Perfluoro[1,2,3,4,6-13C5]Hexanoic Acid (M5PFHxA) | 80 | | 21-145 |
| Perfluoro[1,2,3,4-13C4]Heptanoic Acid (M4PFHpA) | 91 | | 30-139 |
| Perfluoro[1,2,3-13C3]Hexanesulfonic Acid (M3PFHxS) | 106 | | 47-153 |
| Perfluoro[13C8]Octanoic Acid (M8PFOA) | 95 | | 36-149 |
| 1H,1H,2H,2H-Perfluoro[1,2-13C2]Octanesulfonic Acid (M2-6:2FTS) | 191 | | 1-244 |
| Perfluoro[13C9]Nonanoic Acid (M9PFNA) | 97 | | 34-146 |
| Perfluoro[13C8]Octanesulfonic Acid (M8PFOS) | 93 | | 42-146 |
| Perfluoro[1,2,3,4,5,6-13C6]Decanoic Acid (M6PFDA) | 89 | | 38-144 |
| 1H,1H,2H,2H-Perfluoro[1,2-13C2]Decanesulfonic Acid (M2-8:2FTS) | 137 | | 7-170 |
| N-Deuteriomethylperfluoro-1-octanesulfonamidoacetic Acid (d3-NMeFOSAA) | 71 | | 1-181 |
| Perfluoro[1,2,3,4,5,6,7-13C7]Undecanoic Acid (M7-PFUDA) | 88 | | 40-144 |
| Perfluoro[13C8]Octanesulfonamide (M8FOSA) | 32 | | 1-87 |
| N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA) | 70 | | 23-146 |
| Perfluoro[1,2-13C2]Dodecanoic Acid (MPFDOA) | 77 | | 24-161 |
| Perfluoro[1,2-13C2]Tetradecanoic Acid (M2PFTEDA) | 77 | | 33-143 |

**Project Name:** GROSSINGERS
**Project Number:** 9313
**Lab Number:** L2010093
**Report Date:** 03/18/20

## SAMPLE RESULTS

Lab ID: L2010093-07
Client ID: FB
Sample Location: LIBERTY, NY

Date Collected: 03/05/20 14:50
Date Received: 03/05/20
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 134,LCMSMS-ID
Analytical Date: 03/11/20 20:13
Analyst: SG

Extraction Method: ALPHA 23528
Extraction Date: 03/06/20 15:00

| Parameter | Result | Qualifier | Units | RL | MDL | Dilution Factor |
|---|---|---|---|---|---|---|
| **Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab** | | | | | | |
| Perfluorobutanoic Acid (PFBA) | ND | | ng/l | 1.87 | 0.382 | 1 |
| Perfluoropentanoic Acid (PFPeA) | ND | | ng/l | 1.87 | 0.371 | 1 |
| Perfluorobutanesulfonic Acid (PFBS) | ND | | ng/l | 1.87 | 0.223 | 1 |
| Perfluorohexanoic Acid (PFHxA) | 0.318 | J | ng/l | 1.87 | 0.307 | 1 |
| Perfluoroheptanoic Acid (PFHpA) | ND | | ng/l | 1.87 | 0.211 | 1 |
| Perfluorohexanesulfonic Acid (PFHxS) | ND | | ng/l | 1.87 | 0.352 | 1 |
| Perfluorooctanoic Acid (PFOA) | ND | | ng/l | 1.87 | 0.221 | 1 |
| 1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS) | ND | | ng/l | 1.87 | 1.25 | 1 |
| Perfluoroheptanesulfonic Acid (PFHpS) | ND | | ng/l | 1.87 | 0.644 | 1 |
| Perfluorononanoic Acid (PFNA) | ND | | ng/l | 1.87 | 0.292 | 1 |
| Perfluorooctanesulfonic Acid (PFOS) | ND | | ng/l | 1.87 | 0.472 | 1 |
| Perfluorodecanoic Acid (PFDA) | ND | | ng/l | 1.87 | 0.285 | 1 |
| 1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS) | ND | | ng/l | 1.87 | 1.13 | 1 |
| N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA) | ND | | ng/l | 1.87 | 0.607 | 1 |
| Perfluoroundecanoic Acid (PFUnA) | ND | | ng/l | 1.87 | 0.243 | 1 |
| Perfluorodecanesulfonic Acid (PFDS) | ND | | ng/l | 1.87 | 0.918 | 1 |
| Perfluorooctanesulfonamide (FOSA) | ND | | ng/l | 1.87 | 0.543 | 1 |
| N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA) | ND | | ng/l | 1.87 | 0.753 | 1 |
| Perfluorododecanoic Acid (PFDoA) | ND | | ng/l | 1.87 | 0.348 | 1 |
| Perfluorotridecanoic Acid (PFTrDA) | ND | | ng/l | 1.87 | 0.306 | 1 |
| Perfluorotetradecanoic Acid (PFTA) | ND | | ng/l | 1.87 | 0.232 | 1 |
| PFOA/PFOS, Total | ND | | ng/l | 1.87 | 0.221 | 1 |

**Project Name:** GROSSINGERS **Lab Number:** L2010093

**Project Number:** 9313 **Report Date:** 03/18/20

## SAMPLE RESULTS

Lab ID: L2010093-07 Date Collected: 03/05/20 14:50

Client ID: FB Date Received: 03/05/20

Sample Location: LIBERTY, NY Field Prep: Not Specified

Sample Depth:

| Parameter | Result | Qualifier | Units | RL | MDL | Dilution Factor |
|---|---|---|---|---|---|---|
| Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab | | | | | | |

| Surrogate (Extracted Internal Standard) | % Recovery | Qualifier | Acceptance Criteria |
|---|---|---|---|
| Perfluoro[13C4]Butanoic Acid (MPFBA) | 100 | | 2-156 |
| Perfluoro[13C5]Pentanoic Acid (M5PFPEA) | 117 | | 16-173 |
| Perfluoro[2,3,4-13C3]Butanesulfonic Acid (M3PFBS) | 97 | | 31-159 |
| Perfluoro[1,2,3,4,6-13C5]Hexanoic Acid (M5PFHxA) | 96 | | 21-145 |
| Perfluoro[1,2,3,4-13C4]Heptanoic Acid (M4PFHpA) | 100 | | 30-139 |
| Perfluoro[1,2,3-13C3]Hexanesulfonic Acid (M3PFHxS) | 103 | | 47-153 |
| Perfluoro[13C8]Octanoic Acid (M8PFOA) | 98 | | 36-149 |
| 1H,1H,2H,2H-Perfluoro[1,2-13C2]Octanesulfonic Acid (M2-6:2FTS) | 110 | | 1-244 |
| Perfluoro[13C9]Nonanoic Acid (M9PFNA) | 99 | | 34-146 |
| Perfluoro[13C8]Octanesulfonic Acid (M8PFOS) | 95 | | 42-146 |
| Perfluoro[1,2,3,4,5,6-13C6]Decanoic Acid (M6PFDA) | 97 | | 38-144 |
| 1H,1H,2H,2H-Perfluoro[1,2-13C2]Decanesulfonic Acid (M2-8:2FTS) | 128 | | 7-170 |
| N-Deuteriomethylperfluoro-1-octanesulfonamidoacetic Acid (d3-NMeFOSAA) | 88 | | 1-181 |
| Perfluoro[1,2,3,4,5,6,7-13C7]Undecanoic Acid (M7-PFUDA) | 102 | | 40-144 |
| Perfluoro[13C8]Octanesulfonamide (M8FOSA) | 60 | | 1-87 |
| N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA) | 78 | | 23-146 |
| Perfluoro[1,2-13C2]Dodecanoic Acid (MPFDOA) | 89 | | 24-161 |
| Perfluoro[1,2-13C2]Tetradecanoic Acid (M2PFTEDA) | 86 | | 33-143 |

**Project Name:** GROSSINGERS
**Project Number:** 9313
**Lab Number:** L2010093
**Report Date:** 03/18/20

## SAMPLE RESULTS

Lab ID: L2010093-09
Client ID: DUP
Sample Location: LIBERTY, NY

Date Collected: 03/05/20 00:00
Date Received: 03/05/20
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 134,LCMSMS-ID
Analytical Date: 03/11/20 20:29
Analyst: SG

Extraction Method: ALPHA 23528
Extraction Date: 03/06/20 15:00

| Parameter | Result | Qualifier | Units | RL | MDL | Dilution Factor |
|---|---|---|---|---|---|---|
| **Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab** | | | | | | |
| Perfluorobutanoic Acid (PFBA) | 11.9 | | ng/l | 1.99 | 0.406 | 1 |
| Perfluoropentanoic Acid (PFPeA) | 6.22 | | ng/l | 1.99 | 0.394 | 1 |
| Perfluorobutanesulfonic Acid (PFBS) | 2.67 | | ng/l | 1.99 | 0.237 | 1 |
| Perfluorohexanoic Acid (PFHxA) | 8.50 | | ng/l | 1.99 | 0.327 | 1 |
| Perfluoroheptanoic Acid (PFHpA) | 6.15 | | ng/l | 1.99 | 0.224 | 1 |
| Perfluorohexanesulfonic Acid (PFHxS) | 6.90 | | ng/l | 1.99 | 0.374 | 1 |
| Perfluorooctanoic Acid (PFOA) | 39.7 | | ng/l | 1.99 | 0.235 | 1 |
| 1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS) | 2.02 | | ng/l | 1.99 | 1.33 | 1 |
| Perfluoroheptanesulfonic Acid (PFHpS) | 1.06 | J | ng/l | 1.99 | 0.685 | 1 |
| Perfluorononanoic Acid (PFNA) | 2.73 | | ng/l | 1.99 | 0.311 | 1 |
| Perfluorooctanesulfonic Acid (PFOS) | 69.4 | | ng/l | 1.99 | 0.502 | 1 |
| Perfluorodecanoic Acid (PFDA) | 3.88 | | ng/l | 1.99 | 0.303 | 1 |
| 1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS) | ND | | ng/l | 1.99 | 1.21 | 1 |
| N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA) | 7.72 | | ng/l | 1.99 | 0.645 | 1 |
| Perfluoroundecanoic Acid (PFUnA) | 0.737 | J | ng/l | 1.99 | 0.259 | 1 |
| Perfluorodecanesulfonic Acid (PFDS) | ND | | ng/l | 1.99 | 0.976 | 1 |
| Perfluorooctanesulfonamide (FOSA) | 16.3 | | ng/l | 1.99 | 0.578 | 1 |
| N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA) | 6.77 | | ng/l | 1.99 | 0.801 | 1 |
| Perfluorododecanoic Acid (PFDoA) | 0.458 | J | ng/l | 1.99 | 0.370 | 1 |
| Perfluorotridecanoic Acid (PFTrDA) | ND | | ng/l | 1.99 | 0.326 | 1 |
| Perfluorotetradecanoic Acid (PFTA) | 0.271 | J | ng/l | 1.99 | 0.247 | 1 |
| PFOA/PFOS, Total | 109 | | ng/l | 1.99 | 0.235 | 1 |

**Project Name:** GROSSINGERS **Lab Number:** L2010093

**Project Number:** 9313 **Report Date:** 03/18/20

## SAMPLE RESULTS

Lab ID: L2010093-09 Date Collected: 03/05/20 00:00

Client ID: DUP Date Received: 03/05/20

Sample Location: LIBERTY, NY Field Prep: Not Specified

Sample Depth:

| Parameter | Result | Qualifier | Units | RL | MDL | Dilution Factor |
|---|---|---|---|---|---|---|
| Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab | | | | | | |

| Surrogate (Extracted Internal Standard) | % Recovery | Qualifier | Acceptance Criteria |
|---|---|---|---|
| Perfluoro[13C4]Butanoic Acid (MPFBA) | 100 | | 2-156 |
| Perfluoro[13C5]Pentanoic Acid (M5PFPEA) | 94 | | 16-173 |
| Perfluoro[2,3,4-13C3]Butanesulfonic Acid (M3PFBS) | 91 | | 31-159 |
| Perfluoro[1,2,3,4,6-13C5]Hexanoic Acid (M5PFHxA) | 81 | | 21-145 |
| Perfluoro[1,2,3,4-13C4]Heptanoic Acid (M4PFHpA) | 92 | | 30-139 |
| Perfluoro[1,2,3-13C3]Hexanesulfonic Acid (M3PFHxS) | 96 | | 47-153 |
| Perfluoro[13C8]Octanoic Acid (M8PFOA) | 99 | | 36-149 |
| 1H,1H,2H,2H-Perfluoro[1,2-13C2]Octanesulfonic Acid (M2-6:2FTS) | **267** | Q | 1-244 |
| Perfluoro[13C9]Nonanoic Acid (M9PFNA) | 109 | | 34-146 |
| Perfluoro[13C8]Octanesulfonic Acid (M8PFOS) | 94 | | 42-146 |
| Perfluoro[1,2,3,4,5,6-13C6]Decanoic Acid (M6PFDA) | 97 | | 38-144 |
| 1H,1H,2H,2H-Perfluoro[1,2-13C2]Decanesulfonic Acid (M2-8:2FTS) | **297** | Q | 7-170 |
| N-Deuteriomethylperfluoro-1-octanesulfonamidoacetic Acid (d3-NMeFOSAA) | 102 | | 1-181 |
| Perfluoro[1,2,3,4,5,6,7-13C7]Undecanoic Acid (M7-PFUDA) | 102 | | 40-144 |
| Perfluoro[13C8]Octanesulfonamide (M8FOSA) | 43 | | 1-87 |
| N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA) | 123 | | 23-146 |
| Perfluoro[1,2-13C2]Dodecanoic Acid (MPFDOA) | 84 | | 24-161 |
| Perfluoro[1,2-13C2]Tetradecanoic Acid (M2PFTEDA) | 74 | | 33-143 |

**Project Name:** GROSSINGERS
**Project Number:** 9313
**Lab Number:** L2010093
**Report Date:** 03/18/20

# Method Blank Analysis
## Batch Quality Control

Analytical Method: 134,LCMSMS-ID
Analytical Date: 03/11/20 14:25
Analyst: SG

Extraction Method: ALPHA 23528
Extraction Date: 03/06/20 15:00

| Parameter | Result | Qualifier | Units | RL | MDL |
|---|---|---|---|---|---|
| Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab for sample(s): 01-07,09 Batch: WG1348148-1 | | | | | |
| Perfluorobutanoic Acid (PFBA) | ND | | ng/l | 2.00 | 0.408 |
| Perfluoropentanoic Acid (PFPeA) | ND | | ng/l | 2.00 | 0.396 |
| Perfluorobutanesulfonic Acid (PFBS) | ND | | ng/l | 2.00 | 0.238 |
| Perfluorohexanoic Acid (PFHxA) | 0.376 | J | ng/l | 2.00 | 0.328 |
| Perfluoroheptanoic Acid (PFHpA) | ND | | ng/l | 2.00 | 0.225 |
| Perfluorohexanesulfonic Acid (PFHxS) | ND | | ng/l | 2.00 | 0.376 |
| Perfluorooctanoic Acid (PFOA) | ND | | ng/l | 2.00 | 0.236 |
| 1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS) | ND | | ng/l | 2.00 | 1.33 |
| Perfluoroheptanesulfonic Acid (PFHpS) | ND | | ng/l | 2.00 | 0.688 |
| Perfluorononanoic Acid (PFNA) | ND | | ng/l | 2.00 | 0.312 |
| Perfluorooctanesulfonic Acid (PFOS) | ND | | ng/l | 2.00 | 0.504 |
| Perfluorodecanoic Acid (PFDA) | ND | | ng/l | 2.00 | 0.304 |
| 1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS) | ND | | ng/l | 2.00 | 1.21 |
| N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA) | ND | | ng/l | 2.00 | 0.648 |
| Perfluoroundecanoic Acid (PFUnA) | ND | | ng/l | 2.00 | 0.260 |
| Perfluorodecanesulfonic Acid (PFDS) | ND | | ng/l | 2.00 | 0.980 |
| Perfluorooctanesulfonamide (FOSA) | ND | | ng/l | 2.00 | 0.580 |
| N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA) | ND | | ng/l | 2.00 | 0.804 |
| Perfluorododecanoic Acid (PFDoA) | ND | | ng/l | 2.00 | 0.372 |
| Perfluorotridecanoic Acid (PFTrDA) | ND | | ng/l | 2.00 | 0.327 |
| Perfluorotetradecanoic Acid (PFTA) | ND | | ng/l | 2.00 | 0.248 |
| PFOA/PFOS, Total | ND | | ng/l | 2.00 | 0.236 |

**Project Name:** GROSSINGERS
**Project Number:** 9313
**Lab Number:** L2010093
**Report Date:** 03/18/20

# Method Blank Analysis
## Batch Quality Control

Analytical Method: 134,LCMSMS-ID
Analytical Date: 03/11/20 14:25
Analyst: SG

Extraction Method: ALPHA 23528
Extraction Date: 03/06/20 15:00

| Parameter | Result | Qualifier | Units | RL | MDL |
|---|---|---|---|---|---|
| Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab for sample(s): 01-07,09 Batch: WG1348148-1 | | | | | |

| Surrogate (Extracted Internal Standard) | %Recovery | Qualifier | Acceptance Criteria |
|---|---|---|---|
| Perfluoro[13C4]Butanoic Acid (MPFBA) | 103 | | 2-156 |
| Perfluoro[13C5]Pentanoic Acid (M5PFPEA) | 115 | | 16-173 |
| Perfluoro[2,3,4-13C3]Butanesulfonic Acid (M3PFBS) | 108 | | 31-159 |
| Perfluoro[1,2,3,4,6-13C5]Hexanoic Acid (M5PFHxA) | 101 | | 21-145 |
| Perfluoro[1,2,3,4-13C4]Heptanoic Acid (M4PFHpA) | 105 | | 30-139 |
| Perfluoro[1,2,3-13C3]Hexanesulfonic Acid (M3PFHxS) | 115 | | 47-153 |
| Perfluoro[13C8]Octanoic Acid (M8PFOA) | 104 | | 36-149 |
| 1H,1H,2H,2H-Perfluoro[1,2-13C2]Octanesulfonic Acid (M2-6:2FTS) | 129 | | 1-244 |
| Perfluoro[13C9]Nonanoic Acid (M9PFNA) | 108 | | 34-146 |
| Perfluoro[13C8]Octanesulfonic Acid (M8PFOS) | 109 | | 42-146 |
| Perfluoro[1,2,3,4,5,6-13C6]Decanoic Acid (M6PFDA) | 104 | | 38-144 |
| 1H,1H,2H,2H-Perfluoro[1,2-13C2]Decanesulfonic Acid (M2-8:2FTS) | 152 | | 7-170 |
| N-Deuteriomethylperfluoro-1-octanesulfonamidoacetic Acid (d3-NMeFOSAA) | 115 | | 1-181 |
| Perfluoro[1,2,3,4,5,6,7-13C7]Undecanoic Acid (M7-PFUDA) | 111 | | 40-144 |
| Perfluoro[13C8]Octanesulfonamide (M8FOSA) | 49 | | 1-87 |
| N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA) | 89 | | 23-146 |
| Perfluoro[1,2-13C2]Dodecanoic Acid (MPFDOA) | 94 | | 24-161 |
| Perfluoro[1,2-13C2]Tetradecanoic Acid (M2PFTEDA) | 85 | | 33-143 |

# Lab Control Sample Analysis
## Batch Quality Control

**Project Name:** GROSSINGERS
**Project Number:** 9313
**Lab Number:** L2010093
**Report Date:** 03/18/20

| Parameter | LCS %Recovery | Qual | LCSD %Recovery | Qual | %Recovery Limits | RPD | Qual | RPD Limits |
|---|---|---|---|---|---|---|---|---|
| Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab Associated sample(s): 01-07,09 Batch: WG1348148-2 WG1348148-3 | | | | | | | | |
| Perfluorobutanoic Acid (PFBA) | 98 | | 100 | | 67-148 | 2 | | 30 |
| Perfluoropentanoic Acid (PFPeA) | 105 | | 106 | | 63-161 | 1 | | 30 |
| Perfluorobutanesulfonic Acid (PFBS) | 95 | | 97 | | 65-157 | 2 | | 30 |
| Perfluorohexanoic Acid (PFHxA) | 98 | | 100 | | 69-168 | 2 | | 30 |
| Perfluoroheptanoic Acid (PFHpA) | 99 | | 99 | | 58-159 | 0 | | 30 |
| Perfluorohexanesulfonic Acid (PFHxS) | 92 | | 92 | | 69-177 | 0 | | 30 |
| Perfluorooctanoic Acid (PFOA) | 101 | | 105 | | 63-159 | 4 | | 30 |
| 1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS) | 115 | | 123 | | 49-187 | 7 | | 30 |
| Perfluoroheptanesulfonic Acid (PFHpS) | 104 | | 110 | | 61-179 | 6 | | 30 |
| Perfluorononanoic Acid (PFNA) | 100 | | 102 | | 68-171 | 2 | | 30 |
| Perfluorooctanesulfonic Acid (PFOS) | 97 | | 111 | | 52-151 | 13 | | 30 |
| Perfluorodecanoic Acid (PFDA) | 95 | | 102 | | 63-171 | 7 | | 30 |
| 1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS) | 134 | | 124 | | 56-173 | 8 | | 30 |
| N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA) | 112 | | 122 | | 60-166 | 9 | | 30 |
| Perfluoroundecanoic Acid (PFUnA) | 102 | | 101 | | 60-153 | 1 | | 30 |
| Perfluorodecanesulfonic Acid (PFDS) | 100 | | 113 | | 38-156 | 12 | | 30 |
| Perfluorooctanesulfonamide (FOSA) | 101 | | 96 | | 46-170 | 5 | | 30 |
| N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA) | 103 | | 121 | | 45-170 | 16 | | 30 |
| Perfluorododecanoic Acid (PFDoA) | 103 | | 110 | | 67-153 | 7 | | 30 |
| Perfluorotridecanoic Acid (PFTrDA) | 118 | | 123 | | 48-158 | 4 | | 30 |
| Perfluorotetradecanoic Acid (PFTA) | 110 | | 103 | | 59-182 | 7 | | 30 |

# Lab Control Sample Analysis
## Batch Quality Control

**Project Name:** GROSSINGERS
**Project Number:** 9313
**Lab Number:** L2010093
**Report Date:** 03/18/20

| Parameter | LCS %Recovery | Qual | LCSD %Recovery | Qual | %Recovery Limits | RPD | Qual | RPD Limits |
|---|---|---|---|---|---|---|---|---|
| Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab Associated sample(s): 01-07,09 Batch: WG1348148-2 WG1348148-3 | | | | | | | | |

| Surrogate (Extracted Internal Standard) | LCS %Recovery | Qual | LCSD %Recovery | Qual | Acceptance Criteria |
|---|---|---|---|---|---|
| Perfluoro[13C4]Butanoic Acid (MPFBA) | 103 | | 101 | | 2-156 |
| Perfluoro[13C5]Pentanoic Acid (M5PFPEA) | 116 | | 115 | | 16-173 |
| Perfluoro[2,3,4-13C3]Butanesulfonic Acid (M3PFBS) | 103 | | 96 | | 31-159 |
| Perfluoro[1,2,3,4,6-13C5]Hexanoic Acid (M5PFHxA) | 100 | | 101 | | 21-145 |
| Perfluoro[1,2,3,4-13C4]Heptanoic Acid (M4PFHpA) | 104 | | 103 | | 30-139 |
| Perfluoro[1,2,3-13C3]Hexanesulfonic Acid (M3PFHxS) | 110 | | 103 | | 47-153 |
| Perfluoro[13C8]Octanoic Acid (M8PFOA) | 105 | | 103 | | 36-149 |
| 1H,1H,2H,2H-Perfluoro[1,2-13C2]Octanesulfonic Acid (M2-6:2FTS) | 121 | | 112 | | 1-244 |
| Perfluoro[13C9]Nonanoic Acid (M9PFNA) | 108 | | 108 | | 34-146 |
| Perfluoro[13C8]Octanesulfonic Acid (M8PFOS) | 107 | | 92 | | 42-146 |
| Perfluoro[1,2,3,4,5,6-13C6]Decanoic Acid (M6PFDA) | 107 | | 104 | | 38-144 |
| 1H,1H,2H,2H-Perfluoro[1,2-13C2]Decanesulfonic Acid (M2-8:2FTS) | 123 | | 129 | | 7-170 |
| N-Deuteriomethylperfluoro-1-octanesulfonamidoacetic Acid (d3-NMeFOSAA) | 92 | | 89 | | 1-181 |
| Perfluoro[1,2,3,4,5,6,7-13C7]Undecanoic Acid (M7-PFUDA) | 109 | | 110 | | 40-144 |
| Perfluoro[13C8]Octanesulfonamide (M8FOSA) | 53 | | 54 | | 1-87 |
| N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA) | 89 | | 81 | | 23-146 |
| Perfluoro[1,2-13C2]Dodecanoic Acid (MPFDOA) | 97 | | 94 | | 24-161 |
| Perfluoro[1,2-13C2]Tetradecanoic Acid (M2PFTEDA) | 88 | | 95 | | 33-143 |

# Lab Duplicate Analysis
## Batch Quality Control

**Project Name:** GROSSINGERS
**Project Number:** 9313

**Lab Number:** L2010093
**Report Date:** 03/18/20

| Parameter | Native Sample | Duplicate Sample | Units | RPD | Qual | RPD Limits |
|---|---|---|---|---|---|---|
| Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab Associated sample(s): 01-07,09 QC Batch ID: WG1348148-5 QC Sample: L2010093-01 Client ID: MW-203 | | | | | | |
| Perfluorobutanoic Acid (PFBA) | 2.79 | 2.79 | ng/l | 0 | | 30 |
| Perfluoropentanoic Acid (PFPeA) | 1.62J | 1.54J | ng/l | NC | | 30 |
| Perfluorobutanesulfonic Acid (PFBS) | 1.23J | 1.05J | ng/l | NC | | 30 |
| Perfluorohexanoic Acid (PFHxA) | 2.13J | 1.76J | ng/l | NC | | 30 |
| Perfluoroheptanoic Acid (PFHpA) | 1.77J | 1.53J | ng/l | NC | | 30 |
| Perfluorohexanesulfonic Acid (PFHxS) | 0.914J | 1.26J | ng/l | NC | | 30 |
| Perfluorooctanoic Acid (PFOA) | 6.00 | 6.07 | ng/l | 1 | | 30 |
| 1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS) | ND | ND | ng/l | NC | | 30 |
| Perfluoroheptanesulfonic Acid (PFHpS) | ND | ND | ng/l | NC | | 30 |
| Perfluorononanoic Acid (PFNA) | 0.802J | 0.619J | ng/l | NC | | 30 |
| Perfluorooctanesulfonic Acid (PFOS) | 27.9 | 21.6 | ng/l | 25 | | 30 |
| Perfluorodecanoic Acid (PFDA) | 0.464J | 0.390J | ng/l | NC | | 30 |
| 1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS) | ND | ND | ng/l | NC | | 30 |
| N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA) | ND | ND | ng/l | NC | | 30 |
| Perfluoroundecanoic Acid (PFUnA) | 0.288J | ND | ng/l | NC | | 30 |
| Perfluorodecanesulfonic Acid (PFDS) | ND | ND | ng/l | NC | | 30 |
| Perfluorooctanesulfonamide (FOSA) | 0.978J | 0.680J | ng/l | NC | | 30 |
| N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA) | 2.34 | 2.39 | ng/l | 2 | | 30 |
| Perfluorododecanoic Acid (PFDoA) | 1.32J | 0.848J | ng/l | NC | | 30 |
| Perfluorotridecanoic Acid (PFTrDA) | 0.768J | 0.385J | ng/l | NC | | 30 |

# Lab Duplicate Analysis
## Batch Quality Control

**Project Name:** GROSSINGERS
**Project Number:** 9313
**Lab Number:** L2010093
**Report Date:** 03/18/20

| Parameter | Native Sample | Duplicate Sample | Units | RPD | Qual | RPD Limits |
|---|---|---|---|---|---|---|
| Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab Associated sample(s): 01-07,09 QC Batch ID: WG1348148-5 QC Sample: L2010093-01 Client ID: MW-203 | | | | | | |
| Perfluorotetradecanoic Acid (PFTA) | 3.92 | 2.27 | ng/l | **53** | Q | 30 |
| PFOA/PFOS, Total | 33.9 | 27.7 | ng/l | 20 | | 30 |

| Surrogate (Extracted Internal Standard) | %Recovery | Qualifier | %Recovery | Qualifier | Acceptance Criteria |
|---|---|---|---|---|---|
| Perfluoro[13C4]Butanoic Acid (MPFBA) | 100 | | 101 | | 2-156 |
| Perfluoro[13C5]Pentanoic Acid (M5PFPEA) | 100 | | 102 | | 16-173 |
| Perfluoro[2,3,4-13C3]Butanesulfonic Acid (M3PFBS) | 96 | | 90 | | 31-159 |
| Perfluoro[1,2,3,4,6-13C5]Hexanoic Acid (M5PFHxA) | 85 | | 84 | | 21-145 |
| Perfluoro[1,2,3,4-13C4]Heptanoic Acid (M4PFHpA) | 95 | | 93 | | 30-139 |
| Perfluoro[1,2,3-13C3]Hexanesulfonic Acid (M3PFHxS) | 102 | | 101 | | 47-153 |
| Perfluoro[13C8]Octanoic Acid (M8PFOA) | 102 | | 98 | | 36-149 |
| 1H,1H,2H,2H-Perfluoro[1,2-13C2]Octanesulfonic Acid (M2-6:2FTS) | **300** | Q | **277** | Q | 1-244 |
| Perfluoro[13C9]Nonanoic Acid (M9PFNA) | 106 | | 104 | | 34-146 |
| Perfluoro[13C8]Octanesulfonic Acid (M8PFOS) | 101 | | 96 | | 42-146 |
| Perfluoro[1,2,3,4,5,6-13C6]Decanoic Acid (M6PFDA) | 93 | | 97 | | 38-144 |
| 1H,1H,2H,2H-Perfluoro[1,2-13C2]Decanesulfonic Acid (M2-8:2FTS) | **231** | Q | **214** | Q | 7-170 |
| N-Deuteriomethylperfluoro-1-octanesulfonamidoacetic Acid (d3-NMeFOSAA) | 93 | | 100 | | 1-181 |
| Perfluoro[1,2,3,4,5,6,7-13C7]Undecanoic Acid (M7-PFUDA) | 95 | | 97 | | 40-144 |
| Perfluoro[13C8]Octanesulfonamide (M8FOSA) | 38 | | 44 | | 1-87 |
| N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA) | 98 | | 111 | | 23-146 |
| Perfluoro[1,2-13C2]Dodecanoic Acid (MPFDOA) | 80 | | 82 | | 24-161 |
| Perfluoro[1,2-13C2]Tetradecanoic Acid (M2PFTEDA) | 77 | | 77 | | 33-143 |

**Project Name:** GROSSINGERS
**Project Number:** 9313

**Lab Number:** L2010093
**Report Date:** 03/18/20

## Sample Receipt and Container Information

Were project specific reporting limits specified? YES

### Cooler Information

| Cooler | Custody Seal |
|---|---|
| A | Absent |
| B | Absent |

### Container Information

| Container ID | Container Type | Cooler | Initial pH | Final pH | Temp deg C | Pres | Seal | Frozen Date/Time | Analysis(*) |
|---|---|---|---|---|---|---|---|---|---|
| L2010093-01A | Vial HCl preserved | A | NA | | 4.8 | Y | Absent | | NYTCL-8260(14) |
| L2010093-01B | Vial HCl preserved | A | NA | | 4.8 | Y | Absent | | NYTCL-8260(14) |
| L2010093-01C | Vial HCl preserved | A | NA | | 4.8 | Y | Absent | | NYTCL-8260(14) |
| L2010093-01D | Plastic 250ml unpreserved | A | NA | | 4.8 | Y | Absent | | A2-NY-537-ISOTOPE(14) |
| L2010093-01E | Plastic 250ml unpreserved | A | NA | | 4.8 | Y | Absent | | A2-NY-537-ISOTOPE(14) |
| L2010093-02A | Vial HCl preserved | A | NA | | 4.8 | Y | Absent | | NYTCL-8260(14) |
| L2010093-02B | Vial HCl preserved | A | NA | | 4.8 | Y | Absent | | NYTCL-8260(14) |
| L2010093-02C | Vial HCl preserved | A | NA | | 4.8 | Y | Absent | | NYTCL-8260(14) |
| L2010093-02D | Plastic 250ml unpreserved | A | NA | | 4.8 | Y | Absent | | A2-NY-537-ISOTOPE(14) |
| L2010093-02E | Plastic 250ml unpreserved | A | NA | | 4.8 | Y | Absent | | A2-NY-537-ISOTOPE(14) |
| L2010093-03A | Vial HCl preserved | A | NA | | 4.8 | Y | Absent | | NYTCL-8260(14) |
| L2010093-03B | Vial HCl preserved | A | NA | | 4.8 | Y | Absent | | NYTCL-8260(14) |
| L2010093-03C | Vial HCl preserved | A | NA | | 4.8 | Y | Absent | | NYTCL-8260(14) |
| L2010093-03D | Plastic 250ml unpreserved | A | NA | | 4.8 | Y | Absent | | A2-NY-537-ISOTOPE(14) |
| L2010093-03E | Plastic 250ml unpreserved | A | NA | | 4.8 | Y | Absent | | A2-NY-537-ISOTOPE(14) |
| L2010093-04A | Vial HCl preserved | A | NA | | 4.8 | Y | Absent | | NYTCL-8260(14) |
| L2010093-04B | Vial HCl preserved | A | NA | | 4.8 | Y | Absent | | NYTCL-8260(14) |
| L2010093-04C | Vial HCl preserved | A | NA | | 4.8 | Y | Absent | | NYTCL-8260(14) |
| L2010093-04D | Plastic 250ml unpreserved | A | NA | | 4.8 | Y | Absent | | A2-NY-537-ISOTOPE(14) |
| L2010093-04E | Plastic 250ml unpreserved | A | NA | | 4.8 | Y | Absent | | A2-NY-537-ISOTOPE(14) |
| L2010093-05A | Vial HCl preserved | A | NA | | 4.8 | Y | Absent | | NYTCL-8260(14) |
| L2010093-05B | Vial HCl preserved | A | NA | | 4.8 | Y | Absent | | NYTCL-8260(14) |



*Values in parentheses indicate holding time in days

**Project Name:** GROSSINGERS
**Project Number:** 9313

**Lab Number:** L2010093
**Report Date:** 03/18/20

## Container Information

| Container ID | Container Type | Cooler | Initial pH | Final pH | Temp deg C | Pres | Seal | Frozen Date/Time | Analysis(*) |
|---|---|---|---|---|---|---|---|---|---|
| L2010093-05C | Vial HCl preserved | A | NA | | 4.8 | Y | Absent | | NYTCL-8260(14) |
| L2010093-05D | Plastic 250ml unpreserved | A | NA | | 4.8 | Y | Absent | | A2-NY-537-ISOTOPE(14) |
| L2010093-05E | Plastic 250ml unpreserved | A | NA | | 4.8 | Y | Absent | | A2-NY-537-ISOTOPE(14) |
| L2010093-06A | Vial HCl preserved | A | NA | | 4.8 | Y | Absent | | NYTCL-8260(14) |
| L2010093-06B | Vial HCl preserved | A | NA | | 4.8 | Y | Absent | | NYTCL-8260(14) |
| L2010093-06C | Vial HCl preserved | A | NA | | 4.8 | Y | Absent | | NYTCL-8260(14) |
| L2010093-06D | Plastic 250ml unpreserved | A | NA | | 4.8 | Y | Absent | | A2-NY-537-ISOTOPE(14) |
| L2010093-06E | Plastic 250ml unpreserved | A | NA | | 4.8 | Y | Absent | | A2-NY-537-ISOTOPE(14) |
| L2010093-07A | Plastic 250ml unpreserved | A | NA | | 4.8 | Y | Absent | | A2-NY-537-ISOTOPE(14) |
| L2010093-08A | Vial HCl preserved | A | NA | | 4.8 | Y | Absent | | NYTCL-8260(14) |
| L2010093-08B | Vial HCl preserved | A | NA | | 4.8 | Y | Absent | | NYTCL-8260(14) |
| L2010093-09A | Vial HCl preserved | A | NA | | 4.8 | Y | Absent | | NYTCL-8260(14) |
| L2010093-09B | Vial HCl preserved | A | NA | | 4.8 | Y | Absent | | NYTCL-8260(14) |
| L2010093-09C | Vial HCl preserved | A | NA | | 4.8 | Y | Absent | | NYTCL-8260(14) |
| L2010093-09D | Plastic 250ml unpreserved | A | NA | | 4.8 | Y | Absent | | A2-NY-537-ISOTOPE(14) |
| L2010093-09E | Plastic 250ml unpreserved | A | NA | | 4.8 | Y | Absent | | A2-NY-537-ISOTOPE(14) |



*Values in parentheses indicate holding time in days

**Project Name:** GROSSINGERS
**Project Number:** 9313
**Lab Number:** L2010093
**Report Date:** 03/18/20

## PFAS PARAMETER SUMMARY

| Parameter | Acronym | CAS Number |
|---|---|---|
| PERFLUOROALKYL CARBOXYLIC ACIDS (PFCAs) | | |
| Perfluorooctadecanoic Acid | PFODA | 16517-11-6 |
| Perfluorohexadecanoic Acid | PFHxDA | 67905-19-5 |
| Perfluorotetradecanoic Acid | PFTA | 376-06-7 |
| Perfluorotridecanoic Acid | PFTrDA | 72629-94-8 |
| Perfluorododecanoic Acid | PFDoA | 307-55-1 |
| Perfluoroundecanoic Acid | PFUnA | 2058-94-8 |
| Perfluorodecanoic Acid | PFDA | 335-76-2 |
| Perfluorononanoic Acid | PFNA | 375-95-1 |
| Perfluorooctanoic Acid | PFOA | 335-67-1 |
| Perfluoroheptanoic Acid | PFHpA | 375-85-9 |
| Perfluorohexanoic Acid | PFHxA | 307-24-4 |
| Perfluoropentanoic Acid | PFPeA | 2706-90-3 |
| Perfluorobutanoic Acid | PFBA | 375-22-4 |
| PERFLUOROALKYL SULFONIC ACIDS (PFSAs) | | |
| Perfluorododecanesulfonic Acid | PFDoDS | 79780-39-5 |
| Perfluorodecanesulfonic Acid | PFDS | 335-77-3 |
| Perfluorononanesulfonic Acid | PFNS | 68259-12-1 |
| Perfluorooctanesulfonic Acid | PFOS | 1763-23-1 |
| Perfluoroheptanesulfonic Acid | PFHpS | 375-92-8 |
| Perfluorohexanesulfonic Acid | PFHxS | 355-46-4 |
| Perfluoropentanesulfonic Acid | PFPeS | 2706-91-4 |
| Perfluorobutanesulfonic Acid | PFBS | 375-73-5 |
| FLUOROTELOMERS | | |
| 1H,1H,2H,2H-Perfluorododecanesulfonic Acid | 10:2FTS | 120226-60-0 |
| 1H,1H,2H,2H-Perfluorodecanesulfonic Acid | 8:2FTS | 39108-34-4 |
| 1H,1H,2H,2H-Perfluorooctanesulfonic Acid | 6:2FTS | 27619-97-2 |
| 1H,1H,2H,2H-Perfluorohexanesulfonic Acid | 4:2FTS | 757124-72-4 |
| PERFLUOROALKANE SULFONAMIDES (FASAs) | | |
| Perfluorooctanesulfonamide | FOSA | 754-91-6 |
| N-Ethyl Perfluorooctane Sulfonamide | NEtFOSA | 4151-50-2 |
| N-Methyl Perfluorooctane Sulfonamide | NMeFOSA | 31506-32-8 |
| PERFLUOROALKANE SULFONYL SUBSTANCES | | |
| N-Ethyl Perfluorooctanesulfonamido Ethanol | NEtFOSE | 1691-99-2 |
| N-Methyl Perfluorooctanesulfonamido Ethanol | NMeFOSE | 24448-09-7 |
| N-Ethyl Perfluorooctanesulfonamidoacetic Acid | NEtFOSAA | 2991-50-6 |
| N-Methyl Perfluorooctanesulfonamidoacetic Acid | NMeFOSAA | 2355-31-9 |
| PER- and POLYFLUOROALKYL ETHER CARBOXYLIC ACIDS | | |
| 2,3,3,3-Tetrafluoro-2-[1,1,2,2,3,3,3-Heptafluoropropoxy]-Propanoic Acid | HFPO-DA | 13252-13-6 |
| 4,8-Dioxa-3h-Perfluorononanoic Acid | ADONA | 919005-14-4 |
| CHLORO-PERFLUOROALKYL SULFONIC ACIDS | | |
| 11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid | 11Cl-PF3OUdS | 763051-92-9 |
| 9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid | 9Cl-PF3ONS | 756426-58-1 |

| | | | |
|---|---|---|---|
| **Project Name:** | GROSSINGERS | **Lab Number:** | L2010093 |
| **Project Number:** | 9313 | **Report Date:** | 03/18/20 |

## GLOSSARY

***Acronyms***

DL - Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the limit of quantitation (LOQ). The DL includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

EDL - Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).

EMPC - Estimated Maximum Possible Concentration: The concentration that results from the signal present at the retention time of an analyte when the ions meet all of the identification criteria except the ion abundance ratio criteria. An EMPC is a worst-case estimate of the concentration.

EPA - Environmental Protection Agency.

LCS - Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.

LCSD - Laboratory Control Sample Duplicate: Refer to LCS.

LFB - Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.

LOD - Limit of Detection: This value represents the level to which a target analyte can reliably be detected for a specific analyte in a specific matrix by a specific method. The LOD includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

LOQ - Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

MDL - Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.

MS - Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available. For Method 332.0, the spike recovery is calculated using the native concentration, including estimated values.

MSD - Matrix Spike Sample Duplicate: Refer to MS.

NA - Not Applicable.

NC - Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.

NDPA/DPA - N-Nitrosodiphenylamine/Diphenylamine.

NI - Not Ignitable.

NP - Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.

RL - Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.

RPD - Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.

SRM - Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.

STLP - Semi-dynamic Tank Leaching Procedure per EPA Method 1315.

TEF - Toxic Equivalency Factors: The values assigned to each dioxin and furan to evaluate their toxicity relative to 2,3,7,8-TCDD.

TEQ - Toxic Equivalent: The measure of a sample's toxicity derived by multiplying each dioxin and furan by its corresponding TEF and then summing the resulting values.

TIC - Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

***Footnotes***

*Report Format: DU Report with 'J' Qualifiers*

| | | | |
|---|---|---|---|
| **Project Name:** | GROSSINGERS | **Lab Number:** | L2010093 |
| **Project Number:** | 9313 | **Report Date:** | 03/18/20 |

1 - The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method.

***Terms***

Analytical Method: Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

Difference: With respect to Total Oxidizable Precursor (TOP) Assay analysis, the difference is defined as the Post-Treatment value minus the Pre-Treatment value.

Final pH: As it pertains to Sample Receipt & Container Information section of the report, Final pH reflects pH of container determined after adjustment at the laboratory, if applicable. If no adjustment required, value reflects Initial pH.

Frozen Date/Time: With respect to Volatile Organics in soil, Frozen Date/Time reflects the date/time at which associated Reagent Water-preserved vials were initially frozen. Note: If frozen date/time is beyond 48 hours from sample collection, value will be reflected in 'bold'.

Initial pH: As it pertains to Sample Receipt & Container Information section of the report, Initial pH reflects pH of container determined upon receipt, if applicable.

PAH Total: With respect to Alkylated PAH analyses, the 'PAHs, Total' result is defined as the summation of results for all or a subset of the following compounds: Naphthalene, C1-C4 Naphthalenes, 2-Methylnaphthalene, 1-Methylnaphthalene, Biphenyl, Acenaphthylene, Acenaphthene, Fluorene, C1-C3 Fluorenes, Phenanthrene, C1-C4 Phenanthrenes/Anthracenes, Anthracene, Fluoranthene, Pyrene, C1-C4 Fluoranthenes/Pyrenes, Benz(a)anthracene, Chrysene, C1-C4 Chrysenes, Benzo(b)fluoranthene, Benzo(j)+(k)fluoranthene, Benzo(e)pyrene, Benzo(a)pyrene, Perylene, Indeno(1,2,3-cd)pyrene, Dibenz(ah)+(ac)anthracene, Benzo(g,h,i)perylene. If a 'Total' result is requested, the results of its individual components will also be reported.

PFAS Total: With respect to PFAS analyses, the 'PFAS, Total (5)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA and PFOS. If a 'Total' result is requested, the results of its individual components will also be reported.

The target compound Chlordane (CAS No. 57-74-9) is reported for GC ECD analyses. Per EPA,this compound "refers to a mixture of chlordane isomers, other chlorinated hydrocarbons and numerous other components." (Reference: USEPA Toxicological Review of Chlordane, In Support of Summary Information on the Integrated Risk Information System (IRIS), December 1997.)

Total: With respect to Organic analyses, a 'Total' result is defined as the summation of results for individual isomers or Aroclors. If a 'Total' result is requested, the results of its individual components will also be reported. This is applicable to 'Total' results for methods 8260, 8081 and 8082.

***Data Qualifiers***

**A** - Spectra identified as "Aldol Condensates" are byproducts of the extraction/concentration procedures when acetone is introduced in the process.

**B** - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).

**C** - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.

**D** - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.

**E** - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.

**G** - The concentration may be biased high due to matrix interferences (i.e, co-elution) with non-target compound(s). The result should be considered estimated.

**H** - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.

**I** - The lower value for the two columns has been reported due to obvious interference.

**J** - Estimated value. The Target analyte concentration is below the quantitation limit (RL), but above the Method Detection Limit (MDL) or Estimated Detection Limit (EDL) for SPME-related analyses. This represents an estimated concentration for Tentatively Identified Compounds (TICs).

**M** - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.

**ND** - Not detected at the method detection limit (MDL) for the sample, or estimated detection limit (EDL) for SPME-related analyses.

**NJ** - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.

**P** - The RPD between the results for the two columns exceeds the method-specified criteria.

**Q** - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration

| | | | |
|---|---|---|---|
| **Project Name:** | GROSSINGERS | **Lab Number:** | L2010093 |
| **Project Number:** | 9313 | **Report Date:** | 03/18/20 |

***Data Qualifiers***

Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)

**R** - Analytical results are from sample re-analysis.

**RE** - Analytical results are from sample re-extraction.

**S** - Analytical results are from modified screening analysis.

*Report Format: DU Report with 'J' Qualifiers*

| | | | |
|---|---|---|---|
| **Project Name:** | GROSSINGERS | **Lab Number:** | L2010093 |
| **Project Number:** | 9313 | **Report Date:** | 03/18/20 |

## REFERENCES


1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - IV, 2007.

134 Determination of Selected Perfluorinated Alkyl Acids in Drinking Water by Solid Phase Extraction and Liquid Chromatography/Tandem Mass Spectrometry (LC/MS/MS) using Isotope Dilution. Alpha SOP 23528.


## LIMITATION OF LIABILITIES

Alpha Analytical performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical be held liable for any incidental, consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding time and splitting of samples in the field.

# Certification Information

**The following analytes are not included in our Primary NELAP Scope of Accreditation:**

**Westborough Facility**
**EPA 624/624.1:** m/p-xylene, o-xylene
**EPA 8260C:** NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene, Azobenzene; SCM: Iodomethane (methyl iodide), 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.
**EPA 8270D:** NPW: Dimethylnaphthalene,1,4-Diphenylhydrazine; SCM: Dimethylnaphthalene,1,4-Diphenylhydrazine.
**SM4500**: NPW: Amenable Cyanide; SCM: Total Phosphorus, TKN, NO2, NO3.

**Mansfield Facility**
**SM 2540D:** TSS
**EPA 8082A:** NPW: PCB: 1, 5, 31, 87,101, 110, 141, 151, 153, 180, 183, 187.
**EPA TO-15:** Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene, 3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.
**EPA TO-12** Non-methane organics
**EPA 3C** Fixed gases
**Biological Tissue Matrix:** EPA 3050B

**The following analytes are included in our Massachusetts DEP Scope of Accreditation**

**Westborough Facility:**

***Drinking Water***
**EPA 300.0**: Chloride, Nitrate-N, Fluoride, Sulfate; **EPA 353.2**: Nitrate-N, Nitrite-N; **SM4500NO3-F**: Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE, EPA 180.1, SM2130B, SM4500Cl-D, SM2320B, SM2540C, SM4500H-B, SM4500NO2-B**
**EPA 332**: Perchlorate; **EPA 524.2:** THMs and VOCs; **EPA 504.1:** EDB, DBCP.
**Microbiology**: **SM9215B; SM9223-P/A, SM9223B-Colilert-QT,SM9222D**.

***Non-Potable Water***
**SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2320B, SM4500CL-E, SM4500F-BC, SM4500NH3-BH:** Ammonia-N and Kjeldahl-N, **EPA 350.1**: Ammonia-N, **LACHAT 10-107-06-1-B**: Ammonia-N, **EPA 351.1, SM4500NO3-F, EPA 353.2**: Nitrate-N**, SM4500P-E, SM4500P-B, E, SM4500SO4-E, SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, EPA 420.1, SM4500-CN-CE, SM2540D, EPA 300: Chloride, Sulfate, Nitrate.**
**EPA 624.1**: Volatile Halocarbons & Aromatics,
**EPA 608.3**: Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs
**EPA 625.1**: SVOC (Acid/Base/Neutral Extractables), **EPA 600/4-81-045**: PCB-Oil.
**Microbiology**: **SM9223B-Colilert-QT; Enterolert-QT, SM9221E, EPA 1600, EPA 1603.**

**Mansfield Facility:**

***Drinking Water***
**EPA 200.7:** Al, Ba, Cd, Cr, Cu, Fe, Mn, Ni, Na, Ag, Ca, Zn. **EPA 200.8:** Al, Sb, As, Ba, Be, Cd, Cr, Cu, Pb, Mn, Ni, Se, Ag, TL, Zn. **EPA 245.1** Hg.
**EPA 522.**

***Non-Potable Water***
**EPA 200.7:** Al, Sb, As, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Sr, TL, Ti, V, Zn.
**EPA 200.8:** Al, Sb**,** As, Be, Cd, Cr, Cu, Fe, Pb, Mn, Ni, K, Se, Ag, Na, TL, Zn.
**EPA 245.1** Hg.
**SM2340B**

For a complete listing of analytes and methods, please contact your Alpha Project Manager.

# NEW YORK CHAIN OF CUSTODY

ALPHA ANALYTICAL

Westborough, MA 01581
8 Walkup Dr.
TEL: 508-898-9220
FAX: 508-898-9193

Mansfield, MA 02048
320 Forbes Blvd
TEL: 508-822-9300
FAX: 508-822-3288

**Service Centers**
Mahwah, NJ 07430: 35 Whitney Rd, Suite 5
Albany, NY 12205: 14 Walker Way
Tonawanda, NY 14150: 275 Cooper Ave, Suite 105

Page 1 of 1

Date Rec'd in Lab: 3/6/20

ALPHA Job #: L2010093

**Client Information**
Client: ESI
Address: 12a Maple ave
Pine Brook, NJ
Phone: 973 808 9050
Fax:
Email: Fd @esi.org

**Project Information**
Project Name: Grossingers
Project Location: Liberty, NY
Project #: 9313
(Use Project name as Project #) ☐
Project Manager: Fuad Dahan
ALPHAQuote #:

**Turn-Around Time**
Standard ☒ Due Date: 1 week
Rush (only if pre approved) ☐ # of Days:

**Deliverables**
☐ ASP-A ☐ ASP-B
☐ EQuIS (1 File) ☒ EQuIS (4 File)
☐ Other NY Cat B

**Regulatory Requirement**
☐ NY TOGS ☐ NY Part 375
☐ AWQ Standards ☐ NY CP-51
☐ NY Restricted Use ☐ Other
☒ NY Unrestricted Use NY Cat B
☐ NYC Sewer Discharge

**Billing Information**
☒ Same as Client Info
PO # 9313
Phase 10

**Disposal Site Information**
Please identify below location of applicable disposal facilities.
Disposal Facility:
☐ NJ ☐ NY
☐ Other:

These samples have been previously analyzed by Alpha ☐

**Other project specific requirements/comments:**

**Please specify Metals or TAL.**

**ANALYSIS**

**Sample Filtration**
☐ Done
☐ Lab to do
***Preservation***
☐ Lab to do
***(Please Specify below)***

| ALPHA Lab ID (Lab Use Only) | Sample ID | Collection Date | Collection Time | Sample Matrix | Sampler's Initials | TCL VOCs | PFAS, 537 | Total Bottle | Sample Specific Comments |
|---|---|---|---|---|---|---|---|---|---|
| 10093-01 | MW-203 | 3/5/20 | 900 | GW | JCS | X | X | | |
| -02 | MW-204 | | 1130 | | | | | | |
| -03 | MW-205 | | 1035 | | | | | | |
| -04 | MW-206 | | 1220 | | | | | | |
| -05 | MW-208 | | 1320 | | | | | | |
| -06 | MW-207 | | 1530 | | | | | | |
| -07 | FB | | 1450 | DI | | | | | |
| -08 | TB | 3/3/20 | | | | X | | | |
| -09 | DUP | 3/5/20 | | GW | | X | X | | |
| | | | | | | | | | |

Preservative Code:
A = None
B = HCl
C = $HNO_3$
D = $H_2SO_4$
E = NaOH
F = MeOH
G = $NaHSO_4$
H = $Na_2S_2O_3$
K/E = Zn Ac/NaOH
O = Other

Container Code
P = Plastic
A = Amber Glass
V = Vial
G = Glass
B = Bacteria Cup
C = Cube
O = Other
E = Encore
D = BOD Bottle

Westboro: Certification No: MA935
Mansfield: Certification No: MA015

| | | | |
|---|---|---|---|
| Container Type | V, P | V, P | |
| Preservative | A, B | A, B | |

| Relinquished By: | Date/Time | Received By: | Date/Time |
|---|---|---|---|
| | 3/5/20 1745 | | 3/5/20 1745 |
| | 3/5/20 1745 | | 3/6/20 0000 |
| | 3/6/20 0015 | | 3/6/20 00:16 |

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. BY EXECUTING THIS COC, THE CLIENT HAS READ AND AGREES TO BE BOUND BY ALPHA'S TERMS & CONDITIONS. (See reverse side.)

Form No: 01-25 HC (rev. 30-Sept-2013)

# ANALYTICAL REPORT

| | |
|---|---|
| Lab Number: | L2010346 |
| Client: | Soils Engineering Services, Inc.<br>12A Maple Avenue<br>Pine Brook, NJ 07058 |
| ATTN: | Fuad Duhan |
| Phone: | (973) 808-9050 |
| Project Name: | GROSSINGERS |
| Project Number: | 9313 |
| Report Date: | 03/18/20 |

The original project report/data package is held by Alpha Analytical. This report/data package is paginated and should be reproduced only in its entirety. Alpha Analytical holds no responsibility for results and/or data that are not consistent with the original.

Certifications & Approvals: MA (M-MA086), NH NELAP (2064), CT (PH-0574), IL (200077), ME (MA00086), MD (348), NJ (MA935), NY (11148), NC (25700/666), PA (68-03671), RI (LAO00065), TX (T104704476), VT (VT-0935), VA (460195), USDA (Permit #P330-17-00196).

Eight Walkup Drive, Westborough, MA 01581-1019
508-898-9220 (Fax) 508-898-9193 800-624-9220 - www.alphalab.com

**Project Name:** GROSSINGERS
**Project Number:** 9313

**Lab Number:** L2010346
**Report Date:** 03/18/20

| Alpha Sample ID | Client ID | Matrix | Sample Location | Collection Date/Time | Receive Date |
|---|---|---|---|---|---|
| L2010346-01 | MW-216 | WATER | LIBERTY, NY | 03/06/20 09:25 | 03/06/20 |
| L2010346-02 | MW-217 | WATER | LIBERTY, NY | 03/06/20 11:00 | 03/06/20 |
| L2010346-03 | MW-209 | WATER | LIBERTY, NY | 03/06/20 16:00 | 03/06/20 |
| L2010346-04 | MW-211 | WATER | LIBERTY, NY | 03/06/20 11:30 | 03/06/20 |
| L2010346-05 | MW-201 | WATER | LIBERTY, NY | 03/06/20 13:45 | 03/06/20 |
| L2010346-06 | MW-210 | WATER | LIBERTY, NY | 03/06/20 15:10 | 03/06/20 |
| L2010346-07 | FB | WATER | LIBERTY, NY | 03/06/20 16:15 | 03/06/20 |
| L2010346-08 | TB | WATER | LIBERTY, NY | 03/03/20 00:00 | 03/06/20 |

| | | | |
|---|---|---|---|
| **Project Name:** | GROSSINGERS | **Lab Number:** | L2010346 |
| **Project Number:** | 9313 | **Report Date:** | 03/18/20 |

## Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet NELAP requirements for all NELAP accredited parameters unless otherwise noted in the following narrative. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. Tentatively Identified Compounds (TICs), if requested, are reported for compounds identified to be present and are not part of the method/program Target Compound List, even if only a subset of the TCL are being reported. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively.

When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances, the specific failure is not narrated but noted in the associated QC Outlier Summary Report, located directly after the Case Narrative. QC information is also incorporated in the Data Usability Assessment table (Format 11) of our Data Merger tool, where it can be reviewed in conjunction with the sample result, associated regulatory criteria and any associated data usability implications.

Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

HOLD POLICY - For samples submitted on hold, Alpha's policy is to hold samples (with the exception of Air canisters) free of charge for 21 calendar days from the date the project is completed. After 21 calendar days, we will dispose of all samples submitted including those put on hold unless you have contacted your Alpha Project Manager and made arrangements for Alpha to continue to hold the samples. Air canisters will be disposed after 3 business days from the date the project is completed.

Please contact Project Management at 800-624-9220 with any questions.

**Project Name:** GROSSINGERS **Lab Number:** L2010346
**Project Number:** 9313 **Report Date:** 03/18/20

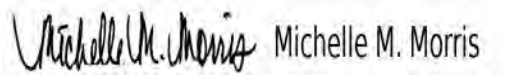
**Case Narrative (continued)**

Report Submission
March 18, 2020: This final report includes the results of all requested analyses.
March 12, 2020: This is a preliminary report.

All non-detect (ND) or estimated concentrations (J-qualified) have been quantitated to the limit noted in the MDL column.

Perfluorinated Alkyl Acids by Isotope Dilution
L2010346-02: Extracted Internal Standard recoveries were outside the acceptance criteria for individual analytes. Please refer to the surrogate section of the report for details.
WG1350235-1: The continuing calibration standard had the response for Perfluoroctanesulfonic Acid-Branched (br-PFOS) outside of acceptance criteria. The response for Perfluorooctanesulfonic Acid (PFOS) was within acceptance criteria; therefore, no further action was taken.
WG1350235-1: The continuing calibration standard had the response for Perfluorohexanesulfonic Acid-linear (L-PFHxS) outside of acceptance criteria. The response for Perfluorohexanesulfonic Acid (PFHxS) was within acceptance criteria; therefore, no further action was taken.
WG1350235-3: The continuing calibration standard had the response for Perfluorohexanesulfonic Acid-Branched (br-PFHxS) outside of acceptance criteria. The response for Perfluorohexanesulfonic Acid (PFHxS) was within acceptance criteria; therefore, no further action was taken.
WG1350235-4: The continuing calibration standard had the response for M2-8:2FTS outside the acceptance criteria for the method. The associated target analytes were within acceptance criteria; therefore, no further action was taken.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature:  Michelle M. Morris

Title: Technical Director/Representative Date: 03/18/20

# ORGANICS

# VOLATILES

**Project Name:** GROSSINGERS
**Project Number:** 9313
**Lab Number:** L2010346
**Report Date:** 03/18/20

## SAMPLE RESULTS

Lab ID: L2010346-01
Client ID: MW-216
Sample Location: LIBERTY, NY

Date Collected: 03/06/20 09:25
Date Received: 03/06/20
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8260C
Analytical Date: 03/11/20 19:38
Analyst: MM

| Parameter | Result | Qualifier | Units | RL | MDL | Dilution Factor |
|---|---|---|---|---|---|---|
| **Volatile Organics by GC/MS - Westborough Lab** | | | | | | |
| Methylene chloride | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,1-Dichloroethane | ND | | ug/l | 2.5 | 0.70 | 1 |
| Chloroform | ND | | ug/l | 2.5 | 0.70 | 1 |
| Carbon tetrachloride | ND | | ug/l | 0.50 | 0.13 | 1 |
| 1,2-Dichloropropane | ND | | ug/l | 1.0 | 0.14 | 1 |
| Dibromochloromethane | ND | | ug/l | 0.50 | 0.15 | 1 |
| 1,1,2-Trichloroethane | ND | | ug/l | 1.5 | 0.50 | 1 |
| Tetrachloroethene | ND | | ug/l | 0.50 | 0.18 | 1 |
| Chlorobenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Trichlorofluoromethane | 48 | | ug/l | 2.5 | 0.70 | 1 |
| 1,2-Dichloroethane | ND | | ug/l | 0.50 | 0.13 | 1 |
| 1,1,1-Trichloroethane | ND | | ug/l | 2.5 | 0.70 | 1 |
| Bromodichloromethane | ND | | ug/l | 0.50 | 0.19 | 1 |
| trans-1,3-Dichloropropene | ND | | ug/l | 0.50 | 0.16 | 1 |
| cis-1,3-Dichloropropene | ND | | ug/l | 0.50 | 0.14 | 1 |
| 1,3-Dichloropropene, Total | ND | | ug/l | 0.50 | 0.14 | 1 |
| 1,1-Dichloropropene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Bromoform | ND | | ug/l | 2.0 | 0.65 | 1 |
| 1,1,2,2-Tetrachloroethane | ND | | ug/l | 0.50 | 0.17 | 1 |
| Benzene | ND | | ug/l | 0.50 | 0.16 | 1 |
| Toluene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Ethylbenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Chloromethane | ND | | ug/l | 2.5 | 0.70 | 1 |
| Bromomethane | ND | | ug/l | 2.5 | 0.70 | 1 |
| Vinyl chloride | ND | | ug/l | 1.0 | 0.07 | 1 |
| Chloroethane | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,1-Dichloroethene | ND | | ug/l | 0.50 | 0.17 | 1 |
| trans-1,2-Dichloroethene | ND | | ug/l | 2.5 | 0.70 | 1 |

**Project Name:** GROSSINGERS **Lab Number:** L2010346

**Project Number:** 9313 **Report Date:** 03/18/20

## SAMPLE RESULTS

Lab ID: L2010346-01 Date Collected: 03/06/20 09:25

Client ID: MW-216 Date Received: 03/06/20

Sample Location: LIBERTY, NY Field Prep: Not Specified

Sample Depth:

| Parameter | Result | Qualifier | Units | RL | MDL | Dilution Factor |
|---|---|---|---|---|---|---|
| **Volatile Organics by GC/MS - Westborough Lab** | | | | | | |
| Trichloroethene | ND | | ug/l | 0.50 | 0.18 | 1 |
| 1,2-Dichlorobenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,3-Dichlorobenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,4-Dichlorobenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Methyl tert butyl ether | ND | | ug/l | 2.5 | 0.70 | 1 |
| p/m-Xylene | ND | | ug/l | 2.5 | 0.70 | 1 |
| o-Xylene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Xylenes, Total | ND | | ug/l | 2.5 | 0.70 | 1 |
| cis-1,2-Dichloroethene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,2-Dichloroethene, Total | ND | | ug/l | 2.5 | 0.70 | 1 |
| Dibromomethane | ND | | ug/l | 5.0 | 1.0 | 1 |
| 1,2,3-Trichloropropane | ND | | ug/l | 2.5 | 0.70 | 1 |
| Acrylonitrile | ND | | ug/l | 5.0 | 1.5 | 1 |
| Styrene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Dichlorodifluoromethane | 15 | | ug/l | 5.0 | 1.0 | 1 |
| Acetone | ND | | ug/l | 5.0 | 1.5 | 1 |
| Carbon disulfide | ND | | ug/l | 5.0 | 1.0 | 1 |
| 2-Butanone | ND | | ug/l | 5.0 | 1.9 | 1 |
| Vinyl acetate | ND | | ug/l | 5.0 | 1.0 | 1 |
| 4-Methyl-2-pentanone | ND | | ug/l | 5.0 | 1.0 | 1 |
| 2-Hexanone | ND | | ug/l | 5.0 | 1.0 | 1 |
| Bromochloromethane | ND | | ug/l | 2.5 | 0.70 | 1 |
| 2,2-Dichloropropane | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,2-Dibromoethane | ND | | ug/l | 2.0 | 0.65 | 1 |
| 1,3-Dichloropropane | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,1,1,2-Tetrachloroethane | ND | | ug/l | 2.5 | 0.70 | 1 |
| Bromobenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| n-Butylbenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| sec-Butylbenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| tert-Butylbenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| o-Chlorotoluene | ND | | ug/l | 2.5 | 0.70 | 1 |
| p-Chlorotoluene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,2-Dibromo-3-chloropropane | ND | | ug/l | 2.5 | 0.70 | 1 |
| Hexachlorobutadiene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Isopropylbenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| p-Isopropyltoluene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Naphthalene | ND | | ug/l | 2.5 | 0.70 | 1 |

**Project Name:** GROSSINGERS **Lab Number:** L2010346

**Project Number:** 9313 **Report Date:** 03/18/20

## SAMPLE RESULTS

Lab ID: L2010346-01 Date Collected: 03/06/20 09:25

Client ID: MW-216 Date Received: 03/06/20

Sample Location: LIBERTY, NY Field Prep: Not Specified

Sample Depth:

| Parameter | Result | Qualifier | Units | RL | MDL | Dilution Factor |
|---|---|---|---|---|---|---|
| **Volatile Organics by GC/MS - Westborough Lab** | | | | | | |
| n-Propylbenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,2,3-Trichlorobenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,2,4-Trichlorobenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,3,5-Trimethylbenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,2,4-Trimethylbenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,4-Dioxane | ND | | ug/l | 250 | 61. | 1 |
| p-Diethylbenzene | ND | | ug/l | 2.0 | 0.70 | 1 |
| p-Ethyltoluene | ND | | ug/l | 2.0 | 0.70 | 1 |
| 1,2,4,5-Tetramethylbenzene | ND | | ug/l | 2.0 | 0.54 | 1 |
| Ethyl ether | ND | | ug/l | 2.5 | 0.70 | 1 |
| trans-1,4-Dichloro-2-butene | ND | | ug/l | 2.5 | 0.70 | 1 |
| **Tentatively Identified Compounds** | | | | | | |
| Total TIC Compounds | 7.72 | J | ug/l | | | 1 |
| Fluorodichloromethane | 7.72 | NJ | ug/l | | | 1 |

| Surrogate | % Recovery | Qualifier | Acceptance Criteria |
|---|---|---|---|
| 1,2-Dichloroethane-d4 | 112 | | 70-130 |
| Toluene-d8 | 96 | | 70-130 |
| 4-Bromofluorobenzene | 95 | | 70-130 |
| Dibromofluoromethane | 111 | | 70-130 |

**Project Name:** GROSSINGERS
**Project Number:** 9313
**Lab Number:** L2010346
**Report Date:** 03/18/20

## SAMPLE RESULTS

Lab ID: L2010346-02
Client ID: MW-217
Sample Location: LIBERTY, NY

Date Collected: 03/06/20 11:00
Date Received: 03/06/20
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8260C
Analytical Date: 03/11/20 20:08
Analyst: MM

| Parameter | Result | Qualifier | Units | RL | MDL | Dilution Factor |
|---|---|---|---|---|---|---|
| **Volatile Organics by GC/MS - Westborough Lab** | | | | | | |
| Methylene chloride | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,1-Dichloroethane | ND | | ug/l | 2.5 | 0.70 | 1 |
| Chloroform | ND | | ug/l | 2.5 | 0.70 | 1 |
| Carbon tetrachloride | ND | | ug/l | 0.50 | 0.13 | 1 |
| 1,2-Dichloropropane | ND | | ug/l | 1.0 | 0.14 | 1 |
| Dibromochloromethane | ND | | ug/l | 0.50 | 0.15 | 1 |
| 1,1,2-Trichloroethane | ND | | ug/l | 1.5 | 0.50 | 1 |
| Tetrachloroethene | ND | | ug/l | 0.50 | 0.18 | 1 |
| Chlorobenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Trichlorofluoromethane | 22 | | ug/l | 2.5 | 0.70 | 1 |
| 1,2-Dichloroethane | ND | | ug/l | 0.50 | 0.13 | 1 |
| 1,1,1-Trichloroethane | ND | | ug/l | 2.5 | 0.70 | 1 |
| Bromodichloromethane | ND | | ug/l | 0.50 | 0.19 | 1 |
| trans-1,3-Dichloropropene | ND | | ug/l | 0.50 | 0.16 | 1 |
| cis-1,3-Dichloropropene | ND | | ug/l | 0.50 | 0.14 | 1 |
| 1,3-Dichloropropene, Total | ND | | ug/l | 0.50 | 0.14 | 1 |
| 1,1-Dichloropropene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Bromoform | ND | | ug/l | 2.0 | 0.65 | 1 |
| 1,1,2,2-Tetrachloroethane | ND | | ug/l | 0.50 | 0.17 | 1 |
| Benzene | ND | | ug/l | 0.50 | 0.16 | 1 |
| Toluene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Ethylbenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Chloromethane | ND | | ug/l | 2.5 | 0.70 | 1 |
| Bromomethane | ND | | ug/l | 2.5 | 0.70 | 1 |
| Vinyl chloride | ND | | ug/l | 1.0 | 0.07 | 1 |
| Chloroethane | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,1-Dichloroethene | ND | | ug/l | 0.50 | 0.17 | 1 |
| trans-1,2-Dichloroethene | ND | | ug/l | 2.5 | 0.70 | 1 |

**Project Name:** GROSSINGERS **Lab Number:** L2010346

**Project Number:** 9313 **Report Date:** 03/18/20

**SAMPLE RESULTS**

Lab ID: L2010346-02 Date Collected: 03/06/20 11:00

Client ID: MW-217 Date Received: 03/06/20

Sample Location: LIBERTY, NY Field Prep: Not Specified

Sample Depth:

| Parameter | Result | Qualifier | Units | RL | MDL | Dilution Factor |
|---|---|---|---|---|---|---|
| **Volatile Organics by GC/MS - Westborough Lab** | | | | | | |
| Trichloroethene | ND | | ug/l | 0.50 | 0.18 | 1 |
| 1,2-Dichlorobenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,3-Dichlorobenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,4-Dichlorobenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Methyl tert butyl ether | ND | | ug/l | 2.5 | 0.70 | 1 |
| p/m-Xylene | ND | | ug/l | 2.5 | 0.70 | 1 |
| o-Xylene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Xylenes, Total | ND | | ug/l | 2.5 | 0.70 | 1 |
| cis-1,2-Dichloroethene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,2-Dichloroethene, Total | ND | | ug/l | 2.5 | 0.70 | 1 |
| Dibromomethane | ND | | ug/l | 5.0 | 1.0 | 1 |
| 1,2,3-Trichloropropane | ND | | ug/l | 2.5 | 0.70 | 1 |
| Acrylonitrile | ND | | ug/l | 5.0 | 1.5 | 1 |
| Styrene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Dichlorodifluoromethane | ND | | ug/l | 5.0 | 1.0 | 1 |
| Acetone | ND | | ug/l | 5.0 | 1.5 | 1 |
| Carbon disulfide | ND | | ug/l | 5.0 | 1.0 | 1 |
| 2-Butanone | ND | | ug/l | 5.0 | 1.9 | 1 |
| Vinyl acetate | ND | | ug/l | 5.0 | 1.0 | 1 |
| 4-Methyl-2-pentanone | ND | | ug/l | 5.0 | 1.0 | 1 |
| 2-Hexanone | ND | | ug/l | 5.0 | 1.0 | 1 |
| Bromochloromethane | ND | | ug/l | 2.5 | 0.70 | 1 |
| 2,2-Dichloropropane | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,2-Dibromoethane | ND | | ug/l | 2.0 | 0.65 | 1 |
| 1,3-Dichloropropane | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,1,1,2-Tetrachloroethane | ND | | ug/l | 2.5 | 0.70 | 1 |
| Bromobenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| n-Butylbenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| sec-Butylbenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| tert-Butylbenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| o-Chlorotoluene | ND | | ug/l | 2.5 | 0.70 | 1 |
| p-Chlorotoluene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,2-Dibromo-3-chloropropane | ND | | ug/l | 2.5 | 0.70 | 1 |
| Hexachlorobutadiene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Isopropylbenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| p-Isopropyltoluene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Naphthalene | ND | | ug/l | 2.5 | 0.70 | 1 |

**Project Name:** GROSSINGERS **Lab Number:** L2010346

**Project Number:** 9313 **Report Date:** 03/18/20

## SAMPLE RESULTS

Lab ID: L2010346-02 Date Collected: 03/06/20 11:00

Client ID: MW-217 Date Received: 03/06/20

Sample Location: LIBERTY, NY Field Prep: Not Specified

Sample Depth:

| Parameter | Result | Qualifier | Units | RL | MDL | Dilution Factor |
|---|---|---|---|---|---|---|
| **Volatile Organics by GC/MS - Westborough Lab** | | | | | | |
| n-Propylbenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,2,3-Trichlorobenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,2,4-Trichlorobenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,3,5-Trimethylbenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,2,4-Trimethylbenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,4-Dioxane | ND | | ug/l | 250 | 61. | 1 |
| p-Diethylbenzene | ND | | ug/l | 2.0 | 0.70 | 1 |
| p-Ethyltoluene | ND | | ug/l | 2.0 | 0.70 | 1 |
| 1,2,4,5-Tetramethylbenzene | ND | | ug/l | 2.0 | 0.54 | 1 |
| Ethyl ether | ND | | ug/l | 2.5 | 0.70 | 1 |
| trans-1,4-Dichloro-2-butene | ND | | ug/l | 2.5 | 0.70 | 1 |
| **Tentatively Identified Compounds** | | | | | | |
| No Tentatively Identified Compounds | ND | | ug/l | | | 1 |

| Surrogate | % Recovery | Qualifier | Acceptance Criteria |
|---|---|---|---|
| 1,2-Dichloroethane-d4 | 116 | | 70-130 |
| Toluene-d8 | 95 | | 70-130 |
| 4-Bromofluorobenzene | 95 | | 70-130 |
| Dibromofluoromethane | 112 | | 70-130 |

**Project Name:** GROSSINGERS
**Project Number:** 9313
**Lab Number:** L2010346
**Report Date:** 03/18/20

## SAMPLE RESULTS

Lab ID: L2010346-03
Client ID: MW-209
Sample Location: LIBERTY, NY

Date Collected: 03/06/20 16:00
Date Received: 03/06/20
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8260C
Analytical Date: 03/11/20 20:39
Analyst: MM

| Parameter | Result | Qualifier | Units | RL | MDL | Dilution Factor |
|---|---|---|---|---|---|---|
| **Volatile Organics by GC/MS - Westborough Lab** | | | | | | |
| Methylene chloride | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,1-Dichloroethane | ND | | ug/l | 2.5 | 0.70 | 1 |
| Chloroform | ND | | ug/l | 2.5 | 0.70 | 1 |
| Carbon tetrachloride | ND | | ug/l | 0.50 | 0.13 | 1 |
| 1,2-Dichloropropane | ND | | ug/l | 1.0 | 0.14 | 1 |
| Dibromochloromethane | ND | | ug/l | 0.50 | 0.15 | 1 |
| 1,1,2-Trichloroethane | ND | | ug/l | 1.5 | 0.50 | 1 |
| Tetrachloroethene | ND | | ug/l | 0.50 | 0.18 | 1 |
| Chlorobenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Trichlorofluoromethane | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,2-Dichloroethane | ND | | ug/l | 0.50 | 0.13 | 1 |
| 1,1,1-Trichloroethane | ND | | ug/l | 2.5 | 0.70 | 1 |
| Bromodichloromethane | ND | | ug/l | 0.50 | 0.19 | 1 |
| trans-1,3-Dichloropropene | ND | | ug/l | 0.50 | 0.16 | 1 |
| cis-1,3-Dichloropropene | ND | | ug/l | 0.50 | 0.14 | 1 |
| 1,3-Dichloropropene, Total | ND | | ug/l | 0.50 | 0.14 | 1 |
| 1,1-Dichloropropene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Bromoform | ND | | ug/l | 2.0 | 0.65 | 1 |
| 1,1,2,2-Tetrachloroethane | ND | | ug/l | 0.50 | 0.17 | 1 |
| Benzene | ND | | ug/l | 0.50 | 0.16 | 1 |
| Toluene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Ethylbenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Chloromethane | ND | | ug/l | 2.5 | 0.70 | 1 |
| Bromomethane | ND | | ug/l | 2.5 | 0.70 | 1 |
| Vinyl chloride | ND | | ug/l | 1.0 | 0.07 | 1 |
| Chloroethane | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,1-Dichloroethene | ND | | ug/l | 0.50 | 0.17 | 1 |
| trans-1,2-Dichloroethene | ND | | ug/l | 2.5 | 0.70 | 1 |

**Project Name:** GROSSINGERS **Lab Number:** L2010346

**Project Number:** 9313 **Report Date:** 03/18/20

## SAMPLE RESULTS

Lab ID: L2010346-03 Date Collected: 03/06/20 16:00

Client ID: MW-209 Date Received: 03/06/20

Sample Location: LIBERTY, NY Field Prep: Not Specified

Sample Depth:

| Parameter | Result | Qualifier | Units | RL | MDL | Dilution Factor |
|---|---|---|---|---|---|---|
| **Volatile Organics by GC/MS - Westborough Lab** | | | | | | |
| Trichloroethene | ND | | ug/l | 0.50 | 0.18 | 1 |
| 1,2-Dichlorobenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,3-Dichlorobenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,4-Dichlorobenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Methyl tert butyl ether | ND | | ug/l | 2.5 | 0.70 | 1 |
| p/m-Xylene | ND | | ug/l | 2.5 | 0.70 | 1 |
| o-Xylene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Xylenes, Total | ND | | ug/l | 2.5 | 0.70 | 1 |
| cis-1,2-Dichloroethene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,2-Dichloroethene, Total | ND | | ug/l | 2.5 | 0.70 | 1 |
| Dibromomethane | ND | | ug/l | 5.0 | 1.0 | 1 |
| 1,2,3-Trichloropropane | ND | | ug/l | 2.5 | 0.70 | 1 |
| Acrylonitrile | ND | | ug/l | 5.0 | 1.5 | 1 |
| Styrene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Dichlorodifluoromethane | ND | | ug/l | 5.0 | 1.0 | 1 |
| Acetone | ND | | ug/l | 5.0 | 1.5 | 1 |
| Carbon disulfide | ND | | ug/l | 5.0 | 1.0 | 1 |
| 2-Butanone | ND | | ug/l | 5.0 | 1.9 | 1 |
| Vinyl acetate | ND | | ug/l | 5.0 | 1.0 | 1 |
| 4-Methyl-2-pentanone | ND | | ug/l | 5.0 | 1.0 | 1 |
| 2-Hexanone | ND | | ug/l | 5.0 | 1.0 | 1 |
| Bromochloromethane | ND | | ug/l | 2.5 | 0.70 | 1 |
| 2,2-Dichloropropane | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,2-Dibromoethane | ND | | ug/l | 2.0 | 0.65 | 1 |
| 1,3-Dichloropropane | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,1,1,2-Tetrachloroethane | ND | | ug/l | 2.5 | 0.70 | 1 |
| Bromobenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| n-Butylbenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| sec-Butylbenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| tert-Butylbenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| o-Chlorotoluene | ND | | ug/l | 2.5 | 0.70 | 1 |
| p-Chlorotoluene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,2-Dibromo-3-chloropropane | ND | | ug/l | 2.5 | 0.70 | 1 |
| Hexachlorobutadiene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Isopropylbenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| p-Isopropyltoluene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Naphthalene | ND | | ug/l | 2.5 | 0.70 | 1 |

**Project Name:** GROSSINGERS **Lab Number:** L2010346

**Project Number:** 9313 **Report Date:** 03/18/20

## SAMPLE RESULTS

Lab ID: L2010346-03 Date Collected: 03/06/20 16:00

Client ID: MW-209 Date Received: 03/06/20

Sample Location: LIBERTY, NY Field Prep: Not Specified

Sample Depth:

| Parameter | Result | Qualifier | Units | RL | MDL | Dilution Factor |
|---|---|---|---|---|---|---|
| **Volatile Organics by GC/MS - Westborough Lab** | | | | | | |
| n-Propylbenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,2,3-Trichlorobenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,2,4-Trichlorobenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,3,5-Trimethylbenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,2,4-Trimethylbenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,4-Dioxane | ND | | ug/l | 250 | 61. | 1 |
| p-Diethylbenzene | ND | | ug/l | 2.0 | 0.70 | 1 |
| p-Ethyltoluene | ND | | ug/l | 2.0 | 0.70 | 1 |
| 1,2,4,5-Tetramethylbenzene | ND | | ug/l | 2.0 | 0.54 | 1 |
| Ethyl ether | ND | | ug/l | 2.5 | 0.70 | 1 |
| trans-1,4-Dichloro-2-butene | ND | | ug/l | 2.5 | 0.70 | 1 |
| **Tentatively Identified Compounds** | | | | | | |
| No Tentatively Identified Compounds | ND | | ug/l | | | 1 |

| Surrogate | % Recovery | Qualifier | Acceptance Criteria |
|---|---|---|---|
| 1,2-Dichloroethane-d4 | 112 | | 70-130 |
| Toluene-d8 | 96 | | 70-130 |
| 4-Bromofluorobenzene | 93 | | 70-130 |
| Dibromofluoromethane | 109 | | 70-130 |

**Project Name:** GROSSINGERS
**Project Number:** 9313
**Lab Number:** L2010346
**Report Date:** 03/18/20

## SAMPLE RESULTS

Lab ID: L2010346-04
Client ID: MW-211
Sample Location: LIBERTY, NY

Date Collected: 03/06/20 11:30
Date Received: 03/06/20
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8260C
Analytical Date: 03/11/20 21:09
Analyst: MM

| Parameter | Result | Qualifier | Units | RL | MDL | Dilution Factor |
|---|---|---|---|---|---|---|
| **Volatile Organics by GC/MS - Westborough Lab** | | | | | | |
| Methylene chloride | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,1-Dichloroethane | ND | | ug/l | 2.5 | 0.70 | 1 |
| Chloroform | ND | | ug/l | 2.5 | 0.70 | 1 |
| Carbon tetrachloride | ND | | ug/l | 0.50 | 0.13 | 1 |
| 1,2-Dichloropropane | ND | | ug/l | 1.0 | 0.14 | 1 |
| Dibromochloromethane | ND | | ug/l | 0.50 | 0.15 | 1 |
| 1,1,2-Trichloroethane | ND | | ug/l | 1.5 | 0.50 | 1 |
| Tetrachloroethene | ND | | ug/l | 0.50 | 0.18 | 1 |
| Chlorobenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Trichlorofluoromethane | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,2-Dichloroethane | ND | | ug/l | 0.50 | 0.13 | 1 |
| 1,1,1-Trichloroethane | ND | | ug/l | 2.5 | 0.70 | 1 |
| Bromodichloromethane | ND | | ug/l | 0.50 | 0.19 | 1 |
| trans-1,3-Dichloropropene | ND | | ug/l | 0.50 | 0.16 | 1 |
| cis-1,3-Dichloropropene | ND | | ug/l | 0.50 | 0.14 | 1 |
| 1,3-Dichloropropene, Total | ND | | ug/l | 0.50 | 0.14 | 1 |
| 1,1-Dichloropropene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Bromoform | ND | | ug/l | 2.0 | 0.65 | 1 |
| 1,1,2,2-Tetrachloroethane | ND | | ug/l | 0.50 | 0.17 | 1 |
| Benzene | ND | | ug/l | 0.50 | 0.16 | 1 |
| Toluene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Ethylbenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Chloromethane | ND | | ug/l | 2.5 | 0.70 | 1 |
| Bromomethane | ND | | ug/l | 2.5 | 0.70 | 1 |
| Vinyl chloride | ND | | ug/l | 1.0 | 0.07 | 1 |
| Chloroethane | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,1-Dichloroethene | ND | | ug/l | 0.50 | 0.17 | 1 |
| trans-1,2-Dichloroethene | ND | | ug/l | 2.5 | 0.70 | 1 |

**Project Name:** GROSSINGERS **Lab Number:** L2010346

**Project Number:** 9313 **Report Date:** 03/18/20

## SAMPLE RESULTS

Lab ID: L2010346-04 Date Collected: 03/06/20 11:30

Client ID: MW-211 Date Received: 03/06/20

Sample Location: LIBERTY, NY Field Prep: Not Specified

Sample Depth:

| Parameter | Result | Qualifier | Units | RL | MDL | Dilution Factor |
|---|---|---|---|---|---|---|
| **Volatile Organics by GC/MS - Westborough Lab** | | | | | | |
| Trichloroethene | ND | | ug/l | 0.50 | 0.18 | 1 |
| 1,2-Dichlorobenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,3-Dichlorobenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,4-Dichlorobenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Methyl tert butyl ether | ND | | ug/l | 2.5 | 0.70 | 1 |
| p/m-Xylene | ND | | ug/l | 2.5 | 0.70 | 1 |
| o-Xylene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Xylenes, Total | ND | | ug/l | 2.5 | 0.70 | 1 |
| cis-1,2-Dichloroethene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,2-Dichloroethene, Total | ND | | ug/l | 2.5 | 0.70 | 1 |
| Dibromomethane | ND | | ug/l | 5.0 | 1.0 | 1 |
| 1,2,3-Trichloropropane | ND | | ug/l | 2.5 | 0.70 | 1 |
| Acrylonitrile | ND | | ug/l | 5.0 | 1.5 | 1 |
| Styrene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Dichlorodifluoromethane | ND | | ug/l | 5.0 | 1.0 | 1 |
| Acetone | ND | | ug/l | 5.0 | 1.5 | 1 |
| Carbon disulfide | ND | | ug/l | 5.0 | 1.0 | 1 |
| 2-Butanone | ND | | ug/l | 5.0 | 1.9 | 1 |
| Vinyl acetate | ND | | ug/l | 5.0 | 1.0 | 1 |
| 4-Methyl-2-pentanone | ND | | ug/l | 5.0 | 1.0 | 1 |
| 2-Hexanone | ND | | ug/l | 5.0 | 1.0 | 1 |
| Bromochloromethane | ND | | ug/l | 2.5 | 0.70 | 1 |
| 2,2-Dichloropropane | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,2-Dibromoethane | ND | | ug/l | 2.0 | 0.65 | 1 |
| 1,3-Dichloropropane | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,1,1,2-Tetrachloroethane | ND | | ug/l | 2.5 | 0.70 | 1 |
| Bromobenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| n-Butylbenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| sec-Butylbenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| tert-Butylbenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| o-Chlorotoluene | ND | | ug/l | 2.5 | 0.70 | 1 |
| p-Chlorotoluene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,2-Dibromo-3-chloropropane | ND | | ug/l | 2.5 | 0.70 | 1 |
| Hexachlorobutadiene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Isopropylbenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| p-Isopropyltoluene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Naphthalene | ND | | ug/l | 2.5 | 0.70 | 1 |

**Project Name:** GROSSINGERS **Lab Number:** L2010346

**Project Number:** 9313 **Report Date:** 03/18/20

## SAMPLE RESULTS

Lab ID: L2010346-04 Date Collected: 03/06/20 11:30

Client ID: MW-211 Date Received: 03/06/20

Sample Location: LIBERTY, NY Field Prep: Not Specified

Sample Depth:

| Parameter | Result | Qualifier | Units | RL | MDL | Dilution Factor |
|---|---|---|---|---|---|---|
| **Volatile Organics by GC/MS - Westborough Lab** | | | | | | |
| n-Propylbenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,2,3-Trichlorobenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,2,4-Trichlorobenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,3,5-Trimethylbenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,2,4-Trimethylbenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,4-Dioxane | ND | | ug/l | 250 | 61. | 1 |
| p-Diethylbenzene | ND | | ug/l | 2.0 | 0.70 | 1 |
| p-Ethyltoluene | ND | | ug/l | 2.0 | 0.70 | 1 |
| 1,2,4,5-Tetramethylbenzene | ND | | ug/l | 2.0 | 0.54 | 1 |
| Ethyl ether | ND | | ug/l | 2.5 | 0.70 | 1 |
| trans-1,4-Dichloro-2-butene | ND | | ug/l | 2.5 | 0.70 | 1 |
| **Tentatively Identified Compounds** | | | | | | |
| No Tentatively Identified Compounds | ND | | ug/l | | | 1 |

| Surrogate | % Recovery | Qualifier | Acceptance Criteria |
|---|---|---|---|
| 1,2-Dichloroethane-d4 | 112 | | 70-130 |
| Toluene-d8 | 97 | | 70-130 |
| 4-Bromofluorobenzene | 94 | | 70-130 |
| Dibromofluoromethane | 113 | | 70-130 |

**Project Name:** GROSSINGERS
**Project Number:** 9313
**Lab Number:** L2010346
**Report Date:** 03/18/20

## SAMPLE RESULTS

Lab ID: L2010346-05
Client ID: MW-201
Sample Location: LIBERTY, NY

Date Collected: 03/06/20 13:45
Date Received: 03/06/20
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8260C
Analytical Date: 03/11/20 21:39
Analyst: MM

| Parameter | Result | Qualifier | Units | RL | MDL | Dilution Factor |
|---|---|---|---|---|---|---|
| **Volatile Organics by GC/MS - Westborough Lab** | | | | | | |
| Methylene chloride | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,1-Dichloroethane | ND | | ug/l | 2.5 | 0.70 | 1 |
| Chloroform | ND | | ug/l | 2.5 | 0.70 | 1 |
| Carbon tetrachloride | ND | | ug/l | 0.50 | 0.13 | 1 |
| 1,2-Dichloropropane | ND | | ug/l | 1.0 | 0.14 | 1 |
| Dibromochloromethane | ND | | ug/l | 0.50 | 0.15 | 1 |
| 1,1,2-Trichloroethane | ND | | ug/l | 1.5 | 0.50 | 1 |
| Tetrachloroethene | ND | | ug/l | 0.50 | 0.18 | 1 |
| Chlorobenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Trichlorofluoromethane | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,2-Dichloroethane | ND | | ug/l | 0.50 | 0.13 | 1 |
| 1,1,1-Trichloroethane | ND | | ug/l | 2.5 | 0.70 | 1 |
| Bromodichloromethane | ND | | ug/l | 0.50 | 0.19 | 1 |
| trans-1,3-Dichloropropene | ND | | ug/l | 0.50 | 0.16 | 1 |
| cis-1,3-Dichloropropene | ND | | ug/l | 0.50 | 0.14 | 1 |
| 1,3-Dichloropropene, Total | ND | | ug/l | 0.50 | 0.14 | 1 |
| 1,1-Dichloropropene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Bromoform | ND | | ug/l | 2.0 | 0.65 | 1 |
| 1,1,2,2-Tetrachloroethane | ND | | ug/l | 0.50 | 0.17 | 1 |
| Benzene | ND | | ug/l | 0.50 | 0.16 | 1 |
| Toluene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Ethylbenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Chloromethane | ND | | ug/l | 2.5 | 0.70 | 1 |
| Bromomethane | ND | | ug/l | 2.5 | 0.70 | 1 |
| Vinyl chloride | ND | | ug/l | 1.0 | 0.07 | 1 |
| Chloroethane | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,1-Dichloroethene | ND | | ug/l | 0.50 | 0.17 | 1 |
| trans-1,2-Dichloroethene | ND | | ug/l | 2.5 | 0.70 | 1 |

**Project Name:** GROSSINGERS **Lab Number:** L2010346

**Project Number:** 9313 **Report Date:** 03/18/20

## SAMPLE RESULTS

Lab ID: L2010346-05 Date Collected: 03/06/20 13:45

Client ID: MW-201 Date Received: 03/06/20

Sample Location: LIBERTY, NY Field Prep: Not Specified

Sample Depth:

| Parameter | Result | Qualifier | Units | RL | MDL | Dilution Factor |
|---|---|---|---|---|---|---|
| **Volatile Organics by GC/MS - Westborough Lab** | | | | | | |
| Trichloroethene | ND | | ug/l | 0.50 | 0.18 | 1 |
| 1,2-Dichlorobenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,3-Dichlorobenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,4-Dichlorobenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Methyl tert butyl ether | ND | | ug/l | 2.5 | 0.70 | 1 |
| p/m-Xylene | ND | | ug/l | 2.5 | 0.70 | 1 |
| o-Xylene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Xylenes, Total | ND | | ug/l | 2.5 | 0.70 | 1 |
| cis-1,2-Dichloroethene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,2-Dichloroethene, Total | ND | | ug/l | 2.5 | 0.70 | 1 |
| Dibromomethane | ND | | ug/l | 5.0 | 1.0 | 1 |
| 1,2,3-Trichloropropane | ND | | ug/l | 2.5 | 0.70 | 1 |
| Acrylonitrile | ND | | ug/l | 5.0 | 1.5 | 1 |
| Styrene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Dichlorodifluoromethane | ND | | ug/l | 5.0 | 1.0 | 1 |
| Acetone | ND | | ug/l | 5.0 | 1.5 | 1 |
| Carbon disulfide | ND | | ug/l | 5.0 | 1.0 | 1 |
| 2-Butanone | ND | | ug/l | 5.0 | 1.9 | 1 |
| Vinyl acetate | ND | | ug/l | 5.0 | 1.0 | 1 |
| 4-Methyl-2-pentanone | ND | | ug/l | 5.0 | 1.0 | 1 |
| 2-Hexanone | ND | | ug/l | 5.0 | 1.0 | 1 |
| Bromochloromethane | ND | | ug/l | 2.5 | 0.70 | 1 |
| 2,2-Dichloropropane | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,2-Dibromoethane | ND | | ug/l | 2.0 | 0.65 | 1 |
| 1,3-Dichloropropane | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,1,1,2-Tetrachloroethane | ND | | ug/l | 2.5 | 0.70 | 1 |
| Bromobenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| n-Butylbenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| sec-Butylbenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| tert-Butylbenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| o-Chlorotoluene | ND | | ug/l | 2.5 | 0.70 | 1 |
| p-Chlorotoluene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,2-Dibromo-3-chloropropane | ND | | ug/l | 2.5 | 0.70 | 1 |
| Hexachlorobutadiene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Isopropylbenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| p-Isopropyltoluene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Naphthalene | ND | | ug/l | 2.5 | 0.70 | 1 |

**Project Name:** GROSSINGERS **Lab Number:** L2010346

**Project Number:** 9313 **Report Date:** 03/18/20

## SAMPLE RESULTS

Lab ID: L2010346-05 Date Collected: 03/06/20 13:45

Client ID: MW-201 Date Received: 03/06/20

Sample Location: LIBERTY, NY Field Prep: Not Specified

Sample Depth:

| Parameter | Result | Qualifier | Units | RL | MDL | Dilution Factor |
|---|---|---|---|---|---|---|
| **Volatile Organics by GC/MS - Westborough Lab** | | | | | | |
| n-Propylbenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,2,3-Trichlorobenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,2,4-Trichlorobenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,3,5-Trimethylbenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,2,4-Trimethylbenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,4-Dioxane | ND | | ug/l | 250 | 61. | 1 |
| p-Diethylbenzene | ND | | ug/l | 2.0 | 0.70 | 1 |
| p-Ethyltoluene | ND | | ug/l | 2.0 | 0.70 | 1 |
| 1,2,4,5-Tetramethylbenzene | ND | | ug/l | 2.0 | 0.54 | 1 |
| Ethyl ether | ND | | ug/l | 2.5 | 0.70 | 1 |
| trans-1,4-Dichloro-2-butene | ND | | ug/l | 2.5 | 0.70 | 1 |
| **Tentatively Identified Compounds** | | | | | | |
| No Tentatively Identified Compounds | ND | | ug/l | | | 1 |

| Surrogate | % Recovery | Qualifier | Acceptance Criteria |
|---|---|---|---|
| 1,2-Dichloroethane-d4 | 114 | | 70-130 |
| Toluene-d8 | 97 | | 70-130 |
| 4-Bromofluorobenzene | 95 | | 70-130 |
| Dibromofluoromethane | 111 | | 70-130 |

**Project Name:** GROSSINGERS
**Project Number:** 9313
**Lab Number:** L2010346
**Report Date:** 03/18/20

## SAMPLE RESULTS

Lab ID: L2010346-06
Client ID: MW-210
Sample Location: LIBERTY, NY

Date Collected: 03/06/20 15:10
Date Received: 03/06/20
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8260C
Analytical Date: 03/11/20 23:40
Analyst: MM

| Parameter | Result | Qualifier | Units | RL | MDL | Dilution Factor |
|---|---|---|---|---|---|---|
| **Volatile Organics by GC/MS - Westborough Lab** | | | | | | |
| Methylene chloride | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,1-Dichloroethane | ND | | ug/l | 2.5 | 0.70 | 1 |
| Chloroform | ND | | ug/l | 2.5 | 0.70 | 1 |
| Carbon tetrachloride | ND | | ug/l | 0.50 | 0.13 | 1 |
| 1,2-Dichloropropane | ND | | ug/l | 1.0 | 0.14 | 1 |
| Dibromochloromethane | ND | | ug/l | 0.50 | 0.15 | 1 |
| 1,1,2-Trichloroethane | ND | | ug/l | 1.5 | 0.50 | 1 |
| Tetrachloroethene | ND | | ug/l | 0.50 | 0.18 | 1 |
| Chlorobenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Trichlorofluoromethane | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,2-Dichloroethane | ND | | ug/l | 0.50 | 0.13 | 1 |
| 1,1,1-Trichloroethane | ND | | ug/l | 2.5 | 0.70 | 1 |
| Bromodichloromethane | ND | | ug/l | 0.50 | 0.19 | 1 |
| trans-1,3-Dichloropropene | ND | | ug/l | 0.50 | 0.16 | 1 |
| cis-1,3-Dichloropropene | ND | | ug/l | 0.50 | 0.14 | 1 |
| 1,3-Dichloropropene, Total | ND | | ug/l | 0.50 | 0.14 | 1 |
| 1,1-Dichloropropene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Bromoform | ND | | ug/l | 2.0 | 0.65 | 1 |
| 1,1,2,2-Tetrachloroethane | ND | | ug/l | 0.50 | 0.17 | 1 |
| Benzene | ND | | ug/l | 0.50 | 0.16 | 1 |
| Toluene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Ethylbenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Chloromethane | ND | | ug/l | 2.5 | 0.70 | 1 |
| Bromomethane | ND | | ug/l | 2.5 | 0.70 | 1 |
| Vinyl chloride | ND | | ug/l | 1.0 | 0.07 | 1 |
| Chloroethane | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,1-Dichloroethene | ND | | ug/l | 0.50 | 0.17 | 1 |
| trans-1,2-Dichloroethene | ND | | ug/l | 2.5 | 0.70 | 1 |

**Project Name:** GROSSINGERS **Lab Number:** L2010346

**Project Number:** 9313 **Report Date:** 03/18/20

## SAMPLE RESULTS

Lab ID: L2010346-06 Date Collected: 03/06/20 15:10

Client ID: MW-210 Date Received: 03/06/20

Sample Location: LIBERTY, NY Field Prep: Not Specified

Sample Depth:

| Parameter | Result | Qualifier | Units | RL | MDL | Dilution Factor |
|---|---|---|---|---|---|---|
| **Volatile Organics by GC/MS - Westborough Lab** | | | | | | |
| Trichloroethene | ND | | ug/l | 0.50 | 0.18 | 1 |
| 1,2-Dichlorobenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,3-Dichlorobenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,4-Dichlorobenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Methyl tert butyl ether | ND | | ug/l | 2.5 | 0.70 | 1 |
| p/m-Xylene | ND | | ug/l | 2.5 | 0.70 | 1 |
| o-Xylene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Xylenes, Total | ND | | ug/l | 2.5 | 0.70 | 1 |
| cis-1,2-Dichloroethene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,2-Dichloroethene, Total | ND | | ug/l | 2.5 | 0.70 | 1 |
| Dibromomethane | ND | | ug/l | 5.0 | 1.0 | 1 |
| 1,2,3-Trichloropropane | ND | | ug/l | 2.5 | 0.70 | 1 |
| Acrylonitrile | ND | | ug/l | 5.0 | 1.5 | 1 |
| Styrene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Dichlorodifluoromethane | ND | | ug/l | 5.0 | 1.0 | 1 |
| Acetone | ND | | ug/l | 5.0 | 1.5 | 1 |
| Carbon disulfide | ND | | ug/l | 5.0 | 1.0 | 1 |
| 2-Butanone | ND | | ug/l | 5.0 | 1.9 | 1 |
| Vinyl acetate | ND | | ug/l | 5.0 | 1.0 | 1 |
| 4-Methyl-2-pentanone | ND | | ug/l | 5.0 | 1.0 | 1 |
| 2-Hexanone | ND | | ug/l | 5.0 | 1.0 | 1 |
| Bromochloromethane | ND | | ug/l | 2.5 | 0.70 | 1 |
| 2,2-Dichloropropane | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,2-Dibromoethane | ND | | ug/l | 2.0 | 0.65 | 1 |
| 1,3-Dichloropropane | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,1,1,2-Tetrachloroethane | ND | | ug/l | 2.5 | 0.70 | 1 |
| Bromobenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| n-Butylbenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| sec-Butylbenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| tert-Butylbenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| o-Chlorotoluene | ND | | ug/l | 2.5 | 0.70 | 1 |
| p-Chlorotoluene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,2-Dibromo-3-chloropropane | ND | | ug/l | 2.5 | 0.70 | 1 |
| Hexachlorobutadiene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Isopropylbenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| p-Isopropyltoluene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Naphthalene | ND | | ug/l | 2.5 | 0.70 | 1 |

**Project Name:** GROSSINGERS **Lab Number:** L2010346

**Project Number:** 9313 **Report Date:** 03/18/20

## SAMPLE RESULTS

Lab ID: L2010346-06 Date Collected: 03/06/20 15:10

Client ID: MW-210 Date Received: 03/06/20

Sample Location: LIBERTY, NY Field Prep: Not Specified

Sample Depth:

| Parameter | Result | Qualifier | Units | RL | MDL | Dilution Factor |
|---|---|---|---|---|---|---|
| **Volatile Organics by GC/MS - Westborough Lab** | | | | | | |
| n-Propylbenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,2,3-Trichlorobenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,2,4-Trichlorobenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,3,5-Trimethylbenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,2,4-Trimethylbenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,4-Dioxane | ND | | ug/l | 250 | 61. | 1 |
| p-Diethylbenzene | ND | | ug/l | 2.0 | 0.70 | 1 |
| p-Ethyltoluene | ND | | ug/l | 2.0 | 0.70 | 1 |
| 1,2,4,5-Tetramethylbenzene | ND | | ug/l | 2.0 | 0.54 | 1 |
| Ethyl ether | ND | | ug/l | 2.5 | 0.70 | 1 |
| trans-1,4-Dichloro-2-butene | ND | | ug/l | 2.5 | 0.70 | 1 |
| **Tentatively Identified Compounds** | | | | | | |
| No Tentatively Identified Compounds | ND | | ug/l | | | 1 |

| Surrogate | % Recovery | Qualifier | Acceptance Criteria |
|---|---|---|---|
| 1,2-Dichloroethane-d4 | 116 | | 70-130 |
| Toluene-d8 | 96 | | 70-130 |
| 4-Bromofluorobenzene | 94 | | 70-130 |
| Dibromofluoromethane | 112 | | 70-130 |

**Project Name:** GROSSINGERS
**Project Number:** 9313
**Lab Number:** L2010346
**Report Date:** 03/18/20

## SAMPLE RESULTS

Lab ID: L2010346-08
Client ID: TB
Sample Location: LIBERTY, NY

Date Collected: 03/03/20 00:00
Date Received: 03/06/20
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8260C
Analytical Date: 03/11/20 19:08
Analyst: MM

| Parameter | Result | Qualifier | Units | RL | MDL | Dilution Factor |
|---|---|---|---|---|---|---|
| **Volatile Organics by GC/MS - Westborough Lab** | | | | | | |
| Methylene chloride | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,1-Dichloroethane | ND | | ug/l | 2.5 | 0.70 | 1 |
| Chloroform | ND | | ug/l | 2.5 | 0.70 | 1 |
| Carbon tetrachloride | ND | | ug/l | 0.50 | 0.13 | 1 |
| 1,2-Dichloropropane | ND | | ug/l | 1.0 | 0.14 | 1 |
| Dibromochloromethane | ND | | ug/l | 0.50 | 0.15 | 1 |
| 1,1,2-Trichloroethane | ND | | ug/l | 1.5 | 0.50 | 1 |
| Tetrachloroethene | ND | | ug/l | 0.50 | 0.18 | 1 |
| Chlorobenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Trichlorofluoromethane | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,2-Dichloroethane | ND | | ug/l | 0.50 | 0.13 | 1 |
| 1,1,1-Trichloroethane | ND | | ug/l | 2.5 | 0.70 | 1 |
| Bromodichloromethane | ND | | ug/l | 0.50 | 0.19 | 1 |
| trans-1,3-Dichloropropene | ND | | ug/l | 0.50 | 0.16 | 1 |
| cis-1,3-Dichloropropene | ND | | ug/l | 0.50 | 0.14 | 1 |
| 1,3-Dichloropropene, Total | ND | | ug/l | 0.50 | 0.14 | 1 |
| 1,1-Dichloropropene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Bromoform | ND | | ug/l | 2.0 | 0.65 | 1 |
| 1,1,2,2-Tetrachloroethane | ND | | ug/l | 0.50 | 0.17 | 1 |
| Benzene | ND | | ug/l | 0.50 | 0.16 | 1 |
| Toluene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Ethylbenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Chloromethane | ND | | ug/l | 2.5 | 0.70 | 1 |
| Bromomethane | ND | | ug/l | 2.5 | 0.70 | 1 |
| Vinyl chloride | ND | | ug/l | 1.0 | 0.07 | 1 |
| Chloroethane | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,1-Dichloroethene | ND | | ug/l | 0.50 | 0.17 | 1 |
| trans-1,2-Dichloroethene | ND | | ug/l | 2.5 | 0.70 | 1 |

**Project Name:** GROSSINGERS **Lab Number:** L2010346

**Project Number:** 9313 **Report Date:** 03/18/20

**SAMPLE RESULTS**

Lab ID: L2010346-08 Date Collected: 03/03/20 00:00

Client ID: TB Date Received: 03/06/20

Sample Location: LIBERTY, NY Field Prep: Not Specified

Sample Depth:

| Parameter | Result | Qualifier | Units | RL | MDL | Dilution Factor |
|---|---|---|---|---|---|---|
| **Volatile Organics by GC/MS - Westborough Lab** | | | | | | |
| Trichloroethene | ND | | ug/l | 0.50 | 0.18 | 1 |
| 1,2-Dichlorobenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,3-Dichlorobenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,4-Dichlorobenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Methyl tert butyl ether | ND | | ug/l | 2.5 | 0.70 | 1 |
| p/m-Xylene | ND | | ug/l | 2.5 | 0.70 | 1 |
| o-Xylene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Xylenes, Total | ND | | ug/l | 2.5 | 0.70 | 1 |
| cis-1,2-Dichloroethene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,2-Dichloroethene, Total | ND | | ug/l | 2.5 | 0.70 | 1 |
| Dibromomethane | ND | | ug/l | 5.0 | 1.0 | 1 |
| 1,2,3-Trichloropropane | ND | | ug/l | 2.5 | 0.70 | 1 |
| Acrylonitrile | ND | | ug/l | 5.0 | 1.5 | 1 |
| Styrene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Dichlorodifluoromethane | ND | | ug/l | 5.0 | 1.0 | 1 |
| Acetone | ND | | ug/l | 5.0 | 1.5 | 1 |
| Carbon disulfide | ND | | ug/l | 5.0 | 1.0 | 1 |
| 2-Butanone | ND | | ug/l | 5.0 | 1.9 | 1 |
| Vinyl acetate | ND | | ug/l | 5.0 | 1.0 | 1 |
| 4-Methyl-2-pentanone | ND | | ug/l | 5.0 | 1.0 | 1 |
| 2-Hexanone | ND | | ug/l | 5.0 | 1.0 | 1 |
| Bromochloromethane | ND | | ug/l | 2.5 | 0.70 | 1 |
| 2,2-Dichloropropane | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,2-Dibromoethane | ND | | ug/l | 2.0 | 0.65 | 1 |
| 1,3-Dichloropropane | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,1,1,2-Tetrachloroethane | ND | | ug/l | 2.5 | 0.70 | 1 |
| Bromobenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| n-Butylbenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| sec-Butylbenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| tert-Butylbenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| o-Chlorotoluene | ND | | ug/l | 2.5 | 0.70 | 1 |
| p-Chlorotoluene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,2-Dibromo-3-chloropropane | ND | | ug/l | 2.5 | 0.70 | 1 |
| Hexachlorobutadiene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Isopropylbenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| p-Isopropyltoluene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Naphthalene | ND | | ug/l | 2.5 | 0.70 | 1 |

**Project Name:** GROSSINGERS **Lab Number:** L2010346

**Project Number:** 9313 **Report Date:** 03/18/20

## SAMPLE RESULTS

Lab ID: L2010346-08 Date Collected: 03/03/20 00:00

Client ID: TB Date Received: 03/06/20

Sample Location: LIBERTY, NY Field Prep: Not Specified

Sample Depth:

| Parameter | Result | Qualifier | Units | RL | MDL | Dilution Factor |
|---|---|---|---|---|---|---|
| **Volatile Organics by GC/MS - Westborough Lab** | | | | | | |
| n-Propylbenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,2,3-Trichlorobenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,2,4-Trichlorobenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,3,5-Trimethylbenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,2,4-Trimethylbenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,4-Dioxane | ND | | ug/l | 250 | 61. | 1 |
| p-Diethylbenzene | ND | | ug/l | 2.0 | 0.70 | 1 |
| p-Ethyltoluene | ND | | ug/l | 2.0 | 0.70 | 1 |
| 1,2,4,5-Tetramethylbenzene | ND | | ug/l | 2.0 | 0.54 | 1 |
| Ethyl ether | ND | | ug/l | 2.5 | 0.70 | 1 |
| trans-1,4-Dichloro-2-butene | ND | | ug/l | 2.5 | 0.70 | 1 |
| **Tentatively Identified Compounds** | | | | | | |
| No Tentatively Identified Compounds | ND | | ug/l | | | 1 |

| Surrogate | % Recovery | Qualifier | Acceptance Criteria |
|---|---|---|---|
| 1,2-Dichloroethane-d4 | 112 | | 70-130 |
| Toluene-d8 | 95 | | 70-130 |
| 4-Bromofluorobenzene | 95 | | 70-130 |
| Dibromofluoromethane | 111 | | 70-130 |

**Project Name:** GROSSINGERS **Lab Number:** L2010346

**Project Number:** 9313 **Report Date:** 03/18/20

# Method Blank Analysis
## Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 03/11/20 18:08
Analyst: KJD

| Parameter | Result | Qualifier | Units | RL | MDL |
|---|---|---|---|---|---|
| Volatile Organics by GC/MS - Westborough Lab for sample(s): 01-06,08 Batch: WG1350045-5 | | | | | |
| Methylene chloride | ND | | ug/l | 2.5 | 0.70 |
| 1,1-Dichloroethane | ND | | ug/l | 2.5 | 0.70 |
| Chloroform | ND | | ug/l | 2.5 | 0.70 |
| Carbon tetrachloride | ND | | ug/l | 0.50 | 0.13 |
| 1,2-Dichloropropane | ND | | ug/l | 1.0 | 0.14 |
| Dibromochloromethane | ND | | ug/l | 0.50 | 0.15 |
| 1,1,2-Trichloroethane | ND | | ug/l | 1.5 | 0.50 |
| Tetrachloroethene | ND | | ug/l | 0.50 | 0.18 |
| Chlorobenzene | ND | | ug/l | 2.5 | 0.70 |
| Trichlorofluoromethane | ND | | ug/l | 2.5 | 0.70 |
| 1,2-Dichloroethane | ND | | ug/l | 0.50 | 0.13 |
| 1,1,1-Trichloroethane | ND | | ug/l | 2.5 | 0.70 |
| Bromodichloromethane | ND | | ug/l | 0.50 | 0.19 |
| trans-1,3-Dichloropropene | ND | | ug/l | 0.50 | 0.16 |
| cis-1,3-Dichloropropene | ND | | ug/l | 0.50 | 0.14 |
| 1,3-Dichloropropene, Total | ND | | ug/l | 0.50 | 0.14 |
| 1,1-Dichloropropene | ND | | ug/l | 2.5 | 0.70 |
| Bromoform | ND | | ug/l | 2.0 | 0.65 |
| 1,1,2,2-Tetrachloroethane | ND | | ug/l | 0.50 | 0.17 |
| Benzene | ND | | ug/l | 0.50 | 0.16 |
| Toluene | ND | | ug/l | 2.5 | 0.70 |
| Ethylbenzene | ND | | ug/l | 2.5 | 0.70 |
| Chloromethane | ND | | ug/l | 2.5 | 0.70 |
| Bromomethane | ND | | ug/l | 2.5 | 0.70 |
| Vinyl chloride | ND | | ug/l | 1.0 | 0.07 |
| Chloroethane | ND | | ug/l | 2.5 | 0.70 |
| 1,1-Dichloroethene | ND | | ug/l | 0.50 | 0.17 |
| trans-1,2-Dichloroethene | ND | | ug/l | 2.5 | 0.70 |
| Trichloroethene | ND | | ug/l | 0.50 | 0.18 |

**Project Name:** GROSSINGERS **Lab Number:** L2010346

**Project Number:** 9313 **Report Date:** 03/18/20

# Method Blank Analysis
## Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 03/11/20 18:08
Analyst: KJD

| Parameter | Result | Qualifier | Units | RL | MDL |
|---|---|---|---|---|---|
| Volatile Organics by GC/MS - Westborough Lab for sample(s): 01-06,08 Batch: WG1350045-5 | | | | | |
| 1,2-Dichlorobenzene | ND | | ug/l | 2.5 | 0.70 |
| 1,3-Dichlorobenzene | ND | | ug/l | 2.5 | 0.70 |
| 1,4-Dichlorobenzene | ND | | ug/l | 2.5 | 0.70 |
| Methyl tert butyl ether | ND | | ug/l | 2.5 | 0.70 |
| p/m-Xylene | ND | | ug/l | 2.5 | 0.70 |
| o-Xylene | ND | | ug/l | 2.5 | 0.70 |
| Xylenes, Total | ND | | ug/l | 2.5 | 0.70 |
| cis-1,2-Dichloroethene | ND | | ug/l | 2.5 | 0.70 |
| 1,2-Dichloroethene, Total | ND | | ug/l | 2.5 | 0.70 |
| Dibromomethane | ND | | ug/l | 5.0 | 1.0 |
| 1,2,3-Trichloropropane | ND | | ug/l | 2.5 | 0.70 |
| Acrylonitrile | ND | | ug/l | 5.0 | 1.5 |
| Styrene | ND | | ug/l | 2.5 | 0.70 |
| Dichlorodifluoromethane | ND | | ug/l | 5.0 | 1.0 |
| Acetone | ND | | ug/l | 5.0 | 1.5 |
| Carbon disulfide | ND | | ug/l | 5.0 | 1.0 |
| 2-Butanone | ND | | ug/l | 5.0 | 1.9 |
| Vinyl acetate | ND | | ug/l | 5.0 | 1.0 |
| 4-Methyl-2-pentanone | ND | | ug/l | 5.0 | 1.0 |
| 2-Hexanone | ND | | ug/l | 5.0 | 1.0 |
| Bromochloromethane | ND | | ug/l | 2.5 | 0.70 |
| 2,2-Dichloropropane | ND | | ug/l | 2.5 | 0.70 |
| 1,2-Dibromoethane | ND | | ug/l | 2.0 | 0.65 |
| 1,3-Dichloropropane | ND | | ug/l | 2.5 | 0.70 |
| 1,1,1,2-Tetrachloroethane | ND | | ug/l | 2.5 | 0.70 |
| Bromobenzene | ND | | ug/l | 2.5 | 0.70 |
| n-Butylbenzene | ND | | ug/l | 2.5 | 0.70 |
| sec-Butylbenzene | ND | | ug/l | 2.5 | 0.70 |
| tert-Butylbenzene | ND | | ug/l | 2.5 | 0.70 |

**Project Name:** GROSSINGERS
**Project Number:** 9313
**Lab Number:** L2010346
**Report Date:** 03/18/20

# Method Blank Analysis
## Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 03/11/20 18:08
Analyst: KJD

| Parameter | Result | Qualifier | Units | RL | MDL |
|---|---|---|---|---|---|
| Volatile Organics by GC/MS - Westborough Lab for sample(s): 01-06,08 Batch: WG1350045-5 | | | | | |
| o-Chlorotoluene | ND | | ug/l | 2.5 | 0.70 |
| p-Chlorotoluene | ND | | ug/l | 2.5 | 0.70 |
| 1,2-Dibromo-3-chloropropane | ND | | ug/l | 2.5 | 0.70 |
| Hexachlorobutadiene | ND | | ug/l | 2.5 | 0.70 |
| Isopropylbenzene | ND | | ug/l | 2.5 | 0.70 |
| p-Isopropyltoluene | ND | | ug/l | 2.5 | 0.70 |
| Naphthalene | ND | | ug/l | 2.5 | 0.70 |
| n-Propylbenzene | ND | | ug/l | 2.5 | 0.70 |
| 1,2,3-Trichlorobenzene | ND | | ug/l | 2.5 | 0.70 |
| 1,2,4-Trichlorobenzene | ND | | ug/l | 2.5 | 0.70 |
| 1,3,5-Trimethylbenzene | ND | | ug/l | 2.5 | 0.70 |
| 1,2,4-Trimethylbenzene | ND | | ug/l | 2.5 | 0.70 |
| 1,4-Dioxane | ND | | ug/l | 250 | 61. |
| p-Diethylbenzene | ND | | ug/l | 2.0 | 0.70 |
| p-Ethyltoluene | ND | | ug/l | 2.0 | 0.70 |
| 1,2,4,5-Tetramethylbenzene | ND | | ug/l | 2.0 | 0.54 |
| Ethyl ether | ND | | ug/l | 2.5 | 0.70 |
| trans-1,4-Dichloro-2-butene | ND | | ug/l | 2.5 | 0.70 |

| Tentatively Identified Compounds | | | |
|---|---|---|---|
| Total TIC Compounds | 2.89 | J | ug/l |
| Ethane, 1,1-Difluoro- | 2.89 | NJ | ug/l |

**Project Name:** GROSSINGERS
**Project Number:** 9313
**Lab Number:** L2010346
**Report Date:** 03/18/20

# Method Blank Analysis
## Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 03/11/20 18:08
Analyst: KJD

| Parameter | Result | Qualifier | Units | RL | MDL |
|---|---|---|---|---|---|
| Volatile Organics by GC/MS - Westborough Lab for sample(s): 01-06,08 Batch: WG1350045-5 | | | | | |

| Surrogate | %Recovery | Qualifier | Acceptance Criteria |
|---|---|---|---|
| 1,2-Dichloroethane-d4 | 112 | | 70-130 |
| Toluene-d8 | 95 | | 70-130 |
| 4-Bromofluorobenzene | 96 | | 70-130 |
| Dibromofluoromethane | 109 | | 70-130 |

# Lab Control Sample Analysis
## Batch Quality Control

**Project Name:** GROSSINGERS
**Project Number:** 9313
**Lab Number:** L2010346
**Report Date:** 03/18/20

| Parameter | LCS %Recovery | Qual | LCSD %Recovery | Qual | %Recovery Limits | RPD | Qual | RPD Limits |
|---|---|---|---|---|---|---|---|---|
| Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-06,08 Batch: WG1350045-3 WG1350045-4 | | | | | | | | |
| Methylene chloride | 110 | | 96 | | 70-130 | 14 | | 20 |
| 1,1-Dichloroethane | 100 | | 100 | | 70-130 | 0 | | 20 |
| Chloroform | 110 | | 110 | | 70-130 | 0 | | 20 |
| Carbon tetrachloride | 130 | | 130 | | 63-132 | 0 | | 20 |
| 1,2-Dichloropropane | 97 | | 94 | | 70-130 | 3 | | 20 |
| Dibromochloromethane | 100 | | 100 | | 63-130 | 0 | | 20 |
| 1,1,2-Trichloroethane | 97 | | 93 | | 70-130 | 4 | | 20 |
| Tetrachloroethene | 110 | | 100 | | 70-130 | 10 | | 20 |
| Chlorobenzene | 98 | | 96 | | 75-130 | 2 | | 20 |
| Trichlorofluoromethane | 140 | | 140 | | 62-150 | 0 | | 20 |
| 1,2-Dichloroethane | 120 | | 110 | | 70-130 | 9 | | 20 |
| 1,1,1-Trichloroethane | 130 | | 130 | | 67-130 | 0 | | 20 |
| Bromodichloromethane | 120 | | 120 | | 67-130 | 0 | | 20 |
| trans-1,3-Dichloropropene | 110 | | 100 | | 70-130 | 10 | | 20 |
| cis-1,3-Dichloropropene | 110 | | 110 | | 70-130 | 0 | | 20 |
| 1,1-Dichloropropene | 120 | | 120 | | 70-130 | 0 | | 20 |
| Bromoform | 85 | | 84 | | 54-136 | 1 | | 20 |
| 1,1,2,2-Tetrachloroethane | 75 | | 72 | | 67-130 | 4 | | 20 |
| Benzene | 110 | | 110 | | 70-130 | 0 | | 20 |
| Toluene | 100 | | 97 | | 70-130 | 3 | | 20 |
| Ethylbenzene | 100 | | 97 | | 70-130 | 3 | | 20 |
| Chloromethane | 86 | | 86 | | 64-130 | 0 | | 20 |
| Bromomethane | 90 | | 96 | | 39-139 | 6 | | 20 |

# Lab Control Sample Analysis

## Batch Quality Control

**Project Name:** GROSSINGERS

**Project Number:** 9313

**Lab Number:** L2010346

**Report Date:** 03/18/20

| Parameter | LCS %Recovery | Qual | LCSD %Recovery | Qual | %Recovery Limits | RPD | Qual | RPD Limits |
|---|---|---|---|---|---|---|---|---|
| Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-06,08 Batch: WG1350045-3 WG1350045-4 | | | | | | | | |
| Vinyl chloride | 96 | | 99 | | 55-140 | 3 | | 20 |
| Chloroethane | 100 | | 100 | | 55-138 | 0 | | 20 |
| 1,1-Dichloroethene | 120 | | 120 | | 61-145 | 0 | | 20 |
| trans-1,2-Dichloroethene | 110 | | 110 | | 70-130 | 0 | | 20 |
| Trichloroethene | 130 | | 120 | | 70-130 | 8 | | 20 |
| 1,2-Dichlorobenzene | 99 | | 96 | | 70-130 | 3 | | 20 |
| 1,3-Dichlorobenzene | 99 | | 97 | | 70-130 | 2 | | 20 |
| 1,4-Dichlorobenzene | 100 | | 98 | | 70-130 | 2 | | 20 |
| Methyl tert butyl ether | 110 | | 110 | | 63-130 | 0 | | 20 |
| p/m-Xylene | 110 | | 110 | | 70-130 | 0 | | 20 |
| o-Xylene | 110 | | 105 | | 70-130 | 5 | | 20 |
| cis-1,2-Dichloroethene | 110 | | 100 | | 70-130 | 10 | | 20 |
| Dibromomethane | 110 | | 100 | | 70-130 | 10 | | 20 |
| 1,2,3-Trichloropropane | 87 | | 80 | | 64-130 | 8 | | 20 |
| Acrylonitrile | 91 | | 89 | | 70-130 | 2 | | 20 |
| Styrene | 110 | | 110 | | 70-130 | 0 | | 20 |
| Dichlorodifluoromethane | 100 | | 100 | | 36-147 | 0 | | 20 |
| Acetone | 110 | | 120 | | 58-148 | 9 | | 20 |
| Carbon disulfide | 110 | | 110 | | 51-130 | 0 | | 20 |
| 2-Butanone | 100 | | 100 | | 63-138 | 0 | | 20 |
| Vinyl acetate | 100 | | 100 | | 70-130 | 0 | | 20 |
| 4-Methyl-2-pentanone | 76 | | 75 | | 59-130 | 1 | | 20 |
| 2-Hexanone | 83 | | 82 | | 57-130 | 1 | | 20 |

# Lab Control Sample Analysis
## Batch Quality Control

**Project Name:** GROSSINGERS
**Project Number:** 9313
**Lab Number:** L2010346
**Report Date:** 03/18/20

| Parameter | LCS %Recovery | Qual | LCSD %Recovery | Qual | %Recovery Limits | RPD | Qual | RPD Limits |
|---|---|---|---|---|---|---|---|---|
| Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-06,08 Batch: WG1350045-3 WG1350045-4 | | | | | | | | |
| Bromochloromethane | 120 | | 110 | | 70-130 | 9 | | 20 |
| 2,2-Dichloropropane | 130 | | 120 | | 63-133 | 8 | | 20 |
| 1,2-Dibromoethane | 98 | | 95 | | 70-130 | 3 | | 20 |
| 1,3-Dichloropropane | 100 | | 97 | | 70-130 | 3 | | 20 |
| 1,1,1,2-Tetrachloroethane | 110 | | 100 | | 64-130 | 10 | | 20 |
| Bromobenzene | 85 | | 83 | | 70-130 | 2 | | 20 |
| n-Butylbenzene | 100 | | 100 | | 53-136 | 0 | | 20 |
| sec-Butylbenzene | 92 | | 91 | | 70-130 | 1 | | 20 |
| tert-Butylbenzene | 100 | | 97 | | 70-130 | 3 | | 20 |
| o-Chlorotoluene | 97 | | 84 | | 70-130 | 14 | | 20 |
| p-Chlorotoluene | 94 | | 91 | | 70-130 | 3 | | 20 |
| 1,2-Dibromo-3-chloropropane | 79 | | 82 | | 41-144 | 4 | | 20 |
| Hexachlorobutadiene | 98 | | 98 | | 63-130 | 0 | | 20 |
| Isopropylbenzene | 90 | | 88 | | 70-130 | 2 | | 20 |
| p-Isopropyltoluene | 100 | | 98 | | 70-130 | 2 | | 20 |
| Naphthalene | 89 | | 91 | | 70-130 | 2 | | 20 |
| n-Propylbenzene | 92 | | 89 | | 69-130 | 3 | | 20 |
| 1,2,3-Trichlorobenzene | 94 | | 95 | | 70-130 | 1 | | 20 |
| 1,2,4-Trichlorobenzene | 95 | | 95 | | 70-130 | 0 | | 20 |
| 1,3,5-Trimethylbenzene | 120 | | 110 | | 64-130 | 9 | | 20 |
| 1,2,4-Trimethylbenzene | 120 | | 110 | | 70-130 | 9 | | 20 |
| 1,4-Dioxane | 136 | | 136 | | 56-162 | 0 | | 20 |
| p-Diethylbenzene | 110 | | 110 | | 70-130 | 0 | | 20 |

# Lab Control Sample Analysis

## Batch Quality Control

**Project Name:** GROSSINGERS

**Project Number:** 9313

**Lab Number:** L2010346

**Report Date:** 03/18/20

| Parameter | LCS %Recovery | Qual | LCSD %Recovery | Qual | %Recovery Limits | RPD | Qual | RPD Limits |
|---|---|---|---|---|---|---|---|---|
| Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-06,08 Batch: WG1350045-3 WG1350045-4 | | | | | | | | |
| p-Ethyltoluene | 100 | | 100 | | 70-130 | 0 | | 20 |
| 1,2,4,5-Tetramethylbenzene | 110 | | 100 | | 70-130 | 10 | | 20 |
| Ethyl ether | 100 | | 100 | | 59-134 | 0 | | 20 |
| trans-1,4-Dichloro-2-butene | 70 | | 70 | | 70-130 | 0 | | 20 |

| Surrogate | LCS %Recovery | Qual | LCSD %Recovery | Qual | Acceptance Criteria |
|---|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 110 | | 109 | | 70-130 |
| Toluene-d8 | 96 | | 96 | | 70-130 |
| 4-Bromofluorobenzene | 85 | | 83 | | 70-130 |
| Dibromofluoromethane | 109 | | 108 | | 70-130 |

# SEMIVOLATILES

**Project Name:** GROSSINGERS
**Project Number:** 9313
**Lab Number:** L2010346
**Report Date:** 03/18/20

## SAMPLE RESULTS

Lab ID: L2010346-01
Client ID: MW-216
Sample Location: LIBERTY, NY

Date Collected: 03/06/20 09:25
Date Received: 03/06/20
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 134,LCMSMS-ID
Analytical Date: 03/13/20 00:43
Analyst: SG

Extraction Method: ALPHA 23528
Extraction Date: 03/08/20 14:00

| Parameter | Result | Qualifier | Units | RL | MDL | Dilution Factor |
|---|---|---|---|---|---|---|
| **Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab** | | | | | | |
| Perfluorobutanoic Acid (PFBA) | 4.28 | | ng/l | 1.93 | 0.394 | 1 |
| Perfluoropentanoic Acid (PFPeA) | 2.06 | | ng/l | 1.93 | 0.382 | 1 |
| Perfluorobutanesulfonic Acid (PFBS) | 1.35 | J | ng/l | 1.93 | 0.230 | 1 |
| Perfluorohexanoic Acid (PFHxA) | 2.95 | | ng/l | 1.93 | 0.317 | 1 |
| Perfluoroheptanoic Acid (PFHpA) | 2.12 | | ng/l | 1.93 | 0.217 | 1 |
| Perfluorohexanesulfonic Acid (PFHxS) | 1.80 | J | ng/l | 1.93 | 0.363 | 1 |
| Perfluorooctanoic Acid (PFOA) | 8.18 | | ng/l | 1.93 | 0.228 | 1 |
| 1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS) | ND | | ng/l | 1.93 | 1.28 | 1 |
| Perfluoroheptanesulfonic Acid (PFHpS) | ND | | ng/l | 1.93 | 0.664 | 1 |
| Perfluorononanoic Acid (PFNA) | 0.402 | J | ng/l | 1.93 | 0.301 | 1 |
| Perfluorooctanesulfonic Acid (PFOS) | 6.51 | | ng/l | 1.93 | 0.486 | 1 |
| Perfluorodecanoic Acid (PFDA) | ND | | ng/l | 1.93 | 0.293 | 1 |
| 1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS) | ND | | ng/l | 1.93 | 1.17 | 1 |
| N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA) | ND | | ng/l | 1.93 | 0.625 | 1 |
| Perfluoroundecanoic Acid (PFUnA) | ND | | ng/l | 1.93 | 0.251 | 1 |
| Perfluorodecanesulfonic Acid (PFDS) | ND | | ng/l | 1.93 | 0.946 | 1 |
| Perfluorooctanesulfonamide (FOSA) | ND | | ng/l | 1.93 | 0.560 | 1 |
| N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA) | ND | | ng/l | 1.93 | 0.776 | 1 |
| Perfluorododecanoic Acid (PFDoA) | ND | | ng/l | 1.93 | 0.359 | 1 |
| Perfluorotridecanoic Acid (PFTrDA) | ND | | ng/l | 1.93 | 0.316 | 1 |
| Perfluorotetradecanoic Acid (PFTA) | 0.259 | J | ng/l | 1.93 | 0.239 | 1 |
| PFOA/PFOS, Total | 14.7 | | ng/l | 1.93 | 0.228 | 1 |

**Project Name:** GROSSINGERS **Lab Number:** L2010346

**Project Number:** 9313 **Report Date:** 03/18/20

## SAMPLE RESULTS

Lab ID: L2010346-01 Date Collected: 03/06/20 09:25

Client ID: MW-216 Date Received: 03/06/20

Sample Location: LIBERTY, NY Field Prep: Not Specified

Sample Depth:

| Parameter | Result | Qualifier | Units | RL | MDL | Dilution Factor |
|---|---|---|---|---|---|---|
| Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab | | | | | | |

| Surrogate (Extracted Internal Standard) | % Recovery | Qualifier | Acceptance Criteria |
|---|---|---|---|
| Perfluoro[13C4]Butanoic Acid (MPFBA) | 104 | | 2-156 |
| Perfluoro[13C5]Pentanoic Acid (M5PFPEA) | 103 | | 16-173 |
| Perfluoro[2,3,4-13C3]Butanesulfonic Acid (M3PFBS) | 96 | | 31-159 |
| Perfluoro[1,2,3,4,6-13C5]Hexanoic Acid (M5PFHxA) | 85 | | 21-145 |
| Perfluoro[1,2,3,4-13C4]Heptanoic Acid (M4PFHpA) | 94 | | 30-139 |
| Perfluoro[1,2,3-13C3]Hexanesulfonic Acid (M3PFHxS) | 107 | | 47-153 |
| Perfluoro[13C8]Octanoic Acid (M8PFOA) | 104 | | 36-149 |
| 1H,1H,2H,2H-Perfluoro[1,2-13C2]Octanesulfonic Acid (M2-6:2FTS) | 209 | | 1-244 |
| Perfluoro[13C9]Nonanoic Acid (M9PFNA) | 106 | | 34-146 |
| Perfluoro[13C8]Octanesulfonic Acid (M8PFOS) | 104 | | 42-146 |
| Perfluoro[1,2,3,4,5,6-13C6]Decanoic Acid (M6PFDA) | 100 | | 38-144 |
| 1H,1H,2H,2H-Perfluoro[1,2-13C2]Decanesulfonic Acid (M2-8:2FTS) | 149 | | 7-170 |
| N-Deuteriomethylperfluoro-1-octanesulfonamidoacetic Acid (d3-NMeFOSAA) | 79 | | 1-181 |
| Perfluoro[1,2,3,4,5,6,7-13C7]Undecanoic Acid (M7-PFUDA) | 101 | | 40-144 |
| Perfluoro[13C8]Octanesulfonamide (M8FOSA) | 44 | | 1-87 |
| N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA) | 69 | | 23-146 |
| Perfluoro[1,2-13C2]Dodecanoic Acid (MPFDOA) | 85 | | 24-161 |
| Perfluoro[1,2-13C2]Tetradecanoic Acid (M2PFTEDA) | 81 | | 33-143 |

**Project Name:** GROSSINGERS
**Project Number:** 9313
**Lab Number:** L2010346
**Report Date:** 03/18/20

## SAMPLE RESULTS

Lab ID: L2010346-02
Client ID: MW-217
Sample Location: LIBERTY, NY

Date Collected: 03/06/20 11:00
Date Received: 03/06/20
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 134,LCMSMS-ID
Analytical Date: 03/13/20 01:00
Analyst: SG

Extraction Method: ALPHA 23528
Extraction Date: 03/08/20 14:00

| Parameter | Result | Qualifier | Units | RL | MDL | Dilution Factor |
|---|---|---|---|---|---|---|
| **Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab** | | | | | | |
| Perfluorobutanoic Acid (PFBA) | 4.31 | | ng/l | 1.94 | 0.395 | 1 |
| Perfluoropentanoic Acid (PFPeA) | 2.11 | | ng/l | 1.94 | 0.384 | 1 |
| Perfluorobutanesulfonic Acid (PFBS) | 2.93 | | ng/l | 1.94 | 0.231 | 1 |
| Perfluorohexanoic Acid (PFHxA) | 3.40 | | ng/l | 1.94 | 0.318 | 1 |
| Perfluoroheptanoic Acid (PFHpA) | 2.66 | | ng/l | 1.94 | 0.218 | 1 |
| Perfluorohexanesulfonic Acid (PFHxS) | 7.38 | | ng/l | 1.94 | 0.364 | 1 |
| Perfluorooctanoic Acid (PFOA) | 15.7 | | ng/l | 1.94 | 0.229 | 1 |
| 1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS) | ND | | ng/l | 1.94 | 1.29 | 1 |
| Perfluoroheptanesulfonic Acid (PFHpS) | 0.752 | J | ng/l | 1.94 | 0.667 | 1 |
| Perfluorononanoic Acid (PFNA) | 1.08 | J | ng/l | 1.94 | 0.302 | 1 |
| Perfluorooctanesulfonic Acid (PFOS) | 30.0 | | ng/l | 1.94 | 0.488 | 1 |
| Perfluorodecanoic Acid (PFDA) | 0.473 | J | ng/l | 1.94 | 0.294 | 1 |
| 1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS) | ND | | ng/l | 1.94 | 1.17 | 1 |
| N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA) | ND | | ng/l | 1.94 | 0.628 | 1 |
| Perfluoroundecanoic Acid (PFUnA) | ND | | ng/l | 1.94 | 0.252 | 1 |
| Perfluorodecanesulfonic Acid (PFDS) | ND | | ng/l | 1.94 | 0.950 | 1 |
| Perfluorooctanesulfonamide (FOSA) | ND | | ng/l | 1.94 | 0.562 | 1 |
| N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA) | ND | | ng/l | 1.94 | 0.779 | 1 |
| Perfluorododecanoic Acid (PFDoA) | ND | | ng/l | 1.94 | 0.360 | 1 |
| Perfluorotridecanoic Acid (PFTrDA) | ND | | ng/l | 1.94 | 0.317 | 1 |
| Perfluorotetradecanoic Acid (PFTA) | ND | | ng/l | 1.94 | 0.240 | 1 |
| PFOA/PFOS, Total | 45.7 | | ng/l | 1.94 | 0.229 | 1 |

**Project Name:** GROSSINGERS **Lab Number:** L2010346

**Project Number:** 9313 **Report Date:** 03/18/20

## SAMPLE RESULTS

Lab ID: L2010346-02 Date Collected: 03/06/20 11:00

Client ID: MW-217 Date Received: 03/06/20

Sample Location: LIBERTY, NY Field Prep: Not Specified

Sample Depth:

| Parameter | Result | Qualifier | Units | RL | MDL | Dilution Factor |
|---|---|---|---|---|---|---|
| Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab | | | | | | |

| Surrogate (Extracted Internal Standard) | % Recovery | Qualifier | Acceptance Criteria |
|---|---|---|---|
| Perfluoro[13C4]Butanoic Acid (MPFBA) | 98 | | 2-156 |
| Perfluoro[13C5]Pentanoic Acid (M5PFPEA) | 97 | | 16-173 |
| Perfluoro[2,3,4-13C3]Butanesulfonic Acid (M3PFBS) | 98 | | 31-159 |
| Perfluoro[1,2,3,4,6-13C5]Hexanoic Acid (M5PFHxA) | 81 | | 21-145 |
| Perfluoro[1,2,3,4-13C4]Heptanoic Acid (M4PFHpA) | 90 | | 30-139 |
| Perfluoro[1,2,3-13C3]Hexanesulfonic Acid (M3PFHxS) | 102 | | 47-153 |
| Perfluoro[13C8]Octanoic Acid (M8PFOA) | 99 | | 36-149 |
| 1H,1H,2H,2H-Perfluoro[1,2-13C2]Octanesulfonic Acid (M2-6:2FTS) | **254** | Q | 1-244 |
| Perfluoro[13C9]Nonanoic Acid (M9PFNA) | 102 | | 34-146 |
| Perfluoro[13C8]Octanesulfonic Acid (M8PFOS) | 103 | | 42-146 |
| Perfluoro[1,2,3,4,5,6-13C6]Decanoic Acid (M6PFDA) | 95 | | 38-144 |
| 1H,1H,2H,2H-Perfluoro[1,2-13C2]Decanesulfonic Acid (M2-8:2FTS) | **178** | Q | 7-170 |
| N-Deuteriomethylperfluoro-1-octanesulfonamidoacetic Acid (d3-NMeFOSAA) | 78 | | 1-181 |
| Perfluoro[1,2,3,4,5,6,7-13C7]Undecanoic Acid (M7-PFUDA) | 90 | | 40-144 |
| Perfluoro[13C8]Octanesulfonamide (M8FOSA) | 39 | | 1-87 |
| N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA) | 76 | | 23-146 |
| Perfluoro[1,2-13C2]Dodecanoic Acid (MPFDOA) | 75 | | 24-161 |
| Perfluoro[1,2-13C2]Tetradecanoic Acid (M2PFTEDA) | 74 | | 33-143 |

**Project Name:** GROSSINGERS
**Project Number:** 9313
**Lab Number:** L2010346
**Report Date:** 03/18/20

## SAMPLE RESULTS

Lab ID: L2010346-03
Client ID: MW-209
Sample Location: LIBERTY, NY

Date Collected: 03/06/20 16:00
Date Received: 03/06/20
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 134,LCMSMS-ID
Analytical Date: 03/13/20 02:39
Analyst: SG

Extraction Method: ALPHA 23528
Extraction Date: 03/08/20 14:00

| Parameter | Result | Qualifier | Units | RL | MDL | Dilution Factor |
|---|---|---|---|---|---|---|
| **Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab** | | | | | | |
| Perfluorobutanoic Acid (PFBA) | 6.63 | | ng/l | 2.30 | 0.470 | 1 |
| Perfluoropentanoic Acid (PFPeA) | 2.77 | | ng/l | 2.30 | 0.456 | 1 |
| Perfluorobutanesulfonic Acid (PFBS) | 1.36 | J | ng/l | 2.30 | 0.274 | 1 |
| Perfluorohexanoic Acid (PFHxA) | 2.74 | | ng/l | 2.30 | 0.378 | 1 |
| Perfluoroheptanoic Acid (PFHpA) | 3.04 | | ng/l | 2.30 | 0.259 | 1 |
| Perfluorohexanesulfonic Acid (PFHxS) | ND | | ng/l | 2.30 | 0.433 | 1 |
| Perfluorooctanoic Acid (PFOA) | 5.16 | | ng/l | 2.30 | 0.272 | 1 |
| 1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS) | ND | | ng/l | 2.30 | 1.53 | 1 |
| Perfluoroheptanesulfonic Acid (PFHpS) | ND | | ng/l | 2.30 | 0.793 | 1 |
| Perfluorononanoic Acid (PFNA) | 1.39 | J | ng/l | 2.30 | 0.359 | 1 |
| Perfluorooctanesulfonic Acid (PFOS) | 1.18 | J | ng/l | 2.30 | 0.581 | 1 |
| Perfluorodecanoic Acid (PFDA) | ND | | ng/l | 2.30 | 0.350 | 1 |
| 1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS) | ND | | ng/l | 2.30 | 1.40 | 1 |
| N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA) | ND | | ng/l | 2.30 | 0.746 | 1 |
| Perfluoroundecanoic Acid (PFUnA) | ND | | ng/l | 2.30 | 0.300 | 1 |
| Perfluorodecanesulfonic Acid (PFDS) | ND | | ng/l | 2.30 | 1.13 | 1 |
| Perfluorooctanesulfonamide (FOSA) | ND | | ng/l | 2.30 | 0.668 | 1 |
| N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA) | 1.26 | J | ng/l | 2.30 | 0.926 | 1 |
| Perfluorododecanoic Acid (PFDoA) | ND | | ng/l | 2.30 | 0.428 | 1 |
| Perfluorotridecanoic Acid (PFTrDA) | ND | | ng/l | 2.30 | 0.377 | 1 |
| Perfluorotetradecanoic Acid (PFTA) | 0.618 | J | ng/l | 2.30 | 0.286 | 1 |
| PFOA/PFOS, Total | 6.34 | J | ng/l | 2.30 | 0.272 | 1 |

**Project Name:** GROSSINGERS **Lab Number:** L2010346

**Project Number:** 9313 **Report Date:** 03/18/20

## SAMPLE RESULTS

Lab ID: L2010346-03 Date Collected: 03/06/20 16:00

Client ID: MW-209 Date Received: 03/06/20

Sample Location: LIBERTY, NY Field Prep: Not Specified

Sample Depth:

| Parameter | Result | Qualifier | Units | RL | MDL | Dilution Factor |
|---|---|---|---|---|---|---|
| Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab | | | | | | |

| Surrogate (Extracted Internal Standard) | % Recovery | Qualifier | Acceptance Criteria |
|---|---|---|---|
| Perfluoro[13C4]Butanoic Acid (MPFBA) | 96 | | 2-156 |
| Perfluoro[13C5]Pentanoic Acid (M5PFPEA) | 98 | | 16-173 |
| Perfluoro[2,3,4-13C3]Butanesulfonic Acid (M3PFBS) | 91 | | 31-159 |
| Perfluoro[1,2,3,4,6-13C5]Hexanoic Acid (M5PFHxA) | 81 | | 21-145 |
| Perfluoro[1,2,3,4-13C4]Heptanoic Acid (M4PFHpA) | 91 | | 30-139 |
| Perfluoro[1,2,3-13C3]Hexanesulfonic Acid (M3PFHxS) | 95 | | 47-153 |
| Perfluoro[13C8]Octanoic Acid (M8PFOA) | 100 | | 36-149 |
| 1H,1H,2H,2H-Perfluoro[1,2-13C2]Octanesulfonic Acid (M2-6:2FTS) | 190 | | 1-244 |
| Perfluoro[13C9]Nonanoic Acid (M9PFNA) | 105 | | 34-146 |
| Perfluoro[13C8]Octanesulfonic Acid (M8PFOS) | 101 | | 42-146 |
| Perfluoro[1,2,3,4,5,6-13C6]Decanoic Acid (M6PFDA) | 98 | | 38-144 |
| 1H,1H,2H,2H-Perfluoro[1,2-13C2]Decanesulfonic Acid (M2-8:2FTS) | 152 | | 7-170 |
| N-Deuteriomethylperfluoro-1-octanesulfonamidoacetic Acid (d3-NMeFOSAA) | 63 | | 1-181 |
| Perfluoro[1,2,3,4,5,6,7-13C7]Undecanoic Acid (M7-PFUDA) | 97 | | 40-144 |
| Perfluoro[13C8]Octanesulfonamide (M8FOSA) | 41 | | 1-87 |
| N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA) | 61 | | 23-146 |
| Perfluoro[1,2-13C2]Dodecanoic Acid (MPFDOA) | 71 | | 24-161 |
| Perfluoro[1,2-13C2]Tetradecanoic Acid (M2PFTEDA) | 62 | | 33-143 |

**Project Name:** GROSSINGERS
**Project Number:** 9313
**Lab Number:** L2010346
**Report Date:** 03/18/20

## SAMPLE RESULTS

Lab ID: L2010346-04
Client ID: MW-211
Sample Location: LIBERTY, NY

Date Collected: 03/06/20 11:30
Date Received: 03/06/20
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 134,LCMSMS-ID
Analytical Date: 03/13/20 02:56
Analyst: SG

Extraction Method: ALPHA 23528
Extraction Date: 03/08/20 14:00

| Parameter | Result | Qualifier | Units | RL | MDL | Dilution Factor |
|---|---|---|---|---|---|---|
| **Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab** | | | | | | |
| Perfluorobutanoic Acid (PFBA) | ND | | ng/l | 2.27 | 0.464 | 1 |
| Perfluoropentanoic Acid (PFPeA) | 0.609 | J | ng/l | 2.27 | 0.450 | 1 |
| Perfluorobutanesulfonic Acid (PFBS) | ND | | ng/l | 2.27 | 0.270 | 1 |
| Perfluorohexanoic Acid (PFHxA) | 0.432 | J | ng/l | 2.27 | 0.373 | 1 |
| Perfluoroheptanoic Acid (PFHpA) | ND | | ng/l | 2.27 | 0.256 | 1 |
| Perfluorohexanesulfonic Acid (PFHxS) | ND | | ng/l | 2.27 | 0.427 | 1 |
| Perfluorooctanoic Acid (PFOA) | 0.941 | J | ng/l | 2.27 | 0.268 | 1 |
| 1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS) | ND | | ng/l | 2.27 | 1.51 | 1 |
| Perfluoroheptanesulfonic Acid (PFHpS) | ND | | ng/l | 2.27 | 0.782 | 1 |
| Perfluorononanoic Acid (PFNA) | ND | | ng/l | 2.27 | 0.354 | 1 |
| Perfluorooctanesulfonic Acid (PFOS) | ND | | ng/l | 2.27 | 0.573 | 1 |
| Perfluorodecanoic Acid (PFDA) | ND | | ng/l | 2.27 | 0.345 | 1 |
| 1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS) | ND | | ng/l | 2.27 | 1.38 | 1 |
| N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA) | ND | | ng/l | 2.27 | 0.736 | 1 |
| Perfluoroundecanoic Acid (PFUnA) | ND | | ng/l | 2.27 | 0.295 | 1 |
| Perfluorodecanesulfonic Acid (PFDS) | ND | | ng/l | 2.27 | 1.11 | 1 |
| Perfluorooctanesulfonamide (FOSA) | ND | | ng/l | 2.27 | 0.659 | 1 |
| N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA) | ND | | ng/l | 2.27 | 0.914 | 1 |
| Perfluorododecanoic Acid (PFDoA) | ND | | ng/l | 2.27 | 0.423 | 1 |
| Perfluorotridecanoic Acid (PFTrDA) | ND | | ng/l | 2.27 | 0.372 | 1 |
| Perfluorotetradecanoic Acid (PFTA) | ND | | ng/l | 2.27 | 0.282 | 1 |
| PFOA/PFOS, Total | 0.941 | J | ng/l | 2.27 | 0.268 | 1 |

**Project Name:** GROSSINGERS **Lab Number:** L2010346

**Project Number:** 9313 **Report Date:** 03/18/20

**SAMPLE RESULTS**

Lab ID: L2010346-04 Date Collected: 03/06/20 11:30

Client ID: MW-211 Date Received: 03/06/20

Sample Location: LIBERTY, NY Field Prep: Not Specified

Sample Depth:

| Parameter | Result | Qualifier | Units | RL | MDL | Dilution Factor |
|---|---|---|---|---|---|---|
| Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab | | | | | | |

| Surrogate (Extracted Internal Standard) | % Recovery | Qualifier | Acceptance Criteria |
|---|---|---|---|
| Perfluoro[13C4]Butanoic Acid (MPFBA) | 88 | | 2-156 |
| Perfluoro[13C5]Pentanoic Acid (M5PFPEA) | 94 | | 16-173 |
| Perfluoro[2,3,4-13C3]Butanesulfonic Acid (M3PFBS) | 112 | | 31-159 |
| Perfluoro[1,2,3,4,6-13C5]Hexanoic Acid (M5PFHxA) | 84 | | 21-145 |
| Perfluoro[1,2,3,4-13C4]Heptanoic Acid (M4PFHpA) | 89 | | 30-139 |
| Perfluoro[1,2,3-13C3]Hexanesulfonic Acid (M3PFHxS) | 124 | | 47-153 |
| Perfluoro[13C8]Octanoic Acid (M8PFOA) | 89 | | 36-149 |
| 1H,1H,2H,2H-Perfluoro[1,2-13C2]Octanesulfonic Acid (M2-6:2FTS) | 147 | | 1-244 |
| Perfluoro[13C9]Nonanoic Acid (M9PFNA) | 94 | | 34-146 |
| Perfluoro[13C8]Octanesulfonic Acid (M8PFOS) | 113 | | 42-146 |
| Perfluoro[1,2,3,4,5,6-13C6]Decanoic Acid (M6PFDA) | 86 | | 38-144 |
| 1H,1H,2H,2H-Perfluoro[1,2-13C2]Decanesulfonic Acid (M2-8:2FTS) | 142 | | 7-170 |
| N-Deuteriomethylperfluoro-1-octanesulfonamidoacetic Acid (d3-NMeFOSAA) | 65 | | 1-181 |
| Perfluoro[1,2,3,4,5,6,7-13C7]Undecanoic Acid (M7-PFUDA) | 94 | | 40-144 |
| Perfluoro[13C8]Octanesulfonamide (M8FOSA) | 24 | | 1-87 |
| N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA) | 65 | | 23-146 |
| Perfluoro[1,2-13C2]Dodecanoic Acid (MPFDOA) | 89 | | 24-161 |
| Perfluoro[1,2-13C2]Tetradecanoic Acid (M2PFTEDA) | 82 | | 33-143 |

**Project Name:** GROSSINGERS
**Project Number:** 9313
**Lab Number:** L2010346
**Report Date:** 03/18/20

## SAMPLE RESULTS

Lab ID: L2010346-05
Client ID: MW-201
Sample Location: LIBERTY, NY

Date Collected: 03/06/20 13:45
Date Received: 03/06/20
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 134,LCMSMS-ID
Analytical Date: 03/13/20 03:12
Analyst: SG

Extraction Method: ALPHA 23528
Extraction Date: 03/08/20 14:00

| Parameter | Result | Qualifier | Units | RL | MDL | Dilution Factor |
|---|---|---|---|---|---|---|
| **Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab** | | | | | | |
| Perfluorobutanoic Acid (PFBA) | ND | | ng/l | 1.98 | 0.403 | 1 |
| Perfluoropentanoic Acid (PFPeA) | 0.454 | J | ng/l | 1.98 | 0.391 | 1 |
| Perfluorobutanesulfonic Acid (PFBS) | ND | | ng/l | 1.98 | 0.235 | 1 |
| Perfluorohexanoic Acid (PFHxA) | 0.565 | J | ng/l | 1.98 | 0.324 | 1 |
| Perfluoroheptanoic Acid (PFHpA) | ND | | ng/l | 1.98 | 0.222 | 1 |
| Perfluorohexanesulfonic Acid (PFHxS) | ND | | ng/l | 1.98 | 0.372 | 1 |
| Perfluorooctanoic Acid (PFOA) | 0.553 | J | ng/l | 1.98 | 0.233 | 1 |
| 1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS) | ND | | ng/l | 1.98 | 1.32 | 1 |
| Perfluoroheptanesulfonic Acid (PFHpS) | ND | | ng/l | 1.98 | 0.680 | 1 |
| Perfluorononanoic Acid (PFNA) | ND | | ng/l | 1.98 | 0.308 | 1 |
| Perfluorooctanesulfonic Acid (PFOS) | ND | | ng/l | 1.98 | 0.498 | 1 |
| Perfluorodecanoic Acid (PFDA) | ND | | ng/l | 1.98 | 0.300 | 1 |
| 1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS) | ND | | ng/l | 1.98 | 1.20 | 1 |
| N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA) | ND | | ng/l | 1.98 | 0.640 | 1 |
| Perfluoroundecanoic Acid (PFUnA) | ND | | ng/l | 1.98 | 0.257 | 1 |
| Perfluorodecanesulfonic Acid (PFDS) | ND | | ng/l | 1.98 | 0.968 | 1 |
| Perfluorooctanesulfonamide (FOSA) | ND | | ng/l | 1.98 | 0.573 | 1 |
| N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA) | ND | | ng/l | 1.98 | 0.794 | 1 |
| Perfluorododecanoic Acid (PFDoA) | ND | | ng/l | 1.98 | 0.368 | 1 |
| Perfluorotridecanoic Acid (PFTrDA) | ND | | ng/l | 1.98 | 0.323 | 1 |
| Perfluorotetradecanoic Acid (PFTA) | ND | | ng/l | 1.98 | 0.245 | 1 |
| PFOA/PFOS, Total | 0.553 | J | ng/l | 1.98 | 0.233 | 1 |

**Project Name:** GROSSINGERS **Lab Number:** L2010346

**Project Number:** 9313 **Report Date:** 03/18/20

## SAMPLE RESULTS

Lab ID: L2010346-05 Date Collected: 03/06/20 13:45

Client ID: MW-201 Date Received: 03/06/20

Sample Location: LIBERTY, NY Field Prep: Not Specified

Sample Depth:

| Parameter | Result | Qualifier | Units | RL | MDL | Dilution Factor |
|---|---|---|---|---|---|---|
| Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab | | | | | | |

| Surrogate (Extracted Internal Standard) | % Recovery | Qualifier | Acceptance Criteria |
|---|---|---|---|
| Perfluoro[13C4]Butanoic Acid (MPFBA) | 89 | | 2-156 |
| Perfluoro[13C5]Pentanoic Acid (M5PFPEA) | 92 | | 16-173 |
| Perfluoro[2,3,4-13C3]Butanesulfonic Acid (M3PFBS) | 102 | | 31-159 |
| Perfluoro[1,2,3,4,6-13C5]Hexanoic Acid (M5PFHxA) | 80 | | 21-145 |
| Perfluoro[1,2,3,4-13C4]Heptanoic Acid (M4PFHpA) | 85 | | 30-139 |
| Perfluoro[1,2,3-13C3]Hexanesulfonic Acid (M3PFHxS) | 112 | | 47-153 |
| Perfluoro[13C8]Octanoic Acid (M8PFOA) | 88 | | 36-149 |
| 1H,1H,2H,2H-Perfluoro[1,2-13C2]Octanesulfonic Acid (M2-6:2FTS) | 137 | | 1-244 |
| Perfluoro[13C9]Nonanoic Acid (M9PFNA) | 92 | | 34-146 |
| Perfluoro[13C8]Octanesulfonic Acid (M8PFOS) | 102 | | 42-146 |
| Perfluoro[1,2,3,4,5,6-13C6]Decanoic Acid (M6PFDA) | 88 | | 38-144 |
| 1H,1H,2H,2H-Perfluoro[1,2-13C2]Decanesulfonic Acid (M2-8:2FTS) | 137 | | 7-170 |
| N-Deuteriomethylperfluoro-1-octanesulfonamidoacetic Acid (d3-NMeFOSAA) | 68 | | 1-181 |
| Perfluoro[1,2,3,4,5,6,7-13C7]Undecanoic Acid (M7-PFUDA) | 98 | | 40-144 |
| Perfluoro[13C8]Octanesulfonamide (M8FOSA) | 38 | | 1-87 |
| N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA) | 63 | | 23-146 |
| Perfluoro[1,2-13C2]Dodecanoic Acid (MPFDOA) | 87 | | 24-161 |
| Perfluoro[1,2-13C2]Tetradecanoic Acid (M2PFTEDA) | 80 | | 33-143 |

**Project Name:** GROSSINGERS
**Project Number:** 9313
**Lab Number:** L2010346
**Report Date:** 03/18/20

## SAMPLE RESULTS

Lab ID: L2010346-06
Client ID: MW-210
Sample Location: LIBERTY, NY

Date Collected: 03/06/20 15:10
Date Received: 03/06/20
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 134,LCMSMS-ID
Analytical Date: 03/13/20 03:29
Analyst: SG

Extraction Method: ALPHA 23528
Extraction Date: 03/08/20 14:00

| Parameter | Result | Qualifier | Units | RL | MDL | Dilution Factor |
|---|---|---|---|---|---|---|
| **Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab** | | | | | | |
| Perfluorobutanoic Acid (PFBA) | 1.59 | J | ng/l | 2.30 | 0.470 | 1 |
| Perfluoropentanoic Acid (PFPeA) | 0.885 | J | ng/l | 2.30 | 0.456 | 1 |
| Perfluorobutanesulfonic Acid (PFBS) | 0.922 | J | ng/l | 2.30 | 0.274 | 1 |
| Perfluorohexanoic Acid (PFHxA) | 1.21 | J | ng/l | 2.30 | 0.378 | 1 |
| Perfluoroheptanoic Acid (PFHpA) | 0.857 | J | ng/l | 2.30 | 0.259 | 1 |
| Perfluorohexanesulfonic Acid (PFHxS) | 1.10 | J | ng/l | 2.30 | 0.433 | 1 |
| Perfluorooctanoic Acid (PFOA) | 2.91 | | ng/l | 2.30 | 0.272 | 1 |
| 1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS) | ND | | ng/l | 2.30 | 1.53 | 1 |
| Perfluoroheptanesulfonic Acid (PFHpS) | ND | | ng/l | 2.30 | 0.793 | 1 |
| Perfluorononanoic Acid (PFNA) | ND | | ng/l | 2.30 | 0.359 | 1 |
| Perfluorooctanesulfonic Acid (PFOS) | 6.43 | | ng/l | 2.30 | 0.581 | 1 |
| Perfluorodecanoic Acid (PFDA) | ND | | ng/l | 2.30 | 0.350 | 1 |
| 1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS) | ND | | ng/l | 2.30 | 1.40 | 1 |
| N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA) | ND | | ng/l | 2.30 | 0.746 | 1 |
| Perfluoroundecanoic Acid (PFUnA) | ND | | ng/l | 2.30 | 0.300 | 1 |
| Perfluorodecanesulfonic Acid (PFDS) | ND | | ng/l | 2.30 | 1.13 | 1 |
| Perfluorooctanesulfonamide (FOSA) | ND | | ng/l | 2.30 | 0.668 | 1 |
| N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA) | ND | | ng/l | 2.30 | 0.926 | 1 |
| Perfluorododecanoic Acid (PFDoA) | ND | | ng/l | 2.30 | 0.428 | 1 |
| Perfluorotridecanoic Acid (PFTrDA) | ND | | ng/l | 2.30 | 0.377 | 1 |
| Perfluorotetradecanoic Acid (PFTA) | ND | | ng/l | 2.30 | 0.286 | 1 |
| PFOA/PFOS, Total | 9.34 | | ng/l | 2.30 | 0.272 | 1 |

**Project Name:** GROSSINGERS **Lab Number:** L2010346

**Project Number:** 9313 **Report Date:** 03/18/20

**SAMPLE RESULTS**

Lab ID: L2010346-06 Date Collected: 03/06/20 15:10

Client ID: MW-210 Date Received: 03/06/20

Sample Location: LIBERTY, NY Field Prep: Not Specified

Sample Depth:

| Parameter | Result | Qualifier | Units | RL | MDL | Dilution Factor |
|---|---|---|---|---|---|---|
| Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab | | | | | | |

| Surrogate (Extracted Internal Standard) | % Recovery | Qualifier | Acceptance Criteria |
|---|---|---|---|
| Perfluoro[13C4]Butanoic Acid (MPFBA) | 91 | | 2-156 |
| Perfluoro[13C5]Pentanoic Acid (M5PFPEA) | 99 | | 16-173 |
| Perfluoro[2,3,4-13C3]Butanesulfonic Acid (M3PFBS) | 107 | | 31-159 |
| Perfluoro[1,2,3,4,6-13C5]Hexanoic Acid (M5PFHxA) | 86 | | 21-145 |
| Perfluoro[1,2,3,4-13C4]Heptanoic Acid (M4PFHpA) | 87 | | 30-139 |
| Perfluoro[1,2,3-13C3]Hexanesulfonic Acid (M3PFHxS) | 114 | | 47-153 |
| Perfluoro[13C8]Octanoic Acid (M8PFOA) | 91 | | 36-149 |
| 1H,1H,2H,2H-Perfluoro[1,2-13C2]Octanesulfonic Acid (M2-6:2FTS) | 138 | | 1-244 |
| Perfluoro[13C9]Nonanoic Acid (M9PFNA) | 92 | | 34-146 |
| Perfluoro[13C8]Octanesulfonic Acid (M8PFOS) | 108 | | 42-146 |
| Perfluoro[1,2,3,4,5,6-13C6]Decanoic Acid (M6PFDA) | 91 | | 38-144 |
| 1H,1H,2H,2H-Perfluoro[1,2-13C2]Decanesulfonic Acid (M2-8:2FTS) | 120 | | 7-170 |
| N-Deuteriomethylperfluoro-1-octanesulfonamidoacetic Acid (d3-NMeFOSAA) | 68 | | 1-181 |
| Perfluoro[1,2,3,4,5,6,7-13C7]Undecanoic Acid (M7-PFUDA) | 100 | | 40-144 |
| Perfluoro[13C8]Octanesulfonamide (M8FOSA) | 31 | | 1-87 |
| N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA) | 61 | | 23-146 |
| Perfluoro[1,2-13C2]Dodecanoic Acid (MPFDOA) | 88 | | 24-161 |
| Perfluoro[1,2-13C2]Tetradecanoic Acid (M2PFTEDA) | 86 | | 33-143 |

**Project Name:** GROSSINGERS
**Project Number:** 9313
**Lab Number:** L2010346
**Report Date:** 03/18/20

## SAMPLE RESULTS

Lab ID: L2010346-07
Client ID: FB
Sample Location: LIBERTY, NY

Date Collected: 03/06/20 16:15
Date Received: 03/06/20
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 134,LCMSMS-ID
Analytical Date: 03/13/20 03:45
Analyst: SG

Extraction Method: ALPHA 23528
Extraction Date: 03/08/20 14:00

| Parameter | Result | Qualifier | Units | RL | MDL | Dilution Factor |
|---|---|---|---|---|---|---|
| **Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab** | | | | | | |
| Perfluorobutanoic Acid (PFBA) | ND | | ng/l | 2.00 | 0.408 | 1 |
| Perfluoropentanoic Acid (PFPeA) | ND | | ng/l | 2.00 | 0.396 | 1 |
| Perfluorobutanesulfonic Acid (PFBS) | ND | | ng/l | 2.00 | 0.238 | 1 |
| Perfluorohexanoic Acid (PFHxA) | 0.372 | J | ng/l | 2.00 | 0.328 | 1 |
| Perfluoroheptanoic Acid (PFHpA) | ND | | ng/l | 2.00 | 0.225 | 1 |
| Perfluorohexanesulfonic Acid (PFHxS) | ND | | ng/l | 2.00 | 0.376 | 1 |
| Perfluorooctanoic Acid (PFOA) | ND | | ng/l | 2.00 | 0.236 | 1 |
| 1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS) | ND | | ng/l | 2.00 | 1.33 | 1 |
| Perfluoroheptanesulfonic Acid (PFHpS) | ND | | ng/l | 2.00 | 0.688 | 1 |
| Perfluorononanoic Acid (PFNA) | ND | | ng/l | 2.00 | 0.312 | 1 |
| Perfluorooctanesulfonic Acid (PFOS) | ND | | ng/l | 2.00 | 0.504 | 1 |
| Perfluorodecanoic Acid (PFDA) | ND | | ng/l | 2.00 | 0.304 | 1 |
| 1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS) | ND | | ng/l | 2.00 | 1.21 | 1 |
| N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA) | ND | | ng/l | 2.00 | 0.648 | 1 |
| Perfluoroundecanoic Acid (PFUnA) | ND | | ng/l | 2.00 | 0.260 | 1 |
| Perfluorodecanesulfonic Acid (PFDS) | ND | | ng/l | 2.00 | 0.980 | 1 |
| Perfluorooctanesulfonamide (FOSA) | ND | | ng/l | 2.00 | 0.580 | 1 |
| N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA) | ND | | ng/l | 2.00 | 0.804 | 1 |
| Perfluorododecanoic Acid (PFDoA) | ND | | ng/l | 2.00 | 0.372 | 1 |
| Perfluorotridecanoic Acid (PFTrDA) | ND | | ng/l | 2.00 | 0.327 | 1 |
| Perfluorotetradecanoic Acid (PFTA) | 0.484 | J | ng/l | 2.00 | 0.248 | 1 |
| PFOA/PFOS, Total | ND | | ng/l | 2.00 | 0.236 | 1 |

**Project Name:** GROSSINGERS **Lab Number:** L2010346

**Project Number:** 9313 **Report Date:** 03/18/20

## SAMPLE RESULTS

Lab ID: L2010346-07 Date Collected: 03/06/20 16:15

Client ID: FB Date Received: 03/06/20

Sample Location: LIBERTY, NY Field Prep: Not Specified

Sample Depth:

| Parameter | Result | Qualifier | Units | RL | MDL | Dilution Factor |
|---|---|---|---|---|---|---|
| Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab | | | | | | |

| Surrogate (Extracted Internal Standard) | % Recovery | Qualifier | Acceptance Criteria |
|---|---|---|---|
| Perfluoro[13C4]Butanoic Acid (MPFBA) | 105 | | 2-156 |
| Perfluoro[13C5]Pentanoic Acid (M5PFPEA) | 118 | | 16-173 |
| Perfluoro[2,3,4-13C3]Butanesulfonic Acid (M3PFBS) | 101 | | 31-159 |
| Perfluoro[1,2,3,4,6-13C5]Hexanoic Acid (M5PFHxA) | 103 | | 21-145 |
| Perfluoro[1,2,3,4-13C4]Heptanoic Acid (M4PFHpA) | 105 | | 30-139 |
| Perfluoro[1,2,3-13C3]Hexanesulfonic Acid (M3PFHxS) | 109 | | 47-153 |
| Perfluoro[13C8]Octanoic Acid (M8PFOA) | 107 | | 36-149 |
| 1H,1H,2H,2H-Perfluoro[1,2-13C2]Octanesulfonic Acid (M2-6:2FTS) | 116 | | 1-244 |
| Perfluoro[13C9]Nonanoic Acid (M9PFNA) | 112 | | 34-146 |
| Perfluoro[13C8]Octanesulfonic Acid (M8PFOS) | 101 | | 42-146 |
| Perfluoro[1,2,3,4,5,6-13C6]Decanoic Acid (M6PFDA) | 103 | | 38-144 |
| 1H,1H,2H,2H-Perfluoro[1,2-13C2]Decanesulfonic Acid (M2-8:2FTS) | 131 | | 7-170 |
| N-Deuteriomethylperfluoro-1-octanesulfonamidoacetic Acid (d3-NMeFOSAA) | 92 | | 1-181 |
| Perfluoro[1,2,3,4,5,6,7-13C7]Undecanoic Acid (M7-PFUDA) | 110 | | 40-144 |
| Perfluoro[13C8]Octanesulfonamide (M8FOSA) | 65 | | 1-87 |
| N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA) | 85 | | 23-146 |
| Perfluoro[1,2-13C2]Dodecanoic Acid (MPFDOA) | 101 | | 24-161 |
| Perfluoro[1,2-13C2]Tetradecanoic Acid (M2PFTEDA) | 94 | | 33-143 |

**Project Name:** GROSSINGERS
**Project Number:** 9313

**Lab Number:** L2010346
**Report Date:** 03/18/20

# Method Blank Analysis
## Batch Quality Control

Analytical Method: 134,LCMSMS-ID
Analytical Date: 03/12/20 22:31
Analyst: SG

Extraction Method: ALPHA 23528
Extraction Date: 03/08/20 12:32

| Parameter | Result | Qualifier | Units | RL | MDL |
|---|---|---|---|---|---|
| Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab for sample(s): 01-07 Batch: WG1348523-1 | | | | | |
| Perfluorobutanoic Acid (PFBA) | ND | | ng/l | 2.00 | 0.408 |
| Perfluoropentanoic Acid (PFPeA) | ND | | ng/l | 2.00 | 0.396 |
| Perfluorobutanesulfonic Acid (PFBS) | ND | | ng/l | 2.00 | 0.238 |
| Perfluorohexanoic Acid (PFHxA) | 0.352 | J | ng/l | 2.00 | 0.328 |
| Perfluoroheptanoic Acid (PFHpA) | ND | | ng/l | 2.00 | 0.225 |
| Perfluorohexanesulfonic Acid (PFHxS) | ND | | ng/l | 2.00 | 0.376 |
| Perfluorooctanoic Acid (PFOA) | ND | | ng/l | 2.00 | 0.236 |
| 1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS) | ND | | ng/l | 2.00 | 1.33 |
| Perfluoroheptanesulfonic Acid (PFHpS) | ND | | ng/l | 2.00 | 0.688 |
| Perfluorononanoic Acid (PFNA) | ND | | ng/l | 2.00 | 0.312 |
| Perfluorooctanesulfonic Acid (PFOS) | ND | | ng/l | 2.00 | 0.504 |
| Perfluorodecanoic Acid (PFDA) | ND | | ng/l | 2.00 | 0.304 |
| 1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS) | ND | | ng/l | 2.00 | 1.21 |
| N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA) | ND | | ng/l | 2.00 | 0.648 |
| Perfluoroundecanoic Acid (PFUnA) | ND | | ng/l | 2.00 | 0.260 |
| Perfluorodecanesulfonic Acid (PFDS) | ND | | ng/l | 2.00 | 0.980 |
| Perfluorooctanesulfonamide (FOSA) | ND | | ng/l | 2.00 | 0.580 |
| N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA) | ND | | ng/l | 2.00 | 0.804 |
| Perfluorododecanoic Acid (PFDoA) | ND | | ng/l | 2.00 | 0.372 |
| Perfluorotridecanoic Acid (PFTrDA) | ND | | ng/l | 2.00 | 0.327 |
| Perfluorotetradecanoic Acid (PFTA) | 0.452 | J | ng/l | 2.00 | 0.248 |
| PFOA/PFOS, Total | ND | | ng/l | 2.00 | 0.236 |

**Project Name:** GROSSINGERS
**Project Number:** 9313
**Lab Number:** L2010346
**Report Date:** 03/18/20

# Method Blank Analysis
## Batch Quality Control

Analytical Method: 134,LCMSMS-ID
Analytical Date: 03/12/20 22:31
Analyst: SG

Extraction Method: ALPHA 23528
Extraction Date: 03/08/20 12:32

| Parameter | Result | Qualifier | Units | RL | MDL |
|---|---|---|---|---|---|
| Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab for sample(s): 01-07 Batch: WG1348523-1 | | | | | |

| Surrogate (Extracted Internal Standard) | %Recovery | Qualifier | Acceptance Criteria |
|---|---|---|---|
| Perfluoro[13C4]Butanoic Acid (MPFBA) | 102 | | 2-156 |
| Perfluoro[13C5]Pentanoic Acid (M5PFPEA) | 115 | | 16-173 |
| Perfluoro[2,3,4-13C3]Butanesulfonic Acid (M3PFBS) | 100 | | 31-159 |
| Perfluoro[1,2,3,4,6-13C5]Hexanoic Acid (M5PFHxA) | 101 | | 21-145 |
| Perfluoro[1,2,3,4-13C4]Heptanoic Acid (M4PFHpA) | 103 | | 30-139 |
| Perfluoro[1,2,3-13C3]Hexanesulfonic Acid (M3PFHxS) | 110 | | 47-153 |
| Perfluoro[13C8]Octanoic Acid (M8PFOA) | 103 | | 36-149 |
| 1H,1H,2H,2H-Perfluoro[1,2-13C2]Octanesulfonic Acid (M2-6:2FTS) | 112 | | 1-244 |
| Perfluoro[13C9]Nonanoic Acid (M9PFNA) | 105 | | 34-146 |
| Perfluoro[13C8]Octanesulfonic Acid (M8PFOS) | 114 | | 42-146 |
| Perfluoro[1,2,3,4,5,6-13C6]Decanoic Acid (M6PFDA) | 101 | | 38-144 |
| 1H,1H,2H,2H-Perfluoro[1,2-13C2]Decanesulfonic Acid (M2-8:2FTS) | 121 | | 7-170 |
| N-Deuteriomethylperfluoro-1-octanesulfonamidoacetic Acid (d3-NMeFOSAA) | 94 | | 1-181 |
| Perfluoro[1,2,3,4,5,6,7-13C7]Undecanoic Acid (M7-PFUDA) | 109 | | 40-144 |
| Perfluoro[13C8]Octanesulfonamide (M8FOSA) | 55 | | 1-87 |
| N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA) | 92 | | 23-146 |
| Perfluoro[1,2-13C2]Dodecanoic Acid (MPFDOA) | 99 | | 24-161 |
| Perfluoro[1,2-13C2]Tetradecanoic Acid (M2PFTEDA) | 88 | | 33-143 |

# Lab Control Sample Analysis
## Batch Quality Control

**Project Name:** GROSSINGERS
**Project Number:** 9313
**Lab Number:** L2010346
**Report Date:** 03/18/20

| Parameter | LCS %Recovery | Qual | LCSD %Recovery | Qual | %Recovery Limits | RPD | Qual | RPD Limits |
|---|---|---|---|---|---|---|---|---|
| Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab Associated sample(s): 01-07 Batch: WG1348523-2 WG1348523-3 | | | | | | | | |
| Perfluorobutanoic Acid (PFBA) | 98 | | 103 | | 67-148 | 5 | | 30 |
| Perfluoropentanoic Acid (PFPeA) | 102 | | 110 | | 63-161 | 8 | | 30 |
| Perfluorobutanesulfonic Acid (PFBS) | 93 | | 102 | | 65-157 | 9 | | 30 |
| Perfluorohexanoic Acid (PFHxA) | 98 | | 104 | | 69-168 | 6 | | 30 |
| Perfluoroheptanoic Acid (PFHpA) | 97 | | 103 | | 58-159 | 6 | | 30 |
| Perfluorohexanesulfonic Acid (PFHxS) | 91 | | 97 | | 69-177 | 6 | | 30 |
| Perfluorooctanoic Acid (PFOA) | 106 | | 108 | | 63-159 | 2 | | 30 |
| 1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS) | 115 | | 118 | | 49-187 | 3 | | 30 |
| Perfluoroheptanesulfonic Acid (PFHpS) | 112 | | 116 | | 61-179 | 4 | | 30 |
| Perfluorononanoic Acid (PFNA) | 101 | | 104 | | 68-171 | 3 | | 30 |
| Perfluorooctanesulfonic Acid (PFOS) | 106 | | 100 | | 52-151 | 6 | | 30 |
| Perfluorodecanoic Acid (PFDA) | 100 | | 107 | | 63-171 | 7 | | 30 |
| 1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS) | 117 | | 129 | | 56-173 | 10 | | 30 |
| N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA) | 105 | | 115 | | 60-166 | 9 | | 30 |
| Perfluoroundecanoic Acid (PFUnA) | 100 | | 108 | | 60-153 | 8 | | 30 |
| Perfluorodecanesulfonic Acid (PFDS) | 108 | | 103 | | 38-156 | 5 | | 30 |
| Perfluorooctanesulfonamide (FOSA) | 106 | | 108 | | 46-170 | 2 | | 30 |
| N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA) | 95 | | 100 | | 45-170 | 5 | | 30 |
| Perfluorododecanoic Acid (PFDoA) | 103 | | 107 | | 67-153 | 4 | | 30 |
| Perfluorotridecanoic Acid (PFTrDA) | 109 | | 114 | | 48-158 | 4 | | 30 |
| Perfluorotetradecanoic Acid (PFTA) | 101 | | 110 | | 59-182 | 9 | | 30 |

# Lab Control Sample Analysis
## Batch Quality Control

**Project Name:** GROSSINGERS
**Project Number:** 9313
**Lab Number:** L2010346
**Report Date:** 03/18/20

| Parameter | LCS %Recovery | Qual | LCSD %Recovery | Qual | %Recovery Limits | RPD | Qual | RPD Limits |
|---|---|---|---|---|---|---|---|---|
| Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab Associated sample(s): 01-07 Batch: WG1348523-2 WG1348523-3 | | | | | | | | |

| Surrogate (Extracted Internal Standard) | LCS %Recovery | Qual | LCSD %Recovery | Qual | Acceptance Criteria |
|---|---|---|---|---|---|
| Perfluoro[13C4]Butanoic Acid (MPFBA) | 107 | | 103 | | 2-156 |
| Perfluoro[13C5]Pentanoic Acid (M5PFPEA) | 120 | | 113 | | 16-173 |
| Perfluoro[2,3,4-13C3]Butanesulfonic Acid (M3PFBS) | 106 | | 98 | | 31-159 |
| Perfluoro[1,2,3,4,6-13C5]Hexanoic Acid (M5PFHxA) | 103 | | 99 | | 21-145 |
| Perfluoro[1,2,3,4-13C4]Heptanoic Acid (M4PFHpA) | 105 | | 105 | | 30-139 |
| Perfluoro[1,2,3-13C3]Hexanesulfonic Acid (M3PFHxS) | 116 | | 103 | | 47-153 |
| Perfluoro[13C8]Octanoic Acid (M8PFOA) | 103 | | 107 | | 36-149 |
| 1H,1H,2H,2H-Perfluoro[1,2-13C2]Octanesulfonic Acid (M2-6:2FTS) | 125 | | 123 | | 1-244 |
| Perfluoro[13C9]Nonanoic Acid (M9PFNA) | 108 | | 108 | | 34-146 |
| Perfluoro[13C8]Octanesulfonic Acid (M8PFOS) | 102 | | 104 | | 42-146 |
| Perfluoro[1,2,3,4,5,6-13C6]Decanoic Acid (M6PFDA) | 102 | | 99 | | 38-144 |
| 1H,1H,2H,2H-Perfluoro[1,2-13C2]Decanesulfonic Acid (M2-8:2FTS) | 131 | | 122 | | 7-170 |
| N-Deuteriomethylperfluoro-1-octanesulfonamidoacetic Acid (d3-NMeFOSAA) | 93 | | 91 | | 1-181 |
| Perfluoro[1,2,3,4,5,6,7-13C7]Undecanoic Acid (M7-PFUDA) | 112 | | 107 | | 40-144 |
| Perfluoro[13C8]Octanesulfonamide (M8FOSA) | 64 | | 62 | | 1-87 |
| N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA) | 92 | | 87 | | 23-146 |
| Perfluoro[1,2-13C2]Dodecanoic Acid (MPFDOA) | 98 | | 101 | | 24-161 |
| Perfluoro[1,2-13C2]Tetradecanoic Acid (M2PFTEDA) | 80 | | 90 | | 33-143 |

**Project Name:** GROSSINGERS
**Project Number:** 9313

**Lab Number:** L2010346
**Report Date:** 03/18/20

## Sample Receipt and Container Information

Were project specific reporting limits specified? YES

### Cooler Information

| Cooler | Custody Seal |
|---|---|
| A | Absent |
| B | Absent |

### Container Information

| Container ID | Container Type | Cooler | Initial pH | Final pH | Temp deg C | Pres | Seal | Frozen Date/Time | Analysis(*) |
|---|---|---|---|---|---|---|---|---|---|
| L2010346-01A | Vial HCl preserved | A | NA | | 3.1 | Y | Absent | | NYTCL-8260(14) |
| L2010346-01B | Vial HCl preserved | A | NA | | 3.1 | Y | Absent | | NYTCL-8260(14) |
| L2010346-01C | Vial HCl preserved | A | NA | | 3.1 | Y | Absent | | NYTCL-8260(14) |
| L2010346-01D | Plastic 250ml unpreserved | B | NA | | 2.4 | Y | Absent | | A2-NY-537-ISOTOPE(14) |
| L2010346-01E | Plastic 250ml unpreserved | B | NA | | 2.4 | Y | Absent | | A2-NY-537-ISOTOPE(14) |
| L2010346-02A | Vial HCl preserved | A | NA | | 3.1 | Y | Absent | | NYTCL-8260(14) |
| L2010346-02B | Vial HCl preserved | A | NA | | 3.1 | Y | Absent | | NYTCL-8260(14) |
| L2010346-02C | Vial HCl preserved | A | NA | | 3.1 | Y | Absent | | NYTCL-8260(14) |
| L2010346-02D | Plastic 250ml unpreserved | B | NA | | 2.4 | Y | Absent | | A2-NY-537-ISOTOPE(14) |
| L2010346-02E | Plastic 250ml unpreserved | B | NA | | 2.4 | Y | Absent | | A2-NY-537-ISOTOPE(14) |
| L2010346-03A | Vial HCl preserved | A | NA | | 3.1 | Y | Absent | | NYTCL-8260(14) |
| L2010346-03B | Vial HCl preserved | A | NA | | 3.1 | Y | Absent | | NYTCL-8260(14) |
| L2010346-03C | Vial HCl preserved | A | NA | | 3.1 | Y | Absent | | NYTCL-8260(14) |
| L2010346-03D | Plastic 250ml unpreserved | B | NA | | 2.4 | Y | Absent | | A2-NY-537-ISOTOPE(14) |
| L2010346-03E | Plastic 250ml unpreserved | B | NA | | 2.4 | Y | Absent | | A2-NY-537-ISOTOPE(14) |
| L2010346-04A | Vial HCl preserved | A | NA | | 3.1 | Y | Absent | | NYTCL-8260(14) |
| L2010346-04B | Vial HCl preserved | A | NA | | 3.1 | Y | Absent | | NYTCL-8260(14) |
| L2010346-04C | Vial HCl preserved | A | NA | | 3.1 | Y | Absent | | NYTCL-8260(14) |
| L2010346-04D | Plastic 250ml unpreserved | B | NA | | 2.4 | Y | Absent | | A2-NY-537-ISOTOPE(14) |
| L2010346-04E | Plastic 250ml unpreserved | B | NA | | 2.4 | Y | Absent | | A2-NY-537-ISOTOPE(14) |
| L2010346-05A | Vial HCl preserved | A | NA | | 3.1 | Y | Absent | | NYTCL-8260(14) |
| L2010346-05B | Vial HCl preserved | A | NA | | 3.1 | Y | Absent | | NYTCL-8260(14) |



*Values in parentheses indicate holding time in days

**Project Name:** GROSSINGERS
**Project Number:** 9313

**Lab Number:** L2010346
**Report Date:** 03/18/20

## Container Information

| Container ID | Container Type | Cooler | Initial pH | Final pH | Temp deg C | Pres | Seal | Frozen Date/Time | Analysis(*) |
|---|---|---|---|---|---|---|---|---|---|
| L2010346-05C | Vial HCl preserved | A | NA | | 3.1 | Y | Absent | | NYTCL-8260(14) |
| L2010346-05D | Plastic 250ml unpreserved | B | NA | | 2.4 | Y | Absent | | A2-NY-537-ISOTOPE(14) |
| L2010346-05E | Plastic 250ml unpreserved | B | NA | | 2.4 | Y | Absent | | A2-NY-537-ISOTOPE(14) |
| L2010346-06A | Vial HCl preserved | A | NA | | 3.1 | Y | Absent | | NYTCL-8260(14) |
| L2010346-06B | Vial HCl preserved | A | NA | | 3.1 | Y | Absent | | NYTCL-8260(14) |
| L2010346-06C | Vial HCl preserved | A | NA | | 3.1 | Y | Absent | | NYTCL-8260(14) |
| L2010346-06D | Plastic 250ml unpreserved | B | NA | | 2.4 | Y | Absent | | A2-NY-537-ISOTOPE(14) |
| L2010346-06E | Plastic 250ml unpreserved | B | NA | | 2.4 | Y | Absent | | A2-NY-537-ISOTOPE(14) |
| L2010346-07D | Plastic 250ml unpreserved | B | NA | | 2.4 | Y | Absent | | A2-NY-537-ISOTOPE(14) |
| L2010346-07E | Plastic 250ml unpreserved | B | NA | | 2.4 | Y | Absent | | A2-NY-537-ISOTOPE(14) |
| L2010346-08A | Vial HCl preserved | A | NA | | 3.1 | Y | Absent | | NYTCL-8260(14) |
| L2010346-08B | Vial HCl preserved | A | NA | | 3.1 | Y | Absent | | NYTCL-8260(14) |



*Values in parentheses indicate holding time in days

**Project Name:** GROSSINGERS
**Project Number:** 9313
**Lab Number:** L2010346
**Report Date:** 03/18/20

## PFAS PARAMETER SUMMARY

| Parameter | Acronym | CAS Number |
|---|---|---|
| PERFLUOROALKYL CARBOXYLIC ACIDS (PFCAs) | | |
| Perfluorooctadecanoic Acid | PFODA | 16517-11-6 |
| Perfluorohexadecanoic Acid | PFHxDA | 67905-19-5 |
| Perfluorotetradecanoic Acid | PFTA | 376-06-7 |
| Perfluorotridecanoic Acid | PFTrDA | 72629-94-8 |
| Perfluorododecanoic Acid | PFDoA | 307-55-1 |
| Perfluoroundecanoic Acid | PFUnA | 2058-94-8 |
| Perfluorodecanoic Acid | PFDA | 335-76-2 |
| Perfluorononanoic Acid | PFNA | 375-95-1 |
| Perfluorooctanoic Acid | PFOA | 335-67-1 |
| Perfluoroheptanoic Acid | PFHpA | 375-85-9 |
| Perfluorohexanoic Acid | PFHxA | 307-24-4 |
| Perfluoropentanoic Acid | PFPeA | 2706-90-3 |
| Perfluorobutanoic Acid | PFBA | 375-22-4 |
| PERFLUOROALKYL SULFONIC ACIDS (PFSAs) | | |
| Perfluorododecanesulfonic Acid | PFDoDS | 79780-39-5 |
| Perfluorodecanesulfonic Acid | PFDS | 335-77-3 |
| Perfluorononanesulfonic Acid | PFNS | 68259-12-1 |
| Perfluorooctanesulfonic Acid | PFOS | 1763-23-1 |
| Perfluoroheptanesulfonic Acid | PFHpS | 375-92-8 |
| Perfluorohexanesulfonic Acid | PFHxS | 355-46-4 |
| Perfluoropentanesulfonic Acid | PFPeS | 2706-91-4 |
| Perfluorobutanesulfonic Acid | PFBS | 375-73-5 |
| FLUOROTELOMERS | | |
| 1H,1H,2H,2H-Perfluorododecanesulfonic Acid | 10:2FTS | 120226-60-0 |
| 1H,1H,2H,2H-Perfluorodecanesulfonic Acid | 8:2FTS | 39108-34-4 |
| 1H,1H,2H,2H-Perfluorooctanesulfonic Acid | 6:2FTS | 27619-97-2 |
| 1H,1H,2H,2H-Perfluorohexanesulfonic Acid | 4:2FTS | 757124-72-4 |
| PERFLUOROALKANE SULFONAMIDES (FASAs) | | |
| Perfluorooctanesulfonamide | FOSA | 754-91-6 |
| N-Ethyl Perfluorooctane Sulfonamide | NEtFOSA | 4151-50-2 |
| N-Methyl Perfluorooctane Sulfonamide | NMeFOSA | 31506-32-8 |
| PERFLUOROALKANE SULFONYL SUBSTANCES | | |
| N-Ethyl Perfluorooctanesulfonamido Ethanol | NEtFOSE | 1691-99-2 |
| N-Methyl Perfluorooctanesulfonamido Ethanol | NMeFOSE | 24448-09-7 |
| N-Ethyl Perfluorooctanesulfonamidoacetic Acid | NEtFOSAA | 2991-50-6 |
| N-Methyl Perfluorooctanesulfonamidoacetic Acid | NMeFOSAA | 2355-31-9 |
| PER- and POLYFLUOROALKYL ETHER CARBOXYLIC ACIDS | | |
| 2,3,3,3-Tetrafluoro-2-[1,1,2,2,3,3,3-Heptafluoropropoxy]-Propanoic Acid | HFPO-DA | 13252-13-6 |
| 4,8-Dioxa-3h-Perfluorononanoic Acid | ADONA | 919005-14-4 |
| CHLORO-PERFLUOROALKYL SULFONIC ACIDS | | |
| 11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid | 11Cl-PF3OUdS | 763051-92-9 |
| 9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid | 9Cl-PF3ONS | 756426-58-1 |

| | | | |
|---|---|---|---|
| **Project Name:** | GROSSINGERS | **Lab Number:** | L2010346 |
| **Project Number:** | 9313 | **Report Date:** | 03/18/20 |

## GLOSSARY

***Acronyms***

DL - Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the limit of quantitation (LOQ). The DL includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

EDL - Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).

EMPC - Estimated Maximum Possible Concentration: The concentration that results from the signal present at the retention time of an analyte when the ions meet all of the identification criteria except the ion abundance ratio criteria. An EMPC is a worst-case estimate of the concentration.

EPA - Environmental Protection Agency.

LCS - Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.

LCSD - Laboratory Control Sample Duplicate: Refer to LCS.

LFB - Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.

LOD - Limit of Detection: This value represents the level to which a target analyte can reliably be detected for a specific analyte in a specific matrix by a specific method. The LOD includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

LOQ - Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

MDL - Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.

MS - Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available. For Method 332.0, the spike recovery is calculated using the native concentration, including estimated values.

MSD - Matrix Spike Sample Duplicate: Refer to MS.

NA - Not Applicable.

NC - Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.

NDPA/DPA - N-Nitrosodiphenylamine/Diphenylamine.

NI - Not Ignitable.

NP - Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.

RL - Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.

RPD - Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.

SRM - Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.

STLP - Semi-dynamic Tank Leaching Procedure per EPA Method 1315.

TEF - Toxic Equivalency Factors: The values assigned to each dioxin and furan to evaluate their toxicity relative to 2,3,7,8-TCDD.

TEQ - Toxic Equivalent: The measure of a sample's toxicity derived by multiplying each dioxin and furan by its corresponding TEF and then summing the resulting values.

TIC - Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

***Footnotes***

*Report Format: DU Report with 'J' Qualifiers*

| | | | |
|---|---|---|---|
| **Project Name:** | GROSSINGERS | **Lab Number:** | L2010346 |
| **Project Number:** | 9313 | **Report Date:** | 03/18/20 |

1 - The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method.

***Terms***

Analytical Method: Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

Difference: With respect to Total Oxidizable Precursor (TOP) Assay analysis, the difference is defined as the Post-Treatment value minus the Pre-Treatment value.

Final pH: As it pertains to Sample Receipt & Container Information section of the report, Final pH reflects pH of container determined after adjustment at the laboratory, if applicable. If no adjustment required, value reflects Initial pH.

Frozen Date/Time: With respect to Volatile Organics in soil, Frozen Date/Time reflects the date/time at which associated Reagent Water-preserved vials were initially frozen. Note: If frozen date/time is beyond 48 hours from sample collection, value will be reflected in 'bold'.

Initial pH: As it pertains to Sample Receipt & Container Information section of the report, Initial pH reflects pH of container determined upon receipt, if applicable.

PAH Total: With respect to Alkylated PAH analyses, the 'PAHs, Total' result is defined as the summation of results for all or a subset of the following compounds: Naphthalene, C1-C4 Naphthalenes, 2-Methylnaphthalene, 1-Methylnaphthalene, Biphenyl, Acenaphthylene, Acenaphthene, Fluorene, C1-C3 Fluorenes, Phenanthrene, C1-C4 Phenanthrenes/Anthracenes, Anthracene, Fluoranthene, Pyrene, C1-C4 Fluoranthenes/Pyrenes, Benz(a)anthracene, Chrysene, C1-C4 Chrysenes, Benzo(b)fluoranthene, Benzo(j)+(k)fluoranthene, Benzo(e)pyrene, Benzo(a)pyrene, Perylene, Indeno(1,2,3-cd)pyrene, Dibenz(ah)+(ac)anthracene, Benzo(g,h,i)perylene. If a 'Total' result is requested, the results of its individual components will also be reported.

PFAS Total: With respect to PFAS analyses, the 'PFAS, Total (5)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA and PFOS. If a 'Total' result is requested, the results of its individual components will also be reported.

The target compound Chlordane (CAS No. 57-74-9) is reported for GC ECD analyses. Per EPA,this compound "refers to a mixture of chlordane isomers, other chlorinated hydrocarbons and numerous other components." (Reference: USEPA Toxicological Review of Chlordane, In Support of Summary Information on the Integrated Risk Information System (IRIS), December 1997.)

Total: With respect to Organic analyses, a 'Total' result is defined as the summation of results for individual isomers or Aroclors. If a 'Total' result is requested, the results of its individual components will also be reported. This is applicable to 'Total' results for methods 8260, 8081 and 8082.

***Data Qualifiers***

**A** - Spectra identified as "Aldol Condensates" are byproducts of the extraction/concentration procedures when acetone is introduced in the process.

**B** - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).

**C** - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.

**D** - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.

**E** - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.

**G** - The concentration may be biased high due to matrix interferences (i.e, co-elution) with non-target compound(s). The result should be considered estimated.

**H** - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.

**I** - The lower value for the two columns has been reported due to obvious interference.

**J** - Estimated value. The Target analyte concentration is below the quantitation limit (RL), but above the Method Detection Limit (MDL) or Estimated Detection Limit (EDL) for SPME-related analyses. This represents an estimated concentration for Tentatively Identified Compounds (TICs).

**M** - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.

**ND** - Not detected at the method detection limit (MDL) for the sample, or estimated detection limit (EDL) for SPME-related analyses.

**NJ** - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.

**P** - The RPD between the results for the two columns exceeds the method-specified criteria.

**Q** - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration

*Report Format: DU Report with 'J' Qualifiers*

| | | | |
|---|---|---|---|
| **Project Name:** | GROSSINGERS | **Lab Number:** | L2010346 |
| **Project Number:** | 9313 | **Report Date:** | 03/18/20 |

***Data Qualifiers***

Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)

**R** - Analytical results are from sample re-analysis.

**RE** - Analytical results are from sample re-extraction.

**S** - Analytical results are from modified screening analysis.

*Report Format: DU Report with 'J' Qualifiers*

| | | | |
|---|---|---|---|
| **Project Name:** | GROSSINGERS | **Lab Number:** | L2010346 |
| **Project Number:** | 9313 | **Report Date:** | 03/18/20 |

## REFERENCES


1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - IV, 2007.

134 Determination of Selected Perfluorinated Alkyl Acids in Drinking Water by Solid Phase Extraction and Liquid Chromatography/Tandem Mass Spectrometry (LC/MS/MS) using Isotope Dilution. Alpha SOP 23528.


## LIMITATION OF LIABILITIES

Alpha Analytical performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical be held liable for any incidental, consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding time and splitting of samples in the field.

# Certification Information

**The following analytes are not included in our Primary NELAP Scope of Accreditation:**

**Westborough Facility**
**EPA 624/624.1:** m/p-xylene, o-xylene
**EPA 8260C:** NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene, Azobenzene; SCM: Iodomethane (methyl iodide), 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.
**EPA 8270D:** NPW: Dimethylnaphthalene,1,4-Diphenylhydrazine; SCM: Dimethylnaphthalene,1,4-Diphenylhydrazine.
**SM4500**: NPW: Amenable Cyanide; SCM: Total Phosphorus, TKN, NO2, NO3.

**Mansfield Facility**
**SM 2540D:** TSS
**EPA 8082A:** NPW: PCB: 1, 5, 31, 87,101, 110, 141, 151, 153, 180, 183, 187.
**EPA TO-15:** Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene, 3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.
**EPA TO-12** Non-methane organics
**EPA 3C** Fixed gases
**Biological Tissue Matrix:** EPA 3050B

**The following analytes are included in our Massachusetts DEP Scope of Accreditation**

**Westborough Facility:**

***Drinking Water***
**EPA 300.0**: Chloride, Nitrate-N, Fluoride, Sulfate; **EPA 353.2**: Nitrate-N, Nitrite-N; **SM4500NO3-F**: Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE, EPA 180.1, SM2130B, SM4500Cl-D, SM2320B, SM2540C, SM4500H-B, SM4500NO2-B**
**EPA 332**: Perchlorate; **EPA 524.2:** THMs and VOCs; **EPA 504.1:** EDB, DBCP.
**Microbiology**: **SM9215B; SM9223-P/A, SM9223B-Colilert-QT,SM9222D**.

***Non-Potable Water***
**SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2320B, SM4500CL-E, SM4500F-BC, SM4500NH3-BH:** Ammonia-N and Kjeldahl-N, **EPA 350.1**: Ammonia-N, **LACHAT 10-107-06-1-B**: Ammonia-N, **EPA 351.1, SM4500NO3-F, EPA 353.2**: Nitrate-N**, SM4500P-E, SM4500P-B, E, SM4500SO4-E, SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, EPA 420.1, SM4500-CN-CE, SM2540D, EPA 300: Chloride, Sulfate, Nitrate.**
**EPA 624.1**: Volatile Halocarbons & Aromatics,
**EPA 608.3**: Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs
**EPA 625.1**: SVOC (Acid/Base/Neutral Extractables), **EPA 600/4-81-045**: PCB-Oil.
**Microbiology**: **SM9223B-Colilert-QT; Enterolert-QT, SM9221E, EPA 1600, EPA 1603.**

**Mansfield Facility:**

***Drinking Water***
**EPA 200.7:** Al, Ba, Cd, Cr, Cu, Fe, Mn, Ni, Na, Ag, Ca, Zn. **EPA 200.8:** Al, Sb, As, Ba, Be, Cd, Cr, Cu, Pb, Mn, Ni, Se, Ag, TL, Zn. **EPA 245.1** Hg.
**EPA 522.**

***Non-Potable Water***
**EPA 200.7:** Al, Sb, As, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Sr, TL, Ti, V, Zn.
**EPA 200.8:** Al, Sb**,** As, Be, Cd, Cr, Cu, Fe, Pb, Mn, Ni, K, Se, Ag, Na, TL, Zn.
**EPA 245.1** Hg.
**SM2340B**

For a complete listing of analytes and methods, please contact your Alpha Project Manager.

# NEW YORK CHAIN OF CUSTODY

ALPHA

Westborough, MA 01581
8 Walkup Dr.
TEL: 508-898-9220
FAX: 508-898-9193

Mansfield, MA 02048
320 Forbes Blvd
TEL: 508-822-9300
FAX: 508-822-3288

**Service Centers**
Mahwah, NJ 07430: 35 Whitney Rd, Suite 5
Albany, NY 12205: 14 Walker Way
Tonawanda, NY 14150: 275 Cooper Ave, Suite 105

Page 1 of 1

Date Rec'd in Lab: 3/7/20

ALPHA Job #: L2010346

**Client Information**
Client: SESI
Address: 129 Maplewood Dr Pine Brook, NJ
Phone: 9738084050
Fax:
Email: fd@sesi.org

**Project Information**
Project Name: Grossinger's
Project Location: Liberty, NY
Project #: 9313
(Use Project name as Project #) ☐
Project Manager: Fuad Datoo
ALPHAQuote #:

**Turn-Around Time**
Standard ☒ Due Date: 1 week
Rush (only if pre approved) ☐ # of Days:

**Deliverables**
☐ ASP-A ☐ ASP-B
☐ EQuIS (1 File) ☒ EQuIS (4 File)
☐ Other NY Cat B

**Regulatory Requirement**
☐ NY TOGS ☐ NY Part 375
☐ AWQ Standards ☐ NY CP-51
☐ NY Restricted Use ☐ Other
☒ NY Unrestricted Use
☐ NYC Sewer Discharge NY Cat B

**Billing Information**
☒ Same as Client Info
PO # 9313 Phase 10

**Disposal Site Information**
Please identify below location of applicable disposal facilities.
Disposal Facility:
☐ NJ ☐ NY
☐ Other:

These samples have been previously analyzed by Alpha ☐

**Other project specific requirements/comments:**

**Please specify Metals or TAL.**

**ANALYSIS**

**Sample Filtration**
☐ Done
☐ Lab to do
*Preservation*
☐ Lab to do
*(Please Specify below)*

| ALPHA Lab ID (Lab Use Only) | Sample ID | Collection Date | Collection Time | Sample Matrix | Sampler's Initials | TCL VOCs | PFAS, 537 | Total Bottle | Sample Specific Comments |
|---|---|---|---|---|---|---|---|---|---|
| 10346 01 | MW-216 | 3/6/20 | 925 | GW | JCS | X | X | | |
| -02 | MW-217 | | 1100 | | | | | | |
| -03 | MW-209 | | 1600 | | | | | | |
| -04 | MW-211 | | 1130 | | | | | | |
| -05 | MW-201 | | 1345 | | | | | | |
| -06 | MW-210 | | 1510 | | | | | | |
| -07 | FB | | 1615 | DF | | | X | | |
| -08 | TB | 3/3/20 | | | | X | | | |
| | | | | | | | | | |
| | | | | | | | | | |

Preservative Code:
A = None
B = HCl
C = $HNO_3$
D = $H_2SO_4$
E = NaOH
F = MeOH
G = $NaHSO_4$
H = $Na_2S_2O_3$
K/E = Zn Ac/NaOH
O = Other

Container Code
P = Plastic
A = Amber Glass
V = Vial
G = Glass
B = Bacteria Cup
C = Cube
O = Other
E = Encore
D = BOD Bottle

Westboro: Certification No: MA935
Mansfield: Certification No: MA015

| | | |
|---|---|---|
| Container Type | V | P |
| Preservative | B | A |

| Relinquished By: | Date/Time | Received By: | Date/Time |
|---|---|---|---|
| | 3/6/20 1830 | | 3/6/20 1830 |
| | 3/6/20 1830 | AAL | 3/6/20 20:20 |
| AAL | 3/6/20 23:55 | | 3/6/20 23:55 |

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. BY EXECUTING THIS COC, THE CLIENT HAS READ AND AGREES TO BE BOUND BY ALPHA'S TERMS & CONDITIONS. (See reverse side.)

Form No: 01-25 HC (rev. 30-Sept-2013)

# ANALYTICAL REPORT

| | |
|---|---|
| Lab Number: | L2121570 |
| Client: | Soils Engineering Services, Inc.<br>12A Maple Avenue<br>Pine Brook, NJ 07058 |
| ATTN: | Todd Kelly |
| Phone: | (973) 808-9050 |
| Project Name: | GROSSINGERS |
| Project Number: | 9313 |
| Report Date: | 05/12/21 |

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Certifications & Approvals: MA (M-MA086), NH NELAP (2064), CT (PH-0574), IL (200077), ME (MA00086), MD (348), NJ (MA935), NY (11148), NC (25700/666), PA (68-03671), RI (LAO00065), TX (T104704476), VT (VT-0935), VA (460195), USDA (Permit #P330-17-00196).

Eight Walkup Drive, Westborough, MA 01581-1019
508-898-9220 (Fax) 508-898-9193 800-624-9220 - www.alphalab.com

**Project Name:** GROSSINGERS
**Project Number:** 9313

**Lab Number:** L2121570
**Report Date:** 05/12/21

| Alpha Sample ID | Client ID | Matrix | Sample Location | Collection Date/Time | Receive Date |
|---|---|---|---|---|---|
| L2121570-01 | MW-214 | WATER | LIBERTY, NY | 04/27/21 09:55 | 04/27/21 |
| L2121570-02 | MW-213 | WATER | LIBERTY, NY | 04/27/21 10:15 | 04/27/21 |
| L2121570-03 | MW-207 | WATER | LIBERTY, NY | 04/27/21 11:40 | 04/27/21 |
| L2121570-04 | MW-206 | WATER | LIBERTY, NY | 04/27/21 11:45 | 04/27/21 |
| L2121570-05 | MW-204 | WATER | LIBERTY, NY | 04/27/21 13:35 | 04/27/21 |
| L2121570-06 | MW-205 | WATER | LIBERTY, NY | 04/27/21 13:40 | 04/27/21 |
| L2121570-07 | DUP | WATER | LIBERTY, NY | 04/27/21 12:00 | 04/27/21 |
| L2121570-08 | TB | WATER | LIBERTY, NY | 04/26/21 00:00 | 04/27/21 |

| | | | |
|---|---|---|---|
| **Project Name:** | GROSSINGERS | **Lab Number:** | L2121570 |
| **Project Number:** | 9313 | **Report Date:** | 05/12/21 |

## Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet NELAP requirements for all NELAP accredited parameters unless otherwise noted in the following narrative. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. Tentatively Identified Compounds (TICs), if requested, are reported for compounds identified to be present and are not part of the method/program Target Compound List, even if only a subset of the TCL are being reported. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively.

When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances, the specific failure is not narrated but noted in the associated QC Outlier Summary Report, located directly after the Case Narrative. QC information is also incorporated in the Data Usability Assessment table (Format 11) of our Data Merger tool, where it can be reviewed in conjunction with the sample result, associated regulatory criteria and any associated data usability implications.

Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

HOLD POLICY - For samples submitted on hold, Alpha's policy is to hold samples (with the exception of Air canisters) free of charge for 21 calendar days from the date the project is completed. After 21 calendar days, we will dispose of all samples submitted including those put on hold unless you have contacted your Alpha Project Manager and made arrangements for Alpha to continue to hold the samples. Air canisters will be disposed after 3 business days from the date the project is completed.

Please contact Project Management at 800-624-9220 with any questions.

| | | | |
|---|---|---|---|
| **Project Name:** | GROSSINGERS | **Lab Number:** | L2121570 |
| **Project Number:** | 9313 | **Report Date:** | 05/12/21 |

**Case Narrative (continued)**

Report Submission

May 12, 2021: This final report includes the results of all requested analyses.

May 04, 2021: This is a preliminary report.

All non-detect (ND) or estimated concentrations (J-qualified) have been quantitated to the limit noted in the MDL column.

Perfluorinated Alkyl Acids by Isotope Dilution

L2121570-01, -02 and WG1493960-3/-4: Extracted Internal Standard recoveries were outside the acceptance criteria for individual analytes. Please refer to the surrogate section of the report for details.

L2121570-03 and -04: The sample was centrifuged and decanted prior to extraction due to sample matrix.

L2121570-05 and -06: The MeOH fraction of the extraction is reported for Perfluorooctanesulfonamide (FOSA) due to better extraction efficiency of the M8FOSA Surrogate (Extracted Internal Standard).

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature: Caitlin Walukevich

Caitlin Walukevich

Title: Technical Director/Representative

Date: 05/12/21

# ORGANICS

# VOLATILES

**Project Name:** GROSSINGERS
**Project Number:** 9313
**Lab Number:** L2121570
**Report Date:** 05/12/21

## SAMPLE RESULTS

Lab ID: L2121570-01
Client ID: MW-214
Sample Location: LIBERTY, NY

Date Collected: 04/27/21 09:55
Date Received: 04/27/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8260C
Analytical Date: 05/02/21 19:14
Analyst: NLK

| Parameter | Result | Qualifier | Units | RL | MDL | Dilution Factor |
|---|---|---|---|---|---|---|
| **Volatile Organics by GC/MS - Westborough Lab** | | | | | | |
| Methylene chloride | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,1-Dichloroethane | ND | | ug/l | 2.5 | 0.70 | 1 |
| Chloroform | ND | | ug/l | 2.5 | 0.70 | 1 |
| Carbon tetrachloride | ND | | ug/l | 0.50 | 0.13 | 1 |
| 1,2-Dichloropropane | ND | | ug/l | 1.0 | 0.14 | 1 |
| Dibromochloromethane | ND | | ug/l | 0.50 | 0.15 | 1 |
| 1,1,2-Trichloroethane | ND | | ug/l | 1.5 | 0.50 | 1 |
| Tetrachloroethene | ND | | ug/l | 0.50 | 0.18 | 1 |
| Chlorobenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Trichlorofluoromethane | 5.4 | | ug/l | 2.5 | 0.70 | 1 |
| 1,2-Dichloroethane | ND | | ug/l | 0.50 | 0.13 | 1 |
| 1,1,1-Trichloroethane | ND | | ug/l | 2.5 | 0.70 | 1 |
| Bromodichloromethane | ND | | ug/l | 0.50 | 0.19 | 1 |
| trans-1,3-Dichloropropene | ND | | ug/l | 0.50 | 0.16 | 1 |
| cis-1,3-Dichloropropene | ND | | ug/l | 0.50 | 0.14 | 1 |
| 1,3-Dichloropropene, Total | ND | | ug/l | 0.50 | 0.14 | 1 |
| 1,1-Dichloropropene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Bromoform | ND | | ug/l | 2.0 | 0.65 | 1 |
| 1,1,2,2-Tetrachloroethane | ND | | ug/l | 0.50 | 0.17 | 1 |
| Benzene | ND | | ug/l | 0.50 | 0.16 | 1 |
| Toluene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Ethylbenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Chloromethane | ND | | ug/l | 2.5 | 0.70 | 1 |
| Bromomethane | ND | | ug/l | 2.5 | 0.70 | 1 |
| Vinyl chloride | ND | | ug/l | 1.0 | 0.07 | 1 |
| Chloroethane | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,1-Dichloroethene | ND | | ug/l | 0.50 | 0.17 | 1 |
| trans-1,2-Dichloroethene | ND | | ug/l | 2.5 | 0.70 | 1 |

**Project Name:** GROSSINGERS **Lab Number:** L2121570

**Project Number:** 9313 **Report Date:** 05/12/21

## SAMPLE RESULTS

Lab ID: L2121570-01 Date Collected: 04/27/21 09:55

Client ID: MW-214 Date Received: 04/27/21

Sample Location: LIBERTY, NY Field Prep: Not Specified

Sample Depth:

| Parameter | Result | Qualifier | Units | RL | MDL | Dilution Factor |
|---|---|---|---|---|---|---|
| **Volatile Organics by GC/MS - Westborough Lab** | | | | | | |
| Trichloroethene | ND | | ug/l | 0.50 | 0.18 | 1 |
| 1,2-Dichlorobenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,3-Dichlorobenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,4-Dichlorobenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Methyl tert butyl ether | ND | | ug/l | 2.5 | 0.70 | 1 |
| p/m-Xylene | ND | | ug/l | 2.5 | 0.70 | 1 |
| o-Xylene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Xylenes, Total | ND | | ug/l | 2.5 | 0.70 | 1 |
| cis-1,2-Dichloroethene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,2-Dichloroethene, Total | ND | | ug/l | 2.5 | 0.70 | 1 |
| Dibromomethane | ND | | ug/l | 5.0 | 1.0 | 1 |
| 1,2,3-Trichloropropane | ND | | ug/l | 2.5 | 0.70 | 1 |
| Acrylonitrile | ND | | ug/l | 5.0 | 1.5 | 1 |
| Styrene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Dichlorodifluoromethane | 21 | | ug/l | 5.0 | 1.0 | 1 |
| Acetone | ND | | ug/l | 5.0 | 1.5 | 1 |
| Carbon disulfide | ND | | ug/l | 5.0 | 1.0 | 1 |
| 2-Butanone | ND | | ug/l | 5.0 | 1.9 | 1 |
| Vinyl acetate | ND | | ug/l | 5.0 | 1.0 | 1 |
| 4-Methyl-2-pentanone | ND | | ug/l | 5.0 | 1.0 | 1 |
| 2-Hexanone | ND | | ug/l | 5.0 | 1.0 | 1 |
| Bromochloromethane | ND | | ug/l | 2.5 | 0.70 | 1 |
| 2,2-Dichloropropane | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,2-Dibromoethane | ND | | ug/l | 2.0 | 0.65 | 1 |
| 1,3-Dichloropropane | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,1,1,2-Tetrachloroethane | ND | | ug/l | 2.5 | 0.70 | 1 |
| Bromobenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| n-Butylbenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| sec-Butylbenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| tert-Butylbenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| o-Chlorotoluene | ND | | ug/l | 2.5 | 0.70 | 1 |
| p-Chlorotoluene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,2-Dibromo-3-chloropropane | ND | | ug/l | 2.5 | 0.70 | 1 |
| Hexachlorobutadiene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Isopropylbenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| p-Isopropyltoluene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Naphthalene | ND | | ug/l | 2.5 | 0.70 | 1 |

**Project Name:** GROSSINGERS **Lab Number:** L2121570

**Project Number:** 9313 **Report Date:** 05/12/21

## SAMPLE RESULTS

Lab ID: L2121570-01 Date Collected: 04/27/21 09:55

Client ID: MW-214 Date Received: 04/27/21

Sample Location: LIBERTY, NY Field Prep: Not Specified

Sample Depth:

| Parameter | Result | Qualifier | Units | RL | MDL | Dilution Factor |
|---|---|---|---|---|---|---|
| **Volatile Organics by GC/MS - Westborough Lab** | | | | | | |
| n-Propylbenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,2,3-Trichlorobenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,2,4-Trichlorobenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,3,5-Trimethylbenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,2,4-Trimethylbenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,4-Dioxane | ND | | ug/l | 250 | 61. | 1 |
| p-Diethylbenzene | ND | | ug/l | 2.0 | 0.70 | 1 |
| p-Ethyltoluene | ND | | ug/l | 2.0 | 0.70 | 1 |
| 1,2,4,5-Tetramethylbenzene | ND | | ug/l | 2.0 | 0.54 | 1 |
| Ethyl ether | ND | | ug/l | 2.5 | 0.70 | 1 |
| trans-1,4-Dichloro-2-butene | ND | | ug/l | 2.5 | 0.70 | 1 |
| **Tentatively Identified Compounds** | | | | | | |
| No Tentatively Identified Compounds | ND | | ug/l | | | 1 |

| Surrogate | % Recovery | Qualifier | Acceptance Criteria |
|---|---|---|---|
| 1,2-Dichloroethane-d4 | 110 | | 70-130 |
| Toluene-d8 | 112 | | 70-130 |
| 4-Bromofluorobenzene | 90 | | 70-130 |
| Dibromofluoromethane | 105 | | 70-130 |

**Project Name:** GROSSINGERS
**Project Number:** 9313
**Lab Number:** L2121570
**Report Date:** 05/12/21

## SAMPLE RESULTS

Lab ID: L2121570-02
Client ID: MW-213
Sample Location: LIBERTY, NY

Date Collected: 04/27/21 10:15
Date Received: 04/27/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8260C
Analytical Date: 05/02/21 19:35
Analyst: NLK

| Parameter | Result | Qualifier | Units | RL | MDL | Dilution Factor |
|---|---|---|---|---|---|---|
| **Volatile Organics by GC/MS - Westborough Lab** | | | | | | |
| Methylene chloride | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,1-Dichloroethane | ND | | ug/l | 2.5 | 0.70 | 1 |
| Chloroform | ND | | ug/l | 2.5 | 0.70 | 1 |
| Carbon tetrachloride | ND | | ug/l | 0.50 | 0.13 | 1 |
| 1,2-Dichloropropane | ND | | ug/l | 1.0 | 0.14 | 1 |
| Dibromochloromethane | ND | | ug/l | 0.50 | 0.15 | 1 |
| 1,1,2-Trichloroethane | ND | | ug/l | 1.5 | 0.50 | 1 |
| Tetrachloroethene | ND | | ug/l | 0.50 | 0.18 | 1 |
| Chlorobenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Trichlorofluoromethane | 52 | | ug/l | 2.5 | 0.70 | 1 |
| 1,2-Dichloroethane | ND | | ug/l | 0.50 | 0.13 | 1 |
| 1,1,1-Trichloroethane | ND | | ug/l | 2.5 | 0.70 | 1 |
| Bromodichloromethane | ND | | ug/l | 0.50 | 0.19 | 1 |
| trans-1,3-Dichloropropene | ND | | ug/l | 0.50 | 0.16 | 1 |
| cis-1,3-Dichloropropene | ND | | ug/l | 0.50 | 0.14 | 1 |
| 1,3-Dichloropropene, Total | ND | | ug/l | 0.50 | 0.14 | 1 |
| 1,1-Dichloropropene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Bromoform | ND | | ug/l | 2.0 | 0.65 | 1 |
| 1,1,2,2-Tetrachloroethane | ND | | ug/l | 0.50 | 0.17 | 1 |
| Benzene | ND | | ug/l | 0.50 | 0.16 | 1 |
| Toluene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Ethylbenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Chloromethane | ND | | ug/l | 2.5 | 0.70 | 1 |
| Bromomethane | ND | | ug/l | 2.5 | 0.70 | 1 |
| Vinyl chloride | ND | | ug/l | 1.0 | 0.07 | 1 |
| Chloroethane | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,1-Dichloroethene | ND | | ug/l | 0.50 | 0.17 | 1 |
| trans-1,2-Dichloroethene | ND | | ug/l | 2.5 | 0.70 | 1 |

**Project Name:** GROSSINGERS **Lab Number:** L2121570

**Project Number:** 9313 **Report Date:** 05/12/21

## SAMPLE RESULTS

Lab ID: L2121570-02 Date Collected: 04/27/21 10:15

Client ID: MW-213 Date Received: 04/27/21

Sample Location: LIBERTY, NY Field Prep: Not Specified

Sample Depth:

| Parameter | Result | Qualifier | Units | RL | MDL | Dilution Factor |
|---|---|---|---|---|---|---|
| **Volatile Organics by GC/MS - Westborough Lab** | | | | | | |
| Trichloroethene | ND | | ug/l | 0.50 | 0.18 | 1 |
| 1,2-Dichlorobenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,3-Dichlorobenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,4-Dichlorobenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Methyl tert butyl ether | ND | | ug/l | 2.5 | 0.70 | 1 |
| p/m-Xylene | ND | | ug/l | 2.5 | 0.70 | 1 |
| o-Xylene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Xylenes, Total | ND | | ug/l | 2.5 | 0.70 | 1 |
| cis-1,2-Dichloroethene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,2-Dichloroethene, Total | ND | | ug/l | 2.5 | 0.70 | 1 |
| Dibromomethane | ND | | ug/l | 5.0 | 1.0 | 1 |
| 1,2,3-Trichloropropane | ND | | ug/l | 2.5 | 0.70 | 1 |
| Acrylonitrile | ND | | ug/l | 5.0 | 1.5 | 1 |
| Styrene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Dichlorodifluoromethane | 54 | | ug/l | 5.0 | 1.0 | 1 |
| Acetone | ND | | ug/l | 5.0 | 1.5 | 1 |
| Carbon disulfide | ND | | ug/l | 5.0 | 1.0 | 1 |
| 2-Butanone | ND | | ug/l | 5.0 | 1.9 | 1 |
| Vinyl acetate | ND | | ug/l | 5.0 | 1.0 | 1 |
| 4-Methyl-2-pentanone | ND | | ug/l | 5.0 | 1.0 | 1 |
| 2-Hexanone | ND | | ug/l | 5.0 | 1.0 | 1 |
| Bromochloromethane | ND | | ug/l | 2.5 | 0.70 | 1 |
| 2,2-Dichloropropane | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,2-Dibromoethane | ND | | ug/l | 2.0 | 0.65 | 1 |
| 1,3-Dichloropropane | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,1,1,2-Tetrachloroethane | ND | | ug/l | 2.5 | 0.70 | 1 |
| Bromobenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| n-Butylbenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| sec-Butylbenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| tert-Butylbenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| o-Chlorotoluene | ND | | ug/l | 2.5 | 0.70 | 1 |
| p-Chlorotoluene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,2-Dibromo-3-chloropropane | ND | | ug/l | 2.5 | 0.70 | 1 |
| Hexachlorobutadiene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Isopropylbenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| p-Isopropyltoluene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Naphthalene | ND | | ug/l | 2.5 | 0.70 | 1 |

**Project Name:** GROSSINGERS **Lab Number:** L2121570

**Project Number:** 9313 **Report Date:** 05/12/21

## SAMPLE RESULTS

Lab ID: L2121570-02 Date Collected: 04/27/21 10:15

Client ID: MW-213 Date Received: 04/27/21

Sample Location: LIBERTY, NY Field Prep: Not Specified

Sample Depth:

| Parameter | Result | Qualifier | Units | RL | MDL | Dilution Factor |
|---|---|---|---|---|---|---|
| **Volatile Organics by GC/MS - Westborough Lab** | | | | | | |
| n-Propylbenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,2,3-Trichlorobenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,2,4-Trichlorobenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,3,5-Trimethylbenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,2,4-Trimethylbenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,4-Dioxane | ND | | ug/l | 250 | 61. | 1 |
| p-Diethylbenzene | ND | | ug/l | 2.0 | 0.70 | 1 |
| p-Ethyltoluene | ND | | ug/l | 2.0 | 0.70 | 1 |
| 1,2,4,5-Tetramethylbenzene | ND | | ug/l | 2.0 | 0.54 | 1 |
| Ethyl ether | ND | | ug/l | 2.5 | 0.70 | 1 |
| trans-1,4-Dichloro-2-butene | ND | | ug/l | 2.5 | 0.70 | 1 |
| **Tentatively Identified Compounds** | | | | | | |
| No Tentatively Identified Compounds | ND | | ug/l | | | 1 |

| Surrogate | % Recovery | Qualifier | Acceptance Criteria |
|---|---|---|---|
| 1,2-Dichloroethane-d4 | 111 | | 70-130 |
| Toluene-d8 | 111 | | 70-130 |
| 4-Bromofluorobenzene | 92 | | 70-130 |
| Dibromofluoromethane | 103 | | 70-130 |

**Project Name:** GROSSINGERS
**Project Number:** 9313
**Lab Number:** L2121570
**Report Date:** 05/12/21

## SAMPLE RESULTS

Lab ID: L2121570-03
Client ID: MW-207
Sample Location: LIBERTY, NY

Date Collected: 04/27/21 11:40
Date Received: 04/27/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8260C
Analytical Date: 05/02/21 19:56
Analyst: NLK

| Parameter | Result | Qualifier | Units | RL | MDL | Dilution Factor |
|---|---|---|---|---|---|---|
| **Volatile Organics by GC/MS - Westborough Lab** | | | | | | |
| Methylene chloride | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,1-Dichloroethane | ND | | ug/l | 2.5 | 0.70 | 1 |
| Chloroform | ND | | ug/l | 2.5 | 0.70 | 1 |
| Carbon tetrachloride | ND | | ug/l | 0.50 | 0.13 | 1 |
| 1,2-Dichloropropane | ND | | ug/l | 1.0 | 0.14 | 1 |
| Dibromochloromethane | ND | | ug/l | 0.50 | 0.15 | 1 |
| 1,1,2-Trichloroethane | ND | | ug/l | 1.5 | 0.50 | 1 |
| Tetrachloroethene | ND | | ug/l | 0.50 | 0.18 | 1 |
| Chlorobenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Trichlorofluoromethane | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,2-Dichloroethane | ND | | ug/l | 0.50 | 0.13 | 1 |
| 1,1,1-Trichloroethane | ND | | ug/l | 2.5 | 0.70 | 1 |
| Bromodichloromethane | ND | | ug/l | 0.50 | 0.19 | 1 |
| trans-1,3-Dichloropropene | ND | | ug/l | 0.50 | 0.16 | 1 |
| cis-1,3-Dichloropropene | ND | | ug/l | 0.50 | 0.14 | 1 |
| 1,3-Dichloropropene, Total | ND | | ug/l | 0.50 | 0.14 | 1 |
| 1,1-Dichloropropene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Bromoform | ND | | ug/l | 2.0 | 0.65 | 1 |
| 1,1,2,2-Tetrachloroethane | ND | | ug/l | 0.50 | 0.17 | 1 |
| Benzene | ND | | ug/l | 0.50 | 0.16 | 1 |
| Toluene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Ethylbenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Chloromethane | ND | | ug/l | 2.5 | 0.70 | 1 |
| Bromomethane | ND | | ug/l | 2.5 | 0.70 | 1 |
| Vinyl chloride | ND | | ug/l | 1.0 | 0.07 | 1 |
| Chloroethane | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,1-Dichloroethene | ND | | ug/l | 0.50 | 0.17 | 1 |
| trans-1,2-Dichloroethene | ND | | ug/l | 2.5 | 0.70 | 1 |

**Project Name:** GROSSINGERS **Lab Number:** L2121570

**Project Number:** 9313 **Report Date:** 05/12/21

**SAMPLE RESULTS**

Lab ID: L2121570-03 Date Collected: 04/27/21 11:40

Client ID: MW-207 Date Received: 04/27/21

Sample Location: LIBERTY, NY Field Prep: Not Specified

Sample Depth:

| Parameter | Result | Qualifier | Units | RL | MDL | Dilution Factor |
|---|---|---|---|---|---|---|
| **Volatile Organics by GC/MS - Westborough Lab** | | | | | | |
| Trichloroethene | ND | | ug/l | 0.50 | 0.18 | 1 |
| 1,2-Dichlorobenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,3-Dichlorobenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,4-Dichlorobenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Methyl tert butyl ether | ND | | ug/l | 2.5 | 0.70 | 1 |
| p/m-Xylene | ND | | ug/l | 2.5 | 0.70 | 1 |
| o-Xylene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Xylenes, Total | ND | | ug/l | 2.5 | 0.70 | 1 |
| cis-1,2-Dichloroethene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,2-Dichloroethene, Total | ND | | ug/l | 2.5 | 0.70 | 1 |
| Dibromomethane | ND | | ug/l | 5.0 | 1.0 | 1 |
| 1,2,3-Trichloropropane | ND | | ug/l | 2.5 | 0.70 | 1 |
| Acrylonitrile | ND | | ug/l | 5.0 | 1.5 | 1 |
| Styrene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Dichlorodifluoromethane | ND | | ug/l | 5.0 | 1.0 | 1 |
| Acetone | ND | | ug/l | 5.0 | 1.5 | 1 |
| Carbon disulfide | ND | | ug/l | 5.0 | 1.0 | 1 |
| 2-Butanone | ND | | ug/l | 5.0 | 1.9 | 1 |
| Vinyl acetate | ND | | ug/l | 5.0 | 1.0 | 1 |
| 4-Methyl-2-pentanone | ND | | ug/l | 5.0 | 1.0 | 1 |
| 2-Hexanone | ND | | ug/l | 5.0 | 1.0 | 1 |
| Bromochloromethane | ND | | ug/l | 2.5 | 0.70 | 1 |
| 2,2-Dichloropropane | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,2-Dibromoethane | ND | | ug/l | 2.0 | 0.65 | 1 |
| 1,3-Dichloropropane | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,1,1,2-Tetrachloroethane | ND | | ug/l | 2.5 | 0.70 | 1 |
| Bromobenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| n-Butylbenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| sec-Butylbenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| tert-Butylbenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| o-Chlorotoluene | ND | | ug/l | 2.5 | 0.70 | 1 |
| p-Chlorotoluene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,2-Dibromo-3-chloropropane | ND | | ug/l | 2.5 | 0.70 | 1 |
| Hexachlorobutadiene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Isopropylbenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| p-Isopropyltoluene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Naphthalene | ND | | ug/l | 2.5 | 0.70 | 1 |

**Project Name:** GROSSINGERS **Lab Number:** L2121570

**Project Number:** 9313 **Report Date:** 05/12/21

## SAMPLE RESULTS

Lab ID: L2121570-03 Date Collected: 04/27/21 11:40

Client ID: MW-207 Date Received: 04/27/21

Sample Location: LIBERTY, NY Field Prep: Not Specified

Sample Depth:

| Parameter | Result | Qualifier | Units | RL | MDL | Dilution Factor |
|---|---|---|---|---|---|---|
| **Volatile Organics by GC/MS - Westborough Lab** | | | | | | |
| n-Propylbenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,2,3-Trichlorobenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,2,4-Trichlorobenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,3,5-Trimethylbenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,2,4-Trimethylbenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,4-Dioxane | ND | | ug/l | 250 | 61. | 1 |
| p-Diethylbenzene | ND | | ug/l | 2.0 | 0.70 | 1 |
| p-Ethyltoluene | ND | | ug/l | 2.0 | 0.70 | 1 |
| 1,2,4,5-Tetramethylbenzene | ND | | ug/l | 2.0 | 0.54 | 1 |
| Ethyl ether | ND | | ug/l | 2.5 | 0.70 | 1 |
| trans-1,4-Dichloro-2-butene | ND | | ug/l | 2.5 | 0.70 | 1 |
| **Tentatively Identified Compounds** | | | | | | |
| No Tentatively Identified Compounds | ND | | ug/l | | | 1 |

| Surrogate | % Recovery | Qualifier | Acceptance Criteria |
|---|---|---|---|
| 1,2-Dichloroethane-d4 | 111 | | 70-130 |
| Toluene-d8 | 112 | | 70-130 |
| 4-Bromofluorobenzene | 91 | | 70-130 |
| Dibromofluoromethane | 109 | | 70-130 |

**Project Name:** GROSSINGERS **Lab Number:** L2121570

**Project Number:** 9313 **Report Date:** 05/12/21

**SAMPLE RESULTS**

Lab ID: L2121570-04 Date Collected: 04/27/21 11:45
Client ID: MW-206 Date Received: 04/27/21
Sample Location: LIBERTY, NY Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8260C
Analytical Date: 05/02/21 20:17
Analyst: NLK

| Parameter | Result | Qualifier | Units | RL | MDL | Dilution Factor |
|---|---|---|---|---|---|---|
| **Volatile Organics by GC/MS - Westborough Lab** | | | | | | |
| Methylene chloride | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,1-Dichloroethane | ND | | ug/l | 2.5 | 0.70 | 1 |
| Chloroform | ND | | ug/l | 2.5 | 0.70 | 1 |
| Carbon tetrachloride | ND | | ug/l | 0.50 | 0.13 | 1 |
| 1,2-Dichloropropane | ND | | ug/l | 1.0 | 0.14 | 1 |
| Dibromochloromethane | ND | | ug/l | 0.50 | 0.15 | 1 |
| 1,1,2-Trichloroethane | ND | | ug/l | 1.5 | 0.50 | 1 |
| Tetrachloroethene | ND | | ug/l | 0.50 | 0.18 | 1 |
| Chlorobenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Trichlorofluoromethane | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,2-Dichloroethane | ND | | ug/l | 0.50 | 0.13 | 1 |
| 1,1,1-Trichloroethane | ND | | ug/l | 2.5 | 0.70 | 1 |
| Bromodichloromethane | ND | | ug/l | 0.50 | 0.19 | 1 |
| trans-1,3-Dichloropropene | ND | | ug/l | 0.50 | 0.16 | 1 |
| cis-1,3-Dichloropropene | ND | | ug/l | 0.50 | 0.14 | 1 |
| 1,3-Dichloropropene, Total | ND | | ug/l | 0.50 | 0.14 | 1 |
| 1,1-Dichloropropene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Bromoform | ND | | ug/l | 2.0 | 0.65 | 1 |
| 1,1,2,2-Tetrachloroethane | ND | | ug/l | 0.50 | 0.17 | 1 |
| Benzene | ND | | ug/l | 0.50 | 0.16 | 1 |
| Toluene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Ethylbenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Chloromethane | ND | | ug/l | 2.5 | 0.70 | 1 |
| Bromomethane | ND | | ug/l | 2.5 | 0.70 | 1 |
| Vinyl chloride | ND | | ug/l | 1.0 | 0.07 | 1 |
| Chloroethane | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,1-Dichloroethene | ND | | ug/l | 0.50 | 0.17 | 1 |
| trans-1,2-Dichloroethene | ND | | ug/l | 2.5 | 0.70 | 1 |

**Project Name:** GROSSINGERS **Lab Number:** L2121570

**Project Number:** 9313 **Report Date:** 05/12/21

## SAMPLE RESULTS

Lab ID: L2121570-04 Date Collected: 04/27/21 11:45

Client ID: MW-206 Date Received: 04/27/21

Sample Location: LIBERTY, NY Field Prep: Not Specified

Sample Depth:

| Parameter | Result | Qualifier | Units | RL | MDL | Dilution Factor |
|---|---|---|---|---|---|---|
| **Volatile Organics by GC/MS - Westborough Lab** | | | | | | |
| Trichloroethene | ND | | ug/l | 0.50 | 0.18 | 1 |
| 1,2-Dichlorobenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,3-Dichlorobenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,4-Dichlorobenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Methyl tert butyl ether | ND | | ug/l | 2.5 | 0.70 | 1 |
| p/m-Xylene | ND | | ug/l | 2.5 | 0.70 | 1 |
| o-Xylene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Xylenes, Total | ND | | ug/l | 2.5 | 0.70 | 1 |
| cis-1,2-Dichloroethene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,2-Dichloroethene, Total | ND | | ug/l | 2.5 | 0.70 | 1 |
| Dibromomethane | ND | | ug/l | 5.0 | 1.0 | 1 |
| 1,2,3-Trichloropropane | ND | | ug/l | 2.5 | 0.70 | 1 |
| Acrylonitrile | ND | | ug/l | 5.0 | 1.5 | 1 |
| Styrene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Dichlorodifluoromethane | 1.4 | J | ug/l | 5.0 | 1.0 | 1 |
| Acetone | ND | | ug/l | 5.0 | 1.5 | 1 |
| Carbon disulfide | ND | | ug/l | 5.0 | 1.0 | 1 |
| 2-Butanone | ND | | ug/l | 5.0 | 1.9 | 1 |
| Vinyl acetate | ND | | ug/l | 5.0 | 1.0 | 1 |
| 4-Methyl-2-pentanone | ND | | ug/l | 5.0 | 1.0 | 1 |
| 2-Hexanone | ND | | ug/l | 5.0 | 1.0 | 1 |
| Bromochloromethane | ND | | ug/l | 2.5 | 0.70 | 1 |
| 2,2-Dichloropropane | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,2-Dibromoethane | ND | | ug/l | 2.0 | 0.65 | 1 |
| 1,3-Dichloropropane | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,1,1,2-Tetrachloroethane | ND | | ug/l | 2.5 | 0.70 | 1 |
| Bromobenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| n-Butylbenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| sec-Butylbenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| tert-Butylbenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| o-Chlorotoluene | ND | | ug/l | 2.5 | 0.70 | 1 |
| p-Chlorotoluene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,2-Dibromo-3-chloropropane | ND | | ug/l | 2.5 | 0.70 | 1 |
| Hexachlorobutadiene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Isopropylbenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| p-Isopropyltoluene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Naphthalene | ND | | ug/l | 2.5 | 0.70 | 1 |

**Project Name:** GROSSINGERS **Lab Number:** L2121570

**Project Number:** 9313 **Report Date:** 05/12/21

## SAMPLE RESULTS

Lab ID: L2121570-04 Date Collected: 04/27/21 11:45

Client ID: MW-206 Date Received: 04/27/21

Sample Location: LIBERTY, NY Field Prep: Not Specified

Sample Depth:

| Parameter | Result | Qualifier | Units | RL | MDL | Dilution Factor |
|---|---|---|---|---|---|---|
| **Volatile Organics by GC/MS - Westborough Lab** | | | | | | |
| n-Propylbenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,2,3-Trichlorobenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,2,4-Trichlorobenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,3,5-Trimethylbenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,2,4-Trimethylbenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,4-Dioxane | ND | | ug/l | 250 | 61. | 1 |
| p-Diethylbenzene | ND | | ug/l | 2.0 | 0.70 | 1 |
| p-Ethyltoluene | ND | | ug/l | 2.0 | 0.70 | 1 |
| 1,2,4,5-Tetramethylbenzene | ND | | ug/l | 2.0 | 0.54 | 1 |
| Ethyl ether | ND | | ug/l | 2.5 | 0.70 | 1 |
| trans-1,4-Dichloro-2-butene | ND | | ug/l | 2.5 | 0.70 | 1 |
| **Tentatively Identified Compounds** | | | | | | |
| No Tentatively Identified Compounds | ND | | ug/l | | | 1 |

| Surrogate | % Recovery | Qualifier | Acceptance Criteria |
|---|---|---|---|
| 1,2-Dichloroethane-d4 | 111 | | 70-130 |
| Toluene-d8 | 111 | | 70-130 |
| 4-Bromofluorobenzene | 88 | | 70-130 |
| Dibromofluoromethane | 105 | | 70-130 |

**Project Name:** GROSSINGERS
**Project Number:** 9313
**Lab Number:** L2121570
**Report Date:** 05/12/21

## SAMPLE RESULTS

Lab ID: L2121570-05
Client ID: MW-204
Sample Location: LIBERTY, NY

Date Collected: 04/27/21 13:35
Date Received: 04/27/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8260C
Analytical Date: 05/02/21 20:38
Analyst: NLK

| Parameter | Result | Qualifier | Units | RL | MDL | Dilution Factor |
|---|---|---|---|---|---|---|
| **Volatile Organics by GC/MS - Westborough Lab** | | | | | | |
| Methylene chloride | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,1-Dichloroethane | ND | | ug/l | 2.5 | 0.70 | 1 |
| Chloroform | ND | | ug/l | 2.5 | 0.70 | 1 |
| Carbon tetrachloride | ND | | ug/l | 0.50 | 0.13 | 1 |
| 1,2-Dichloropropane | ND | | ug/l | 1.0 | 0.14 | 1 |
| Dibromochloromethane | ND | | ug/l | 0.50 | 0.15 | 1 |
| 1,1,2-Trichloroethane | ND | | ug/l | 1.5 | 0.50 | 1 |
| Tetrachloroethene | ND | | ug/l | 0.50 | 0.18 | 1 |
| Chlorobenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Trichlorofluoromethane | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,2-Dichloroethane | ND | | ug/l | 0.50 | 0.13 | 1 |
| 1,1,1-Trichloroethane | ND | | ug/l | 2.5 | 0.70 | 1 |
| Bromodichloromethane | ND | | ug/l | 0.50 | 0.19 | 1 |
| trans-1,3-Dichloropropene | ND | | ug/l | 0.50 | 0.16 | 1 |
| cis-1,3-Dichloropropene | ND | | ug/l | 0.50 | 0.14 | 1 |
| 1,3-Dichloropropene, Total | ND | | ug/l | 0.50 | 0.14 | 1 |
| 1,1-Dichloropropene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Bromoform | ND | | ug/l | 2.0 | 0.65 | 1 |
| 1,1,2,2-Tetrachloroethane | ND | | ug/l | 0.50 | 0.17 | 1 |
| Benzene | ND | | ug/l | 0.50 | 0.16 | 1 |
| Toluene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Ethylbenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Chloromethane | ND | | ug/l | 2.5 | 0.70 | 1 |
| Bromomethane | ND | | ug/l | 2.5 | 0.70 | 1 |
| Vinyl chloride | ND | | ug/l | 1.0 | 0.07 | 1 |
| Chloroethane | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,1-Dichloroethene | ND | | ug/l | 0.50 | 0.17 | 1 |
| trans-1,2-Dichloroethene | ND | | ug/l | 2.5 | 0.70 | 1 |

**Project Name:** GROSSINGERS **Lab Number:** L2121570

**Project Number:** 9313 **Report Date:** 05/12/21

**SAMPLE RESULTS**

Lab ID: L2121570-05 Date Collected: 04/27/21 13:35

Client ID: MW-204 Date Received: 04/27/21

Sample Location: LIBERTY, NY Field Prep: Not Specified

Sample Depth:

| Parameter | Result | Qualifier | Units | RL | MDL | Dilution Factor |
|---|---|---|---|---|---|---|
| **Volatile Organics by GC/MS - Westborough Lab** | | | | | | |
| Trichloroethene | ND | | ug/l | 0.50 | 0.18 | 1 |
| 1,2-Dichlorobenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,3-Dichlorobenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,4-Dichlorobenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Methyl tert butyl ether | ND | | ug/l | 2.5 | 0.70 | 1 |
| p/m-Xylene | ND | | ug/l | 2.5 | 0.70 | 1 |
| o-Xylene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Xylenes, Total | ND | | ug/l | 2.5 | 0.70 | 1 |
| cis-1,2-Dichloroethene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,2-Dichloroethene, Total | ND | | ug/l | 2.5 | 0.70 | 1 |
| Dibromomethane | ND | | ug/l | 5.0 | 1.0 | 1 |
| 1,2,3-Trichloropropane | ND | | ug/l | 2.5 | 0.70 | 1 |
| Acrylonitrile | ND | | ug/l | 5.0 | 1.5 | 1 |
| Styrene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Dichlorodifluoromethane | ND | | ug/l | 5.0 | 1.0 | 1 |
| Acetone | ND | | ug/l | 5.0 | 1.5 | 1 |
| Carbon disulfide | ND | | ug/l | 5.0 | 1.0 | 1 |
| 2-Butanone | ND | | ug/l | 5.0 | 1.9 | 1 |
| Vinyl acetate | ND | | ug/l | 5.0 | 1.0 | 1 |
| 4-Methyl-2-pentanone | ND | | ug/l | 5.0 | 1.0 | 1 |
| 2-Hexanone | ND | | ug/l | 5.0 | 1.0 | 1 |
| Bromochloromethane | ND | | ug/l | 2.5 | 0.70 | 1 |
| 2,2-Dichloropropane | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,2-Dibromoethane | ND | | ug/l | 2.0 | 0.65 | 1 |
| 1,3-Dichloropropane | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,1,1,2-Tetrachloroethane | ND | | ug/l | 2.5 | 0.70 | 1 |
| Bromobenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| n-Butylbenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| sec-Butylbenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| tert-Butylbenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| o-Chlorotoluene | ND | | ug/l | 2.5 | 0.70 | 1 |
| p-Chlorotoluene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,2-Dibromo-3-chloropropane | ND | | ug/l | 2.5 | 0.70 | 1 |
| Hexachlorobutadiene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Isopropylbenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| p-Isopropyltoluene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Naphthalene | ND | | ug/l | 2.5 | 0.70 | 1 |

**Project Name:** GROSSINGERS **Lab Number:** L2121570

**Project Number:** 9313 **Report Date:** 05/12/21

## SAMPLE RESULTS

Lab ID: L2121570-05 Date Collected: 04/27/21 13:35

Client ID: MW-204 Date Received: 04/27/21

Sample Location: LIBERTY, NY Field Prep: Not Specified

Sample Depth:

| Parameter | Result | Qualifier | Units | RL | MDL | Dilution Factor |
|---|---|---|---|---|---|---|
| **Volatile Organics by GC/MS - Westborough Lab** | | | | | | |
| n-Propylbenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,2,3-Trichlorobenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,2,4-Trichlorobenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,3,5-Trimethylbenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,2,4-Trimethylbenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,4-Dioxane | ND | | ug/l | 250 | 61. | 1 |
| p-Diethylbenzene | ND | | ug/l | 2.0 | 0.70 | 1 |
| p-Ethyltoluene | ND | | ug/l | 2.0 | 0.70 | 1 |
| 1,2,4,5-Tetramethylbenzene | ND | | ug/l | 2.0 | 0.54 | 1 |
| Ethyl ether | ND | | ug/l | 2.5 | 0.70 | 1 |
| trans-1,4-Dichloro-2-butene | ND | | ug/l | 2.5 | 0.70 | 1 |
| **Tentatively Identified Compounds** | | | | | | |
| No Tentatively Identified Compounds | ND | | ug/l | | | 1 |

| Surrogate | % Recovery | Qualifier | Acceptance Criteria |
|---|---|---|---|
| 1,2-Dichloroethane-d4 | 111 | | 70-130 |
| Toluene-d8 | 111 | | 70-130 |
| 4-Bromofluorobenzene | 91 | | 70-130 |
| Dibromofluoromethane | 107 | | 70-130 |

**Project Name:** GROSSINGERS
**Project Number:** 9313
**Lab Number:** L2121570
**Report Date:** 05/12/21

## SAMPLE RESULTS

Lab ID: L2121570-06
Client ID: MW-205
Sample Location: LIBERTY, NY

Date Collected: 04/27/21 13:40
Date Received: 04/27/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8260C
Analytical Date: 05/02/21 20:59
Analyst: NLK

| Parameter | Result | Qualifier | Units | RL | MDL | Dilution Factor |
|---|---|---|---|---|---|---|
| **Volatile Organics by GC/MS - Westborough Lab** | | | | | | |
| Methylene chloride | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,1-Dichloroethane | ND | | ug/l | 2.5 | 0.70 | 1 |
| Chloroform | ND | | ug/l | 2.5 | 0.70 | 1 |
| Carbon tetrachloride | ND | | ug/l | 0.50 | 0.13 | 1 |
| 1,2-Dichloropropane | ND | | ug/l | 1.0 | 0.14 | 1 |
| Dibromochloromethane | ND | | ug/l | 0.50 | 0.15 | 1 |
| 1,1,2-Trichloroethane | ND | | ug/l | 1.5 | 0.50 | 1 |
| Tetrachloroethene | ND | | ug/l | 0.50 | 0.18 | 1 |
| Chlorobenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Trichlorofluoromethane | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,2-Dichloroethane | ND | | ug/l | 0.50 | 0.13 | 1 |
| 1,1,1-Trichloroethane | ND | | ug/l | 2.5 | 0.70 | 1 |
| Bromodichloromethane | ND | | ug/l | 0.50 | 0.19 | 1 |
| trans-1,3-Dichloropropene | ND | | ug/l | 0.50 | 0.16 | 1 |
| cis-1,3-Dichloropropene | ND | | ug/l | 0.50 | 0.14 | 1 |
| 1,3-Dichloropropene, Total | ND | | ug/l | 0.50 | 0.14 | 1 |
| 1,1-Dichloropropene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Bromoform | ND | | ug/l | 2.0 | 0.65 | 1 |
| 1,1,2,2-Tetrachloroethane | ND | | ug/l | 0.50 | 0.17 | 1 |
| Benzene | ND | | ug/l | 0.50 | 0.16 | 1 |
| Toluene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Ethylbenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Chloromethane | ND | | ug/l | 2.5 | 0.70 | 1 |
| Bromomethane | ND | | ug/l | 2.5 | 0.70 | 1 |
| Vinyl chloride | ND | | ug/l | 1.0 | 0.07 | 1 |
| Chloroethane | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,1-Dichloroethene | ND | | ug/l | 0.50 | 0.17 | 1 |
| trans-1,2-Dichloroethene | ND | | ug/l | 2.5 | 0.70 | 1 |

**Project Name:** GROSSINGERS **Lab Number:** L2121570

**Project Number:** 9313 **Report Date:** 05/12/21

**SAMPLE RESULTS**

Lab ID: L2121570-06 Date Collected: 04/27/21 13:40

Client ID: MW-205 Date Received: 04/27/21

Sample Location: LIBERTY, NY Field Prep: Not Specified

Sample Depth:

| Parameter | Result | Qualifier | Units | RL | MDL | Dilution Factor |
|---|---|---|---|---|---|---|
| **Volatile Organics by GC/MS - Westborough Lab** | | | | | | |
| Trichloroethene | ND | | ug/l | 0.50 | 0.18 | 1 |
| 1,2-Dichlorobenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,3-Dichlorobenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,4-Dichlorobenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Methyl tert butyl ether | ND | | ug/l | 2.5 | 0.70 | 1 |
| p/m-Xylene | ND | | ug/l | 2.5 | 0.70 | 1 |
| o-Xylene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Xylenes, Total | ND | | ug/l | 2.5 | 0.70 | 1 |
| cis-1,2-Dichloroethene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,2-Dichloroethene, Total | ND | | ug/l | 2.5 | 0.70 | 1 |
| Dibromomethane | ND | | ug/l | 5.0 | 1.0 | 1 |
| 1,2,3-Trichloropropane | ND | | ug/l | 2.5 | 0.70 | 1 |
| Acrylonitrile | ND | | ug/l | 5.0 | 1.5 | 1 |
| Styrene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Dichlorodifluoromethane | ND | | ug/l | 5.0 | 1.0 | 1 |
| Acetone | ND | | ug/l | 5.0 | 1.5 | 1 |
| Carbon disulfide | ND | | ug/l | 5.0 | 1.0 | 1 |
| 2-Butanone | ND | | ug/l | 5.0 | 1.9 | 1 |
| Vinyl acetate | ND | | ug/l | 5.0 | 1.0 | 1 |
| 4-Methyl-2-pentanone | ND | | ug/l | 5.0 | 1.0 | 1 |
| 2-Hexanone | ND | | ug/l | 5.0 | 1.0 | 1 |
| Bromochloromethane | ND | | ug/l | 2.5 | 0.70 | 1 |
| 2,2-Dichloropropane | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,2-Dibromoethane | ND | | ug/l | 2.0 | 0.65 | 1 |
| 1,3-Dichloropropane | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,1,1,2-Tetrachloroethane | ND | | ug/l | 2.5 | 0.70 | 1 |
| Bromobenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| n-Butylbenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| sec-Butylbenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| tert-Butylbenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| o-Chlorotoluene | ND | | ug/l | 2.5 | 0.70 | 1 |
| p-Chlorotoluene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,2-Dibromo-3-chloropropane | ND | | ug/l | 2.5 | 0.70 | 1 |
| Hexachlorobutadiene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Isopropylbenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| p-Isopropyltoluene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Naphthalene | ND | | ug/l | 2.5 | 0.70 | 1 |

**Project Name:** GROSSINGERS **Lab Number:** L2121570

**Project Number:** 9313 **Report Date:** 05/12/21

## SAMPLE RESULTS

Lab ID: L2121570-06 Date Collected: 04/27/21 13:40

Client ID: MW-205 Date Received: 04/27/21

Sample Location: LIBERTY, NY Field Prep: Not Specified

Sample Depth:

| Parameter | Result | Qualifier | Units | RL | MDL | Dilution Factor |
|---|---|---|---|---|---|---|
| **Volatile Organics by GC/MS - Westborough Lab** | | | | | | |
| n-Propylbenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,2,3-Trichlorobenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,2,4-Trichlorobenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,3,5-Trimethylbenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,2,4-Trimethylbenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,4-Dioxane | ND | | ug/l | 250 | 61. | 1 |
| p-Diethylbenzene | ND | | ug/l | 2.0 | 0.70 | 1 |
| p-Ethyltoluene | ND | | ug/l | 2.0 | 0.70 | 1 |
| 1,2,4,5-Tetramethylbenzene | ND | | ug/l | 2.0 | 0.54 | 1 |
| Ethyl ether | ND | | ug/l | 2.5 | 0.70 | 1 |
| trans-1,4-Dichloro-2-butene | ND | | ug/l | 2.5 | 0.70 | 1 |
| **Tentatively Identified Compounds** | | | | | | |
| No Tentatively Identified Compounds | ND | | ug/l | | | 1 |

| Surrogate | % Recovery | Qualifier | Acceptance Criteria |
|---|---|---|---|
| 1,2-Dichloroethane-d4 | 111 | | 70-130 |
| Toluene-d8 | 109 | | 70-130 |
| 4-Bromofluorobenzene | 94 | | 70-130 |
| Dibromofluoromethane | 107 | | 70-130 |

**Project Name:** GROSSINGERS
**Project Number:** 9313
**Lab Number:** L2121570
**Report Date:** 05/12/21

## SAMPLE RESULTS

Lab ID: L2121570-07
Client ID: DUP
Sample Location: LIBERTY, NY
Date Collected: 04/27/21 12:00
Date Received: 04/27/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8260C
Analytical Date: 05/02/21 21:20
Analyst: NLK

| Parameter | Result | Qualifier | Units | RL | MDL | Dilution Factor |
|---|---|---|---|---|---|---|
| **Volatile Organics by GC/MS - Westborough Lab** | | | | | | |
| Methylene chloride | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,1-Dichloroethane | ND | | ug/l | 2.5 | 0.70 | 1 |
| Chloroform | ND | | ug/l | 2.5 | 0.70 | 1 |
| Carbon tetrachloride | ND | | ug/l | 0.50 | 0.13 | 1 |
| 1,2-Dichloropropane | ND | | ug/l | 1.0 | 0.14 | 1 |
| Dibromochloromethane | ND | | ug/l | 0.50 | 0.15 | 1 |
| 1,1,2-Trichloroethane | ND | | ug/l | 1.5 | 0.50 | 1 |
| Tetrachloroethene | ND | | ug/l | 0.50 | 0.18 | 1 |
| Chlorobenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Trichlorofluoromethane | 54 | | ug/l | 2.5 | 0.70 | 1 |
| 1,2-Dichloroethane | ND | | ug/l | 0.50 | 0.13 | 1 |
| 1,1,1-Trichloroethane | ND | | ug/l | 2.5 | 0.70 | 1 |
| Bromodichloromethane | ND | | ug/l | 0.50 | 0.19 | 1 |
| trans-1,3-Dichloropropene | ND | | ug/l | 0.50 | 0.16 | 1 |
| cis-1,3-Dichloropropene | ND | | ug/l | 0.50 | 0.14 | 1 |
| 1,3-Dichloropropene, Total | ND | | ug/l | 0.50 | 0.14 | 1 |
| 1,1-Dichloropropene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Bromoform | ND | | ug/l | 2.0 | 0.65 | 1 |
| 1,1,2,2-Tetrachloroethane | ND | | ug/l | 0.50 | 0.17 | 1 |
| Benzene | ND | | ug/l | 0.50 | 0.16 | 1 |
| Toluene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Ethylbenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Chloromethane | ND | | ug/l | 2.5 | 0.70 | 1 |
| Bromomethane | ND | | ug/l | 2.5 | 0.70 | 1 |
| Vinyl chloride | ND | | ug/l | 1.0 | 0.07 | 1 |
| Chloroethane | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,1-Dichloroethene | ND | | ug/l | 0.50 | 0.17 | 1 |
| trans-1,2-Dichloroethene | ND | | ug/l | 2.5 | 0.70 | 1 |

**Project Name:** GROSSINGERS **Lab Number:** L2121570

**Project Number:** 9313 **Report Date:** 05/12/21

**SAMPLE RESULTS**

Lab ID: L2121570-07 Date Collected: 04/27/21 12:00

Client ID: DUP Date Received: 04/27/21

Sample Location: LIBERTY, NY Field Prep: Not Specified

Sample Depth:

| Parameter | Result | Qualifier | Units | RL | MDL | Dilution Factor |
|---|---|---|---|---|---|---|
| **Volatile Organics by GC/MS - Westborough Lab** | | | | | | |
| Trichloroethene | ND | | ug/l | 0.50 | 0.18 | 1 |
| 1,2-Dichlorobenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,3-Dichlorobenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,4-Dichlorobenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Methyl tert butyl ether | ND | | ug/l | 2.5 | 0.70 | 1 |
| p/m-Xylene | ND | | ug/l | 2.5 | 0.70 | 1 |
| o-Xylene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Xylenes, Total | ND | | ug/l | 2.5 | 0.70 | 1 |
| cis-1,2-Dichloroethene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,2-Dichloroethene, Total | ND | | ug/l | 2.5 | 0.70 | 1 |
| Dibromomethane | ND | | ug/l | 5.0 | 1.0 | 1 |
| 1,2,3-Trichloropropane | ND | | ug/l | 2.5 | 0.70 | 1 |
| Acrylonitrile | ND | | ug/l | 5.0 | 1.5 | 1 |
| Styrene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Dichlorodifluoromethane | 55 | | ug/l | 5.0 | 1.0 | 1 |
| Acetone | ND | | ug/l | 5.0 | 1.5 | 1 |
| Carbon disulfide | ND | | ug/l | 5.0 | 1.0 | 1 |
| 2-Butanone | ND | | ug/l | 5.0 | 1.9 | 1 |
| Vinyl acetate | ND | | ug/l | 5.0 | 1.0 | 1 |
| 4-Methyl-2-pentanone | ND | | ug/l | 5.0 | 1.0 | 1 |
| 2-Hexanone | ND | | ug/l | 5.0 | 1.0 | 1 |
| Bromochloromethane | ND | | ug/l | 2.5 | 0.70 | 1 |
| 2,2-Dichloropropane | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,2-Dibromoethane | ND | | ug/l | 2.0 | 0.65 | 1 |
| 1,3-Dichloropropane | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,1,1,2-Tetrachloroethane | ND | | ug/l | 2.5 | 0.70 | 1 |
| Bromobenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| n-Butylbenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| sec-Butylbenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| tert-Butylbenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| o-Chlorotoluene | ND | | ug/l | 2.5 | 0.70 | 1 |
| p-Chlorotoluene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,2-Dibromo-3-chloropropane | ND | | ug/l | 2.5 | 0.70 | 1 |
| Hexachlorobutadiene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Isopropylbenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| p-Isopropyltoluene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Naphthalene | ND | | ug/l | 2.5 | 0.70 | 1 |

**Project Name:** GROSSINGERS **Lab Number:** L2121570

**Project Number:** 9313 **Report Date:** 05/12/21

## SAMPLE RESULTS

Lab ID: L2121570-07 Date Collected: 04/27/21 12:00

Client ID: DUP Date Received: 04/27/21

Sample Location: LIBERTY, NY Field Prep: Not Specified

Sample Depth:

| Parameter | Result | Qualifier | Units | RL | MDL | Dilution Factor |
|---|---|---|---|---|---|---|
| **Volatile Organics by GC/MS - Westborough Lab** | | | | | | |
| n-Propylbenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,2,3-Trichlorobenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,2,4-Trichlorobenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,3,5-Trimethylbenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,2,4-Trimethylbenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,4-Dioxane | ND | | ug/l | 250 | 61. | 1 |
| p-Diethylbenzene | ND | | ug/l | 2.0 | 0.70 | 1 |
| p-Ethyltoluene | ND | | ug/l | 2.0 | 0.70 | 1 |
| 1,2,4,5-Tetramethylbenzene | ND | | ug/l | 2.0 | 0.54 | 1 |
| Ethyl ether | ND | | ug/l | 2.5 | 0.70 | 1 |
| trans-1,4-Dichloro-2-butene | ND | | ug/l | 2.5 | 0.70 | 1 |
| **Tentatively Identified Compounds** | | | | | | |
| No Tentatively Identified Compounds | ND | | ug/l | | | 1 |

| Surrogate | % Recovery | Qualifier | Acceptance Criteria |
|---|---|---|---|
| 1,2-Dichloroethane-d4 | 115 | | 70-130 |
| Toluene-d8 | 111 | | 70-130 |
| 4-Bromofluorobenzene | 85 | | 70-130 |
| Dibromofluoromethane | 107 | | 70-130 |

**Project Name:** GROSSINGERS
**Project Number:** 9313
**Lab Number:** L2121570
**Report Date:** 05/12/21

## SAMPLE RESULTS

Lab ID: L2121570-08
Client ID: TB
Sample Location: LIBERTY, NY

Date Collected: 04/26/21 00:00
Date Received: 04/27/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8260C
Analytical Date: 05/02/21 18:53
Analyst: NLK

| Parameter | Result | Qualifier | Units | RL | MDL | Dilution Factor |
|---|---|---|---|---|---|---|
| **Volatile Organics by GC/MS - Westborough Lab** | | | | | | |
| Methylene chloride | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,1-Dichloroethane | ND | | ug/l | 2.5 | 0.70 | 1 |
| Chloroform | ND | | ug/l | 2.5 | 0.70 | 1 |
| Carbon tetrachloride | ND | | ug/l | 0.50 | 0.13 | 1 |
| 1,2-Dichloropropane | ND | | ug/l | 1.0 | 0.14 | 1 |
| Dibromochloromethane | ND | | ug/l | 0.50 | 0.15 | 1 |
| 1,1,2-Trichloroethane | ND | | ug/l | 1.5 | 0.50 | 1 |
| Tetrachloroethene | ND | | ug/l | 0.50 | 0.18 | 1 |
| Chlorobenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Trichlorofluoromethane | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,2-Dichloroethane | ND | | ug/l | 0.50 | 0.13 | 1 |
| 1,1,1-Trichloroethane | ND | | ug/l | 2.5 | 0.70 | 1 |
| Bromodichloromethane | ND | | ug/l | 0.50 | 0.19 | 1 |
| trans-1,3-Dichloropropene | ND | | ug/l | 0.50 | 0.16 | 1 |
| cis-1,3-Dichloropropene | ND | | ug/l | 0.50 | 0.14 | 1 |
| 1,3-Dichloropropene, Total | ND | | ug/l | 0.50 | 0.14 | 1 |
| 1,1-Dichloropropene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Bromoform | ND | | ug/l | 2.0 | 0.65 | 1 |
| 1,1,2,2-Tetrachloroethane | ND | | ug/l | 0.50 | 0.17 | 1 |
| Benzene | ND | | ug/l | 0.50 | 0.16 | 1 |
| Toluene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Ethylbenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Chloromethane | ND | | ug/l | 2.5 | 0.70 | 1 |
| Bromomethane | ND | | ug/l | 2.5 | 0.70 | 1 |
| Vinyl chloride | ND | | ug/l | 1.0 | 0.07 | 1 |
| Chloroethane | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,1-Dichloroethene | ND | | ug/l | 0.50 | 0.17 | 1 |
| trans-1,2-Dichloroethene | ND | | ug/l | 2.5 | 0.70 | 1 |

**Project Name:** GROSSINGERS **Lab Number:** L2121570

**Project Number:** 9313 **Report Date:** 05/12/21

**SAMPLE RESULTS**

Lab ID: L2121570-08 Date Collected: 04/26/21 00:00

Client ID: TB Date Received: 04/27/21

Sample Location: LIBERTY, NY Field Prep: Not Specified

Sample Depth:

| Parameter | Result | Qualifier | Units | RL | MDL | Dilution Factor |
|---|---|---|---|---|---|---|
| **Volatile Organics by GC/MS - Westborough Lab** | | | | | | |
| Trichloroethene | ND | | ug/l | 0.50 | 0.18 | 1 |
| 1,2-Dichlorobenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,3-Dichlorobenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,4-Dichlorobenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Methyl tert butyl ether | ND | | ug/l | 2.5 | 0.70 | 1 |
| p/m-Xylene | ND | | ug/l | 2.5 | 0.70 | 1 |
| o-Xylene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Xylenes, Total | ND | | ug/l | 2.5 | 0.70 | 1 |
| cis-1,2-Dichloroethene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,2-Dichloroethene, Total | ND | | ug/l | 2.5 | 0.70 | 1 |
| Dibromomethane | ND | | ug/l | 5.0 | 1.0 | 1 |
| 1,2,3-Trichloropropane | ND | | ug/l | 2.5 | 0.70 | 1 |
| Acrylonitrile | ND | | ug/l | 5.0 | 1.5 | 1 |
| Styrene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Dichlorodifluoromethane | ND | | ug/l | 5.0 | 1.0 | 1 |
| Acetone | ND | | ug/l | 5.0 | 1.5 | 1 |
| Carbon disulfide | ND | | ug/l | 5.0 | 1.0 | 1 |
| 2-Butanone | ND | | ug/l | 5.0 | 1.9 | 1 |
| Vinyl acetate | ND | | ug/l | 5.0 | 1.0 | 1 |
| 4-Methyl-2-pentanone | ND | | ug/l | 5.0 | 1.0 | 1 |
| 2-Hexanone | ND | | ug/l | 5.0 | 1.0 | 1 |
| Bromochloromethane | ND | | ug/l | 2.5 | 0.70 | 1 |
| 2,2-Dichloropropane | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,2-Dibromoethane | ND | | ug/l | 2.0 | 0.65 | 1 |
| 1,3-Dichloropropane | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,1,1,2-Tetrachloroethane | ND | | ug/l | 2.5 | 0.70 | 1 |
| Bromobenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| n-Butylbenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| sec-Butylbenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| tert-Butylbenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| o-Chlorotoluene | ND | | ug/l | 2.5 | 0.70 | 1 |
| p-Chlorotoluene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,2-Dibromo-3-chloropropane | ND | | ug/l | 2.5 | 0.70 | 1 |
| Hexachlorobutadiene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Isopropylbenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| p-Isopropyltoluene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Naphthalene | ND | | ug/l | 2.5 | 0.70 | 1 |

**Project Name:** GROSSINGERS **Lab Number:** L2121570

**Project Number:** 9313 **Report Date:** 05/12/21

## SAMPLE RESULTS

Lab ID: L2121570-08 Date Collected: 04/26/21 00:00

Client ID: TB Date Received: 04/27/21

Sample Location: LIBERTY, NY Field Prep: Not Specified

Sample Depth:

| Parameter | Result | Qualifier | Units | RL | MDL | Dilution Factor |
|---|---|---|---|---|---|---|
| **Volatile Organics by GC/MS - Westborough Lab** | | | | | | |
| n-Propylbenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,2,3-Trichlorobenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,2,4-Trichlorobenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,3,5-Trimethylbenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,2,4-Trimethylbenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,4-Dioxane | ND | | ug/l | 250 | 61. | 1 |
| p-Diethylbenzene | ND | | ug/l | 2.0 | 0.70 | 1 |
| p-Ethyltoluene | ND | | ug/l | 2.0 | 0.70 | 1 |
| 1,2,4,5-Tetramethylbenzene | ND | | ug/l | 2.0 | 0.54 | 1 |
| Ethyl ether | ND | | ug/l | 2.5 | 0.70 | 1 |
| trans-1,4-Dichloro-2-butene | ND | | ug/l | 2.5 | 0.70 | 1 |
| **Tentatively Identified Compounds** | | | | | | |
| No Tentatively Identified Compounds | ND | | ug/l | | | 1 |

| Surrogate | % Recovery | Qualifier | Acceptance Criteria |
|---|---|---|---|
| 1,2-Dichloroethane-d4 | 111 | | 70-130 |
| Toluene-d8 | 112 | | 70-130 |
| 4-Bromofluorobenzene | 92 | | 70-130 |
| Dibromofluoromethane | 105 | | 70-130 |

**Project Name:** GROSSINGERS
**Project Number:** 9313
**Lab Number:** L2121570
**Report Date:** 05/12/21

# Method Blank Analysis
## Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 05/02/21 18:32
Analyst: AJK

| Parameter | Result | Qualifier | Units | RL | MDL |
|---|---|---|---|---|---|
| Volatile Organics by GC/MS - Westborough Lab for sample(s): 01-08 Batch: WG1494075-5 | | | | | |
| Methylene chloride | ND | | ug/l | 2.5 | 0.70 |
| 1,1-Dichloroethane | ND | | ug/l | 2.5 | 0.70 |
| Chloroform | ND | | ug/l | 2.5 | 0.70 |
| Carbon tetrachloride | ND | | ug/l | 0.50 | 0.13 |
| 1,2-Dichloropropane | ND | | ug/l | 1.0 | 0.14 |
| Dibromochloromethane | ND | | ug/l | 0.50 | 0.15 |
| 1,1,2-Trichloroethane | ND | | ug/l | 1.5 | 0.50 |
| Tetrachloroethene | ND | | ug/l | 0.50 | 0.18 |
| Chlorobenzene | ND | | ug/l | 2.5 | 0.70 |
| Trichlorofluoromethane | ND | | ug/l | 2.5 | 0.70 |
| 1,2-Dichloroethane | ND | | ug/l | 0.50 | 0.13 |
| 1,1,1-Trichloroethane | ND | | ug/l | 2.5 | 0.70 |
| Bromodichloromethane | ND | | ug/l | 0.50 | 0.19 |
| trans-1,3-Dichloropropene | ND | | ug/l | 0.50 | 0.16 |
| cis-1,3-Dichloropropene | ND | | ug/l | 0.50 | 0.14 |
| 1,3-Dichloropropene, Total | ND | | ug/l | 0.50 | 0.14 |
| 1,1-Dichloropropene | ND | | ug/l | 2.5 | 0.70 |
| Bromoform | ND | | ug/l | 2.0 | 0.65 |
| 1,1,2,2-Tetrachloroethane | ND | | ug/l | 0.50 | 0.17 |
| Benzene | ND | | ug/l | 0.50 | 0.16 |
| Toluene | ND | | ug/l | 2.5 | 0.70 |
| Ethylbenzene | ND | | ug/l | 2.5 | 0.70 |
| Chloromethane | ND | | ug/l | 2.5 | 0.70 |
| Bromomethane | ND | | ug/l | 2.5 | 0.70 |
| Vinyl chloride | ND | | ug/l | 1.0 | 0.07 |
| Chloroethane | ND | | ug/l | 2.5 | 0.70 |
| 1,1-Dichloroethene | ND | | ug/l | 0.50 | 0.17 |
| trans-1,2-Dichloroethene | ND | | ug/l | 2.5 | 0.70 |
| Trichloroethene | ND | | ug/l | 0.50 | 0.18 |

**Project Name:** GROSSINGERS
**Project Number:** 9313
**Lab Number:** L2121570
**Report Date:** 05/12/21

# Method Blank Analysis
## Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 05/02/21 18:32
Analyst: AJK

| Parameter | Result | Qualifier | Units | RL | MDL |
|---|---|---|---|---|---|
| Volatile Organics by GC/MS - Westborough Lab for sample(s): 01-08 Batch: WG1494075-5 | | | | | |
| 1,2-Dichlorobenzene | ND | | ug/l | 2.5 | 0.70 |
| 1,3-Dichlorobenzene | ND | | ug/l | 2.5 | 0.70 |
| 1,4-Dichlorobenzene | ND | | ug/l | 2.5 | 0.70 |
| Methyl tert butyl ether | ND | | ug/l | 2.5 | 0.70 |
| p/m-Xylene | ND | | ug/l | 2.5 | 0.70 |
| o-Xylene | ND | | ug/l | 2.5 | 0.70 |
| Xylenes, Total | ND | | ug/l | 2.5 | 0.70 |
| cis-1,2-Dichloroethene | ND | | ug/l | 2.5 | 0.70 |
| 1,2-Dichloroethene, Total | ND | | ug/l | 2.5 | 0.70 |
| Dibromomethane | ND | | ug/l | 5.0 | 1.0 |
| 1,2,3-Trichloropropane | ND | | ug/l | 2.5 | 0.70 |
| Acrylonitrile | ND | | ug/l | 5.0 | 1.5 |
| Styrene | ND | | ug/l | 2.5 | 0.70 |
| Dichlorodifluoromethane | ND | | ug/l | 5.0 | 1.0 |
| Acetone | ND | | ug/l | 5.0 | 1.5 |
| Carbon disulfide | ND | | ug/l | 5.0 | 1.0 |
| 2-Butanone | ND | | ug/l | 5.0 | 1.9 |
| Vinyl acetate | ND | | ug/l | 5.0 | 1.0 |
| 4-Methyl-2-pentanone | ND | | ug/l | 5.0 | 1.0 |
| 2-Hexanone | ND | | ug/l | 5.0 | 1.0 |
| Bromochloromethane | ND | | ug/l | 2.5 | 0.70 |
| 2,2-Dichloropropane | ND | | ug/l | 2.5 | 0.70 |
| 1,2-Dibromoethane | ND | | ug/l | 2.0 | 0.65 |
| 1,3-Dichloropropane | ND | | ug/l | 2.5 | 0.70 |
| 1,1,1,2-Tetrachloroethane | ND | | ug/l | 2.5 | 0.70 |
| Bromobenzene | ND | | ug/l | 2.5 | 0.70 |
| n-Butylbenzene | ND | | ug/l | 2.5 | 0.70 |
| sec-Butylbenzene | ND | | ug/l | 2.5 | 0.70 |
| tert-Butylbenzene | ND | | ug/l | 2.5 | 0.70 |

**Project Name:** GROSSINGERS
**Project Number:** 9313
**Lab Number:** L2121570
**Report Date:** 05/12/21

# Method Blank Analysis
## Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 05/02/21 18:32
Analyst: AJK

| Parameter | Result | Qualifier | Units | RL | MDL |
|---|---|---|---|---|---|
| Volatile Organics by GC/MS - Westborough Lab for sample(s): 01-08 Batch: WG1494075-5 | | | | | |
| o-Chlorotoluene | ND | | ug/l | 2.5 | 0.70 |
| p-Chlorotoluene | ND | | ug/l | 2.5 | 0.70 |
| 1,2-Dibromo-3-chloropropane | ND | | ug/l | 2.5 | 0.70 |
| Hexachlorobutadiene | ND | | ug/l | 2.5 | 0.70 |
| Isopropylbenzene | ND | | ug/l | 2.5 | 0.70 |
| p-Isopropyltoluene | ND | | ug/l | 2.5 | 0.70 |
| Naphthalene | ND | | ug/l | 2.5 | 0.70 |
| n-Propylbenzene | ND | | ug/l | 2.5 | 0.70 |
| 1,2,3-Trichlorobenzene | ND | | ug/l | 2.5 | 0.70 |
| 1,2,4-Trichlorobenzene | ND | | ug/l | 2.5 | 0.70 |
| 1,3,5-Trimethylbenzene | ND | | ug/l | 2.5 | 0.70 |
| 1,2,4-Trimethylbenzene | ND | | ug/l | 2.5 | 0.70 |
| 1,4-Dioxane | ND | | ug/l | 250 | 61. |
| p-Diethylbenzene | ND | | ug/l | 2.0 | 0.70 |
| p-Ethyltoluene | ND | | ug/l | 2.0 | 0.70 |
| 1,2,4,5-Tetramethylbenzene | ND | | ug/l | 2.0 | 0.54 |
| Ethyl ether | ND | | ug/l | 2.5 | 0.70 |
| trans-1,4-Dichloro-2-butene | ND | | ug/l | 2.5 | 0.70 |
| Tentatively Identified Compounds | | | | | |
| No Tentatively Identified Compounds | ND | | ug/l | | |

**Project Name:** GROSSINGERS
**Project Number:** 9313
**Lab Number:** L2121570
**Report Date:** 05/12/21

# Method Blank Analysis
## Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 05/02/21 18:32
Analyst: AJK

| Parameter | Result | Qualifier | Units | RL | MDL |
|---|---|---|---|---|---|
| Volatile Organics by GC/MS - Westborough Lab for sample(s): 01-08 Batch: WG1494075-5 | | | | | |

| Surrogate | %Recovery | Qualifier | Acceptance Criteria |
|---|---|---|---|
| 1,2-Dichloroethane-d4 | 105 | | 70-130 |
| Toluene-d8 | 113 | | 70-130 |
| 4-Bromofluorobenzene | 90 | | 70-130 |
| Dibromofluoromethane | 103 | | 70-130 |

# Lab Control Sample Analysis
## Batch Quality Control

**Project Name:** GROSSINGERS
**Project Number:** 9313
**Lab Number:** L2121570
**Report Date:** 05/12/21

| Parameter | LCS %Recovery | Qual | LCSD %Recovery | Qual | %Recovery Limits | RPD | Qual | RPD Limits |
|---|---|---|---|---|---|---|---|---|
| Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-08 Batch: WG1494075-3 WG1494075-4 | | | | | | | | |
| Methylene chloride | 95 | | 96 | | 70-130 | 1 | | 20 |
| 1,1-Dichloroethane | 100 | | 100 | | 70-130 | 0 | | 20 |
| Chloroform | 95 | | 93 | | 70-130 | 2 | | 20 |
| Carbon tetrachloride | 86 | | 84 | | 63-132 | 2 | | 20 |
| 1,2-Dichloropropane | 110 | | 110 | | 70-130 | 0 | | 20 |
| Dibromochloromethane | 94 | | 100 | | 63-130 | 6 | | 20 |
| 1,1,2-Trichloroethane | 110 | | 110 | | 70-130 | 0 | | 20 |
| Tetrachloroethene | 120 | | 110 | | 70-130 | 9 | | 20 |
| Chlorobenzene | 110 | | 100 | | 75-130 | 10 | | 20 |
| Trichlorofluoromethane | 79 | | 77 | | 62-150 | 3 | | 20 |
| 1,2-Dichloroethane | 110 | | 110 | | 70-130 | 0 | | 20 |
| 1,1,1-Trichloroethane | 96 | | 91 | | 67-130 | 5 | | 20 |
| Bromodichloromethane | 92 | | 92 | | 67-130 | 0 | | 20 |
| trans-1,3-Dichloropropene | 100 | | 100 | | 70-130 | 0 | | 20 |
| cis-1,3-Dichloropropene | 92 | | 91 | | 70-130 | 1 | | 20 |
| 1,1-Dichloropropene | 94 | | 90 | | 70-130 | 4 | | 20 |
| Bromoform | 96 | | 97 | | 54-136 | 1 | | 20 |
| 1,1,2,2-Tetrachloroethane | 100 | | 100 | | 67-130 | 0 | | 20 |
| Benzene | 96 | | 95 | | 70-130 | 1 | | 20 |
| Toluene | 110 | | 110 | | 70-130 | 0 | | 20 |
| Ethylbenzene | 110 | | 100 | | 70-130 | 10 | | 20 |
| Chloromethane | 75 | | 67 | | 64-130 | 11 | | 20 |
| Bromomethane | 100 | | 97 | | 39-139 | 3 | | 20 |

# Lab Control Sample Analysis
## Batch Quality Control

**Project Name:** GROSSINGERS
**Project Number:** 9313
**Lab Number:** L2121570
**Report Date:** 05/12/21

| Parameter | LCS %Recovery | Qual | LCSD %Recovery | Qual | %Recovery Limits | RPD | Qual | RPD Limits |
|---|---|---|---|---|---|---|---|---|
| Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-08 Batch: WG1494075-3 WG1494075-4 | | | | | | | | |
| Vinyl chloride | 98 | | 88 | | 55-140 | 11 | | 20 |
| Chloroethane | 100 | | 100 | | 55-138 | 0 | | 20 |
| 1,1-Dichloroethene | 94 | | 90 | | 61-145 | 4 | | 20 |
| trans-1,2-Dichloroethene | 97 | | 97 | | 70-130 | 0 | | 20 |
| Trichloroethene | 100 | | 96 | | 70-130 | 4 | | 20 |
| 1,2-Dichlorobenzene | 100 | | 98 | | 70-130 | 2 | | 20 |
| 1,3-Dichlorobenzene | 100 | | 96 | | 70-130 | 4 | | 20 |
| 1,4-Dichlorobenzene | 99 | | 96 | | 70-130 | 3 | | 20 |
| Methyl tert butyl ether | 90 | | 96 | | 63-130 | 6 | | 20 |
| p/m-Xylene | 100 | | 95 | | 70-130 | 5 | | 20 |
| o-Xylene | 100 | | 100 | | 70-130 | 0 | | 20 |
| cis-1,2-Dichloroethene | 97 | | 94 | | 70-130 | 3 | | 20 |
| Dibromomethane | 100 | | 100 | | 70-130 | 0 | | 20 |
| 1,2,3-Trichloropropane | 90 | | 96 | | 64-130 | 6 | | 20 |
| Acrylonitrile | 120 | | 130 | | 70-130 | 8 | | 20 |
| Styrene | 100 | | 100 | | 70-130 | 0 | | 20 |
| Dichlorodifluoromethane | 72 | | 64 | | 36-147 | 12 | | 20 |
| Acetone | 98 | | 100 | | 58-148 | 2 | | 20 |
| Carbon disulfide | 84 | | 82 | | 51-130 | 2 | | 20 |
| 2-Butanone | 100 | | 120 | | 63-138 | 18 | | 20 |
| Vinyl acetate | 100 | | 100 | | 70-130 | 0 | | 20 |
| 4-Methyl-2-pentanone | **140** | Q | **150** | Q | 59-130 | 7 | | 20 |
| 2-Hexanone | 120 | | 120 | | 57-130 | 0 | | 20 |

# Lab Control Sample Analysis

## Batch Quality Control

**Project Name:** GROSSINGERS

**Project Number:** 9313

**Lab Number:** L2121570

**Report Date:** 05/12/21

| Parameter | LCS %Recovery | Qual | LCSD %Recovery | Qual | %Recovery Limits | RPD | Qual | RPD Limits |
|---|---|---|---|---|---|---|---|---|
| Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-08 Batch: WG1494075-3 WG1494075-4 | | | | | | | | |
| Bromochloromethane | 100 | | 100 | | 70-130 | 0 | | 20 |
| 2,2-Dichloropropane | 96 | | 93 | | 63-133 | 3 | | 20 |
| 1,2-Dibromoethane | 100 | | 100 | | 70-130 | 0 | | 20 |
| 1,3-Dichloropropane | 110 | | 110 | | 70-130 | 0 | | 20 |
| 1,1,1,2-Tetrachloroethane | 100 | | 100 | | 64-130 | 0 | | 20 |
| Bromobenzene | 100 | | 100 | | 70-130 | 0 | | 20 |
| n-Butylbenzene | 100 | | 99 | | 53-136 | 1 | | 20 |
| sec-Butylbenzene | 92 | | 87 | | 70-130 | 6 | | 20 |
| tert-Butylbenzene | 95 | | 88 | | 70-130 | 8 | | 20 |
| o-Chlorotoluene | 95 | | 89 | | 70-130 | 7 | | 20 |
| p-Chlorotoluene | 97 | | 90 | | 70-130 | 7 | | 20 |
| 1,2-Dibromo-3-chloropropane | 98 | | 100 | | 41-144 | 2 | | 20 |
| Hexachlorobutadiene | 100 | | 100 | | 63-130 | 0 | | 20 |
| Isopropylbenzene | 89 | | 83 | | 70-130 | 7 | | 20 |
| p-Isopropyltoluene | 96 | | 90 | | 70-130 | 6 | | 20 |
| Naphthalene | 88 | | 90 | | 70-130 | 2 | | 20 |
| n-Propylbenzene | 98 | | 92 | | 69-130 | 6 | | 20 |
| 1,2,3-Trichlorobenzene | 100 | | 100 | | 70-130 | 0 | | 20 |
| 1,2,4-Trichlorobenzene | 110 | | 100 | | 70-130 | 10 | | 20 |
| 1,3,5-Trimethylbenzene | 89 | | 83 | | 64-130 | 7 | | 20 |
| 1,2,4-Trimethylbenzene | 89 | | 84 | | 70-130 | 6 | | 20 |
| 1,4-Dioxane | 114 | | 112 | | 56-162 | 2 | | 20 |
| p-Diethylbenzene | 95 | | 88 | | 70-130 | 8 | | 20 |

# Lab Control Sample Analysis

## Batch Quality Control

**Project Name:** GROSSINGERS

**Project Number:** 9313

**Lab Number:** L2121570

**Report Date:** 05/12/21

| Parameter | LCS %Recovery | Qual | LCSD %Recovery | Qual | %Recovery Limits | RPD | Qual | RPD Limits |
|---|---|---|---|---|---|---|---|---|
| Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-08 Batch: WG1494075-3 WG1494075-4 | | | | | | | | |
| p-Ethyltoluene | 91 | | 84 | | 70-130 | 8 | | 20 |
| 1,2,4,5-Tetramethylbenzene | 89 | | 84 | | 70-130 | 6 | | 20 |
| Ethyl ether | 97 | | 100 | | 59-134 | 3 | | 20 |
| trans-1,4-Dichloro-2-butene | 98 | | 100 | | 70-130 | 2 | | 20 |

| Surrogate | LCS %Recovery | Qual | LCSD %Recovery | Qual | Acceptance Criteria |
|---|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 106 | | 107 | | 70-130 |
| Toluene-d8 | 111 | | 113 | | 70-130 |
| 4-Bromofluorobenzene | 88 | | 88 | | 70-130 |
| Dibromofluoromethane | 102 | | 103 | | 70-130 |

# SEMIVOLATILES

**Project Name:** GROSSINGERS
**Project Number:** 9313
**Lab Number:** L2121570
**Report Date:** 05/12/21

## SAMPLE RESULTS

Lab ID: L2121570-01
Client ID: MW-214
Sample Location: LIBERTY, NY

Date Collected: 04/27/21 09:55
Date Received: 04/27/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 134,LCMSMS-ID
Analytical Date: 05/04/21 14:34
Analyst: RS

Extraction Method: ALPHA 23528
Extraction Date: 05/04/21 04:25

| Parameter | Result | Qualifier | Units | RL | MDL | Dilution Factor |
|---|---|---|---|---|---|---|
| **Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab** | | | | | | |
| Perfluorobutanoic Acid (PFBA) | 10.1 | | ng/l | 2.01 | 0.410 | 1 |
| Perfluoropentanoic Acid (PFPeA) | 6.97 | F | ng/l | 2.01 | 0.398 | 1 |
| Perfluorobutanesulfonic Acid (PFBS) | 3.02 | | ng/l | 2.01 | 0.239 | 1 |
| Perfluorohexanoic Acid (PFHxA) | 9.42 | | ng/l | 2.01 | 0.330 | 1 |
| Perfluoroheptanoic Acid (PFHpA) | 6.64 | | ng/l | 2.01 | 0.226 | 1 |
| Perfluorohexanesulfonic Acid (PFHxS) | 6.66 | | ng/l | 2.01 | 0.378 | 1 |
| Perfluorooctanoic Acid (PFOA) | 29.5 | | ng/l | 2.01 | 0.237 | 1 |
| 1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS) | ND | | ng/l | 2.01 | 1.34 | 1 |
| Perfluoroheptanesulfonic Acid (PFHpS) | 1.35 | J | ng/l | 2.01 | 0.691 | 1 |
| Perfluorononanoic Acid (PFNA) | 1.29 | J | ng/l | 2.01 | 0.314 | 1 |
| Perfluorooctanesulfonic Acid (PFOS) | 40.3 | | ng/l | 2.01 | 0.506 | 1 |
| Perfluorodecanoic Acid (PFDA) | 0.631 | JF | ng/l | 2.01 | 0.306 | 1 |
| 1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS) | ND | | ng/l | 2.01 | 1.22 | 1 |
| N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA) | ND | | ng/l | 2.01 | 0.651 | 1 |
| Perfluoroundecanoic Acid (PFUnA) | ND | | ng/l | 2.01 | 0.261 | 1 |
| Perfluorodecanesulfonic Acid (PFDS) | ND | | ng/l | 2.01 | 0.985 | 1 |
| Perfluorooctanesulfonamide (FOSA) | 0.800 | JF | ng/l | 2.01 | 0.583 | 1 |
| N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA) | ND | | ng/l | 2.01 | 0.808 | 1 |
| Perfluorododecanoic Acid (PFDoA) | ND | | ng/l | 2.01 | 0.374 | 1 |
| Perfluorotridecanoic Acid (PFTrDA) | ND | | ng/l | 2.01 | 0.329 | 1 |
| Perfluorotetradecanoic Acid (PFTA) | ND | | ng/l | 2.01 | 0.249 | 1 |
| PFOA/PFOS, Total | 69.8 | | ng/l | 2.01 | 0.237 | 1 |

**Project Name:** GROSSINGERS **Lab Number:** L2121570

**Project Number:** 9313 **Report Date:** 05/12/21

## SAMPLE RESULTS

Lab ID: L2121570-01 Date Collected: 04/27/21 09:55

Client ID: MW-214 Date Received: 04/27/21

Sample Location: LIBERTY, NY Field Prep: Not Specified

Sample Depth:

| Parameter | Result | Qualifier | Units | RL | MDL | Dilution Factor |
|---|---|---|---|---|---|---|
| Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab | | | | | | |

| Surrogate (Extracted Internal Standard) | % Recovery | Qualifier | Acceptance Criteria |
|---|---|---|---|
| Perfluoro[13C4]Butanoic Acid (MPFBA) | 76 | | 58-132 |
| Perfluoro[13C5]Pentanoic Acid (M5PFPEA) | 75 | | 62-163 |
| Perfluoro[2,3,4-13C3]Butanesulfonic Acid (M3PFBS) | 74 | | 70-131 |
| Perfluoro[1,2,3,4,6-13C5]Hexanoic Acid (M5PFHxA) | 61 | | 57-129 |
| Perfluoro[1,2,3,4-13C4]Heptanoic Acid (M4PFHpA) | 70 | | 60-129 |
| Perfluoro[1,2,3-13C3]Hexanesulfonic Acid (M3PFHxS) | 82 | | 71-134 |
| Perfluoro[13C8]Octanoic Acid (M8PFOA) | 71 | | 62-129 |
| 1H,1H,2H,2H-Perfluoro[1,2-13C2]Octanesulfonic Acid (M2-6:2FTS) | 64 | | 14-147 |
| Perfluoro[13C9]Nonanoic Acid (M9PFNA) | 63 | | 59-139 |
| Perfluoro[13C8]Octanesulfonic Acid (M8PFOS) | **68** | Q | 69-131 |
| Perfluoro[1,2,3,4,5,6-13C6]Decanoic Acid (M6PFDA) | 63 | | 62-124 |
| 1H,1H,2H,2H-Perfluoro[1,2-13C2]Decanesulfonic Acid (M2-8:2FTS) | 60 | | 10-162 |
| N-Deuteriomethylperfluoro-1-octanesulfonamidoacetic Acid (d3-NMeFOSAA) | 34 | | 24-116 |
| Perfluoro[1,2,3,4,5,6,7-13C7]Undecanoic Acid (M7-PFUDA) | 59 | | 55-137 |
| Perfluoro[13C8]Octanesulfonamide (M8FOSA) | 14 | | 10-112 |
| N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA) | 41 | | 27-126 |
| Perfluoro[1,2-13C2]Dodecanoic Acid (MPFDOA) | 61 | | 48-131 |
| Perfluoro[1,2-13C2]Tetradecanoic Acid (M2PFTEDA) | 61 | | 22-136 |

**Project Name:** GROSSINGERS
**Project Number:** 9313
**Lab Number:** L2121570
**Report Date:** 05/12/21

## SAMPLE RESULTS

Lab ID: L2121570-02
Client ID: MW-213
Sample Location: LIBERTY, NY

Date Collected: 04/27/21 10:15
Date Received: 04/27/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 134,LCMSMS-ID
Analytical Date: 05/04/21 15:08
Analyst: RS

Extraction Method: ALPHA 23528
Extraction Date: 05/04/21 04:25

| Parameter | Result | Qualifier | Units | RL | MDL | Dilution Factor |
|---|---|---|---|---|---|---|
| **Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab** | | | | | | |
| Perfluorobutanoic Acid (PFBA) | 12.8 | | ng/l | 1.97 | 0.401 | 1 |
| Perfluoropentanoic Acid (PFPeA) | 8.53 | | ng/l | 1.97 | 0.389 | 1 |
| Perfluorobutanesulfonic Acid (PFBS) | 2.92 | | ng/l | 1.97 | 0.234 | 1 |
| Perfluorohexanoic Acid (PFHxA) | 9.60 | | ng/l | 1.97 | 0.322 | 1 |
| Perfluoroheptanoic Acid (PFHpA) | 6.70 | | ng/l | 1.97 | 0.221 | 1 |
| Perfluorohexanesulfonic Acid (PFHxS) | 6.29 | | ng/l | 1.97 | 0.370 | 1 |
| Perfluorooctanoic Acid (PFOA) | 27.7 | | ng/l | 1.97 | 0.232 | 1 |
| 1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS) | ND | | ng/l | 1.97 | 1.31 | 1 |
| Perfluoroheptanesulfonic Acid (PFHpS) | 1.22 | J | ng/l | 1.97 | 0.676 | 1 |
| Perfluorononanoic Acid (PFNA) | 2.67 | | ng/l | 1.97 | 0.307 | 1 |
| Perfluorooctanesulfonic Acid (PFOS) | 70.0 | | ng/l | 1.97 | 0.496 | 1 |
| Perfluorodecanoic Acid (PFDA) | 1.40 | J | ng/l | 1.97 | 0.299 | 1 |
| 1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS) | ND | | ng/l | 1.97 | 1.19 | 1 |
| N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA) | ND | | ng/l | 1.97 | 0.637 | 1 |
| Perfluoroundecanoic Acid (PFUnA) | ND | | ng/l | 1.97 | 0.256 | 1 |
| Perfluorodecanesulfonic Acid (PFDS) | ND | | ng/l | 1.97 | 0.964 | 1 |
| Perfluorooctanesulfonamide (FOSA) | 1.27 | JF | ng/l | 1.97 | 0.570 | 1 |
| N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA) | ND | | ng/l | 1.97 | 0.790 | 1 |
| Perfluorododecanoic Acid (PFDoA) | ND | | ng/l | 1.97 | 0.366 | 1 |
| Perfluorotridecanoic Acid (PFTrDA) | ND | | ng/l | 1.97 | 0.322 | 1 |
| Perfluorotetradecanoic Acid (PFTA) | ND | | ng/l | 1.97 | 0.244 | 1 |
| PFOA/PFOS, Total | 97.7 | | ng/l | 1.97 | 0.232 | 1 |

**Project Name:** GROSSINGERS **Lab Number:** L2121570

**Project Number:** 9313 **Report Date:** 05/12/21

## SAMPLE RESULTS

Lab ID: L2121570-02 Date Collected: 04/27/21 10:15

Client ID: MW-213 Date Received: 04/27/21

Sample Location: LIBERTY, NY Field Prep: Not Specified

Sample Depth:

| Parameter | Result | Qualifier | Units | RL | MDL | Dilution Factor |
|---|---|---|---|---|---|---|
| Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab | | | | | | |

| Surrogate (Extracted Internal Standard) | % Recovery | Qualifier | Acceptance Criteria |
|---|---|---|---|
| Perfluoro[13C4]Butanoic Acid (MPFBA) | 77 | | 58-132 |
| Perfluoro[13C5]Pentanoic Acid (M5PFPEA) | 76 | | 62-163 |
| Perfluoro[2,3,4-13C3]Butanesulfonic Acid (M3PFBS) | 73 | | 70-131 |
| Perfluoro[1,2,3,4,6-13C5]Hexanoic Acid (M5PFHxA) | 60 | | 57-129 |
| Perfluoro[1,2,3,4-13C4]Heptanoic Acid (M4PFHpA) | 67 | | 60-129 |
| Perfluoro[1,2,3-13C3]Hexanesulfonic Acid (M3PFHxS) | 80 | | 71-134 |
| Perfluoro[13C8]Octanoic Acid (M8PFOA) | 72 | | 62-129 |
| 1H,1H,2H,2H-Perfluoro[1,2-13C2]Octanesulfonic Acid (M2-6:2FTS) | 69 | | 14-147 |
| Perfluoro[13C9]Nonanoic Acid (M9PFNA) | 64 | | 59-139 |
| Perfluoro[13C8]Octanesulfonic Acid (M8PFOS) | **67** | Q | 69-131 |
| Perfluoro[1,2,3,4,5,6-13C6]Decanoic Acid (M6PFDA) | 65 | | 62-124 |
| 1H,1H,2H,2H-Perfluoro[1,2-13C2]Decanesulfonic Acid (M2-8:2FTS) | 65 | | 10-162 |
| N-Deuteriomethylperfluoro-1-octanesulfonamidoacetic Acid (d3-NMeFOSAA) | 37 | | 24-116 |
| Perfluoro[1,2,3,4,5,6,7-13C7]Undecanoic Acid (M7-PFUDA) | 63 | | 55-137 |
| Perfluoro[13C8]Octanesulfonamide (M8FOSA) | 19 | | 10-112 |
| N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA) | 49 | | 27-126 |
| Perfluoro[1,2-13C2]Dodecanoic Acid (MPFDOA) | 62 | | 48-131 |
| Perfluoro[1,2-13C2]Tetradecanoic Acid (M2PFTEDA) | 69 | | 22-136 |

**Project Name:** GROSSINGERS
**Project Number:** 9313
**Lab Number:** L2121570
**Report Date:** 05/12/21

## SAMPLE RESULTS

Lab ID: L2121570-03
Client ID: MW-207
Sample Location: LIBERTY, NY

Date Collected: 04/27/21 11:40
Date Received: 04/27/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 134,LCMSMS-ID
Analytical Date: 05/07/21 00:28
Analyst: MP

Extraction Method: ALPHA 23528
Extraction Date: 05/04/21 04:25

| Parameter | Result | Qualifier | Units | RL | MDL | Dilution Factor |
|---|---|---|---|---|---|---|
| **Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab** | | | | | | |
| Perfluorobutanoic Acid (PFBA) | 0.497 | J | ng/l | 2.14 | 0.437 | 1 |
| Perfluoropentanoic Acid (PFPeA) | 0.476 | J | ng/l | 2.14 | 0.424 | 1 |
| Perfluorobutanesulfonic Acid (PFBS) | 0.304 | J | ng/l | 2.14 | 0.255 | 1 |
| Perfluorohexanoic Acid (PFHxA) | 0.660 | J | ng/l | 2.14 | 0.352 | 1 |
| Perfluoroheptanoic Acid (PFHpA) | 0.506 | J | ng/l | 2.14 | 0.241 | 1 |
| Perfluorohexanesulfonic Acid (PFHxS) | 0.472 | J | ng/l | 2.14 | 0.403 | 1 |
| Perfluorooctanoic Acid (PFOA) | 2.20 | | ng/l | 2.14 | 0.253 | 1 |
| 1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS) | ND | | ng/l | 2.14 | 1.43 | 1 |
| Perfluoroheptanesulfonic Acid (PFHpS) | ND | | ng/l | 2.14 | 0.738 | 1 |
| Perfluorononanoic Acid (PFNA) | 0.467 | J | ng/l | 2.14 | 0.334 | 1 |
| Perfluorooctanesulfonic Acid (PFOS) | 8.36 | | ng/l | 2.14 | 0.540 | 1 |
| Perfluorodecanoic Acid (PFDA) | ND | | ng/l | 2.14 | 0.326 | 1 |
| 1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS) | ND | | ng/l | 2.14 | 1.30 | 1 |
| N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA) | ND | | ng/l | 2.14 | 0.695 | 1 |
| Perfluoroundecanoic Acid (PFUnA) | ND | | ng/l | 2.14 | 0.279 | 1 |
| Perfluorodecanesulfonic Acid (PFDS) | ND | | ng/l | 2.14 | 1.05 | 1 |
| Perfluorooctanesulfonamide (FOSA) | ND | | ng/l | 2.14 | 0.622 | 1 |
| N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA) | ND | | ng/l | 2.14 | 0.862 | 1 |
| Perfluorododecanoic Acid (PFDoA) | ND | | ng/l | 2.14 | 0.399 | 1 |
| Perfluorotridecanoic Acid (PFTrDA) | ND | | ng/l | 2.14 | 0.351 | 1 |
| Perfluorotetradecanoic Acid (PFTA) | ND | | ng/l | 2.14 | 0.266 | 1 |
| PFOA/PFOS, Total | 10.6 | | ng/l | 2.14 | 0.253 | 1 |

**Project Name:** GROSSINGERS **Lab Number:** L2121570

**Project Number:** 9313 **Report Date:** 05/12/21

## SAMPLE RESULTS

Lab ID: L2121570-03 Date Collected: 04/27/21 11:40

Client ID: MW-207 Date Received: 04/27/21

Sample Location: LIBERTY, NY Field Prep: Not Specified

Sample Depth:

| Parameter | Result | Qualifier | Units | RL | MDL | Dilution Factor |
|---|---|---|---|---|---|---|
| Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab | | | | | | |

| Surrogate (Extracted Internal Standard) | % Recovery | Qualifier | Acceptance Criteria |
|---|---|---|---|
| Perfluoro[13C4]Butanoic Acid (MPFBA) | 88 | | 58-132 |
| Perfluoro[13C5]Pentanoic Acid (M5PFPEA) | 90 | | 62-163 |
| Perfluoro[2,3,4-13C3]Butanesulfonic Acid (M3PFBS) | 87 | | 70-131 |
| Perfluoro[1,2,3,4,6-13C5]Hexanoic Acid (M5PFHxA) | 73 | | 57-129 |
| Perfluoro[1,2,3,4-13C4]Heptanoic Acid (M4PFHpA) | 83 | | 60-129 |
| Perfluoro[1,2,3-13C3]Hexanesulfonic Acid (M3PFHxS) | 96 | | 71-134 |
| Perfluoro[13C8]Octanoic Acid (M8PFOA) | 84 | | 62-129 |
| 1H,1H,2H,2H-Perfluoro[1,2-13C2]Octanesulfonic Acid (M2-6:2FTS) | 88 | | 14-147 |
| Perfluoro[13C9]Nonanoic Acid (M9PFNA) | 77 | | 59-139 |
| Perfluoro[13C8]Octanesulfonic Acid (M8PFOS) | 82 | | 69-131 |
| Perfluoro[1,2,3,4,5,6-13C6]Decanoic Acid (M6PFDA) | 75 | | 62-124 |
| 1H,1H,2H,2H-Perfluoro[1,2-13C2]Decanesulfonic Acid (M2-8:2FTS) | 90 | | 10-162 |
| N-Deuteriomethylperfluoro-1-octanesulfonamidoacetic Acid (d3-NMeFOSAA) | 53 | | 24-116 |
| Perfluoro[1,2,3,4,5,6,7-13C7]Undecanoic Acid (M7-PFUDA) | 75 | | 55-137 |
| Perfluoro[13C8]Octanesulfonamide (M8FOSA) | 10 | | 10-112 |
| N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA) | 63 | | 27-126 |
| Perfluoro[1,2-13C2]Dodecanoic Acid (MPFDOA) | 83 | | 48-131 |
| Perfluoro[1,2-13C2]Tetradecanoic Acid (M2PFTEDA) | 67 | | 22-136 |

**Project Name:** GROSSINGERS
**Project Number:** 9313
**Lab Number:** L2121570
**Report Date:** 05/12/21

## SAMPLE RESULTS

Lab ID: L2121570-04
Client ID: MW-206
Sample Location: LIBERTY, NY

Date Collected: 04/27/21 11:45
Date Received: 04/27/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 134,LCMSMS-ID
Analytical Date: 05/07/21 00:45
Analyst: MP

Extraction Method: ALPHA 23528
Extraction Date: 05/04/21 04:25

| Parameter | Result | Qualifier | Units | RL | MDL | Dilution Factor |
|---|---|---|---|---|---|---|
| **Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab** | | | | | | |
| Perfluorobutanoic Acid (PFBA) | 13.1 | | ng/l | 1.94 | 0.396 | 1 |
| Perfluoropentanoic Acid (PFPeA) | 4.20 | | ng/l | 1.94 | 0.384 | 1 |
| Perfluorobutanesulfonic Acid (PFBS) | 2.68 | | ng/l | 1.94 | 0.231 | 1 |
| Perfluorohexanoic Acid (PFHxA) | 5.80 | | ng/l | 1.94 | 0.318 | 1 |
| Perfluoroheptanoic Acid (PFHpA) | 6.84 | | ng/l | 1.94 | 0.219 | 1 |
| Perfluorohexanesulfonic Acid (PFHxS) | 4.42 | | ng/l | 1.94 | 0.365 | 1 |
| Perfluorooctanoic Acid (PFOA) | 26.0 | | ng/l | 1.94 | 0.229 | 1 |
| 1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS) | ND | | ng/l | 1.94 | 1.29 | 1 |
| Perfluoroheptanesulfonic Acid (PFHpS) | ND | | ng/l | 1.94 | 0.668 | 1 |
| Perfluorononanoic Acid (PFNA) | 1.01 | J | ng/l | 1.94 | 0.303 | 1 |
| Perfluorooctanesulfonic Acid (PFOS) | 30.9 | | ng/l | 1.94 | 0.489 | 1 |
| Perfluorodecanoic Acid (PFDA) | 0.307 | J | ng/l | 1.94 | 0.295 | 1 |
| 1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS) | ND | | ng/l | 1.94 | 1.18 | 1 |
| N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA) | ND | | ng/l | 1.94 | 0.629 | 1 |
| Perfluoroundecanoic Acid (PFUnA) | ND | | ng/l | 1.94 | 0.252 | 1 |
| Perfluorodecanesulfonic Acid (PFDS) | ND | | ng/l | 1.94 | 0.952 | 1 |
| Perfluorooctanesulfonamide (FOSA) | ND | | ng/l | 1.94 | 0.563 | 1 |
| N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA) | ND | | ng/l | 1.94 | 0.781 | 1 |
| Perfluorododecanoic Acid (PFDoA) | ND | | ng/l | 1.94 | 0.361 | 1 |
| Perfluorotridecanoic Acid (PFTrDA) | ND | | ng/l | 1.94 | 0.318 | 1 |
| Perfluorotetradecanoic Acid (PFTA) | ND | | ng/l | 1.94 | 0.241 | 1 |
| PFOA/PFOS, Total | 56.9 | | ng/l | 1.94 | 0.229 | 1 |

**Project Name:** GROSSINGERS **Lab Number:** L2121570

**Project Number:** 9313 **Report Date:** 05/12/21

## SAMPLE RESULTS

Lab ID: L2121570-04 Date Collected: 04/27/21 11:45

Client ID: MW-206 Date Received: 04/27/21

Sample Location: LIBERTY, NY Field Prep: Not Specified

Sample Depth:

| Parameter | Result | Qualifier | Units | RL | MDL | Dilution Factor |
|---|---|---|---|---|---|---|

Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab

| Surrogate (Extracted Internal Standard) | % Recovery | Qualifier | Acceptance Criteria |
|---|---|---|---|
| Perfluoro[13C4]Butanoic Acid (MPFBA) | 78 | | 58-132 |
| Perfluoro[13C5]Pentanoic Acid (M5PFPEA) | 78 | | 62-163 |
| Perfluoro[2,3,4-13C3]Butanesulfonic Acid (M3PFBS) | 74 | | 70-131 |
| Perfluoro[1,2,3,4,6-13C5]Hexanoic Acid (M5PFHxA) | 65 | | 57-129 |
| Perfluoro[1,2,3,4-13C4]Heptanoic Acid (M4PFHpA) | 74 | | 60-129 |
| Perfluoro[1,2,3-13C3]Hexanesulfonic Acid (M3PFHxS) | 83 | | 71-134 |
| Perfluoro[13C8]Octanoic Acid (M8PFOA) | 77 | | 62-129 |
| 1H,1H,2H,2H-Perfluoro[1,2-13C2]Octanesulfonic Acid (M2-6:2FTS) | 79 | | 14-147 |
| Perfluoro[13C9]Nonanoic Acid (M9PFNA) | 67 | | 59-139 |
| Perfluoro[13C8]Octanesulfonic Acid (M8PFOS) | 75 | | 69-131 |
| Perfluoro[1,2,3,4,5,6-13C6]Decanoic Acid (M6PFDA) | 70 | | 62-124 |
| 1H,1H,2H,2H-Perfluoro[1,2-13C2]Decanesulfonic Acid (M2-8:2FTS) | 78 | | 10-162 |
| N-Deuteriomethylperfluoro-1-octanesulfonamidoacetic Acid (d3-NMeFOSAA) | 52 | | 24-116 |
| Perfluoro[1,2,3,4,5,6,7-13C7]Undecanoic Acid (M7-PFUDA) | 68 | | 55-137 |
| Perfluoro[13C8]Octanesulfonamide (M8FOSA) | 12 | | 10-112 |
| N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA) | 64 | | 27-126 |
| Perfluoro[1,2-13C2]Dodecanoic Acid (MPFDOA) | 73 | | 48-131 |
| Perfluoro[1,2-13C2]Tetradecanoic Acid (M2PFTEDA) | 74 | | 22-136 |

**Project Name:** GROSSINGERS
**Project Number:** 9313
**Lab Number:** L2121570
**Report Date:** 05/12/21

## SAMPLE RESULTS

Lab ID: L2121570-05
Client ID: MW-204
Sample Location: LIBERTY, NY

Date Collected: 04/27/21 13:35
Date Received: 04/27/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 134,LCMSMS-ID
Analytical Date: 05/07/21 01:01
Analyst: MP

Extraction Method: ALPHA 23528
Extraction Date: 05/04/21 04:25

| Parameter | Result | Qualifier | Units | RL | MDL | Dilution Factor |
|---|---|---|---|---|---|---|
| **Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab** | | | | | | |
| Perfluorobutanoic Acid (PFBA) | 0.724 | J | ng/l | 1.93 | 0.393 | 1 |
| Perfluoropentanoic Acid (PFPeA) | 0.701 | J | ng/l | 1.93 | 0.381 | 1 |
| Perfluorobutanesulfonic Acid (PFBS) | ND | | ng/l | 1.93 | 0.229 | 1 |
| Perfluorohexanoic Acid (PFHxA) | 0.744 | J | ng/l | 1.93 | 0.316 | 1 |
| Perfluoroheptanoic Acid (PFHpA) | 0.389 | J | ng/l | 1.93 | 0.217 | 1 |
| Perfluorohexanesulfonic Acid (PFHxS) | ND | | ng/l | 1.93 | 0.362 | 1 |
| Perfluorooctanoic Acid (PFOA) | 1.53 | J | ng/l | 1.93 | 0.227 | 1 |
| 1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS) | ND | | ng/l | 1.93 | 1.28 | 1 |
| Perfluoroheptanesulfonic Acid (PFHpS) | ND | | ng/l | 1.93 | 0.663 | 1 |
| Perfluorononanoic Acid (PFNA) | ND | | ng/l | 1.93 | 0.300 | 1 |
| Perfluorooctanesulfonic Acid (PFOS) | 4.41 | | ng/l | 1.93 | 0.485 | 1 |
| Perfluorodecanoic Acid (PFDA) | ND | | ng/l | 1.93 | 0.293 | 1 |
| 1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS) | ND | | ng/l | 1.93 | 1.17 | 1 |
| N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA) | ND | | ng/l | 1.93 | 0.624 | 1 |
| Perfluoroundecanoic Acid (PFUnA) | ND | | ng/l | 1.93 | 0.250 | 1 |
| Perfluorodecanesulfonic Acid (PFDS) | ND | | ng/l | 1.93 | 0.944 | 1 |
| N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA) | ND | | ng/l | 1.93 | 0.774 | 1 |
| Perfluorododecanoic Acid (PFDoA) | ND | | ng/l | 1.93 | 0.358 | 1 |
| Perfluorotridecanoic Acid (PFTrDA) | ND | | ng/l | 1.93 | 0.315 | 1 |
| Perfluorotetradecanoic Acid (PFTA) | ND | | ng/l | 1.93 | 0.239 | 1 |
| PFOA/PFOS, Total | 5.94 | J | ng/l | 1.93 | 0.227 | 1 |

**Project Name:** GROSSINGERS **Lab Number:** L2121570

**Project Number:** 9313 **Report Date:** 05/12/21

**SAMPLE RESULTS**

Lab ID: L2121570-05 Date Collected: 04/27/21 13:35

Client ID: MW-204 Date Received: 04/27/21

Sample Location: LIBERTY, NY Field Prep: Not Specified

Sample Depth:

| Parameter | Result | Qualifier | Units | RL | MDL | Dilution Factor |
|---|---|---|---|---|---|---|
| Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab | | | | | | |

| Surrogate (Extracted Internal Standard) | % Recovery | Qualifier | Acceptance Criteria |
|---|---|---|---|
| Perfluoro[13C4]Butanoic Acid (MPFBA) | 71 | | 58-132 |
| Perfluoro[13C5]Pentanoic Acid (M5PFPEA) | 72 | | 62-163 |
| Perfluoro[2,3,4-13C3]Butanesulfonic Acid (M3PFBS) | 90 | | 70-131 |
| Perfluoro[1,2,3,4,6-13C5]Hexanoic Acid (M5PFHxA) | 60 | | 57-129 |
| Perfluoro[1,2,3,4-13C4]Heptanoic Acid (M4PFHpA) | 68 | | 60-129 |
| Perfluoro[1,2,3-13C3]Hexanesulfonic Acid (M3PFHxS) | 97 | | 71-134 |
| Perfluoro[13C8]Octanoic Acid (M8PFOA) | 70 | | 62-129 |
| 1H,1H,2H,2H-Perfluoro[1,2-13C2]Octanesulfonic Acid (M2-6:2FTS) | 90 | | 14-147 |
| Perfluoro[13C9]Nonanoic Acid (M9PFNA) | 64 | | 59-139 |
| Perfluoro[13C8]Octanesulfonic Acid (M8PFOS) | 86 | | 69-131 |
| Perfluoro[1,2,3,4,5,6-13C6]Decanoic Acid (M6PFDA) | 69 | | 62-124 |
| 1H,1H,2H,2H-Perfluoro[1,2-13C2]Decanesulfonic Acid (M2-8:2FTS) | 94 | | 10-162 |
| N-Deuteriomethylperfluoro-1-octanesulfonamidoacetic Acid (d3-NMeFOSAA) | 42 | | 24-116 |
| Perfluoro[1,2,3,4,5,6,7-13C7]Undecanoic Acid (M7-PFUDA) | 73 | | 55-137 |
| N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA) | 49 | | 27-126 |
| Perfluoro[1,2-13C2]Dodecanoic Acid (MPFDOA) | 73 | | 48-131 |
| Perfluoro[1,2-13C2]Tetradecanoic Acid (M2PFTEDA) | 91 | | 22-136 |

**Project Name:** GROSSINGERS
**Project Number:** 9313
**Lab Number:** L2121570
**Report Date:** 05/12/21

## SAMPLE RESULTS

Lab ID: L2121570-05
Client ID: MW-204
Sample Location: LIBERTY, NY

Date Collected: 04/27/21 13:35
Date Received: 04/27/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 134,LCMSMS-ID
Analytical Date: 05/10/21 22:16
Analyst: HT

Extraction Method: ALPHA 23528
Extraction Date: 05/04/21 04:25

| Parameter | Result | Qualifier | Units | RL | MDL | Dilution Factor |
|---|---|---|---|---|---|---|
| **Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab** | | | | | | |
| Perfluorooctanesulfonamide (FOSA) | ND | | ng/l | 1.93 | 0.559 | 1 |

| Surrogate (Extracted Internal Standard) | % Recovery | Qualifier | Acceptance Criteria |
|---|---|---|---|
| Perfluoro[13C8]Octanesulfonamide (M8FOSA) | 72 | | 10-112 |

**Project Name:** GROSSINGERS
**Project Number:** 9313
**Lab Number:** L2121570
**Report Date:** 05/12/21

## SAMPLE RESULTS

Lab ID: L2121570-06
Client ID: MW-205
Sample Location: LIBERTY, NY

Date Collected: 04/27/21 13:40
Date Received: 04/27/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 134,LCMSMS-ID
Analytical Date: 05/07/21 01:18
Analyst: MP

Extraction Method: ALPHA 23528
Extraction Date: 05/04/21 04:25

| Parameter | Result | Qualifier | Units | RL | MDL | Dilution Factor |
|---|---|---|---|---|---|---|
| **Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab** | | | | | | |
| Perfluorobutanoic Acid (PFBA) | ND | | ng/l | 1.87 | 0.381 | 1 |
| Perfluoropentanoic Acid (PFPeA) | ND | | ng/l | 1.87 | 0.370 | 1 |
| Perfluorobutanesulfonic Acid (PFBS) | ND | | ng/l | 1.87 | 0.222 | 1 |
| Perfluorohexanoic Acid (PFHxA) | 0.478 | J | ng/l | 1.87 | 0.306 | 1 |
| Perfluoroheptanoic Acid (PFHpA) | ND | | ng/l | 1.87 | 0.210 | 1 |
| Perfluorohexanesulfonic Acid (PFHxS) | ND | | ng/l | 1.87 | 0.351 | 1 |
| Perfluorooctanoic Acid (PFOA) | 0.620 | J | ng/l | 1.87 | 0.220 | 1 |
| 1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS) | ND | | ng/l | 1.87 | 1.24 | 1 |
| Perfluoroheptanesulfonic Acid (PFHpS) | ND | | ng/l | 1.87 | 0.643 | 1 |
| Perfluorononanoic Acid (PFNA) | ND | | ng/l | 1.87 | 0.291 | 1 |
| Perfluorooctanesulfonic Acid (PFOS) | 0.583 | J | ng/l | 1.87 | 0.471 | 1 |
| Perfluorodecanoic Acid (PFDA) | ND | | ng/l | 1.87 | 0.284 | 1 |
| 1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS) | ND | | ng/l | 1.87 | 1.13 | 1 |
| N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA) | ND | | ng/l | 1.87 | 0.605 | 1 |
| Perfluoroundecanoic Acid (PFUnA) | ND | | ng/l | 1.87 | 0.243 | 1 |
| Perfluorodecanesulfonic Acid (PFDS) | ND | | ng/l | 1.87 | 0.915 | 1 |
| N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA) | ND | | ng/l | 1.87 | 0.751 | 1 |
| Perfluorododecanoic Acid (PFDoA) | ND | | ng/l | 1.87 | 0.348 | 1 |
| Perfluorotridecanoic Acid (PFTrDA) | ND | | ng/l | 1.87 | 0.306 | 1 |
| Perfluorotetradecanoic Acid (PFTA) | ND | | ng/l | 1.87 | 0.232 | 1 |
| PFOA/PFOS, Total | 1.20 | J | ng/l | 1.87 | 0.220 | 1 |

**Project Name:** GROSSINGERS **Lab Number:** L2121570

**Project Number:** 9313 **Report Date:** 05/12/21

**SAMPLE RESULTS**

Lab ID: L2121570-06 Date Collected: 04/27/21 13:40

Client ID: MW-205 Date Received: 04/27/21

Sample Location: LIBERTY, NY Field Prep: Not Specified

Sample Depth:

| Parameter | Result | Qualifier | Units | RL | MDL | Dilution Factor |
|---|---|---|---|---|---|---|

Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab

| Surrogate (Extracted Internal Standard) | % Recovery | Qualifier | Acceptance Criteria |
|---|---|---|---|
| Perfluoro[13C4]Butanoic Acid (MPFBA) | 72 | | 58-132 |
| Perfluoro[13C5]Pentanoic Acid (M5PFPEA) | 73 | | 62-163 |
| Perfluoro[2,3,4-13C3]Butanesulfonic Acid (M3PFBS) | 91 | | 70-131 |
| Perfluoro[1,2,3,4,6-13C5]Hexanoic Acid (M5PFHxA) | 60 | | 57-129 |
| Perfluoro[1,2,3,4-13C4]Heptanoic Acid (M4PFHpA) | 69 | | 60-129 |
| Perfluoro[1,2,3-13C3]Hexanesulfonic Acid (M3PFHxS) | 100 | | 71-134 |
| Perfluoro[13C8]Octanoic Acid (M8PFOA) | 70 | | 62-129 |
| 1H,1H,2H,2H-Perfluoro[1,2-13C2]Octanesulfonic Acid (M2-6:2FTS) | 81 | | 14-147 |
| Perfluoro[13C9]Nonanoic Acid (M9PFNA) | 67 | | 59-139 |
| Perfluoro[13C8]Octanesulfonic Acid (M8PFOS) | 90 | | 69-131 |
| Perfluoro[1,2,3,4,5,6-13C6]Decanoic Acid (M6PFDA) | 70 | | 62-124 |
| 1H,1H,2H,2H-Perfluoro[1,2-13C2]Decanesulfonic Acid (M2-8:2FTS) | 96 | | 10-162 |
| N-Deuteriomethylperfluoro-1-octanesulfonamidoacetic Acid (d3-NMeFOSAA) | 48 | | 24-116 |
| Perfluoro[1,2,3,4,5,6,7-13C7]Undecanoic Acid (M7-PFUDA) | 75 | | 55-137 |
| N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA) | 57 | | 27-126 |
| Perfluoro[1,2-13C2]Dodecanoic Acid (MPFDOA) | 81 | | 48-131 |
| Perfluoro[1,2-13C2]Tetradecanoic Acid (M2PFTEDA) | 91 | | 22-136 |

**Project Name:** GROSSINGERS
**Project Number:** 9313
**Lab Number:** L2121570
**Report Date:** 05/12/21

## SAMPLE RESULTS

Lab ID: L2121570-06
Client ID: MW-205
Sample Location: LIBERTY, NY

Date Collected: 04/27/21 13:40
Date Received: 04/27/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 134,LCMSMS-ID
Analytical Date: 05/12/21 00:24
Analyst: HT

Extraction Method: ALPHA 23528
Extraction Date: 05/04/21 04:25

| Parameter | Result | Qualifier | Units | RL | MDL | Dilution Factor |
|---|---|---|---|---|---|---|
| **Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab** | | | | | | |
| Perfluorooctanesulfonamide (FOSA) | ND | | ng/l | 1.87 | 0.542 | 1 |

| Surrogate (Extracted Internal Standard) | % Recovery | Qualifier | Acceptance Criteria |
|---|---|---|---|
| Perfluoro[13C8]Octanesulfonamide (M8FOSA) | 74 | | 10-112 |

**Project Name:** GROSSINGERS
**Project Number:** 9313
**Lab Number:** L2121570
**Report Date:** 05/12/21

## SAMPLE RESULTS

Lab ID: L2121570-07
Client ID: DUP
Sample Location: LIBERTY, NY

Date Collected: 04/27/21 12:00
Date Received: 04/27/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 134,LCMSMS-ID
Analytical Date: 05/07/21 01:34
Analyst: MP

Extraction Method: ALPHA 23528
Extraction Date: 05/04/21 04:25

| Parameter | Result | Qualifier | Units | RL | MDL | Dilution Factor |
|---|---|---|---|---|---|---|
| **Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab** | | | | | | |
| Perfluorobutanoic Acid (PFBA) | 11.3 | | ng/l | 2.01 | 0.410 | 1 |
| Perfluoropentanoic Acid (PFPeA) | 8.30 | | ng/l | 2.01 | 0.398 | 1 |
| Perfluorobutanesulfonic Acid (PFBS) | 2.91 | | ng/l | 2.01 | 0.239 | 1 |
| Perfluorohexanoic Acid (PFHxA) | 9.39 | | ng/l | 2.01 | 0.330 | 1 |
| Perfluoroheptanoic Acid (PFHpA) | 6.90 | | ng/l | 2.01 | 0.226 | 1 |
| Perfluorohexanesulfonic Acid (PFHxS) | 6.45 | | ng/l | 2.01 | 0.378 | 1 |
| Perfluorooctanoic Acid (PFOA) | 28.5 | | ng/l | 2.01 | 0.237 | 1 |
| 1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS) | ND | | ng/l | 2.01 | 1.34 | 1 |
| Perfluoroheptanesulfonic Acid (PFHpS) | 1.31 | J | ng/l | 2.01 | 0.692 | 1 |
| Perfluorononanoic Acid (PFNA) | 2.54 | | ng/l | 2.01 | 0.314 | 1 |
| Perfluorooctanesulfonic Acid (PFOS) | 69.5 | | ng/l | 2.01 | 0.507 | 1 |
| Perfluorodecanoic Acid (PFDA) | 1.49 | J | ng/l | 2.01 | 0.306 | 1 |
| 1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS) | ND | | ng/l | 2.01 | 1.22 | 1 |
| N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA) | ND | | ng/l | 2.01 | 0.652 | 1 |
| Perfluoroundecanoic Acid (PFUnA) | ND | | ng/l | 2.01 | 0.261 | 1 |
| Perfluorodecanesulfonic Acid (PFDS) | ND | | ng/l | 2.01 | 0.985 | 1 |
| Perfluorooctanesulfonamide (FOSA) | 0.869 | JF | ng/l | 2.01 | 0.583 | 1 |
| N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA) | ND | | ng/l | 2.01 | 0.808 | 1 |
| Perfluorododecanoic Acid (PFDoA) | ND | | ng/l | 2.01 | 0.374 | 1 |
| Perfluorotridecanoic Acid (PFTrDA) | ND | | ng/l | 2.01 | 0.329 | 1 |
| Perfluorotetradecanoic Acid (PFTA) | ND | | ng/l | 2.01 | 0.249 | 1 |
| PFOA/PFOS, Total | 98.0 | | ng/l | 2.01 | 0.237 | 1 |

**Project Name:** GROSSINGERS **Lab Number:** L2121570

**Project Number:** 9313 **Report Date:** 05/12/21

## SAMPLE RESULTS

Lab ID: L2121570-07 Date Collected: 04/27/21 12:00

Client ID: DUP Date Received: 04/27/21

Sample Location: LIBERTY, NY Field Prep: Not Specified

Sample Depth:

| Parameter | Result | Qualifier | Units | RL | MDL | Dilution Factor |
|---|---|---|---|---|---|---|
| Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab | | | | | | |

| Surrogate (Extracted Internal Standard) | % Recovery | Qualifier | Acceptance Criteria |
|---|---|---|---|
| Perfluoro[13C4]Butanoic Acid (MPFBA) | 81 | | 58-132 |
| Perfluoro[13C5]Pentanoic Acid (M5PFPEA) | 77 | | 62-163 |
| Perfluoro[2,3,4-13C3]Butanesulfonic Acid (M3PFBS) | 78 | | 70-131 |
| Perfluoro[1,2,3,4,6-13C5]Hexanoic Acid (M5PFHxA) | 65 | | 57-129 |
| Perfluoro[1,2,3,4-13C4]Heptanoic Acid (M4PFHpA) | 74 | | 60-129 |
| Perfluoro[1,2,3-13C3]Hexanesulfonic Acid (M3PFHxS) | 85 | | 71-134 |
| Perfluoro[13C8]Octanoic Acid (M8PFOA) | 76 | | 62-129 |
| 1H,1H,2H,2H-Perfluoro[1,2-13C2]Octanesulfonic Acid (M2-6:2FTS) | 95 | | 14-147 |
| Perfluoro[13C9]Nonanoic Acid (M9PFNA) | 69 | | 59-139 |
| Perfluoro[13C8]Octanesulfonic Acid (M8PFOS) | 72 | | 69-131 |
| Perfluoro[1,2,3,4,5,6-13C6]Decanoic Acid (M6PFDA) | 67 | | 62-124 |
| 1H,1H,2H,2H-Perfluoro[1,2-13C2]Decanesulfonic Acid (M2-8:2FTS) | 79 | | 10-162 |
| N-Deuteriomethylperfluoro-1-octanesulfonamidoacetic Acid (d3-NMeFOSAA) | 45 | | 24-116 |
| Perfluoro[1,2,3,4,5,6,7-13C7]Undecanoic Acid (M7-PFUDA) | 67 | | 55-137 |
| Perfluoro[13C8]Octanesulfonamide (M8FOSA) | 10 | | 10-112 |
| N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA) | 56 | | 27-126 |
| Perfluoro[1,2-13C2]Dodecanoic Acid (MPFDOA) | 65 | | 48-131 |
| Perfluoro[1,2-13C2]Tetradecanoic Acid (M2PFTEDA) | 62 | | 22-136 |

**Project Name:** GROSSINGERS
**Project Number:** 9313

**Lab Number:** L2121570
**Report Date:** 05/12/21

# Method Blank Analysis
## Batch Quality Control

Analytical Method: 134,LCMSMS-ID
Analytical Date: 05/04/21 13:45
Analyst: RS

Extraction Method: ALPHA 23528
Extraction Date: 05/04/21 04:25

| Parameter | Result | Qualifier | Units | RL | MDL |
|---|---|---|---|---|---|
| Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab for sample(s): 01-07 Batch: WG1493960-1 | | | | | |
| Perfluorobutanoic Acid (PFBA) | ND | | ng/l | 2.00 | 0.408 |
| Perfluoropentanoic Acid (PFPeA) | ND | | ng/l | 2.00 | 0.396 |
| Perfluorobutanesulfonic Acid (PFBS) | ND | | ng/l | 2.00 | 0.238 |
| Perfluorohexanoic Acid (PFHxA) | 0.432 | J | ng/l | 2.00 | 0.328 |
| Perfluoroheptanoic Acid (PFHpA) | ND | | ng/l | 2.00 | 0.225 |
| Perfluorohexanesulfonic Acid (PFHxS) | ND | | ng/l | 2.00 | 0.376 |
| Perfluorooctanoic Acid (PFOA) | ND | | ng/l | 2.00 | 0.236 |
| 1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS) | ND | | ng/l | 2.00 | 1.33 |
| Perfluoroheptanesulfonic Acid (PFHpS) | ND | | ng/l | 2.00 | 0.688 |
| Perfluorononanoic Acid (PFNA) | ND | | ng/l | 2.00 | 0.312 |
| Perfluorooctanesulfonic Acid (PFOS) | ND | | ng/l | 2.00 | 0.504 |
| Perfluorodecanoic Acid (PFDA) | ND | | ng/l | 2.00 | 0.304 |
| 1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS) | ND | | ng/l | 2.00 | 1.21 |
| N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA) | ND | | ng/l | 2.00 | 0.648 |
| Perfluoroundecanoic Acid (PFUnA) | ND | | ng/l | 2.00 | 0.260 |
| Perfluorodecanesulfonic Acid (PFDS) | ND | | ng/l | 2.00 | 0.980 |
| Perfluorooctanesulfonamide (FOSA) | ND | | ng/l | 2.00 | 0.580 |
| N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA) | ND | | ng/l | 2.00 | 0.804 |
| Perfluorododecanoic Acid (PFDoA) | ND | | ng/l | 2.00 | 0.372 |
| Perfluorotridecanoic Acid (PFTrDA) | ND | | ng/l | 2.00 | 0.327 |
| Perfluorotetradecanoic Acid (PFTA) | ND | | ng/l | 2.00 | 0.248 |
| PFOA/PFOS, Total | ND | | ng/l | 2.00 | 0.236 |

**Project Name:** GROSSINGERS
**Project Number:** 9313
**Lab Number:** L2121570
**Report Date:** 05/12/21

# Method Blank Analysis
## Batch Quality Control

Analytical Method: 134,LCMSMS-ID
Analytical Date: 05/04/21 13:45
Analyst: RS

Extraction Method: ALPHA 23528
Extraction Date: 05/04/21 04:25

| Parameter | Result | Qualifier | Units | RL | MDL |
|---|---|---|---|---|---|
| Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab for sample(s): 01-07 Batch: WG1493960-1 | | | | | |

| Surrogate (Extracted Internal Standard) | %Recovery | Qualifier | Acceptance Criteria |
|---|---|---|---|
| Perfluoro[13C4]Butanoic Acid (MPFBA) | 86 | | 58-132 |
| Perfluoro[13C5]Pentanoic Acid (M5PFPEA) | 94 | | 62-163 |
| Perfluoro[2,3,4-13C3]Butanesulfonic Acid (M3PFBS) | 85 | | 70-131 |
| Perfluoro[1,2,3,4,6-13C5]Hexanoic Acid (M5PFHxA) | 71 | | 57-129 |
| Perfluoro[1,2,3,4-13C4]Heptanoic Acid (M4PFHpA) | 79 | | 60-129 |
| Perfluoro[1,2,3-13C3]Hexanesulfonic Acid (M3PFHxS) | 89 | | 71-134 |
| Perfluoro[13C8]Octanoic Acid (M8PFOA) | 81 | | 62-129 |
| 1H,1H,2H,2H-Perfluoro[1,2-13C2]Octanesulfonic Acid (M2-6:2FTS) | 54 | | 14-147 |
| Perfluoro[13C9]Nonanoic Acid (M9PFNA) | 76 | | 59-139 |
| Perfluoro[13C8]Octanesulfonic Acid (M8PFOS) | 86 | | 69-131 |
| Perfluoro[1,2,3,4,5,6-13C6]Decanoic Acid (M6PFDA) | 83 | | 62-124 |
| 1H,1H,2H,2H-Perfluoro[1,2-13C2]Decanesulfonic Acid (M2-8:2FTS) | 75 | | 10-162 |
| N-Deuteriomethylperfluoro-1-octanesulfonamidoacetic Acid (d3-NMeFOSAA) | 57 | | 24-116 |
| Perfluoro[1,2,3,4,5,6,7-13C7]Undecanoic Acid (M7-PFUDA) | 88 | | 55-137 |
| Perfluoro[13C8]Octanesulfonamide (M8FOSA) | 25 | | 10-112 |
| N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA) | 77 | | 27-126 |
| Perfluoro[1,2-13C2]Dodecanoic Acid (MPFDOA) | 90 | | 48-131 |
| Perfluoro[1,2-13C2]Tetradecanoic Acid (M2PFTEDA) | 96 | | 22-136 |

**Project Name:** GROSSINGERS
**Project Number:** 9313

**Lab Number:** L2121570
**Report Date:** 05/12/21

# Method Blank Analysis
## Batch Quality Control

Analytical Method: 134,LCMSMS-ID
Analytical Date: 05/05/21 13:34
Analyst: RS

Extraction Method: ALPHA 23528
Extraction Date: 05/04/21 04:25

| Parameter | Result | Qualifier | Units | RL | MDL |
|---|---|---|---|---|---|
| Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab for sample(s): 01-07 Batch: WG1493960-1 | | | | | |
| Perfluorooctanesulfonamide (FOSA) | ND | | ng/l | 2.00 | 0.580 |

| Surrogate (Extracted Internal Standard) | %Recovery | Qualifier | Acceptance Criteria |
|---|---|---|---|
| Perfluoro[13C8]Octanesulfonamide (M8FOSA) | 92 | | 10-112 |

# Lab Control Sample Analysis
## Batch Quality Control

**Project Name:** GROSSINGERS
**Project Number:** 9313
**Lab Number:** L2121570
**Report Date:** 05/12/21

| Parameter | LCS %Recovery | Qual | LCSD %Recovery | Qual | %Recovery Limits | RPD | Qual | RPD Limits |
|---|---|---|---|---|---|---|---|---|
| Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab Associated sample(s): 01-07 Batch: WG1493960-2 | | | | | | | | |
| Perfluorobutanoic Acid (PFBA) | 101 | | - | | 67-148 | - | | 30 |
| Perfluoropentanoic Acid (PFPeA) | 107 | | - | | 63-161 | - | | 30 |
| Perfluorobutanesulfonic Acid (PFBS) | 97 | | - | | 65-157 | - | | 30 |
| Perfluorohexanoic Acid (PFHxA) | 103 | | - | | 69-168 | - | | 30 |
| Perfluoroheptanoic Acid (PFHpA) | 99 | | - | | 58-159 | - | | 30 |
| Perfluorohexanesulfonic Acid (PFHxS) | 96 | | - | | 69-177 | - | | 30 |
| Perfluorooctanoic Acid (PFOA) | 104 | | - | | 63-159 | - | | 30 |
| 1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS) | 113 | | - | | 49-187 | - | | 30 |
| Perfluoroheptanesulfonic Acid (PFHpS) | 103 | | - | | 61-179 | - | | 30 |
| Perfluorononanoic Acid (PFNA) | 117 | | - | | 68-171 | - | | 30 |
| Perfluorooctanesulfonic Acid (PFOS) | 107 | | - | | 52-151 | - | | 30 |
| Perfluorodecanoic Acid (PFDA) | 103 | | - | | 63-171 | - | | 30 |
| 1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS) | 108 | | - | | 56-173 | - | | 30 |
| N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA) | 109 | | - | | 60-166 | - | | 30 |
| Perfluoroundecanoic Acid (PFUnA) | 113 | | - | | 60-153 | - | | 30 |
| Perfluorodecanesulfonic Acid (PFDS) | 99 | | - | | 38-156 | - | | 30 |
| Perfluorooctanesulfonamide (FOSA) | 97 | | - | | 46-170 | - | | 30 |
| N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA) | 97 | | - | | 45-170 | - | | 30 |
| Perfluorododecanoic Acid (PFDoA) | 104 | | - | | 67-153 | - | | 30 |
| Perfluorotridecanoic Acid (PFTrDA) | 130 | | - | | 48-158 | - | | 30 |
| Perfluorotetradecanoic Acid (PFTA) | 115 | | - | | 59-182 | - | | 30 |

# Lab Control Sample Analysis

## Batch Quality Control

**Project Name:** GROSSINGERS

**Project Number:** 9313

**Lab Number:** L2121570

**Report Date:** 05/12/21

| Parameter | LCS %Recovery | Qual | LCSD %Recovery | Qual | %Recovery Limits | RPD | Qual | RPD Limits |
|---|---|---|---|---|---|---|---|---|
| Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab Associated sample(s): 01-07 Batch: WG1493960-2 | | | | | | | | |

| Surrogate (Extracted Internal Standard) | LCS %Recovery | Qual | LCSD %Recovery | Qual | Acceptance Criteria |
|---|---|---|---|---|---|
| Perfluoro[13C4]Butanoic Acid (MPFBA) | 84 | | | | 58-132 |
| Perfluoro[13C5]Pentanoic Acid (M5PFPEA) | 91 | | | | 62-163 |
| Perfluoro[2,3,4-13C3]Butanesulfonic Acid (M3PFBS) | 85 | | | | 70-131 |
| Perfluoro[1,2,3,4,6-13C5]Hexanoic Acid (M5PFHxA) | 70 | | | | 57-129 |
| Perfluoro[1,2,3,4-13C4]Heptanoic Acid (M4PFHpA) | 77 | | | | 60-129 |
| Perfluoro[1,2,3-13C3]Hexanesulfonic Acid (M3PFHxS) | 88 | | | | 71-134 |
| Perfluoro[13C8]Octanoic Acid (M8PFOA) | 79 | | | | 62-129 |
| 1H,1H,2H,2H-Perfluoro[1,2-13C2]Octanesulfonic Acid (M2-6:2FTS) | 57 | | | | 14-147 |
| Perfluoro[13C9]Nonanoic Acid (M9PFNA) | 71 | | | | 59-139 |
| Perfluoro[13C8]Octanesulfonic Acid (M8PFOS) | 82 | | | | 69-131 |
| Perfluoro[1,2,3,4,5,6-13C6]Decanoic Acid (M6PFDA) | 82 | | | | 62-124 |
| 1H,1H,2H,2H-Perfluoro[1,2-13C2]Decanesulfonic Acid (M2-8:2FTS) | 76 | | | | 10-162 |
| N-Deuteriomethylperfluoro-1-octanesulfonamidoacetic Acid (d3-NMeFOSAA) | 59 | | | | 24-116 |
| Perfluoro[1,2,3,4,5,6,7-13C7]Undecanoic Acid (M7-PFUDA) | 84 | | | | 55-137 |
| Perfluoro[13C8]Octanesulfonamide (M8FOSA) | 25 | | | | 10-112 |
| N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA) | 73 | | | | 27-126 |
| Perfluoro[1,2-13C2]Dodecanoic Acid (MPFDOA) | 93 | | | | 48-131 |
| Perfluoro[1,2-13C2]Tetradecanoic Acid (M2PFTEDA) | 86 | | | | 22-136 |

# Lab Control Sample Analysis

## Batch Quality Control

**Project Name:** GROSSINGERS

**Project Number:** 9313

**Lab Number:** L2121570

**Report Date:** 05/12/21

| Parameter | LCS %Recovery | Qual | LCSD %Recovery | Qual | %Recovery Limits | RPD | Qual | RPD Limits |
|---|---|---|---|---|---|---|---|---|
| Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab | Associated sample(s): 01-07 | | Batch: WG1493960-2 | | | | | |
| Perfluorooctanesulfonamide (FOSA) | 93 | | - | | 46-170 | - | | 30 |

| Surrogate (Extracted Internal Standard) | LCS %Recovery | Qual | LCSD %Recovery | Qual | Acceptance Criteria |
|---|---|---|---|---|---|
| Perfluoro[13C8]Octanesulfonamide (M8FOSA) | 89 | | | | 10-112 |

# Matrix Spike Analysis

## *Batch Quality Control*

**Project Name:** GROSSINGERS

**Project Number:** 9313

**Lab Number:** L2121570

**Report Date:** 05/12/21

| Parameter | Native Sample | MS Added | MS Found | MS %Recovery | Qual | MSD Found | MSD %Recovery | Qual | Recovery Limits | RPD | Qual | RPD Limits |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab Associated sample(s): 01-07 QC Batch ID: WG1493960-3 QC Sample: L2121570-01 Client ID: MW-214 | | | | | | | | | | | | |
| Perfluorobutanoic Acid (PFBA) | 10.1 | 42 | 50.4 | 96 | | - | - | | 67-148 | - | | 30 |
| Perfluoropentanoic Acid (PFPeA) | 6.97F | 42 | 48.8 | 100 | | - | - | | 63-161 | - | | 30 |
| Perfluorobutanesulfonic Acid (PFBS) | 3.02 | 37.2 | 37.5 | 92 | | - | - | | 65-157 | - | | 30 |
| Perfluorohexanoic Acid (PFHxA) | 9.42 | 42 | 50.8 | 99 | | - | - | | 69-168 | - | | 30 |
| Perfluoroheptanoic Acid (PFHpA) | 6.64 | 42 | 47.1 | 96 | | - | - | | 58-159 | - | | 30 |
| Perfluorohexanesulfonic Acid (PFHxS) | 6.66 | 38.3 | 42.8 | 94 | | - | - | | 69-177 | - | | 30 |
| Perfluorooctanoic Acid (PFOA) | 29.5 | 42 | 72.4 | 102 | | - | - | | 63-159 | - | | 30 |
| 1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS) | ND | 39.9 | 44.4 | 111 | | - | - | | 49-187 | - | | 30 |
| Perfluoroheptanesulfonic Acid (PFHpS) | 1.35J | 39.9 | 45.6 | 111 | | - | - | | 61-179 | - | | 30 |
| Perfluorononanoic Acid (PFNA) | 1.29J | 42 | 44.7 | 103 | | - | - | | 68-171 | - | | 30 |
| Perfluorooctanesulfonic Acid (PFOS) | 40.3 | 38.9 | 82.1 | 107 | | - | - | | 52-151 | - | | 30 |
| Perfluorodecanoic Acid (PFDA) | 0.631JF | 42 | 41.6 | 98 | | - | - | | 63-171 | - | | 30 |
| 1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS) | ND | 40.3 | 44.5 | 110 | | - | - | | 56-173 | - | | 30 |
| N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA) | ND | 42 | 44.9 | 107 | | - | - | | 60-166 | - | | 30 |
| Perfluoroundecanoic Acid (PFUnA) | ND | 42 | 43.1 | 103 | | - | - | | 60-153 | - | | 30 |
| Perfluorodecanesulfonic Acid (PFDS) | ND | 40.4 | 31.7 | 78 | | - | - | | 38-156 | - | | 30 |
| Perfluorooctanesulfonamide (FOSA) | 0.800JF | 42 | 40.4F | 94 | | - | - | | 46-170 | - | | 30 |
| N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA) | ND | 42 | 42.6 | 102 | | - | - | | 45-170 | - | | 30 |
| Perfluorododecanoic Acid (PFDoA) | ND | 42 | 40.7 | 97 | | - | - | | 67-153 | - | | 30 |
| Perfluorotridecanoic Acid (PFTrDA) | ND | 42 | 51.0 | 122 | | - | - | | 48-158 | - | | 30 |
| Perfluorotetradecanoic Acid (PFTA) | ND | 42 | 44.2 | 105 | | - | - | | 59-182 | - | | 30 |

# Matrix Spike Analysis

***Batch Quality Control***

***Project Name:*** GROSSINGERS

***Project Number:*** 9313

***Lab Number:*** L2121570

***Report Date:*** 05/12/21

| *Parameter* | *Native Sample* | *MS Added* | *MS Found* | *MS %Recovery* | *Qual* | *MSD Found* | *MSD %Recovery* | *Qual* | *Recovery Limits* | *RPD* | *Qual* | *RPD Limits* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab Associated sample(s): 01-07 QC Batch ID: WG1493960-3 QC Sample: L2121570-01 Client ID: MW-214 | | | | | | | | | | | | |

| *Surrogate (Extracted Internal Standard)* | *MS % Recovery* | *MS Qualifier* | *MSD % Recovery* | *MSD Qualifier* | *Acceptance Criteria* |
|---|---|---|---|---|---|
| 1H,1H,2H,2H-Perfluoro[1,2-13C2]Decanesulfonic Acid (M2-8:2FTS) | 58 | | | | 10-162 |
| 1H,1H,2H,2H-Perfluoro[1,2-13C2]Octanesulfonic Acid (M2-6:2FTS) | 66 | | | | 14-147 |
| N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA) | 44 | | | | 27-126 |
| N-Deuteriomethylperfluoro-1-octanesulfonamidoacetic Acid (d3-NMeFOSAA) | 36 | | | | 24-116 |
| Perfluoro[1,2,3,4,5,6,7-13C7]Undecanoic Acid (M7-PFUDA) | 58 | | | | 55-137 |
| Perfluoro[1,2,3,4,5,6-13C6]Decanoic Acid (M6PFDA) | **61** | Q | | | 62-124 |
| Perfluoro[1,2,3,4,6-13C5]Hexanoic Acid (M5PFHxA) | 59 | | | | 57-129 |
| Perfluoro[1,2,3,4-13C4]Heptanoic Acid (M4PFHpA) | 66 | | | | 60-129 |
| Perfluoro[1,2,3-13C3]Hexanesulfonic Acid (M3PFHxS) | 78 | | | | 71-134 |
| Perfluoro[1,2-13C2]Dodecanoic Acid (MPFDOA) | 61 | | | | 48-131 |
| Perfluoro[1,2-13C2]Tetradecanoic Acid (M2PFTEDA) | 64 | | | | 22-136 |
| Perfluoro[13C4]Butanoic Acid (MPFBA) | 76 | | | | 58-132 |
| Perfluoro[13C5]Pentanoic Acid (M5PFPEA) | 75 | | | | 62-163 |
| Perfluoro[13C8]Octanesulfonamide (M8FOSA) | 11 | | | | 10-112 |
| Perfluoro[13C8]Octanesulfonic Acid (M8PFOS) | **66** | Q | | | 69-131 |
| Perfluoro[13C8]Octanoic Acid (M8PFOA) | 70 | | | | 62-129 |
| Perfluoro[13C9]Nonanoic Acid (M9PFNA) | 63 | | | | 59-139 |
| Perfluoro[2,3,4-13C3]Butanesulfonic Acid (M3PFBS) | 73 | | | | 70-131 |

# Lab Duplicate Analysis
## Batch Quality Control

**Project Name:** GROSSINGERS
**Project Number:** 9313

**Lab Number:** L2121570
**Report Date:** 05/12/21

| Parameter | Native Sample | Duplicate Sample | Units | RPD | Qual | RPD Limits |
|---|---|---|---|---|---|---|
| Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab Associated sample(s): 01-07 QC Batch ID: WG1493960-4 QC Sample: L2121570-02 Client ID: MW-213 | | | | | | |
| Perfluorobutanoic Acid (PFBA) | 12.8 | 10.6 | ng/l | 19 | | 30 |
| Perfluoropentanoic Acid (PFPeA) | 8.53 | 8.48 | ng/l | 1 | | 30 |
| Perfluorobutanesulfonic Acid (PFBS) | 2.92 | 2.80 | ng/l | 4 | | 30 |
| Perfluorohexanoic Acid (PFHxA) | 9.60 | 9.61 | ng/l | 0 | | 30 |
| Perfluoroheptanoic Acid (PFHpA) | 6.70 | 6.82 | ng/l | 2 | | 30 |
| Perfluorohexanesulfonic Acid (PFHxS) | 6.29 | 6.38 | ng/l | 1 | | 30 |
| Perfluorooctanoic Acid (PFOA) | 27.7 | 28.0 | ng/l | 1 | | 30 |
| 1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS) | ND | ND | ng/l | NC | | 30 |
| Perfluoroheptanesulfonic Acid (PFHpS) | 1.22J | 1.12J | ng/l | NC | | 30 |
| Perfluorononanoic Acid (PFNA) | 2.67 | 2.61 | ng/l | 2 | | 30 |
| Perfluorooctanesulfonic Acid (PFOS) | 70.0 | 70.8 | ng/l | 1 | | 30 |
| Perfluorodecanoic Acid (PFDA) | 1.40J | 1.38J | ng/l | NC | | 30 |
| 1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS) | ND | ND | ng/l | NC | | 30 |
| N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA) | ND | ND | ng/l | NC | | 30 |
| Perfluoroundecanoic Acid (PFUnA) | ND | ND | ng/l | NC | | 30 |
| Perfluorodecanesulfonic Acid (PFDS) | ND | ND | ng/l | NC | | 30 |
| Perfluorooctanesulfonamide (FOSA) | 1.27JF | 0.911JF | ng/l | NC | | 30 |
| N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA) | ND | ND | ng/l | NC | | 30 |
| Perfluorododecanoic Acid (PFDoA) | ND | ND | ng/l | NC | | 30 |
| Perfluorotridecanoic Acid (PFTrDA) | ND | ND | ng/l | NC | | 30 |

# Lab Duplicate Analysis
## Batch Quality Control

**Project Name:** GROSSINGERS
**Project Number:** 9313

**Lab Number:** L2121570
**Report Date:** 05/12/21

| Parameter | Native Sample | Duplicate Sample | Units | RPD | Qual | RPD Limits |
|---|---|---|---|---|---|---|
| Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab Associated sample(s): 01-07 QC Batch ID: WG1493960-4 QC Sample: L2121570-02 Client ID: MW-213 | | | | | | |
| Perfluorotetradecanoic Acid (PFTA) | ND | ND | ng/l | NC | | 30 |
| PFOA/PFOS, Total | 97.7 | 98.8 | ng/l | 1 | | 30 |

| Surrogate (Extracted Internal Standard) | %Recovery | Qualifier | %Recovery | Qualifier | Acceptance Criteria |
|---|---|---|---|---|---|
| Perfluoro[13C4]Butanoic Acid (MPFBA) | 77 | | 79 | | 58-132 |
| Perfluoro[13C5]Pentanoic Acid (M5PFPEA) | 76 | | 76 | | 62-163 |
| Perfluoro[2,3,4-13C3]Butanesulfonic Acid (M3PFBS) | 73 | | 74 | | 70-131 |
| Perfluoro[1,2,3,4,6-13C5]Hexanoic Acid (M5PFHxA) | 60 | | 61 | | 57-129 |
| Perfluoro[1,2,3,4-13C4]Heptanoic Acid (M4PFHpA) | 67 | | 70 | | 60-129 |
| Perfluoro[1,2,3-13C3]Hexanesulfonic Acid (M3PFHxS) | 80 | | 81 | | 71-134 |
| Perfluoro[13C8]Octanoic Acid (M8PFOA) | 72 | | 74 | | 62-129 |
| 1H,1H,2H,2H-Perfluoro[1,2-13C2]Octanesulfonic Acid (M2-6:2FTS) | 69 | | 69 | | 14-147 |
| Perfluoro[13C9]Nonanoic Acid (M9PFNA) | 64 | | 68 | | 59-139 |
| Perfluoro[13C8]Octanesulfonic Acid (M8PFOS) | **67** | Q | **68** | Q | 69-131 |
| Perfluoro[1,2,3,4,5,6-13C6]Decanoic Acid (M6PFDA) | 65 | | 63 | | 62-124 |
| 1H,1H,2H,2H-Perfluoro[1,2-13C2]Decanesulfonic Acid (M2-8:2FTS) | 65 | | 60 | | 10-162 |
| N-Deuteriomethylperfluoro-1-octanesulfonamidoacetic Acid (d3-NMeFOSAA) | 37 | | 37 | | 24-116 |
| Perfluoro[1,2,3,4,5,6,7-13C7]Undecanoic Acid (M7-PFUDA) | 63 | | 59 | | 55-137 |
| Perfluoro[13C8]Octanesulfonamide (M8FOSA) | 19 | | 21 | | 10-112 |
| N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA) | 49 | | 50 | | 27-126 |
| Perfluoro[1,2-13C2]Dodecanoic Acid (MPFDOA) | 62 | | 61 | | 48-131 |
| Perfluoro[1,2-13C2]Tetradecanoic Acid (M2PFTEDA) | 69 | | 63 | | 22-136 |

**Project Name:** GROSSINGERS
**Project Number:** 9313

**Lab Number:** L2121570
**Report Date:** 05/12/21

## Sample Receipt and Container Information

Were project specific reporting limits specified? YES

### Cooler Information

| Cooler | Custody Seal |
|---|---|
| A | Absent |

### Container Information

| Container ID | Container Type | Cooler | Initial pH | Final pH | Temp deg C | Pres | Seal | Frozen Date/Time | Analysis(*) |
|---|---|---|---|---|---|---|---|---|---|
| L2121570-01A | Vial HCl preserved | A | NA | | 4.2 | Y | Absent | | NYTCL-8260(14) |
| L2121570-01B | Vial HCl preserved | A | NA | | 4.2 | Y | Absent | | NYTCL-8260(14) |
| L2121570-01C | Vial HCl preserved | A | NA | | 4.2 | Y | Absent | | NYTCL-8260(14) |
| L2121570-01D | Plastic 250ml unpreserved | A | NA | | 4.2 | Y | Absent | | A2-NY-537-ISOTOPE(14) |
| L2121570-01E | Plastic 250ml unpreserved | A | NA | | 4.2 | Y | Absent | | A2-NY-537-ISOTOPE(14) |
| L2121570-02A | Vial HCl preserved | A | NA | | 4.2 | Y | Absent | | NYTCL-8260(14) |
| L2121570-02B | Vial HCl preserved | A | NA | | 4.2 | Y | Absent | | NYTCL-8260(14) |
| L2121570-02C | Vial HCl preserved | A | NA | | 4.2 | Y | Absent | | NYTCL-8260(14) |
| L2121570-02D | Plastic 250ml unpreserved | A | NA | | 4.2 | Y | Absent | | A2-NY-537-ISOTOPE(14) |
| L2121570-02E | Plastic 250ml unpreserved | A | NA | | 4.2 | Y | Absent | | A2-NY-537-ISOTOPE(14) |
| L2121570-03A | Vial HCl preserved | A | NA | | 4.2 | Y | Absent | | NYTCL-8260(14) |
| L2121570-03B | Vial HCl preserved | A | NA | | 4.2 | Y | Absent | | NYTCL-8260(14) |
| L2121570-03C | Vial HCl preserved | A | NA | | 4.2 | Y | Absent | | NYTCL-8260(14) |
| L2121570-03D | Plastic 250ml unpreserved | A | NA | | 4.2 | Y | Absent | | A2-NY-537-ISOTOPE(14) |
| L2121570-03E | Plastic 250ml unpreserved | A | NA | | 4.2 | Y | Absent | | A2-NY-537-ISOTOPE(14) |
| L2121570-04A | Vial HCl preserved | A | NA | | 4.2 | Y | Absent | | NYTCL-8260(14) |
| L2121570-04B | Vial HCl preserved | A | NA | | 4.2 | Y | Absent | | NYTCL-8260(14) |
| L2121570-04C | Vial HCl preserved | A | NA | | 4.2 | Y | Absent | | NYTCL-8260(14) |
| L2121570-04D | Plastic 250ml unpreserved | A | NA | | 4.2 | Y | Absent | | A2-NY-537-ISOTOPE(14) |
| L2121570-04E | Plastic 250ml unpreserved | A | NA | | 4.2 | Y | Absent | | A2-NY-537-ISOTOPE(14) |
| L2121570-05A | Vial HCl preserved | A | NA | | 4.2 | Y | Absent | | NYTCL-8260(14) |
| L2121570-05B | Vial HCl preserved | A | NA | | 4.2 | Y | Absent | | NYTCL-8260(14) |
| L2121570-05C | Vial HCl preserved | A | NA | | 4.2 | Y | Absent | | NYTCL-8260(14) |



*Values in parentheses indicate holding time in days

**Project Name:** GROSSINGERS
**Project Number:** 9313

**Lab Number:** L2121570
**Report Date:** 05/12/21

## Container Information

| Container ID | Container Type | Cooler | Initial pH | Final pH | Temp deg C | Pres | Seal | Frozen Date/Time | Analysis(*) |
|---|---|---|---|---|---|---|---|---|---|
| L2121570-05D | Plastic 250ml unpreserved | A | NA | | 4.2 | Y | Absent | | A2-NY-537-ISOTOPE(14) |
| L2121570-05E | Plastic 250ml unpreserved | A | NA | | 4.2 | Y | Absent | | A2-NY-537-ISOTOPE(14) |
| L2121570-06A | Vial HCl preserved | A | NA | | 4.2 | Y | Absent | | NYTCL-8260(14) |
| L2121570-06B | Vial HCl preserved | A | NA | | 4.2 | Y | Absent | | NYTCL-8260(14) |
| L2121570-06C | Vial HCl preserved | A | NA | | 4.2 | Y | Absent | | NYTCL-8260(14) |
| L2121570-06D | Plastic 250ml unpreserved | A | NA | | 4.2 | Y | Absent | | A2-NY-537-ISOTOPE(14) |
| L2121570-06E | Plastic 250ml unpreserved | A | NA | | 4.2 | Y | Absent | | A2-NY-537-ISOTOPE(14) |
| L2121570-07A | Vial HCl preserved | A | NA | | 4.2 | Y | Absent | | NYTCL-8260(14) |
| L2121570-07B | Vial HCl preserved | A | NA | | 4.2 | Y | Absent | | NYTCL-8260(14) |
| L2121570-07C | Vial HCl preserved | A | NA | | 4.2 | Y | Absent | | NYTCL-8260(14) |
| L2121570-07D | Plastic 250ml unpreserved | A | NA | | 4.2 | Y | Absent | | A2-NY-537-ISOTOPE(14) |
| L2121570-07E | Plastic 250ml unpreserved | A | NA | | 4.2 | Y | Absent | | A2-NY-537-ISOTOPE(14) |
| L2121570-08A | Vial HCl preserved | A | NA | | 4.2 | Y | Absent | | NYTCL-8260(14) |
| L2121570-08B | Vial HCl preserved | A | NA | | 4.2 | Y | Absent | | NYTCL-8260(14) |



*Values in parentheses indicate holding time in days

**Project Name:** GROSSINGERS
**Project Number:** 9313
**Lab Number:** L2121570
**Report Date:** 05/12/21

## PFAS PARAMETER SUMMARY

| Parameter | Acronym | CAS Number |
|---|---|---|
| PERFLUOROALKYL CARBOXYLIC ACIDS (PFCAs) | | |
| Perfluorooctadecanoic Acid | PFODA | 16517-11-6 |
| Perfluorohexadecanoic Acid | PFHxDA | 67905-19-5 |
| Perfluorotetradecanoic Acid | PFTA | 376-06-7 |
| Perfluorotridecanoic Acid | PFTrDA | 72629-94-8 |
| Perfluorododecanoic Acid | PFDoA | 307-55-1 |
| Perfluoroundecanoic Acid | PFUnA | 2058-94-8 |
| Perfluorodecanoic Acid | PFDA | 335-76-2 |
| Perfluorononanoic Acid | PFNA | 375-95-1 |
| Perfluorooctanoic Acid | PFOA | 335-67-1 |
| Perfluoroheptanoic Acid | PFHpA | 375-85-9 |
| Perfluorohexanoic Acid | PFHxA | 307-24-4 |
| Perfluoropentanoic Acid | PFPeA | 2706-90-3 |
| Perfluorobutanoic Acid | PFBA | 375-22-4 |
| PERFLUOROALKYL SULFONIC ACIDS (PFSAs) | | |
| Perfluorododecanesulfonic Acid | PFDoDS | 79780-39-5 |
| Perfluorodecanesulfonic Acid | PFDS | 335-77-3 |
| Perfluorononanesulfonic Acid | PFNS | 68259-12-1 |
| Perfluorooctanesulfonic Acid | PFOS | 1763-23-1 |
| Perfluoroheptanesulfonic Acid | PFHpS | 375-92-8 |
| Perfluorohexanesulfonic Acid | PFHxS | 355-46-4 |
| Perfluoropentanesulfonic Acid | PFPeS | 2706-91-4 |
| Perfluorobutanesulfonic Acid | PFBS | 375-73-5 |
| FLUOROTELOMERS | | |
| 1H,1H,2H,2H-Perfluorododecanesulfonic Acid | 10:2FTS | 120226-60-0 |
| 1H,1H,2H,2H-Perfluorodecanesulfonic Acid | 8:2FTS | 39108-34-4 |
| 1H,1H,2H,2H-Perfluorooctanesulfonic Acid | 6:2FTS | 27619-97-2 |
| 1H,1H,2H,2H-Perfluorohexanesulfonic Acid | 4:2FTS | 757124-72-4 |
| PERFLUOROALKANE SULFONAMIDES (FASAs) | | |
| Perfluorooctanesulfonamide | FOSA | 754-91-6 |
| N-Ethyl Perfluorooctane Sulfonamide | NEtFOSA | 4151-50-2 |
| N-Methyl Perfluorooctane Sulfonamide | NMeFOSA | 31506-32-8 |
| PERFLUOROALKANE SULFONYL SUBSTANCES | | |
| N-Ethyl Perfluorooctanesulfonamido Ethanol | NEtFOSE | 1691-99-2 |
| N-Methyl Perfluorooctanesulfonamido Ethanol | NMeFOSE | 24448-09-7 |
| N-Ethyl Perfluorooctanesulfonamidoacetic Acid | NEtFOSAA | 2991-50-6 |
| N-Methyl Perfluorooctanesulfonamidoacetic Acid | NMeFOSAA | 2355-31-9 |
| PER- and POLYFLUOROALKYL ETHER CARBOXYLIC ACIDS | | |
| 2,3,3,3-Tetrafluoro-2-[1,1,2,2,3,3,3-Heptafluoropropoxy]-Propanoic Acid | HFPO-DA | 13252-13-6 |
| 4,8-Dioxa-3h-Perfluorononanoic Acid | ADONA | 919005-14-4 |
| CHLORO-PERFLUOROALKYL SULFONIC ACIDS | | |
| 11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid | 11Cl-PF3OUdS | 763051-92-9 |
| 9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid | 9Cl-PF3ONS | 756426-58-1 |
| PERFLUOROETHER SULFONIC ACIDS (PFESAs) | | |
| Perfluoro(2-Ethoxyethane)Sulfonic Acid | PFEESA | 113507-82-7 |
| PERFLUOROETHER/POLYETHER CARBOXYLIC ACIDS (PFPCAs) | | |
| Perfluoro-3-Methoxypropanoic Acid | PFMPA | 377-73-1 |
| Perfluoro-4-Methoxybutanoic Acid | PFMBA | 863090-89-5 |
| Nonafluoro-3,6-Dioxaheptanoic Acid | NFDHA | 151772-58-6 |

| | | | |
|---|---|---|---|
| **Project Name:** | GROSSINGERS | **Lab Number:** | L2121570 |
| **Project Number:** | 9313 | **Report Date:** | 05/12/21 |

## GLOSSARY

***Acronyms***

DL - Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the limit of quantitation (LOQ). The DL includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

EDL - Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).

EMPC - Estimated Maximum Possible Concentration: The concentration that results from the signal present at the retention time of an analyte when the ions meet all of the identification criteria except the ion abundance ratio criteria. An EMPC is a worst-case estimate of the concentration.

EPA - Environmental Protection Agency.

LCS - Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.

LCSD - Laboratory Control Sample Duplicate: Refer to LCS.

LFB - Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.

LOD - Limit of Detection: This value represents the level to which a target analyte can reliably be detected for a specific analyte in a specific matrix by a specific method. The LOD includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

LOQ - Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

MDL - Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.

MS - Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available. For Method 332.0, the spike recovery is calculated using the native concentration, including estimated values.

MSD - Matrix Spike Sample Duplicate: Refer to MS.

NA - Not Applicable.

NC - Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.

NDPA/DPA - N-Nitrosodiphenylamine/Diphenylamine.

NI - Not Ignitable.

NP - Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.

NR - No Results: Term is utilized when 'No Target Compounds Requested' is reported for the analysis of Volatile or Semivolatile Organic TIC only requests.

RL - Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.

RPD - Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.

SRM - Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.

STLP - Semi-dynamic Tank Leaching Procedure per EPA Method 1315.

TEF - Toxic Equivalency Factors: The values assigned to each dioxin and furan to evaluate their toxicity relative to 2,3,7,8-TCDD.

TEQ - Toxic Equivalent: The measure of a sample's toxicity derived by multiplying each dioxin and furan by its corresponding TEF and then summing the resulting values.

TIC - Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

*Report Format: DU Report with 'J' Qualifiers*

| | | | |
|---|---|---|---|
| **Project Name:** | GROSSINGERS | **Lab Number:** | L2121570 |
| **Project Number:** | 9313 | **Report Date:** | 05/12/21 |

***Footnotes***

1 - The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method.

***Terms***

Analytical Method: Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

Difference: With respect to Total Oxidizable Precursor (TOP) Assay analysis, the difference is defined as the Post-Treatment value minus the Pre-Treatment value.

Final pH: As it pertains to Sample Receipt & Container Information section of the report, Final pH reflects pH of container determined after adjustment at the laboratory, if applicable. If no adjustment required, value reflects Initial pH.

Frozen Date/Time: With respect to Volatile Organics in soil, Frozen Date/Time reflects the date/time at which associated Reagent Water-preserved vials were initially frozen. Note: If frozen date/time is beyond 48 hours from sample collection, value will be reflected in 'bold'.

Initial pH: As it pertains to Sample Receipt & Container Information section of the report, Initial pH reflects pH of container determined upon receipt, if applicable.

PAH Total: With respect to Alkylated PAH analyses, the 'PAHs, Total' result is defined as the summation of results for all or a subset of the following compounds: Naphthalene, C1-C4 Naphthalenes, 2-Methylnaphthalene, 1-Methylnaphthalene, Biphenyl, Acenaphthylene, Acenaphthene, Fluorene, C1-C3 Fluorenes, Phenanthrene, C1-C4 Phenanthrenes/Anthracenes, Anthracene, Fluoranthene, Pyrene, C1-C4 Fluoranthenes/Pyrenes, Benz(a)anthracene, Chrysene, C1-C4 Chrysenes, Benzo(b)fluoranthene, Benzo(j)+(k)fluoranthene, Benzo(e)pyrene, Benzo(a)pyrene, Perylene, Indeno(1,2,3-cd)pyrene, Dibenz(ah)+(ac)anthracene, Benzo(g,h,i)perylene. If a 'Total' result is requested, the results of its individual components will also be reported.

PFAS Total: With respect to PFAS analyses, the 'PFAS, Total (5)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA and PFOS. In addition, the 'PFAS, Total (6)' result is defined as the summation of results at or above the RL for: PFHpA, PFHxS, PFOA, PFNA, PFDA and PFOS. (Note: 'PFAS, Total (6)' is applicable to MassDEP DW compliance analysis only.). If a 'Total' result is requested, the results of its individual components will also be reported.

The target compound Chlordane (CAS No. 57-74-9) is reported for GC ECD analyses. Per EPA,this compound "refers to a mixture of chlordane isomers, other chlorinated hydrocarbons and numerous other components." (Reference: USEPA Toxicological Review of Chlordane, In Support of Summary Information on the Integrated Risk Information System (IRIS), December 1997.)

Total: With respect to Organic analyses, a 'Total' result is defined as the summation of results for individual isomers or Aroclors. If a 'Total' result is requested, the results of its individual components will also be reported. This is applicable to 'Total' results for methods 8260, 8081 and 8082.

***Data Qualifiers***

**A** - Spectra identified as "Aldol Condensates" are byproducts of the extraction/concentration procedures when acetone is introduced in the process.

**B** - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).

**C** - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.

**D** - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.

**E** - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.

**F** - The ratio of quantifier ion response to qualifier ion response falls outside of the laboratory criteria. Results are considered to be an estimated maximum concentration.

**G** - The concentration may be biased high due to matrix interferences (i.e, co-elution) with non-target compound(s). The result should be considered estimated.

**H** - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.

**I** - The lower value for the two columns has been reported due to obvious interference.

**J** - Estimated value. The Target analyte concentration is below the quantitation limit (RL), but above the Method Detection Limit (MDL) or Estimated Detection Limit (EDL) for SPME-related analyses. This represents an estimated concentration for Tentatively Identified Compounds (TICs).

**M** - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.

**ND** - Not detected at the method detection limit (MDL) for the sample, or estimated detection limit (EDL) for SPME-related analyses.

*Report Format: DU Report with 'J' Qualifiers*

| | | | |
|---|---|---|---|
| **Project Name:** | GROSSINGERS | **Lab Number:** | L2121570 |
| **Project Number:** | 9313 | **Report Date:** | 05/12/21 |

***Data Qualifiers***

**NJ** - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.

**P** - The RPD between the results for the two columns exceeds the method-specified criteria.

**Q** - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)

**R** - Analytical results are from sample re-analysis.

**RE** - Analytical results are from sample re-extraction.

**S** - Analytical results are from modified screening analysis.

*Report Format: DU Report with 'J' Qualifiers*

| | | | |
|---|---|---|---|
| **Project Name:** | GROSSINGERS | **Lab Number:** | L2121570 |
| **Project Number:** | 9313 | **Report Date:** | 05/12/21 |

## REFERENCES


1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - VI, 2018.

134 Determination of Selected Perfluorinated Alkyl Acids in Drinking Water by Solid Phase Extraction and Liquid Chromatography/Tandem Mass Spectrometry (LC/MS/MS) using Isotope Dilution. Alpha SOP 23528.


## LIMITATION OF LIABILITIES

Alpha Analytical performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical be held liable for any incidental, consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding time and splitting of samples in the field.

# Certification Information

**The following analytes are not included in our Primary NELAP Scope of Accreditation:**

**Westborough Facility**
**EPA 624/624.1:** m/p-xylene, o-xylene, Naphthalene
**EPA 625/625.1:** alpha-Terpineol
**EPA 8260C/8260D:** NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene, Azobenzene; SCM: Iodomethane (methyl iodide), 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.
**EPA 8270D/8270E:** NPW: Dimethylnaphthalene,1,4-Diphenylhydrazine, alpha-Terpineol; SCM: Dimethylnaphthalene,1,4-Diphenylhydrazine.
**SM4500**: NPW: Amenable Cyanide; SCM: Total Phosphorus, TKN, NO2, NO3.

**Mansfield Facility**
**SM 2540D:** TSS
**EPA 8082A:** NPW: PCB: 1, 5, 31, 87,101, 110, 141, 151, 153, 180, 183, 187.
**EPA TO-15:** Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene, 3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.
**Biological Tissue Matrix:** EPA 3050B

**The following analytes are included in our Massachusetts DEP Scope of Accreditation**

**Westborough Facility:**

***Drinking Water***
**EPA 300.0**: Chloride, Nitrate-N, Fluoride, Sulfate; **EPA 353.2**: Nitrate-N, Nitrite-N; **SM4500NO3-F**: Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE, EPA 180.1, SM2130B, SM4500Cl-D, SM2320B, SM2540C, SM4500H-B, SM4500NO2-B**
**EPA 332**: Perchlorate; **EPA 524.2:** THMs and VOCs; **EPA 504.1:** EDB, DBCP.
**Microbiology**: **SM9215B; SM9223-P/A, SM9223B-Colilert-QT,SM9222D**.

***Non-Potable Water***
**SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2320B, SM4500CL-E, SM4500F-BC, SM4500NH3-BH:** Ammonia-N and Kjeldahl-N, **EPA 350.1**: Ammonia-N, **LACHAT 10-107-06-1-B**: Ammonia-N, **EPA 351.1, SM4500NO3-F, EPA 353.2**: Nitrate-N**, SM4500P-E, SM4500P-B, E, SM4500SO4-E, SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, EPA 420.1, SM4500-CN-CE, SM2540D, EPA 300: Chloride, Sulfate, Nitrate.**
**EPA 624.1**: Volatile Halocarbons & Aromatics,
**EPA 608.3**: Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs
**EPA 625.1**: SVOC (Acid/Base/Neutral Extractables), **EPA 600/4-81-045**: PCB-Oil.
**Microbiology**: **SM9223B-Colilert-QT; Enterolert-QT, SM9221E, EPA 1600, EPA 1603, SM9222D.**

**Mansfield Facility:**

***Drinking Water***
**EPA 200.7:** Al, Ba, Cd, Cr, Cu, Fe, Mn, Ni, Na, Ag, Ca, Zn. **EPA 200.8:** Al, Sb, As, Ba, Be, Cd, Cr, Cu, Pb, Mn, Ni, Se, Ag, TL, Zn. **EPA 245.1** Hg.
**EPA 522, EPA 537.1.**

***Non-Potable Water***
**EPA 200.7:** Al, Sb, As, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Sr, TL, Ti, V, Zn.
**EPA 200.8:** Al, Sb**,** As, Be, Cd, Cr, Cu, Fe, Pb, Mn, Ni, K, Se, Ag, Na, TL, Zn.
**EPA 245.1** Hg.
**SM2340B**

For a complete listing of analytes and methods, please contact your Alpha Project Manager.

# NEW YORK CHAIN OF CUSTODY

ALPHA

Westborough, MA 01581
8 Walkup Dr.
TEL: 508-898-9220
FAX: 508-898-9193

Mansfield, MA 02048
320 Forbes Blvd
TEL: 508-822-9300
FAX: 508-822-3288

**Service Centers**
Mahwah, NJ 07430: 35 Whitney Rd, Suite 5
Albany, NY 12205: 14 Walker Way
Tonawanda, NY 14150: 275 Cooper Ave, Suite 105

Page 1 of 1

Date Rec'd in Lab: 4/27/21

ALPHA Job #: L2121570

**Client Information**
Client: Sesi
Address: 12a Maple ave
Pine Brook, NJ
Phone: 973 808 9050
Fax:
Email: TTK@sesi.org

**Project Information**
Project Name: Grossingers
Project Location: Liberty, NY
Project #: 9313
(Use Project name as Project #)
Project Manager: Todd Kelly
ALPHAQuote #:

**Turn-Around Time**
Standard: [X] 1 week Due Date:
Rush (only if pre approved): [ ] # of Days:

**Deliverables**
[ ] ASP-A [X] ASP-B
[ ] EQuIS (1 File) [ ] EQuIS (4 File)
[ ] Other

**Regulatory Requirement**
[ ] NY TOGS [ ] NY Part 375
[X] AWQ Standards [ ] NY CP-51
[ ] NY Restricted Use [ ] Other
[ ] NY Unrestricted Use
[ ] NYC Sewer Discharge

**Billing Information**
[X] Same as Client Info
PO# 9313
Phase II

**Disposal Site Information**
Please identify below location of applicable disposal facilities.
Disposal Facility:
[ ] NJ [ ] NY
[ ] Other:

These samples have been previously analyzed by Alpha [ ]

**Other project specific requirements/comments:**

**Please specify Metals or TAL**

**ANALYSIS**

**Sample Filtration**
[ ] Done
[ ] Lab to do
**Preservation**
[ ] Lab to do
**(Please Specify below)**

| ALPHA Lab ID (Lab Use Only) | Sample ID | Collection Date | Collection Time | Sample Matrix | Sampler's Initials | TCL VOCs 15 | PFAS (537.1) | Sample Specific Comments | Total Bottle |
|---|---|---|---|---|---|---|---|---|---|
| 21570 -01 | MW-214 | 4/27/21 | 955 | GW | JGS | X | X | | 5 |
| -02 | MW-213 | | 1015 | | | | | | |
| -03 | MW-207 | | 1140 | | | | | | |
| -04 | MW-206 | | 1145 | | | | | | |
| -05 | MW-204 | | 1335 | | | | | | |
| -06 | MW-205 | | 1340 | | | | | | |
| -07 | DUP | | 1200 | | | | | | 4 |
| | ~~FB~~ | | ~~1500~~ | | | | | | |
| -08 | TB | 4/26/21 | | DI | | X | | | 2 |

Preservative Code:
A = None
B = HCl
C = $HNO_3$
D = $H_2SO_4$
E = NaOH
F = MeOH
G = $NaHSO_4$
H = $Na_2S_2O_3$
K/E = Zn Ac/NaOH
O = Other

Container Code
P = Plastic
A = Amber Glass
V = Vial
G = Glass
B = Bacteria Cup
C = Cube
O = Other
E = Encore
D = BOD Bottle

Westboro: Certification No: MA935
Mansfield: Certification No: MA015

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Container Type | 2V | P | | | | | | | | | |
| Preservative | B | A | | | | | | | | | |

| Relinquished By: | Date/Time | Received By: | Date/Time |
|---|---|---|---|
| | 4/27/21 1640 | | 4/27 1645 |
| | 4/27 1645 | | 4/27/ 1641 |
| | 4/27/21 1645 | | 4/27/21 2155 |

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. BY EXECUTING THIS COC, THE CLIENT HAS READ AND AGREES TO BE BOUND BY ALPHA'S TERMS & CONDITIONS. (See reverse side.)

Form No: 01-25 HC (rev. 30-Sept-2013)

# ANALYTICAL REPORT

| | |
|---|---|
| Lab Number: | L2121852 |
| Client: | Soils Engineering Services, Inc.<br>12A Maple Avenue<br>Pine Brook, NJ 07058 |
| ATTN: | Todd Kelly |
| Phone: | (973) 808-9050 |
| Project Name: | GROSSINGERS |
| Project Number: | 9313 |
| Report Date: | 05/12/21 |

The original project report/data package is held by Alpha Analytical. This report/data package is paginated and should be reproduced only in its entirety. Alpha Analytical holds no responsibility for results and/or data that are not consistent with the original.

Certifications & Approvals: MA (M-MA086), NH NELAP (2064), CT (PH-0574), IL (200077), ME (MA00086), MD (348), NJ (MA935), NY (11148), NC (25700/666), PA (68-03671), RI (LAO00065), TX (T104704476), VT (VT-0935), VA (460195), USDA (Permit #P330-17-00196).

Eight Walkup Drive, Westborough, MA 01581-1019
508-898-9220 (Fax) 508-898-9193 800-624-9220 - www.alphalab.com

**Project Name:** GROSSINGERS
**Project Number:** 9313

**Lab Number:** L2121852
**Report Date:** 05/12/21

| Alpha Sample ID | Client ID | Matrix | Sample Location | Collection Date/Time | Receive Date |
|---|---|---|---|---|---|
| L2121852-01 | MW-201 | WATER | LIBERTY, NY | 04/28/21 12:10 | 04/28/21 |
| L2121852-02 | MW-203 | WATER | LIBERTY, NY | 04/28/21 09:20 | 04/28/21 |
| L2121852-03 | MW-209 | WATER | LIBERTY, NY | 04/28/21 12:50 | 04/28/21 |
| L2121852-04 | MW-211 | WATER | LIBERTY, NY | 04/28/21 10:45 | 04/28/21 |
| L2121852-05 | MW-216 | WATER | LIBERTY, NY | 04/28/21 11:20 | 04/28/21 |
| L2121852-06 | MW-217 | WATER | LIBERTY, NY | 04/28/21 12:40 | 04/28/21 |
| L2121852-07 | TB | TRIP BLANK (AQUEOUS) | LIBERTY, NY | 04/28/21 00:00 | 04/28/21 |

| | | | |
|---|---|---|---|
| **Project Name:** | GROSSINGERS | **Lab Number:** | L2121852 |
| **Project Number:** | 9313 | **Report Date:** | 05/12/21 |

## Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet NELAP requirements for all NELAP accredited parameters unless otherwise noted in the following narrative. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. Tentatively Identified Compounds (TICs), if requested, are reported for compounds identified to be present and are not part of the method/program Target Compound List, even if only a subset of the TCL are being reported. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively.

When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances, the specific failure is not narrated but noted in the associated QC Outlier Summary Report, located directly after the Case Narrative. QC information is also incorporated in the Data Usability Assessment table (Format 11) of our Data Merger tool, where it can be reviewed in conjunction with the sample result, associated regulatory criteria and any associated data usability implications.

Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

HOLD POLICY - For samples submitted on hold, Alpha's policy is to hold samples (with the exception of Air canisters) free of charge for 21 calendar days from the date the project is completed. After 21 calendar days, we will dispose of all samples submitted including those put on hold unless you have contacted your Alpha Project Manager and made arrangements for Alpha to continue to hold the samples. Air canisters will be disposed after 3 business days from the date the project is completed.

Please contact Project Management at 800-624-9220 with any questions.

| | | | |
|---|---|---|---|
| **Project Name:** | GROSSINGERS | **Lab Number:** | L2121852 |
| **Project Number:** | 9313 | **Report Date:** | 05/12/21 |

**Case Narrative (continued)**

Report Submission

May 12, 2021: This final report includes the results of all requested analyses.

May 05, 2021: This is a preliminary report.

All non-detect (ND) or estimated concentrations (J-qualified) have been quantitated to the limit noted in the MDL column.

Perfluorinated Alkyl Acids by Isotope Dilution

L2121852-03: The sample was centrifuged and decanted prior to extraction due to sample matrix.

L2121852-06: The MeOH fraction of the extraction is reported for Perfluorooctanesulfonamide (FOSA) due to better extraction efficiency of the M8FOSA Surrogate (Extracted Internal Standard).

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature: Cristin Walker

Title: Technical Director/Representative Date: 05/12/21

# ORGANICS

# VOLATILES

**Project Name:** GROSSINGERS
**Project Number:** 9313
**Lab Number:** L2121852
**Report Date:** 05/12/21

## SAMPLE RESULTS

Lab ID: L2121852-01
Client ID: MW-201
Sample Location: LIBERTY, NY

Date Collected: 04/28/21 12:10
Date Received: 04/28/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8260C
Analytical Date: 05/03/21 12:38
Analyst: NLK

| Parameter | Result | Qualifier | Units | RL | MDL | Dilution Factor |
|---|---|---|---|---|---|---|
| **Volatile Organics by GC/MS - Westborough Lab** | | | | | | |
| Methylene chloride | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,1-Dichloroethane | ND | | ug/l | 2.5 | 0.70 | 1 |
| Chloroform | ND | | ug/l | 2.5 | 0.70 | 1 |
| Carbon tetrachloride | ND | | ug/l | 0.50 | 0.13 | 1 |
| 1,2-Dichloropropane | ND | | ug/l | 1.0 | 0.14 | 1 |
| Dibromochloromethane | ND | | ug/l | 0.50 | 0.15 | 1 |
| 1,1,2-Trichloroethane | ND | | ug/l | 1.5 | 0.50 | 1 |
| Tetrachloroethene | ND | | ug/l | 0.50 | 0.18 | 1 |
| Chlorobenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Trichlorofluoromethane | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,2-Dichloroethane | ND | | ug/l | 0.50 | 0.13 | 1 |
| 1,1,1-Trichloroethane | ND | | ug/l | 2.5 | 0.70 | 1 |
| Bromodichloromethane | ND | | ug/l | 0.50 | 0.19 | 1 |
| trans-1,3-Dichloropropene | ND | | ug/l | 0.50 | 0.16 | 1 |
| cis-1,3-Dichloropropene | ND | | ug/l | 0.50 | 0.14 | 1 |
| 1,3-Dichloropropene, Total | ND | | ug/l | 0.50 | 0.14 | 1 |
| 1,1-Dichloropropene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Bromoform | ND | | ug/l | 2.0 | 0.65 | 1 |
| 1,1,2,2-Tetrachloroethane | ND | | ug/l | 0.50 | 0.17 | 1 |
| Benzene | ND | | ug/l | 0.50 | 0.16 | 1 |
| Toluene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Ethylbenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Chloromethane | ND | | ug/l | 2.5 | 0.70 | 1 |
| Bromomethane | ND | | ug/l | 2.5 | 0.70 | 1 |
| Vinyl chloride | ND | | ug/l | 1.0 | 0.07 | 1 |
| Chloroethane | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,1-Dichloroethene | ND | | ug/l | 0.50 | 0.17 | 1 |
| trans-1,2-Dichloroethene | ND | | ug/l | 2.5 | 0.70 | 1 |

**Project Name:** GROSSINGERS **Lab Number:** L2121852

**Project Number:** 9313 **Report Date:** 05/12/21

## SAMPLE RESULTS

Lab ID: L2121852-01 Date Collected: 04/28/21 12:10

Client ID: MW-201 Date Received: 04/28/21

Sample Location: LIBERTY, NY Field Prep: Not Specified

Sample Depth:

| Parameter | Result | Qualifier | Units | RL | MDL | Dilution Factor |
|---|---|---|---|---|---|---|
| **Volatile Organics by GC/MS - Westborough Lab** | | | | | | |
| Trichloroethene | ND | | ug/l | 0.50 | 0.18 | 1 |
| 1,2-Dichlorobenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,3-Dichlorobenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,4-Dichlorobenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Methyl tert butyl ether | ND | | ug/l | 2.5 | 0.70 | 1 |
| p/m-Xylene | ND | | ug/l | 2.5 | 0.70 | 1 |
| o-Xylene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Xylenes, Total | ND | | ug/l | 2.5 | 0.70 | 1 |
| cis-1,2-Dichloroethene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,2-Dichloroethene, Total | ND | | ug/l | 2.5 | 0.70 | 1 |
| Dibromomethane | ND | | ug/l | 5.0 | 1.0 | 1 |
| 1,2,3-Trichloropropane | ND | | ug/l | 2.5 | 0.70 | 1 |
| Acrylonitrile | ND | | ug/l | 5.0 | 1.5 | 1 |
| Styrene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Dichlorodifluoromethane | ND | | ug/l | 5.0 | 1.0 | 1 |
| Acetone | ND | | ug/l | 5.0 | 1.5 | 1 |
| Carbon disulfide | ND | | ug/l | 5.0 | 1.0 | 1 |
| 2-Butanone | ND | | ug/l | 5.0 | 1.9 | 1 |
| Vinyl acetate | ND | | ug/l | 5.0 | 1.0 | 1 |
| 4-Methyl-2-pentanone | ND | | ug/l | 5.0 | 1.0 | 1 |
| 2-Hexanone | ND | | ug/l | 5.0 | 1.0 | 1 |
| Bromochloromethane | ND | | ug/l | 2.5 | 0.70 | 1 |
| 2,2-Dichloropropane | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,2-Dibromoethane | ND | | ug/l | 2.0 | 0.65 | 1 |
| 1,3-Dichloropropane | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,1,1,2-Tetrachloroethane | ND | | ug/l | 2.5 | 0.70 | 1 |
| Bromobenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| n-Butylbenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| sec-Butylbenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| tert-Butylbenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| o-Chlorotoluene | ND | | ug/l | 2.5 | 0.70 | 1 |
| p-Chlorotoluene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,2-Dibromo-3-chloropropane | ND | | ug/l | 2.5 | 0.70 | 1 |
| Hexachlorobutadiene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Isopropylbenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| p-Isopropyltoluene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Naphthalene | ND | | ug/l | 2.5 | 0.70 | 1 |

**Project Name:** GROSSINGERS **Lab Number:** L2121852

**Project Number:** 9313 **Report Date:** 05/12/21

## SAMPLE RESULTS

Lab ID: L2121852-01 Date Collected: 04/28/21 12:10

Client ID: MW-201 Date Received: 04/28/21

Sample Location: LIBERTY, NY Field Prep: Not Specified

Sample Depth:

| Parameter | Result | Qualifier | Units | RL | MDL | Dilution Factor |
|---|---|---|---|---|---|---|
| **Volatile Organics by GC/MS - Westborough Lab** | | | | | | |
| n-Propylbenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,2,3-Trichlorobenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,2,4-Trichlorobenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,3,5-Trimethylbenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,2,4-Trimethylbenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,4-Dioxane | ND | | ug/l | 250 | 61. | 1 |
| p-Diethylbenzene | ND | | ug/l | 2.0 | 0.70 | 1 |
| p-Ethyltoluene | ND | | ug/l | 2.0 | 0.70 | 1 |
| 1,2,4,5-Tetramethylbenzene | ND | | ug/l | 2.0 | 0.54 | 1 |
| Ethyl ether | ND | | ug/l | 2.5 | 0.70 | 1 |
| trans-1,4-Dichloro-2-butene | ND | | ug/l | 2.5 | 0.70 | 1 |
| **Tentatively Identified Compounds** | | | | | | |
| No Tentatively Identified Compounds | ND | | ug/l | | | 1 |

| Surrogate | % Recovery | Qualifier | Acceptance Criteria |
|---|---|---|---|
| 1,2-Dichloroethane-d4 | 101 | | 70-130 |
| Toluene-d8 | 109 | | 70-130 |
| 4-Bromofluorobenzene | 104 | | 70-130 |
| Dibromofluoromethane | 94 | | 70-130 |

**Project Name:** GROSSINGERS
**Project Number:** 9313
**Lab Number:** L2121852
**Report Date:** 05/12/21

## SAMPLE RESULTS

Lab ID: L2121852-02
Client ID: MW-203
Sample Location: LIBERTY, NY

Date Collected: 04/28/21 09:20
Date Received: 04/28/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8260C
Analytical Date: 05/03/21 13:01
Analyst: NLK

| Parameter | Result | Qualifier | Units | RL | MDL | Dilution Factor |
|---|---|---|---|---|---|---|
| **Volatile Organics by GC/MS - Westborough Lab** | | | | | | |
| Methylene chloride | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,1-Dichloroethane | ND | | ug/l | 2.5 | 0.70 | 1 |
| Chloroform | ND | | ug/l | 2.5 | 0.70 | 1 |
| Carbon tetrachloride | ND | | ug/l | 0.50 | 0.13 | 1 |
| 1,2-Dichloropropane | ND | | ug/l | 1.0 | 0.14 | 1 |
| Dibromochloromethane | ND | | ug/l | 0.50 | 0.15 | 1 |
| 1,1,2-Trichloroethane | ND | | ug/l | 1.5 | 0.50 | 1 |
| Tetrachloroethene | ND | | ug/l | 0.50 | 0.18 | 1 |
| Chlorobenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Trichlorofluoromethane | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,2-Dichloroethane | ND | | ug/l | 0.50 | 0.13 | 1 |
| 1,1,1-Trichloroethane | ND | | ug/l | 2.5 | 0.70 | 1 |
| Bromodichloromethane | ND | | ug/l | 0.50 | 0.19 | 1 |
| trans-1,3-Dichloropropene | ND | | ug/l | 0.50 | 0.16 | 1 |
| cis-1,3-Dichloropropene | ND | | ug/l | 0.50 | 0.14 | 1 |
| 1,3-Dichloropropene, Total | ND | | ug/l | 0.50 | 0.14 | 1 |
| 1,1-Dichloropropene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Bromoform | ND | | ug/l | 2.0 | 0.65 | 1 |
| 1,1,2,2-Tetrachloroethane | ND | | ug/l | 0.50 | 0.17 | 1 |
| Benzene | 0.27 | J | ug/l | 0.50 | 0.16 | 1 |
| Toluene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Ethylbenzene | 3.1 | | ug/l | 2.5 | 0.70 | 1 |
| Chloromethane | ND | | ug/l | 2.5 | 0.70 | 1 |
| Bromomethane | ND | | ug/l | 2.5 | 0.70 | 1 |
| Vinyl chloride | ND | | ug/l | 1.0 | 0.07 | 1 |
| Chloroethane | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,1-Dichloroethene | ND | | ug/l | 0.50 | 0.17 | 1 |
| trans-1,2-Dichloroethene | ND | | ug/l | 2.5 | 0.70 | 1 |

**Project Name:** GROSSINGERS **Lab Number:** L2121852

**Project Number:** 9313 **Report Date:** 05/12/21

## SAMPLE RESULTS

Lab ID: L2121852-02 Date Collected: 04/28/21 09:20

Client ID: MW-203 Date Received: 04/28/21

Sample Location: LIBERTY, NY Field Prep: Not Specified

Sample Depth:

| Parameter | Result | Qualifier | Units | RL | MDL | Dilution Factor |
|---|---|---|---|---|---|---|
| **Volatile Organics by GC/MS - Westborough Lab** | | | | | | |
| Trichloroethene | ND | | ug/l | 0.50 | 0.18 | 1 |
| 1,2-Dichlorobenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,3-Dichlorobenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,4-Dichlorobenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Methyl tert butyl ether | ND | | ug/l | 2.5 | 0.70 | 1 |
| p/m-Xylene | ND | | ug/l | 2.5 | 0.70 | 1 |
| o-Xylene | 1.0 | J | ug/l | 2.5 | 0.70 | 1 |
| Xylenes, Total | 1.0 | J | ug/l | 2.5 | 0.70 | 1 |
| cis-1,2-Dichloroethene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,2-Dichloroethene, Total | ND | | ug/l | 2.5 | 0.70 | 1 |
| Dibromomethane | ND | | ug/l | 5.0 | 1.0 | 1 |
| 1,2,3-Trichloropropane | ND | | ug/l | 2.5 | 0.70 | 1 |
| Acrylonitrile | ND | | ug/l | 5.0 | 1.5 | 1 |
| Styrene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Dichlorodifluoromethane | ND | | ug/l | 5.0 | 1.0 | 1 |
| Acetone | ND | | ug/l | 5.0 | 1.5 | 1 |
| Carbon disulfide | ND | | ug/l | 5.0 | 1.0 | 1 |
| 2-Butanone | ND | | ug/l | 5.0 | 1.9 | 1 |
| Vinyl acetate | ND | | ug/l | 5.0 | 1.0 | 1 |
| 4-Methyl-2-pentanone | ND | | ug/l | 5.0 | 1.0 | 1 |
| 2-Hexanone | ND | | ug/l | 5.0 | 1.0 | 1 |
| Bromochloromethane | ND | | ug/l | 2.5 | 0.70 | 1 |
| 2,2-Dichloropropane | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,2-Dibromoethane | ND | | ug/l | 2.0 | 0.65 | 1 |
| 1,3-Dichloropropane | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,1,1,2-Tetrachloroethane | ND | | ug/l | 2.5 | 0.70 | 1 |
| Bromobenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| n-Butylbenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| sec-Butylbenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| tert-Butylbenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| o-Chlorotoluene | ND | | ug/l | 2.5 | 0.70 | 1 |
| p-Chlorotoluene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,2-Dibromo-3-chloropropane | ND | | ug/l | 2.5 | 0.70 | 1 |
| Hexachlorobutadiene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Isopropylbenzene | 0.87 | J | ug/l | 2.5 | 0.70 | 1 |
| p-Isopropyltoluene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Naphthalene | ND | | ug/l | 2.5 | 0.70 | 1 |

**Project Name:** GROSSINGERS **Lab Number:** L2121852

**Project Number:** 9313 **Report Date:** 05/12/21

## SAMPLE RESULTS

Lab ID: L2121852-02 Date Collected: 04/28/21 09:20

Client ID: MW-203 Date Received: 04/28/21

Sample Location: LIBERTY, NY Field Prep: Not Specified

Sample Depth:

| Parameter | Result | Qualifier | Units | RL | MDL | Dilution Factor |
|---|---|---|---|---|---|---|
| **Volatile Organics by GC/MS - Westborough Lab** | | | | | | |
| n-Propylbenzene | 0.95 | J | ug/l | 2.5 | 0.70 | 1 |
| 1,2,3-Trichlorobenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,2,4-Trichlorobenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,3,5-Trimethylbenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,2,4-Trimethylbenzene | 2.5 | | ug/l | 2.5 | 0.70 | 1 |
| 1,4-Dioxane | ND | | ug/l | 250 | 61. | 1 |
| p-Diethylbenzene | ND | | ug/l | 2.0 | 0.70 | 1 |
| p-Ethyltoluene | ND | | ug/l | 2.0 | 0.70 | 1 |
| 1,2,4,5-Tetramethylbenzene | 1.1 | J | ug/l | 2.0 | 0.54 | 1 |
| Ethyl ether | ND | | ug/l | 2.5 | 0.70 | 1 |
| trans-1,4-Dichloro-2-butene | ND | | ug/l | 2.5 | 0.70 | 1 |
| **Tentatively Identified Compounds** | | | | | | |
| Total TIC Compounds | 12.2 | J | ug/l | | | 1 |
| Unknown Aromatic | 1.20 | J | ug/l | | | 1 |
| Pentane, 2-methyl- | 2.45 | NJ | ug/l | | | 1 |
| Unknown Benzene | 2.53 | J | ug/l | | | 1 |
| Pentane, 3-methyl- | 1.67 | NJ | ug/l | | | 1 |
| Unknown Aromatic | 1.01 | J | ug/l | | | 1 |
| Unknown Aromatic | 1.96 | J | ug/l | | | 1 |
| Cyclopentane, Methyl- | 1.38 | NJ | ug/l | | | 1 |

| Surrogate | % Recovery | Qualifier | Acceptance Criteria |
|---|---|---|---|
| 1,2-Dichloroethane-d4 | 100 | | 70-130 |
| Toluene-d8 | 109 | | 70-130 |
| 4-Bromofluorobenzene | 105 | | 70-130 |
| Dibromofluoromethane | 95 | | 70-130 |

**Project Name:** GROSSINGERS
**Project Number:** 9313
**Lab Number:** L2121852
**Report Date:** 05/12/21

**SAMPLE RESULTS**

Lab ID: L2121852-03
Client ID: MW-209
Sample Location: LIBERTY, NY

Date Collected: 04/28/21 12:50
Date Received: 04/28/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8260C
Analytical Date: 05/03/21 13:24
Analyst: NLK

| Parameter | Result | Qualifier | Units | RL | MDL | Dilution Factor |
|---|---|---|---|---|---|---|
| **Volatile Organics by GC/MS - Westborough Lab** | | | | | | |
| Methylene chloride | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,1-Dichloroethane | ND | | ug/l | 2.5 | 0.70 | 1 |
| Chloroform | ND | | ug/l | 2.5 | 0.70 | 1 |
| Carbon tetrachloride | ND | | ug/l | 0.50 | 0.13 | 1 |
| 1,2-Dichloropropane | ND | | ug/l | 1.0 | 0.14 | 1 |
| Dibromochloromethane | ND | | ug/l | 0.50 | 0.15 | 1 |
| 1,1,2-Trichloroethane | ND | | ug/l | 1.5 | 0.50 | 1 |
| Tetrachloroethene | ND | | ug/l | 0.50 | 0.18 | 1 |
| Chlorobenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Trichlorofluoromethane | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,2-Dichloroethane | ND | | ug/l | 0.50 | 0.13 | 1 |
| 1,1,1-Trichloroethane | ND | | ug/l | 2.5 | 0.70 | 1 |
| Bromodichloromethane | ND | | ug/l | 0.50 | 0.19 | 1 |
| trans-1,3-Dichloropropene | ND | | ug/l | 0.50 | 0.16 | 1 |
| cis-1,3-Dichloropropene | ND | | ug/l | 0.50 | 0.14 | 1 |
| 1,3-Dichloropropene, Total | ND | | ug/l | 0.50 | 0.14 | 1 |
| 1,1-Dichloropropene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Bromoform | ND | | ug/l | 2.0 | 0.65 | 1 |
| 1,1,2,2-Tetrachloroethane | ND | | ug/l | 0.50 | 0.17 | 1 |
| Benzene | ND | | ug/l | 0.50 | 0.16 | 1 |
| Toluene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Ethylbenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Chloromethane | ND | | ug/l | 2.5 | 0.70 | 1 |
| Bromomethane | ND | | ug/l | 2.5 | 0.70 | 1 |
| Vinyl chloride | ND | | ug/l | 1.0 | 0.07 | 1 |
| Chloroethane | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,1-Dichloroethene | ND | | ug/l | 0.50 | 0.17 | 1 |
| trans-1,2-Dichloroethene | ND | | ug/l | 2.5 | 0.70 | 1 |

**Project Name:** GROSSINGERS **Lab Number:** L2121852

**Project Number:** 9313 **Report Date:** 05/12/21

**SAMPLE RESULTS**

Lab ID: L2121852-03 Date Collected: 04/28/21 12:50

Client ID: MW-209 Date Received: 04/28/21

Sample Location: LIBERTY, NY Field Prep: Not Specified

Sample Depth:

| Parameter | Result | Qualifier | Units | RL | MDL | Dilution Factor |
|---|---|---|---|---|---|---|
| **Volatile Organics by GC/MS - Westborough Lab** | | | | | | |
| Trichloroethene | ND | | ug/l | 0.50 | 0.18 | 1 |
| 1,2-Dichlorobenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,3-Dichlorobenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,4-Dichlorobenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Methyl tert butyl ether | ND | | ug/l | 2.5 | 0.70 | 1 |
| p/m-Xylene | ND | | ug/l | 2.5 | 0.70 | 1 |
| o-Xylene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Xylenes, Total | ND | | ug/l | 2.5 | 0.70 | 1 |
| cis-1,2-Dichloroethene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,2-Dichloroethene, Total | ND | | ug/l | 2.5 | 0.70 | 1 |
| Dibromomethane | ND | | ug/l | 5.0 | 1.0 | 1 |
| 1,2,3-Trichloropropane | ND | | ug/l | 2.5 | 0.70 | 1 |
| Acrylonitrile | ND | | ug/l | 5.0 | 1.5 | 1 |
| Styrene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Dichlorodifluoromethane | ND | | ug/l | 5.0 | 1.0 | 1 |
| Acetone | ND | | ug/l | 5.0 | 1.5 | 1 |
| Carbon disulfide | ND | | ug/l | 5.0 | 1.0 | 1 |
| 2-Butanone | ND | | ug/l | 5.0 | 1.9 | 1 |
| Vinyl acetate | ND | | ug/l | 5.0 | 1.0 | 1 |
| 4-Methyl-2-pentanone | ND | | ug/l | 5.0 | 1.0 | 1 |
| 2-Hexanone | ND | | ug/l | 5.0 | 1.0 | 1 |
| Bromochloromethane | ND | | ug/l | 2.5 | 0.70 | 1 |
| 2,2-Dichloropropane | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,2-Dibromoethane | ND | | ug/l | 2.0 | 0.65 | 1 |
| 1,3-Dichloropropane | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,1,1,2-Tetrachloroethane | ND | | ug/l | 2.5 | 0.70 | 1 |
| Bromobenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| n-Butylbenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| sec-Butylbenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| tert-Butylbenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| o-Chlorotoluene | ND | | ug/l | 2.5 | 0.70 | 1 |
| p-Chlorotoluene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,2-Dibromo-3-chloropropane | ND | | ug/l | 2.5 | 0.70 | 1 |
| Hexachlorobutadiene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Isopropylbenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| p-Isopropyltoluene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Naphthalene | ND | | ug/l | 2.5 | 0.70 | 1 |

**Project Name:** GROSSINGERS **Lab Number:** L2121852

**Project Number:** 9313 **Report Date:** 05/12/21

## SAMPLE RESULTS

Lab ID: L2121852-03 Date Collected: 04/28/21 12:50

Client ID: MW-209 Date Received: 04/28/21

Sample Location: LIBERTY, NY Field Prep: Not Specified

Sample Depth:

| Parameter | Result | Qualifier | Units | RL | MDL | Dilution Factor |
|---|---|---|---|---|---|---|
| **Volatile Organics by GC/MS - Westborough Lab** | | | | | | |
| n-Propylbenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,2,3-Trichlorobenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,2,4-Trichlorobenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,3,5-Trimethylbenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,2,4-Trimethylbenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,4-Dioxane | ND | | ug/l | 250 | 61. | 1 |
| p-Diethylbenzene | ND | | ug/l | 2.0 | 0.70 | 1 |
| p-Ethyltoluene | ND | | ug/l | 2.0 | 0.70 | 1 |
| 1,2,4,5-Tetramethylbenzene | ND | | ug/l | 2.0 | 0.54 | 1 |
| Ethyl ether | ND | | ug/l | 2.5 | 0.70 | 1 |
| trans-1,4-Dichloro-2-butene | ND | | ug/l | 2.5 | 0.70 | 1 |
| **Tentatively Identified Compounds** | | | | | | |
| No Tentatively Identified Compounds | ND | | ug/l | | | 1 |

| Surrogate | % Recovery | Qualifier | Acceptance Criteria |
|---|---|---|---|
| 1,2-Dichloroethane-d4 | 101 | | 70-130 |
| Toluene-d8 | 109 | | 70-130 |
| 4-Bromofluorobenzene | 105 | | 70-130 |
| Dibromofluoromethane | 95 | | 70-130 |

**Project Name:** GROSSINGERS
**Project Number:** 9313
**Lab Number:** L2121852
**Report Date:** 05/12/21

**SAMPLE RESULTS**

Lab ID: L2121852-04
Client ID: MW-211
Sample Location: LIBERTY, NY

Date Collected: 04/28/21 10:45
Date Received: 04/28/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8260C
Analytical Date: 05/03/21 13:47
Analyst: NLK

| Parameter | Result | Qualifier | Units | RL | MDL | Dilution Factor |
|---|---|---|---|---|---|---|
| **Volatile Organics by GC/MS - Westborough Lab** | | | | | | |
| Methylene chloride | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,1-Dichloroethane | ND | | ug/l | 2.5 | 0.70 | 1 |
| Chloroform | ND | | ug/l | 2.5 | 0.70 | 1 |
| Carbon tetrachloride | ND | | ug/l | 0.50 | 0.13 | 1 |
| 1,2-Dichloropropane | ND | | ug/l | 1.0 | 0.14 | 1 |
| Dibromochloromethane | ND | | ug/l | 0.50 | 0.15 | 1 |
| 1,1,2-Trichloroethane | ND | | ug/l | 1.5 | 0.50 | 1 |
| Tetrachloroethene | ND | | ug/l | 0.50 | 0.18 | 1 |
| Chlorobenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Trichlorofluoromethane | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,2-Dichloroethane | ND | | ug/l | 0.50 | 0.13 | 1 |
| 1,1,1-Trichloroethane | ND | | ug/l | 2.5 | 0.70 | 1 |
| Bromodichloromethane | ND | | ug/l | 0.50 | 0.19 | 1 |
| trans-1,3-Dichloropropene | ND | | ug/l | 0.50 | 0.16 | 1 |
| cis-1,3-Dichloropropene | ND | | ug/l | 0.50 | 0.14 | 1 |
| 1,3-Dichloropropene, Total | ND | | ug/l | 0.50 | 0.14 | 1 |
| 1,1-Dichloropropene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Bromoform | ND | | ug/l | 2.0 | 0.65 | 1 |
| 1,1,2,2-Tetrachloroethane | ND | | ug/l | 0.50 | 0.17 | 1 |
| Benzene | ND | | ug/l | 0.50 | 0.16 | 1 |
| Toluene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Ethylbenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Chloromethane | ND | | ug/l | 2.5 | 0.70 | 1 |
| Bromomethane | ND | | ug/l | 2.5 | 0.70 | 1 |
| Vinyl chloride | ND | | ug/l | 1.0 | 0.07 | 1 |
| Chloroethane | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,1-Dichloroethene | ND | | ug/l | 0.50 | 0.17 | 1 |
| trans-1,2-Dichloroethene | ND | | ug/l | 2.5 | 0.70 | 1 |

**Project Name:** GROSSINGERS **Lab Number:** L2121852

**Project Number:** 9313 **Report Date:** 05/12/21

**SAMPLE RESULTS**

Lab ID: L2121852-04 Date Collected: 04/28/21 10:45

Client ID: MW-211 Date Received: 04/28/21

Sample Location: LIBERTY, NY Field Prep: Not Specified

Sample Depth:

| Parameter | Result | Qualifier | Units | RL | MDL | Dilution Factor |
|---|---|---|---|---|---|---|
| **Volatile Organics by GC/MS - Westborough Lab** | | | | | | |
| Trichloroethene | ND | | ug/l | 0.50 | 0.18 | 1 |
| 1,2-Dichlorobenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,3-Dichlorobenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,4-Dichlorobenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Methyl tert butyl ether | ND | | ug/l | 2.5 | 0.70 | 1 |
| p/m-Xylene | ND | | ug/l | 2.5 | 0.70 | 1 |
| o-Xylene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Xylenes, Total | ND | | ug/l | 2.5 | 0.70 | 1 |
| cis-1,2-Dichloroethene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,2-Dichloroethene, Total | ND | | ug/l | 2.5 | 0.70 | 1 |
| Dibromomethane | ND | | ug/l | 5.0 | 1.0 | 1 |
| 1,2,3-Trichloropropane | ND | | ug/l | 2.5 | 0.70 | 1 |
| Acrylonitrile | ND | | ug/l | 5.0 | 1.5 | 1 |
| Styrene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Dichlorodifluoromethane | ND | | ug/l | 5.0 | 1.0 | 1 |
| Acetone | ND | | ug/l | 5.0 | 1.5 | 1 |
| Carbon disulfide | ND | | ug/l | 5.0 | 1.0 | 1 |
| 2-Butanone | ND | | ug/l | 5.0 | 1.9 | 1 |
| Vinyl acetate | ND | | ug/l | 5.0 | 1.0 | 1 |
| 4-Methyl-2-pentanone | ND | | ug/l | 5.0 | 1.0 | 1 |
| 2-Hexanone | ND | | ug/l | 5.0 | 1.0 | 1 |
| Bromochloromethane | ND | | ug/l | 2.5 | 0.70 | 1 |
| 2,2-Dichloropropane | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,2-Dibromoethane | ND | | ug/l | 2.0 | 0.65 | 1 |
| 1,3-Dichloropropane | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,1,1,2-Tetrachloroethane | ND | | ug/l | 2.5 | 0.70 | 1 |
| Bromobenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| n-Butylbenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| sec-Butylbenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| tert-Butylbenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| o-Chlorotoluene | ND | | ug/l | 2.5 | 0.70 | 1 |
| p-Chlorotoluene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,2-Dibromo-3-chloropropane | ND | | ug/l | 2.5 | 0.70 | 1 |
| Hexachlorobutadiene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Isopropylbenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| p-Isopropyltoluene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Naphthalene | ND | | ug/l | 2.5 | 0.70 | 1 |

**Project Name:** GROSSINGERS **Lab Number:** L2121852

**Project Number:** 9313 **Report Date:** 05/12/21

## SAMPLE RESULTS

Lab ID: L2121852-04 Date Collected: 04/28/21 10:45

Client ID: MW-211 Date Received: 04/28/21

Sample Location: LIBERTY, NY Field Prep: Not Specified

Sample Depth:

| Parameter | Result | Qualifier | Units | RL | MDL | Dilution Factor |
|---|---|---|---|---|---|---|
| **Volatile Organics by GC/MS - Westborough Lab** | | | | | | |
| n-Propylbenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,2,3-Trichlorobenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,2,4-Trichlorobenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,3,5-Trimethylbenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,2,4-Trimethylbenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,4-Dioxane | ND | | ug/l | 250 | 61. | 1 |
| p-Diethylbenzene | ND | | ug/l | 2.0 | 0.70 | 1 |
| p-Ethyltoluene | ND | | ug/l | 2.0 | 0.70 | 1 |
| 1,2,4,5-Tetramethylbenzene | ND | | ug/l | 2.0 | 0.54 | 1 |
| Ethyl ether | ND | | ug/l | 2.5 | 0.70 | 1 |
| trans-1,4-Dichloro-2-butene | ND | | ug/l | 2.5 | 0.70 | 1 |
| **Tentatively Identified Compounds** | | | | | | |
| No Tentatively Identified Compounds | ND | | ug/l | | | 1 |

| Surrogate | % Recovery | Qualifier | Acceptance Criteria |
|---|---|---|---|
| 1,2-Dichloroethane-d4 | 100 | | 70-130 |
| Toluene-d8 | 110 | | 70-130 |
| 4-Bromofluorobenzene | 105 | | 70-130 |
| Dibromofluoromethane | 95 | | 70-130 |

**Project Name:** GROSSINGERS
**Project Number:** 9313
**Lab Number:** L2121852
**Report Date:** 05/12/21

## SAMPLE RESULTS

Lab ID: L2121852-05
Client ID: MW-216
Sample Location: LIBERTY, NY

Date Collected: 04/28/21 11:20
Date Received: 04/28/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8260C
Analytical Date: 05/03/21 14:10
Analyst: NLK

| Parameter | Result | Qualifier | Units | RL | MDL | Dilution Factor |
|---|---|---|---|---|---|---|
| **Volatile Organics by GC/MS - Westborough Lab** | | | | | | |
| Methylene chloride | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,1-Dichloroethane | ND | | ug/l | 2.5 | 0.70 | 1 |
| Chloroform | ND | | ug/l | 2.5 | 0.70 | 1 |
| Carbon tetrachloride | ND | | ug/l | 0.50 | 0.13 | 1 |
| 1,2-Dichloropropane | ND | | ug/l | 1.0 | 0.14 | 1 |
| Dibromochloromethane | ND | | ug/l | 0.50 | 0.15 | 1 |
| 1,1,2-Trichloroethane | ND | | ug/l | 1.5 | 0.50 | 1 |
| Tetrachloroethene | ND | | ug/l | 0.50 | 0.18 | 1 |
| Chlorobenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Trichlorofluoromethane | 29 | | ug/l | 2.5 | 0.70 | 1 |
| 1,2-Dichloroethane | ND | | ug/l | 0.50 | 0.13 | 1 |
| 1,1,1-Trichloroethane | ND | | ug/l | 2.5 | 0.70 | 1 |
| Bromodichloromethane | ND | | ug/l | 0.50 | 0.19 | 1 |
| trans-1,3-Dichloropropene | ND | | ug/l | 0.50 | 0.16 | 1 |
| cis-1,3-Dichloropropene | ND | | ug/l | 0.50 | 0.14 | 1 |
| 1,3-Dichloropropene, Total | ND | | ug/l | 0.50 | 0.14 | 1 |
| 1,1-Dichloropropene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Bromoform | ND | | ug/l | 2.0 | 0.65 | 1 |
| 1,1,2,2-Tetrachloroethane | ND | | ug/l | 0.50 | 0.17 | 1 |
| Benzene | ND | | ug/l | 0.50 | 0.16 | 1 |
| Toluene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Ethylbenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Chloromethane | ND | | ug/l | 2.5 | 0.70 | 1 |
| Bromomethane | ND | | ug/l | 2.5 | 0.70 | 1 |
| Vinyl chloride | ND | | ug/l | 1.0 | 0.07 | 1 |
| Chloroethane | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,1-Dichloroethene | ND | | ug/l | 0.50 | 0.17 | 1 |
| trans-1,2-Dichloroethene | ND | | ug/l | 2.5 | 0.70 | 1 |

**Project Name:** GROSSINGERS **Lab Number:** L2121852

**Project Number:** 9313 **Report Date:** 05/12/21

**SAMPLE RESULTS**

Lab ID: L2121852-05 Date Collected: 04/28/21 11:20

Client ID: MW-216 Date Received: 04/28/21

Sample Location: LIBERTY, NY Field Prep: Not Specified

Sample Depth:

| Parameter | Result | Qualifier | Units | RL | MDL | Dilution Factor |
|---|---|---|---|---|---|---|
| **Volatile Organics by GC/MS - Westborough Lab** | | | | | | |
| Trichloroethene | ND | | ug/l | 0.50 | 0.18 | 1 |
| 1,2-Dichlorobenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,3-Dichlorobenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,4-Dichlorobenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Methyl tert butyl ether | ND | | ug/l | 2.5 | 0.70 | 1 |
| p/m-Xylene | ND | | ug/l | 2.5 | 0.70 | 1 |
| o-Xylene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Xylenes, Total | ND | | ug/l | 2.5 | 0.70 | 1 |
| cis-1,2-Dichloroethene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,2-Dichloroethene, Total | ND | | ug/l | 2.5 | 0.70 | 1 |
| Dibromomethane | ND | | ug/l | 5.0 | 1.0 | 1 |
| 1,2,3-Trichloropropane | ND | | ug/l | 2.5 | 0.70 | 1 |
| Acrylonitrile | ND | | ug/l | 5.0 | 1.5 | 1 |
| Styrene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Dichlorodifluoromethane | 11 | | ug/l | 5.0 | 1.0 | 1 |
| Acetone | ND | | ug/l | 5.0 | 1.5 | 1 |
| Carbon disulfide | ND | | ug/l | 5.0 | 1.0 | 1 |
| 2-Butanone | ND | | ug/l | 5.0 | 1.9 | 1 |
| Vinyl acetate | ND | | ug/l | 5.0 | 1.0 | 1 |
| 4-Methyl-2-pentanone | ND | | ug/l | 5.0 | 1.0 | 1 |
| 2-Hexanone | ND | | ug/l | 5.0 | 1.0 | 1 |
| Bromochloromethane | ND | | ug/l | 2.5 | 0.70 | 1 |
| 2,2-Dichloropropane | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,2-Dibromoethane | ND | | ug/l | 2.0 | 0.65 | 1 |
| 1,3-Dichloropropane | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,1,1,2-Tetrachloroethane | ND | | ug/l | 2.5 | 0.70 | 1 |
| Bromobenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| n-Butylbenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| sec-Butylbenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| tert-Butylbenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| o-Chlorotoluene | ND | | ug/l | 2.5 | 0.70 | 1 |
| p-Chlorotoluene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,2-Dibromo-3-chloropropane | ND | | ug/l | 2.5 | 0.70 | 1 |
| Hexachlorobutadiene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Isopropylbenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| p-Isopropyltoluene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Naphthalene | ND | | ug/l | 2.5 | 0.70 | 1 |

**Project Name:** GROSSINGERS **Lab Number:** L2121852

**Project Number:** 9313 **Report Date:** 05/12/21

## SAMPLE RESULTS

Lab ID: L2121852-05 Date Collected: 04/28/21 11:20

Client ID: MW-216 Date Received: 04/28/21

Sample Location: LIBERTY, NY Field Prep: Not Specified

Sample Depth:

| Parameter | Result | Qualifier | Units | RL | MDL | Dilution Factor |
|---|---|---|---|---|---|---|
| **Volatile Organics by GC/MS - Westborough Lab** | | | | | | |
| n-Propylbenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,2,3-Trichlorobenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,2,4-Trichlorobenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,3,5-Trimethylbenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,2,4-Trimethylbenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,4-Dioxane | ND | | ug/l | 250 | 61. | 1 |
| p-Diethylbenzene | ND | | ug/l | 2.0 | 0.70 | 1 |
| p-Ethyltoluene | ND | | ug/l | 2.0 | 0.70 | 1 |
| 1,2,4,5-Tetramethylbenzene | ND | | ug/l | 2.0 | 0.54 | 1 |
| Ethyl ether | ND | | ug/l | 2.5 | 0.70 | 1 |
| trans-1,4-Dichloro-2-butene | ND | | ug/l | 2.5 | 0.70 | 1 |
| **Tentatively Identified Compounds** | | | | | | |
| Total TIC Compounds | 12.9 | J | ug/l | | | 1 |
| Fluorodichloromethane | 12.9 | NJ | ug/l | | | 1 |

| Surrogate | % Recovery | Qualifier | Acceptance Criteria |
|---|---|---|---|
| 1,2-Dichloroethane-d4 | 101 | | 70-130 |
| Toluene-d8 | 109 | | 70-130 |
| 4-Bromofluorobenzene | 105 | | 70-130 |
| Dibromofluoromethane | 94 | | 70-130 |

**Project Name:** GROSSINGERS
**Project Number:** 9313
**Lab Number:** L2121852
**Report Date:** 05/12/21

**SAMPLE RESULTS**

Lab ID: L2121852-06
Client ID: MW-217
Sample Location: LIBERTY, NY

Date Collected: 04/28/21 12:40
Date Received: 04/28/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8260C
Analytical Date: 05/03/21 14:33
Analyst: NLK

| Parameter | Result | Qualifier | Units | RL | MDL | Dilution Factor |
|---|---|---|---|---|---|---|
| **Volatile Organics by GC/MS - Westborough Lab** | | | | | | |
| Methylene chloride | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,1-Dichloroethane | ND | | ug/l | 2.5 | 0.70 | 1 |
| Chloroform | ND | | ug/l | 2.5 | 0.70 | 1 |
| Carbon tetrachloride | ND | | ug/l | 0.50 | 0.13 | 1 |
| 1,2-Dichloropropane | ND | | ug/l | 1.0 | 0.14 | 1 |
| Dibromochloromethane | ND | | ug/l | 0.50 | 0.15 | 1 |
| 1,1,2-Trichloroethane | ND | | ug/l | 1.5 | 0.50 | 1 |
| Tetrachloroethene | ND | | ug/l | 0.50 | 0.18 | 1 |
| Chlorobenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Trichlorofluoromethane | 47 | | ug/l | 2.5 | 0.70 | 1 |
| 1,2-Dichloroethane | ND | | ug/l | 0.50 | 0.13 | 1 |
| 1,1,1-Trichloroethane | ND | | ug/l | 2.5 | 0.70 | 1 |
| Bromodichloromethane | ND | | ug/l | 0.50 | 0.19 | 1 |
| trans-1,3-Dichloropropene | ND | | ug/l | 0.50 | 0.16 | 1 |
| cis-1,3-Dichloropropene | ND | | ug/l | 0.50 | 0.14 | 1 |
| 1,3-Dichloropropene, Total | ND | | ug/l | 0.50 | 0.14 | 1 |
| 1,1-Dichloropropene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Bromoform | ND | | ug/l | 2.0 | 0.65 | 1 |
| 1,1,2,2-Tetrachloroethane | ND | | ug/l | 0.50 | 0.17 | 1 |
| Benzene | ND | | ug/l | 0.50 | 0.16 | 1 |
| Toluene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Ethylbenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Chloromethane | ND | | ug/l | 2.5 | 0.70 | 1 |
| Bromomethane | ND | | ug/l | 2.5 | 0.70 | 1 |
| Vinyl chloride | ND | | ug/l | 1.0 | 0.07 | 1 |
| Chloroethane | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,1-Dichloroethene | ND | | ug/l | 0.50 | 0.17 | 1 |
| trans-1,2-Dichloroethene | ND | | ug/l | 2.5 | 0.70 | 1 |

**Project Name:** GROSSINGERS **Lab Number:** L2121852

**Project Number:** 9313 **Report Date:** 05/12/21

## SAMPLE RESULTS

Lab ID: L2121852-06 Date Collected: 04/28/21 12:40

Client ID: MW-217 Date Received: 04/28/21

Sample Location: LIBERTY, NY Field Prep: Not Specified

Sample Depth:

| Parameter | Result | Qualifier | Units | RL | MDL | Dilution Factor |
|---|---|---|---|---|---|---|
| **Volatile Organics by GC/MS - Westborough Lab** | | | | | | |
| Trichloroethene | ND | | ug/l | 0.50 | 0.18 | 1 |
| 1,2-Dichlorobenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,3-Dichlorobenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,4-Dichlorobenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Methyl tert butyl ether | ND | | ug/l | 2.5 | 0.70 | 1 |
| p/m-Xylene | ND | | ug/l | 2.5 | 0.70 | 1 |
| o-Xylene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Xylenes, Total | ND | | ug/l | 2.5 | 0.70 | 1 |
| cis-1,2-Dichloroethene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,2-Dichloroethene, Total | ND | | ug/l | 2.5 | 0.70 | 1 |
| Dibromomethane | ND | | ug/l | 5.0 | 1.0 | 1 |
| 1,2,3-Trichloropropane | ND | | ug/l | 2.5 | 0.70 | 1 |
| Acrylonitrile | ND | | ug/l | 5.0 | 1.5 | 1 |
| Styrene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Dichlorodifluoromethane | ND | | ug/l | 5.0 | 1.0 | 1 |
| Acetone | ND | | ug/l | 5.0 | 1.5 | 1 |
| Carbon disulfide | ND | | ug/l | 5.0 | 1.0 | 1 |
| 2-Butanone | ND | | ug/l | 5.0 | 1.9 | 1 |
| Vinyl acetate | ND | | ug/l | 5.0 | 1.0 | 1 |
| 4-Methyl-2-pentanone | ND | | ug/l | 5.0 | 1.0 | 1 |
| 2-Hexanone | ND | | ug/l | 5.0 | 1.0 | 1 |
| Bromochloromethane | ND | | ug/l | 2.5 | 0.70 | 1 |
| 2,2-Dichloropropane | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,2-Dibromoethane | ND | | ug/l | 2.0 | 0.65 | 1 |
| 1,3-Dichloropropane | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,1,1,2-Tetrachloroethane | ND | | ug/l | 2.5 | 0.70 | 1 |
| Bromobenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| n-Butylbenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| sec-Butylbenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| tert-Butylbenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| o-Chlorotoluene | ND | | ug/l | 2.5 | 0.70 | 1 |
| p-Chlorotoluene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,2-Dibromo-3-chloropropane | ND | | ug/l | 2.5 | 0.70 | 1 |
| Hexachlorobutadiene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Isopropylbenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| p-Isopropyltoluene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Naphthalene | ND | | ug/l | 2.5 | 0.70 | 1 |

**Project Name:** GROSSINGERS **Lab Number:** L2121852

**Project Number:** 9313 **Report Date:** 05/12/21

## SAMPLE RESULTS

Lab ID: L2121852-06 Date Collected: 04/28/21 12:40

Client ID: MW-217 Date Received: 04/28/21

Sample Location: LIBERTY, NY Field Prep: Not Specified

Sample Depth:

| Parameter | Result | Qualifier | Units | RL | MDL | Dilution Factor |
|---|---|---|---|---|---|---|
| **Volatile Organics by GC/MS - Westborough Lab** | | | | | | |
| n-Propylbenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,2,3-Trichlorobenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,2,4-Trichlorobenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,3,5-Trimethylbenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,2,4-Trimethylbenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,4-Dioxane | ND | | ug/l | 250 | 61. | 1 |
| p-Diethylbenzene | ND | | ug/l | 2.0 | 0.70 | 1 |
| p-Ethyltoluene | ND | | ug/l | 2.0 | 0.70 | 1 |
| 1,2,4,5-Tetramethylbenzene | ND | | ug/l | 2.0 | 0.54 | 1 |
| Ethyl ether | ND | | ug/l | 2.5 | 0.70 | 1 |
| trans-1,4-Dichloro-2-butene | ND | | ug/l | 2.5 | 0.70 | 1 |
| **Tentatively Identified Compounds** | | | | | | |
| No Tentatively Identified Compounds | ND | | ug/l | | | 1 |

| Surrogate | % Recovery | Qualifier | Acceptance Criteria |
|---|---|---|---|
| 1,2-Dichloroethane-d4 | 102 | | 70-130 |
| Toluene-d8 | 109 | | 70-130 |
| 4-Bromofluorobenzene | 104 | | 70-130 |
| Dibromofluoromethane | 96 | | 70-130 |

**Project Name:** GROSSINGERS
**Project Number:** 9313
**Lab Number:** L2121852
**Report Date:** 05/12/21

## SAMPLE RESULTS

Lab ID: L2121852-07
Client ID: TB
Sample Location: LIBERTY, NY

Date Collected: 04/28/21 00:00
Date Received: 04/28/21
Field Prep: Not Specified

Sample Depth:
Matrix: Trip Blank (Aqueous)
Analytical Method: 1,8260C
Analytical Date: 05/03/21 12:14
Analyst: NLK

| Parameter | Result | Qualifier | Units | RL | MDL | Dilution Factor |
|---|---|---|---|---|---|---|
| **Volatile Organics by GC/MS - Westborough Lab** | | | | | | |
| Methylene chloride | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,1-Dichloroethane | ND | | ug/l | 2.5 | 0.70 | 1 |
| Chloroform | ND | | ug/l | 2.5 | 0.70 | 1 |
| Carbon tetrachloride | ND | | ug/l | 0.50 | 0.13 | 1 |
| 1,2-Dichloropropane | ND | | ug/l | 1.0 | 0.14 | 1 |
| Dibromochloromethane | ND | | ug/l | 0.50 | 0.15 | 1 |
| 1,1,2-Trichloroethane | ND | | ug/l | 1.5 | 0.50 | 1 |
| Tetrachloroethene | ND | | ug/l | 0.50 | 0.18 | 1 |
| Chlorobenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Trichlorofluoromethane | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,2-Dichloroethane | ND | | ug/l | 0.50 | 0.13 | 1 |
| 1,1,1-Trichloroethane | ND | | ug/l | 2.5 | 0.70 | 1 |
| Bromodichloromethane | ND | | ug/l | 0.50 | 0.19 | 1 |
| trans-1,3-Dichloropropene | ND | | ug/l | 0.50 | 0.16 | 1 |
| cis-1,3-Dichloropropene | ND | | ug/l | 0.50 | 0.14 | 1 |
| 1,3-Dichloropropene, Total | ND | | ug/l | 0.50 | 0.14 | 1 |
| 1,1-Dichloropropene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Bromoform | ND | | ug/l | 2.0 | 0.65 | 1 |
| 1,1,2,2-Tetrachloroethane | ND | | ug/l | 0.50 | 0.17 | 1 |
| Benzene | ND | | ug/l | 0.50 | 0.16 | 1 |
| Toluene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Ethylbenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Chloromethane | ND | | ug/l | 2.5 | 0.70 | 1 |
| Bromomethane | ND | | ug/l | 2.5 | 0.70 | 1 |
| Vinyl chloride | ND | | ug/l | 1.0 | 0.07 | 1 |
| Chloroethane | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,1-Dichloroethene | ND | | ug/l | 0.50 | 0.17 | 1 |
| trans-1,2-Dichloroethene | ND | | ug/l | 2.5 | 0.70 | 1 |

**Project Name:** GROSSINGERS **Lab Number:** L2121852

**Project Number:** 9313 **Report Date:** 05/12/21

**SAMPLE RESULTS**

Lab ID: L2121852-07 Date Collected: 04/28/21 00:00

Client ID: TB Date Received: 04/28/21

Sample Location: LIBERTY, NY Field Prep: Not Specified

Sample Depth:

| Parameter | Result | Qualifier | Units | RL | MDL | Dilution Factor |
|---|---|---|---|---|---|---|
| **Volatile Organics by GC/MS - Westborough Lab** | | | | | | |
| Trichloroethene | ND | | ug/l | 0.50 | 0.18 | 1 |
| 1,2-Dichlorobenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,3-Dichlorobenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,4-Dichlorobenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Methyl tert butyl ether | ND | | ug/l | 2.5 | 0.70 | 1 |
| p/m-Xylene | ND | | ug/l | 2.5 | 0.70 | 1 |
| o-Xylene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Xylenes, Total | ND | | ug/l | 2.5 | 0.70 | 1 |
| cis-1,2-Dichloroethene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,2-Dichloroethene, Total | ND | | ug/l | 2.5 | 0.70 | 1 |
| Dibromomethane | ND | | ug/l | 5.0 | 1.0 | 1 |
| 1,2,3-Trichloropropane | ND | | ug/l | 2.5 | 0.70 | 1 |
| Acrylonitrile | ND | | ug/l | 5.0 | 1.5 | 1 |
| Styrene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Dichlorodifluoromethane | ND | | ug/l | 5.0 | 1.0 | 1 |
| Acetone | 4.9 | J | ug/l | 5.0 | 1.5 | 1 |
| Carbon disulfide | ND | | ug/l | 5.0 | 1.0 | 1 |
| 2-Butanone | ND | | ug/l | 5.0 | 1.9 | 1 |
| Vinyl acetate | ND | | ug/l | 5.0 | 1.0 | 1 |
| 4-Methyl-2-pentanone | ND | | ug/l | 5.0 | 1.0 | 1 |
| 2-Hexanone | ND | | ug/l | 5.0 | 1.0 | 1 |
| Bromochloromethane | ND | | ug/l | 2.5 | 0.70 | 1 |
| 2,2-Dichloropropane | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,2-Dibromoethane | ND | | ug/l | 2.0 | 0.65 | 1 |
| 1,3-Dichloropropane | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,1,1,2-Tetrachloroethane | ND | | ug/l | 2.5 | 0.70 | 1 |
| Bromobenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| n-Butylbenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| sec-Butylbenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| tert-Butylbenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| o-Chlorotoluene | ND | | ug/l | 2.5 | 0.70 | 1 |
| p-Chlorotoluene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,2-Dibromo-3-chloropropane | ND | | ug/l | 2.5 | 0.70 | 1 |
| Hexachlorobutadiene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Isopropylbenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| p-Isopropyltoluene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Naphthalene | ND | | ug/l | 2.5 | 0.70 | 1 |

**Project Name:** GROSSINGERS **Lab Number:** L2121852

**Project Number:** 9313 **Report Date:** 05/12/21

## SAMPLE RESULTS

Lab ID: L2121852-07 Date Collected: 04/28/21 00:00

Client ID: TB Date Received: 04/28/21

Sample Location: LIBERTY, NY Field Prep: Not Specified

Sample Depth:

| Parameter | Result | Qualifier | Units | RL | MDL | Dilution Factor |
|---|---|---|---|---|---|---|
| **Volatile Organics by GC/MS - Westborough Lab** | | | | | | |
| n-Propylbenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,2,3-Trichlorobenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,2,4-Trichlorobenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,3,5-Trimethylbenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,2,4-Trimethylbenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,4-Dioxane | ND | | ug/l | 250 | 61. | 1 |
| p-Diethylbenzene | ND | | ug/l | 2.0 | 0.70 | 1 |
| p-Ethyltoluene | ND | | ug/l | 2.0 | 0.70 | 1 |
| 1,2,4,5-Tetramethylbenzene | ND | | ug/l | 2.0 | 0.54 | 1 |
| Ethyl ether | ND | | ug/l | 2.5 | 0.70 | 1 |
| trans-1,4-Dichloro-2-butene | ND | | ug/l | 2.5 | 0.70 | 1 |
| **Tentatively Identified Compounds** | | | | | | |
| No Tentatively Identified Compounds | ND | | ug/l | | | 1 |

| Surrogate | % Recovery | Qualifier | Acceptance Criteria |
|---|---|---|---|
| 1,2-Dichloroethane-d4 | 101 | | 70-130 |
| Toluene-d8 | 109 | | 70-130 |
| 4-Bromofluorobenzene | 106 | | 70-130 |
| Dibromofluoromethane | 95 | | 70-130 |

**Project Name:** GROSSINGERS
**Project Number:** 9313
**Lab Number:** L2121852
**Report Date:** 05/12/21

# Method Blank Analysis
## Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 05/03/21 11:51
Analyst: PD

| Parameter | Result | Qualifier | Units | RL | MDL |
|---|---|---|---|---|---|
| Volatile Organics by GC/MS - Westborough Lab for sample(s): 01-07 Batch: WG1494193-5 | | | | | |
| Methylene chloride | ND | | ug/l | 2.5 | 0.70 |
| 1,1-Dichloroethane | ND | | ug/l | 2.5 | 0.70 |
| Chloroform | ND | | ug/l | 2.5 | 0.70 |
| Carbon tetrachloride | ND | | ug/l | 0.50 | 0.13 |
| 1,2-Dichloropropane | ND | | ug/l | 1.0 | 0.14 |
| Dibromochloromethane | ND | | ug/l | 0.50 | 0.15 |
| 1,1,2-Trichloroethane | ND | | ug/l | 1.5 | 0.50 |
| Tetrachloroethene | ND | | ug/l | 0.50 | 0.18 |
| Chlorobenzene | ND | | ug/l | 2.5 | 0.70 |
| Trichlorofluoromethane | ND | | ug/l | 2.5 | 0.70 |
| 1,2-Dichloroethane | ND | | ug/l | 0.50 | 0.13 |
| 1,1,1-Trichloroethane | ND | | ug/l | 2.5 | 0.70 |
| Bromodichloromethane | ND | | ug/l | 0.50 | 0.19 |
| trans-1,3-Dichloropropene | ND | | ug/l | 0.50 | 0.16 |
| cis-1,3-Dichloropropene | ND | | ug/l | 0.50 | 0.14 |
| 1,3-Dichloropropene, Total | ND | | ug/l | 0.50 | 0.14 |
| 1,1-Dichloropropene | ND | | ug/l | 2.5 | 0.70 |
| Bromoform | ND | | ug/l | 2.0 | 0.65 |
| 1,1,2,2-Tetrachloroethane | ND | | ug/l | 0.50 | 0.17 |
| Benzene | ND | | ug/l | 0.50 | 0.16 |
| Toluene | ND | | ug/l | 2.5 | 0.70 |
| Ethylbenzene | ND | | ug/l | 2.5 | 0.70 |
| Chloromethane | ND | | ug/l | 2.5 | 0.70 |
| Bromomethane | ND | | ug/l | 2.5 | 0.70 |
| Vinyl chloride | ND | | ug/l | 1.0 | 0.07 |
| Chloroethane | ND | | ug/l | 2.5 | 0.70 |
| 1,1-Dichloroethene | ND | | ug/l | 0.50 | 0.17 |
| trans-1,2-Dichloroethene | ND | | ug/l | 2.5 | 0.70 |
| Trichloroethene | ND | | ug/l | 0.50 | 0.18 |

**Project Name:** GROSSINGERS
**Project Number:** 9313
**Lab Number:** L2121852
**Report Date:** 05/12/21

# Method Blank Analysis
## Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 05/03/21 11:51
Analyst: PD

| Parameter | Result | Qualifier | Units | RL | MDL |
|---|---|---|---|---|---|
| Volatile Organics by GC/MS - Westborough Lab for sample(s): 01-07 Batch: WG1494193-5 | | | | | |
| 1,2-Dichlorobenzene | ND | | ug/l | 2.5 | 0.70 |
| 1,3-Dichlorobenzene | ND | | ug/l | 2.5 | 0.70 |
| 1,4-Dichlorobenzene | ND | | ug/l | 2.5 | 0.70 |
| Methyl tert butyl ether | ND | | ug/l | 2.5 | 0.70 |
| p/m-Xylene | ND | | ug/l | 2.5 | 0.70 |
| o-Xylene | ND | | ug/l | 2.5 | 0.70 |
| Xylenes, Total | ND | | ug/l | 2.5 | 0.70 |
| cis-1,2-Dichloroethene | ND | | ug/l | 2.5 | 0.70 |
| 1,2-Dichloroethene, Total | ND | | ug/l | 2.5 | 0.70 |
| Dibromomethane | ND | | ug/l | 5.0 | 1.0 |
| 1,2,3-Trichloropropane | ND | | ug/l | 2.5 | 0.70 |
| Acrylonitrile | ND | | ug/l | 5.0 | 1.5 |
| Styrene | ND | | ug/l | 2.5 | 0.70 |
| Dichlorodifluoromethane | ND | | ug/l | 5.0 | 1.0 |
| Acetone | ND | | ug/l | 5.0 | 1.5 |
| Carbon disulfide | ND | | ug/l | 5.0 | 1.0 |
| 2-Butanone | ND | | ug/l | 5.0 | 1.9 |
| Vinyl acetate | ND | | ug/l | 5.0 | 1.0 |
| 4-Methyl-2-pentanone | ND | | ug/l | 5.0 | 1.0 |
| 2-Hexanone | ND | | ug/l | 5.0 | 1.0 |
| Bromochloromethane | ND | | ug/l | 2.5 | 0.70 |
| 2,2-Dichloropropane | ND | | ug/l | 2.5 | 0.70 |
| 1,2-Dibromoethane | ND | | ug/l | 2.0 | 0.65 |
| 1,3-Dichloropropane | ND | | ug/l | 2.5 | 0.70 |
| 1,1,1,2-Tetrachloroethane | ND | | ug/l | 2.5 | 0.70 |
| Bromobenzene | ND | | ug/l | 2.5 | 0.70 |
| n-Butylbenzene | ND | | ug/l | 2.5 | 0.70 |
| sec-Butylbenzene | ND | | ug/l | 2.5 | 0.70 |
| tert-Butylbenzene | ND | | ug/l | 2.5 | 0.70 |

**Project Name:** GROSSINGERS
**Project Number:** 9313
**Lab Number:** L2121852
**Report Date:** 05/12/21

# Method Blank Analysis
## Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 05/03/21 11:51
Analyst: PD

| Parameter | Result | Qualifier | Units | RL | MDL |
|---|---|---|---|---|---|
| Volatile Organics by GC/MS - Westborough Lab for sample(s): 01-07 Batch: WG1494193-5 | | | | | |
| o-Chlorotoluene | ND | | ug/l | 2.5 | 0.70 |
| p-Chlorotoluene | ND | | ug/l | 2.5 | 0.70 |
| 1,2-Dibromo-3-chloropropane | ND | | ug/l | 2.5 | 0.70 |
| Hexachlorobutadiene | ND | | ug/l | 2.5 | 0.70 |
| Isopropylbenzene | ND | | ug/l | 2.5 | 0.70 |
| p-Isopropyltoluene | ND | | ug/l | 2.5 | 0.70 |
| Naphthalene | ND | | ug/l | 2.5 | 0.70 |
| n-Propylbenzene | ND | | ug/l | 2.5 | 0.70 |
| 1,2,3-Trichlorobenzene | ND | | ug/l | 2.5 | 0.70 |
| 1,2,4-Trichlorobenzene | ND | | ug/l | 2.5 | 0.70 |
| 1,3,5-Trimethylbenzene | ND | | ug/l | 2.5 | 0.70 |
| 1,2,4-Trimethylbenzene | ND | | ug/l | 2.5 | 0.70 |
| 1,4-Dioxane | ND | | ug/l | 250 | 61. |
| p-Diethylbenzene | ND | | ug/l | 2.0 | 0.70 |
| p-Ethyltoluene | ND | | ug/l | 2.0 | 0.70 |
| 1,2,4,5-Tetramethylbenzene | ND | | ug/l | 2.0 | 0.54 |
| Ethyl ether | ND | | ug/l | 2.5 | 0.70 |
| trans-1,4-Dichloro-2-butene | ND | | ug/l | 2.5 | 0.70 |
| Tentatively Identified Compounds | | | | | |
| No Tentatively Identified Compounds | ND | | ug/l | | |

**Project Name:** GROSSINGERS
**Project Number:** 9313
**Lab Number:** L2121852
**Report Date:** 05/12/21

# Method Blank Analysis
## Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 05/03/21 11:51
Analyst: PD

| Parameter | Result | Qualifier | Units | RL | MDL |
|---|---|---|---|---|---|
| Volatile Organics by GC/MS - Westborough Lab for sample(s): 01-07 Batch: WG1494193-5 | | | | | |

| Surrogate | %Recovery | Qualifier | Acceptance Criteria |
|---|---|---|---|
| 1,2-Dichloroethane-d4 | 101 | | 70-130 |
| Toluene-d8 | 109 | | 70-130 |
| 4-Bromofluorobenzene | 105 | | 70-130 |
| Dibromofluoromethane | 94 | | 70-130 |

# Lab Control Sample Analysis
## Batch Quality Control

**Project Name:** GROSSINGERS
**Project Number:** 9313
**Lab Number:** L2121852
**Report Date:** 05/12/21

| Parameter | LCS %Recovery | Qual | LCSD %Recovery | Qual | %Recovery Limits | RPD | Qual | RPD Limits |
|---|---|---|---|---|---|---|---|---|
| Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-07 Batch: WG1494193-3 WG1494193-4 | | | | | | | | |
| Methylene chloride | 97 | | 97 | | 70-130 | 0 | | 20 |
| 1,1-Dichloroethane | 100 | | 100 | | 70-130 | 0 | | 20 |
| Chloroform | 96 | | 97 | | 70-130 | 1 | | 20 |
| Carbon tetrachloride | 92 | | 93 | | 63-132 | 1 | | 20 |
| 1,2-Dichloropropane | 100 | | 100 | | 70-130 | 0 | | 20 |
| Dibromochloromethane | 98 | | 100 | | 63-130 | 2 | | 20 |
| 1,1,2-Trichloroethane | 100 | | 110 | | 70-130 | 10 | | 20 |
| Tetrachloroethene | 110 | | 110 | | 70-130 | 0 | | 20 |
| Chlorobenzene | 100 | | 110 | | 75-130 | 10 | | 20 |
| Trichlorofluoromethane | 86 | | 87 | | 62-150 | 1 | | 20 |
| 1,2-Dichloroethane | 98 | | 100 | | 70-130 | 2 | | 20 |
| 1,1,1-Trichloroethane | 95 | | 97 | | 67-130 | 2 | | 20 |
| Bromodichloromethane | 94 | | 94 | | 67-130 | 0 | | 20 |
| trans-1,3-Dichloropropene | 97 | | 100 | | 70-130 | 3 | | 20 |
| cis-1,3-Dichloropropene | 93 | | 94 | | 70-130 | 1 | | 20 |
| 1,1-Dichloropropene | 96 | | 98 | | 70-130 | 2 | | 20 |
| Bromoform | 98 | | 100 | | 54-136 | 2 | | 20 |
| 1,1,2,2-Tetrachloroethane | 110 | | 110 | | 67-130 | 0 | | 20 |
| Benzene | 96 | | 97 | | 70-130 | 1 | | 20 |
| Toluene | 110 | | 110 | | 70-130 | 0 | | 20 |
| Ethylbenzene | 100 | | 110 | | 70-130 | 10 | | 20 |
| Chloromethane | 69 | | 73 | | 64-130 | 6 | | 20 |
| Bromomethane | 72 | | 72 | | 39-139 | 0 | | 20 |

# Lab Control Sample Analysis
## Batch Quality Control

**Project Name:** GROSSINGERS
**Project Number:** 9313

**Lab Number:** L2121852
**Report Date:** 05/12/21

| Parameter | LCS %Recovery | Qual | LCSD %Recovery | Qual | %Recovery Limits | RPD | Qual | RPD Limits |
|---|---|---|---|---|---|---|---|---|
| Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-07 Batch: WG1494193-3 WG1494193-4 | | | | | | | | |
| Vinyl chloride | 80 | | 83 | | 55-140 | 4 | | 20 |
| Chloroethane | 91 | | 93 | | 55-138 | 2 | | 20 |
| 1,1-Dichloroethene | 90 | | 92 | | 61-145 | 2 | | 20 |
| trans-1,2-Dichloroethene | 96 | | 97 | | 70-130 | 1 | | 20 |
| Trichloroethene | 99 | | 100 | | 70-130 | 1 | | 20 |
| 1,2-Dichlorobenzene | 110 | | 110 | | 70-130 | 0 | | 20 |
| 1,3-Dichlorobenzene | 110 | | 110 | | 70-130 | 0 | | 20 |
| 1,4-Dichlorobenzene | 110 | | 110 | | 70-130 | 0 | | 20 |
| Methyl tert butyl ether | 90 | | 93 | | 63-130 | 3 | | 20 |
| p/m-Xylene | 105 | | 110 | | 70-130 | 5 | | 20 |
| o-Xylene | 105 | | 110 | | 70-130 | 5 | | 20 |
| cis-1,2-Dichloroethene | 99 | | 100 | | 70-130 | 1 | | 20 |
| Dibromomethane | 96 | | 95 | | 70-130 | 1 | | 20 |
| 1,2,3-Trichloropropane | 110 | | 120 | | 64-130 | 9 | | 20 |
| Acrylonitrile | 110 | | 110 | | 70-130 | 0 | | 20 |
| Styrene | 100 | | 105 | | 70-130 | 5 | | 20 |
| Dichlorodifluoromethane | 59 | | 61 | | 36-147 | 3 | | 20 |
| Acetone | 120 | | 110 | | 58-148 | 9 | | 20 |
| Carbon disulfide | 93 | | 92 | | 51-130 | 1 | | 20 |
| 2-Butanone | 100 | | 100 | | 63-138 | 0 | | 20 |
| Vinyl acetate | 100 | | 98 | | 70-130 | 2 | | 20 |
| 4-Methyl-2-pentanone | 110 | | 110 | | 59-130 | 0 | | 20 |
| 2-Hexanone | 110 | | 120 | | 57-130 | 9 | | 20 |

# Lab Control Sample Analysis
## Batch Quality Control

**Project Name:** GROSSINGERS
**Project Number:** 9313
**Lab Number:** L2121852
**Report Date:** 05/12/21

| Parameter | LCS %Recovery | Qual | LCSD %Recovery | Qual | %Recovery Limits | RPD | Qual | RPD Limits |
|---|---|---|---|---|---|---|---|---|
| Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-07 Batch: WG1494193-3 WG1494193-4 | | | | | | | | |
| Bromochloromethane | 100 | | 100 | | 70-130 | 0 | | 20 |
| 2,2-Dichloropropane | 90 | | 89 | | 63-133 | 1 | | 20 |
| 1,2-Dibromoethane | 100 | | 110 | | 70-130 | 10 | | 20 |
| 1,3-Dichloropropane | 100 | | 110 | | 70-130 | 10 | | 20 |
| 1,1,1,2-Tetrachloroethane | 100 | | 100 | | 64-130 | 0 | | 20 |
| Bromobenzene | 110 | | 120 | | 70-130 | 9 | | 20 |
| n-Butylbenzene | 110 | | 110 | | 53-136 | 0 | | 20 |
| sec-Butylbenzene | 110 | | 120 | | 70-130 | 9 | | 20 |
| tert-Butylbenzene | 110 | | 120 | | 70-130 | 9 | | 20 |
| o-Chlorotoluene | 110 | | 110 | | 70-130 | 0 | | 20 |
| p-Chlorotoluene | 110 | | 110 | | 70-130 | 0 | | 20 |
| 1,2-Dibromo-3-chloropropane | 83 | | 93 | | 41-144 | 11 | | 20 |
| Hexachlorobutadiene | 110 | | 120 | | 63-130 | 9 | | 20 |
| Isopropylbenzene | 120 | | 120 | | 70-130 | 0 | | 20 |
| p-Isopropyltoluene | 110 | | 120 | | 70-130 | 9 | | 20 |
| Naphthalene | 92 | | 110 | | 70-130 | 18 | | 20 |
| n-Propylbenzene | 110 | | 120 | | 69-130 | 9 | | 20 |
| 1,2,3-Trichlorobenzene | 95 | | 110 | | 70-130 | 15 | | 20 |
| 1,2,4-Trichlorobenzene | 100 | | 110 | | 70-130 | 10 | | 20 |
| 1,3,5-Trimethylbenzene | 110 | | 120 | | 64-130 | 9 | | 20 |
| 1,2,4-Trimethylbenzene | 110 | | 110 | | 70-130 | 0 | | 20 |
| 1,4-Dioxane | 88 | | 90 | | 56-162 | 2 | | 20 |
| p-Diethylbenzene | 110 | | 110 | | 70-130 | 0 | | 20 |

# Lab Control Sample Analysis

## Batch Quality Control

**Project Name:** GROSSINGERS

**Project Number:** 9313

**Lab Number:** L2121852

**Report Date:** 05/12/21

| Parameter | LCS %Recovery | Qual | LCSD %Recovery | Qual | %Recovery Limits | RPD | Qual | RPD Limits |
|---|---|---|---|---|---|---|---|---|
| Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-07 Batch: WG1494193-3 WG1494193-4 | | | | | | | | |
| p-Ethyltoluene | 110 | | 120 | | 70-130 | 9 | | 20 |
| 1,2,4,5-Tetramethylbenzene | 100 | | 100 | | 70-130 | 0 | | 20 |
| Ethyl ether | 92 | | 94 | | 59-134 | 2 | | 20 |
| trans-1,4-Dichloro-2-butene | 87 | | 99 | | 70-130 | 13 | | 20 |

| Surrogate | LCS %Recovery | Qual | LCSD %Recovery | Qual | Acceptance Criteria |
|---|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 102 | | 101 | | 70-130 |
| Toluene-d8 | 108 | | 110 | | 70-130 |
| 4-Bromofluorobenzene | 104 | | 105 | | 70-130 |
| Dibromofluoromethane | 98 | | 98 | | 70-130 |

# SEMIVOLATILES

**Project Name:** GROSSINGERS
**Project Number:** 9313
**Lab Number:** L2121852
**Report Date:** 05/12/21

## SAMPLE RESULTS

Lab ID: L2121852-01
Client ID: MW-201
Sample Location: LIBERTY, NY

Date Collected: 04/28/21 12:10
Date Received: 04/28/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 134,LCMSMS-ID
Analytical Date: 05/10/21 04:07
Analyst: SG

Extraction Method: ALPHA 23528
Extraction Date: 05/05/21 15:25

| Parameter | Result | Qualifier | Units | RL | MDL | Dilution Factor |
|---|---|---|---|---|---|---|
| **Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab** | | | | | | |
| Perfluorobutanoic Acid (PFBA) | ND | | ng/l | 2.04 | 0.416 | 1 |
| Perfluoropentanoic Acid (PFPeA) | 0.514 | J | ng/l | 2.04 | 0.404 | 1 |
| Perfluorobutanesulfonic Acid (PFBS) | ND | | ng/l | 2.04 | 0.243 | 1 |
| Perfluorohexanoic Acid (PFHxA) | 0.518 | J | ng/l | 2.04 | 0.335 | 1 |
| Perfluoroheptanoic Acid (PFHpA) | ND | | ng/l | 2.04 | 0.230 | 1 |
| Perfluorohexanesulfonic Acid (PFHxS) | ND | | ng/l | 2.04 | 0.384 | 1 |
| Perfluorooctanoic Acid (PFOA) | 0.486 | J | ng/l | 2.04 | 0.241 | 1 |
| 1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS) | ND | | ng/l | 2.04 | 1.36 | 1 |
| Perfluoroheptanesulfonic Acid (PFHpS) | ND | | ng/l | 2.04 | 0.702 | 1 |
| Perfluorononanoic Acid (PFNA) | ND | | ng/l | 2.04 | 0.318 | 1 |
| Perfluorooctanesulfonic Acid (PFOS) | ND | | ng/l | 2.04 | 0.514 | 1 |
| Perfluorodecanoic Acid (PFDA) | ND | | ng/l | 2.04 | 0.310 | 1 |
| 1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS) | ND | | ng/l | 2.04 | 1.24 | 1 |
| N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA) | ND | | ng/l | 2.04 | 0.661 | 1 |
| Perfluoroundecanoic Acid (PFUnA) | ND | | ng/l | 2.04 | 0.265 | 1 |
| Perfluorodecanesulfonic Acid (PFDS) | ND | | ng/l | 2.04 | 1.00 | 1 |
| Perfluorooctanesulfonamide (FOSA) | ND | | ng/l | 2.04 | 0.592 | 1 |
| N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA) | ND | | ng/l | 2.04 | 0.820 | 1 |
| Perfluorododecanoic Acid (PFDoA) | ND | | ng/l | 2.04 | 0.380 | 1 |
| Perfluorotridecanoic Acid (PFTrDA) | ND | | ng/l | 2.04 | 0.334 | 1 |
| Perfluorotetradecanoic Acid (PFTA) | ND | | ng/l | 2.04 | 0.253 | 1 |
| PFOA/PFOS, Total | 0.486 | J | ng/l | 2.04 | 0.241 | 1 |

**Project Name:** GROSSINGERS **Lab Number:** L2121852

**Project Number:** 9313 **Report Date:** 05/12/21

## SAMPLE RESULTS

Lab ID: L2121852-01 Date Collected: 04/28/21 12:10

Client ID: MW-201 Date Received: 04/28/21

Sample Location: LIBERTY, NY Field Prep: Not Specified

Sample Depth:

| Parameter | Result | Qualifier | Units | RL | MDL | Dilution Factor |
|---|---|---|---|---|---|---|
| Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab | | | | | | |

| Surrogate (Extracted Internal Standard) | % Recovery | Qualifier | Acceptance Criteria |
|---|---|---|---|
| Perfluoro[13C4]Butanoic Acid (MPFBA) | 71 | | 58-132 |
| Perfluoro[13C5]Pentanoic Acid (M5PFPEA) | 85 | | 62-163 |
| Perfluoro[2,3,4-13C3]Butanesulfonic Acid (M3PFBS) | 88 | | 70-131 |
| Perfluoro[1,2,3,4,6-13C5]Hexanoic Acid (M5PFHxA) | 66 | | 57-129 |
| Perfluoro[1,2,3,4-13C4]Heptanoic Acid (M4PFHpA) | 69 | | 60-129 |
| Perfluoro[1,2,3-13C3]Hexanesulfonic Acid (M3PFHxS) | 91 | | 71-134 |
| Perfluoro[13C8]Octanoic Acid (M8PFOA) | 68 | | 62-129 |
| 1H,1H,2H,2H-Perfluoro[1,2-13C2]Octanesulfonic Acid (M2-6:2FTS) | 64 | | 14-147 |
| Perfluoro[13C9]Nonanoic Acid (M9PFNA) | 68 | | 59-139 |
| Perfluoro[13C8]Octanesulfonic Acid (M8PFOS) | 91 | | 69-131 |
| Perfluoro[1,2,3,4,5,6-13C6]Decanoic Acid (M6PFDA) | 72 | | 62-124 |
| 1H,1H,2H,2H-Perfluoro[1,2-13C2]Decanesulfonic Acid (M2-8:2FTS) | 49 | | 10-162 |
| N-Deuteriomethylperfluoro-1-octanesulfonamidoacetic Acid (d3-NMeFOSAA) | 46 | | 24-116 |
| Perfluoro[1,2,3,4,5,6,7-13C7]Undecanoic Acid (M7-PFUDA) | 79 | | 55-137 |
| Perfluoro[13C8]Octanesulfonamide (M8FOSA) | 13 | | 10-112 |
| N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA) | 50 | | 27-126 |
| Perfluoro[1,2-13C2]Dodecanoic Acid (MPFDOA) | 87 | | 48-131 |
| Perfluoro[1,2-13C2]Tetradecanoic Acid (M2PFTEDA) | 88 | | 22-136 |

**Project Name:** GROSSINGERS
**Project Number:** 9313
**Lab Number:** L2121852
**Report Date:** 05/12/21

## SAMPLE RESULTS

Lab ID: L2121852-02
Client ID: MW-203
Sample Location: LIBERTY, NY

Date Collected: 04/28/21 09:20
Date Received: 04/28/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 134,LCMSMS-ID
Analytical Date: 05/10/21 04:40
Analyst: SG

Extraction Method: ALPHA 23528
Extraction Date: 05/05/21 15:25

| Parameter | Result | Qualifier | Units | RL | MDL | Dilution Factor |
|---|---|---|---|---|---|---|
| **Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab** | | | | | | |
| Perfluorobutanoic Acid (PFBA) | 0.869 | J | ng/l | 1.82 | 0.371 | 1 |
| Perfluoropentanoic Acid (PFPeA) | 0.564 | J | ng/l | 1.82 | 0.360 | 1 |
| Perfluorobutanesulfonic Acid (PFBS) | ND | | ng/l | 1.82 | 0.216 | 1 |
| Perfluorohexanoic Acid (PFHxA) | 0.778 | J | ng/l | 1.82 | 0.298 | 1 |
| Perfluoroheptanoic Acid (PFHpA) | 0.629 | J | ng/l | 1.82 | 0.205 | 1 |
| Perfluorohexanesulfonic Acid (PFHxS) | 0.789 | J | ng/l | 1.82 | 0.342 | 1 |
| Perfluorooctanoic Acid (PFOA) | 3.26 | | ng/l | 1.82 | 0.214 | 1 |
| 1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS) | 2.13 | | ng/l | 1.82 | 1.21 | 1 |
| Perfluoroheptanesulfonic Acid (PFHpS) | ND | | ng/l | 1.82 | 0.625 | 1 |
| Perfluorononanoic Acid (PFNA) | 0.320 | J | ng/l | 1.82 | 0.284 | 1 |
| Perfluorooctanesulfonic Acid (PFOS) | 14.5 | | ng/l | 1.82 | 0.458 | 1 |
| Perfluorodecanoic Acid (PFDA) | ND | | ng/l | 1.82 | 0.276 | 1 |
| 1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS) | ND | | ng/l | 1.82 | 1.10 | 1 |
| N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA) | ND | | ng/l | 1.82 | 0.589 | 1 |
| Perfluoroundecanoic Acid (PFUnA) | ND | | ng/l | 1.82 | 0.236 | 1 |
| Perfluorodecanesulfonic Acid (PFDS) | ND | | ng/l | 1.82 | 0.891 | 1 |
| Perfluorooctanesulfonamide (FOSA) | 0.989 | JF | ng/l | 1.82 | 0.527 | 1 |
| N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA) | 3.14 | | ng/l | 1.82 | 0.731 | 1 |
| Perfluorododecanoic Acid (PFDoA) | ND | | ng/l | 1.82 | 0.338 | 1 |
| Perfluorotridecanoic Acid (PFTrDA) | ND | | ng/l | 1.82 | 0.297 | 1 |
| Perfluorotetradecanoic Acid (PFTA) | ND | | ng/l | 1.82 | 0.225 | 1 |
| PFOA/PFOS, Total | 17.8 | | ng/l | 1.82 | 0.214 | 1 |

**Project Name:** GROSSINGERS **Lab Number:** L2121852

**Project Number:** 9313 **Report Date:** 05/12/21

**SAMPLE RESULTS**

Lab ID: L2121852-02 Date Collected: 04/28/21 09:20

Client ID: MW-203 Date Received: 04/28/21

Sample Location: LIBERTY, NY Field Prep: Not Specified

Sample Depth:

| Parameter | Result | Qualifier | Units | RL | MDL | Dilution Factor |
|---|---|---|---|---|---|---|

Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab

| Surrogate (Extracted Internal Standard) | % Recovery | Qualifier | Acceptance Criteria |
|---|---|---|---|
| Perfluoro[13C4]Butanoic Acid (MPFBA) | 89 | | 58-132 |
| Perfluoro[13C5]Pentanoic Acid (M5PFPEA) | 104 | | 62-163 |
| Perfluoro[2,3,4-13C3]Butanesulfonic Acid (M3PFBS) | 89 | | 70-131 |
| Perfluoro[1,2,3,4,6-13C5]Hexanoic Acid (M5PFHxA) | 76 | | 57-129 |
| Perfluoro[1,2,3,4-13C4]Heptanoic Acid (M4PFHpA) | 84 | | 60-129 |
| Perfluoro[1,2,3-13C3]Hexanesulfonic Acid (M3PFHxS) | 90 | | 71-134 |
| Perfluoro[13C8]Octanoic Acid (M8PFOA) | 90 | | 62-129 |
| 1H,1H,2H,2H-Perfluoro[1,2-13C2]Octanesulfonic Acid (M2-6:2FTS) | 121 | | 14-147 |
| Perfluoro[13C9]Nonanoic Acid (M9PFNA) | 88 | | 59-139 |
| Perfluoro[13C8]Octanesulfonic Acid (M8PFOS) | 90 | | 69-131 |
| Perfluoro[1,2,3,4,5,6-13C6]Decanoic Acid (M6PFDA) | 89 | | 62-124 |
| 1H,1H,2H,2H-Perfluoro[1,2-13C2]Decanesulfonic Acid (M2-8:2FTS) | 70 | | 10-162 |
| N-Deuteriomethylperfluoro-1-octanesulfonamidoacetic Acid (d3-NMeFOSAA) | 81 | | 24-116 |
| Perfluoro[1,2,3,4,5,6,7-13C7]Undecanoic Acid (M7-PFUDA) | 90 | | 55-137 |
| Perfluoro[13C8]Octanesulfonamide (M8FOSA) | 27 | | 10-112 |
| N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA) | 77 | | 27-126 |
| Perfluoro[1,2-13C2]Dodecanoic Acid (MPFDOA) | 80 | | 48-131 |
| Perfluoro[1,2-13C2]Tetradecanoic Acid (M2PFTEDA) | 77 | | 22-136 |

**Project Name:** GROSSINGERS
**Project Number:** 9313
**Lab Number:** L2121852
**Report Date:** 05/12/21

## SAMPLE RESULTS

Lab ID: L2121852-03
Client ID: MW-209
Sample Location: LIBERTY, NY

Date Collected: 04/28/21 12:50
Date Received: 04/28/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 134,LCMSMS-ID
Analytical Date: 05/10/21 05:13
Analyst: SG

Extraction Method: ALPHA 23528
Extraction Date: 05/05/21 15:25

| Parameter | Result | Qualifier | Units | RL | MDL | Dilution Factor |
|---|---|---|---|---|---|---|
| **Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab** | | | | | | |
| Perfluorobutanoic Acid (PFBA) | 3.22 | | ng/l | 2.04 | 0.416 | 1 |
| Perfluoropentanoic Acid (PFPeA) | 2.11 | | ng/l | 2.04 | 0.404 | 1 |
| Perfluorobutanesulfonic Acid (PFBS) | 0.669 | J | ng/l | 2.04 | 0.243 | 1 |
| Perfluorohexanoic Acid (PFHxA) | 1.84 | J | ng/l | 2.04 | 0.335 | 1 |
| Perfluoroheptanoic Acid (PFHpA) | 1.63 | J | ng/l | 2.04 | 0.230 | 1 |
| Perfluorohexanesulfonic Acid (PFHxS) | 0.506 | JF | ng/l | 2.04 | 0.384 | 1 |
| Perfluorooctanoic Acid (PFOA) | 4.08 | | ng/l | 2.04 | 0.241 | 1 |
| 1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS) | 8.87 | | ng/l | 2.04 | 1.36 | 1 |
| Perfluoroheptanesulfonic Acid (PFHpS) | ND | | ng/l | 2.04 | 0.702 | 1 |
| Perfluorononanoic Acid (PFNA) | 1.40 | J | ng/l | 2.04 | 0.318 | 1 |
| Perfluorooctanesulfonic Acid (PFOS) | 2.44 | | ng/l | 2.04 | 0.514 | 1 |
| Perfluorodecanoic Acid (PFDA) | ND | | ng/l | 2.04 | 0.310 | 1 |
| 1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS) | ND | | ng/l | 2.04 | 1.24 | 1 |
| N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA) | ND | | ng/l | 2.04 | 0.661 | 1 |
| Perfluoroundecanoic Acid (PFUnA) | ND | | ng/l | 2.04 | 0.265 | 1 |
| Perfluorodecanesulfonic Acid (PFDS) | ND | | ng/l | 2.04 | 1.00 | 1 |
| Perfluorooctanesulfonamide (FOSA) | ND | | ng/l | 2.04 | 0.592 | 1 |
| N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA) | ND | | ng/l | 2.04 | 0.820 | 1 |
| Perfluorododecanoic Acid (PFDoA) | ND | | ng/l | 2.04 | 0.380 | 1 |
| Perfluorotridecanoic Acid (PFTrDA) | ND | | ng/l | 2.04 | 0.334 | 1 |
| Perfluorotetradecanoic Acid (PFTA) | ND | | ng/l | 2.04 | 0.253 | 1 |
| PFOA/PFOS, Total | 6.52 | | ng/l | 2.04 | 0.241 | 1 |

**Project Name:** GROSSINGERS **Lab Number:** L2121852

**Project Number:** 9313 **Report Date:** 05/12/21

**SAMPLE RESULTS**

Lab ID: L2121852-03 Date Collected: 04/28/21 12:50

Client ID: MW-209 Date Received: 04/28/21

Sample Location: LIBERTY, NY Field Prep: Not Specified

Sample Depth:

| Parameter | Result | Qualifier | Units | RL | MDL | Dilution Factor |
|---|---|---|---|---|---|---|
| Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab | | | | | | |

| Surrogate (Extracted Internal Standard) | % Recovery | Qualifier | Acceptance Criteria |
|---|---|---|---|
| Perfluoro[13C4]Butanoic Acid (MPFBA) | 88 | | 58-132 |
| Perfluoro[13C5]Pentanoic Acid (M5PFPEA) | 102 | | 62-163 |
| Perfluoro[2,3,4-13C3]Butanesulfonic Acid (M3PFBS) | 88 | | 70-131 |
| Perfluoro[1,2,3,4,6-13C5]Hexanoic Acid (M5PFHxA) | 77 | | 57-129 |
| Perfluoro[1,2,3,4-13C4]Heptanoic Acid (M4PFHpA) | 85 | | 60-129 |
| Perfluoro[1,2,3-13C3]Hexanesulfonic Acid (M3PFHxS) | 89 | | 71-134 |
| Perfluoro[13C8]Octanoic Acid (M8PFOA) | 88 | | 62-129 |
| 1H,1H,2H,2H-Perfluoro[1,2-13C2]Octanesulfonic Acid (M2-6:2FTS) | 86 | | 14-147 |
| Perfluoro[13C9]Nonanoic Acid (M9PFNA) | 82 | | 59-139 |
| Perfluoro[13C8]Octanesulfonic Acid (M8PFOS) | 89 | | 69-131 |
| Perfluoro[1,2,3,4,5,6-13C6]Decanoic Acid (M6PFDA) | 85 | | 62-124 |
| 1H,1H,2H,2H-Perfluoro[1,2-13C2]Decanesulfonic Acid (M2-8:2FTS) | 55 | | 10-162 |
| N-Deuteriomethylperfluoro-1-octanesulfonamidoacetic Acid (d3-NMeFOSAA) | 61 | | 24-116 |
| Perfluoro[1,2,3,4,5,6,7-13C7]Undecanoic Acid (M7-PFUDA) | 81 | | 55-137 |
| Perfluoro[13C8]Octanesulfonamide (M8FOSA) | 20 | | 10-112 |
| N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA) | 58 | | 27-126 |
| Perfluoro[1,2-13C2]Dodecanoic Acid (MPFDOA) | 80 | | 48-131 |
| Perfluoro[1,2-13C2]Tetradecanoic Acid (M2PFTEDA) | 84 | | 22-136 |

**Project Name:** GROSSINGERS
**Project Number:** 9313
**Lab Number:** L2121852
**Report Date:** 05/12/21

**SAMPLE RESULTS**

Lab ID: L2121852-04
Client ID: MW-211
Sample Location: LIBERTY, NY

Date Collected: 04/28/21 10:45
Date Received: 04/28/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 134,LCMSMS-ID
Analytical Date: 05/10/21 05:29
Analyst: SG

Extraction Method: ALPHA 23528
Extraction Date: 05/05/21 15:25

| Parameter | Result | Qualifier | Units | RL | MDL | Dilution Factor |
|---|---|---|---|---|---|---|
| **Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab** | | | | | | |
| Perfluorobutanoic Acid (PFBA) | 0.482 | J | ng/l | 2.04 | 0.416 | 1 |
| Perfluoropentanoic Acid (PFPeA) | 0.551 | J | ng/l | 2.04 | 0.404 | 1 |
| Perfluorobutanesulfonic Acid (PFBS) | ND | | ng/l | 2.04 | 0.243 | 1 |
| Perfluorohexanoic Acid (PFHxA) | 0.555 | J | ng/l | 2.04 | 0.335 | 1 |
| Perfluoroheptanoic Acid (PFHpA) | ND | | ng/l | 2.04 | 0.230 | 1 |
| Perfluorohexanesulfonic Acid (PFHxS) | ND | | ng/l | 2.04 | 0.384 | 1 |
| Perfluorooctanoic Acid (PFOA) | 0.939 | J | ng/l | 2.04 | 0.241 | 1 |
| 1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS) | 1.84 | J | ng/l | 2.04 | 1.36 | 1 |
| Perfluoroheptanesulfonic Acid (PFHpS) | ND | | ng/l | 2.04 | 0.702 | 1 |
| Perfluorononanoic Acid (PFNA) | ND | | ng/l | 2.04 | 0.318 | 1 |
| Perfluorooctanesulfonic Acid (PFOS) | 1.58 | J | ng/l | 2.04 | 0.514 | 1 |
| Perfluorodecanoic Acid (PFDA) | ND | | ng/l | 2.04 | 0.310 | 1 |
| 1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS) | ND | | ng/l | 2.04 | 1.24 | 1 |
| N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA) | ND | | ng/l | 2.04 | 0.661 | 1 |
| Perfluoroundecanoic Acid (PFUnA) | ND | | ng/l | 2.04 | 0.265 | 1 |
| Perfluorodecanesulfonic Acid (PFDS) | ND | | ng/l | 2.04 | 1.00 | 1 |
| Perfluorooctanesulfonamide (FOSA) | ND | | ng/l | 2.04 | 0.592 | 1 |
| N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA) | ND | | ng/l | 2.04 | 0.820 | 1 |
| Perfluorododecanoic Acid (PFDoA) | ND | | ng/l | 2.04 | 0.380 | 1 |
| Perfluorotridecanoic Acid (PFTrDA) | ND | | ng/l | 2.04 | 0.334 | 1 |
| Perfluorotetradecanoic Acid (PFTA) | ND | | ng/l | 2.04 | 0.253 | 1 |
| PFOA/PFOS, Total | 2.52 | J | ng/l | 2.04 | 0.241 | 1 |

**Project Name:** GROSSINGERS **Lab Number:** L2121852

**Project Number:** 9313 **Report Date:** 05/12/21

**SAMPLE RESULTS**

Lab ID: L2121852-04 Date Collected: 04/28/21 10:45

Client ID: MW-211 Date Received: 04/28/21

Sample Location: LIBERTY, NY Field Prep: Not Specified

Sample Depth:

| Parameter | Result | Qualifier | Units | RL | MDL | Dilution Factor |
|---|---|---|---|---|---|---|

Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab

| Surrogate (Extracted Internal Standard) | % Recovery | Qualifier | Acceptance Criteria |
|---|---|---|---|
| Perfluoro[13C4]Butanoic Acid (MPFBA) | 77 | | 58-132 |
| Perfluoro[13C5]Pentanoic Acid (M5PFPEA) | 98 | | 62-163 |
| Perfluoro[2,3,4-13C3]Butanesulfonic Acid (M3PFBS) | 97 | | 70-131 |
| Perfluoro[1,2,3,4,6-13C5]Hexanoic Acid (M5PFHxA) | 74 | | 57-129 |
| Perfluoro[1,2,3,4-13C4]Heptanoic Acid (M4PFHpA) | 78 | | 60-129 |
| Perfluoro[1,2,3-13C3]Hexanesulfonic Acid (M3PFHxS) | 95 | | 71-134 |
| Perfluoro[13C8]Octanoic Acid (M8PFOA) | 76 | | 62-129 |
| 1H,1H,2H,2H-Perfluoro[1,2-13C2]Octanesulfonic Acid (M2-6:2FTS) | 66 | | 14-147 |
| Perfluoro[13C9]Nonanoic Acid (M9PFNA) | 74 | | 59-139 |
| Perfluoro[13C8]Octanesulfonic Acid (M8PFOS) | 89 | | 69-131 |
| Perfluoro[1,2,3,4,5,6-13C6]Decanoic Acid (M6PFDA) | 79 | | 62-124 |
| 1H,1H,2H,2H-Perfluoro[1,2-13C2]Decanesulfonic Acid (M2-8:2FTS) | 48 | | 10-162 |
| N-Deuteriomethylperfluoro-1-octanesulfonamidoacetic Acid (d3-NMeFOSAA) | 61 | | 24-116 |
| Perfluoro[1,2,3,4,5,6,7-13C7]Undecanoic Acid (M7-PFUDA) | 76 | | 55-137 |
| Perfluoro[13C8]Octanesulfonamide (M8FOSA) | 15 | | 10-112 |
| N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA) | 53 | | 27-126 |
| Perfluoro[1,2-13C2]Dodecanoic Acid (MPFDOA) | 75 | | 48-131 |
| Perfluoro[1,2-13C2]Tetradecanoic Acid (M2PFTEDA) | 84 | | 22-136 |

**Project Name:** GROSSINGERS
**Project Number:** 9313
**Lab Number:** L2121852
**Report Date:** 05/12/21

## SAMPLE RESULTS

Lab ID: L2121852-05
Client ID: MW-216
Sample Location: LIBERTY, NY

Date Collected: 04/28/21 11:20
Date Received: 04/28/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 134,LCMSMS-ID
Analytical Date: 05/10/21 05:46
Analyst: SG

Extraction Method: ALPHA 23528
Extraction Date: 05/05/21 15:25

| Parameter | Result | Qualifier | Units | RL | MDL | Dilution Factor |
|---|---|---|---|---|---|---|
| **Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab** | | | | | | |
| Perfluorobutanoic Acid (PFBA) | 5.08 | | ng/l | 1.80 | 0.368 | 1 |
| Perfluoropentanoic Acid (PFPeA) | 2.40 | | ng/l | 1.80 | 0.357 | 1 |
| Perfluorobutanesulfonic Acid (PFBS) | 1.30 | J | ng/l | 1.80 | 0.215 | 1 |
| Perfluorohexanoic Acid (PFHxA) | 3.06 | | ng/l | 1.80 | 0.296 | 1 |
| Perfluoroheptanoic Acid (PFHpA) | 2.39 | | ng/l | 1.80 | 0.203 | 1 |
| Perfluorohexanesulfonic Acid (PFHxS) | 3.56 | | ng/l | 1.80 | 0.339 | 1 |
| Perfluorooctanoic Acid (PFOA) | 10.8 | | ng/l | 1.80 | 0.213 | 1 |
| 1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS) | 2.29 | | ng/l | 1.80 | 1.20 | 1 |
| Perfluoroheptanesulfonic Acid (PFHpS) | ND | | ng/l | 1.80 | 0.621 | 1 |
| Perfluorononanoic Acid (PFNA) | 0.859 | J | ng/l | 1.80 | 0.282 | 1 |
| Perfluorooctanesulfonic Acid (PFOS) | 24.9 | | ng/l | 1.80 | 0.455 | 1 |
| Perfluorodecanoic Acid (PFDA) | 0.375 | JF | ng/l | 1.80 | 0.274 | 1 |
| 1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS) | ND | | ng/l | 1.80 | 1.09 | 1 |
| N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA) | ND | | ng/l | 1.80 | 0.585 | 1 |
| Perfluoroundecanoic Acid (PFUnA) | ND | | ng/l | 1.80 | 0.235 | 1 |
| Perfluorodecanesulfonic Acid (PFDS) | ND | | ng/l | 1.80 | 0.884 | 1 |
| Perfluorooctanesulfonamide (FOSA) | 0.664 | J | ng/l | 1.80 | 0.523 | 1 |
| N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA) | 0.744 | J | ng/l | 1.80 | 0.726 | 1 |
| Perfluorododecanoic Acid (PFDoA) | ND | | ng/l | 1.80 | 0.336 | 1 |
| Perfluorotridecanoic Acid (PFTrDA) | ND | | ng/l | 1.80 | 0.295 | 1 |
| Perfluorotetradecanoic Acid (PFTA) | ND | | ng/l | 1.80 | 0.224 | 1 |
| PFOA/PFOS, Total | 35.7 | | ng/l | 1.80 | 0.213 | 1 |

**Project Name:** GROSSINGERS **Lab Number:** L2121852

**Project Number:** 9313 **Report Date:** 05/12/21

**SAMPLE RESULTS**

Lab ID: L2121852-05 Date Collected: 04/28/21 11:20

Client ID: MW-216 Date Received: 04/28/21

Sample Location: LIBERTY, NY Field Prep: Not Specified

Sample Depth:

| Parameter | Result | Qualifier | Units | RL | MDL | Dilution Factor |
|---|---|---|---|---|---|---|

Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab

| Surrogate (Extracted Internal Standard) | % Recovery | Qualifier | Acceptance Criteria |
|---|---|---|---|
| Perfluoro[13C4]Butanoic Acid (MPFBA) | 81 | | 58-132 |
| Perfluoro[13C5]Pentanoic Acid (M5PFPEA) | 91 | | 62-163 |
| Perfluoro[2,3,4-13C3]Butanesulfonic Acid (M3PFBS) | 82 | | 70-131 |
| Perfluoro[1,2,3,4,6-13C5]Hexanoic Acid (M5PFHxA) | 68 | | 57-129 |
| Perfluoro[1,2,3,4-13C4]Heptanoic Acid (M4PFHpA) | 76 | | 60-129 |
| Perfluoro[1,2,3-13C3]Hexanesulfonic Acid (M3PFHxS) | 83 | | 71-134 |
| Perfluoro[13C8]Octanoic Acid (M8PFOA) | 81 | | 62-129 |
| 1H,1H,2H,2H-Perfluoro[1,2-13C2]Octanesulfonic Acid (M2-6:2FTS) | 111 | | 14-147 |
| Perfluoro[13C9]Nonanoic Acid (M9PFNA) | 78 | | 59-139 |
| Perfluoro[13C8]Octanesulfonic Acid (M8PFOS) | 82 | | 69-131 |
| Perfluoro[1,2,3,4,5,6-13C6]Decanoic Acid (M6PFDA) | 78 | | 62-124 |
| 1H,1H,2H,2H-Perfluoro[1,2-13C2]Decanesulfonic Acid (M2-8:2FTS) | 60 | | 10-162 |
| N-Deuteriomethylperfluoro-1-octanesulfonamidoacetic Acid (d3-NMeFOSAA) | 61 | | 24-116 |
| Perfluoro[1,2,3,4,5,6,7-13C7]Undecanoic Acid (M7-PFUDA) | 76 | | 55-137 |
| Perfluoro[13C8]Octanesulfonamide (M8FOSA) | 27 | | 10-112 |
| N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA) | 55 | | 27-126 |
| Perfluoro[1,2-13C2]Dodecanoic Acid (MPFDOA) | 73 | | 48-131 |
| Perfluoro[1,2-13C2]Tetradecanoic Acid (M2PFTEDA) | 66 | | 22-136 |

**Project Name:** GROSSINGERS
**Project Number:** 9313
**Lab Number:** L2121852
**Report Date:** 05/12/21

## SAMPLE RESULTS

Lab ID: L2121852-06
Client ID: MW-217
Sample Location: LIBERTY, NY

Date Collected: 04/28/21 12:40
Date Received: 04/28/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 134,LCMSMS-ID
Analytical Date: 05/10/21 06:02
Analyst: SG

Extraction Method: ALPHA 23528
Extraction Date: 05/05/21 15:25

| Parameter | Result | Qualifier | Units | RL | MDL | Dilution Factor |
|---|---|---|---|---|---|---|
| **Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab** | | | | | | |
| Perfluorobutanoic Acid (PFBA) | 3.66 | | ng/l | 1.77 | 0.362 | 1 |
| Perfluoropentanoic Acid (PFPeA) | 2.18 | | ng/l | 1.77 | 0.351 | 1 |
| Perfluorobutanesulfonic Acid (PFBS) | 2.75 | | ng/l | 1.77 | 0.211 | 1 |
| Perfluorohexanoic Acid (PFHxA) | 3.86 | | ng/l | 1.77 | 0.291 | 1 |
| Perfluoroheptanoic Acid (PFHpA) | 2.74 | | ng/l | 1.77 | 0.200 | 1 |
| Perfluorohexanesulfonic Acid (PFHxS) | 5.70 | | ng/l | 1.77 | 0.333 | 1 |
| Perfluorooctanoic Acid (PFOA) | 14.6 | | ng/l | 1.77 | 0.209 | 1 |
| 1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS) | 1.36 | J | ng/l | 1.77 | 1.18 | 1 |
| Perfluoroheptanesulfonic Acid (PFHpS) | ND | | ng/l | 1.77 | 0.610 | 1 |
| Perfluorononanoic Acid (PFNA) | 0.496 | J | ng/l | 1.77 | 0.276 | 1 |
| Perfluorooctanesulfonic Acid (PFOS) | 19.5 | | ng/l | 1.77 | 0.447 | 1 |
| Perfluorodecanoic Acid (PFDA) | ND | | ng/l | 1.77 | 0.270 | 1 |
| 1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS) | ND | | ng/l | 1.77 | 1.07 | 1 |
| N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA) | ND | | ng/l | 1.77 | 0.574 | 1 |
| Perfluoroundecanoic Acid (PFUnA) | ND | | ng/l | 1.77 | 0.230 | 1 |
| Perfluorodecanesulfonic Acid (PFDS) | ND | | ng/l | 1.77 | 0.869 | 1 |
| N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA) | ND | | ng/l | 1.77 | 0.713 | 1 |
| Perfluorododecanoic Acid (PFDoA) | ND | | ng/l | 1.77 | 0.330 | 1 |
| Perfluorotridecanoic Acid (PFTrDA) | ND | | ng/l | 1.77 | 0.290 | 1 |
| Perfluorotetradecanoic Acid (PFTA) | ND | | ng/l | 1.77 | 0.220 | 1 |
| PFOA/PFOS, Total | 34.1 | | ng/l | 1.77 | 0.209 | 1 |

**Project Name:** GROSSINGERS **Lab Number:** L2121852

**Project Number:** 9313 **Report Date:** 05/12/21

**SAMPLE RESULTS**

Lab ID: L2121852-06 Date Collected: 04/28/21 12:40

Client ID: MW-217 Date Received: 04/28/21

Sample Location: LIBERTY, NY Field Prep: Not Specified

Sample Depth:

| Parameter | Result | Qualifier | Units | RL | MDL | Dilution Factor |
|---|---|---|---|---|---|---|
| Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab | | | | | | |

| Surrogate (Extracted Internal Standard) | % Recovery | Qualifier | Acceptance Criteria |
|---|---|---|---|
| Perfluoro[13C4]Butanoic Acid (MPFBA) | 80 | | 58-132 |
| Perfluoro[13C5]Pentanoic Acid (M5PFPEA) | 101 | | 62-163 |
| Perfluoro[2,3,4-13C3]Butanesulfonic Acid (M3PFBS) | 91 | | 70-131 |
| Perfluoro[1,2,3,4,6-13C5]Hexanoic Acid (M5PFHxA) | 74 | | 57-129 |
| Perfluoro[1,2,3,4-13C4]Heptanoic Acid (M4PFHpA) | 79 | | 60-129 |
| Perfluoro[1,2,3-13C3]Hexanesulfonic Acid (M3PFHxS) | 86 | | 71-134 |
| Perfluoro[13C8]Octanoic Acid (M8PFOA) | 79 | | 62-129 |
| 1H,1H,2H,2H-Perfluoro[1,2-13C2]Octanesulfonic Acid (M2-6:2FTS) | 67 | | 14-147 |
| Perfluoro[13C9]Nonanoic Acid (M9PFNA) | 74 | | 59-139 |
| Perfluoro[13C8]Octanesulfonic Acid (M8PFOS) | 84 | | 69-131 |
| Perfluoro[1,2,3,4,5,6-13C6]Decanoic Acid (M6PFDA) | 74 | | 62-124 |
| 1H,1H,2H,2H-Perfluoro[1,2-13C2]Decanesulfonic Acid (M2-8:2FTS) | 48 | | 10-162 |
| N-Deuteriomethylperfluoro-1-octanesulfonamidoacetic Acid (d3-NMeFOSAA) | 55 | | 24-116 |
| Perfluoro[1,2,3,4,5,6,7-13C7]Undecanoic Acid (M7-PFUDA) | 74 | | 55-137 |
| N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA) | 49 | | 27-126 |
| Perfluoro[1,2-13C2]Dodecanoic Acid (MPFDOA) | 78 | | 48-131 |
| Perfluoro[1,2-13C2]Tetradecanoic Acid (M2PFTEDA) | 76 | | 22-136 |

**Project Name:** GROSSINGERS
**Project Number:** 9313
**Lab Number:** L2121852
**Report Date:** 05/12/21

## SAMPLE RESULTS

Lab ID: L2121852-06
Client ID: MW-217
Sample Location: LIBERTY, NY

Date Collected: 04/28/21 12:40
Date Received: 04/28/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 134,LCMSMS-ID
Analytical Date: 05/11/21 00:18
Analyst: HT

Extraction Method: ALPHA 23528
Extraction Date: 05/05/21 15:25

| Parameter | Result | Qualifier | Units | RL | MDL | Dilution Factor |
|---|---|---|---|---|---|---|
| **Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab** | | | | | | |
| Perfluorooctanesulfonamide (FOSA) | ND | | ng/l | 1.77 | 0.514 | 1 |

| Surrogate (Extracted Internal Standard) | % Recovery | Qualifier | Acceptance Criteria |
|---|---|---|---|
| Perfluoro[13C8]Octanesulfonamide (M8FOSA) | 79 | | 10-112 |

**Project Name:** GROSSINGERS
**Project Number:** 9313
**Lab Number:** L2121852
**Report Date:** 05/12/21

# Method Blank Analysis
## Batch Quality Control

Analytical Method: 134,LCMSMS-ID
Analytical Date: 05/10/21 02:44
Analyst: SG

Extraction Method: ALPHA 23528
Extraction Date: 05/05/21 15:25

| Parameter | Result | Qualifier | Units | RL | MDL |
|---|---|---|---|---|---|
| Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab for sample(s): 01-06 Batch: WG1494805-1 | | | | | |
| Perfluorobutanoic Acid (PFBA) | ND | | ng/l | 2.00 | 0.408 |
| Perfluoropentanoic Acid (PFPeA) | ND | | ng/l | 2.00 | 0.396 |
| Perfluorobutanesulfonic Acid (PFBS) | ND | | ng/l | 2.00 | 0.238 |
| Perfluorohexanoic Acid (PFHxA) | 0.568 | J | ng/l | 2.00 | 0.328 |
| Perfluoroheptanoic Acid (PFHpA) | ND | | ng/l | 2.00 | 0.225 |
| Perfluorohexanesulfonic Acid (PFHxS) | ND | | ng/l | 2.00 | 0.376 |
| Perfluorooctanoic Acid (PFOA) | ND | | ng/l | 2.00 | 0.236 |
| 1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS) | ND | | ng/l | 2.00 | 1.33 |
| Perfluoroheptanesulfonic Acid (PFHpS) | ND | | ng/l | 2.00 | 0.688 |
| Perfluorononanoic Acid (PFNA) | ND | | ng/l | 2.00 | 0.312 |
| Perfluorooctanesulfonic Acid (PFOS) | ND | | ng/l | 2.00 | 0.504 |
| Perfluorodecanoic Acid (PFDA) | ND | | ng/l | 2.00 | 0.304 |
| 1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS) | ND | | ng/l | 2.00 | 1.21 |
| N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA) | ND | | ng/l | 2.00 | 0.648 |
| Perfluoroundecanoic Acid (PFUnA) | ND | | ng/l | 2.00 | 0.260 |
| Perfluorodecanesulfonic Acid (PFDS) | ND | | ng/l | 2.00 | 0.980 |
| Perfluorooctanesulfonamide (FOSA) | ND | | ng/l | 2.00 | 0.580 |
| N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA) | ND | | ng/l | 2.00 | 0.804 |
| Perfluorododecanoic Acid (PFDoA) | ND | | ng/l | 2.00 | 0.372 |
| Perfluorotridecanoic Acid (PFTrDA) | ND | | ng/l | 2.00 | 0.327 |
| Perfluorotetradecanoic Acid (PFTA) | ND | | ng/l | 2.00 | 0.248 |
| PFOA/PFOS, Total | ND | | ng/l | 2.00 | 0.236 |

**Project Name:** GROSSINGERS
**Project Number:** 9313
**Lab Number:** L2121852
**Report Date:** 05/12/21

# Method Blank Analysis
## Batch Quality Control

Analytical Method: 134,LCMSMS-ID
Analytical Date: 05/10/21 02:44
Analyst: SG

Extraction Method: ALPHA 23528
Extraction Date: 05/05/21 15:25

| Parameter | Result | Qualifier | Units | RL | MDL |
|---|---|---|---|---|---|
| Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab for sample(s): 01-06 Batch: WG1494805-1 | | | | | |

| Surrogate (Extracted Internal Standard) | %Recovery | Qualifier | Acceptance Criteria |
|---|---|---|---|
| Perfluoro[13C4]Butanoic Acid (MPFBA) | 90 | | 58-132 |
| Perfluoro[13C5]Pentanoic Acid (M5PFPEA) | 128 | | 62-163 |
| Perfluoro[2,3,4-13C3]Butanesulfonic Acid (M3PFBS) | 101 | | 70-131 |
| Perfluoro[1,2,3,4,6-13C5]Hexanoic Acid (M5PFHxA) | 84 | | 57-129 |
| Perfluoro[1,2,3,4-13C4]Heptanoic Acid (M4PFHpA) | 89 | | 60-129 |
| Perfluoro[1,2,3-13C3]Hexanesulfonic Acid (M3PFHxS) | 98 | | 71-134 |
| Perfluoro[13C8]Octanoic Acid (M8PFOA) | 89 | | 62-129 |
| 1H,1H,2H,2H-Perfluoro[1,2-13C2]Octanesulfonic Acid (M2-6:2FTS) | 63 | | 14-147 |
| Perfluoro[13C9]Nonanoic Acid (M9PFNA) | 86 | | 59-139 |
| Perfluoro[13C8]Octanesulfonic Acid (M8PFOS) | 95 | | 69-131 |
| Perfluoro[1,2,3,4,5,6-13C6]Decanoic Acid (M6PFDA) | 90 | | 62-124 |
| 1H,1H,2H,2H-Perfluoro[1,2-13C2]Decanesulfonic Acid (M2-8:2FTS) | 55 | | 10-162 |
| N-Deuteriomethylperfluoro-1-octanesulfonamidoacetic Acid (d3-NMeFOSAA) | 70 | | 24-116 |
| Perfluoro[1,2,3,4,5,6,7-13C7]Undecanoic Acid (M7-PFUDA) | 94 | | 55-137 |
| Perfluoro[13C8]Octanesulfonamide (M8FOSA) | 42 | | 10-112 |
| N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA) | 71 | | 27-126 |
| Perfluoro[1,2-13C2]Dodecanoic Acid (MPFDOA) | 94 | | 48-131 |
| Perfluoro[1,2-13C2]Tetradecanoic Acid (M2PFTEDA) | 94 | | 22-136 |

**Project Name:** GROSSINGERS
**Project Number:** 9313
**Lab Number:** L2121852
**Report Date:** 05/12/21

# Method Blank Analysis
## Batch Quality Control

Analytical Method: 134,LCMSMS-ID
Analytical Date: 05/10/21 21:19
Analyst: HT

Extraction Method: ALPHA 23528
Extraction Date: 05/05/21 15:25

| Parameter | Result | Qualifier | Units | RL | MDL |
|---|---|---|---|---|---|
| Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab for sample(s): 01-06 Batch: WG1494805-1 | | | | | |
| Perfluorooctanesulfonamide (FOSA) | ND | | ng/l | 2.00 | 0.580 |

| Surrogate (Extracted Internal Standard) | %Recovery | Qualifier | Acceptance Criteria |
|---|---|---|---|
| Perfluoro[13C8]Octanesulfonamide (M8FOSA) | 84 | | 10-112 |

# Lab Control Sample Analysis
## Batch Quality Control

**Project Name:** GROSSINGERS
**Project Number:** 9313

**Lab Number:** L2121852
**Report Date:** 05/12/21

| Parameter | LCS %Recovery | Qual | LCSD %Recovery | Qual | %Recovery Limits | RPD | Qual | RPD Limits |
|---|---|---|---|---|---|---|---|---|
| Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab Associated sample(s): 01-06 Batch: WG1494805-2 | | | | | | | | |
| Perfluorobutanoic Acid (PFBA) | 107 | | - | | 67-148 | - | | 30 |
| Perfluoropentanoic Acid (PFPeA) | 108 | | - | | 63-161 | - | | 30 |
| Perfluorobutanesulfonic Acid (PFBS) | 105 | | - | | 65-157 | - | | 30 |
| Perfluorohexanoic Acid (PFHxA) | 108 | | - | | 69-168 | - | | 30 |
| Perfluoroheptanoic Acid (PFHpA) | 107 | | - | | 58-159 | - | | 30 |
| Perfluorohexanesulfonic Acid (PFHxS) | 117 | | - | | 69-177 | - | | 30 |
| Perfluorooctanoic Acid (PFOA) | 108 | | - | | 63-159 | - | | 30 |
| 1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS) | 122 | | - | | 49-187 | - | | 30 |
| Perfluoroheptanesulfonic Acid (PFHpS) | 98 | | - | | 61-179 | - | | 30 |
| Perfluorononanoic Acid (PFNA) | 108 | | - | | 68-171 | - | | 30 |
| Perfluorooctanesulfonic Acid (PFOS) | 114 | | - | | 52-151 | - | | 30 |
| Perfluorodecanoic Acid (PFDA) | 105 | | - | | 63-171 | - | | 30 |
| 1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS) | 119 | | - | | 56-173 | - | | 30 |
| N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA) | 116 | | - | | 60-166 | - | | 30 |
| Perfluoroundecanoic Acid (PFUnA) | 107 | | - | | 60-153 | - | | 30 |
| Perfluorodecanesulfonic Acid (PFDS) | 108 | | - | | 38-156 | - | | 30 |
| Perfluorooctanesulfonamide (FOSA) | 108 | | - | | 46-170 | - | | 30 |
| N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA) | 108 | | - | | 45-170 | - | | 30 |
| Perfluorododecanoic Acid (PFDoA) | 110 | | - | | 67-153 | - | | 30 |
| Perfluorotridecanoic Acid (PFTrDA) | 123 | | - | | 48-158 | - | | 30 |
| Perfluorotetradecanoic Acid (PFTA) | 109 | | - | | 59-182 | - | | 30 |

# Lab Control Sample Analysis
## Batch Quality Control

**Project Name:** GROSSINGERS
**Project Number:** 9313
**Lab Number:** L2121852
**Report Date:** 05/12/21

| Parameter | LCS %Recovery | Qual | LCSD %Recovery | Qual | %Recovery Limits | RPD | Qual | RPD Limits |
|---|---|---|---|---|---|---|---|---|
| Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab Associated sample(s): 01-06 Batch: WG1494805-2 | | | | | | | | |

| Surrogate (Extracted Internal Standard) | LCS %Recovery | Qual | LCSD %Recovery | Qual | Acceptance Criteria |
|---|---|---|---|---|---|
| Perfluoro[13C4]Butanoic Acid (MPFBA) | 89 | | | | 58-132 |
| Perfluoro[13C5]Pentanoic Acid (M5PFPEA) | 125 | | | | 62-163 |
| Perfluoro[2,3,4-13C3]Butanesulfonic Acid (M3PFBS) | 100 | | | | 70-131 |
| Perfluoro[1,2,3,4,6-13C5]Hexanoic Acid (M5PFHxA) | 84 | | | | 57-129 |
| Perfluoro[1,2,3,4-13C4]Heptanoic Acid (M4PFHpA) | 90 | | | | 60-129 |
| Perfluoro[1,2,3-13C3]Hexanesulfonic Acid (M3PFHxS) | 102 | | | | 71-134 |
| Perfluoro[13C8]Octanoic Acid (M8PFOA) | 89 | | | | 62-129 |
| 1H,1H,2H,2H-Perfluoro[1,2-13C2]Octanesulfonic Acid (M2-6:2FTS) | 66 | | | | 14-147 |
| Perfluoro[13C9]Nonanoic Acid (M9PFNA) | 86 | | | | 59-139 |
| Perfluoro[13C8]Octanesulfonic Acid (M8PFOS) | 101 | | | | 69-131 |
| Perfluoro[1,2,3,4,5,6-13C6]Decanoic Acid (M6PFDA) | 89 | | | | 62-124 |
| 1H,1H,2H,2H-Perfluoro[1,2-13C2]Decanesulfonic Acid (M2-8:2FTS) | 55 | | | | 10-162 |
| N-Deuteriomethylperfluoro-1-octanesulfonamidoacetic Acid (d3-NMeFOSAA) | 74 | | | | 24-116 |
| Perfluoro[1,2,3,4,5,6,7-13C7]Undecanoic Acid (M7-PFUDA) | 93 | | | | 55-137 |
| Perfluoro[13C8]Octanesulfonamide (M8FOSA) | 38 | | | | 10-112 |
| N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA) | 78 | | | | 27-126 |
| Perfluoro[1,2-13C2]Dodecanoic Acid (MPFDOA) | 98 | | | | 48-131 |
| Perfluoro[1,2-13C2]Tetradecanoic Acid (M2PFTEDA) | 97 | | | | 22-136 |

# Lab Control Sample Analysis

## Batch Quality Control

**Project Name:** GROSSINGERS

**Project Number:** 9313

**Lab Number:** L2121852

**Report Date:** 05/12/21

| Parameter | LCS %Recovery | Qual | LCSD %Recovery | Qual | %Recovery Limits | RPD | Qual | RPD Limits |
|---|---|---|---|---|---|---|---|---|
| Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab | Associated sample(s): 01-06 | | Batch: WG1494805-2 | | | | | |
| Perfluorooctanesulfonamide (FOSA) | 98 | | - | | 46-170 | - | | 30 |

| Surrogate (Extracted Internal Standard) | LCS %Recovery | Qual | LCSD %Recovery | Qual | Acceptance Criteria |
|---|---|---|---|---|---|
| Perfluoro[13C8]Octanesulfonamide (M8FOSA) | 88 | | | | 10-112 |

# Matrix Spike Analysis

## *Batch Quality Control*

**Project Name:** GROSSINGERS
**Project Number:** 9313
**Lab Number:** L2121852
**Report Date:** 05/12/21

| Parameter | Native Sample | MS Added | MS Found | MS %Recovery | Qual | MSD Found | MSD %Recovery | Qual | Recovery Limits | RPD | Qual | RPD Limits |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab Associated sample(s): 01-06 QC Batch ID: WG1494805-3 QC Sample: L2121852-01 Client ID: MW-201 | | | | | | | | | | | | |
| Perfluorobutanoic Acid (PFBA) | ND | 43.7 | 46.5 | 106 | | - | - | | 67-148 | - | | 30 |
| Perfluoropentanoic Acid (PFPeA) | 0.514J | 43.7 | 46.8 | 106 | | - | - | | 63-161 | - | | 30 |
| Perfluorobutanesulfonic Acid (PFBS) | ND | 38.8 | 40.8 | 105 | | - | - | | 65-157 | - | | 30 |
| Perfluorohexanoic Acid (PFHxA) | 0.518J | 43.7 | 47.2 | 107 | | - | - | | 69-168 | - | | 30 |
| Perfluoroheptanoic Acid (PFHpA) | ND | 43.7 | 45.6 | 104 | | - | - | | 58-159 | - | | 30 |
| Perfluorohexanesulfonic Acid (PFHxS) | ND | 39.9 | 45.9 | 115 | | - | - | | 69-177 | - | | 30 |
| Perfluorooctanoic Acid (PFOA) | 0.486J | 43.7 | 47.0 | 107 | | - | - | | 63-159 | - | | 30 |
| 1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS) | ND | 41.6 | 49.3 | 119 | | - | - | | 49-187 | - | | 30 |
| Perfluoroheptanesulfonic Acid (PFHpS) | ND | 41.6 | 42.1 | 101 | | - | - | | 61-179 | - | | 30 |
| Perfluorononanoic Acid (PFNA) | ND | 43.7 | 46.4 | 106 | | - | - | | 68-171 | - | | 30 |
| Perfluorooctanesulfonic Acid (PFOS) | ND | 40.5 | 49.5 | 122 | | - | - | | 52-151 | - | | 30 |
| Perfluorodecanoic Acid (PFDA) | ND | 43.7 | 45.4 | 104 | | - | - | | 63-171 | - | | 30 |
| 1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS) | ND | 41.9 | 48.0 | 115 | | - | - | | 56-173 | - | | 30 |
| N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA) | ND | 43.7 | 46.3 | 106 | | - | - | | 60-166 | - | | 30 |
| Perfluoroundecanoic Acid (PFUnA) | ND | 43.7 | 46.3 | 106 | | - | - | | 60-153 | - | | 30 |
| Perfluorodecanesulfonic Acid (PFDS) | ND | 42.1 | 46.6 | 111 | | - | - | | 38-156 | - | | 30 |
| Perfluorooctanesulfonamide (FOSA) | ND | 43.7 | 42.2F | 97 | | - | - | | 46-170 | - | | 30 |
| N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA) | ND | 43.7 | 47.0 | 108 | | - | - | | 45-170 | - | | 30 |
| Perfluorododecanoic Acid (PFDoA) | ND | 43.7 | 51.9 | 119 | | - | - | | 67-153 | - | | 30 |
| Perfluorotridecanoic Acid (PFTrDA) | ND | 43.7 | 56.3 | 129 | | - | - | | 48-158 | - | | 30 |
| Perfluorotetradecanoic Acid (PFTA) | ND | 43.7 | 51.4 | 118 | | - | - | | 59-182 | - | | 30 |

# Matrix Spike Analysis

***Batch Quality Control***

***Project Name:*** GROSSINGERS

***Project Number:*** 9313

***Lab Number:*** L2121852

***Report Date:*** 05/12/21

| *Parameter* | *Native Sample* | *MS Added* | *MS Found* | *MS %Recovery* | *Qual* | *MSD Found* | *MSD %Recovery* | *Qual* | *Recovery Limits* | *RPD* | *Qual* | *RPD Limits* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|

Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab Associated sample(s): 01-06 QC Batch ID: WG1494805-3 QC Sample: L2121852-01 Client ID: MW-201

| *Surrogate (Extracted Internal Standard)* | *MS % Recovery* | *MS Qualifier* | *MSD % Recovery* | *MSD Qualifier* | *Acceptance Criteria* |
|---|---|---|---|---|---|
| 1H,1H,2H,2H-Perfluoro[1,2-13C2]Decanesulfonic Acid (M2-8:2FTS) | 51 | | | | 10-162 |
| 1H,1H,2H,2H-Perfluoro[1,2-13C2]Octanesulfonic Acid (M2-6:2FTS) | 66 | | | | 14-147 |
| N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA) | 55 | | | | 27-126 |
| N-Deuteriomethylperfluoro-1-octanesulfonamidoacetic Acid (d3-NMeFOSAA) | 56 | | | | 24-116 |
| Perfluoro[1,2,3,4,5,6,7-13C7]Undecanoic Acid (M7-PFUDA) | 84 | | | | 55-137 |
| Perfluoro[1,2,3,4,5,6-13C6]Decanoic Acid (M6PFDA) | 78 | | | | 62-124 |
| Perfluoro[1,2,3,4,6-13C5]Hexanoic Acid (M5PFHxA) | 69 | | | | 57-129 |
| Perfluoro[1,2,3,4-13C4]Heptanoic Acid (M4PFHpA) | 73 | | | | 60-129 |
| Perfluoro[1,2,3-13C3]Hexanesulfonic Acid (M3PFHxS) | 94 | | | | 71-134 |
| Perfluoro[1,2-13C2]Dodecanoic Acid (MPFDOA) | 88 | | | | 48-131 |
| Perfluoro[1,2-13C2]Tetradecanoic Acid (M2PFTEDA) | 91 | | | | 22-136 |
| Perfluoro[13C4]Butanoic Acid (MPFBA) | 73 | | | | 58-132 |
| Perfluoro[13C5]Pentanoic Acid (M5PFPEA) | 89 | | | | 62-163 |
| Perfluoro[13C8]Octanesulfonamide (M8FOSA) | 13 | | | | 10-112 |
| Perfluoro[13C8]Octanesulfonic Acid (M8PFOS) | 94 | | | | 69-131 |
| Perfluoro[13C8]Octanoic Acid (M8PFOA) | 72 | | | | 62-129 |
| Perfluoro[13C9]Nonanoic Acid (M9PFNA) | 71 | | | | 59-139 |
| Perfluoro[2,3,4-13C3]Butanesulfonic Acid (M3PFBS) | 92 | | | | 70-131 |

# Lab Duplicate Analysis
## Batch Quality Control

**Project Name:** GROSSINGERS
**Project Number:** 9313

**Lab Number:** L2121852
**Report Date:** 05/12/21

| Parameter | Native Sample | Duplicate Sample | Units | RPD | Qual | RPD Limits |
|---|---|---|---|---|---|---|
| Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab Associated sample(s): 01-06 QC Batch ID: WG1494805-4 QC Sample: L2121852-02 Client ID: MW-203 | | | | | | |
| Perfluorobutanoic Acid (PFBA) | 0.869J | 0.804J | ng/l | NC | | 30 |
| Perfluoropentanoic Acid (PFPeA) | 0.564J | 0.637J | ng/l | NC | | 30 |
| Perfluorobutanesulfonic Acid (PFBS) | ND | ND | ng/l | NC | | 30 |
| Perfluorohexanoic Acid (PFHxA) | 0.778J | 0.907J | ng/l | NC | | 30 |
| Perfluoroheptanoic Acid (PFHpA) | 0.629J | 0.615J | ng/l | NC | | 30 |
| Perfluorohexanesulfonic Acid (PFHxS) | 0.789J | 0.852JF | ng/l | NC | | 30 |
| Perfluorooctanoic Acid (PFOA) | 3.26 | 3.20 | ng/l | 2 | | 30 |
| 1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS) | 2.13 | 2.49 | ng/l | 16 | | 30 |
| Perfluoroheptanesulfonic Acid (PFHpS) | ND | ND | ng/l | NC | | 30 |
| Perfluorononanoic Acid (PFNA) | 0.320J | 0.315J | ng/l | NC | | 30 |
| Perfluorooctanesulfonic Acid (PFOS) | 14.5 | 14.0 | ng/l | 4 | | 30 |
| Perfluorodecanoic Acid (PFDA) | ND | ND | ng/l | NC | | 30 |
| 1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS) | ND | ND | ng/l | NC | | 30 |
| N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA) | ND | ND | ng/l | NC | | 30 |
| Perfluoroundecanoic Acid (PFUnA) | ND | ND | ng/l | NC | | 30 |
| Perfluorodecanesulfonic Acid (PFDS) | ND | ND | ng/l | NC | | 30 |
| Perfluorooctanesulfonamide (FOSA) | 0.989JF | 0.800JF | ng/l | NC | | 30 |
| N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA) | 3.14 | 3.11 | ng/l | 1 | | 30 |
| Perfluorododecanoic Acid (PFDoA) | ND | ND | ng/l | NC | | 30 |
| Perfluorotridecanoic Acid (PFTrDA) | ND | ND | ng/l | NC | | 30 |

# Lab Duplicate Analysis
## Batch Quality Control

**Project Name:** GROSSINGERS
**Project Number:** 9313

**Lab Number:** L2121852
**Report Date:** 05/12/21

| Parameter | Native Sample | Duplicate Sample | Units | RPD | Qual | RPD Limits |
|---|---|---|---|---|---|---|
| Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab Associated sample(s): 01-06 QC Batch ID: WG1494805-4 QC Sample: L2121852-02 Client ID: MW-203 | | | | | | |
| Perfluorotetradecanoic Acid (PFTA) | ND | ND | ng/l | NC | | 30 |

| Surrogate (Extracted Internal Standard) | %Recovery | Qualifier | %Recovery | Qualifier | Acceptance Criteria |
|---|---|---|---|---|---|
| Perfluoro[13C4]Butanoic Acid (MPFBA) | 89 | | 87 | | 58-132 |
| Perfluoro[13C5]Pentanoic Acid (M5PFPEA) | 104 | | 102 | | 62-163 |
| Perfluoro[2,3,4-13C3]Butanesulfonic Acid (M3PFBS) | 89 | | 91 | | 70-131 |
| Perfluoro[1,2,3,4,6-13C5]Hexanoic Acid (M5PFHxA) | 76 | | 75 | | 57-129 |
| Perfluoro[1,2,3,4-13C4]Heptanoic Acid (M4PFHpA) | 84 | | 83 | | 60-129 |
| Perfluoro[1,2,3-13C3]Hexanesulfonic Acid (M3PFHxS) | 90 | | 90 | | 71-134 |
| Perfluoro[13C8]Octanoic Acid (M8PFOA) | 90 | | 88 | | 62-129 |
| 1H,1H,2H,2H-Perfluoro[1,2-13C2]Octanesulfonic Acid (M2-6:2FTS) | 121 | | 119 | | 14-147 |
| Perfluoro[13C9]Nonanoic Acid (M9PFNA) | 88 | | 86 | | 59-139 |
| Perfluoro[13C8]Octanesulfonic Acid (M8PFOS) | 90 | | 92 | | 69-131 |
| Perfluoro[1,2,3,4,5,6-13C6]Decanoic Acid (M6PFDA) | 89 | | 89 | | 62-124 |
| 1H,1H,2H,2H-Perfluoro[1,2-13C2]Decanesulfonic Acid (M2-8:2FTS) | 70 | | 83 | | 10-162 |
| N-Deuteriomethylperfluoro-1-octanesulfonamidoacetic Acid (d3-NMeFOSAA) | 81 | | 81 | | 24-116 |
| Perfluoro[1,2,3,4,5,6,7-13C7]Undecanoic Acid (M7-PFUDA) | 90 | | 92 | | 55-137 |
| Perfluoro[13C8]Octanesulfonamide (M8FOSA) | 27 | | 25 | | 10-112 |
| N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA) | 77 | | 73 | | 27-126 |
| Perfluoro[1,2-13C2]Dodecanoic Acid (MPFDOA) | 80 | | 87 | | 48-131 |
| Perfluoro[1,2-13C2]Tetradecanoic Acid (M2PFTEDA) | 77 | | 80 | | 22-136 |

**Project Name:** GROSSINGERS
**Project Number:** 9313

**Lab Number:** L2121852
**Report Date:** 05/12/21

## Sample Receipt and Container Information

Were project specific reporting limits specified? YES

### Cooler Information

| Cooler | Custody Seal |
|---|---|
| A | Absent |

### Container Information

| Container ID | Container Type | Cooler | Initial pH | Final pH | Temp deg C | Pres | Seal | Frozen Date/Time | Analysis(*) |
|---|---|---|---|---|---|---|---|---|---|
| L2121852-01A | Vial HCl preserved | A | NA | | 4.2 | Y | Absent | | NYTCL-8260(14) |
| L2121852-01B | Vial HCl preserved | A | NA | | 4.2 | Y | Absent | | NYTCL-8260(14) |
| L2121852-01C | Vial HCl preserved | A | NA | | 4.2 | Y | Absent | | NYTCL-8260(14) |
| L2121852-01D | Plastic 250ml unpreserved | A | NA | | 4.2 | Y | Absent | | A2-NY-537-ISOTOPE(14) |
| L2121852-01E | Plastic 250ml unpreserved | A | NA | | 4.2 | Y | Absent | | A2-NY-537-ISOTOPE(14) |
| L2121852-02A | Vial HCl preserved | A | NA | | 4.2 | Y | Absent | | NYTCL-8260(14) |
| L2121852-02B | Vial HCl preserved | A | NA | | 4.2 | Y | Absent | | NYTCL-8260(14) |
| L2121852-02C | Vial HCl preserved | A | NA | | 4.2 | Y | Absent | | NYTCL-8260(14) |
| L2121852-02D | Plastic 250ml unpreserved | A | NA | | 4.2 | Y | Absent | | A2-NY-537-ISOTOPE(14) |
| L2121852-02E | Plastic 250ml unpreserved | A | NA | | 4.2 | Y | Absent | | A2-NY-537-ISOTOPE(14) |
| L2121852-03A | Vial HCl preserved | A | NA | | 4.2 | Y | Absent | | NYTCL-8260(14) |
| L2121852-03B | Vial HCl preserved | A | NA | | 4.2 | Y | Absent | | NYTCL-8260(14) |
| L2121852-03C | Vial HCl preserved | A | NA | | 4.2 | Y | Absent | | NYTCL-8260(14) |
| L2121852-03D | Plastic 250ml unpreserved | A | NA | | 4.2 | Y | Absent | | A2-NY-537-ISOTOPE(14) |
| L2121852-03E | Plastic 250ml unpreserved | A | NA | | 4.2 | Y | Absent | | A2-NY-537-ISOTOPE(14) |
| L2121852-04A | Vial HCl preserved | A | NA | | 4.2 | Y | Absent | | NYTCL-8260(14) |
| L2121852-04B | Vial HCl preserved | A | NA | | 4.2 | Y | Absent | | NYTCL-8260(14) |
| L2121852-04C | Vial HCl preserved | A | NA | | 4.2 | Y | Absent | | NYTCL-8260(14) |
| L2121852-04D | Plastic 250ml unpreserved | A | NA | | 4.2 | Y | Absent | | A2-NY-537-ISOTOPE(14) |
| L2121852-04E | Plastic 250ml unpreserved | A | NA | | 4.2 | Y | Absent | | A2-NY-537-ISOTOPE(14) |
| L2121852-05A | Vial HCl preserved | A | NA | | 4.2 | Y | Absent | | NYTCL-8260(14) |
| L2121852-05B | Vial HCl preserved | A | NA | | 4.2 | Y | Absent | | NYTCL-8260(14) |
| L2121852-05C | Vial HCl preserved | A | NA | | 4.2 | Y | Absent | | NYTCL-8260(14) |



*Values in parentheses indicate holding time in days

***Project Name:*** GROSSINGERS
***Project Number:*** 9313

***Lab Number:*** L2121852
***Report Date:*** 05/12/21

***Container Information***

| Container ID | Container Type | Cooler | Initial pH | Final pH | Temp deg C | Pres | Seal | Frozen Date/Time | Analysis(*) |
|---|---|---|---|---|---|---|---|---|---|
| L2121852-05D | Plastic 250ml unpreserved | A | NA | | 4.2 | Y | Absent | | A2-NY-537-ISOTOPE(14) |
| L2121852-05E | Plastic 250ml unpreserved | A | NA | | 4.2 | Y | Absent | | A2-NY-537-ISOTOPE(14) |
| L2121852-06A | Vial HCl preserved | A | NA | | 4.2 | Y | Absent | | NYTCL-8260(14) |
| L2121852-06B | Vial HCl preserved | A | NA | | 4.2 | Y | Absent | | NYTCL-8260(14) |
| L2121852-06C | Vial HCl preserved | A | NA | | 4.2 | Y | Absent | | NYTCL-8260(14) |
| L2121852-06D | Plastic 250ml unpreserved | A | NA | | 4.2 | Y | Absent | | A2-NY-537-ISOTOPE(14) |
| L2121852-06E | Plastic 250ml unpreserved | A | NA | | 4.2 | Y | Absent | | A2-NY-537-ISOTOPE(14) |
| L2121852-07A | Vial HCl preserved | A | NA | | 4.2 | Y | Absent | | NYTCL-8260(14) |
| L2121852-07B | Vial HCl preserved | A | NA | | 4.2 | Y | Absent | | NYTCL-8260(14) |



*Values in parentheses indicate holding time in days

**Project Name:** GROSSINGERS
**Project Number:** 9313
**Lab Number:** L2121852
**Report Date:** 05/12/21

## PFAS PARAMETER SUMMARY

| Parameter | Acronym | CAS Number |
|---|---|---|
| PERFLUOROALKYL CARBOXYLIC ACIDS (PFCAs) | | |
| Perfluorooctadecanoic Acid | PFODA | 16517-11-6 |
| Perfluorohexadecanoic Acid | PFHxDA | 67905-19-5 |
| Perfluorotetradecanoic Acid | PFTA | 376-06-7 |
| Perfluorotridecanoic Acid | PFTrDA | 72629-94-8 |
| Perfluorododecanoic Acid | PFDoA | 307-55-1 |
| Perfluoroundecanoic Acid | PFUnA | 2058-94-8 |
| Perfluorodecanoic Acid | PFDA | 335-76-2 |
| Perfluorononanoic Acid | PFNA | 375-95-1 |
| Perfluorooctanoic Acid | PFOA | 335-67-1 |
| Perfluoroheptanoic Acid | PFHpA | 375-85-9 |
| Perfluorohexanoic Acid | PFHxA | 307-24-4 |
| Perfluoropentanoic Acid | PFPeA | 2706-90-3 |
| Perfluorobutanoic Acid | PFBA | 375-22-4 |
| PERFLUOROALKYL SULFONIC ACIDS (PFSAs) | | |
| Perfluorododecanesulfonic Acid | PFDoDS | 79780-39-5 |
| Perfluorodecanesulfonic Acid | PFDS | 335-77-3 |
| Perfluorononanesulfonic Acid | PFNS | 68259-12-1 |
| Perfluorooctanesulfonic Acid | PFOS | 1763-23-1 |
| Perfluoroheptanesulfonic Acid | PFHpS | 375-92-8 |
| Perfluorohexanesulfonic Acid | PFHxS | 355-46-4 |
| Perfluoropentanesulfonic Acid | PFPeS | 2706-91-4 |
| Perfluorobutanesulfonic Acid | PFBS | 375-73-5 |
| FLUOROTELOMERS | | |
| 1H,1H,2H,2H-Perfluorododecanesulfonic Acid | 10:2FTS | 120226-60-0 |
| 1H,1H,2H,2H-Perfluorodecanesulfonic Acid | 8:2FTS | 39108-34-4 |
| 1H,1H,2H,2H-Perfluorooctanesulfonic Acid | 6:2FTS | 27619-97-2 |
| 1H,1H,2H,2H-Perfluorohexanesulfonic Acid | 4:2FTS | 757124-72-4 |
| PERFLUOROALKANE SULFONAMIDES (FASAs) | | |
| Perfluorooctanesulfonamide | FOSA | 754-91-6 |
| N-Ethyl Perfluorooctane Sulfonamide | NEtFOSA | 4151-50-2 |
| N-Methyl Perfluorooctane Sulfonamide | NMeFOSA | 31506-32-8 |
| PERFLUOROALKANE SULFONYL SUBSTANCES | | |
| N-Ethyl Perfluorooctanesulfonamido Ethanol | NEtFOSE | 1691-99-2 |
| N-Methyl Perfluorooctanesulfonamido Ethanol | NMeFOSE | 24448-09-7 |
| N-Ethyl Perfluorooctanesulfonamidoacetic Acid | NEtFOSAA | 2991-50-6 |
| N-Methyl Perfluorooctanesulfonamidoacetic Acid | NMeFOSAA | 2355-31-9 |
| PER- and POLYFLUOROALKYL ETHER CARBOXYLIC ACIDS | | |
| 2,3,3,3-Tetrafluoro-2-[1,1,2,2,3,3,3-Heptafluoropropoxy]-Propanoic Acid | HFPO-DA | 13252-13-6 |
| 4,8-Dioxa-3h-Perfluorononanoic Acid | ADONA | 919005-14-4 |
| CHLORO-PERFLUOROALKYL SULFONIC ACIDS | | |
| 11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid | 11Cl-PF3OUdS | 763051-92-9 |
| 9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid | 9Cl-PF3ONS | 756426-58-1 |
| PERFLUOROETHER SULFONIC ACIDS (PFESAs) | | |
| Perfluoro(2-Ethoxyethane)Sulfonic Acid | PFEESA | 113507-82-7 |
| PERFLUOROETHER/POLYETHER CARBOXYLIC ACIDS (PFPCAs) | | |
| Perfluoro-3-Methoxypropanoic Acid | PFMPA | 377-73-1 |
| Perfluoro-4-Methoxybutanoic Acid | PFMBA | 863090-89-5 |
| Nonafluoro-3,6-Dioxaheptanoic Acid | NFDHA | 151772-58-6 |

| | | | |
|---|---|---|---|
| **Project Name:** | GROSSINGERS | **Lab Number:** | L2121852 |
| **Project Number:** | 9313 | **Report Date:** | 05/12/21 |

## GLOSSARY

***Acronyms***

DL - Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the limit of quantitation (LOQ). The DL includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

EDL - Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).

EMPC - Estimated Maximum Possible Concentration: The concentration that results from the signal present at the retention time of an analyte when the ions meet all of the identification criteria except the ion abundance ratio criteria. An EMPC is a worst-case estimate of the concentration.

EPA - Environmental Protection Agency.

LCS - Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.

LCSD - Laboratory Control Sample Duplicate: Refer to LCS.

LFB - Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.

LOD - Limit of Detection: This value represents the level to which a target analyte can reliably be detected for a specific analyte in a specific matrix by a specific method. The LOD includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

LOQ - Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

MDL - Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.

MS - Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available. For Method 332.0, the spike recovery is calculated using the native concentration, including estimated values.

MSD - Matrix Spike Sample Duplicate: Refer to MS.

NA - Not Applicable.

NC - Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.

NDPA/DPA - N-Nitrosodiphenylamine/Diphenylamine.

NI - Not Ignitable.

NP - Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.

NR - No Results: Term is utilized when 'No Target Compounds Requested' is reported for the analysis of Volatile or Semivolatile Organic TIC only requests.

RL - Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.

RPD - Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.

SRM - Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.

STLP - Semi-dynamic Tank Leaching Procedure per EPA Method 1315.

TEF - Toxic Equivalency Factors: The values assigned to each dioxin and furan to evaluate their toxicity relative to 2,3,7,8-TCDD.

TEQ - Toxic Equivalent: The measure of a sample's toxicity derived by multiplying each dioxin and furan by its corresponding TEF and then summing the resulting values.

TIC - Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

*Report Format: DU Report with 'J' Qualifiers*

| | | | |
|---|---|---|---|
| **Project Name:** | GROSSINGERS | **Lab Number:** | L2121852 |
| **Project Number:** | 9313 | **Report Date:** | 05/12/21 |

***Footnotes***

1 - The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method.

***Terms***

Analytical Method: Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

Difference: With respect to Total Oxidizable Precursor (TOP) Assay analysis, the difference is defined as the Post-Treatment value minus the Pre-Treatment value.

Final pH: As it pertains to Sample Receipt & Container Information section of the report, Final pH reflects pH of container determined after adjustment at the laboratory, if applicable. If no adjustment required, value reflects Initial pH.

Frozen Date/Time: With respect to Volatile Organics in soil, Frozen Date/Time reflects the date/time at which associated Reagent Water-preserved vials were initially frozen. Note: If frozen date/time is beyond 48 hours from sample collection, value will be reflected in 'bold'.

Initial pH: As it pertains to Sample Receipt & Container Information section of the report, Initial pH reflects pH of container determined upon receipt, if applicable.

PAH Total: With respect to Alkylated PAH analyses, the 'PAHs, Total' result is defined as the summation of results for all or a subset of the following compounds: Naphthalene, C1-C4 Naphthalenes, 2-Methylnaphthalene, 1-Methylnaphthalene, Biphenyl, Acenaphthylene, Acenaphthene, Fluorene, C1-C3 Fluorenes, Phenanthrene, C1-C4 Phenanthrenes/Anthracenes, Anthracene, Fluoranthene, Pyrene, C1-C4 Fluoranthenes/Pyrenes, Benz(a)anthracene, Chrysene, C1-C4 Chrysenes, Benzo(b)fluoranthene, Benzo(j)+(k)fluoranthene, Benzo(e)pyrene, Benzo(a)pyrene, Perylene, Indeno(1,2,3-cd)pyrene, Dibenz(ah)+(ac)anthracene, Benzo(g,h,i)perylene. If a 'Total' result is requested, the results of its individual components will also be reported.

PFAS Total: With respect to PFAS analyses, the 'PFAS, Total (5)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA and PFOS. In addition, the 'PFAS, Total (6)' result is defined as the summation of results at or above the RL for: PFHpA, PFHxS, PFOA, PFNA, PFDA and PFOS. (Note: 'PFAS, Total (6)' is applicable to MassDEP DW compliance analysis only.). If a 'Total' result is requested, the results of its individual components will also be reported.

The target compound Chlordane (CAS No. 57-74-9) is reported for GC ECD analyses. Per EPA,this compound "refers to a mixture of chlordane isomers, other chlorinated hydrocarbons and numerous other components." (Reference: USEPA Toxicological Review of Chlordane, In Support of Summary Information on the Integrated Risk Information System (IRIS), December 1997.)

Total: With respect to Organic analyses, a 'Total' result is defined as the summation of results for individual isomers or Aroclors. If a 'Total' result is requested, the results of its individual components will also be reported. This is applicable to 'Total' results for methods 8260, 8081 and 8082.

***Data Qualifiers***

**A** - Spectra identified as "Aldol Condensates" are byproducts of the extraction/concentration procedures when acetone is introduced in the process.

**B** - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).

**C** - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.

**D** - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.

**E** - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.

**F** - The ratio of quantifier ion response to qualifier ion response falls outside of the laboratory criteria. Results are considered to be an estimated maximum concentration.

**G** - The concentration may be biased high due to matrix interferences (i.e, co-elution) with non-target compound(s). The result should be considered estimated.

**H** - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.

**I** - The lower value for the two columns has been reported due to obvious interference.

**J** - Estimated value. The Target analyte concentration is below the quantitation limit (RL), but above the Method Detection Limit (MDL) or Estimated Detection Limit (EDL) for SPME-related analyses. This represents an estimated concentration for Tentatively Identified Compounds (TICs).

**M** - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.

**ND** - Not detected at the method detection limit (MDL) for the sample, or estimated detection limit (EDL) for SPME-related analyses.

*Report Format: DU Report with 'J' Qualifiers*

| | | | |
|---|---|---|---|
| **Project Name:** | GROSSINGERS | **Lab Number:** | L2121852 |
| **Project Number:** | 9313 | **Report Date:** | 05/12/21 |

***Data Qualifiers***

**NJ** - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.

**P** - The RPD between the results for the two columns exceeds the method-specified criteria.

**Q** - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)

**R** - Analytical results are from sample re-analysis.

**RE** - Analytical results are from sample re-extraction.

**S** - Analytical results are from modified screening analysis.

*Report Format: DU Report with 'J' Qualifiers*

## REFERENCES

1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - VI, 2018.

134 Determination of Selected Perfluorinated Alkyl Acids in Drinking Water by Solid Phase Extraction and Liquid Chromatography/Tandem Mass Spectrometry (LC/MS/MS) using Isotope Dilution. Alpha SOP 23528.

## LIMITATION OF LIABILITIES

Alpha Analytical performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical be held liable for any incidental, consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding time and splitting of samples in the field.

# Certification Information

**The following analytes are not included in our Primary NELAP Scope of Accreditation:**

**Westborough Facility**
**EPA 624/624.1:** m/p-xylene, o-xylene, Naphthalene
**EPA 625/625.1:** alpha-Terpineol
**EPA 8260C/8260D:** NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene, Azobenzene; SCM: Iodomethane (methyl iodide), 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.
**EPA 8270D/8270E:** NPW: Dimethylnaphthalene,1,4-Diphenylhydrazine, alpha-Terpineol; SCM: Dimethylnaphthalene,1,4-Diphenylhydrazine.
**SM4500**: NPW: Amenable Cyanide; SCM: Total Phosphorus, TKN, NO2, NO3.

**Mansfield Facility**
**SM 2540D:** TSS
**EPA 8082A:** NPW: PCB: 1, 5, 31, 87,101, 110, 141, 151, 153, 180, 183, 187.
**EPA TO-15:** Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene, 3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.
**Biological Tissue Matrix:** EPA 3050B

**The following analytes are included in our Massachusetts DEP Scope of Accreditation**

**Westborough Facility:**

***Drinking Water***
**EPA 300.0**: Chloride, Nitrate-N, Fluoride, Sulfate; **EPA 353.2**: Nitrate-N, Nitrite-N; **SM4500NO3-F**: Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE, EPA 180.1, SM2130B, SM4500Cl-D, SM2320B, SM2540C, SM4500H-B, SM4500NO2-B**
**EPA 332**: Perchlorate; **EPA 524.2:** THMs and VOCs; **EPA 504.1:** EDB, DBCP.
**Microbiology**: **SM9215B; SM9223-P/A, SM9223B-Colilert-QT,SM9222D**.

***Non-Potable Water***
**SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2320B, SM4500CL-E, SM4500F-BC, SM4500NH3-BH:** Ammonia-N and Kjeldahl-N, **EPA 350.1**: Ammonia-N, **LACHAT 10-107-06-1-B**: Ammonia-N, **EPA 351.1, SM4500NO3-F, EPA 353.2**: Nitrate-N**, SM4500P-E, SM4500P-B, E, SM4500SO4-E, SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, EPA 420.1, SM4500-CN-CE, SM2540D, EPA 300: Chloride, Sulfate, Nitrate.**
**EPA 624.1**: Volatile Halocarbons & Aromatics,
**EPA 608.3**: Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs
**EPA 625.1**: SVOC (Acid/Base/Neutral Extractables), **EPA 600/4-81-045**: PCB-Oil.
**Microbiology**: **SM9223B-Colilert-QT; Enterolert-QT, SM9221E, EPA 1600, EPA 1603, SM9222D.**

**Mansfield Facility:**

***Drinking Water***
**EPA 200.7:** Al, Ba, Cd, Cr, Cu, Fe, Mn, Ni, Na, Ag, Ca, Zn. **EPA 200.8:** Al, Sb, As, Ba, Be, Cd, Cr, Cu, Pb, Mn, Ni, Se, Ag, TL, Zn. **EPA 245.1** Hg.
**EPA 522, EPA 537.1.**

***Non-Potable Water***
**EPA 200.7:** Al, Sb, As, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Sr, TL, Ti, V, Zn.
**EPA 200.8:** Al, Sb**,** As, Be, Cd, Cr, Cu, Fe, Pb, Mn, Ni, K, Se, Ag, Na, TL, Zn.
**EPA 245.1** Hg.
**SM2340B**

For a complete listing of analytes and methods, please contact your Alpha Project Manager.

ALPHA

Westborough, MA 01581
8 Walkup Dr.
TEL: 508-898-9220
FAX: 508-898-9193

Mansfield, MA 02048
320 Forbes Blvd
TEL: 508-822-9300
FAX: 508-822-3288

# NEW YORK CHAIN OF CUSTODY

Service Centers
Mahwah, NJ 07430: 35 Whitney Rd, Suite 5
Albany, NY 12205: 14 Walker Way
Tonawanda, NY 14150: 275 Cooper Ave, Suite 105

Page 1 of 1

Date Rec'd in Lab: 4/29/21

ALPHA Job #: L2121852

## Client Information

Client: SESI (Consulting Engineer)
Address: 12A Maple Ave
Pine Brook, NJ
Phone:
Fax:
Email: TTK@SESI.org

## Project Information

Project Name: Grossingers
Project Location: Liberty, NY
Project #: 9313.11
(Use Project name as Project #)
Project Manager: Todd Kelly
ALPHAQuote #:

## Turn-Around Time

Standard: [X] 1 week Due Date:
Rush (only if pre approved): [ ] # of Days:

These samples have been previously analyzed by Alpha [ ]

**Other project specific requirements/comments:**

**Please specify Metals or TAL.**

## Deliverables

[ ] ASP-A [X] ASP-B
[ ] EQuIS (1 File) [ ] EQuIS (4 File)
[ ] Other

## Regulatory Requirement

[ ] NY TOGS [ ] NY Part 375
[X] AWQ Standards [ ] NY CP-51
[ ] NY Restricted Use [ ] Other
[ ] NY Unrestricted Use
[ ] NYC Sewer Discharge

## Billing Information

[X] Same as Client Info
PO # 9313.11

## Disposal Site Information

Please identify below location of applicable disposal facilities.
Disposal Facility:
[ ] NJ [ ] NY
[ ] Other

## ANALYSIS

| ALPHA Lab ID (Lab Use Only) | Sample ID | Collection Date | Collection Time | Sample Matrix | Sampler's Initials | PFAS (537) | VOCs | | | | | | | Total Bottle |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 21852-01 | MW-201 | 4/28/21 | 1210 | GW | MEM | X | X | | | | | | | |
| -02 | MW-203 | | 0920 | | MEM | X | X | | | | | | | |
| -03 | MW-209 | | 1250 | | MEM | X | X | | | | | | | |
| -04 | MW-211 | | 1045 | | MEM | X | X | | | | | | | |
| -05 | MW-216 | | 1120 | | MEM | X | X | | | | | | | |
| -06 | MW-217 | | 1240 | | MEM | X | X | | | | | | | |
| -07 | TB | 4/28/21 | — | Blank | CH | | X | | | | | | | |

**Sample Filtration**
[ ] Done
[ ] Lab to do
**Preservation**
[ ] Lab to do
*(Please Specify below)*

Sample Specific Comments

| Preservative Code | Container Code |
|---|---|
| A = None | P = Plastic |
| B = HCl | A = Amber Glass |
| C = $HNO_3$ | V = Vial |
| D = $H_2SO_4$ | G = Glass |
| E = NaOH | B = Bacteria Cup |
| F = MeOH | C = Cube |
| G = $NaHSO_4$ | O = Other |
| H = $Na_2S_2O_3$ | E = Encore |
| K/E = Zn Ac/NaOH | D = BOD Bottle |
| O = Other | |

Westboro: Certification No: MA935
Mansfield: Certification No: MA015

| Container Type | P | V | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Preservative | A | B | | | | | | | |

| Relinquished By: | Date/Time | Received By: | Date/Time |
|---|---|---|---|
| | 4/28/21 | | 4/28/21 1517 |
| | 4/29/21 17:40 | | 4/28/21 2000 |
| | 4/29/21 0010 | | 4/29/21 00:10 |
| Wendy Mooney | 4/29/21 4:00 | T. Kelly | 4/29/21 0405 |
| T. Hubbell | 4/29/21 0520 | | 4/29/21 0520 |

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. BY EXECUTING THIS COC, THE CLIENT HAS READ AND AGREES TO BE BOUND BY ALPHA'S TERMS & CONDITIONS. (See reverse side.)

Form No: 01-25 HC (rev. 30-Sept-2013)

# ANALYTICAL REPORT

| | |
|---|---|
| Lab Number: | L2122071 |
| Client: | Soils Engineering Services, Inc.<br>12A Maple Avenue<br>Pine Brook, NJ 07058 |
| ATTN: | Todd Kelly |
| Phone: | (973) 808-9050 |
| Project Name: | GROSSINGERS |
| Project Number: | 9313 |
| Report Date: | 05/13/21 |

The original project report/data package is held by Alpha Analytical. This report/data package is paginated and should be reproduced only in its entirety. Alpha Analytical holds no responsibility for results and/or data that are not consistent with the original.

Certifications & Approvals: MA (M-MA086), NH NELAP (2064), CT (PH-0574), IL (200077), ME (MA00086), MD (348), NJ (MA935), NY (11148), NC (25700/666), PA (68-03671), RI (LAO00065), TX (T104704476), VT (VT-0935), VA (460195), USDA (Permit #P330-17-00196).

Eight Walkup Drive, Westborough, MA 01581-1019
508-898-9220 (Fax) 508-898-9193 800-624-9220 - www.alphalab.com

**Project Name:** GROSSINGERS
**Project Number:** 9313

**Lab Number:** L2122071
**Report Date:** 05/13/21

| Alpha Sample ID | Client ID | Matrix | Sample Location | Collection Date/Time | Receive Date |
|---|---|---|---|---|---|
| L2122071-01 | MW-210 | WATER | LIBERTY, NY | 04/29/21 11:00 | 04/29/21 |
| L2122071-02 | TB | TRIP BLANK (AQUEOUS) | LIBERTY, NY | 04/29/21 00:00 | 04/29/21 |

| | | | |
|---|---|---|---|
| **Project Name:** | GROSSINGERS | **Lab Number:** | L2122071 |
| **Project Number:** | 9313 | **Report Date:** | 05/13/21 |

## Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet NELAP requirements for all NELAP accredited parameters unless otherwise noted in the following narrative. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. Tentatively Identified Compounds (TICs), if requested, are reported for compounds identified to be present and are not part of the method/program Target Compound List, even if only a subset of the TCL are being reported. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively.

When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances, the specific failure is not narrated but noted in the associated QC Outlier Summary Report, located directly after the Case Narrative. QC information is also incorporated in the Data Usability Assessment table (Format 11) of our Data Merger tool, where it can be reviewed in conjunction with the sample result, associated regulatory criteria and any associated data usability implications.

Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

HOLD POLICY - For samples submitted on hold, Alpha's policy is to hold samples (with the exception of Air canisters) free of charge for 21 calendar days from the date the project is completed. After 21 calendar days, we will dispose of all samples submitted including those put on hold unless you have contacted your Alpha Project Manager and made arrangements for Alpha to continue to hold the samples. Air canisters will be disposed after 3 business days from the date the project is completed.

Please contact Project Management at 800-624-9220 with any questions.

**Project Name:** GROSSINGERS **Lab Number:** L2122071
**Project Number:** 9313 **Report Date:** 05/13/21

**Case Narrative (continued)**

Report Submission

May 13, 2021: This final report includes the results of all requested analyses.

May 05, 2021: This is a preliminary report.

All non-detect (ND) or estimated concentrations (J-qualified) have been quantitated to the limit noted in the MDL column.

Perfluorinated Alkyl Acids by Isotope Dilution

L2122071-01: The MeOH fraction of the extraction is reported for Perfluorooctanesulfonamide (FOSA) due to better extraction efficiency of the M8FOSA Surrogate (Extracted Internal Standard).

The WG1493960-2 LCS recovery, associated with L2122071-01, is above the acceptance criteria for perfluorooctadecanoic acid (pfoda) (135%); however, the associated sample is non-detect to the RL for this target analyte. The results of the original analysis are reported.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature: Cristin Walker

Title: Technical Director/Representative Date: 05/13/21

# ORGANICS

# VOLATILES

**Project Name:** GROSSINGERS
**Project Number:** 9313
**Lab Number:** L2122071
**Report Date:** 05/13/21

## SAMPLE RESULTS

Lab ID: L2122071-01
Client ID: MW-210
Sample Location: LIBERTY, NY

Date Collected: 04/29/21 11:00
Date Received: 04/29/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8260C
Analytical Date: 05/04/21 15:27
Analyst: LAC

| Parameter | Result | Qualifier | Units | RL | MDL | Dilution Factor |
|---|---|---|---|---|---|---|
| **Volatile Organics by GC/MS - Westborough Lab** | | | | | | |
| Methylene chloride | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,1-Dichloroethane | ND | | ug/l | 2.5 | 0.70 | 1 |
| Chloroform | ND | | ug/l | 2.5 | 0.70 | 1 |
| Carbon tetrachloride | ND | | ug/l | 0.50 | 0.13 | 1 |
| 1,2-Dichloropropane | ND | | ug/l | 1.0 | 0.14 | 1 |
| Dibromochloromethane | ND | | ug/l | 0.50 | 0.15 | 1 |
| 1,1,2-Trichloroethane | ND | | ug/l | 1.5 | 0.50 | 1 |
| Tetrachloroethene | ND | | ug/l | 0.50 | 0.18 | 1 |
| Chlorobenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Trichlorofluoromethane | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,2-Dichloroethane | ND | | ug/l | 0.50 | 0.13 | 1 |
| 1,1,1-Trichloroethane | ND | | ug/l | 2.5 | 0.70 | 1 |
| Bromodichloromethane | ND | | ug/l | 0.50 | 0.19 | 1 |
| trans-1,3-Dichloropropene | ND | | ug/l | 0.50 | 0.16 | 1 |
| cis-1,3-Dichloropropene | ND | | ug/l | 0.50 | 0.14 | 1 |
| 1,3-Dichloropropene, Total | ND | | ug/l | 0.50 | 0.14 | 1 |
| 1,1-Dichloropropene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Bromoform | ND | | ug/l | 2.0 | 0.65 | 1 |
| 1,1,2,2-Tetrachloroethane | ND | | ug/l | 0.50 | 0.17 | 1 |
| Benzene | ND | | ug/l | 0.50 | 0.16 | 1 |
| Toluene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Ethylbenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Chloromethane | ND | | ug/l | 2.5 | 0.70 | 1 |
| Bromomethane | ND | | ug/l | 2.5 | 0.70 | 1 |
| Vinyl chloride | ND | | ug/l | 1.0 | 0.07 | 1 |
| Chloroethane | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,1-Dichloroethene | ND | | ug/l | 0.50 | 0.17 | 1 |
| trans-1,2-Dichloroethene | ND | | ug/l | 2.5 | 0.70 | 1 |

**Project Name:** GROSSINGERS **Lab Number:** L2122071

**Project Number:** 9313 **Report Date:** 05/13/21

## SAMPLE RESULTS

Lab ID: L2122071-01 Date Collected: 04/29/21 11:00

Client ID: MW-210 Date Received: 04/29/21

Sample Location: LIBERTY, NY Field Prep: Not Specified

Sample Depth:

| Parameter | Result | Qualifier | Units | RL | MDL | Dilution Factor |
|---|---|---|---|---|---|---|
| **Volatile Organics by GC/MS - Westborough Lab** | | | | | | |
| Trichloroethene | ND | | ug/l | 0.50 | 0.18 | 1 |
| 1,2-Dichlorobenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,3-Dichlorobenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,4-Dichlorobenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Methyl tert butyl ether | ND | | ug/l | 2.5 | 0.70 | 1 |
| p/m-Xylene | ND | | ug/l | 2.5 | 0.70 | 1 |
| o-Xylene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Xylenes, Total | ND | | ug/l | 2.5 | 0.70 | 1 |
| cis-1,2-Dichloroethene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,2-Dichloroethene, Total | ND | | ug/l | 2.5 | 0.70 | 1 |
| Dibromomethane | ND | | ug/l | 5.0 | 1.0 | 1 |
| 1,2,3-Trichloropropane | ND | | ug/l | 2.5 | 0.70 | 1 |
| Acrylonitrile | ND | | ug/l | 5.0 | 1.5 | 1 |
| Styrene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Dichlorodifluoromethane | ND | | ug/l | 5.0 | 1.0 | 1 |
| Acetone | ND | | ug/l | 5.0 | 1.5 | 1 |
| Carbon disulfide | ND | | ug/l | 5.0 | 1.0 | 1 |
| 2-Butanone | ND | | ug/l | 5.0 | 1.9 | 1 |
| Vinyl acetate | ND | | ug/l | 5.0 | 1.0 | 1 |
| 4-Methyl-2-pentanone | ND | | ug/l | 5.0 | 1.0 | 1 |
| 2-Hexanone | ND | | ug/l | 5.0 | 1.0 | 1 |
| Bromochloromethane | ND | | ug/l | 2.5 | 0.70 | 1 |
| 2,2-Dichloropropane | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,2-Dibromoethane | ND | | ug/l | 2.0 | 0.65 | 1 |
| 1,3-Dichloropropane | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,1,1,2-Tetrachloroethane | ND | | ug/l | 2.5 | 0.70 | 1 |
| Bromobenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| n-Butylbenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| sec-Butylbenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| tert-Butylbenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| o-Chlorotoluene | ND | | ug/l | 2.5 | 0.70 | 1 |
| p-Chlorotoluene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,2-Dibromo-3-chloropropane | ND | | ug/l | 2.5 | 0.70 | 1 |
| Hexachlorobutadiene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Isopropylbenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| p-Isopropyltoluene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Naphthalene | ND | | ug/l | 2.5 | 0.70 | 1 |

**Project Name:** GROSSINGERS **Lab Number:** L2122071

**Project Number:** 9313 **Report Date:** 05/13/21

## SAMPLE RESULTS

Lab ID: L2122071-01 Date Collected: 04/29/21 11:00

Client ID: MW-210 Date Received: 04/29/21

Sample Location: LIBERTY, NY Field Prep: Not Specified

Sample Depth:

| Parameter | Result | Qualifier | Units | RL | MDL | Dilution Factor |
|---|---|---|---|---|---|---|
| **Volatile Organics by GC/MS - Westborough Lab** | | | | | | |
| n-Propylbenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,2,3-Trichlorobenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,2,4-Trichlorobenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,3,5-Trimethylbenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,2,4-Trimethylbenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,4-Dioxane | ND | | ug/l | 250 | 61. | 1 |
| p-Diethylbenzene | ND | | ug/l | 2.0 | 0.70 | 1 |
| p-Ethyltoluene | ND | | ug/l | 2.0 | 0.70 | 1 |
| 1,2,4,5-Tetramethylbenzene | ND | | ug/l | 2.0 | 0.54 | 1 |
| Ethyl ether | ND | | ug/l | 2.5 | 0.70 | 1 |
| trans-1,4-Dichloro-2-butene | ND | | ug/l | 2.5 | 0.70 | 1 |
| **Tentatively Identified Compounds** | | | | | | |
| No Tentatively Identified Compounds | ND | | ug/l | | | 1 |

| Surrogate | % Recovery | Qualifier | Acceptance Criteria |
|---|---|---|---|
| 1,2-Dichloroethane-d4 | 104 | | 70-130 |
| Toluene-d8 | 110 | | 70-130 |
| 4-Bromofluorobenzene | 90 | | 70-130 |
| Dibromofluoromethane | 105 | | 70-130 |

**Project Name:** GROSSINGERS
**Project Number:** 9313
**Lab Number:** L2122071
**Report Date:** 05/13/21

**SAMPLE RESULTS**

Lab ID: L2122071-02
Client ID: TB
Sample Location: LIBERTY, NY

Date Collected: 04/29/21 00:00
Date Received: 04/29/21
Field Prep: Not Specified

Sample Depth:
Matrix: Trip Blank (Aqueous)
Analytical Method: 1,8260C
Analytical Date: 05/04/21 15:48
Analyst: LAC

| Parameter | Result | Qualifier | Units | RL | MDL | Dilution Factor |
|---|---|---|---|---|---|---|
| **Volatile Organics by GC/MS - Westborough Lab** | | | | | | |
| Methylene chloride | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,1-Dichloroethane | ND | | ug/l | 2.5 | 0.70 | 1 |
| Chloroform | ND | | ug/l | 2.5 | 0.70 | 1 |
| Carbon tetrachloride | ND | | ug/l | 0.50 | 0.13 | 1 |
| 1,2-Dichloropropane | ND | | ug/l | 1.0 | 0.14 | 1 |
| Dibromochloromethane | ND | | ug/l | 0.50 | 0.15 | 1 |
| 1,1,2-Trichloroethane | ND | | ug/l | 1.5 | 0.50 | 1 |
| Tetrachloroethene | ND | | ug/l | 0.50 | 0.18 | 1 |
| Chlorobenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Trichlorofluoromethane | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,2-Dichloroethane | ND | | ug/l | 0.50 | 0.13 | 1 |
| 1,1,1-Trichloroethane | ND | | ug/l | 2.5 | 0.70 | 1 |
| Bromodichloromethane | ND | | ug/l | 0.50 | 0.19 | 1 |
| trans-1,3-Dichloropropene | ND | | ug/l | 0.50 | 0.16 | 1 |
| cis-1,3-Dichloropropene | ND | | ug/l | 0.50 | 0.14 | 1 |
| 1,3-Dichloropropene, Total | ND | | ug/l | 0.50 | 0.14 | 1 |
| 1,1-Dichloropropene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Bromoform | ND | | ug/l | 2.0 | 0.65 | 1 |
| 1,1,2,2-Tetrachloroethane | ND | | ug/l | 0.50 | 0.17 | 1 |
| Benzene | ND | | ug/l | 0.50 | 0.16 | 1 |
| Toluene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Ethylbenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Chloromethane | ND | | ug/l | 2.5 | 0.70 | 1 |
| Bromomethane | ND | | ug/l | 2.5 | 0.70 | 1 |
| Vinyl chloride | ND | | ug/l | 1.0 | 0.07 | 1 |
| Chloroethane | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,1-Dichloroethene | ND | | ug/l | 0.50 | 0.17 | 1 |
| trans-1,2-Dichloroethene | ND | | ug/l | 2.5 | 0.70 | 1 |

**Project Name:** GROSSINGERS **Lab Number:** L2122071

**Project Number:** 9313 **Report Date:** 05/13/21

## SAMPLE RESULTS

Lab ID: L2122071-02 Date Collected: 04/29/21 00:00

Client ID: TB Date Received: 04/29/21

Sample Location: LIBERTY, NY Field Prep: Not Specified

Sample Depth:

| Parameter | Result | Qualifier | Units | RL | MDL | Dilution Factor |
|---|---|---|---|---|---|---|
| **Volatile Organics by GC/MS - Westborough Lab** | | | | | | |
| Trichloroethene | ND | | ug/l | 0.50 | 0.18 | 1 |
| 1,2-Dichlorobenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,3-Dichlorobenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,4-Dichlorobenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Methyl tert butyl ether | ND | | ug/l | 2.5 | 0.70 | 1 |
| p/m-Xylene | ND | | ug/l | 2.5 | 0.70 | 1 |
| o-Xylene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Xylenes, Total | ND | | ug/l | 2.5 | 0.70 | 1 |
| cis-1,2-Dichloroethene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,2-Dichloroethene, Total | ND | | ug/l | 2.5 | 0.70 | 1 |
| Dibromomethane | ND | | ug/l | 5.0 | 1.0 | 1 |
| 1,2,3-Trichloropropane | ND | | ug/l | 2.5 | 0.70 | 1 |
| Acrylonitrile | ND | | ug/l | 5.0 | 1.5 | 1 |
| Styrene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Dichlorodifluoromethane | ND | | ug/l | 5.0 | 1.0 | 1 |
| Acetone | 5.0 | | ug/l | 5.0 | 1.5 | 1 |
| Carbon disulfide | ND | | ug/l | 5.0 | 1.0 | 1 |
| 2-Butanone | ND | | ug/l | 5.0 | 1.9 | 1 |
| Vinyl acetate | ND | | ug/l | 5.0 | 1.0 | 1 |
| 4-Methyl-2-pentanone | ND | | ug/l | 5.0 | 1.0 | 1 |
| 2-Hexanone | ND | | ug/l | 5.0 | 1.0 | 1 |
| Bromochloromethane | ND | | ug/l | 2.5 | 0.70 | 1 |
| 2,2-Dichloropropane | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,2-Dibromoethane | ND | | ug/l | 2.0 | 0.65 | 1 |
| 1,3-Dichloropropane | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,1,1,2-Tetrachloroethane | ND | | ug/l | 2.5 | 0.70 | 1 |
| Bromobenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| n-Butylbenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| sec-Butylbenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| tert-Butylbenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| o-Chlorotoluene | ND | | ug/l | 2.5 | 0.70 | 1 |
| p-Chlorotoluene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,2-Dibromo-3-chloropropane | ND | | ug/l | 2.5 | 0.70 | 1 |
| Hexachlorobutadiene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Isopropylbenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| p-Isopropyltoluene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Naphthalene | ND | | ug/l | 2.5 | 0.70 | 1 |

**Project Name:** GROSSINGERS **Lab Number:** L2122071

**Project Number:** 9313 **Report Date:** 05/13/21

## SAMPLE RESULTS

Lab ID: L2122071-02 Date Collected: 04/29/21 00:00

Client ID: TB Date Received: 04/29/21

Sample Location: LIBERTY, NY Field Prep: Not Specified

Sample Depth:

| Parameter | Result | Qualifier | Units | RL | MDL | Dilution Factor |
|---|---|---|---|---|---|---|
| **Volatile Organics by GC/MS - Westborough Lab** | | | | | | |
| n-Propylbenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,2,3-Trichlorobenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,2,4-Trichlorobenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,3,5-Trimethylbenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,2,4-Trimethylbenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,4-Dioxane | ND | | ug/l | 250 | 61. | 1 |
| p-Diethylbenzene | ND | | ug/l | 2.0 | 0.70 | 1 |
| p-Ethyltoluene | ND | | ug/l | 2.0 | 0.70 | 1 |
| 1,2,4,5-Tetramethylbenzene | ND | | ug/l | 2.0 | 0.54 | 1 |
| Ethyl ether | ND | | ug/l | 2.5 | 0.70 | 1 |
| trans-1,4-Dichloro-2-butene | ND | | ug/l | 2.5 | 0.70 | 1 |
| **Tentatively Identified Compounds** | | | | | | |
| No Tentatively Identified Compounds | ND | | ug/l | | | 1 |

| Surrogate | % Recovery | Qualifier | Acceptance Criteria |
|---|---|---|---|
| 1,2-Dichloroethane-d4 | 105 | | 70-130 |
| Toluene-d8 | 108 | | 70-130 |
| 4-Bromofluorobenzene | 89 | | 70-130 |
| Dibromofluoromethane | 105 | | 70-130 |

**Project Name:** GROSSINGERS **Lab Number:** L2122071

**Project Number:** 9313 **Report Date:** 05/13/21

# Method Blank Analysis
## Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 05/04/21 08:26
Analyst: PD

| Parameter | Result | Qualifier | Units | RL | MDL |
|---|---|---|---|---|---|
| Volatile Organics by GC/MS - Westborough Lab for sample(s): 01-02 Batch: WG1494182-5 | | | | | |
| Methylene chloride | ND | | ug/l | 2.5 | 0.70 |
| 1,1-Dichloroethane | ND | | ug/l | 2.5 | 0.70 |
| Chloroform | ND | | ug/l | 2.5 | 0.70 |
| Carbon tetrachloride | ND | | ug/l | 0.50 | 0.13 |
| 1,2-Dichloropropane | ND | | ug/l | 1.0 | 0.14 |
| Dibromochloromethane | ND | | ug/l | 0.50 | 0.15 |
| 1,1,2-Trichloroethane | ND | | ug/l | 1.5 | 0.50 |
| Tetrachloroethene | ND | | ug/l | 0.50 | 0.18 |
| Chlorobenzene | ND | | ug/l | 2.5 | 0.70 |
| Trichlorofluoromethane | ND | | ug/l | 2.5 | 0.70 |
| 1,2-Dichloroethane | ND | | ug/l | 0.50 | 0.13 |
| 1,1,1-Trichloroethane | ND | | ug/l | 2.5 | 0.70 |
| Bromodichloromethane | ND | | ug/l | 0.50 | 0.19 |
| trans-1,3-Dichloropropene | ND | | ug/l | 0.50 | 0.16 |
| cis-1,3-Dichloropropene | ND | | ug/l | 0.50 | 0.14 |
| 1,3-Dichloropropene, Total | ND | | ug/l | 0.50 | 0.14 |
| 1,1-Dichloropropene | ND | | ug/l | 2.5 | 0.70 |
| Bromoform | ND | | ug/l | 2.0 | 0.65 |
| 1,1,2,2-Tetrachloroethane | ND | | ug/l | 0.50 | 0.17 |
| Benzene | ND | | ug/l | 0.50 | 0.16 |
| Toluene | ND | | ug/l | 2.5 | 0.70 |
| Ethylbenzene | ND | | ug/l | 2.5 | 0.70 |
| Chloromethane | ND | | ug/l | 2.5 | 0.70 |
| Bromomethane | ND | | ug/l | 2.5 | 0.70 |
| Vinyl chloride | ND | | ug/l | 1.0 | 0.07 |
| Chloroethane | ND | | ug/l | 2.5 | 0.70 |
| 1,1-Dichloroethene | ND | | ug/l | 0.50 | 0.17 |
| trans-1,2-Dichloroethene | ND | | ug/l | 2.5 | 0.70 |
| Trichloroethene | ND | | ug/l | 0.50 | 0.18 |

**Project Name:** GROSSINGERS **Lab Number:** L2122071

**Project Number:** 9313 **Report Date:** 05/13/21

# Method Blank Analysis
## Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 05/04/21 08:26
Analyst: PD

| Parameter | Result | Qualifier | Units | RL | MDL |
|---|---|---|---|---|---|
| Volatile Organics by GC/MS - Westborough Lab for sample(s): 01-02 Batch: WG1494182-5 | | | | | |
| 1,2-Dichlorobenzene | ND | | ug/l | 2.5 | 0.70 |
| 1,3-Dichlorobenzene | ND | | ug/l | 2.5 | 0.70 |
| 1,4-Dichlorobenzene | ND | | ug/l | 2.5 | 0.70 |
| Methyl tert butyl ether | ND | | ug/l | 2.5 | 0.70 |
| p/m-Xylene | ND | | ug/l | 2.5 | 0.70 |
| o-Xylene | ND | | ug/l | 2.5 | 0.70 |
| Xylenes, Total | ND | | ug/l | 2.5 | 0.70 |
| cis-1,2-Dichloroethene | ND | | ug/l | 2.5 | 0.70 |
| 1,2-Dichloroethene, Total | ND | | ug/l | 2.5 | 0.70 |
| Dibromomethane | ND | | ug/l | 5.0 | 1.0 |
| 1,2,3-Trichloropropane | ND | | ug/l | 2.5 | 0.70 |
| Acrylonitrile | ND | | ug/l | 5.0 | 1.5 |
| Styrene | ND | | ug/l | 2.5 | 0.70 |
| Dichlorodifluoromethane | ND | | ug/l | 5.0 | 1.0 |
| Acetone | ND | | ug/l | 5.0 | 1.5 |
| Carbon disulfide | ND | | ug/l | 5.0 | 1.0 |
| 2-Butanone | ND | | ug/l | 5.0 | 1.9 |
| Vinyl acetate | ND | | ug/l | 5.0 | 1.0 |
| 4-Methyl-2-pentanone | ND | | ug/l | 5.0 | 1.0 |
| 2-Hexanone | ND | | ug/l | 5.0 | 1.0 |
| Bromochloromethane | ND | | ug/l | 2.5 | 0.70 |
| 2,2-Dichloropropane | ND | | ug/l | 2.5 | 0.70 |
| 1,2-Dibromoethane | ND | | ug/l | 2.0 | 0.65 |
| 1,3-Dichloropropane | ND | | ug/l | 2.5 | 0.70 |
| 1,1,1,2-Tetrachloroethane | ND | | ug/l | 2.5 | 0.70 |
| Bromobenzene | ND | | ug/l | 2.5 | 0.70 |
| n-Butylbenzene | ND | | ug/l | 2.5 | 0.70 |
| sec-Butylbenzene | ND | | ug/l | 2.5 | 0.70 |
| tert-Butylbenzene | ND | | ug/l | 2.5 | 0.70 |

**Project Name:** GROSSINGERS
**Project Number:** 9313
**Lab Number:** L2122071
**Report Date:** 05/13/21

# Method Blank Analysis
## Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 05/04/21 08:26
Analyst: PD

| Parameter | Result | Qualifier | Units | RL | MDL |
|---|---|---|---|---|---|
| Volatile Organics by GC/MS - Westborough Lab for sample(s): 01-02 Batch: WG1494182-5 | | | | | |
| o-Chlorotoluene | ND | | ug/l | 2.5 | 0.70 |
| p-Chlorotoluene | ND | | ug/l | 2.5 | 0.70 |
| 1,2-Dibromo-3-chloropropane | ND | | ug/l | 2.5 | 0.70 |
| Hexachlorobutadiene | ND | | ug/l | 2.5 | 0.70 |
| Isopropylbenzene | ND | | ug/l | 2.5 | 0.70 |
| p-Isopropyltoluene | ND | | ug/l | 2.5 | 0.70 |
| Naphthalene | ND | | ug/l | 2.5 | 0.70 |
| n-Propylbenzene | ND | | ug/l | 2.5 | 0.70 |
| 1,2,3-Trichlorobenzene | ND | | ug/l | 2.5 | 0.70 |
| 1,2,4-Trichlorobenzene | ND | | ug/l | 2.5 | 0.70 |
| 1,3,5-Trimethylbenzene | ND | | ug/l | 2.5 | 0.70 |
| 1,2,4-Trimethylbenzene | ND | | ug/l | 2.5 | 0.70 |
| 1,4-Dioxane | ND | | ug/l | 250 | 61. |
| p-Diethylbenzene | ND | | ug/l | 2.0 | 0.70 |
| p-Ethyltoluene | ND | | ug/l | 2.0 | 0.70 |
| 1,2,4,5-Tetramethylbenzene | ND | | ug/l | 2.0 | 0.54 |
| Ethyl ether | ND | | ug/l | 2.5 | 0.70 |
| trans-1,4-Dichloro-2-butene | ND | | ug/l | 2.5 | 0.70 |
| Tentatively Identified Compounds | | | | | |
| No Tentatively Identified Compounds | ND | | ug/l | | |

**Project Name:** GROSSINGERS
**Project Number:** 9313
**Lab Number:** L2122071
**Report Date:** 05/13/21

# Method Blank Analysis
## Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 05/04/21 08:26
Analyst: PD

| Parameter | Result | Qualifier | Units | RL | MDL |
|---|---|---|---|---|---|
| Volatile Organics by GC/MS - Westborough Lab for sample(s): 01-02 Batch: WG1494182-5 | | | | | |

| Surrogate | %Recovery | Qualifier | Acceptance Criteria |
|---|---|---|---|
| 1,2-Dichloroethane-d4 | 101 | | 70-130 |
| Toluene-d8 | 109 | | 70-130 |
| 4-Bromofluorobenzene | 87 | | 70-130 |
| Dibromofluoromethane | 101 | | 70-130 |

# Lab Control Sample Analysis
## Batch Quality Control

**Project Name:** GROSSINGERS
**Project Number:** 9313

**Lab Number:** L2122071
**Report Date:** 05/13/21

| Parameter | LCS %Recovery | Qual | LCSD %Recovery | Qual | %Recovery Limits | RPD | Qual | RPD Limits |
|---|---|---|---|---|---|---|---|---|
| Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-02 Batch: WG1494182-3 WG1494182-4 | | | | | | | | |
| Methylene chloride | 91 | | 92 | | 70-130 | 1 | | 20 |
| 1,1-Dichloroethane | 96 | | 94 | | 70-130 | 2 | | 20 |
| Chloroform | 97 | | 98 | | 70-130 | 1 | | 20 |
| Carbon tetrachloride | 85 | | 86 | | 63-132 | 1 | | 20 |
| 1,2-Dichloropropane | 120 | | 120 | | 70-130 | 0 | | 20 |
| Dibromochloromethane | 100 | | 100 | | 63-130 | 0 | | 20 |
| 1,1,2-Trichloroethane | 120 | | 120 | | 70-130 | 0 | | 20 |
| Tetrachloroethene | 120 | | 120 | | 70-130 | 0 | | 20 |
| Chlorobenzene | 110 | | 110 | | 75-130 | 0 | | 20 |
| Trichlorofluoromethane | 76 | | 76 | | 62-150 | 0 | | 20 |
| 1,2-Dichloroethane | 110 | | 110 | | 70-130 | 0 | | 20 |
| 1,1,1-Trichloroethane | 92 | | 94 | | 67-130 | 2 | | 20 |
| Bromodichloromethane | 90 | | 91 | | 67-130 | 1 | | 20 |
| trans-1,3-Dichloropropene | 96 | | 100 | | 70-130 | 4 | | 20 |
| cis-1,3-Dichloropropene | 93 | | 95 | | 70-130 | 2 | | 20 |
| 1,1-Dichloropropene | 95 | | 96 | | 70-130 | 1 | | 20 |
| Bromoform | 97 | | 100 | | 54-136 | 3 | | 20 |
| 1,1,2,2-Tetrachloroethane | 110 | | 110 | | 67-130 | 0 | | 20 |
| Benzene | 100 | | 100 | | 70-130 | 0 | | 20 |
| Toluene | 110 | | 110 | | 70-130 | 0 | | 20 |
| Ethylbenzene | 110 | | 110 | | 70-130 | 0 | | 20 |
| Chloromethane | 72 | | 68 | | 64-130 | 6 | | 20 |
| Bromomethane | 120 | | 110 | | 39-139 | 9 | | 20 |

# Lab Control Sample Analysis
## Batch Quality Control

**Project Name:** GROSSINGERS
**Project Number:** 9313
**Lab Number:** L2122071
**Report Date:** 05/13/21

| Parameter | LCS %Recovery | Qual | LCSD %Recovery | Qual | %Recovery Limits | RPD | Qual | RPD Limits |
|---|---|---|---|---|---|---|---|---|
| Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-02 Batch: WG1494182-3 WG1494182-4 | | | | | | | | |
| Vinyl chloride | 110 | | 110 | | 55-140 | 0 | | 20 |
| Chloroethane | 98 | | 86 | | 55-138 | 13 | | 20 |
| 1,1-Dichloroethene | 93 | | 91 | | 61-145 | 2 | | 20 |
| trans-1,2-Dichloroethene | 96 | | 92 | | 70-130 | 4 | | 20 |
| Trichloroethene | 100 | | 100 | | 70-130 | 0 | | 20 |
| 1,2-Dichlorobenzene | 120 | | 110 | | 70-130 | 9 | | 20 |
| 1,3-Dichlorobenzene | 110 | | 110 | | 70-130 | 0 | | 20 |
| 1,4-Dichlorobenzene | 110 | | 110 | | 70-130 | 0 | | 20 |
| Methyl tert butyl ether | 86 | | 85 | | 63-130 | 1 | | 20 |
| p/m-Xylene | 105 | | 105 | | 70-130 | 0 | | 20 |
| o-Xylene | 110 | | 105 | | 70-130 | 5 | | 20 |
| cis-1,2-Dichloroethene | 110 | | 97 | | 70-130 | 13 | | 20 |
| Dibromomethane | 100 | | 110 | | 70-130 | 10 | | 20 |
| 1,2,3-Trichloropropane | 100 | | 100 | | 64-130 | 0 | | 20 |
| Acrylonitrile | 110 | | 120 | | 70-130 | 9 | | 20 |
| Styrene | 110 | | 110 | | 70-130 | 0 | | 20 |
| Dichlorodifluoromethane | 78 | | 77 | | 36-147 | 1 | | 20 |
| Acetone | 93 | | 95 | | 58-148 | 2 | | 20 |
| Carbon disulfide | 85 | | 85 | | 51-130 | 0 | | 20 |
| 2-Butanone | 120 | | 120 | | 63-138 | 0 | | 20 |
| Vinyl acetate | 100 | | 110 | | 70-130 | 10 | | 20 |
| 4-Methyl-2-pentanone | **140** | Q | **160** | Q | 59-130 | 13 | | 20 |
| 2-Hexanone | 120 | | 130 | | 57-130 | 8 | | 20 |

# Lab Control Sample Analysis
## Batch Quality Control

**Project Name:** GROSSINGERS
**Project Number:** 9313
**Lab Number:** L2122071
**Report Date:** 05/13/21

| Parameter | LCS %Recovery | Qual | LCSD %Recovery | Qual | %Recovery Limits | RPD | Qual | RPD Limits |
|---|---|---|---|---|---|---|---|---|
| Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-02 Batch: WG1494182-3 WG1494182-4 | | | | | | | | |
| Bromochloromethane | 110 | | 110 | | 70-130 | 0 | | 20 |
| 2,2-Dichloropropane | 91 | | 93 | | 63-133 | 2 | | 20 |
| 1,2-Dibromoethane | 110 | | 110 | | 70-130 | 0 | | 20 |
| 1,3-Dichloropropane | 120 | | 120 | | 70-130 | 0 | | 20 |
| 1,1,1,2-Tetrachloroethane | 100 | | 110 | | 64-130 | 10 | | 20 |
| Bromobenzene | 110 | | 110 | | 70-130 | 0 | | 20 |
| n-Butylbenzene | 110 | | 100 | | 53-136 | 10 | | 20 |
| sec-Butylbenzene | 98 | | 94 | | 70-130 | 4 | | 20 |
| tert-Butylbenzene | 100 | | 95 | | 70-130 | 5 | | 20 |
| o-Chlorotoluene | 100 | | 96 | | 70-130 | 4 | | 20 |
| p-Chlorotoluene | 100 | | 98 | | 70-130 | 2 | | 20 |
| 1,2-Dibromo-3-chloropropane | 100 | | 110 | | 41-144 | 10 | | 20 |
| Hexachlorobutadiene | 120 | | 120 | | 63-130 | 0 | | 20 |
| Isopropylbenzene | 95 | | 90 | | 70-130 | 5 | | 20 |
| p-Isopropyltoluene | 100 | | 97 | | 70-130 | 3 | | 20 |
| Naphthalene | 98 | | 100 | | 70-130 | 2 | | 20 |
| n-Propylbenzene | 100 | | 99 | | 69-130 | 1 | | 20 |
| 1,2,3-Trichlorobenzene | 120 | | 120 | | 70-130 | 0 | | 20 |
| 1,2,4-Trichlorobenzene | 120 | | 120 | | 70-130 | 0 | | 20 |
| 1,3,5-Trimethylbenzene | 95 | | 91 | | 64-130 | 4 | | 20 |
| 1,2,4-Trimethylbenzene | 99 | | 92 | | 70-130 | 7 | | 20 |
| 1,4-Dioxane | 116 | | 122 | | 56-162 | 5 | | 20 |
| p-Diethylbenzene | 100 | | 99 | | 70-130 | 1 | | 20 |

# Lab Control Sample Analysis

## Batch Quality Control

**Project Name:** GROSSINGERS

**Project Number:** 9313

**Lab Number:** L2122071

**Report Date:** 05/13/21

| Parameter | LCS %Recovery | Qual | LCSD %Recovery | Qual | %Recovery Limits | RPD | Qual | RPD Limits |
|---|---|---|---|---|---|---|---|---|
| Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-02 Batch: WG1494182-3 WG1494182-4 | | | | | | | | |
| p-Ethyltoluene | 98 | | 93 | | 70-130 | 5 | | 20 |
| 1,2,4,5-Tetramethylbenzene | 99 | | 93 | | 70-130 | 6 | | 20 |
| Ethyl ether | 90 | | 92 | | 59-134 | 2 | | 20 |
| trans-1,4-Dichloro-2-butene | 88 | | 96 | | 70-130 | 9 | | 20 |

| Surrogate | LCS %Recovery | Qual | LCSD %Recovery | Qual | Acceptance Criteria |
|---|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 96 | | 100 | | 70-130 |
| Toluene-d8 | 109 | | 108 | | 70-130 |
| 4-Bromofluorobenzene | 90 | | 84 | | 70-130 |
| Dibromofluoromethane | 102 | | 101 | | 70-130 |

# SEMIVOLATILES

**Project Name:** GROSSINGERS
**Project Number:** 9313
**Lab Number:** L2122071
**Report Date:** 05/13/21

## SAMPLE RESULTS

Lab ID: L2122071-01
Client ID: MW-210
Sample Location: LIBERTY, NY

Date Collected: 04/29/21 11:00
Date Received: 04/29/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 134,LCMSMS-ID
Analytical Date: 05/07/21 02:57
Analyst: MP

Extraction Method: ALPHA 23528
Extraction Date: 05/04/21 04:25

| Parameter | Result | Qualifier | Units | RL | MDL | Dilution Factor |
|---|---|---|---|---|---|---|
| **Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab** | | | | | | |
| Perfluorobutanoic Acid (PFBA) | 14.0 | | ng/l | 1.75 | 0.358 | 1 |
| Perfluoropentanoic Acid (PFPeA) | 1.48 | J | ng/l | 1.75 | 0.347 | 1 |
| Perfluorobutanesulfonic Acid (PFBS) | 1.17 | J | ng/l | 1.75 | 0.209 | 1 |
| Perfluorohexanoic Acid (PFHxA) | 1.80 | | ng/l | 1.75 | 0.288 | 1 |
| Perfluoroheptanoic Acid (PFHpA) | 1.12 | J | ng/l | 1.75 | 0.198 | 1 |
| Perfluorohexanesulfonic Acid (PFHxS) | 1.62 | J | ng/l | 1.75 | 0.330 | 1 |
| Perfluorooctanoic Acid (PFOA) | 4.74 | | ng/l | 1.75 | 0.207 | 1 |
| 1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS) | ND | | ng/l | 1.75 | 1.17 | 1 |
| Perfluoroheptanesulfonic Acid (PFHpS) | ND | | ng/l | 1.75 | 0.604 | 1 |
| Perfluorononanoic Acid (PFNA) | ND | | ng/l | 1.75 | 0.274 | 1 |
| Perfluorooctanesulfonic Acid (PFOS) | 7.25 | | ng/l | 1.75 | 0.442 | 1 |
| Perfluorodecanoic Acid (PFDA) | ND | | ng/l | 1.75 | 0.267 | 1 |
| 1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS) | ND | | ng/l | 1.75 | 1.06 | 1 |
| N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA) | ND | | ng/l | 1.75 | 0.568 | 1 |
| Perfluoroundecanoic Acid (PFUnA) | ND | | ng/l | 1.75 | 0.228 | 1 |
| Perfluorodecanesulfonic Acid (PFDS) | ND | | ng/l | 1.75 | 0.860 | 1 |
| N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA) | ND | | ng/l | 1.75 | 0.705 | 1 |
| Perfluorododecanoic Acid (PFDoA) | ND | | ng/l | 1.75 | 0.326 | 1 |
| Perfluorotridecanoic Acid (PFTrDA) | ND | | ng/l | 1.75 | 0.287 | 1 |
| Perfluorotetradecanoic Acid (PFTA) | ND | | ng/l | 1.75 | 0.218 | 1 |
| PFOA/PFOS, Total | 12.0 | | ng/l | 1.75 | 0.207 | 1 |

**Project Name:** GROSSINGERS **Lab Number:** L2122071

**Project Number:** 9313 **Report Date:** 05/13/21

**SAMPLE RESULTS**

Lab ID: L2122071-01 Date Collected: 04/29/21 11:00

Client ID: MW-210 Date Received: 04/29/21

Sample Location: LIBERTY, NY Field Prep: Not Specified

Sample Depth:

| Parameter | Result | Qualifier | Units | RL | MDL | Dilution Factor |
|---|---|---|---|---|---|---|
| Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab | | | | | | |

| Surrogate (Extracted Internal Standard) | % Recovery | Qualifier | Acceptance Criteria |
|---|---|---|---|
| Perfluoro[13C4]Butanoic Acid (MPFBA) | 73 | | 58-132 |
| Perfluoro[13C5]Pentanoic Acid (M5PFPEA) | 77 | | 62-163 |
| Perfluoro[2,3,4-13C3]Butanesulfonic Acid (M3PFBS) | 87 | | 70-131 |
| Perfluoro[1,2,3,4,6-13C5]Hexanoic Acid (M5PFHxA) | 60 | | 57-129 |
| Perfluoro[1,2,3,4-13C4]Heptanoic Acid (M4PFHpA) | 65 | | 60-129 |
| Perfluoro[1,2,3-13C3]Hexanesulfonic Acid (M3PFHxS) | 94 | | 71-134 |
| Perfluoro[13C8]Octanoic Acid (M8PFOA) | 67 | | 62-129 |
| 1H,1H,2H,2H-Perfluoro[1,2-13C2]Octanesulfonic Acid (M2-6:2FTS) | 78 | | 14-147 |
| Perfluoro[13C9]Nonanoic Acid (M9PFNA) | 65 | | 59-139 |
| Perfluoro[13C8]Octanesulfonic Acid (M8PFOS) | 84 | | 69-131 |
| Perfluoro[1,2,3,4,5,6-13C6]Decanoic Acid (M6PFDA) | 68 | | 62-124 |
| 1H,1H,2H,2H-Perfluoro[1,2-13C2]Decanesulfonic Acid (M2-8:2FTS) | 90 | | 10-162 |
| N-Deuteriomethylperfluoro-1-octanesulfonamidoacetic Acid (d3-NMeFOSAA) | 44 | | 24-116 |
| Perfluoro[1,2,3,4,5,6,7-13C7]Undecanoic Acid (M7-PFUDA) | 75 | | 55-137 |
| N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA) | 56 | | 27-126 |
| Perfluoro[1,2-13C2]Dodecanoic Acid (MPFDOA) | 75 | | 48-131 |
| Perfluoro[1,2-13C2]Tetradecanoic Acid (M2PFTEDA) | 90 | | 22-136 |

**Project Name:** GROSSINGERS
**Project Number:** 9313
**Lab Number:** L2122071
**Report Date:** 05/13/21

## SAMPLE RESULTS

Lab ID: L2122071-01
Client ID: MW-210
Sample Location: LIBERTY, NY

Sample Depth:
Matrix: Water
Analytical Method: 134,LCMSMS-ID
Analytical Date: 05/10/21 22:09
Analyst: HT

Date Collected: 04/29/21 11:00
Date Received: 04/29/21
Field Prep: Not Specified

Extraction Method: ALPHA 23528
Extraction Date: 05/04/21 04:25

| Parameter | Result | Qualifier | Units | RL | MDL | Dilution Factor |
|---|---|---|---|---|---|---|
| **Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab** | | | | | | |
| Perfluorooctanesulfonamide (FOSA) | ND | | ng/l | 1.75 | 0.509 | 1 |

| Surrogate (Extracted Internal Standard) | % Recovery | Qualifier | Acceptance Criteria |
|---|---|---|---|
| Perfluoro[13C8]Octanesulfonamide (M8FOSA) | 82 | | 10-112 |

**Project Name:** GROSSINGERS
**Project Number:** 9313
**Lab Number:** L2122071
**Report Date:** 05/13/21

# Method Blank Analysis
## Batch Quality Control

Analytical Method: 134,LCMSMS-ID
Analytical Date: 05/04/21 13:45
Analyst: RS

Extraction Method: ALPHA 23528
Extraction Date: 05/04/21 04:25

| Parameter | Result | Qualifier | Units | RL | MDL |
|---|---|---|---|---|---|
| Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab for sample(s): 01 Batch: WG1493960-1 | | | | | |
| Perfluorobutanoic Acid (PFBA) | ND | | ng/l | 2.00 | 0.408 |
| Perfluoropentanoic Acid (PFPeA) | ND | | ng/l | 2.00 | 0.396 |
| Perfluorobutanesulfonic Acid (PFBS) | ND | | ng/l | 2.00 | 0.238 |
| Perfluorohexanoic Acid (PFHxA) | 0.432 | J | ng/l | 2.00 | 0.328 |
| Perfluoroheptanoic Acid (PFHpA) | ND | | ng/l | 2.00 | 0.225 |
| Perfluorohexanesulfonic Acid (PFHxS) | ND | | ng/l | 2.00 | 0.376 |
| Perfluorooctanoic Acid (PFOA) | ND | | ng/l | 2.00 | 0.236 |
| 1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS) | ND | | ng/l | 2.00 | 1.33 |
| Perfluoroheptanesulfonic Acid (PFHpS) | ND | | ng/l | 2.00 | 0.688 |
| Perfluorononanoic Acid (PFNA) | ND | | ng/l | 2.00 | 0.312 |
| Perfluorooctanesulfonic Acid (PFOS) | ND | | ng/l | 2.00 | 0.504 |
| Perfluorodecanoic Acid (PFDA) | ND | | ng/l | 2.00 | 0.304 |
| 1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS) | ND | | ng/l | 2.00 | 1.21 |
| N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA) | ND | | ng/l | 2.00 | 0.648 |
| Perfluoroundecanoic Acid (PFUnA) | ND | | ng/l | 2.00 | 0.260 |
| Perfluorodecanesulfonic Acid (PFDS) | ND | | ng/l | 2.00 | 0.980 |
| Perfluorooctanesulfonamide (FOSA) | ND | | ng/l | 2.00 | 0.580 |
| N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA) | ND | | ng/l | 2.00 | 0.804 |
| Perfluorododecanoic Acid (PFDoA) | ND | | ng/l | 2.00 | 0.372 |
| Perfluorotridecanoic Acid (PFTrDA) | ND | | ng/l | 2.00 | 0.327 |
| Perfluorotetradecanoic Acid (PFTA) | ND | | ng/l | 2.00 | 0.248 |
| PFOA/PFOS, Total | ND | | ng/l | 2.00 | 0.236 |

**Project Name:** GROSSINGERS
**Project Number:** 9313
**Lab Number:** L2122071
**Report Date:** 05/13/21

# Method Blank Analysis
## Batch Quality Control

Analytical Method: 134,LCMSMS-ID
Analytical Date: 05/04/21 13:45
Analyst: RS

Extraction Method: ALPHA 23528
Extraction Date: 05/04/21 04:25

| Parameter | Result | Qualifier | Units | RL | MDL |
|---|---|---|---|---|---|
| Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab for sample(s): 01 Batch: WG1493960-1 | | | | | |

| Surrogate (Extracted Internal Standard) | %Recovery | Qualifier | Acceptance Criteria |
|---|---|---|---|
| Perfluoro[13C4]Butanoic Acid (MPFBA) | 86 | | 58-132 |
| Perfluoro[13C5]Pentanoic Acid (M5PFPEA) | 94 | | 62-163 |
| Perfluoro[2,3,4-13C3]Butanesulfonic Acid (M3PFBS) | 85 | | 70-131 |
| Perfluoro[1,2,3,4,6-13C5]Hexanoic Acid (M5PFHxA) | 71 | | 57-129 |
| Perfluoro[1,2,3,4-13C4]Heptanoic Acid (M4PFHpA) | 79 | | 60-129 |
| Perfluoro[1,2,3-13C3]Hexanesulfonic Acid (M3PFHxS) | 89 | | 71-134 |
| Perfluoro[13C8]Octanoic Acid (M8PFOA) | 81 | | 62-129 |
| 1H,1H,2H,2H-Perfluoro[1,2-13C2]Octanesulfonic Acid (M2-6:2FTS) | 54 | | 14-147 |
| Perfluoro[13C9]Nonanoic Acid (M9PFNA) | 76 | | 59-139 |
| Perfluoro[13C8]Octanesulfonic Acid (M8PFOS) | 86 | | 69-131 |
| Perfluoro[1,2,3,4,5,6-13C6]Decanoic Acid (M6PFDA) | 83 | | 62-124 |
| 1H,1H,2H,2H-Perfluoro[1,2-13C2]Decanesulfonic Acid (M2-8:2FTS) | 75 | | 10-162 |
| N-Deuteriomethylperfluoro-1-octanesulfonamidoacetic Acid (d3-NMeFOSAA) | 57 | | 24-116 |
| Perfluoro[1,2,3,4,5,6,7-13C7]Undecanoic Acid (M7-PFUDA) | 88 | | 55-137 |
| Perfluoro[13C8]Octanesulfonamide (M8FOSA) | 25 | | 10-112 |
| N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA) | 77 | | 27-126 |
| Perfluoro[1,2-13C2]Dodecanoic Acid (MPFDOA) | 90 | | 48-131 |
| Perfluoro[1,2-13C2]Tetradecanoic Acid (M2PFTEDA) | 96 | | 22-136 |

**Project Name:** GROSSINGERS
**Project Number:** 9313

**Lab Number:** L2122071
**Report Date:** 05/13/21

# Method Blank Analysis
## Batch Quality Control

Analytical Method: 134,LCMSMS-ID
Analytical Date: 05/05/21 13:34
Analyst: RS

Extraction Method: ALPHA 23528
Extraction Date: 05/04/21 04:25

| Parameter | Result | Qualifier | Units | RL | MDL |
|---|---|---|---|---|---|
| Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab for sample(s): 01 Batch: WG1493960-1 | | | | | |
| Perfluorooctanesulfonamide (FOSA) | ND | | ng/l | 2.00 | 0.580 |

| Surrogate (Extracted Internal Standard) | %Recovery | Qualifier | Acceptance Criteria |
|---|---|---|---|
| Perfluoro[13C8]Octanesulfonamide (M8FOSA) | 92 | | 10-112 |

# Lab Control Sample Analysis
## Batch Quality Control

**Project Name:** GROSSINGERS
**Project Number:** 9313

**Lab Number:** L2122071
**Report Date:** 05/13/21

| Parameter | LCS %Recovery | Qual | LCSD %Recovery | Qual | %Recovery Limits | RPD | Qual | RPD Limits |
|---|---|---|---|---|---|---|---|---|
| Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab Associated sample(s): 01 Batch: WG1493960-2 | | | | | | | | |
| Perfluorobutanoic Acid (PFBA) | 101 | | - | | 67-148 | - | | 30 |
| Perfluoropentanoic Acid (PFPeA) | 107 | | - | | 63-161 | - | | 30 |
| Perfluorobutanesulfonic Acid (PFBS) | 97 | | - | | 65-157 | - | | 30 |
| Perfluorohexanoic Acid (PFHxA) | 103 | | - | | 69-168 | - | | 30 |
| Perfluoroheptanoic Acid (PFHpA) | 99 | | - | | 58-159 | - | | 30 |
| Perfluorohexanesulfonic Acid (PFHxS) | 96 | | - | | 69-177 | - | | 30 |
| Perfluorooctanoic Acid (PFOA) | 104 | | - | | 63-159 | - | | 30 |
| 1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS) | 113 | | - | | 49-187 | - | | 30 |
| Perfluoroheptanesulfonic Acid (PFHpS) | 103 | | - | | 61-179 | - | | 30 |
| Perfluorononanoic Acid (PFNA) | 117 | | - | | 68-171 | - | | 30 |
| Perfluorooctanesulfonic Acid (PFOS) | 107 | | - | | 52-151 | - | | 30 |
| Perfluorodecanoic Acid (PFDA) | 103 | | - | | 63-171 | - | | 30 |
| 1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS) | 108 | | - | | 56-173 | - | | 30 |
| N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA) | 109 | | - | | 60-166 | - | | 30 |
| Perfluoroundecanoic Acid (PFUnA) | 113 | | - | | 60-153 | - | | 30 |
| Perfluorodecanesulfonic Acid (PFDS) | 99 | | - | | 38-156 | - | | 30 |
| Perfluorooctanesulfonamide (FOSA) | 97 | | - | | 46-170 | - | | 30 |
| N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA) | 97 | | - | | 45-170 | - | | 30 |
| Perfluorododecanoic Acid (PFDoA) | 104 | | - | | 67-153 | - | | 30 |
| Perfluorotridecanoic Acid (PFTrDA) | 130 | | - | | 48-158 | - | | 30 |
| Perfluorotetradecanoic Acid (PFTA) | 115 | | - | | 59-182 | - | | 30 |

# Lab Control Sample Analysis
## Batch Quality Control

**Project Name:** GROSSINGERS
**Project Number:** 9313
**Lab Number:** L2122071
**Report Date:** 05/13/21

| Parameter | LCS %Recovery | Qual | LCSD %Recovery | Qual | %Recovery Limits | RPD | Qual | RPD Limits |
|---|---|---|---|---|---|---|---|---|
| Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab Associated sample(s): 01 Batch: WG1493960-2 | | | | | | | | |

| Surrogate (Extracted Internal Standard) | LCS %Recovery | Qual | LCSD %Recovery | Qual | Acceptance Criteria |
|---|---|---|---|---|---|
| Perfluoro[13C4]Butanoic Acid (MPFBA) | 84 | | | | 58-132 |
| Perfluoro[13C5]Pentanoic Acid (M5PFPEA) | 91 | | | | 62-163 |
| Perfluoro[2,3,4-13C3]Butanesulfonic Acid (M3PFBS) | 85 | | | | 70-131 |
| Perfluoro[1,2,3,4,6-13C5]Hexanoic Acid (M5PFHxA) | 70 | | | | 57-129 |
| Perfluoro[1,2,3,4-13C4]Heptanoic Acid (M4PFHpA) | 77 | | | | 60-129 |
| Perfluoro[1,2,3-13C3]Hexanesulfonic Acid (M3PFHxS) | 88 | | | | 71-134 |
| Perfluoro[13C8]Octanoic Acid (M8PFOA) | 79 | | | | 62-129 |
| 1H,1H,2H,2H-Perfluoro[1,2-13C2]Octanesulfonic Acid (M2-6:2FTS) | 57 | | | | 14-147 |
| Perfluoro[13C9]Nonanoic Acid (M9PFNA) | 71 | | | | 59-139 |
| Perfluoro[13C8]Octanesulfonic Acid (M8PFOS) | 82 | | | | 69-131 |
| Perfluoro[1,2,3,4,5,6-13C6]Decanoic Acid (M6PFDA) | 82 | | | | 62-124 |
| 1H,1H,2H,2H-Perfluoro[1,2-13C2]Decanesulfonic Acid (M2-8:2FTS) | 76 | | | | 10-162 |
| N-Deuteriomethylperfluoro-1-octanesulfonamidoacetic Acid (d3-NMeFOSAA) | 59 | | | | 24-116 |
| Perfluoro[1,2,3,4,5,6,7-13C7]Undecanoic Acid (M7-PFUDA) | 84 | | | | 55-137 |
| Perfluoro[13C8]Octanesulfonamide (M8FOSA) | 25 | | | | 10-112 |
| N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA) | 73 | | | | 27-126 |
| Perfluoro[1,2-13C2]Dodecanoic Acid (MPFDOA) | 93 | | | | 48-131 |
| Perfluoro[1,2-13C2]Tetradecanoic Acid (M2PFTEDA) | 86 | | | | 22-136 |

# Lab Control Sample Analysis

## Batch Quality Control

**Project Name:** GROSSINGERS

**Project Number:** 9313

**Lab Number:** L2122071

**Report Date:** 05/13/21

| Parameter | LCS %Recovery | Qual | LCSD %Recovery | Qual | %Recovery Limits | RPD | Qual | RPD Limits |
|---|---|---|---|---|---|---|---|---|
| Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab Associated sample(s): 01 Batch: WG1493960-2 | | | | | | | | |
| Perfluorooctanesulfonamide (FOSA) | 93 | | - | | 46-170 | - | | 30 |

| Surrogate (Extracted Internal Standard) | LCS %Recovery | Qual | LCSD %Recovery | Qual | Acceptance Criteria |
|---|---|---|---|---|---|
| Perfluoro[13C8]Octanesulfonamide (M8FOSA) | 89 | | | | 10-112 |

# Matrix Spike Analysis
## *Batch Quality Control*

**Project Name:** GROSSINGERS
**Project Number:** 9313
**Lab Number:** L2122071
**Report Date:** 05/13/21

| Parameter | Native Sample | MS Added | MS Found | MS %Recovery | Qual | MSD Found | MSD %Recovery | Qual | Recovery Limits | RPD | Qual | RPD Limits |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab Associated sample(s): 01 QC Batch ID: WG1493960-3 QC Sample: L2121570-01 Client ID: MS Sample | | | | | | | | | | | | |
| Perfluorobutanoic Acid (PFBA) | 10.1 | 42 | 50.4 | 96 | | - | - | | 67-148 | - | | 30 |
| Perfluoropentanoic Acid (PFPeA) | 6.97F | 42 | 48.8 | 100 | | - | - | | 63-161 | - | | 30 |
| Perfluorobutanesulfonic Acid (PFBS) | 3.02 | 37.2 | 37.5 | 92 | | - | - | | 65-157 | - | | 30 |
| 1H,1H,2H,2H-Perfluorohexanesulfonic Acid (4:2FTS) | ND | 39.3 | 43.4 | 111 | | - | - | | 37-219 | - | | 30 |
| Perfluorohexanoic Acid (PFHxA) | 9.42 | 42 | 50.8 | 99 | | - | - | | 69-168 | - | | 30 |
| Perfluoropentanesulfonic Acid (PFPeS) | 1.92J | 39.4 | 36.5 | 88 | | - | - | | 52-156 | - | | 30 |
| Perfluoroheptanoic Acid (PFHpA) | 6.64 | 42 | 47.1 | 96 | | - | - | | 58-159 | - | | 30 |
| Perfluorohexanesulfonic Acid (PFHxS) | 6.66 | 38.3 | 42.8 | 94 | | - | - | | 69-177 | - | | 30 |
| Perfluorooctanoic Acid (PFOA) | 29.5 | 42 | 72.4 | 102 | | - | - | | 63-159 | - | | 30 |
| 1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS) | ND | 39.9 | 44.4 | 111 | | - | - | | 49-187 | - | | 30 |
| Perfluoroheptanesulfonic Acid (PFHpS) | 1.35J | 39.9 | 45.6 | 111 | | - | - | | 61-179 | - | | 30 |
| Perfluorononanoic Acid (PFNA) | 1.29J | 42 | 44.7 | 103 | | - | - | | 68-171 | - | | 30 |
| Perfluorooctanesulfonic Acid (PFOS) | 40.3 | 38.9 | 82.1 | 107 | | - | - | | 52-151 | - | | 30 |
| Perfluorodecanoic Acid (PFDA) | 0.631JF | 42 | 41.6 | 98 | | - | - | | 63-171 | - | | 30 |
| 1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS) | ND | 40.3 | 44.5 | 110 | | - | - | | 56-173 | - | | 30 |
| Perfluorononanesulfonic Acid (PFNS) | ND | 40.4 | 33.6 | 83 | | - | - | | 48-150 | - | | 30 |
| N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA) | ND | 42 | 44.9 | 107 | | - | - | | 60-166 | - | | 30 |
| Perfluoroundecanoic Acid (PFUnA) | ND | 42 | 43.1 | 103 | | - | - | | 60-153 | - | | 30 |
| Perfluorodecanesulfonic Acid (PFDS) | ND | 40.4 | 31.7 | 78 | | - | - | | 38-156 | - | | 30 |
| Perfluorooctanesulfonamide (FOSA) | 0.800JF | 42 | 40.4F | 94 | | - | - | | 46-170 | - | | 30 |
| N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA) | ND | 42 | 42.6 | 102 | | - | - | | 45-170 | - | | 30 |
| Perfluorododecanoic Acid (PFDoA) | ND | 42 | 40.7 | 97 | | - | - | | 67-153 | - | | 30 |

# Matrix Spike Analysis

## Batch Quality Control

**Project Name:** GROSSINGERS
**Project Number:** 9313
**Lab Number:** L2122071
**Report Date:** 05/13/21

| Parameter | Native Sample | MS Added | MS Found | MS %Recovery | Qual | MSD Found | MSD %Recovery | Qual | Recovery Limits | RPD | Qual | RPD Limits |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab Associated sample(s): 01 QC Batch ID: WG1493960-3 QC Sample: L2121570-01 Client ID: MS Sample | | | | | | | | | | | | |
| Perfluorotridecanoic Acid (PFTrDA) | ND | 42 | 51.0 | 122 | | - | - | | 48-158 | - | | 30 |
| Perfluorotetradecanoic Acid (PFTA) | ND | 42 | 44.2 | 105 | | - | - | | 59-182 | - | | 30 |

| Surrogate (Extracted Internal Standard) | MS % Recovery | MS Qualifier | MSD % Recovery | MSD Qualifier | Acceptance Criteria |
|---|---|---|---|---|---|
| 1H,1H,2H,2H-Perfluoro[1,2-13C2]Decanesulfonic Acid (M2-8:2FTS) | 58 | | | | 10-162 |
| 1H,1H,2H,2H-Perfluoro[1,2-13C2]Hexanesulfonic Acid (M2-4:2FTS) | 71 | | | | 12-142 |
| 1H,1H,2H,2H-Perfluoro[1,2-13C2]Octanesulfonic Acid (M2-6:2FTS) | 66 | | | | 14-147 |
| N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA) | 44 | | | | 27-126 |
| N-Deuteriomethylperfluoro-1-octanesulfonamidoacetic Acid (d3-NMeFOSAA) | 36 | | | | 24-116 |
| Perfluoro[1,2,3,4,5,6,7-13C7]Undecanoic Acid (M7-PFUDA) | 58 | | | | 55-137 |
| Perfluoro[1,2,3,4,5,6-13C6]Decanoic Acid (M6PFDA) | **61** | Q | | | 62-124 |
| Perfluoro[1,2,3,4,6-13C5]Hexanoic Acid (M5PFHxA) | 59 | | | | 57-129 |
| Perfluoro[1,2,3,4-13C4]Heptanoic Acid (M4PFHpA) | 66 | | | | 60-129 |
| Perfluoro[1,2,3-13C3]Hexanesulfonic Acid (M3PFHxS) | 78 | | | | 71-134 |
| Perfluoro[1,2-13C2]Dodecanoic Acid (MPFDOA) | 61 | | | | 48-131 |
| Perfluoro[1,2-13C2]Tetradecanoic Acid (M2PFTEDA) | 64 | | | | 22-136 |
| Perfluoro[13C4]Butanoic Acid (MPFBA) | 76 | | | | 58-132 |
| Perfluoro[13C5]Pentanoic Acid (M5PFPEA) | 75 | | | | 62-163 |
| Perfluoro[13C8]Octanesulfonamide (M8FOSA) | 11 | | | | 10-112 |
| Perfluoro[13C8]Octanesulfonic Acid (M8PFOS) | **66** | Q | | | 69-131 |
| Perfluoro[13C8]Octanoic Acid (M8PFOA) | 70 | | | | 62-129 |
| Perfluoro[13C9]Nonanoic Acid (M9PFNA) | 63 | | | | 59-139 |
| Perfluoro[2,3,4-13C3]Butanesulfonic Acid (M3PFBS) | 73 | | | | 70-131 |

# Lab Duplicate Analysis
## Batch Quality Control

**Project Name:** GROSSINGERS
**Project Number:** 9313

**Lab Number:** L2122071
**Report Date:** 05/13/21

| Parameter | Native Sample | Duplicate Sample | Units | RPD | Qual | RPD Limits |
|---|---|---|---|---|---|---|
| Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab Associated sample(s): 01 QC Batch ID: WG1493960-4 QC Sample: L2121570-02 Client ID: DUP Sample | | | | | | |
| Perfluorobutanoic Acid (PFBA) | 12.8 | 10.6 | ng/l | 19 | | 30 |
| Perfluoropentanoic Acid (PFPeA) | 8.53 | 8.48 | ng/l | 1 | | 30 |
| Perfluorobutanesulfonic Acid (PFBS) | 2.92 | 2.80 | ng/l | 4 | | 30 |
| 1H,1H,2H,2H-Perfluorohexanesulfonic Acid (4:2FTS) | ND | ND | ng/l | NC | | 30 |
| Perfluorohexanoic Acid (PFHxA) | 9.60 | 9.61 | ng/l | 0 | | 30 |
| Perfluoropentanesulfonic Acid (PFPeS) | 1.63J | 1.91 | ng/l | NC | | 30 |
| Perfluoroheptanoic Acid (PFHpA) | 6.70 | 6.82 | ng/l | 2 | | 30 |
| Perfluorohexanesulfonic Acid-Branched (br-PFHxS) | 1.07J | 1.38J | ng/l | NC | | 30 |
| Perfluorohexanesulfonic Acid-Linear (L-PFHxS) | 5.22 | 5.00 | ng/l | 4 | | 30 |
| Perfluorohexanesulfonic Acid (PFHxS) | 6.29 | 6.38 | ng/l | 1 | | 30 |
| Perfluorooctanoic Acid-Branched (br-PFOA) | 3.60 | 3.64 | ng/l | 1 | | 30 |
| Perfluorooctanoic Acid-Linear (L-PFOA) | 24.1 | 24.3 | ng/l | 1 | | 30 |
| Perfluorooctanoic Acid (PFOA) | 27.7 | 28.0 | ng/l | 1 | | 30 |
| 1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS) | ND | ND | ng/l | NC | | 30 |
| Perfluoroheptanesulfonic Acid (PFHpS) | 1.22J | 1.12J | ng/l | NC | | 30 |
| Perfluorononanoic Acid (PFNA) | 2.67 | 2.61 | ng/l | 2 | | 30 |
| Perfluorooctanesulfonic Acid-Branched (br-PFOS) | 23.6 | 23.6 | ng/l | 0 | | 30 |
| Perfluorooctanesulfonic Acid-Linear (L-PFOS) | 46.3 | 47.3 | ng/l | 2 | | 30 |
| Perfluorooctanesulfonic Acid (PFOS) | 70.0 | 70.8 | ng/l | 1 | | 30 |
| Perfluorodecanoic Acid (PFDA) | 1.40J | 1.38J | ng/l | NC | | 30 |

# Lab Duplicate Analysis
## Batch Quality Control

**Project Name:** GROSSINGERS
**Project Number:** 9313

**Lab Number:** L2122071
**Report Date:** 05/13/21

| Parameter | Native Sample | Duplicate Sample | Units | RPD | Qual | RPD Limits |
|---|---|---|---|---|---|---|
| Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab Associated sample(s): 01 QC Batch ID: WG1493960-4 QC Sample: L2121570-02 Client ID: DUP Sample | | | | | | |
| 1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS) | ND | ND | ng/l | NC | | 30 |
| Perfluorononanesulfonic Acid (PFNS) | ND | ND | ng/l | NC | | 30 |
| N-Methyl Perfluorooctanesulfonamidoacetic Acid-Branched (br-NMeFOSAA) | ND | ND | ng/l | NC | | 30 |
| N-Methyl Perfluorooctanesulfonamidoacetic Acid-Linear (L-NMeFOSAA) | ND | ND | ng/l | NC | | 30 |
| N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA) | ND | ND | ng/l | NC | | 30 |
| Perfluoroundecanoic Acid (PFUnA) | ND | ND | ng/l | NC | | 30 |
| Perfluorodecanesulfonic Acid (PFDS) | ND | ND | ng/l | NC | | 30 |
| Perfluorooctanesulfonamide (FOSA) | 1.27JF | 0.911JF | ng/l | NC | | 30 |
| N-Ethyl Perfluorooctanesulfonamidoacetic Acid-Branched (br-NEtFOSAA) | ND | ND | ng/l | NC | | 30 |
| N-Ethyl Perfluorooctanesulfonamidoacetic Acid-Linear (L-NEtFOSAA) | ND | ND | ng/l | NC | | 30 |
| N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA) | ND | ND | ng/l | NC | | 30 |
| Perfluorododecanoic Acid (PFDoA) | ND | ND | ng/l | NC | | 30 |
| Perfluorotridecanoic Acid (PFTrDA) | ND | ND | ng/l | NC | | 30 |
| Perfluorotetradecanoic Acid (PFTA) | ND | ND | ng/l | NC | | 30 |
| PFOA/PFOS, Total | 97.7 | 98.8 | ng/l | 1 | | 30 |
| PFAS, Total (5) | 113 | 115 | ng/l | 1 | | 30 |

| Surrogate (Extracted Internal Standard) | %Recovery | Qualifier | %Recovery | Qualifier | Acceptance Criteria |
|---|---|---|---|---|---|
| Perfluoro[13C4]Butanoic Acid (MPFBA) | 77 | | 79 | | 58-132 |
| Perfluoro[13C5]Pentanoic Acid (M5PFPEA) | 76 | | 76 | | 62-163 |

# Lab Duplicate Analysis
## Batch Quality Control

**Project Name:** GROSSINGERS
**Project Number:** 9313

**Lab Number:** L2122071
**Report Date:** 05/13/21

| Parameter | Native Sample | Duplicate Sample | Units | RPD | Qual | RPD Limits |
|---|---|---|---|---|---|---|

Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab Associated sample(s): 01 QC Batch ID: WG1493960-4 QC Sample: L2121570-02 Client ID: DUP Sample

| Surrogate (Extracted Internal Standard) | %Recovery | Qualifier | %Recovery | Qualifier | Acceptance Criteria |
|---|---|---|---|---|---|
| Perfluoro[2,3,4-13C3]Butanesulfonic Acid (M3PFBS) | 73 | | 74 | | 70-131 |
| 1H,1H,2H,2H-Perfluoro[1,2-13C2]Hexanesulfonic Acid (M2-4:2FTS) | 69 | | 70 | | 12-142 |
| Perfluoro[1,2,3,4,6-13C5]Hexanoic Acid (M5PFHxA) | 60 | | 61 | | 57-129 |
| Perfluoro[1,2,3,4-13C4]Heptanoic Acid (M4PFHpA) | 67 | | 70 | | 60-129 |
| Perfluoro[1,2,3-13C3]Hexanesulfonic Acid (M3PFHxS) | 80 | | 81 | | 71-134 |
| Perfluoro[13C8]Octanoic Acid (M8PFOA) | 72 | | 74 | | 62-129 |
| 1H,1H,2H,2H-Perfluoro[1,2-13C2]Octanesulfonic Acid (M2-6:2FTS) | 69 | | 69 | | 14-147 |
| Perfluoro[13C9]Nonanoic Acid (M9PFNA) | 64 | | 68 | | 59-139 |
| Perfluoro[13C8]Octanesulfonic Acid (M8PFOS) | **67** | Q | **68** | Q | 69-131 |
| Perfluoro[1,2,3,4,5,6-13C6]Decanoic Acid (M6PFDA) | 65 | | 63 | | 62-124 |
| 1H,1H,2H,2H-Perfluoro[1,2-13C2]Decanesulfonic Acid (M2-8:2FTS) | 65 | | 60 | | 10-162 |
| N-Deuteriomethylperfluoro-1-octanesulfonamidoacetic Acid (d3-NMeFOSAA) | 37 | | 37 | | 24-116 |
| Perfluoro[1,2,3,4,5,6,7-13C7]Undecanoic Acid (M7-PFUDA) | 63 | | 59 | | 55-137 |
| Perfluoro[13C8]Octanesulfonamide (M8FOSA) | 19 | | 21 | | 10-112 |
| N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA) | 49 | | 50 | | 27-126 |
| Perfluoro[1,2-13C2]Dodecanoic Acid (MPFDOA) | 62 | | 61 | | 48-131 |
| Perfluoro[1,2-13C2]Tetradecanoic Acid (M2PFTEDA) | 69 | | 63 | | 22-136 |

**Project Name:** GROSSINGERS
**Project Number:** 9313

**Lab Number:** L2122071
**Report Date:** 05/13/21

## Sample Receipt and Container Information

Were project specific reporting limits specified? YES

### Cooler Information

| Cooler | Custody Seal |
|---|---|
| A | Absent |

### Container Information

| Container ID | Container Type | Cooler | Initial pH | Final pH | Temp deg C | Pres | Seal | Frozen Date/Time | Analysis(*) |
|---|---|---|---|---|---|---|---|---|---|
| L2122071-01A | Vial HCl preserved | A | NA | | 2.8 | Y | Absent | | NYTCL-8260(14) |
| L2122071-01B | Vial HCl preserved | A | NA | | 2.8 | Y | Absent | | NYTCL-8260(14) |
| L2122071-01C | Vial HCl preserved | A | NA | | 2.8 | Y | Absent | | NYTCL-8260(14) |
| L2122071-01D | Plastic 250ml unpreserved | A | NA | | 2.8 | Y | Absent | | A2-NY-537-ISOTOPE(14) |
| L2122071-01E | Plastic 250ml unpreserved | A | NA | | 2.8 | Y | Absent | | A2-NY-537-ISOTOPE(14) |
| L2122071-02A | Vial HCl preserved | A | NA | | 2.8 | Y | Absent | | NYTCL-8260(14) |
| L2122071-02B | Vial HCl preserved | A | NA | | 2.8 | Y | Absent | | NYTCL-8260(14) |



*Values in parentheses indicate holding time in days

**Project Name:** GROSSINGERS
**Project Number:** 9313
**Lab Number:** L2122071
**Report Date:** 05/13/21

## PFAS PARAMETER SUMMARY

| Parameter | Acronym | CAS Number |
|---|---|---|
| PERFLUOROALKYL CARBOXYLIC ACIDS (PFCAs) | | |
| Perfluorooctadecanoic Acid | PFODA | 16517-11-6 |
| Perfluorohexadecanoic Acid | PFHxDA | 67905-19-5 |
| Perfluorotetradecanoic Acid | PFTA | 376-06-7 |
| Perfluorotridecanoic Acid | PFTrDA | 72629-94-8 |
| Perfluorododecanoic Acid | PFDoA | 307-55-1 |
| Perfluoroundecanoic Acid | PFUnA | 2058-94-8 |
| Perfluorodecanoic Acid | PFDA | 335-76-2 |
| Perfluorononanoic Acid | PFNA | 375-95-1 |
| Perfluorooctanoic Acid | PFOA | 335-67-1 |
| Perfluoroheptanoic Acid | PFHpA | 375-85-9 |
| Perfluorohexanoic Acid | PFHxA | 307-24-4 |
| Perfluoropentanoic Acid | PFPeA | 2706-90-3 |
| Perfluorobutanoic Acid | PFBA | 375-22-4 |
| PERFLUOROALKYL SULFONIC ACIDS (PFSAs) | | |
| Perfluorododecanesulfonic Acid | PFDoDS | 79780-39-5 |
| Perfluorodecanesulfonic Acid | PFDS | 335-77-3 |
| Perfluorononanesulfonic Acid | PFNS | 68259-12-1 |
| Perfluorooctanesulfonic Acid | PFOS | 1763-23-1 |
| Perfluoroheptanesulfonic Acid | PFHpS | 375-92-8 |
| Perfluorohexanesulfonic Acid | PFHxS | 355-46-4 |
| Perfluoropentanesulfonic Acid | PFPeS | 2706-91-4 |
| Perfluorobutanesulfonic Acid | PFBS | 375-73-5 |
| FLUOROTELOMERS | | |
| 1H,1H,2H,2H-Perfluorododecanesulfonic Acid | 10:2FTS | 120226-60-0 |
| 1H,1H,2H,2H-Perfluorodecanesulfonic Acid | 8:2FTS | 39108-34-4 |
| 1H,1H,2H,2H-Perfluorooctanesulfonic Acid | 6:2FTS | 27619-97-2 |
| 1H,1H,2H,2H-Perfluorohexanesulfonic Acid | 4:2FTS | 757124-72-4 |
| PERFLUOROALKANE SULFONAMIDES (FASAs) | | |
| Perfluorooctanesulfonamide | FOSA | 754-91-6 |
| N-Ethyl Perfluorooctane Sulfonamide | NEtFOSA | 4151-50-2 |
| N-Methyl Perfluorooctane Sulfonamide | NMeFOSA | 31506-32-8 |
| PERFLUOROALKANE SULFONYL SUBSTANCES | | |
| N-Ethyl Perfluorooctanesulfonamido Ethanol | NEtFOSE | 1691-99-2 |
| N-Methyl Perfluorooctanesulfonamido Ethanol | NMeFOSE | 24448-09-7 |
| N-Ethyl Perfluorooctanesulfonamidoacetic Acid | NEtFOSAA | 2991-50-6 |
| N-Methyl Perfluorooctanesulfonamidoacetic Acid | NMeFOSAA | 2355-31-9 |
| PER- and POLYFLUOROALKYL ETHER CARBOXYLIC ACIDS | | |
| 2,3,3,3-Tetrafluoro-2-[1,1,2,2,3,3,3-Heptafluoropropoxy]-Propanoic Acid | HFPO-DA | 13252-13-6 |
| 4,8-Dioxa-3h-Perfluorononanoic Acid | ADONA | 919005-14-4 |
| CHLORO-PERFLUOROALKYL SULFONIC ACIDS | | |
| 11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid | 11Cl-PF3OUdS | 763051-92-9 |
| 9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid | 9Cl-PF3ONS | 756426-58-1 |
| PERFLUOROETHER SULFONIC ACIDS (PFESAs) | | |
| Perfluoro(2-Ethoxyethane)Sulfonic Acid | PFEESA | 113507-82-7 |
| PERFLUOROETHER/POLYETHER CARBOXYLIC ACIDS (PFPCAs) | | |
| Perfluoro-3-Methoxypropanoic Acid | PFMPA | 377-73-1 |
| Perfluoro-4-Methoxybutanoic Acid | PFMBA | 863090-89-5 |
| Nonafluoro-3,6-Dioxaheptanoic Acid | NFDHA | 151772-58-6 |

**Project Name:** GROSSINGERS **Lab Number:** L2122071

**Project Number:** 9313 **Report Date:** 05/13/21

## GLOSSARY

***Acronyms***

DL - Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the limit of quantitation (LOQ). The DL includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

EDL - Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).

EMPC - Estimated Maximum Possible Concentration: The concentration that results from the signal present at the retention time of an analyte when the ions meet all of the identification criteria except the ion abundance ratio criteria. An EMPC is a worst-case estimate of the concentration.

EPA - Environmental Protection Agency.

LCS - Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.

LCSD - Laboratory Control Sample Duplicate: Refer to LCS.

LFB - Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.

LOD - Limit of Detection: This value represents the level to which a target analyte can reliably be detected for a specific analyte in a specific matrix by a specific method. The LOD includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

LOQ - Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

MDL - Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.

MS - Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available. For Method 332.0, the spike recovery is calculated using the native concentration, including estimated values.

MSD - Matrix Spike Sample Duplicate: Refer to MS.

NA - Not Applicable.

NC - Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.

NDPA/DPA - N-Nitrosodiphenylamine/Diphenylamine.

NI - Not Ignitable.

NP - Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.

NR - No Results: Term is utilized when 'No Target Compounds Requested' is reported for the analysis of Volatile or Semivolatile Organic TIC only requests.

RL - Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.

RPD - Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.

SRM - Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.

STLP - Semi-dynamic Tank Leaching Procedure per EPA Method 1315.

TEF - Toxic Equivalency Factors: The values assigned to each dioxin and furan to evaluate their toxicity relative to 2,3,7,8-TCDD.

TEQ - Toxic Equivalent: The measure of a sample's toxicity derived by multiplying each dioxin and furan by its corresponding TEF and then summing the resulting values.

TIC - Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

*Report Format: DU Report with 'J' Qualifiers*

| | | | |
|---|---|---|---|
| **Project Name:** | GROSSINGERS | **Lab Number:** | L2122071 |
| **Project Number:** | 9313 | **Report Date:** | 05/13/21 |

***Footnotes***

1 - The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method.

***Terms***

Analytical Method: Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

Difference: With respect to Total Oxidizable Precursor (TOP) Assay analysis, the difference is defined as the Post-Treatment value minus the Pre-Treatment value.

Final pH: As it pertains to Sample Receipt & Container Information section of the report, Final pH reflects pH of container determined after adjustment at the laboratory, if applicable. If no adjustment required, value reflects Initial pH.

Frozen Date/Time: With respect to Volatile Organics in soil, Frozen Date/Time reflects the date/time at which associated Reagent Water-preserved vials were initially frozen. Note: If frozen date/time is beyond 48 hours from sample collection, value will be reflected in 'bold'.

Initial pH: As it pertains to Sample Receipt & Container Information section of the report, Initial pH reflects pH of container determined upon receipt, if applicable.

PAH Total: With respect to Alkylated PAH analyses, the 'PAHs, Total' result is defined as the summation of results for all or a subset of the following compounds: Naphthalene, C1-C4 Naphthalenes, 2-Methylnaphthalene, 1-Methylnaphthalene, Biphenyl, Acenaphthylene, Acenaphthene, Fluorene, C1-C3 Fluorenes, Phenanthrene, C1-C4 Phenanthrenes/Anthracenes, Anthracene, Fluoranthene, Pyrene, C1-C4 Fluoranthenes/Pyrenes, Benz(a)anthracene, Chrysene, C1-C4 Chrysenes, Benzo(b)fluoranthene, Benzo(j)+(k)fluoranthene, Benzo(e)pyrene, Benzo(a)pyrene, Perylene, Indeno(1,2,3-cd)pyrene, Dibenz(ah)+(ac)anthracene, Benzo(g,h,i)perylene. If a 'Total' result is requested, the results of its individual components will also be reported.

PFAS Total: With respect to PFAS analyses, the 'PFAS, Total (5)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA and PFOS. In addition, the 'PFAS, Total (6)' result is defined as the summation of results at or above the RL for: PFHpA, PFHxS, PFOA, PFNA, PFDA and PFOS. (Note: 'PFAS, Total (6)' is applicable to MassDEP DW compliance analysis only.). If a 'Total' result is requested, the results of its individual components will also be reported.

The target compound Chlordane (CAS No. 57-74-9) is reported for GC ECD analyses. Per EPA,this compound "refers to a mixture of chlordane isomers, other chlorinated hydrocarbons and numerous other components." (Reference: USEPA Toxicological Review of Chlordane, In Support of Summary Information on the Integrated Risk Information System (IRIS), December 1997.)

Total: With respect to Organic analyses, a 'Total' result is defined as the summation of results for individual isomers or Aroclors. If a 'Total' result is requested, the results of its individual components will also be reported. This is applicable to 'Total' results for methods 8260, 8081 and 8082.

***Data Qualifiers***

**A** - Spectra identified as "Aldol Condensates" are byproducts of the extraction/concentration procedures when acetone is introduced in the process.

**B** - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).

**C** - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.

**D** - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.

**E** - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.

**F** - The ratio of quantifier ion response to qualifier ion response falls outside of the laboratory criteria. Results are considered to be an estimated maximum concentration.

**G** - The concentration may be biased high due to matrix interferences (i.e, co-elution) with non-target compound(s). The result should be considered estimated.

**H** - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.

**I** - The lower value for the two columns has been reported due to obvious interference.

**J** - Estimated value. The Target analyte concentration is below the quantitation limit (RL), but above the Method Detection Limit (MDL) or Estimated Detection Limit (EDL) for SPME-related analyses. This represents an estimated concentration for Tentatively Identified Compounds (TICs).

**M** - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.

**ND** - Not detected at the method detection limit (MDL) for the sample, or estimated detection limit (EDL) for SPME-related analyses.

*Report Format: DU Report with 'J' Qualifiers*

| | | | |
|---|---|---|---|
| **Project Name:** | GROSSINGERS | **Lab Number:** | L2122071 |
| **Project Number:** | 9313 | **Report Date:** | 05/13/21 |

***Data Qualifiers***

**NJ** - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.

**P** - The RPD between the results for the two columns exceeds the method-specified criteria.

**Q** - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)

**R** - Analytical results are from sample re-analysis.

**RE** - Analytical results are from sample re-extraction.

**S** - Analytical results are from modified screening analysis.

| | | | |
|---|---|---|---|
| **Project Name:** | GROSSINGERS | **Lab Number:** | L2122071 |
| **Project Number:** | 9313 | **Report Date:** | 05/13/21 |

## REFERENCES


1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - VI, 2018.

134 Determination of Selected Perfluorinated Alkyl Acids in Drinking Water by Solid Phase Extraction and Liquid Chromatography/Tandem Mass Spectrometry (LC/MS/MS) using Isotope Dilution. Alpha SOP 23528.


## LIMITATION OF LIABILITIES

Alpha Analytical performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical be held liable for any incidental, consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding time and splitting of samples in the field.

# Certification Information

**The following analytes are not included in our Primary NELAP Scope of Accreditation:**

**Westborough Facility**
**EPA 624/624.1:** m/p-xylene, o-xylene, Naphthalene
**EPA 625/625.1:** alpha-Terpineol
**EPA 8260C/8260D:** NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene, Azobenzene; SCM: Iodomethane (methyl iodide), 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.
**EPA 8270D/8270E:** NPW: Dimethylnaphthalene,1,4-Diphenylhydrazine, alpha-Terpineol; SCM: Dimethylnaphthalene,1,4-Diphenylhydrazine.
**SM4500**: NPW: Amenable Cyanide; SCM: Total Phosphorus, TKN, NO2, NO3.

**Mansfield Facility**
**SM 2540D:** TSS
**EPA 8082A:** NPW: PCB: 1, 5, 31, 87,101, 110, 141, 151, 153, 180, 183, 187.
**EPA TO-15:** Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene, 3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.
**Biological Tissue Matrix:** EPA 3050B

**The following analytes are included in our Massachusetts DEP Scope of Accreditation**

**Westborough Facility:**

***Drinking Water***
**EPA 300.0**: Chloride, Nitrate-N, Fluoride, Sulfate; **EPA 353.2**: Nitrate-N, Nitrite-N; **SM4500NO3-F**: Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE, EPA 180.1, SM2130B, SM4500Cl-D, SM2320B, SM2540C, SM4500H-B, SM4500NO2-B**
**EPA 332**: Perchlorate; **EPA 524.2:** THMs and VOCs; **EPA 504.1:** EDB, DBCP.
**Microbiology**: **SM9215B; SM9223-P/A, SM9223B-Colilert-QT,SM9222D**.

***Non-Potable Water***
**SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2320B, SM4500CL-E, SM4500F-BC, SM4500NH3-BH:** Ammonia-N and Kjeldahl-N, **EPA 350.1**: Ammonia-N, **LACHAT 10-107-06-1-B**: Ammonia-N, **EPA 351.1, SM4500NO3-F, EPA 353.2**: Nitrate-N**, SM4500P-E, SM4500P-B, E, SM4500SO4-E, SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, EPA 420.1, SM4500-CN-CE, SM2540D, EPA 300: Chloride, Sulfate, Nitrate.**
**EPA 624.1**: Volatile Halocarbons & Aromatics,
**EPA 608.3**: Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs
**EPA 625.1**: SVOC (Acid/Base/Neutral Extractables), **EPA 600/4-81-045**: PCB-Oil.
**Microbiology**: **SM9223B-Colilert-QT; Enterolert-QT, SM9221E, EPA 1600, EPA 1603, SM9222D.**

**Mansfield Facility:**

***Drinking Water***
**EPA 200.7:** Al, Ba, Cd, Cr, Cu, Fe, Mn, Ni, Na, Ag, Ca, Zn. **EPA 200.8:** Al, Sb, As, Ba, Be, Cd, Cr, Cu, Pb, Mn, Ni, Se, Ag, TL, Zn. **EPA 245.1** Hg.
**EPA 522, EPA 537.1.**

***Non-Potable Water***
**EPA 200.7:** Al, Sb, As, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Sr, TL, Ti, V, Zn.
**EPA 200.8:** Al, Sb**,** As, Be, Cd, Cr, Cu, Fe, Pb, Mn, Ni, K, Se, Ag, Na, TL, Zn.
**EPA 245.1** Hg.
**SM2340B**

For a complete listing of analytes and methods, please contact your Alpha Project Manager.

# NEW YORK CHAIN OF CUSTODY

ALPHA

Westborough, MA 01581
8 Walkup Dr.
TEL: 508-898-9220
FAX: 508-898-9193

Mansfield, MA 02048
320 Forbes Blvd
TEL: 508-822-9300
FAX: 508-822-3288

**Service Centers**
Mahwah, NJ 07430: 35 Whitney Rd, Suite 5
Albany, NY 12205: 14 Walker Way
Tonawanda, NY 14150: 275 Cooper Ave, Suite 105

Page 1 of 1

Date Rec'd in Lab: 4/29/21 RS 5/1/21

ALPHA Job #: L2132071

## Client Information

Client: SESI Consulting Engineers
Address: 12A Maple Ave.
Phone:
Fax:
Email: TLK@SESI.org

## Project Information

Project Name: Grossingers
Project Location: Liberty, NY
Project #: 9213:11
(Use Project name as Project #)
Project Manager: Todd Kelly
ALPHAQuote #:

## Turn-Around Time

Standard: X
Rush (only if pre approved):
Due Date:
# of Days:

These samples have been previously analyzed by Alpha

**Other project specific requirements/comments:**

**Please specify Metals or TAL**

## Deliverables

- ASP-A
- ASP-B: X
- EQuIS (1 File)
- EQuIS (4 File)
- Other

## Regulatory Requirement

- NY TOGS
- NY Part 375
- AWQ Standards: X
- NY CP-51
- NY Restricted Use
- Other
- NY Unrestricted Use
- NYC Sewer Discharge

## Billing Information

- Same as Client Info: X

PO # 9213:11

## Disposal Site Information

Please identify below location of applicable disposal facilities.

Disposal Facility:
- NJ
- NY
- Other:

## ANALYSIS

*Sample Filtration*
- Done
- Lab to do

*Preservation*
- Lab to do

*(Please Specify below)*

Total Bottle

| ALPHA Lab ID (Lab Use Only) | Sample ID | Collection Date | Collection Time | Sample Matrix | Sampler's Initials | PFAS (537) | TCL VOC+15 | Sample Specific Comments |
|---|---|---|---|---|---|---|---|---|
| 22071.01 | MW-21C | 4/29/21 | 1100 | GW | MEM | X | X | |
| .02 | TB | 4/29/21 | — | Blank | MAB | | X | |
| | | | | | | | | |
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| | | | | | | | | |

Container Type: P, V
Preservative: A, B

Preservative Code:
A = None
B = HCl
C = $HNO_3$
D = $H_2SO_4$
E = NaOH
F = MeOH
G = $NaHSO_4$
H = $Na_2S_2O_3$
K/E = Zn Ac/NaOH
O = Other

Container Code
P = Plastic
A = Amber Glass
V = Vial
G = Glass
B = Bacteria Cup
C = Cube
O = Other
E = Encore
D = BOD Bottle

Westboro: Certification No: MA935
Mansfield: Certification No: MA015

| Relinquished By: | Date/Time | Received By: | Date/Time |
|---|---|---|---|
| | 4/29/21 1305 | | 4/29/21 1305 |
| | 4.29.21 1735 | | 4/29/21 1735 |
| | 4/29/21 2150 | | 4/29/21 2150 |

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. BY EXECUTING THIS COC, THE CLIENT HAS READ AND AGREES TO BE BOUND BY ALPHA'S TERMS & CONDITIONS. (See reverse side.)

Form No: 01-25 HC (rev. 30-Sept-2013)

# Appendix D:

## Soil Vapor Laboratory Data

# ANALYTICAL REPORT

| | |
|---|---|
| Lab Number: | L2010375 |
| Client: | Soils Engineering Services, Inc.<br>12A Maple Avenue<br>Pine Brook, NJ 07058 |
| ATTN: | Fuad Duhan |
| Phone: | (973) 808-9050 |
| Project Name: | GROSSINGERS |
| Project Number: | 9313 |
| Report Date: | 03/13/20 |

The original project report/data package is held by Alpha Analytical. This report/data package is paginated and should be reproduced only in its entirety. Alpha Analytical holds no responsibility for results and/or data that are not consistent with the original.

Certifications & Approvals: MA (M-MA030), NH NELAP (2062), CT (PH-0141), DoD (L2474), FL (E87814), IL (200081), LA (85084), ME (MA00030), MD (350), NJ (MA015), NY (11627), NC (685), OH (CL106), PA (68-02089), RI (LAO00299), TX (T104704419), VT (VT-0015), VA (460194), WA (C954), US Army Corps of Engineers, USDA (Permit #P330-17-00150), USFWS (Permit #206964).

320 Forbes Boulevard, Mansfield, MA 02048-1806
508-822-9300 (Fax) 508-822-3288 800-624-9220 - www.alphalab.com

**Project Name:** GROSSINGERS
**Project Number:** 9313

**Lab Number:** L2010375
**Report Date:** 03/13/20

| Alpha Sample ID | Client ID | Matrix | Sample Location | Collection Date/Time | Receive Date |
|---|---|---|---|---|---|
| L2010375-01 | SMPV-14 | SOIL_VAPOR | LIBERTY, NY | 03/06/20 12:21 | 03/06/20 |
| L2010375-02 | SMPV-13 | SOIL_VAPOR | LIBERTY, NY | 03/06/20 12:56 | 03/06/20 |
| L2010375-03 | SMPV-1 | SOIL_VAPOR | LIBERTY, NY | 03/06/20 13:12 | 03/06/20 |
| L2010375-04 | SMPV-3 | SOIL_VAPOR | LIBERTY, NY | 03/06/20 14:15 | 03/06/20 |
| L2010375-05 | SMPV-2 | SOIL_VAPOR | LIBERTY, NY | 03/06/20 15:06 | 03/06/20 |
| L2010375-06 | SMPV-12 | SOIL_VAPOR | LIBERTY, NY | 03/06/20 15:35 | 03/06/20 |
| L2010375-07 | SMPV-10 | SOIL_VAPOR | LIBERTY, NY | 03/06/20 15:52 | 03/06/20 |
| L2010375-08 | SMPV-11 | SOIL_VAPOR | LIBERTY, NY | 03/06/20 16:14 | 03/06/20 |
| L2010375-09 | UNUSED CAN #2985 | AIR | LIBERTY, NY | | 03/06/20 |

| | | | |
|---|---|---|---|
| **Project Name:** | GROSSINGERS | **Lab Number:** | L2010375 |
| **Project Number:** | 9313 | **Report Date:** | 03/13/20 |

## Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet NELAP requirements for all NELAP accredited parameters unless otherwise noted in the following narrative. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. Tentatively Identified Compounds (TICs), if requested, are reported for compounds identified to be present and are not part of the method/program Target Compound List, even if only a subset of the TCL are being reported. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively.

When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances, the specific failure is not narrated but noted in the associated QC Outlier Summary Report, located directly after the Case Narrative. QC information is also incorporated in the Data Usability Assessment table (Format 11) of our Data Merger tool, where it can be reviewed in conjunction with the sample result, associated regulatory criteria and any associated data usability implications.

Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

HOLD POLICY - For samples submitted on hold, Alpha's policy is to hold samples (with the exception of Air canisters) free of charge for 21 calendar days from the date the project is completed. After 21 calendar days, we will dispose of all samples submitted including those put on hold unless you have contacted your Alpha Project Manager and made arrangements for Alpha to continue to hold the samples. Air canisters will be disposed after 3 business days from the date the project is completed.

Please contact Project Management at 800-624-9220 with any questions.

| | | | |
|---|---|---|---|
| **Project Name:** | GROSSINGERS | **Lab Number:** | L2010375 |
| **Project Number:** | 9313 | **Report Date:** | 03/13/20 |

**Case Narrative (continued)**

Volatile Organics in Air

Canisters were released from the laboratory on February 25, and March 4, 2020. The canister certification results are provided as an addendum.

L2010375-01: The sample was re-analyzed on dilution in order to quantify the results within the calibration range. The result(s) should be considered estimated, and are qualified with an E flag, for any compound(s) that exceeded the calibration range in the initial analysis. The re-analysis was performed only for the compound(s) that exceeded the calibration range.

L2010375-01: The sample has elevated detection limits due to the dilution required by the elevated concentrations of target compounds in the sample.

The WG1350343-3 LCS recovery for 1,2,4-trichlorobenzene (136%) is above the upper 130% acceptance limit. All samples associated with this LCS do not have reportable amounts of this analyte.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature: Christopher J. Anderson

Title: Technical Director/Representative Date: 03/13/20

# AIR

**Project Name:** GROSSINGERS
**Project Number:** 9313
**Lab Number:** L2010375
**Report Date:** 03/13/20

## SAMPLE RESULTS

Lab ID: L2010375-01
Client ID: SMPV-14
Sample Location: LIBERTY, NY

Date Collected: 03/06/20 12:21
Date Received: 03/06/20
Field Prep: Not Specified

Sample Depth:
Matrix: Soil_Vapor
Anaytical Method: 48,TO-15
Analytical Date: 03/13/20 01:47
Analyst: TS

| | ppbV | | | ug/m3 | | | | |
|---|---|---|---|---|---|---|---|---|
| Parameter | Results | RL | MDL | Results | RL | MDL | Qualifier | Dilution Factor |
| **Volatile Organics in Air - Mansfield Lab** | | | | | | | | |
| Dichlorodifluoromethane | 16.6 | 0.200 | -- | 82.1 | 0.989 | -- | | 1 |
| Chloromethane | ND | 0.200 | -- | ND | 0.413 | -- | | 1 |
| Freon-114 | ND | 0.200 | -- | ND | 1.40 | -- | | 1 |
| Vinyl chloride | ND | 0.200 | -- | ND | 0.511 | -- | | 1 |
| 1,3-Butadiene | ND | 0.200 | -- | ND | 0.442 | -- | | 1 |
| Bromomethane | ND | 0.200 | -- | ND | 0.777 | -- | | 1 |
| Chloroethane | ND | 0.200 | -- | ND | 0.528 | -- | | 1 |
| Ethanol | 5.97 | 5.00 | -- | 11.2 | 9.42 | -- | | 1 |
| Vinyl bromide | ND | 0.200 | -- | ND | 0.874 | -- | | 1 |
| Acetone | 5.76 | 1.00 | -- | 13.7 | 2.38 | -- | | 1 |
| Trichlorofluoromethane | 142 | 0.200 | -- | 798 | 1.12 | -- | E | 1 |
| Isopropanol | 1.31 | 0.500 | -- | 3.22 | 1.23 | -- | | 1 |
| 1,1-Dichloroethene | ND | 0.200 | -- | ND | 0.793 | -- | | 1 |
| Tertiary butyl Alcohol | ND | 0.500 | -- | ND | 1.52 | -- | | 1 |
| Methylene chloride | ND | 0.500 | -- | ND | 1.74 | -- | | 1 |
| 3-Chloropropene | ND | 0.200 | -- | ND | 0.626 | -- | | 1 |
| Carbon disulfide | 0.248 | 0.200 | -- | 0.772 | 0.623 | -- | | 1 |
| Freon-113 | ND | 0.200 | -- | ND | 1.53 | -- | | 1 |
| trans-1,2-Dichloroethene | ND | 0.200 | -- | ND | 0.793 | -- | | 1 |
| 1,1-Dichloroethane | ND | 0.200 | -- | ND | 0.809 | -- | | 1 |
| Methyl tert butyl ether | ND | 0.200 | -- | ND | 0.721 | -- | | 1 |
| 2-Butanone | 1.42 | 0.500 | -- | 4.19 | 1.47 | -- | | 1 |
| cis-1,2-Dichloroethene | ND | 0.200 | -- | ND | 0.793 | -- | | 1 |

***Project Name:*** GROSSINGERS
***Project Number:*** 9313

***Lab Number:*** L2010375
***Report Date:*** 03/13/20

## *SAMPLE RESULTS*

Lab ID: L2010375-01
Client ID: SMPV-14
Sample Location: LIBERTY, NY

Date Collected: 03/06/20 12:21
Date Received: 03/06/20
Field Prep: Not Specified

Sample Depth:

| Parameter | ppbV Results | ppbV RL | ppbV MDL | ug/m3 Results | ug/m3 RL | ug/m3 MDL | Qualifier | Dilution Factor |
|---|---|---|---|---|---|---|---|---|
| **Volatile Organics in Air - Mansfield Lab** | | | | | | | | |
| Ethyl Acetate | ND | 0.500 | -- | ND | 1.80 | -- | | 1 |
| Chloroform | ND | 0.200 | -- | ND | 0.977 | -- | | 1 |
| Tetrahydrofuran | ND | 0.500 | -- | ND | 1.47 | -- | | 1 |
| 1,2-Dichloroethane | ND | 0.200 | -- | ND | 0.809 | -- | | 1 |
| n-Hexane | 0.486 | 0.200 | -- | 1.71 | 0.705 | -- | | 1 |
| 1,1,1-Trichloroethane | ND | 0.200 | -- | ND | 1.09 | -- | | 1 |
| Benzene | 0.474 | 0.200 | -- | 1.51 | 0.639 | -- | | 1 |
| Carbon tetrachloride | ND | 0.200 | -- | ND | 1.26 | -- | | 1 |
| Cyclohexane | ND | 0.200 | -- | ND | 0.688 | -- | | 1 |
| 1,2-Dichloropropane | ND | 0.200 | -- | ND | 0.924 | -- | | 1 |
| Bromodichloromethane | ND | 0.200 | -- | ND | 1.34 | -- | | 1 |
| 1,4-Dioxane | ND | 0.200 | -- | ND | 0.721 | -- | | 1 |
| Trichloroethene | ND | 0.200 | -- | ND | 1.07 | -- | | 1 |
| 2,2,4-Trimethylpentane | ND | 0.200 | -- | ND | 0.934 | -- | | 1 |
| Heptane | 0.430 | 0.200 | -- | 1.76 | 0.820 | -- | | 1 |
| cis-1,3-Dichloropropene | ND | 0.200 | -- | ND | 0.908 | -- | | 1 |
| 4-Methyl-2-pentanone | ND | 0.500 | -- | ND | 2.05 | -- | | 1 |
| trans-1,3-Dichloropropene | ND | 0.200 | -- | ND | 0.908 | -- | | 1 |
| 1,1,2-Trichloroethane | ND | 0.200 | -- | ND | 1.09 | -- | | 1 |
| Toluene | 2.10 | 0.200 | -- | 7.91 | 0.754 | -- | | 1 |
| 2-Hexanone | ND | 0.200 | -- | ND | 0.820 | -- | | 1 |
| Dibromochloromethane | ND | 0.200 | -- | ND | 1.70 | -- | | 1 |
| 1,2-Dibromoethane | ND | 0.200 | -- | ND | 1.54 | -- | | 1 |
| Tetrachloroethene | 1.77 | 0.200 | -- | 12.0 | 1.36 | -- | | 1 |
| Chlorobenzene | ND | 0.200 | -- | ND | 0.921 | -- | | 1 |
| Ethylbenzene | 0.617 | 0.200 | -- | 2.68 | 0.869 | -- | | 1 |

**Project Name:** GROSSINGERS
**Project Number:** 9313
**Lab Number:** L2010375
**Report Date:** 03/13/20

## SAMPLE RESULTS

Lab ID: L2010375-01
Client ID: SMPV-14
Sample Location: LIBERTY, NY

Date Collected: 03/06/20 12:21
Date Received: 03/06/20
Field Prep: Not Specified

Sample Depth:

| Parameter | ppbV Results | ppbV RL | ppbV MDL | ug/m3 Results | ug/m3 RL | ug/m3 MDL | Qualifier | Dilution Factor |
|---|---|---|---|---|---|---|---|---|
| **Volatile Organics in Air - Mansfield Lab** | | | | | | | | |
| p/m-Xylene | 2.22 | 0.400 | -- | 9.64 | 1.74 | -- | | 1 |
| Bromoform | ND | 0.200 | -- | ND | 2.07 | -- | | 1 |
| Styrene | ND | 0.200 | -- | ND | 0.852 | -- | | 1 |
| 1,1,2,2-Tetrachloroethane | ND | 0.200 | -- | ND | 1.37 | -- | | 1 |
| o-Xylene | 0.835 | 0.200 | -- | 3.63 | 0.869 | -- | | 1 |
| 4-Ethyltoluene | 0.222 | 0.200 | -- | 1.09 | 0.983 | -- | | 1 |
| 1,3,5-Trimethylbenzene | 0.250 | 0.200 | -- | 1.23 | 0.983 | -- | | 1 |
| 1,2,4-Trimethylbenzene | 0.943 | 0.200 | -- | 4.64 | 0.983 | -- | | 1 |
| Benzyl chloride | ND | 0.200 | -- | ND | 1.04 | -- | | 1 |
| 1,3-Dichlorobenzene | ND | 0.200 | -- | ND | 1.20 | -- | | 1 |
| 1,4-Dichlorobenzene | ND | 0.200 | -- | ND | 1.20 | -- | | 1 |
| 1,2-Dichlorobenzene | ND | 0.200 | -- | ND | 1.20 | -- | | 1 |
| 1,2,4-Trichlorobenzene | ND | 0.200 | -- | ND | 1.48 | -- | | 1 |
| Hexachlorobutadiene | ND | 0.200 | -- | ND | 2.13 | -- | | 1 |

| Internal Standard | % Recovery | Qualifier | Acceptance Criteria |
|---|---|---|---|
| 1,4-Difluorobenzene | 102 | | 60-140 |
| Bromochloromethane | 102 | | 60-140 |
| chlorobenzene-d5 | 107 | | 60-140 |

***Project Name:*** GROSSINGERS
***Project Number:*** 9313
***Lab Number:*** L2010375
***Report Date:*** 03/13/20

## *SAMPLE RESULTS*

Lab ID: L2010375-01 D
Client ID: SMPV-14
Sample Location: LIBERTY, NY

Date Collected: 03/06/20 12:21
Date Received: 03/06/20
Field Prep: Not Specified

Sample Depth:
Matrix: Soil_Vapor
Anaytical Method: 48,TO-15
Analytical Date: 03/13/20 08:37
Analyst: TS

| | ppbV | | | ug/m3 | | | | |
|---|---|---|---|---|---|---|---|---|
| **Parameter** | **Results** | **RL** | **MDL** | **Results** | **RL** | **MDL** | **Qualifier** | **Dilution Factor** |
| Volatile Organics in Air - Mansfield Lab | | | | | | | | |
| Trichlorofluoromethane | 147 | 0.400 | -- | 826 | 2.25 | -- | | 2 |

| **Internal Standard** | **% Recovery** | **Qualifier** | **Acceptance Criteria** |
|---|---|---|---|
| 1,4-Difluorobenzene | 101 | | 60-140 |
| Bromochloromethane | 101 | | 60-140 |
| chlorobenzene-d5 | 106 | | 60-140 |

**Project Name:** GROSSINGERS
**Project Number:** 9313
**Lab Number:** L2010375
**Report Date:** 03/13/20

## SAMPLE RESULTS

Lab ID: L2010375-02
Client ID: SMPV-13
Sample Location: LIBERTY, NY

Date Collected: 03/06/20 12:56
Date Received: 03/06/20
Field Prep: Not Specified

Sample Depth:
Matrix: Soil_Vapor
Anaytical Method: 48,TO-15
Analytical Date: 03/13/20 02:27
Analyst: TS

| | ppbV | | | ug/m3 | | | | |
|---|---|---|---|---|---|---|---|---|
| **Parameter** | **Results** | **RL** | **MDL** | **Results** | **RL** | **MDL** | **Qualifier** | **Dilution Factor** |
| Volatile Organics in Air - Mansfield Lab | | | | | | | | |
| Dichlorodifluoromethane | 57.7 | 0.200 | -- | 285 | 0.989 | -- | | 1 |
| Chloromethane | 0.522 | 0.200 | -- | 1.08 | 0.413 | -- | | 1 |
| Freon-114 | ND | 0.200 | -- | ND | 1.40 | -- | | 1 |
| Vinyl chloride | ND | 0.200 | -- | ND | 0.511 | -- | | 1 |
| 1,3-Butadiene | 0.397 | 0.200 | -- | 0.878 | 0.442 | -- | | 1 |
| Bromomethane | ND | 0.200 | -- | ND | 0.777 | -- | | 1 |
| Chloroethane | ND | 0.200 | -- | ND | 0.528 | -- | | 1 |
| Ethanol | ND | 5.00 | -- | ND | 9.42 | -- | | 1 |
| Vinyl bromide | ND | 0.200 | -- | ND | 0.874 | -- | | 1 |
| Acetone | 2.40 | 1.00 | -- | 5.70 | 2.38 | -- | | 1 |
| Trichlorofluoromethane | 8.67 | 0.200 | -- | 48.7 | 1.12 | -- | | 1 |
| Isopropanol | 0.808 | 0.500 | -- | 1.99 | 1.23 | -- | | 1 |
| 1,1-Dichloroethene | ND | 0.200 | -- | ND | 0.793 | -- | | 1 |
| Tertiary butyl Alcohol | ND | 0.500 | -- | ND | 1.52 | -- | | 1 |
| Methylene chloride | 1.06 | 0.500 | -- | 3.68 | 1.74 | -- | | 1 |
| 3-Chloropropene | ND | 0.200 | -- | ND | 0.626 | -- | | 1 |
| Carbon disulfide | 0.256 | 0.200 | -- | 0.797 | 0.623 | -- | | 1 |
| Freon-113 | ND | 0.200 | -- | ND | 1.53 | -- | | 1 |
| trans-1,2-Dichloroethene | ND | 0.200 | -- | ND | 0.793 | -- | | 1 |
| 1,1-Dichloroethane | ND | 0.200 | -- | ND | 0.809 | -- | | 1 |
| Methyl tert butyl ether | ND | 0.200 | -- | ND | 0.721 | -- | | 1 |
| 2-Butanone | ND | 0.500 | -- | ND | 1.47 | -- | | 1 |
| cis-1,2-Dichloroethene | ND | 0.200 | -- | ND | 0.793 | -- | | 1 |

**Project Name:** GROSSINGERS
**Project Number:** 9313
**Lab Number:** L2010375
**Report Date:** 03/13/20

## SAMPLE RESULTS

Lab ID: L2010375-02
Client ID: SMPV-13
Sample Location: LIBERTY, NY

Date Collected: 03/06/20 12:56
Date Received: 03/06/20
Field Prep: Not Specified

Sample Depth:

| Parameter | ppbV Results | ppbV RL | ppbV MDL | ug/m3 Results | ug/m3 RL | ug/m3 MDL | Qualifier | Dilution Factor |
|---|---|---|---|---|---|---|---|---|
| **Volatile Organics in Air - Mansfield Lab** | | | | | | | | |
| Ethyl Acetate | ND | 0.500 | -- | ND | 1.80 | -- | | 1 |
| Chloroform | ND | 0.200 | -- | ND | 0.977 | -- | | 1 |
| Tetrahydrofuran | ND | 0.500 | -- | ND | 1.47 | -- | | 1 |
| 1,2-Dichloroethane | ND | 0.200 | -- | ND | 0.809 | -- | | 1 |
| n-Hexane | 0.200 | 0.200 | -- | 0.705 | 0.705 | -- | | 1 |
| 1,1,1-Trichloroethane | ND | 0.200 | -- | ND | 1.09 | -- | | 1 |
| Benzene | ND | 0.200 | -- | ND | 0.639 | -- | | 1 |
| Carbon tetrachloride | ND | 0.200 | -- | ND | 1.26 | -- | | 1 |
| Cyclohexane | ND | 0.200 | -- | ND | 0.688 | -- | | 1 |
| 1,2-Dichloropropane | ND | 0.200 | -- | ND | 0.924 | -- | | 1 |
| Bromodichloromethane | ND | 0.200 | -- | ND | 1.34 | -- | | 1 |
| 1,4-Dioxane | ND | 0.200 | -- | ND | 0.721 | -- | | 1 |
| Trichloroethene | ND | 0.200 | -- | ND | 1.07 | -- | | 1 |
| 2,2,4-Trimethylpentane | ND | 0.200 | -- | ND | 0.934 | -- | | 1 |
| Heptane | ND | 0.200 | -- | ND | 0.820 | -- | | 1 |
| cis-1,3-Dichloropropene | ND | 0.200 | -- | ND | 0.908 | -- | | 1 |
| 4-Methyl-2-pentanone | ND | 0.500 | -- | ND | 2.05 | -- | | 1 |
| trans-1,3-Dichloropropene | ND | 0.200 | -- | ND | 0.908 | -- | | 1 |
| 1,1,2-Trichloroethane | ND | 0.200 | -- | ND | 1.09 | -- | | 1 |
| Toluene | 0.222 | 0.200 | -- | 0.837 | 0.754 | -- | | 1 |
| 2-Hexanone | ND | 0.200 | -- | ND | 0.820 | -- | | 1 |
| Dibromochloromethane | ND | 0.200 | -- | ND | 1.70 | -- | | 1 |
| 1,2-Dibromoethane | ND | 0.200 | -- | ND | 1.54 | -- | | 1 |
| Tetrachloroethene | ND | 0.200 | -- | ND | 1.36 | -- | | 1 |
| Chlorobenzene | ND | 0.200 | -- | ND | 0.921 | -- | | 1 |
| Ethylbenzene | ND | 0.200 | -- | ND | 0.869 | -- | | 1 |

**Project Name:** GROSSINGERS
**Project Number:** 9313
**Lab Number:** L2010375
**Report Date:** 03/13/20

## SAMPLE RESULTS

Lab ID: L2010375-02
Client ID: SMPV-13
Sample Location: LIBERTY, NY

Date Collected: 03/06/20 12:56
Date Received: 03/06/20
Field Prep: Not Specified

Sample Depth:

| Parameter | ppbV Results | ppbV RL | ppbV MDL | ug/m3 Results | ug/m3 RL | ug/m3 MDL | Qualifier | Dilution Factor |
|---|---|---|---|---|---|---|---|---|
| **Volatile Organics in Air - Mansfield Lab** | | | | | | | | |
| p/m-Xylene | ND | 0.400 | -- | ND | 1.74 | -- | | 1 |
| Bromoform | ND | 0.200 | -- | ND | 2.07 | -- | | 1 |
| Styrene | ND | 0.200 | -- | ND | 0.852 | -- | | 1 |
| 1,1,2,2-Tetrachloroethane | ND | 0.200 | -- | ND | 1.37 | -- | | 1 |
| o-Xylene | ND | 0.200 | -- | ND | 0.869 | -- | | 1 |
| 4-Ethyltoluene | ND | 0.200 | -- | ND | 0.983 | -- | | 1 |
| 1,3,5-Trimethylbenzene | ND | 0.200 | -- | ND | 0.983 | -- | | 1 |
| 1,2,4-Trimethylbenzene | ND | 0.200 | -- | ND | 0.983 | -- | | 1 |
| Benzyl chloride | ND | 0.200 | -- | ND | 1.04 | -- | | 1 |
| 1,3-Dichlorobenzene | ND | 0.200 | -- | ND | 1.20 | -- | | 1 |
| 1,4-Dichlorobenzene | ND | 0.200 | -- | ND | 1.20 | -- | | 1 |
| 1,2-Dichlorobenzene | ND | 0.200 | -- | ND | 1.20 | -- | | 1 |
| 1,2,4-Trichlorobenzene | ND | 0.200 | -- | ND | 1.48 | -- | | 1 |
| Hexachlorobutadiene | ND | 0.200 | -- | ND | 2.13 | -- | | 1 |

| Internal Standard | % Recovery | Qualifier | Acceptance Criteria |
|---|---|---|---|
| 1,4-Difluorobenzene | 102 | | 60-140 |
| Bromochloromethane | 102 | | 60-140 |
| chlorobenzene-d5 | 103 | | 60-140 |

**Project Name:** GROSSINGERS
**Project Number:** 9313
**Lab Number:** L2010375
**Report Date:** 03/13/20

## SAMPLE RESULTS

Lab ID: L2010375-03
Client ID: SMPV-1
Sample Location: LIBERTY, NY

Date Collected: 03/06/20 13:12
Date Received: 03/06/20
Field Prep: Not Specified

Sample Depth:
Matrix: Soil_Vapor
Anaytical Method: 48,TO-15
Analytical Date: 03/13/20 03:07
Analyst: TS

| | ppbV | | | ug/m3 | | | | |
|---|---|---|---|---|---|---|---|---|
| **Parameter** | **Results** | **RL** | **MDL** | **Results** | **RL** | **MDL** | **Qualifier** | **Dilution Factor** |
| Volatile Organics in Air - Mansfield Lab | | | | | | | | |
| Dichlorodifluoromethane | 0.650 | 0.200 | -- | 3.21 | 0.989 | -- | | 1 |
| Chloromethane | ND | 0.200 | -- | ND | 0.413 | -- | | 1 |
| Freon-114 | ND | 0.200 | -- | ND | 1.40 | -- | | 1 |
| Vinyl chloride | ND | 0.200 | -- | ND | 0.511 | -- | | 1 |
| 1,3-Butadiene | ND | 0.200 | -- | ND | 0.442 | -- | | 1 |
| Bromomethane | ND | 0.200 | -- | ND | 0.777 | -- | | 1 |
| Chloroethane | ND | 0.200 | -- | ND | 0.528 | -- | | 1 |
| Ethanol | ND | 5.00 | -- | ND | 9.42 | -- | | 1 |
| Vinyl bromide | ND | 0.200 | -- | ND | 0.874 | -- | | 1 |
| Acetone | 3.91 | 1.00 | -- | 9.29 | 2.38 | -- | | 1 |
| Trichlorofluoromethane | 0.754 | 0.200 | -- | 4.24 | 1.12 | -- | | 1 |
| Isopropanol | 1.25 | 0.500 | -- | 3.07 | 1.23 | -- | | 1 |
| 1,1-Dichloroethene | ND | 0.200 | -- | ND | 0.793 | -- | | 1 |
| Tertiary butyl Alcohol | ND | 0.500 | -- | ND | 1.52 | -- | | 1 |
| Methylene chloride | ND | 0.500 | -- | ND | 1.74 | -- | | 1 |
| 3-Chloropropene | ND | 0.200 | -- | ND | 0.626 | -- | | 1 |
| Carbon disulfide | 0.878 | 0.200 | -- | 2.73 | 0.623 | -- | | 1 |
| Freon-113 | ND | 0.200 | -- | ND | 1.53 | -- | | 1 |
| trans-1,2-Dichloroethene | ND | 0.200 | -- | ND | 0.793 | -- | | 1 |
| 1,1-Dichloroethane | ND | 0.200 | -- | ND | 0.809 | -- | | 1 |
| Methyl tert butyl ether | ND | 0.200 | -- | ND | 0.721 | -- | | 1 |
| 2-Butanone | 1.01 | 0.500 | -- | 2.98 | 1.47 | -- | | 1 |
| cis-1,2-Dichloroethene | ND | 0.200 | -- | ND | 0.793 | -- | | 1 |

**Project Name:** GROSSINGERS
**Project Number:** 9313
**Lab Number:** L2010375
**Report Date:** 03/13/20

## SAMPLE RESULTS

Lab ID: L2010375-03
Client ID: SMPV-1
Sample Location: LIBERTY, NY

Date Collected: 03/06/20 13:12
Date Received: 03/06/20
Field Prep: Not Specified

Sample Depth:

| Parameter | ppbV Results | ppbV RL | ppbV MDL | ug/m3 Results | ug/m3 RL | ug/m3 MDL | Qualifier | Dilution Factor |
|---|---|---|---|---|---|---|---|---|
| **Volatile Organics in Air - Mansfield Lab** | | | | | | | | |
| Ethyl Acetate | ND | 0.500 | -- | ND | 1.80 | -- | | 1 |
| Chloroform | ND | 0.200 | -- | ND | 0.977 | -- | | 1 |
| Tetrahydrofuran | ND | 0.500 | -- | ND | 1.47 | -- | | 1 |
| 1,2-Dichloroethane | ND | 0.200 | -- | ND | 0.809 | -- | | 1 |
| n-Hexane | 0.469 | 0.200 | -- | 1.65 | 0.705 | -- | | 1 |
| 1,1,1-Trichloroethane | ND | 0.200 | -- | ND | 1.09 | -- | | 1 |
| Benzene | 0.254 | 0.200 | -- | 0.811 | 0.639 | -- | | 1 |
| Carbon tetrachloride | ND | 0.200 | -- | ND | 1.26 | -- | | 1 |
| Cyclohexane | 0.269 | 0.200 | -- | 0.926 | 0.688 | -- | | 1 |
| 1,2-Dichloropropane | ND | 0.200 | -- | ND | 0.924 | -- | | 1 |
| Bromodichloromethane | ND | 0.200 | -- | ND | 1.34 | -- | | 1 |
| 1,4-Dioxane | ND | 0.200 | -- | ND | 0.721 | -- | | 1 |
| Trichloroethene | ND | 0.200 | -- | ND | 1.07 | -- | | 1 |
| 2,2,4-Trimethylpentane | ND | 0.200 | -- | ND | 0.934 | -- | | 1 |
| Heptane | 0.337 | 0.200 | -- | 1.38 | 0.820 | -- | | 1 |
| cis-1,3-Dichloropropene | ND | 0.200 | -- | ND | 0.908 | -- | | 1 |
| 4-Methyl-2-pentanone | ND | 0.500 | -- | ND | 2.05 | -- | | 1 |
| trans-1,3-Dichloropropene | ND | 0.200 | -- | ND | 0.908 | -- | | 1 |
| 1,1,2-Trichloroethane | ND | 0.200 | -- | ND | 1.09 | -- | | 1 |
| Toluene | 1.42 | 0.200 | -- | 5.35 | 0.754 | -- | | 1 |
| 2-Hexanone | ND | 0.200 | -- | ND | 0.820 | -- | | 1 |
| Dibromochloromethane | ND | 0.200 | -- | ND | 1.70 | -- | | 1 |
| 1,2-Dibromoethane | ND | 0.200 | -- | ND | 1.54 | -- | | 1 |
| Tetrachloroethene | 1.38 | 0.200 | -- | 9.36 | 1.36 | -- | | 1 |
| Chlorobenzene | ND | 0.200 | -- | ND | 0.921 | -- | | 1 |
| Ethylbenzene | 0.414 | 0.200 | -- | 1.80 | 0.869 | -- | | 1 |

**Project Name:** GROSSINGERS
**Project Number:** 9313
**Lab Number:** L2010375
**Report Date:** 03/13/20

## SAMPLE RESULTS

Lab ID: L2010375-03
Client ID: SMPV-1
Sample Location: LIBERTY, NY

Date Collected: 03/06/20 13:12
Date Received: 03/06/20
Field Prep: Not Specified

Sample Depth:

| Parameter | ppbV Results | ppbV RL | ppbV MDL | ug/m3 Results | ug/m3 RL | ug/m3 MDL | Qualifier | Dilution Factor |
|---|---|---|---|---|---|---|---|---|
| **Volatile Organics in Air - Mansfield Lab** | | | | | | | | |
| p/m-Xylene | 1.66 | 0.400 | -- | 7.21 | 1.74 | -- | | 1 |
| Bromoform | ND | 0.200 | -- | ND | 2.07 | -- | | 1 |
| Styrene | ND | 0.200 | -- | ND | 0.852 | -- | | 1 |
| 1,1,2,2-Tetrachloroethane | ND | 0.200 | -- | ND | 1.37 | -- | | 1 |
| o-Xylene | 0.608 | 0.200 | -- | 2.64 | 0.869 | -- | | 1 |
| 4-Ethyltoluene | 0.203 | 0.200 | -- | 0.998 | 0.983 | -- | | 1 |
| 1,3,5-Trimethylbenzene | ND | 0.200 | -- | ND | 0.983 | -- | | 1 |
| 1,2,4-Trimethylbenzene | 0.803 | 0.200 | -- | 3.95 | 0.983 | -- | | 1 |
| Benzyl chloride | ND | 0.200 | -- | ND | 1.04 | -- | | 1 |
| 1,3-Dichlorobenzene | ND | 0.200 | -- | ND | 1.20 | -- | | 1 |
| 1,4-Dichlorobenzene | ND | 0.200 | -- | ND | 1.20 | -- | | 1 |
| 1,2-Dichlorobenzene | ND | 0.200 | -- | ND | 1.20 | -- | | 1 |
| 1,2,4-Trichlorobenzene | ND | 0.200 | -- | ND | 1.48 | -- | | 1 |
| Hexachlorobutadiene | ND | 0.200 | -- | ND | 2.13 | -- | | 1 |

| Internal Standard | % Recovery | Qualifier | Acceptance Criteria |
|---|---|---|---|
| 1,4-Difluorobenzene | 101 | | 60-140 |
| Bromochloromethane | 100 | | 60-140 |
| chlorobenzene-d5 | 104 | | 60-140 |

**Project Name:** GROSSINGERS
**Project Number:** 9313
**Lab Number:** L2010375
**Report Date:** 03/13/20

## SAMPLE RESULTS

Lab ID: L2010375-04
Client ID: SMPV-3
Sample Location: LIBERTY, NY

Date Collected: 03/06/20 14:15
Date Received: 03/06/20
Field Prep: Not Specified

Sample Depth:
Matrix: Soil_Vapor
Anaytical Method: 48,TO-15
Analytical Date: 03/13/20 03:47
Analyst: TS

| | ppbV | | | ug/m3 | | | | |
|---|---|---|---|---|---|---|---|---|
| **Parameter** | **Results** | **RL** | **MDL** | **Results** | **RL** | **MDL** | **Qualifier** | **Dilution Factor** |
| Volatile Organics in Air - Mansfield Lab | | | | | | | | |
| Dichlorodifluoromethane | 0.978 | 0.200 | -- | 4.84 | 0.989 | -- | | 1 |
| Chloromethane | 0.539 | 0.200 | -- | 1.11 | 0.413 | -- | | 1 |
| Freon-114 | ND | 0.200 | -- | ND | 1.40 | -- | | 1 |
| Vinyl chloride | ND | 0.200 | -- | ND | 0.511 | -- | | 1 |
| 1,3-Butadiene | ND | 0.200 | -- | ND | 0.442 | -- | | 1 |
| Bromomethane | ND | 0.200 | -- | ND | 0.777 | -- | | 1 |
| Chloroethane | ND | 0.200 | -- | ND | 0.528 | -- | | 1 |
| Ethanol | ND | 5.00 | -- | ND | 9.42 | -- | | 1 |
| Vinyl bromide | ND | 0.200 | -- | ND | 0.874 | -- | | 1 |
| Acetone | 2.04 | 1.00 | -- | 4.85 | 2.38 | -- | | 1 |
| Trichlorofluoromethane | 0.569 | 0.200 | -- | 3.20 | 1.12 | -- | | 1 |
| Isopropanol | ND | 0.500 | -- | ND | 1.23 | -- | | 1 |
| 1,1-Dichloroethene | ND | 0.200 | -- | ND | 0.793 | -- | | 1 |
| Tertiary butyl Alcohol | ND | 0.500 | -- | ND | 1.52 | -- | | 1 |
| Methylene chloride | ND | 0.500 | -- | ND | 1.74 | -- | | 1 |
| 3-Chloropropene | ND | 0.200 | -- | ND | 0.626 | -- | | 1 |
| Carbon disulfide | ND | 0.200 | -- | ND | 0.623 | -- | | 1 |
| Freon-113 | ND | 0.200 | -- | ND | 1.53 | -- | | 1 |
| trans-1,2-Dichloroethene | ND | 0.200 | -- | ND | 0.793 | -- | | 1 |
| 1,1-Dichloroethane | ND | 0.200 | -- | ND | 0.809 | -- | | 1 |
| Methyl tert butyl ether | ND | 0.200 | -- | ND | 0.721 | -- | | 1 |
| 2-Butanone | ND | 0.500 | -- | ND | 1.47 | -- | | 1 |
| cis-1,2-Dichloroethene | ND | 0.200 | -- | ND | 0.793 | -- | | 1 |

**Project Name:** GROSSINGERS
**Project Number:** 9313
**Lab Number:** L2010375
**Report Date:** 03/13/20

## SAMPLE RESULTS

Lab ID: L2010375-04
Client ID: SMPV-3
Sample Location: LIBERTY, NY

Date Collected: 03/06/20 14:15
Date Received: 03/06/20
Field Prep: Not Specified

Sample Depth:

| Parameter | ppbV Results | ppbV RL | ppbV MDL | ug/m3 Results | ug/m3 RL | ug/m3 MDL | Qualifier | Dilution Factor |
|---|---|---|---|---|---|---|---|---|
| **Volatile Organics in Air - Mansfield Lab** | | | | | | | | |
| Ethyl Acetate | ND | 0.500 | -- | ND | 1.80 | -- | | 1 |
| Chloroform | ND | 0.200 | -- | ND | 0.977 | -- | | 1 |
| Tetrahydrofuran | ND | 0.500 | -- | ND | 1.47 | -- | | 1 |
| 1,2-Dichloroethane | ND | 0.200 | -- | ND | 0.809 | -- | | 1 |
| n-Hexane | ND | 0.200 | -- | ND | 0.705 | -- | | 1 |
| 1,1,1-Trichloroethane | ND | 0.200 | -- | ND | 1.09 | -- | | 1 |
| Benzene | ND | 0.200 | -- | ND | 0.639 | -- | | 1 |
| Carbon tetrachloride | ND | 0.200 | -- | ND | 1.26 | -- | | 1 |
| Cyclohexane | ND | 0.200 | -- | ND | 0.688 | -- | | 1 |
| 1,2-Dichloropropane | ND | 0.200 | -- | ND | 0.924 | -- | | 1 |
| Bromodichloromethane | ND | 0.200 | -- | ND | 1.34 | -- | | 1 |
| 1,4-Dioxane | ND | 0.200 | -- | ND | 0.721 | -- | | 1 |
| Trichloroethene | ND | 0.200 | -- | ND | 1.07 | -- | | 1 |
| 2,2,4-Trimethylpentane | ND | 0.200 | -- | ND | 0.934 | -- | | 1 |
| Heptane | ND | 0.200 | -- | ND | 0.820 | -- | | 1 |
| cis-1,3-Dichloropropene | ND | 0.200 | -- | ND | 0.908 | -- | | 1 |
| 4-Methyl-2-pentanone | ND | 0.500 | -- | ND | 2.05 | -- | | 1 |
| trans-1,3-Dichloropropene | ND | 0.200 | -- | ND | 0.908 | -- | | 1 |
| 1,1,2-Trichloroethane | ND | 0.200 | -- | ND | 1.09 | -- | | 1 |
| Toluene | ND | 0.200 | -- | ND | 0.754 | -- | | 1 |
| 2-Hexanone | ND | 0.200 | -- | ND | 0.820 | -- | | 1 |
| Dibromochloromethane | ND | 0.200 | -- | ND | 1.70 | -- | | 1 |
| 1,2-Dibromoethane | ND | 0.200 | -- | ND | 1.54 | -- | | 1 |
| Tetrachloroethene | ND | 0.200 | -- | ND | 1.36 | -- | | 1 |
| Chlorobenzene | ND | 0.200 | -- | ND | 0.921 | -- | | 1 |
| Ethylbenzene | ND | 0.200 | -- | ND | 0.869 | -- | | 1 |

***Project Name:*** GROSSINGERS
***Project Number:*** 9313
***Lab Number:*** L2010375
***Report Date:*** 03/13/20

## *SAMPLE RESULTS*

Lab ID: L2010375-04
Client ID: SMPV-3
Sample Location: LIBERTY, NY

Date Collected: 03/06/20 14:15
Date Received: 03/06/20
Field Prep: Not Specified

Sample Depth:

| Parameter | ppbV Results | ppbV RL | ppbV MDL | ug/m3 Results | ug/m3 RL | ug/m3 MDL | Qualifier | Dilution Factor |
|---|---|---|---|---|---|---|---|---|
| **Volatile Organics in Air - Mansfield Lab** | | | | | | | | |
| p/m-Xylene | ND | 0.400 | -- | ND | 1.74 | -- | | 1 |
| Bromoform | ND | 0.200 | -- | ND | 2.07 | -- | | 1 |
| Styrene | ND | 0.200 | -- | ND | 0.852 | -- | | 1 |
| 1,1,2,2-Tetrachloroethane | ND | 0.200 | -- | ND | 1.37 | -- | | 1 |
| o-Xylene | ND | 0.200 | -- | ND | 0.869 | -- | | 1 |
| 4-Ethyltoluene | ND | 0.200 | -- | ND | 0.983 | -- | | 1 |
| 1,3,5-Trimethylbenzene | ND | 0.200 | -- | ND | 0.983 | -- | | 1 |
| 1,2,4-Trimethylbenzene | ND | 0.200 | -- | ND | 0.983 | -- | | 1 |
| Benzyl chloride | ND | 0.200 | -- | ND | 1.04 | -- | | 1 |
| 1,3-Dichlorobenzene | ND | 0.200 | -- | ND | 1.20 | -- | | 1 |
| 1,4-Dichlorobenzene | ND | 0.200 | -- | ND | 1.20 | -- | | 1 |
| 1,2-Dichlorobenzene | ND | 0.200 | -- | ND | 1.20 | -- | | 1 |
| 1,2,4-Trichlorobenzene | ND | 0.200 | -- | ND | 1.48 | -- | | 1 |
| Hexachlorobutadiene | ND | 0.200 | -- | ND | 2.13 | -- | | 1 |

| Internal Standard | % Recovery | Qualifier | Acceptance Criteria |
|---|---|---|---|
| 1,4-Difluorobenzene | 96 | | 60-140 |
| Bromochloromethane | 97 | | 60-140 |
| chlorobenzene-d5 | 99 | | 60-140 |

**Project Name:** GROSSINGERS
**Project Number:** 9313
**Lab Number:** L2010375
**Report Date:** 03/13/20

## SAMPLE RESULTS

Lab ID: L2010375-05
Client ID: SMPV-2
Sample Location: LIBERTY, NY

Date Collected: 03/06/20 15:06
Date Received: 03/06/20
Field Prep: Not Specified

Sample Depth:
Matrix: Soil_Vapor
Anaytical Method: 48,TO-15
Analytical Date: 03/13/20 05:18
Analyst: TS

| | ppbV | | | ug/m3 | | | | |
|---|---|---|---|---|---|---|---|---|
| **Parameter** | **Results** | **RL** | **MDL** | **Results** | **RL** | **MDL** | **Qualifier** | **Dilution Factor** |
| Volatile Organics in Air - Mansfield Lab | | | | | | | | |
| Dichlorodifluoromethane | 0.436 | 0.200 | -- | 2.16 | 0.989 | -- | | 1 |
| Chloromethane | 0.483 | 0.200 | -- | 0.997 | 0.413 | -- | | 1 |
| Freon-114 | ND | 0.200 | -- | ND | 1.40 | -- | | 1 |
| Vinyl chloride | ND | 0.200 | -- | ND | 0.511 | -- | | 1 |
| 1,3-Butadiene | ND | 0.200 | -- | ND | 0.442 | -- | | 1 |
| Bromomethane | ND | 0.200 | -- | ND | 0.777 | -- | | 1 |
| Chloroethane | ND | 0.200 | -- | ND | 0.528 | -- | | 1 |
| Ethanol | ND | 5.00 | -- | ND | 9.42 | -- | | 1 |
| Vinyl bromide | ND | 0.200 | -- | ND | 0.874 | -- | | 1 |
| Acetone | 1.79 | 1.00 | -- | 4.25 | 2.38 | -- | | 1 |
| Trichlorofluoromethane | ND | 0.200 | -- | ND | 1.12 | -- | | 1 |
| Isopropanol | ND | 0.500 | -- | ND | 1.23 | -- | | 1 |
| 1,1-Dichloroethene | ND | 0.200 | -- | ND | 0.793 | -- | | 1 |
| Tertiary butyl Alcohol | ND | 0.500 | -- | ND | 1.52 | -- | | 1 |
| Methylene chloride | ND | 0.500 | -- | ND | 1.74 | -- | | 1 |
| 3-Chloropropene | ND | 0.200 | -- | ND | 0.626 | -- | | 1 |
| Carbon disulfide | ND | 0.200 | -- | ND | 0.623 | -- | | 1 |
| Freon-113 | ND | 0.200 | -- | ND | 1.53 | -- | | 1 |
| trans-1,2-Dichloroethene | ND | 0.200 | -- | ND | 0.793 | -- | | 1 |
| 1,1-Dichloroethane | ND | 0.200 | -- | ND | 0.809 | -- | | 1 |
| Methyl tert butyl ether | ND | 0.200 | -- | ND | 0.721 | -- | | 1 |
| 2-Butanone | ND | 0.500 | -- | ND | 1.47 | -- | | 1 |
| cis-1,2-Dichloroethene | ND | 0.200 | -- | ND | 0.793 | -- | | 1 |

**Project Name:** GROSSINGERS
**Project Number:** 9313
**Lab Number:** L2010375
**Report Date:** 03/13/20

## SAMPLE RESULTS

Lab ID: L2010375-05
Client ID: SMPV-2
Sample Location: LIBERTY, NY

Date Collected: 03/06/20 15:06
Date Received: 03/06/20
Field Prep: Not Specified

Sample Depth:

| Parameter | ppbV Results | ppbV RL | ppbV MDL | ug/m3 Results | ug/m3 RL | ug/m3 MDL | Qualifier | Dilution Factor |
|---|---|---|---|---|---|---|---|---|
| **Volatile Organics in Air - Mansfield Lab** | | | | | | | | |
| Ethyl Acetate | ND | 0.500 | -- | ND | 1.80 | -- | | 1 |
| Chloroform | ND | 0.200 | -- | ND | 0.977 | -- | | 1 |
| Tetrahydrofuran | ND | 0.500 | -- | ND | 1.47 | -- | | 1 |
| 1,2-Dichloroethane | ND | 0.200 | -- | ND | 0.809 | -- | | 1 |
| n-Hexane | ND | 0.200 | -- | ND | 0.705 | -- | | 1 |
| 1,1,1-Trichloroethane | ND | 0.200 | -- | ND | 1.09 | -- | | 1 |
| Benzene | ND | 0.200 | -- | ND | 0.639 | -- | | 1 |
| Carbon tetrachloride | ND | 0.200 | -- | ND | 1.26 | -- | | 1 |
| Cyclohexane | ND | 0.200 | -- | ND | 0.688 | -- | | 1 |
| 1,2-Dichloropropane | ND | 0.200 | -- | ND | 0.924 | -- | | 1 |
| Bromodichloromethane | ND | 0.200 | -- | ND | 1.34 | -- | | 1 |
| 1,4-Dioxane | ND | 0.200 | -- | ND | 0.721 | -- | | 1 |
| Trichloroethene | ND | 0.200 | -- | ND | 1.07 | -- | | 1 |
| 2,2,4-Trimethylpentane | ND | 0.200 | -- | ND | 0.934 | -- | | 1 |
| Heptane | ND | 0.200 | -- | ND | 0.820 | -- | | 1 |
| cis-1,3-Dichloropropene | ND | 0.200 | -- | ND | 0.908 | -- | | 1 |
| 4-Methyl-2-pentanone | ND | 0.500 | -- | ND | 2.05 | -- | | 1 |
| trans-1,3-Dichloropropene | ND | 0.200 | -- | ND | 0.908 | -- | | 1 |
| 1,1,2-Trichloroethane | ND | 0.200 | -- | ND | 1.09 | -- | | 1 |
| Toluene | ND | 0.200 | -- | ND | 0.754 | -- | | 1 |
| 2-Hexanone | ND | 0.200 | -- | ND | 0.820 | -- | | 1 |
| Dibromochloromethane | ND | 0.200 | -- | ND | 1.70 | -- | | 1 |
| 1,2-Dibromoethane | ND | 0.200 | -- | ND | 1.54 | -- | | 1 |
| Tetrachloroethene | ND | 0.200 | -- | ND | 1.36 | -- | | 1 |
| Chlorobenzene | ND | 0.200 | -- | ND | 0.921 | -- | | 1 |
| Ethylbenzene | ND | 0.200 | -- | ND | 0.869 | -- | | 1 |

***Project Name:*** GROSSINGERS
***Project Number:*** 9313
***Lab Number:*** L2010375
***Report Date:*** 03/13/20

## *SAMPLE RESULTS*

Lab ID: L2010375-05
Client ID: SMPV-2
Sample Location: LIBERTY, NY

Date Collected: 03/06/20 15:06
Date Received: 03/06/20
Field Prep: Not Specified

Sample Depth:

| Parameter | ppbV Results | ppbV RL | ppbV MDL | ug/m3 Results | ug/m3 RL | ug/m3 MDL | Qualifier | Dilution Factor |
|---|---|---|---|---|---|---|---|---|
| **Volatile Organics in Air - Mansfield Lab** | | | | | | | | |
| p/m-Xylene | ND | 0.400 | -- | ND | 1.74 | -- | | 1 |
| Bromoform | ND | 0.200 | -- | ND | 2.07 | -- | | 1 |
| Styrene | ND | 0.200 | -- | ND | 0.852 | -- | | 1 |
| 1,1,2,2-Tetrachloroethane | ND | 0.200 | -- | ND | 1.37 | -- | | 1 |
| o-Xylene | ND | 0.200 | -- | ND | 0.869 | -- | | 1 |
| 4-Ethyltoluene | ND | 0.200 | -- | ND | 0.983 | -- | | 1 |
| 1,3,5-Trimethylbenzene | ND | 0.200 | -- | ND | 0.983 | -- | | 1 |
| 1,2,4-Trimethylbenzene | ND | 0.200 | -- | ND | 0.983 | -- | | 1 |
| Benzyl chloride | ND | 0.200 | -- | ND | 1.04 | -- | | 1 |
| 1,3-Dichlorobenzene | ND | 0.200 | -- | ND | 1.20 | -- | | 1 |
| 1,4-Dichlorobenzene | ND | 0.200 | -- | ND | 1.20 | -- | | 1 |
| 1,2-Dichlorobenzene | ND | 0.200 | -- | ND | 1.20 | -- | | 1 |
| 1,2,4-Trichlorobenzene | ND | 0.200 | -- | ND | 1.48 | -- | | 1 |
| Hexachlorobutadiene | ND | 0.200 | -- | ND | 2.13 | -- | | 1 |

| Internal Standard | % Recovery | Qualifier | Acceptance Criteria |
|---|---|---|---|
| 1,4-Difluorobenzene | 101 | | 60-140 |
| Bromochloromethane | 102 | | 60-140 |
| chlorobenzene-d5 | 104 | | 60-140 |

**Project Name:** GROSSINGERS
**Project Number:** 9313
**Lab Number:** L2010375
**Report Date:** 03/13/20

## SAMPLE RESULTS

Lab ID: L2010375-06
Client ID: SMPV-12
Sample Location: LIBERTY, NY

Date Collected: 03/06/20 15:35
Date Received: 03/06/20
Field Prep: Not Specified

Sample Depth:
Matrix: Soil_Vapor
Anaytical Method: 48,TO-15
Analytical Date: 03/13/20 05:59
Analyst: TS

| | ppbV | | | ug/m3 | | | | |
|---|---|---|---|---|---|---|---|---|
| Parameter | Results | RL | MDL | Results | RL | MDL | Qualifier | Dilution Factor |
| **Volatile Organics in Air - Mansfield Lab** | | | | | | | | |
| Dichlorodifluoromethane | 0.553 | 0.200 | -- | 2.73 | 0.989 | -- | | 1 |
| Chloromethane | 0.519 | 0.200 | -- | 1.07 | 0.413 | -- | | 1 |
| Freon-114 | ND | 0.200 | -- | ND | 1.40 | -- | | 1 |
| Vinyl chloride | ND | 0.200 | -- | ND | 0.511 | -- | | 1 |
| 1,3-Butadiene | ND | 0.200 | -- | ND | 0.442 | -- | | 1 |
| Bromomethane | ND | 0.200 | -- | ND | 0.777 | -- | | 1 |
| Chloroethane | ND | 0.200 | -- | ND | 0.528 | -- | | 1 |
| Ethanol | ND | 5.00 | -- | ND | 9.42 | -- | | 1 |
| Vinyl bromide | ND | 0.200 | -- | ND | 0.874 | -- | | 1 |
| Acetone | 1.63 | 1.00 | -- | 3.87 | 2.38 | -- | | 1 |
| Trichlorofluoromethane | 0.323 | 0.200 | -- | 1.82 | 1.12 | -- | | 1 |
| Isopropanol | ND | 0.500 | -- | ND | 1.23 | -- | | 1 |
| 1,1-Dichloroethene | ND | 0.200 | -- | ND | 0.793 | -- | | 1 |
| Tertiary butyl Alcohol | ND | 0.500 | -- | ND | 1.52 | -- | | 1 |
| Methylene chloride | ND | 0.500 | -- | ND | 1.74 | -- | | 1 |
| 3-Chloropropene | ND | 0.200 | -- | ND | 0.626 | -- | | 1 |
| Carbon disulfide | ND | 0.200 | -- | ND | 0.623 | -- | | 1 |
| Freon-113 | ND | 0.200 | -- | ND | 1.53 | -- | | 1 |
| trans-1,2-Dichloroethene | ND | 0.200 | -- | ND | 0.793 | -- | | 1 |
| 1,1-Dichloroethane | ND | 0.200 | -- | ND | 0.809 | -- | | 1 |
| Methyl tert butyl ether | ND | 0.200 | -- | ND | 0.721 | -- | | 1 |
| 2-Butanone | ND | 0.500 | -- | ND | 1.47 | -- | | 1 |
| cis-1,2-Dichloroethene | ND | 0.200 | -- | ND | 0.793 | -- | | 1 |

**Project Name:** GROSSINGERS
**Project Number:** 9313
**Lab Number:** L2010375
**Report Date:** 03/13/20

## SAMPLE RESULTS

Lab ID: L2010375-06
Client ID: SMPV-12
Sample Location: LIBERTY, NY

Date Collected: 03/06/20 15:35
Date Received: 03/06/20
Field Prep: Not Specified

Sample Depth:

| Parameter | ppbV Results | ppbV RL | ppbV MDL | ug/m3 Results | ug/m3 RL | ug/m3 MDL | Qualifier | Dilution Factor |
|---|---|---|---|---|---|---|---|---|
| **Volatile Organics in Air - Mansfield Lab** | | | | | | | | |
| Ethyl Acetate | ND | 0.500 | -- | ND | 1.80 | -- | | 1 |
| Chloroform | ND | 0.200 | -- | ND | 0.977 | -- | | 1 |
| Tetrahydrofuran | ND | 0.500 | -- | ND | 1.47 | -- | | 1 |
| 1,2-Dichloroethane | ND | 0.200 | -- | ND | 0.809 | -- | | 1 |
| n-Hexane | ND | 0.200 | -- | ND | 0.705 | -- | | 1 |
| 1,1,1-Trichloroethane | ND | 0.200 | -- | ND | 1.09 | -- | | 1 |
| Benzene | ND | 0.200 | -- | ND | 0.639 | -- | | 1 |
| Carbon tetrachloride | ND | 0.200 | -- | ND | 1.26 | -- | | 1 |
| Cyclohexane | ND | 0.200 | -- | ND | 0.688 | -- | | 1 |
| 1,2-Dichloropropane | ND | 0.200 | -- | ND | 0.924 | -- | | 1 |
| Bromodichloromethane | ND | 0.200 | -- | ND | 1.34 | -- | | 1 |
| 1,4-Dioxane | ND | 0.200 | -- | ND | 0.721 | -- | | 1 |
| Trichloroethene | ND | 0.200 | -- | ND | 1.07 | -- | | 1 |
| 2,2,4-Trimethylpentane | ND | 0.200 | -- | ND | 0.934 | -- | | 1 |
| Heptane | ND | 0.200 | -- | ND | 0.820 | -- | | 1 |
| cis-1,3-Dichloropropene | ND | 0.200 | -- | ND | 0.908 | -- | | 1 |
| 4-Methyl-2-pentanone | ND | 0.500 | -- | ND | 2.05 | -- | | 1 |
| trans-1,3-Dichloropropene | ND | 0.200 | -- | ND | 0.908 | -- | | 1 |
| 1,1,2-Trichloroethane | ND | 0.200 | -- | ND | 1.09 | -- | | 1 |
| Toluene | ND | 0.200 | -- | ND | 0.754 | -- | | 1 |
| 2-Hexanone | ND | 0.200 | -- | ND | 0.820 | -- | | 1 |
| Dibromochloromethane | ND | 0.200 | -- | ND | 1.70 | -- | | 1 |
| 1,2-Dibromoethane | ND | 0.200 | -- | ND | 1.54 | -- | | 1 |
| Tetrachloroethene | ND | 0.200 | -- | ND | 1.36 | -- | | 1 |
| Chlorobenzene | ND | 0.200 | -- | ND | 0.921 | -- | | 1 |
| Ethylbenzene | ND | 0.200 | -- | ND | 0.869 | -- | | 1 |

**Project Name:** GROSSINGERS
**Project Number:** 9313
**Lab Number:** L2010375
**Report Date:** 03/13/20

## SAMPLE RESULTS

Lab ID: L2010375-06
Client ID: SMPV-12
Sample Location: LIBERTY, NY

Date Collected: 03/06/20 15:35
Date Received: 03/06/20
Field Prep: Not Specified

Sample Depth:

| Parameter | ppbV Results | ppbV RL | ppbV MDL | ug/m3 Results | ug/m3 RL | ug/m3 MDL | Qualifier | Dilution Factor |
|---|---|---|---|---|---|---|---|---|
| **Volatile Organics in Air - Mansfield Lab** | | | | | | | | |
| p/m-Xylene | ND | 0.400 | -- | ND | 1.74 | -- | | 1 |
| Bromoform | ND | 0.200 | -- | ND | 2.07 | -- | | 1 |
| Styrene | ND | 0.200 | -- | ND | 0.852 | -- | | 1 |
| 1,1,2,2-Tetrachloroethane | ND | 0.200 | -- | ND | 1.37 | -- | | 1 |
| o-Xylene | ND | 0.200 | -- | ND | 0.869 | -- | | 1 |
| 4-Ethyltoluene | ND | 0.200 | -- | ND | 0.983 | -- | | 1 |
| 1,3,5-Trimethylbenzene | ND | 0.200 | -- | ND | 0.983 | -- | | 1 |
| 1,2,4-Trimethylbenzene | ND | 0.200 | -- | ND | 0.983 | -- | | 1 |
| Benzyl chloride | ND | 0.200 | -- | ND | 1.04 | -- | | 1 |
| 1,3-Dichlorobenzene | ND | 0.200 | -- | ND | 1.20 | -- | | 1 |
| 1,4-Dichlorobenzene | ND | 0.200 | -- | ND | 1.20 | -- | | 1 |
| 1,2-Dichlorobenzene | ND | 0.200 | -- | ND | 1.20 | -- | | 1 |
| 1,2,4-Trichlorobenzene | ND | 0.200 | -- | ND | 1.48 | -- | | 1 |
| Hexachlorobutadiene | ND | 0.200 | -- | ND | 2.13 | -- | | 1 |

| Internal Standard | % Recovery | Qualifier | Acceptance Criteria |
|---|---|---|---|
| 1,4-Difluorobenzene | 95 | | 60-140 |
| Bromochloromethane | 97 | | 60-140 |
| chlorobenzene-d5 | 94 | | 60-140 |

**Project Name:** GROSSINGERS
**Project Number:** 9313
**Lab Number:** L2010375
**Report Date:** 03/13/20

## SAMPLE RESULTS

Lab ID: L2010375-07
Client ID: SMPV-10
Sample Location: LIBERTY, NY

Date Collected: 03/06/20 15:52
Date Received: 03/06/20
Field Prep: Not Specified

Sample Depth:
Matrix: Soil_Vapor
Anaytical Method: 48,TO-15
Analytical Date: 03/13/20 06:39
Analyst: TS

| | ppbV | | | ug/m3 | | | | |
|---|---|---|---|---|---|---|---|---|
| **Parameter** | **Results** | **RL** | **MDL** | **Results** | **RL** | **MDL** | **Qualifier** | **Dilution Factor** |
| Volatile Organics in Air - Mansfield Lab | | | | | | | | |
| Dichlorodifluoromethane | 14.8 | 0.200 | -- | 73.2 | 0.989 | -- | | 1 |
| Chloromethane | 0.260 | 0.200 | -- | 0.537 | 0.413 | -- | | 1 |
| Freon-114 | ND | 0.200 | -- | ND | 1.40 | -- | | 1 |
| Vinyl chloride | ND | 0.200 | -- | ND | 0.511 | -- | | 1 |
| 1,3-Butadiene | ND | 0.200 | -- | ND | 0.442 | -- | | 1 |
| Bromomethane | ND | 0.200 | -- | ND | 0.777 | -- | | 1 |
| Chloroethane | ND | 0.200 | -- | ND | 0.528 | -- | | 1 |
| Ethanol | ND | 5.00 | -- | ND | 9.42 | -- | | 1 |
| Vinyl bromide | ND | 0.200 | -- | ND | 0.874 | -- | | 1 |
| Acetone | 4.51 | 1.00 | -- | 10.7 | 2.38 | -- | | 1 |
| Trichlorofluoromethane | 19.7 | 0.200 | -- | 111 | 1.12 | -- | | 1 |
| Isopropanol | ND | 0.500 | -- | ND | 1.23 | -- | | 1 |
| 1,1-Dichloroethene | ND | 0.200 | -- | ND | 0.793 | -- | | 1 |
| Tertiary butyl Alcohol | ND | 0.500 | -- | ND | 1.52 | -- | | 1 |
| Methylene chloride | ND | 0.500 | -- | ND | 1.74 | -- | | 1 |
| 3-Chloropropene | ND | 0.200 | -- | ND | 0.626 | -- | | 1 |
| Carbon disulfide | ND | 0.200 | -- | ND | 0.623 | -- | | 1 |
| Freon-113 | ND | 0.200 | -- | ND | 1.53 | -- | | 1 |
| trans-1,2-Dichloroethene | ND | 0.200 | -- | ND | 0.793 | -- | | 1 |
| 1,1-Dichloroethane | ND | 0.200 | -- | ND | 0.809 | -- | | 1 |
| Methyl tert butyl ether | ND | 0.200 | -- | ND | 0.721 | -- | | 1 |
| 2-Butanone | 0.622 | 0.500 | -- | 1.83 | 1.47 | -- | | 1 |
| cis-1,2-Dichloroethene | ND | 0.200 | -- | ND | 0.793 | -- | | 1 |

**Project Name:** GROSSINGERS
**Project Number:** 9313
**Lab Number:** L2010375
**Report Date:** 03/13/20

## SAMPLE RESULTS

Lab ID: L2010375-07
Client ID: SMPV-10
Sample Location: LIBERTY, NY

Date Collected: 03/06/20 15:52
Date Received: 03/06/20
Field Prep: Not Specified

Sample Depth:

| Parameter | ppbV Results | ppbV RL | ppbV MDL | ug/m3 Results | ug/m3 RL | ug/m3 MDL | Qualifier | Dilution Factor |
|---|---|---|---|---|---|---|---|---|
| **Volatile Organics in Air - Mansfield Lab** | | | | | | | | |
| Ethyl Acetate | ND | 0.500 | -- | ND | 1.80 | -- | | 1 |
| Chloroform | ND | 0.200 | -- | ND | 0.977 | -- | | 1 |
| Tetrahydrofuran | ND | 0.500 | -- | ND | 1.47 | -- | | 1 |
| 1,2-Dichloroethane | ND | 0.200 | -- | ND | 0.809 | -- | | 1 |
| n-Hexane | 0.341 | 0.200 | -- | 1.20 | 0.705 | -- | | 1 |
| 1,1,1-Trichloroethane | ND | 0.200 | -- | ND | 1.09 | -- | | 1 |
| Benzene | 0.342 | 0.200 | -- | 1.09 | 0.639 | -- | | 1 |
| Carbon tetrachloride | ND | 0.200 | -- | ND | 1.26 | -- | | 1 |
| Cyclohexane | ND | 0.200 | -- | ND | 0.688 | -- | | 1 |
| 1,2-Dichloropropane | ND | 0.200 | -- | ND | 0.924 | -- | | 1 |
| Bromodichloromethane | ND | 0.200 | -- | ND | 1.34 | -- | | 1 |
| 1,4-Dioxane | ND | 0.200 | -- | ND | 0.721 | -- | | 1 |
| Trichloroethene | ND | 0.200 | -- | ND | 1.07 | -- | | 1 |
| 2,2,4-Trimethylpentane | ND | 0.200 | -- | ND | 0.934 | -- | | 1 |
| Heptane | 0.331 | 0.200 | -- | 1.36 | 0.820 | -- | | 1 |
| cis-1,3-Dichloropropene | ND | 0.200 | -- | ND | 0.908 | -- | | 1 |
| 4-Methyl-2-pentanone | ND | 0.500 | -- | ND | 2.05 | -- | | 1 |
| trans-1,3-Dichloropropene | ND | 0.200 | -- | ND | 0.908 | -- | | 1 |
| 1,1,2-Trichloroethane | ND | 0.200 | -- | ND | 1.09 | -- | | 1 |
| Toluene | 2.22 | 0.200 | -- | 8.37 | 0.754 | -- | | 1 |
| 2-Hexanone | ND | 0.200 | -- | ND | 0.820 | -- | | 1 |
| Dibromochloromethane | ND | 0.200 | -- | ND | 1.70 | -- | | 1 |
| 1,2-Dibromoethane | ND | 0.200 | -- | ND | 1.54 | -- | | 1 |
| Tetrachloroethene | 2.10 | 0.200 | -- | 14.2 | 1.36 | -- | | 1 |
| Chlorobenzene | ND | 0.200 | -- | ND | 0.921 | -- | | 1 |
| Ethylbenzene | 0.668 | 0.200 | -- | 2.90 | 0.869 | -- | | 1 |

**Project Name:** GROSSINGERS
**Project Number:** 9313
**Lab Number:** L2010375
**Report Date:** 03/13/20

## SAMPLE RESULTS

Lab ID: L2010375-07
Client ID: SMPV-10
Sample Location: LIBERTY, NY

Date Collected: 03/06/20 15:52
Date Received: 03/06/20
Field Prep: Not Specified

Sample Depth:

| Parameter | ppbV Results | ppbV RL | ppbV MDL | ug/m3 Results | ug/m3 RL | ug/m3 MDL | Qualifier | Dilution Factor |
|---|---|---|---|---|---|---|---|---|
| **Volatile Organics in Air - Mansfield Lab** | | | | | | | | |
| p/m-Xylene | 2.63 | 0.400 | -- | 11.4 | 1.74 | -- | | 1 |
| Bromoform | ND | 0.200 | -- | ND | 2.07 | -- | | 1 |
| Styrene | ND | 0.200 | -- | ND | 0.852 | -- | | 1 |
| 1,1,2,2-Tetrachloroethane | ND | 0.200 | -- | ND | 1.37 | -- | | 1 |
| o-Xylene | 1.00 | 0.200 | -- | 4.34 | 0.869 | -- | | 1 |
| 4-Ethyltoluene | 0.308 | 0.200 | -- | 1.51 | 0.983 | -- | | 1 |
| 1,3,5-Trimethylbenzene | 0.340 | 0.200 | -- | 1.67 | 0.983 | -- | | 1 |
| 1,2,4-Trimethylbenzene | 1.29 | 0.200 | -- | 6.34 | 0.983 | -- | | 1 |
| Benzyl chloride | ND | 0.200 | -- | ND | 1.04 | -- | | 1 |
| 1,3-Dichlorobenzene | ND | 0.200 | -- | ND | 1.20 | -- | | 1 |
| 1,4-Dichlorobenzene | ND | 0.200 | -- | ND | 1.20 | -- | | 1 |
| 1,2-Dichlorobenzene | ND | 0.200 | -- | ND | 1.20 | -- | | 1 |
| 1,2,4-Trichlorobenzene | ND | 0.200 | -- | ND | 1.48 | -- | | 1 |
| Hexachlorobutadiene | ND | 0.200 | -- | ND | 2.13 | -- | | 1 |

| Internal Standard | % Recovery | Qualifier | Acceptance Criteria |
|---|---|---|---|
| 1,4-Difluorobenzene | 102 | | 60-140 |
| Bromochloromethane | 102 | | 60-140 |
| chlorobenzene-d5 | 109 | | 60-140 |

**Project Name:** GROSSINGERS
**Project Number:** 9313
**Lab Number:** L2010375
**Report Date:** 03/13/20

## SAMPLE RESULTS

Lab ID: L2010375-08
Client ID: SMPV-11
Sample Location: LIBERTY, NY

Date Collected: 03/06/20 16:14
Date Received: 03/06/20
Field Prep: Not Specified

Sample Depth:
Matrix: Soil_Vapor
Anaytical Method: 48,TO-15
Analytical Date: 03/13/20 07:20
Analyst: TS

| | ppbV | | | ug/m3 | | | | |
|---|---|---|---|---|---|---|---|---|
| **Parameter** | **Results** | **RL** | **MDL** | **Results** | **RL** | **MDL** | **Qualifier** | **Dilution Factor** |
| Volatile Organics in Air - Mansfield Lab | | | | | | | | |
| Dichlorodifluoromethane | 0.510 | 0.200 | -- | 2.52 | 0.989 | -- | | 1 |
| Chloromethane | 0.523 | 0.200 | -- | 1.08 | 0.413 | -- | | 1 |
| Freon-114 | ND | 0.200 | -- | ND | 1.40 | -- | | 1 |
| Vinyl chloride | ND | 0.200 | -- | ND | 0.511 | -- | | 1 |
| 1,3-Butadiene | ND | 0.200 | -- | ND | 0.442 | -- | | 1 |
| Bromomethane | ND | 0.200 | -- | ND | 0.777 | -- | | 1 |
| Chloroethane | ND | 0.200 | -- | ND | 0.528 | -- | | 1 |
| Ethanol | ND | 5.00 | -- | ND | 9.42 | -- | | 1 |
| Vinyl bromide | ND | 0.200 | -- | ND | 0.874 | -- | | 1 |
| Acetone | 1.93 | 1.00 | -- | 4.58 | 2.38 | -- | | 1 |
| Trichlorofluoromethane | 1.73 | 0.200 | -- | 9.72 | 1.12 | -- | | 1 |
| Isopropanol | ND | 0.500 | -- | ND | 1.23 | -- | | 1 |
| 1,1-Dichloroethene | ND | 0.200 | -- | ND | 0.793 | -- | | 1 |
| Tertiary butyl Alcohol | ND | 0.500 | -- | ND | 1.52 | -- | | 1 |
| Methylene chloride | ND | 0.500 | -- | ND | 1.74 | -- | | 1 |
| 3-Chloropropene | ND | 0.200 | -- | ND | 0.626 | -- | | 1 |
| Carbon disulfide | ND | 0.200 | -- | ND | 0.623 | -- | | 1 |
| Freon-113 | ND | 0.200 | -- | ND | 1.53 | -- | | 1 |
| trans-1,2-Dichloroethene | ND | 0.200 | -- | ND | 0.793 | -- | | 1 |
| 1,1-Dichloroethane | ND | 0.200 | -- | ND | 0.809 | -- | | 1 |
| Methyl tert butyl ether | ND | 0.200 | -- | ND | 0.721 | -- | | 1 |
| 2-Butanone | ND | 0.500 | -- | ND | 1.47 | -- | | 1 |
| cis-1,2-Dichloroethene | ND | 0.200 | -- | ND | 0.793 | -- | | 1 |

**Project Name:** GROSSINGERS
**Project Number:** 9313
**Lab Number:** L2010375
**Report Date:** 03/13/20

## SAMPLE RESULTS

Lab ID: L2010375-08
Client ID: SMPV-11
Sample Location: LIBERTY, NY

Date Collected: 03/06/20 16:14
Date Received: 03/06/20
Field Prep: Not Specified

Sample Depth:

| Parameter | ppbV Results | ppbV RL | ppbV MDL | ug/m3 Results | ug/m3 RL | ug/m3 MDL | Qualifier | Dilution Factor |
|---|---|---|---|---|---|---|---|---|
| **Volatile Organics in Air - Mansfield Lab** | | | | | | | | |
| Ethyl Acetate | ND | 0.500 | -- | ND | 1.80 | -- | | 1 |
| Chloroform | ND | 0.200 | -- | ND | 0.977 | -- | | 1 |
| Tetrahydrofuran | ND | 0.500 | -- | ND | 1.47 | -- | | 1 |
| 1,2-Dichloroethane | ND | 0.200 | -- | ND | 0.809 | -- | | 1 |
| n-Hexane | 0.309 | 0.200 | -- | 1.09 | 0.705 | -- | | 1 |
| 1,1,1-Trichloroethane | ND | 0.200 | -- | ND | 1.09 | -- | | 1 |
| Benzene | 0.204 | 0.200 | -- | 0.652 | 0.639 | -- | | 1 |
| Carbon tetrachloride | ND | 0.200 | -- | ND | 1.26 | -- | | 1 |
| Cyclohexane | 0.290 | 0.200 | -- | 0.998 | 0.688 | -- | | 1 |
| 1,2-Dichloropropane | ND | 0.200 | -- | ND | 0.924 | -- | | 1 |
| Bromodichloromethane | ND | 0.200 | -- | ND | 1.34 | -- | | 1 |
| 1,4-Dioxane | ND | 0.200 | -- | ND | 0.721 | -- | | 1 |
| Trichloroethene | ND | 0.200 | -- | ND | 1.07 | -- | | 1 |
| 2,2,4-Trimethylpentane | ND | 0.200 | -- | ND | 0.934 | -- | | 1 |
| Heptane | ND | 0.200 | -- | ND | 0.820 | -- | | 1 |
| cis-1,3-Dichloropropene | ND | 0.200 | -- | ND | 0.908 | -- | | 1 |
| 4-Methyl-2-pentanone | ND | 0.500 | -- | ND | 2.05 | -- | | 1 |
| trans-1,3-Dichloropropene | ND | 0.200 | -- | ND | 0.908 | -- | | 1 |
| 1,1,2-Trichloroethane | ND | 0.200 | -- | ND | 1.09 | -- | | 1 |
| Toluene | ND | 0.200 | -- | ND | 0.754 | -- | | 1 |
| 2-Hexanone | ND | 0.200 | -- | ND | 0.820 | -- | | 1 |
| Dibromochloromethane | ND | 0.200 | -- | ND | 1.70 | -- | | 1 |
| 1,2-Dibromoethane | ND | 0.200 | -- | ND | 1.54 | -- | | 1 |
| Tetrachloroethene | ND | 0.200 | -- | ND | 1.36 | -- | | 1 |
| Chlorobenzene | ND | 0.200 | -- | ND | 0.921 | -- | | 1 |
| Ethylbenzene | ND | 0.200 | -- | ND | 0.869 | -- | | 1 |

**Project Name:** GROSSINGERS
**Project Number:** 9313
**Lab Number:** L2010375
**Report Date:** 03/13/20

## SAMPLE RESULTS

Lab ID: L2010375-08
Client ID: SMPV-11
Sample Location: LIBERTY, NY

Date Collected: 03/06/20 16:14
Date Received: 03/06/20
Field Prep: Not Specified

Sample Depth:

| Parameter | ppbV Results | ppbV RL | ppbV MDL | ug/m3 Results | ug/m3 RL | ug/m3 MDL | Qualifier | Dilution Factor |
|---|---|---|---|---|---|---|---|---|
| **Volatile Organics in Air - Mansfield Lab** | | | | | | | | |
| p/m-Xylene | ND | 0.400 | -- | ND | 1.74 | -- | | 1 |
| Bromoform | ND | 0.200 | -- | ND | 2.07 | -- | | 1 |
| Styrene | ND | 0.200 | -- | ND | 0.852 | -- | | 1 |
| 1,1,2,2-Tetrachloroethane | ND | 0.200 | -- | ND | 1.37 | -- | | 1 |
| o-Xylene | ND | 0.200 | -- | ND | 0.869 | -- | | 1 |
| 4-Ethyltoluene | ND | 0.200 | -- | ND | 0.983 | -- | | 1 |
| 1,3,5-Trimethylbenzene | ND | 0.200 | -- | ND | 0.983 | -- | | 1 |
| 1,2,4-Trimethylbenzene | ND | 0.200 | -- | ND | 0.983 | -- | | 1 |
| Benzyl chloride | ND | 0.200 | -- | ND | 1.04 | -- | | 1 |
| 1,3-Dichlorobenzene | ND | 0.200 | -- | ND | 1.20 | -- | | 1 |
| 1,4-Dichlorobenzene | ND | 0.200 | -- | ND | 1.20 | -- | | 1 |
| 1,2-Dichlorobenzene | ND | 0.200 | -- | ND | 1.20 | -- | | 1 |
| 1,2,4-Trichlorobenzene | ND | 0.200 | -- | ND | 1.48 | -- | | 1 |
| Hexachlorobutadiene | ND | 0.200 | -- | ND | 2.13 | -- | | 1 |

| Internal Standard | % Recovery | Qualifier | Acceptance Criteria |
|---|---|---|---|
| 1,4-Difluorobenzene | 97 | | 60-140 |
| Bromochloromethane | 98 | | 60-140 |
| chlorobenzene-d5 | 101 | | 60-140 |

**Project Name:** GROSSINGERS
**Project Number:** 9313
**Lab Number:** L2010375
**Report Date:** 03/13/20

# Method Blank Analysis
## Batch Quality Control

Analytical Method: 48,TO-15
Analytical Date: 03/12/20 14:58

| Parameter | ppbV Results | ppbV RL | ppbV MDL | ug/m3 Results | ug/m3 RL | ug/m3 MDL | Qualifier | Dilution Factor |
|---|---|---|---|---|---|---|---|---|
| Volatile Organics in Air - Mansfield Lab for sample(s): 01-08 Batch: WG1350343-4 | | | | | | | | |
| Dichlorodifluoromethane | ND | 0.200 | -- | ND | 0.989 | -- | | 1 |
| Chloromethane | ND | 0.200 | -- | ND | 0.413 | -- | | 1 |
| Freon-114 | ND | 0.200 | -- | ND | 1.40 | -- | | 1 |
| Vinyl chloride | ND | 0.200 | -- | ND | 0.511 | -- | | 1 |
| 1,3-Butadiene | ND | 0.200 | -- | ND | 0.442 | -- | | 1 |
| Bromomethane | ND | 0.200 | -- | ND | 0.777 | -- | | 1 |
| Chloroethane | ND | 0.200 | -- | ND | 0.528 | -- | | 1 |
| Ethanol | ND | 5.00 | -- | ND | 9.42 | -- | | 1 |
| Vinyl bromide | ND | 0.200 | -- | ND | 0.874 | -- | | 1 |
| Acetone | ND | 1.00 | -- | ND | 2.38 | -- | | 1 |
| Trichlorofluoromethane | ND | 0.200 | -- | ND | 1.12 | -- | | 1 |
| Isopropanol | ND | 0.500 | -- | ND | 1.23 | -- | | 1 |
| 1,1-Dichloroethene | ND | 0.200 | -- | ND | 0.793 | -- | | 1 |
| Tertiary butyl Alcohol | ND | 0.500 | -- | ND | 1.52 | -- | | 1 |
| Methylene chloride | ND | 0.500 | -- | ND | 1.74 | -- | | 1 |
| 3-Chloropropene | ND | 0.200 | -- | ND | 0.626 | -- | | 1 |
| Carbon disulfide | ND | 0.200 | -- | ND | 0.623 | -- | | 1 |
| Freon-113 | ND | 0.200 | -- | ND | 1.53 | -- | | 1 |
| trans-1,2-Dichloroethene | ND | 0.200 | -- | ND | 0.793 | -- | | 1 |
| 1,1-Dichloroethane | ND | 0.200 | -- | ND | 0.809 | -- | | 1 |
| Methyl tert butyl ether | ND | 0.200 | -- | ND | 0.721 | -- | | 1 |
| 2-Butanone | ND | 0.500 | -- | ND | 1.47 | -- | | 1 |
| cis-1,2-Dichloroethene | ND | 0.200 | -- | ND | 0.793 | -- | | 1 |
| Ethyl Acetate | ND | 0.500 | -- | ND | 1.80 | -- | | 1 |
| Chloroform | ND | 0.200 | -- | ND | 0.977 | -- | | 1 |

**Project Name:** GROSSINGERS
**Project Number:** 9313
**Lab Number:** L2010375
**Report Date:** 03/13/20

# Method Blank Analysis
## Batch Quality Control

Analytical Method: 48,TO-15
Analytical Date: 03/12/20 14:58

| Parameter | ppbV Results | ppbV RL | ppbV MDL | ug/m3 Results | ug/m3 RL | ug/m3 MDL | Qualifier | Dilution Factor |
|---|---|---|---|---|---|---|---|---|
| Volatile Organics in Air - Mansfield Lab for sample(s): 01-08 Batch: WG1350343-4 | | | | | | | | |
| Tetrahydrofuran | ND | 0.500 | -- | ND | 1.47 | -- | | 1 |
| 1,2-Dichloroethane | ND | 0.200 | -- | ND | 0.809 | -- | | 1 |
| n-Hexane | ND | 0.200 | -- | ND | 0.705 | -- | | 1 |
| 1,1,1-Trichloroethane | ND | 0.200 | -- | ND | 1.09 | -- | | 1 |
| Benzene | ND | 0.200 | -- | ND | 0.639 | -- | | 1 |
| Carbon tetrachloride | ND | 0.200 | -- | ND | 1.26 | -- | | 1 |
| Cyclohexane | ND | 0.200 | -- | ND | 0.688 | -- | | 1 |
| 1,2-Dichloropropane | ND | 0.200 | -- | ND | 0.924 | -- | | 1 |
| Bromodichloromethane | ND | 0.200 | -- | ND | 1.34 | -- | | 1 |
| 1,4-Dioxane | ND | 0.200 | -- | ND | 0.721 | -- | | 1 |
| Trichloroethene | ND | 0.200 | -- | ND | 1.07 | -- | | 1 |
| 2,2,4-Trimethylpentane | ND | 0.200 | -- | ND | 0.934 | -- | | 1 |
| Heptane | ND | 0.200 | -- | ND | 0.820 | -- | | 1 |
| cis-1,3-Dichloropropene | ND | 0.200 | -- | ND | 0.908 | -- | | 1 |
| 4-Methyl-2-pentanone | ND | 0.500 | -- | ND | 2.05 | -- | | 1 |
| trans-1,3-Dichloropropene | ND | 0.200 | -- | ND | 0.908 | -- | | 1 |
| 1,1,2-Trichloroethane | ND | 0.200 | -- | ND | 1.09 | -- | | 1 |
| Toluene | ND | 0.200 | -- | ND | 0.754 | -- | | 1 |
| 2-Hexanone | ND | 0.200 | -- | ND | 0.820 | -- | | 1 |
| Dibromochloromethane | ND | 0.200 | -- | ND | 1.70 | -- | | 1 |
| 1,2-Dibromoethane | ND | 0.200 | -- | ND | 1.54 | -- | | 1 |
| Tetrachloroethene | ND | 0.200 | -- | ND | 1.36 | -- | | 1 |
| Chlorobenzene | ND | 0.200 | -- | ND | 0.921 | -- | | 1 |
| Ethylbenzene | ND | 0.200 | -- | ND | 0.869 | -- | | 1 |
| p/m-Xylene | ND | 0.400 | -- | ND | 1.74 | -- | | 1 |

**Project Name:** GROSSINGERS
**Project Number:** 9313
**Lab Number:** L2010375
**Report Date:** 03/13/20

# Method Blank Analysis
## Batch Quality Control

Analytical Method: 48,TO-15
Analytical Date: 03/12/20 14:58

| Parameter | ppbV Results | ppbV RL | ppbV MDL | ug/m3 Results | ug/m3 RL | ug/m3 MDL | Qualifier | Dilution Factor |
|---|---|---|---|---|---|---|---|---|
| Volatile Organics in Air - Mansfield Lab for sample(s): 01-08 Batch: WG1350343-4 | | | | | | | | |
| Bromoform | ND | 0.200 | -- | ND | 2.07 | -- | | 1 |
| Styrene | ND | 0.200 | -- | ND | 0.852 | -- | | 1 |
| 1,1,2,2-Tetrachloroethane | ND | 0.200 | -- | ND | 1.37 | -- | | 1 |
| o-Xylene | ND | 0.200 | -- | ND | 0.869 | -- | | 1 |
| 4-Ethyltoluene | ND | 0.200 | -- | ND | 0.983 | -- | | 1 |
| 1,3,5-Trimethylbenzene | ND | 0.200 | -- | ND | 0.983 | -- | | 1 |
| 1,2,4-Trimethylbenzene | ND | 0.200 | -- | ND | 0.983 | -- | | 1 |
| Benzyl chloride | ND | 0.200 | -- | ND | 1.04 | -- | | 1 |
| 1,3-Dichlorobenzene | ND | 0.200 | -- | ND | 1.20 | -- | | 1 |
| 1,4-Dichlorobenzene | ND | 0.200 | -- | ND | 1.20 | -- | | 1 |
| 1,2-Dichlorobenzene | ND | 0.200 | -- | ND | 1.20 | -- | | 1 |
| 1,2,4-Trichlorobenzene | ND | 0.200 | -- | ND | 1.48 | -- | | 1 |
| Hexachlorobutadiene | ND | 0.200 | -- | ND | 2.13 | -- | | 1 |

# Lab Control Sample Analysis
## Batch Quality Control

**Project Name:** GROSSINGERS
**Project Number:** 9313

**Lab Number:** L2010375
**Report Date:** 03/13/20

| Parameter | LCS %Recovery | Qual | LCSD %Recovery | Qual | %Recovery Limits | RPD | Qual | RPD Limits |
|---|---|---|---|---|---|---|---|---|
| Volatile Organics in Air - Mansfield Lab Associated sample(s): 01-08 Batch: WG1350343-3 | | | | | | | | |
| Dichlorodifluoromethane | 98 | | - | | 70-130 | - | | |
| Chloromethane | 97 | | - | | 70-130 | - | | |
| Freon-114 | 101 | | - | | 70-130 | - | | |
| Vinyl chloride | 100 | | - | | 70-130 | - | | |
| 1,3-Butadiene | 99 | | - | | 70-130 | - | | |
| Bromomethane | 101 | | - | | 70-130 | - | | |
| Chloroethane | 93 | | - | | 70-130 | - | | |
| Ethanol | 89 | | - | | 40-160 | - | | |
| Vinyl bromide | 91 | | - | | 70-130 | - | | |
| Acetone | 82 | | - | | 40-160 | - | | |
| Trichlorofluoromethane | 89 | | - | | 70-130 | - | | |
| Isopropanol | 80 | | - | | 40-160 | - | | |
| 1,1-Dichloroethene | 99 | | - | | 70-130 | - | | |
| Tertiary butyl Alcohol | 88 | | - | | 70-130 | - | | |
| Methylene chloride | 100 | | - | | 70-130 | - | | |
| 3-Chloropropene | 103 | | - | | 70-130 | - | | |
| Carbon disulfide | 92 | | - | | 70-130 | - | | |
| Freon-113 | 102 | | - | | 70-130 | - | | |
| trans-1,2-Dichloroethene | 96 | | - | | 70-130 | - | | |
| 1,1-Dichloroethane | 98 | | - | | 70-130 | - | | |
| Methyl tert butyl ether | 90 | | - | | 70-130 | - | | |
| 2-Butanone | 102 | | - | | 70-130 | - | | |
| cis-1,2-Dichloroethene | 102 | | - | | 70-130 | - | | |

# Lab Control Sample Analysis
## Batch Quality Control

**Project Name:** GROSSINGERS
**Project Number:** 9313
**Lab Number:** L2010375
**Report Date:** 03/13/20

| Parameter | LCS %Recovery | Qual | LCSD %Recovery | Qual | %Recovery Limits | RPD | Qual | RPD Limits |
|---|---|---|---|---|---|---|---|---|
| Volatile Organics in Air - Mansfield Lab Associated sample(s): 01-08 Batch: WG1350343-3 | | | | | | | | |
| Ethyl Acetate | 108 | | - | | 70-130 | - | | |
| Chloroform | 100 | | - | | 70-130 | - | | |
| Tetrahydrofuran | 100 | | - | | 70-130 | - | | |
| 1,2-Dichloroethane | 93 | | - | | 70-130 | - | | |
| n-Hexane | 98 | | - | | 70-130 | - | | |
| 1,1,1-Trichloroethane | 94 | | - | | 70-130 | - | | |
| Benzene | 97 | | - | | 70-130 | - | | |
| Carbon tetrachloride | 99 | | - | | 70-130 | - | | |
| Cyclohexane | 99 | | - | | 70-130 | - | | |
| 1,2-Dichloropropane | 102 | | - | | 70-130 | - | | |
| Bromodichloromethane | 99 | | - | | 70-130 | - | | |
| 1,4-Dioxane | 100 | | - | | 70-130 | - | | |
| Trichloroethene | 101 | | - | | 70-130 | - | | |
| 2,2,4-Trimethylpentane | 101 | | - | | 70-130 | - | | |
| Heptane | 101 | | - | | 70-130 | - | | |
| cis-1,3-Dichloropropene | 105 | | - | | 70-130 | - | | |
| 4-Methyl-2-pentanone | 104 | | - | | 70-130 | - | | |
| trans-1,3-Dichloropropene | 90 | | - | | 70-130 | - | | |
| 1,1,2-Trichloroethane | 105 | | - | | 70-130 | - | | |
| Toluene | 102 | | - | | 70-130 | - | | |
| 2-Hexanone | 112 | | - | | 70-130 | - | | |
| Dibromochloromethane | 108 | | - | | 70-130 | - | | |
| 1,2-Dibromoethane | 106 | | - | | 70-130 | - | | |

# Lab Control Sample Analysis

## Batch Quality Control

**Project Name:** GROSSINGERS

**Project Number:** 9313

**Lab Number:** L2010375

**Report Date:** 03/13/20

| Parameter | LCS %Recovery | Qual | LCSD %Recovery | Qual | %Recovery Limits | RPD | Qual | RPD Limits |
|---|---|---|---|---|---|---|---|---|
| Volatile Organics in Air - Mansfield Lab Associated sample(s): 01-08 Batch: WG1350343-3 | | | | | | | | |
| Tetrachloroethene | 102 | | - | | 70-130 | - | | |
| Chlorobenzene | 104 | | - | | 70-130 | - | | |
| Ethylbenzene | 104 | | - | | 70-130 | - | | |
| p/m-Xylene | 104 | | - | | 70-130 | - | | |
| Bromoform | 110 | | - | | 70-130 | - | | |
| Styrene | 106 | | - | | 70-130 | - | | |
| 1,1,2,2-Tetrachloroethane | 112 | | - | | 70-130 | - | | |
| o-Xylene | 107 | | - | | 70-130 | - | | |
| 4-Ethyltoluene | 106 | | - | | 70-130 | - | | |
| 1,3,5-Trimethylbenzene | 108 | | - | | 70-130 | - | | |
| 1,2,4-Trimethylbenzene | 112 | | - | | 70-130 | - | | |
| Benzyl chloride | 117 | | - | | 70-130 | - | | |
| 1,3-Dichlorobenzene | 114 | | - | | 70-130 | - | | |
| 1,4-Dichlorobenzene | 112 | | - | | 70-130 | - | | |
| 1,2-Dichlorobenzene | 115 | | - | | 70-130 | - | | |
| 1,2,4-Trichlorobenzene | **136** | Q | - | | 70-130 | - | | |
| Hexachlorobutadiene | 127 | | - | | 70-130 | - | | |

**Project Name:** GROSSINGERS

**Project Number:** 9313

**Lab Number:** L2010375

**Report Date:** 03/13/20

## Canister and Flow Controller Information

| Samplenum | Client ID | Media ID | Media Type | Date Prepared | Bottle Order | Cleaning Batch ID | Can Leak Check | Initial Pressure (in. Hg) | Pressure on Receipt (in. Hg) | Flow Controler Leak Chk | Flow Out mL/min | Flow In mL/min | % RPD |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| L2010375-01 | SMPV-14 | 01870 | SV200 | 02/25/20 | 315200 | | - | - | - | Pass | 220 | 201 | 9 |
| L2010375-01 | SMPV-14 | 1784 | 6.0L Can | 02/25/20 | 315200 | L2007511-03 | Pass | -29.0 | -7.7 | - | - | - | - |
| L2010375-02 | SMPV-13 | 01857 | SV200 | 02/25/20 | 315200 | | - | - | - | Pass | 217 | 192 | 12 |
| L2010375-02 | SMPV-13 | 608 | 6.0L Can | 02/25/20 | 315200 | L2007511-04 | Pass | -29.0 | -8.0 | - | - | - | - |
| L2010375-03 | SMPV-1 | 01863 | SV200 | 02/25/20 | 315200 | | - | - | - | Pass | 216 | 198 | 9 |
| L2010375-03 | SMPV-1 | 979 | 6.0L Can | 02/25/20 | 315200 | L2007511-04 | Pass | -28.9 | -7.1 | - | - | - | - |
| L2010375-04 | SMPV-3 | 0772 | Flow 1 | 03/04/20 | 315864 | | - | - | - | Pass | 160 | 156 | 3 |
| L2010375-04 | SMPV-3 | 2667 | 6.0L Can | 03/04/20 | 315864 | L2008049-03 | Pass | -28.9 | -14.2 | - | - | - | - |
| L2010375-05 | SMPV-2 | 0581 | Flow 1 | 03/04/20 | 315864 | | - | - | - | Pass | 160 | 168 | 5 |
| L2010375-05 | SMPV-2 | 1843 | 6.0L Can | 03/04/20 | 315864 | L2008049-03 | Pass | -28.2 | -8.2 | - | - | - | - |
| L2010375-06 | SMPV-12 | 01700 | Flow 1 | 03/04/20 | 315864 | | - | - | - | Pass | 160 | 159 | 1 |
| L2010375-06 | SMPV-12 | 2721 | 6.0L Can | 03/04/20 | 315864 | L2008049-03 | Pass | -28.9 | -14.7 | - | - | - | - |
| L2010375-07 | SMPV-10 | 0410 | Flow 1 | 03/04/20 | 315864 | | - | - | - | Pass | 160 | 153 | 4 |
| L2010375-07 | SMPV-10 | 2812 | 6.0L Can | 03/04/20 | 315864 | L2008049-03 | Pass | -28.9 | -6.9 | - | - | - | - |
| L2010375-08 | SMPV-11 | 0319 | Flow 1 | 03/04/20 | 315864 | | - | - | - | Pass | 160 | 157 | 2 |

**Project Name:** GROSSINGERS

**Project Number:** 9313

**Lab Number:** L2010375

**Report Date:** 03/13/20

## Canister and Flow Controller Information

| Samplenum | Client ID | Media ID | Media Type | Date Prepared | Bottle Order | Cleaning Batch ID | Can Leak Check | Initial Pressure (in. Hg) | Pressure on Receipt (in. Hg) | Flow Controler Leak Chk | Flow Out mL/min | Flow In mL/min | % RPD |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| L2010375-08 | SMPV-11 | 2930 | 6.0L Can | 03/04/20 | 315864 | L2008049-03 | Pass | -28.9 | -15.0 | - | - | - | - |
| L2010375-09 | UNUSED CAN #2985 | 01866 | SV200 | 02/25/20 | 315200 | | - | - | - | Pass | 216 | 193 | 11 |
| L2010375-09 | UNUSED CAN #2985 | 2958 | 6.0L Can | 02/25/20 | 315200 | L2007511-04 | Pass | -29.1 | -11.6 | - | - | - | - |

**Project Name:** BATCH CANISTER CERTIFICATION
**Project Number:** CANISTER QC BAT
**Lab Number:** L2007511
**Report Date:** 03/13/20

# Air Canister Certification Results

Lab ID: L2007511-03
Client ID: CAN 2005 SHELF 41
Sample Location:

Date Collected: 02/19/20 16:00
Date Received: 02/20/20
Field Prep: Not Specified

Sample Depth:
Matrix: Air
Anaytical Method: 48,TO-15
Analytical Date: 02/20/20 19:46
Analyst: GP

| | ppbV | | | ug/m3 | | | | |
|---|---|---|---|---|---|---|---|---|
| **Parameter** | **Results** | **RL** | **MDL** | **Results** | **RL** | **MDL** | **Qualifier** | **Dilution Factor** |
| Volatile Organics in Air - Mansfield Lab | | | | | | | | |
| Chlorodifluoromethane | ND | 0.200 | -- | ND | 0.707 | -- | | 1 |
| Propylene | ND | 0.500 | -- | ND | 0.861 | -- | | 1 |
| Propane | ND | 0.500 | -- | ND | 0.902 | -- | | 1 |
| Dichlorodifluoromethane | ND | 0.200 | -- | ND | 0.989 | -- | | 1 |
| Chloromethane | ND | 0.200 | -- | ND | 0.413 | -- | | 1 |
| Freon-114 | ND | 0.200 | -- | ND | 1.40 | -- | | 1 |
| Methanol | ND | 5.00 | -- | ND | 6.55 | -- | | 1 |
| Vinyl chloride | ND | 0.200 | -- | ND | 0.511 | -- | | 1 |
| 1,3-Butadiene | ND | 0.200 | -- | ND | 0.442 | -- | | 1 |
| Butane | ND | 0.200 | -- | ND | 0.475 | -- | | 1 |
| Bromomethane | ND | 0.200 | -- | ND | 0.777 | -- | | 1 |
| Chloroethane | ND | 0.200 | -- | ND | 0.528 | -- | | 1 |
| Ethanol | ND | 5.00 | -- | ND | 9.42 | -- | | 1 |
| Dichlorofluoromethane | ND | 0.200 | -- | ND | 0.842 | -- | | 1 |
| Vinyl bromide | ND | 0.200 | -- | ND | 0.874 | -- | | 1 |
| Acrolein | ND | 0.500 | -- | ND | 1.15 | -- | | 1 |
| Acetone | ND | 1.00 | -- | ND | 2.38 | -- | | 1 |
| Acetonitrile | ND | 0.200 | -- | ND | 0.336 | -- | | 1 |
| Trichlorofluoromethane | ND | 0.200 | -- | ND | 1.12 | -- | | 1 |
| Isopropanol | ND | 0.500 | -- | ND | 1.23 | -- | | 1 |
| Acrylonitrile | ND | 0.500 | -- | ND | 1.09 | -- | | 1 |
| Pentane | ND | 0.200 | -- | ND | 0.590 | -- | | 1 |
| Ethyl ether | ND | 0.200 | -- | ND | 0.606 | -- | | 1 |
| 1,1-Dichloroethene | ND | 0.200 | -- | ND | 0.793 | -- | | 1 |

**Project Name:** BATCH CANISTER CERTIFICATION
**Project Number:** CANISTER QC BAT
**Lab Number:** L2007511
**Report Date:** 03/13/20

# Air Canister Certification Results

Lab ID: L2007511-03
Client ID: CAN 2005 SHELF 41
Sample Location:

Date Collected: 02/19/20 16:00
Date Received: 02/20/20
Field Prep: Not Specified

Sample Depth:

| Parameter | ppbV Results | ppbV RL | ppbV MDL | ug/m3 Results | ug/m3 RL | ug/m3 MDL | Qualifier | Dilution Factor |
|---|---|---|---|---|---|---|---|---|
| Volatile Organics in Air - Mansfield Lab | | | | | | | | |
| Tertiary butyl Alcohol | ND | 0.500 | -- | ND | 1.52 | -- | | 1 |
| Methylene chloride | ND | 0.500 | -- | ND | 1.74 | -- | | 1 |
| 3-Chloropropene | ND | 0.200 | -- | ND | 0.626 | -- | | 1 |
| Carbon disulfide | ND | 0.200 | -- | ND | 0.623 | -- | | 1 |
| Freon-113 | ND | 0.200 | -- | ND | 1.53 | -- | | 1 |
| Xylenes, total | ND | 0.600 | -- | ND | 0.869 | -- | | 1 |
| trans-1,2-Dichloroethene | ND | 0.200 | -- | ND | 0.793 | -- | | 1 |
| 1,1-Dichloroethane | ND | 0.200 | -- | ND | 0.809 | -- | | 1 |
| Methyl tert butyl ether | ND | 0.200 | -- | ND | 0.721 | -- | | 1 |
| Vinyl acetate | ND | 1.00 | -- | ND | 3.52 | -- | | 1 |
| 2-Butanone | ND | 0.500 | -- | ND | 1.47 | -- | | 1 |
| cis-1,2-Dichloroethene | ND | 0.200 | -- | ND | 0.793 | -- | | 1 |
| Ethyl Acetate | ND | 0.500 | -- | ND | 1.80 | -- | | 1 |
| Chloroform | ND | 0.200 | -- | ND | 0.977 | -- | | 1 |
| Tetrahydrofuran | ND | 0.500 | -- | ND | 1.47 | -- | | 1 |
| 2,2-Dichloropropane | ND | 0.200 | -- | ND | 0.924 | -- | | 1 |
| 1,2-Dichloroethene (total) | ND | 1.00 | -- | ND | 1.00 | -- | | 1 |
| 1,2-Dichloroethane | ND | 0.200 | -- | ND | 0.809 | -- | | 1 |
| n-Hexane | ND | 0.200 | -- | ND | 0.705 | -- | | 1 |
| Diisopropyl ether | ND | 0.200 | -- | ND | 0.836 | -- | | 1 |
| tert-Butyl Ethyl Ether | ND | 0.200 | -- | ND | 0.836 | -- | | 1 |
| 1,1,1-Trichloroethane | ND | 0.200 | -- | ND | 1.09 | -- | | 1 |
| 1,1-Dichloropropene | ND | 0.200 | -- | ND | 0.908 | -- | | 1 |
| Benzene | ND | 0.200 | -- | ND | 0.639 | -- | | 1 |
| Carbon tetrachloride | ND | 0.200 | -- | ND | 1.26 | -- | | 1 |
| Cyclohexane | ND | 0.200 | -- | ND | 0.688 | -- | | 1 |
| tert-Amyl Methyl Ether | ND | 0.200 | -- | ND | 0.836 | -- | | 1 |

**Project Name:** BATCH CANISTER CERTIFICATION
**Project Number:** CANISTER QC BAT
**Lab Number:** L2007511
**Report Date:** 03/13/20

# Air Canister Certification Results

Lab ID: L2007511-03
Client ID: CAN 2005 SHELF 41
Sample Location:

Date Collected: 02/19/20 16:00
Date Received: 02/20/20
Field Prep: Not Specified

Sample Depth:

| Parameter | ppbV Results | ppbV RL | ppbV MDL | ug/m3 Results | ug/m3 RL | ug/m3 MDL | Qualifier | Dilution Factor |
|---|---|---|---|---|---|---|---|---|
| Volatile Organics in Air - Mansfield Lab | | | | | | | | |
| Dibromomethane | ND | 0.200 | -- | ND | 1.42 | -- | | 1 |
| 1,2-Dichloropropane | ND | 0.200 | -- | ND | 0.924 | -- | | 1 |
| Bromodichloromethane | ND | 0.200 | -- | ND | 1.34 | -- | | 1 |
| 1,4-Dioxane | ND | 0.200 | -- | ND | 0.721 | -- | | 1 |
| Trichloroethene | ND | 0.200 | -- | ND | 1.07 | -- | | 1 |
| 2,2,4-Trimethylpentane | ND | 0.200 | -- | ND | 0.934 | -- | | 1 |
| Methyl Methacrylate | ND | 0.500 | -- | ND | 2.05 | -- | | 1 |
| Heptane | ND | 0.200 | -- | ND | 0.820 | -- | | 1 |
| cis-1,3-Dichloropropene | ND | 0.200 | -- | ND | 0.908 | -- | | 1 |
| 4-Methyl-2-pentanone | ND | 0.500 | -- | ND | 2.05 | -- | | 1 |
| trans-1,3-Dichloropropene | ND | 0.200 | -- | ND | 0.908 | -- | | 1 |
| 1,1,2-Trichloroethane | ND | 0.200 | -- | ND | 1.09 | -- | | 1 |
| Toluene | ND | 0.200 | -- | ND | 0.754 | -- | | 1 |
| 1,3-Dichloropropane | ND | 0.200 | -- | ND | 0.924 | -- | | 1 |
| 2-Hexanone | ND | 0.200 | -- | ND | 0.820 | -- | | 1 |
| Dibromochloromethane | ND | 0.200 | -- | ND | 1.70 | -- | | 1 |
| 1,2-Dibromoethane | ND | 0.200 | -- | ND | 1.54 | -- | | 1 |
| Butyl acetate | ND | 0.500 | -- | ND | 2.38 | -- | | 1 |
| Octane | ND | 0.200 | -- | ND | 0.934 | -- | | 1 |
| Tetrachloroethene | ND | 0.200 | -- | ND | 1.36 | -- | | 1 |
| 1,1,1,2-Tetrachloroethane | ND | 0.200 | -- | ND | 1.37 | -- | | 1 |
| Chlorobenzene | ND | 0.200 | -- | ND | 0.921 | -- | | 1 |
| Ethylbenzene | ND | 0.200 | -- | ND | 0.869 | -- | | 1 |
| p/m-Xylene | ND | 0.400 | -- | ND | 1.74 | -- | | 1 |
| Bromoform | ND | 0.200 | -- | ND | 2.07 | -- | | 1 |
| Styrene | ND | 0.200 | -- | ND | 0.852 | -- | | 1 |
| 1,1,2,2-Tetrachloroethane | ND | 0.200 | -- | ND | 1.37 | -- | | 1 |

**Project Name:** BATCH CANISTER CERTIFICATION
**Project Number:** CANISTER QC BAT
**Lab Number:** L2007511
**Report Date:** 03/13/20

# Air Canister Certification Results

Lab ID: L2007511-03
Client ID: CAN 2005 SHELF 41
Sample Location:

Date Collected: 02/19/20 16:00
Date Received: 02/20/20
Field Prep: Not Specified

Sample Depth:

| Parameter | ppbV Results | ppbV RL | ppbV MDL | ug/m3 Results | ug/m3 RL | ug/m3 MDL | Qualifier | Dilution Factor |
|---|---|---|---|---|---|---|---|---|
| Volatile Organics in Air - Mansfield Lab | | | | | | | | |
| o-Xylene | ND | 0.200 | -- | ND | 0.869 | -- | | 1 |
| 1,2,3-Trichloropropane | ND | 0.200 | -- | ND | 1.21 | -- | | 1 |
| Nonane | ND | 0.200 | -- | ND | 1.05 | -- | | 1 |
| Isopropylbenzene | ND | 0.200 | -- | ND | 0.983 | -- | | 1 |
| Bromobenzene | ND | 0.200 | -- | ND | 0.793 | -- | | 1 |
| 2-Chlorotoluene | ND | 0.200 | -- | ND | 1.04 | -- | | 1 |
| n-Propylbenzene | ND | 0.200 | -- | ND | 0.983 | -- | | 1 |
| 4-Chlorotoluene | ND | 0.200 | -- | ND | 1.04 | -- | | 1 |
| 4-Ethyltoluene | ND | 0.200 | -- | ND | 0.983 | -- | | 1 |
| 1,3,5-Trimethylbenzene | ND | 0.200 | -- | ND | 0.983 | -- | | 1 |
| tert-Butylbenzene | ND | 0.200 | -- | ND | 1.10 | -- | | 1 |
| 1,2,4-Trimethylbenzene | ND | 0.200 | -- | ND | 0.983 | -- | | 1 |
| Decane | ND | 0.200 | -- | ND | 1.16 | -- | | 1 |
| Benzyl chloride | ND | 0.200 | -- | ND | 1.04 | -- | | 1 |
| 1,3-Dichlorobenzene | ND | 0.200 | -- | ND | 1.20 | -- | | 1 |
| 1,4-Dichlorobenzene | ND | 0.200 | -- | ND | 1.20 | -- | | 1 |
| sec-Butylbenzene | ND | 0.200 | -- | ND | 1.10 | -- | | 1 |
| 1,2,3-Trimethylbenzene | ND | 0.200 | -- | ND | 0.983 | -- | | 1 |
| p-Isopropyltoluene | ND | 0.200 | -- | ND | 1.10 | -- | | 1 |
| 1,2-Dichlorobenzene | ND | 0.200 | -- | ND | 1.20 | -- | | 1 |
| n-Butylbenzene | ND | 0.200 | -- | ND | 1.10 | -- | | 1 |
| 1,2-Dibromo-3-chloropropane | ND | 0.200 | -- | ND | 1.93 | -- | | 1 |
| Undecane | ND | 0.200 | -- | ND | 1.28 | -- | | 1 |
| Dodecane | ND | 0.200 | -- | ND | 1.39 | -- | | 1 |
| 1,2,4-Trichlorobenzene | ND | 0.200 | -- | ND | 1.48 | -- | | 1 |
| Naphthalene | ND | 0.200 | -- | ND | 1.05 | -- | | 1 |
| 1,2,3-Trichlorobenzene | ND | 0.200 | -- | ND | 1.48 | -- | | 1 |

**Project Name:** BATCH CANISTER CERTIFICATION **Lab Number:** L2007511

**Project Number:** CANISTER QC BAT **Report Date:** 03/13/20

# Air Canister Certification Results

Lab ID: L2007511-03
Client ID: CAN 2005 SHELF 41
Sample Location:

Date Collected: 02/19/20 16:00
Date Received: 02/20/20
Field Prep: Not Specified

Sample Depth:

| | ppbV | | | ug/m3 | | | | |
|---|---|---|---|---|---|---|---|---|
| **Parameter** | **Results** | **RL** | **MDL** | **Results** | **RL** | **MDL** | **Qualifier** | **Dilution Factor** |
| Volatile Organics in Air - Mansfield Lab | | | | | | | | |
| Hexachlorobutadiene | ND | 0.200 | -- | ND | 2.13 | -- | | 1 |

| | **Results** | **Qualifier** | **Units** | **RDL** | **Dilution Factor** |
|---|---|---|---|---|---|
| Tentatively Identified Compounds | | | | | |

No Tentatively Identified Compounds

| **Internal Standard** | **% Recovery** | **Qualifier** | **Acceptance Criteria** |
|---|---|---|---|
| 1,4-Difluorobenzene | 85 | | 60-140 |
| Bromochloromethane | 88 | | 60-140 |
| chlorobenzene-d5 | 80 | | 60-140 |

**Project Name:** BATCH CANISTER CERTIFICATION
**Project Number:** CANISTER QC BAT

**Lab Number:** L2007511
**Report Date:** 03/13/20

# Air Canister Certification Results

Lab ID: L2007511-03
Client ID: CAN 2005 SHELF 41
Sample Location:

Date Collected: 02/19/20 16:00
Date Received: 02/20/20
Field Prep: Not Specified

Sample Depth:
Matrix: Air
Anaytical Method: 48,TO-15-SIM
Analytical Date: 02/20/20 19:46
Analyst: GP

| | ppbV | | | ug/m3 | | | | |
|---|---|---|---|---|---|---|---|---|
| **Parameter** | **Results** | **RL** | **MDL** | **Results** | **RL** | **MDL** | **Qualifier** | **Dilution Factor** |
| Volatile Organics in Air by SIM - Mansfield Lab | | | | | | | | |
| Dichlorodifluoromethane | ND | 0.200 | -- | ND | 0.989 | -- | | 1 |
| Chloromethane | ND | 0.200 | -- | ND | 0.413 | -- | | 1 |
| Freon-114 | ND | 0.050 | -- | ND | 0.349 | -- | | 1 |
| Vinyl chloride | ND | 0.020 | -- | ND | 0.051 | -- | | 1 |
| 1,3-Butadiene | ND | 0.020 | -- | ND | 0.044 | -- | | 1 |
| Bromomethane | ND | 0.020 | -- | ND | 0.078 | -- | | 1 |
| Chloroethane | ND | 0.100 | -- | ND | 0.264 | -- | | 1 |
| Acetone | ND | 1.00 | -- | ND | 2.38 | -- | | 1 |
| Trichlorofluoromethane | ND | 0.050 | -- | ND | 0.281 | -- | | 1 |
| Acrylonitrile | ND | 0.500 | -- | ND | 1.09 | -- | | 1 |
| 1,1-Dichloroethene | ND | 0.020 | -- | ND | 0.079 | -- | | 1 |
| Methylene chloride | ND | 0.500 | -- | ND | 1.74 | -- | | 1 |
| Freon-113 | ND | 0.050 | -- | ND | 0.383 | -- | | 1 |
| trans-1,2-Dichloroethene | ND | 0.020 | -- | ND | 0.079 | -- | | 1 |
| 1,1-Dichloroethane | ND | 0.020 | -- | ND | 0.081 | -- | | 1 |
| Methyl tert butyl ether | ND | 0.200 | -- | ND | 0.721 | -- | | 1 |
| 2-Butanone | ND | 0.500 | -- | ND | 1.47 | -- | | 1 |
| cis-1,2-Dichloroethene | ND | 0.020 | -- | ND | 0.079 | -- | | 1 |
| Chloroform | ND | 0.020 | -- | ND | 0.098 | -- | | 1 |
| 1,2-Dichloroethane | ND | 0.020 | -- | ND | 0.081 | -- | | 1 |
| 1,1,1-Trichloroethane | ND | 0.020 | -- | ND | 0.109 | -- | | 1 |
| Benzene | ND | 0.100 | -- | ND | 0.319 | -- | | 1 |
| Carbon tetrachloride | ND | 0.020 | -- | ND | 0.126 | -- | | 1 |
| 1,2-Dichloropropane | ND | 0.020 | -- | ND | 0.092 | -- | | 1 |

**Project Name:** BATCH CANISTER CERTIFICATION
**Project Number:** CANISTER QC BAT
**Lab Number:** L2007511
**Report Date:** 03/13/20

# Air Canister Certification Results

Lab ID: L2007511-03
Client ID: CAN 2005 SHELF 41
Sample Location:

Date Collected: 02/19/20 16:00
Date Received: 02/20/20
Field Prep: Not Specified

Sample Depth:

| Parameter | ppbV Results | ppbV RL | ppbV MDL | ug/m3 Results | ug/m3 RL | ug/m3 MDL | Qualifier | Dilution Factor |
|---|---|---|---|---|---|---|---|---|
| Volatile Organics in Air by SIM - Mansfield Lab | | | | | | | | |
| Bromodichloromethane | ND | 0.020 | -- | ND | 0.134 | -- | | 1 |
| 1,4-Dioxane | ND | 0.100 | -- | ND | 0.360 | -- | | 1 |
| Trichloroethene | ND | 0.020 | -- | ND | 0.107 | -- | | 1 |
| cis-1,3-Dichloropropene | ND | 0.020 | -- | ND | 0.091 | -- | | 1 |
| 4-Methyl-2-pentanone | ND | 0.500 | -- | ND | 2.05 | -- | | 1 |
| trans-1,3-Dichloropropene | ND | 0.020 | -- | ND | 0.091 | -- | | 1 |
| 1,1,2-Trichloroethane | ND | 0.020 | -- | ND | 0.109 | -- | | 1 |
| Toluene | ND | 0.050 | -- | ND | 0.188 | -- | | 1 |
| Dibromochloromethane | ND | 0.020 | -- | ND | 0.170 | -- | | 1 |
| 1,2-Dibromoethane | ND | 0.020 | -- | ND | 0.154 | -- | | 1 |
| Tetrachloroethene | ND | 0.020 | -- | ND | 0.136 | -- | | 1 |
| 1,1,1,2-Tetrachloroethane | ND | 0.020 | -- | ND | 0.137 | -- | | 1 |
| Chlorobenzene | ND | 0.100 | -- | ND | 0.461 | -- | | 1 |
| Ethylbenzene | ND | 0.020 | -- | ND | 0.087 | -- | | 1 |
| p/m-Xylene | ND | 0.040 | -- | ND | 0.174 | -- | | 1 |
| Bromoform | ND | 0.020 | -- | ND | 0.207 | -- | | 1 |
| Styrene | ND | 0.020 | -- | ND | 0.085 | -- | | 1 |
| 1,1,2,2-Tetrachloroethane | ND | 0.020 | -- | ND | 0.137 | -- | | 1 |
| o-Xylene | ND | 0.020 | -- | ND | 0.087 | -- | | 1 |
| Isopropylbenzene | ND | 0.200 | -- | ND | 0.983 | -- | | 1 |
| 4-Ethyltoluene | ND | 0.020 | -- | ND | 0.098 | -- | | 1 |
| 1,3,5-Trimethybenzene | ND | 0.020 | -- | ND | 0.098 | -- | | 1 |
| 1,2,4-Trimethylbenzene | ND | 0.020 | -- | ND | 0.098 | -- | | 1 |
| Benzyl chloride | ND | 0.200 | -- | ND | 1.04 | -- | | 1 |
| 1,3-Dichlorobenzene | ND | 0.020 | -- | ND | 0.120 | -- | | 1 |
| 1,4-Dichlorobenzene | ND | 0.020 | -- | ND | 0.120 | -- | | 1 |
| sec-Butylbenzene | ND | 0.200 | -- | ND | 1.10 | -- | | 1 |

**Project Name:** BATCH CANISTER CERTIFICATION **Lab Number:** L2007511

**Project Number:** CANISTER QC BAT **Report Date:** 03/13/20

# Air Canister Certification Results

Lab ID: L2007511-03
Client ID: CAN 2005 SHELF 41
Sample Location:

Date Collected: 02/19/20 16:00
Date Received: 02/20/20
Field Prep: Not Specified

Sample Depth:

| Parameter | ppbV Results | ppbV RL | ppbV MDL | ug/m3 Results | ug/m3 RL | ug/m3 MDL | Qualifier | Dilution Factor |
|---|---|---|---|---|---|---|---|---|
| Volatile Organics in Air by SIM - Mansfield Lab | | | | | | | | |
| p-Isopropyltoluene | ND | 0.200 | -- | ND | 1.10 | -- | | 1 |
| 1,2-Dichlorobenzene | ND | 0.020 | -- | ND | 0.120 | -- | | 1 |
| n-Butylbenzene | ND | 0.200 | -- | ND | 1.10 | -- | | 1 |
| 1,2,4-Trichlorobenzene | ND | 0.050 | -- | ND | 0.371 | -- | | 1 |
| Naphthalene | ND | 0.050 | -- | ND | 0.262 | -- | | 1 |
| 1,2,3-Trichlorobenzene | ND | 0.050 | -- | ND | 0.371 | -- | | 1 |
| Hexachlorobutadiene | ND | 0.050 | -- | ND | 0.533 | -- | | 1 |

| Internal Standard | % Recovery | Qualifier | Acceptance Criteria |
|---|---|---|---|
| 1,4-difluorobenzene | 82 | | 60-140 |
| bromochloromethane | 83 | | 60-140 |
| chlorobenzene-d5 | 79 | | 60-140 |

**Project Name:** BATCH CANISTER CERTIFICATION
**Project Number:** CANISTER QC BAT

**Lab Number:** L2007511
**Report Date:** 03/13/20

# Air Canister Certification Results

Lab ID: L2007511-04
Client ID: CAN 3389 SHELF 42
Sample Location:

Date Collected: 02/19/20 16:00
Date Received: 02/20/20
Field Prep: Not Specified

Sample Depth:
Matrix: Air
Anaytical Method: 48,TO-15
Analytical Date: 02/20/20 20:24
Analyst: GP

| | ppbV | | | ug/m3 | | | | |
|---|---|---|---|---|---|---|---|---|
| **Parameter** | **Results** | **RL** | **MDL** | **Results** | **RL** | **MDL** | **Qualifier** | **Dilution Factor** |
| Volatile Organics in Air - Mansfield Lab | | | | | | | | |
| Chlorodifluoromethane | ND | 0.200 | -- | ND | 0.707 | -- | | 1 |
| Propylene | ND | 0.500 | -- | ND | 0.861 | -- | | 1 |
| Propane | ND | 0.500 | -- | ND | 0.902 | -- | | 1 |
| Dichlorodifluoromethane | ND | 0.200 | -- | ND | 0.989 | -- | | 1 |
| Chloromethane | ND | 0.200 | -- | ND | 0.413 | -- | | 1 |
| Freon-114 | ND | 0.200 | -- | ND | 1.40 | -- | | 1 |
| Methanol | ND | 5.00 | -- | ND | 6.55 | -- | | 1 |
| Vinyl chloride | ND | 0.200 | -- | ND | 0.511 | -- | | 1 |
| 1,3-Butadiene | ND | 0.200 | -- | ND | 0.442 | -- | | 1 |
| Butane | ND | 0.200 | -- | ND | 0.475 | -- | | 1 |
| Bromomethane | ND | 0.200 | -- | ND | 0.777 | -- | | 1 |
| Chloroethane | ND | 0.200 | -- | ND | 0.528 | -- | | 1 |
| Ethanol | ND | 5.00 | -- | ND | 9.42 | -- | | 1 |
| Dichlorofluoromethane | ND | 0.200 | -- | ND | 0.842 | -- | | 1 |
| Vinyl bromide | ND | 0.200 | -- | ND | 0.874 | -- | | 1 |
| Acrolein | ND | 0.500 | -- | ND | 1.15 | -- | | 1 |
| Acetone | ND | 1.00 | -- | ND | 2.38 | -- | | 1 |
| Acetonitrile | ND | 0.200 | -- | ND | 0.336 | -- | | 1 |
| Trichlorofluoromethane | ND | 0.200 | -- | ND | 1.12 | -- | | 1 |
| Isopropanol | ND | 0.500 | -- | ND | 1.23 | -- | | 1 |
| Acrylonitrile | ND | 0.500 | -- | ND | 1.09 | -- | | 1 |
| Pentane | ND | 0.200 | -- | ND | 0.590 | -- | | 1 |
| Ethyl ether | ND | 0.200 | -- | ND | 0.606 | -- | | 1 |
| 1,1-Dichloroethene | ND | 0.200 | -- | ND | 0.793 | -- | | 1 |

**Project Name:** BATCH CANISTER CERTIFICATION
**Project Number:** CANISTER QC BAT
**Lab Number:** L2007511
**Report Date:** 03/13/20

# Air Canister Certification Results

Lab ID: L2007511-04
Client ID: CAN 3389 SHELF 42
Sample Location:

Date Collected: 02/19/20 16:00
Date Received: 02/20/20
Field Prep: Not Specified

Sample Depth:

| Parameter | ppbV Results | ppbV RL | ppbV MDL | ug/m3 Results | ug/m3 RL | ug/m3 MDL | Qualifier | Dilution Factor |
|---|---|---|---|---|---|---|---|---|
| **Volatile Organics in Air - Mansfield Lab** | | | | | | | | |
| Tertiary butyl Alcohol | ND | 0.500 | -- | ND | 1.52 | -- | | 1 |
| Methylene chloride | ND | 0.500 | -- | ND | 1.74 | -- | | 1 |
| 3-Chloropropene | ND | 0.200 | -- | ND | 0.626 | -- | | 1 |
| Carbon disulfide | ND | 0.200 | -- | ND | 0.623 | -- | | 1 |
| Freon-113 | ND | 0.200 | -- | ND | 1.53 | -- | | 1 |
| trans-1,2-Dichloroethene | ND | 0.200 | -- | ND | 0.793 | -- | | 1 |
| Xylenes, total | ND | 0.600 | -- | ND | 0.869 | -- | | 1 |
| 1,1-Dichloroethane | ND | 0.200 | -- | ND | 0.809 | -- | | 1 |
| Methyl tert butyl ether | ND | 0.200 | -- | ND | 0.721 | -- | | 1 |
| Vinyl acetate | ND | 1.00 | -- | ND | 3.52 | -- | | 1 |
| 2-Butanone | ND | 0.500 | -- | ND | 1.47 | -- | | 1 |
| cis-1,2-Dichloroethene | ND | 0.200 | -- | ND | 0.793 | -- | | 1 |
| Ethyl Acetate | ND | 0.500 | -- | ND | 1.80 | -- | | 1 |
| Chloroform | ND | 0.200 | -- | ND | 0.977 | -- | | 1 |
| Tetrahydrofuran | ND | 0.500 | -- | ND | 1.47 | -- | | 1 |
| 2,2-Dichloropropane | ND | 0.200 | -- | ND | 0.924 | -- | | 1 |
| 1,2-Dichloroethene (total) | ND | 1.00 | -- | ND | 1.00 | -- | | 1 |
| 1,2-Dichloroethane | ND | 0.200 | -- | ND | 0.809 | -- | | 1 |
| n-Hexane | ND | 0.200 | -- | ND | 0.705 | -- | | 1 |
| Diisopropyl ether | ND | 0.200 | -- | ND | 0.836 | -- | | 1 |
| tert-Butyl Ethyl Ether | ND | 0.200 | -- | ND | 0.836 | -- | | 1 |
| 1,1,1-Trichloroethane | ND | 0.200 | -- | ND | 1.09 | -- | | 1 |
| 1,1-Dichloropropene | ND | 0.200 | -- | ND | 0.908 | -- | | 1 |
| Benzene | ND | 0.200 | -- | ND | 0.639 | -- | | 1 |
| Carbon tetrachloride | ND | 0.200 | -- | ND | 1.26 | -- | | 1 |
| Cyclohexane | ND | 0.200 | -- | ND | 0.688 | -- | | 1 |
| tert-Amyl Methyl Ether | ND | 0.200 | -- | ND | 0.836 | -- | | 1 |

**Project Name:** BATCH CANISTER CERTIFICATION
**Project Number:** CANISTER QC BAT
**Lab Number:** L2007511
**Report Date:** 03/13/20

# Air Canister Certification Results

Lab ID: L2007511-04
Client ID: CAN 3389 SHELF 42
Sample Location:

Date Collected: 02/19/20 16:00
Date Received: 02/20/20
Field Prep: Not Specified

Sample Depth:

| Parameter | ppbV Results | ppbV RL | ppbV MDL | ug/m3 Results | ug/m3 RL | ug/m3 MDL | Qualifier | Dilution Factor |
|---|---|---|---|---|---|---|---|---|
| Volatile Organics in Air - Mansfield Lab | | | | | | | | |
| Dibromomethane | ND | 0.200 | -- | ND | 1.42 | -- | | 1 |
| 1,2-Dichloropropane | ND | 0.200 | -- | ND | 0.924 | -- | | 1 |
| Bromodichloromethane | ND | 0.200 | -- | ND | 1.34 | -- | | 1 |
| 1,4-Dioxane | ND | 0.200 | -- | ND | 0.721 | -- | | 1 |
| Trichloroethene | ND | 0.200 | -- | ND | 1.07 | -- | | 1 |
| 2,2,4-Trimethylpentane | ND | 0.200 | -- | ND | 0.934 | -- | | 1 |
| Methyl Methacrylate | ND | 0.500 | -- | ND | 2.05 | -- | | 1 |
| Heptane | ND | 0.200 | -- | ND | 0.820 | -- | | 1 |
| cis-1,3-Dichloropropene | ND | 0.200 | -- | ND | 0.908 | -- | | 1 |
| 4-Methyl-2-pentanone | ND | 0.500 | -- | ND | 2.05 | -- | | 1 |
| trans-1,3-Dichloropropene | ND | 0.200 | -- | ND | 0.908 | -- | | 1 |
| 1,1,2-Trichloroethane | ND | 0.200 | -- | ND | 1.09 | -- | | 1 |
| Toluene | ND | 0.200 | -- | ND | 0.754 | -- | | 1 |
| 1,3-Dichloropropane | ND | 0.200 | -- | ND | 0.924 | -- | | 1 |
| 2-Hexanone | ND | 0.200 | -- | ND | 0.820 | -- | | 1 |
| Dibromochloromethane | ND | 0.200 | -- | ND | 1.70 | -- | | 1 |
| 1,2-Dibromoethane | ND | 0.200 | -- | ND | 1.54 | -- | | 1 |
| Butyl acetate | ND | 0.500 | -- | ND | 2.38 | -- | | 1 |
| Octane | ND | 0.200 | -- | ND | 0.934 | -- | | 1 |
| Tetrachloroethene | ND | 0.200 | -- | ND | 1.36 | -- | | 1 |
| 1,1,1,2-Tetrachloroethane | ND | 0.200 | -- | ND | 1.37 | -- | | 1 |
| Chlorobenzene | ND | 0.200 | -- | ND | 0.921 | -- | | 1 |
| Ethylbenzene | ND | 0.200 | -- | ND | 0.869 | -- | | 1 |
| p/m-Xylene | ND | 0.400 | -- | ND | 1.74 | -- | | 1 |
| Bromoform | ND | 0.200 | -- | ND | 2.07 | -- | | 1 |
| Styrene | ND | 0.200 | -- | ND | 0.852 | -- | | 1 |
| 1,1,2,2-Tetrachloroethane | ND | 0.200 | -- | ND | 1.37 | -- | | 1 |

**Project Name:** BATCH CANISTER CERTIFICATION
**Project Number:** CANISTER QC BAT
**Lab Number:** L2007511
**Report Date:** 03/13/20

# Air Canister Certification Results

Lab ID: L2007511-04
Client ID: CAN 3389 SHELF 42
Sample Location:

Date Collected: 02/19/20 16:00
Date Received: 02/20/20
Field Prep: Not Specified

Sample Depth:

| Parameter | ppbV Results | ppbV RL | ppbV MDL | ug/m3 Results | ug/m3 RL | ug/m3 MDL | Qualifier | Dilution Factor |
|---|---|---|---|---|---|---|---|---|
| Volatile Organics in Air - Mansfield Lab | | | | | | | | |
| o-Xylene | ND | 0.200 | -- | ND | 0.869 | -- | | 1 |
| 1,2,3-Trichloropropane | ND | 0.200 | -- | ND | 1.21 | -- | | 1 |
| Nonane | ND | 0.200 | -- | ND | 1.05 | -- | | 1 |
| Isopropylbenzene | ND | 0.200 | -- | ND | 0.983 | -- | | 1 |
| Bromobenzene | ND | 0.200 | -- | ND | 0.793 | -- | | 1 |
| 2-Chlorotoluene | ND | 0.200 | -- | ND | 1.04 | -- | | 1 |
| n-Propylbenzene | ND | 0.200 | -- | ND | 0.983 | -- | | 1 |
| 4-Chlorotoluene | ND | 0.200 | -- | ND | 1.04 | -- | | 1 |
| 4-Ethyltoluene | ND | 0.200 | -- | ND | 0.983 | -- | | 1 |
| 1,3,5-Trimethylbenzene | ND | 0.200 | -- | ND | 0.983 | -- | | 1 |
| tert-Butylbenzene | ND | 0.200 | -- | ND | 1.10 | -- | | 1 |
| 1,2,4-Trimethylbenzene | ND | 0.200 | -- | ND | 0.983 | -- | | 1 |
| Decane | ND | 0.200 | -- | ND | 1.16 | -- | | 1 |
| Benzyl chloride | ND | 0.200 | -- | ND | 1.04 | -- | | 1 |
| 1,3-Dichlorobenzene | ND | 0.200 | -- | ND | 1.20 | -- | | 1 |
| 1,4-Dichlorobenzene | ND | 0.200 | -- | ND | 1.20 | -- | | 1 |
| sec-Butylbenzene | ND | 0.200 | -- | ND | 1.10 | -- | | 1 |
| 1,2,3-Trimethylbenzene | ND | 0.200 | -- | ND | 0.983 | -- | | 1 |
| p-Isopropyltoluene | ND | 0.200 | -- | ND | 1.10 | -- | | 1 |
| 1,2-Dichlorobenzene | ND | 0.200 | -- | ND | 1.20 | -- | | 1 |
| n-Butylbenzene | ND | 0.200 | -- | ND | 1.10 | -- | | 1 |
| 1,2-Dibromo-3-chloropropane | ND | 0.200 | -- | ND | 1.93 | -- | | 1 |
| Undecane | ND | 0.200 | -- | ND | 1.28 | -- | | 1 |
| Dodecane | ND | 0.200 | -- | ND | 1.39 | -- | | 1 |
| 1,2,4-Trichlorobenzene | ND | 0.200 | -- | ND | 1.48 | -- | | 1 |
| Naphthalene | ND | 0.200 | -- | ND | 1.05 | -- | | 1 |
| 1,2,3-Trichlorobenzene | ND | 0.200 | -- | ND | 1.48 | -- | | 1 |

**Project Name:** BATCH CANISTER CERTIFICATION **Lab Number:** L2007511

**Project Number:** CANISTER QC BAT **Report Date:** 03/13/20

# Air Canister Certification Results

Lab ID: L2007511-04
Client ID: CAN 3389 SHELF 42
Sample Location:

Date Collected: 02/19/20 16:00
Date Received: 02/20/20
Field Prep: Not Specified

Sample Depth:

| Parameter | ppbV Results | ppbV RL | ppbV MDL | ug/m3 Results | ug/m3 RL | ug/m3 MDL | Qualifier | Dilution Factor |
|---|---|---|---|---|---|---|---|---|
| Volatile Organics in Air - Mansfield Lab | | | | | | | | |
| Hexachlorobutadiene | ND | 0.200 | -- | ND | 2.13 | -- | | 1 |

| | Results | Qualifier | Units | RDL | Dilution Factor |
|---|---|---|---|---|---|
| Tentatively Identified Compounds | | | | | |

No Tentatively Identified Compounds

| Internal Standard | % Recovery | Qualifier | Acceptance Criteria |
|---|---|---|---|
| 1,4-Difluorobenzene | 83 | | 60-140 |
| Bromochloromethane | 85 | | 60-140 |
| chlorobenzene-d5 | 77 | | 60-140 |

**Project Name:** BATCH CANISTER CERTIFICATION
**Project Number:** CANISTER QC BAT
**Lab Number:** L2007511
**Report Date:** 03/13/20

# Air Canister Certification Results

Lab ID: L2007511-04
Client ID: CAN 3389 SHELF 42
Sample Location:

Date Collected: 02/19/20 16:00
Date Received: 02/20/20
Field Prep: Not Specified

Sample Depth:
Matrix: Air
Anaytical Method: 48,TO-15-SIM
Analytical Date: 02/20/20 20:24
Analyst: GP

| | ppbV | | | ug/m3 | | | | |
|---|---|---|---|---|---|---|---|---|
| **Parameter** | **Results** | **RL** | **MDL** | **Results** | **RL** | **MDL** | **Qualifier** | **Dilution Factor** |
| Volatile Organics in Air by SIM - Mansfield Lab | | | | | | | | |
| Dichlorodifluoromethane | ND | 0.200 | -- | ND | 0.989 | -- | | 1 |
| Chloromethane | ND | 0.200 | -- | ND | 0.413 | -- | | 1 |
| Freon-114 | ND | 0.050 | -- | ND | 0.349 | -- | | 1 |
| Vinyl chloride | ND | 0.020 | -- | ND | 0.051 | -- | | 1 |
| 1,3-Butadiene | ND | 0.020 | -- | ND | 0.044 | -- | | 1 |
| Bromomethane | ND | 0.020 | -- | ND | 0.078 | -- | | 1 |
| Chloroethane | ND | 0.100 | -- | ND | 0.264 | -- | | 1 |
| Acetone | ND | 1.00 | -- | ND | 2.38 | -- | | 1 |
| Trichlorofluoromethane | ND | 0.050 | -- | ND | 0.281 | -- | | 1 |
| Acrylonitrile | ND | 0.500 | -- | ND | 1.09 | -- | | 1 |
| 1,1-Dichloroethene | ND | 0.020 | -- | ND | 0.079 | -- | | 1 |
| Methylene chloride | ND | 0.500 | -- | ND | 1.74 | -- | | 1 |
| Freon-113 | ND | 0.050 | -- | ND | 0.383 | -- | | 1 |
| trans-1,2-Dichloroethene | ND | 0.020 | -- | ND | 0.079 | -- | | 1 |
| 1,1-Dichloroethane | ND | 0.020 | -- | ND | 0.081 | -- | | 1 |
| Methyl tert butyl ether | ND | 0.200 | -- | ND | 0.721 | -- | | 1 |
| 2-Butanone | ND | 0.500 | -- | ND | 1.47 | -- | | 1 |
| cis-1,2-Dichloroethene | ND | 0.020 | -- | ND | 0.079 | -- | | 1 |
| Chloroform | ND | 0.020 | -- | ND | 0.098 | -- | | 1 |
| 1,2-Dichloroethane | ND | 0.020 | -- | ND | 0.081 | -- | | 1 |
| 1,1,1-Trichloroethane | ND | 0.020 | -- | ND | 0.109 | -- | | 1 |
| Benzene | ND | 0.100 | -- | ND | 0.319 | -- | | 1 |
| Carbon tetrachloride | ND | 0.020 | -- | ND | 0.126 | -- | | 1 |
| 1,2-Dichloropropane | ND | 0.020 | -- | ND | 0.092 | -- | | 1 |

**Project Name:** BATCH CANISTER CERTIFICATION
**Project Number:** CANISTER QC BAT
**Lab Number:** L2007511
**Report Date:** 03/13/20

# Air Canister Certification Results

Lab ID: L2007511-04
Client ID: CAN 3389 SHELF 42
Sample Location:

Date Collected: 02/19/20 16:00
Date Received: 02/20/20
Field Prep: Not Specified

Sample Depth:

| Parameter | ppbV Results | ppbV RL | ppbV MDL | ug/m3 Results | ug/m3 RL | ug/m3 MDL | Qualifier | Dilution Factor |
|---|---|---|---|---|---|---|---|---|
| Volatile Organics in Air by SIM - Mansfield Lab | | | | | | | | |
| Bromodichloromethane | ND | 0.020 | -- | ND | 0.134 | -- | | 1 |
| 1,4-Dioxane | ND | 0.100 | -- | ND | 0.360 | -- | | 1 |
| Trichloroethene | ND | 0.020 | -- | ND | 0.107 | -- | | 1 |
| cis-1,3-Dichloropropene | ND | 0.020 | -- | ND | 0.091 | -- | | 1 |
| 4-Methyl-2-pentanone | ND | 0.500 | -- | ND | 2.05 | -- | | 1 |
| trans-1,3-Dichloropropene | ND | 0.020 | -- | ND | 0.091 | -- | | 1 |
| 1,1,2-Trichloroethane | ND | 0.020 | -- | ND | 0.109 | -- | | 1 |
| Toluene | ND | 0.050 | -- | ND | 0.188 | -- | | 1 |
| Dibromochloromethane | ND | 0.020 | -- | ND | 0.170 | -- | | 1 |
| 1,2-Dibromoethane | ND | 0.020 | -- | ND | 0.154 | -- | | 1 |
| Tetrachloroethene | ND | 0.020 | -- | ND | 0.136 | -- | | 1 |
| 1,1,1,2-Tetrachloroethane | ND | 0.020 | -- | ND | 0.137 | -- | | 1 |
| Chlorobenzene | ND | 0.100 | -- | ND | 0.461 | -- | | 1 |
| Ethylbenzene | ND | 0.020 | -- | ND | 0.087 | -- | | 1 |
| p/m-Xylene | ND | 0.040 | -- | ND | 0.174 | -- | | 1 |
| Bromoform | ND | 0.020 | -- | ND | 0.207 | -- | | 1 |
| Styrene | ND | 0.020 | -- | ND | 0.085 | -- | | 1 |
| 1,1,2,2-Tetrachloroethane | ND | 0.020 | -- | ND | 0.137 | -- | | 1 |
| o-Xylene | ND | 0.020 | -- | ND | 0.087 | -- | | 1 |
| Isopropylbenzene | ND | 0.200 | -- | ND | 0.983 | -- | | 1 |
| 4-Ethyltoluene | ND | 0.020 | -- | ND | 0.098 | -- | | 1 |
| 1,3,5-Trimethybenzene | ND | 0.020 | -- | ND | 0.098 | -- | | 1 |
| 1,2,4-Trimethylbenzene | ND | 0.020 | -- | ND | 0.098 | -- | | 1 |
| Benzyl chloride | ND | 0.200 | -- | ND | 1.04 | -- | | 1 |
| 1,3-Dichlorobenzene | ND | 0.020 | -- | ND | 0.120 | -- | | 1 |
| 1,4-Dichlorobenzene | ND | 0.020 | -- | ND | 0.120 | -- | | 1 |
| sec-Butylbenzene | ND | 0.200 | -- | ND | 1.10 | -- | | 1 |

**Project Name:** BATCH CANISTER CERTIFICATION **Lab Number:** L2007511

**Project Number:** CANISTER QC BAT **Report Date:** 03/13/20

# Air Canister Certification Results

Lab ID: L2007511-04
Client ID: CAN 3389 SHELF 42
Sample Location:

Date Collected: 02/19/20 16:00
Date Received: 02/20/20
Field Prep: Not Specified

Sample Depth:

| Parameter | ppbV Results | ppbV RL | ppbV MDL | ug/m3 Results | ug/m3 RL | ug/m3 MDL | Qualifier | Dilution Factor |
|---|---|---|---|---|---|---|---|---|
| Volatile Organics in Air by SIM - Mansfield Lab | | | | | | | | |
| p-Isopropyltoluene | ND | 0.200 | -- | ND | 1.10 | -- | | 1 |
| 1,2-Dichlorobenzene | ND | 0.020 | -- | ND | 0.120 | -- | | 1 |
| n-Butylbenzene | ND | 0.200 | -- | ND | 1.10 | -- | | 1 |
| 1,2,4-Trichlorobenzene | ND | 0.050 | -- | ND | 0.371 | -- | | 1 |
| Naphthalene | ND | 0.050 | -- | ND | 0.262 | -- | | 1 |
| 1,2,3-Trichlorobenzene | ND | 0.050 | -- | ND | 0.371 | -- | | 1 |
| Hexachlorobutadiene | ND | 0.050 | -- | ND | 0.533 | -- | | 1 |

| Internal Standard | % Recovery | Qualifier | Acceptance Criteria |
|---|---|---|---|
| 1,4-difluorobenzene | 79 | | 60-140 |
| bromochloromethane | 81 | | 60-140 |
| chlorobenzene-d5 | 77 | | 60-140 |

**Project Name:** BATCH CANISTER CERTIFICATION
**Project Number:** CANISTER QC BAT

**Lab Number:** L2008049
**Report Date:** 03/13/20

# Air Canister Certification Results

Lab ID: L2008049-03
Client ID: CAN 2829 SHELF 46
Sample Location:

Date Collected: 02/26/20 16:00
Date Received: 02/27/20
Field Prep: Not Specified

Sample Depth:
Matrix: Air
Anaytical Method: 48,TO-15
Analytical Date: 02/27/20 19:13
Analyst: GP

| | ppbV | | | ug/m3 | | | | |
|---|---|---|---|---|---|---|---|---|
| **Parameter** | **Results** | **RL** | **MDL** | **Results** | **RL** | **MDL** | **Qualifier** | **Dilution Factor** |
| Volatile Organics in Air - Mansfield Lab | | | | | | | | |
| Chlorodifluoromethane | ND | 0.200 | -- | ND | 0.707 | -- | | 1 |
| Propylene | ND | 0.500 | -- | ND | 0.861 | -- | | 1 |
| Propane | ND | 0.500 | -- | ND | 0.902 | -- | | 1 |
| Dichlorodifluoromethane | ND | 0.200 | -- | ND | 0.989 | -- | | 1 |
| Chloromethane | ND | 0.200 | -- | ND | 0.413 | -- | | 1 |
| Freon-114 | ND | 0.200 | -- | ND | 1.40 | -- | | 1 |
| Methanol | ND | 5.00 | -- | ND | 6.55 | -- | | 1 |
| Vinyl chloride | ND | 0.200 | -- | ND | 0.511 | -- | | 1 |
| 1,3-Butadiene | ND | 0.200 | -- | ND | 0.442 | -- | | 1 |
| Butane | ND | 0.200 | -- | ND | 0.475 | -- | | 1 |
| Bromomethane | ND | 0.200 | -- | ND | 0.777 | -- | | 1 |
| Chloroethane | ND | 0.200 | -- | ND | 0.528 | -- | | 1 |
| Ethanol | ND | 5.00 | -- | ND | 9.42 | -- | | 1 |
| Dichlorofluoromethane | ND | 0.200 | -- | ND | 0.842 | -- | | 1 |
| Vinyl bromide | ND | 0.200 | -- | ND | 0.874 | -- | | 1 |
| Acrolein | ND | 0.500 | -- | ND | 1.15 | -- | | 1 |
| Acetone | ND | 1.00 | -- | ND | 2.38 | -- | | 1 |
| Acetonitrile | ND | 0.200 | -- | ND | 0.336 | -- | | 1 |
| Trichlorofluoromethane | ND | 0.200 | -- | ND | 1.12 | -- | | 1 |
| Isopropanol | ND | 0.500 | -- | ND | 1.23 | -- | | 1 |
| Acrylonitrile | ND | 0.500 | -- | ND | 1.09 | -- | | 1 |
| Pentane | ND | 0.200 | -- | ND | 0.590 | -- | | 1 |
| Ethyl ether | ND | 0.200 | -- | ND | 0.606 | -- | | 1 |
| 1,1-Dichloroethene | ND | 0.200 | -- | ND | 0.793 | -- | | 1 |

**Project Name:** BATCH CANISTER CERTIFICATION
**Project Number:** CANISTER QC BAT
**Lab Number:** L2008049
**Report Date:** 03/13/20

# Air Canister Certification Results

Lab ID: L2008049-03
Client ID: CAN 2829 SHELF 46
Sample Location:

Date Collected: 02/26/20 16:00
Date Received: 02/27/20
Field Prep: Not Specified

Sample Depth:

| Parameter | ppbV Results | ppbV RL | ppbV MDL | ug/m3 Results | ug/m3 RL | ug/m3 MDL | Qualifier | Dilution Factor |
|---|---|---|---|---|---|---|---|---|
| Volatile Organics in Air - Mansfield Lab | | | | | | | | |
| Tertiary butyl Alcohol | ND | 0.500 | -- | ND | 1.52 | -- | | 1 |
| Methylene chloride | ND | 0.500 | -- | ND | 1.74 | -- | | 1 |
| 3-Chloropropene | ND | 0.200 | -- | ND | 0.626 | -- | | 1 |
| Carbon disulfide | ND | 0.200 | -- | ND | 0.623 | -- | | 1 |
| Freon-113 | ND | 0.200 | -- | ND | 1.53 | -- | | 1 |
| trans-1,2-Dichloroethene | ND | 0.200 | -- | ND | 0.793 | -- | | 1 |
| 1,1-Dichloroethane | ND | 0.200 | -- | ND | 0.809 | -- | | 1 |
| Methyl tert butyl ether | ND | 0.200 | -- | ND | 0.721 | -- | | 1 |
| Vinyl acetate | ND | 1.00 | -- | ND | 3.52 | -- | | 1 |
| 2-Butanone | ND | 0.500 | -- | ND | 1.47 | -- | | 1 |
| Xylenes, total | ND | 0.600 | -- | ND | 0.869 | -- | | 1 |
| cis-1,2-Dichloroethene | ND | 0.200 | -- | ND | 0.793 | -- | | 1 |
| Ethyl Acetate | ND | 0.500 | -- | ND | 1.80 | -- | | 1 |
| Chloroform | ND | 0.200 | -- | ND | 0.977 | -- | | 1 |
| Tetrahydrofuran | ND | 0.500 | -- | ND | 1.47 | -- | | 1 |
| 2,2-Dichloropropane | ND | 0.200 | -- | ND | 0.924 | -- | | 1 |
| 1,2-Dichloroethane | ND | 0.200 | -- | ND | 0.809 | -- | | 1 |
| n-Hexane | ND | 0.200 | -- | ND | 0.705 | -- | | 1 |
| Diisopropyl ether | ND | 0.200 | -- | ND | 0.836 | -- | | 1 |
| tert-Butyl Ethyl Ether | ND | 0.200 | -- | ND | 0.836 | -- | | 1 |
| 1,2-Dichloroethene (total) | ND | 1.00 | -- | ND | 1.00 | -- | | 1 |
| 1,1,1-Trichloroethane | ND | 0.200 | -- | ND | 1.09 | -- | | 1 |
| 1,1-Dichloropropene | ND | 0.200 | -- | ND | 0.908 | -- | | 1 |
| Benzene | ND | 0.200 | -- | ND | 0.639 | -- | | 1 |
| Carbon tetrachloride | ND | 0.200 | -- | ND | 1.26 | -- | | 1 |
| Cyclohexane | ND | 0.200 | -- | ND | 0.688 | -- | | 1 |
| tert-Amyl Methyl Ether | ND | 0.200 | -- | ND | 0.836 | -- | | 1 |

**Project Name:** BATCH CANISTER CERTIFICATION
**Project Number:** CANISTER QC BAT
**Lab Number:** L2008049
**Report Date:** 03/13/20

# Air Canister Certification Results

Lab ID: L2008049-03
Client ID: CAN 2829 SHELF 46
Sample Location:

Date Collected: 02/26/20 16:00
Date Received: 02/27/20
Field Prep: Not Specified

Sample Depth:

| Parameter | ppbV Results | ppbV RL | ppbV MDL | ug/m3 Results | ug/m3 RL | ug/m3 MDL | Qualifier | Dilution Factor |
|---|---|---|---|---|---|---|---|---|
| Volatile Organics in Air - Mansfield Lab | | | | | | | | |
| Dibromomethane | ND | 0.200 | -- | ND | 1.42 | -- | | 1 |
| 1,2-Dichloropropane | ND | 0.200 | -- | ND | 0.924 | -- | | 1 |
| Bromodichloromethane | ND | 0.200 | -- | ND | 1.34 | -- | | 1 |
| 1,4-Dioxane | ND | 0.200 | -- | ND | 0.721 | -- | | 1 |
| Trichloroethene | ND | 0.200 | -- | ND | 1.07 | -- | | 1 |
| 2,2,4-Trimethylpentane | ND | 0.200 | -- | ND | 0.934 | -- | | 1 |
| Methyl Methacrylate | ND | 0.500 | -- | ND | 2.05 | -- | | 1 |
| Heptane | ND | 0.200 | -- | ND | 0.820 | -- | | 1 |
| cis-1,3-Dichloropropene | ND | 0.200 | -- | ND | 0.908 | -- | | 1 |
| 4-Methyl-2-pentanone | ND | 0.500 | -- | ND | 2.05 | -- | | 1 |
| trans-1,3-Dichloropropene | ND | 0.200 | -- | ND | 0.908 | -- | | 1 |
| 1,1,2-Trichloroethane | ND | 0.200 | -- | ND | 1.09 | -- | | 1 |
| Toluene | ND | 0.200 | -- | ND | 0.754 | -- | | 1 |
| 1,3-Dichloropropane | ND | 0.200 | -- | ND | 0.924 | -- | | 1 |
| 2-Hexanone | ND | 0.200 | -- | ND | 0.820 | -- | | 1 |
| Dibromochloromethane | ND | 0.200 | -- | ND | 1.70 | -- | | 1 |
| 1,2-Dibromoethane | ND | 0.200 | -- | ND | 1.54 | -- | | 1 |
| Butyl acetate | ND | 0.500 | -- | ND | 2.38 | -- | | 1 |
| Octane | ND | 0.200 | -- | ND | 0.934 | -- | | 1 |
| Tetrachloroethene | ND | 0.200 | -- | ND | 1.36 | -- | | 1 |
| 1,1,1,2-Tetrachloroethane | ND | 0.200 | -- | ND | 1.37 | -- | | 1 |
| Chlorobenzene | ND | 0.200 | -- | ND | 0.921 | -- | | 1 |
| Ethylbenzene | ND | 0.200 | -- | ND | 0.869 | -- | | 1 |
| p/m-Xylene | ND | 0.400 | -- | ND | 1.74 | -- | | 1 |
| Bromoform | ND | 0.200 | -- | ND | 2.07 | -- | | 1 |
| Styrene | ND | 0.200 | -- | ND | 0.852 | -- | | 1 |
| 1,1,2,2-Tetrachloroethane | ND | 0.200 | -- | ND | 1.37 | -- | | 1 |

**Project Name:** BATCH CANISTER CERTIFICATION
**Project Number:** CANISTER QC BAT
**Lab Number:** L2008049
**Report Date:** 03/13/20

# Air Canister Certification Results

Lab ID: L2008049-03
Client ID: CAN 2829 SHELF 46
Sample Location:

Date Collected: 02/26/20 16:00
Date Received: 02/27/20
Field Prep: Not Specified

Sample Depth:

| Parameter | ppbV Results | ppbV RL | ppbV MDL | ug/m3 Results | ug/m3 RL | ug/m3 MDL | Qualifier | Dilution Factor |
|---|---|---|---|---|---|---|---|---|
| Volatile Organics in Air - Mansfield Lab | | | | | | | | |
| o-Xylene | ND | 0.200 | -- | ND | 0.869 | -- | | 1 |
| 1,2,3-Trichloropropane | ND | 0.200 | -- | ND | 1.21 | -- | | 1 |
| Nonane | ND | 0.200 | -- | ND | 1.05 | -- | | 1 |
| Isopropylbenzene | ND | 0.200 | -- | ND | 0.983 | -- | | 1 |
| Bromobenzene | ND | 0.200 | -- | ND | 0.793 | -- | | 1 |
| 2-Chlorotoluene | ND | 0.200 | -- | ND | 1.04 | -- | | 1 |
| n-Propylbenzene | ND | 0.200 | -- | ND | 0.983 | -- | | 1 |
| 4-Chlorotoluene | ND | 0.200 | -- | ND | 1.04 | -- | | 1 |
| 4-Ethyltoluene | ND | 0.200 | -- | ND | 0.983 | -- | | 1 |
| 1,3,5-Trimethylbenzene | ND | 0.200 | -- | ND | 0.983 | -- | | 1 |
| tert-Butylbenzene | ND | 0.200 | -- | ND | 1.10 | -- | | 1 |
| 1,2,4-Trimethylbenzene | ND | 0.200 | -- | ND | 0.983 | -- | | 1 |
| Decane | ND | 0.200 | -- | ND | 1.16 | -- | | 1 |
| Benzyl chloride | ND | 0.200 | -- | ND | 1.04 | -- | | 1 |
| 1,3-Dichlorobenzene | ND | 0.200 | -- | ND | 1.20 | -- | | 1 |
| 1,4-Dichlorobenzene | ND | 0.200 | -- | ND | 1.20 | -- | | 1 |
| sec-Butylbenzene | ND | 0.200 | -- | ND | 1.10 | -- | | 1 |
| p-Isopropyltoluene | ND | 0.200 | -- | ND | 1.10 | -- | | 1 |
| 1,2-Dichlorobenzene | ND | 0.200 | -- | ND | 1.20 | -- | | 1 |
| n-Butylbenzene | ND | 0.200 | -- | ND | 1.10 | -- | | 1 |
| 1,2-Dibromo-3-chloropropane | ND | 0.200 | -- | ND | 1.93 | -- | | 1 |
| Undecane | ND | 0.200 | -- | ND | 1.28 | -- | | 1 |
| Dodecane | ND | 0.200 | -- | ND | 1.39 | -- | | 1 |
| 1,2,4-Trichlorobenzene | ND | 0.200 | -- | ND | 1.48 | -- | | 1 |
| Naphthalene | ND | 0.200 | -- | ND | 1.05 | -- | | 1 |
| 1,2,3-Trichlorobenzene | ND | 0.200 | -- | ND | 1.48 | -- | | 1 |
| Hexachlorobutadiene | ND | 0.200 | -- | ND | 2.13 | -- | | 1 |

**Project Name:** BATCH CANISTER CERTIFICATION
**Project Number:** CANISTER QC BAT
**Lab Number:** L2008049
**Report Date:** 03/13/20

# Air Canister Certification Results

Lab ID: L2008049-03
Client ID: CAN 2829 SHELF 46
Sample Location:

Date Collected: 02/26/20 16:00
Date Received: 02/27/20
Field Prep: Not Specified

Sample Depth:

| | ppbV | | | ug/m3 | | | | |
|---|---|---|---|---|---|---|---|---|
| **Parameter** | **Results** | **RL** | **MDL** | **Results** | **RL** | **MDL** | **Qualifier** | **Dilution Factor** |
| Volatile Organics in Air - Mansfield Lab | | | | | | | | |

| | **Results** | **Qualifier** | **Units** | **RDL** | **Dilution Factor** |
|---|---|---|---|---|---|
| Tentatively Identified Compounds | | | | | |

No Tentatively Identified Compounds

| **Internal Standard** | **% Recovery** | **Qualifier** | **Acceptance Criteria** |
|---|---|---|---|
| 1,4-Difluorobenzene | 94 | | 60-140 |
| Bromochloromethane | 94 | | 60-140 |
| chlorobenzene-d5 | 88 | | 60-140 |

**Project Name:** BATCH CANISTER CERTIFICATION **Lab Number:** L2008049

**Project Number:** CANISTER QC BAT **Report Date:** 03/13/20

# Air Canister Certification Results

Lab ID: L2008049-03
Client ID: CAN 2829 SHELF 46
Sample Location:

Date Collected: 02/26/20 16:00
Date Received: 02/27/20
Field Prep: Not Specified

Sample Depth:
Matrix: Air
Anaytical Method: 48,TO-15-SIM
Analytical Date: 02/27/20 19:13
Analyst: TS

| | ppbV | | | ug/m3 | | | | |
|---|---|---|---|---|---|---|---|---|
| **Parameter** | **Results** | **RL** | **MDL** | **Results** | **RL** | **MDL** | **Qualifier** | **Dilution Factor** |
| Volatile Organics in Air by SIM - Mansfield Lab | | | | | | | | |
| Dichlorodifluoromethane | ND | 0.200 | -- | ND | 0.989 | -- | | 1 |
| Chloromethane | ND | 0.200 | -- | ND | 0.413 | -- | | 1 |
| Freon-114 | ND | 0.050 | -- | ND | 0.349 | -- | | 1 |
| Vinyl chloride | ND | 0.020 | -- | ND | 0.051 | -- | | 1 |
| 1,3-Butadiene | ND | 0.020 | -- | ND | 0.044 | -- | | 1 |
| Bromomethane | ND | 0.020 | -- | ND | 0.078 | -- | | 1 |
| Chloroethane | ND | 0.100 | -- | ND | 0.264 | -- | | 1 |
| Acetone | ND | 1.00 | -- | ND | 2.38 | -- | | 1 |
| Trichlorofluoromethane | ND | 0.050 | -- | ND | 0.281 | -- | | 1 |
| Acrylonitrile | ND | 0.500 | -- | ND | 1.09 | -- | | 1 |
| 1,1-Dichloroethene | ND | 0.020 | -- | ND | 0.079 | -- | | 1 |
| Methylene chloride | ND | 0.500 | -- | ND | 1.74 | -- | | 1 |
| Freon-113 | ND | 0.050 | -- | ND | 0.383 | -- | | 1 |
| trans-1,2-Dichloroethene | ND | 0.020 | -- | ND | 0.079 | -- | | 1 |
| 1,1-Dichloroethane | ND | 0.020 | -- | ND | 0.081 | -- | | 1 |
| Methyl tert butyl ether | ND | 0.200 | -- | ND | 0.721 | -- | | 1 |
| 2-Butanone | ND | 0.500 | -- | ND | 1.47 | -- | | 1 |
| cis-1,2-Dichloroethene | ND | 0.020 | -- | ND | 0.079 | -- | | 1 |
| Chloroform | ND | 0.020 | -- | ND | 0.098 | -- | | 1 |
| 1,2-Dichloroethane | ND | 0.020 | -- | ND | 0.081 | -- | | 1 |
| 1,1,1-Trichloroethane | ND | 0.020 | -- | ND | 0.109 | -- | | 1 |
| Benzene | ND | 0.100 | -- | ND | 0.319 | -- | | 1 |
| Carbon tetrachloride | ND | 0.020 | -- | ND | 0.126 | -- | | 1 |
| 1,2-Dichloropropane | ND | 0.020 | -- | ND | 0.092 | -- | | 1 |

**Project Name:** BATCH CANISTER CERTIFICATION
**Project Number:** CANISTER QC BAT
**Lab Number:** L2008049
**Report Date:** 03/13/20

# Air Canister Certification Results

Lab ID: L2008049-03
Client ID: CAN 2829 SHELF 46
Sample Location:

Date Collected: 02/26/20 16:00
Date Received: 02/27/20
Field Prep: Not Specified

Sample Depth:

| Parameter | ppbV Results | ppbV RL | ppbV MDL | ug/m3 Results | ug/m3 RL | ug/m3 MDL | Qualifier | Dilution Factor |
|---|---|---|---|---|---|---|---|---|
| Volatile Organics in Air by SIM - Mansfield Lab | | | | | | | | |
| Bromodichloromethane | ND | 0.020 | -- | ND | 0.134 | -- | | 1 |
| 1,4-Dioxane | ND | 0.100 | -- | ND | 0.360 | -- | | 1 |
| Trichloroethene | ND | 0.020 | -- | ND | 0.107 | -- | | 1 |
| cis-1,3-Dichloropropene | ND | 0.020 | -- | ND | 0.091 | -- | | 1 |
| 4-Methyl-2-pentanone | ND | 0.500 | -- | ND | 2.05 | -- | | 1 |
| trans-1,3-Dichloropropene | ND | 0.020 | -- | ND | 0.091 | -- | | 1 |
| 1,1,2-Trichloroethane | ND | 0.020 | -- | ND | 0.109 | -- | | 1 |
| Toluene | ND | 0.050 | -- | ND | 0.188 | -- | | 1 |
| Dibromochloromethane | ND | 0.020 | -- | ND | 0.170 | -- | | 1 |
| 1,2-Dibromoethane | ND | 0.020 | -- | ND | 0.154 | -- | | 1 |
| Tetrachloroethene | ND | 0.020 | -- | ND | 0.136 | -- | | 1 |
| 1,1,1,2-Tetrachloroethane | ND | 0.020 | -- | ND | 0.137 | -- | | 1 |
| Chlorobenzene | ND | 0.100 | -- | ND | 0.461 | -- | | 1 |
| Ethylbenzene | ND | 0.020 | -- | ND | 0.087 | -- | | 1 |
| p/m-Xylene | ND | 0.040 | -- | ND | 0.174 | -- | | 1 |
| Bromoform | ND | 0.020 | -- | ND | 0.207 | -- | | 1 |
| Styrene | ND | 0.020 | -- | ND | 0.085 | -- | | 1 |
| 1,1,2,2-Tetrachloroethane | ND | 0.020 | -- | ND | 0.137 | -- | | 1 |
| o-Xylene | ND | 0.020 | -- | ND | 0.087 | -- | | 1 |
| Isopropylbenzene | ND | 0.200 | -- | ND | 0.983 | -- | | 1 |
| 4-Ethyltoluene | ND | 0.020 | -- | ND | 0.098 | -- | | 1 |
| 1,3,5-Trimethybenzene | ND | 0.020 | -- | ND | 0.098 | -- | | 1 |
| 1,2,4-Trimethylbenzene | ND | 0.020 | -- | ND | 0.098 | -- | | 1 |
| Benzyl chloride | ND | 0.200 | -- | ND | 1.04 | -- | | 1 |
| 1,3-Dichlorobenzene | ND | 0.020 | -- | ND | 0.120 | -- | | 1 |
| 1,4-Dichlorobenzene | ND | 0.020 | -- | ND | 0.120 | -- | | 1 |
| sec-Butylbenzene | ND | 0.200 | -- | ND | 1.10 | -- | | 1 |

**Project Name:** BATCH CANISTER CERTIFICATION **Lab Number:** L2008049

**Project Number:** CANISTER QC BAT **Report Date:** 03/13/20

# Air Canister Certification Results

Lab ID: L2008049-03
Client ID: CAN 2829 SHELF 46
Sample Location:

Date Collected: 02/26/20 16:00
Date Received: 02/27/20
Field Prep: Not Specified

Sample Depth:

| Parameter | ppbV Results | ppbV RL | ppbV MDL | ug/m3 Results | ug/m3 RL | ug/m3 MDL | Qualifier | Dilution Factor |
|---|---|---|---|---|---|---|---|---|
| Volatile Organics in Air by SIM - Mansfield Lab | | | | | | | | |
| p-Isopropyltoluene | ND | 0.200 | -- | ND | 1.10 | -- | | 1 |
| 1,2-Dichlorobenzene | ND | 0.020 | -- | ND | 0.120 | -- | | 1 |
| n-Butylbenzene | ND | 0.200 | -- | ND | 1.10 | -- | | 1 |
| 1,2,4-Trichlorobenzene | ND | 0.050 | -- | ND | 0.371 | -- | | 1 |
| Naphthalene | ND | 0.050 | -- | ND | 0.262 | -- | | 1 |
| 1,2,3-Trichlorobenzene | ND | 0.050 | -- | ND | 0.371 | -- | | 1 |
| Hexachlorobutadiene | ND | 0.050 | -- | ND | 0.533 | -- | | 1 |

| Internal Standard | % Recovery | Qualifier | Acceptance Criteria |
|---|---|---|---|
| 1,4-difluorobenzene | 93 | | 60-140 |
| bromochloromethane | 94 | | 60-140 |
| chlorobenzene-d5 | 89 | | 60-140 |

**Project Name:** GROSSINGERS
**Project Number:** 9313

**Lab Number:** L2010375
**Report Date:** 03/13/20

## Sample Receipt and Container Information

Were project specific reporting limits specified? YES

### Cooler Information

| Cooler | Custody Seal |
|---|---|
| NA | Absent |

### Container Information

| Container ID | Container Type | Cooler | Initial pH | Final pH | Temp deg C | Pres | Seal | Frozen Date/Time | Analysis(*) |
|---|---|---|---|---|---|---|---|---|---|
| L2010375-01A | Canister - 6 Liter | NA | NA | | | Y | Absent | | TO15-LL(30) |
| L2010375-02A | Canister - 6 Liter | NA | NA | | | Y | Absent | | TO15-LL(30) |
| L2010375-03A | Canister - 6 Liter | NA | NA | | | Y | Absent | | TO15-LL(30) |
| L2010375-04A | Canister - 6 Liter | NA | NA | | | Y | Absent | | TO15-LL(30) |
| L2010375-05A | Canister - 6 Liter | NA | NA | | | Y | Absent | | TO15-LL(30) |
| L2010375-06A | Canister - 6 Liter | NA | NA | | | Y | Absent | | TO15-LL(30) |
| L2010375-07A | Canister - 6 Liter | NA | NA | | | Y | Absent | | TO15-LL(30) |
| L2010375-08A | Canister - 6 Liter | NA | NA | | | Y | Absent | | TO15-LL(30) |
| L2010375-09A | Canister - 6 Liter | NA | NA | | | Y | Absent | | CLEAN-FEE() |



*Values in parentheses indicate holding time in days

| | | | |
|---|---|---|---|
| **Project Name:** | GROSSINGERS | **Lab Number:** | L2010375 |
| **Project Number:** | 9313 | **Report Date:** | 03/13/20 |

## GLOSSARY

***Acronyms***

| | |
|---|---|
| DL | - Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the limit of quantitation (LOQ). The DL includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.) |
| EDL | - Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME). |
| EMPC | - Estimated Maximum Possible Concentration: The concentration that results from the signal present at the retention time of an analyte when the ions meet all of the identification criteria except the ion abundance ratio criteria. An EMPC is a worst-case estimate of the concentration. |
| EPA | - Environmental Protection Agency. |
| LCS | - Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes. |
| LCSD | - Laboratory Control Sample Duplicate: Refer to LCS. |
| LFB | - Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes. |
| LOD | - Limit of Detection: This value represents the level to which a target analyte can reliably be detected for a specific analyte in a specific matrix by a specific method. The LOD includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.) |
| LOQ | - Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)<br><br>Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.) |
| MDL | - Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. |
| MS | - Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available. For Method 332.0, the spike recovery is calculated using the native concentration, including estimated values. |
| MSD | - Matrix Spike Sample Duplicate: Refer to MS. |
| NA | - Not Applicable. |
| NC | - Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit. |
| NDPA/DPA | - N-Nitrosodiphenylamine/Diphenylamine. |
| NI | - Not Ignitable. |
| NP | - Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil. |
| RL | - Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable. |
| RPD | - Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report. |
| SRM | - Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples. |
| STLP | - Semi-dynamic Tank Leaching Procedure per EPA Method 1315. |
| TEF | - Toxic Equivalency Factors: The values assigned to each dioxin and furan to evaluate their toxicity relative to 2,3,7,8-TCDD. |
| TEQ | - Toxic Equivalent: The measure of a sample's toxicity derived by multiplying each dioxin and furan by its corresponding TEF and then summing the resulting values. |
| TIC | - Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations. |

***Footnotes***

*Report Format: Data Usability Report*

| | | | |
|---|---|---|---|
| **Project Name:** | GROSSINGERS | **Lab Number:** | L2010375 |
| **Project Number:** | 9313 | **Report Date:** | 03/13/20 |

1 - The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method.

***Terms***

Analytical Method: Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

Difference: With respect to Total Oxidizable Precursor (TOP) Assay analysis, the difference is defined as the Post-Treatment value minus the Pre-Treatment value.

Final pH: As it pertains to Sample Receipt & Container Information section of the report, Final pH reflects pH of container determined after adjustment at the laboratory, if applicable. If no adjustment required, value reflects Initial pH.

Frozen Date/Time: With respect to Volatile Organics in soil, Frozen Date/Time reflects the date/time at which associated Reagent Water-preserved vials were initially frozen. Note: If frozen date/time is beyond 48 hours from sample collection, value will be reflected in 'bold'.

Initial pH: As it pertains to Sample Receipt & Container Information section of the report, Initial pH reflects pH of container determined upon receipt, if applicable.

PAH Total: With respect to Alkylated PAH analyses, the 'PAHs, Total' result is defined as the summation of results for all or a subset of the following compounds: Naphthalene, C1-C4 Naphthalenes, 2-Methylnaphthalene, 1-Methylnaphthalene, Biphenyl, Acenaphthylene, Acenaphthene, Fluorene, C1-C3 Fluorenes, Phenanthrene, C1-C4 Phenanthrenes/Anthracenes, Anthracene, Fluoranthene, Pyrene, C1-C4 Fluoranthenes/Pyrenes, Benz(a)anthracene, Chrysene, C1-C4 Chrysenes, Benzo(b)fluoranthene, Benzo(j)+(k)fluoranthene, Benzo(e)pyrene, Benzo(a)pyrene, Perylene, Indeno(1,2,3-cd)pyrene, Dibenz(ah)+(ac)anthracene, Benzo(g,h,i)perylene. If a 'Total' result is requested, the results of its individual components will also be reported.

PFAS Total: With respect to PFAS analyses, the 'PFAS, Total (5)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA and PFOS. If a 'Total' result is requested, the results of its individual components will also be reported.

The target compound Chlordane (CAS No. 57-74-9) is reported for GC ECD analyses. Per EPA,this compound "refers to a mixture of chlordane isomers, other chlorinated hydrocarbons and numerous other components." (Reference: USEPA Toxicological Review of Chlordane, In Support of Summary Information on the Integrated Risk Information System (IRIS), December 1997.)

Total: With respect to Organic analyses, a 'Total' result is defined as the summation of results for individual isomers or Aroclors. If a 'Total' result is requested, the results of its individual components will also be reported. This is applicable to 'Total' results for methods 8260, 8081 and 8082.

***Data Qualifiers***

**A** - Spectra identified as "Aldol Condensates" are byproducts of the extraction/concentration procedures when acetone is introduced in the process.

**B** - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).

**C** - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.

**D** - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.

**E** - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.

**G** - The concentration may be biased high due to matrix interferences (i.e, co-elution) with non-target compound(s). The result should be considered estimated.

**H** - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.

**I** - The lower value for the two columns has been reported due to obvious interference.

**J** - Estimated value. This represents an estimated concentration for Tentatively Identified Compounds (TICs).

**M** - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.

**ND** - Not detected at the reporting limit (RL) for the sample.

**NJ** - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.

**P** - The RPD between the results for the two columns exceeds the method-specified criteria.

**Q** - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less

*Report Format: Data Usability Report*

| | | | |
|---|---|---|---|
| **Project Name:** | GROSSINGERS | **Lab Number:** | L2010375 |
| **Project Number:** | 9313 | **Report Date:** | 03/13/20 |

***Data Qualifiers***

than 5x the RL. (Metals only.)

**R** - Analytical results are from sample re-analysis.

**RE** - Analytical results are from sample re-extraction.

**S** - Analytical results are from modified screening analysis.

*Report Format: Data Usability Report*

## REFERENCES

48 Compendium of Methods for the Determination of Toxic Organic Compounds in Ambient Air. Second Edition. EPA/625/R-96/010b, January 1999.

## LIMITATION OF LIABILITIES

Alpha Analytical performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical be held liable for any incidental, consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding time and splitting of samples in the field.

# Certification Information

**The following analytes are not included in our Primary NELAP Scope of Accreditation:**

**Westborough Facility**
**EPA 624/624.1:** m/p-xylene, o-xylene
**EPA 8260C:** NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene, Azobenzene; SCM: Iodomethane (methyl iodide), 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.
**EPA 8270D:** NPW: Dimethylnaphthalene,1,4-Diphenylhydrazine; SCM: Dimethylnaphthalene,1,4-Diphenylhydrazine.
**SM4500**: NPW: Amenable Cyanide; SCM: Total Phosphorus, TKN, NO2, NO3.

**Mansfield Facility**
**SM 2540D:** TSS
**EPA 8082A:** NPW: PCB: 1, 5, 31, 87,101, 110, 141, 151, 153, 180, 183, 187.
**EPA TO-15:** Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene, 3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.
**EPA TO-12** Non-methane organics
**EPA 3C** Fixed gases
**Biological Tissue Matrix:** EPA 3050B

**The following analytes are included in our Massachusetts DEP Scope of Accreditation**

**Westborough Facility:**

***Drinking Water***
**EPA 300.0**: Chloride, Nitrate-N, Fluoride, Sulfate; **EPA 353.2**: Nitrate-N, Nitrite-N; **SM4500NO3-F**: Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE, EPA 180.1, SM2130B, SM4500Cl-D, SM2320B, SM2540C, SM4500H-B, SM4500NO2-B**
**EPA 332**: Perchlorate; **EPA 524.2:** THMs and VOCs; **EPA 504.1:** EDB, DBCP.
**Microbiology**: **SM9215B; SM9223-P/A, SM9223B-Colilert-QT,SM9222D**.

***Non-Potable Water***
**SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2320B, SM4500CL-E, SM4500F-BC, SM4500NH3-BH:** Ammonia-N and Kjeldahl-N, **EPA 350.1**: Ammonia-N, **LACHAT 10-107-06-1-B**: Ammonia-N, **EPA 351.1, SM4500NO3-F, EPA 353.2**: Nitrate-N**, SM4500P-E, SM4500P-B, E, SM4500SO4-E, SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, EPA 420.1, SM4500-CN-CE, SM2540D, EPA 300: Chloride, Sulfate, Nitrate.**
**EPA 624.1**: Volatile Halocarbons & Aromatics,
**EPA 608.3**: Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs
**EPA 625.1**: SVOC (Acid/Base/Neutral Extractables), **EPA 600/4-81-045**: PCB-Oil.
**Microbiology**: **SM9223B-Colilert-QT; Enterolert-QT, SM9221E, EPA 1600, EPA 1603.**

**Mansfield Facility:**

***Drinking Water***
**EPA 200.7:** Al, Ba, Cd, Cr, Cu, Fe, Mn, Ni, Na, Ag, Ca, Zn. **EPA 200.8:** Al, Sb, As, Ba, Be, Cd, Cr, Cu, Pb, Mn, Ni, Se, Ag, TL, Zn. **EPA 245.1** Hg.
**EPA 522.**

***Non-Potable Water***
**EPA 200.7:** Al, Sb, As, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Sr, TL, Ti, V, Zn.
**EPA 200.8:** Al, Sb**,** As, Be, Cd, Cr, Cu, Fe, Pb, Mn, Ni, K, Se, Ag, Na, TL, Zn.
**EPA 245.1** Hg.
**SM2340B**

For a complete listing of analytes and methods, please contact your Alpha Project Manager.

# AIR ANALYSIS

PAGE 1 OF 1

ALPHA ANALYTICAL — CHAIN OF CUSTODY

320 Forbes Blvd, Mansfield, MA 02048
TEL: 508-822-9300 FAX: 508-822-3288

Date Rec'd in Lab: 3/7/20

ALPHA Job #: L2 010375

**Client Information**

Client: SESD
Address: 12a Mapleave Pine Brook, NJ
Phone: 973 808 9050
Fax:
Email: FA@sesi.org
☐ These samples have been previously analyzed by Alpha

**Project Information**

Project Name: Grossingers
Project Location: Liberty, NY
Project #: 9313
Project Manager: Fuad Dahan
ALPHA Quote #:

**Turn-Around Time**

☒ Standard ☐ RUSH (only confirmed if pre-approved!)
Date Due: 1 week Time:

**Report Information - Data Deliverables**

☐ FAX
☐ ADEx
Criteria Checker:
(Default based on Regulatory Criteria Indicated)
Other Formats:
☒ EMAIL (standard pdf report)
☐ Additional Deliverables:
Report to: (if different than Project Manager)

**Billing Information**

☒ Same as Client info PO #: 9313
Phase 10

**Regulatory Requirements/Report Limits**

| State/Fed | Program | Res / Comm |
|---|---|---|
| NY | | Res |

Other Project Specific Requirements/Comments:

Project-Specific Target Compound List: ☐

**All Columns Below Must Be Filled Out**

| ALPHA Lab ID (Lab Use Only) | Sample ID | COLLECTION End Date | Start Time | End Time | Initial Vacuum | Final Vacuum | Sample Matrix* | Sampler's Initials | Can Size | ID Can | ID - Flow Controller | TO-15 | TO-15 SIM | APH Subset non-petroleum HCs ☐ | Fixed Gases | Sulfides & Mercaptans by TO-15 | Sample Comments (i.e. PID) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | ~~SMPV-13~~ | ~~3/6/20~~ | ~~1145~~ | ~~1215~~ | ~~-28.42~~ | | SV | JS | 6L | ~~2958~~ | ~~0846~~ | ~~X~~ | | | | | |
| 10375-01 | SMPV-14 | 3/6/20 | 1151 | 1221 | -28.71 | -7.01 | SV | JCS | 6L | 1784 | 01870 | X | | | | | |
| -02 | SMPV-13 | | 1226 | 1256 | -28.64 | -7.55 | | | | 608 | 0857 | | | | | | |
| -03 | SMPV-1 | | 1242 | 1312 | -28.76 | -6.65 | | | | 979 | 0863 | | | | | | |
| -04 | SMPV-3 | | 1345 | 1415 | -28.13 | -13.62 | | | | 2467 | 0772 | | | | | | |
| -05 | SMPV-2 | | 1436 | 1506 | -27.70 | -7.88 | | | | 1843 | 0581 | | | | | | |
| -06 | SMPV-12 | | 1505 | 1535 | -28.42 | -14.30 | | | | 2721 | 01700 | | | | | | |
| -07 | SMPV-10 | | 1522 | 1552 | -28.33 | -6.50 | | | | 2812 | 0410 | | | | | | |
| -08 | SMPV-11 | ↓ | 1546 | 1614 | -28.88 | -14.57 | ↓ | ↓ | ↓ | 2930 | 0319 | ↓ | | | | | |

*SAMPLE MATRIX CODES

AA = Ambient Air (Indoor/Outdoor)
SV = Soil Vapor/Landfill Gas/SVE
Other = Please Specify

Container Type

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. All samples submitted are subject to Alpha's Terms and Conditions. See reverse side.

| Relinquished By: | Date/Time | Received By: | Date/Time: |
|---|---|---|---|
| | ~~3/6/20 1830~~ | | 3/6/20 1830 |
| | 3/6/20 1830 | | 3/6/20 2245 |
| | 3/7/20 0405 | | 3/7/20 04:05 |

Form No: 101-02 Rev: (25-Sep-15)

# ANALYTICAL REPORT

| | |
|---|---|
| Lab Number: | L2122115 |
| Client: | Soils Engineering Services, Inc.<br>12A Maple Avenue<br>Pine Brook, NJ 07058 |
| ATTN: | Todd Kelly |
| Phone: | (973) 808-9050 |
| Project Name: | GROSSINGERS |
| Project Number: | 9313:11 |
| Report Date: | 05/05/21 |

The original project report/data package is held by Alpha Analytical. This report/data package is paginated and should be reproduced only in its entirety. Alpha Analytical holds no responsibility for results and/or data that are not consistent with the original.

Certifications & Approvals: MA (M-MA030), NH NELAP (2062), CT (PH-0141), DoD (L2474), FL (E87814), IL (200081), LA (85084), ME (MA00030), MD (350), NJ (MA015), NY (11627), NC (685), OH (CL106), PA (68-02089), RI (LAO00299), TX (T104704419), VT (VT-0015), VA (460194), WA (C954), US Army Corps of Engineers, USDA (Permit #P330-17-00150), USFWS (Permit #206964).

320 Forbes Boulevard, Mansfield, MA 02048-1806
508-822-9300 (Fax) 508-822-3288 800-624-9220 - www.alphalab.com

**Project Name:** GROSSINGERS
**Project Number:** 9313:11

**Lab Number:** L2122115
**Report Date:** 05/05/21

| Alpha Sample ID | Client ID | Matrix | Sample Location | Collection Date/Time | Receive Date |
|---|---|---|---|---|---|
| L2122115-01 | SMPV-1 | SOIL_VAPOR | LIBERTY, NY | 04/29/21 11:57 | 04/29/21 |
| L2122115-02 | SMPV-2 | SOIL_VAPOR | LIBERTY, NY | 04/29/21 10:12 | 04/29/21 |
| L2122115-03 | SMPV-3 | SOIL_VAPOR | LIBERTY, NY | 04/29/21 12:34 | 04/29/21 |
| L2122115-04 | UNUSED CAN 2578 | SOIL_VAPOR | LIBERTY, NY | | 04/29/21 |

| | | | |
|---|---|---|---|
| **Project Name:** | GROSSINGERS | **Lab Number:** | L2122115 |
| **Project Number:** | 9313:11 | **Report Date:** | 05/05/21 |

## Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet NELAP requirements for all NELAP accredited parameters unless otherwise noted in the following narrative. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. Tentatively Identified Compounds (TICs), if requested, are reported for compounds identified to be present and are not part of the method/program Target Compound List, even if only a subset of the TCL are being reported. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively.

When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances, the specific failure is not narrated but noted in the associated QC Outlier Summary Report, located directly after the Case Narrative. QC information is also incorporated in the Data Usability Assessment table (Format 11) of our Data Merger tool, where it can be reviewed in conjunction with the sample result, associated regulatory criteria and any associated data usability implications.

Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

HOLD POLICY - For samples submitted on hold, Alpha's policy is to hold samples (with the exception of Air canisters) free of charge for 21 calendar days from the date the project is completed. After 21 calendar days, we will dispose of all samples submitted including those put on hold unless you have contacted your Alpha Project Manager and made arrangements for Alpha to continue to hold the samples. Air canisters will be disposed after 3 business days from the date the project is completed.

Please contact Project Management at 800-624-9220 with any questions.

| | | | |
|---|---|---|---|
| **Project Name:** | GROSSINGERS | **Lab Number:** | L2122115 |
| **Project Number:** | 9313:11 | **Report Date:** | 05/05/21 |

**Case Narrative (continued)**

Volatile Organics in Air

Canisters were released from the laboratory on April 26, 2021. The canister certification results are provided as an addendum.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature: Christopher J. Anderson

Title: Technical Director/Representative Date: 05/05/21

# AIR

***Project Name:*** GROSSINGERS
***Project Number:*** 9313:11

***Lab Number:*** L2122115
***Report Date:*** 05/05/21

## *SAMPLE RESULTS*

Lab ID: L2122115-01
Client ID: SMPV-1
Sample Location: LIBERTY, NY

Date Collected: 04/29/21 11:57
Date Received: 04/29/21
Field Prep: Not Specified

Sample Depth:
Matrix: Soil_Vapor
Anaytical Method: 48,TO-15
Analytical Date: 05/04/21 20:48
Analyst: EW

| | ppbV | | | ug/m3 | | | | |
|---|---|---|---|---|---|---|---|---|
| **Parameter** | **Results** | **RL** | **MDL** | **Results** | **RL** | **MDL** | **Qualifier** | **Dilution Factor** |
| Volatile Organics in Air - Mansfield Lab | | | | | | | | |
| Dichlorodifluoromethane | 0.478 | 0.200 | -- | 2.36 | 0.989 | -- | | 1 |
| Chloromethane | ND | 0.200 | -- | ND | 0.413 | -- | | 1 |
| Freon-114 | ND | 0.200 | -- | ND | 1.40 | -- | | 1 |
| Vinyl chloride | ND | 0.200 | -- | ND | 0.511 | -- | | 1 |
| 1,3-Butadiene | ND | 0.200 | -- | ND | 0.442 | -- | | 1 |
| Bromomethane | ND | 0.200 | -- | ND | 0.777 | -- | | 1 |
| Chloroethane | ND | 0.200 | -- | ND | 0.528 | -- | | 1 |
| Ethanol | 41.2 | 5.00 | -- | 77.6 | 9.42 | -- | | 1 |
| Vinyl bromide | ND | 0.200 | -- | ND | 0.874 | -- | | 1 |
| Acetone | 14.8 | 1.00 | -- | 35.2 | 2.38 | -- | | 1 |
| Trichlorofluoromethane | 0.456 | 0.200 | -- | 2.56 | 1.12 | -- | | 1 |
| Isopropanol | 0.707 | 0.500 | -- | 1.74 | 1.23 | -- | | 1 |
| 1,1-Dichloroethene | ND | 0.200 | -- | ND | 0.793 | -- | | 1 |
| Tertiary butyl Alcohol | 1.48 | 0.500 | -- | 4.49 | 1.52 | -- | | 1 |
| Methylene chloride | ND | 0.500 | -- | ND | 1.74 | -- | | 1 |
| 3-Chloropropene | ND | 0.200 | -- | ND | 0.626 | -- | | 1 |
| Carbon disulfide | ND | 0.200 | -- | ND | 0.623 | -- | | 1 |
| Freon-113 | ND | 0.200 | -- | ND | 1.53 | -- | | 1 |
| trans-1,2-Dichloroethene | ND | 0.200 | -- | ND | 0.793 | -- | | 1 |
| 1,1-Dichloroethane | ND | 0.200 | -- | ND | 0.809 | -- | | 1 |
| Methyl tert butyl ether | ND | 0.200 | -- | ND | 0.721 | -- | | 1 |
| 2-Butanone | 0.702 | 0.500 | -- | 2.07 | 1.47 | -- | | 1 |
| cis-1,2-Dichloroethene | ND | 0.200 | -- | ND | 0.793 | -- | | 1 |

***Project Name:*** GROSSINGERS
***Project Number:*** 9313:11

***Lab Number:*** L2122115
***Report Date:*** 05/05/21

## *SAMPLE RESULTS*

Lab ID: L2122115-01
Client ID: SMPV-1
Sample Location: LIBERTY, NY

Date Collected: 04/29/21 11:57
Date Received: 04/29/21
Field Prep: Not Specified

Sample Depth:

| Parameter | ppbV Results | ppbV RL | ppbV MDL | ug/m3 Results | ug/m3 RL | ug/m3 MDL | Qualifier | Dilution Factor |
|---|---|---|---|---|---|---|---|---|
| **Volatile Organics in Air - Mansfield Lab** | | | | | | | | |
| Ethyl Acetate | ND | 0.500 | -- | ND | 1.80 | -- | | 1 |
| Chloroform | ND | 0.200 | -- | ND | 0.977 | -- | | 1 |
| Tetrahydrofuran | ND | 0.500 | -- | ND | 1.47 | -- | | 1 |
| 1,2-Dichloroethane | ND | 0.200 | -- | ND | 0.809 | -- | | 1 |
| n-Hexane | ND | 0.200 | -- | ND | 0.705 | -- | | 1 |
| 1,1,1-Trichloroethane | ND | 0.200 | -- | ND | 1.09 | -- | | 1 |
| Benzene | 0.741 | 0.200 | -- | 2.37 | 0.639 | -- | | 1 |
| Carbon tetrachloride | ND | 0.200 | -- | ND | 1.26 | -- | | 1 |
| Cyclohexane | ND | 0.200 | -- | ND | 0.688 | -- | | 1 |
| 1,2-Dichloropropane | ND | 0.200 | -- | ND | 0.924 | -- | | 1 |
| Bromodichloromethane | ND | 0.200 | -- | ND | 1.34 | -- | | 1 |
| 1,4-Dioxane | ND | 0.200 | -- | ND | 0.721 | -- | | 1 |
| Trichloroethene | ND | 0.200 | -- | ND | 1.07 | -- | | 1 |
| 2,2,4-Trimethylpentane | 0.354 | 0.200 | -- | 1.65 | 0.934 | -- | | 1 |
| Heptane | 0.261 | 0.200 | -- | 1.07 | 0.820 | -- | | 1 |
| cis-1,3-Dichloropropene | ND | 0.200 | -- | ND | 0.908 | -- | | 1 |
| 4-Methyl-2-pentanone | 2.92 | 0.500 | -- | 12.0 | 2.05 | -- | | 1 |
| trans-1,3-Dichloropropene | ND | 0.200 | -- | ND | 0.908 | -- | | 1 |
| 1,1,2-Trichloroethane | ND | 0.200 | -- | ND | 1.09 | -- | | 1 |
| Toluene | 2.03 | 0.200 | -- | 7.65 | 0.754 | -- | | 1 |
| 2-Hexanone | ND | 0.200 | -- | ND | 0.820 | -- | | 1 |
| Dibromochloromethane | ND | 0.200 | -- | ND | 1.70 | -- | | 1 |
| 1,2-Dibromoethane | ND | 0.200 | -- | ND | 1.54 | -- | | 1 |
| Tetrachloroethene | ND | 0.200 | -- | ND | 1.36 | -- | | 1 |
| Chlorobenzene | ND | 0.200 | -- | ND | 0.921 | -- | | 1 |
| Ethylbenzene | 0.792 | 0.200 | -- | 3.44 | 0.869 | -- | | 1 |

***Project Name:*** GROSSINGERS
***Project Number:*** 9313:11
***Lab Number:*** L2122115
***Report Date:*** 05/05/21

## *SAMPLE RESULTS*

Lab ID: L2122115-01
Client ID: SMPV-1
Sample Location: LIBERTY, NY

Date Collected: 04/29/21 11:57
Date Received: 04/29/21
Field Prep: Not Specified

Sample Depth:

| Parameter | ppbV Results | ppbV RL | ppbV MDL | ug/m3 Results | ug/m3 RL | ug/m3 MDL | Qualifier | Dilution Factor |
|---|---|---|---|---|---|---|---|---|
| **Volatile Organics in Air - Mansfield Lab** | | | | | | | | |
| p/m-Xylene | 2.99 | 0.400 | -- | 13.0 | 1.74 | -- | | 1 |
| Bromoform | ND | 0.200 | -- | ND | 2.07 | -- | | 1 |
| Styrene | ND | 0.200 | -- | ND | 0.852 | -- | | 1 |
| 1,1,2,2-Tetrachloroethane | ND | 0.200 | -- | ND | 1.37 | -- | | 1 |
| o-Xylene | 1.26 | 0.200 | -- | 5.47 | 0.869 | -- | | 1 |
| 4-Ethyltoluene | 0.268 | 0.200 | -- | 1.32 | 0.983 | -- | | 1 |
| 1,3,5-Trimethylbenzene | 0.417 | 0.200 | -- | 2.05 | 0.983 | -- | | 1 |
| 1,2,4-Trimethylbenzene | 1.34 | 0.200 | -- | 6.59 | 0.983 | -- | | 1 |
| Benzyl chloride | ND | 0.200 | -- | ND | 1.04 | -- | | 1 |
| 1,3-Dichlorobenzene | ND | 0.200 | -- | ND | 1.20 | -- | | 1 |
| 1,4-Dichlorobenzene | ND | 0.200 | -- | ND | 1.20 | -- | | 1 |
| 1,2-Dichlorobenzene | ND | 0.200 | -- | ND | 1.20 | -- | | 1 |
| 1,2,4-Trichlorobenzene | ND | 0.200 | -- | ND | 1.48 | -- | | 1 |
| Hexachlorobutadiene | ND | 0.200 | -- | ND | 2.13 | -- | | 1 |

| Internal Standard | % Recovery | Qualifier | Acceptance Criteria |
|---|---|---|---|
| 1,4-Difluorobenzene | 90 | | 60-140 |
| Bromochloromethane | 91 | | 60-140 |
| chlorobenzene-d5 | 90 | | 60-140 |

***Project Name:*** GROSSINGERS
***Project Number:*** 9313:11
***Lab Number:*** L2122115
***Report Date:*** 05/05/21

## *SAMPLE RESULTS*

Lab ID: L2122115-02
Client ID: SMPV-2
Sample Location: LIBERTY, NY

Date Collected: 04/29/21 10:12
Date Received: 04/29/21
Field Prep: Not Specified

Sample Depth:
Matrix: Soil_Vapor
Anaytical Method: 48,TO-15
Analytical Date: 05/04/21 21:27
Analyst: EW

| | ppbV | | | ug/m3 | | | | |
|---|---|---|---|---|---|---|---|---|
| **Parameter** | **Results** | **RL** | **MDL** | **Results** | **RL** | **MDL** | **Qualifier** | **Dilution Factor** |
| Volatile Organics in Air - Mansfield Lab | | | | | | | | |
| Dichlorodifluoromethane | 0.510 | 0.200 | -- | 2.52 | 0.989 | -- | | 1 |
| Chloromethane | ND | 0.200 | -- | ND | 0.413 | -- | | 1 |
| Freon-114 | ND | 0.200 | -- | ND | 1.40 | -- | | 1 |
| Vinyl chloride | ND | 0.200 | -- | ND | 0.511 | -- | | 1 |
| 1,3-Butadiene | ND | 0.200 | -- | ND | 0.442 | -- | | 1 |
| Bromomethane | ND | 0.200 | -- | ND | 0.777 | -- | | 1 |
| Chloroethane | ND | 0.200 | -- | ND | 0.528 | -- | | 1 |
| Ethanol | 62.9 | 5.00 | -- | 119 | 9.42 | -- | | 1 |
| Vinyl bromide | ND | 0.200 | -- | ND | 0.874 | -- | | 1 |
| Acetone | 11.8 | 1.00 | -- | 28.0 | 2.38 | -- | | 1 |
| Trichlorofluoromethane | 3.83 | 0.200 | -- | 21.5 | 1.12 | -- | | 1 |
| Isopropanol | 0.652 | 0.500 | -- | 1.60 | 1.23 | -- | | 1 |
| 1,1-Dichloroethene | ND | 0.200 | -- | ND | 0.793 | -- | | 1 |
| Tertiary butyl Alcohol | 0.708 | 0.500 | -- | 2.15 | 1.52 | -- | | 1 |
| Methylene chloride | ND | 0.500 | -- | ND | 1.74 | -- | | 1 |
| 3-Chloropropene | ND | 0.200 | -- | ND | 0.626 | -- | | 1 |
| Carbon disulfide | ND | 0.200 | -- | ND | 0.623 | -- | | 1 |
| Freon-113 | ND | 0.200 | -- | ND | 1.53 | -- | | 1 |
| trans-1,2-Dichloroethene | ND | 0.200 | -- | ND | 0.793 | -- | | 1 |
| 1,1-Dichloroethane | ND | 0.200 | -- | ND | 0.809 | -- | | 1 |
| Methyl tert butyl ether | ND | 0.200 | -- | ND | 0.721 | -- | | 1 |
| 2-Butanone | 0.552 | 0.500 | -- | 1.63 | 1.47 | -- | | 1 |
| cis-1,2-Dichloroethene | ND | 0.200 | -- | ND | 0.793 | -- | | 1 |

**Project Name:** GROSSINGERS
**Project Number:** 9313:11

**Lab Number:** L2122115
**Report Date:** 05/05/21

## SAMPLE RESULTS

Lab ID: L2122115-02
Client ID: SMPV-2
Sample Location: LIBERTY, NY

Date Collected: 04/29/21 10:12
Date Received: 04/29/21
Field Prep: Not Specified

Sample Depth:

| Parameter | ppbV Results | ppbV RL | ppbV MDL | ug/m3 Results | ug/m3 RL | ug/m3 MDL | Qualifier | Dilution Factor |
|---|---|---|---|---|---|---|---|---|
| **Volatile Organics in Air - Mansfield Lab** | | | | | | | | |
| Ethyl Acetate | ND | 0.500 | -- | ND | 1.80 | -- | | 1 |
| Chloroform | ND | 0.200 | -- | ND | 0.977 | -- | | 1 |
| Tetrahydrofuran | ND | 0.500 | -- | ND | 1.47 | -- | | 1 |
| 1,2-Dichloroethane | ND | 0.200 | -- | ND | 0.809 | -- | | 1 |
| n-Hexane | 0.215 | 0.200 | -- | 0.758 | 0.705 | -- | | 1 |
| 1,1,1-Trichloroethane | ND | 0.200 | -- | ND | 1.09 | -- | | 1 |
| Benzene | 0.477 | 0.200 | -- | 1.52 | 0.639 | -- | | 1 |
| Carbon tetrachloride | ND | 0.200 | -- | ND | 1.26 | -- | | 1 |
| Cyclohexane | 0.230 | 0.200 | -- | 0.792 | 0.688 | -- | | 1 |
| 1,2-Dichloropropane | ND | 0.200 | -- | ND | 0.924 | -- | | 1 |
| Bromodichloromethane | ND | 0.200 | -- | ND | 1.34 | -- | | 1 |
| 1,4-Dioxane | ND | 0.200 | -- | ND | 0.721 | -- | | 1 |
| Trichloroethene | ND | 0.200 | -- | ND | 1.07 | -- | | 1 |
| 2,2,4-Trimethylpentane | 0.549 | 0.200 | -- | 2.56 | 0.934 | -- | | 1 |
| Heptane | 0.584 | 0.200 | -- | 2.39 | 0.820 | -- | | 1 |
| cis-1,3-Dichloropropene | ND | 0.200 | -- | ND | 0.908 | -- | | 1 |
| 4-Methyl-2-pentanone | 3.53 | 0.500 | -- | 14.5 | 2.05 | -- | | 1 |
| trans-1,3-Dichloropropene | ND | 0.200 | -- | ND | 0.908 | -- | | 1 |
| 1,1,2-Trichloroethane | ND | 0.200 | -- | ND | 1.09 | -- | | 1 |
| Toluene | 4.58 | 0.200 | -- | 17.3 | 0.754 | -- | | 1 |
| 2-Hexanone | ND | 0.200 | -- | ND | 0.820 | -- | | 1 |
| Dibromochloromethane | ND | 0.200 | -- | ND | 1.70 | -- | | 1 |
| 1,2-Dibromoethane | ND | 0.200 | -- | ND | 1.54 | -- | | 1 |
| Tetrachloroethene | ND | 0.200 | -- | ND | 1.36 | -- | | 1 |
| Chlorobenzene | ND | 0.200 | -- | ND | 0.921 | -- | | 1 |
| Ethylbenzene | 1.46 | 0.200 | -- | 6.34 | 0.869 | -- | | 1 |

***Project Name:*** GROSSINGERS
***Project Number:*** 9313:11
***Lab Number:*** L2122115
***Report Date:*** 05/05/21

## *SAMPLE RESULTS*

Lab ID: L2122115-02
Client ID: SMPV-2
Sample Location: LIBERTY, NY

Date Collected: 04/29/21 10:12
Date Received: 04/29/21
Field Prep: Not Specified

Sample Depth:

| Parameter | ppbV Results | ppbV RL | ppbV MDL | ug/m3 Results | ug/m3 RL | ug/m3 MDL | Qualifier | Dilution Factor |
|---|---|---|---|---|---|---|---|---|
| **Volatile Organics in Air - Mansfield Lab** | | | | | | | | |
| p/m-Xylene | 5.45 | 0.400 | -- | 23.7 | 1.74 | -- | | 1 |
| Bromoform | ND | 0.200 | -- | ND | 2.07 | -- | | 1 |
| Styrene | ND | 0.200 | -- | ND | 0.852 | -- | | 1 |
| 1,1,2,2-Tetrachloroethane | ND | 0.200 | -- | ND | 1.37 | -- | | 1 |
| o-Xylene | 2.05 | 0.200 | -- | 8.90 | 0.869 | -- | | 1 |
| 4-Ethyltoluene | 0.411 | 0.200 | -- | 2.02 | 0.983 | -- | | 1 |
| 1,3,5-Trimethylbenzene | 0.547 | 0.200 | -- | 2.69 | 0.983 | -- | | 1 |
| 1,2,4-Trimethylbenzene | 1.76 | 0.200 | -- | 8.65 | 0.983 | -- | | 1 |
| Benzyl chloride | ND | 0.200 | -- | ND | 1.04 | -- | | 1 |
| 1,3-Dichlorobenzene | ND | 0.200 | -- | ND | 1.20 | -- | | 1 |
| 1,4-Dichlorobenzene | ND | 0.200 | -- | ND | 1.20 | -- | | 1 |
| 1,2-Dichlorobenzene | ND | 0.200 | -- | ND | 1.20 | -- | | 1 |
| 1,2,4-Trichlorobenzene | ND | 0.200 | -- | ND | 1.48 | -- | | 1 |
| Hexachlorobutadiene | ND | 0.200 | -- | ND | 2.13 | -- | | 1 |

| Internal Standard | % Recovery | Qualifier | Acceptance Criteria |
|---|---|---|---|
| 1,4-Difluorobenzene | 91 | | 60-140 |
| Bromochloromethane | 90 | | 60-140 |
| chlorobenzene-d5 | 92 | | 60-140 |

***Project Name:*** GROSSINGERS
***Project Number:*** 9313:11

***Lab Number:*** L2122115
***Report Date:*** 05/05/21

## *SAMPLE RESULTS*

Lab ID: L2122115-03
Client ID: SMPV-3
Sample Location: LIBERTY, NY

Date Collected: 04/29/21 12:34
Date Received: 04/29/21
Field Prep: Not Specified

Sample Depth:
Matrix: Soil_Vapor
Anaytical Method: 48,TO-15
Analytical Date: 05/04/21 22:05
Analyst: EW

| | ppbV | | | ug/m3 | | | | |
|---|---|---|---|---|---|---|---|---|
| **Parameter** | **Results** | **RL** | **MDL** | **Results** | **RL** | **MDL** | **Qualifier** | **Dilution Factor** |
| Volatile Organics in Air - Mansfield Lab | | | | | | | | |
| Dichlorodifluoromethane | 0.473 | 0.200 | -- | 2.34 | 0.989 | -- | | 1 |
| Chloromethane | 0.626 | 0.200 | -- | 1.29 | 0.413 | -- | | 1 |
| Freon-114 | ND | 0.200 | -- | ND | 1.40 | -- | | 1 |
| Vinyl chloride | ND | 0.200 | -- | ND | 0.511 | -- | | 1 |
| 1,3-Butadiene | ND | 0.200 | -- | ND | 0.442 | -- | | 1 |
| Bromomethane | ND | 0.200 | -- | ND | 0.777 | -- | | 1 |
| Chloroethane | ND | 0.200 | -- | ND | 0.528 | -- | | 1 |
| Ethanol | 38.0 | 5.00 | -- | 71.6 | 9.42 | -- | | 1 |
| Vinyl bromide | ND | 0.200 | -- | ND | 0.874 | -- | | 1 |
| Acetone | 14.1 | 1.00 | -- | 33.5 | 2.38 | -- | | 1 |
| Trichlorofluoromethane | 0.215 | 0.200 | -- | 1.21 | 1.12 | -- | | 1 |
| Isopropanol | 0.501 | 0.500 | -- | 1.23 | 1.23 | -- | | 1 |
| 1,1-Dichloroethene | ND | 0.200 | -- | ND | 0.793 | -- | | 1 |
| Tertiary butyl Alcohol | 1.49 | 0.500 | -- | 4.52 | 1.52 | -- | | 1 |
| Methylene chloride | ND | 0.500 | -- | ND | 1.74 | -- | | 1 |
| 3-Chloropropene | ND | 0.200 | -- | ND | 0.626 | -- | | 1 |
| Carbon disulfide | ND | 0.200 | -- | ND | 0.623 | -- | | 1 |
| Freon-113 | ND | 0.200 | -- | ND | 1.53 | -- | | 1 |
| trans-1,2-Dichloroethene | ND | 0.200 | -- | ND | 0.793 | -- | | 1 |
| 1,1-Dichloroethane | ND | 0.200 | -- | ND | 0.809 | -- | | 1 |
| Methyl tert butyl ether | ND | 0.200 | -- | ND | 0.721 | -- | | 1 |
| 2-Butanone | 0.815 | 0.500 | -- | 2.40 | 1.47 | -- | | 1 |
| cis-1,2-Dichloroethene | ND | 0.200 | -- | ND | 0.793 | -- | | 1 |

***Project Name:*** GROSSINGERS
***Project Number:*** 9313:11

***Lab Number:*** L2122115
***Report Date:*** 05/05/21

## *SAMPLE RESULTS*

Lab ID: L2122115-03
Client ID: SMPV-3
Sample Location: LIBERTY, NY

Date Collected: 04/29/21 12:34
Date Received: 04/29/21
Field Prep: Not Specified

Sample Depth:

| Parameter | ppbV Results | ppbV RL | ppbV MDL | ug/m3 Results | ug/m3 RL | ug/m3 MDL | Qualifier | Dilution Factor |
|---|---|---|---|---|---|---|---|---|
| **Volatile Organics in Air - Mansfield Lab** | | | | | | | | |
| Ethyl Acetate | ND | 0.500 | -- | ND | 1.80 | -- | | 1 |
| Chloroform | ND | 0.200 | -- | ND | 0.977 | -- | | 1 |
| Tetrahydrofuran | ND | 0.500 | -- | ND | 1.47 | -- | | 1 |
| 1,2-Dichloroethane | ND | 0.200 | -- | ND | 0.809 | -- | | 1 |
| n-Hexane | ND | 0.200 | -- | ND | 0.705 | -- | | 1 |
| 1,1,1-Trichloroethane | ND | 0.200 | -- | ND | 1.09 | -- | | 1 |
| Benzene | 0.897 | 0.200 | -- | 2.87 | 0.639 | -- | | 1 |
| Carbon tetrachloride | ND | 0.200 | -- | ND | 1.26 | -- | | 1 |
| Cyclohexane | ND | 0.200 | -- | ND | 0.688 | -- | | 1 |
| 1,2-Dichloropropane | ND | 0.200 | -- | ND | 0.924 | -- | | 1 |
| Bromodichloromethane | ND | 0.200 | -- | ND | 1.34 | -- | | 1 |
| 1,4-Dioxane | ND | 0.200 | -- | ND | 0.721 | -- | | 1 |
| Trichloroethene | ND | 0.200 | -- | ND | 1.07 | -- | | 1 |
| 2,2,4-Trimethylpentane | 0.332 | 0.200 | -- | 1.55 | 0.934 | -- | | 1 |
| Heptane | 0.271 | 0.200 | -- | 1.11 | 0.820 | -- | | 1 |
| cis-1,3-Dichloropropene | ND | 0.200 | -- | ND | 0.908 | -- | | 1 |
| 4-Methyl-2-pentanone | 2.72 | 0.500 | -- | 11.1 | 2.05 | -- | | 1 |
| trans-1,3-Dichloropropene | ND | 0.200 | -- | ND | 0.908 | -- | | 1 |
| 1,1,2-Trichloroethane | ND | 0.200 | -- | ND | 1.09 | -- | | 1 |
| Toluene | 1.66 | 0.200 | -- | 6.26 | 0.754 | -- | | 1 |
| 2-Hexanone | ND | 0.200 | -- | ND | 0.820 | -- | | 1 |
| Dibromochloromethane | ND | 0.200 | -- | ND | 1.70 | -- | | 1 |
| 1,2-Dibromoethane | ND | 0.200 | -- | ND | 1.54 | -- | | 1 |
| Tetrachloroethene | ND | 0.200 | -- | ND | 1.36 | -- | | 1 |
| Chlorobenzene | ND | 0.200 | -- | ND | 0.921 | -- | | 1 |
| Ethylbenzene | 0.688 | 0.200 | -- | 2.99 | 0.869 | -- | | 1 |

***Project Name:*** GROSSINGERS
***Project Number:*** 9313:11
***Lab Number:*** L2122115
***Report Date:*** 05/05/21

## *SAMPLE RESULTS*

Lab ID: L2122115-03
Client ID: SMPV-3
Sample Location: LIBERTY, NY

Date Collected: 04/29/21 12:34
Date Received: 04/29/21
Field Prep: Not Specified

Sample Depth:

| Parameter | ppbV Results | ppbV RL | ppbV MDL | ug/m3 Results | ug/m3 RL | ug/m3 MDL | Qualifier | Dilution Factor |
|---|---|---|---|---|---|---|---|---|
| **Volatile Organics in Air - Mansfield Lab** | | | | | | | | |
| p/m-Xylene | 3.29 | 0.400 | -- | 14.3 | 1.74 | -- | | 1 |
| Bromoform | ND | 0.200 | -- | ND | 2.07 | -- | | 1 |
| Styrene | ND | 0.200 | -- | ND | 0.852 | -- | | 1 |
| 1,1,2,2-Tetrachloroethane | ND | 0.200 | -- | ND | 1.37 | -- | | 1 |
| o-Xylene | 1.33 | 0.200 | -- | 5.78 | 0.869 | -- | | 1 |
| 4-Ethyltoluene | 0.422 | 0.200 | -- | 2.07 | 0.983 | -- | | 1 |
| 1,3,5-Trimethylbenzene | 0.700 | 0.200 | -- | 3.44 | 0.983 | -- | | 1 |
| 1,2,4-Trimethylbenzene | 1.86 | 0.200 | -- | 9.14 | 0.983 | -- | | 1 |
| Benzyl chloride | ND | 0.200 | -- | ND | 1.04 | -- | | 1 |
| 1,3-Dichlorobenzene | 0.281 | 0.200 | -- | 1.69 | 1.20 | -- | | 1 |
| 1,4-Dichlorobenzene | ND | 0.200 | -- | ND | 1.20 | -- | | 1 |
| 1,2-Dichlorobenzene | ND | 0.200 | -- | ND | 1.20 | -- | | 1 |
| 1,2,4-Trichlorobenzene | ND | 0.200 | -- | ND | 1.48 | -- | | 1 |
| Hexachlorobutadiene | ND | 0.200 | -- | ND | 2.13 | -- | | 1 |

| Internal Standard | % Recovery | Qualifier | Acceptance Criteria |
|---|---|---|---|
| 1,4-Difluorobenzene | 90 | | 60-140 |
| Bromochloromethane | 92 | | 60-140 |
| chlorobenzene-d5 | 92 | | 60-140 |

**Project Name:** GROSSINGERS
**Project Number:** 9313:11

**Lab Number:** L2122115
**Report Date:** 05/05/21

# Method Blank Analysis
## Batch Quality Control

Analytical Method: 48,TO-15
Analytical Date: 05/04/21 14:30

| Parameter | ppbV Results | ppbV RL | ppbV MDL | ug/m3 Results | ug/m3 RL | ug/m3 MDL | Qualifier | Dilution Factor |
|---|---|---|---|---|---|---|---|---|
| Volatile Organics in Air - Mansfield Lab for sample(s): 01-03 Batch: WG1494290-4 | | | | | | | | |
| Dichlorodifluoromethane | ND | 0.200 | -- | ND | 0.989 | -- | | 1 |
| Chloromethane | ND | 0.200 | -- | ND | 0.413 | -- | | 1 |
| Freon-114 | ND | 0.200 | -- | ND | 1.40 | -- | | 1 |
| Vinyl chloride | ND | 0.200 | -- | ND | 0.511 | -- | | 1 |
| 1,3-Butadiene | ND | 0.200 | -- | ND | 0.442 | -- | | 1 |
| Bromomethane | ND | 0.200 | -- | ND | 0.777 | -- | | 1 |
| Chloroethane | ND | 0.200 | -- | ND | 0.528 | -- | | 1 |
| Ethanol | ND | 5.00 | -- | ND | 9.42 | -- | | 1 |
| Vinyl bromide | ND | 0.200 | -- | ND | 0.874 | -- | | 1 |
| Acetone | ND | 1.00 | -- | ND | 2.38 | -- | | 1 |
| Trichlorofluoromethane | ND | 0.200 | -- | ND | 1.12 | -- | | 1 |
| Isopropanol | ND | 0.500 | -- | ND | 1.23 | -- | | 1 |
| 1,1-Dichloroethene | ND | 0.200 | -- | ND | 0.793 | -- | | 1 |
| Tertiary butyl Alcohol | ND | 0.500 | -- | ND | 1.52 | -- | | 1 |
| Methylene chloride | ND | 0.500 | -- | ND | 1.74 | -- | | 1 |
| 3-Chloropropene | ND | 0.200 | -- | ND | 0.626 | -- | | 1 |
| Carbon disulfide | ND | 0.200 | -- | ND | 0.623 | -- | | 1 |
| Freon-113 | ND | 0.200 | -- | ND | 1.53 | -- | | 1 |
| trans-1,2-Dichloroethene | ND | 0.200 | -- | ND | 0.793 | -- | | 1 |
| 1,1-Dichloroethane | ND | 0.200 | -- | ND | 0.809 | -- | | 1 |
| Methyl tert butyl ether | ND | 0.200 | -- | ND | 0.721 | -- | | 1 |
| 2-Butanone | ND | 0.500 | -- | ND | 1.47 | -- | | 1 |
| cis-1,2-Dichloroethene | ND | 0.200 | -- | ND | 0.793 | -- | | 1 |
| Ethyl Acetate | ND | 0.500 | -- | ND | 1.80 | -- | | 1 |
| Chloroform | ND | 0.200 | -- | ND | 0.977 | -- | | 1 |

**Project Name:** GROSSINGERS
**Project Number:** 9313:11
**Lab Number:** L2122115
**Report Date:** 05/05/21

# Method Blank Analysis
## Batch Quality Control

Analytical Method: 48,TO-15
Analytical Date: 05/04/21 14:30

| Parameter | ppbV Results | ppbV RL | ppbV MDL | ug/m3 Results | ug/m3 RL | ug/m3 MDL | Qualifier | Dilution Factor |
|---|---|---|---|---|---|---|---|---|
| Volatile Organics in Air - Mansfield Lab for sample(s): 01-03 Batch: WG1494290-4 | | | | | | | | |
| Tetrahydrofuran | ND | 0.500 | -- | ND | 1.47 | -- | | 1 |
| 1,2-Dichloroethane | ND | 0.200 | -- | ND | 0.809 | -- | | 1 |
| n-Hexane | ND | 0.200 | -- | ND | 0.705 | -- | | 1 |
| 1,1,1-Trichloroethane | ND | 0.200 | -- | ND | 1.09 | -- | | 1 |
| Benzene | ND | 0.200 | -- | ND | 0.639 | -- | | 1 |
| Carbon tetrachloride | ND | 0.200 | -- | ND | 1.26 | -- | | 1 |
| Cyclohexane | ND | 0.200 | -- | ND | 0.688 | -- | | 1 |
| 1,2-Dichloropropane | ND | 0.200 | -- | ND | 0.924 | -- | | 1 |
| Bromodichloromethane | ND | 0.200 | -- | ND | 1.34 | -- | | 1 |
| 1,4-Dioxane | ND | 0.200 | -- | ND | 0.721 | -- | | 1 |
| Trichloroethene | ND | 0.200 | -- | ND | 1.07 | -- | | 1 |
| 2,2,4-Trimethylpentane | ND | 0.200 | -- | ND | 0.934 | -- | | 1 |
| Heptane | ND | 0.200 | -- | ND | 0.820 | -- | | 1 |
| cis-1,3-Dichloropropene | ND | 0.200 | -- | ND | 0.908 | -- | | 1 |
| 4-Methyl-2-pentanone | ND | 0.500 | -- | ND | 2.05 | -- | | 1 |
| trans-1,3-Dichloropropene | ND | 0.200 | -- | ND | 0.908 | -- | | 1 |
| 1,1,2-Trichloroethane | ND | 0.200 | -- | ND | 1.09 | -- | | 1 |
| Toluene | ND | 0.200 | -- | ND | 0.754 | -- | | 1 |
| 2-Hexanone | ND | 0.200 | -- | ND | 0.820 | -- | | 1 |
| Dibromochloromethane | ND | 0.200 | -- | ND | 1.70 | -- | | 1 |
| 1,2-Dibromoethane | ND | 0.200 | -- | ND | 1.54 | -- | | 1 |
| Tetrachloroethene | ND | 0.200 | -- | ND | 1.36 | -- | | 1 |
| Chlorobenzene | ND | 0.200 | -- | ND | 0.921 | -- | | 1 |
| Ethylbenzene | ND | 0.200 | -- | ND | 0.869 | -- | | 1 |
| p/m-Xylene | ND | 0.400 | -- | ND | 1.74 | -- | | 1 |

**Project Name:** GROSSINGERS
**Project Number:** 9313:11
**Lab Number:** L2122115
**Report Date:** 05/05/21

# Method Blank Analysis
## Batch Quality Control

Analytical Method: 48,TO-15
Analytical Date: 05/04/21 14:30

| Parameter | ppbV Results | ppbV RL | ppbV MDL | ug/m3 Results | ug/m3 RL | ug/m3 MDL | Qualifier | Dilution Factor |
|---|---|---|---|---|---|---|---|---|
| Volatile Organics in Air - Mansfield Lab for sample(s): 01-03 Batch: WG1494290-4 | | | | | | | | |
| Bromoform | ND | 0.200 | -- | ND | 2.07 | -- | | 1 |
| Styrene | ND | 0.200 | -- | ND | 0.852 | -- | | 1 |
| 1,1,2,2-Tetrachloroethane | ND | 0.200 | -- | ND | 1.37 | -- | | 1 |
| o-Xylene | ND | 0.200 | -- | ND | 0.869 | -- | | 1 |
| 4-Ethyltoluene | ND | 0.200 | -- | ND | 0.983 | -- | | 1 |
| 1,3,5-Trimethylbenzene | ND | 0.200 | -- | ND | 0.983 | -- | | 1 |
| 1,2,4-Trimethylbenzene | ND | 0.200 | -- | ND | 0.983 | -- | | 1 |
| Benzyl chloride | ND | 0.200 | -- | ND | 1.04 | -- | | 1 |
| 1,3-Dichlorobenzene | ND | 0.200 | -- | ND | 1.20 | -- | | 1 |
| 1,4-Dichlorobenzene | ND | 0.200 | -- | ND | 1.20 | -- | | 1 |
| 1,2-Dichlorobenzene | ND | 0.200 | -- | ND | 1.20 | -- | | 1 |
| 1,2,4-Trichlorobenzene | ND | 0.200 | -- | ND | 1.48 | -- | | 1 |
| Hexachlorobutadiene | ND | 0.200 | -- | ND | 2.13 | -- | | 1 |

# Lab Control Sample Analysis
## Batch Quality Control

**Project Name:** GROSSINGERS
**Project Number:** 9313:11

**Lab Number:** L2122115
**Report Date:** 05/05/21

| Parameter | LCS %Recovery | Qual | LCSD %Recovery | Qual | %Recovery Limits | RPD | Qual | RPD Limits |
|---|---|---|---|---|---|---|---|---|
| Volatile Organics in Air - Mansfield Lab Associated sample(s): 01-03 Batch: WG1494290-3 | | | | | | | | |
| Dichlorodifluoromethane | 108 | | - | | 70-130 | - | | |
| Chloromethane | 107 | | - | | 70-130 | - | | |
| Freon-114 | 104 | | - | | 70-130 | - | | |
| Vinyl chloride | 104 | | - | | 70-130 | - | | |
| 1,3-Butadiene | 107 | | - | | 70-130 | - | | |
| Bromomethane | 98 | | - | | 70-130 | - | | |
| Chloroethane | 100 | | - | | 70-130 | - | | |
| Ethanol | 102 | | - | | 40-160 | - | | |
| Vinyl bromide | 97 | | - | | 70-130 | - | | |
| Acetone | 75 | | - | | 40-160 | - | | |
| Trichlorofluoromethane | 105 | | - | | 70-130 | - | | |
| Isopropanol | 77 | | - | | 40-160 | - | | |
| 1,1-Dichloroethene | 100 | | - | | 70-130 | - | | |
| Tertiary butyl Alcohol | 89 | | - | | 70-130 | - | | |
| Methylene chloride | 105 | | - | | 70-130 | - | | |
| 3-Chloropropene | 105 | | - | | 70-130 | - | | |
| Carbon disulfide | 93 | | - | | 70-130 | - | | |
| Freon-113 | 98 | | - | | 70-130 | - | | |
| trans-1,2-Dichloroethene | 93 | | - | | 70-130 | - | | |
| 1,1-Dichloroethane | 97 | | - | | 70-130 | - | | |
| Methyl tert butyl ether | 100 | | - | | 70-130 | - | | |
| 2-Butanone | 105 | | - | | 70-130 | - | | |
| cis-1,2-Dichloroethene | 103 | | - | | 70-130 | - | | |

# Lab Control Sample Analysis
## Batch Quality Control

**Project Name:** GROSSINGERS
**Project Number:** 9313:11

**Lab Number:** L2122115
**Report Date:** 05/05/21

| Parameter | LCS %Recovery | Qual | LCSD %Recovery | Qual | %Recovery Limits | RPD | Qual | RPD Limits |
|---|---|---|---|---|---|---|---|---|
| Volatile Organics in Air - Mansfield Lab Associated sample(s): 01-03 Batch: WG1494290-3 | | | | | | | | |
| Ethyl Acetate | 97 | | - | | 70-130 | - | | |
| Chloroform | 101 | | - | | 70-130 | - | | |
| Tetrahydrofuran | 104 | | - | | 70-130 | - | | |
| 1,2-Dichloroethane | 112 | | - | | 70-130 | - | | |
| n-Hexane | 99 | | - | | 70-130 | - | | |
| 1,1,1-Trichloroethane | 122 | | - | | 70-130 | - | | |
| Benzene | 99 | | - | | 70-130 | - | | |
| Carbon tetrachloride | 121 | | - | | 70-130 | - | | |
| Cyclohexane | 101 | | - | | 70-130 | - | | |
| 1,2-Dichloropropane | 106 | | - | | 70-130 | - | | |
| Bromodichloromethane | 112 | | - | | 70-130 | - | | |
| 1,4-Dioxane | 103 | | - | | 70-130 | - | | |
| Trichloroethene | 103 | | - | | 70-130 | - | | |
| 2,2,4-Trimethylpentane | 105 | | - | | 70-130 | - | | |
| Heptane | 116 | | - | | 70-130 | - | | |
| cis-1,3-Dichloropropene | 118 | | - | | 70-130 | - | | |
| 4-Methyl-2-pentanone | 120 | | - | | 70-130 | - | | |
| trans-1,3-Dichloropropene | 108 | | - | | 70-130 | - | | |
| 1,1,2-Trichloroethane | 111 | | - | | 70-130 | - | | |
| Toluene | 90 | | - | | 70-130 | - | | |
| 2-Hexanone | 103 | | - | | 70-130 | - | | |
| Dibromochloromethane | 101 | | - | | 70-130 | - | | |
| 1,2-Dibromoethane | 95 | | - | | 70-130 | - | | |

# Lab Control Sample Analysis

## Batch Quality Control

**Project Name:** GROSSINGERS

**Project Number:** 9313:11

**Lab Number:** L2122115

**Report Date:** 05/05/21

| Parameter | LCS %Recovery | Qual | LCSD %Recovery | Qual | %Recovery Limits | RPD | Qual | RPD Limits |
|---|---|---|---|---|---|---|---|---|
| Volatile Organics in Air - Mansfield Lab Associated sample(s): 01-03 Batch: WG1494290-3 | | | | | | | | |
| Tetrachloroethene | 84 | | - | | 70-130 | - | | |
| Chlorobenzene | 88 | | - | | 70-130 | - | | |
| Ethylbenzene | 96 | | - | | 70-130 | - | | |
| p/m-Xylene | 94 | | - | | 70-130 | - | | |
| Bromoform | 100 | | - | | 70-130 | - | | |
| Styrene | 93 | | - | | 70-130 | - | | |
| 1,1,2,2-Tetrachloroethane | 92 | | - | | 70-130 | - | | |
| o-Xylene | 97 | | - | | 70-130 | - | | |
| 4-Ethyltoluene | 95 | | - | | 70-130 | - | | |
| 1,3,5-Trimethylbenzene | 93 | | - | | 70-130 | - | | |
| 1,2,4-Trimethylbenzene | 96 | | - | | 70-130 | - | | |
| Benzyl chloride | 91 | | - | | 70-130 | - | | |
| 1,3-Dichlorobenzene | 85 | | - | | 70-130 | - | | |
| 1,4-Dichlorobenzene | 91 | | - | | 70-130 | - | | |
| 1,2-Dichlorobenzene | 88 | | - | | 70-130 | - | | |
| 1,2,4-Trichlorobenzene | 76 | | - | | 70-130 | - | | |
| Hexachlorobutadiene | 86 | | - | | 70-130 | - | | |

**Project Name:** GROSSINGERS

**Lab Number:** L2122115

**Project Number:** 9313:11

**Report Date:** 05/05/21

## Canister and Flow Controller Information

| Samplenum | Client ID | Media ID | Media Type | Date Prepared | Bottle Order | Cleaning Batch ID | Can Leak Check | Initial Pressure (in. Hg) | Pressure on Receipt (in. Hg) | Flow Controler Leak Chk | Flow Out mL/min | Flow In mL/min | % RPD |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| L2122115-01 | SMPV-1 | 01914 | SV200 | 04/26/21 | 350136 | | - | - | - | Pass | 219 | 220 | 0 |
| L2122115-01 | SMPV-1 | 2052 | 6.0L Can | 04/26/21 | 350136 | L2117575-02 | Pass | -29.6 | -6.5 | - | - | - | - |
| L2122115-02 | SMPV-2 | 0658 | SV200 | 04/26/21 | 350136 | | - | - | - | Pass | 219 | 224 | 2 |
| L2122115-02 | SMPV-2 | 2565 | 6.0L Can | 04/26/21 | 350136 | L2118246-02 | Pass | -29.4 | -5.9 | - | - | - | - |
| L2122115-03 | SMPV-3 | 0997 | SV200 | 04/26/21 | 350136 | | - | - | - | Pass | 220 | 223 | 1 |
| L2122115-03 | SMPV-3 | 1578 | 6.0L Can | 04/26/21 | 350136 | L2117575-02 | Pass | -28.5 | -7.1 | - | - | - | - |
| L2122115-04 | UNUSED CAN 2578 | 02119 | SV200 | 04/26/21 | 350136 | | - | - | - | Pass | 225 | 220 | 2 |
| L2122115-04 | UNUSED CAN 2578 | 2578 | 6.0L Can | 04/26/21 | 350136 | L2117575-02 | Pass | -29.1 | -29.7 | - | - | - | - |

**Project Name:** BATCH CANISTER CERTIFICATION
**Project Number:** CANISTER QC BAT
**Lab Number:** L2117575
**Report Date:** 05/05/21

# Air Canister Certification Results

Lab ID: L2117575-02
Client ID: CAN 3091 SHELF 46
Sample Location:

Date Collected: 04/07/21 16:00
Date Received: 04/08/21
Field Prep: Not Specified

Sample Depth:
Matrix: Air
Anaytical Method: 48,TO-15
Analytical Date: 04/08/21 17:35
Analyst: TS

| | ppbV | | | ug/m3 | | | | |
|---|---|---|---|---|---|---|---|---|
| **Parameter** | **Results** | **RL** | **MDL** | **Results** | **RL** | **MDL** | **Qualifier** | **Dilution Factor** |
| Volatile Organics in Air - Mansfield Lab | | | | | | | | |
| Chlorodifluoromethane | ND | 0.200 | -- | ND | 0.707 | -- | | 1 |
| Propylene | ND | 0.500 | -- | ND | 0.861 | -- | | 1 |
| Propane | ND | 0.500 | -- | ND | 0.902 | -- | | 1 |
| Dichlorodifluoromethane | ND | 0.200 | -- | ND | 0.989 | -- | | 1 |
| Chloromethane | ND | 0.200 | -- | ND | 0.413 | -- | | 1 |
| Freon-114 | ND | 0.200 | -- | ND | 1.40 | -- | | 1 |
| Methanol | ND | 5.00 | -- | ND | 6.55 | -- | | 1 |
| Vinyl chloride | ND | 0.200 | -- | ND | 0.511 | -- | | 1 |
| 1,3-Butadiene | ND | 0.200 | -- | ND | 0.442 | -- | | 1 |
| Butane | ND | 0.200 | -- | ND | 0.475 | -- | | 1 |
| Bromomethane | ND | 0.200 | -- | ND | 0.777 | -- | | 1 |
| Chloroethane | ND | 0.200 | -- | ND | 0.528 | -- | | 1 |
| Ethanol | ND | 5.00 | -- | ND | 9.42 | -- | | 1 |
| Dichlorofluoromethane | ND | 0.200 | -- | ND | 0.842 | -- | | 1 |
| Vinyl bromide | ND | 0.200 | -- | ND | 0.874 | -- | | 1 |
| Acrolein | ND | 0.500 | -- | ND | 1.15 | -- | | 1 |
| Acetone | ND | 1.00 | -- | ND | 2.38 | -- | | 1 |
| Acetonitrile | ND | 0.200 | -- | ND | 0.336 | -- | | 1 |
| Trichlorofluoromethane | ND | 0.200 | -- | ND | 1.12 | -- | | 1 |
| Isopropanol | ND | 0.500 | -- | ND | 1.23 | -- | | 1 |
| Acrylonitrile | ND | 0.500 | -- | ND | 1.09 | -- | | 1 |
| Pentane | ND | 0.200 | -- | ND | 0.590 | -- | | 1 |
| Ethyl ether | ND | 0.200 | -- | ND | 0.606 | -- | | 1 |
| 1,1-Dichloroethene | ND | 0.200 | -- | ND | 0.793 | -- | | 1 |

**Project Name:** BATCH CANISTER CERTIFICATION
**Project Number:** CANISTER QC BAT

**Lab Number:** L2117575
**Report Date:** 05/05/21

# Air Canister Certification Results

Lab ID: L2117575-02
Client ID: CAN 3091 SHELF 46
Sample Location:

Date Collected: 04/07/21 16:00
Date Received: 04/08/21
Field Prep: Not Specified

Sample Depth:

| Parameter | ppbV Results | ppbV RL | ppbV MDL | ug/m3 Results | ug/m3 RL | ug/m3 MDL | Qualifier | Dilution Factor |
|---|---|---|---|---|---|---|---|---|
| **Volatile Organics in Air - Mansfield Lab** | | | | | | | | |
| Tertiary butyl Alcohol | ND | 0.500 | -- | ND | 1.52 | -- | | 1 |
| Methylene chloride | ND | 0.500 | -- | ND | 1.74 | -- | | 1 |
| 3-Chloropropene | ND | 0.200 | -- | ND | 0.626 | -- | | 1 |
| Carbon disulfide | ND | 0.200 | -- | ND | 0.623 | -- | | 1 |
| Freon-113 | ND | 0.200 | -- | ND | 1.53 | -- | | 1 |
| trans-1,2-Dichloroethene | ND | 0.200 | -- | ND | 0.793 | -- | | 1 |
| 1,1-Dichloroethane | ND | 0.200 | -- | ND | 0.809 | -- | | 1 |
| Methyl tert butyl ether | ND | 0.200 | -- | ND | 0.721 | -- | | 1 |
| Vinyl acetate | ND | 1.00 | -- | ND | 3.52 | -- | | 1 |
| Xylenes, total | ND | 0.600 | -- | ND | 0.869 | -- | | 1 |
| 2-Butanone | ND | 0.500 | -- | ND | 1.47 | -- | | 1 |
| cis-1,2-Dichloroethene | ND | 0.200 | -- | ND | 0.793 | -- | | 1 |
| Ethyl Acetate | ND | 0.500 | -- | ND | 1.80 | -- | | 1 |
| Chloroform | ND | 0.200 | -- | ND | 0.977 | -- | | 1 |
| Tetrahydrofuran | ND | 0.500 | -- | ND | 1.47 | -- | | 1 |
| 2,2-Dichloropropane | ND | 0.200 | -- | ND | 0.924 | -- | | 1 |
| 1,2-Dichloroethane | ND | 0.200 | -- | ND | 0.809 | -- | | 1 |
| n-Hexane | ND | 0.200 | -- | ND | 0.705 | -- | | 1 |
| Diisopropyl ether | ND | 0.200 | -- | ND | 0.836 | -- | | 1 |
| tert-Butyl Ethyl Ether | ND | 0.200 | -- | ND | 0.836 | -- | | 1 |
| 1,2-Dichloroethene (total) | ND | 1.00 | -- | ND | 1.00 | -- | | 1 |
| 1,1,1-Trichloroethane | ND | 0.200 | -- | ND | 1.09 | -- | | 1 |
| 1,1-Dichloropropene | ND | 0.200 | -- | ND | 0.908 | -- | | 1 |
| Benzene | ND | 0.200 | -- | ND | 0.639 | -- | | 1 |
| Carbon tetrachloride | ND | 0.200 | -- | ND | 1.26 | -- | | 1 |
| Cyclohexane | ND | 0.200 | -- | ND | 0.688 | -- | | 1 |
| tert-Amyl Methyl Ether | ND | 0.200 | -- | ND | 0.836 | -- | | 1 |

**Project Name:** BATCH CANISTER CERTIFICATION
**Project Number:** CANISTER QC BAT

**Lab Number:** L2117575
**Report Date:** 05/05/21

# Air Canister Certification Results

Lab ID: L2117575-02
Client ID: CAN 3091 SHELF 46
Sample Location:

Date Collected: 04/07/21 16:00
Date Received: 04/08/21
Field Prep: Not Specified

Sample Depth:

| Parameter | ppbV Results | ppbV RL | ppbV MDL | ug/m3 Results | ug/m3 RL | ug/m3 MDL | Qualifier | Dilution Factor |
|---|---|---|---|---|---|---|---|---|
| Volatile Organics in Air - Mansfield Lab | | | | | | | | |
| Dibromomethane | ND | 0.200 | -- | ND | 1.42 | -- | | 1 |
| 1,2-Dichloropropane | ND | 0.200 | -- | ND | 0.924 | -- | | 1 |
| Bromodichloromethane | ND | 0.200 | -- | ND | 1.34 | -- | | 1 |
| 1,4-Dioxane | ND | 0.200 | -- | ND | 0.721 | -- | | 1 |
| Trichloroethene | ND | 0.200 | -- | ND | 1.07 | -- | | 1 |
| 2,2,4-Trimethylpentane | ND | 0.200 | -- | ND | 0.934 | -- | | 1 |
| Methyl Methacrylate | ND | 0.500 | -- | ND | 2.05 | -- | | 1 |
| Heptane | ND | 0.200 | -- | ND | 0.820 | -- | | 1 |
| cis-1,3-Dichloropropene | ND | 0.200 | -- | ND | 0.908 | -- | | 1 |
| 4-Methyl-2-pentanone | ND | 0.500 | -- | ND | 2.05 | -- | | 1 |
| trans-1,3-Dichloropropene | ND | 0.200 | -- | ND | 0.908 | -- | | 1 |
| 1,1,2-Trichloroethane | ND | 0.200 | -- | ND | 1.09 | -- | | 1 |
| Toluene | ND | 0.200 | -- | ND | 0.754 | -- | | 1 |
| 1,3-Dichloropropane | ND | 0.200 | -- | ND | 0.924 | -- | | 1 |
| 2-Hexanone | ND | 0.200 | -- | ND | 0.820 | -- | | 1 |
| Dibromochloromethane | ND | 0.200 | -- | ND | 1.70 | -- | | 1 |
| 1,2-Dibromoethane | ND | 0.200 | -- | ND | 1.54 | -- | | 1 |
| Butyl acetate | ND | 0.500 | -- | ND | 2.38 | -- | | 1 |
| Octane | ND | 0.200 | -- | ND | 0.934 | -- | | 1 |
| Tetrachloroethene | ND | 0.200 | -- | ND | 1.36 | -- | | 1 |
| 1,1,1,2-Tetrachloroethane | ND | 0.200 | -- | ND | 1.37 | -- | | 1 |
| Chlorobenzene | ND | 0.200 | -- | ND | 0.921 | -- | | 1 |
| Ethylbenzene | ND | 0.200 | -- | ND | 0.869 | -- | | 1 |
| p/m-Xylene | ND | 0.400 | -- | ND | 1.74 | -- | | 1 |
| Bromoform | ND | 0.200 | -- | ND | 2.07 | -- | | 1 |
| Styrene | ND | 0.200 | -- | ND | 0.852 | -- | | 1 |
| 1,1,2,2-Tetrachloroethane | ND | 0.200 | -- | ND | 1.37 | -- | | 1 |

**Project Name:** BATCH CANISTER CERTIFICATION
**Project Number:** CANISTER QC BAT
**Lab Number:** L2117575
**Report Date:** 05/05/21

# Air Canister Certification Results

Lab ID: L2117575-02
Client ID: CAN 3091 SHELF 46
Sample Location:

Date Collected: 04/07/21 16:00
Date Received: 04/08/21
Field Prep: Not Specified

Sample Depth:

| Parameter | ppbV Results | ppbV RL | ppbV MDL | ug/m3 Results | ug/m3 RL | ug/m3 MDL | Qualifier | Dilution Factor |
|---|---|---|---|---|---|---|---|---|
| Volatile Organics in Air - Mansfield Lab | | | | | | | | |
| o-Xylene | ND | 0.200 | -- | ND | 0.869 | -- | | 1 |
| 1,2,3-Trichloropropane | ND | 0.200 | -- | ND | 1.21 | -- | | 1 |
| Nonane | ND | 0.200 | -- | ND | 1.05 | -- | | 1 |
| Isopropylbenzene | ND | 0.200 | -- | ND | 0.983 | -- | | 1 |
| Bromobenzene | ND | 0.200 | -- | ND | 0.793 | -- | | 1 |
| 2-Chlorotoluene | ND | 0.200 | -- | ND | 1.04 | -- | | 1 |
| n-Propylbenzene | ND | 0.200 | -- | ND | 0.983 | -- | | 1 |
| 4-Chlorotoluene | ND | 0.200 | -- | ND | 1.04 | -- | | 1 |
| 4-Ethyltoluene | ND | 0.200 | -- | ND | 0.983 | -- | | 1 |
| 1,3,5-Trimethylbenzene | ND | 0.200 | -- | ND | 0.983 | -- | | 1 |
| tert-Butylbenzene | ND | 0.200 | -- | ND | 1.10 | -- | | 1 |
| 1,2,4-Trimethylbenzene | ND | 0.200 | -- | ND | 0.983 | -- | | 1 |
| Decane | ND | 0.200 | -- | ND | 1.16 | -- | | 1 |
| Benzyl chloride | ND | 0.200 | -- | ND | 1.04 | -- | | 1 |
| 1,3-Dichlorobenzene | ND | 0.200 | -- | ND | 1.20 | -- | | 1 |
| 1,4-Dichlorobenzene | ND | 0.200 | -- | ND | 1.20 | -- | | 1 |
| sec-Butylbenzene | ND | 0.200 | -- | ND | 1.10 | -- | | 1 |
| p-Isopropyltoluene | ND | 0.200 | -- | ND | 1.10 | -- | | 1 |
| 1,2-Dichlorobenzene | ND | 0.200 | -- | ND | 1.20 | -- | | 1 |
| n-Butylbenzene | ND | 0.200 | -- | ND | 1.10 | -- | | 1 |
| 1,2-Dibromo-3-chloropropane | ND | 0.200 | -- | ND | 1.93 | -- | | 1 |
| Undecane | ND | 0.200 | -- | ND | 1.28 | -- | | 1 |
| Dodecane | ND | 0.200 | -- | ND | 1.39 | -- | | 1 |
| 1,2,4-Trichlorobenzene | ND | 0.200 | -- | ND | 1.48 | -- | | 1 |
| Naphthalene | ND | 0.200 | -- | ND | 1.05 | -- | | 1 |
| 1,2,3-Trichlorobenzene | ND | 0.200 | -- | ND | 1.48 | -- | | 1 |
| Hexachlorobutadiene | ND | 0.200 | -- | ND | 2.13 | -- | | 1 |

**Project Name:** BATCH CANISTER CERTIFICATION
**Project Number:** CANISTER QC BAT
**Lab Number:** L2117575
**Report Date:** 05/05/21

# Air Canister Certification Results

Lab ID: L2117575-02
Client ID: CAN 3091 SHELF 46
Sample Location:

Date Collected: 04/07/21 16:00
Date Received: 04/08/21
Field Prep: Not Specified

Sample Depth:

| Parameter | ppbV Results | ppbV RL | ppbV MDL | ug/m3 Results | ug/m3 RL | ug/m3 MDL | Qualifier | Dilution Factor |
|---|---|---|---|---|---|---|---|---|
| Volatile Organics in Air - Mansfield Lab | | | | | | | | |

| | Results | Qualifier | Units | RDL | Dilution Factor |
|---|---|---|---|---|---|
| Tentatively Identified Compounds | | | | | |

No Tentatively Identified Compounds

| Internal Standard | % Recovery | Qualifier | Acceptance Criteria |
|---|---|---|---|
| 1,4-Difluorobenzene | 92 | | 60-140 |
| Bromochloromethane | 96 | | 60-140 |
| chlorobenzene-d5 | 88 | | 60-140 |

**Project Name:** BATCH CANISTER CERTIFICATION
**Project Number:** CANISTER QC BAT

**Lab Number:** L2117575
**Report Date:** 05/05/21

# Air Canister Certification Results

Lab ID: L2117575-02
Client ID: CAN 3091 SHELF 46
Sample Location:

Date Collected: 04/07/21 16:00
Date Received: 04/08/21
Field Prep: Not Specified

Sample Depth:
Matrix: Air
Anaytical Method: 48,TO-15-SIM
Analytical Date: 04/08/21 17:35
Analyst: TS

| | ppbV | | | ug/m3 | | | | |
|---|---|---|---|---|---|---|---|---|
| **Parameter** | **Results** | **RL** | **MDL** | **Results** | **RL** | **MDL** | **Qualifier** | **Dilution Factor** |
| Volatile Organics in Air by SIM - Mansfield Lab | | | | | | | | |
| Dichlorodifluoromethane | ND | 0.200 | -- | ND | 0.989 | -- | | 1 |
| Chloromethane | ND | 0.200 | -- | ND | 0.413 | -- | | 1 |
| Freon-114 | ND | 0.050 | -- | ND | 0.349 | -- | | 1 |
| Vinyl chloride | ND | 0.020 | -- | ND | 0.051 | -- | | 1 |
| 1,3-Butadiene | ND | 0.020 | -- | ND | 0.044 | -- | | 1 |
| Bromomethane | ND | 0.020 | -- | ND | 0.078 | -- | | 1 |
| Chloroethane | ND | 0.100 | -- | ND | 0.264 | -- | | 1 |
| Acrolein | ND | 0.050 | -- | ND | 0.115 | -- | | 1 |
| Acetone | ND | 1.00 | -- | ND | 2.38 | -- | | 1 |
| Trichlorofluoromethane | ND | 0.050 | -- | ND | 0.281 | -- | | 1 |
| Acrylonitrile | ND | 0.500 | -- | ND | 1.09 | -- | | 1 |
| 1,1-Dichloroethene | ND | 0.020 | -- | ND | 0.079 | -- | | 1 |
| Methylene chloride | ND | 0.500 | -- | ND | 1.74 | -- | | 1 |
| Freon-113 | ND | 0.050 | -- | ND | 0.383 | -- | | 1 |
| trans-1,2-Dichloroethene | ND | 0.020 | -- | ND | 0.079 | -- | | 1 |
| 1,1-Dichloroethane | ND | 0.020 | -- | ND | 0.081 | -- | | 1 |
| Methyl tert butyl ether | ND | 0.200 | -- | ND | 0.721 | -- | | 1 |
| 2-Butanone | ND | 0.500 | -- | ND | 1.47 | -- | | 1 |
| cis-1,2-Dichloroethene | ND | 0.020 | -- | ND | 0.079 | -- | | 1 |
| Chloroform | ND | 0.020 | -- | ND | 0.098 | -- | | 1 |
| 1,2-Dichloroethane | ND | 0.020 | -- | ND | 0.081 | -- | | 1 |
| 1,1,1-Trichloroethane | ND | 0.020 | -- | ND | 0.109 | -- | | 1 |
| Benzene | ND | 0.100 | -- | ND | 0.319 | -- | | 1 |
| Carbon tetrachloride | ND | 0.020 | -- | ND | 0.126 | -- | | 1 |

**Project Name:** BATCH CANISTER CERTIFICATION
**Project Number:** CANISTER QC BAT
**Lab Number:** L2117575
**Report Date:** 05/05/21

# Air Canister Certification Results

Lab ID: L2117575-02
Client ID: CAN 3091 SHELF 46
Sample Location:

Date Collected: 04/07/21 16:00
Date Received: 04/08/21
Field Prep: Not Specified

Sample Depth:

| Parameter | ppbV Results | ppbV RL | ppbV MDL | ug/m3 Results | ug/m3 RL | ug/m3 MDL | Qualifier | Dilution Factor |
|---|---|---|---|---|---|---|---|---|
| Volatile Organics in Air by SIM - Mansfield Lab | | | | | | | | |
| 1,2-Dichloropropane | ND | 0.020 | -- | ND | 0.092 | -- | | 1 |
| Bromodichloromethane | ND | 0.020 | -- | ND | 0.134 | -- | | 1 |
| 1,4-Dioxane | ND | 0.100 | -- | ND | 0.360 | -- | | 1 |
| Trichloroethene | ND | 0.020 | -- | ND | 0.107 | -- | | 1 |
| cis-1,3-Dichloropropene | ND | 0.020 | -- | ND | 0.091 | -- | | 1 |
| 4-Methyl-2-pentanone | ND | 0.500 | -- | ND | 2.05 | -- | | 1 |
| trans-1,3-Dichloropropene | ND | 0.020 | -- | ND | 0.091 | -- | | 1 |
| 1,1,2-Trichloroethane | ND | 0.020 | -- | ND | 0.109 | -- | | 1 |
| Toluene | ND | 0.050 | -- | ND | 0.188 | -- | | 1 |
| Dibromochloromethane | ND | 0.020 | -- | ND | 0.170 | -- | | 1 |
| 1,2-Dibromoethane | ND | 0.020 | -- | ND | 0.154 | -- | | 1 |
| Tetrachloroethene | ND | 0.020 | -- | ND | 0.136 | -- | | 1 |
| 1,1,1,2-Tetrachloroethane | ND | 0.020 | -- | ND | 0.137 | -- | | 1 |
| Chlorobenzene | ND | 0.100 | -- | ND | 0.461 | -- | | 1 |
| Ethylbenzene | ND | 0.020 | -- | ND | 0.087 | -- | | 1 |
| p/m-Xylene | ND | 0.040 | -- | ND | 0.174 | -- | | 1 |
| Bromoform | ND | 0.020 | -- | ND | 0.207 | -- | | 1 |
| Styrene | ND | 0.020 | -- | ND | 0.085 | -- | | 1 |
| 1,1,2,2-Tetrachloroethane | ND | 0.020 | -- | ND | 0.137 | -- | | 1 |
| o-Xylene | ND | 0.020 | -- | ND | 0.087 | -- | | 1 |
| Isopropylbenzene | ND | 0.200 | -- | ND | 0.983 | -- | | 1 |
| 4-Ethyltoluene | ND | 0.020 | -- | ND | 0.098 | -- | | 1 |
| 1,3,5-Trimethybenzene | ND | 0.020 | -- | ND | 0.098 | -- | | 1 |
| 1,2,4-Trimethylbenzene | ND | 0.020 | -- | ND | 0.098 | -- | | 1 |
| Benzyl chloride | ND | 0.200 | -- | ND | 1.04 | -- | | 1 |
| 1,3-Dichlorobenzene | ND | 0.020 | -- | ND | 0.120 | -- | | 1 |
| 1,4-Dichlorobenzene | ND | 0.020 | -- | ND | 0.120 | -- | | 1 |

**Project Name:** BATCH CANISTER CERTIFICATION **Lab Number:** L2117575

**Project Number:** CANISTER QC BAT **Report Date:** 05/05/21

# Air Canister Certification Results

Lab ID: L2117575-02
Client ID: CAN 3091 SHELF 46
Sample Location:

Date Collected: 04/07/21 16:00
Date Received: 04/08/21
Field Prep: Not Specified

Sample Depth:

| Parameter | ppbV Results | ppbV RL | ppbV MDL | ug/m3 Results | ug/m3 RL | ug/m3 MDL | Qualifier | Dilution Factor |
|---|---|---|---|---|---|---|---|---|
| Volatile Organics in Air by SIM - Mansfield Lab | | | | | | | | |
| sec-Butylbenzene | ND | 0.200 | -- | ND | 1.10 | -- | | 1 |
| p-Isopropyltoluene | ND | 0.200 | -- | ND | 1.10 | -- | | 1 |
| 1,2-Dichlorobenzene | ND | 0.020 | -- | ND | 0.120 | -- | | 1 |
| n-Butylbenzene | ND | 0.200 | -- | ND | 1.10 | -- | | 1 |
| 1,2,4-Trichlorobenzene | ND | 0.050 | -- | ND | 0.371 | -- | | 1 |
| Naphthalene | ND | 0.050 | -- | ND | 0.262 | -- | | 1 |
| 1,2,3-Trichlorobenzene | ND | 0.050 | -- | ND | 0.371 | -- | | 1 |
| Hexachlorobutadiene | ND | 0.050 | -- | ND | 0.533 | -- | | 1 |

| Internal Standard | % Recovery | Qualifier | Acceptance Criteria |
|---|---|---|---|
| 1,4-difluorobenzene | 92 | | 60-140 |
| bromochloromethane | 97 | | 60-140 |
| chlorobenzene-d5 | 88 | | 60-140 |

**Project Name:** BATCH CANISTER CERTIFICATION
**Project Number:** CANISTER QC BAT

**Lab Number:** L2118246
**Report Date:** 05/05/21

# Air Canister Certification Results

Lab ID: L2118246-02
Client ID: CAN 1553 SHELF 40
Sample Location:

Date Collected: 04/09/21 16:00
Date Received: 04/12/21
Field Prep: Not Specified

Sample Depth:
Matrix: Air
Anaytical Method: 48,TO-15
Analytical Date: 04/12/21 17:16
Analyst: EW

| | ppbV | | | ug/m3 | | | | |
|---|---|---|---|---|---|---|---|---|
| **Parameter** | **Results** | **RL** | **MDL** | **Results** | **RL** | **MDL** | **Qualifier** | **Dilution Factor** |
| Volatile Organics in Air - Mansfield Lab | | | | | | | | |
| Chlorodifluoromethane | ND | 0.200 | -- | ND | 0.707 | -- | | 1 |
| Propylene | ND | 0.500 | -- | ND | 0.861 | -- | | 1 |
| Propane | ND | 0.500 | -- | ND | 0.902 | -- | | 1 |
| Dichlorodifluoromethane | ND | 0.200 | -- | ND | 0.989 | -- | | 1 |
| Chloromethane | ND | 0.200 | -- | ND | 0.413 | -- | | 1 |
| Freon-114 | ND | 0.200 | -- | ND | 1.40 | -- | | 1 |
| Methanol | ND | 5.00 | -- | ND | 6.55 | -- | | 1 |
| Vinyl chloride | ND | 0.200 | -- | ND | 0.511 | -- | | 1 |
| 1,3-Butadiene | ND | 0.200 | -- | ND | 0.442 | -- | | 1 |
| Butane | ND | 0.200 | -- | ND | 0.475 | -- | | 1 |
| Bromomethane | ND | 0.200 | -- | ND | 0.777 | -- | | 1 |
| Chloroethane | ND | 0.200 | -- | ND | 0.528 | -- | | 1 |
| Ethanol | ND | 5.00 | -- | ND | 9.42 | -- | | 1 |
| Dichlorofluoromethane | ND | 0.200 | -- | ND | 0.842 | -- | | 1 |
| Vinyl bromide | ND | 0.200 | -- | ND | 0.874 | -- | | 1 |
| Acrolein | ND | 0.500 | -- | ND | 1.15 | -- | | 1 |
| Acetone | ND | 1.00 | -- | ND | 2.38 | -- | | 1 |
| Acetonitrile | ND | 0.200 | -- | ND | 0.336 | -- | | 1 |
| Trichlorofluoromethane | ND | 0.200 | -- | ND | 1.12 | -- | | 1 |
| Isopropanol | ND | 0.500 | -- | ND | 1.23 | -- | | 1 |
| Acrylonitrile | ND | 0.500 | -- | ND | 1.09 | -- | | 1 |
| Pentane | ND | 0.200 | -- | ND | 0.590 | -- | | 1 |
| Ethyl ether | ND | 0.200 | -- | ND | 0.606 | -- | | 1 |
| 1,1-Dichloroethene | ND | 0.200 | -- | ND | 0.793 | -- | | 1 |

**Project Name:** BATCH CANISTER CERTIFICATION
**Project Number:** CANISTER QC BAT
**Lab Number:** L2118246
**Report Date:** 05/05/21

# Air Canister Certification Results

Lab ID: L2118246-02
Client ID: CAN 1553 SHELF 40
Sample Location:

Date Collected: 04/09/21 16:00
Date Received: 04/12/21
Field Prep: Not Specified

Sample Depth:

| Parameter | ppbV Results | ppbV RL | ppbV MDL | ug/m3 Results | ug/m3 RL | ug/m3 MDL | Qualifier | Dilution Factor |
|---|---|---|---|---|---|---|---|---|
| **Volatile Organics in Air - Mansfield Lab** | | | | | | | | |
| Tertiary butyl Alcohol | ND | 0.500 | -- | ND | 1.52 | -- | | 1 |
| Methylene chloride | ND | 0.500 | -- | ND | 1.74 | -- | | 1 |
| 3-Chloropropene | ND | 0.200 | -- | ND | 0.626 | -- | | 1 |
| Carbon disulfide | ND | 0.200 | -- | ND | 0.623 | -- | | 1 |
| Freon-113 | ND | 0.200 | -- | ND | 1.53 | -- | | 1 |
| trans-1,2-Dichloroethene | ND | 0.200 | -- | ND | 0.793 | -- | | 1 |
| 1,1-Dichloroethane | ND | 0.200 | -- | ND | 0.809 | -- | | 1 |
| Methyl tert butyl ether | ND | 0.200 | -- | ND | 0.721 | -- | | 1 |
| Vinyl acetate | ND | 1.00 | -- | ND | 3.52 | -- | | 1 |
| Xylenes, total | ND | 0.600 | -- | ND | 0.869 | -- | | 1 |
| 2-Butanone | ND | 0.500 | -- | ND | 1.47 | -- | | 1 |
| cis-1,2-Dichloroethene | ND | 0.200 | -- | ND | 0.793 | -- | | 1 |
| Ethyl Acetate | ND | 0.500 | -- | ND | 1.80 | -- | | 1 |
| Chloroform | ND | 0.200 | -- | ND | 0.977 | -- | | 1 |
| Tetrahydrofuran | ND | 0.500 | -- | ND | 1.47 | -- | | 1 |
| 2,2-Dichloropropane | ND | 0.200 | -- | ND | 0.924 | -- | | 1 |
| 1,2-Dichloroethane | ND | 0.200 | -- | ND | 0.809 | -- | | 1 |
| n-Hexane | ND | 0.200 | -- | ND | 0.705 | -- | | 1 |
| Diisopropyl ether | ND | 0.200 | -- | ND | 0.836 | -- | | 1 |
| tert-Butyl Ethyl Ether | ND | 0.200 | -- | ND | 0.836 | -- | | 1 |
| 1,2-Dichloroethene (total) | ND | 1.00 | -- | ND | 1.00 | -- | | 1 |
| 1,1,1-Trichloroethane | ND | 0.200 | -- | ND | 1.09 | -- | | 1 |
| 1,1-Dichloropropene | ND | 0.200 | -- | ND | 0.908 | -- | | 1 |
| Benzene | ND | 0.200 | -- | ND | 0.639 | -- | | 1 |
| Carbon tetrachloride | ND | 0.200 | -- | ND | 1.26 | -- | | 1 |
| Cyclohexane | ND | 0.200 | -- | ND | 0.688 | -- | | 1 |
| tert-Amyl Methyl Ether | ND | 0.200 | -- | ND | 0.836 | -- | | 1 |

**Project Name:** BATCH CANISTER CERTIFICATION
**Project Number:** CANISTER QC BAT
**Lab Number:** L2118246
**Report Date:** 05/05/21

# Air Canister Certification Results

Lab ID: L2118246-02
Client ID: CAN 1553 SHELF 40
Sample Location:

Date Collected: 04/09/21 16:00
Date Received: 04/12/21
Field Prep: Not Specified

Sample Depth:

| Parameter | ppbV Results | ppbV RL | ppbV MDL | ug/m3 Results | ug/m3 RL | ug/m3 MDL | Qualifier | Dilution Factor |
|---|---|---|---|---|---|---|---|---|
| Volatile Organics in Air - Mansfield Lab | | | | | | | | |
| Dibromomethane | ND | 0.200 | -- | ND | 1.42 | -- | | 1 |
| 1,2-Dichloropropane | ND | 0.200 | -- | ND | 0.924 | -- | | 1 |
| Bromodichloromethane | ND | 0.200 | -- | ND | 1.34 | -- | | 1 |
| 1,4-Dioxane | ND | 0.200 | -- | ND | 0.721 | -- | | 1 |
| Trichloroethene | ND | 0.200 | -- | ND | 1.07 | -- | | 1 |
| 2,2,4-Trimethylpentane | ND | 0.200 | -- | ND | 0.934 | -- | | 1 |
| Methyl Methacrylate | ND | 0.500 | -- | ND | 2.05 | -- | | 1 |
| Heptane | ND | 0.200 | -- | ND | 0.820 | -- | | 1 |
| cis-1,3-Dichloropropene | ND | 0.200 | -- | ND | 0.908 | -- | | 1 |
| 4-Methyl-2-pentanone | ND | 0.500 | -- | ND | 2.05 | -- | | 1 |
| trans-1,3-Dichloropropene | ND | 0.200 | -- | ND | 0.908 | -- | | 1 |
| 1,1,2-Trichloroethane | ND | 0.200 | -- | ND | 1.09 | -- | | 1 |
| Toluene | ND | 0.200 | -- | ND | 0.754 | -- | | 1 |
| 1,3-Dichloropropane | ND | 0.200 | -- | ND | 0.924 | -- | | 1 |
| 2-Hexanone | ND | 0.200 | -- | ND | 0.820 | -- | | 1 |
| Dibromochloromethane | ND | 0.200 | -- | ND | 1.70 | -- | | 1 |
| 1,2-Dibromoethane | ND | 0.200 | -- | ND | 1.54 | -- | | 1 |
| Butyl acetate | ND | 0.500 | -- | ND | 2.38 | -- | | 1 |
| Octane | ND | 0.200 | -- | ND | 0.934 | -- | | 1 |
| Tetrachloroethene | ND | 0.200 | -- | ND | 1.36 | -- | | 1 |
| 1,1,1,2-Tetrachloroethane | ND | 0.200 | -- | ND | 1.37 | -- | | 1 |
| Chlorobenzene | ND | 0.200 | -- | ND | 0.921 | -- | | 1 |
| Ethylbenzene | ND | 0.200 | -- | ND | 0.869 | -- | | 1 |
| p/m-Xylene | ND | 0.400 | -- | ND | 1.74 | -- | | 1 |
| Bromoform | ND | 0.200 | -- | ND | 2.07 | -- | | 1 |
| Styrene | ND | 0.200 | -- | ND | 0.852 | -- | | 1 |
| 1,1,2,2-Tetrachloroethane | ND | 0.200 | -- | ND | 1.37 | -- | | 1 |

**Project Name:** BATCH CANISTER CERTIFICATION **Lab Number:** L2118246

**Project Number:** CANISTER QC BAT **Report Date:** 05/05/21

# Air Canister Certification Results

Lab ID: L2118246-02
Client ID: CAN 1553 SHELF 40
Sample Location:

Date Collected: 04/09/21 16:00
Date Received: 04/12/21
Field Prep: Not Specified

Sample Depth:

| Parameter | ppbV Results | ppbV RL | ppbV MDL | ug/m3 Results | ug/m3 RL | ug/m3 MDL | Qualifier | Dilution Factor |
|---|---|---|---|---|---|---|---|---|
| Volatile Organics in Air - Mansfield Lab | | | | | | | | |
| o-Xylene | ND | 0.200 | -- | ND | 0.869 | -- | | 1 |
| 1,2,3-Trichloropropane | ND | 0.200 | -- | ND | 1.21 | -- | | 1 |
| Nonane | ND | 0.200 | -- | ND | 1.05 | -- | | 1 |
| Isopropylbenzene | ND | 0.200 | -- | ND | 0.983 | -- | | 1 |
| Bromobenzene | ND | 0.200 | -- | ND | 0.793 | -- | | 1 |
| 2-Chlorotoluene | ND | 0.200 | -- | ND | 1.04 | -- | | 1 |
| n-Propylbenzene | ND | 0.200 | -- | ND | 0.983 | -- | | 1 |
| 4-Chlorotoluene | ND | 0.200 | -- | ND | 1.04 | -- | | 1 |
| 4-Ethyltoluene | ND | 0.200 | -- | ND | 0.983 | -- | | 1 |
| 1,3,5-Trimethylbenzene | ND | 0.200 | -- | ND | 0.983 | -- | | 1 |
| tert-Butylbenzene | ND | 0.200 | -- | ND | 1.10 | -- | | 1 |
| 1,2,4-Trimethylbenzene | ND | 0.200 | -- | ND | 0.983 | -- | | 1 |
| Decane | ND | 0.200 | -- | ND | 1.16 | -- | | 1 |
| Benzyl chloride | ND | 0.200 | -- | ND | 1.04 | -- | | 1 |
| 1,3-Dichlorobenzene | ND | 0.200 | -- | ND | 1.20 | -- | | 1 |
| 1,4-Dichlorobenzene | ND | 0.200 | -- | ND | 1.20 | -- | | 1 |
| sec-Butylbenzene | ND | 0.200 | -- | ND | 1.10 | -- | | 1 |
| p-Isopropyltoluene | ND | 0.200 | -- | ND | 1.10 | -- | | 1 |
| 1,2-Dichlorobenzene | ND | 0.200 | -- | ND | 1.20 | -- | | 1 |
| n-Butylbenzene | ND | 0.200 | -- | ND | 1.10 | -- | | 1 |
| 1,2-Dibromo-3-chloropropane | ND | 0.200 | -- | ND | 1.93 | -- | | 1 |
| Undecane | ND | 0.200 | -- | ND | 1.28 | -- | | 1 |
| Dodecane | ND | 0.200 | -- | ND | 1.39 | -- | | 1 |
| 1,2,4-Trichlorobenzene | ND | 0.200 | -- | ND | 1.48 | -- | | 1 |
| Naphthalene | ND | 0.200 | -- | ND | 1.05 | -- | | 1 |
| 1,2,3-Trichlorobenzene | ND | 0.200 | -- | ND | 1.48 | -- | | 1 |
| Hexachlorobutadiene | ND | 0.200 | -- | ND | 2.13 | -- | | 1 |

**Project Name:** BATCH CANISTER CERTIFICATION
**Project Number:** CANISTER QC BAT
**Lab Number:** L2118246
**Report Date:** 05/05/21

# Air Canister Certification Results

Lab ID: L2118246-02
Client ID: CAN 1553 SHELF 40
Sample Location:

Date Collected: 04/09/21 16:00
Date Received: 04/12/21
Field Prep: Not Specified

Sample Depth:

| Parameter | ppbV Results | ppbV RL | ppbV MDL | ug/m3 Results | ug/m3 RL | ug/m3 MDL | Qualifier | Dilution Factor |
|---|---|---|---|---|---|---|---|---|
| Volatile Organics in Air - Mansfield Lab | | | | | | | | |

| | Results | Qualifier | Units | RDL | Dilution Factor |
|---|---|---|---|---|---|
| Tentatively Identified Compounds | | | | | |

No Tentatively Identified Compounds

| Internal Standard | % Recovery | Qualifier | Acceptance Criteria |
|---|---|---|---|
| 1,4-Difluorobenzene | 94 | | 60-140 |
| Bromochloromethane | 96 | | 60-140 |
| chlorobenzene-d5 | 90 | | 60-140 |

**Project Name:** BATCH CANISTER CERTIFICATION
**Project Number:** CANISTER QC BAT

**Lab Number:** L2118246
**Report Date:** 05/05/21

# Air Canister Certification Results

Lab ID: L2118246-02
Client ID: CAN 1553 SHELF 40
Sample Location:

Date Collected: 04/09/21 16:00
Date Received: 04/12/21
Field Prep: Not Specified

Sample Depth:
Matrix: Air
Anaytical Method: 48,TO-15-SIM
Analytical Date: 04/12/21 17:16
Analyst: EW

| | ppbV | | | ug/m3 | | | | |
|---|---|---|---|---|---|---|---|---|
| **Parameter** | **Results** | **RL** | **MDL** | **Results** | **RL** | **MDL** | **Qualifier** | **Dilution Factor** |
| Volatile Organics in Air by SIM - Mansfield Lab | | | | | | | | |
| Dichlorodifluoromethane | ND | 0.200 | -- | ND | 0.989 | -- | | 1 |
| Chloromethane | ND | 0.200 | -- | ND | 0.413 | -- | | 1 |
| Freon-114 | ND | 0.050 | -- | ND | 0.349 | -- | | 1 |
| Vinyl chloride | ND | 0.020 | -- | ND | 0.051 | -- | | 1 |
| 1,3-Butadiene | ND | 0.020 | -- | ND | 0.044 | -- | | 1 |
| Bromomethane | ND | 0.020 | -- | ND | 0.078 | -- | | 1 |
| Chloroethane | ND | 0.100 | -- | ND | 0.264 | -- | | 1 |
| Acrolein | ND | 0.050 | -- | ND | 0.115 | -- | | 1 |
| Acetone | ND | 1.00 | -- | ND | 2.38 | -- | | 1 |
| Trichlorofluoromethane | ND | 0.050 | -- | ND | 0.281 | -- | | 1 |
| Acrylonitrile | ND | 0.500 | -- | ND | 1.09 | -- | | 1 |
| 1,1-Dichloroethene | ND | 0.020 | -- | ND | 0.079 | -- | | 1 |
| Methylene chloride | ND | 0.500 | -- | ND | 1.74 | -- | | 1 |
| Freon-113 | ND | 0.050 | -- | ND | 0.383 | -- | | 1 |
| trans-1,2-Dichloroethene | ND | 0.020 | -- | ND | 0.079 | -- | | 1 |
| 1,1-Dichloroethane | ND | 0.020 | -- | ND | 0.081 | -- | | 1 |
| Methyl tert butyl ether | ND | 0.200 | -- | ND | 0.721 | -- | | 1 |
| 2-Butanone | ND | 0.500 | -- | ND | 1.47 | -- | | 1 |
| cis-1,2-Dichloroethene | ND | 0.020 | -- | ND | 0.079 | -- | | 1 |
| Chloroform | ND | 0.020 | -- | ND | 0.098 | -- | | 1 |
| 1,2-Dichloroethane | ND | 0.020 | -- | ND | 0.081 | -- | | 1 |
| 1,1,1-Trichloroethane | ND | 0.020 | -- | ND | 0.109 | -- | | 1 |
| Benzene | ND | 0.100 | -- | ND | 0.319 | -- | | 1 |
| Carbon tetrachloride | ND | 0.020 | -- | ND | 0.126 | -- | | 1 |

**Project Name:** BATCH CANISTER CERTIFICATION **Lab Number:** L2118246

**Project Number:** CANISTER QC BAT **Report Date:** 05/05/21

# Air Canister Certification Results

Lab ID: L2118246-02
Client ID: CAN 1553 SHELF 40
Sample Location:

Date Collected: 04/09/21 16:00
Date Received: 04/12/21
Field Prep: Not Specified

Sample Depth:

| Parameter | ppbV Results | ppbV RL | ppbV MDL | ug/m3 Results | ug/m3 RL | ug/m3 MDL | Qualifier | Dilution Factor |
|---|---|---|---|---|---|---|---|---|
| Volatile Organics in Air by SIM - Mansfield Lab | | | | | | | | |
| 1,2-Dichloropropane | ND | 0.020 | -- | ND | 0.092 | -- | | 1 |
| Bromodichloromethane | ND | 0.020 | -- | ND | 0.134 | -- | | 1 |
| 1,4-Dioxane | ND | 0.100 | -- | ND | 0.360 | -- | | 1 |
| Trichloroethene | ND | 0.020 | -- | ND | 0.107 | -- | | 1 |
| cis-1,3-Dichloropropene | ND | 0.020 | -- | ND | 0.091 | -- | | 1 |
| 4-Methyl-2-pentanone | ND | 0.500 | -- | ND | 2.05 | -- | | 1 |
| trans-1,3-Dichloropropene | ND | 0.020 | -- | ND | 0.091 | -- | | 1 |
| 1,1,2-Trichloroethane | ND | 0.020 | -- | ND | 0.109 | -- | | 1 |
| Toluene | ND | 0.050 | -- | ND | 0.188 | -- | | 1 |
| Dibromochloromethane | ND | 0.020 | -- | ND | 0.170 | -- | | 1 |
| 1,2-Dibromoethane | ND | 0.020 | -- | ND | 0.154 | -- | | 1 |
| Tetrachloroethene | ND | 0.020 | -- | ND | 0.136 | -- | | 1 |
| 1,1,1,2-Tetrachloroethane | ND | 0.020 | -- | ND | 0.137 | -- | | 1 |
| Chlorobenzene | ND | 0.100 | -- | ND | 0.461 | -- | | 1 |
| Ethylbenzene | ND | 0.020 | -- | ND | 0.087 | -- | | 1 |
| p/m-Xylene | ND | 0.040 | -- | ND | 0.174 | -- | | 1 |
| Bromoform | ND | 0.020 | -- | ND | 0.207 | -- | | 1 |
| Styrene | ND | 0.020 | -- | ND | 0.085 | -- | | 1 |
| 1,1,2,2-Tetrachloroethane | ND | 0.020 | -- | ND | 0.137 | -- | | 1 |
| o-Xylene | ND | 0.020 | -- | ND | 0.087 | -- | | 1 |
| Isopropylbenzene | ND | 0.200 | -- | ND | 0.983 | -- | | 1 |
| 4-Ethyltoluene | ND | 0.020 | -- | ND | 0.098 | -- | | 1 |
| 1,3,5-Trimethybenzene | ND | 0.020 | -- | ND | 0.098 | -- | | 1 |
| 1,2,4-Trimethylbenzene | ND | 0.020 | -- | ND | 0.098 | -- | | 1 |
| Benzyl chloride | ND | 0.200 | -- | ND | 1.04 | -- | | 1 |
| 1,3-Dichlorobenzene | ND | 0.020 | -- | ND | 0.120 | -- | | 1 |
| 1,4-Dichlorobenzene | ND | 0.020 | -- | ND | 0.120 | -- | | 1 |

**Project Name:** BATCH CANISTER CERTIFICATION **Lab Number:** L2118246

**Project Number:** CANISTER QC BAT **Report Date:** 05/05/21

# Air Canister Certification Results

Lab ID: L2118246-02
Client ID: CAN 1553 SHELF 40
Sample Location:

Date Collected: 04/09/21 16:00
Date Received: 04/12/21
Field Prep: Not Specified

Sample Depth:

| Parameter | ppbV Results | ppbV RL | ppbV MDL | ug/m3 Results | ug/m3 RL | ug/m3 MDL | Qualifier | Dilution Factor |
|---|---|---|---|---|---|---|---|---|
| Volatile Organics in Air by SIM - Mansfield Lab | | | | | | | | |
| sec-Butylbenzene | ND | 0.200 | -- | ND | 1.10 | -- | | 1 |
| p-Isopropyltoluene | ND | 0.200 | -- | ND | 1.10 | -- | | 1 |
| 1,2-Dichlorobenzene | ND | 0.020 | -- | ND | 0.120 | -- | | 1 |
| n-Butylbenzene | ND | 0.200 | -- | ND | 1.10 | -- | | 1 |
| 1,2,4-Trichlorobenzene | ND | 0.050 | -- | ND | 0.371 | -- | | 1 |
| Naphthalene | ND | 0.050 | -- | ND | 0.262 | -- | | 1 |
| 1,2,3-Trichlorobenzene | ND | 0.050 | -- | ND | 0.371 | -- | | 1 |
| Hexachlorobutadiene | ND | 0.050 | -- | ND | 0.533 | -- | | 1 |

| Internal Standard | % Recovery | Qualifier | Acceptance Criteria |
|---|---|---|---|
| 1,4-difluorobenzene | 92 | | 60-140 |
| bromochloromethane | 97 | | 60-140 |
| chlorobenzene-d5 | 90 | | 60-140 |

**Project Name:** GROSSINGERS
**Project Number:** 9313:11

**Lab Number:** L2122115
**Report Date:** 05/05/21

## Sample Receipt and Container Information

Were project specific reporting limits specified? YES

### Cooler Information

| Cooler | Custody Seal |
|---|---|
| NA | Present/Intact |

### Container Information

| Container ID | Container Type | Cooler | Initial pH | Final pH | Temp deg C | Pres | Seal | Frozen Date/Time | Analysis(*) |
|---|---|---|---|---|---|---|---|---|---|
| L2122115-01A | Canister - 6 Liter | NA | NA | | | Y | Present/Intact | | TO15-LL(30) |
| L2122115-02A | Canister - 6 Liter | NA | NA | | | Y | Present/Intact | | TO15-LL(30) |
| L2122115-03A | Canister - 6 Liter | NA | NA | | | Y | Present/Intact | | TO15-LL(30) |
| L2122115-04A | Canister - 6 Liter | NA | NA | | | Y | Present/Intact | | CLEAN-FEE() |



*Values in parentheses indicate holding time in days

| | | | |
|---|---|---|---|
| **Project Name:** | GROSSINGERS | **Lab Number:** | L2122115 |
| **Project Number:** | 9313:11 | **Report Date:** | 05/05/21 |

## GLOSSARY

***Acronyms***

| | |
|---|---|
| DL | - Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the limit of quantitation (LOQ). The DL includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.) |
| EDL | - Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME). |
| EMPC | - Estimated Maximum Possible Concentration: The concentration that results from the signal present at the retention time of an analyte when the ions meet all of the identification criteria except the ion abundance ratio criteria. An EMPC is a worst-case estimate of the concentration. |
| EPA | - Environmental Protection Agency. |
| LCS | - Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes. |
| LCSD | - Laboratory Control Sample Duplicate: Refer to LCS. |
| LFB | - Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes. |
| LOD | - Limit of Detection: This value represents the level to which a target analyte can reliably be detected for a specific analyte in a specific matrix by a specific method. The LOD includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.) |
| LOQ | - Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)<br><br>Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.) |
| MDL | - Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. |
| MS | - Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available. For Method 332.0, the spike recovery is calculated using the native concentration, including estimated values. |
| MSD | - Matrix Spike Sample Duplicate: Refer to MS. |
| NA | - Not Applicable. |
| NC | - Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit. |
| NDPA/DPA | - N-Nitrosodiphenylamine/Diphenylamine. |
| NI | - Not Ignitable. |
| NP | - Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil. |
| NR | - No Results: Term is utilized when 'No Target Compounds Requested' is reported for the analysis of Volatile or Semivolatile Organic TIC only requests. |
| RL | - Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable. |
| RPD | - Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report. |
| SRM | - Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples. |
| STLP | - Semi-dynamic Tank Leaching Procedure per EPA Method 1315. |
| TEF | - Toxic Equivalency Factors: The values assigned to each dioxin and furan to evaluate their toxicity relative to 2,3,7,8-TCDD. |
| TEQ | - Toxic Equivalent: The measure of a sample's toxicity derived by multiplying each dioxin and furan by its corresponding TEF and then summing the resulting values. |
| TIC | - Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations. |

*Report Format: Data Usability Report*

| | | | |
|---|---|---|---|
| **Project Name:** | GROSSINGERS | **Lab Number:** | L2122115 |
| **Project Number:** | 9313:11 | **Report Date:** | 05/05/21 |

***Footnotes***

1 - The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method.

***Terms***

Analytical Method: Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

Difference: With respect to Total Oxidizable Precursor (TOP) Assay analysis, the difference is defined as the Post-Treatment value minus the Pre-Treatment value.

Final pH: As it pertains to Sample Receipt & Container Information section of the report, Final pH reflects pH of container determined after adjustment at the laboratory, if applicable. If no adjustment required, value reflects Initial pH.

Frozen Date/Time: With respect to Volatile Organics in soil, Frozen Date/Time reflects the date/time at which associated Reagent Water-preserved vials were initially frozen. Note: If frozen date/time is beyond 48 hours from sample collection, value will be reflected in 'bold'.

Initial pH: As it pertains to Sample Receipt & Container Information section of the report, Initial pH reflects pH of container determined upon receipt, if applicable.

PAH Total: With respect to Alkylated PAH analyses, the 'PAHs, Total' result is defined as the summation of results for all or a subset of the following compounds: Naphthalene, C1-C4 Naphthalenes, 2-Methylnaphthalene, 1-Methylnaphthalene, Biphenyl, Acenaphthylene, Acenaphthene, Fluorene, C1-C3 Fluorenes, Phenanthrene, C1-C4 Phenanthrenes/Anthracenes, Anthracene, Fluoranthene, Pyrene, C1-C4 Fluoranthenes/Pyrenes, Benz(a)anthracene, Chrysene, C1-C4 Chrysenes, Benzo(b)fluoranthene, Benzo(j)+(k)fluoranthene, Benzo(e)pyrene, Benzo(a)pyrene, Perylene, Indeno(1,2,3-cd)pyrene, Dibenz(ah)+(ac)anthracene, Benzo(g,h,i)perylene. If a 'Total' result is requested, the results of its individual components will also be reported.

PFAS Total: With respect to PFAS analyses, the 'PFAS, Total (5)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA and PFOS. In addition, the 'PFAS, Total (6)' result is defined as the summation of results at or above the RL for: PFHpA, PFHxS, PFOA, PFNA, PFDA and PFOS. (Note: 'PFAS, Total (6)' is applicable to MassDEP DW compliance analysis only.). If a 'Total' result is requested, the results of its individual components will also be reported.

The target compound Chlordane (CAS No. 57-74-9) is reported for GC ECD analyses. Per EPA,this compound "refers to a mixture of chlordane isomers, other chlorinated hydrocarbons and numerous other components." (Reference: USEPA Toxicological Review of Chlordane, In Support of Summary Information on the Integrated Risk Information System (IRIS), December 1997.)

Total: With respect to Organic analyses, a 'Total' result is defined as the summation of results for individual isomers or Aroclors. If a 'Total' result is requested, the results of its individual components will also be reported. This is applicable to 'Total' results for methods 8260, 8081 and 8082.

***Data Qualifiers***

**A** - Spectra identified as "Aldol Condensates" are byproducts of the extraction/concentration procedures when acetone is introduced in the process.

**B** - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).

**C** - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.

**D** - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.

**E** - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.

**F** - The ratio of quantifier ion response to qualifier ion response falls outside of the laboratory criteria. Results are considered to be an estimated maximum concentration.

**G** - The concentration may be biased high due to matrix interferences (i.e, co-elution) with non-target compound(s). The result should be considered estimated.

**H** - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.

**I** - The lower value for the two columns has been reported due to obvious interference.

**J** - Estimated value. This represents an estimated concentration for Tentatively Identified Compounds (TICs).

**M** - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.

**ND** - Not detected at the reporting limit (RL) for the sample.

**NJ** - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where

*Report Format: Data Usability Report*

| | | | |
|---|---|---|---|
| **Project Name:** | GROSSINGERS | **Lab Number:** | L2122115 |
| **Project Number:** | 9313:11 | **Report Date:** | 05/05/21 |

***Data Qualifiers***

the identification is based on a mass spectral library search.

**P** - The RPD between the results for the two columns exceeds the method-specified criteria.

**Q** - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)

**R** - Analytical results are from sample re-analysis.

**RE** - Analytical results are from sample re-extraction.

**S** - Analytical results are from modified screening analysis.

*Report Format: Data Usability Report*

**Project Name:** GROSSINGERS
**Project Number:** 9313:11
**Lab Number:** L2122115
**Report Date:** 05/05/21

## REFERENCES

48 Compendium of Methods for the Determination of Toxic Organic Compounds in Ambient Air. Second Edition. EPA/625/R-96/010b, January 1999.

## LIMITATION OF LIABILITIES

Alpha Analytical performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical be held liable for any incidental, consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding time and splitting of samples in the field.

# Certification Information

**The following analytes are not included in our Primary NELAP Scope of Accreditation:**

**Westborough Facility**
**EPA 624/624.1:** m/p-xylene, o-xylene, Naphthalene
**EPA 625/625.1:** alpha-Terpineol
**EPA 8260C/8260D:** NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene, Azobenzene; SCM: Iodomethane (methyl iodide), 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.
**EPA 8270D/8270E:** NPW: Dimethylnaphthalene,1,4-Diphenylhydrazine, alpha-Terpineol; SCM: Dimethylnaphthalene,1,4-Diphenylhydrazine.
**SM4500**: NPW: Amenable Cyanide; SCM: Total Phosphorus, TKN, NO2, NO3.

**Mansfield Facility**
**SM 2540D:** TSS
**EPA 8082A:** NPW: PCB: 1, 5, 31, 87,101, 110, 141, 151, 153, 180, 183, 187.
**EPA TO-15:** Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene, 3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.
**Biological Tissue Matrix:** EPA 3050B

**The following analytes are included in our Massachusetts DEP Scope of Accreditation**

**Westborough Facility:**

***Drinking Water***
**EPA 300.0**: Chloride, Nitrate-N, Fluoride, Sulfate; **EPA 353.2**: Nitrate-N, Nitrite-N; **SM4500NO3-F**: Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE, EPA 180.1, SM2130B, SM4500Cl-D, SM2320B, SM2540C, SM4500H-B, SM4500NO2-B**
**EPA 332**: Perchlorate; **EPA 524.2:** THMs and VOCs; **EPA 504.1:** EDB, DBCP.
**Microbiology**: **SM9215B; SM9223-P/A, SM9223B-Colilert-QT,SM9222D**.

***Non-Potable Water***
**SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2320B, SM4500CL-E, SM4500F-BC, SM4500NH3-BH:** Ammonia-N and Kjeldahl-N, **EPA 350.1**: Ammonia-N, **LACHAT 10-107-06-1-B**: Ammonia-N, **EPA 351.1, SM4500NO3-F, EPA 353.2**: Nitrate-N, **SM4500P-E, SM4500P-B, E, SM4500SO4-E, SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, EPA 420.1, SM4500-CN-CE, SM2540D, EPA 300: Chloride, Sulfate, Nitrate.**
**EPA 624.1**: Volatile Halocarbons & Aromatics,
**EPA 608.3**: Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs
**EPA 625.1**: SVOC (Acid/Base/Neutral Extractables), **EPA 600/4-81-045**: PCB-Oil.
**Microbiology**: **SM9223B-Colilert-QT; Enterolert-QT, SM9221E, EPA 1600, EPA 1603, SM9222D.**

**Mansfield Facility:**

***Drinking Water***
**EPA 200.7:** Al, Ba, Cd, Cr, Cu, Fe, Mn, Ni, Na, Ag, Ca, Zn. **EPA 200.8:** Al, Sb, As, Ba, Be, Cd, Cr, Cu, Pb, Mn, Ni, Se, Ag, TL, Zn. **EPA 245.1** Hg.
**EPA 522, EPA 537.1.**

***Non-Potable Water***
**EPA 200.7:** Al, Sb, As, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Sr, TL, Ti, V, Zn.
**EPA 200.8:** Al, Sb, As, Be, Cd, Cr, Cu, Fe, Pb, Mn, Ni, K, Se, Ag, Na, TL, Zn.
**EPA 245.1** Hg.
**SM2340B**

For a complete listing of analytes and methods, please contact your Alpha Project Manager.

# AIR ANALYSIS

PAGE 1 OF 1

**Date Rec'd in Lab:** 4-30-21

**ALPHA Job #:** L2122115

ALPHA ANALYTICAL — CHAIN OF CUSTODY

320 Forbes Blvd, Mansfield, MA 02048
TEL: 508-822-9300 FAX: 508-822-3288

## Client Information

Client: SESI Consulting Engineers
Address: 12 A Maple Ave
Pine Brook, NJ
Phone:
Fax:
Email: TTK@sesi.org

☐ These samples have been previously analyzed by Alpha

## Project Information

Project Name: Grossinger
Project Location: Liberty, NY
Project #: 9313:11
Project Manager: Todd Kelly
ALPHA Quote #:

## Turn-Around Time

☒ Standard ☐ RUSH (only confirmed if pre-approved!)

Date Due: Time:

## Report Information - Data Deliverables

☐ FAX
☒ ADEx
Criteria Checker:
(Default based on Regulatory Criteria Indicated)
Other Formats:
☒ EMAIL (standard pdf report)
☐ Additional Deliverables:

Report to: (if different than Project Manager)

## Billing Information

☒ Same as Client info PO #: 9313:11

## Regulatory Requirements/Report Limits

| State/Fed | Program | Res / Comm |
|---|---|---|
| | | |
| | | |
| | | |

Other Project Specific Requirements/Comments: ✱ One unused canister included

Project-Specific Target Compound List: ☐

**All Columns Below Must Be Filled Out**

| ALPHA Lab ID (Lab Use Only) | Sample ID | COLLECTION End Date | Start Time | End Time | Initial Vacuum | Final Vacuum | Sample Matrix* | Sampler's Initials | Can Size | ID Can | ID - Flow Controller | ANALYSIS TO-15 | TO-15 SIM | APH Subtract non-petroleum HCs ☐ | Fixed Gases | Sulfides & Mercaptans by TO-15 | Sample Comments (i.e. PID) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 22115-01 | SMPV-1 | 4/29/21 | 11:33 | 11:57 | -28.43 | -4.92 | SV | MEM | 6L | 2052 | 0914 | X | | | | | |
| 02 | SMPV-2 | ↓ | 9:48 | 10:12 | -28.13 | -4.95 | SV | MEM | 6L | 2565 | 0658 | X | | | | | |
| 03 | SMPV-3 | ↓ | 12:12 | 12:34 | -26.95 | -5.76 | SV | MEM | 6L | KFF | 0997 | X | | | | | |

*SAMPLE MATRIX CODES
AA = Ambient Air (Indoor/Outdoor)
SV = Soil Vapor/Landfill Gas/SVE
Other = Please Specify

Container Type

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. All samples submitted are subject to Alpha's Terms and Conditions. See reverse side.

| Relinquished By: | Date/Time | Received By: | Date/Time: |
|---|---|---|---|
| | 4/29/21 1305 | AAL | 4.29.21 1305 |
| | 4.29.21 1740 | | 4/30/21 0230 |

Rev. (25-Sep-15)

# ANALYTICAL REPORT

| | |
|---|---|
| Lab Number: | L2122189 |
| Client: | Soils Engineering Services, Inc.<br>12A Maple Avenue<br>Pine Brook, NJ 07058 |
| ATTN: | Todd Kelly |
| Phone: | (973) 808-9050 |
| Project Name: | GROSSINGERS |
| Project Number: | 9313:11 |
| Report Date: | 05/04/21 |

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320 Forbes Boulevard, Mansfield, MA 02048-1806
508-822-9300 (Fax) 508-822-3288 800-624-9220 - www.alphalab.com

**Project Name:** GROSSINGERS
**Project Number:** 9313:11

**Lab Number:** L2122189
**Report Date:** 05/04/21

| Alpha Sample ID | Client ID | Matrix | Sample Location | Collection Date/Time | Receive Date |
|---|---|---|---|---|---|
| L2122189-01 | SMPV-14 | SOIL_VAPOR | LIBERTY, NY | 04/28/21 14:33 | 04/28/21 |
| L2122189-02 | SMPV-10 | SOIL_VAPOR | LIBERTY, NY | 04/28/21 10:33 | 04/28/21 |
| L2122189-03 | SMPV-11 | SOIL_VAPOR | LIBERTY, NY | 04/28/21 10:54 | 04/28/21 |
| L2122189-04 | SMPV-13 | SOIL_VAPOR | LIBERTY, NY | 04/28/21 13:59 | 04/28/21 |

| | | | |
|---|---|---|---|
| **Project Name:** | GROSSINGERS | **Lab Number:** | L2122189 |
| **Project Number:** | 9313:11 | **Report Date:** | 05/04/21 |

## Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet NELAP requirements for all NELAP accredited parameters unless otherwise noted in the following narrative. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. Tentatively Identified Compounds (TICs), if requested, are reported for compounds identified to be present and are not part of the method/program Target Compound List, even if only a subset of the TCL are being reported. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively.

When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances, the specific failure is not narrated but noted in the associated QC Outlier Summary Report, located directly after the Case Narrative. QC information is also incorporated in the Data Usability Assessment table (Format 11) of our Data Merger tool, where it can be reviewed in conjunction with the sample result, associated regulatory criteria and any associated data usability implications.

Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

HOLD POLICY - For samples submitted on hold, Alpha's policy is to hold samples (with the exception of Air canisters) free of charge for 21 calendar days from the date the project is completed. After 21 calendar days, we will dispose of all samples submitted including those put on hold unless you have contacted your Alpha Project Manager and made arrangements for Alpha to continue to hold the samples. Air canisters will be disposed after 3 business days from the date the project is completed.

Please contact Project Management at 800-624-9220 with any questions.

| | | | |
|---|---|---|---|
| **Project Name:** | GROSSINGERS | **Lab Number:** | L2122189 |
| **Project Number:** | 9313:11 | **Report Date:** | 05/04/21 |

**Case Narrative (continued)**

Volatile Organics in Air

Canisters were released from the laboratory on April 26, 2021. The canister certification results are provided as an addendum.

Sample Receipt

The flow controller ID number for the sample designated SMPV-13 (L2122189-04) is listed on the CoC as 0170 but should be 0710.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature: Kelly O'Neill

Title: Technical Director/Representative Date: 05/04/21

# AIR

***Project Name:*** GROSSINGERS
***Project Number:*** 9313:11

***Lab Number:*** L2122189
***Report Date:*** 05/04/21

## *SAMPLE RESULTS*

Lab ID: L2122189-01
Client ID: SMPV-14
Sample Location: LIBERTY, NY

Date Collected: 04/28/21 14:33
Date Received: 04/28/21
Field Prep: Not Specified

Sample Depth:
Matrix: Soil_Vapor
Anaytical Method: 48,TO-15
Analytical Date: 05/03/21 17:13
Analyst: RY

| | ppbV | | | ug/m3 | | | | |
|---|---|---|---|---|---|---|---|---|
| **Parameter** | **Results** | **RL** | **MDL** | **Results** | **RL** | **MDL** | **Qualifier** | **Dilution Factor** |
| Volatile Organics in Air - Mansfield Lab | | | | | | | | |
| Dichlorodifluoromethane | 2.14 | 0.200 | -- | 10.6 | 0.989 | -- | | 1 |
| Chloromethane | ND | 0.200 | -- | ND | 0.413 | -- | | 1 |
| Freon-114 | ND | 0.200 | -- | ND | 1.40 | -- | | 1 |
| Vinyl chloride | ND | 0.200 | -- | ND | 0.511 | -- | | 1 |
| 1,3-Butadiene | ND | 0.200 | -- | ND | 0.442 | -- | | 1 |
| Bromomethane | ND | 0.200 | -- | ND | 0.777 | -- | | 1 |
| Chloroethane | ND | 0.200 | -- | ND | 0.528 | -- | | 1 |
| Ethanol | ND | 5.00 | -- | ND | 9.42 | -- | | 1 |
| Vinyl bromide | ND | 0.200 | -- | ND | 0.874 | -- | | 1 |
| Acetone | 8.89 | 1.00 | -- | 21.1 | 2.38 | -- | | 1 |
| Trichlorofluoromethane | 79.6 | 0.200 | -- | 447 | 1.12 | -- | | 1 |
| Isopropanol | 1.17 | 0.500 | -- | 2.88 | 1.23 | -- | | 1 |
| 1,1-Dichloroethene | ND | 0.200 | -- | ND | 0.793 | -- | | 1 |
| Tertiary butyl Alcohol | 1.01 | 0.500 | -- | 3.06 | 1.52 | -- | | 1 |
| Methylene chloride | ND | 0.500 | -- | ND | 1.74 | -- | | 1 |
| 3-Chloropropene | ND | 0.200 | -- | ND | 0.626 | -- | | 1 |
| Carbon disulfide | ND | 0.200 | -- | ND | 0.623 | -- | | 1 |
| Freon-113 | ND | 0.200 | -- | ND | 1.53 | -- | | 1 |
| trans-1,2-Dichloroethene | ND | 0.200 | -- | ND | 0.793 | -- | | 1 |
| 1,1-Dichloroethane | ND | 0.200 | -- | ND | 0.809 | -- | | 1 |
| Methyl tert butyl ether | ND | 0.200 | -- | ND | 0.721 | -- | | 1 |
| 2-Butanone | ND | 0.500 | -- | ND | 1.47 | -- | | 1 |
| cis-1,2-Dichloroethene | ND | 0.200 | -- | ND | 0.793 | -- | | 1 |

***Project Name:*** GROSSINGERS
***Project Number:*** 9313:11

***Lab Number:*** L2122189
***Report Date:*** 05/04/21

## *SAMPLE RESULTS*

Lab ID: L2122189-01
Client ID: SMPV-14
Sample Location: LIBERTY, NY

Date Collected: 04/28/21 14:33
Date Received: 04/28/21
Field Prep: Not Specified

Sample Depth:

| Parameter | ppbV Results | ppbV RL | ppbV MDL | ug/m3 Results | ug/m3 RL | ug/m3 MDL | Qualifier | Dilution Factor |
|---|---|---|---|---|---|---|---|---|
| **Volatile Organics in Air - Mansfield Lab** | | | | | | | | |
| Ethyl Acetate | 1.44 | 0.500 | -- | 5.19 | 1.80 | -- | | 1 |
| Chloroform | ND | 0.200 | -- | ND | 0.977 | -- | | 1 |
| Tetrahydrofuran | ND | 0.500 | -- | ND | 1.47 | -- | | 1 |
| 1,2-Dichloroethane | ND | 0.200 | -- | ND | 0.809 | -- | | 1 |
| n-Hexane | ND | 0.200 | -- | ND | 0.705 | -- | | 1 |
| 1,1,1-Trichloroethane | ND | 0.200 | -- | ND | 1.09 | -- | | 1 |
| Benzene | 0.261 | 0.200 | -- | 0.834 | 0.639 | -- | | 1 |
| Carbon tetrachloride | ND | 0.200 | -- | ND | 1.26 | -- | | 1 |
| Cyclohexane | ND | 0.200 | -- | ND | 0.688 | -- | | 1 |
| 1,2-Dichloropropane | ND | 0.200 | -- | ND | 0.924 | -- | | 1 |
| Bromodichloromethane | ND | 0.200 | -- | ND | 1.34 | -- | | 1 |
| 1,4-Dioxane | ND | 0.200 | -- | ND | 0.721 | -- | | 1 |
| Trichloroethene | ND | 0.200 | -- | ND | 1.07 | -- | | 1 |
| 2,2,4-Trimethylpentane | ND | 0.200 | -- | ND | 0.934 | -- | | 1 |
| Heptane | ND | 0.200 | -- | ND | 0.820 | -- | | 1 |
| cis-1,3-Dichloropropene | ND | 0.200 | -- | ND | 0.908 | -- | | 1 |
| 4-Methyl-2-pentanone | ND | 0.500 | -- | ND | 2.05 | -- | | 1 |
| trans-1,3-Dichloropropene | ND | 0.200 | -- | ND | 0.908 | -- | | 1 |
| 1,1,2-Trichloroethane | ND | 0.200 | -- | ND | 1.09 | -- | | 1 |
| Toluene | 0.289 | 0.200 | -- | 1.09 | 0.754 | -- | | 1 |
| 2-Hexanone | ND | 0.200 | -- | ND | 0.820 | -- | | 1 |
| Dibromochloromethane | ND | 0.200 | -- | ND | 1.70 | -- | | 1 |
| 1,2-Dibromoethane | ND | 0.200 | -- | ND | 1.54 | -- | | 1 |
| Tetrachloroethene | ND | 0.200 | -- | ND | 1.36 | -- | | 1 |
| Chlorobenzene | ND | 0.200 | -- | ND | 0.921 | -- | | 1 |
| Ethylbenzene | ND | 0.200 | -- | ND | 0.869 | -- | | 1 |

***Project Name:*** GROSSINGERS
***Project Number:*** 9313:11

***Lab Number:*** L2122189
***Report Date:*** 05/04/21

## *SAMPLE RESULTS*

Lab ID: L2122189-01
Client ID: SMPV-14
Sample Location: LIBERTY, NY

Date Collected: 04/28/21 14:33
Date Received: 04/28/21
Field Prep: Not Specified

Sample Depth:

| Parameter | ppbV Results | ppbV RL | ppbV MDL | ug/m3 Results | ug/m3 RL | ug/m3 MDL | Qualifier | Dilution Factor |
|---|---|---|---|---|---|---|---|---|
| **Volatile Organics in Air - Mansfield Lab** | | | | | | | | |
| p/m-Xylene | ND | 0.400 | -- | ND | 1.74 | -- | | 1 |
| Bromoform | ND | 0.200 | -- | ND | 2.07 | -- | | 1 |
| Styrene | ND | 0.200 | -- | ND | 0.852 | -- | | 1 |
| 1,1,2,2-Tetrachloroethane | ND | 0.200 | -- | ND | 1.37 | -- | | 1 |
| o-Xylene | ND | 0.200 | -- | ND | 0.869 | -- | | 1 |
| 4-Ethyltoluene | ND | 0.200 | -- | ND | 0.983 | -- | | 1 |
| 1,3,5-Trimethylbenzene | ND | 0.200 | -- | ND | 0.983 | -- | | 1 |
| 1,2,4-Trimethylbenzene | ND | 0.200 | -- | ND | 0.983 | -- | | 1 |
| Benzyl chloride | ND | 0.200 | -- | ND | 1.04 | -- | | 1 |
| 1,3-Dichlorobenzene | 0.321 | 0.200 | -- | 1.93 | 1.20 | -- | | 1 |
| 1,4-Dichlorobenzene | ND | 0.200 | -- | ND | 1.20 | -- | | 1 |
| 1,2-Dichlorobenzene | ND | 0.200 | -- | ND | 1.20 | -- | | 1 |
| 1,2,4-Trichlorobenzene | ND | 0.200 | -- | ND | 1.48 | -- | | 1 |
| Hexachlorobutadiene | ND | 0.200 | -- | ND | 2.13 | -- | | 1 |

| Internal Standard | % Recovery | Qualifier | Acceptance Criteria |
|---|---|---|---|
| 1,4-Difluorobenzene | 96 | | 60-140 |
| Bromochloromethane | 95 | | 60-140 |
| chlorobenzene-d5 | 92 | | 60-140 |

***Project Name:*** GROSSINGERS
***Project Number:*** 9313:11

***Lab Number:*** L2122189
***Report Date:*** 05/04/21

## *SAMPLE RESULTS*

Lab ID: L2122189-02
Client ID: SMPV-10
Sample Location: LIBERTY, NY

Date Collected: 04/28/21 10:33
Date Received: 04/28/21
Field Prep: Not Specified

Sample Depth:
Matrix: Soil_Vapor
Anaytical Method: 48,TO-15
Analytical Date: 05/03/21 17:52
Analyst: RY

| | ppbV | | | ug/m3 | | | | |
|---|---|---|---|---|---|---|---|---|
| **Parameter** | **Results** | **RL** | **MDL** | **Results** | **RL** | **MDL** | **Qualifier** | **Dilution Factor** |
| Volatile Organics in Air - Mansfield Lab | | | | | | | | |
| Dichlorodifluoromethane | 1.70 | 0.200 | -- | 8.41 | 0.989 | -- | | 1 |
| Chloromethane | 0.262 | 0.200 | -- | 0.541 | 0.413 | -- | | 1 |
| Freon-114 | ND | 0.200 | -- | ND | 1.40 | -- | | 1 |
| Vinyl chloride | ND | 0.200 | -- | ND | 0.511 | -- | | 1 |
| 1,3-Butadiene | ND | 0.200 | -- | ND | 0.442 | -- | | 1 |
| Bromomethane | ND | 0.200 | -- | ND | 0.777 | -- | | 1 |
| Chloroethane | ND | 0.200 | -- | ND | 0.528 | -- | | 1 |
| Ethanol | 20.6 | 5.00 | -- | 38.8 | 9.42 | -- | | 1 |
| Vinyl bromide | ND | 0.200 | -- | ND | 0.874 | -- | | 1 |
| Acetone | 38.3 | 1.00 | -- | 91.0 | 2.38 | -- | | 1 |
| Trichlorofluoromethane | 3.82 | 0.200 | -- | 21.5 | 1.12 | -- | | 1 |
| Isopropanol | 13.2 | 0.500 | -- | 32.4 | 1.23 | -- | | 1 |
| 1,1-Dichloroethene | ND | 0.200 | -- | ND | 0.793 | -- | | 1 |
| Tertiary butyl Alcohol | 6.25 | 0.500 | -- | 18.9 | 1.52 | -- | | 1 |
| Methylene chloride | ND | 0.500 | -- | ND | 1.74 | -- | | 1 |
| 3-Chloropropene | ND | 0.200 | -- | ND | 0.626 | -- | | 1 |
| Carbon disulfide | ND | 0.200 | -- | ND | 0.623 | -- | | 1 |
| Freon-113 | ND | 0.200 | -- | ND | 1.53 | -- | | 1 |
| trans-1,2-Dichloroethene | ND | 0.200 | -- | ND | 0.793 | -- | | 1 |
| 1,1-Dichloroethane | ND | 0.200 | -- | ND | 0.809 | -- | | 1 |
| Methyl tert butyl ether | ND | 0.200 | -- | ND | 0.721 | -- | | 1 |
| 2-Butanone | 1.61 | 0.500 | -- | 4.75 | 1.47 | -- | | 1 |
| cis-1,2-Dichloroethene | ND | 0.200 | -- | ND | 0.793 | -- | | 1 |

***Project Name:*** GROSSINGERS
***Project Number:*** 9313:11
***Lab Number:*** L2122189
***Report Date:*** 05/04/21

## *SAMPLE RESULTS*

Lab ID: L2122189-02
Client ID: SMPV-10
Sample Location: LIBERTY, NY

Date Collected: 04/28/21 10:33
Date Received: 04/28/21
Field Prep: Not Specified

Sample Depth:

| Parameter | ppbV Results | ppbV RL | ppbV MDL | ug/m3 Results | ug/m3 RL | ug/m3 MDL | Qualifier | Dilution Factor |
|---|---|---|---|---|---|---|---|---|
| **Volatile Organics in Air - Mansfield Lab** | | | | | | | | |
| Ethyl Acetate | 26.3 | 0.500 | -- | 94.8 | 1.80 | -- | | 1 |
| Chloroform | ND | 0.200 | -- | ND | 0.977 | -- | | 1 |
| Tetrahydrofuran | ND | 0.500 | -- | ND | 1.47 | -- | | 1 |
| 1,2-Dichloroethane | ND | 0.200 | -- | ND | 0.809 | -- | | 1 |
| n-Hexane | 2.26 | 0.200 | -- | 7.96 | 0.705 | -- | | 1 |
| 1,1,1-Trichloroethane | ND | 0.200 | -- | ND | 1.09 | -- | | 1 |
| Benzene | 0.594 | 0.200 | -- | 1.90 | 0.639 | -- | | 1 |
| Carbon tetrachloride | ND | 0.200 | -- | ND | 1.26 | -- | | 1 |
| Cyclohexane | ND | 0.200 | -- | ND | 0.688 | -- | | 1 |
| 1,2-Dichloropropane | ND | 0.200 | -- | ND | 0.924 | -- | | 1 |
| Bromodichloromethane | ND | 0.200 | -- | ND | 1.34 | -- | | 1 |
| 1,4-Dioxane | ND | 0.200 | -- | ND | 0.721 | -- | | 1 |
| Trichloroethene | ND | 0.200 | -- | ND | 1.07 | -- | | 1 |
| 2,2,4-Trimethylpentane | ND | 0.200 | -- | ND | 0.934 | -- | | 1 |
| Heptane | 0.438 | 0.200 | -- | 1.79 | 0.820 | -- | | 1 |
| cis-1,3-Dichloropropene | ND | 0.200 | -- | ND | 0.908 | -- | | 1 |
| 4-Methyl-2-pentanone | 0.690 | 0.500 | -- | 2.83 | 2.05 | -- | | 1 |
| trans-1,3-Dichloropropene | ND | 0.200 | -- | ND | 0.908 | -- | | 1 |
| 1,1,2-Trichloroethane | ND | 0.200 | -- | ND | 1.09 | -- | | 1 |
| Toluene | 7.91 | 0.200 | -- | 29.8 | 0.754 | -- | | 1 |
| 2-Hexanone | ND | 0.200 | -- | ND | 0.820 | -- | | 1 |
| Dibromochloromethane | ND | 0.200 | -- | ND | 1.70 | -- | | 1 |
| 1,2-Dibromoethane | ND | 0.200 | -- | ND | 1.54 | -- | | 1 |
| Tetrachloroethene | ND | 0.200 | -- | ND | 1.36 | -- | | 1 |
| Chlorobenzene | ND | 0.200 | -- | ND | 0.921 | -- | | 1 |
| Ethylbenzene | 0.319 | 0.200 | -- | 1.39 | 0.869 | -- | | 1 |

***Project Name:*** GROSSINGERS
***Project Number:*** 9313:11

***Lab Number:*** L2122189
***Report Date:*** 05/04/21

## *SAMPLE RESULTS*

Lab ID: L2122189-02
Client ID: SMPV-10
Sample Location: LIBERTY, NY

Date Collected: 04/28/21 10:33
Date Received: 04/28/21
Field Prep: Not Specified

Sample Depth:

| Parameter | ppbV Results | ppbV RL | ppbV MDL | ug/m3 Results | ug/m3 RL | ug/m3 MDL | Qualifier | Dilution Factor |
|---|---|---|---|---|---|---|---|---|
| **Volatile Organics in Air - Mansfield Lab** | | | | | | | | |
| p/m-Xylene | 1.49 | 0.400 | -- | 6.47 | 1.74 | -- | | 1 |
| Bromoform | ND | 0.200 | -- | ND | 2.07 | -- | | 1 |
| Styrene | 0.204 | 0.200 | -- | 0.869 | 0.852 | -- | | 1 |
| 1,1,2,2-Tetrachloroethane | ND | 0.200 | -- | ND | 1.37 | -- | | 1 |
| o-Xylene | 0.768 | 0.200 | -- | 3.34 | 0.869 | -- | | 1 |
| 4-Ethyltoluene | ND | 0.200 | -- | ND | 0.983 | -- | | 1 |
| 1,3,5-Trimethylbenzene | ND | 0.200 | -- | ND | 0.983 | -- | | 1 |
| 1,2,4-Trimethylbenzene | ND | 0.200 | -- | ND | 0.983 | -- | | 1 |
| Benzyl chloride | ND | 0.200 | -- | ND | 1.04 | -- | | 1 |
| 1,3-Dichlorobenzene | 0.220 | 0.200 | -- | 1.32 | 1.20 | -- | | 1 |
| 1,4-Dichlorobenzene | ND | 0.200 | -- | ND | 1.20 | -- | | 1 |
| 1,2-Dichlorobenzene | ND | 0.200 | -- | ND | 1.20 | -- | | 1 |
| 1,2,4-Trichlorobenzene | ND | 0.200 | -- | ND | 1.48 | -- | | 1 |
| Hexachlorobutadiene | ND | 0.200 | -- | ND | 2.13 | -- | | 1 |

| Internal Standard | % Recovery | Qualifier | Acceptance Criteria |
|---|---|---|---|
| 1,4-Difluorobenzene | 102 | | 60-140 |
| Bromochloromethane | 100 | | 60-140 |
| chlorobenzene-d5 | 101 | | 60-140 |

***Project Name:*** GROSSINGERS
***Project Number:*** 9313:11

***Lab Number:*** L2122189
***Report Date:*** 05/04/21

## *SAMPLE RESULTS*

Lab ID: L2122189-03
Client ID: SMPV-11
Sample Location: LIBERTY, NY

Date Collected: 04/28/21 10:54
Date Received: 04/28/21
Field Prep: Not Specified

Sample Depth:
Matrix: Soil_Vapor
Anaytical Method: 48,TO-15
Analytical Date: 05/03/21 18:31
Analyst: RY

| | ppbV | | | ug/m3 | | | | |
|---|---|---|---|---|---|---|---|---|
| **Parameter** | **Results** | **RL** | **MDL** | **Results** | **RL** | **MDL** | **Qualifier** | **Dilution Factor** |
| Volatile Organics in Air - Mansfield Lab | | | | | | | | |
| Dichlorodifluoromethane | 0.452 | 0.200 | -- | 2.24 | 0.989 | -- | | 1 |
| Chloromethane | ND | 0.200 | -- | ND | 0.413 | -- | | 1 |
| Freon-114 | ND | 0.200 | -- | ND | 1.40 | -- | | 1 |
| Vinyl chloride | ND | 0.200 | -- | ND | 0.511 | -- | | 1 |
| 1,3-Butadiene | ND | 0.200 | -- | ND | 0.442 | -- | | 1 |
| Bromomethane | ND | 0.200 | -- | ND | 0.777 | -- | | 1 |
| Chloroethane | ND | 0.200 | -- | ND | 0.528 | -- | | 1 |
| Ethanol | 12.3 | 5.00 | -- | 23.2 | 9.42 | -- | | 1 |
| Vinyl bromide | ND | 0.200 | -- | ND | 0.874 | -- | | 1 |
| Acetone | 11.5 | 1.00 | -- | 27.3 | 2.38 | -- | | 1 |
| Trichlorofluoromethane | 42.3 | 0.200 | -- | 238 | 1.12 | -- | | 1 |
| Isopropanol | 3.66 | 0.500 | -- | 9.00 | 1.23 | -- | | 1 |
| 1,1-Dichloroethene | ND | 0.200 | -- | ND | 0.793 | -- | | 1 |
| Tertiary butyl Alcohol | 1.16 | 0.500 | -- | 3.52 | 1.52 | -- | | 1 |
| Methylene chloride | ND | 0.500 | -- | ND | 1.74 | -- | | 1 |
| 3-Chloropropene | ND | 0.200 | -- | ND | 0.626 | -- | | 1 |
| Carbon disulfide | ND | 0.200 | -- | ND | 0.623 | -- | | 1 |
| Freon-113 | ND | 0.200 | -- | ND | 1.53 | -- | | 1 |
| trans-1,2-Dichloroethene | ND | 0.200 | -- | ND | 0.793 | -- | | 1 |
| 1,1-Dichloroethane | ND | 0.200 | -- | ND | 0.809 | -- | | 1 |
| Methyl tert butyl ether | ND | 0.200 | -- | ND | 0.721 | -- | | 1 |
| 2-Butanone | ND | 0.500 | -- | ND | 1.47 | -- | | 1 |
| cis-1,2-Dichloroethene | ND | 0.200 | -- | ND | 0.793 | -- | | 1 |

**Project Name:** GROSSINGERS
**Project Number:** 9313:11

**Lab Number:** L2122189
**Report Date:** 05/04/21

## SAMPLE RESULTS

Lab ID: L2122189-03
Client ID: SMPV-11
Sample Location: LIBERTY, NY

Date Collected: 04/28/21 10:54
Date Received: 04/28/21
Field Prep: Not Specified

Sample Depth:

| Parameter | ppbV Results | ppbV RL | ppbV MDL | ug/m3 Results | ug/m3 RL | ug/m3 MDL | Qualifier | Dilution Factor |
|---|---|---|---|---|---|---|---|---|
| **Volatile Organics in Air - Mansfield Lab** | | | | | | | | |
| Ethyl Acetate | 7.33 | 0.500 | -- | 26.4 | 1.80 | -- | | 1 |
| Chloroform | ND | 0.200 | -- | ND | 0.977 | -- | | 1 |
| Tetrahydrofuran | ND | 0.500 | -- | ND | 1.47 | -- | | 1 |
| 1,2-Dichloroethane | ND | 0.200 | -- | ND | 0.809 | -- | | 1 |
| n-Hexane | 0.630 | 0.200 | -- | 2.22 | 0.705 | -- | | 1 |
| 1,1,1-Trichloroethane | ND | 0.200 | -- | ND | 1.09 | -- | | 1 |
| Benzene | 0.899 | 0.200 | -- | 2.87 | 0.639 | -- | | 1 |
| Carbon tetrachloride | ND | 0.200 | -- | ND | 1.26 | -- | | 1 |
| Cyclohexane | 0.559 | 0.200 | -- | 1.92 | 0.688 | -- | | 1 |
| 1,2-Dichloropropane | ND | 0.200 | -- | ND | 0.924 | -- | | 1 |
| Bromodichloromethane | ND | 0.200 | -- | ND | 1.34 | -- | | 1 |
| 1,4-Dioxane | ND | 0.200 | -- | ND | 0.721 | -- | | 1 |
| Trichloroethene | ND | 0.200 | -- | ND | 1.07 | -- | | 1 |
| 2,2,4-Trimethylpentane | 0.740 | 0.200 | -- | 3.46 | 0.934 | -- | | 1 |
| Heptane | 0.359 | 0.200 | -- | 1.47 | 0.820 | -- | | 1 |
| cis-1,3-Dichloropropene | ND | 0.200 | -- | ND | 0.908 | -- | | 1 |
| 4-Methyl-2-pentanone | ND | 0.500 | -- | ND | 2.05 | -- | | 1 |
| trans-1,3-Dichloropropene | ND | 0.200 | -- | ND | 0.908 | -- | | 1 |
| 1,1,2-Trichloroethane | ND | 0.200 | -- | ND | 1.09 | -- | | 1 |
| Toluene | 3.66 | 0.200 | -- | 13.8 | 0.754 | -- | | 1 |
| 2-Hexanone | ND | 0.200 | -- | ND | 0.820 | -- | | 1 |
| Dibromochloromethane | ND | 0.200 | -- | ND | 1.70 | -- | | 1 |
| 1,2-Dibromoethane | ND | 0.200 | -- | ND | 1.54 | -- | | 1 |
| Tetrachloroethene | ND | 0.200 | -- | ND | 1.36 | -- | | 1 |
| Chlorobenzene | ND | 0.200 | -- | ND | 0.921 | -- | | 1 |
| Ethylbenzene | 0.369 | 0.200 | -- | 1.60 | 0.869 | -- | | 1 |

***Project Name:*** GROSSINGERS
***Project Number:*** 9313:11
***Lab Number:*** L2122189
***Report Date:*** 05/04/21

## *SAMPLE RESULTS*

Lab ID: L2122189-03
Client ID: SMPV-11
Sample Location: LIBERTY, NY

Date Collected: 04/28/21 10:54
Date Received: 04/28/21
Field Prep: Not Specified

Sample Depth:

| Parameter | ppbV Results | ppbV RL | ppbV MDL | ug/m3 Results | ug/m3 RL | ug/m3 MDL | Qualifier | Dilution Factor |
|---|---|---|---|---|---|---|---|---|
| **Volatile Organics in Air - Mansfield Lab** | | | | | | | | |
| p/m-Xylene | 1.61 | 0.400 | -- | 6.99 | 1.74 | -- | | 1 |
| Bromoform | ND | 0.200 | -- | ND | 2.07 | -- | | 1 |
| Styrene | ND | 0.200 | -- | ND | 0.852 | -- | | 1 |
| 1,1,2,2-Tetrachloroethane | ND | 0.200 | -- | ND | 1.37 | -- | | 1 |
| o-Xylene | 0.805 | 0.200 | -- | 3.50 | 0.869 | -- | | 1 |
| 4-Ethyltoluene | ND | 0.200 | -- | ND | 0.983 | -- | | 1 |
| 1,3,5-Trimethylbenzene | ND | 0.200 | -- | ND | 0.983 | -- | | 1 |
| 1,2,4-Trimethylbenzene | 0.348 | 0.200 | -- | 1.71 | 0.983 | -- | | 1 |
| Benzyl chloride | ND | 0.200 | -- | ND | 1.04 | -- | | 1 |
| 1,3-Dichlorobenzene | ND | 0.200 | -- | ND | 1.20 | -- | | 1 |
| 1,4-Dichlorobenzene | ND | 0.200 | -- | ND | 1.20 | -- | | 1 |
| 1,2-Dichlorobenzene | ND | 0.200 | -- | ND | 1.20 | -- | | 1 |
| 1,2,4-Trichlorobenzene | ND | 0.200 | -- | ND | 1.48 | -- | | 1 |
| Hexachlorobutadiene | ND | 0.200 | -- | ND | 2.13 | -- | | 1 |

| Internal Standard | % Recovery | Qualifier | Acceptance Criteria |
|---|---|---|---|
| 1,4-Difluorobenzene | 98 | | 60-140 |
| Bromochloromethane | 94 | | 60-140 |
| chlorobenzene-d5 | 100 | | 60-140 |

***Project Name:*** GROSSINGERS
***Project Number:*** 9313:11

***Lab Number:*** L2122189
***Report Date:*** 05/04/21

## *SAMPLE RESULTS*

Lab ID: L2122189-04
Client ID: SMPV-13
Sample Location: LIBERTY, NY

Date Collected: 04/28/21 13:59
Date Received: 04/28/21
Field Prep: Not Specified

Sample Depth:
Matrix: Soil_Vapor
Anaytical Method: 48,TO-15
Analytical Date: 05/03/21 19:50
Analyst: RY

| | ppbV | | | ug/m3 | | | | |
|---|---|---|---|---|---|---|---|---|
| **Parameter** | **Results** | **RL** | **MDL** | **Results** | **RL** | **MDL** | **Qualifier** | **Dilution Factor** |
| Volatile Organics in Air - Mansfield Lab | | | | | | | | |
| Dichlorodifluoromethane | 76.1 | 0.200 | -- | 376 | 0.989 | -- | | 1 |
| Chloromethane | ND | 0.200 | -- | ND | 0.413 | -- | | 1 |
| Freon-114 | ND | 0.200 | -- | ND | 1.40 | -- | | 1 |
| Vinyl chloride | ND | 0.200 | -- | ND | 0.511 | -- | | 1 |
| 1,3-Butadiene | ND | 0.200 | -- | ND | 0.442 | -- | | 1 |
| Bromomethane | ND | 0.200 | -- | ND | 0.777 | -- | | 1 |
| Chloroethane | ND | 0.200 | -- | ND | 0.528 | -- | | 1 |
| Ethanol | 5.41 | 5.00 | -- | 10.2 | 9.42 | -- | | 1 |
| Vinyl bromide | ND | 0.200 | -- | ND | 0.874 | -- | | 1 |
| Acetone | 10.6 | 1.00 | -- | 25.2 | 2.38 | -- | | 1 |
| Trichlorofluoromethane | 18.6 | 0.200 | -- | 105 | 1.12 | -- | | 1 |
| Isopropanol | 1.79 | 0.500 | -- | 4.40 | 1.23 | -- | | 1 |
| 1,1-Dichloroethene | ND | 0.200 | -- | ND | 0.793 | -- | | 1 |
| Tertiary butyl Alcohol | 1.41 | 0.500 | -- | 4.27 | 1.52 | -- | | 1 |
| Methylene chloride | ND | 0.500 | -- | ND | 1.74 | -- | | 1 |
| 3-Chloropropene | ND | 0.200 | -- | ND | 0.626 | -- | | 1 |
| Carbon disulfide | ND | 0.200 | -- | ND | 0.623 | -- | | 1 |
| Freon-113 | ND | 0.200 | -- | ND | 1.53 | -- | | 1 |
| trans-1,2-Dichloroethene | ND | 0.200 | -- | ND | 0.793 | -- | | 1 |
| 1,1-Dichloroethane | ND | 0.200 | -- | ND | 0.809 | -- | | 1 |
| Methyl tert butyl ether | ND | 0.200 | -- | ND | 0.721 | -- | | 1 |
| 2-Butanone | 0.554 | 0.500 | -- | 1.63 | 1.47 | -- | | 1 |
| cis-1,2-Dichloroethene | ND | 0.200 | -- | ND | 0.793 | -- | | 1 |

***Project Name:*** GROSSINGERS
***Project Number:*** 9313:11

***Lab Number:*** L2122189
***Report Date:*** 05/04/21

## *SAMPLE RESULTS*

Lab ID: L2122189-04
Client ID: SMPV-13
Sample Location: LIBERTY, NY

Date Collected: 04/28/21 13:59
Date Received: 04/28/21
Field Prep: Not Specified

Sample Depth:

| Parameter | ppbV Results | ppbV RL | ppbV MDL | ug/m3 Results | ug/m3 RL | ug/m3 MDL | Qualifier | Dilution Factor |
|---|---|---|---|---|---|---|---|---|
| **Volatile Organics in Air - Mansfield Lab** | | | | | | | | |
| Ethyl Acetate | 2.58 | 0.500 | -- | 9.30 | 1.80 | -- | | 1 |
| Chloroform | ND | 0.200 | -- | ND | 0.977 | -- | | 1 |
| Tetrahydrofuran | ND | 0.500 | -- | ND | 1.47 | -- | | 1 |
| 1,2-Dichloroethane | ND | 0.200 | -- | ND | 0.809 | -- | | 1 |
| n-Hexane | ND | 0.200 | -- | ND | 0.705 | -- | | 1 |
| 1,1,1-Trichloroethane | ND | 0.200 | -- | ND | 1.09 | -- | | 1 |
| Benzene | 0.431 | 0.200 | -- | 1.38 | 0.639 | -- | | 1 |
| Carbon tetrachloride | ND | 0.200 | -- | ND | 1.26 | -- | | 1 |
| Cyclohexane | ND | 0.200 | -- | ND | 0.688 | -- | | 1 |
| 1,2-Dichloropropane | ND | 0.200 | -- | ND | 0.924 | -- | | 1 |
| Bromodichloromethane | ND | 0.200 | -- | ND | 1.34 | -- | | 1 |
| 1,4-Dioxane | ND | 0.200 | -- | ND | 0.721 | -- | | 1 |
| Trichloroethene | ND | 0.200 | -- | ND | 1.07 | -- | | 1 |
| 2,2,4-Trimethylpentane | ND | 0.200 | -- | ND | 0.934 | -- | | 1 |
| Heptane | ND | 0.200 | -- | ND | 0.820 | -- | | 1 |
| cis-1,3-Dichloropropene | ND | 0.200 | -- | ND | 0.908 | -- | | 1 |
| 4-Methyl-2-pentanone | ND | 0.500 | -- | ND | 2.05 | -- | | 1 |
| trans-1,3-Dichloropropene | ND | 0.200 | -- | ND | 0.908 | -- | | 1 |
| 1,1,2-Trichloroethane | ND | 0.200 | -- | ND | 1.09 | -- | | 1 |
| Toluene | 0.714 | 0.200 | -- | 2.69 | 0.754 | -- | | 1 |
| 2-Hexanone | ND | 0.200 | -- | ND | 0.820 | -- | | 1 |
| Dibromochloromethane | ND | 0.200 | -- | ND | 1.70 | -- | | 1 |
| 1,2-Dibromoethane | ND | 0.200 | -- | ND | 1.54 | -- | | 1 |
| Tetrachloroethene | 0.214 | 0.200 | -- | 1.45 | 1.36 | -- | | 1 |
| Chlorobenzene | ND | 0.200 | -- | ND | 0.921 | -- | | 1 |
| Ethylbenzene | ND | 0.200 | -- | ND | 0.869 | -- | | 1 |

***Project Name:*** GROSSINGERS
***Project Number:*** 9313:11
***Lab Number:*** L2122189
***Report Date:*** 05/04/21

## *SAMPLE RESULTS*

Lab ID: L2122189-04
Client ID: SMPV-13
Sample Location: LIBERTY, NY

Date Collected: 04/28/21 13:59
Date Received: 04/28/21
Field Prep: Not Specified

Sample Depth:

| Parameter | ppbV Results | ppbV RL | ppbV MDL | ug/m3 Results | ug/m3 RL | ug/m3 MDL | Qualifier | Dilution Factor |
|---|---|---|---|---|---|---|---|---|
| **Volatile Organics in Air - Mansfield Lab** | | | | | | | | |
| p/m-Xylene | 0.477 | 0.400 | -- | 2.07 | 1.74 | -- | | 1 |
| Bromoform | ND | 0.200 | -- | ND | 2.07 | -- | | 1 |
| Styrene | ND | 0.200 | -- | ND | 0.852 | -- | | 1 |
| 1,1,2,2-Tetrachloroethane | ND | 0.200 | -- | ND | 1.37 | -- | | 1 |
| o-Xylene | 0.299 | 0.200 | -- | 1.30 | 0.869 | -- | | 1 |
| 4-Ethyltoluene | ND | 0.200 | -- | ND | 0.983 | -- | | 1 |
| 1,3,5-Trimethylbenzene | ND | 0.200 | -- | ND | 0.983 | -- | | 1 |
| 1,2,4-Trimethylbenzene | ND | 0.200 | -- | ND | 0.983 | -- | | 1 |
| Benzyl chloride | ND | 0.200 | -- | ND | 1.04 | -- | | 1 |
| 1,3-Dichlorobenzene | 0.348 | 0.200 | -- | 2.09 | 1.20 | -- | | 1 |
| 1,4-Dichlorobenzene | ND | 0.200 | -- | ND | 1.20 | -- | | 1 |
| 1,2-Dichlorobenzene | ND | 0.200 | -- | ND | 1.20 | -- | | 1 |
| 1,2,4-Trichlorobenzene | ND | 0.200 | -- | ND | 1.48 | -- | | 1 |
| Hexachlorobutadiene | ND | 0.200 | -- | ND | 2.13 | -- | | 1 |

| Internal Standard | % Recovery | Qualifier | Acceptance Criteria |
|---|---|---|---|
| 1,4-Difluorobenzene | 98 | | 60-140 |
| Bromochloromethane | 95 | | 60-140 |
| chlorobenzene-d5 | 97 | | 60-140 |

**Project Name:** GROSSINGERS
**Project Number:** 9313:11

**Lab Number:** L2122189
**Report Date:** 05/04/21

# Method Blank Analysis
## Batch Quality Control

Analytical Method: 48,TO-15
Analytical Date: 05/03/21 15:22

| Parameter | ppbV Results | ppbV RL | ppbV MDL | ug/m3 Results | ug/m3 RL | ug/m3 MDL | Qualifier | Dilution Factor |
|---|---|---|---|---|---|---|---|---|
| Volatile Organics in Air - Mansfield Lab for sample(s): 01-04 Batch: WG1493788-4 | | | | | | | | |
| Dichlorodifluoromethane | ND | 0.200 | -- | ND | 0.989 | -- | | 1 |
| Chloromethane | ND | 0.200 | -- | ND | 0.413 | -- | | 1 |
| Freon-114 | ND | 0.200 | -- | ND | 1.40 | -- | | 1 |
| Vinyl chloride | ND | 0.200 | -- | ND | 0.511 | -- | | 1 |
| 1,3-Butadiene | ND | 0.200 | -- | ND | 0.442 | -- | | 1 |
| Bromomethane | ND | 0.200 | -- | ND | 0.777 | -- | | 1 |
| Chloroethane | ND | 0.200 | -- | ND | 0.528 | -- | | 1 |
| Ethanol | ND | 5.00 | -- | ND | 9.42 | -- | | 1 |
| Vinyl bromide | ND | 0.200 | -- | ND | 0.874 | -- | | 1 |
| Acetone | ND | 1.00 | -- | ND | 2.38 | -- | | 1 |
| Trichlorofluoromethane | ND | 0.200 | -- | ND | 1.12 | -- | | 1 |
| Isopropanol | ND | 0.500 | -- | ND | 1.23 | -- | | 1 |
| 1,1-Dichloroethene | ND | 0.200 | -- | ND | 0.793 | -- | | 1 |
| Tertiary butyl Alcohol | ND | 0.500 | -- | ND | 1.52 | -- | | 1 |
| Methylene chloride | ND | 0.500 | -- | ND | 1.74 | -- | | 1 |
| 3-Chloropropene | ND | 0.200 | -- | ND | 0.626 | -- | | 1 |
| Carbon disulfide | ND | 0.200 | -- | ND | 0.623 | -- | | 1 |
| Freon-113 | ND | 0.200 | -- | ND | 1.53 | -- | | 1 |
| trans-1,2-Dichloroethene | ND | 0.200 | -- | ND | 0.793 | -- | | 1 |
| 1,1-Dichloroethane | ND | 0.200 | -- | ND | 0.809 | -- | | 1 |
| Methyl tert butyl ether | ND | 0.200 | -- | ND | 0.721 | -- | | 1 |
| 2-Butanone | ND | 0.500 | -- | ND | 1.47 | -- | | 1 |
| cis-1,2-Dichloroethene | ND | 0.200 | -- | ND | 0.793 | -- | | 1 |
| Ethyl Acetate | ND | 0.500 | -- | ND | 1.80 | -- | | 1 |
| Chloroform | ND | 0.200 | -- | ND | 0.977 | -- | | 1 |

**Project Name:** GROSSINGERS
**Project Number:** 9313:11
**Lab Number:** L2122189
**Report Date:** 05/04/21

# Method Blank Analysis
## Batch Quality Control

Analytical Method: 48,TO-15
Analytical Date: 05/03/21 15:22

| Parameter | ppbV Results | ppbV RL | ppbV MDL | ug/m3 Results | ug/m3 RL | ug/m3 MDL | Qualifier | Dilution Factor |
|---|---|---|---|---|---|---|---|---|
| Volatile Organics in Air - Mansfield Lab for sample(s): 01-04 Batch: WG1493788-4 | | | | | | | | |
| Tetrahydrofuran | ND | 0.500 | -- | ND | 1.47 | -- | | 1 |
| 1,2-Dichloroethane | ND | 0.200 | -- | ND | 0.809 | -- | | 1 |
| n-Hexane | ND | 0.200 | -- | ND | 0.705 | -- | | 1 |
| 1,1,1-Trichloroethane | ND | 0.200 | -- | ND | 1.09 | -- | | 1 |
| Benzene | ND | 0.200 | -- | ND | 0.639 | -- | | 1 |
| Carbon tetrachloride | ND | 0.200 | -- | ND | 1.26 | -- | | 1 |
| Cyclohexane | ND | 0.200 | -- | ND | 0.688 | -- | | 1 |
| 1,2-Dichloropropane | ND | 0.200 | -- | ND | 0.924 | -- | | 1 |
| Bromodichloromethane | ND | 0.200 | -- | ND | 1.34 | -- | | 1 |
| 1,4-Dioxane | ND | 0.200 | -- | ND | 0.721 | -- | | 1 |
| Trichloroethene | ND | 0.200 | -- | ND | 1.07 | -- | | 1 |
| 2,2,4-Trimethylpentane | ND | 0.200 | -- | ND | 0.934 | -- | | 1 |
| Heptane | ND | 0.200 | -- | ND | 0.820 | -- | | 1 |
| cis-1,3-Dichloropropene | ND | 0.200 | -- | ND | 0.908 | -- | | 1 |
| 4-Methyl-2-pentanone | ND | 0.500 | -- | ND | 2.05 | -- | | 1 |
| trans-1,3-Dichloropropene | ND | 0.200 | -- | ND | 0.908 | -- | | 1 |
| 1,1,2-Trichloroethane | ND | 0.200 | -- | ND | 1.09 | -- | | 1 |
| Toluene | ND | 0.200 | -- | ND | 0.754 | -- | | 1 |
| 2-Hexanone | ND | 0.200 | -- | ND | 0.820 | -- | | 1 |
| Dibromochloromethane | ND | 0.200 | -- | ND | 1.70 | -- | | 1 |
| 1,2-Dibromoethane | ND | 0.200 | -- | ND | 1.54 | -- | | 1 |
| Tetrachloroethene | ND | 0.200 | -- | ND | 1.36 | -- | | 1 |
| Chlorobenzene | ND | 0.200 | -- | ND | 0.921 | -- | | 1 |
| Ethylbenzene | ND | 0.200 | -- | ND | 0.869 | -- | | 1 |
| p/m-Xylene | ND | 0.400 | -- | ND | 1.74 | -- | | 1 |

**Project Name:** GROSSINGERS
**Project Number:** 9313:11
**Lab Number:** L2122189
**Report Date:** 05/04/21

# Method Blank Analysis
## Batch Quality Control

Analytical Method: 48,TO-15
Analytical Date: 05/03/21 15:22

| Parameter | ppbV Results | ppbV RL | ppbV MDL | ug/m3 Results | ug/m3 RL | ug/m3 MDL | Qualifier | Dilution Factor |
|---|---|---|---|---|---|---|---|---|
| Volatile Organics in Air - Mansfield Lab for sample(s): 01-04 Batch: WG1493788-4 | | | | | | | | |
| Bromoform | ND | 0.200 | -- | ND | 2.07 | -- | | 1 |
| Styrene | ND | 0.200 | -- | ND | 0.852 | -- | | 1 |
| 1,1,2,2-Tetrachloroethane | ND | 0.200 | -- | ND | 1.37 | -- | | 1 |
| o-Xylene | ND | 0.200 | -- | ND | 0.869 | -- | | 1 |
| 4-Ethyltoluene | ND | 0.200 | -- | ND | 0.983 | -- | | 1 |
| 1,3,5-Trimethylbenzene | ND | 0.200 | -- | ND | 0.983 | -- | | 1 |
| 1,2,4-Trimethylbenzene | ND | 0.200 | -- | ND | 0.983 | -- | | 1 |
| Benzyl chloride | ND | 0.200 | -- | ND | 1.04 | -- | | 1 |
| 1,3-Dichlorobenzene | ND | 0.200 | -- | ND | 1.20 | -- | | 1 |
| 1,4-Dichlorobenzene | ND | 0.200 | -- | ND | 1.20 | -- | | 1 |
| 1,2-Dichlorobenzene | ND | 0.200 | -- | ND | 1.20 | -- | | 1 |
| 1,2,4-Trichlorobenzene | ND | 0.200 | -- | ND | 1.48 | -- | | 1 |
| Hexachlorobutadiene | ND | 0.200 | -- | ND | 2.13 | -- | | 1 |

# Lab Control Sample Analysis

## Batch Quality Control

**Project Name:** GROSSINGERS

**Project Number:** 9313:11

**Lab Number:** L2122189

**Report Date:** 05/04/21

| Parameter | LCS %Recovery | Qual | LCSD %Recovery | Qual | %Recovery Limits | RPD | Qual | RPD Limits |
|---|---|---|---|---|---|---|---|---|
| Volatile Organics in Air - Mansfield Lab Associated sample(s): 01-04 Batch: WG1493788-3 | | | | | | | | |
| Dichlorodifluoromethane | 94 | | - | | 70-130 | - | | |
| Chloromethane | 88 | | - | | 70-130 | - | | |
| Freon-114 | 94 | | - | | 70-130 | - | | |
| Vinyl chloride | 92 | | - | | 70-130 | - | | |
| 1,3-Butadiene | 93 | | - | | 70-130 | - | | |
| Bromomethane | 92 | | - | | 70-130 | - | | |
| Chloroethane | 87 | | - | | 70-130 | - | | |
| Ethanol | 78 | | - | | 40-160 | - | | |
| Vinyl bromide | 86 | | - | | 70-130 | - | | |
| Acetone | 60 | | - | | 40-160 | - | | |
| Trichlorofluoromethane | 83 | | - | | 70-130 | - | | |
| Isopropanol | 62 | | - | | 40-160 | - | | |
| 1,1-Dichloroethene | 93 | | - | | 70-130 | - | | |
| Tertiary butyl Alcohol | 80 | | - | | 70-130 | - | | |
| Methylene chloride | 101 | | - | | 70-130 | - | | |
| 3-Chloropropene | 99 | | - | | 70-130 | - | | |
| Carbon disulfide | 92 | | - | | 70-130 | - | | |
| Freon-113 | 100 | | - | | 70-130 | - | | |
| trans-1,2-Dichloroethene | 92 | | - | | 70-130 | - | | |
| 1,1-Dichloroethane | 94 | | - | | 70-130 | - | | |
| Methyl tert butyl ether | 85 | | - | | 70-130 | - | | |
| 2-Butanone | 92 | | - | | 70-130 | - | | |
| cis-1,2-Dichloroethene | 98 | | - | | 70-130 | - | | |

# Lab Control Sample Analysis

## Batch Quality Control

**Project Name:** GROSSINGERS

**Project Number:** 9313:11

**Lab Number:** L2122189

**Report Date:** 05/04/21

| Parameter | LCS %Recovery | Qual | LCSD %Recovery | Qual | %Recovery Limits | RPD | Qual | RPD Limits |
|---|---|---|---|---|---|---|---|---|
| Volatile Organics in Air - Mansfield Lab Associated sample(s): 01-04 Batch: WG1493788-3 | | | | | | | | |
| Ethyl Acetate | 97 | | - | | 70-130 | - | | |
| Chloroform | 97 | | - | | 70-130 | - | | |
| Tetrahydrofuran | 90 | | - | | 70-130 | - | | |
| 1,2-Dichloroethane | 91 | | - | | 70-130 | - | | |
| n-Hexane | 95 | | - | | 70-130 | - | | |
| 1,1,1-Trichloroethane | 92 | | - | | 70-130 | - | | |
| Benzene | 97 | | - | | 70-130 | - | | |
| Carbon tetrachloride | 96 | | - | | 70-130 | - | | |
| Cyclohexane | 98 | | - | | 70-130 | - | | |
| 1,2-Dichloropropane | 97 | | - | | 70-130 | - | | |
| Bromodichloromethane | 99 | | - | | 70-130 | - | | |
| 1,4-Dioxane | 100 | | - | | 70-130 | - | | |
| Trichloroethene | 101 | | - | | 70-130 | - | | |
| 2,2,4-Trimethylpentane | 100 | | - | | 70-130 | - | | |
| Heptane | 96 | | - | | 70-130 | - | | |
| cis-1,3-Dichloropropene | 102 | | - | | 70-130 | - | | |
| 4-Methyl-2-pentanone | 100 | | - | | 70-130 | - | | |
| trans-1,3-Dichloropropene | 84 | | - | | 70-130 | - | | |
| 1,1,2-Trichloroethane | 103 | | - | | 70-130 | - | | |
| Toluene | 101 | | - | | 70-130 | - | | |
| 2-Hexanone | 100 | | - | | 70-130 | - | | |
| Dibromochloromethane | 113 | | - | | 70-130 | - | | |
| 1,2-Dibromoethane | 106 | | - | | 70-130 | - | | |

# Lab Control Sample Analysis

## Batch Quality Control

**Project Name:** GROSSINGERS

**Project Number:** 9313:11

**Lab Number:** L2122189

**Report Date:** 05/04/21

| Parameter | LCS %Recovery | Qual | LCSD %Recovery | Qual | %Recovery Limits | RPD | Qual | RPD Limits |
|---|---|---|---|---|---|---|---|---|
| Volatile Organics in Air - Mansfield Lab Associated sample(s): 01-04 Batch: WG1493788-3 | | | | | | | | |
| Tetrachloroethene | 105 | | - | | 70-130 | - | | |
| Chlorobenzene | 108 | | - | | 70-130 | - | | |
| Ethylbenzene | 109 | | - | | 70-130 | - | | |
| p/m-Xylene | 108 | | - | | 70-130 | - | | |
| Bromoform | 120 | | - | | 70-130 | - | | |
| Styrene | 114 | | - | | 70-130 | - | | |
| 1,1,2,2-Tetrachloroethane | 118 | | - | | 70-130 | - | | |
| o-Xylene | 110 | | - | | 70-130 | - | | |
| 4-Ethyltoluene | 113 | | - | | 70-130 | - | | |
| 1,3,5-Trimethylbenzene | 111 | | - | | 70-130 | - | | |
| 1,2,4-Trimethylbenzene | 114 | | - | | 70-130 | - | | |
| Benzyl chloride | 113 | | - | | 70-130 | - | | |
| 1,3-Dichlorobenzene | 116 | | - | | 70-130 | - | | |
| 1,4-Dichlorobenzene | 115 | | - | | 70-130 | - | | |
| 1,2-Dichlorobenzene | 118 | | - | | 70-130 | - | | |
| 1,2,4-Trichlorobenzene | 105 | | - | | 70-130 | - | | |
| Hexachlorobutadiene | 112 | | - | | 70-130 | - | | |

# Lab Duplicate Analysis
## Batch Quality Control

**Project Name:** GROSSINGERS
**Project Number:** 9313:11

**Lab Number:** L2122189
**Report Date:** 05/04/21

| Parameter | Native Sample | Duplicate Sample | Units | RPD | Qual | RPD Limits |
|---|---|---|---|---|---|---|
| Volatile Organics in Air - Mansfield Lab Associated sample(s): 01-04 QC Batch ID: WG1493788-5 QC Sample: L2122189-03 Client ID: SMPV-11 | | | | | | |
| Dichlorodifluoromethane | 0.452 | 0.457 | ppbV | 1 | | 25 |
| Chloromethane | ND | ND | ppbV | NC | | 25 |
| Freon-114 | ND | ND | ppbV | NC | | 25 |
| Vinyl chloride | ND | ND | ppbV | NC | | 25 |
| 1,3-Butadiene | ND | ND | ppbV | NC | | 25 |
| Bromomethane | ND | ND | ppbV | NC | | 25 |
| Chloroethane | ND | ND | ppbV | NC | | 25 |
| Ethanol | 12.3 | 12.1 | ppbV | 2 | | 25 |
| Vinyl bromide | ND | ND | ppbV | NC | | 25 |
| Acetone | 11.5 | 10.3 | ppbV | 11 | | 25 |
| Trichlorofluoromethane | 42.3 | 40.5 | ppbV | 4 | | 25 |
| Isopropanol | 3.66 | 3.38 | ppbV | 8 | | 25 |
| 1,1-Dichloroethene | ND | ND | ppbV | NC | | 25 |
| Tertiary butyl Alcohol | 1.16 | 1.14 | ppbV | 2 | | 25 |
| Methylene chloride | ND | ND | ppbV | NC | | 25 |
| 3-Chloropropene | ND | ND | ppbV | NC | | 25 |
| Carbon disulfide | ND | ND | ppbV | NC | | 25 |
| Freon-113 | ND | ND | ppbV | NC | | 25 |
| trans-1,2-Dichloroethene | ND | ND | ppbV | NC | | 25 |
| 1,1-Dichloroethane | ND | ND | ppbV | NC | | 25 |
| Methyl tert butyl ether | ND | ND | ppbV | NC | | 25 |

# Lab Duplicate Analysis
## Batch Quality Control

**Project Name:** GROSSINGERS
**Project Number:** 9313:11

**Lab Number:** L2122189
**Report Date:** 05/04/21

| Parameter | Native Sample | Duplicate Sample | Units | RPD | Qual | RPD Limits |
|---|---|---|---|---|---|---|
| Volatile Organics in Air - Mansfield Lab Associated sample(s): 01-04 QC Batch ID: WG1493788-5 QC Sample: L2122189-03 Client ID: SMPV-11 | | | | | | |
| 2-Butanone | ND | ND | ppbV | NC | | 25 |
| cis-1,2-Dichloroethene | ND | ND | ppbV | NC | | 25 |
| Ethyl Acetate | 7.33 | 7.41 | ppbV | 1 | | 25 |
| Chloroform | ND | ND | ppbV | NC | | 25 |
| Tetrahydrofuran | ND | ND | ppbV | NC | | 25 |
| 1,2-Dichloroethane | ND | ND | ppbV | NC | | 25 |
| n-Hexane | 0.630 | 0.661 | ppbV | 5 | | 25 |
| 1,1,1-Trichloroethane | ND | ND | ppbV | NC | | 25 |
| Benzene | 0.899 | 0.914 | ppbV | 2 | | 25 |
| Carbon tetrachloride | ND | ND | ppbV | NC | | 25 |
| Cyclohexane | 0.559 | 0.543 | ppbV | 3 | | 25 |
| 1,2-Dichloropropane | ND | ND | ppbV | NC | | 25 |
| Bromodichloromethane | ND | ND | ppbV | NC | | 25 |
| 1,4-Dioxane | ND | ND | ppbV | NC | | 25 |
| Trichloroethene | ND | ND | ppbV | NC | | 25 |
| 2,2,4-Trimethylpentane | 0.740 | 0.739 | ppbV | 0 | | 25 |
| Heptane | 0.359 | 0.388 | ppbV | 8 | | 25 |
| cis-1,3-Dichloropropene | ND | ND | ppbV | NC | | 25 |
| 4-Methyl-2-pentanone | ND | ND | ppbV | NC | | 25 |
| trans-1,3-Dichloropropene | ND | ND | ppbV | NC | | 25 |
| 1,1,2-Trichloroethane | ND | ND | ppbV | NC | | 25 |

# Lab Duplicate Analysis
## Batch Quality Control

**Project Name:** GROSSINGERS
**Project Number:** 9313:11

**Lab Number:** L2122189
**Report Date:** 05/04/21

| Parameter | Native Sample | Duplicate Sample | Units | RPD | Qual | RPD Limits |
|---|---|---|---|---|---|---|
| Volatile Organics in Air - Mansfield Lab Associated sample(s): 01-04 QC Batch ID: WG1493788-5 QC Sample: L2122189-03 Client ID: SMPV-11 | | | | | | |
| Toluene | 3.66 | 3.61 | ppbV | 1 | | 25 |
| 2-Hexanone | ND | ND | ppbV | NC | | 25 |
| Dibromochloromethane | ND | ND | ppbV | NC | | 25 |
| 1,2-Dibromoethane | ND | ND | ppbV | NC | | 25 |
| Tetrachloroethene | ND | ND | ppbV | NC | | 25 |
| Chlorobenzene | ND | ND | ppbV | NC | | 25 |
| Ethylbenzene | 0.369 | 0.369 | ppbV | 0 | | 25 |
| p/m-Xylene | 1.61 | 1.60 | ppbV | 1 | | 25 |
| Bromoform | ND | ND | ppbV | NC | | 25 |
| Styrene | ND | ND | ppbV | NC | | 25 |
| 1,1,2,2-Tetrachloroethane | ND | ND | ppbV | NC | | 25 |
| o-Xylene | 0.805 | 0.794 | ppbV | 1 | | 25 |
| 4-Ethyltoluene | ND | ND | ppbV | NC | | 25 |
| 1,3,5-Trimethylbenzene | ND | ND | ppbV | NC | | 25 |
| 1,2,4-Trimethylbenzene | 0.348 | 0.346 | ppbV | 1 | | 25 |
| Benzyl chloride | ND | ND | ppbV | NC | | 25 |
| 1,3-Dichlorobenzene | ND | 0.211 | ppbV | NC | | 25 |
| 1,4-Dichlorobenzene | ND | ND | ppbV | NC | | 25 |
| 1,2-Dichlorobenzene | ND | ND | ppbV | NC | | 25 |
| 1,2,4-Trichlorobenzene | ND | ND | ppbV | NC | | 25 |
| Hexachlorobutadiene | ND | ND | ppbV | NC | | 25 |

**Project Name:** GROSSINGERS

**Project Number:** 9313:11

**Lab Number:** L2122189

**Report Date:** 05/04/21

## Canister and Flow Controller Information

| Samplenum | Client ID | Media ID | Media Type | Date Prepared | Bottle Order | Cleaning Batch ID | Can Leak Check | Initial Pressure (in. Hg) | Pressure on Receipt (in. Hg) | Flow Controler Leak Chk | Flow Out mL/min | Flow In mL/min | % RPD |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| L2122189-01 | SMPV-14 | 01910 | SV200 | 04/26/21 | 350136 | | - | - | - | Pass | 219 | 216 | 1 |
| L2122189-01 | SMPV-14 | 1641 | 6.0L Can | 04/26/21 | 350136 | L2118246-02 | Pass | -29.4 | -5.0 | - | - | - | - |
| L2122189-02 | SMPV-10 | 01906 | SV200 | 04/26/21 | 350136 | | - | - | - | Pass | 217 | 210 | 3 |
| L2122189-02 | SMPV-10 | 3328 | 6.0L Can | 04/26/21 | 350136 | L2118246-02 | Pass | -28.9 | -3.4 | - | - | - | - |
| L2122189-03 | SMPV-11 | 0673 | SV200 | 04/26/21 | 350136 | | - | - | - | Pass | 220 | 216 | 2 |
| L2122189-03 | SMPV-11 | 930 | 6.0L Can | 04/26/21 | 350136 | L2118246-02 | Pass | -29.5 | -5.8 | - | - | - | - |
| L2122189-04 | SMPV-13 | 0710 | SV200 | 04/26/21 | 350136 | | - | - | - | Pass | 217 | 217 | 0 |
| L2122189-04 | SMPV-13 | 1687 | 6.0L Can | 04/26/21 | 350136 | L2118246-02 | Pass | -29.5 | -6.5 | - | - | - | - |

**Project Name:** BATCH CANISTER CERTIFICATION
**Project Number:** CANISTER QC BAT

**Lab Number:** L2118246
**Report Date:** 05/04/21

# Air Canister Certification Results

Lab ID: L2118246-02
Client ID: CAN 1553 SHELF 40
Sample Location:

Date Collected: 04/09/21 16:00
Date Received: 04/12/21
Field Prep: Not Specified

Sample Depth:
Matrix: Air
Anaytical Method: 48,TO-15
Analytical Date: 04/12/21 17:16
Analyst: EW

| | ppbV | | | ug/m3 | | | | |
|---|---|---|---|---|---|---|---|---|
| **Parameter** | **Results** | **RL** | **MDL** | **Results** | **RL** | **MDL** | **Qualifier** | **Dilution Factor** |
| Volatile Organics in Air - Mansfield Lab | | | | | | | | |
| Chlorodifluoromethane | ND | 0.200 | -- | ND | 0.707 | -- | | 1 |
| Propylene | ND | 0.500 | -- | ND | 0.861 | -- | | 1 |
| Propane | ND | 0.500 | -- | ND | 0.902 | -- | | 1 |
| Dichlorodifluoromethane | ND | 0.200 | -- | ND | 0.989 | -- | | 1 |
| Chloromethane | ND | 0.200 | -- | ND | 0.413 | -- | | 1 |
| Freon-114 | ND | 0.200 | -- | ND | 1.40 | -- | | 1 |
| Methanol | ND | 5.00 | -- | ND | 6.55 | -- | | 1 |
| Vinyl chloride | ND | 0.200 | -- | ND | 0.511 | -- | | 1 |
| 1,3-Butadiene | ND | 0.200 | -- | ND | 0.442 | -- | | 1 |
| Butane | ND | 0.200 | -- | ND | 0.475 | -- | | 1 |
| Bromomethane | ND | 0.200 | -- | ND | 0.777 | -- | | 1 |
| Chloroethane | ND | 0.200 | -- | ND | 0.528 | -- | | 1 |
| Ethanol | ND | 5.00 | -- | ND | 9.42 | -- | | 1 |
| Dichlorofluoromethane | ND | 0.200 | -- | ND | 0.842 | -- | | 1 |
| Vinyl bromide | ND | 0.200 | -- | ND | 0.874 | -- | | 1 |
| Acrolein | ND | 0.500 | -- | ND | 1.15 | -- | | 1 |
| Acetone | ND | 1.00 | -- | ND | 2.38 | -- | | 1 |
| Acetonitrile | ND | 0.200 | -- | ND | 0.336 | -- | | 1 |
| Trichlorofluoromethane | ND | 0.200 | -- | ND | 1.12 | -- | | 1 |
| Isopropanol | ND | 0.500 | -- | ND | 1.23 | -- | | 1 |
| Acrylonitrile | ND | 0.500 | -- | ND | 1.09 | -- | | 1 |
| Pentane | ND | 0.200 | -- | ND | 0.590 | -- | | 1 |
| Ethyl ether | ND | 0.200 | -- | ND | 0.606 | -- | | 1 |
| 1,1-Dichloroethene | ND | 0.200 | -- | ND | 0.793 | -- | | 1 |

**Project Name:** BATCH CANISTER CERTIFICATION
**Project Number:** CANISTER QC BAT
**Lab Number:** L2118246
**Report Date:** 05/04/21

# Air Canister Certification Results

Lab ID: L2118246-02
Client ID: CAN 1553 SHELF 40
Sample Location:

Date Collected: 04/09/21 16:00
Date Received: 04/12/21
Field Prep: Not Specified

Sample Depth:

| Parameter | ppbV Results | ppbV RL | ppbV MDL | ug/m3 Results | ug/m3 RL | ug/m3 MDL | Qualifier | Dilution Factor |
|---|---|---|---|---|---|---|---|---|
| **Volatile Organics in Air - Mansfield Lab** | | | | | | | | |
| Tertiary butyl Alcohol | ND | 0.500 | -- | ND | 1.52 | -- | | 1 |
| Methylene chloride | ND | 0.500 | -- | ND | 1.74 | -- | | 1 |
| 3-Chloropropene | ND | 0.200 | -- | ND | 0.626 | -- | | 1 |
| Carbon disulfide | ND | 0.200 | -- | ND | 0.623 | -- | | 1 |
| Freon-113 | ND | 0.200 | -- | ND | 1.53 | -- | | 1 |
| trans-1,2-Dichloroethene | ND | 0.200 | -- | ND | 0.793 | -- | | 1 |
| 1,1-Dichloroethane | ND | 0.200 | -- | ND | 0.809 | -- | | 1 |
| Methyl tert butyl ether | ND | 0.200 | -- | ND | 0.721 | -- | | 1 |
| Vinyl acetate | ND | 1.00 | -- | ND | 3.52 | -- | | 1 |
| Xylenes, total | ND | 0.600 | -- | ND | 0.869 | -- | | 1 |
| 2-Butanone | ND | 0.500 | -- | ND | 1.47 | -- | | 1 |
| cis-1,2-Dichloroethene | ND | 0.200 | -- | ND | 0.793 | -- | | 1 |
| Ethyl Acetate | ND | 0.500 | -- | ND | 1.80 | -- | | 1 |
| Chloroform | ND | 0.200 | -- | ND | 0.977 | -- | | 1 |
| Tetrahydrofuran | ND | 0.500 | -- | ND | 1.47 | -- | | 1 |
| 2,2-Dichloropropane | ND | 0.200 | -- | ND | 0.924 | -- | | 1 |
| 1,2-Dichloroethane | ND | 0.200 | -- | ND | 0.809 | -- | | 1 |
| n-Hexane | ND | 0.200 | -- | ND | 0.705 | -- | | 1 |
| Diisopropyl ether | ND | 0.200 | -- | ND | 0.836 | -- | | 1 |
| tert-Butyl Ethyl Ether | ND | 0.200 | -- | ND | 0.836 | -- | | 1 |
| 1,2-Dichloroethene (total) | ND | 1.00 | -- | ND | 1.00 | -- | | 1 |
| 1,1,1-Trichloroethane | ND | 0.200 | -- | ND | 1.09 | -- | | 1 |
| 1,1-Dichloropropene | ND | 0.200 | -- | ND | 0.908 | -- | | 1 |
| Benzene | ND | 0.200 | -- | ND | 0.639 | -- | | 1 |
| Carbon tetrachloride | ND | 0.200 | -- | ND | 1.26 | -- | | 1 |
| Cyclohexane | ND | 0.200 | -- | ND | 0.688 | -- | | 1 |
| tert-Amyl Methyl Ether | ND | 0.200 | -- | ND | 0.836 | -- | | 1 |

**Project Name:** BATCH CANISTER CERTIFICATION
**Project Number:** CANISTER QC BAT

**Lab Number:** L2118246
**Report Date:** 05/04/21

# Air Canister Certification Results

Lab ID: L2118246-02
Client ID: CAN 1553 SHELF 40
Sample Location:

Date Collected: 04/09/21 16:00
Date Received: 04/12/21
Field Prep: Not Specified

Sample Depth:

| Parameter | ppbV Results | ppbV RL | ppbV MDL | ug/m3 Results | ug/m3 RL | ug/m3 MDL | Qualifier | Dilution Factor |
|---|---|---|---|---|---|---|---|---|
| **Volatile Organics in Air - Mansfield Lab** | | | | | | | | |
| Dibromomethane | ND | 0.200 | -- | ND | 1.42 | -- | | 1 |
| 1,2-Dichloropropane | ND | 0.200 | -- | ND | 0.924 | -- | | 1 |
| Bromodichloromethane | ND | 0.200 | -- | ND | 1.34 | -- | | 1 |
| 1,4-Dioxane | ND | 0.200 | -- | ND | 0.721 | -- | | 1 |
| Trichloroethene | ND | 0.200 | -- | ND | 1.07 | -- | | 1 |
| 2,2,4-Trimethylpentane | ND | 0.200 | -- | ND | 0.934 | -- | | 1 |
| Methyl Methacrylate | ND | 0.500 | -- | ND | 2.05 | -- | | 1 |
| Heptane | ND | 0.200 | -- | ND | 0.820 | -- | | 1 |
| cis-1,3-Dichloropropene | ND | 0.200 | -- | ND | 0.908 | -- | | 1 |
| 4-Methyl-2-pentanone | ND | 0.500 | -- | ND | 2.05 | -- | | 1 |
| trans-1,3-Dichloropropene | ND | 0.200 | -- | ND | 0.908 | -- | | 1 |
| 1,1,2-Trichloroethane | ND | 0.200 | -- | ND | 1.09 | -- | | 1 |
| Toluene | ND | 0.200 | -- | ND | 0.754 | -- | | 1 |
| 1,3-Dichloropropane | ND | 0.200 | -- | ND | 0.924 | -- | | 1 |
| 2-Hexanone | ND | 0.200 | -- | ND | 0.820 | -- | | 1 |
| Dibromochloromethane | ND | 0.200 | -- | ND | 1.70 | -- | | 1 |
| 1,2-Dibromoethane | ND | 0.200 | -- | ND | 1.54 | -- | | 1 |
| Butyl acetate | ND | 0.500 | -- | ND | 2.38 | -- | | 1 |
| Octane | ND | 0.200 | -- | ND | 0.934 | -- | | 1 |
| Tetrachloroethene | ND | 0.200 | -- | ND | 1.36 | -- | | 1 |
| 1,1,1,2-Tetrachloroethane | ND | 0.200 | -- | ND | 1.37 | -- | | 1 |
| Chlorobenzene | ND | 0.200 | -- | ND | 0.921 | -- | | 1 |
| Ethylbenzene | ND | 0.200 | -- | ND | 0.869 | -- | | 1 |
| p/m-Xylene | ND | 0.400 | -- | ND | 1.74 | -- | | 1 |
| Bromoform | ND | 0.200 | -- | ND | 2.07 | -- | | 1 |
| Styrene | ND | 0.200 | -- | ND | 0.852 | -- | | 1 |
| 1,1,2,2-Tetrachloroethane | ND | 0.200 | -- | ND | 1.37 | -- | | 1 |

**Project Name:** BATCH CANISTER CERTIFICATION
**Project Number:** CANISTER QC BAT
**Lab Number:** L2118246
**Report Date:** 05/04/21

# Air Canister Certification Results

Lab ID: L2118246-02
Client ID: CAN 1553 SHELF 40
Sample Location:

Date Collected: 04/09/21 16:00
Date Received: 04/12/21
Field Prep: Not Specified

Sample Depth:

| Parameter | ppbV Results | ppbV RL | ppbV MDL | ug/m3 Results | ug/m3 RL | ug/m3 MDL | Qualifier | Dilution Factor |
|---|---|---|---|---|---|---|---|---|
| Volatile Organics in Air - Mansfield Lab | | | | | | | | |
| o-Xylene | ND | 0.200 | -- | ND | 0.869 | -- | | 1 |
| 1,2,3-Trichloropropane | ND | 0.200 | -- | ND | 1.21 | -- | | 1 |
| Nonane | ND | 0.200 | -- | ND | 1.05 | -- | | 1 |
| Isopropylbenzene | ND | 0.200 | -- | ND | 0.983 | -- | | 1 |
| Bromobenzene | ND | 0.200 | -- | ND | 0.793 | -- | | 1 |
| 2-Chlorotoluene | ND | 0.200 | -- | ND | 1.04 | -- | | 1 |
| n-Propylbenzene | ND | 0.200 | -- | ND | 0.983 | -- | | 1 |
| 4-Chlorotoluene | ND | 0.200 | -- | ND | 1.04 | -- | | 1 |
| 4-Ethyltoluene | ND | 0.200 | -- | ND | 0.983 | -- | | 1 |
| 1,3,5-Trimethylbenzene | ND | 0.200 | -- | ND | 0.983 | -- | | 1 |
| tert-Butylbenzene | ND | 0.200 | -- | ND | 1.10 | -- | | 1 |
| 1,2,4-Trimethylbenzene | ND | 0.200 | -- | ND | 0.983 | -- | | 1 |
| Decane | ND | 0.200 | -- | ND | 1.16 | -- | | 1 |
| Benzyl chloride | ND | 0.200 | -- | ND | 1.04 | -- | | 1 |
| 1,3-Dichlorobenzene | ND | 0.200 | -- | ND | 1.20 | -- | | 1 |
| 1,4-Dichlorobenzene | ND | 0.200 | -- | ND | 1.20 | -- | | 1 |
| sec-Butylbenzene | ND | 0.200 | -- | ND | 1.10 | -- | | 1 |
| p-Isopropyltoluene | ND | 0.200 | -- | ND | 1.10 | -- | | 1 |
| 1,2-Dichlorobenzene | ND | 0.200 | -- | ND | 1.20 | -- | | 1 |
| n-Butylbenzene | ND | 0.200 | -- | ND | 1.10 | -- | | 1 |
| 1,2-Dibromo-3-chloropropane | ND | 0.200 | -- | ND | 1.93 | -- | | 1 |
| Undecane | ND | 0.200 | -- | ND | 1.28 | -- | | 1 |
| Dodecane | ND | 0.200 | -- | ND | 1.39 | -- | | 1 |
| 1,2,4-Trichlorobenzene | ND | 0.200 | -- | ND | 1.48 | -- | | 1 |
| Naphthalene | ND | 0.200 | -- | ND | 1.05 | -- | | 1 |
| 1,2,3-Trichlorobenzene | ND | 0.200 | -- | ND | 1.48 | -- | | 1 |
| Hexachlorobutadiene | ND | 0.200 | -- | ND | 2.13 | -- | | 1 |

**Project Name:** BATCH CANISTER CERTIFICATION
**Project Number:** CANISTER QC BAT
**Lab Number:** L2118246
**Report Date:** 05/04/21

# Air Canister Certification Results

Lab ID: L2118246-02
Client ID: CAN 1553 SHELF 40
Sample Location:

Date Collected: 04/09/21 16:00
Date Received: 04/12/21
Field Prep: Not Specified

Sample Depth:

| Parameter | ppbV Results | ppbV RL | ppbV MDL | ug/m3 Results | ug/m3 RL | ug/m3 MDL | Qualifier | Dilution Factor |
|---|---|---|---|---|---|---|---|---|
| Volatile Organics in Air - Mansfield Lab | | | | | | | | |

| | Results | Qualifier | Units | RDL | Dilution Factor |
|---|---|---|---|---|---|
| Tentatively Identified Compounds | | | | | |

No Tentatively Identified Compounds

| Internal Standard | % Recovery | Qualifier | Acceptance Criteria |
|---|---|---|---|
| 1,4-Difluorobenzene | 94 | | 60-140 |
| Bromochloromethane | 96 | | 60-140 |
| chlorobenzene-d5 | 90 | | 60-140 |

**Project Name:** BATCH CANISTER CERTIFICATION
**Project Number:** CANISTER QC BAT

**Lab Number:** L2118246
**Report Date:** 05/04/21

# Air Canister Certification Results

Lab ID: L2118246-02
Client ID: CAN 1553 SHELF 40
Sample Location:

Date Collected: 04/09/21 16:00
Date Received: 04/12/21
Field Prep: Not Specified

Sample Depth:
Matrix: Air
Anaytical Method: 48,TO-15-SIM
Analytical Date: 04/12/21 17:16
Analyst: EW

| | ppbV | | | ug/m3 | | | | |
|---|---|---|---|---|---|---|---|---|
| **Parameter** | **Results** | **RL** | **MDL** | **Results** | **RL** | **MDL** | **Qualifier** | **Dilution Factor** |
| Volatile Organics in Air by SIM - Mansfield Lab | | | | | | | | |
| Dichlorodifluoromethane | ND | 0.200 | -- | ND | 0.989 | -- | | 1 |
| Chloromethane | ND | 0.200 | -- | ND | 0.413 | -- | | 1 |
| Freon-114 | ND | 0.050 | -- | ND | 0.349 | -- | | 1 |
| Vinyl chloride | ND | 0.020 | -- | ND | 0.051 | -- | | 1 |
| 1,3-Butadiene | ND | 0.020 | -- | ND | 0.044 | -- | | 1 |
| Bromomethane | ND | 0.020 | -- | ND | 0.078 | -- | | 1 |
| Chloroethane | ND | 0.100 | -- | ND | 0.264 | -- | | 1 |
| Acrolein | ND | 0.050 | -- | ND | 0.115 | -- | | 1 |
| Acetone | ND | 1.00 | -- | ND | 2.38 | -- | | 1 |
| Trichlorofluoromethane | ND | 0.050 | -- | ND | 0.281 | -- | | 1 |
| Acrylonitrile | ND | 0.500 | -- | ND | 1.09 | -- | | 1 |
| 1,1-Dichloroethene | ND | 0.020 | -- | ND | 0.079 | -- | | 1 |
| Methylene chloride | ND | 0.500 | -- | ND | 1.74 | -- | | 1 |
| Freon-113 | ND | 0.050 | -- | ND | 0.383 | -- | | 1 |
| trans-1,2-Dichloroethene | ND | 0.020 | -- | ND | 0.079 | -- | | 1 |
| 1,1-Dichloroethane | ND | 0.020 | -- | ND | 0.081 | -- | | 1 |
| Methyl tert butyl ether | ND | 0.200 | -- | ND | 0.721 | -- | | 1 |
| 2-Butanone | ND | 0.500 | -- | ND | 1.47 | -- | | 1 |
| cis-1,2-Dichloroethene | ND | 0.020 | -- | ND | 0.079 | -- | | 1 |
| Chloroform | ND | 0.020 | -- | ND | 0.098 | -- | | 1 |
| 1,2-Dichloroethane | ND | 0.020 | -- | ND | 0.081 | -- | | 1 |
| 1,1,1-Trichloroethane | ND | 0.020 | -- | ND | 0.109 | -- | | 1 |
| Benzene | ND | 0.100 | -- | ND | 0.319 | -- | | 1 |
| Carbon tetrachloride | ND | 0.020 | -- | ND | 0.126 | -- | | 1 |

**Project Name:** BATCH CANISTER CERTIFICATION **Lab Number:** L2118246

**Project Number:** CANISTER QC BAT **Report Date:** 05/04/21

# Air Canister Certification Results

Lab ID: L2118246-02
Client ID: CAN 1553 SHELF 40
Sample Location:

Date Collected: 04/09/21 16:00
Date Received: 04/12/21
Field Prep: Not Specified

Sample Depth:

| Parameter | ppbV Results | ppbV RL | ppbV MDL | ug/m3 Results | ug/m3 RL | ug/m3 MDL | Qualifier | Dilution Factor |
|---|---|---|---|---|---|---|---|---|
| Volatile Organics in Air by SIM - Mansfield Lab | | | | | | | | |
| 1,2-Dichloropropane | ND | 0.020 | -- | ND | 0.092 | -- | | 1 |
| Bromodichloromethane | ND | 0.020 | -- | ND | 0.134 | -- | | 1 |
| 1,4-Dioxane | ND | 0.100 | -- | ND | 0.360 | -- | | 1 |
| Trichloroethene | ND | 0.020 | -- | ND | 0.107 | -- | | 1 |
| cis-1,3-Dichloropropene | ND | 0.020 | -- | ND | 0.091 | -- | | 1 |
| 4-Methyl-2-pentanone | ND | 0.500 | -- | ND | 2.05 | -- | | 1 |
| trans-1,3-Dichloropropene | ND | 0.020 | -- | ND | 0.091 | -- | | 1 |
| 1,1,2-Trichloroethane | ND | 0.020 | -- | ND | 0.109 | -- | | 1 |
| Toluene | ND | 0.050 | -- | ND | 0.188 | -- | | 1 |
| Dibromochloromethane | ND | 0.020 | -- | ND | 0.170 | -- | | 1 |
| 1,2-Dibromoethane | ND | 0.020 | -- | ND | 0.154 | -- | | 1 |
| Tetrachloroethene | ND | 0.020 | -- | ND | 0.136 | -- | | 1 |
| 1,1,1,2-Tetrachloroethane | ND | 0.020 | -- | ND | 0.137 | -- | | 1 |
| Chlorobenzene | ND | 0.100 | -- | ND | 0.461 | -- | | 1 |
| Ethylbenzene | ND | 0.020 | -- | ND | 0.087 | -- | | 1 |
| p/m-Xylene | ND | 0.040 | -- | ND | 0.174 | -- | | 1 |
| Bromoform | ND | 0.020 | -- | ND | 0.207 | -- | | 1 |
| Styrene | ND | 0.020 | -- | ND | 0.085 | -- | | 1 |
| 1,1,2,2-Tetrachloroethane | ND | 0.020 | -- | ND | 0.137 | -- | | 1 |
| o-Xylene | ND | 0.020 | -- | ND | 0.087 | -- | | 1 |
| Isopropylbenzene | ND | 0.200 | -- | ND | 0.983 | -- | | 1 |
| 4-Ethyltoluene | ND | 0.020 | -- | ND | 0.098 | -- | | 1 |
| 1,3,5-Trimethybenzene | ND | 0.020 | -- | ND | 0.098 | -- | | 1 |
| 1,2,4-Trimethylbenzene | ND | 0.020 | -- | ND | 0.098 | -- | | 1 |
| Benzyl chloride | ND | 0.200 | -- | ND | 1.04 | -- | | 1 |
| 1,3-Dichlorobenzene | ND | 0.020 | -- | ND | 0.120 | -- | | 1 |
| 1,4-Dichlorobenzene | ND | 0.020 | -- | ND | 0.120 | -- | | 1 |

**Project Name:** BATCH CANISTER CERTIFICATION **Lab Number:** L2118246

**Project Number:** CANISTER QC BAT **Report Date:** 05/04/21

# Air Canister Certification Results

Lab ID: L2118246-02
Client ID: CAN 1553 SHELF 40
Sample Location:

Date Collected: 04/09/21 16:00
Date Received: 04/12/21
Field Prep: Not Specified

Sample Depth:

| Parameter | ppbV Results | ppbV RL | ppbV MDL | ug/m3 Results | ug/m3 RL | ug/m3 MDL | Qualifier | Dilution Factor |
|---|---|---|---|---|---|---|---|---|
| Volatile Organics in Air by SIM - Mansfield Lab | | | | | | | | |
| sec-Butylbenzene | ND | 0.200 | -- | ND | 1.10 | -- | | 1 |
| p-Isopropyltoluene | ND | 0.200 | -- | ND | 1.10 | -- | | 1 |
| 1,2-Dichlorobenzene | ND | 0.020 | -- | ND | 0.120 | -- | | 1 |
| n-Butylbenzene | ND | 0.200 | -- | ND | 1.10 | -- | | 1 |
| 1,2,4-Trichlorobenzene | ND | 0.050 | -- | ND | 0.371 | -- | | 1 |
| Naphthalene | ND | 0.050 | -- | ND | 0.262 | -- | | 1 |
| 1,2,3-Trichlorobenzene | ND | 0.050 | -- | ND | 0.371 | -- | | 1 |
| Hexachlorobutadiene | ND | 0.050 | -- | ND | 0.533 | -- | | 1 |

| Internal Standard | % Recovery | Qualifier | Acceptance Criteria |
|---|---|---|---|
| 1,4-difluorobenzene | 92 | | 60-140 |
| bromochloromethane | 97 | | 60-140 |
| chlorobenzene-d5 | 90 | | 60-140 |

**Project Name:** GROSSINGERS
**Project Number:** 9313:11

**Lab Number:** L2122189
**Report Date:** 05/04/21

## Sample Receipt and Container Information

Were project specific reporting limits specified? YES

### Cooler Information

| Cooler | Custody Seal |
|---|---|
| NA | Absent |

### Container Information

| Container ID | Container Type | Cooler | Initial pH | Final pH | Temp deg C | Pres | Seal | Frozen Date/Time | Analysis(*) |
|---|---|---|---|---|---|---|---|---|---|
| L2122189-01A | Canister - 6 Liter | NA | NA | | | Y | Absent | | TO15-LL(30) |
| L2122189-02A | Canister - 6 Liter | NA | NA | | | Y | Absent | | TO15-LL(30) |
| L2122189-03A | Canister - 6 Liter | NA | NA | | | Y | Absent | | TO15-LL(30) |
| L2122189-04A | Canister - 6 Liter | NA | NA | | | Y | Absent | | TO15-LL(30) |



*Values in parentheses indicate holding time in days

| | | | |
|---|---|---|---|
| **Project Name:** | GROSSINGERS | **Lab Number:** | L2122189 |
| **Project Number:** | 9313:11 | **Report Date:** | 05/04/21 |

## GLOSSARY

***Acronyms***

| | |
|---|---|
| DL | - Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the limit of quantitation (LOQ). The DL includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.) |
| EDL | - Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME). |
| EMPC | - Estimated Maximum Possible Concentration: The concentration that results from the signal present at the retention time of an analyte when the ions meet all of the identification criteria except the ion abundance ratio criteria. An EMPC is a worst-case estimate of the concentration. |
| EPA | - Environmental Protection Agency. |
| LCS | - Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes. |
| LCSD | - Laboratory Control Sample Duplicate: Refer to LCS. |
| LFB | - Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes. |
| LOD | - Limit of Detection: This value represents the level to which a target analyte can reliably be detected for a specific analyte in a specific matrix by a specific method. The LOD includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.) |
| LOQ | - Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)<br><br>Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.) |
| MDL | - Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. |
| MS | - Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available. For Method 332.0, the spike recovery is calculated using the native concentration, including estimated values. |
| MSD | - Matrix Spike Sample Duplicate: Refer to MS. |
| NA | - Not Applicable. |
| NC | - Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit. |
| NDPA/DPA | - N-Nitrosodiphenylamine/Diphenylamine. |
| NI | - Not Ignitable. |
| NP | - Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil. |
| NR | - No Results: Term is utilized when 'No Target Compounds Requested' is reported for the analysis of Volatile or Semivolatile Organic TIC only requests. |
| RL | - Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable. |
| RPD | - Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report. |
| SRM | - Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples. |
| STLP | - Semi-dynamic Tank Leaching Procedure per EPA Method 1315. |
| TEF | - Toxic Equivalency Factors: The values assigned to each dioxin and furan to evaluate their toxicity relative to 2,3,7,8-TCDD. |
| TEQ | - Toxic Equivalent: The measure of a sample's toxicity derived by multiplying each dioxin and furan by its corresponding TEF and then summing the resulting values. |
| TIC | - Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations. |

*Report Format: Data Usability Report*

| | | | |
|---|---|---|---|
| **Project Name:** | GROSSINGERS | **Lab Number:** | L2122189 |
| **Project Number:** | 9313:11 | **Report Date:** | 05/04/21 |

***Footnotes***

1 - The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method.

***Terms***

Analytical Method: Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

Difference: With respect to Total Oxidizable Precursor (TOP) Assay analysis, the difference is defined as the Post-Treatment value minus the Pre-Treatment value.

Final pH: As it pertains to Sample Receipt & Container Information section of the report, Final pH reflects pH of container determined after adjustment at the laboratory, if applicable. If no adjustment required, value reflects Initial pH.

Frozen Date/Time: With respect to Volatile Organics in soil, Frozen Date/Time reflects the date/time at which associated Reagent Water-preserved vials were initially frozen. Note: If frozen date/time is beyond 48 hours from sample collection, value will be reflected in 'bold'.

Initial pH: As it pertains to Sample Receipt & Container Information section of the report, Initial pH reflects pH of container determined upon receipt, if applicable.

PAH Total: With respect to Alkylated PAH analyses, the 'PAHs, Total' result is defined as the summation of results for all or a subset of the following compounds: Naphthalene, C1-C4 Naphthalenes, 2-Methylnaphthalene, 1-Methylnaphthalene, Biphenyl, Acenaphthylene, Acenaphthene, Fluorene, C1-C3 Fluorenes, Phenanthrene, C1-C4 Phenanthrenes/Anthracenes, Anthracene, Fluoranthene, Pyrene, C1-C4 Fluoranthenes/Pyrenes, Benz(a)anthracene, Chrysene, C1-C4 Chrysenes, Benzo(b)fluoranthene, Benzo(j)+(k)fluoranthene, Benzo(e)pyrene, Benzo(a)pyrene, Perylene, Indeno(1,2,3-cd)pyrene, Dibenz(ah)+(ac)anthracene, Benzo(g,h,i)perylene. If a 'Total' result is requested, the results of its individual components will also be reported.

PFAS Total: With respect to PFAS analyses, the 'PFAS, Total (5)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA and PFOS. In addition, the 'PFAS, Total (6)' result is defined as the summation of results at or above the RL for: PFHpA, PFHxS, PFOA, PFNA, PFDA and PFOS. (Note: 'PFAS, Total (6)' is applicable to MassDEP DW compliance analysis only.). If a 'Total' result is requested, the results of its individual components will also be reported.

The target compound Chlordane (CAS No. 57-74-9) is reported for GC ECD analyses. Per EPA,this compound "refers to a mixture of chlordane isomers, other chlorinated hydrocarbons and numerous other components." (Reference: USEPA Toxicological Review of Chlordane, In Support of Summary Information on the Integrated Risk Information System (IRIS), December 1997.)

Total: With respect to Organic analyses, a 'Total' result is defined as the summation of results for individual isomers or Aroclors. If a 'Total' result is requested, the results of its individual components will also be reported. This is applicable to 'Total' results for methods 8260, 8081 and 8082.

***Data Qualifiers***

**A** - Spectra identified as "Aldol Condensates" are byproducts of the extraction/concentration procedures when acetone is introduced in the process.

**B** - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).

**C** - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.

**D** - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.

**E** - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.

**F** - The ratio of quantifier ion response to qualifier ion response falls outside of the laboratory criteria. Results are considered to be an estimated maximum concentration.

**G** - The concentration may be biased high due to matrix interferences (i.e, co-elution) with non-target compound(s). The result should be considered estimated.

**H** - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.

**I** - The lower value for the two columns has been reported due to obvious interference.

**J** - Estimated value. This represents an estimated concentration for Tentatively Identified Compounds (TICs).

**M** - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.

**ND** - Not detected at the reporting limit (RL) for the sample.

**NJ** - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where

*Report Format: Data Usability Report*

| | | | |
|---|---|---|---|
| **Project Name:** | GROSSINGERS | **Lab Number:** | L2122189 |
| **Project Number:** | 9313:11 | **Report Date:** | 05/04/21 |

***Data Qualifiers***

the identification is based on a mass spectral library search.

**P** - The RPD between the results for the two columns exceeds the method-specified criteria.

**Q** - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)

**R** - Analytical results are from sample re-analysis.

**RE** - Analytical results are from sample re-extraction.

**S** - Analytical results are from modified screening analysis.

*Report Format: Data Usability Report*

## REFERENCES

48 Compendium of Methods for the Determination of Toxic Organic Compounds in Ambient Air. Second Edition. EPA/625/R-96/010b, January 1999.

## LIMITATION OF LIABILITIES

Alpha Analytical performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical be held liable for any incidental, consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding time and splitting of samples in the field.

# Certification Information

**The following analytes are not included in our Primary NELAP Scope of Accreditation:**

**Westborough Facility**
**EPA 624/624.1:** m/p-xylene, o-xylene, Naphthalene
**EPA 625/625.1:** alpha-Terpineol
**EPA 8260C/8260D:** NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene, Azobenzene; SCM: Iodomethane (methyl iodide), 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.
**EPA 8270D/8270E:** NPW: Dimethylnaphthalene,1,4-Diphenylhydrazine, alpha-Terpineol; SCM: Dimethylnaphthalene,1,4-Diphenylhydrazine.
**SM4500**: NPW: Amenable Cyanide; SCM: Total Phosphorus, TKN, NO2, NO3.

**Mansfield Facility**
**SM 2540D:** TSS
**EPA 8082A:** NPW: PCB: 1, 5, 31, 87,101, 110, 141, 151, 153, 180, 183, 187.
**EPA TO-15:** Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene, 3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.
**Biological Tissue Matrix:** EPA 3050B

**The following analytes are included in our Massachusetts DEP Scope of Accreditation**

**Westborough Facility:**

***Drinking Water***
**EPA 300.0**: Chloride, Nitrate-N, Fluoride, Sulfate; **EPA 353.2**: Nitrate-N, Nitrite-N; **SM4500NO3-F**: Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE, EPA 180.1, SM2130B, SM4500Cl-D, SM2320B, SM2540C, SM4500H-B, SM4500NO2-B**
**EPA 332**: Perchlorate; **EPA 524.2:** THMs and VOCs; **EPA 504.1:** EDB, DBCP.
**Microbiology**: **SM9215B; SM9223-P/A, SM9223B-Colilert-QT,SM9222D**.

***Non-Potable Water***
**SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2320B, SM4500CL-E, SM4500F-BC, SM4500NH3-BH:** Ammonia-N and Kjeldahl-N, **EPA 350.1**: Ammonia-N, **LACHAT 10-107-06-1-B**: Ammonia-N, **EPA 351.1, SM4500NO3-F, EPA 353.2**: Nitrate-N, **SM4500P-E, SM4500P-B, E, SM4500SO4-E, SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, EPA 420.1, SM4500-CN-CE, SM2540D, EPA 300: Chloride, Sulfate, Nitrate.**
**EPA 624.1**: Volatile Halocarbons & Aromatics,
**EPA 608.3**: Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs
**EPA 625.1**: SVOC (Acid/Base/Neutral Extractables), **EPA 600/4-81-045**: PCB-Oil.
**Microbiology**: **SM9223B-Colilert-QT; Enterolert-QT, SM9221E, EPA 1600, EPA 1603, SM9222D.**

**Mansfield Facility:**

***Drinking Water***
**EPA 200.7:** Al, Ba, Cd, Cr, Cu, Fe, Mn, Ni, Na, Ag, Ca, Zn. **EPA 200.8:** Al, Sb, As, Ba, Be, Cd, Cr, Cu, Pb, Mn, Ni, Se, Ag, TL, Zn. **EPA 245.1** Hg.
**EPA 522, EPA 537.1.**

***Non-Potable Water***
**EPA 200.7:** Al, Sb, As, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Sr, TL, Ti, V, Zn.
**EPA 200.8:** Al, Sb, As, Be, Cd, Cr, Cu, Fe, Pb, Mn, Ni, K, Se, Ag, Na, TL, Zn.
**EPA 245.1** Hg.
**SM2340B**

For a complete listing of analytes and methods, please contact your Alpha Project Manager.

# AIR ANALYSIS

PAGE 1 OF 1

**CHAIN OF CUSTODY**

320 Forbes Blvd, Mansfield, MA 02048
TEL: 508-822-9300 FAX: 508-822-3288

Date Rec'd in Lab: 4/28/21

ALPHA Job #: L2122189

## Client Information

Client: SESI Consulting Engineers
Address: 12A Maple Ave
Pine Brook, NJ
Phone: 973 808 9050
Fax:
Email: TTK@sesi.org
☐ These samples have been previously analyzed by Alpha

## Project Information

Project Name: Grossingers
Project Location: Liberty, NY
Project #: 9313:11
Project Manager: Todd Kelly
ALPHA Quote #:

## Turn-Around Time

☒ Standard ☐ RUSH (only confirmed if pre-approved)
1 week
Date Due: Time:

## Report Information - Data Deliverables

☐ FAX
☐ ADEx
Criteria Checker:
(Default based on Regulatory Criteria Indicated)
Other Formats:
☒ EMAIL (standard pdf report)
☐ Additional Deliverables:
Report to: (if different than Project Manager)

## Billing Information

☒ Same as Client info PO #:
9313 Phase II

## Regulatory Requirements/Report Limits

| State/Fed | Program | Res / Comm |
|---|---|---|
| NY | Cat B | |

Other Project Specific Requirements/Comments:

Project-Specific Target Compound List: ☐

## ANALYSIS

All Columns Below Must Be Filled Out

| ALPHA Lab ID (Lab Use Only) | Sample ID | COLLECTION End Date | Start Time | End Time | Initial Vacuum | Final Vacuum | Sample Matrix* | Sampler's Initials | Can Size | I D Can | I D - Flow Controller | TO-15 | TO-15 SIM | APH (Subset Non-petroleum HCs ☐) | Fixed Gases | Sulfides & Mercaptans by TO-15 | Sample Comments (i.e. PID) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 22189-01 | SMPV-14 | 4/28/21 | 14:07 | 1433 | -28.46 | -2.95 | SV | JCS | 6L | 1041 | 01904 | X | | | | | |
| -02 | SMPV-10 | | 1012 | 1033 | -27.53 | -1.56 | | | 6L | 3328 | 01906 | | | | | | Flow: 0.19 L/m |
| -03 | SMPV-11 | | 1026 | 1054 | -28.40 | -3.87 | | | 6L | 930 | 0673 | | | | | | |
| -04 | SMPV-13 | | 1329 | 1359 | -28.31 | -4.19 | | | 6L | 1687 | 0170 | | | | | | |

*SAMPLE MATRIX CODES

AA = Ambient Air (Indoor/Outdoor)
SV = Soil Vapor/Landfill Gas/SVE
Other = Please Specify

Container Type

| Relinquished By: | Date/Time | Received By: | Date/Time: |
|---|---|---|---|
| | 4/28/21 | | 4/28/21 15:17 |
| | 4/28/21 1720 | | |
| | 4/28/21 | | 4/29/21 0760 |

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. All samples submitted are subject to Alpha's Terms and Conditions. See reverse side.

# Appendix E:

## NYSDEC—IC & EC Certification Form

Enclosure 2

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

**Site Details** **Box 1**

**Site No.** **C353015**

**Site Name Former Grossingers Resort**

Site Address: Clements and Grossinger Roads Zip Code: 12754
City/Town: Liberty
County: Sullivan
Site Acreage: 18.170

Reporting Period: December 31, 2019 to April 30, 2021

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

**Box 2**

| | YES | NO |
|---|---|---|
| 6. Is the current site use consistent with the use(s) listed below? Unrestricted, Residential, Restricted-Residential, Commercial, and Industrial | ☒ | ☐ |
| 7. Are all ICs in place and functioning as designed? | ☒ | ☐ |

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

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

**Box 2A**

| | YES | NO |
|---|---|---|
| 8. Has any new information revealed that assumptions made in the Qualitative Exposure Assessment regarding offsite contamination are no longer valid? | ☐ | ☒ |

**If you answered YES to question 8, include documentation or evidence that documentation has been previously submitted with this certification form.**

| | | |
|---|---|---|
| 9. Are the assumptions in the Qualitative Exposure Assessment still valid? (The Qualitative Exposure Assessment must be certified every five years) | ☒ | ☐ |

**If you answered NO to question 9, the Periodic Review Report must include an updated Qualitative Exposure Assessment based on the new assumptions.**

**SITE NO. C353015**

**Box 3**

**Description of Institutional Controls**

| Parcel | Owner | Institutional Control |
|---|---|---|
| **30-1-1.1 (portion of)** | Sullivan Resorts, LLC | Ground Water Use Restriction<br>Monitoring Plan<br>Site Management Plan<br>IC/EC Plan |

The remedy is conditional track 1. The site meets unrestricted SCOs for soil. Residual VOCs and PFAS in groundwater must be addressed by a Site Management Plan.

The use of groundwater underlying the property is prohibited without treatment rendering it safe for intended use.

Evaluation of vapor intrusion with mitigation as required prior to the construction of new buildings on site.

Monitoring of on-site groundwater.

**Box 4**

**Description of Engineering Controls**

| Parcel | Engineering Control |
|---|---|
| **30-1-1.1 (portion of)** | Monitoring Wells |

Groundwater will be monitored until residual concentrations of VOCs and PFAS meet Department standards. If VOCs and PFAS do not naturally attenuate, groundwater treatment will be required.

**Box 5**

**Periodic Review Report (PRR) Certification Statements**

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

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

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

| YES | NO |
|---|---|
| ☒ | ☐ |

2. For each Engineering control listed in Box 4, I certify by checking "YES" below that all of the following statements are true:

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

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

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

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

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

| YES | NO |
|---|---|
| ☒ | ☐ |

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

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

Signature of Owner, Remedial Party or Designated Representative

Date

**IC CERTIFICATIONS**
**SITE NO. C353015**

**Box 6**

**SITE OWNER OR DESIGNATED REPRESENTATIVE SIGNATURE**

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

I KEVIN MOMANUS at 7 PENN PLAZA SUITE 524 WHITE PLAINS, NY
print name print business address

am certifying as PROJECT MANAGER (Owner or Remedial Party)

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

Signature of Owner, Remedial Party, or Designated Representative Rendering Certification

07/09/21
Date

## EC CERTIFICATIONS

**Box 7**

### Qualified Environmental Professional Signature

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

I Fuad Dahan (print name) at SESI Consulting Engineers (print business address),

am certifying as a Qualified Environmental Professional for the Sullivan Resorts LLC (Owner or Remedial Party)

| Signature of Qualified Environmental Professional, for the Owner or Remedial Party, Rendering Certification | Stamp (Required for PE) | 7/12/2021 Date |
|---|---|---|